

Appendix A
Analytical Laboratory Reports

Due to electronic file size, this document cannot be viewed on-line.

The complete records are stored in the Central Files of the Southwest Region Office of Ecology for review by appointment only. You can request to view these documents by filing a [records request](#).¹ For help making a request, contact the [Public Records Officer](#)² at or call 360-407-6040.

¹ <https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests>

² publicrecordsofficer@ecy.wa.gov

Appendix B
Excavation Photographs



Photograph 1: Southern extension of Swan Manufacturing Co. (SMC) concrete floor slab, looking northeast.



Photograph 2: Southwest corner of southern extension of SMC concrete floor slab, looking north.



Photograph 3: Southern extension and central part of SMC concrete floor slab, looking northeast.



Photograph 4: Southwest corner and central part of SMC concrete slab, looking east.



Photograph 5: Southern extension and western part of SMC concrete slab, looking north.



Photograph 6: Shallow groove or channel in southern extension of SMC concrete slab, looking west.



Photograph 7: Shallow groove or channel in southern extension of SMC concrete slab, looking west.



Photograph 8: Exposed soil under groove or channel after removal of concrete. Glass sample container shows location of sample MT.



Photograph 9: Slot in central part of SMC concrete slab, looking north.



Photograph 10: Slot in central part of SMC concrete floor slab, looking west.



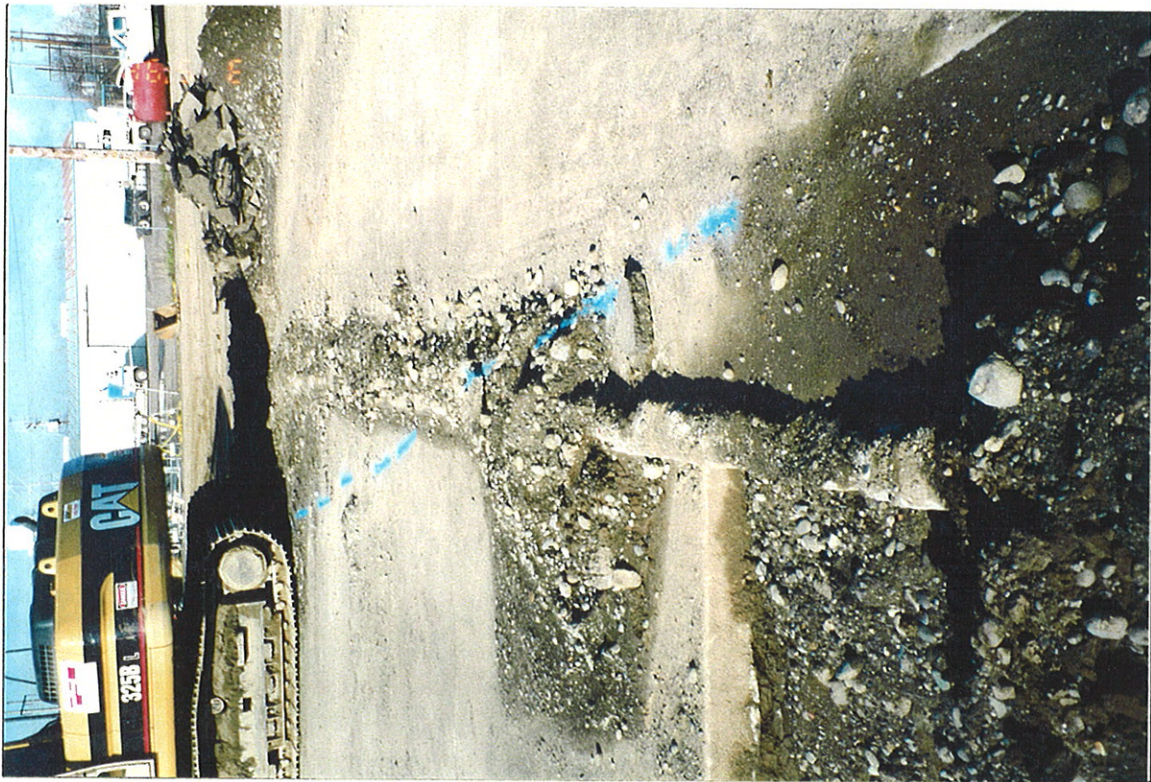
Photograph 11: Central part of SMC concrete slab, looking northeast.



Photograph 12: Central part of SMC concrete floor slab, looking northeast.



Photograph 13: Central part of SMC concrete floor slab, looking east.



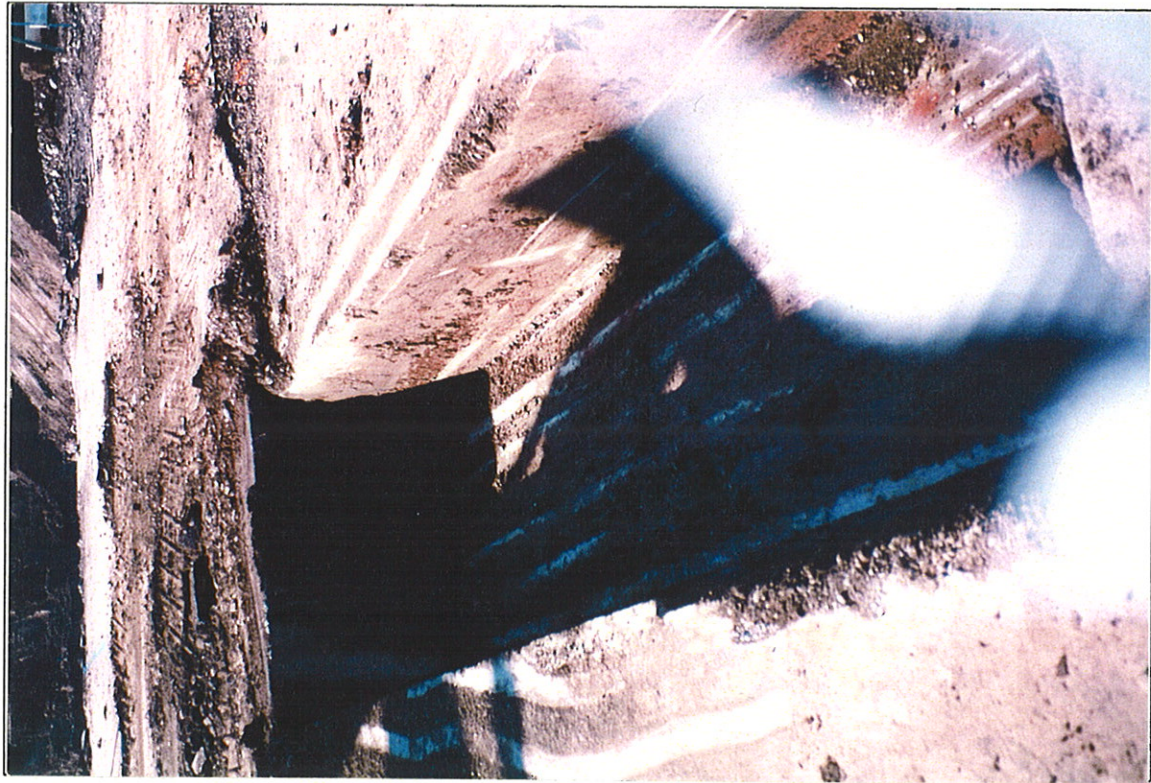
Photograph 14: Southern extension and central part of SMC concrete floor slab, looking west.



Photograph 15: Concrete vault/pit in eastern part of SMC concrete floor slab, looking south.



Photograph 16: Concrete vault/pit in SMC concrete floor slab, looking northeast.



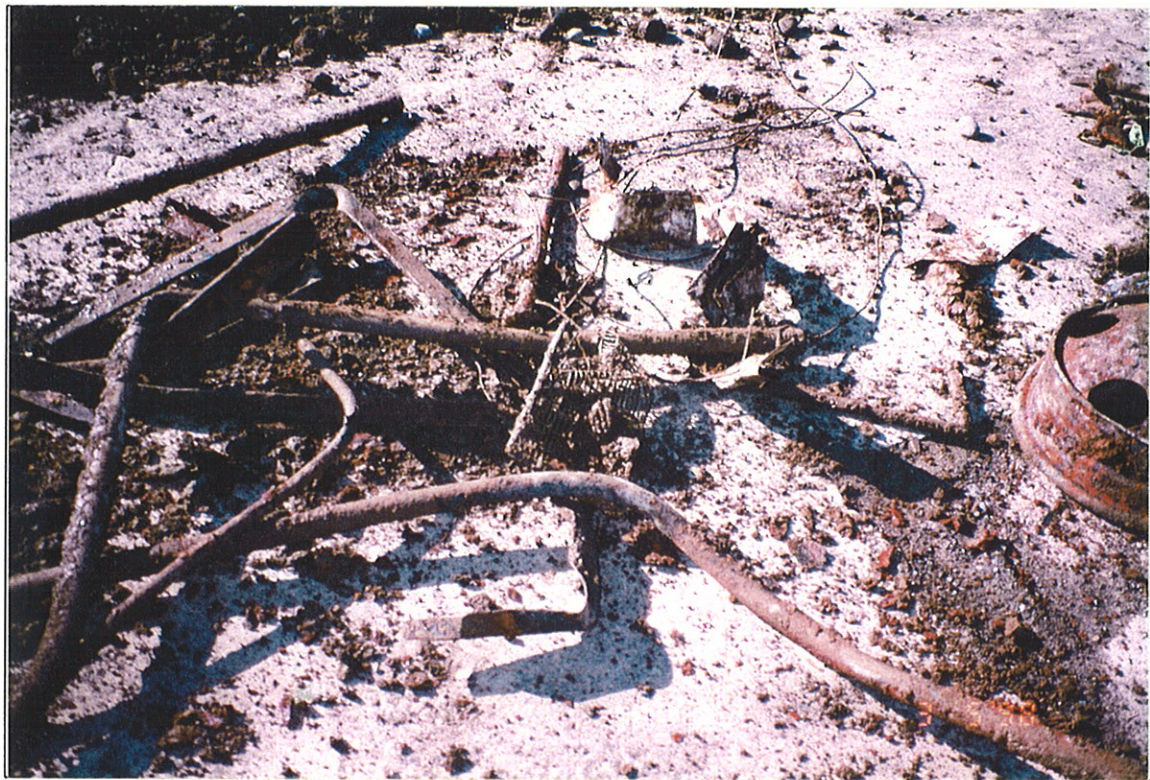
Photograph 17: Concrete vault/pit in SMC concrete floor slab, looking south.



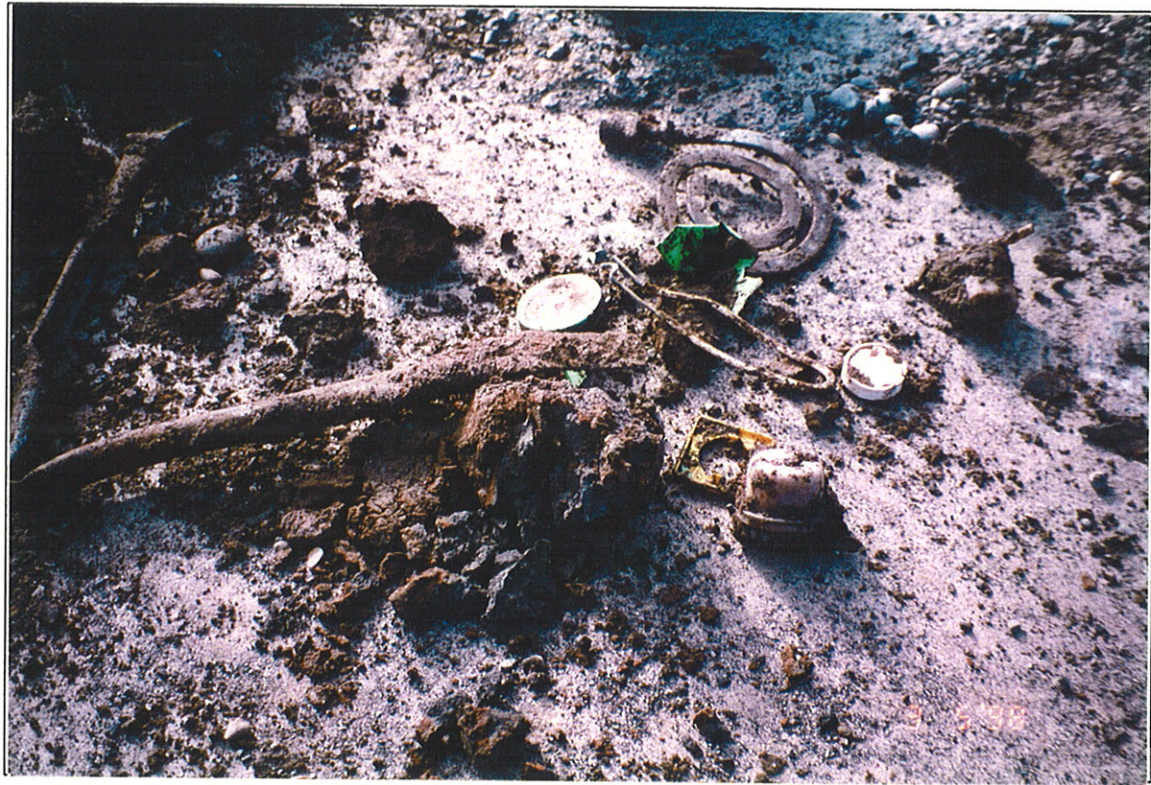
Photograph 18: Southern end of concrete vault/pit. Photograph shows short "leg" of vault to west of the large section of vault.



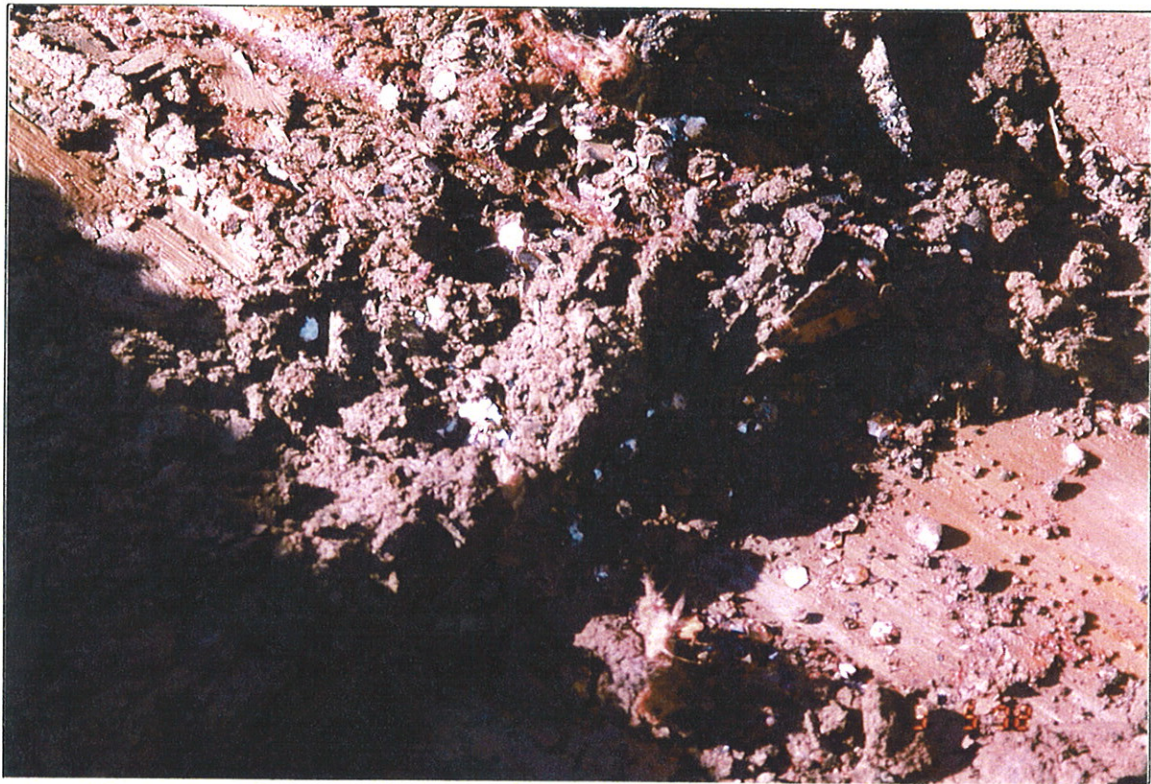
Photograph 19: Debris inside the concrete vault/pit.



Photograph 20: Debris inside the concrete vault/pit.



Photograph 21: Debris inside the concrete vault/pit.



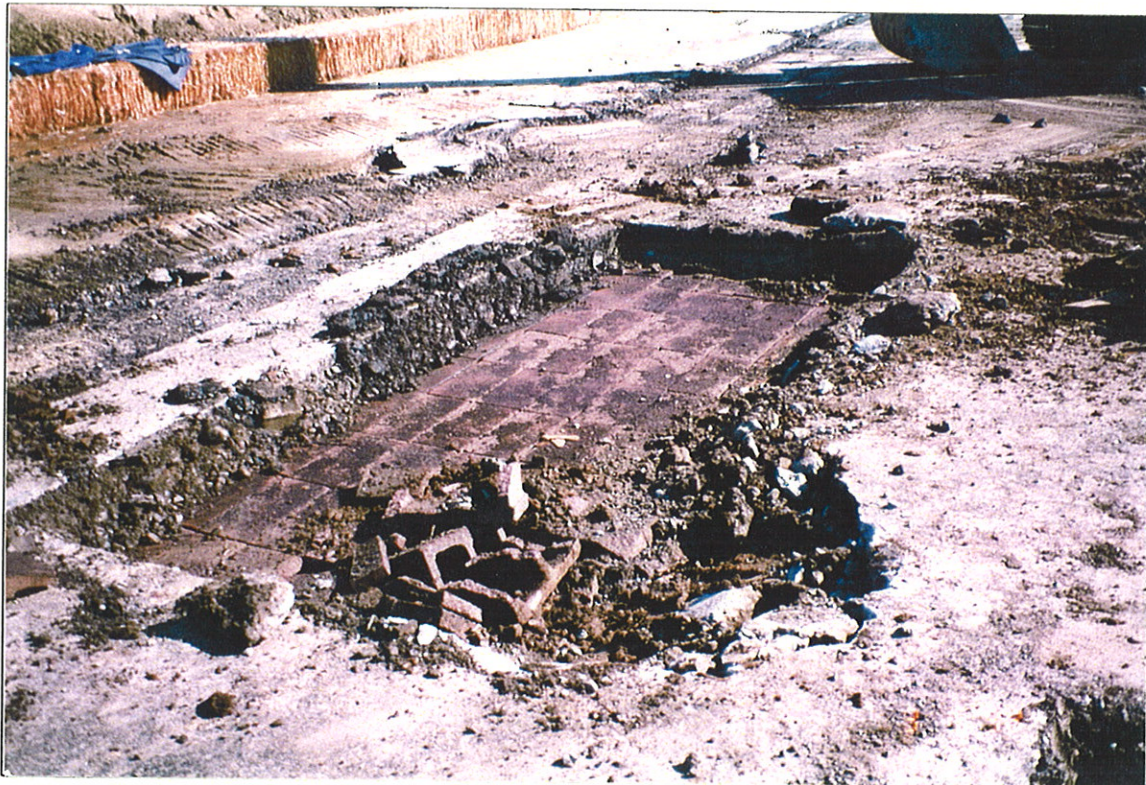
Photograph 22: Bottom of concrete vault showing metal hex-shaped "punchouts".



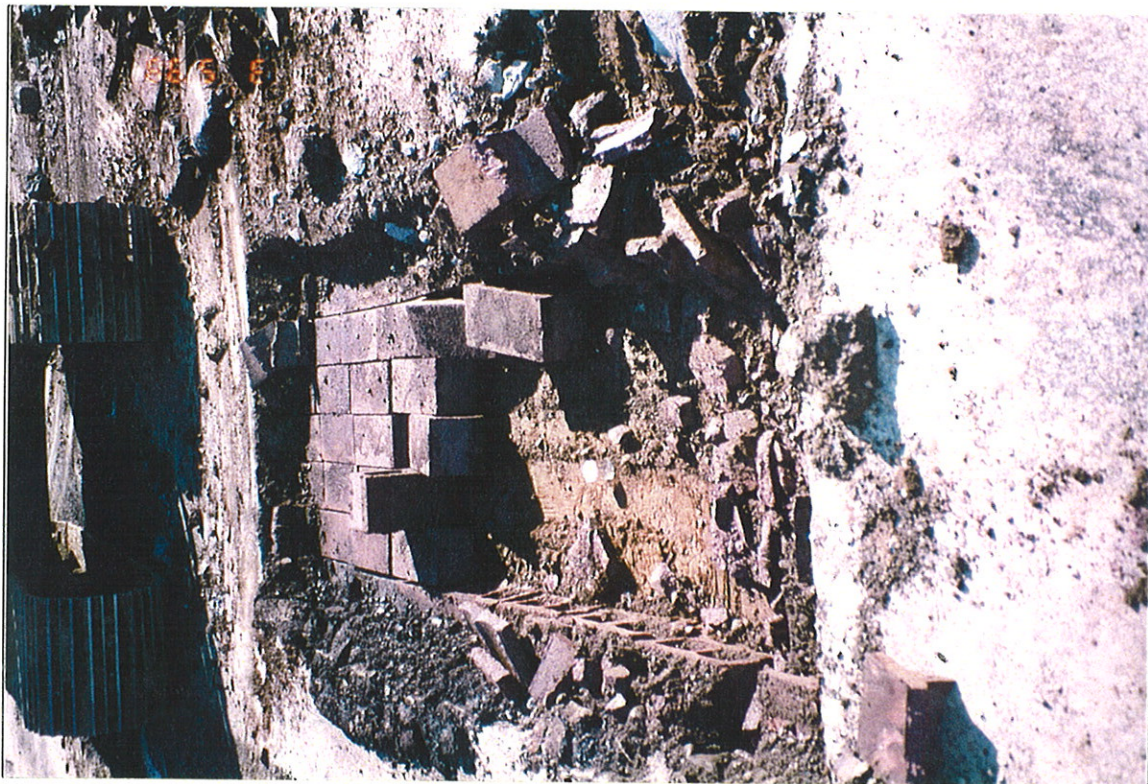
Photograph 23: Bottom of short leg of "L" shaped concrete vault showing circular depression in concrete.



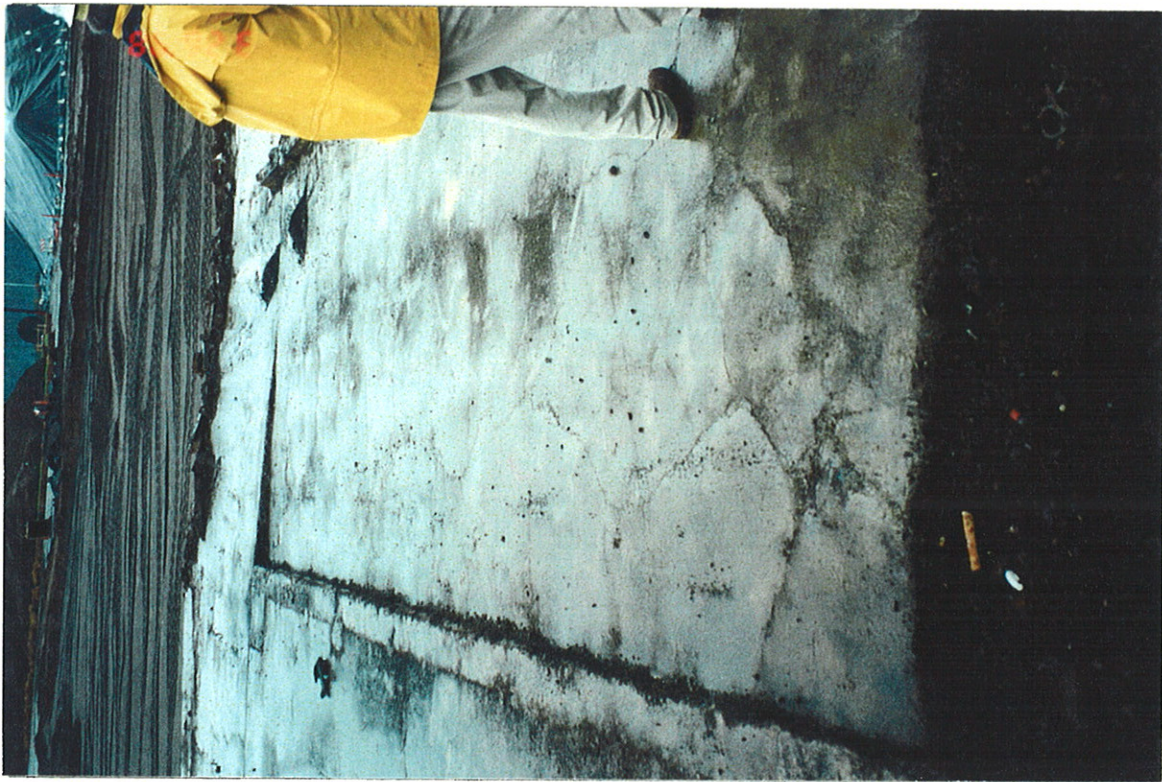
Photograph 24: Grooved concrete slab embedded in former SMC concrete floor slab.



Photograph 25: Cinder blocks below the grooved concrete slab.



Photograph 26: Exposed soil below cinder blocks. Sample container identified location of sample Cinder Blk 1'.



Photographer 27: Northern portion of SMC concrete floor slab showing concrete curb. Notes ceramic cylinder in foreground found in soil adjacent to slab.



Photographer 28: View of the western portion of the SMC building which does not have a concrete floor.



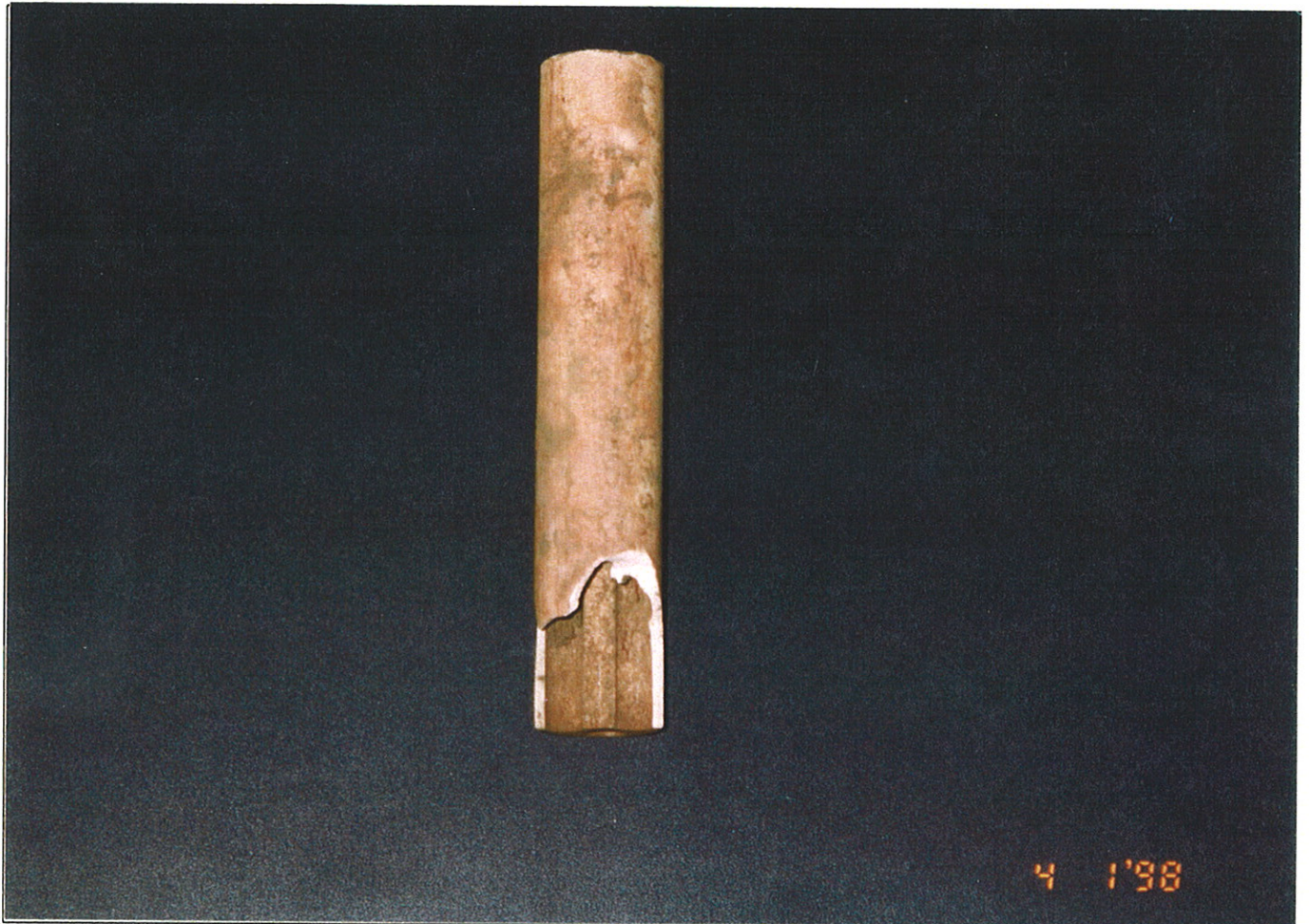
Photograph 29: Northwest corner of excavation which includes the southwest portion of the SMC building area. Notes pipe in corner of excavation.



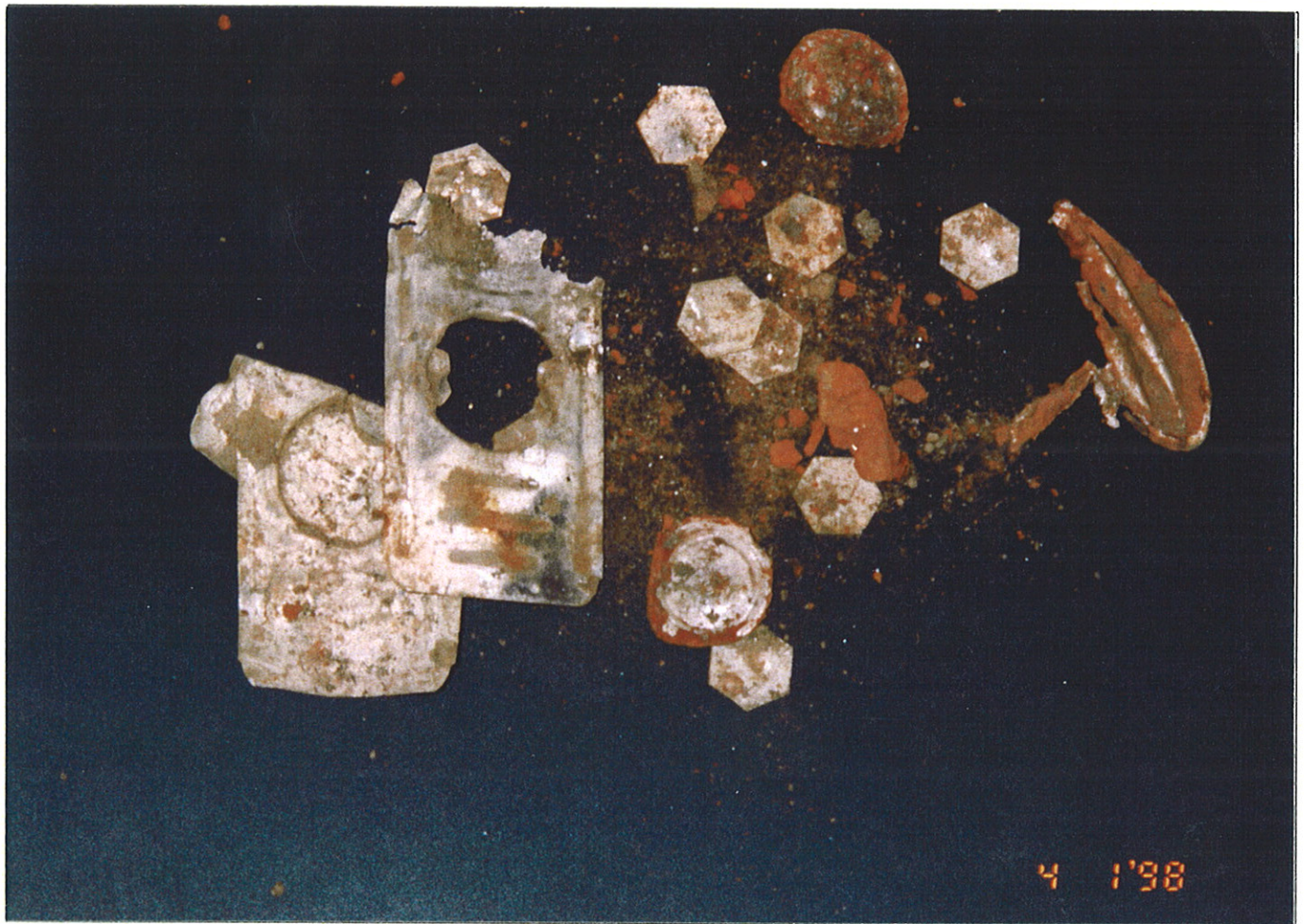
Photograph 30: Close-up of pipe in Photograph 29.



Photograph 31: Pipe under SMC concrete floor slab found approximately 10 feet east of the concrete vault. Note green gray material in pipe which was collected and labeled as CS-15.



Photograph 32: Close-up of ceramic cylinder shown in Photograph 27.



Photograph 33: Close-up of metal fragments found in concrete vault and along north side of SMC concrete floor slab.



Photograph 1: Southern extension of SMC concrete slab, looking northeast.



Photograph 2: Southwest corner of southern extension of SMC concrete slab, looking north.



Photograph 3: Southern extension and central part of SMC concrete slab, looking northeast.



Photograph 4: Southwest corner and central part of SMC concrete slab, looking east.



Photograph 5: Southern extension and western part of the SMC concrete slab, looking north.



Photograph 6: Shallow groove or channel in southern extension of SMC concrete slab, looking west.



Photograph 7: Shallow groove or channel in southern extension of SMC concrete slab, looking west.



Photograph 8: Exposed soil under groove or channel after removal of concrete slab. Glass sample container shows location of sample Mid-trench.



Photograph 9: Slot in central part of SMC concrete slab, looking north.



Photograph 10: Slot in central part of SMC concrete slab, looking west.



Photograph 11: Central part of SMC concrete slab, looking northeast.



Photograph 12: Central part of the SMC concrete slab, looking north east.



Photograph 13: Central part of the SMC concrete slab, looking east.



Photograph 14: Southern extension and central part of the SMC concrete slab, looking west.



Photograph 15: Concrete pit in eastern part of the SMC concrete slab, looking south.



Photograph 16: Concrete pit in SMC concrete slab, looking northeast.



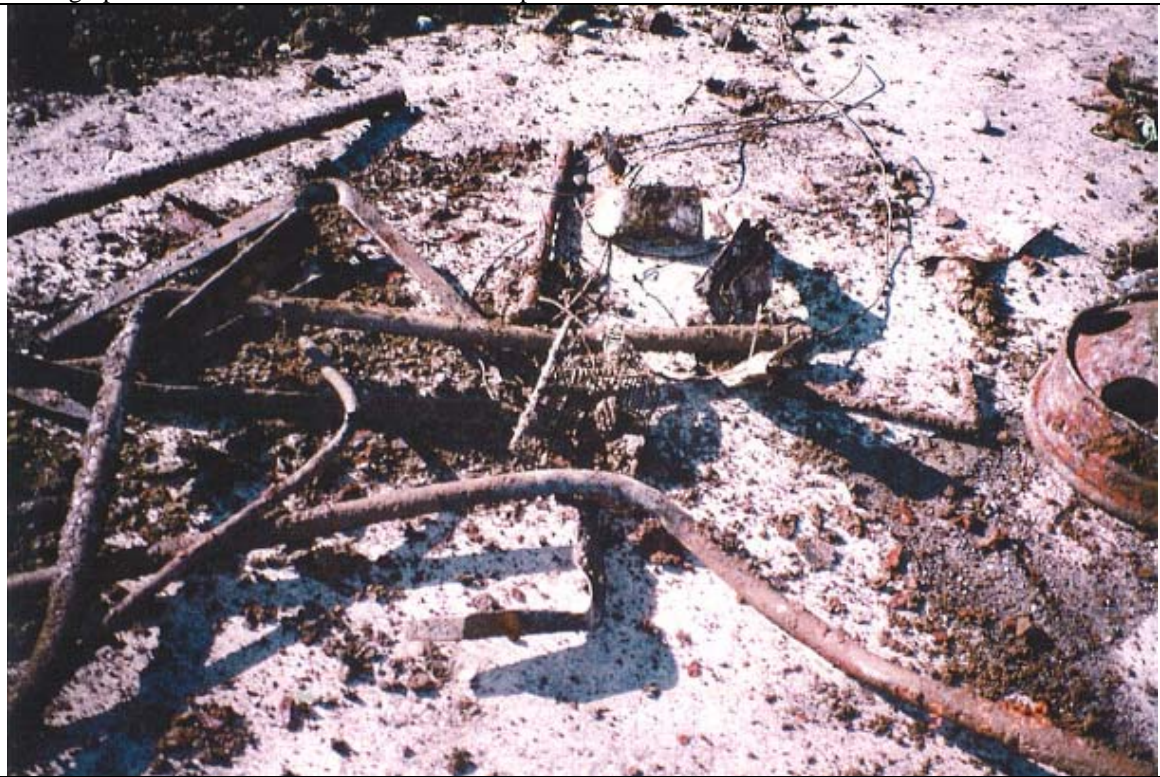
Photograph 17: Concrete pit in SMC concrete slab, looking south.



Photograph 18: Southern end of concrete pit. Photograph shows short "leg" of pit to the west of the large section of concrete pit.



Photograph 19: Debris from inside the concrete pit.



Photograph 20: Debris from inside the concrete pit.



Photograph 21: Debris from inside concrete pit.



Photograph 22: Bottom of concrete pit showing hexagonal-shaped metal punch outs.



Photograph 23: Bottom of short leg of "L" shaped concrete pit showing circular depression in concrete.



Photograph 24: Grooved concrete embedded in SMC concrete slab.



Photograph 25: Cinder blocks below the grooved concrete.



Photograph 26: Exposed soil below cinder blocks. Sample container identifies location of sample Cinder Blk 1'.



Photograph 27: Northern portion of SMC concrete slab showing concrete curb. Note ceramic cylinder in foreground found in soil adjacent to slab. Looking south.



Photograph 28: View of the western portion of the SMC building where a concrete slab was not observed, looking west.



Photograph 29: Northwest corner of excavation which includes the southwest portion of the SMC building area. Note pipe in corner of excavation, looking west.



Photograph 30: Close-up of pipe in northwest corner of excavation observed in Photograph 29, looking west.



Photograph 31: Pipe under SMC concrete slab found approximately 10 feet east of the concrete pit. Note green gray material in pipe which was collected and designated CS-15.



Photograph 32: Remedial excavation begins on east side of the former building 2220.



Photograph 33: Former SMC concrete slab discovered. Looking north.



Photograph 34: Remedial excavation, looking northwest.



Photograph 35: Remedial excavation at greatest depth. Groundwater fills bottom of excavation.



Photograph 36: Verification soil sample collection.



Photograph 37: Backfilling of remedial excavation begins.



Photograph 38: Backfilling of remedial excavation.



Photograph 39: Remedial excavation showing SMC concrete slab. Looking northeast.



Photograph 40: Backfilling of remedial excavation. Looking south from SMC slab.



Photograph 41: Backfilling of remedial excavation. SMC slab in foreground.



Photograph 42: Backfilling of remedial excavation complete. SMC slab in foreground.

Appendix C
Disposal Documentation for Removed Soil

6.1



Western Region

October 5, 1999
Project 20427

Mr. Terry Belunes, R.G.
Parametrix, Inc.
700 N.E. Multnomah, Suite 1160
Portland, OR 97232

Dear Terry:

Subject: Waste Tickets for Port of Vancouver TCE-Impacted Soil Pile Treatment

Philip Services Corporation (Philip) is preparing to submit the final invoice documentation for treatment of the TCE-Impacted soil at the Port of Vancouver Former Swann Manufacturing site (Site) in Vancouver, Washington. As part of the effort, Philip contacted Ms. Heidi Rosenberg of the Port regarding documentation requirements for work conducted. Ms. Rosenberg requested that we provide you with copies of disposal receipts for the concrete debris as well as the cover.

Attached, please find copies of waste tickets for transport and disposal of the materials noted above. Concrete debris was transported on February 23 and 24, 1999, and the plastic cover and miscellaneous debris was transported on April 19, and on July 22, 1999.

If you have questions regarding the tickets, please contact Phil Johnson or me at 360-737-3887.

Sincerely yours,

PHILIP SERVICES CORPORATION


Dotti F. Ramey, P.E.

Project Manager

D:/20427/wastetickets.doc

001530

Helping Clients Obtain a Competitive Advantage in a Global Market



DATE 2.23.99 OREGON MILES 186 WASHINGTON MILES 33

SERIAL HAULED Concrete CUSTOMER Phillips Service's JOB NO. *

PICKUP SITE Port of Vanc 4th Plain + Mill Plain Blvd Vanc DELIVERY SITE Hilishoro Orc

FUEL _____ TRK # 9504 TRLR # pac OR PUC# _____ TARE WT _____

START SITE 7:30 LUNCH none END SITE 4:00 JOB HRS 8 1/2 hrs

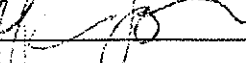
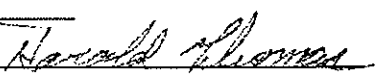
YARD START 9:00 YARD END 4:00 TOTAL HRS 9 hrs

DELIVERED TO	PLANT TIME IN	PLANT TIME OUT	DUMP TIME IN	DUMP TIME OUT	DOWNTIME OR STANDBY	NET TONS HAULED	NET YARDS HAULED	REMARKS OR HAUL TKT #
1 <u>PTI Hookup</u>	<u>9:00</u>			<u>9:30</u>				
2 <u>Hilishoro Landfill</u>	<u>9:30</u>	<u>9:45</u>	<u>8:30</u>	<u>8:45</u>		<u>22.28</u>		<u># 776282</u>
3	<u>10:10</u>	<u>10:25</u>	<u>11:35</u>	<u>11:45</u>		<u>26.61</u>		<u># 778842</u>
4	<u>12:45</u>	<u>1:10</u>	<u>2:30</u>	<u>2:45</u>		<u>24.16</u>		<u># 772778</u>
5	<u>4:00</u>							
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								

A NEW FORM MUST BE USED FOR EACH JOB

OWNER/OPERATOR RESPONSIBLE FOR ALL INSURANCE AND ANY/ALL PROPERTY DAMAGE. TICKETS MUST BE SIGNED AND SUBMITTED AT THE END OF EACH DAY FOR PAYMENT.

RECORD YOUR TIME TO THE NEAREST 1/4 HOUR ON TOTAL HOURS ONLY. IT IS YOUR RESPONSIBILITY TO GET TICKETS SIGNED. CHARGE STANDBY TIME FOR ANYTHING OVER 15 MINUTES. IF YOU DON'T GET IT ON YOUR TICKET YOU WILL NOT BE PAID FOR IT.

CONTRACTING COMPANY SIGNATURE X 
 DRIVER NAME Harold Thomas DRIVER SIGNATURE X 
 (PRINTED)

OFFICE USE ONLY	
BILLED HRS	
PREVAIL WAGE	
<input type="checkbox"/> YES <input type="checkbox"/> NO	
RATE <u>65.00</u>	

6579

776282

HILLSBORO LANDFILL

Tik# 363735


SUBSIDIARY OF USA WASTE, INC.
205 SE MINTER BRIDGE ROAD
HILLSBORO, OR 97123
PHONE# 503/640-9427
PREPARED BY: JAW

PHILLIP ENVIRONMENTAL
CUSTOMER ACCT# 5151589
VEHICLE ID# 5 DATE: 02/23/1999
TIME IN: 8:44 TIME OUT: 9:02
MANUAL TICKET# N/A

COMMODITY: SP_WASTE
HAULER: SKETTER THOMPSN HAULER TICKET NUMBER:
STATE AUTHORIZATION/ID NUMBER: HLD BY TAYLOR
MANIFEST#: PAN SOURCE ID: WA - CLK -
GEN: P#4553 NAME: PROJ#:
GEN SOURCE/ADDRESS: PORT OF VANCOUVER
TONS(LBS): GROSS: 41.52(83040) TARE: 19.24(38480) NET: 22.28(44560)
RATE: 34.820 / TON QNTY: 22.28 PRETAX CHARGE: 775.79
PAYMENT METHOD: CHARGE: ACCOUNT RECE PAYMENT TOTAL: 827.48
DEPOSIT: 0 IN METRO: N LOOP TAG#: 125

COMMODITIES: \$775.79
EXTRA CHARGES: \$0
TAXES AND FEES: \$51.69

ALL CHARGES: \$827.48
=====


SIGNATURE

768842

HILLSBORO LANDFILL


Tik# 363807

A SUBSIDIARY OF USA WASTE, INC.
3205 SE MINTER BRIDGE ROAD
HILLSBORO, OR 97123
PHONE# 503/640-9427
PREPARED BY: JLT

PHILLIP ENVIRONMENTAL
CUSTOMER ACCT# 5151589
VEHICLE ID# 5 DATE: 02/23/1999
TIME IN: 11:24 TIME OUT: 11:24
MANUAL TICKET# N/A

COMMODITY: SP_WASTE
HAULER: SKEETER THOMPSON HAULER TICKET NUMBER:
STATE AUTHORIZATION/ID NUMBER: HLD BY TAYLOR
SOURCE ID: WA - CLK -
GEN: P#4553 NAME: PROJ#:
GEN SOURCE/ADDRESS: PORT OF VANCOUVER
TONS(LBS): GROSS: 45.85(91700) TARE: 19.24(38480) NET: 26.61(53220)
RATE: 34.820 / TON QNTY: 26.61 PRETAX CHARGE: 926.56

PAYMENT METHOD: CHARGE: ACCOUNT RECE PAYMENT TOTAL: 988.30
DEPOSIT: 0 IN METRO: N LOOP TAG#: 0


SIGNATURE

COMMODITIES: \$926.56
EXTRA CHARGES: \$0
TAXES AND FEES: \$61.74

ALL CHARGES: \$988.30
=====

772778

HILLSBORO LANDFILL

Tik# 363863

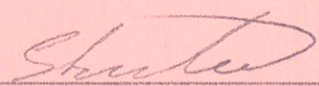
A SUBSIDIARY OF USA WASTE, INC.
3205 SE MINTER BRIDGE ROAD
HILLSBORO, OR 97123
PHONE# 503/640-9427
PREPARED BY: JLT

PHILLIP ENVIRONMENTAL
CUSTOMER ACCT# 5151589
VEHICLE ID# 5 DATE: 02/23/1999
TIME IN: 14:12 TIME OUT: 14:13
MANUAL TICKET# N/A

COMMODITY: SP_WASTE
HAULER: SKEETER THOMPSON HAULER TICKET NUMBER:
STATE AUTHORIZATION/ID NUMBER: HLD BY TAYLOR
SOURCE ID: WA - CLK -
GEN: P#4553 NAME: PROJ#:
GEN SOURCE/ADDRESS: PORT OF VANCOUVER
TONS(LBS): GROSS: 43.40(86800) TARE: 19.24(38480) NET: 24.16(48320)
RATE: 34.820 / TON QNTY: 24.16 PRETAX CHARGE: 841.25

PAYMENT METHOD: CHARGE: ACCOUNT RECE PAYMENT TOTAL: 897.30
DEPOSIT: 0 IN METRO: N LOOP TAG#: 0

COMMODITIES: \$841.25
EXTRA CHARGES: \$0
TAXES AND FEES: \$56.05



SIGNATURE

ALL CHARGES: \$897.30
=====

DATE 2-23-99 OREGON MILES 150 WASHINGTON MILES 410

SERIAL HAULED Concrete CUSTOMER PHILIPS Service JOB NO. _____

PICKUP SITE Port of Vancouver DELIVERY SITE HILLS BORO Ore

FUEL 112 TRK# 9709 TRLR# 9984 OR PUC# NXB 923 TARE WT. _____

START SITE 2.00 LUNCH Ø END SITE 4.00 JOB HRS 9

YARD START 6.30 YARD END 4.00 TOTAL HRS 9 1/2

DELIVERED TO	PLANT TIME IN	PLANT TIME OUT	DUMP TIME IN	DUMP TIME OUT	DOWNTIME OR STANDBY	NET TONS HAULED	NET YARDS HAULED	REMARKS OR HAUL TKT #
1 Hills Boro	7.00	7.40	8.45	9.05		19.13		776279
2 Land/Fill	10.00	11.10	12.10	12.15		22.75		772766
3	1.10	1.30	2.30	2.40		21.46		772779
4	4.00							
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								

A NEW FORM MUST BE USED FOR EACH JOB

OWNER/OPERATOR RESPONSIBLE FOR ALL INSURANCE AND ANY/ALL PROPERTY DAMAGE. TICKETS MUST BE SIGNED AND SUBMITTED AT THE END OF EACH DAY FOR PAYMENT.

RECORD YOUR TIME TO THE NEAREST 1/4 HOUR ON TOTAL HOURS ONLY. IT IS YOUR RESPONSIBILITY TO GET TICKETS SIGNED. CHARGE STANDBY TIME FOR ANYTHING OVER 15 MINUTES. IF YOU DON'T GET IT ON YOUR TICKET YOU WILL NOT BE PAID FOR IT.

CONTRACTING COMPANY SIGNATURE [Signature]

DRIVER NAME Arred LARUE (PRINTED)

DRIVER SIGNATURE [Signature]

OFFICE USE ONLY

BILLED HRS _____

PREVAIL WAGE

YES NO

RATE 65.00

6796

776279

HILLSBORO LANDFILL

Tik# 363727

A SUBSIDIARY OF USA WASTE, INC.
3205 SE MINTER BRIDGE ROAD
HILLSBORO, OR 97123
PHONE# 503/640-9427
PREPARED BY: DMK

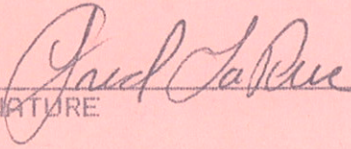
PHILLIP ENVIRONMENTAL
CUSTOMER ACCT# 5151589
VEHICLE ID# 6 DATE: 02/23/1995
TIME IN: 8:32 TIME OUT: 8:52
MANUAL TICKET# N/A

COMMODITY: SP_WASTE
HAULER: FRED LARUE HAULER TICKET NUMBER:
STATE AUTHORIZATION/ID NUMBER: HLD BY TAYLOR TRUCKING
SOURCE ID: WA - CLK -
GEN: P#4553 NAME: PROJ#:
GEN SOURCE/ADDRESS: PORT OF VANCOUVER
TONS(LBS): GROSS: 36.49(72980) TARE: 17.36(34720) NET: 19.13(38260)
RATE: 34.820 / TON QNTY: 19.13 PRETAX CHARGE: 666.11

PAYMENT METHOD: CHARGE: ACCOUNT RECE PAYMENT TOTAL: 710.49
DEPOSIT: 0 JAW IN METRO: N LOOP TAG#: 150

COMMODITIES: \$666.11
EXTRA CHARGES: \$0
TAXES AND FEES: \$44.38

ALL CHARGES: \$710.49
=====


SIGNATURE

772766

HILLSBORO LANDFILL

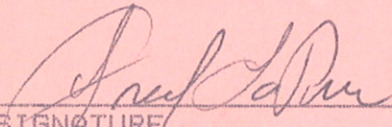
Tik# 363821

A SUBSIDIARY OF USA WASTE, INC.
3205 SE MINTER BRIDGE ROAD
HILLSBORO, OR 97123
PHONE# 503/640-9427
PREPARED BY: JAW

PHILLIP ENVIRONMENTAL
CUSTOMER ACCT# 5151589
VEHICLE ID# 6 DATE: 02/23/1999
TIME IN: 11:55 TIME OUT: 11:56
MANUAL TICKET# N/A

COMMODITY: SP_WASTE
HAULER: FRED LARUE HAULER TICKET NUMBER:
STATE AUTHORIZATION/ID NUMBER: HLD BY TAYLOR TRUCKING
SOURCE ID: WA - CLK -
GEN: P#4553 NAME: PROJ#:
GEN SOURCE/ADDRESS: PORT OF VANCOUVER
TONS(LBS): GROSS: 40.10(80200) TARE: 17.35(34700) NET: 22.75(45500)
RATE: 34.820 / TON QNTY: 22.75 PRETAX CHARGE: 792.16

PAYMENT METHOD: CHARGE: ACCOUNT RECE PAYMENT TOTAL: 844.94
DEPOSIT: 0 JAW IN METRO: N LOOP TAG#:


SIGNATURE

COMMODITIES: \$792.16
EXTRA CHARGES: \$0
TAXES AND FEES: \$52.78
ALL CHARGES: \$844.94
=====

772779

HILLSBORO LANDFILL

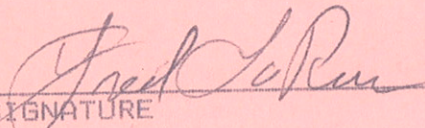
Tik# 363864

A SUBSIDIARY OF USA WASTE, INC.
3205 SE MINTER BRIDGE ROAD
HILLSBORO, OR 97123
PHONE# 503/640-9427
PREPARED BY: JLT

PHILLIP ENVIRONMENTAL
CUSTOMER ACCT# 5151589
VEHICLE ID# 6 DATE: 02/23/1999
TIME IN: 14:14 TIME OUT: 14:15
MANUAL TICKET# N/A

COMMODITY: SP_WASTE
HAULER: FRED LARUE HAULER TICKET NUMBER:
STATE AUTHORIZATION/ID NUMBER: HLD BY TAYLOR
SOURCE ID: WA - CLK -
GEN: P#4553 NAME: PROJ#:
GEN SOURCE/ADDRESS: PORT OF VANCOUVER
TONS(LBS): GROSS: 38.81(77620) TARE: 17.35(34700) NET: 21.46(42920)
RATE: 34.820 / TON QNTY: 21.46 PRETAX CHARGE: 747.24
PAYMENT METHOD: CHARGE: ACCOUNT RECE PAYMENT TOTAL: 797.03
DEPOSIT: 0 IN METRO: N LOOP TAG#: 0

COMMODITIES: \$747.24
EXTRA CHARGES: \$0
TAXES AND FEES: \$49.79
ALL CHARGES: \$797.03
=====


SIGNATURE

DATE 2-24-99 OREGON MILES 50 WASHINGTON MILES 20

SERIAL HAULED Concrete CUSTOMER PHILIP Enviromental JOB NO. _____

PICKUP SITE Port of Vancouver DELIVERY SITE HILLS BORO

FUEL Ø TRK# 9709 TRLR# 9984 OR PUC# NXB 923 TARE WT _____

START SITE 730 LUNCH Ø END SITE 1000 JOB HRS 2 1/2

YARD START 7.00 YARD END 10.00 TOTAL HRS 3

DELIVERED TO	PLANT TIME IN	PLANT TIME OUT	DUMP TIME IN	DUMP TIME OUT	DOWNTIME OR STANDBY	NET TONS HAULED	NET YARDS HAULED	REMARKS OR HAUL TKT #
1 HILLSBORO	7.30	7.35	8.45	8.55		17.35		772799
2 Landfill	9.55							
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								

A NEW FORM MUST BE USED FOR EACH JOB

OWNER/OPERATOR RESPONSIBLE FOR ALL INSURANCE AND ANY/ALL PROPERTY DAMAGE. TICKETS MUST BE SIGNED AND SUBMITTED AT THE END OF EACH DAY FOR PAYMENT.

RECORD YOUR TIME TO THE NEAREST 1/4 HOUR ON TOTAL HOURS ONLY. IT IS YOUR RESPONSIBILITY TO GET TICKETS SIGNED. CHARGE STANDBY TIME FOR ANYTHING OVER 15 MINUTES. IF YOU DON'T GET IT ON YOUR TICKET YOU WILL NOT BE PAID FOR IT.

CONTRACTING COMPANY SIGNATURE X

DRIVER NAME Fred LaRue
(PRINTED)

DRIVER SIGNATURE X

OFFICE USE ONLY

BILLED HRS

PREVAIL WAGE

YES NO

RATE 65.00

6797

772799

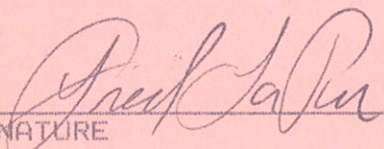
HILLSBORO LANDFILL

Tik# 363931

A SUBSIDIARY OF USA WASTE, INC.
3205 SE MINTER BRIDGE ROAD
HILLSBORO, OR 97123
PHONE# 503/640-9427
PREPARED BY: JAW

PHILLIP ENVIRONMENTAL
CUSTOMER ACCT# 5151589
VEHICLE ID# 6 DATE: 02/24/1999
TIME IN: 8:35 TIME OUT: 8:36
MANUAL TICKET# N/A

COMMODITY: SP_WASTE
HAULER: FRED LARUE HAULER TICKET NUMBER:
STATE AUTHORIZATION/ID NUMBER: HLD BY TAYLOR
SOURCE ID: WA - CLK -
GEN: P#4553 NAME: PROJ#:
GEN, SOURCE/ADDRESS: PORT OF VANCOUVER
TONS (LBS): GROSS: 35.03 (70060) TARE: 17.35 (34700) NET: 17.68 (35360)
RATE: 34.820 / TON QNTY: 17.68 PRETAX CHARGE: 615.62
PAYMENT METHOD: CHARGE: ACCOUNT RECE PAYMENT TOTAL: 656.64
DEPOSIT: 0 JAW IN METRO: N LOOP TAG#:


SIGNATURE

COMMODITIES: \$615.62
EXTRA CHARGES: \$0
TAXES AND FEES: \$41.02

ALL CHARGES: \$656.64
=====

DATE 4-19-99 OREGON MILES 14 WASHINGTON MILES 67 602
735

MATERIAL HAULED Waste CUSTOMER Philip Services JOB NO. 20427

PICKUP SITE Port of Vancouver DELIVERY SITE Hillsboro Landfill

FUEL _____ TRK # 9500 TRLR # 9900 OR PUC# 241951 TARE WT _____

START SITE 8:00 LUNCH Ø END SITE 12:30 JOB HRS 4 1/2

YARD START 7:30 YARD END 12:30 TOTAL HRS 5

DELIVERED TO	PLANT TIME IN	PLANT TIME OUT	DUMP TIME IN	DUMP TIME OUT	DOWNTIME OR STANDBY	NET TONS HAULED	NET YARDS HAULED	REMARKS OR HAUL TKT #
1	8:00	9:15	10:25	11:30		1893		786217
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								

A NEW FORM MUST BE USED FOR EACH JOB

OWNER/OPERATOR RESPONSIBLE FOR ALL INSURANCE AND ANY/ALL PROPERTY DAMAGE. TICKETS MUST BE SIGNED AND SUBMITTED AT THE END OF EACH DAY FOR PAYMENT.

ROUND YOUR TIME TO THE NEAREST 1/4 HOUR ON TOTAL HOURS ONLY. IT IS YOUR RESPONSIBILITY TO GET TICKETS SIGNED. CHARGE STANDBY TIME FOR ANYTHING OVER 15 MINUTES. IF YOU DON'T GET IT ON YOUR TICKET YOU WILL NOT BE PAID FOR IT.

OFFICE USE ONLY	
BILLED HRS	
PREVAIL WAGE	
<input type="checkbox"/> YES <input type="checkbox"/> NO	
RATE	<u>70.00</u>

CONTRACTING COMPANY SIGNATURE [Signature]
DRIVER NAME Mike P. Johnson (PRINTED) DRIVER SIGNATURE [Signature] 7523

788217

HILLSBORO LANDFILL

Tik# 37 275

A SUBSIDIARY OF USA WASTE, INC.
3205 SE MINTER BRIDGE ROAD
HILLSBORO, OR 97123
PHONE# 503/640-9427
PREPARED BY: DMK

CREDIT CARD
CUSTOMER ACCT# 5155
VEHICLE ID# 4
TIME IN: 11:16 TIME OUT: 11:18
MANUAL TICKET# N/A

COMMODITY: SP_WASTE
HAULER: MIKE JOHNSON
SOURCE ID: WA - CLK -
GEN: P#4553 NAME:

HAULER TICKET NUMBER:

PROJ#:

GEN SOURCE/ADDRESS: PORT OF VANCOUVER
TONS(LBS): GROSS: 36.96(73920) TARE: 18.93(37860) NET: 18.03(36060)
RATE: 34.820 / TON QNTY: 18.03 PRETAX CHARGE: 630.80

PAYMENT METHOD: PAYMENT: CREDIT CARD PAYMENT TOTAL: 630.63
DEPOSIT: 0 IN METRO: N LOOP TAG#:
CREDIT CARD#: 5527 EXPIRES:

COMMODITIES: 160.80
EXTRA CHARGES: \$0
TAXES AND FEES: 83

SIGNATURE

ALL CHARGES: 630.63

DATE 7-22-99 OREGON MILES 110 OFFROAD MILES 0 WASHINGTON MILES 25
 MATERIAL HAULED Demo CUSTOMER: PILLIP ENV JOB NO. _____
 PICKUP SITE MILL Plain EXT+KOTOBUKI DELIVERY SITE HILLSBORO ORE
 FUEL _____ TRK # 9709 TRLR # 9984 OR PUC# NXB 923 TARE WT _____
 START SITE 7.30 LUNCH 0 END SITE 2.00 JOB HRS 6 1/2
 YARD START 7.00 YARD END 2.00 TOTAL HRS 7

DELIVERED TO	PLANT TIME IN	PLANT TIME OUT	DUMP TIME IN	DUMP TIME OUT	DOWNTIME OR STANDBY	NET TONS HAULED	NET YARDS HAULED	REMARKS OR HAUL TKT #
1 Hillsboro	7.30	8.40	9.25	10.10			24	816885
2 Landfill	11.05	11.55	12.55	1.15			24	816966
3	2.00							
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								Send scale ticket
22								
23								

A NEW FORM MUST BE USED FOR EACH JOB

OWNER/OPERATOR RESPONSIBLE FOR ALL INSURANCE AND ANY/ALL PROPERTY DAMAGE. TICKETS MUST BE SIGNED AND SUBMITTED AT THE END OF EACH DAY FOR PAYMENT.

RECORD YOUR TIME TO THE NEAREST 1/4 HOUR ON TOTAL HOURS ONLY. IT IS YOUR RESPONSIBILITY TO GET ALL TICKETS SIGNED. CHARGE STANDBY TIME FOR ANYTHING OVER 15 MINUTES. IF YOU DON'T GET IT ON YOUR TICKET YOU WILL NOT BE PAID FOR IT.

CONTRACTING COMPANY SIGNATURE X

DRIVER NAME Arac Labue
(PRINTED)

DRIVER SIGNATURE X *Arac Labue*

OFFICE USE ONLY

BILLED HRS

PREVAIL WAGE

YES NO

RATE 70⁰⁰

9244

816985

WILLSBORO LANDFILL FAX# 2579313

WILLSBORO
CREDIT CARD
CUSTOMER ACCT# 515555
VEHICLE TAG # DATE: 07/22/79
TIME IN: 9:31 TIME OUT: 9:56
MANUAL TICKETS N/A

A SUBSIDIARY OF USA WASTE, INC.
3205 SE WINTER BRIDGE ROAD
HILLSBORO, OR 97123
PHONE# 503/640-9427
PREPARED BY: TLC

COMMODITY: SP_WASTE JOB: PILLIP ENV.
STATE AUTHORIZATION/ID NUMBER: HOLD BY TAYLOR

SOURCE ID: W0 - CLK - FROTH:
GEN: P#4553
GEN SOURCE/ADDRESS: PORT OF VANCOUVER
TONS (LBS): GROSS: 22.67 (45,340) TARIFF 17.07 (34,140) NET: 5.60 (11,200)
RATE: 34.820 / TON DUTY: 5.60 PRTY CHARGE: 194.99

PAYMENT METHOD: PAYMENT: CREDIT CARD PAYMENT TOTAL: 207.99
DEPOSIT: W TLC IN METRO: N LOUP TAG#: 124
CREDIT CARD#: 0974 EXPIRES: /

WILLSBORO
COMMODITIES: \$194.99
EXTRA CHARGES: \$0
TAXES AND FEES: \$12.99

ALL CHARGES: \$207.99
SIGNATURE

816966

HILLSBORO LANDFILL T 4 44 334271

|||||

A SUBSIDIARY OF USA WASTE, INC.
3245 SE MINTER BRIDGE ROAD
HILLSBORO, OR 97123
PHONE# 503/644-9427
PREPARED BY: TLC

CREDIT CARD
CUSTOMER ACCT# 515555
VEHICLE ID# 6 DATE: 07/22/13
TIME IN: 12:22 TIME OUT: 12:49
MANUAL TICKETS# N/A

COMMODITY: SP_WASTE

FOR: HLD BY TAYLOR

HAULER: FRED

HAULER TICKET NUMBER:

SOURCE ID: WA - CLK -

SEN: P#4553 NONE:

SEN SOURCE/ADDRESS: PORT OF VANCOUVER

TONS(LBS): GROSS: 22.59(45180) TARE: 17.06(34040) NET: 5.57(11140)
RATE: 34.020 / TON DMTY: 5.57 PERCENT CHARGE: 193.95

PAYMENT METHOD: PAYMENT: CREDIT CARD

PAID BY: 206.07

DEPOSIT: M DDK

IN REFUND: 1.000 TARE: 12.4

CREDIT CARD#: 827A

EXPIRES:

|||||

COMMITTEES 1173.05
EXTRA CHARGES: 40
TAXES AND FEES: 115.92

SIGNATURE

ALL CHARGES: 1296.07

Appendix D
Letters from Ecology

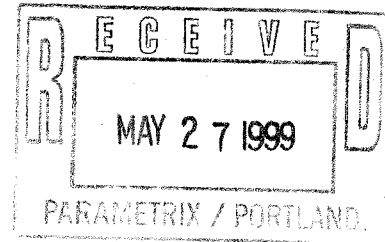


COPY

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

MS: 5-70 • 2108 Grand Boulevard • Vancouver, Washington 98661-4622 • (360) 690-7171

May 26, 1999



Heidi Rosenberg
Port of Vancouver
P.O. Box 1180
Vancouver WA 98666

Dear Ms. Rosenberg:

Re: Review Of Interim Report On TCE-Impacted Soil Treatment At The Former Building 2220 Site

As you are aware, Terry Belunes submitted the above mentioned report and cover letter dated May 12, 1999. The letter asked that I provide you with my written concurrence on the assessment that Cell 1 meets the established cleanup target level for TCE (500 ppb).

I have reviewed the interim report and concur that Cell 1 meets the cleanup target level. Although subcell 6 had TCE levels exceeding 500 ppb, it appears that additional treatment brought the concentrations down below 500. And although subcells 7 and 13 had elevated levels of TCE, it appears that soil from those subcells was added to Cell 2 for further treatment. My understanding is that the remaining soil in Cell 1 will be moved to another location for use on Port property.

If you should have any questions regarding this letter, please call me at 690-4798.

Sincerely,

Lin Bernhardt
Site Manager
Vancouver Field Office

LB:lh

cc: Terry Belunes, Parametrix
Craig Rankine, Department of Ecology

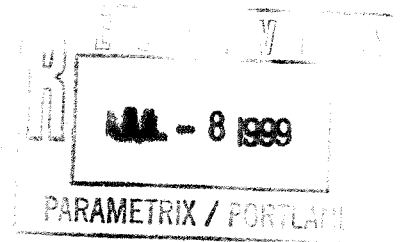
000919





STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

MS: S-70 • 2108 Grand Boulevard • Vancouver, Washington 98661-4622 • (360) 690-7171



July 7, 1999

Heidi Rosenberg
Port of Vancouver
P.O. Box 1180
Vancouver, WA 98666

FILE COPY

Subject: Review of Interim Report on TCE-Impacted Soil Treatment at the former Building 2220 site, Cell 2

Dear Ms. Rosenberg:

Ecology has reviewed the Port's *Interim Report for Treatment of TCE-Impacted Soil Stockpile Treatment Cell #2, Port of Vancouver, Washington* dated June 8, 1999. This letter is to let you know that I concur with the reports assessment that Cell 2 meets the established cleanup target level for TCE.

The report states that two subcells (7 and 13) from Cell 1 had been added to Cell 2 for additional treatment and that subsequent sampling shows these two subcells to be within treatment target levels (i.e. below 500 ppb). The report shows that all other subcells were also within target levels with the exception of subcell 41 which will be treated for an additional period of time.

Based on the above information and the interim report, we concur that Cell 2 meets the cleanup target levels, with the exception of subcell 41. Ecology concurs that the treated soil in Cells 1 and 2, with the exception of subcell 41 until sampling verifies it meets cleanup target levels, can be moved to another location for use on Port property.

If you should have any questions regarding this letter, please call me at 690-4798 .

Sincerely,

Lin Bernhardt
Site Manager

Terry Belunes, Parametrix
Craig Rankine, Dept. of Ecology

000925





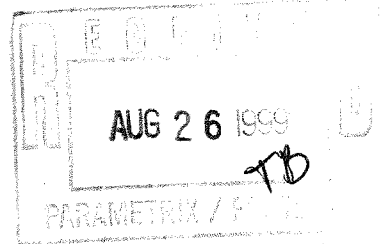
COPY

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

MS: S-70 • 2108 Grand Boulevard • Vancouver, Washington 98661-4622 • (360) 690-7171

August 24, 1999

Heidi Rosenberg
Port of Vancouver
P.O. Box 1180
Vancouver, WA 98666



Dear Ms. Rosenberg:

Re: Review Of Interim Report On TCE-Impacted Soil Treatment At The Former Building 2220 Site, Cell 3

Ecology has reviewed the Port's *Interim Report for Treatment of TCE-Impacted Soil Stockpile Treatment Cell #3, Port of Vancouver, Washington* dated July 27, 1999. This letter is to let you know that I concur with the reports assessment that Cell 3 meets the established cleanup target level for TCE (i.e. below 500 ppb).

The report states that one subcell (#41) from Cell 2 did not meet cleanup levels and was therefore added to Cell 3 for additional treatment. Subsequent sampling shows this subcell to be within treatment target levels. Based on the above information and the interim report, we concur that Cell 3 meets the cleanup target levels and can be moved to another location for use on Port property.

It appears that all of the soil in the stockpile has now been treated and can be moved to another location. Ecology requests that erosion control measures be put in place around the remaining stockpile if it is not moved by October 1999.

If you should have any questions regarding this letter, please call me at (360) 690-4798.

Sincerely,

Lin Bernhardt
Site Manager
Vancouver Field Office

LB:lh

Terry Belunes, Parametrix
Craig Rankine, Dept. of Ecology, VFO

000529



Appendix E-1
Monitoring Well Boring Logs

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: SANDRA MATTHEWS
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: 5' CORE
 Groundwater Sample Method: N/A

Boring Number: MW-1
 Sheet: 1 OF 1
 Total Boring Depth: 25 FEET
 Date Started/Completed: JANUARY 30, 1997
 Ground Level Elevation: 26.80 FEET NGVD
 Measuring Point Elevation: 26.29 FEET NGVD
 Static Water Level: 6.34 FEET NGVD Date: 4/24/98
 Northing: 119596.0 Easting: 1078680.9

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 1 feet: Asphalt with gravel sub-base	
			5	CEMENT 0-2 FEET	1 - 14 feet: Silty sand (SM), fine-grained, dark yellowish brown 10YR 3/4, ~15% fines in upper foot	
			10	BENTONITE CHIPS 2-12 FEET		
	36		15	2-INCH THREADED SCHEDULE 40 PVC CASING GROUND SURFACE - 25 FEET	⊙ 12 feet: dark olive brown 2.5Y 3/3, moist	
	36		20	8 1/4-INCH BOREHOLE 0-25 FEET	14 - 25 feet: Poorly graded sand (SP), fine-grained, olive brown 2.5Y 4/3, slightly moist	
	27		25	10-20 MESH SILICA SAND 12-25 FEET	⊙ 19 feet: saturated	
			30	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 15-25 FEET	⊙ 25 feet: End of boring	
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS, INC
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-13
 Sheet: 1 OF 1
 Total Boring Depth: 30 FT / WELL DEPTH: 29 FT
 Date Started/Completed: OCTOBER 10, 2000
 Ground Level Elevation: 33.19 FT NGVD
 Measuring Point Elevation: 35.42 FT NGVD
 Static Water Level: 23.73 FT NGVD Date: 10/30/00
 Northing: 120183 Easting: 1077319.6

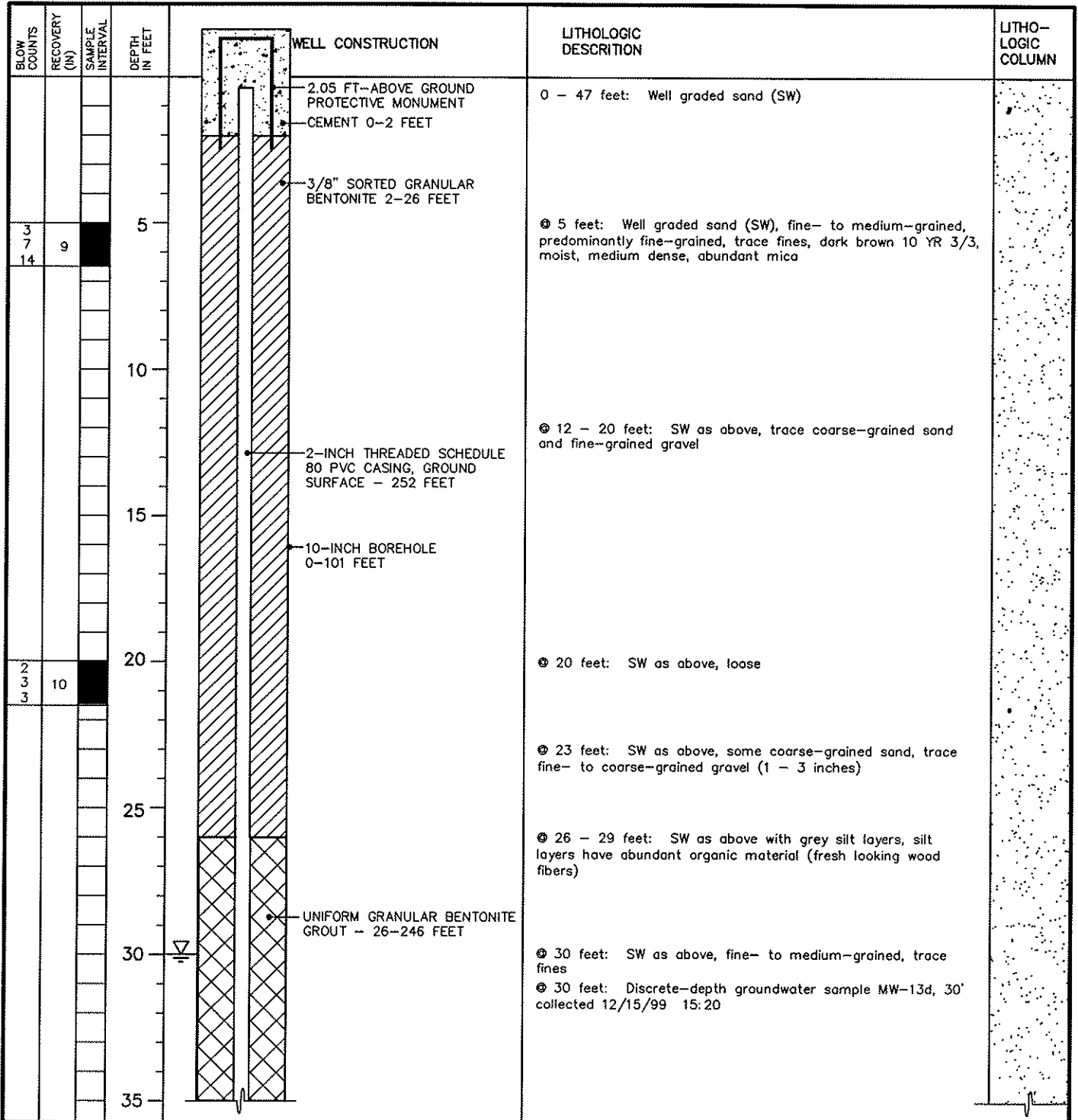
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				<p>2.23 FT - ABOVE GROUND PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8" SORTED GRANULAR BENTONITE 2-16 FEET 2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 19 FEET 8 1/4-INCH BOREHOLE 0-30 FEET 10-20 MESH SILICA SAND 16-30 FEET 2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 19-29 FEET</p>		
6 7 10	18		5		0 - 18 feet: Well graded sand (SW), predominantly fine-grained, ~ 15% medium- to coarse-grained, grey/brown, medium dense FILL.	
5 7 8	18		10			
9 11 12	10		15			
5 8 9	18		20		18 - 23 feet: Poorly graded sand (SP), fine-grained, trace fines, tan/brown, moist, medium dense, abundant mica flakes	
			25		23 - 28 feet: Silt with sand (ML), ~ 35% very fine-grained sand, non-plastic, tan/brown, saturated	
	15					
6 11 13			30		28 - 30 feet: Poorly graded sand (SP), fine-grained, grey, saturated, basaltic	
				@ 30 feet: End of boring		

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-13d
 Sheet: 1 OF 8
 Total Boring Depth: 268 FT/ WELL DEPTH: 262 FT
 Date Started/Completed: DEC 15, 1999/JAN 20, 2000
 Ground Level Elevation: 33.19 FT NGVD
 Measuring Point Elevation: 35.24 FT NGVD
 Static Water Level: 30.16 FT NGVD Date: 10/30/00
 Northing: 120173 Easting: 1077318



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-13d
 Sheet: 2 OF 8
 Total Boring Depth: 268 FT/ WELL DEPTH: 262 FT
 Date Started/Completed: DEC 15, 1999/JAN 20, 2000
 Ground Level Elevation: 33.19 FT NGVD
 Measuring Point Elevation: 35.24 FT NGVD
 Static Water Level: 30.16 FT NGVD Date: 10/30/00
 Northing: 120173 Easting: 1077318

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
10 13 30	14		40	<p>UNIFORM GRANULAR BENTONITE GROUT - 26-246 FEET</p> <p>2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 252 FEET</p> <p>10-INCH BOREHOLE 0-101 FEET</p>	<p>⊙ 35 feet: Well graded sand with silt (SW), fine- to medium-grained, predominantly fine-grained, ~10% fines, dark brown 10 YR 3/3, dense</p> <p>⊙ 45 feet: Silt content decreasing with depth</p>	
3 4 10	2		50		<p>47 - 98 feet: Well graded sand with gravel/well graded gravel with sand (SW/GW), sand fine- to coarse-grained, gravel clast size and content varies, saturated throughout</p> <p>⊙ 50 feet: Well graded sand and gravel (SW), sand is predominantly medium- to coarse-grained, gravel is rounded, medium dense, sand and gravel predominantly basaltic</p> <p>⊙ 50 feet: Discrete-depth groundwater sample MW-13d, 50', collected 12/16/99 13:35</p> <p>⊙ 52 - 57 feet: Well graded gravel with sand (GW), gravel fine- to coarse-grained (1 to 6 inches in diameter), rounded, sand fine- to coarse-grained, predominantly medium- to coarse-grained, sand and gravel are basaltic</p> <p>⊙ 57 - 60 feet: SW with gravel, gravel predominantly 1 - 3 inches in diameter, trace up to 6 inches in diameter</p> <p>⊙ 60 - 65 feet: SW with gravel, gravel generally 1 - 2 inches in diameter, trace up to 6 inches in diameter</p>	
3 31 50	9		65		<p>⊙ 65 feet: Well graded sand with gravel (SW), sand fine- to coarse-grained, predominantly coarse-grained and angular, ~35% gravel up to 1.5 inches in diameter in sampler, up to 4 inches in diameter in bailer</p> <p>⊙ 67 - 70 feet: Gravel content decreasing to trace amount of fine- to coarse-grained</p>	
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-13d
 Sheet: 4 OF 8
 Total Boring Depth: 268 FT/ WELL DEPTH: 262 FT
 Date Started/Completed: DEC 15, 1999/JAN 20, 2000
 Ground Level Elevation: 33.19 FT NGVD
 Measuring Point Elevation: 35.24 FT NGVD
 Static Water Level: 30.16 FT NGVD Date: 10/30/00
 Northing: 120173 Easting: 1077318

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110	<p style="margin-left: 20px;">2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 252 FEET</p> <p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT 26-246 FEET</p> <p style="margin-left: 20px;">8-INCH BOREHOLE 101-268 FEET</p>	SW/GW as above	
50/2'			115		<p>109 - 182 feet: Well graded gravel with sand (GW) in silty to silty sand matrix, gravel up to 5 inches in diameter, predominantly rounded, basaltic, matrix is fine-grained, brown, silty sand, saturated</p> <p>⊙ 110 feet: Discrete-depth groundwater sample MW-13d, 110', collected 12/22/99 14:55</p> <p>⊙ 112 - 119 feet: GW as above, silty matrix, sand content in matrix increasing with depth, gravel up to 4 - 5 inches in diameter</p> <p>⊙ 119 - 122 feet: GW as above, some layers of more sandy matrix, gravel predominantly 1 - 2 inches in diameter, some up to 4 - 5 inches in diameter</p> <p>⊙ 126 - 132 feet: GW as above, predominantly <3 inches in diameter, sand fine- to coarse-grained, possibly cemented</p> <p>⊙ 130 feet: Discrete-depth groundwater sample MW-13d, 130', collected 12/28/99 11:50</p> <p>⊙ 136 - 152 feet: GW as above, silt content increasing with depth, gravel size decreasing to <1 inch in diameter at 150 feet</p>	
			120			
			125			
			130			
			135			
			140			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-13d
 Sheet: 5 OF 8
 Total Boring Depth: 268 FT/ WELL DEPTH: 262 FT
 Date Started/Completed: DEC 15, 1999/JAN 20, 2000
 Ground Level Elevation: 33.19 FT NGVD
 Measuring Point Elevation: 35.24 FT NGVD
 Static Water Level: 30.16 FT NGVD Date: 10/30/00
 Northing: 120173 Easting: 1077318

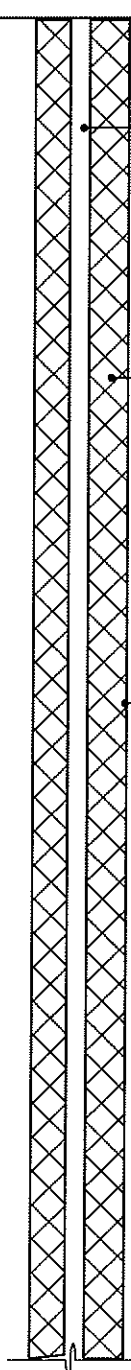

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145	<p style="margin-left: 20px;">2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE ~ 252 FEET</p> <p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT 26-246 FEET</p> <p style="margin-left: 20px;">8-INCH BOREHOLE 101-268 FEET</p>	GW as above Ⓞ 150 feet: Discrete-depth groundwater sample MW-13d, 150', collected 12/30/99 08:20 Ⓞ 152 - 160 feet: GW as above, up to 4 inches in diameter in fine-grained silty sand matrix Ⓞ 162 - 170 feet: GW as above, predominantly 1 - 3 inches in diameter in fine-grained silty brown sand matrix Ⓞ 170 feet: Discrete-depth groundwater sample MW-13d, 170', collected 1/3/00 09:40 Ⓞ 170 - 182 feet: GW as above, predominantly 1 - 2 inches in diameter in fine-grained silty brown sand matrix	
			150			
			155			
50	0		160			
			165			
			170			
			175			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-13d
 Sheet: 6 OF 8
 Total Boring Depth: 268 FT/ WELL DEPTH: 262 FT
 Date Started/Completed: DEC 15, 1999/JAN 20, 2000
 Ground Level Elevation: 33.19 FT NGVD
 Measuring Point Elevation: 35.24 FT NGVD
 Static Water Level: 30.16 FT NGVD Date: 10/30/00
 Northing: 120173 Easting: 1077318

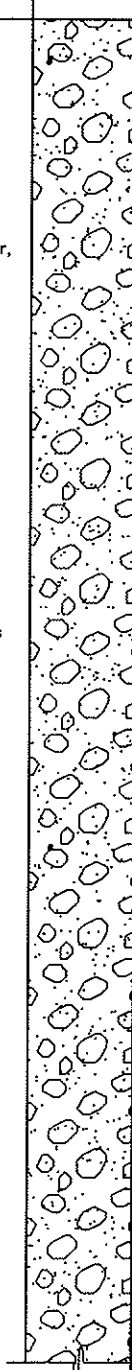
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180	 <p>2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 252 FEET</p> <p>UNIFORM GRANULAR BENTONITE GROUT 26-246 FEET</p> <p>8-INCH BOREHOLE 101-268 FEET</p>	<p>GW as above</p> <p>182 - 262 feet: Well graded gravel with sand (GW), gravel up to 6 inches in diameter, loose, predominantly rounded, basaltic, some cementation on some grains, sand content variable, trace amount of silt, saturated</p> <p>⊙ 182 - 185 feet: GW as above, 1 - 3 inches in diameter</p> <p>⊙ 185 - 190 feet: GW as above, ½ to 4 inches in diameter, predominantly <2 inches in diameter, trace >2 inches in diameter, some fine-grained sand, little or no fines, loose, some cementation, trace mica</p> <p>⊙ 190 feet: Discrete-depth groundwater sample MW-13d, 190', collected 1/4/00 11:50</p> <p>⊙ 190 - 193 feet: GW as above, ½ to 3-inches in diameter, predominantly <1-inch in diameter, ~15-20% fine-grained sand, trace cementation, trace mica flakes, trace to no silt, loose</p> <p>⊙ 196 - 202 feet: GW as above, 1 - 2 inches in diameter, some fine sand, no fines, possibly cemented</p> <p>⊙ 202 - 204 feet: GW as above, ½ - 3 inches in diameter, loose, trace cementation on grains, ~20% fine-grained sand</p> <p>⊙ 204 - 210 feet: GW as above, loose</p> <p>⊙ 210 feet: GW as above, increased sand content</p>	
			185			
			190			
			195			
			200			
			205			
			210			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-13d
 Sheet: 7 OF 8
 Total Boring Depth: 268 FT/ WELL DEPTH: 262 FT
 Date Started/Completed: DEC 15, 1999/JAN 20, 2000
 Ground Level Elevation: 33.19 FT NGVD
 Measuring Point Elevation: 35.24 FT NGVD
 Static Water Level: 30.16 FT NGVD Date: 10/30/00
 Northing: 120173 Easting: 1077318

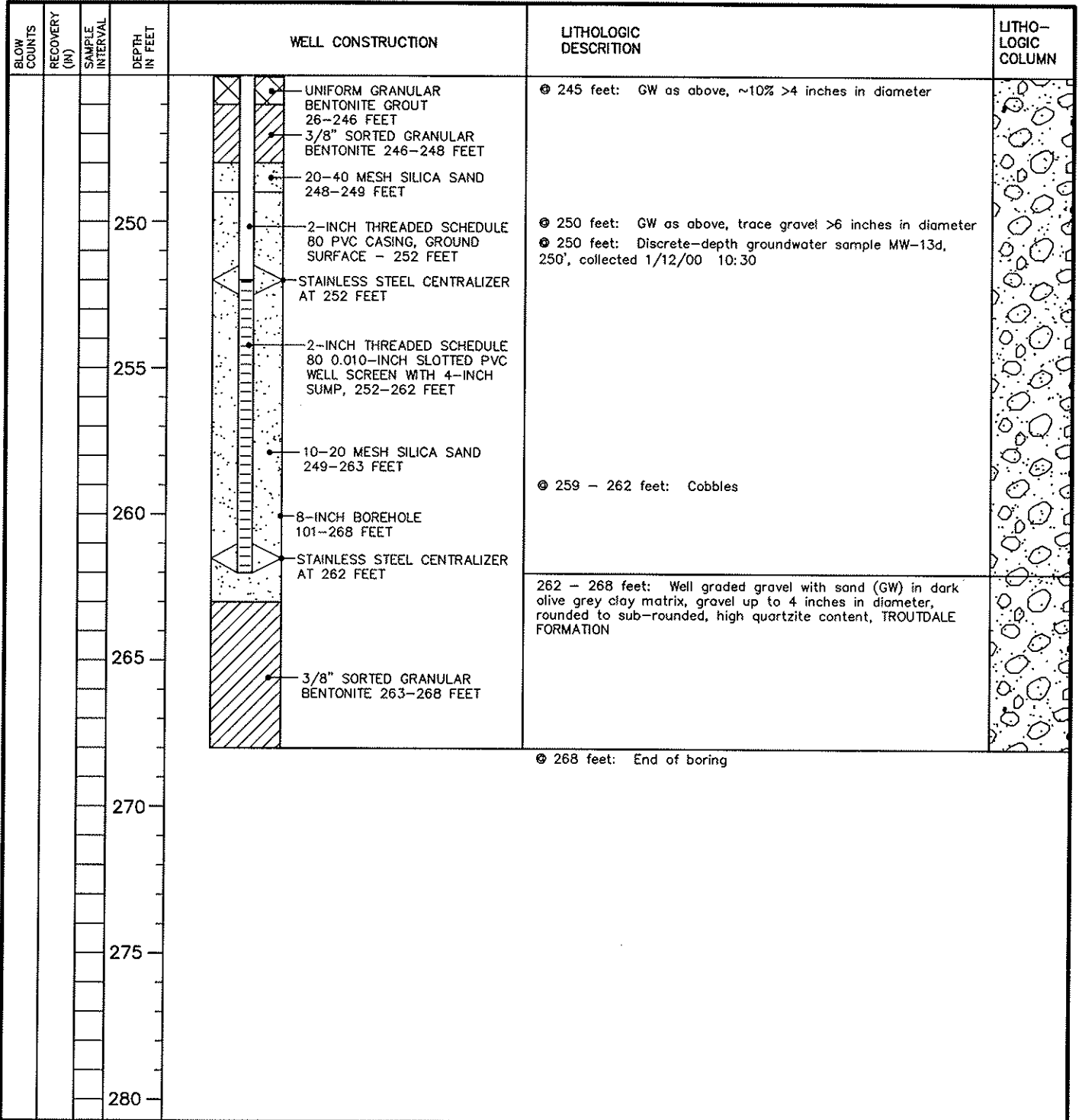
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			215	<p>2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 252 FEET</p> <p>UNIFORM GRANULAR BENTONITE GROUT 26-246 FEET</p> <p>8-INCH BOREHOLE 101-268 FEET</p>	<p>⊙ 210 feet: Discrete-depth groundwater sample MW-13d, 210', collected 1/6/00 13:42</p> <p>⊙ 216 - 218 feet: GW as above, up to 6 inches in diameter, ~60% fine- to coarse-grained sand, some cementation on some gravel clasts</p> <p>⊙ 220 feet: GW as above, trace fines</p> <p>⊙ 226 - 230 feet: GW as above, increase in sand and fines</p> <p>⊙ 230 feet: Discrete-depth groundwater sample MW-13d, 230', collected 1/10/00 12:05</p> <p>⊙ 234 feet: GW as above, 1/2 - 2 inches in diameter, some fines</p> <p>⊙ 236 feet: GW as above, some >4 inches in diameter, ~30% sand, loose</p>	
			220			
			225			
			230			
			235			
			240			
			245			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-13d
 Sheet: 8 OF 8
 Total Boring Depth: 268 FT/ WELL DEPTH: 262 FT
 Date Started/Completed: DEC 15, 1999/JAN 20, 2000
 Ground Level Elevation: 33.19 FT NGVD
 Measuring Point Elevation: 35.24 FT NGVD
 Static Water Level: 30.16 FT NGVD Date: 10/30/00
 Northing: 120173 Easting: 1077318



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-14d
 Sheet: 1 OF 7
 Total boring Depth: 226 FT / WELL DEPTH: 221 FT
 Date Started/Completed: FEB. 29, 2000/MARCH 27, 2000
 Ground Level Elevation: 26.5 FEET NGVD
 Measuring Point Elevation: 26.37 FEET NGVD
 Static Water Level: 21.09 FEET NGVD Date: 10/30/00
 Northing: 119128 Easting: 1078405

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 2 feet: Asphalt with gravel sub-base	.
			5	CEMENT 0-2 FEET	2 - 5 feet: Sand and gravel FILL	○
			10	3/8" SORTED GRANULAR BENTONITE 2-20 FEET	5 - 11 feet: Silt (ML), trace coarse-grained sand, brown with grey mottling	
			15	2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 211 FEET	11 - 41 feet: Poorly graded to well graded sand (SP to SW)	●
			20	10-INCH BOREHOLE 0-101 FEET	⊙ 11 feet: Poorly graded sand (SP), fine-grained, brown	●
			25		⊙ 15 feet: Abundant mica flakes	●
			30	UNIFORM GRANULAR BENTONITE GROUT - 20-204 FEET	⊙ 20 feet: SP as above, grey, less mica	●
			35		⊙ 24 feet: Discrete-depth groundwater sample MW-14d, 24', collected 2/29/00 07:55	●
					⊙ 30 feet: Well graded sand (SW), fine- to coarse-grained, brown	●

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-14d
 Sheet: 2 OF 7
 Total boring Depth: 226 FT / WELL DEPTH: 221 FT
 Date Started/Completed: FEB. 29, 2000/MARCH 27, 2000
 Ground Level Elevation: 26.5 FEET NGVD
 Measuring Point Elevation: 26.37 FEET NGVD
 Static Water Level: 21.09 FEET NGVD Date: 10/30/00
 Northing: 119128 Easting: 1078405

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
			40	<p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT - 20-204 FEET</p> <p style="margin-left: 20px;">2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 211 FEET</p> <p style="margin-left: 20px;">10-INCH BOREHOLE 0-101 FEET</p>	Ⓞ 35 feet: Up to 10% fine-grained gravel (< 1/8 inch in diameter) Ⓞ 40 feet: Poorly graded sand (SP), coarse-grained, trace fine-grained gravel, angular Ⓞ 40 feet: Discrete-depth groundwater sample MW-14d, 40', collected 2/29/00 11:10		
			45			41 - 58 feet: Well graded gravel with sand (GW), gravel is fine- to coarse-grained (up to 6 inches in diameter), sand is coarse-grained, dark grey Ⓞ 47 feet: GW as above, 1 - 5 inches in diameter	
			50			58 - 90 feet: Well graded sand with gravel (SW), coarse-grained, variable gravel content and size Ⓞ 60 feet: Some gravel >6 inches in diameter Ⓞ 60 feet: Discrete-depth groundwater sample MW-14d, 60', collected 3/1/00 08:00	
			55				
			60				
			65				
			70				

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-14d
 Sheet: 3 OF 7
 Total boring Depth: 226 FT / WELL DEPTH: 221 FT
 Date Started/Completed: FEB. 29, 2000/MARCH 27, 2000
 Ground Level Elevation: 26.5 FEET NGVD
 Measuring Point Elevation: 26.37 FEET NGVD
 Static Water Level: 21.09 FEET NGVD Date: 10/30/00
 Northing: 119128 Easting: 1078405

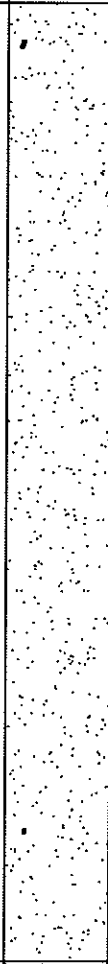
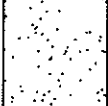


BLOW COUNTS	RECOVERY (M)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	<p>2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 211 FEET</p> <p>UNIFORM GRANULAR BENTONITE GROUT 20-204 FEET</p>	<p>70 feet: SW as above, increasing sand content</p> <p>78 feet: SW as above, coarse-grained sand with ~10% gravel (up to 2 inches in diameter)</p> <p>80 feet: Discrete-depth groundwater sample MW-14d, 80', collected 3/1/00 15:08</p>	75
			80			80
			85	<p>10-INCH BOREHOLE 0-101 FEET</p>		85
			90		<p>90 - 130 feet: Poorly graded sand (SP), coarse-grained, trace gravel, trace fines, dark grey</p> <p>92 feet: SP as above, trace fine-grained gravel (up to 1/2 inch in diameter)</p> <p>95 - 110 feet: SP as above, trace fine to coarse-grained gravel (up to 3 inches in diameter)</p>	90
			95			95
			100	<p>8-INCH BOREHOLE 101-226 FEET</p>	<p>100 feet: Discrete-depth groundwater sample MW-14d, 100', collected 3/2/00 13:22</p>	100
			105			105

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-14d
 Sheet: 4 OF 7
 Total boring Depth: 226 FT / WELL DEPTH: 221 FT
 Date Started/Completed: FEB. 29, 2000/MARCH 27, 2000
 Ground Level Elevation: 26.5 FEET NGVD
 Measuring Point Elevation: 26.37 FEET NGVD
 Static Water Level: 21.09 FEET NGVD Date: 10/30/00
 Northing: 119128 Easting: 1078405

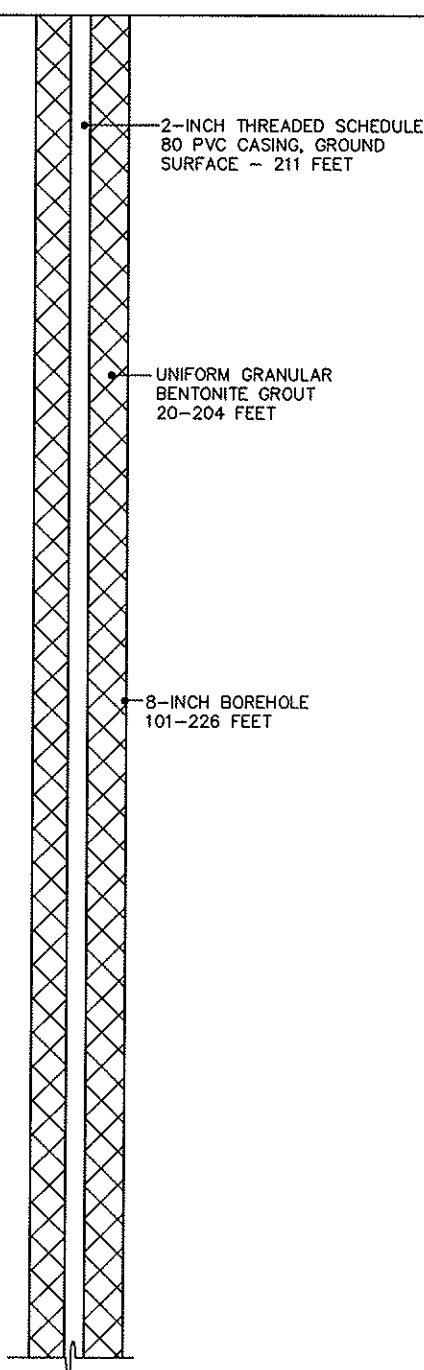
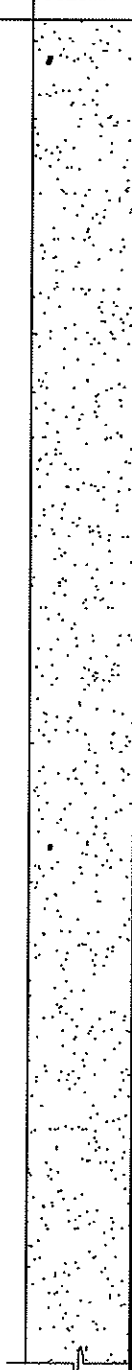
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110	<p>2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 211 FEET</p> <p>UNIFORM GRANULAR BENTONITE GROUT 20-204 FEET</p> <p>8-INCH BOREHOLE 101-226 FEET</p>	<p>⊙ 110 feet: SP as above, trace fines, dark grey</p> <p>⊙ 120 feet: Discrete-depth groundwater sample MW-14d, 120', collected 3/7/00 12:57</p>	
			115			
			120			
			125			
			130		<p>130 - 133 feet: Well graded sand (SW), fine- to coarse-grained, trace light brown fines, dark grey</p>	
			135		<p>133 - 135 feet: Well graded gravel (GW), fine- to coarse-grained, (up to 4 inches in diameter), well rounded, basaltic</p>	
			140		<p>135 - 178 feet: Well graded sand (SW), fine- to coarse-grained, trace fines, dark grey</p> <p>⊙ 138 feet: SW as above, medium-grained, silty</p>	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-14d
 Sheet: 5 OF 7
 Total boring Depth: 226 FT / WELL DEPTH: 221 FT
 Date Started/Completed: FEB. 29, 2000/MARCH 27, 2000
 Ground Level Elevation: 26.5 FEET NGVD
 Measuring Point Elevation: 26.37 FEET NGVD
 Static Water Level: 21.09 FEET NGVD Date: 10/30/00
 Northing: 119128 Easting: 1078405

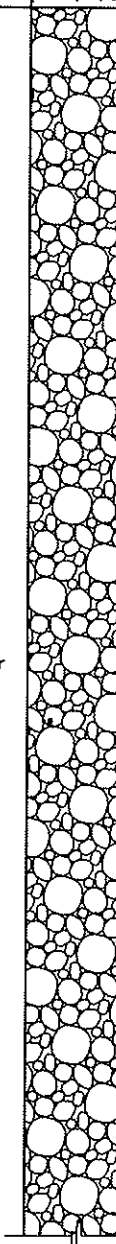
BLOW COUNTS	RECOVERY (M)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145	 <p>2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE ~ 211 FEET</p> <p>UNIFORM GRANULAR BENTONITE GROUT 20-204 FEET</p> <p>8-INCH BOREHOLE 101-226 FEET</p>	<p>⊙ 140 feet: Discrete--depth groundwater sample MW-14d, 140', collected 3/8/00 09:20</p> <p>⊙ 150 feet: SW as above, grain size increasing</p> <p>⊙ 155 feet: SW as above, ~15% fines, fines are light brown with occasional red streaks</p> <p>⊙ 160 feet: Discrete--depth groundwater sample MW-14d, 160', collected 3/8/00 15:40</p>	
			150			
			155			
			160			
			165			
			170			
			175			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-14d
 Sheet: 6 OF 7
 Total boring Depth: 226 FT / WELL DEPTH: 221 FT
 Date Started/Completed: FEB. 29, 2000/MARCH 27, 2000
 Ground Level Elevation: 26.5 FEET NGVD
 Measuring Point Elevation: 26.37 FEET NGVD
 Static Water Level: 21.09 FEET NGVD Date: 10/30/00
 Northing: 119128 Easting: 1078405

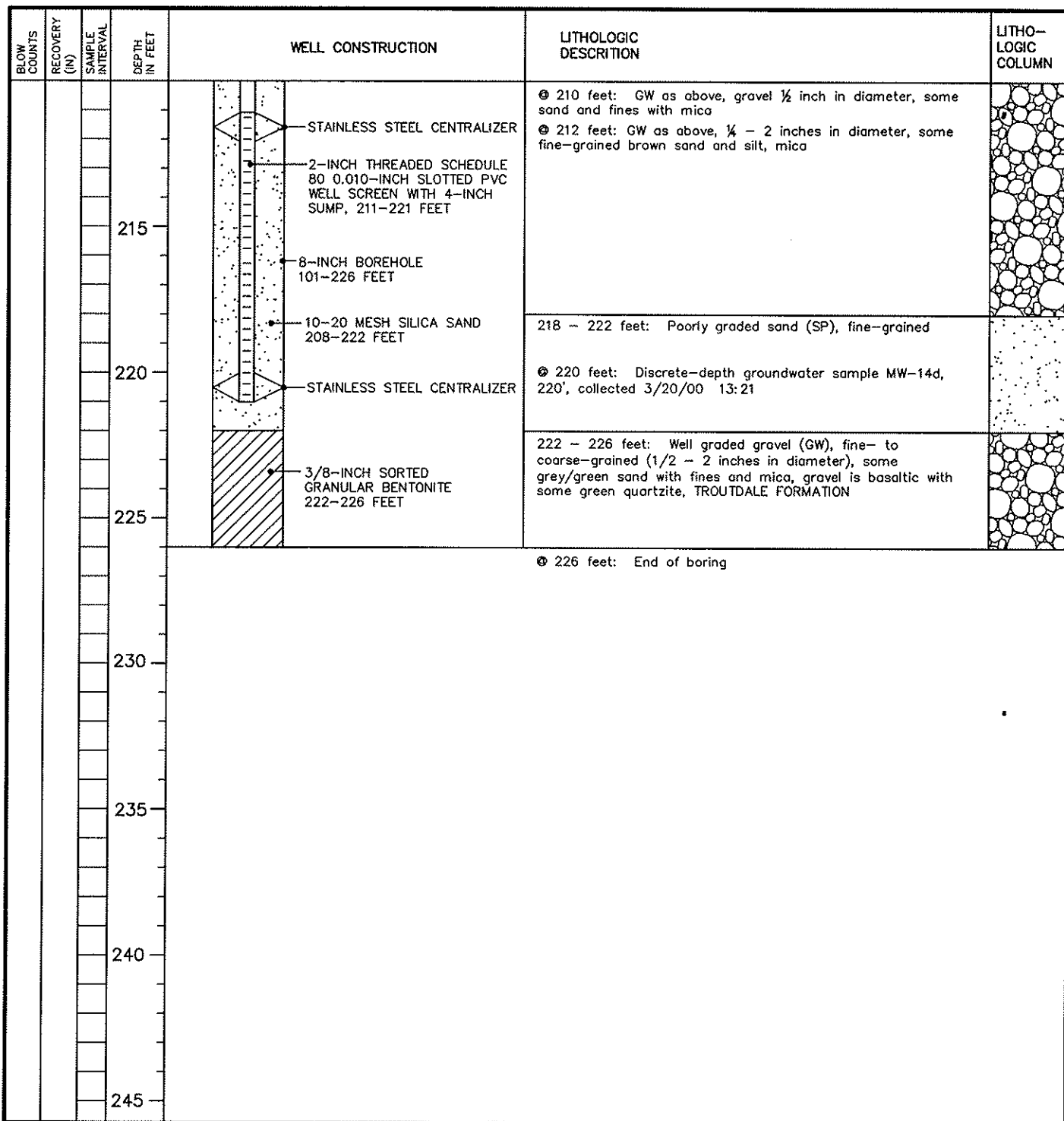
BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180	<p>2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 211 FEET</p> <p>UNIFORM GRANULAR BENTONITE GROUT 20-204 FEET</p> <p>8-INCH BOREHOLE 101-226 FEET</p>	<p>178 - 218 feet: Well graded gravel (GW), fine- to coarse-grained, some sand and fines, well rounded to sub-angular, predominantly basaltic</p> <p>⊗ 178 feet: Gravel 1/2 inch in diameter</p> <p>⊗ 180 feet: Discrete-depth groundwater sample MW-14d, 180', collected 3/11/00 15:05</p>	
			185	<p>3/8" SORTED GRANULAR BENTONITE 204-207 FEET</p> <p>20-40 MESH SILICA SAND 207-208 FEET</p> <p>10-20 MESH SILICA SAND 208-222 FEET</p>	<p>⊗ 185 feet: GW as above, gravel 1/4 - 3 inches in diameter</p> <p>⊗ 190 feet: GW as above, clean</p> <p>⊗ 195 feet: GW as above, gravel 1/8 - 2 inches in diameter</p> <p>⊗ 200 feet: Discrete-depth groundwater sample MW-14d, 200', collected 3/17/00 10:19</p> <p>⊗ 202 feet: GW as above, gravel 1/8 - 1 1/2 inches in diameter, some sand</p> <p>⊗ 205 feet: Some mica in sand</p>	
			190			
			195			
			200			
			205			
			210			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-14d
 Sheet: 7 OF 7
 Total boring Depth: 226 FT / WELL DEPTH: 221 FT
 Date Started/Completed: FEB. 29, 2000/MARCH 27, 2000
 Ground Level Elevation: 26.5 FEET NGVD
 Measuring Point Elevation: 26.37 FEET NGVD
 Static Water Level: 21.09 FEET NGVD Date: 10/30/00
 Northing: 119128 Easting: 1078405



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS, INC
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-15
 Sheet: 1 OF 1
 Total Boring Depth: 33 FT
 Date Started/Completed: OCTOBER 10, 2000
 Ground Level Elevation: 31.1 FT NGVD
 Measuring Point Elevation: 30.68 FT NGVD
 Static Water Level: 25.78 FT NGVD Date: 10/30/00
 Northing: 117072 Easting: 1079498

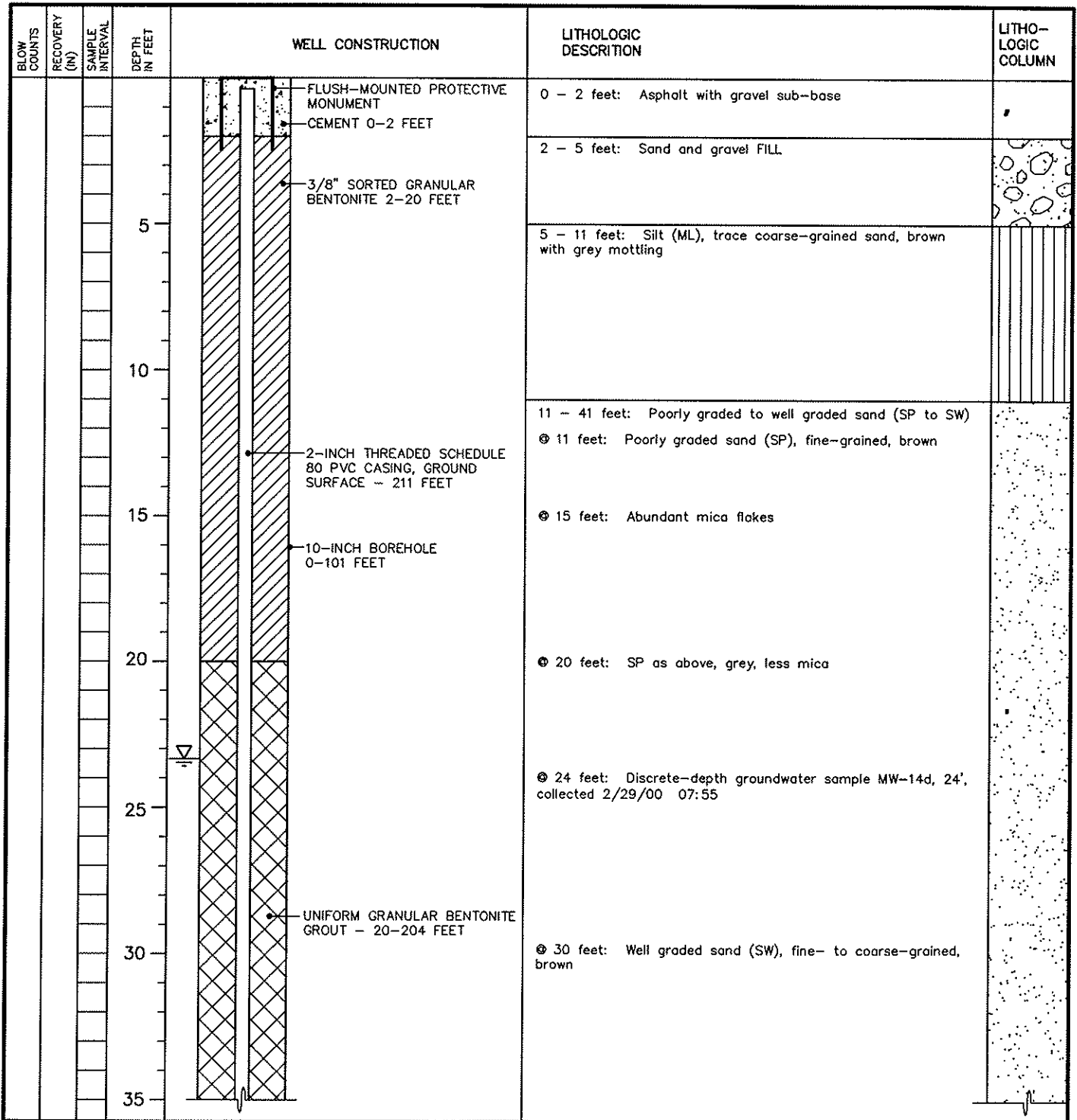
BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8" SORTED GRANULAR BENTONITE 2-20 FEET	0 - 1 feet: Asphalt with gravel sub-base	.
11 11 14	16		5		1 - 12 feet: Well graded sand (SW), predominantly fine-grained, ~10% medium- to coarse-grained, brown, dry, loose to medium dense	.
5 4 4	18		10			
2 2 2	8		15	2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 23 FEET 8 1/4-INCH BOREHOLE 0-33 FEET	12 - 18 feet: Silt (ML), trace very fine-grained sand, moderately plastic, dark brown, dry, medium stiff	
2 4 4	16		20		18 - 28 feet: Silt with sand (ML), ~20% very fine-grained sand, slightly plastic, strong brown, moist, medium stiff to stiff	
7 7 9	18		25	10-20 MESH SILICA SAND 20-33 FEET	25 - 28 feet: Alternating layers of silt with sand (ML) as above and poorly graded sand (SP), fine-grained, trace medium-grained, trace fines, grey, dry to moist, basaltic	
6 6 6	6		30	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 23-33 FEET	28 - 33 feet: Well graded sand (SW), fine- to coarse-grained, predominantly medium- to coarse-grained, trace fines, medium loose, saturated, angular, basaltic	.
			35		33 feet: End of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-14d
 Sheet: 1 OF 7
 Total boring Depth: 226 FT / WELL DEPTH: 221 FT
 Date Started/Completed: FEB. 29, 2000/MARCH 27, 2000
 Ground Level Elevation: 26.5 FEET NGVD
 Measuring Point Elevation: 26.37 FEET NGVD
 Static Water Level: 21.09 FEET NGVD Date: 10/30/00
 Northing: 119128 Easting: 1078405



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-14d
 Sheet: 2 OF 7
 Total boring Depth: 226 FT / WELL DEPTH: 221 FT
 Date Started/Completed: FEB. 29, 2000/MARCH 27, 2000
 Ground Level Elevation: 26.5 FEET NGVD
 Measuring Point Elevation: 26.37 FEET NGVD
 Static Water Level: 21.09 FEET NGVD Date: 10/30/00
 Northing: 119128 Easting: 1078405


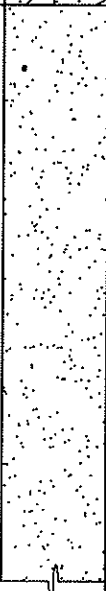
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
			40	<p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT - 20-204 FEET</p> <p style="margin-left: 20px;">2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 211 FEET</p> <p style="margin-left: 20px;">10-INCH BOREHOLE 0-101 FEET</p>	Ⓢ 35 feet: Up to 10% fine-grained gravel (< 1inch in diameter) Ⓢ 40 feet: Poorly graded sand (SP), coarse-grained, trace fine-grained gravel, angular Ⓢ 40 feet: Discrete-depth groundwater sample MW-14d, 40', collected 2/29/00 11:10		
			45			41 - 58 feet: Well graded gravel with sand (GW), gravel is fine- to coarse-grained (up to 6 inches in diameter), sand is coarse-grained, dark grey Ⓢ 47 feet: GW as above, 1 - 5 inches in diameter	
			50			58 - 90 feet: Well graded sand with gravel (SW), coarse-grained, variable gravel content and size Ⓢ 60 feet: Some gravel >6 inches in diameter Ⓢ 60 feet: Discrete-depth groundwater sample MW-14d, 60', collected 3/1/00 08:00	
			55				
			60				
			65				
			70				

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-14d
 Sheet: 3 OF 7
 Total boring Depth: 226 FT / WELL DEPTH: 221 FT
 Date Started/Completed: FEB. 29, 2000/MARCH 27, 2000
 Ground Level Elevation: 26.5 FEET NGVD
 Measuring Point Elevation: 26.37 FEET NGVD
 Static Water Level: 21.09 FEET NGVD Date: 10/30/00
 Northing: 119128 Easting: 1078405


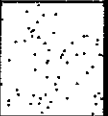

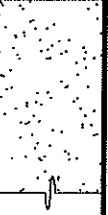
BLOW COUNTS	RECOVERY (M)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	<p>2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 211 FEET</p> <p>UNIFORM GRANULAR BENTONITE GROUT 20-204 FEET</p>	<p>⊙ 70 feet: SW as above, increasing sand content</p> <p>⊙ 78 feet: SW as above, coarse-grained sand with ~10% gravel (up to 2 inches in diameter)</p> <p>⊙ 80 feet: Discrete-depth groundwater sample MW-14d, 80', collected 3/1/00 15:08</p>	
			80	<p>10-INCH BOREHOLE 0-101 FEET</p>	<p>90 - 130 feet: Poorly graded sand (SP), coarse-grained, trace gravel, trace fines, dark grey</p> <p>⊙ 92 feet: SP as above, trace fine-grained gravel (up to 1/2 inch in diameter)</p> <p>⊙ 95 - 110 feet: SP as above, trace fine to coarse-grained gravel (up to 3 inches in diameter)</p>	
			90	<p>8-INCH BOREHOLE 101-226 FEET</p>	<p>⊙ 100 feet: Discrete-depth groundwater sample MW-14d, 100', collected 3/2/00 13:22</p>	
			100			
			105			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-14d
 Sheet: 4 OF 7
 Total boring Depth: 226 FT / WELL DEPTH: 221 FT
 Date Started/Completed: FEB. 29, 2000/MARCH 27, 2000
 Ground Level Elevation: 26.5 FEET NGVD
 Measuring Point Elevation: 26.37 FEET NGVD
 Static Water Level: 21.09 FEET NGVD Date: 10/30/00
 Northing: 119128 Easting: 1078405

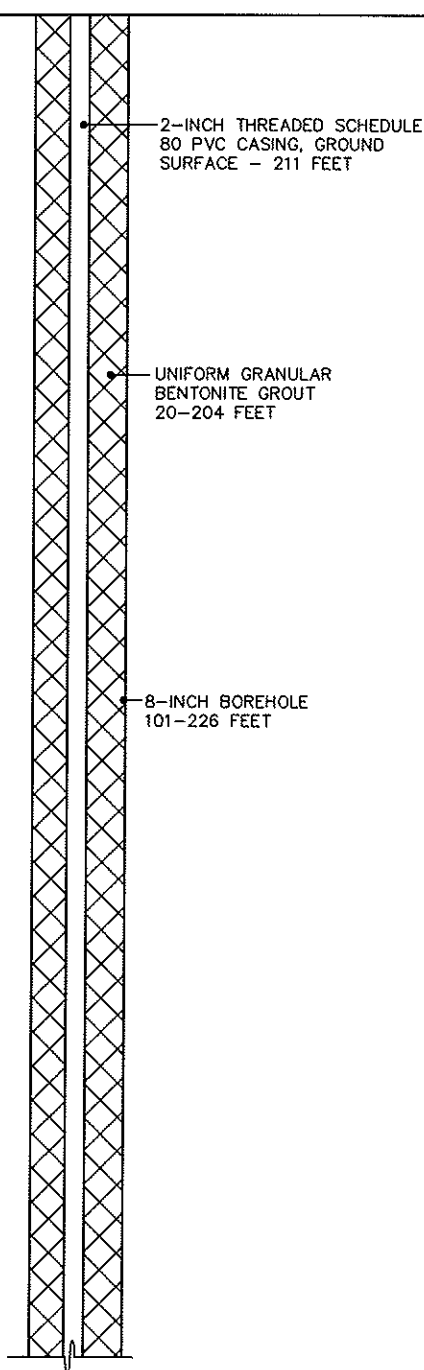

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110	2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 211 FEET UNIFORM GRANULAR BENTONITE GROUT 20-204 FEET 8-INCH BOREHOLE 101-226 FEET	Ⓞ 110 feet: SP as above, trace fines, dark grey Ⓞ 120 feet: Discrete-depth groundwater sample MW-14d, 120', collected 3/7/00 12:57	
			130		130 - 133 feet: Well graded sand (SW), fine- to coarse-grained, trace light brown fines, dark grey	
			135		133 - 135 feet: Well graded gravel (GW), fine- to coarse-grained, (up to 4 inches in diameter), well rounded, basaltic	
			140		135 - 178 feet: Well graded sand (SW), fine- to coarse-grained, trace fines, dark grey Ⓞ 138 feet: SW as above, medium-grained, silty	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-14d
 Sheet: 5 OF 7
 Total boring Depth: 226 FT / WELL DEPTH: 221 FT
 Date Started/Completed: FEB. 29, 2000/MARCH 27, 2000
 Ground Level Elevation: 26.5 FEET NGVD
 Measuring Point Elevation: 26.37 FEET NGVD
 Static Water Level: 21.09 FEET NGVD Date: 10/30/00
 Northing: 119128 Easting: 1078405

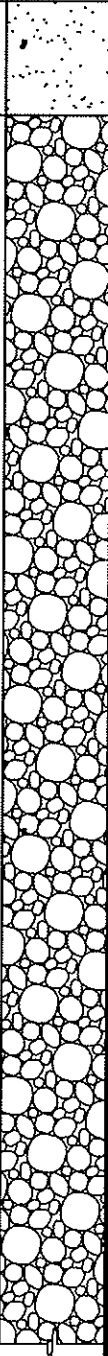
BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145	 <p>2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 211 FEET</p> <p>UNIFORM GRANULAR BENTONITE GROUT 20-204 FEET</p> <p>8-INCH BOREHOLE 101-226 FEET</p>	<p>⊙ 140 feet: Discrete--depth groundwater sample MW-14d, 140', collected 3/8/00 09:20</p> <p>⊙ 150 feet: SW as above, grain size increasing</p> <p>⊙ 155 feet: SW as above, ~15% fines, fines are light brown with occasional red streaks</p> <p>⊙ 160 feet: Discrete--depth groundwater sample MW-14d, 160', collected 3/8/00 15:40</p>	
			150			
			155			
			160			
			165			
			170			
			175			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-14d
 Sheet: 6 OF 7
 Total boring Depth: 226 FT / WELL DEPTH: 221 FT
 Date Started/Completed: FEB. 29, 2000/MARCH 27, 2000
 Ground Level Elevation: 26.5 FEET NGVD
 Measuring Point Elevation: 26.37 FEET NGVD
 Static Water Level: 21.09 FEET NGVD Date: 10/30/00
 Northing: 119128 Easting: 1078405

BLOW COUNTS	RECOVERY (M)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180	2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 211 FEET UNIFORM GRANULAR BENTONITE GROUT 20-204 FEET 8-INCH BOREHOLE 101-226 FEET	178 - 218 feet: Well graded gravel (GW), fine- to coarse-grained, some sand and fines, well rounded to sub-angular, predominantly basaltic ⊕ 178 feet: Gravel 1/2 inch in diameter ⊕ 180 feet: Discrete-depth groundwater sample MW-14d, 180', collected 3/11/00 15:05 ⊕ 185 feet: GW as above, gravel 1/4 - 3 inches in diameter ⊕ 190 feet: GW as above, clean ⊕ 195 feet: GW as above, gravel 1/8 - 2 inches in diameter ⊕ 200 feet: Discrete-depth groundwater sample MW-14d, 200', collected 3/17/00 10:19 ⊕ 202 feet: GW as above, gravel 1/8 - 1 1/2 inches in diameter, some sand ⊕ 205 feet: Some mica in sand	
			185			
			190			
			195			
			200			
			205	3/8" SORTED GRANULAR BENTONITE 204-207 FEET 20-40 MESH SILICA SAND 207-208 FEET 10-20 MESH SILICA SAND 208-222 FEET		
			210			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-15i
 Sheet: 1 OF 7
 Total Boring Depth: 220 FT / WELL DEPTH: 139 FT
 Date Started/Completed: MAY 26, 2000/MAY 31, 2000
 Ground Level Elevation: 31.3 FT NGVD
 Measuring Point Elevation: 30.89 FT NGVD
 Static Water Level: 25.99 FT NGVD Date: 10/30/00
 Northing: 117075 Easting: 1079491

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 1 feet: Gravel FILL	0
			5	CEMENT 0-2 FEET	1 - 16 feet: Poorly graded sand (SP), medium-grained, grey, FILL	1
			10	3/8" SORTED GRANULAR BENTONITE 2-26 FEET		2
			15	2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 129 FEET		3
			20	10-INCH BOREHOLE 0-102 FEET	16 - 26 feet: Clay (CL), dark brown, plastic	4
			25		© 25 feet: Discrete-depth groundwater sample MW-15i, 25', collected 5/10/00 14:21 	5
			30	UNIFORM GRANULAR BENTONITE GROUT - 26-123 FEET	26 - 51 feet: Well graded sand (SW), fine- to coarse-grained, predominantly medium- to coarse-grained, trace fine-grained gravel, few fines, dark grey, basaltic, angular	6
6 15 22	7		35			7

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-15i
 Sheet: 2 OF 7
 Total Boring Depth: 220 FT / WELL DEPTH: 139 FT
 Date Started/Completed: MAY 26, 2000/MAY 31, 2000
 Ground Level Elevation: 31.3 FT NGVD
 Measuring Point Elevation: 30.89 FT NGVD
 Static Water Level: 25.99 FT NGVD Date: 10/30/00
 Northing: 117075 Easting: 1079491

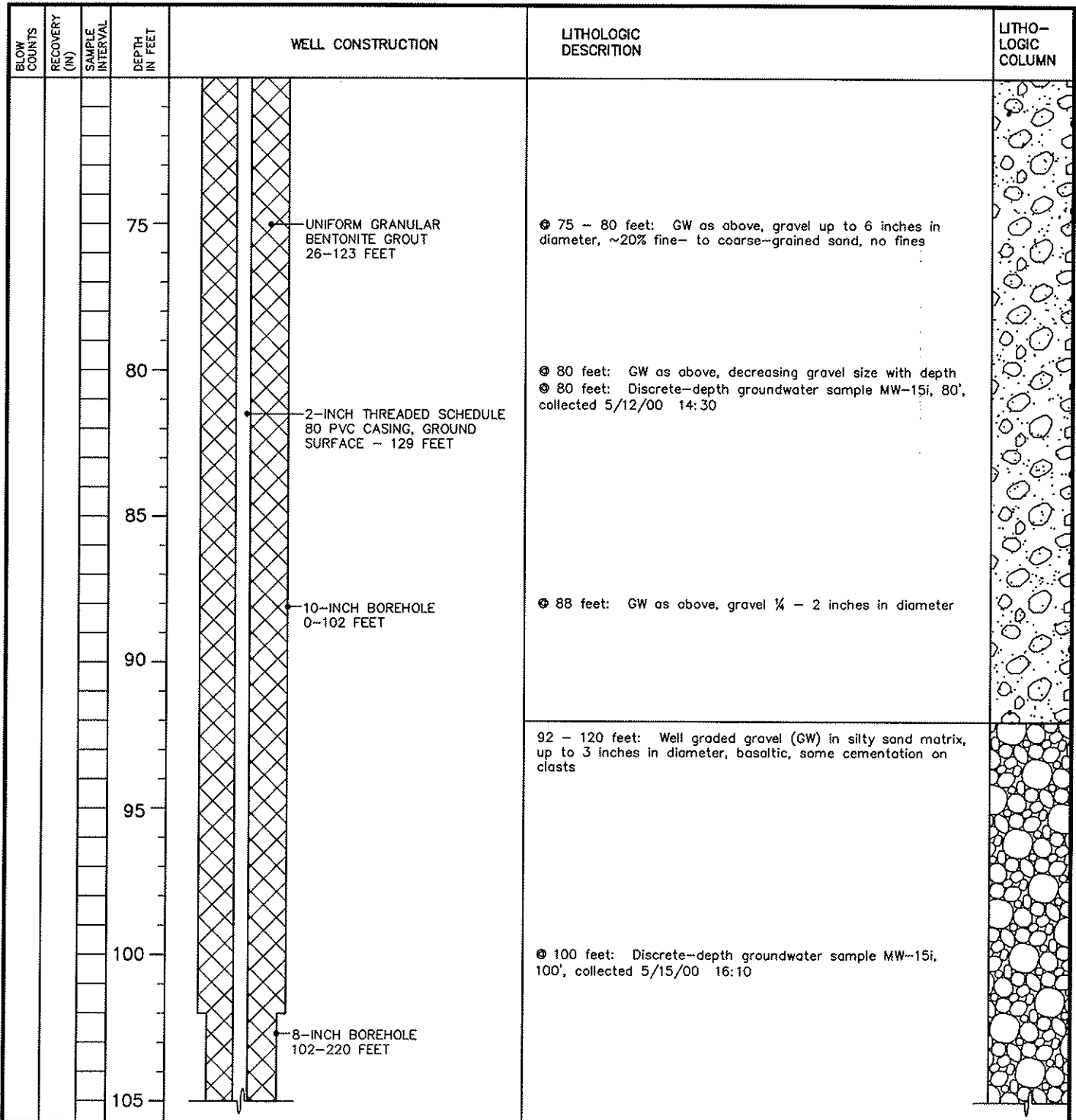
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		SW as above	
			45	● UNIFORM GRANULAR BENTONITE GROUT - 26-123 FEET ● 2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 129 FEET ● 10-INCH BOREHOLE 0-102 FEET	⊕ 40 feet: Discrete-depth groundwater sample MW-15i, 40', collected 5/11/00 09:45 ⊕ 45 feet: SW as above, ~5% gravel ⊕ 45 feet: SW as above, increasing percentage of coarse-grained sand, gravel content increasing ⊕ 48 feet: SW as above	
7 30 43					51 - 53 feet: Sand and gravel, even distribution, sand is coarse-grained, angular, gravel ½ - 3 inches in diameter	
			55		53 - 92 feet: Well graded gravel with sand (GW), ½ - 3 inches in diameter, ~30% sand, no fines, basaltic, well rounded ⊕ 56 - 65 feet: GW as above, gravel predominantly 1 - 2 inches in diameter, trace up to 6 inches in diameter	
			60		⊕ 60 feet: Discrete-depth groundwater sample MW-15i, 60', collected 5/11/00 14:15	
			65		⊕ 63 feet: GW as above, predominantly 2 to 3 inches in diameter, some cobbles up to 6 inches in diameter	
			70		⊕ 66 feet: GW as above, gravel up to 5 inches in diameter ⊕ 67 feet: GW as above, gravel is less well graded, predominantly 1 - 2 inches in diameter or less, ~20% sand, basaltic ⊕ 68 - 73 feet: GW as above, some cobbles up to 6 inches in diameter	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-15i
 Sheet: 3 OF 7
 Total Boring Depth: 220 FT / WELL DEPTH: 139 FT
 Date Started/Completed: MAY 26, 2000/MAY 31, 2000
 Ground Level Elevation: 31.3 FT NGVD
 Measuring Point Elevation: 30.89 FT NGVD
 Static Water Level: 25.99 FT NGVD Date: 10/30/00
 Northing: 117075 Easting: 1079491



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-15i
 Sheet: 4 OF 7
 Total Boring Depth: 220 FT / WELL DEPTH: 139 FT
 Date Started/Completed: MAY 26, 2000/MAY 31, 2000
 Ground Level Elevation: 31.3 FT NGVD
 Measuring Point Elevation: 30.89 FT NGVD
 Static Water Level: 25.99 FT NGVD Date: 10/30/00
 Northing: 117075 Easting: 1079491

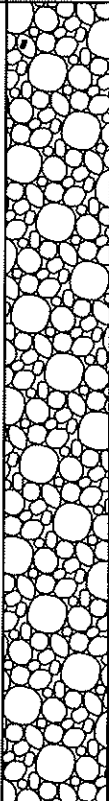


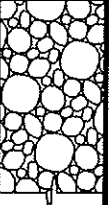

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110	<ul style="list-style-type: none"> • UNIFORM GRANULAR BENTONITE GROUT 26-123 FEET 	<ul style="list-style-type: none"> ⊙ 105 feet: GW in silty sand matrix as above, gravel 2 - 3 inches in diameter, cementation on some clasts 	
			115	<ul style="list-style-type: none"> • 2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 129 FEET 	<ul style="list-style-type: none"> ⊙ 110 - 120 feet: GW in silty sand matrix as above, gravel 1 - 2 inches in diameter, trace up to 3 inches in diameter, basaltic, trace quartzite grains ⊙ 120 feet: Discrete-depth groundwater sample MW-15i, 120', collected 5/18/00 11:55 	
			120		<ul style="list-style-type: none"> 120 - 131 feet: Well graded gravel (GW), some sand, less fines than above, loose 	
			125	<ul style="list-style-type: none"> • 3/8" SORTED GRANULAR BENTONITE 123-125 FEET • 20-40 MESH SILICA SAND 125-126 FEET • 8-INCH BOREHOLE 102-220 FEET • STAINLESS STEEL CENTRALIZER 	<ul style="list-style-type: none"> ⊙ 127 feet: GW as above, predominantly < 1 inch gravel, trace up to 3 inches in diameter, loose, trace cementation, fewer fines than above ⊙ 129 - 131 feet: Poorly graded sand with gravel (SP) lens, ~40% gravel 	
			130	<ul style="list-style-type: none"> • 10-20 MESH SILICA SAND 126-141 FEET • 2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN 129-139 FEET • STAINLESS STEEL CENTRALIZER 	<ul style="list-style-type: none"> 131 - 161 feet: Well graded gravel (GW) in silty sand matrix ⊙ 131 - 138 feet: GW in silty sand matrix as at 110 - 120 feet 	
			135		<ul style="list-style-type: none"> ⊙ 138 feet: GW as above, more fines 	
			140			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

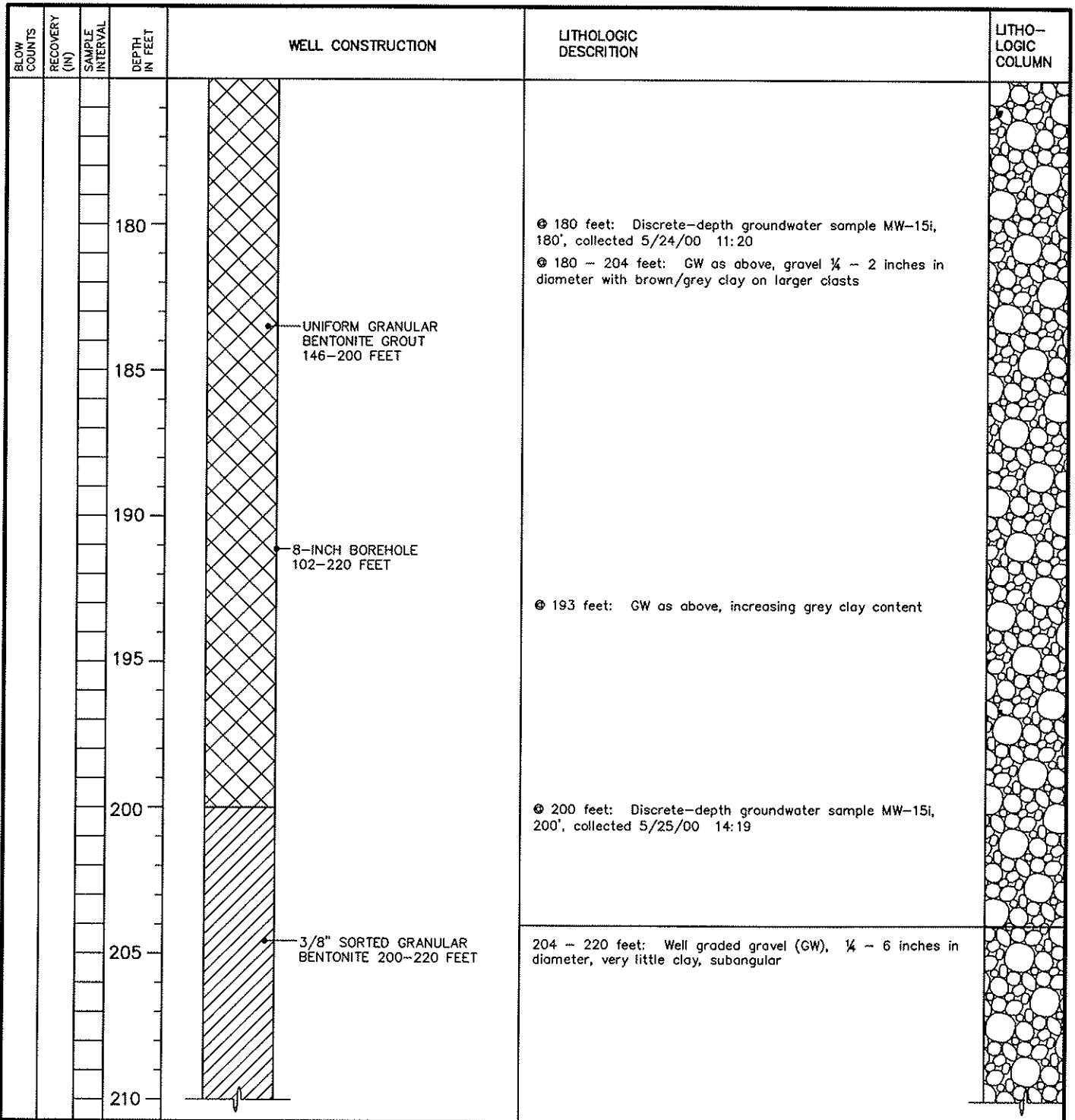
Boring Number: MW-15i
 Sheet: 5 OF 7
 Total Boring Depth: 220 FT / WELL DEPTH: 139 FT
 Date Started/Completed: MAY 26, 2000/MAY 31, 2000
 Ground Level Elevation: 31.3 FT NGVD
 Measuring Point Elevation: 30.89 FT NGVD
 Static Water Level: 25.99 FT NGVD Date: 10/30/00
 Northing: 117075 Easting: 1079491

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145	10-20 MESH SILICA SAND 126-141 FEET 3/8" SORTED GRANULAR BENTONITE 141-146 FEET UNIFORM GRANULAR BENTONITE GROUT 146-200 FEET 8-INCH BOREHOLE 102-220 FEET	Ⓢ 140 feet: Discrete--depth groundwater sample MW-15i, 140', collected 5/19/00 12:30 Ⓢ 142 - 148 feet: GW as above, gravel 1/4 to 4 inches in diameter, predominantly basaltic, grain size decreasing with depth Ⓢ 150 feet: GW as above, some sand	
			160		Ⓢ 160 feet: Discrete--depth groundwater sample MW-15i, 160', collected 5/22/00 15:04 161 - 164 feet: Silt with sand (ML), some fine-grained gravel, brown, some mica, gravel predominantly basaltic	
			165		164 - 170 feet: Well graded sand (SW), little gravel	
			170		170 - 204 feet: Well graded gravel (GW) with brown and grey clay Ⓢ 173 feet: GW as above, some cementation on grains	
			175			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: <u>PORT OF VANCOUVER/SWAN MANUFACTURING</u> Project Number: <u>275-1940-006</u> Location: <u>VANCOUVER, WA</u> PMX Representative: <u>ANNE ACKERMAN/CHRIS HAMILTON</u> Drilled By: <u>WESTERBURG DRILLING</u> Drill Method: <u>CABLE TOOL</u> Soil Sample Method: <u>2" SPLIT SPOON</u> Groundwater Sample Method: <u>TEMPORARY WELL POINT</u>	Boring Number: <u>MW-15i</u> Sheet: <u>6 OF 7</u> Total Boring Depth: <u>220 FT / WELL DEPTH: 139 FT</u> Date Started/Completed: <u>MAY 26, 2000/MAY 31, 2000</u> Ground Level Elevation: <u>31.3 FT NGVD</u> Measuring Point Elevation: <u>30.89 FT NGVD</u> Static Water Level: <u>25.99 FT NGVD</u> Date: <u>10/30/00</u> Northing: <u>117075</u> Easting: <u>1079491</u>
---	---

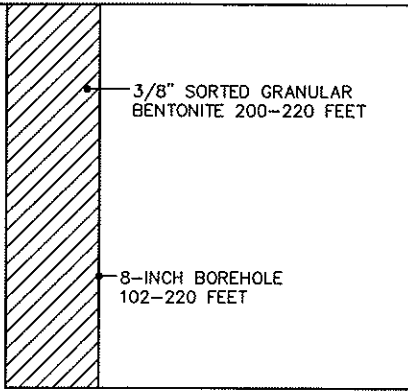
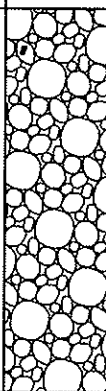


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-15i
 Sheet: 7 OF 7
 Total Boring Depth: 220 FT / WELL DEPTH: 139 FT
 Date Started/Completed: MAY 26, 2000/MAY 31, 2000
 Ground Level Elevation: 31.3 FT NGVD
 Measuring Point Elevation: 30.89 FT NGVD
 Static Water Level: 25.99 FT NGVD Date: 10/30/00
 Northing: 117075 Easting: 1079491

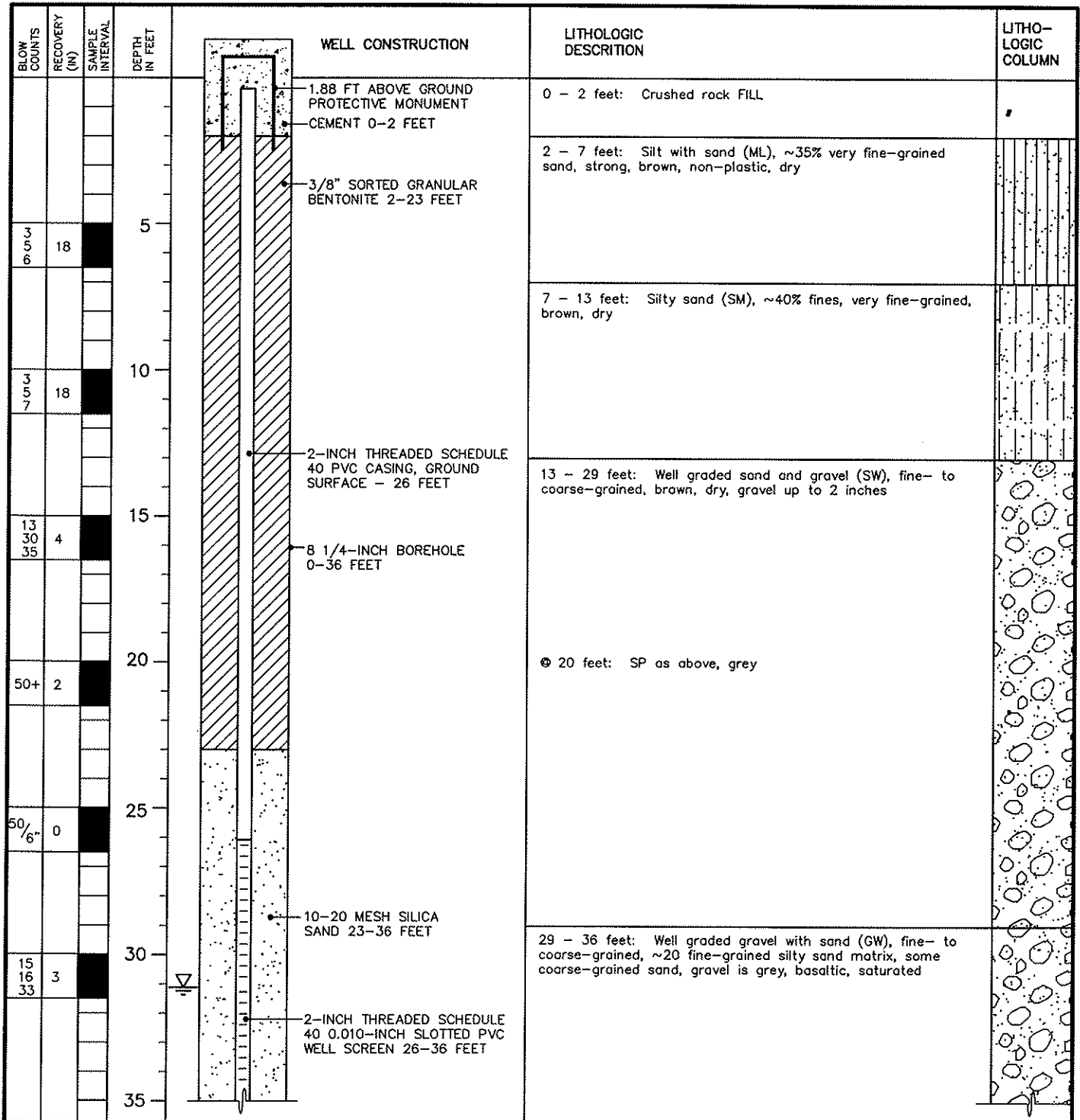
BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			215	 <p style="margin-left: 20px;">3/8" SORTED GRANULAR BENTONITE 200-220 FEET</p> <p style="margin-left: 20px;">8-INCH BOREHOLE 102-220 FEET</p>	GW as above ● 220 feet: Discrete-depth groundwater sample MW-15i, 220', collected 5/26/00 14:43 ● 220 feet: End of boring	
			220			
			225			
			230			
			235			
			240			
			245			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS, INC.
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-16
 Sheet: 1 OF 2
 Total Boring Depth: 36 FT
 Date Started/Completed: OCTOBER 9, 2000
 Ground Level Elevation: 35.33 FT NGVD
 Measuring Point Elevation: 37.21 FT NGVD
 Static Water Level: 32.25 FT NGVD Date: 10/30/00
 Northing: 119171 Easting: 1080006

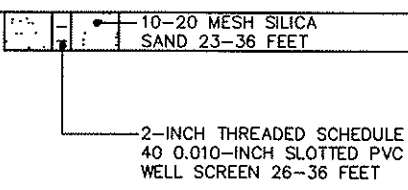



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS, INC.
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-16
 Sheet: 2 OF 2
 Total Boring Depth: 36 FT
 Date Started/Completed: OCTOBER 9, 2000
 Ground Level Elevation: 35.33 FT NGVD
 Measuring Point Elevation: 37.21 FT NGVD
 Static Water Level: 32.25 FT NGVD Date: 10/30/00
 Northing: 119171 Easting: 1080006

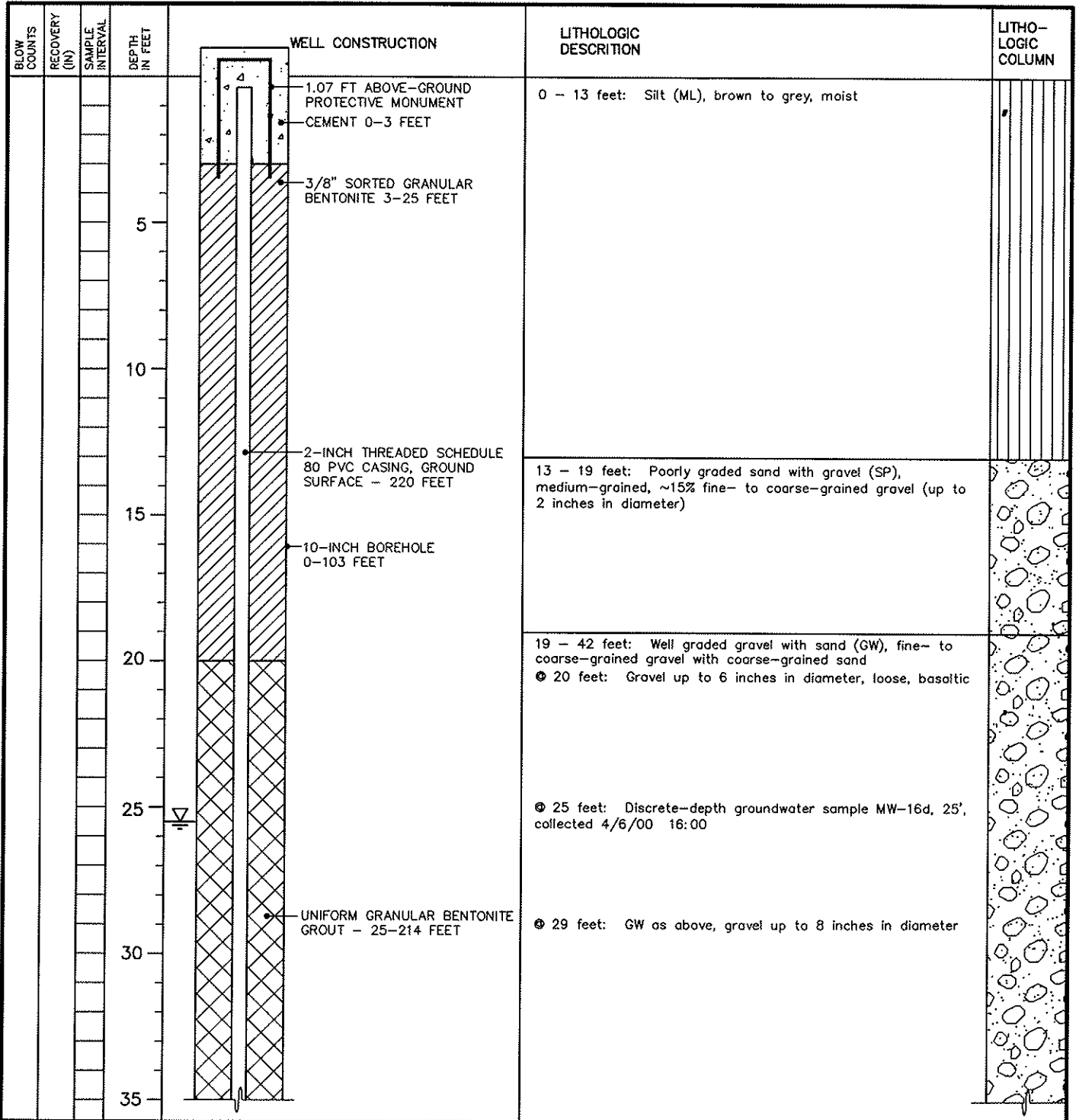
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
0 10	0			 <p>10-20 MESH SILICA SAND 23-36 FEET</p> <p>2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 26-36 FEET</p>	<p>⊙ 36 feet: End of boring</p>	
			40			
			45			
			50			
			55			
			60			
			65			
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBERG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-16d
 Sheet: 1 OF 7
 Total Boring Depth: 240 FT / WELL DEPTH: 230 FT
 Date Started/Completed: MAY 1, 2000
 Ground Level Elevation: 35.33 FT NGVD
 Measuring Point Elevation: 36.40 FT NGVD
 Static Water Level: 31.43 FT NGVD Date: 10/30/00
 Northing: 119162 Easting: 1080004





EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBERG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-16d
 Sheet: 2 OF 7
 Total Boring Depth: 240 FT / WELL DEPTH: 230 FT
 Date Started/Completed: MAY 1, 2000
 Ground Level Elevation: 35.33 FT NGVD
 Measuring Point Elevation: 36.40 FT NGVD
 Static Water Level: 31.43 FT NGVD Date: 10/30/00
 Northing: 119162 Easting: 1080004

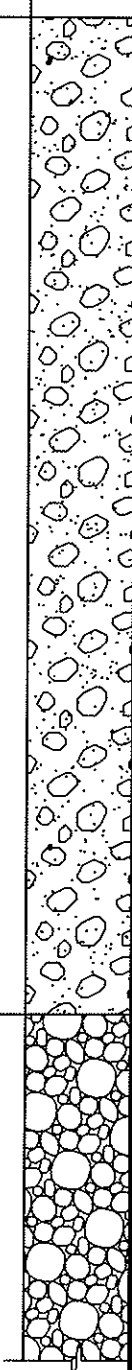
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40	UNIFORM GRANULAR BENTONITE GROUT - 25-214 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 220 FEET 10-INCH BOREHOLE 0-103 FEET	GW as above Ⓞ 40 feet: GW as above, gravel up to 2 inches in diameter, sand content up to 60% Ⓞ 40 feet: Discrete-depth groundwater sample MW-16d, 40', collected 4/7/00 10:20	
			45			42 - 62 feet: Poorly graded sand (SP), coarse-grained, trace fine-grained gravel (<1 inch in diameter), angular
			50			
			55			
			60		Ⓞ 60 feet: Discrete-depth groundwater sample MW-16d, 60', collected 4/10/00 08:00	
			65		62 - 96 feet: Well graded sand and gravel (SW), predominantly coarse-grained, variable gravel content	
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBERG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-16d
 Sheet: 3 OF 7
 Total Boring Depth: 240 FT / WELL DEPTH: 230 FT
 Date Started/Completed: MAY 1, 2000
 Ground Level Elevation: 35.33 FT NGVD
 Measuring Point Elevation: 36.40 FT NGVD
 Static Water Level: 31.43 FT NGVD Date: 10/30/00
 Northing: 119162 Easting: 1080004

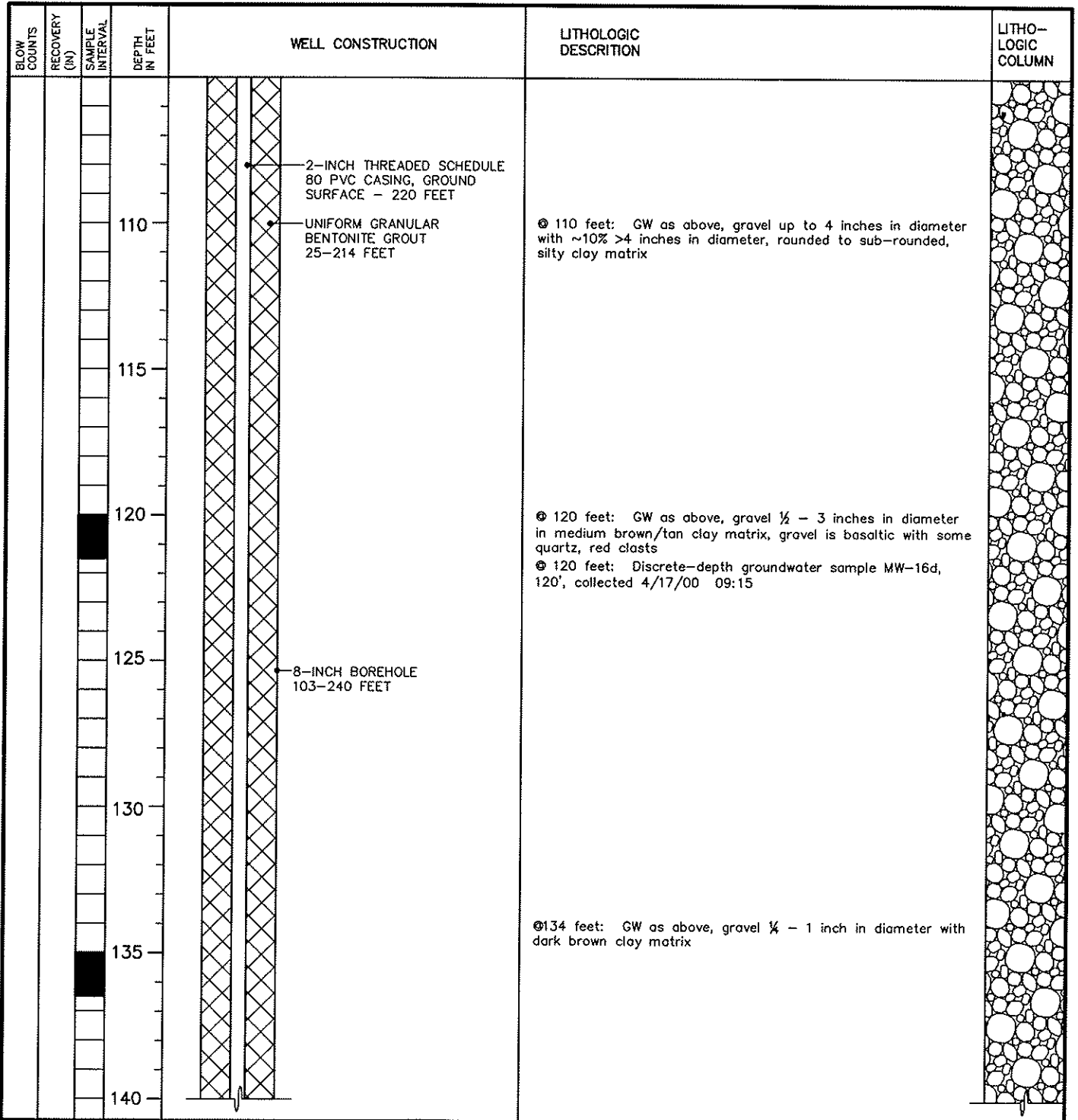
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	<p>2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 220 FEET</p> <p>UNIFORM GRANULAR BENTONITE GROUT 25-214 FEET</p>		
			80		<p>⊕ 80 feet: SW as above, ~30% fine- to coarse-grained gravel (up to 3 inches in diameter)</p> <p>⊕ 80 feet: Discrete-depth groundwater sample MW-16d, 80', collected 4/12/00 07:50</p> <p>⊕ 82 feet: More gravel than sand, gravel up to 5 inches in diameter</p>	
			85	<p>10-INCH BOREHOLE 0-103 FEET</p>		
			90			
			95			
			100		<p>96 - 240 feet: Well graded gravel (GW) in a silty sand matrix, gravel fine- to coarse-grained, variable sand content, some cementation</p> <p>⊕ 96 feet: Gravel up to 4 inches in diameter, some dark brown/black well graded sand cemented on grains, clayey silt matrix apparent on some grains</p> <p>⊕ 100 feet: Discrete-depth groundwater sample MW-16d, 100', collected 4/13/00 08:12</p>	
			105	<p>8-INCH BOREHOLE 103-240 FEET</p>		

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBERG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-16d
 Sheet: 4 OF 7
 Total Boring Depth: 240 FT / WELL DEPTH: 230 FT
 Date Started/Completed: MAY 1, 2000
 Ground Level Elevation: 35.33 FT NGVD
 Measuring Point Elevation: 36.40 FT NGVD
 Static Water Level: 31.43 FT NGVD Date: 10/30/00
 Northing: 119162 Easting: 1080004



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBERG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-16d
 Sheet: 5 OF 7
 Total Boring Depth: 240 FT / WELL DEPTH: 230 FT
 Date Started/Completed: MAY 1, 2000
 Ground Level Elevation: 35.33 FT NGVD
 Measuring Point Elevation: 36.40 FT NGVD
 Static Water Level: 31.43 FT NGVD Date: 10/30/00
 Northing: 119162 Easting: 1080004

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145	2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 220 FEET UNIFORM GRANULAR BENTONITE GROUT 25-214 FEET	Ⓢ 140 feet: Discrete-depth groundwater sample MW-16d, 140', collected 4/18/00 10:23 Ⓢ 150 feet: GW as above, increasing fines content, gravel ½ - 5 inches in diameter, cementation on larger clasts	
X X X	XX		150		Ⓢ 155 feet: GW as above, gravel ½ - 6 inches in diameter, cemented Ⓢ 160 feet: Discrete-depth groundwater sample MW-16d, 160', collected 4/19/00 13:24	
			155			
			160	8-INCH BOREHOLE 103-240 FEET	Ⓢ 165 feet: GW as above, gravel 1 - 4 inches in diameter in light brown clayey silt matrix, trace sand, ~15% fines	
			165		Ⓢ 172 feet: GW as above, gravel ½ - 4 inches in diameter, ~15% well graded sand, little or no fines	
			170			
			175			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBERG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-16d
 Sheet: 6 OF 7
 Total Boring Depth: 240 FT / WELL DEPTH: 230 FT
 Date Started/Completed: MAY 1, 2000
 Ground Level Elevation: 35.33 FT NGVD
 Measuring Point Elevation: 36.40 FT NGVD
 Static Water Level: 31.43 FT NGVD Date: 10/30/00
 Northing: 119162 Easting: 1080004

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180	2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 220 FEET UNIFORM GRANULAR BENTONITE GROUT 25-214 FEET	● 180 feet: GW as above, some dark grey clay matrix ● 180 feet: Discrete-depth groundwater sample MW-16d, 180', collected 4/21/00 09:40 ● 184 feet: GW as above, gravel ¼ - 4 inches in diameter in silty, slightly sandy clay matrix, ~30% fines	
			185		● 195 feet: GW as above, gravel ¼ - 3 inches in diameter, some clay matrix ● 200 feet: Discrete-depth groundwater sample MW-16d, 200', collected 4/24/00 12:46 ● 205 feet: GW as above, gravel ½ - 4 inches in diameter in silty clay matrix, ~40 - 50% fines ● 206 - 209 feet: Less matrix, ~20% fines	
			190			
			195	8-INCH BOREHOLE 103-240 FEET		
			200			
			205			
			210			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBERG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-16d
 Sheet: 7 OF 7
 Total Boring Depth: 240 FT / WELL DEPTH: 230 FT
 Date Started/Completed: MAY 1, 2000
 Ground Level Elevation: 35.33 FT NGVD
 Measuring Point Elevation: 36.40 FT NGVD
 Static Water Level: 31.43 FT NGVD Date: 10/30/00
 Northing: 119162 Easting: 1080004

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			215	UNIFORM GRANULAR BENTONITE GROUT 25-214 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 220 FEET 3/8" SORTED GRANULAR BENTONITE 214-216 FEET 20-40 MESH SILICA SAND 216-217 FEET	Ⓞ 215 feet: GW as above, gravel ¼ - 4 inches in diameter in brown sandy clay matrix	
			220	STAINLESS STEEL CENTRALIZER AT 220 FEET 10-20 MESH SILICA SAND 217-231 FEET 8-INCH BOREHOLE 103-240 FEET	Ⓞ 220 feet: GW as above, little matrix, gravel ¼ - 4 inches in diameter Ⓞ 220 feet: Discrete-depth groundwater sample MW-16d, 220', collected 4/26/00 13:19	
			225	2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN WITH 4-INCH SUMP 220-230 FEET	Ⓞ 225 - 228 feet: GW as above, gravel 1/8 - 3 inches in diameter in sandy clay matrix	
			230	STAINLESS STEEL CENTRALIZER AT 230 FEET		
			235	3/8" SORTED GRANULAR BENTONITE 231-240 FEET		
			240		Ⓞ 240 feet: Discrete-depth groundwater sample MW-16d, 240', collected 4/28/00 10:11 Ⓞ 240 feet: End of boring	
			245			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEO TECH EXPLORATION, INC
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-17
 Sheet: 1 OF 1
 Total Boring Depth: 31 FT
 Date Started/Completed: OCTOBER 11, 2000
 Ground Level Elevation: 29.57 FT NGVD
 Measuring Point Elevation: 29.34 FT NGVD
 Static Water Level: 24.45 FT NGVD Date: 10/30/00
 Northing: 118248 Easting: 1079807

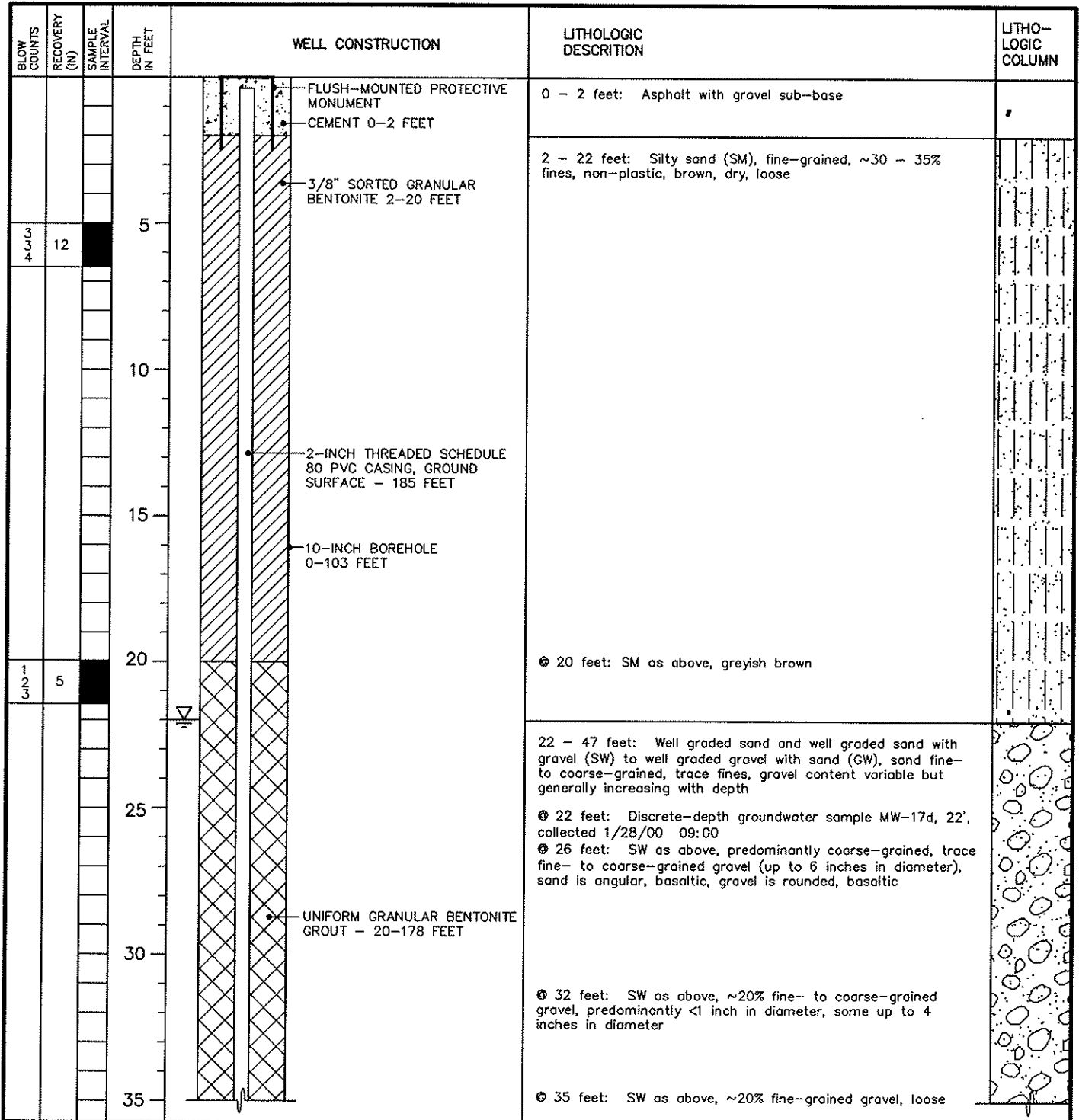
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET	0 - 2 feet: Asphalt with gravel sub-base	
				3/8 INCH SORTED GRANULAR BENTONITE 2-18 FEET	2 - 7 feet: Alternating layers of silt with sand (ML) with silty sand (SM), ML has ~30% very fine-grained sand, brown, non-plastic, dry, SM is fine-grained, ~30% fines, brown, dry	
6 7 10	15		5			
				2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 21 FEET	7 - 25.5 feet: Silty sand (SM), fine-grained, brown to dark brown, dry	
4 4 4	17		10		⊙ 10 feet: SM as above, ~30 - 40% fines	
				8 1/4-INCH BOREHOLE 0-31 FEET		
4 9 8	15		15		⊙ 15 feet: SM as above, ~20% fines	
				2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 21-31 FEET		
6 7 10	16		20		⊙ 25.5 feet: Grading to:	
				10-20 MESH SILICA SAND 18-31 FEET	25.5 - 31 feet: Well graded sand (SW), fine- to coarse-grained, predominantly medium- to coarse-grained, grey, angular, basaltic, saturated	
12 12 12	12		25		⊙ 30 feet: SW as above, more coarse-grained sand than above, trace fine-grained gravel	
23 50 1/4			30		⊙ 31 feet: End of boring	
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-17d
 Sheet: 1 OF 6
 Total Boring Depth: 205 FT / WELL DEPTH: 195 FT
 Date Started/Completed: JAN. 27, 2000/FEB. 18, 2000
 Ground Level Elevation: 29.84 FT NGVD
 Measuring Point Elevation: 29.56 FT NGVD
 Static Water Level: 24.62 FT NGVD Date: 10/30/00
 Northing: 118238 Easting: 1079809



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-17d
 Sheet: 2 OF 6
 Total Boring Depth: 205 FT / WELL DEPTH: 195 FT
 Date Started/Completed: JAN. 27, 2000/FEB. 18, 2000
 Ground Level Elevation: 29.84 FT NGVD
 Measuring Point Elevation: 29.56 FT NGVD
 Static Water Level: 24.62 FT NGVD Date: 10/30/00
 Northing: 118238 Easting: 1079809

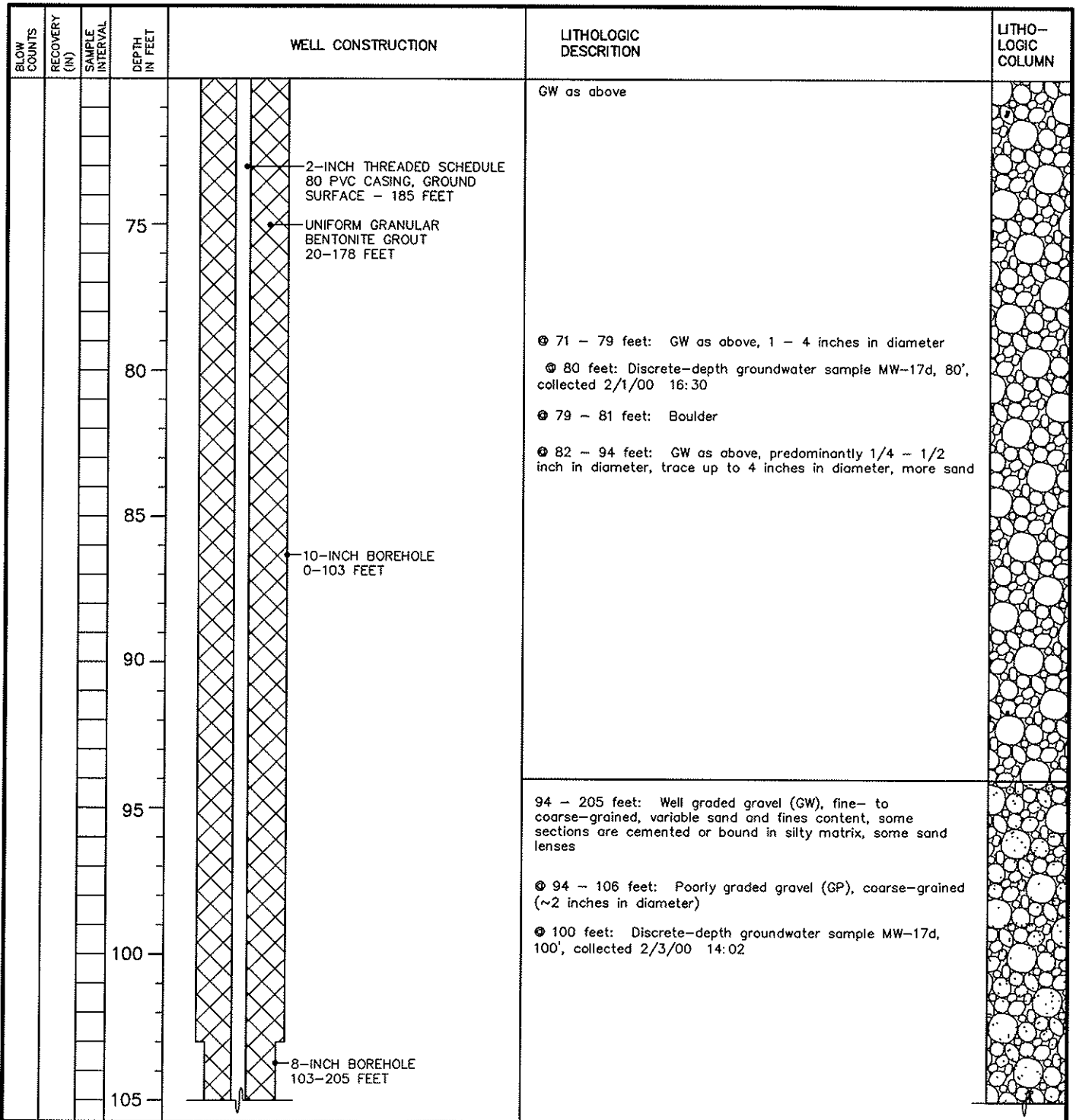
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
1	9		40	<p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT - 20-178 FEET</p> <p style="margin-left: 20px;">2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 185 FEET</p> <p style="margin-left: 20px;">10-INCH BOREHOLE 0-103 FEET</p>	<p>SW/GW as above</p> <p>⊙ 38 feet: Well graded gravel with sand (GW), gravel predominantly 1 - 2 inches in diameter, trace up to 4 inches in diameter, ~30 - 40% fine- to coarse-grained sand, none to trace fines, loose</p> <p>⊙ 40 feet: Discrete-depth groundwater sample MW-17d, 40', collected 1/31/00 09:00</p> <p>⊙ 41 - 49 feet: GW as above, 1/2 - 3 inches in diameter</p>	
		45	<p>47 - 62 feet: Poorly graded sand with gravel (SP), coarse-grained, gravel fine-grained, no fines, basaltic</p>			
		50	<p>⊙ 60 feet: Discrete-depth groundwater sample MW-17d, 60', collected 1/31/00 15:05</p>			
		55	<p>62 - 94 feet: Well graded gravel (GW), fine- to coarse-grained, some sand, some fines and cementation, predominantly basaltic clasts</p> <p>⊙ 63 feet: GW as above, 1/2 - 4 inches in diameter</p> <p>⊙ 65 - 70 feet: GW as above, 1/2 - 2 1/2 inches in diameter</p>			
			60			
			65			
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-17d
 Sheet: 3 OF 6
 Total Boring Depth: 205 FT / WELL DEPTH: 195 FT
 Date Started/Completed: JAN. 27, 2000/FEB. 18, 2000
 Ground Level Elevation: 29.84 FT NGVD
 Measuring Point Elevation: 29.56 FT NGVD
 Static Water Level: 24.62 FT NGVD Date: 10/30/00
 Northing: 118238 Easting: 1079809



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-17d
 Sheet: 4 OF 6
 Total Boring Depth: 205 FT / WELL DEPTH: 195 FT
 Date Started/Completed: JAN. 27, 2000/FEB.18, 2000
 Ground Level Elevation: 29.84 FT NGVD
 Measuring Point Elevation: 29.56 FT NGVD
 Static Water Level: 24.62 FT NGVD Date: 10/30/00
 Northing: 118238 Easting: 1079809

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110	<p>2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 185 FEET</p> <p>UNIFORM GRANULAR BENTONITE GROUT 20-178 FEET</p>	<p>⊕ 94 - 106 feet: GP as above, coarse-grained (~2 inches in diameter)</p> <p>⊕ 106 - 111 feet: GW as above 1/2 - 3/4 inches in diameter</p> <p>⊕ 111 - 113 feet: GW as above, 1/2 - 2 inches in diameter</p>	
			115		<p>⊕ 120 feet: GW as above, 1/4 - 3/4 inches in diameter, some sand, some fines and cementation, basaltic clasts</p> <p>⊕ 120 feet: Discrete-depth groundwater sample MW-17d, 120', collected 2/8/00 10:37</p>	
			120		<p>⊕ 125 - 130 feet: GW as above, 1/4 - 1 inch in diameter, some sand, some fines, basaltic clasts</p>	
			125	<p>8-INCH BOREHOLE 103-205 FEET</p>	<p>⊕ 132 - 137 feet: GW as above, up to 4 inches in diameter, some clay matrix, some coarse-grained sand</p>	
			130			
			135			
			140			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-17d
 Sheet: 5 OF 6
 Total Boring Depth: 205 FT / WELL DEPTH: 195 FT
 Date Started/Completed: JAN. 27, 2000/FEB. 18, 2000
 Ground Level Elevation: 29.84 FT NGVD
 Measuring Point Elevation: 29.56 FT NGVD
 Static Water Level: 24.62 FT NGVD Date: 10/30/00
 Northing: 118238 Easting: 1079809

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145	<p>2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 185 FEET</p> <p>UNIFORM GRANULAR BENTONITE GROUT 20-178 FEET</p>	<p>⊙ 140 - 146 feet: GW as above, 1 - 2 1/2 inches in diameter, more sand than above, some cementation</p> <p>⊙ 140 feet: Discrete-depth groundwater sample MW-17d, 140', collected 2/9/00 13:52</p>	
			150		<p>⊙ 149 - 154 feet: GW as above, coarse-grained</p>	
			155		<p>⊙ 154 - 161 feet: Poorly graded sand with gravel (SP), fine-grained, with fine-grained gravel (1/4 - 3/4 inches in diameter)</p>	
			160	<p>8-INCH BOREHOLE 103-205 FEET</p>	<p>⊙ 160 feet: Discrete-depth groundwater sample MW-17d, 160', collected 2/10/00 14:46</p> <p>⊙ 161 - 172 feet: Well graded gravel (GW) in clay matrix, coarse-grained (2 inches in diameter)</p>	
			165		<p>⊙ 166 - 170 feet: Fine- to coarse-grained sand (SW), predominantly coarse-grained at 170 feet, gravel is well rounded, basaltic, some cementation</p>	
			170		<p>⊙ 172 - 174 feet: Poorly graded sand with gravel (SP), fine-grained, gravel fine-grained (1/4 - 1/2 inches in diameter)</p>	
			175			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-17d
 Sheet: 6 OF 6
 Total Boring Depth: 205 FT / WELL DEPTH: 195 FT
 Date Started/Completed: JAN. 27, 2000/FEB. 18, 2000
 Ground Level Elevation: 29.84 FT NGVD
 Measuring Point Elevation: 29.56 FT NGVD
 Static Water Level: 24.62 FT NGVD Date: 10/30/00
 Northing: 118238 Easting: 1079809

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180	UNIFORM GRANULAR BENTONITE GROUT 20-178 FEET 3/8 INCH SORTED GRANULAR BENTONITE 178-181 FEET 20-40 MESH SILICA SAND 181-182 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 185 FEET STAINLESS STEEL CENTRALIZER 10-20 MESH SILICA SAND 182-196 FEET 2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN 185-195 FEET STAINLESS STEEL CENTRALIZER 8-INCH BOREHOLE 103-205 FEET 3/8 INCH SORTED GRANULAR BENTONITE 196-205 FEET	GW as above ⊕ 180 feet: Discrete-depth groundwater sample MW-17d, 180', collected 2/11/00 14:22 ⊕ 181 - 188 feet: Sand lens ⊕ 188 - 205 feet: Well graded gravel with sand (GW) in silty sand matrix, fine- to coarse-grained (up to 5 inches in diameter), ~ 25% sand, rounded to sub-rounded, slightly cemented, abundant mica flakes ⊕ 199 feet: Minor amount of olive green clay, gravel up to 4 inches ⊕ 200 feet: Discrete-depth groundwater sample MW-17d, 200', collected 2/15/00 10:40 ⊕ 205 feet: End of boring	
			185			
			190			
			195			
			200			
			205			
			210			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS, INC
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-18
 Sheet: 1 OF 2
 Total Boring Depth: 39 FT / WELL DEPTH: 38 FT
 Date Started/Completed: NOVEMBER 3, 2000
 Ground Level Elevation: 32.03 FT NGVD
 Measuring Point Elevation: 31.65 FT NGVD
 Static Water Level: 27.83 FT NGVD Date: 11/20/00
 Northing: 117102 Easting: 1080373

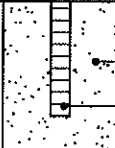
BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 2 feet: Asphalt with gravel sub-base	
			0	CEMENT 0-2 FEET		
20 24 23	0		5	3/8-INCH SORTED GRANULAR BENTONITE 2-25 FEET	2 - 18 feet: Poorly graded sand (SP), fine-grained, trace fine-grained gravel, no fines, brown/grey, slightly moist to saturated, loose to medium dense, FILL	
2 3 3	12		10		⊙ 15 feet: As above, ~15% medium-grained sand, saturated	
3 5 15	18		15	2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 28 FEET		
				8 1/4-INCH BOREHOLE 0-39 FEET		
4 8 10	12		20		18 - 23 feet: Silt (ML), trace very fine-grained sand, brown/grey mottled, moderate plasticity, dry to moist, stiff	
3 6 6	14		25		23 - 27 feet: Silt with sand (ML), ~40% medium- to coarse-grained sand, brown, moist to saturated, sand is angular, basaltic	
				10-20 MESH SILICA SAND 25-39 FEET	⊙ 27 feet: Grading to:	
8 10 10	18		30	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 28-38 FEET	27 - 33 feet: Well graded sand with silt (SM), medium- to coarse-grained, ~15% fines, grey, angular, basaltic, saturated	
					⊙ 33 feet: Grading to:	
			35		33 - 39 feet: Well graded sand (SW), medium- to coarse-grained, ~10% fines, trace fine-grained gravel, basaltic, saturated	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS, INC
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-18
 Sheet: 2 OF 2
 Total Boring Depth: 39 FT / WELL DEPTH: 38 FT
 Date Started/Completed: NOVEMBER 3, 2000
 Ground Level Elevation: 32.03 FT NGVD
 Measuring Point Elevation: 31.65 FT NGVD
 Static Water Level: 27.83 FT NGVD Date: 11/20/00
 Northing: 117102 Easting: 1080373

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
6 20 30/5'	15		0	 <p>8 1/4-INCH BOREHOLE 0-39 FEET 10-20 MESH SILICA SAND 25-39 FEET 2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 28-38 FEET</p>	SW as above	•
			40		⊙ 39 feet: End of boring	
			45			
			50			
			55			
			60			
			65			
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-18i
 Sheet: 1 OF 6
 Total Boring Depth: 180 FT /WELL DEPTH: 130 FT
 Date Started/Completed: JUNE 13, 2000/JUNE 30, 2000
 Ground Level Elevation: 32.06 FT NGVD
 Measuring Point Elevation: 31.84 FT NGVD
 Static Water Level: 26.96 FT NGVD Date: 10/30/00
 Northing: 117097 Easting: 1080382

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET	0 - 2 feet: Asphalt with gravel sub-base	.
4	7		5	3/8" SORTED GRANULAR BENTONITE 2-10 FEET	2 - 20 feet: Poorly graded sand (SP), fine-grained, trace amounts of medium- to coarse-grained, trace fines, trace wood fragments, dry, loose, FILL	
			10	2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 120 FEET 10-INCH BOREHOLE 0-100 FEET		
1 2 3			20	UNIFORM GRANULAR BENTONITE GROUT - 10-114 FEET	20 - 28 feet: Silt (ML), trace very fine-grained sand, low to moderate plasticity, unsaturated, medium stiff	
			25			
			30		28 - 48 feet: Well graded sand (SW), fine- to coarse-grained, predominantly coarse-grained, trace fines, basaltic, angular, saturated ⊙ 28 feet: Discrete-depth groundwater sample MW-18i, 28', collected 6/13/00 13:10 ⊙ 28 - 37 feet: SW as above, ~50% coarse-grained sand, 50% fine- to medium-grained sand	
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-18i
 Sheet: 2 OF 6
 Total Boring Depth: 180 FT /WELL DEPTH: 130 FT
 Date Started/Completed: JUNE 13, 2000/JUNE 30, 2000
 Ground Level Elevation: 32.06 FT NGVD
 Measuring Point Elevation: 31.84 FT NGVD
 Static Water Level: 26.96 FT NGVD Date: 10/30/00
 Northing: 117097 Easting: 1080382

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
3 12 20	8		40	UNIFORM GRANULAR BENTONITE GROUT - 10-114 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 120 FEET 10-INCH BOREHOLE 0-100 FEET	<ul style="list-style-type: none"> ⊙ 37 feet: SW as above, trace brown silt lenses (1/2 inch thick), trace gravel 1 - 2 inches in diameter ⊙ 38 feet: Grain size increasing, trace gravel up to 5 inches in diameter ⊙ 40 feet: Discrete-depth groundwater sample MW-18i, 40', collected 6/14/00 10:55 ⊙ 40 - 47 feet: SW as above, predominantly coarse-grained, ~20% fine- to medium-grained, trace gravel up to 6 inches in diameter, sand is angular, basaltic ⊙ 47 feet: SW as above, increasing gravel content with depth 48 - 102 feet: Well graded gravel with sand (GW), fine- to coarse-grained, sand content and grain size variable, trace fines, saturated ⊙ 50 feet: Predominantly coarse-grained sand, trace fine- to medium-grained sand, ~30% coarse-grained gravel (1/4 - 4 inches in diameter), sand is angular, basaltic, grey ⊙ 58 - 60 feet: GW as above, fairly even proportion of sand and gravel, gravel up to 5 inches in diameter, sand fine- to coarse-grained, predominantly coarse-grained, angular, basaltic ⊙ 60 feet: Discrete-depth groundwater sample MW-18i, 60', collected 6/15/00 10:25 ⊙ 60 - 63 feet: GW as above, some large cobbles ⊙ 63 - 73 feet: GW as above, ~30% sand, gravel predominantly <1 inch in diameter, trace up to 3 inches in diameter, basaltic, rounded to sub-rounded, grey, sand fine- to coarse-grained, predominantly coarse-grained, grey, basaltic 	
			45			
			50			
			55			
			60	▽		
			65			
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-18i
 Sheet: 3 OF 6
 Total Boring Depth: 180 FT /WELL DEPTH: 130 FT
 Date Started/Completed: JUNE 13, 2000/JUNE 30, 2000
 Ground Level Elevation: 32.06 FT NGVD
 Measuring Point Elevation: 31.84 FT NGVD
 Static Water Level: 26.96 FT NGVD Date: 10/30/00
 Northing: 117097 Easting: 1080382

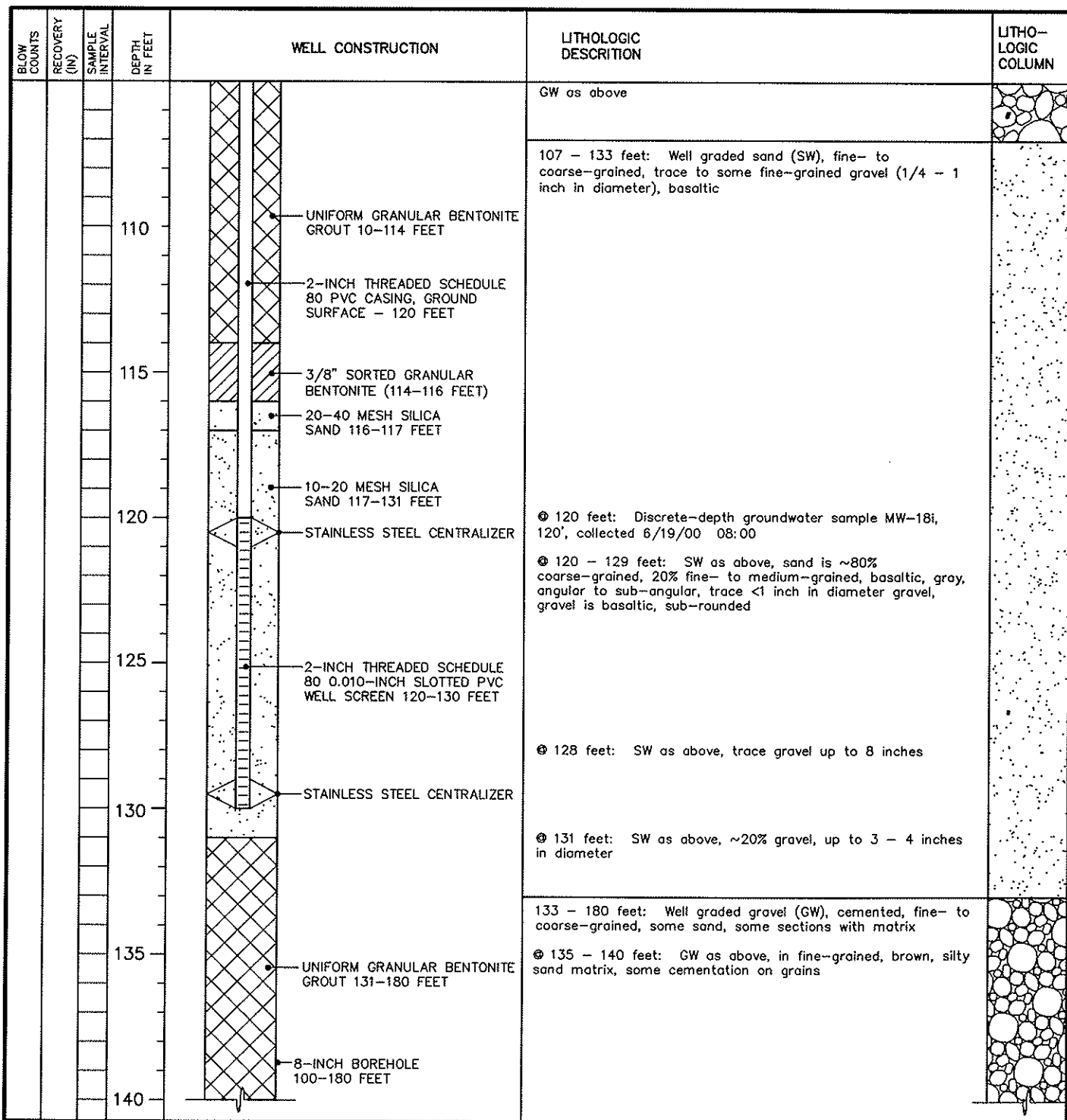
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	<p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT - 10-114 FEET</p> <p style="margin-left: 20px;">2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 120 FEET</p> <p style="margin-left: 20px;">10-INCH BOREHOLE 0-100 FEET</p> <p style="margin-left: 20px;">8-INCH BOREHOLE 100-180 FEET</p>	Ⓢ 73 - 76 feet: GW as above, predominantly < 2 inches in diameter, trace up to 3 inches in diameter, ~30% coarse-grained Ⓢ 76 feet: GW as above, up to 4 inches in diameter	
			80		Ⓢ 80 feet: Discrete-depth groundwater sample MW-18i, 80', collected 6/15/00 15:05	
			85		Ⓢ 84 - 90 feet: GW as above, ½ - 5 inches in diameter	
			90		Ⓢ 91 - 94 feet: GW as above, less sand than above, gravel ½ - 3 inches in diameter	
			95		Ⓢ 97 feet: GW as above, up to 6 inches in diameter	
			100		Ⓢ 99 - 101 feet: GW as above, ½ - 2 inches in diameter with coarse-grained, angular sand Ⓢ 100 feet: Discrete-depth groundwater sample MW-18i, 100', collected 6/16/00 10:45	
			105		102 - 107 feet: Large gravel	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-18i
 Sheet: 4 OF 6
 Total Boring Depth: 180 FT /WELL DEPTH: 130 FT
 Date Started/Completed: JUNE 13, 2000/JUNE 30, 2000
 Ground Level Elevation: 32.06 FT NGVD
 Measuring Point Elevation: 31.84 FT NGVD
 Static Water Level: 26.96 FT NGVD Date: 10/30/00
 Northing: 117097 Easting: 1080382

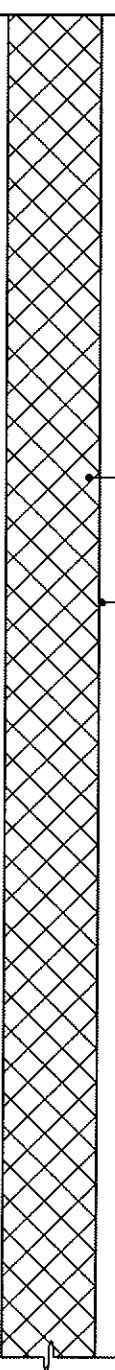
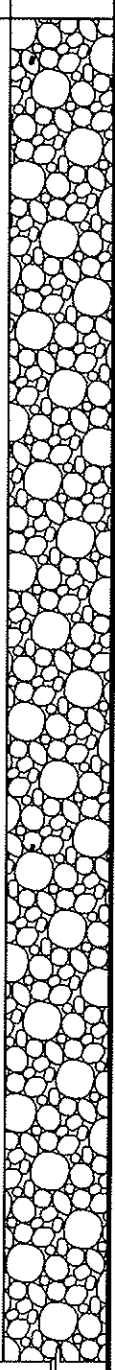


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-18i
 Sheet: 5 OF 6
 Total Boring Depth: 180 FT /WELL DEPTH: 130 FT
 Date Started/Completed: JUNE 13, 2000/JUNE 30, 2000
 Ground Level Elevation: 32.06 FT NGVD
 Measuring Point Elevation: 31.84 FT NGVD
 Static Water Level: 26.96 FT NGVD Date: 10/30/00
 Northing: 117097 Easting: 1080382

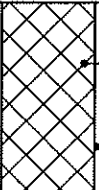
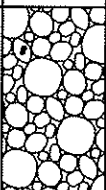
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145	 <p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT 131-180 FEET</p> <p style="margin-left: 20px;">8-INCH BOREHOLE 100-180 FEET</p>	<p>⊗ 140 feet: Discrete-depth groundwater sample MW-18i, 140', collected 6/27/00 12:10</p> <p>⊗ 140 - 148 feet: GW as above, ¼ - 4 inches in diameter, some sand, some cementation</p> <p>⊗ 150 - 158 feet: GW as above, ½ - 3 inches in diameter, some grey clay, some cementation</p> <p>⊗ 160 feet: Discrete-depth groundwater sample MW-18i, 160', collected 6/26/00 14:45</p> <p>⊗ 160 - 180 feet: GW as above 1/8 - 6 inches in diameter, very little sand</p>	
			150			
			155			
			160			
			165			
			170			
			175			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-18i
 Sheet: 6 OF 6
 Total Boring Depth: 180 FT /WELL DEPTH: 130 FT
 Date Started/Completed: JUNE 13, 2000/JUNE 30, 2000
 Ground Level Elevation: 32.06 FT NGVD
 Measuring Point Elevation: 31.84 FT NGVD
 Static Water Level: 26.96 FT NGVD Date: 10/30/00
 Northing: 117097 Easting: 1080382

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180	 <p>UNIFORM GRANULAR BENTONITE GROUT 131-180 FEET</p> <p>8-INCH BOREHOLE 100-180 FEET</p>	<p>⊙ 180 feet: Discrete-depth groundwater sample MW-18i, 180', collected 6/28/00 10:55</p>	
			185		<p>⊙ 180 feet: End of boring</p>	
			190			
			195			
			200			
			205			
			210			

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931
Location: ALLEY BETWEEN NW PACKING AND GREAT WESTERN MALTING
PMX Representative: MIKE MARSHALL
Drilled By: GEOTECH EXPLORATIONS
Drill Method: AUGER
Soil Sample Method: SPLIT SPOON
Groundwater Sample Method: NA

Boring Number: MW-19s
Sheet: 1 OF 1
Total Boring Depth: 34 FT / WELL DEPTH: 33 FT
Date Completed: OCTOBER 6, 2004
Ground Level Measurement: 33.55 FT
Initial Water Level ∇ 29.8 FT (AUGER IN GROUND)
Measuring Point Elevation: 33.26 FT
Static Water Level: 29.89 FT **Date:** 10/07/04
Northing: 116599.2 **Easting:** 1079945.5

DATE: 03/30/07 08:22am FILENAME: P194006281

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
				<p> FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1 FEET BENTONITE CHIPS 1-21 FEET 2-INCH THREADED SCH 40 PVC CASING, 0-23 FEET, FLUSH THREAD 8-INCH BOREHOLE 0-34 FEET 10/20 SILICA SAND, 21-34 FEET 2-INCH SCH 40 0.020 SLOT PVC SCREEN 23-33 FEET </p>	No sample obtained 5-20 feet: SAND (SW) - dark gray, loose, wet, micaceous, sub angular, medium to coarse grained @ 15 feet: SAND, fine grained 20-30 feet: SILT TO SANDY SILT (ML) - light brownish gray to light brown, medium stiff, moist to wet, mottled, micaceous, sand is fined grained 30-34 feet: SAND (SW) - dark gray, medium dense, saturated, micaceous, sub angular, medium to coarse grained 34 feet: End of boring	
5 6 7	12"		5			
6 8 9	14"		10			
2 2 3	12"		15			
3 4 5	16"		20			
6 5 3	12"		25			
5 10 10	16"		30			
5 8 10	12"		35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-1
 Sheet: 1 OF 2
 Total Depth: 40 FEET
 Date Started/Completed: DECEMBER 3, 2001
 Ground Level Elevation: 28.89 FEET NGVD
 Measuring Point Elevation: 28.62 FEET NGVD
 Static Water Level: 20.8 FEET NGVD Date: 12/20/01
 Northing: 119586.25 Easting: 1078904.76

DATE: 12/05/02 FILENAME: 194006672 IMAGES: XREF'S:

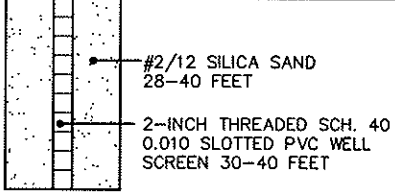

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 2 feet: GW well-graded Gravel	0
			2	CONCRETE 0-2 FEET		2
			5	UNIFORM GRANULAR BENTONITE, 2-28 FEET	2-30 feet: SP poorly-graded Sand	5
10 12 22	5		10	10-INCH BOREHOLE 0-40 FEET	⊙ 10 feet: poorly-graded Sand (SP), 5% fines, medium-very fine, angular, loose, non-plastic, damp, trace gravel (<2 inches)	10
			15	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 30 FEET		15
11 12 14	100		20		⊙ 20 feet: poorly graded Sand (SP), no fines, fine-medium grained, angular, loose, moist	20
			25		⊙ 21 feet: poorly graded Sand (SP), with 5% silt gray, fine-very fine grained, angular, non-plastic, loose-medium dense, moist	25
			30			30
			35	#2/12 SILICA SAND 28-40 FEET	30-37 feet: SW well-graded Sand	35
			37	2-INCH THREADED SCH. 40 0.010 INCH SLOTTED PVC WELL SCREEN 30-40 FEET	⊙ 30 feet: gravelly Sand (SW), dark brown/gray, coarse-fine grained, 15% coarse, 60% medium, 15% fine-grained, 10% sub-rounded angular gravel (<1"), loose-medium dense, saturated	37

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-1
 Sheet: 2 OF 2
 Total Depth: 40 FEET
 Date Started/Completed: DECEMBER 3, 2001
 Ground Level Elevation: 28.89 FEET NGVD
 Measuring Point Elevation: 28.62 FEET NGVD
 Static Water Level: 20.8 FEET NGVD Date: 12/20/01
 Northing: 119586.25 Easting: 1078904.76

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		as above SW @ 40 feet: well graded Gravel (GW), gray, 5% fines, 80% coarse, 60% oversized, medium dense, saturated, angular to sub-rounded 40 feet: end of boring	
			45			
			50			
			55			
			60			
			65			
			70			

IMAGES:
XREF'S:

DATE: 12/05/02 FILENAME: 194006673

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-2
 Sheet: 1 OF 1
 Total Depth: 25 FEET
 Date Started/Completed: DECEMBER 3, 2001
 Ground Level Elevation: 28.75 FEET NGVD
 Measuring Point Elevation: 28.39 FEET NGVD
 Static Water Level: 20.2 FEET NGVD Date: 12/20/01
 Northing: 119575.63 Easting: 1078907.10

IMAGES: XREFS:
 DATE: 12/31/02 FILENAME: 194006528

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 1 feet: GP Poorly-graded Gravel	
			0-2	CONCRETE 0-2 FEET	1 - 14 feet: GM, Silty sandy gravel	
			2-13	UNIFORM GRANULAR BENTONITE, 2-13 FEET		
			5			
			10	10-INCH BOREHOLE 0-25 FEET		
10 12 22	5		10	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 15 FEET	@ 10 feet: Silty sandy gravel (GM), light brown, 20% fines, 20% angular sand, medium to fine-grained, 60% angular gravel (<3/4"), sticky, medium dense	
			15		14 - 25 feet: (SP), Poorly graded sand	
			15	#2/12 SILICA SAND 13-25 FEET		
			20	2-INCH THREADED SCH. 40 0.010 SLOTTED PVC WELL SCREEN 15-25 FEET	@ 20 feet: poorly graded Sand (SP), light brown, 5% fines, fine-grained, non-plastic, 2" lens of medium grained sand at 21' bgs, saturated	
11 12 14	100		20			
			25		End of Boring	
			30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-3
 Sheet: 1 OF 3
 Total Depth: 100 FEET
 Date Started/Completed: DECEMBER 4, 2001
 Ground Level Elevation: 28.88 FEET NGVD
 Measuring Point Elevation: 28.22 FEET NGVD
 Static Water Level: 20.5 FEET NGVD Date: 12/20/01
 Northing: 119594.79 Easting: 1078922.16

DATE: 12/31/02 FILENAME: 194006529 IMAGES: XREF.S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 1 feet: (GP)	○
			0.2	CONCRETE 0-2 FEET	1.0 - 20 feet: (SP)	●
			2	UNIFORM GRANULAR BENTONITE GROUT, 2-88 FEET		●
			5			●
			10		⊙ 10 feet: poorly-graded Sand (SP), light brown, no fines, trace coarse angular sand, fine-grained, moist, angular, med. dense	●
12 22 25	100		10			●
			15	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 90 FEET		●
			15	10-INCH BOREHOLE 0-100 FEET		●
			20		20 - 21 feet: (ML)	●
10 22 20	100		20		⊙ 20 feet: as above	●
			20.5		⊙ 20.5 feet: 2-inch lens of sandy silt (ML), brown, 80% fines, non-plastic, 10% fine-grained angular sand, med. dense, wgt	●
			21		21 - 28 feet: (SP)	●
			25			●
			30		28 - 68 feet: (SW)	●
5 20 33	100		30		⊙ 30 feet: well graded Sand (SW), dark gray no fines, 15% coarse angular, 60% med-angular, 25% fine-grained, saturated, med-dense to dense	●
			35			●

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-3
 Sheet: 2 OF 3
 Total Depth: 100 FEET
 Date Started/Completed: DECEMBER 4, 2001
 Ground Level Elevation: 28.88 FEET NGVD
 Measuring Point Elevation: 28.22 FEET NGVD
 Static Water Level: 20.5 FEET NGVD Date: 12/20/01
 Northing: 119594.79 Easting: 1078922.16

DATE: 12/31/02 FILENAME: 194006534
 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		28 -- 68 feet: (SW)	
3 22 2.5	40				◎ 40 feet: well-graded Sand (SW), dark gray, no fines, 50% coarse, 25% med, 25% fine-grained, angular to rounded, saturated, trace gravel (<1/4")	
			45	UNIFORM GRANULAR BENTONITE GROUT - 2-88 FEET		
			50	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 90 FEET	◎ 50 feet: as above, coarse fraction decreasing to ~25%	
17 50 6	50			10-INCH BOREHOLE 0-100 FEET		
			55			
			60		◎ 60 feet: as above, dense	
4 12 4.5	100					
			65			
			70		◎ 70 feet: poorly-graded Sand (SP), dark gray, trace fines, trace coarse sand, 50% fine-grained, 40% med-grained, angular to sub-rounded, saturated	
5 7 2.2	100					

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-3
 Sheet: 3 OF 3
 Total Depth: 100 FEET
 Date Started/Completed: DECEMBER 4, 2001
 Ground Level Elevation: 28.88 FEET NGVD
 Measuring Point Elevation: 28.22 FEET NGVD
 Static Water Level: 20.5 FEET NGVD Date: 12/20/01
 Northing: 119594.79 Easting: 1078922.16

DATE: 12/31/02 FILENAME: 194006535 IMAGES: XREFS:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
5 7 22	100		75	<p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT 2-88 FEET</p> <p style="margin-left: 20px;">#2/12 SILICA SAND 88-100 FEET</p> <p style="margin-left: 20px;">10-INCH BOREHOLE 0-100 FEET</p> <p style="margin-left: 20px;">2-INCH THREADED SCH 40 0.010-INCH SLOTTED PVC WELL SCREEN 90-100 FEET</p>	@ 70 feet: poorly-graded Sand (SP), dark gray, trace fines, trace coarse sand, 50% fine-grained, 40% med-grained, angular to sub-rounded, saturated	
3 6 9	80		80		@ 80 feet: as above, fine-grained increasing to 50%, 45% med-grained	
9 1 50	100		90		@ 90 feet: as above, but with trace gravel (<1/2")	
10 15 28	100		100		100 feet: End of boring @ 100 feet: poorly-graded sand (SP), gray, trace fines, trace coarse, 70% med-grained, 25% fine-grained, med-dense.	
			105			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-4
 Sheet: 1 OF 2
 Total Depth: 40 FEET
 Date Started/Completed: DECEMBER 10, 2001
 Ground Level Elevation: 28.26 FEET NGVD
 Measuring Point Elevation: 28.00 FEET NGVD
 Static Water Level: 20.0 FEET NGVD Date: 12/20/01
 Northing: 119582.19 Easting: 1078943.09

DATE: 12/31/02 FILENAME: 194006536 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 1 feet: GP	[GP Pattern]
			1	CONCRETE 0-2 FEET	1 - 5 feet: ML	[ML Pattern]
			5	UNIFORM GRANULAR BENTONITE, 2-28 FEET		[Bentonite Pattern]
			10		6 - 31 feet: SP	[SP Pattern]
9 13 16	30		10		⊙ 10 feet: poorly-graded sand (SP), gray, trace fines, 5% coarse, 90% medium and fine-grained, med-dense, moist	[SP Pattern]
			15	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 30 FEET		[Casing Pattern]
			20	10-INCH BOREHOLE 0-40 FEET	⊙ 20 feet: poorly-graded Sand (SP), gray, 5% fines, trace coarse, 80% fine-grained, 10% med-grained, moist, med-dense	[SP Pattern]
10 13 17	100		20			[SP Pattern]
			25			[SP Pattern]
			30		⊙ 30 Feet: as above, coarse fraction increasing to 20%	[SP Pattern]
14 50 6	100		30	2-INCH THREADED SCH 40 0.010 INCH SLOTTED PVC WELL SCREEN 30-40 FEET		[Screen Pattern]
			35	#2/12 SILICA SAND, 28-40 FEET	31 - 40 feet: SW ⊙ 31 Feet: well-graded Sand (SW) with gravel (<1/2"), gray, trace fines. 50% coarse, 20% medium, 20% fine-grained, wet, med-dense to very dense	[SW Pattern]

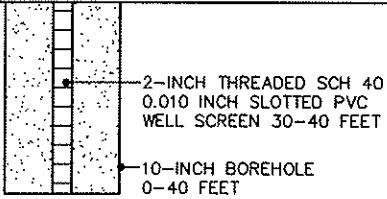

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-4
 Sheet: 2 OF 2
 Total Depth: 40 FEET
 Date Started/Completed: DECEMBER 10, 2001
 Ground Level Elevation: 28.26 FEET NGVD
 Measuring Point Elevation: 28.00 FEET NGVD
 Static Water Level: 20.0 FEET NGVD Date: 12/20/01
 Northing: 119582.19 Easting: 1078943.09

DATE: 12/31/02 FILENAME: 194006537 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40	 <p>2-INCH THREADED SCH 40 0.010 INCH SLOTTED PVC WELL SCREEN 30-40 FEET</p> <p>10-INCH BOREHOLE 0-40 FEET</p>	Ⓢ 40 feet, as above	
			45			
			50			
			55			
			60			
			65			
			70			
					40 feet: End of boring	


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-5
 Sheet: 1 OF 3
 Total Depth: 75 FEET
 Date Started/Completed: DECEMBER 14, 2001
 Ground Level Elevation: 28.53 FEET NGVD
 Measuring Point Elevation: 28.12 FEET NGVD
 Static Water Level: 20.0 FEET NGVD Date: 12/14/01
 Northing: 119572.83 Easting: 1078920.86

IMAGES: XREF'S:
 DATE: 12/31/02 FILENAME: 194006538

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-2 FEET	0 - 1 feet: GP	0
			5	UNIFORM GRANULAR BENTONITE GROUT, 2-63 FEET	1 - 20 feet: SP	1
			10		@ 10 feet: poorly-graded Sand (SP), light brown, no fines, trace coarse angular sand, fine-grained, moist, angular, med-dense	10
			15	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 65 FEET 10-INCH BOREHOLE 0-75 FEET		15
			20		@ 20 feet: as above	20
			25		21-65 feet: SW	25
			30		@ 30 feet: well-graded Sand (SW), dark gray, no fines, 15% coarse, 60% medium, 25% fine-grained, saturated, med-dense to dense	30
			35			35

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-5
 Sheet: 2 OF 3
 Total Depth: 75 FEET
 Date Started/Completed: DECEMBER 14, 2001
 Ground Level Elevation: 28.53 FEET NGVD
 Measuring Point Elevation: 28.12 FEET NGVD
 Static Water Level: 20.0 FEET NGVD Date: 12/14/01
 Northing: 119572.83 Easting: 1078920.86

DATE: 12/31/02 FILENAME: 194006539 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		21 - 65 feet: (SW)	
			45	UNIFORM GRANULAR BENTONITE GROUT - 2-63 FEET	⊙ 40 feet: well-graded Sand (SW), dark gray, no fines, 50% coarse, 25% medium, 25% fine-grained, angular to rounded, saturated, trace gravel (<1/4 ")	
			50	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 65 FEET	⊙ 50 feet: as above, coarse fraction decreasing	
			55	10-INCH BOREHOLE 0-75 FEET	⊙ 60 feet: as above, dense	
			60			
			65	#2/12 SILICA SAND 63-75 FEET 2-INCH THREADED SCH 40 0.010 INCH SLOTTED PVC WELL SCREEN 65-75 FEET	65-75 feet: SP	
			70		⊙ 70 feet: poorly-graded Sand (SP), dark-gray, trace fines, trace coarse sand, 40% med-grained, 45% fine-grained	

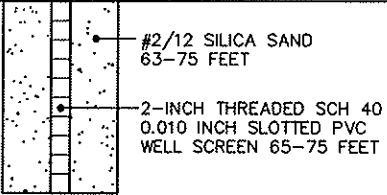
EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-5
 Sheet: 3 OF 3
 Total Depth: 75 FEET
 Date Started/Completed: DECEMBER 14, 2001
 Ground Level Elevation: 28.53 FEET NGVD
 Measuring Point Elevation: 28.12 FEET NGVD
 Static Water Level: 20.0 FEET NGVD Date: 12/14/01
 Northing: 119572.83 Easting: 1078920.86

DATE: 12/31/02 FILENAME: 194006540 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75		@ 70 feet: poorly-graded Sand (SP), dark-gray, trace fines, trace coarse sand, 40% med--grained, 45% fine-grained	.
			80			
			85			
			90			
			95			
			100			
			105			
					75 feet: end of boring	

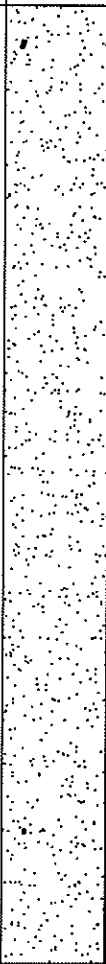


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-6
 Sheet: 1 OF 3
 Total Depth: 100 FEET
 Date Started/Completed: DECEMBER 6, 2001/DECEMBER 10, 2001
 Ground Level Elevation: 28.69 FEET NGVD
 Measuring Point Elevation: 28.45 FEET NGVD
 Static Water Level: 20.0 FEET NGVD Date: 12/21/01
 Northing: 119555.48 Easting: 1078944.72

DATE: 12/31/02 FILENAME: 194006545 IMAGES: XREF'S:



BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-2 FEET UNIFORM GRANULAR BENTONITE GROUT, 2-88 FEET	0 - 25 feet: SP ◎ 10 feet: poorly-graded Sand (SP), light brown, no fines, trace coarse angular sand, mostly fine-grained ◎ 20 feet: as above	
			5	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 90 FEET 10-INCH BOREHOLE 0-100 FEET		
			10			
			15			
			20			
			25		25 - 68 feet: SW ◎ 30 feet: well-graded Sand (SW), gray, 20% coarse angular, 55% medium angular, 25% fine-grained, saturated	
			30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275--1940--006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-6
 Sheet: 2 OF 3
 Total Depth: 100 FEET
 Date Started/Completed: DECEMBER 6, 2001/DECEMBER 10, 2001
 Ground Level Elevation: 28.69 FEET NGVD
 Measuring Point Elevation: 28.45 FEET NGVD
 Static Water Level: 20.0 FEET NGVD Date: 12/21/01
 Northing: 119555.48 Easting: 1078944.72

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		25 - 68 feet: SW, well-graded Sand (SW), gray, 20% coarse angular, 55% medium angular, 25% fine-grained, saturated	
			45	UNIFORM GRANULAR BENTONITE GROUT - 2-88 FEET	⊙ 40 feet: as above, coarse fraction increasing to 50%, 25% medium and fine grained	
			50	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 90 FEET	⊙ 50 feet: as above, coarse fraction decreasing slightly	
			55	10-INCH BOREHOLE 0-100 FEET	⊙ 60 feet: as above	
			60			
			65			
			70		68 - 100 feet: (SP)	
					⊙ 70 feet: poorly-graded Sand (SP), dark gray, trace fines, 50% fine-grained, 40% med-grained	

DATE 12/31/02 FILENAME 194005546 PAGES 3

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-6
 Sheet: 3 OF 3
 Total Depth: 100 FEET
 Date Started/Completed: DECEMBER 6, 2001/DECEMBER 10, 2001
 Ground Level Elevation: 28.69 FEET NGVD
 Measuring Point Elevation: 28.45 FEET NGVD
 Static Water Level: 20.0 FEET NGVD Date: 12/21/01
 Northing: 119555.48 Easting: 1078944.72

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	<p>2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 90 FEET</p> <p>UNIFORM GRANULAR BENTONITE GROUT 2-88 FEET</p> <p>10-INCH BOREHOLE 0-100 FEET</p>	<p>68 - 100 feet: poorly-graded Sand (SP), dark gray, trace fines, 50% fine-grained, 40% med-grained</p> <p>⊙ 80 feet: as above, increasing fine-grained sand</p> <p>⊙ 90 feet: as above</p>	
			80			
			85			
			90	<p>2-INCH THREADED SCH 40 0.010-INCH SLOTTED PVC WELL SCREEN 90-100 FEET</p> <p>#2/12 SILICA SAND 88-100 FEET</p>	<p>⊙ 100 feet: poorly-graded Sand (SP) with gravel, dark gray, trace fines, 45% fine-grained, 40% med-grained</p> <p>100 feet: end of boring</p>	
			95			
			100			
			105			

DATE: 12/31/02 FILENAME: 194006547 IMAGES: XREF'S:

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-7
 Sheet: 1 OF 3
 Total Depth: 75 FEET
 Date Started/Completed: DECEMBER 5, 2001/DECEMBER 5, 2001
 Ground Level Elevation: 28.81 FEET NGVD
 Measuring Point Elevation: 28.56 FEET NGVD
 Static Water Level: 20.5 FEET NGVD Date: 12/21/01
 Northing: 119557.51 Easting: 1078959.18

DATE: 12/31/02 FILENAME: 1940006048

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 25 feet: SP	
			0-2	CONCRETE 0-2 FEET		
			2-63	UNIFORM GRANULAR BENTONITE GROUT, 2-63 FEET		
			5			
			10		⊗ 10 feet: poorly-graded Sand (SP), gray/brown, 80% fine grained, trace fines, 15% med-grained, angular, trace gravel (<1/2"), med-dense	
13 16 18	50		10			
			15	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 65 FEET		
			15	10-INCH BOREHOLE 0-75 FEET		
			20		20 - 28 feet: SM	
			20		⊗ 20 feet: poorly-graded silty Sand (SM), gray/brown, 20% fines, non-plastic, 80% fine grained, moist/wet	
14 14 16	50		20			
			25			
			30		28 - 65 feet: SW	
			30		⊗ 30 feet: well-graded Sand (SW) with gravel (<1/2"), trace fines, 40% coarse, 50% med-grained, dense to very dense, saturated	
50 / 6	20		30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-7
 Sheet: 2 OF 3
 Total Depth: 75 FEET
 Date Started/Completed: DECEMBER 5, 2001/DECEMBER 5, 2001
 Ground Level Elevation: 28.81 FEET NGVD
 Measuring Point Elevation: 28.56 FEET NGVD
 Static Water Level: 20.5 FEET NGVD Date: 12/21/01
 Northing: 119557.51 Easting: 1078959.18

DATE 12/31/03 FILENAME 194006540 IMAGES XREFS:

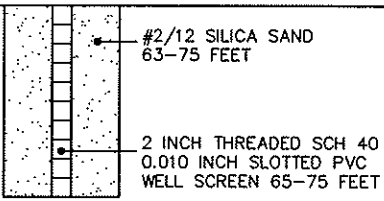

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		28 - 65 feet: well-graded Sand (SW) with gravel (<1/2"), trace fines, 40% coarse, 50% med-grained, dense to very dense, saturated @ 40 feet: as above, coarse fraction increasing to 60%	
50 / 6	60		45	UNIFORM GRANULAR BENTONITE GROUT - 2-63 FEET 2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 65 FEET		
50 / 6	60		50	10-INCH BOREHOLE 0-75 FEET		
50 / 6	60		55			
			60		@ 50 feet: gravelly Sand (SW), dark gray, no fines, 80% coarse, 15% gravel (<1/2"), 5% fine-grained, very dense @ 60 feet: as above	
---	80		65	#2/12 SILICA SAND 63-75 FEET 2 INCH THREADED SCH 40 0.010 INCH SLOTTED PVC WELL SCREEN 65-75 FEET	@ 65 feet: (SP)	
			70		@ 70 feet: poorly-graded Sand (SP), dark gray, trace fines, 40% fine, 40% med-grained, trace coarse	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-7
 Sheet: 3 OF 3
 Total Depth: 75 FEET
 Date Started/Completed: DECEMBER 5, 2001/DECEMBER 5, 2001
 Ground Level Elevation: 28.81 FEET NGVD
 Measuring Point Elevation: 28.56 FEET NGVD
 Static Water Level: 20.5 FEET NGVD Date: 12/21/01
 Northing: 119557.51 Easting: 1078959.18

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75		70 - 100 feet: poorly-graded Sand (SP), dark gray, trace fines, 40% fine, 40% med-grained, trace coarse	
			80			
			85			
			90			
			95			
			100			
			105			
					75 feet: end of boring	

DATE: 12/31/02 FILENAME: 194008550 IMAGES: XREF'S:

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-8
 Sheet: 1 OF 1
 Total Depth: 25 FEET
 Date Started/Completed: DECEMBER 5, 2001
 Ground Level Elevation: 28.89 FEET NGVD
 Measuring Point Elevation: 28.54 FEET NGVD
 Static Water Level: 20.0 FEET NGVD Date: 12/20/01
 Northing: 119540.87 Easting: 1078967.53

IMAGES: XREF'S:
 DATE: 12/31/02 FILENAME: 194006551

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-2 FEET	0 - 25 feet: SP	0
			5	UNIFORM GRANULAR BENTONITE, 2-13 FEET 10-INCH BOREHOLE 0-25 FEET		5
6 22		50	10	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 15 FEET	◎ 10 feet: poorly-graded Sand (SP) with silt, gray/brown, non-plastic, 5% silt, 15% coarse, 80% medium to fine grained, trace gravel (<1/2"), med-dense, moist	10
			15	#2/12 SILICA SAND 13-25 FEET		15
15 15 15		100	20	2-INCH THREADED SCH. 40 0.010 SLOTTED PVC WELL SCREEN 15-25 FEET 	◎ 20 feet: poorly-graded Sand (SP) with silt, gray/brown, non-plastic, fines increasing to 30%, 70% fine-grained sand, moist/wet	20
			25		25 feet: end of boring	25
			30			30
			35			35

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: IMW-1
 Sheet: 1 OF 1
 Total Depth: 27 FEET
 Date Started/Completed: DECEMBER 3, 2001
 Ground Level Elevation: 27.89 FEET NGVD
 Measuring Point Elevation: 27.56 FEET NGVD
 Static Water Level: 21.6 FEET NGVD Date: 12/18/01
 Northing: 119485.39 Easting: 1078855.65

DATE: 12/05/02 FILENAME: 194006552 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 0.5 feet: poorly-graded gravel (GP)	
			0.5	CONCRETE 0-2 FEET	0.5 - 3 feet: sandy silt (ML)	
			5	UNIFORM GRANULAR BENTONITE, 2-15 FEET	3 - 27 feet: poorly-graded Sand (SP)	
			10		⊗ 10 feet: poorly-graded Sand (SP) light brown, fine-medium grained, angular, loose-medium dense	
9 22	50		10			
			15	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 27 FEET		
			15	10-INCH BOREHOLE 0-27 FEET		
			20	#2/12 SILICA SAND 15-27 FEET		
15 15 15	100		20	2-INCH THREADED SCH 40 0.010 SLOTTED PVC WELL SCREEN 17-27 FEET	⊗ 20 feet: poorly-graded Sand (SP) grayish brown, no fines coarse, wet, loose-medium dense	
			25			
			30			
			35			
					27 feet: end of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: IMW-2
 Sheet: 1 OF 1
 Total Depth: 27 FEET
 Date Started/Completed: DECEMBER 3, 2001
 Ground Level Elevation: 27.87 FEET NGVD
 Measuring Point Elevation: 27.66 FEET NGVD
 Static Water Level: 21.7 FEET NGVD Date: 12/19/01
 Northing: 119465.93 Easting: 1078941.7

IMAGES:
XREF'S:

DATE: 12/05/02 FILENAME: 194006553

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 0.5 feet: poorly-graded gravel (GP)	
			0.5	CONCRETE 0-2 FEET	0.5 - 11 feet: silt with sand (ML)	
			5	UNIFORM GRANULAR BENTONITE, 2-15 FEET		
			10		⊗ 10 feet: silt with sand (ML) dark brown, 95% fine sand	
5 8 12	100		11	2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 27 FEET	11 - 27 feet: poorly-graded Sand (SP)	
			15	10-INCH BOREHOLE 0-27 FEET	⊗ 11 feet: poorly-graded Sand (SP), 5% fines, fine grained, 1" lens of SP with 20% fines, loose-medium dense, non-plastic	
			20	#2/12 SILICA SAND 15-27 FEET		
5 7 9			20	2-INCH THREADED SCH 40 0.010 SLOTTED PVC WELL SCREEN 17-27 FEET	⊗ 20 feet: poorly-graded Sand (SP), 10% fines, very fine to fine-grained, angular, wet, non-plastic, 2" lens of fine-medium grained well-graded sand.	
			25			
			30			
			35			
					27 feet: end of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: IMW-3
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Started/Completed: DECEMBER 13, 2001
 Ground Level Elevation: 31.05 FEET NGVD
 Measuring Point Elevation: 30.82 FEET NGVD
 Static Water Level: 24.8 FEET NGVD Date: 12/19/01
 Northing: 119467.58 Easting: 1079027.77

DATE: 12/05/02 FILENAME: 194006554 IMAGES: XREF.S:

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 20.5 feet: silty Sand (SM)	
			2	CONCRETE 0-2 FEET		
			5	UNIFORM GRANULAR BENTONITE, 2-18 FEET		
			10		⊙ 10 feet: silty Sand (SM) light brown, 3% fines, moderate plasticity, traces coarse, loose-med dense, moist	
6 9 11			11	2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 20 FEET		
			15	10-INCH BOREHOLE 0-30 FEET		
			20	#2/12 SILICA SAND 18-30 FEET	⊙ 20 feet: as above	
11 15 19			21		20.5 - 21 feet: sandy silt (ML)	
			25	2-INCH THREADED SCH 40 0.010 SLOTTED PVC WELL SCREEN 20-30 FEET	⊙ 20.5 feet: 2" lens of sandy Silty, light brown, 60% fines, moderate plasticity, 45% very fine-fine grained sand, 55% medium grained, wet	
			28		21 - 28 feet: poorly-graded Sand (SP)	
			30		⊙ 21 feet: poorly-graded Sand (SP), trace fines, non-plastic, 90% fine grained, 10% medium grained, wet	
15 15 16			30		28 - 30 feet: well-graded sand (SW)	
			30		⊙ 30 feet: well-graded Sand (SW), 5% coarse, 90% med-fine-grained, trace fines	
			30		30 feet: end of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: IMW-4
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Started/Completed: DECEMBER 13, 2001
 Ground Level Elevation: 31.31 FEET NGVD
 Measuring Point Elevation: 31.00 FEET NGVD
 Static Water Level: 25.8 FEET NGVD Date: 12/19/01
 Northing: 119504.83 Easting: 1079075.75

IMAGES: XREFS
 DATE: 12/05/02 FILENAME: 194006555

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 15 feet: Silt (ML)	
			0-2	CONCRETE		
			2-18	UNIFORM GRANULAR BENTONITE		
			18-20		⊙ 10 feet: Silt (ML), light brown, 90% fines, moderate plasticity, 10% fine sand, moist, loose-med dense	
12	18	100	20	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 20 FEET		
			15	10-INCH BOREHOLE 0-30 FEET	15 - 25 feet: poorly-graded Sand (SP)	
			18-22	#2/12 SILICA SAND 18-30 FEET	⊙ 20 feet: poorly-graded Sand (SP), grey brown, 5% fines	
10	18	100	22			
			25	2-INCH THREADED SCH 40 0.010 SLOTTED PVC WELL SCREEN 20-30 FEET	25 - 30 feet: well-graded Sand (SW)	
			30		⊙ 30 feet: well-graded Sand (SW), trace fines	
5	12	100	20		30 feet: end of boring	
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: IMW-5
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Started/Completed: DECEMBER 12, 2001
 Ground Level Elevation: 31.06 FEET NGVD
 Measuring Point Elevation: 30.74 FEET NGVD
 Static Water Level: 24.9 FEET NGVD Date: 12/19/01
 Northing: 119592.26 Easting: 1078965.18

IMAGES XREF'S
DATE: 12/05/00 FILENAME: 19400556

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-2 FEET UNIFORM GRANULAR BENTONITE, 2-18 FEET	0 - 28 feet: poorly-graded Sand (SP)	0
12 18 20	100		10	10-INCH BOREHOLE 0-30 FEET 2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE -20 FEET	@ 10 feet: poorly-graded Sand (SP), grey, trace fines, 10% coarse, 70% medium grained, 20% fine grained, medium dense, moist	10
10 18 22	100		20	#2/12 SILICA SAND 18-30 FEET	@ 20 feet: as above, less coarse fraction, moist/wet	20
			25	2-INCH THREADED SCH 40 0.010 SLOTTED PVC WELL SCREEN 20-30 FEET 	28 - 30 feet: well-graded Sand (SW)	25
6 12 20	100		30		@ 30 feet: well-graded Sand (SW) with gravel (<1"), dark gray, trace fines, 15% coarse, 60% medium grained, 40% fine grained, angular to sub-rounded, saturated, end of boring	30
			35			35

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING

Project Number: 275-1940-006

Location: VANCOUVER, WA

PMX Representative: ANDREW SOMES

Drilled By: CASCADE DRILLING

Drill Method: HOLLOW STEM AUGER

Soil Sample Method: SPLIT SPOON

Groundwater Sample Method: NA

Boring Number: IMW-5A

Sheet: 1 OF 2

Total Depth: 70 FEET

Date Started/Completed: DECEMBER 12, 2001

Ground Level Elevation: 31.03 FEET NGVD

Measuring Point Elevation: 30.78 FEET NGVD

Static Water Level: 24.9 FEET NGVD Date: 12/19/01

Northing: 119589.70 Easting: 1078967.31

BLOW COUNTS	RECOVERY (M)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	<ul style="list-style-type: none"> FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-2 FEET UNIFORM GRANULAR BENTONITE GROUT, 2-58 FEET 	0 - 28 feet: poorly-graded Sand (SP)	0
			10	<ul style="list-style-type: none"> 2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 60 FEET 10-INCH BOREHOLE 0-70 FEET 	◎ 10 feet: poorly-graded Sand (SP), gray, trace fines, 10% coarse, 70% medium grained, 20% fine grained, medium dense, moist	10
			20		◎ 20 feet: as above, less coarse fraction, moist/wet	20
			25			25
			30		28 - 70 feet: well-graded Sand (SW)	30
			35		◎ 30 feet: well-graded Sand (SW) with gravel (<1"), dark gray, trace fines, 15% coarse, 60% medium grained, 40% fine grained, angular to sub-rounded, saturated	35

IMAGES: KREBS
 DATE: 12/31/01 FILENAME: 194006597

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: IMW-5A
 Sheet: 2 OF 2
 Total Depth: 70 FEET
 Date Started/Completed: DECEMBER 12, 2001
 Ground Level Elevation: 31.03 FEET NGVD
 Measuring Point Elevation: 30.78 FEET NGVD
 Static Water Level: 24.9 FEET NGVD Date: 12/19/01
 Northing: 119589.70 Easting: 1078966.31

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		28 - 70 feet: well-graded Sand (SW)	
			45	UNIFORM GRANULAR BENTONITE GROUT 2-58 FEET	⊙ 40 feet: gravelly Sand (SW) well-graded, trace fines, 20% gravel (<1"), 40% coarse, 20% fine grained, angular to sub-rounded	
			50	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 60 FEET	⊙ 50 feet: well-graded Sand (SW) with gravel, dark gray, 40% coarse, 40% fine to medium grained, 15% gravel (<3/4"), angular to sub-rounded	
			55	10-INCH BOREHOLE 0-70 FEET		
			60	#2/12 SILICA SAND 58-70 FEET	⊙ 60 feet: as above, less gravel, coarse fraction increasing to 60%, 30% med-fine grained, dense	
			65	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 60 FEET		
			70		⊙ 70 feet: well-graded Sand (SW), dark grey, trace fines, 15% coarse, trace gravel (<1/2"), 40% med-grained, 40% fine grained, dense End of boring	

DATE 12/05/02 FILENAME 194006558 IMAGES XREFS

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: IMW-6
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Started/Completed: DECEMBER 11, 2001
 Ground Level Elevation: 31.10 FEET NGVD
 Measuring Point Elevation: 30.86 FEET NGVD
 Static Water Level: 24.9 FEET NGVD Date: 12/18/01
 Northing: 119626.24 Easting: 1078932.60

DATE: 12/31/02 FILENAME: 194006560 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 28 feet: poorly-graded Sand (SP)	
			2	CONCRETE 0-2 FEET		
			5	UNIFORM GRANULAR BENTONITE, 2-18 FEET		
			10	10-INCH BOREHOLE 0-30 FEET	⊙ 10 feet: poorly-graded Sand (SP). gray, trace fines, 10% coarse, 70% medium grained, 20% fine grained, medium dense, moist	
10 11 16	100		10	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 20 FEET		
			15			
			20	#2/12 SILICA SAND 18-30 FEET	⊙ 20 feet: as above, less coarse fraction, moist/wet	
12 50 6	80		20	2-INCH THREADED SCH. 40 0.010 SLOTTED PVC WELL SCREEN 20-30 FEET		
			25			
			28		28 - 30 feet: well-graded Sand (SW)	
			30		⊙ 30 feet: well-graded Sand (SW) with gravel (<1"), dark gray, trace fines, 15% coarse, 60% medium grained, 40% fine grained, angular to sub-rounded, saturated	
6 12 20	30		30		30 feet: End of boring	
			35			


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: IMW-6A
 Sheet: 1 OF 2
 Total Depth: 70 FEET
 Date Started/Completed: DECEMBER 11, 2001
 Ground Level Elevation: 31.03 FEET NGVD
 Measuring Point Elevation: 30.68 FEET NGVD
 Static Water Level: 24.9 FEET NGVD Date: 12/18/01
 Northing: 119626.73 Easting: 1078934.98

DATE: 12/31/02 FILENAME: 194006541 XREF'S

BLOW COUNTS	RECOVERY (M)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-2 FEET UNIFORM GRANULAR BENTONITE GROUT, 2-58 FEET	0 - 28 feet: poorly-graded Sand (SW)	
			5		Ⓢ 10 feet: poorly-graded sand (SP), gray, trace fines, 10% coarse, 70% medium grained, 20% fine-grained, medium dense, moist	
			10			
			15	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 60 FEET 10-INCH BOREHOLE 0-70 FEET		
			20		Ⓢ 20 feet: as above, less coarse fraction, moist/wet	
			25			
			30		28 - 70 feet: well-graded Sand (SW)	
			35		Ⓢ 30 feet: well-graded Sand (SW) with gravel (<1"), dark gray, trace fines, 15% coarse, 60% medium grained, 40% fine grained, angular to sub-rounded, saturated	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: IMW-6A
 Sheet: 2 OF 2
 Total Depth: 70 FEET
 Date Started/Completed: DECEMBER 11, 2001
 Ground Level Elevation: 31.03 FEET NGVD
 Measuring Point Elevation: 30.68 FEET NGVD
 Static Water Level: 24.9 FEET NGVD Date: 12/18/01
 Northing: 119626.73 Easting: 1078934.98

DATE: 12/31/02 FILENAME: 194006542 IMAGES: XREFS:

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
11 50 6	60		40		28 - 70 feet: well-graded Sand (SW)	
			45	UNIFORM GRANULAR BENTONITE GROUT, 2-58 FEET	⊙ 40 feet: gravelly Sand (SW), well graded, trace fines, 20% gravel (<1"), 40% coarse, 20% fine grained, angular to sub-rounded	
			50	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 70 FEET	⊙ 50 feet: well-graded Sand (SW) with gravel, dark gray, 40% coarse, 40% fine to medium grained, 15% gravel (<3/4"), angular to sub-rounded	
	80		55	10-INCH BOREHOLE 0-70 FEET		
30 50 5	70		60		⊙ 60 feet: as above, less gravel, coarse fraction increasing to 60%, 30% medium fine grained, dense	
			65	2 INCH THREADED SCH 40 0.010 SLOTTED PVC WELL SCREEN 60-70 FEET		
				#2/12 SILICA SAND 58-70 FEET		
7 30 6	60		70		⊙ 70 feet: well-graded Sand (SW), dark gray, trace fines, 15% coarse, trace gravel (<1/2"), 40% medium grained, 40% fine grained, dense	
					70 feet: end of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: IMW-7
 Sheet: 1 OF 1
 Total Depth: 31.5 FEET
 Date Started/Completed: DECEMBER 11, 2001
 Ground Level Elevation: 30.48 FEET NGVD
 Measuring Point Elevation: 29.88 FEET NGVD
 Static Water Level: 24.1 FEET NGVD Date: 12/18/01
 Northing: 119625.19 Easting: 1078882.87

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 31 feet: poorly-graded Sand (SP)	
			0-2	CONCRETE		
			2-18	UNIFORM GRANULAR BENTONITE		
			0-30	10-INCH BOREHOLE		
8 12 14			9.5		⊗ 9.5 feet: FILL as above, silt, gray/brown mottled, rare wood and plastic fragments	
			0-20	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE		
16 21 30			20		⊗ 20 feet: as above, with fines increasing slightly, medium dense to dense, moist	
			18-30	#2/12 SILICA SAND		
			20-30	2-INCH THREADED SCH 40 0.010 SLOTTED PVC WELL SCREEN		
			24.1	▽		
10 50 6			30		⊗ 30 feet: as above, wet	
			31.5 - 10		31.5 - 10 feet: well graded Sand (SW)	
			31		⊗ 31 feet: 2" lens of silty Sand (SM), brown, 15% fines, non-plastic, trace coarse, 50% medium grained, 30% fine grained, wet	
			31.5		⊗ 31.5 feet: well graded Sand (SW) with gravel, dark gray, 20% coarse, 5% gravel (<1/2"), 50% medium grained, 30% fine grained, wet, angular	

DATE: 12/31/02 FILENAME: 104008543 IMAGES: XREFS

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: P-1
 Sheet: 1 OF 1
 Total Depth: 31.5 FEET
 Date Started/Completed: OCTOBER 5, 2000
 Ground Level Elevation: 30.3 FEET NGVD
 Measuring Point Elevation: 30.00 FEET NGVD
 Static Water Level: 24.56 FEET NGVD Date: 10/30/00
 Northing: 117603 Easting: 1077752

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 2 feet: Asphalt with gravel sub-base	
			0-2	CEMENT 0-2 FEET		
			2-18	3/8" SORTED GRANULAR BENTONITE 2-18 FEET	2 - 14 feet: Poorly graded sand (SP), fine-grained, no fines, brown/grey, disturbed native FILL	
5 5 4	5		5			
3 4 4	18		10			
2 2 3	5		15	2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 20 FEET	14 - 28 feet: Silt (ML), trace very fine-grained sand, plastic, dark brown, dry, medium stiff	
				8 1/4-INCH BOREHOLE 0-31.5 FEET		
1 2 4	10		20		⊗ 20 feet: ML as above, dark brown/rust mottled, slightly moist, medium stiff	
1 2 3	18		25	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 20-30 FEET	⊗ 25 feet: ML as above, moist to saturated	
				10-20 MESH SILICA SAND 18-30.5 FEET	28 - 31 feet: Well graded sand with silt (SW), fine- to medium-grained, ~30% fines, angular, basaltic	
				FORMATION COLLAPSE 30.5-31.5 FEET	31 - 31.5 feet: Well graded sand (SW), fine- to medium-grained, trace coarse-grained, grey, saturated, angular, basaltic	
					⊗ 31.5 feet: End of boring	
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: P-2
 Sheet: 1 OF 1
 Total Depth: 30.5 FEET
 Date Started/Completed: OCTOBER 5, 2000
 Ground Level Elevation: 33.1 FEET NGVD
 Measuring Point Elevation: 32.76 FEET NGVD
 Static Water Level: 24.10 FEET NGVD Date: 10/30/00
 Northing: 117136 Easting: 1078331

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8" SORTED GRANULAR BENTONITE 2-18 FEET 2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 20 FEET 8 1/4-INCH BOREHOLE 0-30.5 FEET 2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 20-30 FEET 10-20 MESH SILICA SAND 18-30.5 FEET	0 - 2 feet: Asphalt with gravel sub-base 2 - 24 feet: Poorly graded sand (SP), fine-grained, grey/brown, dry, medium dense, FILL @ 10 feet: SP as above, trace coarse-grained @ 15 feet: SP as above, increasing coarse-grained sand content, up to 10% fine-grained gravel, gravel predominantly basaltic @ 20 feet: SP as above, dry to slightly moist 24 - 30 feet: Well graded sand (SW), fine- to medium-grained, trace coarse-grained, ~5% fines, grey/brown @ 26 feet: Saturated 30 - 30.5 feet: Silt with sand (ML), ~30% fine-grained sand, grey, non-plastic, saturated, soft @ 30.5 feet: End of boring	
6 9 10	18		5			
5 8 9	9		10			
9 13 13	10		15			
4 11 11	10		20			
5 5 10	6		25			
1 1 2	6		30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: P-8
 Sheet: 1 OF 1
 Total Depth: 30.5 FEET
 Date Started/Completed: OCTOBER 6, 2000
 Ground Level Elevation: 30.4 FEET NGVD
 Measuring Point Elevation: 30.14 FEET NGVD
 Static Water Level: 23.58 FEET NGVD Date: 10/30/00
 Northing: 117983 Easting: 1078086

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 2 feet: Asphalt with gravel sub-base	
				CEMENT 0-2 FEET		
				3/8" SORTED GRANULAR BENTONITE 2-18 FEET	2 - 9 feet: Well graded sand with gravel (SW), fine- to coarse-grained, ~40% fine-grained, ~20% medium-grained, ~40% coarse-grained, ~30% fine-grained gravel, dry	●
18 23 18	11		5			
					9 - 25 feet: Silty sand (SM), grading to silt (ML)	
				2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 20 FEET	⊙ 10 feet: Silty sand (SM), ~30% fines, rusty brown/tan brown mottled, dry, medium stiff	
2 3 5	9		10			
				8 1/4-INCH BOREHOLE 0-30.5 FEET	⊙ 15 feet: Silt with sand (ML), ~30% fine-grained sand, grey, non-plastic, saturated, soft	
2 2 2	18		15		⊙ 15.5 feet: ML as above, ~15% fine-grained sand, grey, moderate plasticity, saturated to moist	
				2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 20-30 FEET		
					⊙ 18 feet: ML as above, tan/rust, plastic, hard, dry	
				10-20 MESH SILICA SAND 18-30.5 FEET	25 - 29 feet: Silty sand (SM), fine- to medium-grained, ~30% fines, predominantly fine-grained, ~10% medium-grained, rusty brown, saturated, loose	
4 10 25	18		30		29 - 30.5 feet: Well graded sand (SW), fine- to coarse-grained, predominantly coarse-grained, trace fines, angular, basaltic, saturated	
					⊙ 30.5 feet: End of boring	
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: P-4
 Sheet: 1 OF 1
 Total Depth: 31.5 FEET
 Date Started/Completed: OCTOBER 6, 2000
 Ground Level Elevation: 29.6 FEET NGVD
 Measuring Point Elevation: 28.97 FEET NGVD
 Static Water Level: 27.19 FEET NGVD Date: 10/30/00
 Northing: 117469 Easting: 1078696

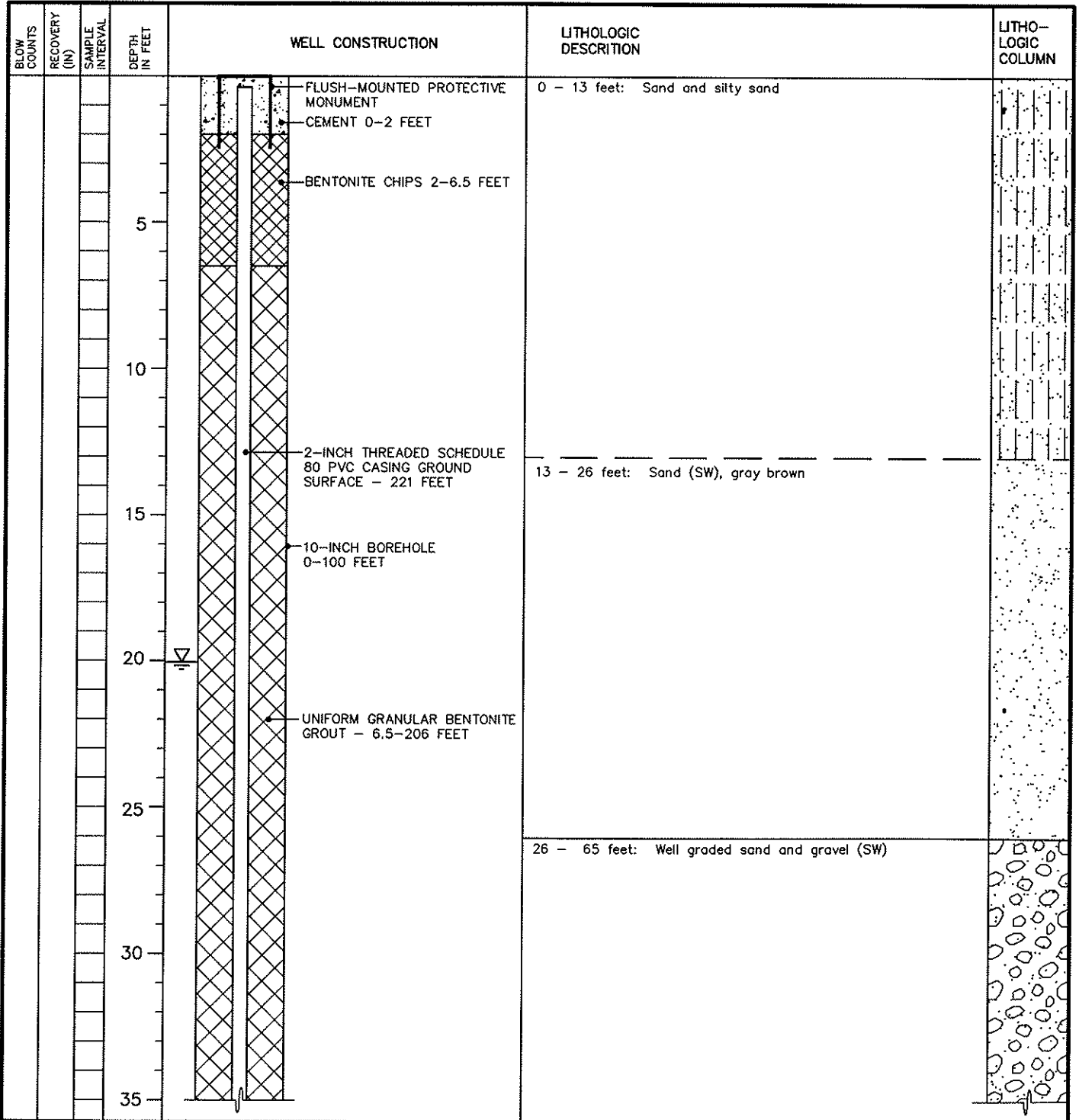
BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 2 feet: Asphalt with gravel sub-base	
			0-2	CEMENT 0-2 FEET		
			2-19	3/8" SORTED GRANULAR BENTONITE 2-19 FEET	2 - 23 feet: Poorly graded sand (SP) FILL	
7 12 12	10		5		⊕ 5 feet: Poorly graded sand (SP), fine-grained, trace fine-grained gravel (up to 1 inch in diameter), trace clumps of silt, trace coarse-grained sand, brown/grey, moist, medium dense	
6 14 13	7		10		⊕ 10 feet: SP as above, dry	
			10-15	2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 21 FEET	⊕ 10 - 15 feet: SP as above, trace gravel up to 2 inches in diameter, gravel content increasing with depth	
6 10 16	9		15	8 1/4-INCH BOREHOLE 0-31.5 FEET	⊕ 15 - 20 feet: SP as above, much less gravel	
6 11 14	10		20		⊕ 20 feet: SP as above, ~10-15% coarse-grained sand and fine-grained gravel, grey/brown, dry	
4 4 4	6		25	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 21-31 FEET	23 - 31.5 feet: Silt with sand (ML), ~20-25% very fine-grained sand, grey/brown, soft, moderate plasticity, very moist to saturated, soft	
2 2 4	10		30	10-20 MESH SILICA SAND 19-31.5 FEET	⊕ 31 feet: ML as above, some 2 - 3 inch lenses of silty sand with up to 30-40% fines, saturated, soft	
			31.5		⊕ 31.5 feet: End of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-7 / MW-1d
 Sheet: 1 OF 7
 Total Boring Depth: 227 FT/ WELL DEPTH 221FT
 Date Started/Completed: MARCH 3, 1998/APRIL 2, 1998
 Ground Level Elevation: 26.7 FEET NGVD
 Measuring Point Elevation: 26.46 FEET NGVD
 Static Water Level: 6.40 FEET NGVD Date: 4/24/98
 Northing: 119586.4 Easting: 1078679.5



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-7 / MW-1d
 Sheet: 2 OF 7
 Total Depth: 227 FEET
 Date Started/Completed: MARCH 3, 1998/APRIL 2, 1998
 Ground Level Elevation: 26.7 FEET NGVD
 Measuring Point Elevation: 26.46 FEET NGVD
 Static Water Level: 6.40 FEET NGVD Date: 4/24/98
 Northing: 119586.4 Easting: 1078679.5

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		SW as above	⊗ 40 feet: discrete-depth groundwater sample B-7, 40'
			45	UNIFORM GRANULAR BENTONITE GROUT - 6.5-206 FEET	⊗ 45 feet: coarse cobbles, up to 5 inches in diameter	
			50	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 221 FEET		
			55	10-INCH BOREHOLE 0-100 FEET		
			60		⊗ 60 feet: discrete-depth groundwater sample B-7, 60' collected 3/11/98 11:47	
			65		65 - 137 feet: Well graded sand (SW), fine- to coarse-grained, up to trace fine-grained gravel	
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-7 / MW-1d
 Sheet: 5 OF 7
 Total Depth: 227 FEET
 Date Started/Completed: MARCH 3, 1998/APRIL 2, 1998
 Ground Level Elevation: 26.7 FEET NGVD
 Measuring Point Elevation: 26.46 FEET NGVD
 Static Water Level: 6.40 FEET NGVD Date: 4/24/98
 Northing: 119586.4 Easting: 1078679.5

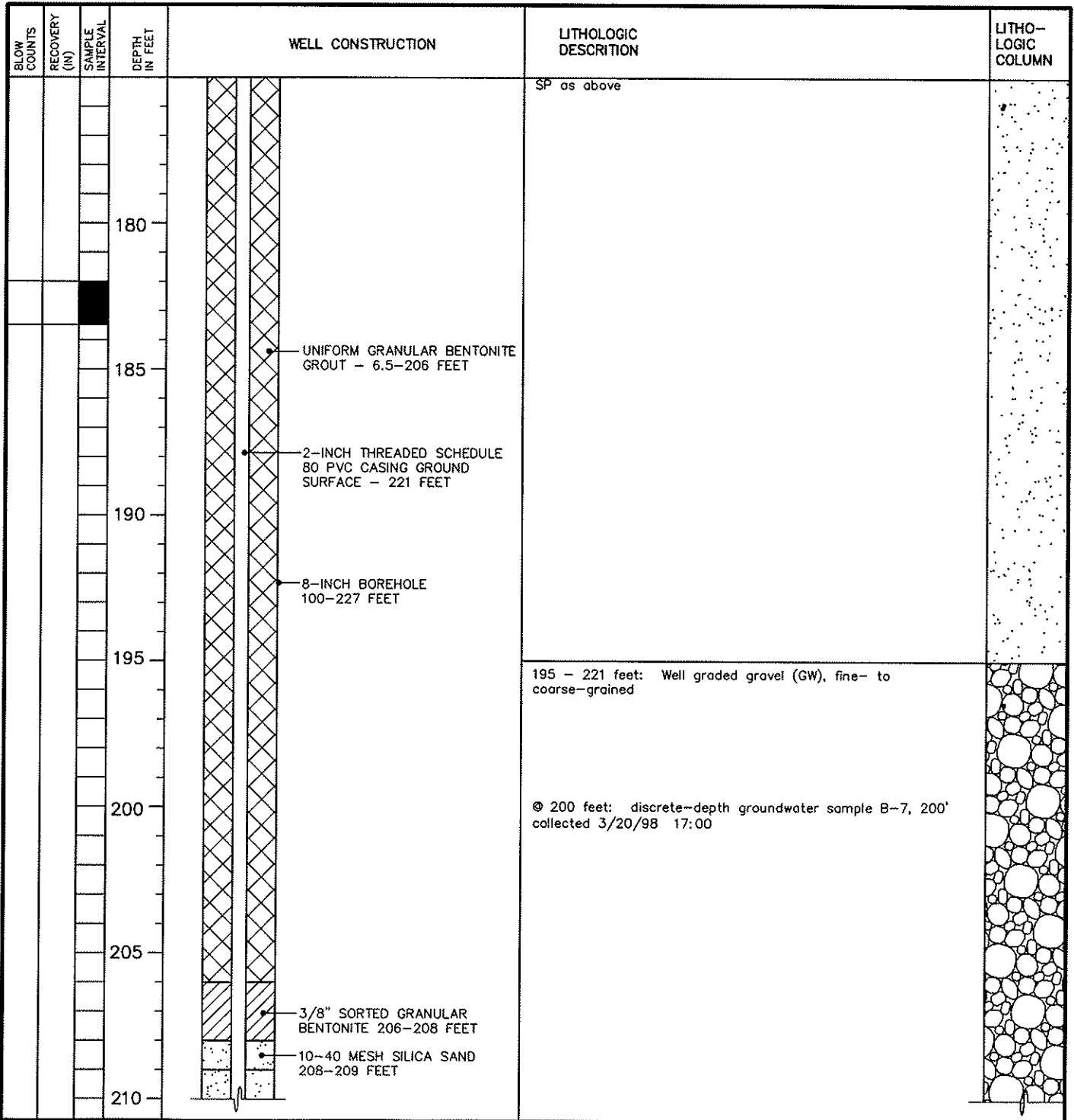
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145		SP as above	
			150	UNIFORM GRANULAR BENTONITE GROUT - 6.5-206 FEET		
	12		155	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 221 FEET	⊙ 152 feet: sparse coarse sand	
			160	8-INCH BOREHOLE 100-227 FEET	⊙ 160 feet: discrete-depth groundwater sample B-7, 160' collected 3/19/98 8:40	
			165			
			170			
			175			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-7 / MW-1d
 Sheet: 6 OF 7
 Total Depth: 227 FEET
 Date Started/Completed: MARCH 3, 1998/APRIL 2, 1998
 Ground Level Elevation: 26.7 FEET NGVD
 Measuring Point Elevation: 26.46 FEET NGVD
 Static Water Level: 6.40 FEET NGVD Date: 4/24/98
 Northing: 119586.4 Easting: 1078679.5



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-7 / MW-1d
 Sheet: 7 OF 7
 Total Depth: 227 FEET
 Date Started/Completed: MARCH 3, 1998/APRIL 2, 1998
 Ground Level Elevation: 26.7 FEET NGVD
 Measuring Point Elevation: 26.46 FEET NGVD
 Static Water Level: 6.40 FEET NGVD Date: 4/24/98
 Northing: 119586.4 Easting: 1078679.5

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
	8		215	<p>STAINLESS STEEL CENTRALIZER AT 211 FEET</p> <p>10-20 MESH SILICA SAND 209-222 FEET</p> <p>8-INCH BOREHOLE 100-227 FEET</p> <p>2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN WITH 4-INCH SUMP 211-221 FEET</p> <p>STAINLESS STEEL CENTRALIZER AT 221 FEET</p> <p>3/8" SORTED GRANULAR BENTONITE 222-227 FEET</p>	GW as above 221 ~ 227 feet: Well graded gravel (GW), coarse-grained, weakly cemented in green clay matrix with abundant mica, clasts are quartzite and basalt, TROUTDALE FORMATION	
			220			
			225			
			230			
			235			
			240			
			245			
@227 feet: End of boring						

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: SANDRA MATTHEWS
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: GRAB
 Groundwater Sample Method: N/A

Boring Number: MW-2
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Started/Completed: JANUARY 29, 1997
 Ground Level Elevation: 30.43 FEET NGVD
 Measuring Point Elevation: 30.16 FEET NGVD
 Static Water Level: 6.24 FEET NGVD Date: 4/24/98
 Northing: 119499.2 Easting: 1079177.9

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 1 feet: Asphalt with gravel sub-base	
			5	CEMENT 0-2 FEET	1 - 12 feet: Silty sand (SM), fine-grained, brown to dark yellowish brown 10YR 4/3 to 10YR 4/4, dry	
			10	BENTONITE CHIPS 2-17 FEET	⊙ 8 feet: light olive brown 2.5Y 5/4	
			15	2-INCH THREADED SCHEDULE 40 PVC CASING GROUND SURFACE - 30 FEET	12 - 19 feet: Grading to a poorly graded sand (SP), olive brown 2.5Y 4/4	
			20	8 1/4-INCH BOREHOLE 0-30 FEET	19 - 30 feet: Grading to a well graded sand (SW), very dark grey 2.5Y 3/1	
			25	10-20 MESH SILICA SAND 17-30 FEET	⊙ 23 feet: saturated	
			30	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN. 20-30 FEET	⊙ 27 feet: some gravel	
			35		⊙ 30 feet: End of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-2d
 Sheet: 1 OF 7
 Total Depth: 223 FEET
 Date Started/Completed: NOVEMBER 3, 1998/DECEMBER 3, 1998
 Ground Level Elevation: 30.51 FEET NGVD
 Measuring Point Elevation: 30.23 FEET NGVD
 Static Water Level: 9.11 FEET NGVD Date: 4/21/99
 Northing: 119490 Easting: 1079172

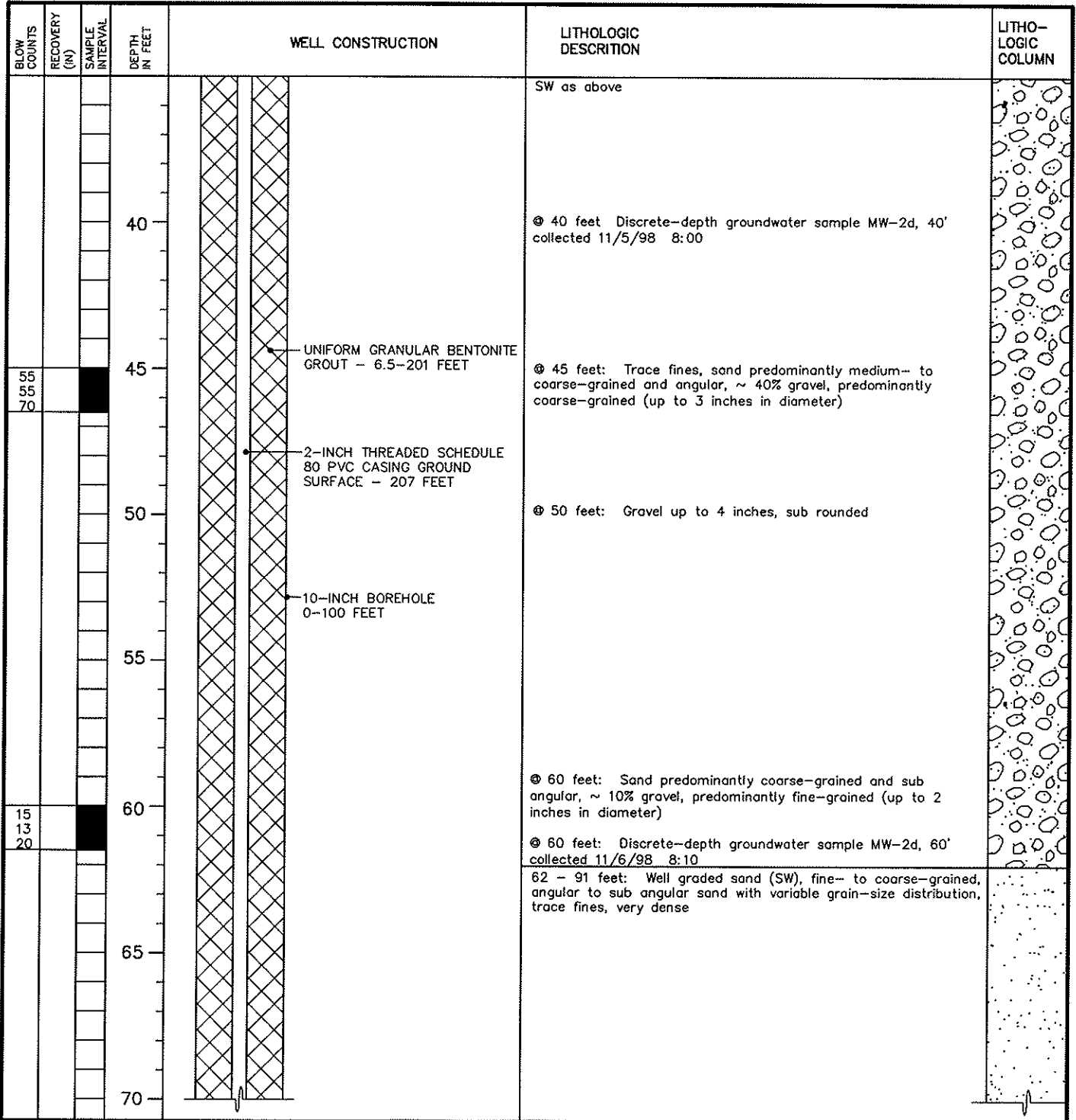
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET BENTONITE CHIPS 2-6.5 FEET	0 - 1 feet: Asphalt with gravel sub-base	
			5		1 - 27 feet: Brown, fine-grained sand, See MW-2 log for detailed stratigraphic information 0 - 30 feet	
			10			
			15	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 207 FEET 10-INCH BOREHOLE 0-100 FEET		
			20			
			25	UNIFORM GRANULAR BENTONITE GROUT - 6.5-201 FEET	@ 25 feet: discrete-depth groundwater sample MW-2d, 25' collected 11/4/98 9:15	
			30		27 - 62 feet: Well graded sand with gravel (SW), fine- to coarse-grained angular to sub angular sand with variable grain-size distribution, 10% to 40% gravel, up to 10% fines, saturated, dark brown	
40 7			35		@ 30 feet: ~ 30% fine- to coarse-grained gravel, 10% fines	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-2d
 Sheet: 2 OF 7
 Total Depth: 223 FEET
 Date Started/Completed: NOVEMBER 3,1998/DECEMBER 3,1998
 Ground Level Elevation: 30.51 FEET NGVD
 Measuring Point Elevation: 30.23 FEET NGVD
 Static Water Level: 9.11 FEET NGVD Date: 4/21/99
 Northing: 119490 Easting: 1079172



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-2d
 Sheet: 3 OF 7
 Total Depth: 223 FEET
 Date Started/Completed: NOVEMBER 3,1998/DECEMBER 3,1998
 Ground Level Elevation: 30.51 FEET NGVD
 Measuring Point Elevation: 30.23 FEET NGVD
 Static Water Level: 9.11 FEET NGVD Date: 4/21/99
 Northing: 119490 Easting: 1079172

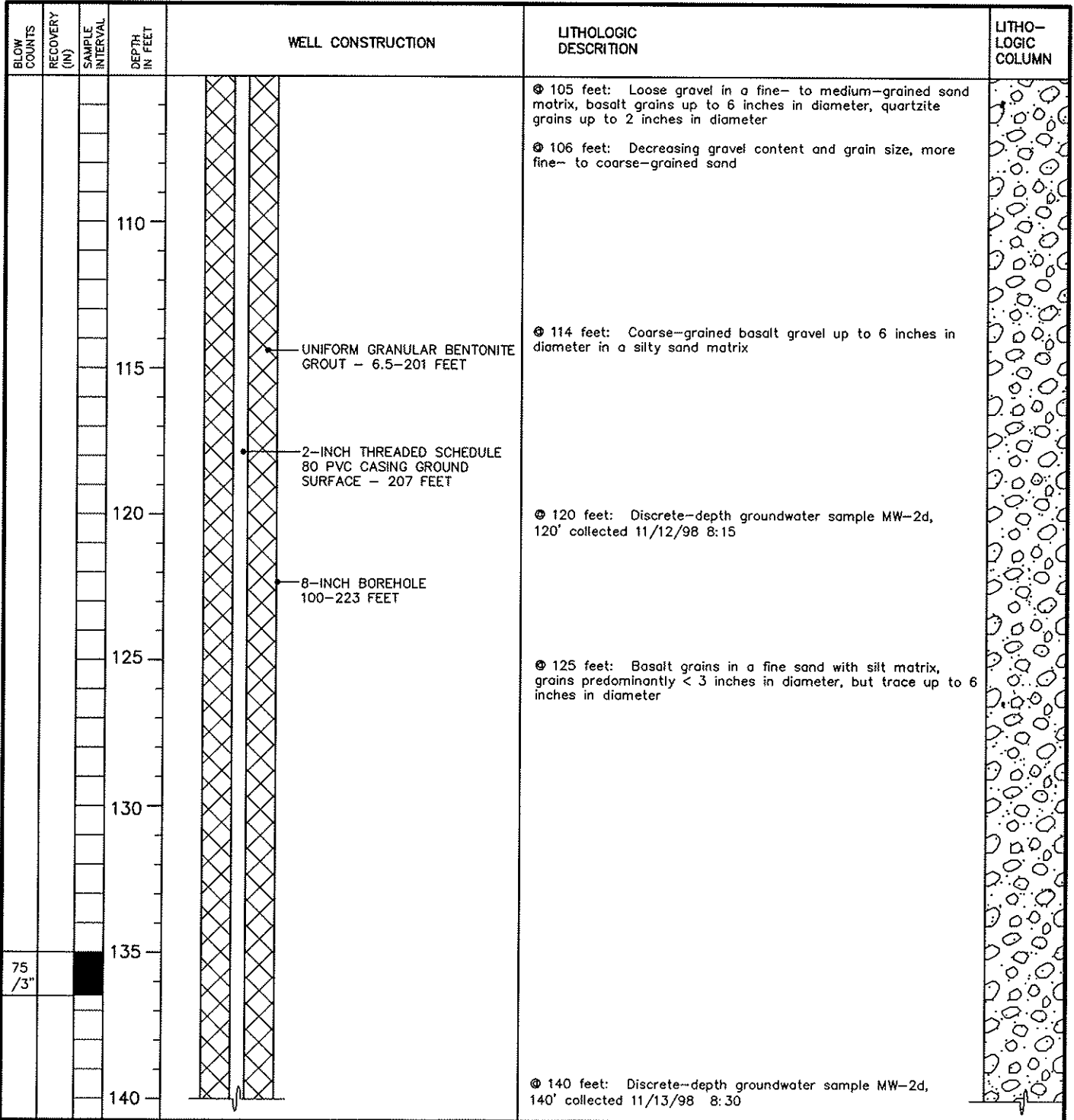
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75		SW as above	
12 45 50	10				@ 75 feet: Predominantly medium-grained sand with ~ 20% coarse-grained, ~ 5% fine-grained, trace fines, angular to sub angular, dark brown	
			80	UNIFORM GRANULAR BENTONITE GROUT - 6.5-201 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 207 FEET	@ 80 feet: Discrete-depth groundwater sample MW-2d, 80' collected 11/9/98 9:30	
			85			
			90	10-INCH BOREHOLE 0-100 FEET		
28 51 40					91 - 172 feet: Well graded gravel with sand (GW), fine- to coarse-grained, predominantly basaltic gravels with variable grain size distribution in a sand matrix, some silt @ 93 feet: Basalt grains up to 5 inches in diameter with some quartzite grains up to 1 inch in diameter in sandy silt matrix	
			95			
			100	8-INCH BOREHOLE 100-223 FEET	@ 100 feet: Discrete-depth groundwater sample MW-2d, 100' collected 11/10/98 8:25	
			105			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-2d
 Sheet: 4 OF 7
 Total Depth: 223 FEET
 Date Started/Completed: NOVEMBER 3, 1998/DECEMBER 3, 1998
 Ground Level Elevation: 30.51 FEET NGVD
 Measuring Point Elevation: 30.23 FEET NGVD
 Static Water Level: 9.11 FEET NGVD Date: 4/21/99
 Northing: 119490 Easting: 1079172



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-2d
 Sheet: 5 OF 7
 Total Depth: 223 FEET
 Date Started/Completed: NOVEMBER 3,1998/DECEMBER 3,1998
 Ground Level Elevation: 30.51 FEET NGVD
 Measuring Point Elevation: 30.23 FEET NGVD
 Static Water Level: 9.11 FEET NGVD Date: 4/21/99
 Northing: 119490 Easting: 1079172

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145		GW as above	
			150	UNIFORM GRANULAR BENTONITE GROUT - 6.5-201 FEET	⊙ 145 feet: Matrix less silty than above	
			155	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 207 FEET	⊙ 155 feet: Gravel predominantly 1 to 3 inches in diameter	
80 /4"			160	8-INCH BOREHOLE 100-223 FEET	⊙ 160 feet: Discrete-depth groundwater sample MW-2d, 160' collected 11/16/98 13:00	
			165			
			170		⊙ 167 feet: Predominantly basalt grains with some quartzite grains up to 6 inches in diameter, no cementation but some silt in matrix	
75 /3"			175		172 - 179 feet: Poorly graded sand (SP), fine-grained, trace fines, no gravel, dark grayish brown, ~ 60 - 70% quartz, very dense	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-2d
 Sheet: 6 OF 7
 Total Depth: 223 FEET
 Date Started/Completed: NOVEMBER 3,1998/DECEMBER 3,1998
 Ground Level Elevation: 30.51 FEET NGVD
 Measuring Point Elevation: 30.23 FEET NGVD
 Static Water Level: 9.11 FEET NGVD Date: 4/21/99
 Northing: 119490 Easting: 1079172

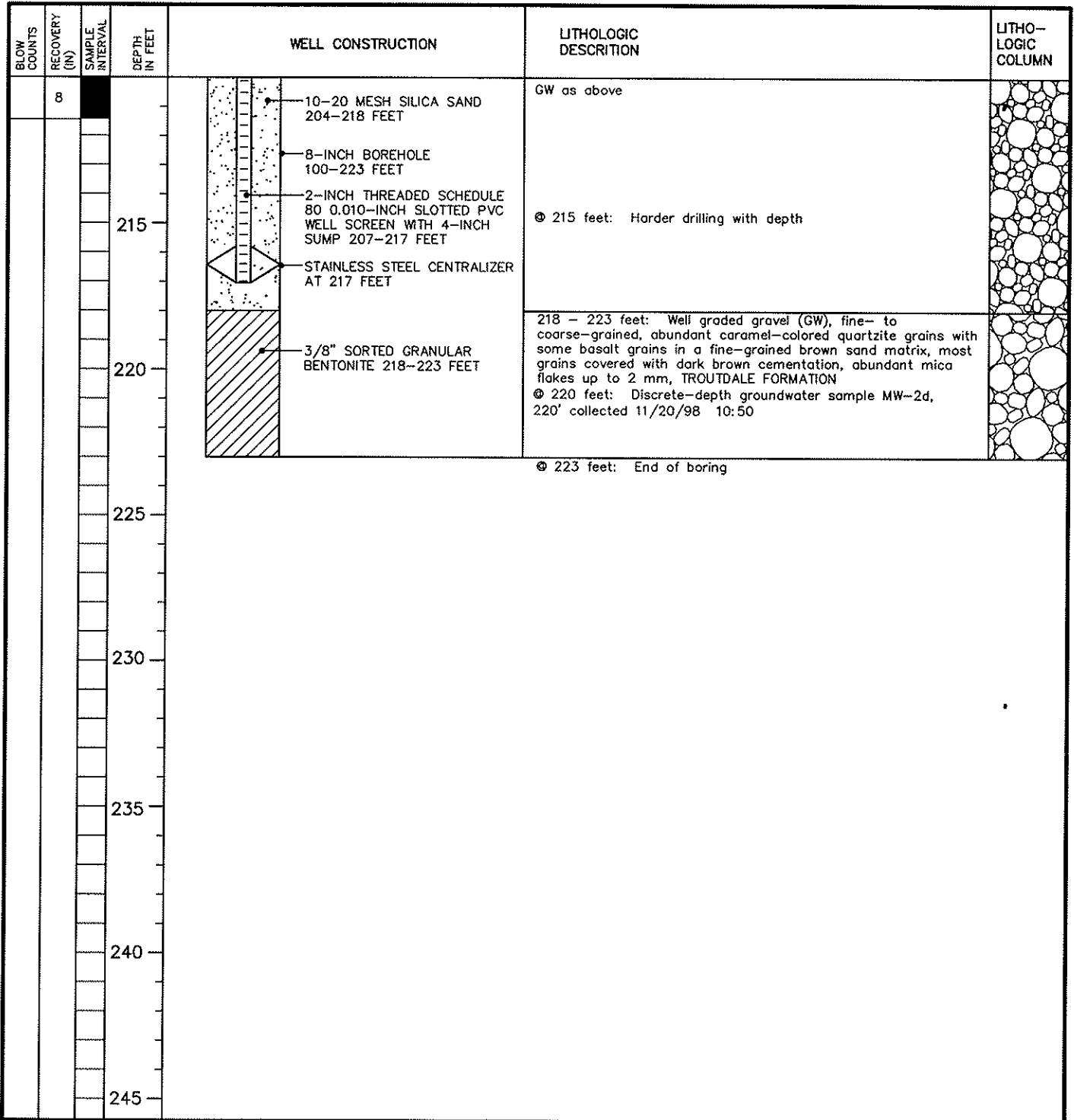
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
8	56	20/0"	180		SP as above	
			185	UNIFORM GRANULAR BENTONITE GROUT - 6.5-201 FEET	⊙ 185 feet: Less gravel from 180 to 186 feet	
			190	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 207 FEET	⊙ 190 feet: Predominantly basalt grains up to 3 inches in diameter in fine silty sand matrix with some mica	
			195	8-INCH BOREHOLE 100-223 FEET	⊙ 192 feet: More silt in matrix	
			200		⊙ 195 feet: Loose basalt grains up to 3 inches in diameter with some mica and cementation on grains	
			205	3/8" SORTED GRANULAR BENTONITE 201-203 FEET	⊙ 200 feet: ~ 30% quartzite grains, loose, little to no cementation on grains, some mica	
			205	20-40 MESH SILICA SAND 203-204 FEET	⊙ 200 feet: Discrete-depth groundwater sample MW-2d, 200' collected 11/18/98 15:30	
			205	STAINLESS STEEL CENTRALIZER AT 207 FEET	⊙ 205 feet: Predominantly loose, uncemented basalt grains, minor amounts of quartzite	
			210			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-2d
 Sheet: 7 OF 7
 Total Depth: 223 FEET
 Date Started/Completed: NOVEMBER 3,1998/DECEMBER 3,1998
 Ground Level Elevation: 30.51 FEET NGVD
 Measuring Point Elevation: 30.23 FEET NGVD
 Static Water Level: 9.11 FEET NGVD Date: 4/21/99
 Northing: 119490 Easting: 1079172



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: SANDRA MATTHEWS
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: GRAB
 Groundwater Sample Method: N/A

Boring Number: MW-3
 Sheet: 1 OF 1
 Total Depth: 27 FEET
 Date Started/Completed: JANUARY 29, 1997
 Ground Level Elevation: 27.26 FEET NGVD
 Measuring Point Elevation: 26.72 FEET NGVD
 Static Water Level: 6.27 FEET NGVD Date: 4/24/98
 Northing: 119440.8 Easting: 1078946.0

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 1 feet: Asphalt with gravel sub-base	0
			5	CEMENT 0-2 FEET	1 - 13 feet: Silty sand (SM), fine-grained, brown 10YR 4/3, dry	1
			10	BENTONITE CHIPS 2-10 FEET		2
			15	2-INCH THREADED SCHEDULE 40 PVC CASING GROUND SURFACE - 23 FEET		3
			20	8 1/4-INCH BOREHOLE 0-27 FEET	⊙ 12 feet: light olive brown 2.5Y 5/4	4
			25	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 13-23 FEET	13 - 21 feet: Poorly graded sand (SP), fine grained, few fines, light olive brown 2.5Y 5/4	5
			30	10-20 MESH SILICA SAND 10-23 FEET	⊙ 15 feet: moist	6
			35	FORMATION COLLAPSE 23-28 FEET	⊙ 17 feet: saturated	7
					21 - 27 feet: Well graded sand (SW), very dark grey 2.5Y 3/1	8
					⊙ 27 feet: End of boring	9

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: SANDRA MATTHEWS
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: 5' CORE
 Groundwater Sample Method: N/A

Boring Number: MW-4
 Sheet: 1 OF 1
 Total Depth: 25 FEET
 Date Started/Completed: JANUARY 29, 1997
 Ground Level Elevation: 27.11 FEET NGVD
 Measuring Point Elevation: 26.62 FEET NGVD
 Static Water Level: 6.25 FEET NGVD Date: 4/24/98
 Northing: 119230.9 Easting: 1079009.3

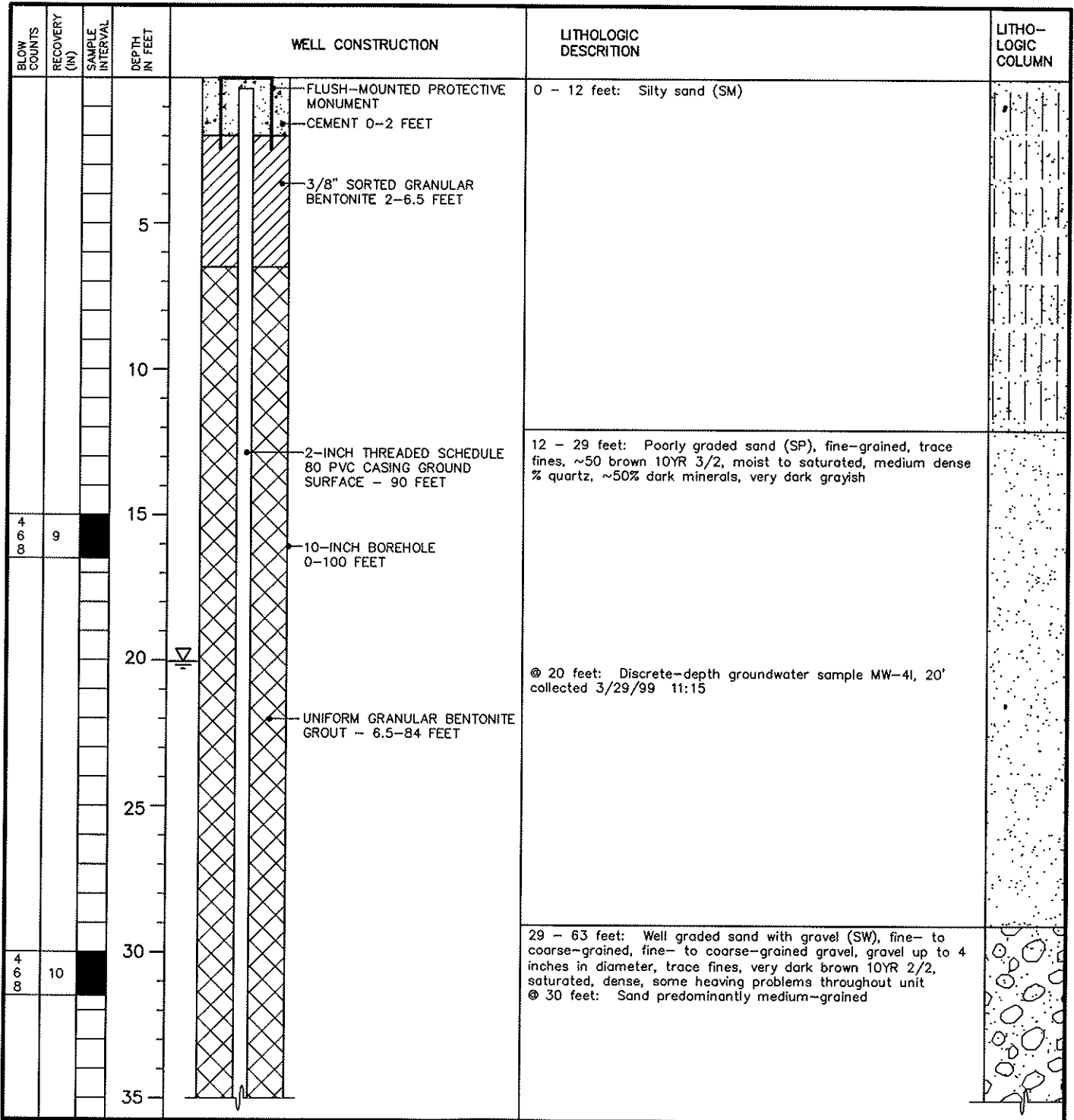
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 1 feet: Asphalt with gravel sub-base	
			0-2	CEMENT 0-2 FEET	1 - 12 feet: Silty sand (SM), fine-grained, brown 10YR 4/3, dry	
26			2-12	BENTONITE CHIPS 2-12 FEET		
			5			
49			5-12	2-INCH THREADED SCHEDULE 40 PVC CASING GROUND SURFACE - 25 FEET		
			10		⊙ 10 feet: light olive brown 2.5Y 5/4	
43			12-15	8 1/4-INCH BOREHOLE 0-25 FEET	12 - 25 feet: Poorly graded sand (SP), few fines	
			15	10-20 MESH SILICA SAND 12-25 FEET		
23			15-25	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 15-25 FEET		
			20		⊙ 19.5 feet: moist	
29			21		⊙ 21 feet: olive brown 2.5Y 4/4	
			25		⊙ 25 feet: End of boring	
			30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4i
 Sheet: 1 OF 4
 Total Depth: 140 FEET
 Date Started/Completed: MARCH 29, 1999/APRIL 9, 1999
 Ground Level Elevation: 27.7 FEET NGVD
 Measuring Point Elevation: 27.43 FEET NGVD
 Static Water Level: 12.40 FEET NGVD Date: 6/9/99
 Northing: 118892 Easting: 1079060



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4i
 Sheet: 3 OF 4
 Total Depth: 140 FEET
 Date Started/Completed: MARCH 29, 1999/APRIL 9, 1999
 Ground Level Elevation: 27.7 FEET NGVD
 Measuring Point Elevation: 27.43 FEET NGVD
 Static Water Level: 12.40 FEET NGVD Date: 6/9/99
 Northing: 118892 Easting: 1079060

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
4 6 10	4		75	<ul style="list-style-type: none"> 10-INCH BOREHOLE 0-100 FEET UNIFORM GRANULAR BENTONITE GROUT - 6.5-84 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 90 FEET 3/8" SORTED GRANULAR BENTONITE 84-86 FEET 20-40 MESH SILICA SAND 86-87 FEET 	<p>SW as above</p> <p>⊙ 71 feet: Coarse-grained, angular, basaltic sand with somewhat more fine- to medium-grained sand</p> <p>⊙ 75 feet: Silty sand (SM), fine- to coarse-grained, well graded, predominantly fine- to medium-grained, ~20% fines, dark yellowish brown 10YR 3/2, medium dense</p> <p>⊙ 80 feet: Discrete-depth groundwater sample MW-4i, 80' collected 3/31/99 11:35</p> <p>85 - 88 feet: Trace fine-grained gravel</p> <p>⊙ 88 feet: Gravel content increasing, silt content decreasing</p>	
0			90	<ul style="list-style-type: none"> STAINLESS STEEL CENTRALIZER AT 90 FEET 10-20 MESH SILICA SAND 87-101 FEET 2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN WITH 4-INCH SUMP 90-100 FEET STAINLESS STEEL CENTRALIZER AT 100 FEET 8-INCH BOREHOLE 100-140 FEET 	<p>90 - 100 feet: Well graded sand (SW), fine- to coarse-grained, trace fines, trace gravel</p> <p>100 - 140 feet: Well graded gravel with sand and silt (GW), fine- to coarse-grained gravels, up to 3 inches in diameter, in a sandy to silty sand matrix, saturated</p> <p>⊙ 100 feet: Gravel up to 1 1/2 inches in diameter in a sandy matrix, some silt lenses</p> <p>⊙ 100 feet: Discrete-depth groundwater sample MW-4i, 100' collected 4/1/99 08:54</p> <p>⊙ 105 feet: More silt in matrix</p>	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4i
 Sheet: 4 OF 4
 Total Depth: 140 FEET
 Date Started/Completed: MARCH 29, 1999/APRIL 9, 1999
 Ground Level Elevation: 27.7 FEET NGVD
 Measuring Point Elevation: 27.43 FEET NGVD
 Static Water Level: 12.40 FEET NGVD Date: 6/9/99
 Northing: 118892 Easting: 1079060

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
9/50"					SW as above	
			110			
			115	3/8" SORTED GRANULAR BENTONITE 101-140 FEET		
40/50/1"	3		120	8-INCH BOREHOLE 100-140 FEET	@ 113 feet: Brown sandy silt to silty sand matrix, gravel up to 3 inches in diameter @ 120 feet: Fine-grained gravel <1 inch in diameter in fine-grained silty sand matrix @ 120 feet: Discrete-depth groundwater sample MW-4i, 120' collected 4/2/99 09:15 @ 125 feet: Gravel up to 2 inches in diameter @ 128 feet: Gravel up to 3 inches in diameter	
			125			
			130			
75/3"	2		135		@ 135 feet: Gravel up to 2 inches in diameter in gray silt/clay matrix @ 136 feet: Matrix is sand with silt	
			140		@ 140 feet: Discrete-depth groundwater sample MW-4i, 140' collected 4/5/99 11:15 @ 140 feet: End of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4d
 Sheet: 1 OF 7
 Total Depth: 240 FEET
 Date Started/Completed: DECEMBER 6, 1998/JANUARY 14, 1999
 Ground Level Elevation: 26.95 FEET NGVD
 Measuring Point Elevation: 26.72 FEET NGVD
 Static Water Level: 8.89 FEET NGVD Date: 4/21/99
 Northing: 119076 Easting: 1079049

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET BENTONITE CHIPS 2-6.5 FEET	0 - 1 feet: Asphalt with gravel sub-base 1 - 25 feet: Silty sand (SM), fine-grained, some coarse-grained sand and fine-grained gravel lenses	0
			5			
			10			
			15	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 222 FEET 10-INCH BOREHOLE 0-100 FEET		
			20			
			25	UNIFORM GRANULAR BENTONITE GROUT - 6.5-216 FEET	@ 25 feet: Discrete depth groundwater sample MW-4d, 25' collected 12/4/98 15:15 25 - 30 feet: Well graded sand (SW), predominantly medium- to coarse-grained, angular to sub angular, trace fines, trace fine- to coarse-grained sub rounded basalt gravel	
			30		30 - 61 feet: Well graded sand with gravel (SW), fine- to coarse-grained with variable grain size distribution, up to 40% gravel @ 32 feet: Predominantly medium- to coarse-grained, angular to sub angular, trace fines, ~ 10% gravel @ 34 feet: ~ 25% gravel, no fines @ 35 feet: Gravel predominantly basalt grains < 1.5 inches in diameter, trace grains up to 6 inches in diameter	
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4d
 Sheet: 2 OF 7
 Total Depth: 240 FEET
 Date Started/Completed: DECEMBER 6, 1998/JANUARY 14, 1999
 Ground Level Elevation: 26.95 FEET NGVD
 Measuring Point Elevation: 26.72 FEET NGVD
 Static Water Level: 8.89 FEET NGVD Date: 4/21/99
 Northing: 119076 Easting: 1079049

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
4 10 16	6		0-10		SW as above	
			10-45		@ 40 feet: Discrete-depth groundwater sample MW-4D, 40' collected 12/7/98 13:00 @ 42 feet: Gravel up to 2 inches in diameter	
			45-50	UNIFORM GRANULAR BENTONITE GROUT - 6.5-216 FEET		
			50-55	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 222 FEET		
45 100	6		50-55		@ 50 feet: Predominantly medium- to coarse-grained, angular to sub angular basaltic sand, ~25% basalt gravels up to 2 inches in diameter, some thin (1 inch) silty zones, dense @ 53 feet: Looser than above, ~35 - 40% basalt gravel with grains predominantly < 1 inch in diameter	
			55-60	10-INCH BOREHOLE 0-100 FEET		
			60-65		@ 60 feet: Discrete-depth groundwater sample MW-4d, 60' collected 12/8/98 13:45 61 - 113 feet: Well graded sand (SW), Predominantly medium-grained with some fine and coarse grains throughout, trace amounts of gravel until 63 feet, angular	
14			65-70		@ 65 feet: Predominantly medium-grained, angular, basaltic sand with ~10% fine-grained, ~10% coarse-grained, ~ 10% fines, dark brown @ 67 feet: Thin silty sand layers	
			70-240			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4d
 Sheet: 3 OF 7
 Total Depth: 240 FEET
 Date Started/Completed: DECEMBER 6, 1998/JANUARY 14, 1999
 Ground Level Elevation: 26.95 FEET NGVD
 Measuring Point Elevation: 26.72 FEET NGVD
 Static Water Level: 8.89 FEET NGVD Date: 4/21/99
 Northing: 119076 Easting: 1079049

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75		SW as above	
9 13 44			80	UNIFORM GRANULAR BENTONITE GROUT - 6.5-216 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 222 FEET 10-INCH BOREHOLE 0-100 FEET	@ 80 feet: Discrete-depth groundwater sample MW-4d, 80' collected 12/9/98 13:00	
			85			
			90			
9 13			95		@ 93 feet: Some increase in silt content along and thin silt layers	
			100		@ 100 feet: Silt content continuing to increase @ 100 feet: Discrete-depth groundwater sample MW-4d, 100 collected 12/10/98 11:50	
			105	8-INCH BOREHOLE 100-240 FEET		

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4d
 Sheet: 4 OF 7
 Total Depth: 240 FEET
 Date Started/Completed: DECEMBER 6, 1998/JANUARY 14, 1999
 Ground Level Elevation: 26.95 FEET NGVD
 Measuring Point Elevation: 26.72 FEET NGVD
 Static Water Level: 8.89 FEET NGVD Date: 4/21/99
 Northing: 119076 Easting: 1079049

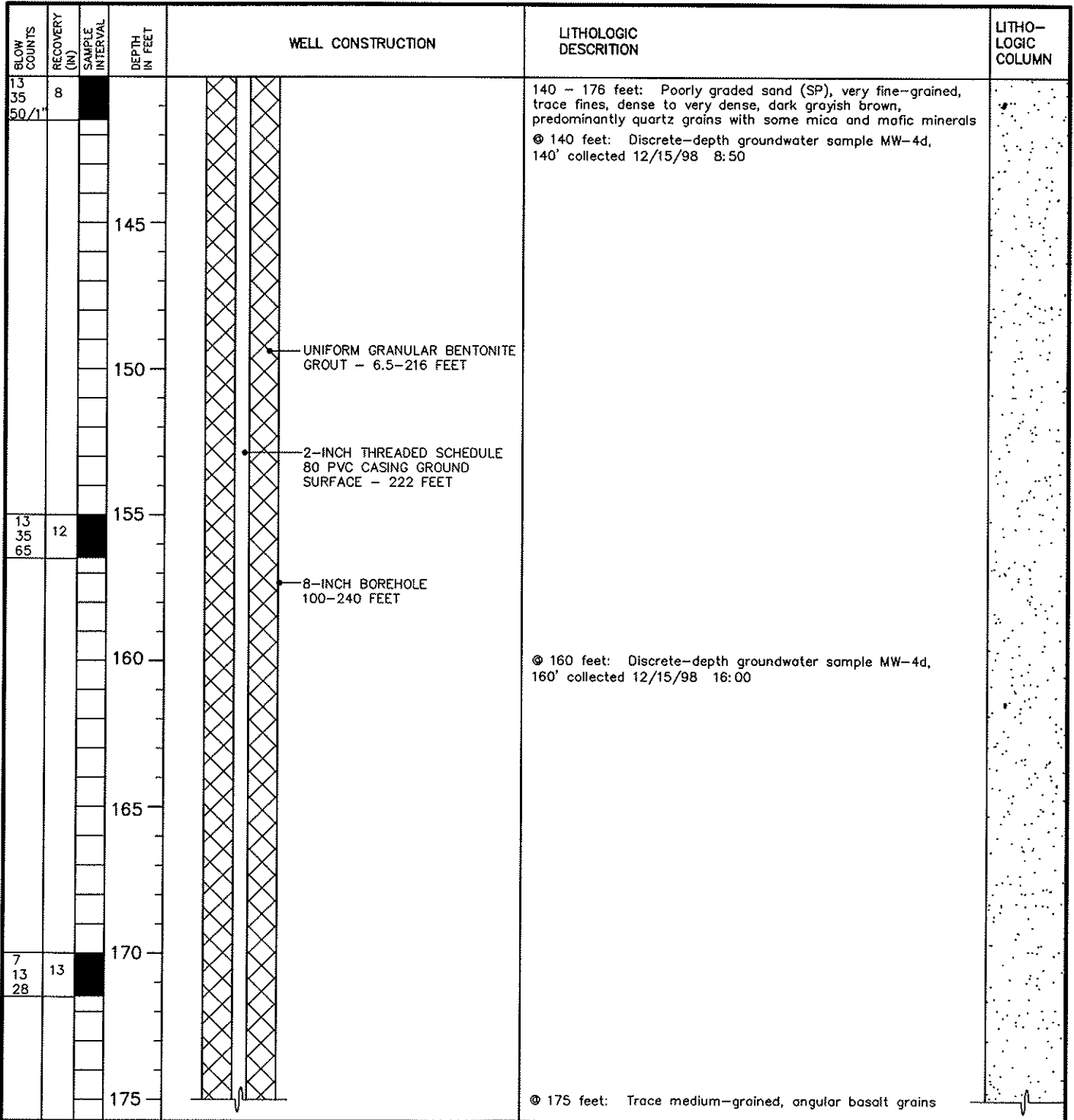
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110		SW as above @ 109 feet: Trace gravel up to 1 inch in diameter @ 110 feet: Predominantly fine- to medium-grained, ~ 15% fines, silty sand zones throughout sampled interval, dark yellowish brown	110
8 26 90	10			UNIFORM GRANULAR BENTONITE GROUT - 6.5-216 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 222 FEET 8-INCH BOREHOLE 100-240 FEET	113 - 140 feet: Well graded sand with gravel (SW), fine- to coarse-grained, up to ~ 10% fines, angular to sub angular, fine- to coarse-grained gravel @ 115 feet: Trace fines, gravels predominantly < 1 inch in diameter but trace up to 3 inches in diameter @ 120 feet: Discrete-depth groundwater sample MW-4d, 120' collected 12/14/98 8:40 @ 122 feet: Predominantly medium- to coarse-grained, angular to sub angular, basaltic sand with ~ 10% fines, gravel predominantly < 1 inch in diameter but trace up to 4 inches in diameter, very occasional silty sand lenses @ 125 feet: Trace fines @ 130 feet: Increasing silt content with depth, decreasing grain size and gravel content with depth	115 120 125 130 135 140
7 30 35	2					125

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4d
 Sheet: 5 OF 7
 Total Depth: 240 FEET
 Date Started/Completed: DECEMBER 6, 1998/JANUARY 14, 1999
 Ground Level Elevation: 26.95 FEET NGVD
 Measuring Point Elevation: 26.72 FEET NGVD
 Static Water Level: 8.89 FEET NGVD Date: 4/21/99
 Northing: 119076 Easting: 1079049



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4d
 Sheet: 6 OF 7
 Total Depth: 240 FEET
 Date Started/Completed: DECEMBER 6, 1998/JANUARY 14, 1999
 Ground Level Elevation: 26.95 FEET NGVD
 Measuring Point Elevation: 26.72 FEET NGVD
 Static Water Level: 8.89 FEET NGVD Date: 4/21/99
 Northing: 119076 Easting: 1079049

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180		SP as above	
			185	UNIFORM GRANULAR BENTONITE GROUT - 6.5-216 FEET	176 - 233 feet: Well graded gravel with sand (GW), fine- to coarse-grained gravel in sand to silty sand matrix	
40 100 /4"	2			2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE ~ 222 FEET	@ 180 feet: Discrete-depth groundwater sample MW-4d, 180' collected 12/17/98 8:40 @ 181 feet: Gravels up to 2 inches in diameter in very fine brown sand matrix, trace fines, trace grains up to 4 inches in diameter, gravels are predominantly basalt with some quartzite grains @ 185 feet: Sand matrix is predominantly quartz with some basalt grains, gravels predominantly basalt	
			190		@ 191 feet: Trace cementation on gravels	
			195	8-INCH BOREHOLE 100-240 FEET	@ 195 feet: Gravels up to 3 inches in diameter, grain size increasing with depth	
			200		@ 200 feet: Discrete-depth groundwater sample MW-4d, 200' collected 12/18/98 12:35	
0					@ 203 feet: Gravels up to 4 inches in diameter in brown silty sand matrix, no cementation on grains, predominantly basalt, trace quartzite	
			205			
			210			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4d
 Sheet: 7 OF 7
 Total Depth: 240 FEET
 Date Started/Completed: DECEMBER 6, 1998/JANUARY 14, 1999
 Ground Level Elevation: 26.95 FEET NGVD
 Measuring Point Elevation: 26.72 FEET NGVD
 Static Water Level: 8.89 FEET NGVD Date: 4/21/99
 Northing: 119076 Easting: 1079049

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				UNIFORM GRANULAR BENTONITE GROUT - 6.5-216 FEET	GW as above	[Pattern]
65 65 /0"	0		215	3/8" SORTED GRANULAR BENTONITE 216-218 FEET	⊕ 215 feet: Increase in sand content, gravels predominantly 1 to 2 inches in diameter, trace up to 4 inches in diameter	[Pattern]
			220	20-40 MESH SILICA SAND 218-219 FEET 10-20 MESH SILICA SAND 219-233 FEET STAINLESS STEEL CENTRALIZER AT 222 FEET	⊕ 220 feet: Trace quartzite gravel, no cementation on grains ⊕ 220 feet: Discrete-depth groundwater sample MW-4d, 220' collected 12/23/98 15:10	[Pattern]
			225	8-INCH BOREHOLE 100-240 FEET 2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN WITH 4-INCH SUMP 222-232 FEET	⊕ 225 feet: Some mica present	[Pattern]
40 50 /0"			230	STAINLESS STEEL CENTRALIZER AT 232 FEET		[Pattern]
			235	3/8" SORTED GRANULAR BENTONITE 233-240 FEET	233 - 240 feet: Well graded gravel (GW), some sand, ~ 50% basalt grains, 50% caramel-colored quartzite grains, trace large (2 mm) mica flakes, cementation on grains, gray clay matrix from 233 feet to 234 feet, mica content and amount and degree of cementation increasing with depth, TROUTDALE FORMATION	[Pattern]
			240		⊕ 240 feet: Discrete-depth groundwater sample MW-4d, 240' collected 1/5/99 12:50 ⊕ 240 feet: End of boring	[Pattern]
			245			[Pattern]

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS, INC
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-5
 Sheet: 1 OF 1
 Total Depth: 30.5 FEET
 Date Started/Completed: OCTOBER 10, 2000
 Ground Level Elevation: 28.50 FEET NGVD
 Measuring Point Elevation: 30.64 FEET NGVD
 Static Water Level: 25.50 FEET NGVD Date: 10/30/00
 Northing: 119585 Easting: 1078926

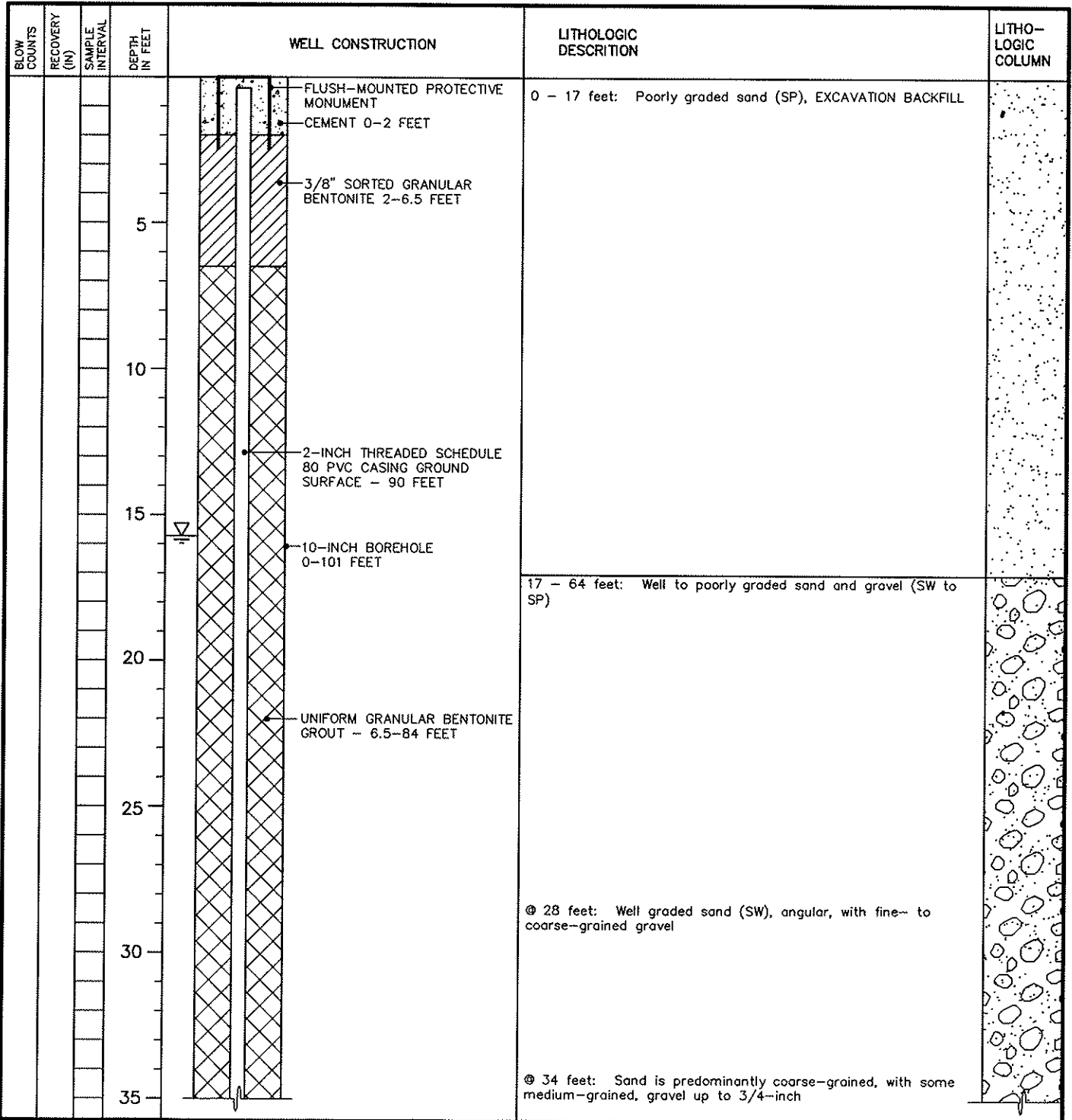
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	ABOVE-GROUND PROTECTIVE MONUMENT	0 - 17 feet: Poorly graded sand (SP), EXCAVATION BACKFILL	
			3	CEMENT 0-3 FEET		
			5	3/8" SORTED GRANULAR BENTONITE 3-17 FEET		
			10			
			15	2-INCH THREADED SCHEDULE 40 PVC CASING GROUND SURFACE - 20 FEET		
			17	8 1/4-INCH BOREHOLE 0-30.5 FEET		
			20	10-20 MESH SILICA SAND 17-30.5 FEET	17 - 24 feet: Silty sand (SM), very fine-grained, ~20% fines, brown, dry, loose	
3 5 4	18		20	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 20-30 FEET		
			25		24 - 30 feet: Well graded sand (SW), ~85% fine- to medium-grained, 15% coarse-grained, trace fines, grey, saturated at 25 feet, loose, angular, basaltic,	
4 6 4	18		25			
			30		@30 feet: Mostly coarse-grained	
4 19 25	15		30		@30.5 feet: End of boring	
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: NA
 Groundwater Sample Method: NA

Boring Number: MW-5i
 Sheet: 1 OF 3
 Total Depth: 101 FEET
 Date Started/Completed: JANUARY 15, 1999/JANUARY 22, 1999
 Ground Level Elevation: 28.2 FEET NGVD
 Measuring Point Elevation: 28.11 FEET NGVD
 Static Water Level: 12.43 FEET NGVD Date: 6/9/99
 Northing: 119579 Easting: 1078939



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: NA
 Groundwater Sample Method: NA

Boring Number: MW-5i
 Sheet: 2 OF 3
 Total Depth: 101 FEET
 Date Started/Completed: JANUARY 15, 1999/JANUARY 22, 1999
 Ground Level Elevation: 28.2 FEET NGVD
 Measuring Point Elevation: 28.11 FEET NGVD
 Static Water Level: 12.43 FEET NGVD Date: 6/9/99
 Northing: 119579 Easting: 1078939

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
			40	<p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT - 6.5-84 FEET</p> <p style="margin-left: 20px;">2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 90 FEET</p> <p style="margin-left: 20px;">10-INCH BOREHOLE 0-101 FEET</p>	SW as above		
			45				
			50				
			55				
			60				
			65				
			70				
					64 - 101 feet: Well graded sand (SW), fine- to coarse-grained, trace to little fines, grayish brown to brown 10 YR 4/3 to very dark brown 10 YR 2/2, saturated, very dense to dense		

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: NA
 Groundwater Sample Method: NA

Boring Number: MW-5i
 Sheet: 3 OF 3
 Total Depth: 101 FEET
 Date Started/Completed: JANUARY 15, 1999/JANUARY 22, 1999
 Ground Level Elevation: 28.2 FEET NGVD
 Measuring Point Elevation: 28.11 FEET NGVD
 Static Water Level: 12.43 FEET NGVD Date: 6/9/99
 Northing: 119579 Easting: 1078939

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	<ul style="list-style-type: none"> • UNIFORM GRANULAR BENTONITE GROUT - 6.5-84 FEET • 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 90 FEET • 10-INCH BOREHOLE 0-101 FEET 	SW as above @ 74 feet: Some thin silt layers	75
			80	<ul style="list-style-type: none"> • 3/8" SORTED GRANULAR BENTONITE 84-86 FEET • 20-40 MESH SILICA SAND 86-87 FEET • STAINLESS STEEL CENTRALIZER AT 90 FEET 	@ 80 feet: SW, fine- to medium-grained, little fines, grayish brown, saturated, very dense	80
			85	<ul style="list-style-type: none"> • 2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN WITH 4-INCH SUMP 90-100 FEET • 10-20 MESH SILICA SAND 87-101 FEET • STAINLESS STEEL CENTRALIZER AT 100 FEET 	@ 95 feet: SW, ~10% coarse-grained, brownish grey, saturated, very dense	85
			90			90
			95			95
			100			100
			105		@ 101 feet: End of boring	105

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING

Project Number: 27-1940-06

Location: VANCOUVER, WA

PMX Representative: ANNE ACKERMAN

Drilled By: WESTERBURG DRILLING

Drill Method: CABLE TOOL

Soil Sample Method: SPLIT SPOON

Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-10 / MW-5d

Sheet: 1 OF 7

Total Depth: 234 FEET

Date Started/Completed: APRIL 27, 1998/MAY 20, 1998

Ground Level Elevation: 28.11 FEET NGVD

Measuring Point Elevation: 28.04 FEET NGVD

Static Water Level: 6.55 FEET NGVD Date: 7/20/98

Northing: 119572 Easting: 1078929

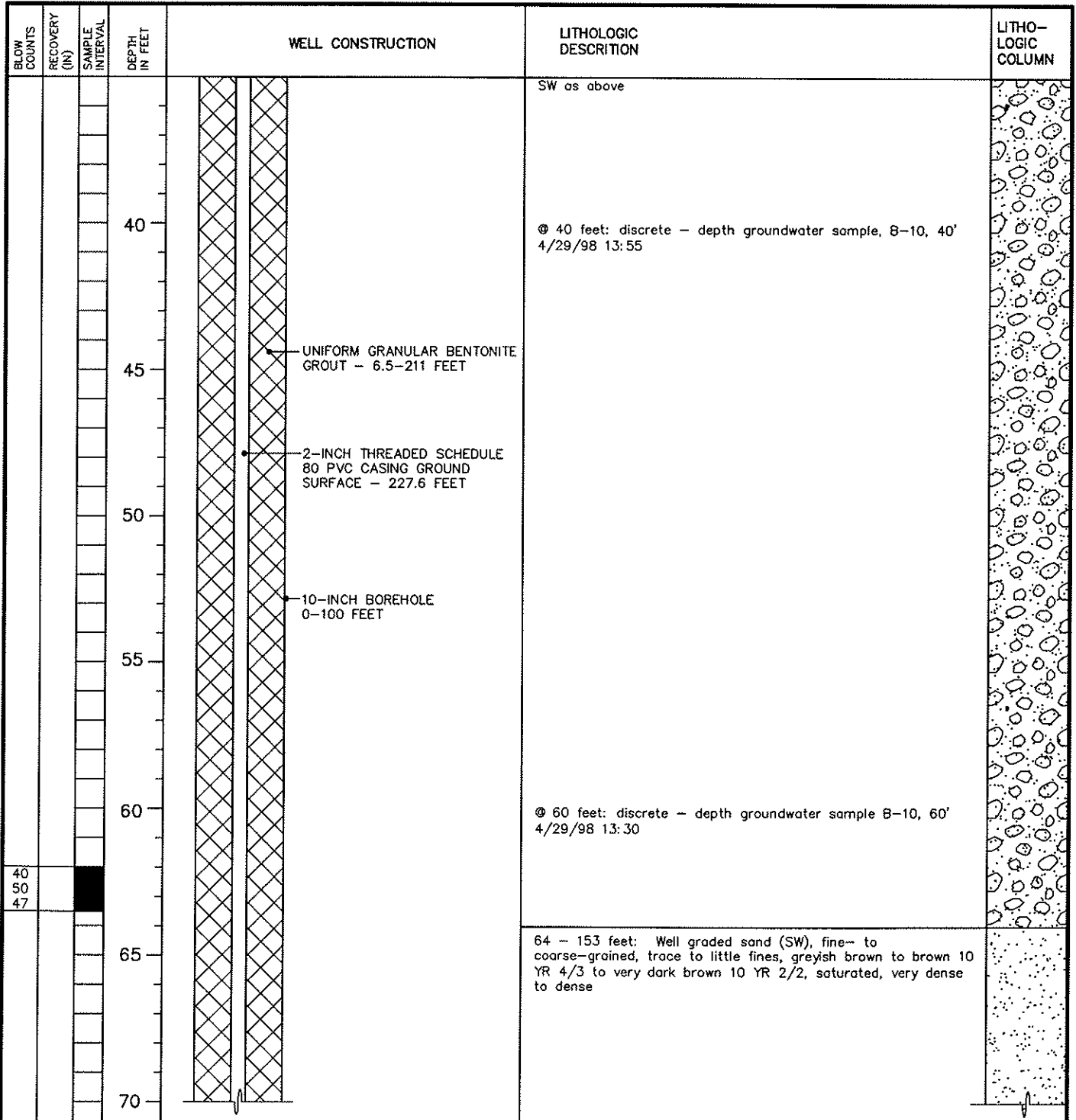
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 17 feet: Poorly Graded Sand (SP), EXCAVATION BACKFILL	
			5	CEMENT 0-2 FEET		
			10	BENTONITE CHIPS 2-6.5 FEET		
			15	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE- 227.6 FEET		
			20	10-INCH BOREHOLE 0-100 FEET	17 - 64 feet: Well graded sand and gravel (SW)	
			25	UNIFORM GRANULAR BENTONITE GROUT - 6.5-211 FEET	⊙ 25 feet: discrete - depth groundwater sample B-10, 25' 4/27/98 15:20	
			30		⊙ 28 feet: SW, angular, with fine- to coarse-grained gravel, based on bailer cuttings	
			35		⊙ 34 feet: Sand is predominantly coarse-grained, with some medium-grained, gravel up to 3/4-inch in diameter, based on bailer cuttings	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-10 / MW-5d
 Sheet: 2 OF 7
 Total Depth: 234 FEET
 Date Started/Completed: APRIL 27, 1998/MAY 20, 1998
 Ground Level Elevation: 28.11 FEET NGVD
 Measuring Point Elevation: 28.04 FEET NGVD
 Static Water Level: 6.55 FEET NGVD Date: 7/20/98
 Northing: 119572 Easting: 1078929



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-10 / MW-5d
 Sheet: 3 OF 7
 Total Depth: 234 FEET
 Date Started/Completed: APRIL 27, 1998/MAY 20, 1998
 Ground Level Elevation: 28.11 FEET NGVD
 Measuring Point Elevation: 28.04 FEET NGVD
 Static Water Level: 6.55 FEET NGVD Date: 7/20/98
 Northing: 119572 Easting: 1078929

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75		SW as above	
8 26 48			80	UNIFORM GRANULAR BENTONITE GROUT - 6.5-211 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 227.6 FEET 10-INCH BOREHOLE 0-100 FEET	@ 74 feet: Some thin silt layers, based on bailer cuttings @ 80 feet: SW, fine- to medium-grained, little fines, greyish brown, saturated, very dense discrete - depth groundwater sample B-10, 80' 4/30/98 12:20	
16 38 80			95		@ 95 feet: SW, ~10% coarse-grained, little fines, brownish grey, saturated, very dense	
			100	8-INCH BOREHOLE 100-234 FEET	@ 100 feet: discrete - depth groundwater sample B-10, 100' 4/30/98 16:56	
			105			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-10 / MW-5d
 Sheet: 4 OF 7
 Total Depth: 234 FEET
 Date Started/Completed: APRIL 27, 1998/MAY 20, 1998
 Ground Level Elevation: 28.11 FEET NGVD
 Measuring Point Elevation: 28.04 FEET NGVD
 Static Water Level: 6.55 FEET NGVD Date: 7/20/98
 Northing: 119572 Easting: 1078929

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110		SW as above @ 110 feet: Poorly graded sand (SP), very fine-grained, trace fines, brown 10YR 4/3, saturated, very dense	110
10 29 65	9					110
			115	UNIFORM GRANULAR BENTONITE GROUT - 6.5-211 FEET	@ 115 feet: Grain size increasing with depth to medium to coarse-grained sand and some fine gravel, based on bailer cuttings	115
			120	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 227.6 FEET	@ 120 feet: discrete - depth groundwater sample B-10, 120' 5/4/98 14:05	120
			125	8-INCH BOREHOLE 100-234 FEET	@ 125 feet: No recovery, medium- to coarse-grained sand and fine-grained gravel, based on bailer cuttings	125
72						125
			130			130
			135		@135 feet: SW, medium- to coarse-grained, few fine-grained, trace fines, trace fine-grained gravel, very dark brown 10YR 2/2, saturated, dense	135
11 19 21	8					135
			140			140

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-10 / MW-5d
 Sheet: 5 OF 7
 Total Depth: 234 FEET
 Date Started/Completed: APRIL 27, 1998/MAY 20, 1998
 Ground Level Elevation: 28.11 FEET NGVD
 Measuring Point Elevation: 28.04 FEET NGVD
 Static Water Level: 6.55 FEET NGVD Date: 7/20/98
 Northing: 119572 Easting: 1078929

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
19 24 32	9		140	<p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT - 6.5-211 FEET</p> <p style="margin-left: 20px;">2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 227.6 FEET</p> <p style="margin-left: 20px;">8-INCH BOREHOLE 100-234 FEET</p>	@ 140 feet: SW, fine- to medium-grained, trace coarse-grained, trace fines, trace fine-grained gravel, very dark brown 10YR 2/2, saturated, very dense discrete - depth groundwater sample B-10, 140' 5/5/98 10:50	
13 26 32	12		155		153 - 209 feet: Poorly graded sand (SP), fine-grained, trace fines, brown 10YR 4/3 to dark brown 10YR 3/3, saturated, dense to very dense @ 155 feet: SP, fine-grained, brown 10YR 4/3, saturated, very dense	
9 14 32	7		170		@ 160 feet: discrete - depth groundwater sample B-10, 160' 5/5/98 16:20 @ 170 feet: SP, fine-grained, trace fines, brown 10YR 4/3, saturated, dense	
			175			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-10 / MW-5d
 Sheet: 6 OF 7
 Total Depth: 234 FEET
 Date Started/Completed: APRIL 27, 1998/MAY 20, 1998
 Ground Level Elevation: 28.11 FEET NGVD
 Measuring Point Elevation: 28.04 FEET NGVD
 Static Water Level: 6.55 FEET NGVD Date: 7/20/98
 Northing: 119572 Easting: 1078929

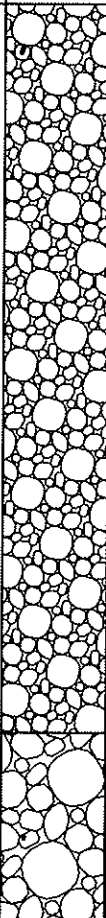
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180		SP as above	
			185	UNIFORM GRANULAR BENTONITE GROUT - 6.5-211 FEET	© 180 feet: discrete - depth groundwater sample B-10, 180' 5/6/98 13:00 © 185 feet: SP, fine-grained, brown 10 YR 4/3, saturated, very dense	
28 42 65	10			2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 227.6 FEET		
			190			
			195			
			200	8-INCH BOREHOLE 100-234 FEET	© 200 feet: SP, fine-grained, trace fines, dark brown 10 YR 3/3, saturated, very dense discrete - depth groundwater sample B-10, 200' 5/7/98 11:00	
14 22 47	12					
			205			
			210		GW as below	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-10 / MW-5d
 Sheet: 7 OF 7
 Total Depth: 234 FEET
 Date Started/Completed: APRIL 27, 1998/MAY 20, 1998
 Ground Level Elevation: 28.11 FEET NGVD
 Measuring Point Elevation: 28.04 FEET NGVD
 Static Water Level: 6.55 FEET NGVD Date: 7/20/98
 Northing: 119572 Easting: 1078929

BLOW COUNTS	RECOVERY (ft)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			215	3/8" SORTED GRANULAR BENTONITE 211-213 FEET 10-40 MESH SILICA SAND 213-214 FEET 8-INCH BOREHOLE 100-234 FEET STAINLESS STEEL CENTRALIZER AT 217 FEET	209 feet - 229 feet Well graded gravel with sand (GW), fine- to coarse-grained (up to 2 inches), some fine- to coarse-grained sand, trace fines, saturated, gravel is predominately basaltic, some granitic @ 215 feet: GW as above	
12			220	10-20 MESH SILICA SAND 214-228 FEET 2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN WITH 4-INCH SUMP 217.3-227.6 FEET STAINLESS STEEL CENTRALIZER AT 227 FEET	@ 220 feet: discrete - depth groundwater sample B-10, 220' 5/8/98 15:00 @ 224 feet: cobbles up to 4 inches in diameter, based on bailer cuttings @ 226 feet: slightly cemented basalt cobbles, based on bailer cuttings	
			230	3/8" SORTED GRANULAR BENTONITE 228-233 FEET CEMENT 233-234 FEET	@ 228 feet: discrete - depth groundwater sample B-10, 228' 5/14/98 16:00 229 feet - 234 feet: Well graded gravel with sand (GW), fine- to coarse-grained (up to 8 inches), saturated, slightly cemented, gravel contains basalt, granite, abundant caramel-colored quartzite, abundant large mica flakes (up to 2 mm), TROUTDALE FORMATION	
			235		@ 234 feet: End of boring	
			240			
			245			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: SPLIT-SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-0
 Sheet: 1 OF 1
 Total Depth: 31.5 FEET
 Date Started/Completed: JULY 13, 1998
 Ground Level Elevation: 29.6 FEET NGVD
 Measuring Point Elevation: 29.32 FEET NGVD
 Static Water Level: 12.38 FEET NGVD Date: 6/9/99
 Northing: 199255.4 Easting: 1079212.2

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				<p style="font-size: small;">FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8" SORTED GRANULAR BENTONITE 2 - 16 FEET 2-INCH THREADED SCHEDULE 40 PVC CASING GROUND SURFACE - 19 FEET 8 1/4-INCH BOREHOLE 0-31.5 FEET 10-20 MESH SILICA SAND 16-31.5 FEET 2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN. 19-29 FEET</p>	0 - 8 feet: Silty sand (SM), fine-grained, ~40% fines, dark brown 7.5YR 4/4, dry, loose 8 - 22 feet: Poorly graded sand (SP), fine-grained, trace fines, dark brown 7.5 YR 4/3, dry, loose @ 15 feet: Medium dense @ 20 feet: Silty sand layers, moist 22- 31.5 feet: Well graded sand (SW), fine- to coarse-grained, predominantly medium-grained, loose @ 23 feet: Saturated @ 27 feet: Some gravel @ 30 feet: Predominantly coarse-grained sand, trace fines, ~10% fine-grained gravel @ 31.5 feet: End of boring	
3 4 4	17		5			
4 4 5	24		10			
3 3 9	20		15			
5 6 9	17		20			
1 1 1	23		25			
5 10 24			30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING

Project Number: 27-1940-06

Location: VANCOUVER, WA

PMX Representative: ANNE ACKERMAN

Drilled By: GEOTECH EXPLORATIONS

Drill Method: HOLLOW - STEM AUGER

Soil Sample Method: SPLIT-SPOON

Groundwater Sample Method: N/A

Boring Number: MW-7

Sheet: 1 OF 1

Total Depth: 31.5 FEET

Date Started/Completed: JULY 13, 1998

Ground Level Elevation: 31.3 FEET NGVD

Measuring Point Elevation: 30.89 FEET NGVD

Static Water Level: 12.41 FEET NGVD Date: 6/9/99

Northing: 199424.6 Easting: 1079484.1

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
8 9 7	16		5	<ul style="list-style-type: none"> FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8" SORTED GRANULAR BENTONITE 2 - 17 FEET 	0 - 13 feet: Silt with sand (ML), ~20% very fine-grained sand, slightly plastic, strong brown 7.5YR 4/6, moist, medium stiff to stiff	
3 2 4	22		10	<ul style="list-style-type: none"> 2-INCH THREADED SCHEDULE 40 PVC CASING GROUND SURFACE - 20 FEET 8 1/4-INCH BOREHOLE 0-31.5 FEET 	13 - 19 feet: Silty sand (SM), fine-grained, ~30% fines, brown 7.5 YR 4/3, dry medium dense	
4 6 5	24		15		19 - 22 feet: Poorly graded sand (SP), medium-grained, dark brown 7.5 YR 3/2, moist, medium dense	
10 10 15	18		20	<ul style="list-style-type: none"> 10-20 MESH SILICA SAND 17-31.5 FEET 2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN. 20-30 FEET 	22 - 31.5 feet: Well graded sand with gravel (SW), fine- to coarse-grained, predominantly coarse-grained, trace fines, ~10 % fine-grained gravel, dark brown 7.5 YR 3/2, dry to saturated, dense	
14 25 15	3		25		@24 feet: Saturated	
26 7			30			
			35			

⊙ 31.5 feet: End of boring

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-7i
 Sheet: 2 OF 6
 Total Depth: 180 FEET
 Date Started/Completed: JULY 27, 2000/AUGUST 9, 2000
 Ground Level Elevation: 32.81 FEET NGVD
 Measuring Point Elevation: 32.42 FEET NGVD
 Static Water Level: 27.41 FEET NGVD Date: 10/30/00
 Northing: 119388 Easting: 1079449

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		GW as above	
			45	UNIFORM GRANULAR BENTONITE GROUT - 21-74 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 80 FEET	@ 40 feet: Discrete-depth groundwater sample MW-7i, 40', collected 7/19/00 07:25	
			50		48 - 53 feet: Poorly graded sand with gravel (SP), sand coarse-grained, gravel fine- to coarse-grained (1/4 to 2 inches in diameter), dark brown to black, gravel is rounded, saturated	
			55	10-INCH BOREHOLE 0-105 FEET	53 - 60 feet: Well graded gravel with sand (GW), fine- to coarse grained (1/2 to 4 inches in diameter), sand is coarse-grained, sand and gravel are basaltic, saturated @ 57 - 60 feet: Cobbles	
			60		60 - 69 feet: Well graded sand (SW), fine- to coarse-grained, predominantly coarse-grained, trace gravel, subangular to angular, basaltic, saturated	
			65		@ 60 feet: Discrete-depth groundwater sample MW-7i, 60', collected 7/19/00 11:25 @ 65 - 68 feet: SW as above, loose @ 66 - 68 feet: Thin (~1 inch) silt lenses @ 68 feet: Some heaving	
			70		69 - 73 feet: Gravel with sand, saturated	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-7i
 Sheet: 3 OF 6
 Total Depth: 180 FEET
 Date Started/Completed: JULY 27, 2000/AUGUST 9, 2000
 Ground Level Elevation: 32.81 FEET NGVD
 Measuring Point Elevation: 32.42 FEET NGVD
 Static Water Level: 27.41 FEET NGVD Date: 10/30/00
 Northing: 119388 Easting: 1079449

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 80 FEET 3/8 INCH SORTED GRANULAR BENTONITE 74-76 FEET 20-40 MESH SILICA SAND 76-77 FEET	69 - 73 feet: Gravel with sand, saturated	75
			80	STAINLESS STEEL CENTRALIZER 10-20 MESH SILICA SAND 77-91 FEET 2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN 80-90 FEET	73 - 87 feet: Well graded sand (SW), predominantly coarse-grained, subangular to angular, basaltic, saturated ⊕ 74 - 79 feet: Thin (1 to 2 inches thick) silty sand lenses ⊕ 79 - 80 feet: SW as above, trace gravel up to 3 inches, no silty lenses ⊕ 80 feet: Discrete-depth groundwater sample MW-7i, 80', collected 7/20/00 09:12 ⊕ 80 - 87 feet: SW as above, silty	80
			90	STAINLESS STEEL CENTRALIZER	87 - 100 feet: Well graded gravel (GW), fine- to coarse-grained (1/2 to 6 inches in diameter), some coarse-grained sand, some cementation on grains, gravel predominantly basaltic, saturated	90
			95	10-INCH BOREHOLE 0-105 FEET 3/8 INCH SORTED GRANULAR BENTONITE 91-100 FEET		95
			100	UNIFORM GRANULAR BENTONITE 100-180 FEET	100 - 153 feet: Well graded gravel (GW) in silt to silty sand matrix, saturated ⊕ 100 feet: Discrete-depth groundwater sample MW-7i, 100', collected 7/21/00 09:50 ⊕ 100 - 115 feet: GW as above, gravel up to 3 inches in diameter, tightly packed, matrix predominantly sand, some silt, some cementation on grains, basaltic	100
			105			105

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: <u>PORT OF VANCOUVER/SWAN MANUFACTURING</u> Project Number: <u>275-1940-006</u> Location: <u>VANCOUVER, WA</u> PMX Representative: <u>ANNE ACKERMAN/CHRIS HAMILTON</u> Drilled By: <u>WESTERBURG DRILLING</u> Drill Method: <u>CABLE TOOL</u> Soil Sample Method: <u>2" SPLIT SPOON</u> Groundwater Sample Method: <u>TEMPORARY WELL POINT</u>	Boring Number: <u>MW-7i</u> Sheet: <u>4 OF 6</u> Total Depth: <u>180 FEET</u> Date Started/Completed: <u>JULY 27, 2000/AUGUST 9, 2000</u> Ground Level Elevation: <u>32.81 FEET NGVD</u> Measuring Point Elevation: <u>32.42 FEET NGVD</u> Static Water Level: <u>27.41 FEET NGVD</u> Date: <u>10/30/00</u> Northing: <u>119388</u> Easting: <u>1079449</u>
---	--

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110		GW as above	
			115			
			120			
			125			
			130			
			135			
			140			
			140			
			140			
			140			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-7i
 Sheet: 5 OF 6
 Total Depth: 180 FEET
 Date Started/Completed: JULY 27, 2000/AUGUST 9, 2000
 Ground Level Elevation: 32.81 FEET NGVD
 Measuring Point Elevation: 32.42 FEET NGVD
 Static Water Level: 27.41 FEET NGVD Date: 10/30/00
 Northing: 119388 Easting: 1079449

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
			145		Ⓞ 140 feet: Discrete-depth groundwater sample MW-7i, 140', collected 7/31/00 14:40 Ⓞ 140 - 150 feet: GW as above, trace gravel up to 4 inches in diameter Ⓞ 148 - 152 feet: GW as above, increase in percent of 3 to 4 inch diameter clasts		
			150			153 - 180 feet: Well graded gravel with sand (GW)	
			155			Ⓞ 155 - 160 feet: GW as above, gravel 2 to 4 inches in diameter, trace up to 6 inches in diameter, some fine- to medium-grained sand, little fines, gravel mostly basaltic with some cementation on grains Ⓞ 158 feet: GW as above, cemented	
			160			Ⓞ 160 feet: Discrete-depth groundwater sample MW-7i, 160', collected 8/1/00 13:30 Ⓞ 161 feet: GW as above, cemented Ⓞ 161 - 169 feet: GW as above, less cemented than above	
			165				
			170			Ⓞ 169 - 171 feet: GW as above, well cemented	
			175				

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: <u>PORT OF VANCOUVER/SWAN MANUFACTURING</u> Project Number: <u>275-1940-006</u> Location: <u>VANCOUVER, WA</u> PMX Representative: <u>ANNE ACKERMAN/CHRIS HAMILTON</u> Drilled By: <u>WESTERBURG DRILLING</u> Drill Method: <u>CABLE TOOL</u> Soil Sample Method: <u>2" SPLIT SPOON</u> Groundwater Sample Method: <u>TEMPORARY WELL POINT</u>	Boring Number: <u>MW-7i</u> Sheet: <u>6 OF 6</u> Total Depth: <u>180 FEET</u> Date Started/Completed: <u>JULY 27, 2000/AUGUST 9, 2000</u> Ground Level Elevation: <u>32.81 FEET NGVD</u> Measuring Point Elevation: <u>32.42 FEET NGVD</u> Static Water Level: <u>27.41 FEET NGVD</u> Date: <u>10/30/00</u> Northing: <u>119388</u> Easting: <u>1079449</u>
---	---

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180	<ul style="list-style-type: none"> • UNIFORM GRANULAR BENTONITE GROUT - 100-180 FEET • 8-INCH BOREHOLE 105-180 FEET 	GW as above ● 179 feet: GW as above, gravel up to 1-inch in diameter ● 180 feet: Discrete-depth groundwater sample MW-7i, 180', collected 8/2/00 12:50 ● 180 feet: End of boring	
			185			
			190			
			195			
			200			
			205			
			210			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: SPLIT-SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-8
 Sheet: 1 OF 1
 Total Depth: 31.5 FEET
 Date Started/Completed: JULY 13, 1998
 Ground Level Elevation: 31.8 FEET NGVD
 Measuring Point Elevation: 31.41 FEET NGVD
 Static Water Level: 12.40 FEET NGVD Date: 6/9/99
 Northing: 119642.6 Easting: 1079434.5

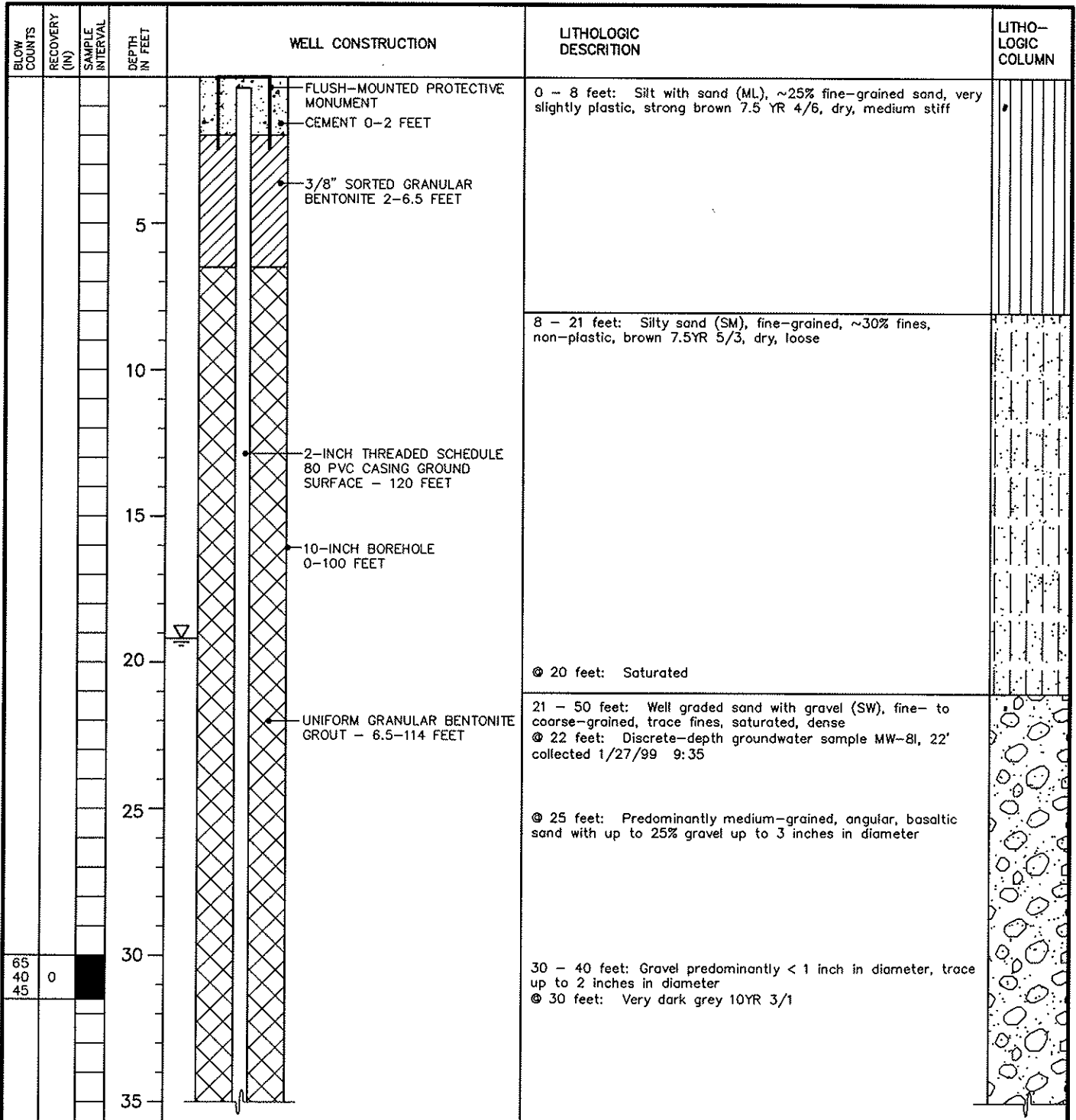
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 8 feet: Silt with sand (ML), ~25% fine-grained sand, very slightly plastic, strong brown 7.5 YR 4/6, dry medium stiff	
2 3 3	14		5	CEMENT 0-2 FEET		
			10	3/8" SORTED GRANULAR BENTONITE 2 - 17 FEET		
3 4 4	24		15	2-INCH THREADED SCHEDULE 40 PVC CASING GROUND SURFACE - 20 FEET	8 - 21 feet: Silty sand (SM), fine-grained, ~30% fines, non-plastic, brown 7.5YR 5/3, dry, loose	
			20	8 1/4-INCH BOREHOLE 0-31.5 FEET	⊕ 15 feet: Dark brown 7.5YR 4/3	
4 3 4	19		25	10-20 MESH SILICA SAND 17-31.5 FEET		
4 14 32	21		30	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN. 20-30 FEET	21-31.5 feet: Well graded sand with gravel (SW), fine- to coarse-grained, ~70% medium-grained, ~15% fine-grained gravel, dark brown 7.5YR 3/3, moist to saturated, medium dense to dense	
8 12 13	2		35		⊕ 25 feet: Saturated	
7 26 40			31.5		⊕ 30 feet: Sand is predominantly coarse-grained	
					⊕ 31.5 feet: End of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-8i
 Sheet: 1 OF 4
 Total Depth: 140 FEET
 Date Started/Completed: JANUARY 27, 1999/FEBRUARY 25, 1999
 Ground Level Elevation: 31.6 FEET NGVD
 Measuring Point Elevation: 31.45 FEET NGVD
 Static Water Level: 12.40 FEET NGVD Date: 6/9/99
 Northing: 119648 Easting: 1079444



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-8i
 Sheet: 2 OF 4
 Total Depth: 140 FEET
 Date Started/Completed: JANUARY 27, 1999/FEBRUARY 25, 1999
 Ground Level Elevation: 31.6 FEET NGVD
 Measuring Point Elevation: 31.45 FEET NGVD
 Static Water Level: 12.40 FEET NGVD Date: 6/9/99
 Northing: 119648 Easting: 1079444

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			40		SW as above	
			45	UNIFORM GRANULAR BENTONITE GROUT - 6.5-114 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 120 FEET 10-INCH BOREHOLE 0-100 FEET	◎ 40 feet: Discrete-depth groundwater sample MW-8i, 40' collected 1/28/99 11:15 ◎ 45 feet: ~10% fines, very dark grayish brown 10YR 3/2	
35 50 35/0'	4		50		50 - 56 feet: Well graded gravel with sand (GW), ~35 - 40% gravel, predominantly 1 to 3 inches in diameter, trace up to 4 inches in diameter	
			55		56 - 58 feet: Thin sandy silt lenses	
25 35 40	10		60		58 - 89 feet: Well graded sand (SW), fine- to coarse-grained, trace fines, medium- to coarse-grained sand is angular to sub angular, basaltic, fine-grained sand is quartz, very dark grayish brown 10YR 3/2, saturated 60 - 75 feet: Trace gravel ◎ 60 feet: Discrete-depth groundwater sample MW-8i, 60' collected 2/1/99 8:15	
			65			
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-8i
 Sheet: 3 OF 4
 Total Depth: 140 FEET
 Date Started/Completed: JANUARY 27, 1999/FEBRUARY 25, 1999
 Ground Level Elevation: 31.6 FEET NGVD
 Measuring Point Elevation: 31.45 FEET NGVD
 Static Water Level: 12.40 FEET NGVD Date: 6/9/99
 Northing: 119648 Easting: 1079444

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75		SW as above	
12 35 75	12				75 - 89 feet: No gravel, variable grain size, but predominantly medium- to coarse-grained ◎ 75 feet: dark grayish brown 10YR 4/2	
			80	UNIFORM GRANULAR BENTONITE GROUT - 6.5-114 FEET	◎ 80 feet: Discrete-depth groundwater sample MW-8i, 80' collected 2/1/99 14:00	
			85	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 120 FEET		
			90	10-INCH BOREHOLE 0-100 FEET	89 - 140 feet: Well graded sand with gravel to well graded gravel with sand (SW/GW) ◎ 90 feet: Well graded sand with gravel (SW), fine- to coarse-grained, predominantly coarse-grained, some fines, trace fine- to coarse-grained gravel, dark grayish brown 10YR 4/2, saturated	
			95		◎ 95 feet: Gravel up to 4 inches in diameter	
			100		◎ 100 feet: Abundant coarse-grained gravel ◎ 100 feet: Discrete-depth groundwater sample MW-8i, 100' collected 2/2/99 13:40	
			105	8-INCH BOREHOLE 100-140 FEET	◎ 103 feet: Sand/gravel ratio variable	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-8i
 Sheet: 4 OF 4
 Total Depth: 140 FEET
 Date Started/Completed: JANUARY 27, 1999/FEBRUARY 25, 1999
 Ground Level Elevation: 31.6 FEET NGVD
 Measuring Point Elevation: 31.45 FEET NGVD
 Static Water Level: 12.40 FEET NGVD Date: 6/9/99
 Northing: 119648 Easting: 1079444

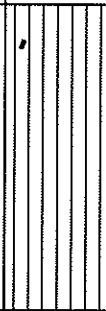
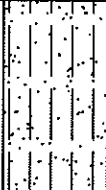
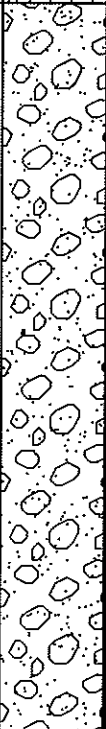
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
20					SW as above	
80					⊙ 106 feet: Well graded gravel with sand (GW), ~40% fine- to coarse-grained sand, gravel is fine- to coarse-grained	
20			110	UNIFORM GRANULAR BENTONITE GROUT - 6.5-114 FEET 8-INCH BOREHOLE 100-140 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 120 FEET	⊙ 110 feet: Well graded sand and gravel (SW), gravel up to 3 inches in diameter	
			115	3/8" SORTED GRANULAR BENTONITE 114-116 FEET 20-40 MESH SILICA SAND 116-118 FEET	⊙ 113 feet: More fines in matrix	
			120	STAINLESS STEEL CENTRALIZER AT 120 FEET 10-20 MESH SILICA SAND 118-131 FEET	⊙ 116 feet: Less fines in matrix, gravel up to 3 inches in diameter	
			125	2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN WITH 4-INCH SUMP 120-130 FEET	⊙ 120 feet: Discrete-depth groundwater sample MW-8i, 120' collected 2/5/99 13:10	
			130	STAINLESS STEEL CENTRALIZER AT 130 FEET	⊙ 121 feet: Predominantly fine-grained gravel < 1 inch in diameter, some fines in matrix	
			135	3/8" SORTED GRANULAR BENTONITE 131-140 FEET	⊙ 126 feet: More sand, some fines	
50					⊙ 137 feet: Loose gravel up to 4 inches in diameter	
50	0				⊙ 138 feet: Loose, coarse-grained gravel with trace sandy cementation on grains	
20					⊙ 140 feet: Discrete-depth groundwater sample MW-8i, 140' collected 2/10/99 12:10	
			140		⊙ 140 feet: End of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: SPLIT-SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-0
 Sheet: 1 OF 1
 Total Depth: 32 FEET
 Date Started/Completed: JULY 14, 1998
 Ground Level Elevation: 33.6 FEET NGVD
 Measuring Point Elevation: 33.35 FEET NGVD
 Static Water Level: 12.42 FEET NGVD Date: 6/9/99
 Northing: 119667.7 Easting: 1079889.6

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8" SORTED GRANULAR BENTONITE 2 - 19 FEET	0 - 8 feet: Silt (ML), ~10% very fine-grained sand, slightly plastic, dark yellowish brown 10YR 4/6, dry, stiff	
3 6 6	20		5			
3 4 7	24		10	2-INCH THREADED SCHEDULE 40 PVC CASING GROUND SURFACE - 22 FEET 8 1/4-INCH BOREHOLE 0-32 FEET	8 - 13 feet: Silt with sand (ML), ~20 fine-grained sand, non-plastic, brown 10YR 4/3, moist, stiff	
11 18 30	10		15		13 - 32 feet: Well graded sand with gravel (SW), fine- to coarse-grained, ~70% coarse-grained, ~10% fine-to coarse-grained gravel, dark brown 10YR 3/3, dry to saturated, dense ⊙ 17 feet: Gravel up to 3 inches in diameter	
18 16 20	6		20	10-20 MESH SILICA SAND 19-32 FEET	⊙ 20 feet: Trace fines, ⊙20.5' gravel, dry	
12 29 28	7		25	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN. 22-32 FEET	⊙ 25 feet: Moist ⊙ 27 feet: Saturated	
7 24 28			30			
			35		⊙ 32 feet: End of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: SPLIT-SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-10
 Sheet: 1 OF 1
 Total Depth: 31.5 FEET
 Date Started/Completed: JULY 14, 1998
 Ground Level Elevation: 33.4 FEET NGVD
 Measuring Point Elevation: 32.88 FEET NGVD
 Static Water Level: 12.39 FEET NGVD Date: 6/9/99
 Northing: 119148.2 Easting: 1079694.5

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 10 feet: Silt with sand (ML), ~10% fine-grained sand, trace fine-grained gravel, slightly plastic, dark yellowish brown 10YR 4/4, moist, soft	
			0-2	CEMENT		
			2-18	3/8" SORTED GRANULAR BENTONITE		
2 1 2	3		5			
			10	2-INCH THREADED SCHEDULE 40 PVC CASING GROUND SURFACE - 21 FEET	10 - 11 feet: Gravel layer	
2 4 6	0		10			
			15	8 1/4-INCH BOREHOLE 0-31.5 FEET	11 - 21 feet: Silty sand (SM), fine-grained, ~20% fines, brown 7.5YR 5/3, dry to very moist, medium dense	
4 6 12	18		15			
			20	10-20 MESH SILICA SAND 18-31.5 FEET	@ 20 feet: Very moist	
5 10 13	16		20			
			25	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN. 21-31.5 FEET	21 - 24 feet: Well graded sand (SW), fine- to coarse-grained, predominantly medium-grained, dark brown 7.5YR 4/3, dry, medium dense	
12 12 10	20		25			
			30		24 - 31.5 feet: Well graded sand with gravel (SW), fine- to coarse-grained, ~70% medium- to coarse-grained, ~15% fine-grained gravel, trace fines, dark yellowish brown 10YR 3/3, moist to saturated, medium dense to dense	
16 33 33	12		30		@ 26 feet: Saturated	
			31.5		@ 30 feet: Some coarse-grained gravel	
			35		@ 31.5 feet: End of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING

Project Number: 27-1940-06

Location: VANCOUVER, WA

PMX Representative: ANNE ACKERMAN

Drilled By: WESTERBURG DRILLING

Drill Method: CABLE TOOL

Soil Sample Method: SPLIT-SPOON

Groundwater Sample Method: N/A

Boring Number: MW-11

Sheet: 1 OF 1

Total Depth: 27 FEET

Date Started/Completed: APRIL 12, 1999

Ground Level Elevation: 25.4 FEET NGVD

Measuring Point Elevation: 25.00 FEET NGVD

Static Water Level: 9.07 FEET NGVD Date: 4/21/99

Northing: 119259 Easting: 1078694

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 2 feet: Fine- to medium-grained sand FILL	
			0-2	CEMENT 0-2 FEET	2 - 3 feet: Crushed rock FILL	
			2-13	3/8" SORTED GRANULAR BENTONITE 2 - 13 FEET	3 - 25 feet: Silty sand (SM), very fine-grained, ~35% fines abundant mica flakes, slightly plastic, dark yellowish brown 10YR 3/4, moist, loose ⊙ 4 feet: Some thin silt layers	
11 29 15	18		5		Beginning at 9 feet: silt content decreasing with depth, grain size increasing with depth	
			10	2-INCH THREADED SCHEDULE 40 PVC CASING GROUND SURFACE - 16 FEET		
			15	8 1/4-INCH BOREHOLE 0-27 FEET		
			15	10-20 MESH SILICA SAND 13-27 FEET		
			20	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN. 16-26 FEET	⊙ 20 feet: Very fine-grained to fine-grained, ~25% fines, less mica than above, non-plastic, dark grayish brown 10YR 4/2, dry to moist, dense	
8 17 8	6		25		25 - 27 feet: Well graded sand (SW), fine- to coarse-grained, predominantly medium- to coarse-grained, trace to few fines, trace fine-grained gravel, dark brown 10YR 2/2, medium dense	
			27		⊙ 27 feet: End of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS, INC
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-12
 Sheet: 1 OF 1
 Total Depth: 31.5 FEET
 Date Started/Completed: OCTOBER 6, 2000
 Ground Level Elevation: 32.32 FEET NGVD
 Measuring Point Elevation: 32.07 FEET NGVD
 Static Water Level: 27.10 FEET NGVD Date: 10/30/00
 Northing: 119836 Easting: 1078263

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 2 feet: Asphalt with gravel sub-base	
			0	CEMENT 0-2 FEET		
			2	3/8" SORTED GRANULAR BENTONITE 2-19 FEET	2 - 11 feet: Poorly graded sand (SP), fine-grained, brown, dry, medium dense FILL	
4 6 7	18		5			
			10	2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 21 FEET	11 - 14 feet: Organic silt (OH), plastic, brown, moist to dry, abundant organics, FORMER GROUND SURFACE	
2 2 1	18		15	8 1/4-INCH BOREHOLE 0-31.5 FEET	14 - 27 feet: Silt with sand (ML), ~ 25% very fine-grained sand, non-plastic, strong brown, dry to saturated, medium stiff to stiff	
2 2 4	18		20	10-20 MESH SILICA SAND 19-31.5 FEET	⊙ 20 feet: ML as above, slightly moist	
2 4 7	18		25	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 21-31 FEET	⊙ 26 feet: ML as above, saturated	
2 3 4	17		30		27 - 31.5 feet: Silty sand (SM), ~40% fines, brown, saturated, loose	
2 2 4	10		35		⊙ 31.5 feet: End of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-12d
 Sheet: 1 OF 7
 Total Depth: 224 FEET
 Date Started/Completed: MARCH 1, 1999/MARCH 25,1999
 Ground Level Elevation: 32.48 FEET NGVD
 Measuring Point Elevation: 32.22 FEET NGVD
 Static Water Level: 9.11 FEET NGVD Date: 4/21/99
 Northing: 119826 Easting: 1078272

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				<p style="font-size: small;">FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET BENTONITE CHIPS 2-6.5 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 206 FEET 10-INCH BOREHOLE 0-100 FEET UNIFORM GRANULAR BENTONITE GROUT - 6.5-200 FEET</p>	0 - 2 feet: Asphalt with gravel sub-base 2 - 16 feet: Poorly graded sand (SP), fine-grained, trace coarse-grained, trace fine-grained gravel, subangular, ~ 50% quartz, greyish brown 10 YR 5/2, loose, dry, FILL 16 - 32 feet: Silty sand (SM), very fine-grained, ~ 35% fines, predominately quartz, abundant mica, a thin (1/2 inch) zone of fine- to medium-grained silty sand at 12 feet, loose, saturated, brown 10 YR 4/3 @ 20 feet: Discrete-depth groundwater sample MW-12d, 20' collected 3/3/99 08:35 @ 25 feet: Silt with silty sand, fine-grained, trace medium- to coarse-grained, brown 32 - 35 feet: Poorly graded sand (SP), trace fines, trace gravel, brown	
4 6 9	18		5			
4 5 6	18		20			
			25			
			30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-12d
 Sheet: 2 OF 7
 Total Depth: 224 FEET
 Date Started/Completed: MARCH 1, 1999/MARCH 25,1999
 Ground Level Elevation: 32.48 FEET NGVD
 Measuring Point Elevation: 32.22 FEET NGVD
 Static Water Level: 9.11 FEET NGVD Date: 4/21/99
 Northing: 119826 Easting: 1078272

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
8 25 51	14		35	<p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT - 6.5-200 FEET</p> <p style="margin-left: 20px;">2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 206 FEET</p> <p style="margin-left: 20px;">10-INCH BOREHOLE 0-100 FEET</p>	35 - 42 feet: Well graded sand with gravel (SW), fine- to coarse-grained, trace fines, predominantly medium- to coarse, angular to subangular basalt grains with some fine quartz grains Ⓞ 40 feet: Discrete--depth groundwater sample MW12d, 40' collected 3/3/99 12:00		
			40				
			45			42 - 60 feet: Well graded gravel with sand (GW), fine- to coarse-grained gravel in a variable sand matrix Ⓞ 44 feet: Gravel predominantly < 2 inches in diameter, trace larger	
			50			Ⓞ 49 feet: ~ 40 to 50% sand, matrix is fine- to coarse-grained, angular, basaltic	
16 36 50	2		53			Ⓞ 53 feet: More sand than gravel	
			55			Ⓞ 57 feet: More gravel than sand, gravel predominantly < 1 inch in diameter, trace larger grains	
			60			Ⓞ 60 feet: Discrete--depth groundwater sample MW-12d, 60' collected 3/4/99 13:40	
			65			60 - 73 feet: Well graded sand with gravel (SW), fine- to coarse-grained, angular, basaltic sand with up to ~ 40% fine- to coarse-grained gravel, gravel predominantly < 1 inch in diameter, trace gravels up to 3 inches in diameter, up to 10% fines, dark grayish brown 10 YR 4/2	
55 55 100	12		67			Ⓞ 67 feet: Trace gravel up to 5 inches in diameter	
			70				

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-12d
 Sheet: 3 OF 7
 Total Depth: 224 FEET
 Date Started/Completed: MARCH 1, 1999/MARCH 25,1999
 Ground Level Elevation: 32.48 FEET NGVD
 Measuring Point Elevation: 32.22 FEET NGVD
 Static Water Level: 9.11 FEET NGVD Date: 4/21/99
 Northing: 119826 Easting: 1078272

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75		SW as above	
	0		80	UNIFORM GRANULAR BENTONITE GROUT -- 6.5-200 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 206 FEET	73 - 106 feet: Well graded gravel with sand (GW), fine- to coarse-grained gravel in a variable sand matrix ⊗ 75 feet: Gravel predominantly 1/2 to 1 inch in diameter, trace up to 4 inches in diameter ⊗ 80 feet: Discrete-depth groundwater sample MW 12d, 80' collected 3/5/99 13:30	
			85		⊗ 85 feet: Sand matrix is fine- to coarse-grained, subangular sand, gravel is predominantly basalt grains 1/2 to 2 inches in diameter, trace up to 6 inches in diameter	
			90	10-INCH BOREHOLE 0-100 FEET	⊗ 90 feet: Increasing percentage of gravel is 3 inches in diameter	
	0		95			
			100		⊗ 100 feet: Discrete-depth groundwater sample MW12d, 100' collected 3/9/99 08:20	
			105	8-INCH BOREHOLE 100-224 FEET		

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-12d
 Sheet: 4 OF 7
 Total Depth: 224 FEET
 Date Started/Completed: MARCH 1, 1999/MARCH 25,1999
 Ground Level Elevation: 32.48 FEET NGVD
 Measuring Point Elevation: 32.22 FEET NGVD
 Static Water Level: 9.11 FEET NGVD Date: 4/21/99
 Northing: 119826 Easting: 1078272

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110		GW as above 106 - 180 feet: Well graded sand (SW), fine- to coarse-grained, predominantly medium- to coarse-grained, trace to ~ 10% fines, trace fine-grained gravel @ 110 feet: Trace thin (1/4 inch) silt lenses, trace fine-grained gravel (1 inch in diameter)	0
18 70 68	9		115	UNIFORM GRANULAR BENTONITE GROUT - 6.5-200 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 206 FEET 8-INCH BOREHOLE 100-224 FEET	@ 115 feet: Predominantly coarse-grained sand, trace fines, trace 1 inch diameter gravel, sand is angular to sub angular, loose, basaltic, dark grayish brown 10 YR 4/2	1
			120		@ 120 feet: Discrete-depth groundwater sample MW-12d, 120' collected 3/12/99 10:05	2
			125		@ 127 feet: Trace gravel up to 4 inches in diameter	3
15 35 45	6		130		@ 130 feet: Predominantly coarse-grained, angular, basaltic sand, trace fines dispersed throughout, trace gravel up to 2 inches in diameter bound in a fine sand and silt matrix,	4
			135			5
			140		@ 140 feet: Discrete-depth groundwater sample MW-12d, 140' collected 3/15/99 12:50	6

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-12d
 Sheet: 5 OF 7
 Total Depth: 224 FEET
 Date Started/Completed: MARCH 1, 1999/MARCH 25, 1999
 Ground Level Elevation: 32.48 FEET NGVD
 Measuring Point Elevation: 32.22 FEET NGVD
 Static Water Level: 9.11 FEET NGVD Date: 4/21/99
 Northing: 119826 Easting: 1078272

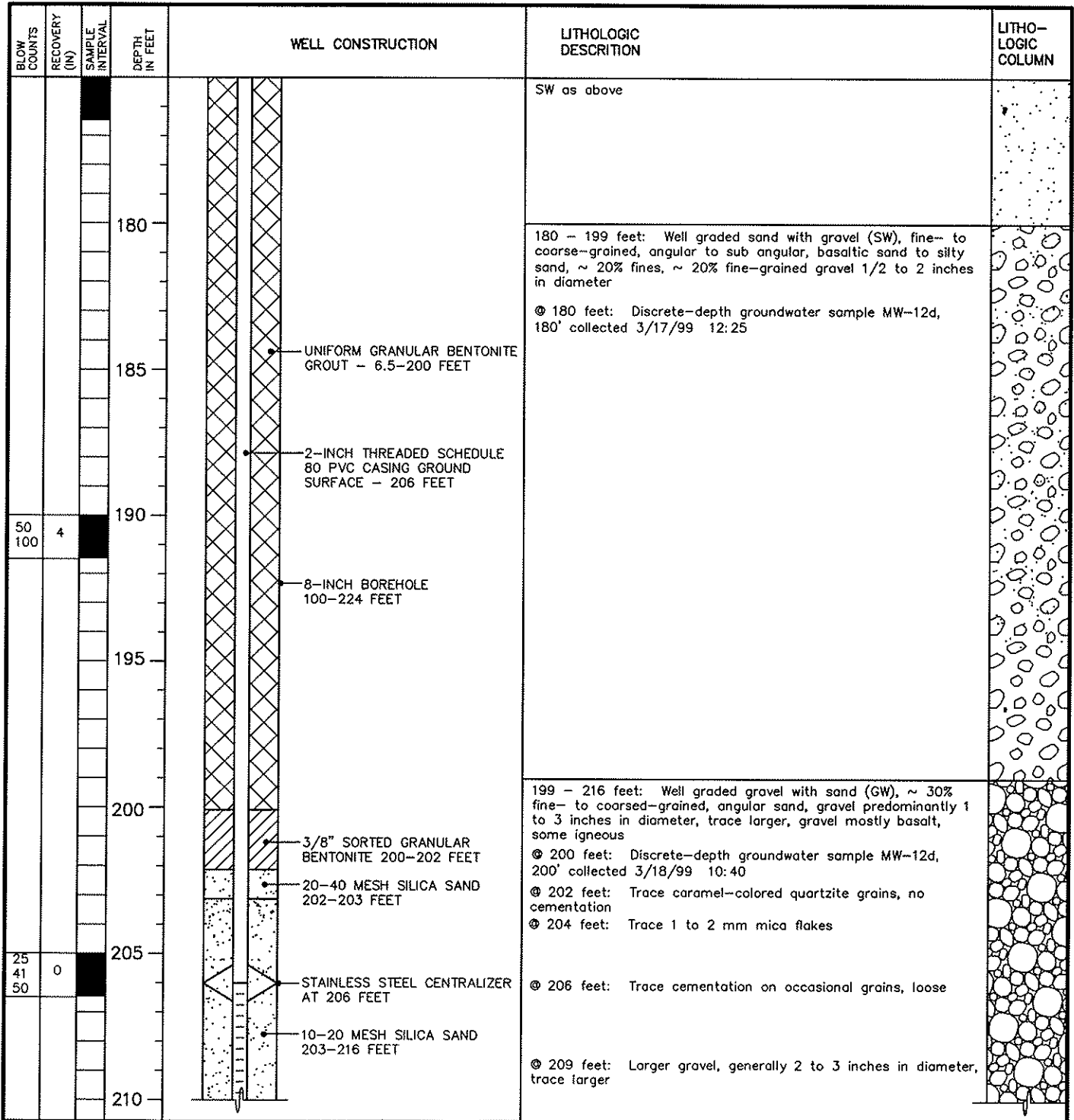
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145			
5					Ⓞ 145 feet: Predominantly medium-grained sand with ~ 20% fines, angular to sub angular mostly basalt grains but some quartz grains, dark brown 10 YR 3/3	
			150	UNIFORM GRANULAR BENTONITE GROUT - 6.5-200 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 206 FEET		
			155			
			160	8-INCH BOREHOLE 100-224 FEET	Ⓞ 160 feet: Discrete-depth groundwater sample MW-12d, 160' collected 3/16/99 11:35 Ⓞ 160 feet: Predominantly medium-grained, angular to sub angular, basaltic sand, ~ 10% fines, somewhat loose but cohesive due to silt content, dark brown 10 YR 3/3	
3					Ⓞ 165 feet: Trace gravel up to 2 inches in diameter, less silt	
			165			
			170			
			175		Ⓞ 175 feet: Predominantly coarse-grained, angular, basaltic sand, ~ 20 fines, ~ 10% fine-grained gravel dark brown 10 YR 3/3	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-12d
 Sheet: 6 OF 7
 Total Depth: 224 FEET
 Date Started/Completed: MARCH 1, 1999/MARCH 25, 1999
 Ground Level Elevation: 32.48 FEET NGVD
 Measuring Point Elevation: 32.22 FEET NGVD
 Static Water Level: 9.11 FEET NGVD Date: 4/21/99
 Northing: 119826 Easting: 1078272

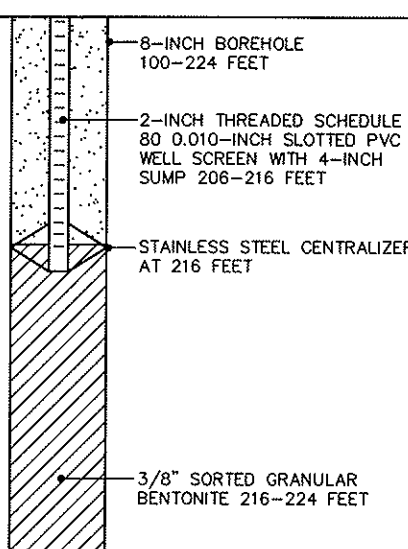
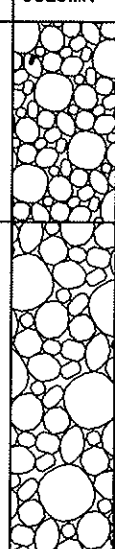


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-12d
 Sheet: 7 OF 7
 Total Depth: 224 FEET
 Date Started/Completed: MARCH 1, 1999/MARCH 25, 1999
 Ground Level Elevation: 32.48 FEET NGVD
 Measuring Point Elevation: 32.22 FEET NGVD
 Static Water Level: 9.11 FEET NGVD Date: 4/21/99
 Northing: 119826 Easting: 1078272

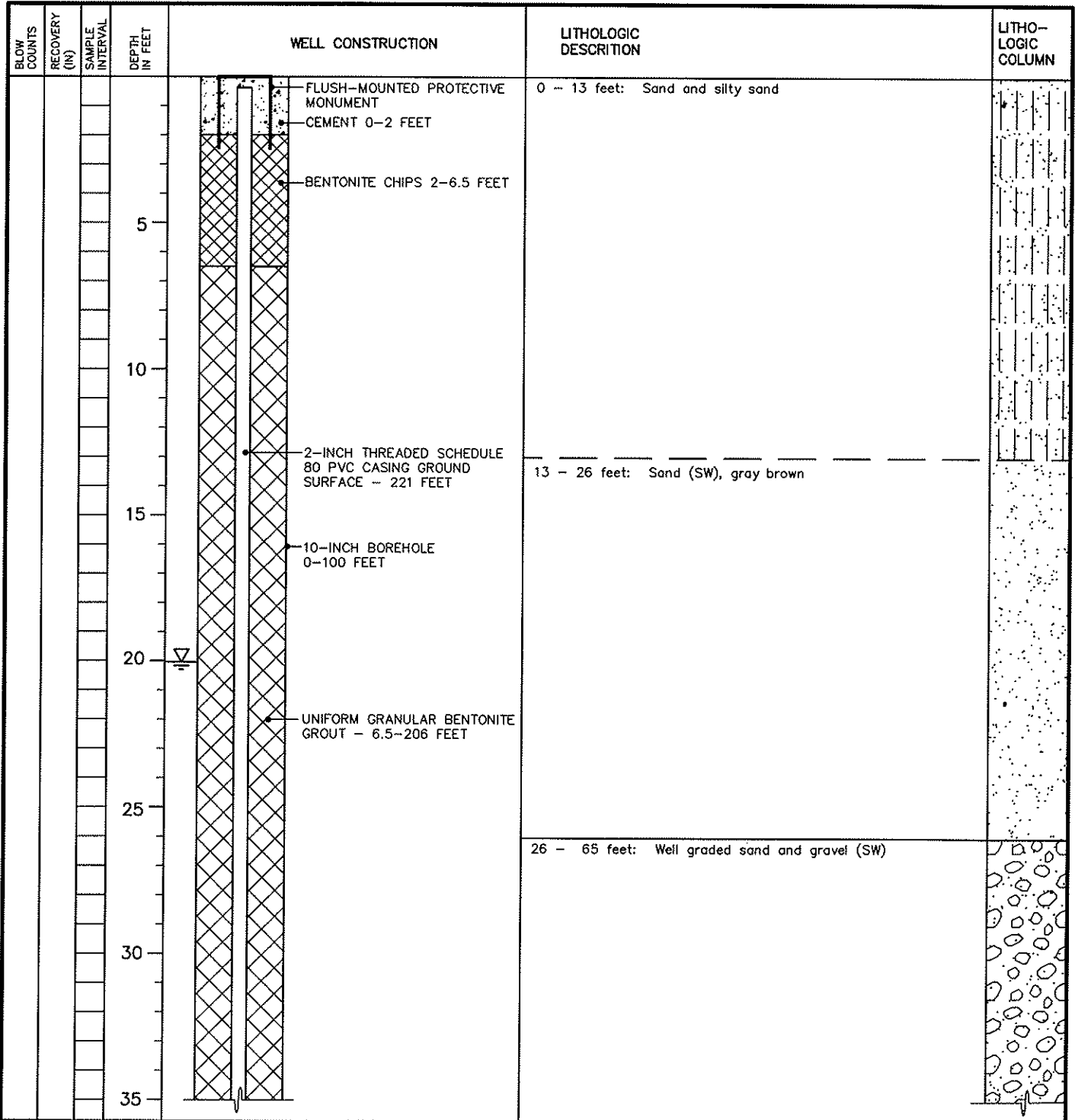
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
	8		215	 <p>8-INCH BOREHOLE 100-224 FEET</p> <p>2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN WITH 4-INCH SUMP 206-216 FEET</p> <p>STAINLESS STEEL CENTRALIZER AT 216 FEET</p> <p>3/8" SORTED GRANULAR BENTONITE 216-224 FEET</p>	<p>GW as above</p> <p>⊙ 213 feet: Trace gravel up to 6 inches in diameter</p> <p>216 - 224 feet: Well graded gravel (GW), hard drilling, returns mostly drilled gravel, hole not making much water, TROUTDALE FORMATION</p> <p>⊙ 220 feet: discrete-depth groundwater sample MW-12d, 220' collected 3/19/99 10:20</p> <p>⊙ 224 feet: End of boring</p>	
			220			
			225			
			230			
			235			
			240			
			245			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-7 / MW-1d
 Sheet: 1 OF 7
 Total Boring Depth: 227 FT/ WELL DEPTH 221 FT
 Date Started/Completed: MARCH 3, 1998/APRIL 2, 1998
 Ground Level Elevation: 26.78 FT NGVD
 Measuring Point Elevation: 26.42 FT NGVD
 Static Water Level: 6.40 FT NGVD Date: 4/24/98
 Northing: 119586.4 Easting: 1078679.5



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-7 / MW-1d
 Sheet: 2 OF 7
 Total Boring Depth: 227 FT/ WELL DEPTH 221 FT
 Date Started/Completed: MARCH 3, 1998/APRIL 2, 1998
 Ground Level Elevation: 26.78 FT NGVD
 Measuring Point Elevation: 26.42 FT NGVD
 Static Water Level: 6.40 FT NGVD Date: 4/24/98
 Northing: 119586.4 Easting: 1078679.5

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		SW as above	
			45	UNIFORM GRANULAR BENTONITE GROUT - 6.5-206 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 221 FEET	@ 40 feet: discrete-depth groundwater sample B-7, 40' @ 45 feet: coarse cobbles, up to 5 inches in diameter	
			50	10-INCH BOREHOLE 0-100 FEET		
			55			
			60			
			65			
			70		65 - 137 feet: Well graded sand (SW), fine- to coarse-grained, up to trace fine-grained gravel	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-7 / MW-1d
 Sheet: 4 OF 7
 Total Boring Depth: 227 FT/ WELL DEPTH 221 FT
 Date Started/Completed: MARCH 3, 1998/APRIL 2, 1998
 Ground Level Elevation: 26.78 FT NGVD
 Measuring Point Elevation: 26.42 FT NGVD
 Static Water Level: 6.40 FT NGVD Date: 4/24/98
 Northing: 119586.4 Easting: 1078679.5

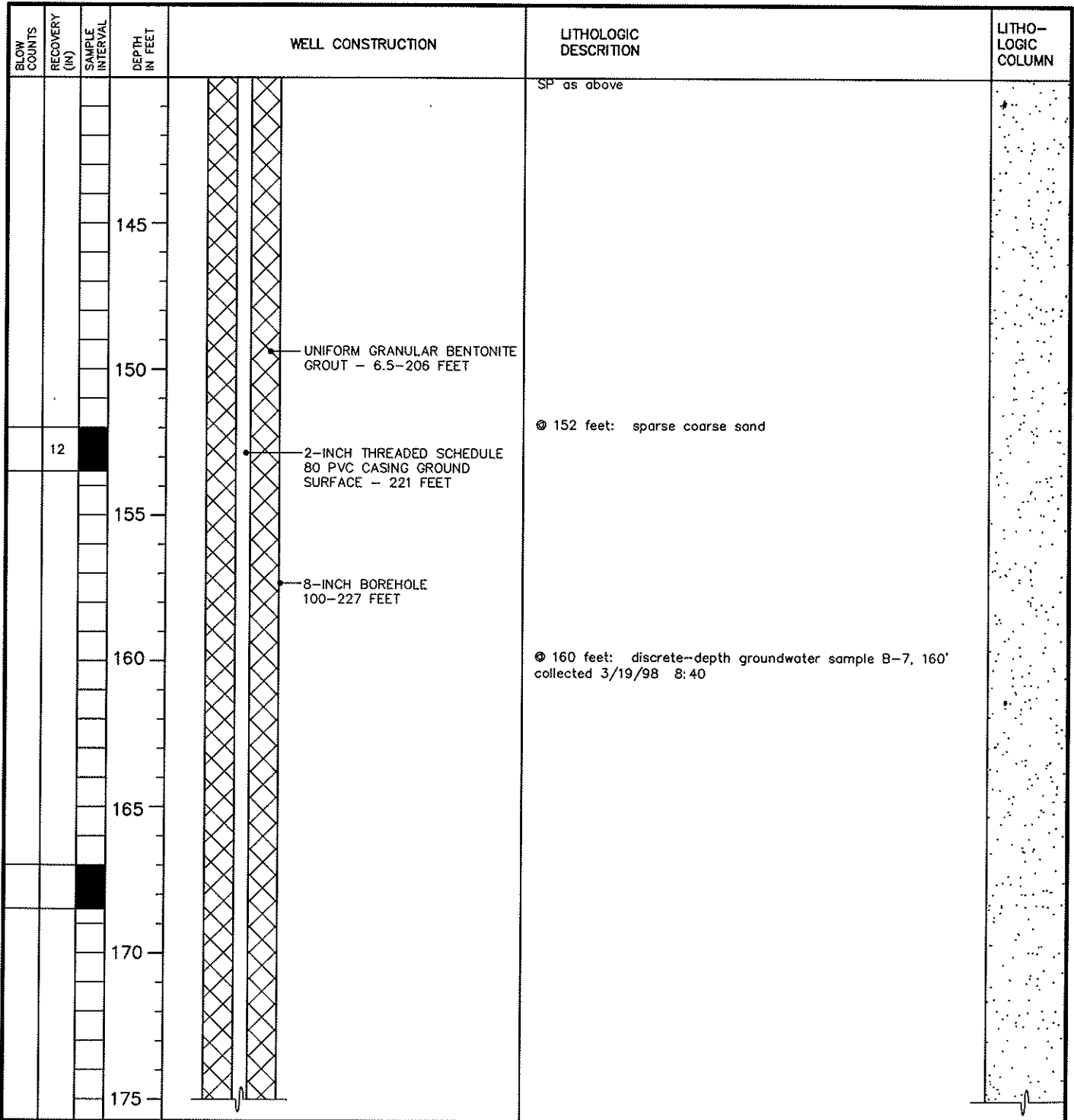
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
9/50'					SW as above	
			110			
			115	UNIFORM GRANULAR BENTONITE GROUT 6.5-206 FEET		
			120	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 221 FEET		
40 50/1'	3			8-INCH BOREHOLE 100-227 FEET	◎ 120 feet: discrete-depth groundwater sample B-7, 120' collected 3/16/98 14:40	
			125			
			130			
			135			
75/3'	2				137 - 195 feet: Poorly graded sand (SP), fine-grained, some thin (1/4 to 1 1/2 inch) silt lenses	
			140			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-7 / MW-1d
 Sheet: 5 OF 7
 Total Boring Depth: 227 FT/ WELL DEPTH 221 FT
 Date Started/Completed: MARCH 3, 1998/APRIL 2, 1998
 Ground Level Elevation: 26.78 FT NGVD
 Measuring Point Elevation: 26.42 FT NGVD
 Static Water Level: 6.40 FT NGVD Date: 4/24/98
 Northing: 119586.4 Easting: 1078679.5

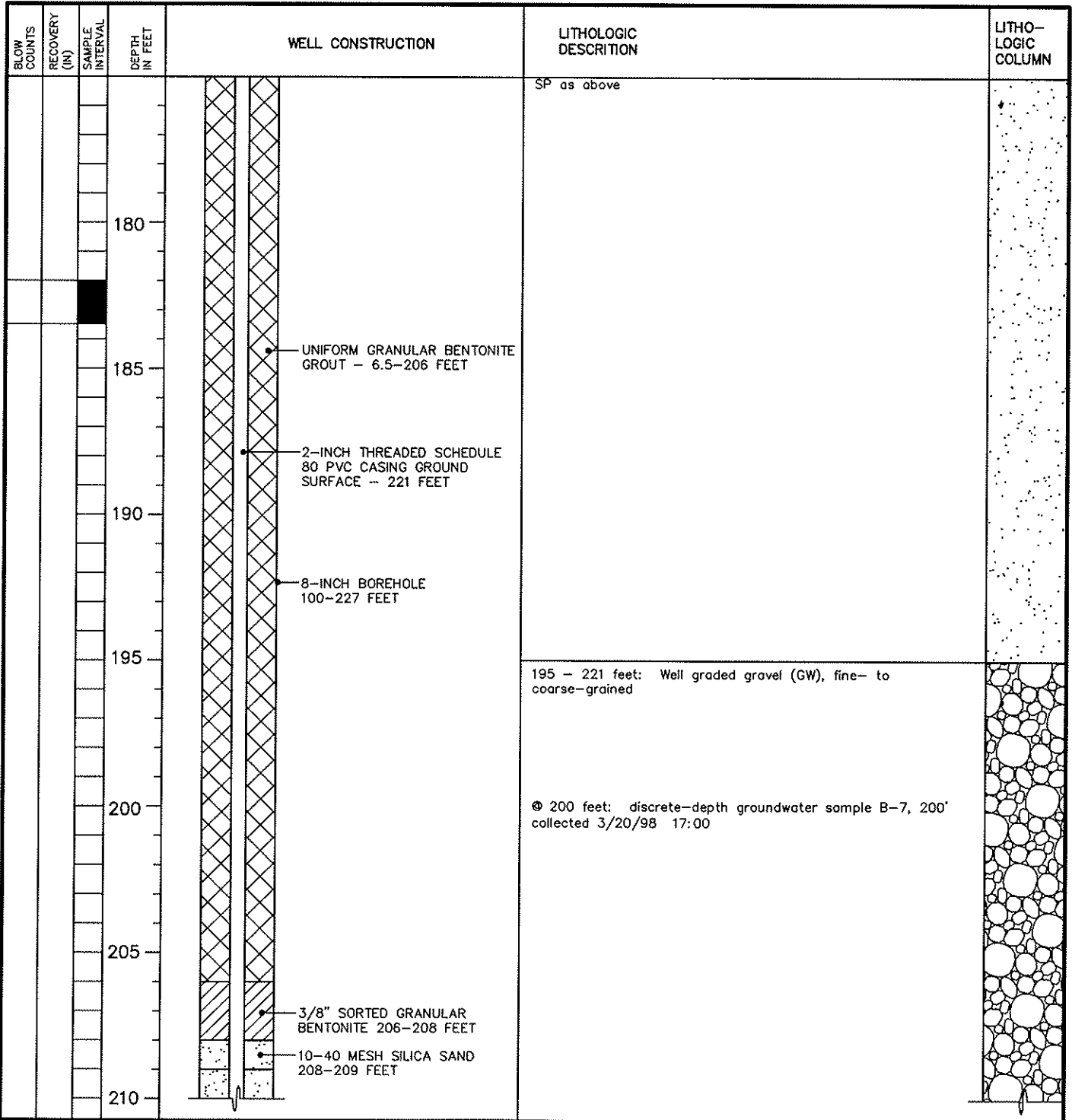


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-7 / MW-1d
 Sheet: 6 OF 7
 Total Boring Depth: 227 FT/ WELL DEPTH 221 FT
 Date Started/Completed: MARCH 3, 1998/APRIL 2, 1998
 Ground Level Elevation: 26.78 FT NGVD
 Measuring Point Elevation: 26.42 FT NGVD
 Static Water Level: 6.40 FT NGVD Date: 4/24/98
 Northing: 119586.4 Easting: 1078679.5

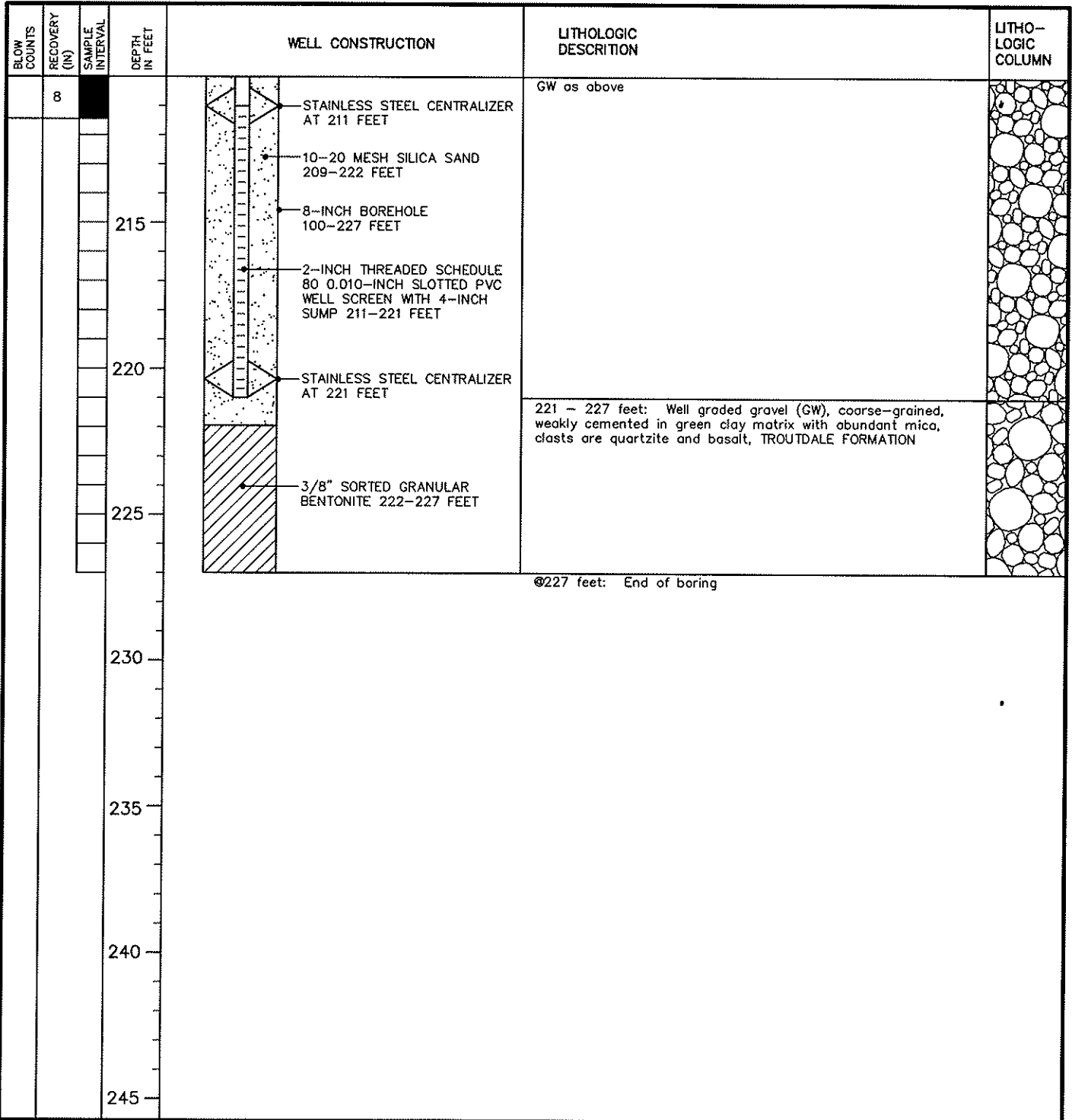


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-7 / MW-1d
 Sheet: 7 OF 7
 Total Boring Depth: 227 FT/ WELL DEPTH 221 FT
 Date Started/Completed: MARCH 3, 1998/APRIL 2, 1998
 Ground Level Elevation: 26.78 FT NGVD
 Measuring Point Elevation: 26.42 FT NGVD
 Static Water Level: 6.40 FT NGVD Date: 4/24/98
 Northing: 119586.4 Easting: 1078679.5

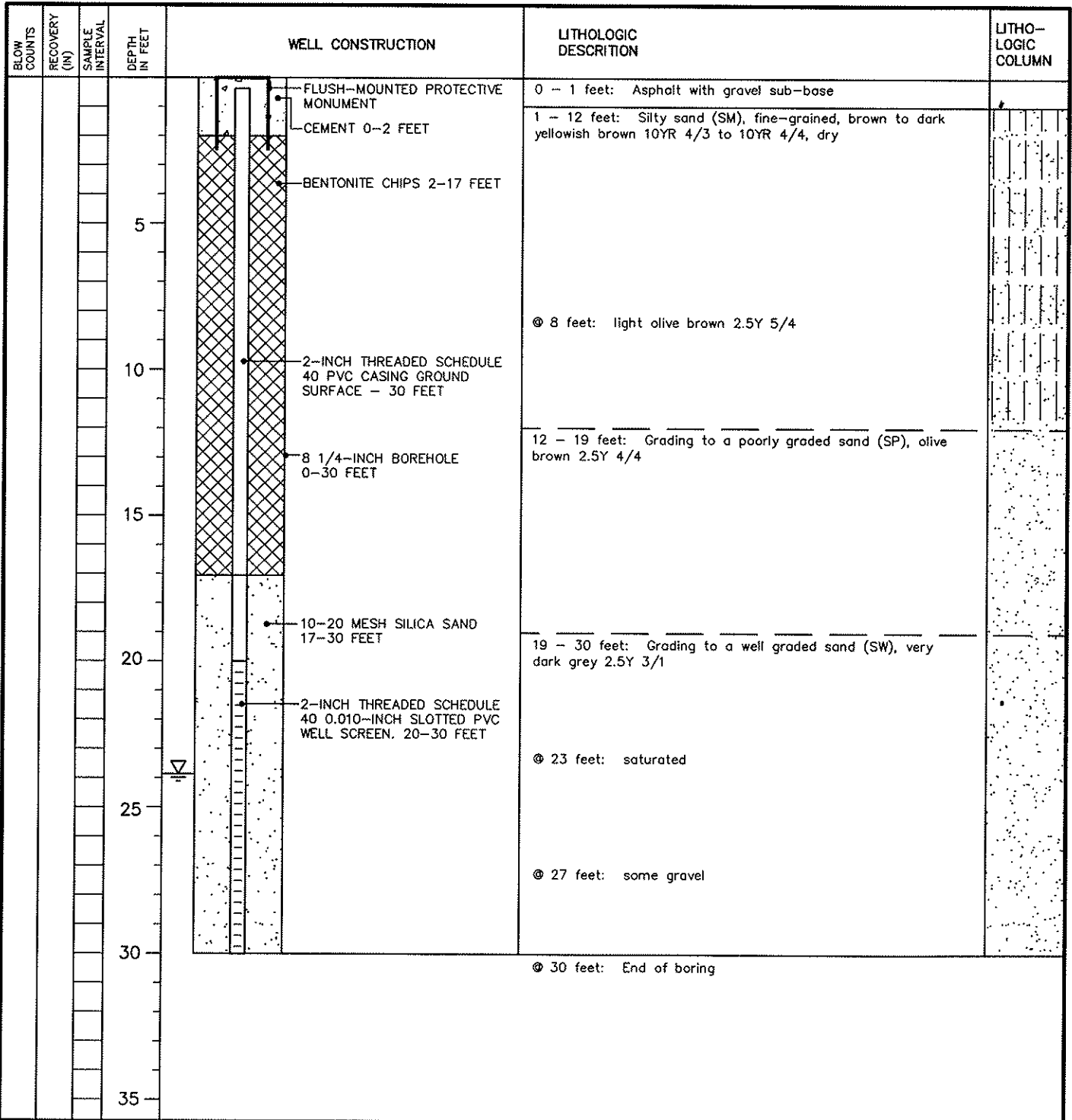


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: SANDRA MATTHEWS
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: GRAB
 Groundwater Sample Method: N/A

Boring Number: MW-2
 Sheet: 1 OF 1
 Total Boring Depth: 30 ET
 Date Started/Completed: JANUARY 29, 1997
 Ground Level Elevation: 30.37 FT NGVD
 Measuring Point Elevation: 30.09 FT NGVD
 Static Water Level: 6.24 FT NGVD Date: 4/24/98
 Northing: 119499.2 Easting: 1079177.9

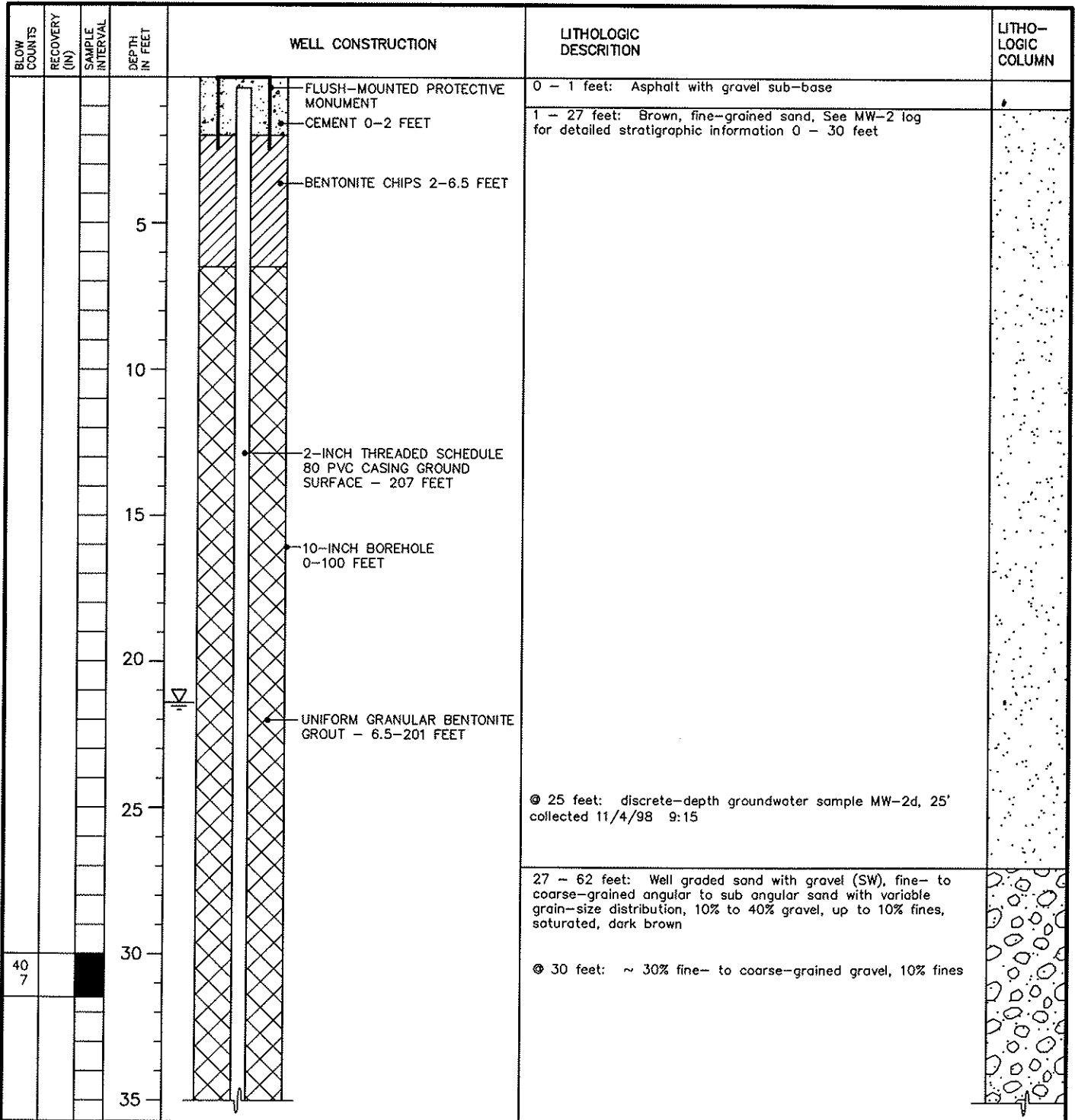


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-2d
 Sheet: 1 OF 7
 Total Boring Depth: 223 FT / WELL DEPTH: 217 FT
 Date Started/Completed: NOVEMBER 3, 1998/DECEMBER 3, 1998
 Ground Level Elevation: 30.65 FT NGVD
 Measuring Point Elevation: 30.19 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119490 Easting: 1079172



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-2d
 Sheet: 2 OF 7
 Total Boring Depth: 223 FT / WELL DEPTH: 217 FT
 Date Started/Completed: NOVEMBER 3,1998/DECEMBER 3,1998
 Ground Level Elevation: 30.65 FT NGVD
 Measuring Point Elevation: 30.19 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119490 Easting: 1079172

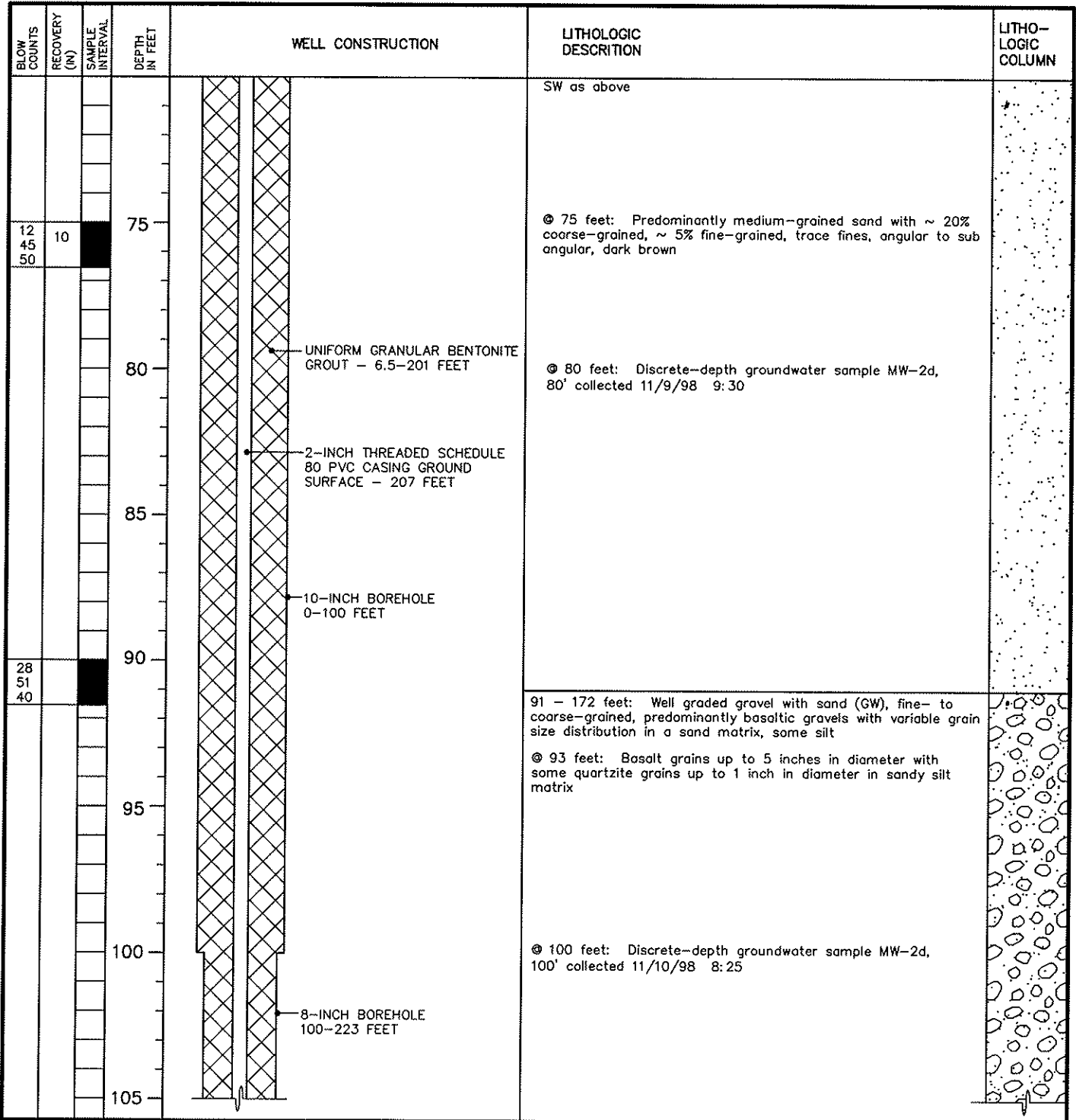
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		SW as above	
			45	UNIFORM GRANULAR BENTONITE GROUT - 6.5-201 FEET	@ 40 feet Discrete-depth groundwater sample MW-2d, 40' collected 11/5/98 8:00	
55 55 70				2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 207 FEET	@ 45 feet: Trace fines, sand predominantly medium- to coarse-grained and angular, ~ 40% gravel, predominantly coarse-grained (up to 3 inches in diameter)	
			50		@ 50 feet: Gravel up to 4 inches, sub rounded	
			55	10-INCH BOREHOLE 0-100 FEET		
			60		@ 60 feet: Sand predominantly coarse-grained and sub angular, ~ 10% gravel, predominantly fine-grained (up to 2 inches in diameter) @ 60 feet: Discrete-depth groundwater sample MW-2d, 60' collected 11/6/98 8:10	
15 13 20					62 - 91 feet: Well graded sand (SW), fine- to coarse-grained, angular to sub angular sand with variable grain-size distribution, trace fines, very dense	
			65			
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-2d
 Sheet: 3 OF 7
 Total Boring Depth: 223 FT / WELL DEPTH: 217 FT
 Date Started/Completed: NOVEMBER 3,1998/DECEMBER 3,1998
 Ground Level Elevation: 30.65 FT NGVD
 Measuring Point Elevation: 30.19 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119490 Easting: 1079172



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-2d
 Sheet: 4 OF 7
 Total Boring Depth: 223 FT / WELL DEPTH: 217 FT
 Date Started/Completed: NOVEMBER 3, 1998/DECEMBER 3, 1998
 Ground Level Elevation: 30.65 FT NGVD
 Measuring Point Elevation: 30.19 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119490 Easting: 1079172

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110		Ⓞ 105 feet: Loose gravel in a fine- to medium-grained sand matrix, basalt grains up to 6 inches in diameter, quartzite grains up to 2 inches in diameter Ⓞ 106 feet: Decreasing gravel content and grain size, more fine- to coarse-grained sand	
			115	← UNIFORM GRANULAR BENTONITE GROUT - 6.5-201 FEET ← 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 207 FEET	Ⓞ 114 feet: Coarse-grained basalt gravel up to 6 inches in diameter in a silty sand matrix	
			120	← 8-INCH BOREHOLE 100-223 FEET	Ⓞ 120 feet: Discrete-depth groundwater sample MW-2d, 120' collected 11/12/98 8:15	
			125		Ⓞ 125 feet: Basalt grains in a fine sand with silt matrix, grains predominantly < 3 inches in diameter, but trace up to 6 inches in diameter	
			130			
			135			
75 /3"			140		Ⓞ 140 feet: Discrete-depth groundwater sample MW-2d, 140' collected 11/13/98 8:30	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-2d
 Sheet: 5 OF 7
 Total Boring Depth: 223 FT / WELL DEPTH: 217 FT
 Date Started/Completed: NOVEMBER 3,1998/DECEMBER 3,1998
 Ground Level Elevation: 30.65 FT NGVD
 Measuring Point Elevation: 30.19 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119490 Easting: 1079172

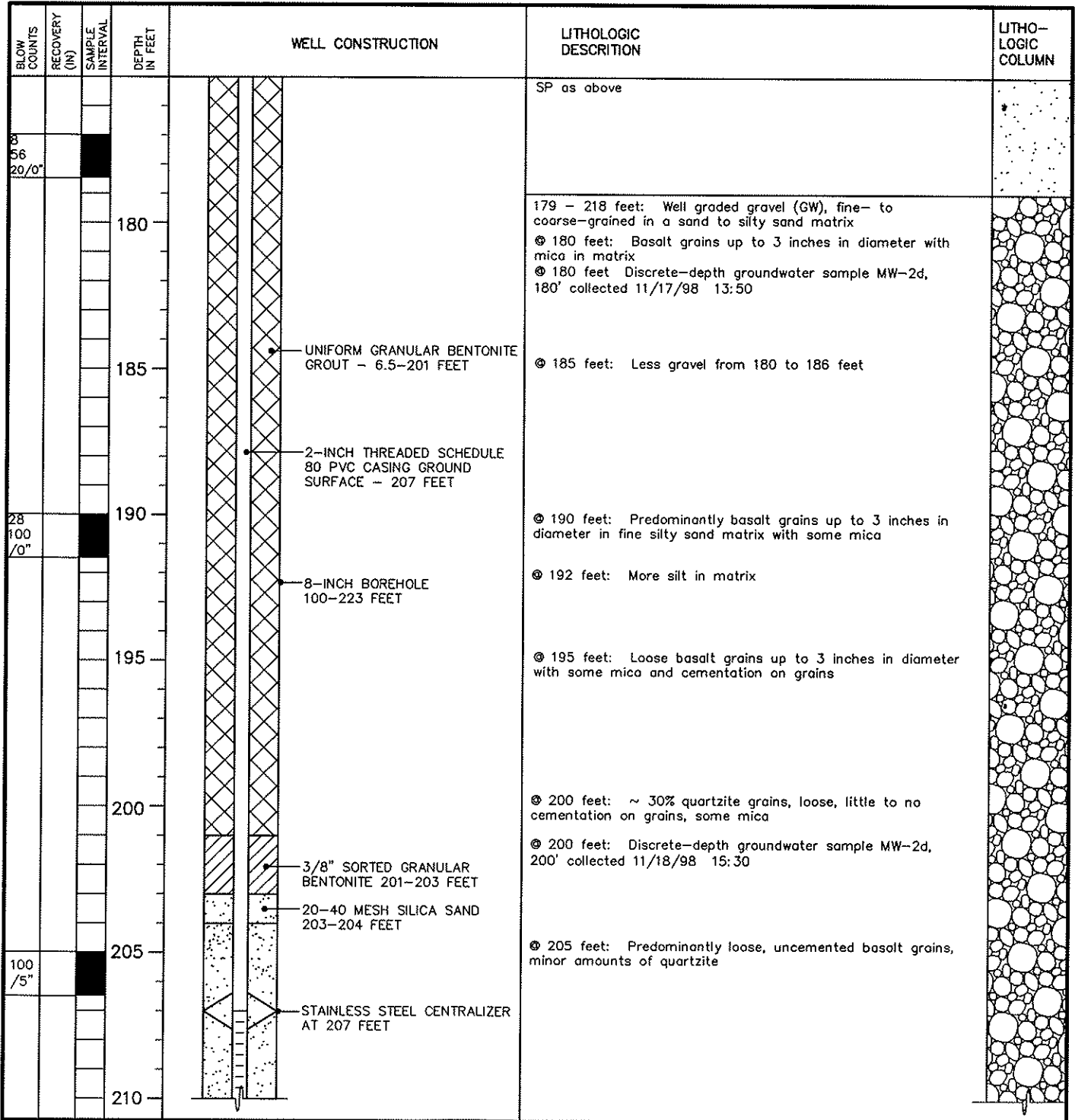
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145		GW as above	
			150	UNIFORM GRANULAR BENTONITE GROUT - 6.5-201 FEET	⊙ 145 feet: Matrix less silty than above	
			155	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 207 FEET	⊙ 155 feet: Gravel predominantly 1 to 3 inches in diameter	
80 /4"			160	8-INCH BOREHOLE 100-223 FEET	⊙ 160 feet: Discrete-depth groundwater sample MW-2d, 160' collected 11/16/98 13:00	
			165			
			170		⊙ 167 feet: Predominantly basalt grains with some quartzite grains up to 6 inches in diameter, no cementation but some silt in matrix	
75 /3"			175		172 - 179 feet: Poorly graded sand (SP), fine-grained, trace fines, no gravel, dark grayish brown, ~ 60 - 70% quartz, very dense	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-2d
 Sheet: 6 OF 7
 Total Boring Depth: 223 FT / WELL DEPTH: 217 FT
 Date Started/Completed: NOVEMBER 3,1998/DECEMBER 3,1998
 Ground Level Elevation: 30.65 FT NGVD
 Measuring Point Elevation: 30.19 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119490 Easting: 1079172

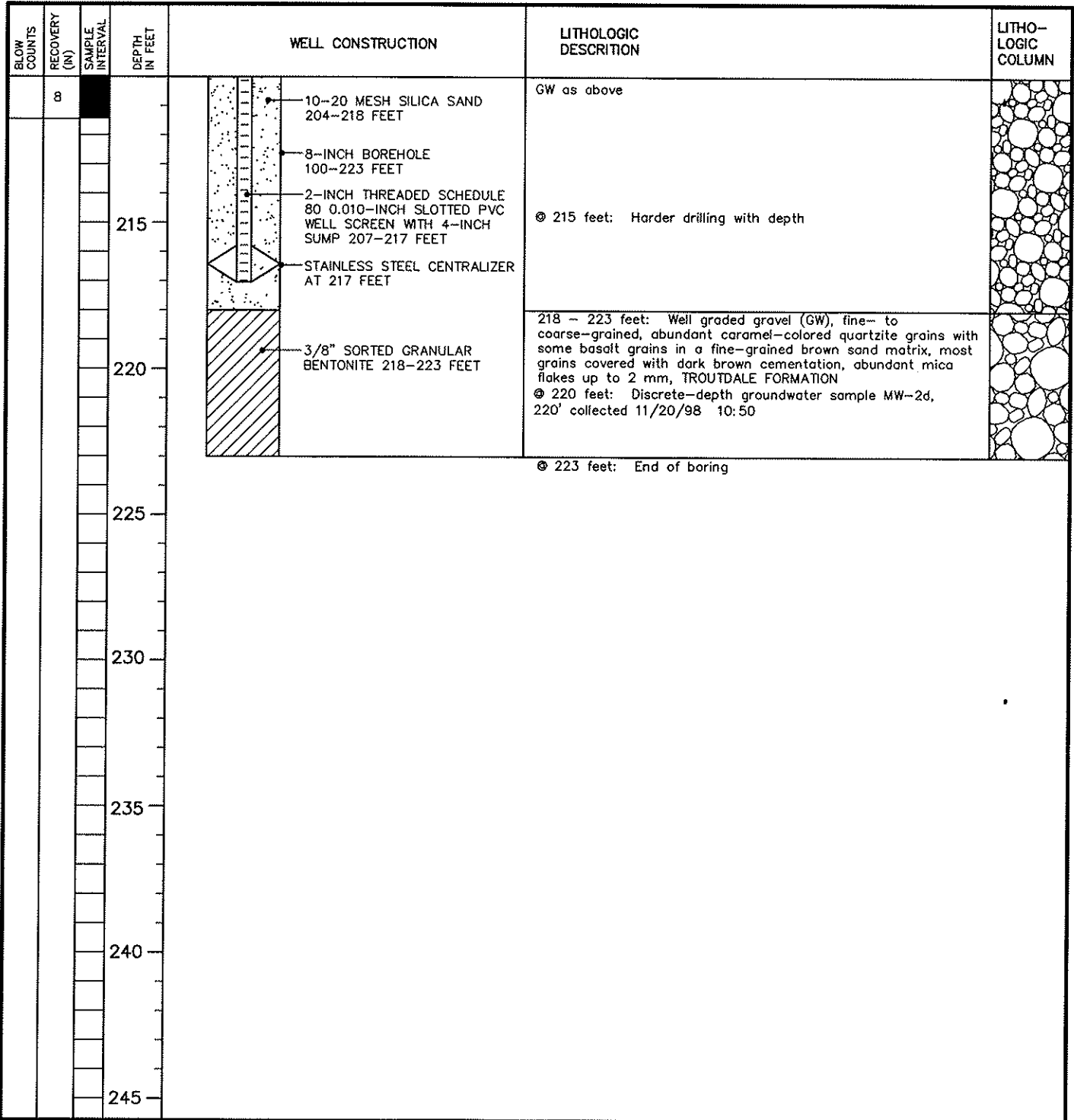


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-2d
 Sheet: 7 OF 7
 Total Boring Depth: 223 FT / WELL DEPTH: 217 FT
 Date Started/Completed: NOVEMBER 3,1998/DECEMBER 3,1998
 Ground Level Elevation: 30.65 FT NGVD
 Measuring Point Elevation: 30.19 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119490 Easting: 1079172

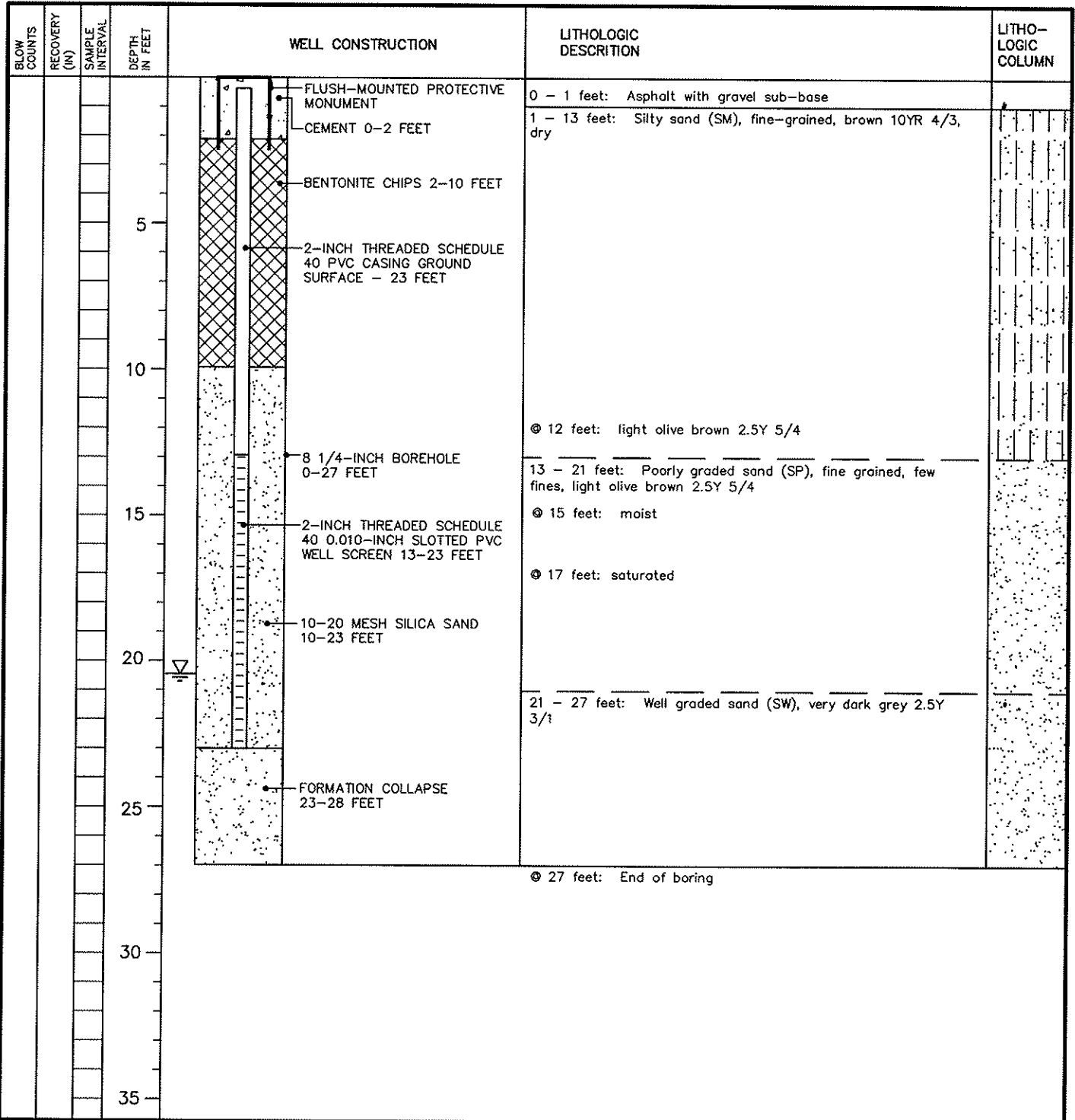


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: SANDRA MATTHEWS
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: GRAB
 Groundwater Sample Method: N/A

Boring Number: MW-3
 Sheet: 1 OF 1
 Total Boring Depth: 27 FT / WELL DEPTH: 23 FT
 Date Started/Completed: JANUARY 29, 1997
 Ground Level Elevation: 27.19 FT NGVD
 Measuring Point Elevation: 26.64 FT NGVD
 Static Water Level: 6.27 FT NGVD Date: 4/24/98
 Northing: 119440.8 Easting: 1078946.0



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: SANDRA MATTHEWS
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: 5' CORE
 Groundwater Sample Method: N/A

Boring Number: MW-4
 Sheet: 1 OF 1
 Total Boring Depth: 25 FT
 Date Started/Completed: JANUARY 29, 1997
 Ground Level Elevation: 27.06 FT NGVD
 Measuring Point Elevation: 26.57 FT NGVD
 Static Water Level: 6.25 FT NGVD Date: 4/24/98
 Northing: 119230.9 Easting: 1079009.3

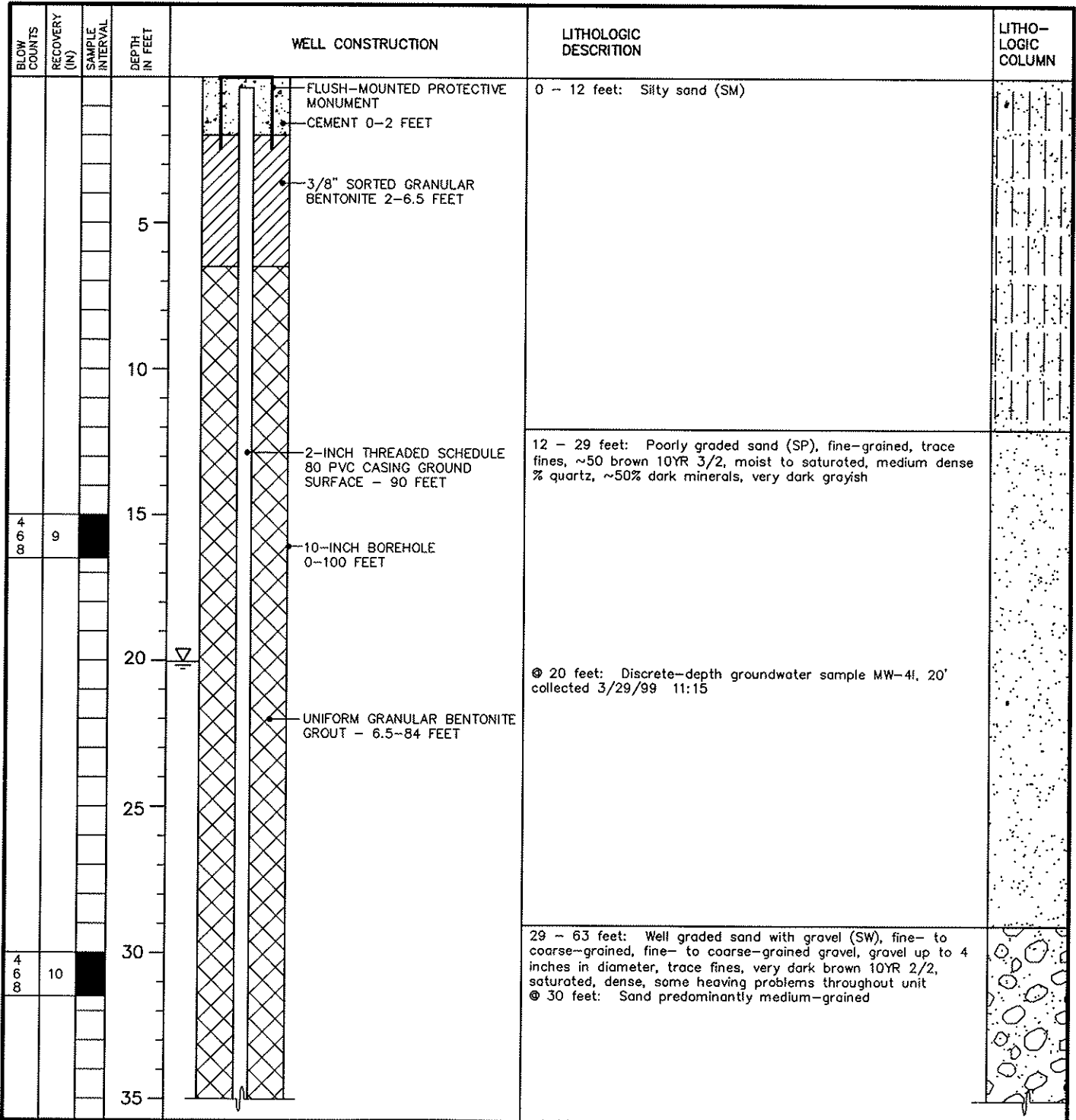
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 1 feet: Asphalt with gravel sub-base	
			0	CEMENT 0-2 FEET	1 - 12 feet: Silty sand (SM), fine-grained, brown 10YR 4/3, dry	
26			5	BENTONITE CHIPS 2-12 FEET		
			5	2-INCH THREADED SCHEDULE 40 PVC CASING GROUND SURFACE - 25 FEET		
49			10		@ 10 feet: light olive brown 2.5Y 5/4	
			10	8 1/4-INCH BOREHOLE 0-25 FEET		
43			15	10-20 MESH SILICA SAND 12-25 FEET	12 - 25 feet: Poorly graded sand (SP), few fines	
			15	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 15-25 FEET		
23			20		@ 19.5 feet: moist	
			20		@ 21 feet: olive brown 2.5Y 4/4	
29			25		@ 25 feet: End of boring	
			25			
			30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4i
 Sheet: 1 OF 4
 Total Boring Depth: 140 FT /WELL DEPTH: 100 FT
 Date Started/Completed: MARCH 29, 1999/APRIL 9, 1999
 Ground Level Elevation: 27.72 FT NGVD
 Measuring Point Elevation: 28.48 FT NGVD
 Static Water Level: 12.40 FT NGVD Date: 6/9/99
 Northing: 118892 Easting: 1079060



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4i
 Sheet: 2 OF 4
 Total Boring Depth: 140 FT /WELL DEPTH: 100 FT
 Date Started/Completed: MARCH 29, 1999/APRIL 9, 1999
 Ground Level Elevation: 27.72 FT NGVD
 Measuring Point Elevation: 28.48 FT NGVD
 Static Water Level: 12.40 FT NGVD Date: 6/9/99
 Northing: 118892 Easting: 1079060

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
6 25 60	11		40 45 50 55 60 65 70	<p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT - 6.5-84 FEET</p> <p style="margin-left: 20px;">2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 90 FEET</p> <p style="margin-left: 20px;">10-INCH BOREHOLE 0-100 FEET</p>	<p>35 - 40 feet: Sand predominantly medium- to coarse-grained, trace gravel up to 4 inches in diameter</p> <p>⊙ 40 feet: Discrete-depth groundwater sample MW-4i, 40' collected 3/29/99 15:20</p> <p>⊙ 42 feet: Grain size increasing with depth, slight increase in gravel content</p> <p>⊙ 45 feet: Gravel content increasing, gravel mostly 1 to 2 inches in diameter</p> <p>⊙ 47 feet: ~ 30% loose gravel</p> <p>⊙ 60 feet: Gravel mostly 1 inch in diameter, but trace up to 4 inches in diameter, loose</p> <p>⊙ 60 feet: Discrete-depth groundwater sample MW-4i, 60' collected 3/30/99 14:27</p> <p>63 - 90 feet: Well graded sand with silt to silty sand (SW/SM), saturated</p> <p>⊙ 63 feet: Well graded sand with silt (SW), fine - to coarse-grained, predominantly coarse-grained, trace fine-grained gravel, coarse-grained sand is angular to sub angular and basaltic, fine- to medium-grained sand is sub rounded quartz</p>	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4i
 Sheet: 3 OF 4
 Total Boring Depth: 140 FT /WELL DEPTH: 100 FT
 Date Started/Completed: MARCH 29, 1999/APRIL 9, 1999
 Ground Level Elevation: 27.72 FT NGVD
 Measuring Point Elevation: 28.48 FT NGVD
 Static Water Level: 12.40 FT NGVD Date: 6/9/99
 Northing: 118892 Easting: 1079060

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75		SW as above @ 71 feet: Coarse-grained, angular, basaltic sand with somewhat more fine- to medium-grained sand	
4 6 10	4			10-INCH BOREHOLE 0-100 FEET UNIFORM GRANULAR BENTONITE GROUT - 6.5-84 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 90 FEET 3/8" SORTED GRANULAR BENTONITE 84-86 FEET 20-40 MESH SILICA SAND 86-87 FEET	@ 75 feet: Silty sand (SM), fine- to coarse-grained, well graded, predominantly fine- to medium-grained, ~20% fines, dark yellowish brown 10YR 3/2, medium dense @ 80 feet: Discrete-depth groundwater sample MW-4i, 80' collected 3/31/99 11:35 85 - 88 feet: Trace fine-grained gravel @ 88 feet: Gravel content increasing, silt content decreasing	
			90	STAINLESS STEEL CENTRALIZER AT 90 FEET 10-20 MESH SILICA SAND 87-101 FEET	90 - 100 feet: Well graded sand (SW), fine- to coarse-grained, trace fines, trace gravel	
			95	2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN WITH 4-INCH SUMP 90-100 FEET		
			100	STAINLESS STEEL CENTRALIZER AT 100 FEET 8-INCH BOREHOLE 100-140 FEET	100 - 140 feet: Well graded gravel with sand and silt (GW), fine- to coarse-grained gravels, up to 3 inches in diameter, in a sandy to silty sand matrix, saturated @ 100 feet: Gravel up to 1 1/2 inches in diameter in a sandy matrix, some silt lenses @ 100 feet: Discrete-depth groundwater sample MW-4i, 100' collected 4/1/99 08:54	
			105		@ 105 feet: More silt in matrix	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4i
 Sheet: 4 OF 4
 Total Boring Depth: 140 FT /WELL DEPTH: 100 FT
 Date Started/Completed: MARCH 29, 1999/APRIL 9, 1999
 Ground Level Elevation: 27.72 FT NGVD
 Measuring Point Elevation: 28.48 FT NGVD
 Static Water Level: 12.40 FT NGVD Date: 6/9/99
 Northing: 118892 Easting: 1079060

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
9/50			100		SW as above	
			110			
			115	3/8" SORTED GRANULAR BENTONITE 101-140 FEET		
40/50	3		120	8-INCH BOREHOLE 100-140 FEET	@ 120 feet: Fine-grained gravel <1 inch in diameter in fine-grained silty sand matrix @ 120 feet: Discrete-depth groundwater sample MW-4i, 120' collected 4/2/99 09:15	
			125		@ 125 feet: Gravel up to 2 inches in diameter	
			130		@ 128 feet: Gravel up to 3 inches in diameter	
75/3	2		135		@ 135 feet: Gravel up to 2 inches in diameter in gray silt/clay matrix @ 136 feet: Matrix is sand with silt	
			140		@ 140 feet: Discrete-depth groundwater sample MW-4i, 140' collected 4/5/99 11:15 @ 140 feet: End of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4d
 Sheet: 1 OF 7
 Total Boring Depth: 240 FT /WELL DEPTH: 232 FT
 Date Started/Completed: DECEMBER 6, 1998/JANUARY 14, 1999
 Ground Level Elevation: 26.97 FT NGVD
 Measuring Point Elevation: 26.66 FT NGVD
 Static Water Level: 8.89 FT NGVD Date: 4/21/99
 Northing: 119076 Easting: 1079049

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 1 feet: Asphalt with gravel sub-base	
			5	CEMENT 0-2 FEET	1 - 25 feet: Silty sand (SM), fine-grained, some coarse-grained sand and fine-grained gravel lenses	
			10	BENTONITE CHIPS 2-6.5 FEET		
			15	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 222 FEET		
			20	10-INCH BOREHOLE 0-100 FEET		
			25	UNIFORM GRANULAR BENTONITE GROUT - 6.5-216 FEET	@ 25 feet: Discrete depth groundwater sample MW-4d, 25' collected 12/4/98 15:15 25 - 30 feet: Well graded sand (SW), predominantly medium- to coarse-grained, angular to sub angular, trace fines, trace fine- to coarse-grained sub rounded basalt gravel	
			30		30 - 61 feet: Well graded sand with gravel (SW), fine- to coarse-grained with variable grain size distribution, up to 40% gravel	
			35		@ 32 feet: Predominantly medium- to coarse-grained, angular to sub angular, trace fines, ~ 10% gravel @ 34 feet: ~ 25% gravel, no fines @ 35 feet: Gravel predominantly basalt grains < 1.5 inches in diameter, trace grains up to 6 inches in diameter	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4d
 Sheet: 2 OF 7
 Total Boring Depth: 240 FT /WELL DEPTH: 232 FT
 Date Started/Completed: DECEMBER 6, 1998/JANUARY 14, 1999
 Ground Level Elevation: 26.97 FT NGVD
 Measuring Point Elevation: 26.66 FT NGVD
 Static Water Level: 8.89 FT NGVD Date: 4/21/99
 Northing: 119076 Easting: 1079049

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
4					SW as above	
10	6					
16						
			40		⊕ 40 feet: Discrete-depth groundwater sample MW-4D, 40' collected 12/7/98 13:00	
			45	UNIFORM GRANULAR BENTONITE GROUT - 6.5-216 FEET	⊕ 42 feet: Gravel up to 2 inches in diameter	
			50	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 222 FEET	⊕ 50 feet: Predominantly medium- to coarse-grained, angular to sub angular basaltic sand, ~25% basalt gravels up to 2 inches in diameter, some thin (1 inch) silty zones, dense	
45	6		55	10-INCH BOREHOLE 0-100 FEET	⊕ 53 feet: Looser than above, ~35 - 40% basalt gravel with grains predominantly < 1 inch in diameter	
100			60		⊕ 60 feet: Discrete-depth groundwater sample MW-4d, 60' collected 12/8/98 13:45	
			65		61 - 113 feet: Well graded sand (SW), Predominantly medium-grained with some fine and coarse grains throughout, trace amounts of gravel until 63 feet, angular	
14			70		⊕ 65 feet: Predominantly medium-grained, angular, basaltic sand with ~10% fine-grained, ~10% coarse-grained, ~ 10% fines, dark brown	
					⊕ 67 feet: Thin silty sand layers	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4d
 Sheet: 3 OF 7
 Total Boring Depth: 240 FT /WELL DEPTH: 232 FT
 Date Started/Completed: DECEMBER 6, 1998/JANUARY 14, 1999
 Ground Level Elevation: 26.97 FT NGVD
 Measuring Point Elevation: 26.66 FT NGVD
 Static Water Level: 8.89 FT NGVD Date: 4/21/99
 Northing: 119076 Easting: 1079049

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75		SW as above	
9 13 44			80	UNIFORM GRANULAR BENTONITE GROUT - 6.5-216 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 222 FEET	@ 80 feet: Discrete-depth groundwater sample MW-4d, 80' collected 12/9/98 13:00	
			85	10-INCH BOREHOLE 0-100 FEET		
			90			
9 13			95		@ 93 feet: Some increase in silt content along and thin silt layers	
			100	8-INCH BOREHOLE 100-240 FEET	@ 100 feet: Silt content continuing to increase @ 100 feet: Discrete-depth groundwater sample MW-4d, 100 collected 12/10/98 11:50	
			105			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4d
 Sheet: 4 OF 7
 Total Boring Depth: 240 FT /WELL DEPTH: 232 FT
 Date Started/Completed: DECEMBER 6, 1998/JANUARY 14, 1999
 Ground Level Elevation: 26.97 FT NGVD
 Measuring Point Elevation: 26.66 FT NGVD
 Static Water Level: 8.89 FT NGVD Date: 4/21/99
 Northing: 119076 Easting: 1079049

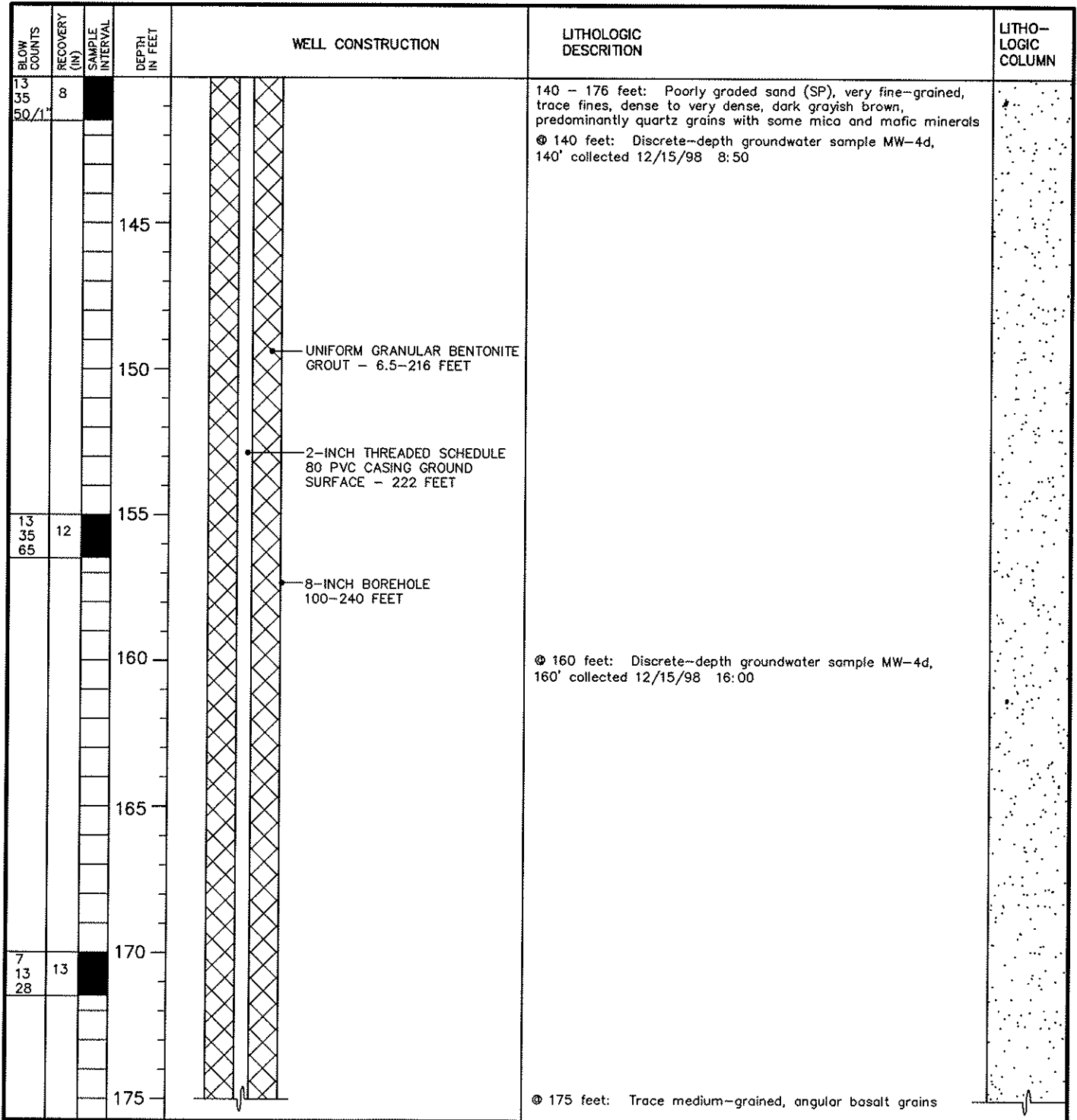
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110		SW as above @ 109 feet: Trace gravel up to 1 inch in diameter @ 110 feet: Predominantly fine- to medium-grained, ~ 15% fines, silty sand zones throughout sampled interval, dark yellowish brown	110
8 26 90	10					
			115	UNIFORM GRANULAR BENTONITE GROUT - 6.5-216 FEET	113 - 140 feet: Well graded sand with gravel (SW), fine- to coarse-grained, up to ~ 10% fines, angular to sub angular, fine- to coarse-grained gravel @ 115 feet: Trace fines, gravels predominantly < 1 inch in diameter but trace up to 3 inches in diameter	115
			120	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 222 FEET	@ 120 feet: Discrete-depth groundwater sample MW-4d, 120' collected 12/14/98 8:40	120
			125	8-INCH BOREHOLE 100-240 FEET	@ 122 feet: Predominantly medium- to coarse-grained, angular to sub angular, basaltic sand with ~ 10% fines, gravel predominantly < 1 inch in diameter but trace up to 4 inches in diameter, very occasional silty sand lenses @ 125 feet: Trace fines	125
7 30 35	2					
			130		@ 130 feet: Increasing silt content with depth, decreasing grain size and gravel content with depth	130
			135			135
			140			140

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4d
 Sheet: 5 OF 7
 Total Boring Depth: 240 FT /WELL DEPTH: 232 FT
 Date Started/Completed: DECEMBER 6, 1998/JANUARY 14, 1999
 Ground Level Elevation: 26.97 FT NGVD
 Measuring Point Elevation: 26.66 FT NGVD
 Static Water Level: 8.89 FT NGVD Date: 4/21/99
 Northing: 119076 Easting: 1079049



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4d
 Sheet: 6 OF 7
 Total Boring Depth: 240 FT /WELL DEPTH: 232 FT
 Date Started/Completed: DECEMBER 6, 1998/JANUARY 14, 1999
 Ground Level Elevation: 26.97 FT NGVD
 Measuring Point Elevation: 26.66 FT NGVD
 Static Water Level: 8.89 FT NGVD Date: 4/21/99
 Northing: 119076 Easting: 1079049

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180		SP as above	
			185	UNIFORM GRANULAR BENTONITE GROUT - 6.5-216 FEET	176 - 233 feet: Well graded gravel with sand (GW), fine- to coarse-grained gravel in sand to silty sand matrix	
40 100 /4"	2			2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 222 FEET	© 180 feet: Discrete-depth groundwater sample MW-4d, 180' collected 12/17/98 8:40 © 181 feet: Gravels up to 2 inches in diameter in very fine brown sand matrix, trace fines, trace grains up to 4 inches in diameter, gravels are predominantly basalt with some quartzite grains © 185 feet: Sand matrix is predominantly quartz with some basalt grains, gravels predominantly basalt	
			190		© 191 feet: Trace cementation on gravels	
			195	8-INCH BOREHOLE 100-240 FEET	© 195 feet: Gravels up to 3 inches in diameter, grain size increasing with depth	
			200		© 200 feet: Discrete-depth groundwater sample MW-4d, 200' collected 12/18/98 12:35	
0					© 203 feet: Gravels up to 4 inches in diameter in brown silty sand matrix, no cementation on grains, predominantly basalt, trace quartzite	
			205			
			210			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4d
 Sheet: 7 OF 7
 Total Boring Depth: 240 FT /WELL DEPTH: 232 FT
 Date Started/Completed: DECEMBER 6, 1998/JANUARY 14, 1999
 Ground Level Elevation: 26.97 FT NGVD
 Measuring Point Elevation: 26.66 FT NGVD
 Static Water Level: 8.89 FT NGVD Date: 4/21/99
 Northing: 119076 Easting: 1079049

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				UNIFORM GRANULAR BENTONITE GROUT - 6.5-216 FEET	GW as above	
65 65 /0"	0		215	3/8" SORTED GRANULAR BENTONITE 216-218 FEET 20-40 MESH SILICA SAND 218-219 FEET 10-20 MESH SILICA SAND 219-233 FEET STAINLESS STEEL CENTRALIZER AT 222 FEET 8-INCH BOREHOLE 100-240 FEET 2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN WITH 4-INCH SUMP 222-232 FEET	@ 215 feet: Increase in sand content, gravels predominantly 1 to 2 inches in diameter, trace up to 4 inches in diameter @ 220 feet: Trace quartzite gravel, no cementation on grains @ 220 feet: Discrete-depth groundwater sample MW-4d, 220' collected 12/23/98 15:10 @ 225 feet: Some mica present	
40 50 /0"			230	STAINLESS STEEL CENTRALIZER AT 232 FEET		
			235	3/8" SORTED GRANULAR BENTONITE 233-240 FEET	233 - 240 feet: Well graded gravel (GW), some sand, ~ 50% basalt grains, 50% caramel-colored quartzite grains, trace large (2 mm) mica flakes, cementation on grains, gray clay matrix from 233 feet to 234 feet, mica content and amount and degree of cementation increasing with depth, TROUTDALE FORMATION @ 240 feet: Discrete-depth groundwater sample MW-4d, 240' collected 1/5/99 12:50 @ 240 feet: End of boring	
			240			
			245			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS, INC
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-5
 Sheet: 1 OF 1
 Total Boring Depth: 30.5 FT /WELL DEPTH: 30 FT
 Date Started/Completed: OCTOBER 10, 2000
 Ground Level Elevation: 28.50 FEET NGVD
 Measuring Point Elevation: 30.64 FEET NGVD
 Static Water Level: 25.50 FEET NGVD Date: 10/30/00
 Northing: 119585 Easting: 1078926

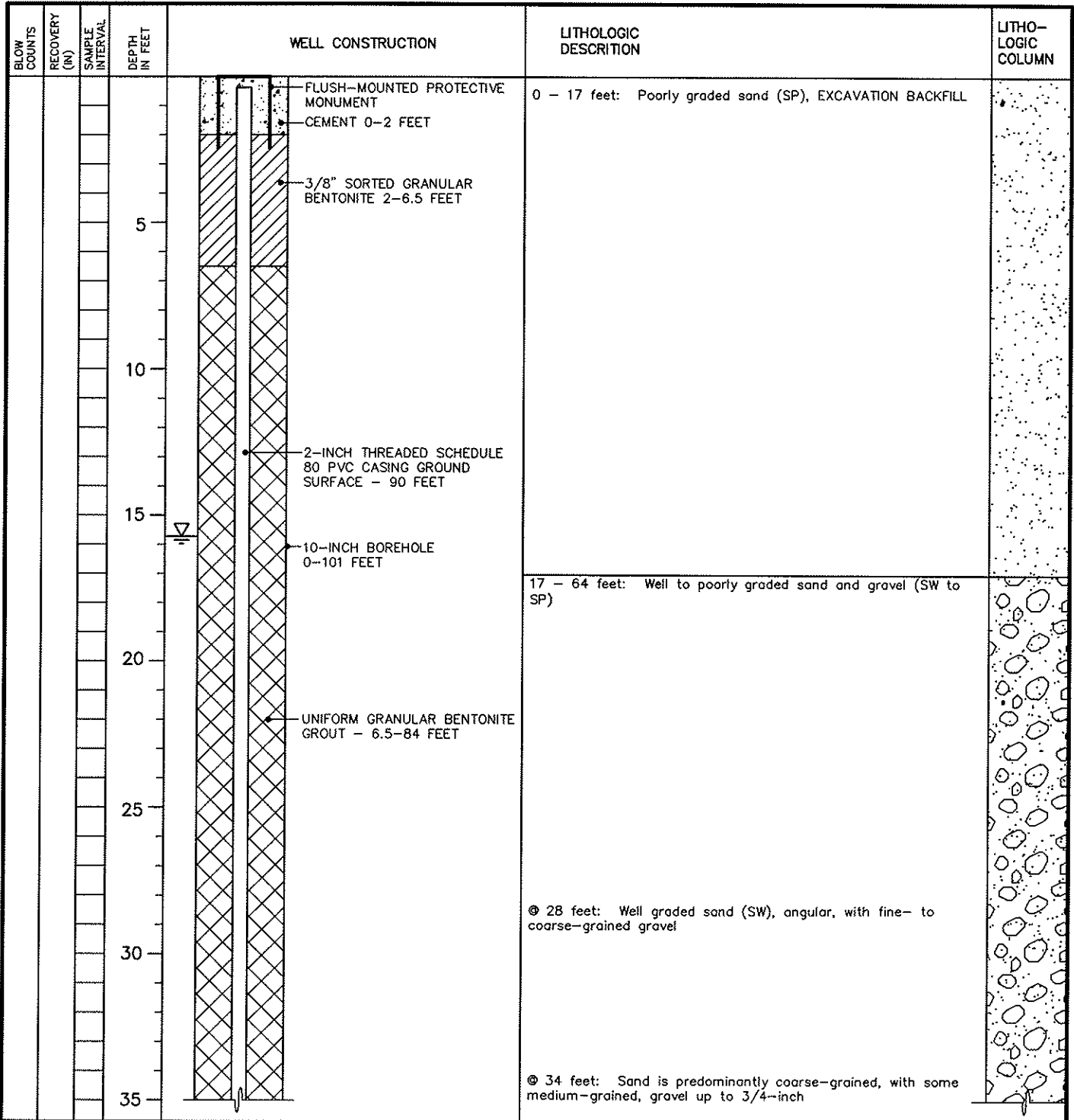
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	ABOVE-GROUND PROTECTIVE MONUMENT	0 - 17 feet: Poorly graded sand (SP), EXCAVATION BACKFILL	
			0-3	CEMENT 0-3 FEET		
			3			
			4			
			5	3/8" SORTED GRANULAR BENTONITE 3-17 FEET		
			10			
			15	2-INCH THREADED SCHEDULE 40 PVC CASING GROUND SURFACE - 20 FEET		
			17	8 1/4-INCH BOREHOLE 0-30.5 FEET		
			20	10-20 MESH SILICA SAND 17-30.5 FEET	17 - 24 feet: Silty sand (SM), very fine-grained, ~20% fines, brown, dry, loose	
3	18		20			
5			21			
4			22			
			24	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 20-30 FEET		
4	18		25		24 - 30 feet: Well graded sand (SW), ~85% fine- to medium-grained, 15% coarse-grained, trace fines, grey, saturated at 25 feet, loose, angular, basaltic,	
6			26			
4			27			
			30		@30 feet: Mostly coarse-grained	
4	15		30		@30.5 feet: End of boring	
19			31			
25			32			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: NA
 Groundwater Sample Method: NA

Boring Number: MW-5i
 Sheet: 1 OF 3
 Total Boring Depth: 101 FT / WELL DEPTH: 100 FT
 Date Started/Completed: JANUARY 15, 1999/JANUARY 22, 1999
 Ground Level Elevation: 28.29 FT NGVD
 Measuring Point Elevation: 28.16 FT NGVD
 Static Water Level: 12.43 FT NGVD Date: 6/9/99
 Northing: 119579 Easting: 1078939

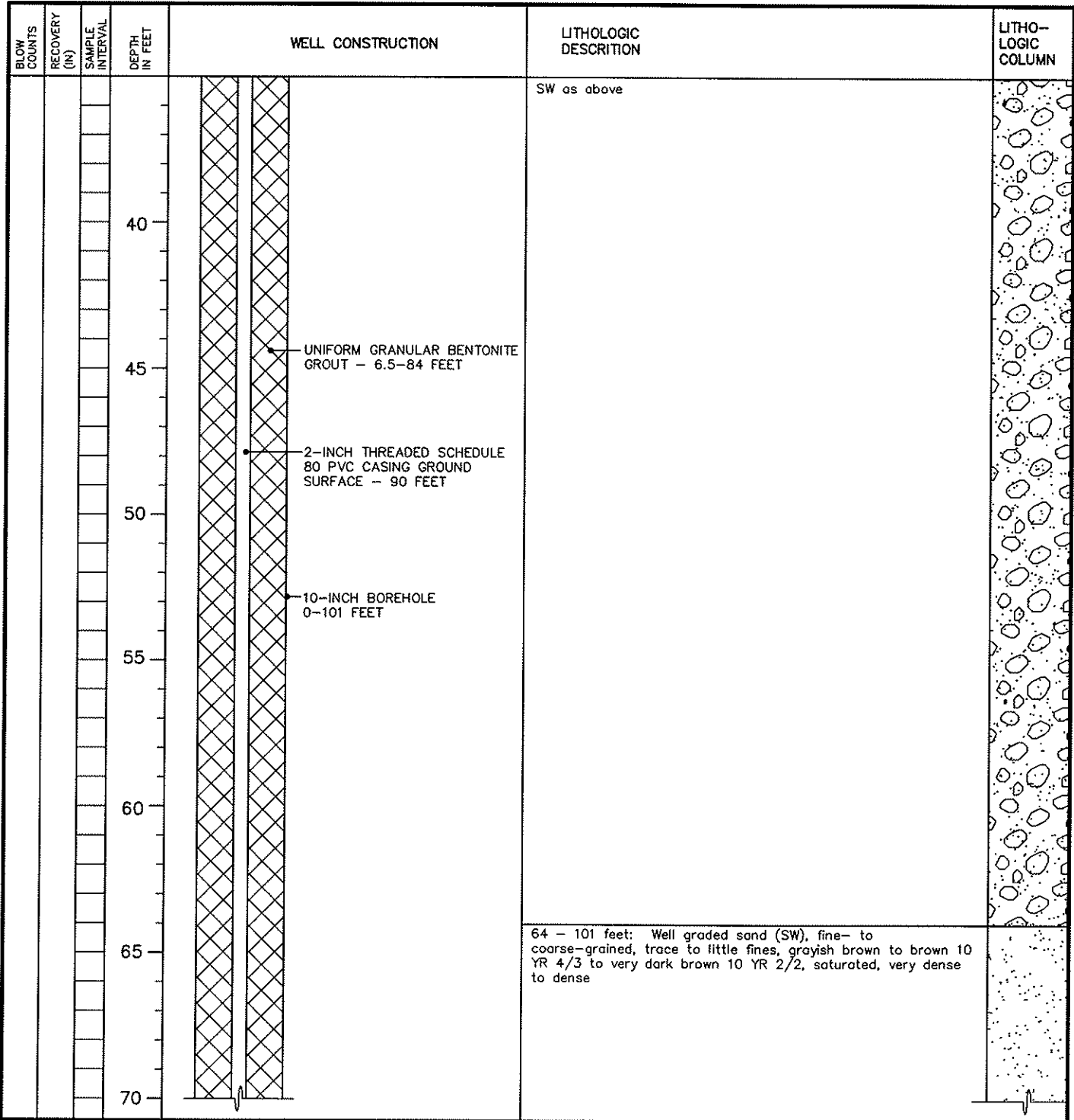


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: NA
 Groundwater Sample Method: NA

Boring Number: MW-5i
 Sheet: 2 OF 3
 Total Boring Depth: 101 FT / WELL DEPTH: 100 FT
 Date Started/Completed: JANUARY 15, 1999/JANUARY 22, 1999
 Ground Level Elevation: 28.29 FT NGVD
 Measuring Point Elevation: 28.16 FT NGVD
 Static Water Level: 12.43 FT NGVD Date: 6/9/99
 Northing: 119579 Easting: 1078939



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: NA
 Groundwater Sample Method: NA

Boring Number: MW-5i
 Sheet: 3 OF 3
 Total Boring Depth: 101 FT / WELL DEPTH: 100 FT
 Date Started/Completed: JANUARY 15, 1999/JANUARY 22, 1999
 Ground Level Elevation: 28.29 FT NGVD
 Measuring Point Elevation: 28.16 FT NGVD
 Static Water Level: 12.43 FT NGVD Date: 6/9/99
 Northing: 119579 Easting: 1078939

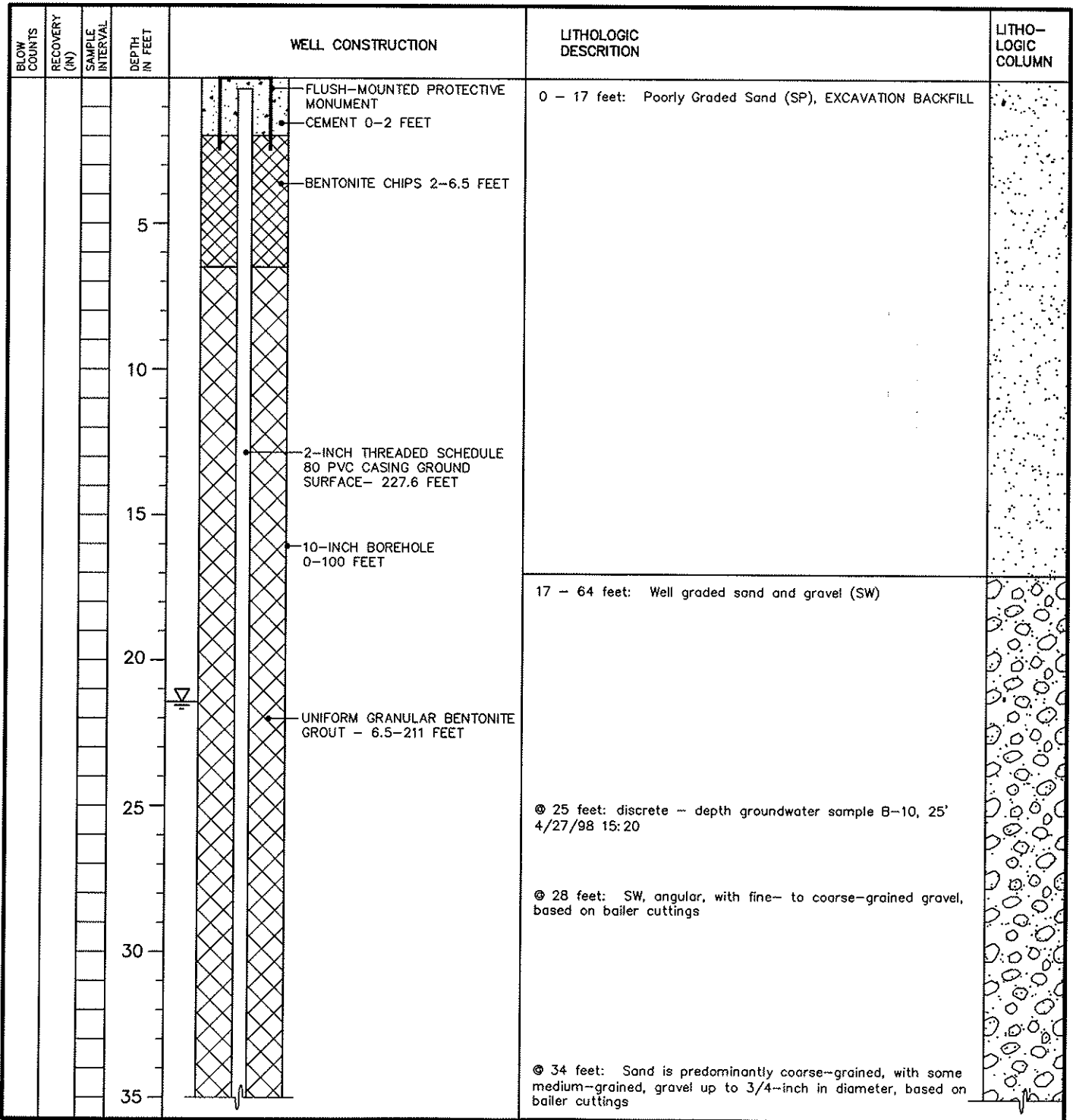
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	<ul style="list-style-type: none"> UNIFORM GRANULAR BENTONITE GROUT - 6.5-84 FEET 	<p>SW as above</p> <p>⊙ 74 feet: Some thin silt layers</p>	75
			80	<ul style="list-style-type: none"> 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 90 FEET 10-INCH BOREHOLE 0-101 FEET 	<p>⊙ 80 feet: SW, fine- to medium-grained, little fines, grayish brown, saturated, very dense</p>	80
			85	<ul style="list-style-type: none"> 3/8" SORTED GRANULAR BENTONITE 84-86 FEET 20-40 MESH SILICA SAND 86-87 FEET 		85
			90	<ul style="list-style-type: none"> STAINLESS STEEL CENTRALIZER AT 90 FEET 2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN WITH 4-INCH SUMP 90-100 FEET 	<p>⊙ 95 feet: SW, ~10% coarse-grained, brownish grey, saturated, very dense</p>	90
			95	<ul style="list-style-type: none"> 10-20 MESH SILICA SAND 87-101 FEET 		95
			100	<ul style="list-style-type: none"> STAINLESS STEEL CENTRALIZER AT 100 FEET 	<p>⊙ 101 feet: End of boring</p>	100
			105			105

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-10 / MW-5d
 Sheet: 1 OF 7
 Total Boring Depth: 234 FT /WELL DEPTH 227 FT
 Date Started/Completed: APRIL 27, 1998/MAY 20, 1998
 Ground Level Elevation: 28.34 FT NGVD
 Measuring Point Elevation: 27.97 FT NGVD
 Static Water Level: 6.55 FT NGVD Date: 7/20/98
 Northing: 119572 Easting: 1078929



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-10 / MW-5d
 Sheet: 2 OF 7
 Total Boring Depth: 234 FT /WELL DEPTH 227 FT
 Date Started/Completed: APRIL 27, 1998/MAY 20, 1998
 Ground Level Elevation: 28.34 FT NGVD
 Measuring Point Elevation: 27.97 FT NGVD
 Static Water Level: 6.55 FT NGVD Date: 7/20/98
 Northing: 119572 Easting: 1078929

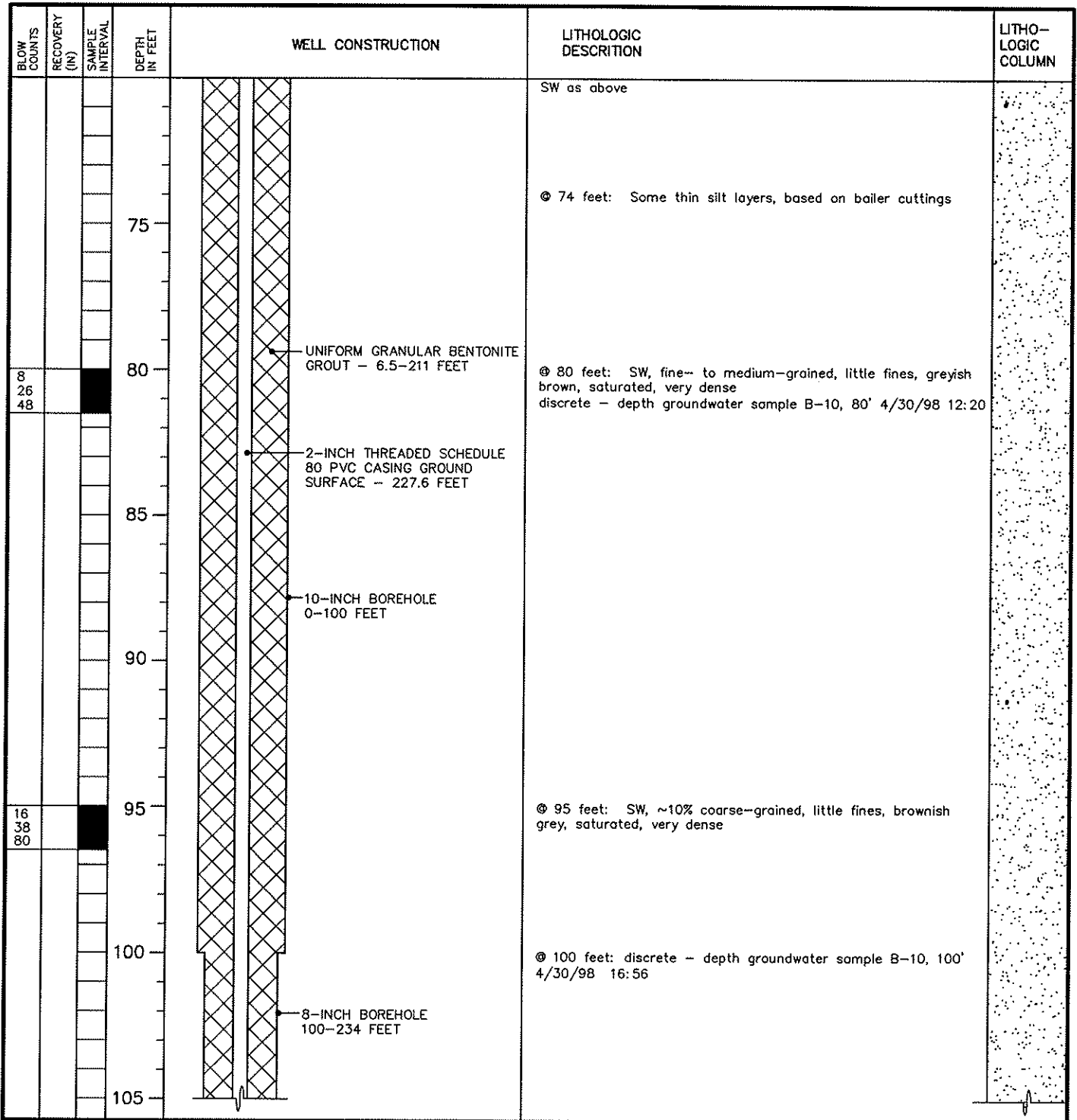
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
			40	<p style="text-align: center;">UNIFORM GRANULAR BENTONITE GROUT - 6.5-211 FEET</p> <p style="text-align: center;">2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 227.6 FEET</p> <p style="text-align: center;">10-INCH BOREHOLE 0-100 FEET</p>	SW as above ◎ 40 feet: discrete - depth groundwater sample, B-10, 40' 4/29/98 13:55		
			45				
			50				
			55				
			60		◎ 60 feet: discrete - depth groundwater sample B-10, 60' 4/29/98 13:30		
40 50 47			65		64 - 153 feet: Well graded sand (SW), fine- to coarse-grained, trace to little fines, greyish brown to brown 10 YR 4/3 to very dark brown 10 YR 2/2, saturated, very dense to dense		
			70				

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-10 / MW-5d
 Sheet: 3 OF 7
 Total Boring Depth: 234 FT /WELL DEPTH 227 FT
 Date Started/Completed: APRIL 27, 1998/MAY 20, 1998
 Ground Level Elevation: 28.34 FT NGVD
 Measuring Point Elevation: 27.97 FT NGVD
 Static Water Level: 6.55 FT NGVD Date: 7/20/98
 Northing: 119572 Easting: 1078929



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-10 / MW-5d
 Sheet: 4 OF 7
 Total Boring Depth: 234 FT /WELL DEPTH 227 FT
 Date Started/Completed: APRIL 27, 1998/MAY 20, 1998
 Ground Level Elevation: 28.34 FT NGVD
 Measuring Point Elevation: 27.97 FT NGVD
 Static Water Level: 6.55 FT NGVD Date: 7/20/98
 Northing: 119572 Easting: 1078929

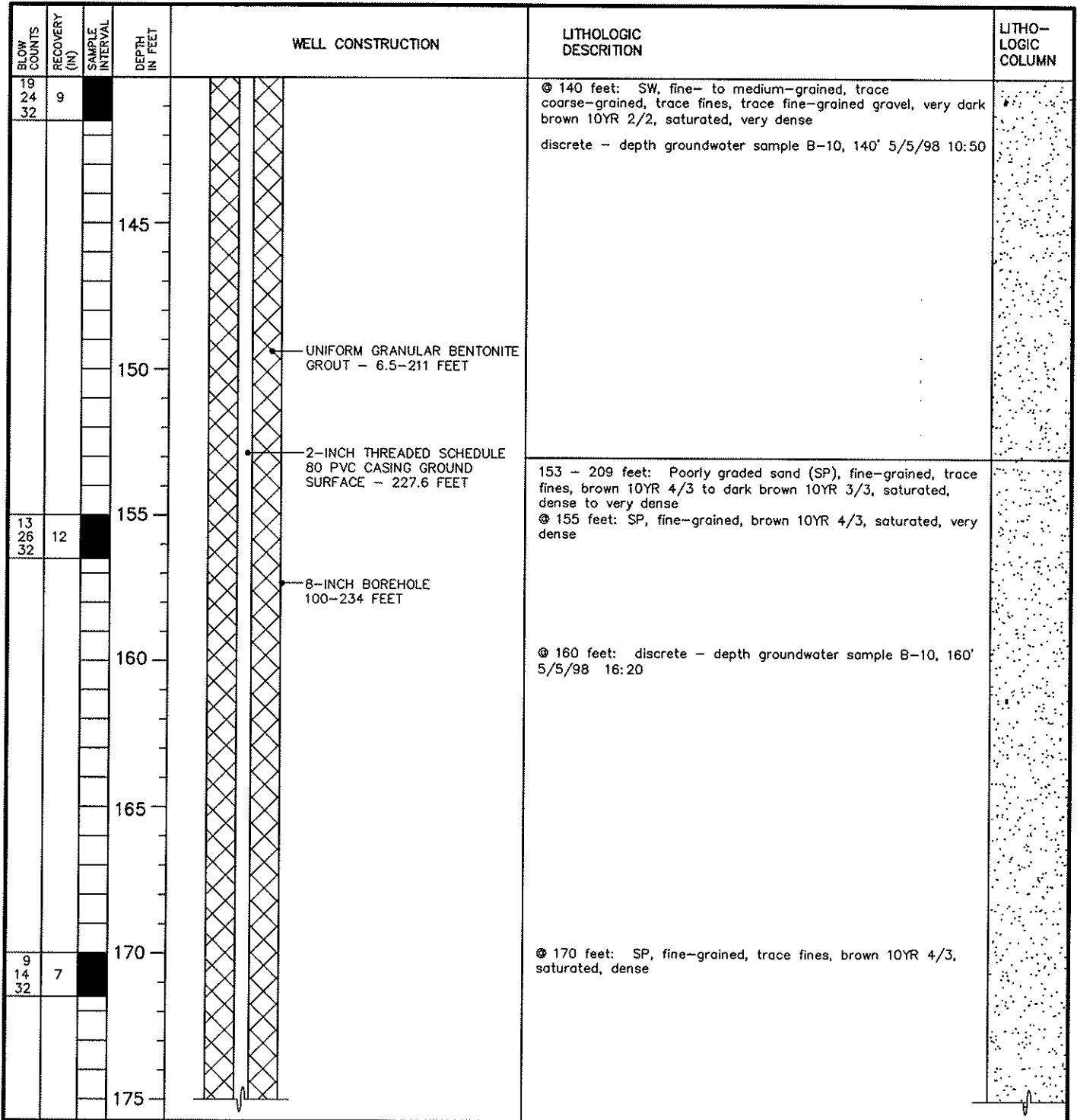
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110		SW as above	
10 29 65	9				© 110 feet: Poorly graded sand (SP), very fined-grained, trace fines, brown 10YR 4/3, saturated, very dense	
			115		© 115 feet: Grain size increasing with depth to medium to coarse-grained sand and some fine gravel, based on bailer cuttings	
			120		© 120 feet: discrete - depth groundwater sample B-10, 120' 5/4/98 14:05	
			125		© 125 feet: No recovery, medium- to coarse-grained sand and fine-grained gravel, based on bailer cuttings	
72						
			130			
			135		©135 feet: SW, medium- to coarse-grained, few fine-grained, trace fines, trace fine-grained gravel, very dark brown 10YR 2/2, saturated, dense	
11 19 21	8					
			140			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-10 / MW-5d
 Sheet: 5 OF 7
 Total Boring Depth: 234 FT /WELL DEPTH 227 FT
 Date Started/Completed: APRIL 27, 1998/MAY 20, 1998
 Ground Level Elevation: 28.34 FT NGVD
 Measuring Point Elevation: 27.97 FT NGVD
 Static Water Level: 6.55 FT NGVD Date: 7/20/98
 Northing: 119572 Easting: 1078929



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-10 / MW-5d
 Sheet: 6 OF 7
 Total Boring Depth: 234 FT /WELL DEPTH 227 FT
 Date Started/Completed: APRIL 27, 1998/MAY 20, 1998
 Ground Level Elevation: 28.34 FT NGVD
 Measuring Point Elevation: 27.97 FT NGVD
 Static Water Level: 6.55 FT NGVD Date: 7/20/98
 Northing: 119572 Easting: 1078929

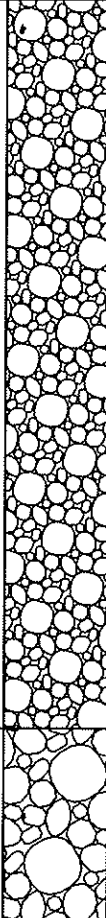
BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180		SP as above	
			185	UNIFORM GRANULAR BENTONITE GROUT -- 6.5-211 FEET	© 180 feet: discrete - depth groundwater sample B-10, 180' 5/6/98 13:00 © 185 feet: SP, fine-grained, brown 10 YR 4/3, saturated, very dense	
28 42 65	10		190	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 227.6 FEET		
			195	8-INCH BOREHOLE 100-234 FEET		
14 22 47	12		200		© 200 feet: SP, fine-grained, trace fines, dark brown 10 YR 3/3, saturated, very dense discrete - depth groundwater sample B-10, 200' 5/7/98 11:00	
			205			
			210		GW as below	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-10 / MW-5d
 Sheet: 7 OF 7
 Total Boring Depth: 234 FT /WELL DEPTH 227 FT
 Date Started/Completed: APRIL 27, 1998/MAY 20, 1998
 Ground Level Elevation: 28.34 FT NGVD
 Measuring Point Elevation: 27.97 FT NGVD
 Static Water Level: 6.55 FT NGVD Date: 7/20/98
 Northing: 119572 Easting: 1078929

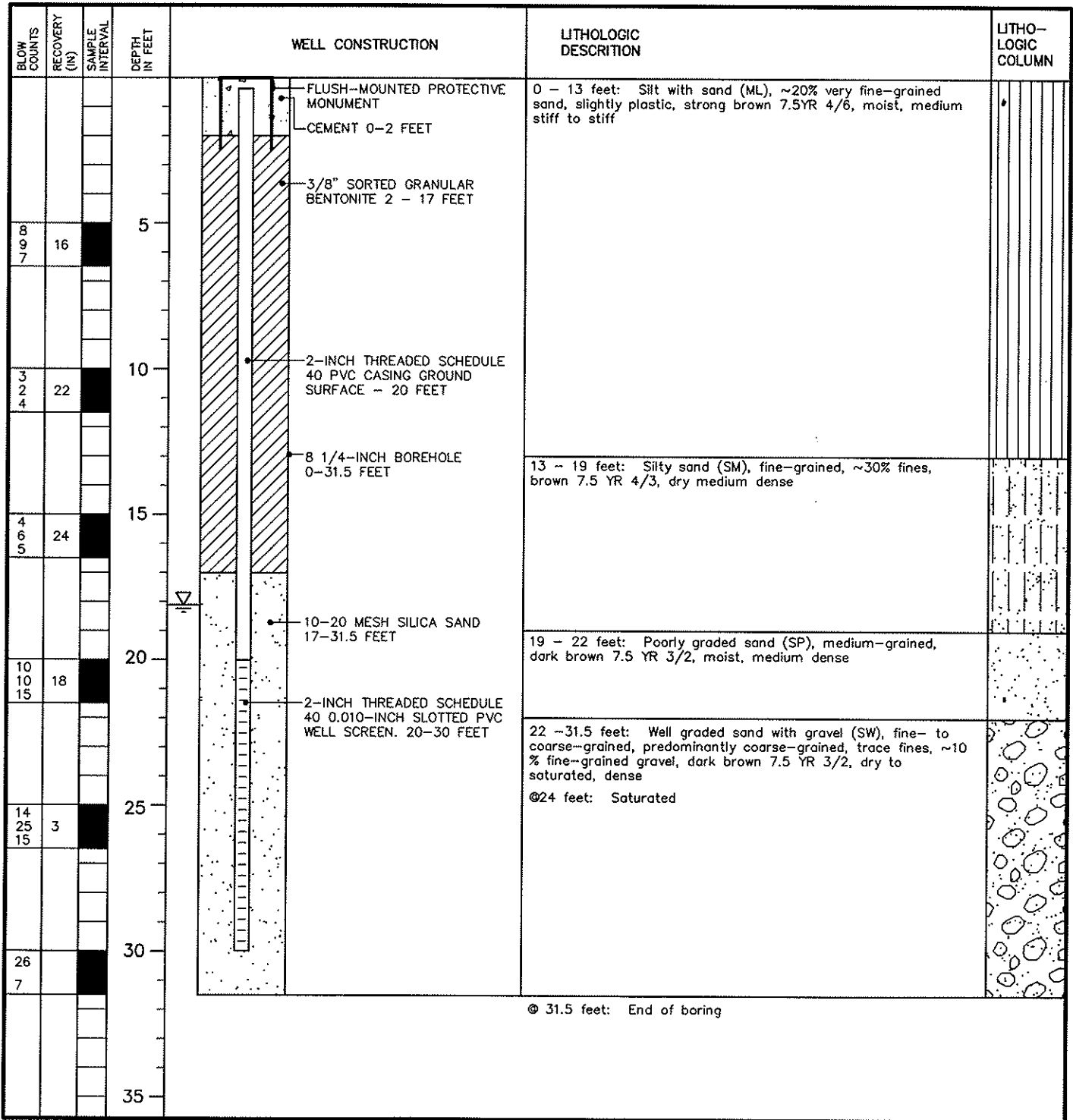
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			215	3/8" SORTED GRANULAR BENTONITE 211-213 FEET 10-40 MESH SILICA SAND 213-214 FEET 8-INCH BOREHOLE 100-234 FEET STAINLESS STEEL CENTRALIZER AT 217 FEET	209 feet - 229 feet Well graded gravel with sand (GW), fine- to coarse-grained (up to 2 inches), some fine- to coarse-grained sand, trace fines, saturated, gravel is predominately basaltic, some granitic ◎ 215 feet: GW as above	
12			220	10-20 MESH SILICA SAND 214-228 FEET 2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN WITH 4-INCH SUMP 217.3-227.6 FEET STAINLESS STEEL CENTRALIZER AT 227 FEET	◎ 220 feet: discrete - depth groundwater sample B-10, 220' 5/8/98 15:00 ◎ 224 feet: cobbles up to 4 inches in diameter, based on bailer cuttings ◎ 226 feet: slightly cemented basalt cobbles, based on bailer cuttings ◎ 228 feet: discrete - depth groundwater sample B-10, 228' 5/14/98 16:00	
			230	3/8" SORTED GRANULAR BENTONITE 228-233 FEET CEMENT 233-234 FEET	229 feet - 234 feet: Well graded gravel with sand (GW), fine- to coarse-grained (up to 8 inches), saturated, slightly cemented, gravel contains basalt, granite, abundant caramel-colored quartzite, abundant large mica flakes (up to 2 mm), TROUTDALE FORMATION	
			235		◎ 234 feet: End of boring	
			240			
			245			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: SPLIT-SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-7
 Sheet: 1 OF 1
 Total Boring Depth: 31.5 FT / WELL DEPTH: 30 FT
 Date Started/Completed: JULY 13, 1998
 Ground Level Elevation: 31.24 FT NGVD
 Measuring Point Elevation: 30.84 FT NGVD
 Static Water Level: 12.41 FT NGVD Date: 6/9/99
 Northing: 119424.6 Easting: 1079484.1

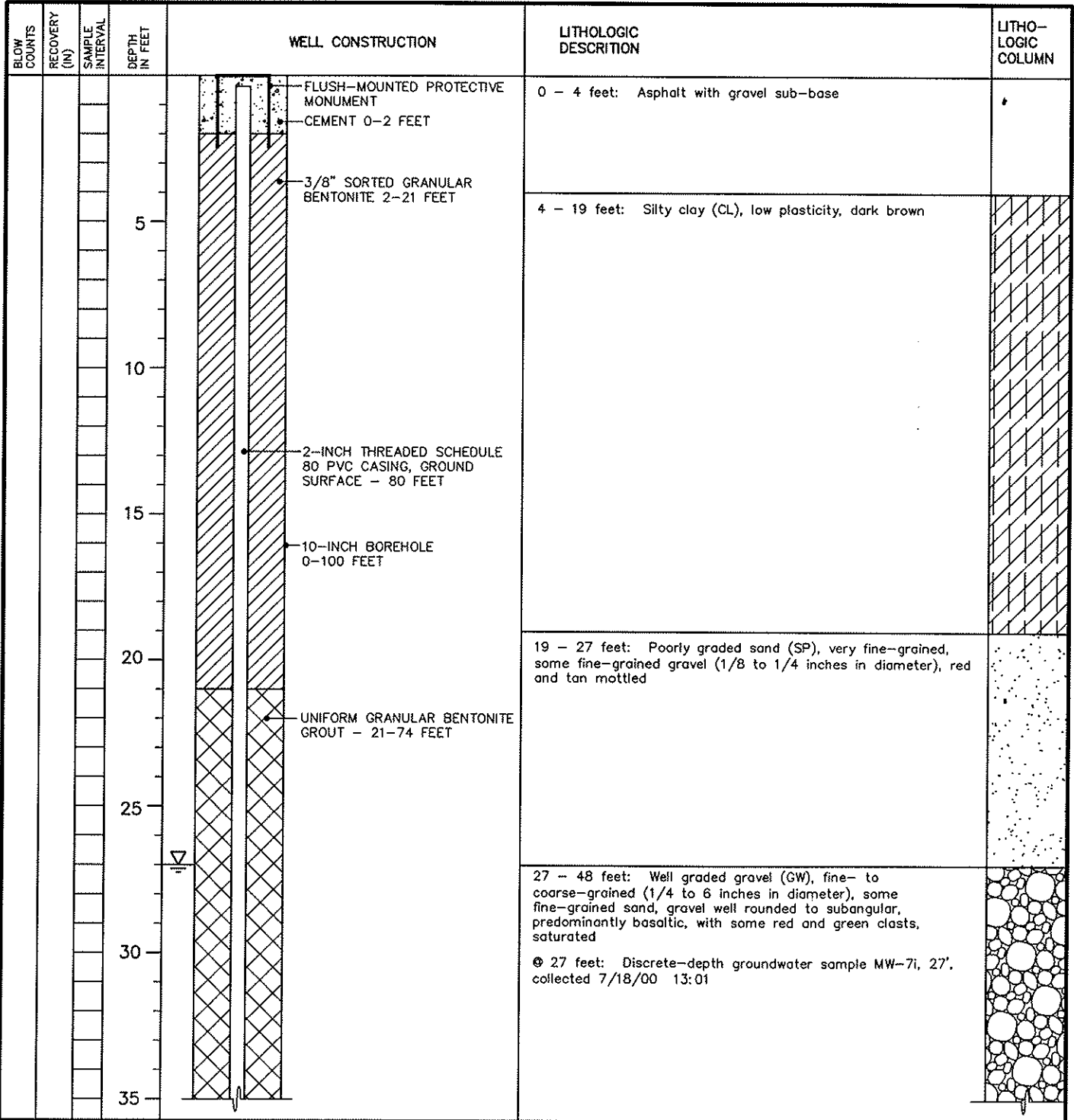


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-7i
 Sheet: 1 OF 6
 Total Boring Depth: 180 FT / WELL DEPTH: 90 FT
 Date Started/Completed: JULY 27, 2000/AUGUST 9, 2000
 Ground Level Elevation: 32.81 FT NGVD
 Measuring Point Elevation: 32.42 FT NGVD
 Static Water Level: 27.41 FT NGVD Date: 10/30/00
 Northing: 119388 Easting: 1079449



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-7i
 Sheet: 2 OF 6
 Total Boring Depth: 180 FT / WELL DEPTH: 90 FT
 Date Started/Completed: JULY 27, 2000/AUGUST 9, 2000
 Ground Level Elevation: 32.81 FT NGVD
 Measuring Point Elevation: 32.42 FT NGVD
 Static Water Level: 27.41 FT NGVD Date: 10/30/00
 Northing: 119388 Easting: 1079449

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		GW as above	
			45	UNIFORM GRANULAR BENTONITE GROUT - 21-74 FEET	⊙ 40 feet: Discrete--depth groundwater sample MW-7i, 40', collected 7/19/00 07:25	
			50	2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 80 FEET	48 - 53 feet: Poorly graded sand with gravel (SP), sand coarse-grained, gravel fine- to coarse-grained (1/4 to 2 inches in diameter), dark brown to black, gravel is rounded, saturated	
			55	10-INCH BOREHOLE 0-105 FEET	53 - 60 feet: Well graded gravel with sand (GW), fine- to coarse-grained (1/2 to 4 inches in diameter), sand is coarse-grained, sand and gravel are basaltic, saturated	
			60		⊙ 57 - 60 feet: Cobbles	
			65		60 - 69 feet: Well graded sand (SW), fine- to coarse-grained, predominantly coarse-grained, trace gravel, subangular to angular, basaltic, saturated	
			70		⊙ 60 feet: Discrete--depth groundwater sample MW-7i, 60', collected 7/19/00 11:25	
					⊙ 65 - 68 feet: SW as above, loose	
					⊙ 66 - 68 feet: Thin (~1 inch) silt lenses	
					⊙ 68 feet: Some heaving	
					69 - 73 feet: Gravel with sand, saturated	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

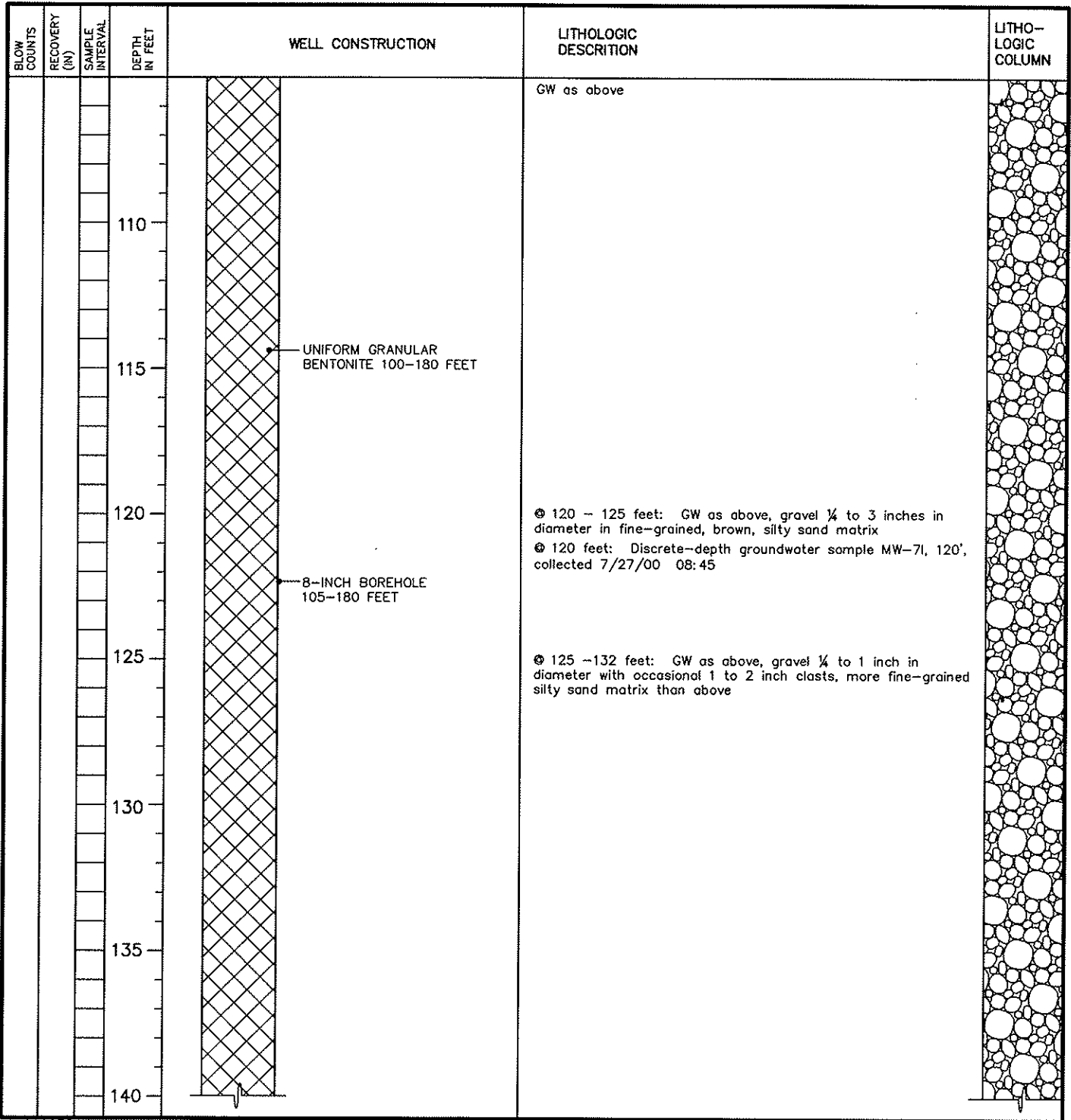
Boring Number: MW-7i
 Sheet: 3 OF 6
 Total Boring Depth: 180 FT / WELL DEPTH: 90 FT
 Date Started/Completed: JULY 27, 2000/AUGUST 9, 2000
 Ground Level Elevation: 32.81 FT NGVD
 Measuring Point Elevation: 32.42 FT NGVD
 Static Water Level: 27.41 FT NGVD Date: 10/30/00
 Northing: 119388 Easting: 1079449

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 80 FEET 3/8 INCH SORTED GRANULAR BENTONITE 74-76 FEET 20-40 MESH SILICA SAND 76-77 FEET	69 - 73 feet: Gravel with sand, saturated	75
			80	STAINLESS STEEL CENTRALIZER 10-20 MESH SILICA SAND 77-91 FEET 2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN 80-90 FEET	73 - 87 feet: Well graded sand (SW), predominantly coarse-grained, subangular to angular, basaltic, saturated ⊕ 74 - 79 feet: Thin (1 to 2 inches thick) silty sand lenses ⊕ 79 - 80 feet: SW as above, trace gravel up to 3 inches, no silty lenses ⊕ 80 feet: Discrete-depth groundwater sample MW-7i, 80', collected 7/20/00 09:12 ⊕ 80 - 87 feet: SW as above, silty	80
			85			85
			90	STAINLESS STEEL CENTRALIZER	87 - 100 feet: Well graded gravel (GW), fine- to coarse-grained (1/2 to 6 inches in diameter), some coarse-grained sand, some cementation on grains, gravel predominantly basaltic, saturated	90
			95	10-INCH BOREHOLE 0-105 FEET 3/8 INCH SORTED GRANULAR BENTONITE 91-100 FEET		95
			100			100
			105	UNIFORM GRANULAR BENTONITE 100-180 FEET	100 - 153 feet: Well graded gravel (GW) in silt to silty sand matrix, saturated ⊕ 100 feet: Discrete-depth groundwater sample MW-7i, 100', collected 7/21/00 09:50 ⊕ 100 - 115 feet: GW as above, gravel up to 3 inches in diameter, tightly packed, matrix predominantly sand, some silt, some cementation on grains, basaltic	105

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: <u>PORT OF VANCOUVER/SWAN MANUFACTURING</u> Project Number: <u>275-1940-006</u> Location: <u>VANCOUVER, WA</u> PMX Representative: <u>ANNE ACKERMAN/CHRIS HAMILTON</u> Drilled By: <u>WESTERBURG DRILLING</u> Drill Method: <u>CABLE TOOL</u> Soil Sample Method: <u>2" SPLIT SPOON</u> Groundwater Sample Method: <u>TEMPORARY WELL POINT</u>	Boring Number: <u>MW-7i</u> Sheet: <u>4 OF 6</u> Total Boring Depth: <u>180 FT / WELL DEPTH: 90 FT</u> Date Started/Completed: <u>JULY 27, 2000/AUGUST 9, 2000</u> Ground Level Elevation: <u>32.81 FT NGVD</u> Measuring Point Elevation: <u>32.42 FT NGVD</u> Static Water Level: <u>27.41 FT NGVD</u> Date: <u>10/30/00</u> Northing: <u>119388</u> Easting: <u>1079449</u>
---	---



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: <u>PORT OF VANCOUVER/SWAN MANUFACTURING</u> Project Number: <u>275-1940-006</u> Location: <u>VANCOUVER, WA</u> PMX Representative: <u>ANNE ACKERMAN/CHRIS HAMILTON</u> Drilled By: <u>WESTERBURG DRILLING</u> Drill Method: <u>CABLE TOOL</u> Soil Sample Method: <u>2" SPLIT SPOON</u> Groundwater Sample Method: <u>TEMPORARY WELL POINT</u>	Boring Number: <u>MW-7i</u> Sheet: <u>5 OF 6</u> Total Boring Depth: <u>180 FT / WELL DEPTH: 90 FT</u> Date Started/Completed: <u>JULY 27, 2000/AUGUST 9, 2000</u> Ground Level Elevation: <u>32.81 FT NGVD</u> Measuring Point Elevation: <u>32.42 FT NGVD</u> Static Water Level: <u>27.41 FT NGVD</u> Date: <u>10/30/00</u> Northing: <u>119388</u> Easting: <u>1079449</u>
---	---

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145	<p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT - 100-180 FEET</p> <p style="margin-left: 20px;">8-INCH BOREHOLE 105-180 FEET</p>	<p>⊙ 140 feet: Discrete-depth groundwater sample MW-7i, 140', collected 7/31/00 14:40</p> <p>⊙ 140 - 150 feet: GW as above, trace gravel up to 4 inches in diameter</p> <p>⊙ 148 - 152 feet: GW as above, increase in percent of 3 to 4 inch diameter clasts</p>	
			150			
			155			
			160			
			165			
			170			
			175			
					<p>153 - 180 feet: Well graded gravel with sand (GW)</p> <p>⊙ 155 - 160 feet: GW as above, gravel 2 to 4 inches in diameter, trace up to 6 inches in diameter, some fine- to medium-grained sand, little fines, gravel mostly basaltic with some cementation on grains</p> <p>⊙ 158 feet: GW as above, cemented</p> <p>⊙ 160 feet: Discrete-depth groundwater sample MW-7i, 160', collected 8/1/00 13:30</p> <p>⊙ 161 feet: GW as above, cemented</p> <p>⊙ 161 - 169 feet: GW as above, less cemented than above</p> <p>⊙ 169 - 171 feet: GW as above, well cemented</p>	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: <u>PORT OF VANCOUVER/SWAN MANUFACTURING</u> Project Number: <u>275-1940-006</u> Location: <u>VANCOUVER, WA</u> PMX Representative: <u>ANNE ACKERMAN/CHRIS HAMILTON</u> Drilled By: <u>WESTERBURG DRILLING</u> Drill Method: <u>CABLE TOOL</u> Soil Sample Method: <u>2" SPLIT SPOON</u> Groundwater Sample Method: <u>TEMPORARY WELL POINT</u>	Boring Number: <u>MW-7i</u> Sheet: <u>6 OF 6</u> Total Boring Depth: <u>180 FT / WELL DEPTH: 90 FT</u> Date Started/Completed: <u>JULY 27, 2000/AUGUST 9, 2000</u> Ground Level Elevation: <u>32.81 FT NGVD</u> Measuring Point Elevation: <u>32.42 FT NGVD</u> Static Water Level: <u>27.41 FT NGVD</u> Date: <u>10/30/00</u> Northing: <u>119388</u> Easting: <u>1079449</u>
---	---

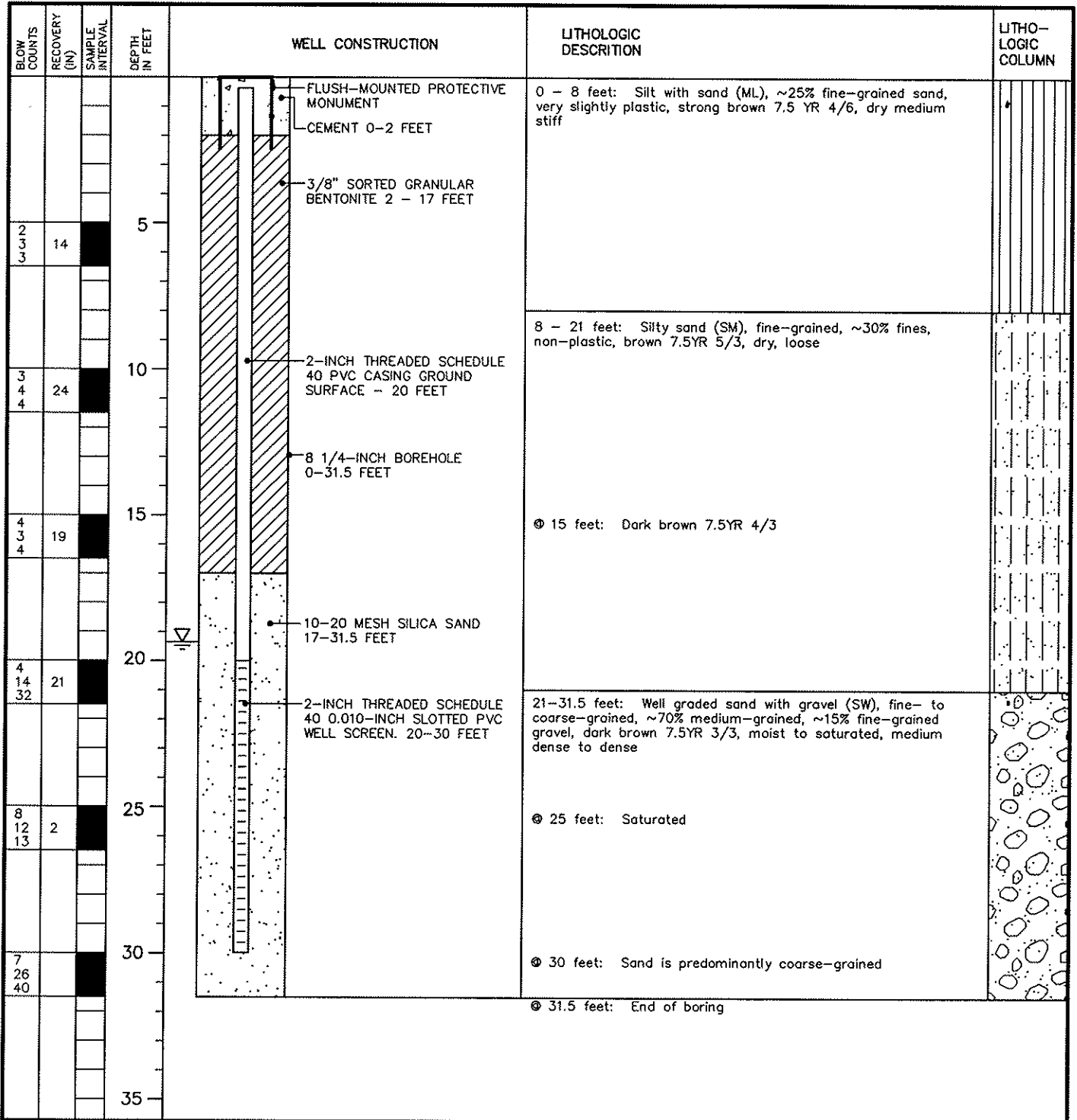
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180	<ul style="list-style-type: none"> • UNIFORM GRANULAR BENTONITE GROUT - 100-180 FEET • 8-INCH BOREHOLE 105-180 FEET 	GW as above ● 179 feet: GW as above, gravel up to 1-inch in diameter ● 180 feet: Discrete-depth groundwater sample MW-7i, 180', collected 8/2/00 12:50 ● 180 feet: End of boring	
			185			
			190			
			195			
			200			
			205			
			210			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: SPLIT-SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-8
 Sheet: 1 OF 1
 Total Boring Depth: 31.5 FT / WELL DEPTH: 30 FT
 Date Started/Completed: JULY 13, 1998
 Ground Level Elevation: 31.65 FT NGVD
 Measuring Point Elevation: 31.38 FT NGVD
 Static Water Level: 12.40 FT NGVD Date: 6/9/99
 Northing: 119642.6 Easting: 1079434.5



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-8i
 Sheet: 1 OF 4
 Total Boring Depth: 140 FT / WELL DEPTH: 130 FT
 Date Started/Completed: JANUARY 27, 1999/FEBRUARY 25, 1999
 Ground Level Elevation: 31.65 FT NGVD
 Measuring Point Elevation: 31.42 FT NGVD
 Static Water Level: 12.40 FT NGVD Date: 6/9/99
 Northing: 119648 Easting: 1079444

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 8 feet: Silt with sand (ML), ~25% fine-grained sand, very slightly plastic, strong brown 7.5 YR 4/6, dry, medium stiff	0
			2	CEMENT 0-2 FEET		2
			5	3/8" SORTED GRANULAR BENTONITE 2-6.5 FEET		5
			10		8 - 21 feet: Silty sand (SM), fine-grained, ~30% fines, non-plastic, brown 7.5YR 5/3, dry, loose	10
			15	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 120 FEET		15
			20	10-INCH BOREHOLE 0-100 FEET	@ 20 feet: Saturated	20
			25	UNIFORM GRANULAR BENTONITE GROUT - 6.5-114 FEET	21 - 50 feet: Well graded sand with gravel (SW), fine- to coarse-grained, trace fines, saturated, dense @ 22 feet: Discrete-depth groundwater sample MW-8i, 22' collected 1/27/99 9:35	25
			30		@ 25 feet: Predominantly medium-grained, angular, basaltic sand with up to 25% gravel up to 3 inches in diameter	30
65 40 45	0		35		30 - 40 feet: Gravel predominantly < 1 inch in diameter, trace up to 2 inches in diameter @ 30 feet: Very dark grey 10YR 3/1	35

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-8i
 Sheet: 2 OF 4
 Total Boring Depth: 140 FT / WELL DEPTH: 130 FT
 Date Started/Completed: JANUARY 27, 1999/FEBRUARY 25, 1999
 Ground Level Elevation: 31.65 FT NGVD
 Measuring Point Elevation: 31.42 FT NGVD
 Static Water Level: 12.40 FT NGVD Date: 6/9/99
 Northing: 119648 Easting: 1079444

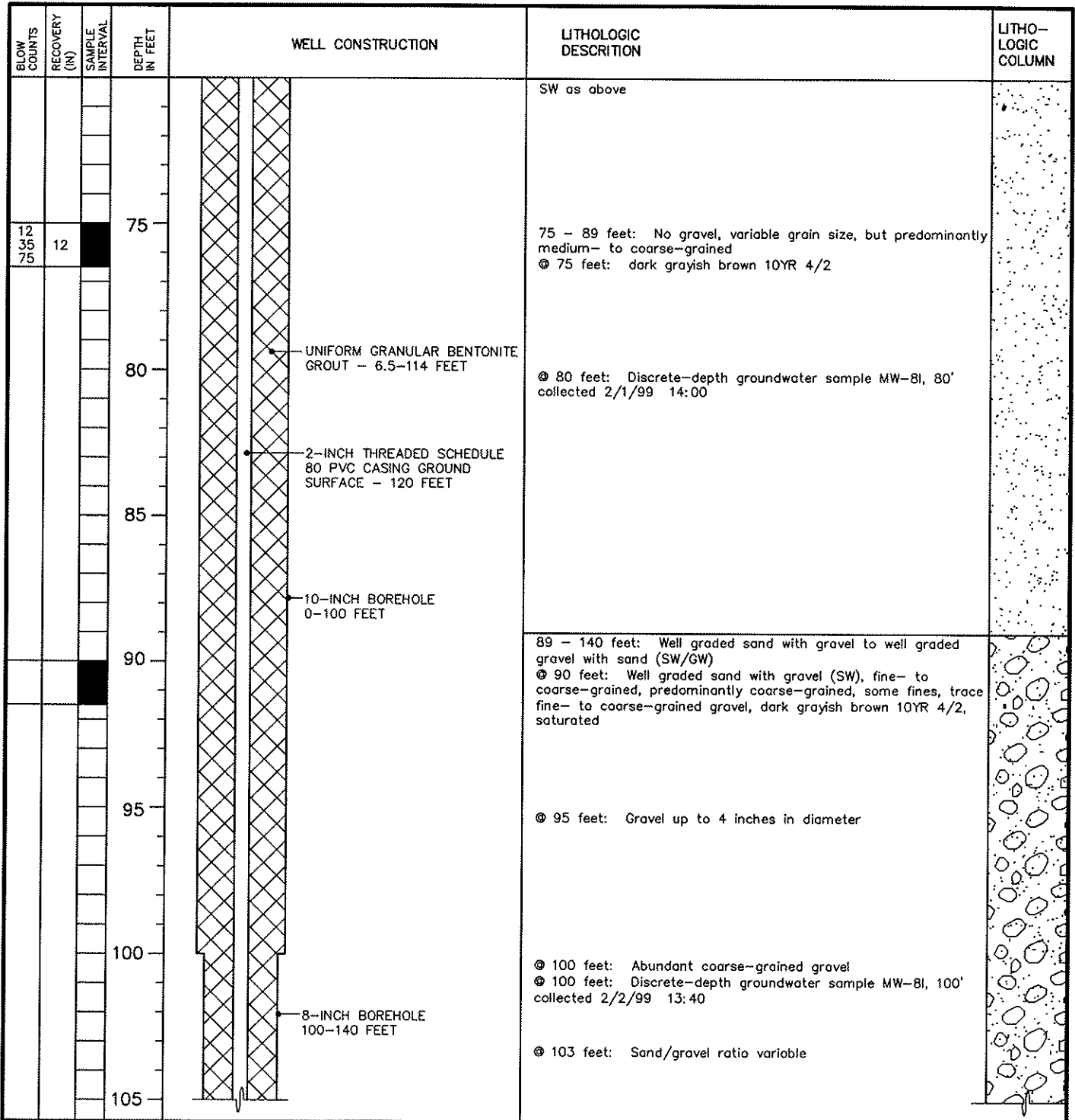
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		SW as above	D
			45	UNIFORM GRANULAR BENTONITE GROUT - 6.5-114 FEET	@ 40 feet: Discrete-depth groundwater sample MW-8i, 40' collected 1/28/99 11:15 @ 45 feet: ~10% fines, very dark greyish brown 10YR 3/2	D
35 50 35/0'	4		50	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 120 FEET	50 - 56 feet: Well graded gravel with sand (GW), ~35 - 40% gravel, predominantly 1 to 3 inches in diameter, trace up to 4 inches in diameter	D
			55	10-INCH BOREHOLE 0-100 FEET	56 - 58 feet: Thin sandy silt lenses	D
25 35 40	10		60		58 - 89 feet: Well graded sand (SW), fine- to coarse-grained, trace fines, medium- to coarse-grained sand is angular to sub angular, basaltic, fine-grained sand is quartz, very dark grayish brown 10YR 3/2, saturated 60 - 75 feet: Trace gravel @ 60 feet: Discrete-depth groundwater sample MW-8i, 60' collected 2/1/99 8:15	D
			65			D
			70			D

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-8i
 Sheet: 3 OF 4
 Total Boring Depth: 140 FT / WELL DEPTH: 130 FT
 Date Started/Completed: JANUARY 27, 1999/FEBRUARY 25, 1999
 Ground Level Elevation: 31.65 FT NGVD
 Measuring Point Elevation: 31.42 FT NGVD
 Static Water Level: 12.40 FT NGVD Date: 6/9/99
 Northing: 119648 Easting: 1079444



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-8i
 Sheet: 4 OF 4
 Total Boring Depth: 140 FT / WELL DEPTH: 130 FT
 Date Started/Completed: JANUARY 27, 1999/FEBRUARY 25, 1999
 Ground Level Elevation: 31.65 FT NGVD
 Measuring Point Elevation: 31.42 FT NGVD
 Static Water Level: 12.40 FT NGVD Date: 6/9/99
 Northing: 119648 Easting: 1079444

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
20					SW as above	
80				UNIFORM GRANULAR BENTONITE GROUT - 6.5-114 FEET	⊙ 106 feet: Well graded gravel with sand (GW), ~40% fine- to coarse-grained sand, gravel is fine- to coarse-grained	
20			110	8-INCH BOREHOLE 100-140 FEET	⊙ 110 feet: Well graded sand and gravel (SW), gravel up to 3 inches in diameter	
				2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 120 FEET	⊙ 113 feet: More fines in matrix	
			115	3/8" SORTED GRANULAR BENTONITE 114-116 FEET	⊙ 116 feet: Less fines in matrix, gravel up to 3 inches in diameter	
				20-40 MESH SILICA SAND 116-118 FEET	⊙ 120 feet: Discrete-depth groundwater sample MW-8i, 120' collected 2/5/99 13:10	
			120	STAINLESS STEEL CENTRALIZER AT 120 FEET	⊙ 121 feet: Predominantly fine-grained gravel < 1 inch in diameter, some fines in matrix	
				10-20 MESH SILICA SAND 118-131 FEET	⊙ 126 feet: More sand, some fines	
			125	2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN WITH 4-INCH SUMP 120-130 FEET		
			130	STAINLESS STEEL CENTRALIZER AT 130 FEET		
				3/8" SORTED GRANULAR BENTONITE 131-140 FEET	⊙ 137 feet: Loose gravel up to 4 inches in diameter	
			135		⊙ 138 feet: Loose, coarse-grained gravel with trace sandy cementation on grains	
50	0				⊙ 140 feet: Discrete-depth groundwater sample MW-8i, 140' collected 2/10/99 12:10	
50					⊙ 140 feet: End of boring	
20			140			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: SPLIT-SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-9
 Sheet: 1 OF 1
 Total Boring Depth: 32 FT
 Date Started/Completed: JULY 14, 1998
 Ground Level Elevation: 33.6 FT NGVD
 Measuring Point Elevation: 33.32 FT NGVD
 Static Water Level: 12.42 FT NGVD Date: 6/9/99
 Northing: 119667.7 Easting: 1079889.6

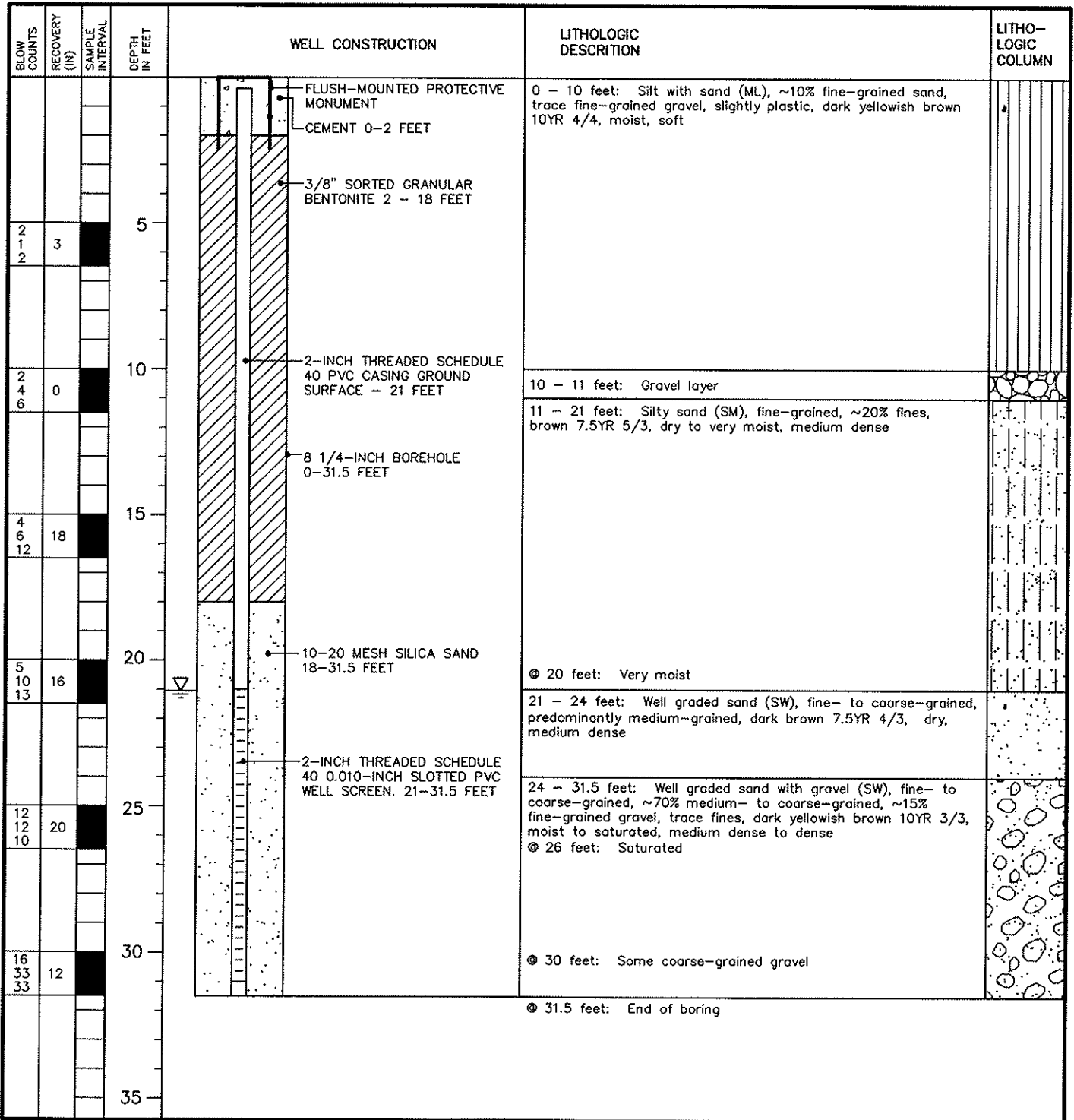
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 8 feet: Silt (ML), ~10% very fine-grained sand, slightly plastic, dark yellowish brown 10YR 4/6, dry, stiff	
			0-2	CEMENT		
			2-19	3/8" SORTED GRANULAR BENTONITE		
3 6 6	20		5			
			8-13	2-INCH THREADED SCHEDULE 40 PVC CASING GROUND SURFACE - 22 FEET	8 - 13 feet: Silt with sand (ML), ~20 fine-grained sand, non-plastic, brown 10YR 4/3, moist, stiff	
3 4 7	24		10			
			13-32	8 1/4-INCH BOREHOLE 0-32 FEET	13 - 32 feet: Well graded sand with gravel (SW), fine- to coarse-grained, ~70% coarse-grained, ~10% fine- to coarse-grained gravel, dark brown 10YR 3/3, dry to saturated, dense	
11 18 30	10		15		⊙ 17 feet: Gravel up to 3 inches in diameter	
			19-32	10-20 MESH SILICA SAND	⊙ 20 feet: Trace fines, @20.5' gravel, dry	
18 16 20	6		20			
			22-32	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN	⊙ 25 feet: Moist	
12 29 28	7		25		⊙ 27 feet: Saturated	
			30			
7 24 28			30			
			32		⊙ 32 feet: End of boring	
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: SPLIT-SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-10
 Sheet: 1 OF 1
 Total Boring Depth: 31.5 FT
 Date Started/Completed: JULY 14, 1998
 Ground Level Elevation: 33.11 FT NGVD
 Measuring Point Elevation: 32.84 FT NGVD
 Static Water Level: 12.391 FT NGVD Date: 6/9/99
 Northing: 119148.2 Easting: 1079694.5



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT-SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-11
 Sheet: 1 OF 1
 Total Boring Depth: 27 FT / WELL DEPTH: 26 FT
 Date Started/Completed: APRIL 12, 1999
 Ground Level Elevation: 25.41 FT NGVD
 Measuring Point Elevation: 24.96 FT NGVD
 Static Water Level: 9.07 FT NGVD Date: 4/21/99
 Northing: 119259 Easting: 1078694

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 2 feet: Fine- to medium-grained sand FILL	
			0	CEMENT 0-2 FEET	2 - 3 feet: Crushed rock FILL	
			2		3 - 25 feet: Silty sand (SM), very fine-grained, ~35% fines abundant mica flakes, slightly plastic, dark yellowish brown 10YR 3/4, moist, loose ⊗ 4 feet: Some thin silt layers	
2	18		3	3/8" SORTED GRANULAR BENTONITE 2 - 13 FEET		
3			5			
			5		Beginning at 9 feet: silt content decreasing with depth, grain size increasing with depth	
			10	2-INCH THREADED SCHEDULE 40 PVC CASING GROUND SURFACE - 16 FEET		
			10	8 1/4-INCH BOREHOLE 0-27 FEET		
			15		⊗ 20 feet: Very fine-grained to fine-grained, ~25% fines, less mica than above, non-plastic, dark grayish brown 10YR 4/2, dry to moist, dense	
11	18		15	10-20 MESH SILICA SAND 13-27 FEET		
29			15			
			20		25 - 27 feet: Well graded sand (SW), fine- to coarse-grained, predominantly medium- to coarse-grained, trace to few fines, trace fine-grained gravel, dark brown 10YR 2/2, medium dense ⊗ 27 feet: End of boring	
			20	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN. 16-26 FEET		
			25			
8	6		25			
17			26			
8			27			
			30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS, INC
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-12
 Sheet: 1 OF 1
 Total Boring Depth: 31.5 FT / WELL DEPTH: 31 FT
 Date Started/Completed: OCTOBER 6, 2000
 Ground Level Elevation: 32.32 FT NGVD
 Measuring Point Elevation: 32.07 FT NGVD
 Static Water Level: 27.10 FT NGVD Date: 10/30/00
 Northing: 119836 Easting: 1078263

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 2 feet: Asphalt with gravel sub-base	
				CEMENT 0-2 FEET		
				3/8" SORTED GRANULAR BENTONITE 2-19 FEET	2 - 11 feet: Poorly graded sand (SP), fine-grained, brown, dry, medium dense FILL	
4 6 7	18		5			
				2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 21 FEET		
2 2 1	18		10		11 - 14 feet: Organic silt (OH), plastic, brown, moist to dry, abundant organics, FORMER GROUND SURFACE	
				8 1/4-INCH BOREHOLE 0-31.5 FEET		
2 2 4	18		15		14 - 27 feet: Silt with sand (ML), ~ 25% very fine-grained sand, non-plastic, strong brown, dry to saturated, medium stiff to stiff	
				10-20 MESH SILICA SAND 19-31.5 FEET		
2 4 7	18		20		⊙ 20 feet: ML as above, slightly moist	
				2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 21-31 FEET		
2 3 4	17		25	▽	⊙ 26 feet: ML as above, saturated	
					27 - 31.5 feet: Silty sand (SM), ~40% fines, brown, saturated, loose	
2 2 4	10		30			
					⊙ 31.5 feet: End of boring	
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-12d
 Sheet: 1 OF 7
 Total Boring Depth: 224 FT / WELL DEPTH: 216 FT
 Date Started/Completed: MARCH 1, 1999/MARCH 25,1999
 Ground Level Elevation: 32.58 FT NGVD
 Measuring Point Elevation: 32.32 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119826 Easting: 1078272

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET	0 - 2 feet: Asphalt with gravel sub-base	
4 6 9	18		5	BENTONITE CHIPS 2-6.5 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 206 FEET	2 - 16 feet: Poorly graded sand (SP), fine-grained, trace coarse-grained, trace fine-grained gravel, subangular, ~ 50% quartz, greyish brown 10 YR 5/2, loose, dry, FILL	
			10	10-INCH BOREHOLE 0-100 FEET		
4 5 6	18		20	UNIFORM GRANULAR BENTONITE GROUT - 6.5-200 FEET	16 - 32 feet: Silty sand (SM), very fine-grained, ~ 35% fines, predominately quartz, abundant mica, a thin (1/2 inch) zone of fine- to medium-grained silty sand at 12 feet, loose, saturated, brown 10 YR 4/3 @ 20 feet: Discrete-depth groundwater sample MW-12d, 20' collected 3/3/99 08:35	
			25		@ 25 feet: Silt with silty sand, fine-grained, trace medium- to coarse-grained, brown	
			30			
			35		32 - 35 feet: Poorly graded sand (SP), trace fines, trace gravel, brown	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-12d
 Sheet: 2 OF 7
 Total Boring Depth: 224 FT / WELL DEPTH: 216 FT
 Date Started/Completed: MARCH 1, 1999/MARCH 25,1999
 Ground Level Elevation: 32.58 FT NGVD
 Measuring Point Elevation: 32.32 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119826 Easting: 1078272

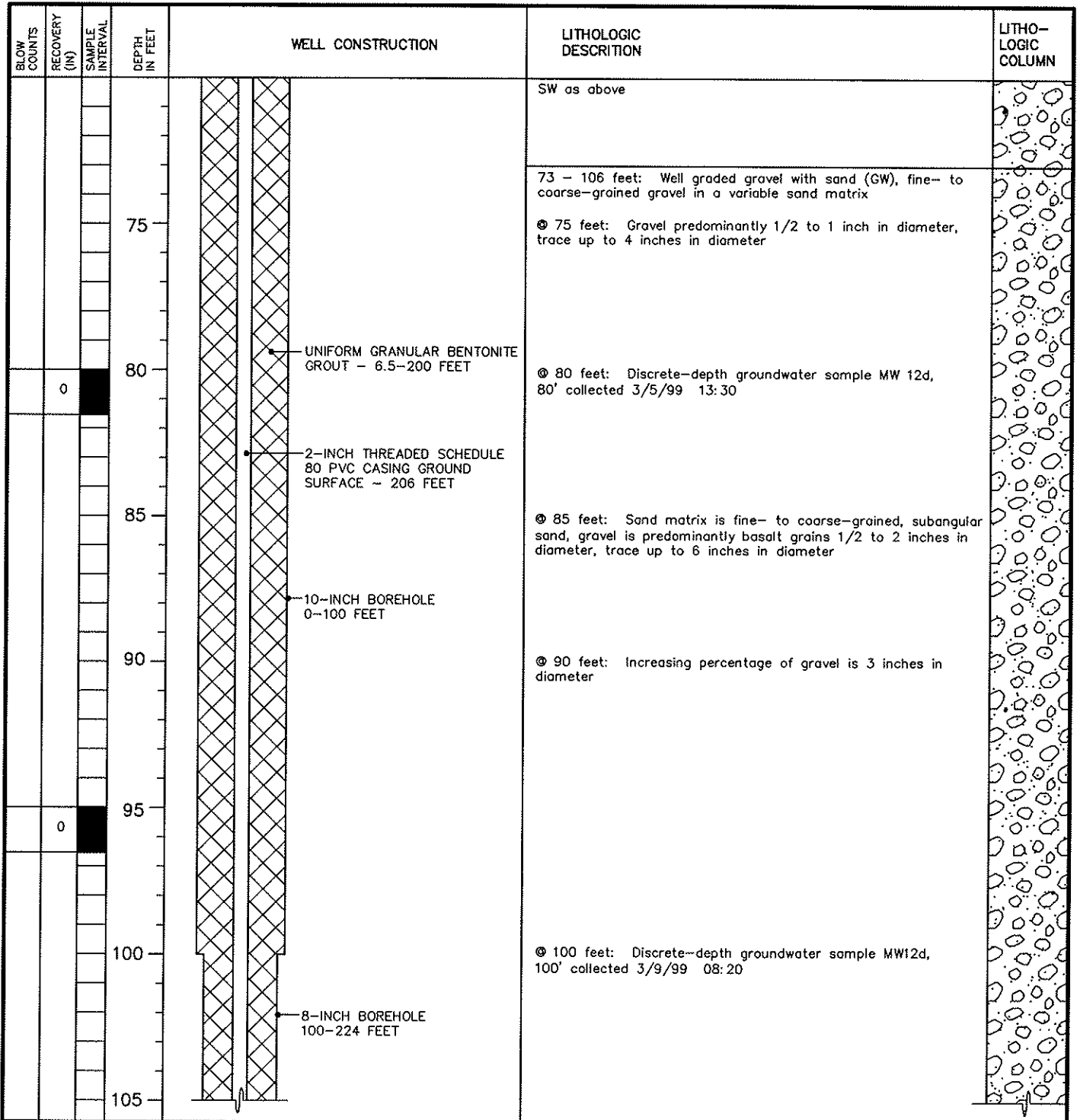
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
8 25 55	14		40	<p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT - 6.5-200 FEET</p> <p style="margin-left: 20px;">2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 206 FEET</p> <p style="margin-left: 20px;">10-INCH BOREHOLE 0-100 FEET</p>	35 - 42 feet: Well graded sand with gravel (SW), fine- to coarse-grained, trace fines, predominantly medium- to coarse, angular to subangular basalt grains with some fine quartz grains ◎ 40 feet: Discrete-depth groundwater sample MW12d, 40' collected 3/3/99 12:00	40
16 36 50	2		50		42 - 60 feet: Well graded gravel with sand (GW), fine- to coarse-grained gravel in a variable sand matrix ◎ 44 feet: Gravel predominantly < 2 inches in diameter, trace larger ◎ 49 feet: ~ 40 to 50% sand, matrix is fine- to coarse-grained, angular, basaltic ◎ 53 feet: More sand than gravel ◎ 57 feet: More gravel than sand, gravel predominantly < 1 inch in diameter, trace larger grains ◎ 60 feet: Discrete-depth groundwater sample MW-12d, 60' collected 3/4/99 13:40	50
55 55 100	12		65		60 - 73 feet: Well graded sand with gravel (SW), fine- to coarse-grained, angular, basaltic sand with up to ~ 40% fine- to coarse-grained gravel, gravel predominantly < 1 inch in diameter, trace gravels up to 3 inches in diameter, up to 10% fines, dark grayish brown 10 YR 4/2 ◎ 67 feet: Trace gravel up to 5 inches in diameter	65
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-12d
 Sheet: 3 OF 7
 Total Boring Depth: 224 FT / WELL DEPTH: 216 FT
 Date Started/Completed: MARCH 1, 1999/MARCH 25,1999
 Ground Level Elevation: 32.58 FT NGVD
 Measuring Point Elevation: 32.32 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119826 Easting: 1078272

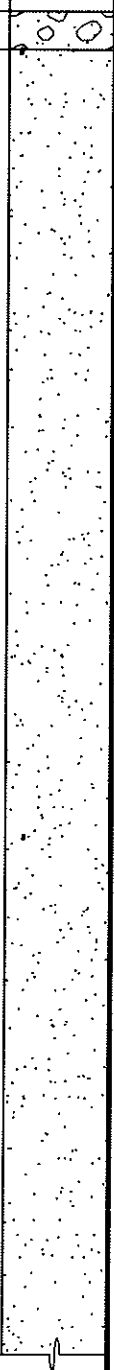


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-12d
 Sheet: 4 OF 7
 Total Boring Depth: 224 FT / WELL DEPTH: 216 FT
 Date Started/Completed: MARCH 1, 1999/MARCH 25,1999
 Ground Level Elevation: 32.58 FT NGVD
 Measuring Point Elevation: 32.32 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119826 Easting: 1078272

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110		GW as above 106 - 180 feet: Well graded sand (SW), fine- to coarse-grained, predominantly medium- to coarse-grained, trace to ~ 10% fines, trace fine-grained gravel ⊕ 110 feet: Trace thin (1/4 inch) silt lenses, trace fine-grained gravel (1 inch in diameter)	
18 70 68	9		115	UNIFORM GRANULAR BENTONITE GROUT - 6.5-200 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 206 FEET 8-INCH BOREHOLE 100-224 FEET	⊕ 115 feet: Predominantly coarse-grained sand, trace fines, trace 1 inch diameter gravel, sand is angular to sub angular, loose, basaltic, dark grayish brown 10 YR 4/2 ⊕ 120 feet: Discrete-depth groundwater sample MW-12d, 120' collected 3/12/99 10:05 ⊕ 127 feet: Trace gravel up to 4 inches in diameter	
15 35 45	6		130		⊕ 130 feet: Predominantly coarse-grained, angular, basaltic sand, trace fines dispersed throughout, trace gravel up to 2 inches in diameter bound in a fine sand and silt matrix,	
			135			
			140		⊕ 140 feet: Discrete-depth groundwater sample MW-12d, 140' collected 3/15/99 12:50	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-12d
 Sheet: 5 OF 7
 Total Boring Depth: 224 FT / WELL DEPTH: 216 FT
 Date Started/Completed: MARCH 1, 1999/MARCH 25,1999
 Ground Level Elevation: 32.58 FT NGVD
 Measuring Point Elevation: 32.32 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119826 Easting: 1078272

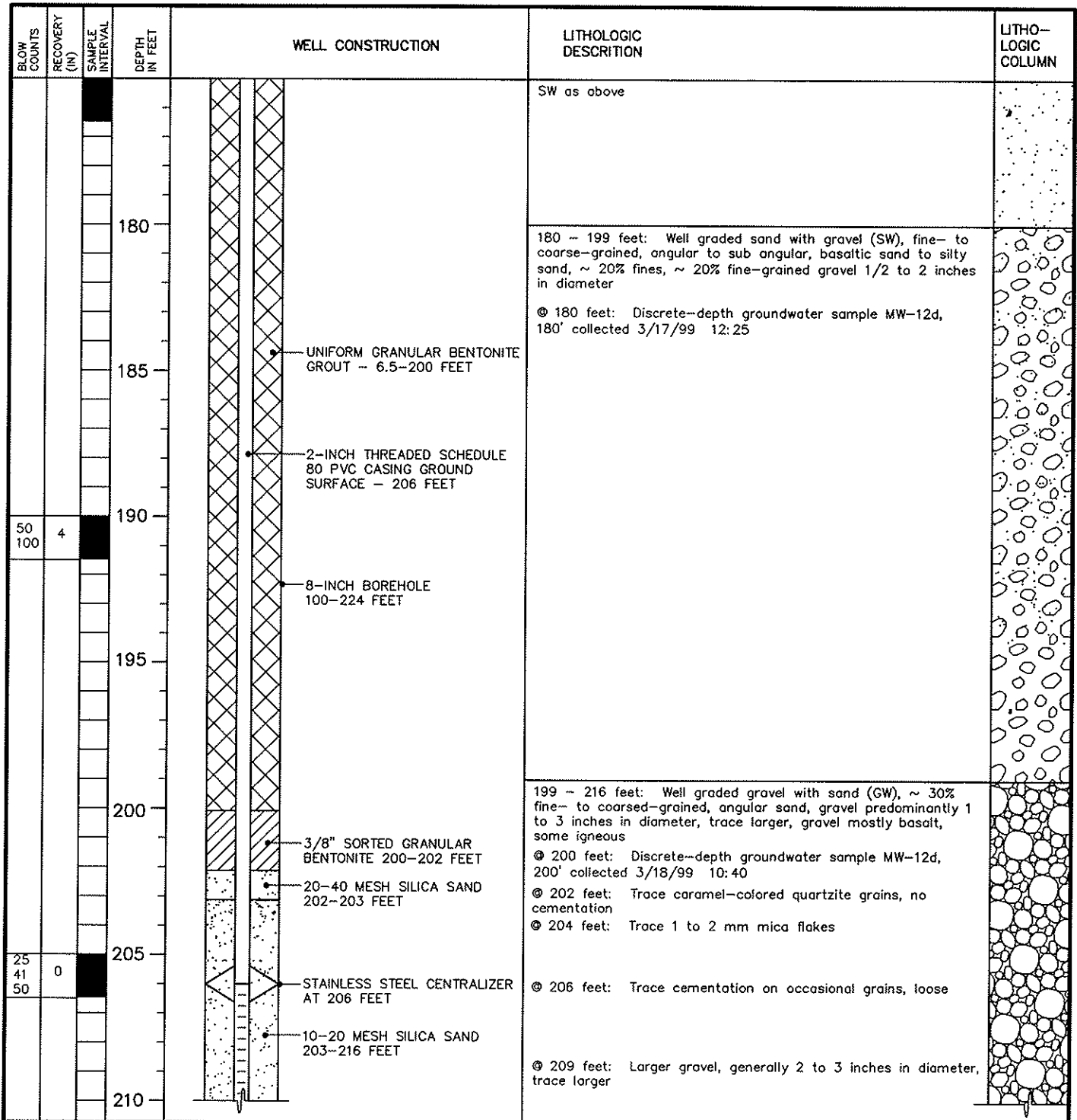
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145	<p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT - 6.5-200 FEET</p> <p style="margin-left: 20px;">2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE ~ 206 FEET</p> <p style="margin-left: 20px;">8-INCH BOREHOLE 100-224 FEET</p>	<p>SW as above</p> <p>⊙ 145 feet: Predominantly medium-grained sand with ~ 20% fines, angular to sub angular mostly basalt grains but some quartz grains, dark brown 10 YR 3/3</p> <p>⊙ 160 feet: Discrete-depth groundwater sample MW-12d, 160' collected 3/16/99 11:35</p> <p>⊙ 160 feet: Predominantly medium-grained, angular to sub angular, basaltic sand, ~ 10% fines, somewhat loose but cohesive due to silt content, dark brown 10 YR 3/3</p> <p>⊙ 165 feet: Trace gravel up to 2 inches in diameter, less silt</p> <p>⊙ 175 feet: Predominantly coarse-grained, angular, basaltic sand, ~ 20 fines, ~ 10% fine-grained gravel dark brown 10 YR 3/3</p>	
5			150			
			155			
			160			
3			165			
			170			
			175			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-12d
 Sheet: 6 OF 7
 Total Boring Depth: 224 FT / WELL DEPTH: 216 FT
 Date Started/Completed: MARCH 1, 1999/MARCH 25,1999
 Ground Level Elevation: 32.58 FT NGVD
 Measuring Point Elevation: 32.32 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119826 Easting: 1078272



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-12d
 Sheet: 7 OF 7
 Total Boring Depth: 224 FT / WELL DEPTH: 216 FT
 Date Started/Completed: MARCH 1, 1999/MARCH 25,1999
 Ground Level Elevation: 32.58 FT NGVD
 Measuring Point Elevation: 32.32 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119826 Easting: 1078272

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
	8		215	<p>8-INCH BOREHOLE 100-224 FEET</p> <p>2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN WITH 4-INCH SUMP 206-216 FEET</p> <p>STAINLESS STEEL CENTRALIZER AT 216 FEET</p> <p>3/8" SORTED GRANULAR BENTONITE 216-224 FEET</p>	GW as above ⊕ 213 feet: Trace gravel up to 6 inches in diameter 216 - 224 feet: Well graded gravel (GW), hard drilling, returns mostly drilled gravel, hole not making much water, TROUTDALE FORMATION ⊕ 220 feet: discrete-depth groundwater sample MW-12d, 220' collected 3/19/99 10:20 ⊕ 224 feet: End of boring	
			220			
			225			
			230			
			235			
			240			
			245			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-19i
 Sheet: 2 OF 6
 Total Boring Depth: 191 FT/WELL DEPTH: 130 FT
 Date Started/Completed: AUGUST 11, 2000/AUGUST 31, 2000
 Ground Level Elevation: 34.37 FT NGVD
 Measuring Point Elevation: 34.02 FT NGVD
 Static Water Level: 29.15 FT NGVD Date: 10/30/00
 Northing: 116550 Easting: 1079958

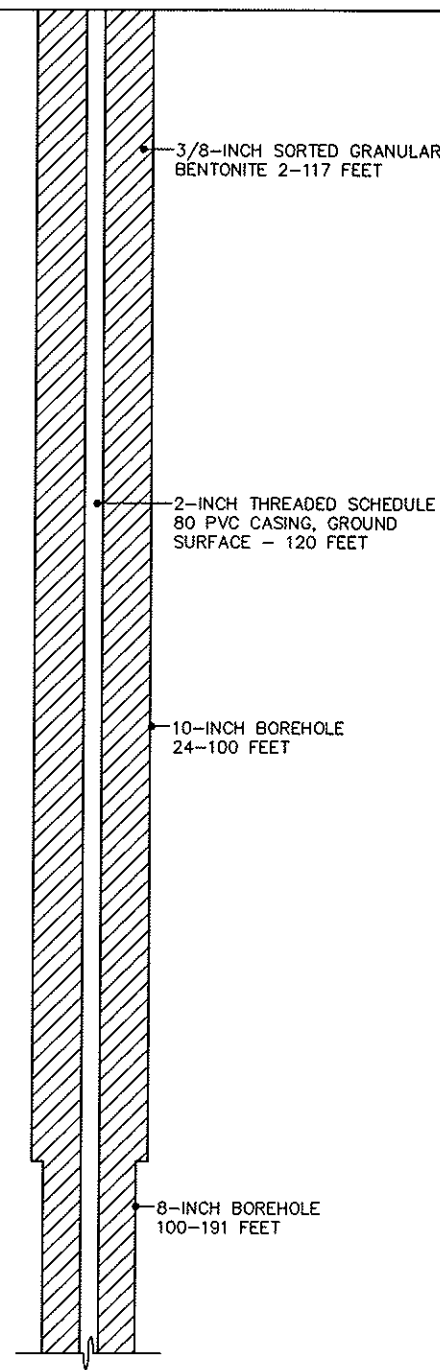
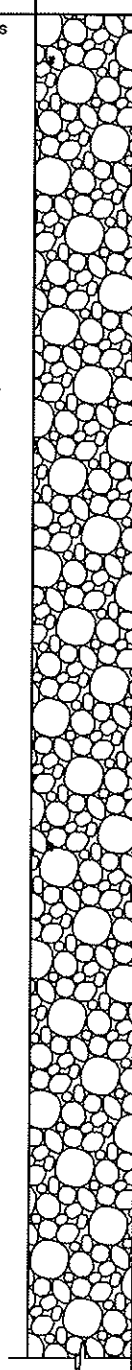
BLOW COUNTS	RECOVERY (M)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
16 59 36			40	<p style="font-size: small;">3/8-INCH SORTED GRANULAR BENTONITE 2-117 FEET</p> <p style="font-size: small;">2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 120 FEET</p> <p style="font-size: small;">10-INCH BOREHOLE 24-100 FEET</p>	<p>⊙ 35 feet: SW as above, ~10 -15% fines, predominantly medium-grained, some fine- and coarse-grained, trace gravel up to 1 inch in diameter, sand is angular, basaltic, gravel is sub-rounded</p> <p>⊙ 37 - 39 feet: SW as above, predominantly coarse-grained, angular, basaltic, ~10% gravel up to 1 inch in diameter, trace fines</p> <p>⊙ 40 - 47 feet: SW as above, gravel up to 3 inches in diameter, gravel content and grain size increasing with depth</p> <p>⊙ 48 feet: SW as above, ~20% gravel, trace up to 4 inches in diameter</p> <p>⊙ 50 feet: SW as above, trace to no fines</p> <p>⊙ 50 feet: Discrete-depth groundwater sample MW-19i, 50', collected 8/14/00 13:55</p> <p>⊙ 50 - 59 feet: SW as above, grain size and gravel content continuing to increase with depth</p> <p>⊙ 59 feet: SW as above with gravel, ~35% fine- to coarse-grained gravel, gravel predominantly 1 - 2 inches in diameter, trace up to 6 inches in diameter</p> <p>⊙ 67 - 78 feet: SW with gravel as above predominantly, cobbles up to 6 inches in diameter</p> <p>68 - 118 feet: Well graded gravel (GW), fine- to coarse-grained, some sand, clean</p>	
			45			
			50			
			55			
			60			
			65			
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-19i
 Sheet: 3 OF 6
 Total Boring Depth: 191 FT/WELL DEPTH: 130 FT
 Date Started/Completed: AUGUST 11, 2000/AUGUST 31, 2000
 Ground Level Elevation: 34.37 FT NGVD
 Measuring Point Elevation: 34.02 FT NGVD
 Static Water Level: 29.15 FT NGVD Date: 10/30/00
 Northing: 116550 Easting: 1079958

FLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	 <p>3/8-INCH SORTED GRANULAR BENTONITE 2-117 FEET</p> <p>2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 120 FEET</p> <p>10-INCH BOREHOLE 24-100 FEET</p> <p>8-INCH BOREHOLE 100-191 FEET</p>	<p>⊗ 70 feet: GW as above, ~10 -15% sand, ~75% of gravel is fine-grained, trace up to 6 inches in diameter, clean</p> <p>⊗ 70 feet: Discrete-depth groundwater sample MW-19i, 70', collected 8/15/00 09:25</p> <p>⊗ 78 feet: GW as above, predominantly <1 inch in diameter, some 2 - 3 inches in diameter, no cobbles, clean</p> <p>⊗ 79 - 83 feet: GW as above, predominantly 1/4 - 1 1/2 inches in diameter, some 2 - 3 inches in diameter, trace up to 6 inches in diameter</p> <p>⊗ 83 - 90 feet: GW as above, some 3 - 4 inch diameter gravel</p> <p>⊗ 90 feet: Discrete-depth groundwater sample MW-19i, 90', collected 8/15/00 15:00</p> <p>⊗ 90 - 99 feet: GW as above, predominantly 2 - 3 inches in diameter, trace 5 - 6 inches in diameter, little coarse-grained sand</p> <p>⊗ 101 feet: GW as above, large gravel</p> <p>⊗ 103 - 105 feet: GW as above, predominantly 2 inches in diameter, trace up to 6 inches in diameter</p>	
			80			
			85			
			90			
			95			
			100			
			105			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-19i
 Sheet: 4 OF 6
 Total Boring Depth: 191 FT/WELL DEPTH: 130 FT
 Date Started/Completed: AUGUST 11, 2000/AUGUST 31, 2000
 Ground Level Elevation: 34.37 FT NGVD
 Measuring Point Elevation: 34.02 FT NGVD
 Static Water Level: 29.15 FT NGVD Date: 10/30/00
 Northing: 116550 Easting: 1079958

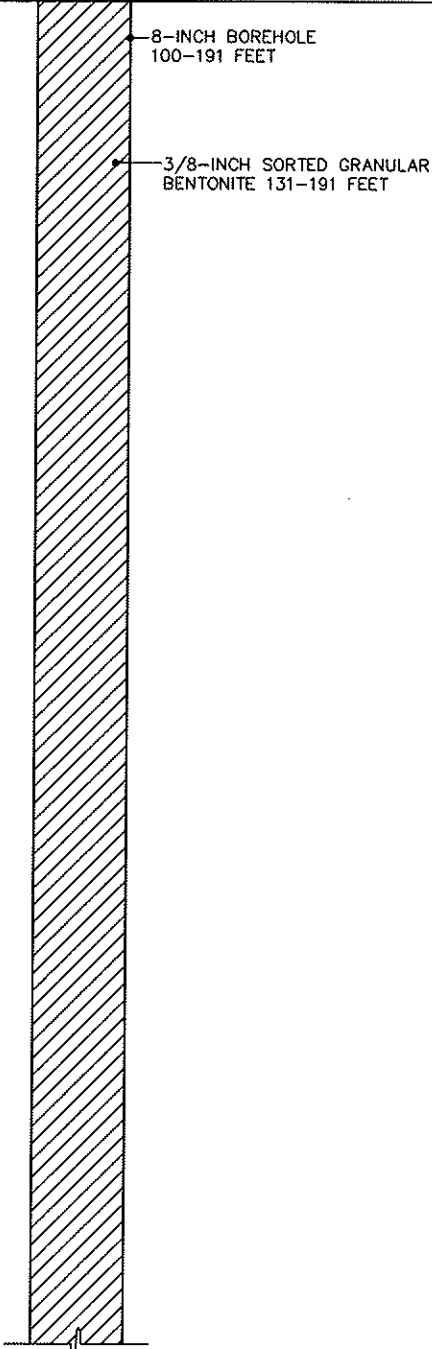
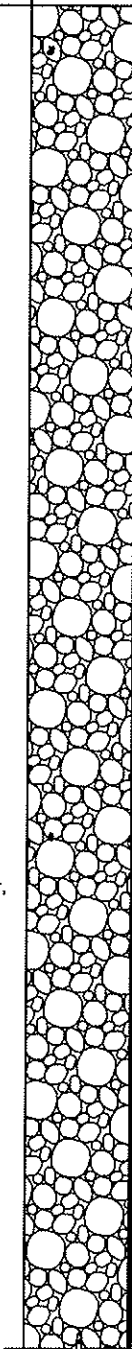
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110	8-INCH BOREHOLE 100-191 FEET 3/8-INCH SORTED GRANULAR BENTONITE 2-117 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 120 FEET 20-40 MESH SILICA SAND 117-118 FEET STAINLESS STEEL CENTRALIZER AT 120 FEET 10-20 MESH SILICA SAND 118-131 FEET 2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN 120-130 FEET STAINLESS STEEL CENTRALIZER AT 130 FEET 3/8-INCH SORTED GRANULAR BENTONITE 131-191 FEET	@ 108 feet: GW as above, up to 3 inches in diameter, loose @ 110 -117 feet: GW as above, 1/4 - 3 inches in diameter, clean, loose @ 110 feet: Discrete-depth groundwater sample MW-19i, collected 8/16/00 13:15 118 - 131 feet: Well graded sand with gravel (SW), fine- to coarse-grained, predominantly coarse-grained, no fines, angular, basaltic, ~30% fine- to coarse-grained gravel, predominantly <1/2 inch in diameter, trace up to 3 - 4 inches in diameter @ 130 feet: Discrete-depth groundwater sample MW-19i, 130', collected 8/21/00 09:57 131 - 191 feet: Well graded gravel (GW), fine- to coarse-grained, some cementation, some silty matrix @ 131 - 137 feet: GW as above, 1/2 - 6 inches in diameter, some cementation	
			115			
			120			
			125			
			130			
			135			
			140			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-19i
 Sheet: 5 OF 6
 Total Boring Depth: 191 FT/WELL DEPTH: 130 FT
 Date Started/Completed: AUGUST 11, 2000/AUGUST 31, 2000
 Ground Level Elevation: 34.37 FT NGVD
 Measuring Point Elevation: 34.02 FT NGVD
 Static Water Level: 29.15 FT NGVD Date: 10/30/0
 Northing: 116550 Easting: 1079958

BLOW COUNTS	RECOVERY (in)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145	 <p>8-INCH BOREHOLE 100-191 FEET</p> <p>3/8-INCH SORTED GRANULAR BENTONITE 131-191 FEET</p>	<p>GW as above</p> <p>⊙ 150 feet: Discrete-depth groundwater sample MW-19i, 150', collected 8/22/00 14:30</p> <p>⊙ 153 - 161 feet: No recovery, large cemented gravel, per driller</p> <p>⊙ 163 - 170 feet: GW as above, up to 5 inches in diameter, some cementation, some silty sand matrix</p> <p>⊙ 169.5 - 171.5 feet: Sand and gravel, relatively even proportion, sand is fine- to coarse-grained, predominantly fine-grained, trace fines, gravel is predominantly <1 inch in diameter, ~20% up to 3 inches in diameter, some cementation, some silty matrix</p> <p>⊙ 170 feet: Discrete-depth groundwater sample MW-19i, 170', collected 8/24/00 08:25</p> <p>⊙ 171.5 feet: GW as above, in a silty sand matrix, gravel predominantly <2 inches in diameter, sand is fine-grained, silty, brown</p>	
			150			
			155			
			160			
			165			
			170			
			175			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-20
 Sheet: 1 OF 2
 Total Boring Depth: 57.5 FT/WELL DEPTH: 57 FT
 Date Started/Completed: OCTOBER 13, 2000
 Ground Level Elevation: 56.36 FT NGVD
 Measuring Point Elevation: 56.04 FT NGVD
 Static Water Level: 51.11 FT NGVD Date: 10/30/00
 Northing: 119621 Easting: 1080541

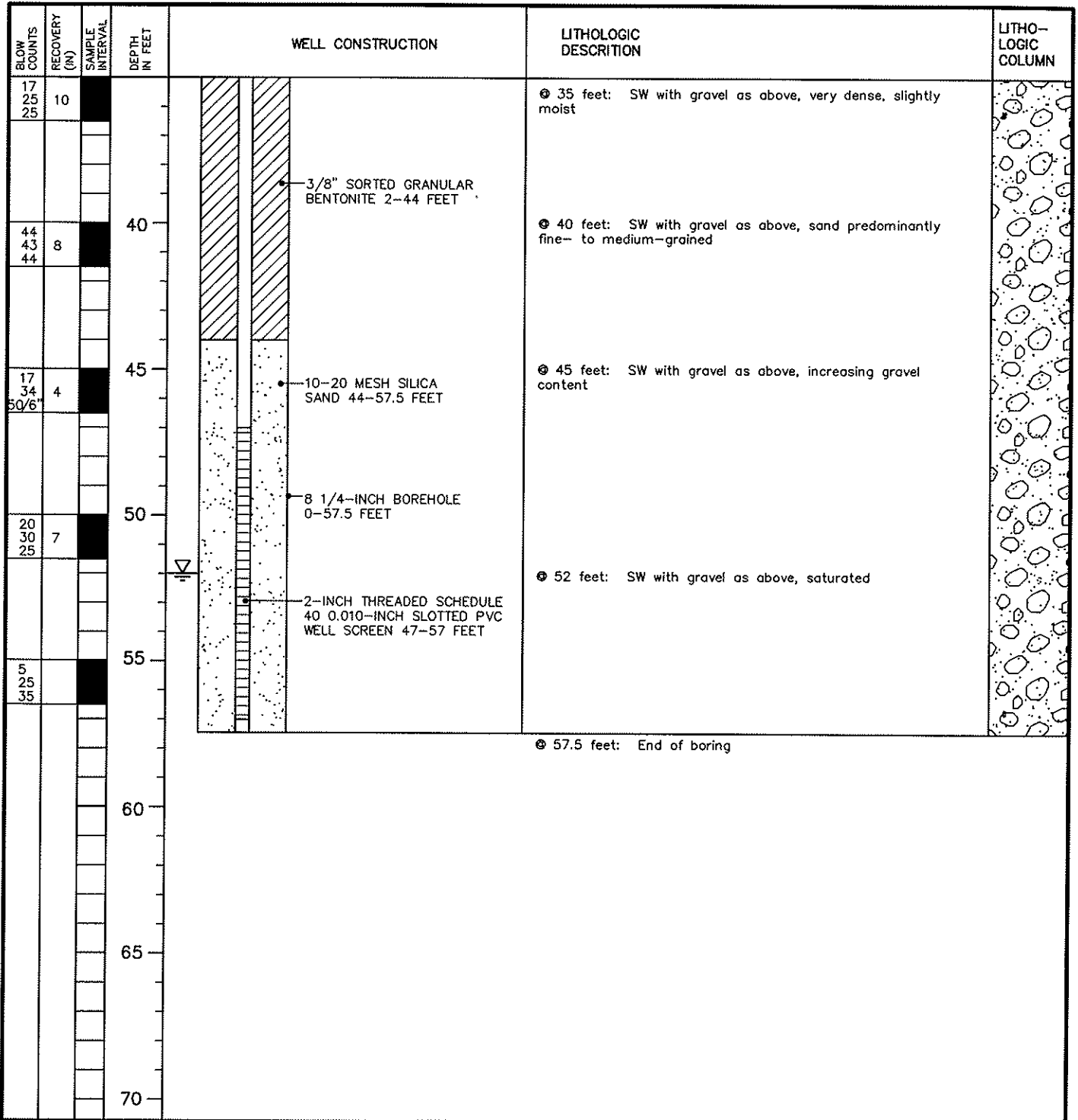
BLOW COUNTS	RECOVERY (in)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8" SORTED GRANULAR BENTONITE 2-44 FEET 2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 47 FEET 8 1/4-INCH BOREHOLE 0-57.5 FEET	0 - 1 feet: Gravel roadway 1 - 8 feet: Silt with sand (ML), ~20% very fine-grained sand, brown, slightly plastic, dry, medium stiff 8 - 18 feet: Silty sand (SM) @ 10 feet: SM as above, ~35% fines, very fine-grained, brown, dry, medium stiff @15 feet: SM as above, ~15% fines, tan/brown 18 - 57.5 feet: Well graded sand with gravel (SW) @ 20 feet: No recovery, pushed a cobble @ 23 feet: SW with gravel as above, coarse grained, based on drilling rate @ 25 feet: SW with gravel as above, fine- to coarse-grained, relatively even grain size distribution, trace fines, gravel up to 2 inches in diameter, dry @ 30 feet: SW with gravel as above, ~10% fines, gravel from 1/2 to 2 inches in diameter @ 31.4 feet: SW with gravel as above, moist @ 30 - 35 feet: SW with gravel as above, gravel up to 3 inches in diameter	
4 4 5	10		5			
4 4 4	14		10			
6 7 7	6		15			
26 25 25	0		20			
25 40 45	4		25			
17 17 17	5		30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW STEM-AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: MW-20
 Sheet: 2 OF 2
 Total Boring Depth: 57.5 FT/WELL DEPTH: 57 FT
 Date Started/Completed: OCTOBER 13, 2000
 Ground Level Elevation: 56.36 FT NGVD
 Measuring Point Elevation: 56.04 FT NGVD
 Static Water Level: 51.11 FT NGVD Date: 10/30/00
 Northing: 119621 Easting: 1080541



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-21
 Sheet: 1 OF 2
 Total Boring Depth: 42 FEET
 Date Started/Completed: OCTOBER 16, 2000
 Ground Level Elevation: 40.33 FEET NGVD
 Measuring Point Elevation: 39.87 FEET NGVD
 Static Water Level: 34.94 FEET NGVD Date: 10/30/00
 Northing: 118920 Easting: 1080513

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8" SORTED GRANULAR BENTONITE 2-29 FEET 2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 32 FEET 8 1/4-INCH BOREHOLE 0-42 FEET 10-20 MESH SILICA SAND 29-42 FEET 2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 32-42 FEET	0 - 1 feet: Gravel roadway 1 - 12 feet: Silt with sand (ML) grading to Silty Sand (SM) @ 5 feet: Silt with sand (ML), ~30% very fine-grained sand, brown, non-plastic, dry, stiff @ 10 feet: Silty sand (SM), very fine-grained, ~40% fines, brown, dry to slightly moist, medium dense 12 - 42 feet: Well graded gravel with sand (GW) @ 15 - 20 feet: Well graded gravel with sand (GW), 1/4 to 2 inches in diameter, trace up to 3 inches in diameter, rounded, some sand and silt @ 20 feet: Well graded gravel (GW) in silty sand matrix, 1/2 to 2 inches in diameter, sand fine- to medium-grained, trace fines, moist @ 25 feet: GW as above, 1/4 to 1 inches in diameter, small amount of sand, trace fines, predominantly basaltic grains, some moisture @ 25 - 30 feet: GW as above, up to 4 inches in diameter @ 30 feet: GW as at 25 feet	
5 6	15		5			
6 10 13	16		10			
40 50/4	2		15			
14 40 17	2		20			
14 10 12	8		25			
24 15 15			30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-21
 Sheet: 2 OF 2
 Total Boring Depth: 42 FEET
 Date Started/Completed: OCTOBER 16, 2000
 Ground Level Elevation: 40.33 FEET NGVD
 Measuring Point Elevation: 39.87 FEET NGVD
 Static Water Level: 34.94 FEET NGVD Date: 10/30/00
 Northing: 118920 Easting: 1080513

BLOW COUNTS	RECOVERY (in)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
30 50/6"	1			<p style="margin-left: 20px;">10-20 MESH SILICA SAND 29-42 FEET</p> <p style="margin-left: 20px;">2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 32-42 FEET</p> <p style="margin-left: 20px;">8 1/4-INCH BOREHOLE 0-42 FEET</p>	<p>⊙ 35 - 40 feet: GW as above, more sand than above, sand fine- to coarse-grained, predominantly coarse-grained, gravel up to 3 inches in diameter, basaltic grains, saturated</p>	
40 50/5"	5	40	<p>⊙ 42 feet: End of boring</p>			
			45			
			50			
			60			
			65			
			70			
			75			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS, INC
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-22
 Sheet: 1 OF 1
 Total Boring Depth: 21.5 FT/WELL DEPTH: 16 FT
 Date Started/Completed: OCTOBER 13, 2000
 Ground Level Elevation: 35.38 FT NGVD
 Measuring Point Elevation: 35.08 FT NGVD
 Static Water Level: 10.88 FT NGVD Date: 11/20/00
 Northing: 118235 Easting: 1080450

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				<p style="font-size: small;">FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8" SORTED GRANULAR BENTONITE 2-4 FEET 2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 6 FEET 10-20 MESH SILICA SAND 4-17 FEET 2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 6-16 FEET 8 1/4-INCH BOREHOLE 0-20 FEET 3/8" SORTED GRANULAR BENTONITE 17-20 FEET</p>	0 - 2 feet: Asphalt with gravel sub-base 2 - 15 feet: Silt with sand (ML), ~40% fine-grained sand, non-plastic, brown, dry to saturated @ 10 feet: ML as above, ~30% fine-grained sand, moist	
2 2 2	11		5			
2 0 2	10		10	▽		
3 8 10	14		15		15 - 21.5 feet: Silty sand (SM), saturated, some laminations @ 20 feet: SM as above, trace laminations	
4 7 8	10		20		@ 21.5 feet: End of boring	
			25			
			30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-23
 Sheet: 1 OF 2
 Total Boring Depth: 45 FEET
 Date Started/Completed: OCTOBER 18, 2000
 Ground Level Elevation: 46.38 FEET NGVD
 Measuring Point Elevation: 45.85 FEET NGVD
 Static Water Level: 40.96 FEET NGVD Date: 10/30/00
 Northing: 117372 Easting: 1080889

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8" SORTED GRANULAR BENTONITE 2-32 FEET 2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 35 FEET 8 1/4-INCH BOREHOLE 0-45 FEET 10-20 MESH SILICA SAND 32-45 FEET	0 - 2 feet: Gravel FILL 2 - 5 feet: Silt with sand (ML), ~25% fine-grained sand, brown, dry, slightly plastic 5 - 9 feet: Well graded sand (SW), fine- to medium-grained, relatively even grain size distribution, ~10% fines, brown, dry, medium dense 9 - 14 feet: Poorly graded sand (SP), fine-grained, brown, dry, medium dense 14 - 37 feet: Silty sand (SM) ⊙ 15 feet: SM as above, very fine-grained, ~25% fines, tan brown, dry, medium dense ⊙ 25 feet: SM as above, ~40% fines ⊙ 30 feet: SM as above, grey brown	
3 8 10	15		5			
7 10 7	14		10			
3 4 7	16		15			
4 7 7	18		20			
3 4 5	18		25			
7 10 11	18		30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-23
 Sheet: 2 OF 2
 Total Boring Depth: 45 FEET
 Date Started/Completed: OCTOBER 18, 2000
 Ground Level Elevation: 46.38 FEET NGVD
 Measuring Point Elevation: 45.85 FEET NGVD
 Static Water Level: 40.96 FEET NGVD Date: 10/30/00
 Northing: 117372 Easting: 1080889

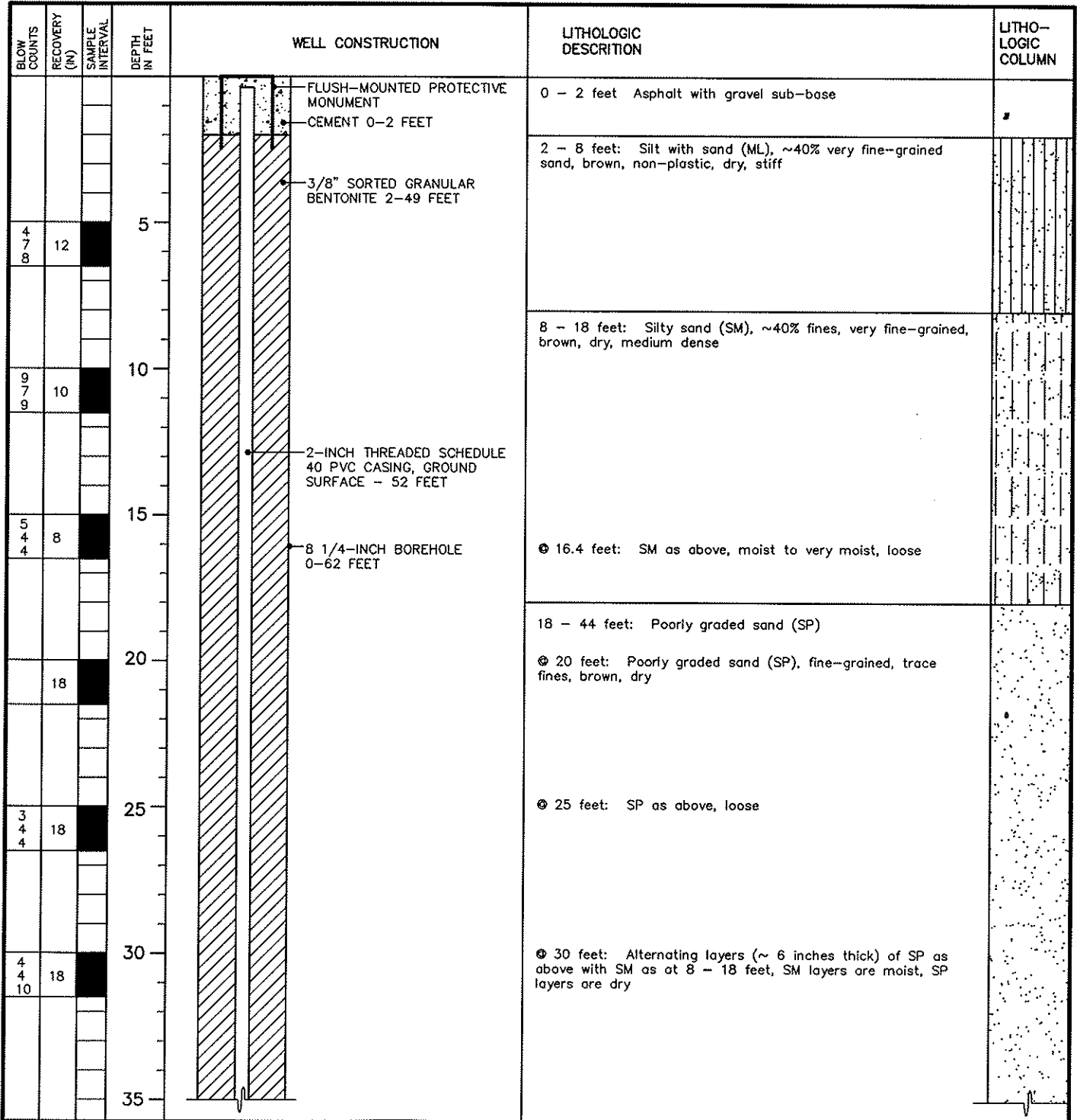
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
8 10 8	18		36.4		Ⓞ 36.4 feet: SM as above, saturated	
9 11 14	12		40		Ⓞ 37 - 45 feet: Well graded sand (SW), fine- to coarse-grained, predominantly fine- to medium-grained, trace coarse-grained, angular, basaltic, dry, medium dense	
14			45		Ⓞ 45 feet: SW as above, trace fine-grained gravel Ⓞ 45 feet: End of boring	
			50			
			55			
			60			
			65			
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-24
 Sheet: 1 OF 2
 Total Boring Depth: 62 FEET
 Date Started/Completed: OCTOBER 17, 2000
 Ground Level Elevation: 60.74 FEET NGVD
 Measuring Point Elevation: 60.47 FEET NGVD
 Static Water Level: 55.51 FEET NGVD Date: 10/30/00
 Northing: 119437 Easting: 1081749



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-24
 Sheet: 2 OF 2
 Total Boring Depth: 62 FEET
 Date Started/Completed: OCTOBER 17, 2000
 Ground Level Elevation: 60.74 FEET NGVD
 Measuring Point Elevation: 60.47 FEET NGVD
 Static Water Level: 55.51 FEET NGVD Date: 10/30/00
 Northing: 119437 Easting: 1081749

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
4 7	18		35	<p>3/8" SORTED GRANULAR BENTONITE 2-49 FEET</p> <p>2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE 52 FEET</p> <p>8 1/4-INCH BOREHOLE 0-62 FEET</p> <p>10-20 MESH SILICA SAND 49-62 FEET</p> <p>2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 52-62 FEET</p>	@ 35 feet: SP as at 20 feet, very fine-grained, dry, medium dense @ 40 feet: Alternating layers (~ 4 inches thick) of SP with SM as at 30 feet	
4 6 7	18		40		44 - 49 feet: Poorly graded sand (SP), fine-grained, ~60% basalt grains and 40% quartz grains, salt and pepper appearance, dry, medium dense	
7 8 9	15		45		49 - 53 feet: Alternating layers of SP and SM as at 40 feet	
4 4 7	17		50		53 - 58 feet: Well graded sand with gravel (SW), ~25% fine-grained gravel (1/4 to 1 inch in diameter), basaltic and quartz grains giving salt and pepper appearance as at 44 - 49 feet, moist	
10 10 10	10		55		58 - 62 feet: Well graded sand (SW), fine- to coarse-grained, predominantly fine- to medium-grained, ~10% coarse-grained, trace fines, trace fine-grained gravel, basaltic, saturated	
4 4 18			60			
			62		@ 62 feet: End of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-24i
 Sheet: 1 OF 5
 Total Boring Depth: 165 FT/WELL DEPTH: 123 FT
 Date Started/Completed: APRIL 10, 2001/APRIL 25, 2001
 Ground Level Elevation: 61.14 FT NGVD
 Measuring Point Elevation: 60.59 FT NGVD
 Static Water Level: 4.97 FT NGVD Date: 5/29/01
 Northing: 119428 Easting: 1081745

DATE: 03/28/07 FILENAME: 194006667 XREF'S:

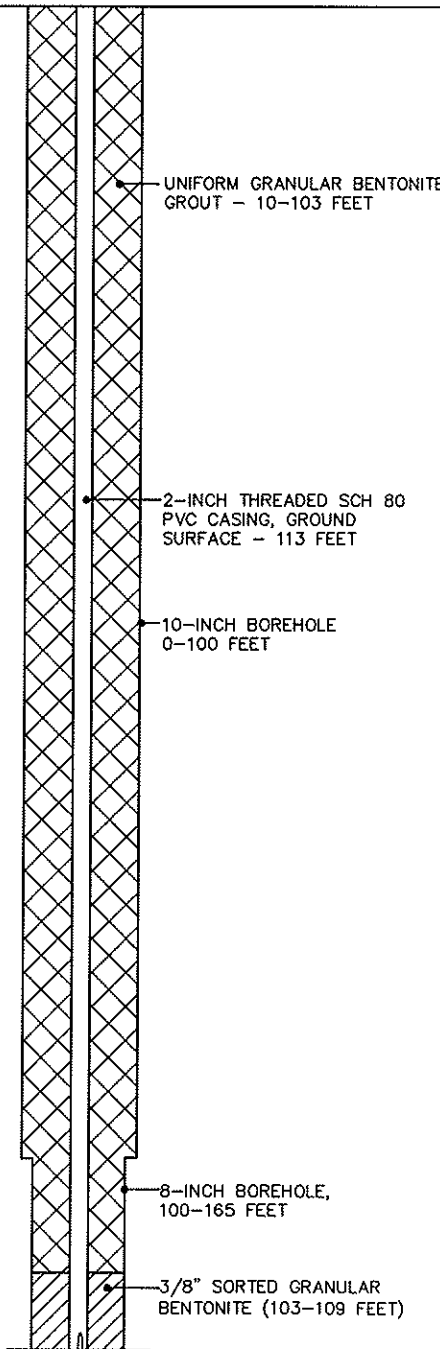
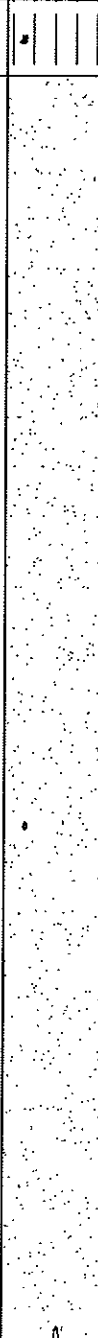
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	<ul style="list-style-type: none"> FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET 	0 - 72 feet: Silt to silt with sand (ML), dry ◎ 2 feet: ML as above, tan, some organics	
			5	<ul style="list-style-type: none"> 3/8" SORTED GRANULAR BENTONITE 2-10 FEET 2-INCH THREADED SCH 80 PVC CASING, GROUND SURFACE - 113 FEET 	◎ 8 feet: ML as above, trace very fine-grained sand, sand content increasing slightly with depth	
			10			
			15	<ul style="list-style-type: none"> UNIFORM GRANULAR BENTONITE GROUT, 10-103 FEET 10-INCH BOREHOLE 0-100 FEET 	◎ 15 feet: ML as above, with sand, tan	
			20			
			25			
			30		◎ 30 feet: ML as above	
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-24i
 Sheet: 3 OF 5
 Total Boring Depth: 165 FT/WELL DEPTH: 123 FT
 Date Started/Completed: APRIL 10, 2001/APRIL 25, 2001
 Ground Level Elevation: 61.14 FT NGVD
 Measuring Point Elevation: 60.59 FT NGVD
 Static Water Level: 4.97 FT NGVD Date: 5/29/01
 Northing: 119428 Easting: 1081745

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	 <p>UNIFORM GRANULAR BENTONITE GROUT - 10-103 FEET</p> <p>2-INCH THREADED SCH 80 PVC CASING, GROUND SURFACE - 113 FEET</p> <p>10-INCH BOREHOLE 0-100 FEET</p> <p>8-INCH BOREHOLE, 100-165 FEET</p> <p>3/8" SORTED GRANULAR BENTONITE (103-109 FEET)</p>	<p>ML as above</p> <p>72 - 111 feet: Well graded sand (SW), well graded, angular, trace fines, up to ~15% gravel @ 72 feet: SW as above, ~10% gravel</p> <p>@ 75 feet: SW as above, ~10% well graded, basaltic gravel up to 3 inches in diameter</p> <p>@ 85 feet: Discrete-depth groundwater sample MW-24i, 85' collected 4/12/01 10:10</p> <p>@ 90 feet: SW as above, trace gravel</p> <p>@ 105 feet: SW as above, up to 15% gravel</p>	

DATE: 03/28/07 FILENAME: 194006669
 IMAGES: XREF'S:

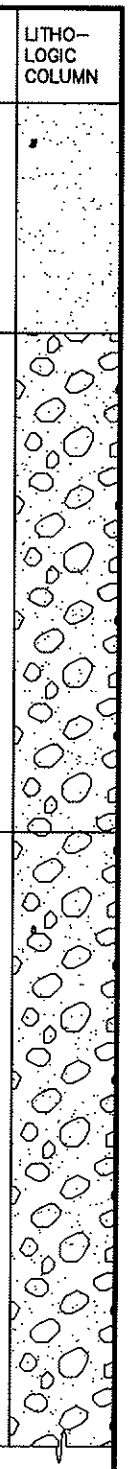
EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-24i
 Sheet: 4 OF 5
 Total Boring Depth: 165 FT/WELL DEPTH: 123 FT
 Date Started/Completed: APRIL 10, 2001/APRIL 25, 2001
 Ground Level Elevation: 61.14 FT NGVD
 Measuring Point Elevation: 60.59 FT NGVD
 Static Water Level: 4.97 FT NGVD Date: 5/29/01
 Northing: 119428 Easting: 1081745

DATE: 03/28/07 FILENAME: 194006670 XREF'S: IMAGES:



BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110	<ul style="list-style-type: none"> • 3/8" SORTED GRANULAR BENTONITE 108-109 FEET • 20-40 MESH SILICA SAND 109-110 FEET • 2-INCH THREADED SCH 80 PVC CASING, GROUND SURFACE - 113 FEET • STAINLESS STEEL CENTRALIZER • 8 INCH BOREHOLE 100-165 FEET • 10-20 MESH SILICA SAND 110-124 FEET • 2-INCH THREADED SCH 80 0.010-INCH SLOTTED PVC WELL SCREEN, 113-123 FEET • STAINLESS STEEL CENTRALIZER • UNIFORM GRANULAR BENTONITE GROUT, 124-165 FEET 	<p>• 105 feet: Discrete-depth groundwater sample MW-24i, 105' collected 4/12/01 14:30</p> <p>111 - 124 feet: Well graded sand with gravel (SW), ~20%-30% gravel, gravel is basaltic</p> <p>124 - 150 feet: Well graded gravel with sand (GW), some tan cementation on clasts</p> <p>• 125 feet: Discrete-depth groundwater sample MW-24i, 125' collected 4/17/01 09:30</p>	
			115			
			120			
			125			
			130			
			135			
			140			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-24i
 Sheet: 5 OF 5
 Total Boring Depth: 165 FT/WELL DEPTH: 123 FT
 Date Started/Completed: APRIL 10, 2001/APRIL 25, 2001
 Ground Level Elevation: 61.14 FT NGVD
 Measuring Point Elevation: 60.59 FT NGVD
 Static Water Level: 4.97 FT NGVD Date: 5/29/01
 Northing: 119428 Easting: 1081745

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145	 <p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT, 124-165 FEET</p> <p style="margin-left: 20px;">8 INCH BOREHOLE 100-165 FEET</p>	GW as above ◎ 145 feet: GW as above, trace fines ◎ 145 feet: Discrete--depth groundwater sample MW-24i, 145' collected 4/18/01 14:30	
			150		150 - 165 feet: Well graded gravel with sand and silt (GW), clasts up to 3 inches in diameter, predominantly basaltic ◎ 165 feet: Discrete--depth groundwater sample MW-24i, 165' collected 4/20/01 13:00 ◎ 165 feet: End of boring	
			155			
			160			
			165			
			170			
			175			

DATE: 03/28/07 FILENAME: 194006671 XREF'S:

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-25
 Sheet: 1 OF 3
 Total Depth: 85 FEET
 Date Started/Completed: OCTOBER 17, 2000
 Ground Level Elevation: 80.27 FEET NGVD
 Measuring Point Elevation: 79.91 FEET NGVD
 Static Water Level: 75.05 FEET NGVD Date: 10/30/00
 Northing: 117917 Easting: 1081716

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				<p style="font-size: small;">FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8" SORTED GRANULAR BENTONITE 2-72 FEET 2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 75 FEET 8 1/4-INCH BOREHOLE 0-85 FEET</p>	0 - 2 feet: Asphalt with gravel sub-base	•
8 8 9	13		5		2 - 12 feet: Poorly graded sand (SP), fine-grained, trace fines, rusty brown, dry, medium dense	•
4 4 5	12		10		⊙ 10 feet: SP as above, very fine-grained, no fines	•
7 10 9	16		15		12 - 18 feet: Silty sand (SM), very fine-grained, ~25% fines, tan brown, dry, medium dense	•
5 10 12	18		20		18 - 22 feet: Poorly graded sand (SP), fine-grained, trace fines, dark brown, dry, medium dense	•
5 5 6	18		25		22 - 29 feet: Silty sand (SM), very fine-grained, ~20% fines, tan brown, dry, medium dense	•
3 6 12	10		30		29 - 36 feet: Alternating layers (~ 3 inches thick) of well graded sand and gravel (SW) with Silt with Sand (ML). SW is fine- to coarse-grained, ~10% fine-grained gravel, trace fines, dry, ML is ~30% fine-grained sand, dark brown, moist to very moist	•
			35			•

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-25
 Sheet: 2 OF 3
 Total Depth: 85 FEET
 Date Started/Completed: OCTOBER 17, 2000
 Ground Level Elevation: 80.27 FEET NGVD
 Measuring Point Elevation: 79.91 FEET NGVD
 Static Water Level: 75.05 FEET NGVD Date: 10/30/00
 Northing: 117917 Easting: 1081716

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
40 45 45	6		40		36 - 69 feet: Well graded gravel (GW) ◎ 40 feet: GW as above, up to 2 inches in diameter, basaltic, some fine- to coarse-grained sand, dry	
17 50/4"	3		45		◎ 45 feet: GW as above, ~10% fines, more sand than above, sand fine- to coarse-grained, predominantly coarse-grained, gravel is basaltic, moist	
10 25 3	3		50			
20 40 40	6		55			
50 50/6"	3		60		◎ 58 feet: GW as above, up to 4 inches in diameter ◎ 60 - 65 feet: GW as above, 1 to 4 inches in diameter	
30 40 40	4		65			
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-25
 Sheet: 3 OF 3
 Total Depth: 85 FEET
 Date Started/Completed: OCTOBER 17, 2000
 Ground Level Elevation: 80.27 FEET NGVD
 Measuring Point Elevation: 79.91 FEET NGVD
 Static Water Level: 75.05 FEET NGVD Date: 10/30/00
 Northing: 117917 Easting: 1081716

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
25 20 20	14			<p>3/8" SORTED GRANULAR BENTONITE 2-72 FEET</p> <p>2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE 75 FEET</p> <p>8 1/4-INCH BOREHOLE 0-85 FEET</p> <p>10-20 MESH SILICA SAND 72-85 FEET</p> <p>2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 75-85 FEET</p>	69 - 85 feet: Well graded sand (SW), fine- to coarse-grained, predominantly coarse-grained, trace 1/2 inch diameter gravel, basaltic, moist		
13 13 25	12		75		<p>⊙ 75 feet: SW as above, predominantly fine- to medium-grained, trace coarse-grained, trace fines, trace fine-grained gravel, moist</p>		
10 15 25	16		80		<p>⊙ 80 feet: SW as above, saturated</p>		
10 20 35	10		85		<p>⊙ 85 feet: SW as above, ~10% coarse-grained, trace 1/4 to 1/2 inch diameter gravel, angular, basaltic, saturated</p> <p>⊙ 85 feet: End of boring</p>		
			90				
			95				
			100				
			105				

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: <u>PORT OF VANCOUVER/SWAN MANUFACTURING</u> Project Number: <u>275-1940-006</u> Location: <u>VANCOUVER, WA</u> PMX Representative: <u>CHRIS HAMILTON/TERRY HANBURG</u> Drilled By: <u>WESTERBURG DRILLING</u> Drill Method: <u>CABLE TOOL</u> Soil Sample Method: <u>2" SPLIT SPOON</u> Groundwater Sample Method: <u>TEMPORARY WELL POINT</u>	Boring Number: <u>MW-26i</u> Sheet: <u>1 OF 6</u> Total Boring Depth: <u>181 FT/WELL DEPTH: 113 FT</u> Date Started/Completed: <u>APRIL 30, 2001/MAY 18, 2001</u> Ground Level Elevation: <u>82.35 FT NGVD</u> Measuring Point Elevation: <u>82.04 FT NGVD</u> Static Water Level: <u>4.62 FT NGVD</u> Date: <u>6/25/01</u> Northing: <u>118143</u> Easting: <u>1082098</u>
---	--

BLOW COUNTS	RECOVERY (in)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8" SORTED GRANULAR BENTONITE 2-10 FEET 2-INCH THREADED SCH 80 PVC CASING, GROUND SURFACE - 103 FEET	0 - 15 feet: Silt (ML), tan, dry	0 - 15
			5			5
			10			10
			15	UNIFORM GRANULAR BENTONITE GROUT, 10-96 FEET 10-INCH BOREHOLE 0-100 FEET	15 - 26.5 feet: Poorly graded sand with silt (SP), medium brown	15 - 26.5
			20			20
			25			25
			30		26.5 - 75 feet: Well graded gravel with silt (GW), clasts up to 2 inches in diameter, very hard, dry	26.5 - 75
			35			35

DATE: 03/28/07 FILENAME: 194006661 IMAGES: XREF'S:

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: <u>PORT OF VANCOUVER/SWAN MANUFACTURING</u> Project Number: <u>275-1940-006</u> Location: <u>VANCOUVER, WA</u> PMX Representative: <u>CHRIS HAMILTON/TERRY HANBURG</u> Drilled By: <u>WESTERBURG DRILLING</u> Drill Method: <u>CABLE TOOL</u> Soil Sample Method: <u>2" SPLIT SPOON</u> Groundwater Sample Method: <u>TEMPORARY WELL POINT</u>	Boring Number: <u>MW-26i</u> Sheet: <u>2 OF 6</u> Total Boring Depth: <u>181 FT / WELL DEPTH: 113 FT</u> Date Started/Completed: <u>APRIL 30, 2001/MAY 18, 2001</u> Ground Level Elevation: <u>82.35 FT NGVD</u> Measuring Point Elevation: <u>82.04 FT NGVD</u> Static Water Level: <u>4.62 FT NGVD</u> Date: <u>6/25/01</u> Northing: <u>118143</u> Easting: <u>1082098</u>
---	--

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40	UNIFORM GRANULAR BENTONITE GROUT - 10-96 FEET 2-INCH THREADED SCH 80 PVC CASING, GROUND SURFACE - 103 FEET 10-INCH BOREHOLE 0-100 FEET	GW as above	
		45	@ 45 feet: GW as above, some sand, gravel clasts up to 6 inches in diameter			
			50			
			55			
			60			
			65		@ 65 feet: GW as above, some poorly graded sand	
			70			

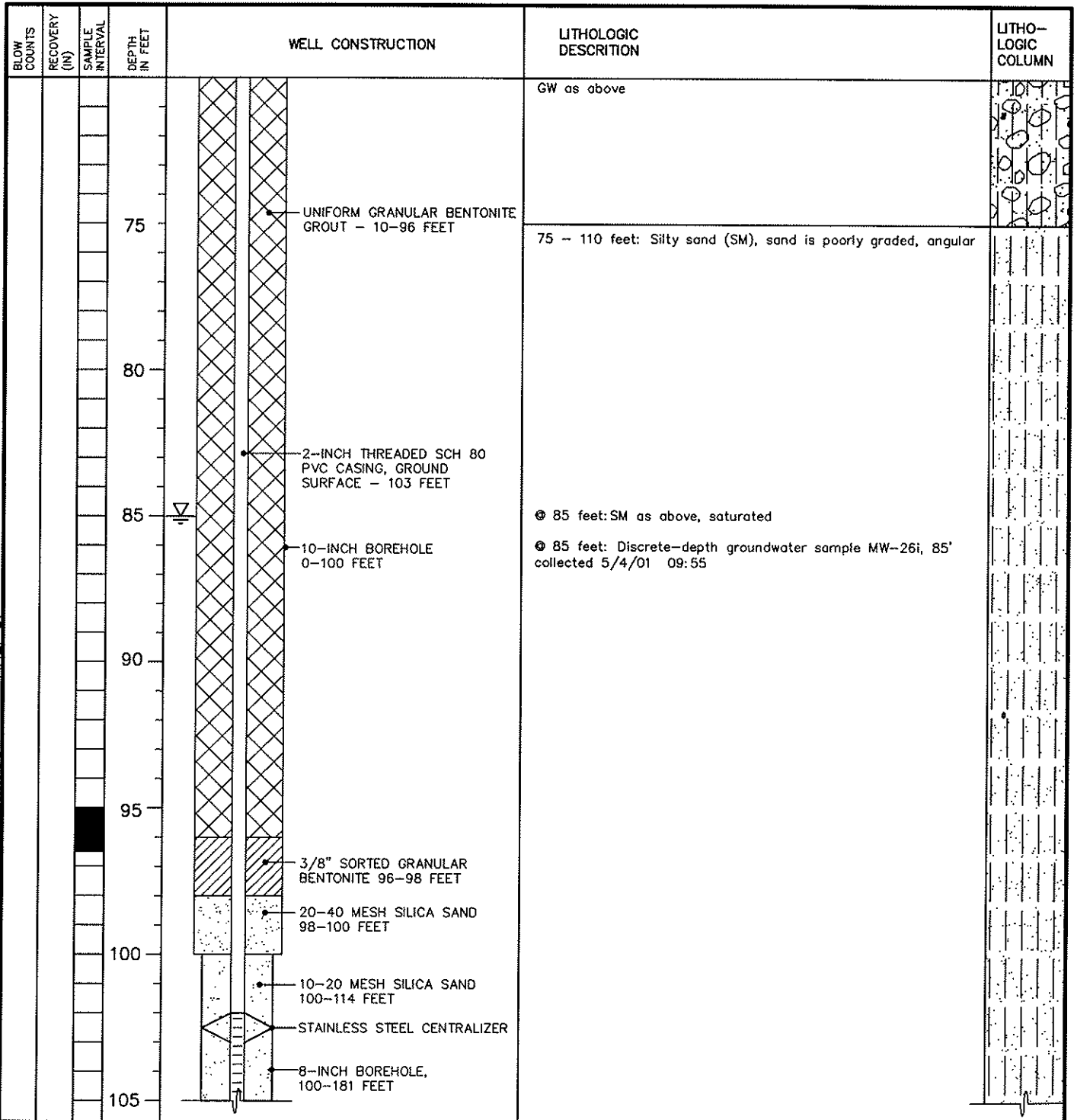
DATE: 03/28/07 FILENAME: 194006662 IMAGES: XREF'S:

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON/TERRY HANBURG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-26i
 Sheet: 3 OF 6
 Total Boring Depth: 181 FT / WELL DEPTH: 113 FT
 Date Started/Completed: APRIL 30, 2001/MAY 18, 2001
 Ground Level Elevation: 82.35 FT NGVD
 Measuring Point Elevation: 82.04 FT NGVD
 Static Water Level: 4.62 FT NGVD Date: 6/25/01
 Northing: 118143 Easting: 1082098



IMAGES: XREF'S:
 DATE: 03/28/07 FILENAME: 194006663

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON/TERRY HANBURG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-26i
 Sheet: 4 OF 6
 Total Boring Depth: 181 FT / WELL DEPTH: 113 FT
 Date Started/Completed: APRIL 30, 2001/MAY 18, 2001
 Ground Level Elevation: 82.35 FT NGVD
 Measuring Point Elevation: 82.04 FT NGVD
 Static Water Level: 4.62 FT NGVD Date: 6/25/01
 Northing: 118143 Easting: 1082098

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110	<ul style="list-style-type: none"> • 10-20 MESH SILICA SAND 100-114 FEET • 2-INCH THREADED SCH 80 0.010-INCH SLOTTED PVC WELL SCREEN 103-113 FEET • STAINLESS STEEL CENTRALIZER 	<p>SM as above Ⓣ 105 feet: Discrete-depth groundwater sample MW-26i, 105' collected 5/4/01 13:30</p>	
			115	<ul style="list-style-type: none"> • 3/8" SORTED GRANULAR BENTONITE 114-118 FEET 	<p>110 -127 feet: Well graded sand (SW) Ⓣ 112 feet: SW as above, ~30% gravel up to 4 inches in diameter, gravel is basaltic</p>	
			120	<ul style="list-style-type: none"> • UNIFORM GRANULAR BENTONITE 118-181 FEET 	<p>Ⓣ 120 feet: SW as above, trace gravel up to 1/2 inch in diameter Ⓣ 120 feet: Discrete-depth groundwater sample MW-26i, 120' collected 5/8/01 12:55</p>	
			125		<p>127 - 140 feet: Poorly graded sand (SP), coarse-grained to fine-grained, trace gravel Ⓣ 127 feet: SP as above, basaltic gravel up to 3 inches in diameter Ⓣ 129 feet: SP as above, ~10% gravel up to 3 inches in diameter, some cementation on gravel clasts, trace fines</p>	
			130		<p>Ⓣ 137 feet: SP as above, very fine-grained sand, ~20% fines, trace gravel up to 2 inches in diameter</p>	
			135			
			140			


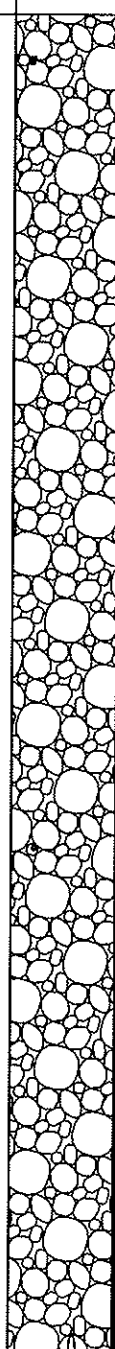
IMAGES: XREF'S:
 DATE: 03/28/07 FILENAME: 194006664

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON/TERRY HANBURG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-26i
 Sheet: 5 OF 6
 Total Boring Depth: 181 FT / WELL DEPTH: 113 FT
 Date Started/Completed: APRIL 30, 2001/MAY 18, 2001
 Ground Level Elevation: 82.35 FT NGVD
 Measuring Point Elevation: 82.04 FT NGVD
 Static Water Level: 4.62 FT NGVD Date: 6/25/01
 Northing: 118143 Easting: 1082098



BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145	 <p>UNIFORM GRANULAR BENTONITE GROUT 118-181</p> <p>8 INCH BOREHOLE 100-181 FEET</p>	<p>140 - 175 feet: Well graded gravel (GW) in silty sand matrix</p> <p>⊙ 140 feet: Discrete-depth groundwater sample MW-26i, 140' collected 5/9/01 14:20</p> <p>⊙ 141 feet: GW as above, predominantly less than 1/4 inch in diameter with trace clasts up to 3 inches in diameter, ~10% fine-grained sand, some fines, hard drilling</p> <p>⊙ 153 feet: GW as above, very hard drilling</p> <p>⊙ 155 feet: GW as above, trace clay</p> <p>⊙ 160 feet: Discrete-depth groundwater sample MW-26i, 160' collected 5/11/01 08:30</p> <p>⊙ 163 feet: GW as above, drilling not so hard</p> <p>⊙ 172 feet: GW as above, ~ 60% well graded gravel and 40% well graded sand in an olive brown silty clay matrix</p>	
			150			
			155			
			160			
			165			
			170			
			175			

DATE: 03/28/07 FILENAME: 194006665 IMAGES: XREF'S:

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: <u>PORT OF VANCOUVER/SWAN MANUFACTURING</u> Project Number: <u>275-1940-006</u> Location: <u>VANCOUVER, WA</u> PMX Representative: <u>CHRIS HAMILTON/TERRY HANBURG</u> Drilled By: <u>WESTERBURG DRILLING</u> Drill Method: <u>CABLE TOOL</u> Soil Sample Method: <u>2" SPLIT SPOON</u> Groundwater Sample Method: <u>TEMPORARY WELL POINT</u>	Boring Number: <u>MW-26i</u> Sheet: <u>6 OF 6</u> Total Boring Depth: <u>181 FT / WELL DEPTH: 113 FT</u> Date Started/Completed: <u>APRIL 30, 2001/MAY 18, 2001</u> Ground Level Elevation: <u>82.35 FT NGVD</u> Measuring Point Elevation: <u>82.04 FT NGVD</u> Static Water Level: <u>4.62 FT NGVD</u> Date: <u>6/25/01</u> Northing: <u>118143</u> Easting: <u>1082098</u>
---	--

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180	 <p>UNIFORM GRANULAR BENTONITE GROUT 118-181</p> <p>8 INCH BOREHOLE 100-181 FEET</p>	<p>As above Well graded gravel (GW) in silty sand matrix</p> <p>● 180 feet: Discrete-depth groundwater sample MW-26i, 180' collected 5/15/01 09:25</p> <p>● 181 feet: End of boring</p>	
			185			
			190			
			195			
			200			
			205			
			210			

DATE: 03/28/07 FILENAME: 194006666 IMAGES: XREF'S:

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING

Project Number: 275-1940-006

Location: VANCOUVER, WA

PMX Representative: TERRY HANBERG

Drilled By: WESTERBURG DRILLING

Drill Method: CABLE TOOL

Soil Sample Method: 2" SPLIT SPOON

Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-28i

Sheet: 1 OF 4

Total Boring Depth: 130 FT/ WELL DEPTH: 85 FT

Date Started/Completed: MARCH 23, 2001/APRIL 6, 2001

Ground Level Elevation: 31.11 FT NGVD

Measuring Point Elevation: 30.90 FT NGVD

Static Water Level: 4.94 FT NGVD Date: 4/30/01

Northing: 117831 Easting: 1079675

BLOW COUNTS	RECOVERY (in)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 3.5 feet: Gravel FILL	
			0-2	CEMENT 0-2 FEET		
			5	UNIFORM GRANULAR BENTONITE GROUT, 2-68 FEET	3.5 - 11 feet: Sand FILL ⊙ 4 feet: Geosynthetic fabric ⊙ 5 feet: FILL as above, loose ⊙ 6.5 feet: FILL as above, brick red fine-grained sand with occasional white flakes ⊙ 9.5 feet: FILL as above, silt, grey/brown mottled, rare wood and plastic fragments	
2	18		5			
			10			
			15	2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 75 FEET	11 - 21 feet: Silt (ML), dark brown to dark olive green, moist, very stiff ⊙ 12 feet: ML as above, some organic material (roots), H2S odor ⊙ 15 feet: ML as above, clayey, no odor	
6 10 8	18		15			
			20	10-INCH BOREHOLE 0-100 FEET	21 - 26 feet: Poorly graded sand (SP), fine-grained, light olive green, medium dense, moist	
6 6 4	16		20			
			25		26 - 32 feet: Poorly graded sand (SP), medium-grained, angular, medium dense ⊙ 27 feet: SP as above, saturated	
5 4 7	16		25			
			30		⊙ 30 feet: Discrete-depth groundwater sample MW-28, 30', collected 3/26/01 10:45	
			35		32 - 57 feet: Well graded sand with gravel (SW), sand is coarse-grained, gravel is sub-rounded to rounded, basaltic, saturated	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBERG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-28i
 Sheet: 2 OF 4
 Total Boring Depth: 130 FT/ WELL DEPTH: 85 FT
 Date Started/Completed: MARCH 23, 2001/APRIL 6, 2001
 Ground Level Elevation: 31.11 FT NGVD
 Measuring Point Elevation: 30.90 FT NGVD
 Static Water Level: 4.94 FT NGVD Date: 4/30/01
 Northing: 117831 Easting: 1079675

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		32 - 57 feet: Well graded sand with gravel (SW), sand is coarse-grained, gravel is sub-rounded to rounded, basaltic, saturated ◎ 38 feet: SW as above, ~80% coarse-grained sand, ~20% fine- to coarse-grained gravel	
			45	• UNIFORM GRANULAR BENTONITE GROUT - 2-68 FEET • 2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 75 FEET	◎ 50 feet: Discrete-depth groundwater sample MW-28, 50', collected 3/26/01 14:40 ◎ 53 feet: SW as above, ~60% coarse-grained sand, 40% fine- to coarse-grained gravel	
			55	• 10-INCH BOREHOLE 0-100 FEET		
			60		57 - 60 feet: Well graded gravel (GW), ~60% gravel 40% coarse-grained sand, gravel predominantly 2-inch minus with trace cobbles up to 6 inches in diameter, saturated	
			65		60 - 89 feet: Poorly graded gravel (GP), ~90% coarse-grained gravel, 10% coarse-grained sand, gravel is sub-rounded to rounded, saturated	
			70	• 3/8 INCH SORTED GRANULAR BENTONITE 68-70 FEET	◎ 68 feet: GP as above, hard drilling ◎ 70 feet: GP as above, trace cobbles up to 8 inches in diameter ◎ 70 feet: Discrete-depth groundwater sample MW-28, 70', collected 3/27/01 10:45	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBERG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-28i
 Sheet: 3 OF 4
 Total Boring Depth: 130 FT/ WELL DEPTH: 85 FT
 Date Started/Completed: MARCH 23, 2001/APRIL 6, 2001
 Ground Level Elevation: 31.11 FT NGVD
 Measuring Point Elevation: 30.90 FT NGVD
 Static Water Level: 4.94 FT NGVD Date: 4/30/01
 Northing: 117831 Easting: 1079675

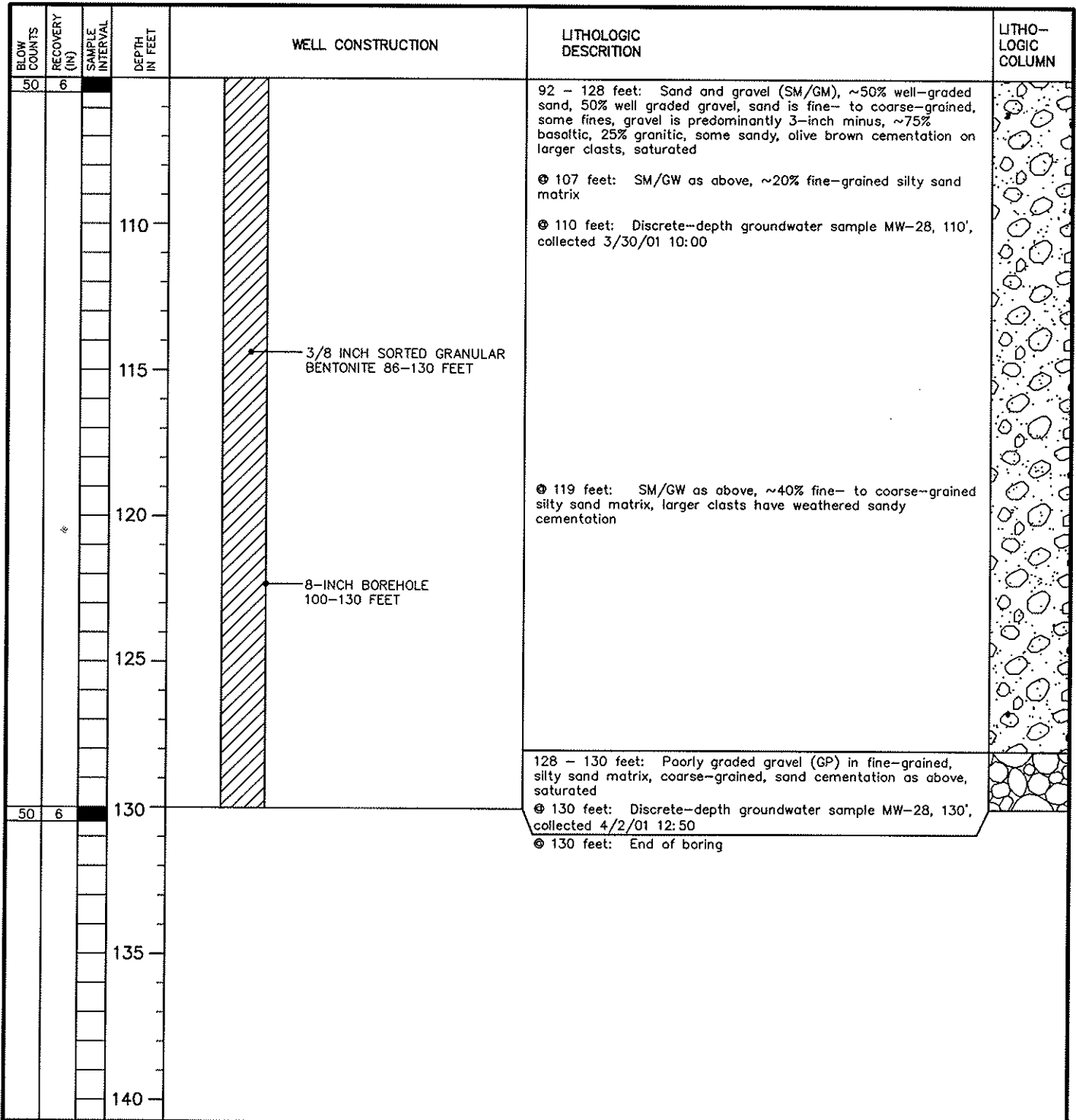
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	20-40 MESH SILICA SAND 70-71.5 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 75 FEET STAINLESS STEEL CENTRALIZER 10-20 MESH SILICA SAND 71.5-86 FEET 2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN 75-85 FEET STAINLESS STEEL CENTRALIZER	60 - 89 feet: Poorly graded gravel (GP), ~90% coarse-grained gravel, 10% coarse-grained sand, gravel is sub-rounded to rounded, saturated @ 79 feet: GP as above, hard drilling @ 81 feet: GP as above, some large boulders	75
2 50	12		90		89 - 92 feet: Well graded sand (SW), fine- to medium-grained, some fines, tan/grey, saturated @ 90 feet: Discrete-depth groundwater sample MW-28, 90', collected 3/28/01 12:15 grades to:	90
			95	10-INCH BOREHOLE 0-100 FEET 3/8 INCH SORTED GRANULAR BENTONITE 86-130 FEET	92 - 128 feet: Sand and gravel (SM/GM), ~50% well-graded sand, 50% well graded gravel, sand is fine- to coarse-grained, some fines, gravel is predominantly 3-inch minus, ~75% basaltic, 25% granitic, some sandy, olive brown cementation on larger clasts, saturated	95
			100	8 INCH BOREHOLE 100-130 FEET		100
			105			105

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBERG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-28i
 Sheet: 4 OF 4
 Total Boring Depth: 130 FT/ WELL DEPTH: 85 FT
 Date Started/Completed: MARCH 23, 2001/APRIL 6, 2001
 Ground Level Elevation: 31.11 FT NGVD
 Measuring Point Elevation: 30.90 FT NGVD
 Static Water Level: 4.94 FT NGVD Date: 4/30/01
 Northing: 117831 Easting: 1079675



BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931
Location: THOMPSON AND MILL PLAIN
PMX Representative: MIKE MARSHALL
Drilled By: GEOTECH EXPLORATIONS
Drill Method: AUGER
Soil Sample Method: SPLIT SPOON
Groundwater Sample Method: NA

Boring Number: MW-28s
Sheet: 1 OF 1
Total Boring Depth: 30 FT / WELL DEPTH: 29 FT
Date Completed: OCTOBER 5, 2004
Ground Level Measurement: 29.21 FT
Initial Water Level ∇ 25.8 FT (AUGER INGROUND)
Measuring Point Elevation: 29.08 FT
Static Water Level: 25.46 FT **Date:** 10/07/04
Northing: 117927.4 **Easting:** 1079806.5

BLOW COUNTS	RECOVERY (in)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
5 2 1	6"		5		No sample obtained	
5 7 3	4"		10		5-15 feet: SANDY GRAVELLY SILT (GM) - dark gray to black, loose, moist, sand is fine grained, rounded to sub rounded fine gravel	
5 4 4	4"		15		15-20 feet: SILT (ML) - dark gray, soft, moist to wet, micaceous	
3 3 5	16"		20		20-25 feet: SILTY SAND (SM) - dark gray, loose, moist to wet, micaceous, sand is fine grained	
5 7 5	18"		25		25-25.5 feet: SAND (SW) - dark gray, loose, saturated, micaceous, medium grained 25.5-30 feet: SILTY SAND (SM) - dark gray, loose, saturated, micaceous, fine grained	
			30		30 feet: End of boring	
			35			

DATE: 03/28/07 2:59pm FILENAME: P194006284

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBURG/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-29i
 Sheet: 1 OF 4
 Total Boring Depth: 130 FEET/WELL DEPTH: 125 FT
 Date Started/Completed: MARCH 6, 2001/MARCH 16, 2001
 Ground Level Elevation: 31.32 FT NGVD
 Measuring Point Elevation: 30.73 FT NGVD
 Static Water Level: 5.72 FT NGVD Date: 4/30/01
 Northing: 117364 Easting: 1078364

FILE: 194006653
 DATE: Mar 28, 2007 - 12:09pm PLOTTED BY: morgapau XREF'S:

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0-3 feet: Asphalt with sand and gravel subbase	
			5	CEMENT 0-2 FEET	3-8 feet: Silty sand (SM), very fine-grained, tan to gold, dry	
			10	3/8" SORTED GRANULAR BENTONITE 2-21 FEET	8-34 feet: Silt (ML), variable sand content, sand content generally increasing with depth, low to high plasticity, moist to dry	
			15	2-INCH THREADED SCH 80 PVC CASING, GROUND SURFACE - 115 FEET	⊙ 9 feet: ML as above high plasticity, moist	
	18		20	10-INCH BOREHOLE 0-100 FEET	⊙ 10 feet: ML as above, dry, sandy	
			25		⊙ 15 feet: ML as above, dark grey, some mica, moist	
			30	UNIFORM GRANULAR BENTONITE GROUT - 21-108 FEET	⊙ 20 feet: ML as above, very fine-grained sand	
			35		⊙ 30 feet: ML as above, some sand, high plasticity, saturated ⊙ 30 feet: Discrete-depth groundwater sample MW-29i 30' collected 3/6/01 13:00 ⊙ 30.5 feet: ML as above, ~30% medium to coarse-grained sand, low plasticity ⊙ 33 feet: ML as above, ~25% very fine-grained sand, ~15% medium to coarse-grained sand, sand becoming angular	

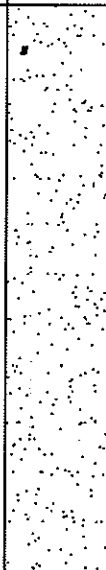

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBURG/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-29i
 Sheet: 2 OF 4
 Total Boring Depth: 130 FEET/WELL DEPTH: 125 FT
 Date Started/Completed: MARCH 6, 2001/MARCH 16, 2001
 Ground Level Elevation: 31.32 FT NGVD
 Measuring Point Elevation: 30.73 FT NGVD
 Static Water Level: 5.72 FT NGVD Date: 4/30/01
 Northing: 117364 Easting: 1078364

FILE: 194006654
 DATE: Mar 28, 2007 - 12:10pm
 PLOTTED BY: morgapau
 XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40	UNIFORM GRANULAR BENTONITE GROUT - 21-108 FEET	34-50 feet: Well graded sand (SW), predominantly coarse-grained, trace fine-grained gravel	
15 15 7	12		45			
			50	2-INCH THREADED SCH 80 PVC CASING, GROUND SURFACE ~ 115 FEET 10-INCH BOREHOLE 0-100 FEET	50-130 feet: Well graded sand with gravel (SW), sand fine- to medium-grained, predominantly coarse-grained, trace fines, gravel content variable ◎ 50 feet: Discrete-depth groundwater sample MW-29i 50' collected 3/7/01 12:30 ◎ 50 feet: SW as above, angular, ~30% gravel, clasts up to 1 1/2 inches in diameter ◎ 55 feet: SW as above, ~45% fine- to coarse-grained gravel, clasts up to 3 inches in diameter	
25 20 20	12		60			
			65		◎ 65 feet: SW as above, sand becoming less angular, trace fines	
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBURG/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-29i
 Sheet: 3 OF 4
 Total Boring Depth: 130 FEET/WELL DEPTH: 125 FT
 Date Started/Completed: MARCH 6, 2001/MARCH 16, 2001
 Ground Level Elevation: 31.32 FT NGVD
 Measuring Point Elevation: 30.73 FT NGVD
 Static Water Level: 5.72 FT NGVD Date: 4/30/01
 Northing: 117364 Easting: 1078364

BLOW COUNTS	RECOVERY (in)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	UNIFORM GRANULAR BENTONITE GROUT - 21-108 FEET 2-INCH THREADED SCH 80 PVC CASING, GROUND SURFACE - 115 FEET 10-INCH BOREHOLE 0-100 FEET	SW as above @ 70 feet: Discrete-depth groundwater sample MW-29i 70' collected 3/8/01 09:00	
			80	8-INCH BOREHOLE 100-130 FEET	@ 78 feet: SW as above, sand predominantly coarse-grained, gravel clasts up to 1 inch in diameter @ 90 feet: SW as above @ 90 feet: Discrete-depth groundwater sample MW-29i 90' collected 3/8/01 14:30	
			85			
			90			
			95			
			100			
			105			

FILE: 194006655
 DATE: Mar 28 2007 - 12:11pm PLOTTED BY: marcapau XREF'S: IMAGES:

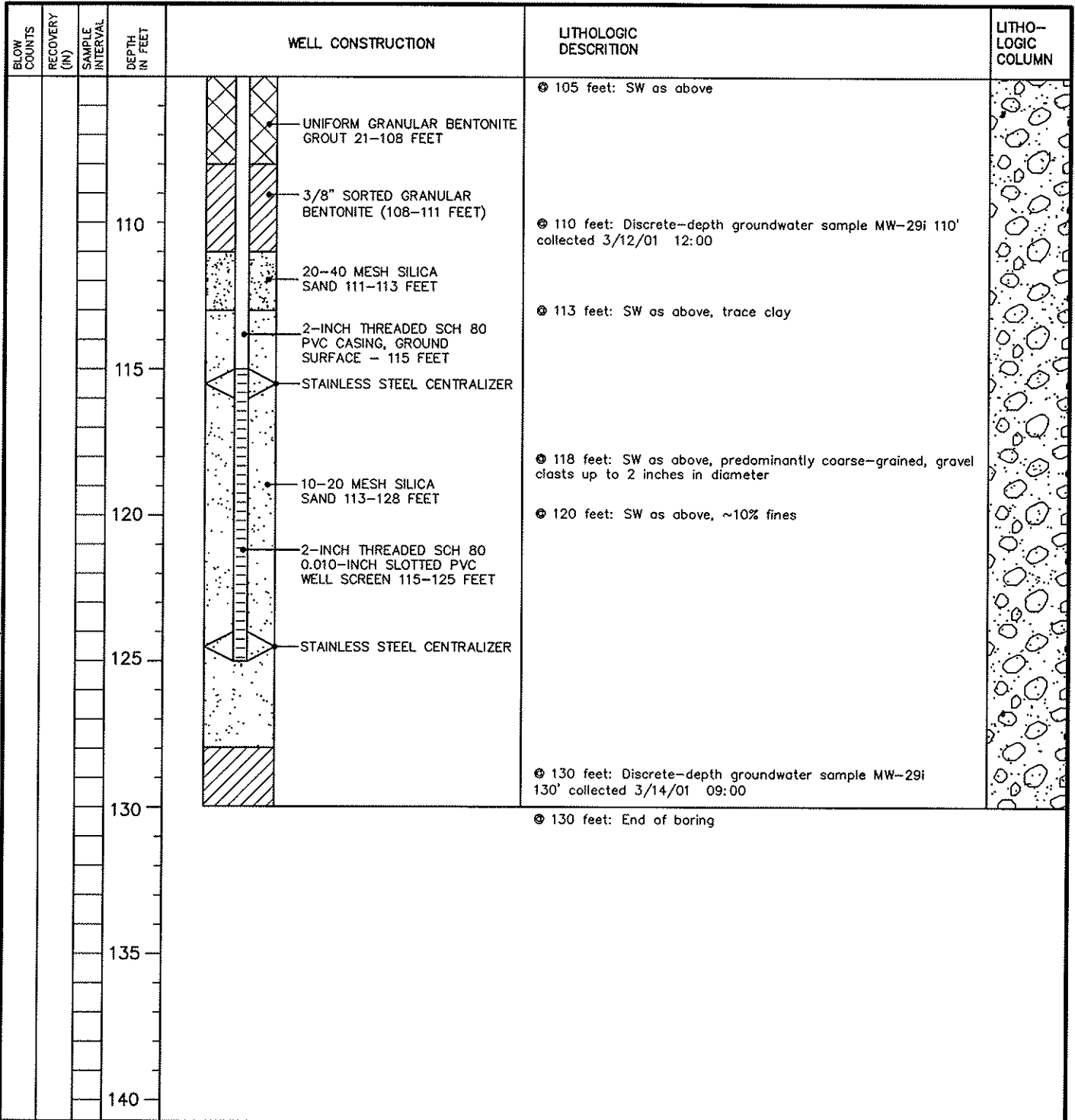
EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBURG/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-29i
 Sheet: 4 OF 4
 Total Boring Depth: 130 FEET/WELL DEPTH: 125 FT
 Date Started/Completed: MARCH 6, 2001/MARCH 16, 2001
 Ground Level Elevation: 31.32 FT NGVD
 Measuring Point Elevation: 30.73 FT NGVD
 Static Water Level: 5.72 FT NGVD Date: 4/30/01
 Northing: 117364 Easting: 1078364

FILE: 194006656
 DATE: Mar 28, 2007 - 12:12pm
 PLOTTED BY: morgapau
 XREF'S:



EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER/SWAN MFG Boring Number: MW-30i
 Project Number: 275-1940-006-05-6300 Sheet: 1 OF 6
 Location: ST. SERVICES Total Boring Depth: 187 FEET/WELL DEPTH: 85 FEET
 PMX Representative: INGMAR SAUL Date Completed: MARCH 3, 2003
 Drilled By: WESTERBERG DRILLING Ground Level Elevation: 29.82 FEET
 Drill Method: CABLE TOOL Measuring Point Elevation: 29.61 FEET
 Soil Sample Method: SPLIT SPOON Static Water Level: ~24 FEET Date: 2/03
 Groundwater Sample Method: SUBMERSIBLE PUMP Northing: 118607.3 Easting: 1077713.8

FILE: P194006022
 DATE: Mar 28, 2007 - 9:30am PLOTTED BY: morgapau XREF'S: IMAGES:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0-5 feet: SANDY GRAVEL (GW) - Black (10YR 2/1), Fill dense, wet/saturated, fine to coarse grained sand, well graded, poorly sorted ~45%, fine angular gravel ~55%, micaceous.	[Pattern]
			5	CONCRETE 0-1 FEET		
			10	BENTONITE CHIPS 1-4 FEET		
4 3 3	18"		10		5 - 14 feet: SAND (SW) - Very dark gray (10YR 3/1) loose wet (driller added water), fine to medium grained sand, well graded, poorly sorted, micaceous.	[Pattern]
			15	BENTONITE GROUT, 4-69 FEET		
2 2 2	18"		15		@ 10 - 11.5 feet: Dark gray (10YR 4/1), damp, sub-rounded, trace of fine sub-rounded gravel ~1%.	[Pattern]
			20	2-INCH THREADED SCH 80 PVC CASING, FLUSH THREAD		
1 2 2	18"		20		14 - 23 feet: SILT (ML)- Very dark grayish brown (10YR 3/2), soft, moist, micaceous.	[Pattern]
			25	10-INCH BOREHOLE 0-105 FEET		
1 2 3	18"		25		@ 20 - 21.5 feet: Grayish brown (10YR 5/2), moderately mottled	[Pattern]
			30		23 - 27 feet: SANDY SILT (SM)- Brown (10YR 4/3), medium stiff, moist, medium to fine grained sand, sub-angular ~30%, ~70% silt.	[Pattern]
50 3	1"		30		28 - 50 feet: SAND (SW)- Very Dark Brown (10YR 2/2), loose, saturated fine to coarse sand, poorly sorted, well graded, sub rounded. @ 29 feet: Discrete depth groundwater sample MW30-29', collected 2/6/03 1110.	[Pattern]
			35			

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER/SWAN MFG Boring Number: MW-30i
 Project Number: 275-1940-006-05-6300 Sheet: 2 OF 6
 Location: ST. SERVICES Total Boring Depth: 187 FEET/WELL DEPTH: 85 FEET
 PMX Representative: INGMAR SAUL Date Completed: MARCH 3, 2003
 Drilled By: WESTERBERG DRILLING Ground Level Elevation: 29.82 FEET
 Drill Method: CABLE TOOL Measuring Point Elevation: 29.61 FEET
 Soil Sample Method: SPLIT SPOON Static Water Level: ~24 FEET Date: 2/03
 Groundwater Sample Method: SUBMERSIBLE PUMP Northing: 118607.3 Easting: 1077713.8

FILE: P194006023
 DATE: Mar 28, 2007 - 9:28am PLOTTED BY: morgapau
 IMAGES: XREF'S:

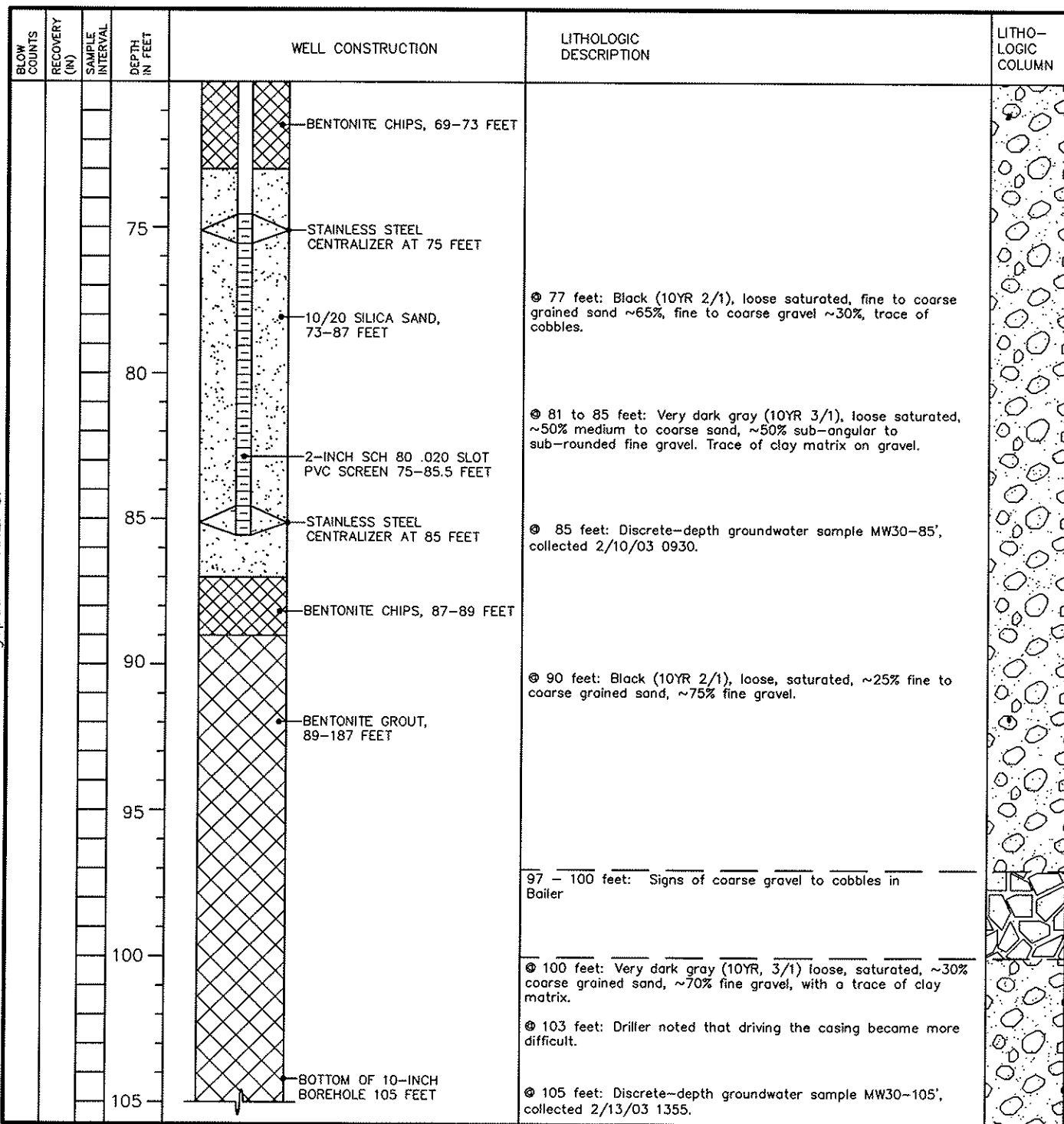
BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		⊗ 40 feet: trace of fine gravel.	
			45		⊗ 45 feet: Heaving sands ⊗ 45 feet: discrete-depth groundwater sample MW30-45', collected 2/6/03 1515.	
			50	2-INCH THREADED SCH 80 PVC CASING, FLUSH THREAD		
			55	10-INCH BOREHOLE 0-105 FEET	50 - 139 feet: GRAVELY SAND (GW) - Black (10YR 2/1), loose, saturated, ~80% fine to coarse grained sand, poorly sorted, well graded, ~20% fine to coarse sub-rounded gravel.	
			60		⊗ 53 feet: Switch from bailing to drilling. The percent of gravel is increasing causing harder drilling	
			65		⊗ 60 feet: Greater percentage of coarse gravels and cobbles range in length of 5 inches to 8 inches.	
			70	BENTONITE CHIPS, 69-73 FEET	⊗ 65 feet: discrete-depth groundwater sample MW30-65', collected 2/7/03 1230.	
					⊗ 67 feet: SANDY GRAVEL (GW) - ~20% fine to coarse grained sand, ~80% fine to coarse gravel.	
				BENTONITE GROUT, 4-69 FEET		

EXPLORATORY BORING LOG

Parametrix

Project Name: <u>PORT OF VANCOUVER/SWAN MFG</u>	Boring Number: <u>MW-30i</u>
Project Number: <u>275-1940-006-05-6300</u>	Sheet: <u>3 OF 6</u>
Location: <u>ST. SERVICES</u>	Total Boring Depth: <u>187 FEET/WELL DEPTH: 85 FEET</u>
PMX Representative: <u>INGMAR SAUL</u>	Date Completed: <u>MARCH 3, 2003</u>
Drilled By: <u>WESTERBERG DRILLING</u>	Ground Level Elevation: <u>29.82 FEET</u>
Drill Method: <u>CABLE TOOL</u>	Measuring Point Elevation: <u>29.61 FEET</u>
Soil Sample Method: <u>SPLIT SPOON</u>	Static Water Level: <u>~24 FEET</u> Date: <u>2/03</u>
Groundwater Sample Method: <u>SUBMERSIBLE PUMP</u>	Northing: <u>118607.3</u> Easting: <u>1077713.8</u>

FILE: P194006024
 DATE: Mar 28, 2007 - 9:28am
 PLOTTED BY: morgapau
 IMAGES: XREF'S:



EXPLORATORY BORING LOG

Parametrix

Project Name: <u>PORT OF VANCOUVER/SWAN MFG</u>	Boring Number: <u>MW-30i</u>
Project Number: <u>275-1940-006-05-6300</u>	Sheet: <u>4 OF 6</u>
Location: <u>ST. SERVICES</u>	Total Boring Depth: <u>187 FEET/WELL DEPTH: 85 FEET</u>
PMX Representative: <u>INGMAR SAUL</u>	Date Completed: <u>MARCH 3, 2003</u>
Drilled By: <u>WESTERBERG DRILLING</u>	Ground Level Elevation: <u>29.82 FEET</u>
Drill Method: <u>CABLE TOOL</u>	Measuring Point Elevation: <u>29.61 FEET</u>
Soil Sample Method: <u>SPLIT SPOON</u>	Static Water Level: <u>~24 FEET</u> Date: <u>2/03</u>
Groundwater Sample Method: <u>SUBMERSIBLE PUMP</u>	Northing: <u>118607.3</u> Easting: <u>1077713.8</u>

FILE: P194006025
 DATE: Mar 28, 2007 - 9:28am
 PLOTTED BY: morgapau
 XREF'S:

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110	<p style="margin-left: 20px;">TOP OF 8-INCH BOREHOLE 105-187 FEET</p> <p style="margin-left: 20px;">BENTONITE GROUT, 89-187 FEET</p>	<p>⊙ 105 feet: Very dark gray (10YR 3/1), loose, saturated, ~25% fine to coarse grained sand, ~75% fine to coarse gravel, with a trace of clay matrix. Switched from bailing to drilling</p>	
			115		<p>⊙ 112 feet: Driller said casing started driving harder, having trouble with heaving sands, material is too loose, the casing is dropping as material is bailed out of casing.</p>	
			120		<p>117 feet: GRAVELLY SAND (GW)- Black (10YR 2/1), loose, saturated, ~20% sub-angular to sub-rounded fine gravel, ~80% sub-angular, well graded, poorly sorted medium to coarse grained sand. Having problem with heaving sands. Switched from drilling to bailing</p>	
			125		<p>⊙ 125 feet: Discrete-depth groundwater sample MW30-125', collected 2/3/03 1010</p>	
			130		<p>⊙ 130 feet: Trace of coarse gravel less than ~5% signs of clay matrix holding together coarse grained sand <1%.</p>	
			135		<p>⊙ 132 feet: Casing driving in a lot harder than before. Switched from bailing to drilling.</p>	
			140		<p>⊙ 135 feet: Signs of more coarse gravels, probably a sand, gravel.</p>	
					<p>139 - 162 feet: SAND (SW)- Black (10YR 2/1) loose, saturated, fine to coarse grained sand, well graded, poorly sorted. Heaving Sands, Switched from drilling to bailing.</p>	

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER/SWAN MFG Boring Number: MW-30i
 Project Number: 275-1940-006-05-6300 Sheet: 5 OF 6
 Location: ST. SERVICES Total Boring Depth: 187 FEET/WELL DEPTH: 85 FEET
 PMX Representative: INGMAR SAUL Date Completed: MARCH 3, 2003
 Drilled By: WESTERBERG DRILLING Ground Level Elevation: 29.82 FEET
 Drill Method: CABLE TOOL Measuring Point Elevation: 29.61 FEET
 Soil Sample Method: SPLIT SPOON Static Water Level: ~24FEET Date: 2/03
 Groundwater Sample Method: SUBMERSIBLE PUMP Northing: 118607.3 Easting: 1077713.8

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145		<p>⊕ 145 feet: Discrete-depth groundwater sample MW30-145', collected 2/14/03 1400</p> <p>⊕ 145 feet: Very dark gray (10YR 3/1), loose saturated, medium to fine grained sand, well graded, poorly sorted.</p> <p>⊕ 150 feet: Trace of clay matrix holding together fine sand.</p> <p>⊕ 155 feet: Micaceous, signs of clay matrix.</p> <p>⊕ 157 feet: First signs of fine to coarse gravel, (<5%) mixed in with sands. (No signs of Cementation)</p> <p>⊕ 159.5 feet: Switched from bailing to drilling.</p> <p>⊕ 159.5 feet: Switched from drilling to bailing, encountered heaving sands.</p>	
			150			
			155			
			160			
			165			
			170			
			175			
			175			
			175			
			175			
			175	<p>162 - 175 feet: GRAVELLY SAND (GW)-- Very dark gray (10YR2/1) loose, saturated, ~15% fine to coarse gravel, signs of cementation, ~85% fine to coarse grained sand, micaceous, with a trace of silt.</p> <p>⊕ 165 feet: Switched from bailing to drilling.</p> <p>⊕ 165 feet: Discrete-depth groundwater sample MW30-165', collected 2/17/03 1540</p> <p>⊕ 172 feet: Some coarse gravel showed signs of cementation and clay matrix.</p>		
			175	<p>175 - 183 feet: GRAVELLY SANDY SILT (GW/SM)-- Gray (10YR, 5/1), loose saturated, fine to coarse gravel ~15%, fine to coarse grained sand ~20%, silt ~65% micaceous.</p>		

FILE: P194006026
 DATE: Mar 28, 2007 - 9:29am PLOTTED BY: morgapau
 IMAGES: XREF'S:

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER/SWAN MFG Boring Number: MW-30i
 Project Number: 275-1940-006-05-6300 Sheet: 6 OF 6
 Location: ST. SERVICES Total Boring Depth: 187 FEET/WELL DEPTH: 85 FEET
 PMX Representative: INGMAR SAUL Date Completed: MARCH 3, 2003
 Drilled By: WESTERBERG DRILLING Ground Level Elevation: 29.82 FEET
 Drill Method: CABLE TOOL Measuring Point Elevation: 29.61 FEET
 Soil Sample Method: SPLIT SPOON Static Water Level: ~24 FEET Date: 2/03
 Groundwater Sample Method: SUBMERSIBLE PUMP Northing: 118607.3 Easting: 1077713.8


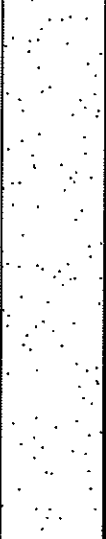


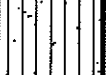


BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180	<p>TOP OF 8-INCH BOREHOLE 105-187 FEET</p> <p>BENTONITE GROUT, 89-187 FEET</p>	<p>⊙ 175 feet: Gray (10YR 5/1), loose saturated, ~15% fine to coarse gravel, ~20% fine to coarse grained sand, ~65% silt, micaceous.</p>	
			185			<p>183 - 187 feet: SILT (ML) - Gray (10YR 4/1), loose, saturated trace of fine gravel, trace of mud is coarse ground sand.</p> <p>⊙ 185 feet: Discrete-depth groundwater sample MW30-185', collected 2/19/03 1415</p>
			190		<p>187 feet: Bottom of Boring at 187 feet.</p>	

FILE: P194006027
 DATE: Mar 28, 2007 -- 9:29am PLOTTED BY: morgapau
 IMAGES: XREF'S:

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER/SWAN MFG Boring Number: MW-31i
 Project Number: 275-1940-006-05-6300 Sheet: 1 OF 5
 Location: ST. SERVICES Total Depth: 167 FEET/WELL DEPTH: 85 FT
 PMX Representative: INGMAR SAUL Date Completed: FEBURARY 4, 2003
 Drilled By: WESTERBERG DRILLING Ground Level Elevation: 31.65 FT
 Drill Method: CABLE TOOL Measuring Point Elevation: 31.45 FT
 Soil Sample Method: SPLIT SPOON Static Water Level: ~25 FEET Date: 12/02
 Groundwater Sample Method: SUBMERSIBLE PUMP Northing: 119133.4 Easting: 1077245.3

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-2 FEET BENTONITE CHIPS 2-6 FEET BENTONITE GROUT, 6-68 FEET 2-INCH THREADED SCH 80 PVC CASING, FLUSH THREAD 10-INCH BOREHOLE 0-107 FEET	0 - 1 feet: Gravel and Ground Asphalt cover with fine, 1 - 3 feet: GRAVELLY SAND (GW) - Very dark gray (10YR 3/1). Damp, well rounded coarse to fine gravel in medium to fine sand, micaceous, fill material.	
			5		3 - 4 feet: SAND (SW) - Gray (10YR 5/1) damp, loose, poorly graded well sorted, some coarse sand in fine grained sand, fill material. @ 4 feet: Boulder or concrete pipe?	
2 3 4	12"		10		@ 15 feet: Black (10YR 2.5/1) medium stiff, moist, ~20% fine-grained sand, trace of fine gravel, micaceous.	
2 2 3	12"		15		17 - 22.5 feet: SILT (ML) - Dark grayish brown (10YR 4/2), medium stiff, damp, moderately mottled, micaceous.	
1 2 3	13"		20		22.5 - 28 feet: SANDY SILT (MH) - Brown (10YR 4/3), soft, wet/moist, ~30% fine-grained sand, trace of fine gravel.	
1 1 1	16"		25		28 - 55 feet: SAND (SW) - Very dark gray (10YR 3/1) loose, saturated, well graded, poorly sorted, fine to coarse grained sand, sub angular, trace of fine gravels, predominantly coarse grained. @ 28 feet: Discrete-depth groundwater sample MW31-28', collected 1/10/03 0935	
1 2 7	12"		30			
			35			

FILE: P194006028
 DATE: Mar 28, 2007 - 11:39am PLOTTED BY: morgopau XREF'S:

EXPLORATORY BORING LOG

Parametrix

Project Name: <u>PORT OF VANCOUVER/SWAN MFG</u>	Boring Number: <u>MW-31i</u>
Project Number: <u>275-1940-006-05-6300</u>	Sheet: <u>2 OF 5</u>
Location: <u>ST. SERVICES</u>	Total Depth: <u>167 FEET/WELL DEPTH: 85 FT</u>
PMX Representative: <u>INGMAR SAUL</u>	Date Completed: <u>FEBURARY 4, 2003</u>
Drilled By: <u>WESTERBERG DRILLING</u>	Ground Level Elevation: <u>31.65 FT</u>
Drill Method: <u>CABLE TOOL</u>	Measuring Point Elevation: <u>31.45 FT</u>
Soil Sample Method: <u>SPLIT SPOON</u>	Static Water Level: <u>~25 FEET</u> Date: <u>12/02</u>
Groundwater Sample Method: <u>SUBMERSIBLE PUMP</u>	Northing: <u>119133.4</u> Easting: <u>1077245.3</u>

FILE: P194006029
 DATE: Mar 28, 2007 - 11:40am
 PLOTTED BY: morgapau
 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40	BENTONITE GROUT, 6-68 FEET	@ 35 - 40 feet: Noticed an increase in fine gravels, trace of wood debris. @ 40 - 41.5 feet: Very dark gray (10YR 3/1) wet, loose, fine to coarse grained sand, majority is medium-grained, poorly sorted, well graded, sub-angular, trace of fine gravel up to 3 inches Heaving sand @ 45 feet: Discrete-depth groundwater sample MW31-45', collected 1/10/03 1525	
5 8 17	15"		45	2-INCH THREADED SCH 80 PVC CASING, FLUSH THREAD	@ 50 - 55 feet: signs of coarser gravels, up to 6 inches in length. Switched from bailing to drilling.	
			50	10-INCH BOREHOLE 0-107 FEET	55 - 100 feet: SANDY GRAVEL (GW)- Very dark gray (10YR 3/1), saturated, loose, ~60% cobbles to fine gravel, ~40% fine to coarse sand, material becomes coarser (coarse gravel to cobbles). with majority of sand being coarse grained.	
50 3	0"		60		@ 65 feet: Discrete-depth groundwater sample MW31-65', collected 1/13/03 1305 @ 65 feet: Switched from drilling to bailing.	
			65			
			70	BENTONITE CHIPS, 68-72 FEET		

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER/SWAN MFG
 Project Number: 275-1940-006-05-6300
 Location: ST. SERVICES
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: SUBMERSIBLE PUMP

Boring Number: MW-31i
 Sheet: 3 OF 5
 Total Depth: 167 FEET/WELL DEPTH: 85 FT
 Date Completed: FEBURARY 4, 2003
 Ground Level Elevation: 31.65 FT
 Measuring Point Elevation: 31.45 FT
 Static Water Level: ~25 FEET Date: 12/02
 Northing: 119133.4 Easting: 1077245.3

FILE: P194006030
 DATE: Mar 28, 2007 - 11:37am PLOTTED BY: morgapau XREF'S:
 IMAGES:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	BENTONITE CHIPS, 68-72 FEET STAINLESS STEEL CENTRALIZER AT 75 FEET 10/20 SILICA SAND, 72-87 FEET 2-INCH SCH 80 .020 SLOT PVC SCREEN 75-85.5 FEET STAINLESS STEEL CENTRALIZER AT 85 FEET BENTONITE CHIPS, 87-89 FEET BENTONITE GROUT, 89-167 FEET 10 INCH BOREHOLE	@ 70 feet: Dark gray (10YR 4/1) saturated, ~80% cobbles to fine gravel, ~20% fine to coarse sand. Majority of gravel is coarse. @ 78 feet: Gray (10YR 4/1) loose, saturated, ~20% coarse grained sand, ~80% coarse gravel, some boulders, gravel well rounded, sand sub rounded. @ 85 feet: Discrete-depth groundwater sample MW31-85', collected 1/14/03 1020 @ 85 feet: Dark gray (10YR 4/1) loose, saturated, ~15% sand coarse grained, ~85% fine to coarse gravel (majority is fine) well rounded, trace of clay on matrix gravels. @ 86 to 87 feet: Bailing is getting more difficult. @ 87 feet: Dark gray (10YR 4/1), loose saturated, ~15% coarse grained sand, 85% gravel. Switched from bailing to drilling. @ 88 feet: Driller said drilling has become noticeably more difficult. No signs of cementation on gravel. 100 -115 feet: GRAVEL (GP) - First signs of cementation on gravel, Clay matrix stuck on gravel. @ 105 feet: Discrete-depth groundwater sample MW31-105', collected 1/15/03 1603	
			80			
			85			
			90			
			95			
			100			
			105			

EXPLORATORY BORING LOG

Parametrix

Project Name: <u>PORT OF VANCOUVER/SWAN MFG</u>	Boring Number: <u>MW-31i</u>
Project Number: <u>275-1940-006-05-6300</u>	Sheet: <u>4 OF 5</u>
Location: <u>ST. SERVICES</u>	Total Depth: <u>167 FEET/WELL DEPTH: 85 FT</u>
PMX Representative: <u>INGMAR SAUL</u>	Date Completed: <u>FEBURARY 4, 2003</u>
Drilled By: <u>WESTERBERG DRILLING</u>	Ground Level Elevation: <u>31.65 FT</u>
Drill Method: <u>CABLE TOOL</u>	Measuring Point Elevation: <u>31.45 FT</u>
Soil Sample Method: <u>SPLIT SPOON</u>	Static Water Level: <u>~25 FEET</u> Date: <u>12/02</u>
Groundwater Sample Method: <u>SUBMERSIBLE PUMP</u>	Northing: <u>119133.4</u> Easting: <u>1077245.3</u>

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110	<p style="font-size: small;"> BOTTOM OF 10-INCH BOREHOLE 0-107 FEET TOP OF 8-INCH BOREHOLE 107-167 FEET BENTONITE GROUT, 89-187 FEET </p>	<p>⊕ 111 feet: Drilling has become more difficult.</p> <hr/> <p>115 - 160 feet: SANDY GRAVEL (GW)- Dark gray (10YR 4/1), loose, saturated, ~15% fine grained sand, ~85% in fine to coarse gravel, trace of cementation on gravel.</p> <p>⊕ 119 feet: ~25% gravel has signs of cementation.</p> <hr/> <p>⊕ 125 feet: Discrete-depth groundwater sample MW31-125', collected 1/20/03 1300</p> <p>⊕ 125 - 130 feet: SANDY GRAVEL (GW)</p> <p>⊕ 125 feet: Dark gray (10YR 4/1) loose, saturated, very little fine gravel coming up with the bailer, medium to fine sand, poorly sorted well graded, micaceous, sub-rounded, ~85% sand, ~15% gravel. No sign of cementation or clay matrix.</p> <hr/> <p>⊕ 130 feet: Dark Gray (10YR 4/1) loose, saturated, ~20% fine grained sand, ~80% fine gravel.</p> <hr/> <p>⊕ 135 feet: ~20% fine to coarse grained sand, ~80% fine to coarse gravel to cobbles.</p>	
			115			
			120			
			125			
			130			
			135			
			140			

FILE: P194006031
 DATE: Mar 28, 2007 - 11:37am PLOTTED BY: morgapau XREF'S:

EXPLORATORY BORING LOG

Parametrix

Project Name: <u>PORT OF VANCOUVER/SWAN MFG</u>	Boring Number: <u>MW-31i</u>
Project Number: <u>275-1940-006-05-6300</u>	Sheet: <u>5 OF 5</u>
Location: <u>ST. SERVICES</u>	Total Depth: <u>167 FEET/WELL DEPTH: 85 FT</u>
PMX Representative: <u>INGMAR SAUL</u>	Date Completed: <u>FEBURARY 4, 2003</u>
Drilled By: <u>WESTERBERG DRILLING</u>	Ground Level Elevation: <u>31.65 FT</u>
Drill Method: <u>CABLE TOOL</u>	Measuring Point Elevation: <u>31.45 FT</u>
Soil Sample Method: <u>SPLIT SPOON</u>	Static Water Level: <u>~25 FEET</u> Date: <u>12/02</u>
Groundwater Sample Method: <u>SUBMERSIBLE PUMP</u>	Northing: <u>119133.4</u> Easting: <u>1077245.3</u>

FILE: P194006032
 DATE: Mar 28, 2007 - 11:38am
 PLOTTED BY: morgapau
 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
			145	<p style="margin-left: 20px;">8-INCH BOREHOLE 107-167 FEET</p> <p style="margin-left: 20px;">BENTONITE GROUT, 89-167 FEET</p>	<p>⊕ 145 feet: Discrete-depth groundwater sample MW31-145', collected 1/22/03 0918</p> <p>⊕ 150 feet: Drilling became easier from 150 feet to 157 feet.</p> <p>⊕ 155 feet: Dark gray (10YR 4/1), loose, saturated, ~30% fine-grained sand, ~70% to fine gravel. Signs of clay matrix and cementation on gravel.</p>		
			150				
			155				
			160				
			165		<p>163 - 167 feet: SANDY SILTY GRAVEL (SM/GW)- Gray (10YR 2/1) loose, saturated, ~5-10% medium to fine grained sand, ~20-25% silt, ~65-70% fine gravel, silt matrix holding sand and gravel together.</p> <p>⊕ 165 feet: Discrete-depth groundwater sample MW31-165', collected 1/23/03 1430</p>		
			170		<p>167 feet bgs Bottom of Boring at 167 feet.</p>		
			175				

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: POV WEST OF GUARD SHACK
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: MW-32i
 Sheet: 1 OF 4
 Total Boring Depth: 141.5 FEET/WEEL DEPTH: 70 FT
 Date Completed: JULY 23, 2004
 Ground Level Measurement: 34.49 FT
 Initial Water Level ▽ 29.35 FT/WELL DEPTH @ 70'-0"
 Measuring Point Elevation: 34.2 FT
 Static Water Level: 29.81 FT Date: 8/16/04
 Northing: 118876.2 Easting: 1076875.1

FILE: P194006201
 DATE: Mar 28, 2007 - 11:24am
 PLOTTED BY: morgapau
 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1 FEET 10/20 SAND 1-2 FEET TO DRAIN MONUMENT BENTONITE CHIPS 2-5 FEET BENTONITE SLURRY, 5-52 FEET 2-INCH THREADED SCH 80 PVC CASING 0-60 FEET, FLUSH THREAD. 10-INCH BOREHOLE 0-101.5 FEET	0-2 feet: GRAVEL Fill 3/4 minus, asphalt layer 2-inches thick 2 - 10 feet: SAND (SW) - Dark gray (10YR 4/1), loose, damp, fine to coarse grained, well graded, with trace of fine gravel ~5% @ 8 feet: SAND, without gravel 10 - 15 feet: SILTY SAND (SW) - gray (10YR 5/1) loose, moist, medium to fine grained sand, graded well, micaceous 15 - 18 feet: SILT (ML) - Very dark gray (10YR 3/1) medium stiff, moist, micaceous 18 - 24 feet: SANDY SILT (SM) - Brown (10YR 5/3), medium stiff, moist, micaceous, moderately mottled 24 - 36 feet: SILT (ML) - Brown (10YR 5/3), medium stiff, moist to wet, micaceous, moderately mottled @30 feet: SILT, soft, wet	
1 3 5	9"		10			
2 3 4	14"		15			
2 3 2	18"		20			
4 2 3	18"		25			
1 1 2	18"		30			
			35			

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: POV WEST OF GUARD SHACK
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: MW-32i
 Sheet: 2 OF 4
 Total Boring Depth: 141.5 FEET/WEEL DEPTH: 70 FT
 Date Completed: JULY 23, 2004
 Ground Level Measurement: 34.49 FT
 Initial Water Level ∇ 29.35 FT/WELL DEPTH @ 70'-0"
 Measuring Point Elevation: 34.2 FT
 Static Water Level: 29.81 FT Date: 8/16/04
 Northing: 118876.2 Easting: 1076875.1

FILE: P194006202
 DATE: Mar 28, 2007 - 11:24am PLOTTED BY: morgapau
 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
1 1 2	18"					
			40	BENTONITE SLURRY, 5-52 FEET	36 - 39 feet: GRAVELY SILT (ML)- Dark reddish brown (5YR 2/3), wet, soft, sub-rounded, fine gravel	
1 3 7	18"				39 - 47 feet: SAND (SW) Dark Brown (7.5YR 3/3), saturated, loose, sub-rounded, medium to coarse grained, trace of sub-rounded fine gravel. @39 feet: Discrete depth groundwater sample MW32i-39 feet Collected 7/8/04 1440	
2 5 7	8"		45		@ 45 - 46.5 feet: SAND (SW)- Very Dark Gray (5YR 3/1)	
			50	2-INCH THREADED SCH 80 PVC CASING, 0-60 FEET, FLUSH THREAD 10-INCH BOREHOLE 0-101.5 FEET BENTONITE CHIPS, 52-56 FEET	47-60 feet: GRAVELY SAND (SW) - Very Dark Gray (5YR 3/1), saturated, loose, sub-rounded, medium to coarse grained sand, with 25% sub-rounded fine gravel	
50 5	4"				@ 57 feet: ~40% sub-rounded fine to coarse gravel	
			60	20/40 SILICA SAND, 56-57 FEET 10/20 SILICA SAND, 57-71 FEET STAINLESS STEEL CENTRALIZER AT 60 FEET	60 - 100 feet: SANDY GRAVEL (GW)- Very Dark Gray (5YR 3/1), saturated, loose, sub-rounded, medium to coarse grained sand, well graded, ~60% gravel, ~40% sand @60 feet: Discrete depth groundwater sample MW-32i-60 feet 7/9/04 1055	
			65	2-INCH SCH 80 .010 SLOT PVC SCREEN 60-70 FEET	@ 64 feet: SANDY GRAVEL (GW), ~75% gravel, ~25% sand	
			70	STAINLESS STEEL CENTRALIZER AT 70 FEET		

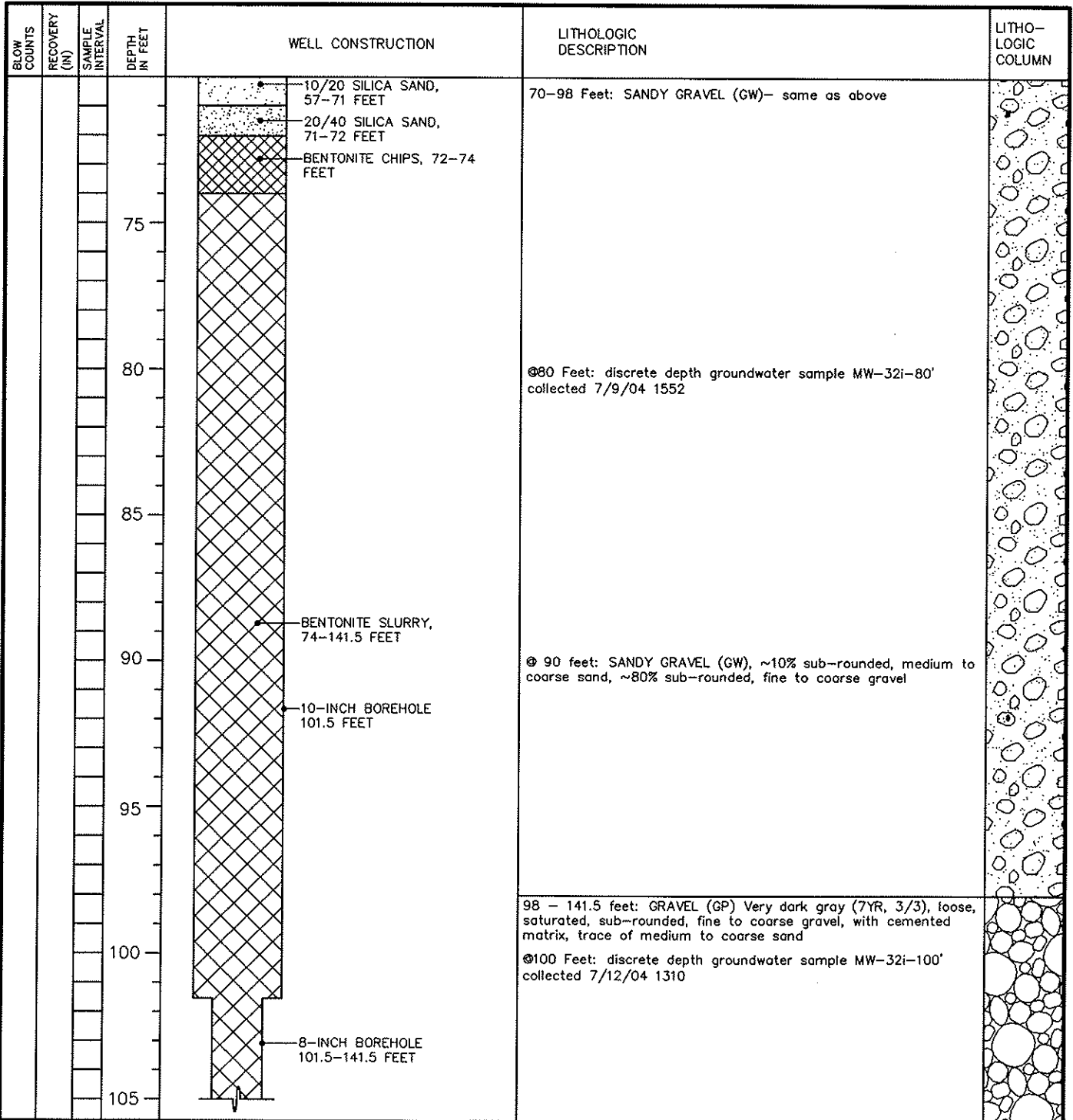
EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: POV WEST OF GUARD SHACK
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: MW-32i
 Sheet: 3 OF 4
 Total Boring Depth: 141.5 FEET/WEEL DEPTH: 70 FT
 Date Completed: JULY 23, 2004
 Ground Level Measurement: 34.49 FT
 Initial Water Level ∇ 29.35 FT/WELL DEPTH @ 70'-0"
 Measuring Point Elevation: 34.2 FT
 Static Water Level: 29.81 FT Date: 8/16/04
 Northing: 118876.2 Easting: 1076875.1

FILE: P194006203
 DATE: Mar 28, 2007 - 11:23am PLOTTED BY: morgapau XREF'S: IMAGES:



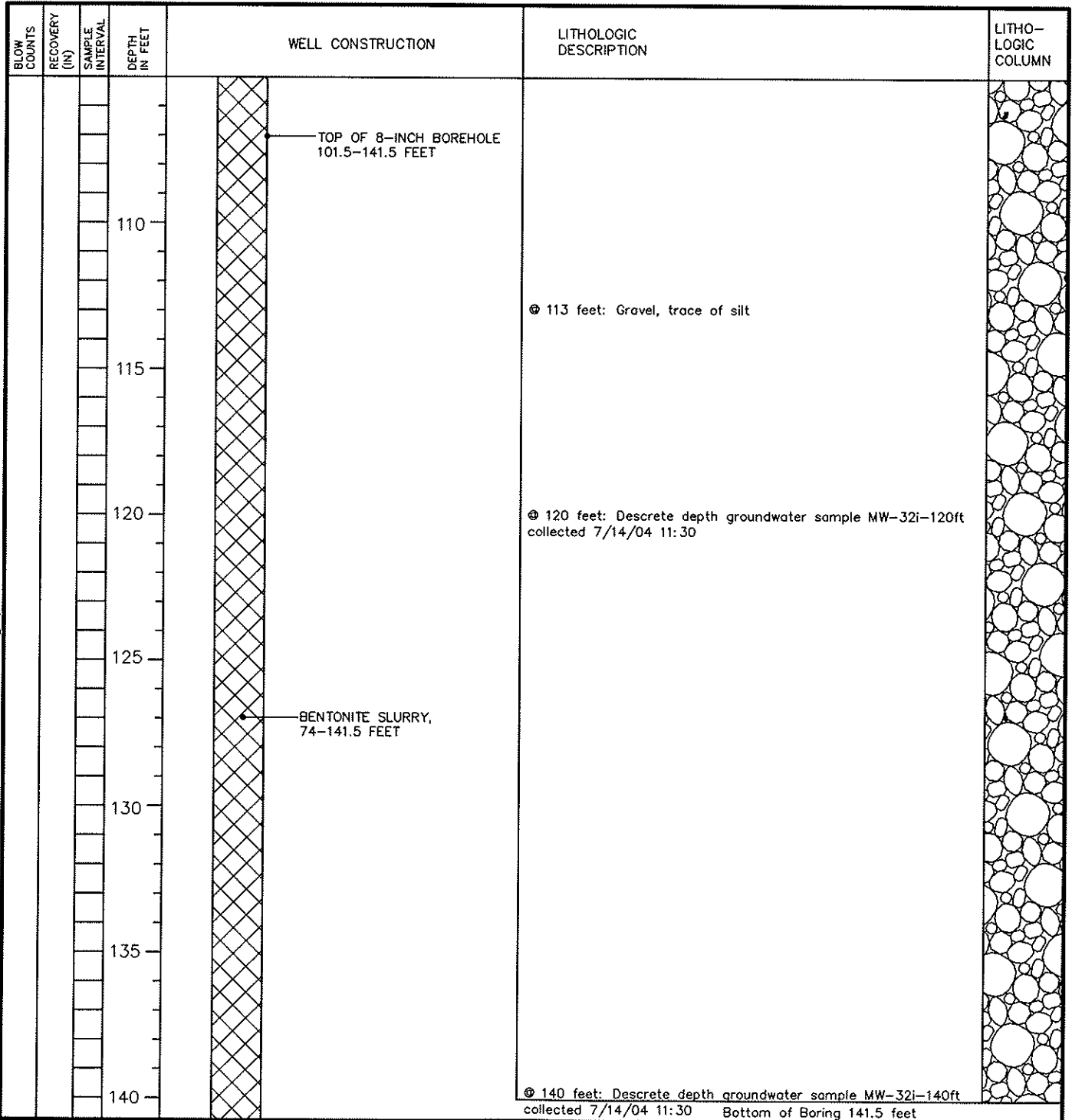
EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: POV WEST OF GUARD SHACK
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: MW-32i
 Sheet: 4 OF 4
 Total Boring Depth: 141.5 FEET/WEEL DEPTH: 70 FT
 Date Completed: JULY 23, 2004
 Ground Level Measurement: 34.49 FT
 Initial Water Level ∇ 29.35 FT/WELL DEPTH @ 70'-0"
 Measuring Point Elevation: 34.2 FT
 Static Water Level: 29.81 FT Date: 8/16/04
 Northing: 118876.2 Easting: 1076875.1

FILE: P194006204
 DATE: Mar 28, 2007 - 11:23am
 PLOTTED BY: morgapau
 IMAGES: XREF'S:



BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931
Location: POV GUARD SHACK
PMX Representative: MIKE MARSHALL
Drilled By: GEOTECH EXPLORATIONS
Drill Method: AUGER
Soil Sample Method: SPLIT SPOON
Groundwater Sample Method: NA

Boring Number: MW-32s
Sheet: 1 OF 1
Total Boring Depth: 34.5 FT / WELL DEPTH: 33 FT
Date Completed: OCTOBER 7, 2004
Ground Level Measurement: 34.49 FT
Initial Water Level 30.98 FT
Measuring Point Elevation: 34.23 FT
Static Water Level: 34.0 FT **Date:** 10/07/04
Northing: 118880.8 **Easting:** 1076872.1

DATE: 03/28/07 11:31am FILENAME: P194006285

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			5	<p>FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1 FEET</p>	No sample obtained	
7 14 14	14"		10	<p>BENTONITE CHIPS 1-21 FEET</p>	5-20 feet: SAND (SW) - grayish brown, medium dense, moist, micaceous, fine to medium grained, sub rounded @10.6 feet: SAND, brown, loose, fine grained @11.1 feet: SAND, dark gray	
7 6 6	16"		15	<p>2-INCH THREADED SCH 40 PVC CASING, 0-23 FEET, FLUSH THREAD</p> <p>8-INCH BOREHOLE 0-34.5 FEET</p>		
6 6 10	14"		20		20-25 feet: SANDY SILT (ML) - light brown, soft to medium stiff, moist to wet, micaceous, mottled, sand is fine grained	
2 4 6	16"		25	<p>10/20 SILICA SAND, 21-34.5 FEET</p> <p>2-INCH SCH 40 0.020 SLOT PVC SCREEN 23-33 FEET</p>	25-34.5 feet: SILT (ML) - light brown, medium stiff, wet, micaceous, mottled, minor trace of fine grained sand lenses	
2 3 6	20"		30			
2 4 2	18"		35			
					34.5 feet: End of boring	

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: ACROSS STREET FROM HUMANE SOCIETY
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: MW-33i
 Sheet: 1 OF 5
 Total Boring Depth: 177 FEET/WELL DEPTH: 85 FEET
 Date Completed: AUGUST 10, 2004
 Ground Level Measurement: 31.58 FT
 Initial Water Level ∇ 27.45 FT
 Measuring Point Elevation: 31.57 FT
 Static Water Level: 25.75 FT Date: 11/15/04
 Northing: 119263.7 Easting: 1077870.3

FILE: P194006205
 DATE: Mar 28, 2007 - 10:46am
 PLOTTED BY: morgapau
 XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1 FEET 10/20 SILICA SAND, 1-2 FEET BENTONITE CHIPS 2-6 FEET BENTONITE GROUT, 6-69 FEET 2-INCH THREADED SCH 80 PVC CASING, 0-75 FEET, FLUSH THREAD 10-INCH BOREHOLE 0-137 FEET	0-0.35 feet: ASPHALT 0.35 -1 feet: SILTY SAND (GM), fill material 1 -15 feet: SAND (SW) Dark gray (2.5 4/1), loose damp, sub-angular, fine to medium grained, poorly sorted, with trace of fine gravel ⊗ 10-11.5 feet: Sand, micaceous 15 - 20 feet: SILTY SAND (SM)- Brown (7.5 4/4) loose, moist, fine grained sand, poorly sorted, slightly mottled, micaceous, 40% silt, 60% sand 20 - 21.5 feet: SAND (SW)- Brown (10YR 4/3), medium dense, moist, fine grained, poorly sorted, micaceous ⊗ 25 - 26.5 feet: SAND, Dark gray (2.5 4/1), dense, poorly sorted, sub-angular, fine to medium grained ⊗ 30 - 31.5 feet: SAND, loose, wet to saturated	
1 1 1		12"	10			
2 2 5		12"	15			
3 6 9		12"	20			
8 18 30		18"	25			
1 1 2		18"	30			
			35			

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: ACROSS STREET FROM HUMANE SOCIETY
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: MW-33i
 Sheet: 2 OF 5
 Total Boring Depth: 177 FEET/WELL DEPTH: 85 FEET
 Date Completed: AUGUST 10, 2004
 Ground Level Measurement: 31.58 FT
 Initial Water Level ∇ 27.45 FT
 Measuring Point Elevation: 31.57 FT
 Static Water Level: 25.75 FT Date: 11/15/04
 Northing: 119263.7 Easting: 1077870.3

FILE: P194006206
 DATE: Mar 28, 2007 - 10:47am
 PLOTTED BY: morgapau
 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
1 2 3	9"				@ 35 - 35.5 feet: SAND, Very Dark Gray (2.5 3/1) saturated @ 35 feet: Discrete depth groundwater sample MW-33i-35ft collected 7/26/04 13:55	
10 20 20	12"		40	BENTONITE GROUT 6-69 FEET	@ 40 - 41.5 feet: SAND, some coarse grained sand	
1 2 6	12"		45		@ 45 - 46.5 feet: SAND, fine to coarse grained, poorly sorted, trace of fine gravel @ 47 feet: Sand, few fine gravel	
5 17 19	4"		50	2-INCH THREADED SCH 80 PVC CASING, 0-75 FEET, FLUSH THREAD 10-INCH BOREHOLE 0-137 FEET	@ 50-51.5 feet: SAND, coarse grained, with some medium to fine grained sand, well sorted, with trace of fine gravel	
			55		52 - 60 feet: GRAVELLY SAND (GW), Very dark gray (2.5Y 3/1), dense, little fine to coarse gravel, fine to coarse grained sand, poorly sorted @ 55 feet: Discrete depth groundwater sample MW-33i-55ft collected 7/27/04 10:00	
			60		60 - 99 feet: SANDY GRAVEL (GW), Dark gray (2.5 4/1), dense, saturated, sub-rounded, fine to coarse grained sand, ~20% sub-rounded, fine to coarse gravel, ~80%	
			70	BENTONITE CHIPS, 69-71 FEET		

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: ACROSS STREET FROM HUMANE SOCIETY
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: MW-33i
 Sheet: 3 OF 5
 Total Boring Depth: 177 FEET/WELL DEPTH: 85 FEET
 Date Completed: AUGUST 10, 2004
 Ground Level Measurement: 31.58 FT
 Initial Water Level ∇ 27.45 FT
 Measuring Point Elevation: 31.57 FT
 Static Water Level: 25.75 FT Date: 11/15/04
 Northing: 119263.7 Easting: 1077870.3

FILE: P194006207
 DATE: Mar 28, 2007 - 10:50am PLOTTED BY: morgapau XREF'S:
 IMAGES:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	20/40 SILICA SAND, 71-72 FEET STAINLESS STEEL CENTRALIZER AT 75 FEET 10/20 SILICA SAND, 72-86 FEET 2-INCH SCH 80 .010 SLOT PVC SCREEN 75-85 FEET STAINLESS STEEL CENTRALIZER AT 85 FEET 20/40 SILICA SAND, 86-87 FEET BENTONITE CHIPS, 87-88 FEET	@ 75 feet: Discrete depth groundwater sample MW-33i-76ft collected 7/27/04 14:50	75
			80			80
			85		@ 85 feet: SANDY GRAVEL (GW), Very Dark gray (2.5 3/1), sub-rounded, fine to coarse grained sand, ~35%, sub-rounded, coarse gravel to cobbles, ~65%	85
			90			90
			95	BENTONITE SLURRY, 88 - 177 FEET	@ 95 feet: Discrete depth groundwater sample MW-33i-96ft collected 7/28/04 10:50	95
			100		99 -124 feet: SAND (SW), Very Dark Gray (2.5YR 3/1) dense, saturated coarse sand, trace of sub-rounded fine gravel	100
			105			105

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: ACROSS STREET FROM HUMANE SOCIETY
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: MW-33i
 Sheet: 4 OF 5
 Total Boring Depth: 177 FEET/WELL DEPTH: 85 FEET
 Date Completed: AUGUST 10, 2004
 Ground Level Measurement: 31.58 FT
 Initial Water Level ∇ 27.45 FT
 Measuring Point Elevation: 31.57 FT
 Static Water Level: 25.75 FT Date: 11/15/04
 Northing: 119263.7 Easting: 1077870.3

FILE: P194006208
 DATE: Mar 28, 2007 - 10:49am PLOTTED BY: morgapau XREF'S: IMAGES:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
			110	10-INCH BOREHOLE 0-137 FEET BENTONITE SLURRY, 88-177 FEET TOP OF 8-INCH BOREHOLE 137- 177 FEET		*	
			115			@ 115 feet: Discrete depth groundwater sample MW-33i-115ft collected 7/28/04 16:12	
			120			@120 feet: SAND (SW), sub-rounded, fine to coarse grained sand, trace of fine sub-angular gravel, trace of silt	
			125			124 - 129 feet: GRAVELLY SAND (GW), Very Dark Gray (2.5 3/1), dense, saturated, sub-rounded fine to coarse grained sand, sub-rounded, fine to coarse gravel, trace of silt @ 127 feet: Gravel and cobbles have a clay matrix	○
			130		129 - 177 feet: SANDY GRAVEL (GW), Very Dark Gray (2.5 3/1) very dense, saturated, sub-rounded, medium to coarse grained sand, ~40, sub-rounded, fine to coarse gravels and cobbles, ~60% gravel has a cemented matrix	○	
			135		@ 135 feet: Discrete depth groundwater sample MW-33i-135ft collected 7/29/04 15:01	○	
			140			○	

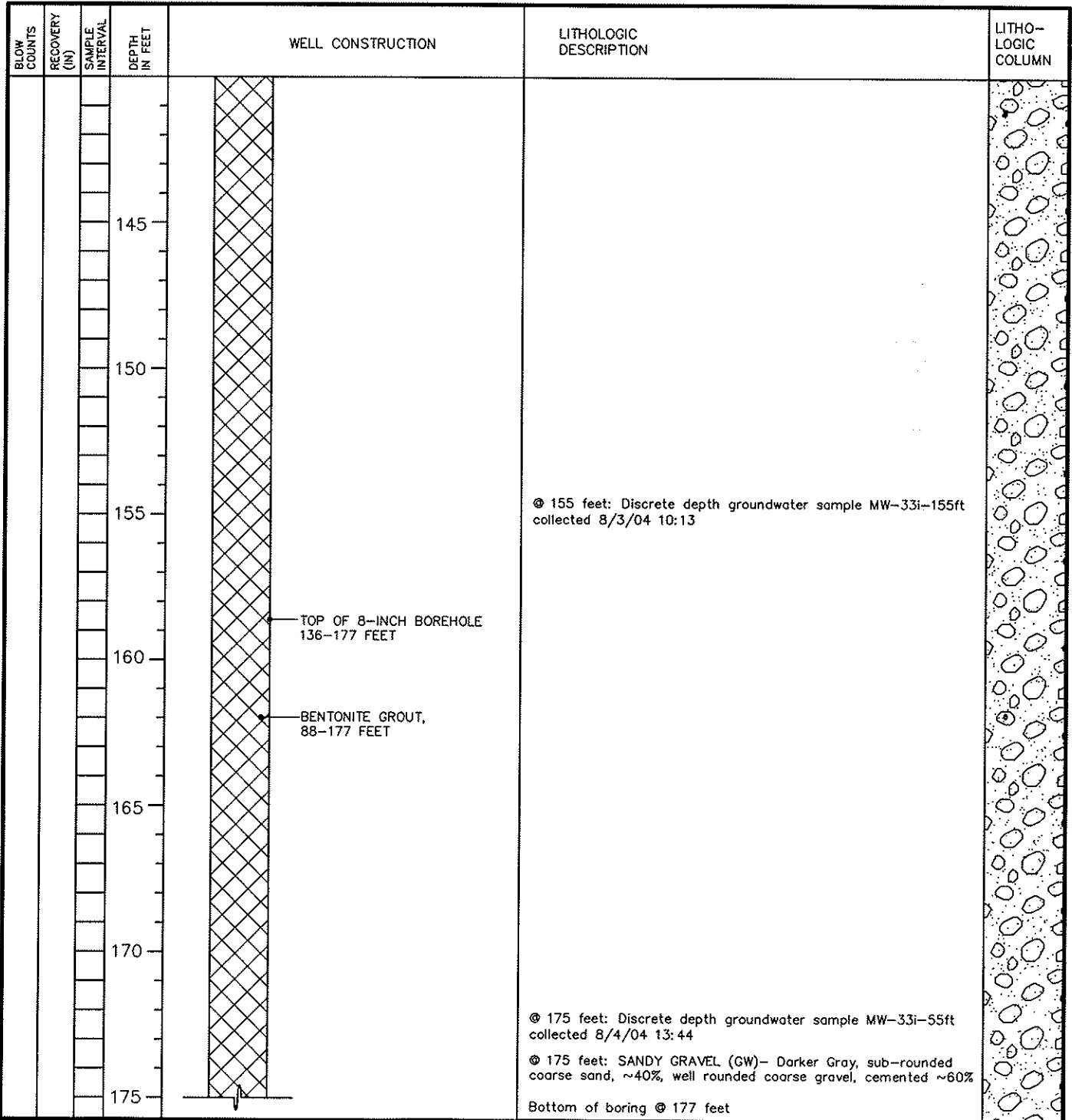
EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: ACROSS STREET FROM HUMANE SOCIETY
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: MW-33i
 Sheet: 5 OF 5
 Total Boring Depth: 177 FEET/WELL DEPTH: 85 FEET
 Date Completed: AUGUST 10, 2004
 Ground Level Measurement: 31.58 FT
 Initial Water Level ∇ 27.45 FT
 Measuring Point Elevation: 31.57 FT
 Static Water Level: 25.75 FT Date: 11/15/04
 Northing: 119263.7 Easting: 1077870.3

FILE: P194006209
 DATE: Mar 28, 2007 - 10:48am
 PLOTTED BY: morgapau
 IMAGES: XREF'S:



BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931
Location: NORTH OF WA HUMANE SOCIETY
PMX Representative: MIKE MARSHALL
Drilled By: GEOTECH EXPLORATIONS
Drill Method: AUGER
Soil Sample Method: SPLIT SPOON
Groundwater Sample Method: NA

Boring Number: MW-33s
Sheet: 1 OF 1
Total Boring Depth: 35 FEET/ WELL DEPTH: 31 FEET
Date Completed: OCTOBER 4, 2004
Ground Level Measurement: 31.81 FT
Initial Water Level 28.2 FT
Measuring Point Elevation: 31.57 FT
Static Water Level: 28.15 FT **Date:** 10/04/04
Northing: 119263 **Easting:** 1077875.4

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			5	<p>FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1 FEET</p>	No sample obtained	
6 7 9	12"				5-15.3 feet: SAND (SW) - gray, loose, damp, micaceous, medium grained	
6 4 4	12"		10	BENTONITE CHIPS 1-19 FEET		
7 6 8	12"		15	2-INCH THREADED SCH 40 PVC CASING, 0-21 FEET, FLUSH THREAD		
10 10 12	12"		20	8-INCH BOREHOLE 0-35 FEET	15.3-25 feet: SILTY SAND (SM) - brown, medium stiff, moist, micaceous, sand is fine grained	
7 7 11	12"		25	10/20 SILICA SAND, 19-35 FEET		
7 8 10	12"		30	2-INCH SCH 40 0.020 SLOT PVC SCREEN 21-31 FEET	25-35 feet: SAND (SW) - dark gray, loose, moist, medium grained	
			35		@ 30 feet: SAND, saturated	
				35 feet: End of boring		

DATE: 03/28/07 11:09am FILENAME: P194006286

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-34i

Project Number: 275-1940-006-03-4931

Sheet: 1 OF 5

Location: WESTSIDE WASTEWATER RECLAMATION FACILITY

Total Depth: 181 FEET/WELL DEPTH: 105 FEET

PMX Representative: INGMAR SAUL/ADAM ROMEOY

Date Completed: 10/14/04

Drilled By: TACOMA PUMP AND DRILLING

Ground Level Measurement: 32.73 FT

Drill Method: CABLE TOOL

Initial Water Level 28.48 FT

Soil Sample Method: SPLIT SPOON

Measuring Point Elevation: 35.08 PVC

Groundwater Sample Method: REDIFLO 2 PUMP

Northing: 118284.9 **Easting:** 1078511.6

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			0	<p style="font-size: small;">ABOVE GROUND PROTECTIVE MONUMENT 0 TO -3 FEET</p> <p style="font-size: small;">CONCRETE 0-4 FEET</p>	0-12 feet: FILL MATERIAL - SILT - brown, medium stiff, dry, trace of sub-rounded fine gravel	
12 17 15	4"		10		@ 10 feet: SILT, very dark gray (2.5Y 3/1), very stiff, damp, some organics, micaceous	
18 20 25	12"		15	<p style="font-size: small;">BENTONITE SLURRY, 4-92 FEET</p>	12-44 feet: SAND - grayish brown (2.5Y 5/2), dense, damp, fine to medium grained, poorly graded, micaceous	
7 15 17	12"		20	<p style="font-size: small;">2-INCH THREADED SCH 80 PVC CASING, -2.5 TO 95 FEET, FLUSH THREAD</p> <p style="font-size: small;">10-INCH BOREHOLE 0-79 FEET</p>	@ 20 feet: SAND, grayish brown (10YR 5/2)	
15 20 23	18"		25		@ 25 feet: SAND, very dark gray (10YR 3/1), dense, moist, fine to coarse grained, well graded, micaceous @ 25.75 feet: SAND, dark grayish brown (10YR 4/2), dense, moist, fine grained, poorly graded, micaceous	
			30		@ 30 feet: SAND, dark brown, dense, moist, fine to medium grained, well graded	

DATE: 03/28/07 10:24am FILENAME: P194006298

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-34i

Project Number: 275-1940-006-03-4931

Sheet: 2 OF 5

Date Completed: 10/14/04

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
13 12 15	12"					
5 8 12	18"		35		@ 35 feet: SAND, dark gray to dark brown, dense, moist, fine to medium grained, well graded	
5 7 30	12"		40		@ 40 feet: SAND, dark gray, dense, wet, fine to medium grained, well graded @ 40 feet: Discrete depth groundwater sample MW-34i-40ft collected 9/17/04 1435	
5 28 55	9"		45		45-63 feet: GRAVELLY SAND - dark gray (10Y 3/1), dense, saturated, sub-rounded, fine gravel, fine to coarse grained sand, well graded, 35% gravel, 65% sand	
10 30 50	15"		50	<ul style="list-style-type: none"> • BENTONITE SLURRY, 4-92 FEET 		
			55	<ul style="list-style-type: none"> • 2-INCH THREADED SCH 80 PVC CASING, -2.5 TO 95 FEET, FLUSH THREAD • 10-INCH BOREHOLE 0-79 FEET 	@ 55 feet: GRAVELLY SAND, sub-rounded, coarse gravel	
50 50 50	12"		60		@ 60 feet: SANDY GRAVEL, very dense, 30% sand, 70% gravel @ 60 feet: Discrete depth groundwater sample MW-34i-60ft collected 9/21/04 0925	
			65		63-118 feet: GRAVEL - dark gray, dense, saturated, rounded, fine to coarse gravel and cobbles, trace of coarse grained sand, ~5% sand, ~95% gravel	
			70			

DATE: 03/28/07 10:24am FILENAME: P194006298

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

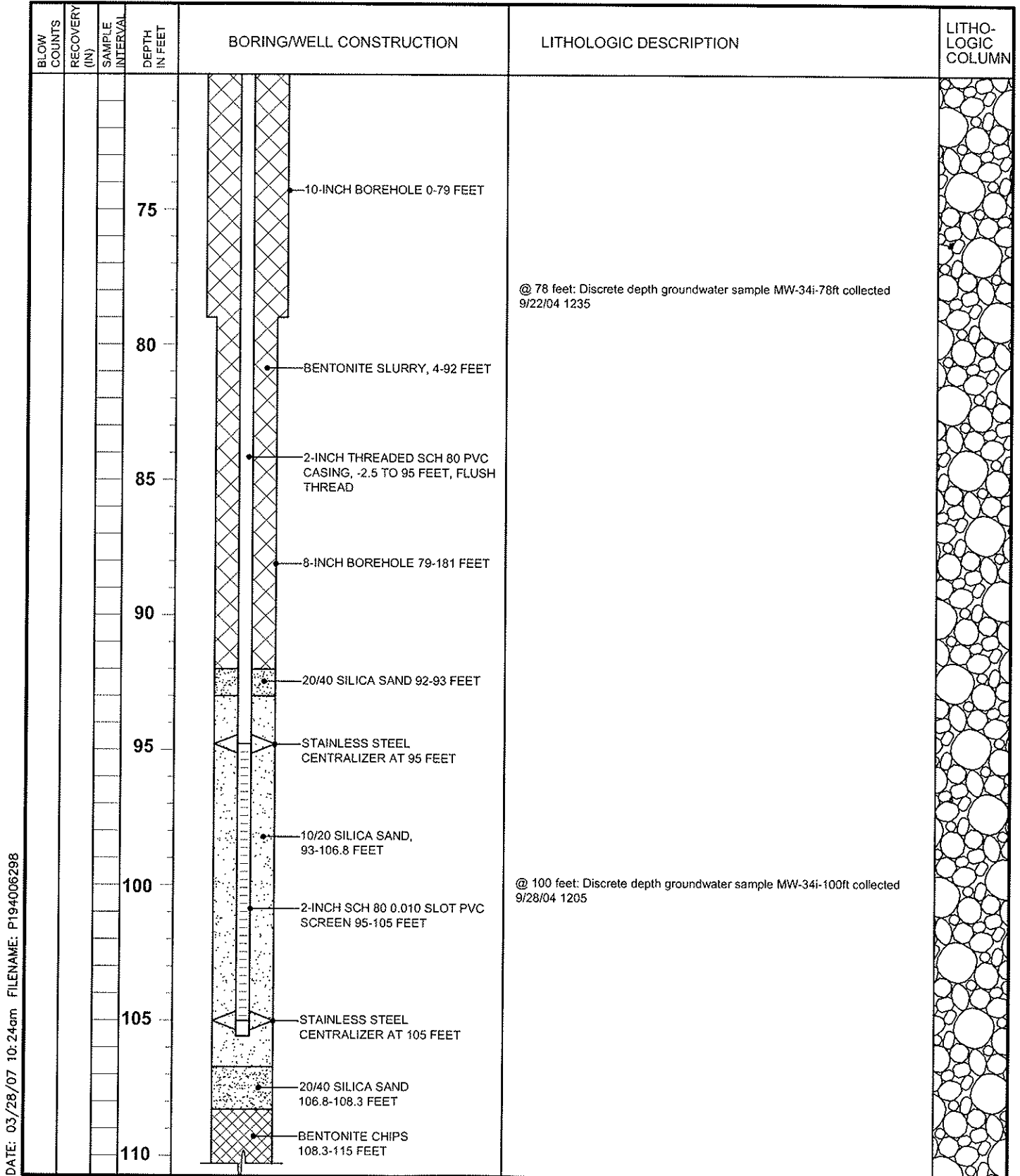
Boring Number: MW-34i

Project Number: 275-1940-006-03-4931

Sheet: 3 OF 5

Date Completed: 10/14/04

continued from previous page



DATE: 03/28/07 10:24am FILENAME: P194006298

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

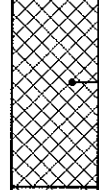
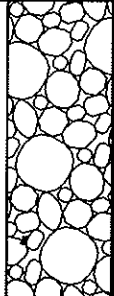
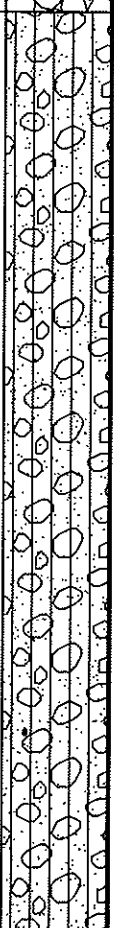
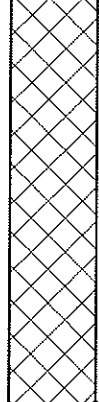
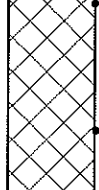

Boring Number: MW-34i

Project Number: 275-1940-006-03-4931

Sheet: 4 OF 5

Date Completed: 10/14/04

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			115	 <p>BENTONITE CHIPS 108.3-115 FEET</p>	@ 113 feet: GRAVEL WITH SAND, sub-rounded, fine grained sand	
			120		118-142 feet: SILTY SAND WITH GRAVEL - dark gray, loose, saturated, sub-rounded, fine to coarse grained sand, with some fine to coarse gravel	
			125	 <p>8-INCH BOREHOLE 79-181 FEET</p>		
			130	 <p>BENTONITE SLURRY, 115-181 FEET</p>		
			135			
			140			
			145		142-165.5 feet: SILTY SAND - dark gray, loose, saturated, sub-rounded, fine to coarse grained sand	
			150			

DATE: 03/28/07 10:24am FILENAME: P194006298

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER


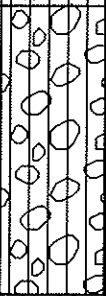

Boring Number: MW-34i

Project Number: 275-1940-006-03-4931

Sheet: 5 OF 5

Date Completed: 10/14/04

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN	
			155	 <p style="margin-left: 20px;">8-INCH BOREHOLE 79-181 FEET</p> <p style="margin-left: 20px;">BENTONITE SLURRY 115-181 FEET</p>			
			160			@ 161 feet: Discrete depth groundwater sample MW-34i-161ft collected 10/05/04 1145	
			165			165.5-173 feet: SANDY SILTY GRAVEL - dark gray, dense, saturated, sub-angular fine to coarse grained sand, fine to coarse gravel with a silt matrix	
			170				
			175			173-181 feet: SANDY GRAVEL - dark gray, very dense, saturated, sub-rounded, coarse gravel with a cemented matrix	
			180			@ 180 feet: Discrete depth groundwater sample MW-34i-180ft collected 10/07/04 0905	
			185			181 feet: Bottom of boring	
			190				

DATE: 03/28/07 10:24am FILENAME: P194006298

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: NW PACKING/PORTWAY
 PMX Representative: ADAM ROMEY
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDIFLOW2 PUMP

Boring Number: MW-35i
 Sheet: 1 of 5
 Total Boring Depth: 182 FEET/WELL DEPTH: 122 FEET
 Date Completed: OCTOBER 14, 2004
 Initial Water Level: 35.65 FEET/ WELL @ 40 FEET
 Measuring Point Elevation: 34.20 FEET
 Northing: 117243.5 Easting: 1080160.9

DATE: 03/28/07 10:57am FILENAME: P194006282

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
					0-0.5 feet: ASPHALT CAP 0.5-3.0 feet: GRAVEL FILL	
			5		3.0-15 feet: SAND (SP) - Brown, medium grained	
4 4 4	18"		10		@ 10 feet: SAND, dark gray/brown, loose, moist, poorly graded	
2 5 13	14"		15		15-15.5 feet: SILT (ML) - light brown, very stiff, moist, micaceous, poorly graded	
			20		15.5-20 feet: SILTY SAND - dark gray/brown, medium dense, moist, medium grained, 30% fines	
3 3 6	14"		25		20-25.5 feet: SILT - dark gray/black, stiff, moist, micaceous	
7 8 15	18"		30		@ 25 feet: SILT, brown, very stiff	
			35		25.5-30 feet: SILTY SAND - gray/brown, medium dense, moist, micaceous, fine to medium grained, well graded, 40% fines	
3 4 4	18"				30-45 feet: SAND (SW) - gray, loose, wet, medium to coarse grained sand, well graded, trace silt	
					@ 35 feet: SAND, dense, sub-angular	

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-35i

Project Number: 275-1940-006-03-4931

Sheet: 2 OF 5

Date Completed: OCTOBER 14, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
5 10 25	16"		40		@ 40 feet: heaving sands - no split spoon (bailer sample) @ 40 feet: Discrete depth groundwater sample MW-35i-40ft collected 10/04/04 1310	
6 12 16	14"		45		45-55 feet: GRAVELLY SAND (SP) - gray, medium dense, saturated, sub-angular coarse sand, poorly graded, 10% coarse gravel	
			50		55-98 feet: GRAVEL (GW) - gray, dense, saturated, medium to very coarse gravel and cobbles, well graded	
			55		@ 60 feet: Discrete depth groundwater sample MW-35i-60ft collected 10/04/04 1605	
			60		@ 70 feet: GRAVEL, fine to coarse gravel with cobbles and trace coarse sand	
			65			
			70			
			75			

DATE: 03/28/07 10:57am FILENAME: P194006282

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

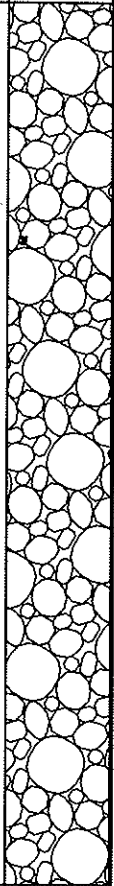
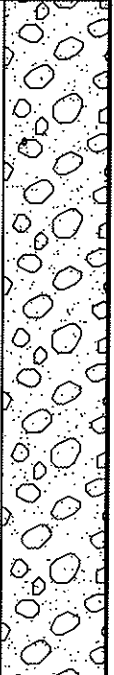
Boring Number: MW-35i

Project Number: 275-1940-006-03-4931

Sheet: 3 OF 5

Date Completed: OCTOBER 14, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			80		@ 80 feet: Discrete depth groundwater sample MW-35i-80ft collected 10/05/04 1225	
			85	BENTONITE SLURRY, 5-104 FEET		
			90	2-INCH THREADED SCH 80 PVC CASING, 0-112 FEET, FLUSH THREAD		
			95	10-INCH BOREHOLE 0-100 FEET		
			100		98-130 feet: SANDY GRAVEL (GW) - driving casing became more difficult - gray, dense, saturated, fine to very coarse gravel - 15% coarse sand and silty matrix @ 100 feet: Discrete depth groundwater sample MW-35i-100ft collected 10/06/04 0810	
			105	8-INCH BOREHOLE 100-182 FEET	@ 105 feet: SANDY GRAVEL, dark gray, coarse gravel, 10% coarse sub-angular sand	
			110	BENTONITE CHIPS, 104-108 FEET	@ 107 feet: driving casing became more difficult	
			115	20/40 SILICA SAND, 108-109 FEET		
			115	10/20 SILICA SAND, 109-123 FEET	@ 113 feet: driving casing became easier	
			115	2-INCH SCH 80 0.020 SLOT PVC SCREEN 112-122 FEET		

DATE: 03/28/07 10: 59am FILENAME: P194006282

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-35i

Project Number: 275-1940-006-03-4931

Sheet: 4 OF 5

Date Completed: OCTOBER 14, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			120	<p>2-INCH SCH 80 0.020 SLOT PVC SCREEN 112-122 FEET</p> <p>10/20 SILICA SAND, 109-123 FEET</p> <p>20/40 SILICA SAND, 123-124.5 FEET</p> <p>BENTONITE CHIPS, 124.5-127 FEET</p> <p>8-INCH BOREHOLE 100-182 FEET</p> <p>BENTONITE GROUT, 127-182 FEET</p>	<p>@ 120 feet: SANDY GRAVEL, fine to coarse gravel, 10% fine to medium grained sand, well graded</p> <p>@ 120 feet: Discrete depth groundwater sample MW-35i-120ft collected 10/07/04 1350</p>	
			125			
			130		<p>130-182 feet: GRAVEL (GW) - dark gray, dense, saturated, medium to coarse gravel with cemented matrix</p>	
			135			
			140		<p>@ 140 feet: Discrete depth groundwater sample MW-35i-140ft collected 10/08/04 1445</p>	
			145			
			150			
			155			

DATE: 03/28/07 10:59am FILENAME: P194006282

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931
Location: NORTH WEST PACKING
PMX Representative: MIKE MARSHALL
Drilled By: GEOTECH EXPLORATIONS
Drill Method: AUGER
Soil Sample Method: SPLIT SPOON
Groundwater Sample Method: NA

Boring Number: MW-35s
Sheet: 1 OF 1
Total Boring Depth: 33 FEET/WELL DEPTH: 32.5 FEET
Date Completed: OCTOBER 4, 2004
Ground Level Measurement: 34.61 FT
Initial Water Level ∇ 31.8 FT
Measuring Point Elevation: 34.20 FT
Static Water Level: 30.8 FT **Date:** 10/04/04
Northing: 117240.3 **Easting:** 1080198.7

DATE: 03/28/07 10:16am FILENAME: P194006287

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			5	FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1 FEET BENTONITE CHIPS 1-20.5 FEET	No sample obtained (cuttings are gravelly sand)	.
14 9 16	12"		10	2-INCH THREADED SCH 40 PVC CASING, 0-22.5 FEET, FLUSH THREAD	5-10 feet: SAND (SW) - gray, medium dense, damp, micaceous, medium to fine grained, sub rounded to sub angular	.
1 1 3	12"		15	8-INCH BOREHOLE 0-33 FEET	10-15 feet: SILTY SAND (SM) - light brown, loose, moist, micaceous, trace of wood debris	.
2 2 3	18"		20		15-20.5 feet: SAND (SW) - dark gray, loose, wet to saturated, micaceous, sub rounded	.
2 2 5	18"		25	10/20 SILICA SAND, 20.5-33 FEET	20.5-30 feet: SILT (ML) - dark gray, soft, wet, mottled	.
2 2 1	19"		30	2-INCH SCH 40 0.020 SLOT PVC SCREEN 22.5-32.5 FEET	30-33 feet: SAND (SW) - dark gray, loose, wet to saturated, medium grained to coarse grained sub rounded	.
4 5 6	12"		35		33 feet: End of boring	.

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-36i

Project Number: 275-1940-006-003-4931

Sheet: 2 OF 5

Date Completed: SEPTEMBER 28, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN	
4 13 16	4"			<p style="margin-left: 20px;">BENTONITE SLURRY, 5-89 FEET</p> <p style="margin-left: 20px;">2-INCH THREADED SCH 80 PVC CASING, 0-95 FEET, FLUSH THREAD</p> <p style="margin-left: 20px;">10-INCH BOREHOLE 0-111 FEET</p>			
5 15 20	6"		40		@ 40 feet: Discrete depth groundwater sample MW-36i-40ft collected 9/13/04 1305		
			45				
25	0"		50		48-64 feet: SAND, Dark gray, dense, saturated, medium to coarse grained, well sorted		
			55				
			60		@ 60 feet: Discrete depth groundwater sample MW-36i-60ft collected 9/14/04 0850		
			65		64-106 feet: SANDY GRAVEL, Dark Gray, dense, saturated, sub-rounded, medium to coarse grained sand, sub-rounded, cobbles to fine gravel		
			70				
			75				

DATE: 03/11/05 09:24am FILENAME: P194006227

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-36i

Project Number: 275-1940-006-003-4931

Sheet: 3 OF 5

Date Completed: SEPTEMBER 28, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			80	<ul style="list-style-type: none"> • BENTONITE SLURRY, 5-89 FEET • 2-INCH THREADED SCH 80 PVC CASING, 0-95 FEET, FLUSH THREAD • 10-INCH BOREHOLE 0-111 FEET 	<ul style="list-style-type: none"> @ 80 feet: Discrete depth groundwater sample MW-36i-80ft collected 9/14/04 1250 	
			85			
			90	<ul style="list-style-type: none"> • BENTONITE CHIPS 89-91 FEET • 20/40 SILICA SAND 91-92 FEET 		
			95	<ul style="list-style-type: none"> • STAINLESS STEEL CENTRALIZER AT 95 FEET 		
			100	<ul style="list-style-type: none"> • 2-INCH SCH 80 0.010 SLOT PVC SCREEN 95-105 FEET • 10/20 SILICA SAND, 92-106.5 FEET 	<ul style="list-style-type: none"> @ 100 feet, SANDY GRAVEL, trace of fine grained sand and silt @ 100 feet: Discrete depth groundwater sample MW-36i-100ft collected 9/15/04 1135 	
			105	<ul style="list-style-type: none"> • STAINLESS STEEL CENTRALIZER AT 105 FEET 	<ul style="list-style-type: none"> @ 105.5 feet, SANDY GRAVEL, traces of cementation 	
			110	<ul style="list-style-type: none"> • 20/40 SILICA SAND, 106.5 -107.5 FEET • BENTONITE CHIPS 107.5 -112 FEET • 8-INCH BOREHOLE 111-163 FEET • BENTONITE SLURRY, 112-163 FEET 	<ul style="list-style-type: none"> 106-163 feet, SANDY GRAVEL, dark gray, very dense, saturated, sub-rounded, medium to coarse grained sand, micaceous, sub-rounded to well-rounded, medium to coarse gravel and cobbles, with cementation matrix 	
			115			

DATE: 03/11/05 09:24am FILENAME: P194006227

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-36i

Project Number: 275-1940-006-003-4931

Sheet: 4 OF 5

Date Completed: SEPTEMBER 28, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			120		@ 120 feet: Discrete depth groundwater sample MW-36i-120ft collected 9/17/04 1135	
			125	BENTONITE SLURRY 112-163 FEET		
			130	8-INCH BOREHOLE 111-163 FEET		
			135			
			140		@ 140 feet, SANDY GRAVEL, sub-rounded fine to medium grained sand, sub-rounded to well-rounded fine to coarse gravel with cobbles @ 140 feet: Discrete depth groundwater sample MW-36i-140ft collected 9/21/04 0845	
			145			
			150			
			155			

DATE: 03/11/05 09:24am FILENAME: P194006227

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

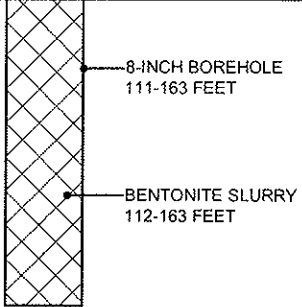

Boring Number: MW-36i

Project Number: 275-1940-006-003-4931

Sheet: 5 OF 5

Date Completed: SEPTEMBER 28, 2004

continued from previous page

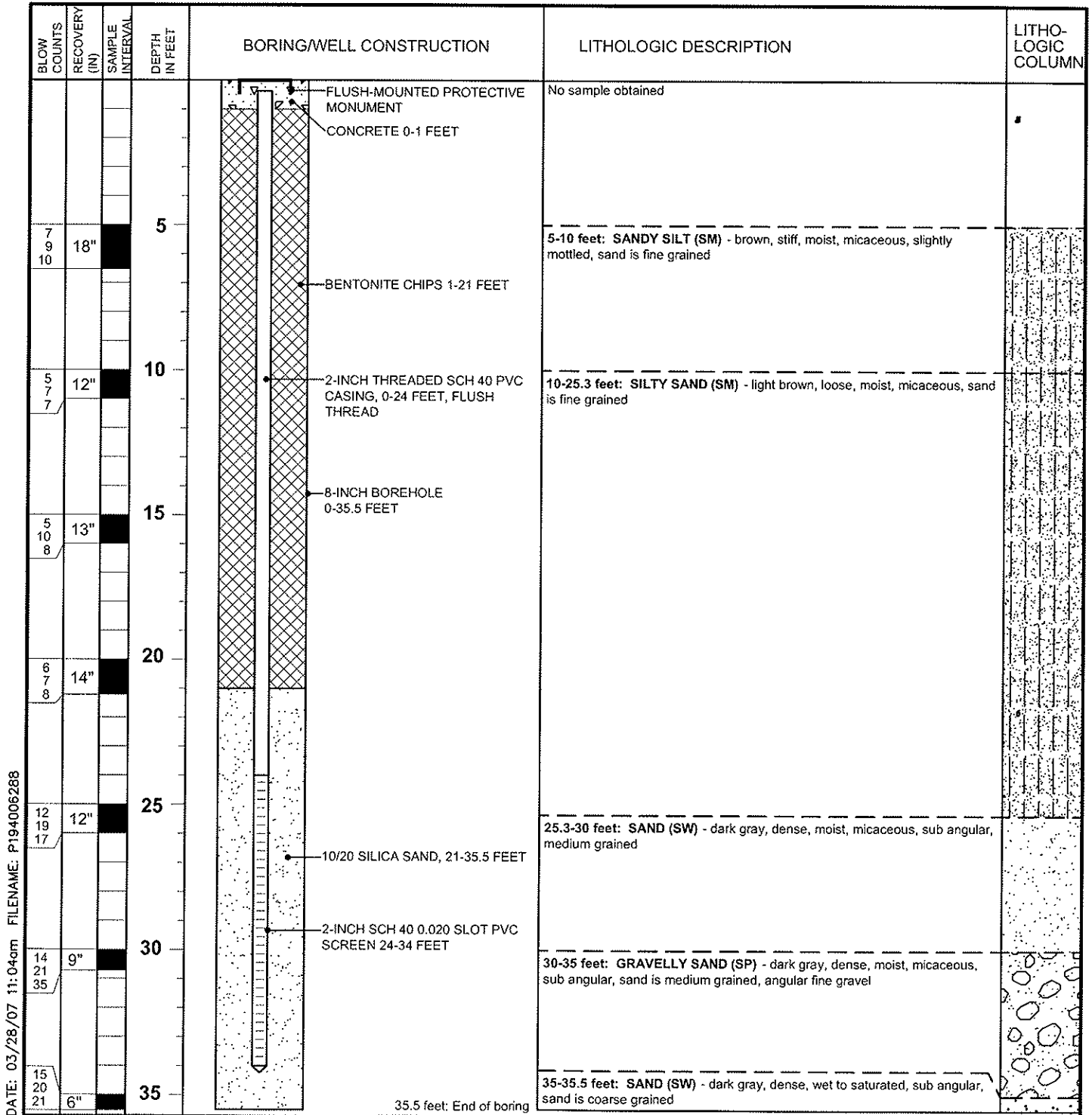
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			160	 <p>8-INCH BOREHOLE 111-163 FEET</p> <p>BENTONITE SLURRY 112-163 FEET</p>	<p>@ 160 feet, SANDY GRAVEL, sub-rounded, micaceous, fine grained sand, sub-rounded to well-rounded fine to coarse gravel</p> <p>@ 160 feet: Discrete depth groundwater sample MW-36i-160ft collected 9/23/04 0855</p>	
			165		<p>@ 163 feet: Bottom of boring</p>	
			170			
			175			
			180			
			185			
			190			
			195			

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: 20TH AND THOMPSON
 PMX Representative: MIKE MARSHALL
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: MW-36s
 Sheet: 1 OF 1
 Total Boring Depth: 35.5 FEET/ WELL DEPTH: 34 FEET
 Date Completed: OCTOBER 5, 2004
 Ground Level Measurement: 35.05 FT
 Initial Water Level ∇ : 31.2 FT
 Measuring Point Elevation: 34.64 FT
 Static Water Level: 30.82 FT Date: 10/05/04
 Northing: 118220.5 Easting: 1080185.6




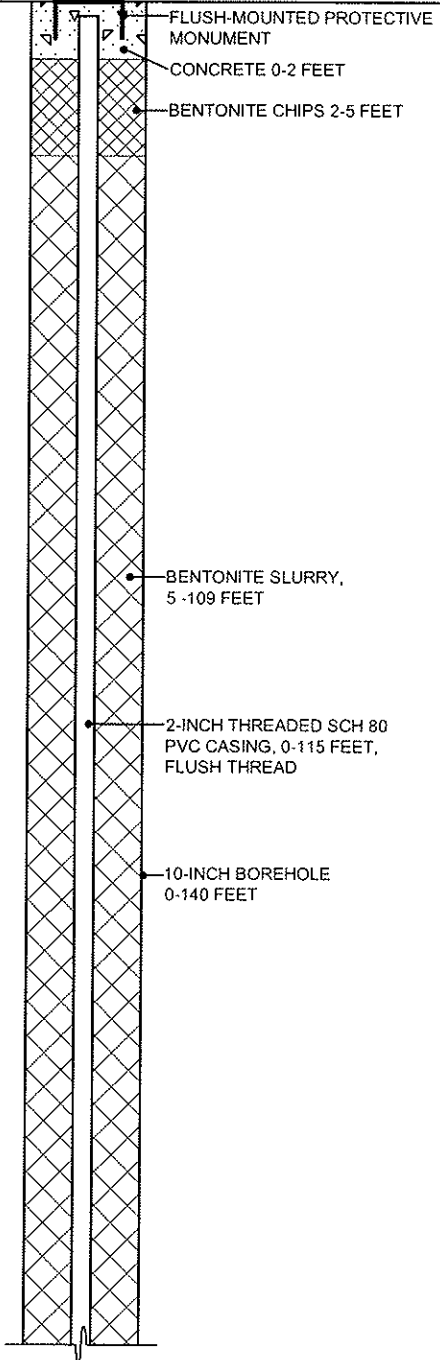

DATE: 03/28/07 11:04am FILENAME: P194006288

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-003-4931
 Location: TRI STAR LUMBER/ 1200 Portway
 PMX Representative: INGMAR SAUL/ADAM ROMEY
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDIFLO 2 PUMP

Boring Number: MW-37i
 Sheet: 1 OF 5
 Total Boring Depth: 182 FEET/WELL DEPTH: 125 FEET
 Date Completed: SEPTEMBER 9, 2004
 Ground Level Measurement: 34.69 FT
 Initial Water Level  30.5 FT
 Measuring Point Elevation: 34.64 FT
 Northing: 116675.3 Easting: 1080849.8

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0		0-0.17 feet: ASPHALT GRAVEL SURFACE 0.17-1 feet: GRAVEL FILL 1-2 feet: SAND FILL 2-5 feet: SANDY SILT (SW) - Dark reddish brown (5YR 3/2), medium stiff, damp, trace of coarse grained sand 5-53 feet: SAND (SW) - Dark grayish brown (10YR 4/3), medium dense, damp, sub-angular, fine to coarse grained sand, micaceous, poorly sorted @ 15 feet, SAND, very dark gray (7.5YR 3/1) @ 25 feet, SAND, not micaceous	
4 5 5	15"		10			
3 3 6	17"		15			
4 6 3	16"		20			
4 5 9	17"		25			
6 4 4	18"		30			
			35			

DATE: 02/13/07 3:16pm FILENAME: P194006219

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-37i

Project Number: 275-1940-006-003-4931

Sheet: 2 OF 5

Date Completed: SEPTEMBER 9, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
4 4 8	12"				@ 35 feet, SAND, wet	
3 4 5	3"		40		@ 40 feet: Discrete depth groundwater sample MW-37i-40ft collected 8/13/04 1235	
4 5 8	3"		45		@ 45 feet, SAND, trace of gravel	
2 2 8	4"		50	BENTONITE SLURRY, 5-109 FEET		
2 4 6	4"		55	2-INCH THREADED SCH 80 PVC CASING, 0-115 FEET, FLUSH THREAD	53-108 feet: GRAVELY SAND (GW), Dark Grayish Brown (10YR 4/2), saturated, medium dense, ~10% sub-rounded fine to coarse gravel and cobbles, fine to coarse grained sand.	
5 5 25	0"		60	10-INCH BOREHOLE 0-140 FEET	@ 55 feet, GRAVELY SAND, Very dark gray (7.5YR 3/1), sub-rounded, ~30% fine to coarse gravel and cobbles, fine to coarse grained sand, poorly sorted	
8 10 10	1/2"		65		@ 60 feet: Discrete depth groundwater sample MW-37i-60ft collected 8/16/04 0905	
50/5	5"		70		@ 70 feet, GRAVELY SAND, ~45% gravel and cobbles	
			75			

DATE: 02/13/07 3:16pm FILENAME: P194006219

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-37i

Project Number: 275-1940-006-003-4931

Sheet: 3 OF 5

Date Completed: SEPTEMBER 9, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			80	<ul style="list-style-type: none"> • BENTONITE SLURRY, 5-109 FEET • 2-INCH THREADED SCH 80 PVC CASING, 0-115 FEET, FLUSH THREAD • 10-INCH BOREHOLE 0-140 FEET 	<p>@ 80 feet: Discrete depth groundwater sample MW-37i-80ft collected 8/16/04 1327</p>	
			85		<p>@ 90 feet: GRAVELY SAND, trace of clay matrix on gravel</p>	
			90			
			95			
			100		<p>@ 100 feet: Discrete depth groundwater sample MW-37i-100ft collected 8/17/04 0900</p>	
			105			
			110	<ul style="list-style-type: none"> • BENTONITE CHIPS 109-111 FEET • 20/40 SILICA SAND 111-112 FEET • 10/20 SILICA SAND 112-126 FEET 	<p>108 -140 feet: SAND (SP), Dark gray (7.5YR 4/1), dense, saturated, fine grained sand, micaceous, well sorted</p> <p>@ 110 feet: Discrete depth groundwater sample MW-37i-110ft collected 8/20/04 0810</p>	
			115	<ul style="list-style-type: none"> • STAINLESS STEEL CENTRALIZER AT 115 FEET 		

DATE: 02/13/07 3:16pm FILENAME: P194006219

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-37i

Project Number: 275-1940-006-003-4931

Sheet: 4 OF 5

Date Completed: SEPTEMBER 9, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			120	<p>STAINLESS STEEL CENTRALIZER AT 115 FEET</p> <p>2-INCH SCH 80 0.010 SLOT PVC SCREEN 115-125 FEET</p> <p>10/20 SILICA SAND, 112-126 FEET</p>	<p>@ 119 feet: Discrete depth groundwater sample MW-37i-120ft collected 8/19/04 1155</p>	120
			125	<p>STAINLESS STEEL CENTRALIZER AT 125 FEET</p> <p>20/40 SILICA SAND, 126-127 FEET</p> <p>BENTONITE CHIPS 127-129 FEET</p>	<p>@ 125 feet, SAND, trace of coarse grained sand</p>	125
			130	<p>10-INCH BOREHOLE 0-140 FEET</p> <p>BENTONITE SLURRY, 129-182 FEET</p>	<p>@ 128 feet: Discrete depth groundwater sample MW-37i-130ft collected 8/20/04 1410</p>	130
			135			135
			140	<p>8-INCH BOREHOLE 140-182 FEET</p>	<p>140-182 feet: SANDY GRAVEL (GW), Very Dark Gray (2.5 3/1), dense, saturated, ~40% sub-rounded, medium to coarse grained sand, sub-rounded fine to coarse gravel and cobbles, gravel has cemented matrix</p> <p>@ 142 feet: Discrete depth groundwater sample MW-37i-142ft collected 8/23/04 1225</p>	140
			145			145
			150		<p>@ 150 feet, SANDY GRAVEL, trace of silt</p>	150
			155			155

DATE: 02/13/07 3:16pm FILENAME: P194006219

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

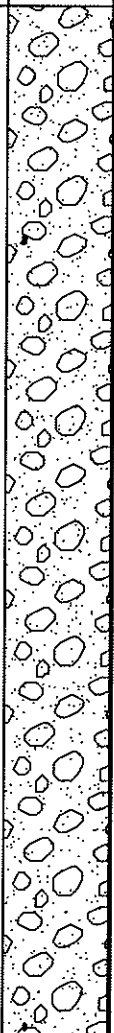
Boring Number: MW-37i

Project Number: 275-1940-006-003-4931

Sheet: 5 OF 5

Date Completed: SEPTEMBER 9, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			160	<div style="border-left: 1px dashed black; border-right: 1px dashed black; height: 100px; position: relative;"> <div style="position: absolute; top: 0; left: 50%; transform: translate(-50%, -50%);">8-INCH BOREHOLE 140-182 FEET</div> <div style="position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%);">BENTONITE SLURRY 129-182 FEET</div> </div>	<p>@ 162 feet: Discrete depth groundwater sample MW-37i-160ft collected 8/27/04 1045</p>	
			165			
			170			
			175			
			180			
			185		<p>@ 182 feet: Bottom of boring</p> <p>@ 182 feet: Discrete depth groundwater sample MW-37i-180ft collected 8/30/04 1535</p>	
			190			
			195			

DATE: 02/13/07 3:16pm FILENAME: P194006219

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931
Location: TRISTAR TIMBER
PMX Representative: MIKE MARSHALL
Drilled By: GEOTECH EXPLORATIONS
Drill Method: AUGER
Soil Sample Method: SPLIT SPOON
Groundwater Sample Method: NA

Boring Number: MW-37s
Sheet: 1 OF 1
Total Boring Depth: 35 FEET/WELL DEPTH: 34 FEET
Date Completed: OCTOBER 6, 2004
Ground Level Measurement: 34.9 FT
Initial Water Level ∇ 31.2 FT
Measuring Point Elevation: 34.79 FT
Static Water Level: 31.18 FT **Date:** 10/07/04
Northing: 116677.8 **Easting:** 1080852.4

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				<p>FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1 FEET</p> <p>BENTONITE CHIPS 1-22 FEET</p> <p>2-INCH THREADED SCH 40 PVC CASING, 0-24 FEET, FLUSH THREAD</p> <p>8-INCH BOREHOLE 0-35 FEET</p> <p>10/20 SILICA SAND, 22-35 FEET</p> <p>2-INCH SCH 40 0.020 SLOT PVC SCREEN 24-34 FEET</p>	No sample obtained 5-35 feet: SAND (SW) - dark grayish brown, loose, damp, micaceous, medium to coarse grained @ 30 feet: SAND, saturated	
5 7 9	13"		5			
9 4 4	10"		10			
7 5 7	12"		15			
10 5 6	12"		20			
2 2 4	18"		25			
5 5 3	14"		30			
1 2 1	12"		35			

DATE: 03/28/07 10:01am FILENAME: P194006289

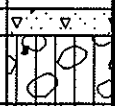
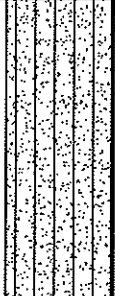
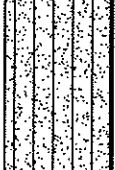
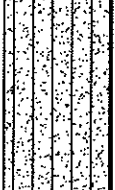
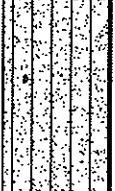
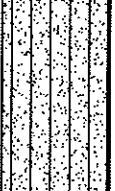
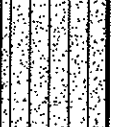
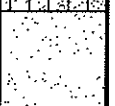
35 feet: End of boring

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931
Location: COLUMBIA CASCADE PROPERTY
PMX Representative: INGMAR SAUL/ADAM ROMEY
Drilled By: TACOMA PUMP AND DRILLING
Drill Method: CABLE TOOL
Soil Sample Method: REDIFLOW PUMP/SPLIT SPOON
Groundwater Sample Method: REDIFLO 2 PUMP

Boring Number: MW-38i
Sheet: 1 OF 6
Total Boring Depth: 210 FEET/WELL DEPTH: 155 FEET
Date Completed: NOVEMBER 12, 2004
Initial Water Level ∇ 40.05 FT
Measuring Point Elevation: 44.47 FT
Northing: 117482.74 **Easting:** 1080862.92

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1.5 FEET BENTONITE CHIPS 1.5-4 FEET	0-0.3 feet: ASPHALT 0.3-2.5 feet: SILTY GRAVEL FILL	
9 14 15	15"		5		2.5-33 feet: SILTY SAND - dark brown (7.5 YR 3/2), stiff, damp, fine grained sand @ 10 feet: SILTY SAND, light olive brown, dense, micaceous, ~40% silt	
20 30 33	15"		10	BENTONITE SLURRY, 4-138.7 FEET	@ 15 feet: SILTY SAND, very dense, ~25% silt	
8 13 14	12"		15	2-INCH THREADED SCH 80 PVC CASING, 0-145 FEET, FLUSH THREAD 10-INCH BOREHOLE 0-168 FEET	@ 20 feet: SILTY SAND, medium dense, ~35% silt	
15 24 30	12"		20		@ 25 feet: SILTY SAND, very dense, ~25% silt	
13 21 27	10"		25			
			30			
			35		33-41 feet: SAND - dark grayish brown (10YR 4/2), very dense, moist, sub-rounded, fine to medium grained, well sorted, trace of silt	

DATE: 03/28/07 11:02am FILENAME: P194006296

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931

Boring Number: MW-38i
Sheet: 2 OF 6
Date Completed: NOVEMBER 12, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
15 50 45	12"			<p style="margin-left: 20px;">BENTONITE SLURRY, 4-138.7 FEET</p> <p style="margin-left: 20px;">2-INCH THREADED SCH 80 PVC CASING, 0-145 FEET, FLUSH THREAD</p> <p style="margin-left: 20px;">10-INCH BOREHOLE 0-168 FEET</p>		
25 28 70	18"		40		<p>@ 40 feet: SAND, dark grayish brown (10YR 4/2), very dense, moist, sub-rounded, medium to coarse grained, poorly graded, trace of sub-rounded coarse gravel</p>	
			45		<p>41-70 feet: GRAVELLY SAND - dark gray (2.5Y 4/2), very dense, wet, sub-rounded, fine to coarse gravel, sub-rounded, fine to coarse grained sand, well sorted</p>	
15 40 50/1	8"		50		<p>@ 51 feet: Discrete depth groundwater sample MW-38i-50ft collected 10/19/04 1610</p>	
			55		<p>@ 60 feet: GRAVELLY SAND, saturated, sub-rounded, medium to coarse gravel, sub-rounded, medium to coarse grained sand, well sorted, trace clay matrix</p>	
			65		<p>@ 68 feet: Discrete depth groundwater sample MW-38i-70ft collected 10/20/04 1250</p>	
			70		<p>70-88 feet: SAND - dark gray, saturated, sub-rounded, fine to coarse grained sand, well sorted, trace of gravel</p>	
			75			

DATE: 03/28/07 11:02am FILENAME: P194006296

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931

Boring Number: MW-38i
Sheet: 3 OF 6
Date Completed: NOVEMBER 12, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			80		@ 80 feet: SAND, trace of sub-rounded fine gravel	
			85			
			90	<ul style="list-style-type: none"> • BENTONITE SLURRY, 4-138.7 FEET • 2-INCH THREADED SCH 80 PVC CASING, 0-145 FEET, FLUSH THREAD • 10-INCH BOREHOLE 0-168 FEET 	88-113 feet: SANDY GRAVEL - very dark gray (7.5YR 3/1), very dense, saturated, sub-rounded, fine to coarse grained sand, well sorted, sub-rounded, fine to coarse gravel and cobbles @ 90 feet: Discrete depth groundwater sample MW-38i-90ft collected 10/21/04 1015	
			95			
			100			
			105			
			110		@ 112 feet: Discrete depth groundwater sample MW-38i-110ft collected 10/22/04 1225	
			115		113-157 feet: SAND - dark gray (7.5YR 4/1), dense, saturated, medium to coarse grained sand, trace of sub-rounded coarse gravel	

DATE: 03/28/07 11:02am FILENAME: P194006296

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-38i

Project Number: 275-1940-006-03-4931

Sheet: 4 OF 6

Date Completed: NOVEMBER 12, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			120			
			125			
			130			
			135			
			140	<ul style="list-style-type: none"> • BENTONITE SLURRY 4-138.7 FEET • 2-INCH THREADED SCH 80 PVC CASING, 0-145 FEET, FLUSH THREAD • 10-INCH BOREHOLE 0-168 FEET • BENTONITE CHIPS 138.7-140.8 FEET • 20/40 SILICA SAND 140.8-142.3 FEET 	<p>@ 131 feet: Discrete depth groundwater sample MW-38i-130ft collected 10/25/04 1615</p> <p>@ 140 feet: SAND, some sub-rounded, coarse gravel with clay matrix</p>	
			145	<ul style="list-style-type: none"> • STAINLESS STEEL CENTRALIZER AT 145 FEET • 2-INCH SCH 80 0.010 SLOT PVC SCREEN 145.0-155.0 FEET 		
			150	<ul style="list-style-type: none"> • 10/20 SILICA SAND, 142.3-156.6 FEET 	<p>@ 150 feet: SAND, trace of fine grained sand, well sorted</p> <p>@ 150 feet: Discrete depth groundwater sample MW-38i-150ft collected 10/26/04 1400</p>	
			155	<ul style="list-style-type: none"> • STAINLESS STEEL CENTRALIZER AT 155 FEET 		

DATE: 03/28/07 11:02am FILENAME: P194006296



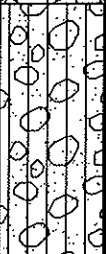
BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931

Boring Number: MW-38i
Sheet: 5 OF 6
Date Completed: NOVEMBER 12, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			160	<ul style="list-style-type: none"> 10/20 SILICA SAND 142.3-156.6 FEET 20/40 SILICA SAND 156.6-157.7 FEET BENTONITE CHIPS 157.7-161.0 FEET 	<p>@ 156.5 feet: SAND, trace of sub-rounded, coarse gravel and cobbles, first signs of cemented matrix on gravel</p> <p>157-166 feet: SANDY GRAVEL - very dark gray (7.5YR 3/1), very dense, saturated, sub-angular, fine to coarse grained sand, well sorted, sub-rounded, coarse gravel and cobbles with cemented matrix</p> <p>@ 160-166 feet: Altering layers of sandy gravel and sand. Each layer varying between 6 to 12 inches</p>	
			165	<ul style="list-style-type: none"> 10-INCH BOREHOLE 0-168 FEET 	<p>166-189 feet: GRAVEL - very dark gray, very dense, saturated, fine to coarse gravel and cobbles, trace of silt matrix and cemented matrix</p>	
			170	<ul style="list-style-type: none"> 8-INCH BOREHOLE 168-210 FEET 	<p>@ 170 feet: Discrete depth groundwater sample MW-38i-170ft collected 10/28/04 1345</p>	
			175	<ul style="list-style-type: none"> BENTONITE SLURRY 161-210 FEET 	<p>@ 175 feet: GRAVEL, sub-rounded, coarse gravel with cemented matrix</p>	
			180			
			185			
			190		<p>189-197 feet: SILTY SANDY GRAVEL - very dark gray (7.5YR 3/1), medium dense, saturated</p> <p>@ 190 feet: Discrete depth groundwater sample MW-38i-190ft collected 11/2/04 1350</p>	
			195			

DATE: 03/28/07 11:02am FILENAME: P194006296

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

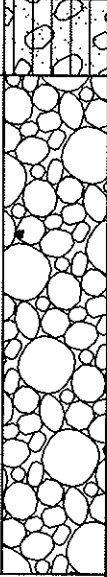
Boring Number: MW-38i

Project Number: 275-1940-006-03-4931

Sheet: 6 OF 6

Date Completed: NOVEMBER 12, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO- LOGIC COLUMN
			200	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p style="margin: 0;">8-INCH BOREHOLE 168-210 FEET</p> <p style="margin: 0;">BENTONITE SLURRY 161-210 FEET</p> </div>	<p>197-210: GRAVEL - very dark gray (7.5YR 3/1), very dense, saturated, coarse gravel, cemented matrix, trace of silt</p> <p>@ 210 feet: Discrete depth groundwater sample MW-38i-210ft collected 11/04/04 0905</p> <p>210 feet: Bottom of boring</p>	
			205			
			210			
			215			
			220			
			225			
			230			
			235			

DATE: 03/28/07 11:02am FILENAME: P194006296

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931
Location: GREAT WESTERN MALTING
PMX Representative: MIKE MARSHALL
Drilled By: GEOTECH EXPLORATIONS
Drill Method: AUGER
Soil Sample Method: SPLIT SPOON
Groundwater Sample Method: NA

Boring Number: MW-39s
Sheet: 1 OF 1
Total Boring Depth: 34 FEET/WELL DEPTH: 33 FEET
Date Completed: OCTOBER 7, 2004
Ground level Measurement: 33.37 FT
Initial Water Level 32.3 FT @ 1300
Measuring Point Elevation: 33.26 FT
Static Water Level: 29.8 FT **Date:** 10/07/04
Northing: 116629.8 **Easting:** 1079205.8

DATE: 03/28/07 09:47am FILENAME: P194006283

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			5	<p>FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1 FEET</p>	<p>0-10 feet: GRAVELLY SAND (GM) - brown, medium dense, moist, micaceous, sub rounded, fine to medium grained sand, sub rounded fine gravel</p>	
13 17 5	12"					
			10	<p>BENTONITE CHIPS 1-21 FEET</p>	<p>10-20 feet: SAND (SM) - dark gray, loose, moist, micaceous, fine grained</p>	
2 3 3	18"					
			15	<p>2-INCH THREADED SCH 40 PVC CASING, 0-23 FEET, FLUSH THREAD</p>		
1 1 2	18"					
			20	<p>8-INCH BOREHOLE 0-34 FEET</p>	<p>20-30 feet: SILT (ML) - dark gray, soft, wet, mottled, micaceous</p>	
1 2 4	14"					
			25	<p>10/20 SILICA SAND, 21-34 FEET</p>	<p>@ 25 feet: SILT, grayish brown, medium stiff</p>	
3 7 7	12"					
			30	<p>2-INCH SCH 40 0.020 SLOT PVC SCREEN 23-33 FEET</p>	<p>30-34 feet: SANDY SILT (ML) - brown, medium stiff, saturated, micaceous, mottled, sand is fine grained</p>	
2 3 6	14"					
			35		<p>34 feet: End of boring</p>	
3 9 9	12"					

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER/SWAN MFG
 Project Number: 275-1940-006-05-6300
 Location: ST. SERVICES
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: SUBMERSIBLE PUMP

Boring Number: MW-30i
 Sheet: 1 OF 6
 Total Depth: 187 FEET
 Date Completed: MARCH 3, 2003
 Ground Level Elevation: 30.01 FEET
 Measuring Point Elevation: 29.81 FEET
 Static Water Level: ~24 FEET Date: 2/03
 Northing: 118607.3 Easting: 1077713.8

FILE: P194006022
 DATE: Feb 13, 2007 - 4:14pm PLOTTED BY: morgappau
 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0-5 feet: SANDY GRAVEL (GW) - Black (10YR 2/1), Fill dense, wet/saturated, fine to coarse grained sand, well graded, poorly sorted ~45%, fine angular gravel ~55%, micaceous.	[Pattern]
			5	CONCRETE 0-1 FEET		
			10	BENTONITE CHIPS 1-4 FEET		
4 3 3	18"		10	BENTONITE GROUT, 4-69 FEET	5 - 14 feet: SAND (SW) - Very dark gray (10YR 3/1) loose wet (driller added water), fine to medium grained sand, well graded, poorly sorted, micaceous.	[Pattern]
			15	2-INCH THREADED SCH 80 PVC CASING, FLUSH THREAD	14 - 23 feet: SILT (ML)- Very dark grayish brown (10YR 3/2), soft, moist, micaceous.	[Pattern]
2 2 2	18"		15	10-INCH BOREHOLE 0-105 FEET	20 - 21.5 feet: Grayish brown (10YR 5/2), moderately mottled	[Pattern]
1 2 2	18"		20		23 - 27 feet: SANDY SILT (SM)- Brown (10YR 4/3), medium stiff, moist, medium to fine grained sand, sub-angular ~30%, ~70% silt.	[Pattern]
1 2 3	18"		25		28 - 50 feet: SAND (SW)- Very Dark Brown (10YR 2/2), loose, saturated fine to coarse sand, poorly sorted, well graded, sub rounded.	[Pattern]
50 3	1"		30		@ 29 feet: Discrete depth groundwater sample MW30-29', collected 2/6/03 1110.	[Pattern]
			35			[Pattern]

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER/SWAN MFG
 Project Number: 275-1940-006-05-6300
 Location: ST. SERVICES
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: SUBMERSIBLE PUMP

Boring Number: **MW-30i**
 Sheet: 2 OF 6
 Total Depth: 187 FEET
 Date Completed: MARCH 3, 2003
 Ground Level Elevation: 30.01 FEET
 Measuring Point Elevation: 29.81 FEET
 Static Water Level: ~24 FEET Date: 2/03
 Northing: 118607.3 Easting: 1077713.8

FILE: P194006023
 DATE: Feb 13, 2007 - 4:15pm PLOTTED BY: morgapau XREF'S: IMAGES:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40	BENTONITE GROUT, 4-69 FEET	@ 40 feet: trace of fine gravel.	40
			45		@ 45 feet: Heaving sands @ 45 feet: discrete-depth groundwater sample MW30-45', collected 2/6/03 1515.	45
			50	2-INCH THREADED SCH 80 PVC CASING, FLUSH THREAD		50
			55	10-INCH BOREHOLE 0-105 FEET	50 - 139 feet: GRAVELY SAND (GW) - Black (10YR 2/1), loose, saturated, ~80% fine to coarse grained sand, poorly sorted, well graded, ~20% fine to coarse sub-rounded gravel. @ 53 feet: Switch from bailing to drilling. The percent of gravel is increasing causing harder drilling	55
			60		@ 60 feet: Greater percentage of coarse gravels and cobble range in length of 5 inches to 8 inches.	60
			65		@ 65 feet: discrete-depth groundwater sample MW30-65', collected 2/7/03 1230.	65
			70	BENTONITE CHIPS, 69-73 FEET	@ 67 feet: SANDY GRAVEL (GW) - ~20% fine to coarse grained sand, ~80% fine to coarse gravel.	70

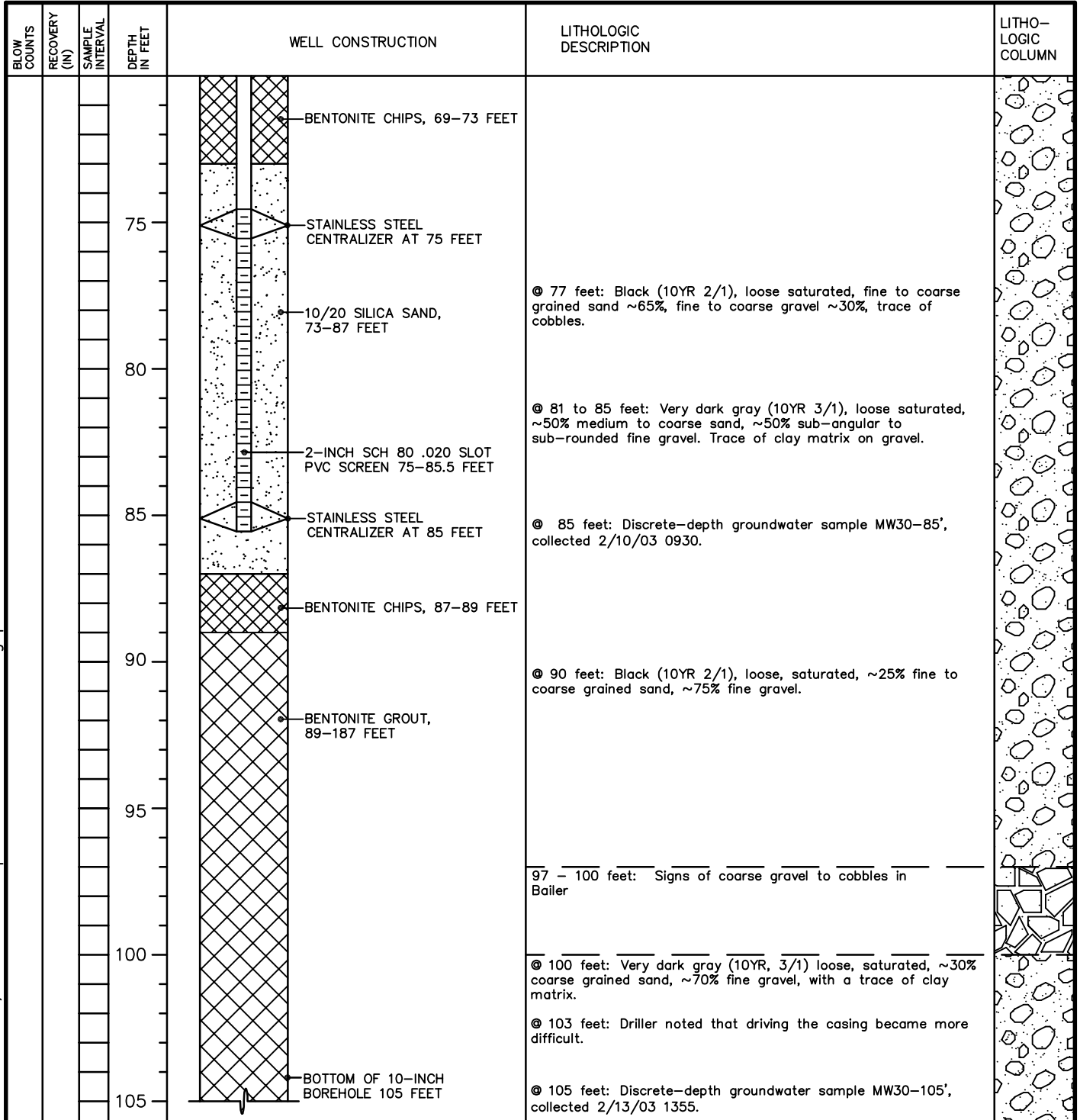
EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER/SWAN MFG
 Project Number: 275-1940-006-05-6300
 Location: ST. SERVICES
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: SUBMERSIBLE PUMP

Boring Number: MW-30i
 Sheet: 3 OF 6
 Total Depth: 187 FEET
 Date Completed: MARCH 3, 2003
 Ground Level Elevation: 30.01 FEET
 Measuring Point Elevation: 29.81 FEET
 Static Water Level: ~24 FEET Date: 2/03
 Northing: 118607.3 Easting: 1077713.8

FILE: P194006024
 DATE: Feb 13, 2007 - 4:15pm PLOTTED BY: morgapau XREF'S:



EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER/SWAN MFG
 Project Number: 275-1940-006-05-6300
 Location: ST. SERVICES
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: SUBMERSIBLE PUMP

Boring Number: MW-30i
 Sheet: 4 OF 6
 Total Depth: 187 FEET
 Date Completed: MARCH 3, 2003
 Ground Level Elevation: 30.01 FEET
 Measuring Point Elevation: 29.81 FEET
 Static Water Level: ~24 FEET Date: 2/03
 Northing: 118607.3 Easting: 1077713.8

FILE: P194006025
 DATE: Feb 13, 2007 - 4:16pm PLOTTED BY: morgapau XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110	<p style="margin-left: 20px;">TOP OF 8-INCH BOREHOLE 105-187 FEET</p> <p style="margin-left: 20px;">BENTONITE GROUT, 89-187 FEET</p>	<p>© 105 feet: Very dark gray (10YR 3/1), loose, saturated, ~25% fine to coarse grained sand, ~75% fine to coarse gravel, with a trace of clay matrix. Switched from bailing to drilling</p>	
			115		<p>© 112 feet: Driller said casing started driving harder, having trouble with heaving sands, material is too loose, the casing is dropping as material is bailed out of casing.</p>	
			120		<p>117 feet: GRAVELY SAND (GW)- Black (10YR 2/1), loose, saturated, ~20% sub-angular to sub-rounded fine gravel, ~80% sub-angular, well graded, poorly sorted medium to coarse grained sand. Having problem with heaving sands. Switched from drilling to bailing</p>	
			125		<p>© 125 feet: Discrete-depth groundwater sample MW30-125', collected 2/3/03 1010</p>	
			130		<p>© 130 feet: Trace of coarse gravel less than ~5% signs of clay matrix holding together coarse grained sand <1%.</p>	
			135		<p>© 132 feet: Casing driving in a lot harder than before. Switched from bailing to drilling.</p>	
			140		<p>© 135 feet: Signs of more coarse gravels, probably a sand, gravel.</p>	
					<p>139 - 162 feet: SAND (SW)- Black (10YR 2/1) loose, saturated, fine to coarse grained sand, well graded, poorly sorted. Heaving Sands, Switched from drilling to bailing.</p>	

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER/SWAN MFG
 Project Number: 275-1940-006-05-6300
 Location: ST. SERVICES
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: SUBMERSIBLE PUMP

Boring Number: MW-30i
 Sheet: 5 OF 6
 Total Depth: 187 FEET
 Date Completed: MARCH 3, 2003
 Ground Level Elevation: 30.01 FEET
 Measuring Point Elevation: 29.81 FEET
 Static Water Level: ~24FEET Date: 2/03
 Northing: 118607.3 Easting: 1077713.8

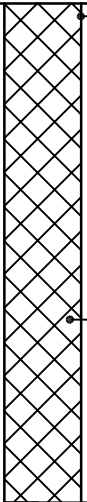
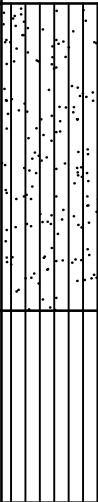
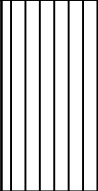

FILE: P194006026
 DATE: Feb 13, 2007 - 4:16pm PLOTTED BY: morgapau XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN		
			145	<p style="margin-left: 20px;">TOP OF 8-INCH BOREHOLE 105-187 FEET</p> <p style="margin-left: 20px;">BENTONITE GROUT, 89-187 FEET</p>	© 145 feet: Discrete-depth groundwater sample MW30-145', collected 2/14/03 1400 © 145 feet: Very dark gray (10YR 3/1), loose saturated, medium to fine grained sand, well graded, poorly sorted.			
			150		© 150 feet: Trace of clay matrix holding together fine sand.			
			155		© 155 feet: Micaceous, signs of clay matrix.			
			160		© 157 feet: First signs of fine to coarse gravel, (<5%) mixed in with sands. (No signs of Cementation)			
			165		© 159.5 feet: Switched from bailing to drilling. © 159.5 feet: Switched from drilling to bailing, encountered heaving sands.			
			170		162 - 175 feet: GRAVELLY SAND (GW)- Very dark gray (10YR2/1) loose, saturated, ~15% fine to coarse gravel, signs of cementation, ~85% fine to coarse grained sand, micaceous, with a trace of silt.			
			175		© 165 feet: Switched from bailing to drilling. © 165 feet: Discrete-depth groundwater sample MW30-165', collected 2/17/03 1540			
					© 172 feet: Some coarse gravel showed signs of cementation and clay matrix.			
							175 - 183 feet: GRAVELLY SANDY SILT (GW/SM)- Gray (10YR, 5/1), loose saturated, fine to coarse gravel ~15%, fine to coarse grained sand ~20%, silt ~65% micaceous.	

EXPLORATORY BORING LOG

Parametrix

Project Name: <u>PORT OF VANCOUVER/SWAN MFG</u>	Boring Number: <u>MW-30i</u>
Project Number: <u>275-1940-006-05-6300</u>	Sheet: <u>6 OF 6</u>
Location: <u>ST. SERVICES</u>	Total Depth: <u>187 FEET</u>
PMX Representative: <u>INGMAR SAUL</u>	Date Completed: <u>MARCH 3, 2003</u>
Drilled By: <u>WESTERBERG DRILLING</u>	Ground Level Elevation: <u>30.01 FEET</u>
Drill Method: <u>CABLE TOOL</u>	Measuring Point Elevation: <u>29.81 FEET</u>
Soil Sample Method: <u>SPLIT SPOON</u>	Static Water Level: <u>~24 FEET</u> Date: <u>2/03</u>
Groundwater Sample Method: <u>SUBMERSIBLE PUMP</u>	Northing: <u>118607.3</u> Easting: <u>1077713.8</u>

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180	 <p>TOP OF 8-INCH BOREHOLE 105-187 FEET</p> <p>BENTONITE GROUT, 89-187 FEET</p>	<p>© 175 feet: Gray (10YR 5/1), loose saturated, ~15% fine to coarse gravel, ~20% fine to coarse grained sand, ~65% silt, micaceous.</p>	
			185		<p>183 - 187 feet: SILT (ML) - Gray (10YR 4/1), loose, saturated trace of fine gravel, trace of mud is coarse ground sand.</p> <p>© 185 feet: Discrete-depth groundwater sample MW30-185', collected 2/19/03 1415</p>	
			190		<p>187 feet: Bottom of Boring at 187 feet.</p>	

FILE: P194006027
 DATE: Feb 13, 2007 - 4:16pm PLOTTED BY: morgapau XREF'S:

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER/SWAN MFG
 Project Number: 275-1940-006-05-6300
 Location: ST. SERVICES
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: SUBMERSIBLE PUMP

Boring Number: MW-31i
 Sheet: 1 OF 5
 Total Depth: 167 FEET
 Date Completed: FEBURARY 4, 2003
 Ground Level Elevation: 31.84 FEET
 Measuring Point Elevation: 31.64 FEET
 Static Water Level: ~25 FEET Date: 12/02
 Northing: 119133.4 Easting: 1077245.3

FILE: P194006028
 DATE: Feb 13, 2007 - 4:17pm
 PLOTTED BY: morgapau
 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-2 FEET BENTONITE CHIPS 2-6 FEET BENTONITE GROUT, 6-68 FEET 2-INCH THREADED SCH 80 PVC CASING, FLUSH THREAD 10-INCH BOREHOLE 0-107 FEET	0 - 1 feet: Gravel and Ground Asphalt cover with fine, 1 - 3 feet: GRAVELLY SAND (GW) - Very dark gray (10YR 3/1). Damp, well rounded coarse to fine gravel in medium to fine sand, micaceous, fill material. 3 - 4 feet: SAND (SW) - Gray (10YR 5/1) damp, loose, poorly graded well sorted, some coarse sand in fine grained sand, fill material. ◎ 4 feet: Boulder or concrete pipe? ◎ 15 feet: Black (10YR 2.51) medium stiff, moist, ~20% fine-grained sand, trace of fine gravel, micaceous. 17 - 22.5 feet: SILT (ML) - Dark grayish brown (10YR 4/2), medium stiff, damp, moderately mottled, micaceous. 22.5 - 28 feet: SANDY SILT (MH) - Brown (10YR 4/3), soft, wet/moist, ~30% fine-grained sand, trace of fine gravel. 28 - 55 feet: SAND (SW) - Very dark gray (10YR 3/1) loose, saturated, well graded, poorly sorted, fine to coarse grained sand, sub angular, trace of fine gravels, predominantly coarse grained. ◎ 28 feet: Discrete-depth groundwater sample MW31-28', collected 1/10/03 0935	
2 3 4	12"		10			
2 3 3	12"		15			
1 2 3	13"		20			
1 1 1	16"		25			
1 2 7	12"		30			
			35			



EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER/SWAN MFG
 Project Number: 275-1940-006-05-6300
 Location: ST. SERVICES
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: SUBMERSIBLE PUMP

Boring Number: MW-31i
 Sheet: 2 OF 5
 Total Depth: 167 FEET
 Date Completed: FEBURARY 4, 2003
 Ground Level Elevation: 31.84 FEET
 Measuring Point Elevation: 31.64 FEET
 Static Water Level: ~25 FEET Date: 12/02
 Northing: 119133.4 Easting: 1077245.3

FILE: P194006029
 DATE: Feb 13, 2007 - 4:17pm PLOTTED BY: morgapau
 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
5 8 17	15"		40	BENTONITE GROUT, 6-68 FEET 2-INCH THREADED SCH 80 PVC CASING, FLUSH THREAD 10-INCH BOREHOLE 0-107 FEET	@ 35 - 40 feet: Noticed an increase in fine gravels, trace of wood debris. @ 40 - 41.5 feet: Very dark gray (10YR 3/1) wet, loose, fine to coarse grained sand, majority is medium-grained, poorly sorted, well graded, sub-angular, trace of fine gravel up to 3 inches Heaving sand @ 45 feet: Discrete-depth groundwater sample MW31-45', collected 1/10/03 1525 @ 50 - 55 feet: signs of coarser gravels, up to 6 inches in length. Switched from bailing to drilling.	
50 3	0"		60		55 - 100 feet: SANDY GRAVEL (GW)- Very dark gray (10YR 3/1), saturated, loose, ~60% cobbles to fine gravel, ~40% fine to coarse sand, material becomes coarser (coarse gravel to cobbles). with majority of sand being coarse grained. @ 65 feet: Discrete-depth groundwater sample MW31-65', collected 1/13/03 1305 @ 65 feet: Switched from drilling to bailing.	
			70	BENTONITE CHIPS, 68-72 FEET		

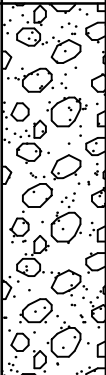
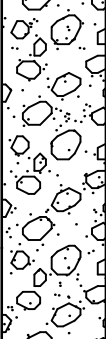

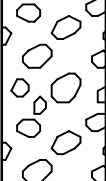
EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER/SWAN MFG
 Project Number: 275-1940-006-05-6300
 Location: ST. SERVICES
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: SUBMERSIBLE PUMP

Boring Number: MW-31i
 Sheet: 3 OF 5
 Total Depth: 167 FEET
 Date Completed: FEBURARY 4, 2003
 Ground Level Elevation: 31.84 FEET
 Measuring Point Elevation: 31.64 FEET
 Static Water Level: ~25 FEET Date: 12/02
 Northing: 119133.4 Easting: 1077245.3

FILE: P194006030
 DATE: Feb 13, 2007 - 4:18pm PLOTTED BY: moragpap XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	BENTONITE CHIPS, 68-72 FEET STAINLESS STEEL CENTRALIZER AT 75 FEET 10/20 SILICA SAND, 72-87 FEET 2-INCH SCH 80 .020 SLOT PVC SCREEN 75-85.5 FEET STAINLESS STEEL CENTRALIZER AT 85 FEET	@ 70 feet: Dark gray (10YR 4/1) saturated, ~80% cobbles to fine gravel, ~20% fine to coarse sand. Majority of gravel is coarse. @ 78 feet: Gray (10YR 4/1) loose, saturated, ~20% coarse grained sand, ~80% coarse gravel, some boulders, gravel well rounded, sand sub rounded.	
			85	BENTONITE CHIPS, 87-89 FEET BENTONITE GROUT, 89-167 FEET 10 INCH BOREHOLE	@ 85 feet: Discrete-depth groundwater sample MW31-85', collected 1/14/03 1020 @ 85 feet: Dark gray (10YR 4/1) loose, saturated, ~15% sand coarse grained, ~85% fine to coarse gravel (majority is fine) well rounded, trace of clay on matrix gravels. @ 86 to 87 feet: Bailing is getting more difficult. @ 87 feet: Dark gray (10YR 4/1), loose saturated, ~15%, coarse grained sand, 85% gravel. Switched from bailing to drilling. @ 88 feet: Driller said drilling has become noticeably more difficult. No signs of cementation on gravel.	
			100		100 -115 feet: GRAVEL (GP) - First signs of cementation on gravel, Clay matrix stuck on gravel.	
			105		@ 105 feet: Discrete-depth groundwater sample MW31-105', collected 1/15/03 1603	

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER/SWAN MFG
 Project Number: 275-1940-006-05-6300
 Location: ST. SERVICES
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: SUBMERSIBLE PUMP

Boring Number: MW-31i
 Sheet: 4 OF 5
 Total Depth: 167 FEET
 Date Completed: FEBURARY 4, 2003
 Ground Level Elevation: 31.84 FEET
 Measuring Point Elevation: 31.64 FEET
 Static Water Level: ~25 FEET Date: 12/02
 Northing: 119133.4 Easting: 1077245.3

FILE: P194006031
 DATE: Feb 13, 2007 - 4:18pm
 PLOTTED BY: morgapau
 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110	<p style="font-size: small;"> BOTTOM OF 10-INCH BOREHOLE 0-107 FEET TOP OF 8-INCH BOREHOLE 107-167 FEET BENTONITE GROUT, 89-187 FEET </p>		
			115		<p>© 111 feet: Drilling has become more difficult.</p>	
			120		<p>115 - 160 feet: SANDY GRAVEL (GW)- Dark gray (10YR 4/1), loose, saturated, ~15% fine grained sand, ~85% in fine to coarse gravel, trace of cementation on gravel.</p> <p>© 119 feet: ~25% gravel has signs of cementation.</p>	
			125		<p>© 125 feet: Discrete-depth groundwater sample MW31-125', collected 1/20/03 1300</p> <p>© 125 - 130 feet: SANDY GRAVEL (GW)</p> <p>© 125 feet: Dark gray (10YR 4/1) loose, saturated, very little fine gravel coming up with the bailer, medium to fine sand, poorly sorted well graded, micaceous, sub-rounded, ~85% sand, ~15% gravel. No sign of cementation or clay matrix.</p>	
			130		<p>© 130 feet: Dark Gray (10YR 4/1) loose, saturated, ~20% fine grained sand, ~80% fine gravel.</p>	
			135		<p>© 135 feet: ~20% fine to coarse grained sand, ~80% fine to coarse gravel to cobbles.</p>	
			140			

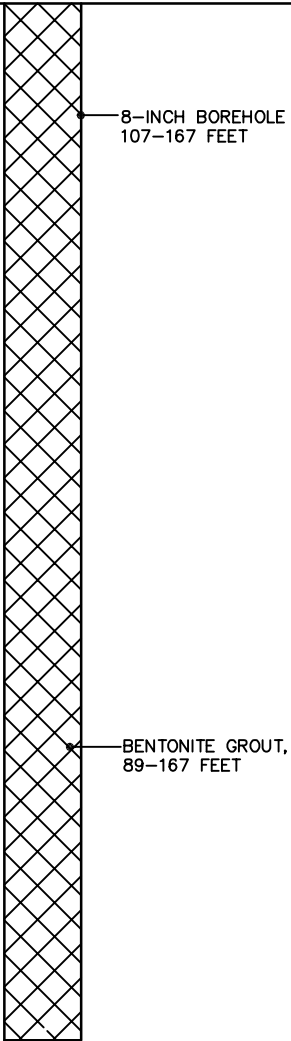
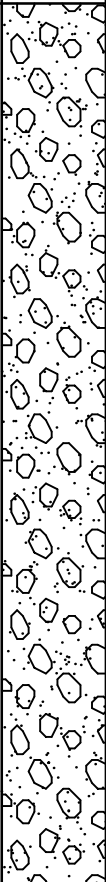
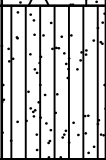
EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER/SWAN MFG
 Project Number: 275-1940-006-05-6300
 Location: ST. SERVICES
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: SUBMERSIBLE PUMP

Boring Number: **MW-31i**
 Sheet: 5 OF 5
 Total Depth: 167 FEET
 Date Completed: FEBURARY 4, 2003
 Ground Level Elevation: 31.84 FEET
 Measuring Point Elevation: 31.64 FEET
 Static Water Level: ~25 FEET Date: 12/02
 Northing: 119133.4 Easting: 1077245.3

FILE: P194006032
 DATE: Feb 13, 2007 - 4:19pm
 PLOTTED BY: morgapau
 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145	 <p style="margin-left: 20px;">8-INCH BOREHOLE 107-167 FEET</p> <p style="margin-left: 20px;">BENTONITE GROUT, 89-167 FEET</p>	<p>© 145 feet: Discrete-depth groundwater sample MW31-145', collected 1/22/03 0918</p>	
			150		<p>© 150 feet: Drilling became easier from 150 feet to 157 feet.</p>	
			155		<p>© 155 feet: Dark gray (10YR 4/1), loose, saturated, ~30% fine-grained sand, ~70% to fine gravel. Signs of clay matrix and cementation on gravel.</p>	
			160			
			165		<p>163 - 167 feet: SANDY SILTY GRAVEL (SM/GW)- Gray (10YR 2/1) loose, saturated, ~5-10% medium to fine grained sand, ~20-25% silt, ~65-70% fine gravel, silt matrix holding sand and gravel together.</p> <p>© 165 feet: Discrete-depth groundwater sample MW31-165', collected 1/23/03 1430</p>	
			170		<p>167 feet bgs Bottom of Boring at 167 feet.</p>	
			175			

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: POV WEST OF GUARD SHACK
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: MW-32i
 Sheet: 1 OF 4
 Total Depth: 141.5 FEET
 Date Completed: JULY 23, 2004
 Initial Water Level: 29.0 FT
 Measuring Point Elevation: 34.20 FT
 Static Water Level: 29.81 FT Date: 8/16/04
 Northing: 118876.2 Easting: 1076875.1

FILE: P194006201
 DATE: Feb 13, 2007 - 3:55pm PLOTTED BY: morgapau
 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0-2 feet: GRAVEL Fill 3/4 minus, asphalt layer 2-inches thick	0
			1	CONCRETE 0-1 FEET		1
			2	10/20 SAND 1-2 FEET TO DRAIN MONUMENT	2 - 10 feet: SAND (SW) - Dark gray (10YR 4/1), loose, damp, fine to course grained, well graded, with trace of fine gravel ~5%	2
			3	BENTONITE CHIPS 2-5 FEET		3
			4	BENTONITE SLURRY, 5-52 FEET	⊙ 8 feet: SAND, without gravel	4
1 3 3	9"		5		10 - 15 feet: SILTY SAND (SW) - gray (10YR 5/1) loose, moist, medium to fine grained sand, graded well, micaceous	5
			6	2-INCH THREADED SCH 80 PVC CASING 0-60 FEET, FLUSH THREAD,		6
			7	10-INCH BOREHOLE 0-101.5 FEET	15 - 18 feet: SILT (ML) - Very dark gray (10YR 3/1) medium stiff, moist, micaceous	7
2 3 4	14"		8		18 - 24 feet: SANDY SILT (SM) - Brown (10YR 5/3), medium stiff, moist, micaceous, moderately mottled	8
			9			9
			10			10
			11			11
			12			12
			13			13
			14			14
			15			15
			16			16
			17			17
			18			18
			19			19
			20			20
			21			21
			22			22
			23			23
			24			24
			25			25
			26			26
			27			27
			28			28
			29			29
			30			30
			31			31
			32			32
			33			33
			34			34
			35		⊙30 feet: SILT, soft, wet	35

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: POV WEST OF GUARD SHACK
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: **MW-32i**
 Sheet: 2 OF 4
 Total Depth: 141.5 FEET
 Date Completed: JULY 23, 2004
 Initial Water Level: 29.0 FT
 Measuring Point Elevation: 34.20 FT
 Static Water Level: 29.81 FT Date: 8/16/04
 Northing: 118876.2 Easting: 1076875.1

FILE: P194006202
 DATE: Feb 13, 2007 - 3:55pm PLOTTED BY: morgapau
 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
1 1 2	18"					
					36 - 39 feet: GRAVELY SILT (ML)- Dark reddish brown (5YR 2/3), wet, soft, sub-rounded, fine gravel	
			40	BENTONITE SLURRY, 5-52 FEET	39 - 47 feet: SAND (SW) Dark Brown (7.5YR 3/3), saturated, loose, sub-rounded, medium to coarse grained, trace of sub-rounded fine gravel. @39 feet: Discrete depth groundwater sample MW32i-39 feet Collected 7/8/04 1440	
1 3 7	18"					
			45		@ 45 - 46.5 feet: SAND (SW)- Very Dark Gray (5YR 3/1)	
2 5 7	8"					
			50	2-INCH THREADED SCH 80 PVC CASING, 0-60 FEET, FLUSH THREAD 10-INCH BOREHOLE 0-101.5 FEET	47-60 feet: GRAVELY SAND (SW) - Very Dark Gray (5YR 3/1), saturated, loose, sub-rounded, medium to coarse grained sand, with 25% sub-rounded fine gravel	
50 5	4"					
			55	BENTONITE CHIPS, 52-56 FEET	@ 57 feet: ~40% sub-rounded fine to coarse gravel	
			60	20/40 SILICA SAND, 56-57 FEET 10/20 SILICA SAND, 57-71 FEET STAINLESS STEEL CENTRALIZER AT 60 FEET	60 - 100 feet: SANDY GRAVEL (GW)- Very Dark Gray (5YR 3/1), saturated, loose, sub-rounded, medium to coarse grained sand, well graded, ~60% gravel, ~40% sand @60 feet: Discrete depth groundwater sample MW-32i-60 feet 7/9/04 1055	
			65	2-INCH SCH 80 .010 SLOT PVC SCREEN 60-70 FEET	@ 64 feet: SANDY GRAVEL (GW), ~75% gravel, ~25% sand	
			70	STAINLESS STEEL CENTRALIZER AT 70 FEET		

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: POV WEST OF GUARD SHACK
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: **MW-32i**
 Sheet: 3 OF 4
 Total Depth: 141.5 FEET
 Date Completed: JULY 23, 2004
 Initial Water Level: 29.0 FT
 Measuring Point Elevation: 34.20 FT
 Static Water Level: 29.81 FT Date: 8/16/04
 Northing: 118876.2 Easting: 1076875.1

FILE: P194006203
 DATE: Feb 13, 2007 - 3:54pm PLOTTED BY: morgapau XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	10/20 SILICA SAND, 57-71 FEET 20/40 SILICA SAND, 71-72 FEET BENTONITE CHIPS, 72-74 FEET	70-98 Feet: SANDY GRAVEL (GW)- same as above	
			80		@80 Feet: discrete depth groundwater sample MW-32i-80' collected 7/9/04 1552	
			85			
			90	BENTONITE SLURRY, 74-141.5 FEET 10-INCH BOREHOLE 101.5 FEET	@ 90 feet: SANDY GRAVEL (GW), ~10% sub-rounded, medium to coarse sand, ~80% sub-rounded, fine to coarse gravel	
			95			
			100		98 - 141.5 feet: GRAVEL (GP) Very dark gray (7YR, 3/3), loose, saturated, sub-rounded, fine to coarse gravel, with cemented matrix, trace of medium to coarse sand @100 Feet: discrete depth groundwater sample MW-32i-100' collected 7/12/04 1310	
			105	8-INCH BOREHOLE 101.5-141.5 FEET		

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: POV WEST OF GUARD SHACK
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: **MW-32i**
 Sheet: 4 OF 4
 Total Depth: 141.5 FEET
 Date Completed: JULY 23, 2004
 Initial Water Level: 29.0 FT
 Measuring Point Elevation: 34.20 FT
 Static Water Level: 29.81 FT Date: 8/16/04
 Northing: 118876.2 Easting: 1076875.1

FILE: P194006204
 DATE: Feb 13, 2007 - 3:54pm PLOTTED BY: morgapau XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110	<p style="margin-left: 20px;">TOP OF 8-INCH BOREHOLE 101.5-141.5 FEET</p> <p style="margin-left: 20px;">BENTONITE SLURRY, 74-141.5 FEET</p>	<p style="margin-left: 20px;">© 113 feet: Gravel, trace of silt</p> <p style="margin-left: 20px;">© 120 feet: Discrete depth groundwater sample MW-32i-120ft collected 7/14/04 11:30</p> <p style="margin-left: 20px;">© 140 feet: Discrete depth groundwater sample MW-32i-140ft collected 7/14/04 11:30 Bottom of Boring 141.5 feet</p>	
			115			
			120			
			125			
			130			
			135			
			140			

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931
Location: POV GUARD SHACK
PMX Representative: MIKE MARSHALL
Drilled By: GEOTECH EXPLORATIONS
Drill Method: AUGER
Soil Sample Method: SPLIT SPOON
Groundwater Sample Method: NA

Boring Number: MW-32s
Sheet: 1 OF 1
Total Depth: 34.5 FEET
Date Completed: OCTOBER 7, 2004
Initial Water Level: 30.98 FT
Measuring Point Elevation: 34.23 FT
Static Water Level: 34.0 FT **Date:** 10/07/04
Northing: 118881 **Easting:** 1076872

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			5	<p>FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1 FEET</p>	No sample obtained	
7 14 14	14"				5-20 feet: SAND (SW) - grayish brown, medium dense, moist, micaceous, fine to medium grained, sub rounded	
7 6 6	16"		10	<p>BENTONITE CHIPS 1-21 FEET</p>	@10.6 feet: SAND, brown, loose, fine grained @11.1 feet: SAND, dark gray	
6 6 10	14"		15	<p>2-INCH THREADED SCH 40 PVC CASING, 0-23 FEET, FLUSH THREAD</p>		
				<p>8-INCH BOREHOLE 0-34.5 FEET</p>		
2 4 6	16"		20		20-25 feet: SANDY SILT (ML) - light brown, soft to medium stiff, moist to wet, micaceous, mottled, sand is fine grained	
2 5 5	18"		25	<p>10/20 SILICA SAND, 21-34.5 FEET</p>	25-34.5 feet: SILT (ML) - light brown, medium stiff, wet, micaceous, mottled, minor trace of fine grained sand lenses	
2 3 6	20"		30	<p>2-INCH SCH 40 0.020 SLOT PVC SCREEN 23-33 FEET</p>		
2 4 2	18"		35		34.5 feet: End of boring	

DATE: 02/14/07 08:38am FILENAME: P194006285

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: ACROSS STREET FROM HUMANE SOCIETY
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: MW-33i
 Sheet: 1 OF 5
 Total Depth: 177 FEET
 Date Completed: AUGUST 10, 2004
 Initial Water Level: ▽ 27.45 FT
 Measuring Point Elevation: 31.46 FT
 Static Water Level: 25.75 FT Date: 11/15/04
 Northing: 119263.7 Easting: 1077870.3

FILE: P194006205
 DATE: Feb 13, 2007 - 3:48pm
 PLOTTED BY: morgapau
 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1 FEET 10/20 SILICA SAND, 1-2 FEET BENTONITE CHIPS 2-6 FEET BENTONITE GROUT, 6-69 FEET 2-INCH THREADED SCH 80 PVC CASING, 0-75 FEET, FLUSH THREAD 10-INCH BOREHOLE 0-137 FEET	0-0.35 feet: ASPHALT 0.35 -1 feet: SILTY SAND (GM), fill material 1 -15 feet: SAND (SW) Dark gray (2.5 4/1), loose damp, sub-angular, fine to medium grained, poorly sorted, with trace of fine gravel ◎ 10-11.5 feet: Sand, micaceous 15 - 20 feet: SILTY SAND (SM)- Brown (7.5 4/4) loose, moist, fine grained sand, poorly sorted, slightly mottled, micaceous, 40% silt, 60% sand 20 - 21.5 feet: SAND (SW)- Brown (10YR 4/3), medium dense, moist, fine grained, poorly sorted, micaceous ◎ 25 - 26.5 feet: SAND, Dark gray (2.5 4/1), dense, poorly sorted, sub-angular, fine to medium grained ◎ 30 - 31.5 feet: SAND, loose, wet to saturated	
1 1 1	12"		10			
2 5	12"		15			
3 6 6	12"		20			
8 18 30	18"		25			
1 1 2	18"		30			
			35			

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: ACROSS STREET FROM HUMANE SOCIETY
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: **MW-33i**
 Sheet: 2 OF 5
 Total Depth: 177 FEET
 Date Completed: AUGUST 10, 2004
 Initial Water Level: 27.45 FT
 Measuring Point Elevation: 31.46 FT
 Static Water Level: 25.75 FT Date: 11/15/04
 Northing: 119263.7 Easting: 1077870.3

FILE: P194006206
 DATE: Feb 13, 2007 - 3:48pm PLOTTED BY: morgapau
 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
1 2 3	9"				@ 35 - 35.5 feet: SAND, Very Dark Gray (2.5 3/1) saturated @ 35 feet: Discrete depth groundwater sample MW-33i-35ft collected 7/26/04 13:55	
10 20 20	12"		40	BENTONITE GROUT 6-69 FEET	@ 40 - 41.5 feet: SAND, some coarse grained sand	
1 2 6	12"		45		@ 45 - 46.5 feet: SAND, fine to coarse grained, poorly sorted, trace of fine gravel @ 47 feet: Sand, few fine gravel	
5 17 19	4"		50	2-INCH THREADED SCH 80 PVC CASING, 0-75 FEET, FLUSH THREAD 10-INCH BOREHOLE 0-137 FEET	@ 50-51.5 feet: SAND, coarse grained, with some medium to fine grained sand, well sorted, with trace of fine gravel	
			55		52 - 60 feet: GRAVELLY SAND (GW), Very dark gray (2.5Y 3/1), dense, little fine to coarse gravel, fine to coarse grained sand, poorly sorted @ 55 feet: Discrete depth groundwater sample MW-33i-55ft collected 7/27/04 10:00	
			60		60 - 99 feet: SANDY GRAVEL (GW), Dark gray (2.5 4/1), dense, saturated, sub-rounded, fine to coarse grained sand, ~20% sub-rounded, fine to coarse gravel, ~80%	
			70	BENTONITE CHIPS, 69-71 FEET		

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: ACROSS STREET FROM HUMANE SOCIETY
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: **MW-33i**
 Sheet: 4 OF 5
 Total Depth: 177 FEET
 Date Completed: AUGUST 10, 2004
 Initial Water Level: 27.45 FT
 Measuring Point Elevation: 31.46 FT
 Static Water Level: 25.75 FT Date: 11/15/04
 Northing: 119263.7 Easting: 1077870.3

FILE: P194006208
 DATE: Feb 13, 2007 - 3:49pm PLOTTED BY: morgapau XREF'S: IMAGES:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
			110	<p style="font-size: small;">10-INCH BOREHOLE 0-137 FEET</p> <p style="font-size: small;">BENTONITE SLURRY, 88-177 FEET</p> <p style="font-size: small;">TOP OF 8-INCH BOREHOLE 137- 177 FEET</p>			
			115			© 115 feet: Discrete depth groundwater sample MW-33i-115ft collected 7/28/04 16:12	
			120			©120 feet: SAND (SW), sub-rounded, fine to coarse grained sand, trace of fine sub-angular gravel, trace of silt	
			125			124 - 129 feet: GRAVELY SAND (GW), Very Dark Gray (2.5 3/1), dense, saturated, sub-rounded fine to coarse grained sand, sub-rounded, fine to coarse gravel, trace of silt	
			130			© 127 feet: Gravel and cobbles have a clay matrix	
			135		129 - 177 feet: SANDY GRAVEL (GW), Very Dark Gray (2.5 3/1) very dense, saturated, sub-rounded, medium to coarse grained sand, ~40, sub-rounded, fine to coarse gravels and cobbles, ~60%, gravel has a cemented matrix		
			140		© 135 feet: Discrete depth groundwater sample MW-33i-135ft collected 7/29/04 15:01		

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: ACROSS STREET FROM HUMANE SOCIETY
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: **MW-33i**
 Sheet: 5 OF 5
 Total Depth: 177 FEET
 Date Completed: AUGUST 10, 2004
 Initial Water Level: 27.45 FT
 Measuring Point Elevation: 31.46 FT
 Static Water Level: 25.75 FT Date: 11/15/04
 Northing: 119263.7 Easting: 1077870.3

FILE: P194006209
 DATE: Feb 13, 2007 - 3:47pm PLOTTED BY: morgapau
 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145		<p>© 155 feet: Discrete depth groundwater sample MW-33i-155ft collected 8/3/04 10:13</p> <p>© 175 feet: Discrete depth groundwater sample MW-33i-55ft collected 8/4/04 13:44</p> <p>© 175 feet: SANDY GRAVEL (GW)- Darker Gray, sub-rounded coarse sand, ~40%, well rounded coarse gravel, cemented ~60%</p> <p>Bottom of boring © 177 feet</p>	
			150			
			155			
			160			
			165			
			170			
			175			

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931
Location: NORTH OF WA HUMANE SOCIETY
PMX Representative: MIKE MARSHALL
Drilled By: GEOTECH EXPLORATIONS
Drill Method: AUGER
Soil Sample Method: SPLIT SPOON
Groundwater Sample Method: NA

Boring Number: MW-33s
Sheet: 1 OF 1
Total Depth: 35 FEET
Date Completed: OCTOBER 4, 2004
Initial Water Level 28.2 FT
Measuring Point Elevation: 31.57 FT
Static Water Level: 28.15 FT **Date:** 10/04/04
Northing: 119263 **Easting:** 1077875

DATE: 02/14/07 08:38am FILENAME: P194006286

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			5	<p>FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1 FEET</p>	No sample obtained	
6 7 9	12"				5-15.3 feet: SAND (SW) - gray, loose, damp, micaceous, medium grained	
6 4 4	12"		10	BENTONITE CHIPS 1-19 FEET		
7 6 8	12"		15	2-INCH THREADED SCH 40 PVC CASING, 0-21 FEET, FLUSH THREAD	15.3-25 feet: SILTY SAND (SM) - brown, medium stiff, moist, micaceous, sand is fine grained	
10 10 12	12"		20	8-INCH BOREHOLE 0-35 FEET		
7 7 11	12"		25	10/20 SILICA SAND, 19-35 FEET	25-35 feet: SAND (SW) - dark gray, loose, moist, medium grained	
7 8 10	12"		30	2-INCH SCH 40 0.020 SLOT PVC SCREEN 21-31 FEET	@ 30 feet: SAND, saturated	
			35	<p>10/20 SILICA SAND, 19-35 FEET</p> <p>2-INCH SCH 40 0.020 SLOT PVC SCREEN 21-31 FEET</p>	35 feet: End of boring	

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931
Location: WESTSIDE WASTEWATER RECLAMATION FACILITY
PMX Representative: INGMAR SAUL/ADAM ROMEY
Drilled By: TACOMA PUMP AND DRILLING
Drill Method: CABLE TOOL
Soil Sample Method: SPLIT SPOON
Groundwater Sample Method: REDIFLO 2 PUMP

Boring Number: MW-34i
Sheet: 1 OF 5
Total Depth: 181 FEET
Date Completed: 10/14/04
Initial Water Level ∇ 28.48 FT
Measuring Point Elevation: 35.08 PVC
Northing: 118284.9 **Easting:** 1078511.6

DATE: 02/13/07 3:35pm FILENAME: P194006298

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			0	<p style="font-size: small;">ABOVE GROUND PROTECTIVE MONUMENT 0 TO -3 FEET</p> <p style="font-size: small;">CONCRETE 0-4 FEET</p>	0-12 feet: FILL MATERIAL - SILT - brown, medium stiff, dry, trace of sub-rounded fine gravel	
12 17 15	4"		10		@ 10 feet: SILT , very dark gray (2.5Y 3/1), very stiff, damp, some organics, micaceous	
18 20 25	12"		15	<p style="font-size: small;">BENTONITE SLURRY, 4-92 FEET</p>	12-44 feet: SAND - grayish brown (2.5Y 5/2), dense, damp, fine to medium grained, poorly graded, micaceous	
7 15 17	12"		20	<p style="font-size: small;">2-INCH THREADED SCH 80 PVC CASING, -2.5 TO 95 FEET, FLUSH THREAD</p> <p style="font-size: small;">10-INCH BOREHOLE 0-79 FEET</p>	@ 20 feet: SAND , grayish brown (10YR 5/2)	
15 20 23	18"		25		@ 25 feet: SAND , very dark gray (10YR 3/1), dense, moist, fine to coarse grained, well graded, micaceous @ 25.75 feet: SAND , dark grayish brown (10YR 4/2), dense, moist, fine grained, poorly graded, micaceous	
			30		@ 30 feet: SAND , dark brown, dense, moist, fine to medium grained, well graded	

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-34i

Project Number: 275-1940-006-03-4931

Sheet: 2 OF 5

Date Completed: 10/14/04

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
13 12 15	12"			<p style="text-align: center;">BENTONITE SLURRY, 4-92 FEET</p> <p style="text-align: center;">2-INCH THREADED SCH 80 PVC CASING, -2.5 TO 95 FEET, FLUSH THREAD</p> <p style="text-align: center;">10-INCH BOREHOLE 0-79 FEET</p>		
5 8 12	18"		35		@ 35 feet: SAND, dark gray to dark brown, dense, moist, fine to medium grained, well graded	
5 7 30	12"		40		@ 40 feet: SAND, dark gray, dense, wet, fine to medium grained, well graded @ 40 feet: Discrete depth groundwater sample MW-34i-40ft collected 9/17/04 1435	
5 28 55	9"		45		45-63 feet: GRAVELLY SAND - dark gray (10Y 3/1), dense, saturated, sub-rounded, fine gravel, fine to coarse grained sand, well graded, 35% gravel, 65% sand	
10 30 50	15"		50		@ 55 feet: GRAVELLY SAND, sub-rounded, coarse gravel	
50 50 50	12"		55		@ 60 feet: SANDY GRAVEL, very dense, 30% sand, 70% gravel @ 60 feet: Discrete depth groundwater sample MW-34i-60ft collected 9/21/04 0925	
			60			
			65			
			70			

DATE: 02/13/07 3:35pm FILENAME: P194006298

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

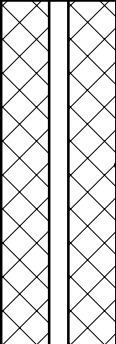
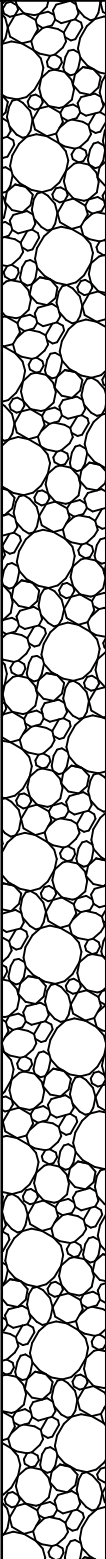
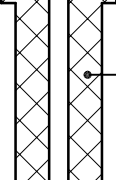
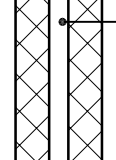
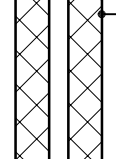
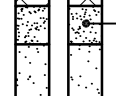

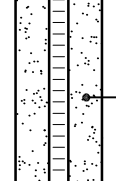
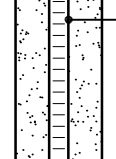
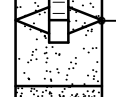


Boring Number: MW-34i

Project Number: 275-1940-006-03-4931

Sheet: 3 OF 5

Date Completed: 10/14/04

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			75	 <p>10-INCH BOREHOLE 0-79 FEET</p>		
			80	 <p>BENTONITE SLURRY, 4-92 FEET</p>	<p>@ 78 feet: Discrete depth groundwater sample MW-34i-78ft collected 9/22/04 1235</p>	
			85	 <p>2-INCH THREADED SCH 80 PVC CASING, -2.5 TO 95 FEET, FLUSH THREAD</p>		
			90	 <p>8-INCH BOREHOLE 79-181 FEET</p>		
			95	 <p>20/40 SILICA SAND 92-93 FEET</p>  <p>STAINLESS STEEL CENTRALIZER AT 95 FEET</p>		
			100	 <p>10/20 SILICA SAND, 93-106.8 FEET</p>  <p>2-INCH SCH 80 0.010 SLOT PVC SCREEN 95-105 FEET</p>	<p>@ 100 feet: Discrete depth groundwater sample MW-34i-100ft collected 9/28/04 1205</p>	
			105	 <p>STAINLESS STEEL CENTRALIZER AT 105 FEET</p>		
			110	 <p>20/40 SILICA SAND 106.8-108.3 FEET</p>  <p>BENTONITE CHIPS 108.3-115 FEET</p>		

DATE: 02/13/07 3:35pm FILENAME: P194006298

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

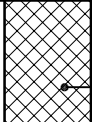
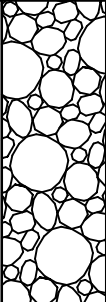
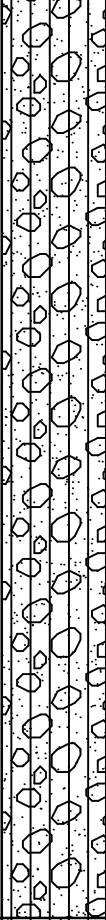
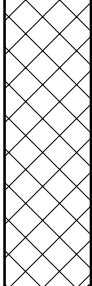
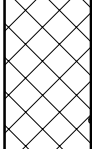

Boring Number: MW-34i

Project Number: 275-1940-006-03-4931

Sheet: 4 OF 5

Date Completed: 10/14/04

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			115	 <p style="margin-left: 20px;">BENTONITE CHIPS 108.3-115 FEET</p>	<p>@ 113 feet: GRAVEL WITH SAND, sub-rounded, fine grained sand</p>	
			120		<p>118-142 feet: SILTY SAND WITH GRAVEL - dark gray, loose, saturated, sub-rounded, fine to coarse grained sand, with some fine to coarse gravel</p>	
			125	 <p style="margin-left: 20px;">8-INCH BOREHOLE 79-181 FEET</p>		
			130	 <p style="margin-left: 20px;">BENTONITE SLURRY, 115-181 FEET</p>		
			135			
			140			
			145		<p>142-165.5 feet: SILTY SAND - dark gray, loose, saturated, sub-rounded, fine to coarse grained sand</p>	
			150			

DATE: 02/13/07 3:35pm FILENAME: P194006298

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-34i

Project Number: 275-1940-006-03-4931

Sheet: 5 OF 5

Date Completed: 10/14/04

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN	
			155	<p style="margin-left: 20px;">8-INCH BOREHOLE 79-181 FEET</p> <p style="margin-left: 20px;">BENTONITE SLURRY 115-181 FEET</p>			
			160			@ 161 feet: Discrete depth groundwater sample MW-34i-161ft collected 10/05/04 1145	
			165			165.5-173 feet: SANDY SILTY GRAVEL - dark gray, dense, saturated, sub-angular fine to coarse grained sand, fine to coarse gravel with a silt matrix	
			170				
			175			173-181 feet: SANDY GRAVEL - dark gray, very dense, saturated, sub-rounded, coarse gravel with a cemented matrix	
			180			@ 180 feet: Discrete depth groundwater sample MW-34i-180ft collected 10/07/04 0905	
			185			181 feet: Bottom of boring	
			190				

DATE: 02/13/07 3:35pm FILENAME: P194006298

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931
Location: NORTH WEST PACKING
PMX Representative: MIKE MARSHALL
Drilled By: GEOTECH EXPLORATIONS
Drill Method: AUGER
Soil Sample Method: SPLIT SPOON
Groundwater Sample Method: NA

Boring Number: MW-35s
Sheet: 1 OF 1
Total Depth: 33 FEET
Date Completed: OCTOBER 4, 2004
Initial Water Level: 31.8 FT
Measuring Point Elevation: 34.31 FT
Static Water Level: 30.8 FT **Date:** 10/04/04
Northing: 117240 **Easting:** 1080199

DATE: 02/14/07 08:38am FILENAME: P194006287

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			5	<p>FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1 FEET</p>	No sample obtained (cuttings are gravelly sand)	
14 9 16	12"			BENTONITE CHIPS 1-20.5 FEET	5-10 feet: SAND (SW) - gray, medium dense, damp, micaceous, medium to fine grained, sub rounded to sub angular	
1 1 3	12"		10	2-INCH THREADED SCH 40 PVC CASING, 0-22.5 FEET, FLUSH THREAD	10-15 feet: SILTY SAND (SM) - light brown, loose, moist, micaceous, trace of wood debris	
2 2 3	18"		15	8-INCH BOREHOLE 0-33 FEET	15-20.5 feet: SAND (SW) - dark gray, loose, wet to saturated, micaceous, sub rounded	
2 2 5	18"		20		20.5-30 feet: SILT (ML) - dark gray, soft, wet, mottled	
2 2 1	19"		25	10/20 SILICA SAND, 20.5-33 FEET		
4 5 6	12"		30	2-INCH SCH 40 0.020 SLOT PVC SCREEN 22.5-32.5 FEET	30-33 feet: SAND (SW) - dark gray, loose, wet to saturated, medium grained to coarse grained sub rounded	
			35		33 feet: End of boring	

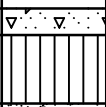
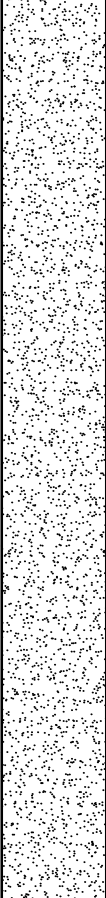
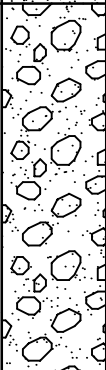
BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-003-4931
Location: 20th St/ Simpson Ave
PMX Representative: INGMAR SAUL/ADAM ROMEY
Drilled By: WESTERBERG DRILLING
Drill Method: CABLE TOOL
Soil Sample Method: SPLIT SPOON
Groundwater Sample Method: REDIFLO 2 PUMP

Boring Number: MW-36i
Sheet: 1 OF 5
Total Depth: 163 FEET
Date Completed: SEPTEMBER 28, 2004
Initial Water Level ∇ 31.10 FT
Measuring Point Elevation: 34.84 FT
Northing: 118216.3 **Easting:** 1080185.6

DATE: 03/11/05 09:24am FILENAME: P194006227

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			5	<ul style="list-style-type: none"> FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-2 FEET BENTONITE CHIPS 2-5 FEET 	0-0.5 feet: CONCRETE SIDEWALK AND GRAVEL FILL 0.5-2 feet: SILT, Light brown, loose, damp	
4 5 5	18"		10		2-25 feet: SAND, Grayish brown, loose, damp, fine grained, well sorted, micaceous	
3 6 9	18"		15	<ul style="list-style-type: none"> BENTONITE SLURRY, 5-89 FEET 		
3 4 5	18"		20	<ul style="list-style-type: none"> 2-INCH THREADED SCH 80 PVC CASING, 0-95 FEET, FLUSH THREAD 		
			25	<ul style="list-style-type: none"> 10-INCH BOREHOLE 0-111 FEET 	@ 25 feet, SAND, Dark Gray medium dense, moist, fine to coarse grained, poorly sorted, micaceous, trace of sub-rounded fine gravel	
4 6 15	18"		30		26-48 feet: GRAVELLY SAND, Dark gray, medium dense, moist, sub-rounded, coarse to fine gravel, coarse to fine grained sand, poorly sorted, micaceous	
5 8 8	12"		35			

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-36i

Project Number: 275-1940-006-003-4931

Sheet: 2 OF 5

Date Completed: SEPTEMBER 28, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
4 13 16	4"					
5 15 20	6"		40		@ 40 feet: Discrete depth groundwater sample MW-36i-40ft collected 9/13/04 1305	
			45			
25	0"		50	<ul style="list-style-type: none"> • BENTONITE SLURRY, 5-89 FEET • 2-INCH THREADED SCH 80 PVC CASING, 0-95 FEET, FLUSH THREAD • 10-INCH BOREHOLE 0-111 FEET 	48-64 feet: SAND, Dark gray, dense, saturated, medium to coarse grained, well sorted	
			55			
			60		@ 60 feet: Discrete depth groundwater sample MW-36i-60ft collected 9/14/04 0850	
			65		64-106 feet: SANDY GRAVEL, Dark Gray, dense, saturated, sub-rounded, medium to coarse grained sand, sub-rounded, cobbles to fine gravel	
			70			
			75			

DATE: 03/11/05 09:24am FILENAME: P194006227

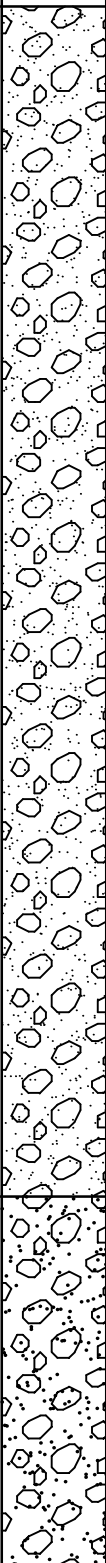
BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-003-4931

Boring Number: MW-36i
Sheet: 3 OF 5
Date Completed: SEPTEMBER 28, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			80	<ul style="list-style-type: none"> • BENTONITE SLURRY, 5-89 FEET • 2-INCH THREADED SCH 80 PVC CASING, 0-95 FEET, FLUSH THREAD • 10-INCH BOREHOLE 0-111 FEET 	<p>@ 80 feet: Discrete depth groundwater sample MW-36i-80ft collected 9/14/04 1250</p>	
			85			
			90	<ul style="list-style-type: none"> • BENTONITE CHIPS 89-91 FEET • 20/40 SILICA SAND 91-92 FEET 		
			95	<ul style="list-style-type: none"> • STAINLESS STEEL CENTRALIZER AT 95 FEET 		
			100	<ul style="list-style-type: none"> • 2-INCH SCH 80 0.010 SLOT PVC SCREEN 95-105 FEET • 10/20 SILICA SAND, 92-106.5 FEET 	<p>@ 100 feet, SANDY GRAVEL, trace of fine grained sand and silt</p> <p>@ 100 feet: Discrete depth groundwater sample MW-36i-100ft collected 9/15/04 1135</p>	
			105	<ul style="list-style-type: none"> • STAINLESS STEEL CENTRALIZER AT 105 FEET 	<p>@ 105.5 feet, SANDY GRAVEL, traces of cementation</p>	
			110	<ul style="list-style-type: none"> • 20/40 SILICA SAND, 106.5 -107.5 FEET • BENTONITE CHIPS 107.5 -112 FEET • 8-INCH BOREHOLE 111-163 FEET • BENTONITE SLURRY, 112-163 FEET 	<p>106-163 feet, SANDY GRAVEL, dark gray, very dense, saturated, sub-rounded, medium to coarse grained sand, micaceous, sub-rounded to well-rounded, medium to coarse gravel and cobbles, with cementation matrix</p>	
			115			

DATE: 03/11/05 09:24am FILENAME: P194006227

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-36i

Project Number: 275-1940-006-003-4931

Sheet: 4 OF 5

Date Completed: SEPTEMBER 28, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			120		@ 120 feet: Discrete depth groundwater sample MW-36i-120ft collected 9/17/04 1135	
			125	 BENTONITE SLURRY 112-163 FEET		
			130	 8-INCH BOREHOLE 111-163 FEET		
			135			
			140		@ 140 feet, SANDY GRAVEL, sub-rounded fine to medium grained sand, sub-rounded to well-rounded fine to coarse gravel with cobbles @ 140 feet: Discrete depth groundwater sample MW-36i-140ft collected 9/21/04 0845	
			145			
			150			
			155			

DATE: 03/11/05 09:24am FILENAME: P194006227

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

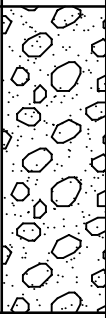
Boring Number: MW-36i

Project Number: 275-1940-006-003-4931

Sheet: 5 OF 5

Date Completed: SEPTEMBER 28, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			160	<div style="border: 1px solid black; width: 40px; height: 40px; margin-bottom: 5px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px);"></div> <p>8-INCH BOREHOLE 111-163 FEET</p> <div style="border: 1px solid black; width: 40px; height: 40px; margin-bottom: 5px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px);"></div> <p>BENTONITE SLURRY 112-163 FEET</p>	<p>@ 160 feet, SANDY GRAVEL, sub-rounded, micaceous, fine grained sand, sub-rounded to well-rounded fine to coarse gravel</p> <p>@ 160 feet: Discrete depth groundwater sample MW-36i-160ft collected 9/23/04 0855</p>	
			165			
			170			
			175			
			180			
			185			
			190			
			195			

DATE: 03/11/05 09:24am FILENAME: P194006227

@ 163 feet: Bottom of boring

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931
Location: 20TH AND THOMPSON
PMX Representative: MIKE MARSHALL
Drilled By: GEOTECH EXPLORATIONS
Drill Method: AUGER
Soil Sample Method: SPLIT SPOON
Groundwater Sample Method: NA

Boring Number: MW-36s
Sheet: 1 OF 1
Total Depth: 35.5 FEET
Date Completed: OCTOBER 5, 2004
Initial Water Level: 31.2 FT
Measuring Point Elevation: 34.64 FT
Static Water Level: 30.82 FT **Date:** 10/05/04
Northing: 118220 **Easting:** 1080186

DATE: 02/14/07 08:37am FILENAME: P194006288

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
					No sample obtained	
7 9 10	18"		5		5-10 feet: SANDY SILT (SM) - brown, stiff, moist, micaceous, slightly mottled, sand is fine grained	
5 7 7	12"		10		10-25.3 feet: SILTY SAND (SM) - light brown, loose, moist, micaceous, sand is fine grained	
5 10 8	13"		15			
6 7 8	14"		20			
12 19 17	12"		25		25.3-30 feet: SAND (SW) - dark gray, dense, moist, micaceous, sub angular, medium grained	
14 21 35	9"		30		30-35 feet: GRAVELLY SAND (SP) - dark gray, dense, moist, micaceous, sub angular, sand is medium grained, angular fine gravel	
15 20 21	6"		35	35.5 feet: End of boring	35-35.5 feet: SAND (SW) - dark gray, dense, wet to saturated, sub angular, sand is coarse grained	

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-003-4931
Location: TRI STAR LUMBER/ 1200 Portway
PMX Representative: INGMAR SAUL/ADAM ROMEY
Drilled By: WESTERBERG DRILLING
Drill Method: CABLE TOOL
Soil Sample Method: SPLIT SPOON
Groundwater Sample Method: REDIFLO 2 PUMP

Boring Number: MW-37i
Sheet: 1 OF 5
Total Depth: 182 FEET
Date Completed: SEPTEMBER 9, 2004
Initial Water Level: ∇ 30.5 FT
Measuring Point Elevation: 34.64 FT
Northing: 116675.3 **Easting:** 1080849.8

DATE: 02/13/07 3:16pm FILENAME: P194006219

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
				<p>FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-2 FEET BENTONITE CHIPS 2-5 FEET</p>	0-0.17 feet: ASPHALT GRAVEL SURFACE 0.17-1 feet: GRAVEL FILL 1-2 feet: SAND FILL	
			5		2-5 feet: SANDY SILT (SW) - Dark reddish brown (5YR 3/2), medium stiff, damp, trace of coarse grained sand	
4 5 5		15"	10		5-53 feet: SAND (SW) - Dark grayish brown (10YR 4/3), medium dense, damp, sub-angular, fine to coarse grained sand, micaceous, poorly sorted	
			15	BENTONITE SLURRY, 5 -109 FEET	@ 15 feet, SAND, very dark gray (7.5YR 3/1)	
3 3 6		17"	20	2-INCH THREADED SCH 80 PVC CASING, 0-115 FEET, FLUSH THREAD		
4 6 3		16"	25	10-INCH BOREHOLE 0-140 FEET	@ 25 feet, SAND, not micaceous	
4 5 9		17"	30			
3 4 4		18"	35			

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-003-4931

Boring Number: MW-37i
Sheet: 2 OF 5
Date Completed: SEPTEMBER 9, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
4 4 8	12"				@ 35 feet, SAND, wet	
3 4 5	3"		40		@ 40 feet: Discrete depth groundwater sample MW-37i-40ft collected 8/13/04 1235	
4 5 8	3"		45		@ 45 feet, SAND, trace of gravel	
2 2 8	4"		50		BENTONITE SLURRY, 5-109 FEET	
2 4 6	4"		55		2-INCH THREADED SCH 80 PVC CASING, 0-115 FEET, FLUSH THREAD	
					10-INCH BOREHOLE 0-140 FEET	
5 5 25	0"		60		53-108 feet: GRAVELY SAND (GW), Dark Grayish Brown (10YR 4/2), saturated, medium dense, ~10% sub-rounded fine to coarse gravel and cobbles, fine to coarse grained sand. @ 55 feet, GRAVELY SAND, Very dark gray (7.5YR 3/1), sub-rounded, ~30% fine to coarse gravel and cobbles, fine to coarse grained sand, poorly sorted	
8 10 10	1/2"		65		@ 60 feet: Discrete depth groundwater sample MW-37i-60ft collected 8/16/04 0905	
50/5	5"		70		@ 70 feet, GRAVELY SAND, ~45% gravel and cobbles	
			75			

DATE: 02/13/07 3:16pm FILENAME: P194006219

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

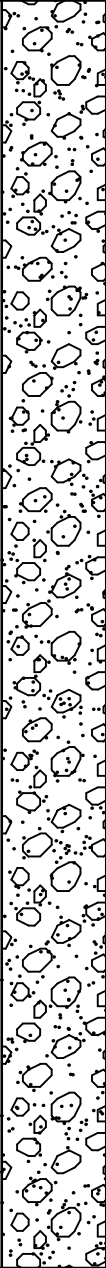
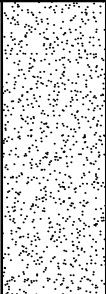
Boring Number: MW-37i

Project Number: 275-1940-006-003-4931

Sheet: 3 OF 5

Date Completed: SEPTEMBER 9, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			80	<ul style="list-style-type: none"> • BENTONITE SLURRY, 5-109 FEET • 2-INCH THREADED SCH 80 PVC CASING, 0-115 FEET, FLUSH THREAD • 10-INCH BOREHOLE 0-140 FEET 	@ 80 feet: Discrete depth groundwater sample MW-37i-80ft collected 8/16/04 1327	
			85			
			90		@ 90 feet, GRAVELY SAND, trace of clay matrix on gravel	
			95			
			100		@ 100 feet: Discrete depth groundwater sample MW-37i-100ft collected 8/17/04 0900	
			105			
			110	<ul style="list-style-type: none"> • BENTONITE CHIPS 109-111 FEET • 20/40 SILICA SAND 111-112 FEET • 10/20 SILICA SAND 112-126 FEET 	@ 110 feet: Discrete depth groundwater sample MW-37i-110ft collected 8/20/04 0810	
			115	<ul style="list-style-type: none"> • STAINLESS STEEL CENTRALIZER AT 115 FEET 	108 -140 feet: SAND (SP), Dark gray (7.5YR 4/1), dense, saturated, fine grained sand, micaceous, well sorted	

DATE: 02/13/07 3:16pm FILENAME: P194006219

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-003-4931

Boring Number: MW-37i
Sheet: 4 OF 5
Date Completed: SEPTEMBER 9, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			120	<p>STAINLESS STEEL CENTRALIZER AT 115 FEET</p> <p>2-INCH SCH 80 0.010 SLOT PVC SCREEN 115-125 FEET</p> <p>10/20 SILICA SAND, 112-126 FEET</p> <p>STAINLESS STEEL CENTRALIZER AT 125 FEET</p> <p>20/40 SILICA SAND, 126-127 FEET</p> <p>BENTONITE CHIPS 127-129 FEET</p> <p>10-INCH BOREHOLE 0-140 FEET</p> <p>BENTONITE SLURRY, 129-182 FEET</p>	<p>@ 119 feet: Discrete depth groundwater sample MW-37i-120ft collected 8/19/04 1155</p> <p>@ 125 feet, SAND, trace of coarse grained sand</p> <p>@ 128 feet: Discrete depth groundwater sample MW-37i-130ft collected 8/20/04 1410</p>	125
			130			130
			135			135
			140		<p>140-182 feet: SANDY GRAVEL (GW), Very Dark Gray (2.5 3/1), dense, saturated, ~40% sub-rounded, medium to coarse grained sand, sub-rounded fine to coarse gravel and cobbles, gravel has cemented matrix</p> <p>@ 142 feet: Discrete depth groundwater sample MW-37i-142ft collected 8/23/04 1225</p>	140
			145			145
			150		<p>@ 150 feet, SANDY GRAVEL, trace of silt</p>	150
			155			155

DATE: 02/13/07 3:16pm FILENAME: P194006219

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-37i

Project Number: 275-1940-006-003-4931

Sheet: 5 OF 5

Date Completed: SEPTEMBER 9, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			160	<div style="border-left: 1px solid black; border-right: 1px solid black; border-bottom: 1px solid black; padding: 2px;"> </div> <p style="margin-left: 20px;">8-INCH BOREHOLE 140-182 FEET</p> <div style="border-left: 1px solid black; border-right: 1px solid black; border-bottom: 1px solid black; padding: 2px; margin-top: 10px;"> </div> <p style="margin-left: 20px;">BENTONITE SLURRY 129-182 FEET</p>	<p>@ 162 feet: Discrete depth groundwater sample MW-37i-160ft collected 8/27/04 1045</p>	
			165			
			170			
			175			
			180			
			185		<p>@ 182 feet: Bottom of boring</p> <p>@ 182 feet: Discrete depth groundwater sample MW-37i-180ft collected 8/30/04 1535</p>	
			190			
			195			

DATE: 02/13/07 3:16pm FILENAME: P194006219

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931
Location: TRISTAR TIMBER
PMX Representative: MIKE MARSHALL
Drilled By: GEOTECH EXPLORATIONS
Drill Method: AUGER
Soil Sample Method: SPLIT SPOON
Groundwater Sample Method: NA

Boring Number: MW-37s
Sheet: 1 OF 1
Total Depth: 35 FEET
Date Completed: OCTOBER 6, 2004
Initial Water Level: 31.2 FT
Measuring Point Elevation: 34.79 FT
Static Water Level: 31.18 FT **Date:** 10/07/04
Northing: 116678 **Easting:** 1080852

DATE: 02/14/07 08:37am FILENAME: P194006289

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				<p>FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1 FEET BENTONITE CHIPS 1-22 FEET 2-INCH THREADED SCH 40 PVC CASING, 0-24 FEET, FLUSH THREAD 8-INCH BOREHOLE 0-35 FEET 10/20 SILICA SAND, 22-35 FEET 2-INCH SCH 40 0.020 SLOT PVC SCREEN 24-34 FEET</p>	No sample obtained 5-35 feet: SAND (SW) - dark grayish brown, loose, damp, micaceous, medium to coarse grained @ 30 feet: SAND, saturated 35 feet: End of boring	
5 7 9	13"		5			
9 4 4	10"		10			
7 5 7	12"		15			
10 5 6	12"		20			
2 2 4	18"		25			
5 5 3	14"		30			
1 2 1	12"		35			

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931
Location: COLUMBIA CASCADE PROPERTY
PMX Representative: INGMAR SAUL/ADAM ROMEY
Drilled By: TACOMA PUMP AND DRILLING
Drill Method: CABLE TOOL
Soil Sample Method: REDIFLOW PUMP/SPLIT SPOON
Groundwater Sample Method: REDIFLO 2 PUMP

Boring Number: MW-38i
Sheet: 1 OF 6
Total Depth: 210 FEET
Date Completed: NOVEMBER 12, 2004
Initial Water Level ∇ 40.05 FT
Measuring Point Elevation: 44.05 FT
Northing: 117482.74 **Easting:** 1080862.92

DATE: 02/13/07 3:13pm FILENAME: P194006296

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			5	<ul style="list-style-type: none"> FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1.5 FEET BENTONITE CHIPS 1.5-4 FEET 	0-0.3 feet: ASPHALT 0.3-2.5 feet: SILTY GRAVEL FILL	
9 14 15	15"		10		@ 10 feet: SILTY SAND, light olive brown, dense, micaceous, ~40% silt	
20 30 33	15"		15	<ul style="list-style-type: none"> BENTONITE SLURRY, 4-138.7 FEET 	@ 15 feet: SILTY SAND, very dense, ~25% silt	
8 13 14	12"		20	<ul style="list-style-type: none"> 2-INCH THREADED SCH 80 PVC CASING, 0-145 FEET, FLUSH THREAD 	@ 20 feet: SILTY SAND, medium dense, ~35% silt	
15 24 30	12"		25	<ul style="list-style-type: none"> 10-INCH BOREHOLE 0-168 FEET 	@ 25 feet: SILTY SAND, very dense, ~25% silt	
13 21 27	10"		30			
			35		33-41 feet: SAND - dark grayish brown (10YR 4/2), very dense, moist, sub-rounded, fine to medium grained, well sorted, trace of silt	

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-38i

Project Number: 275-1940-006-03-4931

Sheet: 2 OF 6

Date Completed: NOVEMBER 12, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN	
15 50 45	12"			<p style="margin-left: 100px;">BENTONITE SLURRY, 4-138.7 FEET</p> <p style="margin-left: 100px;">2-INCH THREADED SCH 80 PVC CASING, 0-145 FEET, FLUSH THREAD</p> <p style="margin-left: 100px;">10-INCH BOREHOLE 0-168 FEET</p>			
25 28 70	18"		40			@ 40 feet: SAND, dark grayish brown (10YR 4/2), very dense, moist, sub-rounded, medium to coarse grained, poorly graded, trace of sub-rounded coarse gravel	
15 40 50/1	8"		45			41-70 feet: GRAVELLY SAND - dark gray (2.5Y 4/2), very dense, wet, sub-rounded, fine to coarse gravel, sub-rounded, fine to coarse grained sand, well sorted	
			50			@ 51 feet: Discrete depth groundwater sample MW-38i-50ft collected 10/19/04 1610	
			55				
			60		@ 60 feet: GRAVELLY SAND, saturated, sub-rounded, medium to coarse gravel, sub-rounded, medium to coarse grained sand, well sorted, trace clay matrix		
			65				
			70		@ 68 feet: Discrete depth groundwater sample MW-38i-70ft collected 10/20/04 1250		
			75		70-88 feet: SAND - dark gray, saturated, sub-rounded, fine to coarse grained sand, well sorted, trace of gravel		

DATE: 02/13/07 3:13pm FILENAME: P194006296

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

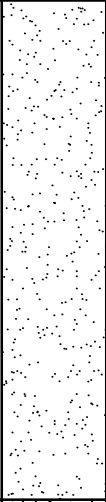


Boring Number: MW-38i

Project Number: 275-1940-006-03-4931

Sheet: 3 OF 6

Date Completed: NOVEMBER 12, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			80		@ 80 feet: SAND, trace of sub-rounded fine gravel	
			85			
			90	<ul style="list-style-type: none"> • BENTONITE SLURRY, 4-138.7 FEET 	88-113 feet: SANDY GRAVEL - very dark gray (7.5YR 3/1), very dense, saturated, sub-rounded, fine to coarse grained sand, well sorted, sub-rounded, fine to coarse gravel and cobbles @ 90 feet: Discrete depth groundwater sample MW-38i-90ft collected 10/21/04 1015	
			95	<ul style="list-style-type: none"> • 2-INCH THREADED SCH 80 PVC CASING, 0-145 FEET, FLUSH THREAD 		
			100	<ul style="list-style-type: none"> • 10-INCH BOREHOLE 0-168 FEET 		
			105			
			110		@ 112 feet: Discrete depth groundwater sample MW-38i-110ft collected 10/22/04 1225	
			115		113-157 feet: SAND - dark gray (7.5YR 4/1), dense, saturated, medium to coarse grained sand, trace of sub-rounded coarse gravel	

DATE: 02/13/07 3:13pm FILENAME: P194006296

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-38i

Project Number: 275-1940-006-03-4931

Sheet: 4 OF 6

Date Completed: NOVEMBER 12, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			120			
			125	<ul style="list-style-type: none"> • BENTONITE SLURRY 4-138.7 FEET 		
			130	<ul style="list-style-type: none"> • 2-INCH THREADED SCH 80 PVC CASING, 0-145 FEET, FLUSH THREAD • 10-INCH BOREHOLE 0-168 FEET 	<ul style="list-style-type: none"> @ 131 feet: Discrete depth groundwater sample MW-38i-130ft collected 10/25/04 1615 	
			135			
			140	<ul style="list-style-type: none"> • BENTONITE CHIPS 138.7-140.8 FEET • 20/40 SILICA SAND 140.8-142.3 FEET 	<ul style="list-style-type: none"> @ 140 feet: SAND, some sub-rounded, coarse gravel with clay matrix 	
			145	<ul style="list-style-type: none"> • STAINLESS STEEL CENTRALIZER AT 145 FEET • 2-INCH SCH 80 0.010 SLOT PVC SCREEN 145.0-155.0 FEET 		
			150	<ul style="list-style-type: none"> • 10/20 SILICA SAND, 142.3-156.6 FEET 	<ul style="list-style-type: none"> @ 150 feet: SAND, trace of fine grained sand, well sorted @ 150 feet: Discrete depth groundwater sample MW-38i-150ft collected 10/26/04 1400 	
			155	<ul style="list-style-type: none"> • STAINLESS STEEL CENTRALIZER AT 155 FEET 		

DATE: 03/11/05 09:33am FILENAME: P194006296

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-38i

Project Number: 275-1940-006-03-4931

Sheet: 5 OF 6

Date Completed: NOVEMBER 12, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			160	<ul style="list-style-type: none"> 10/20 SILICA SAND 142.3-156.6 FEET 20/40 SILICA SAND 156.6-157.7 FEET BENTONITE CHIPS 157.7-161.0 FEET 	<p>@ 156.5 feet: SAND, trace of sub-rounded, coarse gravel and cobbles, first signs of cemented matrix on gravel</p> <p>157-166 feet: SANDY GRAVEL - very dark gray (7.5YR 3/1), very dense, saturated, sub-angular, fine to coarse grained sand, well sorted, sub-rounded, coarse gravel and cobbles with cemented matrix</p> <p>@ 160-166 feet: Altering layers of sandy gravel and sand. Each layer varying between 6 to 12 inches</p>	160
			165	<ul style="list-style-type: none"> 10-INCH BOREHOLE 0-168 FEET 	<p>166-189 feet: GRAVEL - very dark gray, very dense, saturated, fine to coarse gravel and cobbles, trace of silt matrix and cemented matrix</p>	165
			170	<ul style="list-style-type: none"> 8-INCH BOREHOLE 168-210 FEET 	<p>@ 170 feet: Discrete depth groundwater sample MW-38i-170ft collected 10/28/04 1345</p>	170
			175	<ul style="list-style-type: none"> BENTONITE SLURRY 161-210 FEET 	<p>@ 175 feet: GRAVEL, sub-rounded, coarse gravel with cemented matrix</p>	175
			180			180
			185			185
			190		<p>189-197 feet: SILTY SANDY GRAVEL - very dark gray (7.5YR 3/1), medium dense, saturated</p> <p>@ 190 feet: Discrete depth groundwater sample MW-38i-190ft collected 11/2/04 1350</p>	190
			195			195

DATE: 03/11/05 09:33am FILENAME: P194006296

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-38i

Project Number: 275-1940-006-03-4931

Sheet: 6 OF 6

Date Completed: NOVEMBER 12, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN		
			200	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p style="margin: 0;">8-INCH BOREHOLE 168-210 FEET</p> <p style="margin: 0;">BENTONITE SLURRY 161-210 FEET</p> </div>	<p>197-210: GRAVEL - very dark gray (7.5YR 3/1), very dense, saturated, coarse gravel, cemented matrix, trace of silt</p> <p>@ 210 feet: Discrete depth groundwater sample MW-38i-210ft collected 11/04/04 0905</p> <p>210 feet: Bottom of boring</p>	200		
			205					205
			210					210
			215					215
			220					220
			225					225
			230					230
			235					235

DATE: 03/11/05 09:33am FILENAME: P194006296

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: SANDRA MATTHEWS
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: 5' CORE
 Groundwater Sample Method: N/A

Boring Number: MW-1
 Sheet: 1 OF 1
 Total Boring Depth: 25 FEET
 Date Started/Completed: JANUARY 30, 1997
 Ground Level Elevation: 26.80 FEET NGVD
 Measuring Point Elevation: 26.29 FEET NGVD
 Static Water Level: 6.34 FEET NGVD Date: 4/24/98
 Northing: 119596.0 Easting: 1078680.9

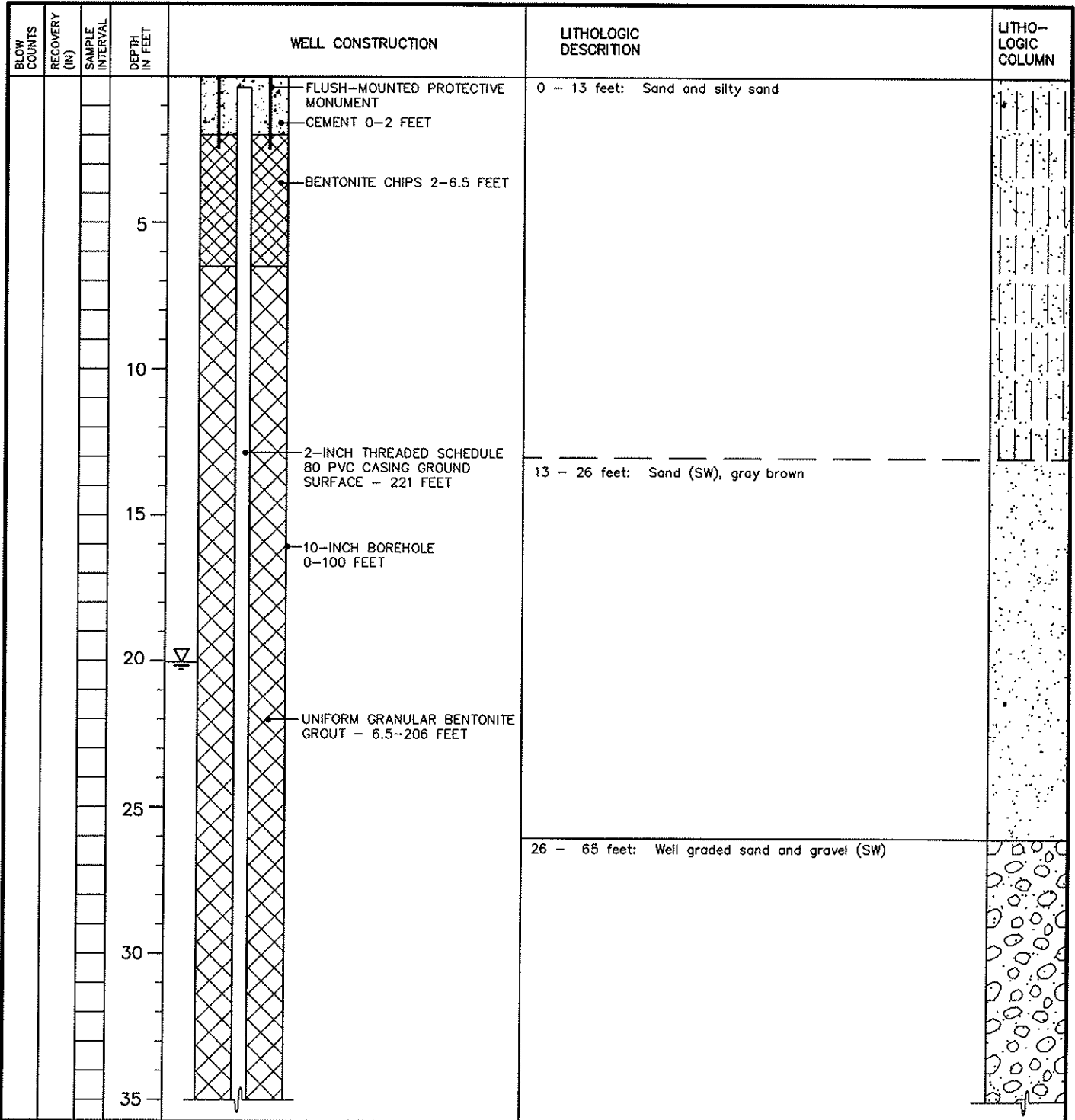
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET BENTONITE CHIPS 2-12 FEET	0 - 1 feet: Asphalt with gravel sub-base 1 - 14 feet: Silty sand (SM), fine-grained, dark yellowish brown 10YR 3/4, ~15% fines in upper foot	
	36		10	2-INCH THREADED SCHEDULE 40 PVC CASING GROUND SURFACE - 25 FEET 8 1/4-INCH BOREHOLE 0-25 FEET 10-20 MESH SILICA SAND 12-25 FEET	@ 12 feet: dark olive brown 2.5Y 3/3, moist 14 - 25 feet: Poorly graded sand (SP), fine-grained, olive brown 2.5Y 4/3, slightly moist	
	36		15	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 15-25 FEET	@ 19 feet: saturated	
	27		20	(Water level symbol)		
			25		@ 25 feet: End of boring	
			30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-7 / MW-1d
 Sheet: 1 OF 7
 Total Boring Depth: 227 FT/ WELL DEPTH 221 FT
 Date Started/Completed: MARCH 3, 1998/APRIL 2, 1998
 Ground Level Elevation: 26.78 FT NGVD
 Measuring Point Elevation: 26.42 FT NGVD
 Static Water Level: 6.40 FT NGVD Date: 4/24/98
 Northing: 119586.4 Easting: 1078679.5



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-7 / MW-1d
 Sheet: 2 OF 7
 Total Boring Depth: 227 FT/ WELL DEPTH 221 FT
 Date Started/Completed: MARCH 3, 1998/APRIL 2, 1998
 Ground Level Elevation: 26.78 FT NGVD
 Measuring Point Elevation: 26.42 FT NGVD
 Static Water Level: 6.40 FT NGVD Date: 4/24/98
 Northing: 119586.4 Easting: 1078679.5

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		SW as above	
			45	UNIFORM GRANULAR BENTONITE GROUT - 6.5-206 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 221 FEET	@ 40 feet: discrete-depth groundwater sample B-7, 40' @ 45 feet: coarse cobbles, up to 5 inches in diameter	
			50	10-INCH BOREHOLE 0-100 FEET		
			55			
			60		@ 60 feet: discrete-depth groundwater sample B-7, 60' collected 3/11/98 11:47	
			65		65 - 137 feet: Well graded sand (SW), fine- to coarse-grained, up to trace fine-grained gravel	
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-7 / MW-1d
 Sheet: 4 OF 7
 Total Boring Depth: 227 FT/ WELL DEPTH 221 FT
 Date Started/Completed: MARCH 3, 1998/APRIL 2, 1998
 Ground Level Elevation: 26.78 FT NGVD
 Measuring Point Elevation: 26.42 FT NGVD
 Static Water Level: 6.40 FT NGVD Date: 4/24/98
 Northing: 119586.4 Easting: 1078679.5

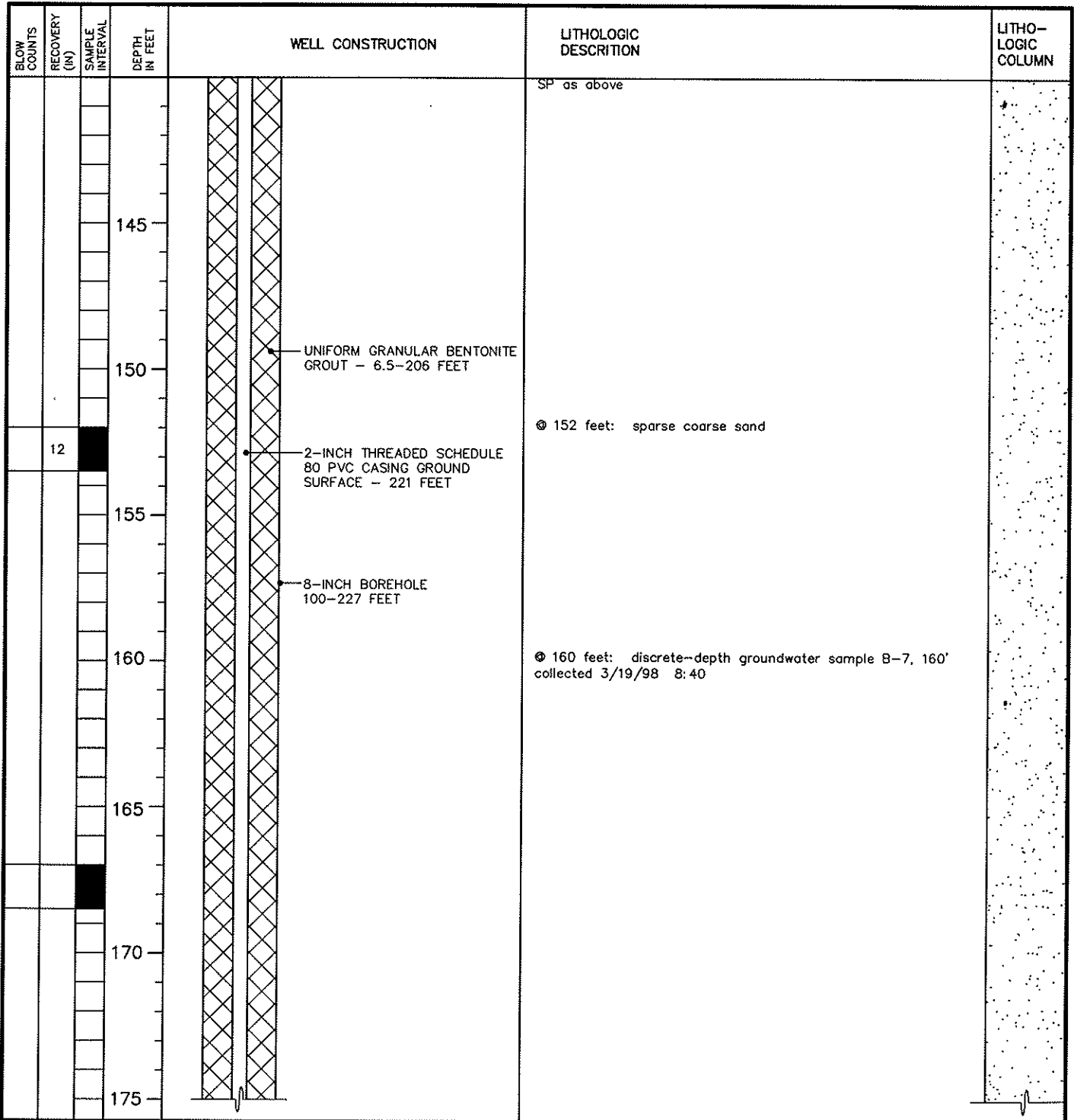
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
9/50'					SW as above	
			110			
			115	UNIFORM GRANULAR BENTONITE GROUT 6.5-206 FEET		
			120	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 221 FEET		
40 50/1'	3			8-INCH BOREHOLE 100-227 FEET	⊙ 120 feet: discrete-depth groundwater sample B-7, 120' collected 3/16/98 14:40	
			125			
			130			
			135			
75/3'	2					
			140		137 - 195 feet: Poorly graded sand (SP), fine-grained, some thin (1/4 to 1 1/2 inch) silt lenses	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-7 / MW-1d
 Sheet: 5 OF 7
 Total Boring Depth: 227 FT/ WELL DEPTH 221 FT
 Date Started/Completed: MARCH 3, 1998/APRIL 2, 1998
 Ground Level Elevation: 26.78 FT NGVD
 Measuring Point Elevation: 26.42 FT NGVD
 Static Water Level: 6.40 FT NGVD Date: 4/24/98
 Northing: 119586.4 Easting: 1078679.5

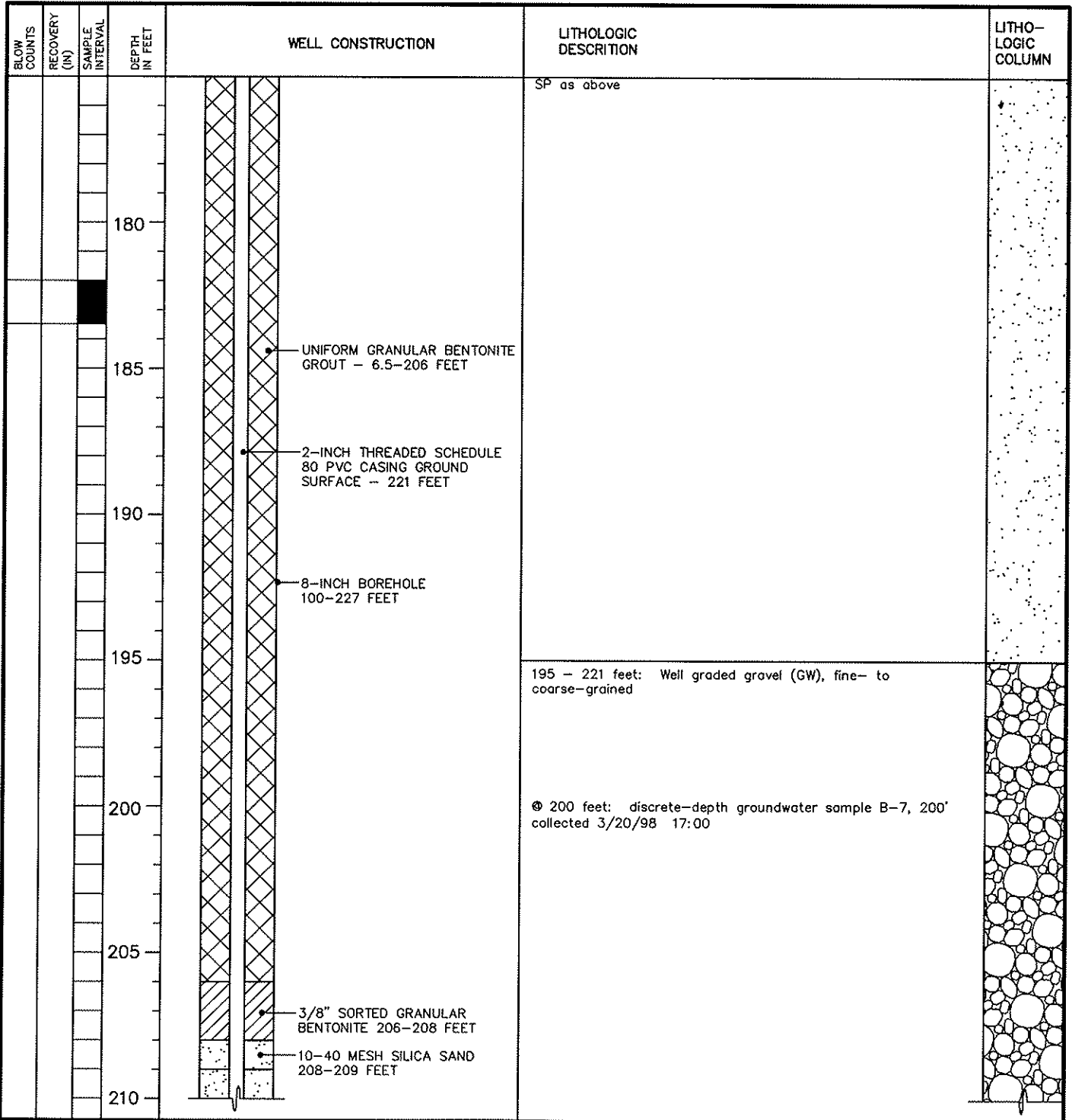


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-7 / MW-1d
 Sheet: 6 OF 7
 Total Boring Depth: 227 FT/ WELL DEPTH 221 FT
 Date Started/Completed: MARCH 3, 1998/APRIL 2, 1998
 Ground Level Elevation: 26.78 FT NGVD
 Measuring Point Elevation: 26.42 FT NGVD
 Static Water Level: 6.40 FT NGVD Date: 4/24/98
 Northing: 119586.4 Easting: 1078679.5

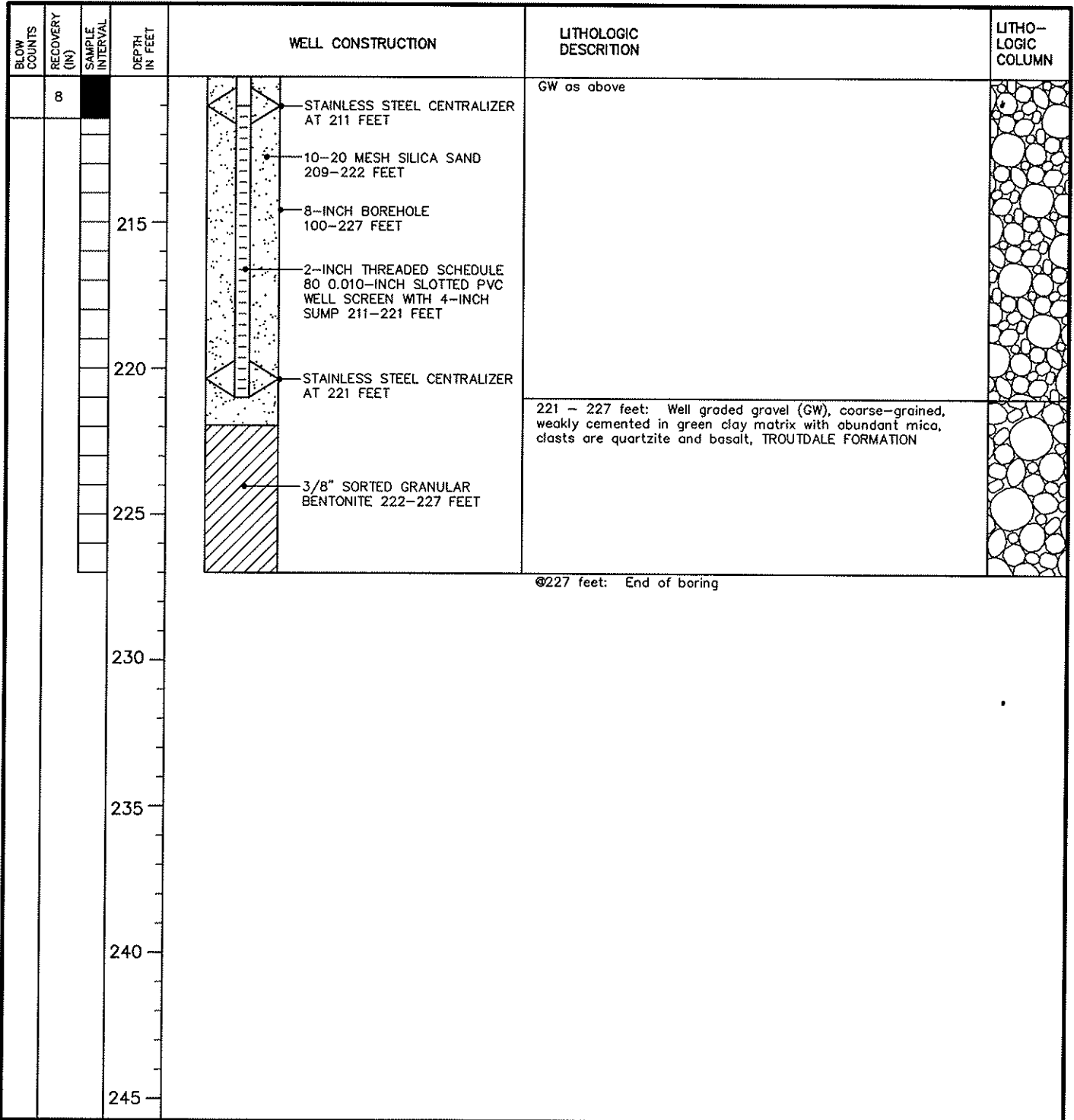


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-7 / MW-1d
 Sheet: 7 OF 7
 Total Boring Depth: 227 FT/ WELL DEPTH 221 FT
 Date Started/Completed: MARCH 3, 1998/APRIL 2, 1998
 Ground Level Elevation: 26.78 FT NGVD
 Measuring Point Elevation: 26.42 FT NGVD
 Static Water Level: 6.40 FT NGVD Date: 4/24/98
 Northing: 119586.4 Easting: 1078679.5

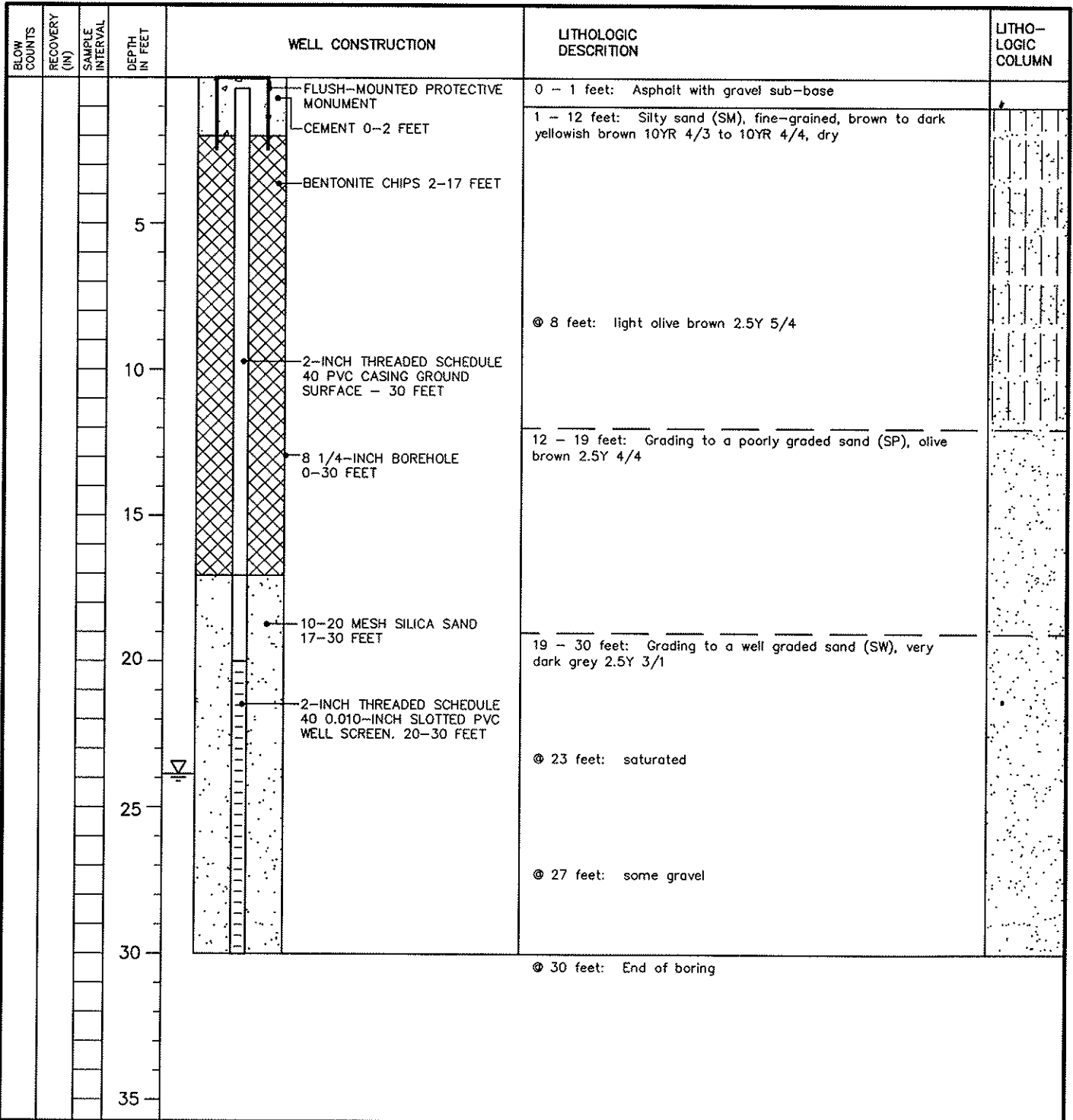


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: SANDRA MATTHEWS
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: GRAB
 Groundwater Sample Method: N/A

Boring Number: MW-2
 Sheet: 1 OF 1
 Total Boring Depth: 30 ET
 Date Started/Completed: JANUARY 29, 1997
 Ground Level Elevation: 30.37 FT NGVD
 Measuring Point Elevation: 30.09 FT NGVD
 Static Water Level: 6.24 FT NGVD Date: 4/24/98
 Northing: 119499.2 Easting: 1079177.9

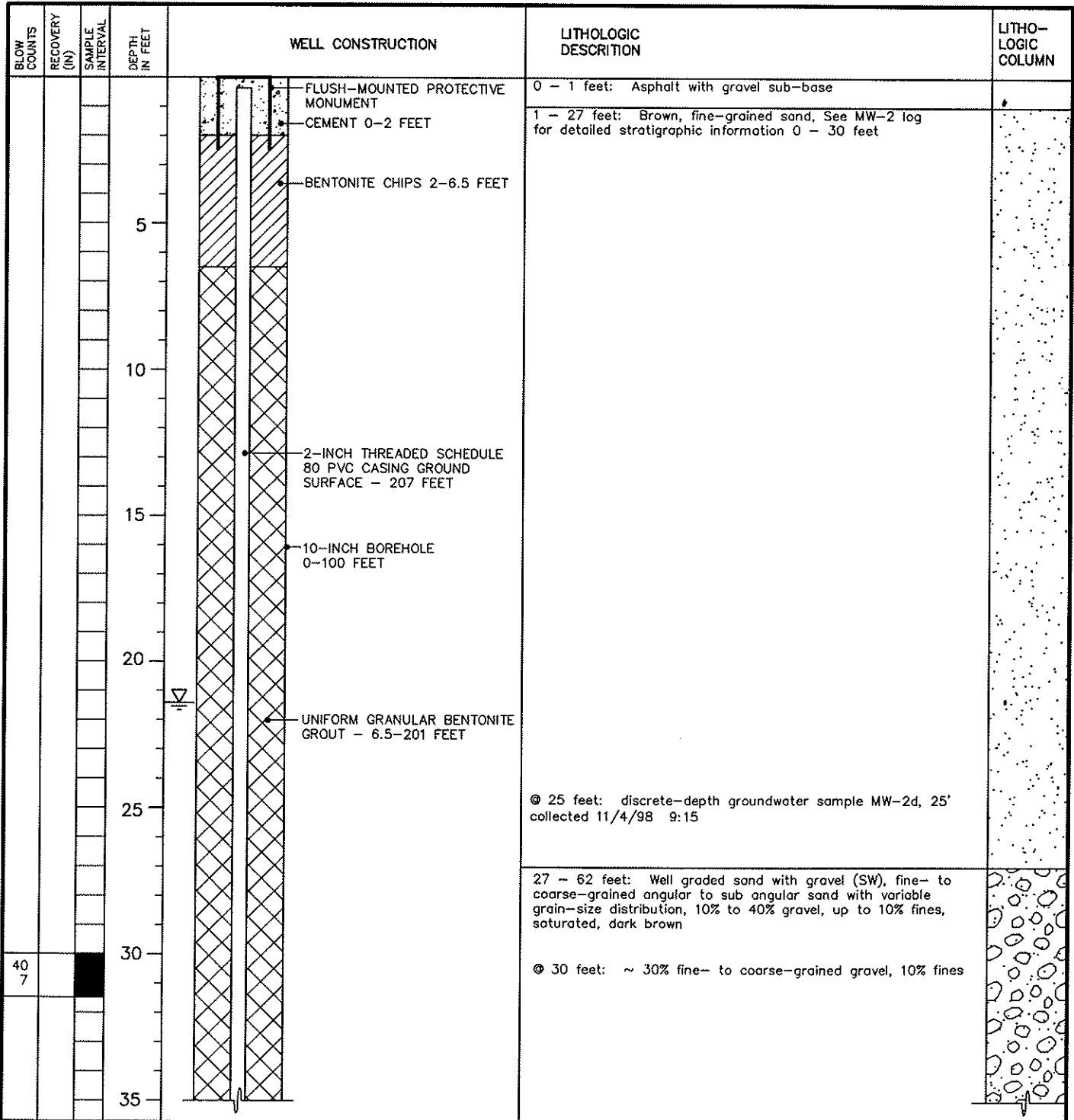


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-2d
 Sheet: 1 OF 7
 Total Boring Depth: 223 FT / WELL DEPTH: 217 FT
 Date Started/Completed: NOVEMBER 3, 1998/DECEMBER 3, 1998
 Ground Level Elevation: 30.65 FT NGVD
 Measuring Point Elevation: 30.19 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119490 Easting: 1079172




EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-2d
 Sheet: 2 OF 7
 Total Boring Depth: 223 FT / WELL DEPTH: 217 FT
 Date Started/Completed: NOVEMBER 3,1998/DECEMBER 3,1998
 Ground Level Elevation: 30.65 FT NGVD
 Measuring Point Elevation: 30.19 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119490 Easting: 1079172

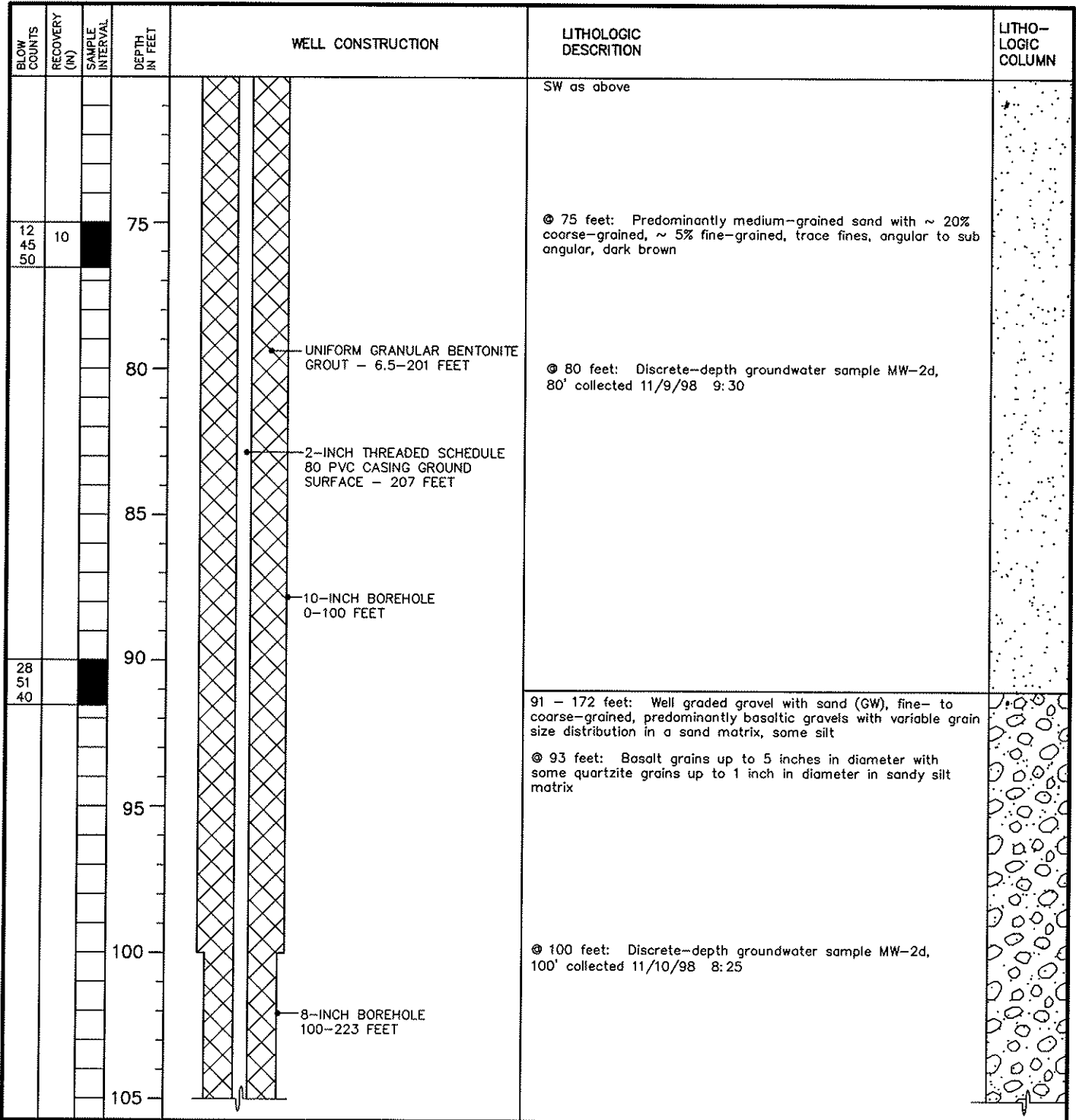
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		SW as above	
			45	UNIFORM GRANULAR BENTONITE GROUT - 6.5-201 FEET	@ 40 feet Discrete-depth groundwater sample MW-2d, 40' collected 11/5/98 8:00	
55 55 70				2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 207 FEET	@ 45 feet: Trace fines, sand predominantly medium- to coarse-grained and angular, ~ 40% gravel, predominantly coarse-grained (up to 3 inches in diameter)	
			50		@ 50 feet: Gravel up to 4 inches, sub rounded	
			55	10-INCH BOREHOLE 0-100 FEET		
			60		@ 60 feet: Sand predominantly coarse-grained and sub angular, ~ 10% gravel, predominantly fine-grained (up to 2 inches in diameter)	
15 13 20					@ 60 feet: Discrete-depth groundwater sample MW-2d, 60' collected 11/6/98 8:10	
			65		62 - 91 feet: Well graded sand (SW), fine- to coarse-grained, angular to sub angular sand with variable grain-size distribution, trace fines, very dense	
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-2d
 Sheet: 3 OF 7
 Total Boring Depth: 223 FT / WELL DEPTH: 217 FT
 Date Started/Completed: NOVEMBER 3,1998/DECEMBER 3,1998
 Ground Level Elevation: 30.65 FT NGVD
 Measuring Point Elevation: 30.19 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119490 Easting: 1079172



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-2d
 Sheet: 4 OF 7
 Total Boring Depth: 223 FT / WELL DEPTH: 217 FT
 Date Started/Completed: NOVEMBER 3, 1998/DECEMBER 3, 1998
 Ground Level Elevation: 30.65 FT NGVD
 Measuring Point Elevation: 30.19 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119490 Easting: 1079172

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110		Ⓞ 105 feet: Loose gravel in a fine- to medium-grained sand matrix, basalt grains up to 6 inches in diameter, quartzite grains up to 2 inches in diameter Ⓞ 106 feet: Decreasing gravel content and grain size, more fine- to coarse-grained sand	
			115	← UNIFORM GRANULAR BENTONITE GROUT - 6.5-201 FEET ← 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 207 FEET	Ⓞ 114 feet: Coarse-grained basalt gravel up to 6 inches in diameter in a silty sand matrix	
			120	← 8-INCH BOREHOLE 100-223 FEET	Ⓞ 120 feet: Discrete-depth groundwater sample MW-2d, 120' collected 11/12/98 8:15	
			125		Ⓞ 125 feet: Basalt grains in a fine sand with silt matrix, grains predominantly < 3 inches in diameter, but trace up to 6 inches in diameter	
			130			
			135			
75 /3"						
			140		Ⓞ 140 feet: Discrete-depth groundwater sample MW-2d, 140' collected 11/13/98 8:30	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-2d
 Sheet: 5 OF 7
 Total Boring Depth: 223 FT / WELL DEPTH: 217 FT
 Date Started/Completed: NOVEMBER 3,1998/DECEMBER 3,1998
 Ground Level Elevation: 30.65 FT NGVD
 Measuring Point Elevation: 30.19 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119490 Easting: 1079172

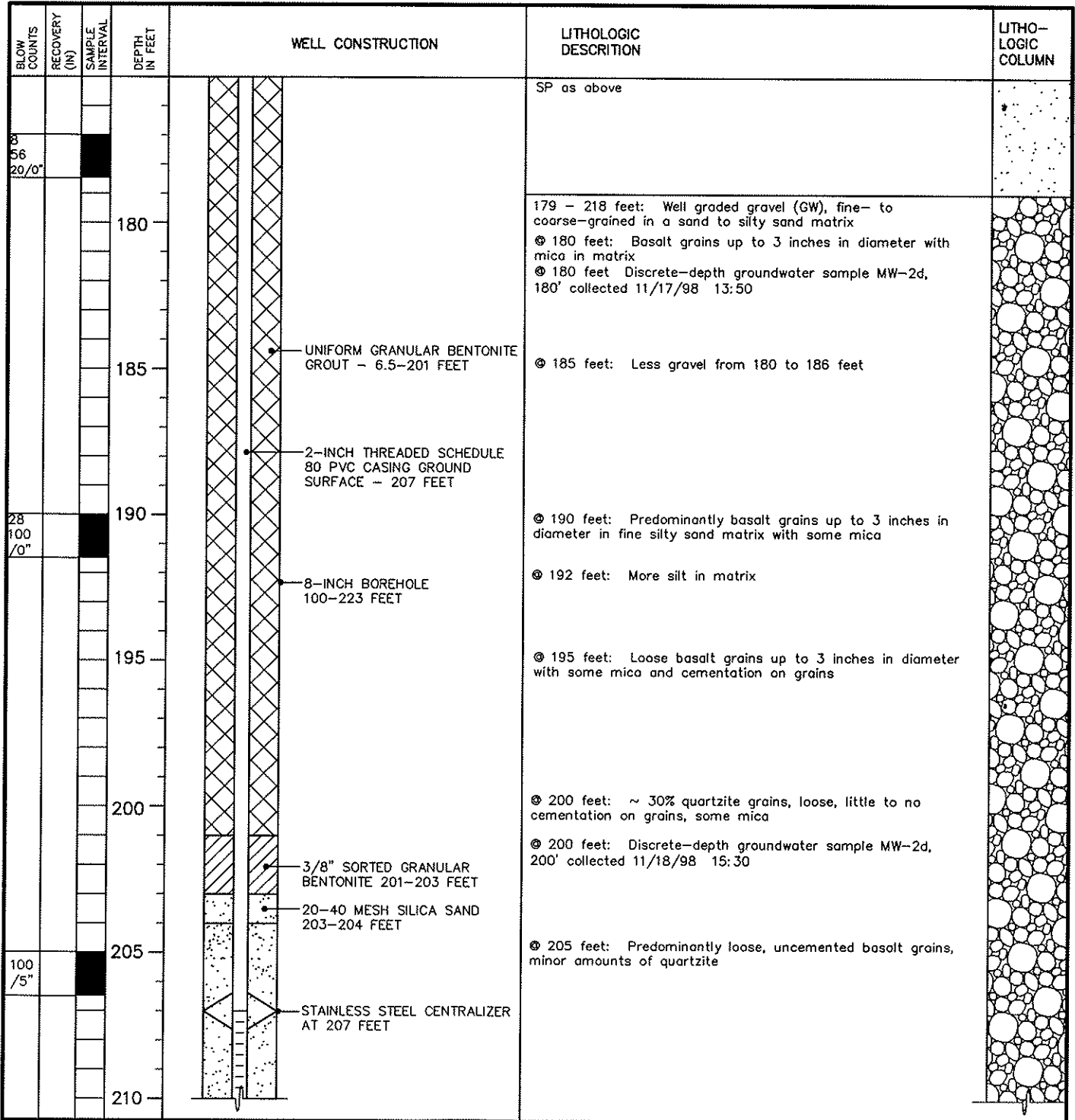
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145		GW as above	
			150	UNIFORM GRANULAR BENTONITE GROUT - 6.5-201 FEET	⊙ 145 feet: Matrix less silty than above	
			155	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 207 FEET	⊙ 155 feet: Gravel predominantly 1 to 3 inches in diameter	
80 /4"			160	8-INCH BOREHOLE 100-223 FEET	⊙ 160 feet: Discrete-depth groundwater sample MW-2d, 160' collected 11/16/98 13:00	
			165			
			170		⊙ 167 feet: Predominantly basalt grains with some quartzite grains up to 6 inches in diameter, no cementation but some silt in matrix	
75 /3"			175		172 - 179 feet: Poorly graded sand (SP), fine-grained, trace fines, no gravel, dark grayish brown, ~ 60 - 70% quartz, very dense	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-2d
 Sheet: 6 OF 7
 Total Boring Depth: 223 FT / WELL DEPTH: 217 FT
 Date Started/Completed: NOVEMBER 3,1998/DECEMBER 3,1998
 Ground Level Elevation: 30.65 FT NGVD
 Measuring Point Elevation: 30.19 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119490 Easting: 1079172

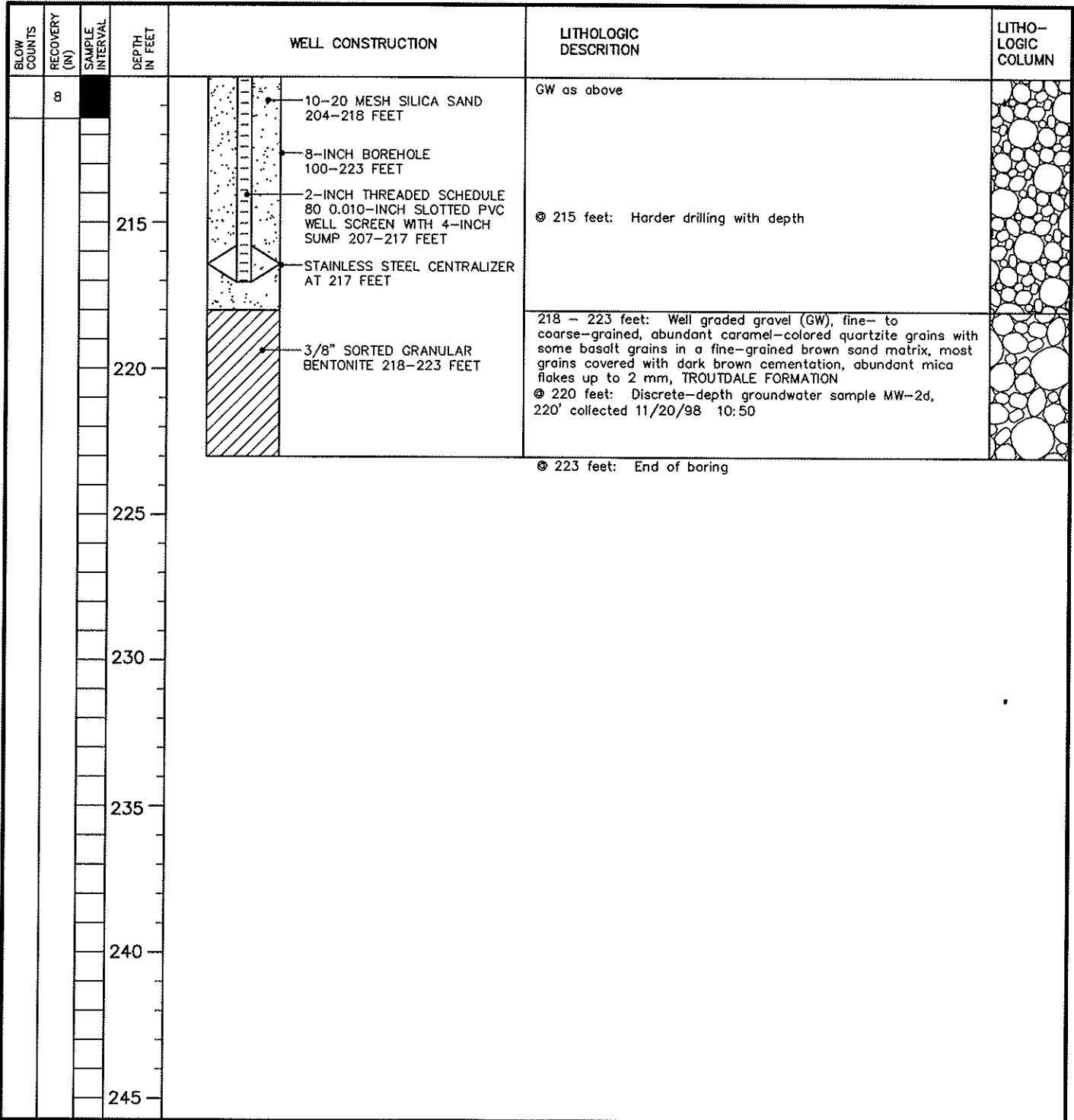


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-2d
 Sheet: 7 OF 7
 Total Boring Depth: 223 FT / WELL DEPTH: 217 FT
 Date Started/Completed: NOVEMBER 3,1998/DECEMBER 3,1998
 Ground Level Elevation: 30.65 FT NGVD
 Measuring Point Elevation: 30.19 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119490 Easting: 1079172

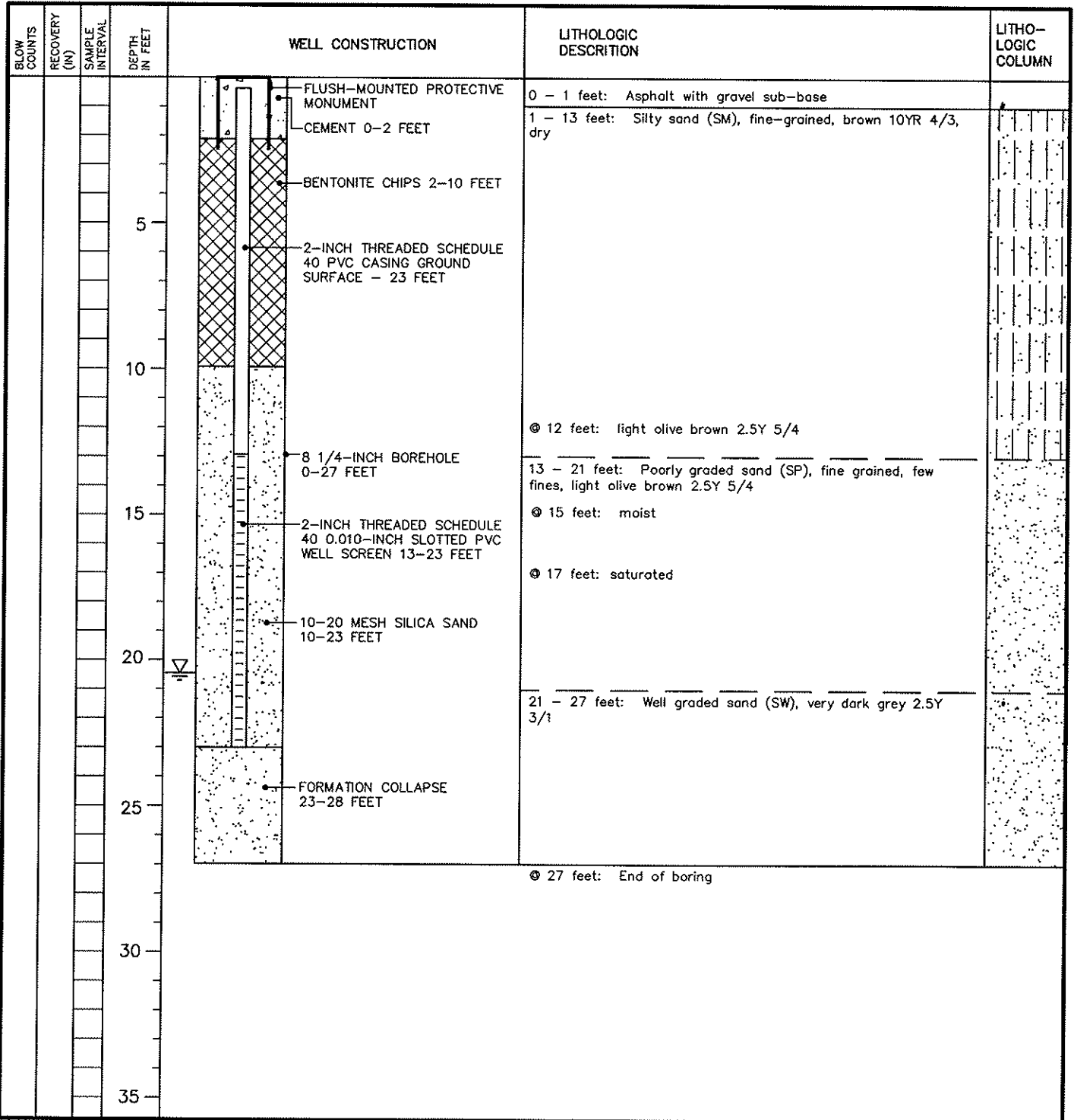


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: SANDRA MATTHEWS
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: GRAB
 Groundwater Sample Method: N/A

Boring Number: MW-3
 Sheet: 1 OF 1
 Total Boring Depth: 27 FT / WELL DEPTH: 23 FT
 Date Started/Completed: JANUARY 29, 1997
 Ground Level Elevation: 27.19 FT NGVD
 Measuring Point Elevation: 26.64 FT NGVD
 Static Water Level: 6.27 FT NGVD Date: 4/24/98
 Northing: 119440.8 Easting: 1078946.0



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: SANDRA MATTHEWS
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: 5' CORE
 Groundwater Sample Method: N/A

Boring Number: MW-4
 Sheet: 1 OF 1
 Total Boring Depth: 25 FT
 Date Started/Completed: JANUARY 29, 1997
 Ground Level Elevation: 27.06 FT NGVD
 Measuring Point Elevation: 26.57 FT NGVD
 Static Water Level: 6.25 FT NGVD Date: 4/24/98
 Northing: 119230.9 Easting: 1079009.3

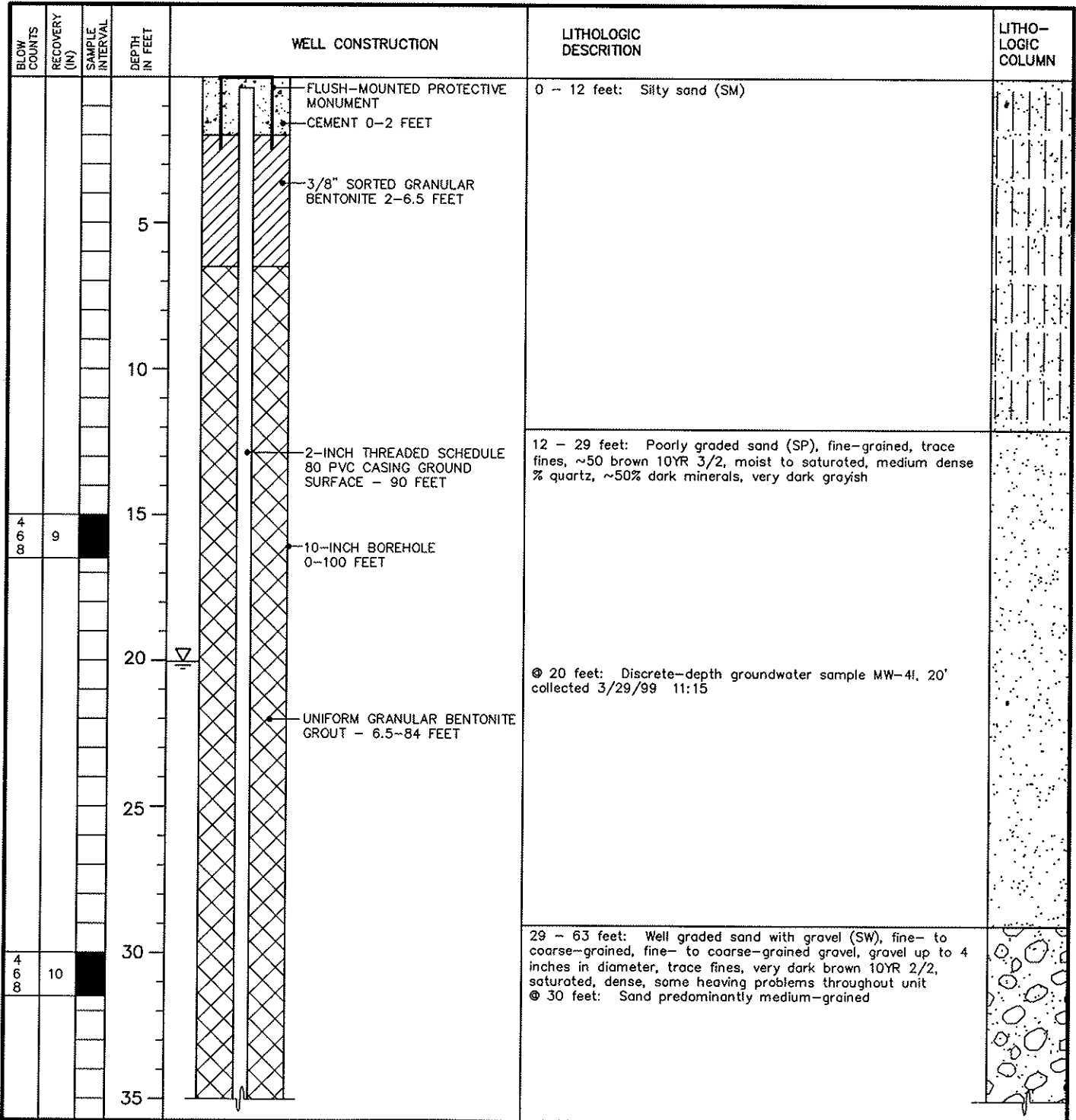
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 1 feet: Asphalt with gravel sub-base	
			0	CEMENT 0-2 FEET	1 - 12 feet: Silty sand (SM), fine-grained, brown 10YR 4/3, dry	
26			5	BENTONITE CHIPS 2-12 FEET		
			5	2-INCH THREADED SCHEDULE 40 PVC CASING GROUND SURFACE - 25 FEET		
49			10		@ 10 feet: light olive brown 2.5Y 5/4	
			10	8 1/4-INCH BOREHOLE 0-25 FEET		
43			15	10-20 MESH SILICA SAND 12-25 FEET	12 - 25 feet: Poorly graded sand (SP), few fines	
			15	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 15-25 FEET		
23			20		@ 19.5 feet: moist	
			20		@ 21 feet: olive brown 2.5Y 4/4	
29			25		@ 25 feet: End of boring	
			25			
			30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4i
 Sheet: 1 OF 4
 Total Boring Depth: 140 FT /WELL DEPTH: 100 FT
 Date Started/Completed: MARCH 29, 1999/APRIL 9, 1999
 Ground Level Elevation: 27.72 FT NGVD
 Measuring Point Elevation: 28.48 FT NGVD
 Static Water Level: 12.40 FT NGVD Date: 6/9/99
 Northing: 118892 Easting: 1079060



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4i
 Sheet: 2 OF 4
 Total Boring Depth: 140 FT /WELL DEPTH: 100 FT
 Date Started/Completed: MARCH 29, 1999/APRIL 9, 1999
 Ground Level Elevation: 27.72 FT NGVD
 Measuring Point Elevation: 28.48 FT NGVD
 Static Water Level: 12.40 FT NGVD Date: 6/9/99
 Northing: 118892 Easting: 1079060

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
6 25 60	11		40		35 - 40 feet: Sand predominantly medium- to coarse-grained, trace gravel up to 4 inches in diameter	
			45	UNIFORM GRANULAR BENTONITE GROUT - 6.5-84 FEET	@ 40 feet: Discrete-depth groundwater sample MW-4i, 40' collected 3/29/99 15:20 @ 42 feet: Grain size increasing with depth, slight increase in gravel content @ 45 feet: Gravel content increasing, gravel mostly 1 to 2 inches in diameter @ 47 feet: ~ 30% loose gravel	
			50	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 90 FEET		
			55	10-INCH BOREHOLE 0-100 FEET		
			60		@ 60 feet: Gravel mostly 1 inch in diameter, but trace up to 4 inches in diameter, loose @ 60 feet: Discrete-depth groundwater sample MW-4i, 60' collected 3/30/99 14:27	
			65		63 - 90 feet: Well graded sand with silt to silty sand (SW/SM), saturated	
			70		@ 63 feet: Well graded sand with silt (SW), fine - to coarse-grained, predominantly coarse-grained, trace fine-grained gravel, coarse-grained sand is angular to sub angular and basaltic, fine- to medium-grained sand is sub rounded quartz	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4i
 Sheet: 3 OF 4
 Total Boring Depth: 140 FT /WELL DEPTH: 100 FT
 Date Started/Completed: MARCH 29, 1999/APRIL 9, 1999
 Ground Level Elevation: 27.72 FT NGVD
 Measuring Point Elevation: 28.48 FT NGVD
 Static Water Level: 12.40 FT NGVD Date: 6/9/99
 Northing: 118892 Easting: 1079060

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75		SW as above @ 71 feet: Coarse-grained, angular, basaltic sand with somewhat more fine- to medium-grained sand	
4 6 10	4			10-INCH BOREHOLE 0-100 FEET UNIFORM GRANULAR BENTONITE GROUT - 6.5-84 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 90 FEET 3/8" SORTED GRANULAR BENTONITE 84-86 FEET 20-40 MESH SILICA SAND 86-87 FEET	@ 75 feet: Silty sand (SM), fine- to coarse-grained, well graded, predominantly fine- to medium-grained, ~20% fines, dark yellowish brown 10YR 3/2, medium dense @ 80 feet: Discrete-depth groundwater sample MW-4i, 80' collected 3/31/99 11:35 85 - 88 feet: Trace fine-grained gravel @ 88 feet: Gravel content increasing, silt content decreasing	
			90	STAINLESS STEEL CENTRALIZER AT 90 FEET 10-20 MESH SILICA SAND 87-101 FEET	90 - 100 feet: Well graded sand (SW), fine- to coarse-grained, trace fines, trace gravel	
			95	2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN WITH 4-INCH SUMP 90-100 FEET		
			100	STAINLESS STEEL CENTRALIZER AT 100 FEET 8-INCH BOREHOLE 100-140 FEET	100 - 140 feet: Well graded gravel with sand and silt (GW), fine- to coarse-grained gravels, up to 3 inches in diameter, in a sandy to silty sand matrix, saturated @ 100 feet: Gravel up to 1 1/2 inches in diameter in a sandy matrix, some silt lenses @ 100 feet: Discrete-depth groundwater sample MW-4i, 100' collected 4/1/99 08:54	
			105		@ 105 feet: More silt in matrix	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4i
 Sheet: 4 OF 4
 Total Boring Depth: 140 FT /WELL DEPTH: 100 FT
 Date Started/Completed: MARCH 29, 1999/APRIL 9, 1999
 Ground Level Elevation: 27.72 FT NGVD
 Measuring Point Elevation: 28.48 FT NGVD
 Static Water Level: 12.40 FT NGVD Date: 6/9/99
 Northing: 118892 Easting: 1079060

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
9/50			100		SW as above	
			110			
			115	3/8" SORTED GRANULAR BENTONITE 101-140 FEET		
40/50	1"	3	120	8-INCH BOREHOLE 100-140 FEET	@ 120 feet: Fine-grained gravel <1 inch in diameter in fine-grained silty sand matrix @ 120 feet: Discrete-depth groundwater sample MW-4i, 120' collected 4/2/99 09:15	
			125		@ 125 feet: Gravel up to 2 inches in diameter	
			130		@ 128 feet: Gravel up to 3 inches in diameter	
75/3"		2	135		@ 135 feet: Gravel up to 2 inches in diameter in gray silt/clay matrix @ 136 feet: Matrix is sand with silt	
			140		@ 140 feet: Discrete-depth groundwater sample MW-4i, 140' collected 4/5/99 11:15 @ 140 feet: End of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4d
 Sheet: 1 OF 7
 Total Boring Depth: 240 FT /WELL DEPTH: 232 FT
 Date Started/Completed: DECEMBER 6, 1998/JANUARY 14, 1999
 Ground Level Elevation: 26.97 FT NGVD
 Measuring Point Elevation: 26.66 FT NGVD
 Static Water Level: 8.89 FT NGVD Date: 4/21/99
 Northing: 119076 Easting: 1079049

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 1 feet: Asphalt with gravel sub-base	
			5	CEMENT 0-2 FEET	1 - 25 feet: Silty sand (SM), fine-grained, some coarse-grained sand and fine-grained gravel lenses	
			10	BENTONITE CHIPS 2-6.5 FEET		
			15	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 222 FEET		
			20	10-INCH BOREHOLE 0-100 FEET		
			25	UNIFORM GRANULAR BENTONITE GROUT - 6.5-216 FEET	@ 25 feet: Discrete depth groundwater sample MW-4d, 25' collected 12/4/98 15:15 25 - 30 feet: Well graded sand (SW), predominantly medium- to coarse-grained, angular to sub angular, trace fines, trace fine- to coarse-grained sub rounded basalt gravel	
			30		30 - 61 feet: Well graded sand with gravel (SW), fine- to coarse-grained with variable grain size distribution, up to 40% gravel	
			32		@ 32 feet: Predominantly medium- to coarse-grained, angular to sub angular, trace fines, ~ 10% gravel	
			34		@ 34 feet: ~ 25% gravel, no fines	
			35		@ 35 feet: Gravel predominantly basalt grains < 1.5 inches in diameter, trace grains up to 6 inches in diameter	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4d
 Sheet: 2 OF 7
 Total Boring Depth: 240 FT /WELL DEPTH: 232 FT
 Date Started/Completed: DECEMBER 6, 1998/JANUARY 14, 1999
 Ground Level Elevation: 26.97 FT NGVD
 Measuring Point Elevation: 26.66 FT NGVD
 Static Water Level: 8.89 FT NGVD Date: 4/21/99
 Northing: 119076 Easting: 1079049

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
4					SW as above	
10	6					
16						
			40		⊕ 40 feet: Discrete-depth groundwater sample MW-4D, 40' collected 12/7/98 13:00	
			45	UNIFORM GRANULAR BENTONITE GROUT - 6.5-216 FEET	⊕ 42 feet: Gravel up to 2 inches in diameter	
			50	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 222 FEET	⊕ 50 feet: Predominantly medium- to coarse-grained, angular to sub angular basaltic sand, ~25% basalt gravels up to 2 inches in diameter, some thin (1 inch) silty zones, dense	
45	6		55	10-INCH BOREHOLE 0-100 FEET	⊕ 53 feet: Looser than above, ~35 - 40% basalt gravel with grains predominantly < 1 inch in diameter	
100			60		⊕ 60 feet: Discrete-depth groundwater sample MW-4d, 60' collected 12/8/98 13:45	
			65		61 - 113 feet: Well graded sand (SW), Predominantly medium-grained with some fine and coarse grains throughout, trace amounts of gravel until 63 feet, angular	
14			70		⊕ 65 feet: Predominantly medium-grained, angular, basaltic sand with ~10% fine-grained, ~10% coarse-grained, ~ 10% fines, dark brown	
					⊕ 67 feet: Thin silty sand layers	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4d
 Sheet: 3 OF 7
 Total Boring Depth: 240 FT /WELL DEPTH: 232 FT
 Date Started/Completed: DECEMBER 6, 1998/JANUARY 14, 1999
 Ground Level Elevation: 26.97 FT NGVD
 Measuring Point Elevation: 26.66 FT NGVD
 Static Water Level: 8.89 FT NGVD Date: 4/21/99
 Northing: 119076 Easting: 1079049

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75		SW as above	
9 13 44			80	UNIFORM GRANULAR BENTONITE GROUT - 6.5-216 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 222 FEET	@ 80 feet: Discrete-depth groundwater sample MW-4d, 80' collected 12/9/98 13:00	
			85	10-INCH BOREHOLE 0-100 FEET		
			90			
9 13			95		@ 93 feet: Some increase in silt content along and thin silt layers	
			100	8-INCH BOREHOLE 100-240 FEET	@ 100 feet: Silt content continuing to increase @ 100 feet: Discrete-depth groundwater sample MW-4d, 100 collected 12/10/98 11:50	
			105			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4d
 Sheet: 4 OF 7
 Total Boring Depth: 240 FT /WELL DEPTH: 232 FT
 Date Started/Completed: DECEMBER 6, 1998/JANUARY 14, 1999
 Ground Level Elevation: 26.97 FT NGVD
 Measuring Point Elevation: 26.66 FT NGVD
 Static Water Level: 8.89 FT NGVD Date: 4/21/99
 Northing: 119076 Easting: 1079049

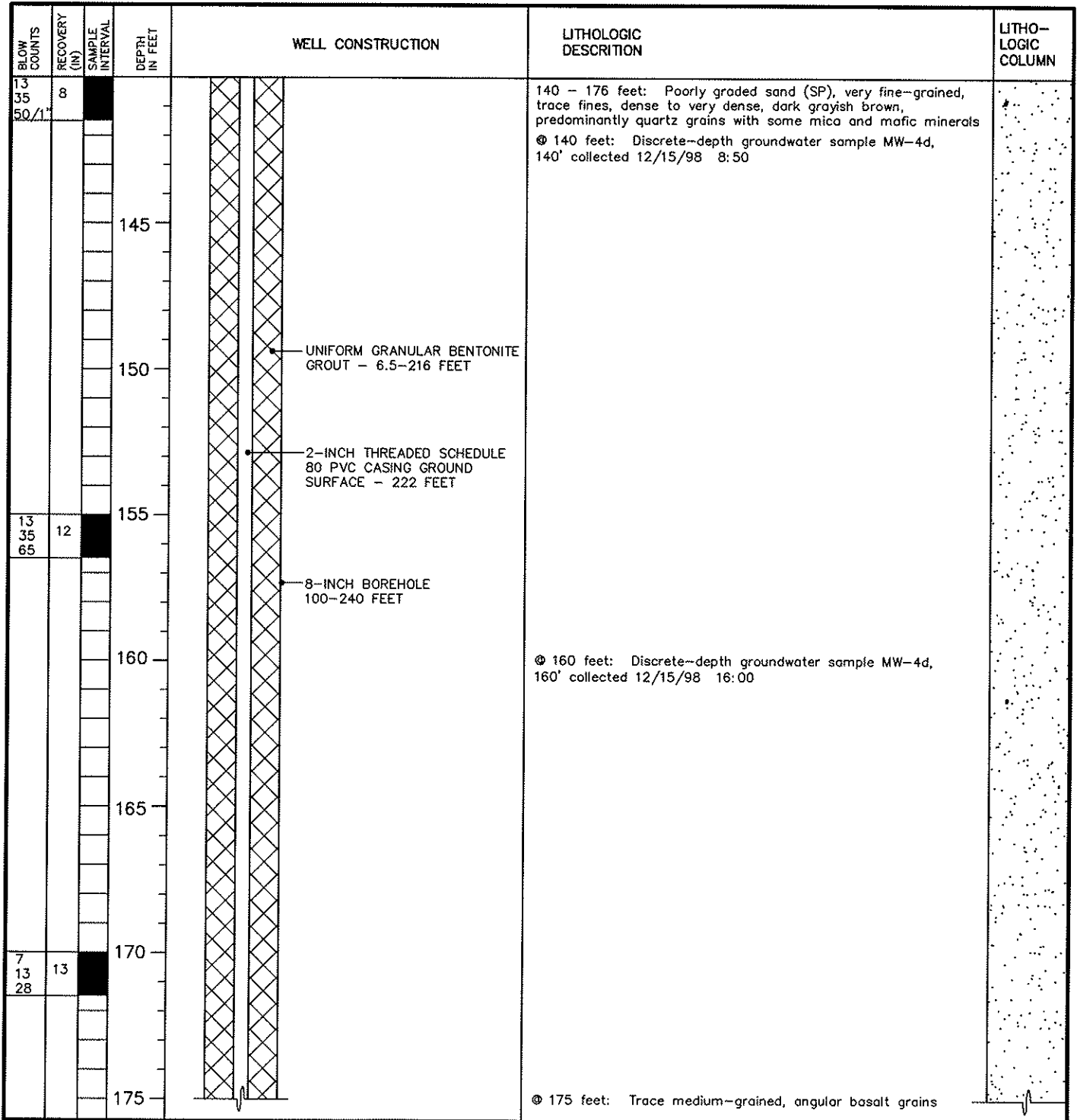
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110		SW as above @ 109 feet: Trace gravel up to 1 inch in diameter @ 110 feet: Predominantly fine- to medium-grained, ~ 15% fines, silty sand zones throughout sampled interval, dark yellowish brown	•••••
8 26 90	10					
			115	UNIFORM GRANULAR BENTONITE GROUT - 6.5-216 FEET	113 - 140 feet: Well graded sand with gravel (SW), fine- to coarse-grained, up to ~ 10% fines, angular to sub angular, fine- to coarse-grained gravel @ 115 feet: Trace fines, gravels predominantly < 1 inch in diameter but trace up to 3 inches in diameter	○ ○ ○ ○ ○
			120	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 222 FEET	@ 120 feet: Discrete-depth groundwater sample MW-4d, 120' collected 12/14/98 8:40	○ ○ ○ ○ ○
			125	8-INCH BOREHOLE 100-240 FEET	@ 122 feet: Predominantly medium- to coarse-grained, angular to sub angular, basaltic sand with ~ 10% fines, gravel predominantly < 1 inch in diameter but trace up to 4 inches in diameter, very occasional silty sand lenses @ 125 feet: Trace fines	○ ○ ○ ○ ○
7 30 35	2					
			130		@ 130 feet: Increasing silt content with depth, decreasing grain size and gravel content with depth	○ ○ ○ ○ ○
			135			○ ○ ○ ○ ○
			140			○ ○ ○ ○ ○

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4d
 Sheet: 5 OF 7
 Total Boring Depth: 240 FT /WELL DEPTH: 232 FT
 Date Started/Completed: DECEMBER 6, 1998/JANUARY 14, 1999
 Ground Level Elevation: 26.97 FT NGVD
 Measuring Point Elevation: 26.66 FT NGVD
 Static Water Level: 8.89 FT NGVD Date: 4/21/99
 Northing: 119076 Easting: 1079049



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4d
 Sheet: 6 OF 7
 Total Boring Depth: 240 FT /WELL DEPTH: 232 FT
 Date Started/Completed: DECEMBER 6, 1998/JANUARY 14, 1999
 Ground Level Elevation: 26.97 FT NGVD
 Measuring Point Elevation: 26.66 FT NGVD
 Static Water Level: 8.89 FT NGVD Date: 4/21/99
 Northing: 119076 Easting: 1079049

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180		SP as above	
			185	UNIFORM GRANULAR BENTONITE GROUT - 6.5-216 FEET	176 - 233 feet: Well graded gravel with sand (GW), fine- to coarse-grained gravel in sand to silty sand matrix	
40 100 /4"	2			2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 222 FEET	© 180 feet: Discrete-depth groundwater sample MW-4d, 180' collected 12/17/98 8:40 © 181 feet: Gravels up to 2 inches in diameter in very fine brown sand matrix, trace fines, trace grains up to 4 inches in diameter, gravels are predominantly basalt with some quartzite grains © 185 feet: Sand matrix is predominantly quartz with some basalt grains, gravels predominantly basalt	
			190		© 191 feet: Trace cementation on gravels	
			195	8-INCH BOREHOLE 100-240 FEET	© 195 feet: Gravels up to 3 inches in diameter, grain size increasing with depth	
			200		© 200 feet: Discrete-depth groundwater sample MW-4d, 200' collected 12/18/98 12:35	
0					© 203 feet: Gravels up to 4 inches in diameter in brown silty sand matrix, no cementation on grains, predominantly basalt, trace quartzite	
			205			
			210			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-4d
 Sheet: 7 OF 7
 Total Boring Depth: 240 FT /WELL DEPTH: 232 FT
 Date Started/Completed: DECEMBER 6, 1998/JANUARY 14, 1999
 Ground Level Elevation: 26.97 FT NGVD
 Measuring Point Elevation: 26.66 FT NGVD
 Static Water Level: 8.89 FT NGVD Date: 4/21/99
 Northing: 119076 Easting: 1079049

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				UNIFORM GRANULAR BENTONITE GROUT - 6.5-216 FEET	GW as above	
65 65 /0"	0		215	3/8" SORTED GRANULAR BENTONITE 216-218 FEET 20-40 MESH SILICA SAND 218-219 FEET 10-20 MESH SILICA SAND 219-233 FEET STAINLESS STEEL CENTRALIZER AT 222 FEET 8-INCH BOREHOLE 100-240 FEET 2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN WITH 4-INCH SUMP 222-232 FEET	@ 215 feet: Increase in sand content, gravels predominantly 1 to 2 inches in diameter, trace up to 4 inches in diameter @ 220 feet: Trace quartzite gravel, no cementation on grains @ 220 feet: Discrete-depth groundwater sample MW-4d, 220' collected 12/23/98 15:10 @ 225 feet: Some mica present	
40 50 /0"			230	STAINLESS STEEL CENTRALIZER AT 232 FEET		
			235	3/8" SORTED GRANULAR BENTONITE 233-240 FEET	233 - 240 feet: Well graded gravel (GW), some sand, ~ 50% basalt grains, 50% caramel-colored quartzite grains, trace large (2 mm) mica flakes, cementation on grains, gray clay matrix from 233 feet to 234 feet, mica content and amount and degree of cementation increasing with depth, TROUTDALE FORMATION @ 240 feet: Discrete-depth groundwater sample MW-4d, 240' collected 1/5/99 12:50 @ 240 feet: End of boring	
			240			
			245			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS, INC
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-5
 Sheet: 1 OF 1
 Total Boring Depth: 30.5 FT /WELL DEPTH: 30 FT
 Date Started/Completed: OCTOBER 10, 2000
 Ground Level Elevation: 28.50 FEET NGVD
 Measuring Point Elevation: 30.64 FEET NGVD
 Static Water Level: 25.50 FEET NGVD Date: 10/30/00
 Northing: 119585 Easting: 1078926

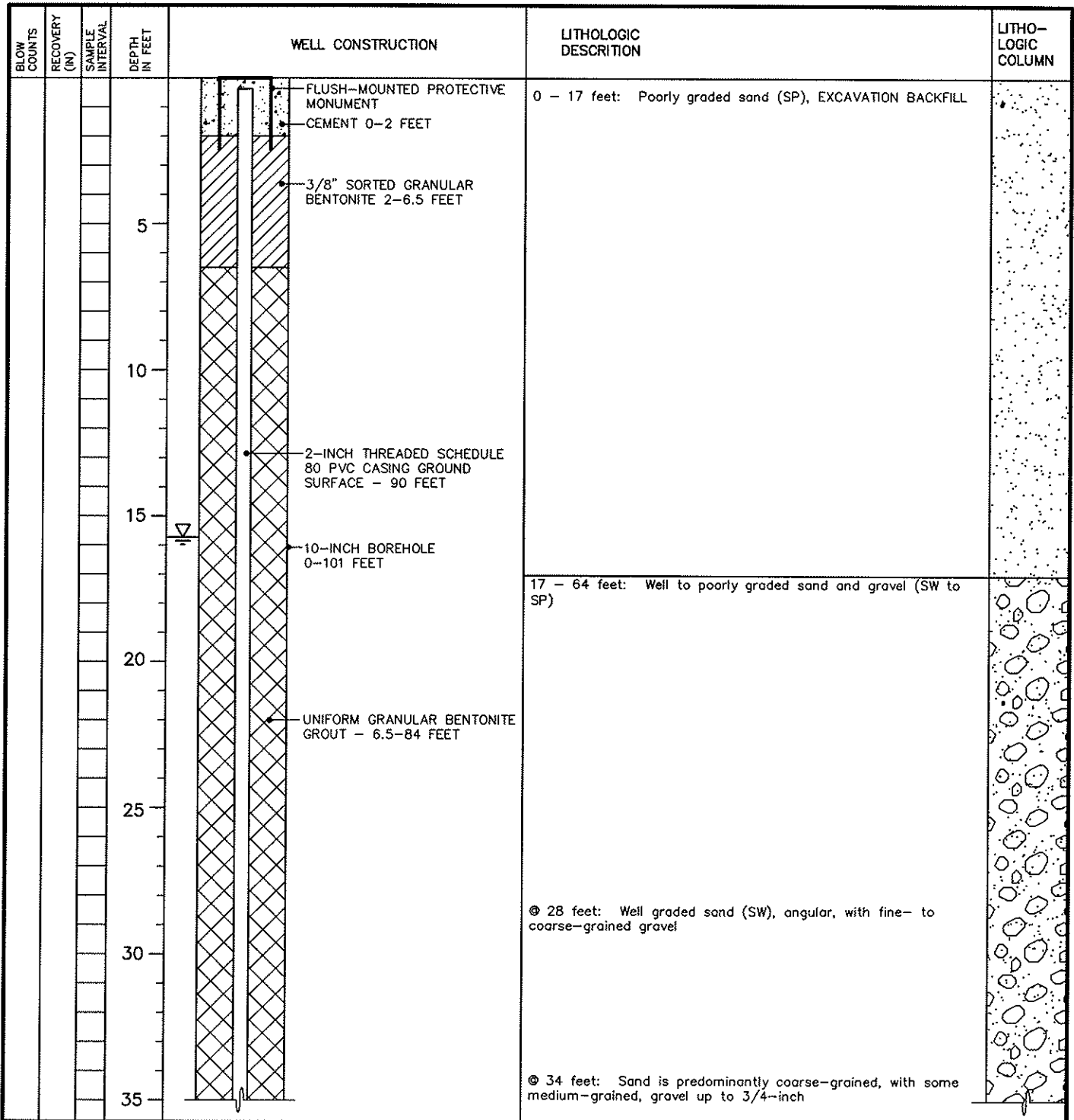
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	ABOVE-GROUND PROTECTIVE MONUMENT	0 - 17 feet: Poorly graded sand (SP), EXCAVATION BACKFILL	
			0-3	CEMENT 0-3 FEET		
			3			
			4			
			5	3/8" SORTED GRANULAR BENTONITE 3-17 FEET		
			10			
			15	2-INCH THREADED SCHEDULE 40 PVC CASING GROUND SURFACE - 20 FEET		
			17	8 1/4-INCH BOREHOLE 0-30.5 FEET		
			17-20	10-20 MESH SILICA SAND 17-30.5 FEET	17 - 24 feet: Silty sand (SM), very fine-grained, ~20% fines, brown, dry, loose	
3	18		20			
5						
4				2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 20-30 FEET		
			25		24 - 30 feet: Well graded sand (SW), ~85% fine- to medium-grained, 15% coarse-grained, trace fines, grey, saturated at 25 feet, loose, angular, basaltic,	
4	18		25			
6						
4						
			30		@30 feet: Mostly coarse-grained	
4	15		30		@30.5 feet: End of boring	
19						
25						
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: NA
 Groundwater Sample Method: NA

Boring Number: MW-5i
 Sheet: 1 OF 3
 Total Boring Depth: 101 FT / WELL DEPTH: 100 FT
 Date Started/Completed: JANUARY 15, 1999/JANUARY 22, 1999
 Ground Level Elevation: 28.29 FT NGVD
 Measuring Point Elevation: 28.16 FT NGVD
 Static Water Level: 12.43 FT NGVD Date: 6/9/99
 Northing: 119579 Easting: 1078939



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: NA
 Groundwater Sample Method: NA

Boring Number: MW-5i
 Sheet: 2 OF 3
 Total Boring Depth: 101 FT / WELL DEPTH: 100 FT
 Date Started/Completed: JANUARY 15, 1999/JANUARY 22, 1999
 Ground Level Elevation: 28.29 FT NGVD
 Measuring Point Elevation: 28.16 FT NGVD
 Static Water Level: 12.43 FT NGVD Date: 6/9/99
 Northing: 119579 Easting: 1078939

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40	<p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT - 6.5-84 FEET</p> <p style="margin-left: 20px;">2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 90 FEET</p> <p style="margin-left: 20px;">10-INCH BOREHOLE 0-101 FEET</p>	SW as above	
			45			
			50			
			55			
			60			
			65			
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: NA
 Groundwater Sample Method: NA

Boring Number: MW-5i
 Sheet: 3 OF 3
 Total Boring Depth: 101 FT / WELL DEPTH: 100 FT
 Date Started/Completed: JANUARY 15, 1999/JANUARY 22, 1999
 Ground Level Elevation: 28.29 FT NGVD
 Measuring Point Elevation: 28.16 FT NGVD
 Static Water Level: 12.43 FT NGVD Date: 6/9/99
 Northing: 119579 Easting: 1078939

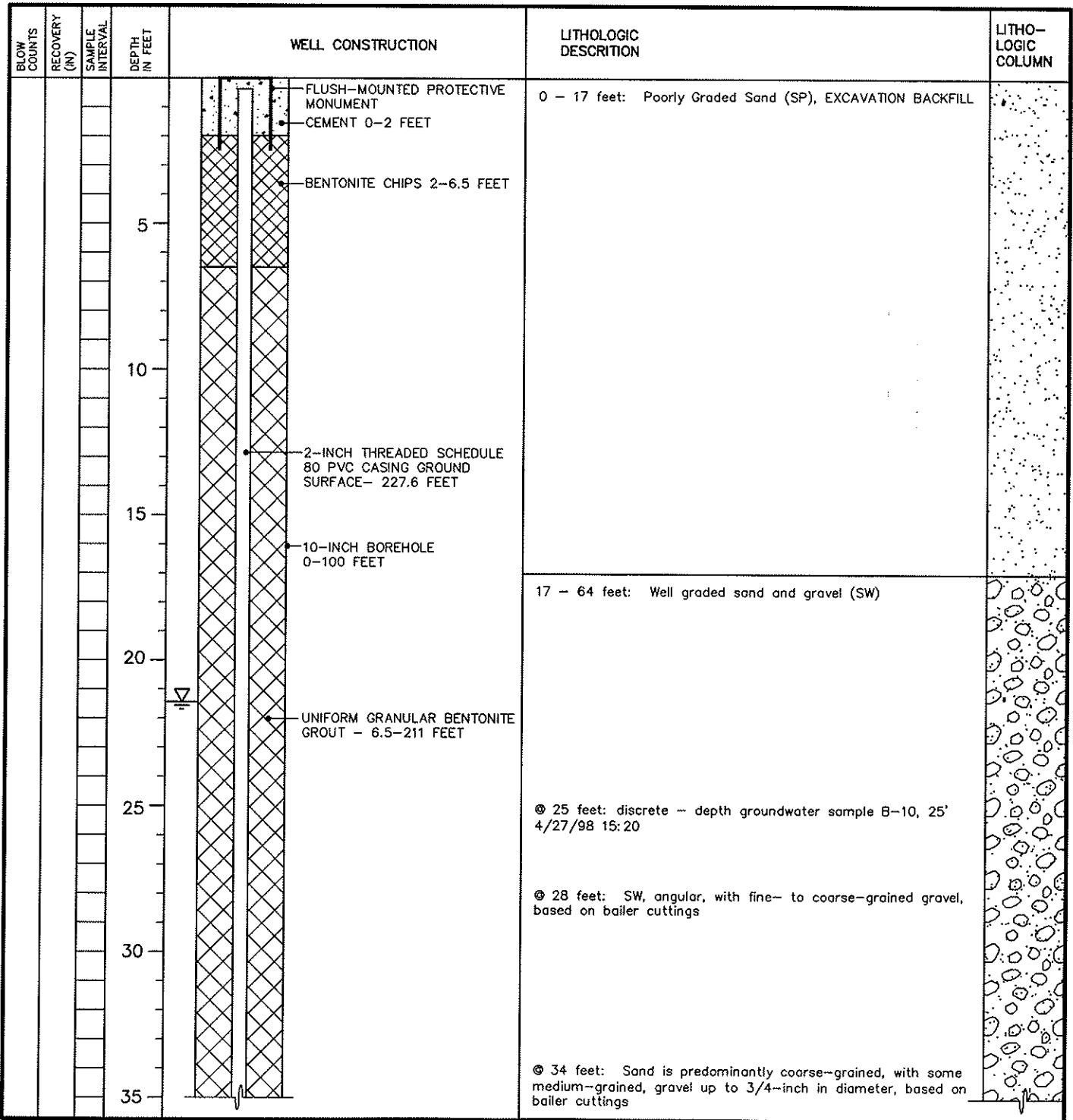
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	<ul style="list-style-type: none"> UNIFORM GRANULAR BENTONITE GROUT - 6.5-84 FEET 	SW as above ⊕ 74 feet: Some thin silt layers	
			80	<ul style="list-style-type: none"> 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 90 FEET 10-INCH BOREHOLE 0-101 FEET 	⊕ 80 feet: SW, fine- to medium-grained, little fines, grayish brown, saturated, very dense	
			85	<ul style="list-style-type: none"> 3/8" SORTED GRANULAR BENTONITE 84-86 FEET 20-40 MESH SILICA SAND 86-87 FEET 		
			90	<ul style="list-style-type: none"> STAINLESS STEEL CENTRALIZER AT 90 FEET 2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN WITH 4-INCH SUMP 90-100 FEET 	⊕ 95 feet: SW, ~10% coarse-grained, brownish grey, saturated, very dense	
			95	<ul style="list-style-type: none"> 10-20 MESH SILICA SAND 87-101 FEET 		
			100	<ul style="list-style-type: none"> STAINLESS STEEL CENTRALIZER AT 100 FEET 	⊕ 101 feet: End of boring	
			105			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-10 / MW-5d
 Sheet: 1 OF 7
 Total Boring Depth: 234 FT /WELL DEPTH 227 FT
 Date Started/Completed: APRIL 27, 1998/MAY 20, 1998
 Ground Level Elevation: 28.34 FT NGVD
 Measuring Point Elevation: 27.97 FT NGVD
 Static Water Level: 6.55 FT NGVD Date: 7/20/98
 Northing: 119572 Easting: 1078929



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-10 / MW-5d
 Sheet: 2 OF 7
 Total Boring Depth: 234 FT /WELL DEPTH 227 FT
 Date Started/Completed: APRIL 27, 1998/MAY 20, 1998
 Ground Level Elevation: 28.34 FT NGVD
 Measuring Point Elevation: 27.97 FT NGVD
 Static Water Level: 6.55 FT NGVD Date: 7/20/98
 Northing: 119572 Easting: 1078929

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
			40	<p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT - 6.5-211 FEET</p> <p style="margin-left: 20px;">2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 227.6 FEET</p> <p style="margin-left: 20px;">10-INCH BOREHOLE 0-100 FEET</p>	SW as above ◎ 40 feet: discrete - depth groundwater sample, B-10, 40' 4/29/98 13:55		
			45				
			50				
			55				
			60		◎ 60 feet: discrete - depth groundwater sample B-10, 60' 4/29/98 13:30		
40 50 47			65		64 - 153 feet: Well graded sand (SW), fine- to coarse-grained, trace to little fines, greyish brown to brown 10 YR 4/3 to very dark brown 10 YR 2/2, saturated, very dense to dense		
			70				

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-10 / MW-5d
 Sheet: 3 OF 7
 Total Boring Depth: 234 FT /WELL DEPTH 227 FT
 Date Started/Completed: APRIL 27, 1998/MAY 20, 1998
 Ground Level Elevation: 28.34 FT NGVD
 Measuring Point Elevation: 27.97 FT NGVD
 Static Water Level: 6.55 FT NGVD Date: 7/20/98
 Northing: 119572 Easting: 1078929

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75		SW as above	
			80	UNIFORM GRANULAR BENTONITE GROUT - 6.5-211 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 227.6 FEET 10-INCH BOREHOLE 0-100 FEET	@ 74 feet: Some thin silt layers, based on bailer cuttings @ 80 feet: SW, fine- to medium-grained, little fines, greyish brown, saturated, very dense discrete - depth groundwater sample B-10, 80' 4/30/98 12:20	
8 26 48			80			
			85			
			90			
			95		@ 95 feet: SW, ~10% coarse-grained, little fines, brownish grey, saturated, very dense	
16 38 80			95			
			100	8-INCH BOREHOLE 100-234 FEET	@ 100 feet: discrete - depth groundwater sample B-10, 100' 4/30/98 16:56	
			105			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-10 / MW-5d
 Sheet: 4 OF 7
 Total Boring Depth: 234 FT /WELL DEPTH 227 FT
 Date Started/Completed: APRIL 27, 1998/MAY 20, 1998
 Ground Level Elevation: 28.34 FT NGVD
 Measuring Point Elevation: 27.97 FT NGVD
 Static Water Level: 6.55 FT NGVD Date: 7/20/98
 Northing: 119572 Easting: 1078929

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110		SW as above	
10 29 65	9				◎ 110 feet: Poorly graded sand (SP), very fined-grained, trace fines, brown 10YR 4/3, saturated, very dense	
			115		◎ 115 feet: Grain size increasing with depth to medium to coarse-grained sand and some fine gravel, based on bailer cuttings	
			120	UNIFORM GRANULAR BENTONITE GROUT - 6.5-211 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 227.6 FEET 8-INCH BOREHOLE 100-234 FEET	◎ 120 feet: discrete - depth groundwater sample B-10, 120' 5/4/98 14:05	
			125		◎ 125 feet: No recovery, medium- to coarse-grained sand and fine-grained gravel, based on bailer cuttings	
72						
			130			
			135		◎ 135 feet: SW, medium- to coarse-grained, few fine-grained, trace fines, trace fine-grained gravel, very dark brown 10YR 2/2, saturated, dense	
11 19 21	8					
			140			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-10 / MW-5d
 Sheet: 5 OF 7
 Total Boring Depth: 234 FT /WELL DEPTH 227 FT
 Date Started/Completed: APRIL 27, 1998/MAY 20, 1998
 Ground Level Elevation: 28.34 FT NGVD
 Measuring Point Elevation: 27.97 FT NGVD
 Static Water Level: 6.55 FT NGVD Date: 7/20/98
 Northing: 119572 Easting: 1078929

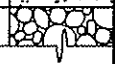
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
19 24 32	9		140		@ 140 feet: SW, fine- to medium-grained, trace coarse-grained, trace fines, trace fine-grained gravel, very dark brown 10YR 2/2, saturated, very dense discrete - depth groundwater sample B-10, 140' 5/5/98 10:50	
			150	UNIFORM GRANULAR BENTONITE GROUT - 6.5-211 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE ~ 227.6 FEET		
13 26 32	12		155		153 - 209 feet: Poorly graded sand (SP), fine-grained, trace fines, brown 10YR 4/3 to dark brown 10YR 3/3, saturated, dense to very dense @ 155 feet: SP, fine-grained, brown 10YR 4/3, saturated, very dense	
			160	8-INCH BOREHOLE 100-234 FEET	@ 160 feet: discrete - depth groundwater sample B-10, 160' 5/5/98 16:20	
9 14 32	7		170		@ 170 feet: SP, fine-grained, trace fines, brown 10YR 4/3, saturated, dense	
			175			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-10 / MW-5d
 Sheet: 6 OF 7
 Total Boring Depth: 234 FT /WELL DEPTH 227 FT
 Date Started/Completed: APRIL 27, 1998/MAY 20, 1998
 Ground Level Elevation: 28.34 FT NGVD
 Measuring Point Elevation: 27.97 FT NGVD
 Static Water Level: 6.55 FT NGVD Date: 7/20/98
 Northing: 119572 Easting: 1078929

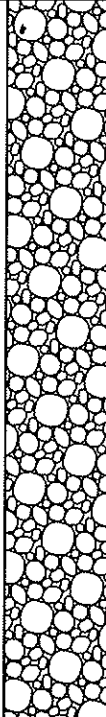
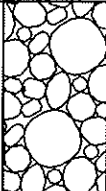
BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180		SP as above	
			185	UNIFORM GRANULAR BENTONITE GROUT -- 6.5-211 FEET	© 180 feet: discrete - depth groundwater sample B-10, 180' 5/6/98 13:00 © 185 feet: SP, fine-grained, brown 10 YR 4/3, saturated, very dense	
28 42 65	10		190	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 227.6 FEET		
			195	8-INCH BOREHOLE 100-234 FEET		
14 22 47	12		200		© 200 feet: SP, fine-grained, trace fines, dark brown 10 YR 3/3, saturated, very dense discrete - depth groundwater sample B-10, 200' 5/7/98 11:00	
			205			
			210		GW as below	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: B-10 / MW-5d
 Sheet: 7 OF 7
 Total Boring Depth: 234 FT /WELL DEPTH 227 FT
 Date Started/Completed: APRIL 27, 1998/MAY 20, 1998
 Ground Level Elevation: 28.34 FT NGVD
 Measuring Point Elevation: 27.97 FT NGVD
 Static Water Level: 6.55 FT NGVD Date: 7/20/98
 Northing: 119572 Easting: 1078929

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			215	3/8" SORTED GRANULAR BENTONITE 211-213 FEET 10-40 MESH SILICA SAND 213-214 FEET 8-INCH BOREHOLE 100-234 FEET STAINLESS STEEL CENTRALIZER AT 217 FEET	209 feet - 229 feet Well graded gravel with sand (GW), fine- to coarse-grained (up to 2 inches), some fine- to coarse-grained sand, trace fines, saturated, gravel is predominately basaltic, some granitic ◎ 215 feet: GW as above	
12			220	10-20 MESH SILICA SAND 214-228 FEET 2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN WITH 4-INCH SUMP 217.3-227.6 FEET STAINLESS STEEL CENTRALIZER AT 227 FEET	◎ 220 feet: discrete - depth groundwater sample B-10, 220' 5/8/98 15:00 ◎ 224 feet: cobbles up to 4 inches in diameter, based on bailer cuttings ◎ 226 feet: slightly cemented basalt cobbles, based on bailer cuttings ◎ 228 feet: discrete - depth groundwater sample B-10, 228' 5/14/98 16:00	
			230	3/8" SORTED GRANULAR BENTONITE 228-233 FEET CEMENT 233-234 FEET	229 feet - 234 feet: Well graded gravel with sand (GW), fine- to coarse-grained (up to 8 inches), saturated, slightly cemented, gravel contains basalt, granite, abundant caramel-colored quartzite, abundant large mica flakes (up to 2 mm), TROUTDALE FORMATION	
			235		◎ 234 feet: End of boring	
			240			
			245			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: SPLIT-SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-7
 Sheet: 1 OF 1
 Total Boring Depth: 31.5 FT / WELL DEPTH: 30 FT
 Date Started/Completed: JULY 13, 1998
 Ground Level Elevation: 31.24 FT NGVD
 Measuring Point Elevation: 30.84 FT NGVD
 Static Water Level: 12.41 FT NGVD Date: 6/9/99
 Northing: 119424.6 Easting: 1079484.1

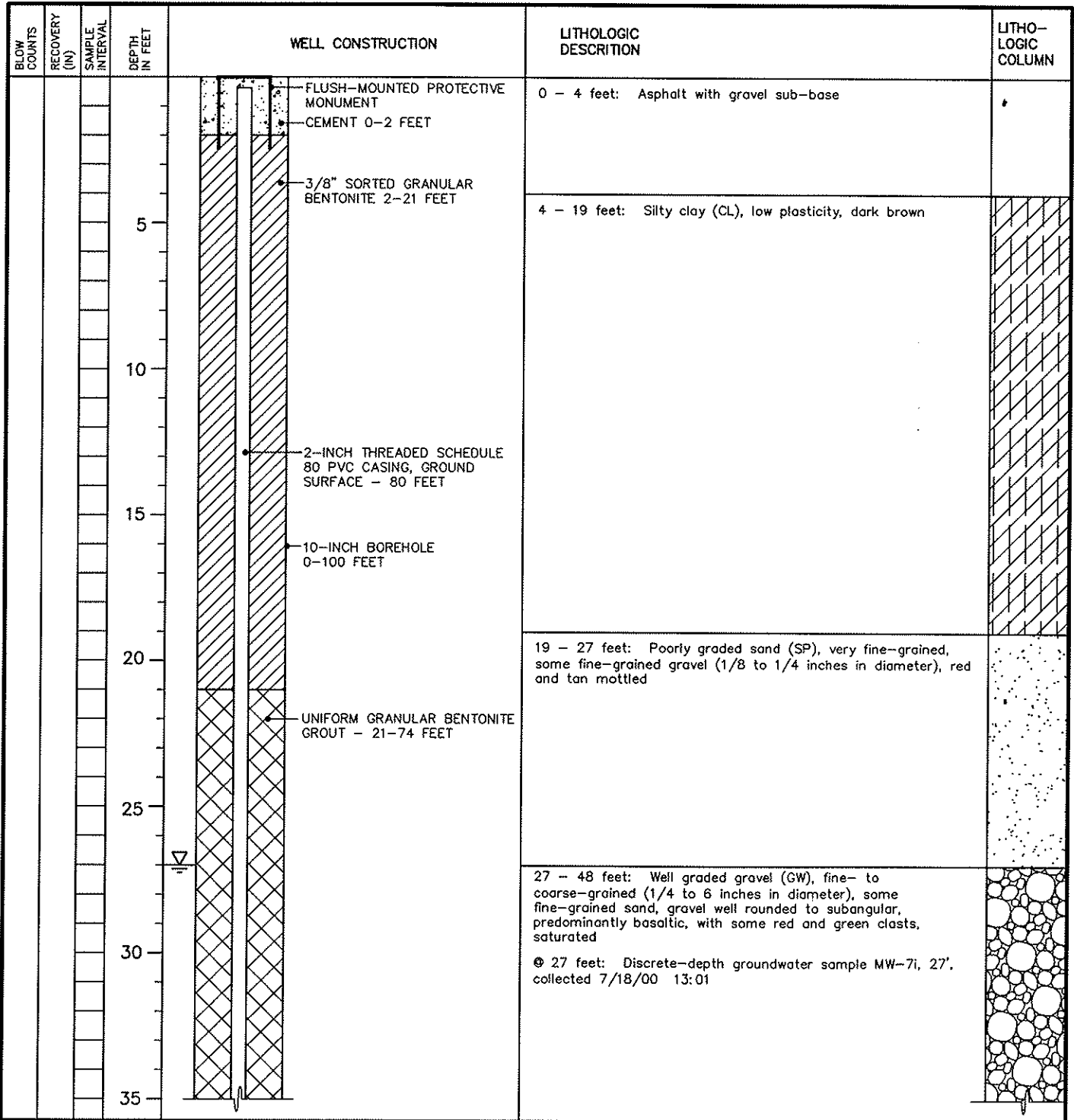
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				<p style="font-size: small;">FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8" SORTED GRANULAR BENTONITE 2 - 17 FEET 2-INCH THREADED SCHEDULE 40 PVC CASING GROUND SURFACE ~ 20 FEET 8 1/4-INCH BOREHOLE 0-31.5 FEET 10-20 MESH SILICA SAND 17-31.5 FEET 2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN. 20-30 FEET</p>	0 - 13 feet: Silt with sand (ML), ~20% very fine-grained sand, slightly plastic, strong brown 7.5YR 4/6, moist, medium stiff to stiff 13 - 19 feet: Silty sand (SM), fine-grained, ~30% fines, brown 7.5 YR 4/3, dry medium dense 19 - 22 feet: Poorly graded sand (SP), medium-grained, dark brown 7.5 YR 3/2, moist, medium dense 22 - 31.5 feet: Well graded sand with gravel (SW), fine- to coarse-grained, predominantly coarse-grained, trace fines, ~10 % fine-grained gravel, dark brown 7.5 YR 3/2, dry to saturated, dense @24 feet: Saturated	
8 9 7	16		5			
3 2 4	22		10			
4 6 5	24		15			
10 10 15	18		20			
14 25 15	3		25			
26 7			30			
			35		@ 31.5 feet: End of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-7i
 Sheet: 1 OF 6
 Total Boring Depth: 180 FT / WELL DEPTH: 90 FT
 Date Started/Completed: JULY 27, 2000/AUGUST 9, 2000
 Ground Level Elevation: 32.81 FT NGVD
 Measuring Point Elevation: 32.42 FT NGVD
 Static Water Level: 27.41 FT NGVD Date: 10/30/00
 Northing: 119388 Easting: 1079449



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-7i
 Sheet: 2 OF 6
 Total Boring Depth: 180 FT / WELL DEPTH: 90 FT
 Date Started/Completed: JULY 27, 2000/AUGUST 9, 2000
 Ground Level Elevation: 32.81 FT NGVD
 Measuring Point Elevation: 32.42 FT NGVD
 Static Water Level: 27.41 FT NGVD Date: 10/30/00
 Northing: 119388 Easting: 1079449

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		GW as above	
			45	UNIFORM GRANULAR BENTONITE GROUT - 21-74 FEET	⊗ 40 feet: Discrete--depth groundwater sample MW-7i, 40', collected 7/19/00 07:25	
			50	2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 80 FEET	48 - 53 feet: Poorly graded sand with gravel (SP), sand coarse-grained, gravel fine- to coarse-grained (1/4 to 2 inches in diameter), dark brown to black, gravel is rounded, saturated	
			55	10-INCH BOREHOLE 0-105 FEET	53 - 60 feet: Well graded gravel with sand (GW), fine- to coarse grained (1/2 to 4 inches in diameter), sand is coarse-grained, sand and gravel are basaltic, saturated	
			60		⊗ 57 - 60 feet: Cobbles	
			65		60 - 69 feet: Well graded sand (SW), fine- to coarse-grained, predominantly coarse-grained, trace gravel, subangular to angular, basaltic, saturated	
			70		⊗ 60 feet: Discrete--depth groundwater sample MW-7i, 60', collected 7/19/00 11:25	
					⊗ 65 - 68 feet: SW as above, loose	
					⊗ 66 - 68 feet: Thin (~1 inch) silt lenses	
					⊗ 68 feet: Some heaving	
					69 - 73 feet: Gravel with sand, saturated	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-7i
 Sheet: 3 OF 6
 Total Boring Depth: 180 FT / WELL DEPTH: 90 FT
 Date Started/Completed: JULY 27, 2000/AUGUST 9, 2000
 Ground Level Elevation: 32.81 FT NGVD
 Measuring Point Elevation: 32.42 FT NGVD
 Static Water Level: 27.41 FT NGVD Date: 10/30/00
 Northing: 119388 Easting: 1079449

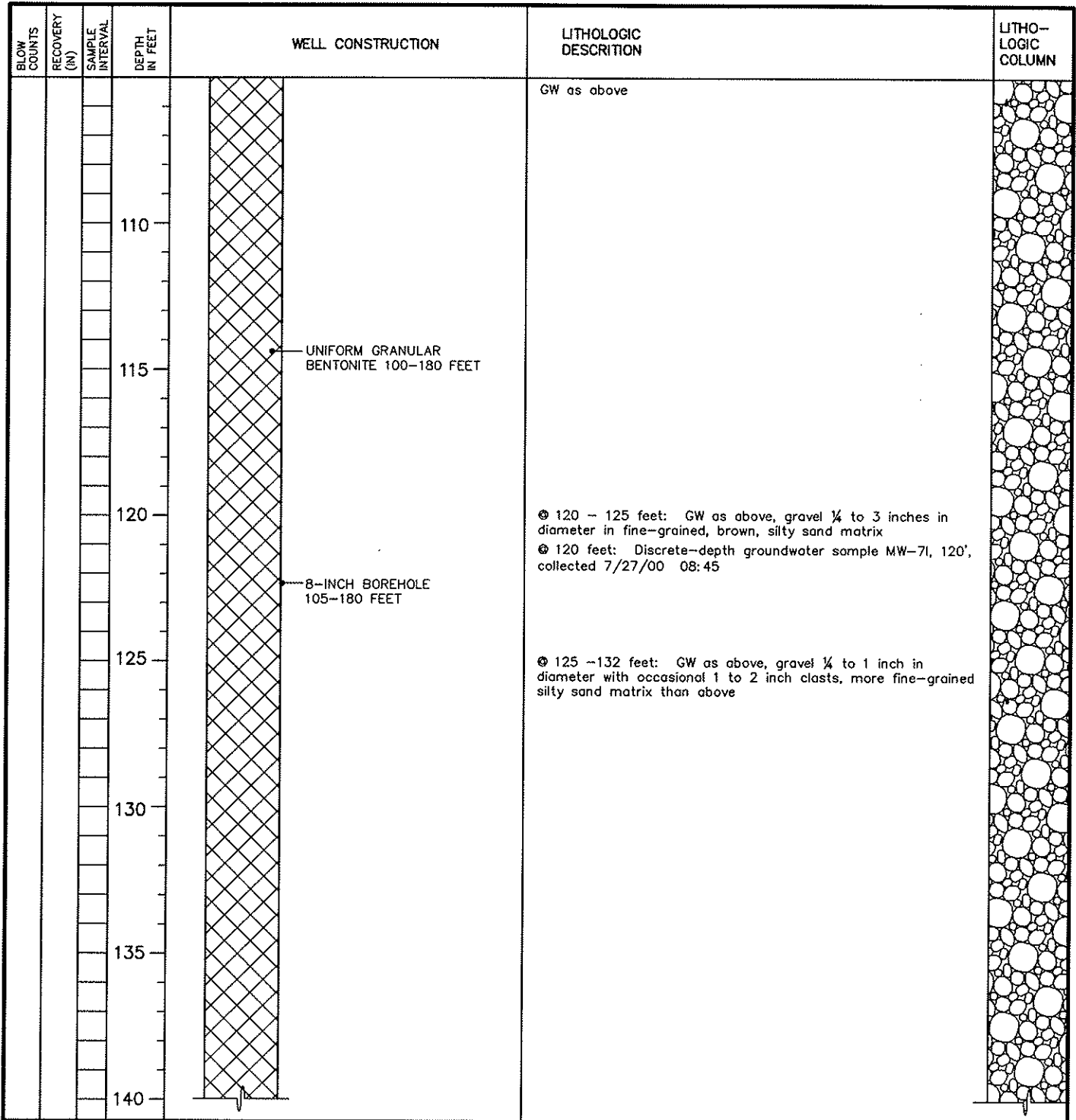
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 80 FEET 3/8 INCH SORTED GRANULAR BENTONITE 74-76 FEET 20-40 MESH SILICA SAND 76-77 FEET	69 - 73 feet: Gravel with sand, saturated	75
			80	STAINLESS STEEL CENTRALIZER 10-20 MESH SILICA SAND 77-91 FEET 2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN 80-90 FEET	73 - 87 feet: Well graded sand (SW), predominantly coarse-grained, subangular to angular, basaltic, saturated ⊕ 74 - 79 feet: Thin (1 to 2 inches thick) silty sand lenses ⊕ 79 - 80 feet: SW as above, trace gravel up to 3 inches, no silty lenses ⊕ 80 feet: Discrete-depth groundwater sample MW-7i, 80', collected 7/20/00 09:12 ⊕ 80 - 87 feet: SW as above, silty	80
			85			85
			90	STAINLESS STEEL CENTRALIZER	87 - 100 feet: Well graded gravel (GW), fine- to coarse-grained (1/2 to 6 inches in diameter), some coarse-grained sand, some cementation on grains, gravel predominantly basaltic, saturated	90
			95	10-INCH BOREHOLE 0-105 FEET 3/8 INCH SORTED GRANULAR BENTONITE 91-100 FEET		95
			100		100 - 153 feet: Well graded gravel (GW) in silt to silty sand matrix, saturated ⊕ 100 feet: Discrete-depth groundwater sample MW-7i, 100', collected 7/21/00 09:50 ⊕ 100 - 115 feet: GW as above, gravel up to 3 inches in diameter, tightly packed, matrix predominantly sand, some silt, some cementation on grains, basaltic	100
			105	UNIFORM GRANULAR BENTONITE 100-180 FEET		105

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-7i
 Sheet: 4 OF 6
 Total Boring Depth: 180 FT / WELL DEPTH: 90 FT
 Date Started/Completed: JULY 27, 2000/AUGUST 9, 2000
 Ground Level Elevation: 32.81 FT NGVD
 Measuring Point Elevation: 32.42 FT NGVD
 Static Water Level: 27.41 FT NGVD Date: 10/30/00
 Northing: 119388 Easting: 1079449



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: <u>PORT OF VANCOUVER/SWAN MANUFACTURING</u> Project Number: <u>275-1940-006</u> Location: <u>VANCOUVER, WA</u> PMX Representative: <u>ANNE ACKERMAN/CHRIS HAMILTON</u> Drilled By: <u>WESTERBURG DRILLING</u> Drill Method: <u>CABLE TOOL</u> Soil Sample Method: <u>2" SPLIT SPOON</u> Groundwater Sample Method: <u>TEMPORARY WELL POINT</u>	Boring Number: <u>MW-7i</u> Sheet: <u>5 OF 6</u> Total Boring Depth: <u>180 FT / WELL DEPTH: 90 FT</u> Date Started/Completed: <u>JULY 27, 2000/AUGUST 9, 2000</u> Ground Level Elevation: <u>32.81 FT NGVD</u> Measuring Point Elevation: <u>32.42 FT NGVD</u> Static Water Level: <u>27.41 FT NGVD</u> Date: <u>10/30/00</u> Northing: <u>119388</u> Easting: <u>1079449</u>
---	---

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
			145	UNIFORM GRANULAR BENTONITE GROUT - 100-180 FEET	Ⓞ 140 feet: Discrete-depth groundwater sample MW-7i, 140', collected 7/31/00 14:40 Ⓞ 140 - 150 feet: GW as above, trace gravel up to 4 inches in diameter		
			150				Ⓞ 148 - 152 feet: GW as above, increase in percent of 3 to 4 inch diameter clasts
			155	8-INCH BOREHOLE 105-180 FEET	153 - 180 feet: Well graded gravel with sand (GW) Ⓞ 155 - 160 feet: GW as above, gravel 2 to 4 inches in diameter, trace up to 6 inches in diameter, some fine- to medium-grained sand, little fines, gravel mostly basaltic with some cementation on grains Ⓞ 158 feet: GW as above, cemented		
			160				Ⓞ 160 feet: Discrete-depth groundwater sample MW-7i, 160', collected 8/1/00 13:30 Ⓞ 161 feet: GW as above, cemented Ⓞ 161 - 169 feet: GW as above, less cemented than above
			165				
			170				Ⓞ 169 - 171 feet: GW as above, well cemented
			175				

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: <u>PORT OF VANCOUVER/SWAN MANUFACTURING</u> Project Number: <u>275-1940-006</u> Location: <u>VANCOUVER, WA</u> PMX Representative: <u>ANNE ACKERMAN/CHRIS HAMILTON</u> Drilled By: <u>WESTERBURG DRILLING</u> Drill Method: <u>CABLE TOOL</u> Soil Sample Method: <u>2" SPLIT SPOON</u> Groundwater Sample Method: <u>TEMPORARY WELL POINT</u>	Boring Number: <u>MW-7i</u> Sheet: <u>6 OF 6</u> Total Boring Depth: <u>180 FT / WELL DEPTH: 90 FT</u> Date Started/Completed: <u>JULY 27, 2000/AUGUST 9, 2000</u> Ground Level Elevation: <u>32.81 FT NGVD</u> Measuring Point Elevation: <u>32.42 FT NGVD</u> Static Water Level: <u>27.41 FT NGVD</u> Date: <u>10/30/00</u> Northing: <u>119388</u> Easting: <u>1079449</u>
---	---

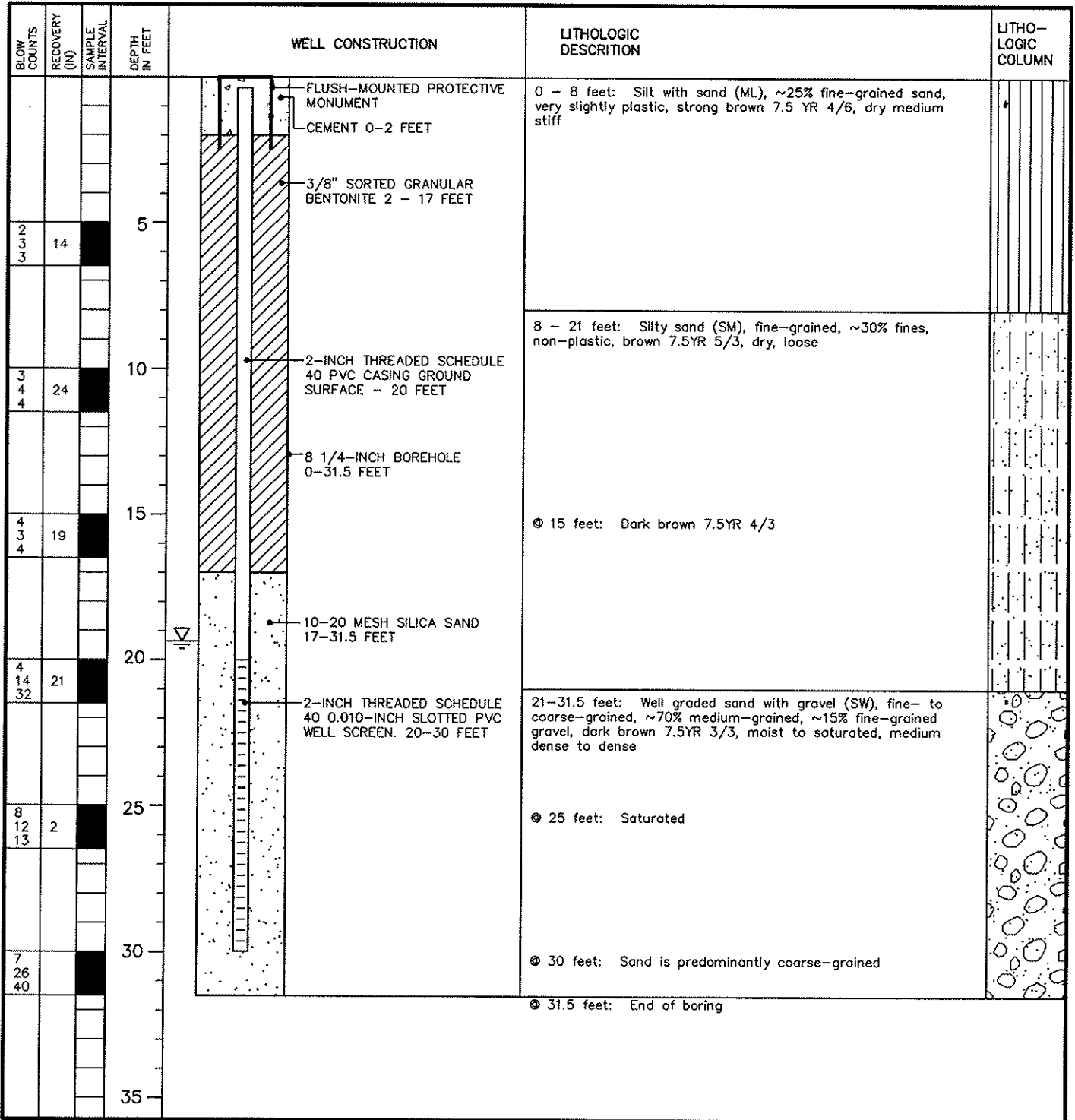
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180	<ul style="list-style-type: none"> • UNIFORM GRANULAR BENTONITE GROUT - 100-180 FEET • 8-INCH BOREHOLE 105-180 FEET 	GW as above ● 179 feet: GW as above, gravel up to 1-inch in diameter ● 180 feet: Discrete-depth groundwater sample MW-7i, 180', collected 8/2/00 12:50 ● 180 feet: End of boring	
			185			
			190			
			195			
			200			
			205			
			210			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: SPLIT-SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-8
 Sheet: 1 OF 1
 Total Boring Depth: 31.5 FT / WELL DEPTH: 30 FT
 Date Started/Completed: JULY 13, 1998
 Ground Level Elevation: 31.65 FT NGVD
 Measuring Point Elevation: 31.38 FT NGVD
 Static Water Level: 12.40 FT NGVD Date: 6/9/99
 Northing: 119642.6 Easting: 1079434.5



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-8i
 Sheet: 1 OF 4
 Total Boring Depth: 140 FT / WELL DEPTH: 130 FT
 Date Started/Completed: JANUARY 27, 1999/FEBRUARY 25, 1999
 Ground Level Elevation: 31.65 FT NGVD
 Measuring Point Elevation: 31.42 FT NGVD
 Static Water Level: 12.40 FT NGVD Date: 6/9/99
 Northing: 119648 Easting: 1079444

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 8 feet: Silt with sand (ML), ~25% fine-grained sand, very slightly plastic, strong brown 7.5 YR 4/6, dry, medium stiff	0
			2	CEMENT 0-2 FEET		2
			5	3/8" SORTED GRANULAR BENTONITE 2-6.5 FEET		5
			10		8 - 21 feet: Silty sand (SM), fine-grained, ~30% fines, non-plastic, brown 7.5YR 5/3, dry, loose	10
			15	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 120 FEET		15
			20	10-INCH BOREHOLE 0-100 FEET	@ 20 feet: Saturated	20
			25	UNIFORM GRANULAR BENTONITE GROUT - 6.5-114 FEET	21 - 50 feet: Well graded sand with gravel (SW), fine- to coarse-grained, trace fines, saturated, dense @ 22 feet: Discrete-depth groundwater sample MW-8i, 22' collected 1/27/99 9:35	25
			30		@ 25 feet: Predominantly medium-grained, angular, basaltic sand with up to 25% gravel up to 3 inches in diameter	30
65 40 45	0		35		30 - 40 feet: Gravel predominantly < 1 inch in diameter, trace up to 2 inches in diameter @ 30 feet: Very dark grey 10YR 3/1	35

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-8i
 Sheet: 2 OF 4
 Total Boring Depth: 140 FT / WELL DEPTH: 130 FT
 Date Started/Completed: JANUARY 27, 1999/FEBRUARY 25, 1999
 Ground Level Elevation: 31.65 FT NGVD
 Measuring Point Elevation: 31.42 FT NGVD
 Static Water Level: 12.40 FT NGVD Date: 6/9/99
 Northing: 119648 Easting: 1079444

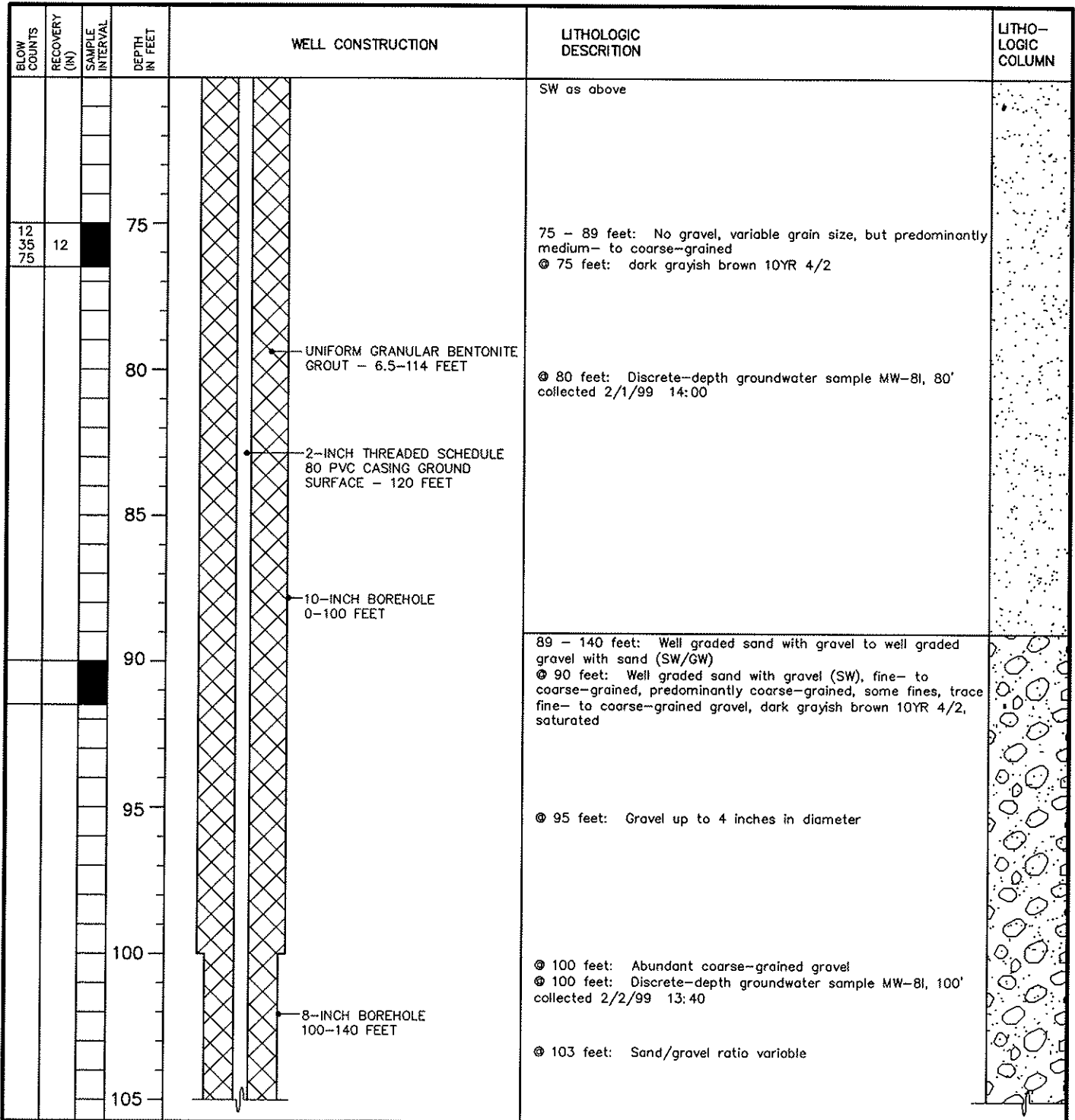
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		SW as above	D
			45	UNIFORM GRANULAR BENTONITE GROUT - 6.5-114 FEET	@ 40 feet: Discrete-depth groundwater sample MW-8i, 40' collected 1/28/99 11:15 @ 45 feet: ~10% fines, very dark greyish brown 10YR 3/2	D
35 50 35/0'	4		50	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 120 FEET	50 - 56 feet: Well graded gravel with sand (GW), ~35 - 40% gravel, predominantly 1 to 3 inches in diameter, trace up to 4 inches in diameter	D
			55	10-INCH BOREHOLE 0-100 FEET	56 - 58 feet: Thin sandy silt lenses	D
25 35 40			60		58 - 89 feet: Well graded sand (SW), fine- to coarse-grained, trace fines, medium- to coarse-grained sand is angular to sub angular, basaltic, fine-grained sand is quartz, very dark grayish brown 10YR 3/2, saturated 60 - 75 feet: Trace gravel @ 60 feet: Discrete-depth groundwater sample MW-8i, 60' collected 2/1/99 8:15	D
			65			D
			70			D

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-8i
 Sheet: 3 OF 4
 Total Boring Depth: 140 FT / WELL DEPTH: 130 FT
 Date Started/Completed: JANUARY 27, 1999/FEBRUARY 25, 1999
 Ground Level Elevation: 31.65 FT NGVD
 Measuring Point Elevation: 31.42 FT NGVD
 Static Water Level: 12.40 FT NGVD Date: 6/9/99
 Northing: 119648 Easting: 1079444



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/SANDRA MATTHEWS
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-8i
 Sheet: 4 OF 4
 Total Boring Depth: 140 FT / WELL DEPTH: 130 FT
 Date Started/Completed: JANUARY 27, 1999/FEBRUARY 25, 1999
 Ground Level Elevation: 31.65 FT NGVD
 Measuring Point Elevation: 31.42 FT NGVD
 Static Water Level: 12.40 FT NGVD Date: 6/9/99
 Northing: 119648 Easting: 1079444

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
20					SW as above	
80				UNIFORM GRANULAR BENTONITE GROUT - 6.5-114 FEET	⊙ 106 feet: Well graded gravel with sand (GW), ~40% fine- to coarse-grained sand, gravel is fine- to coarse-grained	
20			110	8-INCH BOREHOLE 100-140 FEET	⊙ 110 feet: Well graded sand and gravel (SW), gravel up to 3 inches in diameter	
				2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 120 FEET	⊙ 113 feet: More fines in matrix	
			115	3/8" SORTED GRANULAR BENTONITE 114-116 FEET	⊙ 116 feet: Less fines in matrix, gravel up to 3 inches in diameter	
				20-40 MESH SILICA SAND 116-118 FEET	⊙ 120 feet: Discrete-depth groundwater sample MW-8i, 120' collected 2/5/99 13:10	
			120	STAINLESS STEEL CENTRALIZER AT 120 FEET	⊙ 121 feet: Predominantly fine-grained gravel < 1 inch in diameter, some fines in matrix	
				10-20 MESH SILICA SAND 118-131 FEET		
			125	2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN WITH 4-INCH SUMP 120-130 FEET	⊙ 126 feet: More sand, some fines	
			130	STAINLESS STEEL CENTRALIZER AT 130 FEET		
				3/8" SORTED GRANULAR BENTONITE 131-140 FEET	⊙ 137 feet: Loose gravel up to 4 inches in diameter	
50			135		⊙ 138 feet: Loose, coarse-grained gravel with trace sandy cementation on grains	
50	0				⊙ 140 feet: Discrete-depth groundwater sample MW-8i, 140' collected 2/10/99 12:10	
20			140		⊙ 140 feet: End of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: SPLIT-SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-9
 Sheet: 1 OF 1
 Total Boring Depth: 32 FT
 Date Started/Completed: JULY 14, 1998
 Ground Level Elevation: 33.6 FT NGVD
 Measuring Point Elevation: 33.32 FT NGVD
 Static Water Level: 12.42 FT NGVD Date: 6/9/99
 Northing: 119667.7 Easting: 1079889.6

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 8 feet: Silt (ML), ~10% very fine-grained sand, slightly plastic, dark yellowish brown 10YR 4/6, dry, stiff	
			0	CEMENT 0-2 FEET		
			2	3/8" SORTED GRANULAR BENTONITE 2 - 19 FEET		
3 6 6	20		5			
			8	2-INCH THREADED SCHEDULE 40 PVC CASING GROUND SURFACE - 22 FEET	8 - 13 feet: Silt with sand (ML), ~20 fine-grained sand, non-plastic, brown 10YR 4/3, moist, stiff	
3 4 7	24		10			
			13	8 1/4-INCH BOREHOLE 0-32 FEET	13 - 32 feet: Well graded sand with gravel (SW), fine- to coarse-grained, ~70% coarse-grained, ~10% fine-to coarse-grained gravel, dark brown 10YR 3/3, dry to saturated, dense	
11 18 30	10		15		⊙ 17 feet: Gravel up to 3 inches in diameter	
			19	10-20 MESH SILICA SAND 19-32 FEET	⊙ 20 feet: Trace fines, @20.5' gravel, dry	
18 16 20	6		20			
			22	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN. 22-32 FEET	⊙ 25 feet: Moist	
12 29 28	7		25		⊙ 27 feet: Saturated	
			30			
7 24 28			30			
			32		⊙ 32 feet: End of boring	
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: SPLIT-SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-10
 Sheet: 1 OF 1
 Total Boring Depth: 31.5 FT
 Date Started/Completed: JULY 14, 1998
 Ground Level Elevation: 33.11 FT NGVD
 Measuring Point Elevation: 32.84 FT NGVD
 Static Water Level: 12.391 FT NGVD Date: 6/9/99
 Northing: 119148.2 Easting: 1079694.5

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 10 feet: Silt with sand (ML), ~10% fine-grained sand, trace fine-grained gravel, slightly plastic, dark yellowish brown 10YR 4/4, moist, soft	
				CEMENT 0-2 FEET		
				3/8" SORTED GRANULAR BENTONITE 2 - 18 FEET		
2 1 2	3		5			
				2-INCH THREADED SCHEDULE 40 PVC CASING GROUND SURFACE - 21 FEET	10 - 11 feet: Gravel layer	
2 4 6	0		10		11 - 21 feet: Silty sand (SM), fine-grained, ~20% fines, brown 7.5YR 5/3, dry to very moist, medium dense	
				8 1/4-INCH BOREHOLE 0-31.5 FEET		
4 6 12	18		15			
				10-20 MESH SILICA SAND 18-31.5 FEET	⊙ 20 feet: Very moist	
5 10 13	16		20		21 - 24 feet: Well graded sand (SW), fine- to coarse-grained, predominantly medium-grained, dark brown 7.5YR 4/3, dry, medium dense	
				2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN. 21-31.5 FEET	24 - 31.5 feet: Well graded sand with gravel (SW), fine- to coarse-grained, ~70% medium- to coarse-grained, ~15% fine-grained gravel, trace fines, dark yellowish brown 10YR 3/3, moist to saturated, medium dense to dense	
12 12 10	20		25		⊙ 26 feet: Saturated	
16 33 33	12		30		⊙ 30 feet: Some coarse-grained gravel	
			35		⊙ 31.5 feet: End of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT-SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-11
 Sheet: 1 OF 1
 Total Boring Depth: 27 FT / WELL DEPTH: 26 FT
 Date Started/Completed: APRIL 12, 1999
 Ground Level Elevation: 25.41 FT NGVD
 Measuring Point Elevation: 24.96 FT NGVD
 Static Water Level: 9.07 FT NGVD Date: 4/21/99
 Northing: 119259 Easting: 1078694

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				<p style="font-size: small;">FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8" SORTED GRANULAR BENTONITE 2 - 13 FEET 2-INCH THREADED SCHEDULE 40 PVC CASING GROUND SURFACE - 16 FEET 8 1/4-INCH BOREHOLE 0-27 FEET 10-20 MESH SILICA SAND 13-27 FEET 2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN. 16-26 FEET</p>	0 - 2 feet: Fine- to medium-grained sand FILL 2 - 3 feet: Crushed rock FILL 3 - 25 feet: Silty sand (SM), very fine-grained, ~35% fines abundant mica flakes, slightly plastic, dark yellowish brown 10YR 3/4, moist, loose ⊕ 4 feet: Some thin silt layers Beginning at 9 feet: silt content decreasing with depth, grain size increasing with depth ⊕ 20 feet: Very fine-grained to fine-grained, ~25% fines, less mica than above, non-plastic, dark grayish brown 10YR 4/2, dry to moist, dense 25 - 27 feet: Well graded sand (SW), fine- to coarse-grained, predominantly medium- to coarse-grained, trace to few fines, trace fine-grained gravel, dark brown 10YR 2/2, medium dense ⊕ 27 feet: End of boring	
2 3 5	18		5			
11 29 15	18		15	▽		
8 17 8	6		25			
			30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS, INC
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-12
 Sheet: 1 OF 1
 Total Boring Depth: 31.5 FT / WELL DEPTH: 31 FT
 Date Started/Completed: OCTOBER 6, 2000
 Ground Level Elevation: 32.32 FT NGVD
 Measuring Point Elevation: 32.07 FT NGVD
 Static Water Level: 27.10 FT NGVD Date: 10/30/00
 Northing: 119836 Easting: 1078263

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 2 feet: Asphalt with gravel sub-base	
				CEMENT 0-2 FEET		
				3/8" SORTED GRANULAR BENTONITE 2-19 FEET	2 - 11 feet: Poorly graded sand (SP), fine-grained, brown, dry, medium dense FILL	
4 6 7	18		5			
				2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 21 FEET		
2 2 1	18		10		11 - 14 feet: Organic silt (OH), plastic, brown, moist to dry, abundant organics, FORMER GROUND SURFACE	
				8 1/4-INCH BOREHOLE 0-31.5 FEET		
2 2 4	18		15		14 - 27 feet: Silt with sand (ML), ~ 25% very fine-grained sand, non-plastic, strong brown, dry to saturated, medium stiff to stiff	
				10-20 MESH SILICA SAND 19-31.5 FEET		
2 4 7	18		20		⊙ 20 feet: ML as above, slightly moist	
				2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 21-31 FEET		
2 3 4	17		25	▽	⊙ 26 feet: ML as above, saturated	
					27 - 31.5 feet: Silty sand (SM), ~40% fines, brown, saturated, loose	
2 2 4	10		30			
					⊙ 31.5 feet: End of boring	
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-12d
 Sheet: 1 OF 7
 Total Boring Depth: 224 FT / WELL DEPTH: 216 FT
 Date Started/Completed: MARCH 1, 1999/MARCH 25,1999
 Ground Level Elevation: 32.58 FT NGVD
 Measuring Point Elevation: 32.32 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119826 Easting: 1078272

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET	0 - 2 feet: Asphalt with gravel sub-base	
4 6 9	18		5	BENTONITE CHIPS 2-6.5 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 206 FEET	2 - 16 feet: Poorly graded sand (SP), fine-grained, trace coarse-grained, trace fine-grained gravel, subangular, ~ 50% quartz, greyish brown 10 YR 5/2, loose, dry, FILL	
			10	10-INCH BOREHOLE 0-100 FEET		
4 5 6	18		20	UNIFORM GRANULAR BENTONITE GROUT - 6.5-200 FEET	16 - 32 feet: Silty sand (SM), very fine-grained, ~ 35% fines, predominately quartz, abundant mica, a thin (1/2 inch) zone of fine- to medium-grained silty sand at 12 feet, loose, saturated, brown 10 YR 4/3 @ 20 feet: Discrete-depth groundwater sample MW-12d, 20' collected 3/3/99 08:35	
			25		@ 25 feet: Silt with silty sand, fine-grained, trace medium- to coarse-grained, brown	
			30			
			35		32 - 35 feet: Poorly graded sand (SP), trace fines, trace gravel, brown	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-12d
 Sheet: 2 OF 7
 Total Boring Depth: 224 FT / WELL DEPTH: 216 FT
 Date Started/Completed: MARCH 1, 1999/MARCH 25,1999
 Ground Level Elevation: 32.58 FT NGVD
 Measuring Point Elevation: 32.32 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119826 Easting: 1078272

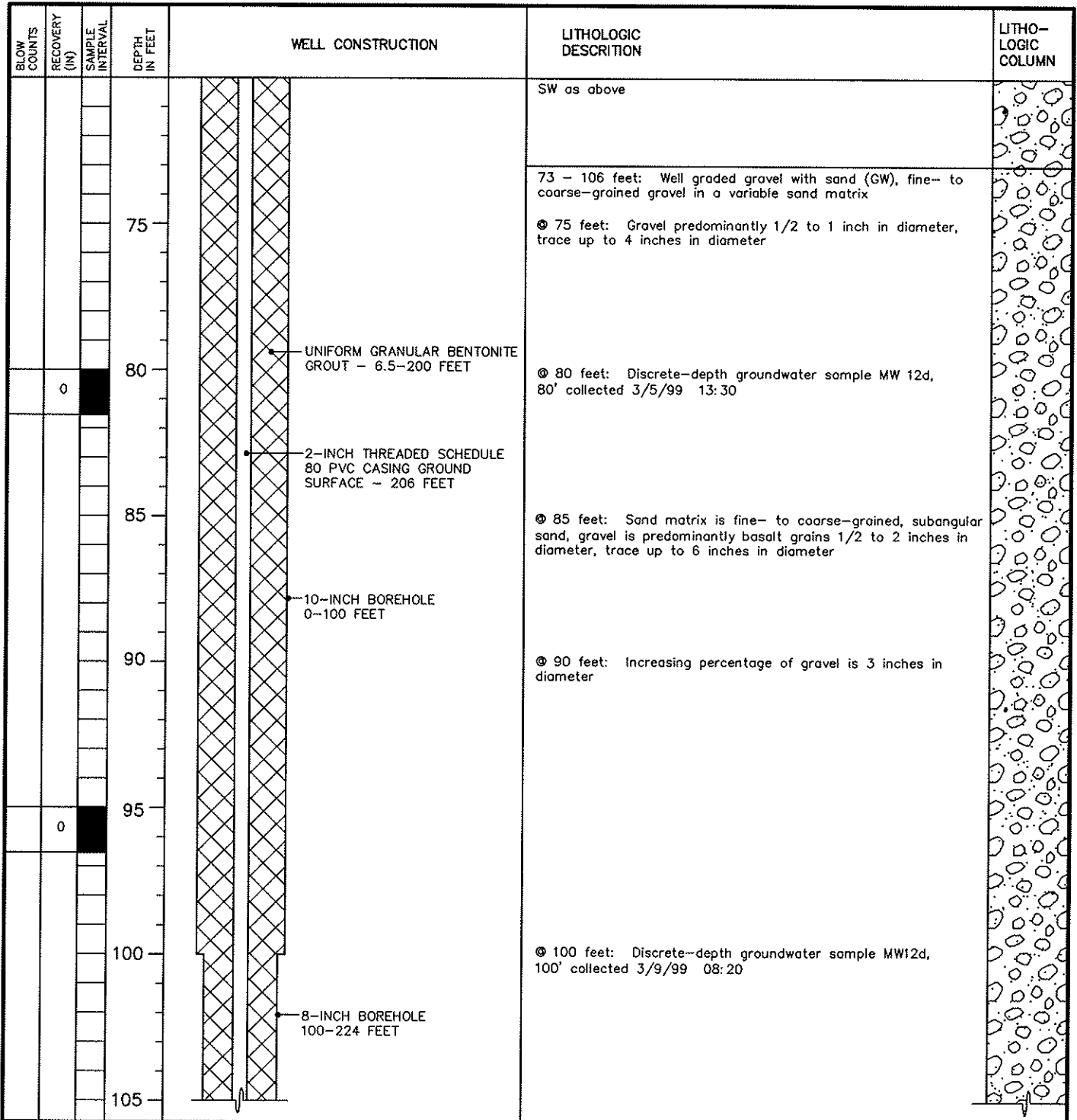
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
8 25 55	14		40	<p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT - 6.5-200 FEET</p> <p style="margin-left: 20px;">2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 206 FEET</p> <p style="margin-left: 20px;">10-INCH BOREHOLE 0-100 FEET</p>	35 - 42 feet: Well graded sand with gravel (SW), fine- to coarse-grained, trace fines, predominantly medium- to coarse, angular to subangular basalt grains with some fine quartz grains ◎ 40 feet: Discrete-depth groundwater sample MW12d, 40' collected 3/3/99 12:00	
16 36 50	2		50		42 - 60 feet: Well graded gravel with sand (GW), fine- to coarse-grained gravel in a variable sand matrix ◎ 44 feet: Gravel predominantly < 2 inches in diameter, trace larger ◎ 49 feet: ~ 40 to 50% sand, matrix is fine- to coarse-grained, angular, basaltic ◎ 53 feet: More sand than gravel ◎ 57 feet: More gravel than sand, gravel predominantly < 1 inch in diameter, trace larger grains ◎ 60 feet: Discrete-depth groundwater sample MW-12d, 60' collected 3/4/99 13:40	
55 55 100	12		65		60 - 73 feet: Well graded sand with gravel (SW), fine- to coarse-grained, angular, basaltic sand with up to ~ 40% fine- to coarse-grained gravel, gravel predominantly < 1 inch in diameter, trace gravels up to 3 inches in diameter, up to 10% fines, dark grayish brown 10 YR 4/2 ◎ 67 feet: Trace gravel up to 5 inches in diameter	
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-12d
 Sheet: 3 OF 7
 Total Boring Depth: 224 FT / WELL DEPTH: 216 FT
 Date Started/Completed: MARCH 1, 1999/MARCH 25,1999
 Ground Level Elevation: 32.58 FT NGVD
 Measuring Point Elevation: 32.32 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119826 Easting: 1078272



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-12d
 Sheet: 4 OF 7
 Total Boring Depth: 224 FT / WELL DEPTH: 216 FT
 Date Started/Completed: MARCH 1, 1999/MARCH 25,1999
 Ground Level Elevation: 32.58 FT NGVD
 Measuring Point Elevation: 32.32 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119826 Easting: 1078272

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110		GW as above 106 - 180 feet: Well graded sand (SW), fine- to coarse-grained, predominantly medium- to coarse-grained, trace to ~ 10% fines, trace fine-grained gravel ⊕ 110 feet: Trace thin (1/4 inch) silt lenses, trace fine-grained gravel (1 inch in diameter)	
18 70 68	9		115	UNIFORM GRANULAR BENTONITE GROUT - 6.5-200 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 206 FEET 8-INCH BOREHOLE 100-224 FEET	⊕ 115 feet: Predominantly coarse-grained sand, trace fines, trace 1 inch diameter gravel, sand is angular to sub angular, loose, basaltic, dark grayish brown 10 YR 4/2 ⊕ 120 feet: Discrete-depth groundwater sample MW-12d, 120' collected 3/12/99 10:05 ⊕ 127 feet: Trace gravel up to 4 inches in diameter	
15 35 45	6		130		⊕ 130 feet: Predominantly coarse-grained, angular, basaltic sand, trace fines dispersed throughout, trace gravel up to 2 inches in diameter bound in a fine sand and silt matrix,	
			135			
			140		⊕ 140 feet: Discrete-depth groundwater sample MW-12d, 140' collected 3/15/99 12:50	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-12d
 Sheet: 5 OF 7
 Total Boring Depth: 224 FT / WELL DEPTH: 216 FT
 Date Started/Completed: MARCH 1, 1999/MARCH 25,1999
 Ground Level Elevation: 32.58 FT NGVD
 Measuring Point Elevation: 32.32 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119826 Easting: 1078272

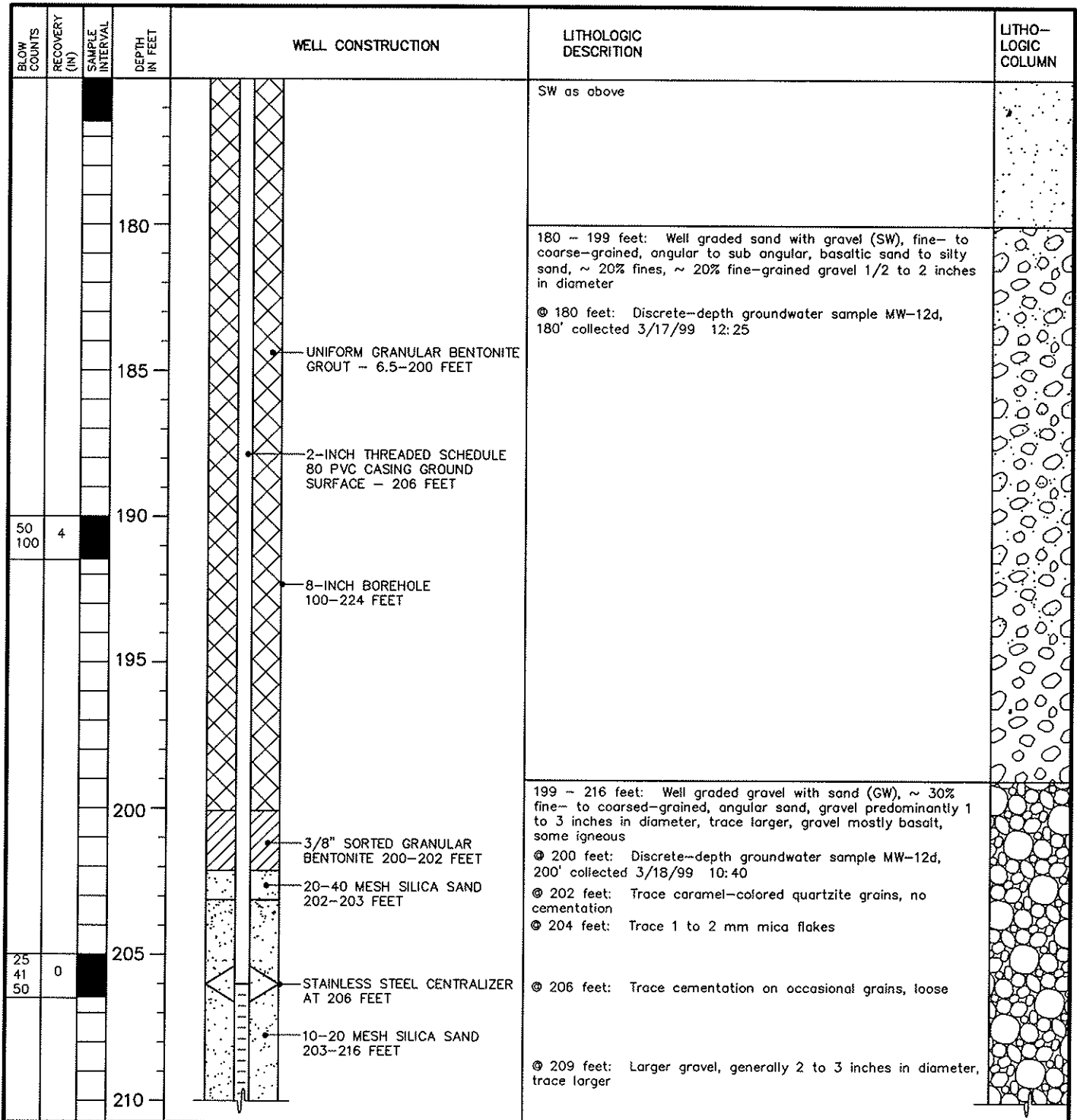
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145		SW as above	
	5				◎ 145 feet: Predominantly medium-grained sand with ~ 20% fines, angular to sub angular mostly basalt grains but some quartz grains, dark brown 10 YR 3/3	
			150	UNIFORM GRANULAR BENTONITE GROUT - 6.5-200 FEET		
			155	2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE ~ 206 FEET		
			160	8-INCH BOREHOLE 100-224 FEET	◎ 160 feet: Discrete-depth groundwater sample MW-12d, 160' collected 3/16/99 11:35 ◎ 160 feet: Predominantly medium-grained, angular to sub angular, basaltic sand, ~ 10% fines, somewhat loose but cohesive due to silt content, dark brown 10 YR 3/3	
	3				◎ 165 feet: Trace gravel up to 2 inches in diameter, less silt	
			165			
			170			
			175		◎ 175 feet: Predominantly coarse-grained, angular, basaltic sand, ~ 20 fines, ~ 10% fine-grained gravel dark brown 10 YR 3/3	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-12d
 Sheet: 6 OF 7
 Total Boring Depth: 224 FT / WELL DEPTH: 216 FT
 Date Started/Completed: MARCH 1, 1999/MARCH 25,1999
 Ground Level Elevation: 32.58 FT NGVD
 Measuring Point Elevation: 32.32 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119826 Easting: 1078272

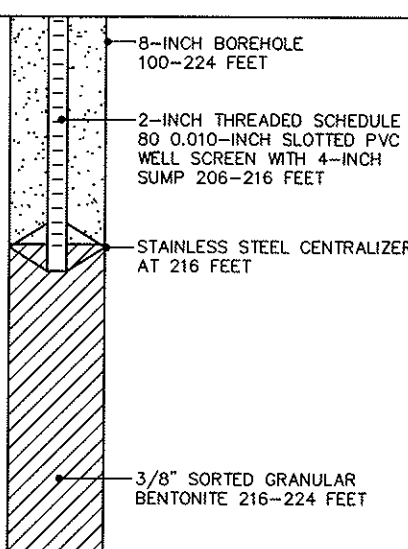
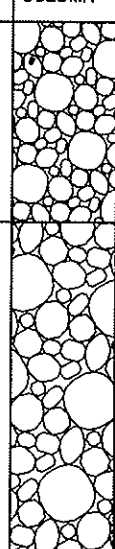


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 27-1940-06
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON/GRAB
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-12d
 Sheet: 7 OF 7
 Total Boring Depth: 224 FT / WELL DEPTH: 216 FT
 Date Started/Completed: MARCH 1, 1999/MARCH 25,1999
 Ground Level Elevation: 32.58 FT NGVD
 Measuring Point Elevation: 32.32 FT NGVD
 Static Water Level: 9.11 FT NGVD Date: 4/21/99
 Northing: 119826 Easting: 1078272

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
	8		215	 <p>8-INCH BOREHOLE 100-224 FEET</p> <p>2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN WITH 4-INCH SUMP 206-216 FEET</p> <p>STAINLESS STEEL CENTRALIZER AT 216 FEET</p> <p>3/8" SORTED GRANULAR BENTONITE 216-224 FEET</p>	<p>GW as above</p> <p>⊕ 213 feet: Trace gravel up to 6 inches in diameter</p> <p>216 - 224 feet: Well graded gravel (GW), hard drilling, returns mostly drilled gravel, hole not making much water, TROUTDALE FORMATION</p> <p>⊕ 220 feet: discrete-depth groundwater sample MW-12d, 220' collected 3/19/99 10:20</p> <p>⊕ 224 feet: End of boring</p>	
			220			
			225			
			230			
			235			
			240			
			245			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS, INC
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-13
 Sheet: 1 OF 1
 Total Boring Depth: 30 FT / WELL DEPTH: 29 FT
 Date Started/Completed: OCTOBER 10, 2000
 Ground Level Elevation: 33.19 FT NGVD
 Measuring Point Elevation: 35.42 FT NGVD
 Static Water Level: 23.73 FT NGVD Date: 10/30/00
 Northing: 120183 Easting: 1077319.6

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
6 7 10	18		5	2.23 FT - ABOVE GROUND PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8" SORTED GRANULAR BENTONITE 2-16 FEET	0 - 18 feet: Well graded sand (SW), predominantly fine-grained, ~ 15% medium- to coarse-grained, grey/brown, medium dense FILL.	
5 7 8	18		10			
9 11 12	10		15	2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 19 FEET		
5 8 9	18		20	8 1/4-INCH BOREHOLE 0-30 FEET 10-20 MESH SILICA SAND 16-30 FEET	18 - 23 feet: Poorly graded sand (SP), fine-grained, trace fines, tan/brown, moist, medium dense, abundant mica flakes	
			25	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 19-29 FEET	23 - 28 feet: Silt with sand (ML), ~ 35% very fine-grained sand, non-plastic, tan/brown, saturated	
6 11 13			30		28 - 30 feet: Poorly graded sand (SP), fine-grained, grey, saturated, basaltic	
			35		⊙ 30 feet: End of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-13d
 Sheet: 1 OF 8
 Total Boring Depth: 268 FT/ WELL DEPTH: 262 FT
 Date Started/Completed: DEC 15, 1999/JAN 20, 2000
 Ground Level Elevation: 33.19 FT NGVD
 Measuring Point Elevation: 35.24 FT NGVD
 Static Water Level: 30.16 FT NGVD Date: 10/30/00
 Northing: 120173 Easting: 1077318

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	2.05 FT--ABOVE GROUND PROTECTIVE MONUMENT	0 - 47 feet: Well graded sand (SW)	
			2	CEMENT 0-2 FEET		
			5	3/8" SORTED GRANULAR BENTONITE 2-26 FEET	⊙ 5 feet: Well graded sand (SW), fine- to medium-grained, predominantly fine-grained, trace fines, dark brown 10 YR 3/3, moist, medium dense, abundant mica	
3 7 14	9		10	2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 252 FEET	⊙ 12 - 20 feet: SW as above, trace coarse-grained sand and fine-grained gravel	
			15	10-INCH BOREHOLE 0-101 FEET		
2 3 3	10		20		⊙ 20 feet: SW as above, loose	
			25		⊙ 23 feet: SW as above, some coarse-grained sand, trace fine- to coarse-grained gravel (1 - 3 inches)	
			30	UNIFORM GRANULAR BENTONITE GROUT - 26-246 FEET	⊙ 26 - 29 feet: SW as above with grey silt layers, silt layers have abundant organic material (fresh looking wood fibers)	
			35	(Water level symbol at 30.16 FT)	⊙ 30 feet: SW as above, fine- to medium-grained, trace fines ⊙ 30 feet: Discrete-depth groundwater sample MW-13d, 30' collected 12/15/99 15:20	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-13d
 Sheet: 2 OF 8
 Total Boring Depth: 268 FT/ WELL DEPTH: 262 FT
 Date Started/Completed: DEC 15, 1999/JAN 20, 2000
 Ground Level Elevation: 33.19 FT NGVD
 Measuring Point Elevation: 35.24 FT NGVD
 Static Water Level: 30.16 FT NGVD Date: 10/30/00
 Northing: 120173 Easting: 1077318

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
10 13 30	14		40	<p>UNIFORM GRANULAR BENTONITE GROUT - 26-246 FEET</p> <p>2-INCH THREADED SCHEDULE 80 PVC CASING GROUND SURFACE - 252 FEET</p> <p>10-INCH BOREHOLE 0-101 FEET</p>	<p>⊙ 35 feet: Well graded sand with silt (SW), fine- to medium-grained, predominantly fine-grained, ~10% fines, dark brown 10 YR 3/3, dense</p> <p>⊙ 45 feet: Silt content decreasing with depth</p>	
3 4 10	2		50		<p>47 - 98 feet: Well graded sand with gravel/well graded gravel with sand (SW/GW), sand fine- to coarse-grained, gravel clast size and content varies, saturated throughout</p> <p>⊙ 50 feet: Well graded sand and gravel (SW), sand is predominantly medium- to coarse-grained, gravel is rounded, medium dense, sand and gravel predominantly basaltic</p> <p>⊙ 50 feet: Discrete-depth groundwater sample MW-13d, 50', collected 12/16/99 13:35</p> <p>⊙ 52 - 57 feet: Well graded gravel with sand (GW), gravel fine- to coarse-grained (1 to 6 inches in diameter), rounded, sand fine- to coarse-grained, predominantly medium- to coarse-grained, sand and gravel are basaltic</p> <p>⊙ 57 - 60 feet: SW with gravel, gravel predominantly 1 - 3 inches in diameter, trace up to 6 inches in diameter</p> <p>⊙ 60 - 65 feet: SW with gravel, gravel generally 1 - 2 inches in diameter, trace up to 6 inches in diameter</p>	
3 31 50	9		65		<p>⊙ 65 feet: Well graded sand with gravel (SW), sand fine- to coarse-grained, predominantly coarse-grained and angular, ~35% gravel up to 1.5 inches in diameter in sampler, up to 4 inches in diameter in bailer</p> <p>⊙ 67 - 70 feet: Gravel content decreasing to trace amount of fine- to coarse-grained</p>	
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING

Project Number: 275-1940-006

Location: VANCOUVER, WA

PMX Representative: ANNE ACKERMAN

Drilled By: WESTERBURG DRILLING

Drill Method: CABLE TOOL

Soil Sample Method: 2" SPLIT SPOON

Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-13d

Sheet: 3 OF 8

Total Boring Depth: 268 FT/ WELL DEPTH: 262 FT

Date Started/Completed: DEC 15, 1999/JAN 20, 2000

Ground Level Elevation: 33.19 FT NGVD

Measuring Point Elevation: 35.24 FT NGVD

Static Water Level: 30.16 FT NGVD Date: 10/30/00

Northing: 120173 Easting: 1077318

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			75	<ul style="list-style-type: none"> 2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 252 FEET UNIFORM GRANULAR BENTONITE GROUT 26-246 FEET 10-INCH BOREHOLE 0-101 FEET 8-INCH BOREHOLE 101-268 FEET 	<ul style="list-style-type: none"> ⊗ 70 feet: Discrete-depth groundwater sample MW-13d, 70', collected 12/17/99 11:00 ⊗ 72 - 76 feet: GW, predominantly 1 - 4 inches in diameter, trace cobbles up to 10 inches in diameter, minor amounts of coarse-grained, angular, basaltic sand ⊗ 76 feet: GW, grain size decreasing, predominantly 1 - 2 inches in diameter, some fine- to coarse-grained sand matrix ⊗ 76 - 80 feet: Sand content increasing to ~60% at 80 feet, gravel 1 - 2 inches in diameter, trace up to 6 inches in diameter ⊗ 80 - 84 feet: SW, ~40% gravel, sand is fine- to coarse-grained, basaltic, gravel is rounded, basaltic, up to 5 inches in diameter ⊗ 84 - 87 feet: SW as above, gravel up to 2 inches in diameter ⊗ 90 feet: Discrete-depth groundwater sample MW-13d, 90', collected 12/20/99 09:35 ⊗ 93 feet: Trace gravel up to 3 inches in diameter ⊗ 94 - 97 feet: GW, predominantly 2 - 4 inches in diameter, trace up to 8 inches in diameter 98 - 109 feet: SW/GW as above, some silt on gravel clasts, transition to underlying unit 	
50, 1"	4		95			
			100			
			105			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-13d
 Sheet: 4 OF 8
 Total Boring Depth: 268 FT/ WELL DEPTH: 262 FT
 Date Started/Completed: DEC 15, 1999/JAN 20, 2000
 Ground Level Elevation: 33.19 FT NGVD
 Measuring Point Elevation: 35.24 FT NGVD
 Static Water Level: 30.16 FT NGVD Date: 10/30/00
 Northing: 120173 Easting: 1077318

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110	<p style="margin-left: 20px;">2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 252 FEET</p> <p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT 26-246 FEET</p> <p style="margin-left: 20px;">8-INCH BOREHOLE 101-268 FEET</p>	SW/GW as above	
50/2'			115		<p>109 - 182 feet: Well graded gravel with sand (GW) in silty to silty sand matrix, gravel up to 5 inches in diameter, predominantly rounded, basaltic, matrix is fine-grained, brown, silty sand, saturated</p> <p>⊙ 110 feet: Discrete-depth groundwater sample MW-13d, 110', collected 12/22/99 14:55</p> <p>⊙ 112 - 119 feet: GW as above, silty matrix, sand content in matrix increasing with depth, gravel up to 4 - 5 inches in diameter</p> <p>⊙ 119 - 122 feet: GW as above, some layers of more sandy matrix, gravel predominantly 1 - 2 inches in diameter, some up to 4 - 5 inches in diameter</p> <p>⊙ 126 - 132 feet: GW as above, predominantly <3 inches in diameter, sand fine- to coarse-grained, possibly cemented</p> <p>⊙ 130 feet: Discrete-depth groundwater sample MW-13d, 130', collected 12/28/99 11:50</p> <p>⊙ 136 - 152 feet: GW as above, silt content increasing with depth, gravel size decreasing to <1 inch in diameter at 150 feet</p>	
			120			
			125			
			130			
			135			
			140			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-13d
 Sheet: 5 OF 8
 Total Boring Depth: 268 FT/ WELL DEPTH: 262 FT
 Date Started/Completed: DEC 15, 1999/JAN 20, 2000
 Ground Level Elevation: 33.19 FT NGVD
 Measuring Point Elevation: 35.24 FT NGVD
 Static Water Level: 30.16 FT NGVD Date: 10/30/00
 Northing: 120173 Easting: 1077318

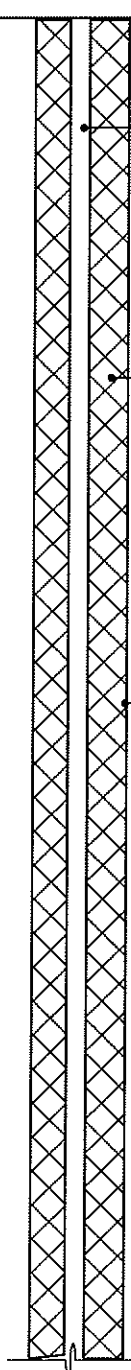

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145	<p style="margin-left: 20px;">2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE ~ 252 FEET</p> <p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT 26-246 FEET</p> <p style="margin-left: 20px;">8-INCH BOREHOLE 101-268 FEET</p>	GW as above Ⓞ 150 feet: Discrete-depth groundwater sample MW-13d, 150', collected 12/30/99 08:20 Ⓞ 152 - 160 feet: GW as above, up to 4 inches in diameter in fine-grained silty sand matrix Ⓞ 162 - 170 feet: GW as above, predominantly 1 - 3 inches in diameter in fine-grained silty brown sand matrix Ⓞ 170 feet: Discrete-depth groundwater sample MW-13d, 170', collected 1/3/00 09:40 Ⓞ 170 - 182 feet: GW as above, predominantly 1 - 2 inches in diameter in fine-grained silty brown sand matrix	
			150			
			155			
50	0		160			
			165			
			170			
			175			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-13d
 Sheet: 6 OF 8
 Total Boring Depth: 268 FT/ WELL DEPTH: 262 FT
 Date Started/Completed: DEC 15, 1999/JAN 20, 2000
 Ground Level Elevation: 33.19 FT NGVD
 Measuring Point Elevation: 35.24 FT NGVD
 Static Water Level: 30.16 FT NGVD Date: 10/30/00
 Northing: 120173 Easting: 1077318

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180	 <p>2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 252 FEET</p> <p>UNIFORM GRANULAR BENTONITE GROUT 26-246 FEET</p> <p>8-INCH BOREHOLE 101-268 FEET</p>	<p>GW as above</p> <p>182 - 262 feet: Well graded gravel with sand (GW), gravel up to 6 inches in diameter, loose, predominantly rounded, basaltic, some cementation on some grains, sand content variable, trace amount of silt, saturated</p> <p>⊙ 182 - 185 feet: GW as above, 1 - 3 inches in diameter</p> <p>⊙ 185 - 190 feet: GW as above, ½ to 4 inches in diameter, predominantly <2 inches in diameter, trace >2 inches in diameter, some fine-grained sand, little or no fines, loose, some cementation, trace mica</p> <p>⊙ 190 feet: Discrete-depth groundwater sample MW-13d, 190', collected 1/4/00 11:50</p> <p>⊙ 190 - 193 feet: GW as above, ½ to 3-inches in diameter, predominantly <1-inch in diameter, ~15-20% fine-grained sand, trace cementation, trace mica flakes, trace to no silt, loose</p> <p>⊙ 196 - 202 feet: GW as above, 1 - 2 inches in diameter, some fine sand, no fines, possibly cemented</p> <p>⊙ 202 - 204 feet: GW as above, ½ - 3 inches in diameter, loose, trace cementation on grains, ~20% fine-grained sand</p> <p>⊙ 204 - 210 feet: GW as above, loose</p> <p>⊙ 210 feet: GW as above, increased sand content</p>	
			185			
			190			
			195			
			200			
			205			
			210			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-13d
 Sheet: 7 OF 8
 Total Boring Depth: 268 FT/ WELL DEPTH: 262 FT
 Date Started/Completed: DEC 15, 1999/JAN 20, 2000
 Ground Level Elevation: 33.19 FT NGVD
 Measuring Point Elevation: 35.24 FT NGVD
 Static Water Level: 30.16 FT NGVD Date: 10/30/00
 Northing: 120173 Easting: 1077318

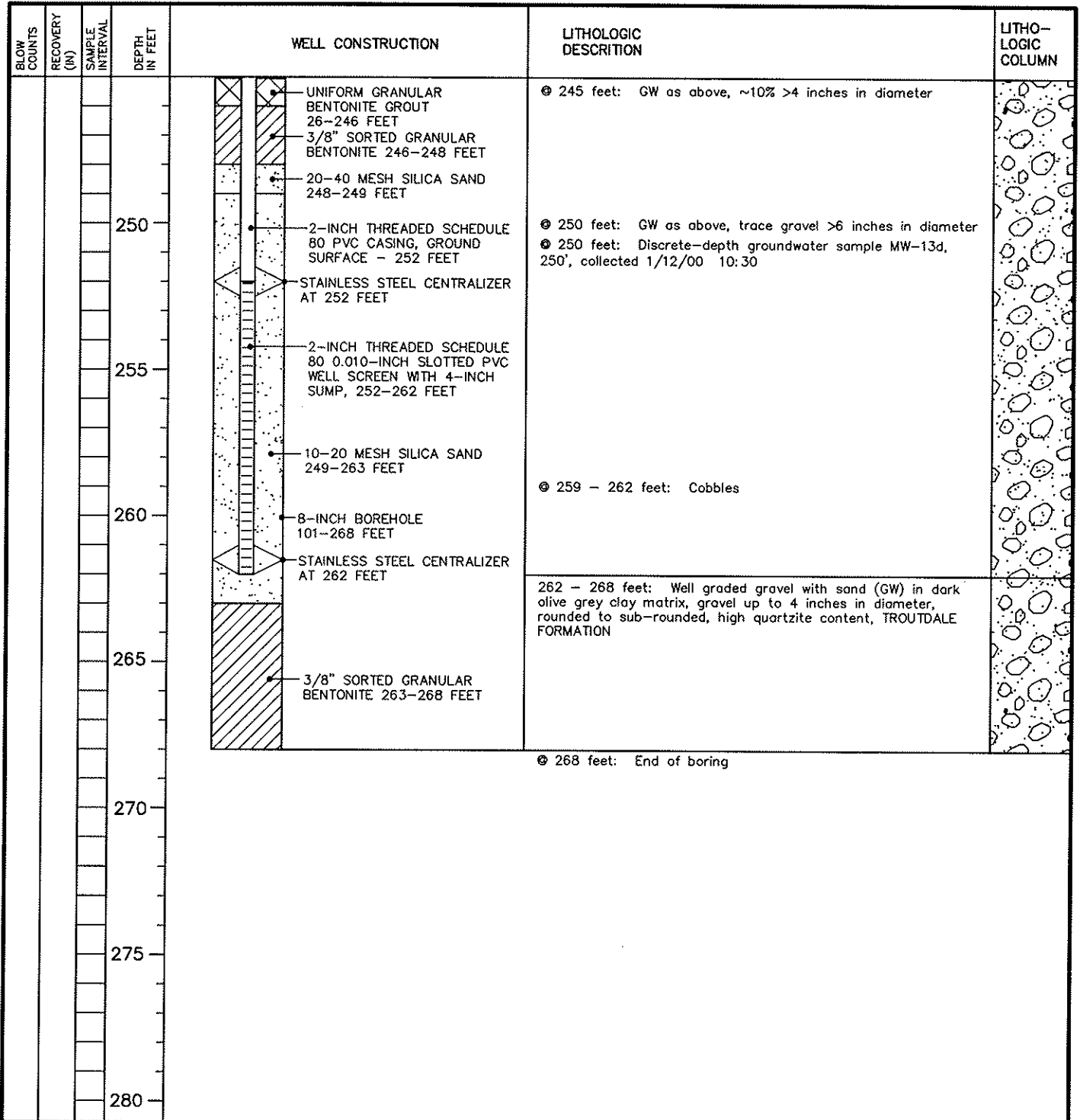
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			215	<p>2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 252 FEET</p>	<p>⊙ 210 feet: Discrete-depth groundwater sample MW-13d, 210', collected 1/6/00 13:42</p>	
			220	<p>UNIFORM GRANULAR BENTONITE GROUT 26-246 FEET</p>	<p>⊙ 216 - 218 feet: GW as above, up to 6 inches in diameter, ~60% fine- to coarse-grained sand, some cementation on some gravel clasts</p> <p>⊙ 220 feet: GW as above, trace fines</p>	
			225		<p>⊙ 226 - 230 feet: GW as above, increase in sand and fines</p>	
			230	<p>8-INCH BOREHOLE 101-268 FEET</p>	<p>⊙ 230 feet: Discrete-depth groundwater sample MW-13d, 230', collected 1/10/00 12:05</p>	
			235		<p>⊙ 234 feet: GW as above, 1/2 - 2 inches in diameter, some fines</p> <p>⊙ 236 feet: GW as above, some >4 inches in diameter, ~30% sand, loose</p>	
			240			
			245			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-13d
 Sheet: 8 OF 8
 Total Boring Depth: 268 FT/ WELL DEPTH: 262 FT
 Date Started/Completed: DEC 15, 1999/JAN 20, 2000
 Ground Level Elevation: 33.19 FT NGVD
 Measuring Point Elevation: 35.24 FT NGVD
 Static Water Level: 30.16 FT NGVD Date: 10/30/00
 Northing: 120173 Easting: 1077318



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-14d
 Sheet: 1 OF 7
 Total boring Depth: 226 FT / WELL DEPTH: 221 FT
 Date Started/Completed: FEB. 29, 2000/MARCH 27, 2000
 Ground Level Elevation: 26.5 FEET NGVD
 Measuring Point Elevation: 26.37 FEET NGVD
 Static Water Level: 21.09 FEET NGVD Date: 10/30/00
 Northing: 119128 Easting: 1078405

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 2 feet: Asphalt with gravel sub-base	.
			5	CEMENT 0-2 FEET	2 - 5 feet: Sand and gravel FILL	○
			10	3/8" SORTED GRANULAR BENTONITE 2-20 FEET	5 - 11 feet: Silt (ML), trace coarse-grained sand, brown with grey mottling	
			15	2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 211 FEET	11 - 41 feet: Poorly graded to well graded sand (SP to SW)	●
			20	10-INCH BOREHOLE 0-101 FEET	⊕ 11 feet: Poorly graded sand (SP), fine-grained, brown	●
			25		⊕ 15 feet: Abundant mica flakes	●
			30	UNIFORM GRANULAR BENTONITE GROUT - 20-204 FEET	⊕ 20 feet: SP as above, grey, less mica	●
			35		⊕ 24 feet: Discrete-depth groundwater sample MW-14d, 24', collected 2/29/00 07:55	●
					⊕ 30 feet: Well graded sand (SW), fine- to coarse-grained, brown	●

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-14d
 Sheet: 2 OF 7
 Total boring Depth: 226 FT / WELL DEPTH: 221 FT
 Date Started/Completed: FEB. 29, 2000/MARCH 27, 2000
 Ground Level Elevation: 26.5 FEET NGVD
 Measuring Point Elevation: 26.37 FEET NGVD
 Static Water Level: 21.09 FEET NGVD Date: 10/30/00
 Northing: 119128 Easting: 1078405


BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		Ⓞ 35 feet: Up to 10% fine-grained gravel (< 1/8 inch in diameter) Ⓞ 40 feet: Poorly graded sand (SP), coarse-grained, trace fine-grained gravel, angular Ⓞ 40 feet: Discrete-depth groundwater sample MW-14d, 40', collected 2/29/00 11:10	40
			45	→ UNIFORM GRANULAR BENTONITE GROUT - 20-204 FEET → 2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 211 FEET → 10-INCH BOREHOLE 0-101 FEET	41 - 58 feet: Well graded gravel with sand (GW), gravel is fine- to coarse-grained (up to 6 inches in diameter), sand is coarse-grained, dark grey Ⓞ 47 feet: GW as above, 1 - 5 inches in diameter	45
			50			50
			55			55
			60		58 - 90 feet: Well graded sand with gravel (SW), coarse-grained, variable gravel content and size Ⓞ 60 feet: Some gravel >6 inches in diameter Ⓞ 60 feet: Discrete-depth groundwater sample MW-14d, 60', collected 3/1/00 08:00	60
			65			65
			70			70

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-14d
 Sheet: 3 OF 7
 Total boring Depth: 226 FT / WELL DEPTH: 221 FT
 Date Started/Completed: FEB. 29, 2000/MARCH 27, 2000
 Ground Level Elevation: 26.5 FEET NGVD
 Measuring Point Elevation: 26.37 FEET NGVD
 Static Water Level: 21.09 FEET NGVD Date: 10/30/00
 Northing: 119128 Easting: 1078405

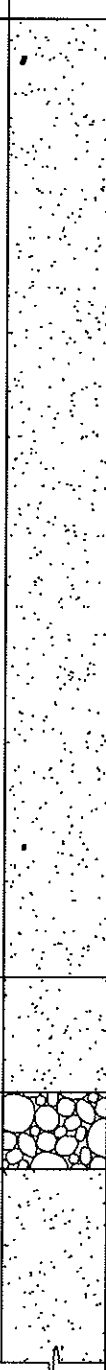
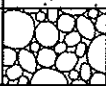
BLOW COUNTS	RECOVERY (M)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	<p>2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 211 FEET</p> <p>UNIFORM GRANULAR BENTONITE GROUT 20-204 FEET</p>	<p>70 feet: SW as above, increasing sand content</p> <p>78 feet: SW as above, coarse-grained sand with ~10% gravel (up to 2 inches in diameter)</p> <p>80 feet: Discrete-depth groundwater sample MW-14d, 80', collected 3/1/00 15:08</p>	
			80	<p>10-INCH BOREHOLE 0-101 FEET</p>	<p>90 - 130 feet: Poorly graded sand (SP), coarse-grained, trace gravel, trace fines, dark grey</p> <p>92 feet: SP as above, trace fine-grained gravel (up to 1/2 inch in diameter)</p> <p>95 - 110 feet: SP as above, trace fine to coarse-grained gravel (up to 3 inches in diameter)</p> <p>100 feet: Discrete-depth groundwater sample MW-14d, 100', collected 3/2/00 13:22</p>	
			85			
			90			
			95			
			100	<p>8-INCH BOREHOLE 101-226 FEET</p>		
			105			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-14d
 Sheet: 4 OF 7
 Total boring Depth: 226 FT / WELL DEPTH: 221 FT
 Date Started/Completed: FEB. 29, 2000/MARCH 27, 2000
 Ground Level Elevation: 26.5 FEET NGVD
 Measuring Point Elevation: 26.37 FEET NGVD
 Static Water Level: 21.09 FEET NGVD Date: 10/30/00
 Northing: 119128 Easting: 1078405

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110	2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 211 FEET UNIFORM GRANULAR BENTONITE GROUT 20-204 FEET 8-INCH BOREHOLE 101-226 FEET	◎ 110 feet: SP as above, trace fines, dark grey ◎ 120 feet: Discrete-depth groundwater sample MW-14d, 120', collected 3/7/00 12:57	
			115			
			120			
			125			
			130		130 - 133 feet: Well graded sand (SW), fine- to coarse-grained, trace light brown fines, dark grey	
			135		133 - 135 feet: Well graded gravel (GW), fine- to coarse-grained, (up to 4 inches in diameter), well rounded, basaltic	
			140		135 - 178 feet: Well graded sand (SW), fine- to coarse-grained, trace fines, dark grey ◎ 138 feet: SW as above, medium-grained, silty	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-14d
 Sheet: 5 OF 7
 Total boring Depth: 226 FT / WELL DEPTH: 221 FT
 Date Started/Completed: FEB. 29, 2000/MARCH 27, 2000
 Ground Level Elevation: 26.5 FEET NGVD
 Measuring Point Elevation: 26.37 FEET NGVD
 Static Water Level: 21.09 FEET NGVD Date: 10/30/00
 Northing: 119128 Easting: 1078405

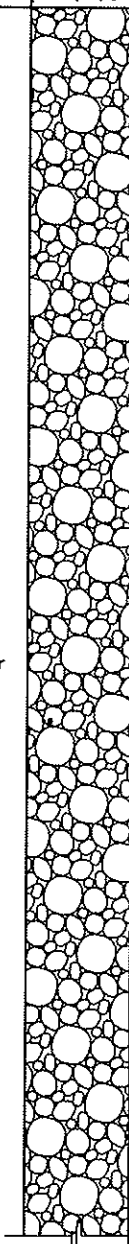
BLOW COUNTS	RECOVERY (M)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145	<p>2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE ~ 211 FEET</p> <p>UNIFORM GRANULAR BENTONITE GROUT 20-204 FEET</p> <p>8-INCH BOREHOLE 101-226 FEET</p>	<p>⊙ 140 feet: Discrete--depth groundwater sample MW-14d, 140', collected 3/8/00 09:20</p> <p>⊙ 150 feet: SW as above, grain size increasing</p> <p>⊙ 155 feet: SW as above, ~15% fines, fines are light brown with occasional red streaks</p> <p>⊙ 160 feet: Discrete--depth groundwater sample MW-14d, 160', collected 3/8/00 15:40</p>	
			150			
			155			
			160			
			165			
			170			
			175			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-14d
 Sheet: 6 OF 7
 Total boring Depth: 226 FT / WELL DEPTH: 221 FT
 Date Started/Completed: FEB. 29, 2000/MARCH 27, 2000
 Ground Level Elevation: 26.5 FEET NGVD
 Measuring Point Elevation: 26.37 FEET NGVD
 Static Water Level: 21.09 FEET NGVD Date: 10/30/00
 Northing: 119128 Easting: 1078405

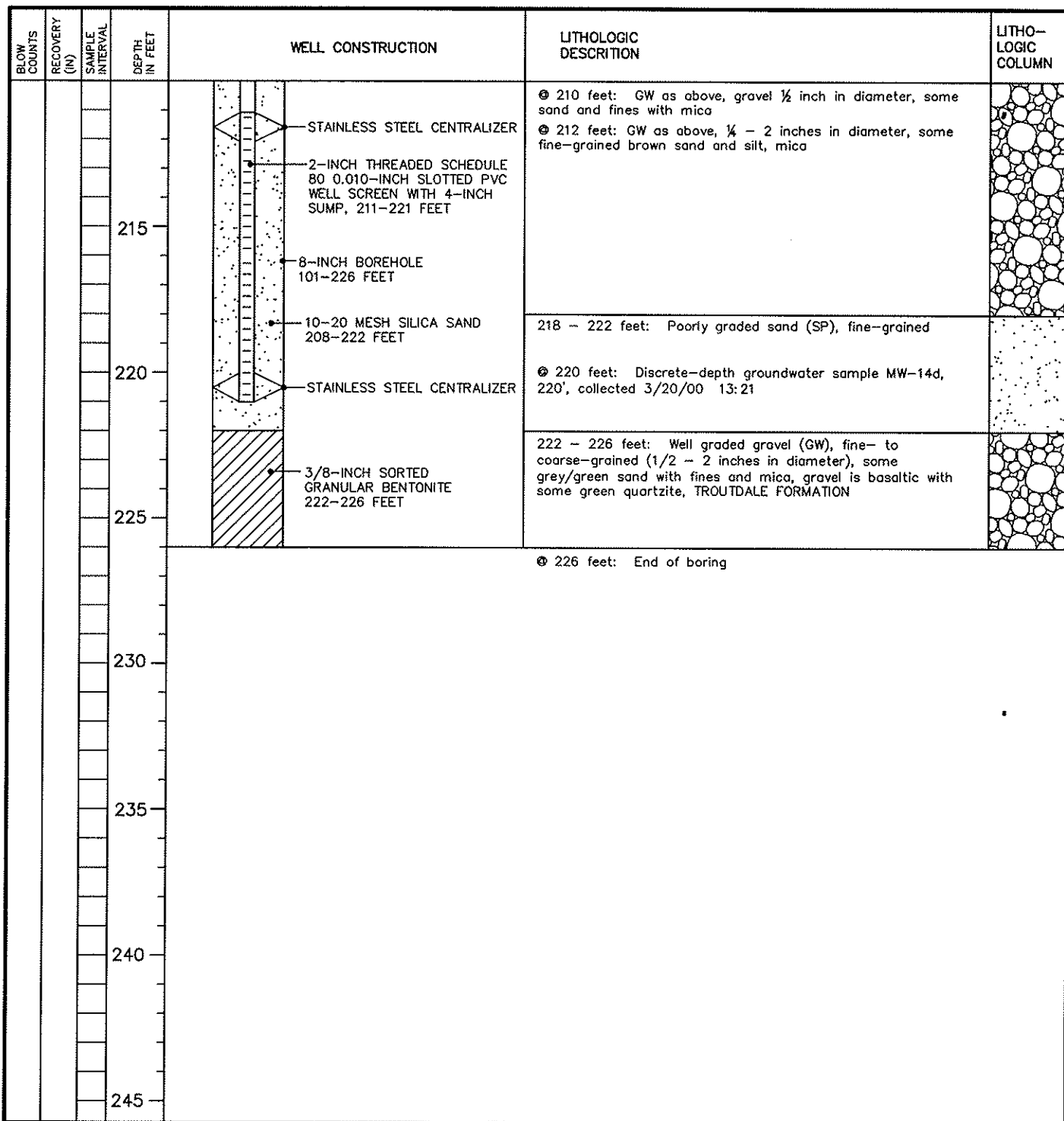
BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180	<p>2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 211 FEET</p> <p>UNIFORM GRANULAR BENTONITE GROUT 20-204 FEET</p> <p>8-INCH BOREHOLE 101-226 FEET</p> <p>3/8" SORTED GRANULAR BENTONITE 204-207 FEET</p> <p>20-40 MESH SILICA SAND 207-208 FEET</p> <p>10-20 MESH SILICA SAND 208-222 FEET</p>	<p>178 - 218 feet: Well graded gravel (GW), fine- to coarse-grained, some sand and fines, well rounded to sub-angular, predominantly basaltic</p> <p>⊗ 178 feet: Gravel 1/2 inch in diameter</p> <p>⊗ 180 feet: Discrete-depth groundwater sample MW-14d, 180', collected 3/11/00 15:05</p> <p>⊗ 185 feet: GW as above, gravel 1/4 - 3 inches in diameter</p> <p>⊗ 190 feet: GW as above, clean</p> <p>⊗ 195 feet: GW as above, gravel 1/8 - 2 inches in diameter</p> <p>⊗ 200 feet: Discrete-depth groundwater sample MW-14d, 200', collected 3/17/00 10:19</p> <p>⊗ 202 feet: GW as above, gravel 1/8 - 1 1/2 inches in diameter, some sand</p> <p>⊗ 205 feet: Some mica in sand</p>	
			185			
			190			
			195			
			200			
			205			
			210			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-14d
 Sheet: 7 OF 7
 Total boring Depth: 226 FT / WELL DEPTH: 221 FT
 Date Started/Completed: FEB. 29, 2000/MARCH 27, 2000
 Ground Level Elevation: 26.5 FEET NGVD
 Measuring Point Elevation: 26.37 FEET NGVD
 Static Water Level: 21.09 FEET NGVD Date: 10/30/00
 Northing: 119128 Easting: 1078405



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS, INC
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-15
 Sheet: 1 OF 1
 Total Boring Depth: 33 FT
 Date Started/Completed: OCTOBER 10, 2000
 Ground Level Elevation: 31.1 FT NGVD
 Measuring Point Elevation: 30.68 FT NGVD
 Static Water Level: 25.78 FT NGVD Date: 10/30/00
 Northing: 117072 Easting: 1079498

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8" SORTED GRANULAR BENTONITE 2-20 FEET	0 - 1 feet: Asphalt with gravel sub-base	.
11 11 14	16		5		1 - 12 feet: Well graded sand (SW), predominantly fine-grained, ~10% medium- to coarse-grained, brown, dry, loose to medium dense	
5 4 4	18		10		12 - 18 feet: Silt (ML), trace very fine-grained sand, moderately plastic, dark brown, dry, medium stiff	
2 2 2	8		15	2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 23 FEET 8 1/4-INCH BOREHOLE 0-33 FEET	18 - 28 feet: Silt with sand (ML), ~20% very fine-grained sand, slightly plastic, strong brown, moist, medium stiff to stiff	
2 4 4	16		20		20-33 FEET 10-20 MESH SILICA SAND	
7 7 9	18		25		25 - 28 feet: Alternating layers of silt with sand (ML) as above and poorly graded sand (SP), fine-grained, trace medium-grained, trace fines, grey, dry to moist, basaltic	
6 6 6	6		30	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 23-33 FEET	28 - 33 feet: Well graded sand (SW), fine- to coarse-grained, predominantly medium- to coarse-grained, trace fines, medium loose, saturated, angular, basaltic	
			35		33 feet: End of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-15i
 Sheet: 1 OF 7
 Total Boring Depth: 220 FT / WELL DEPTH: 139 FT
 Date Started/Completed: MAY 26, 2000/MAY 31, 2000
 Ground Level Elevation: 31.3 FT NGVD
 Measuring Point Elevation: 30.89 FT NGVD
 Static Water Level: 25.99 FT NGVD Date: 10/30/00
 Northing: 117075 Easting: 1079491

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 1 feet: Gravel FILL	0
			5	CEMENT 0-2 FEET	1 - 16 feet: Poorly graded sand (SP), medium-grained, grey, FILL	1
			10	3/8" SORTED GRANULAR BENTONITE 2-26 FEET		2
			15	2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 129 FEET		3
			20	10-INCH BOREHOLE 0-102 FEET	16 - 26 feet: Clay (CL), dark brown, plastic	4
			25		⊙ 25 feet: Discrete-depth groundwater sample MW-15i, 25', collected 5/10/00 14:21	5
			30	UNIFORM GRANULAR BENTONITE GROUT - 26-123 FEET	26 - 51 feet: Well graded sand (SW), fine- to coarse-grained, predominantly medium- to coarse-grained, trace fine-grained gravel, few fines, dark grey, basaltic, angular	6
6 15 22	7		35			7

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-15i
 Sheet: 2 OF 7
 Total Boring Depth: 220 FT / WELL DEPTH: 139 FT
 Date Started/Completed: MAY 26, 2000/MAY 31, 2000
 Ground Level Elevation: 31.3 FT NGVD
 Measuring Point Elevation: 30.89 FT NGVD
 Static Water Level: 25.99 FT NGVD Date: 10/30/00
 Northing: 117075 Easting: 1079491

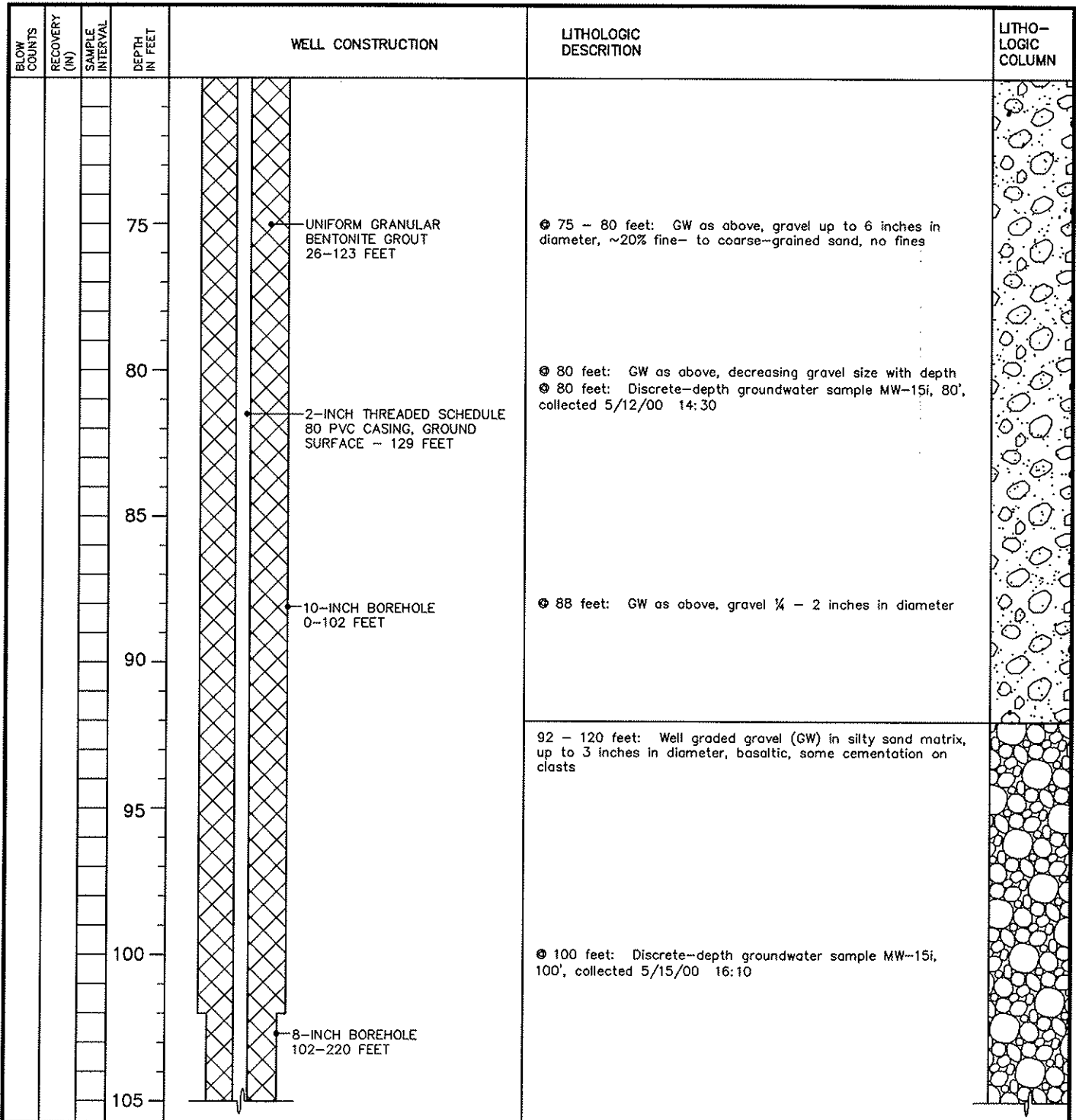
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		SW as above	
			45	• UNIFORM GRANULAR BENTONITE GROUT - 26-123 FEET • 2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 129 FEET • 10-INCH BOREHOLE 0-102 FEET	⊕ 40 feet: Discrete-depth groundwater sample MW-15i, 40', collected 5/11/00 09:45 ⊕ 45 feet: SW as above, ~5% gravel ⊕ 45 feet: SW as above, increasing percentage of coarse-grained sand, gravel content increasing ⊕ 48 feet: SW as above	
7 30 43			50		51 - 53 feet: Sand and gravel, even distribution, sand is coarse-grained, angular, gravel ½ - 3 inches in diameter	
			55		53 - 92 feet: Well graded gravel with sand (GW), ½ - 3 inches in diameter, ~30% sand, no fines, basaltic, well rounded ⊕ 56 - 65 feet: GW as above, gravel predominantly 1 - 2 inches in diameter, trace up to 6 inches in diameter	
			60		⊕ 60 feet: Discrete-depth groundwater sample MW-15i, 60', collected 5/11/00 14:15	
			65		⊕ 63 feet: GW as above, predominantly 2 to 3 inches in diameter, some cobbles up to 6 inches in diameter	
			70		⊕ 66 feet: GW as above, gravel up to 5 inches in diameter ⊕ 67 feet: GW as above, gravel is less well graded, predominantly 1 - 2 inches in diameter or less, ~20% sand, basaltic ⊕ 68 - 73 feet: GW as above, some cobbles up to 6 inches in diameter	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-15i
 Sheet: 3 OF 7
 Total Boring Depth: 220 FT / WELL DEPTH: 139 FT
 Date Started/Completed: MAY 26, 2000/MAY 31, 2000
 Ground Level Elevation: 31.3 FT NGVD
 Measuring Point Elevation: 30.89 FT NGVD
 Static Water Level: 25.99 FT NGVD Date: 10/30/00
 Northing: 117075 Easting: 1079491

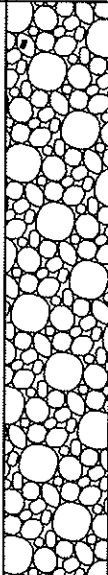
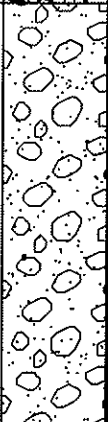



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-15i
 Sheet: 4 OF 7
 Total Boring Depth: 220 FT / WELL DEPTH: 139 FT
 Date Started/Completed: MAY 26, 2000/MAY 31, 2000
 Ground Level Elevation: 31.3 FT NGVD
 Measuring Point Elevation: 30.89 FT NGVD
 Static Water Level: 25.99 FT NGVD Date: 10/30/00
 Northing: 117075 Easting: 1079491

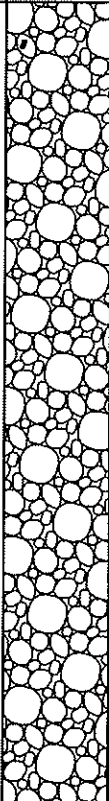


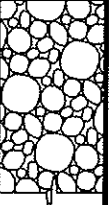
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110	<ul style="list-style-type: none"> • UNIFORM GRANULAR BENTONITE GROUT 26-123 FEET 	<ul style="list-style-type: none"> ⊙ 105 feet: GW in silty sand matrix as above, gravel 2 - 3 inches in diameter, cementation on some clasts 	
			115	<ul style="list-style-type: none"> • 2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 129 FEET 	<ul style="list-style-type: none"> ⊙ 110 - 120 feet: GW in silty sand matrix as above, gravel 1 - 2 inches in diameter, trace up to 3 inches in diameter, basaltic, trace quartzite grains ⊙ 120 feet: Discrete-depth groundwater sample MW-15i, 120', collected 5/18/00 11:55 	
			120	<ul style="list-style-type: none"> • 3/8" SORTED GRANULAR BENTONITE 123-125 FEET 	<ul style="list-style-type: none"> 120 - 131 feet: Well graded gravel (GW), some sand, less fines than above, loose 	
			125	<ul style="list-style-type: none"> • 20-40 MESH SILICA SAND 125-126 FEET • 8-INCH BOREHOLE 102-220 FEET • STAINLESS STEEL CENTRALIZER 	<ul style="list-style-type: none"> ⊙ 127 feet: GW as above, predominantly < 1 inch gravel, trace up to 3 inches in diameter, loose, trace cementation, fewer fines than above ⊙ 129 - 131 feet: Poorly graded sand with gravel (SP) lens, ~40% gravel 	
			130	<ul style="list-style-type: none"> • 10-20 MESH SILICA SAND 126-141 FEET • 2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN 129-139 FEET • STAINLESS STEEL CENTRALIZER 	<ul style="list-style-type: none"> 131 - 161 feet: Well graded gravel (GW) in silty sand matrix ⊙ 131 - 138 feet: GW in silty sand matrix as at 110 - 120 feet 	
			135	<ul style="list-style-type: none"> • STAINLESS STEEL CENTRALIZER 	<ul style="list-style-type: none"> ⊙ 138 feet: GW as above, more fines 	
			140			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

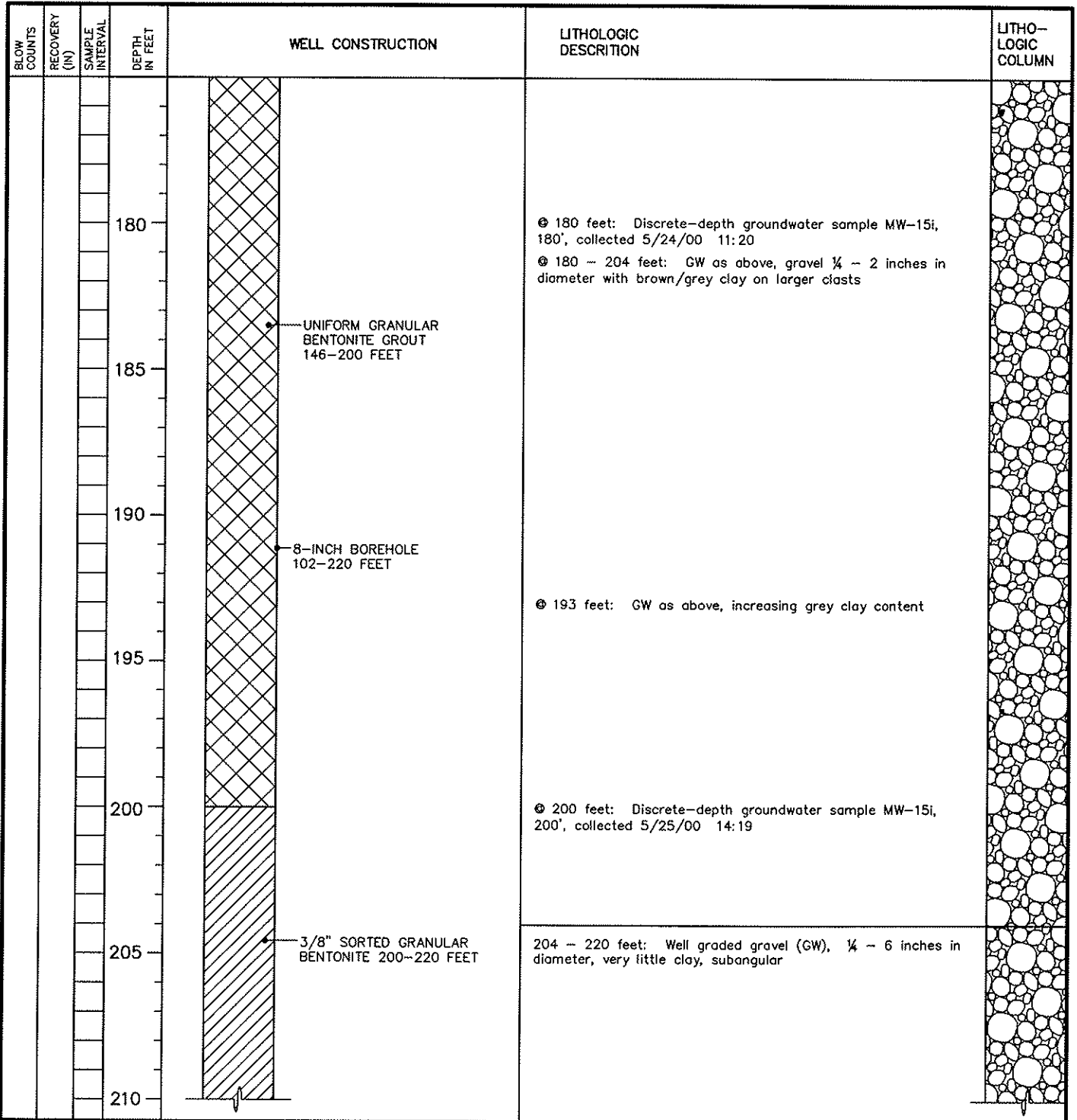
Boring Number: MW-15i
 Sheet: 5 OF 7
 Total Boring Depth: 220 FT / WELL DEPTH: 139 FT
 Date Started/Completed: MAY 26, 2000/MAY 31, 2000
 Ground Level Elevation: 31.3 FT NGVD
 Measuring Point Elevation: 30.89 FT NGVD
 Static Water Level: 25.99 FT NGVD Date: 10/30/00
 Northing: 117075 Easting: 1079491

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145	10-20 MESH SILICA SAND 126-141 FEET 3/8" SORTED GRANULAR BENTONITE 141-146 FEET UNIFORM GRANULAR BENTONITE GROUT 146-200 FEET 8-INCH BOREHOLE 102-220 FEET	Ⓞ 140 feet: Discrete-depth groundwater sample MW-15i, 140', collected 5/19/00 12:30 Ⓞ 142 - 148 feet: GW as above, gravel 1/4 to 4 inches in diameter, predominantly basaltic, grain size decreasing with depth Ⓞ 150 feet: GW as above, some sand Ⓞ 160 feet: Discrete-depth groundwater sample MW-15i, 160', collected 5/22/00 15:04	
			160		161 - 164 feet: Silt with sand (ML), some fine-grained gravel, brown, some mica, gravel predominantly basaltic	
			165		164 - 170 feet: Well graded sand (SW), little gravel	
			170		170 - 204 feet: Well graded gravel (GW) with brown and grey clay Ⓞ 173 feet: GW as above, some cementation on grains	
			175			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: <u>PORT OF VANCOUVER/SWAN MANUFACTURING</u> Project Number: <u>275-1940-006</u> Location: <u>VANCOUVER, WA</u> PMX Representative: <u>ANNE ACKERMAN/CHRIS HAMILTON</u> Drilled By: <u>WESTERBURG DRILLING</u> Drill Method: <u>CABLE TOOL</u> Soil Sample Method: <u>2" SPLIT SPOON</u> Groundwater Sample Method: <u>TEMPORARY WELL POINT</u>	Boring Number: <u>MW-15i</u> Sheet: <u>6 OF 7</u> Total Boring Depth: <u>220 FT / WELL DEPTH: 139 FT</u> Date Started/Completed: <u>MAY 26, 2000/MAY 31, 2000</u> Ground Level Elevation: <u>31.3 FT NGVD</u> Measuring Point Elevation: <u>30.89 FT NGVD</u> Static Water Level: <u>25.99 FT NGVD</u> Date: <u>10/30/00</u> Northing: <u>117075</u> Easting: <u>1079491</u>
---	---

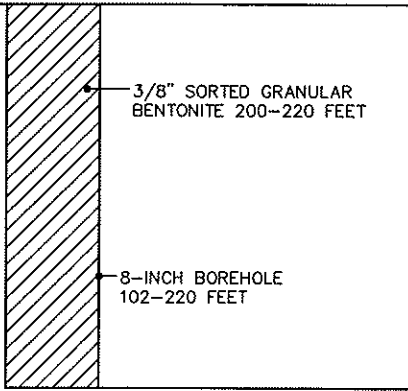
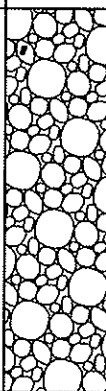


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-15i
 Sheet: 7 OF 7
 Total Boring Depth: 220 FT / WELL DEPTH: 139 FT
 Date Started/Completed: MAY 26, 2000/MAY 31, 2000
 Ground Level Elevation: 31.3 FT NGVD
 Measuring Point Elevation: 30.89 FT NGVD
 Static Water Level: 25.99 FT NGVD Date: 10/30/00
 Northing: 117075 Easting: 1079491

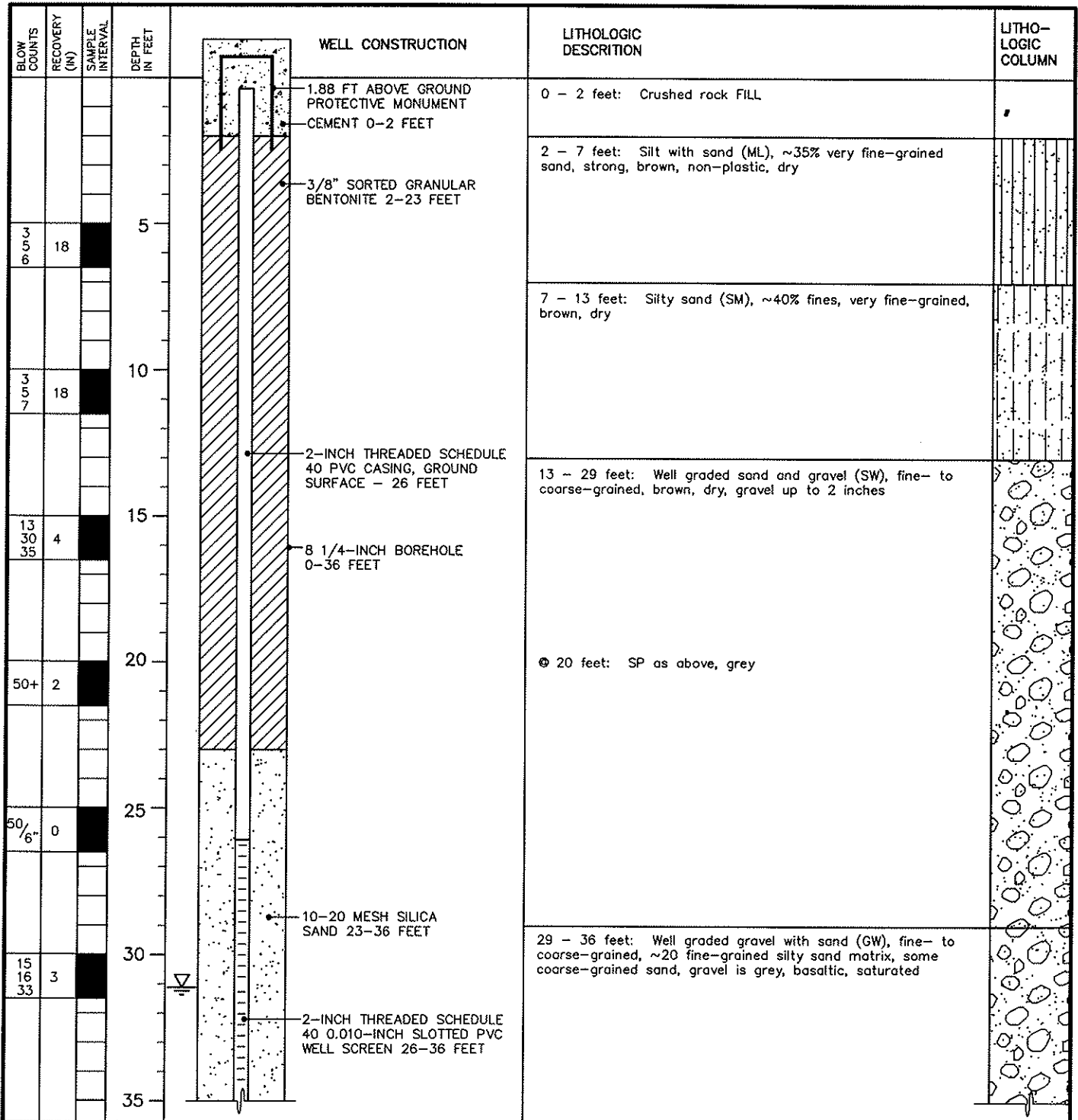
BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			215	 <p style="margin-left: 20px;">3/8" SORTED GRANULAR BENTONITE 200-220 FEET</p> <p style="margin-left: 20px;">8-INCH BOREHOLE 102-220 FEET</p>	GW as above	
			220		<p>⊙ 220 feet: Discrete-depth groundwater sample MW-15i, 220', collected 5/26/00 14:43</p> <p>⊙ 220 feet: End of boring</p>	
			225			
			230			
			235			
			240			
			245			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS, INC.
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-16
 Sheet: 1 OF 2
 Total Boring Depth: 36 FT
 Date Started/Completed: OCTOBER 9, 2000
 Ground Level Elevation: 35.33 FT NGVD
 Measuring Point Elevation: 37.21 FT NGVD
 Static Water Level: 32.25 FT NGVD Date: 10/30/00
 Northing: 119171 Easting: 1080006



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING

Project Number: 275-1940-006

Location: VANCOUVER, WA

PMX Representative: ANNE ACKERMAN

Drilled By: GEOTECH EXPLORATIONS, INC.

Drill Method: HOLLOW-STEM AUGER

Soil Sample Method: 2" SPLIT SPOON

Groundwater Sample Method: N/A

Boring Number: MW-16

Sheet: 2 OF 2

Total Boring Depth: 36 FT

Date Started/Completed: OCTOBER 9, 2000

Ground Level Elevation: 35.33 FT NGVD

Measuring Point Elevation: 37.21 FT NGVD

Static Water Level: 32.25 FT NGVD Date: 10/30/00

Northing: 119171 Easting: 1080006

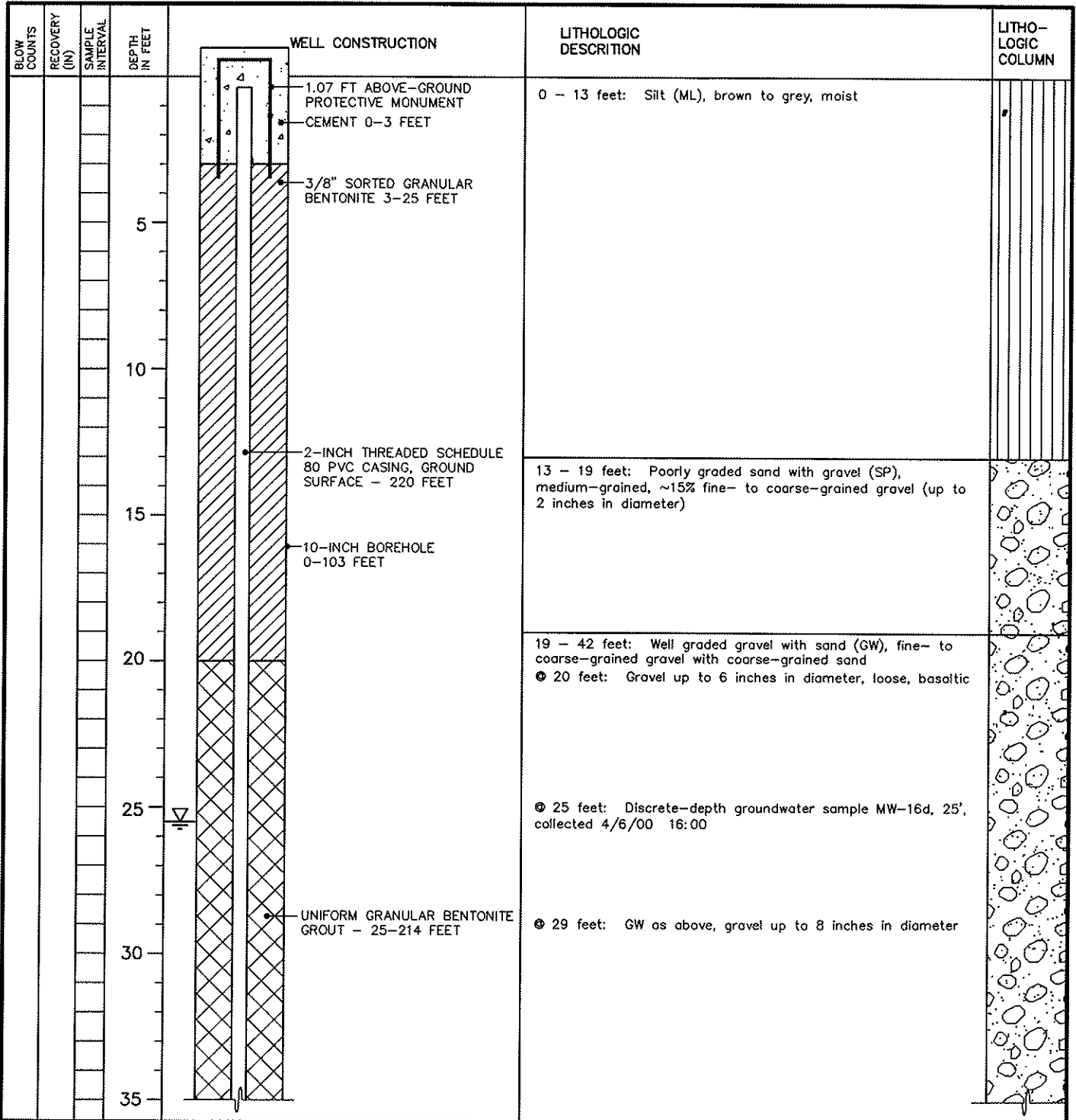
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
0 10	0			<p style="font-size: small;">10-20 MESH SILICA SAND 23-36 FEET</p> <p style="font-size: small;">2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 26-36 FEET</p>	<p style="font-size: small;">● 36 feet: End of boring</p>	
			40			
			45			
			50			
			55			
			60			
			65			
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBERG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-16d
 Sheet: 1 OF 7
 Total Boring Depth: 240 FT / WELL DEPTH: 230 FT
 Date Started/Completed: MAY 1, 2000
 Ground Level Elevation: 35.33 FT NGVD
 Measuring Point Elevation: 36.40 FT NGVD
 Static Water Level: 31.43 FT NGVD Date: 10/30/00
 Northing: 119162 Easting: 1080004






EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBERG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-16d
 Sheet: 2 OF 7
 Total Boring Depth: 240 FT / WELL DEPTH: 230 FT
 Date Started/Completed: MAY 1, 2000
 Ground Level Elevation: 35.33 FT NGVD
 Measuring Point Elevation: 36.40 FT NGVD
 Static Water Level: 31.43 FT NGVD Date: 10/30/00
 Northing: 119162 Easting: 1080004

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40	UNIFORM GRANULAR BENTONITE GROUT - 25-214 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 220 FEET 10-INCH BOREHOLE 0-103 FEET	GW as above Ⓞ 40 feet: GW as above, gravel up to 2 inches in diameter, sand content up to 60% Ⓞ 40 feet: Discrete-depth groundwater sample MW-16d, 40', collected 4/7/00 10:20	
			45			42 - 62 feet: Poorly graded sand (SP), coarse-grained, trace fine-grained gravel (<1 inch in diameter), angular
			50			
			55			
			60		Ⓞ 60 feet: Discrete-depth groundwater sample MW-16d, 60', collected 4/10/00 08:00	
			65		62 - 96 feet: Well graded sand and gravel (SW), predominantly coarse-grained, variable gravel content	
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBERG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-16d
 Sheet: 3 OF 7
 Total Boring Depth: 240 FT / WELL DEPTH: 230 FT
 Date Started/Completed: MAY 1, 2000
 Ground Level Elevation: 35.33 FT NGVD
 Measuring Point Elevation: 36.40 FT NGVD
 Static Water Level: 31.43 FT NGVD Date: 10/30/00
 Northing: 119162 Easting: 1080004

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	<p>2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 220 FEET</p> <p>UNIFORM GRANULAR BENTONITE GROUT 25-214 FEET</p>		75
			80		<p>⊕ 80 feet: SW as above, ~30% fine- to coarse-grained gravel (up to 3 inches in diameter)</p> <p>⊕ 80 feet: Discrete-depth groundwater sample MW-16d, 80', collected 4/12/00 07:50</p> <p>⊕ 82 feet: More gravel than sand, gravel up to 5 inches in diameter</p>	80
			85	<p>10-INCH BOREHOLE 0-103 FEET</p>		85
			90			90
			95			95
			100		<p>96 - 240 feet: Well graded gravel (GW) in a silty sand matrix, gravel fine- to coarse-grained, variable sand content, some cementation</p> <p>⊕ 96 feet: Gravel up to 4 inches in diameter, some dark brown/black well graded sand cemented on grains, clayey silt matrix apparent on some grains</p> <p>⊕ 100 feet: Discrete-depth groundwater sample MW-16d, 100', collected 4/13/00 08:12</p>	100
			105	<p>8-INCH BOREHOLE 103-240 FEET</p>		105

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBERG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-16d
 Sheet: 4 OF 7
 Total Boring Depth: 240 FT / WELL DEPTH: 230 FT
 Date Started/Completed: MAY 1, 2000
 Ground Level Elevation: 35.33 FT NGVD
 Measuring Point Elevation: 36.40 FT NGVD
 Static Water Level: 31.43 FT NGVD Date: 10/30/00
 Northing: 119162 Easting: 1080004

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110	<p>2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 220 FEET</p> <p>UNIFORM GRANULAR BENTONITE GROUT 25-214 FEET</p>	<p>⊙ 110 feet: GW as above, gravel up to 4 inches in diameter with ~10% >4 inches in diameter, rounded to sub-rounded, silty clay matrix</p>	
			115			
			120		<p>⊙ 120 feet: GW as above, gravel ½ - 3 inches in diameter in medium brown/tan clay matrix, gravel is basaltic with some quartz, red clasts</p> <p>⊙ 120 feet: Discrete-depth groundwater sample MW-16d, 120', collected 4/17/00 09:15</p>	
			125	<p>8-INCH BOREHOLE 103-240 FEET</p>		
			130			
			135		<p>⊙ 134 feet: GW as above, gravel ¼ - 1 inch in diameter with dark brown clay matrix</p>	
			140			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBERG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-16d
 Sheet: 5 OF 7
 Total Boring Depth: 240 FT / WELL DEPTH: 230 FT
 Date Started/Completed: MAY 1, 2000
 Ground Level Elevation: 35.33 FT NGVD
 Measuring Point Elevation: 36.40 FT NGVD
 Static Water Level: 31.43 FT NGVD Date: 10/30/00
 Northing: 119162 Easting: 1080004

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145	2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 220 FEET UNIFORM GRANULAR BENTONITE GROUT 25-214 FEET	Ⓢ 140 feet: Discrete-depth groundwater sample MW-16d, 140', collected 4/18/00 10:23 Ⓢ 150 feet: GW as above, increasing fines content, gravel ½ - 5 inches in diameter, cementation on larger clasts	
X X X	XX		150		Ⓢ 155 feet: GW as above, gravel ½ - 6 inches in diameter, cemented Ⓢ 160 feet: Discrete-depth groundwater sample MW-16d, 160', collected 4/19/00 13:24	
			155			
			160	8-INCH BOREHOLE 103-240 FEET	Ⓢ 165 feet: GW as above, gravel 1 - 4 inches in diameter in light brown clayey silt matrix, trace sand, ~15% fines	
			165		Ⓢ 172 feet: GW as above, gravel ½ - 4 inches in diameter, ~15% well graded sand, little or no fines	
			170			
			175			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBERG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-16d
 Sheet: 6 OF 7
 Total Boring Depth: 240 FT / WELL DEPTH: 230 FT
 Date Started/Completed: MAY 1, 2000
 Ground Level Elevation: 35.33 FT NGVD
 Measuring Point Elevation: 36.40 FT NGVD
 Static Water Level: 31.43 FT NGVD Date: 10/30/00
 Northing: 119162 Easting: 1080004

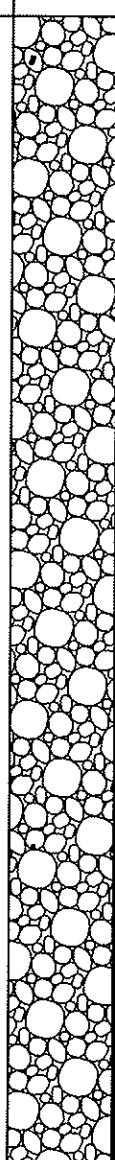
BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180	2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 220 FEET UNIFORM GRANULAR BENTONITE GROUT 25-214 FEET	● 180 feet: GW as above, some dark grey clay matrix ● 180 feet: Discrete-depth groundwater sample MW-16d, 180', collected 4/21/00 09:40	
			185		● 184 feet: GW as above, gravel ¼ - 4 inches in diameter in silty, slightly sandy clay matrix, ~30% fines	
			190			
			195	8-INCH BOREHOLE 103-240 FEET	● 195 feet: GW as above, gravel ¼ - 3 inches in diameter, some clay matrix	
			200		● 200 feet: Discrete-depth groundwater sample MW-16d, 200', collected 4/24/00 12:46	
			205		● 205 feet: GW as above, gravel ½ - 4 inches in diameter in silty clay matrix, ~40 - 50% fines ● 206 - 209 feet: Less matrix, ~20% fines	
			210			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBERG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-16d
 Sheet: 7 OF 7
 Total Boring Depth: 240 FT / WELL DEPTH: 230 FT
 Date Started/Completed: MAY 1, 2000
 Ground Level Elevation: 35.33 FT NGVD
 Measuring Point Elevation: 36.40 FT NGVD
 Static Water Level: 31.43 FT NGVD Date: 10/30/00
 Northing: 119162 Easting: 1080004

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			215	UNIFORM GRANULAR BENTONITE GROUT 25-214 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 220 FEET 3/8" SORTED GRANULAR BENTONITE 214-216 FEET 20-40 MESH SILICA SAND 216-217 FEET	Ⓞ 215 feet: GW as above, gravel ¼ - 4 inches in diameter in brown sandy clay matrix	
			220	STAINLESS STEEL CENTRALIZER AT 220 FEET 10-20 MESH SILICA SAND 217-231 FEET 8-INCH BOREHOLE 103-240 FEET	Ⓞ 220 feet: GW as above, little matrix, gravel ¼ - 4 inches in diameter Ⓞ 220 feet: Discrete-depth groundwater sample MW-16d, 220', collected 4/26/00 13:19	
			225	2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN WITH 4-INCH SUMP 220-230 FEET STAINLESS STEEL CENTRALIZER AT 230 FEET	Ⓞ 225 - 228 feet: GW as above, gravel 1/8 - 3 inches in diameter in sandy clay matrix	
			230	3/8" SORTED GRANULAR BENTONITE 231-240 FEET	Ⓞ 240 feet: Discrete-depth groundwater sample MW-16d, 240', collected 4/28/00 10:11 Ⓞ 240 feet: End of boring	
			235			
			240			
			245			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEO TECH EXPLORATION, INC
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-17
 Sheet: 1 OF 1
 Total Boring Depth: 31 FT
 Date Started/Completed: OCTOBER 11, 2000
 Ground Level Elevation: 29.57 FT NGVD
 Measuring Point Elevation: 29.34 FT NGVD
 Static Water Level: 24.45 FT NGVD Date: 10/30/00
 Northing: 118248 Easting: 1079807

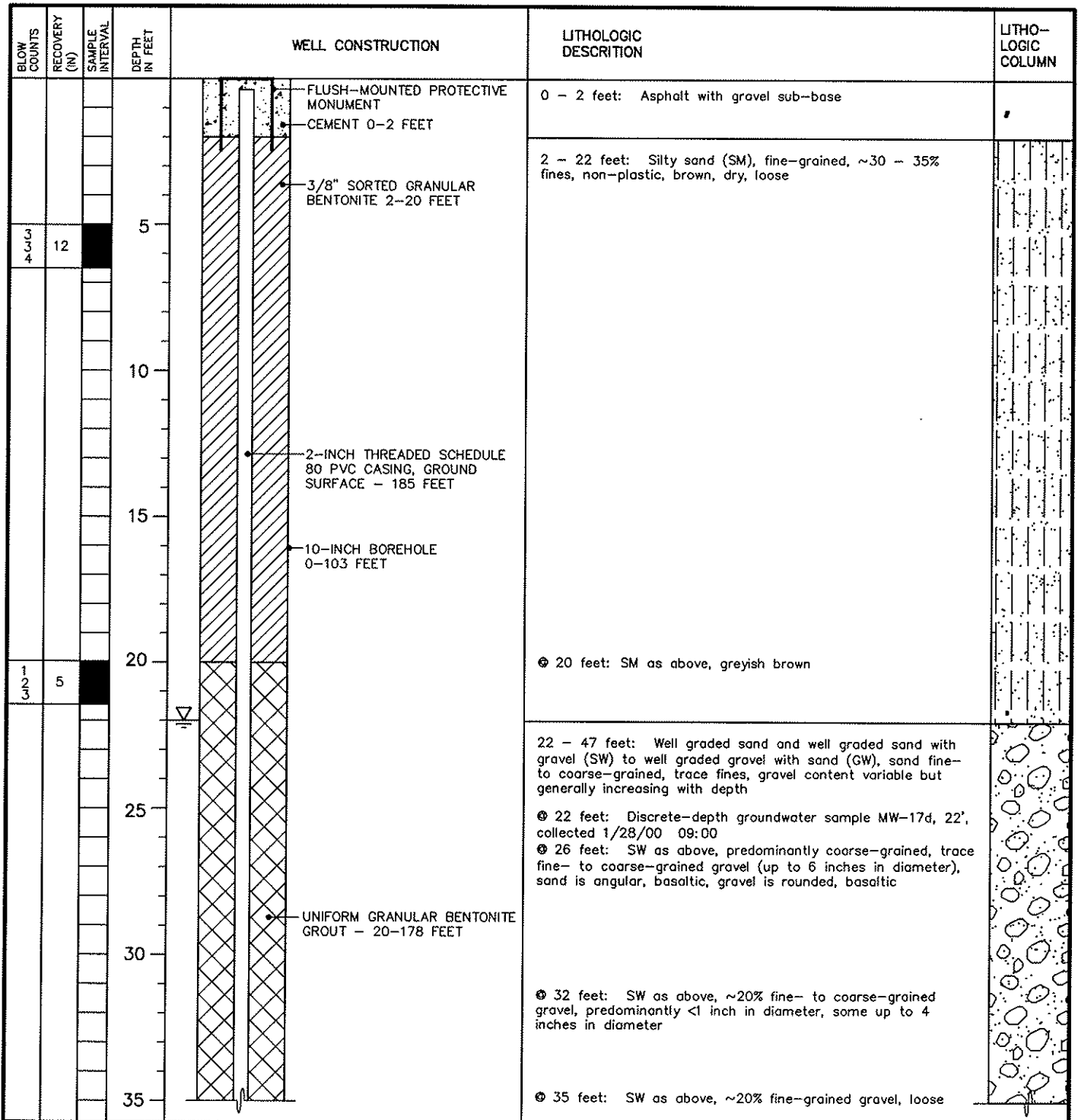
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8 INCH SORTED GRANULAR BENTONITE 2-18 FEET 2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 21 FEET 8 1/4-INCH BOREHOLE 0-31 FEET 2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 21-31 FEET 10-20 MESH SILICA SAND 18-31 FEET	0 - 2 feet: Asphalt with gravel sub-base 2 - 7 feet: Alternating layers of silt with sand (ML) with silty sand (SM), ML has ~30% very fine-grained sand, brown, non-plastic, dry, SM is fine-grained, ~30% fines, brown, dry 7 - 25.5 feet: Silty sand (SM), fine-grained, brown to dark brown, dry @ 10 feet: SM as above, ~30 - 40% fines @ 15 feet: SM as above, ~20% fines @ 25.5 feet: Grading to: 25.5 - 31 feet: Well graded sand (SW), fine- to coarse-grained, predominantly medium- to coarse-grained, grey, angular, basaltic, saturated @ 30 feet: SW as above, more coarse-grained sand than above, trace fine-grained gravel @ 31 feet: End of boring	
6 7 10	15		5			
4 4 4	17		10			
4 9 8	15		15			
6 7 10	16		20			
12 12 12	12		25			
23 50/4			30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-17d
 Sheet: 1 OF 6
 Total Boring Depth: 205 FT / WELL DEPTH: 195 FT
 Date Started/Completed: JAN. 27, 2000/FEB. 18, 2000
 Ground Level Elevation: 29.84 FT NGVD
 Measuring Point Elevation: 29.56 FT NGVD
 Static Water Level: 24.62 FT NGVD Date: 10/30/00
 Northing: 118238 Easting: 1079809



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-17d
 Sheet: 2 OF 6
 Total Boring Depth: 205 FT / WELL DEPTH: 195 FT
 Date Started/Completed: JAN. 27, 2000/FEB. 18, 2000
 Ground Level Elevation: 29.84 FT NGVD
 Measuring Point Elevation: 29.56 FT NGVD
 Static Water Level: 24.62 FT NGVD Date: 10/30/00
 Northing: 118238 Easting: 1079809

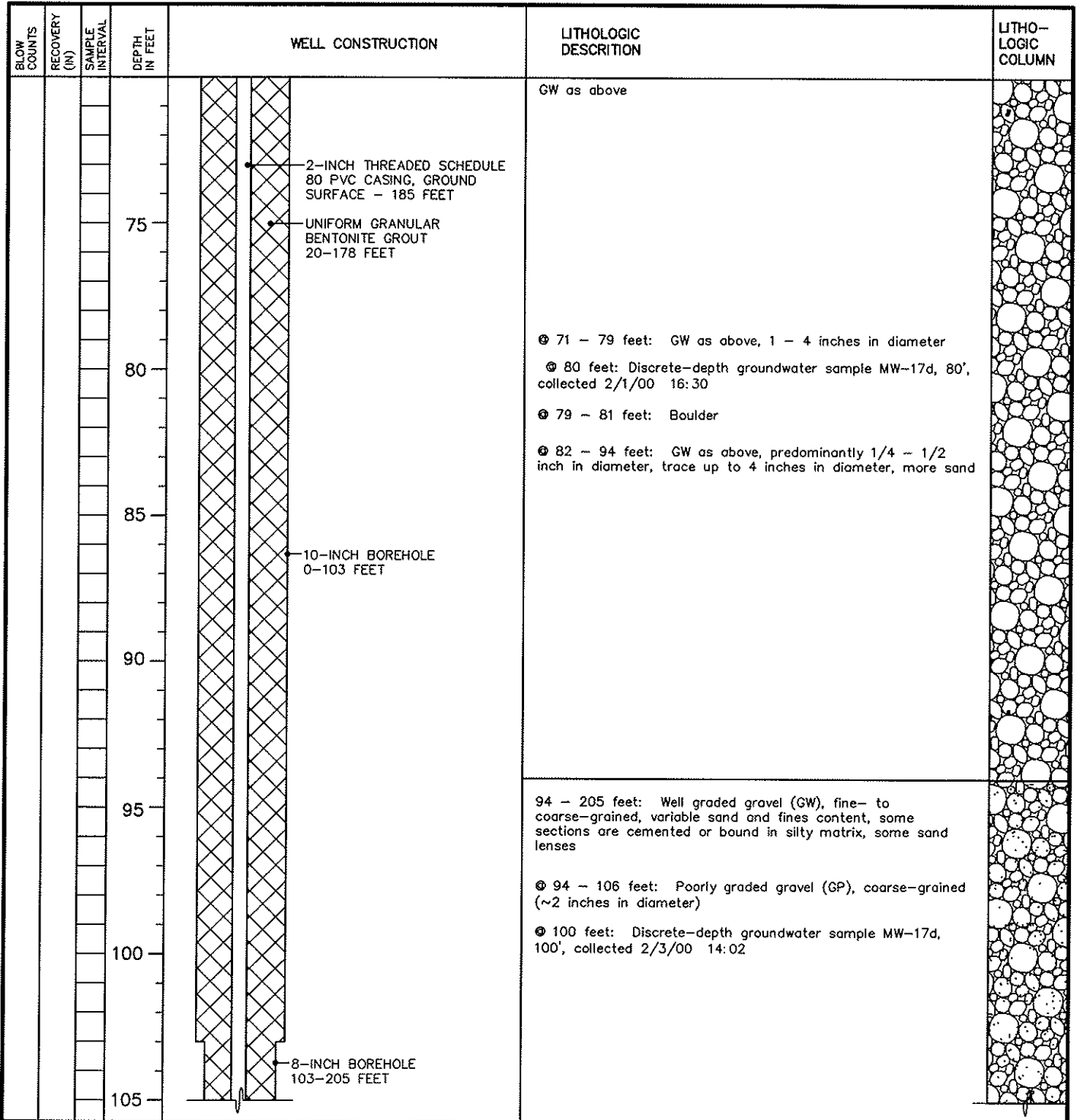
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
1	9				SW/GW as above	
			40		Ⓞ 38 feet: Well graded gravel with sand (GW), gravel predominantly 1 - 2 inches in diameter, trace up to 4 inches in diameter, ~30 - 40% fine- to coarse-grained sand, none to trace fines, loose Ⓞ 40 feet: Discrete-depth groundwater sample MW-17d, 40', collected 1/31/00 09:00 Ⓞ 41 - 49 feet: GW as above, 1/2 - 3 inches in diameter	
			45	• UNIFORM GRANULAR BENTONITE GROUT - 20-178 FEET		
			50	• 2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 185 FEET • 10-INCH BOREHOLE 0-103 FEET	47 - 62 feet: Poorly graded sand with gravel (SP), coarse-grained, gravel fine-grained, no fines, basaltic	
			55			
			60		Ⓞ 60 feet: Discrete-depth groundwater sample MW-17d, 60', collected 1/31/00 15:05	
			65		62 - 94 feet: Well graded gravel (GW), fine- to coarse-grained, some sand, some fines and cementation, predominantly basaltic clasts Ⓞ 63 feet: GW as above, 1/2 - 4 inches in diameter Ⓞ 65 - 70 feet: GW as above, 1/2 - 2 1/2 inches in diameter	
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-17d
 Sheet: 3 OF 6
 Total Boring Depth: 205 FT / WELL DEPTH: 195 FT
 Date Started/Completed: JAN. 27, 2000/FEB. 18, 2000
 Ground Level Elevation: 29.84 FT NGVD
 Measuring Point Elevation: 29.56 FT NGVD
 Static Water Level: 24.62 FT NGVD Date: 10/30/00
 Northing: 118238 Easting: 1079809



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-17d
 Sheet: 4 OF 6
 Total Boring Depth: 205 FT / WELL DEPTH: 195 FT
 Date Started/Completed: JAN. 27, 2000/FEB.18, 2000
 Ground Level Elevation: 29.84 FT NGVD
 Measuring Point Elevation: 29.56 FT NGVD
 Static Water Level: 24.62 FT NGVD Date: 10/30/00
 Northing: 118238 Easting: 1079809

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110	<p>2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 185 FEET</p> <p>UNIFORM GRANULAR BENTONITE GROUT 20-178 FEET</p>	<p>⊕ 94 - 106 feet: GP as above, coarse-grained (~2 inches in diameter)</p> <p>⊕ 106 - 111 feet: GW as above 1/2 - 3/4 inches in diameter</p> <p>⊕ 111 - 113 feet: GW as above, 1/2 - 2 inches in diameter</p>	
			115		<p>⊕ 120 feet: GW as above, 1/4 - 3/4 inches in diameter, some sand, some fines and cementation, basaltic clasts</p> <p>⊕ 120 feet: Discrete-depth groundwater sample MW-17d, 120', collected 2/8/00 10:37</p>	
			120		<p>⊕ 125 - 130 feet: GW as above, 1/4 - 1 inch in diameter, some sand, some fines, basaltic clasts</p>	
			125	<p>8-INCH BOREHOLE 103-205 FEET</p>	<p>⊕ 132 - 137 feet: GW as above, up to 4 inches in diameter, some clay matrix, some coarse-grained sand</p>	
			130			
			135			
			140			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-17d
 Sheet: 5 OF 6
 Total Boring Depth: 205 FT / WELL DEPTH: 195 FT
 Date Started/Completed: JAN. 27, 2000/FEB. 18, 2000
 Ground Level Elevation: 29.84 FT NGVD
 Measuring Point Elevation: 29.56 FT NGVD
 Static Water Level: 24.62 FT NGVD Date: 10/30/00
 Northing: 118238 Easting: 1079809

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145	<p>2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 185 FEET</p> <p>UNIFORM GRANULAR BENTONITE GROUT 20-178 FEET</p>	<p>⊙ 140 - 146 feet: GW as above, 1 - 2 1/2 inches in diameter, more sand than above, some cementation</p> <p>⊙ 140 feet: Discrete-depth groundwater sample MW-17d, 140', collected 2/9/00 13:52</p>	
			150		<p>⊙ 149 - 154 feet: GW as above, coarse-grained</p>	
			155		<p>⊙ 154 - 161 feet: Poorly graded sand with gravel (SP), fine-grained, with fine-grained gravel (1/4 - 3/4 inches in diameter)</p>	
			160	<p>8-INCH BOREHOLE 103-205 FEET</p>	<p>⊙ 160 feet: Discrete-depth groundwater sample MW-17d, 160', collected 2/10/00 14:46</p> <p>⊙ 161 - 172 feet: Well graded gravel (GW) in clay matrix, coarse-grained (2 inches in diameter)</p>	
			165		<p>⊙ 166 - 170 feet: Fine- to coarse-grained sand (SW), predominantly coarse-grained at 170 feet, gravel is well rounded, basaltic, some cementation</p>	
			170		<p>⊙ 172 - 174 feet: Poorly graded sand with gravel (SP), fine-grained, gravel fine-grained (1/4 - 1/2 inches in diameter)</p>	
			175			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-17d
 Sheet: 6 OF 6
 Total Boring Depth: 205 FT / WELL DEPTH: 195 FT
 Date Started/Completed: JAN. 27, 2000/FEB. 18, 2000
 Ground Level Elevation: 29.84 FT NGVD
 Measuring Point Elevation: 29.56 FT NGVD
 Static Water Level: 24.62 FT NGVD Date: 10/30/00
 Northing: 118238 Easting: 1079809

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180	<ul style="list-style-type: none"> UNIFORM GRANULAR BENTONITE GROUT 20-178 FEET 3/8 INCH SORTED GRANULAR BENTONITE 178-181 FEET 20-40 MESH SILICA SAND 181-182 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 185 FEET STAINLESS STEEL CENTRALIZER 10-20 MESH SILICA SAND 182-196 FEET 2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN 185-195 FEET STAINLESS STEEL CENTRALIZER 8-INCH BOREHOLE 103-205 FEET 3/8 INCH SORTED GRANULAR BENTONITE 196-205 FEET 	<p>GW as above</p> <p>⊙ 180 feet: Discrete-depth groundwater sample MW-17d, 180', collected 2/11/00 14:22</p> <p>⊙ 181 - 188 feet: Sand lens</p> <p>⊙ 188 - 205 feet: Well graded gravel with sand (GW) in silty sand matrix, fine- to coarse-grained (up to 5 inches in diameter), ~ 25% sand, rounded to sub-rounded, slightly cemented, abundant mica flakes</p> <p>⊙ 199 feet: Minor amount of olive green clay, gravel up to 4 inches</p> <p>⊙ 200 feet: Discrete-depth groundwater sample MW-17d, 200', collected 2/15/00 10:40</p> <p>⊙ 205 feet: End of boring</p>	
			185			
			190			
			195			
			200			
			205			
			210			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS, INC
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-18
 Sheet: 1 OF 2
 Total Boring Depth: 39 FT / WELL DEPTH: 38 FT
 Date Started/Completed: NOVEMBER 3, 2000
 Ground Level Elevation: 32.03 FT NGVD
 Measuring Point Elevation: 31.65 FT NGVD
 Static Water Level: 27.83 FT NGVD Date: 11/20/00
 Northing: 117102 Easting: 1080373

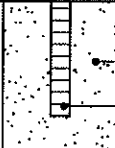
BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 2 feet: Asphalt with gravel sub-base	
			0	CEMENT 0-2 FEET		
			2-5	3/8-INCH SORTED GRANULAR BENTONITE 2-25 FEET	2 - 18 feet: Poorly graded sand (SP), fine-grained, trace fine-grained gravel, no fines, brown/grey, slightly moist to saturated, loose to medium dense, FILL	
20 24 23	0		5			
			10		⊙ 15 feet: As above, ~15% medium-grained sand, saturated	
2 3 3	12		10	2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 28 FEET		
			15	8 1/4-INCH BOREHOLE 0-39 FEET		
3 5 15	18		15		18 - 23 feet: Silt (ML), trace very fine-grained sand, brown/grey mottled, moderate plasticity, dry to moist, stiff	
			20			
4 8 10	12		20		23 - 27 feet: Silt with sand (ML), ~40% medium- to coarse-grained sand, brown, moist to saturated, sand is angular, basaltic	
			25		⊙ 27 feet: Grading to:	
3 6 6	14		25		27 - 33 feet: Well graded sand with silt (SM), medium- to coarse-grained, ~15% fines, grey, angular, basaltic, saturated	
			30	10-20 MESH SILICA SAND 25-39 FEET		
			30	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 28-38 FEET	⊙ 33 feet: Grading to:	
8 10 10	18		30		33 - 39 feet: Well graded sand (SW), medium- to coarse-grained, ~10% fines, trace fine-grained gravel, basaltic, saturated	
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS, INC
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-18
 Sheet: 2 OF 2
 Total Boring Depth: 39 FT / WELL DEPTH: 38 FT
 Date Started/Completed: NOVEMBER 3, 2000
 Ground Level Elevation: 32.03 FT NGVD
 Measuring Point Elevation: 31.65 FT NGVD
 Static Water Level: 27.83 FT NGVD Date: 11/20/00
 Northing: 117102 Easting: 1080373

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
6 20 30/5'	15		0	 <p>8 1/4-INCH BOREHOLE 0-39 FEET 10-20 MESH SILICA SAND 25-39 FEET 2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 28-38 FEET</p>	SW as above	
			40	⊙ 39 feet: End of boring		
			45			
			50			
			55			
			60			
			65			
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-18i
 Sheet: 1 OF 6
 Total Boring Depth: 180 FT /WELL DEPTH: 130 FT
 Date Started/Completed: JUNE 13, 2000/JUNE 30, 2000
 Ground Level Elevation: 32.06 FT NGVD
 Measuring Point Elevation: 31.84 FT NGVD
 Static Water Level: 26.96 FT NGVD Date: 10/30/00
 Northing: 117097 Easting: 1080382

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 2 feet: Asphalt with gravel sub-base	.
			5	CEMENT 0-2 FEET	2 - 20 feet: Poorly graded sand (SP), fine-grained, trace amounts of medium- to coarse-grained, trace fines, trace wood fragments, dry, loose, FILL	.
4	7		10	3/8" SORTED GRANULAR BENTONITE 2-10 FEET		
			15	2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 120 FEET	20 - 28 feet: Silt (ML), trace very fine-grained sand, low to moderate plasticity, unsaturated, medium stiff	
			20	10-INCH BOREHOLE 0-100 FEET		
1 2 3			25	UNIFORM GRANULAR BENTONITE GROUT - 10-114 FEET		
			30		28 - 48 feet: Well graded sand (SW), fine- to coarse-grained, predominantly coarse-grained, trace fines, basaltic, angular, saturated	.
			35		@ 28 feet: Discrete-depth groundwater sample MW-18i, 28', collected 6/13/00 13:10 @ 28 - 37 feet: SW as above, ~50% coarse-grained sand, 50% fine- to medium-grained sand	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-18i
 Sheet: 2 OF 6
 Total Boring Depth: 180 FT /WELL DEPTH: 130 FT
 Date Started/Completed: JUNE 13, 2000/JUNE 30, 2000
 Ground Level Elevation: 32.06 FT NGVD
 Measuring Point Elevation: 31.84 FT NGVD
 Static Water Level: 26.96 FT NGVD Date: 10/30/00
 Northing: 117097 Easting: 1080382

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
3 12 20	8		40	UNIFORM GRANULAR BENTONITE GROUT - 10-114 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 120 FEET 10-INCH BOREHOLE 0-100 FEET	<ul style="list-style-type: none"> ⊙ 37 feet: SW as above, trace brown silt lenses (1/2 inch thick), trace gravel 1 - 2 inches in diameter ⊙ 38 feet: Grain size increasing, trace gravel up to 5 inches in diameter ⊙ 40 feet: Discrete-depth groundwater sample MW-18i, 40', collected 6/14/00 10:55 ⊙ 40 - 47 feet: SW as above, predominantly coarse-grained, ~20% fine- to medium-grained, trace gravel up to 6 inches in diameter, sand is angular, basaltic ⊙ 47 feet: SW as above, increasing gravel content with depth 48 - 102 feet: Well graded gravel with sand (GW), fine- to coarse-grained, sand content and grain size variable, trace fines, saturated ⊙ 50 feet: Predominantly coarse-grained sand, trace fine- to medium-grained sand, ~30% coarse-grained gravel (1/4 - 4 inches in diameter), sand is angular, basaltic, grey ⊙ 58 - 60 feet: GW as above, fairly even proportion of sand and gravel, gravel up to 5 inches in diameter, sand fine- to coarse-grained, predominantly coarse-grained, angular, basaltic ⊙ 60 feet: Discrete-depth groundwater sample MW-18i, 60', collected 6/15/00 10:25 ⊙ 60 - 63 feet: GW as above, some large cobbles ⊙ 63 - 73 feet: GW as above, ~30% sand, gravel predominantly <1 inch in diameter, trace up to 3 inches in diameter, basaltic, rounded to sub-rounded, grey, sand fine- to coarse-grained, predominantly coarse-grained, grey, basaltic 	
			45			
			50			
			55			
			60	▽		
			65			
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-18i
 Sheet: 3 OF 6
 Total Boring Depth: 180 FT /WELL DEPTH: 130 FT
 Date Started/Completed: JUNE 13, 2000/JUNE 30, 2000
 Ground Level Elevation: 32.06 FT NGVD
 Measuring Point Elevation: 31.84 FT NGVD
 Static Water Level: 26.96 FT NGVD Date: 10/30/00
 Northing: 117097 Easting: 1080382

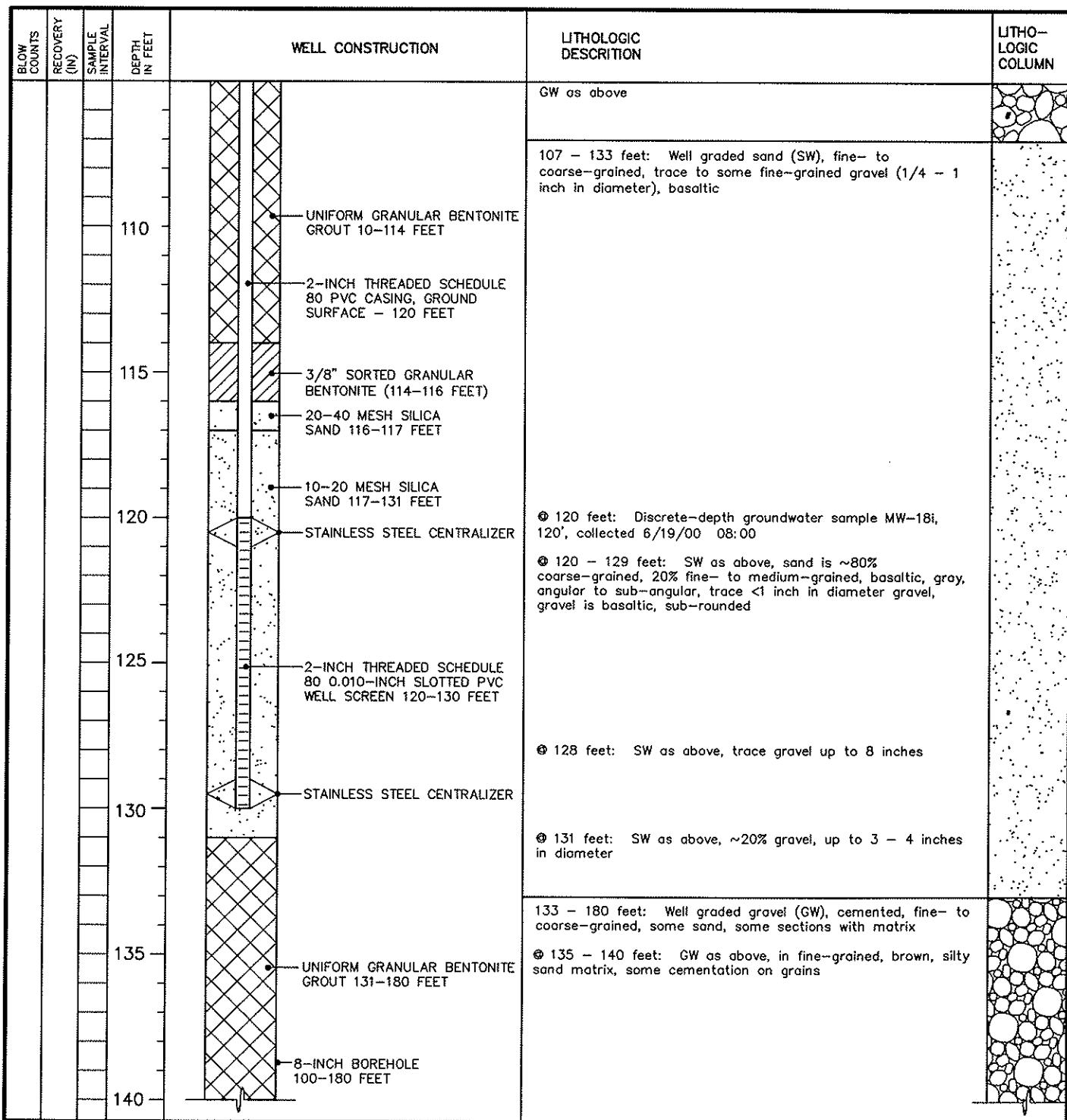
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	UNIFORM GRANULAR BENTONITE GROUT - 10-114 FEET	Ⓢ 73 - 76 feet: GW as above, predominantly < 2 inches in diameter, trace up to 3 inches in diameter, ~30% coarse-grained Ⓢ 76 feet: GW as above, up to 4 inches in diameter	
			80	2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 120 FEET	Ⓢ 80 feet: Discrete-depth groundwater sample MW-18i, 80', collected 6/15/00 15:05 Ⓢ 84 - 90 feet: GW as above, 1/2 - 5 inches in diameter	
			85	10-INCH BOREHOLE 0-100 FEET	Ⓢ 91 - 94 feet: GW as above, less sand than above, gravel 1/2 - 3 inches in diameter	
			90		Ⓢ 97 feet: GW as above, up to 6 inches in diameter	
			95		Ⓢ 99 - 101 feet: GW as above, 1/2 - 2 inches in diameter with coarse-grained, angular sand Ⓢ 100 feet: Discrete-depth groundwater sample MW-18i, 100', collected 6/16/00 10:45	
			100		102 - 107 feet: Large gravel	
			105	8-INCH BOREHOLE 100-180 FEET		

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-18i
 Sheet: 4 OF 6
 Total Boring Depth: 180 FT /WELL DEPTH: 130 FT
 Date Started/Completed: JUNE 13, 2000/JUNE 30, 2000
 Ground Level Elevation: 32.06 FT NGVD
 Measuring Point Elevation: 31.84 FT NGVD
 Static Water Level: 26.96 FT NGVD Date: 10/30/00
 Northing: 117097 Easting: 1080382

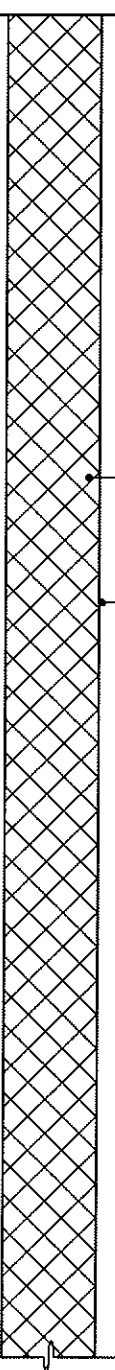
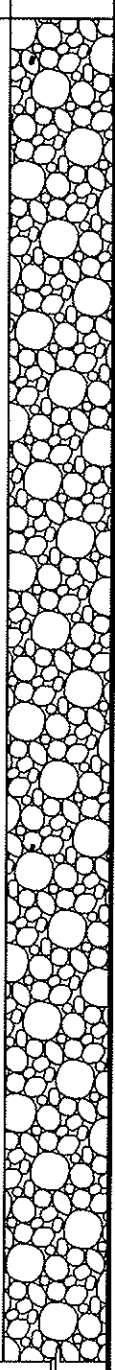


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-18i
 Sheet: 5 OF 6
 Total Boring Depth: 180 FT /WELL DEPTH: 130 FT
 Date Started/Completed: JUNE 13, 2000/JUNE 30, 2000
 Ground Level Elevation: 32.06 FT NGVD
 Measuring Point Elevation: 31.84 FT NGVD
 Static Water Level: 26.96 FT NGVD Date: 10/30/00
 Northing: 117097 Easting: 1080382

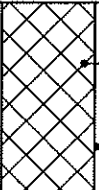
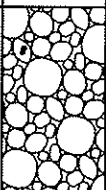
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145	 <p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT 131-180 FEET</p> <p style="margin-left: 20px;">8-INCH BOREHOLE 100-180 FEET</p>	<p>⊗ 140 feet: Discrete-depth groundwater sample MW-18i, 140', collected 6/27/00 12:10</p> <p>⊗ 140 - 148 feet: GW as above, ¼ - 4 inches in diameter, some sand, some cementation</p> <p>⊗ 150 - 158 feet: GW as above, ½ - 3 inches in diameter, some grey clay, some cementation</p> <p>⊗ 160 feet: Discrete-depth groundwater sample MW-18i, 160', collected 6/26/00 14:45</p> <p>⊗ 160 - 180 feet: GW as above 1/8 - 6 inches in diameter, very little sand</p>	
			150			
			155			
			160			
			165			
			170			
			175			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-18i
 Sheet: 6 OF 6
 Total Boring Depth: 180 FT /WELL DEPTH: 130 FT
 Date Started/Completed: JUNE 13, 2000/JUNE 30, 2000
 Ground Level Elevation: 32.06 FT NGVD
 Measuring Point Elevation: 31.84 FT NGVD
 Static Water Level: 26.96 FT NGVD Date: 10/30/00
 Northing: 117097 Easting: 1080382

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180	 <p>UNIFORM GRANULAR BENTONITE GROUT 131-180 FEET</p> <p>8-INCH BOREHOLE 100-180 FEET</p>	<p>⊗ 180 feet: Discrete-depth groundwater sample MW-18i, 180', collected 6/28/00 10:55</p>	
			185		<p>⊗ 180 feet: End of boring</p>	
			190			
			195			
			200			
			205			
			210			

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931
Location: ALLEY BETWEEN NW PACKING AND GREAT WESTERN MALTING
PMX Representative: MIKE MARSHALL
Drilled By: GEOTECH EXPLORATIONS
Drill Method: AUGER
Soil Sample Method: SPLIT SPOON
Groundwater Sample Method: NA

Boring Number: MW-19s
Sheet: 1 OF 1
Total Boring Depth: 34 FT / WELL DEPTH: 33 FT
Date Completed: OCTOBER 6, 2004
Ground Level Measurement: 33.55 FT
Initial Water Level ∇ 29.8 FT (AUGER IN GROUND)
Measuring Point Elevation: 33.26 FT
Static Water Level: 29.89 FT **Date:** 10/07/04
Northing: 116599.2 **Easting:** 1079945.5

DATE: 03/30/07 08:22am FILENAME: P194006281

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			5	FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1 FEET	No sample obtained	.
5 6 7	12"		10	BENTONITE CHIPS 1-21 FEET 2-INCH THREADED SCH 40 PVC CASING, 0-23 FEET, FLUSH THREAD	5-20 feet: SAND (SW) - dark gray, loose, wet, micaceous, sub angular, medium to coarse grained @ 15 feet: SAND, fine grained	
6 8 9	14"		15	8-INCH BOREHOLE 0-34 FEET		
2 2 3	12"		20		20-30 feet: SILT TO SANDY SILT (ML) - light brownish gray to light brown, medium stiff, moist to wet, mottled, micaceous, sand is fined grained	
3 4 5	16"		25	10/20 SILICA SAND, 21-34 FEET		
6 5 3	12"		30	2-INCH SCH 40 0.020 SLOT PVC SCREEN 23-33 FEET	30-34 feet: SAND (SW) - dark gray, medium dense, saturated, micaceous, sub angular, medium to coarse grained	
5 10 10	16"		35		34 feet: End of boring	
5 8 10	12"					

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-19i
 Sheet: 1 OF 6
 Total Boring Depth: 191 FT/WELL DEPTH: 130 FT
 Date Started/Completed: AUGUST 11, 2000/AUGUST 31, 2000
 Ground Level Elevation: 34.37 FT NGVD
 Measuring Point Elevation: 34.02 FT NGVD
 Static Water Level: 29.15 FT NGVD Date: 10/30/00
 Northing: 116550 Easting: 1079958

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 2 feet: Asphalt with gravel sub-base	
			5	CEMENT 0-2 FEET	2 - 16 feet: Poorly graded sand (SP), fine-grained, trace fines, loose, dry, FILL	•
			10	3/8-INCH SORTED GRANULAR BENTONITE 2-117 FEET		
8	8		15	2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 120 FEET		
			20	12-INCH BOREHOLE 0-24 FEET	16 - 20 feet: Silt with sand (ML), ~15% very fine-grained sand, brown/grey mottled, low plasticity, soft	
1 2 2	18		25		20 - 27 feet: Silt (ML), trace very fine-grained sand, medium plasticity, grey with some rust mottling	
			30	10-INCH BOREHOLE 24-100 FEET	⊙ 23 feet: ML as above, some brown very fine-grained sand	
			35		27 - 33 feet: Silty sand (ML), fine-grained, trace medium-grained, ~30% fines, brown, dry	
				▽	⊙ 29 feet: Sandy	
					⊙ 32 feet: Discrete-depth groundwater sample MW-19i, 32', collected 8/11/00 07:45	
					33 - 68 feet: Well graded sand (SW), fine- to coarse-grained, some fines, fines decreasing and grain size increasing with depth, saturated	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-19i
 Sheet: 2 OF 6
 Total Boring Depth: 191 FT/WELL DEPTH: 130 FT
 Date Started/Completed: AUGUST 11, 2000/AUGUST 31, 2000
 Ground Level Elevation: 34.37 FT NGVD
 Measuring Point Elevation: 34.02 FT NGVD
 Static Water Level: 29.15 FT NGVD Date: 10/30/00
 Northing: 116550 Easting: 1079958

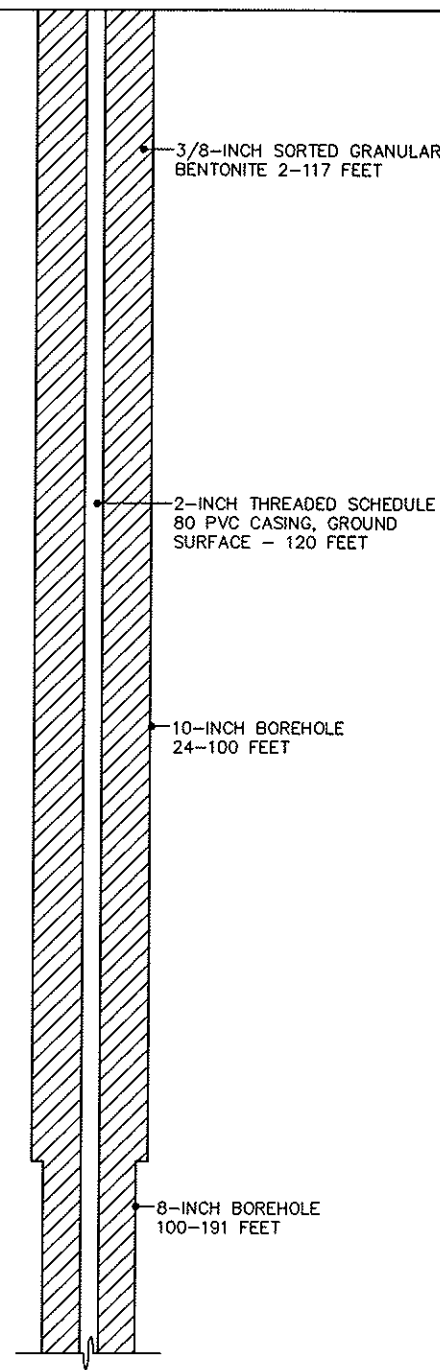
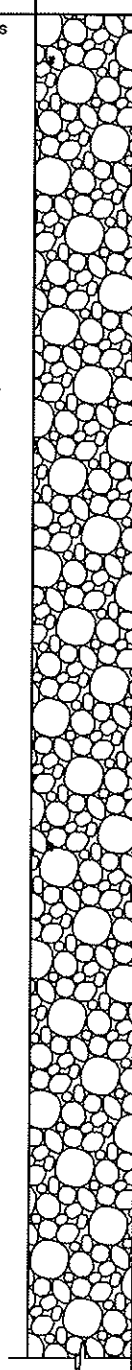
BLOW COUNTS	RECOVERY (M)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
16 59 36				<p>3/8-INCH SORTED GRANULAR BENTONITE 2-117 FEET</p> <p>2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 120 FEET</p> <p>10-INCH BOREHOLE 24-100 FEET</p>	<p>⊙ 35 feet: SW as above, ~10 -15% fines, predominantly medium-grained, some fine- and coarse-grained, trace gravel up to 1 inch in diameter, sand is angular, basaltic, gravel is sub-rounded</p> <p>⊙ 37 - 39 feet: SW as above, predominantly coarse-grained, angular, basaltic, ~10% gravel up to 1 inch in diameter, trace fines</p> <p>⊙ 40 - 47 feet: SW as above, gravel up to 3 inches in diameter, gravel content and grain size increasing with depth</p> <p>⊙ 48 feet: SW as above, ~20% gravel, trace up to 4 inches in diameter</p> <p>⊙ 50 feet: SW as above, trace to no fines</p> <p>⊙ 50 feet: Discrete-depth groundwater sample MW-19i, 50', collected 8/14/00 13:55</p> <p>⊙ 50 - 59 feet: SW as above, grain size and gravel content continuing to increase with depth</p> <p>⊙ 59 feet: SW as above with gravel, ~35% fine- to coarse-grained gravel, gravel predominantly 1 - 2 inches in diameter, trace up to 6 inches in diameter</p> <p>⊙ 67 - 78 feet: SW with gravel as above predominantly, cobbles up to 6 inches in diameter</p> <p>68 - 118 feet: Well graded gravel (GW), fine- to coarse-grained, some sand, clean</p>	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-19i
 Sheet: 3 OF 6
 Total Boring Depth: 191 FT/WELL DEPTH: 130 FT
 Date Started/Completed: AUGUST 11, 2000/AUGUST 31, 2000
 Ground Level Elevation: 34.37 FT NGVD
 Measuring Point Elevation: 34.02 FT NGVD
 Static Water Level: 29.15 FT NGVD Date: 10/30/00
 Northing: 116550 Easting: 1079958

FLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	 <p>3/8-INCH SORTED GRANULAR BENTONITE 2-117 FEET</p> <p>2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 120 FEET</p> <p>10-INCH BOREHOLE 24-100 FEET</p> <p>8-INCH BOREHOLE 100-191 FEET</p>	<p>⊙ 70 feet: GW as above, ~10 -15% sand, ~75% of gravel is fine-grained, trace up to 6 inches in diameter, clean</p> <p>⊙ 70 feet: Discrete-depth groundwater sample MW-19i, 70', collected 8/15/00 09:25</p> <p>⊙ 78 feet: GW as above, predominantly <1 inch in diameter, some 2 - 3 inches in diameter, no cobbles, clean</p> <p>⊙ 79 - 83 feet: GW as above, predominantly 1/4 - 1 1/2 inches in diameter, some 2 - 3 inches in diameter, trace up to 6 inches in diameter</p> <p>⊙ 83 - 90 feet: GW as above, some 3 - 4 inch diameter gravel</p> <p>⊙ 90 feet: Discrete-depth groundwater sample MW-19i, 90', collected 8/15/00 15:00</p> <p>⊙ 90 - 99 feet: GW as above, predominantly 2 - 3 inches in diameter, trace 5 - 6 inches in diameter, little coarse-grained sand</p> <p>⊙ 101 feet: GW as above, large gravel</p> <p>⊙ 103 - 105 feet: GW as above, predominantly 2 inches in diameter, trace up to 6 inches in diameter</p>	
			80			
			85			
			90			
			95			
			100			
			105			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-19i
 Sheet: 4 OF 6
 Total Boring Depth: 191 FT/WELL DEPTH: 130 FT
 Date Started/Completed: AUGUST 11, 2000/AUGUST 31, 2000
 Ground Level Elevation: 34.37 FT NGVD
 Measuring Point Elevation: 34.02 FT NGVD
 Static Water Level: 29.15 FT NGVD Date: 10/30/00
 Northing: 116550 Easting: 1079958

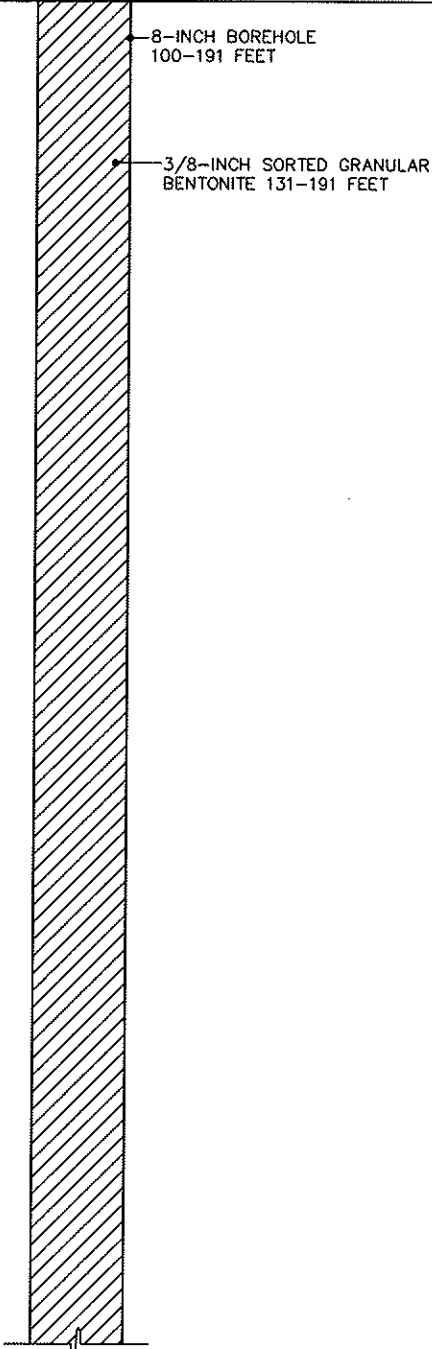
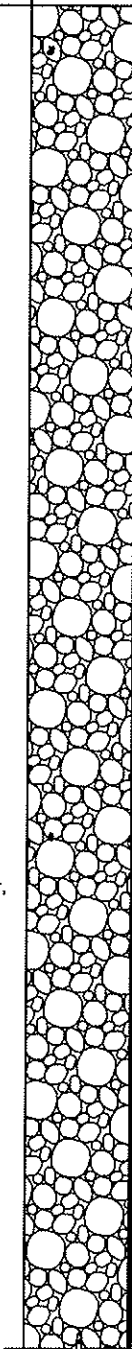
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110	8-INCH BOREHOLE 100-191 FEET 3/8-INCH SORTED GRANULAR BENTONITE 2-117 FEET 2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 120 FEET 20-40 MESH SILICA SAND 117-118 FEET STAINLESS STEEL CENTRALIZER AT 120 FEET 10-20 MESH SILICA SAND 118-131 FEET 2-INCH THREADED SCHEDULE 80 0.010-INCH SLOTTED PVC WELL SCREEN 120-130 FEET STAINLESS STEEL CENTRALIZER AT 130 FEET 3/8-INCH SORTED GRANULAR BENTONITE 131-191 FEET	<p>⊙ 108 feet: GW as above, up to 3 inches in diameter, loose</p> <p>⊙ 110 -117 feet: GW as above, ¼ - 3 inches in diameter, clean, loose</p> <p>⊙ 110 feet: Discrete-depth groundwater sample MW-19i, collected 8/16/00 13:15</p> <p>118 - 131 feet: Well graded sand with gravel (SW), fine- to coarse-grained, predominantly coarse-grained, no fines, angular, basaltic, ~30% fine- to coarse-grained gravel, predominantly <1/2 inch in diameter, trace up to 3 - 4 inches in diameter</p> <p>⊙ 130 feet: Discrete-depth groundwater sample MW-19i, 130', collected 8/21/00 09:57</p> <p>131 - 191 feet: Well graded gravel (GW), fine- to coarse-grained, some cementation, some silty matrix</p> <p>⊙ 131 - 137 feet: GW as above, ½ - 6 inches in diameter, some cementation</p>	
			115			
			120			
			125			
			130			
			135			
			140			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-19i
 Sheet: 5 OF 6
 Total Boring Depth: 191 FT/WELL DEPTH: 130 FT
 Date Started/Completed: AUGUST 11, 2000/AUGUST 31, 2000
 Ground Level Elevation: 34.37 FT NGVD
 Measuring Point Elevation: 34.02 FT NGVD
 Static Water Level: 29.15 FT NGVD Date: 10/30/0
 Northing: 116550 Easting: 1079958

BLOW COUNTS	RECOVERY (in)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145	 <p>8-INCH BOREHOLE 100-191 FEET</p> <p>3/8-INCH SORTED GRANULAR BENTONITE 131-191 FEET</p>	GW as above ◎ 150 feet: Discrete-depth groundwater sample MW-19i, 150', collected 8/22/00 14:30 ◎ 153 - 161 feet: No recovery, large cemented gravel, per driller ◎ 163 - 170 feet: GW as above, up to 5 inches in diameter, some cementation, some silty sand matrix ◎ 169.5 - 171.5 feet: Sand and gravel, relatively even proportion, sand is fine- to coarse-grained, predominantly fine-grained, trace fines, gravel is predominantly <1 inch in diameter, ~20% up to 3 inches in diameter, some cementation, some silty matrix ◎ 170 feet: Discrete-depth groundwater sample MW-19i, 170', collected 8/24/00 08:25 ◎ 171.5 feet: GW as above, in a silty sand matrix, gravel predominantly <2 inches in diameter, sand is fine-grained, silty, brown	
			150			
			155			
			160			
			165			
			170			
			175			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-20
 Sheet: 1 OF 2
 Total Boring Depth: 57.5 FT/WELL DEPTH: 57 FT
 Date Started/Completed: OCTOBER 13, 2000
 Ground Level Elevation: 56.36 FT NGVD
 Measuring Point Elevation: 56.04 FT NGVD
 Static Water Level: 51.11 FT NGVD Date: 10/30/00
 Northing: 119621 Easting: 1080541

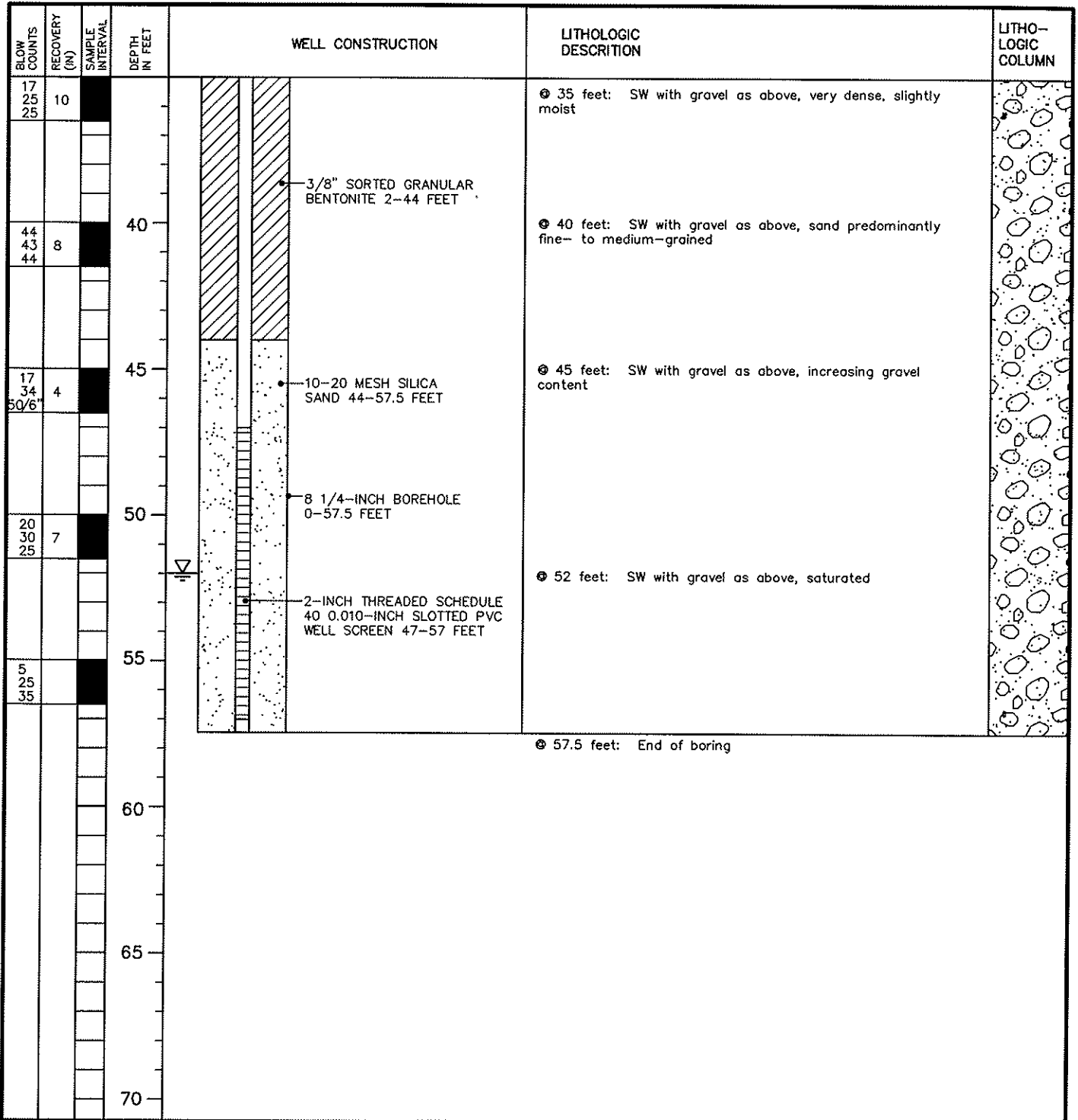
BLOW COUNTS	RECOVERY (in)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8" SORTED GRANULAR BENTONITE 2-44 FEET 2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 47 FEET 8 1/4-INCH BOREHOLE 0-57.5 FEET	0 - 1 feet: Gravel roadway 1 - 8 feet: Silt with sand (ML), ~20% very fine-grained sand, brown, slightly plastic, dry, medium stiff 8 - 18 feet: Silty sand (SM) @ 10 feet: SM as above, ~35% fines, very fine-grained, brown, dry, medium stiff @15 feet: SM as above, ~15% fines, tan/brown 18 - 57.5 feet: Well graded sand with gravel (SW) @ 20 feet: No recovery, pushed a cobble @ 23 feet: SW with gravel as above, coarse grained, based on drilling rate @ 25 feet: SW with gravel as above, fine- to coarse-grained, relatively even grain size distribution, trace fines, gravel up to 2 inches in diameter, dry @ 30 feet: SW with gravel as above, ~10% fines, gravel from 1/2 to 2 inches in diameter @ 31.4 feet: SW with gravel as above, moist @ 30 - 35 feet: SW with gravel as above, gravel up to 3 inches in diameter	
4 4 5	10		5			
4 4 4	14		10			
6 7 7	6		15			
26 25 25	0		20			
25 40 45	4		25			
17 17 17	5		30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW STEM-AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: MW-20
 Sheet: 2 OF 2
 Total Boring Depth: 57.5 FT/WELL DEPTH: 57 FT
 Date Started/Completed: OCTOBER 13, 2000
 Ground Level Elevation: 56.36 FT NGVD
 Measuring Point Elevation: 56.04 FT NGVD
 Static Water Level: 51.11 FT NGVD Date: 10/30/00
 Northing: 119621 Easting: 1080541



EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-21
 Sheet: 1 OF 2
 Total Boring Depth: 42 FEET
 Date Started/Completed: OCTOBER 16, 2000
 Ground Level Elevation: 40.33 FEET NGVD
 Measuring Point Elevation: 39.87 FEET NGVD
 Static Water Level: 34.94 FEET NGVD Date: 10/30/00
 Northing: 118920 Easting: 1080513

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8" SORTED GRANULAR BENTONITE 2-29 FEET 2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 32 FEET 8 1/4-INCH BOREHOLE 0-42 FEET 10-20 MESH SILICA SAND 29-42 FEET 2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 32-42 FEET	0 - 1 feet: Gravel roadway 1 - 12 feet: Silt with sand (ML) grading to Silty Sand (SM) @ 5 feet: Silt with sand (ML), ~30% very fine-grained sand, brown, non-plastic, dry, stiff @ 10 feet: Silty sand (SM), very fine-grained, ~40% fines, brown, dry to slightly moist, medium dense 12 - 42 feet: Well graded gravel with sand (GW) @ 15 - 20 feet: Well graded gravel with sand (GW), 1/4 to 2 inches in diameter, trace up to 3 inches in diameter, rounded, some sand and silt @ 20 feet: Well graded gravel (GW) in silty sand matrix, 1/2 to 2 inches in diameter, sand fine- to medium-grained, trace fines, moist @ 25 feet: GW as above, 1/4 to 1 inches in diameter, small amount of sand, trace fines, predominantly basaltic grains, some moisture @ 25 - 30 feet: GW as above, up to 4 inches in diameter @ 30 feet: GW as at 25 feet	
5 6	15		5			
6 10 13	16		10			
40 50/4	2		15			
14 40 17	2		20			
14 10 12	8		25			
24 15 15			30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-21
 Sheet: 2 OF 2
 Total Boring Depth: 42 FEET
 Date Started/Completed: OCTOBER 16, 2000
 Ground Level Elevation: 40.33 FEET NGVD
 Measuring Point Elevation: 39.87 FEET NGVD
 Static Water Level: 34.94 FEET NGVD Date: 10/30/00
 Northing: 118920 Easting: 1080513

BLOW COUNTS	RECOVERY (in)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
30 50/6"	1				@ 35 - 40 feet: GW as above, more sand than above, sand fine- to coarse-grained, predominantly coarse-grained, gravel up to 3 inches in diameter, basaltic grains, saturated	
40 50/5"	5	40	@ 42 feet: End of boring			
			45			
			50			
			60			
			65			
			70			
			75			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS, INC
 Drill Method: HOLLOW - STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-22
 Sheet: 1 OF 1
 Total Boring Depth: 21.5 FT/WELL DEPTH: 16 FT
 Date Started/Completed: OCTOBER 13, 2000
 Ground Level Elevation: 35.38 FT NGVD
 Measuring Point Elevation: 35.08 FT NGVD
 Static Water Level: 10.88 FT NGVD Date: 11/20/00
 Northing: 118235 Easting: 1080450

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				<p style="font-size: small;">FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8" SORTED GRANULAR BENTONITE 2-4 FEET 2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 6 FEET 10-20 MESH SILICA SAND 4-17 FEET 2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 6-16 FEET 8 1/4-INCH BOREHOLE 0-20 FEET 3/8" SORTED GRANULAR BENTONITE 17-20 FEET</p>	0 - 2 feet: Asphalt with gravel sub-base 2 - 15 feet: Silt with sand (ML), ~40% fine-grained sand, non-plastic, brown, dry to saturated @ 10 feet: ML as above, ~30% fine-grained sand, moist	
2 2 2	11		5			
2 0 2	10		10	▽		
3 8 10	14		15		15 - 21.5 feet: Silty sand (SM), saturated, some laminations @ 20 feet: SM as above, trace laminations	
4 7 8	10		20		@ 21.5 feet: End of boring	
			25			
			30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-23
 Sheet: 1 OF 2
 Total Boring Depth: 45 FEET
 Date Started/Completed: OCTOBER 18, 2000
 Ground Level Elevation: 46.38 FEET NGVD
 Measuring Point Elevation: 45.85 FEET NGVD
 Static Water Level: 40.96 FEET NGVD Date: 10/30/00
 Northing: 117372 Easting: 1080889

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8" SORTED GRANULAR BENTONITE 2-32 FEET 2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 35 FEET 8 1/4-INCH BOREHOLE 0-45 FEET 10-20 MESH SILICA SAND 32-45 FEET	0 - 2 feet: Gravel FILL 2 - 5 feet: Silt with sand (ML), ~25% fine-grained sand, brown, dry, slightly plastic 5 - 9 feet: Well graded sand (SW), fine- to medium-grained, relatively even grain size distribution, ~10% fines, brown, dry, medium dense 9 - 14 feet: Poorly graded sand (SP), fine-grained, brown, dry, medium dense 14 - 37 feet: Silty sand (SM) ⊙ 15 feet: SM as above, very fine-grained, ~25% fines, tan brown, dry, medium dense ⊙ 25 feet: SM as above, ~40% fines ⊙ 30 feet: SM as above, grey brown	
3 8 10	15		5			
7 10 7	14		10			
3 4 7	16		15			
4 7 7	18		20			
3 4 5	18		25			
7 10 11	18		30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-23
 Sheet: 2 OF 2
 Total Boring Depth: 45 FEET
 Date Started/Completed: OCTOBER 18, 2000
 Ground Level Elevation: 46.38 FEET NGVD
 Measuring Point Elevation: 45.85 FEET NGVD
 Static Water Level: 40.96 FEET NGVD Date: 10/30/00
 Northing: 117372 Easting: 1080889

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
18			0		⊙ 36.4 feet: SM as above, saturated	
			10			
			20			
			30			
			40			
9 11 14	12		40	10-20 MESH SILICA SAND 32-45 FEET 2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 35-45 FEET 8 1/4-INCH BOREHOLE 0-45 FEET	37 - 45 feet: Well graded sand (SW), fine- to coarse-grained, predominantly fine- to medium-grained, trace coarse-grained, angular, basaltic, dry, medium dense	
			45		⊙ 45 feet: SW as above, trace fine-grained gravel	
14			45		⊙ 45 feet: End of boring	
			50			
			55			
			60			
			65			
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-24
 Sheet: 1 OF 2
 Total Boring Depth: 62 FEET
 Date Started/Completed: OCTOBER 17, 2000
 Ground Level Elevation: 60.74 FEET NGVD
 Measuring Point Elevation: 60.47 FEET NGVD
 Static Water Level: 55.51 FEET NGVD Date: 10/30/00
 Northing: 119437 Easting: 1081749

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				<p style="font-size: small;">FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8" SORTED GRANULAR BENTONITE 2-49 FEET 2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 52 FEET 8 1/4-INCH BOREHOLE 0-62 FEET</p>	0 - 2 feet Asphalt with gravel sub-base 2 - 8 feet: Silt with sand (ML), ~40% very fine-grained sand, brown, non-plastic, dry, stiff 8 - 18 feet: Silty sand (SM), ~40% fines, very fine-grained, brown, dry, medium dense ⊗ 16.4 feet: SM as above, moist to very moist, loose 18 - 44 feet: Poorly graded sand (SP) ⊗ 20 feet: Poorly graded sand (SP), fine-grained, trace fines, brown, dry ⊗ 25 feet: SP as above, loose ⊗ 30 feet: Alternating layers (~ 6 inches thick) of SP as above with SM as at 8 - 18 feet, SM layers are moist, SP layers are dry	
4 7 8	12		5			
9 7 9	10		10			
5 4 4	8		15			
	18		20			
3 4 4	18		25			
4 4 10	18		30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-24
 Sheet: 2 OF 2
 Total Boring Depth: 62 FEET
 Date Started/Completed: OCTOBER 17, 2000
 Ground Level Elevation: 60.74 FEET NGVD
 Measuring Point Elevation: 60.47 FEET NGVD
 Static Water Level: 55.51 FEET NGVD Date: 10/30/00
 Northing: 119437 Easting: 1081749

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
4 7 7	18		35	<p>3/8" SORTED GRANULAR BENTONITE 2-49 FEET</p> <p>2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE 52 FEET</p> <p>8 1/4-INCH BOREHOLE 0-62 FEET</p> <p>10-20 MESH SILICA SAND 49-62 FEET</p> <p>2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 52-62 FEET</p>	@ 35 feet: SP as at 20 feet, very fine-grained, dry, medium dense @ 40 feet: Alternating layers (~ 4 inches thick) of SP with SM as at 30 feet	
4 6 7	18		40		44 - 49 feet: Poorly graded sand (SP), fine-grained, ~60% basalt grains and 40% quartz grains, salt and pepper appearance, dry, medium dense	
7 8 9	15		45		49 - 53 feet: Alternating layers of SP and SM as at 40 feet	
4 4 7	17		50		53 - 58 feet: Well graded sand with gravel (SW), ~25% fine-grained gravel (1/4 to 1 inch in diameter), basaltic and quartz grains giving salt and pepper appearance as at 44 - 49 feet, moist	
10 10 10	10		55		58 - 62 feet: Well graded sand (SW), fine- to coarse-grained, predominantly fine- to medium-grained, ~10% coarse-grained, trace fines, trace fine-grained gravel, basaltic, saturated	
4 4 18			60			
			62		@ 62 feet: End of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-24i
 Sheet: 1 OF 5
 Total Boring Depth: 165 FT/WELL DEPTH: 123 FT
 Date Started/Completed: APRIL 10, 2001/APRIL 25, 2001
 Ground Level Elevation: 61.14 FT NGVD
 Measuring Point Elevation: 60.59 FT NGVD
 Static Water Level: 4.97 FT NGVD Date: 5/29/01
 Northing: 119428 Easting: 1081745

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 72 feet: Silt to silt with sand (ML), dry	
			2	CEMENT 0-2 FEET	⊙ 2 feet: ML as above, tan, some organics	
			5	3/8" SORTED GRANULAR BENTONITE 2-10 FEET		
			10	2-INCH THREADED SCH 80 PVC CASING, GROUND SURFACE - 113 FEET	⊙ 8 feet: ML as above, trace very fine-grained sand, sand content increasing slightly with depth	
			15	UNIFORM GRANULAR BENTONITE GROUT, 10-103 FEET	⊙ 15 feet: ML as above, with sand, tan	
			20	10-INCH BOREHOLE 0-100 FEET		
			30		⊙ 30 feet: ML as above	
			35			

DATE: 03/28/07 FILENAME: 194006667
 IMAGES: XREF'S:

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-24i
 Sheet: 2 OF 5
 Total Boring Depth: 165 FT/WELL DEPTH: 123 FT
 Date Started/Completed: APRIL 10, 2001/APRIL 25, 2001
 Ground Level Elevation: 61.14 FT NGVD
 Measuring Point Elevation: 60.59 FT NGVD
 Static Water Level: 4.97 FT NGVD Date: 5/29/01
 Northing: 119428 Easting: 1081745

DATE: 03/28/07 FILENAME: 194006668 XREF'S:

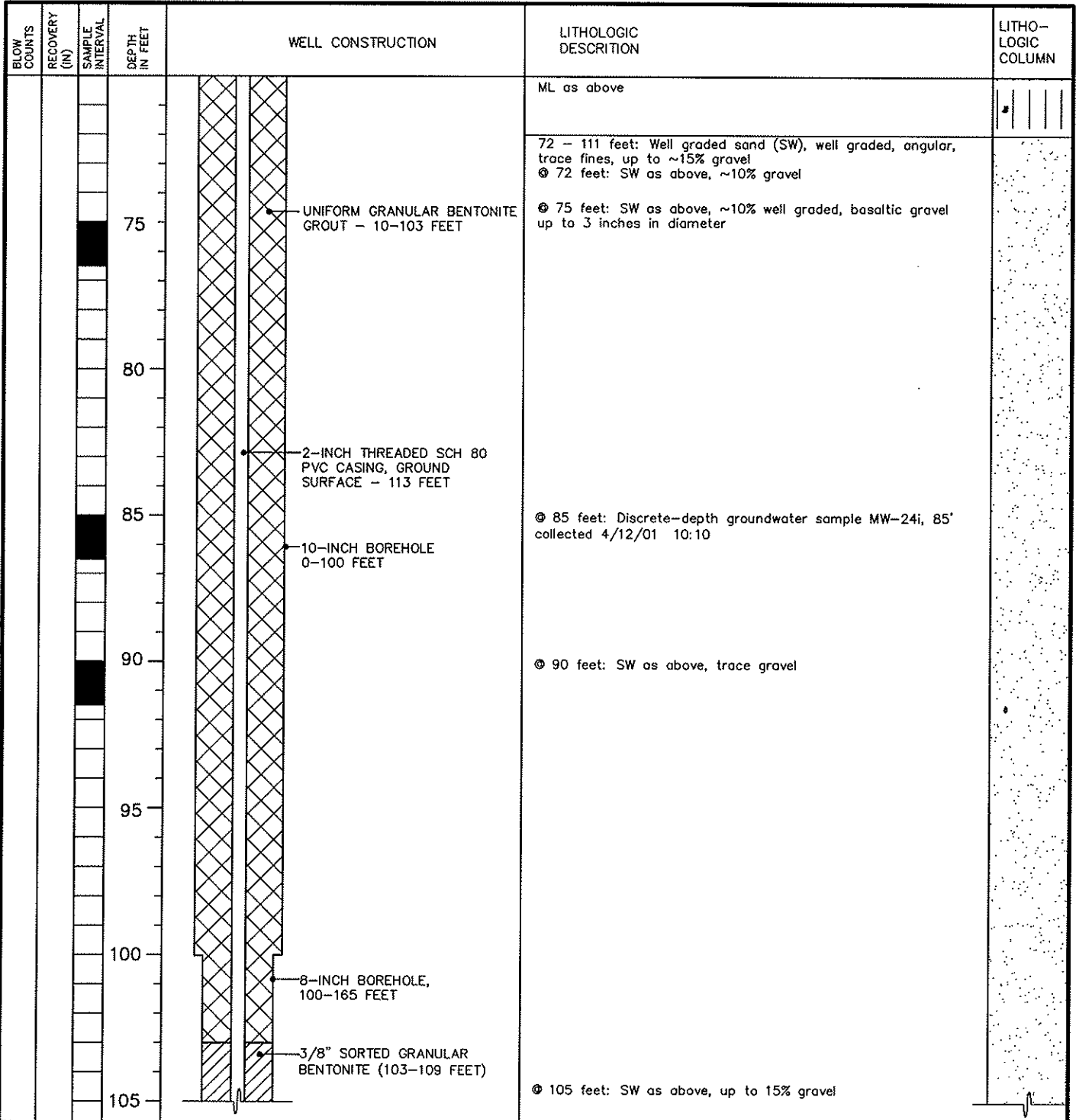
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
			40	UNIFORM GRANULAR BENTONITE GROUT - 10-103 FEET 2-INCH THREADED SCH 80 PVC CASING, GROUND SURFACE - 113 FEET 10-INCH BOREHOLE 0-100 FEET	ML as above		
			45		⊙ 45 feet: Silty sand lens (SM), poorly graded, dark brown		
			50				
			55				
			60			⊙ 58 feet: ML as above, trace fine-grained gravel up to 1/4 inch in diameter	
			65		▽	⊙ 65 feet: ML as above, saturated, ~25% well graded, angular sand, gravel clast size increasing with depth ⊙ 65 feet: Discrete-depth groundwater sample MW-24i, 65' collected 4/11/01 13:00	
			70				

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-24i
 Sheet: 3 OF 5
 Total Boring Depth: 165 FT/WELL DEPTH: 123 FT
 Date Started/Completed: APRIL 10, 2001/APRIL 25, 2001
 Ground Level Elevation: 61.14 FT NGVD
 Measuring Point Elevation: 60.59 FT NGVD
 Static Water Level: 4.97 FT NGVD Date: 5/29/01
 Northing: 119428 Easting: 1081745



DATE: 03/28/07 FILENAME: 194006669
 IMAGES: XREF'S:

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-24i
 Sheet: 4 OF 5
 Total Boring Depth: 165 FT/WELL DEPTH: 123 FT
 Date Started/Completed: APRIL 10, 2001/APRIL 25, 2001
 Ground Level Elevation: 61.14 FT NGVD
 Measuring Point Elevation: 60.59 FT NGVD
 Static Water Level: 4.97 FT NGVD Date: 5/29/01
 Northing: 119428 Easting: 1081745

DATE: 03/28/07 FILENAME: 194006670 XREF'S:

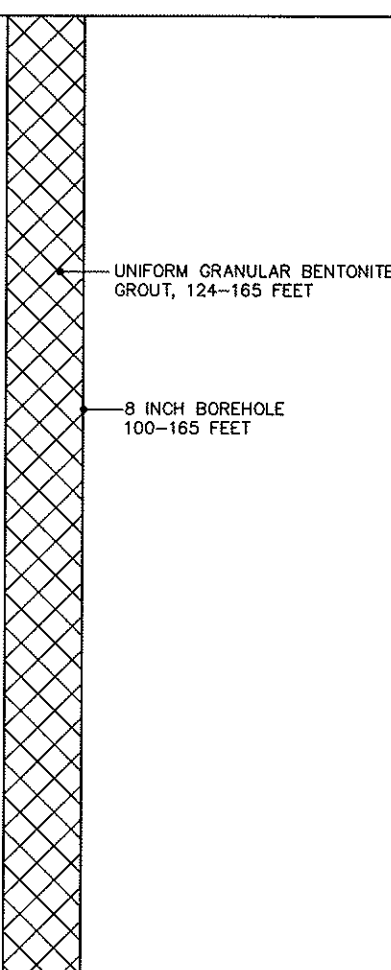

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110	<ul style="list-style-type: none"> • 3/8" SORTED GRANULAR BENTONITE 108-109 FEET • 20-40 MESH SILICA SAND 109-110 FEET • 2-INCH THREADED SCH 80 PVC CASING, GROUND SURFACE - 113 FEET • STAINLESS STEEL CENTRALIZER • 8 INCH BOREHOLE 100-165 FEET • 10-20 MESH SILICA SAND 110-124 FEET • 2-INCH THREADED SCH 80 0.010-INCH SLOTTED PVC WELL SCREEN, 113-123 FEET • STAINLESS STEEL CENTRALIZER • UNIFORM GRANULAR BENTONITE GROUT, 124-165 FEET 	<p>• 105 feet: Discrete-depth groundwater sample MW-24i, 105' collected 4/12/01 14:30</p> <p>111 - 124 feet: Well graded sand with gravel (SW), ~20%-30% gravel, gravel is basaltic</p> <p>124 - 150 feet: Well graded gravel with sand (GW), some tan cementation on clasts</p> <p>• 125 feet: Discrete-depth groundwater sample MW-24i, 125' collected 4/17/01 09:30</p>	
			120			
			125			
			130			
			135			
			140			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-24i
 Sheet: 5 OF 5
 Total Boring Depth: 165 FT/WELL DEPTH: 123 FT
 Date Started/Completed: APRIL 10, 2001/APRIL 25, 2001
 Ground Level Elevation: 61.14 FT NGVD
 Measuring Point Elevation: 60.59 FT NGVD
 Static Water Level: 4.97 FT NGVD Date: 5/29/01
 Northing: 119428 Easting: 1081745

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145	 <p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT, 124-165 FEET</p> <p style="margin-left: 20px;">8 INCH BOREHOLE 100-165 FEET</p>	GW as above ◎ 145 feet: GW as above, trace fines ◎ 145 feet: Discrete--depth groundwater sample MW-24i, 145' collected 4/18/01 14:30	
			150		150 - 165 feet: Well graded gravel with sand and silt (GW), clasts up to 3 inches in diameter, predominantly basaltic ◎ 165 feet: Discrete--depth groundwater sample MW-24i, 165' collected 4/20/01 13:00 ◎ 165 feet: End of boring	
			155			
			160			
			165			
			170			
			175			

DATE: 03/28/07 FILENAME: 194006671 XREF'S:

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-25
 Sheet: 1 OF 3
 Total Depth: 85 FEET
 Date Started/Completed: OCTOBER 17, 2000
 Ground Level Elevation: 80.27 FEET NGVD
 Measuring Point Elevation: 79.91 FEET NGVD
 Static Water Level: 75.05 FEET NGVD Date: 10/30/00
 Northing: 117917 Easting: 1081716

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				<p>FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8" SORTED GRANULAR BENTONITE 2-72 FEET 2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 75 FEET 8 1/4-INCH BOREHOLE 0-85 FEET</p>	0 - 2 feet: Asphalt with gravel sub-base 2 - 12 feet: Poorly graded sand (SP), fine-grained, trace fines, rusty brown, dry, medium dense @ 10 feet: SP as above, very fine-grained, no fines 12 - 18 feet: Silty sand (SM), very fine-grained, ~25% fines, tan brown, dry, medium dense 18 - 22 feet: Poorly graded sand (SP), fine-grained, trace fines, dark brown, dry, medium dense 22 - 29 feet: Silty sand (SM), very fine-grained, ~20% fines, tan brown, dry, medium dense 29 - 36 feet: Alternating layers (~ 3 inches thick) of well graded sand and gravel (SW) with Silt with Sand (ML). SW is fine- to coarse-grained, ~10% fine-grained gravel, trace fines, dry, ML is ~30% fine-grained sand, dark brown, moist to very moist	
8 8 9	13		5			
4 4 5	12		10			
7 10 9	16		15			
5 10 12	18		20			
5 5 6	18		25			
3 6 12	10		30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: MW-25
 Sheet: 2 OF 3
 Total Depth: 85 FEET
 Date Started/Completed: OCTOBER 17, 2000
 Ground Level Elevation: 80.27 FEET NGVD
 Measuring Point Elevation: 79.91 FEET NGVD
 Static Water Level: 75.05 FEET NGVD Date: 10/30/00
 Northing: 117917 Easting: 1081716

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
40 45 45	6		40		36 - 69 feet: Well graded gravel (GW) @ 40 feet: GW as above, up to 2 inches in diameter, basaltic, some fine- to coarse-grained sand, dry	
17 50/4"	3		45		@ 45 feet: GW as above, ~10% fines, more sand than above, sand fine- to coarse-grained, predominantly coarse-grained, gravel is basaltic, moist	
10 25 3	3		50			
20 40 40	6		55			
50 50/6"	3		60		@ 58 feet: GW as above, up to 4 inches in diameter @ 60 - 65 feet: GW as above, 1 to 4 inches in diameter	
30 40 40	4		65			
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

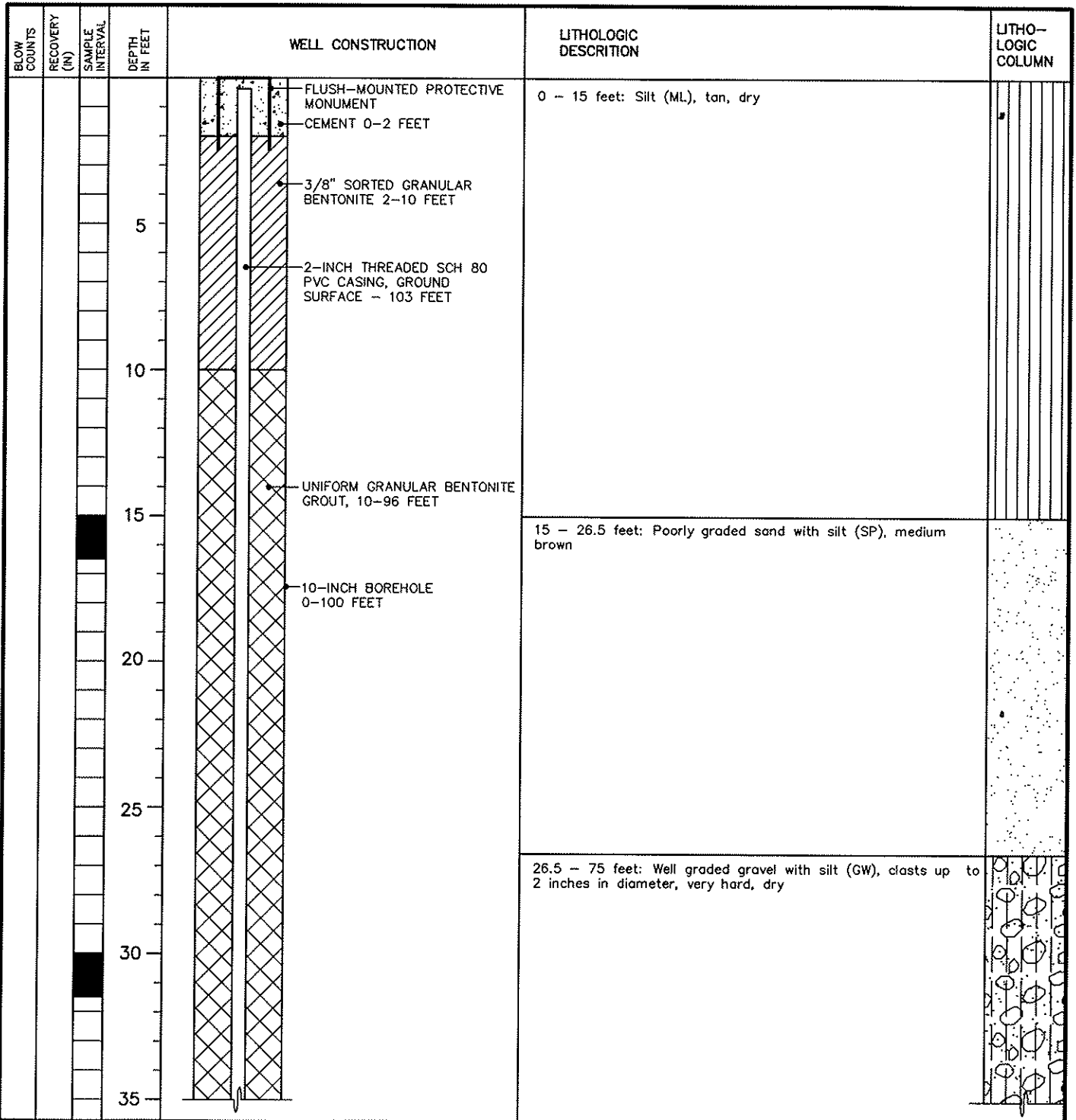
Boring Number: MW-25
 Sheet: 3 OF 3
 Total Depth: 85 FEET
 Date Started/Completed: OCTOBER 17, 2000
 Ground Level Elevation: 80.27 FEET NGVD
 Measuring Point Elevation: 79.91 FEET NGVD
 Static Water Level: 75.05 FEET NGVD Date: 10/30/00
 Northing: 117917 Easting: 1081716

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
25 20 20	14			<p>3/8" SORTED GRANULAR BENTONITE 2-72 FEET</p> <p>2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE 75 FEET</p> <p>8 1/4-INCH BOREHOLE 0-85 FEET</p> <p>10-20 MESH SILICA SAND 72-85 FEET</p> <p>2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 75-85 FEET</p>	69 - 85 feet: Well graded sand (SW), fine- to coarse-grained, predominantly coarse-grained, trace 1/2 inch diameter gravel, basaltic, moist		
13 13 25	12		75		<p>⊙ 75 feet: SW as above, predominantly fine- to medium-grained, trace coarse-grained, trace fines, trace fine-grained gravel, moist</p>		
10 15 25	16		80		<p>⊙ 80 feet: SW as above, saturated</p>		
10 20 35	10		85		<p>⊙ 85 feet: SW as above, ~10% coarse-grained, trace 1/4 to 1/2 inch diameter gravel, angular, basaltic, saturated</p> <p>⊙ 85 feet: End of boring</p>		
			90				
			95				
			100				
			105				

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: <u>PORT OF VANCOUVER/SWAN MANUFACTURING</u> Project Number: <u>275-1940-006</u> Location: <u>VANCOUVER, WA</u> PMX Representative: <u>CHRIS HAMILTON/TERRY HANBURG</u> Drilled By: <u>WESTERBURG DRILLING</u> Drill Method: <u>CABLE TOOL</u> Soil Sample Method: <u>2" SPLIT SPOON</u> Groundwater Sample Method: <u>TEMPORARY WELL POINT</u>	Boring Number: <u>MW-26i</u> Sheet: <u>1 OF 6</u> Total Boring Depth: <u>181 FT/WELL DEPTH: 113 FT</u> Date Started/Completed: <u>APRIL 30, 2001/MAY 18, 2001</u> Ground Level Elevation: <u>82.35 FT NGVD</u> Measuring Point Elevation: <u>82.04 FT NGVD</u> Static Water Level: <u>4.62 FT NGVD</u> Date: <u>6/25/01</u> Northing: <u>118143</u> Easting: <u>1082098</u>
---	--



DATE: 03/28/07 FILENAME: 194006661 IMAGES: XREF'S:

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON/TERRY HANBURG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-26i
 Sheet: 2 OF 6
 Total Boring Depth: 181 FT / WELL DEPTH: 113 FT
 Date Started/Completed: APRIL 30, 2001/MAY 18, 2001
 Ground Level Elevation: 82.35 FT NGVD
 Measuring Point Elevation: 82.04 FT NGVD
 Static Water Level: 4.62 FT NGVD Date: 6/25/01
 Northing: 118143 Easting: 1082098

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40	<p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT - 10-96 FEET</p> <p style="margin-left: 20px;">2-INCH THREADED SCH 80 PVC CASING, GROUND SURFACE - 103 FEET</p> <p style="margin-left: 20px;">10-INCH BOREHOLE 0-100 FEET</p>	GW as above	
			45		@ 45 feet: GW as above, some sand, gravel clasts up to 6 inches in diameter	
			50			
			55			
			60			
			65		@ 65 feet: GW as above, some poorly graded sand	
			70			

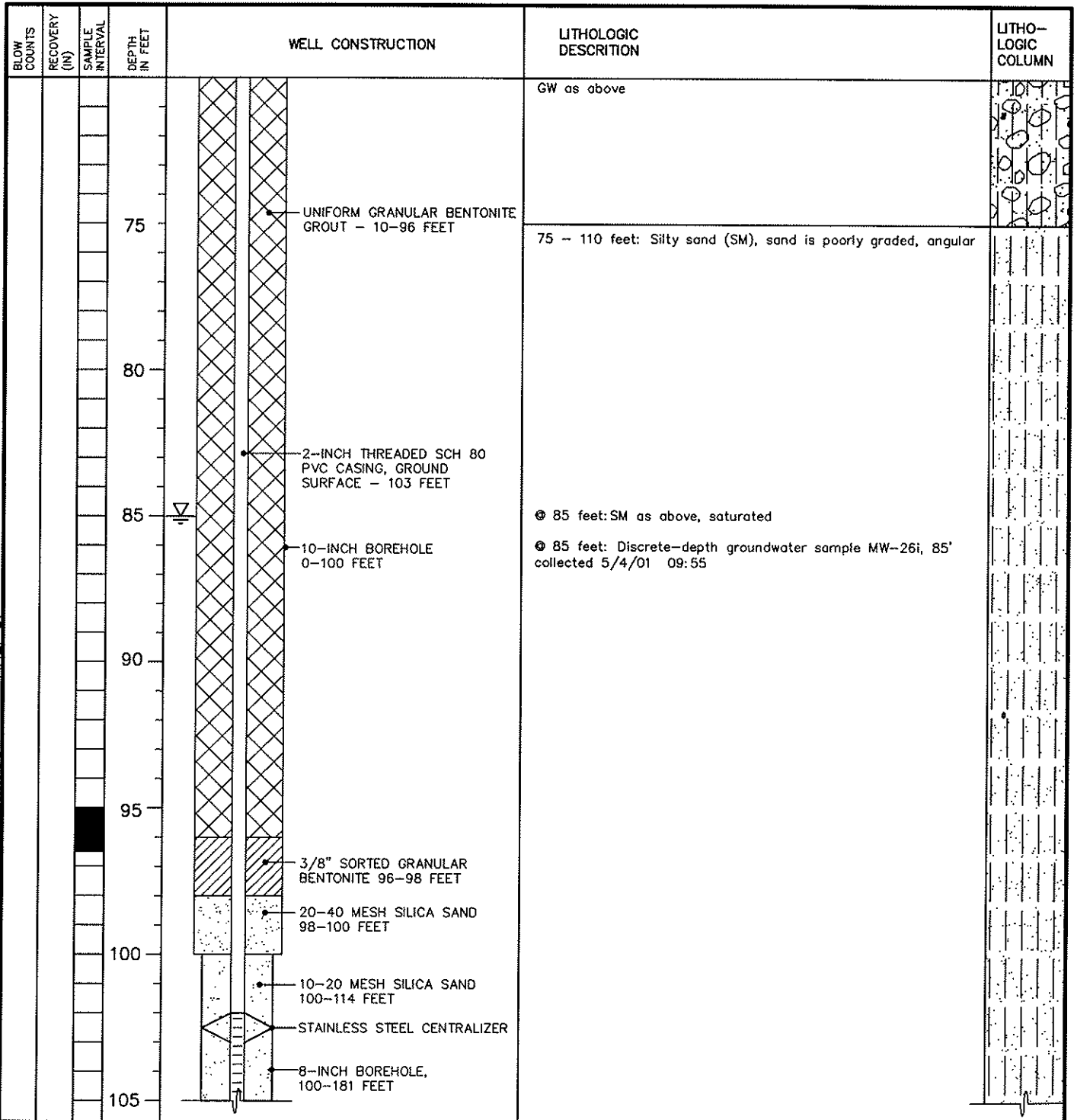
DATE: 03/28/07 FILENAME: 194006662 IMAGES: XREF'S:

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON/TERRY HANBURG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-26i
 Sheet: 3 OF 6
 Total Boring Depth: 181 FT / WELL DEPTH: 113 FT
 Date Started/Completed: APRIL 30, 2001/MAY 18, 2001
 Ground Level Elevation: 82.35 FT NGVD
 Measuring Point Elevation: 82.04 FT NGVD
 Static Water Level: 4.62 FT NGVD Date: 6/25/01
 Northing: 118143 Easting: 1082098

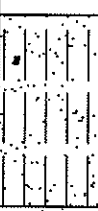





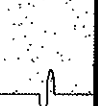


IMAGES: XREF'S:
 DATE: 03/28/07 FILENAME: 194006663

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: <u>PORT OF VANCOUVER/SWAN MANUFACTURING</u> Project Number: <u>275-1940-006</u> Location: <u>VANCOUVER, WA</u> PMX Representative: <u>CHRIS HAMILTON/TERRY HANBURG</u> Drilled By: <u>WESTERBURG DRILLING</u> Drill Method: <u>CABLE TOOL</u> Soil Sample Method: <u>2" SPLIT SPOON</u> Groundwater Sample Method: <u>TEMPORARY WELL POINT</u>	Boring Number: <u>MW-26i</u> Sheet: <u>4 OF 6</u> Total Boring Depth: <u>181 FT / WELL DEPTH: 113 FT</u> Date Started/Completed: <u>APRIL 30, 2001/MAY 18, 2001</u> Ground Level Elevation: <u>82.35 FT NGVD</u> Measuring Point Elevation: <u>82.04 FT NGVD</u> Static Water Level: <u>4.62 FT NGVD</u> Date: <u>6/25/01</u> Northing: <u>118143</u> Easting: <u>1082098</u>
---	--

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110	<ul style="list-style-type: none"> • 10-20 MESH SILICA SAND 100-114 FEET • 2-INCH THREADED SCH 80 0.010-INCH SLOTTED PVC WELL SCREEN 103-113 FEET • STAINLESS STEEL CENTRALIZER 	SM as above Ⓣ 105 feet: Discrete-depth groundwater sample MW-26i, 105' collected 5/4/01 13:30	
			115	<ul style="list-style-type: none"> • 3/8" SORTED GRANULAR BENTONITE 114-118 FEET 	110 -127 feet: Well graded sand (SW) Ⓣ 112 feet: SW as above, ~30% gravel up to 4 inches in diameter, gravel is basaltic	
			120	<ul style="list-style-type: none"> • UNIFORM GRANULAR BENTONITE 118-181 FEET 	Ⓣ 120 feet: SW as above, trace gravel up to 1/2 inch in diameter Ⓣ 120 feet: Discrete-depth groundwater sample MW-26i, 120' collected 5/8/01 12:55	
			125		127 - 140 feet: Poorly graded sand (SP), coarse-grained to fine-grained, trace gravel Ⓣ 127 feet: SP as above, basaltic gravel up to 3 inches in diameter Ⓣ 129 feet: SP as above, ~10% gravel up to 3 inches in diameter, some cementation on gravel clasts, trace fines	
			130		Ⓣ 137 feet: SP as above, very fine-grained sand, ~20% fines, trace gravel up to 2 inches in diameter	
			135			
			140			


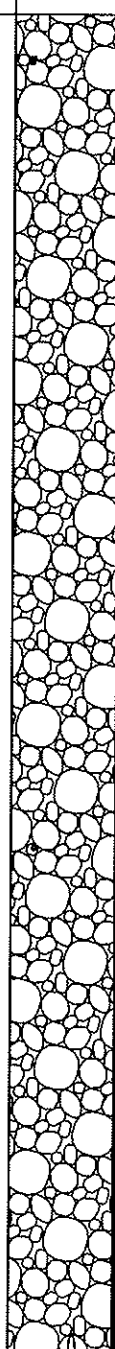
IMAGES: XREF'S:
 DATE: 03/28/07 FILENAME: 194006664

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: CHRIS HAMILTON/TERRY HANBURG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-26i
 Sheet: 5 OF 6
 Total Boring Depth: 181 FT / WELL DEPTH: 113 FT
 Date Started/Completed: APRIL 30, 2001/MAY 18, 2001
 Ground Level Elevation: 82.35 FT NGVD
 Measuring Point Elevation: 82.04 FT NGVD
 Static Water Level: 4.62 FT NGVD Date: 6/25/01
 Northing: 118143 Easting: 1082098

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145	 <p>UNIFORM GRANULAR BENTONITE GROUT 118-181</p> <p>8 INCH BOREHOLE 100-181 FEET</p>	<p>140 - 175 feet: Well graded gravel (GW) in silty sand matrix</p> <p>⊙ 140 feet: Discrete-depth groundwater sample MW-26i, 140' collected 5/9/01 14:20</p> <p>⊙ 141 feet: GW as above, predominantly less than 1/4 inch in diameter with trace clasts up to 3 inches in diameter, ~10% fine-grained sand, some fines, hard drilling</p> <p>⊙ 153 feet: GW as above, very hard drilling</p> <p>⊙ 155 feet: GW as above, trace clay</p> <p>⊙ 160 feet: Discrete-depth groundwater sample MW-26i, 160' collected 5/11/01 08:30</p> <p>⊙ 163 feet: GW as above, drilling not so hard</p> <p>⊙ 172 feet: GW as above, ~ 60% well graded gravel and 40% well graded sand in an olive brown silty clay matrix</p>	
			150			
			155			
			160			
			165			
			170			
			175			

DATE: 03/28/07 FILENAME: 194006665 IMAGES: XREF'S:

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: <u>PORT OF VANCOUVER/SWAN MANUFACTURING</u> Project Number: <u>275-1940-006</u> Location: <u>VANCOUVER, WA</u> PMX Representative: <u>CHRIS HAMILTON/TERRY HANBURG</u> Drilled By: <u>WESTERBURG DRILLING</u> Drill Method: <u>CABLE TOOL</u> Soil Sample Method: <u>2" SPLIT SPOON</u> Groundwater Sample Method: <u>TEMPORARY WELL POINT</u>	Boring Number: <u>MW-26i</u> Sheet: <u>6 OF 6</u> Total Boring Depth: <u>181 FT / WELL DEPTH: 113 FT</u> Date Started/Completed: <u>APRIL 30, 2001/MAY 18, 2001</u> Ground Level Elevation: <u>82.35 FT NGVD</u> Measuring Point Elevation: <u>82.04 FT NGVD</u> Static Water Level: <u>4.62 FT NGVD</u> Date: <u>6/25/01</u> Northing: <u>118143</u> Easting: <u>1082098</u>
---	--

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180	UNIFORM GRANULAR BENTONITE GROUT 118-181 8 INCH BOREHOLE 100-181 FEET	As above Well graded gravel (GW) in silty sand matrix ● 180 feet: Discrete-depth groundwater sample MW-26i, 180' collected 5/15/01 09:25 ● 181 feet: End of boring	
			185			
			190			
			195			
			200			
			205			
			210			

DATE: 03/28/07 FILENAME: 194006666 IMAGES: XREF'S:

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBERG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-28i
 Sheet: 1 OF 4
 Total Boring Depth: 130 FT/ WELL DEPTH: 85 FT
 Date Started/Completed: MARCH 23, 2001/APRIL 6, 2001
 Ground Level Elevation: 31.11 FT NGVD
 Measuring Point Elevation: 30.90 FT NGVD
 Static Water Level: 4.94 FT NGVD Date: 4/30/01
 Northing: 117831 Easting: 1079675

BLOW COUNTS	RECOVERY (in)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 3.5 feet: Gravel FILL	
			0-2	CEMENT 0-2 FEET		
			5	UNIFORM GRANULAR BENTONITE GROUT, 2-68 FEET	3.5 - 11 feet: Sand FILL ⊗ 4 feet: Geosynthetic fabric ⊗ 5 feet: FILL as above, loose ⊗ 6.5 feet: FILL as above, brick red fine-grained sand with occasional white flakes ⊗ 9.5 feet: FILL as above, silt, grey/brown mottled, rare wood and plastic fragments	
2	18		5			
			10			
			15	2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 75 FEET	11 - 21 feet: Silt (ML), dark brown to dark olive green, moist, very stiff ⊗ 12 feet: ML as above, some organic material (roots), H2S odor ⊗ 15 feet: ML as above, clayey, no odor	
6 10 8	18		15			
			20	10-INCH BOREHOLE 0-100 FEET		
6 6 4	16		20		21 - 26 feet: Poorly graded sand (SP), fine-grained, light olive green, medium dense, moist	
			25		26 - 32 feet: Poorly graded sand (SP), medium-grained, angular, medium dense ⊗ 27 feet: SP as above, saturated	
5 4 7	16		25			
			30		⊗ 30 feet: Discrete-depth groundwater sample MW-28, 30', collected 3/26/01 10:45	
			35		32 - 57 feet: Well graded sand with gravel (SW), sand is coarse-grained, gravel is sub-rounded to rounded, basaltic, saturated	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBERG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-28i
 Sheet: 2 OF 4
 Total Boring Depth: 130 FT/ WELL DEPTH: 85 FT
 Date Started/Completed: MARCH 23, 2001/APRIL 6, 2001
 Ground Level Elevation: 31.11 FT NGVD
 Measuring Point Elevation: 30.90 FT NGVD
 Static Water Level: 4.94 FT NGVD Date: 4/30/01
 Northing: 117831 Easting: 1079675

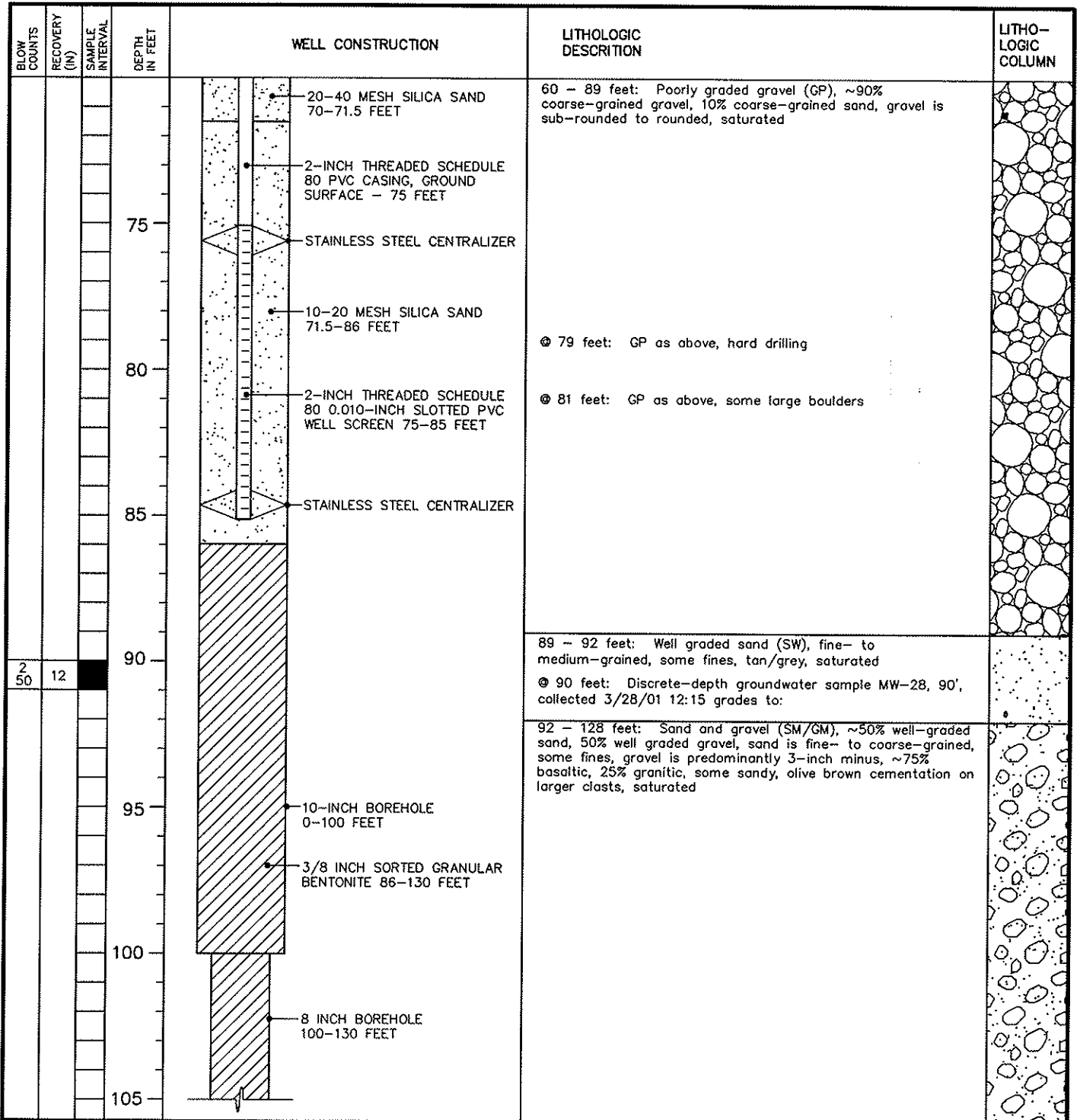
BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		32 - 57 feet: Well graded sand with gravel (SW), sand is coarse-grained, gravel is sub-rounded to rounded, basaltic, saturated ◎ 38 feet: SW as above, ~80% coarse-grained sand, ~20% fine- to coarse-grained gravel	
			45	• UNIFORM GRANULAR BENTONITE GROUT - 2-68 FEET • 2-INCH THREADED SCHEDULE 80 PVC CASING, GROUND SURFACE - 75 FEET	◎ 50 feet: Discrete-depth groundwater sample MW-28, 50', collected 3/26/01 14:40 ◎ 53 feet: SW as above, ~60% coarse-grained sand, 40% fine- to coarse-grained gravel	
			50			
			55	• 10-INCH BOREHOLE 0-100 FEET	57 - 60 feet: Well graded gravel (GW), ~60% gravel 40% coarse-grained sand, gravel predominantly 2-inch minus with trace cobbles up to 6 inches in diameter, saturated	
			60			
			65		60 - 89 feet: Poorly graded gravel (GP), ~90% coarse-grained gravel, 10% coarse-grained sand, gravel is sub-rounded to rounded, saturated ◎ 68 feet: GP as above, hard drilling ◎ 70 feet: GP as above, trace cobbles up to 8 inches in diameter ◎ 70 feet: Discrete-depth groundwater sample MW-28, 70', collected 3/27/01 10:45	
			70	• 3/8 INCH SORTED GRANULAR BENTONITE 68-70 FEET		

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBERG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-28i
 Sheet: 3 OF 4
 Total Boring Depth: 130 FT/ WELL DEPTH: 85 FT
 Date Started/Completed: MARCH 23, 2001/APRIL 6, 2001
 Ground Level Elevation: 31.11 FT NGVD
 Measuring Point Elevation: 30.90 FT NGVD
 Static Water Level: 4.94 FT NGVD Date: 4/30/01
 Northing: 117831 Easting: 1079675

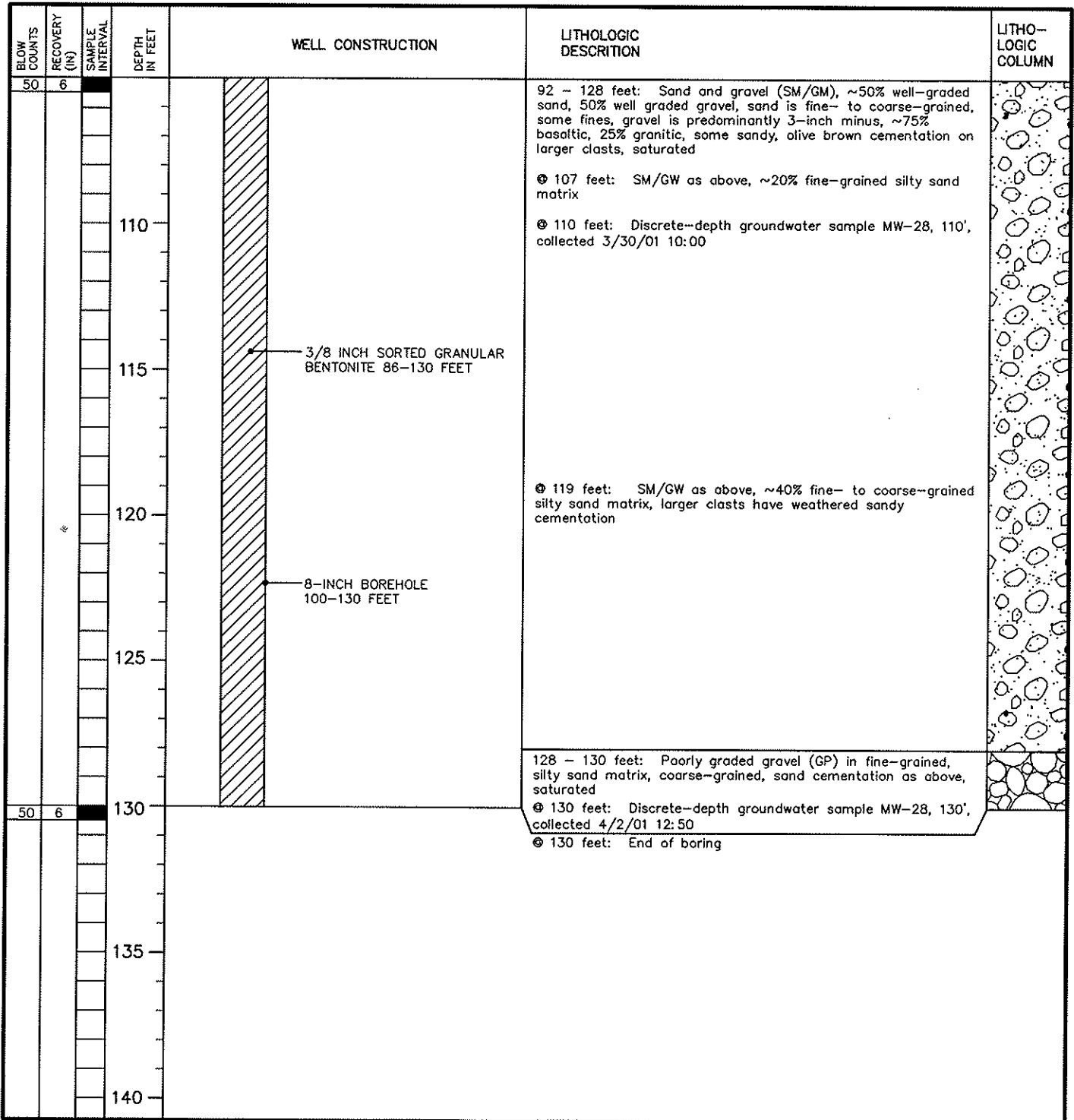


EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBERG
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-28i
 Sheet: 4 OF 4
 Total Boring Depth: 130 FT/ WELL DEPTH: 85 FT
 Date Started/Completed: MARCH 23, 2001/APRIL 6, 2001
 Ground Level Elevation: 31.11 FT NGVD
 Measuring Point Elevation: 30.90 FT NGVD
 Static Water Level: 4.94 FT NGVD Date: 4/30/01
 Northing: 117831 Easting: 1079675



BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: THOMPSON AND MILL PLAIN
 PMX Representative: MIKE MARSHALL
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: MW-28s
 Sheet: 1 OF 1
 Total Boring Depth: 30 FT / WELL DEPTH: 29 FT
 Date Completed: OCTOBER 5, 2004
 Ground Level Measurement: 29.21 FT
 Initial Water Level ∇ 25.8 FT (AUGER INGROUND)
 Measuring Point Elevation: 29.08 FT
 Static Water Level: 25.46 FT Date: 10/07/04
 Northing: 117927.4 Easting: 1079806.5

BLOW COUNTS	RECOVERY (in)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
5 2 1	6"		5		No sample obtained	
5 7 3	4"		10		5-15 feet: SANDY GRAVELLY SILT (GM) - dark gray to black, loose, moist, sand is fine grained, rounded to sub rounded fine gravel	
5 4 4	4"		15		15-20 feet: SILT (ML) - dark gray, soft, moist to wet, micaceous	
3 3 5	16"		20		20-25 feet: SILTY SAND (SM) - dark gray, loose, moist to wet, micaceous, sand is fine grained	
5 7 5	18"		25		25-25.5 feet: SAND (SW) - dark gray, loose, saturated, micaceous, medium grained 25.5-30 feet: SILTY SAND (SM) - dark gray, loose, saturated, micaceous, fine grained	
			30		30 feet: End of boring	
			35			

DATE: 03/28/07 2:59pm FILENAME: P194006284

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBURG/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-29i
 Sheet: 1 OF 4
 Total Boring Depth: 130 FEET/WELL DEPTH: 125 FT
 Date Started/Completed: MARCH 6, 2001/MARCH 16, 2001
 Ground Level Elevation: 31.32 FT NGVD
 Measuring Point Elevation: 30.73 FT NGVD
 Static Water Level: 5.72 FT NGVD Date: 4/30/01
 Northing: 117364 Easting: 1078364

FILE: 194006653
 DATE: Mar 28, 2007 - 12:09pm PLOTTED BY: morgapau XREF'S:

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0-3 feet: Asphalt with sand and gravel subbase	
			5	CEMENT 0-2 FEET		
			10	3/8" SORTED GRANULAR BENTONITE 2-21 FEET	3-8 feet: Silty sand (SM), very fine-grained, tan to gold, dry	
			15	2-INCH THREADED SCH 80 PVC CASING, GROUND SURFACE - 115 FEET	8-34 feet: Silt (ML), variable sand content, sand content generally increasing with depth, low to high plasticity, moist to dry ⊗ 9 feet: ML as above high plasticity, moist ⊗ 10 feet: ML as above, dry, sandy	
240	18		20	10-INCH BOREHOLE 0-100 FEET	⊗ 15 feet: ML as above, dark grey, some mica, moist	
			25		⊗ 20 feet: ML as above, very fine-grained sand	
			30	UNIFORM GRANULAR BENTONITE GROUT - 21-108 FEET	⊗ 30 feet: ML as above, some sand, high plasticity, saturated ⊗ 30 feet: Discrete-depth groundwater sample MW-29i 30' collected 3/6/01 13:00 ⊗ 30.5 feet: ML as above, ~30% medium to coarse-grained sand, low plasticity ⊗ 33 feet: ML as above, ~25% very fine-grained sand, ~15% medium to coarse-grained sand, sand becoming angular	
			35			

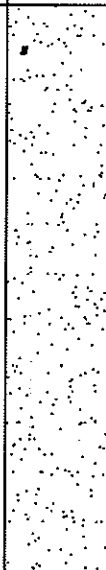

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBURG/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-29i
 Sheet: 2 OF 4
 Total Boring Depth: 130 FEET/WELL DEPTH: 125 FT
 Date Started/Completed: MARCH 6, 2001/MARCH 16, 2001
 Ground Level Elevation: 31.32 FT NGVD
 Measuring Point Elevation: 30.73 FT NGVD
 Static Water Level: 5.72 FT NGVD Date: 4/30/01
 Northing: 117364 Easting: 1078364

FILE: 194006654
 DATE: Mar 28, 2007 - 12:10pm
 PLOTTED BY: morgapau
 XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40	UNIFORM GRANULAR BENTONITE GROUT - 21-108 FEET	34-50 feet: Well graded sand (SW), predominantly coarse-grained, trace fine-grained gravel	
15 15 7	12		45			
			50	2-INCH THREADED SCH 80 PVC CASING, GROUND SURFACE ~ 115 FEET 10-INCH BOREHOLE 0-100 FEET	50-130 feet: Well graded sand with gravel (SW), sand fine- to medium-grained, predominantly coarse-grained, trace fines, gravel content variable ◎ 50 feet: Discrete-depth groundwater sample MW-29i 50' collected 3/7/01 12:30 ◎ 50 feet: SW as above, angular, ~30% gravel, clasts up to 1 1/2 inches in diameter ◎ 55 feet: SW as above, ~45% fine- to coarse-grained gravel, clasts up to 3 inches in diameter	
25 20 20	12		60			
			65		◎ 65 feet: SW as above, sand becoming less angular, trace fines	
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: TERRY HANBURG/CHRIS HAMILTON
 Drilled By: WESTERBURG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: TEMPORARY WELL POINT

Boring Number: MW-29i
 Sheet: 3 OF 4
 Total Boring Depth: 130 FEET/WELL DEPTH: 125 FT
 Date Started/Completed: MARCH 6, 2001/MARCH 16, 2001
 Ground Level Elevation: 31.32 FT NGVD
 Measuring Point Elevation: 30.73 FT NGVD
 Static Water Level: 5.72 FT NGVD Date: 4/30/01
 Northing: 117364 Easting: 1078364

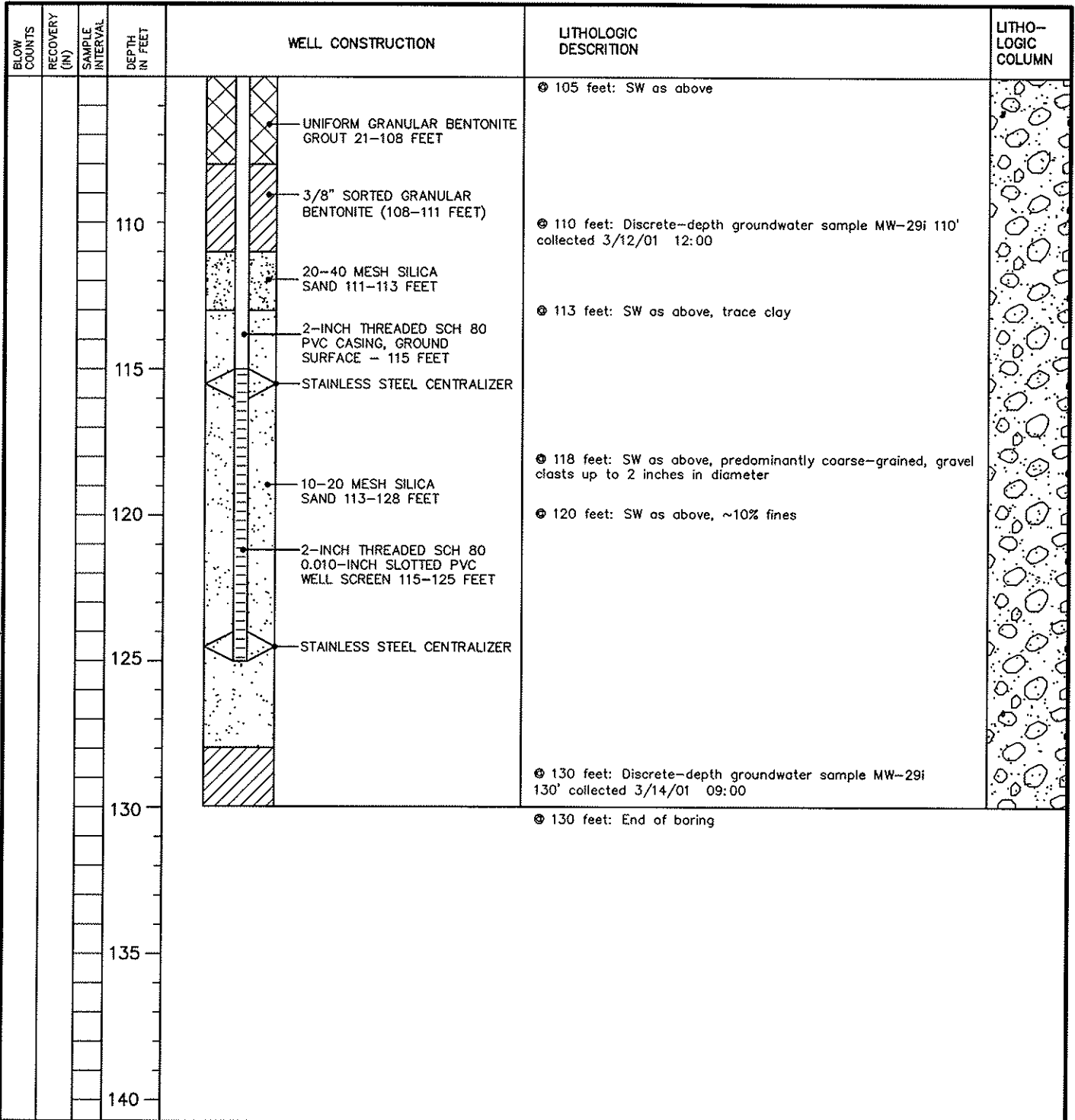
BLOW COUNTS	RECOVERY (in)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	<p>UNIFORM GRANULAR BENTONITE GROUT - 21-108 FEET</p> <p>2-INCH THREADED SCH 80 PVC CASING, GROUND SURFACE - 115 FEET</p> <p>10-INCH BOREHOLE 0-100 FEET</p>	<p>SW as above</p> <p>⊙ 70 feet: Discrete-depth groundwater sample MW-29i 70' collected 3/8/01 09:00</p> <p>⊙ 78 feet: SW as above, sand predominantly coarse-grained, gravel clasts up to 1 inch in diameter</p> <p>⊙ 90 feet: SW as above</p> <p>⊙ 90 feet: Discrete-depth groundwater sample MW-29i 90' collected 3/8/01 14:30</p>	
			80			
			85			
			90			
			95			
			100	<p>8-INCH BOREHOLE 100-130 FEET</p>		
			105			

FILE: 194006655
 DATE: Mar 28 2007 - 12:11pm PLOTTED BY: marcapau XREF'S: IMAGES:

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: <u>PORT OF VANCOUVER/SWAN MANUFACTURING</u> Project Number: <u>275-1940-006</u> Location: <u>VANCOUVER, WA</u> PMX Representative: <u>TERRY HANBURG/CHRIS HAMILTON</u> Drilled By: <u>WESTERBURG DRILLING</u> Drill Method: <u>CABLE TOOL</u> Soil Sample Method: <u>2" SPLIT SPOON</u> Groundwater Sample Method: <u>TEMPORARY WELL POINT</u>	Boring Number: <u>MW-29i</u> Sheet: <u>4 OF 4</u> Total Boring Depth: <u>130 FEET/WELL DEPTH: 125 FT</u> Date Started/Completed: <u>MARCH 6, 2001/MARCH 16, 2001</u> Ground Level Elevation: <u>31.32 FT NGVD</u> Measuring Point Elevation: <u>30.73 FT NGVD</u> Static Water Level: <u>5.72 FT NGVD</u> Date: <u>4/30/01</u> Northing: <u>117364</u> Easting: <u>1078364</u>
---	---



FILE: 194006656
 DATE: Mar 28, 2007 - 12:12pm
 PLOTTED BY: morgapau
 XREF'S:

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER/SWAN MFG Boring Number: MW-30i
 Project Number: 275-1940-006-05-6300 Sheet: 1 OF 6
 Location: ST. SERVICES Total Boring Depth: 187 FEET/WELL DEPTH: 85 FEET
 PMX Representative: INGMAR SAUL Date Completed: MARCH 3, 2003
 Drilled By: WESTERBERG DRILLING Ground Level Elevation: 29.82 FEET
 Drill Method: CABLE TOOL Measuring Point Elevation: 29.61 FEET
 Soil Sample Method: SPLIT SPOON Static Water Level: ~24 FEET Date: 2/03
 Groundwater Sample Method: SUBMERSIBLE PUMP Northing: 118607.3 Easting: 1077713.8

FILE: P194006022
 DATE: Mar 28, 2007 - 9:30am PLOTTED BY: morgapau
 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0-5 feet: SANDY GRAVEL (GW) - Black (10YR 2/1), Fill dense, wet/saturated, fine to coarse grained sand, well graded, poorly sorted ~45%, fine angular gravel ~55%, micaceous.	[Pattern]
			5	CONCRETE 0-1 FEET		
			10	BENTONITE CHIPS 1-4 FEET		
4 3 3	18"		10		5 - 14 feet: SAND (SW) - Very dark gray (10YR 3/1) loose wet (driller added water), fine to medium grained sand, well graded, poorly sorted, micaceous.	[Pattern]
			15	BENTONITE GROUT, 4-69 FEET		
2 2 2	18"		15		@ 10 - 11.5 feet: Dark gray (10YR 4/1), damp, sub-rounded, trace of fine sub-rounded gravel ~1%.	[Pattern]
			20	2-INCH THREADED SCH 80 PVC CASING, FLUSH THREAD		
1 2 2	18"		20		14 - 23 feet: SILT (ML)- Very dark grayish brown (10YR 3/2), soft, moist, micaceous.	[Pattern]
			25	10-INCH BOREHOLE 0-105 FEET		
1 2 3	18"		25		@ 20 - 21.5 feet: Grayish brown (10YR 5/2), moderately mottled	[Pattern]
			30		23 - 27 feet: SANDY SILT (SM)- Brown (10YR 4/3), medium stiff, moist, medium to fine grained sand, sub-angular ~30%, ~70% silt.	[Pattern]
50 3	1"		30		28 - 50 feet: SAND (SW)- Very Dark Brown (10YR 2/2), loose, saturated fine to coarse sand, poorly sorted, well graded, sub rounded. @ 29 feet: Discrete depth groundwater sample MW30-29', collected 2/6/03 1110.	[Pattern]
			35			

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER/SWAN MFG Boring Number: MW-30i
 Project Number: 275-1940-006-05-6300 Sheet: 2 OF 6
 Location: ST. SERVICES Total Boring Depth: 187 FEET/WELL DEPTH: 85 FEET
 PMX Representative: INGMAR SAUL Date Completed: MARCH 3, 2003
 Drilled By: WESTERBERG DRILLING Ground Level Elevation: 29.82 FEET
 Drill Method: CABLE TOOL Measuring Point Elevation: 29.61 FEET
 Soil Sample Method: SPLIT SPOON Static Water Level: ~24 FEET Date: 2/03
 Groundwater Sample Method: SUBMERSIBLE PUMP Northing: 118607.3 Easting: 1077713.8

FILE: P194006023
 DATE: Mar 28, 2007 - 9:28am PLOTTED BY: morgapau
 IMAGES: XREF'S:

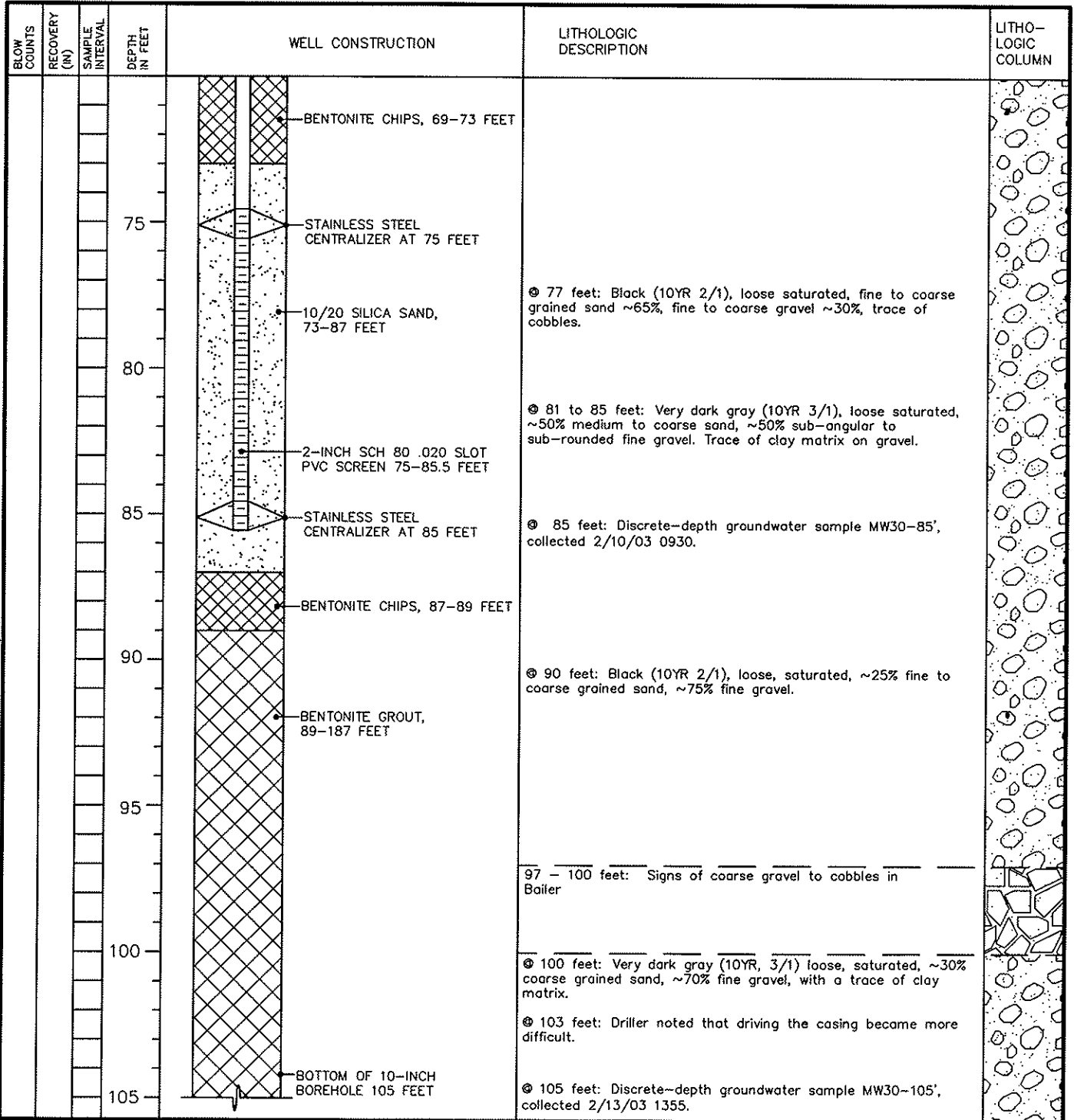
BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40	BENTONITE GROUT, 4-69 FEET	@ 40 feet: trace of fine gravel.	
			45		@ 45 feet: Heaving sands @ 45 feet: discrete-depth groundwater sample MW30-45', collected 2/6/03 1515.	
			50	2-INCH THREADED SCH 80 PVC CASING, FLUSH THREAD 10-INCH BOREHOLE 0-105 FEET	50 - 139 feet: GRAVELY SAND (GW) - Black (10YR 2/1), loose, saturated, ~80% fine to coarse grained sand, poorly sorted, well graded, ~20% fine to coarse sub-rounded gravel.	
			55		@ 53 feet: Switch from bailing to drilling. The percent of gravel is increasing causing harder drilling	
			60		@ 60 feet: Greater percentage of coarse gravels and cobbles range in length of 5 inches to 8 inches.	
			65		@ 65 feet: discrete-depth groundwater sample MW30-65', collected 2/7/03 1230.	
			70	BENTONITE CHIPS, 69-73 FEET	@ 67 feet: SANDY GRAVEL (GW) - ~20% fine to coarse grained sand, ~80% fine to coarse gravel.	

EXPLORATORY BORING LOG

Parametrix

Project Name: <u>PORT OF VANCOUVER/SWAN MFG</u>	Boring Number: <u>MW-30i</u>
Project Number: <u>275-1940-006-05-6300</u>	Sheet: <u>3 OF 6</u>
Location: <u>ST. SERVICES</u>	Total Boring Depth: <u>187 FEET/WELL DEPTH: 85 FEET</u>
PMX Representative: <u>INGMAR SAUL</u>	Date Completed: <u>MARCH 3, 2003</u>
Drilled By: <u>WESTERBERG DRILLING</u>	Ground Level Elevation: <u>29.82 FEET</u>
Drill Method: <u>CABLE TOOL</u>	Measuring Point Elevation: <u>29.61 FEET</u>
Soil Sample Method: <u>SPLIT SPOON</u>	Static Water Level: <u>~24 FEET</u> Date: <u>2/03</u>
Groundwater Sample Method: <u>SUBMERSIBLE PUMP</u>	Northing: <u>118607.3</u> Easting: <u>1077713.8</u>

FILE: P194006024
 DATE: Mar 28, 2007 - 9:28am PLOTTED BY: morgapau
 IMAGES: XREF'S:



EXPLORATORY BORING LOG

Parametrix

Project Name: <u>PORT OF VANCOUVER/SWAN MFG</u>	Boring Number: <u>MW-30i</u>
Project Number: <u>275-1940-006-05-6300</u>	Sheet: <u>4 OF 6</u>
Location: <u>ST. SERVICES</u>	Total Boring Depth: <u>187 FEET/WELL DEPTH: 85 FEET</u>
PMX Representative: <u>INGMAR SAUL</u>	Date Completed: <u>MARCH 3, 2003</u>
Drilled By: <u>WESTERBERG DRILLING</u>	Ground Level Elevation: <u>29.82 FEET</u>
Drill Method: <u>CABLE TOOL</u>	Measuring Point Elevation: <u>29.61 FEET</u>
Soil Sample Method: <u>SPLIT SPOON</u>	Static Water Level: <u>~24 FEET</u> Date: <u>2/03</u>
Groundwater Sample Method: <u>SUBMERSIBLE PUMP</u>	Northing: <u>118607.3</u> Easting: <u>1077713.8</u>

FILE: P194006025
 DATE: Mar 28, 2007 - 9:28am
 PLOTTED BY: morgapau
 XREF'S:

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110		@ 105 feet: Very dark gray (10YR 3/1), loose, saturated, ~25% fine to coarse grained sand, ~75% fine to coarse gravel, with a trace of clay matrix. Switched from bailing to drilling	
			115		@ 112 feet: Driller said casing started driving harder, having trouble with heaving sands, material is too loose, the casing is dropping as material is bailed out of casing.	
			120		117 feet: GRAVELY SAND (GW)- Black (10YR 2/1), loose, saturated, ~20% sub-angular to sub-rounded fine gravel, ~80% sub-angular, well graded, poorly sorted medium to coarse grained sand. Having problem with heaving sands. Switched from drilling to bailing	
			125		@ 125 feet: Discrete-depth groundwater sample MW30-125', collected 2/3/03 1010	
			130		@ 130 feet: Trace of coarse gravel less than ~5% signs of clay matrix holding together coarse grained sand <1%.	
			135		@ 132 feet: Casing driving in a lot harder than before. Switched from bailing to drilling.	
			140		@ 135 feet: Signs of more coarse gravels, probably a sand, gravel.	
			140		139 - 162 feet: SAND (SW)- Black (10YR 2/1) loose, saturated, fine to coarse grained sand, well graded, poorly sorted. Heaving Sands, Switched from drilling to bailing.	

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER/SWAN MFG Boring Number: MW-30i
 Project Number: 275-1940-006-05-6300 Sheet: 5 OF 6
 Location: ST. SERVICES Total Boring Depth: 187 FEET/WELL DEPTH: 85 FEET
 PMX Representative: INGMAR SAUL Date Completed: MARCH 3, 2003
 Drilled By: WESTERBERG DRILLING Ground Level Elevation: 29.82 FEET
 Drill Method: CABLE TOOL Measuring Point Elevation: 29.61 FEET
 Soil Sample Method: SPLIT SPOON Static Water Level: ~24FEET Date: 2/03
 Groundwater Sample Method: SUBMERSIBLE PUMP Northing: 118607.3 Easting: 1077713.8

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN		
			145		<p>⊕ 145 feet: Discrete-depth groundwater sample MW30-145', collected 2/14/03 1400</p> <p>⊕ 145 feet: Very dark gray (10YR 3/1), loose saturated, medium to fine grained sand, well graded, poorly sorted.</p> <p>⊕ 150 feet: Trace of clay matrix holding together fine sand.</p> <p>⊕ 155 feet: Micaceous, signs of clay matrix.</p> <p>⊕ 157 feet: First signs of fine to coarse gravel, (<5%) mixed in with sands. (No signs of Cementation)</p> <p>⊕ 159.5 feet: Switched from bailing to drilling.</p> <p>⊕ 159.5 feet: Switched from drilling to bailing, encountered heaving sands.</p>			
			150					
			155					
			160					
			165					
			170					
			175					
			175				<p>162 - 175 feet: GRAVELLY SAND (GW)-- Very dark gray (10YR2/1) loose, saturated, ~15% fine to coarse gravel, signs of cementation, ~85% fine to coarse grained sand, micaceous, with a trace of silt.</p> <p>⊕ 165 feet: Switched from bailing to drilling.</p> <p>⊕ 165 feet: Discrete-depth groundwater sample MW30-165', collected 2/17/03 1540</p> <p>⊕ 172 feet: Some coarse gravel showed signs of cementation and clay matrix.</p>	
			175				<p>175 - 183 feet: GRAVELLY SANDY SILT (GW/SM)-- Gray (10YR, 5/1), loose saturated, fine to coarse gravel ~15%, fine to coarse grained sand ~20%, silt ~65% micaceous.</p>	

FILE: P194006026
 DATE: Mar 28, 2007 - 9:29am PLOTTED BY: morgapau
 IMAGES: XREF'S:

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER/SWAN MFG Boring Number: MW-30i
 Project Number: 275-1940-006-05-6300 Sheet: 6 OF 6
 Location: ST. SERVICES Total Boring Depth: 187 FEET/WELL DEPTH: 85 FEET
 PMX Representative: INGMAR SAUL Date Completed: MARCH 3, 2003
 Drilled By: WESTERBERG DRILLING Ground Level Elevation: 29.82 FEET
 Drill Method: CABLE TOOL Measuring Point Elevation: 29.61 FEET
 Soil Sample Method: SPLIT SPOON Static Water Level: ~24 FEET Date: 2/03
 Groundwater Sample Method: SUBMERSIBLE PUMP Northing: 118607.3 Easting: 1077713.8

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			180		@ 175 feet: Gray (10YR 5/1), loose saturated, ~15% fine to coarse gravel, ~20% fine to coarse grained sand, ~65% silt, micaceous.	
			185		183 - 187 feet: SILT (ML) - Gray (10YR 4/1), loose, saturated trace of fine gravel, trace of mud is coarse ground sand. @ 185 feet: Discrete-depth groundwater sample MW30-185', collected 2/19/03 1415	
			190		187 feet: Bottom of Boring at 187 feet.	

FILE: P194006027 IMAGES: XREF'S:
 DATE: Mar 28, 2007 -- 9:29am PLOTTED BY: morgapau

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER/SWAN MFG Boring Number: MW-31i
 Project Number: 275-1940-006-05-6300 Sheet: 1 OF 5
 Location: ST. SERVICES Total Depth: 167 FEET/WELL DEPTH: 85 FT
 PMX Representative: INGMAR SAUL Date Completed: FEBURARY 4, 2003
 Drilled By: WESTERBERG DRILLING Ground Level Elevation: 31.65 FT
 Drill Method: CABLE TOOL Measuring Point Elevation: 31.45 FT
 Soil Sample Method: SPLIT SPOON Static Water Level: ~25 FEET Date: 12/02
 Groundwater Sample Method: SUBMERSIBLE PUMP Northing: 119133.4 Easting: 1077245.3

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 1 feet: Gravel and Ground Asphalt cover with fine,	
				CONCRETE 0-2 FEET	1 - 3 feet: GRAVELLY SAND (GW) - Very dark gray (10YR 3/1). Damp, well rounded coarse to fine gravel in medium to fine sand, micaceous, fill material.	
			5	BENTONITE CHIPS 2-6 FEET	3 - 4 feet: SAND (SW) - Gray (10YR 5/1) damp, loose, poorly graded well sorted, some coarse sand in fine grained sand, fill material.	
			10	BENTONITE GROUT, 6-68 FEET	⊙ 4 feet: Boulder or concrete pipe?	
2 3 4	12"		15	2-INCH THREADED SCH 80 PVC CASING, FLUSH THREAD	⊙ 15 feet: Black (10YR 2.5/1) medium stiff, moist, ~20% fine-grained sand, trace of fine gravel, micaceous.	
2 2 3	12"		20	10-INCH BOREHOLE 0-107 FEET	17 - 22.5 feet: SILT (ML) - Dark grayish brown (10YR 4/2), medium stiff, damp, moderately mottled, micaceous.	
1 2 3	13"		25		22.5 - 28 feet: SANDY SILT (MH) - Brown (10YR 4/3), soft, wet/moist, ~30% fine-grained sand, trace of fine gravel.	
1 1 1	16"		30		28 - 55 feet: SAND (SW) - Very dark gray (10YR 3/1) loose, saturated, well graded, poorly sorted, fine to coarse grained sand, sub angular, trace of fine gravels, predominantly coarse grained.	
1 2 7	12"		35		⊙ 28 feet: Discrete-depth groundwater sample MW31-28', collected 1/10/03 0935	



FILE: P194006028
 DATE: Mar 28, 2007 - 11:39am
 PLOTTED BY: morgopau
 IMAGES: XREF'S:

EXPLORATORY BORING LOG

Parametrix

Project Name: <u>PORT OF VANCOUVER/SWAN MFG</u>	Boring Number: <u>MW-31i</u>
Project Number: <u>275-1940-006-05-6300</u>	Sheet: <u>2 OF 5</u>
Location: <u>ST. SERVICES</u>	Total Depth: <u>167 FEET/WELL DEPTH: 85 FT</u>
PMX Representative: <u>INGMAR SAUL</u>	Date Completed: <u>FEBURARY 4, 2003</u>
Drilled By: <u>WESTERBERG DRILLING</u>	Ground Level Elevation: <u>31.65 FT</u>
Drill Method: <u>CABLE TOOL</u>	Measuring Point Elevation: <u>31.45 FT</u>
Soil Sample Method: <u>SPLIT SPOON</u>	Static Water Level: <u>~25 FEET</u> Date: <u>12/02</u>
Groundwater Sample Method: <u>SUBMERSIBLE PUMP</u>	Northing: <u>119133.4</u> Easting: <u>1077245.3</u>

FILE: P194006029
 DATE: Mar 28, 2007 - 11:40am
 PLOTTED BY: morgapau
 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40	● BENTONITE GROUT, 6-68 FEET	@ 35 - 40 feet: Noticed an increase in fine gravels, trace of wood debris. @ 40 - 41.5 feet: Very dark gray (10YR 3/1) wet, loose, fine to coarse grained sand, majority is medium-grained, poorly sorted, well graded, sub-angular, trace of fine gravel up to 3 inches Heaving sand @ 45 feet: Discrete-depth groundwater sample MW31-45', collected 1/10/03 1525	
5 8 17	15"		45			
			50	● 2-INCH THREADED SCH 80 PVC CASING, FLUSH THREAD	@ 50 - 55 feet: signs of coarser gravels, up to 6 inches in length. Switched from bailing to drilling.	
			55	● 10-INCH BOREHOLE 0-107 FEET		
			60		55 - 100 feet: SANDY GRAVEL (GW)- Very dark gray (10YR 3/1), saturated, loose, ~60% cobbles to fine gravel, ~40% fine to coarse sand, material becomes coarser (coarse gravel to cobbles). with majority of sand being coarse grained.	
50 3	0"		65		@ 65 feet: Discrete-depth groundwater sample MW31-65', collected 1/13/03 1305 @ 65 feet: Switched from drilling to bailing.	
			70	● BENTONITE CHIPS, 68-72 FEET		

EXPLORATORY BORING LOG

Parametrix

Project Name: <u>PORT OF VANCOUVER/SWAN MFG</u>	Boring Number: <u>MW-31i</u>
Project Number: <u>275-1940-006-05-6300</u>	Sheet: <u>3 OF 5</u>
Location: <u>ST. SERVICES</u>	Total Depth: <u>167 FEET/WELL DEPTH: 85 FT</u>
PMX Representative: <u>INGMAR SAUL</u>	Date Completed: <u>FEBURARY 4, 2003</u>
Drilled By: <u>WESTERBERG DRILLING</u>	Ground Level Elevation: <u>31.65 FT</u>
Drill Method: <u>CABLE TOOL</u>	Measuring Point Elevation: <u>31.45 FT</u>
Soil Sample Method: <u>SPLIT SPOON</u>	Static Water Level: <u>~25 FEET</u> Date: <u>12/02</u>
Groundwater Sample Method: <u>SUBMERSIBLE PUMP</u>	Northing: <u>119133.4</u> Easting: <u>1077245.3</u>

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	<p style="text-align: center;">BENTONITE CHIPS, 68-72 FEET</p> <p style="text-align: center;">STAINLESS STEEL CENTRALIZER AT 75 FEET</p> <p style="text-align: center;">10/20 SILICA SAND, 72-87 FEET</p> <p style="text-align: center;">2-INCH SCH 80 .020 SLOT PVC SCREEN 75-85.5 FEET</p> <p style="text-align: center;">STAINLESS STEEL CENTRALIZER AT 85 FEET</p> <p style="text-align: center;">BENTONITE CHIPS, 87-89 FEET</p> <p style="text-align: center;">BENTONITE GROUT, 89-167 FEET</p> <p style="text-align: center;">10 INCH BOREHOLE</p>	<p>⊙ 70 feet: Dark gray (10YR 4/1) saturated, ~80% cobbles to fine gravel, ~20% fine to coarse sand. Majority of gravel is coarse.</p> <p>⊙ 78 feet: Gray (10YR 4/1) loose, saturated, ~20% coarse grained sand, ~80% coarse gravel, some boulders, gravel well rounded, sand sub rounded.</p> <p>⊙ 85 feet: Discrete-depth groundwater sample MW31-85', collected 1/14/03 1020</p> <p>⊙ 85 feet: Dark gray (10YR 4/1) loose, saturated, ~15% sand coarse grained, ~85% fine to coarse gravel (majority is fine) well rounded, trace of clay on matrix gravels.</p> <p>⊙ 86 to 87 feet: Bailing is getting more difficult.</p> <p>⊙ 87 feet: Dark gray (10YR 4/1), loose saturated, ~15% coarse grained sand, 85% gravel. Switched from bailing to drilling.</p> <p>⊙ 88 feet: Driller said drilling has become noticeably more difficult. No signs of cementation on gravel.</p>	
			100		<p>100 -115 feet: GRAVEL (GP) - First signs of cementation on gravel, Clay matrix stuck on gravel.</p>	
			105		<p>⊙ 105 feet: Discrete-depth groundwater sample MW31-105', collected 1/15/03 1603</p>	

FILE: P194006030
 DATE: Mar 28, 2007 - 11:37am PLOTTED BY: morgapau XREF'S:

EXPLORATORY BORING LOG

Parametrix

Project Name: <u>PORT OF VANCOUVER/SWAN MFG</u>	Boring Number: <u>MW-31i</u>
Project Number: <u>275-1940-006-05-6300</u>	Sheet: <u>4 OF 5</u>
Location: <u>ST. SERVICES</u>	Total Depth: <u>167 FEET/WELL DEPTH: 85 FT</u>
PMX Representative: <u>INGMAR SAUL</u>	Date Completed: <u>FEBURARY 4, 2003</u>
Drilled By: <u>WESTERBERG DRILLING</u>	Ground Level Elevation: <u>31.65 FT</u>
Drill Method: <u>CABLE TOOL</u>	Measuring Point Elevation: <u>31.45 FT</u>
Soil Sample Method: <u>SPLIT SPOON</u>	Static Water Level: <u>~25 FEET</u> Date: <u>12/02</u>
Groundwater Sample Method: <u>SUBMERSIBLE PUMP</u>	Northing: <u>119133.4</u> Easting: <u>1077245.3</u>

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110		<p>⊕ 111 feet: Drilling has become more difficult.</p> <hr/> <p>115 - 160 feet: SANDY GRAVEL (GW) - Dark gray (10YR 4/1), loose, saturated, ~15% fine grained sand, ~85% in fine to coarse gravel, trace of cementation on gravel.</p> <p>⊕ 119 feet: ~25% gravel has signs of cementation.</p> <hr/> <p>⊕ 125 feet: Discrete-depth groundwater sample MW31-125', collected 1/20/03 1300</p> <p>⊕ 125 - 130 feet: SANDY GRAVEL (GW)</p> <p>⊕ 125 feet: Dark gray (10YR 4/1) loose, saturated, very little fine gravel coming up with the bailer, medium to fine sand, poorly sorted well graded, micaceous, sub-rounded, ~85% sand, ~15% gravel. No sign of cementation or clay matrix.</p> <hr/> <p>⊕ 130 feet: Dark Gray (10YR 4/1) loose, saturated, ~20% fine grained sand, ~80% fine gravel.</p> <hr/> <p>⊕ 135 feet: ~20% fine to coarse grained sand, ~80% fine to coarse gravel to cobbles.</p>	
			115			
			120			
			125			
			130			
			135			
			140			

FILE: P194006031
 DATE: Mar 28, 2007 - 11:37am PLOTTED BY: morgapau XREF'S:

EXPLORATORY BORING LOG

Parametrix

Project Name: <u>PORT OF VANCOUVER/SWAN MFG</u>	Boring Number: <u>MW-31i</u>
Project Number: <u>275-1940-006-05-6300</u>	Sheet: <u>5 OF 5</u>
Location: <u>ST. SERVICES</u>	Total Depth: <u>167 FEET/WELL DEPTH: 85 FT</u>
PMX Representative: <u>INGMAR SAUL</u>	Date Completed: <u>FEBURARY 4, 2003</u>
Drilled By: <u>WESTERBERG DRILLING</u>	Ground Level Elevation: <u>31.65 FT</u>
Drill Method: <u>CABLE TOOL</u>	Measuring Point Elevation: <u>31.45 FT</u>
Soil Sample Method: <u>SPLIT SPOON</u>	Static Water Level: <u>~25 FEET</u> Date: <u>12/02</u>
Groundwater Sample Method: <u>SUBMERSIBLE PUMP</u>	Northing: <u>119133.4</u> Easting: <u>1077245.3</u>

FILE: P194006032
 DATE: Mar 28, 2007 - 11:38am
 PLOTTED BY: morgapau
 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
			145	<p style="margin-left: 20px;">8-INCH BOREHOLE 107-167 FEET</p> <p style="margin-left: 20px;">BENTONITE GROUT, 89-167 FEET</p>	<p>⊕ 145 feet: Discrete-depth groundwater sample MW31-145', collected 1/22/03 0918</p> <p>⊕ 150 feet: Drilling became easier from 150 feet to 157 feet.</p> <p>⊕ 155 feet: Dark gray (10YR 4/1), loose, saturated, ~30% fine-grained sand, ~70% to fine gravel. Signs of clay matrix and cementation on gravel.</p>		
			150				
			155				
			160				
			165		<p>163 - 167 feet: SANDY SILTY GRAVEL (SM/GW)- Gray (10YR 2/1) loose, saturated, ~5-10% medium to fine grained sand, ~20-25% silt, ~65-70% fine gravel, silt matrix holding sand and gravel together.</p> <p>⊕ 165 feet: Discrete-depth groundwater sample MW31-165', collected 1/23/03 1430</p>		
			170		<p>167 feet bgs Bottom of Boring at 167 feet.</p>		
			175				

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: POV WEST OF GUARD SHACK
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: MW-32i
 Sheet: 1 OF 4
 Total Boring Depth: 141.5 FEET/WEEL DEPTH: 70 FT
 Date Completed: JULY 23, 2004
 Ground Level Measurement: 34.49 FT
 Initial Water Level ▽ 29.35 FT/WELL DEPTH @ 70'-0"
 Measuring Point Elevation: 34.2 FT
 Static Water Level: 29.81 FT Date: 8/16/04
 Northing: 118876.2 Easting: 1076875.1

FILE: P194006201
 DATE: Mar 28, 2007 - 11:24am
 PLOTTED BY: morgapau
 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1 FEET 10/20 SAND 1-2 FEET TO DRAIN MONUMENT BENTONITE CHIPS 2-5 FEET BENTONITE SLURRY, 5-52 FEET 2-INCH THREADED SCH 80 PVC CASING 0-60 FEET, FLUSH THREAD. 10-INCH BOREHOLE 0-101.5 FEET	0-2 feet: GRAVEL Fill 3/4 minus, asphalt layer 2-inches thick 2 - 10 feet: SAND (SW) - Dark gray (10YR 4/1), loose, damp, fine to coarse grained, well graded, with trace of fine gravel ~5% @ 8 feet: SAND, without gravel 10 - 15 feet: SILTY SAND (SW) - gray (10YR 5/1) loose, moist, medium to fine grained sand, graded well, micaceous 15 - 18 feet: SILT (ML) - Very dark gray (10YR 3/1) medium stiff, moist, micaceous 18 - 24 feet: SANDY SILT (SM) - Brown (10YR 5/3), medium stiff, moist, micaceous, moderately mottled 24 - 36 feet: SILT (ML) - Brown (10YR 5/3), medium stiff, moist to wet, micaceous, moderately mottled @30 feet: SILT, soft, wet	
1 3 5	9"		10			
2 3 4	14"		15			
2 3 2	18"		20			
4 2 3	18"		25			
1 1 2	18"		30			
			35			

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: POV WEST OF GUARD SHACK
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: MW-32i
 Sheet: 2 OF 4
 Total Boring Depth: 141.5 FEET/WEEL DEPTH: 70 FT
 Date Completed: JULY 23, 2004
 Ground Level Measurement: 34.49 FT
 Initial Water Level ∇ 29.35 FT/WELL DEPTH @ 70'-0"
 Measuring Point Elevation: 34.2 FT
 Static Water Level: 29.81 FT Date: 8/16/04
 Northing: 118876.2 Easting: 1076875.1

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
1 1 2	18"					
			40	BENTONITE SLURRY, 5-52 FEET	36 - 39 feet: GRAVELY SILT (ML)- Dark reddish brown (5YR 2/3), wet, soft, sub-rounded, fine gravel	
1 3 7	18"				39 - 47 feet: SAND (SW) Dark Brown (7.5YR 3/3), saturated, loose, sub-rounded, medium to coarse grained, trace of sub-rounded fine gravel. @39 feet: Discrete depth groundwater sample MW32i-39 feet Collected 7/8/04 1440	
2 5 7	8"		45		@ 45 - 46.5 feet: SAND (SW)- Very Dark Gray (5YR 3/1)	
			50	2-INCH THREADED SCH 80 PVC CASING, 0-60 FEET, FLUSH THREAD 10-INCH BOREHOLE 0-101.5 FEET BENTONITE CHIPS, 52-56 FEET	47-60 feet: GRAVELY SAND (SW) - Very Dark Gray (5YR 3/1), saturated, loose, sub-rounded, medium to coarse grained sand, with 25% sub-rounded fine gravel	
50 5	4"				@ 57 feet: ~40% sub-rounded fine to coarse gravel	
			55	20/40 SILICA SAND, 56-57 FEET 10/20 SILICA SAND, 57-71 FEET		
			60	STAINLESS STEEL CENTRALIZER AT 60 FEET	60 - 100 feet: SANDY GRAVEL (GW)- Very Dark Gray (5YR 3/1), saturated, loose, sub-rounded, medium to coarse grained sand, well graded, ~60% gravel, ~40% sand @60 feet: Discrete depth groundwater sample MW-32i-60 feet 7/9/04 1055	
			65	2-INCH SCH 80 .010 SLOT PVC SCREEN 60-70 FEET	@ 64 feet: SANDY GRAVEL (GW), ~75% gravel, ~25% sand	
			70	STAINLESS STEEL CENTRALIZER AT 70 FEET		

FILE: P194006202
 DATE: Mar 28, 2007 - 11:24am PLOTTED BY: morgapau
 IMAGES: XREF'S:

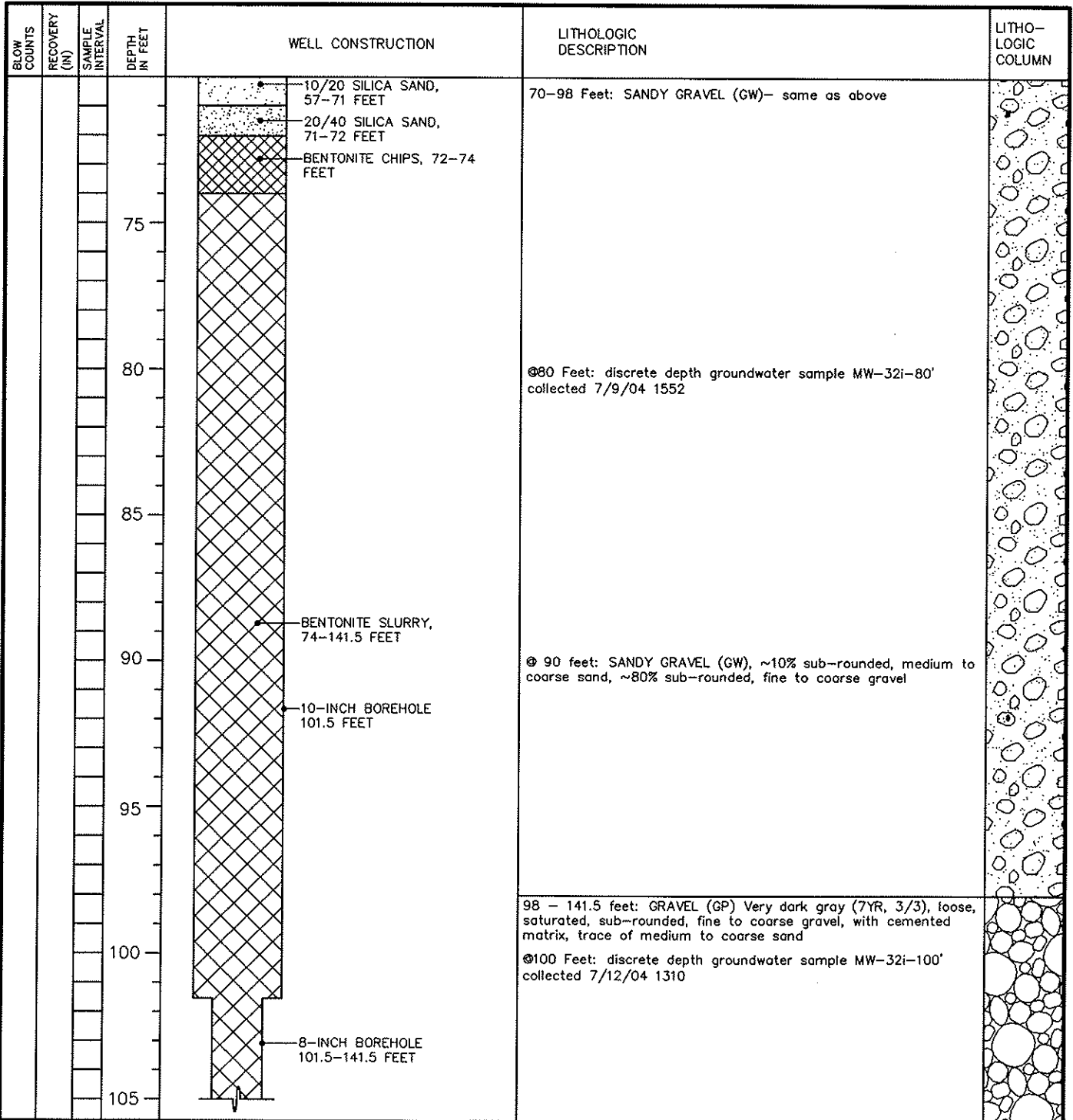
EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: POV WEST OF GUARD SHACK
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: MW-32i
 Sheet: 3 OF 4
 Total Boring Depth: 141.5 FEET/WEEL DEPTH: 70 FT
 Date Completed: JULY 23, 2004
 Ground Level Measurement: 34.49 FT
 Initial Water Level ∇ 29.35 FT/WELL DEPTH @ 70'-0"
 Measuring Point Elevation: 34.2 FT
 Static Water Level: 29.81 FT Date: 8/16/04
 Northing: 118876.2 Easting: 1076875.1

FILE: P194006203
 DATE: Mar 28, 2007 - 11:23am PLOTTED BY: morgapau XREF'S: IMAGES:



EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: POV WEST OF GUARD SHACK
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: MW-32i
 Sheet: 4 OF 4
 Total Boring Depth: 141.5 FEET/WEEL DEPTH: 70 FT
 Date Completed: JULY 23, 2004
 Ground Level Measurement: 34.49 FT
 Initial Water Level ∇ 29.35 FT/WELL DEPTH @ 70'-0"
 Measuring Point Elevation: 34.2 FT
 Static Water Level: 29.81 FT Date: 8/16/04
 Northing: 118876.2 Easting: 1076875.1

FILE: P194006204
 DATE: Mar 28, 2007 - 11:23am
 PLOTTED BY: morgapau
 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			110	<p style="margin-top: 100px;">TOP OF 8-INCH BOREHOLE 101.5-141.5 FEET</p> <p style="margin-top: 100px;">BENTONITE SLURRY, 74-141.5 FEET</p>	<p style="margin-top: 100px;">⊙ 113 feet: Gravel, trace of silt</p> <p style="margin-top: 100px;">⊙ 120 feet: Discrete depth groundwater sample MW-32i-120ft collected 7/14/04 11:30</p> <p style="margin-top: 100px;">⊙ 140 feet: Discrete depth groundwater sample MW-32i-140ft collected 7/14/04 11:30</p> <p style="margin-top: 100px;">Bottom of Boring 141.5 feet</p>	
			115			
			120			
			125			
			130			
			135			
			140			

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931
Location: POV GUARD SHACK
PMX Representative: MIKE MARSHALL
Drilled By: GEOTECH EXPLORATIONS
Drill Method: AUGER
Soil Sample Method: SPLIT SPOON
Groundwater Sample Method: NA

Boring Number: MW-32s
Sheet: 1 OF 1
Total Boring Depth: 34.5 FT / WELL DEPTH: 33 FT
Date Completed: OCTOBER 7, 2004
Ground Level Measurement: 34.49 FT
Initial Water Level 30.98 FT
Measuring Point Elevation: 34.23 FT
Static Water Level: 34.0 FT **Date:** 10/07/04
Northing: 118880.8 **Easting:** 1076872.1

DATE: 03/28/07 11:31am FILENAME: P194006285

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			5	<p>FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1 FEET</p>	No sample obtained	
7 14 14	14"		10	<p>BENTONITE CHIPS 1-21 FEET</p>	5-20 feet: SAND (SW) - grayish brown, medium dense, moist, micaceous, fine to medium grained, sub rounded @10.6 feet: SAND, brown, loose, fine grained @11.1 feet: SAND, dark gray	
7 6 6	16"		15	<p>2-INCH THREADED SCH 40 PVC CASING, 0-23 FEET, FLUSH THREAD</p> <p>8-INCH BOREHOLE 0-34.5 FEET</p>		
6 6 10	14"		20		20-25 feet: SANDY SILT (ML) - light brown, soft to medium stiff, moist to wet, micaceous, mottled, sand is fine grained	
2 4 6	16"		25	<p>10/20 SILICA SAND, 21-34.5 FEET</p> <p>2-INCH SCH 40 0.020 SLOT PVC SCREEN 23-33 FEET</p>	25-34.5 feet: SILT (ML) - light brown, medium stiff, wet, micaceous, mottled, minor trace of fine grained sand lenses	
2 3 6	20"		30			
2 4 2	18"		35			
					34.5 feet: End of boring	

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: ACROSS STREET FROM HUMANE SOCIETY
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: MW-33i
 Sheet: 1 OF 5
 Total Boring Depth: 177 FEET/WELL DEPTH: 85 FEET
 Date Completed: AUGUST 10, 2004
 Ground Level Measurement: 31.58 FT
 Initial Water Level ∇ 27.45 FT
 Measuring Point Elevation: 31.57 FT
 Static Water Level: 25.75 FT Date: 11/15/04
 Northing: 119263.7 Easting: 1077870.3

FILE: P194006205
 DATE: Mar 28, 2007 - 10:46am
 PLOTTED BY: morgapau
 XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1 FEET 10/20 SILICA SAND, 1-2 FEET BENTONITE CHIPS 2-6 FEET BENTONITE GROUT, 6-69 FEET 2-INCH THREADED SCH 80 PVC CASING, 0-75 FEET, FLUSH THREAD 10-INCH BOREHOLE 0-137 FEET	0-0.35 feet: ASPHALT 0.35 -1 feet: SILTY SAND (GM), fill material 1 -15 feet: SAND (SW) Dark gray (2.5 4/1), loose damp, sub-angular, fine to medium grained, poorly sorted, with trace of fine gravel ⊗ 10-11.5 feet: Sand, micaceous 15 - 20 feet: SILTY SAND (SM)- Brown (7.5 4/4) loose, moist, fine grained sand, poorly sorted, slightly mottled, micaceous, 40% silt, 60% sand 20 - 21.5 feet: SAND (SW)- Brown (10YR 4/3), medium dense, moist, fine grained, poorly sorted, micaceous ⊗ 25 - 26.5 feet: SAND, Dark gray (2.5 4/1), dense, poorly sorted, sub-angular, fine to medium grained ⊗ 30 - 31.5 feet: SAND, loose, wet to saturated	
1 1 1		12"	10			
2 2 5		12"	15			
3 6 9		12"	20			
8 18 30		18"	25			
1 1 2		18"	30			
			35			

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: ACROSS STREET FROM HUMANE SOCIETY
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: MW-33i
 Sheet: 2 OF 5
 Total Boring Depth: 177 FEET/WELL DEPTH: 85 FEET
 Date Completed: AUGUST 10, 2004
 Ground Level Measurement: 31.58 FT
 Initial Water Level ∇ 27.45 FT
 Measuring Point Elevation: 31.57 FT
 Static Water Level: 25.75 FT Date: 11/15/04
 Northing: 119263.7 Easting: 1077870.3

FILE: P194006206
 DATE: Mar 28, 2007 - 10:47am PLOTTED BY: morgapau XREF'S:
 IMAGES:


BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
1 2 3	9"				@ 35 - 35.5 feet: SAND, Very Dark Gray (2.5 3/1) saturated @ 35 feet: Discrete depth groundwater sample MW-33i-35ft collected 7/26/04 13:55	
10 20 20	12"		40	BENTONITE GROUT 6-69 FEET	@ 40 - 41.5 feet: SAND, some coarse grained sand	
1 2 6	12"		45		@ 45 - 46.5 feet: SAND, fine to coarse grained, poorly sorted, trace of fine gravel @ 47 feet: Sand, few fine gravel	
5 17 19	4"		50	2-INCH THREADED SCH 80 PVC CASING, 0-75 FEET, FLUSH THREAD 10-INCH BOREHOLE 0-137 FEET	@ 50-51.5 feet: SAND, coarse grained, with some medium to fine grained sand, well sorted, with trace of fine gravel	
			55		52 - 60 feet: GRAVELLY SAND (GW), Very dark gray (2.5Y 3/1), dense, little fine to coarse gravel, fine to coarse grained sand, poorly sorted @ 55 feet: Discrete depth groundwater sample MW-33i-55ft collected 7/27/04 10:00	
			60		60 - 99 feet: SANDY GRAVEL (GW), Dark gray (2.5 4/1), dense, saturated, sub-rounded, fine to coarse grained sand, ~20% sub-rounded, fine to coarse gravel, ~80%	
			70	BENTONITE CHIPS, 69-71 FEET		

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: ACROSS STREET FROM HUMANE SOCIETY
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: MW-33i
 Sheet: 3 OF 5
 Total Boring Depth: 177 FEET/WELL DEPTH: 85 FEET
 Date Completed: AUGUST 10, 2004
 Ground Level Measurement: 31.58 FT
 Initial Water Level ∇ 27.45 FT
 Measuring Point Elevation: 31.57 FT
 Static Water Level: 25.75 FT Date: 11/15/04
 Northing: 119263.7 Easting: 1077870.3

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	20/40 SILICA SAND, 71-72 FEET STAINLESS STEEL CENTRALIZER AT 75 FEET 10/20 SILICA SAND, 72-86 FEET 2-INCH SCH 80 .010 SLOT PVC SCREEN 75-85 FEET STAINLESS STEEL CENTRALIZER AT 85 FEET 20/40 SILICA SAND, 86-87 FEET BENTONITE CHIPS, 87-88 FEET	@ 75 feet: Discrete depth groundwater sample MW-33i-76ft collected 7/27/04 14:50	
			85	BENTONITE SLURRY, 88 - 177 FEET	@ 85 feet: SANDY GRAVEL (GW), Very Dark gray (2.5 3/1), sub-rounded, fine to coarse grained sand, ~35%, sub-rounded, coarse gravel to cobbles, ~65%	
			95		@ 95 feet: Discrete depth groundwater sample MW-33i-96ft collected 7/28/04 10:50	
			99		99 -124 feet: SAND (SW), Very Dark Gray (2.5YR 3/1) dense, saturated coarse sand, trace of sub-rounded fine gravel	
			100			
			105			

FILE: P194006207
 DATE: Mar 28, 2007 - 10:50am PLOTTED BY: morgapau XREF'S:

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: ACROSS STREET FROM HUMANE SOCIETY
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: MW-33i
 Sheet: 4 OF 5
 Total Boring Depth: 177 FEET/WELL DEPTH: 85 FEET
 Date Completed: AUGUST 10, 2004
 Ground Level Measurement: 31.58 FT
 Initial Water Level ∇ 27.45 FT
 Measuring Point Elevation: 31.57 FT
 Static Water Level: 25.75 FT Date: 11/15/04
 Northing: 119263.7 Easting: 1077870.3

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
			110	<p style="margin-left: 20px;">10-INCH BOREHOLE 0-137 FEET</p> <p style="margin-left: 20px;">BENTONITE SLURRY, 88-177 FEET</p> <p style="margin-left: 20px;">TOP OF 8-INCH BOREHOLE 137- 177 FEET</p>			
			115			@ 115 feet: Discrete depth groundwater sample MW-33i-115ft collected 7/28/04 16:12	
			120			@120 feet: SAND (SW), sub-rounded, fine to coarse grained sand, trace of fine sub-angular gravel, trace of silt	
			125			124 - 129 feet: GRAVELY SAND (GW), Very Dark Gray (2.5 3/1), dense, saturated, sub-rounded fine to coarse grained sand, sub-rounded, fine to coarse gravel, trace of silt @ 127 feet: Gravel and cobbles have a clay matrix	
			130		129 - 177 feet: SANDY GRAVEL (GW), Very Dark Gray (2.5 3/1) very dense, saturated, sub-rounded, medium to coarse grained sand, ~40, sub-rounded, fine to coarse gravels and cobbles, ~60% gravel has a cemented matrix		
			135		@ 135 feet: Discrete depth groundwater sample MW-33i-135ft collected 7/29/04 15:01		
			140				

FILE: P194006208
 DATE: Mar 28, 2007 - 10:49am PLOTTED BY: morgapau XREF'S: IMAGES:

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: ACROSS STREET FROM HUMANE SOCIETY
 PMX Representative: INGMAR SAUL
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDI FLO 2 PUMP

Boring Number: MW-33i
 Sheet: 5 OF 5
 Total Boring Depth: 177 FEET/WELL DEPTH: 85 FEET
 Date Completed: AUGUST 10, 2004
 Ground Level Measurement: 31.58 FT
 Initial Water Level ∇ 27.45 FT
 Measuring Point Elevation: 31.57 FT
 Static Water Level: 25.75 FT Date: 11/15/04
 Northing: 119263.7 Easting: 1077870.3

FILE: P194006209
 DATE: Mar 28, 2007 - 10:48am
 PLOTTED BY: morgapau
 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			145		<p>Ⓞ 155 feet: Discrete depth groundwater sample MW-33i-155ft collected 8/3/04 10:13</p> <p>Ⓞ 175 feet: Discrete depth groundwater sample MW-33i-55ft collected 8/4/04 13:44</p> <p>Ⓞ 175 feet: SANDY GRAVEL (GW)- Darker Gray, sub-rounded coarse sand, ~40%, well rounded coarse gravel, cemented ~60%</p> <p>Bottom of boring Ⓞ 177 feet</p>	
			150			
			155			
			160			
			165			
			170			
			175			

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931
Location: NORTH OF WA HUMANE SOCIETY
PMX Representative: MIKE MARSHALL
Drilled By: GEOTECH EXPLORATIONS
Drill Method: AUGER
Soil Sample Method: SPLIT SPOON
Groundwater Sample Method: NA

Boring Number: MW-33s
Sheet: 1 OF 1
Total Boring Depth: 35 FEET/ WELL DEPTH: 31 FEET
Date Completed: OCTOBER 4, 2004
Ground Level Measurement: 31.81 FT
Initial Water Level 28.2 FT
Measuring Point Elevation: 31.57 FT
Static Water Level: 28.15 FT **Date:** 10/04/04
Northing: 119263 **Easting:** 1077875.4

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			5	<p>FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1 FEET</p>	No sample obtained	
6 7 9	12"				5-15.3 feet: SAND (SW) - gray, loose, damp, micaceous, medium grained	
6 4 4	12"		10	BENTONITE CHIPS 1-19 FEET		
7 6 8	12"			2-INCH THREADED SCH 40 PVC CASING, 0-21 FEET, FLUSH THREAD		
7 6 8	12"		15	8-INCH BOREHOLE 0-35 FEET	15.3-25 feet: SILTY SAND (SM) - brown, medium stiff, moist, micaceous, sand is fine grained	
10 10 12	12"			10/20 SILICA SAND, 19-35 FEET		
7 7 11	12"		25	2-INCH SCH 40 0.020 SLOT PVC SCREEN 21-31 FEET	25-35 feet: SAND (SW) - dark gray, loose, moist, medium grained	
7 8 10	12"		30		@ 30 feet: SAND, saturated	
			35		35 feet: End of boring	

DATE: 03/28/07 11:09am FILENAME: P194006286

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-34i

Project Number: 275-1940-006-03-4931

Sheet: 1 OF 5

Location: WESTSIDE WASTEWATER RECLAMATION FACILITY

Total Depth: 181 FEET/WELL DEPTH: 105 FEET

PMX Representative: INGMAR SAUL/ADAM ROMEY

Date Completed: 10/14/04

Drilled By: TACOMA PUMP AND DRILLING

Ground Level Measurement: 32.73 FT

Drill Method: CABLE TOOL

Initial Water Level 28.48 FT

Soil Sample Method: SPLIT SPOON

Measuring Point Elevation: 35.08 PVC

Groundwater Sample Method: REDIFLO 2 PUMP

Northing: 118284.9 **Easting:** 1078511.6

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			0	<p style="font-size: small;">ABOVE GROUND PROTECTIVE MONUMENT 0 TO -3 FEET</p> <p style="font-size: small;">CONCRETE 0-4 FEET</p>	0-12 feet: FILL MATERIAL - SILT - brown, medium stiff, dry, trace of sub-rounded fine gravel	
12 17 15	4"		10		@ 10 feet: SILT , very dark gray (2.5Y 3/1), very stiff, damp, some organics, micaceous	
18 20 25	12"		15	<p style="font-size: small;">BENTONITE SLURRY, 4-92 FEET</p>	12-44 feet: SAND - grayish brown (2.5Y 5/2), dense, damp, fine to medium grained, poorly graded, micaceous	
7 15 17	12"		20	<p style="font-size: small;">2-INCH THREADED SCH 80 PVC CASING, -2.5 TO 95 FEET, FLUSH THREAD</p> <p style="font-size: small;">10-INCH BOREHOLE 0-79 FEET</p>	@ 20 feet: SAND , grayish brown (10YR 5/2)	
15 20 23	18"		25		@ 25 feet: SAND , very dark gray (10YR 3/1), dense, moist, fine to coarse grained, well graded, micaceous @ 25.75 feet: SAND , dark grayish brown (10YR 4/2), dense, moist, fine grained, poorly graded, micaceous	
			30		@ 30 feet: SAND , dark brown, dense, moist, fine to medium grained, well graded	

DATE: 03/28/07 10:24am FILENAME: P194006298

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931

Boring Number: MW-34i
Sheet: 2 OF 5
Date Completed: 10/14/04

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
13 12 15	12"					
5 8 12	18"		35		@ 35 feet: SAND, dark gray to dark brown, dense, moist, fine to medium grained, well graded	
5 7 30	12"		40		@ 40 feet: SAND, dark gray, dense, wet, fine to medium grained, well graded @ 40 feet: Discrete depth groundwater sample MW-34i-40ft collected 9/17/04 1435	
5 28 55	9"		45		45-63 feet: GRAVELLY SAND - dark gray (10Y 3/1), dense, saturated, sub-rounded, fine gravel, fine to coarse grained sand, well graded, 35% gravel, 65% sand	
10 30 50	15"		50	<ul style="list-style-type: none"> • BENTONITE SLURRY, 4-92 FEET 		
			55	<ul style="list-style-type: none"> • 2-INCH THREADED SCH 80 PVC CASING, -2.5 TO 95 FEET, FLUSH THREAD • 10-INCH BOREHOLE 0-79 FEET 	@ 55 feet: GRAVELLY SAND, sub-rounded, coarse gravel	
50 50 50	12"		60		@ 60 feet: SANDY GRAVEL, very dense, 30% sand, 70% gravel @ 60 feet: Discrete depth groundwater sample MW-34i-60ft collected 9/21/04 0925	
			65		63-118 feet: GRAVEL - dark gray, dense, saturated, rounded, fine to coarse gravel and cobbles, trace of coarse grained sand, ~5% sand, ~95% gravel	
			70			

DATE: 03/28/07 10:24am FILENAME: P194006298

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

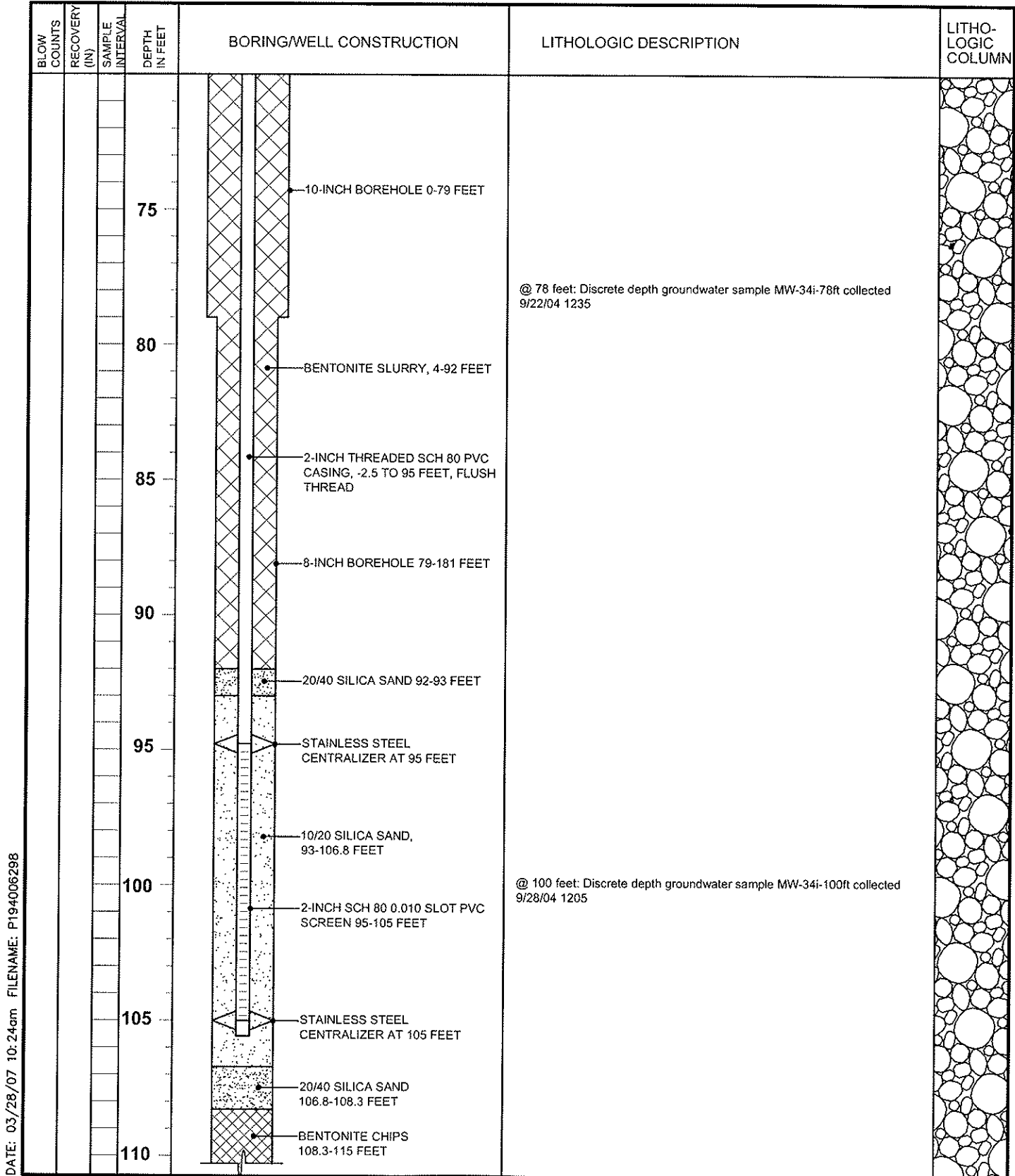
Boring Number: MW-34i

Project Number: 275-1940-006-03-4931

Sheet: 3 OF 5

Date Completed: 10/14/04

continued from previous page



DATE: 03/28/07 10:24am FILENAME: P194006298

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

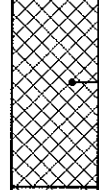
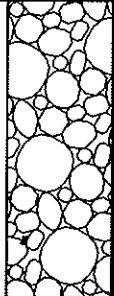
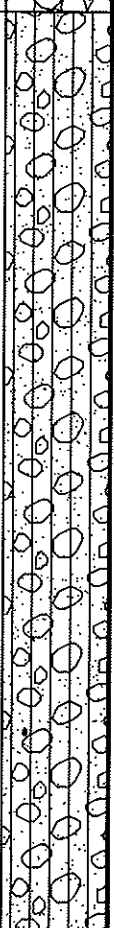



Boring Number: MW-34i

Project Number: 275-1940-006-03-4931

Sheet: 4 OF 5

Date Completed: 10/14/04

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			115	 <p>BENTONITE CHIPS 108.3-115 FEET</p>	@ 113 feet: GRAVEL WITH SAND, sub-rounded, fine grained sand	
			120		118-142 feet: SILTY SAND WITH GRAVEL - dark gray, loose, saturated, sub-rounded, fine to coarse grained sand, with some fine to coarse gravel	
			125	 <p>8-INCH BOREHOLE 79-181 FEET</p>		
			130	 <p>BENTONITE SLURRY, 115-181 FEET</p>		
			135			
			140			
			145		142-165.5 feet: SILTY SAND - dark gray, loose, saturated, sub-rounded, fine to coarse grained sand	
			150			

DATE: 03/28/07 10:24am FILENAME: P194006298

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER


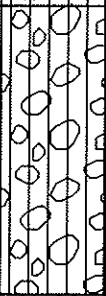

Boring Number: MW-34i

Project Number: 275-1940-006-03-4931

Sheet: 5 OF 5

Date Completed: 10/14/04

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN	
			155	 <p style="margin-left: 20px;">8-INCH BOREHOLE 79-181 FEET</p> <p style="margin-left: 20px;">BENTONITE SLURRY 115-181 FEET</p>			
			160			@ 161 feet: Discrete depth groundwater sample MW-34i-161ft collected 10/05/04 1145	
			165			165.5-173 feet: SANDY SILTY GRAVEL - dark gray, dense, saturated, sub-angular fine to coarse grained sand, fine to coarse gravel with a silt matrix	
			170				
			175			173-181 feet: SANDY GRAVEL - dark gray, very dense, saturated, sub-rounded, coarse gravel with a cemented matrix	
			180			@ 180 feet: Discrete depth groundwater sample MW-34i-180ft collected 10/07/04 0905	
			185			181 feet: Bottom of boring	
			190				

DATE: 03/28/07 10:24am FILENAME: P194006298

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: NW PACKING/PORTWAY
 PMX Representative: ADAM ROMEY
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDIFLOW2 PUMP

Boring Number: MW-35i
 Sheet: 1 of 5
 Total Boring Depth: 182 FEET/WELL DEPTH: 122 FEET
 Date Completed: OCTOBER 14, 2004
 Initial Water Level: 35.65 FEET/ WELL @ 40 FEET
 Measuring Point Elevation: 34.20 FEET
 Northing: 117243.5 Easting: 1080160.9

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
					0-0.5 feet: ASPHALT CAP 0.5-3.0 feet: GRAVEL FILL	
			5		3.0-15 feet: SAND (SP) - Brown, medium grained	
4 4 4	18"		10		@ 10 feet: SAND, dark gray/brown, loose, moist, poorly graded	
2 5 13	14"		15		15-15.5 feet: SILT (ML) - light brown, very stiff, moist, micaceous, poorly graded	
3 3 6	14"		20		15.5-20 feet: SILTY SAND - dark gray/brown, medium dense, moist, medium grained, 30% fines	
			25		20-25.5 feet: SILT - dark gray/black, stiff, moist, micaceous	
7 8 15	18"		30		@ 25 feet: SILT, brown, very stiff	
			35		25.5-30 feet: SILTY SAND - gray/brown, medium dense, moist, micaceous, fine to medium grained, well graded, 40% fines	
3 4 4	18"				30-45 feet: SAND (SW) - gray, loose, wet, medium to coarse grained sand, well graded, trace silt	
					@ 35 feet: SAND, dense, sub-angular	

DATE: 03/28/07 10:57am FILENAME: P194006282

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-35i

Project Number: 275-1940-006-03-4931

Sheet: 2 OF 5

Date Completed: OCTOBER 14, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
5 10 25	16"		40		@ 40 feet: heaving sands - no split spoon (bailer sample) @ 40 feet: Discrete depth groundwater sample MW-35i-40ft collected 10/04/04 1310	
6 12 16	14"		45		45-55 feet: GRAVELLY SAND (SP) - gray, medium dense, saturated, sub-angular coarse sand, poorly graded, 10% coarse gravel	
			55		55-98 feet: GRAVEL (GW) - gray, dense, saturated, medium to very coarse gravel and cobbles, well graded	
			60		@ 60 feet: Discrete depth groundwater sample MW-35i-60ft collected 10/04/04 1605	
			70		@ 70 feet: GRAVEL, fine to coarse gravel with cobbles and trace coarse sand	
			75			

DATE: 03/28/07 10:57am FILENAME: P194006282

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

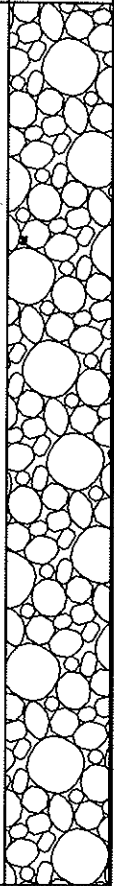
Boring Number: MW-35i

Project Number: 275-1940-006-03-4931

Sheet: 3 OF 5

Date Completed: OCTOBER 14, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			80		@ 80 feet: Discrete depth groundwater sample MW-35i-80ft collected 10/05/04 1225	
			85	BENTONITE SLURRY, 5-104 FEET		
			90	2-INCH THREADED SCH 80 PVC CASING, 0-112 FEET, FLUSH THREAD		
			95	10-INCH BOREHOLE 0-100 FEET		
			100		98-130 feet: SANDY GRAVEL (GW) - driving casing became more difficult - gray, dense, saturated, fine to very coarse gravel - 15% coarse sand and silty matrix @ 100 feet: Discrete depth groundwater sample MW-35i-100ft collected 10/06/04 0810	
			105	8-INCH BOREHOLE 100-182 FEET		
			110	BENTONITE CHIPS, 104-108 FEET	@ 105 feet: SANDY GRAVEL, dark gray, coarse gravel, 10% coarse sub-angular sand @ 107 feet: driving casing became more difficult	
			115	20/40 SILICA SAND, 108-109 FEET		
				10/20 SILICA SAND, 109-123 FEET	@ 113 feet: driving casing became easier	
				2-INCH SCH 80 0.020 SLOT PVC SCREEN 112-122 FEET		

DATE: 03/28/07 10:59am FILENAME: P194006282

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-35i

Project Number: 275-1940-006-03-4931

Sheet: 4 OF 5

Date Completed: OCTOBER 14, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			120	<p>2-INCH SCH 80 0.020 SLOT PVC SCREEN 112-122 FEET</p> <p>10/20 SILICA SAND, 109-123 FEET</p>	<p>@ 120 feet: SANDY GRAVEL, fine to coarse gravel, 10% fine to medium grained sand, well graded</p> <p>@ 120 feet: Discrete depth groundwater sample MW-35i-120ft collected 10/07/04 1350</p>	
			125	<p>20/40 SILICA SAND, 123-124.5 FEET</p> <p>BENTONITE CHIPS, 124.5-127 FEET</p>	<p>130-182 feet: GRAVEL (GW) - dark gray, dense, saturated, medium to coarse gravel with cemented matrix</p>	
			130	<p>8-INCH BOREHOLE 100-182 FEET</p>	<p>@ 140 feet: Discrete depth groundwater sample MW-35i-140ft collected 10/08/04 1445</p>	
			135	<p>BENTONITE GROUT, 127-182 FEET</p>		
			140			
			145			
			150			
			155			

DATE: 03/28/07 10:59am FILENAME: P194006282

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931
Location: NORTH WEST PACKING
PMX Representative: MIKE MARSHALL
Drilled By: GEOTECH EXPLORATIONS
Drill Method: AUGER
Soil Sample Method: SPLIT SPOON
Groundwater Sample Method: NA

Boring Number: MW-35s
Sheet: 1 OF 1
Total Boring Depth: 33 FEET/WELL DEPTH: 32.5 FEET
Date Completed: OCTOBER 4, 2004
Ground Level Measurement: 34.61 FT
Initial Water Level ∇ 31.8 FT
Measuring Point Elevation: 34.20 FT
Static Water Level: 30.8 FT **Date:** 10/04/04
Northing: 117240.3 **Easting:** 1080198.7

DATE: 03/28/07 10:16am FILENAME: P194006287

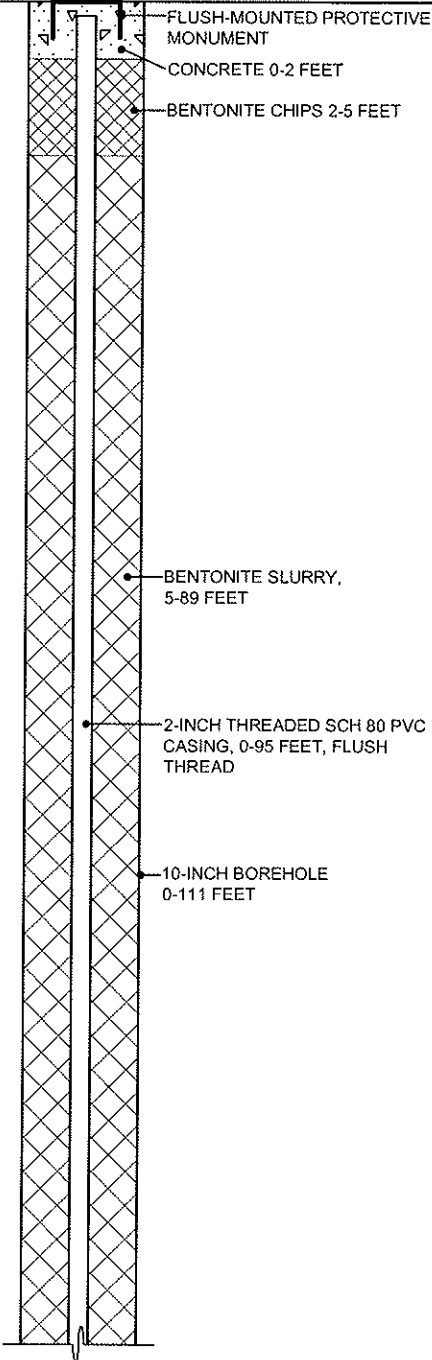
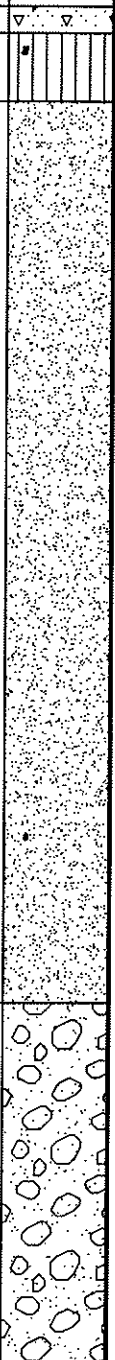
BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			5	FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1 FEET BENTONITE CHIPS 1-20.5 FEET	No sample obtained (cuttings are gravelly sand)	.
14 9 16	12"		10	2-INCH THREADED SCH 40 PVC CASING, 0-22.5 FEET, FLUSH THREAD 8-INCH BOREHOLE 0-33 FEET	5-10 feet: SAND (SW) - gray, medium dense, damp, micaceous, medium to fine grained, sub rounded to sub angular	.
1 1 3	12"		15		10-15 feet: SILTY SAND (SM) - light brown, loose, moist, micaceous, trace of wood debris	.
2 2 3	18"		20		15-20.5 feet: SAND (SW) - dark gray, loose, wet to saturated, micaceous, sub rounded	.
2 2 5	18"		25	10/20 SILICA SAND, 20.5-33 FEET 2-INCH SCH 40 0.020 SLOT PVC SCREEN 22.5-32.5 FEET	20.5-30 feet: SILT (ML) - dark gray, soft, wet, mottled	.
2 2 1	19"		30		30-33 feet: SAND (SW) - dark gray, loose, wet to saturated, medium grained to coarse grained sub rounded	.
4 5 6	12"		35		33 feet: End of boring	.

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-003-4931
Location: 20th St/ Simpson Ave
PMX Representative: INGMAR SAUL/ADAM ROMEY
Drilled By: WESTERBERG DRILLING
Drill Method: CABLE TOOL
Soil Sample Method: SPLIT SPOON
Groundwater Sample Method: REDIFLO 2 PUMP

Boring Number: MW-36i
Sheet: 1 OF 5
Total Boring Depth: 163 FEET/ WELL DEPTH: 105 FEET
Date Completed: SEPTEMBER 28, 2004
Ground Level Measurement: 35.11 FT
Initial Water Level 31.10 FT
Measuring Point Elevation: 34.84 FT
Northing: 118216.3 **Easting:** 1080185.6

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
				 <p> FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-2 FEET BENTONITE CHIPS 2-5 FEET BENTONITE SLURRY, 5-89 FEET 2-INCH THREADED SCH 80 PVC CASING, 0-95 FEET, FLUSH THREAD 10-INCH BOREHOLE 0-111 FEET </p>	0-0.5 feet: CONCRETE SIDEWALK AND GRAVEL FILL 0.5-2 feet: SILT, Light brown, loose, damp 2-25 feet: SAND, Grayish brown, loose, damp, fine grained, well sorted, micaceous @ 25 feet, SAND, Dark Gray medium dense, moist, fine to coarse grained, poorly sorted, micaceous, trace of sub-rounded fine gravel 26-48 feet: GRAVELLY SAND, Dark gray, medium dense, moist, sub-rounded, coarse to fine gravel, coarse to fine grained sand, poorly sorted, micaceous	
4 5 5	18"		10			
3 3 9	18"		15			
3 4 5	18"		20			
4 6 15	18"		25			
5 8 8	12"		30			
			35			

DATE: 03/11/05 09:24am FILENAME: P194006227

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-36i

Project Number: 275-1940-006-003-4931

Sheet: 2 OF 5

Date Completed: SEPTEMBER 28, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN	
4 13 16	4"			<p style="margin-left: 20px;">BENTONITE SLURRY, 5-89 FEET</p> <p style="margin-left: 20px;">2-INCH THREADED SCH 80 PVC CASING, 0-95 FEET, FLUSH THREAD</p> <p style="margin-left: 20px;">10-INCH BOREHOLE 0-111 FEET</p>			
5 15 20	6"		40		@ 40 feet: Discrete depth groundwater sample MW-36i-40ft collected 9/13/04 1305		
			45				
			50				48-64 feet: SAND, Dark gray, dense, saturated, medium to coarse grained, well sorted
25	0"						
			55				
			60		@ 60 feet: Discrete depth groundwater sample MW-36i-60ft collected 9/14/04 0850		
			65		64-106 feet: SANDY GRAVEL, Dark Gray, dense, saturated, sub-rounded, medium to coarse grained sand, sub-rounded, cobbles to fine gravel		
			70				
			75				

DATE: 03/11/05 09:24am FILENAME: P194006227

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER


Boring Number: MW-36i

Project Number: 275-1940-006-003-4931

Sheet: 3 OF 5

Date Completed: SEPTEMBER 28, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			80	<ul style="list-style-type: none"> • BENTONITE SLURRY, 5-89 FEET • 2-INCH THREADED SCH 80 PVC CASING, 0-95 FEET, FLUSH THREAD • 10-INCH BOREHOLE 0-111 FEET 	<p>@ 80 feet: Discrete depth groundwater sample MW-36i-80ft collected 9/14/04 1250</p>	
			85	<ul style="list-style-type: none"> • BENTONITE CHIPS 89-91 FEET • 20/40 SILICA SAND 91-92 FEET • STAINLESS STEEL CENTRALIZER AT 95 FEET 		
			90	<ul style="list-style-type: none"> • 2-INCH SCH 80 0.010 SLOT PVC SCREEN 95-105 FEET • 10/20 SILICA SAND, 92-106.5 FEET 	<p>@ 100 feet, SANDY GRAVEL, trace of fine grained sand and silt @ 100 feet: Discrete depth groundwater sample MW-36i-100ft collected 9/15/04 1135</p>	
			95	<ul style="list-style-type: none"> • STAINLESS STEEL CENTRALIZER AT 105 FEET • 20/40 SILICA SAND, 106.5 -107.5 FEET 		
			100	<ul style="list-style-type: none"> • BENTONITE CHIPS 107.5 -112 FEET • 8-INCH BOREHOLE 111-163 FEET • BENTONITE SLURRY, 112-163 FEET 	<p>@ 105.5 feet, SANDY GRAVEL, traces of cementation</p> <p>106-163 feet, SANDY GRAVEL, dark gray, very dense, saturated, sub-rounded, medium to coarse grained sand, micaceous, sub-rounded to well-rounded, medium to coarse gravel and cobbles, with cementation matrix</p>	
			105			
			110			
			115			

DATE: 03/11/05 09:24am FILENAME: P194006227

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-36i

Project Number: 275-1940-006-003-4931

Sheet: 4 OF 5

Date Completed: SEPTEMBER 28, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			120		@ 120 feet: Discrete depth groundwater sample MW-36i-120ft collected 9/17/04 1135	
			125	BENTONITE SLURRY 112-163 FEET		
			130	8-INCH BOREHOLE 111-163 FEET		
			135			
			140		@ 140 feet, SANDY GRAVEL, sub-rounded fine to medium grained sand, sub-rounded to well-rounded fine to coarse gravel with cobbles @ 140 feet: Discrete depth groundwater sample MW-36i-140ft collected 9/21/04 0845	
			145			
			150			
			155			

DATE: 03/11/05 09:24am FILENAME: P194006227

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

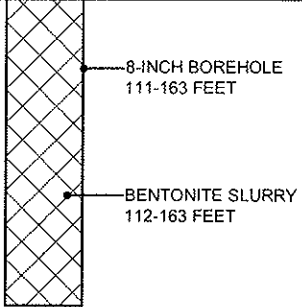

Boring Number: MW-36i

Project Number: 275-1940-006-003-4931

Sheet: 5 OF 5

Date Completed: SEPTEMBER 28, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			160	 <p>8-INCH BOREHOLE 111-163 FEET</p> <p>BENTONITE SLURRY 112-163 FEET</p>	<p>@ 160 feet, SANDY GRAVEL, sub-rounded, micaceous, fine grained sand, sub-rounded to well-rounded fine to coarse gravel</p> <p>@ 160 feet: Discrete depth groundwater sample MW-36i-160ft collected 9/23/04 0855</p>	
			165		<p>@ 163 feet: Bottom of boring</p>	
			170			
			175			
			180			
			185			
			190			
			195			

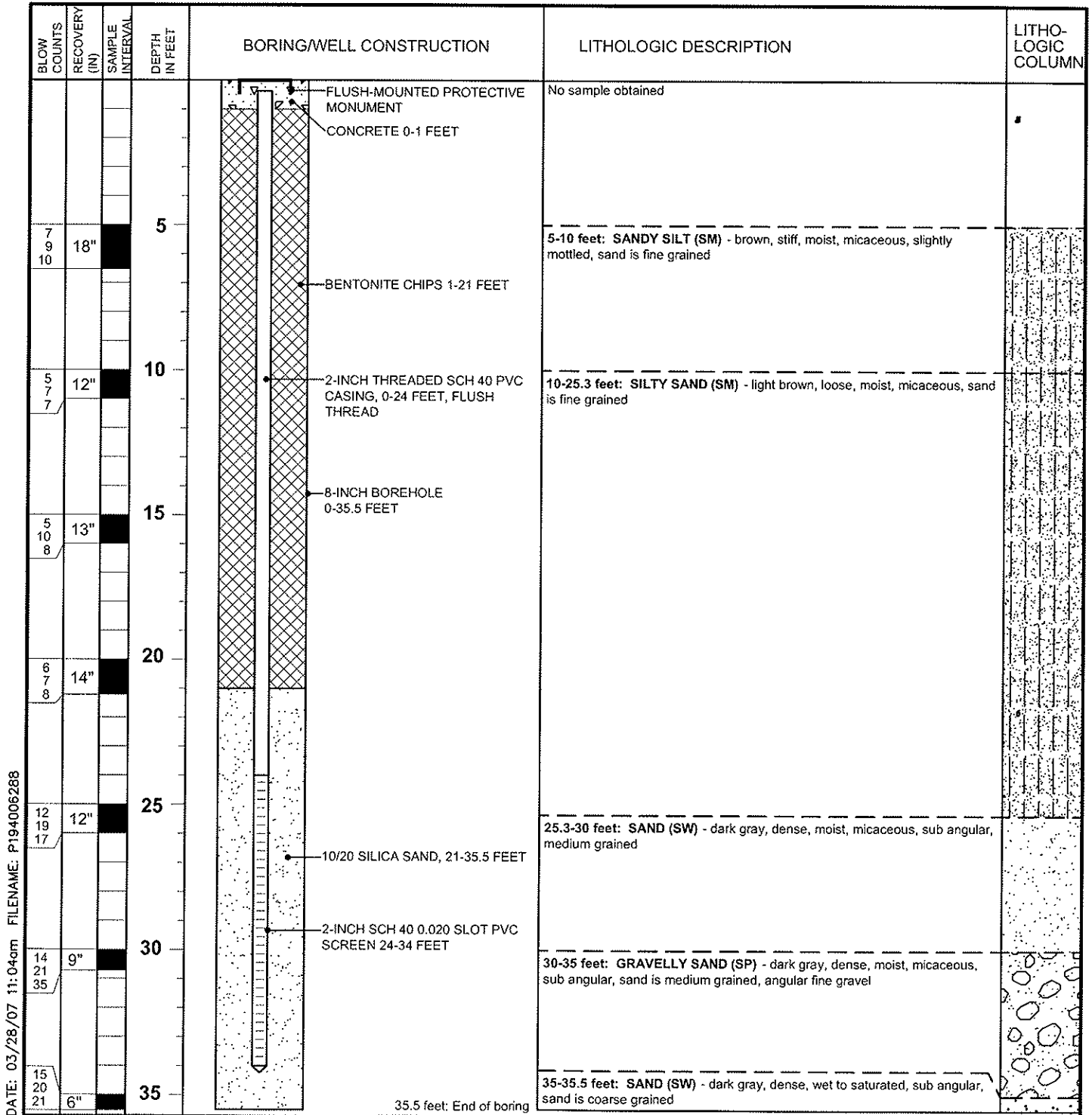
DATE: 03/11/05 09:24am FILENAME: P194006227

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-03-4931
 Location: 20TH AND THOMPSON
 PMX Representative: MIKE MARSHALL
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: MW-36s
 Sheet: 1 OF 1
 Total Boring Depth: 35.5 FEET/ WELL DEPTH: 34 FEET
 Date Completed: OCTOBER 5, 2004
 Ground Level Measurement: 35.05 FT
 Initial Water Level ∇ : 31.2 FT
 Measuring Point Elevation: 34.64 FT
 Static Water Level: 30.82 FT Date: 10/05/04
 Northing: 118220.5 Easting: 1080185.6



DATE: 03/28/07 11:04am FILENAME: P194006288

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-003-4931
 Location: TRI STAR LUMBER/ 1200 Portway
 PMX Representative: INGMAR SAUL/ADAM ROMEY
 Drilled By: WESTERBERG DRILLING
 Drill Method: CABLE TOOL
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: REDIFLO 2 PUMP

Boring Number: MW-37i
 Sheet: 1 OF 5
 Total Boring Depth: 182 FEET/WELL DEPTH: 125 FEET
 Date Completed: SEPTEMBER 9, 2004
 Ground Level Measurement: 34.69 FT
 Initial Water Level 30.5 FT
 Measuring Point Elevation: 34.64 FT
 Northing: 116675.3 Easting: 1080849.8

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-2 FEET BENTONITE CHIPS 2-5 FEET	0-0.17 feet: ASPHALT GRAVEL SURFACE 0.17-1 feet: GRAVEL FILL 1-2 feet: SAND FILL	0
			5		2-5 feet: SANDY SILT (SW) - Dark reddish brown (5YR 3/2), medium stiff, damp, trace of coarse grained sand	5
4 5 5	15"		10		5-53 feet: SAND (SW) - Dark grayish brown (10YR 4/3), medium dense, damp, sub-angular, fine to coarse grained sand, micaceous, poorly sorted	10
3 3 6	17"		15	BENTONITE SLURRY, 5-109 FEET	@ 15 feet, SAND, very dark gray (7.5YR 3/1)	15
4 6 3	16"		20	2-INCH THREADED SCH 80 PVC CASING, 0-115 FEET, FLUSH THREAD 10-INCH BOREHOLE 0-140 FEET		20
4 5 9	17"		25		@ 25 feet, SAND, not micaceous	25
6 4 4	18"		30			30
			35			35

DATE: 02/13/07 3:16pm FILENAME: P194006219

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-37i

Project Number: 275-1940-006-003-4931

Sheet: 2 OF 5

Date Completed: SEPTEMBER 9, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
4 4 8	12"				@ 35 feet, SAND, wet	
3 4 5	3"		40		@ 40 feet: Discrete depth groundwater sample MW-37i-40ft collected 8/13/04 1235	
4 5 8	3"		45		@ 45 feet, SAND, trace of gravel	
2 2 8	4"		50	BENTONITE SLURRY, 5-109 FEET		
2 4 6	4"		55	2-INCH THREADED SCH 80 PVC CASING, 0-115 FEET, FLUSH THREAD	53-108 feet: GRAVELY SAND (GW), Dark Grayish Brown (10YR 4/2), saturated, medium dense, ~10% sub-rounded fine to coarse gravel and cobbles, fine to coarse grained sand.	
5 5 25	0"		60	10-INCH BOREHOLE 0-140 FEET	@ 55 feet, GRAVELY SAND, Very dark gray (7.5YR 3/1), sub-rounded, ~30% fine to coarse gravel and cobbles, fine to coarse grained sand, poorly sorted	
8 10 10	1/2"		65		@ 60 feet: Discrete depth groundwater sample MW-37i-60ft collected 8/16/04 0905	
50/5	5"		70		@ 70 feet, GRAVELY SAND, ~45% gravel and cobbles	
			75			

DATE: 02/13/07 3:16pm FILENAME: P194006219

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-37i

Project Number: 275-1940-006-003-4931

Sheet: 3 OF 5

Date Completed: SEPTEMBER 9, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			80	<ul style="list-style-type: none"> • BENTONITE SLURRY, 5-109 FEET • 2-INCH THREADED SCH 80 PVC CASING, 0-115 FEET, FLUSH THREAD • 10-INCH BOREHOLE 0-140 FEET 	<p>@ 80 feet: Discrete depth groundwater sample MW-37i-80ft collected 8/16/04 1327</p>	
			85		<p>@ 90 feet: GRAVELY SAND, trace of clay matrix on gravel</p>	
			90			
			95			
			100		<p>@ 100 feet: Discrete depth groundwater sample MW-37i-100ft collected 8/17/04 0900</p>	
			105			
			110	<ul style="list-style-type: none"> • BENTONITE CHIPS 109-111 FEET • 20/40 SILICA SAND 111-112 FEET • 10/20 SILICA SAND 112-126 FEET 	<p>108 -140 feet: SAND (SP), Dark gray (7.5YR 4/1), dense, saturated, fine grained sand, micaceous, well sorted</p> <p>@ 110 feet: Discrete depth groundwater sample MW-37i-110ft collected 8/20/04 0810</p>	
			115	<ul style="list-style-type: none"> • STAINLESS STEEL CENTRALIZER AT 115 FEET 		

DATE: 02/13/07 3:16pm FILENAME: P194006219

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-37i

Project Number: 275-1940-006-003-4931

Sheet: 4 OF 5

Date Completed: SEPTEMBER 9, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			120	<p>STAINLESS STEEL CENTRALIZER AT 115 FEET</p> <p>2-INCH SCH 80 0.010 SLOT PVC SCREEN 115-125 FEET</p> <p>10/20 SILICA SAND, 112-126 FEET</p>	<p>@ 119 feet: Discrete depth groundwater sample MW-37i-120ft collected 8/19/04 1155</p>	120
			125	<p>STAINLESS STEEL CENTRALIZER AT 125 FEET</p> <p>20/40 SILICA SAND, 126-127 FEET</p> <p>BENTONITE CHIPS 127-129 FEET</p>	<p>@ 125 feet, SAND, trace of coarse grained sand</p>	125
			130	<p>10-INCH BOREHOLE 0-140 FEET</p> <p>BENTONITE SLURRY, 129-182 FEET</p>	<p>@ 128 feet: Discrete depth groundwater sample MW-37i-130ft collected 8/20/04 1410</p>	130
			135			135
			140	<p>8-INCH BOREHOLE 140-182 FEET</p>	<p>140-182 feet: SANDY GRAVEL (GW), Very Dark Gray (2.5 3/1), dense, saturated, ~40% sub-rounded, medium to coarse grained sand, sub-rounded fine to coarse gravel and cobbles, gravel has cemented matrix</p> <p>@ 142 feet: Discrete depth groundwater sample MW-37i-142ft collected 8/23/04 1225</p>	140
			145			145
			150		<p>@ 150 feet, SANDY GRAVEL, trace of silt</p>	150
			155			155

DATE: 02/13/07 3:16pm FILENAME: P194006219

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

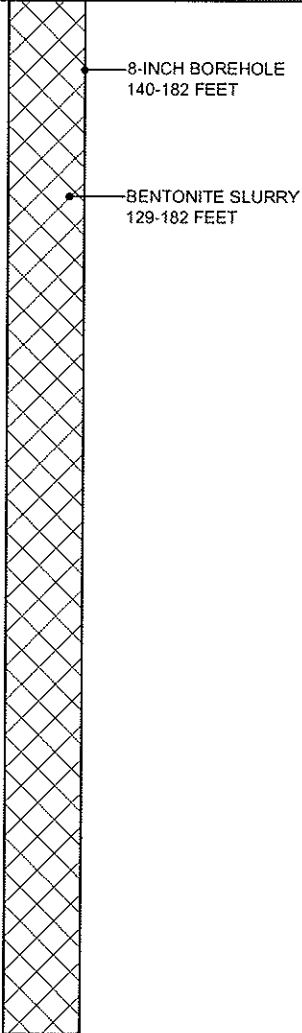
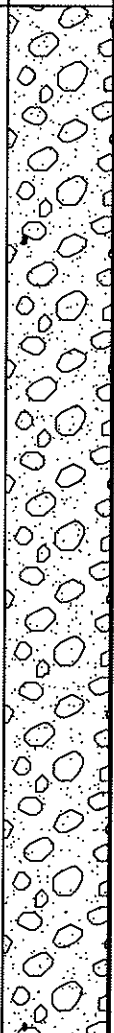
Boring Number: MW-37i

Project Number: 275-1940-006-003-4931

Sheet: 5 OF 5

Date Completed: SEPTEMBER 9, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			160	 <p style="margin-left: 20px;">8-INCH BOREHOLE 140-182 FEET</p> <p style="margin-left: 20px;">BENTONITE SLURRY 129-182 FEET</p>	<p>@ 162 feet: Discrete depth groundwater sample MW-37i-160ft collected 8/27/04 1045</p>	
			165			
			170			
			175			
			180			
			185		<p>@ 182 feet: Bottom of boring</p> <p>@ 182 feet: Discrete depth groundwater sample MW-37i-180ft collected 8/30/04 1535</p>	
			190			
			195			

DATE: 02/13/07 3:16pm FILENAME: P194006219

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931
Location: TRISTAR TIMBER
PMX Representative: MIKE MARSHALL
Drilled By: GEOTECH EXPLORATIONS
Drill Method: AUGER
Soil Sample Method: SPLIT SPOON
Groundwater Sample Method: NA

Boring Number: MW-37s
Sheet: 1 OF 1
Total Boring Depth: 35 FEET/WELL DEPTH: 34 FEET
Date Completed: OCTOBER 6, 2004
Ground Level Measurement: 34.9 FT
Initial Water Level ∇ 31.2 FT
Measuring Point Elevation: 34.79 FT
Static Water Level: 31.18 FT **Date:** 10/07/04
Northing: 116677.8 **Easting:** 1080852.4

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			5	FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1 FEET BENTONITE CHIPS 1-22 FEET	No sample obtained	
5 7 9	13"				5-35 feet: SAND (SW) - dark grayish brown, loose, damp, micaceous, medium to coarse grained	
			10	2-INCH THREADED SCH 40 PVC CASING, 0-24 FEET, FLUSH THREAD		
9 4 4	10"					
			15	8-INCH BOREHOLE 0-35 FEET		
7 5 7	12"					
			20			
10 5 6	12"					
			25	10/20 SILICA SAND, 22-35 FEET		
2 2 4	18"					
			30	2-INCH SCH 40 0.020 SLOT PVC SCREEN 24-34 FEET	@ 30 feet: SAND, saturated	
5 5 3	14"					
			35			
1 2 1	12"					

DATE: 03/28/07 10:01am FILENAME: P194006289

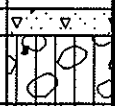
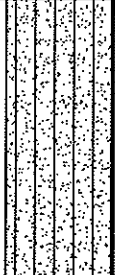
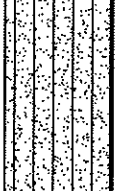
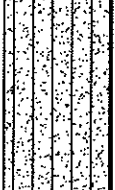
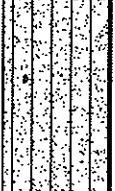
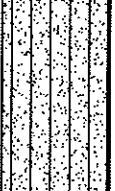
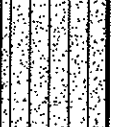
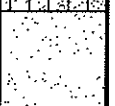

35 feet: End of boring

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931
Location: COLUMBIA CASCADE PROPERTY
PMX Representative: INGMAR SAUL/ADAM ROMEY
Drilled By: TACOMA PUMP AND DRILLING
Drill Method: CABLE TOOL
Soil Sample Method: REDIFLOW PUMP/SPLIT SPOON
Groundwater Sample Method: REDIFLO 2 PUMP

Boring Number: MW-38i
Sheet: 1 OF 6
Total Boring Depth: 210 FEET/WELL DEPTH: 155 FEET
Date Completed: NOVEMBER 12, 2004
Initial Water Level ∇ 40.05 FT
Measuring Point Elevation: 44.47 FT
Northing: 117482.74 **Easting:** 1080862.92

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
				<ul style="list-style-type: none"> FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1.5 FEET BENTONITE CHIPS 1.5-4 FEET 	0-0.3 feet: ASPHALT 0.3-2.5 feet: SILTY GRAVEL FILL	
			5		2.5-33 feet: SILTY SAND - dark brown (7.5 YR 3/2), stiff, damp, fine grained sand	
			10		@ 10 feet: SILTY SAND, light olive brown, dense, micaceous, ~40% silt	
9 14 15	15"			<ul style="list-style-type: none"> BENTONITE SLURRY, 4-138.7 FEET 	@ 15 feet: SILTY SAND, very dense, ~25% silt	
20 30 33	15"		15		@ 20 feet: SILTY SAND, medium dense, ~35% silt	
8 13 14	12"		20	<ul style="list-style-type: none"> 2-INCH THREADED SCH 80 PVC CASING, 0-145 FEET, FLUSH THREAD 10-INCH BOREHOLE 0-168 FEET 	@ 25 feet: SILTY SAND, very dense, ~25% silt	
15 24 30	12"		25			
13 21 27	10"		30			
			35		33-41 feet: SAND - dark grayish brown (10YR 4/2), very dense, moist, sub-rounded, fine to medium grained, well sorted, trace of silt	

DATE: 03/28/07 11:02am FILENAME: P194006296

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931

Boring Number: MW-38i
Sheet: 2 OF 6
Date Completed: NOVEMBER 12, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN	
15 50 45	12"			<p style="margin-left: 20px;">BENTONITE SLURRY, 4-138.7 FEET</p> <p style="margin-left: 20px;">2-INCH THREADED SCH 80 PVC CASING, 0-145 FEET, FLUSH THREAD</p> <p style="margin-left: 20px;">10-INCH BOREHOLE 0-168 FEET</p>			
25 28 70	18"		40			@ 40 feet: SAND, dark grayish brown (10YR 4/2), very dense, moist, sub-rounded, medium to coarse grained, poorly graded, trace of sub-rounded coarse gravel	
15 40 50/1	8"		45			41-70 feet: GRAVELLY SAND - dark gray (2.5Y 4/2), very dense, wet, sub-rounded, fine to coarse gravel, sub-rounded, fine to coarse grained sand, well sorted	
			50			@ 51 feet: Discrete depth groundwater sample MW-38i-50ft collected 10/19/04 1610	
			55				
			60		@ 60 feet: GRAVELLY SAND, saturated, sub-rounded, medium to coarse gravel, sub-rounded, medium to coarse grained sand, well sorted, trace clay matrix		
			65				
			70		@ 68 feet: Discrete depth groundwater sample MW-38i-70ft collected 10/20/04 1250		
			75		70-88 feet: SAND - dark gray, saturated, sub-rounded, fine to coarse grained sand, well sorted, trace of gravel		

DATE: 03/28/07 11:02am FILENAME: P194006296

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931

Boring Number: MW-38i
Sheet: 3 OF 6
Date Completed: NOVEMBER 12, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			80		@ 80 feet: SAND, trace of sub-rounded fine gravel	
			85			
			90	<ul style="list-style-type: none"> • BENTONITE SLURRY, 4-138.7 FEET • 2-INCH THREADED SCH 80 PVC CASING, 0-145 FEET, FLUSH THREAD • 10-INCH BOREHOLE 0-168 FEET 	88-113 feet: SANDY GRAVEL - very dark gray (7.5YR 3/1), very dense, saturated, sub-rounded, fine to coarse grained sand, well sorted, sub-rounded, fine to coarse gravel and cobbles @ 90 feet: Discrete depth groundwater sample MW-38i-90ft collected 10/21/04 1015	
			95			
			100			
			105			
			110		@ 112 feet: Discrete depth groundwater sample MW-38i-110ft collected 10/22/04 1225	
			115		113-157 feet: SAND - dark gray (7.5YR 4/1), dense, saturated, medium to coarse grained sand, trace of sub-rounded coarse gravel	

DATE: 03/28/07 11:02am FILENAME: P194006296

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

Boring Number: MW-38i

Project Number: 275-1940-006-03-4931

Sheet: 4 OF 6

Date Completed: NOVEMBER 12, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			120			
			125			
			130	<ul style="list-style-type: none"> • BENTONITE SLURRY 4-138.7 FEET • 2-INCH THREADED SCH 80 PVC CASING, 0-145 FEET, FLUSH THREAD • 10-INCH BOREHOLE 0-168 FEET 	<ul style="list-style-type: none"> @ 131 feet: Discrete depth groundwater sample MW-38i-130ft collected 10/25/04 1615 	
			135			
			140	<ul style="list-style-type: none"> • BENTONITE CHIPS 138.7-140.8 FEET • 20/40 SILICA SAND 140.8-142.3 FEET 	<ul style="list-style-type: none"> @ 140 feet: SAND, some sub-rounded, coarse gravel with clay matrix 	
			145	<ul style="list-style-type: none"> • STAINLESS STEEL CENTRALIZER AT 145 FEET • 2-INCH SCH 80 0.010 SLOT PVC SCREEN 145.0-155.0 FEET 		
			150	<ul style="list-style-type: none"> • 10/20 SILICA SAND, 142.3-156.6 FEET 	<ul style="list-style-type: none"> @ 150 feet: SAND, trace of fine grained sand, well sorted @ 150 feet: Discrete depth groundwater sample MW-38i-150ft collected 10/26/04 1400 	
			155	<ul style="list-style-type: none"> • STAINLESS STEEL CENTRALIZER AT 155 FEET 		

DATE: 03/28/07 11:02am FILENAME: P194006296



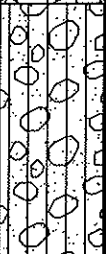
BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931

Boring Number: MW-38i
Sheet: 5 OF 6
Date Completed: NOVEMBER 12, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			160	<ul style="list-style-type: none"> 10/20 SILICA SAND 142.3-156.6 FEET 20/40 SILICA SAND 156.6-157.7 FEET BENTONITE CHIPS 157.7-161.0 FEET 	<p>@ 156.5 feet: SAND, trace of sub-rounded, coarse gravel and cobbles, first signs of cemented matrix on gravel</p> <p>157-166 feet: SANDY GRAVEL - very dark gray (7.5YR 3/1), very dense, saturated, sub-angular, fine to coarse grained sand, well sorted, sub-rounded, coarse gravel and cobbles with cemented matrix</p> <p>@ 160-166 feet: Altering layers of sandy gravel and sand. Each layer varying between 6 to 12 inches</p>	
			165	<ul style="list-style-type: none"> 10-INCH BOREHOLE 0-168 FEET 	<p>166-189 feet: GRAVEL - very dark gray, very dense, saturated, fine to coarse gravel and cobbles, trace of silt matrix and cemented matrix</p>	
			170	<ul style="list-style-type: none"> 8-INCH BOREHOLE 168-210 FEET 	<p>@ 170 feet: Discrete depth groundwater sample MW-38i-170ft collected 10/28/04 1345</p>	
			175	<ul style="list-style-type: none"> BENTONITE SLURRY 161-210 FEET 	<p>@ 175 feet: GRAVEL, sub-rounded, coarse gravel with cemented matrix</p>	
			180			
			185			
			190		<p>189-197 feet: SILTY SANDY GRAVEL - very dark gray (7.5YR 3/1), medium dense, saturated</p> <p>@ 190 feet: Discrete depth groundwater sample MW-38i-190ft collected 11/2/04 1350</p>	
			195			

DATE: 03/28/07 11:02am FILENAME: P194006296

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER

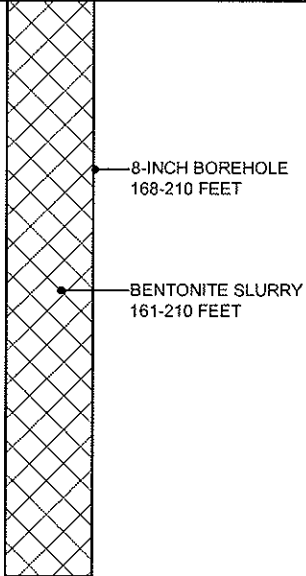

Boring Number: MW-38i

Project Number: 275-1940-006-03-4931

Sheet: 6 OF 6

Date Completed: NOVEMBER 12, 2004

continued from previous page

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			200	 <p style="margin-left: 20px;">8-INCH BOREHOLE 168-210 FEET</p> <p style="margin-left: 20px;">BENTONITE SLURRY 161-210 FEET</p>	<p>197-210: GRAVEL - very dark gray (7.5YR 3/1), very dense, saturated, coarse gravel, cemented matrix, trace of silt</p> <p style="margin-top: 100px;">@ 210 feet: Discrete depth groundwater sample MW-38i-210ft collected 11/04/04 0905</p> <p>210 feet: Bottom of boring</p>	
			205			
			210			
			215			
			220			
			225			
			230			
			235			

DATE: 03/28/07 11:02am FILENAME: P194006296

BORING/WELL LOG

Parametrix

Project Name: PORT OF VANCOUVER
Project Number: 275-1940-006-03-4931
Location: GREAT WESTERN MALTING
PMX Representative: MIKE MARSHALL
Drilled By: GEOTECH EXPLORATIONS
Drill Method: AUGER
Soil Sample Method: SPLIT SPOON
Groundwater Sample Method: NA

Boring Number: MW-39s
Sheet: 1 OF 1
Total Boring Depth: 34 FEET/WELL DEPTH: 33 FEET
Date Completed: OCTOBER 7, 2004
Ground level Measurement: 33.37 FT
Initial Water Level 32.3 FT @ 1300
Measuring Point Elevation: 33.26 FT
Static Water Level: 29.8 FT **Date:** 10/07/04
Northing: 116629.8 **Easting:** 1079205.8

DATE: 03/28/07 09:47am FILENAME: P194006283

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	BORING/WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
			5	FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-1 FEET BENTONITE CHIPS 1-21 FEET	0-10 feet: GRAVELLY SAND (GM) - brown, medium dense, moist, micaceous, sub rounded, fine to medium grained sand, sub rounded fine gravel	
13 17 5	12"		10	2-INCH THREADED SCH 40 PVC CASING, 0-23 FEET, FLUSH THREAD 8-INCH BOREHOLE 0-34 FEET	10-20 feet: SAND (SM) - dark gray, loose, moist, micaceous, fine grained	
2 3 3	18"		15			
1 1 2	18"		20		20-30 feet: SILT (ML) - dark gray, soft, wet, mottled, micaceous	
1 2 4	14"		25	10/20 SILICA SAND, 21-34 FEET 2-INCH SCH 40 0.020 SLOT PVC SCREEN 23-33 FEET	@ 25 feet: SILT , grayish brown, medium stiff	
3 7 7	12"		30		30-34 feet: SANDY SILT (ML) - brown, medium stiff, saturated, micaceous, mottled, sand is fine grained	
2 3 6	14"		35		34 feet: End of boring	
3 9 6	12"					

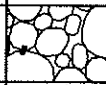
EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-1
 Sheet: 1 OF 2
 Total Depth: 40 FEET
 Date Started/Completed: DECEMBER 3, 2001
 Ground Level Elevation: 28.89 FEET NGVD
 Measuring Point Elevation: 28.62 FEET NGVD
 Static Water Level: 20.8 FEET NGVD Date: 12/20/01
 Northing: 119586.25 Easting: 1078904.76

DATE: 12/05/02 FILENAME: 194006672 IMAGES: XREF'S:

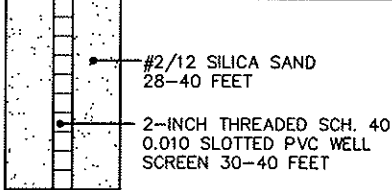

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 2 feet: GW well-graded Gravel	
			2	CONCRETE 0-2 FEET	2-30 feet: SP poorly-graded Sand	
			5	UNIFORM GRANULAR BENTONITE, 2-28 FEET		
			10	10-INCH BOREHOLE 0-40 FEET	⊙ 10 feet: poorly-graded Sand (SP), 5% fines, medium-very fine, angular, loose, non-plastic, damp, trace gravel (<2 inches)	
10 12 22	5		10	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 30 FEET		
			15			
			20		⊙ 20 feet: poorly graded Sand (SP), no fines, fine-medium grained, angular, loose, moist	
11 12 14	100		20		⊙ 21 feet: poorly graded Sand (SP), with 5% silt gray, fine-very fine grained, angular, non-plastic, loose-medium dense, moist	
			25			
			30		30-37 feet: SW well-graded Sand	
			30	#2/12 SILICA SAND 28-40 FEET	⊙ 30 feet: gravelly Sand (SW), dark brown/gray, coarse-fine grained, 15% coarse, 60% medium, 15% fine-grained, 10% sub-rounded angular gravel (<1"), loose-medium dense, saturated	
			35	2-INCH THREADED SCH. 40 0.010 INCH SLOTTED PVC WELL SCREEN 30-40 FEET		

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-1
 Sheet: 2 OF 2
 Total Depth: 40 FEET
 Date Started/Completed: DECEMBER 3, 2001
 Ground Level Elevation: 28.89 FEET NGVD
 Measuring Point Elevation: 28.62 FEET NGVD
 Static Water Level: 20.8 FEET NGVD Date: 12/20/01
 Northing: 119586.25 Easting: 1078904.76

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		as above SW @ 40 feet: well graded Gravel (GW), gray, 5% fines, 80% coarse, 60% oversized, medium dense, saturated, angular to sub-rounded 40 feet: end of boring	
			45			
			50			
			55			
			60			
			65			
			70			

IMAGES:
XREF'S:

DATE: 12/05/02 FILENAME: 194006673

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-2
 Sheet: 1 OF 1
 Total Depth: 25 FEET
 Date Started/Completed: DECEMBER 3, 2001
 Ground Level Elevation: 28.75 FEET NGVD
 Measuring Point Elevation: 28.39 FEET NGVD
 Static Water Level: 20.2 FEET NGVD Date: 12/20/01
 Northing: 119575.63 Easting: 1078907.10

IMAGES: XREFS:
 DATE: 12/31/02 FILENAME: 194006528

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 1 feet: GP Poorly-graded Gravel	
			0-2	CONCRETE 0-2 FEET	1 - 14 feet: GM, Silty sandy gravel	
			5	UNIFORM GRANULAR BENTONITE, 2-13 FEET		
			10	10-INCH BOREHOLE 0-25 FEET	@ 10 feet: Silty sandy gravel (GM), light brown, 20% fines, 20% angular sand, medium to fine-grained, 60% angular gravel (<3/4"), sticky, medium dense	
10 12 22	5		10	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 15 FEET		
			15		14 - 25 feet: (SP), Poorly graded sand	
			15	#2/12 SILICA SAND 13-25 FEET		
			20	2-INCH THREADED SCH. 40 0.010 SLOTTED PVC WELL SCREEN 15-25 FEET	@ 20 feet: poorly graded Sand (SP), light brown, 5% fines, fine-grained, non-plastic, 2" lens of medium grained sand at 21' bgs, saturated	
11 12 14	100		20			
			25		End of Boring	
			30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-3
 Sheet: 1 OF 3
 Total Depth: 100 FEET
 Date Started/Completed: DECEMBER 4, 2001
 Ground Level Elevation: 28.88 FEET NGVD
 Measuring Point Elevation: 28.22 FEET NGVD
 Static Water Level: 20.5 FEET NGVD Date: 12/20/01
 Northing: 119594.79 Easting: 1078922.16

IMAGES: XREF'S:
 DATE: 12/31/02 FILENAME: 194006529

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 1 feet: (GP)	○
			0.5	CONCRETE 0-2 FEET	1.0 - 20 feet: (SP)	●
			5	UNIFORM GRANULAR BENTONITE GROUT, 2-88 FEET		●
			10		⊙ 10 feet: poorly-graded Sand (SP), light brown, no fines, trace coarse angular sand, fine-grained, moist, angular, med. dense	●
12 22 25	100		10			●
			15	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 90 FEET		●
			15	10-INCH BOREHOLE 0-100 FEET		●
			20		20 - 21 feet: (ML) ⊙ 20 feet: as above ⊙ 20.5 feet: 2-inch lens of sandy silt (ML), brown, 80% fines, non-plastic, 10% fine-grained angular sand, med. dense, wgt	●
10 22 20	100		20		21 - 28 feet: (SP)	●
			25			●
			30		28 - 68 feet: (SW) ⊙ 30 feet: well graded Sand (SW), dark gray no fines, 15% coarse angular, 60% med-angular, 25% fine-grained, saturated, med-dense to dense	●
5 20 33	100		30			●
			35			●

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-3
 Sheet: 2 OF 3
 Total Depth: 100 FEET
 Date Started/Completed: DECEMBER 4, 2001
 Ground Level Elevation: 28.88 FEET NGVD
 Measuring Point Elevation: 28.22 FEET NGVD
 Static Water Level: 20.5 FEET NGVD Date: 12/20/01
 Northing: 119594.79 Easting: 1078922.16

DATE: 12/31/02 FILENAME: 194006534 XREF'S: IMAGES:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		28 -- 68 feet: (SW)	
3 22 2.5	40				⊙ 40 feet: well-graded Sand (SW), dark gray, no fines, 50% coarse, 25% med, 25% fine-grained, angular to rounded, saturated, trace gravel (<1/4")	
			45	UNIFORM GRANULAR BENTONITE GROUT - 2-88 FEET		
			50	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 90 FEET	⊙ 50 feet: as above, coarse fraction decreasing to ~25%	
17 50 6	50			10-INCH BOREHOLE 0-100 FEET		
			55			
			60		⊙ 60 feet: as above, dense	
4 12 45	100					
			65			
			70		⊙ 70 feet: poorly-graded Sand (SP), dark gray, trace fines, trace coarse sand, 50% fine-grained, 40% med-grained, angular to sub-rounded, saturated	
5 7 22	100					

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-3
 Sheet: 3 OF 3
 Total Depth: 100 FEET
 Date Started/Completed: DECEMBER 4, 2001
 Ground Level Elevation: 28.88 FEET NGVD
 Measuring Point Elevation: 28.22 FEET NGVD
 Static Water Level: 20.5 FEET NGVD Date: 12/20/01
 Northing: 119594.79 Easting: 1078922.16

DATE: 12/31/02 FILENAME: 194006535 IMAGES: XREFS:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
5 7 22	100		75	<p style="margin-left: 20px;">UNIFORM GRANULAR BENTONITE GROUT 2-88 FEET</p> <p style="margin-left: 20px;">#2/12 SILICA SAND 88-100 FEET</p> <p style="margin-left: 20px;">10-INCH BOREHOLE 0-100 FEET</p> <p style="margin-left: 20px;">2-INCH THREADED SCH 40 0.010-INCH SLOTTED PVC WELL SCREEN 90-100 FEET</p>	@ 70 feet: poorly-graded Sand (SP), dark gray, trace fines, trace coarse sand, 50% fine-grained, 40% med-grained, angular to sub-rounded, saturated	
3 6 9	80		80		@ 80 feet: as above, fine-grained increasing to 50%, 45% med-grained	
9 1 50	100		90		@ 90 feet: as above, but with trace gravel (<1/2")	
10 15 28	100		100		100 feet: End of boring @ 100 feet: poorly-graded sand (SP), gray, trace fines, trace coarse, 70% med-grained, 25% fine-grained, med-dense.	
			105			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-4
 Sheet: 1 OF 2
 Total Depth: 40 FEET
 Date Started/Completed: DECEMBER 10, 2001
 Ground Level Elevation: 28.26 FEET NGVD
 Measuring Point Elevation: 28.00 FEET NGVD
 Static Water Level: 20.0 FEET NGVD Date: 12/20/01
 Northing: 119582.19 Easting: 1078943.09

IMAGES: XREF'S:
 DATE: 12/31/02 FILENAME: 194006536

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 1 feet: GP	[Pattern: Stippled]
			1	CONCRETE 0-2 FEET	1 - 5 feet: ML	[Pattern: Vertical Lines]
			5	UNIFORM GRANULAR BENTONITE, 2-28 FEET		[Pattern: Vertical Lines]
			10		6 - 31 feet: SP	[Pattern: Stippled]
9 13 16	30		10		⊙ 10 feet: poorly-graded sand (SP), gray, trace fines, 5% coarse, 90% medium and fine-grained, med-dense, moist	[Pattern: Stippled]
			15	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 30 FEET		[Pattern: Stippled]
			20	10-INCH BOREHOLE 0-40 FEET	⊙ 20 feet: poorly-graded Sand (SP), gray, 5% fines, trace coarse, 80% fine-grained, 10% med-grained, moist, med-dense	[Pattern: Stippled]
10 13 17	100		20			[Pattern: Stippled]
			25			[Pattern: Stippled]
			30		⊙ 30 Feet: as above, coarse fraction increasing to 20%	[Pattern: Stippled]
14 50 6	100		30	2-INCH THREADED SCH 40 0.010 INCH SLOTTED PVC WELL SCREEN 30-40 FEET	31 - 40 feet: SW	[Pattern: Stippled]
			35	#2/12 SILICA SAND, 28-40 FEET	⊙ 31 Feet: well-graded Sand (SW) with gravel (<1/2"), gray, trace fines. 50% coarse, 20% medium, 20% fine-grained, wet, med-dense to very dense	[Pattern: Stippled]

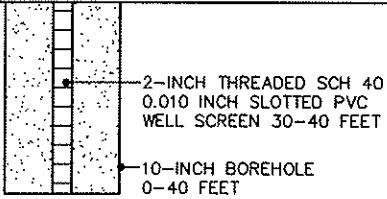

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-4
 Sheet: 2 OF 2
 Total Depth: 40 FEET
 Date Started/Completed: DECEMBER 10, 2001
 Ground Level Elevation: 28.26 FEET NGVD
 Measuring Point Elevation: 28.00 FEET NGVD
 Static Water Level: 20.0 FEET NGVD Date: 12/20/01
 Northing: 119582.19 Easting: 1078943.09

DATE: 12/31/02 FILENAME: 194006537 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40	 <p>2-INCH THREADED SCH 40 0.010 INCH SLOTTED PVC WELL SCREEN 30-40 FEET</p> <p>10-INCH BOREHOLE 0-40 FEET</p>	<p>⊙ 40 feet, as above</p>	
			45		<p>40 feet: End of boring</p>	
			50			
			55			
			60			
			65			
			70			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-5
 Sheet: 1 OF 3
 Total Depth: 75 FEET
 Date Started/Completed: DECEMBER 14, 2001
 Ground Level Elevation: 28.53 FEET NGVD
 Measuring Point Elevation: 28.12 FEET NGVD
 Static Water Level: 20.0 FEET NGVD Date: 12/14/01
 Northing: 119572.83 Easting: 1078920.86

DATE: 12/31/02 FILENAME: 194006538 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 1 feet: GP	0
			5	CONCRETE 0-2 FEET	1 - 20 feet: SP	5
			10	UNIFORM GRANULAR BENTONITE GROUT, 2-63 FEET	⊙ 10 feet: poorly-graded Sand (SP), light brown, no fines, trace coarse angular sand, fine-grained, moist, angular, med-dense	10
			15	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 65 FEET		15
			20	10-INCH BOREHOLE 0-75 FEET	⊙ 20 feet: as above	20
			25		21-65 feet: SW	25
			30		⊙ 30 feet: well-graded Sand (SW), dark gray, no fines, 15% coarse, 60% medium, 25% fine-grained, saturated, med-dense to dense	30
			35			35

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-5
 Sheet: 2 OF 3
 Total Depth: 75 FEET
 Date Started/Completed: DECEMBER 14, 2001
 Ground Level Elevation: 28.53 FEET NGVD
 Measuring Point Elevation: 28.12 FEET NGVD
 Static Water Level: 20.0 FEET NGVD Date: 12/14/01
 Northing: 119572.83 Easting: 1078920.86

DATE: 12/31/02 FILENAME: 194006539 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		21 - 65 feet: (SW)	
			45	UNIFORM GRANULAR BENTONITE GROUT - 2-63 FEET	⊙ 40 feet: well-graded Sand (SW), dark gray, no fines, 50% coarse, 25% medium, 25% fine-grained, angular to rounded, saturated, trace gravel (<1/4 ")	
			50	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 65 FEET	⊙ 50 feet: as above, coarse fraction decreasing	
			55	10-INCH BOREHOLE 0-75 FEET	⊙ 60 feet: as above, dense	
			65	#2/12 SILICA SAND 63-75 FEET 2-INCH THREADED SCH 40 0.010 INCH SLOTTED PVC WELL SCREEN 65-75 FEET	65-75 feet: SP	
			70		⊙ 70 feet: poorly-graded Sand (SP), dark-gray, trace fines, trace coarse sand, 40% med-grained, 45% fine-grained	

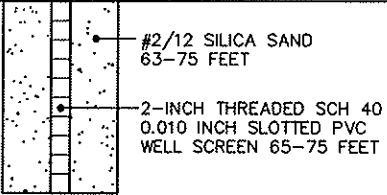
EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-5
 Sheet: 3 OF 3
 Total Depth: 75 FEET
 Date Started/Completed: DECEMBER 14, 2001
 Ground Level Elevation: 28.53 FEET NGVD
 Measuring Point Elevation: 28.12 FEET NGVD
 Static Water Level: 20.0 FEET NGVD Date: 12/14/01
 Northing: 119572.83 Easting: 1078920.86

DATE: 12/31/02 FILENAME: 194006540 IMAGES: XREF'S:

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75		@ 70 feet: poorly-graded Sand (SP), dark-gray, trace fines, trace coarse sand, 40% med--grained, 45% fine-grained	.
			80			
			85			
			90			
			95			
			100			
			105			
					75 feet: end of boring	

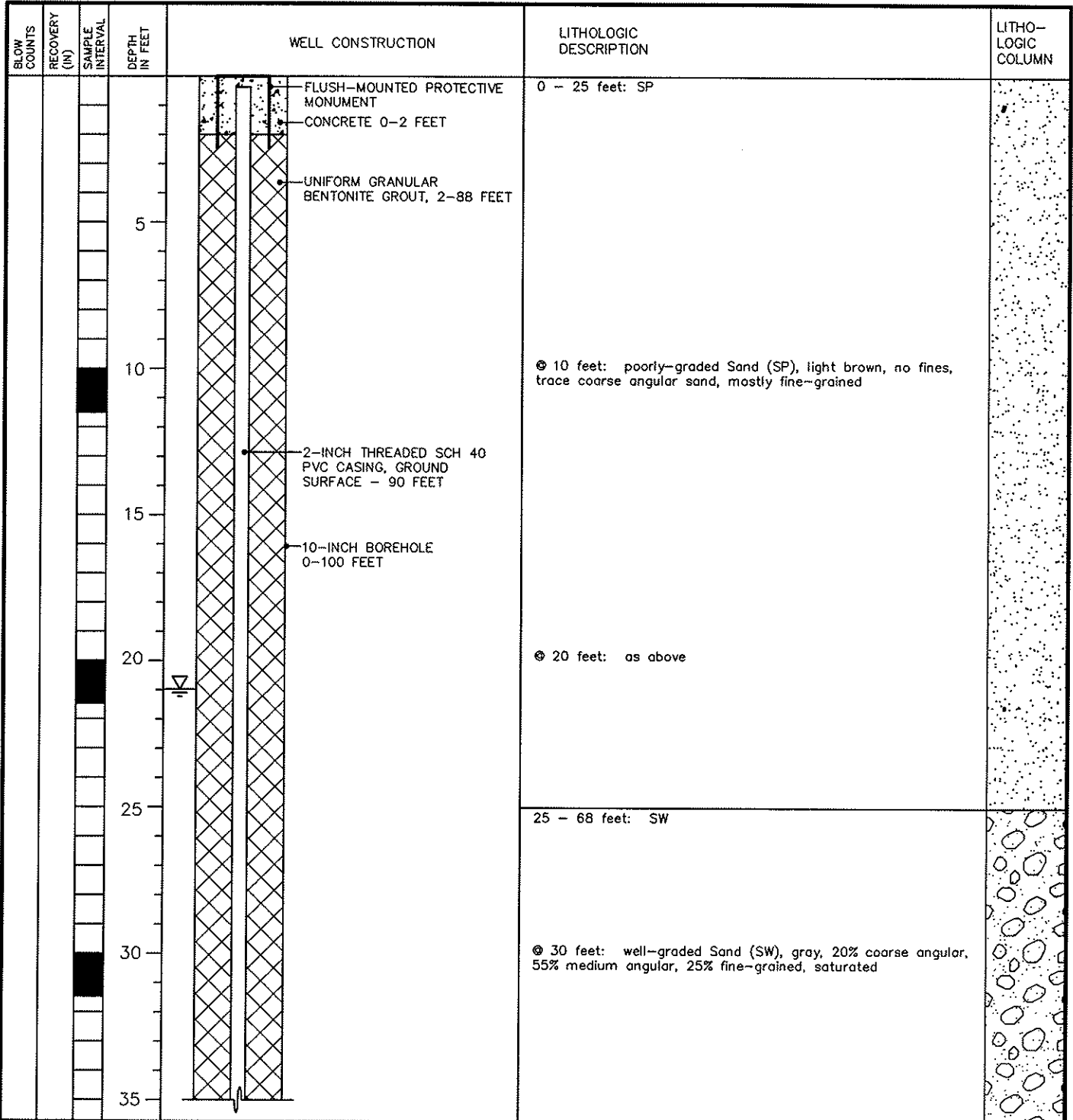
EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-6
 Sheet: 1 OF 3
 Total Depth: 100 FEET
 Date Started/Completed: DECEMBER 6, 2001/DECEMBER 10, 2001
 Ground Level Elevation: 28.69 FEET NGVD
 Measuring Point Elevation: 28.45 FEET NGVD
 Static Water Level: 20.0 FEET NGVD Date: 12/21/01
 Northing: 119555.48 Easting: 1078944.72

DATE: 12/31/02 FILENAME: 194006545 IMAGES: XREF'S:





EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275--1940--006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-6
 Sheet: 2 OF 3
 Total Depth: 100 FEET
 Date Started/Completed: DECEMBER 6, 2001/DECEMBER 10, 2001
 Ground Level Elevation: 28.69 FEET NGVD
 Measuring Point Elevation: 28.45 FEET NGVD
 Static Water Level: 20.0 FEET NGVD Date: 12/21/01
 Northing: 119555.48 Easting: 1078944.72

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		25 - 68 feet: SW, well-graded Sand (SW), gray, 20% coarse angular, 55% medium angular, 25% fine-grained, saturated	
			45	UNIFORM GRANULAR BENTONITE GROUT - 2-88 FEET	⊙ 40 feet: as above, coarse fraction increasing to 50%, 25% medium and fine grained	
			50	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 90 FEET	⊙ 50 feet: as above, coarse fraction decreasing slightly	
			55	10-INCH BOREHOLE 0-100 FEET	⊙ 60 feet: as above	
			60			
			65			
			70		68 - 100 feet: (SP)	
					⊙ 70 feet: poorly-graded Sand (SP), dark gray, trace fines, 50% fine-grained, 40% med-grained	

DATE 12/31/02 FILENAME 194005546 SHEETS 1

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-6
 Sheet: 3 OF 3
 Total Depth: 100 FEET
 Date Started/Completed: DECEMBER 6, 2001/DECEMBER 10, 2001
 Ground Level Elevation: 28.69 FEET NGVD
 Measuring Point Elevation: 28.45 FEET NGVD
 Static Water Level: 20.0 FEET NGVD Date: 12/21/01
 Northing: 119555.48 Easting: 1078944.72

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 90 FEET UNIFORM GRANULAR BENTONITE GROUT 2-88 FEET 10-INCH BOREHOLE 0-100 FEET	68 - 100 feet: poorly-graded Sand (SP), dark gray, trace fines, 50% fine-grained, 40% med-grained © 80 feet: as above, increasing fine-grained sand	
			80		© 90 feet: as above	
			85			
			90	2-INCH THREADED SCH 40 0.010-INCH SLOTTED PVC WELL SCREEN 90-100 FEET #2/12 SILICA SAND 88-100 FEET	© 100 feet: poorly-graded Sand (SP) with gravel, dark gray, trace fines, 45% fine-grained, 40% med-grained	
			95			
			100		100 feet: end of boring	
			105			

DATE: 12/31/02 FILENAME: 194006547
 IMAGES: XREF'S:

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-7
 Sheet: 1 OF 3
 Total Depth: 75 FEET
 Date Started/Completed: DECEMBER 5, 2001/DECEMBER 5, 2001
 Ground Level Elevation: 28.81 FEET NGVD
 Measuring Point Elevation: 28.56 FEET NGVD
 Static Water Level: 20.5 FEET NGVD Date: 12/21/01
 Northing: 119557.51 Easting: 1078959.18

DATE: 12/31/02 FILENAME: 194006648

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 25 feet: SP	
			0-2	CONCRETE 0-2 FEET		
			2-63	UNIFORM GRANULAR BENTONITE GROUT, 2-63 FEET		
			5			
13 16 18	50		10		⊗ 10 feet: poorly-graded Sand (SP), gray/brown, 80% fine grained, trace fines, 15% med-grained, angular, trace gravel (<1/2"), med-dense	
			15	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 65 FEET		
			15	10-INCH BOREHOLE 0-75 FEET		
			20		20 - 28 feet: SM ⊗ 20 feet: poorly-graded silty Sand (SM), gray/brown, 20% fines, non-plastic, 80% fine grained, moist/wet	
14 14 16	50		20			
			25			
50 / 6	20		30		28 - 65 feet: SW ⊗ 30 feet: well-graded Sand (SW) with gravel (<1/2"), trace fines, 40% coarse, 50% med-grained, dense to very dense, saturated	
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-7
 Sheet: 2 OF 3
 Total Depth: 75 FEET
 Date Started/Completed: DECEMBER 5, 2001/DECEMBER 5, 2001
 Ground Level Elevation: 28.81 FEET NGVD
 Measuring Point Elevation: 28.56 FEET NGVD
 Static Water Level: 20.5 FEET NGVD Date: 12/21/01
 Northing: 119557.51 Easting: 1078959.18

DATE 12/31/03 FILENAME 194006540 IMAGES XREFS:

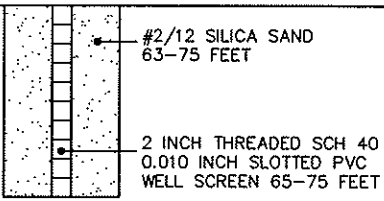

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		28 - 65 feet: well-graded Sand (SW) with gravel (<1/2"), trace fines, 40% coarse, 50% med-grained, dense to very dense, saturated	
50 / 6	60		45	UNIFORM GRANULAR BENTONITE GROUT - 2-63 FEET 2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 65 FEET	@ 40 feet: as above, coarse fraction increasing to 60%	
50 / 6	60		50	10-INCH BOREHOLE 0-75 FEET	@ 50 feet: gravelly Sand (SW), dark gray, no fines, 80% coarse, 15% gravel (<1/2"), 5% fine-grained, very dense	
---	80		55			
			60			
			65	#2/12 SILICA SAND 63-75 FEET 2 INCH THREADED SCH 40 0.010 INCH SLOTTED PVC WELL SCREEN 65-75 FEET	@ 60 feet: as above 65 - 75 feet: (SP)	
			70		@ 70 feet: poorly-graded Sand (SP), dark gray, trace fines, 40% fine, 40% med-grained, trace coarse	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-7
 Sheet: 3 OF 3
 Total Depth: 75 FEET
 Date Started/Completed: DECEMBER 5, 2001/DECEMBER 5, 2001
 Ground Level Elevation: 28.81 FEET NGVD
 Measuring Point Elevation: 28.56 FEET NGVD
 Static Water Level: 20.5 FEET NGVD Date: 12/21/01
 Northing: 119557.51 Easting: 1078959.18

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			75		70 - 100 feet: poorly-graded Sand (SP), dark gray, trace fines, 40% fine, 40% med-grained, trace coarse	
			80			
			85			
			90			
			95			
			100			
			105			
					75 feet: end of boring	

IMAGES: XREF'S
 DATE: 12/31/02 FILENAME: 194008550

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: VMW-8
 Sheet: 1 OF 1
 Total Depth: 25 FEET
 Date Started/Completed: DECEMBER 5, 2001
 Ground Level Elevation: 28.89 FEET NGVD
 Measuring Point Elevation: 28.54 FEET NGVD
 Static Water Level: 20.0 FEET NGVD Date: 12/20/01
 Northing: 119540.87 Easting: 1078967.53

IMAGES: XREF'S:
 DATE: 12/31/02 FILENAME: 194006551

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-2 FEET	0 - 25 feet: SP	0
6 22	50		10	UNIFORM GRANULAR BENTONITE, 2-13 FEET 10-INCH BOREHOLE 0-25 FEET 2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 15 FEET	◎ 10 feet: poorly-graded Sand (SP) with silt, gray/brown, non-plastic, 5% silt, 15% coarse, 80% medium to fine grained, trace gravel (<1/2"), med-dense, moist	10
15 15 15	100		20	#2/12 SILICA SAND 13-25 FEET 2-INCH THREADED SCH. 40 0.010 SLOTTED PVC WELL SCREEN 15-25 FEET	◎ 20 feet: poorly-graded Sand (SP) with silt, gray/brown, non-plastic, fines increasing to 30%, 70% fine-grained sand, moist/wet	20
			25	25 feet: end of boring	25 feet: end of boring	25
			30			30
			35			35

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: IMW-1
 Sheet: 1 OF 1
 Total Depth: 27 FEET
 Date Started/Completed: DECEMBER 3, 2001
 Ground Level Elevation: 27.89 FEET NGVD
 Measuring Point Elevation: 27.56 FEET NGVD
 Static Water Level: 21.6 FEET NGVD Date: 12/18/01
 Northing: 119485.39 Easting: 1078855.65

IMAGES: XREF'S:
 DATE: 12/05/02 FILENAME: 194006552

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 0.5 feet: poorly-graded gravel (GP)	
			0.5	CONCRETE 0-2 FEET	0.5 - 3 feet: sandy silt (ML)	
			5	UNIFORM GRANULAR BENTONITE, 2-15 FEET	3 - 27 feet: poorly-graded Sand (SP)	
			10		⊗ 10 feet: poorly-graded Sand (SP) light brown, fine-medium grained, angular, loose-medium dense	
9 22	50		10			
			15	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 27 FEET		
			15	10-INCH BOREHOLE 0-27 FEET		
			20	#2/12 SILICA SAND 15-27 FEET		
15 15 15	100		20	2-INCH THREADED SCH 40 0.010 SLOTTED PVC WELL SCREEN 17-27 FEET	⊗ 20 feet: poorly-graded Sand (SP) grayish brown, no fines coarse, wet, loose-medium dense	
			25			
			30			
			35			
			27		27 feet: end of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: IMW-2
 Sheet: 1 OF 1
 Total Depth: 27 FEET
 Date Started/Completed: DECEMBER 3, 2001
 Ground Level Elevation: 27.87 FEET NGVD
 Measuring Point Elevation: 27.66 FEET NGVD
 Static Water Level: 21.7 FEET NGVD Date: 12/19/01
 Northing: 119465.93 Easting: 1078941.7

IMAGES:
XREF'S:

DATE: 12/05/02 FILENAME: 194006553

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 0.5 feet: poorly-graded gravel (GP)	
			0.5	CONCRETE 0-2 FEET	0.5 - 11 feet: silt with sand (ML)	
			5	UNIFORM GRANULAR BENTONITE, 2-15 FEET		
			10		⊗ 10 feet: silt with sand (ML) dark brown, 95% fine sand	
5 8 12	100		11	2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 27 FEET	11 - 27 feet: poorly-graded Sand (SP)	
			15	10-INCH BOREHOLE 0-27 FEET	⊗ 11 feet: poorly-graded Sand (SP), 5% fines, fine grained, 1" lens of SP with 20% fines, loose-medium dense, non-plastic	
			20	#2/12 SILICA SAND 15-27 FEET		
5 7 9			20	2-INCH THREADED SCH 40 0.010 SLOTTED PVC WELL SCREEN 17-27 FEET	⊗ 20 feet: poorly-graded Sand (SP), 10% fines, very fine to fine-grained, angular, wet, non-plastic, 2" lens of fine-medium grained well-graded sand.	
			25			
			30			
			35			
					27 feet: end of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING

Project Number: 275-1940-006

Location: VANCOUVER, WA

PMX Representative: ANDREW SOMES

Drilled By: CASCADE DRILLING

Drill Method: HOLLOW STEM AUGER

Soil Sample Method: SPLIT SPOON

Groundwater Sample Method: NA

Boring Number: IMW-3

Sheet: 1 OF 1

Total Depth: 30 FEET

Date Started/Completed: DECEMBER 13, 2001

Ground Level Elevation: 31.05 FEET NGVD

Measuring Point Elevation: 30.82 FEET NGVD

Static Water Level: 24.8 FEET NGVD Date: 12/19/01

Northing: 119467.58 Easting: 1079027.77

DATE: 12/05/02 FILENAME: 194006554 IMAGES: XREF.S:

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 20.5 feet: silty Sand (SM)	
			2	CONCRETE 0-2 FEET		
			5	UNIFORM GRANULAR BENTONITE, 2-18 FEET		
			10		⊙ 10 feet: silty Sand (SM) light brown, 3% fines, moderate plasticity, traces coarse, loose-med dense, moist	
6 9 11			11	2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 20 FEET		
			15	10-INCH BOREHOLE 0-30 FEET		
			20	#2/12 SILICA SAND 18-30 FEET	⊙ 20 feet: as above	
11 15 19			21		20.5 - 21 feet: sandy silt (ML)	
			25	2-INCH THREADED SCH 40 0.010 SLOTTED PVC WELL SCREEN 20-30 FEET	⊙ 20.5 feet: 2" lens of sandy Silty, light brown, 60% fines, moderate plasticity, 45% very fine-fine grained sand, 55% medium grained, wet	
			28		21 - 28 feet: poorly-graded Sand (SP)	
			30		⊙ 21 feet: poorly-graded Sand (SP), trace fines, non-plastic, 90% fine grained, 10% medium grained, wet	
15 15 16			30		28 - 30 feet: well-graded sand (SW)	
			30		⊙ 30 feet: well-graded Sand (SW), 5% coarse, 90% med-fine-grained, trace fines	
			30		30 feet: end of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: IMW-4
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Started/Completed: DECEMBER 13, 2001
 Ground Level Elevation: 31.31 FEET NGVD
 Measuring Point Elevation: 31.00 FEET NGVD
 Static Water Level: 25.8 FEET NGVD Date: 12/19/01
 Northing: 119504.83 Easting: 1079075.75

IMAGES: XREFS
 DATE: 12/05/02 FILENAME: 194006555

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 15 feet: Silt (ML)	
			0-2	CONCRETE		
			2-18	UNIFORM GRANULAR BENTONITE		
			18-20		⊙ 10 feet: Silt (ML), light brown, 90% fines, moderate plasticity, 10% fine sand, moist, loose-med dense	
12	18	100	20	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 20 FEET		
			15	10-INCH BOREHOLE 0-30 FEET	15 - 25 feet: poorly-graded Sand (SP)	
			18-22	#2/12 SILICA SAND 18-30 FEET	⊙ 20 feet: poorly-graded Sand (SP), grey brown, 5% fines	
10	18	100	22			
			25	2-INCH THREADED SCH 40 0.010 SLOTTED PVC WELL SCREEN 20-30 FEET	25 - 30 feet: well-graded Sand (SW)	
			30		⊙ 30 feet: well-graded Sand (SW), trace fines	
5	12	100	20		30 feet: end of boring	
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: IMW-5
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Started/Completed: DECEMBER 12, 2001
 Ground Level Elevation: 31.06 FEET NGVD
 Measuring Point Elevation: 30.74 FEET NGVD
 Static Water Level: 24.9 FEET NGVD Date: 12/19/01
 Northing: 119592.26 Easting: 1078965.18

IMAGES XREF'S
DATE: 12/05/00 FILENAME: 19400556

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 28 feet: poorly-graded Sand (SP)	
			2	CONCRETE 0-2 FEET		
			5	UNIFORM GRANULAR BENTONITE, 2-18 FEET		
			10	10-INCH BOREHOLE 0-30 FEET	⊕ 10 feet: poorly-graded Sand (SP), grey, trace fines, 10% coarse, 70% medium grained, 20% fine grained, medium dense, moist	
12 18 20	100		10	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE -20 FEET		
			15			
			20	#2/12 SILICA SAND 18-30 FEET	⊕ 20 feet: as above, less coarse fraction, moist/wet	
10 18 22	100		20	2-INCH THREADED SCH 40 0.010 SLOTTED PVC WELL SCREEN 20-30 FEET		
			25			
			28		28 - 30 feet: well-graded Sand (SW)	
6 12 20	100		30		⊕ 30 feet: well-graded Sand (SW) with gravel (<1"), dark gray, trace fines, 15% coarse, 60% medium grained, 40% fine grained, angular to sub-rounded, saturated, end of boring	
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING

Project Number: 275-1940-006

Location: VANCOUVER, WA

PMX Representative: ANDREW SOMES

Drilled By: CASCADE DRILLING

Drill Method: HOLLOW STEM AUGER

Soil Sample Method: SPLIT SPOON

Groundwater Sample Method: NA

Boring Number: IMW-5A

Sheet: 1 OF 2

Total Depth: 70 FEET

Date Started/Completed: DECEMBER 12, 2001

Ground Level Elevation: 31.03 FEET NGVD

Measuring Point Elevation: 30.78 FEET NGVD

Static Water Level: 24.9 FEET NGVD Date: 12/19/01

Northing: 119589.70 Easting: 1078967.31

BLOW COUNTS	RECOVERY (M)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	<ul style="list-style-type: none"> FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-2 FEET UNIFORM GRANULAR BENTONITE GROUT, 2-58 FEET 	0 - 28 feet: poorly-graded Sand (SP)	0
			5		◎ 10 feet: poorly-graded Sand (SP), gray, trace fines, 10% coarse, 70% medium grained, 20% fine grained, medium dense, moist	10
			10	<ul style="list-style-type: none"> 2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 60 FEET 10-INCH BOREHOLE 0-70 FEET 	◎ 20 feet: as above, less coarse fraction, moist/wet	20
			15			25
			20			30
			25		28 - 70 feet: well-graded Sand (SW)	35
			30		◎ 30 feet: well-graded Sand (SW) with gravel (<1"), dark gray, trace fines, 15% coarse, 60% medium grained, 40% fine grained, angular to sub-rounded, saturated	
			35			

IMAGES: KREBS
 DATE: 12/31/01 FILENAME: 194006597

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: IMW-5A
 Sheet: 2 OF 2
 Total Depth: 70 FEET
 Date Started/Completed: DECEMBER 12, 2001
 Ground Level Elevation: 31.03 FEET NGVD
 Measuring Point Elevation: 30.78 FEET NGVD
 Static Water Level: 24.9 FEET NGVD Date: 12/19/01
 Northing: 119589.70 Easting: 1078966.31

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			40		28 - 70 feet: well-graded Sand (SW)	
			45	UNIFORM GRANULAR BENTONITE GROUT 2-58 FEET	⊙ 40 feet: gravelly Sand (SW) well-graded, trace fines, 20% gravel (<1"), 40% coarse, 20% fine grained, angular to sub-rounded	
			50	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 60 FEET	⊙ 50 feet: well-graded Sand (SW) with gravel, dark gray, 40% coarse, 40% fine to medium grained, 15% gravel (<3/4"), angular to sub-rounded	
			55	10-INCH BOREHOLE 0-70 FEET		
			60	#2/12 SILICA SAND 58-70 FEET	⊙ 60 feet: as above, less gravel, coarse fraction increasing to 60%, 30% med-fine grained, dense	
			65	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 60 FEET		
			70		⊙ 70 feet: well-graded Sand (SW), dark grey, trace fines, 15% coarse, trace gravel (<1/2"), 40% med-grained, 40% fine grained, dense End of boring	

DATE 12/05/02 FILENAME 194006558 IMAGES XREFS

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: IMW-6
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Started/Completed: DECEMBER 11, 2001
 Ground Level Elevation: 31.10 FEET NGVD
 Measuring Point Elevation: 30.86 FEET NGVD
 Static Water Level: 24.9 FEET NGVD Date: 12/18/01
 Northing: 119626.24 Easting: 1078932.60

DATE: 12/31/02 FILENAME: 194006560 IMAGES: XREFS:


BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 28 feet: poorly-graded Sand (SP)	
			5	CONCRETE 0-2 FEET		
			10	UNIFORM GRANULAR BENTONITE, 2-18 FEET		
10 11 16	100		10	10-INCH BOREHOLE 0-30 FEET	@ 10 feet: poorly-graded Sand (SP). gray, trace fines, 10% coarse, 70% medium grained, 20% fine grained, medium dense, moist	
			15	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 20 FEET		
12 50 6	80		20	#2/12 SILICA SAND 18-30 FEET	@ 20 feet: as above, less coarse fraction, moist/wet	
			25	2-INCH THREADED SCH. 40 0.010 SLOTTED PVC WELL SCREEN 20-30 FEET		
6 12 20	30		30		28 - 30 feet: well-graded Sand (SW)	
			30		@ 30 feet: well-graded Sand (SW) with gravel (<1"), dark gray, trace fines, 15% coarse, 60% medium grained, 40% fine grained, angular to sub-rounded, saturated	
			30		30 feet: End of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: IMW-6A
 Sheet: 1 OF 2
 Total Depth: 70 FEET
 Date Started/Completed: DECEMBER 11, 2001
 Ground Level Elevation: 31.03 FEET NGVD
 Measuring Point Elevation: 30.68 FEET NGVD
 Static Water Level: 24.9 FEET NGVD Date: 12/18/01
 Northing: 119626.73 Easting: 1078934.98

BLOW COUNTS	RECOVERY (M)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT CONCRETE 0-2 FEET UNIFORM GRANULAR BENTONITE GROUT, 2-58 FEET	0 - 28 feet: poorly-graded Sand (SW)	0
			5		Ⓢ 10 feet: poorly-graded sand (SP), gray, trace fines, 10% coarse, 70% medium grained, 20% fine-grained, medium dense, moist	5
			10	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 60 FEET 10-INCH BOREHOLE 0-70 FEET	Ⓢ 20 feet: as above, less coarse fraction, moist/wet	10
			15			15
			20			20
			25			25
			30		28 - 70 feet: well-graded Sand (SW) Ⓢ 30 feet: well-graded Sand (SW) with gravel (<1"), dark gray, trace fines, 15% coarse, 60% medium grained, 40% fine grained, angular to sub-rounded, saturated	30
			35			35

IMAGES: XREF'S

DATE: 12/31/02 FILENAME: 194006541

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: IMW-6A
 Sheet: 2 OF 2
 Total Depth: 70 FEET
 Date Started/Completed: DECEMBER 11, 2001
 Ground Level Elevation: 31.03 FEET NGVD
 Measuring Point Elevation: 30.68 FEET NGVD
 Static Water Level: 24.9 FEET NGVD Date: 12/18/01
 Northing: 119626.73 Easting: 1078934.98

DATE: 12/31/02 FILENAME: 194006542 IMAGES: XREFS:

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
11 50 6	60		40		28 - 70 feet: well-graded Sand (SW)	
			45	UNIFORM GRANULAR BENTONITE GROUT, 2-58 FEET	⊙ 40 feet: gravelly Sand (SW), well graded, trace fines, 20% gravel (<1"), 40% coarse, 20% fine grained, angular to sub-rounded	
			50	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 70 FEET	⊙ 50 feet: well-graded Sand (SW) with gravel, dark gray, 40% coarse, 40% fine to medium grained, 15% gravel (<3/4"), angular to sub-rounded	
	80		55	10-INCH BOREHOLE 0-70 FEET		
30 50 5	70		60		⊙ 60 feet: as above, less gravel, coarse fraction increasing to 60%, 30% medium fine grained, dense	
			65	2 INCH THREADED SCH 40 0.010 SLOTTED PVC WELL SCREEN 60-70 FEET		
				#2/12 SILICA SAND 58-70 FEET		
7 30 6	60		70		⊙ 70 feet: well-graded Sand (SW), dark gray, trace fines, 15% coarse, trace gravel (<1/2"), 40% medium grained, 40% fine grained, dense	
					70 feet: end of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANDREW SOMES
 Drilled By: CASCADE DRILLING
 Drill Method: HOLLOW STEM AUGER
 Soil Sample Method: SPLIT SPOON
 Groundwater Sample Method: NA

Boring Number: IMW-7
 Sheet: 1 OF 1
 Total Depth: 31.5 FEET
 Date Started/Completed: DECEMBER 11, 2001
 Ground Level Elevation: 30.48 FEET NGVD
 Measuring Point Elevation: 29.88 FEET NGVD
 Static Water Level: 24.1 FEET NGVD Date: 12/18/01
 Northing: 119625.19 Easting: 1078882.87

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 31 feet: poorly-graded Sand (SP)	
			0-2	CONCRETE		
			2-18	UNIFORM GRANULAR BENTONITE		
			5			
			10	10-INCH BOREHOLE 0-30 FEET	⊗ 9.5 feet: FILL as above, silt, gray/brown mottled, rare wood and plastic fragments	
8 12 14			10	2-INCH THREADED SCH 40 PVC CASING, GROUND SURFACE - 20 FEET		
			15			
			20	#2/12 SILICA SAND 18-30 FEET	⊗ 20 feet: as above, with fines increasing slightly, medium dense to dense, moist	
16 21 30			20	2-INCH THREADED SCH 40 0.010 SLOTTED PVC WELL SCREEN 20-30 FEET		
			25			
			30		⊗ 30 feet: as above, wet	
10 50 6			30		31.5 - 10 feet: well graded Sand (SW)	
			31		⊗ 31 feet: 2" lens of silty Sand (SM), brown, 15% fines, non-plastic, trace coarse, 50% medium grained, 30% fine grained, wet	
			31.5		⊗ 31.5 feet: well graded Sand (SW) with gravel, dark gray, 20% coarse, 5% gravel (<1/2"), 50% medium grained, 30% fine grained, wet, angular	

DATE: 12/31/02 FILENAME: 104008543 IMAGES: XREFS:

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: P-1
 Sheet: 1 OF 1
 Total Depth: 31.5 FEET
 Date Started/Completed: OCTOBER 5, 2000
 Ground Level Elevation: 30.3 FEET NGVD
 Measuring Point Elevation: 30.00 FEET NGVD
 Static Water Level: 24.56 FEET NGVD Date: 10/30/00
 Northing: 117603 Easting: 1077752

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET	0 - 2 feet: Asphalt with gravel sub-base	•
5 5 4	5		5	3/8" SORTED GRANULAR BENTONITE 2-18 FEET	2 - 14 feet: Poorly graded sand (SP), fine-grained, no fines, brown/grey, disturbed native FILL	
3 4 4	18		10	2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 20 FEET		
2 2 3	5		15	8 1/4-INCH BOREHOLE 0-31.5 FEET	14 - 28 feet: Silt (ML), trace very fine-grained sand, plastic, dark brown, dry, medium stiff	
1 2 4	10		20		⊗ 20 feet: ML as above, dark brown/rust mottled, slightly moist, medium stiff	
1 2 3	18		25	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 20-30 FEET	⊗ 25 feet: ML as above, moist to saturated	
			30	10-20 MESH SILICA SAND 18-30.5 FEET	28 - 31 feet: Well graded sand with silt (SW), fine- to medium-grained, ~30% fines, angular, basaltic	
			31.5	FORMATION COLLAPSE 30.5-31.5 FEET	31 - 31.5 feet: Well graded sand (SW), fine- to medium-grained, trace coarse-grained, grey, saturated, angular, basaltic	
					⊗ 31.5 feet: End of boring	

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: P-2
 Sheet: 1 OF 1
 Total Depth: 30.5 FEET
 Date Started/Completed: OCTOBER 5, 2000
 Ground Level Elevation: 33.1 FEET NGVD
 Measuring Point Elevation: 32.76 FEET NGVD
 Static Water Level: 24.10 FEET NGVD Date: 10/30/00
 Northing: 117136 Easting: 1078331

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				FLUSH-MOUNTED PROTECTIVE MONUMENT CEMENT 0-2 FEET 3/8" SORTED GRANULAR BENTONITE 2-18 FEET 2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 20 FEET 8 1/4-INCH BOREHOLE 0-30.5 FEET 2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 20-30 FEET 10-20 MESH SILICA SAND 18-30.5 FEET	0 - 2 feet: Asphalt with gravel sub-base 2 - 24 feet: Poorly graded sand (SP), fine-grained, grey/brown, dry, medium dense, FILL @ 10 feet: SP as above, trace coarse-grained @ 15 feet: SP as above, increasing coarse-grained sand content, up to 10% fine-grained gravel, gravel predominantly basaltic @ 20 feet: SP as above, dry to slightly moist 24 - 30 feet: Well graded sand (SW), fine- to medium-grained, trace coarse-grained, ~5% fines, grey/brown @ 26 feet: Saturated 30 - 30.5 feet: Silt with sand (ML), ~30% fine-grained sand, grey, non-plastic, saturated, soft @ 30.5 feet: End of boring	
6 9 10	18		5			
5 8 9	9		10			
9 13 13	10		15			
4 11 11	10		20			
5 5 10	6		25			
1 1 2	6		30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: P-8
 Sheet: 1 OF 1
 Total Depth: 30.5 FEET
 Date Started/Completed: OCTOBER 6, 2000
 Ground Level Elevation: 30.4 FEET NGVD
 Measuring Point Elevation: 30.14 FEET NGVD
 Static Water Level: 23.58 FEET NGVD Date: 10/30/00
 Northing: 117983 Easting: 1078086

BLOW COUNTS	RECOVERY (IN)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 2 feet: Asphalt with gravel sub-base	
			0	CEMENT 0-2 FEET		
			2	3/8" SORTED GRANULAR BENTONITE 2-18 FEET	2 - 9 feet: Well graded sand with gravel (SW), fine- to coarse-grained, ~40% fine-grained, ~20% medium-grained, ~40% coarse-grained, ~30% fine-grained gravel, dry	●
18 23 18	11		5			
			10	2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 20 FEET	9 - 25 feet: Silty sand (SM), grading to silt (ML) ● 10 feet: Silty sand (SM), ~30% fines, rusty brown/tan brown mottled, dry, medium stiff	●
2 3 5	9		10			
			15	8 1/4-INCH BOREHOLE 0-30.5 FEET	● 15 feet: Silt with sand (ML), ~30% fine-grained sand, grey, non-plastic, saturated, soft ● 15.5 feet: ML as above, ~15% fine-grained sand, grey, moderate plasticity, saturated to moist	●
2 2 2	18		15			
			20	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 20-30 FEET	● 18 feet: ML as above, tan/rust, plastic, hard, dry	●
			20			
2 2 2	18		25		25 - 29 feet: Silty sand (SM), fine- to medium-grained, ~30% fines, predominantly fine-grained, ~10% medium-grained, rusty brown, saturated, loose	●
			25			
4 10 25	18		30	10-20 MESH SILICA SAND 18-30.5 FEET	29 - 30.5 feet: Well graded sand (SW), fine- to coarse-grained, predominantly coarse-grained, trace fines, angular, basaltic, saturated ● 30.5 feet: End of boring	●
			30			
			35			

EXPLORATORY BORING LOG

Parametrix, Inc.

Project Name: PORT OF VANCOUVER/SWAN MANUFACTURING
 Project Number: 275-1940-006
 Location: VANCOUVER, WA
 PMX Representative: ANNE ACKERMAN
 Drilled By: GEOTECH EXPLORATIONS
 Drill Method: HOLLOW-STEM AUGER
 Soil Sample Method: 2" SPLIT SPOON
 Groundwater Sample Method: N/A

Boring Number: P-4
 Sheet: 1 OF 1
 Total Depth: 31.5 FEET
 Date Started/Completed: OCTOBER 6, 2000
 Ground Level Elevation: 29.6 FEET NGVD
 Measuring Point Elevation: 28.97 FEET NGVD
 Static Water Level: 27.19 FEET NGVD Date: 10/30/00
 Northing: 117469 Easting: 1078696

BLOW COUNTS	RECOVERY (N)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	FLUSH-MOUNTED PROTECTIVE MONUMENT	0 - 2 feet: Asphalt with gravel sub-base	
			0	CEMENT 0-2 FEET		
			2	3/8" SORTED GRANULAR BENTONITE 2-19 FEET	2 - 23 feet: Poorly graded sand (SP) FILL	
7 12 12	10		5		⊗ 5 feet: Poorly graded sand (SP), fine-grained, trace fine-grained gravel (up to 1 inch in diameter), trace clumps of silt, trace coarse-grained sand, brown/grey, moist, medium dense	
6 14 13	7		10		⊗ 10 feet: SP as above, dry	
			10	2-INCH THREADED SCHEDULE 40 PVC CASING, GROUND SURFACE - 21 FEET	⊗ 10 - 15 feet: SP as above, trace gravel up to 2 inches in diameter, gravel content increasing with depth	
6 10 16	9		15	8 1/4-INCH BOREHOLE 0-31.5 FEET	⊗ 15 - 20 feet: SP as above, much less gravel	
6 11 14	10		20		⊗ 20 feet: SP as above, ~10-15% coarse-grained sand and fine-grained gravel, grey/brown, dry	
4 4 4	6		25	2-INCH THREADED SCHEDULE 40 0.010-INCH SLOTTED PVC WELL SCREEN 21-31 FEET	23 - 31.5 feet: Silt with sand (ML), ~20-25% very fine-grained sand, grey/brown, soft, moderate plasticity, very moist to saturated, soft	
2 2 4	10		30	10-20 MESH SILICA SAND 19-31.5 FEET	⊗ 31 feet: ML as above, some 2 - 3 inch lenses of silty sand with up to 30-40% fines, saturated, soft	
			31.5		⊗ 31.5 feet: End of boring	

Parametrix

Boring ID: CPOND-1		Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/11/05	
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/11/05	
Location:		Checked by: Ingmar Saul, L.G.		Boring Depth: 40	
				Depth to Water: 31	

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 36'</p> <p>Backfilled with Bentonite Chips; 0 to 40'</p>	0
0-4			Gravelly Sand (SW) Dark grayish brown; 65% fine to medium, subrounded sand; 25% medium to coarse, subangular gravel; 10% fines, low plasticity; micaceous; loose; damp.				
4-5			Slag material Black, 90% fine to coarse grained sand sized; highly crystalline, metallic luster, silver color fragments; loose; dry.	CPOND-1-3.5			
5-6			Sand (SW) Dark grayish brown; 95% fine to medium grained, subrounded, sand; 5% fines, non plastic; micaceous; loose; damp.				
6-9			Slag material Black; highly crystalline, metallic luster, silver colored fragments; fine to coarse grained sand size; loose; dry; 3" of gravelly sand at 4'.				
9-12			Sand with Silt (SP-SM) Dark grayish brown; 90% fine to medium grained sand, subrounded, micaceous, sand; 10% fines, non plastic; loose; damp.				
12-18			Silty Sand (SM) Dark Brown; 60% fine grained sand; 40% fines, low plasticity; slightly mottled; medium dense; moist.				
18-22			Sandy Silt (ML) Dark brown; 75% fines, low plasticity; 25% fine grained sand; micaceous; stiff; moist.				
22-25			Silt (ML) Grayish brown; 98% fines, low to medium plasticity; 2% fine grained sand; moderately mottled; very stiff; damp to moist.				25

Parametrix

Boring ID: CPOND-1	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/11/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/11/05
Location:	Checked by: Ingmar Saul, L.G.	Boring Depth: 40
		Depth to Water: 31

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			Silty Sand (SP-SM) Dark reddish brown; 80% fine to medium grained sand, subrounded, trace of coarse grained sand; 20% fines, low plasticity; medium dense; wet to saturated.			<p>0.75-Inch Well Point Screen: 36 to 40'</p>	30
35			Sand (SP) Dark brown; 90% medium to coarse grained sand, subrounded; 5% fine, subrounded gravel; 5% fines, non plastic; medium dense; wet to saturated.	CPOND-1i-W CPOND-1i-W-Dup	Recovery data not recorded in the field		35
40			Bottom of boring at 40 feet bgs.				40
45			Intermediate groundwater sample collected from second boring located one foot north of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.			45	
50						50	

Parametrix

Boring ID: CPOND-2		Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/13/05	
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/13/05	
Location: Former Pond G		Checked by: Ingmar Saul, L.G.		Boring Depth: 35 ft.	
				Depth to Water: 28 ft.	

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 29'</p> <p>Backfilled with Bentonite Chips; 0 to 35'</p>	0
0 - 4			Gravelly Sand (SW) Dark grayish brown; 60% fine to coarse grained sand, subrounded; 35% fine to coarse gravel, 1 inch minus) subangular; 5% fines, non plastic; loose; damp.		4		0
4 - 5			Sand (SP) Dark gray; 90% fine to medium grained sand, subrounded; 5% fine, subrounded gravel; 5% fines, non plastic; micaceous; loose; damp.				5
5 - 9.7			Baghouse dust Black; 95% silt sized grains; 5% fine sand sized grains, crystalline, metallic luster, silver colored flakes; stiff; moist.	CPOND-2-8.0	5		10
9.7 - 10			Trace of wood at 9.7 ft. bgs.				10
10 - 13.5			Sand (SP) Dark gray; 95% fine grained sand, subrounded; 5% fines, non plastic; micaceous; dense; moist.		3.5		15
13.5 - 15.5			Sandy Silt (ML) Very dark gray; 90% fines, low plasticity; 10% fine grained sand; micaceous; slightly mottled; medium stiff; moist.		2.5		20
15.5 - 21			Silt (ML) Grayish brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; stiff; moist.		2		25
21 - 25							25

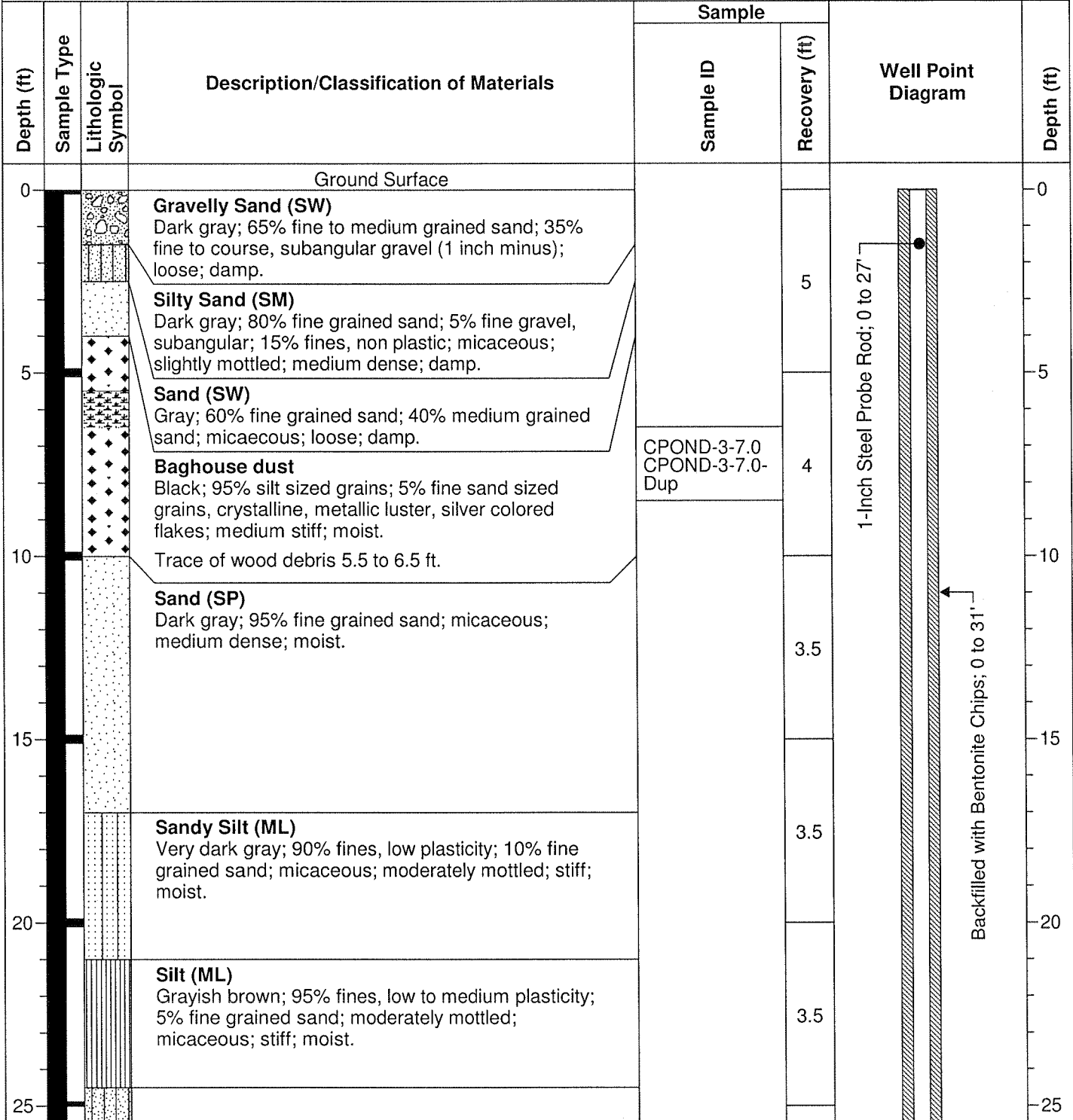
Parametrix

Boring ID: CPOND-2	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 28 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
			Silty Sand (SM) Dark reddish brown; 80% fine to medium grained sand, trace of coarse grained sand, subrounded; 20% fines, low plasticity; medium dense; wet.		3	<p>0.75-Inch Well Point Screen; 29 to 33'</p>	
30			Sand (SP) Dark brown; 95% medium grained sand, with a trace of coarse grained sand, subrounded sand; 5% fines, non plastic; micaceous; dense; saturated.	CPOND-2i-W	3		30
35			Bottom of boring at 35 feet bgs.				35
40			Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.				40
45							45
50							50

Parametrix

Boring ID: CPOND-3	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 30 ft.
		Depth to Water: 26.8 ft.



Parametrix

Boring ID: CPOND-3		Drilling Company: GeoTech Explorations		Sheet 2 of 2			
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/14/05			
Project #: 275-1940-006-03-4916A		Logged by: Ingmar Saul, L.G.		Ending Date: 7/14/05			
Location: Former Pond G		Checked by: Mike Marshall		Boring Depth: 30 ft.			
				Depth to Water: 26.8 ft.			
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			<p>Silty Sand (SM) Dark reddish brown; 60% fine to medium grained sand, surrounded; 40% fines, low plasticity; medium dense; moist to wet.</p>		4		30
			<p>Sand (SP) Dark brown; 95% fine to medium grained sand, subrounded; 5% fines, non plastic; micaceous; dense; saturated.</p>				
			Bottom of boring at 30 feet bgs.	CPOND-3i-W			
35			Intermediate groundwater sample collected from second boring located one foot north of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.				35
40							40
45							45
50							50

Parametrix

Boring ID: CPOND-4	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 30 ft.
		Depth to Water: 23.0 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
			Gravelly Sand (SW) Dark gray; 85% fine to medium grained sand; 15% fine to coarse, subangular gravel; loose; damp.			<p>1-Inch Steel Probe Rod; 0 to 29'</p> <p>Backfilled with Bentonite Chips; 0 to 33'</p>	
			Silty Sand (SM) Dark brown; 60% fine sand; trace of fine, subangular gravel; 40% fines, non plastic; micaceous; slightly mottled; medium dense; damp.		5		
			Sand (SW) Gray; 60% fine sand; 40% medium sand; micaeous; loose; damp.				
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist. Trace of wood debris at 6 ft.		4		
			Saturated at 11.5 ft. Sand (SP) Dark gray; 95% subrounded fine sand; % fines; micaceous; medium dense; moist.	CPOND-4-12.0	5		
			Sandy Silt (ML) Very dark gray; 90% fines, low plasticity; 10% fine grained sand; micaceous; stiff; moist.		4		
20							20

Parametrix

Boring ID: CPOND-4	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 30 ft.
		Depth to Water: 23.0 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
			Silt (ML) Dark brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; stiff; moist.		3		
25			Silty Sand (SM) Dark reddish brown; 70% fine to medium, trace of coarse, subangular sand; 30% fines, low plasticity; medium dense; moist to wet.		3.5		
			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.				
30			Bottom of boring at 30 feet bgs. Intermediate groundwater sample collected from second boring located one foot north of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.	CPOND-4i-W			
35							
40							

Parametrix

Boring ID: CPOND-5		Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/14/05	
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/14/05	
Location: East of 26th Extension		Checked by: Ingmar Saul, L.G.		Boring Depth: 30 ft.	
				Depth to Water: 30.4 ft.	

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
			Gravelly Sand (SW) Dark gray; 85% fine to coarse sand; 15% fine to coarse, subangular gravel; loose; damp.			<p>1-Inch Steel Probe Rod; 0 to 29.8'</p> <p>Backfilled with Bentonite Chips; 0 to 33.8'</p>	
			Sand (SP) Gray; 60% fine sand; 40% medium sand; micaeous; loose; damp.				
			Sandy Silt (ML) Very dark gray; 70% fines, low plasticity; 30% fine sand; micaceous; stiff; moist.				
20							20

Parametrix

Boring ID: CPOND-5	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/14/05
Location: East of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 30 ft.
		Depth to Water: 30.4 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			<p>Silt (ML) Dark brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; stiff; moist.</p>			<p>0.75-Inch Well Point Screen; 29.8 to 33.8'</p>	25
30			<p>Silty Sand (SM) Dark reddish brown; 70% fine to medium, trace of coarse, subangular sand; 30% fines, low plasticity; medium dense; moist to wet.</p>				30
35			<p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.</p> <p>Bottom of boring at 30 feet bgs.</p>	CPOND-5i-W	Recovery data not recorded in the field		35
40			<p>Intermediate groundwater sample collected from second boring located one foot north of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.</p>				40

Parametrix

Boring ID: CPOND-6	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 29.5 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 34'</p> <p>Backfilled with Bentonite Chips; 0 to 38'</p>	0
0 - 3		◆◆◆◆◆	Gravelly Sand (SW) Brownish gray; 85% fine to coarse, subrounded sand; 10% fine to coarse, subangular gravel (1" minus); 5% fines, non plastic; loose; damp.				0
3 - 5		◆◆◆◆◆	Sand (SW) Dark grayish brown; 95% fine to medium, subrounded sand; 5% fines, non plastic; micaceous; loose; damp.		3		3
5 - 7.0		◆◆◆◆◆	Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.				5
7.0 - 7.4		◆◆◆◆◆	Saturated at 7.0 ft. bgs. Trace of wood debris at 7.4 ft. bgs.	CPOND-6-7.0	4.5		7.0
7.4 - 10		◆◆◆◆◆	Sand (SP) Dark gray; 95% fine, subrounded sand; 5% fines, non plastic; micaceous; loose; moist.				10
10 - 15		◆◆◆◆◆	Sandy Silt (ML) Very dark gray; 85% fines, low plasticity; 15% fine grained sand; micaceous; medium stiff; wet to saturated.		2	15	
15 - 20		◆◆◆◆◆	Silt (ML) Dark grayish brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; stiff; moist.		2	20	

Parametrix

Boring ID: CPOND-6	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 29.5 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25					3		25
30			Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subrounded sand; 20% fines, low plasticity; medium dense; wet.		2		30
35			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated. Bottom of boring at 35 feet bgs.	CPOND-6i-W	3		35
40			Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.				40

Parametrix

Boring ID: CPOND-7		Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/15/05	
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/15/05	
Location: Former Pond B		Checked by: Ingmar Saul, L.G.		Boring Depth: 35 ft.	
				Depth to Water: 28.3 ft.	

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 35'</p> <p>Backfilled with Bentonite Chips; 0 to 39'</p>	0
0 - 3			Gravelly Sand (SW) Brownish gray; 85% fine to coarse, subrounded sand; 10% fine to coarse, subangular gravel (1" minus); 5% fines, non plastic; loose; damp.		3		0
3 - 5			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.				5
5 - 9			Sand (SW) Dark gray to brownish gray; 95% fine, subrounded sand; 5% fines, non plastic; micaceous; loose to medium dense; moist. Layer of coarse gravel at 9 ft.	CPOND-7-6.0	4.5		10
9 - 15			Sandy Silt (ML) Very dark gray; 85% fines, low plasticity; 15% fine grained sand; micaceous; slightly mottled; medium stiff; wet to saturated.		2		15
15 - 20					2	20	

Parametrix

Boring ID: CPOND-7	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: Former Pond B	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 28.3 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
26			<p>Silt (ML) Dark grayish brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; stiff; moist.</p>		3		26
31					2		31
36			<p>Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subrounded sand; 20% fines, low plasticity; medium dense; wet.</p> <p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.</p> <p>Bottom of boring at 35 feet bgs.</p>	CPOND-7i-W	3		36
41			<p>Intermediate groundwater sample collected from second boring located one foot northeast of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.</p>				41

Parametrix

Boring ID: CPOND-8	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 32.8 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 34'</p> <p>Backfilled with Bentonite Chips; 0 to 38'</p>	0
			Gravelly Sand (SW) Brownish gray; 80% fine to coarse, subrounded sand; 15% fine to coarse, subangular gravel (1" minus); 5% fines, non plastic; loose; damp.				
			Sand (SW) Grayish brown; 95% fine to medium, trace of coarse, subrounded sand; 5% fines, non plastic; loose; damp.		4.5		
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.				
5			Sand (SW) Grayish brown; 95% fine to medium, trace of coarse, subrounded sand; 5% fines, non plastic; loose; damp.	CPOND-8-5.5 CPOND-8-5.5-DUP			
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.		2		
			Sand (SW) Grayish brown; 95% fine sand; 5% fines, low plasticity; micaceous; loose to medium dense; moist.				
10							10
			Sandy Silt (ML) Dark grayish brown; 90% fines, low plasticity; 10% fine grained sand; micaceous; slightly mottled; medium stiff; moist.				
15							15
					3		
					1.5		
20							20

Parametrix

Boring ID: CPOND-8 Project Name: POV - Carborundum Pond Project #: 275-1940-006-03-4916A Location: Former Pond G				Drilling Company: GeoTech Explorations Drilling Method: Push-Probe Logged by: Mike Marshall Checked by: Ingmar Saul, L.G.		Sheet 2 of 2 Starting Date: 7/15/05 Ending Date: 7/15/05 Boring Depth: 35 ft. Depth to Water: 32.8 ft.	
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; stiff; moist.		1		25
30			Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subrounded sand; 20% fines, low plasticity; medium dense; wet.		1		30
35			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.		2		35
40			Bottom of boring at 35 feet bgs. Intermediate groundwater sample collected from second boring located one foot northwest of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.	CPOND-8i-W			40

Parametrix

Boring ID: CPOND-9	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: East of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 33.8 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 2.5			Gravelly Sand (SW) Dark gray; 80% fine to coarse sand; 15% fine to coarse (1.5" minus), subangular gravel; 5% fines; loose; damp.			<p>1-Inch Steel Probe Rod; 0 to 36'</p> <p>Backfilled with Bentonite Chips; 0 to 40'</p>	0
2.5 - 5			Sand (SW) Grayish brown; 95% fine to medium, trace of coarse, subrounded sand; <5% fines, non plastic; loose; damp.				5
5 - 7.5			Silty Silt (ML) Brown; 80% fines, low plasticity; 20% fine sand; micaceous; very stiff; moist to damp.				10
7.5 - 12.5			Sand (SW) Grayish brown; 95% fine to medium, trace of coarse, subrounded sand; 5% fines, non plastic; loose; damp.				15
12.5 - 15			Silty Sand (SP) Dark gray; 85% fine sand; 15% fines; micaceous; medium dense; moist to wet at 14 ft.				20
15 - 20			Silty Silt (ML) Very dark gray; 80% fines, low plasticity; 20% fine sand; micaceous; medium stiff; moist.				25
20 - 25			Silt (ML) Grayish brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; stiff; moist.				

Parametrix

Boring ID: CPOND-9	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: East of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 33.8 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30							30
35			<p>Silty Sand (SM) Dark reddish brown; 80% fine to medium, trace of coarse, subangular sand; 20% fines, low plasticity; medium dense; wet.</p>				35
40			<p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.</p>	CPOND-9i-W	Recovery data not recorded in the field		40
45			<p>Bottom of boring at 40 feet bgs.</p> <p>Intermediate groundwater sample collected from second boring located one foot northwest of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.</p>				45
50							50

Parametrix

Boring ID: CPOND-10 Project Name: POV - Carborundum Pond Project #: 275-1940-006-03-4916A Location: East of 26th Extension				Drilling Company: GeoTech Explorations Drilling Method: Push-Probe Logged by: Mike Marshall Checked by: Ingmar Saul, L.G.		Sheet 1 of 2 Starting Date: 7/18/05 Ending Date: 7/18/05 Boring Depth: 40 ft. Depth to Water: 29 ft.	
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
			Gravelly Sand (SW) Dark gray; 85% fine to coarse sand; 15% fine to coarse (1.5" minus), subangular gravel; loose; damp.				
			Sand (SW) Grayish brown; 95% fine to medium, trace of coarse, subrounded sand; <5% fines, non plastic; micaceous; loose; damp to moist.		4.5	1-Inch Steel Probe Rod; 0 to 42' Backfilled with Bentonite Chips; 0 to 46'	
5					4		5
			Silty Sand (SP) Dark brown; 70% fine sand; 30% fines, low plasticity, slightly mottled; micaeous; medium dense; moist to wet at 14 ft.				10
10					3		15
			Sandy Silt (ML) Dark gray; 75% fines, low plasticity; 25% fine sand; micaceous; medium stiff; moist.				20
15					3	25	
			Dark grayish brown; 60% fines, low plasticity, slightly mottled; 40% fine sand; micaceous; medium stiff; moist to wet.				
20					2		20
25							25

Parametrix

Boring ID: CPOND-10		Drilling Company: GeoTech Explorations		Sheet 2 of 2			
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/18/05			
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/18/05			
Location: East of 26th Extension		Checked by: Ingmar Saul, L.G.		Boring Depth: 40 ft.			
				Depth to Water: 29 ft.			
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			<p>Silt (ML) Grayish brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; stiff; moist.</p>		3	<p>0.75-Inch Well Point Screen; 42 to 46'</p>	30
35					2		35
40			<p>Silty Sand (SM) Dark reddish brown; 80% fine to medium, trace of coarse, subangular sand; 20% fines, low plasticity; medium dense; wet.</p>		4		40
40			<p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.</p>				40
			<p>Bottom of boring at 40 feet bgs.</p>				
45			<p>Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.</p>	CPOND-9i-W CPOND-9i-W-Dup			45
50							50

Parametrix

Boring ID: CPOND-11	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 34 ft.

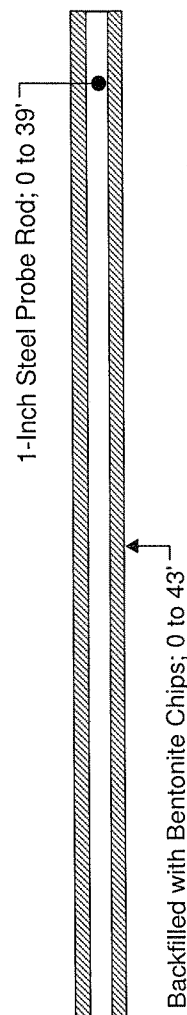
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 34'</p> <p>Backfilled with Bentonite Chips; 0 to 38'</p>	0
			Gravelly Sand (SW) Grayish brown; 85% fine to medium, subangular sand; 10% fine, subangular gravel; 5% fines, nonplastic; loose; damp.				
			Sandy Silt (ML) Brown; 80% fines, low plasticity; 15% fine sand; 5% fine, subangular gravel; micaceous; loose; damp.				
			Silty Sand (SM) Very dark gray; 80% fine sand; 15% fines, low plasticity; <5% fragments of crystalline, metallic luster, silver color; 1" thick layer of baghouse dust at 5' bgs; loose; moist.	CPOND-11-4.5			
5			Sand (SW) Dark grayish brown; 95% fine to medium, subrounded sand; 5% fines, low plasticity; micaceous; loose; moist. Grades into fine sand at 13' and then into sandy silt below.				
10			Sandy Silt (ML) Dark brown; 90% fines, low plasticity; 10% fine sand; micaceous; slightly mottled; stiff; moist.				
15							
20							

Parametrix

Boring ID: CPOND-11		Drilling Company: GeoTech Explorations		Sheet 2 of 2			
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/13/05			
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/13/05			
Location: West of 26th Extension		Checked by: Ingmar Saul, L.G.		Boring Depth: 35 ft.			
				Depth to Water: 34 ft.			
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Grayish brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; very stiff; wet.		Recovery data not recorded in the field 		25
30			Silty Sand (SM) Dark reddish brown; 80% fine to medium, trace of coarse, subangular sand; 20% fines, low plasticity; medium dense; wet.				30
35			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.	CPOND-11i-W			35
40			Bottom of boring at 35 feet bgs. Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.	CPOND-11i-W-Dup			40

Parametrix

Boring ID: CPOND-12				Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond				Drilling Method: Push-Probe		Starting Date: 7/11/05	
Project #: 275-1940-006-03-4916A				Logged by: Ingmar Saul, L.G.		Ending Date: 7/11/05	
Location: West of 26th Extension				Checked by: Mike Marshall		Boring Depth: 40 ft.	
						Depth to Water: 32 ft.	
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
			Asphalt				
			Sandy Gravel (GW) Dark gray; 60% fine, subrounded gravel; 40% fine sand; loose; dry.		3		
			Sand (SW) Dark gray; 95% fine to medium, subrounded sand; 5% fines, non plastic; micaceous; loose; damp.		4		
5							5
			Silt (ML) Very dark gray to brown; 70% fines, low plasticity; 30% fine sand; micaceous; medium stiff; damp.	CPOND-12-14.0	4		
10							10
			Sand (SW) Dark gray; 95% medium to fine sand; trace of fine, subangular gravel; micaceous; loose; damp.		3		
15							15
			Silty Sand (SM) Dark brown; 70% fine sand; 30% fines, low plasticity; layer of fine sand 6" thick at 28'; micaceous; medium stiff; moist to wet.		3.5		
20							20
25							25



Parametrix

Boring ID: CPOND-12	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/11/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/11/05
Location: West of 26th Extension	Checked by: Mike Marshall	Boring Depth: 40 ft.
		Depth to Water: 32 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			Silt (ML) Dark brown; 95% fines, low to medium plasticity; <5% fine sand; micaceous; moderately mottled; medium stiff to stiff; moist to wet.				30
35			Silty Sand (SM) Dark reddish brown; 80% medium to coarse, subrounded sand; 15% fines, low plasticity; 5% fine, subrounded gravel; medium dense; wet.				35
40			Sand (SP) Dark brown; 90% medium, trace of coarse, subangular sand; 10% fine to medium, subrounded gravel; trace of fines, non plastic; loose; saturated. Bottom of boring at 40 feet bgs.	CPOND-12i-W			40
45							45
50			Intermediate groundwater sample collected from second boring located one foot southwest of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.				50

Recovery data not recorded in the field

Parametrix

Boring ID: CPOND-13	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/12/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/12/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 23.6 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 4			Gravelly Sand (SW) Grayish brown; 80% fine to medium, subangular to angular sand; 20% fine, subangular gravel; loose; damp.		4	<p>1-Inch Steel Probe Rod; 0 to 41'</p> <p>Backfilled with Bentonite Chips; 0 to 44'</p>	0
4 - 10			Sand (SW) Grayish brown; 95% fine to medium, subrounded sand; <5% fines, non plastic; micaceous; laminations of darker more medium sand; loose; damp.		4		4
10 - 16			Sandy Silt (ML) Dark brown; 85% fines, low plasticity; 15% fine sand; micaceous; slightly mottled; medium stiff to stiff; moist to wet.		4		4
16 - 20			Silt (ML) Grayish brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; medium stiff to soft; wet.		4		4
20 - 25					2		2

Parametrix

Boring ID: CPOND-13	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/12/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/12/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 23.6 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30					2	<p>0.75-Inch Well Point Screen; 40 to 44'</p>	30
35			Silty Sand (SM) Dark reddish brown; 80% fine to medium, trace of coarse, subangular sand; 20% fines, low plasticity; medium dense; wet.		2.5		35
40			Sand (SP) Dark brown; 90% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; 5% fine subrounded gravel; micaceous; dense; saturated.		4		40
			Bottom of boring at 40 feet bgs.	CPOND-13i-W			45
45			Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.				50

Parametrix

Boring ID: CPOND-14				Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond				Drilling Method: Push-Probe		Starting Date: 7/11/05	
Project #: 275-1940-006-03-4916A				Logged by: Mike Marshall		Ending Date: 7/11/05	
Location: West of 26th Extension				Checked by: Ingmar Saul, L.G.		Boring Depth: 40 ft.	
						Depth to Water: 33 ft.	
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 3			Sandy Gravel (GW) Dark grayish brown; 70% fine, subrounded to angular gravel; 30% fine sand; loose; damp.		3	<p>1-Inch Steel Probe Rod; 0 to 36'</p> <p>Backfilled with Bentonite Chips; 0 to 40'</p>	0
3 - 8			Sand (SP) Dark grayish brown; 90% fine to medium sand; 10% fines, non plastic; micaceous; loose; damp.		5		3
8 - 13			Sandy Silt (ML) Dark brown; 80% fines, low plasticity; 20% fine sand; micaceous; medium stiff; moist to wet.		5		5
13 - 18			Silt (ML) Dark brown; 90% fines, low to medium plasticity; 10% fine to medium sand; interbeds of fine to medium sand 1" to 3" thick at 20', 24', 31' and 34'; slightly mottled; micaceous; medium stiff to soft; damp to moist.		3.5		10
18 - 21					3		15
21 - 24							20
24 - 27							25

Parametrix

Boring ID: CPOND-14	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/11/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/11/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 33 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30					3.5	<p>0.75-Inch Well Point Screen; 36 to 40'</p>	30
35			Trace of medium, subrounded gravel Silty Sand (SM) Dark reddish brown; 75% medium to coarse, subangular sand; 25% fines, low plasticity; trace of medium gravel; dense; wet to saturated.		3.5		35
40			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; medium dense; wet to saturated.	CPOND-14i-W	5		40
			Bottom of boring at 40 feet bgs.				
45			Intermediate groundwater sample collected from second boring located one foot southwest of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.				45
50							50

Parametrix

Boring ID: CPOND-15	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/11/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/11/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 36 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
			Asphalt				
			Sand (SP) Dark grayish brown; 95% fine to medium sand; 5% fines, non plastic; trace of medium subrounded gravel; micaceous; loose; damp.		4	<p>1-Inch Steel Probe Rod; 0 to 34'</p> <p>Backfilled with Bentonite Chips; 0 to 38'</p>	
5					5		5
10					4.5		10
15					4.5		15
			Silty Sand (SM) Dark brown; 65% fine sand; 35% fines, low plasticity; micaceous; loose; moist.		4.5		20
20			Sand (SW) Dark grayish brown; 85% fine to medium, subrounded sand; 15% fines, non plastic; loose; moist.		2.5	25	
25							25

Parametrix

Boring ID: CPOND-15		Drilling Company: GeoTech Explorations		Sheet 2 of 2			
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/11/05			
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/11/05			
Location: West of 26th Extension		Checked by: Ingmar Saul, L.G.		Boring Depth: 40 ft.			
				Depth to Water: 36 ft.			
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			<p>Silt (ML) Dark brown; 90% fines, low to medium plasticity; 10% fine to medium sand; slightly mottled; micaceous; medium stiff to soft; wet.</p> <p>Interbed of fine sand 9" thick at 28'.</p>		2.5	<p>0.75-Inch Well Point Screen; 34 to 38'</p>	30
35			<p>Silty Sand (SM) Dark reddish brown; 75% medium to coarse, subangular sand; 25% fines, low plasticity; trace of medium gravel; dense; wet.</p>		3.5		35
			<p>Sand (SW) Dark brown; 95% medium, subrounded to angular sand; <5% fines, non plastic; medium dense to dense; wet.</p>		5		40
40			<p>Silty Sand (SM) Dark brown; 75% medium to coarse, subrounded sand; 25% fines, low plasticity; loose; saturated.</p>	CPOND-15i-W			40
			<p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded to subangular, sand; <5% fines, non plastic; medium dense, wet to saturated.</p> <p>Bottom of boring at 40 feet bgs.</p>				45
45			<p>Intermediate groundwater sample collected from second boring located one foot southwest of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.</p>			50	
50							50

Parametrix

Boring ID: CPOND-16				Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond				Drilling Method: Push-Probe		Starting Date: 7/18/05	
Project #: 275-1940-006-03-4916A				Logged by: Mike Marshall		Ending Date: 7/18/05	
Location: West of 26th Extension				Checked by: Ingmar Saul, L.G.		Boring Depth: 45 ft.	
						Depth to Water: 38.1 ft.	
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 4			Gravelly Sand (SW) Dark grayish brown; 80% fine to coarse, subrounded sand; 15% fine to coarse, angular gravel (1.5" minus); 5% fines, non plastic; micaceous; loose; damp.		4	<p>1-Inch Steel Probe Rod; 0 to 44'</p> <p>Backfilled with Bentonite Chips; 0 to 48'</p>	0
4 - 10			Sand (SW) Dark grayish brown; 95% fine to medium, trace of coarse, subrounded sand; 5% fines, non plastic; micaceous; loose; damp.		3		4
10 - 17			Silty Sand (SM) Dark brown; 80% fine sand; 20% fines, low plasticity; micaceous; slightly mottled; medium dense to loose; moist to wet.		2.5		10
17 - 22			Sandy Silt (SW) Dark brown; 80% fines, low plasticity; 20% fine sand; micaceous; slightly mottled; medium stiff to soft; wet.		2.5		15
22 - 25					0		20
25							25

Parametrix

Boring ID: CPOND-16	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/18/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/18/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 45 ft.
		Depth to Water: 38.1 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			<p>Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; <5% fine sand; moderately mottled; micaceous; stiff; moist.</p>		2.5		30
35					2.5		35
40			<p>Silty Sand (SM) Dark reddish brown; 80% fine to medium, subangular sand; 25% fines, low plasticity; medium dense; wet.</p>		5		40
45			<p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; <5% fines, non plastic; dense; saturated.</p>		4		45
50			<p>Bottom of boring at 45 feet bgs.</p> <p>Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.</p>	CPOND-16i-W			50

Parametrix

Boring ID: CPOND-17		Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/18/05	
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/18/05	
Location: Former Pond B		Checked by: Ingmar Saul, L.G.		Boring Depth: 35 ft.	
				Depth to Water: 31.12 ft.	

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 36'</p> <p>Backfilled with Bentonite Chips; 0 to 40'</p>	0
			Gravelly Sand (SW) Dark Gray; 80% fine to coarse, subrounded sand; 15% fine to coarse, angular gravel; 5% fines, non plastic; loose; damp.				
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; wet.		4		
5					5		
			Saturated starting at approximately 8.5' bgs.	CPOND-17-8.5			
10			Sand (SP) Dark gray; 95% fine to medium sand; 5% fine gravel; micaceous; medium dense; moist.				
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.		5		
			Gravelly Sand (SW) Dark gray; 70% fine to coarse, subrounded sand; 25% fine, subangular gravel; 5% fines, non plastic; medium dense; damp.				
15			Silty Sand (SM) Dark gray; 85% fine sand; 15% fines, low plasticity; medium dense to loose; moist to wet at 19 ft.		4		
20							

Parametrix

Boring ID: CPOND-17	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/18/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/18/05
Location: Former Pond B	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 31.12 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
			Sandy Silt (ML) Dark grayish brown; 80% fines, low plasticity; 20% fine sand; micaceous; soft; moist to wet.		3.5		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.		2.5		25
30			Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subangular sand; 20% fines, low plasticity; medium dense; moist to wet.		3.5		30
35			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.				35
			Bottom of boring at 35 feet bgs.				
			Intermediate groundwater sample collected from second boring located one foot east of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.	CPOND-17i-W			
40							40

Parametrix

Boring ID: CPOND-18	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/18/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/18/05
Location: Former Pond B	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 34.5 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 34'</p> <p>Backfilled with Bentonite Chips; 0 to 38'</p>	0
			Gravelly Sand (SW) Dark Gray; 80% fine to coarse, subrounded sand; 15% fine to coarse, subangular gravel (1" minus); 5% fines, non plastic; loose; damp.		4.5		
			Sand (SW) Dark gray; 95% fine to medium, trace of coarse, subrounded sand; 5% fines, non plastic; micaceous; loose; damp to moist.				
5			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; wet to saturated.		4		
				CPOND-18-8.5			
10			Gravelly Sand (SW) Dark gray; 85% fine, subrounded sand; 10% coarse, angular gravel; 5% fines, non plastic; loose; moist.				
			Silty Sand (SM) Dark gray; 85% fine sand; 15% fines, low plasticity; medium dense; moist to wet.		3		
15					2		
20							

Parametrix

Boring ID: CPOND-18	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/18/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/18/05
Location: Former Pond B	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 34.5 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.		4.5		25
30			Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subangular sand; 20% fines, low plasticity; medium dense; moist to wet.		1		30
			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.		4		35
35			Bottom of boring at 35 feet bgs. Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.	CPOND-18i-W			40

Parametrix

Boring ID: CPOND-19	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 30 ft.
		Depth to Water: 25.7 ft.


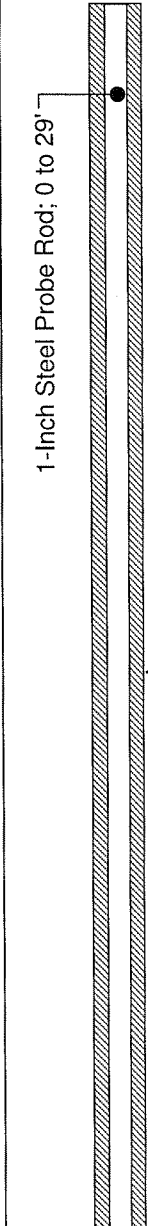


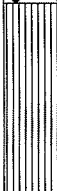
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
			Gravelly Sand (SW) Dark Gray; 60% fine to coarse, subrounded sand; 35% fine to coarse, subangular gravel (1" minus); 5% fines, non plastic; loose; damp.		Recovery data not recorded in the field		
			Silty Sand (SM) Dark brown; 85% fine sand; 15% fines, non plastic; trace of fine, subangular gravel; micaceous; slightly mottled; medium dense; damp				
			Sand (SW) Gray; 90% fine to medium sand; 10% fines, non plastic; micaceous; loose; damp.				
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.	CPOND-19-8.5			
			Slag material Dull silver; metallic luster, phaneritic crystalline structure; very hard; dry.				
10			Sand (SP) Dark gray; 95% fine, subrounded sand; 5% fines, non plastic; micaceous; medium dense; moist				10
15			Sandy Silt (ML) Very dark gray; 70% fines, low plasticity; 30% fine sand; micaceous; medium stiff; moist.				15
20							20

Parametrix

Boring ID: CPOND-19 Project Name: POV - Carborundum Pond Project #: 275-1940-006-03-4916A Location: Former Pond G				Drilling Company: GeoTech Explorations Drilling Method: Push-Probe Logged by: Ingmar Saul, L.G. Checked by: Mike Marshall		Sheet 2 of 2 Starting Date: 7/14/05 Ending Date: 7/14/05 Boring Depth: 30 ft. Depth to Water: 25.7 ft.		
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)	
				Sample ID	Recovery (ft)			
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.		Recovery data not recorded in the field		25	
			Silty Sand (SM) Dark reddish brown; 70% medium, trace of coarse, subangular sand; 30% fines, low plasticity; medium dense; moist to wet.					
30			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.					
			Bottom of boring at 30 feet bgs.	CPOND-19i-W				
35			Intermediate groundwater sample collected from second boring located one foot west of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.					
40								

Parametrix

Boring ID: CPOND-20	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 30 ft.
		Depth to Water:

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
			Gravelly Sand (SW) Dark Gray; 85% fine to coarse, subrounded sand; 10% fine to coarse, angular gravel (1" minus); 5% fines, non plastic; loose, damp.			 <p>1-Inch Steel Probe Rod; 0 to 29'</p> <p>Backfilled with Bentonite Chips; 0 to 33'</p>	
			Sand (SW) Dark grayish brown; 95% fine to medium, subrounded sand; 5% fines, non plastic; loose, damp.				
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff to soft when saturated, wet, saturated at 15' bgs.				
			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled, micaceous, stiff, moist.	CPOND-20-17.0			

Parametrix

Boring ID: CPOND-20	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 30 ft.
		Depth to Water:

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subangular sand; 20% fines, low plasticity; medium dense, moist to wet.		Recovery data not recorded in the field 		25
30			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous, dense, saturated.				30
35			Bottom of boring at 30 feet bgs. Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.	CPOND-20i-W			35
40							40

Parametrix

Boring ID: CPOND-21	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 34.6 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 5			Gravelly Sand (SW) Dark grayish brown; 75% fine to coarse, subrounded sand; 25% fine to coarse, angular to subrounded gravel (1.5" minus); 5-10% fines, non plastic; loose; damp.		4	<p>1-Inch Steel Probe Rod; 0 to 34'</p> <p>Backfilled with Bentonite Chips; 0 to 38'</p>	0
5 - 13.7			Sand (SW) Dark grayish brown; 95% fine to medium, subrounded sand; 5% fines, non plastic; grades into fine sand at 13.7'; micaceous; loose; moist.		4		5
13.7 - 19			Sandy Silt (SW) Dark brown; 90% fines, low plasticity; 10% fine sand; 5" thick fine sand layer (80% fine sand; 20% fines) at 19' ; micaceous; moderately mottled; stiff; moist.		3		10
19 - 20					3.5		15
20 - 35						20	

Parametrix

Boring ID: CPOND-21	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 34.6 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Grayish brown; 95% fines, low to medium plasticity; <5% fine sand; moderately mottled; micaceous; stiff; moist.		1	<p>0.75-Inch Well Point Screen; 34 to 38'</p>	25
30			Silty Sand (SM) Dark reddish brown; 80% fine to medium, subrounded sand; 20% fines, low plasticity; medium dense; wet.		3		30
35			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; <5% fines, non plastic; dense; saturated.		4		35
35			Bottom of boring at 35 feet bgs.	CPOND-21i-W			35
40			Intermediate groundwater sample collected from second boring located one foot west of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.				40

Parametrix

Boring ID: CPOND-22	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 35 ft.
		Depth to Water: 28 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 30'</p> <p>Backfilled with Bentonite Chips; 0 to 34'</p>	0
			Gravelly Sand (SW) Dark gray; 85% fine to medium, subangular sand; 15% fine to coarse, subangular gravel; loose; damp.				
			Silty Sand (SM) Dark gray; 80% fine sand; 15% fine sand; 5% fine, subangular gravel; slightly mottled; micaceous; medium dense; damp.				
			Sand (SW) Gray; 95% medium to fine sand; 5% fines, non plastic; micaceous; loose; damp.	CPOND-22-4.0			
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.				
			Silty Sand (SM) Dark gray; 85% fine sand; 15% fines, non plastic; micaceous; medium dense; damp				
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.				
			Silty Sand (SM) Dark gray; 85% fine sand; 15% fines, non plastic; micaceous; medium dense; damp. 60% fine sand; 40% fines, low plasticity starting at approximately 10 ft. bgs.				
15			Sandy Silt (ML) Very dark gray; 70% fines, low plasticity; 30% fine sand; micaceous; medium stiff; moist.				15
20							20

Recovery data not recorded in the field

Parametrix

Boring ID: CPOND-22	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 35 ft.
		Depth to Water: 28 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.		Recovery data not recorded in the field 		25
			Silty Sand (SM) Dark reddish brown; 65% medium, trace of coarse, subangular sand; 35% fines, low plasticity; medium dense; moist to wet.				30
30			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.	CPOND-22i-W			35
35			Bottom of boring at 35 feet bgs.				40
40			Intermediate groundwater sample collected from second boring located one foot west of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.				40

Parametrix

Boring ID: CPOND-23	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 30 ft.
		Depth to Water: 22.3 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 29'</p> <p>Backfilled with Bentonite Chips; 0 to 33'</p>	0
			Gravelly Sand (SW) Dark gray; 85% fine to medium, subangular sand; 15% fine to coarse, subangular gravel; loose; damp.				
			Silty Sand (SM) Dark gray; 80% fine sand; 15% fine sand; 5% fine, subangular gravel; micaceous; medium dense; damp.		5		
			Sand (SW) Gray; 95% medium to fine sand; 5% fines, non plastic; micaceous; loose; damp.				
5			Baghouse waste Dusky red; 85% silt; 15% medium to fine sand; medium stiff; dry.	CPOND-23-5.5			
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.		5		
			Sand (SW) Dark gray; 95% fine sand; 5% fines, non plastic; micaceous; medium dense; damp.	CPOND-23-9.0			
10					2.5		
			Silty Sand (SM) Dark gray; 60% fine sand; 40% fines, low plasticity; micaceous; medium dense; moist.				
15			Sandy Silt (ML) Very dark gray; 90% fines, low plasticity; 10% fine sand; micaceous; moderately mottled; stiff; moist.		2		
20							

Parametrix

Boring ID: CPOND-23	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 30 ft.
		Depth to Water: 22.3 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.		2		25
			Silty Sand (SM) Dark reddish brown; 65% medium, trace of coarse, subrounded sand; 35% fines, low plasticity; medium dense; moist to wet.		5		25
30			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; dense; saturated. Bottom of boring at 30 feet bgs.	CPOND-23i-W			30
35			Intermediate groundwater sample collected from second boring located one foot from logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.				35
40							40

Parametrix

Boring ID: CPOND-24		Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/13/05	
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/13/05	
Location: Former Pond G		Checked by: Ingmar Saul, L.G.		Boring Depth: 35 ft.	
				Depth to Water: 27.8 ft.	

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 34'</p> <p>Backfilled with Bentonite Chips; 0 to 38'</p>	0
			Gravelly Sand (SW) Brownish gray; 60% fine to coarse, subrounded sand; 35% fine to coarse, subrounded to subangular gravel (1" minus); 5% fines, non plastic; loose; damp.				5
			Sandy Silt (ML) Brown; 80% fines, low plasticity; 15% fine sand; 5% fine, subangular gravel; micaceous; stiff; damp.				
			Sand (SW) Dark gray; 90% fine sand; 5% fine, subrounded gravel; 5% fines, non plastic; loose; damp.				
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; stiff; moist.	CPOND-24-8.0 CPOND-24-8.0-DUP	4		
5			Sand (SW) Light gray; 95% fine, subrounded sand; 5% fines, non plastic; micaceous; loose; moist.			4	10
10			Sandy Silt (ML) Dark gray; 90% fines, low plasticity; 10% fine sand; micaceous; slightly mottled; medium stiff; moist.			3.5	15
15							20

Parametrix

Boring ID: CPOND-24	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 27.8 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.		3.5		25
30			Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subrounded sand; 15% fines, low plasticity; 5% fine, subrounded gravel; medium dense; wet.		3.5		30
35			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; dense; saturated. Bottom of boring at 35 feet bgs.	CPOND-24i-W	3		35
40			Intermediate groundwater sample collected from second boring located one foot east of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.				40

Parametrix

Boring ID: CPOND-25		Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/12/05	
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/12/05	
Location: Former Pond G		Checked by: Ingmar Saul, L.G.		Boring Depth: 40 ft.	
				Depth to Water: 31.2 ft.	

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 35'</p> <p>Backfilled with Bentonite Chips; 0 to 39'</p>	0
			Gravelly Sand (SW) Brownish gray; 60% fine to coarse, angular to subrounded sand; 30% fine to coarse, subrounded gravel; 10% fines, non plastic; medium dense; damp.				
			Sand (SW) Dark gray; 80% fine to medium, subrounded sand; 15% fine, subrounded gravel; 5% fines, non plastic; loose; damp.		4.5		
5			Baghouse dust Black; 70% fine to coarse sand, crystalline, metallic luster, silver colored flakes; 20% fine to coarse, phaneritic, gravel; 10% fines sized material; with several 2" interbedded layers of highly phaneritic crystalline fragments; medium dense; damp.	CPOND-25-6.5			
			Sandy gravel (SW) Light gray; 80% medium, angular gravel; 15% fine to coarse, angular sand; 5% fines, non plastic; dense; dry.		4		
10			Baghouse dust Black; 70% fine to coarse sand, crystalline, metallic luster, silver colored flakes; 20% fine to coarse, phaneritic, gravel; 10% fines; medium dense; damp.				
			Sand (SW) Grayish brown; 95% medium to coarse, subrounded sand; 5% fine, subrounded gravel; micaceous; loose; damp.		2.5		
15			Sandy Silt (ML) Brown; 90% fines, low plasticity; 10% fine sand; micaceous; slightly mottled; stiff; moist.				
					2.5		
20							20

Parametrix

Boring ID: CPOND-25	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/12/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/12/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 31.2 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.		1.5		25
30			Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subrounded sand; 15% fines, low plasticity; 5% fine, subrounded gravel; medium dense to loose; wet to saturated.		2		30
35			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; dense; saturated.		2		35
40			Intermediate groundwater sample collected from second boring located one foot east of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.	CPOND-25i-W CPOND-25i-W-DUP	3		40

Parametrix

Boring ID: CPOND-26	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/13/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 35 ft.
		Depth to Water: 28.5 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 28.6'</p> <p>Backfilled with Bentonite Chips; 0 to 33.6'</p>	0
			Gravelly Sand (SW) Grayish brown; 60% fine to coarse, subrounded sand; 35% fine to coarse, subrounded to subangular gravel (1" minus); 5% fines, non plastic; loose; damp.		5		0
			Sand (SW) Dark gray; 90% fine to medium, subrounded sand; 5% fine, subrounded gravel; 5% fines, non plastic; micaceous; loose; damp.				5
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.		4.5		5
			Trace of wood at 9.0' bgs.	CPOND-26-9.0			10
			Sand (SP) Dark gray; 95% fine, subrounded sand; 5% fines, non plastic; micaceous; dense; moist		3		10
			Sandy Silt (ML) Very dark gray; 70% fines, low plasticity; 30% fine sand; micaceous; medium stiff; moist.		2.5	15	
20						20	

Parametrix

Boring ID: CPOND-26	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/13/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 35 ft.
		Depth to Water: 28.5 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.		2.5	 0.75-Inch Well Point Screen; 28.6 to 33.6'	25
			Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subrounded sand; 20% fines, low plasticity; medium dense; moist to wet.				25
30			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.		3		30
				CPOND-22i-W	4		30
35			Bottom of boring at 35 feet bgs.				35
40			Intermediate groundwater sample collected from second boring located one foot west of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.				40

Parametrix

Boring ID: CPOND-27	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/12/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/12/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 29.5 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 5			Gravelly Sand (SW) Dark to light grayish brown; 70% fine to coarse, subrounded to angular sand; 25% fine to coarse, subangular gravel; 5% fines, non plastic; loose; damp.		3	<p>1-Inch Steel Probe Rod; 0 to 34'</p> <p>Backfilled with Bentonite Chips; 0 to 38'</p>	0
5 - 10			Sand (SW) Grayish brown; 90% fine to coarse, subrounded sand; 5% fine to medium, subangular gravel; 5% fines, non plastic; loose; damp.		3		5
10 - 15			Gravelly Sand (SW) Dark to light grayish brown; 70% fine to coarse, subrounded to angular sand; 25% fine to coarse, subangular gravel (1.5" minus); 5% fines, non plastic; loose to medium dense; moist.		3		10
15 - 20			Sandy Silt (SW) Brown; 80% fines, low plasticity; 20% fine sand; micaceous; slightly mottled; medium stiff; wet.		3		15
20 - 25			Silt (ML) Brown; 95% fines, low plasticity; <5% fine sand; micaceous; moderately mottled; stiff to very stiff; moist.		3.5		20
25							25

Parametrix

Boring ID: CPOND-27	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/12/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/12/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 29.5 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
28			Sand (SW) Grayish brown; 90% fine sand; 10% fines, low plasticity; micaceous; slightly mottled; soft; moist.		4		28
30			Silt (ML) Dark brown; 90% fines, low to medium plasticity; 10% fine sand; slightly mottled; micaceous; soft; moist.				30
33			Silty Sand (SM) Dark reddish brown; 80% fine to coarse, subrounded sand; 15% fines, low plasticity; 5% fine, subrounded gravel; medium dense; wet.		4		33
35			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; <5% fines, non plastic; dense; saturated. Bottom of boring at 35 feet bgs.	CPOND-27i-W			35
40			Intermediate groundwater sample collected from second boring located one foot northwest of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.				40
45							45
50							50

Parametrix

Boring ID: CPOND-28	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: East of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 23.4 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 36'</p> <p>Backfilled with Bentonite Chips; 0 to 40'</p>	0
0 - 4			Gravelly Sand (SW) Dark grayish brown; 80% fine to coarse, subrounded sand; 15% fine to coarse, angular gravel (1.5" minus); 5% fines, non plastic; loose; damp.		4		0
4 - 5			Sand (SW) Grayish brown; 95% fine to medium, trace of coarse, subrounded sand; 5% fines, non plastic; loose; damp.				5
5 - 10			Sandy Silt (SW) Brown; 80% fines, low plasticity; 20% fine sand; micaceous; slightly mottled; medium stiff; wet.		4		10
10 - 20			very dark gray to black; 90% fines, low plasticity; 10% fine sand; micaceous; moist starting at approximately 9.7' bgs.		3.5		15
20 - 25			Silt (ML) Dark brown; 95% fines, low to medium plasticity; <5% fine sand; moderately mottled; micaceous; stiff; moist.		4		20
25 - 35					1	25	


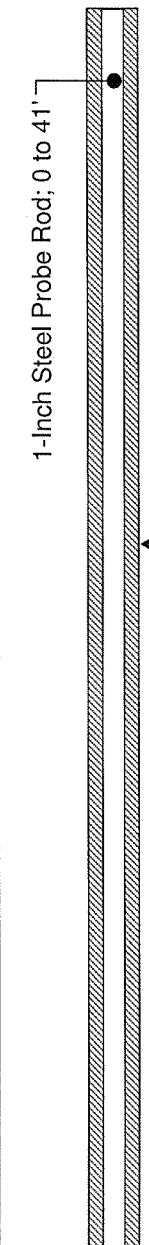



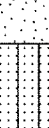

Parametrix

Boring ID: CPOND-28	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: East of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 23.4 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30					2	<p>0.75-Inch Well Point Screen; 36 to 40'</p>	30
35			<p>Silty Sand (SM) Dark reddish brown; 80% fine to medium, subrounded sand; 20% fines, low plasticity; medium dense; wet.</p> <p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; <5% fines, non plastic; dense; saturated.</p> <p>Bottom of boring at 35 feet bgs.</p>		3		35
40			<p>Intermediate groundwater sample collected from second boring located one foot north of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.</p>	CPOND-28i-W			40
45							45
50							50

Parametrix

Boring ID: CPOND-29	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/12/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/12/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 45 t.
		Depth to Water: 37 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 5			Gravelly Sand (SW) Dark grayish brown; 70% fine to medium, subrounded sand; 25% fine, angular gravel (1.5" minus); 5% fines, non plastic; loose; damp.		3.5	 <p>1-Inch Steel Probe Rod; 0 to 41'</p> <p>Backfilled with Bentonite Chips; 0 to 45'</p>	0
5 - 10			Sand (SW) Dark grayish brown; 95% fine to medium, subrounded sand; 5% fines, non plastic; trace of fine, subrounded gravel; laminations of darker and more medium sized sand; micaceous; loose; damp.		4		5
10 - 15					4		10
15 - 20					4		15
20 - 25					4		20
25 - 30					4		25

Parametrix

Boring ID: CPOND-29	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/12/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/12/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 45 t.
		Depth to Water: 37 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			Silt (ML) Brown; 95% fines, low plasticity; <5% fine sand; micaceous; moderately mottled; stiff to very stiff; moist.		4		30
35					5		35
40			Silty Sand (SM) Dark reddish brown; 80% medium to coarse, subrounded sand; 15% fines, low plasticity; 5% fine, subrounded gravel; medium dense; wet to saturated.		5		40
45			Sand (SP) Dark brown; 90% medium, trace of coarse, subrounded, sand; 10% fine to medium, subrounded gravel; dense; saturated.	CPOND-29i-W	3		45
50			Bottom of boring at 45 feet bgs. Intermediate groundwater sample collected from second boring located one foot east of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.				50

Parametrix

Boring ID: CPOND-30	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/11/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/11/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 45 ft.
		Depth to Water: 33 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 1.5			Asphalt				
1.5 - 4.5			Sandy Gravel (GW) Dark grayish brown; 60% fine, subrounded gravel; 40% fine sand; loose; damp.		4	<p>1-Inch Steel Probe Rod; 0 to 41'</p> <p>Backfilled with Bentonite Chips; 0 to 45'</p>	
4.5 - 11.5			Sand (SW) Dark grayish brown; 95% fine to medium, subrounded sand; 5% fines, non plastic; trace of fine, subrounded gravel; micaceous; loose; damp.		4		5
11.5 - 17.5			Sandy Silt (SW) Dark brown; 70% fines, low plasticity; 30% fine sand; interbeds of fine sand 6" thick at 15.5' and 22'; micaceous; medium stiff; moist.		4		10
17.5 - 22.5					4		15
22.5 - 25			Silty Sand (SM) Dark brown; 70% fine sand; 30% fines, low plasticity; micaceous; medium stiff; damp.		3.5		20
25						25	

Parametrix

Boring ID: CPOND-30	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/11/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/11/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 45 ft.
		Depth to Water: 33 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			<p>Silt (ML) Brown; 95% fines, low plasticity; <5% fine sand; micaceous; moderately mottled; medium stiff to stiff; moist to wet.</p>		1.5		30
35					3		35
40			<p>Silty Sand (SM) Dark reddish brown; 80% medium to coarse, subrounded sand; 15% fines, low plasticity; 5% fine, subrounded gravel; medium dense; wet.</p>		5		40
45			<p>Sand (SP) Dark brown; 90% medium, trace of coarse, subrounded, sand; 10% fine to medium, subrounded gravel; dense; saturated.</p> <p>Bottom of boring at 40 feet bgs.</p>	CPOND-30i-W			45
50			<p>Intermediate groundwater sample collected from second boring located one foot southwest of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.</p>				50

Parametrix

Boring ID: CPOND-1		Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/11/05	
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/11/05	
Location:		Checked by: Ingmar Saul, L.G.		Boring Depth: 40	
				Depth to Water: 31	

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 36'</p> <p>Backfilled with Bentonite Chips; 0 to 40'</p>	0
0-4			Gravelly Sand (SW) Dark grayish brown; 65% fine to medium, subrounded sand; 25% medium to coarse, subangular gravel; 10% fines, low plasticity; micaceous; loose; damp.				0
4-5			Slag material Black, 90% fine to coarse grained sand sized; highly crystalline, metallic luster, silver color fragments; loose; dry.	CPOND-1-3.5			5
5-6			Sand (SW) Dark grayish brown; 95% fine to medium grained, subrounded, sand; 5% fines, non plastic; micaceous; loose; damp.				5
6-9			Slag material Black; highly crystalline, metallic luster, silver colored fragments; fine to coarse grained sand size; loose; dry; 3" of gravelly sand at 4'.				10
9-12			Sand with Silt (SP-SM) Dark grayish brown; 90% fine to medium grained sand, subrounded, micaceous, sand; 10% fines, non plastic; loose; damp.				15
12-18			Silty Sand (SM) Dark Brown; 60% fine grained sand; 40% fines, low plasticity; slightly mottled; medium dense; moist.				20
18-22			Sandy Silt (ML) Dark brown; 75% fines, low plasticity; 25% fine grained sand; micaceous; stiff; moist.				25
22-25			Silt (ML) Grayish brown; 98% fines, low to medium plasticity; 2% fine grained sand; moderately mottled; very stiff; damp to moist.			30	

Parametrix

Boring ID: CPOND-1	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/11/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/11/05
Location:	Checked by: Ingmar Saul, L.G.	Boring Depth: 40
		Depth to Water: 31

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			Silty Sand (SP-SM) Dark reddish brown; 80% fine to medium grained sand, subrounded, trace of coarse grained sand; 20% fines, low plasticity; medium dense; wet to saturated.			<p>0.75-Inch Well Point Screen: 36 to 40'</p>	30
35			Sand (SP) Dark brown; 90% medium to coarse grained sand, subrounded; 5% fine, subrounded gravel; 5% fines, non plastic; medium dense; wet to saturated.	CPOND-1i-W CPOND-1i-W-Dup			35
40			Bottom of boring at 40 feet bgs.				40
45			Intermediate groundwater sample collected from second boring located one foot north of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.				45
50							50

Parametrix

Boring ID: CPOND-2		Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/13/05	
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/13/05	
Location: Former Pond G		Checked by: Ingmar Saul, L.G.		Boring Depth: 35 ft.	
				Depth to Water: 28 ft.	

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 29'</p> <p>Backfilled with Bentonite Chips; 0 to 35'</p>	0
0 - 4			Gravelly Sand (SW) Dark grayish brown; 60% fine to coarse grained sand, subrounded; 35% fine to coarse gravel, 1 inch minus) subangular; 5% fines, non plastic; loose; damp.				0
4 - 6			Sand (SP) Dark gray; 90% fine to medium grained sand, subrounded; 5% fine, subrounded gravel; 5% fines, non plastic; micaceous; loose; damp.				5
6 - 10			Baghouse dust Black; 95% silt sized grains; 5% fine sand sized grains, crystalline, metallic luster, silver colored flakes; stiff; moist.	CPOND-2-8.0			10
10			Trace of wood at 9.7 ft. bgs.				10
10 - 14			Sand (SP) Dark gray; 95% fine grained sand, subrounded; 5% fines, non plastic; micaceous; dense; moist.				15
14 - 20			Sandy Silt (ML) Very dark gray; 90% fines, low plasticity; 10% fine grained sand; micaceous; slightly mottled; medium stiff; moist.				20
20 - 25			Silt (ML) Grayish brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; stiff; moist.				25

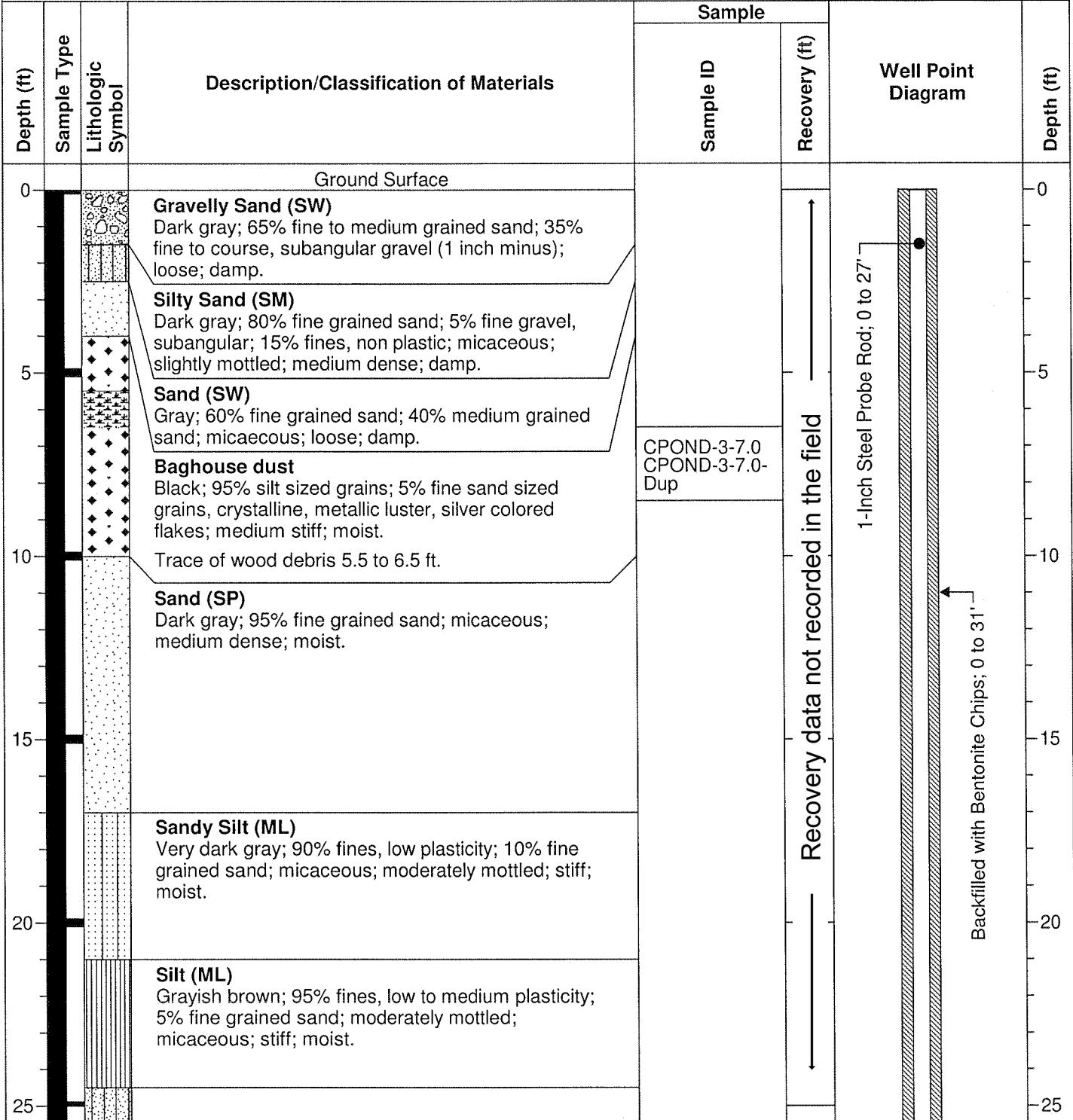
Parametrix

Boring ID: CPOND-2	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 28 ft.

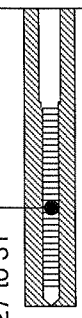
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
			Silty Sand (SM) Dark reddish brown; 80% fine to medium grained sand, trace of coarse grained sand, subrounded; 20% fines, low plasticity; medium dense; wet.			<p>0.75-Inch Well Point Screen; 29 to 33'</p>	
30			Sand (SP) Dark brown; 95% medium grained sand, with a trace of coarse grained sand, subrounded sand; 5% fines, non plastic; micaceous; dense; saturated.	CPOND-2i-W	Recovery data not recorded in the field		30
35			Bottom of boring at 35 feet bgs.				35
40			Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.				40
45							45
50							50

Parametrix

Boring ID: CPOND-3	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 30 ft.
		Depth to Water: 26.8 ft.



Parametrix

Boring ID: CPOND-3		Drilling Company: GeoTech Explorations		Sheet 2 of 2			
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/14/05			
Project #: 275-1940-006-03-4916A		Logged by: Ingmar Saul, L.G.		Ending Date: 7/14/05			
Location: Former Pond G		Checked by: Mike Marshall		Boring Depth: 30 ft.			
				Depth to Water: 26.8 ft.			
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30	[Symbol]	[Symbol]	Silty Sand (SM) Dark reddish brown; 60% fine to medium grained sand, surrounded; 40% fines, low plasticity; medium dense; moist to wet.		↑ Recovery data not recorded in the field ↓	 0.75-Inch Well Point Screen; 27 to 31'	30
			Sand (SP) Dark brown; 95% fine to medium grained sand, subrounded; 5% fines, non plastic; micaceous; dense; saturated.	CPOND-3i-W			
35			Bottom of boring at 30 feet bgs.				35
40			Intermediate groundwater sample collected from second boring located one foot north of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.				40
45							45
50							50

Parametrix

Boring ID: CPOND-4	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 30 ft.
		Depth to Water: 23.0 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 2.5			Gravelly Sand (SW) Dark gray; 85% fine to medium grained sand; 15% fine to coarse, subangular gravel; loose; damp.			<p>1-Inch Steel Probe Rod; 0 to 29'</p> <p>Backfilled with Bentonite Chips; 0 to 33'</p>	
2.5 - 4.5			Silty Sand (SM) Dark brown; 60% fine sand; trace of fine, subangular gravel; 40% fines, non plastic; micaceous; slightly mottled; medium dense; damp.				
4.5 - 6.5			Sand (SW) Gray; 60% fine sand; 40% medium sand; micaeous; loose; damp.				
6.5 - 11.5			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist. Trace of wood debris at 6 ft.				
11.5 - 18.5			Saturated at 11.5 ft. Sand (SP) Dark gray; 95% subrounded fine sand; % fines; micaceous; medium dense; moist.	CPOND-4-12.0	Recovery data not recorded in the field		
18.5 - 20			Sandy Silt (ML) Very dark gray; 90% fines, low plasticity; 10% fine grained sand; micaceous; stiff; moist.				



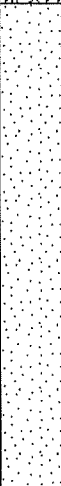


Parametrix

Boring ID: CPOND-4	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 30 ft.
		Depth to Water: 23.0 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Dark brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; stiff; moist.		Recovery data not recorded in the field		25
			Silty Sand (SM) Dark reddish brown; 70% fine to medium, trace of coarse, subangular sand; 30% fines, low plasticity; medium dense; moist to wet.				30
30			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.				35
			Bottom of boring at 30 feet bgs. Intermediate groundwater sample collected from second boring located one foot north of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.	CPOND-4i-W			40

Parametrix

Boring ID: CPOND-5		Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/14/05	
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/14/05	
Location: East of 26th Extension		Checked by: Ingmar Saul, L.G.		Boring Depth: 30 ft.	
				Depth to Water: 30.4 ft.	

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
			Gravelly Sand (SW) Dark gray; 85% fine to coarse sand; 15% fine to coarse, subangular gravel; loose; damp.			 <p>1-Inch Steel Probe Rod; 0 to 29.8'</p> <p>Backfilled with Bentonite Chips; 0 to 33.8'</p>	
			Sand (SP) Gray; 60% fine sand; 40% medium sand; micaeous; loose; damp.				
			Sandy Silt (ML) Very dark gray; 70% fines, low plasticity; 30% fine sand; micaceous; stiff; moist.				
20							20

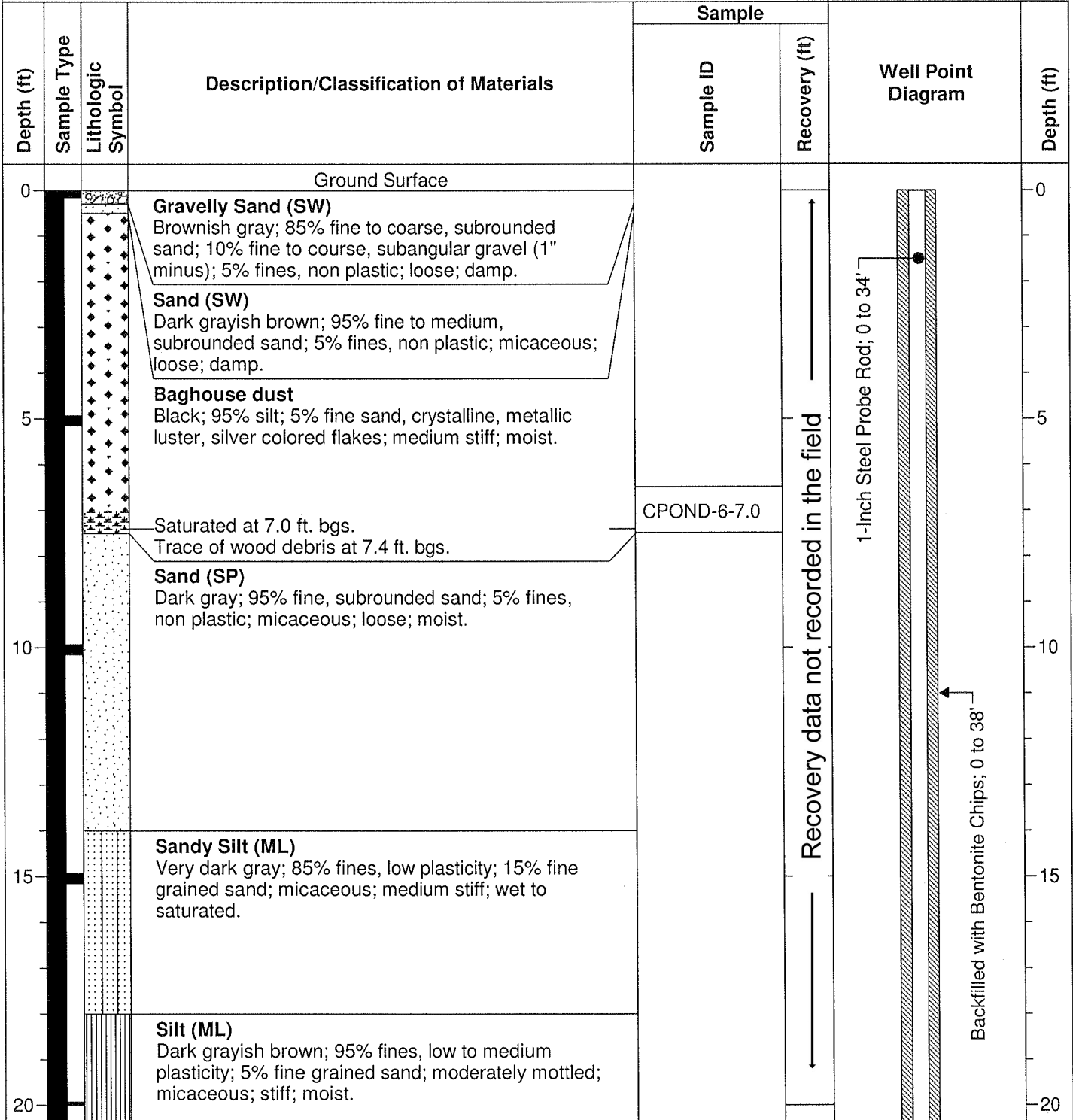
Parametrix

Boring ID: CPOND-5	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/14/05
Location: East of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 30 ft.
		Depth to Water: 30.4 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			<p>Silt (ML) Dark brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; stiff; moist.</p>		Recovery data not recorded in the field		25
30			<p>Silty Sand (SM) Dark reddish brown; 70% fine to medium, trace of coarse, subangular sand; 30% fines, low plasticity; medium dense; moist to wet.</p>				30
35			<p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.</p> <p>Bottom of boring at 30 feet bgs.</p>	CPOND-5i-W			35
40			<p>Intermediate groundwater sample collected from second boring located one foot north of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.</p>				40

Parametrix

Boring ID: CPOND-6	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 29.5 ft.



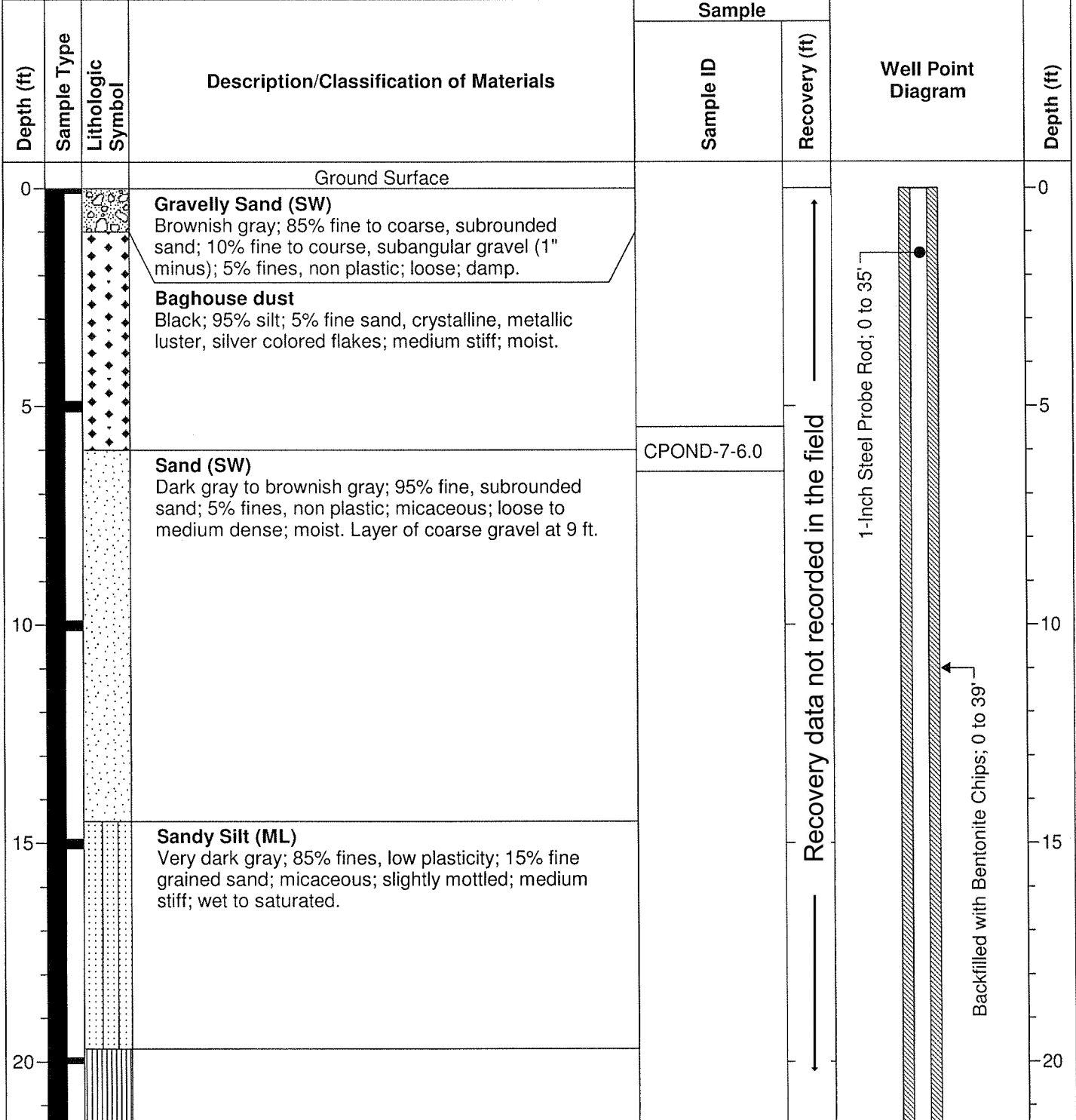
Parametrix

Boring ID: CPOND-6	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 29.5 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25							25
30			Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subrounded sand; 20% fines, low plasticity; medium dense; wet.		Recovery data not recorded in the field		30
35			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated. Bottom of boring at 35 feet bgs.	CPOND-6i-W			35
40			Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.			40	

Parametrix

Boring ID: CPOND-7		Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/15/05	
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/15/05	
Location: Former Pond B		Checked by: Ingmar Saul, L.G.		Boring Depth: 35 ft.	
				Depth to Water: 28.3 ft.	

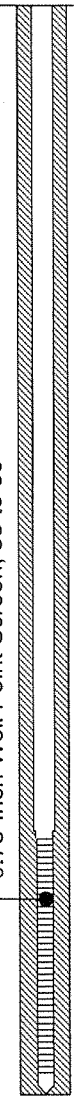


Parametrix

Boring ID: CPOND-7	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: Former Pond B	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 28.3 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
26			<p>Silt (ML) Dark grayish brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; stiff; moist.</p>		Recovery data not recorded in the field		26
31							31
36			<p>Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subrounded sand; 20% fines, low plasticity; medium dense; wet.</p> <p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.</p> <p>Bottom of boring at 35 feet bgs.</p>	CPOND-7i-W			36
41			<p>Intermediate groundwater sample collected from second boring located one foot northeast of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.</p>				41

0.75-Inch Well Point Screen; 35 to 39'



Parametrix

Boring ID: CPOND-8	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 32.8 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
			Gravelly Sand (SW) Brownish gray; 80% fine to coarse, subrounded sand; 15% fine to coarse, subangular gravel (1" minus); 5% fines, non plastic; loose; damp.			<p>1-Inch Steel Probe Rod; 0 to 34'</p> <p>Backfilled with Bentonite Chips; 0 to 38'</p>	
			Sand (SW) Grayish brown; 95% fine to medium, trace of coarse, subrounded sand; 5% fines, non plastic; loose; damp.				
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.				
			Sand (SW) Grayish brown; 95% fine to medium, trace of coarse, subrounded sand; 5% fines, non plastic; loose; damp.	CPOND-8-5.5 CPOND-8-5.5-DUP			
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.				
10			Sand (SW) Grayish brown; 95% fine sand; 5% fines, low plasticity; micaceous; loose to medium dense; moist.				10
15			Sandy Silt (ML) Dark grayish brown; 90% fines, low plasticity; 10% fine grained sand; micaceous; slightly mottled; medium stiff; moist.				15
20							20

Parametrix

Boring ID: CPOND-8	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 32.8 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; stiff; moist.		Recovery data not recorded in the field		25
30			Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subrounded sand; 20% fines, low plasticity; medium dense; wet.				30
35			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.				35
40			Bottom of boring at 35 feet bgs. Intermediate groundwater sample collected from second boring located one foot northwest of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.	CPOND-8i-W			40

Parametrix

Boring ID: CPOND-9	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: East of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 33.8 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
			Gravelly Sand (SW) Dark gray; 80% fine to coarse sand; 15% fine to coarse (1.5" minus), subangular gravel; 5% fines; loose; damp.			<p>1-Inch Steel Probe Rod; 0 to 36'</p> <p>Backfilled with Bentonite Chips; 0 to 40'</p>	
			Sand (SW) Grayish brown; 95% fine to medium, trace of coarse, subrounded sand; <5% fines, non plastic; loose; damp.				
5			Silty Silt (ML) Brown; 80% fines, low plasticity; 20% fine sand; micaceous; very stiff; moist to damp.				
			Sand (SW) Grayish brown; 95% fine to medium, trace of coarse, subrounded sand; 5% fines, non plastic; loose; damp.				
10			Silty Sand (SP) Dark gray; 85% fine sand; 15% fines; micaceous; medium dense; moist to wet at 14 ft.				
			Silty Silt (ML) Very dark gray; 80% fines, low plasticity; 20% fine sand; micaceous; medium stiff; moist.				
15			Silt (ML) Grayish brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; stiff; moist.				
20							20
25							25

Parametrix

Boring ID: CPOND-9	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: East of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 33.8 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30							30
35			<p>Silty Sand (SM) Dark reddish brown; 80% fine to medium, trace of coarse, subangular sand; 20% fines, low plasticity; medium dense; wet.</p>				35
40			<p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.</p>	CPOND-9i-W	Recovery data not recorded in the field		40
45			<p>Bottom of boring at 40 feet bgs.</p> <p>Intermediate groundwater sample collected from second boring located one foot northwest of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.</p>				45
50							50

Parametrix

Boring ID: CPOND-10	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/18/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/18/05
Location: East of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 29 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 5			Gravelly Sand (SW) Dark gray; 85% fine to coarse sand; 15% fine to coarse (1.5" minus), subangular gravel; loose; damp.			<p>1-Inch Steel Probe Rod; 0 to 42'</p> <p>Backfilled with Bentonite Chips; 0 to 46'</p>	0
5 - 10			Sand (SW) Grayish brown; 95% fine to medium, trace of coarse, subrounded sand; <5% fines, non plastic; micaceous; loose; damp to moist.				5
10 - 14			Silty Sand (SP) Dark brown; 70% fine sand; 30% fines, low plasticity, slightly mottled; micaeous; medium dense; moist to wet at 14 ft.				10
14 - 25			Sandy Silt (ML) Dark gray; 75% fines, low plasticity; 25% fine sand; micaceous; medium stiff; moist. Dark grayish brown; 60% fines, low plasticity, slightly mottled; 40% fine sand; micaceous; medium stiff; moist to wet.				15
25							25

Parametrix

Boring ID: CPOND-10	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/18/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/18/05
Location: East of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 29 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			<p>Silt (ML) Grayish brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; stiff; moist.</p>		Recovery data not recorded in the field		30
35			<p>Silty Sand (SM) Dark reddish brown; 80% fine to medium, trace of coarse, subangular sand; 20% fines, low plasticity; medium dense; wet.</p>				35
40			<p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.</p> <p>Bottom of boring at 40 feet bgs.</p>	CPOND-9i-W CPOND-9i-W-Dup			40
45			<p>Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.</p>				45
50							50

Parametrix

Boring ID: CPOND-11	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 34 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 34'</p> <p>Backfilled with Bentonite Chips; 0 to 38'</p>	0
			Gravelly Sand (SW) Grayish brown; 85% fine to medium, subangular sand; 10% fine, subangular gravel; 5% fines, nonplastic; loose; damp.				
			Sandy Silt (ML) Brown; 80% fines, low plasticity; 15% fine sand; 5% fine, subangular gravel; micaceous; loose; damp.				
5			Silty Sand (SM) Very dark gray; 80% fine sand; 15% fines, low plasticity; <5% fragments of crystalline, metallic luster, silver color; 1" thick layer of baghouse dust at 5' bgs; loose; moist.	CPOND-11-4.5			
			Sand (SW) Dark grayish brown; 95% fine to medium, subrounded sand; 5% fines, low plasticity; micaceous; loose; moist. Grades into fine sand at 13' and then into sandy silt below.				
10							10
			Sandy Silt (ML) Dark brown; 90% fines, low plasticity; 10% fine sand; micaceous; slightly mottled; stiff; moist.				15
15							20
20							20

Parametrix

Boring ID: CPOND-11	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 34 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Grayish brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; very stiff; wet.		Recovery data not recorded in the field 		25
30			Silty Sand (SM) Dark reddish brown; 80% fine to medium, trace of coarse, subangular sand; 20% fines, low plasticity; medium dense; wet.				30
35			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.	CPOND-11i-W			35
40			Bottom of boring at 35 feet bgs. Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.	CPOND-11i-W-Dup			40

Parametrix

Boring ID: CPOND-12				Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond				Drilling Method: Push-Probe		Starting Date: 7/11/05	
Project #: 275-1940-006-03-4916A				Logged by: Ingmar Saul, L.G.		Ending Date: 7/11/05	
Location: West of 26th Extension				Checked by: Mike Marshall		Boring Depth: 40 ft.	
						Depth to Water: 32 ft.	
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
			Asphalt Sandy Gravel (GW) Dark gray; 60% fine, subrounded gravel; 40% fine sand; loose; dry. Sand (SW) Dark gray; 95% fine to medium, subrounded sand; 5% fines, non plastic; micaceous; loose; damp.				
5							5
10							10
15			Silt (ML) Very dark gray to brown; 70% fines, low plasticity; 30% fine sand; micaceous; medium stiff; damp.	CPOND-12-14.0			15
			Sand (SW) Dark gray; 95% medium to fine sand; trace of fine, subangular gravel; micaceous; loose; damp.				
20			Silty Sand (SM) Dark brown; 70% fine sand; 30% fines, low plasticity; layer of fine sand 6" thick at 28'; micaceous; medium stiff; moist to wet.				20
25							25

Recovery data not recorded in the field

1-Inch Steel Probe Rod; 0 to 39'

Backfilled with Bentonite Chips; 0 to 43'


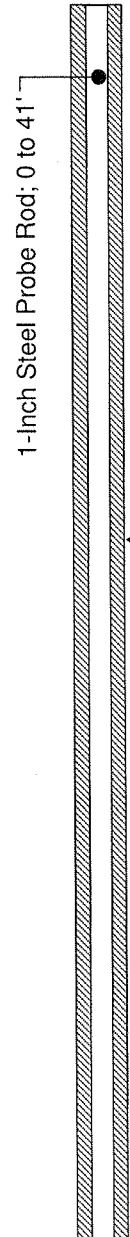



Parametrix

Boring ID: CPOND-12	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/11/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/11/05
Location: West of 26th Extension	Checked by: Mike Marshall	Boring Depth: 40 ft.
		Depth to Water: 32 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			<p>Silt (ML) Dark brown; 95% fines, low to medium plasticity; <5% fine sand; micaceous; moderately mottled; medium stiff to stiff; moist to wet.</p>				30
35			<p>Silty Sand (SM) Dark reddish brown; 80% medium to coarse, subrounded sand; 15% fines, low plasticity; 5% fine, subrounded gravel; medium dense; wet.</p>				35
40			<p>Sand (SP) Dark brown; 90% medium, trace of coarse, subangular sand; 10% fine to medium, subrounded gravel; trace of fines, non plastic; loose; saturated.</p> <p>Bottom of boring at 40 feet bgs.</p>	CPOND-12i-W	Recovery data not recorded in the field		40
45			<p>Intermediate groundwater sample collected from second boring located one foot southwest of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.</p>				45
50							50

Parametrix

Boring ID: CPOND-13	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/12/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/12/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 23.6 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 4.5			Gravelly Sand (SW) Grayish brown; 80% fine to medium, subangular to angular sand; 20% fine, subangular gravel; loose; damp.			 <p>1-Inch Steel Probe Rod; 0 to 41'</p> <p>Backfilled with Bentonite Chips; 0 to 44'</p>	0
4.5 - 16.5			Sand (SW) Grayish brown; 95% fine to medium, subrounded sand; <5% fines, non plastic; micaceous; laminations of darker more medium sand; loose; damp.				5
16.5 - 20			Sandy Silt (ML) Dark brown; 85% fines, low plasticity; 15% fine sand; micaceous; slightly mottled; medium stiff to stiff; moist to wet.				15
20 - 25			Silt (ML) Grayish brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; medium stiff to soft; wet.				20
25							25

Parametrix

Boring ID: CPOND-13	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/12/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/12/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 23.6 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30						<p>0.75-Inch Well Point Screen; 40 to 44'</p>	30
35			<p>Silty Sand (SM) Dark reddish brown; 80% fine to medium, trace of coarse, subangular sand; 20% fines, low plasticity; medium dense; wet.</p>		Recovery data not recorded in the field		35
40			<p>Sand (SP) Dark brown; 90% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; 5% fine subrounded gravel; micaceous; dense; saturated.</p>				40
			Bottom of boring at 40 feet bgs.	CPOND-13i-W			
45			Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.				50

Parametrix

Boring ID: CPOND-14		Drilling Company: GeoTech Explorations		Sheet 1 of 2			
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/11/05			
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/11/05			
Location: West of 26th Extension		Checked by: Ingmar Saul, L.G.		Boring Depth: 40 ft.			
				Depth to Water: 33 ft.			
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 4.5			Sandy Gravel (GW) Dark grayish brown; 70% fine, subrounded to angular gravel; 30% fine sand; loose; damp.			<p>1-inch Steel Probe Rod; 0 to 36'</p> <p>Backfilled with Bentonite Chips; 0 to 40'</p>	0
4.5 - 13.5			Sand (SP) Dark grayish brown; 90% fine to medium sand; 10% fines, non plastic; micaceous; loose; damp.				5
13.5 - 16.5			Sandy Silt (ML) Dark brown; 80% fines, low plasticity; 20% fine sand; micaceous; medium stiff; moist to wet.				10
16.5 - 25			Silt (ML) Dark brown; 90% fines, low to medium plasticity; 10% fine to medium sand; interbeds of fine to medium sand 1" to 3" thick at 20', 24', 31' and 34'; slightly mottled; micaceous; medium stiff to soft; damp to moist.				15
20 - 25					Recovery data not recorded in the field		20
25							25

Parametrix

Boring ID: CPOND-14	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/11/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/11/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 33 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30						<p>0.75-Inch Well Point Screen; 36 to 40'</p>	30
35			Trace of medium, subrounded gravel Silty Sand (SM) Dark reddish brown; 75% medium to coarse, subangular sand; 25% fines, low plasticity; trace of medium gravel; dense; wet to saturated.				35
40			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; medium dense; wet to saturated.	CPOND-14i-W	Recovery data not recorded in the field		40
45			Bottom of boring at 40 feet bgs.				45
50			Intermediate groundwater sample collected from second boring located one foot southwest of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.				50

Parametrix

Boring ID: CPOND-15	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/11/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/11/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 36 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 14.5			Asphalt Sand (SP) Dark grayish brown; 95% fine to medium sand; 5% fines, non plastic; trace of medium subrounded gravel; micaceous; loose; damp.		Recovery data not recorded in the field	 1-inch Steel Probe Rod; 0 to 34' Backfilled with Bentonite Chips; 0 to 38'	0 - 25
14.5 - 20			Silty Sand (SM) Dark brown; 65% fine sand; 35% fines, low plasticity; micaceous; loose; moist.				
20 - 25			Sand (SW) Dark grayish brown; 85% fine to medium, subrounded sand; 15% fines, non plastic; loose; moist.				

Parametrix

Boring ID: CPOND-15		Drilling Company: GeoTech Explorations		Sheet 2 of 2			
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/11/05			
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/11/05			
Location: West of 26th Extension		Checked by: Ingmar Saul, L.G.		Boring Depth: 40 ft.			
				Depth to Water: 36 ft.			
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			<p>Silt (ML) Dark brown; 90% fines, low to medium plasticity; 10% fine to medium sand; slightly mottled; micaceous; medium stiff to soft; wet.</p> <p>Interbed of fine sand 9" thick at 28'.</p>	CPOND-15i-W	Recovery data not recorded in the field	<p>0.75-Inch Well Point Screen; 34 to 38'</p>	30
35		<p>Silty Sand (SM) Dark reddish brown; 75% medium to coarse, subangular sand; 25% fines, low plasticity; trace of medium gravel; dense; wet.</p>	35				
		<p>Sand (SW) Dark brown; 95% medium, subrounded to angular sand; <5% fines, non plastic; medium dense to dense; wet.</p>					
		<p>Silty Sand (SM) Dark brown; 75% medium to coarse, subrounded sand; 25% fines, low plasticity; loose; saturated.</p>					
40		<p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded to subangular, sand; <5% fines, non plastic; medium dense, wet to saturated.</p> <p>Bottom of boring at 40 feet bgs.</p>					
45			Intermediate groundwater sample collected from second boring located one foot southwest of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.				45
50							50

Parametrix

Boring ID: CPOND-16		Drilling Company: GeoTech Explorations		Sheet 1 of 2			
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/18/05			
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/18/05			
Location: West of 26th Extension		Checked by: Ingmar Saul, L.G.		Boring Depth: 45 ft.			
				Depth to Water: 38.1 ft.			
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 5			Gravelly Sand (SW) Dark grayish brown; 80% fine to coarse, subrounded sand; 15% fine to coarse, angular gravel (1.5" minus); 5% fines, non plastic; micaceous; loose; damp.			<p>1-Inch Steel Probe Rod; 0 to 44'</p> <p>Backfilled with Bentonite Chips; 0 to 48'</p>	0
5 - 10			Sand (SW) Dark grayish brown; 95% fine to medium, trace of coarse, subrounded sand; 5% fines, non plastic; micaceous; loose; damp.				5
10 - 18			Silty Sand (SM) Dark brown; 80% fine sand; 20% fines, low plasticity; micaceous; slightly mottled; medium dense to loose; moist to wet.				10
18 - 24			Sandy Silt (SW) Dark brown; 80% fines, low plasticity; 20% fine sand; micaceous; slightly mottled; medium stiff to soft; wet.				15
24 - 25							20
25							25

Parametrix

Boring ID: CPOND-16	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/18/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/18/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 45 ft.
		Depth to Water: 38.1 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			<p>Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; <5% fine sand; moderately mottled; micaceous; stiff; moist.</p>		Recovery data not recorded in the field		30
35							35
40			<p>Silty Sand (SM) Dark reddish brown; 80% fine to medium, subangular sand; 25% fines, low plasticity; medium dense; wet.</p>				40
45			<p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; <5% fines, non plastic; dense; saturated.</p> <p>Bottom of boring at 45 feet bgs.</p> <p>Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.</p>	CPOND-16i-W			45
50							50

Parametrix

Boring ID: CPOND-17		Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/18/05	
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/18/05	
Location: Former Pond B		Checked by: Ingmar Saul, L.G.		Boring Depth: 35 ft.	
				Depth to Water: 31.12 ft.	

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)	
				Sample ID	Recovery (ft)			
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 36'</p> <p>Backfilled with Bentonite Chips; 0 to 40'</p>	0	
0 - 3			Gravelly Sand (SW) Dark Gray; 80% fine to coarse, subrounded sand; 15% fine to coarse, angular gravel; 5% fines, non plastic; loose; damp.					
3 - 8.5			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; wet.					
8.5 - 9.5			Saturated starting at approximately 8.5' bgs.	CPOND-17-8.5				
9.5 - 10.5			Sand (SP) Dark gray; 95% fine to medium sand; 5% fine gravel; micaceous; medium dense; moist.					
10.5 - 13			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.					
13 - 14			Gravelly Sand (SW) Dark gray; 70% fine to coarse, subrounded sand; 25% fine, subangular gravel; 5% fines, non plastic; medium dense; damp.					
14 - 19			Silty Sand (SM) Dark gray; 85% fine sand; 15% fines, low plasticity; medium dense to loose; moist to wet at 19 ft.					
19 - 20								
20 - 35					Recovery data not recorded in the field			20


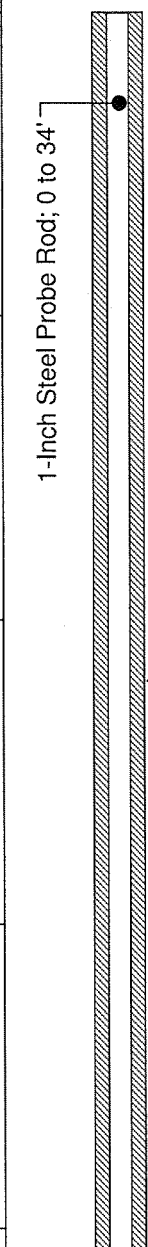

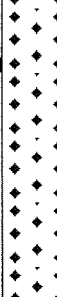


Parametrix

Boring ID: CPOND-17	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/18/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/18/05
Location: Former Pond B	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 31.12 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
			Sandy Silt (ML) Dark grayish brown; 80% fines, low plasticity; 20% fine sand; micaceous; soft; moist to wet.		↑		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.		↑		25
30			Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subangular sand; 20% fines, low plasticity; medium dense; moist to wet.		↑		30
35			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated. Bottom of boring at 35 feet bgs.		↑		35
			Intermediate groundwater sample collected from second boring located one foot east of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.	CPOND-17i-W	↓		40

Parametrix

Boring ID: CPOND-18	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/18/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/18/05
Location: Former Pond B	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 34.5 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
			Gravelly Sand (SW) Dark Gray; 80% fine to coarse, subrounded sand; 15% fine to coarse, subangular gravel (1" minus); 5% fines, non plastic; loose; damp.		Recovery data not recorded in the field		
			Sand (SW) Dark gray; 95% fine to medium, trace of coarse, subrounded sand; 5% fines, non plastic; micaceous; loose; damp to moist.				
5			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; wet to saturated.				
			Gravelly Sand (SW) Dark gray; 85% fine, subrounded sand; 10% coarse, angular gravel; 5% fines, non plastic; loose; moist.	CPOND-18-8.5			10
			Silty Sand (SM) Dark gray; 85% fine sand; 15% fines, low plasticity; medium dense; moist to wet.				20

Parametrix

Boring ID: CPOND-18	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/18/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/18/05
Location: Former Pond B	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 34.5 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.				25
30			Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subangular sand; 20% fines, low plasticity; medium dense; moist to wet.				30
35			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.				35
40			Bottom of boring at 35 feet bgs. Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.	CPOND-18i-W	Recovery data not recorded in the field		40

Parametrix

Boring ID: CPOND-19	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 30 ft.
		Depth to Water: 25.7 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
			Gravelly Sand (SW) Dark Gray; 60% fine to coarse, subrounded sand; 35% fine to coarse, subangular gravel (1" minus); 5% fines, non plastic; loose; damp.		Recovery data not recorded in the field		
			Silty Sand (SM) Dark brown; 85% fine sand; 15% fines, non plastic; trace of fine, subangular gravel; micaceous; slightly mottled; medium dense; damp				
			Sand (SW) Gray; 90% fine to medium sand; 10% fines, non plastic; micaceous; loose; damp.				
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.	CPOND-19-8.5			
			Slag material Dull silver; metallic luster, phaneritic crystalline structure; very hard; dry.				
10			Sand (SP) Dark gray; 95% fine, subrounded sand; 5% fines, non plastic; micaceous; medium dense; moist				10
15			Sandy Silt (ML) Very dark gray; 70% fines, low plasticity; 30% fine sand; micaceous; medium stiff; moist.				15
20							20

Parametrix

Boring ID: CPOND-19 Project Name: POV - Carborundum Pond Project #: 275-1940-006-03-4916A Location: Former Pond G				Drilling Company: GeoTech Explorations Drilling Method: Push-Probe Logged by: Ingmar Saul, L.G. Checked by: Mike Marshall		Sheet 2 of 2 Starting Date: 7/14/05 Ending Date: 7/14/05 Boring Depth: 30 ft. Depth to Water: 25.7 ft.	
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.		Recovery data not recorded in the field		25
			Silty Sand (SM) Dark reddish brown; 70% medium, trace of coarse, subangular sand; 30% fines, low plasticity; medium dense; moist to wet.				
30			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.				
			Bottom of boring at 30 feet bgs. Intermediate groundwater sample collected from second boring located one foot west of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.	CPOND-19i-W			30
35							35
40							40

Parametrix

Boring ID: CPOND-20	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 30 ft.
		Depth to Water:

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
			Gravelly Sand (SW) Dark Gray; 85% fine to coarse, subrounded sand; 10% fine to coarse, angular gravel (1" minus); 5% fines, non plastic; loose, damp.		Recovery data not recorded in the field		
			Sand (SW) Dark grayish brown; 95% fine to medium, subrounded sand; 5% fines, non plastic; loose, damp.				
5			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff to soft when saturated, wet, saturated at 15' bgs.				
10			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled, micaceous, stiff, moist.	CPOND-20-17.0			10
15							15
20							20

Parametrix

Boring ID: CPOND-20	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 30 ft.
		Depth to Water:

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			<p>Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subangular sand; 20% fines, low plasticity; medium dense, moist to wet.</p>		Recovery data not recorded in the field 		25
30			<p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous, dense, saturated.</p>				30
35			<p>Bottom of boring at 30 feet bgs.</p> <p>Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.</p>	CPOND-20i-W			35
40							40

Parametrix

Boring ID: CPOND-21	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 34.6 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 5			Gravelly Sand (SW) Dark grayish brown; 75% fine to coarse, subrounded sand; 25% fine to coarse, angular to subrounded gravel (1.5" minus); 5-10% fines, non plastic; loose; damp.			<p>1-Inch Steel Probe Rod; 0 to 34'</p> <p>Backfilled with Bentonite Chips; 0 to 38'</p>	0
5 - 13.7			Sand (SW) Dark grayish brown; 95% fine to medium, subrounded sand; 5% fines, non plastic; grades into fine sand at 13.7'; micaceous; loose; moist.				5
13.7 - 19			Sandy Silt (SW) Dark brown; 90% fines, low plasticity; 10% fine sand; 5" thick fine sand layer (80% fine sand; 20% fines) at 19' ; micaceous; moderately mottled; stiff; moist.				10
19 - 20						15	
20 - 35						20	

Parametrix

Boring ID: CPOND-21	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 34.6 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Grayish brown; 95% fines, low to medium plasticity; <5% fine sand; moderately mottled; micaceous; stiff; moist.		Recovery data not recorded in the field		25
30			Silty Sand (SM) Dark reddish brown; 80% fine to medium, subrounded sand; 20% fines, low plasticity; medium dense; wet.				30
35			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; <5% fines, non plastic; dense; saturated.				35
			Bottom of boring at 35 feet bgs.	CPOND-21i-W			
40			Intermediate groundwater sample collected from second boring located one foot west of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.				40

Parametrix

Boring ID: CPOND-22	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 35 ft.
		Depth to Water: 28 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 30'</p> <p>Backfilled with Bentonite Chips; 0 to 34'</p>	0
			Gravelly Sand (SW) Dark gray; 85% fine to medium, subangular sand; 15% fine to coarse, subangular gravel; loose; damp.				
			Silty Sand (SM) Dark gray; 80% fine sand; 15% fine sand; 5% fine, subangular gravel; slightly mottled; micaceous; medium dense; damp.				
			Sand (SW) Gray; 95% medium to fine sand; 5% fines, non plastic; micaceous; loose; damp.	CPOND-22-4.0			
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.				
			Silty Sand (SM) Dark gray; 85% fine sand; 15% fines, non plastic; micaceous; medium dense; damp				
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.				
			Silty Sand (SM) Dark gray; 85% fine sand; 15% fines, non plastic; micaceous; medium dense; damp. 60% fine sand; 40% fines, low plasticity starting at approximately 10 ft. bgs.				
15			Sandy Silt (ML) Very dark gray; 70% fines, low plasticity; 30% fine sand; micaceous; medium stiff; moist.				15
20							20


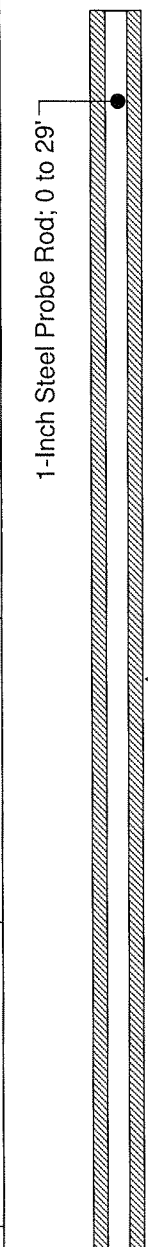




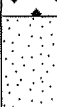


Parametrix

Boring ID: CPOND-22	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 35 ft.
		Depth to Water: 28 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.		Recovery data not recorded in the field 		25
			Silty Sand (SM) Dark reddish brown; 65% medium, trace of coarse, subangular sand; 35% fines, low plasticity; medium dense; moist to wet.				30
30			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.	CPOND-22i-W			35
35			Bottom of boring at 35 feet bgs.				40
40			Intermediate groundwater sample collected from second boring located one foot west of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.				40

Parametrix

Boring ID: CPOND-23	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 30 ft.
		Depth to Water: 22.3 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
			Gravelly Sand (SW) Dark gray; 85% fine to medium, subangular sand; 15% fine to coarse, subangular gravel; loose; damp.			 <p>1-Inch Steel Probe Rod; 0 to 29'</p> <p>Backfilled with Bentonite Chips; 0 to 33'</p>	
			Silty Sand (SM) Dark gray; 80% fine sand; 15% fine sand; 5% fine, subangular gravel; micaceous; medium dense; damp.				
			Sand (SW) Gray; 95% medium to fine sand; 5% fines, non plastic; micaceous; loose; damp.				
			Baghouse waste Dusky red; 85% silt; 15% medium to fine sand; medium stiff; dry.	CPOND-23-5.5	Recovery data not recorded in the field		
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.	CPOND-23-9.0			
			Sand (SW) Dark gray; 95% fine sand; 5% fines, non plastic; micaceous; medium dense; damp.				
			Silty Sand (SM) Dark gray; 60% fine sand; 40% fines, low plasticity; micaceous; medium dense; moist.				
			Sandy Silt (ML) Very dark gray; 90% fines, low plasticity; 10% fine sand; micaceous; moderately mottled; stiff; moist.				
20							20

Parametrix

Boring ID: CPOND-23	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 30 ft.
		Depth to Water: 22.3 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.		Recovery data not recorded in the field		25
			Silty Sand (SM) Dark reddish brown; 65% medium, trace of coarse, subrounded sand; 35% fines, low plasticity; medium dense; moist to wet.				30
30			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; dense; saturated. Bottom of boring at 30 feet bgs.	CPOND-23i-W			35
35			Intermediate groundwater sample collected from second boring located one foot from logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.		40		

Parametrix

Boring ID: CPOND-24	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 27.8 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 2.5			Gravelly Sand (SW) Brownish gray; 60% fine to coarse, subrounded sand; 35% fine to coarse, subrounded to subangular gravel (1" minus); 5% fines, non plastic; loose; damp.		Recovery data not recorded in the field		
2.5 - 4.5			Sandy Silt (ML) Brown; 80% fines, low plasticity; 15% fine sand; 5% fine, subangular gravel; micaceous; stiff; damp.				
4.5 - 6.5			Sand (SW) Dark gray; 90% fine sand; 5% fine, subrounded gravel; 5% fines, non plastic; loose; damp.				
6.5 - 10.0			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; stiff; moist.	CPOND-24-8.0 CPOND-24-8.0-DUP			
10.0 - 13.5			Sand (SW) Light gray; 95% fine, subrounded sand; 5% fines, non plastic; micaceous; loose; moist.				
13.5 - 17.0			Sandy Silt (ML) Dark gray; 90% fines, low plasticity; 10% fine sand; micaceous; slightly mottled; medium stiff; moist.				
17.0 - 20.0							

Parametrix

Boring ID: CPOND-24	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 27.8 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			<p>Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.</p>		Recovery data not recorded in the field		25
30			<p>Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subrounded sand; 15% fines, low plasticity; 5% fine, subrounded gravel; medium dense; wet.</p>				30
35			<p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; dense; saturated.</p> <p>Bottom of boring at 35 feet bgs.</p>	CPOND-24i-W			35
40			<p>Intermediate groundwater sample collected from second boring located one foot east of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.</p>			40	

Parametrix

Boring ID: CPOND-25	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/12/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/12/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 31.2 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
			Gravelly Sand (SW) Brownish gray; 60% fine to coarse, angular to subrounded sand; 30% fine to coarse, subrounded gravel; 10% fines, non plastic; medium dense; damp.			<p>1-Inch Steel Probe Rod; 0 to 35'</p> <p>Backfilled with Bentonite Chips; 0 to 39'</p>	
			Sand (SW) Dark gray; 80% fine to medium, subrounded sand; 15% fine, subrounded gravel; 5% fines, non plastic; loose; damp.				
5			Baghouse dust Black; 70% fine to coarse sand, crystalline, metallic luster, silver colored flakes; 20% fine to coarse, phaneritic, gravel; 10% fines sized material; with several 2" interbedded layers of highly phaneritic crystalline fragments; medium dense; damp.	CPOND-25-6.5			
			Sandy gravel (SW) Light gray; 80% medium, angular gravel; 15% fine to coarse, angular sand; 5% fines, non plastic; dense; dry.				
10			Baghouse dust Black; 70% fine to coarse sand, crystalline, metallic luster, silver colored flakes; 20% fine to coarse, phaneritic, gravel; 10% fines; medium dense; damp.				
			Sand (SW) Grayish brown; 95% medium to coarse, subrounded sand; 5% fine, subrounded gravel; micaceous; loose; damp.				
15			Sandy silt (ML) Brown; 90% fines, low plasticity; 10% fine sand; micaceous; slightly mottled; stiff; moist.				15
20							20


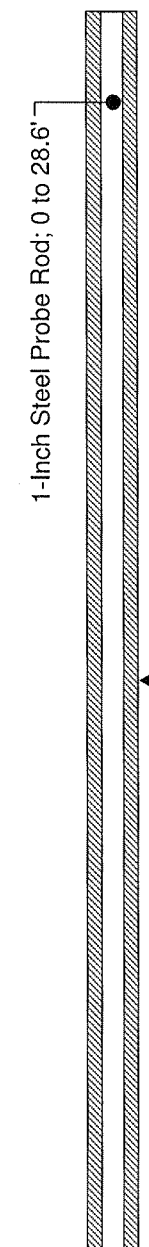





Parametrix

Boring ID: CPOND-25	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/12/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/12/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 31.2 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			<p>Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.</p>		Recovery data not recorded in the field		25
30			<p>Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subrounded sand; 15% fines, low plasticity; 5% fine, subrounded gravel; medium dense to loose; wet to saturated.</p>				30
35			<p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; dense; saturated.</p>				35
40			<p>Intermediate groundwater sample collected from second boring located one foot east of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.</p>	<p>CPOND-25i-W CPOND-25i-W-DUP</p>			40

Parametrix

Boring ID: CPOND-26		Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A		Logged by: Ingmar Saul, L.G.	Ending Date: 7/13/05
Location: Former Pond G		Checked by: Mike Marshall	Boring Depth: 35 ft.
			Depth to Water: 28.5 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)	
				Sample ID	Recovery (ft)			
0			Ground Surface				0	
			Gravelly Sand (SW) Grayish brown; 60% fine to coarse, subrounded sand; 35% fine to coarse, subrounded to subangular gravel (1" minus); 5% fines, non plastic; loose; damp.			 <p>1-Inch Steel Probe Rod; 0 to 28.6'</p> <p>Backfilled with Bentonite Chips; 0 to 33.6'</p>		
			Sand (SW) Dark gray; 90% fine to medium, subrounded sand; 5% fine, subrounded gravel; 5% fines, non plastic; micaceous; loose; damp.					
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.					
			Trace of wood at 9.0' bgs.	CPOND-26-9.0				
			Sand (SP) Dark gray; 95% fine, subrounded sand; 5% fines, non plastic; micaceous; dense; moist					
			Sandy Silt (ML) Very dark gray; 70% fines, low plasticity; 30% fine sand; micaceous; medium stiff; moist.					

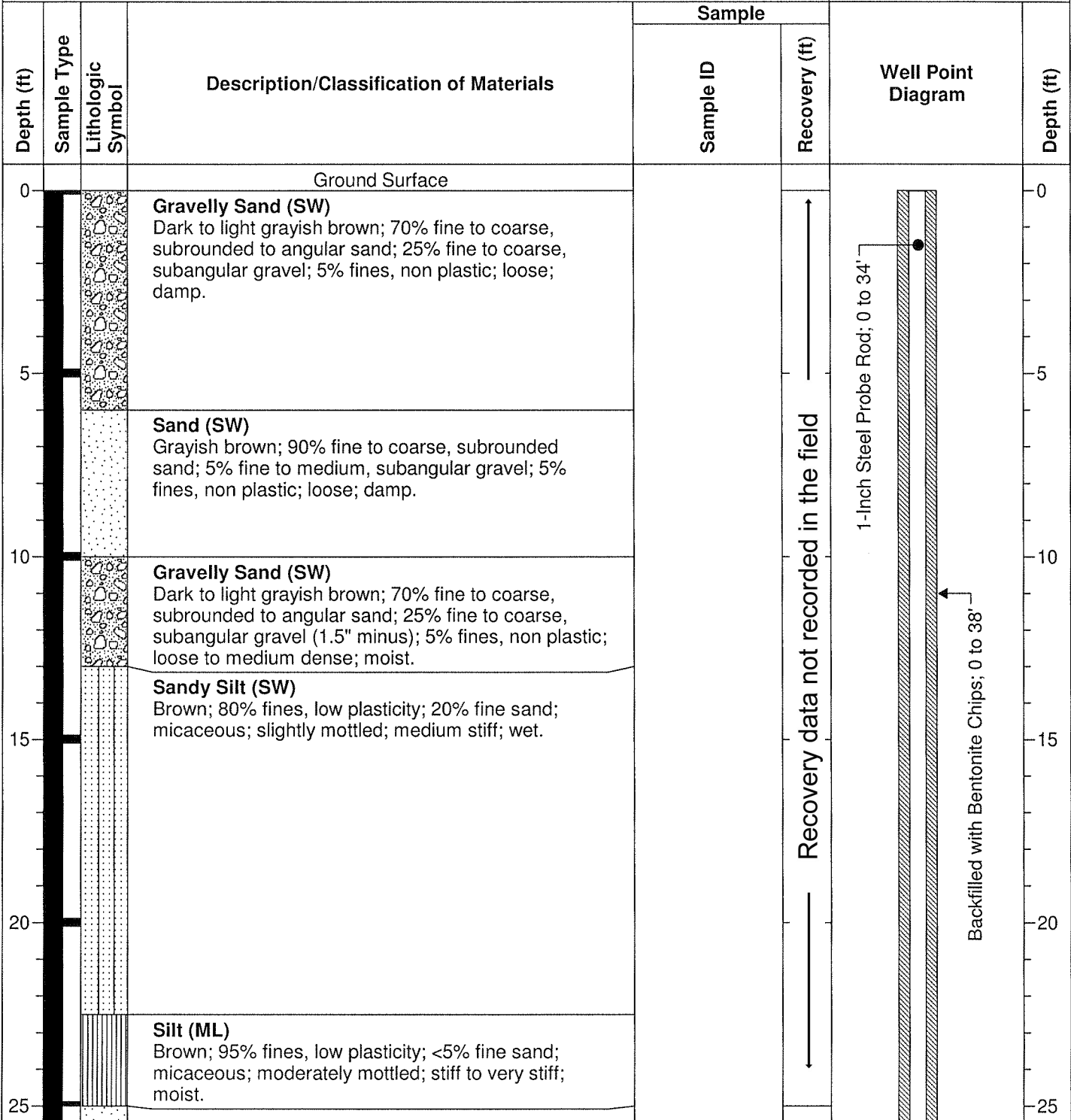
Parametrix

Boring ID: CPOND-26	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/13/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 35 ft.
		Depth to Water: 28.5 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.		Recovery data not recorded in the field	 0.75-Inch Well Point Screen; 28.6 to 33.6'	25
			Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subrounded sand; 20% fines, low plasticity; medium dense; moist to wet.				30
			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.	CPOND-22i-W			35
35			Bottom of boring at 35 feet bgs.				35
40			Intermediate groundwater sample collected from second boring located one foot west of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.				40

Parametrix

Boring ID: CPOND-27	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/12/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/12/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 29.5 ft.



Parametrix

Boring ID: CPOND-27	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/12/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/12/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 29.5 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			<p>Sand (SW) Grayish brown; 90% fine sand; 10% fines, low plasticity; micaceous; slightly mottled; soft; moist.</p> <p>Silt (ML) Dark brown; 90% fines, low to medium plasticity; 10% fine sand; slightly mottled; micaceous; soft; moist.</p> <p>Silty Sand (SM) Dark reddish brown; 80% fine to coarse, subrounded sand; 15% fines, low plasticity; 5% fine, subrounded gravel; medium dense; wet.</p>		Recovery data not recorded in the field		30
35			<p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; <5% fines, non plastic; dense; saturated.</p> <p>Bottom of boring at 35 feet bgs.</p>	CPOND-27i-W			35
40			<p>Intermediate groundwater sample collected from second boring located one foot northwest of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.</p>				40
45						45	
50						50	

Parametrix

Boring ID: CPOND-28	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: East of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 23.4 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 3.5			Gravelly Sand (SW) Dark grayish brown; 80% fine to coarse, subrounded sand; 15% fine to coarse, angular gravel (1.5" minus); 5% fines, non plastic; loose; damp.			<p>1-Inch Steel Probe Rod; 0 to 36'</p> <p>Backfilled with Bentonite Chips; 0 to 40'</p>	0
3.5 - 7.5			Sand (SW) Grayish brown; 95% fine to medium, trace of coarse, subrounded sand; 5% fines, non plastic; loose; damp.				5
7.5 - 10.5			Sandy Silt (SW) Brown; 80% fines, low plasticity; 20% fine sand; micaceous; slightly mottled; medium stiff; wet.				10
10.5 - 20.0			very dark gray to black; 90% fines, low plasticity; 10% fine sand; micaceous; moist starting at approximately 9.7' bgs.				15
20.0 - 25.0			Silt (ML) Dark brown; 95% fines, low to medium plasticity; <5% fine sand; moderately mottled; micaceous; stiff; moist.			20	
25.0						25	

Parametrix

Boring ID: CPOND-28	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: East of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 23.4 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30						<p>0.75-Inch Well Point Screen; 36 to 40'</p>	30
35			<p>Silty Sand (SM) Dark reddish brown; 80% fine to medium, subrounded sand; 20% fines, low plasticity; medium dense; wet.</p> <p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; <5% fines, non plastic; dense; saturated.</p> <p>Bottom of boring at 35 feet bgs.</p>	CPOND-28i-W	Recovery data not recorded in the field		35
40			<p>Intermediate groundwater sample collected from second boring located one foot north of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.</p>				40
45							45
50							50

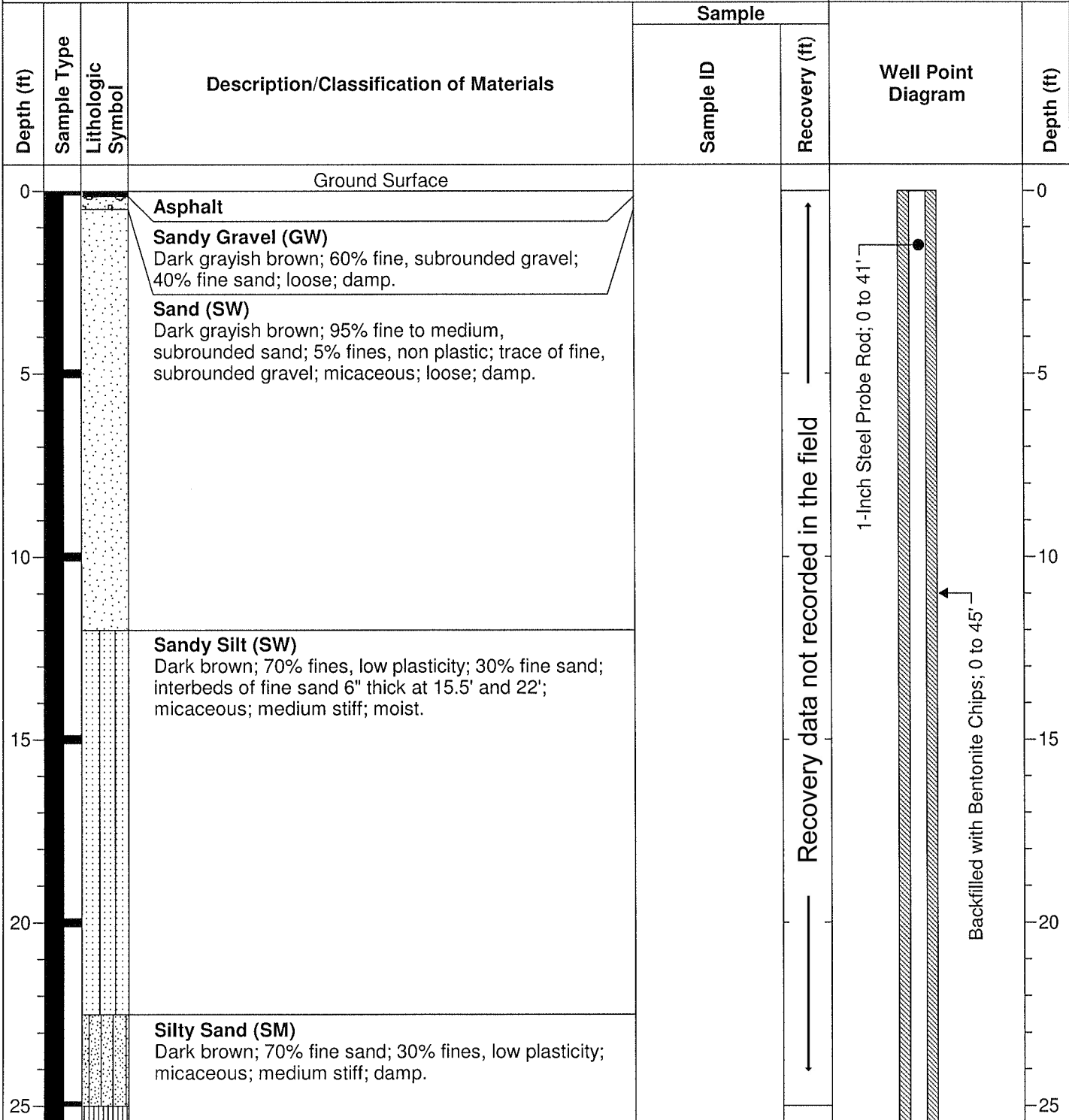
Parametrix

Boring ID: CPOND-29	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/12/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/12/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 45 t.
		Depth to Water: 37 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			Silt (ML) Brown; 95% fines, low plasticity; <5% fine sand; micaceous; moderately mottled; stiff to very stiff; moist.				30
35					Recovery data not recorded in the field		35
40			Silty Sand (SM) Dark reddish brown; 80% medium to coarse, subrounded sand; 15% fines, low plasticity; 5% fine, subrounded gravel; medium dense; wet to saturated.				40
45			Sand (SP) Dark brown; 90% medium, trace of coarse, subrounded, sand; 10% fine to medium, subrounded gravel; dense; saturated.	CPOND-29i-W			45
50			Bottom of boring at 45 feet bgs. Intermediate groundwater sample collected from second boring located one foot east of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.			50	

Parametrix

Boring ID: CPOND-30	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/11/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/11/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 45 ft.
		Depth to Water: 33 ft.



Parametrix

Boring ID: CPOND-30	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/11/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/11/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 45 ft.
		Depth to Water: 33 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			<p>Silt (ML) Brown; 95% fines, low plasticity; <5% fine sand; micaceous; moderately mottled; medium stiff to stiff; moist to wet.</p>				30
35					<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Recovery data not recorded in the field</p>		35
40			<p>Silty Sand (SM) Dark reddish brown; 80% medium to coarse, subrounded sand; 15% fines, low plasticity; 5% fine, subrounded gravel; medium dense; wet.</p> <p>Sand (SP) Dark brown; 90% medium, trace of coarse, subrounded, sand; 10% fine to medium, subrounded gravel; dense; saturated.</p> <p>Bottom of boring at 40 feet bgs.</p>	CPOND-30i-W			40
45						45	
50			<p>Intermediate groundwater sample collected from second boring located one foot southwest of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.</p>				50




Parametrix

Boring ID: CPOND-1		Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/11/05	
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/11/05	
Location:		Checked by: Ingmar Saul, L.G.		Boring Depth: 40	
				Depth to Water: 31	

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 36'</p> <p>Backfilled with Bentonite Chips; 0 to 40'</p>	0
0 - 4			Gravelly Sand (SW) Dark grayish brown; 65% fine to medium, subrounded sand; 25% medium to coarse, subangular gravel; 10% fines, low plasticity; micaceous; loose; damp.				0
4 - 5			Slag material Black, 90% fine to coarse grained sand sized; highly crystalline, metallic luster, silver color fragments; loose; dry.	CPOND-1-3.5			5
5 - 6			Sand (SW) Dark grayish brown; 95% fine to medium grained, subrounded, sand; 5% fines, non plastic; micaceous; loose; damp.				5
6 - 11			Slag material Black; highly crystalline, metallic luster, silver colored fragments; fine to coarse grained sand size; loose; dry; 3" of gravelly sand at 4'.				10
11 - 14			Sand with Silt (SP-SM) Dark grayish brown; 90% fine to medium grained sand, subrounded, micaceous, sand; 10% fines, non plastic; loose; damp.				15
14 - 18			Silty Sand (SM) Dark Brown; 60% fine grained sand; 40% fines, low plasticity; slightly mottled; medium dense; moist.				15
18 - 22			Sandy Silt (ML) Dark brown; 75% fines, low plasticity; 25% fine grained sand; micaceous; stiff; moist.				20
22 - 25			Silt (ML) Grayish brown; 98% fines, low to medium plasticity; 2% fine grained sand; moderately mottled; very stiff; damp to moist.			25	

Parametrix

Boring ID: CPOND-1	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/11/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/11/05
Location:	Checked by: Ingmar Saul, L.G.	Boring Depth: 40
		Depth to Water: 31

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			Silty Sand (SP-SM) Dark reddish brown; 80% fine to medium grained sand, subrounded, trace of coarse grained sand; 20% fines, low plasticity; medium dense; wet to saturated.				30
35			Sand (SP) Dark brown; 90% medium to coarse grained sand, subrounded; 5% fine, subrounded gravel; 5% fines, non plastic; medium dense; wet to saturated.	CPOND-1i-W CPOND-1i-W-Dup			35
40			Bottom of boring at 40 feet bgs.				40
45			Intermediate groundwater sample collected from second boring located one foot north of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.				45
50							50

Parametrix

Boring ID: CPOND-2		Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/13/05	
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/13/05	
Location: Former Pond G		Checked by: Ingmar Saul, L.G.		Boring Depth: 35 ft.	
				Depth to Water: 28 ft.	

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 29'</p> <p>Backfilled with Bentonite Chips; 0 to 35'</p>	0
0 - 4			Gravelly Sand (SW) Dark grayish brown; 60% fine to coarse grained sand, subrounded; 35% fine to coarse gravel, 1 inch minus) subangular; 5% fines, non plastic; loose; damp.		4		0
4 - 5			Sand (SP) Dark gray; 90% fine to medium grained sand, subrounded; 5% fine, subrounded gravel; 5% fines, non plastic; micaceous; loose; damp.				5
5 - 9.7			Baghouse dust Black; 95% silt sized grains; 5% fine sand sized grains, crystalline, metallic luster, silver colored flakes; stiff; moist.	CPOND-2-8.0	5		10
9.7 - 10			Trace of wood at 9.7 ft. bgs.				10
10 - 13.5			Sand (SP) Dark gray; 95% fine grained sand, subrounded; 5% fines, non plastic; micaceous; dense; moist.		3.5		15
13.5 - 15.5			Sandy Silt (ML) Very dark gray; 90% fines, low plasticity; 10% fine grained sand; micaceous; slightly mottled; medium stiff; moist.		2.5		20
15.5 - 21			Silt (ML) Grayish brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; stiff; moist.		2		25
21 - 25							25

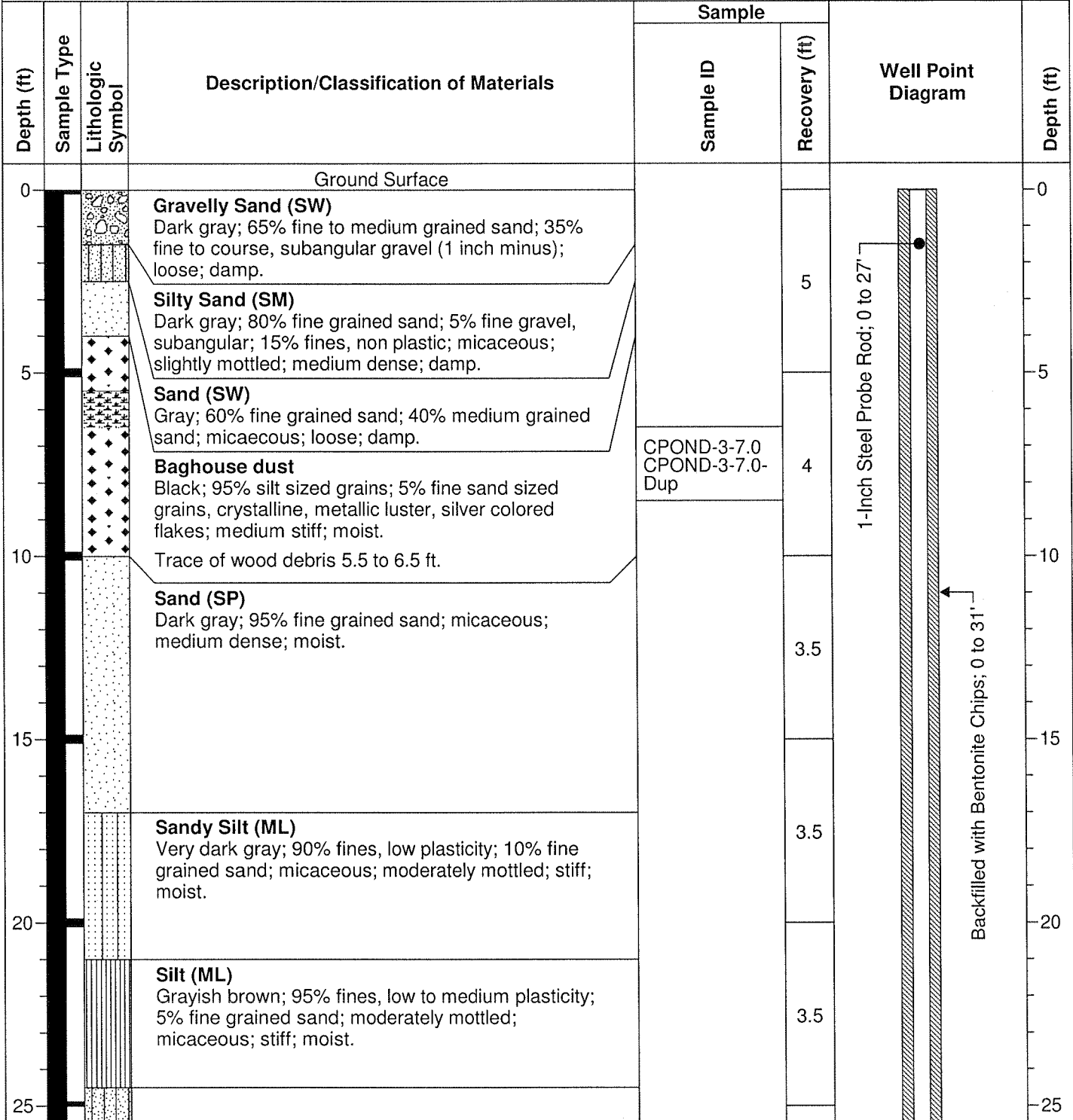
Parametrix

Boring ID: CPOND-2	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 28 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
			Silty Sand (SM) Dark reddish brown; 80% fine to medium grained sand, trace of coarse grained sand, subrounded; 20% fines, low plasticity; medium dense; wet.		3	<p>0.75-Inch Well Point Screen; 29 to 33'</p>	
30			Sand (SP) Dark brown; 95% medium grained sand, with a trace of coarse grained sand, subrounded sand; 5% fines, non plastic; micaceous; dense; saturated.	CPOND-2i-W	3		30
35			Bottom of boring at 35 feet bgs.				35
40			Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.				40
45							45
50							50

Parametrix

Boring ID: CPOND-3		Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A		Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G		Checked by: Mike Marshall	Boring Depth: 30 ft.
			Depth to Water: 26.8 ft.



Parametrix

Boring ID: CPOND-3		Drilling Company: GeoTech Explorations		Sheet 2 of 2			
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/14/05			
Project #: 275-1940-006-03-4916A		Logged by: Ingmar Saul, L.G.		Ending Date: 7/14/05			
Location: Former Pond G		Checked by: Mike Marshall		Boring Depth: 30 ft.			
				Depth to Water: 26.8 ft.			
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			<p>Silty Sand (SM) Dark reddish brown; 60% fine to medium grained sand, surrounded; 40% fines, low plasticity; medium dense; moist to wet.</p>		4		30
			<p>Sand (SP) Dark brown; 95% fine to medium grained sand, subrounded; 5% fines, non plastic; micaceous; dense; saturated.</p>				
			Bottom of boring at 30 feet bgs.	CPOND-3i-W			
35			Intermediate groundwater sample collected from second boring located one foot north of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.				35
40							40
45							45
50							50

Parametrix

Boring ID: CPOND-4	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 30 ft.
		Depth to Water: 23.0 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 2.5			Gravelly Sand (SW) Dark gray; 85% fine to medium grained sand; 15% fine to coarse, subangular gravel; loose; damp.				
2.5 - 4.5			Silty Sand (SM) Dark brown; 60% fine sand; trace of fine, subangular gravel; 40% fines, non plastic; micaceous; slightly mottled; medium dense; damp.		5		
4.5 - 6.5			Sand (SW) Gray; 60% fine sand; 40% medium sand; micaeous; loose; damp.				
6.5 - 11.5			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist. Trace of wood debris at 6 ft.		4		
11.5 - 17.5			Saturated at 11.5 ft. Sand (SP) Dark gray; 95% subrounded fine sand; % fines; micaceous; medium dense; moist.	CPOND-4-12.0	5		
17.5 - 20			Sandy Silt (ML) Very dark gray; 90% fines, low plasticity; 10% fine grained sand; micaceous; stiff; moist.		4		

Parametrix

Boring ID: CPOND-4	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 30 ft.
		Depth to Water: 23.0 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
			Silt (ML) Dark brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; stiff; moist.		3		
25			Silty Sand (SM) Dark reddish brown; 70% fine to medium, trace of coarse, subangular sand; 30% fines, low plasticity; medium dense; moist to wet.		3.5		
			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.				
30			Bottom of boring at 30 feet bgs. Intermediate groundwater sample collected from second boring located one foot north of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.	CPOND-4i-W			
35							
40							

Parametrix

Boring ID: CPOND-5		Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/14/05	
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/14/05	
Location: East of 26th Extension		Checked by: Ingmar Saul, L.G.		Boring Depth: 30 ft.	
				Depth to Water: 30.4 ft.	

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 29.8'</p> <p>Backfilled with Bentonite Chips; 0 to 33.8'</p>	0
			Gravelly Sand (SW) Dark gray; 85% fine to coarse sand; 15% fine to coarse, subangular gravel; loose; damp.				5
			Sand (SP) Gray; 60% fine sand; 40% medium sand; micaeous; loose; damp.				10
			Sandy Silt (ML) Very dark gray; 70% fines, low plasticity; 30% fine sand; micaceous; stiff; moist.				15
							20

Parametrix

Boring ID: CPOND-5	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/14/05
Location: East of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 30 ft.
		Depth to Water: 30.4 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			<p>Silt (ML) Dark brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; stiff; moist.</p>			<p>0.75-Inch Well Point Screen; 29.8 to 33.8'</p>	25
30			<p>Silty Sand (SM) Dark reddish brown; 70% fine to medium, trace of coarse, subangular sand; 30% fines, low plasticity; medium dense; moist to wet.</p>				30
			<p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.</p> <p>Bottom of boring at 30 feet bgs.</p>	CPOND-5i-W			35
40			<p>Intermediate groundwater sample collected from second boring located one foot north of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.</p>				40

Parametrix

Boring ID: CPOND-6	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 29.5 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 34'</p> <p>Backfilled with Bentonite Chips; 0 to 38'</p>	0
0 - 3		◆◆◆◆◆	Gravelly Sand (SW) Brownish gray; 85% fine to coarse, subrounded sand; 10% fine to coarse, subangular gravel (1" minus); 5% fines, non plastic; loose; damp.				0
3 - 5		◆◆◆◆◆	Sand (SW) Dark grayish brown; 95% fine to medium, subrounded sand; 5% fines, non plastic; micaceous; loose; damp.		3		3
5 - 7.0		◆◆◆◆◆	Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.				5
7.0 - 7.4		◆◆◆◆◆	Saturated at 7.0 ft. bgs. Trace of wood debris at 7.4 ft. bgs.	CPOND-6-7.0	4.5		7.0
7.4 - 10		◆◆◆◆◆	Sand (SP) Dark gray; 95% fine, subrounded sand; 5% fines, non plastic; micaceous; loose; moist.				10
10 - 15		◆◆◆◆◆	Sandy Silt (ML) Very dark gray; 85% fines, low plasticity; 15% fine grained sand; micaceous; medium stiff; wet to saturated.		2	15	
15 - 20		◆◆◆◆◆	Silt (ML) Dark grayish brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; stiff; moist.		2	20	

Parametrix

Boring ID: CPOND-6	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 29.5 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25					3		25
30			Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subrounded sand; 20% fines, low plasticity; medium dense; wet.		2		30
35			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated. Bottom of boring at 35 feet bgs.	CPOND-6i-W	3		35
40			Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.				40

Parametrix

Boring ID: CPOND-7		Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/15/05	
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/15/05	
Location: Former Pond B		Checked by: Ingmar Saul, L.G.		Boring Depth: 35 ft.	
				Depth to Water: 28.3 ft.	

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 35'</p> <p>Backfilled with Bentonite Chips; 0 to 39'</p>	0
0 - 3			Gravelly Sand (SW) Brownish gray; 85% fine to coarse, subrounded sand; 10% fine to coarse, subangular gravel (1" minus); 5% fines, non plastic; loose; damp.		3		0
3 - 5			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.				5
5 - 9			Sand (SW) Dark gray to brownish gray; 95% fine, subrounded sand; 5% fines, non plastic; micaceous; loose to medium dense; moist. Layer of coarse gravel at 9 ft.	CPOND-7-6.0	4.5		10
9 - 15			Sandy Silt (ML) Very dark gray; 85% fines, low plasticity; 15% fine grained sand; micaceous; slightly mottled; medium stiff; wet to saturated.		2		15
15 - 20					2	20	

Parametrix

Boring ID: CPOND-7	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: Former Pond B	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 28.3 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
26			<p>Silt (ML) Dark grayish brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; stiff; moist.</p>		3		26
31					2		31
36			<p>Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subrounded sand; 20% fines, low plasticity; medium dense; wet.</p> <p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.</p> <p>Bottom of boring at 35 feet bgs.</p>	CPOND-7i-W	3		36
41			<p>Intermediate groundwater sample collected from second boring located one foot northeast of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.</p>				41

Parametrix

Boring ID: CPOND-8 Project Name: POV - Carborundum Pond Project #: 275-1940-006-03-4916A Location: Former Pond G				Drilling Company: GeoTech Explorations Drilling Method: Push-Probe Logged by: Mike Marshall Checked by: Ingmar Saul, L.G.		Sheet 1 of 2 Starting Date: 7/15/05 Ending Date: 7/15/05 Boring Depth: 35 ft. Depth to Water: 32.8 ft.	
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 34'</p> <p>Backfilled with Bentonite Chips; 0 to 38'</p>	0
			Gravelly Sand (SW) Brownish gray; 80% fine to coarse, subrounded sand; 15% fine to coarse, subangular gravel (1" minus); 5% fines, non plastic; loose; damp.				
			Sand (SW) Grayish brown; 95% fine to medium, trace of coarse, subrounded sand; 5% fines, non plastic; loose; damp.		4.5		
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.	CPOND-8-5.5 CPOND-8-5.5-DUP			
			Sand (SW) Grayish brown; 95% fine to medium, trace of coarse, subrounded sand; 5% fines, non plastic; loose; damp.		2		
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.				
			Sand (SW) Grayish brown; 95% fine sand; 5% fines, low plasticity; micaceous; loose to medium dense; moist.		3		
			Sandy Silt (ML) Dark grayish brown; 90% fines, low plasticity; 10% fine grained sand; micaceous; slightly mottled; medium stiff; moist.		1.5		
20							20

Parametrix

Boring ID: CPOND-8 Project Name: POV - Carborundum Pond Project #: 275-1940-006-03-4916A Location: Former Pond G				Drilling Company: GeoTech Explorations Drilling Method: Push-Probe Logged by: Mike Marshall Checked by: Ingmar Saul, L.G.		Sheet 2 of 2 Starting Date: 7/15/05 Ending Date: 7/15/05 Boring Depth: 35 ft. Depth to Water: 32.8 ft.	
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; stiff; moist.		1		25
30			Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subrounded, sand; 20% fines, low plasticity; medium dense; wet.		1		30
35			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.		2		35
40			Bottom of boring at 35 feet bgs. Intermediate groundwater sample collected from second boring located one foot northwest of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.	CPOND-8i-W			40

Parametrix

Boring ID: CPOND-9	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: East of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 33.8 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 36'</p> <p>Backfilled with Bentonite Chips; 0 to 40'</p>	0
			Gravelly Sand (SW) Dark gray; 80% fine to coarse sand; 15% fine to coarse (1.5" minus), subangular gravel; 5% fines; loose; damp.				5
			Sand (SW) Grayish brown; 95% fine to medium, trace of coarse, subrounded sand; <5% fines, non plastic; loose; damp.				10
			Silty Sand (SP) Dark gray; 85% fine sand; 15% fines; micaeous; medium dense; moist to wet at 14 ft.				15
			Sandy Silt (ML) Brown; 80% fines, low plasticity; 20% fine sand; micaeous; very stiff; moist to damp.				20
			Sand (SW) Grayish brown; 95% fine to medium, trace of coarse, subrounded sand; 5% fines, non plastic; loose; damp.				25
			Silt (ML) Grayish brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaeous; stiff; moist.				

Parametrix

Boring ID: CPOND-9	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: East of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 33.8 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30						<p>0.75-Inch Well Point Screen; 36 to 40'</p>	30
35			<p>Silty Sand (SM) Dark reddish brown; 80% fine to medium, trace of coarse, subangular sand; 20% fines, low plasticity; medium dense; wet.</p>				35
40			<p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.</p>	CPOND-9i-W			40
45			<p>Bottom of boring at 40 feet bgs.</p> <p>Intermediate groundwater sample collected from second boring located one foot northwest of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.</p>				45
50							50

Parametrix

Boring ID: CPOND-10 Project Name: POV - Carborundum Pond Project #: 275-1940-006-03-4916A Location: East of 26th Extension				Drilling Company: GeoTech Explorations Drilling Method: Push-Probe Logged by: Mike Marshall Checked by: Ingmar Saul, L.G.		Sheet 1 of 2 Starting Date: 7/18/05 Ending Date: 7/18/05 Boring Depth: 40 ft. Depth to Water: 29 ft.	
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
			Gravelly Sand (SW) Dark gray; 85% fine to coarse sand; 15% fine to coarse (1.5" minus), subangular gravel; loose; damp.				
			Sand (SW) Grayish brown; 95% fine to medium, trace of coarse, subrounded sand; <5% fines, non plastic; micaceous; loose; damp to moist.		4.5	1-Inch Steel Probe Rod; 0 to 42' Backfilled with Bentonite Chips; 0 to 46'	
5					4		5
			Silty Sand (SP) Dark brown; 70% fine sand; 30% fines, low plasticity, slightly mottled; micaecous; medium dense; moist to wet at 14 ft.				10
10					3		15
			Sandy Silt (ML) Dark gray; 75% fines, low plasticity; 25% fine sand; micaceous; medium stiff; moist.				20
15					3	25	
			Dark grayish brown; 60% fines, low plasticity, slightly mottled; 40% fine sand; micaceous; medium stiff; moist to wet.				
20					2		20
25							25

Parametrix

Boring ID: CPOND-10		Drilling Company: GeoTech Explorations		Sheet 2 of 2			
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/18/05			
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/18/05			
Location: East of 26th Extension		Checked by: Ingmar Saul, L.G.		Boring Depth: 40 ft.			
				Depth to Water: 29 ft.			
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			<p>Silt (ML) Grayish brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; stiff; moist.</p>		3	<p>0.75-Inch Well Point Screen; 42 to 46'</p>	30
35					2		35
40			<p>Silty Sand (SM) Dark reddish brown; 80% fine to medium, trace of coarse, subangular sand; 20% fines, low plasticity; medium dense; wet.</p>		4		40
40			<p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.</p> <p>Bottom of boring at 40 feet bgs.</p>				45
45			<p>Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.</p>	CPOND-9i-W CPOND-9i-W-Dup			45
50							50


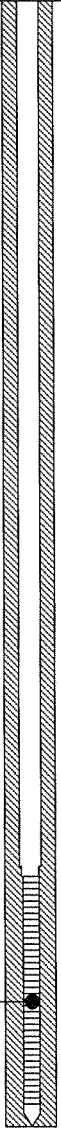


Parametrix

Boring ID: CPOND-11		Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/13/05	
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/13/05	
Location: West of 26th Extension		Checked by: Ingmar Saul, L.G.		Boring Depth: 35 ft.	
				Depth to Water: 34 ft.	

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 34'</p> <p>Backfilled with Bentonite Chips; 0 to 38'</p>	0
			Gravelly Sand (SW) Grayish brown; 85% fine to medium, subangular sand; 10% fine, subangular gravel; 5% fines, nonplastic; loose; damp.				
			Sandy Silt (ML) Brown; 80% fines, low plasticity; 15% fine sand; 5% fine, subangular gravel; micaceous; loose; damp.				
5			Silty Sand (SM) Very dark gray; 80% fine sand; 15% fines, low plasticity; <5% fragments of crystalline, metallic luster, silver color; 1" thick layer of baghouse dust at 5' bgs; loose; moist.	CPOND-11-4.5			
			Sand (SW) Dark grayish brown; 95% fine to medium, subrounded sand; 5% fines, low plasticity; micaceous; loose; moist. Grades into fine sand at 13' and then into sandy silt below.				
10							10
			Sandy Silt (ML) Dark brown; 90% fines, low plasticity; 10% fine sand; micaceous; slightly mottled; stiff; moist.				15
15							20
20							20

Parametrix

Boring ID: CPOND-11	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 34 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Grayish brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; very stiff; wet.			 0.75-Inch Well Point Screen; 34 to 38'	25
30			Silty Sand (SM) Dark reddish brown; 80% fine to medium, trace of coarse, subangular sand; 20% fines, low plasticity; medium dense; wet.				30
35			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.				35
40			Bottom of boring at 35 feet bgs. Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.	CPOND-11i-W CPOND-11i-W-Dup			40

Parametrix

Boring ID: CPOND-12		Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/11/05	
Project #: 275-1940-006-03-4916A		Logged by: Ingmar Saul, L.G.		Ending Date: 7/11/05	
Location: West of 26th Extension		Checked by: Mike Marshall		Boring Depth: 40 ft.	
				Depth to Water: 32 ft.	

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
			Asphalt				
			Sandy Gravel (GW) Dark gray; 60% fine, subrounded gravel; 40% fine sand; loose; dry.		3	<p>1-Inch Steel Probe Rod; 0 to 39'</p> <p>Backfilled with Bentonite Chips; 0 to 43'</p>	
			Sand (SW) Dark gray; 95% fine to medium, subrounded sand; 5% fines, non plastic; micaceous; loose; damp.		4		
5							
					4		
10							
			Silt (ML) Very dark gray to brown; 70% fines, low plasticity; 30% fine sand; micaceous; medium stiff; damp.	CPOND-12-14.0			
15			Sand (SW) Dark gray; 95% medium to fine sand; trace of fine, subangular gravel; micaceous; loose; damp.		3		
			Silty Sand (SM) Dark brown; 70% fine sand; 30% fines, low plasticity; layer of fine sand 6" thick at 28'; micaceous; medium stiff; moist to wet.		3.5		
20							
25							

Parametrix

Boring ID: CPOND-12	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/11/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/11/05
Location: West of 26th Extension	Checked by: Mike Marshall	Boring Depth: 40 ft.
		Depth to Water: 32 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			<p>Silt (ML) Dark brown; 95% fines, low to medium plasticity; <5% fine sand; micaceous; moderately mottled; medium stiff to stiff; moist to wet.</p>				30
35			<p>Silty Sand (SM) Dark reddish brown; 80% medium to coarse, subrounded sand; 15% fines, low plasticity; 5% fine, subrounded gravel; medium dense; wet.</p>				35
40			<p>Sand (SP) Dark brown; 90% medium, trace of coarse, subangular sand; 10% fine to medium, subrounded gravel; trace of fines, non plastic; loose; saturated.</p> <p>Bottom of boring at 40 feet bgs.</p>	CPOND-12i-W			40
45			<p>Intermediate groundwater sample collected from second boring located one foot southwest of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.</p>				45
50							50

Parametrix

Boring ID: CPOND-13	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/12/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/12/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 23.6 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 4			Gravelly Sand (SW) Grayish brown; 80% fine to medium, subangular to angular sand; 20% fine, subangular gravel; loose; damp.		4	<p>1-Inch Steel Probe Rod; 0 to 41'</p> <p>Backfilled with Bentonite Chips; 0 to 44'</p>	0
4 - 10			Sand (SW) Grayish brown; 95% fine to medium, subrounded sand; <5% fines, non plastic; micaceous; laminations of darker more medium sand; loose; damp.		4		4
10 - 16			Sandy Silt (ML) Dark brown; 85% fines, low plasticity; 15% fine sand; micaceous; slightly mottled; medium stiff to stiff; moist to wet.		4		4
16 - 20			Silt (ML) Grayish brown; 95% fines, low to medium plasticity; 5% fine grained sand; moderately mottled; micaceous; medium stiff to soft; wet.		4		4
20 - 25					2		2

Parametrix

Boring ID: CPOND-13	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/12/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/12/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 23.6 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30					2	<p>0.75-Inch Well Point Screen; 40 to 44'</p>	30
35			Silty Sand (SM) Dark reddish brown; 80% fine to medium, trace of coarse, subangular sand; 20% fines, low plasticity; medium dense; wet.		2.5		35
40			Sand (SP) Dark brown; 90% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; 5% fine subrounded gravel; micaceous; dense; saturated.		4		40
			Bottom of boring at 40 feet bgs.	CPOND-13i-W			45
45			Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.				50

Parametrix

Boring ID: CPOND-14		Drilling Company: GeoTech Explorations		Sheet 1 of 2			
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/11/05			
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/11/05			
Location: West of 26th Extension		Checked by: Ingmar Saul, L.G.		Boring Depth: 40 ft.			
				Depth to Water: 33 ft.			
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 3			Sandy Gravel (GW) Dark grayish brown; 70% fine, subrounded to angular gravel; 30% fine sand; loose; damp.		3	<p>1-Inch Steel Probe Rod; 0 to 36'</p> <p>Backfilled with Bentonite Chips; 0 to 40'</p>	0
3 - 8			Sand (SP) Dark grayish brown; 90% fine to medium sand; 10% fines, non plastic; micaceous; loose; damp.		5		3
8 - 13			Sandy Silt (ML) Dark brown; 80% fines, low plasticity; 20% fine sand; micaceous; medium stiff; moist to wet.		5		5
13 - 18			Silt (ML) Dark brown; 90% fines, low to medium plasticity; 10% fine to medium sand; interbeds of fine to medium sand 1" to 3" thick at 20', 24', 31' and 34'; slightly mottled; micaceous; medium stiff to soft; damp to moist.		3.5		3.5
18 - 21					3		3
21 - 25							25

Parametrix

Boring ID: CPOND-14	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/11/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/11/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 33 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30					3.5	<p>0.75-Inch Well Point Screen; 36 to 40'</p>	30
35			Trace of medium, subrounded gravel		3.5		35
			Silty Sand (SM) Dark reddish brown; 75% medium to coarse, subangular sand; 25% fines, low plasticity; trace of medium gravel; dense; wet to saturated.				
			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; medium dense; wet to saturated.	CPOND-14i-W	5		
40			Bottom of boring at 40 feet bgs.				40
45			Intermediate groundwater sample collected from second boring located one foot southwest of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.				45
50							50

Parametrix

Boring ID: CPOND-15	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/11/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/11/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 36 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 4			Asphalt				
4 - 16			Sand (SP) Dark grayish brown; 95% fine to medium sand; 5% fines, non plastic; trace of medium subrounded gravel; micaceous; loose; damp.		4	<p>1-Inch Steel Probe Rod; 0 to 34'</p> <p>Backfilled with Bentonite Chips; 0 to 38'</p>	0
16 - 20			Silty Sand (SM) Dark brown; 65% fine sand; 35% fines, low plasticity; micaceous; loose; moist.		5		5
20 - 24			Sand (SW) Dark grayish brown; 85% fine to medium, subrounded sand; 15% fines, non plastic; loose; moist.		4.5		10
24 - 25					4.5		15
25 - 26					2.5		20
26 - 27							25

Parametrix

Boring ID: CPOND-15		Drilling Company: GeoTech Explorations		Sheet 2 of 2			
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/11/05			
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/11/05			
Location: West of 26th Extension		Checked by: Ingmar Saul, L.G.		Boring Depth: 40 ft.			
				Depth to Water: 36 ft.			
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			<p>Silt (ML) Dark brown; 90% fines, low to medium plasticity; 10% fine to medium sand; slightly mottled; micaceous; medium stiff to soft; wet.</p> <p>Interbed of fine sand 9" thick at 28'.</p>		2.5	<p>0.75-Inch Well Point Screen; 34 to 38'</p>	30
35			<p>Silty Sand (SM) Dark reddish brown; 75% medium to coarse, subangular sand; 25% fines, low plasticity; trace of medium gravel; dense; wet.</p>		3.5		35
			<p>Sand (SW) Dark brown; 95% medium, subrounded to angular sand; <5% fines, non plastic; medium dense to dense; wet.</p>		5		40
40			<p>Silty Sand (SM) Dark brown; 75% medium to coarse, subrounded sand; 25% fines, low plasticity; loose; saturated.</p>	CPOND-15i-W			40
			<p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded to subangular, sand; <5% fines, non plastic; medium dense, wet to saturated.</p> <p>Bottom of boring at 40 feet bgs.</p>				45
45			<p>Intermediate groundwater sample collected from second boring located one foot southwest of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.</p>			50	
50							50

Parametrix

Boring ID: CPOND-16 Project Name: POV - Carborundum Pond Project #: 275-1940-006-03-4916A Location: West of 26th Extension				Drilling Company: GeoTech Explorations Drilling Method: Push-Probe Logged by: Mike Marshall Checked by: Ingmar Saul, L.G.		Sheet 1 of 2 Starting Date: 7/18/05 Ending Date: 7/18/05 Boring Depth: 45 ft. Depth to Water: 38.1 ft.	
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 4			Gravelly Sand (SW) Dark grayish brown; 80% fine to coarse, subrounded sand; 15% fine to coarse, angular gravel (1.5" minus); 5% fines, non plastic; micaceous; loose; damp.		4	1-Inch Steel Probe Rod; 0 to 44' Backfilled with Bentonite Chips; 0 to 48'	0
4 - 10			Sand (SW) Dark grayish brown; 95% fine to medium, trace of coarse, subrounded sand; 5% fines, non plastic; micaceous; loose; damp.		3		4
10 - 15			Silty Sand (SM) Dark brown; 80% fine sand; 20% fines, low plasticity; micaceous; slightly mottled; medium dense to loose; moist to wet.		2.5		10
15 - 20			Sandy Silt (SW) Dark brown; 80% fines, low plasticity; 20% fine sand; micaceous; slightly mottled; medium stiff to soft; wet.		2.5		15
20 - 25					0		20
25						25	

Parametrix

Boring ID: CPOND-16	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/18/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/18/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 45 ft.
		Depth to Water: 38.1 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; <5% fine sand; moderately mottled; micaceous; stiff; moist.		2.5		30
35					2.5		35
40			Silty Sand (SM) Dark reddish brown; 80% fine to medium, subangular sand; 25% fines, low plasticity; medium dense; wet.		5		40
45			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; <5% fines, non plastic; dense; saturated.		4		45
50			Bottom of boring at 45 feet bgs. Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.	CPOND-16i-W			50

Parametrix

Boring ID: CPOND-17		Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/18/05	
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/18/05	
Location: Former Pond B		Checked by: Ingmar Saul, L.G.		Boring Depth: 35 ft.	
				Depth to Water: 31.12 ft.	

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 36'</p> <p>Backfilled with Bentonite Chips; 0 to 40'</p>	0
			Gravelly Sand (SW) Dark Gray; 80% fine to coarse, subrounded sand; 15% fine to coarse, angular gravel; 5% fines, non plastic; loose; damp.				
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; wet.		4		
5					5		
			Saturated starting at approximately 8.5' bgs.	CPOND-17-8.5			
10			Sand (SP) Dark gray; 95% fine to medium sand; 5% fine gravel; micaceous; medium dense; moist.				
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.		5		
			Gravelly Sand (SW) Dark gray; 70% fine to coarse, subrounded sand; 25% fine, subangular gravel; 5% fines, non plastic; medium dense; damp.				
15			Silty Sand (SM) Dark gray; 85% fine sand; 15% fines, low plasticity; medium dense to loose; moist to wet at 19 ft.		4		
20							

Parametrix

Boring ID: CPOND-17	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/18/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/18/05
Location: Former Pond B	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 31.12 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
			Sandy Silt (ML) Dark grayish brown; 80% fines, low plasticity; 20% fine sand; micaceous; soft; moist to wet.		3.5		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.		2.5		25
30			Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subangular sand; 20% fines, low plasticity; medium dense; moist to wet.		3.5		30
35			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.				35
			Bottom of boring at 35 feet bgs.				
			Intermediate groundwater sample collected from second boring located one foot east of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.	CPOND-17i-W			
40							40

Parametrix

Boring ID: CPOND-18	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/18/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/18/05
Location: Former Pond B	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 34.5 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
			Gravelly Sand (SW) Dark Gray; 80% fine to coarse, subrounded sand; 15% fine to coarse, subangular gravel (1" minus); 5% fines, non plastic; loose; damp.			<p>1-Inch Steel Probe Rod; 0 to 34'</p> <p>Backfilled with Bentonite Chips; 0 to 38'</p>	
			Sand (SW) Dark gray; 95% fine to medium, trace of coarse, subrounded sand; 5% fines, non plastic; micaceous; loose; damp to moist.		4.5		
5			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; wet to saturated.		4		
				CPOND-18-8.5			
10			Gravelly Sand (SW) Dark gray; 85% fine, subrounded sand; 10% coarse, angular gravel; 5% fines, non plastic; loose; moist.				10
			Silty Sand (SM) Dark gray; 85% fine sand; 15% fines, low plasticity; medium dense; moist to wet.				
					3		
15							15
					2		
20							20

Parametrix

Boring ID: CPOND-18	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/18/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/18/05
Location: Former Pond B	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 34.5 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.		4.5		25
30			Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subangular sand; 20% fines, low plasticity; medium dense; moist to wet.		1		30
			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.		4		35
35			Bottom of boring at 35 feet bgs. Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.	CPOND-18i-W			40

Parametrix

Boring ID: CPOND-19	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 30 ft.
		Depth to Water: 25.7 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod: 0 to 29'</p> <p>Bentonite Chips: 0 to 33'</p>	0
			Gravelly Sand (SW) Dark Gray; 60% fine to coarse, subrounded sand; 35% fine to coarse, subangular gravel (1" minus); 5% fines, non plastic; loose; damp.				
			Silty Sand (SM) Dark brown; 85% fine sand; 15% fines, non plastic; trace of fine, subangular gravel; micaceous; slightly mottled; medium dense; damp				
			Sand (SW) Gray; 90% fine to medium sand; 10% fines, non plastic; micaceous; loose; damp.				
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.	CPOND-19-8.5			
			Slag material Dull silver; metallic luster, phaneritic crystalline structure; very hard; dry.				
10			Sand (SP) Dark gray; 95% fine, subrounded sand; 5% fines, non plastic; micaceous; medium dense; moist				10
15			Sandy Silt (ML) Very dark gray; 70% fines, low plasticity; 30% fine sand; micaceous; medium stiff; moist.				15
20							20

Parametrix

Boring ID: CPOND-19 Project Name: POV - Carborundum Pond Project #: 275-1940-006-03-4916A Location: Former Pond G				Drilling Company: GeoTech Explorations Drilling Method: Push-Probe Logged by: Ingmar Saul, L.G. Checked by: Mike Marshall		Sheet 2 of 2 Starting Date: 7/14/05 Ending Date: 7/14/05 Boring Depth: 30 ft. Depth to Water: 25.7 ft.	
Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.				25
			Silty Sand (SM) Dark reddish brown; 70% medium, trace of coarse, subangular sand; 30% fines, low plasticity; medium dense; moist to wet.				
			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.				
30			Bottom of boring at 30 feet bgs. Intermediate groundwater sample collected from second boring located one foot west of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.	CPOND-19i-W			30
35							35
40							40

Parametrix

Boring ID: CPOND-20	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 30 ft.
		Depth to Water:

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 29'</p> <p>Backfilled with Bentonite Chips; 0 to 33'</p>	0
			Gravelly Sand (SW) Dark Gray; 85% fine to coarse, subrounded sand; 10% fine to coarse, angular gravel (1" minus); 5% fines, non plastic; loose, damp.				
			Sand (SW) Dark grayish brown; 95% fine to medium, subrounded sand; 5% fines, non plastic; loose, damp.				
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff to soft when saturated, wet, saturated at 15' bgs.				
5			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled, micaceous, stiff, moist.	CPOND-20-17.0			5
10							10
15							15
20							20


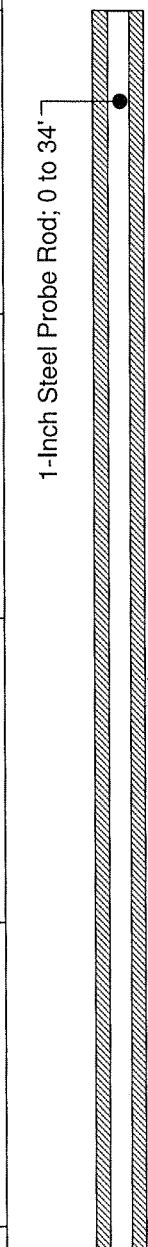
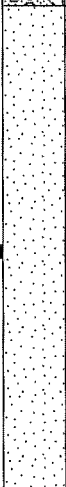
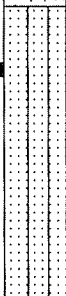

Parametrix

Boring ID: CPOND-20	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 30 ft.
		Depth to Water:

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			<p>Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subangular sand; 20% fines, low plasticity; medium dense, moist to wet.</p>			<p>0.75-Inch Well Point Screen; 29 to 33'</p>	25
30			<p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous, dense, saturated.</p>				30
35			<p>Bottom of boring at 30 feet bgs.</p> <p>Intermediate groundwater sample collected from second boring located one foot south of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample using check valve.</p>	CPOND-20i-W			35
40							40

Parametrix

Boring ID: CPOND-21	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 34.6 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 5			Gravelly Sand (SW) Dark grayish brown; 75% fine to coarse, subrounded sand; 25% fine to coarse, angular to subrounded gravel (1.5" minus); 5-10% fines, non plastic; loose; damp.		4	 <p>1-Inch Steel Probe Rod; 0 to 34'</p> <p>Backfilled with Bentonite Chips; 0 to 38'</p>	0
5 - 13.7			Sand (SW) Dark grayish brown; 95% fine to medium, subrounded sand; 5% fines, non plastic; grades into fine sand at 13.7'; micaceous; loose; moist.		4		5
13.7 - 19			Sandy Silt (SW) Dark brown; 90% fines, low plasticity; 10% fine sand; 5" thick fine sand layer (80% fine sand; 20% fines) at 19' ; micaceous; moderately mottled; stiff; moist.		3		10
19 - 20					3.5		15
20							20

Parametrix

Boring ID: CPOND-21	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 34.6 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Grayish brown; 95% fines, low to medium plasticity; <5% fine sand; moderately mottled; micaceous; stiff; moist.		1	<p>0.75-Inch Well Point Screen; 34 to 38'</p>	25
30			Silty Sand (SM) Dark reddish brown; 80% fine to medium, subrounded sand; 20% fines, low plasticity; medium dense; wet.		3		30
35			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; <5% fines, non plastic; dense; saturated.		4		35
40			Bottom of boring at 35 feet bgs. Intermediate groundwater sample collected from second boring located one foot west of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.	CPOND-21i-W			40

Parametrix

Boring ID: CPOND-22	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 35 ft.
		Depth to Water: 28 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 30'</p> <p>Backfilled with Bentonite Chips; 0 to 34'</p>	0
			Gravelly Sand (SW) Dark gray; 85% fine to medium, subangular sand; 15% fine to coarse, subangular gravel; loose; damp.				
			Silty Sand (SM) Dark gray; 80% fine sand; 15% fine sand; 5% fine, subangular gravel; slightly mottled; micaceous; medium dense; damp.				
			Sand (SW) Gray; 95% medium to fine sand; 5% fines, non plastic; micaceous; loose; damp.	CPOND-22-4.0			
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.				
			Silty Sand (SM) Dark gray; 85% fine sand; 15% fines, non plastic; micaceous; medium dense; damp				
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.				
			Silty Sand (SM) Dark gray; 85% fine sand; 15% fines, non plastic; micaceous; medium dense; damp. 60% fine sand; 40% fines, low plasticity starting at approximately 10 ft. bgs.				
15			Sandy Silt (ML) Very dark gray; 70% fines, low plasticity; 30% fine sand; micaceous; medium stiff; moist.				15
20							20

Parametrix

Boring ID: CPOND-22	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 35 ft.
		Depth to Water: 28 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.				25
			Silty Sand (SM) Dark reddish brown; 65% medium, trace of coarse, subangular sand; 35% fines, low plasticity; medium dense; moist to wet.				30
30			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.	CPOND-22i-W			35
35			Bottom of boring at 35 feet bgs.				40
40			Intermediate groundwater sample collected from second boring located one foot west of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.				

Parametrix

Boring ID: CPOND-23	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 30 ft.
		Depth to Water: 22.3 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 29'</p> <p>Backfilled with Bentonite Chips; 0 to 33'</p>	0
			Gravelly Sand (SW) Dark gray; 85% fine to medium, subangular sand; 15% fine to coarse, subangular gravel; loose; damp.				
			Silty Sand (SM) Dark gray; 80% fine sand; 15% fine sand; 5% fine, subangular gravel; micaceous; medium dense; damp.		5		
			Sand (SW) Gray; 95% medium to fine sand; 5% fines, non plastic; micaceous; loose; damp.				
			Baghouse waste Dusky red; 85% silt; 15% medium to fine sand; medium stiff; dry.	CPOND-23-5.5			
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.		5		
			Sand (SW) Dark gray; 95% fine sand; 5% fines, non plastic; micaceous; medium dense; damp.	CPOND-23-9.0			
					2.5		
10							10
			Silty Sand (SM) Dark gray; 60% fine sand; 40% fines, low plasticity; micaceous; medium dense; moist.				15
			Sandy Silt (ML) Very dark gray; 90% fines, low plasticity; 10% fine sand; micaceous; moderately mottled; stiff; moist.		2		20
20							20

Parametrix

Boring ID: CPOND-23	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/14/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/14/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 30 ft.
		Depth to Water: 22.3 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.		2		25
			Silty Sand (SM) Dark reddish brown; 65% medium, trace of coarse, subrounded sand; 35% fines, low plasticity; medium dense; moist to wet.		5		25
30			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; dense; saturated. Bottom of boring at 30 feet bgs.	CPOND-23i-W			30
35			Intermediate groundwater sample collected from second boring located one foot from logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.				35
40							40

Parametrix

Boring ID: CPOND-24	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 27.8 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 34'</p> <p>Backfilled with Bentonite Chips; 0 to 38'</p>	0
			Gravelly Sand (SW) Brownish gray; 60% fine to coarse, subrounded sand; 35% fine to coarse, subrounded to subangular gravel (1" minus); 5% fines, non plastic; loose; damp.				5
			Sandy Silt (ML) Brown; 80% fines, low plasticity; 15% fine sand; 5% fine, subangular gravel; micaceous; stiff; damp.				
			Sand (SW) Dark gray; 90% fine sand; 5% fine, subrounded gravel; 5% fines, non plastic; loose; damp.				
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; stiff; moist.	CPOND-24-8.0 CPOND-24-8.0-DUP	4		
5			Sand (SW) Light gray; 95% fine, subrounded sand; 5% fines, non plastic; micaceous; loose; moist.			4	10
10			Sandy Silt (ML) Dark gray; 90% fines, low plasticity; 10% fine sand; micaceous; slightly mottled; medium stiff; moist.			3.5	15
15							20

Parametrix

Boring ID: CPOND-24	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/13/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 27.8 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.		3.5		25
30			Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subrounded sand; 15% fines, low plasticity; 5% fine, subrounded gravel; medium dense; wet.		3.5		30
35			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; dense; saturated. Bottom of boring at 35 feet bgs.	CPOND-24i-W	3		35
40			Intermediate groundwater sample collected from second boring located one foot east of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.				40

Parametrix

Boring ID: CPOND-25		Drilling Company: GeoTech Explorations		Sheet 1 of 2	
Project Name: POV - Carborundum Pond		Drilling Method: Push-Probe		Starting Date: 7/12/05	
Project #: 275-1940-006-03-4916A		Logged by: Mike Marshall		Ending Date: 7/12/05	
Location: Former Pond G		Checked by: Ingmar Saul, L.G.		Boring Depth: 40 ft.	
				Depth to Water: 31.2 ft.	

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
			Gravelly Sand (SW) Brownish gray; 60% fine to coarse, angular to subrounded sand; 30% fine to coarse, subrounded gravel; 10% fines, non plastic; medium dense; damp.			<p>1-Inch Steel Probe Rod; 0 to 35'</p> <p>Backfilled with Bentonite Chips; 0 to 39'</p>	
			Sand (SW) Dark gray; 80% fine to medium, subrounded sand; 15% fine, subrounded gravel; 5% fines, non plastic; loose; damp.		4.5		
5			Baghouse dust Black; 70% fine to coarse sand, crystalline, metallic luster, silver colored flakes; 20% fine to coarse, phaneritic, gravel; 10% fines sized material; with several 2" interbedded layers of highly phaneritic crystalline fragments; medium dense; damp.	CPOND-25-6.5	4		
			Sandy gravel (SW) Light gray; 80% medium, angular gravel; 15% fine to coarse, angular sand; 5% fines, non plastic; dense; dry.				
			Baghouse dust Black; 70% fine to coarse sand, crystalline, metallic luster, silver colored flakes; 20% fine to coarse, phaneritic, gravel; 10% fines; medium dense; damp.				
10			Sand (SW) Grayish brown; 95% medium to coarse, subrounded sand; 5% fine, subrounded gravel; micaceous; loose; damp.		2.5		
			Sandy Silt (ML) Brown; 90% fines, low plasticity; 10% fine sand; micaceous; slightly mottled; stiff; moist.				
15					2.5		
20							

Parametrix

Boring ID: CPOND-25	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/12/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/12/05
Location: Former Pond G	Checked by: Ingmar Saul, L.G.	Boring Depth: 40 ft.
		Depth to Water: 31.2 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.		1.5		25
30			Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subrounded sand; 15% fines, low plasticity; 5% fine, subrounded gravel; medium dense to loose; wet to saturated.		2		30
35			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; dense; saturated.		2		35
40			Intermediate groundwater sample collected from second boring located one foot east of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.	CPOND-25i-W CPOND-25i-W-DUP	3		40

Parametrix

Boring ID: CPOND-26	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/13/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 35 ft.
		Depth to Water: 28.5 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 28.6'</p> <p>Backfilled with Bentonite Chips; 0 to 33.6'</p>	0
			Gravelly Sand (SW) Grayish brown; 60% fine to coarse, subrounded sand; 35% fine to coarse, subrounded to subangular gravel (1" minus); 5% fines, non plastic; loose; damp.		5		0
			Sand (SW) Dark gray; 90% fine to medium, subrounded sand; 5% fine, subrounded gravel; 5% fines, non plastic; micaceous; loose; damp.				5
			Baghouse dust Black; 95% silt; 5% fine sand, crystalline, metallic luster, silver colored flakes; medium stiff; moist.		4.5		
			Trace of wood at 9.0' bgs.	CPOND-26-9.0			10
			Sand (SP) Dark gray; 95% fine, subrounded sand; 5% fines, non plastic; micaceous; dense; moist		3		
			Sandy Silt (ML) Very dark gray; 70% fines, low plasticity; 30% fine sand; micaceous; medium stiff; moist.		2.5		15
20							20

Parametrix

Boring ID: CPOND-26	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/13/05
Project #: 275-1940-006-03-4916A	Logged by: Ingmar Saul, L.G.	Ending Date: 7/13/05
Location: Former Pond G	Checked by: Mike Marshall	Boring Depth: 35 ft.
		Depth to Water: 28.5 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
25			Silt (ML) Dark brownish gray; 95% fines, low to medium plasticity; 5% fine sand; moderately mottled; micaceous; stiff; moist.		2.5	<p>0.75-Inch Well Point Screen; 28.6 to 33.6'</p>	25
			Silty Sand (SM) Dark reddish brown; 80% medium, trace of coarse, subrounded sand; 20% fines, low plasticity; medium dense; moist to wet.		3		30
30			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; 5% fines, non plastic; micaceous; dense; saturated.	CPOND-22i-W	4		35
35			Bottom of boring at 35 feet bgs.				40
40			Intermediate groundwater sample collected from second boring located one foot west of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.				40

Parametrix

Boring ID: CPOND-27	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/12/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/12/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 29.5 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 5			Gravelly Sand (SW) Dark to light grayish brown; 70% fine to coarse, subrounded to angular sand; 25% fine to coarse, subangular gravel; 5% fines, non plastic; loose; damp.		3	<p>1-Inch Steel Probe Rod; 0 to 34'</p> <p>Backfilled with Bentonite Chips; 0 to 38'</p>	0
5 - 10			Sand (SW) Grayish brown; 90% fine to coarse, subrounded sand; 5% fine to medium, subangular gravel; 5% fines, non plastic; loose; damp.		3		5
10 - 15			Gravelly Sand (SW) Dark to light grayish brown; 70% fine to coarse, subrounded to angular sand; 25% fine to coarse, subangular gravel (1.5" minus); 5% fines, non plastic; loose to medium dense; moist.		3		10
15 - 20			Sandy Silt (SW) Brown; 80% fines, low plasticity; 20% fine sand; micaceous; slightly mottled; medium stiff; wet.		3		15
20 - 25			Silt (ML) Brown; 95% fines, low plasticity; <5% fine sand; micaceous; moderately mottled; stiff to very stiff; moist.		3.5		20
25						25	

Parametrix

Boring ID: CPOND-27	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/12/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/12/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 29.5 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
28			Sand (SW) Grayish brown; 90% fine sand; 10% fines, low plasticity; micaceous; slightly mottled; soft; moist.		4		28
30			Silt (ML) Dark brown; 90% fines, low to medium plasticity; 10% fine sand; slightly mottled; micaceous; soft; moist.				30
33			Silty Sand (SM) Dark reddish brown; 80% fine to coarse, subrounded sand; 15% fines, low plasticity; 5% fine, subrounded gravel; medium dense; wet.		4		33
35			Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; <5% fines, non plastic; dense; saturated. Bottom of boring at 35 feet bgs.	CPOND-27i-W			35
40			Intermediate groundwater sample collected from second boring located one foot northwest of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.				40
45							45
50							50

Parametrix

Boring ID: CPOND-28	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: East of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 23.4 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface			<p>1-Inch Steel Probe Rod; 0 to 36'</p> <p>Backfilled with Bentonite Chips; 0 to 40'</p>	0
0 - 4			Gravelly Sand (SW) Dark grayish brown; 80% fine to coarse, subrounded sand; 15% fine to coarse, angular gravel (1.5" minus); 5% fines, non plastic; loose; damp.		4		0
4 - 5			Sand (SW) Grayish brown; 95% fine to medium, trace of coarse, subrounded sand; 5% fines, non plastic; loose; damp.				5
5 - 10			Sandy Silt (SW) Brown; 80% fines, low plasticity; 20% fine sand; micaceous; slightly mottled; medium stiff; wet.		4		10
10 - 20			very dark gray to black; 90% fines, low plasticity; 10% fine sand; micaceous; moist starting at approximately 9.7' bgs.		3.5		15
20 - 25			Silt (ML) Dark brown; 95% fines, low to medium plasticity; <5% fine sand; moderately mottled; micaceous; stiff; moist.		4		20
25 - 35					1	25	

Parametrix

Boring ID: CPOND-28	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/15/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/15/05
Location: East of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 35 ft.
		Depth to Water: 23.4 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30					2	<p>0.75-Inch Well Point Screen; 36 to 40'</p>	30
35			<p>Silty Sand (SM) Dark reddish brown; 80% fine to medium, subrounded sand; 20% fines, low plasticity; medium dense; wet.</p> <p>Sand (SP) Dark brown; 95% medium, trace of coarse, subrounded, sand; <5% fines, non plastic; dense; saturated.</p> <p>Bottom of boring at 35 feet bgs.</p>		3		35
40			<p>Intermediate groundwater sample collected from second boring located one foot north of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.</p>	CPOND-28i-W			40
45							45
50							50

Parametrix

Boring ID: CPOND-29	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/12/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/12/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 45 t.
		Depth to Water: 37 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 3.5			Gravelly Sand (SW) Dark grayish brown; 70% fine to medium, subrounded sand; 25% fine, angular gravel (1.5" minus); 5% fines, non plastic; loose; damp.		3.5	<p>1-Inch Steel Probe Rod; 0 to 41'</p> <p>Backfilled with Bentonite Chips; 0 to 45'</p>	0
3.5 - 7.5			Sand (SW) Dark grayish brown; 95% fine to medium, subrounded sand; 5% fines, non plastic; trace of fine, subrounded gravel; laminations of darker and more medium sized sand; micaceous; loose; damp.		4		5
7.5 - 11.5			Sandy Silt (SW) Dark brown; 60% fines, low plasticity; 40% fine sand; interbeds of 95% fine sand at 16' and 23'; micaceous; slightly mottled; medium stiff to soft; moist.		4		10
11.5 - 15.5					4		15
15.5 - 19.5					4		20
19.5 - 23.5					4		25

Parametrix

Boring ID: CPOND-29	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/12/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/12/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 45 t.
		Depth to Water: 37 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			Silt (ML) Brown; 95% fines, low plasticity; <5% fine sand; micaceous; moderately mottled; stiff to very stiff; moist.		4	<p>0.75-Inch Well Point Screen; 41 to 45'</p>	30
35					5		35
40			Silty Sand (SM) Dark reddish brown; 80% medium to coarse, subrounded sand; 15% fines, low plasticity; 5% fine, subrounded gravel; medium dense; wet to saturated.		5		40
45			Sand (SP) Dark brown; 90% medium, trace of coarse, subrounded, sand; 10% fine to medium, subrounded gravel; dense; saturated.	CPOND-29i-W	3		45
50			Bottom of boring at 45 feet bgs. Intermediate groundwater sample collected from second boring located one foot east of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.				50

Parametrix

Boring ID: CPOND-30	Drilling Company: GeoTech Explorations	Sheet 1 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/11/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/11/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 45 ft.
		Depth to Water: 33 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
0			Ground Surface				0
0 - 1.5			Asphalt				
1.5 - 4.5			Sandy Gravel (GW) Dark grayish brown; 60% fine, subrounded gravel; 40% fine sand; loose; damp.		4	<p>1-Inch Steel Probe Rod; 0 to 41'</p> <p>Backfilled with Bentonite Chips; 0 to 45'</p>	
4.5 - 11.5			Sand (SW) Dark grayish brown; 95% fine to medium, subrounded sand; 5% fines, non plastic; trace of fine, subrounded gravel; micaceous; loose; damp.		4		5
11.5 - 17.5			Sandy Silt (SW) Dark brown; 70% fines, low plasticity; 30% fine sand; interbeds of fine sand 6" thick at 15.5' and 22'; micaceous; medium stiff; moist.		4		10
17.5 - 22.5					4		15
22.5 - 25			Silty Sand (SM) Dark brown; 70% fine sand; 30% fines, low plasticity; micaceous; medium stiff; damp.		3.5		20
25						25	

Parametrix

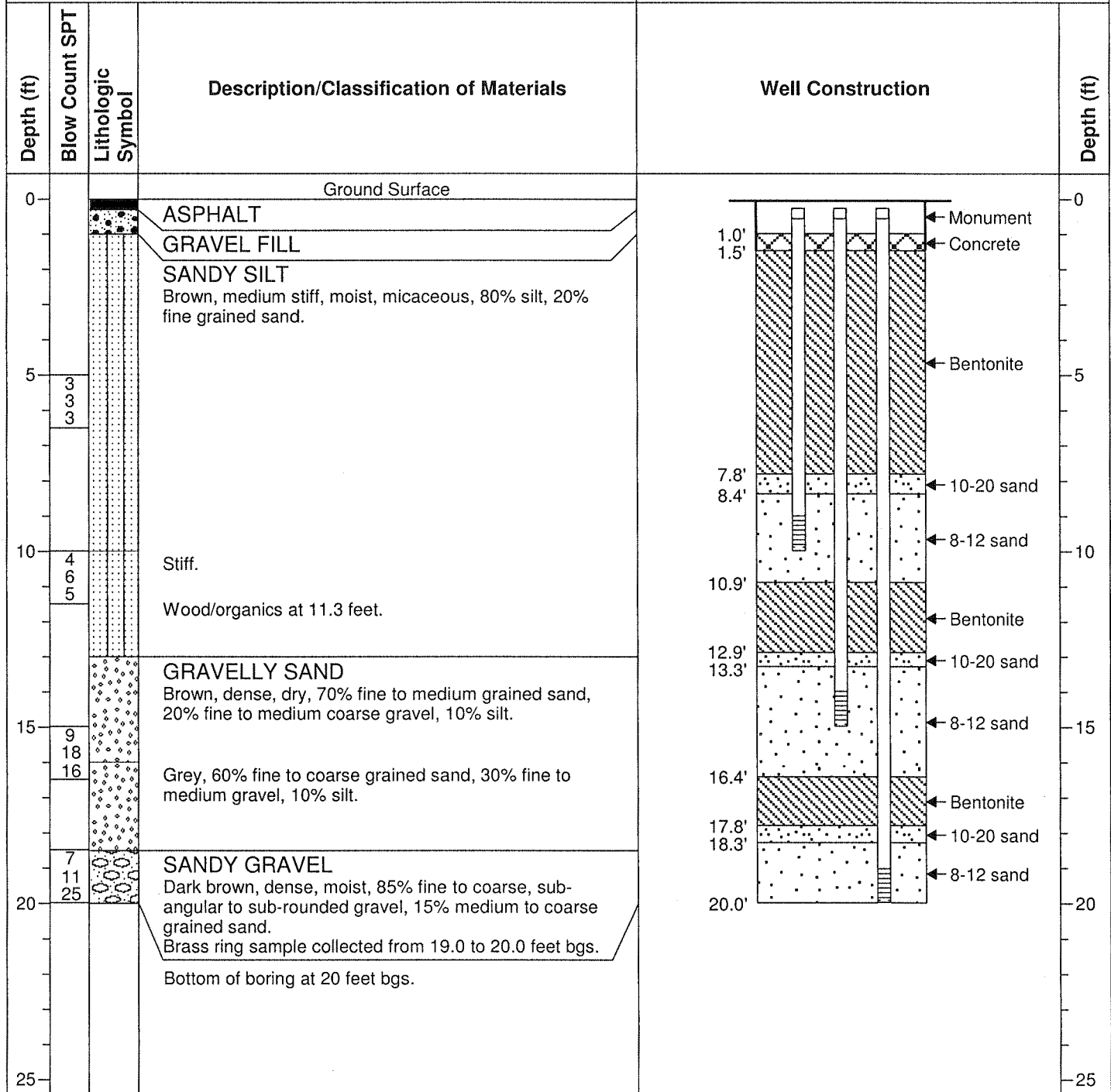
Boring ID: CPOND-30	Drilling Company: GeoTech Explorations	Sheet 2 of 2
Project Name: POV - Carborundum Pond	Drilling Method: Push-Probe	Starting Date: 7/11/05
Project #: 275-1940-006-03-4916A	Logged by: Mike Marshall	Ending Date: 7/11/05
Location: West of 26th Extension	Checked by: Ingmar Saul, L.G.	Boring Depth: 45 ft.
		Depth to Water: 33 ft.

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample		Well Point Diagram	Depth (ft)
				Sample ID	Recovery (ft)		
30			<p>Silt (ML) Brown; 95% fines, low plasticity; <5% fine sand; micaceous; moderately mottled; medium stiff to stiff; moist to wet.</p>		1.5		30
35					3		35
40			<p>Silty Sand (SM) Dark reddish brown; 80% medium to coarse, subrounded sand; 15% fines, low plasticity; 5% fine, subrounded gravel; medium dense; wet.</p>		5		40
45			<p>Sand (SP) Dark brown; 90% medium, trace of coarse, subrounded, sand; 10% fine to medium, subrounded gravel; dense; saturated.</p> <p>Bottom of boring at 40 feet bgs.</p>	CPOND-30i-W			45
50			<p>Intermediate groundwater sample collected from second boring located one foot southwest of logged boring to minimize smearing effects. Purged approximately one gallon with peristaltic pump before collecting VOC sample with check valve.</p>				50

Soil Gas Well Log

Parametrix

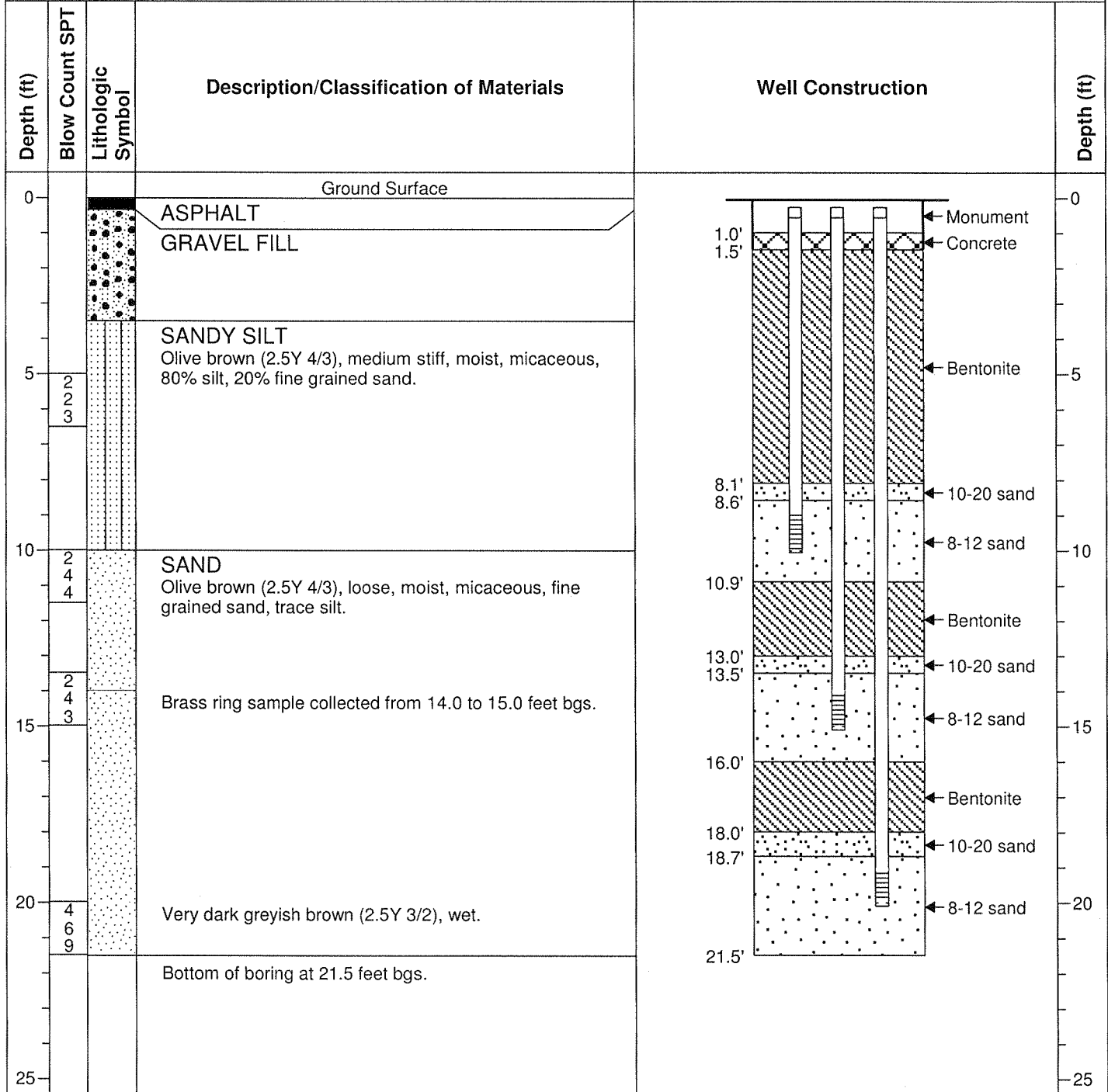
Boring ID: CM-SG-16 Project Name: POV Soil Gas Wells Project #: 2751940006-/3-4965 PMX Representative: Adam Romey G.I.T./Ingmar Saul R.G. Drilling Company: GeoTech/Boart-Longyear Drilling Method: Hollow Stem Auger	Starting Date: 7/19/05 Ending Date: 7/19/05 Boring Depth: 20.0 feet bgs Depth to Water: N/A Location: Panasonic, Building 2245
--	---



Soil Gas Well Log

Parametrix

<p>Boring ID: POV-SG-01</p> <p>Project Name: POV Soil Gas Wells</p> <p>Project #: 2751940006/03-4965</p> <p>PMX Representative: Adam Romey G.I.T./Ingmar Saul R.G.</p> <p>Drilling Company: GeoTech/Boart-Longyear</p> <p>Drilling Method: Hollow Stem Auger</p>	<p>Starting Date: 7/21/05</p> <p>Ending Date: 7/21/05</p> <p>Boring Depth: 21.5 feet bgs</p> <p>Depth to Water: N/A</p> <p>Location: Panasonic, Building 2224</p>
---	---



Soil Gas Well Log

Parametrix

Boring ID: POV-SG-02

Project Name: POV Soil Gas Wells

Project #: 2751940006/03-4965

PMX Representative: Adam Romey G.I.T./Ingmar Saul R.G.

Drilling Company: GeoTech/Boart-Longyear

Drilling Method: Hollow Stem Auger

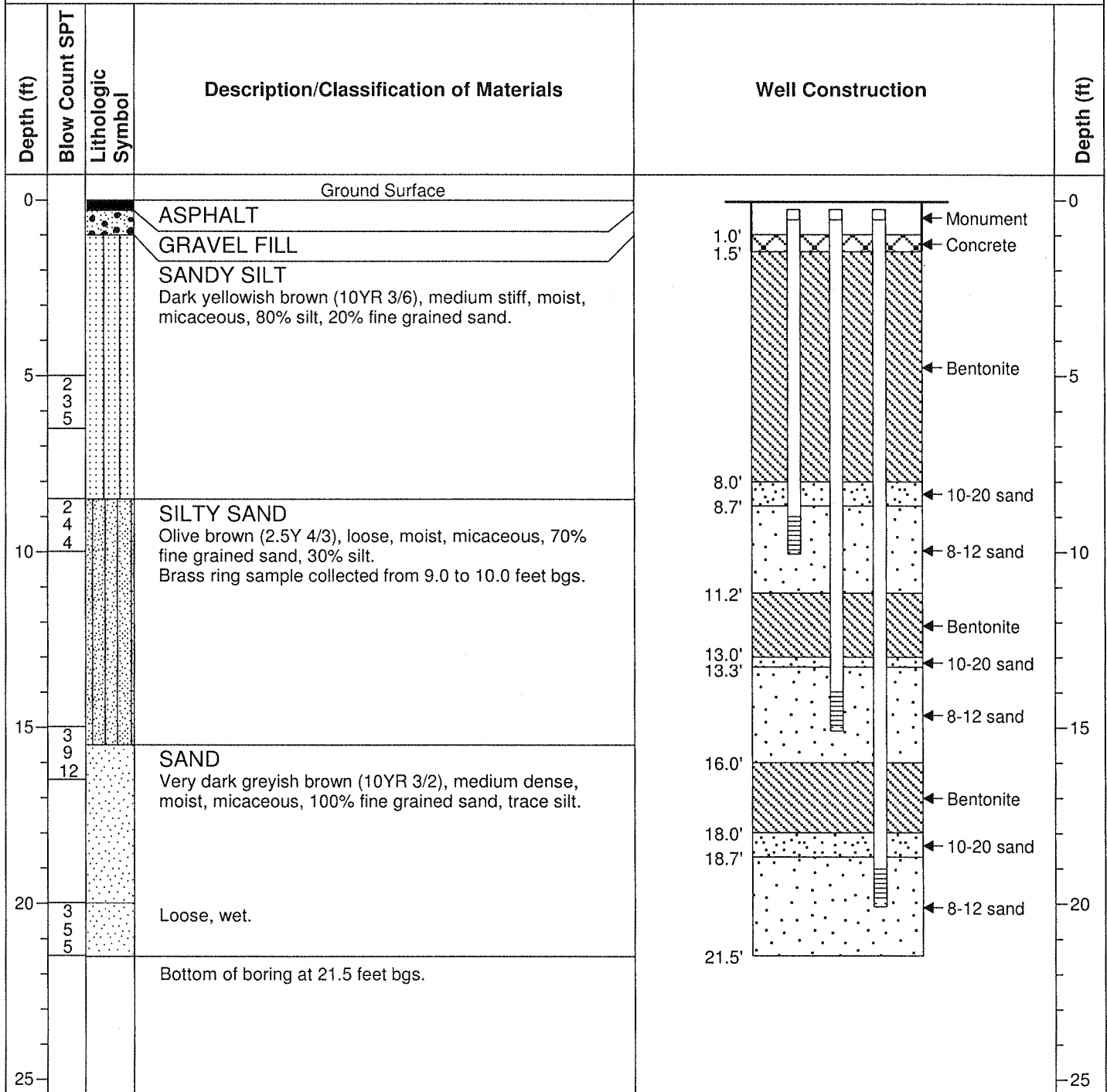
Starting Date: 7/21/05

Ending Date: 7/21/05

Boring Depth: 21.5 feet bgs

Depth to Water: N/A

Location: Panasonic, Building 2224



Soil Gas Well Log

Parametrix

Boring ID: POV-SG-03

Project Name: POV Soil Gas Wells

Project #: 2751940006/03-4965

PMX Representative: Adam Romey G.I.T./Ingmar Saul R.G.

Drilling Company: GeoTech/Boart-Longyear

Drilling Method: Hollow Stem Auger

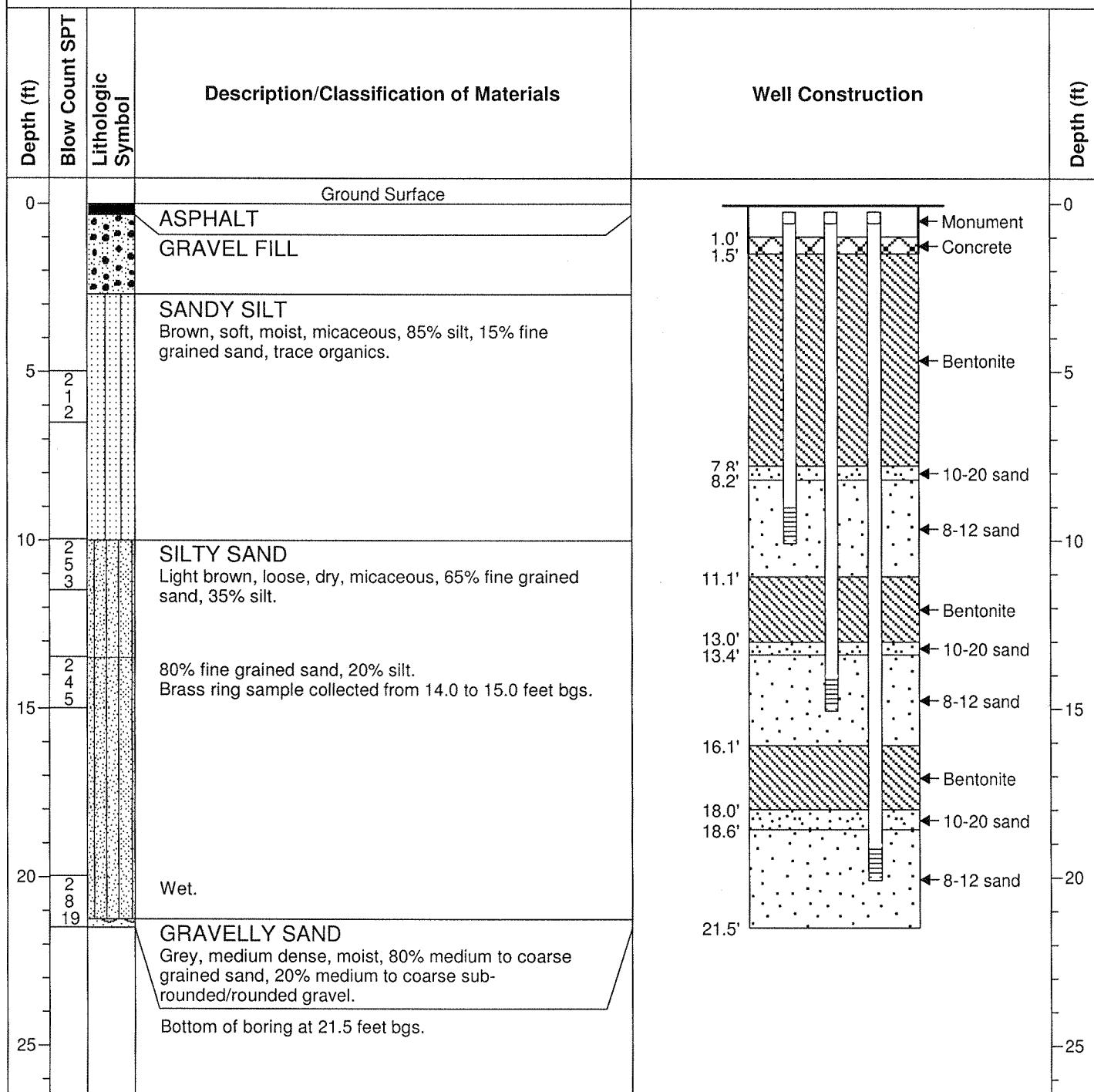
Starting Date: 7/20/05

Ending Date: 7/20/05

Boring Depth: 21.5 feet bgs

Depth to Water: N/A

Location: United Road, Building 2240



Soil Gas Well Log

Parametrix

Boring ID: POV-SG-04

Project Name: POV Soil Gas Wells

Project #: 2751940006/03-4965

PMX Representative: Adam Romey G.I.T./Ingmar Saul R.G.

Drilling Company: GeoTech/Boart-Longyear

Drilling Method: Hollow Stem Auger

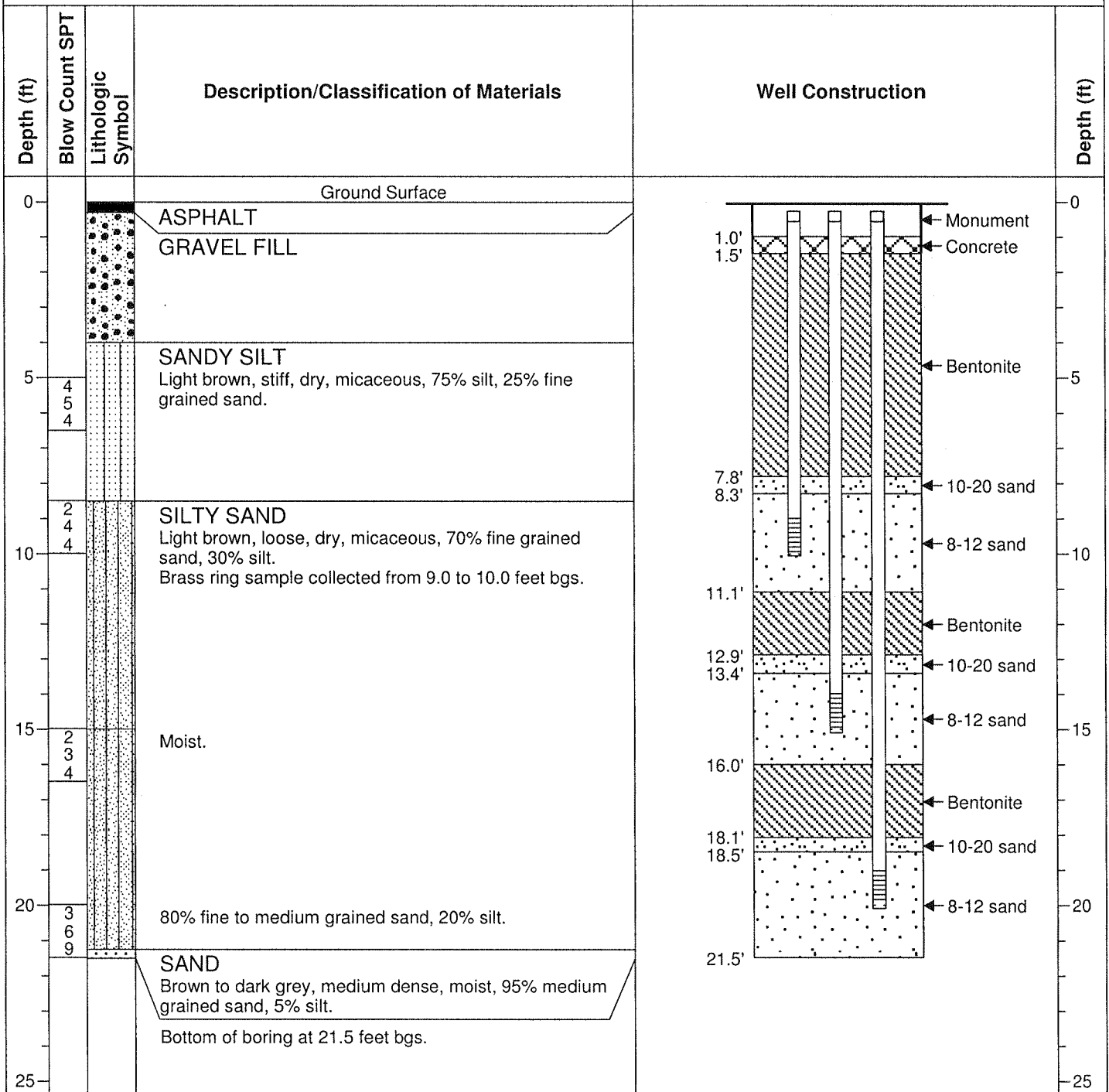
Starting Date: 7/20/05

Ending Date: 7/20/05

Boring Depth: 21.5 feet bgs

Depth to Water: N/A

Location: United Road, Building 2240



Soil Gas Well Log

Parametrix

Boring ID: POV-SG-05

Project Name: POV Soil Gas Wells

Project #: 2751940006/03-4965

PMX Representative: Adam Romey G.I.T./Ingmar Saul R.G.

Drilling Company: Geotech/Boart-Longyear

Drilling Method: Hollow Stem Auger

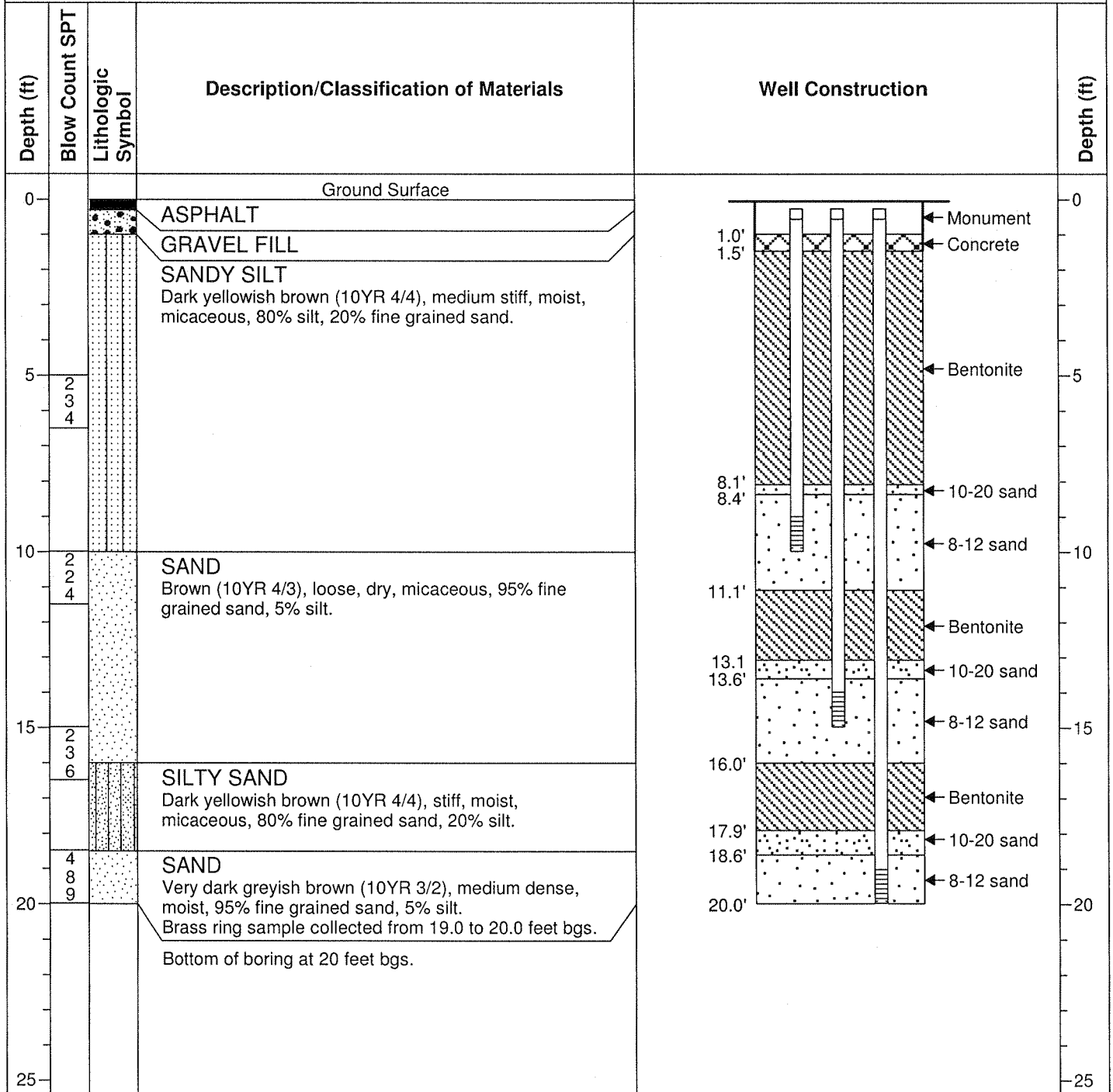
Starting Date: 7/21/05

Ending Date: 7/21/05

Boring Depth: 20.0 feet bgs

Depth to Water: N/A

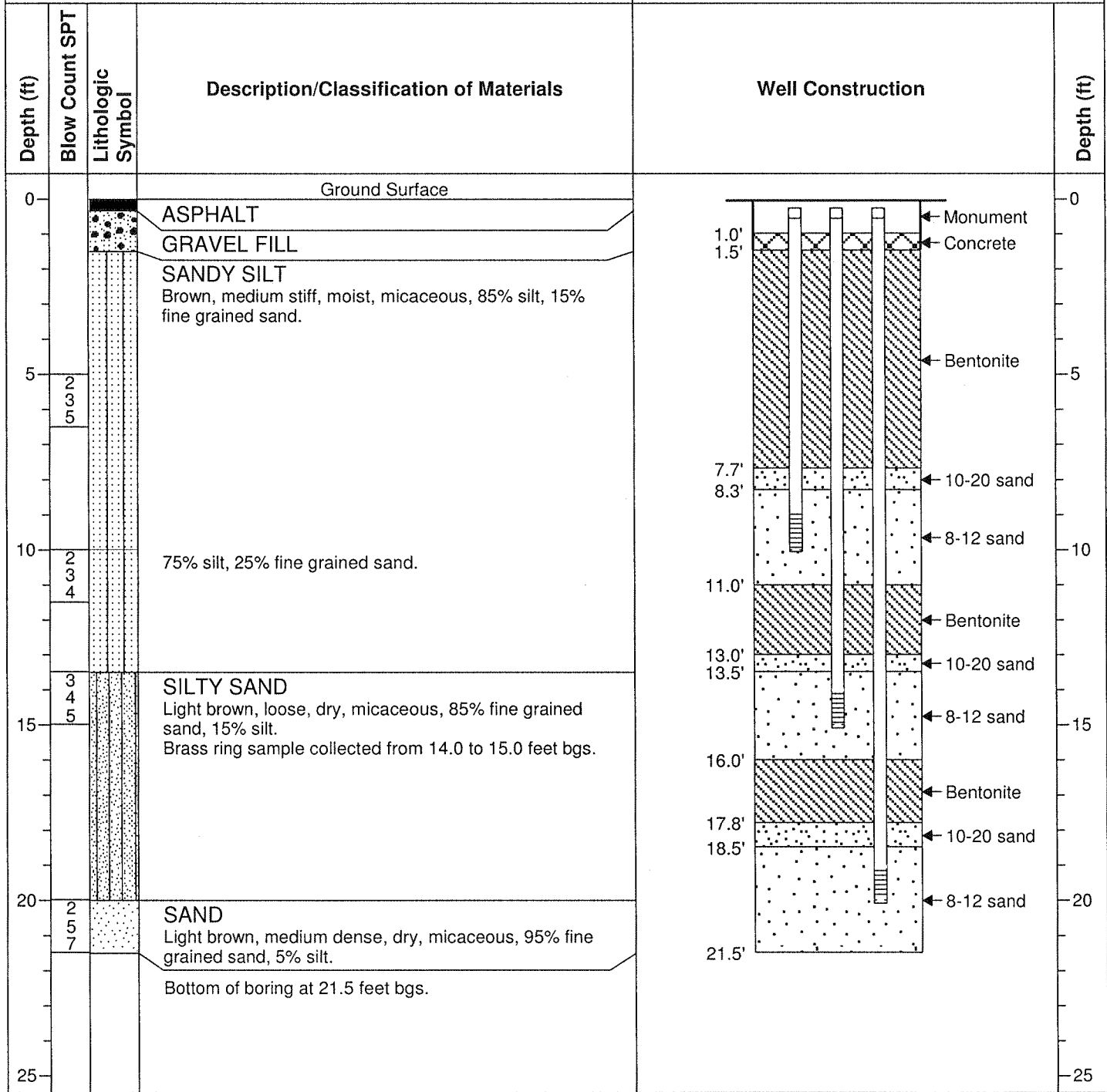
Location: United Road Storage Yard



Soil Gas Well Log

Parametrix

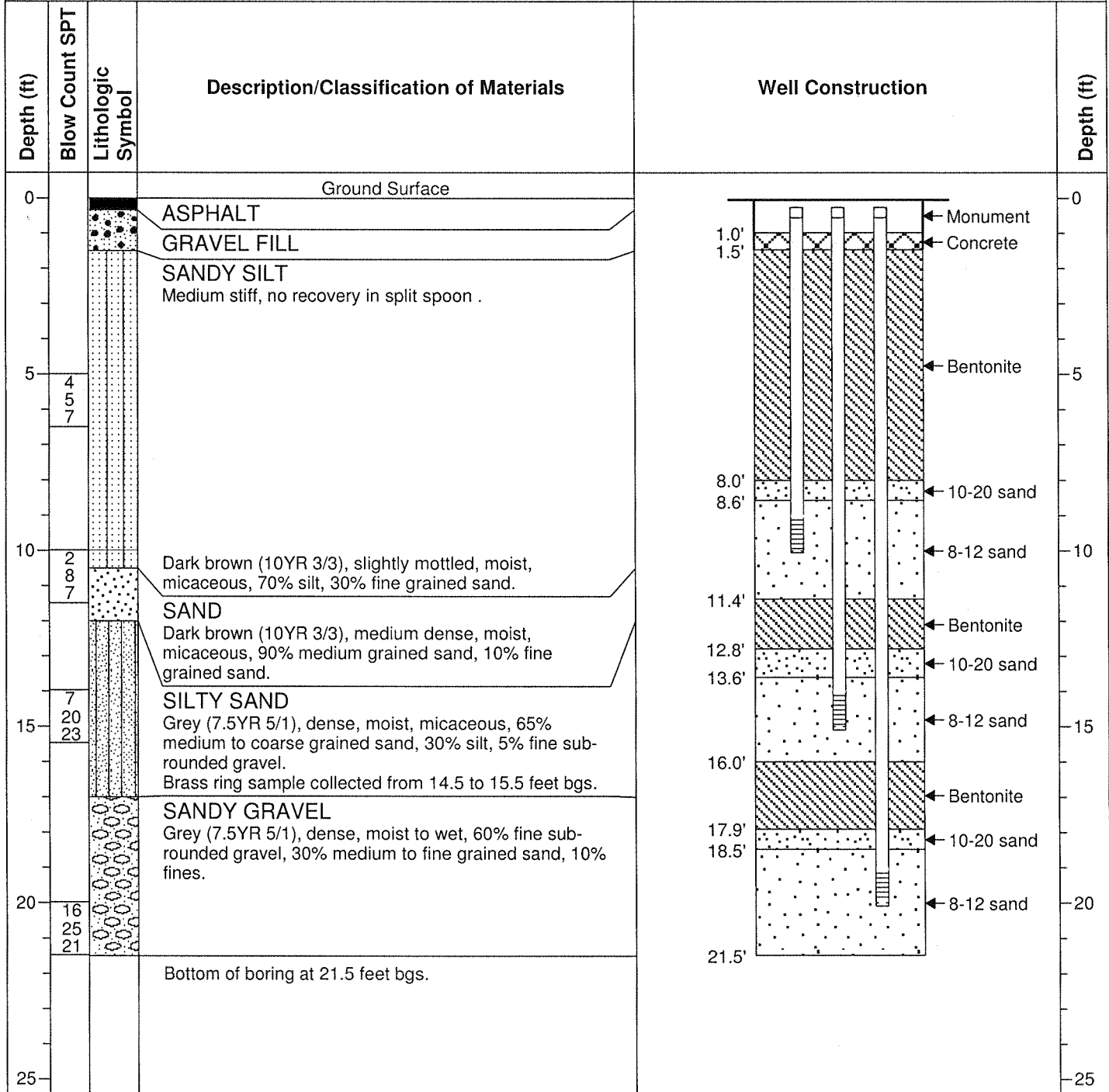
<p>Boring ID: POV-SG-06</p> <p>Project Name: POV Soil Gas Wells</p> <p>Project #: 2751940006/03-4965</p> <p>PMX Representative: Adam Romey G.I.T./Ingmar Saul R.G.</p> <p>Drilling Company: GeoTech, Boart-Longyear</p> <p>Drilling Method: Hollow Stem Auger</p>	<p>Starting Date: 7/20/05</p> <p>Ending Date: 7/20/05</p> <p>Boring Depth: 21.5 feet bgs</p> <p>Depth to Water: N/A</p> <p>Location: Panasonic, Building 2260</p>
--	---



Soil Gas Well Log

Parametrix

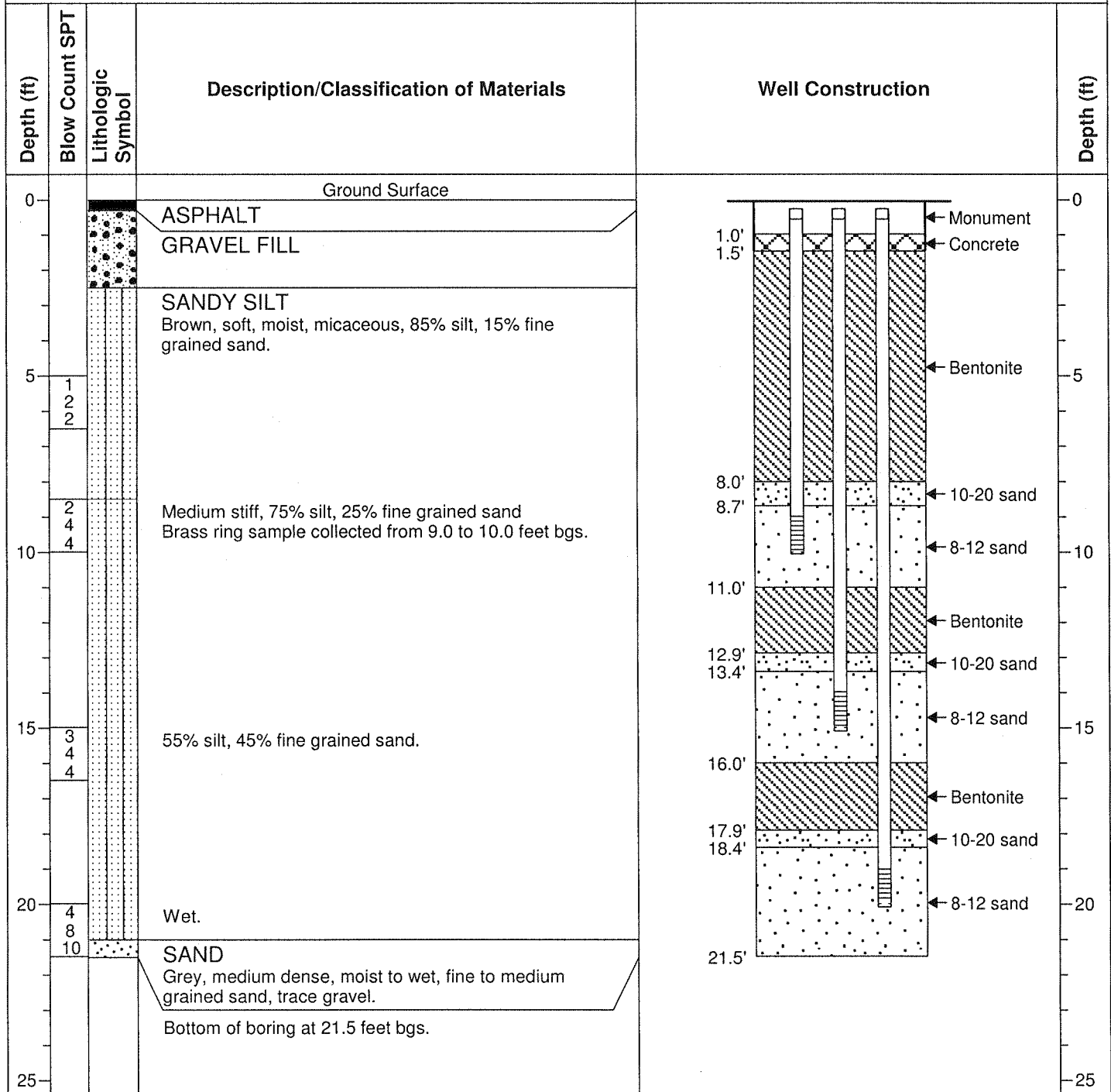
<p>Boring ID: POV-SG-07</p> <p>Project Name: POV Soil Gas Wells</p> <p>Project #: 2751940006/03-4965</p> <p>PMX Representative: Ingmar Saul R.G.</p> <p>Drilling Company: GeoTech/Boart-Longyear</p> <p>Drilling Method: Hollow Stem Auger</p>	<p>Starting Date: 7/18/05</p> <p>Ending Date: 7/19/05</p> <p>Boring Depth: 21.5 feet bgs</p> <p>Depth to Water: N/A</p> <p>Location: Panasonic, Building 2245</p>
---	---



Soil Gas Well Log

Parametrix

<p>Boring ID: POV-SG-08</p> <p>Project Name: POV Soil Gas Wells</p> <p>Project #: 2751940006-03-4965</p> <p>PMX Representative: Adam Romey G.I.T./Ingmar Saul R.G.</p> <p>Drilling Company: Boart-Longyear</p> <p>Drilling Method: Hollow Stem Auger</p>	<p>Starting Date: 7.19.05</p> <p>Ending Date: 7.19.05</p> <p>Boring Depth: 21.5' bgs</p> <p>Depth to Water: N/A</p> <p>Location: Panasonic</p>
---	--



Soil Gas Well Log

Parametrix

Boring ID: POV-SG-09

Project Name: POV Soil Gas Wells

Project #: 2751940006/03-4965

PMX Representative: Adam Romey G.I.T./Ingmar Saul R.G.

Drilling Company: GeoTech/Boart-Longyear

Drilling Method: Hollow Stem Auger

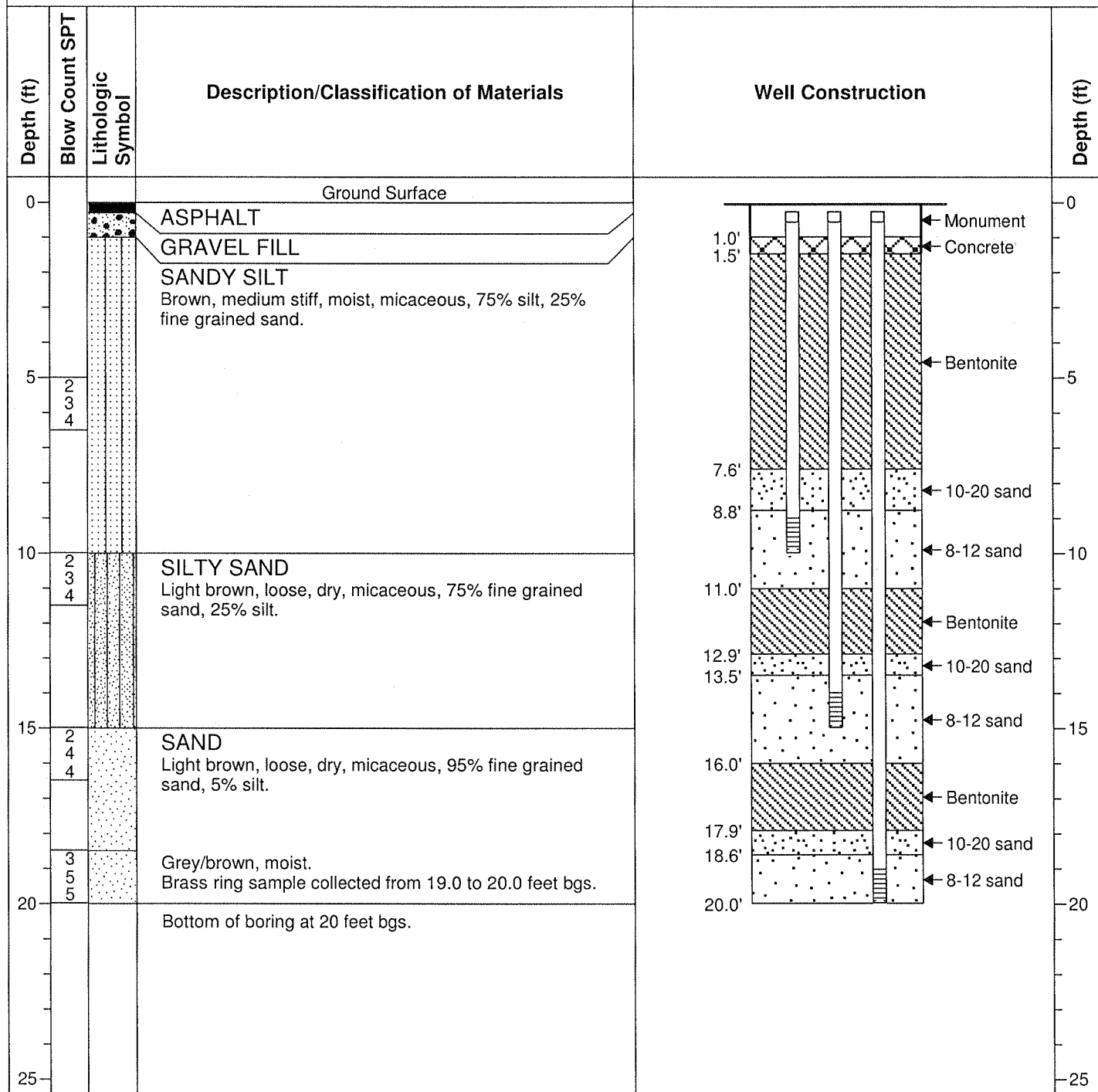
Starting Date: 7/20/05

Ending Date: 7/20/05

Boring Depth: 20.0 feet bgs

Depth to Water: N/A

Location: Panasonic, Building 2255



Soil Gas Well Log

Parametrix

Boring ID: POV-SG-10

Project Name: POV Soil Gas Wells

Project #: 2751940006/03-4965

PMX Representative: Ingmar Saul R.G.

Drilling Company: GeoTech/Boart-Longyear

Drilling Method: Hollow Stem Auger

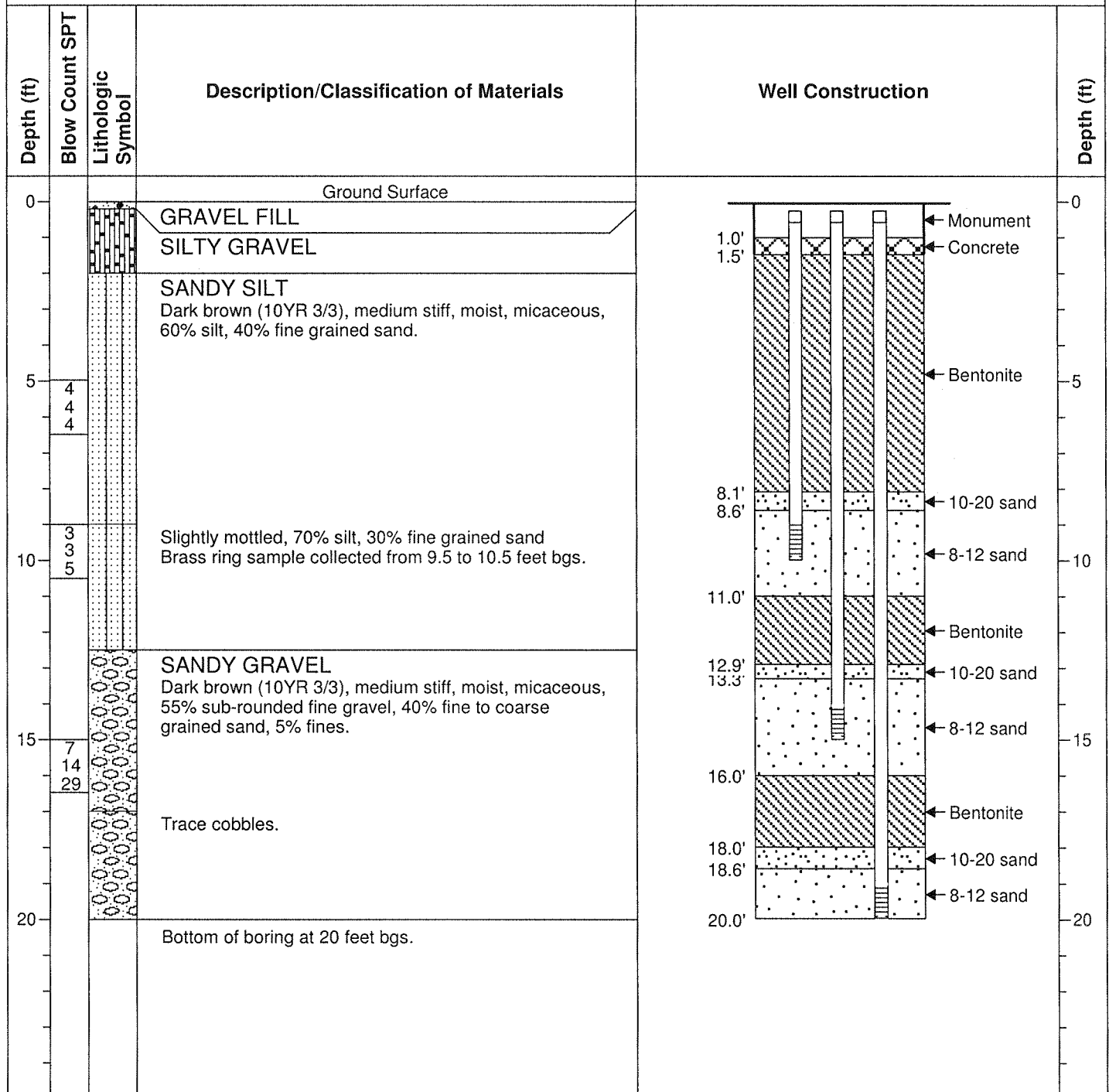
Starting Date: 7/18/05

Ending Date: 7/18/05

Boring Depth: 21.5 feet bgs

Depth to Water: N/A

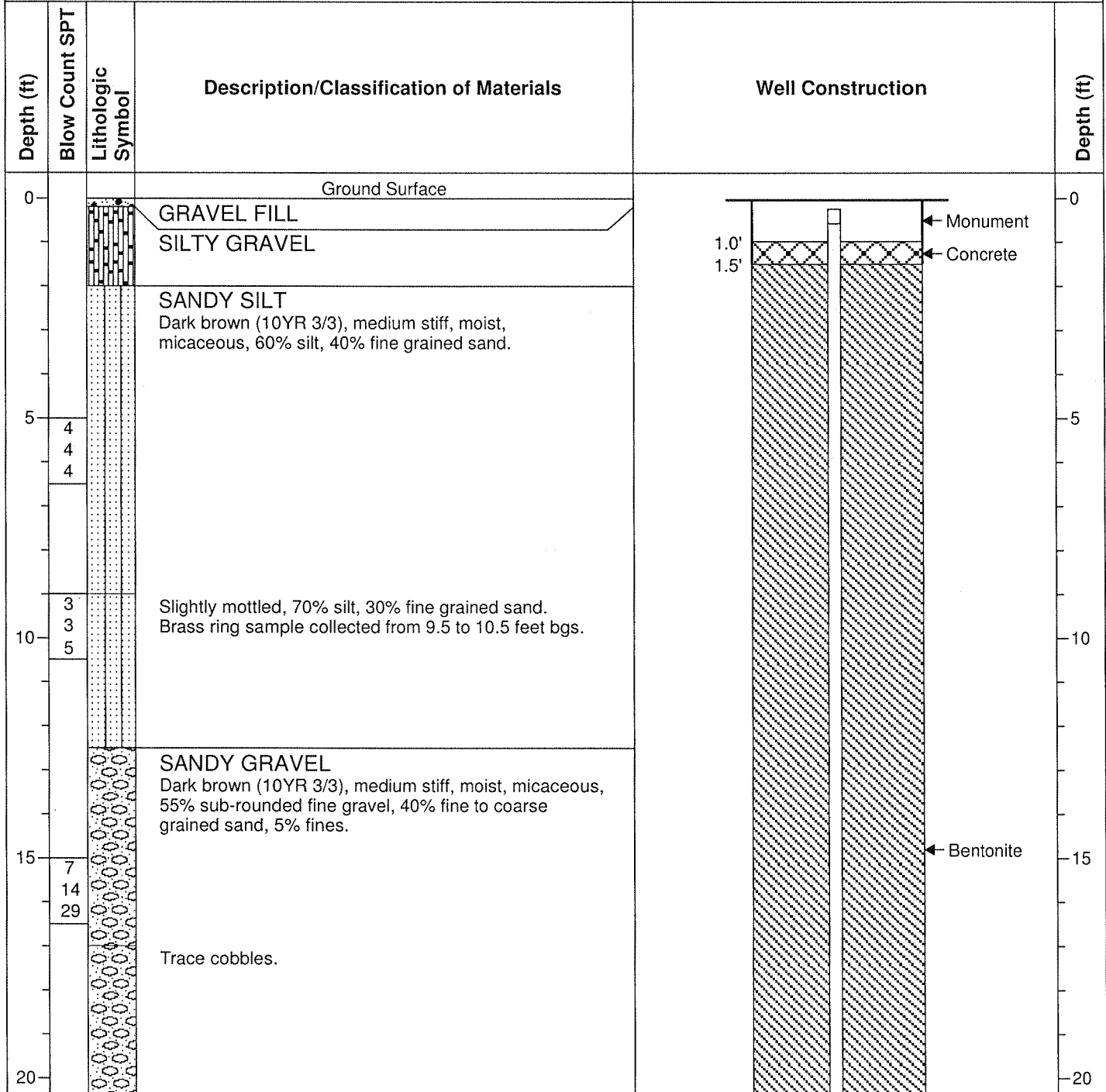
Location: Panasonic, Building 2245



Soil Gas Well Log

Parametrix

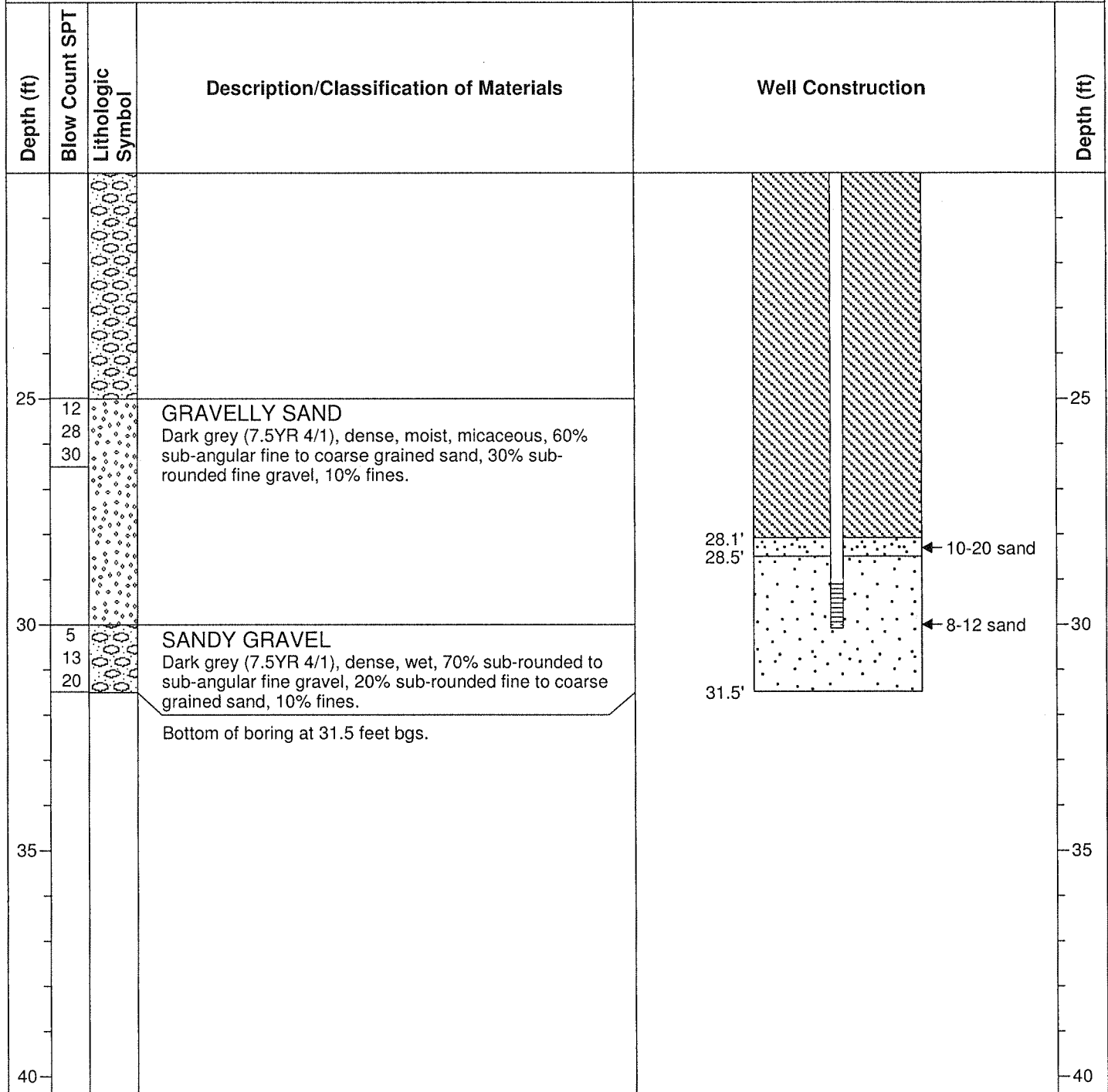
<p>Boring ID: POV-SG-10</p> <p>Project Name: POV Soil Gas Wells</p> <p>Project #: 2751940006/03-4965</p> <p>PMX Representative: Ingmar Saul R.G.</p> <p>Drilling Company: GeoTech/Boart-Longyear</p> <p>Drilling Method: Hollow Stem Auger</p>	<p>Starting Date: 7/18/05</p> <p>Ending Date: 7/18/05</p> <p>Boring Depth: 31.5 feet bgs</p> <p>Depth to Water: N/A</p> <p>Location: Panasonic, Building 2245</p>
---	---



Soil Gas Well Log

Parametrix

<p>Boring ID: POV-SG-10</p> <p>Project Name: POV Soil Gas Wells</p> <p>Project #: 2751940006/03-4965</p> <p>PMX Representative: Ingmar Saul R.G.</p> <p>Drilling Company: GeoTech/Boart-Longyear</p> <p>Drilling Method: Hollow Stem Auger</p>	<p>Starting Date: 7/18/05</p> <p>Ending Date: 7/18/05</p> <p>Boring Depth: 31.5 feet bgs</p> <p>Depth to Water: N/A</p> <p>Location: Panasonic, Building 2245</p>
---	---



EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: **B-4**
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 20, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
B4-24.5		↑	0	CONCRETE PLUG 0-0.4 FEET	0-10 Feet: (Hand Auger To 10 Feet) SAND, Grayish Brown, loose, moist, medium to fine grained (fill)	
			5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET		
		Recovery not recorded			10-24 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained (fill)	
			15	2-INCH BOREHOLE 0-30 FEET		
			20			
		↓	25		24-28.5 Feet: SAND, Light Brown, loose, moist, micaceous, fine grained	
			30		28.5-30 Feet: SAND, Dark Gray, Dark Brown, loose, wet to saturated, medium to coarse grained	
			35		30 Feet: END OF BORING	

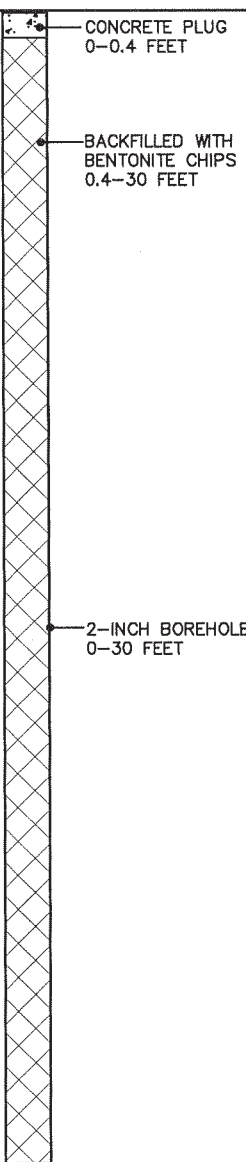
DATE: 10/21/04 FILENAME: P194006238

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: **B-5**
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 20, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
B5-24.5		↑	0	 <p>CONCRETE PLUG 0-0.4 FEET</p> <p>BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET</p> <p>2-INCH BOREHOLE 0-30 FEET</p>	0-10 Feet: (Hand Auger to 10 Feet), SAND, Grayish Brown, loose, moist, medium to fine grained (fill)	0-10
		↓	5			5-10
		↓	10			10-15
		↓	15			15-20
		↓	20			20-25
	↓	25			24-26 Feet: SAND, Light Brown, loose, moist, saturated at 25.5 Feet, micaceous, fine grained	25-30
	↓	30			26-30 Feet: SAND, Dark Gray, Dark Brown, loose, wet to saturated, medium to coarse grained	30-35
		↓	35		30 Feet: END OF BORING	

DATE: 10/21/04 FILENAME: P194006239

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: B-6
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 17, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/21/04 FILENAME: P194006240

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				<p>CONCRETE PLUG 0-0.4 FEET</p> <p>BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET</p> <p>2-INCH BOREHOLE 0-30 FEET</p>	<p>0-2 Feet: ASPHALT and Road Grade</p> <p>2-23 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained (fill)</p> <p>23-23.5 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained</p> <p>23.5-26 Feet: SAND, Light Brown, loose, moist, saturated at 24.5 Feet, micaceous, fine grained,</p> <p>26-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained</p> <p>30 Feet: END OF BORING</p>	
B6-23.0	4'		5			
			10			
	5'		15			
			20			
		↑ Recovery not recorded ↓	25			
			30			
B6-28.0			35			

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: C-1
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 15, 2004
 Initial Water Level: NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
C1-24.0	4'		0	CONCRETE PLUG 0-0.4 FEET BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	0-1 Feet: SANDY, Gravel Grade	0
		Recovery not recorded	5		1-13 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained	1
			10			2
			15	2-INCH BOREHOLE 0-30 FEET	13-27 Feet: SAND, Brown, loose, moist, micaceous, fine grained	3
			20		27-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	4
			25			5
			30		30 Feet: END OF BORING	6
			35			7

DATE: 10/21/04 FILENAME: P194006241

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: **C-3**
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 15, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
C3-24.0		↑		CONCRETE PLUG 0-0.4 FEET BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET 2-INCH BOREHOLE 0-30 FEET	0-0.5 Feet: SANDY, Gravel Grade	○ ○ ○ ○
			5		0.5-6 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained	
			10		6-8.5 Feet: SAND, Gray Brown, loose, moist, medium to fine grained
			15		8.5-12 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained	
		Recovery not recorded			12-17 Feet: SAND, Gray Brown, loose, moist, fine to medium grained
			20		17-24.5 Feet: SAND, Brown, loose, moist, micaceous, fine grained
			25		24.5-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained
		30		30 Feet: END OF BORING		
		↓				

DATE: 10/22/04 FILENAME: P194006243

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: D-2
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 14, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
D2-17.0	4'		0	CONCRETE PLUG 0-0.4 FEET BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	0-12 Feet: SANDY SILT, Brown, stiff to very stiff, moist, sand is fine grained, micaceous	
	5'		5			
	4'		10		12-17 Feet: SAND, Brown to Light Gray, loose, moist, fine to medium grained	
	Recovery not recorded		15	2-INCH BOREHOLE 0-30 FEET	17-27 Feet: SAND, Brown, loose, moist, fine grained, micaceous	
	Recovery not recorded		20		27-30 Feet: SAND, Dark Brown to Dark Gray, loose, wet to saturated, medium to coarse grained	
			25			
			30		30 Feet: END OF BORING	
			35			

DATE: 10/21/04 FILENAME: P194006247

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: D-3
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 14, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/21/04 FILENAME: P194006248

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
D3-24.0	4'		0	CONCRETE PLUG 0-0.4 FEET BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	0-4.3 Feet: SAND, Brown, medium dense, moist, micaceous	0
	5'		5		4.3-4.5 Feet: GRAVEL, angular, Gray, damp, dense 4.5-14 Feet: SANDY SILT, Brown, very stiff, moist, micaceous, sand is fine grained	5
	5'		10		14-24 Feet: SAND, Brown, medium dense, moist, medium to fine grained	10
	5'		15	2-INCH BOREHOLE 0-30 FEET		15
	4'		20		24-25.6 Feet: SAND, Brown, loose, moist, fine grained, micaceous	20
	Recovery not recorded		25		25.6-30 Feet: SAND, Brown to Grayish Brown, loose, saturated, medium to coarse grained	25
			30		30 Feet: END OF BORING	30
			35			35



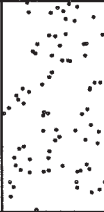
EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: D-4
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 14, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/22/04 FILENAME: P194006249

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
		↑		CONCRETE PLUG 0-0.4 FEET BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET 2-INCH BOREHOLE 0-30 FEET	0-22.3 Feet: SAND, Brown, loose, moist, fine to medium grained	
D4-22.0		↓	22.3		22.4-24.6 Feet: SAND, Brown, loose, moist, fine grained, micaceous	
D4-26.0		↓	26.0		24.6-30 Feet: SAND, Brown to Brownish Gray, loose, wet, medium grained	
		↓	30		30 Feet: END OF BORING	

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: A-1
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 16, 2004
 Initial Water Level: NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/20/04 FILENAME: P194006232

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	CONCRETE PLUG 0-0.4 FEET	0-1 Feet: SANDY GRAVEL, road grade	0
	5'		5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	1-9.5 Feet: SILTY SAND, Brown medium dense, moist, micaceous, fine grained @ 6-7 Feet: Asphalt and concrete debris starting at approximately 6 feet	5
	5'		10		9.5-22 Feet: SAND, Brown to Light Brown, loose, moist fine grained, micaceous	10
	5'		15			15
	4'		20	2-INCH BOREHOLE 0-30 FEET	22-24.8 Feet: SAND, Light Brown, loose, moist, saturated at 24 Feet, micaceous, fine grained	20
A1-23.0	5'		25		24.8-30 Feet: SAND, Dark Gray to Dark Brown, loose, wet, medium to coarse grained	25
A1-28.0	4'		30		30 Feet: END OF BORING	30
			35			35

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: A-2
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 16, 2004
 Initial Water Level: NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
A2-23.0	5'		0	* CONCRETE PLUG 0-0.4 FEET	0-0.5 Feet: SANDY Gravel Grade	0	
			5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	0.5-6 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained	5	
			10		6-7 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained	10	
			15		7-12 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained	15	
			20		12-13 Feet: Asphalt and Concrete debris	20	
			25		13-17.5 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained	25	
			30		2-INCH BOREHOLE 0-30 FEET	17.5-22 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained	30
			35			22-22.5 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained	35
						@ 22.5-24.5 Feet: Moist to saturated starting at approximately 24 Feet	35
						24.5-27 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	35
			27-28 Feet: SAND, Light Brown, loose, moist, micaceous, fine grained	35			
			28-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	35			
					30 Feet: END OF BORING		

DATE: 10/20/04 FILENAME: P194006233

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: A-3
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 16, 2004
 Initial Water Level: NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
A3-23.0	5'		5	CONCRETE PLUG 0-0.4 FEET BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	0-14 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained	
	5'		10		14-15 Feet: SILTY SAND, medium dense, moist, micaceous, fine grained	
	5'		15	2-INCH BOREHOLE 0-30 FEET	15-22 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained	
	5'		20		22-24.5 Feet: SAND, Light Brown, loose, moist, saturated at 24 Feet, micaceous, fine grained	
	5'		25		24.5-30 Feet: SAND, Dark Brown to Dark Gray, loose, wet, medium to coarse grained	
	4'		30		30 Feet: END OF BORING	
			35			

DATE: 10/20/04 FILENAME: P194006234

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: **B-1**
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 16, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
B1-23.0					0-0.5 Feet: SANDY Gravel Grade 0.5-5 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained		
	5'		5		5-7 Feet: ASPHALT, sandy angular chunks of asphalt, moist		
	5'		10		7-8 Feet: CONCRETE, light gray, angular fine gravel, dry		
	5'		15		8-11 Feet: SILTY SAND, Brown, medium to dense, moist, micaceous, fine grained		
	5'		20		11-12.5 Feet: SILTY SAND, Brown, medium to dense, moist, micaceous, fine grained		
	4'		25		12.5-19 Feet: SAND, Brown/Light Brown, loose, moist, micaceous, fine grained		
	5'		30		19.5-22 Feet: SAND, Grayish Brown, loose, moist, fine to medium grained, micaceous		
	4'		35		● 24.5-26 Feet: SAND, saturated starting at 24.5 Feet 26-30 Feet: SAND, Dark Gray, Dark Brown, loose, wet, medium to coarse grained		
						30 Feet: END OF BORING	

DATE: 10/22/04 FILENAME: P194006235

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: **B-2**
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 16, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
B2-24.0			0	CONCRETE PLUG 0-0.4 FEET	0-0.5 Feet: SANDY Gravel Grade 0.5-6 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained	0
	5'		5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET		5
	5'		10		6-6.5 Feet: Asphalt and Gravel Grade 6.5-13 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained	10
	5'		15		13-24.5 Feet: SAND, Light Brown to Brown, loose, moist, fine grained, micaceous	15
	4'		20	2-INCH BOREHOLE 0-30 FEET		20
	3'		25		24.5-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	25
			30		30 Feet: END OF BORING	30
			35			35

DATE: 10/20/04 FILENAME: P194006236

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: **B-3**
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 16, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				<p>CONCRETE PLUG 0-0.4 FEET</p> <p>BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET</p> <p>2-INCH BOREHOLE 0-30 FEET</p>	<p>0-0.5 Feet: SANDY Gravel Grade</p> <p>0.5-2 Feet: SAND, Gray Brown, loose, moist, medium to fine grained</p> <p>2-7 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained</p> <p>7-9.5 Feet: SAND, Gray Brown, loose, moist, medium to fine grained</p> <p>9.5-18 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained</p> <p>18-22 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained</p> <p>22-24.5 Feet: SAND, Light Brown, loose, moist, saturated at 24.5 Feet, micaceous, fine grained</p> <p>24.5-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained</p>	
B3-23.0 DRY	4'		4			
B3-24.0 SAT	4'		8			
	5'		13			
	4'		17			
	5'		22			
	4'		26			
	4'		30			
			30		30 Feet: END OF BORING	

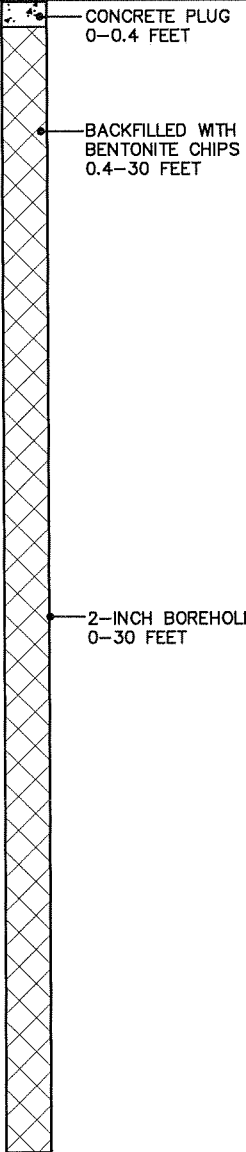
DATE: 10/22/04 FILENAME: P194006237

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: B-4
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 20, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
B4-24.5			0	 <p>CONCRETE PLUG 0-0.4 FEET</p> <p>BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET</p> <p>2-INCH BOREHOLE 0-30 FEET</p>	0-10 Feet: (Hand Auger To 10 Feet) SAND, Grayish Brown, loose, moist, medium to fine grained (fill)	0
			5			5
			10			10
			15			15
			20			20
		25			25	
		30			30	
		35			35	
					10-24 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained (fill)	24
					24-28.5 Feet: SAND, Light Brown, loose, moist, micaceous, fine grained	28.5
					28.5-30 Feet: SAND, Dark Gray, Dark Brown, loose, wet to saturated, medium to coarse grained	30
					30 Feet: END OF BORING	30

DATE: 10/21/04 FILENAME: P194006238

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: B-5
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 20, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
B5-24.5			0	<p>CONCRETE PLUG 0-0.4 FEET</p> <p>BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET</p> <p>2-INCH BOREHOLE 0-30 FEET</p>	0-10 Feet: (Hand Auger to 10 Feet), SAND, Grayish Brown, loose, moist, medium to fine grained (fill)	0
			5			5
			10			10
			15			15
			20			20
		25			24-26 Feet: SAND, Light Brown, loose, moist, saturated at 25.5 Feet, micaceous, fine grained	25
		30			26-30 Feet: SAND, Dark Gray, Dark Brown, loose, wet to saturated, medium to coarse grained	30
		35			30 Feet: END OF BORING	35

DATE: 10/21/04 FILENAME: P194006239

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: B-6
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 17, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
B6-23.0	4'		0	CONCRETE PLUG 0-0.4 FEET	0-2 Feet: ASPHALT and Road Grade	4	
			5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	2-23 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained (fill)		
B6-28.0	5'		10	2-INCH BOREHOLE 0-30 FEET			
			15			23-23.5 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained	
			25			23.5-26 Feet: SAND, Light Brown, loose, moist, saturated at 24.5 Feet, micaceous, fine grained,	
			30		26-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained		
			35		30 Feet: END OF BORING		

DATE: 10/21/04 FILENAME: P194006240

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: C-1
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 15, 2004
 Initial Water Level: NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
C1-24.0	4'		0	CONCRETE PLUG 0-0.4 FEET BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET 2-INCH BOREHOLE 0-30 FEET	0-1 Feet: SANDY, Gravel Grade	0
			5		1-13 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained	5
			10			10
			15			15
			20			20
			25		13-27 Feet: SAND, Brown, loose, moist, micaceous, fine grained	25
			30		27-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	30
			35		30 Feet: END OF BORING	35

DATE: 10/21/04 FILENAME: P194006241

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: C-2
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 15, 2004
 Initial Water Level: NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				<p>CONCRETE PLUG 0-0.4 FEET</p> <p>BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET</p> <p>2-INCH BOREHOLE 0-30 FEET</p>	0-1 Feet: SANDY, Gravel Grade 1-14.5 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained 14.5-19.5 Feet: SAND, Brown, loose, moist, micaceous, fine grained 19.5-24.8 Feet: SAND, Gray Brown, loose, moist, medium to fine grained 24.8-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained 30 Feet: END OF BORING	
	5'		5			
	5'		10			
	3'		15			
	4'		20			
C2-24.0	4'		25			
C2-28.0	4'		30			
			35			

DATE: 10/22/04 FILENAME: P194006242

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: C-3
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 15, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
C3-24.0			0	<p>CONCRETE PLUG 0-0.4 FEET</p> <p>BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET</p> <p>2-INCH BOREHOLE 0-30 FEET</p>	0-0.5 Feet: SANDY, Gravel Grade	
			5		0.5-6 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained	
			10		6-8.5 Feet: SAND, Gray Brown, loose, moist, medium to fine grained	
			15		8.5-12 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained	
			20		12-17 Feet: SAND, Gray Brown, loose, moist, fine to medium grained	
			25		17-24.5 Feet: SAND, Brown, loose, moist, micaceous, fine grained	
			30		24.5-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	
			35		30 Feet: END OF BORING	

DATE: 10/22/04 FILENAME: P194006243

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: **C-4**
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 20, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
	4'		0	CONCRETE PLUG 0-0.4 FEET	0-10 Feet: (Hand Auger to 10 Feet) SAND, Grayish Brown, loose, moist, medium to fine grained (fill)	
	4'		4	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET		
	4'		8			
	4'		12		10-24 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained (fill)	
	4'		16	2-INCH BOREHOLE 0-30 FEET		
	4'		20			
C4-24.5	4'		24		24-29 Feet: SAND, Light Brown, loose, moist, micaceous, fine grained	
C4-30.0	4'		28		29-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	
			30		30 Feet: END OF BORING	
			35			

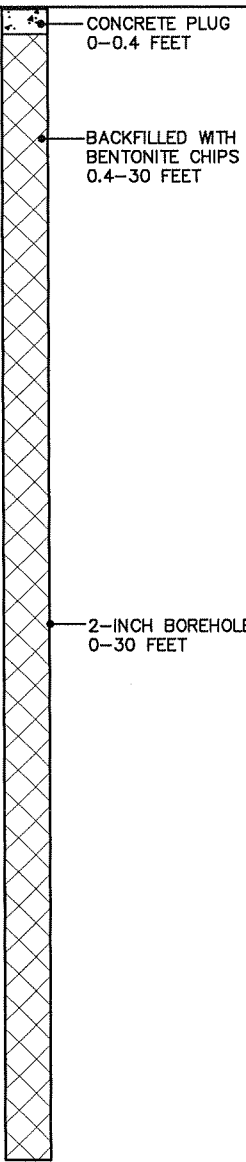
DATE: 10/20/04 FILENAME: P194006244

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: C-5
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 20, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
C5-24.5	4'		0	 <p>CONCRETE PLUG 0-0.4 FEET</p> <p>BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET</p> <p>2-INCH BOREHOLE 0-30 FEET</p>	0-10 Feet: (Hand Auger to 10 Feet) SAND, Grayish Brown, loose, moist, medium to fine grained (fill)	
	4'		4		10-23 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained (fill)	
	4'		8		23-24 Feet: SANDY SILT, Brown, soft, moist, micaceous, fine grained sand	
	4'		12		24-27 Feet: SAND, Light Brown, loose, moist, saturated at 26.8 Feet, micaceous, fine grained	
	4'		16		27-29 Feet: SAND, Dark Brown, Dark Gray, loose, wet to saturated, medium to coarse grained	
	4'		20		29-29.5 Feet: SANDY SILT, Brown, soft, moist, saturated, micaceous, fine grained	
	4'		24		29.5-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet to saturated, medium to coarse grained	
			30		30 Feet: END OF BORING	
			35			

DATE: 10/20/04 FILENAME: P194006245

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: INGMAR SAUL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: C-6
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 17, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
C6-24.0	4'		0	<p>CONCRETE PLUG 0-0.4 FEET</p> <p>BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET</p> <p>2-INCH BOREHOLE 0-30 FEET</p>	0-1.5 Feet: ASPHALT ROAD GRADE 1.5-23.5 Feet: SAND, Grayish Brown, loose, damp, medium to fine grained (fill)	
	4'		4			
	4'		8			
	4'		12			
	4'		16			
	4'		20			
	4'		24			
	4'		28			
	4'		32			
				30		23.5-24.8 Feet: SAND, Light Brown, loose, moist, fine grained, micaceous 24.8-26.5 Feet: SAND, Brown, loose, moist, medium to fine grained, micaceous 26.5-30 Feet: SAND, Dark Brown, loose, saturated, medium to coarse grained, micaceous, saturated at 28 Feet, 28-28.5 Feet: SAND, Light Brown, loose, moist, fine grained, micaceous
			35		30 Feet: END OF BORING	

DATE: 10/22/04 FILENAME: P194006246

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: D-2
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 14, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
D2-17.0	4'		0	CONCRETE PLUG 0-0.4 FEET BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	0-12 Feet: SANDY SILT, Brown, stiff to very stiff, moist, sand is fine grained, micaceous	
	5'		5			
	4'		10			
	15		15	2-INCH BOREHOLE 0-30 FEET	12-17 Feet: SAND, Brown to Light Gray, loose, moist, fine to medium grained	
	20		20		17-27 Feet: SAND, Brown, loose, moist, fine grained, micaceous	
	25		25		27-30 Feet: SAND, Dark Brown to Dark Gray, loose, wet to saturated, medium to coarse grained	
	30		30		30 Feet: END OF BORING	
	35		35			

DATE: 10/21/04 FILENAME: P194006247

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: D-3
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 14, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
D3-24.0	4'		0	CONCRETE PLUG 0-0.4 FEET BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	0-4.3 Feet: SAND, Brown, medium dense, moist, micaceous	0
	5'		5		4.3-4.5 Feet: GRAVEL, angular, Gray, damp, dense 4.5-14 Feet: SANDY SILT, Brown, very stiff, moist, micaceous, sand is fine grained	5
	5'		10		14-24 Feet: SAND, Brown, medium dense, moist, medium to fine grained	10
	5'		15	2-INCH BOREHOLE 0-30 FEET	24-25.6 Feet: SAND, Brown, loose, moist, fine grained, micaceous	15
	4'		20		25.6-30 Feet: SAND, Brown to Grayish Brown, loose, saturated, medium to coarse grained	20
	4'		25		30 Feet: END OF BORING	25
			30			30
			35			35

DATE: 10/21/04 FILENAME: P194006248






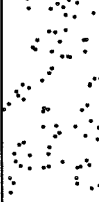
EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: D-4
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 14, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/22/04 FILENAME: P194006249

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	 CONCRETE PLUG 0-0.4 FEET	0-22.3 Feet: SAND, Brown, loose, moist, fine to medium grained	
		5	 BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET			
		10				
			15	 2-INCH BOREHOLE 0-30 FEET		
D4-22.0			20		22.4-24.6 Feet: SAND, Brown, loose, moist, fine grained, micaceous	
D4-26.0			25		24.6-30 Feet: SAND, Brown to Brownish Gray, loose, wet, medium grained	
			30		30 Feet: END OF BORING	
			35			

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: D-5
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 20, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				<p>CONCRETE PLUG 0-0.4 FEET</p> <p>BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET</p> <p>2-INCH BOREHOLE 0-30 FEET</p>	<p>0-10 Feet: (Hand Auger To 10 Feet) SAND, Grayish Brown, loose, moist, medium to fine grained (fill)</p> <p>10-24.5 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained (fill)</p> <p>24.5-27 Feet: SAND, Light Brown, loose, moist, saturated at 26.5 Feet, micaceous, fine grained</p> <p>27-30 Feet: SAND, Dark Gray, Dark Brown, loose, wet, medium to coarse grained</p> <p>30 Feet: END OF BORING</p>	
	5'		5			
	5'		10			
	4'		15			
	4'		20			
	4'		25			
	4'		30			
D5-24.5 D9-DUP						
			35			

DATE: 10/21/04 FILENAME: P194006250


EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: E-2
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 14, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/21/04 FILENAME: P194006252

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
E2-24.0	4'		0	 <p>CONCRETE PLUG 0-0.4 FEET</p> <p>BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET</p> <p>2-INCH BOREHOLE 0-30 FEET</p>	0-2 Feet: GRAVELY SAND (SUB GRADE), Light Gray, loose to medium dense, moist, fine grained sand, fine sub-rounded gravel	0-2
	4'		4		2-11 Feet: SILTY SAND, Brown, medium dense to dense, moist, micaceous, fine grained	2-11
	4'		8		11-22 Feet: SAND, Gray Brown, loose, moist, medium grained	11-22
	4'		12		22-27 Feet: SAND, Brown, loose, moist, saturated at 24.5 Feet, fine grained, micaceous	22-27
	4'		16		27-30 Feet: SAND, Dark Brown to Dark Gray, loose, wet to saturated, medium to coarse grained	27-30
	4'		20		30 Feet: END OF BORING	
	4'		24			

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: E-3
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 14, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
E3-22.0			0	CONCRETE PLUG 0-0.4 FEET	0-1 Feet: GRAVEL (SUB GRADE), sandy gravel, angular fine gravel, fine grained sand	
			5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	1-14 Feet: SILTY SAND, Brown, dense, fine grained, micaceous	
			10			
			15		14-14.5 Feet: GRAVELLY SAND, Light Gray, dense, damp (gravel grade)	
			20	2-INCH BOREHOLE 0-30 FEET	14.5-22 Feet: SAND, Brown to Dark Brown, loose, moist, medium to coarse grained	
			25		22-24.5 Feet: SAND, Brown to Light Brown, loose, moist to wet, micaceous, fine grained	
			30		24.5-30 Feet: SAND, Dark Brown, loose, wet to saturated, medium to coarse grained	
			35		30 Feet: END OF BORING	

DATE: 10/21/04 FILENAME: P194006253





EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: E-4
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 14, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/21/04 FILENAME: P194006254

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
E4-21.0			0	CONCRETE PLUG 0-0.4 FEET	0-1.2 Feet: SANDY GRAVEL, Light Gray Brown, loose, moist, sand is fine grained	
			1.2	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	1.2-20 Feet: SAND, Gray Brown, medium dense, moist, medium grained	
E4-26.0			20	2-INCH BOREHOLE 0-30 FEET	20-25 Feet: SAND, Brown, loose, moist to wet, fine grained, micaceous	
			25		25-30 Feet: SAND, Gray Brown to Dark Gray, loose, moist to wet, medium to coarse grained	
			30		30 Feet: END OF BORING	
			35			

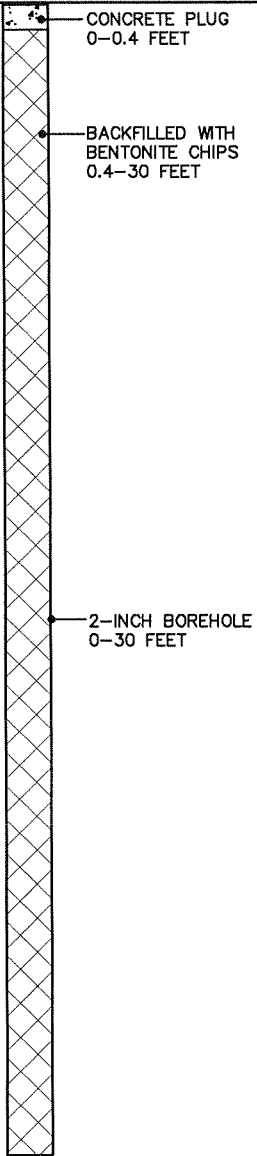
EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: E-5
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 16, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/21/04 FILENAME: P194006255

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
E5-24.0	4'		0	 <p>CONCRETE PLUG 0-0.4 FEET</p> <p>BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET</p> <p>2-INCH BOREHOLE 0-30 FEET</p>	0-24 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained		
	5'		5				
	5'		10				
	4'		15				
	5'		20				
	5'		25				
	5'		30				
	5'		35				
						24-27.5 Feet: SAND, Light Brown, loose, moist, saturated at 26.5 Feet, micaceous, fine grained	
						27.5-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	
					30 Feet: END OF BORING		

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: INGMAR SAUL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: E-6
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 17, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/22/04 FILENAME: P194006256

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
E6-23.5			0	CONCRETE PLUG 0-0.4 FEET	0-2 Feet: ASPHALT and ROAD GRADE	4
	5'		5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	2-23 Feet: SAND, Grayish Brown, loose, damp, medium to fine grained	
	5'		10			
	4'		15	2-INCH BOREHOLE 0-30 FEET		
	4'		20			
	4'		25			
			30		23-24 Feet: SAND, Light Brown, loose, moist, fine grained, micaceous	
			30		24-25 Feet: SAND, Brown, loose, moist, medium to fine grained, micaceous	
			30		25-30 Feet: SAND, Dark Brown, loose, saturated, medium to coarse grained, micaceous	
			35		30 Feet: END OF BORING	

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: F-2
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 15, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
F2-23.0			0	CONCRETE PLUG 0-0.4 FEET	0-1 Feet: SANDY GRAVEL (road grade)	
	4'		5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	1-11 Feet: SAND, Brown, stiff, moist, fine grained, micaceous	
	5'		10		11-23 Feet: SAND, Gray Brown, loose, moist, fine to medium grained	
	4'		15		23-24.8 Feet: SAND, Brown, loose, moist to saturated at 24.3 Feet, fine grained, micaceous	
	5'		20	2-INCH BOREHOLE 0-30 FEET	24.8-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	
	5'		25		30 Feet: END OF BORING	
			30			
			35			

DATE: 10/21/04 FILENAME: P194006257

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: F-3
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 14, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/21/04 FILENAME: P194006258

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
F3-24.0			0	CONCRETE PLUG 0-0.4 FEET BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET 2-INCH BOREHOLE 0-30 FEET	0-4 Feet: SANDY GRAVEL (road grade), Light Gray, loose, damp to moist, fine grained sand, angular fine gravel	0-4
			5		4-13.5 Feet: SILTY SAND, Brown, medium dense, moist, fine grained, micaceous	4-13.5
			10			10-13.5
			15			13.5-22
			20			22-24.5
			25			24.5-30
			30		30 Feet: END OF BORING	
			35			

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: F-4
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 14, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
F4-24.0			0	CONCRETE PLUG 0-0.4 FEET	0-0.3 Feet: GRAVELLY SAND, Brown to Dark Brown, loose, moist, medium to fine grained sand, rounded fine gravel		
			5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	0.3-23 Feet: SAND, Brown to Gray Brown, loose, moist, medium grained		
			10				
			15	2-INCH BOREHOLE 0-30 FEET			
			20				
			25				
			30				
			35				
						23-24 Feet: SAND, Brown, loose, moist, saturated at 24.5 Feet, fine grained, micaceous	
						24-30 Feet: SAND, Dark Brown to Dark Gray, loose, wet to saturated, medium to coarse grained	
						30 Feet: END OF BORING	

DATE: 10/21/04 FILENAME: P194006259

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: F-5
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 16, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/21/04 FILENAME: P194006260

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN		
F5-24.0			0	CONCRETE PLUG 0-0.4 FEET	0-24 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained sand	[Dotted pattern]		
	4'		5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET				
	5'		10					
	5'		15					
	5'		20	2-INCH BOREHOLE 0-30 FEET				
	5'		25					
	4'		30					
			35				24-27.5 Feet: SAND, Light Brown, loose, moist, saturated at 27 Feet, fine grained, micaceous	[Dotted pattern]
							27.5-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	[Dotted pattern]
							30 Feet: END OF BORING	

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: INGMAR SAUL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: F-6
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 17, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
F6-23.5			0	CONCRETE PLUG 0-0.4 FEET	0-2 Feet: ASPHALT ROAD GRADE	4
	5'		5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	2-23 Feet: SAND, Grayish Brown, loose, damp, medium to fine grained	
	5'		10			
	4'		15	2-INCH BOREHOLE 0-30 FEET		
	4'		20			
	3'		25			
	3'		30		23-24 Feet: SAND, Light Brown, loose, moist, fine grained, micaceous	
					24-25 Feet: SAND, Brown, loose, moist, medium to fine grained, micaceous	
					25-30 Feet: SAND, Dark Brown, loose, wet, saturated at 27 Feet, medium to coarse grained, micaceous	
					30 Feet: END OF BORING	

DATE: 10/21/04 FILENAME: P194006261

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: **G-3**
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 15, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

IMAGES: XREF'S:
 DATE: 10/07/04 FILENAME: P194006262

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	CONCRETE PLUG 0-0.4 FEET	0-1 Feet: SANDY, gravel grade	0
			5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	1-11.5 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained	1
			10		11.5-22 Feet: SAND, Gray Brown, loose, moist, medium grained	11.5
			15	2-INCH BOREHOLE 0-30 FEET		15
			20		22-24.5 Feet: SAND, Brown, loose, moist, saturated at 24.2 Feet, micaceous, fine grained, very fine grained at 24.4 Feet,	22
G3-24.0			25		24.5-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	24.5
G3-30.0			30		30 Feet: END OF BORING	30
			35			35






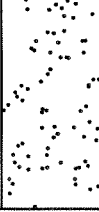
EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: **G-4**
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 15, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/22/04 1:21:41 PM NAME: P194006263

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN		
G4-24.0			0	 CONCRETE PLUG 0-0.4 FEET	0-22.8 Feet: SAND, Brown, loose, moist, medium to fine grained			
	4'		4	 BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET				
	5'		9					
	5'		14					
	5'		19	 2-INCH BOREHOLE 0-30 FEET				
	5'		24					
	5'		29					
	4'		33					
			30				22.8-24.5 Feet: SAND, Brown, loose, moist, saturated at 24.2 Feet, micaceous, fine grained	
			30				24.5-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	
		30		30 Feet: END OF BORING				

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: G-5
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 16, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/21/04 FILENAME: P194006264

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
G5-23.0			0	CONCRETE PLUG 0-0.4 FEET	0-1 Feet: BRICK, SANDY GRAVEL, grade	
	4'	0-4	4	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	1-23 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained	
	5'	4-9	9			
	5'	9-14	14			
	5'	14-19	19	2-INCH BOREHOLE 0-30 FEET		
	5'	19-24	24			
			25		23-27 Feet: SAND, Light Brown, loose, moist, saturated at 26 Feet, micaceous, fine grained	
			30		27-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	
			35		30 Feet: END OF BORING	

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: INGMAR SAUL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: G-6
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 17, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/21/04 FILENAME: P194006265

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				CONCRETE PLUG 0-0.4 FEET BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET 2-INCH BOREHOLE 0-30 FEET	0.15 Feet: ASPHALT ROAD GRADE 1.5-13.5 Feet: SAND, Grayish Brown, loose, damp, medium to fine grained 13.5-15.5 Feet: SAND, Brown, dense, moist, micaceous 15.5-20 Feet: SAND, Gray, loose, damp, graduating from fine grained to fine to medium grained 20-27 Feet: SAND, Light Brown, loose, moist, fine grained sand, micaceous 27-30 Feet: SAND, Dark Brown, loose, wet, saturated at 27 Feet, medium to coarse grained, micaceous 30 Feet: END OF BORING	
G6-23.0	5'		5			
	4.5'		10			
	3'		15			
	4'		20			
	4'		25			
G6-28.0	4'		30			
			35			

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: E-3
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 14, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
E3-22.0		↑		CONCRETE PLUG 0-0.4 FEET	0-1 Feet: GRAVEL (SUB GRADE), sandy gravel, angular fine gravel, fine grained sand	0
				BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	1-14 Feet: SILTY SAND, Brown, dense, fine grained, micaceous	14
					14-14.5 Feet: GRAVELY SAND, Light Gray, dense, damp (gravel grade)	14.5
				2-INCH BOREHOLE 0-30 FEET	14.5-22 Feet: SAND, Brown to Dark Brown, loose, moist, medium to coarse grained	22
					22-24.5 Feet: SAND, Brown to Light Brown, loose, moist to wet, micaceous, fine grained	24.5
					24.5-30 Feet: SAND, Dark Brown, loose, wet to saturated, medium to coarse grained	30
					30 Feet: END OF BORING	30
						35
			↓			

DATE: 10/21/04 FILENAME: P194006253




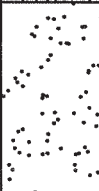
EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: E-4
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 14, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/21/04 FILENAME: P194006254

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
E4-21.0		↑	0	CONCRETE PLUG 0-0.4 FEET	0-1.2 Feet: SANDY GRAVEL, Light Gray Brown, loose, moist, sand is fine grained	
		↓	5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	1.2-20 Feet: SAND, Gray Brown, medium dense, moist, medium grained	
E4-26.0		↓	10	2-INCH BOREHOLE 0-30 FEET	20-25 Feet: SAND, Brown, loose, moist to wet, fine grained, micaceous	
		↓	25		25-30 Feet: SAND, Gray Brown to Dark Gray, loose, moist to wet, medium to coarse grained	
		↓	30		30 Feet: END OF BORING	
		↓	35			

Recovery not recorded

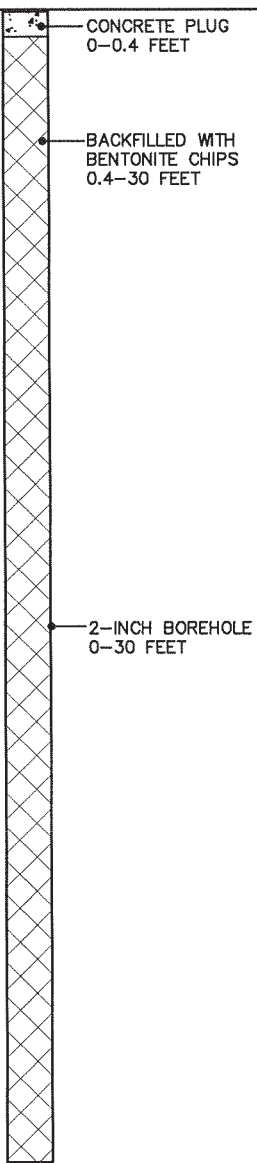
EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: E-5
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 16, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/21/04 FILENAME: P194006255

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
E5-24.0	4'		0	 <p>CONCRETE PLUG 0-0.4 FEET</p> <p>BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET</p> <p>2-INCH BOREHOLE 0-30 FEET</p>	0-24 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained	
	5'		5			
	4'		10			
	5'		15			
	5'		20			
	Recovery not recorded	↑ ↓	25		24-27.5 Feet: SAND, Light Brown, loose, moist, saturated at 26.5 Feet, micaceous, fine grained	
	Recovery not recorded	↑ ↓	30		27.5-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	
			35		30 Feet: END OF BORING	

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: F-3
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 14, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/21/04 FILENAME: P194006258


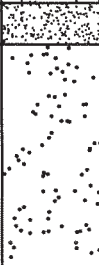
SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
F3-24.0		↑		CONCRETE PLUG 0-0.4 FEET	0-4 Feet: SANDY GRAVEL (road grade), Light Gray, loose, damp to moist, fine grained sand, angular fine gravel	0-4
			5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	4-13.5 Feet: SILTY SAND, Brown, medium dense, moist, fine grained, micaceous	4-13.5
		Recovery not recorded	10		13.5-22 Feet: SAND, Gray Brown, loose, moist, fine to medium grained	13.5-22
			15	2-INCH BOREHOLE 0-30 FEET	22-24.5 Feet: SAND, Brown, loose, wet to saturated at 24 Feet, fine grained, micaceous	22-24.5
			20		24.5-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet to saturated, medium to coarse grained	24.5-30
		↓	25		30 Feet: END OF BORING	30
			30			
			35			

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: F-4
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 14, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
F4-24.0	Recovery not recorded	↑	0	CONCRETE PLUG 0-0.4 FEET	0-0.3 Feet: GRAVELLY SAND, Brown to Dark Brown, loose, moist, medium to fine grained sand, rounded fine gravel 0.3-23 Feet: SAND, Brown to Gray Brown, loose, moist, medium grained	
		↓	30	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET 2-INCH BOREHOLE 0-30 FEET	23-24 Feet: SAND, Brown, loose, moist, saturated at 24.5 Feet, fine grained, micaceous 24-30 Feet: SAND, Dark Brown to Dark Gray, loose, wet to saturated, medium to coarse grained	
				30 Feet: END OF BORING		

DATE: 10/21/04 FILENAME: P194006259

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: **G-3**
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 15, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

IMAGES: XREF'S:
 DATE: 10/07/04 FILENAME: P194006262

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
		↑	0	CONCRETE PLUG 0-0.4 FEET	0-1 Feet: SANDY, gravel grade	0
			5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	1-11.5 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained	1
		↓	10		11.5-22 Feet: SAND, Gray Brown, loose, moist, medium grained	11.5
			15	2-INCH BOREHOLE 0-30 FEET	22-24.5 Feet: SAND, Brown, loose, moist, saturated at 24.2 Feet, micaceous, fine grained, very fine grained at 24.4 Feet,	22
G3-24.0			20		24.5-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	24.5
			25			24.5
			30		30 Feet: END OF BORING	30
G3-30.0		↓	30			30
			35			35

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: A-1
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 16, 2004
 Initial Water Level: NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/20/04 FILENAME: P194006232

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
			0	CONCRETE PLUG 0-0.4 FEET	0-1 Feet: SANDY GRAVEL, road grade	0
	5'		5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	1-9.5 Feet: SILTY SAND, Brown medium dense, moist, micaceous, fine grained @ 6-7 Feet: Asphalt and concrete debris starting at approximately 6 feet	1
	5'		10		9.5-22 Feet: SAND, Brown to Light Brown, loose, moist fine grained, micaceous	10
	5'		15			15
	4'		20	2-INCH BOREHOLE 0-30 FEET	22-24.8 Feet: SAND, Light Brown, loose, moist, saturated at 24 Feet, micaceous, fine grained	20
A1-23.0	5'		25		24.8-30 Feet: SAND, Dark Gray to Dark Brown, loose, wet, medium to coarse grained	25
A1-28.0	4'		30		30 Feet: END OF BORING	30
			35			35

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: A-2
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 16, 2004
 Initial Water Level: NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
A2-23.0	5'		0	* CONCRETE PLUG 0-0.4 FEET	0-0.5 Feet: SANDY Gravel Grade	0	
			5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	0.5-6 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained	5	
			10		6-7 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained	10	
			15		7-12 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained	15	
			20		12-13 Feet: Asphalt and Concrete debris	20	
			25		13-17.5 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained	25	
			30		2-INCH BOREHOLE 0-30 FEET	17.5-22 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained	30
			35			22-22.5 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained	35
						@ 22.5-24.5 Feet: Moist to saturated starting at approximately 24 Feet	35
						24.5-27 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	35
			27-28 Feet: SAND, Light Brown, loose, moist, micaceous, fine grained	35			
			28-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	35			
					30 Feet: END OF BORING		

DATE: 10/20/04 FILENAME: P194006233

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: A-3
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 16, 2004
 Initial Water Level: NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN		
A3-23.0			0	CONCRETE PLUG 0-0.4 FEET	0-14 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained	[Pattern: Dotted]		
	5'		5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET				
	5'		10					
	5'		15					
	5'		20					
	5'		25					
	5'		30	2-INCH BOREHOLE 0-30 FEET			14-15 Feet: SILTY SAND, medium dense, moist, micaceous, fine grained	[Pattern: Vertical Lines]
	5'		30				15-22 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained	[Pattern: Dotted]
	5'		30				22-24.5 Feet: SAND, Light Brown, loose, moist, saturated at 24 Feet, micaceous, fine grained	[Pattern: Dotted]
	4'		30				24.5-30 Feet: SAND, Dark Brown to Dark Gray, loose, wet, medium to coarse grained	[Pattern: Dotted]
		35		30 Feet: END OF BORING				

DATE: 10/20/04 FILENAME: P194006234

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: **B-1**
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 16, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
B1-23.0					0-0.5 Feet: SANDY Gravel Grade 0.5-5 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained		
	5'		5		5-7 Feet: ASPHALT, sandy angular chunks of asphalt, moist		
	5'		10		7-8 Feet: CONCRETE, light gray, angular fine gravel, dry		
	5'		15		8-11 Feet: SILTY SAND, Brown, medium to dense, moist, micaceous, fine grained		
	5'		20		11-12.5 Feet: SILTY SAND, Brown, medium to dense, moist, micaceous, fine grained		
	4'		25		12.5-19 Feet: SAND, Brown/Light Brown, loose, moist, micaceous, fine grained		
	5'		30		19.5-22 Feet: SAND, Grayish Brown, loose, moist, fine to medium grained, micaceous		
	4'		35		● 24.5-26 Feet: SAND, saturated starting at 24.5 Feet 26-30 Feet: SAND, Dark Gray, Dark Brown, loose, wet, medium to coarse grained		
						30 Feet: END OF BORING	

DATE: 10/22/04 FILENAME: P194006235

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: **B-2**
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 16, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
B2-24.0				<p>CONCRETE PLUG 0-0.4 FEET</p> <p>BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET</p> <p>2-INCH BOREHOLE 0-30 FEET</p>	0-0.5 Feet: SANDY Gravel Grade 0.5-6 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained		
	5'		5		6-6.5 Feet: Asphalt and Gravel Grade 6.5-13 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained		
	5'		10			13-24.5 Feet: SAND, Light Brown to Brown, loose, moist, fine grained, micaceous	
	5'		15				
	4'		20				
	3'		25				
	4'		30		24.5-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained		
			35		30 Feet: END OF BORING		

DATE: 10/20/04 FILENAME: P194006236

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: B-3
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 16, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				<p>CONCRETE PLUG 0-0.4 FEET</p> <p>BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET</p> <p>2-INCH BOREHOLE 0-30 FEET</p>	<p>0-0.5 Feet: SANDY Gravel Grade</p> <p>0.5-2 Feet: SAND, Gray Brown, loose, moist, medium to fine grained</p> <p>2-7 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained</p> <p>7-9.5 Feet: SAND, Gray Brown, loose, moist, medium to fine grained</p> <p>9.5-18 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained</p> <p>18-22 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained</p> <p>22-24.5 Feet: SAND, Light Brown, loose, moist, saturated at 24.5 Feet, micaceous, fine grained</p> <p>24.5-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained</p>	
B3-23.0 DRY	4'		4			
B3-24.0 SAT	4'		8			
	5'		13			
	4'		17			
	5'		22			
	4'		26			
	4'		30			
			30		30 Feet: END OF BORING	

DATE: 10/22/04 FILENAME: P194006237

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: B-4
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 20, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
B4-24.5		↑	0	CONCRETE PLUG 0-0.4 FEET	0-10 Feet: (Hand Auger To 10 Feet) SAND, Grayish Brown, loose, moist, medium to fine grained (fill)	
			5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET		
		Recovery not recorded			10-24 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained (fill)	
			15	2-INCH BOREHOLE 0-30 FEET		
			20			
		↓	25		24-28.5 Feet: SAND, Light Brown, loose, moist, micaceous, fine grained	
			30		28.5-30 Feet: SAND, Dark Gray, Dark Brown, loose, wet to saturated, medium to coarse grained	
			35		30 Feet: END OF BORING	

DATE: 10/21/04 FILENAME: P194006238

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: **B-5**
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 20, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
B5-24.5		↑	0	CONCRETE PLUG 0-0.4 FEET BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	0-10 Feet: (Hand Auger to 10 Feet), SAND, Grayish Brown, loose, moist, medium to fine grained (fill)	0-10	
			5			5-10	
			10			10-15	
			15	Recovery not recorded	2-INCH BOREHOLE 0-30 FEET	10-24 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained (fill)	15-20
			20			24-26 Feet: SAND, Light Brown, loose, moist, saturated at 25.5 Feet, micaceous, fine grained	20-25
		↓	25		26-30 Feet: SAND, Dark Gray, Dark Brown, loose, wet to saturated, medium to coarse grained	25-30	
			30		30 Feet: END OF BORING	30-35	
			35			35-40	

DATE: 10/21/04 FILENAME: P194006239

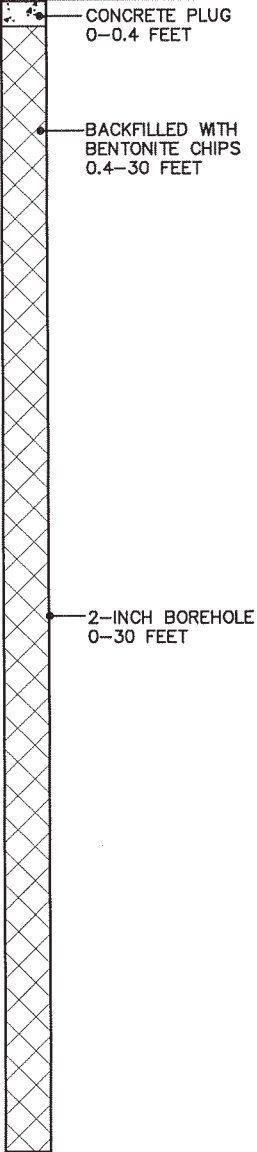

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: **B-6**
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 17, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/21/04 FILENAME: P194006240

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				 <p>CONCRETE PLUG 0-0.4 FEET</p> <p>BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET</p> <p>2-INCH BOREHOLE 0-30 FEET</p>	<p>0-2 Feet: ASPHALT and Road Grade</p> <p>2-23 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained (fill)</p> <p>23-23.5 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained</p> <p>23.5-26 Feet: SAND, Light Brown, loose, moist, saturated at 24.5 Feet, micaceous, fine grained,</p> <p>26-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained</p> <p>30 Feet: END OF BORING</p>	
B6-23.0	4'		5			
	5'		10			
	5'		15			
		↑ Recovery not recorded ↓	20			
			25			
B6-28.0			30			
			35			

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: C-1
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 15, 2004
 Initial Water Level: NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
C1-24.0	4'		0	CONCRETE PLUG 0-0.4 FEET BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	0-1 Feet: SANDY, Gravel Grade	0
		Recovery not recorded	5		1-13 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained	1
			10			2
			15	2-INCH BOREHOLE 0-30 FEET	13-27 Feet: SAND, Brown, loose, moist, micaceous, fine grained	3
			20			4
			25			5
			30		27-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	6
			35		30 Feet: END OF BORING	7

DATE: 10/21/04 FILENAME: P194006241

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: C-2
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 15, 2004
 Initial Water Level: NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				<p>CONCRETE PLUG 0-0.4 FEET</p> <p>BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET</p> <p>2-INCH BOREHOLE 0-30 FEET</p>	<p>0-1 Feet: SANDY, Gravel Grade</p> <p>1-14.5 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained</p> <p>14.5-19.5 Feet: SAND, Brown, loose, moist, micaceous, fine grained</p> <p>19.5-24.8 Feet: SAND, Gray Brown, loose, moist, medium to fine grained</p> <p>24.8-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained</p> <p>30 Feet: END OF BORING</p>	
	5'		5			
	5'		10			
	3'		15			
	4'		20			
C2-24.0			25			
	4'		30			
C2-28.0			35			

DATE: 10/22/04 FILENAME: P194006242

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: C-3
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 15, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN	
C3-24.0		↑		CONCRETE PLUG 0-0.4 FEET BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET 2-INCH BOREHOLE 0-30 FEET	0-0.5 Feet: SANDY, Gravel Grade	○ ○ ○ ○	
			5		0.5-6 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained		
			10			6-8.5 Feet: SAND, Gray Brown, loose, moist, medium to fine grained
			15			8.5-12 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained	
		Recovery not recorded				12-17 Feet: SAND, Gray Brown, loose, moist, fine to medium grained
			20			17-24.5 Feet: SAND, Brown, loose, moist, micaceous, fine grained
			25			24.5-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained
		30			30 Feet: END OF BORING		
		↓					

DATE: 10/22/04 FILENAME: P194006243

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: **C-4**
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 20, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
	4'		0	CONCRETE PLUG 0-0.4 FEET	0-10 Feet: (Hand Auger to 10 Feet) SAND, Grayish Brown, loose, moist, medium to fine grained (fill)	
	4'		4	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET		
	4'		8			
	4'		12		10-24 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained (fill)	
	4'		16	2-INCH BOREHOLE 0-30 FEET		
	4'		20			
C4-24.5	4'		24		24-29 Feet: SAND, Light Brown, loose, moist, micaceous, fine grained	
C4-30.0	4'		28		29-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	
			30		30 Feet: END OF BORING	
			35			

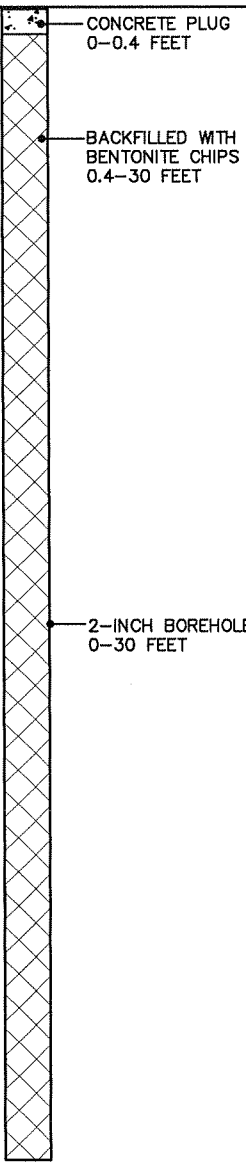
DATE: 10/20/04 FILENAME: P194006244

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: C-5
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 20, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
C5-24.5	4'		0	 <p>CONCRETE PLUG 0-0.4 FEET</p> <p>BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET</p> <p>2-INCH BOREHOLE 0-30 FEET</p>	0-10 Feet: (Hand Auger to 10 Feet) SAND, Grayish Brown, loose, moist, medium to fine grained (fill)	
	4'		4		10-23 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained (fill)	
	4'		8			
	4'		12			
	4'		16			
	4'		20			
	4'		24			
			25		23-24 Feet: SANDY SILT, Brown, soft, moist, micaceous, fine grained sand	
			29		24-27 Feet: SAND, Light Brown, loose, moist, saturated at 26.8 Feet, micaceous, fine grained	
			30		27-29 Feet: SAND, Dark Brown, Dark Gray, loose, wet to saturated, medium to coarse grained	
			30		29-29.5 Feet: SANDY SILT, Brown, soft, moist, saturated, micaceous, fine grained	
			30		29.5-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet to saturated, medium to coarse grained	
			35		30 Feet: END OF BORING	

DATE: 10/20/04 FILENAME: P194006245

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: INGMAR SAUL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: C-6
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 17, 2004
 Initial Water Level: NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
C6-24.0	4'		0	<p>CONCRETE PLUG 0-0.4 FEET</p> <p>BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET</p> <p>2-INCH BOREHOLE 0-30 FEET</p>	0-1.5 Feet: ASPHALT ROAD GRADE	
	4'		4		1.5-23.5 Feet: SAND, Grayish Brown, loose, damp, medium to fine grained (fill)	
	4'		8			
	4'		12			
	4'		16			
	4'		20			
	4'		24			
	4'		28			
	4'		32			
				30		23.5-24.8 Feet: SAND, Light Brown, loose, moist, fine grained, micaceous 24.8-26.5 Feet: SAND, Brown, loose, moist, medium to fine grained, micaceous 26.5-30 Feet: SAND, Dark Brown, loose, saturated, medium to coarse grained, micaceous, saturated at 28 Feet, 28-28.5 Feet: SAND, Light Brown, loose, moist, fine grained, micaceous
			35		30 Feet: END OF BORING	

DATE: 10/22/04 FILENAME: P194006246

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: D-2
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 14, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
D2-17.0	4'		0	CONCRETE PLUG 0-0.4 FEET BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	0-12 Feet: SANDY SILT, Brown, stiff to very stiff, moist, sand is fine grained, micaceous	
	5'		5			
	4'		10		12-17 Feet: SAND, Brown to Light Gray, loose, moist, fine to medium grained	
	Recovery not recorded		15	2-INCH BOREHOLE 0-30 FEET	17-27 Feet: SAND, Brown, loose, moist, fine grained, micaceous	
	Recovery not recorded		20		27-30 Feet: SAND, Dark Brown to Dark Gray, loose, wet to saturated, medium to coarse grained	
			25			
			30		30 Feet: END OF BORING	
			35			

DATE: 10/21/04 FILENAME: P194006247

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: D-3
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 14, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/21/04 FILENAME: P194006248

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
D3-24.0	4'		0	CONCRETE PLUG 0-0.4 FEET BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	0-4.3 Feet: SAND, Brown, medium dense, moist, micaceous	
	5'		5		4.3-4.5 Feet: GRAVEL, angular, Gray, damp, dense	
	5'		10		4.5-14 Feet: SANDY SILT, Brown, very stiff, moist, micaceous, sand is fine grained	
	5'		15	2-INCH BOREHOLE 0-30 FEET	14-24 Feet: SAND, Brown, medium dense, moist, medium to fine grained	
	4'		20		24-25.6 Feet: SAND, Brown, loose, moist, fine grained, micaceous	
	Recovery not recorded		25		25.6-30 Feet: SAND, Brown to Grayish Brown, loose, saturated, medium to coarse grained	
			30		30 Feet: END OF BORING	
			35			

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: D-4
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 14, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/22/04 FILENAME: P194006249

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
		↑	0	CONCRETE PLUG 0-0.4 FEET BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	0-22.3 Feet: SAND, Brown, loose, moist, fine to medium grained	0
			5			
			10			
		Recovery not recorded	15	2-INCH BOREHOLE 0-30 FEET		
			20			
D4-22.0			22.3		22.4-24.6 Feet: SAND, Brown, loose, moist, fine grained, micaceous	22.3
			24.6		24.6-30 Feet: SAND, Brown to Brownish Gray, loose, wet, medium grained	24.6
D4-26.0			26.0			26.0
			30		30 Feet: END OF BORING	30
		↓	35			

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: D-5
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 20, 2004
 Initial Water Level: NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				<p>CONCRETE PLUG 0-0.4 FEET</p> <p>BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET</p> <p>2-INCH BOREHOLE 0-30 FEET</p>	<p>0-10 Feet: (Hand Auger To 10 Feet) SAND, Grayish Brown, loose, moist, medium to fine grained (fill)</p> <p>10-24.5 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained (fill)</p> <p>24.5-27 Feet: SAND, Light Brown, loose, moist, saturated at 26.5 Feet, micaceous, fine grained</p> <p>27-30 Feet: SAND, Dark Gray, Dark Brown, loose, wet, medium to coarse grained</p> <p>30 Feet: END OF BORING</p>	
	5'		5			
	5'		10			
	4'		15			
	4'		20			
	4'		25			
	4'		30			
			35			

DATE: 10/21/04 FILENAME: P194006250

D5-24.5
D9-DUP

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: E-2
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 14, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/21/04 FILENAME: P194006252

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
E2-24.0	4'		0	CONCRETE PLUG 0-0.4 FEET BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET 2-INCH BOREHOLE 0-30 FEET	0-2 Feet: GRAVELY SAND (SUB GRADE), Light Gray, loose to medium dense, moist, fine grained sand, fine sub-rounded gravel	0-2
	4'		4		2-11 Feet: SILTY SAND, Brown, medium dense to dense, moist, micaceous, fine grained	2-11
	4'		8		11-22 Feet: SAND, Gray Brown, loose, moist, medium grained	11-22
	4'		12		22-27 Feet: SAND, Brown, loose, moist, saturated at 24.5 Feet, fine grained, micaceous	22-27
	4'		16		27-30 Feet: SAND, Dark Brown to Dark Gray, loose, wet to saturated, medium to coarse grained	27-30
	4'		20		30 Feet: END OF BORING	
	4'		24			

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: E-3
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 14, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
E3-22.0		↑	0	CONCRETE PLUG 0-0.4 FEET	0-1 Feet: GRAVEL (SUB GRADE), sandy gravel, angular fine gravel, fine grained sand	0
		↓	0.4	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	1-14 Feet: SILTY SAND, Brown, dense, fine grained, micaceous	0.4
		↓	5			5
		↓	10			10
		↓	15		14-14.5 Feet: GRAVELY SAND, Light Gray, dense, damp (gravel grade)	14
		↓	14.5	2-INCH BOREHOLE 0-30 FEET	14.5-22 Feet: SAND, Brown to Dark Brown, loose, moist, medium to coarse grained	14.5
		↓	20		22-24.5 Feet: SAND, Brown to Light Brown, loose, moist to wet, micaceous, fine grained	20
		↓	25		24.5-30 Feet: SAND, Dark Brown, loose, wet to saturated, medium to coarse grained	25
		↓	30		30 Feet: END OF BORING	30
		↓	35			35

DATE: 10/21/04 FILENAME: P194006253

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: E-4
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 14, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/21/04 FILENAME: P194006254

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHOLOGIC COLUMN
E4-21.0		↑	0	CONCRETE PLUG 0-0.4 FEET	0-1.2 Feet: SANDY GRAVEL, Light Gray Brown, loose, moist, sand is fine grained	0
			5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	1.2-20 Feet: SAND, Gray Brown, medium dense, moist, medium grained	5
E4-26.0		↓	10			10
		Recovery not recorded	15	2-INCH BOREHOLE 0-30 FEET		15
			20		20-25 Feet: SAND, Brown, loose, moist to wet, fine grained, micaceous	20
			25		25-30 Feet: SAND, Gray Brown to Dark Gray, loose, moist to wet, medium to coarse grained	25
			30		30 Feet: END OF BORING	30
			35			35

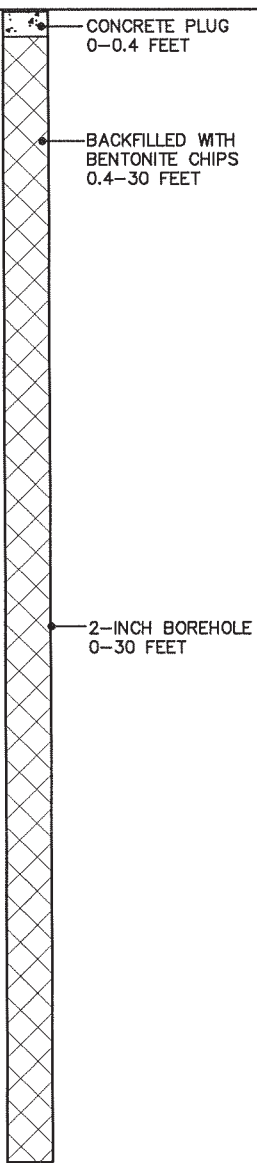
EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: E-5
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 16, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/21/04 FILENAME: P194006255

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
E5-24.0	4'		0	 <p>CONCRETE PLUG 0-0.4 FEET</p> <p>BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET</p> <p>2-INCH BOREHOLE 0-30 FEET</p>	0-24 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained	
	5'		5			
	4'		10			
	5'		15			
	5'		20			
	Recovery not recorded	↑ ↓	25		24-27.5 Feet: SAND, Light Brown, loose, moist, saturated at 26.5 Feet, micaceous, fine grained	
	Recovery not recorded	↑ ↓	30		27.5-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	
			35		30 Feet: END OF BORING	

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: INGMAR SAUL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: E-6
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 17, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/22/04 FILENAME: P194006256

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN	
E6-23.5			0		0-2 Feet: ASPHALT and ROAD GRADE		
	5'		5		2-23 Feet: SAND, Grayish Brown, loose, damp, medium to fine grained		
	5'		10				
	4'		14				
	4'		18				
	4'		22				
	4'		26				
	4'		30				
				30		23-24 Feet: SAND, Light Brown, loose, moist, fine grained, micaceous	
						24-25 Feet: SAND, Brown, loose, moist, medium to fine grained, micaceous	
					25-30 Feet: SAND, Dark Brown, loose, saturated, medium to coarse grained, micaceous		
			35		30 Feet: END OF BORING		

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: F-2
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 15, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
F2-23.0			0	#4	0-1 Feet: SANDY GRAVEL (road grade)	○ ○ ○ ○
	4'		4		1-11 Feet: SAND, Brown, stiff, moist, fine grained, micaceous	● ● ● ●
	5'		9			● ● ● ●
	4'		13		11-23 Feet: SAND, Gray Brown, loose, moist, fine to medium grained	● ● ● ●
	5'		18		23-24.8 Feet: SAND, Brown, loose, moist to saturated at 24.3 Feet, fine grained, micaceous	● ● ● ●
	5'		23		24.8-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	● ● ● ●
			30		30 Feet: END OF BORING	
			35			

DATE: 10/21/04 FILENAME: P194006257

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: F-3
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 14, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/21/04 FILENAME: P194006258


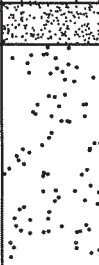
SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
F3-24.0		↑		CONCRETE PLUG 0-0.4 FEET	0-4 Feet: SANDY GRAVEL (road grade), Light Gray, loose, damp to moist, fine grained sand, angular fine gravel	0-4
			5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	4-13.5 Feet: SILTY SAND, Brown, medium dense, moist, fine grained, micaceous	4-13.5
		Recovery not recorded	10		13.5-22 Feet: SAND, Gray Brown, loose, moist, fine to medium grained	13.5-22
			15	2-INCH BOREHOLE 0-30 FEET	22-24.5 Feet: SAND, Brown, loose, wet to saturated at 24 Feet, fine grained, micaceous	22-24.5
			20		24.5-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet to saturated, medium to coarse grained	24.5-30
		↓	25		30 Feet: END OF BORING	30
			30			30
			35			35

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: F-4
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 14, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
F4-24.0	Recovery not recorded	↑	0	CONCRETE PLUG 0-0.4 FEET	0-0.3 Feet: GRAVELLY SAND, Brown to Dark Brown, loose, moist, medium to fine grained sand, rounded fine gravel 0.3-23 Feet: SAND, Brown to Gray Brown, loose, moist, medium grained	
		↓	30	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET 2-INCH BOREHOLE 0-30 FEET	23-24 Feet: SAND, Brown, loose, moist, saturated at 24.5 Feet, fine grained, micaceous 24-30 Feet: SAND, Dark Brown to Dark Gray, loose, wet to saturated, medium to coarse grained	
				30 Feet: END OF BORING		

DATE: 10/21/04 FILENAME: P194006259

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: F-5
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 16, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/21/04 FILENAME: P194006260

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN		
F5-24.0			0	CONCRETE PLUG 0-0.4 FEET	0-24 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained sand	[Dotted pattern]		
	4'		5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET				
	5'		10					
	5'		15					
	5'		20	2-INCH BOREHOLE 0-30 FEET				
	5'		25					
	4'		30					
			35				24-27.5 Feet: SAND, Light Brown, loose, moist, saturated at 27 Feet, fine grained, micaceous	[Dotted pattern]
							27.5-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	[Dotted pattern]
							30 Feet: END OF BORING	

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: INGMAR SAUL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: F-6
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 17, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
F6-23.5			0	CONCRETE PLUG 0-0.4 FEET	0-2 Feet: ASPHALT ROAD GRADE	4
	5'		5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	2-23 Feet: SAND, Grayish Brown, loose, damp, medium to fine grained	
	5'		10			
	4'		15	2-INCH BOREHOLE 0-30 FEET		
	4'		20			
	3'		25		23-24 Feet: SAND, Light Brown, loose, moist, fine grained, micaceous	
			27		24-25 Feet: SAND, Brown, loose, moist, medium to fine grained, micaceous	
	3'		30		25-30 Feet: SAND, Dark Brown, loose, wet, saturated at 27 Feet, medium to coarse grained, micaceous	
			30		30 Feet: END OF BORING	
			35			

DATE: 10/21/04 FILENAME: P194006261

EXPLORATORY BORING LOG

Parametrix

Project Name: <u>PORT OF VANCOUVER</u>	Boring Number: <u>G-3</u>
Project Number: <u>275-1940-006-04 5810</u>	Sheet: <u>1 OF 1</u>
Location: <u>SMC</u>	Total Depth: <u>30 FEET</u>
PMX Representative: <u>MIKE MARSHALL</u>	Date Completed: <u>SEPTEMBER 15, 2004</u>
Drilled By: <u>GEO TECH EXPLORATIONS</u>	Initial Water Level: <u>∇ NA</u>
Drill Method: <u>GEO PROBE</u>	Measuring Point Elevation: <u>NA</u>
Soil Sample Method: <u>DIRECT PUSH</u>	Static Water Level: <u>NA</u> Date: <u>NA</u>
Groundwater Sample Method: <u>NA</u>	Northing: <u>NA</u> Easting: <u>NA</u>

IMAGES: XREF'S:
 DATE: 10/07/04 FILENAME: P194006262

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
		↑	0	CONCRETE PLUG 0-0.4 FEET	0-1 Feet: SANDY, gravel grade	0
			5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	1-11.5 Feet: SILTY SAND, Brown, medium dense, moist, micaceous, fine grained	1
		↓	10		11.5-22 Feet: SAND, Gray Brown, loose, moist, medium grained	11.5
			15	2-INCH BOREHOLE 0-30 FEET	22-24.5 Feet: SAND, Brown, loose, moist, saturated at 24.2 Feet, micaceous, fine grained, very fine grained at 24.4 Feet,	22
G3-24.0			20		24.5-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	24.5
			25			25
			30		30 Feet: END OF BORING	30
G3-30.0		↓	35			35






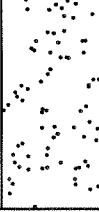
EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: **G-4**
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 15, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/22/04 1:21:41 PM NAME: P194006263

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN		
G4-24.0			0	 CONCRETE PLUG 0-0.4 FEET	0-22.8 Feet: SAND, Brown, loose, moist, medium to fine grained			
	4'		4	 BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET				
	5'		9					
	5'		14					
	5'		19	 2-INCH BOREHOLE 0-30 FEET				
	5'		24					
	5'		29					
	4'		33					
			30				22.8-24.5 Feet: SAND, Brown, loose, moist, saturated at 24.2 Feet, micaceous, fine grained	
			30				24.5-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	
		30		30 Feet: END OF BORING				

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: MIKE MARSHALL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: G-5
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 16, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/21/04 FILENAME: P194006264

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
G5-23.0			0	CONCRETE PLUG 0-0.4 FEET	0-1 Feet: BRICK, SANDY GRAVEL, grade	
	4'		5	BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET	1-23 Feet: SAND, Grayish Brown, loose, moist, medium to fine grained	
	5'		10			
	5'		15			
	5'		20	2-INCH BOREHOLE 0-30 FEET		
	5'		25			
			30		23-27 Feet: SAND, Light Brown, loose, moist, saturated at 26 Feet, micaceous, fine grained	
			35		27-30 Feet: SAND, Dark Brown, Dark Gray, loose, wet, medium to coarse grained	
					30 Feet: END OF BORING	

EXPLORATORY BORING LOG

Parametrix

Project Name: PORT OF VANCOUVER
 Project Number: 275-1940-006-04 5810
 Location: SMC
 PMX Representative: INGMAR SAUL
 Drilled By: GEO TECH EXPLORATIONS
 Drill Method: GEO PROBE
 Soil Sample Method: DIRECT PUSH
 Groundwater Sample Method: NA

Boring Number: G-6
 Sheet: 1 OF 1
 Total Depth: 30 FEET
 Date Completed: SEPTEMBER 17, 2004
 Initial Water Level: ∇ NA
 Measuring Point Elevation: NA
 Static Water Level: NA Date: NA
 Northing: NA Easting: NA

DATE: 10/21/04 FILENAME: P194006265

SAMPLE ID	RECOVERY (FT)	SAMPLE INTERVAL	DEPTH IN FEET	WELL CONSTRUCTION	LITHOLOGIC DESCRIPTION	LITHO-LOGIC COLUMN
				CONCRETE PLUG 0-0.4 FEET BACKFILLED WITH BENTONITE CHIPS 0.4-30 FEET 2-INCH BOREHOLE 0-30 FEET	0.15 Feet: ASPHALT ROAD GRADE 1.5-13.5 Feet: SAND, Grayish Brown, loose, damp, medium to fine grained 13.5-15.5 Feet: SAND, Brown, dense, moist, micaceous 15.5-20 Feet: SAND, Gray, loose, damp, graduating from fine grained to fine to medium grained 20-27 Feet: SAND, Light Brown, loose, moist, fine grained sand, micaceous 27-30 Feet: SAND, Dark Brown, loose, wet, saturated at 27 Feet, medium to coarse grained, micaceous 30 Feet: END OF BORING	
G6-23.0	5'		5			
	4.5'		10			
	3'		15			
	4'		20			
	4'		25			
G6-28.0	4'		30			
			35			