



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300
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Electronic Copy

January 16, 2018

Ms. Tracey Larson
Gig Harbor Transmission
5066 SE Hovgaard Rd
Olalla, WA 98359

Re: Opinion on Proposed Cleanup of the following Site:

- **Site Name:** Gig Harbor Transmission
- **Site Address:** 14610 Purdy Dr. NW, Gig Harbor, Pierce County, WA 98332
- **Facility/Site No.:** 11876
- **Cleanup Site No.:** 1952
- **VCP Project No.:** SW1590

Dear Ms. Larson:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your proposed independent cleanup of the Gig Harbor Transmission facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Ecology has determined that further remedial action is necessary to clean up contamination at the Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.

Description of the Site

This opinion applies only to the Site described below. The Site is described in Ecology's No Further Action Likely opinion issued in a letter dated September 27, 2017.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

1. ECI, Re: *Groundwater Monitoring Gig Harbor Transmission*, dated October 24, 2017.
2. Ecology, Re: *Opinion on Proposed Cleanup of the following Site*, dated September 27, 2017.
3. Email correspondence between Mr. Stephen Spencer, EcoCon Inc. (ECI), and Mr. Tim Mullin, Ecology, dated August 21, 2017.
4. ECI, *Gig Harbor Transmission Terrestrial Ecological Evaluation*, received August 7, 2017.
5. ECI, *Cleanup Action Report (CAR)*, dated April 26, 2017.
6. ECI, *Phase I Environmental Site Assessment (ESA)*, dated January 27, 2017.
7. Environmental Management Services, LLC (EMS), *Phase II Subsurface Investigation*, dated February 19, 2010.
8. Alkai Environmental Consultants, *Phase I ESA*, dated January 22, 2010.
9. Ecology, Initial Investigation Field Report, dated July 8, 2009.
10. Ecology, ERTS report #609920, dated December 8, 2008.

The above documents are kept in the Central Files of the Southwest Regional Office of Ecology (SWRO) for review by appointment only. You can make an appointment by calling with SWRO resource contact at (360) 407-6365.

This opinion is void if any of the information contained in those documents is materially false or misleading.

Analysis of the Cleanup

Ecology has concluded that **further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

The Site is described in Ecology's No Further Action Likely opinion letter dated September 27, 2017.

In response to Ecology's opinion letter, on October 5, 2017, ECI oversaw advancement of four soil borings by direct push methodology, ranging in depth from 13 of 22 feet below ground surface (bgs). All four borings were reportedly installed in the vicinity of B2; however, a figure with boring locations was not provided to Ecology for review. Refusal was met in each boring. Soils were described from each boring as dry. ECI did not report water from any boring, and did not install the well requested in Ecology's opinion letter dated September 27, 2017. ECI proposed that the water sampled from boring B2 in February 2010 was potentially the result of surface water infiltration and was not actually a perched water bearing zone able to be monitored.

Ecology has the following comments regarding the October 2017 investigation:

- 1) It appears the determination on whether or not water was present from beneath the Site was made exclusively based on observation of soils logged from each borehole.
- 2) No PID readings were reported for any of the borings installed, only olfactory indicators, where no odor was reported in any soils logged.
- 3) No images of the borehole cores were provided.
- 4) The length of time each borehole was left open was not reported.
- 5) No discussion of attempted water level measurements in any of the direct push borings was provided.
- 6) No temporary well was set in any boring nor was any attempt made to pump water from any of the borings.
- 7) In February 2010, sufficient groundwater was present to collect samples from B1, B2, and B6.
 - a. Boring B1 was completed in the southwest corner of the Property, whereas B2 and B6 were completed near each other around the northeastern portion of the main shop building.
 - b. Wet soils were also reported in the boring logs for borings B4 and B5.
 - c. Insufficient groundwater was present to produce a sample at B3.
 - i. Ecology notes that boring B3 was advanced to 11 feet bgs and was noted to be dry upon completion, whereas wet soils were reported in nearby borings B4 and B5 at 11.5 feet bgs and 10.5 feet bgs, respectively. Boring B3 may not have been advanced deep enough before encountering refusal to produce sufficient water for sampling. Additionally, per the boring log, it appears that boring B3 was open for approximately 12 minutes (1153 to 1205) and water likely did not have sufficient time to infiltrate the borehole.

- 8) **Ecology does not concur with the request for No Further Action at this Site.** The October 2017 investigation does not meet the requirements under WAC 173-340-360(2)(a)(iv), 173-340-410 or 173-340-720 to confirm that the cleanup action has attained cleanup standards.
- a. An evaluation of groundwater is necessary in order to determine if the second release which occurred between February 2010 and January 2017 has contaminated groundwater beneath the Site.
 - b. In 2010, a Phase I ESA completed by ALKAI Consultants, LLC (Aikai) reported several water wells within ¼ mile of the Site and dozens of wells within 1 mile of the Site¹.
 - c. Based on available data, Ecology has determined that it appears that there is groundwater present beneath the Site and the highest potential beneficial use for that groundwater is drinking water.
 - i. Based on the 2010 boring log for B2, any potential perched water bearing zone appears to be present from approximately 11-14 feet bgs.
 - ii. Well logs contained within Ecology's well log database confirm that shallow groundwater within approximately 1 mile of the Site is used for domestic supply (drinking water). Selected driller's well logs are included as **Enclosure A**.
 - iii. In the opinion letter dated September 27, 2017, Ecology included the well log of a domestic supply well located approximately 700 feet west of the Site. Based on the fact that this domestic supply well is between the Site and Burley Lagoon, the domestic supply well is likely downgradient of the Site.
- 9) **Ecology reiterates the recommendations to install one monitoring well and to complete performance monitoring as described on pages 7 and 8 in the No Further Action Likely opinion letter dated September 27, 2017.**
- a. A different drilling method (e.g., hollow stem auger) may need to be employed to install a properly constructed monitoring well.
- 10) If undertaken, any investigation with the goal of evaluating non-potability of Site groundwater using the yield demonstration must be completed per WAC 173-340-720(2)(b)(i).
- 11) Ecology requests a figure showing the locations of the ECI's October 5, 2017, borings.
- 12) All investigation derived waste (IDW) should be containerized, profiled, and disposed of at an approved facility.

Limitations of the Opinion

1. Opinion does not settle liability with the state.

¹ See pages A-11 through A-14 in Alkai Environmental Consultants' *Phase I ESA*, dated January 22, 2010.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. State is immune from liability.

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

Contact Information

Thank you for choosing to clean up the Site under the Voluntary Cleanup Program (VCP). After you have addressed our concerns, you may request another review of your cleanup. Please do not hesitate to request additional services as your cleanup progresses. We look forward to working with you.

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion, please contact me by phone at 360-407-6265 or e-mail at Tim.Mullin@ecy.wa.gov.

Ms. Tracey Larson
January 16, 2018
Page 6

Sincerely,



Tim Mullin, LHG
SWRO Toxics Cleanup Program

TCM: kb

Enclosure: A – Domestic Supply Well Logs
 B – Email Correspondence

By Certified Mail: [91 7199 9991 7037 7471 8972]

cc: Stephen Spencer, ECI
 Nick Acklam, Ecology
 Stephanie Bussell, Ecology
 Ecology Site File

Enclosure A

Domestic Supply Well Logs

The Department of Ecology does NOT warrant the Data and/or the Information on this Well Report.

File Original and First Copy with
Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 20209A

Water Right Permit No. _____

(1) OWNER: Name Al Eaton Address PO Box 153 Burley WA 98322

(2) LOCATION OF WELL: County Pierce NE 1/4 SW 1/4 Sec 13 T.22N. R.1E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 15135 151st

(3) PROPOSED USE: Domestic Industrial Municipal
 Irrigation Test Well Other
 DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
Abandoned New well Method: Dug Bored
Deepened Cable Driven
Reconditioned Rotary Jetted

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 118 feet. Depth of completed well 118 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6 " Diam. from 4 1/2 ft. to 113 ft.
Welded " Diam. from _____ ft. to _____ ft.
Liner installed Threaded " Diam. from _____ ft. to _____ ft.
Perforations: Yes No
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes No
Manufacturer's Name _____
Type 3/8 Model No. _____
Diam. 67 Slot size 016 from 113 ft. to 118 ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Gravel packed: Yes No Size of gravel _____
Gravel placed from _____ ft. to _____ ft.
Surface seal: Yes No To what depth? 18 ft.
Material used in seal Hole plug 8 sac
Did any strata contain unusable water? Yes No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ HP _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 32 ft. below top of well Date 6/25/93
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes No If yes, by whom? Driller
Yield: 30 gal./min. with 4' 4" ft. drawdown after 1 hrs.
" " " " " "
" " " " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)					
Time	Water Level	Time	Water Level	Time	Water Level
<u>00</u>	<u>36 4"</u>				
<u>1:00</u>	<u>32</u>				

Date of test 6/24/93
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes No

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
<u>Clay (yellow)</u>	<u>0</u>	<u>4</u>
<u>gravel</u>	<u>4</u>	<u>11</u>
<u>Sand</u>	<u>11</u>	<u>21</u>
<u>gravel</u>	<u>21</u>	<u>28</u>
<u>Hard Pan</u>	<u>28</u>	<u>44</u>
<u>gravel</u>	<u>44</u>	<u>52</u>
<u>Silt (gray)</u>	<u>52</u>	<u>56</u>
<u>gravel</u>	<u>56</u>	<u>64</u>
<u>Silt (gray) Cement gravel</u>	<u>64</u>	<u>72</u>
<u>Silt (gray)</u>	<u>72</u>	<u>92</u>
<u>gravel, with gray silt</u>	<u>92</u>	<u>113</u>
<u>gravel</u>	<u>113</u>	<u>118</u>

Work started _____, 19. Completed <u>6/25</u> , 19 <u>93</u>
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WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Wes Glessner Drilling
(PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 6402 154th NW Sp 43 Gig Harbor

(Signed) Wes Glessner License No. 0154
(FULL DRILLER)

Contractor's Registration No. W-264D*082PK Date 6/27, 1993

(USE ADDITIONAL SHEETS IF NECESSARY)

407
 W

WATER WELL REPORT

STATE OF WASHINGTON

Application No.

Permit No.

(1) OWNER: Name Bud Brewer Address 14528 Sherman Dr. NW Gig Harbor, WA
 (2) LOCATION OF WELL: County Pierce SW 1/4 SW 1/4 Sec. 13 T. 22 N. R. 1E W.M.
 Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic Industrial Municipal
 Irrigation Test Well Other

(4) TYPE OF WORK: Owner's number of well (if more than one)
 New well Method: Dug Bored
 Deepened Cable Driven
 Reconditioned Rotary Jetted

(5) DIMENSIONS: Diameter of well 6 inches.
 Drilled 39 ft. Depth of completed well 38'3" ft.

(6) CONSTRUCTION DETAILS:
 Casing installed: 6" Diam. from 0 ft. to 38'3" ft.
 Threaded " Diam. from " ft. to " ft.
 Welded " Diam. from " ft. to " ft.

Perforations: Yes No
 Type of perforator used
 SIZE of perforations in. by in.
 perforations from ft. to ft.
 perforations from ft. to ft.
 perforations from ft. to ft.

Screens: Yes No
 Manufacturer's Name Johnson
 Type stainless steel Model No.
 Diam. 6 Slot size 80 from 36 ft. to 38'3" ft.
 Diam. Slot size from ft. to ft.

Gravel packed: Yes No Size of gravel:
 Gravel placed from ft. to ft.

Surface seal: Yes No To what depth? 30 ft.
 Material used in seal Bentonite & Concrete
 Did any strata contain unusable water? Yes No
 Type of water? Depth of strata
 Method of sealing strata off.....

(7) PUMP: Manufacturer's Name
 Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
 Static level Flowing ft. below top of well Date
 Artesian pressure lbs. per square inch Date
 Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
 Was a pump test made? Yes No If yes, by whom?
 Yield: gal./min. with ft. drawdown after hrs.
 " " " " " "
 " " " " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)					
Time	Water Level	Time	Water Level	Time	Water Level

Date of test
 Batter test 20 gal./min. with 12 ft. drawdown after 1 hrs.
 Artesian flow g.p.m. Date
 Temperature of water Was a chemical analysis made? Yes No

(10) WELL LOG:
 Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown Hard Pan	0	15
Brown sand with clay binder	15	26
Brown sand with seepage	26	28
Hard packed rock salt, sand, small gravel, seepage	28	33
Brown sand, small gravel, heaving a little	33	35
Heaving rock salt, sand, and pea gravel	35	39
Hard packed sand, water-bearing	39	-

RECEIVED

MAY 22 1980

DEPARTMENT OF ECOLOGY
 NORTHWEST REGIONAL OFFICE

Work started March 5 19 80 Completed March 10 19 80

WELL DRILLER'S STATEMENT:
 This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME HARBOR PUMP & DRILLING CO., INC.
 (Person, firm, or corporation) (Type or print)

Address 11302 Burnham Dr. NW Gig Harbor, WA

(Signed) Elmer Colquhoun By: P. Miller
 (Well Driller)

License No. 223-01-8455 Date March 18 19 80
0078

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

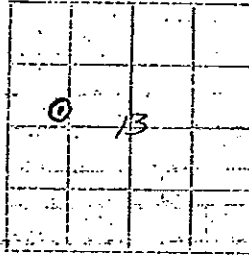
The Department of Ecology does NOT warrant the Data and/or the Information on this Well Report

Appli. No. 9822
 Permit No. 8668

STATE OF WASHINGTON
 DEPARTMENT OF CONSERVATION
 DIVISION OF WATER RESOURCES

WELL LOG

Record by: Driller
 Source: Drillers Record



Location: State of WASHINGTON
 County: Pierce
 Area:
~~XXXX~~ Gov't lot 2
~~XXXX~~ sec. 13 T22 N, R. 1 ~~XXXX~~

Drilling Co: Richardson Well Drilling Company
 Address: 219 So. 115th St., Tacoma, Wash.
 Method of Drilling: new well & cable 4/26/1968
 Owner: Buck & Haywood, Inc.
 Address: P.O. Box 307, Gig Harbor, Wash.
 Land surface, datum: _____ ft. above
 _____ ft. below
 SWL: 8' Date: April 26, 1968 Dims: 8" X 109'

CORRE- LATION	MATERIAL	From (feet)	To (feet)
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(Transcribe driller's terminology literally but paraphrase as necessary, in parentheses. If material water-bearing, so state and record static level if reported. Give depths in feet below land-surface datum unless otherwise indicated. Correlate with stratigraphic column, if feasible. Following log of materials, list all casings, perforations, screens, etc.)

CORRE- LATION	MATERIAL	From (feet)	To (feet)
	Group domestic		
	Top soil	0	5
	Hardpan	5	17
	Gravel & sand, coarse	17	20
	Hardpan	20	26
	Sand - Water bearing	26	31
	Sand & clay	31	38
	Sand, hard packed	38	42
	Clay & sand, blue	42	46
	Clay, blue	46	80
	Sand-water, fine	80	85
	Sand, fine & coarse gravel	85	87
	Sand, fine	87	103
	Sand & clay, fine	103	105
	Sand & gravel, coarse-water	105	109

Turn up _____ Sheet _____ of _____ sheets

File number 2217E13E

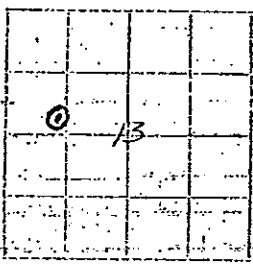
The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

Appli. No. 9822
Permit No. 8668

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION
DIVISION OF WATER RESOURCES

WELL LOG

Record by: Driller
Source: Drillers Record



Location: State of WASHINGTON
County: Pierce
Area:
~~XXXX~~ Gov't lot 2
~~XX~~ sec. 13 T22 N, R. 1 ~~XX~~

Drilling Co: Richardson Well Drilling Company
Address: 219 So. 115th St., Tacoma, Wash.
Method of Drilling: new well & cable 4/26/1968
Owner: Buck & Haywood, Inc.
Address: P.O. Box 307, Gig Harbor, Wash.
Land surface, datum: 8' ft. above/below
SWL: 8' Date: April 26, 1968 Dims: 8" X 109'

CORRE- LATION	MATERIAL	From (feet)	To (feet)
------------------	----------	----------------	--------------

(Transcribe driller's terminology literally but paraphrase as necessary, in parentheses. If material water-bearing, so state and record static level if reported. Give depths in feet below land-surface datum unless otherwise indicated. Correlate with stratigraphic column, if feasible. Following log of materials, list all casings, perforations, screens, etc.)

CORRE- LATION	MATERIAL	From (feet)	To (feet)
	Group domestic		
	Top soil	0	5
	Hardpan	5	17
	Gravel & sand, coarse	17	20
	Hardpan	20	26
	Sand - Water bearing	26	31
	Sand & clay	31	38
	Sand, hard packed	38	42
	Clay & sand, blue	42	46
	Clay, blue	46	80
	Sand-water, fine	80	85
	Sand, fine & coarse gravel	85	87
	Sand, fine	87	103
	Sand & clay, fine	103	105
	Sand & gravel, coarse-water	105	109

Turn up _____ Sheet _____ of _____ sheets

file number 1217E193E

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. 048232
Water Right Permit No.

7 NOV 92

(1) OWNER: Name CARTWRIGHT TOM Address 11220 186TH AVE KPM 818 HARBOR, WA 98329-	
(2) LOCATION OF WELL: County PIERCE - SE 1/4 SE 1/4 Sec 13 T 22 N, R 1E WM	
(2a) STREET ADDRESS OF WELL (or nearest address) SAME	
(3) PROPOSED USE: DOMESTIC	(10) WELL LOG
(4) TYPE OF WORK: NEW WELL Owner's Number of well (If more than one) Method: AIR ROTARY	Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.
(5) DIMENSIONS: Drilled 119.3 ft. Diameter of well 6 inches Depth of completed well 119 ft.	MATERIAL FROM TO
(6) CONSTRUCTION DETAILS: Casing installed: 6 Dia. from 0 ft. to 114 ft. WELDED Dia. from ft. to ft. Dia. from ft. to ft.	TOPSOIL 0 01 BROWN CLAY SAND 1 8 BROWN CLAY & SAND AND GRAVEL 8 30 CEMENTED SAND AND GRAVEL 30 50 BROWN CLAY GRAVEL & SAND 50 70 SILTY SAND WATER 70 119.3
Perforations: NO Type of perforator used SIZE of perforations in. by in. perforations from ft. to ft. perforations from ft. to ft. perforations from ft. to ft.	
Screens: YES Manufacturer's Name HOUSTON Type Model No. Diam. 6 slot size 30 from 114.3 ft. to 119.3 ft. Diam. slot size from ft. to ft.	
Gravel packed: NO Size of gravel Gravel placed from ft. to ft.	
Surface seal: YES To what depth? 18 ft. Material used in seal BENTONITE CLAY Did any strata contain unusable water? NO Type of water? Depth of strata ft. Method of sealing strata off	
(7) PUMP: Manufacturer's Name Type H.P.	Work started 09/23/92 Completed 09/28/92
(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft. Static level 2 ft. below top of well Date 09/29/92 Artesian Pressure lbs. per square inch Date / / Artesian water controlled by	
(9) WELL TESTS: Drawdown is amount water level is lowered below static level. Has a pump test made? NO If yes, by whom? Yield: gal./min with ft. drawdown after hrs.	WELL CONSTRUCTOR CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. - Materials used and the information reported above are true to my best knowledge and belief.
Recovery data Time Water Level Time Water Level Time Water Level	NAME RICHARDSON WELL DRILLING (Person, firm, or corporation) (Type or print)
Date of test / / Bailer test gal./min. ft. drawdown after hrs. Air test 60 gal./min. w/ stem set at 110 ft. for 1 hrs. Artesian flow g.p.a. Date Temperature of water Has a chemical analysis made? NO	ADDRESS PO BOX 44427 TAC WA 98444 [SIGNED] <i>Boyd West</i> License No. 1424 Contractor's <i>By JFE</i> Registration No. RICHWA32108 Date 11/04/92

WATER WELL REPORT

STATE OF WASHINGTON

Application No. W.R.C. 19315
Permit No.

(1) **OWNER:** Name Charlotte B. Widener Address 14810 State Rd 16 Gig Harbor
(2) **LOCATION OF WELL:** County Pierce Legal Desc. is on file
Bearing and distance from section or subdivision corner

(3) **PROPOSED USE:** Domestic Industrial Municipal
Irrigation Test Well Other
(4) **TYPE OF WORK:** Owner's number of well (if more than one)
New well Method: Dug Bored
Deepened Cable Driven
Reconditioned Rotary Jetted

(5) **DIMENSIONS:** Diameter of well 6 inches.
Drilled.....ft. Depth of completed well.....ft.

(6) **CONSTRUCTION DETAILS:**
Casing installed:....." Diam. from ft. to ft.
Threaded " Diam. from ft. to ft.
Welded 6" Diam. from all ft. to ft.
Perforations: Yes No
Type of perforator used.....
SIZE of perforations in. by in.
..... perforations from ft. to ft.
..... perforations from ft. to ft.
..... perforations from ft. to ft.
Screens: Yes No
Manufacturer's Name.....
Type..... Model No.....
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.
Gravel packed: Yes No Size of gravel:.....
Gravel placed from ft. to ft.
Surface seal: Yes No To what depth? 6' ft.
Material used in seal..... Cement
Did any strata contain unusable water? Yes No
Type of water?..... Depth of strata.....
Method of sealing strata off.....

(7) **PUMP:** Manufacturer's Name NONE
Type: HP

(8) **WATER LEVELS:** Land-surface elevation above mean sea level... 10 ft.
Static level 0 ft. below top of well Date 12-5-72
Artesian pressure 0 lbs. per square inch. Date 12-5-72
Artesian water is controlled by VALVE
(Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes No If yes, by whom?.....
Yield: 5 gal./min. with NO ft. drawdown after NO hrs.
" " " " "
" " " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Baller test..... gal./min. with ft. drawdown after hrs.
Artesian flow 5 g.p.m. Date 12-5-72
Temperature of water 52 Was a chemical analysis made? Yes No

(10) **WELL LOG:**
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO

Work started..... 19..... Completed..... 19.....

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME.....
(Person, firm, or corporation) (Type or print)

Address.....

[Signed].....
(Well Driller)

License No..... Date..... 19.....

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

#124
White

WATER WELL REPORT

STATE OF WASHINGTON

Application No.
Permit No.

(1) OWNER: Name Dale Kooley Address

(2) LOCATION OF WELL: County Pierce NE 1/4 NE 1/4 Sec. 24 T. 22 N., R. 1E W.M.
Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic Industrial Municipal
Irrigation Test Well Other

(4) TYPE OF WORK: Owner's number of well (if more than one)

New well Method: Dug Bored
Deepened Cable Driven
Reconditioned Rotary Jetted

(5) DIMENSIONS: Diameter of well 10 inches.
Drilled 316 ft. Depth of completed well 316 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 10" Diam. from 0 ft. to 302 ft.
Threaded " Diam. from ft. to ft.
Welded " Diam. from ft. to ft.

Perforations: Yes No
Type of perforator used

SIZE of perforations in. by in.
..... perforations from ft. to ft.
..... perforations from ft. to ft.
..... perforations from ft. to ft.

Screens: Yes No
Manufacturer's Name Johnson
Type Stainless Steel Model No.
Diam. 10" Slot size 100 from 301 ft. to 310 ft.
Diam. 10" Slot size 80 from 310 ft. to 316 ft.

Gravel packed: Yes No Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes No To what depth? 18 ft.
Material used in seal Mfg. Clay 250#
Did any strata contain unusable water? Yes No
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name

Type: HP

(8) WATER LEVELS: Land-surface elevation above mean sea level
Static level 181 ft. below top of well Date 11-18-76
Artesian pressure lbs. per square inch Date

Artesian water is controlled by
(Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? Yes No If yes, by whom? Mike
Yield: 220 gal./min. with 26 ft. drawdown after 1 1/2 hrs.
" 220 " 28'6" " 3 "
" 220 " 28'8" " 5 "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test 11-18-76
Baller test 60 gal./min. with 5 ft. drawdown after 4 hrs.
Artesian flow g.p.m. Date

Temperature of water Was a chemical analysis made? Yes No

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
19' Augered surface seal hole		
Brown sandy soil	0	5
Gray hardpan, rocks	5	54
Brown hardpan	54	80
Mostly brown sand	80	114
Some gravel mixed in here & some seepage	114	130
Mostly brown sand cleaner some water	130	140
Gray clay	140	147
Silt	147	154
Solid gray clay silt layers mixed in	154	214
Hard gravel, hardpan	214	237
Layers of brown clay & peat	237	250
Blue clay	250	263
Laminated layers of clay & sand	263	275
Hard packed coarse sand & gravel - water bearing	275	296
Gray hardpan	296	299
Loose coarse sand & gravel water bearing	299	317

RECEIVED

DEC 15 1976

DEPARTMENT OF ECOLOGY
SOUTHWEST REGIONAL OFFICE

Work started Oct. 21, 1976 Completed Nov. 18, 1976

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Harbor Pump & Drilling Co., Inc.
(Person, firm, or corporation) (Type or print)

Address 7825 46th Ave., Gig Harbor, Wash/

[Signed] Jim Elmer & Vic By: bls
0476 (Well Driller)

License No. 223 01 8455 Date Nov. 22, 1976

WATER WELL REPORT

STATE OF WASHINGTON

Application No.

Permit No.

(1) **OWNER:** Name Don Peterson Address 3212 No 24th Tacoma, WA. 98406

(2) **LOCATION OF WELL:** County Pierce NW 1/4 NW 1/4 Sec. 24 T. 22 N. R. 1E W.M.

Bearing and distance from section or subdivision corner

(3) **PROPOSED USE:** Domestic Industrial Municipal
 Irrigation Test Well Other

(4) **TYPE OF WORK:** Owner's number of well (if more than one) _____
 New well Method: Dug Bored
 Deepened Cable Driven
 Reconditioned Rotary Jetted

(5) **DIMENSIONS:** Diameter of well 6 inches.
 Drilled 85 ft. Depth of completed well 75.4 ft.

(6) **CONSTRUCTION DETAILS:**
 Casing installed: 8" Diam. from 0 ft. to 32.4 ft.
 Threaded 6" Diam. from 0 ft. to 32.4 ft.
 Welded 8" Diam. from _____ ft. to _____ ft.

Perforations: Yes No
 Type of perforator used _____
 SIZE of perforations _____ in. by _____ in.
 _____ perforations from _____ ft. to _____ ft.
 _____ perforations from _____ ft. to _____ ft.
 _____ perforations from _____ ft. to _____ ft.

Screens: Yes No
 Manufacturer's Name _____
 Type _____ Model No. _____
 Diam. _____ Slot size _____ from _____ ft. to _____ ft.
 Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes No Size of gravel: _____
 Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes No To what depth? 32 ft.
 Material used in seal: 11 Cement 8 sacks
 Did any strata contain unusable water? Yes No
 Type of water? _____ Depth of strata _____
 Method of sealing strata off _____

(7) **PUMP:** Manufacturer's Name Berkeley
 Type: Submersible Jet HP _____

(8) **WATER LEVELS:** Land-surface elevation above mean sea level: 245 ft.
 Static level Flowing ft. below top of well. Date 7/8/75
 Artesian pressure 8 lbs. per square inch. Date 7/8/75
 Artesian water is controlled by gate valve (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level.
 Was a pump test made? Yes No If yes, by whom? _____
 Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level).

Time	Water Level	Time	Water Level	Time	Water Level

Date of test 7-8-75
 Bailor test 20 gal./min. with _____ ft. drawdown after 7 hrs.
 Artesian flow 80 g.p.m. Date 7/8/75
 Temperature of water _____ Was a chemical analysis made? Yes No

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Sandy Top Soil	0	5
Sand & Gravel with large rocks	5	14.8
Sandy brown clay	8	14
Wet sand & gravel	14	22
Gray hardpan	22	25
Gray clay hard pan	25	30
Blue clay	30	76
Clay chunks & gray sand	76	80
Gray waterbearing sand / water flowing	80	85

RECEIVED

AUG 15 1975

DEPARTMENT OF ECOLOGY
 STATE OF WASHINGTON
 3200 PACIFIC AVENUE, OLYMPIA, WA 98501

Work started 7/1, 1975. Completed 7/8, 1975

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Harbor Pump & Drilling Co., Inc.
 (Person, firm, or corporation) (Type or print)

Address 7825 46th Ave. NW Gig Harbor, WA 98335

[Signed] Elmer Colglisier by B. P. Wiles
 0476 (Well Driller)

License No. 223 01 8455 Date 7/16, 1975

22/1E-24P

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION

WELL SCHEDULE

No. 22/1E-13M1

Date 2-10 1951

Record by DM

Source _____

Location State of WASHINGTON

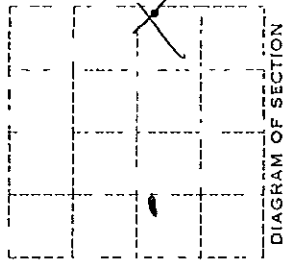
County Blewett

Area Blewett

Map _____

1/4 sec T N R E W

Details _____



Owner Deakes Nursery (His No. _____)

Address _____

Driller HARBER Address _____

Topography _____

Land surface datum 65 ft above

Type Drilled Driven

Bored Jetted

Date _____ 19____

Casing Diam 6 in _____ Type _____

Depth _____ ft Finish _____

Chief aquifer _____ Depth _____ ft Thick _____ ft

Water level Rept 25 ft 7-9 above

Meas _____ ft below datum

which is _____ ft above datum

Pump Type _____ Capacity _____ gal min

Driven by _____ horsepower _____

Yield Flow _____ gal min Pump _____ gal min Meas Rept Est

Drawdown 2 ft after _____ hour ~~12-24~~ 12-24 gal min

Adequacy permanence _____

Use Dom Stock PS RR Ind Irr Obs _____

Quality Sample No _____ 19____ Temp _____ F

Taste color hardness variation etc _____

Other data Log Water levels Draft Pump test Analyses _____

Tu n ut

11529

of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

22/1E-13M1
File number

WELL SCHEDULE CONTINUED

LOGS CASINGS SCREENS AQUIFERS

(As necessary insert ledger pages below for full record. Column boxes should be added on separate form for full response but primary logs may be entered here)

	(FEET)	(FEET)	(FEET)
Soil	0	3	2
Grp		42	7
Grp + seep @ 34		34	
s.s.s. g		43	

MISCELLANEOUS

(On face of schedule list miscellaneous materials used in construction)

of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION
AND DEVELOPMENT

WELL SCHEDULE

Date 19 22 1E 13N

Record by Neil App' 8/5/64

Source _____

Location State of WASHINGTON

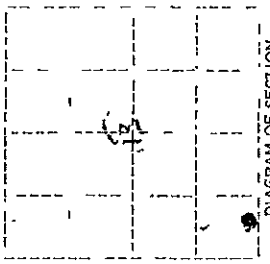
County Pierce

Area _____

Map _____

1/4 sec _____ T _____ N _____ R _____ W _____

Details _____



Owner Ernest A. ... 9 Aubin, W (File No _____)

Address Rt 3 - Box 166 Christiana

Driller Clay ... Address _____

Topography Beach

Land surface datum "at" ft above below S.L.

Type Dug Drilled Driven _____

Boxed Jetted _____

Date _____ 19 41

Casing Diam 10 to 12 in Type _____

Depth 6 ft Finish _____

Chief aquifer _____

Water level Repl _____ ft _____ ft _____ ft

Meas _____ ft _____ ft _____ ft

which is _____ ft above below

Pump Type _____ Capacity _____ gal min

Driven by _____ horsepower _____

Field (Flow) _____ gal min Pump _____ gal min Meas Repl Us

Drawdown _____ ft after _____ hours pumping _____ gal min

Adequacy permanence _____

Use Dom Stock PS RR Ind It Obs _____

Quality sample No _____ 19 _____ Temp _____

Taste color hardness sanitation etc. _____

Other data Log Water levels Draft Pump test Analyses _____

Turn up _____

STATE OF WASHINGTON
 DEPARTMENT OF CONSERVATION
 AND DEVELOPMENT Appl. #7288

WELL LOG

Date October 19, 1964 No. 1

Record by Owner

Source

Location: State of WASHINGTON

County: Pierce

Area

Map: SW 1/4 Sec 13

Govt. Lot: 1/4 sec. 13, 22 N. R. 1 E. E. W.

Drilling Co.

Address

Method of Drilling: Driven

Date: 1964

Owner: Earnest A. Christensen

Address: Route 3, Box 44A, Gig Harbor, Washington

Land surface, datum: 2 ft above

CORRELATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
(Transcribe driller's terminology literally but paraphrase as necessary, in parentheses. If material water-bearing, so state and record static level if reported. Give depths in feet below land surface datum unless otherwise indicated. Correlate with stratigraphic column, if feasible. Following log of materials, list all casings, perforations, screens, etc.)			

Domestic well
 (No record)
 Note: 24" well drilled first to 80', then
 6" well drilled inside 24" well to 180', a
 few weeks later, both about 1941.
 October 14, 1964: 24" well flowed about
 3-4 gpm; 6" well had considerably more
 flow, but controlled by valve. Each well
 obtains from different aquifer.
 Casing: 8 to 15'
 Artesian pressure 15 lbs psi.

Turn up

Sheet of Sheets

STATE OF WASHINGTON
 DEPARTMENT OF CONSERVATION
 AND DEVELOPMENT Appl. #7288

WELL LOG

Date October 19, 1964 No. 1

Record by Owner

Source

Location: State of WASHINGTON

County: Pierce

Area

Map: SW 1/4 Sec 13

Govt. Lot: 1/4 sec 13-22 N. R. 1 E. E. W.

Drilling Co.

Address

Method of Drilling: Driven Date: 1964

Owner: Earnest A. Christensen

Address: Route 3, Box 44A, Gig Harbor, Washington

Land surface, datum: 0 ft. above/below

CORRELATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
-------------	----------	------------------	--------------

(Transcribe driller's terminology literally but paraphrase as necessary, in parentheses. If material water-bearing, so state and record static level if reported. Give depths in feet below land-surface datum unless otherwise indicated. Correlate with stratigraphic column, if feasible. Following log of materials, list all casings, perforations, screens, etc.)

	Domestic well		
	(No record)		
	Note: 24" well drilled first to 80', then		
	6" well drilled inside 24" well to 180', a		
	few weeks later, both about 1941.		
	October 14, 1964: 24" well flowed about		
	3-4 gpm; 6" well had considerably more		
	flow, but controlled by valve. Each well		
	obtains from different aquifer.		
	Casing: 8 to 15'		
	Artesian pressure 15 lbs psi.		

Turn up

Sheet of Sheets

STATE OF WASHINGTON
 DEPARTMENT OF CONSERVATION
 AND DEVELOPMENT Appl. #7288

WELL LOG
 Date October 19, 1964 No. 1

Record by Owner
 Source

Location: State of WASHINGTON
 County: Pierce
 Area

Map: SW 1/4 Sec 13
 Govt. Lot: 1/4 sec 13-22 N. R. 1 E. E. W.

Drilling Co.
 Address

Method of Drilling: Driven Date: 1964
 Owner: Earnest A. Christensen

Address: Route 3, Box 44A, Gig Harbor, Washington

Land surface, datum: ft. above

CORRELATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
-------------	----------	------------------	--------------

(Transcribe driller's terminology literally but paraphrase as necessary, in parentheses, if material water-bearing, to state and record static level if reported. Give depths in feet below land surface datum unless otherwise indicated. Correlate with stratigraphic column, if feasible. Following log of materials, list all casings, perforations, screens, etc.)

Domestic well (No record)			
Note: 24" well drilled first to 80', then 6" well drilled inside 24" well to 180', a few weeks later, both about 1941.			
October 14, 1964: 24" well flowed about 3-4 gpm; 6" well had considerably more flow, but controlled by valve. Each well obtains from different aquifer.			
Casing: 8 to 15'			
Artesian pressure 15 lbs psi.			

Turn up

Sheet _____ of _____ sheets

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION
AND DEVELOPMENT Appl. #7288

WELL LOG
Date October 19 1964 No. 1

Record by Owner

Source _____

Location: State of WASHINGTON

County Pierce

Area _____

Map SW 13

Govt. Lot 1/4 sec 13-22 N. R. 1 E. E. W.

Drilling Co. _____

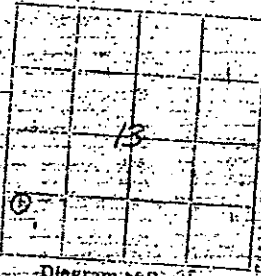
Address _____

Method of Drilling Driven Date 1964

Owner Ernest A. Christensen

Address Route 3, Box 44A, Gig Harbor, Washington

Land surface, datum ft above below



CORRELATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
-------------	----------	------------------	--------------

(Transcribe driller's terminology literally but paraphrase as necessary, in parentheses. If material water-bearing, so state and record static level if reported. Give depths in feet below land surface datum unless otherwise indicated. Correlate with stratigraphic column, if feasible. Following log of materials, list all casings, perforations, screens, etc.)

	Domestic well (No record)		
	Note: 24" well drilled first to 80', then 6" well drilled inside 24" well to 180', a few weeks later, both about 1941.		
	October 14, 1964: 24" well flowed about 3-4 gpm; 6" well had considerably more flow, but controlled by valve. Each well obtains from different aquifer.		
	Casing: 8 to 15'		
	Artesian pressure 15 lbs psi.		

Turn up _____

Sheet _____ of _____ sheets

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WATER WELL REPORT

STATE OF WASHINGTON

Application No.

Permit No.

(1) OWNER: Name Edward Hoffman Address 4906 No. Lexington, Tacoma, Wn 98407

(2) LOCATION OF WELL: County Pierce SE 1/4 SE 1/4 Sec. 13 T. 22 N., R. 1E W.M.
Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic Industrial Municipal
Irrigation Test Well Other

(4) TYPE OF WORK: Owner's number of well (if more than one)
Now well Method: Dug Bored
Deepened Cable Driven
Reconditioned Rotary Jetted

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 96 ft. Depth of completed well 96 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from 0 ft. to 96 ft.
Threaded " Diam. from _____ ft. to _____ ft.
Welded " Diam. from _____ ft. to _____ ft.

Perforations: Yes No
Type of perforator used
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes No
Manufacturer's Name
Type Model No
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes No Size of gravel: _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes No To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes No
Type of water? _____ Depth of strata
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name
Type: _____ HP.

(8) WATER LEVELS: Land-surface elevation ft.
above mean sea level. Date
Statis level 74 ft. below top of well
Artesian pressure _____ lbs. per square inch Date
Artesian water is controlled by
(Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes No If yes, by whom?
Yield: gal./min. with _____ ft. drawdown after _____ hrs.
" " " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test: 15 gal./min. with 4 ft. drawdown after 1 1/2 hrs.
Artesian flow: _____ g.p.m. Date
Temperature of water: _____ Was a chemical analysis made? Yes No

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown silty sand	0	18
Blue clay	18	93
Coarse brown water bearing sand and gravel	93	96

RECEIVED
SEP - 7 1978
DEPARTMENT OF ECOLOGY
SOUTHWEST REGIONAL OFFICE

Work started 8-11 1978, Completed 8-16 1978

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Harbor Pump & Drilling Co., Inc.
(Person, firm, or corporation) (Type or print)
Address 11302 Burnham Dr NW., Gig Harbor, Wn
[Signed] Elmer Colglazzer by: S. Kostalecky
0078 (Well Driller)
License No. 223.01 8455 Date 8-17 1978

WATER WELL REPORT

STATE OF WASHINGTON

Application No. 62-20772
Permit No. 62-20772

(1) OWNER: Name Hank Pederson / PSD-401 Address Purdy

(2) LOCATION OF WELL: County Pierce NE NW Sec 24 T 22 N, R. 1E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic Industrial Municipal
Irrigation Test Well Other

(4) TYPE OF WORK: Owner's number of well (if more than one) 1
New well Method: Dug Bored
Deepened Cable Driven
Reconditioned Rotary Jetted

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 105 ft. Depth of completed well 105 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from 0 ft. to 105 ft.
Threaded " Diam. from _____ ft. to _____ ft.
Welded " Diam. from _____ ft. to _____ ft.

Perforations: Yes No
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes No
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes No Size of gravel: _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes No To what depth? _____ ft.
Material used in seal _____
Did any strata contain unusable water? Yes No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ~60 ft.
Statie level _____ ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____
(Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below statie level
Was a pump test made? Yes No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " " "
" " " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test 11-4-57

Baller test 60 gal./min. with _____ ft. drawdown after _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes No

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Topsoil	0	2'
Hardpan	2	19
Hard packed sand & gravel	19	20
Soft sandy hardpan	20	29
Water bearing sand & gravel	29	31
Hardpan	31	41
Coase sand & gravel	41	45
Making water hardpan	45	47
Water ESS bearing sand & g.	47	49
Hardpan	49	54
Fine sand & gravel	54	56
Hardpan	56	62
Conglomerated sand & gravel & water	62	64
Clean sand, gravel & water	64	67
Conglomerated	67	93
Clay	93	105
11 May 76		

Work started Oct. 28, 1957 Completed Nov. 4, 1957

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Harbor Pump & Drilling, Co.
(Person, firm, or corporation) (Type or print)

Address 7825 46th. Ave. NW, Gig Harbor 9833

[Signed] Larry M. Swinney By: b1:
EXX 0476 (Well Driller)

License No. 223018455 Date HFW Dec. 15, 75

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION

2211E-1311
Title ground

WELL SCHEDULE

No. 2211E-1311

Date 2-19-1961

Record by DM

Source

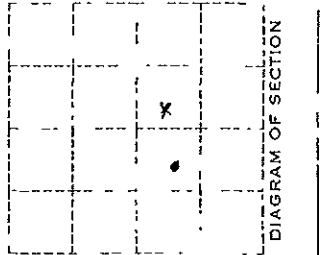
Location State of WASHINGTON

County Pierce

Area Purdy

Map 1/4 sec T N R E W

Details



Owner Henry Kaffenberger (His No)

Address

Driller Harbor Address

Topography

Land surface datum 80 ft above

Type Dug Drilled Driven

Bored Jetted

Date 10

Casing Diam 6 in Type

Depth ft Finish

Chief analyst Rept 16 ft 88 Depth ft Thick ft

Water level Meas 1960 above below

which is ft above datum below

Pump Type Capacity gal min

Driven by horsepower

Yield Flow gal min Pump gal min Meas Rept Est

Drawdown 27 ft after 2 hours pumping 18 gal min

Adequacy permanence

Use Dom Stock PS RR Ind Irr Obs

Quality Sample No 10 Temp F

Taste color hardness emulsion etc

Other data Log Water levels Draft Pump test Analyses

14 11 11

SP 19520

of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WELL SCHEDULE CONTINUED

LOGS CASINGS SCREENS AQUIFERS

(As necessary insert the depth and upper boundary of all recorded Complete logs should be recorded on separate forms for this purpose but fragmentary logs may be entered here)

	(FEET)	(F-CET)
brs	0	9
brbp		27
blgybp		53
stick stg, seep		54
bed layered w/ bp sticks		64
bl cl		68
seep muck		69
stg wb		73.5

MISCELLANEOUS

(On face of each slide list the top and bottom of the same top of the logs here)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION
AND DEVELOPMENT

WELL LOG

Date April 23

Record by Driller

19 65

No.

Permit No. 6974

Source: Driller's Record

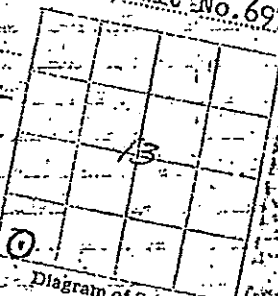
Location: State of WASHINGTON
County Pierce

Area 2075' W & 370' N from S $\frac{1}{2}$
Map corner of Sec. 13

SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13 T. 22 N. R. 1 E.
Drilling Co. Harbor Pump & Drill Co.

Address Rt. 4, Box 4117, Gig Harbor, Washington
Method of Drilling Cable Date 19

Owner Mrs. Homer H. Laffaw
Address Rt. 3, Box 48, Gig Harbor, Washington
Land surface datum ft. above/below



CORRELATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
-------------	----------	------------------	--------------

(Transcribe driller's terminology literally but paraphrase as necessary, in parentheses. If material water-bearing, so state and record static level if reported. Give depths in feet below land surface datum unless otherwise indicated. Correlate with stratigraphic column, if feasible. Following log of materials, list all casings, perforations, screens, etc.)

CORRELATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
	Domestic well - 6" x 83'		
	Log not available. This is from memory.		
	Subsoil & gravel	0	12
	Solid blue clay	12	83
	Casing: 6" from 0 to 74'		
	Artesian pressure 5 psi, July 25, 1952		
	Pump: 1/2 HP Berkeley Jet		

Turn up

Sheet of sheets

WATER WELL REPORT
 STATE OF WASHINGTON

Application No.

Permit No.

(1) **OWNER:** Name Homer Yeager Address 12706 134th Ave KPN, Gig Harbor 98333
 (2) **LOCATION OF WELL:** County Pierce — N 3 1/4 E 1/4 Sec. 24 T. 22 N. R. 15 W.M.
 Bearing and distance from section or subdivision corner

(3) **PROPOSED USE:** Domestic Industrial Municipal
 Irrigation Test Well Other

(4) **TYPE OF WORK:** Owner's number of well (if more than one)
 New well Method: Dug Bored
 Deepened Cable Driven
 Reconditioned Rotary Jetted

(5) **DIMENSIONS:** Diameter of well inches.
 Drilled ft. Depth of completed well ft.

(6) **CONSTRUCTION DETAILS:**
 Casing installed: 6" Diam. from +1 ft. to 179 ft.
 Threaded " Diam. from ft. to ft.
 Welded " Diam. from ft. to ft.

Perforations: Yes No
 Type of perforator used
 SIZE of perforations in. by in.
 perforations from ft. to ft.
 perforations from ft. to ft.
 perforations from ft. to ft.

Screens: Yes No
 Manufacturer's Name Model No.
 Diam. Slot size from ft. to ft.
 Diam. Slot size from ft. to ft.

Gravel packed: Yes No Size of gravel:
 Gravel placed from ft. to ft.

Surface seal: Yes No To what depth? 20 ft.
 Material used in seal bentonite
 Did any strata contain unusable water? Yes No
 Type of water? Depth of strata
 Method of sealing strata off

(7) **PUMP:** Manufacturer's Name Jacuzzi
 Type: submersible H.P. 1 1/2

(8) **WATER LEVELS:** Land-surface elevation 310 ft. above mean sea level.
 Static level 136 ft. below top of well Date 6/19/87
 Artesian pressure lbs. per square inch Date

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level.
 Was a pump test made? Yes No If yes, by whom? driller
 Yield: 15 gal./min. with 22 ft. drawdown after 1 hrs.
 " 30 " " 42 " " 1 "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test 6/19/87
 Baller test gal./min. with ft. drawdown after hrs.
 Artesian flow g.p.m. Date

(10) **WELL LOG:**
 Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Topsoil	0	2
Brn. sand & grav., compact	2	8
Gray sand, med., compact	8	13
Gray sand & grav., compact	13	37
Brn. sand, med., compact	37	108
Brn. sand & grav., cemented	108	116
Brn. sand, med., compact	116	135
Brn. sand, med., wet	135	156
Brn. sand & grav. med., wet	156	163
Brn. sand & grav., compact	163	168
Brn. sand & grav., med., W/B	168	179

Work started 6/18/1987 Completed 6/19/1987

WELL DRILLER'S STATEMENT:
 This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
 NAME Holland Pump Co, Inc. (Person, firm, or corporation) (Type or print)
 Address P.O. Box 581, Wauna, WA 98395
 [Signed] William Powell (Well Driller)
 License No. 0442 Date 6/19/1987

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

#95
 White

WATER WELL REPORT

STATE OF WASHINGTON

Application No.

Permit No.

(1) OWNER: Name Joe Vadala Address 4713 61st Ave. W., Tacoma, Wash. 9846
 (2) LOCATION OF WELL: County Pierce - NE SE Sec 13 T. 22 N. R. 1E W.M.
 Bearing and distance from section or subdivision corner SW

(3) PROPOSED USE: Domestic Industrial Municipal
 Irrigation Test Well Other

(4) TYPE OF WORK: Owner's number of well (if more than one):
 New well Method: Dug Bored
 Deepened Cable Driven
 Reconditioned Rotary Jetted

(5) DIMENSIONS: Diameter of well 6 inches.
 Drilled 109 ft. Depth of completed well 109 ft.

(6) CONSTRUCTION DETAILS:
 Casing installed: 6" Diam. from 0 ft. to 110 ft.
 Threaded " Diam. from ft. to ft.
 Welded " Diam. from ft. to ft.

Perforations: Yes No
 Type of perforator used
 SIZE of perforations in. by in.
 perforations from ft. to ft.
 perforations from ft. to ft.
 perforations from ft. to ft.

Screens: Yes No
 Manufacturer's Name Model No.
 Diam. Slot size from ft. to ft.
 Diam. Slot size from ft. to ft.

Gravel packed: Yes No Size of gravel:
 Gravel placed from ft. to ft.

Surface seal: Yes No To what depth? 18 ft.
 Material used in seal Mfg. Clay 110#
 Did any strata contain unusable water? Yes No
 Type of water? Depth of strata
 Method of sealing strata off

(7) PUMP: Manufacturer's Name
 Type: H.P.

(8) WATER LEVELS: Land surface elevation ft. above mean sea level.
 Static level 88 ft. below top of well Date 8-5-76
 Artesian pressure lbs. per square inch Date
 Artesian water is controlled by (Cap. valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
 Was a pump test made? Yes No If yes, by whom?
 Yield: gal./min. with ft. drawdown after hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test 8-5-76
 Bailor test 15 gal./min. with 7 ft. drawdown after 1 1/2 hrs.
 Artesian flow g.p.m. Date
 Temperature of water Was a chemical analysis made? Yes No

(10) WELL LOG:
 Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown rocky overburden	0	3
Brown hardpan with boulders	3	38
Brown hardpan	38	79
Dry brown medium sand	79	98
Medium-coarse sand & gravel with hard streaks wet	98	104
Brown hardpan	104	109
Coarse sand & gravel water bearing	109	

Work started August 2, 1976 Completed August 5, 1976

WELL DRILLER'S STATEMENT:
 This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
 NAME Harbor Pump & Drilling Co., Inc.
 (Person, firm, or corporation) (Type or print)
 Address 7825 46th Ave., Gig Harbor, Wash.
 [Signed] Victor Todd By: bls
0476 (Well Driller)
 License No. 223 01 8455 Date August 6, 1976

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

File Original and First Copy with
 Department of Ecology
 Second Copy—Owner's Copy
 Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 084610

Water Right Permit No. _____

(1) OWNER: Name Julia Lenden Address 6804-149TH ST CT NW GIG HARBOR, WA 98337

(2) LOCATION OF WELL: County Pierce SW W SW 13 T 22 N. R. 1 E.W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 14710 SHERMAN DR NW GIG HARBOR, WA 98332

(3) PROPOSED USE: Domestic Industrial Municipal
 Irrigation Test Well Other
 DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
 Abandoned New well Deepened Reconditioned
 Method: Dug Cable Rotary Bored Driven Jolted

(5) DIMENSIONS: Diameter of wall 6 inches.
 Drilled 33 feet. Depth of completed well 33 feet.

(6) CONSTRUCTION DETAILS:
 Casing installed: 6 Diam. from 0 ft. to 28 ft.
 Welded 33 Diam. from _____ ft. to _____ ft.
 Liner installed _____ Diam. from _____ ft. to _____ ft.
 Threaded _____ Diam. from _____ ft. to _____ ft.

Perforations: Yes No
 Type of perforator used _____
 SIZE of perforations _____ in. by _____ in.
 _____ perforations from _____ ft. to _____ ft.
 _____ perforations from _____ ft. to _____ ft.
 _____ perforations from _____ ft. to _____ ft.

Screens: Yes No
 Manufacturer's Name Jahnon
 Type _____ Model No. _____
 Diam. 5 Slot size 20 from 28 ft. to 33 ft.
 Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes No Size of gravel _____
 Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes No To what depth? 18 ft.
 Material used in seal Bentonite
 Did any strata contain undesirable water? Yes No
 Type of water? _____ Depth of strata _____
 Method of sealing strata _____

(7) PUMP: Manufacturer's Name _____
 Type _____ H.P. _____

(8) WATER LEVELS: Land surface elevation _____ ft. above mean sea level.
 Static level _____ ft. below top of well. Date _____
 Artesian pressure _____ lbs. per square inch. Date _____
 Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
 Was a pump test made? Yes No If yes, by whom? _____
 Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
 " " " " " " " "
 " " " " " " " "
 Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level

Date of test _____
 Baker test 30 gal./min. with 15 ft. drawdown after 1 hrs.
 Air test _____ gal./min. with stem set at _____ ft. for _____ hrs.
 Artesian flow 10 g.p.m. Date _____
 Temperature of water _____ Was a chemical analysis made? Yes No

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
<u>Top Soil</u>	<u>0</u>	<u>3</u>
<u>Brown hard Pan</u>	<u>3</u>	<u>26</u>
<u>Gravel H&H P&P sand H20</u>	<u>26</u>	<u>33</u>

Work started 2-25-92 1B Completed 3-27-92

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Tyce Pump & drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 9711 151 Ave KPN

(Signed) Robert Hooper (WELL DRILLER) License No. 0467

Contractor's Registration No. tycepd 10182 Date 2-15-92

(USE ADDITIONAL SHEETS IF NECESSARY)

WATER WELL REPORT

Original & 1st copy Ecology, 2nd copy - owner 3rd copy - driller

Construction/Decommission (x in circle)

Construction

Decommission ORIGINAL CONSTRUCTION Notice

118096 of Intent Number

PROPOSED USE Domestic Industrial Municipal
 DeWater Irrigation Test Well Other

TYPE OF WORK Owner's number of well (if more than one) _____
 New Well Reconditioned Method Dug Bored Driven
 Deepened Cable Rotary Jetted

DIMENSIONS Diameter of well 6 inches drilled 38 ft
Depth of completed well 38 ft

CONSTRUCTION DETAILS
Casing Welded 6" Diam from +1 ft to 38 ft
Installed Liner installed " Diam from ft to ft
 Threaded " Diam from ft to ft

Perforations Yes No
Type of perforator used _____
SIZE of perms in by in and no of perms from ft to ft

Screens Yes No K Pac Location _____
Manufacturer's Name _____
Type _____ Model No _____
Diam _____ Slot Size _____ from ft to ft
Diam _____ Slot Size _____ from ft to ft

Gravel/Filter packed Yes No Size of gravel/sand _____
Materials placed from ft to ft

Surface Seal Yes No To what depth? 18 ft
Materials used in seal BENTONITE
Did any strata contain unusable water? Yes No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP Manufacturer's Name GOULDS
Type SUBMERSIBLE 10LS05 HP 1/2

WATER LEVELS Land-surface elevation above mean sea level _____ ft
Static level 6 ft below top of well Date 5/24/02
Artesian pressure _____ lbs per square inch Date _____
Artesian water is controlled by _____ (cap, valve etc)

WELL TESTS Drawdown is amount water level is lowered below static level
Was a pump test made? Yes No If yes by whom? GRESHAM
Yield 18 gal/min with 13 ft drawdown after 1+ hrs
Yield _____ gal/min with _____ ft drawdown after _____ hrs
Yield _____ gal/min with _____ ft drawdown after _____ hrs
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
FULL RECOVERY IN 6 MIN.					
Date of test 5/24/02					

Bar test _____ gal/min with _____ ft drawdown after _____ hrs
Artest 15 gal/min with stem set at 30 ft for 1 hrs
Artesian flow _____ g p m Date _____
Temperature of water _____ Was a chemical analysis made? Yes No

CURRENT

Notice of Intent No W135450

Unique Ecology Well ID Tag No AHB408

Water Right Permit No _____

Property Owner Name JULIA LINDNER CARNS

Well Street Address 14708 SHERMAN DRIVE NW

City GIG HARBOR County PIERCE

Location SW 1/4- 1/4 SW 1/4 Sec 13 Twn 22 R 1E WWM circle or one

Lat/Long (s, l, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____

Long Deg _____ Long Min/Sec _____

Tax Parcel No 0122133111

CONSTRUCTION OR DECOMMISSION PROCEDURE
Formation Describe by color character size of material and structure and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information Indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
GRAY GRAVELLY HARDPAN	0	28
SAND & GRAVEL	28	34
GRAVEL, H2O	34	38

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JUN 11 2002

Washington State

Department of Ecology

Start Date 5/07/02 Completed Date 5/07/02

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

Driller Engineer Trainee Name (Print) CRAIG A GRESHAM
Driller/Engineer/Trainee Signature _____

Drilling Company GRESHAM WELL DRILLING INC
Address P.O. BOX 1600

Driller or Trainee License No 0761

City, State, Zip POULSOBO, WA 98370-0195

If trainee, licensed driller's Signature and License no _____

Contractor's Registration No GRESHWDO55BC Date 5/27/02

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WATER WELL REPORT

Start Card No. 16832
 Unique Well I.D. # AAB663
 Water Right Permit No.

STATE OF WASHINGTON

(1) OWNER: Name VANCE, LOUIS & KARBL Address 1202 VENTURA DR TACOMA, WA 98465-

(2) LOCATION OF WELL: County PIERCE
 (2a) STREET ADDRESS OF WELL (or nearest address) 14720 SHERMAN DR NW, GIG HARBOR - SW 1/4 SW 1/4 Sec 13 T 22 N., R 1R WH

(3) PROPOSED USE: DOMESTIC

(10) WELL LOG

(4) TYPE OF WORK: Owner's Number of well (If more than one)
 NEW WELL Method: CABLE

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

(5) DIMENSIONS: Diameter of well 6 inches
 Drilled 118 ft. Depth of completed well 118 ft.

MATERIAL	FROM	TO
PIPE STICK-UP	0	1
BROWN TOP SOIL ROCKS	1	5
BROWN GRAVEL CLAY & SAND	5	38
BROWN GRAVEL SAND & CLAY	38	63
BROWN GRAVEL SAND & CLAY WBT	63	65
BLUE CLAY	65	100
PINK BLUE SAND WATER	100	105
BLUE SAND GRAVEL WATER	105	118
BROWN GRAVEL SAND & CLAY	118	

(6) CONSTRUCTION DETAILS:
 Casing installed: 6 " Dia. from 0 ft. to 112.2 ft.
 WELDED " Dia. from ft. to ft.
 " Dia. from ft. to ft.

Perforations: NO
 Type of perforator used
 SIZE of perforations in. by in.
 perforations from ft. to ft.
 perforations from ft. to ft.
 perforations from ft. to ft.

Screens: YES
 Manufacturer's Name JOHNSON
 Type STAINLESS Model No. TELESCOPING
 Diam. 6 slot size .018 from 112.8 ft. to 118.0 ft.
 Diam. slot size from ft. to ft.

Gravel packed: NO
 Gravel placed from ft. to ft. Size of gravel

Surface seal: YES To what depth? 20 ft.
 Material used in seal BENTONITE
 Did any strata contain unusable water? NO
 Type of water? Depth of strata ft.
 Method of sealing strata off

(7) PUMP: Manufacturer's Name
 Type H.P.

(8) WATER LEVELS: Land-surface elevation
 above mean sea level ... ft.
 Static level FLOWG ft. below top of well Date 04/22/94
 Artesian Pressure .43 lbs. per square inch Date 04/22/94
 Artesian water controlled by VALVE

Work started 04/18/94 Completed 04/22/94

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
 Was a pump test made? NO If yes, by whom?
 Yield: gal./min with ft. drawdown after hrs.

WELL CONSTRUCTOR CERTIFICATION:
 I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Recovery data
 Time Water Level Time Water Level Time Water Level

NAME NICHOLSON DRILLING INC
 (Person, firm, or corporation) (Type or print)

ADDRESS PO BOX 123

Date of test
 Diller test 30 gal./min. 15 ft. drawdown after 1 hrs.
 Air test gal./min. w/ stem set at ft. for hrs.
 Artesian flow g.p.m. Date
 Temperature of water Was a chemical analysis made? YES

[SIGNED]  License No. 01773

Contractor's
 Registration No. NICHODI1370M Date 05/03/94

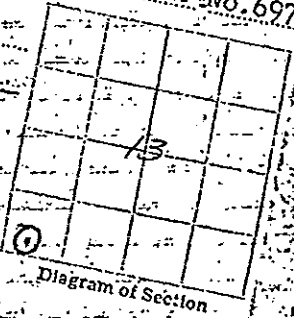
RECEIVED
 94 MAY 23 AM 1:07
 DEPARTMENT OF ECOLOGY
 S.W. REGIONAL OFFICE

The Department of Ecology does NOT warrant the Data and/or the Information on this Well Report

STATE OF WASHINGTON
 DEPARTMENT OF CONSERVATION
 AND DEVELOPMENT

WELL LOG
 Date: April 23 19 65 No. 7463
 Record by: Driller's Record Permit No. 6974

Location: State of WASHINGTON
 County: Pierce
 Area: 2075' W & 370' N from S $\frac{1}{4}$
 Map corner of Sec. 13
 SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13 T22 N, R1 E.



Drilling Co. Harbor Pump & Drill Co.
 Address: Rt. 4, Box 4117, Gig Harbor, Washington
 Method of Drilling: Cable Date: _____ 19__
 Owner: Mrs. Homer H. Laffaw
 Address: Rt. 3, Box 48, Gig Harbor, Washington

Land surface, datum: _____ ft above / below

CORRELATION MATERIAL THICKNESS (feet) DEPTH (feet)

(Transcribe driller's terminology literally but paraphrase as necessary, in parentheses. If material water-bearing, so state and record static level if reported. Give depths in feet below land-surface datum unless otherwise indicated. Correlate with stratigraphic column, if feasible. Following log of materials, list all casings, perforations, screens, etc.)

CORRELATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
	Domestic well - 6" x 83'		
	Log not available. This is from memory.		
	Subsoil & gravel		
	Solid blue clay	0-	12
	Casing: 6" from 0 to 74'	12-	83
	Artesian pressure: 5 psi, July 25, 1952		
	Pump: 1/2 HP Berkeley Jet		

Turn up

Sheet _____ of _____ sheets

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

Table with columns: Core-Litron, MATERIAL, THICKNESS (feet), DEPTH (feet), and Depth forward.

WELL LOG-Continued

No. /

S. P. No. 7449-OS-6-61-2M

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION
AND DEVELOPMENT

WELL LOG

No. Appli, 316
Cert. 241-A

Date July 16, 19 46

Record by Arthur L. Nicholson

Source Driller's Record

Location: State of WASHINGTON

County Pierce

Area _____

Map _____

NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 24 T. 22 N., R. 1 E. W.

Drilling Co. Arthur L. Nicholson

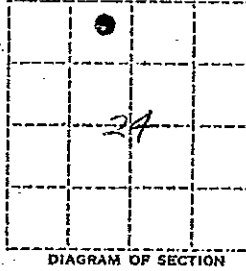
Address Box 1237; Port Orchard

Method of Drilling _____ Date July 17 1946

Owner Peninsula School Dist. #401

Address Gig Harbor, Wash.

Land surface, datum _____ ft. above
below _____



CORRE- LATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
------------------	----------	---------------------	-----------------

(Transcribe driller's terminology literally but paraphrase as necessary, in parentheses. If material water-bearing, so state and record static level if reported. Give depths in feet below land-surface datum unless otherwise indicated. Correlate with stratigraphic column, if feasible. Following log of materials, list all casings, perforations, screens, etc.)

	Cement gravel conglomerate	14	14
	sand & gravel, small amt. water	48	62
	Hard cement gravel conglomerate	25	87
	Sand & gravel, additional water	6	93
	Blue shale (sandy) occasional laminated sequences	15	108
	Gravel (water bearing)	45	153
	Pump Test:		
	Dim: 153' x 8' to 6"		
	SWL: 33'		
	DD: 45'		
	Yield: 60 g.p.m.		
	Casing: 8" diameter from 0 to 20'10"		
	6" diameter from 20'10" to 153'		
	Perforations:		
	2 rows of 3/16" x 1/2" perforations		

Turn up (over) Sheet _____ of _____ Sheets

WATER WELL REPORT

Application No.

STATE OF WASHINGTON

Permit No.

(1) OWNER: Name Peninsula School District Address 14015 62nd Ave. NW; Gig Harbor, WA

(2) LOCATION OF WELL: County Pierce NE 1/4 NW 1/4 Sec 24 T 22 N, R 1 E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic Industrial Municipal
Irrigation Test Well Other

(4) TYPE OF WORK: Owner's number of well (if more than one) #2
New well Method: Dug Bored
Deepened Cable Driven
Reconditioned Rotary Jetted

(5) DIMENSIONS: Diameter of well 10 inches.
Drilled 270 ft. Depth of completed well 269 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 10" Diam. from +1 ft. to 245 ft.
Threaded " Diam. from _____ ft. to _____ ft.
Welded " Diam. from _____ ft. to _____ ft.

Perforations: Yes No
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes No Johnson Screen
Manufacturer's Name Welded wire
Type 8" Riser pipe Model No 235'-245'
Diam. 10 Slot size .060 from 245 ft. to 248 ft.
Diam. 10 Slot size .014 from 248 ft. to 254 ft.
10 .060 254 269

Gravel packed: Yes No Size of gravel: _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes No To what depth? 250 ft.
Material used in seal Bentonite & cement
Did any strata contain unusable water? Yes No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ HP _____

(8) WATER LEVELS: Land-surface elevation 250 ft.
Static level 152 ft. below top of well Date 2/4/80
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes No If yes, by whom? Olympic West Drilling
Yield: 165 gal./min. with 53 ft. drawdown after 3 hrs.
" 200 " 63 " 1 "
" 182 " 62'7" " 4 "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
:05	165' 3"	:20	154' 1"	:33	152' 2"
:10	160' 3"	:25	152' 6"	:35	152
:15	157' 8"	:30	152' 4"		

Date of test 2/4/80
Baller test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes No

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Sand, gravel & clay	0	50
Hardpan	50	70
Sand & clay	70	80
Light brown sand - moist	80	118
Silty blue clay	118	155
Blue clay - sticky	155	200
Fine silt & sand	200	210
Brown clay & gravel	210	225
Grey clay	225	234
Grey clay & sand	234	240
Brown sand & clay	240	242
Brown hardpan	242	246
Sand & gravel - W. B.	246	269
Clay	269	270

RECEIVED

MAR 5 1980

DEPARTMENT OF ECOLOGY
SOUTH WEST REGIONAL OFFICE

Work started 11/18/79 Completed 2/4/80

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Olympic West Drilling, Inc.
(Person, firm, or corporation) (Type or print)

Address 9512 State Hwy 16 NW; Gig Harbor, WA

(Signed) W. D. Maberry
(Well Driller)

License No. 0286 Date 2/6/80

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WELL SCHEDULE

No 221E-13M2

File number

Date 19

Record by DM

Source

1 Location State of WASHINGTON
County Kitsap
Area
Map

1/4 sec T N R E W

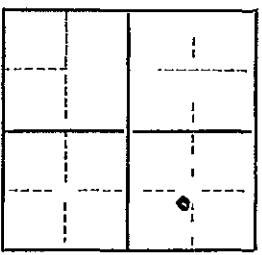


DIAGRAM OF SECTION

Details

- 2 Owner or Tenant *Pete Fortland (sp?)* (His No)
- 3 Driller *Harbor* Address *Fortland?*
- 4 Land surface datum *60* Address above ft below
- 5 Type Dug *Drilled?* Driven Depth Rept Meas feet feet
- 6 Casing Diam *6* to *19* in Type Date *7-18*, 19 *57*
- 7 Chief aquifer(s) *20* ft from ft to ft
- 8 Water level Rept Meas *19* ft above below datum
- 9 Pump Type Capacity Size gal min
- 10 Yield Flow *15* gal min Pump hours pumping *15* gal min
- 11 Use Dom Stock PS Ind Irr Obs
- 12 Quality Sample No 19 Temp F
- 13 Other data Log Water levels Draft Pump test Analy es

Turn up

WELL SCHEDULE (Continued)

14 Well Log

(As necessary insert headings and use space below for full record. Complete logs should be recorded on separate form for that purpose but fragmentary logs may be entered here.)

	FROM (feet)	TO (feet)
<i>April</i>		
<i>add on @ 12</i>		<i>4</i>
<i>add on 1. 1000 c/water</i>		<i>5.5</i>

15 Miscellaneous

(On face of schedule add asterisks to identify topics amplified use same topic headings here.)

WATER WELL REPORT

Start Card No. 022648

STATE OF WASHINGTON

Water Right Permit No. _____

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

(1) OWNER: Name Richard Koenig Address 5118 Key Pkwy Hwy, N.

(2) LOCATION OF WELL: County Pierce SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec 13 T. 22 N. R. 1E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) _____

(3) PROPOSED USE: Domestic Industrial Municipal
 Irrigation Test Well Other
 No Water

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
Abandoned New well Method: Dug Bored
Deepened Cable Driven
Reconditioned Rotary Jetted

MATERIAL	FROM	TO
Brown sand	0	17'
Grey sand + gravel	17	29'
Grey sand + gravel (100% H ₂ O)	29	55'
Brown sand	55	73'
Blue Clay	73	75'
Sandy Blue Clay	75	97'
Hard pan grey	97	114'
Hard pan black	114	122'
Blue sand + gravel	122	140'
Blue Clay	140	147'
Blue clay sand + gravel	147	152'
Peat (black)	152	161'
Hard pan grey	161	177'
Brown sand + clay binder	177	203'
Hard pan grey	203	215'
Brown sand + clay binder	215	234'
Yellow clay (soft)	234	237'
Grey sand	237	252'
Grey sand + H ₂ O	252	290'

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 280 feet. Depth of completed well 280 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +2 ft. to -276 ft.
Welded _____ " Diam. from _____ ft. to _____ ft.
Liner installed _____ " Diam. from _____ ft. to _____ ft.
Threaded _____ " Diam. from _____ ft. to _____ ft.
Perforations: Yes No
Type of perforator used _____
Size of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes No
Manufacturer's Name Cook
Type Spinless Model No. _____
Diam. 5" Slot size 14 from 276 ft. to 250 ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes No Size of gravel _____
Gravel placed from _____ ft. to _____ ft.
Surface seal: Yes No To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land surface elevation above mean sea level _____ ft.
Static level 200 ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " " " " " " " " " "
" " " " " " " " " " " "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)
Time Water Level Time Water Level Time Water Level

Date of test _____
Baller test 22 gal./min. with 4 ft. drawdown after 1 hrs.
Air test _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes No

Work started 9-25 1982 Completed 10-19 1982

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME P & P Well Drilling
(PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address Port Orchard

(Signed) Bryan L. Wolley License No. 1730
(WELL DRILLER)

Contractor's Registration No. PPWeld 110PC Date Oct 28 1989

(USE ADDITIONAL SHEETS IF NECESSARY)



The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

File Original and First Copy with
Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's copy

WATER WELL REPORT

Notice of Intent WE13086
UNIQUE WELL I.D. # BBP824

STATE OF WASHINGTON

Water Right Permit No. N/A

(1) OWNER: Name RICK LARSON Address PO BOX 726, PORT ORCHJARD, WA 98366
 (2) LOCATION OF WELL: County PIERCE - NE 1/4 SE 1/4 Sec 13 T. 22 N.R 1E W.M.
 (2a) STREET ADDRESS OF WELL (or nearest address) 14803 PURDY DR NW
 TAX PARCEL NO. 0122133127

(3) PROPOSED USE: Domestic Industrial Municipal
 Irrigation Test Well Other
 DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
 New Well Method: Bored
 Deepened Dug Driven
 Reconditioned Cable Jetted
 Decommission Rotary

(5) DIMENSIONS: Diameter of well SIX inches.
 Drilled 84 feet. Depth of completed well 84 ft.

(6) CONSTRUCTION DETAILS:
 Casing Installed:
 Welded 6 " Diam. from 0 ft. to 79 ft.
 Liner installed _____ " Diam. from _____ ft. to _____ ft.
 Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes No
 Type of perforator used _____
 SIZE of perforations _____ in. by _____ in.
 _____ perforations from _____ ft. to _____ ft.
 _____ perforations from _____ ft. to _____ ft.
 _____ perforations from _____ ft. to _____ ft.

Screens: Yes No K-Pac Location 79
 Manufacturer's Name JOHNSON
 Type STAINLESS STEEL Model No. TEL
 Diam. 6 Slot size 14 from 79 ft. to 84 ft.
 Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: Yes No Size of gravel/sand _____
 Material placed from _____ ft. to _____ ft.

Surface seal: Yes No To what depth? 18 ft.
 Material used in seal BENTONITE
 Did any strata contain unusable water? Yes No
 Type of water? _____ Depth of strata _____
 Method of sealing strata off _____

(7) PUMP: Manufacturer's Name GOULDS
 Type: SUB H.P. .5

(8) WATER LEVELS: Land-surface elevation _____ ft.
 above mean sea level _____ ft.
 Static level 22 ft. below top of well Date 8/10/2011
 Artesian pressure _____ lbs. per square inch Date _____
 Artesian water is controlled by _____
 (Cap, valve, etc)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
 Was a pump test made? Yes No If yes, by whom? TDDC
 Yield: 10 gal./min. with 52 ft. drawdown after 1 hrs.
 Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
 Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test 8/10/2011

Bailer test 10 gal./min. with 52 ft. drawdown after 1 hrs.
 Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
 Artesian flow _____ g.p.m. Date 8/10/2011
 Temperature of water _____ Was a chemical analyses made? Yes No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION:
 Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
BROWN SAND AND GRAVEL.	0	4
CLAY GREY CEMENTED SAND AND GRAVEL	4	12
CLAY SAND AND GRAVEL.	12	20
CLAY GREY CEMENTED SAND AND GRAVEL.	20	61
GREY CEMENTED LAYERS CLAY AND SAND.	61	70
SAND AND GRAVEL LOOSE W/B.	70	84

RECEIVED

AUG 30 2011

WA State Department
of Ecology (SWRO)

Work Started 8/9/2011, 19. Completed 8/10/2011, 19

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name NICHOLAS J. ERNST License No. 2147
 (Licensed Driller/Engineer)

Trainee Name _____ License No. _____

Drilling Company TOP DOG DRILLING CO

(Signed) Nicholas J. Ernst License No. 2147
 (Licensed Driller/Engineer)

Address PO BOX 2227 BELFAIR WA, 98528

Contractor's
 Registration No. TOPDODCO54RA Date 8/12/2011, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

File Original and First Copy with
Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

Start Card No. 015554

STATE OF WASHINGTON

Water Right Permit No. _____

(1) OWNER: Name Roger & Janey Aiken Address P.O. Box 56 Fox Island

(2) LOCATION OF WELL: County Pierce NE SE 32 ~~33~~ W.M.

(2a) STREET ADDRESS OF WELL (or nearest address): _____

(3) PROPOSED USE: Domestic Irrigation Industrial Municipal
 DeWater Test Well Other

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
Abandoned New well Method: Dug Bored
Deepened Cable Driven
Reconditioned Rotary Jetted

(5) DIMENSIONS: Diameter of well _____ inches.
Drilled _____ feet. Depth of completed well _____ ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 Diam. from 0 ft. to 81 ft.
Welded Liner installed _____ ft. to _____ ft.
Threaded Diam. from _____ ft. to _____ ft.

Perforations: Yes No
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
perforations from _____ ft. to _____ ft.
perforations from _____ ft. to _____ ft.
perforations from _____ ft. to _____ ft.

Screens: Yes No
Manufacturer's Name JOHNSON
Type Stainless Model No. _____
Diam. 5 Slot size 12 from 80 ft. to 85 ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes No Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes No To what depth? 25 ft.
Material used in seal _____
Did any strata contain unusable water? Yes No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land surface elevation above mean sea level _____ ft.
Static level +12 ft. below top of well Date April 2, 1988
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " " " " " "

Recovery data (Time taken as zero when pump turned off) (water level measured from well top to water level)
Time Water Level Time Water Level

Date of test _____
Bailer test 20 gal./min. with 5 ft. drawdown after 2 hrs.
Artest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes No

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Br Till	0	20
Br Sandy Clay	20	28
Br Till Seeps	28	44
Br Till	44	50
Gray Till Dry	50	55
Gray Till Seeps	55	60
Clay	60	80
Gray Sand w/B	80	82
Gray Sand Gravel	82	85

RECEIVED
AUG 15 1990
DEPT. OF ECOLOGY

Work started March 22 19. Completed April 2 1988

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Olsen Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 1548 SE Oregon Street Orland
(Signed) Larry Olsen License No. 1216 (WELL DRILLER)
Contractor's Registration No. ST0100192K9 Date April 2, 1988

(USE ADDITIONAL SHEETS IF NECESSARY)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

File Original and First Copy with Department of Ecology
 Second Copy—Owner's Copy
 Third Copy—Driller's Copy

WATER WELL REPORT

Start Card No 015554

STATE OF WASHINGTON

Water Right Permit No _____

(1) OWNER: Name Roger + Janey Aiken Address P.O. Box 56 Fox Island
 (2) LOCATION OF WELL: County Pierce NE + NW 1/4 Sec 24 T. 22 N. R. 1E W.M
 (2a) STREET ADDRESS OF WELL (or nearest address) 15012 Sherman Dr NW Gig Harbor Wa

(3) PROPOSED USE: Domestic Industrial Municipal
 Irrigation Test Well Other ()
 DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
 Abandoned New well Method: Dug Bored
 Deepened Cable Driven
 Reconditioned Rotary Jetted

(5) DIMENSIONS: Diameter of well _____ inches.
 Drilled _____ feet. Depth of completed well _____ ft.

(6) CONSTRUCTION DETAILS:
 Casing installed: 6 " Diam. from 0 ft. to 81 ft.
 Welded _____ " Diam. from _____ ft. to _____ ft.
 Liner installed Threaded
 Perforations: Yes No
 Type of perforator used _____
 SIZE of perforations _____ in. by _____ in.
 _____ perforations from _____ ft. to _____ ft.
 _____ perforations from _____ ft. to _____ ft.
 _____ perforations from _____ ft. to _____ ft.

Screens: Yes No
 Manufacturer's Name JOHNSON
 Type Stainless Model No _____
 Diam. 5 Slot size 12 from 80 ft. to 85 ft.
 Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes No Size of gravel _____
 Gravel placed from _____ ft. to _____ ft.
 Surface seal: Yes No To what depth? 25 ft.
 Material used in seal _____
 Did any strata contain unusable water? Yes No
 Type of water? _____ Depth of strata _____
 Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
 Type: _____ H.P. _____

(8) WATER LEVELS: Land surface elevation above mean sea level _____ ft.
 Static level +12 ft. below top of well Date April 2/1988
 Artesian pressure _____ lbs. per square inch Date _____
 Artesian water is controlled by _____ (Cap. valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
 Was a pump test made? Yes No If yes, by whom? _____
 Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
 "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)
 Time Water Level Time Water Level Time Water Level

 Date of test _____
 Bailor test 20 gal./min. with 5 ft. drawdown after 2 hrs.
 Airstest _____ gal./min. with stem set at _____ ft. for _____ hrs.
 Artesian flow _____ g.p.m. Date _____
 Temperature of water _____ Was a chemical analysis made? Yes No

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION
 Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Br Till	0	20
Br Sandy Clay	20	28
Br Till Seeps	28	44
Br Till	44	50
Gray Till Dry	50	55
Gray Till Seeps	55	60
Gray Clay	60	80
Gray Sand w/B	80	82
Gray Sand Gravel	82	85

RECEIVED
 AUG 15 1990
 DEPT. OF ECOLOGY

Work started March 22, 19. Completed April 2, 1988

WELL CONSTRUCTOR CERTIFICATION:
 I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Olsen Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
 Address 1598 SE Oregon St Portland Orkla.
 (Signed) Larry Olsen License No. 1216
 Contractor's Registration No. 570100192K9 Date April 2, 1988
 (Small Driller)

(USE ADDITIONAL SHEETS IF NECESSARY)

WATER WELL REPORT

STATE OF WASHINGTON

(1) OWNER: Name Roy Brady Address 3123 No 27th, Tacoma, Wn

(2) LOCATION OF WELL: County Pierce — SE 1/4 SE 1/4 Sec 13 T. 22N, R. 1E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic Industrial Municipal
Irrigation Test Well Other

(4) TYPE OF WORK: Owner's number of well (if more than one)

New well Method: Dug Bored
Deepened Cable Driven
Reconditioned Rotary Jetted

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 108 ft. Depth of completed well 108 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from 0 ft. to 108 ft.
Threaded " Diam. from ft. to ft.
Welded " Diam. from ft. to ft.

Perforations: Yes No
Type of perforator used.....
SIZE of perforations in. by in.
..... perforations from ft. to ft.
..... perforations from ft. to ft.
..... perforations from ft. to ft.

Screens: Yes No
Manufacturer's Name..... Model No.....
Type..... Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes No Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes No To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes No
Type of water? Depth of strata.....
Method of sealing strata off.....

(7) PUMP: Manufacturer's Name.....
Type: H.P.

(8) WATER LEVELS: Land surface elevation above mean sea level..... ft.
Static level 23 ft. below top of well Date.....
Artesian pressure lbs. per square inch Date.....
Artesian water is controlled by..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? Yes No If yes, by whom?.....
Yield: gal./min. with ft. drawdown after hrs.
" " " " " "
" " " " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test.....
Ballor test 20 gal./min. with 4 ft. drawdown after 1 1/2 hrs.
Artesian flow..... g.p.m. Date.....
Temperature of water..... Was a chemical analysis made? Yes No

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Dry brown sand	0	18
Silty gray sand	18	24
Blue silty clay	24	106
Pea gravel	106	108

RECEIVED

SEP - 7 1978

DEPARTMENT OF ECOLOGY
SOUTHWEST REGIONAL OFFICE

Work started 8-9, 1978. Completed 8-11, 1978

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Harbor Pump & Drilling Co., Inc.
(Person, firm, or corporation) (Type or print)

Address 11302 Burnham Dr. NW., Gig Harbor, Wn

[Signed] Thomas Colglazzer by: S. Kostelecky
0078 (Well Driller)

License No. 223.01.84.55 Date 8-16, 1978

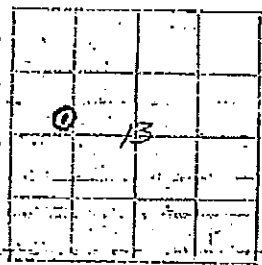
The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

Appl. No. 9822
 Permit No. 8668

STATE OF WASHINGTON
 DEPARTMENT OF CONSERVATION
 DIVISION OF WATER RESOURCES

WELL LOG

Record by..... Driller.....
 Source..... Drillers Record.....
 Location: State of WASHINGTON
 County..... Pierce.....
 Area.....
 XXX Gov't lot 2.....
 XX sec. 13 T. 22 N. R. 1.....
 Drilling Co. Richardson Well Drilling Company.....
 Address 219 So. 115th St., Tacoma, Wash.....
 Method of Drilling new well & cobbate..... 4/26/1968.....
 Owner Buck & Haywood, Inc.....
 Address P.O. Box 307, Gig Harbor, Wash.....
 Land surface, datum..... ft above.....
 SWL..... 8'..... Date April 26, 1968 Dims. 8" X 109'



CORRE- LATION	MATERIAL	From (feet)	To (feet)
------------------	----------	----------------	--------------

(Transcribe driller's terminology literally but paraphrase as necessary, in parentheses. If material water-bearing, so state and record static level if reported. Give depths in feet below land-surface datum unless otherwise indicated. Correlate with stratigraphic column, if feasible. Following log of materials, list all casings, perforations, screens, etc.)

CORRE- LATION	MATERIAL	From (feet)	To (feet)
	Group domestic		
	Top soil	0	5
	Hardpan	5	17
	Gravel & sand, coarse	17	20
	Hardpan	20	26
	Sand - water bearing	26	31
	Sand & clay	31	38
	Sand, hard packed	38	42
	Clay & sand, blue	42	46
	Clay, blue	46	80
	Sand-water, fine	80	85
	Sand, fine & coarse gravel	85	87
	Sand, fine	87	103
	Sand & clay, fine	103	105
	Sand & gravel, coarse-water	105	109

Turn up..... Sheet..... of..... sheets

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

STATE OF WASHINGTON
 DEPARTMENT OF CONSERVATION
 DIVISION OF WATER RESOURCES

Appl. #7583
 Permit #7102

WELL LOG

Record by: Driller
 Source: Driller's Record

Location: State of WASHINGTON

County: Pierce

Area:

Map:

NE 1/4 SW 1/4 sec. 13 T. 22 N. R. 1 E. Diagram of Section

Drilling Co: Harbor Pump & Drilling Co. Inc.

Address: Rt. 4, Box 4117, Gig Harbor, Wash.

Method of Drilling: Cable Date: April 28, 1964

Owner: S. H. Crooks

Address: Route 3, Box 59 B, Gig Harbor, Wash.

Land surface, datum: ft. above
 Date: April 28, 1964 Dims: 6" x 58 1/2"

Artesian pressure: 5 lbs/sq/in

CORRELATION	MATERIAL	From (feet)	To (feet)
-------------	----------	-------------	-----------

(Transcribe driller's terminology literally but phrase as necessary in parentheses. If material water-bearing, so state and record static level if reported. Give depths in feet below land surface datum unless otherwise indicated. Correlate with stratigraphic column. If feasible, following log of materials, list all casings, perforations, screens, etc.)

	Community domestic supply	0	12
	Augered hole	12	42'6"
	Gravel, brown, & hardpan		
	Sand, clean, & gravel,	42'6"	63'3"
	water bearing		
	Casing: 6" from 0-57'		
	Screen installed from 53-58'		
	Surface sealed with cement grout		
	to a depth of 30'		
	Bailer test yield:		
	60 gpm with 32' DD after 4 hrs.		
	Artesian flow 15 gpm		
	Test made 4-28-64		

Sheet _____ of _____ sheets

Turn up

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

File Original with Department of Ecology
Second Copy Owner's Copy
Third Copy - Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent W 112535
UNIQUE WELL ID # AGE 502
Water Right Permit No _____

92184

(1) OWNER Name Roy Pegram Address 14613 Purdy Dr NW Gig Harbor WA 98332
(2) LOCATION OF WELL County Pierce '01 APR -5 31/4 SW 1/4 Sec 13 T 02 NR 16 WM
(2a) STREET ADDRESS OF WELL (or nearest address) Same
TAX PARCEL NO _____

(3) PROPOSED USE Domestic Industrial Irrigation Test Well Other
 DeWater
(4) TYPE OF WORK Owner's number of well (if more than one) _____
 New Well Method Dug Bored
 Deepened Cased Driven
 Reconditioned Rotary Jetted
 Decommission

(5) DIMENSIONS Diameter of well 6 inches
Drilled 88 feet Depth of completed well 88 ft

(6) CONSTRUCTION DETAILS
Casing Installed Welded 6 Diam from +1 ft to 83 ft
 Liner installed Diam from _____ ft to _____ ft
 Threaded Diam from _____ ft to _____ ft

Perforations Yes No
Type of perforator used _____
SIZE of perforations _____ in by _____ in
_____ perforations from _____ ft to _____ ft

Screens Yes No K-Pac Location _____
Manufacturer's Name _____
Type 3/5 Model No _____
Diam 6.75 Slot Size 0.16 from 83 ft to 88 ft
Diam _____ Slot Size _____ from _____ ft to _____ ft

Gravel/Filter packed Yes No Size of gravel/sand _____
Material placed from _____ ft to _____ ft

Surface seal Yes No To what depth? 18 ft
Material used in seal Hole plug
Did any strata contain unusable water? Yes No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP Manufacturer's Name _____
Type _____ HP _____

(8) WATER LEVELS Land surface elevation above mean sea level 42 ft
Static level 72 ft below top of well Date 3/31/01
Artesian pressure _____ lbs per square inch Date _____
Artesian water is controlled by _____ (Cap valve etc)

(9) WELL TESTS Drawdown is amount water level is lowered below static level
Was a pump test made? Yes No If yes by whom? Driller
Yield 40 gal/min with 30 ft drawdown after 1 hrs
Yield _____ gal/min with _____ ft drawdown after _____ hrs
Yield _____ gal/min with _____ ft drawdown after _____ hrs
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)
Time Water Level Time Water Level Time Water Level
8:00 62 _____ _____ _____
1:00 42 _____ _____ _____
Date of test _____
Barter test _____ gal/min with _____ ft drawdown after _____ hrs
Artest _____ gal/min with _____ ft drawdown after _____ hrs
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes No

(b) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated with at least one entry for each change of information Indicate all water encountered

MATERIAL	FROM	TO
Top Soil	0	2
Silt & gravel (Brown)	2	28
Hard Pan (gray)	28	50
Sand & silt (Brown)	50	82
Sand & Gravel	82	88

RECEIVED

APR 10 2001

DEPARTMENT OF ECOLOGY
WELL DRILLING UNIT

Work Started 3/24 01 Completed 3/31 01

WELL CONSTRUCTION CERTIFICATION

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief

Type or Print Name Wes Glessner License No. 0154
(Licensed Driller/Engineer)

Trainee Name _____ License No. _____

Drilling Company WES GLESSNER DRILLING
(Signed) Wesley Glessner License No. 0154
(Licensed Driller/Engineer)

Address PO Box 487 Burley WA 98322

Contractor's Registration No. WES GLESSNER Date 4/2 01

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407 6600. The TDD number is (360) 407 6006.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

STATE OF WASHINGTON
 DEPARTMENT OF CONSERVATION
 DIVISION OF WATER RESOURCES

Appl. #7583
 Permit #7402

WELL LOG

Record by: Driller
 Source: Driller's Record

Location: State of WASHINGTON
 County: Pierce

Map: NE 1/4 SW 1/4 sec. 13 T. 22 N. R. 1 E. Diagram of Section
 Drilling Co: Harbor Pump & Drilling Co. Inc.

Address: Rt. 4, Box 4117, Gig Harbor, Wash.

Method of Drilling: Cable Date: April 28, 1964

Owner: S. H. Crooks
 Address: Route 3, Box 59-B, Gig Harbor, Wash.

Land surface, datum: ft. above/below
 Artesian pressure: 5 lbs/sq/in

flowing Date: April 28, 1964 Dims: 6" x 58' 7"

Correlation MATERIAL From (feet) To (feet)
 (Transcribe driller's terminology literally but paraphrase as necessary, in parentheses. If material water-bearing, so state and record static level if reported. Give depths in feet below land surface datum unless otherwise indicated. Correlate with stratigraphic column, if feasible. Following log of materials, list all casings, perforations, screens, etc.)

CORRELATION	MATERIAL	From (feet)	To (feet)
	Community domestic supply	0	12
	Augered hole	12	42'6"
	Gravel, brown, & hardpan		
	Sand, clean, & gravel,		
	water bearing	42'6"	63'3"
	Casing: 6" from 0-57'		
	Screen installed from 53-58'		
	Surface sealed with cement grout		
	to a depth of 30'		
	Bailer test yield:		
	60 gpm with 32' DD after 4 hrs.		
	Artesian flow 15 gpm		
	Test made 4-28-64		

Sheet _____ of _____ sheets

Turn up

221/2583/2A

STATE OF WASHINGTON
 DEPARTMENT OF CONSERVATION
 DIVISION OF WATER RESOURCES Appl. #7583

Permit #7102

WELL LOG

Record by Driller
 Source Driller's Record

Location: State of WASHINGTON
 County Pierce

Area

Map

NE 1/4 SW 1/4 sec 13 T. 22 N. R. 1 E. Diagram of Section

Drilling Co. Harbor Pump & Drilling Co. Inc.

Address Rt. 4, Box 1117, Gig Harbor, Wash.

Method of Drilling Cable Date April 28 1964

Owner S. H. Crooks

Address Route 3, Box 59-B, Gig Harbor, Wash.

Land surface, datum ft. above

~~XXXX~~ Flowing Date April 28 1964 Dims. 6" x 58'7"

Artesian pressure 5 lbs/sq/in

CORRE-LATION	MATERIAL	From (feet)	To (feet)
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(Transcribe driller's terminology literally but rephrase as necessary, in parentheses. If material water-bearing, so state and record static level if reported. Give depths in feet below land-surface datum unless otherwise indicated. Correlate with stratigraphic column, if feasible. Following log of materials, list all casings, perforations, screens, etc.)

	Community domestic supply	0	12'
	Augered hole	12'	42'6"
	Gravel, brown, & hardpan		
	Sand, clean, & gravel,		
	water bearing	42'6"	63'3"
	Casing: 6" from 0-57'		
	Screen installed from 53-58'		
	Surface sealed with cement grout		
	to a depth of 30'		
	Bailer test yield:		
	60 gpm with 32' DD after 4 hrs.		
	Artesian flow 15 gpm		
	Test made 4-28-64		

Turn up

Sheet _____ of _____ sheets

221/15151

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

and First Copy with
ent of Ecology
nd Copy — Owner's Copy
hird Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No.
Permit No.

(1) OWNER: Name Stan Maleskey Address 14418 Sherman Dr. NW Gig Harbor 98335

(2) LOCATION OF WELL: County Pierce — SW 1/4 SW 1/4 Sec. 13 T. 22 N. R. 1E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic Industrial Municipal
Irrigation Test Well Other

(4) TYPE OF WORK: Owner's number of well
(if more than one)

New well Method: Dug Bored
Deepened Cable Driven
Reconditioned Rotary Jetted

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 40 ft. Depth of completed well 40 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 8 1/2 " Diam. from 0 ft. to 40 ft.
Threaded " Diam. from ... ft. to ... ft.
Welded " Diam. from ... ft. to ... ft.

Perforations: Yes No
Type of perforator used.....
SIZE of perforations in. by in.
..... perforations from ft. to ft.
..... perforations from ft. to ft.
..... perforations from ft. to ft.

Screens: Yes No
Manufacturer's Name.....
Type..... Model No.....
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes No Size of gravel:

Gravel placed from ft. to

Surface seal: Yes No To what depth? ft.
Material used in seal.....
Did any strata contain unusable water? Yes No
Type of water? Depth of strata.....
Method of sealing strata off.....

(7) PUMP: Manufacturer's Name.....
Type: HP.....

(8) WATER LEVELS: Land-surface elevation ~ 20 ft.
above mean sea level...
Static level 6 ft. below top of well Date 7/31/75
Artesian pressure lbs. per square inch Date.....
Artesian water is controlled by.....
(Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is
lowered below static level
Was a pump test made? Yes No If yes, by whom?.....
Yield: gal./min. with (ft. drawdown after) hrs.

Recovery data (time taken as zero when pump turned off) (water level
measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
------	-------------	------	-------------	------	-------------

Date of test 7/31/75
Baller test 20 gal./min. with 24 ft. drawdown after 1 hrs.
Artesian flow g.p.m. Date.....
Temperature of water..... Was a chemical analysis made? Yes No

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and
show thickness of aquifers and the kind and nature of the material in each
stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown sand & large gravel	0	3
Hard packed sand & gravel	3	18
Hard packed gravel, some seepage	18	28
Gray hardpan	28	34
Brown heaving sand - water bearing	34	38
Coarse water bearing sand & gravel	38	40

RECEIVED

AUG 15 1975

DEPARTMENT OF ECOLOGY

Work started 7/28, 1975 Completed 7/31, 1975

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Harbor Pump & Drilling Co., Inc.
(Person, firm, or corporation) (Type or print)

Address 7825 46th Ave. NW Gig Harbor, 98335

[Signed] Emer Colglazier by B.P. Wiles
0476 (Well Driller)

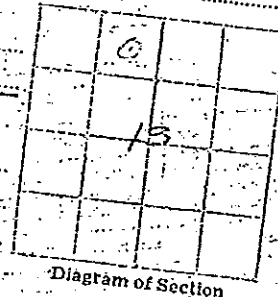
License No. 223 01 8455 Date 7/31, 1975

22/1E-13N

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

STATE OF WASHINGTON
 DEPARTMENT OF CONSERVATION
 AND DEVELOPMENT Appl. #7503

WELL LOG
 Date March 16, 19 65 No. 1
 Record by Driller
 Source Driller's Record



Location: State of WASHINGTON
 County Pierce
 Area _____
 Map _____
 NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec 13 T. 22 N. R. 1 E. E. $\frac{1}{2}$ W.
 Drilling Co. Richardson Well Drilling Company
 Address 219 So. 115th St., Tacoma, Washington
 Method of Drilling Cable Date Jan. 28, 1965
 Owner Stuart B. Haywood
 Address Route 2, Box 212, Gig Harbor, Washington
 Land surface, datum _____ ft. above
 _____ ft. below

CORRELATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
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(Transcribe driller's terminology literally but paraphrase as necessary. In parentheses. If material water-bearing, so state and record static level if reported. Give depths in feet below land-surface datum unless otherwise indicated. Correlate with stratigraphic column, if feasible. Following log of materials, list all casings, perforations, screens, etc.)

CORRELATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
	<u>Municipal well</u>		
	<u>Top soil</u>		
	<u>Sand and gravel</u>	<u>0</u>	<u>2</u>
	<u>Clay and sand</u>	<u>2</u>	<u>29</u>
	<u>Clay and sand</u>	<u>29</u>	<u>60</u>
	<u>Blue clay</u>	<u>60</u>	<u>80</u>
	<u>Coarse sand, gravel and water</u>	<u>80</u>	<u>89</u>
	<u>Water, sand and gravel</u>	<u>89</u>	<u>90</u>
	<u>Casing: 6" from 0 to 92'</u>	<u>90</u>	<u>92</u>
	<u>No perforations</u>		
	<u>Screened from 87 to 92'</u>		
	<u>SWL: 40' on January 28, 1965</u>		
	<u>Yields 30-35 gpm</u>		
	<u>Bailed 30 gpm with 15' DD after 1 hour</u>		
	<u>Pump: 3 HP jet</u>		

Turn up

Sheet _____ of _____ sheets

File number 22115-130

WATER WELL REPORT

STATE OF WASHINGTON

Application No. 017618

Permit No.

^{TELEPHONE}
(1) OWNER: Name U.T.B. 174 Telephone Co. W.L.P. Address 140XX 62ND AV. N.W. GIG HARBO

(2) LOCATION OF WELL: County PIERCE - NW 1/4 NE 1/4 Sec 24 T. 22 N., R. 1 E. W.M.
Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic Industrial Municipal
Irrigation Test Well Other

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well Method: Dug Bored
Deepened Cable Driven
Reconditioned Rotary Jetted

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 42 ft. Depth of completed well 42 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 2 ft. to 40 ft.
Threaded " Diam. from " ft. to " ft.
Welded " Diam. from " ft. to " ft.

Perforations: Yes No
Type of perforator used
SIZE of perforations .. in. by .. in.
perforations from .. ft. to .. ft.
perforations from .. ft. to .. ft.
perforations from .. ft. to .. ft.

Screens: Yes No
Manufacturer's Name
Type .. Model No.
Diam. .. Slot size .. from .. ft. to .. ft.
Diam. .. Slot size .. from .. ft. to .. ft.

Gravel packed: Yes No Size of gravel: ..
Gravel placed from .. ft. to .. ft.

Surface seal: Yes No To what depth? 1.8 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes No
Type of water? .. Depth of strata ..
Method of sealing strata off ..

(7) PUMP: Manufacturer's Name ..
Type: .. H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level. ft.
Static level 37 ft. below top of well Date 10-7 ..
Artesian pressure .. lbs. per square inch Date ..
Artesian water is controlled by ..
(Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? Yes No If yes, by whom? ..
Yield: .. gal./min. with .. ft. drawdown after .. hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
------	-------------	------	-------------	------	-------------

Date of test ..
Bailer test .. gal./min. with .. ft. drawdown after .. hrs.
Artesian flow .. g.p.m. Date ..
Temperature of water .. Was a chemical analysis made? Yes No

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
crushed rock	0	1
SAND	1	2
SAND/ GRAVEL & some clay	2	13
SAND	13	30
SAND & GRAVEL	30	32
SAND	32	38
SAND/ GRAVEL & WATER	38	42

Work started 10/7 1989, Completed 10/7 1989

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME KRINE DRILLING CO. INC
(Person, firm, or corporation) (Type or print)

Address P. O. BOX 317 MILTON WA 98354

[Signed] Edwin P. Krine
(Well Driller)

License No. 0443 Date 10/8 1989

Enclosure B

Email Correspondence

From: [David Polivka](#)
To: [Mullin, Tim \(ECY\)](#)
Cc: [Stephen Spencer](#); [tracey98359](#); [Acklam, Nicholas \(ECY\)](#)
Subject: RE: SW1590 - Gig Harbor Transmission
Date: Thursday, January 04, 2018 3:05:23 PM
Attachments: [image001.png](#)

Tim:

Thank you. That is a good accurate summary of our discussion. I look forward to receiving the letter and working with you to get this project closed out.

David R. Polivka L. G. / L. Hg.

Senior Hydrogeologist



Practical Environmental Compliance Solutions

Offices in: Anchorage | Tacoma | Portland

Direct: (360) 349-0851

Office: (253) 238-9270

Fax: (253) 369-6228

E-mail: david@ecocon.us

From: Mullin, Tim (ECY) [mailto:TMUL461@ECY.WA.GOV]
Sent: Thursday, January 04, 2018 1:23 PM
To: David Polivka
Cc: Stephen Spencer; tracey98359; Acklam, Nicholas (ECY); Mullin, Tim (ECY)
Subject: SW1590 - Gig Harbor Transmission

Dave,

Thanks for the call today regarding SW1590 – Gig Harbor Transmission. My comments for this Site are:

- 1) Ecology's draft Further Action opinion letter is a reiteration of the September 27, 2017 opinion letter requirement to install one monitoring well at B2.
- 2) Anticipate this letter being done in about a week or so. It is currently in the final level of internal Ecology review.
- 3) Ecology recommends reviewing the Further Action opinion letter before taking the next steps or requesting a meeting.
- 4) Ecology does not concur that the dry direct push borings from October 2017 were sufficient to show that groundwater is not present/not contaminated and did not confirm that the cleanup action has attained cleanup standards (see WAC 173-340-360(2)(a)(iv), 173-340-410 or 173-340-720).
- 5) Ecology's concern is to ensure that drinking water supply in the vicinity of Gig Harbor Transmission is protected, especially given the fact that the neighbor to the west has a shallow domestic supply well (likely downgradient).
- 6) Ecology recommends that an example of a sufficient demonstration would be to install a

- monitoring well as outlined in that September 27, 2017 NFA likely opinion letter.
- a. For example, this could be a 2" diameter monitoring well installed with a hollow stem auger, using an approximate 10 foot screen in the vicinity of former boring B2.
 - b. The target interval for this well is the approximate 11-14 foot wet zone as identified in the various February 2010 boring logs from around the Property.
 - c. Ecology suggests drilling deeper than 14 feet to set the monitoring well in order to ensure capture of the perched groundwater zone.
 - d. However, want to avoid dragging down any potential contamination into the drinking water aquifer.
 - i. Thus, the well screen interval will need to be deep enough to cover the potential shallow groundwater zone, but not too deep as to potentially impact the drinking water aquifer.
 - ii. Because the well would be in outwash/till, it may take some time for groundwater to enter the well.
- 7) If the installed monitoring well were dry for some period of time (say a month or more), should discuss with Ecology, as this may be a sufficient demonstration to show that groundwater is not contaminated.
- 8) If groundwater is present in the well, then Ecology recommends completing the performance monitoring as outlined in the September 27, 2017 opinion letter.
- 9) We discussed the option of and current status of the insufficient yield (non potable) demonstration under WAC 173-340-720(2)(b)(i).
- a. However, this demonstration currently requires installing a well in accordance with normal domestic water well construction practices for the area in which the site is located.
 - b. The effort and expense of this option likely makes it not viable compared to installing the monitoring well discussed above.

Thank you,
Tim

Tim Mullin, LHG
Voluntary Cleanup Program Site Manager
Southwest Region – Toxics Cleanup Program
Washington State Department of Ecology
300 Desmond Drive Southeast
Lacey, WA 98503
360-407-6265
tmul461@ecy.wa.gov

Date: May 25, 2018

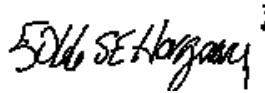
Dept of Ecology:

The following is in response to your May 25, 2018 request for delivery information on your Certified Mail™ item number 9171999991703774718972. The delivery record shows that this item was delivered on January 22, 2018 at 12:26 pm in OLALLA, WA 98359. The scanned image of the recipient information is provided below.

Signature of Recipient :



Address of Recipient :



Thank you for selecting the Postal Service for your mailing needs.

If you require additional assistance, please contact your local Post Office or postal representative.

Sincerely,
United States Postal Service