PROJECT: MJB North Yard Anacortes, Washington	**Boring Log Explanation**			
BORING LOCATION:	ELEVATION AND DATUM:			
DRILLING CONTRACTOR:	DATE STARTED:	DATE FINISHED:		
DRILLING METHOD:	TOTAL DEPTH (ft.):	MEASURING POINT:		
DRILLING EQUIPMENT:	DEPTH TO WATER	FIRST	COMPL.	24 HRS.
SAMPLING METHOD:	LOGGED BY:			
HAMMER WEIGHT: / DROP:	RESPONSIBLE PROFESSIONAL:	REG. NO.		

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	REMARKS
1					Notes 1. Soil descriptions are in accordance with the USCS as set forth by ASTM D2488-90 "Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)."	
2					2. Soil color described according to Munsell Color Chart.	
3					3. Dashed lines separating soil strata represent inferred boundaries between sampled intervals that may be abrupt or gradual transitions.	
4					4. Solid lines represent approximate boundaries observed within sample intervals.	
5					5. OVM = organic vapor meter, reading in volumetric parts per million. Reading collected from baggie headspace.	
6					6. Odor, if noted is subjective and not necessarily indicative of specific compounds or concentrations.	
7					7. NA = Not applicable.	
8					8. ND = No data.	
9	TP-1-9.0				Grab soil sample.	
10					Interval of recovered soil collected with split spoon sampler.	
11						
12					Interval of recovered soil collected with direct push liner.	
13	PP-1-13.0				Sample collected for chemical analysis and sample identification.	
14					Interval of no recovery.	
15						

KEYFORM (REV. 7/99)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Well No. MW-5**
BORING LOCATION: N 554363.38; E 1210473.92	GROUND SURFACE ELEVATION AND DATUM: 12.80 feet MLLW
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 7/14/05 / DATE FINISHED: 7/14/05
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 21.5 / SCREEN INTERVAL (ft.): 4.22 to 14.0
DRILLING EQUIPMENT: CME-75	DEPTH TO WATER: FIRST ~8.5 / COMPL. NA / CASING: 2" Sched. 40 PVC
SAMPLING METHOD: SPT split spoon drive sampler [18" x 2.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: 300 pounds / DROP: 30	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					Surface Elevation: 13.42 feet MLLW	
1	MW-5-0.0		16 19 21 N=40		POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark grayish brown (10YR 3/2), dry to moist, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	Traffic Box Concrete
2						Bentonite chips
3					POORLY GRADED SAND with GRAVEL (SP): brown (10YR 4/3), moist, 50% fine to coarse sand, 45% fine to coarse subrounded to rounded gravel, 5% fines, contains round cobbles up to 4" diameter	8" diameter borehole
4					POORLY GRADED SAND with SILT and GRAVEL (SP-SM): very dark greenish gray (10Y 3/1), moist, 50% fine to coarse sand, 40% fine to coarse subrounded to rounded gravel, 10% nonplastic fines	2" diameter Schedule 40 PVC casing
5	MW-5-5.0					
6			7 13 13 N=26			
7						
8					PEAT with SAND (PT): dark brown mottled yellowish brown (10YR 3/3), wet, 85% fines, 15% fine sand, nonplastic, firm, woody peat with interbeds of dark gray fine sand, sulfitic odor wet	2" diameter, 0.010" slot, Schedule 40 PVC screen
9						
10						
11	MW-5-10.0		3 4 3 N=7			2/12 filter pack sand
12						
13						
14						Schedule 40 PVC endcap
15						

OAKWELLV (REV. 4/00)

PROJECT: MJB North Yard
Anacortes, Washington

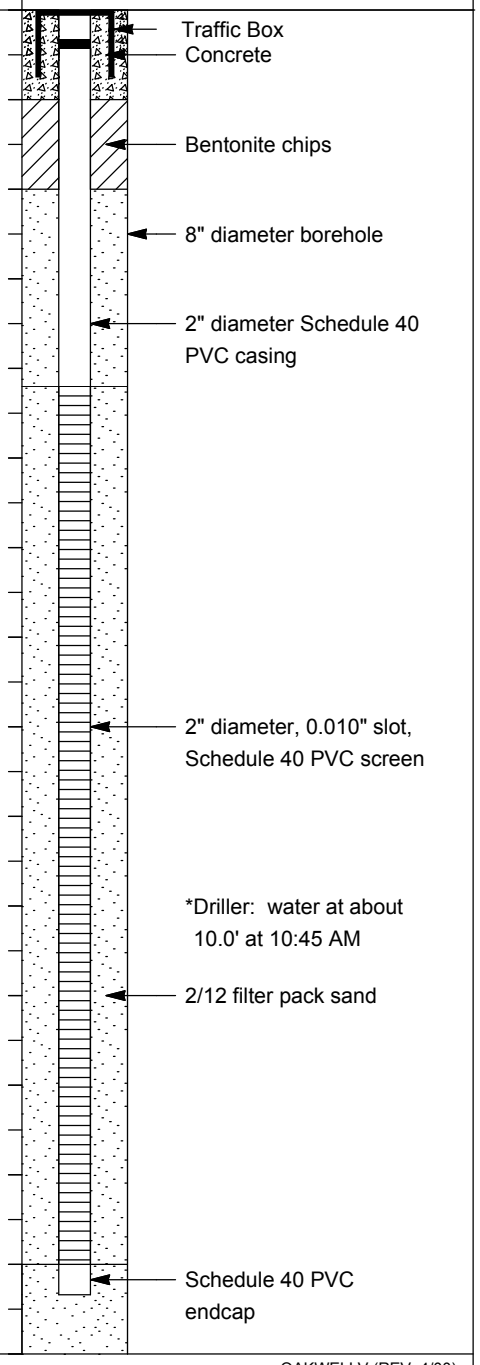
Log of Well No. MW-5 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
16	MW-5-15.0		4 5 9 N=14		SILT with SAND (ML): dark greenish gray mottled brown and yellowish-brown (10GY 4/1), moist to wet, 75% fines, 25% fine to coarse sand, low plasticity, firm, contains pockets of dark gray fine sand, with white shell fragments to 15.5'	2/12 filter pack sand
17						Bentonite chips
18					becoming firmer and blocky; less sand	
19						*Pull augers up about 12 feet.
20						
21	MW-5-20.0		12 13 23 N=36			
22					Bottom of boring at 21.5 feet.	
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						

OAKWELLV (REV. 4/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Well No. MW-6**
BORING LOCATION: N 554768.47; E 1210309.42	GROUND SURFACE ELEVATION AND DATUM: 13.04 feet MLLW
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 7/14/05 / DATE FINISHED: 7/14/05
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 21.5 / SCREEN INTERVAL (ft.): 4.20 to 14.0
DRILLING EQUIPMENT: CME-75	DEPTH TO WATER: FIRST ~10 / COMPL. NA / CASING: 2" Sched. 40 PVC
SAMPLING METHOD: SPT split spoon drive sampler [18" x 2.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: 300 pounds / DROP: 30 inches	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 13.42 feet MLLW
1	MW-6-0.0		29 34 25 N=59		POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark grayish brown (10YR 3/2), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock
2					
3					POORLY GRADED SAND with GRAVEL (SP): brown (10YR 4/3), moist, 50% fine to coarse sand, 45% fine to coarse gravel, 5% nonplastic fines, subrounded to rounded, contains round cobbles up to 4" diameter
4					
5	MW-6-5.0				POORLY GRADED SAND with SILT and GRAVEL (SP-SM): greenish black (10Y 2.5/1), moist, 50% fine to coarse sand, 40% subrounded to rounded fine to coarse gravel, 10% nonplastic fines, occasional cobbles up to 4" in diameter mothball-like odor
6			26 50 for 6"		very slight mothball-like odor
7					
8					
9					
10	MW-6-10.0				less silty, wet, no odor
11			5 12 14 N=26		
12					SILT with SAND (ML): dark greenish gray mottled brown and yellowish-brown (10GY 4/1), moist, 85% fines, 10% fine sand, 5% fine gravel, contains reddish rootlets/seams, low plasticity, firm to hard
13					
14					
15					



OAKWELLV (REV. 4/00)

PROJECT: MJB North Yard
Anacortes, Washington

Log of Well No. MW-6 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
16	MW-6-15.0	■	9 13 19 N=32		SILT with SAND (ML): Continued	2/12 filter pack sand
17						
18						Bentonite chips
19						
20		■				
21	MW-6-20.0		10 10 20 N=30		Bottom of boring at 21.5 feet.	
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						

OAKWELLV (REV. 4/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Well No. MW-7**
BORING LOCATION: N 555056.70; E 1209849.95	GROUND SURFACE ELEVATION AND DATUM: 12.98 feet MLLW
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 7/14/05 / DATE FINISHED: 7/14/05
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 16.5 / SCREEN INTERVAL (ft.): 4.21 to 14.0
DRILLING EQUIPMENT: CME-75	DEPTH TO WATER: FIRST NA, COMPL. NA / CASING: 2" Sched. 40 PVC
SAMPLING METHOD: SPT split spoon drive sampler [18" x 2.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: 300 pounds / DROP: 30 inches	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					Surface Elevation: 13.24 feet MLLW	
1	MW-7-0.0		50 for 6"		POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark grayish brown (10YR 3/2), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	Traffic Box Concrete
2						Bentonite chips
3	MW-7-3.0				ORGANIC SOIL (OL): dark brown to black (10YR 2/1), moist, 80% fines, 20% fine to coarse sand, contains woodshards, nonplastic, soft, woody	8" diameter borehole
4						2" diameter Schedule 40 PVC casing
5					SILT with SAND (ML): dark greenish gray mottled brown and yellowish-brown (10GY 4/1), moist, 75% fines, 25% fine to coarse sand, low plasticity, soft to firm, contains dark brown rootlets, also contains inclusions of green mica/metallic sand	
6	MW-7-5.0		7 7 7 N=14			
7						
8						2" diameter, 0.010" slot, Schedule 40 PVC screen
9						
10						
11	MW-7-10.0		9 6 11 N=17			2/12 filter pack sand
12						
13						
14						Schedule 40 PVC endcap
15						

PROJECT: MJB North Yard
Anacortes, Washington

Log of Well No. MW-7 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
16	MW-7-15.0		6 10 13 N=23		SILT with SAND (ML): (continued); becoming firmer and brown mottled greenish gray	2/12 filter pack sand
					Bottom of boring at 16.5 feet.	
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						

OAKWELLV (REV. 4/00)

PROJECT: MJB North Yard Anacortes, Washington	**Test Pit Log No. TP-1**
TEST PIT LOCATION:	ELEVATION AND DATUM: Not surveyed; datum is ground surface
EXCAVATION CONTRACTOR: Gary Merlino Construction Company, Inc.	DATE STARTED: 7/12/05 / DATE FINISHED: 7/12/05
OPERATOR: Kurt Kamius	TOTAL DEPTH (ft.): 11.0 / MEASURING POINT: Ground surface
EXCAVATION EQUIPMENT: Case 580L Backhoe	DEPTH TO WATER: FIRST 8.5 / COMPL. NA
EXCAVATION BUCKET DIMENSIONS: 18 inches	LOGGED BY: Z. Satterwhite
SAMPLING METHOD: Rubber-tired backhoe	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	RI-TP-1-1.5			POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark grayish brown (10YR 3/2), dry, 65% fine to coarse subangular to angular gravel with cobbles up to 1' diameter, 25% fine to coarse sand, 10% nonplastic fines, gravel is fine-grained dark gray rock	
2				POORLY GRADED SAND with SILT and GRAVEL (SP-SM): greenish black (10Y 2.5/1), moist, 50% fine to coarse sand, 40% fine to coarse subrounded to rounded gravel up to 6" in diameter, 10% nonplastic fines, odor	
3	RI-TP-1-3.0			ORGANIC SOIL (OL): dark brown to black (10YR 2/1), moist, 90% fines, 10% fine gravel, nonplastic, firm, contains rootlets and wood, fluffy like peat, contains brick or red paint gravel up to 3" diameter	
4				POORLY GRADED SAND with SILT (SP-SM): very dark gray (10YR 3/1), dry to moist, 85% fine to coarse sand, 10% nonplastic fines, 5% fine gravel, fluffy/light/ashy, speckled white	
5				SILTY SAND with GRAVEL (SM): black (10YR 2/1), moist, 50% fine to coarse sand, 30% fine subangular to subrounded gravel, 20% nonplastic fines, contains wood chunks	
6					
7					
8	RI-TP-1-7.0				
9				▼ wet	
10					
11				SILT with SAND (ML): dark greenish gray mottled brown and yellowish-brown (10GY 4/1), moist, 75% fines, 20% fine to coarse sand, 5% fine gravel, low plasticity, firm, contains inclusions of coarse silica sand with gold flakes (mica?)	
12				Bottom of test pit at 11.25 feet. Excavation backfilled with cuttings in reverse order to ground surface, and compacted with backhoe bucket.	
13					
14					
15					

OAKTESTPIT (REV. 6/03)

PROJECT: MJB North Yard Anacortes, Washington	**Test Pit Log No. TP-2**
TEST PIT LOCATION:	ELEVATION AND DATUM: Not surveyed; datum is ground surface
EXCAVATION CONTRACTOR: Gary Merlino Construction Company, Inc.	DATE STARTED: 7/12/05 / DATE FINISHED: 7/12/05
OPERATOR: Kurt Kamius	TOTAL DEPTH (ft.): 9.0 / MEASURING POINT: Ground surface
EXCAVATION EQUIPMENT: Case 580L Backhoe	DEPTH TO WATER: FIRST NA / COMPL. NA
EXCAVATION BUCKET DIMENSIONS: 18 inches	LOGGED BY: Z. Satterwhite
SAMPLING METHOD: Rubber-tired backhoe	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	RI-TP-2-1.0			SILTY GRAVEL with SAND (GM): brown (10YR 4/3), dry to moist, 60% fine to coarse subrounded to angular gravel with cobbles up to 1' diameter, 20% fine to coarse sand, 20% nonplastic fines	
2				POORLY GRADED SAND with GRAVEL (SP): brown becoming gray (10YR 4/3), moist, 50% fine to coarse sand, 45% fine to coarse gravel, 5% nonplastic fines, subrounded to rounded, contains round cobbles up to 4" diameter	
3				ORGANIC SOIL (OL): dark brown to black (10YR 2/1), moist, 90% fines, 10% fine gravel, nonplastic, firm, contains rootlets and wood, fluffy like peat, contains brick or red paint gravel up to 3" diameter	
4	RI-TP-2-3.5			POORLY GRADED SAND with GRAVEL (SP): gray (10YR 5/1),	
5				SILT with SAND (ML): dark greenish gray mottled brown and yellowish-brown (10GY 4/1), moist, 75% fines, 20% fine to coarse sand, 5% fine gravel, low plasticity, firm, contains inclusions of coarse silica sand with gold flakes (mica?)	
6					
7					
8					
9				Bottom of test pit at 9.0 feet. Excavation backfilled with cuttings in reverse order to ground surface, and compacted with backhoe bucket.	
10					
11					
12					
13					
14					
15					

PROJECT: MJB North Yard Anacortes, Washington	**Test Pit Log No. TP-3**
TEST PIT LOCATION:	ELEVATION AND DATUM: Not surveyed; datum is ground surface
EXCAVATION CONTRACTOR: Gary Merlino Construction Company, Inc.	DATE STARTED: 7/12/05 / DATE FINISHED: 7/12/05
OPERATOR: Kurt Kamius	TOTAL DEPTH (ft.): 7.0 / MEASURING POINT: Ground surface
EXCAVATION EQUIPMENT: Case 580L Backhoe	DEPTH TO WATER: FIRST 6.5 / COMPL. NA
EXCAVATION BUCKET DIMENSIONS: 18 inches	LOGGED BY: Z. Satterwhite
SAMPLING METHOD: Rubber-tired backhoe	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	RI-TP-3-5.0			POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark grayish brown (10YR 3/2), dry, 65% fine to coarse subangular to angular gravel, 25% fine to coarse sand, 10% nonplastic fines, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2					
3				POORLY GRADED SAND with GRAVEL (SP): brown (10YR 4/3), moist, 50% fine to coarse sand, 45% fine to coarse gravel, 5% nonplastic fines, subrounded to rounded, contains round cobbles up to 4" diameter	
4				POORLY GRADED SAND with SILT and GRAVEL (SP-SM): greenish black (10Y 2.5/1), moist, 50% fine to coarse sand, 40% fine to coarse subrounded to rounded gravel with rounded cobbles up to 4" diameter, 10% nonplastic fines	
5					
6					
7				wet Bottom of test pit at 7.0 feet due to caving. Excavation backfilled with cuttings in reverse order to ground surface, and compacted with backhoe bucket.	
8					
9					
10					
11					
12					
13					
14					
15					

PROJECT: MJB North Yard Anacortes, Washington	**Test Pit Log No. TP-4**
TEST PIT LOCATION:	ELEVATION AND DATUM: Not surveyed; datum is ground surface
EXCAVATION CONTRACTOR: Gary Merlino Construction Company, Inc.	DATE STARTED: 7/12/05 / DATE FINISHED: 7/12/05
OPERATOR: Kurt Kamius	TOTAL DEPTH (ft.): 10.5 / MEASURING POINT: Ground surface
EXCAVATION EQUIPMENT: Case 580L Backhoe	DEPTH TO WATER: FIRST 6.5 / COMPL. NA
EXCAVATION BUCKET DIMENSIONS: 18 inches	LOGGED BY: Z. Satterwhite
SAMPLING METHOD: Rubber-tired backhoe	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	RI-TP-4-0.0 RI-TP-4-1.5			POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark grayish brown (10YR 3/2), dry, 65% fine to coarse subangular to angular gravel with cobbles up to 1' diameter, 25% fine to coarse sand, 10% nonplastic fines, gravel is fine-grained dark gray rock	
2				POORLY GRADED SAND with GRAVEL (SP): brown (10YR 4/3), moist, 50% fine to coarse sand, 45% fine to coarse subrounded to rounded gravel with round cobbles up to 4" diameter, 5% nonplastic fines silty sand with gravel	
3				POORLY GRADED SAND with SILT and GRAVEL (SP-SM): greenish black (10Y 2.5/1), moist, 50% fine to coarse sand, 40% fine to coarse subrounded to rounded gravel up to 6" in diameter, 10% nonplastic fines	
4					
5	RI-TP-4-4.5			matted wood material	
6					
7				wet	
8				SILT with SAND (ML): dark greenish gray mottled brown and yellowish-brown (10GY 4/1), moist, 75% fines, 20% fine to coarse sand, 5% fine gravel, low plasticity, firm, contains inclusions of coarse silica sand with gold flakes (mica?)	
9					
10					
11				Bottom of test pit at 10.5 feet. Excavation backfilled with cuttings in reverse order to ground surface, and compacted with backhoe bucket.	
12					
13					
14					
15					

PROJECT: MJB North Yard Anacortes, Washington	**Test Pit Log No. TP-5**
TEST PIT LOCATION:	ELEVATION AND DATUM: Not surveyed; datum is ground surface
EXCAVATION CONTRACTOR: Gary Merlino Construction Company, Inc.	DATE STARTED: 7/12/05 / DATE FINISHED: 7/12/05
OPERATOR: Kurt Kamius	TOTAL DEPTH (ft.): 8.5 / MEASURING POINT: Ground surface
EXCAVATION EQUIPMENT: Case 580L Backhoe	DEPTH TO WATER: FIRST 8.0 / COMPL. NA
EXCAVATION BUCKET DIMENSIONS: 18 inches	LOGGED BY: Z. Satterwhite
SAMPLING METHOD: Rubber-tired backhoe	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1				POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark grayish brown (10YR 3/2), dry to moist, 65% fine to coarse subangular to angular gravel with cobbles up to 1' diameter, 25% fine to coarse sand, 10% nonplastic fines, gravel is fine-grained dark gray rock	
2				POORLY GRADED SAND with GRAVEL (SP): brown (10YR 4/3), moist, 50% fine to coarse sand, 45% fine to coarse gravel, 5% nonplastic fines, subrounded to rounded, contains round cobbles up to 4" diameter	
3				POORLY GRADED SAND with SILT and GRAVEL (SP-SM): greenish black (10Y 2.5/1), moist, 50% fine to coarse sand, 40% fine to coarse subrounded to rounded cobbles up to 6" diameter, 10% nonplastic fines	
4	RI-TP-5-4.0	✋			
5					
6	RI-TP-5-5.5	✋		SILTY SAND with GRAVEL (SM): black (10YR 2/1), moist to wet, 50% fine to coarse sand, 30% fine subangular to subrounded gravel, 20% nonplastic fines, contains wood chunks, metal pipe debris, rope, yellow sulfur chunks	
7					
8				wood piling (?)	
9				Bottom of test pit at 8.5 feet due to caving. Excavation backfilled with cuttings in reverse order to ground surface, and compacted with backhoe bucket.	
10					
11					
12					
13					
14					
15					

PROJECT: MJB North Yard Anacortes, Washington	**Test Pit Log No. TP-6**
TEST PIT LOCATION:	ELEVATION AND DATUM: Not surveyed; datum is ground surface
EXCAVATION CONTRACTOR: Gary Merlino Construction Company, Inc.	DATE STARTED: 7/12/05 / DATE FINISHED: 7/12/05
OPERATOR: Kurt Kamius	TOTAL DEPTH (ft.): 10.0 / MEASURING POINT: Ground surface
EXCAVATION EQUIPMENT: Case 580L Backhoe	DEPTH TO WATER: FIRST 8.0 / COMPL. NA
EXCAVATION BUCKET DIMENSIONS: 18 inches	LOGGED BY: Z. Satterwhite
SAMPLING METHOD: Rubber-tired backhoe	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	RI-TP-6-0.0			POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark grayish brown (10YR 3/2), dry, 50% fine to coarse subangular to angular gravel with cobbles up to 1' diameter, 40% fine to coarse sand, 10% fines, gravel is fine-grained dark gray rock	
2	RI-TP-6-1.0			POORLY GRADED SAND with GRAVEL (SP): brown (10YR 4/3), moist, 50% fine to coarse sand, 45% fine to coarse gravel, 5% nonplastic fines, subrounded to rounded, contains round cobbles up to 4" diameter	
3					
4				SILTY GRAVEL with SAND (GM): greenish black (10Y 2.5/1), moist, 45% fine to coarse subangular to subrounded gravel, 35% fine to coarse sand, 20% nonplastic fines, contains trace wood shards, mothball-like odor, concrete chunks (1.5' diam), orange rusty slag chunks at 6.5' (8" diam), twine or rope at 7'	
5					
6					
7	RI-TP-6-6.0				
8				SILT with SAND (ML): dark greenish gray mottled brown and yellowish-brown (10GY 4/1), moist, 75% fines, 20% fine to coarse sand, 5% fine gravel, low plasticity, firm, contains inclusions of coarse silica sand with gold flakes (mica?)	
9					
10				Bottom of test pit at 10.0 feet. Excavation backfilled with cuttings in reverse order to ground surface, and compacted with backhoe bucket.	
11					
12					
13					
14					
15					

PROJECT: MJB North Yard Anacortes, Washington	**Test Pit Log No. TP-7**
TEST PIT LOCATION:	ELEVATION AND DATUM: Not surveyed; datum is ground surface
EXCAVATION CONTRACTOR: Gary Merlino Construction Company, Inc.	DATE STARTED: 7/12/05 / DATE FINISHED: 7/12/05
OPERATOR: Kurt Kamius	TOTAL DEPTH (ft.): 8.0 / MEASURING POINT: Ground surface
EXCAVATION EQUIPMENT: Case 580L Backhoe	DEPTH TO WATER: FIRST 6.5 / COMPL. NA
EXCAVATION BUCKET DIMENSIONS: 18 inches	LOGGED BY: Z. Satterwhite
SAMPLING METHOD: Rubber-tired backhoe	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	RI-TP-7-5.5 RI-TP-7-6.5	RI-TP-7X-5.5		POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark grayish brown (10YR 3/2), dry to moist, 65% fine to coarse subangular to angular gravel with cobbles up to 1' diameter, 25% fine to coarse sand, 10% nonplastic fines, gravel is fine-grained dark gray rock	
2				POORLY GRADED SAND with SILT and GRAVEL (SP-SM): greenish black (10Y 2.5/1), moist, 50% fine to coarse sand, 40% fine to coarse subrounded to rounded gravel up to 6" in diameter, 10% nonplastic fines	
3				SILTY GRAVEL with SAND (GM): very dark greenish gray (10Y 3/1), moist, 50% fine to coarse subrounded to rounded gravel, 30% medium to coarse sand, 20% nonplastic fines, slight odor, with occasional round cobbles	
4					
5					
6				wood lagging	
7				wet, mothball-like odor and sheen	
8				Bottom of test pit at 8.0 feet due to caving. Excavation backfilled with cuttings in reverse order to ground surface, and compacted with backhoe bucket.	
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PROJECT: MJB North Yard Anacortes, Washington	**Test Pit Log No. TP-8**
TEST PIT LOCATION:	ELEVATION AND DATUM: Not surveyed; datum is ground surface
EXCAVATION CONTRACTOR: Gary Merlino Construction Company, Inc.	DATE STARTED: 7/12/05 / DATE FINISHED: 7/12/05
OPERATOR: Kurt Kamius	TOTAL DEPTH (ft.): 9.0 / MEASURING POINT: Ground surface
EXCAVATION EQUIPMENT: Case 580L Backhoe	DEPTH TO WATER: FIRST 6.5 / COMPL. NA
EXCAVATION BUCKET DIMENSIONS: 18 inches	LOGGED BY: Z. Satterwhite
SAMPLING METHOD: Rubber-tired backhoe	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	RI-TP-8-0.0			SILTY GRAVEL with SAND (GM): brown (10YR 4/3), dry to moist, 60% fine to coarse gravel, 20% fine to coarse sand, 20% nonplastic fines, subrounded to angular, contains cobbles up to 1' diameter	Note: asphalt and white 6" diameter (sewer?) pipe to east of test pit.
2	RI-TP-8-1.5			POORLY GRADED SAND with SILT and GRAVEL (SP-SM): greenish black (10Y 2.5/1), moist, 50% fine to coarse sand, 40% fine subrounded to rounded gravel, 10% nonplastic fines	
3					
4	RI-TP-8-3.5			ORGANIC SOIL (OL): dark brown to black (10YR 2/1), moist, 90% fines, 10% fine sand, nonplastic, firm, wood matting on top, contains rootlets, becomes brown (7.5YR 4/4) towards bottom	
5				SILT with SAND (ML): dark greenish gray mottled brown and yellowish-brown (10GY 4/1), moist, 75% fines, 25% fine to coarse sand, low plasticity, soft to firm	Tin can lid at 5 feet.
6					
7					
8					
9				Bottom of test pit at 9.0 feet. Excavation backfilled with cuttings in reverse order to ground surface, and compacted with backhoe bucket.	
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PROJECT: MJB North Yard Anacortes, Washington	**Test Pit Log No. TP-9**
TEST PIT LOCATION:	ELEVATION AND DATUM: Not surveyed; datum is ground surface
EXCAVATION CONTRACTOR: Gary Merlino Construction Company, Inc.	DATE STARTED: 7/12/05 / DATE FINISHED: 7/12/05
OPERATOR: Kurt Kamius	TOTAL DEPTH (ft.): 10.0 / MEASURING POINT: Ground surface
EXCAVATION EQUIPMENT: Case 580L Backhoe	DEPTH TO WATER: FIRST NA / COMPL. NA
EXCAVATION BUCKET DIMENSIONS: 18 inches	LOGGED BY: Z. Satterwhite
SAMPLING METHOD: Rubber-tired backhoe	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1–3	RI-TP-9-0.0			POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark grayish brown (10YR 3/2), moist, 75% fine to coarse gravel, 15% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock, contains wood fragments	
4–9				SILT with SAND (ML): dark greenish gray mottled brown and yellowish-brown (10GY 4/1), moist, 75% fines, 20% fine to coarse sand, 5% fine gravel, low plasticity, soft, contains inclusions of coarse silica sand with gold flakes (mica?)	
10–15				Bottom of test pit at 10.0 feet. Excavation backfilled with cuttings in reverse order to ground surface, and compacted with backhoe bucket.	

OAKTESTPIT (REV. 6/03)

PROJECT: MJB North Yard Anacortes, Washington	**Test Pit Log No. TP-10**
TEST PIT LOCATION:	ELEVATION AND DATUM: Not surveyed; datum is ground surface
EXCAVATION CONTRACTOR: Gary Merlino Construction Company, Inc.	DATE STARTED: 7/12/05 / DATE FINISHED: 7/12/05
OPERATOR: Kurt Kamius	TOTAL DEPTH (ft.): 8.0 / MEASURING POINT: Ground surface
EXCAVATION EQUIPMENT: Case 580L Backhoe	DEPTH TO WATER: FIRST 7.5 / COMPL. NA
EXCAVATION BUCKET DIMENSIONS: 18 inches	LOGGED BY: Z. Satterwhite
SAMPLING METHOD: Rubber-tired backhoe	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
				Surface Elevation: Not surveyed	
1				POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark grayish brown (10YR 3/2), dry, 65% fine to coarse subangular to angular gravel with cobbles up to 1' diameter, 25% fine to coarse sand, 10% nonplastic fines, gravel is fine-grained dark gray rock	
2				POORLY GRADED SAND with GRAVEL (SP): brown (10YR 4/3), moist, 50% fine to coarse sand, 45% fine to coarse gravel, 5% nonplastic fines, subrounded to rounded, contains round cobbles up to 4" diameter	
3					
4					
5				POORLY GRADED SAND with SILT and GRAVEL (SP-SM): greenish black (10Y 2.5/1), moist, 50% fine to coarse sand, 40% fine to coarse subrounded to rounded gravel up to 6" in diameter, 10% nonplastic fines concrete chunk @ west of hole (>4' in diam, left in place).	
6				SILTY GRAVEL with SAND (GM): greenish black (10Y 2.5/1), moist, 40% fine to coarse subangular to subrounded gravel, 35% fine to coarse sand, 25% nonplastic fines, contains trace wood shards, concrete chunks, orange rusty slag chunks, twine and rope, slight mothball-like odor	
7	RI-TP-10-6.5			rebar wet	
8				Bottom of test pit at 8.0 feet due to caving. Excavation backfilled with cuttings in reverse order to ground surface, and compacted with backhoe bucket.	
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PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-1**
BORING LOCATION: N 555188.99; E 1210202.95	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/9/06 / DATE FINISHED: 2/9/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: 4.0 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	PP-1-0.0				POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2					SILTY SAND with GRAVEL (SM): brown (10YR 4/3), moist, 55% fine to coarse sand, 30% rounded to subangular fine to coarse gravel, 15% low plasticity fines	
3					SILTY GRAVEL with SAND (GM): dark gray (10Y 3/1), moist, 45% fine to coarse subrounded to rounded gravel, 30% fine to coarse sand, 25% low plasticity fines	
4	PP-1-4.0				▼ wet	
5						
6						
7						
8						
9	PP-1-8.0				SILT with SAND (ML): greenish gray mottled yellowish brown (10GY 5/1), moist, 70% fines, 20% fine to coarse sand, 10% subangular fine to coarse gravel, low plasticity, hard, contains trace dark brown rootlets, also contains inclusions of green mica/metallic sand	
10						
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
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14						
15						

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-2**
BORING LOCATION: N 555180.98; E 1210216.24	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/9/06 / DATE FINISHED: 2/9/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: 4.0 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	PP-2-0.0				POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2						
3						
4	PP-2-4.0				wet	
5					SILT (ML): gray (10YR 5/1), moist, 90% fines, 10% fine sand, low plasticity, soft	
6	PP-2-5.0				dark brown	
7						
8						
9	PP-2-8.5				SANDY SILT (ML) (wet)	
10					SILT with SAND (ML): greenish gray mottled yellowish brown (10GY 5/1), moist, 70% fines, 20% fine to coarse sand, 10% subangular fine to coarse gravel, low plasticity, hard, contains trace dark brown rootlets, also contains inclusions of green mica/metallic sand	
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-3**
BORING LOCATION: N 555169.00; E 1210202.19	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/9/06 / DATE FINISHED: 2/9/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: 4.0 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
0	PP-3-0.0				POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2					SILTY SAND with GRAVEL (SM): brown (10YR 4/3), moist, 55% fine to coarse sand, 30% rounded to subangular fine to coarse gravel, 15% low plasticity fines	
3					POORLY GRADED SAND with GRAVEL (SP): black (10YR 2/1), moist, 70% fine to coarse sand, 30% fine to coarse gravel, with wood and brick fragments	
4	PP-3-4.0				SILTY SAND (SM): dark gray (10YR 4/1), wet, 80% fine to coarse sand, 20% low plasticity fines	
5					SILT (ML): brown (10YR 3/2), moist, 90% fines, 10% fine sand, low plasticity, soft, contains wood	
8	PP-3-8.0				sandy silt (wet)	
9					SILT with GRAVEL (ML): dark greenish gray mottled yellowish brown (5G 4/1), moist, 80% fines, 20% rounded fine to coarse gravel, low plasticity, hard, contains trace dark brown rootlets, also contains inclusions of green mica/metallic sand	
10	PP-3-10.5				matted woody fibers	
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-4**
BORING LOCATION: N 555180.06; E 1210192.78	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/9/06 / DATE FINISHED: 2/9/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST ~4.0 / COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	PP-4-0.0				POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2					SILTY SAND with GRAVEL (SM): brown (10YR 4/3), moist, 55% fine to coarse sand, 30% rounded to subangular fine to coarse gravel, 15% low plasticity fines becoming very dark gray (N 3/)	
3					SILT (ML): very dark greenish gray mottled dark brown (10Y 3/1), wet, 90% fines, 10% fine to coarse sand, low plasticity, soft, contains woody fibrous matter	
4	PP-4-4.0					
5						
6						
7					SILTY SAND (SM): dark greenish gray mottled very dark brown (10GY 4/1), wet, 50% fine to coarse sand, 40% low plasticity fines, 10% fine gravel	
8	PP-4-8.0					
9						
10					SILT (ML): greenish gray mottled yellowish brown (10GY 5/1), moist, 90% fines, 10% subangular fine to coarse gravel, low plasticity, hard, contains trace dark brown rootlets, also contains inclusions of green mica/metallic sand	
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-5**
BORING LOCATION: N 555210.416; E 1210202.96	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/9/06 / DATE FINISHED: 2/9/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST ~8.0 / COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	PP-5-0.0				POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	Driller call: very rocky
2					SILTY SAND with GRAVEL (SM): brown (10YR 4/3), moist, 55% fine to coarse sand, 30% rounded to subangular fine to coarse gravel, 15% low plasticity fines	
3					POORLY GRADED SAND with SILT and GRAVEL (SP-SM): very dark greenish gray (10Y 3/1), moist, 50% fine to coarse sand, 40% fine to coarse subangular to angular gravel, 10% low plasticity fines	
4	PP-5-4.0				SILTY GRAVEL with SAND (GM): dark gray (10Y 3/1), moist, 45% fine to coarse subrounded to rounded gravel, 30% fine to coarse sand, 25% low plasticity fines	Driller call: poor recovery due to rocks
5						
6						
7						
8	PP-5-8.0				▼ wet?	
9						
10	PP-5-9.0				SILT with SAND (ML): greenish gray mottled yellowish brown (10GY 5/1), moist, 70% fines, 20% fine to coarse sand, 10% subangular fine to coarse gravel, low plasticity, hard, contains trace dark brown rootlets, also contains inclusions of green mica/metallic sand	
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-6**
BORING LOCATION: N 555182.37; E 1210234.87	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/9/06 / DATE FINISHED: 2/9/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: 4.5 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	PP-6-0.0				POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2					SILTY SAND with GRAVEL (SM): brown (10YR 4/3), moist, 55% fine to coarse sand, 30% rounded to subangular fine to coarse gravel, 15% low plasticity fines	
3						
4	PP-6-4.0					
5	PP-6-5.0				wet silty sand (SM) with matted wood fibers	
6					SILT (ML): very dark greenish gray (10Y 3/1), moist, 90% fines, 10% fine to coarse sand, low plasticity, soft	
7						
8						
9	PP-6-8.5				SILT with SAND (ML): greenish gray mottled yellowish brown (10GY 5/1), moist, 70% fines, 20% fine to coarse sand, 10% subangular fine to coarse gravel, low plasticity, hard, contains trace dark brown rootlets, also contains inclusions of green mica/metallic sand	
10						
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-7**
BORING LOCATION: N 555144.80; E 1210201.18	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/9/06 / DATE FINISHED: 2/9/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: 4.5 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
0	PP-7-0.0				POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
1					SILTY SAND with GRAVEL (SM): brown (10YR 4/3), moist, 55% fine to coarse sand, 30% rounded to subangular fine to coarse gravel, 15% low plasticity fines	
2						
3					SILTY SAND with GRAVEL (SM): black (10YR 2/1), moist, 50% fine to coarse sand, 30% subrounded to rounded fine to coarse gravel, 20% low plasticity fines	
4					wet	
5	PP-7-4.5				contains woodshards	
6	PP-7-6.0					
7					SILTY GRAVEL with SAND (GM): black (10YR 2/1), wet, 45% subangular to angular fine to coarse gravel, 35% fine to coarse sand, 20% low plasticity fines, odor	
8	PP-7-8.0					
9						
10						
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-8**
BORING LOCATION: N 555189.12; E 1210171.70	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/9/06 / DATE FINISHED: 2/9/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: ~7.5 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	PP-8-0.0				POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2					SILTY SAND with GRAVEL (SM): brown (10YR 4/3), moist, 55% fine to coarse sand, 30% rounded to subrounded fine to coarse gravel, 15% low plasticity fines becoming very dark gray with subangular gravel	Refusal and 2 and 4' bgs in first two boring locations (concrete in bottom of sampler), so move north 4' of first locations.
3						
4						
5	PP-8-4.5				PEAT (PT): very dark brown (10YR 2/2), moist, 60% fibrous woodchips and rootlets, 20% fine to coarse sand, 20% low plasticity fines, non-plastic, soft, odor	
6	PP-8-6.0					
7					SILT (ML): greenish gray (10Y 5/1), moist, 100% fines, low plasticity, soft, with rootlets	
8					wet	
9	PP-8-8.0				SILTY SAND (SM): dark greenish gray mottled very dark brown (10GY 4/1), wet, 50% fine to coarse sand, 40% low plasticity fines, 10% fine gravel	
10					SILT with SAND (ML): greenish gray mottled yellowish brown (10GY 5/1), moist, 70% fines, 20% fine to coarse sand, 10% subangular fine to coarse gravel, low plasticity, soft, contains trace dark brown rootlets, also contains inclusions of green mica/metallic sand	
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-9**
BORING LOCATION: N 555251.11; E 1210482.12	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/10/06 / DATE FINISHED: 2/10/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: ~7.5 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	PP-9-0.0				SILTY SAND with GRAVEL (SM): very dark brown (10YR 2/2), moist, 45% fine to coarse sand, 30% subangular to angular fine to coarse gravel, 25% low plasticity fines, contains woodchips	
2						
3					PEAT (PT): very dark brown mottled black and brown (10YR 2/2), moist, 60% fines, 20% wood shards, 20% fine to coarse sand, non plastic, soft	
4						
5	PP-9-4.5					
6	PP-9-6.0					
7						
8					POORLY GRADED GRAVEL with SAND (GP): greenish gray (10Y 5/1), wet, 60% fine to coarse sand, 40% subangular to rounded fine to coarse gravel	
9					SILT (ML): very soft, wet, sludgy, odor	
10	PP-9-9.0					
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-10**
BORING LOCATION: N 555224.50; E 1210454.89	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/10/06 / DATE FINISHED: 2/10/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: ~7.5 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	PP-10-0.0				SILTY GRAVEL with SAND (GM): dark grayish brown (10YR 4/2), moist, 40% fine to coarse gravel, 30% fine to coarse sand, 30% low plasticity fines, contains metal staple	
2					SILTY SAND with GRAVEL (SM): very dark brown (10YR 2/2), moist, 50% fine to coarse sand, 35% low plasticity fines, 15% subangular to angular fine to coarse gravel	
3					SILT (ML): very dark brown (10YR 2/2), moist, 50% fines, 30% wood, 20% fine to coarse sand, low plasticity, soft	
4	PP-10-4.0					
5					wood (odor)	
6	PP-10-6.0				POORLY GRADED SAND (SP): pale brown (10YR 6/3), moist, 100% fine to coarse sand or crushed rock	
7					wet	
8						
9	PP-10-9.0				WOOD black (10YR 2/1), wet, 50% wood, 30% low plasticity fines, 20% fine to coarse sand, odor, stains things black	
10						
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-11**	
BORING LOCATION: N 555195.28; E 1210431.01	ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/9/06	DATE FINISHED: 2/9/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: ~7.5	COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite	
HAMMER WEIGHT: NA DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman	REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: Not surveyed	
1	PP-11-0.0				POORLY GRADED SAND (SP): dark olive gray (5Y 3/2), moist, 95% fine to medium sand, 5% fines, contains rootlets	
2					WOOD very dark brown (10YR 2/2), moist, 40% wood, 20% fine to medium sand, 20% non-plastic fines, trace subangular to angular fine to coarse gravel, soft	
3						
4					PEAT (PT): dark reddish brown (5YR 3/3), moist, wood	
5	PP-11-5.0					
6					SILTY SAND with GRAVEL (SM): black (10YR 2/1), moist, 50% fine to medium sand, 20% non-plastic fines, 15% subangular to angular fine to medium gravel, 15% wood	
7					WOOD black mottled dark reddish brown (10YR 2/1), wet, 70% woodchips, 20% fine to coarse sand, 10% fine to coarse gravel, soft, odor, trace fine angular pale yellow sulfur gravel throughout	
8	PP-11-8.0					
9						
10						
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-12**
BORING LOCATION: N 555265.23; E 1210480.22	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/10/06 / DATE FINISHED: 2/10/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST ~7.5 / COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	PP-12-0.0				SILTY GRAVEL with SAND (GM): dark grayish brown mottled dark gray, yellowish-brown, and brown (10YR 4/2), moist, 40% fine to coarse subangular to angular gravel, 30% fine to coarse sand, 30% low plasticity fines	
2						
3						
4						
5	PP-12-4.5				WOOD very dark brown mottled olive gray (10YR 2/2), moist, 50% wood, 30% non-plastic fines, 20% fine to coarse sand, peaty, soft	
6						
7	PP-12-6.0				WOOD very dark brown mottled reddish brown (10YR 2/2), moist, 100% peaty woodchips, odor red stained (painted?) wood	
8					wet	
9						
10	PP-12-9.0				red stained (painted?) wood	
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-13**
BORING LOCATION: N 555246.06; E 1210459.16	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/10/06 / DATE FINISHED: 2/10/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: NA / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	PP-13-0.0				GRAVELLY SILT with SAND (ML): dark grayish brown (10YR 4/2), moist, 50% fines, 30% subangular to rounded fine to coarse gravel, 20% fine to coarse sand, low plasticity, soft	
2					SILTY SAND with GRAVEL (SM): dark brown (10YR 3/3), moist, 55% fine to coarse sand, 30% subangular to angular fine to coarse gravel, 15% low plasticity fines, contains woodchips	
3						
4	PP-13-4.0				WOOD dark reddish brown (5YR 3/3), moist, 75% large woodchips, 15% fine to coarse sand, 10% non-plastic fines, slight odor	
5						
6					POORLY GRADED SAND (SP): pale yellow (2.5Y 8/3), moist, 100% fine to coarse sand or crushed rock	
7						
8	PP-13-8.0				WOODmoist, 100% large woodchips, odor	
9						
10	PP-13-9.0					
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-14**
BORING LOCATION: N 555229.40; E 1210445.91	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/9/06 / DATE FINISHED: 2/9/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST ~7.0 / COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: Not surveyed	
1	PP-14-0.0				GRAVELLY SILT (ML): very dark gray (10YR 3/1), moist, 55% fines, 40% subangular to subrounded fine to coarse gravel, 5% fine to coarse sand, low plasticity, soft	
2					off-white sandy gravel or crushed rock SILT with SAND (ML): very dark brown (10YR 2/2), moist, 40% low plasticity fines, 40% wood, 20% fine to coarse sand, non-plastic, soft	
3						
4					SILTY SAND (SM): very dark grayish brown mottled black (10YR 3/2), moist, 60% fine to coarse sand, 30% low plasticity fines, 10% fine to coarse gravel, contains wood chunks	
5	PP-14-4.5					
6					pale yellow crushed rock wood	
7					PEAT (PT): black (10YR 2/1), wet, silty, woody, odor	
8	PP-14-8.0					
9						
10						
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-15**
BORING LOCATION: N 555218.16; E 1210433.96	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/9/06 / DATE FINISHED: 2/9/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: ~7.0 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
0	PP-15-0.0				GRAVELLY SILT (ML): very dark gray (10YR 3/1), moist, 55% fines, 40% subangular to subrounded fine to coarse gravel, 5% fine to coarse sand, low plasticity, soft	
1					SILTY SAND with GRAVEL (SM): black (10YR 2/1), moist, 50% fine to coarse sand, 30% low plasticity fines, 20% fine to coarse gravel, contains wood	
2						
3						
4						
5	PP-15-4.5				large yellow wood chunks	
6					SILT (ML): black (10YR 2/1), moist, 70% fines, 20% wood, 10% fine to coarse sand, low plasticity, very soft, odor	
7					wet	
8	PP-15-8.0					
9						
10						
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-16**
BORING LOCATION: N 555190.45; E 1210404.11	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/9/06 / DATE FINISHED: 2/9/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: ~7.5 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
0	PP-16-0.0				SILTY SAND with GRAVEL (SM): black (10YR 2/1), moist, 50% fine to medium sand, 30% fine to coarse gravel and cobbles, 20% low plasticity fines	
1					SILTY SAND (SM): dark gray mottled yellowish-brown, green, pale yellow, and black (10YR 4/1), moist, 50% fine to coarse sand, 40% low plasticity fines, 10% fine to coarse gravel	
2						
3						
4	PP-16-4.0				pale yellow silty fine gravel (sulfur?)	
5					PEAT (PT): dark reddish brown (5YR 3/3), moist, woody, non-plastic, soft	
6	PP-16-6.5				SILTY SAND with GRAVEL (SM): black (10YR 2/1), moist, 45% fine to coarse sand, 35% subrounded to rounded fine to medium gravel, 20% low plasticity fines, odor	
7						
8	PP-16-8.0				WOOD black mottled dark reddish brown (10YR 2/1), wet, 70% woodchips, 20% fine to coarse sand, 10% fine to coarse gravel, nonplastic, soft, odor, trace fine angular pale yellow sulfur gravel throughout	
9						
10						
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-17**
BORING LOCATION: N 555223.30; E 1210406.18	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/9/06 / DATE FINISHED: 2/9/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: 4.5 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: Not surveyed	
1	PP-17-0.0				POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2					SANDY SILT (ML): dark gray mottled yellowish-brown, green, pale yellow, and black (10YR 4/1), moist, 50% low plasticity fines, 40% fine to coarse sand, 10% fine to coarse gravel, low plasticity, very firm black woodshards	
3					SILTY SAND (SM): black mottled brown (10YR 2/1), moist, 65% fine to medium sand, 35% low plasticity fines, with woodshards	
4					SANDY SILT (ML): very dark grayish brown (10YR 3/2), moist, 65% fines, 35% fine to coarse sand, with woodshards, low plasticity, soft	
5	PP-17-4.5				SILTY SAND with GRAVEL (SM): black (10YR 2/1), wet, 60% fine to coarse sand, 20% dark yellow bubbly slag gravel, 20% low plasticity fines	
6					WOOD black mottled dark red (10YR 2/1),	
7					SILT (ML): black (10YR 2/1), wet, 70% fines, 20% wood, 10% fine to coarse sand, low plasticity, very soft, odor	
8	PP-17-8.0					
9						
10						
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-18**
BORING LOCATION: N 555259.14; E 1210426.85	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/9/06 / DATE FINISHED: 2/9/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: 6.75 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: Not surveyed	
1	PP-18-0.0				SILTY GRAVEL (GM): very dark gray (10YR 3/1), moist, 55% subangular to subrounded fine to coarse gravel, 40% fines, 5% fine to coarse sand yellowish brown fine sandy silt	
2					SILT (ML): very dark brown (10YR 2/2), moist, 80% woody fines, 10% fine to coarse sand, 10% fine to coarse gravel, low plasticity, soft	
3						
4						
5	PP-18-4.5					
6	PP-18-6.0					
7					SILTY GRAVEL (GM): very dark brown (10YR 2/2), wet, 80% fine to coarse subangular to angular gravel, 20% low plasticity fines	
8						
9						
10					PEAT (PT): very dark brown (10YR 2/2), wet, woody, with red-stained wood chunks, odor	
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-19**
BORING LOCATION: N 555266.89; E 1210445.09	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/10/06 / DATE FINISHED: 2/10/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: ~7.5 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	PP-19-0.0				SILTY SAND with GRAVEL (SM): dark grayish brown (10YR 3/2), moist, 40% fine to coarse sand, 35% fine to coarse gravel, 25% low plasticity fines, with woodchips	
2						
3					SANDY SILT (ML): very dark greenish gray mottled brown and black (10Y 3/1), moist, 45% fines, 40% fine to coarse sand, 15% fine to coarse gravel, trace woodchips, low plasticity, soft	
4						
5	PP-19-4.5					
6					WOOD dark brown to reddish brown (10YR 3/3), moist, odor	
7	PP-19-6.0					
8					wet	
9					black	
10	PP-19-9.5				fine sulfur gravel	
11					red stain	
12					silty	
13					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
14						
15						

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-20**
BORING LOCATION: N 555101.15; E 1210378.36	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/10/06 / DATE FINISHED: 2/10/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: 5.0 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	PP-20-0.0				SILTY SAND with GRAVEL (SM): black (10YR 2/1), moist, 40% fine to coarse sand, 35% low plasticity fines, 25% subangular to angular fine to coarse gravel	
2					POORLY GRADED GRAVEL with SILT and SAND (GP-GM): brown (10YR 4/3), moist, 50% subrounded to rounded fine to coarse gravel, 40% fine to coarse sand, 10% low plasticity fines	
3					SILTY SAND with GRAVEL (SM): light yellowish brown (2.5Y 6/3), moist, 40% fine to coarse sand, 35% low plasticity fines, 25% fine to coarse rounded to angular gravel	
4						
5	PP-20-4.5					
6					POORLY GRADED SAND with GRAVEL (SP): very dark gray mottled dark yellowish-brown (10YR 3/1), wet, 80% fine to coarse sand, 20% fine to coarse gravel pale yellow rock	
7						
8						
9					WOOD dark brown to reddish brown (10YR 3/3), wet, 60% peaty woodchips, 20% fine to coarse sand, 20% non-plastic fines, soft to firm, odor	
10	PP-20-9.0				red painted wood chips	
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-21**
BORING LOCATION: N 555077.95; E 1210372.88	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/10/06 / DATE FINISHED: 2/10/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: ~4.5 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: Not surveyed	
1	PP-21-0.0				POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2					POORLY GRADED GRAVEL with SILT and SAND (GP-GM): brown (10YR 4/3), moist, 50% subrounded to rounded fine to coarse gravel, 40% fine to coarse sand, 10% low plasticity fines	
3						
4						
5	PP-21-4.5				▼ wet SILTY SAND (SM): very dark brown (10YR 2/2), moist, 65% fine to coarse sand, 25% low plasticity fines, 10% fine to coarse gravel	
6	PP-21-6.0				POORLY GRADED SAND with GRAVEL (SP): very dark gray mottled dark yellowish-brown (10YR 3/1), wet, 80% fine to coarse sand, 20% fine to coarse gravel, contains wood	
7						
8					SILTY SAND with GRAVEL (SM): very dark brown to black (10YR 2/1), wet, 55% fine to coarse sand, 30% fine to coarse gravel, 15% low plasticity fines, contains trace yellow fine sulfur gravel, odor	
9	PP-21-8.5					
10						
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-22**
BORING LOCATION: N 555050.28; E 1210368.58	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/10/06 / DATE FINISHED: 2/10/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: ~5.0 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	PP-22-1.5				POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2					POORLY GRADED GRAVEL with SILT and SAND (GP-GM): brown mottled gray (10YR 4/3), moist, 50% subrounded to rounded fine to coarse gravel, 40% fine to coarse sand, 10% low plasticity fines	
3						
4	PP-22-4.0					
5					wet	
6						
7					SILTY GRAVEL (GM): greenish black (10Y 2.5/1), wet, 70% fine to coarse gravel, 30% low plasticity fines	
8	PP-22-8.0					
9					WOOD black and dark brown and reddish brown (10YR 2/1), moist, silty and peaty woodchips, odor	
10	PP-22-9.0					
11					red stained wood	
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-23**
BORING LOCATION: N 555044.22; E 1210354.77	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/10/06 / DATE FINISHED: 2/10/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: 5.0 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1					POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2	PP-23-2.0				POORLY GRADED GRAVEL with SILT and SAND (GP-GM): brown mottled gray (10YR 4/3), moist, 50% subrounded to rounded fine to coarse gravel, 40% fine to coarse sand, 10% low plasticity fines	
3						
4	PP-23-4.0					
5					wet	
6						
7					SILTY GRAVEL with SAND (GM): greenish black (5GY 2.5/1), wet, 60% fine to coarse subangular to angular gravel, 20% fine to coarse sand, 20% low plasticity fines, contains woodshards	
8	PP-23-8.0					
9						
10	PP-23-9.0				PEAT (PT): dark brown (10YR 2/2), wet, silty and woody, 20% fine to coarse subangular to angular gravel, odor	
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-24**
BORING LOCATION: N 555056.25; E 1210339.47	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/10/06 / DATE FINISHED: 2/10/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: 4.5 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1					POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2	PP-24-2.0				POORLY GRADED GRAVEL with SILT and SAND (GP-GM): brown mottled gray (10YR 4/3), moist, 50% subrounded to rounded fine to coarse gravel, 40% fine to coarse sand, 10% low plasticity fines	
3					SILTY SAND with GRAVEL (SM): very dark gray mottled brown (10YR 3/1), moist, 50% fine to coarse sand, 30% low plasticity fines, 20% fine to coarse gravel	
4						
5	PP-24-4.5				SILTY GRAVEL with SAND (GM): greenish black (5GY 2.5/1), wet, 60% fine to coarse subangular to angular gravel, 20% fine to coarse sand, 20% low plasticity fines, contains woodshards, odor woodshards	
6						
7						
8	PP-24-8.0				woodshard	Sample could be just cuttings
9						
10						
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-25**
BORING LOCATION: N 555078.82; E 1210305.98	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/10/06 / DATE FINISHED: 2/10/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: 4.5 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	PP-25-1.0				POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2					POORLY GRADED GRAVEL with SILT and SAND (GP-GM): brown mottled gray (10YR 4/3), moist, 50% subrounded to rounded fine to coarse gravel, 40% fine to coarse sand, 10% low plasticity fines	
3					SILTY SAND (SM): black (10YR 2/1), moist, 65% fine to coarse sand, 25% low plasticity fines, 10% fine to coarse gravel, odor	
4	PP-25-4.0					
5					SILTY GRAVEL with SAND (GM): greenish black (5GY 2.5/1), wet, 60% fine to coarse subangular to angular gravel, 20% fine to coarse sand, 20% low plasticity fines, contains woodshards	
6						
7					SANDY SILT (ML): greenish gray mottled yellowish brown (10GY 5/1), moist, 70% fines, 30% fine to coarse sand, low plasticity, very firm, contains trace dark brown rootlets, also contains inclusions of green mica/metallic sand	
8	PP-25-8.0					
9						
10						
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-26**
BORING LOCATION: N 555018.56; E 1210352.72	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/10/06 / DATE FINISHED: 2/10/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: 5.0 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	PP-26-1.5				POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2					SILTY SAND with GRAVEL (SM): brown mottled dark gray (10YR 4/3), moist, 50% fine to coarse sand, 35% subangular fine to coarse gravel, 15% low plasticity fines	
3						
4	PP-26-4.0					
5					wet, dark yellowish brown (10YR 4/4); with subrounded to rounded gravel	
6						
7						
8	PP-26-8.0					
9					SILTY GRAVEL with SAND (GM): greenish black (10Y 2.5/1), wet, 50% subrounded to rounded fine to coarse gravel, 35% fine to coarse sand, 15% low plasticity fines	
10						
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-27**
BORING LOCATION: N 554983.75; E 1210337.41	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/10/06 / DATE FINISHED: 2/10/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: ~6.5 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1					POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	2-inch diameter gray PVC electrical conduit encountered at 3 inches bgs - leads to old transformer to east.
2					POORLY GRADED GRAVEL with SILT and SAND (GP-GM): brown (10YR 4/3), moist, 50% subrounded to rounded fine to coarse gravel, 40% fine to coarse sand, 10% low plasticity fines	
3						
4	PP-27-4.0					
5						
6						
7					WOOD dark brown (10YR 2/2), wet, peaty, 10% fine to coarse sand, woodchips, odor, with yellow angular sulfur pieces	
8	PP-27-8.0					
9	PP-27-9.0					
10					SANDY SILT (ML): very greenish gray mottled yellowish brown (10GY 4/1), moist, 80% fines, 20% fine to coarse sand, low plasticity, firm, contains trace dark brown rootlets, also contains inclusions of green mica/metallic sand	
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-28**
BORING LOCATION: N 554371.80; E 1210369.75	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/10/06 / DATE FINISHED: 2/10/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: 6.0 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1					POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2					POORLY GRADED GRAVEL with SILT and SAND (GP-GM): brown (10YR 4/3), moist, 50% subrounded to rounded fine to coarse gravel, 40% fine to coarse sand, 10% low plasticity fines	
3					SILTY SAND with GRAVEL (SM): very dark gray (N 4/), moist, 50% fine to coarse sand, 30% fine to coarse gravel, 20% nonplastic fines	
4					POORLY GRADED GRAVEL with SAND (GP): pinkish gray (5YR 6/2), moist, 60% subangular to angular fine to medium gravel or broken brick, 40% fine to coarse sand	
5					2.5Y 6/4 light yellowish brown gravelly f-c sand	Hit refusal at 5' bgs on first attempt; move 3' to N.
6	PP-28-6.0				wet	
7					POORLY GRADED GRAVEL with SAND (GP): black (10YR 2/1), moist, 60% subrounded to rounded fine to coarse gravel, 40% fine to coarse sand	
8					subangular to angular gravel with some broken seashells	
9	PP-28-9.0					
10					SANDY SILT (ML): dark greenish gray mottled yellowish-brown (5GY 4/1), moist, 80% fines, 20% fine to coarse sand, low plasticity, hard, contains trace dark brown rootlets, also contains inclusions of green mica/metallic sand	
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-29**
BORING LOCATION: N 554355.79; E 1210395.70	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/10/06 / DATE FINISHED: 2/10/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: 9.25 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1					POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2					brown sandy gravel SILTY SAND with GRAVEL (SM): very dark greenish gray (5GY 3/1), moist, 60% fine to coarse sand, 20% low plasticity fines, 20% subrounded to subangular fine to coarse gravel	
3					very dark grayish brown (10YR 3/2)	
4						
5						Driller call: cobbly and rocky
6						
7						
8	PP-29-8.0					
9					wet	
10	PP-29-9.0				WOOD dark brown to black (10YR 2/1), wet, woodchips, soft	
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-30**
BORING LOCATION: N 554366.29; E 1210422.55	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/10/06 / DATE FINISHED: 2/10/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: 5.5 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1					POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2					POORLY GRADED GRAVEL with SILT and SAND (GP-GM): brown (10YR 4/3), moist, 50% subrounded to rounded fine to coarse gravel, 40% fine to coarse sand, 10% low plasticity fines	
3					SILTY SAND with GRAVEL (SM): very dark gray (N 4/), moist, 50% fine to coarse sand, 30% fine to coarse gravel, 20% nonplastic fines	
4						
5						
6	PP-30-6.0				WOOD dark brown to light brown (10 YR 2/2), wet, large woodchips	Driller call: very hard from 4 to 8.
7						
8						
9						Driller says wood is "pushing through" (no recovery on first attempt). Second boring nearby was performed in order to obtain 8 to 12' sample (3' w).
10	PP-30-9.0					
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-31**
BORING LOCATION: N 554398.65; E 1210397.57	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/10/06 / DATE FINISHED: 2/10/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: 5.0 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1					SILTY SAND with GRAVEL (SM): dark greenish gray (5GY 4/1), moist, 50% fine to coarse sand, 30% fine to coarse gravel, 20% nonplastic fines	
2					becoming N 4/ (dark gray)	
3						
4						
5					wet	
6	PP-31-6.0				WOOD dark brown (10YR 3/3), moist, slight odor, woodchips	
7						
8						
9						
10	PP-31-9.0				black silty woodchips (odor)	
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-32**
BORING LOCATION: N 554432.45; E 1210399.93	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 2/10/06 / DATE FINISHED: 2/10/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: 5.5 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
0					POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry to moist, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2					SILTY SAND with GRAVEL (SM): very dark gray (N 4/), moist, 50% fine to coarse sand, 35% subrounded to rounded fine to coarse gravel, 15% nonplastic fines	
4					odor	
5	PP-32-5.5				wet	
7					WOOD very dark brown to black (10YR 2/1), wet, 25% nonplastic fines, woodchips	
8	PP-32-8.0				odor	
9						
10	PP-32-9.0					
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-33**
BORING LOCATION: N 555251.81; E 1210446.18	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 3/22/06 / DATE FINISHED: 3/22/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST ~4.5 / COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: Not surveyed	
0					POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2					SILTY SAND with GRAVEL (SM): very dark brown (10YR 2/2), moist, 40% fine to coarse sand, 35% fine to coarse subangular to angular gravel, 25% nonplastic fines, contains woodchips	
3					WOOD dark reddish brown (5YR 2.5/2), moist, 75% peaty woodchips, 15% fine to coarse sand, 10% non-plastic fines	Driller is hitting rock, which displaces soft material below. Four attempts to obtain better recovery from different locations, but no success.
4	PP-33-4.0					
5					SILTY GRAVEL (GM): very dark brown (10YR 2/2), wet, 80% fine to coarse subangular to angular gravel, 20% low plasticity fines, odor	
9	PP-33-9.0				SILTY SAND (SM): black (10YR 2.5/1), wet, 40% fine to coarse sand, 30% sludgy nonplastic fines, 20% fine gravel of elemental sulfur, 10% dark woodchips, sheen and odor	
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-34**
BORING LOCATION: N 555286.43; E 1210437.86	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 3/22/06 / DATE FINISHED: 3/22/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST ~10.5 / COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1					POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2						
3					WOOD yellow moist, fine like sawdust, odor	
4						
5	PP-34-4.0					
6						
7						
8	PP-34-8.0					
9					becoming dark brown to reddish brown and slightly coarser	
10	PP-34-9.0				fine sulfur gravel (<1/2" diam) with odor	
11					SILTY SAND (SM): greenish black (10Y 2.5/1), wet, 60% fine to coarse sand, 40% sludgy nonplastic fines	
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
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OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-35**
BORING LOCATION: N 555282.67; E 1210399.49	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 3/22/06 / DATE FINISHED: 3/22/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: ~3.5 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1					SILTY GRAVEL with SAND (GM): very dark grayish brown (10YR 3/2), dry, 55% fine to coarse gravel, 25% fine to coarse sand, 20% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2					POORLY-GRADED SAND (SP): fine, olive (5Y 5/4)	
3					SANDY SILT (ML): very dark gray mottled brown (10YR 3/1), moist, 60% fines, 30% fine sand, 10% woodchips, low plasticity, soft	
4	PP-35-4.0				less sand; wet	
5					WOOD black (10YR 2.5/1), wet, shardy	
6						
7						
8	PP-35-8.0				with fine to coarse gravel	
9					SILTY SAND with GRAVEL (SM): very dark greenish gray (10Y 3/1), wet, 50% fine to coarse sand, 30% low plasticity fines, 20% fine to coarse gravel, contains white seashell fragments	
10	PP-35-9.0				WOOD dark reddish brown (5YR 2.5/2), moist, slight odor	
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-36**
BORING LOCATION: N 555240.01; E 1210378.56	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 3/22/06 / DATE FINISHED: 3/22/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST ~7.0 / COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1					POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2					SILTY SAND with GRAVEL (SM): black mottled gray and brown (10YR 2.5/1), moist, 50% fine to coarse sand, 30% fine to coarse gravel, 20% low plasticity fines	
3					POORLY GRADED SAND with GRAVEL (SP): brown (10YR 5/3), moist, 50% fine to coarse sand, 45% fine to coarse gravel, 5% nonplastic fines, subrounded to rounded	
4	PP-36-4.0				SILTY SAND with GRAVEL (SM): black mottled gray and brown (10YR 2.5/1), moist, 50% fine to coarse sand, 30% fine to coarse gravel, 20% low plasticity fines, white speckles	
5					WOOD light brown moist, large chunks, not peaty	
6						
7					becoming silty and wet	
8	PP-36-8.0					
9					dark greenish-black sulfur odor horizon with red paint-like woodchips	
10					WOOD black mottled dark red (10YR 2/1), wet, fine and peaty, slight odor	
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-37**
BORING LOCATION: N 555211.76; E 1210358.13	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 3/22/06 / DATE FINISHED: 3/22/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST ~3.0 / COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: Not surveyed	
0					SILTY GRAVEL with SAND (GM): very dark gray mottled brown (10YR 3/1), dry, 45% fine to coarse gravel, 35% fine to coarse sand, 20% nonplastic fines, subrounded to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
3					SILTY SAND (SM): greenish black (10Y 2.5/1), wet, 50% fine to coarse sand, 40% low plasticity fines, 10% fine to coarse gravel	
4	PP-37-4.0					no recovery from 4 to 8' on first attempt.
5	PP-37-5.0				WOOD dark reddish brown and black moist, fine, very slight odor, contains red bits like paint	
7					SILTY SAND with GRAVEL (SM): very dark gray (5Y 3/1), wet, 50% fine to coarse sand, 30% fine to coarse gravel, 20% low plasticity fines, white speckles	
8	PP-37-8.0					
9					1-inch hc-like odor and sheen WOOD dark reddish brown and black moist, fine, very slight odor, contains red bits like paint	
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-38**
BORING LOCATION: N 555169.40; E 1210368.40	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 3/22/06 / DATE FINISHED: 3/22/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST ~4.5 / COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1					POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2					POORLY GRADED SAND with GRAVEL (SP): brown (10YR 5/3), moist, 50% fine to coarse sand, 45% fine to coarse gravel, 5% nonplastic fines, subrounded to rounded dark brown organic silt	
3					SULFUR yellow (5Y 8/6), moist, 60% fine to coarse sand of sulfur, 40% fine angular gravel of sulfur, odor	
4	PP-38-4.0					
5					WOOD dark reddish brown to brown wet, fine and peaty, odor	
6						
7						
8	PP-38-8.0					
9						
10					SANDY SILT (ML): greenish gray (10GY 5/1), moist, 70% fines, 30% fine sand, low plasticity, firm	
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-39**
BORING LOCATION: N 555180.95; E 1210135.41	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 3/22/06 / DATE FINISHED: 3/22/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: ~5.5 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: Not surveyed	
1	PP-39-0.0				POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2					SILTY SAND with GRAVEL (SM): brown (10YR 4/3), moist, 55% fine to coarse sand, 30% rounded to subrounded fine to coarse gravel, 15% low plasticity fines	
3						
4						
5	PP-39-4.5				SILTY GRAVEL with SAND (GM): dark greenish gray (5GY 4/1), moist to wet, 55% fine to coarse gravel, 30% fine to coarse sand, 15% low plasticity fines, subrounded to subangular	
6						
7	PP-39-6.5				SILT (ML): greenish black (10Y 2.5/1), moist, 100% fines, low plasticity, soft	
8	PP-39-8.0					
9					SILT with SAND (ML): greenish gray mottled yellowish brown (10GY 5/1), moist, 70% fines, 20% fine to coarse sand, 10% subangular fine to coarse gravel, low plasticity, hard, contains trace dark brown rootlets, also contains inclusions of green mica/metallic sand	
10						
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-40**
BORING LOCATION: N 555156.56; E 1210163.65	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 3/22/06 / DATE FINISHED: 3/22/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: ~7.5 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: Not surveyed	
1	PP-40-0.0				POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2					SILTY SAND with GRAVEL (SM): brown mottled gray and olive (10YR 4/3), moist, 55% fine to coarse sand, 30% rounded to subangular fine to coarse gravel, 15% low plasticity fines	
3						
4					WOOD black to dark reddish brown (10YR 2/1), moist	
5	PP-40-4.5					
6	PP-40-6.0				LEAN CLAY (CL): dark gray moist, low plasticity, firm	
7					SILTY SAND (SM): olive gray (5Y 4/2), moist to wet, 80% fine to coarse sand, 20% low plasticity fines, contains dark brown woodshards, sheen and odor	
8						
9	PP-40-8.0					
10					SILT with SAND (ML): greenish gray mottled yellowish brown (10GY 5/1), moist, 70% fines, 20% fine to coarse sand, 10% subangular fine to coarse gravel, low plasticity, hard, contains trace dark brown rootlets, also contains inclusions of green mica/metallic sand	
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-41**
BORING LOCATION: N 555078.90; E 1210275.33	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 3/22/06 / DATE FINISHED: 3/22/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 6.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) — FIRST: NA / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: Not surveyed	
1	PP-41-1.5				POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2					POORLY GRADED GRAVEL with SILT and SAND (GP-GM): brown (10YR 4/3), moist, 50% subrounded to rounded fine to coarse gravel, 40% fine to coarse sand, 10% low plasticity fines	
3						
4	PP-41-4.0				SILTY GRAVEL with SAND (GM): dark brown mottled gray and greenish gray moist, 60% fine to coarse subangular to angular gravel, 20% fine to coarse sand, 20% low plasticity fines	
5						
6					Bottom of boring at 6.0 feet due to refusal. Boring backfilled with hydrated bentonite chips.	
7						
8						
9						
10						
11						
12						
13						
14						
15						

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-42**
BORING LOCATION: N 555105.54; E 1210307.90	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 3/22/06 / DATE FINISHED: 3/22/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST ~7.0 / COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO. L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1					POORLY GRADED GRAVEL with SILT and SAND (GP-GM): very dark gray (10YR 3/1), dry, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock	
2					POORLY GRADED GRAVEL with SILT and SAND (GP-GM): brown (10YR 4/3), moist, 50% subrounded to rounded fine to coarse gravel, 40% fine to coarse sand, 10% low plasticity fines	
3						
4	PP-42-4.0					
5					greenish gray and black with concrete gravel	
6						
7					POORLY GRADED GRAVEL with SAND (GP): black (10YR 2/1), wet, 80% fine to coarse angular gravel, 20% fine to coarse sand	
8	PP-42-8.0					
9					dark brown woody layer with silt	
10					SILT with SAND (ML): greenish gray mottled yellowish brown (10GY 5/1), moist, 70% fines, 20% fine to coarse sand, 10% subangular fine to coarse gravel, low plasticity, hard, contains trace dark brown rootlets, also contains inclusions of green mica/metallic sand	
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-43**
BORING LOCATION: N 555078.28; E 1210334.54	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 3/22/06 / DATE FINISHED: 3/22/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: ~7.0 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: Not surveyed	
1–15	PP-43-4.0 PP-43-6.0				POORLY GRADED GRAVEL with SILT and SAND (GP-GM): dark grayish brown mottled greenish gray and dark brown (10YR 3/2), moist, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subangular to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock, contains crushed concrete	Driller says lots of refusal due to concrete chunks. Two attempts to obtain decent recovery from 0 to 4'.
5					WOOD yellow moist, large	
7					wet, slight odor	
9					gray and silty	
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	

OAKBOREV (REV. 3/00)

PROJECT: MJB North Yard Anacortes, Washington	**Log of Boring No. PP-44**
BORING LOCATION: N 555053.71; E 1210304.85	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 3/22/06 / DATE FINISHED: 3/22/06
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 12.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Power Probe 9630 Pro-D	DEPTH TO WATER (ft.) FIRST: ~3.0 / COMPL.: NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]	LOGGED BY: Z. Satterwhite
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: K. Goodman / REG. NO.: L.Hg. 1786

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1					POORLY GRADED GRAVEL with SILT and SAND (GP-GM): dark grayish brown mottled greenish gray and dark brown (10YR 3/2), moist, 65% fine to coarse gravel, 25% fine to coarse sand, 10% nonplastic fines, subrounded to angular, contains cobbles up to 1' diameter, gravel is fine-grained dark gray rock, contains crushed concrete	
2					black concrety asphalt layer	
3						
4	PP-44-4.0				SILTY GRAVEL (GM): greenish black (10Y 2.5/1), wet, 50% fine to coarse gravel, 30% low plasticity fines, 15% fine to coarse sand, 5% woodshards, subangular to angular	
5						
6						
7						
8	PP-44-8.0					
9						rock in bottom of sampler.
10						
11						
12					Bottom of boring at 12.0 feet. Boring backfilled with hydrated bentonite chips.	
13						
14						
15						