Schenk Packing Co., Inc.

8204 288th St NW
Stanwood WA 98292
360-629-3939

03/13/2019

Dear Mr. Martin,

Thank you for taking your time and carefully reviewing Schenk packing Company's recent waste water Application. Enclosed is the missing information for section G, site assessment of the waste water application. Also included is the Schenk Packing Company ground water quality evaluation done in 2017 which contains a Vicinity Map, Site Map, Geology and wells, Soils, Ground water contour map, as well as a full report on Schenk Packing Company waste management plan. If you need more information please contact me via mail, email, or by phone.

Thank you,

Sincerely,

Miguel Garcia
360-629-3939
MiguelG@schenkpacking.com

Schenk Packing Spray Fileds

Area#	Latitude	Longitude	Acreage	Owner
1	48.258158	-122.347921	4.08	Schenk Packing Co., Inc
2	48.259213	-122.345506	4.947	Schenk Packing Co., Inc
3	48.260571	-122.34487	4.152	Schenk Packing Co., Inc
4	48.261814	-122.348803	6.984	Schenk Packing Co., Inc
5	48.263165	-122.347102	4.275	Schenk Packing Co., Inc
6	48.262605	-122.348085	1.613	Schenk Packing Co., Inc
7	48.263592	-122.34907	11.07	Schenk Packing Co., Inc
8	48.263983	-122.351207	2.715	Schenk Packing Co., Inc
9	48.262648	-122.351389	2.328	Schenk Packing Co., Inc
10	48.263041	-122.350049	1.12	Schenk Packing Co., Inc

associated
earth sciences
incorporated

September 15, 2017
Project No. 170045H001

Schenk Packing Company, Inc.
8204 288th Street NW
Stanwood, Washington 98292

Attention: Mr. Steve Lenz

Subject: Ground Water Quality Evaluation
Schenk Packing Site
Stanwood, Washington

Dear Mr. Lenz,

Associated Earth Sciences, Inc. (AESI) is pleased to submit this Ground Water Quality Evaluation describing our evaluation for the above-referenced project in Snohomish County, Washington.

We have enjoyed working with you on this study and are confident that the recommendations presented in this report will aid in the successful completion of your project. Please contact me if you have any questions or if we can be of additional help to you.

Sincerely,
ASSOCIATED EARTH SCIENCES, INC.
Everett, Washington

Jay W. Chennault L.Hg., P.E.
Associate Hydrogeologist/Engineer

JWC/en
170045H001-8
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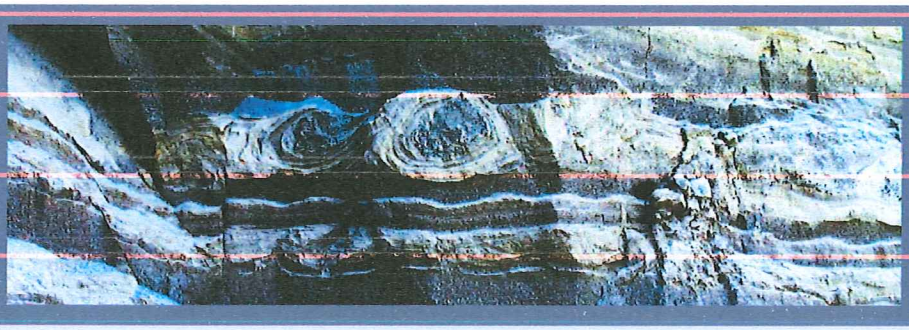
GROUND WATER QUALITY EVALUATION

Schenk Packing Site
Stanwood, Washington

Prepared for

Schenk Packing Company, Inc.

Project No. 170045H001
September 15, 2017



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PURPOSE

The purpose of this report is to present the results of the ground water quality evaluation, prepared by Associated Earth Sciences, Inc. (AESI), for the Schenk Packing Company, Inc. (Schenk Packing) facility (site) near Stanwood, Washington. The location of the site relative to surrounding geographical features is presented on the *"Vicinity Map"*, Figure 1. The site is located in Section 18, Township 32 North, Range 4 East, near Stanwood, Washington. The property address is 8204 288th Street NW Stanwood, Washington 98292.

As required by the State Waste Discharge Permit (ST005174) for the site, this ground water quality evaluation is completed in general accordance with WAC 173-200-080 and conforms to: *Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems, Ecology Publication #29-36* (Ecology, 1993). Prior to beginning this ground water quality evaluation, AESI prepared and submitted to the Washington State Department of Ecology (Ecology) a *Ground Water Quality Evaluation Work Plan* (Work Plan) dated February 8, 2017 (AESI, 2017). Ecology reviewed and approved the Work Plan with requests for site-specific soil and infiltration testing (Ecology, 2017a). AESI completed the site-specific soil and infiltration testing, as requested.

PROJECT SUMMARY

Schenk Packing operates a beef slaughterhouse and packing operation located approximately 1.5 miles northeast of Stanwood in Snohomish County, Washington (Figure 1). The plant processes up to 220 head of cattle per day, over a 52-week season, with approximately 110 fulltime workers.

Process wastewater generated at the site averages approximately 54,000 gallons per day (gpd), up to a maximum of approximately 90,000 gpd. The wastewater generally contains concentrations of biochemical oxygen demand (BOD), Total Kjeldahl nitrogen (TKN), nitrate/nitrite, oil and grease, total dissolved solids (TDS), and total coliform bacteria. The wastewater is stored, and treated on site, before being conveyed to a land application system.

In accordance with the State Waste Discharge Permit (ST005174) for the site, no runoff of wastewater is allowed to leave the land application portions of the site.

Potential environmental impacts from the site, including an assessment of impacts to the ground water system beneath the site are discussed in detail below. Significant adverse environmental impacts from the site are unlikely for the following reasons:

1. The application rates for treated wastewater are significantly lower than the measured infiltration rates for the site soils, thus limiting the potential that land-applied wastewater will generate runoff.

2. The wastewater quality data indicate that the concentrations of nitrogen and total nitrogen loading are significantly below the ground water quality based effluent limits for the site.

3. The regional ground water system beneath the site is significantly deep (approximately 100 to 150 feet below the ground surface) and generally beneath a thick (50 to 100 foot) layer of low permeability statements.

SITE CONSIDERATIONS

The site is located in Section 18, Township 32 North, Range 4 East, near Stanwood, Washington. A map of the site facilities is presented on the "*Site Map*", Figure 2. The land application areas are identified on Figure 2 as Areas 1, 2, 3, 4, 5A, 5B, 5C, 5D, 6, 7, 7B, 8, 9 and 10. The total land application area includes grass/hay, poplar, and fir/alder.

The process water treatment system at the site includes a collection system in the processing area where liquid waste flows through drains to equalization tanks before being pumped through an 8,000 gallon skimmer. Solid wastes are separated from the liquids and hauled off site. Wastewater is screened and treated through two recirculating aerated lagoons prior to land application. The treated wastewater is pumped from the second lagoon (Lagoon 2, Figure 2) to the land application area through a series irrigation lines. The poplar acreage is irrigated through a series of double-headed mist sprinklers and the pasture and fir/alder areas are irrigated through impact sprinklers.

There are no ground water wells, bedrock outcrops, floodways, floodplains, surface water bodies, wetlands or known subsurface drainage systems within the land application areas. Historically, the site appears to have been utilized primarily for agriculture (pasture grass). Average precipitation at the site is approximately 35 inches per year.

SITE GEOLOGY

The site is located in an area generally referred to as the East Stanwood Plateau (Thomas and others, 1997) in western Snohomish County. The geologic setting of this area was defined by several periods of continental glacial advance and retreat between approximately 2 million and 10,000 years ago. The last period of glacial advance into Snohomish County was known as the Vashon Stade of the Fraser Glaciation (approximately 20,000 to 13,500 years before present

[ybp]). The ice is interpreted to have reached a thickness of about 4,000 to 5,000 feet near Bellingham and roughly 3,000 feet near Seattle, Washington. As the Vashon glacier advanced southward across the project area, streams flowing off the front of the glacier and melting ice deposited advance outwash sediments (**Qga_v**) in front of the advancing glacier. The glacier eventually overrode the advance outwash deposits and covered them with a thick layer of glacial till (**Qgt_v**).

During late stages of deglaciation (13,500 to 11,500 ybp), a period termed the Everson Interstade, marine waters entered the Puget Lowland in Whatcom, Skagit and Snohomish Counties. The glacial ice floated in many areas as it retreated and a significant thickness of glaciomarine drift was deposited beneath the floating ice. Dragovich et al. (2002) has divided the Everson Interstade sediments near the site into low permeability glaciomarine drift (**$Qgdm_e$**), fine grained glaciomarine drift (**$Qgdm_{ec}$**), and glaciomarine diamicton (**$Qgdm_{ed}$**). Moderate permeability fluvial-deltaic-turbiditic glaciomarine outwash (**$Qgom_e$**) and emergence beach deposits (**$Qgom_{ee}$**) were also identified by Dragovich et al. (2002).

Local Geologic Units

Surficial geologic units near the site are presented on *"Wells and Geology"*, Figure 3. Sediments from the most recent advancements of the Fraser Glaciation are widely exposed at the surface near the site (Figure 3). Fraser Glaciation sediments beneath the site include deposits from the Vashon Stade and the Everson Interstade. In the site vicinity, the Fraser sediments are likely to be underlain by nonglacial Olympia Formation sediments and older glacial and nonglacial sediments that extend down to the underlying bedrock. A description of the pertinent Pleistocene Fraser glaciation and recent Holocene deposits located beneath the site and vicinity are briefly reviewed below from oldest to youngest.

Olympia Nonglacial Deposits (**Qc_o**)

The Olympia nonglacial sediments (**Qc_o**) are not mapped at the ground surface near the site, but are interpreted to be widely distributed at depth beneath the East Stanwood Plateau (Thomas and others, 1997). The Olympia nonglacial sediments generally consist of thick deposits of organic silts, clays, silty sands, and fluvial sands and gravels. These sediments are interpreted to have been deposited in a meandering river environment (Dragovich et al., 2002). Olympia sediments are interpreted to range from approximately 20,000 to 60,000 ybp. The Olympia sediments, as estimated for this project, appear to be regionally extensive beneath the site vicinity and are likely thicker than 50 feet.

Vashon Advance Outwash (**Qga_v**)

The Vashon advance outwash sediments consist of silt, fine sand, and clay which were deposited in proglacial, fluvial (river or stream), and lacustrine (lake) environments that formed

in front of the advancing Vashon-age glacier. As the Vashon-age glacier spread into the region, the advance outwash sediments were overridden by the glacial ice sheet and consolidated into a dense condition by several thousand feet of ice.

Vashon advance outwash deposits were identified on well logs as being stratigraphically above the older Olympia sediments and directly beneath Vashon till in most of the project area. Most of the wells near the site appear to be completed in the advance outwash or possibly the upper portion of the Olympia sediments, including the two on-site wells. The exact thickness of the advance outwash beneath the site is uncertain due to lithologic similarities with the Olympia sediments described above. In general, these two relatively permeable geologic units combined are less than 200 feet thick and consist of dense, brown to gray sand, sandy gravel, and gravelly sand (Dragovich et al., 2002).

Vashon Lodgment Till (**Qgt$_v$**)

Vashon-age lodgment till (**Qgt$_v$**) was deposited at the sole of the Vashon ice sheet. As a result, this material has been glacially consolidated into a dense condition. Lodgment till sediments were identified in many of the water well reports reviewed for this project (Appendix A). The Vashon till was generally described as a gray silt or clay with sand and gravel or as hardpan on the water well reports. The Vashon till generally ranges between less than 25 feet to 75 feet thick in the site vicinity. However, it should be noted that it is difficult to differentiate between Vashon till and the overlying low-permeability Everson glaciomarine sediments based on information provided on the water well reports. The till appears to unconformably overlie bedrock and Vashon advance outwash near the site.

Everson Glaciomarine Drift Sediments (**Qgdm$_e$**, **Qgdm$_{ec}$** and **Qgdm$_{ed}$**)

Shortly after the removal of the ice sheet from the Strait of Juan de Fuca, much of the retreating glacial ice floated on the influx of marine waters. As the ice floated and/or retreated, it deposited a thick layer of glaciomarine sediments over much of Whatcom, Skagit and north Snohomish Counties. The glaciomarine drift sediments (**Qgdm$_e$** **Qgdm$_{ec}$** and **Qgdm$_{ed}$**) consist of low-permeability, blue-gray, unsorted, unstratified, sandy silt and clay with scattered lenses/layers of sand and gravel. The glaciomarine drift can exceed 300 feet, but appears to typically be less than 50 feet thick in the immediate vicinity of the site (Dragovich et al., 2002).

Everson Glaciomarine Outwash Sediments (**Qgom$_e$**) and Emergence Beach Deposits (**Qgom$_{ee}$**)

The Everson-age fluvial, deltaic glaciomarine sediments (**Qgom$_e$**) consist of loose sand and gravel with interlayered silts and silty sand (Dragovich et al., 2002). Interlayering with **Qgdm$_e$** deposits indicates a submarine deposition. Emergence beach deposits (**Qgom$_{ee}$**) also consist of loose sand and gravel associated with topographic benches or subtle wave-cut terraces (Dragovich et al., 2002).

Water Well Reports

AESI reviewed 50 water well reports available from the Ecology on-line database (Ecology, 2017b) for wells located within one mile of the site. The approximate locations of these wells are shown on Figure 3. Many of the wells could only be located to the nearest quarter-quarter section based on the information available on the water well report, although thirteen wells were located to a specific parcel (Figure 3). Copies of the water well reports are included in Appendix A.

The well located nearest the site is well 18L01 (Figure 3). The interpreted subsurface stratigraphy beneath the site based on the water well report for this well (Appendix A) is a thin layer of topsoil/**Qgom$_e$** overlying six feet of weathered Vashon-aged glacial till (**Qgt$_v$**), overlying 76 feet of unweathered **Qgt$_v$**. Underlying the **Qgt$_v$**, there is approximately 42 feet of unsaturated sand and gravel interpreted as Vashon-aged advance outwash (**Qga$_v$**). The water well report for 18L01 indicates ground water was encountered at a depth of 126 feet, and the well was terminated when it encountered a "blue clay" at a depth of 140 feet. The approximate ground surface elevation of well 18L01 is 196 feet above mean sea level (amsl) based on current LiDAR topography data.

Structural Geology

There are no geologic structures (regional fault, fracture, or structural trends) mapped in the vicinity of the site (Dragovich et al., 2002). The Darrington-Devils Mountain fault zone (DDMFZ) is mapped approximately 6.5 miles north of the site. The DDMFZ is four structures in a tranpressional left-lateral strike-slip fault zone with associated synclines, anticlines and overturned anticlines (Dragovich et al., 2002).

WASTEWATER ANALYSIS

A wastewater analysis was compiled by Schenk Packing and included in their *"Fact Sheet for State Wastewater Discharge Permit"* dated April 15, 2013 (Schenk, 2013). Schenk Packing reported the concentration of pollutants in the discharge in their permit renewal application and in monthly discharge monitoring reports. The wastewater discharge was sampled from the point where it is withdrawn from the secondary pond and pumped to the land application sites for the years 2003 through 2012. Recent data collected from September 2016 through August 2017 are presented along with the historical data in Table 1.

Biochemical oxygen demand (BOD) is a measure of how much oxygen bacteria and other microbes will consume while biodegrading organic matter in the applied wastewater. More simply, it is an indirect measure of the biodegradability of the organic matter in the waste. If the BOD loading is too great to the spray-field, the soil will become anaerobic, and the crop and treatment process will fail. The five-day BOD levels (BOD5) at the site have been measured at

reduced levels since the 1990s, ranging between 62 and 610 milligrams per liter (mg/L) per year from 2003 through 2012, with an overall average of 132 mg/L. The average BOD5 measured from September 2016 through August 2017 is 115 mg/L, with a range of 53 to 180 mg/L (Table 1).

Total Kjeldahl nitrogen (TKN) is a measure of the amount of ammonia and organic nitrogen in the wastewater. The average TKN measured in recent samples is above the average TKN observed from 2003 through 2012. However, the average nitrate/nitrate values in the recent samples were 3.2 mg/L compared to 31.2 mg/L in samples collected from 2003 through 2012 (Table 1), so the average total nitrogen concentration (TKN plus nitrate/nitrite) in the recent samples (50 mg/L) is essentially unchanged from the precious data (Table 1).. The maximum nitrate/nitrate concentration measured during the past year was 12.3 mg/L (Table 1).

Oil and grease is a major pollutant in the raw waste stream of slaughterhouses. The source of grease is primarily from the kill floor. Grease correlates well with BOD in the raw waste, but not in the treated wastes, where grease is much more effectively reduced during treatment than is BOD. The average oil and grease concentration from 2003 through 2012 was 7.3 mg/L, which is similar to the average concentration of 6.0 mg/L observed recently (Table 1).

The average concentration of total coliform bacteria measured from 2003 through 2012 was 73 colonies/100 mL. The average concentration observed in the recent data is 14 colonies/100 mL. Values measured for pH in the wastewater is generally consistent between the historical and recent data (Table 1).

TDS contained in wastewaters of most meat packers contain both organic and inorganic dissolved solids. The amount of dissolved solids will vary to a large extent with the type of in-plant operations and housekeeping practices. The inorganic dissolved solids are particularly important because they are relatively unaffected by biological treatment processes. Dissolved solids affect the ionic nature of ground water and are usually nutrients for bacteria and protozoan's. TDS averaged 787 mg/L in samples collected from 2003 through 2012, and 612 mg/L in recent samples (Table 1).

Table 1 - Wastewater Characterization

Parameter	Units	Average 2003-2012	Average Sept 2016 - July 2017	Maximum Sept 2016 - July 2017
Flow	gpd	71,683	53,897	89, 375
Application Rate	in/month	--	0.0438	0.0732
Biochemical Oxygen Demand	mg/L	132	115	180
TKN	mg/L	18.6	46.8	100
Nitrate/Nitrite	mg/L	32.0	3.2	12.3
Total Nitrogen[1]	mg/L	50.6	50.0	112.3
Oil and Geese	mg/L	7.3	6.0	14
pH	mg/L	7.2	7.0	7.1
TDS	mg/L	787	612	760
Total Coliform	Colonies/100mL	73	13	60

Notes: 1) Total Nitrogen is TKN plus nitrate/nitrite.

In addition to the wastewater characterization, Schenk Packing calculates the monthly total nitrogen in pounds per acre (lbs/ac) applied to each area that is planted in grass/hay, poplar, and fir/alder. These values were calculated based on the concentration of nitrogen in the treated wastewater, volume of wastewater, and land area that it is applied to. A summary of the total nitrogen applied to each crop type is presented in Table 2, and includes the period of September 2016 through August 2017.

Table 2 - Total Nitrogen

	Total Nitrogen (lbs/ac)		
Area	**Grass/Hay**	**Poplar**	**Fir/Alder**
Sep-16	25.1	18.7	5.1
Oct-16	29.2	11.8	6.0
Nov-16	10.6	15.0	1.4
Dec-16	10.0	14.1	5.7
Jan-17	14.4	14.3	0.9
Feb-17	13.9	9.2	3.6
Mar-17	14.3	16.2	5.2
Apr-17	12.6	9.1	0.4
May-17	14.5	11.3	3.9
Jun-17	13.0	15.0	6.1
Jul-17	17.9	30.9	10.0
Aug-17	20.8	15.5	0.7
Total	196.3	181.0	49.0

SOLIDS HANDLING

Solids handling at the site is described by Schenk Packing and included in their *"Fact Sheet for State Wastewater Discharge Permit"* dated April 15, 2013 (Schenk, 2013). All solid wastes are either mixed with paunch manure and hauled off-site to a topsoil operation for composting, or hauled away by Seattle Rendering. Lighter fats, oils and greases are skimmed off the top, and settled solids are scraped off the bottom of the 8,000 gallon skimmer during the initial stages of the treatment system. Approximately 3,000 to 4,000 pounds per day of solids are mixed with the paunch manure and hauled to a topsoil operation for composting. The skimmed fats, oils, and greases, along with the internal organs, are hauled away by Seattle Rendering. Trim and wastes are directly transferred from the plant to the rendering truck by auger.

SOILS CHARACTERIZATION

Soils in the project area were mapped by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) in the 1980s as a part of soil surveys conducted for Snohomish County (NRCS, 1983). Soil scientists create the surveys by observing the landforms, slopes, drainage, vegetation, and underlying geology, and digging holes to study soil horizons down to the parent material below the rooting zone of the vegetation. The soils were grouped in map units of similar characteristics including depth to restrictive layer, drainage class, and depth to water table. These characteristics were then used to assign an interpretive Hydrologic Soil Group to each map unit.

The Hydrologic Soil Groups are generally related to the infiltration capabilities of the soils. Group A soils have a high infiltration rate and consist mainly of deep, well drained to excessively drained sands or gravelly sands. Group B soils have a moderate infiltration rate and depth, are fairly well drained, and have a fine to coarse texture. Group C soils have a slow infiltration rate. These soils generally have moderately fine or fine textured restrictive layers that impede the downward movement of water. Group D soils have a very slow infiltration rate and consist of relatively thin, very fine-grained material that have a high water table and overlie nearly impervious material. Group B/D and C/D soils are naturally Group D soils, primarily due to a high water table, that may have characteristics of Group B or C soils if drained.

Soil map units in the project area are outlined on *"Soils"*, Figure 4. The land application areas utilized by Schenk Packing are predominately Tokul gravelly medial loam, a Group B soil. The northwest corner of the site, primarily in land application areas 7 and 8 are mapped as Pastik silt loam (Figure 4). A brief description of these soil units is given below.

Tokul Gravelly Medial Loam (Group B)

The Tokul gravelly medial loam is described as a moderately deep (20-39 inches to restrictive layer), moderately drained soil located on till plains and hillslopes (NRCS, 1983). The parent

material is glacial till (**Qgt_v**). The **Qgt_v** restrictive layer has a very low permeability with a vertical hydraulic conductivity estimated at only 0.06 inches per hour (iph). Often there is seasonally perched water on the restrictive layer after heavy precipitation events.

Pastik Silt Loam (Group C)

The Pastik silt loam is a deep (80 inches to restrictive layer), moderately drained soil associated with terraces (NRCS, 1983). The parent glacial material is identified as laucustrine (e.g. glaciomarine) sediments. The underlying restrictive layer has a low permeability with a vertical hydraulic conductivity estimated at only 0.06 to 0.20 iph.

Subsurface Exploration

Subsurface exploration for our study consisted of the excavation of two exploration pits and the completion of two infiltration tests in areas mapped as the two different soil types present at the site.

Exploration Test Pits

Explorations EP-1 and EP-2 were excavated by Schenk Pacing with a rubber-tired, tractor-mounted Woods Groundbreaker backhoe with an approximately 1-foot-wide toothed bucket. The various types of materials and sediments encountered in the explorations, as well as the depths where characteristics of these materials changed, are indicated on the exploration logs for each exploration test pit, included in Appendix B. The depths indicated on the logs where conditions changed may represent gradational variations between sediment types in the field. Our explorations were approximately located in the field relative to known site features as shown on Figure 4.

The exploration pits permitted direct, visual observation of subsurface conditions. Materials encountered in the explorations were studied and classified in the field by a geologist from AESI. After logging the exposed soils, the explorations were backfilled with the excavated soil and lightly tamped with the excavator bucket. Disturbed soil samples were selected from the pits, placed in moisture-tight containers, and transported to AESI's laboratory for further visual classification and testing. The exploration logs in Appendix B are based on the field observations and inspection of the samples.

AESI completed one exploration pit (EP-1) in an area mapped as Tokul soils (Figure 4). The exploration pit was advanced to a depth of 5 feet (Appendix B). Exploration pit EP-1 encountered approximately one foot of loose, brown silty fine sand (topsoil) over medium dense silty fine sand that graded to a fine sandy silt, interpreted to be weathered Everson-age glaciomarine sediments (Appendix B).

AESI completed a second exploration pit (EP-2) in an area mapped as Pastik soils (Figure 4). The exploration pit was advanced to a depth of 5 feet (Appendix B). Exploration pit EP-2 encountered approximately 4 inches of loose, brown silty fine to medium sand (topsoil) over lose silty fine to medium sand, interpreted as weathered Everson-age glaciomarine sediments to a depth of 3 feet, followed by fine sandy silt interpreted as Everson-age glaciomarine sediments (Appendix B).

Infiltration Test Pits

Infiltration test pits were completed as shallow (approximately 0.2 feet) excavations in the immediate vicinity of the exploration pits, and as such are not logged as separate explorations. Materials encountered in the excavated infiltration test pits corresponded to materials encountered at shallow depths in the corresponding exploration pit.

Field Infiltration Testing

Infiltration testing locations IT-1 and IT-2 were each located in an area with a distinct mapped soils type (Figure 4). The infiltration tests were completed at relatively shallow (0.2 feet) depths to observe the field infiltration rate of the mapped surface soils in the land application area of the site.

Infiltration Testing Procedures

AESI performed infiltration tests IT-1 and IT-2 on July 11, 2017. The tests were conducted in the shallow, weathered soil subsurface (approximately 0.2 feet deep). This was as shallow as was feasible to contain the water for testing within the test areas. The water used for the testing was obtained from a water truck provided by Schenk Packing. AESI provided all other flow testing equipment. The test dimensions, depths, length of inflow (soak), length of falling head, and total volume for each infiltration test are provided in Table 3. Infiltration test data were recorded by hand in the field and subsequently transferred to an electronic spreadsheet. Infiltration test data sheets are included as Appendix C.

The infiltration tests were conducted as open pit tests. Infiltration testing occurred in two phases, a constant head phase and a falling head phase. For each infiltration test, the first phase of testing (constant head phase) began by introducing water to the test area. Flow rate was measured periodically using a container of known volume and a stopwatch. Water was discharged through a metal and sack-material flow diffuser to minimize turbulence and scouring on the testing base. A staff gauge with 0.01-foot divisions was installed in the pit to monitor the depth of water during testing. No water was present in the testing area prior to testing.

Water was allowed to rise in the test area while the depth of ponded water and the area of coverage were measured. As the water began to pool, the inflow rate was adjusted in order to allow the water level to stabilize (constant head). This portion of the test also allows the receptor soils in the immediate vicinity of the test area to become saturated. Readings of the water level, instantaneous flow rate, and total flow volume were recorded at approximately 5- to 15-minute intervals. The constant head infiltration rate was calculated based on the average flow rate in the later part of testing, the test cell dimensions, and the change in storage within the pit. The inflow continued for 2 hours for each infiltration test. The total volume of water used during testing ranged from 38 to 76 gallons (Table 3).

In both infiltration tests, the second phase of testing (falling head phase) began by discontinuing the water flow immediately after the constant head phase. After discontinuing water flow, water levels were measured with a staff gauge or water level meter with 0.01-foot divisions. The duration of this phase was 11.5 minutes in IT-1, and 3.3 minutes in IT-2, until the remaining wetted area was no longer representative of the entire test area, and testing was discontinued (Table 3).

Table 3 – Infiltration Test Information

Soil Type	Infiltration Test	Approximate Depth (feet bgs)	Inflow Period (minutes)	Total Inflow Volume (gallons)	Constant Head Infiltration Rate (iph)	Falling Head Period (minutes)	Falling Head Infiltration Rate (iph)
Tokul	IT-1	0.2	120	38	3.7	11.5	2.4
Pastik	IT-2	0.2	120	76	9.1	3.3	11.3

Infiltration Testing Results

The results of the infiltration testing indicated that the on-site surficial soils in the land application areas were approximately 3.7 iph and 9.1 iph during the constant head testing in the areas mapped as Tokul and Pastik soils, respectively. The falling head test results indicated similar infiltration rates of 2.4 iph and 11.3 iph for the Tokul and Pastik soils, respectively (Table 3).

Soil Laboratory Testing

Representative soil samples from test pits EP-1 and EP-2 were collected and analyzed in AESI's in-house soils laboratory for USDA texture Classification, United Soils Classification (USC), grain size, dry bulk density, saturated hydraulic conductivity, percent organic matter, and estimates of field capacity and wilting point. The results of each test are summarized in Table 4.

Table 4 – Soil Laboratory Testing Results

Soil Type		Tokul	Pastik
Exploration Pit		EP-1	EP-2
USDA Texture Classification		SANDY LOAM	COARSE SAND
Unified Soils Classification		SM	SW
Grain Size			
Coarse Gravel	%	0%	17.4%
Fine Gravel	%	1.2%	23.4%
Coarse Sand	%	9.9%	10.1%
Medium Sand	%	27.3%	22.4%
Fine Sand	%	18.7%	17.7%
Silt	%	24.5%	7.2%
Clay	%	18.4%	1.8%
Dry Bulk Density	lbs/ft	78.49	103.85
Saturated Hydraulic Conductivity	iph	20.9	5.60
Organic Matter	%	9.35	3.8
Field Capacity	%v	18	10
Wilting Point	%v	8	5

Notes: Field capacity and wilting point based on soil texture class as presented in Saxton and Rawls (2006)
%v = % volumetric water content

HYDROGEOLOGIC CHARACTERIZATION

Water is present in the pore spaces of soils and sediment throughout the project area. This "ground water" is part of the continuous hydrologic cycle which, in the natural state, begins with infiltration of precipitation and runoff (recharge) and ends with discharge to rivers, springs, streams, wetlands, and ultimately to the surrounding saltwater bodies. Under natural conditions, ground water recharge and discharge may shift with climatic cycles, but remain in overall balance. Withdrawal of ground water by wells diverts a part of the ground water cycle, resulting in adjustments to natural recharge, discharge, or both.

Ground water under saturated conditions flows preferentially through materials with greater porosity and permeability, such as clean gravels and sands. Where geologic conditions limit discharge, ground water accumulates in permeable zones, which, if they can support production from wells, are termed "aquifers." The sustainability of wells, or the long-term aquifer capacity, depends both on the extent of the aquifer, its rate of recharge and natural discharge, and the amount of withdrawal by producing wells.

The available information indicates that the site is underlain by a regional aquifer located within the Vashon-age advance outwash (**Qga_v**) sediments or permeable portions of the underlying Olympia-age sediments (**Qco**).

Regional Aquifer

The regional aquifer serves as the primary source of water in the project area. The aquifer appears to be locally extensive beneath the site and as much as approximately 60 feet thick based on the water well report for well 18L01 (Attachment A). The aquifer appears to include permeable portions of the Vashon glacial deposits (**Qga_v**) and possibly upper permeable sediments of the Olympia nonglacial unit (**Qco**).

The aquifer is generally separated from the ground surface by a significant thickness of Everson-age glaciomarine drift sediments (**$Qgdm_e$ $Qgdm_{ec}$** and **$Qgdm_{ed}$**) and/or Vashon-age glacial till (**Qgt_v**). A review of 50 water well reports for domestic wells within one mile of the site (Ecology, 2017) indicate that the sequence of low-permeability are present at or very near the ground surface in the vicinity of the site. A vast majority of the water well reports reviewed (41 of 50) indicated the low-permeability sediments extended to a depth greater than 75 feet below ground surface (bgs). Well 18L01 (Figure 3), located nearest the site, indicates low-permeability sediments to a depth of 76 feet bgs (Appendix A).

Ground water in the aquifer appears to be both confined and unconfined. In the confined portions of the aquifer, water levels rise several feet above where the aquifer was encountered. In the unconfined portions of the aquifer there is typically unsaturated sand and gravel (likely **Qga_v**) below the low-permeability sediments. The water well report for well 18L01 indicates ground water was encountered in an unconfined aquifer at a depth of 126 feet bgs.

Snohomish County has mapped a majority of the land application areas for the site as an aquifer recharge area with moderate susceptibility to contamination based on a depth to aquifer of 40 to 100 feet and work by the U.S. Geological Survey (USGS) (Thomas and others, 1997). A portion of land application area 8 (Figure 2) is mapped as low susceptibility (depth to aquifer greater than 100 feet).

Ground Water Flow Direction

Ground water flow in an aquifer is driven by gravity from areas of high to low hydraulic "head". The "head" at a point in an aquifer is generally determined by measuring the depth to ground water in a well from a known elevation, usually top of the well casing, or wellhead. Lines of equal head can be inferred between points of known head on a ground water contour map. Ground water flows in the direction perpendicular to ground water contours.

A ground water contour map was prepared for the site and vicinity utilizing the depth to water and casing stickup from water well reports, and estimated ground surface elevation (from LiDAR topography data and aerial photography to estimate the well head location for water well reports that could be tied to specific Snohomish County Parcels).

A summary of water level elevations calculated from water well reports tied to parcels is presented in Table 5 (Appendix A). The head values, ground water contours, and inferred ground water flow directions for the advance outwash aquifer are shown on the "*Ground Water Contour Map*", Figure 5.

Table 5 – Ground Water Elevation Data

Well ID	Wellhead Elevation (ft msl)	Depth to Water (ft bgs)	Ground Water Elevation (ft msl)
07K04	233.4	165	68.4
08L01	273.3	165.5	107.8
08M01	255.7	151	104.7
08M02	245.7	142	103.7
08M03	259.4	114	145.4
08M04	258.6	164	94.6
08N02	221.0	84	137.0
08P01	226.5	81	145.5
12R01	121.3	96	25.3
13G02	56.6	48.5	8.1
13G03	119.3	110	9.3
18B01	248.6	179	69.6
18C02	156.1	100	56.1
18L01	196.1	126	70.1

Based on the ground water elevation data derived from the water well reports, ground water in the regional aquifer beneath the site flows generally to the west toward Skagit Bay near the site (Figure 5). This flow direction is consistent with data presented in (Thomas et al., 1997). The hydraulic gradient (slope) of the aquifer in the immediate vicinity of the site appears to be approximately 0.0125 (approximately 66 feet per mile).

Aquifer Recharge and Discharge

Recharge to the regional aquifer is interpreted to be from the vertical infiltration of excess precipitation. The mean annual precipitation near the site averages around 35 inches. Most of this precipitation occurs during the months of November through April. The United States Geological Survey (USGS) has derived regression relationships between mean annual

precipitation and ground water recharge for various generalized glacial soil units like glacial till, glaciomarine drift, advance and recessional outwash (Thomas et al., 1997; Kahle and Olsen, 1995).

Applying the USGS relationship to the glaciomarine drift soils located in the site vicinity results in an estimated annual ground water recharge of approximately 6 inches to the advance outwash aquifer located beneath the site, with the remaining approximately 29 inches of the precipitation likely being lost as evapotranspiration by vegetation and/or surface water runoff/shallow interflow.
Ground water flow in the regional aquifer beneath the site appears to discharge to alluvial sediments to the west, and eventually Skagit Bay. To a much lesser extent, some of the ground water flow through the advance outwash aquifer is captured by domestic wells located near the site.

Aquifer Parameters

Hydraulic conductivity (K) is a measure of the rate at which water can move through an aquifer and, in unconsolidated sediments, is dependent on the size, shape, and arrangement of soil particles in the aquifer. Aquifer transmissivity (T) is a measure of the amount of water that can be transmitted horizontally by the full saturated thickness of the aquifer under a hydraulic gradient of 1 and is related to hydraulic conductivity by the following equation:

$$T = Kb$$

Where:
K = Hydraulic Conductivity (ft/d)
T = Transmissivity (ft^2/d)
B = Aquifer thickness (ft)

Aquifer specific yield (storativity) is a measure of the storage potential of the aquifer and is equal to the ratio of the volume of water the aquifer will yield by gravity drainage to the volume of the aquifer (Fetter, 1988). Values of aquifer parameters such as hydraulic conductivity, storativity, and transmissivity are best determined by the analysis of aquifer pump testing data. For short duration pumping tests (less than 24 hours) aquifer parameters of transmissivity and hydraulic conductivity can be estimated based on the specific capacity (pumping rate in gallons per minute (gpm) divided by the total water level drawdown observed) using the modified Theis methodology (Fetter, 1988).

There was a limited amount of aquifer testing (bailer/pump test) information available on water well reports reviewed for this project (Appendix A). The estimated transmissivities for wells using the modified Theis methodology (Fetter, 1988) are presented in Table 6. The average transmissivity of the regional aquifer based on information from 22 water well reports

is 732 square feet per day (ft^2/d). Based on an assumed aquifer thickness of approximately 30 feet, the hydraulic conductivity in the advance outwash aquifer is approximately 24 feet per day (ft/day) beneath the site. This is within the expected range for sand and gravel aquifers (Fetter, 1988).

Table 6 – Aquifer Testing Information

Well Information						Aquifer Testing Information					
Well Number	Depth (feet)	Screen[1] Length (feet)	Well Dia (in)	SWL (feet)	SWE (feet)	Pump Test	Q (gpm)	s (feet)	t (hrs)	Q/s (gpm/ft)	T (ft^2/d)
07K01	194.0	5	6	-2.5	2.52	B	12	5.0	1.0	2.4	311
07K04	178.0	5	6	-100.0	100	B	8	3.0	1.0	2.7	350
07L02	134.0	5	6	-1.0	1	P	10	5.0	1.0	2.0	252
07Q01	206.0	10	6	-2.0	2	B	30	42.0	2.0	0.7	86
08M03	180.0	5	6	-2.0	2	B	15	2.0	1.0	7.5	1,117
08M04	257.0	5	6	-3.0	3	B	18	4.0	1.0	4.5	631
08M07	154.0	8	6	-13.0	13	P	16	3.0	4.0	5.3	889
08P01	124.0	10	6	1.0	-1	P	18	6.0	2.0	3.0	436
13G01	110.0	5	6	-18.0	18	B	4	22.0	2.0	0.2	17
13J01	159.0	5	6	-1.0	1	P	15	0.5	2.0	30.0	5,522
17D01	195.0	10	6	-2.0	2	B	8	5.0	1.0	1.5	182
17N01	199.0	10	6	-6.0	6	P	5	12.0	2.0	0.4	46
18A01	146.0	0	6	0.0	0	P	11	27.0	3.0	0.4	82
18A02	138.0	0	6	30.0	-30	P	12	13.5	2.0	0.9	178
18B02	215.0	9	6	-1.0	1	P	7	2.0	1.0	3.5	476
18B03	237.0	5	6	-9.0	9	B	8	6.0	1.0	1.3	147
18C01	186.0	5	6	14.0	-14	B	11	0.5	1.0	22.0	3,679
18D01	200.0	10	6	5.0	-5	B	30	28.0	1.0	1.1	123
18D02	92.0	5	6	10.0	-10	P	20	20.0	1.0	1.0	114
18L01	140.0	10	6	0.0	0	B	15	2.0	2.0	7.5	1,206
20C03	162.0	5	6	-4.0	4	B	30	15.0	1.0	2.0	252
20D01	89.0	4	6	-5.0	5	P	3	28.0	6.0	0.1	9

Median	252
Average	732
Maxium	5522
Minimum	9

B= Bailer Test, P= Pumping Test
T = Transmissivity
Q/s = Specific Capacity
gpm = gallons per minute
gpm/foot = gallons per minute per foot of water level drawdown
ft^2/d = square feet per day

The aquifer testing information presented on the water well reports for wells located in the project vicinity was not adequate to calculate aquifer specific yield/storativity. Fetter (1988) indicates that specific yield/storativity of an unconfined aquifer is typically between 0.3 and 0.02. Storativity values for semi-confined aquifers typically range from 0.01 to 0.005 and confined aquifers typically range from 0.005 to 0.00005.

DESIGN CONSIDERATIONS

Design considerations for the land application site include hydraulic loading, nitrogen loading, land area loading, and ground water quality based effluent limits. These analyses were prepared by Schenk Packing (Schenk, 2013), and summarized below.

Hydraulic Loading

The hydraulic loading rate for the site was calculated by Schenk Packing (Schenk, 2013) based on soil permeability and calculated using methods described in the EPA publication, *"Process Design Manual Land Treatment of Municipal Wastewater Effluents"* dated September, 2006 (EPA, 2006). The hydraulic loading rate was computed using the average monthly precipitation at Stanwood for the years 2006 through 2008 and soil permeability based on NRCS data. Hydraulic loading calculations prepared by Schenk Packing were based on natural precipitation, wastewater volume generated, nitrogen uptake, and nitrogen leaching and are summarized in Table 7.

Nitrogen Loading

Nitrogen loading was calculated by Schenk Packing (Schenk, 2013) based on both nitrogen uptake and concentration loading in accordance with the EPA (2006). Crop nitrogen uptake factors for poplar and fir were from the EPA (2006), and the uptake for the grass/hay was determined based on a harvest rate of 7 tons per acre and a dry weight nitrogen content of 1.47 percent (EPA, 2006). The overall average of reported monthly total nitrogen results from 2003 to 2012 (as TKN plus nitrate/nitrite) were used in the concentration calculation. The nitrogen loading values based on both nitrogen uptake and concentration loading methods are summarized in Table 7.

Land Area Loading

Limitation based on application area was calculated by Schenk Packing (Schenk, 2013) for the two nitrogen loading rates calculated above as well as the raw nitrogen crop uptake case. The results of the calculations, summarized in Table 7, show that the hydraulic loading rate based on crop uptake is the limiting factor.

Table 7 – Summary of Hydraulic, Nitrogen and Land Area Loading

Hydraulic Loading Rates (in/yr)				
Method	**Grass/Hay**	**Poplar**	**Fir/Alder**	**Total**
Wastewater Volume	34.08	29.48	5.36	68.92
Uptake	17.99	23.6	17.48	59.07

Nitrogen Loading (lb/ac/year)				
Method	**Grass/Hay**	**Poplar**	**Fir/Alder**	**Total**
Uptake Loading	275	360	267	902
Concentration Loading	390	337	61	788

Land Area Loading (acres)				
Method	**Grass/Hay**	**Poplar**	**Fir/Alder**	**Total**
Uptake	30.3	15.0	3.4	48.7
Application Rate	22.7	11.2	2.5	36.5
Application Area	16.0	12.0	11.0	39.0

Ground Water Quality-Based Effluent Limits

The loading calculations discussed above indicate the limiting case in each loading category to avoid over application of nitrogen to the land areas. Even though Schenk Packing has made improvements to decrease nitrogen and other pollutant loading from the wastewater, over application of some crop types may occur (Schenk, 2013). To help avoid over application, Ecology defined nitrogen application rates for each field based on the protection of ground water quality. These ground water quality effluent limits are presented in Table 8.

Table 8 – Summary of Nitrogen Effluent Limits

Field Type	Monthly Average Concentration	Monthly Maximum Concentration	Annual Maximum Loading
Grass/Hay	88 mg/L	177 mg/L	389 lbs/acre/year
Poplar			337 lbs/acre/year
Fir/Alder			61 lbs/acre/year

The wastewater characterization and nitrogen loading calculations from September 2016 through August 2017 indicate all ground water quality based effluent limits were met. The monthly average total nitrogen concentration (TNK plus nitrate/nitrite) was 50 mg/L (Table 1) compared to the effluent limit of 88 mg/L (Table 8). The monthly maximum total nitrogen concentration was 112.3 mg/L (Table 1) compared to the effluent limit of 177 mg/L. The annual

nitrogen loading totals from September 2016 through August 2017 were 196.3, 181.0, and 49.0 pounds per acre for grass/hay, poplar, and fir/alder, respectively. These totals were well below the ground water quality based limits of 389, 337, and 61 pounds (Table 8).

IRRIGATION AND CROP MANAGEMENT PLAN

Schenk Packing has been land-applying treated wastewater since 1985. In 2000, the acreage for land application was increase from 40 to 45 acres. Treated wastewater from the secondary lagoon is spray irrigated on fields containing a mixture of grass/hay, poplar, and fir/alder. The irrigation methods include a series of double-headed mist sprinklers and impact sprinklers. During each irrigation cycle and area is irrigated for an average of six hours. Irrigation alternates between application areas with a return period of approximately 14 to 24 days.

In accordance with the State Waste Discharge Permit (ST005174) for the site, Schenk Packing must prepare an irrigation and crop management plan annually, and include an annual summary of farm operations for the previous year and a cropping and irrigation schedule for the upcoming year. The intent of this section is to provide a brief summary of the irrigation of crops that has occurred to date in 2017, not to provide a complete irrigation and crop management plan.

During the summer, treated wastewater is typically applied to one or more land application areas over the course of 5 to 7 hours. During the winter, treated wastewater is typically applied for approximately two hours, then shut off for approximately two hours before re-applying to the same field, or moving the application to a different field. According to Schenk Packing, the typical maximum pumping rate for the treated wastewater to the land application areas is approximately 225 gpm (13,500 gallons per hour [gph]).

AESI reviewed the daily irrigation volumes in gallons for each spray field provided by Schenk Packing for 2017. The maximum daily irrigation volume for each field applied in 2017 is presented in Table 9. The maximum irrigation rate in iph for each field was calculated based on an average irrigation time of 5 hours, and the acreage of each application area. These rates are also presented in Table 9. The irrigation rates for each application area ranged from 0.05 iph fir Area 7/7b to 0.88 iph for Area 6. For comparison, the typical maximum pumping rate for the treated wastewater (13,500 gph) would be the equivalent of 0.77 iph for Area 6 (0.65 acres).

Table 9 – Maximum Irrigation Application Rate

Spray Area	Application Area (acres)	Crop	Max Application Volume in 2017 (gallons)	Date	Approximate Application Duration (hours)	Maximum Application Rate (iph)
1	4.1	Grass	72,495	6/23/2017	5	0.13
2	1.1	Fir/Alder	33,455	7/13/2017	5	0.06
	3.9	Poplar				
3	4.2	Grass	79,675	6/7/2017	5	0.14
4	7.0	Grass	84,060	6/22/2017	5	0.09
5a	0.6	Poplar [1]	71,025	7/7/2017	5	0.22
5b	1.7	Poplar [1]				
5b	1.7	Poplar [1]	65,395	4/24/2017	5	0.28
5c	1.2	Fir/Alder	69,340	4/17/2017	5	0.43
5d	0.7	Grass				
6	0.65	Poplar	77,595	6/29/2017	5	0.88
7	11.1	Poplar [1]	86,240	6/27/2017	5	0.05
7b	0.8	Poplar				
8	0.6	Grass	81,905	7/5/2017	5	0.10
9	2.3	Grass	83,175	5/12/2017	5	0.26

Notes: 1) Poplar areas recently converted to grass.

The maximum irrigation rates for each spray field were compared to the minimum infiltration rate measured from the predominant soil type for each application area, as shown in Table 10. The measured minimum infiltration rate for the site soils in all areas far exceeded the maximum irrigation rate in each application area. This exceedance is expressed as an "infiltration factor of safety" calculated by dividing the application rate by the measured infiltration rate, and is presented in Table 10. For example, application area 6 had a measured infiltration rate (2.4 iph) that was approximately 3-times the maximum application rate of 0.88 iph. All other areas had a measured infiltration rate between 6 and 169 times greater than maximum irrigation rate for the application area (Table 10).

Table 10 – Measured Infiltration and Maximum Application Rate Comparison

Application Area	Predominant Soil Type	Minimum Measured Infiltration Rate (iph)	Maximum Application Rate in 2017 (iph)	Infiltration Factor of Safety
1	Tokul	2.4	0.13	18
2	Tokul	2.4	0.06	38
	Tokul	2.4		
3	Tokul	2.4	0.14	17
4	Tokul	2.4	0.09	27
5a	Pastik	9.1	0.22	42
5b	Pastik	9.1		
5b	Pastik	9.1	0.28	33
5c	Tokul	2.4	0.43	6
5d	Tokul	2.4		
6	Tokul	2.4	0.88	3
7	Pastik	9.1	0.05	169
7b	Pastik	9.1		
8	Pastik	9.1	0.10	87
9	Pastik	9.1	0.26	35

POTENTIAL ENVIRONMENTAL IMPACTS

As with any facility that uses land application for treated wastewater discharge, there are potential environmental impacts, primarily related to surface water and ground water quality. If the facility is operated in accordance with the State Waste Discharge Permit (ST005174) for the site, the risk of potential environmental impacts related to the land application of treated wastewater are very low.

Surface Water Quality

The potential for significant adverse impacts to surface water quality at the site is very low for the following reasons:

1. Surface runoff of wastewater to waters of the state or any off-site lands is strictly and expressly prohibited under section S4.C of the State Waste Discharge Permit (ST005174) for the site.

2. The measured infiltration rates for the on-site soils in the land application areas far exceed the wastewater irrigation rates. The irrigation rates would not be expected to generate runoff from the land application areas.

Ground Water Quality

The potential for significant adverse impacts to ground water quality at the site is very low for the following reasons:

1. The measured concentrations of total nitrogen in the irrigation wastewater prior to the land application were well below the discharge limits allowed under section S1.A of the State Waste Discharge Permit (ST005174) for the site. The discharge limits were designed to be protective of ground water quality and based on average total nitrogen concentrations at the site in 2009 (50.49 mg/L, Schenk, 2013. This value is similar to the average total nitrogen concentration from 2016-2017 (50 mg/L, Table 1).

2. The calculated annual nitrogen loading values for the grass/hay, poplar, and fir/alder in 2016/2017 were well below the annual maximum loading values allowed under section S1.A of the State Waste Discharge Permit (ST005174) for the site.

3. The geologic and hydrogeologic conditions beneath the site and vicinity include a significant thickness of low-permeability glaciomarine drift sediments (**$Qgdm_e$** **$Qgdm_{ec}$** and **$Qgdm_{ed}$**) and glacial till (lodgment till (**Qgt_v**). These low permeability sediments significantly impede the vertical migration of ground water from the surface soils to the underlying regional aquifer. This impediment causes infiltrated waste water to remain in the soil column where nutrient loads can be utilized by plants.

CONCLUSIONS AND RECCOMENDATIONS

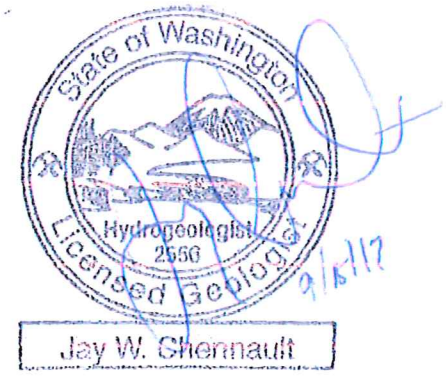
As detailed above, AESI concludes that there are no significant adverse impacts to surface water or ground water quality that will likely result from the continued land application of treated process wastewater from the Schenk Packing facility. AESI recommends continued operation of the facility in accordance with the State Waste Discharge Permit (ST005174) for the site. Schenk Packing should also continue to follow the best management practices (BMPs) identified in sections S1.B and S4.C of the permit to prevent pollution to waters of the state.

CLOSURE

AESI has prepared this ground water quality evaluation for the exclusive use of our client and their agents, for specific application to this project. Within the limitations of scope and schedule, our services have been performed in accordance with generally accepted local hydrogeologic practices in effect at the time our report was prepared. No other warranty, express or implied, is made.

We appreciate the opportunity to have been of service on this project. If you have any questions, please call our office at 425-827-7701.

Sincerely,
ASSOCIATED EARTH SCIENCES, INC.
Everett, Washington



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Associate Hydrogeologist/Engineer

REFERENCES

Associated Earth Sciences, Inc., 2017, *Ground Water Quality Evaluation Work Plan*, prepared for Schenk Packing Company, Inc., Project # 170045H001, February 8, 2017.

Dragovich, J.D., Gilbertson, L.A., Norman, D.K., Anderson, G., and Petro, G.T., 2002, *Geologic Map of the Utsalady and Conway 7.5 Minute Quadrangles, Skagit, Snohomish and Island Counties, Washington*, DNR Open File Report 2002-5, 2002.

Ecology, 2017a, *Letter from Christopher Martin, Water Quality Section Hydrogeologist to Steve Lenz, RE: State Waste Discharge Permit No. ST0005174 Groundwater Study*, February 15, 2017.

Ecology, 2017b, *Department of Ecology Washington State Well Log Viewer*, (https://fortress.wa.gov/ecy/waterresources/map/WCLSWebMap/default.aspx).

Ecology, 1993, Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems, Ecology Publication #29-36, May 1993.

Fetter, 1994, *Applied Hydrogeology,* 3nd Edition, Prentice Hall, Upper Saddle River, New Jersey, 1994.

.

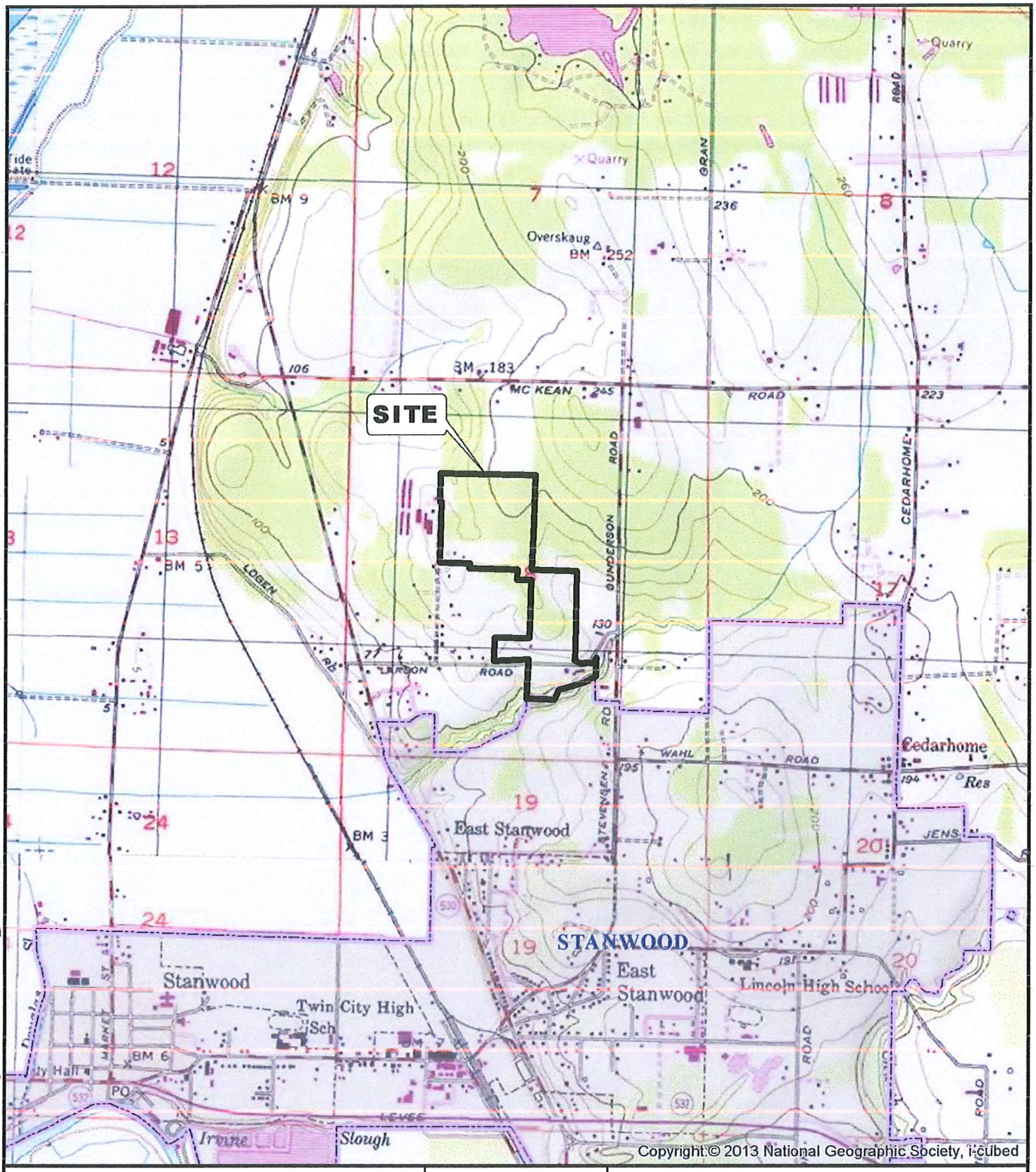
Kahle. S.C., and Olsen T.D., 1995, *Hydrogeology and Quality of Ground Water on Guemes Island, Skagit County, Washington*, U.S. Geological Survey Water Resources Investigations Report 94-4236.

Schenk Packing Company, Inc., 2013, *Fact Sheet for State Wastewater Discharge Permit ST005174,* April 15, 2013.

Thomas, B.E., Wilkinson, J.M., and Embrey , S.S., *The Ground-Water System and Ground –Water Quality in Western Snohomish County, Washington*, U.S. Geological Survey Water-Resources Investigation Report 96-4312, 1997.

U.S. Department of Agriculture National Resource Conservation Service, 1983, *Soils Survey of the Snohomish County Area, Washington*, 1983.

U.S. Environmental Protection Agency, 2006, *Process Design Manual Land Treatment of Municipal Wastewater Effluents, EPA publication 625/R-06/016*, September, 2006



DATA SOURCES / REFERENCES:
USGS: 24K SERIES TOPOGRAPHIC MAPS
SNOHOMISH CO: STREETS, CITY LIMITS, PARCELS 02/17

LOCATIONS AND DISTANCES SHOWN ARE APPROXIMATE

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FEET

NOTE: BLACK AND WHITE REPRODUCTION OF THIS COLOR ORIGINAL MAY REDUCE ITS EFFECTIVENESS AND LEAD TO INCORRECT INTERPRETATION

associated earth sciences incorporated

VICINITY MAP

SCHENK PACKING CO.
HYDROGEOLOGIC INVESTIGATION
SNOHOMISH COUNTY, WASHINGTON

PROJ NO.	DATE:	FIGURE:
170045H001	9/17	1

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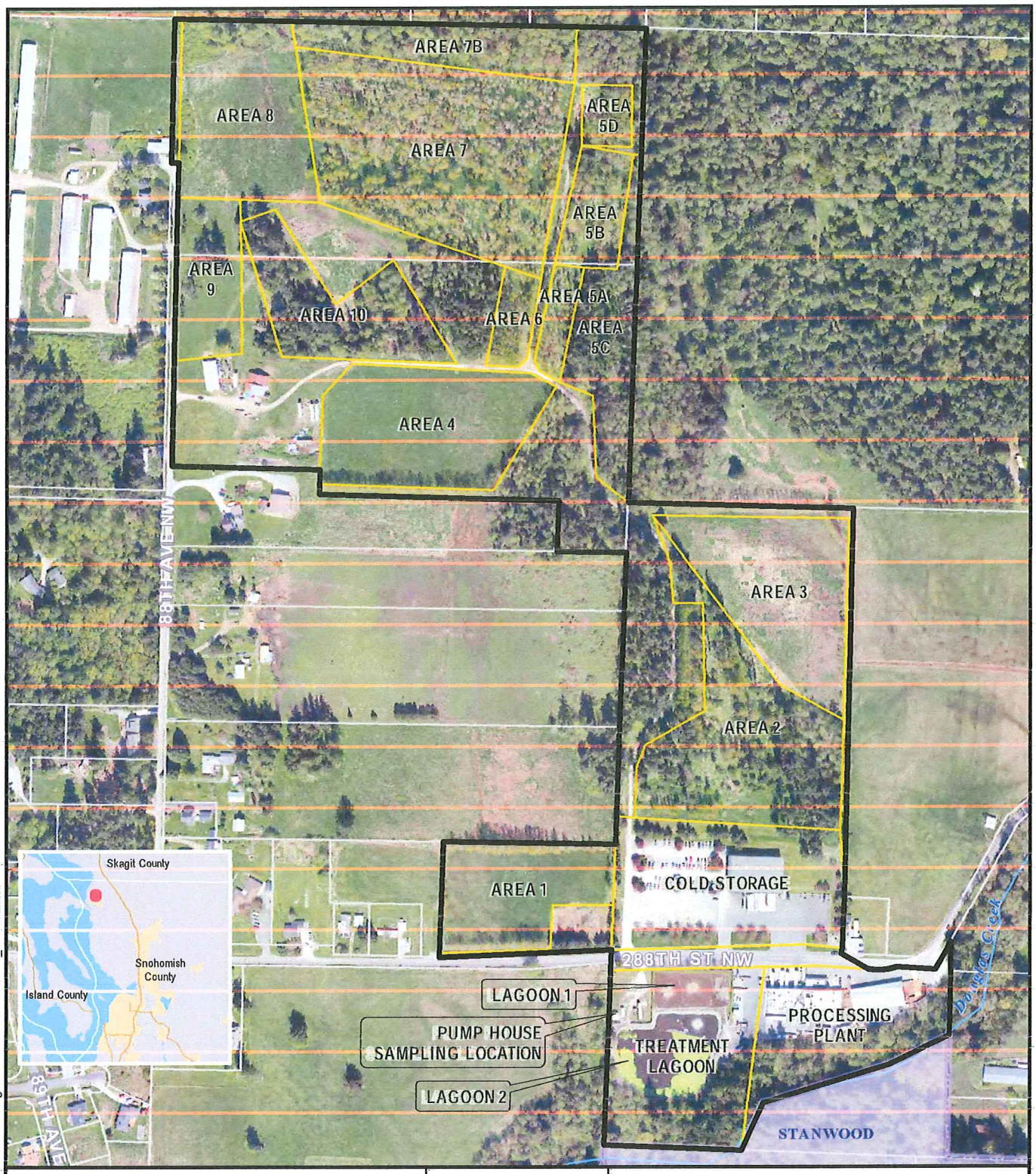

LEGEND:

- SITE
- LAND APPLICATION AREA

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DATA SOURCES / REFERENCES:
SNOHOMISH CO: STREETS, PARCELS 02/17, AERIAL 2015 - PICTOMETRY
LOCATIONS AND DISTANCES SHOWN ARE APPROXIMATE

NOTE: BLACK AND WHITE REPRODUCTION OF THIS COLOR ORIGINAL MAY REDUCE ITS EFFECTIVENESS AND LEAD TO INCORRECT INTERPRETATION

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SITE MAP

SCHENK PACKING CO. HYDROGEOLOGIC INVESTIGATION SNOHOMISH COUNTY, WASHINGTON

PROJ NO.	DATE:	FIGURE:
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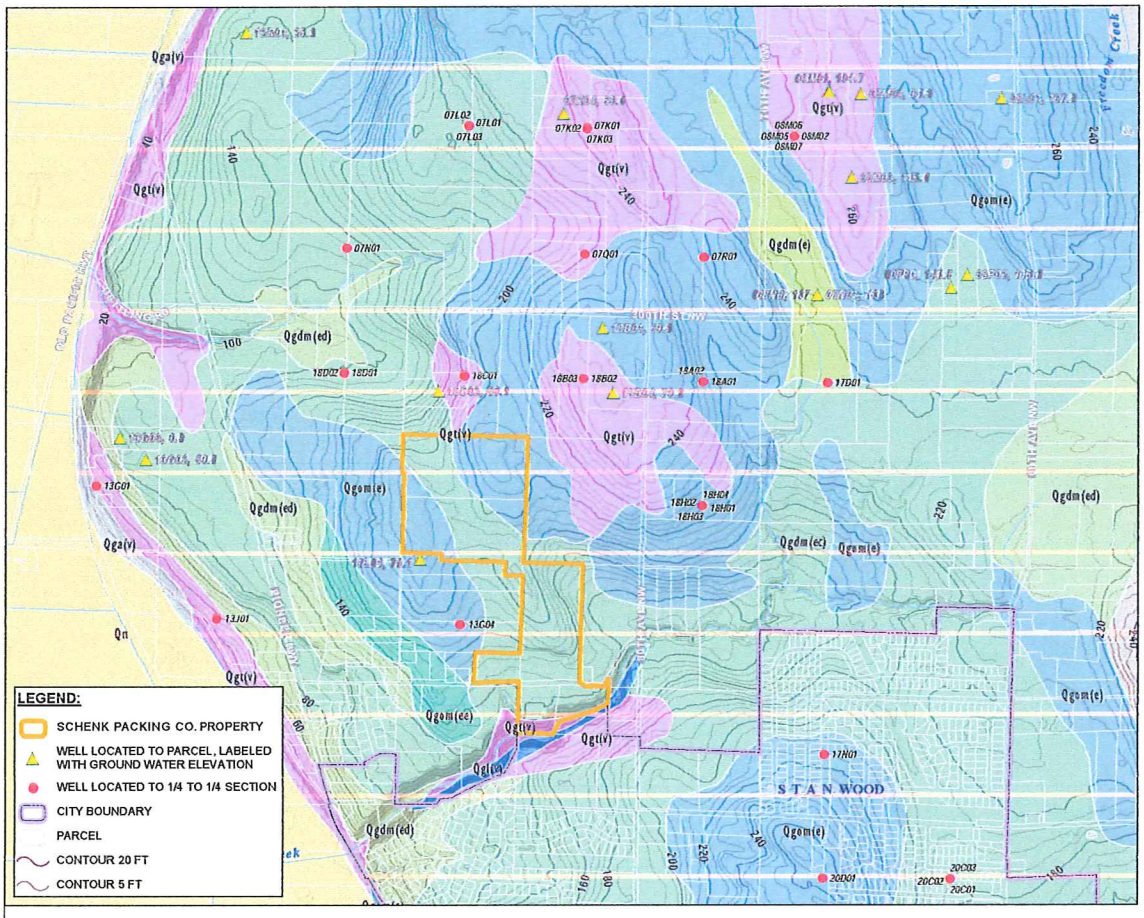


LEGEND:

- SCHENK PACKING CO. PROPERTY
- Qn; Qyal - NEARSHORE DEPOSITS AND ALLUVIUM
- Qgdm(e) - EVERSON GLACIOMARINE DRIFT
- Qgdm(ec) - EVERSON FINE-GRAINED GLACIOMARINE DRIFT
- Qgdm(ed) - EVERSON GLACIOMARINE DIAMICTON
- Qgom(e) - EVERSON GLACIOMARINE DRIFT, UNDIVIDED
- Qgom(ee) - EVERSON EMERGENCE (BEACH) DEPOSIT
- Qvr - VASHON RECESSIONAL OUTWASH
- Qgt(v); Qvt - VASHON TILL
- Qga(v) - VASHON ADVANCE OUTWASH
- Qgl(v) - VASHON TRANSITIONAL SILT AND CLAY DEPOSIT
- Qmg - PRE-FRASER MARINE GLACIAL DRIFT

DATA SOURCES / REFERENCES:
PSLC. LIDAR 2009-2010 SUPERMOSAIC, GRID CELL SIZE IS 6'.
WA STATE PLANE NORTH, NAD83 (HARN) NAVD88, US SURVEY FEET.
CONTOURS CREATED FROM LIDAR
SNOHOMISH CO. PARCELS, STREETS 2017
WADNR, GEOLOGY 24K 1155, DGER [OFR 2002-5 [CONWAY]
LOCATIONS AND DISTANCES SHOWN ARE APPROXIMATE

N

0 500 1000
FEET

BLACK AND WHITE REPRODUCTION OF THIS COLOR ORIGINAL MAY REDUCE ITS EFFECTIVENESS AND LEAD TO INCORRECT INTERPRETATION

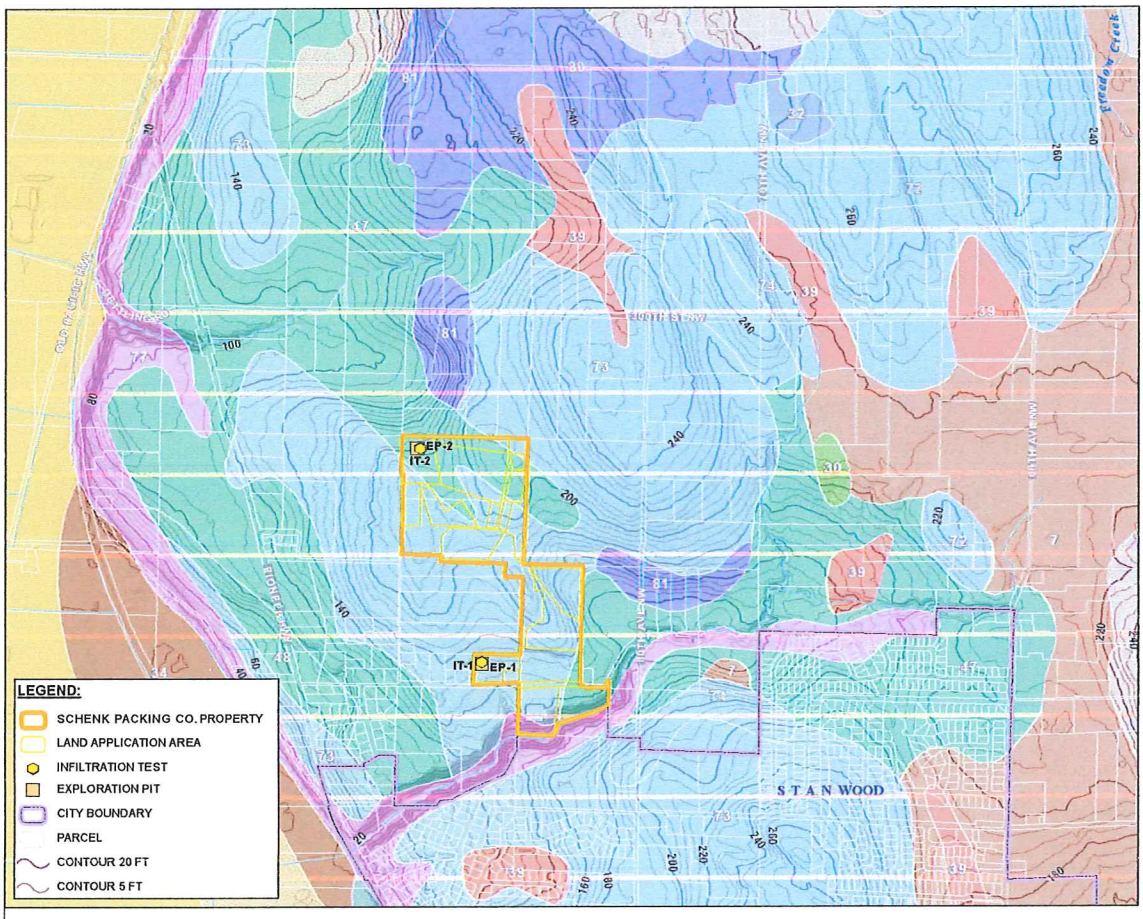
associated earth sciences incorporated

WELLS AND GEOLOGY

SCHENK PACKING CO.
HYDROGEOLOGIC INVESTIGATION
SNOHOMISH COUNTY, WASHINGTON

PROJ NO.	DATE:	FIGURE:
170045H001	9/17	3

Document Path: G:\GIS_Projects\acad\2017\170045\Schenk Packing\mxd\170045H001 F3 Geo_Schenk.mxd



LEGEND:

- SCHENK PACKING CO. PROPERTY
- 7 - Bellingham silty clay loam
- 30 - Lynnwood loamy sand, 0-3 % slope
- 32 - McKenna gravelly silt loam, 0-8% slope
- 34 - Mukilteo muck
- 39 - Norma loam
- 47, 48 - Pastik silt loam, 0-8% slope; 8-25% slope
- 55 - Puget silty clay loam
- 64 - Snohomish silt loam
- 69 - Terric Medisaprists, nearly level
- 72-74 - Tokul gravelly medial loam, 0-8% slope; 8-15% slope; 15-30% slope
- 77 - Tokul-Winston gravelly loams, 25-65% slope
- 80, 81 - Winston gravelly loam, 0-3% slope; Winston gravelly loam, 3-30% slope

DATA SOURCES / REFERENCES:
PSLC: LIDAR 2000-2010 SUPERMOSAIC, GRID CELL SIZE IS 6'.
WA STATE PLANE NORTH, NAD83(HARN) NAVD88, US SURVEY FEET.
CONTOURS CREATED FROM LIDAR.
SNOHOMISH CO. PARCELS, STREETS 2/17
NRCS: SOILS
LOCATIONS AND DISTANCES SHOWN ARE APPROXIMATE

N

0 500 1000
FEET

BLACK AND WHITE REPRODUCTION OF THIS COLOR ORIGINAL MAY REDUCE ITS EFFECTIVENESS AND LEAD TO INCORRECT INTERPRETATION

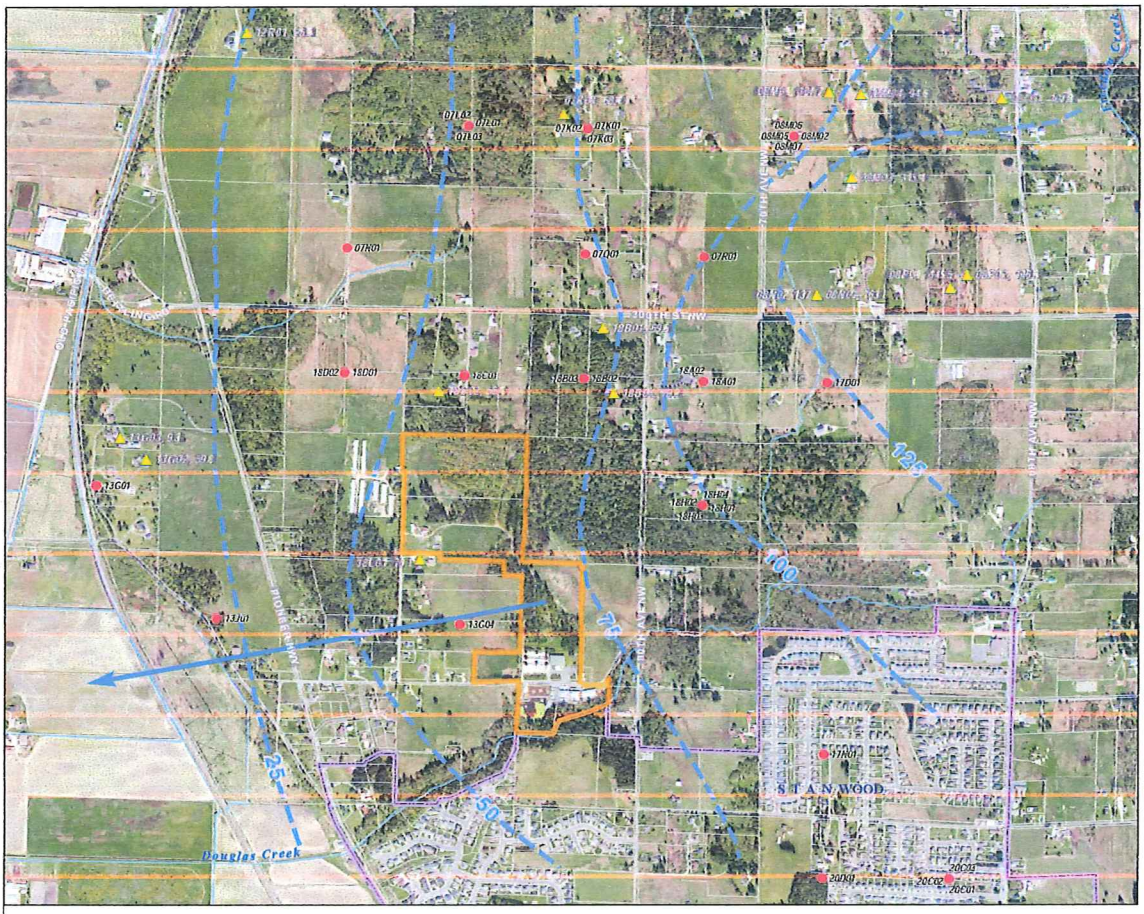
associated earth sciences incorporated

SOILS

SCHENK PACKING CO.
HYDROGEOLOGIC INVESTIGATION
SNOHOMISH COUNTY, WASHINGTON

PROJ NO.	DATE:	FIGURE:
170045H001	9/17	3

Document Path: G:\GIS_Projects\arx\2017\170045 Schenk Packing\mxd\170045H001 F4 Soil_Schenk.mxd



LEGEND:

- SCHENK PACKING CO. PROPERTY
- WELL LOCATED TO PARCEL, LABELED WITH GROUND WATER ELEVATION
- WELL LOCATED TO 1/4 TO 1/4 SECTION
- GROUND WATER ELEVATION CONTOUR
- GROUND WATER FLOW DIRECTION
- PARCEL
- CITY BOUNDARY

DATA SOURCES / REFERENCES:
SNOHOMISH CO: PARCELS, STREETS 2/17, PICTOMETRY INT. 2015 AERIAL

LOCATIONS AND DISTANCES SHOWN ARE APPROXIMATE

N

0 500 1000
FEET

BLACK AND WHITE REPRODUCTION OF THIS COLOR ORIGINAL MAY REDUCE ITS EFFECTIVENESS AND LEAD TO INCORRECT INTERPRETATION

associated earth sciences incorporated

GROUND WATER CONTOUR MAP

SCHENK PACKING CO.
HYDROGEOLOGIC INVESTIGATION
SNOHOMISH COUNTY, WASHINGTON

PROJ NO.	DATE:	FIGURE:
170045H001	9/17	5

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APPENDIX A
Water Well Reports

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

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. [redacted] 32/1/7K01

Water Right Permit No. _____

(1) OWNER: Name ROGER McCUTHEN Address 15820 297ST AVE SE, MONROE

(2) LOCATION OF WELL: County SNOHOMISH NW¼ SE¼ Sec. 7 T. 32 N., R. 6E W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) 304XX 81ST AVE. NW. STANWOOD, WA.

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

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

Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [X] Driven [ ] Reconditioned [ ] Rotary [ ] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 194 feet. Depth of completed well 194 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 188 ft.
Welded [X] Liner installed [ ] Threaded [ ] _____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes [ ] No [X]
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 [X] No [ ]
Manufacturer's Name JOHNSON FILTRATION
Type STAINLESS STEEL Model No. TEMPERED
Diam. 6 Slot size .018 from 188 ft. to 193 ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

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

Surface seal: Yes [X] No [ ] To what depth? 19 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name FLINT & WALLING
Type: SUBMERSIBLE H.P. 1

(8) WATER LEVELS: Land-surface elevation above mean sea level _____
Static level 163 ft. below top of well Date 12-29-92
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 [X] 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 12 gal./min. with 5 ft. drawdown after 1 hrs.
Airlift _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date 12-28-92
Temperature of water _____ Was a chemical analysis made? Yes [X] 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
BLACK TOP SOIL	0	1
TAN SILTY SAND, GRAVEL W/COBBLES	1	6
TAN CLAYEY SILT, SAND & GRAVEL, COBBLES W/ONE BOULDER.	6	15
GRAY CLAYEY SILT, SAND & GRAVEL W/COBBLES & BOULDERS	15	158
TAN SILTY SAND & GRAVEL	158	170
GRAY COARSE GRAVEL W/SOME SAND	170	193
GRAY CLAYEY SILT, SAND, & GRAVEL (TIGHT)	193	194

RECEIVED
JAN 06 1993
DEPT. OF ECOLOGY

Work started 11-30-92 19. Completed 12-28-92 19

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 WOLFE MECHANICAL SERVICES (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address P.O. BOX 7126 EVERETT, WA.
(Signed) Kim English (WELL DRILLER) License No. 1390
Contractor's Registration No. WOLFEMS121CR Date 1-4-92, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

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

32/4E/7 KOZ

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

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 072438

Water Right Permit No

(1) OWNER: Name Tim Buchanan Construction Address P O Box 1014 Mukilteo, WA 98275

(2) LOCATION OF WELL: County Snohomish NW ¼ SE ¼ Sec 7 T. 32 N., R 4 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) 82nd AVE Stanwood WA 98292

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

(4) TYPE OF WORK: Owner's number of well (if more than one) Well #1

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

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 175 feet. Depth of completed well 167 ft.

(6) CONSTRUCTION DETAILS:

Casing Installed: 6 " Diam. from 0 ft. to 167 ft.
Welded ☑ Liner installed ☐ Threaded ☐ " Diam. from ft. to ft.

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

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

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

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

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

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 150 ft. below top of well Date 9-20-90
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 14 ft. drawdown after hrs.
Airlift 12 GPM gal./min. with stem set at 164 ft. for 1 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
Top Soil	0	21
Blue Clay & Gravel	21	65
Sand Gravel	65	115
Brown Clay & Gravel	115	160
Water & Gravel	160	167
Blue Clay	167	175

OCT 09 ...
DEPT. OF ECOLOGY

Work started 9/19/90, 19. Completed 9/20/90, 19.

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

Address P O Box 422 Burlington, WA 98233

(Signed) Lee Dahlman (WELL DRILLER) License No. 0623

Contractor's Registration No. DAHLMPW123LC Date 9/21/90, 19.

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

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

32/4 -- 7 K03

Start Card No. 072439

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

WATER WELL REPORT

STATE OF WASHINGTON

Water Right Permit No. _____

(1) OWNER: Name Tim Buchanan Const. Address P O Box 1014 Mukilteo Wa. 98275

(2) LOCATION OF WELL: County Snohomish NW ¼ SE ¼ Sec. 7 T. 32 N., R. 4 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) 30512 - 82nd Ave Stanwood Wa. Lot 2 Has House

(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 178 feet. Depth of completed well 178 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 178 ft.
Welded ☑ _____" Diam. from _____ ft. to _____ ft.
Liner installed ☐
Threaded ☐ _____" Diam. from _____ ft. to _____ ft.

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

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

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

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

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

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 158 ft. below top of well Date 6-25-90
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 12' ft. drawdown after _____ hrs.
Airtest 15 GPM gal./min. with stem set at 173 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	20
Blue Clay & Gravel	20	70
Dirty Sand & Gravel	70	126
Brown Clay & Gravel	126	170
Water & Gravel	170	178
Clay		

RECEIVED
JUN 29 1990
DEPT. OF ECOLOGY

Work started 6-25 , 19 90 Completed 6-25- , 19 90

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) Sharlene Dahlman (WELL DRILLER) Licensee No. 0623

Contractor's Registration No. DAHLMPW123LC Date 6-25- , 1990

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. W090862
Water Right Permit No.

5782

(1) OWNER: Name KLINE, TONY & SOLIA Address 269 E RUSSELL RD CAMANO ISLAND, WA 98292-

(2) LOCATION OF WELL: County SNOHOMISH - NW 1/4 SE 1/4 Sec 7 T 32 N., R 4E WM
(2a) STREET ADDRESS OF WELL (or nearest address) 82ND STREET 32-4E-7 K04

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one) 1
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 179 ft. Depth of completed well 178.2 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from +2.5 ft. to 175.2 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

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

Screens: YES
Manufacturer's Name MAGNUSON
Type STAINLESS STEEL Model No.
Diam. 6 slot size 20 from 173.2 ft. to 178.2 ft.
Diam. slot size from ft. to ft.

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

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

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

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 165 ft. below top of well Date 06/02/97
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

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

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test 8 gal/min. 3 ft. drawdown after hrs.
Air test 10 gal/min. w/ stem set at 175 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? 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 in formation.

MATERIAL	FROM	TO
TOPSOIL	0	1
GRAY GRAVEL & CLAY	1	35
GRAY GRAVEL SAND & CLAY	35	63
GRAY CLAY	63	67
GRAY GRAVEL & CLAY	67	85
GRAY GRAVEL SILT & SAND	85	94
GRAY GRAVEL & SAND	94	165
GRAY GRAVEL SAND & WATER	165	

RECEIVED
JUN 19 1997
DEPT. OF ECOLOGY

Work started 06/02/97 Completed 06/02/97

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 HAYES DRILLING, INC.
(Person, firm, or corporation) (Type or print)

ADDRESS 5561 ERICKS RD. BOW, WA

[SIGNED] [signature] License No. 2189

Contractor's Registration No. HAYESDI106J5 Date 06/17/97

6012

32/E-52-C7 L01

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

WATER WELL REPORT
STATE OF WASHINGTON

Application No. 072143

Permit No. ....

(1) **OWNER:** Name Heidy O'Conner Address 30802 76th N W Stanwood Wa. 98292

(2) **LOCATION OF WELL:** County Snohomish — NE ¼ SW ¼ Sec. 7 T. 32 N. R. 4 W.M.

Bearing and distance from section or subdivision corner 30406 81st N W Stanwood Wa.

(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 200 ft.
Threaded ☐ ..... " Diam. from ..... ft. to ..... ft.
Welded ☑ ..... " Diam. from ..... ft. to ..... ft.

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

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

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

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

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

(8) **WATER LEVELS:** Land-surface elevation above mean sea level ..... ft.
Static level 167 ft. below top of well Date 5-16-90
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 120 gal./min. with 15 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	30
Blue Clay & Gravel	30	112
Dirty Sand & Gravel	112	138
Brown Sand & Gravel	138	182
Water & Gravel	182	192
Clearner Water & Gravel	192	200

RECEIVED
MAY 21 1990
DEPT OF ECOLOGY

Work started 5-16- 19 90 Completed 5-16- 19 90

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 P.O Box 422 Burlington Wa. 98233

[Signed] Ted Richeson
(Well Driller)

License No. 0623 Date 5-16- 19 90

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

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

32/04-7L02

Application No. .....

Permit No. .....

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

WATER WELL REPORT

STATE OF WASHINGTON

(1) OWNER: Name JAY KOCHLOIAN Address 8702 - 304 nw STANWOOD WA.

(2) LOCATION OF WELL: County Sno W½ NE¼ SW¼ Sec. 7 T. 32 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 134 ft. Depth of completed well 134 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: ..... " Diam. from ..... ft. to ..... 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 ☐ COOK
Manufacturer's Name .....
Type S.S. Model No. .....
Diam. 6 Slot size .10 from 129 ft. to 134 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 BURK
Type: Sub H.P. 3/4

(8) WATER LEVELS: Land-surface elevation above mean sea level ..... ft.
Static level 116 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: 10 gal./min. with 5 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
Top Soil	0	2
clay	2	48
Hardpan	48	65
Dry Sand	65	90
Hardpan lots of gravel	90	121
gravel - 5th water	121	
Drilled 134'		
water sand with gravel	121	134

RECEIVED
AUG 29 1983
DEPT. OF ECOLOGY

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 Hiff Well Drilling
(Person, firm, or corporation) (Type or print)

Address 2924 - 357th nw Stanwood Wa.

[Signed] Everett Hiff
(Well Driller)

License No. 187 Date 5-23, 19 83

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

32/04-07L03

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

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name Ray Kappel Address Everson Rt. 5 Lynden

(2) LOCATION OF WELL: County Sno. NE¼ SW¼ Sec. 7 T. 32 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 36 inches.
Drilled ..... ft. Depth of completed well 17 ft.

(6) CONSTRUCTION DETAILS: Concrete well tile
Casing installed: ..... " Diam. from ..... ft. to ..... 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: 3/8
Gravel placed from 10 ft. to 17 ft.

Surface seal: Yes ☒ No ☐ To what depth? 10 ft.
Material used in seal Concrete
Did any strata contain unusable water? Yes ☐ No ☑
Type of water? ..... Depth of strata. .....
Method of sealing strata off .....

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

(8) WATER LEVELS: Land-surface elevation above mean sea level ..... ft.
Static level 10 ft. below top of well Date 10-14-81
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

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

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

Time	Water Level	Time	Water Level	Time	Water Level

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

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

MATERIAL	FROM	TO
Top Soil	0	2
Clay	2	10
Gravel - Water	10	11
Sandstone	11	17

Work started 10-14 19 81 Completed 10-16 19 81

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 Adkins Well Drilling (Person, firm, or corporation) (Type or print)

Address 7306-83rd Ave NE. Marysville

[Signed] Neil Adkins (Well Driller)

License No. 0687 Date 10-16 19 81

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

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

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

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. 40846
32/4E/7 N D1
Water Right Permit No.

(1) OWNER: Name KENNEY NESSE Address P.O. Box 293 Stanwood, Wa 98292

(2) LOCATION OF WELL: County Snoh SW¼ SW¼ Sec. 7 T. 32 N. R. 4 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 8218 S. Lk. Rd. Stanwood, Wa. 98292

(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 152 feet. Depth of completed well 150 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: ____" Diam. from ____ ft. to ____ ft.
Welded ☑ 6 " Diam. from +2 ft. to 152 ft.
Liner installed ☐ ____" Diam. from ____ ft. to ____ ft.
Threaded ☐
Perforations: Yes ☐ No ☑
Type of perforator used
SIZE of perforations ____ in. by ____ in.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.
Screens: Yes ☐ No ☑
Manufacturer's Name Model No.
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 Bentonite & 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 Unknown
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ____ ft.
Static level 100 ft. below top of well Date 5/17/91
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.
Airlift 20 gal./min. with stem set at 118 ft. for 1 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
Top Soil	0	3
Hard Pan	3	18
Gray Clay	18	38
Gray Clay & Gravel	38	70
Coarse Gravel	70	95
Fine Gravel & Sand	95	138
Coarse Gravel	138	152

RECEIVED
MAY 23 1991
DEPT. OF ECOLOGY

Work started 5/16/ 19 91 Completed 5/17/ 19 91

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 Watkins Well Drilling Co. (TYPE OR PRINT)
(PERSON, FIRM, OR CORPORATION)
Address 557 N Sunset St. Camano I.
(Signed) Dan Watkins (WELL DRILLER) License No. 0516
Contractor's Registration No. Watkiwd139r2 Date 5/18/ 19 91

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

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

WATER WELL REPORT
STATE OF WASHINGTON

32/04-07-001 Application No. 32/04-07-001

Permit No. GI-22891P

(1) OWNER: Name Wallin, Rudy Address 30132 - 80th N.W. Stanwood 98292

(2) LOCATION OF WELL: County Snohomish SW ¼ SE ¼ Sec. 7 T. 32 N., R. 4 W.M.

Bearing and distance from section or subdivision corner 510.29' East and 100' N.

(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 206 ft. Depth of completed well 206 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 206 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 Cement
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

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

(8) WATER LEVELS: Land-surface elevation above mean sea level.... ft.
Static level 160 ft. below top of well Date 2-16-77
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?
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 4 ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

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

MATERIAL	FROM	TO
Topsoil	0	2
Blue Clay	2	130
Gravel	130	185
Blue Clay	185	198
Gravel	198	206
Clay & Gravel	206	

Work started 2-7-77 19 Completed 2-15-77 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 & DRILLING, INC.
(Person, firm, or corporation) (Type or print)
Address Burlington 98233

[Signed] R C Johnson
(Well Driller)

License No. 223-02-7387 Date 2-22-77, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

B. F. No. 7358—OS—(Rev. 4-71).

32/4/7R01

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

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. 014025

(1) OWNER: Name KEN BREWEL Address 7925 300th ST - STANWOOD

(2) LOCATION OF WELL: County SNO SE ¼ SE ¼ Sec. 7 T. 32 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) 3
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

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

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from +3 ft. to 295 ft.
Threaded ☐ ..." Diam. from ..... ft. to ..... ft.
Welded ☒ ..." Diam. from ..... ft. to ..... ft.

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

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

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

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

(7) PUMP: Manufacturer's Name BERKELEY
Type: SUB H.P. 1

(8) WATER LEVELS: Land-surface elevation above mean sea level ..... ft.
Static level 22.5 ft. below top of well Date 7-27-89
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
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 4 gal./min. with 290 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
TAN SANDY SOIL	0	1
TAN CLAY AND GRAVEL	1	4
BLUE HARD PAN	4	76
BLUE SAND & GRAVEL	76	175
TAN CLAY W/SAND & GRAVEL	175	230
BLUE HARD PAN	230	295
SAND & GRAVEL (BLUE) +WATER	295	301

Work started 7-24 19 89 Completed 7-27 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 CAMANO WELL DRILLING (Person, firm, or corporation) (Type or print)
Address PO Box 432 STANWOOD, WA.
[Signed] Jack Nunes (Well Driller)
License No. 0611 Date 8-3 , 19 89

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

File Original with Department of Ecology 116246
Second Copy Owner's Copy
Third Copy Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Notice of Intent W154019
UNIQUE WELL I.D # ABO811
Water Right Permit No

(1) OWNER Name WAYNE DOSCH Address 30704 68TH AVE NW STANWOOD, WA

(2) LOCATION OF WELL County SNOHOMISH NE 1/4 SW 1/4 Sec 08 T 32 N R 04E WM

(2a) STREET ADDRESS OF WELL (or nearest address) SAME 08LO1

TAX PARCEL NO 320408-003-001-00

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

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

(5) DIMENSIONS Diameter of well 6 inches
Drilled 205 feet Depth of completed well 203 ft

(6) CONSTRUCTION DETAILS
Casing Installed ☒ Welded ☐ Liner installed ☐ Threaded
6 Diam from +2 ft to 198 ft
Diam from ft to ft
Diam from ft to ft

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

Screens ☒ Yes ☐ No ☐ K Pac Location 197
Manufacturer's Name ALLOY
Type CONT WOUND Model No
Diam 5 Slot Size 010 from 197 ft to 203 ft
Diam Slot Size from ft to ft

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

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

(7) PUMP Manufacturer's Name GOULDS
Type 7GS07 412 HP 3/4

(8) WATER LEVELS Land surface elevation above mean sea level ft
Static level 165 ft below top of well Date 6/15/02
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
Yield gal/min with ft drawdown after hrs
Yield gal/min with ft drawdown after hrs
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal/min with ft drawdown after hrs
Airtest 7 gal/min with 20 ft drawdown after 1 hrs
Artesian flow gpm Date
Temperature of water Was a chemical analysis made? ☐ Yes ☒ No

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

MATERIAL	FROM	TO
TOP SOIL	0	2
PEAT SOIL	2	6
CLAY/GRAVEL	6	75
CLAY	75	162
CLAY/GRAVEL LWET	162	187
SAND/GRAVEL WATER	187	203

RECEIVED
JUL 18 2002
DEPT OF ECOLOGY

Work Started 6/7/02 Completed 6/15/02

WELL CONSTRUCTION CERTIFICATION

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

Type or Print Name License No
(Licensed Driller/Engineer)

Trainee Name License No
Drilling Company HANKS WELL DRILLING
(Signed) Sheldon Hanks License No 1180
(Licensed Driller/Engineer)
Address 2127-120TH PL S.E. EVERETT WA

Contractors Registration No HANKSWD134PB Date 6/19/02

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer For special accommodation needs contact the Water Resources Program at (360) 407 6800 The TDD number is (360) 407 6006

ECY 050 1 20 (11/98)

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

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

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

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. W102186
UNIQUE WELL I.D. # AEG 345
Water Right Permit No. 32-4E-8M01

(1) OWNER: Name Allen Federspiel Address 7821 NE 124TH ST. Kirkland WA

(2) LOCATION OF WELL: County Snohomish NW 1/4 SW 1/4 Sec 8 T. 32 N, R 4 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 4K 76TH ST Stanwood WA

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

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

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 160 feet. Depth of completed well 159 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6" Diam. from +1½ ft. to _____ ft.
Welded ☐ Liner Installed ☐ Threaded ☐ _____" Diam. from _____ ft. to _____ ft.
_____" Diam. from _____ ft. to _____ ft.

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

Screens: Yes ☐ No ☒
Manufacturer's Name _____ Model No. _____
Type _____
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 Goulds
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 151 ft. below top of well Date 4 MAY 99
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 18+ gal./min. with stem set at 158 ft. for 1 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	0	2
Tan Clay + Gravel	2	14
Grey Clay + Gravel	14	30
Tan Clay + Gravel	30	35
Grey Clay + Gravel	35	86
Gravel	86	92
Grey Sand	92	96
Gravel + Sand	96	100
Grey Sand	100	110
Grey Sand + Gravel	110	112
Grey Sand	112	125
Grey Sand + Gravel	125	128
Grey Sand	128	139
Gravel	139	159
Grey Clay	159	

RECEIVED
MAY 18 1999
DEPT OF ECOLOGY

Work Started 30 APRIL 99 19. Completed 4 MAY 99 19

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 AFFORDABLE WATER SYSTEMS (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 14021 Bradshaw Rd Mt Vernon

(Signed) _____ (WELL DRILLER) License No. 1617

Contractor's Registration No. AFFORWS101RJ Date 18 MAY 99 19

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (8/93)

32/4-8 M02
Start Card No. 072330

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

WATER WELL REPORT

STATE OF WASHINGTON

Water Right Permit No. _____

(1) OWNER: Name Gale McWilliam Address 31607 26th AVE NW STWD

(2) LOCATION OF WELL: County Snohomish NW ¼ SW ¼ Sec. 8 T. 32 N., R. 4 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 31609- 26th AVE NW STWD

(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 180 feet. Depth of completed well 180 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6 " Diam. from 0 ft. to 175 ft.
Welded ☑ Liner installed ☐ Threaded ☐ _____ " Diam. from _____ ft. to _____ ft.
_____ " 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 Look
Type Cont. slot Model No. _____
Diam. 6 Slot size 30 from 175 ft. to 180 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 Stg. etc
Type: Sub. H.P. 1

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 142 ft. below top of well Date 2-8-90
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 30 gal./min. with stem set at 180 ft. for 1 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
Top soil	0	2
Brown clay & gravel	2	8
Hardpan	8	27
clay & gravel	27	43
Hard clay & gravel	43	70
clay	70	76
Gravel & sand	76	180

RECEIVED
FEB 29 1990
DEPT. OF ECOLOGY

Work started 2-7 19 Completed 2-8 19 90

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 Anderson Drilling Co (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 7412-204th NE Ael
(Signed) _____ (WELL DRILLER) License No. 1367
Contractor's Registration No. [illegible] Date March 30, 19 90

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

ENTERED

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. W117614
Water Right Permit No. AER 687

7947

(1) OWNER: Name HOPPAW, JAMES Address 30513 76TH AVE NW STANWOOD, WA 98292-

(2) LOCATION OF WELL: County SNOHOMISH - NW 1/4 SW 1/4 Sec 8 T 32 N., R 4E WM
(2a) STREET ADDRESS OF WELL (or nearest address) 30401 76TH AVE NW

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one) 2
NEW WELL Method: ROTARY '00 JAN 11

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 180.5 ft. Depth of completed well 180.5 ft.

DEPT OF ECOLOGY
CASHIERING

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from +2 ft. to 176.5 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

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

Screens: YES
Manufacturer's Name COOK
Type STAINLESS STEEL Model No.
Diam. 6 slot size 18 from 175.5 ft. to 180.5 ft.
Diam. slot size from ft. to ft.

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

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

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

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 114 ft. below top of well Date 12/20/99
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

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

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test 15 gal/min. 2 ft. drawdown after 1 hrs.
Air test gal/min. w/ stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG 32-4E-8M 03

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

MATERIAL	FROM	TO
TOPSOIL	0	3
BROWN GRAVEL & SAND	3	5
BROWN GRAVEL SILT & SAND	5	22
GRAY SAND & GRAVEL	22	27
GRAY GRAVEL SAND & SILT	27	65
GRAY GRAVEL & SAND	65	80
BROWN SAND & GRAVEL	80	85
GRAY GRAVEL & CLAY & SILT	85	100
GRAY SAND	100	110
GRAY SAND & GRAVEL	110	125
GRAY SAND	125	143
GRAY CLAY & SILT	143	146
GRAY GRAVEL SAND & SILT	146	158
GRAY SAND GRAVEL & WATER	158	

RECEIVED
JAN 13 2000
DEPARTMENT OF ECOLOGY

Work started 12/17/99 Completed 12/20/99

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 HAYES DRILLING, INC.
(Person, firm, or corporation) (Type or print)

ADDRESS 5696 ERSHIG RD. BOW, WA

[SIGNED] Ryan Williams License No. 2190

Contractor's
Registration No. HAYESDI106J5 Date 01/06/00

6936

ENTERED

WATER WELL REPORT
STATE OF WASHINGTON

5488

Start Card No. W072341
Water Right Permit No.

(1) OWNER: Name CARSON, LAURA Address 30529 76TH AVE NW STANWOOD, WA 98292-

(2) LOCATION OF WELL: County SNOHOMISH - NW 1/4 SW 1/4 Sec 8 T 32 N., R 4E WM
(2a) STREET ADDRESS OF WELL (or nearest address) 76TH AVE NW

32-4E-8 M04

(3) PROPOSED USE: DOMESTIC

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

(5) DIMENSIONS: Drilled 258 ft. Diameter of well 6 inches Depth of completed well 257 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from +2.5 ft. to 254 ft. WELDED
" Dia. from ft. to ft.
" Dia. from ft. to ft.

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

Screens: YES Manufacturer's Name NAGAOKA
Type STAINLESS STEEL Model No.
Diam. 6 slot size 15 from 252 ft. to 257 ft.
Diam. slot size from ft. to ft.

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

Surface seal: YES To what depth? 19 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off

(7) PUMP: Manufacturer's Name FLINT & WALLING
Type SUBMERSIBLE H.P. 1.5

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 164 ft. below top of well Date 11/06/96
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? YES If yes, by whom? JERRY BACUS
Yield: 15 gal./min with 35.4 ft. drawdown after 3 hrs.

Recovery data
Time | Water Level | Time | Water Level | Time | Water Level

Date of test
Bailer test 18 gal/min. 4 ft. drawdown after 1 hrs.
Air test gal/min. w/ stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? YES

(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 in formation.

MATERIAL	FROM	TO
BROWN SILT CLAY SAND & GRAVEL	0	19
GRAY SILT GRAVEL & CLAY	19	51
GRAY CLAY & GRAVEL	51	141
GRAY SAND & GRAVEL	141	146
GRAY GRAVEL & SAND	146	155
GREEN BOULDER	155	156
GRAY GRAVEL SILT & SAND	156	249
GRAY SAND GRAVEL & WATER	249	258
GRAY CLAY & SAND	258	

RECEIVED
NOV 12 1996
DEPT. OF ECOLOGY

Work started 10/24/96 Completed 10/28/96

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 HAYES DRILLING, INC. (Person, firm, or corporation) (Type or print)

ADDRESS 556 ERSHIG RD. BOW, WA

[SIGNED] Roy E Smith Jr. License No. 2204

Contractor's Registration No. HAYESDI106J5 Date 11/07/96

5689

32/4E/8 M05

Start Card No. 072315

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

WATER WELL REPORT

STATE OF WASHINGTON

Water Right Permit No.

(1) OWNER: Name Omni Construction Address 11112 - 77th AVE NE

(2) LOCATION OF WELL: County Snohomish NW¼ SW¼ Sec 8 T. 32 N., R 4 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) 31013 - 76th AVE NW STWD

(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 60 feet. Depth of completed well 60 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6 " Diam. from 0 ft. to 60 ft.
Welded ☑
Liner installed ☐
Threaded ☐
" Diam. from ft. to ft.
" 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 Sta-Rite
Type: Submersible H.P. 1/2

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 16 ft. below top of well Date 8-6-90
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.
Airlest 20 gal./min. with stem set at 60 ft. for 1.5 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
Top Soil	0	2
Brown clay & gravel	2	16
Gray clay & gravel	16	37
Gravel	37	60

SEP 27 1990
DEPT. OF ECOLOGY

Work started 8-6 19 Completed 8-6 19 90

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 Anderson Drilling Co. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 741-204th NE Ag

(Signed) (WELL DRILLER) License No. 1367

Contractor's Registration No. Anderdc 13704 Date 8-6 19 90

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 060-1-20 (10/87) -1329-

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

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

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No 074260

Water Right Permit No. 08M06

(1) OWNER: Name Omni Construction Address 11122 99th AVE Ael

(2) LOCATION OF WELL: County Snohomish NW¼ SW¼ Sec 8 T 32 N., R 4 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) 31013 - 76th AVE NW STWO

(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 62 feet. Depth of completed well 62 ft.

(6) CONSTRUCTION DETAILS:

Casing Installed: 6 " Diam. from 0 ft. to 58 ft. Welded ☑ Liner Installed ☐ Threaded ☐

" Diam. from ____ ft. to ____ ft.

" 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 Sta-Rite

Type: Submersible H.P. 1/2

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

Static level 31 ft. below top of well Date 8-6-90

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.

Airlest 20 gal./min. with stem set at 60 ft. for 2 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
Top soil	0	2
Brown clay & gravel	2	17
Gray clay & gravel	17	27
Brown clay & gravel	27	38
Gravel w/clay	38	62
Fairly clean gravel	58	62

DEC 3

DEPT. OF ECOLOGY

Work started 9-6 19 Completed 8-6 19 90

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 Anderson Drilling Co. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 740 - 204th NE Ael

(Signed) [signature] (WELL DRILLER) License No. 1367

Contractor's Registration No Anderdc 13204 Date Sept 30, 19 80

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

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

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. [redacted]
32/4/Bm07
Water Right Permit No.

(1) OWNER: Name William Robinson Address 20427 76th Ave NW Stanwood, Wa

(2) LOCATION OF WELL: County Sno. NW ¼ SW ¼ Sec 08 T 32 N., R 04 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) Same

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

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

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 154 feet. Depth of completed well 154 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 146 ft.
Welded ☑ Liner installed ☐ Threaded ☐ " Diam. from ft. to ft. " 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 Lane
Type S. Steel Model No.
Diam. 6 Slot size 14 from 146 ft. to 154 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 Bent. 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 Gould
Type: Sub. H.P. 1

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 137 ft. below top of well Date 10-12-92
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: 16 gal./min. with 3 ft. drawdown after 4 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 16 gal./min. with 3 ft. drawdown after 1 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
Top-soil	0	2
Br. hard-pan	2	20
gray hard-pan	20	104
dry sand & gravel	104	146
water bearing sand-gravel	146	154

RECEIVED
NOV 16 1992
DEPT. OF ECOLOGY

Work started 10-27-92 Completed 11-13 19 92

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

NAME Watkins Well Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 456 N. Sunset Dr. Camano Isl. Wa.
(Signed) Steve Watt (WELL DRILLER) License No. 0186
Contractor's Registration No. WATKIWW124D3 Date 11-13 19 92

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 101087
Unique Well I.D. # AAE434
Water Right Permit No.

32-4-8N 01

(1) OWNER: Name FOX, DEL Address 300TH AVE STANWOOD, WA

(2) LOCATION OF WELL: County SNOHOMISH - SW 1/4 SW 1/4 Sec 8 T 32 N., R 4E WM

(2a) STREET ADDRESS OF WELL (or nearest address) SAME, STANWOOD

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one) 1
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 80 ft. Depth of completed well 80 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from 0 ft. to 80 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

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

Screens: NO
Manufacturer's Name
Type Model No.
Dian. slot size from ft. to ft.
Dian. slot size from ft. to ft.

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

Surface seal: YES To what depth? 18+ ft.
Material used in seal BENTONITE
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off PRESSURE GROUT

(7) PUMP: Manufacturer's Name AERMOTOR T8-50
Type SUBMERSIBLE H.P. 3/4

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static Level 58 ft. below top of well Date 09/14/98
Artesian Pressure lbs. per square inch Date
Artesian water controlled by CAP

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

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 4.5 gal/min. w/ stem set at 78 ft. for 2 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? YES

(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 in formation.

MATERIAL	FROM	TO
BROWN SAND COBBLES	0	4
BROWN CLAY SAND&GRAVEL	4	18
GRAY CLAY SAND&GRAVEL	18	76
GRAY CLAY SAND&GRAVEL WATER	76	80

RECEIVED
OCT 8 1998
NWRO-WR
DEPT OF ECOLOGY

Work started 09/14/98 Completed 09/14/98

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 DYNATRAX INC.
(Person, firm, or corporation) (Type or print)

ADDRESS 211 COLONY RD. 726-4724

[SIGNED] License No. 1938

Contractor's Registration No. DYNATI*077LS Date 09/14/98

WATER WELL REPORT

08N02

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

Construction/Decommission ("x" in circle)

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

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

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

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

DIMENSIONS: Diameter of well 6 inches, drilled 150 ft. Depth of completed well 150 ft.

CONSTRUCTION DETAILS

Casing installed: ☒ Welded 6 " Diam. from 0 ft. to 140 ft. ☐ Liner installed _____ " Diam. from _____ ft. to _____ ft. ☐ Threaded _____ " Diam. From _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☒ Yes ☐ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type STAINLESS STEEL Model No. _____

Diam. 6 Slot size #20 from 140 ft. to 145 ft.

Diam. 6 Slot size #15 from 145 ft. to 150 ft.

Gravel/Filter packed: ☐ Yes ☒ No Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18 ft.

Material used in seal BENTONITE

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 84 ft. below top of well Date 6/8/2016

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☐ No If yes, by whom? _____

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

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

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer Test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 40 gal./min. with stem set at 139 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date _____

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

CURRENT

Notice of Intent No. WE24087

Unique Ecology Well ID Tag No. BJS 638

Water Right Permit No. _____

Property Owner Name DEL FOX

Well Street Address 7305 N 300TH ST NW

City STANWOOD **County** SNOHOMISH

Location SW 1/4-1/4 SW 1/4 Sec 8 Twn 32 R 4 ☒ EWM ☐ WWM Check One

(s, t, r Still REQUIRED)

Lat/Long Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. (Required) 32040800301100

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
BROWN SAND SILT AND GRAVEL	0	3
GRAVEL AND BROWN SAND	3	7
BROWN CLAY SAND AND GRAVEL	7	35
GREY CLAY SAND AND GRAVEL	3	78
GREY SAND AND WATER	78	83
GREY CLAY SAND AND GRAVEL	83	99
GRAVEL SAND AND WATER	99	103
GREY CLAY SAND AND GRAVEL	103	135
GREY SAND GRAVEL AND WATER	135	150
GREY CLAY	150	152

JUL 18 2016

DEPT OF ECOLOGY
NWRO - WR

Start Date 6/7/2016 Completed Date 6/8/2016

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

☒ Driller ☐ Engineer ☐ Trainee Name (Print) RALPH RIGGLES

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2043

IF TRAINEE: Driller's License No: _____

Driller's Signature: _____

Drilling Company DAHLMAN PUMP & WELL DRILLING INC

Address P O BOX 422

City, State, Zip BURLINGTON , WA , 98233

Contractor's Registration No. DAHLMPW123LC Date 6/8/2016

ECY 050-1-20 (Rev 4/07)

Ecology is an Equal Opportunity Employer

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

08 P01

WATER WELL REPORT

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

STATE OF WASHINGTON ECOLOGY

Construction/Decommission ("x" in circle)

- (x) Construction
- ( ) Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. W 258110

Unique Ecology Well ID Tag No. BZY 580

Water Right Permit No. _____

Property Owner Name Russell Bartlett

Well Street Address 6925 300th St. N.W.

City Stanwood County Snohomish

Location SE 1/4-1/4 SW 1/4 Sec 8 Twn 31N R 4E (WM or WWM) circle one

Lat/Long (s, t, r Still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. P204 080080150 0

PROPOSED USE: [ ] DeWater [x] Domestic [ ] Irrigation [ ] Industrial [ ] Test Well [ ] Municipal [ ] Other _____

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

[x] New well [ ] Reconditioned [ ] Deepened — *Method:* [ ] Dug [ ] Bored [ ] Driven [x] Cable [ ] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 124 ft. Depth of completed well 124 ft.

CONSTRUCTION DETAILS

Casing Installed: [x] Welded 6 " Diam. from +2 ft. to 116 ft. [ ] Liner installed _____ " Diam. from _____ ft. to _____ ft. [ ] Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: [ ] Yes [x] No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: [x] Yes [ ] No [ ] K-Pac Location 114

Manufacturer's Name Alloy

Type S. Steel Model No. _____

Diam. 4" Slot size 10 from 114 ft. to 119 ft.

Diam. 4" Slot size 12 from 119 ft. to 124 ft.

Gravel/Filter packed: [ ] Yes [x] No [ ] Size of gravel/sand _____ Materials placed from _____ ft. to _____ ft.

Surface Seal: [x] Yes [ ] No To what depth? 18 ft.

Material used in seal Bentonite

Did any strata contain unusable water? [ ] Yes [x] No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name Gould's H.P. 1½

Type: SUB

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 81 ft. below top of well Date 9-12-16

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? [x] Yes [ ] No If yes, by whom? Gene's

Yield: 15 gal/min. with 60 ft. drawdown after 2 hrs.

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

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

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? [x] Yes [ ] No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Top soil	0	2
Glacial Till	2	88
Green clay	88	107
water Fine sand	107	116
water Corse sand	116	124

RECEIVED
SEP 21 2016
DEPT OF ECOLOGY
NWRO - WR

Start Date 9-1-16 Completed Date 9-8-16

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

[x] Driller [ ] Engineer [ ] Trainee Name (Print) Gene Hitt

Driller/Engineer/Trainee Signature Gene Hitt

Driller or trainee License No. 0186

IF TRAINEE, Driller's Licensed No. _____ Driller's Signature _____

Drilling Company Gene's Well Drilling

Address 5115 268th St. N.W.

City, State, Zip Stanwood, WA 98292

Contractor's Registration No. GENESWD852JM Date 9-15-16

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05)

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

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

32/4E/8F'92 W-35491
Start Card No.

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

WATER WELL REPORT

STATE OF WASHINGTON

UNIQUE WELL I.D. #

Water Right Permit No.

(1) OWNER: Name SCOTT TRACY Address 6933 300TH ST. NW STANWOOD

(2) LOCATION OF WELL: County SNOHOMISH SE ¼ SW ¼ Sec. 8 T. 32 N., R. 04 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 6933 300TH ST. NW. STANWOOD WA.

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

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

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

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +2 ft. to 120 ft.
Welded [X] Liner installed [ ] Threaded [ ] " Diam. from ft. to ft.
" Diam. from ft. to ft.

Perforations: Yes [ ] No [X]
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 [X] No [ ] Manufacturer's Name SMITH
Type STAINLESS Model No.
Diam 6 Slot size .010 from 115 ft. to 120 ft.
Diam Slot size from ft. to ft.

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

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes [ ] No [X]
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 82 ft. below top of well Date 11-19-93
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] 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.
Airlift 20 gal./min. with stem set at 115 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [ ] No [X]

(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
CLAY & GRAVEL - BRN	0	8
CLAY & GRAVEL - GREY	8	110
SAND & HARD - GREENISH GREY	110	120

RECEIVED
NOV 29 1993
DEPT. OF ECOLOGY

Work started 11-18 19 Completed 11-19 19 93

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 ARLINGTON WELL DRILLING (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 2740 53 AVE NE. ARL.
(Signed) (WELL DRILLER) License No. 1668
Contractor's Registration No. ARLINWD116CF Date 11-22 19 93

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

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

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

S2 S2 12N
12R01

1576663 Please print, sign and return to the Department of Ecology

Water Well Report

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

Construction/Decommission

☑ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* WE 02751

Current Notice of Intent No. WE 02751
Unique Ecology Well ID Tag No. ALA 109
Water Right Permit No.
Property Owner Name Karl Hedeen
Well Street Address xxx Pioneer Hwy
City Stanwood County Snohomish
Location SE 1/4-1/4 SE 1/4 Sec 12 Twn 32 R 3 EWM or WWM ☑ cic ☐ nic
Lat/Long (s, t, r Still REQUIRED) Lat Deg Lat Min/Sec Long Deg Long Min/Sec
Tax Parcel No. 320312-001-006-00

PROPOSED USE: ☐ DeWater ☑ Domestic ☐ Irrigation ☐ Industrial ☐ Test Well ☐ Municipal ☐ Other

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

DIMENSIONS: Diameter of well 6 inches, drilled 153 ft.
Depth of completed well 153 ft.

CONSTRUCTION DETAILS
Casing Installed: ☑ Welded 6 " Diam. from 0 ft. to 148 ft.
☐ Liner installed " Diam. from ft. to ft.
☐ Threaded " Diam. from ft. to ft.

Perforations: ☐ Yes ☑ No
Type of perforator used
SIZE of perfs in. by in. and no. of perfs from ft. to ft.

Screens: ☑ Yes ☐ No ☐ K-Pac Location
Manufacturer's Name
Type stainless steel Model No. telescope
Diam. 6 Slot size 10 from 148 ft. to 153 ft.
Diam. Slot size from ft. to ft.

Gravel/Filter packed: ☐ Yes ☑ No ☐ Size of gravel/sand
Materials packed 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

PUMP: Manufacturer's Name HP
Type:

WATER LEVELS: Land-surface elevation above mean sea level ft
Static level 96 ft. below top of well Date 9/29/04
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs
Airtest 17 gal./min. with stem set a 146 ft. for 1 hrs
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMISSION PROCEDURE

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

MATERIAL	FROM	TO
Topsoil & clay	0	.5
Brown clay & gravel	.5	3
Hard brown clay	3	20
Brown clay sand & gravel	20	41
Brown silty sand & gravel	41	52
Brown clay gravel & sand	52	63
Gray clay sand & gravel	63	96
Brown sand & some gravel	96	105
Gray sand trace of water	105	116
Gray clay	116	120
Fine gray sand	120	123
Gray silty clay	123	134
Sand & water (5gpm)	134	137
Brown clay	137	144
Sand & water	144	153
Brown clay	153	156

RECEIVED
OCT 0 5 2004
DEPT OF ECOLOGY

Start Date 9/29/04 Completed Date 9/29/04

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

Driller/Engineer/Trainee Name (Print) Ralph Riggles
Driller/Engineer/Trainee Signature
Driller or trainee License No. 2043

Drilling Company Dahlman Pump & Well Drilling, Inc.
Address P. O. Box 422 800 277-4898
City, State, Zip Burlington, WA 98233
Contractor's Registration No. DAHLMPW123LC Date 9/30/04

IF TRAINEE,
Driller's Licensed No.
Driller's Signature

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

32/03-13 G01

Blast Card No. 624

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

WATER WELL REPORT

STATE OF WASHINGTON

Water Right Permit No.

(1) OWNER: Name Dave Phillips Address 9721 292nd St NW Stanwood, Wa.

(2) LOCATION OF WELL: County SNO SW ¼ NE ¼ Sec. 13 T. 32 N., R. 5 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) Same as above 292nd St.

(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 ____ feet. Depth of completed well ____ ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 110 ft. Welded ☑ Threaded ☐ Liner installed ☐
" Diam. from ____ ft. to ____ ft.
" 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 Model No. ____
Type Stainless Diam. 6 Slot size .7 from ____ ft. to ____ ft.
Diam. ____ Slot size ____ from ____ ft. to ____ ft.
Gravel packed: Yes ☐ No ☐ Size of gravel ____
Gravel placed from ____ ft. to ____ ft.
Surface seal: Yes ☑ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☑
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

(7) PUMP: Manufacturer's Name [illegible] F&W H.P. 3/4
Type: Sub

(8) WATER LEVELS: Land-surface elevation above mean sea level ____ ft.
Static level 49 ft. below top of well Date 7/15/88
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? ____
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 4 gal./min. with 82 ft. drawdown after 2 hrs.
Airlest ____ 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
Gravel & Boulders	0	12
Hard Pan	12	63
Sandy Clay	63	87
Sand	87	90
Clay	90	102
Sand (Heaving)	102	110
Clay	110	

Work started 7/28/88 19. Completed 8/15/ 19 88

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.
AUG 16 1988

NAME Watkins Well Drilling Co. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 552 N Sunset Dr. Camano Is.
(Signed) Ken Watkins (WELL DRILLER) License No. 0516
Contractor's Registration No. WATKIWD131P2 Date 8/16/ 19 88

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1529-

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

32-3E-13 6-02

Please print, sign and return to the Department of Ecology

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission 179528

☑ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* WE 04049

Current Notice of Intent No. WE 04049

Unique Ecology Well ID Tag No. AKK 032

Water Right Permit No.

Property Owner Name DON RICHARDS

Well Street Address 29201 LOGEN ROAD

City STANWOOD **County** SNOHOMISH

Location SW 1/4-1/4 NE 1/4 Sec 13 Twn 32 R 3 EWM ☑ or WWM ☐ circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

Tax Parcel No. 320313.001.019.00

PROPOSED USE: ☐ DoWater ☑ Domestic ☐ Irrigation ☐ Industrial ☐ Test Well ☐ Municipal ☐ Other

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

☑ New well ☐ Reconditioned ☐ Deepened

Method: ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☑ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 83 ft.

Depth of completed well 83 ft.

CONSTRUCTION DETAILS

Casing Installed: ☑ Welded 6" Diam. from 0 ft. to 78 ft.

☐ Liner installed ____" Diam. from ____ ft. to ____ ft.

☐ Threaded ____" Diam. from ____ ft. to ____ ft.

Perforations: ☐ Yes ☑ No

Type of perforator used

SIZE of perfs ____ in. by ____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: ☑ Yes ☐ No ☐ K-Pac Location

Manufacturer's Name

Type STAINLESS STEEL Model No. TELESCOPE

Diam. 6 Slot size 10 from 78 ft. to 83 ft.

Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Gravel/Filter packed: ☐ Yes ☑ No ☐ Size of gravel/sand

Materials placed from ____ ft. to ____ ft.

Surface Seal: ☑ Yes ☐ No To what depth? 18 ft.

Material used in seal BENTONITE

Did any strata contain unusable water? ☐ Yes ☐ No

Type of water? ____ Depth of strata ____

Method of sealing strata off

PUMP: Manufacturer's Name ____ H.P. ____

Type

WATER LEVELS: Land-surface elevation above mean sea level ____ ft.

Static level 48.5 ft. below top of well Date 8/25/05

Artesian pressure ____ lbs. per square inch Date ____

Artesian water is controlled by ____ (cap, valve, etc)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☐ No If yes, by whom?

Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.

Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.

Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.

Airtest 20 gal./min. with stem set at 76 ft. for 1 hrs.

Artesian flow ____ g.p.m. Date ____

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

CONSTRUCTION OR DECOMMISSION PROCEDURE

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

MATERIAL	FROM	TO
TOPSOIL & GRAVEL	0	1
BROWN CLAY & GRAVEL	0	9
BROWN SILTY SAND & GRAVEL	9	33
BROWN SAND & SOME GRAVEL	33	65
GRAY CLAY	65	72
BROWN SILTY SAND	72	76
FINE BROWN SAND & WATER	76	83
GRAY SILTY CLAY	83	

RECEIVED

SEP 9 1 2005

DEPT OF ECOLOGY

Start Date 8/25/05 Completed Date 8/25/05

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

Driller/Engineer/Trainee Name (Print) RALPH RIGGLES

Driller/Engineer/Trainee Signature

Driller or trainee License No. 2043

If TRAINEE,

Driller's Licensed No.

Driller's Signature

Drilling Company DAHLMAN PUMP & WELL DRILLING, INC

Address P. O. BOX 422 800.277.4898

City, State, Zip BURLINGTON, WA. 98233

Contractor's Registration No. DAHLMPW123LC Date 8/26/05

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

ENTERED

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

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. W16722

UNIQUE WELL I.D. #

Water Right Permit No. 32/3E/13-603

(1) OWNER: Name GILBERT GRORY Address 3717 88th St. NE MARYSVILLE

(2) LOCATION OF WELL: County SNO SW 1/4 NE 1/4 Sec. 13 T. 32 N.R. 3 E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 29299 LOGAN Rd. STANWOOD

(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 245 feet. Depth of completed well 245 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6" Diam. from +2 ft. to 230 ft.
Welded ☐ Liner installed ☐ Threaded ☐ ____" Diam. from ____ ft. to ____ ft.
____" 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 SMITH
Type SS Model No. ____
Diam. 5 5/8 Slot size 14 from 230 ft. to 240 ft.
Diam. 5 5/8 Slot size 12 from 240 ft. to 245 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 above mean sea level ____
Static level 110 ft. below top of well Date 6-14-95
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.
Airlift 50 gal./min. with stem set at 230 ft. for 1 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
TOPSOIL	0	2
TAN SAND & GRAVEL	2	4
TAN HARD PAN	4	14
SAND & GRAVEL	14	40
GRAVEL	40	76
SAND & GRAVEL	76	101
TAN CLAY	101	109
SAND, GRAVEL W/WATER	109	122
GREY CLAY	122	132
SAND W/WATER & WOOD	132	143
GREY CLAY	143	178
GREY SANDY CLAY	178	198
GREY CLAY	198	225
SAND W/WATER	225	245

RECEIVED
JUN 20 1995
DEPT. OF ECOLOGY

Work Started 6-13 95 19 Completed 6-14 1995

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 CAMANO WELL DRILLING (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address PO BOX 432 - STANWOOD, WA

(Signed) ____ (WELL DRILLER) License No. 0611

Contractor's Registration No. CAMANWD146L2 Date 6-17 1995

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

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

11576 2

32-4E-18 13604

WATER WELL REPORT

STATE OF WASHINGTON

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

Notice of Intent W 147471
UNIQUE WELL ID # AGL 164
Water Right Permit No

(1) OWNER Name Don Richards Address 29201 Logen Road, Stanwood, WA 98292

(2) LOCATION OF WELL County Snohomish NE 1/4 SW 1/4 Sec 18 T 32 N R 4E WM

(2a) STREET ADDRESS OF WELL (or nearest address) Logen Road, Stanwood

TAX PARCEL NO 320313-001-019-00

(3) PROPOSED USE [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

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

(5) DIMENSIONS Diameter of well 6 inches
Drilled 223 feet Depth of completed well 223 ft

(6) CONSTRUCTION DETAILS
Casing Installed
[X] Welded 6 Diam from 0 ft to 216 ft
[ ] Liner installed Diam from ft to ft
[ ] Threaded Diam from ft to ft

Perforations [ ] Yes [X] 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 [X] Yes [ ] No [ ] K Pac Location
Manufacturer's Name 2 riser on top
Type stainless steel Model No telescope
Diam 6 Slot size 10 from 218 ft to 223 ft
Diam Slot size from ft to ft

Gravel/Filter packed [ ] Yes [X] No [ ] Size of gravel/sand
Material placed from ft to ft

Surface seal [X] Yes [ ] No To what depth? 18 ft
Material used in seal bentonite
Did any strata contain unusable water? [ ] Yes [X] 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 102 ft below top of well Date 6/20/2002
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
Yield gal/min with ft drawdown after hrs
Yield gal/min with ft drawdown after hrs

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal/min with ft drawdown after hrs
Airtest 30 gal/min with stem set at 215 ft for 1 hrs
Artesian flow g p m Date
Temperature of water Was a chemical analyses made? [ ] Yes [ ] No

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

MATERIAL	FROM	TO
Brown clay & some gravel	0	9
Brown clay	9	21
Gravel sand & brown silt	21	74
Brown sand & some gravel	74	110
Gray clay & sand	110	114
Sand & water	114	117
Brown clay & sand	117	130
Gray clay	130	148
Brown clay & sand	148	157
Brown sand & water	157	160
Brown clay & sand	160	175
Gray silty clay & sand	175	195
Fine sand water & wood	195	206
Brown gray clay	206	215
Sand & water	215	223
Gray clay	223	

RECEIVED
JUL 09 2002
DEPT OF ECOLOGY

Work Started 6/20/2002 19 Completed 6/21/2002 19

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

Type or Print Name Ralph Riggles License No 2043
(Licensed Driller/Engineer)
Trainee Name License No
Drilling Company Dahlman Pump & Well Drilling Inc
(Signed) (Licensed Driller/Engineer) License No
Address P. O Box 422, Burlington, WA 98233
Contractor's Registration No DAHLMPW123LC Date 6/21/02 19

(USE ADDITIONAL SHEETS IF NECESSARY)

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

6952

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. WL14401

No. AER053

(1) OWNER: Name GANDER,KATHLEEN Address 5208 45TH AVE SW SEATTLE, WA 98136-

(2) LOCATION OF WELL: County ISLAND - NE 1/4 SE 1/4 Sec 13 T 32 N., R 3E WM

(2a) STREET ADDRESS OF WELL (or nearest address) 963 GOOD RD

(3) PROPOSED USE: DOMESTIC

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

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 159 ft. Depth of completed well 159 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from +2 ft. to 156 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

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

Screens: YES
Manufacturer's Name COOK
Type STAINLESS STEEL Model No.
Diam. 6 slot size 20 from 154 ft. to 159 ft.
Diam. slot size from ft. to ft.

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

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

(7) PUMP: Manufacturer's Name FLINT & WALLING
Type SUBMERSIBLE H.P. 1 HP

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 145.3 ft. below top of well Date 04/22/99
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? YES If yes, by whom? HAYES DRILLING
Yield: 15 gal./min with .5 ft. drawdown after 2 hrs.

Recovery data

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 10 gal/min. 1 ft. drawdown after 1 hrs.
Air test gal/min. w/ stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? YES

(10) WELL LOG 32-3E-13J01

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

MATERIAL	FROM	TO
TOPSOIL	0	1
BROWN CLAY	1	14
BROWN GRAVEL CLAY	14	37
BROWN GRAVEL SILT	37	85
BROWN SAND GRAVEL	85	126
BROWN GRAVEL & SAND	126	145
BROWN SAND GRAVEL & WATER	145	

RECEIVED

MAY 25 1999

DEPT OF ECOLOGY

Work started 04/21/99 Completed 04/22/99

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 HAYES DRILLING, INC.
(Person, firm, or corporation) (Type or print)

ADDRESS 5696 ERSHIG RD, BOW, WA

[SIGNED] Ryan Williams License No. 2190

Contractor's Registration No. HAYES0I106J5 Date 05/13/99

WELL SITE MEETS ALL SIGHT CRITERIA UNDER I.C.C. 809 BASED ON INFORMATION SUPPLIED BY THE OWNER OR OWNER'S AUTHORIZED REPRESENTATIVE.

6768

32-4E-17D01

120988

WATER WELL REPORT

STATE OF WASHINGTON

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

Notice of Intent W 147495
UNIQUE WELL I D # AGL 189
Water Right Permit No

(1) OWNER Name Creta Harvey Address 29901 80th Avenue NW, Stanwood, WA 98292

(2) LOCATION OF WELL County Snohomish nw NW 1/4 NW 1/4 Sec 17 T 32 N R 4E WM

(2a) STREET ADDRESS OF WELL (or nearest address) 7314 300th St NW, Stanwood

TAX PARCEL NO 320417-002-00800

(3) PROPOSED USE [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

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

(5) DIMENSIONS Diameter of well 6 inches
Drilled 195 feet Depth of completed well 195 ft

(6) CONSTRUCTION DETAILS
Casing Installed
[X] Welded 6 " Diam from 0 ft to 185 ft
[ ] Liner installed ____ Diam from ____ ft to ____ ft
[ ] Threaded ____ Diam from ____ ft to ____ ft

Perforations [ ] Yes [X] 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 [X] Yes [ ] No [ ] K Pac Location ____
Manufacturer's Name ____
Type stainless steel Model No telescope
Diam 6 Slot size 15 from 185 ft to 190 ft
Diam 6 Slot size 10 from 190 ft to 195 ft

Gravel/Filter packed [ ] Yes [X] No [ ] Size of gravel/sand ____
Material placed from ____ ft to ____ ft

Surface seal [X] Yes [ ] No To what depth? 18 ft
Material used in seal bentonite
Did any strata contain unusable water? [ ] Yes [X] 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 136 ft below top of well Date 9/17/2002
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
Yield ____ gal /min with ____ ft drawdown after ____ hrs
Yield ____ gal /min with ____ ft drawdown after ____ hrs

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
Bailer test 75 gal /min with 5 ft drawdown after 1 hrs
Airlift 10 gal /min with stem set at 183 ft for 1 hrs
Artesian flow ____ g p m Date ____
Temperature of water ____ Was a chemical analysis made? [ ] Yes [ ] No

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

MATERIAL	FROM	TO
Brown silty clay	0	3
Brown silty clay & gravel	3	36
Gray clay & gravel	36	45
Gray silty sand clay & gravel	45	77
Fine sand gravel & water	77	84
Gravel sand & gray clay	84	95
Gravel & brown clay	95	103
Gravel sand & water	103	114
Brown silty clay & gravel	114	125
Gray clay & some sand & gravel	125	154
Gray clay & gravel	154	180
Gray sand & water	180	195
Fine silty sand & water	195	

RECEIVED
SEP 24 2002
DEPT OF ECOLOGY

Work Started 9/16/2002 19 Completed 9/17/2002 19

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

Type or Print Name Ralph Riggles License No 2043
(Licensed Driller/Engineer)
Trainee Name ____ License No ____
Drilling Company Dahlman Pump & Well Drilling Inc
(Signed) ____ License No ____
(Licensed Driller/Engineer)
Address P. O. Box 422, Burlington, WA 98233
Contractor's Registration No DAHLMPW123LC Date 9/19/02 19

(USE ADDITIONAL SHEETS IF NECESSARY)

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

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

WATER WELL REPORT

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

17D02

Construction/Decommission ("x" in circle)

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

CURRENT

Notice of Intent No. WE26388

Unique Ecology Well ID Tag No. BJG 063

Water Right Permit No. _____

Property Owner Name CRETE HARVEY

Well Street Address 7314 300TH ST NW

City STANWOOD **County** SNOHOMISH

Location NW 1/4-1/4 NW 1/4 Sec 17 Twn 32 R 4 EWM [X] Check Or WWM [ ] One

(s, t, r Still REQUIRED)

Lat/Long Lat Deg _____ Lat Min/Sec _____

Long Deg _____ Long Min/Sec _____

Tax Parcel No. (Required) 32041700200800

PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other _____

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

[X] New well [ ] Reconditioned *Method:* [ ] Dug [ ] Bored [ ] Driven [ ] Deepened [ ] Cable [X] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 159 ft.

Depth of completed well 159 ft.

CONSTRUCTION DETAILS

Casing Installed: [X] Welded 6" Diam. from 0 ft. to 154 ft.

[ ] Liner installed _____" Diam. from _____ ft. to _____ ft.

[ ] Threaded _____" Diam. From _____ ft. to _____ ft.

Perforations: [ ] Yes [X] No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: [X] Yes [ ] No [ ] K-Pac Location _____

Manufacturer's Name _____

Type STAINLESS STEEL Model No. _____

Diam. 6 Slot size #15 from 154 ft. to 159 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: [ ] Yes [X] No Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: [X] Yes [ ] No To what depth? 18 ft.

Material used in seal BENTONITE

Did any strata contain unusable water? [ ] Yes [X] No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 132 ft. below top of well Date 12/30/2016

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? [ ] Yes [ ] No If yes, by whom? _____

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

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

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer Test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 15 gal./min. with stem set at 153 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? [ ] Yes [ ] No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
TOPSOIL	0	1
BROWN SANDY CLAY	1	10
BROWN CLAY SAND AND GRAVEL	10	16
GREY CLAY SAND AND GRAVEL	16	65
BROWN CLAY SAND AND GRAVEL	65	93
GREY SAND AND SILT	93	98
BROWN CLAY AND SAND	98	152
GREY SAND AND WATER	152	159
GREY CLAY	159	160

RECEIVED

JAN 06 2017

DEPT OF ECOLOGY
NWRO - WR

Start Date 12/29/2016 Completed Date 12/30/2016

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

[X] Driller [ ] Engineer [ ] Trainee Name (Print) RALPH RIGGLES

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2043

IF TRAINEE: Driller's License No: _____

Driller's Signature: _____

Drilling Company DAHLMAN PUMP & WELL DRILLING INC

Address P O BOX 422

City, State, Zip BURLINGTON , WA , 98233

Contractor's Registration No. DAHLMPW123LC Date 1/3/2016

Ecology is an Equal Opportunity Employer

ECY 050-1-20 (Rev 4/07)

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

32/04-17 N01

Application No.

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

WATER WELL REPORT

STATE OF WASHINGTON

Permit No. ....

(1) OWNER: Name Earl Florence Address 7315 284th St. NW Stanwood 98292

(2) LOCATION OF WELL: County Snoh. SE¼ SW¼ Sec. 17 T. 32 N. R. 4 E.W.M.

Bearing and distance from section or subdivision corner

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

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

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 199 ft. Depth of completed well 199 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +2 ft. to 189 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

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

Screens: Yes ☒ No ☐ Johnson
Manufacturer's Name
Type 6" F&F Model No.
Diam. 6 Slot size .7 from 189 ft. to 199 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 Red Jacket
Type: Submersible H.P. 1

(8) WATER LEVELS: Land-surface elevation above mean sea level 200 ft.
Static level 167 ft. below top of well Date 7-6-88
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 38 ft.
Was a pump test made? Yes ☒ No ☐ If yes, by whom? Driller
Yield: 5 gal./min. with 12 ft. drawdown after 2 hrs.
" 8 " 16 " 1/2 "
" 5 " 12 " 2 "

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	179	12:05	167		

Date of test 7-6-88
Bailer test 7.5 gal./min. with 10 ft. drawdown after 1 hrs.
Artesian flow g.p.m. Date
Temperature of water 48 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
2X6" Steel .025 csg.	+2	0
Blk Top Soil	0	1
Brn. Clayhd. sand	1	7
Grey Clayhd. sand	7	16
Gold Clayhd sand	16	25
Gold Brn. Clay	25	35
Brn. Clayhd. Gravel Frac Est 2 1/2 gpm	35	38
Tan Clayhd. sand	38	48
Brn. Clay	48	58
Brn Clayhd. sand	58	65
Blk/Grey Soft Shale	65	90
Blk/Grey Sandy Shale	90	100
Grey Clayhd. sand	100	103
Brn Clay Frac 2 gpm	103	107
Grey Clayhd sand	107	127
Brn. Clayhd. sand	127	135
Blk. Silty sand	135	140
Grey Clayhd. gravel	140	146
Grey Clayhd Sand	146	189
Blk. & White Sandstone	189	199
water		

Work started 6-22 19 88 Completed 7-6 19 88

RECEIVED AUG 12 1988 DEPARTMENT OF ECOLOGY NORTHWEST REGIONAL OFFICE

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 N.E. #5 Lake Stevens, Wa. 98258

[Signed] William C Figgins (Well Driller)

License No. 1514 Date 7-7 19 88

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

32-4-18A01

ENTERED

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W41352

UNIQUE WELL I.D. # ABM013

Water Right Permit No.

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

(1) OWNER: Name HENRY TORKELSON Address 8704 300TH NW STANWOOD WA.

(2) LOCATION OF WELL: County SNOHOMISH NE 1/4 NE 1/4 Sec. 18 T. 32 N. R. 4 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 8704 300TH NW STANWOOD WA.

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

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

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 161 feet. Depth of completed well 146.5 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 141 ft.
Welded [X] Liner installed [ ] Threaded [ ] " Diam. from ft. to ft.
" Diam. from ft. to ft.

Perforations: Yes [ ] No [X]
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 [X] No [ ] Manufacturer's Name HOWARD SMITH
Type STAINLESS Model No.
Diam. 6 Slot size 020 from 141 ft. to 146 ft.
Diam. Slot size from ft. to ft.

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

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

(7) PUMP: Manufacturer's Name FLINT & WALLING
Type: SUBMERSIBLE H.P. 1/2

(8) WATER LEVELS: Land-surface elevation above mean sea level 300 ft.
Static level 97 ft. below top of well Date 6-16-94
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 [X] No [ ] If yes, by whom? INSTALLER
Yield: 11 gal./min. with 27 ft. drawdown after 3 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 SANDY LOAM	0	4
GRAY SANDY CLAY	5	13
GRAY SAND & GRAVEL BROWN STAIN	14	36
GRAY SAND & GRAVEL	37	107
GRAY COARSE SAND & GRAVEL	108	113
GRAY GRAVEL COARSE SAND WATER BEAR.	114	148
GRAY GRAVEL WATER BEAR.	149	161
GRAY FINE SAND, WATER		

RECEIVED
JUN 20 1994
DEPT. OF ECOLOGY

Work Started 6-14 19 Completed 6-16 1994

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 S.R. STALEY DRILLING (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address P.O. BOX 687 STANWOOD WA.

(Signed) (WELL DRILLER) License No. 1909

Contractor's Registration No. STEVER*172PF Date 6-17 1994

(USE ADDITIONAL SHEETS IF NECESSARY)

ECL 050-1-20 (2/93)

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

3/2/4/18 AOR
Start Card No. W41352
UNIQUE WELL I.D. # ABM023

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

WATER WELL REPORT
STATE OF WASHINGTON
Water Right Permit No.

(1) OWNER: Name Henry W. Torkelson Address 8704 300th NW, Stanwood WA

(2) LOCATION OF WELL: County Snohomish NE 1/4 NE 1/4 Sec 18 T 32 N, R 4 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 8706 - 300th NW, Stanwood WA

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

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

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 140 feet. Depth of completed well 138 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6 " Diam. from 0 ft. to 138 ft.
Welded [X]
Liner Installed [ ] " Diam. from ft. to ft.
Threaded [ ] " Diam. from ft. to ft.

Perforations: Yes [ ] No [X]
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 [X]
Manufacturer's Name Model No.
Type
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

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

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

(7) PUMP: Manufacturer's Name FLINT & WALLING
Type: SUBMERSIBLE H.P. 3/4

(8) WATER LEVELS: Land-surface elevation above mean sea level 100 ft.
Static level 115 ft. below top of well Date 5-9-94
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 [X] No [ ] If yes, by whom? INSTALLER
Yield: 12 gal./min. with 13.5 ft. drawdown after 2 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
0:00	128.5	0:15	119	0:30	115

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airlift 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
DARK BROWN SANDY LOAM	0	2
LIGHT BROWN SAND & CLAY	2	14
GRAY CEMENTED SAND & GRAVEL	14	79
GRAY LOOSE SAND & GRAVEL	80	123
GRAY SAND & GRAVEL, WATER	124	140

RECEIVED
MAY 18 1994
DEPT. OF ECOLOGY

Work Started 5-4 19 Completed 5-4 1994

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 S.R. STALEY DRILLING (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address P.O. Box 427 STANWOOD WA.
(Signed) S.R. Staley (WELL DRILLER) License No. 1964
Contractor's Registration No. STALER*172PF Date 5-11 1994

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (2/93)

124608

WATER WELL REPORT

RECEIVED

DEC 19 2002

DEPT OF ECOLOGY

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

Construction/Decommission ("x" in circle)

☒ Construction

○ Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number*

32-4E-18B01

CURRENT Notice of Intent No W154450

Unique Ecology Well ID Tag No AHH 616

Water Right Permit No 1A

Property Owner Name Keith Knudtzen

Well Street Address 8120-300th ST NW

City Stanwood County Snohomish

Location NW 1/4 - 1/4 NE 1/4 Sec 18 Twn 32 R 04 (EWM) or WWM circle one

Lat/Long (s,t,r still REQUIRED) Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

Tax Parcel No 320418-001 002 00

PROPOSED USE ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other ____

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

☒ New Well ☐ Reconditioned ☐ Deepened

Method ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS Diameter of well 6 inches, drilled 300' ft

Depth of completed well 288 ft

CONSTRUCTION DETAILS

Casing Installed ☒ Welded 6" Diam from 0 ft to 288 ft

☐ Liner installed ____" Diam from ____ ft to ____ ft

☐ Threaded ____" Diam from ____ ft to ____ ft

Perforations ☐ Yes ☒ No

Type of perforator used ____

SIZE of perfs ____ in by ____ in and no of perfs ____ from ____ ft to ____ ft

Screens ☒ Yes ☐ No ☒ K-Pac Location 283

Manufacturer's Name Look

Type Con't slot Model No ____

Diam 5 Slot Size 8 from 283 ft to 288 ft

Diam ____ Slot Size ____ from ____ ft to ____ ft

Gravel/Filter packed ☐ Yes ☒ No ☐ Size of gravel/sand ____

Materials placed from ____ ft to ____ ft

Surface Seal ☒ Yes ☐ No To what depth? 18 ft

Materials used in seal Bentonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? ____ Depth of strata ____

Method of sealing strata off ____

PUMP Manufacturer's Name Sta-Rite

Type SQE SQ-2000 10 GPM HP 1½

WATER LEVELS Land-surface elevation above mean sea level ____ ft

Static level 179 ft below top of well Date 12-6-02

Artesian pressure ____ lbs per square inch Date ____

Artesian water is controlled by ____ (cap, valve, etc)

WELL TESTS Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? ____

Yield ____ gal/min with ____ ft drawdown after ____ hrs

Yield ____ gal/min with ____ ft drawdown after ____ hrs

Yield ____ gal/min with ____ ft drawdown after ____ hrs

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____

Bailer test ____ gal/min with ____ ft drawdown after ____ hrs

Airtest 15 gal/min with stem set at 280 ft for 1.5 hrs

Artesian flow ____ g p m Date ____

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

CONSTRUCTION OR DECOMMISSION PROCEDURE

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

MATERIAL	FROM	TO
Top Soil	0	2
Tan Hardpan	2	20
Tan fill	20	35
Gray fill soft	35	65
Sandy silty clay	65	72
Silty sand & gravel brown	72	115
Coarse sand & gravel	115	174
Brown clay	174	185
Gray fill	185	195
Gray clay	195	207
Gray fill	207	215
Gravel & silt	215	225
Silty clay	225	232
Compact Gravel	232	242
Heavy clay / fill	242	250
Coarse dark gravel	250	260
Gravel & fine sand	260	280
WATER - Fine sand, silt	280	288

Start Date 11-27-02 Completed Date 12-6-02

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

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Paul Anderson

Driller/Engineer/Trainee Signature ____

Driller or Trainee License No 1367

If trainee, licensed driller's ____

Drilling Company Anderson Wells Co

Address 6310-145th DR NE

City, State, Zip Lake Stevens WA 98258

Contractor's Registration No Andercowe Date 12-6-02

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

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

WATER WELL REPORT

STATE OF WASHINGTON

Application No. 32/4-18 B07

Permit No. .....

(1) OWNER: Name Ray Hursh Address Stanwood

(2) LOCATION OF WELL: County Snohomish NW¼ NE¼ Sec. 18 T. 32 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 6 inches.
Drilled 215 ft. Depth of completed well 215 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: ..." Diam. from ... ft. to ... ft.
Threaded ☐ ..." Diam. from ... ft. to ... ft.
Welded ☑ 6" Diam. from 0 ft. to 215 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 ..... Model No. .....
Diam. 6 Slot size 10 from 201 ft. to 215 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 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: Surf H.P. ¾

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 145 ft. below top of well Date 9-9-82
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: 7 gal./min. with 8 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
Top Soil	0	1½
Hardpan	1½	8
Clay	8	80
Clay & rock	80	145
Clay	145	206
water Sand	206	215

DEPARTMENT OF ECOLOGY
NORTHWEST REGION
SEP 21 1982
RECEIVED

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 Hitt Well Drilling (Person, firm, or corporation) (Type or print)
Address 28926-5 Ave NW Stanwood
[Signed] Everett F. Hitt (Well Driller)
License No. 187 Date 9-9 19 82

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

32/04-18B03
Application No.

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

WATER WELL REPORT
STATE OF WASHINGTON

Permit No.

(1) OWNER: Name Tafte, ~~[illegible]~~ Roy Address 8218 - 300th N.W. Stanwood 98292

(2) LOCATION OF WELL: County Snohomish E½ of W½ NW ¼ NE ¼ Sec. 18 T. 32 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 6 inches.
Drilled 240 ft. Depth of completed well 237 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 232 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 ☐ Houston Mfg.
Manufacturer's Name
Type Stainless Model No.
Diam. 6 Slot size 10 from 232 ft. to 237 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 Jacuzzi Bros.
Type: Submersible HP 1

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 170 ft. below top of well Date 8-17-77
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?
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 7½ gal./min. with 6 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
Blue Clay & Gravel	0	210
Blue Clay	210	230
Fine Sand	230	240

Work started 8-9-77 19 Completed 8-17-77 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 & DRILLING, INC.
(Person, firm, or corporation) (Type or print)
Address Burlington 98233
[Signed] R C Johnson
(Well Driller)
License No. 223-02-7387 Date 8-31-77 19

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7336—OS—(Rev. 4-71).

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

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy
APR 2 1992

Start Card No. 042078

WATER WELL REPORT

STATE OF WASHINGTON

Water Right Permit No. 32-4E-18 B (W)

(1) OWNER: Name ROBERT KELLER DEPT. OF ECOLOGY Address 7314 300TH ST NW. STANWOOD.

(2) LOCATION OF WELL: County SNOHOMISH NW¼ NE¼ Sec. 18 T. 32 N., R. 4E W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) 29800 BLK 80TH AVE NW STANWOOD WA.

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

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

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 240 feet. Depth of completed well 240 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6 " Diam. from 0 ft. to 235 ft.
Welded [ ] Liner installed [ ] Threaded [ ] " Diam. from ft. to ft.
" Diam. from ft. to ft.

Perforations: Yes [ ] No [X]
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 [X] No [ ]
Manufacturer's Name COOK
Type STAINLESS STEEL Model No.
Diam. 6 Slot size 8 from 235 ft. to 240 ft.
Diam. Slot size from ft. to ft.

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

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes [ ] No [X]
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 200 ft.
Static level 172 ft. below top of well Date 3-20-92
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.
Airlift 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 LOOSE SANDY LOAM	0	7
GRAY HARD CLAY & CLAY	8	72
MIXED 1"-SAND & GRAVEL	73	138
GRAY SOFT CLAY	139	174
GRAY CLAY & GRAVEL MIX	175	231
MULTI COLOR 1"-SAND & GRAVEL WATER BEARING	232	240

Work started 3-15 19 Completed 3-20 19 92

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

NAME STEVEN R. STALEY DRILLING (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address P.O. BOX 687 STANWOOD 98292
(Signed) (WELL DRILLER) License No. 1904
Contractor's Registration No. STEVERS172PF Date 3-23 19 92

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1328-

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

ENTERED

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W053538

UNIQUE WELL I.D. #

Water Right Permit No. 32/4E/18-C 01

(1) OWNER: Name JEFF THORTON Address 1536 S. CAROL ST. CAMANO Is.

(2) LOCATION OF WELL: County SNOHOMISH NE 1/4 NW 1/4 Sec 18 T. 32 N, R 4E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 8432 300th ST NW, STANWOOD, WA.

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

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

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 187 feet. Depth of completed well 186 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6" Diam. from +1 ft. to 180 ft.
Welded [X] Liner Installed [ ] Threaded [ ] _____" Diam. from _____ ft. to _____ ft.
_____" Diam. from _____ ft. to _____ ft.

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

RECEIVED
AUG 28 1995
DEPT. OF ECOLOGY

Screens: Yes [X] No [ ]
Manufacturer's Name HSSC
Type STAINLESS STEEL Model No. TORCH
Diam. 6 Slot size .016 from 180 ft. to 185 ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

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

Surface seal: Yes [X] No [ ] To what depth? 20 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes [X] No [ ]
Type of water? _____ Depth of strata 140'
Method of sealing strata off CASING

(7) PUMP: Manufacturer's Name FLINT & WALLING
Type: SUBMERSIBLE H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 146 ft. below top of well Date 7-21-95
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 [X] 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 11 gal./min. with 0 ft. drawdown after 1 hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date 7-21-95
Temperature of water _____ Was a chemical analysis made? Yes [X] 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 TOPSOIL	0	1
TAN SAND, GRAVEL & COBBLE	1	3
TAN CLAYEY SILT, SAND & GRAVEL	3	68
TAN MED - COARSE SAND W/SOME GRAVEL	68	107
TAN SILTY-SANDY GRAVEL W/SOME COBBLES	107	137
BROWN SILTY, SANDY GRAVEL W/SOME COBBLES	137	140
TAN SILTY, SAND & GRAVEL W/SOME COBBLES	140	145
GRAY SILT, SAND & GRAVEL (TIGHT)	145	149
TAN SILT, SAND & GRAVEL (TIGHT)	149	170
TAN SILTY CLAY	170	172
GRAY COARSE SAND & GRAVEL	172	187

Work Started 7-13-95 19 Completed 7-21-95 19

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 WOLFE MECHANICAL SERVICES Inc. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address P.O. Box 7126 EVERETT, WA

(Signed) Ken Engen (WELL DRILLER) License No. 1390

Contractor's Registration No. WOLFEMSI21CR Date 7-22-95 19

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

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

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

ENTERED

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 63412

UNIQUE WELL I.D. #

Water Right Permit No. 32-4-18C 02

(1) OWNER: Name Jerad Jones Address #1 Ringhams Pl Sedro Woolley

(2) LOCATION OF WELL: County Snohomish NE 1/4 NW 1/4 Sec 18 T. 32 N, R 4 W.M.

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

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

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

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 139 feet. Depth of completed well 138 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from 18" ft. to 133 ft.
Welded [X] Liner installed [ ] Threaded [ ]
" Diam. from ft. to ft.
" Diam. from ft. to ft.

Perforations: Yes [ ] No [X]
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 [X] No [ ]
Manufacturer's Name Johnson
Type Stainless Steel Model No.
Diam. 10 Slot size 6" from 133 ft. to 138 ft.
Diam. Slot size from ft. to ft.

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

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

(7) PUMP: Manufacturer's Name Grundfos H.P. 3/4
Type: SUB

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 100 ft. below top of well Date 20 Feb 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 [X] 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.
Airlift 10+ gal./min. with stem set at 132 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [X] 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	21
Tan Sand	21	37
Gravel	37	39
Tan Sand	39	101
Sand + Gravel	101	117
Brown Sand, Gravel + Clay	117	133
Sand, Gravel Water	133	138
Dark Clay + Silt	138	

RECEIVED
APR 01 1997
DEPT OF ECOLOGY

Work Started 19 Feb 97 19. Completed 20 Feb 97 19

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 Affordable Water Systems (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 1401 Bradshaw Rd Mt Vernon

(Signed) Brad Halvorson (WELL DRILLER) License No. 1617

Contractor's Registration No. AFFORWS101RJ Date 2 MAR 97 19

(USE ADDITIONAL SHEETS IF NECESSARY)

32/04-18D01

Application No.

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

WATER WELL REPORT

STATE OF WASHINGTON

Permit No.

Mail: 23709 80 Lane W. Edmonds, 98020

(1) OWNER: Name Mark Schenman Address 8324 300th N. W., Stanwood, 98292

(2) LOCATION OF WELL: County Snohomish W½ - NW¼ NW¼ Sec. 18 T. 32 N., R. 4E W.M.

Bearing and distance from section or subdivision corner

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

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] 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 200 ft.
Threaded [ ] " Diam. from ft. to ft.
Welded [ ] " Diam. from ft. to ft.

Perforations: Yes [ ] No [X]
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 [X]
Manufacturer's Name Model No.
Type
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

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

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

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

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 158 ft. below top of well Date 10-7-80
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 [X] If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " " "
" " " " "

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Baller test APPROX 30 gal./min. with 28 ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [ ] No [X]

(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
Blue clay and gravel	3	80
Sand and clay	80	110
Gravel	110	170
Clay	170	190
Gravel and water	190	200

OCT 2 1980

Work started Oct. 6 19 80 Completed Oct. 7 19 80

WELL DRILLER'S STATEMENT:

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

NAME DAHLMAN PUMP AND DRILLING (Person, firm, or corporation) (Type or print)

Address P.O. Box 422 Burlington, 98233

[Signed] R C Johnson (Well Driller)

License No. 0222 Date Oct. 8, 19 80

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

18D02

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION
AND DEVELOPMENT

WELL LOG

No Apply. #3616
Permit # 3369

Date May 20 1952
Record by A. G. Kounkel
Source Well driller's record

Location State of WASHINGTON
County Snohomish
Area
~~NE~~ W½ of Government Lot 1
¼ ¼ sec 18 T 32 N R 4 ~~E~~ W

DIAGRAM OF SECTION

Drilling Co A. G. Kounkel
Address Stanwood, Washington
Method of Drilling drilled Date May 20 1952
Owner PETER T. FOLDEN
Address Seattle, Wash.
Land surface datum ft above / below

CORRELATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
	(Transcribe driller's terminology literally but paraphrase as necessary in parentheses. If material water bearing so state and record static level if reported. Give depths in feet below land surface datum unless otherwise indicated. Correlate with stratigraphic column if feasible. Follow drilling log of materials first all casings perforations screens etc.)		
	Yellow clay	25	25
	Hardpan	40	65
	Clay with gravel	13	78
	Sand with pea gravel	14	92
	Pump Test:		
	Dun. 92' x 6"		
	SWL. 80'		
	Dd: 20'		
	Yield. 20 gpm		
	Casing: 6" dia. from 0' to 92'		
	Perfor #20 Cook W.W. Screen from 87' to 92'		
	Pump. Submersible		
	Motor. ½ hp		

Turn up

Sheet ___ of ___ sheets

32/4E/18 H01

Start Card No. 072805

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

WATER WELL REPORT

STATE OF WASHINGTON

Water Right Permit No.

(1) OWNER: Name Baker Cranes Address 2952 Stanwood

(2) LOCATION OF WELL: County SNO SE¼ NE¼ Sec. 18 T. 32 N., R. 4 W.M.

(2a) STREET ADDDRESS 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 ☒ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ☒ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 180 feet. Depth of completed well 180 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6 " Diam. from +2 ft. to 178 ft.
Welded ☒ Liner Installed ☐ Threaded ☐ " Diam. from ft. to ft.
" Diam. from ft. to ft.
Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.
Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.
Gravel packed: Yes ☐ No ☒ Size of gravel
Gravel placed from ft. to ft.
Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

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

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 130 ft. below top of well Date 1-18-90
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Baller test gal./min. with ft. drawdown after hrs.
Airlift 30 gal./min. with stem set at 160 ft. for 1 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	
top Soil	0	2	
Tan Clay	2	12	
Clay hard pan w/gravel	12	60	
Gray Clay w/ gravel	60	81	aqt
Blue Clay	81	160	
Sand	160	165	Qga
Sand gravel	165	170	
Blue Clay	170	175	
Gravel w/water	175	180	Qva

JAN 29 1991
DEPT. OF ECOLOGY

Work started 1-17-91, 19 Completed 1-18-, 19 91

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 Cascade Well Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address PO Box 432 - Stanwood
(Signed) (WELL DRILLER) License No. 0611
Contractor's Registration No. CASCAWD914C2 Date 1-21, 1991

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1320-

32/N3/18 H02

Start Card No. 072802

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

WATER WELL REPORT

STATE OF WASHINGTON

Water Right Permit No. _____

(1) OWNER: Name Brock Baker Address 295th St Stanwood

(2) LOCATION OF WELL: County Snoh SE ¼ NE ¼ Sec 18 T 32 N., R. 4 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 295th St off 300th NW

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

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

(5) DIMENSIONS: Diameter of well 6" inches. Drilled 160 feet. Depth of completed well 160 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from +2 ft. to 158 ft.
Welded [X] Liner installed [ ] Threaded [ ]
_____" Diam. from _____ ft. to _____ ft.
_____" Diam. from _____ ft. to _____ ft.

Perforations: Yes [ ] No [X]
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 [X]
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

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

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
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 122 ft. below top of well Date 1-15-91
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 30 gal./min. with stem set at 140 ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [X]

(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
Topsoil	0	1
TAN CLAY	1	12
Hardpan	12	48
Blue Clay	48	73
Sand & gravel	73	80
Blue Clay	80	96
Sand	96	121
Blue Clay	121	145
Sand w/ little water	145	152
Sand gravel w/water	152	160

JAN 23
DEPT. OF ECOLOGY

Work started 1-14-91 19 Completed 1-15 19 91

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 Cameron Well Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address PO Box 432 Stanwood WA
(Signed) _____ (WELL DRILLER) License No. _____
Contractor's Registration No. CAMERWD916C2 Date 1-15 19 91

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

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

32/04-18H03
Application No

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

WATER WELL REPORT
STATE OF WASHINGTON

Permit No

(1) OWNER: Name Chuck Teeter Address Box 666 Stanwood Wa. 98292

(2) LOCATION OF WELL: County Snohomish NW¼ NW¼ SE¼ SW¼ NE¼ Sec. 18 T. 32 N., R. 5 W.M.

Bearing and distance from section or subdivision corner Loc. 29517 80th N W Stanwood Wa. 98292

(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 192 ft. Depth of completed well 192 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 187 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 SS Model No
Diam 5 Slot size #7 from 187 ft. to 192 ft.
Diam. Slot size from ft. to ft.

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

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

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

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 162 ft. below top of well Date 4-29-87
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?
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
Air ~~Bailer~~ test 70 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	14
Blue Clay & Gravel	14	32
Brown Clay, Sand & Gravel	32	50
Blue Clay & Gravel	50	75
Blue Clay	75	140
Blue Clay & Gravel	140	187
Water & Sand	187	192

Work started 4-27- 19 87 Completed 4-29- 19 87

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 P O Box 422 Burlington Wa. 98233
[Signed] (Well Driller)
License No. 0623 Date 4-30- 19 87

(USE ADDITIONAL SHEETS IF NECESSARY)

32/4E/18 H04

Start Card No. 072652

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

WATER WELL REPORT

STATE OF WASHINGTON

Water Right Permit No. _____

(1) OWNER: Name Hudak, Mike Address 4132 Misson Beach Rd. Marysville Wa. 98270

(2) LOCATION OF WELL: County Snohomish SE ¼ NE ¼ Sec 18 T. 32 N., R 4 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) 80 Ave N W Stanwood Wa.

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

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

(5) DIMENSIONS: Diameter of well 6" inches. Drilled 200 feet. Depth of completed well 200 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 195 ft.
Welded ☑ " Diam. from ft. to ft.
Liner installed ☐ Threaded ☐ " Diam. from ft. to ft.

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

Screens: Yes ☑ No ☐
Manufacturer's Name Johnson
Type SS 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? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☑
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

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

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 158 ft. below top of well Date 2-21-91
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 22 ft. drawdown after _____ hrs.
Airtest 20GPM 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	50
Blue Clay & Gravel	50	65
Blue Clay	65	187
Sand & Water	187	200

RECEIVED
MAR 13 1991
DEPT. OF ECOLOGY

Work started 2-20- 19 90 Completed 2-21- 19 91

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) Les Nielsen (WELL DRILLER) License No. 0623

Contractor's Registration No. DAHLMPW123JC Date 2-22- 19 91

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

32/4E/18 H051

Start Card No. 040010

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

WATER WELL REPORT

STATE OF WASHINGTON

Water Right Permit No. _____

(1) OWNER: Name STEVE + BARB PURNELL Address 4420 105TH PL NE MARYSVILLE WA

(2) LOCATION OF WELL: County SNO SE ¼ NE ¼ Sec. 18 T. 32 N., R. 4 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) 295TH STANWOOD

(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 80 feet. Depth of completed well 73 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 73 ft.
Welded ☒ " Diam. from _____ ft. to _____ ft.
Liner installed ☐ Threaded ☐ " Diam. from _____ ft. to _____ ft.

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

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ 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 GRUNFOS
Type: SUB H.P. 1/2

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 43 ft. below top of well Date 17 JUNE 91
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 8 gal./min. with stem set at 60 ft. for 1 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
Top Soil	0	2
TAN CLAY + SAND	2	17
Gravel Loose	17	22
TAN Clay w/ Gravel	22	48
SAND Grey	48	50
SAND + Gravel Grey	50	55
SAND + Gravel w/ little water	55	60
SAND + Gravel Grey	60	66
SAND + CLAY Grey Fine	66	72
Gravel Large Grey	72	75
SAND DARK Grey FINE	75	80

RECEIVED
JUL 01 1991
DEPT. OF ECOLOGY

Work started 15 JUNE 19 Completed 17 JUNE 19

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 AFFORDABLE WATER SYSTEMS (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 1196 VALENTINE RD
(Signed) _____ License No. 1617 (WELL DRILLER)
Contractor's Registration No. AFFORWS100RT Date 24 JUNE 1991

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

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

329955

32-4E-18L01

WATER WELL REPORT

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

Construction/Decommission ("x" *in circle*)

☒ Construction

○ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. W 253078

Unique Ecology Well ID Tag No. BBA 205

Water Right Permit No. _____

Property Owner Name STEVE LENZ

Well Street Address 29123 88TH AVE NW

City Stanwood County Snohomish

Location NE 1/4-1/4 SW 1/4 Sec 18 Twn 32 R 4E (EWM) or WWM — circle one

Lat/Long (s, t, r Still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 3204 1800 303 800

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

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

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

DIMENSIONS: Diameter of well 6 inches, drilled 140 ft. Depth of completed well 140 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from +2 ft. to 132 ft. ☐ Liner installed _____" Diam. from _____ ft. to _____ ft. ☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☒ Yes ☐ No ☐ K-Pac Location 129

Manufacturer's Name Wilo y

Type S. Steel Model No. _____

Diam. 6 Slot size 14 from 130 ft. to 140 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

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

Surface Seal: ☒ Yes ☐ No To what depth? 18 ft.

Material used in seal BENONITE

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____ Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 126 ft. below top of well Date 11-11-08

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

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

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

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test 15 gal./min. with 2 ft. drawdown after 2 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

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO	
Top soil	0	2	
Br. hard-pan	2	8	
Gray hard pan	8	84	Qvt
Dry sand-gravel	84	126	Qva
Water sand-gravel	126	140	Qvo
Blue clay	140	?	

RECEIVED
DEC 03 2008
DEPT. OF ECOLOGY

Start Date 10-29-08 Completed Date 11-11-08

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

☒ Driller ☐ Engineer ☐ Trainee Name (Print) GENE HITT

Driller/Engineer/Trainee Signature Gene Hitt

Driller or trainee License No. 01866

Drilling Company GENE'S WELL DRILLING

Address 5115 268TH ST NW

City, State, Zip STANWOOD, WA 98292

Contractor's Registration No. GENESWD934BQ Date 11-19-08

IF TRAINEE, Driller's Licensed No. _____ Driller's Signature _____

Ecology is an Equal Opportunity Employer.

32-4E-20C01

WATER WELL REPORT

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

Construction/Decommission ("x" in circle) 182031
- ○ Construction
- ☒ Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number*

CURRENT Notice of Intent No. 097751
Original TAG # ACY729
Unique Ecology Well ID Tag No.
Water Right Permit No. 1A
Property Owner Name Himalaya Homes Inc.
Well Street Address 7024-284th St NW
City Stanwood County: Snohomish
Location NE 1/4- 1/4 NW 1/4 Sec 20 Twn 32 R 04 (EWM) (WWM) circle one
Lat/Long: (s,t,r still REQUIRED) Lat Deg Lat Min/Sec Long Deg Long Min/Sec
Tax Parcel No. 320420-002-007-00

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

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

DIMENSIONS: Diameter of well 6 inches, drilled 159 ft. Depth of completed well 159 ft.

CONSTRUCTION DETAILS
Casing ☒ Welded 6" Diam. from 0 ft. to 154 ft.
Installed: ☐ Liner installed " Diam. from ft. to ft.
☐ Threaded " Diam. from ft. to ft.

Perforations: ☐ Yes ☒ No
Type of perforator used
SIZE of perfs in. by in. and no. of perfs from ft. to ft.

Screens: ☒ Yes ☐ No ☐ K-Pac Location
Manufacturer's Name
Type Model No.
Diam. Slot Size from ft. to ft.
Diam. Slot Size from ft. to ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand
Materials placed from ft. to ft.

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

PUMP: Manufacturer's Name
Type: H.P.

WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 120 ft. below top of well. Date 9-29-05
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (cap,valve, etc.)

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
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

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

MATERIAL	FROM	TO
Pulled Pump Screen & casing Decommissioned well Filled with Bentonite to surface	0	159

RECEIVED
OCT 05 2005
DEPT OF ECOLOGY

Start Date 9-29-05 Completed Date 9-30-05

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

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Mark Anderson
Driller/Engineer/Trainee Signature
Driller or Trainee License No. 1367

Drilling Company Anderson Dev. LLC
Address 6310-145th Dr NE
City, State, Zip Ct Stevens WA 98258
Contractor's Registration No. ANDREDC951BE Date 9-30-05

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

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 4/01)

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

3.2-4/E-20 CO2

WATER WELL REPORT

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

Construction/Decommission ("x" in circle) 182033
(X) Construction
( ) Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number*

CURRENT Notice of Intent No. 097752
Unique Ecology Well ID Tag No. NA
Water Right Permit No. NA
Property Owner Name Himalayan Homes Inc
Well Street Address 7024-28th St NW
City Stanwood County: Snohomish
Location NE 1/4 - 1/4 NW 1/4 Sec 20 Twn 32 R 04 (EWM) or (WWM) circle one
Lat/Long: (s,t,r still REQUIRED) Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____
Tax Parcel No. 320420-002-007-00

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

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

DIMENSIONS: Diameter of well 36 inches, drilled 32 ft.
Depth of completed well 32 ft.

CONSTRUCTION DETAILS
Casing ( ) Welded
Installed: (X) Liner installed 36" Diam. from 0 ft. to 32 ft.
( ) Threaded ____" Diam. from ____ ft. to ____ ft.

Perforations: ( ) Yes (X) No
Type of perforator used ____
SIZE of perfs ____ in. by ____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: ( ) Yes (X) No ( ) K-Pac Location ____
Manufacturer's Name ____
Type ____ Model No. ____
Diam. ____ Slot Size ____ from ____ ft. to ____ ft.
Diam. ____ Slot Size ____ from ____ ft. to ____ ft.

Gravel/Filter packed: ( ) Yes (X) No ( ) Size of gravel/sand ____
Materials placed from ____ ft. to ____ ft.

Surface Seal: ( ) Yes (X) No To what depth? ____ ft
Materials used in seal ____
Did any strata contain unusable water? ( ) Yes (X) No
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

PUMP: Manufacturer's Name ____
Type: ____ H.P. ____

WATER LEVELS: Land-surface elevation above mean sea level ____ ft.
Static level 29' ft. below top of well Date 9-29-05
Artesian pressure ____ lbs. per square inch Date ____
Artesian water is controlled by ____ (cap,valve, etc.)

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
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 (X) No

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

MATERIAL	FROM	TO
Cement	-3	26
Sand	26	32

RECEIVED
OCT 05 2005
DEPT OF ECOLOGY

Start Date 9-29-05 Completed Date 9-29-05

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

(X) Driller ( ) Engineer ( ) Trainee Name (Print) [illegible] Anderson
Driller/Engineer/Trainee Signature [illegible]
Driller or Trainee License No. 1367

Drilling Company Anderson Drilling LLC
Address 6310-145th PL NE
City, State, Zip Lk Stevens WA 98258
Contractor's Registration No. ANDRED*951BK Date 9-30-05

If trainee, licensed driller's Signature and License no. ____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 4/01)

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

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

ENTERED

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W104156
UNIQUE WELL I.D. # ACY729
Water Right Permit No. 32-4-20C03

(1) OWNER: Name MARY HENTHORN Address 7024 284th St. N.W. STANWOOD, WA

(2) LOCATION OF WELL: County SNOHOMISH NE 1/4 NW 1/4 Sec. 20 T. 32 N.R. 4E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 7024 284th St. N.W. STANWOOD

(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 162 feet. Depth of completed well 159 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6" Diam. from +2 ft. to 154 ft.
Welded ☐ ____" Diam. from ____ ft. to ____ ft.
Liner Installed ☐ Threaded ☐ ____" Diam. from ____ ft. to ____ ft.

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

Screens: Yes ☒ No ☐
Manufacturer's Name WESCO
Type SS Model No. ____
Diam. 5 1/2 Slot size 16 from 154 ft. to 159 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 GOULD H.P. 3/4
Type: SUB

(8) WATER LEVELS: Land-surface elevation above mean sea level ____ ft.
Static level 110 ft. below top of well Date 9-1-98
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 150 ft. drawdown after 1 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
TOPSOIL	0	2
CLAY W/ GRAVEL	2	36
SAND	36	38
BLUE CLAY	38	55
SILTY SAND W/ WATER	55	65
CLAY	65	110
CLAY W/ GRAVEL & SAND	110	116
GRAVEL W/ SAND	116	132
GRAVEL & SILT/ SAND W/ LITTLE WATER	132	138
CLAY	138	155
GRAVEL SAND W/ WATER	155	162

RECEIVED
SEP 8 1998
NWRO - WR
DEPT OF ECOLOGY

Work Started 8-29-98 19 Completed 9-1 19 98

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 CAMANO WELL DRILLING (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address PO Box 432 - STANWOOD, WA
(Signed) ____ (WELL DRILLER) License No. 0611
Contractor's Registration No. CAMANWD146R2 Date 9-1 19 98

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

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

ENTERED

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W063341

UNIQUE WELL I.D. #

Water Right Permit No. 32-46-20 D01

(1) OWNER: Name Eric G. Kien Address 7212 284th St. N.W. Stanwood, WA 98292

(2) LOCATION OF WELL: County SNO. NW 1/4 NW 1/4 Sec 20 T. 32 N. R. 04 WM.

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

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

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

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 89 feet. Depth of completed well 89 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +2 ft. to 83 ft.
Welded [X] Liner installed [ ] Threaded [ ]
" Diam. from ft. to ft.
" Diam. from ft. to ft.

Perforations: Yes [ ] No [X]
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 [X] No [ ]
Manufacturer's Name Johnson
Type S. Steel Model No.
Diam. 5 Slot size 10 from 84 ft. to 89 ft.
Diam. Slot size from ft. to ft.

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

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

(7) PUMP: Manufacturer's Name Aeromotor H.P. 1
Type: SUB

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 56 ft. below top of well Date 9-19-95
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 [X] No [ ] If yes, by whom? Dills Pumps
Yield: 2.5 gal./min. with 28 ft. drawdown after 6 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 [X] 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
Top-Soil	0	2
Br. hard-pan - gravel	2	9
Br. hard-pan	9	22
Br. hard-pan - gravel	22	28
Br. clay	28	66
Blue clay	66	85
water bearing sand	85	89
Blue clay	89	?

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SEP 26 1995
DEPT. OF ECOLOGY

Work Started 9-14-95 19. Completed 9-19 19 95

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 GCNC's Well Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 7715 276th N.W. Stanwood, WA 98292

(Signed) Gene Hitt (WELL DRILLER) License No. 0186

Contractor's Registration No. GCNCS W007LC Date 9-22 19 95

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

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

APPENDIX B
Exploration Test Pit Logs

LOG OF EXPLORATION PIT NO. EP-1

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION
1	**Grass / Topsoil** Loose, slightly moist, brown, silty, fine SAND, abundant roots (SM).
2	**Weathered Everson Fine Grained Glaciomarine Sediments** Medium dense, slightly moist, light brown, silty, fine SAND, abundant rootlets (SM).
3	Medium stiff, slightly moist, light brownish gray, fine sandy, SILT, trace gravel (ML).
4	Grades to gray with depth.
5	
6	Bottom of exploration pit at depth 5 feet No seepage. No caving.
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20	

Schenk Packing Co.
Snohomish County, WA

Logged by: ADY
Approved by: CJK

associated earth sciences incorporated

Project No. 170045H001

7/11/17

KCTP3 170045.GPJ August 10, 2017

LOG OF EXPLORATION PIT NO. EP-2

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION
1	**Grass / Topsoil** Loose, slightly moist, dark brown, silty, fine to medium SAND, some gravel, abundant roots (SM).
2	**Weathered Everson Glaciomarine Sediments** Loose, slightly moist, dark brown, silty, fine to medium SAND, some gravel, roots present (SM). Medium dense, slightly moist, reddish brown, fine to medium SAND, some silt, some gravel, abundant roots present (SP-SM).
3	Grades to brownish gray, some silt.
4	**Everson Fine Grained Glaciomarine Sediments** Grades to silty, fine SAND, density increases.
5	Grades to fine sandy, SILT (ML).
6	Bottom of exploration pit at depth 5.5 feet No seepage. Minor caving 0 to 1 foot.
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Schenk Packing Co.
Snohomish County, WA

Logged by: ADY
Approved by: CJK

associated earth sciences incorporated

Project No. 170045H001

7/11/17

KCTP3 170045.GPJ August 10, 2017

APPENDIX C
Infiltration Test Data Sheets

Project Name	Schenk Packing Co.	**Water Source**	Water Truck
Project No.	170045H001	**Meter**	AESI FM #10
Date	7/11/2017	**Pit Area**	
Test No.	IT-1	**Test Depth**	0.2 feet
Performed By	ADY	**Test Material**	

Time (24-hr)	Totalizer (gallon)	Flow Rate (gpm)	Stage (ft)	Comments
10:23:00		0.19	0.00	Begin test.
10:32:00			0.01	~1 sq ft wetted area.
10:45:00		0.12	0.01	~1 sq ft wetted area.
11:00:00		0.11	0.01	~1 sq ft wetted area.
11:10:00		0.1	0.01	~1.3 sq ft wetted area.
11:23:00		0.1	0.01	~1.5 sq ft wetted area.
11:24:00		0.1	0.01	~1.5 sq ft wetted area.
11:30:00		0.52	0.12	~3 sq ft wetted area.
11:40:00		0.55	0.16	~6 sq ft wetted area.
11:50:00		0.55	0.18	~8 sq ft wetted area.
12:00:00		0.56	0.19	~11 sq ft wetted area.
12:10:00		0.56	0.19	~12 sq ft wetted area.
12:16:00		0.56	0.19	~13 sq ft wetted area.
12:23:00		0.56	0.20	~13 sq ft wetted area. Flow off.
12:24:40			0.19	
12:27:00			0.18	
12:28:30			0.17	
12:31:30			0.16	
12:34:30			0.15	Test terminated.

Project Name	Schenk Packing Co.	**Water Source**	Water Truck
Project No.	170045H001	**Meter**	AESI FM #10
Date	7/11/2017	**Pit Area**	
Test No.	IT-2	**Test Depth**	0.2 feet
Performed By	ADY	**Test Material**	

Time (24-hr)	Totalizer (gallon)	Flow Rate (gpm)	Stage (ft)	Comments
13:10:00		0.18	0.00	Begin test.
13:25:00		0.17	0.01	~0.8 sq ft wetted area.
13:40:00		0.17	0.01	~0.8 sq ft wetted area.
13:50:00		0.11	0.01	~1 sq ft wetted area.
14:00:00		0.16	0.01	~1.5 sq ft wetted area.
14:10:00		0.16	0.01	~1.8 sq ft wetted area.
14:11:00		0.78	0.01	~5 sq ft wetted area.
14:17:00		1.14	0.06	~8 sq ft wetted area.
14:25:00		1.14	0.08	~9sq ft wetted area.
14:30:00		1.14	0.09	~9sq ft wetted area.
14:35:00		1.14	0.10	~10sq ft wetted area.
14:45:00		1.16	0.10	~11sq ft wetted area.
14:50:00		1.16	0.10	~12sq ft wetted area.
15:00:00		1.16	0.11	~12sq ft wetted area.
15:05:00		1.16	0.11	~12sq ft wetted area.
15:10:00		1.15	0.11	Flow off.
15:10:45			0.10	
15:11:45			0.08	
15:12:25			0.07	
15:13:15			0.06	Test terminated.