



Cascade Savings Financial Center
2828 Colby Avenue
Suite 407
Everett, Washington 98201
(206) 339-5192 TEL

RECEIVED
SEP 13 1989

DEPARTMENT OF ECOLOGY
NORTHWEST REGION

GROUNDWATER MONITORING PLAN

Lake Goodwin Landfill

Snohomish County, Washington

Prepared for:

Snohomish County Department of Public Works
Solid Waste Management Division

Converse Project No. 89-45523-04

August 31, 1989

1/91



Cascade Savings Financial Center
2828 Colby Avenue
Suite 407
Everett, Washington 98201
(206) 339-5192 TEL

August 31, 1989

89-45523-04

Mr. Ken Miller
Snohomish County Department of Public Works
Solid Waste Management Division
Cathcart Landfill
14528 Highway 9
Snohomish, Washington 98290

Subject: **GROUNDWATER MONITORING PLAN**
Lake Goodwin Landfill
Snohomish County, Washington

Dear Mr. Miller:

This report summarizes the results of our data compilation and interpretation and provides recommendations for a groundwater monitoring plan which includes the installation of four groundwater monitoring wells at the Lake Goodwin Landfill in Snohomish County, Washington.

We appreciate the opportunity to be of service on this project. Should you have any questions regarding this report, please contact us.

Sincerely,

CONVERSE CONSULTANTS NW

F. Patrick Seabeck
Senior Geologist

Dean E. Ryden
Vice President

FPS12/DER/kpp

SUMMARY

This report summarizes our review of existing available geologic and engineering data pertinent to the Lake Goodwin Landfill site and provides recommendations for groundwater monitoring well installation, sampling and testing.

The Lake Goodwin Landfill is located immediately west of Frank Waters Road in northwestern Snohomish County about 1½ miles northwest of Lake Goodwin and about 5½ miles south of Stanwood. The landfill is sited within a former County gravel pit. Waste disposed at the landfill reportedly consisted of municipal waste including garbage and demolition debris and some industrial waste. Debris filling at the site was terminated in September 1982 and final cover placed during 1983. Apparently, the bottom and sides of the gravel pit were not lined prior to the start of filling, nor were leachate or gas collection systems installed. Monitoring of groundwater quality directly beneath or adjacent to the site borders has reportedly not been accomplished.

The Snohomish County Solid Waste Division intends to install one upgradient and two downgradient, deep monitoring wells at the Lake Goodwin Landfill site. Based on our preliminary findings, we recommend that a fourth monitoring well be completed to characterize groundwater quality in a potential shallow perched aquifer at the site.

SCOPE

Work completed for this study included the following items:

- o Compilation and review of existing geologic and hydrogeologic data including reports, maps and well logs. Report and map references are listed on page 17. Copies of applicable well logs obtained from the Washington State Department of Ecology are included in Appendix A.
- o Site reconnaissance on July 22, 1989.
- o Geohydrologic analysis and interpretation of subsurface soil and groundwater conditions based on the results of the document review.
- o Field staking of monitoring well locations.
- o Preparation of this draft report.

SURFACE CONDITIONS

The Lake Goodwin Landfill is located on a rolling topographic upland with elevations ranging from about 320 to 370 feet across the site. The upland surface is occupied by seven lakes, of which Lake Goodwin is the largest. The area surrounding the landfill vicinity is primarily used for commercial forest production; however, population of the Lake Goodwin area is rapidly increasing as the land is subdivided into residential properties.

The footprint of the existing waste mound covers about 11.5 acres. In most places the landfill cover is fairly well vegetated with grass, clover and weeds. A few Douglas fir have naturally reseeded in the fill cover material near the edge of the site. Small areas of bare, eroded

soil occur on the graveled access road which crosses the fill. The site is surrounded by second growth forest on all sides except on the east and north where the second growth has been clearcut.

Surface water was not observed at the site during our field reconnaissance. Limited areas of intermittent surface water probably occur in closed topographic depressions during the wetter months of the year. Reportedly, leachate seepage was observed on the west and northwest perimeters of the landfill in 1980. While staking the proposed monitoring well locations in August 1989, probable leachate stains were noted on the ground surface in a drainage swale located on the northwest side of the landfill. It is recommended the County consider analysis of leachate components if surface leachate seepage is observed again at the landfill.

GEOLOGY

The landfill area is underlain by a complex sequence of glacially over-consolidated soil deposits. These include, in order of increasing depth, Vashon age recessional outwash, glacial till, sand and gravel advance outwash/lacustrine deposits, glacio-lacustrine sand, silt and clay (transitional beds) and a thick sequence of undifferentiated pre-Vashon glacial sediments that are interpreted to consist mostly of silt and clay and that extend to bedrock. Sedimentary bedrock reported to be sandstone and siltstone was encountered at a depth of about 2,000 feet in oil exploration wells slightly north of Lake Goodwin.

Recessional outwash includes gravels and mixtures of gravel and sand. These materials were deposited from meltwater streams as the Vashon continental glacier retreated from the area. Recessional outwash is typically underlain by glacial till. In many areas the outwash forms a thin layer over the till or is not present. Thicker, more extensive deposits of recessional outwash were mapped by Newcomb (1952) east of the landfill. The same area east of the landfill was interpreted differently by Minard (1985) who classified materials in this terrain as advance outwash.

The Vashon till consists of a very dense, relatively impermeable, unsorted mixture of soil particles ranging in size from silt and clay to cobbles and boulders, and forms a blanket-like resistant layer over older glacial deposits. Till is exposed in a nearly vertical cut slope at the southern end of the landfill. The till may include more permeable but discontinuous sandy or weathered zones. The till layer, where present, ranges from a few feet to over 100 feet thick in the site vicinity.

The advance outwash includes relatively clean, permeable gravels and sands with lesser proportions of interbedded silty sand, silt and clay. Well logs indicate that locally thick zones of silt or clay are present within the advance outwash. With increasing depth, the outwash becomes generally finer grained, grading to fine to medium sand and silty sand. The lower finer-grained materials associated with the outwash were probably deposited in a lacustrine environment, and are probably equivalent to the Esperance sand. Advance outwash is not exposed at the landfill but may directly underlie the waste fill if the till cap was previously removed during gravel mining operations.

Existing mapping and drillers' logs indicate that the predominantly granular outwash/lacustrine deposits extend downward from the base of the till to slightly above or below sea level.

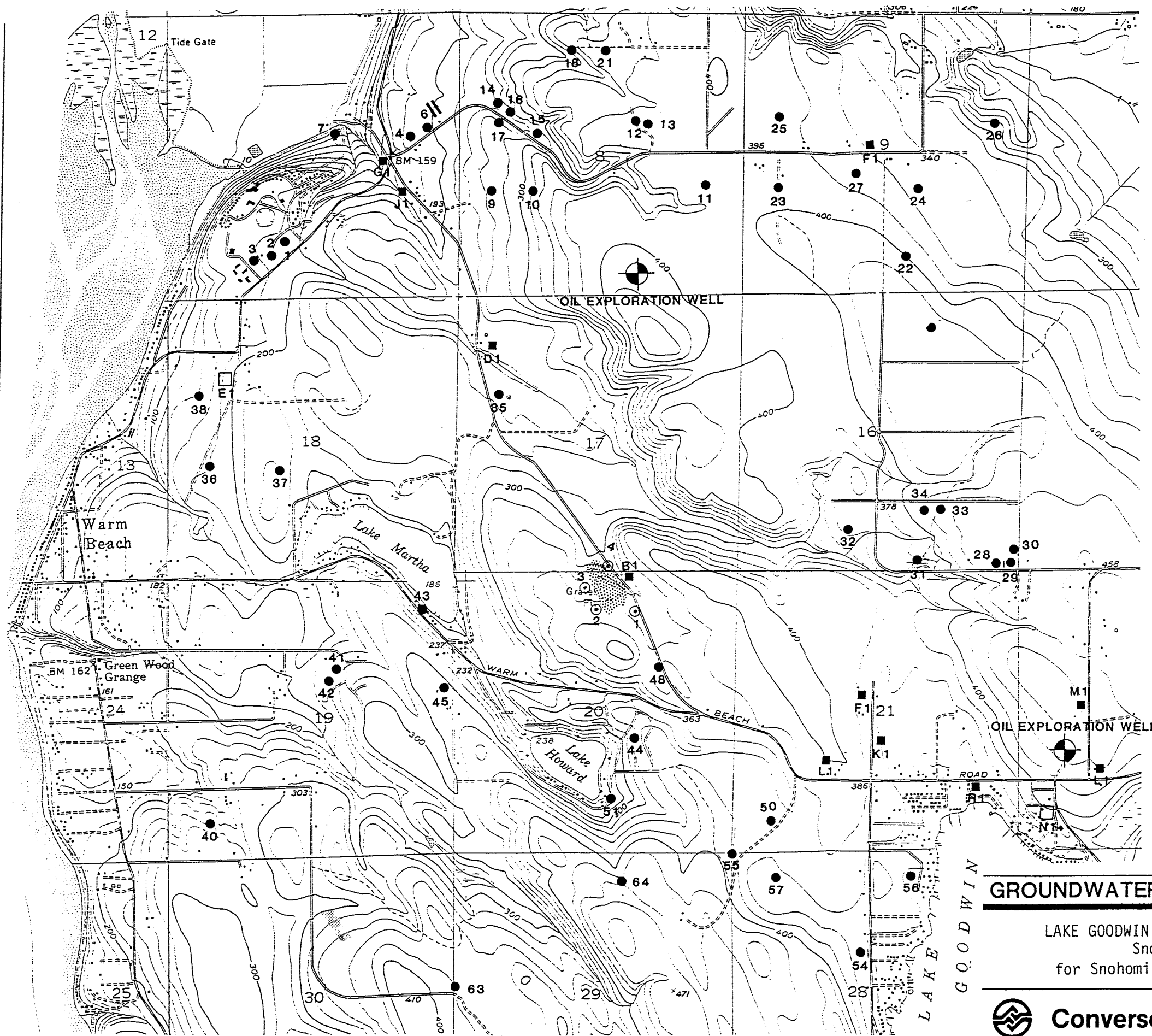
Below the Vashon till and granular outwash/lacustrine sequence are fine-grained soil deposits known as the Transitional Beds (Minard, 1985). At least the upper portions of the Transitional Beds are probably the equivalent of the Lawton clay. The surface of the Transitional Beds generally occurs at elevations close to sea level but may locally extend as high as about 100 feet above sea level. The Transitional Beds are reported to consist predominantly of fine to medium sand, silt, and clay that was deposited in a lacustrine environment ahead of the advancing Vashon continental glacier. These soils grade into the underlying mostly fine-grained Whidbey Formation which is probably hundreds of feet thick and extends to bedrock. The upper portions of the Whidbey Formation or undifferentiated deposits lying between the top of the Whidbey

Formation and the bottom of the Transitional Beds may include gravelly or sandy zones. Drillers' logs indicate that these granular zones also may contain numerous wood debris, peat, and in places, natural gas.






GROUNDWATER

The uppermost regional aquifer of common beneficial use in the landfill vicinity is found in the sandy, lower section of the advance outwash/lacustrine deposits. Groundwater is apparently perched above the silt and clay units of the underlying Transitional Beds or older deposits. The Transitional Beds and the Whidbey Formation as a whole are relatively impermeable but include water-bearing sand and gravel interbeds that are penetrated by deeper wells, particularly west of the landfill. The approximate location of wells drilled into the uppermost outwash/lacustrine aquifer or deeper aquifers in the Transitional Beds or Whidbey Formation and on file at Washington State Department of Ecology or compiled by Newcomb (1952) are indicated on Figure 1. Copies of drillers' logs are presented in Appendix A. Incomplete logs or logs that could not be readily interpreted or located are included in Appendix A but not shown on Figure 1. In our opinion, many additional drilled wells exist in the project vicinity but records for these wells are not publicly available.

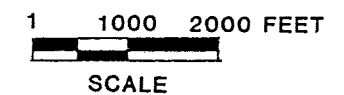
Static water level elevations measured in wells producing from the lower advance outwash/lacustrine deposits vary from about 200 to 300 feet elevation east and northeast of the landfill, to about elevation 10 to 50 west of the landfill. This data indicates a generally westerly sloping groundwater gradient toward Puget Sound. Groundwater moving along the contact between the outwash/lacustrine deposits and the silt/clay of the Transitional Beds forms springs at the bluffs above Puget Sound and the Stillaguamish River near the intersection of this geologic contact with the ground surface. Below the landfill itself, the depth to the advance outwash/lacustrine aquifer is estimated to be approximately 250 to 300 feet below the ground surface, or about elevation 50 to 100.



LEGEND

-  APPROXIMATE WASTE FILL AREA
-  24 APPROXIMATE LOCATION OF DRILLED WELL WITH DRILLER LOG (SEE APPENDIX A)
-  L1 APPROXIMATE LOCATION OF HAND DUG WELL (NEWCOMB 1952)
-  M2 APPROXIMATE LOCATION OF DRILLED WELL (NEWCOMB 1952)
-  3 PROPOSED MONITORING WELL LOCATIONS

REFERENCE: Base map compiled from portion of USGS 7 1/2' STANWOOD, WASHINGTON QUADRANGLE



GROUNDWATER MONITORING PLAN - LAKE GOODWIN LANDFILL

LAKE GOODWIN LANDFILL GROUNDWATER MONITORING PLAN
Snohomish County, Washington
for Snohomish County Department of Public Works

Project No.
89-45523-04

Figure No.



Converse Consultants NW

Geotechnical Engineering
and Applied Earth Sciences

Less common sources of water appear to be shallow dug wells that penetrate perched groundwater zones in the glacial till. It is not known how many dug wells are still presently used. Many of the dug wells are reported to become not usable during that time of the year when groundwater levels drop below the bottom of the well. The location of dug wells reported by Newcomb are shown on Figure 1 and logs are included in Appendix A.

Static water levels in dug wells were reported by Newcomb to vary in depth from about 5 to 20 feet below the ground surface. As shallow groundwater occurs mostly in irregular lenses of sand, weathered till and sandy zones in the till, shallow groundwater flow directions in the till are probably complex and difficult to predict. As an initial estimate, flow directions may be considered based on surface topography with flow toward topographic lows such as streams or lakes.

PROPOSED LOCATIONS AND DEPTHS FOR MONITORING WELLS

In our opinion, the sandy soils comprising the lower portion of the Vashon advance outwash/lacustrine deposits form the appropriate aquifer for groundwater monitoring at the Lake Goodwin site. One upgradient and two downgradient wells are recommended for completion in the regional aquifer. Additionally, we recommend that one shallow downgradient monitoring well be constructed to characterize perched water zones that may underlie the landfill.

Proposed monitoring well locations are shown on Figure 1. These locations have been staked and flagged in the field. Well 1 is presumed to be upgradient, while wells 2 and 3 are considered to be downgradient. Well 4 would be a relatively shallow well designed to monitor possible perched groundwater. The locations shown are approximate and may be modified depending on ease of drill rig access and setup. Locations may also be modified as additional data becomes available during drilling of the wells. We recommend that the wells be drilled in the same sequence as their number designation.

Depths for wells 1, 2, and 3 are anticipated to range from approximately 250 to 300 feet below the ground surface. Well 4 is anticipated to be about 50 feet in depth. Actual depths will depend on the conditions encountered in the field. We recommend that the monitoring wells be constructed of 2-inch diameter, 304 stainless steel riser pipe and screen. Figure 2 is a generalized well construction diagram that shows the key features of the proposed monitoring wells.

SAMPLE AND TESTING REQUIREMENTS

The Snohomish County Solid Waste Management Division has prepared a manual of groundwater monitoring well sampling procedures dated March 1989. Parameters to be analyzed are indicated on Table 6-3 of the manual. We concur with the procedures summarized in this manual and recommend their use at the Lake Goodwin Landfill.

REFERENCES

- Easterbrook, D.J., Blunt, D.J., & Rutter, N.W., 1987, Chronology of Pleistocene Sediments in the Puget Lowland, Washington: Washington Division of Geology and Earth Resources, Bulletin 77.
- Minard, J.P., 1985, Geologic Map of the Stanwood Quadrangle, Snohomish County, Washington: U.S. Geological Survey Miscellaneous Field Studies, Map MF-1741.
- Newcomb, R.C., 1952, Ground Water Resources of Snohomish County, Washington: U.S. Geological Survey Water Supply Paper 1135.
- U.S. Department of Agriculture, Soil Conservation Service, 1983, Soil Survey of Snohomish County Area, Washington.
- Washington State Department of Ecology, various dates, Well logs available in department files.



Figure 2
TYPICAL 2-INCH
MONITORING WELL INSTALLATION



WATER WELL REPORT

STATE OF WASHINGTON

Application No. _____

Permit No.

(1) OWNER: Name Warren Beach Conference Address _____

LOCATION OF WELL: County Snohomish SE 1/4 SW 1/4 Sec 7 T31 N. R4E W.M.
bearing and distance from section or subdivision corner 350' N + 1000' West of S 1/2 Corner of Sec 7

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

(4) TYPE OF WORK: Owner's number of well (if more than one) 5
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 349 ft. Depth of completed well 322 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 1 ft. to 307 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 Watermark Model No _____

Diam. 6 Slot size .015 from 322 ft. to 322 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? 12 ft.

Material used in seal Benatons

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.

Static level 131 ft. below top of well Date 5/19/82

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 _____

Flow test 125 gal./min. with MAX ft. drawdown after 24 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 + Gravel	0	220
Blue Sand - fine - waterbearing	220	247
approx 40 GPM		
Blue Sand - silty	247	307
Blue Sand - some small Gravel	307	322
+ clean coarse Sand		
Blue sand - silty	322	349+

Total length of screen
15' 15" 9" with 3' 9"
12' 5" casing above it
Neoprene PALCAR (K-PALCAR)
15' 21" top - Total length
of screen + extension = 19' 6"

Work started MAY 1 1980 Completed MAY 15 1980

WELL DRILLER'S STATEMENT: MAY 28 1980

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

DEPARTMENT OF ECOLOGY
NAME King Bros (Person, firm, or corporation) (Type or print)

Address PO Box 376 Centralia, WA

[Signed] Carl King (Well Driller)

License No. 2609 Date 5/31 1980

FCY 050-1-20

Bearing and distance from section or subdivision corner

(10) WELL LOG:

3

STATE OF WASHINGTON

Permit No.

(1) OWNER: Name Bob Jacobson Address 830 236th NW Stanwood, WA. 98292

(2) LOCATION OF WELL: County Snohomish - SE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 7 T. 31 N., R. 4 W.M.

_____ ft. 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 <input checked="" type="checkbox"/>	Method: Dug <input type="checkbox"/>	Bored <input type="checkbox"/>
Deepened <input type="checkbox"/>	Cable <input type="checkbox"/>	Driven <input type="checkbox"/>
Reconditioned <input type="checkbox"/>	Rotary <input checked="" type="checkbox"/>	Jetted <input type="checkbox"/>

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 1.85 ft. Depth of completed well 1.50 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 173 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 ☐ *1 + 2 ft 10 p*
 Manufacturer's Name *Johnson Extension*
 Type *Steel* Model No. _____
 Diam. *3 1/2* Slot size *5/16* from *17 1/2* ft. to *18 0* 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 elevationft.
above mean sea level.....ft.
Static levelft. below top of well Date.....
Artesian pressurelbs. 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 _____
 Fall test _____ gal./min. with 20' 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
Brown Clay-Gravel	0	120
Sandy Brown Clay	120	160
Sand	160	170
Sand - Water	170	180
Brown Clay	180	185

RECEIVED
APR 20 1966

APR 27 1965

SECRET - NOFORN
NOFORN - NOFORN

Work started 3-31-88 19 Completed 4-4-88 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 DAHLMAN PUMP & WELL DRILLING, INC.
(Person, firm, or corporation) (Type or print)

Address Box 422, Burlington, WA. 98233

[Signed] W. E. Ricks

License No. 0623 Date 4-6-88 19.....

FCY 050-1-20

(USE ADDITIONAL SHEETS IF NECESSARY)

(1) OWNER: Name James H. Ricketts Address 1555 1st Ave Seattle
LOCATION OF WELL: County Sno. 2174-62 Ave NE 1/4 Sec 8 T 31 N. R. 4 W. M.
bearing and distance from section or subdivision corner lot 6

(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 <input checked="" type="checkbox"/>	Method: Dug <input type="checkbox"/>	Bored <input type="checkbox"/>
Deepened <input type="checkbox"/>	Cable <input type="checkbox"/>	Driven <input type="checkbox"/>
Reconditioned <input type="checkbox"/>	Rotary <input type="checkbox"/>	Jetted <input type="checkbox"/>

(5) DIMENSIONS: Diameter of well inches.
 Drilled 189 ft. Depth of completed well 189 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from TOP ft. to 185 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 COOK

Type S.S. Model No. _____

Diam. 6 Slot size 10 from 183 ft. to 189 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: HP.....

(8) WATER LEVELS: Land-surface elevationft.
above mean sea levelft.
Static level 155 ft. below top of well Date.....
Artesian pressurelbs. 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 15 gal./min. with 2 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.

[illegible]

Work started 9-26 1983 Completed 10-4 1983

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 Hettwell Drilling
(Person, firm, or corporation) (Type or print)

Address 28926-54 NW. Stearns WA

[Signed] E. With
(Well Driller)

License No. 187 Date 10-29 1983

Bearing and distance from section or subdivision corner

ECY 050-i-24



WATER WELL REPORT

STATE OF WASHINGTON

Application No.

Permit No.

(1) OWNER: Name RICK LaFONTE Address 6302-212th N.W. Stanwood, Wa. 98292

(2) LOCATION OF WELL: County Snohomish ~~SAN JUAN~~ NE 1/4 SE 1/4 Sec 8 T. 31 N., R. 4E W.M.

Length 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 811
(if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 275 ft. Depth of completed well 275 ft.

(6) CONSTRUCTION DETAILS:

Casing installed 6 5/8 Diam. from +1 ft. to 270 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 wire wound No.

Diam. 6 Slot size Blank from 250 ft. to 270 ft.

Diam. 6 Slot size .010 from 270 ft. to 275 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 Flint and Walling
Type submersible HP 1

(8) WATER LEVELS: Land-surface elevation 300 ft.
above mean sea level.
Static level 225 ft. below top of well Date 4/24/80
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?

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

Ballot test 8 gal./min. with 40 ft. drawdown after 1 hrs.

Artesian flow g.p.m. Date

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
brown soil	0	3
Cemented gravel	3	137
Sand and gravel	137	175
Cemented gravel	175	260
Sand and gravel	260	275

Work started 4/22/80 19..... Completed 4/24/80 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 JANNSEN WELL DRILLING
(Person, firm, or corporation) (Type or print)

Address 430 West Ave. Arlington, Wa. 98223

[Signed] David Jannsen
(Well Driller)

License No. 0748 Date 5/10/80 19.....

WATER WELL REPORT
STATE OF WASHINGTON

Application No. _____

Permit No.

(1) OWNER: Name AUDORO GONZALES Address 5715 212th N.W. Stanwood, Wa. 98292

LOCATION OF WELL: County Snohomish — SW 1/4 NE 1/4 Sec 8 T 31 N. R 4E 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) 863
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 317 ft. Depth of completed well 317 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 312 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 wirewound Model No. _____
Diam. 9 Slot size blank from 310 ft. to 312 ft.
Diam. 6 Slot size .012 from 312 ft. to 317 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? No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name Flint & Walling
Type: submersible HP 1

(8) WATER LEVELS: Land-surface elevation _____ above mean sea level _____
Static level 247 ft. below top of well Date 11/5/80
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? _____
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: 7 gal./min. with 62 ft. drawdown after 1 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water 2 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
Clay brown	0	3
Cemented gravel with clay streaks	3	217
Cemented gravel	217	250
Sand and gravel	250	317

RECEIVED
FEB 11 1981

DEPARTMENT OF ECOLOGY
NORTHWEST REGION

Work started 10/21 1980 Completed 11/5 1980

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 JANNSEN WELL DRILLING
(Person, firm, or corporation) (Type or print)

Address 430 West Avenue Arlington, Wa. 98222

[Signed] David Jansson
(Well Driller)

License No. 0748 Date 12/5 1980

(1) OWNER: Name ELDON CUDGON Address 7409 HAPPY HOLLOW RD STANWOOD CA
(2) LOCATION OF WELL: County SAN JOHNS - SE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec 8 T. 31 N., R. R4E 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	<input checked="" type="checkbox"/>	Method: Dug	<input type="checkbox"/>	Bored	<input type="checkbox"/>
Deepened	<input type="checkbox"/>	Cable	<input checked="" type="checkbox"/>	Driven	<input type="checkbox"/>
Reconditioned	<input type="checkbox"/>	Rotary	<input type="checkbox"/>	Jetted	<input type="checkbox"/>

(5) DIMENSIONS: Diameter of well 6 inches.
 Drilled 150 ft. Depth of completed well 150 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6-74 " Diam. from C ft. to 140 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 C&K TYPE "K" PALMER

Type REL BRASS Model No _____

Diam. 6.750 Slot size 1.0 from 146 ft. to 195 ft.

Diam. 6.750 Slot size 1.2 from 145 ft. to 150 ft.

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

Surface seal: Yes ☒ No ☐ To what depth? 12 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes ☒ No ☐
Type of water? UNSATURATED Depth of strata 12
Method of sealing strata off CASED

(7) PUMP: Manufacturer's Name Grundfos
Type: Submersible HP 3/4

(8) WATER LEVELS: Land-surface elevation _____ ft.
above mean sea level. _____ ft.
Static level 103.5 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: 15 gal./min. with 17.2 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

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
Soil	0	2
SAND + GRM. FL	2	13
CLAY SAND + GRM. FL	13	30
SAND WITH SCATTERED ROCKS TO 2"	30	
dry		103.5
SAND WITH SCATTERED ROCKS TO 2"	103.5	150 +
WATER BEARING		

S.S.L - GRV
SAND & GRAVEL - GRAY
18'-3" ± GRAY - Blue

THE FORMATION BELOW THE	
STATIC LEVEL LOOSE HEADS	
BALLY	

TOTAL LENGTH OF SCREEN
IS 13'3" 2' OF 5' P.P.F. ON TOP
2 - 5' LENGTHS OF REG BRASS SCREEN
CLOSED 13' FROM

Work started 4-78 1976 Completed 6-3 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 KING DRILLING CO.
(Person, firm, or corporation) (Type or print)

Address P.O. Box 376 CENT WA. 98531

[Signed] Edwin C. Kiley
(Well Driller)

License No. 243 Date 6-9, 1976

7330 N. H. F. F.

Permit No

FCY 050-1-20

1990

WATER WELL REPORT

STATE OF WASHINGTON

Application No.

Permit No.

(1) OWNER: Name Dunedin Industries Ltd. Address P.O. Box 612, Stanwood, Wa. 98292

LOCATION OF WELL: County Snohomish N.E. 1/4 N.W. 1/4 Sec. 8 T. 31 N. R. 4E W.M.
Bearing and distance from section or subdivision corner 28 feet 6 inches northeast of center of S.P. 300 9/81

(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 200 ft. Depth of completed well 200 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 195 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 Model No.
Diam. 5" Slot size #20 from 195 ft. to 200 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? 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 153 ft. below top of well Date 3/4/82
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: 20 gal./min. with 2 ft. drawdown after 1 hrs.
" 20 " 2 " 2 "
" 20 " 2 " 3 "

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
12:00	155				

Date of test 3/4/82
Bailer test " gal./min. with " ft. drawdown after " hrs.
Artesian flow " g.p.m. Date
Temperature of water 50 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	0	105
Gravel	105	125
Clayey Brown Sand	125	160
Gray Coarse Sand	160	200

Work started 2/26/82 19..... Completed 3/4 1982

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 George Bumpus
(Person, firm, or corporation) (Type or print)

Address B.O. Box 612, Stanwood, Wa. 98292

[Signed] George Bumpus
(Well Driller)

License No. 1181 Date 3/5, 1982



5CY 050-1-20

(USE ADDITIONAL SHEETS IF NECESSARY)

WATER WELL REPORT

STATE OF WASHINGTON

Application No.

Permit No.

(1) OWNER: Name Bob Norman

Address 2016 Chestnut Everett, WA 98201

(2) LOCATION OF WELL: County Snohomish West 5253 of SW 1/4 SE 1/4 Sec 9 T 31 N, R 4E W.M.

earing 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 200 ft. Depth of completed well 200 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +1 ft. to 193 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 wirewound Model No Stainless
Diam. 6" Slot size .020 from 193 ft. to 200 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 puddled clay
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 400 ft.
above mean sea level.
Static level 170 ft. below top of well Date 10-24-83
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 10 gal./min. with 10 ft. drawdown after 1 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water 50 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
Soil, sandy	0	2
Hardpan	2	35
Sand, gravel, dry	35	95
Clay, graygreen, silt strips	95	115
Clay, green	115	125
Clay, dark gray	125	140
Clay, gravel layers, silty	140	180
Clay, gravel layers	180	190
Gravel, fine silty sand, wet	190	200

Work started 10-6 1983 Completed 10-24 1983

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 ACE Drilling & Pump Service
(Person, firm, or corporation) (Type or print)

Address 14503-23rd Av NE Arlington, WA

[Signed] Robert E. Freeman
(Well Driller)

License No. 0137 Date 10-25 1983

Bearing and distance from section or subdivision corner

(10) WELL LOG:

1/4 SW 1/4 Sec 9 T 31 N. R 4 W M

(10) WELL LOG:

MATERIAL	FROM	TO
8 Dirty sand, gravel	0	10
Blue Clay	10	25
Sand, Water	75	80

01351000

~~MAY 19 1955~~

DEPARTMENT OF ECOLOGY
NORTHWEST REGION

Work started 3-18-85 19..... Completed 3-19-85 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..... DAHLMAN PUMP & WELL DRILLING, INC.
(Person, firm, or corporation) (Type or print)

Address Box 422, Burlington, WA 98233

[Signed] A. Ben Foster
(Well Driller)

License No. 1192 Date 3-20-85, 1985

WATER WELL REPORT

STATE OF WASHINGTON

Application No.

Permit No.

(1) OWNER: Name Morice Fogle Address

(2) LOCATION OF WELL: County Levee NW 1/4 SE 1/4 Sec. 9 T. 31 N. R. 4 W.M.
Easting 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 77 ft. Depth of completed well 77 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 73 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 COOK
Type STAINLESS Model No.
Diam. 6 Slot size 12 from 73 ft. to 77 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? 15 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 ft.
above mean sea level ft.
Static level 6.2 ft. below top of well Date 10-21-80
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?
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 10-21-80
Bailer test 10 gal./min. with 0 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
Top Soil	0	1
Hard pan	1	4
Soft hard pan	4	12
Very hard pan	12	73
Water bearing gravel	73	77

Work started 10-14 1980 Completed 10-21 1980

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 Art Well Driller
(Person, firm, or corporation) (Type or print)

Address 2547 G-54th St. SE

[Signed] Art Well Driller
(Well Driller)

License No. 187 Date 19.....

WATER WELL REPORT

STATE OF WASHINGTON

Application No.

Permit No.

31/04-09E

000575

(1) OWNER: Name MICHAEL PRICE Address 2400 SE 4TH AVE. STANWOOD

(2) LOCATION OF WELL: County SNO Sec. 9 T. 31 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 3.33 ft. Depth of completed well 3.33 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +3 ft. to 3.33 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 N/A
Type:..... HP

(8) WATER LEVELS: Land-surface elevation above mean sea level..... ft.
Static level 270 ft. below top of well Date 2-8-83
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 15
Batter test 15 gal./min. with 200 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
TOP SOIL	0	1
TAU SANDY CLAY	1	5
TAU HARD PAN	5	32
TAU SAND W/CLAY	32	51
TAU SAND W/ GRAVEL	51	88
TAU SAND W/CLAY	88	96
TAU SAND W/CLAY & GRAVEL	96	107
TAU SAND W/CLAY	107	194
TAU SAND W/ SILT	194	217
TAU SAND W/ GRAVEL	217	254
TAU SANDY CLAY	254	272
BLUE SAND W/ GRAVEL	272	295
SAND DIRTY W/ WOOD & WATER	295	324
SAND GRAVEL W/ WATER	324	333

RECEIVED
AUG 29 1983

DEPARTMENT OF ECOLOGY
NORTHWEST REGION

Work started 2-7 1983 Completed 2-8 1983

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 CANAL WELL DRILLING
(Person, firm, or corporation) (Type or print)

Address PO BOX 432 STANWOOD

[Signed] Joe Murks
(Well Driller)

License No. 0611 Date 8-25 1983

(1) OWNER: Name M. Fogk Address _____

(2) LOCATION OF WELL: County Suckemish SE 1/4 NE 1/4 Sec. 9 T. 31 N., R. 4 W.M.
ing 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 <input checked="" type="checkbox"/>	Method: Dug <input type="checkbox"/>	Bored <input type="checkbox"/>
Deepened <input type="checkbox"/>	Cable <input checked="" type="checkbox"/>	Driven <input type="checkbox"/>
Reconditioned <input type="checkbox"/>	Rotary <input type="checkbox"/>	Jettied <input type="checkbox"/>

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 78 ft. Depth of completed well 28 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 24 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 Cook
Type STAINLESS Model No. _____
Diam. 6 Slot size 14 from 74 ft. to 78 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? 13 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata on _____

(7) PUMP: Manufacturer's Name TAIT
Type: SLB HP 3/4

(8) WATER LEVELS: Land-surface elevation above mean sea level.....ft.
 Static level 54.....ft. below top of well Date 5/14/79
 Artesian pressurelbs. 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.

19	20	21	22
23	24	25	26

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 10 gal./min. with 0 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
TPPSol	0	2
Hard pan	2	70
Water bearing Sand	70	78

Work started 8-7, 1979 Completed 8-10, 1979

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 Hitt Will Brelling
(Person, firm, or corporation) (Type or print)

Address 78926-54 apt 24, Steynwood

[Signed] E. Slitt DEPARTMENT OF GEOLOGY
NORTHWEST REGION
(Well Driller)

License No. 187 Date 9-11, 1979

(1) OWNER: Name Harold M. Miller Address Stamford, Conn.

LOCATION OF WELL: County AND THE NORTH & 25 THE WEST OF THE WEST 25

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	<input checked="" type="checkbox"/>	Method: Dug	<input type="checkbox"/>	Bored	<input type="checkbox"/>
Deepened	<input type="checkbox"/>	Cable	<input checked="" type="checkbox"/>	Driven	<input type="checkbox"/>
Reconditioned	<input type="checkbox"/>	Rotary	<input type="checkbox"/>	Jetted	<input type="checkbox"/>

(5) DIMENSIONS: Diameter of well 6 1/2 inches.
Drilled 17 1/2 ft. Depth of completed well 17 1/2 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: _____" Diam. from _____ ft. to _____ ft.
 Threaded ☐ _____" Diam. from _____ ft. to _____ ft.
 Welded ☒ _____" Diam. from 0 ft. to 1.13 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 35 Model No. _____

Diam. 4 Slot size 1.1 from 17.5 ft. to 12.4 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? 10 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 Leif
Type: HP 121

(8) WATER LEVELS: Land-surface elevation _____ ft.
above mean sea level _____ ft.
Static level 150 ft. below top of well Date _____
Artesian pressure 4 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? Mr. C

Yield: 10 gal./min. with _____ ft. drawdown after 35 hrs.

1.0	2.0	3.0	4.0
1.0	2.0	3.0	4.0

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
Top soil	0	3
Hard pan	3	5
Small pebbles & gravel	3.5	4.5
Sandy clay	4.5	5.0
Gravel	5.0	17.0
SILT	17.0	18.5
Gravel & fine sand	18.5	17.5

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 James H. Smith (Person, firm, or corporation) (Type or print)

Address 5047-65th Ave NW

[Signed] Ernest H. Hitt
(Well Driller)

License No. 187 Date 1-25, 1988

(1) OWNER: Name DON PAQUETTE Address 4717 188th AVE STANWOOD
(2) LOCATION OF WELL: County SNOHOMISH - SE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 16 T. 31 N., R. 4 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	<input checked="" type="checkbox"/>	Method: Dug	<input type="checkbox"/>	Bored	<input type="checkbox"/>
Deepened	<input type="checkbox"/>	Cable	<input type="checkbox"/>	Driven	<input type="checkbox"/>
Reconditioned	<input type="checkbox"/>	Rotary	<input type="checkbox"/>	Jettied	<input type="checkbox"/>

(5) DIMENSIONS: Diameter of well 6 inches.
 Drilled 65 ft. Depth of completed well 65 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 65 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 JACKSON
 Type STAINLESS Model No. _____
 Diam. 6 Slot size 10 from 65 ft. to 60 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? 15 ft.
Material used in seal Butone
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

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

(8) WATER LEVELS: Land-surface elevation above mean sea level.....ft.
 Static level 41.....ft. below top of well Date 5-31-79
 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 0 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
Top Soil	0	2
Hard pan	2	57
Water bearing Sand	57	65

RECEIVED

28 1979

DATE OF ISSUE
PAGE NO. / TOTAL PAGES

Work started 5-20 1979 Completed 5-31 1979

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 Wittell, J. H.
(Person, firm, or corporation) (Type or print)

Address 28926 - 54 Ave. NW.

[Signed] _____
(Well Driller)

License No. 157 Date July 22, 1977

(1) OWNER: Name TIM HALMARK Address 18908 47th AVE STAN
LOCATION OF WELL: County SNO SE 1/4 SE 1/4 Sec 16 T. 31 N., R. 4E 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 <input checked="" type="checkbox"/>	Method: Dug <input type="checkbox"/>	Bored <input type="checkbox"/>
Deepened <input type="checkbox"/>	Cable <input type="checkbox"/>	Driven <input type="checkbox"/>
Reconditioned <input type="checkbox"/>	Rotary <input checked="" type="checkbox"/>	Jetted <input type="checkbox"/>

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 120 ft. Depth of completed well 120 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from T3 ft. to 120 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 SS Model No. _____
Diam. 55 Slot size 104 from 115 ft. to 120 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.....N/A.....
Type:HP.....

(8) **WATER LEVELS:** Land-surface elevation _____
above mean sea level _____
Static level 70 ft. below top of well Date 11-7-82
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.

10	10	10	10
10	10	10	10

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 _____
 Pump test 25 gal./min. with 96 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
TOP SOIL	0	1
SAND TAN CLAY	1	35
BLUE HARD PAN	5	12
TAN HARD PAN W/ SAND	12	95
TAN SAND & GRAVEL W/	95	120
WATER		

Work started 11-7 1988 Completed 11-7 1988

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 CANADIAN WELL DRILLING
(Person, firm, or corporation) (Type or print)

Address: PO Box 432 STANWEG

[Signed] William H. Dwyer
(Well Driller)

License No. 1525 Date 11-8, 1988

License No. 247 Date 19

Permit No.

(10) WELL LOG:

(6) CONSTRUCTION DETAILS:

Work started 4-1, 1937 Completed 4-6, 1937

License No. 2007 Date 4-6, 1987

FCY 050-1-20

WATER WELL REPORT

STATE OF WASHINGTON

3/10/97-16 R
Application No.

Permit No.

(1) OWNER: Name Mr. Bonnie Christensen Address 19105 52nd Ave NW, Starwood
(2) LOCATION OF WELL: County Snohomish SU 1/4 SE 1/4 Sec 16 T31 N. R04 E W4
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 161 ft. Depth of completed well 161 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: " Diam. from ft. to ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to 161 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

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 Grout

Did any strata contain unusable water? Yes ☐ No ☒

Type of water?

Method of sealing strata off

(7) PUMP: Manufacturer's Name

Type:

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.

Static level ft. below top of well Date 3-31-97

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 25+ gal./min. with 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
Silty-Sand & GRAVEL	0	16
Gravel	16	90
Blue Silty-Sand & GRAVEL	90	105
Sandy Silt & GRAVEL	105	135
Coarse Sand & GRAVEL	135	161

Work started 3-23, 1997 Completed 3-30, 1997

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 Arndal Drilling Co.
(Person, firm, or corporation) (Type or print)

Address P.O. Box 662, Monroe WA 98272

[Signed] Arndal
(Well Driller)

License No. 6607 Date 3-31, 1997

ECY 050-1-20

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. _____

Water Right Permit No. _____

(1) OWNER: Name E Earl Rivins Address 312-NW 178th St, Seattle 98177

(2) LOCATION OF WELL: County Snohomish NE 1/4 SW 1/4 Sec 18 T 31 N. R. 4E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 198th & Marine View Drive

(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 495 feet. Depth of completed well 453 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 Diam. from +1 ft. to 443 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 Johnson
Type Stainless steel Model No. _____
Diam. 5 Slot size .016 from 443 ft. to 453 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 N/A
Type _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation _____ ft.
above mean sea level _____ ft.
Static level 230 ft. below top of well Date 11/17/87
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? XXXXXXXXXX
Yield: 5 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 6 gal./min. with 20 ft. drawdown after 1 hrs.

Artest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

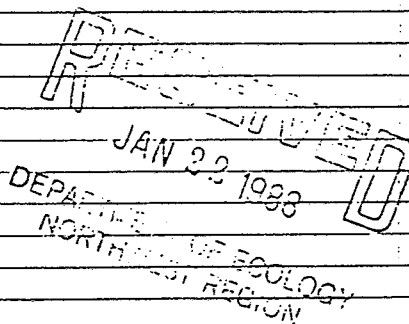
Temperature of water 51 Was a chemical analysis made? Yes ☒ No ☐

Iron 5.0ppm

(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
Brown till & boulders	0	20
Blue gray till	20	105
Brown silty sand & gravel	105	115
Brown silty dry sand	115	115.2
Gray silty sand, some gravel	162	185
Blue /gray till	185	203
Damp brown sand	203	225
Gray silty clay	225	260
Gray silt-stone,	260	365
Gray siltstone & sand	365	370
Gray siltstone, clay, wet	370	420
Gray silty sand, water, silt	420	433
Gray siltstone, sand/water	433	440
Gray silty sand, water	440	495



Work started 10/23 87 Completed 11/17 87

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 OELKE DRILLING, INC
(PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 4312 166th Ave E., Sumner 98390

(Signed) [Signature] License No. 0837
(WELL DRILLER)

Contractor's
Registration
No. OELKEDI1360C Date 1/18 1988

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

WATER WELL REPORT

STATE OF WASHINGTON

Application No.

Permit No.

(1) OWNER: Name Perry Orcutt Address 3500 Silvana Terrace Rd.
(2) LOCATION OF WELL: County Snoh. NW 1/4 NE 1/4 Sec 20 T 31 N. R. 4 W.M.
Measuring 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 367 ft. Depth of completed well 367 ft.

(6) CONSTRUCTION DETAILS: +2
Casing installed: 6" Diam. from 357 ft. to 360 ft.
Threaded ☐ 5 1/2" Diam. from 332 ft. to 367 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
Manufacturer's Name
Type 6" tele Model No.
Diam. 5 1/2" Slot size 10 from 357 ft. to 362 ft.
Diam. 5 1/2" Slot size 12 from 362 ft. to 367 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 bestcrete
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 225 ft.
above mean sea level
Static level 339 ft. below top of well Date 1-16-89
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 Figgins
Was a pump test made? Yes ☒ No ☐ If yes, by whom? Driller
Yield: 3 gal./min. with 25 ft. drawdown after 12 hrs.
" 7 " 25 " 314 "
" 7 " 26 " 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
12:00	364	12:30	3:39		

Date of test 1-16-89
Bailer test 7 gal./min. with 20 ft. drawdown after 1/2 hrs.

Artesian flow g.p.m. Date
Temperature of water 46° 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
6" C25 Csg.	0	0
Brown clay	0	1
brn. clay & gravel	1	10
brn shale & gravel	10	20
brn clay & gravel	20	30
gray sand & gravel	30	40
brn shale & gravel	40	50
blk & white coarse grained sand	50	70
(no water)		
blk & white coarse grained sand	70	78
brn clay & sand / silt	78	83
terracotta gravel		
brn clay & sand / silt	83	150
sandstone		
blk. & green gravel	150	170
1/8" to pea size (no water)		
brn clay / sand & gravel	170	173
brn clay & coarse sand	173	182
brn. sandstone	182	186
blk heavy sand	186	203
brn. soft sandstone	203	231
brn clay streaked sandstone	231	259
sandstone		
brn sandstone (coarse)	259	285
blue shale	285	289
brn sandstone (coarse)	289	322
dark brn shale (trace)	322	333
brn sandstone	333	345
blk. & white 1/8" gravel	345	350
(face of water)		
dk gray brn. shale	350	385
15 ft. 2 in. water		
bottom 18" cased in		318 ft.
bottom of well at		367'

Work started 12-25 19 89 Completed 2-5 19 89

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 Figgins Drilling
(Person, firm, or corporation) (Type or print)

Address 2109 123rd Ave NE #5
Lake Stevens, Wa. 98258

[Signed] William C Figgins
(Well Driller)

License No. 1514 Date 2-17 19 89

FCY 050-1-20

WATER WELL REPORT

Application No.

STATE OF WASHINGTON

Permit No.

(1) OWNER: Name VERSEL NANCE Address 18316-82nd Dr. N.W. Stanwood, Wa. 98

(2) LOCATION OF WELL: County Snohomish SW 1/4 NE 1/4 Sec. 19 T. 31 N. R. 4E W.M.

ring 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) 7913
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 329 ft. Depth of completed well 328 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 5/8 Diam. from +1 ft. to 322 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 Model No. _____

Diam. 6" Slot size 10 from 322 ft. to 328 ft.

Diam. 6" Slot size blank from 321 ft. to 322 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 Cement-cementite

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 240
above mean sea level. Date 9/16/79

Static level 220 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 10 _____

Ballor test 10 gal./min. with 10 ft. drawdown after 2 hrs.

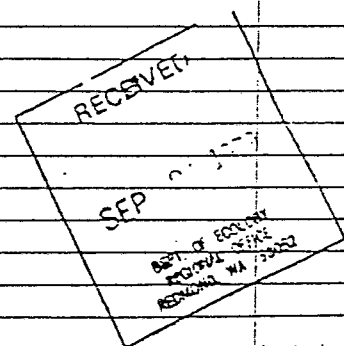
Artesian flow _____ g.p.m. Date _____

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
Soil brown sandy	0	2
Clay brown sandy med boulders	0	7
Clay brown sandy	7	23
SSand and gravels	23	86
Clay gray sandy	86	126
Sand gravel/ clay streaks	126	139
Clay gray sandy	139	154
Sand med gray clay streaks	154	175
Clay gray sandy sand streaks	175	318
Sand med fine (water bearing	318	329



Work started 9/10/79 19____ Completed 9/16/79 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 JANNSEN WELL DRILLING

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

Address 430 West Ave. Arlington, Wa. 98223

[Signed] Kick Wallaert
(Well Driller)

License No. 1060 Date 9/18/79 19____

STATE OF WASHINGTON

Water Right Permit No.

1) OWNER: Name ELLIOTT TANNER

Address: 3019 N.W. 57th. SEATTLE 98

(2) LOCATION OF WELL: County Snohomish NW 14 SE 14 Sec 20 T 31 N. R 4E W.M.

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

(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 409 feet. Depth of completed well 401 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 * Diam. from +1 ft. to 396 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 Johnson
Type stainless steel Model No. _____
Diam. 5 Slot size .014 from 393 ft. to 401 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 Berkeley
Type: submersible H.P. 2

(3) **WATER LEVELS:** Land-surface elevation _____ ft.
above mean sea level _____ ft.
Static level 342 _____ ft. below top of well Date 4/20/88
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: 25 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.

Railer 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
Damp brn gravels, sand	0	96
Coarse damp brn sand	96	137
Brn sands, gravels	137	148
Coarse brn sand	148	220
Finer brn sand	220	317
Silty brn sand, little water	317	342
Grey silt	342	360
Silty grey clay	360	380
Silty grey sand	380	390
Coarser sand gravels wood chips, heaving sand	390	409

Work started 4/11/88, 1988. Completed 4/20, 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 CELKE DRILLING INC.
(PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 4312 166TH AVE. So. - WINNER
98390

(Signed) Dave Johnson License No. 1526
(WELL DRILLER)

Contractor's
Registration
No. DELKEDT136QS Date 6/20, 1988

(USE ADDITIONAL SHEETS IF NECESSARY)

FCY 050-1-20

WATER WELL REPORT

STATE OF WASHINGTON

Application No. _____

Permit No.

OWNER: Name Ed Cook Address 5912-174th St NW Stanwood, WA

LOCATION OF WELL: County Snohomish Sec. 20 T 31 N. R. 4 W.M.

earing and distance from section or subdivision corner Lot 6-Block 54-Div 1 of CD Hillmans Birmingham Add
City of Everett

(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 345 ft. Depth of completed well 345 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +1 ft. to 340 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 Wirewound Model No. Stainless
Diam. 6 Slot size .030 from 340 ft. to 345 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 Puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

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

(8) WATER LEVELS: Land-surface elevation 350 ft.
above mean sea level _____
Static level 293 ft. below top of well Date 9-25-84
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 10 gal./min. with 23 ft. drawdown after 1 hrs.

Artesian flow _____ g.p.m. Date _____
Temperature of water 50 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
Soil, sandy	0	3
Hardpan	3	30
Clay, brown, thin gravel layers	30	95
Gravel, sandy, dry	95	280
Clay, brown, silty	280	300
Sand, brown, silty	300	313
Clay, blue	313	320
Sand, brown, silty	320	338
Sand, coarse, silty, loose, wet	338	345

Work started 8-17 84 Completed 9-25 84

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 Ace Drilling & Pump Service
(Person, firm, or corporation) (Type or print)

Address 14503-23rd Av NE Arlington, WA.

[Signed] Robert E. Freeman
(Well Driller)

License No. 0137 Date 10-22 1984

OWNER: Name Geo. Ficker

Address 18314 Frank Wilson Stoneboro

LOCATION OF WELL: County Hub

NE 1/4 NE 1/4 Sec. 20 T 31 N., R. 4 W.M.

bearing and distance from section or subdivision corner

PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

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

New well	<input type="checkbox"/>	Method: Dug	<input type="checkbox"/>	Bored	<input type="checkbox"/>
Deepened	<input type="checkbox"/>	Cable	<input checked="" type="checkbox"/>	Driven	<input type="checkbox"/>
Reconditioned	<input type="checkbox"/>	Rotary	<input type="checkbox"/>	Jetted	<input type="checkbox"/>

(5) DIMENSIONS: Diameter of well 6 inches.
 Drilled 301 ft. Depth of completed well 301 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: _____" Diam. from _____ ft. to _____ ft.
Threaded ☐ _____" Diam. from _____ ft. to _____ ft.
Welded ☒ _____" Diam. from 0 ft. to 292 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 C. O. H.
Type 5.5 Model No. _____
Diam. 6 Slot size 15-1/2 from 2.91 ft. to 3.01 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 _____ *clay*
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.... _____ ft.
Static level 270 _____ 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? _____

Field: _____ 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

of test _____
 aller test 1.5 gal/min. with 3 ft. drawdown after 1/2 hrs.
 rtesian flow _____ g.p.m. Date _____
 emperature 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
Top Soil	0	2
Hard pan	2	20
Red hard	20	35
Sandy clay	35	100
Hard pan	100	120
Sandy clay	120	175
clay	175	235
Sandy clay	235	250
gravel	250	259
King sand	259	269
water sand	269	301

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 Hottel Publishing
(Person, firm, or corporation) (Type or print)

Address: 2926-5400 71st Street NW

[Signed] Ernest J. Hall
(Well Driller)

License No. 187 Date Aug 27, 1982

31/4E/21/6

Shookomish Co.

529 Madison
Everett, Wash.

31/04-21G

140° N ; 920° E of S 1/4 cor
of Sec 21 T31 R4E

July 30, 1962

Mr. Lemie Koger:

Orchard Beach Community
c/o William Robinson

Dear Sir:

4903 172nd Pl NW. Shorewood
98148

This is my report on the test pumping of the well at Lake Goodwin requested by you.

The test was made with a gasoline driven shallow well pump with a two inch suction line 32 feet long and a two inch discharge pipe.

The static water level before pumping was 17 feet from the top of the casing.

The pumping rate started off at considerable more than thirty-five gallons per minute; but dropped rapidly to a little over thirty gallons per minute, with a drawdown of 12 feet. This drawdown took place inside of the first minute; but held steady at 23 feet from top of casing for a period of seven hours pumping steadily except for two stops of about five minutes to fill gas tank. The last few hours of the test was almost exactly 30 gallons per minute with no further drawdown.

they got another
10 ft to 35 gpm. so 40 gpm seems
plausible rate
play with it
S/ Henry E. Beckmann
11/34 10/30/75

Well Drilling Contractor

Well elev. = 340'

The log of the existing well is as follows:

TO 4 FT. SANDY LOAM
TO 19 FT. HARD PAN
TO 48 FT. COARSE SAND AND GRAVEL (WATER BEARING)
BOTTOMS ON BLUE CLAY.

THE WELL IS STEEL CASING TO 45 FT WITH A FIVE FOOT
SCREEN ON THE LOWER END.

Well serves Orchard Beach Community 3315
Present owner reports 40 gpm yield
with 1 hp pump at 15 YD 11/34 10/30/75

WATER WELL REPORT

STATE OF WASHINGTON

Application No.

Permit No.

(1) OWNER: Name Forschel + Schultz Address 19203 Old Hwy 99

LOCATION OF WELL: County Snohomish SW 1/4 SW 1/4 Sec 21 T 31 N. R 4 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 220 ft. Depth of completed well 220 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from 0 ft. to 220 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 Asphalt 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 ft.
above mean sea level
Static level 180 ft. below top of well Date 8-5-77
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? The driller
Yield: gal./min. with " ft. drawdown after " hrs.
" 30 " " " " " " " " " " " "

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 no 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
GRAVEL	0	41
HARDPAN (GRAY)	42	50
CLAY (GRAY)	51	109
SANDY CLAY (BROWN)	110	153
SAND (WATER)	154	205
COARSE SAND + GRAVEL	206	220
WATER		

RECEIVED

AUG 22 1977

Work started 7-31 19 77 Completed 8-5 19 77

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 Anderson Drilling Co
(Person, firm, or corporation) (Type or print)

Address 7412-2046 N.E

[Signed] Elmer Anderson
(Well Driller)

License No. 0771 Date Aug 8 19 77

Permit No.

~~Page: 709 Date: Thursday, Dec 8 1960~~

Address.....

(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 Clay & Sand	0	15
Blue Clay & Gravel	15	50
Gravel	50	55
Brown Clay	55	66
Blue Clay & Gravel	66	118
Sand	118	220
Brown Clay	220	230
Sand, Gravel & Modern	230	235

Casing installed: 6" Diam. from 6" ft. to 23 1/2 ft.
Threaded ☐ _____" Diam. from _____ ft. to _____ ft.
Welded ☐ _____" Diam. from _____ ft. to _____ ft.

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.

Manufacturer's Name.....

Type..... Model No.....

Diam. Slot size from ft. to ft.

Diam. Slot size from ft. to ft.

Surface seal: Yes ☒ No ☐ -To what depth? 12 ft.
Material used in seal Latex
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

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

Work started 12-1-51 1951 Completed 12-1-51 1951

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 SAINT JOHN AND DEPT.
(Person, firm, or corporation) (Type or print)

Address Box 122 Burlington, WA 98223

[Signed] _____
(Well Driller)

License No. 9-022 Date 12-3-60 19

WATER WELL REPORT

Application No. 25

STATE OF WASHINGTON

Permit No.

(1) OWNER: Name Charles Fairclough Address 5412 155th NW Stanwood, Wa.

(2) LOCATION OF WELL: County Spokane 31 113 Lakewood Farms 1/4 1/4 Sec 25 T 31 N. R 4E W.M.

uring 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 02 ft. Depth of completed well 02 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 5 " Diam. from 0 ft. to 37 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 1778 Model No. 303113
Diam. 5 Slot size 000 from 27 ft. to 02 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? 13 ft.
Material used in seal rubbed clay
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 _____ ft.
Static level 31 ft. below top of well Date 1-22-74
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 30 gal./min. with 1 ft. drawdown after 1 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water 51 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
Soil, Brown, sandy	0	2
Gravel, gray, coarse, cemented	2	30
Gravel, gray, coarse, loose	30	31
Sand, gray, clay streaks, wet	31	54
Sand, gray, some fine gravel, wet, loose	54	52

Work started 1-25 1974 Completed 1-30 1974

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 ace Drilling & Pump Service
(Person, firm, or corporation) (Type or print)

Address Rt 1 Box 205 Arlington, Wa 98223

[Signed] Robert E. Freeman
(Well Driller)

License No. 0137 Date 1/30 1974

(USE ADDITIONAL SHEETS IF NECESSARY)

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 032121

Water Right Permit No.

(1) OWNER: Name Robert Szakal Address 8721 Lowell Larimer Rd. Everett Wa.

(2) LOCATION OF WELL: County Snohomish NW NE Sec 28 T. 31 N. R. 4 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 64th Ave N W Stanwood Wa. 98204

(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 175 feet. Depth of completed well 180 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 8 ft. Diam. from 0 ft. to 160 ft.
Welded ☒ Diam. from _____ ft. to _____ ft.
Liner installed ☐ Diam. from _____ ft. to _____ ft.
Threaded ☐ Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☒ NO WATER

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 _____ ft.

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 Time Water Level

Date of test _____

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
Brown Clay & Gravel	0	35
Blue Clay & Gravel	35	90
Brown Clay	90	115
Brown Clay & Gravel	115	150
Sand	150	175

NO WATER

MAY 10 1989

Work started 5-8- 1989 Completed 5-9- 1989

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 Dahlman Pump & Well Drilling Inc.

(PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address P O Box 422 Burlington Wa. 98233

(Signed) led Richter License No. 0623

(WELL DRILLER)

Contractor's

Registration

No. DAHLMPPW123IC Date 5-12- 1989

(USE ADDITIONAL SHEETS IF NECESSARY)

②

ECY 050-1-20

STATE OF WASHINGTON

Permit No.

(1) OWNER: Name Leon Matt Merritt Address 5528 Lakewood Rd, Stanwood, Ia. 58202

(9) LOCATION OF WELL: County Snoh. - SW 1/4 SE 1/4 Sec 29 T 31 N., R. 4 W. M.
ing and distance from section or subdivision corner Lot 3 Block 104 Hillman's Birch Lake Water-Ex. Ed. Tract

(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 <input checked="" type="checkbox"/>	Method: Dug <input type="checkbox"/>	Bored <input type="checkbox"/>
Deepened <input type="checkbox"/>	Cable <input type="checkbox"/>	Driven <input type="checkbox"/>
Reconditioned <input type="checkbox"/>	Rotary <input type="checkbox"/>	Jetted <input type="checkbox"/>

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 124 ft. Depth of completed well 124 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 6 ft. to 124 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? 15 ft.
Material used in seal Sealant
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 elevationft.
above mean sea level.....ft.
Static levelft. below top of well Date.....
Artesian pressurelbs. 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
Brown Clay Gravel	0	40
Blue Clay & Gravel	40	124

NO WATER

RECEIVED
OCT 10 1964

OCT 10 1984

DEPARTMENT OF ECOLOGY
NORTHWEST REGION

Work started.....11-21..... 19.82... Completed.....11-21..... 19.82

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 DAHLMAN PUMP & DRILLING INC.
(Person, firm, or corporation) (Type or print)

Address P.O. BOX 422, Burlington Wa. 98233

[Signed] T. Ben Turner
(Well Driller)

License No. 1192 Date 11-22- 1983

Mail: 228 176th Pl. S.W. Bothell, WA. 98011
Address: Batement Rd.

SC 11/2/51 WM

License No. 1192 Date 2-1-, 19 84

SECRET

Permit No.

Y 050-1-20

(1) OWNER: Name Snohomish County Address _____

(2) LOCATION OF WELL: County Snohomish NW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec 30 T 31 N. R 4E W.M.
Bearing and distance from section or subdivision corner _____

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 8 inches.
Drilled 222 ft. Depth of completed well 214 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 8" Diam. from 0 ft. to 210 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 Model No. _____
Diam. 8 Slot size 50 from 210 ft. to 214 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 _____
Type: _____ HP _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 154 ft. below top of well Date 5/2/75
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? _____
field: _____ 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

of test _____
Bailer test: 37 gal./min. with 19 ft. drawdown after 3 hrs.
resian 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
Top soil	0	6
Sand & gravel	6	54
Sand, brown	54	116
Sand, lenses of clay, br. seepage	116	210
Sand, water Bearing	210	214
Sand, fine, water bearing	214	215
Clay, blue	215	222

Work started 4/22 19 75 Completed 5/2 19 75

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

Address 3245 Auburn Way S. Auburn, Wa. 980

[Signed] R.B. DeRosa, Jr.
(Well Driller)

License No. C097 Date 5/5 19 75

31/4E/30/K

STATE OF WASHINGTON

W

Permit No. 3104-20K

(1) OWNER: Name Snhomish County Address _____

(2) LOCATION OF WELL: County Snhomish, NW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 30 T31 N. R. 4E 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 235 ft. Depth of completed well 274 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 10" Diam. from 0 ft. to 260 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 Model No. _____
Diam. 10 Slot size 30 from 260 ft. to 265 ft.
Diam. 10 Slot size 40 from 265 ft. to 270 ft.
10 00 270 275

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 Bentinite
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 195 ft. below top of well Date 4/10/75
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? NWP&D CO.
Yield: 175 gal./min. with 60 ft. drawdown after _____ hrs.
" 175 " 60 " 16 "

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
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

End of test 4/10/75

Boiler 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
silty sand, organic mat, br.	0	6
sand & gravel, seepage, br.	6	18
glacial till, br.	18	26
silty sand & gravel br.	26	35
fine sand, occ. gravel, w.b. br.	35	99
silt, br. bl.	99	104
sand & gravel w.b.	104	114
silt, bl.	114	146
silt, lenses of w.b. s&g bl.	146	164
sand, dry, bl.	164	209
sand, fine, w.b.	209	222
sand, fine, dry, lenses of w.b.	222	255
sand & gravel, clean, w.b.	255	274
sand, dry, w.b. lenses	274	285

Work started 3/12 1975 Completed 4/11 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 Northwest Pump & Drilling Co.
(Person, firm, or corporation) (Type or print)

Address 3245 Auburn Way S. Auburn, Wa.

[Signed] Richard B. Delmonico
(Well Driller)

License No. 0097 Date 4/19 1975

(USE ADDITIONAL SHEETS IF NECESSARY)

TABLE 4.—Representative wells in Snohomish County, Wash.—Continued

1	2	3	4	5	6	7	8	9				10		11	12	13	14
Well designation	Owner or occupant of property	Topographic situation	Approximate altitude above sea level (feet)	Type	Depth (feet)	Diameter (inches)	Depth of casing (feet)	Water-bearing zone or zones				Water level		Type of pump	Yield (gallons per minute)	Use of water	Remarks
								A	B	C	D	A	B				
								Depth to top (feet)	Thickness (feet)	Character of material	Ground-water occurrence	Feet below land-surface datum	Date of measurement				
T. 31 N., R. 4 E—Continued																	
20B1	William Sinn	U	340	Dg	16					Permeable zones in till.	Perched	9.1	July 18, 1944	P		D	Inadequate; goes dry.
21F1		U	375	Dg	23.1					do.	do	11.4	do	P		S	
21K1	M. Lewis	U	370	Dg	22.3					do.	do	9.3	do	P		S	
21L1	do	U	390	Dg	14					Gravel in till.	do	11.9	Sept. 12, 1945	J		D, S	Water has chloride content of 27 and hardness of 60 ppm.
21B1	Mrs. L. Leonard	U	325	Dg	13.6					Permeable zones in till.	do	2.0	July 18, 1944		5		
22B1	John Sedy	U	435	Dg	25.8	72	3	18	7.3	Gravel in till.	do	15.6	do	P	10	D, S	Inadequate in dry months. See log.
22B2	do	U	440	Dr	142	6	142	135	6	Sand, gravelly.	Con-fined.	102.0	July 1944				
22L1	O. E. Engstrom	U	430	Dg	78					Permeable zones in till.	Perched	Dry	July 18, 1942				Reported dry from July to January of each year. Do.
22M1	A. Peterson	U	450	Dg	24.0	60				do.	do	23.0	July 1944	P		S	
22M2	H. Jacobsen	U	430	Dr	153	5	153	100	58	Sand.	Uncon-fined.	108	1941	P	6	D, S	Small drawdown reported after 2 hours' pumping at 6 gpm; 100 ft of glacial till over aquifer. Drawdown reported as 11 ft after 5 hours' pumping at 10 gpm; hardness of water 80 ppm; see log.
22N1	G. A. Schuh	U	375	Dr	72	5	72	62	10	Gravel and sand.	Con-fined.	20	August 1944	J		D, PS	Develops aquifer that normally fed nearby springs; see log. See log; well used for stand-by.
24N1	Town of Marysville	S	300	Dr	78	10	78		78	Sand.	Uncon-fined.	Sur-face.	Constantly			PS	
24N2	do	S	275	Dr	358	8	203	164	10	Sand and gravel.	Con-fined.	Flows.	do		250	PS	
25A1	Bert C. Scott	S	160	Dg	23.3					Permeable zones in till.	Perched	6.5	July 21, 1944	P	4	D	
25B1	Peter Baumgard	S	250	Dg	14	48	3	11	3	Gravel under till.	Uncon-fined.	11	July 1944	P		D	
25H1	E. C. Carlson	S	275	Dg	19					Permeable zones in till.	Perched		1944	P		D	
25J1	Russell Sarsten	U	340	Dg	28.2					do.	do	13.6	July 21, 1944	P		D	
34G1	Camp Fire Girls of America	U	430	Dr	160	8	160	120	40	Sand and gravel.	Uncon-fined.	160	About 1935	P		D	

TABLE 4.—Representative wells in Snohomish County, Wash.—Continued

1	2	3	4	5	6	7	8	9				10		11	12	13	14
Well designation	Owner or occupant of property	Topographic situation ¹	Approximate altitude above sea level (feet)	Type ²	Depth (feet) ³	Diameter (inches)	Depth of casing (feet)	Water-bearing zone or zones				Water level		Type of pump ⁴	Yield (gallons per minute)	Use of water ⁵	Remarks ⁶
								A	B	C	D	A	B				
							Depth to top (feet)	Thickness (feet)	Character of material	Ground-water occurrence	Feet below land-surface datum ⁷	Date of measurement					
T. 31 N., R. 3 E.																	
24Q1	J. W. Terry	S	150	Dr	437	6	183	170	10	Sand	Unconfined		June 1945	P	8	D	See log. Water has hardness of 60 and chloride content of 22 ppm. Water has hardness of 70 and chloride content of 23 ppm.
25A1	E. P. Johnson	S	220	Dr	245	6	245	235±		do	do	215	Mar. 1945	P		D	
36A1	Mrs. Eva Houghton	S	210	Dr	265	6	265			Gravel	Confined (?)	207.3	Sept. 12, 1945			D	
36B1	Arthur Killian	Tf	10	Dr	75	8	75	72	3	Gravel, coarse	do	2.0	Aug. 30, 1944	P	16	D, PS	Materials reported as "blue clay" to aquifer; water has hardness of 85 ppm; water level reportedly fluctuates with tide. Materials reported as sand to 56 ft and clay below. Water level reportedly fluctuates with tide; see log. Not used; water reported good; blue clay reported from surface to aquifer.
36B2	do	S	150	Dg	56±					Sand	Unconfined	56	Aug. 1944	P	5	D	
36B3	Elmer Jackaway	Tf	10	Dr	100	8	100	85	15	Sand, gravel	Confined	Flows	June 1943			D	
36R1	Ira Brown	S	10	Dr	96	6	96	85±	11±	Gravel	do	5	Aug. 1944			N	
T. 31 N., R. 4 E.																	
1F1	J. C. Hevly	Fp	30	Dn	23	1¼	23			Sand	Unconfined	16	July 1944	P	8	S	Twenty feet of silt and clay overlies sand; water reported to contain iron. Water reported to contain iron. Do.
1H1	Alex B. Anderson	Fp	35	Dn	16	1¼	16			Sand, gravelly	do	15	do	P		D	
	Mrs. Gusta Ottem	Fp	30	Dn	18	1¼	18			Sand	do	16	do	P	4	D, S	
2D1	A. A. Satrum	Fp	30	Dn	22		22						1944	P	3	D	Another well 38 ft deep yields water reported to contain more iron than that from this well. Materials reported as 10 ft of clay, then quicksand overlying water gravel; water reportedly has high iron content. Dry 4 months of year. Soil overlies gravel, and clay underlies it.
3C1	Hartvig Rod	Fp	25	Dn	30		30			Gravel	do	30	July 1944	P	10	S	
3L1	Alfred Hovig	St	110	Dg	12.1	24	12			Gravel, sandy	Perched	11.5	July 19, 1944	J	4	D	
3N1	Anton Schroedl	St	130	Dg	12.0		12			do	Perched (?)	11	July 20, 1944	P	4	D, S	Originally flowed over casing. Test hole; see log.
4C1	Arnold Robb	Fp	20	Dr	250±	6	250±				Confined	1	July 1945	P		D, S	
6C1	Snohomish County Department of Roads	Fp	10	Dr	95	6	None						1945			N	
6R1	Mrs. Caroline Satra	S	55	Dg	6.1		6			Sand, gravelly	Perched	2	July 17, 1945	P	5	D	Till and "hardpan" overlies aquifer.
7G1	W. R. Pettit	S	125	Dg	6					do	do	2	July 1944	P	5	D, Irr	
7J1	Roy Peer	S	170	Dg	9	48	9			Sand	do	6.9	July 17, 1944	P		D	
9B1	Vern Hurbert	S	310	Dg	50	48	5	47	3	Sand, gravelly	Unconfined (?)	47	July 1944	P	4	D, S	Do. Sometimes dry in summer. Barely adequate in dry months. Do. Water reported to contain iron; sand and clay reported to overlie aquifer. Water reported to contain iron.
9F1	H. D. Oliver	U	365	Dg	19.1		7	18±	1	Gravel, sandy	Perched	10.8	July 20, 1944	P		D	
10B1	M. W. Clark	S	150	Dg	10.5	48				do	do	8.4	July 1944	P		D	
11F1	Albert M. Stenvik	S	260	Dg	20.5					Permeable zones in till	do	3.3	July 20, 1944	P		D	Water reported to contain iron; sand and clay reported to overlie aquifer. Water reported to contain iron.
11N1	Martin Nysethe	S	180	Dg	13.6					do	do	12.4	do	P		D	
12C1	John Brekhus	Fp	35	Dn	43	1¼	43	39	3	Gravel	Unconfined	39	1944	P	5	D	
12H1		Fp	35	Dg	5					Sand	do		do	P	4	D, S	Sandy gravel underlies pebbly soil.
12Q1	Berend Groendyk	Op	70	Dn	20	1¼	20	17	3	Gravel	do	6	July 1944	P	15	D, S	
13B1	Zuicker	S	100	Dg	7.5					Gravel, sandy	do	4.8	July 21, 1944	P		D	
13N1	Elmer Whitman	S	150	Dg	25.5	60	4			Permeable zones in till	Perched	10.9	do	P		D	Water has hardness of 130 ppm; see log.
13R1	Marie Mandis	Op	130	Dg	54					Permeable zones in till (?)	Perched (?)	46	July 1944	P		D, S	
14D1	Kate Foley	S	180	Dg	6					Sand	do	3.2	July 20, 1944	P		D	
	Andrew Folden	S	220	Dg	15.6	48	15+			do	do	13	do	P		D, S	Water has hardness of 130 ppm; see log.
	A. H. Reinecke	S	160	Dr	225	6	224	218	5+	Sand, gravelly	Confined	187	1943	P		D, S	

See footnotes at end of table.