Technical Memorandum – FINAL

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From:	Nathan Rossman, Brittany Duarte, Chad Wiseman – HDR, Inc.
Date:	October 25, 2019
Subject:	Middle and Upper Skagit River Valley Hydrostratigraphy Characterization

Executive Summary

Water resources in the Skagit River basin are the subject of ongoing investigation, as the development of groundwater has the potential to impact regulated instream flows. The purpose of this study is to add to the understanding of the hydrostratigraphy in five specific areas of the Skagit River valley, and explore the degree to which aquifers may be disconnected from the Skagit River and its tributaries. The motivating study question is whether or not aquifers exist that are completely disconnected from surface water by fine-grained (low-permeability) bounding hydrostratigraphic units.

The methods employed include the production and interpretation of subsurface cross sections depicting sediment texture and hydrostratigraphic units based on well logs. The interpretation of the hydrostratigraphy and degree of hydraulic disconnection from surface water is informed by a review of the cross sections and the nature of the geology and aquifers in the basin from local hydrogeological investigation reports and scientific literature. This includes review of geologic maps and groundwater model results on streamflow captured by wells in the region and, more broadly, the theory of streamflow depletion and capture.

The cross sections developed for this study, and the literature review on the geology and hydrogeology of the Skagit River valley, indicate the occurrence of confined aquifers and low to moderate potential for disconnected aquifers mostly at depth (deep aquifers) or on the margins of the valley. Three sites show higher potential for aquifer bodies to be hydraulically disconnected from the Skagit River and its tributaries. The other two sites are found to have less fine-grained material and confining units, and are interpreted to have lower potential for the occurrence of disconnected aquifers. The findings elucidate the discontinuous and heterogeneous nature of the reworked glacio-fluvial sediments described in previous studies. Concerns arise from the findings and review of the scientific literature, which indicate that groundwater pumping has the potential to deplete surface water in the valley of the Skagit River, even if confining units are present. Additionally, pumping from the anticipated small number of localized fully-bounded aquifer bodies in the Skagit River basin can lead to aquifer depletion if they are truly disconnected from surface water, due to the lack of surface water available as a source of the pumped water. The timing of complete aquifer depletion in disconnected aquifers is unknown without further investigation, but it is generally known to be shortest where aquifers are the smallest and pumping rates are the highest.

1.0 Introduction

The Washington State Department of Ecology (Ecology) has authorized HDR, Inc. (HDR), under Master Contract C1700033, to assist in examining the hydrostratigraphy in five specific parts of the Skagit River valley. The purpose of this study is to add to the understanding of the hydrostratigraphy and explore the degree to which aquifers may be disconnected from the Skagit River and its tributaries. The motivating study question is whether or not aquifers exist that are completely disconnected from surface water by fine-grained (low-permeability) bounding hydrostratigraphic units. The study assessment covers five specific parts of the Skagit River valley within the middle and upper parts of the Skagit River basin between Grandy Creek and Marblemount, and in the Sauk River valley north of Darrington, within Water Resource Inventory Area 4 (WRIA4). The five areas of interest (sites) have been identified by Ecology as having potential to experience future groundwater development, variable lithology, high well density, and covering a large geographic area (see **Figure 1** for geographic setting and study sites).

The primary work product for this study includes cross sections with interpreted hydrostratigraphy depicting the spatial relationships between aquifers and low-permeability confining, or bounding, units. The classification of hydrostratigraphic units is based on lithologic (sediment texture) information from publically available well logs. The potential for specific aquifer bodies to be disconnected from surface waters is interpreted using the well logs reviewed, the developed cross sections, and review of supporting hydrogeologic investigation reports, groundwater modeling studies, and scientific literature.¹ Definitions of important terms associated with hydrogeology and streamflow depletion are provided below.

Hydrostratigraphy – The identification of mappable/distinct units on the basis of hydraulic properties that have considerable lateral extent and that also form a geologic framework. Commonly identified units are aquifers and confining units.

Aquifer – Water-bearing body/layer of permeable rock/sediment that transmits water to wells at economically feasible rates. Commonly silt, sand, gravel, or fractured bedrock.

Confining Unit – Essentially the opposite of an aquifer—a rock/sediment body/layer with permeability so low that water hardly moves through the unit. Commonly rich in clay.

Permeability – A measure of the ability of a porous material (rock/sediment) to allow movement of fluids. High permeability units (aquifers) will allow fluids to move rapidly through porous material, while low permeability units (confining units) allow fluid movement very slowly.

2.0 Skagit River Basin Instream Flow Rule

Ecology established the Skagit River basin Instream Resources Protection Program Rule (Washington Administrative Code [WAC] 173-503) on April 14, 2001, setting rules on minimum instream flow at River Mile 15.7. Ecology enacted a 2006 amendment to the instream flow rule

¹ In previous studies, HDR (2016, 2017) completed groundwater-flow modeling evaluations of potential streamflow depletion from pumping at various areas in the lower and middle Skagit River valley, largely downstream of the area investigated for this study (with one site being an area of overlap at the confluence of Grandy Creek with the Skagit River). Those prior study reports by HDR are dated July 6, 2016, and March 29, 2017, prepared for the Washington Water Trust, and Ecology, respectively.

reserving a specified quantity of water for out-of-stream uses (i.e., water uses other than instream flow). The Washington State Supreme Court Swinomish v. Ecology ruling on October 3, 2013, resulted in the finding that the 2006 water reservations are not allowed under the 2001 Skagit River instream flow rule. As a result of that decision, mitigation is necessary for streamflow depletion occurring from Skagit River basin water use beginning after 2001. Based on the Washington Supreme Court ruling and other administrative findings, Ecology has been developing mitigation for residences with wells developed after 2001 under the groundwater permit exemption.

Streamflow Depletion – A reduction in streamflow caused by groundwater pumping. The total amount of streamflow depletion equals the sum of the reductions in the outflow rate of groundwater from an aquifer (*captured groundwater discharge*) and increases in the inflow rate of streamflow to an aquifer (*induced infiltration of streamflow*). Although streamflow depletion refers specifically to streams, its use can include depletion (or capture) of flow in other surfacewater features, including rivers, springs and lakes, and vegetation that taps groundwater.

3.0 Methods

The basic methodology includes selection and use of well logs to produce cross sections depicting sediment texture and correlated hydrostratigraphic units with interpretations between and beneath boreholes. The nature of the geology and aquifers in the valley discussed are informed through review of available information from local hydrogeological investigation reports, groundwater modeling studies, and scientific literature, including geologic maps of the region. The locations of the five areas of interest, identified by Ecology, are shown in **Figure 1**, including the surficial geology mapped by the Washington State Department of Natural Resources (WSDNR) and U.S. Geological Survey (USGS) (WSDNR 2016). The five areas of interest (sites) are referred to as follows:

- Site #1 Grandy Creek Confluence
- Site #2 Concrete, south of Lake Shannon
- Site #3 West of Rockport State Park
- Site #4 Cascade River Confluence, north of Marblemount
- Site #5 Sauk River, north of Darrington

The individual wells with logs used to construct the cross sections, and surrounding available wells, along with cross section lines, are illustrated in **Figure 2 through 6**. The five sites have been identified by Ecology because they cover a wide geographic area, and have the potential to experience future groundwater development, variable lithology and high well capacity based on a preliminary review of wells.

3.1 Data Collection

The primary datasets used for this study include the following:

- Wells with driller's logs and location information obtained from the Washington State Well Log Report Viewer website (<u>fortress.wa.gov/ecy/wellconstruction/map/wclswebMap/default.aspx</u>)
- Geologic maps and descriptions of units from Ecology and WSDNR, and USGS (WSDNR 2016)

 Topographic data generated with LiDAR collected by Quantum Spatial for USGS, Glacier Peak LiDAR Project 2015, and Western Washington 3DEP LiDAR Project 2017 (<u>lidarportal.dnr.wa.gov/#48.21003:-121.93451:9</u>).

Apart from these data sources, much was gained from review of several hydrogeologic investigation reports, groundwater modeling studies and scientific literature in understanding the concept of, and potential for, streamflow depletion caused by groundwater development in general, and in the Skagit River valley. Those sources are cited in appropriate sections (or appendices). While several USGS wells were identified at the five sites, their associated well logs were not obtained or reviewed, as this was outside of the project scope.

3.2 Criteria for Selecting Cross Section Locations

Criteria were developed to select cross section lines at the five sites investigated. The first step involved the random survey review of a portion of well logs in the area of interest to focus on areas more likely to contain bounding confining units (high percentage of silt and clay) and/or containing deep wells. Second, up to three candidate section lines were identified and all the well logs lying on those lines were downloaded and reviewed. Third, a final section line was selected for each site as the one having the greatest potential to contain confining units or as the one containing the most information (i.e., number of wells and greatest depths). The final section line spans the greatest distance as compared to other candidate lines. Finally, well logs were transcribed into a spreadsheet, and some logs were removed because they were either shallower (where there are multiple wells in with the same coordinates), had deficient details in lithology, were illegible, or had no data.

Well locations were refined if possible, however, the wells were nearly ubiquitously mapped to the center of their associated Public Land Survey System (PLSS) quarter-quarter section. Addresses were available in some cases, but the wells fell outside of the quarter-quarter section, so the original locations were retained. Locating wells more precisely was not part of the scope of this project, as refining locations for the large numbers of wells in the large geographic extent of the study area would have been cost and time prohibitive. In areas where wells could not be located more precisely than the centroid of the PLSS quarter-quarter sections, several wells (usually three) were included in the development of the cross sections. In the case of more than three co-located wells, those wells with greater depths, more details in the logs, and those providing the most differences in lithology were selected, thereby allowing for inclusion of higher levels of heterogeneity to be depicted than the one well being represented.

Overall, the five sites contain a total of 934 wells, from which 349 well logs were reviewed (37.4 percent), 114 were transcribed to spreadsheets (12.2 percent), and 72 well logs were used for constructing cross sections (7.7 percent). The average depth of wells with transcribed logs equals 81.3 feet, while the average depth of wells in the areas of interest that were not transcribed equals 55.1 feet. Information regarding wells transcribed during the review process, including coordinates, land surface elevation, and depth to groundwater and screen interval are provided in **Appendix A**. The lithology/textural information transcribed from logs, as well as the generalized lithology (hydrostratigraphic units) classified from the logs, are provided in **Appendix B**. Wells logs used in the construction of the cross sections are presented in **Appendix C**. They are ordered by Site number (area of interest) and by point station number (based on Ecology ID, which has also been added to the well log documents for ease of reference).

3.3 Hydrostratigraphic Cross Section Preparation and Interpretation

The location of five final hydrostratigraphic cross sections, along with well locations, are presented in **Figures 2 through 6**. Lithology recorded on the logs was lumped together into six primary classes (hydrostratigraphic units or facies). These facies are ordered from highest to lowest estimated permeability, as follows:

- Sand & Gravel;
- Sand;
- Silt or Silty Sand;
- Clay, Sandy Clay, or Gravely Clay;
- Hard Pan; and
- Bedrock

Sand and gravel facies are generally considered aquifers, while the other facies are generally considered confining units. When designating the facies type, based on the logged sediment texture, it was assumed that the first recorded texture class was dominant. For instance, "sand and silt" was classified into the Sand unit, and "clay, sand and gravel" was classified into the Clay, Sandy Clay, or Gravely Clay unit. The clay described in the well logs often has accompanying sand and/or gravel, therefore it is likely that these unconsolidated deposits have highly variable permeability and storage properties. In some cases, the logs contained "glacial till," or "till," which was classified into the Clay, Sandy Clay, and Gravely Clay unit. Intervals logged as "top soil" were lumped into the facies type of the material found beneath it.

The top of casing elevations of the wells were estimated from LiDAR ground surface elevation data. The elevations of the hydrostratigraphic unit contacts and water table were estimated by subtracting the reported depth from the estimated top of casing elevation. Well screen intervals and reported groundwater levels were also recorded when provided on the logs. Additionally, the location of the Skagit River and its tributaries were included on the cross sections.

A relative ranking of the interpreted potential for hydraulically disconnected aquifers to be present was assigned and discussed at each of the five sites using the terms *low*, *moderate*, and *high*. Since groundwater flow is a three-dimensional (3-D) process, the use of cross sections for the basis of the interpretation restricts the findings to the qualitative relative ranking. No attempt was made to quantify the level of uncertainty associated with the rankings, but higher confidence is expected in areas where well density and depth are highest.

4.0 Results

The findings of the study are discussed below, beginning with a general description of the hydrogeology of the Skagit River valley, moving next to important discussion points from literature review on the concepts and theory of streamflow depletion and the source of water derived from wells, and finally detailing the hydrostratigraphy of each site and the potential for aquifers to exist that are hydraulically disconnected from surface water. The area geology, hydrogeology, and hydrostratigraphy is described in further detail in **Appendix D**, including hydrostratigraphic unit

extent and continuity for each site based on the developed cross sections and reviewed reports. In addition, **Appendix D** provides more detail, references and figures on the concepts and theory of streamflow depletion.

4.1 Hydrogeology Summary of the Skagit River Valley

Groundwater in the Skagit River valley occurs in the unconsolidated alluvial and glacial deposits in the main river valleys, and occurs in considerably lesser quantities in the bedrock of the mountain areas (Drost and Lombard 1978). Local-scale variability in the distribution of glacial depositional facies often results in the formation of spatially discontinuous units of varying thickness, and most units are not areally contiguous, with thicknesses that may vary considerably over short distances (Savoca et al. 2009). The groundwater-flow system of the Skagit River basin includes water entering the aquifers via recharge from precipitation or infiltration of tributaries at high elevations, which then moves primarily horizontally in the aquifers, traveling sub-parallel to the streams and rivers in a sinuous course or sub-vertically around or through confining units, before discharging to the Skagit River.

4.2 Streamflow Depletion and the Source of Water Derived From Wells

Groundwater systems are a continuum; therefore, pumped groundwater must be supplied by a) more water entering the groundwater system (increased recharge), b) less water leaving the system (decreased discharge), c) removal of water in storage, or d) some combination of these factors (Theis 1940). Equilibrium is reached only when pumping is balanced by capture (when drawdown of aguifer water levels, and removal of water in storage, stops). The dynamics of the groundwater systems are such that long periods of time are necessary before even an approximate equilibrium can be reached (Alley et al. 1999). Pumping may affect surface water directly via induced recharge, or by capture of groundwater that would otherwise discharge to surface water (as baseflow). The water captured from surface waters by wells is called "streamflow depletion," and the proportion of the water pumped by a well that is captured from surface water is called the "capture fraction." Capture fractions can be calculated for the depletion caused to individual surface water bodies from groundwater pumping at specific well locations (actual or hypothetical) using analytical solutions or numerical groundwater modeling. The effect of groundwater pumping on surface water resources has been described and modeled conceptually and mathematically by Barlow and Leake (2012), Bredehoeft (2002), Glover and Balmer (1954), Jenkins (1968), Leake et al. (2010), and Theis (1940), among others.

4.3 Streamflow Depletion in the Context of Connectivity and Confinement

Stream-aquifer hydraulic connections are made when aquifer materials with high-permeability have connected pathways to the stream, whether those pathways are largely horizontal, vertical, or require large distances be traversed. With respect to confining units, Barlow and Leake (2012) describe a common misconception of streamflow depletion: *pumping groundwater exclusively below a confining unit will eliminate the possibility of depletion of surface water connected to the underlying groundwater system*. Confining units may be laterally discontinuous or may form laterally extensive barriers separating adjacent aquifers. In most cases, confining units between wells and streams slow

the progression of depletion in comparison to equivalent aquifer systems without confining units. Despite this fact, Barlow and Leake (2012) make the following important statements with ramifications in the Skagit River basin:

It is not reasonable to expect that pumping beneath an extensive confining unit will eliminate depletion. Water does move vertically from one aquifer to another through confining units, and drawdown from pumping can propagate through confining units as well. [...] The argument that pumping beneath a confining unit eliminates the possibility of [stream] depletion implies that the pumped aquifer is without any vertical or lateral connection to aquifer material that is connected to surface water.

4.4 Hydrostratigraphic Cross Sections

This section describes the hydrostratigraphic units mapped in cross section, including an interpretation of the relative ranking of the degree of hydraulic disconnection between aquifers and surface water. The locations of five sites and final cross sections, along with well locations, are presented in **Figures 1 through 6**, while cross sections are illustrated in **Figures 7 through 11**.

Site #1 – Grandy Creek Confluence

Overall, the potential for hydraulically disconnected aquifers for this site is ranked as *moderate*. The evidence from previous studies suggests that a deeper aquifer is overlain by a thick confining unit that has the potential to hydraulically disconnect it from the Skagit River. However, the cross section constructed for this study (**Figure 7**) provides no definitive evidence of an extensive confining unit that would be capable of disconnecting groundwater from the Skagit River, and therefore such a confining condition cannot be extensive and some degree of connection between deep aquifers and the Skagit River or its tributaries may occur.

Site #2 - Concrete, south of Lake Shannon

Overall, the potential for hydraulically disconnected aquifers for this site is ranked as *moderate*. The cross section constructed for this study (**Figure 8**) provides evidence of an extensive confining unit, and potential for a deeper aquifer that may be confined, both of which raise the potential for disconnected aquifers. However, away from the cross section, particularly east and southeast of the cross section, well logs show less fine-grained materials, and in cross section the confining units near the Skagit River are relatively thin.

Site #3 - West of Rockport State Park

Overall, the potential for hydraulically disconnected aquifers for this site is ranked as *low* to *moderate*. The cross section constructed for this study (**Figure 9**), and review of other wells across the site, provide evidence for several confining units, raising the potential for disconnected aquifers. However, several of the wells reviewed do not penetrate any fine-grained (clay and silt) materials.

Site #4 - Cascade River Confluence, north of Marblemount

Overall, the potential for hydraulically disconnected aquifers for this site is ranked as *low* to *moderate*. In cross section the confining units appear to be largely discontinuous and to not completely surround any aquifer bodies, with the exception of alluvial fan deposits along the western margin of the valley (**Figure 10**). Facies are coarser, and less confining units exist near the Skagit River. There is the possibility that alluvial fan deposits on the margins of the site represent a disconnected aquifer, although the one neighboring deep well with lithology depicted as a Silt or Silty

Sand unit may allow groundwater flow at non-negligible rates, since silt or silty sand has higher permeability values than clay, and the log for that well (82436) describes there being some "gravel lenses." Therefore, the cross section constructed for this study (**Figure 10**) provides evidence that confining or semi-confining units exist, but they are typically not strong barriers to flow due to relatively coarse material or limited extent.

Site #5 - Sauk River, north of Darrington

Overall, the potential for hydraulically disconnected aquifers for this site is ranked as *moderate*. The cross section constructed for this study (**Figure 11**), and review of other wells across the site, provide evidence for several confining or semi-confining units, raising the potential for disconnected aquifers. One confining unit that has the potential to confine a regional aquifer over a large area is the glacial till. However, several of the wells reviewed do not penetrate any fine-grained (clay and silt) materials, and the cross section depicts a lack of lateral continuity of confining units.

5.0 Discussion and Conclusions

The findings elucidate the discontinuous and heterogeneous nature of the reworked glacio-fluvial sediments of the Skagit River valley described in previous studies, indicating abrupt contrasts in reworked material texture. In the areas of interest, there is direct evidence of fine-grained, relatively low-permeability units present in the subsurface that can be classified as confining units, but overall their spatial coverage can largely be considered discontinuous, with the possibility of a few localized exceptions as noted at Sites #1, #2, and #5. At these three sites, confined aquifers exist, with the highest potential for aquifers that are completely surrounded by hydraulic barriers (completely disconnected aquifers). Most of these conditions occur over limited extents in relatively small and commonly deeper aquifers or along the margins of the valleys.

Connectivity between coarse-grained (aquifer) materials is generally the rule, rather than the exception, especially in river-valley settings where the aquifer material is deposited by flowing water (Fogg and Zhang 2016), as aquifers are 3-D by nature. The results of previous modeling investigations indicate that throughout almost all of the lower and middle Skagit River valley (in the areas modeled), between 5 and 100 percent of the streamflow depletion from groundwater pumping wells will be from the mainstem Skagit River, with the remaining percentages almost entirely coming from the tributaries to the Skagit River (HDR 2016, 2017). These percentages (capture fractions) reflect conditions once the new pumping has reached equilibrium.

As detailed in **Appendix D**, the scientific literature reveals how pumping impacts streams with extracted water first coming from aquifer storage, and quickly thereafter coming from capture from connected features, including streams. Even where confining units have been identified, if they are not laterally continuous or do not fully surround (or bound) an aquifer, pumping from aquifers beneath them can lead to some level of streamflow depletion. In fact, a 24-hour constant-rate pumping test performed on Darrington Well #3 at 450 gpm in the deeper confined aquifer revealed drawdown declined after about 160 minutes, indicating either a recharge boundary and/or a leaky condition, meaning that flows are sourced either from the nearby Sauk River or from the shallow aquifer through the confining unit above, or both (Aspect Consulting 2003). Furthermore, concerns regarding the sustained use of aquifers arise in instances with pumping of small aquifers completely disconnected from surface water, because pumping will exceed any potential streamflow capture, instead being sourced from storage in the aquifer, and ultimately declining groundwater levels will persist until the aquifer is depleted (Bredehoeft and Durbin 2009).

6.0 Limitations

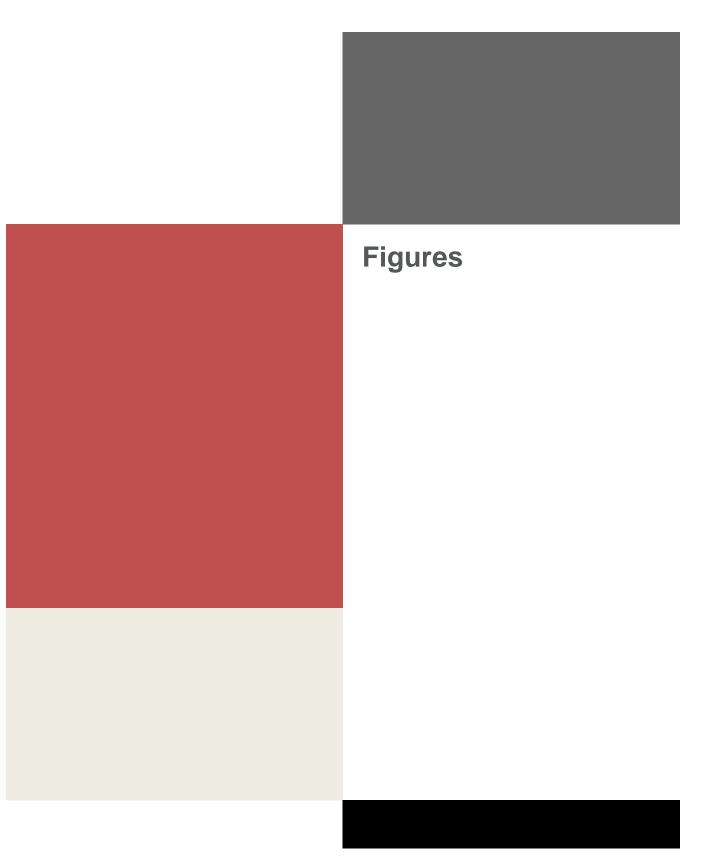
The findings in this technical memorandum are intended to allow a comparative evaluation between sites and do not constitute a detailed evaluation or prediction of actual site conditions. The well logs are the primary information used in the assessment, yet the spatial coverage, details on depositional facies and hydraulic properties, depths logged, and in a majority of cases the well location accuracy are all limited. Additionally, the analysis does not focus on the representation of the hydrostratigraphy in 3-D, although review of logs and previous reports allowed for some extension of understanding laterally perpendicular to the cross sections presented. While information on the lithology from wells located away from the cross sections was reviewed (on a limited basis), the data from those is not depicted, or considered with the same level of detail as those used in the construction of the cross sections.

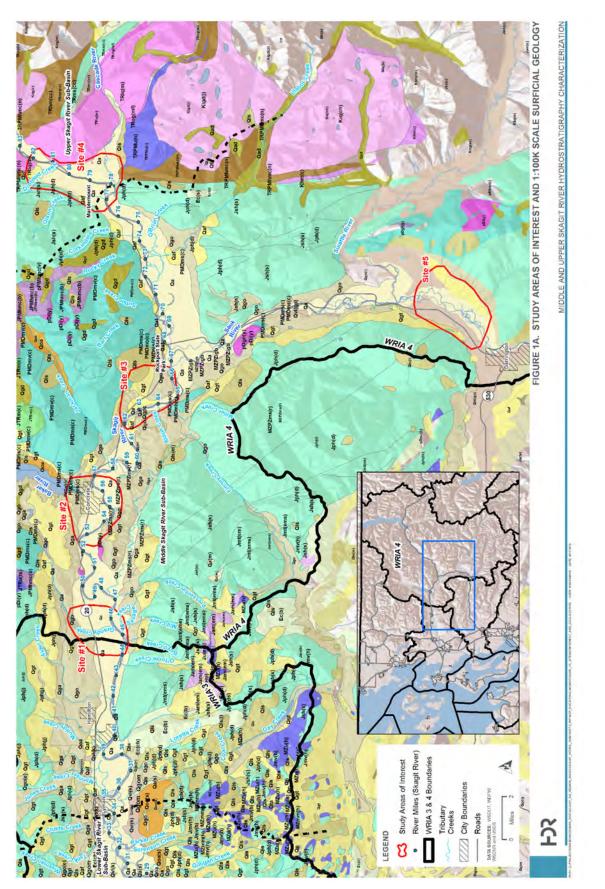
The results presented in this report are interpretations and must be used with caution. Use of this work product by others is at their own risk and the user assumes liability for its use. Any decisions that are made on the basis of this report are the responsibility of the owner. As with any scientific investigation, the findings depend on the available data and on information provided and published from other sources. While HDR has used its best efforts in preparing this technical memorandum, HDR has assumed that third party or client data is accurate, complete, reliable, and current.

7.0 References

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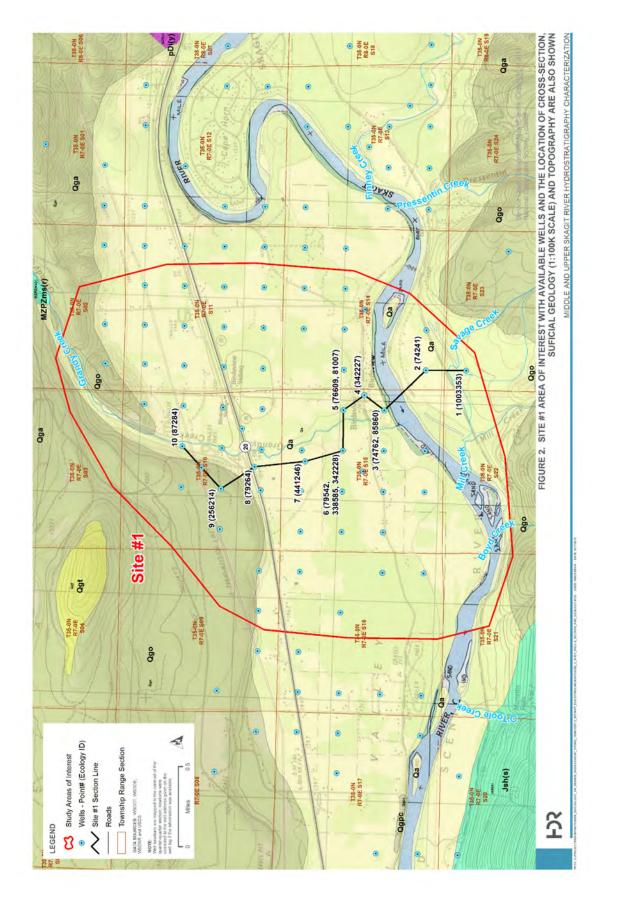
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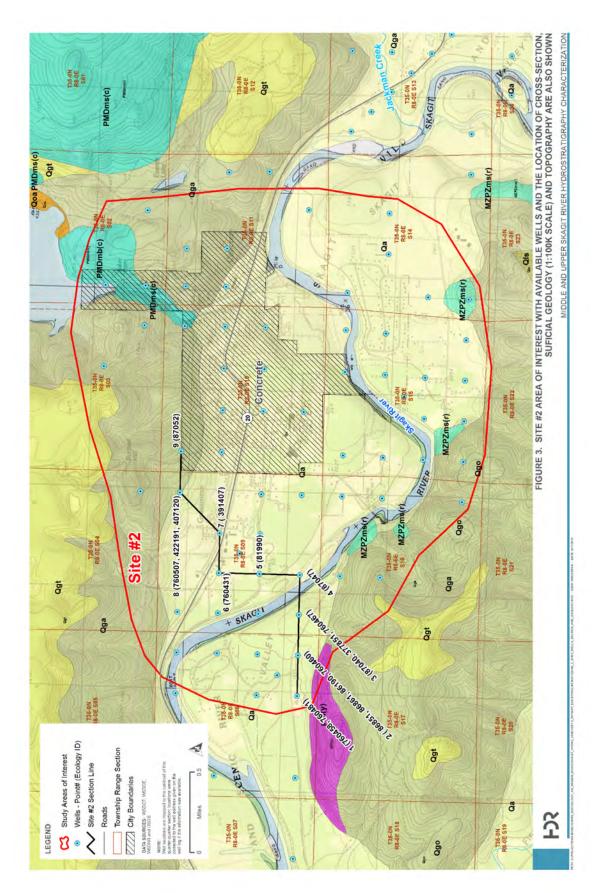


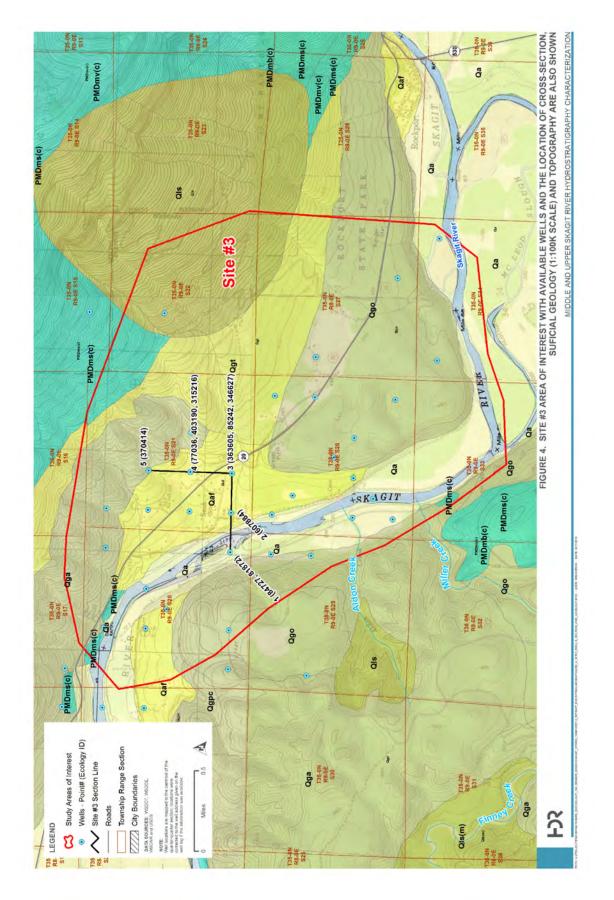


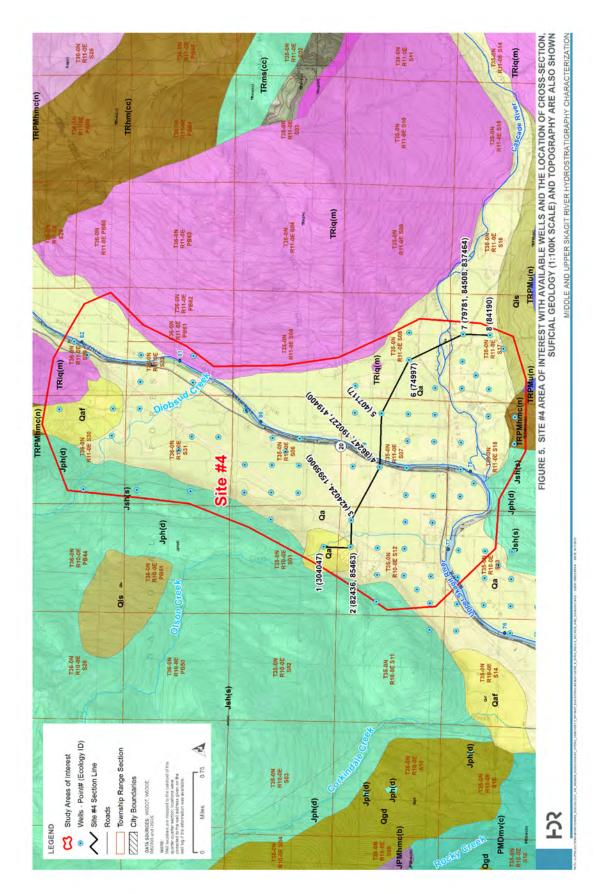
Unco	onsolidated Sediments
	Qa - Quarternary alluvium
	Qf - Holocene artificial fill
	Qgd - Pleistocene glacial drift
	Qgdm - Pleistocene glaciomarine drift
	Qgo - Pleistocene glacial outwash
	Qgt - Pleistocene glacial till
	Qoa - Quaternary alluvium older
	Qaf - Quarternary alluvial fan
	Qc - Pleistocene undifferentiated sedimentary deposits
	Qls - Holocene-Pleistocene landslide and mass wasting deposits
Sedi	mentary Rocks and Deposits
	Ec - Eocene continental sedimentary rocks
	TKcg - Tertiary-Cretaceous continental sedimentary rocks
	KJm - Cretaceous-Jurassic marine sedimentary rocks
	JTRm - Jurassic-Triassic sedimentary rocks
Sedi	mentary and Volcanic Rocks
	JDvs - Jurassic-Devonian sedimentary and volcanic rocks
Volc	anic Rocks and Deposits
	JTRvd - Mesozoic volcanic rocks
	QvI - Holocene-Pleistocene lahars deposits
ntru	sive Igneous Rocks
	Kigd - Tertiary-Cretaceous and Cretaceous intrusive igneous rocks
	TRiq - Mesozoic intrusive igneous rockst
	Oigd - Paleozoic intrusive igneous rocks
	JTRu - Mesozoic-Paleozoic ultramafic rocks
Meta	sedimentary and Metavolcanic Rocks (Greenschist Facies and Lower)
	Jmv - Mesozoic metasedimentary and metavolcanic rocks
	PMDms - Permian-Devonian metasedimentary and metavolcanic rocks
Meta	morphic Rocks (Amphibolite Faces and Higher) Kog - pre-Tertiary-Cretaceous orthogneisses and migmatites
	Khm - Cretaceous metamorphic rocks
	Jhmc - Jurassic-Permian metamorphic rocks
	TRog - Jurassic-Triassic orthogneisses
-	Jam - Mesozoic metamorphic rocks
	pDgn - Pre-Devonian gneiss
	pPMhmc - Paleozoic metamorphic rocks
DATA	SOURCE: WSDNR and USGS

MIDDLE AND UPPER SKAGIT RIVER HYDROSTRATIGRAPHY CHARACTERIZATION

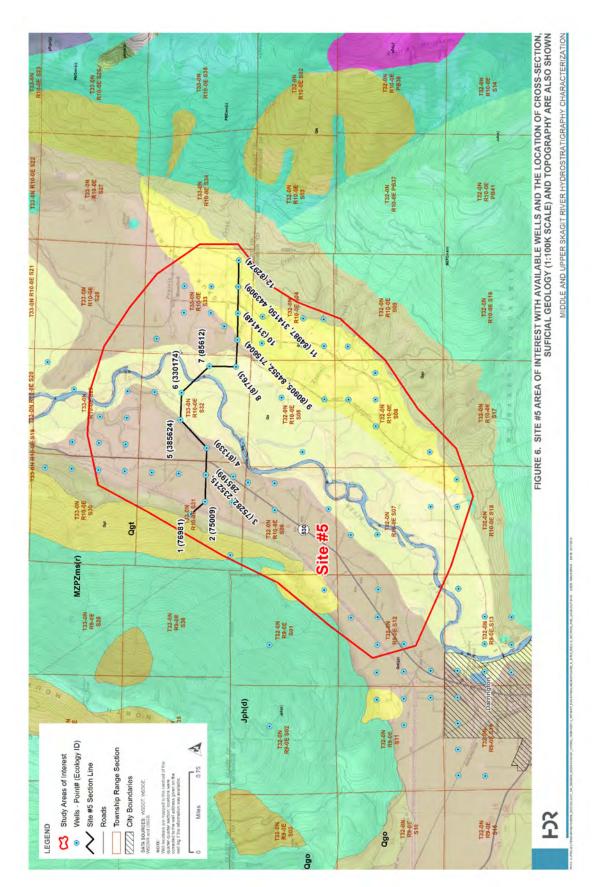


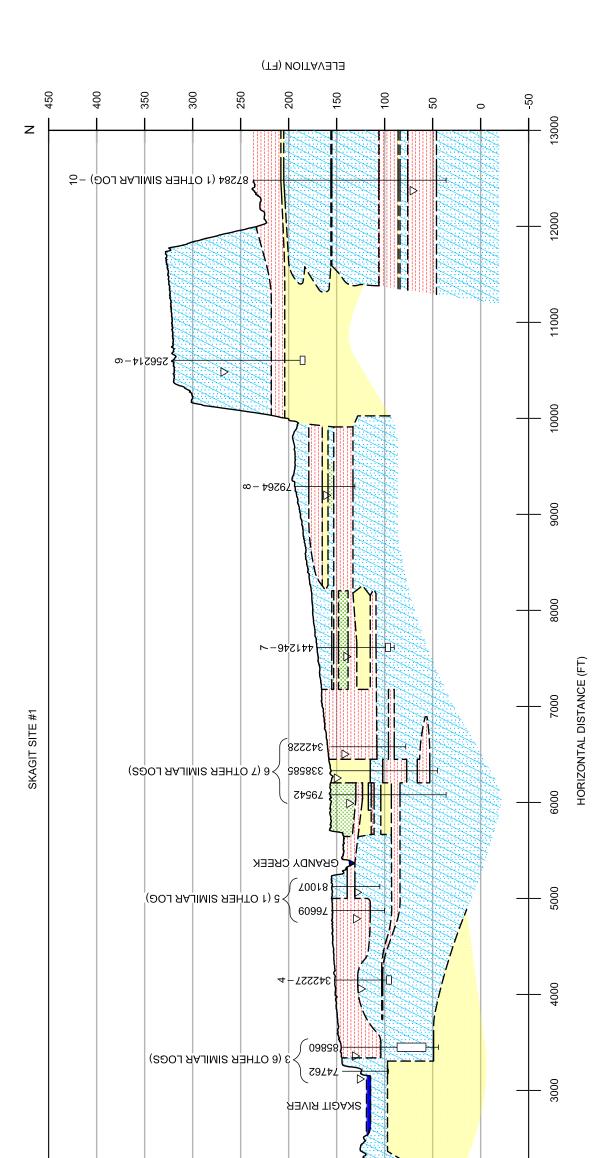






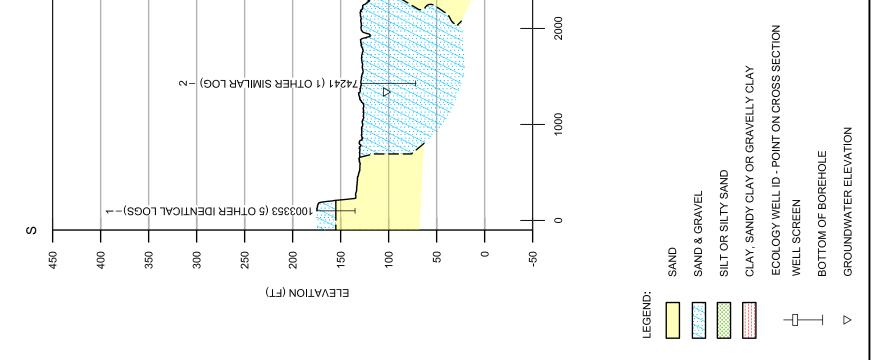
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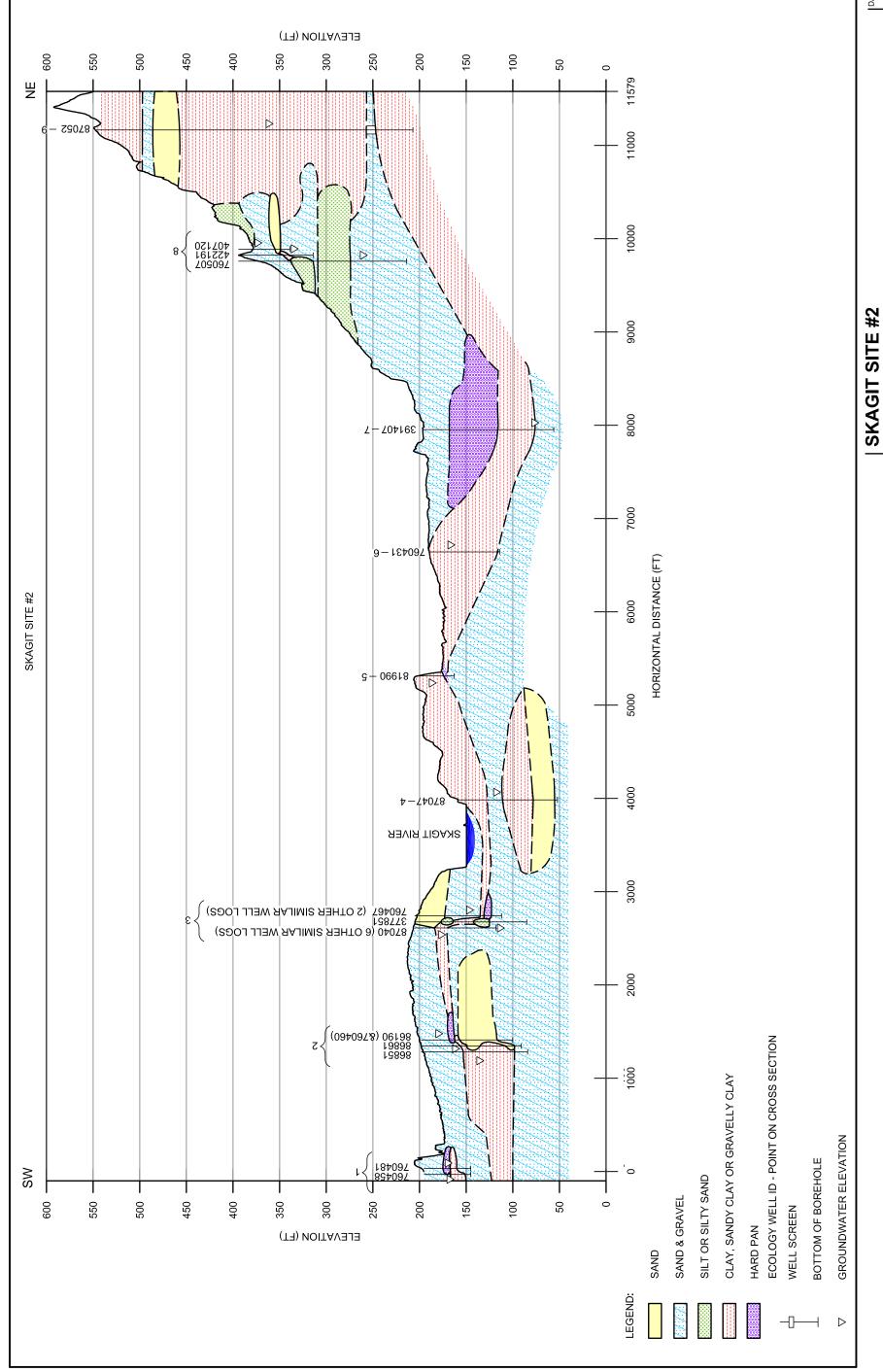
SKAGIT SITE #1 CROSS SECTION

DATE 07/10/2019 FIGURE



DATE 06/25/2019 FIGURE 8

CROSS SECTION



CROSS SECTION

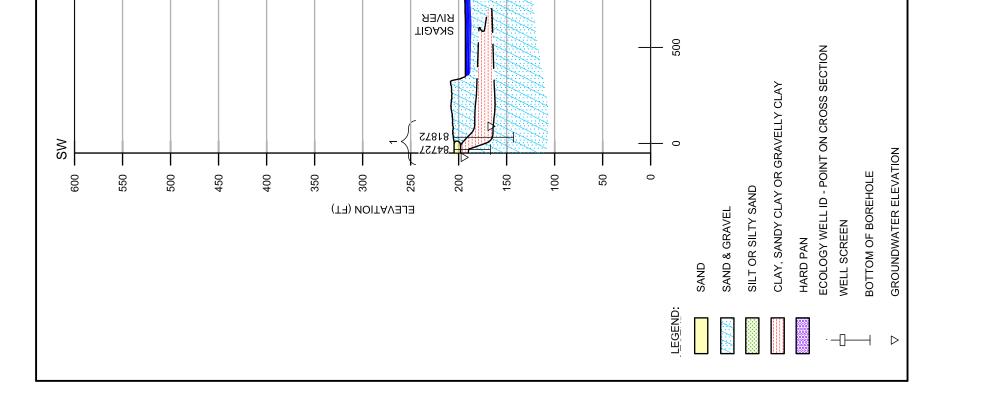


SKAGIT SITE #3

(TT) NOITAVALA 600 550 500 450 400 350 300 250 200 100 150 50 0 L 5500 ШZ \triangleright 320t1t-a 5000 4500 \$15216 \$03190 77036 4000 4 \triangleright 3500 Π 1 HORIZONTAL DISTANCE (FT) 3000 SKAGIT SITE #3 \triangleright 346627 85242 363605 ო 2500 \triangleright Ц 2000 1500 D ∾- †88209 1000

DATE 06/25/2019 FIGURE

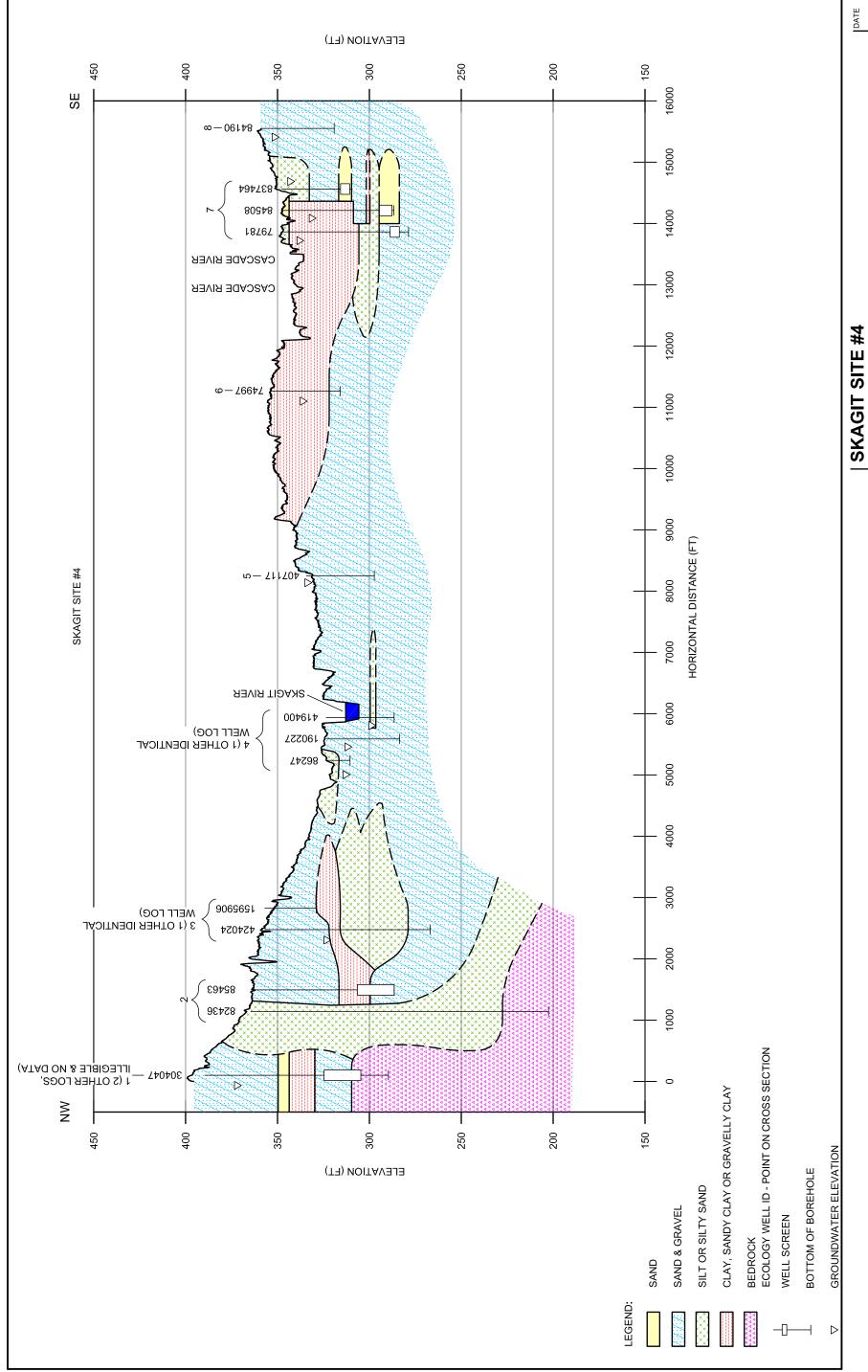
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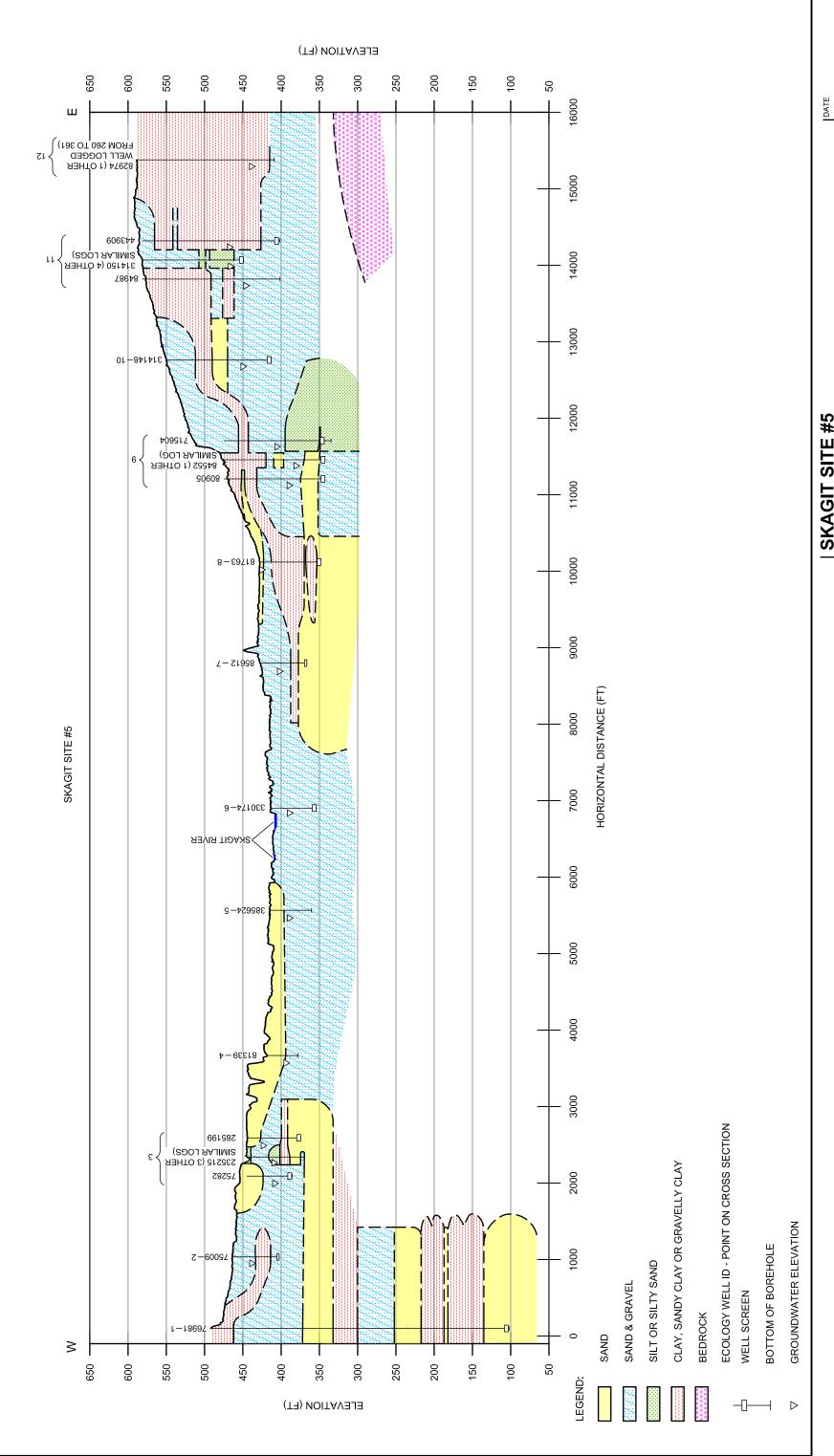


06/25/2019 FIGURE 10

CROSS SECTION









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FIGURE

06/25/2019

Appendix A Transcribed Well Data Summary Information

Ecology	0:44 #	Point on		X Coordinate	Y Coordinate	Well	Well	Ground Surface	Depth to	Groundwater	Screen Top	Screen Bottom
ID	Site #	Cross Section	Cross Section?	(State Plane)	(State Plane)	Depth (ft bgs)	Diameter (in)	Elevat- ion (ft)	Groundwater (ft bgs)	Elevation (ft)	Elevation (ft bgs)	Elevation (ft bgs)
1003353	1	1	YES	1307534	1162722	40	4	175.11				
74241	1	2	YES	1307548	1164050	56	6	128.70	30.0	99		
74762	1	3a	YES	1306226	1165410	46	6	144.50	23.0	122		
85860	1	3b	YES	1306226	1165410	72	8	144.50	18.0	127	88	58
342227	1	4	YES	1306727	1166066	59	6	152.02	32.0	120	98	93
76609	1	5a	YES	1306231	1166754	47	6	155.38	30.0	125		
81007	1	5b	YES	1306231	1166754	50	6	155.38	31.0	124		
79542	1	6a 6b	YES YES	1304899	1166773	60 110	6 6	156.08	23.4	133		
338585 342228	1	60 60	YES	1304899 1304899	1166773 1166773	78	6	156.08 156.08	10.5 19.0	146 137		
441246	1	7	YES	1304549	1168008	76	6	170.57	35.0	137	100	95
79264	1	8	YES	1304371	1169675	0	6	193.41	37.0	156	100	35
256214	1	9	YES	1303660	1170781	138	6	321.57	58.0	264	188	183
87284	1	10	YES	1305046	1172045	200	6	236.30	169.7	67		
74606	1	-	NO	1307548	1164050	34	6	128.70	16.0	113		
78586	1		NO	1304991	1170743	123	8	210.45	43.0	167	92	87
405599	1		NO	1304899	1166773	56	6	156.08	34.0	122	51	56
86862	1		NO	1304899	1166773	58	6	156.08	15.5	141		
256216	1		NO	1304899	1166773	46	6	156.08	32.0	124		
304037	1		NO	1304899	1166773	58	6	156.08	19.0	137		
81039	1		NO	1304899	1166773	120	6	156.08	20.0	136		
86863	1		NO	1304899	1166773	60	6	156.08	14.0	142		
81365	1		NO	1305046	1172045	8	36	236.30	2.9	233		
468522	1		NO	1304899	1166773	60	6	156.08		156	55	60
1003361	1		NO	1307534	1162722	40	4	175.11				
1003417	1		NO NO	1307534	1162722	40 40	4	175.11				
1003613 1003488	1		NO	1307534 1307534	1162722 1162722	40	4	175.11 175.11				
1003488	1		NO	1307534	1162722	40	4	175.11				
760458	2	1a	YES	1326203	1169004	40 50	6	195.77	32.0	164		
760481	2	1b	YES	1326203	1169004	50	6	195.77	30.0	166		
86851	2	2a	YES	1327549	1168971	114	6	198.27	67.0	131		
86861	2	2b	YES	1327549	1168971	107	6	198.27	41.0	157		
86190	2	2c	YES	1327549	1168971	41	6	198.27	23.0	175		
87040	2	3a	YES	1328878	1168941	87		205.09	33.0	172		
377851	2	3b	YES	1328878	1168941	120	6	205.09	96.0	109		
760467	2	3c	YES	1328878	1168941	93	6	205.09	63.0	142		
87047	2	4	YES	1330189	1168910	106	6	158.88	45.0	114		
81990	2	5	YES	1330222	1170241	39	6	202.49	20.0	182		
760431	2	6	YES	1330253	1171570	75	6	189.54	27.0	163		
391407	2	7	YES	1331564	1171539	140	6	196.49	124.0	72		
760507	2	8a 8b	YES YES	1332907	1172840 1172840	180 80	6	394.60	138.0	257		
422191 407120	2	8b 8c	YES	1332907 1332907	1172840 1172840	80 55	6 6	394.60 394.60	64.0 25.0	331 370		
407120 87052	2	9	YES	1334249	1172840	0	0	547.51	190.0	370	258	248
760460	2		NO	1327549	1168971	98	6	198.27	23.0	175	75	81
86831	2		NO	1328878	1168941	93	6	205.09	63.0	142	93	93
640635	2		NO	1339696	1173972	50	- Ť	351.08				20
640639	2		NO	1339696	1173972	35		351.08			20	35
86830	2		NO	1327549	1168971	0	1	198.27	22.0	176	42	42
87039	2		NO	1328878	1168941	65	Ì	205.09	40.0	165	65	65
87041	2		NO	1328878	1168941	63		205.09	41.0	164	63	63
87043	2		NO	1328878	1168941	76		205.09	50.0	155	76	76
87044	2		NO	1328878	1168941	61		205.09	45.0	160	61	61
87045	2		NO	1328878	1168941	60	6	205.09	35.0	170	60	60
87046	2		NO	1328878	1168941	60	6	205.09	35.0	170	60	60
760471	2		NO	1327549	1168971	60	6	198.27	40.0	158	50	58

		Point on	Drawn on	X	Y	Well	Well	Ground	Depth to	Groundwater	Screen	Screen
Ecology	Site #	Cross	Cross	Coordinate	Coordinate	Depth	Diameter	Surface	Groundwater	Elevation	Тор	Bottom
ID	one #	Section	Section?	(State	(State	(ft bgs)	(in)	Elevat-	(ft bgs)	(ft)	Elevation	Elevation
760400	2			Plane)	Plane)		, ,	ion (ft)		. ,	(ft bgs)	(ft bgs)
760492 86175	2		NO NO	1328878 1327549	1168941 1168971	87 60	6 6	205.09 198.27	37.0 40.0	168 158	87 50	87 58
86834	2		NO	1326203	1169004	41	6	195.77	23.0	173	41	41
117726	2		NO	1342175	1173905	0	0	746.25	20.0	110		1
775232	2		NO	1338391	1174006	42		586.94				
84727	3	1a	YES	1358901	1157655	38	6	204.92	15.0	190		
81872	3	1b	YES	1358901	1157655	62	6	204.92	43.0	162		
607884	3	2	YES	1360191	1157628	78	6	244.66	51.0	194	172	167
363605	3	3a	YES	1361486	1157598	96	6	303.49	66.0	237		
85242	3	3b	YES	1361486	1157598	60	6	303.49	51.0	252		
346627	3	3c	YES	1361486	1157598	178	6	303.49	77.0	226	400	400
77036 403190	3	4a 4b	YES YES	1361532 1361532	1158965 1158965	185 175	6 6	368.16 368.16	154.0 128.0	214 240	188	183
315216	3	40 40	YES	1361532	1158965	175	6	368.16	95.0	240		
370414	3	5	YES	1361576	1160333	178	6	496.20	151.0	345	328	318
304047	4	1	YES	1411075	1172218	100	6	389.64	20.0	370	325	305
82436	4	2a	YES	1411054	1170892	162	8	364.52				
85463	4	2b	YES	1411054	1170892	78	8	364.52	48.0	317	307	287
424024	4	3a	YES	1412382	1170869	90	6	356.92	36.0	321		
1595906	4	3b	YES	1412382	1170869	28	6	356.92				
86247	4	4a	YES	1414993	1169454	40	6	323.54	13.0	311		
190227	4	4b	YES	1414993	1169454	40	6	323.54	14.0	310		
419400	4	4c	YES	1414993	1169454	37	6	323.54	27.0	297		
407117	4	5	YES	1417644	1169367	36	6	333.32	2.0	331		
74997	4	6	YES	1420290	1168015	38	6	353.87	20.0	334	000	004
79781 84508	4	7a 7b	YES	1421552	1165354	65 60	6 6	347.68	12.0	336	289	284
84508 837464	4	70 7c	YES YES	1421552 1421552	1165354 1165354	60 37	6	347.68 347.68	18.7 7.0	329 341	295 316	288 311
84190	4	8	YES	1421508	1164015	40	6	359.14	10.0	349	510	511
1595915	4	Ŭ	NO	1412382	1170869	28	6	356.92	10.0	040		
76981	5	1	YES	1380816	1085385	389	6	492.07			108	103
75009	5	2	YES	1381440	1084689	61	6	463.62	30.0	434	406	403
75282	5	3a	YES	1382746	1084649	58	6	444.58	41.0	404	391	386
235215	5	3b	YES	1382746	1084649	75	6	444.58	40.0	405		
285199	5	3c	YES	1382746	1084649	20	6	444.58	26.0	419	380	375
81339	5	4	YES	1384072	1084607	40	6	417.99	29.0	389		
385624	5	5	YES	1385466	1085897	54	6	414.24	30.0	384		
330174	5	6	YES	1386801	1085849	59	6	413.18	29.0	384	359	354
85612	5	7	YES	1388111 1388090	1084479	61	6	427.50	30.0	397	369	366
81763 80905	5 5	8 9a	YES YES	1388090 1389425	1083158 1083096	80 132	6	427.89 474.74	7.4 90.0	420 385	353 348	348 343
80905 84552	5 5	9a 9b	YES	1389425	1083096	132	6	474.74	90.0 99.0	385	348	343
715604	5	9D 9C	YES	1389425	1083096	132	6	474.74	99.0 74.0	401	340	343
314148	5	10	YES	1390731	1083073	137	6	550.06	105.0	445	418	413
84987	5	11a	YES	1392038	1083050	180	6	581.46	140.0	441		
314150	5	11b	YES	1392038	1083050	132	6	581.46	120.0	461	454	449
443909	5	11c	YES	1392038	1083050	178	6	581.46	119.0	462	408	403
82974	5	12	YES	1393346	1083027	180	6	588.98	155.0	434		
314136	5		NO	1382746	1084649	58	6	444.58	25.0	420	53	58
1816836	5		NO	1393346	1083027	101	6	588.98	129.0	460		
76610	5		NO	1382746	1084649	58	6	444.58	24.0	421	53	58
90853	5		NO	1382746	1084649	60	6	444.58	40.0	405	55	60
81857	5		NO	1389425	1083096	133	6	474.74	82.0	393	450	457
325835 83700	5		NO	1392038	1083050	157	6 6	581.46 581.46	118.0	463	152	157
344931	5 5		NO NO	1392038 1392038	1083050 1083050	205 140	6	581.46	145.0 128.0	436 453	200	205
04490	5		UNU	1392030	1003030	140	6	581.46		453		



Appendix B Transcribed Well Log Lithology and Interpreted Hydrostratigraphic Units

Ecology ID	Site #	Cross	Drawn on Cross Section?	Depth to Top of Unit (ft bgs)	Depth to Bottom of Unit (ft bgs)	Lithology on Well Log	Generalized Lithology Group (Hydrostratigraphic Unit)
1003353	1	1	YES	0	5	Till, gravely sand	Sand and Gravel
1003353	1	1	YES	5	20	Gravel with sand	Sand and Gravel
1003353	1	1	YES	20	40	Sandy, gravely, silt	Sand
74241	1	2	YES	0	39	Sand and gravel	Sand and Gravel
74241	1	2	YES	39	56	Water bearing gravel	Sand and Gravel
74762	1	3a	YES	0	25	Gravel	Sand and Gravel
74762	1	3a	YES	25	47	Gravel and water	Sand and Gravel
74762	1	3a	YES	47	48	Sand and clay	Sand
85860	1	3b	YES	0	40	Brown clay and gravel	Clay, Sand Clay, or Gravely Clay
85860	1	3b	YES	40	95	water and gravel	Sand and Gravel
85860	1	3b	YES	95	100	water, fine sand and wood	Sand
342227	1	4	YES	0	2	Topsoil	Clay, Sand Clay, or Gravely Clay
342227	1	4	YES	2	14	Brown clay and sand	Clay, Sand Clay, or Gravely Clay
342227	1	4	YES	14	24	Brown clay sand and gravel	Clay, Sand Clay, or Gravely Clay
342227	1	4	YES	24	42	gravel and sand	Sand and Gravel
342227	1	4	YES	42	49	gravel sand and water	Sand and Gravel
342227	1	4	YES	49	50	Brown clay	Clay, Sand Clay, or Gravely Clay
342227	1	4	YES	50	59	Sand some gravel and water	Sand and Gravel
76609	1	5a	YES	0	20	Clay Brown	Clay, Sand Clay, or Gravely Clay
76609	1	5a	YES	20	40	Clay mix with sand, brown	Clay, Sand Clay, or Gravely Clay
76609	1	5a	YES	40	47	sand and gravel	Sand and Gravel
81007	1	5b	YES	0	16	Sand and gravel	Sand and Gravel
81007	1	5b	YES	10	24	Clay	Clay, Sandy Clay, or Gravely Clay
81007	1	5b	YES	24	34	Sand and gravel with clay	Sand and Gravel
81007	1	5b	YES	34	40	Sand and gravel	Sand and Gravel
81007	1	5b	YES	40	50	Sand, gravel, and water	Sand and Gravel
79542	1	6a	YES YES	0	2 26	Top soil	Silt or Silty Sand Silt or Silty Sand
79542 79542	1	6a 6a	YES		33	Silt and sand	
79542	1	6a	YES	26 33	39	Clay Sand	Clay, Sandy Clay, or Gravely Clay Sand
79542	1	6a	YES	33	42		Sand Sand and Gravel
79542	1	6a	YES	42	42	Sand and gravel Clav	Clay, Sandy Clay, or Gravely Clay
79542	1	6a	YES	42	43 52	Gravel, sand, and water	Sand and Gravel
79542	1	6a	YES	52	63	Sand and water	Sand
79542	1	6a	YES	63	72	Clay, sand and gravel	Clay, Sandy Clay, or Gravely Clay
79542	1	6a	YES	72	80	Gravel, sand, and water	Sand and Gravel
79542	1	6a	YES	80	89	Gravel, sand, and clay	Sand and Gravel
79542	1	6a	YES	89	95	Gravel and sand	Sand and Gravel
79542	1	6a	YES	95	120	Gravel, sand, and clay	Sand and Gravel
338585	1	6b	YES	0	2	Top soil	Sand
338585	1	6b	YES	2	12	Sand and silt	Sand
338585	1	6b	YES	12	41	Sand, silt, clay	Sand
338585	1	6b	YES	41	54	Gravel and sand	Sand and Gravel
338585	1	6b	YES	54	79	Clay and gravel	Clay, Sandy Clay, or Gravely Clay
338585	1	6b	YES	79	90	Gravel and sand	Sand and Gravel
338585	1	6b	YES	90	103	Clay and gravel	Clay, Sandy Clay, or Gravely Clay
338585	1	6b	YES	103	111	Gravel and sand	Sand and Gravel
342228	1	6c	YES	0	4	Top soil	Clay, Sandy Clay, or Gravely Clay
342228	1	6c	YES	4	36	Clay, sand and gravel	Clay, Sandy Clay, or Gravely Clay
342228	1	6c	YES	36	48	Clay	Clay
342228	1	6c	YES	48	60	Sand, gravel, water	Sand and Gravel
342228	1	6c	YES	60	66	Clay, sand	Clay, Sandy Clay, or Gravely Clay
342228	1	6c	YES	66	78	Sand, gravel, water	Sand and Gravel
441246	1	7	YES	0	1	Topsoil	Sand and Gravel
441246	1	7	YES	1	15	Brown sand gravel silt	Sand and Gravel
441246	1	7	YES	15	17	Brown silty sand seepage	Silt or Silty Sand
441246	1	7	YES	17	22	Brown clay	Clay, Sand Clay, or Gravely Clay
441246	1	7	YES	22	32	Gray fine sand silt water	Silt or Silty Sand
441246	1	7	YES	32	41	gray clay wood	Clay, Sand Clay, or Gravely Clay
441246	1	7	YES	41	55	gray sand wood water	Sand
441246	1	7	YES	55	61	tan clay sand	Clay, Sand Clay, or Gravely Clay
441246	1	7	YES	61	76	brown gravel sand water	Sand and Gravel
	1	'		76	10	brown gravel clay	

Ecology ID	Site #	Cross	Drawn on Cross Section?	Depth to Top of Unit (ft bgs)	Depth to Bottom of Unit (ft bgs)	Lithology on Well Log	Generalized Lithology Group (Hydrostratigraphic Unit)
79264	1	8	YES	1	14	sand and gravel	Sand and Gravel
79264	1	8	YES	14	28	Clay sand and gravel	Clay, Sand Clay, or Gravely Clay
79264	1	8	YES	28	34	fine sand	Sand
79264	1	8	YES	34	40	Sand gravel and water	Sand and Gravel
79264	1	8	YES	40	60	Clay blue	Clay, Sand Clay, or Gravely Clay
79264	1	8	YES	60	62	Sand gravel and water	Sand and Gravel
256214	1	9	YES	0	25	loose gravel and brown silty sand	Sand and Gravel
256214	1	9	YES	25	30	gravel and brown clay	Sand and Gravel
256214	1	9	YES	30	88	gravel sand and brown silt	Sand and Gravel
256214	1	9	YES	88	103	gravel sand and brown clay	Sand and Gravel
256214	1	9	YES	103	117	gray clay and gravel	Clay, Sand Clay, or Gravely Clay
256214	1	9	YES	117	138.5	fine gray sand and water	Sand
87284	1	10	YES	1	28	Clay, sand and gravel	Clay, sand clay, or gravelly clay
87284	1	10	YES	28	31	Sand	Sand
87284	1	10	YES	31	80	Sand gravel	Sand and Gravel
87284	1	10	YES	80	81	sand gravel, clay mud	Clay, Sand Clay, or Gravely Clay
87284	1	10	YES	81	110	Sand gravel	Sand and Gravel
87284	1	10	YES	110	130	sand gravel clay water	Sand and Gravel
87284	1	10	YES	130	150	Blue clay	Clay, sand clay, or gravelly clay
87284	1	10	YES	150	152	fine sand	Sand
87284	1	10	YES	152	160	sand gravel	Sand and Gravel
87284	1	10	YES	160	190	clay sand and gravel and water	Clay, Sand Clay, or Gravely Clay
87284	1	10	YES	190	200	sand gravel water	Sand and Gravel
74606	1	-	NO	0	15	Sand	n/a
74606	1	-	NO	15	27	Sand and gravel	n/a
74606	1	-	NO	27	34.6	Sand, gravel, and water	n/a
78586	1	-	NO	0	16	gravel and boulders	n/a
78586	1	-	NO	16	46	clay, brown and small grave	n/a
78586	1	-	NO	46	53	gravel and sand	n/a
78586	1	-	NO	53	58	Sand	n/a
78586	1	-	NO	58	60	Boulder	n/a
78586	1	-	NO	60	64	Gravel and sand	n/a
78586	1	-	NO	64	115	Clay, grey and gravel	n/a
78586	1	-	NO	115	118	Gravel, water bearing	n/a
78586	1	-	NO	118	126	Clay and gravel	n/a
405599	1	-	NO	0	2	Top soil	n/a
405599	1	-	NO	2	12	Silty sand and clay	n/a
405599	1	-	NO	12	25	Silt and gravel	n/a
405599	1	-	NO	25	40	Sand and silt	n/a
405599	1	-	NO	40	56	Sand and water	n/a
405599	1	-	NO	56	60	Clay, sand and gravel	n/a
86862	1	-	NO	0	2	Top soil	n/a
86862	1	-	NO	2	13	Silty sand	n/a
86862	1	-	NO	13	20	Silty sand	n/a
86862	1	-	NO	20	27	Clay and gravel	n/a
86862	1	-	NO	27	43	Sand, wood, and water	n/a
86862	1	-	NO	43	58.5	Gravel, sand, and water	n/a
256216	1	-	NO	0	14	Sandy clay	n/a
256216	1	-	NO	14	32	Sandy gravel	n/a
256216	1	-	NO	32	42	Sand, gravel, and water	n/a
256216	1	-	NO	42	46	Gravel, water	n/a
304037	1	-	NO	0	1	Top soil	n/a
304037	1	-	NO	1	10	Sand, gravel, and silt	n/a
304037	1	-	NO	10	18	Sand, gravel, and silt	n/a
304037	1	-	NO	18	34	Silt, sand, and clay	n/a
304037	1	-	NO	34	40	Silt, sand, wood, and seepage	n/a
304037	1	-	NO	40	45	Sand, water	n/a
	•			~		,	

Ecology ID	Site #	Cross	Drawn on Cross Section?	Top of Unit (ft bgs)	Depth to Bottom of Unit (ft bgs)	Lithology on Well Log	Generalized Lithology Group (Hydrostratigraphic Unit)
81039	1	-	NO	0	30	Clay	n/a
81039	1	-	NO	30	40	Sand and gravel	n/a
81039	1	-	NO	40	58	Sand, gravel, and water	n/a
81039	1	-	NO	58	69	Clay	n/a
81039	1 1	-	NO NO	69	118 120	Clay, gravel, and water	n/a n/a
81039 86863	1	-	NO	118 0	120	Sand, gravel, and water Top soil	n/a
86863	1	-	NO	14	21	Clay, mud, soupy	n/a
86863	1	-	NO	21	45	Clay, sand and gravel	n/a
86863	1	-	NO	45	60	Clay, sand, gravel, and water	n/a
81365	1	-	NO	0	10	Sandy gravel with cobbles	n/a
468522	1	-	NO	0	1	Top soil and gravel	n/a
468522	1	-	NO	1	6	Silty sand and gravel	n/a
468522	1	-	NO	6	15	Sand and silt	n/a
468522	1	-	NO	15	36	Silty sand and gravel	n/a
468522	1	-	NO	36	50	Sand, gravel, and water	n/a
468522	1	-	NO	50	60	Gravel, sand, and water	n/a
1003361	1	-	NO	0	5	Till, gravely sand	n/a
1003361	1	-	NO	5	20	Gravel with sand	n/a
1003361 1003417	1	-	NO	20	40	Sandy, gravely, silt Till, gravely sand	n/a
1003417	1 1	-	NO NO	0	5 20	Gravel with sand	n/a n/a
1003417	1	-	NO	20	40	Sandy, gravely, silt	n/a
1003417	1	-	NO	0	- 1 0 5	Till, gravely sand	n/a
1003613	1	-	NO	5	20	Gravel with sand	n/a
1003613	1	-	NO	20	40	Sandy, gravely, silt	n/a
1003488	1	-	NO	0	5	Till, gravely sand	n/a
1003488	1	-	NO	5	20	Gravel with sand	n/a
1003488	1	-	NO	20	40	Sandy, gravely, silt	n/a
1003499	1	-	NO	0	5	Till, gravely sand	n/a
1003499	1	-	NO	5	20	Gravel with sand	n/a
1003499	1	-	NO	20	40	Sandy, gravely, silt	n/a
760458	2	1a	YES	0	30	Boulders and sand	Sand and Gravel
760458	2	1a	YES	30	44	Clay and sand	Clay, Sandy Clay, or Gravely Clay
760458 760481	2	1a 1b	YES YES	44 0	50 20	Sand, gravel, water Sand, gravel, boulders	Sand and Gravel Sand and Gravel
760481	2	1b 1b	YES	20	20	Hard pan	Hard Pan
760481	2	1b 1b	YES	20	35	Clay, sand, gravel	Clay, Sandy Clay, or Gravely Clay
760481	2	1b 1b	YES	35	50	Sand, gravel, water	Sand and Gravel
86851	2	2a	YES	0	45	Sand, gravel, boulders	Sand and Gravel
86851	2	2a	YES	45	61	Clay	Clay, Sandy Clay, or Gravely Clay
86851	2	2a	YES	61	100	Clay, sand, and gravel	Clay, Sandy Clay, or Gravely Clay
86851	2	2a	YES	100	114	Sand, gravel, water	Sand and Gravel
86861	2	2b	YES	0	4	Clay, sand, and gravel	Sand and Gravel
86861	2	2b	YES	4	41	Sand, gravel, and boulders	Sand and Gravel
86861	2	2b	YES	41	49	Blue clay	Clay, Sandy Clay, or Gravely Clay
86861	2	2b	YES	49	63	Blue gray fine sand	Sand
86861	2	2b	YES	63	90	Brown clay, fine sand	Clay, Sandy Clay, or Gravely Clay
86861	2	2b	YES	90	100	Course brown sand	Sand
86861	2	2b	YES	100	107	Sand, gravel, water	Sand and Gravel
86190 86190	2	2c	YES	0	30	Clay, sand, and boulder	Sand and Gravel
86190 86190	2	2c 2c	YES YES	30 36	36 41	Hard pan Sand, gravel, water	Hard Pan Sand and Gravel
86190	2	20 20	YES	41	81	Heaving sand	Sand
86190	2	20 20	YES	81	95	Heaving sand and gravel	Sand and Gravel
86190	2	20 20	YES	95	98	Sand and gravel	Sand and Gravel
87040	2	3a	YES	0	10	Gravel	Sand and Gravel
87040	2	3a	YES	10	21	Sand gravel	Sand and Gravel
87040	2	3a	YES	21	35	Clay sand	Clay, Sandy Clay, or Gravely Clay
87040	2	3a	YES	35	60	Sand gravel	Sand and Gravel
87040	2	3a	YES	60	70	Water gravel	Sand and Gravel
87040	2	3a	YES	70	87	Gravel water	Sand and Gravel

Ecology ID	Site #	Cross Sections	Drawn on Cross Section?	Top of Unit (ft bgs)	Depth to Bottom of Unit (ft bgs)	Lithology on Well Log	Generalized Lithology Group (Hydrostratigraphic Unit)
377851	2	3b	YES	0	28	Sand	Sand
377851	2	3b	YES	28	41	Silt, sand, gravel	Silt or Silty Sand
377851	2	3b 3b	YES YES	41	63	Blue clay, fine sand	Clay, Sandy Clay, or Gravely Clay
377851 377851	2	3b 3b	YES	63 80	80 87	Silt, sand, gravel Gravel, some silt, water	Silt or Silty Sand Sand and Gravel
377851	2	3b 3b	YES	80	100	Sand, gravel, water	Sand and Gravel
377851	2	3b	YES	100	120	Sand and gravel	Sand and Gravel
760467	2	3c	YES	0	32	Sand	Sand
760467	2	3c	YES	32	70	Sand, gravel, clay	Sand and Gravel
760467	2	3c	YES	70	74	Brown clay, some water	Clay, Sandy Clay, or Gravely Clay
760467	2	3c	YES	74	82	Hard pan	Hard Pan
760467	2	3c	YES	82	90	Sand, gravel, clay	Sand and Gravel
760467	2	3c	YES	90	93	Sand, gravel, water	Sand and Gravel
87047	2	4	YES	0	31	Fine sand and clay	Clay, Sandy Clay, or Gravely Clay
87047	2	4	YES	31	47	Sand, gravel, boulders	Sand and Gravel
87047	2	4	YES	47	69	Clay	Clay, Sandy Clay, or Gravely Clay
87047	2	4	YES	69	80	Clay and fine sand	Clay, Sandy Clay, or Gravely Clay
87047	2	4	YES	80	100	Fine sand and water	Sand
87047	2	4	YES	100	103	Courser sand and water	Sand
87047	2	4	YES	103	106	Sand, gravel, water	Sand and Gravel
81990	2	5 5	YES YES	0 28	28 32	Sandy clay	Clay, Sandy Clay, or Gravely Clay Hard Pan
81990 81990	2	5 5	YES	32	32	Hard pan Compact gravel and water	Sand and Gravel
760431	2	6	YES	0	29	Clay	Clay, Sandy Clay, or Gravely Clay
760431	2	6	YES	29	42	Clay, sand, and gravel	Clay, Sandy Clay, or Gravely Clay
760431	2	6	YES	42	73	clay, sand, gravel, and water	Clay, Sandy Clay, or Gravely Clay
760431	2	6	YES	73	75	sand and gravel	Sand and Gravel
391407	2	7	YES	0	6	Top soil	Sand and Gravel
391407	2	7	YES	6	28	Silt, sand, gravel	Sand and Gravel
391407	2	7	YES	28	80	Hard pan	Hard Pan
391407	2	7	YES	80	120	Clay, sand, gravel, water	Clay, Sandy Clay, or Gravely Clay
391407	2	7	YES	120	140	Sand, gravel, water	Sand and Gravel
760507	2	8a	YES	0	10	Topsoil	Sand and Gravel
760507	2	8a	YES	10	56	Sand and gravel	Sand and Gravel
760507	2	8a	YES	56	80	Hard pan	Hard Pan
760507	2	8a	YES	80	85	Sand, gravel, some water	Sand and Gravel
760507	2	8a	YES	85	120	Silt, sand, gravel	Silt or Silty Sand
760507	2	8a 8a	YES YES	120	125 170	Sand, gravel, some water	Sand and Gravel
760507 760507	2	8a	YES	125 170	170	Sand and gravel Sand, gravel, water	Sand and Gravel Sand and Gravel
422191	2	8b	YES	0	20	Sand, gravel, water Silt, sand, gravel	Silt or Silty Sand
422191	2	8b	YES	20	48	Sand and gravel	Sand and Gravel
422191	2	8b	YES	48		Blue clay	Clay, Sandy Clay, or Gravely Clay
422191	2	8b	YES	54	68	Sand and gravel	Sand and Gravel
422191	2	8b	YES	68	80	Sand, gravel, water	Sand and Gravel
407120	2	8c	YES	0	23	Boulder and sand	Sand and Gravel
407120	2	8c	YES	23	39	Sand and gravel	Sand and Gravel
407120	2	8c	YES	39	45	Fine sand	Sand
407120	2	8c	YES	45	55	Sand, gravel, water	Sand and Gravel
87052	2	9	YES	0	10	Clay	Clay, Sandy Clay, or Gravely Clay
87052	2	9	YES	10	50	Clay, sand, gravel	Clay, Sandy Clay, or Gravely Clay
87052	2	9	YES	50	61	Sand and gravel	Sand and Gravel
87052	2	9	YES	61	90	Fine sand	Sand
87052	2	9 9	YES	90	290	Clay, sand, gravel Sand, gravel, water	Clay, Sandy Clay, or Gravely Clay
87052 87052	2	9	YES YES	290 300	300 340	Sand, gravel, water Clay, sand, gravel	Sand and Gravel Clay, Sandy Clay, or Gravely Clay
760460	2	3	NO	0	340	Clay, sand, gravei Clay, sand, boulder	n/a
760460	2	-	NO	30	30	Hard pan	n/a
760460	2		NO	36	41	Sand, gravel, water	n/a
760460	2	-	NO	41	81	Heavy sand	n/a
760460	2	-	NO	81	95	Heavy sand, gravel	n/a
760460	2	-	NO	95	98	Sand, gravel, water	n/a

Ecology ID	Site #	Cross	Drawn on Cross Section?	Depth to Top of Unit (ft bgs)	Bottom of Unit (ft bgs)	Lithology on Well Log	Generalized Lithology Group (Hydrostratigraphic Unit)
86831	2	-	NO	0	32	Sand	n/a
86831	2	-	NO	32	70	Sand, gravel, and clay	n/a
86831	2	-	NO	70	74	Brown clay	n/a
86831	2	-	NO	74	82	Water	n/a
86831	2	-	NO	82	90	Hard pan	n/a
86831 640635	2	-	NO NO	90	93 15	Sand, gravel, water Fill	n/a
640635	2	-	NO	0 15	25	Loose alluvium, brown cobbles	n/a n/a
640635	2	-	NO	25	30	Clay, silty till	n/a
640635	2	-	NO	30	42	Tight till, brown, cobbles	n/a
640635	2	-	NO	42	50	Clay altered black shale	n/a
640639	2	-	NO	0	10	Fill	n/a
640639	2	-	NO	10	20	Loose soil, brown cobbles	n/a
640639	2	-	NO	20	24	Boulder	n/a
640639	2	-	NO	24	35	Till, small cobbles, clay	n/a
640639	2	-	NO	35	42.5	Weathered limestone	n/a
86830	2	-	NO	0	30	Gravel, clay, boulders	n/a
86830	2	-	NO	30	34	Sand, clay	n/a
86830	2	-	NO	34	42	Sand, gravel, water	n/a
87039	2	-	NO	0	20	Boulder	n/a
87039	2	-	NO	20	33	Clay	n/a
87039	2	-	NO	33	52	Clay, sand, and gravel	n/a
87039	2	-	NO	52	65	Sand, gravel, water	n/a
87041	2	-	NO	0	18	Boulder	n/a
87041	2	-	NO	18	27	Clay, sand, and gravel	n/a
87041	2	-	NO	27	31	Sand	n/a
87041	2	-	NO	31	47	Clay, sand, and gravel	n/a
87041	2	-	NO	47	63	Sand, gravel, water	n/a
87043	2	-	NO	0	22	Boulder	n/a
87043	2	-	NO	22	31	Clay, sand, and gravel	n/a
87043	2	-	NO	31	46	Blue clay	n/a
87043	2	-	NO	46	53	Clay, sand, and gravel	n/a
87043 87043	2	-	NO NO	53 61	61 76	Fine sand	n/a n/a
87043	2	-	NO	0	23	Sand, gravel, water Boulder	n/a
87044	2	-	NO	23	41	Clay and fine sand	n/a
87044	2	-	NO	41	53	Blue clay	n/a
87044	2	_	NO	53	61	Sand, gravel, water	n/a
87045	2	-	NO	0	36	Sand, gravel, boulders	n/a
87045	2	-	NO	36	42	Clay and sand	n/a
87045	2	-	NO	42	55	Clay, sand, gravel	n/a
87045	2	-	NO	55	60	Sand, gravel, water	n/a
87046	2	-	NO	0	30	Sand, gravel, boulders	n/a
87046	2	-	NO	30	44	Clay and sand	n/a
87046	2	-	NO	44	56	Clay, sand, gravel	n/a
87046	2	-	NO	56	60	Sand, gravel, water	n/a
760471	2	-	NO	0	35	Boulder, sand, little clay	n/a
760471	2	-	NO	35	46	Sand and clay	n/a
760471	2	-	NO	46	60	Sand, gravel, water	n/a
760492	2	-	NO	0	3	Sand	n/a
760492	2	-	NO	3	40	Sand and gavel	n/a
760492	2	-	NO	41	43	Sand, clay, some water	n/a
760492	2	-	NO	43	80	Gray clay, sand	n/a
760492	2	-	NO	80	87	Clay, sand, gravel, water	n/a
86175	2	-	NO	0	35	Boulders, sand, and little clay	n/a
86175	2	-	NO	35	46	Sand and clay	n/a
86175	2	-	NO	46	60	Sand, gravel, water	n/a
86834	2	-	NO	0	30	Gravel and boulders	n/a
86834	2	-	NO	30	41	Sand, gravel, water	n/a
117726	2	-	NO	0	38.5	Clay	n/a
775232	2	-	NO	0	41.5	Sand and gravel	n/a

Ecology ID	Site #	Cross	Drawn on Cross Section?	Depth to Top of Unit (ft bgs)	Depth to Bottom of Unit (ft bgs)	Lithology on Well Log	Generalized Lithology Group (Hydrostratigraphic Unit)
84727	3	1a	YES	0	7	Brown sand and silt	Sand
84727	3	1a	YES	7	15	Brown Clay	Clay, Sandy Clay, or Gravely Clay
84727	3	1a	YES	15	38	Sand, gravel, water	Sand and Gravel
81872	3	1b	YES	0	18	Sand, gravel, boulders	Sand and Gravel
81872	3	1b	YES	18	40	Blue Clay	Clay, Sandy Clay, or Gravely Clay
81872	3	1b	YES	40	50	Sand and Gravel	Sand and Gravel
81872	3	1b	YES	50	62	Sand, gravel, water	Sand and Gravel
607884	3	2	YES	0	1	Top Soil	Sand
607884	3	2	YES	2	14	Brown sand clay	Sand
607884	3	2	YES	14	22	Gray Sand clay	Sand
607884	3	2	YES	22	53	Gray gravel	Sand and Gravel
607884	3	2	YES	53	62	Gray gravel, sand, water	Sand and Gravel
607884	3	2	YES	62	78	gravel, water	Sand and Gravel
363605	3	3a	YES	0	18	Silty top soil	Silt or Silty Sand
363605	3	3a	YES	18	22	Sand	Sand
363605	3	3a	YES	22	28	Sand and Gravel	Sand and Gravel
363605	3	3a	YES	28	40	Fine sand	Sand
363605	3	3a	YES	40	89	Sand, gravel, silt	Sand and Gravel with some silt or silty sand
363605	3	3a	YES	89	96	Sand, gravel, water	Sand and Gravel
85242	3	3b	YES	0	56	Brown Clay and gravel	Clay, Sandy Clay, or Gravely Clay
85242	3	3b	YES	56	60	Water and gravel	Sand and Gravel
85242	3	3b	YES	60	60	Blue Clay	Clay, Sandy Clay, or Gravely Clay
346627	3	3c	YES	0	24	Clay dark gray	Clay, Sandy Clay, or Gravely Clay
346627	3	3c	YES	24	31	Clay blue	Clay, Sandy Clay, or Gravely Clay
346627	3	3c	YES	31	34	Sand	Sand
346627	3	3c	YES	34	110	Clay blue	Clay, Sandy Clay, or Gravely Clay
346627	3	3c	YES	110	118	Sand	Sand
346627	3	3c	YES	118	140	Clay brown	Clay, Sandy Clay, or Gravely Clay
346627	3	3c	YES	140	160	Sand and Gravel	Sand and Gravel
346627	3	3c	YES	160	163	Silt gray	Silt or Silty Sand
346627	3	3c	YES	163	178	Sand, gravel, water	Sand and Gravel
77036	3	4a	YES	0	1	Top Soil	Clay, Sandy Clay, or Gravely Clay
77036	3	4a	YES	1	30	Brown clay and gravel	Clay, Sandy Clay, or Gravely Clay
77036	3	4a	YES	30	83	Brown sandy clay	Clay, Sandy Clay, or Gravely Clay
77036	3	4a	YES	83	155	Brown clay and gravel	Clay, Sandy Clay, or Gravely Clay
77036	3	4a	YES	155	175	Blue clay and gravel	Clay, Sandy Clay, or Gravely Clay
77036	3	4a	YES	175	185	Water, gravel, sand	Sand and Gravel
403190	3	4b	YES	0	10	Silt sand	Silt or Silty Sand
403190	3	4b	YES	10	12	Boulder	Sand and Gravel
403190	3	4b	YES	12	46	Large gravel and Sand	Sand and Gravel
403190	3	4b	YES	46	105	Hard pan	Hard Pan
403190	3	4b	YES	105	131	Sand and Gravel	Sand and Gravel
403190	3	4b	YES	131	149	Clay Blue	Clay, Sandy Clay, or Gravely Clay
403190	3	4b	YES	149	153	Clay Mud	Clay, Sandy Clay, or Gravely Clay
403190	3	4b	YES	153	160	Water, real fine sand	Sand and Gravel
403190	3	4b	YES	160	175	Sand, gravel, water	Sand and Gravel
315216	3	4c	YES	0	6	Top Soil	Sand and Gravel
315216	3	4c	YES	6	31	Sand and Gravel	Sand and Gravel
315216	3	4c	YES	31	36	Clay	Clay, Sandy Clay, or Gravely Clay
315216	3	4c	YES	36	41	Sand	Sand
315216	3	4c	YES	41	57	Sand and Gravel	Sand and Gravel
315216	3	4c	YES	57	62	Clay	Clay, Sandy Clay, or Gravely Clay
315216	3	4c	YES	62	78	Sand	Sand
315216	3	4c	YES	78	108	Clay, sand, gravel	Clay, Sandy Clay, or Gravely Clay
315216	3	4c	YES	108	118	Sand, gravel, water	Sand and Gravel

Ecology ID	Site #	Cross Sections	Drawn on Cross Section?	Depth to Top of Unit (ft bgs)	Depth to Bottom of Unit (ft bgs)	Lithology on Well Log	Generalized Lithology Group (Hydrostratigraphic Unit)
370414	3	5	YES	0	4	Brown top soil, cobbles	Sand and Gravel
370414	3	5	YES	4	10	Brown gravel and sand	Sand and Gravel
370414	3	5	YES	10	14	Brown Sand	Sand
370414	3	5	YES	14	30	Brown gravel and sand	Sand and Gravel
370414	3	5	YES	30	31	Brown clay	Clay, Sandy Clay, or Gravely Clay Sand and Gravel
370414 370414	3	5 5	YES YES	31 73	73 85	Brown gravel, clay, silt Gray gravel, clay, silt	Sand and Gravel
370414	3	5	YES	85	115	Brown gravel, clay, silty sand	Sand and Gravel
370414	3	5	YES	115	113	Gray clay, gravel, silty sand	Clay, Sandy Clay, or Gravely Clay
370414	3	5	YES	113	133	Brown gravel, sand, clay, silt	Sand and Gravel
370414	3	5	YES	133	142	Gray clay, gravel, silty sand	Clay, Sandy Clay, or Gravely Clay
370414	3	5	YES	142	153	Brown clay, gravel, silty sand	Clay, Sandy Clay, or Gravely Clay
370414	3	5	YES	153	162	Gray clay, gravel, silty sand	Clay, Sandy Clay, or Gravely Clay
370414	3	5	YES	162	178.5	Tan gravel, sand, fine sand, water	Sand and Gravel
304047	4	1	YES	0	40	Sand, gravel, clay	Sand and Gravel
304047	4	1	YES	40	46	sand	Sand
304047	4	1	YES	46	60	clay	Clay, Sandy Clay, or Gravely Clay
304047	4	1	YES	60	80	sand, water, gravel, clay	Sand and Gravel
304047	4	1	YES	80	100	shale, water	Bedrock (Shale)
82436	4	2a	YES	0	4	Top soil	Silt or Silty Sand
82436	4	2a	YES	4	28	Silt with gravel lenses	Silt or Silty Sand
82436	4	2a	YES	28	137	Silt with some gravel and sand all the way	Silt or Silty Sand
82436	4	2a	YES	137	162	Granite	Bedrock (Granite)
85463	4	2b 2b	YES YES	0 37	37	Dirty sand and gravel	Sand and Gravel
85463	4	2b 2b	YES	40	40 65	water, sand gravel	Sand and Gravel Clay, Sandy Clay, or Gravely Clay
85463 85463	4	20 2b	YES	40 65	78	Brown clay and gravel Gravel and water	Sand and Gravel
424024	4	20 3a	YES	0	6	Top soil	Sand and Gravel
424024	4	3a	YES	6	35	Sand, gravel	Sand and Gravel
424024	4	3a	YES	35	41	Clay Blue	Clay, Sandy Clay, or Gravely Clay
424024	4	3a	YES	41	78	Silt, Sand, and gravel	Silt or Silty Sand
424024	4	3a	YES	78	90	Sand, gravel, water	Sand and Gravel
1595906	4	3b	YES	0	5	Top soil	Sand and Gravel
1595906	4	3b	YES	5	28	Reddish/brown silty gravels into bedrock	Sand and Gravel
1595906	4	3b	YES	28	28	Bedrock	Bedrock (not identified)
86247	4	4a	YES	0	1	Top soil	Sand
86247	4	4a	YES	1	7	brown silty sand	Sand
86247	4	4a	YES	7	13	brown cobbles and sand	Sand and Gravel
86247	4	4a	YES	13	13	gravel and water	Sand and Gravel
190227	4	4b	YES	1	6	Top soil	Sand and Gravel
190227	4	4b	YES	6	30	Sand and Gravel	Sand and Gravel
190227	4	4b	YES	30	40	Sand and Gravel and Water	Sand and Gravel
419400 419400	4	4c 4c	YES YES	0	6 24	Top soil Sand and gravel	Sand and Gravel Sand and Gravel
419400	4	4c 4c	YES	23	24	sand and gravel	Sand and Gravel Silt or Silty Sand
419400	4	40 40	YES	23	31	Sand and gravel	Sand and Gravel
419400	4	40 40	YES	31	37	Sand, gravel, water	Sand and Gravel
407117	4	5	YES	0	6	Top soil	Sand and Gravel
407117	4	5	YES	6	23	Sand, gravel, silt	Sand and Gravel
407117	4	5	YES	23	30	Sand and gravel	Sand and Gravel
407117	4	5	YES	30	36	Sand, gravel, water	Sand and Gravel
74997	4	6	YES	0	3	Top soil	Clay, Sandy Clay, or Gravely Clay
74997	4	6	YES	3	32	Gravel and clay	Clay, Sandy Clay, or Gravely Clay
74997	4	6	YES	32	38	Water and gravel	Sand and Gravel
79781	4	7a	YES	0	4	Brown sandy loam	Silt or Silty Sand
79781	4	7a	YES	4	14	Gray cobbles and clay	Clay, Sandy Clay, or Gravely Clay
79781	4	7a	YES	14	24	cobbles and clay with seepage	Clay, Sandy Clay, or Gravely Clay
79781	4	7a	YES	24	40	Gravel, clay, and sand	Clay, Sandy Clay, or Gravely Clay
79781	4	7a	YES	40	42	Gravel, clay, and sand with seepage	Clay, Sandy Clay, or Gravely Clay
79781	4	7a	YES	42	53	Silt and sand	Silt or Silty Sand
79781	4	7a	YES	53	69	Sand with some gravel	Sand and Gravel

Ecology ID	Site #	Cross Sections	Drawn on Cross Section?	Depth to Top of Unit (ft bgs)	Bottom of Unit (ft bgs)	Lithology on Well Log	Generalized Lithology Group (Hydrostratigraphic Unit)
84508	4	7b	YES	0	4	Sand, light brown	Sand
84508	4	7b	YES	4	15	Clay, gravel, and clay, gray	Clay, Sandy Clay, or Gravely Clay
84508	4	7b	YES	15	28	Clay. Gravel, and cooble, gray	Clay, Sandy Clay, or Gravely Clay
84508	4	7b	YES	28	39	Clay and sand (seepage), brown	Clay, Sandy Clay, or Gravely Clay
84508	4	7b	YES	39	46	gravel and sand (water), brown	Sand and Gravel
84508	4	7b 7b	YES	46	48	Clay and silt (seepage), gray	Clay, Sandy Clay, or Gravely Clay
84508 84508	4	7b 7b	YES YES	48 53	53 61	Silt and sand, yellow-brown	Silt or Silty Sand Sand
837464	4	70 70	YES	0	1	sand (water), yellow brown Top soil	Sand Silt or Silty Sand
837464	4	70 70	YES	1	12	Brown silty sand some gravel	Silt of Silty Sand
837464	4	70 70	YES	12	12	Brown silty sand, wood and water	Silt or Silty Sand
837464	4	7c	YES	12	26	Tan gravel sand water	Sand and Gravel
837464	4	7c	YES	26	20	Tan gravel silt water	Sand and Gravel
837464	4	70 70	YES	29	31	Tan sand gravel water	Sand and Gravel
837464	4	70 70	YES	31	38	Tan sand water	Sand
837464	4	7c	YES	38	38	Tan sand silt water	Sand and Gravel
84190	4	8	YES	0	20	Dirty sand and gravel	Sand and Gravel
84190	4	8	YES	20	40	Water and gravel	Sand and Gravel
1595915	4	-	NO	0	5	Top soil	n/a
1595915	4	-	NO	5	28	Reddish/brown silty gravels into bedrock	n/a
1595915	4	-	NO	28	28	Bedrock	n/a
76981	5	1	YES	0	30	Till	Clay, Sandy Clay, or Gravely Clay
76981	5	1	YES	30	120	Sand, gravel	Sand and Gravel
76981	5	1	YES	120	160	Sand	Sand
76981	5	1	YES	160	192	Clay, sandy	Clay, Sandy Clay, or Gravely Clay
76981	5	1	YES	192	240	Sand, gravel	Sand and Gravel
76981	5	1	YES	240	275	Sand	Sand
76981	5	1	YES	275	305	Clay, sandy	Clay, Sandy Clay, or Gravely Clay
76981	5	1	YES	305	310	Sand	Sand
76981	5	1	YES	310	357	Clay, sandy	Clay, Sandy Clay, or Gravely Clay
76981	5	1	YES	357	390	Sand, coarse	Sand
75009	5	2	YES	0	30	Sandy gravel	Sand and Gravel
75009	5	2	YES	30	50	Clay	Clay, Sandy Clay, or Gravely Clay
75009	5	2	YES	50	61	Sandy gravel	Sand and Gravel
75282	5	3a	YES	0	21	Sand	Sand
75282	5	3a	YES	21	59	Gravel, sand	Sand and Gravel
235215	5	3b	YES	0	5	Silt, sand, gravel	Silt or Silty Sand
235215	5	3b	YES	5	28	Sand, gravel	Sand and Gravel
235215	5	3b	YES	28	43	Silt, sand	Silt or Silty Sand
235215	5	3b	YES	43	56	Clay, sand, gravel	Clay, Sandy Clay, or Gravely Clay
235215	5	3b	YES	56	70	Sand water	Sand
235215	5	3b	YES	70	75	Sand, gravel, water	Sand and Gravel
285199	5	3c	YES	0	18	Sand	Sand
285199	5	3c	YES	18	45	Boulders and sand	Sand and Gravel
285199	5	3c	YES	45	53	Clay	Clay, Sandy Clay, or Gravely Clay
285199	5	3c	YES	53	70	Water bearing sand	Sand
81339	5	4	YES	0	24	Top soil	Sand
81339	5	4	YES	24	40	Sand and gravel	Sand and Gravel
385624	5	5	YES	0	18	Sand	Sand
385624	5	5	YES	18	54	Sand and gravel	Sand and Gravel
330174	5	6	YES	0	59	Sand and gravel	Sand and Gravel
85612	5	7	YES	0	40	Sand and gravel	Sand and Gravel
85612	5	7	YES	40	50	Clay	Clay, Sandy Clay, or Gravely Clay
85612	5	7	YES	50	61	Sand, water	Sand
81763	5	8	YES	0	5	Top soil	Sand
81763	5	8	YES	5	15	Sand, gravel	Sand and Gravel
81763	5	8	YES	15	58	Clay	Clay, Sandy Clay, or Gravely Clay
81763	5	8	YES	58	60	Sand	Sand
81763	5	8	YES	60	75	Clay	Clay, Sandy Clay, or Gravely Clay
81763	5	8	YES	75	80	Sand	Sand

Ecology ID	Site #	Cross	Drawn on Cross Section?	Depth to Top of Unit (ft bgs)	Depth to Bottom of Unit (ft bgs)	Lithology on Well Log	Generalized Lithology Group (Hydrostratigraphic Unit)
80905	5	9a	YES	0	23	Top soil	Clay, Sandy Clay, or Gravely Clay
80905	5	9a	YES	23	27	Sand	Sand
80905	5 5	9a	YES	27	43	Clay Crovel with cond	Clay, Sandy Clay, or Gravely Clay
80905 80905	5	9a 9a	YES YES	43 100	100 123	Gravel with sand Sand	Sand and Gravel Sand
80905	5	9a 9a	YES	123	132	Sand with gravel	Sand and Gravel
84552	5	9b	YES	0	55	Top soil	Clay, Sandy Clay, or Gravely Clay
84552	5	9b	YES	55	65	Sand and gravel	Sand and Gravel
84552	5	9b	YES	65	78	Sand	Sand
84552	5	9b	YES	78	105	Gravel	Sand and Gravel
84552	5	9b	YES	105	125	Sand	Sand
84552	5	9b	YES	125	132	Sand, gravel, water	Sand and Gravel
715604	5	9c	YES	0	19	Top soil	Sand and Gravel
715604	5	9c	YES	19	32	Clay	Clay, Sandy Clay, or Gravely Clay
715604 715604	5 5	9c 9c	YES YES	32 80	80 125	Sand and gravel Silty sand	Sand and Gravel
715604	5	90 90	YES	125	125	Sand	Silt or Silty Sand Sand
715604	5	90 90	YES	125	132	Sand Silt, sand	Silt or Silty Sand
314148	5	10	YES	0	38	Silty sand and gravel	Sand and Gravel
314148	5	10	YES	38	60	Clay	Clay, Sandy Clay, or Gravely Clay
314148	5	10	YES	60	80	Sand and clay	Sand
314148	5	10	YES	80	137	Sand and gravel	Sand and Gravel
84987	5	11a	YES	0	90	Top soil	Clay, Sandy Clay, or Gravely Clay
84987	5	11a	YES	90	105	Sandy gravel	Sand and Gravel
84987	5	11a	YES	105	120	Sandy clay	Clay, Sandy Clay, or Gravely Clay
84987	5	11a	YES	120	180	Gravel	Sand and Gravel
314150	5	11b	YES	0 74	74	Gravel	Sand and Gravel
314150 314150	5 5	11b 11b	YES YES	83	83 88	Silt Gravel	Silt or Silty Sand Sand and Gravel
314150	5	11b	YES	88	120	Silt, gravel	Silt or Silty Sand
314150	5	11b	YES	120	132	Gravel	Sand and Gravel
443909	5	11c	YES	0	16	Gravel	Sand and Gravel
443909	5	11c	YES	16	40	Clay, sand, gravel	Clay, Sandy Clay, or Gravely Clay
443909	5	11c	YES	40	46	Sand and gravel, some water	Sand and Gravel
443909	5	11c	YES	46	155	Clay with coarse sand	Clay, Sandy Clay, or Gravely Clay
443909	5	11c	YES	155	180	Sand, gravel, water	Sand and Gravel
82974	5	12	YES	0	174	Clay and gravel	Clay, Sandy Clay, or Gravely Clay
82974 314136	5 5	12	YES	174 0	180 5	Gravel and water Top soil	Sand and Gravel
314136	5	-	NO NO	5	5 12	Sand	n/a
314136	5	-	NO	12	42	Clay and gravel	n/a
314136	5	-	NO	42	58	Sand and water	n/a
1816836	5	-	NO	260	263	Shale with white quartz	n/a
1816836	5	-	NO	263	288	Shale	n/a
1816836	5	-	NO	288	290	Quartz and shale	n/a
1816836	5	-	NO	290	308	Shale	n/a
1816836	5	-	NO	308	314	Shale	n/a
1816836	5	-	NO	314	322	Shale	n/a
1816836	5	-	NO	322	361	Shale	n/a
76610 76610	5 5	-	NO NO	0 0.5	0.5 26	Top soil Sand and gravel	n/a n/a
76610	5	-	NO	26	35	Clay	n/a
76610	5	-	NO	35	51	Gravel, some rocks, water	n/a
76610	5	-	NO	51	58	Sand	n/a
90853	5	-	NO	0	40	Sand	n/a
90853	5	-	NO	40	50	Gravel	n/a
90853	5	-	NO	50	60	Water sand	n/a
81857	5	-	NO	0	42	Clay	n/a
81857	5	-	NO	42	85	Clay, gravel	n/a
81857	5	-	NO	85	120	Sand	n/a
81857	5	-	NO	120	133	Gravel, sand, water	n/a

Ecology ID	Site #	Cross	Drawn on Cross Section?	Depth to Top of Unit (ft bgs)	Bottom	Lithology on Well Log	Generalized Lithology Group (Hydrostratigraphic Unit)
325835	5	-	NO	0	11	Silty gravel	n/a
325835	5	-	NO	11	107	Gravel, sand, clay	n/a
325835	5	-	NO	107	150	Gravel, silt	n/a
325835	5	-	NO	150	160	Grave, sand, and water	n/a
83700	5	-	NO	0	24	Conglomerate	n/a
83700	5	-	NO	24	56	Conglomerate	n/a
83700	5	-	NO	56	62	Gravel	n/a
83700	5	-	NO	62	86	Conglomerate	n/a
83700	5	-	NO	86	124	Conglomerate	n/a
83700	5	-	NO	124	138	Clay	n/a
83700	5	-	NO	138	164	Gravel and sand	n/a
83700	5	-	NO	164	165	Trace of water	n/a
83700	5	-	NO	165	180	Conglomerate	n/a
83700	5	-	NO	180	200	Conglomerate	n/a
83700	5	-	NO	200	204	Conglomerate	n/a
83700	5	-	NO	204	205	Water	n/a
344931	5	-	NO	0	8	Gravel	n/a
344931	5	-	NO	8	134	Glacial till	n/a
344931	5	-	NO	134	136	Sand and gravel	n/a
344931	5	-	NO	136	140	Glacial till	n/a
86031	5	-	NO	0	153	Clay and gravel	n/a
86031	5	-	NO	153	166	Clay and water	n/a
86031	5	-	NO	166	178	Clay and gravel	n/a
86031	5	-	NO	178	185	Clay	n/a
86031	5	-	NO	185	193	Gravel and water	n/a

Appendix C

Well Logs used to Develop Hydrostratigraphic Cross Sections

Eco id: 1003353

Please	e print, sign and retur	n to the Departur	ent of Ecology
RESUURCE PROTECTIO	IN WELL REPOR		IT Notice of Intent No. 5652762
(SUBMIT ONE WELL REPORT PER	WELL INSTALLED		
Construction/Decommission ("v" in bo	N)		Type of Well ("y in body
L. Decompossion		*	Geotech Soil Boring
ORGINILINSTALLATION Notice of In.	tent Number:	Property Owner 1	severheeser columbia timber Luca
Construction Access		Site Address	skagt Huly near MP. 18
Consulting firm		City Conescte	County _3KAq.+
		Location NW 1/	4-1/4 NW 1/4 Sec 23 I'm 35NR 7E
WELL CONSTRUCTION CERTIFICAT	id its compliance with all	EWM 🗄 or WW	м 🗍
Washington well construction standards Materials lopoled abase fact true to my best knowledge and ba	used and the information	Lat/Long (s, t, r	Lat Deg Min _Sec
		still REQUIRED)	Long Deg - Min-Sec -
Dibaler [1] Tagareer [] Trainee Straff	on Ahris	Tax Parcel No	
Dufferly agrices (Trainee Signature)	new , Horten >	Cased or Uncased	Diameter 3 78 Static Level N.A.
Driller or Tramee 1 icense No.	2901	Work/Decommiss	ion Start Date 9-26-14
If trainee, licensed driller's Signature an	nd License Number:		ion Completed Date 9-27-14
······			and the second sec
Construction Design	Well	Data	Formation Description
	Driller 3'la Wale to 40 Proved th Pallows beve 2100+ from topped with 3/8 bentin	Linite 40'-2 Hu	0-5' Fill, Poard brock, TAN gravely SAND. 5-20' Wed LArge gravels W/SAND 20'-40' HAN, SUNDY, graved Silt. RECEIVED JAN 14 2015 DEPT OF ECOLOGY NWRO-WR
	-		JAN 1 4 2015
р Г	SCALE: 1"= PA(GEOF	

econd Copy — Owner's Copy	LL REPORT	Application No.	
STATE OF V	WASHINGTON	Permit No	
1) OWNER: Name Al Siebeck		crete, WA 98237	
2) LOCATION OF WELL: County Skagit	Govt. Lot 4 SW , SW ,	Sec. 14 T. 35 N. R. 7	W
earing and distance from section or subdivision corner Block 21 &	22 of Bessemer AKA -Portic		
	(10) WELL LOG:		
3) PROPOSED USE: Domestic X Industrial I Municipal I Irrigation I Test Well I Other II	Formation: Describe by color, character show thickness of aquifers and the kind	, size of material and structu	17E, 1
	show thickness of aquifers and the kind stratum penetrated, with at least one e	and nature of the material ntry for each change of for	in e mat
4) TYPE OF WORK: Owner's number of well (if more than one)	MATERIAL	FROM	TO
New well 🙀 Method: Dug 🗌 Bored 🗋 Deepened 🔲 Cable 🎘 Driven 🗌	Sand & Gravel	0	3
Deepened 🖸 Cable 🎢 Driven 📙 Reconditioned 🗆 Rotary 🗋 Jetted 🚺	Water Bearing Gravel		_5
5) DIMENSIONS: Diameter of well inches. Drilled 5 6 ft. Depth of completed well 57 ft.			
6) CONSTRUCTION DETAILS:			
Casing installed: 6 " Diam. from 0 At. to 5 6 A.			
Threaded 🔲			
Welded Diam. from ft. to ft.			
Perforations: Yes 🗆 No 🕅			
Type of perforator used			
size of perforations in by interview in the second			
perforations from ft. to ft.			
perforations from ft. to ft.			
Screens: yes 🗆 No 🗹			
Manufacturer's Name			
Type			
Diam. Slot size from ft. to ft. ft.			
	·		
Gravel packed: Yes D No D Size of gravel:			
Surface seal: Yes No D To what depth? ft.			
Material used in seal			
Type of water? Depth of strata			
Method of sealing strata off			
(7) PUMP: Manufacturer's Name La curzzi Bros.			
Type: Jet HP 2	·		
(8) WATER LEVELS: Land-surface elevation above mean sea level			
Static level	1		
Artesian pressure			
Artesian water is controlled by (Cap, valve, etc.)	· · · · · · · · · · · · · · · · · · ·		
Drawdown is amount water level is			
(9) WELL IESIS: lowered below static level	Work started 7-20-77		., 19.
Was a pump test made? Yes 🗋 No 🗌 If yes, by whom?	I WETT NOTIFERS STATEN	IENT:	
	This well was drilled under m	y jurisdiction and this r	epot
n n n	true to the best of my knowledg	e and Deilei.	
Recovery data (time taken as zero when pump turned off) (water leve measured from well top to water level)		DOTITINO	
Time Water Level Time Water Level Time Water Level	NAME DAHLMAN PUMP & (Person, firm, or con	rporation) (Type or pri	nt)
	Box 422 Burli	ngton, WA 98233	
	1100	110.777.1.1.1941	
		LL 4 Pr LL	
Date of test	[Signed]	Well Driller)	

*** ()**

econd Copy Owner's Copy	R WELL REPORT	Permit No	
(1) OWNER: Name Betty Wilde	Address 874 Lusk &	a. Corre	to wa
2) LOCATION OF WELL: County Staget			
Bearing and distance from section or subdivision corner			
	ipal [] (10) WELL LOG:	÷	· · · · · · · · · · · · · · · · · · ·
(3) PROPOSED USE: Domestic 🖬 Industrial 🗆 Muni- Irrigation 🗇 Test Well 🗇 Other	Formation: Describe by color, char show thickness of aguifers and the	acter, size of material c	and structure, a
(A) TYPE OF WORK. Owner's number of well	show thickness of aquijers and the stratum penetrated, with at least	ne entry for each cha	nge of formati
(4) III OF WORKS. (if more than one)	red		FROM TO
Despened 🔲 Cable 🗌 Dr			0 20
Reconditioned 🗆 Rotary 🗗 Je	ted D Bern Dey Ge	wee	
(5) DIMENSIONS: Diameter of well		ater a	25 4
Drilled 48 ft. Depth of completed well 44			
(6) CONSTRUCTION DETAILS:	GRay Sand & Ch	ey 1	2.7.
Casing installed: 6 " Diam. from + 2 ft. to 4	6 n.		
Threaded []			
Welded 2			
Perforations: yes 🗋 No 🗷			
Type of perforator used in. by	in		
perforations from ft. to	ft.		
perforations from	n		
perforations from			
Screens: Yes D No g			
Manufacturer's Name			
Diam, Slot size from ft. to			
Diam Slot size from ft. to		·······	
Gravel packed: Yes No X Size of gravel;			
Gravel placed from ft. to	········		-
Surface seal: Yes R No D To what depth?	tt		
Material used in seal <u>Subscher</u> <u>Char</u> Did any strata contain unusable water Yes	No 🛃		
Type of water? Depth of strata			
Method of sealing strata of			
(7) PUMP: Manufacturer's Name Flint ; Walling	······································		
Type: Sul 10 gpm HP			}
(8) WATER LEVELS: Land-surface elevation above mean sea level			<u> </u>
Static level 2.3 ft. below top of well Date 2.4 Artesian pressure lbs. per square inch Date		·	
Artesian pressure			
			<u> </u>
(5) WELLE IEBIG. lowered below static level	Work started	80. Completed 2-	<u> 29 1</u> 0.
Was a pump test made? Yes No 😰 If yes, by whom? Yield: gal./min. with ft. drawdown after	hrs. WELL DRILLER'S STA	FEMENT:	
	This well was drilled und	er my jurisdiction a	nd this repor
	" true to the best of my know	ieuge and bener.	F
Recovery data (time taken as zero when pump turned off) (was measured from well top to water level)	NAME HOULD	Well De	illing.
Time Water Level Time Water Level Time Wate	Level (Berson, firm, o	r corporation) (T	ype or print)
	Address 1913	ony Re. D	vw, w
		11.	-
Baller test	[Signed]	(Well Drille)	2

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the copy Define Copy Site: 1 Point: 3b STATE OF	WASHINGTON Les ettant Late Water Right Permit No.	u	· · · · · · · · · · · · · · · · · · ·
1) OWNER Heme Wildon's Steelhead Club	Address Box 435 Sedro muolley :	In. 982	04
2) LOCATION OF WELLS county alkagit	NE HALL & Sec 19 T	35 N.B	.7 .
	Or. Fish intohery SE 15		
3) PROPOSED USE: Doméstic Muleiriat Municipat D	(10) WELL LOG or ABANDONMENT PROCED	URE DES	CRIPTI
HOPORED OBE: Hrightion Houstriar Municipar DeWater Test Well Other	Formation: Describe by color, character, size of material incinees of squifers and the kind and nature of the material in	and structur	e, and a
4) TTPE OF WORK: Dunot's number of well	With at least one entry for each change of information.	FROM	TO
Abahdofati - New well (2) Method: Dug - Bored - Strategy - Despender - Cable - Driven -	Brown Ulay & gravel	υ	40
Reconditioned 🗆 Rotary 🖬 Jetted 🗆	water & Gravel	40	12
b) / Dimensions: Diamater of well Inches.	Water & Fine Band & Wood	95	100
Dinel			
B) CONSTRUCTION DETAILS:			t:.
Cashing Metallidi t R			
Nadda		-+	+
Pohloration: Yas	RECEIVED		f
Type of the for and the second s			ļ
n. byh.	MAY 21 1990		-
n. ron.			<u></u>
h. In		1	
Softeind Wes Let 1 to .	<u> </u>	+	
New Martin Ramo State and an and the Model No.		+	
The second secon		+	<u> </u>
Mart Word and the Mont F7 A. Io 22 A.			<u> </u>
Graver patiente: Yes No Batto of graver			
. Grafin (24.600 With a start i and a start	· · · · · · · · · · · · · · · · · · ·		<u>+</u>
Burfade auth vas No To what depth? 15	· · · · · · · · · · · · · · · · · · ·	·	
Melandi alad in sam <u>BENIONITE</u>			
Type bi deller		·	<u>.</u>
Mathod W destrie atrate of			
7) PUNP adaption of a Name			<u></u>
Jiel HP			ļ
B) WATER LEVELDI, Land surface develop			•••••
Artender Weetline			<u></u> }
Cap, valve, ale	1.0	I	
5) WELL: TESTS: Drandoler is snight weiter level to lowered below statig level	Work started 1-9-, 19. Completed 1	-17	<u>, (oř</u>
Wall a said 1001 Milde? Yes to No	WELL CONSTRUCTOR CERTIFICATION:		
	1 constructed and/or accept responsibility for co and its compliance with all Washington well c.		
the second se	Materials used and the information reported abov knowledge and belief.		
. Robovsky 881s (lims takšn šš zaro Vitish paniji turnad ott) (water level measured hom with top to water level)			
The Park Level The White Level Time Water Level	NAME Debilinen Fump & Jell Drillin PERSON FRM. OR CORPORATION		OR PRINTS
	F O Box 422 Burlington Wa	• -	
Dente Contractor Contractor Contractor Contractor Contractor Contractor Contractor Contractor Contractor Contra	Address (Dictud Copy)		
	(Sloned) Theselore Riecken License	052 • No	3
Balter teat gal, /min, with ft, drawdown after hrs. Abteat ft_0 gal, /illin, with stem set at ft, for hrs.	(WELL DRILLER)		
Artésiai Abli	Registration Ditt Mit 12 JLC Date 1-22-		, 19 ²

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

1

	Point: 4	Eco id: 342227	
		L R B P O R T Start Card No. W 116 Unique Well I.D. # AAI549 GASHINGTON Water Right Permit No.	491
(1)		CAPE RORN ROAD CONCRETE, WA \$9237-	
(2)	LOCATION OF WELL: County SKAGIT) STREET ADDRESS OF WELL (or nearest address) 39966 CAPE RORM	- SE 1/4 NE 1/4 Sec 15 T 35 N., R 7E WM ROAD, CONCRETE	y 21 d
(3)	PROPOSED USE: DOMESTIC	1 (10) WELL LOG 25-7E-14	5
	TYPE OF WORK: Owner's Number of well (If more than one) HERN WELL Nethod: ROTARY	Formation: Describe by color, character, size of mater and structure, and show thickness of aguifers and the and nature of the material in each stratum penetrated at least one entry for each change in formation.	kı
(5)	DIMENSIONS:Diameter of well 6inchesDrilled 59ft.Depth of completed well 59ft.	MATERIAL (FROM	
		BROWN CLAY 6 SAND 2 BROWN CLAY SAND 6 GRAVEL 14 GRAVEL 6 SAND 24 GRAVEL 5 SAND 6 WATER 42	
	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.	BROWNE CLAY 49 SAND SOME GRAVEL & WATER 50 	
	Screens: YES Manufacturer's Name Type STAINLESS STEEL Model No. THLESCOPIES Diam. 6 slot size 20 from 54 ft. to 59 ft. Diam. 6 slot size from ft. to ft. Gravel packed: NO Size of gravel Gravel placed from ft. to ft.	WELL LOCATED ACCORDING TO SKAGIT COUNTY ORDINANCE #12.48	
	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 strate ft. Method of sealing strate off	RECEIVED	
(7)	PUMP: Nanufacturer's Name	OCT 1 9 1999	
(8)	Type H.P. WATER LEVELS: Land-surface elevation above mean sea level ft. Static level 32 ft. below top of well Date 10/11/39 Artesian Pressure 1bs. per square inch Date Artesian Water controlled by	DEPT OF ECOLOGY	
	WELL TESTS: Drawdown is amount water level is lowered below	Work started 10/11/99 Completed 10/11/99 WELL CONSTRUCTOR CERTIFICATION:	
W Y	static level. as a pump test made? If yes, by whom? ield: gal./min with ft. drawdown after hrs.	<pre> Wall Constructed and/or accept responsibility for con- struction of this well, and its compliance with all Washington well construction standards. Materials and the information reported above are true to my b knowledge and belief.</pre>	us
R	ecovery data Time Water Level Time Water Level Time Water Level	AND DARLMAN FUND & WELL DRILL (Person, firm, or corporation) (Type or print)	
Ā	Date of test / / aller test gal/min, ft. drawdown after hrs. ir test 15+ gal/min. w/ stem set at 52 ft. for 1 hrs rtasian flow g.p.m. Date	ADDRESS PO BOX 422 [SIGNED] Hugh W. Pile Licator No. 2043 Contractor's	,

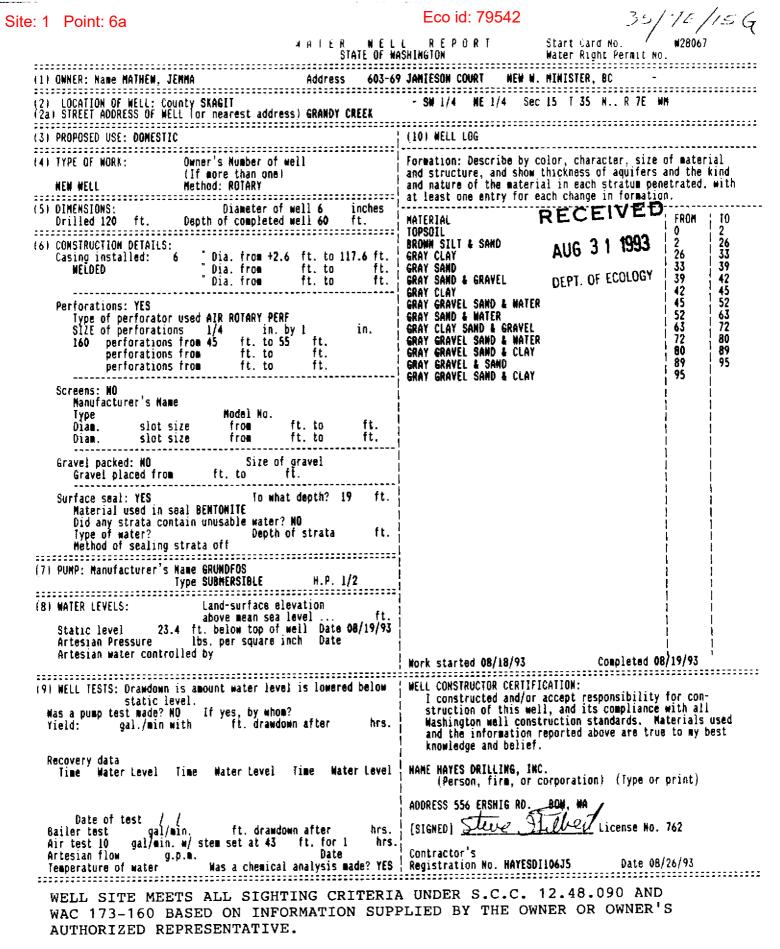
мен керогт.

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

Site: 1 Point: 5a	Eco id: 76609
File Original and First Copy with WATER WE	
Department of Ecology VVALER VVE Second Copy—Owner's Copy STATE OF 1	WASHINGTON 35
Third Copy—Driller's Copy STATE OF	Water Right Permit No
(1) OWNER: Name JAVid Claybo	Address 4088 S. Stag + Hay Secrowoolley
(2) LOCATION OF WELL: County SKeg + +	
(2a) STREET ADDRESS OF WELL (or nearest address) 844 Russ	sell nd Concrete West 78237
(3) PROPOSED USE: Domestic Industrial Municipal	(10) WELL LOG OF ABANDONMENT PROCEDURE DESCRIPTION
DeWater Test Well Other	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.
(4) TYPE OF WORK: Owner's number of well (if more than one)	with at least one entry for each change of information. MATERIAL FROM TO
Abandoned Deveneed Method: Dug Deveneed	GIZV Brown 1420H
Deepened Cable Driven Cable Driven Cable Jetted Driven	Clay mix with Sand Brand 26- 40 11
(5) DIMENSIONS: Diameter of well inches.	Sand + grave 43 475 H
Drilled 77 7 test. Depth of completed well 47 12 H.	
(6) CONSTRUCTION DETAILS:	
Casing Installed: 6 · Diam. fromtt. tott.	
Welded U Diam. fromft. toft. Liner installed C Diam. fromft. toft.	
Perforations: Yes No L	
Type of perforator used	
SIZE of perforations in. by in.	
perforations fromft. toft.	
Manufacturer's Name Model No	
Type Slot size fromft. toft.	
DismSlot sizefromft. toft.	
Gravel packed: Yes No Size of gravel	
Gravel placed fromH.	
Surface seal: Yes No To what depth?f.	RECEIVED
Material used in seal	
Type of water?Depth of strata	
Method of sesting strate off	DEPT. DE ECOLOGY
(7) PUMP: Manufacturer's Name <u>MCDON2/d</u> Type: <u>Skbmar</u> <u>HP</u>	
Land-surface elevation	
(8) WATER LEVELS: above mean sea level ft. Static level30 ft. below top of well Date122	
Artesian pressure Ibs. per aquare inch Date	
Artesian water is controlled by (Cap, valve, etc.))	Work started OCT 30 , 19. Completed Nov 2 , 1991
(9) WELL TESTS: Drawdown is amount water level is lowered below static level Was a pump test made? Yes No If yes, by whom?	WELL CONSTRUCTOR CERTIFICATION:
Yield: gal./min. with th drawdown after hrs	L constructed and/or accept responsibility for construction of this well,
	and na compliance with an evaluation and shows are true to my host
Recovery data (time taken as zero when pump turned off) (water level measured	knowledge and belief.
from well top to water level) Time Water Lovel Time Water Lovel Time Water Lovel	NAME Prince Well Drilling
	- min ala p // 101 Concrete
	- Address 194 NE Cape Nor and wast
Date of test_ Nov 2 19 91	(Signed) Wayne C Grani License No. 1898
Bailer test _ 20 gal./min. with tt drawdown after _ / 12 hra	Providentian d/A
Airtest gal./min. with stem set at ft. for hrate ft. for ft. for hrate ft. for ft. for ft. ft. for hrate ft. ft. for ft.	No. PriNCWD \$75K 4Date 1006
Temperature of water Was a chemical analysis made? Yes No	(USE ADDITIONAL SHEETS IF NECESSARY)

	Driginal and First Copy with Triment of Ecology With	LL REPORT	Stert Card No	·	<u></u>
	nd Copy—Owner's Copy STATE OF V Copy—Driller's Copy STATE OF V	VASHINGTON Water Right Permit N	35/-7	<i>י/</i> וא	h
(1)	OWNER: Name Larry Marght	Addrees			
	LOCATION OF WELL: County SKa. C. 4		ж Sec 15 т.3		
(2a)	STREET ADDDRESS OF WELL (or nearest address) 37/7	Cape How Rd	_ Concor	-efs	<u> </u>
(3)	PROPOSED USE: Domestic Industrial I Municipal	(10) WELL LOG or ABANDONN	AENT PROCEDUR	RE DES	CRIPTIO
(0)	Irrigation Irrigation DeWater Test Well Other	Exemption: Describe by color character	r, size of meterial and	d structure	and she
	TYPE OF WORK: Owner's number of well	thickness of aquifers and the kind and natu with at least one entry for each change of in	ire of the material in ea	ich etratun	n penetrato
		MATERIAL		FROM	τQ
	Deepened 🗍 Cable 🗍 Driven 🗌	Sand Granes	/		10
	Reconditioned Rotary Jetted	Clay		10 24	24
(5)	DIMENSIONS: Diameter of well for the inches.	Sand 2 eravel w		34	40
	Drilled 50 teet. Depth of completed well 50 ft.	SING GAWE!	+ Water	40	50
(6)	CONSTRUCTION DETAILS:				
	Casing installed: Diam. from ft. to ft.				
	Welded []' Diam. fromtt. tott.				1
	Threaded Diam. fromft. toft.				
	Perforations: Yes No - No - Type of perforator used	RECEI	VED		1
	SIZE of perforations in. by in.		VED		
	perforations from ft. to ft.	OCT 15	1992		<u> </u>
	perforations from ft. to ft.			· · · · -	
	perforations from ft. to ft	DEPT. OF EC	OLOGY		
	Manulaciurer's Name Model No Model No				
	Diam Slot size fromft. toft.				ļ
	Diamft. toft.	well mut	<u>-211</u>		
	Gravel packed: Yes No Size of gravel	_ County Reg	atation		
	Gravel placed fromft. toft.	J	ung		
	Surface seal: Yes by To what depth? 18 tt.				
	Material used in seal	· · _ · _ · · · · · · · · ·			4
	Did any strata contain unusable water? Yes No			ļ	
	Type of water?Depth of strate Method of seeling strate off		······································	···· —	
(7)	C . dbc	······································	· · · · · · · · · · · · · · · · · ·	·	↓
(* /	Type: Sub. H.P. 2				
(8)	Land-surface elevation				- i
(0)	Static level ft. below top of well Date ft.				<u> </u>
	Artesian pressure Ibe, per square inch Date			<u> </u>	+ -
	Arteaian water is controlled by(Cap, valve, etc.))	Work storted. 2.8 5 cat 18	. Completed 30	مبوك	£_, 19_
(9)	WELL TESTS: Drawdown is smount water level is lowered below static level			_	
	Was a pump test made? Yes No I II yes, by whom? href yes a set of the	WELL CONSTRUCTOR CERTI		struction	of this w
		and its compliance with all W	ashington well cor	natruction	standar
	Recovery data (time taken as zero when pump turned off) (water level measured	Materials used and the informa knowledge and beliet.	non reported above	are (rue	10 III Y D I
	Recovery data (time taken 26 zero when pump turned off) (when heven inexacted from well top to water level) Time Water Level Time Water Level Time Water Level	NAME PAINCE W	d(pril	11. mg	
				(TYPE	
		Address 794 NG C	epe block		1251
	Date of lest	1. June CP	License	No 19	298
	Bailer test 70 get./min. with tt. drawdown after hra.	(Signed) (WELL DRILLER)	License	NO (_ C	
	Aintest	Contractor's Registration No. Prive W 009564	5.1	30	10
	Artesian flow g.p.m. Date	No. MOLINGWIND DEG	1810	<u>.</u>	, 19
	Temperature of water Was a chemical analysis made? Yes 🔜 No		HEETS IF NECES		- 4-



3180

1 Point: 6b 1/8067	Eco id: 338585 35-7E-15
WATER WELL REPORT	CURRENT Notice of Intent No UISY310
COLOGY Original & 1st copy Ecology 2nd copy owner 3rd copy driller	Unique Ecology Well ID Tag No 364
Construction/Decommission (x in circle) Construction	Water Right Permit No
O Decommission ORIGINAL CONSTRUCTION Notice of Intent Number	Property Owner Name NORM STEWARD
PROPOSED USE Domesuc Industrial Municipal	Well Street Address XX 8330 2mp Location & 1/4 1/4 NF 1/4 Sec_15 Twn 25 R 7 or
DeWater Irrigation Test Well Other	City Concrete County SKAgil
TYPE OF WORK Owner's number of well (if more than one) Mew Well Reconditioned Method Dug Bored Driven Cable Rotary Jetted	Location $21/4$ 1/4 $1/4$ $1/4$ $1/4$ Sec_{15} Twn $35R$ 7 VM or WWM Lat/Long Lat Deg Lat Min/Sec
DIMENSIONS Diameter of well 110 12_ft Depth of completed well 11012_ft	(s t r still REQUIRED) Long Deg Long Min/Sec Tax Parcel No
Type of perforator used	MATERIAL FROM TO
	Top Sol OZ
Screens Vyes No. KPac Location 105 Manufacturer's Name Joh 333 Type S/3 Model No Diam Slot Size 10 from ft to ft	Brown SANd+SIT 2 12
Diam Slot Size ID from ft to ft Diam Slot Size from ft to ft	any should SITACIAY 12 41
Gravel/Filter packed Yes X No Size of gravel/sand	Gravel + Sand 41 54
Surface Seal QYes No To what depth? 18 ft Materials used in seal Benton te	BROWJ CHAY+ GRAVEL SY 79
Did any strata contain unusable water? Kyes 🗋 No	
Type of water?Depth of strata Method of sealing strata off_NATISAL CLAY	GRAVEL+SAND 79 90
PUMP Manufacturer s Name Type	BROWN CLAY+ GROVEL 90 103
WATER LEVELS Land surface elevation above mean sca levelft Static levelft below top of well DateAUG-O2	GRACEL + SAND 103 111
Artesian pressurelbs per square inch Date Artesian water is controlled by (cap valve etc.)	Drilled in Compliance with SKC
WELL TESTS Drawdown 15 amount water level 15 lowered below static level	12 48. Based on information
Was a pump test made? Yes Yes by whom? Yield gal /min with ft drawdown after hrs Yield gal /min with ft drawdown after hrs	May July
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)	RECEIVED
Time Water Level Time Water Level Time Water Level	AUG 2 5 2007
Date of test	
Bailer testgal /min_withft drawdown afterhrs Airtest <u>+ 20</u> gal /min_with stem set at/DOft forhrs Artesian flowg p m_Date	DEP F OF ECOLOGY
Temperature of waterWas a chemical analysis made? 🗌 Yes 🛚 No	Start Date 13 AUG-02_ Completed Date 13 AUG-02_
WELL CONSTRUCTION CERTIFICATION I constructed and/or accept resp Washington well construction standards Materials used and the information	reported above are true to my best knowledge and belief
Driller Engineer Trainee Nama (Print) Halvorson	
Driller/Engineer/Trainee Signature <u>Aug Halan</u> Driller or Trainee License No <u>2180</u>	- Address 14021 Bandshaw Ad
	- City State Zip INT VERNON WA Contractors Registration No AFFORMS 101 R Fate 18 AUGO 2-
If trainee, licensed driller s	- Registration No Arroews VIR Date 18 NO 40

-

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te: 1 Point: 6c	Eco id: 342228 35-7	E. 15G
WATER WELL REPORT	CURRENT Notice of Intent No W1258	7/
s c o L'o's y Original & 1st copy Ecology 2nd copy owner, 3rd copy driller	Umque Ecology Well ID Tag No 4 G	E 050
Construction/Decommission (x in circle) O Construction	Water Right Permit No	
O Decommission ORIGINAL CONSTRUCTION Notice of Intent Number	Property Owner Name Joe Br	
PROPOSED USE Domestic Industrial Municipal DeWater Imgation Test Well Other	Well Street Address <u>341 CM</u>	and Las
TYPE OF WORK Owner's number of well (1f more than one)	City Concile County	SHAGIT
Image: Method Image: December of the second secon	Location <u>SW</u> /4 1/4 <u>NF1/4</u> Sec <u>#S</u> Lat/Long Lat Deg	Twn 54 R_/ or WWM Lat Min/Sec
DIMENSIONS Diameter of well <u>6</u> inches drilled <u>ft</u> Depth of completed well <u>78</u> ft	(s,t,r sun REQUIRED) Long Deg	Long Min/Sec
CONSTRUCTION DETAILS	Tax Parcel No	
Casing EWelded 6 Diam from ft to ft Installed Diam from ft to ft Threaded Diam from ft to ft	t t t t t t t t t t t t t t	material and structure and the enetrated with at least one
Perforations Yes No	(USE ADDITIONAL SHEETS IF NECESSAR)	
Type of perforator used	MATERIAL	FROM TO
	Top Sul	1 4
Screens Yes No KPac Location	Clay Sanda qual	4 36
TypeModel No	Choy	36 48
DiamSlot Sizefromft toft	Sand yraund water	48 66
Diamft toft toft	Clav Surt	60 66
Gravel/Filter packed Yes No Size of gravel/sand	Sond grandenter	66 79
Materials placed fromft toft Surface Seal Yes No , To what depth?ft ft		
Surface Seal DYes No To what depth? / ft Materials used in seal Bin Late	·	
Did any strata contain unusable water? \Box Yes \Box No		
Type of water?Depth of strata	ILCIL DUNT T	
Method of sealing strata off	1) Il SIte Marts Star	
PUMP Manufacturer's Name	Jan La SC 1248 Cucry	
Type H P	- TO PORTO MATURE - 1 131	
WATER LEVELS Land surface elevation above mean sea levelft Static level 19 ft below top of well Date 19/10/19		
Static level 19 ft below top of well Date Aug 9 Artesian pressure 11bs 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 <u>2C</u> gal/min with <u>3</u> ft drawdown after <u>2</u> hrs		
Yieldgal/mm withft drawdown afterhrs	RECE	IVED
Yield gal /mm with ft drawdown after hrs		2 2002
Recovery data (tune taken as zero when pump turned off)(water level measured from well top to water level) Tune Water Level Tune Water Level Tune Water Level	DEPT OF	1 1
	DENIO	
Date of test		
Bailer testgal/min withft drawdown afterhrs Airtestgal/min with stem set atft forhrs Artesian flowg p m Date		A
Temperature of waterWas a chemical analysis made? Yes No	Start Date A Lacy 9 Completed	Date Aug 16 02
WELL CONSTRUCTION CERTIFICATION I constructed and/or accept resp	consibility 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 Bagineer Trainee Name (Print) Wayne TriNCe	Drilling Company Printing Lu	1 Aulling
Driller/Engineer/Trainee Signature (Nayne Prime		
Driller or Trainee License No	- City, State, Zip Conchete In	
	Contractor's	·····
If trainee, licensed driller's Signature and I icense no	- Registration No Prince W Dog 54-4	Date 7 hr 23

Site: 1 Point: 7	Eco id: 441246		
File Original and First Copy with Department of Ecology			
File Original and First Copy with Department of Ecology Second Copy - Owner's Copy Third Copy - Driller's copy	ASHINGTON Water Right Permit No.	# <u>ALQ71</u>	19
(1) OWNER: Name Billi Gryphon C/O Coach Corral	Address 377 Sth Burlington Blvd, Burlington, WA	98233	
(2) LOCATION OF WELL: County skagit	- SE 1/4 NW 1/4 Sec 15 T.		. W.I
(2a) STREET ADDRESS OF WELL (or nearest address) 8179 Emman TAX PARCEL NO. P42704	ual Ln Concrete		
(3) PROPOSED USE: X Domestic Industrial Municipal	(10) WELL LOG or DECOMMISSIONING PROCEDU	RE DESCRIF	PTION:
Irrigation Test Well Other DeWater	Formation: Describe by color, character, size of material and structure, ar nature of the material in each stratum penetrated, with at least one entry f of information. Indicate all water encountered.		
(4) TYPE OF WORK: Owner's number of well (If more than one) X New Well Method:	MATERIAL	FROM	то
Deepened Dug Bored	topsoil	0	1
	brown sand gravel silt	1	15
Decommission X Rotary Jetted	brown silty sand seepage brown clay	15 17	<u>17</u> 22
(5) DIMENSIONS: Diameter of well <u>6</u> inches. Drilled 80 feet. Depth of completed well 76 ft.	gray fine sand silt water	22	32
Drilled 80 feet. Depth of completed well 76 ft.	gray clay wood	32	41
(6) CONSTRUCTION DETAILS:	gray sand wood water	41	55
Casing Installed: X Welded 6	tan clay sand	55	61
Liner installed "Diam from ft. to ft.	brown gravel sand water brown gravel clay	61 76	76
Threaded "Diam. from ft. to ft.	Diowii gravei ciay		
Perforations: Yes XNo Type of perforator used	located in complience with sec12-48 based on information supplied by owner.	<u> </u>	
SIZE of perforations in. by in.			
perforations from ft. to ft.	06056		
perforations from ft. to ft.			
perforations from ft. to ft.			·····
Screens: XYes No K-Pac Location			
Manufacturer's Name johnson			· · · · · · · · · · · · · · · · · · ·
Type <u>ss</u> Model No. Diam, 6 Slot size 20 from 71 ft. to 76 ft.			<u> </u>
Diam. <u>6</u> Slot size <u>20</u> from <u>71</u> ft. to <u>76</u> ft. Diam. Slot size from ft. to ft.	· · · · · · · · · · · · · · · · · · ·		·····
	RECEI	VED	
Gravel/Filter packed: Yes X No Size of gravel/sand Material placed from ft. to ft.			
		2006	
Surface seal: XYes No To what depth? <u>18</u> ft. Material used in seal <u>bentonite</u>			
Did any strata contain unusable water? Yes X No	DEPT. OF E	COLOGY	/
Type of water? Depth of strata			
Method of sealing strata off			
(7) PUMP: Manufacturer's Name goulds			
Type: submersible H.P. 3/4			
(8) WATER LEVELS: Land-surface elevation above mean sea level ft.	Work Started 5/8/2006 , 19, Completed 5/8/2006	2006	19
Static level 35 ft. below top of well Date 5/8/2006	WELL CONSTRUCTION CERTIFICATION:		
Artesian pressure Ibs. per square inch Date	Constructed and/or accept responsibility for construction	of this well, and	its
Artesian water is controlled by(Cap, valve, etc)	compliance with all Washington well construction standard		
	and the information reported above are true to my best kno	wieage and beli	HUT.
(9) WELL TESTS: Drawdown is amount water level is lowered below static level		se No. <u>1825</u>	
Was a pump test made? XYes No If yes, by whom? aquatech Yield: 20 gal./min. with 5 ft. drawdown after 1 hrs.	(Licensed Driller/Engineer)		
Yield: gal./min. with ft. drawdown after	Trainee Name Licen	se No.	
Yield: gal./min. with ft. drawdown after hrs.	Drilling Company Aquatech Well Orilling & Pump	s Inc	
Recovery data (time taken as zero when pump turned off) (water level measured			
from well top to water level)	(Signed) Licen	se No. 1825	
Time Water Level Time Water Level Time Water Level	(Licensed Driller/Engineer)		
	Address 2722 Butler Crk Rd SedroWoolley Wa	ı 98284	
	Contractor's Registration No. <u>AQUATWD040K4</u> Date <u>5/1</u>	1/2006	19
Date of test 5/10/2006		<u>116999</u>	··
Bailer test15 gal./min. with2 ft. drawdown after5 hrs.	(USE ADDITIONAL SHEETS IF NECE	SSARY)	
Airtest gal./min. with stem set at ft. for hrs.	Ecology is an Equal Opportunity and Affirmative Action		
Artesian flow g.p.m. Date	special accommodation needs, contact the Water Res		ram at
Temperature of water Was a chemical analyses made? Yes XNo	(360) 407-6600. The TDD number is (360) 407-6006.		

ite: 1 Point: 8	Eco id: 79264	00 - 2
File Original and First Copy with WATER W		-8253- 0131
acced Conv_Owner's Conv		line
	Water Right Permit No.	
1) OWNER: Name J2MCS COOK	Addrees	
2) LOCATION OF WELL: County Stagit	<u>. SE & SW * Sec /0 T. 3</u>	<u>35 n., r. 7 w.m</u> .
	Her LEKERI + HWY 20	
) PROPOSED USE: Domestic Industrial D Municipal	(10) WELL LOG or ABANDONMENT PROCEDU	RE DESCRIPTION
Irrigation DeWater Teat Well Other	Formation: Describe by color, character, size of material an	d structure, and show
I) TYPE OF WORK: Owner's number of well Z-	 thickness of aguifers and the kind and nature of the material in er with at least one entry for each change of information. 	ach stratum penetrated,
Abandoned New well Method: Dug Bored	MATERIAL	FROM TO
Deepened Cable Driven Reconditioned Rotary	SZNG + Gravel	1428
	Fine Sand	2834
5) DIMENSIONS: Diameter of well inches. Dritledfeet. Depth of completed well ft.	Send Grzul + with	34 40
CONSTRUCTION DETAILS:	- Clay Blue	40 68
Casing installed: <u>6</u> · Diam. from <u>1</u> t. to <u>62</u> · ti	Soud + Stavel + warley	60 62
Weided	·	
Liner installed * Diam. fromft. toft	· · · · · · · · · · · · · · · · · · ·	
Perforations: Yes No		
Type of perforator used		
SIZE of perforations		
perforations from		
ft.toft	·	Ki III
	- Will site Macker	accint
Manufacturer's Name Model No Model No	the datas per da	he have a
Diam Slot size fromtt. tott		90000
DiamSlot sizefromtt. toft		£
Gravel packed: Yes Not Size of gravel	RECEIVED	
Gravel placed fromfl. tofl.	IIIN to tooo	
Surface seal: Yes A No To what depth?ft		
Material used in seal	DEPT. OF ECOLOGY	
Type of water?Depth of strate		
Method of sealing strate off	· · · · · · · · · · · · · · · · · · ·	
') PUMP: Manufacturer's Name		
Type:H.P		
B) WATER LEVELS: Land-surface elevation	s — — — — — — — — — — — — — — — — — — —	
Static level ft. below top of well. Date Artesian pressure Ibs. per aquare inch. Date		
Artesian water is controlled by(Cap, valve, etc.))		e
) WELL TESTS: Drawdown is amount water level is lowered below static level	Work started a view 6, 19. Completed	<u></u>
Was a pump test made? Yes No Hyse, by whom? Way Barry Yield: P this has a first min, with P. M. drawdown after hrs	WELL CONSTRUCTOR SERVICE.	
	I constructed and/or accept responsibility for cons and its compliance with all Washington well cons	struction standards.
рі — н — н — н		are true to my best
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)	0	11
Time Water Level Time Water Level Time Water Level	NAME _ NAME _ NAME _ (PERSON, FIRM, OR CORPORATION)	TYPE OR PRINT
	- TOU NO CONTINU	- Concl
	Address 174 NE Caperos	
Date of test	(Signed) have Prove License	No. 1818
Baller test gal./min. with ft. drawdown after hrs Airfest gal./min. with stem ast at ft. for hrs	Contractor's	
Arreat gai, / min, with eterm are at it. for its of its	No. Trive Wido95 Agente June	5, 192
Temperature of water Was a chemical analysis made? Yes No	(USE ADDITIONAL SHEETS IF NECES	SARY) 🛋

Department of Ecology VVAIEK VVE	LREPORT Notice of Intent	
		.# <u>AFJ9</u>
(1) OWNER: Name Port Gardner Timber (2) LOCATION OF WELL: County Skagit	Addas 9.0. Box 157, Stanwood, WA 98292	ac N B a
(2a) STREET ADDRESS OF WELL (or nearest address) Off Baker Lak	- <u>NE</u> 1/4 <u>SW</u> 1/4 Sec <u>10</u> T. e Road	<u> (</u>
TAX PARCEL NO	- <u>35-7E-1(</u>) <u>L</u>
(3) PROPOSED USE: Domestic Industrial Municipal	(10) WELL LOG or DECOMMISSIONING PROCEDU	
☐ Intigation ☐ Test Well X}Other ☐ DeWater	Formation: Describe by color, character, size of material and structure neture of the material in each stratum penetrated, with at least one en	•
(4) TYPE OF WORK: Owner's number of well (If more than one)	of information. Indicate all water encountered. MATERIAL	FROM
X New Well Method:	Loose gravel & brown silty sand	
Reconditioned Cable Driven	Gravel & brown clay	25
Decommission X Rotary Jetted	Gravel sand & brown silt Gravel sand & brown clay	<u>30</u> 88
(5) DIMENSIONS: Diameter of well 6 inches. Drilled 138 5 feet. Depth of completed well 138 5 ft.	Gravel said a blown clay	103
	Fine gray sand & water	117
(6) CONSTRUCTION DETAILS: Casing installed:	Well located according to Skagit County	
Welded 6 Diam. from 0 fl. to 133.5 fl.	Ordinance #12.48	
Liner installed * Diam. from fl. to fl. Threaded * Diam. from fl. to fl.	······	
		- -
Perforations: LIYes XINo Type of perforator used:		ĮĮ
SIZE of perforations in. by in.		++
perforations from fit. to fit.		
perforations from ft. to ft.		
Type stainless stael Model No. telescope Diam. 6 Slot size 10 from 133.5 ft. to 138.5 ft. Diam. Slot size from ft. to ft. ft. ft.		
Gravel/Filter packed: Yes XNo Size of gravel/sand	OCT 1 1 2	000
Material placed fromft. toft.		
Surface seal: XYes No To what depth? 18 ft.		** : : : : : Y
Material used in seal bentonite	DEP'I OF EU	ULUGY
		JLUGY
Material used in seal <u>bentonite</u> Did any strate contain unusable water? []Yes [X]No		
Material used in seal <u>bentonite</u> Did any strata contain unusable water? Yes XNo Type of water? Depth of strata Method of sealing strata off (7) PUMP: Manufacturer's Name		
Material used in seal <u>bentonite</u> Did any strata contain unusable water? Yes XNo Type of water? Depth of strata Method of sealing strata off	DEP'I UF EU	
Material used in seal <u>bentonite</u> Did any strata contain unusable water? Type of water? Method of sealing strata off (7) PUMP: Manufacturer's Name	Work Started 09/28/2000	
Material used in seal bentonite Did any strata contain unusable water? Did any strata contain unusable water? 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	Work Started 09/28/2000 , 19. Completed 09/	
Material used in seal bentonite Did any strata contain unusable water? Did any strata contain unusable water? 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. below top of well Dele 09/29/2000 Arteelan pressure Ibs. per square inch	Work Started 09/28/2000 , 19. Completed 09/ WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for constructio	29/2000
Material used in seal bentonite Did any strata contain unusable water? Did any strata contain unusable water? 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 58	Work Started 09/28/2000 , 19. Completed 09/ WELL CONSTRUCTION CERTIFICATION:	29/2000
Material used in seal bentonite Did any strata contain unusable water? Did any strata contain unusable water? 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 Static level 58 ft. below top of well Artesian pressure Ibs. per square inch Date Artesian water is controlled by (Cap, valve, etc)	Work Started 09/28/2000 , 19. Completed 09/ WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction compliance with all Washington well construction stands and the information reported above are true to my best to	29/2000 n of this well, a ards. Materials mowledge and
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(2) LOCATION OF WELL: County Statistic Topologic statistic Statistic Topologic statistic Statistic Topologic statistic Statistic Topologic statistic </th <th></th>	
(2a) STREET ADDRESS OF WELL (or neares extrem Bake Lat Rd Can cited (3) PROPOSED USE: Br Connestic Mancipal (10) WELL LOG or ABADONMENT PROCEDURE DESCRIPTI (3) PROPOSED USE: Br Connestic Mancipal Formation: Formation: Mancipal Formation: (3) PROPOSED USE: Br Connestic Mancipal Formation: Formation: Mancipal Formation: Formation: Mancipal Formation: Formation: Formation: Mancipal Formation: Formation: Mancipal Formation: For	
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□ infgation □ infgation Term Well Other □ fermitative: Decomplex particular distribution and above the manual in each statum performation, and show the indexidence of the wide double of the manual in each statum performation. (4) TYPE OF WORK: Owned's number of well □ Matterial. Prove Abandoned New well Matterial. Prove □ Despende □ Cable 0 Driven 0 Subsch 22.8 (5) DIMENSIONS: Dumenter of well 2.0.0 Naterial. Prove (6) CONSTRUCTION DETAILS: Cable 0 Driven 0 R. b	
(4) TYPE OF WORK: Operating and the second sec	as of aquiter
Abandoned New well if mode start line Mathod: Dug Bored Image: Start in the imag	ntry for eac
Despend Cable I DrwnI Reconcilized I Potan_2 Jetted I Signal Sign	T0
Of Diffect 2.20 feet 0 completed well 2.00 ft Sould (32.4 ft) (2.1 c) (2	<u>28</u> 31
Difference The Depth of completed with the second of t	80
(6) CONSTRUCTION DETAILS: Casing installed: (1) Weided: (1) Diam. hom n. to Threadod: (1) Diam. hom n. to perforations: (1) Type of perforations from (1, to	81 110
Casing installed:	120
Line installed Diam. from ft. to n S2.4.44 152.2 Perforations: Ves No No 152.2 152.2 Perforations: Ves No 152.2 152.2 152.2 Type of perforations was in. by in. 152.2 152.2 StZE of perforations in. by in. 152.2 152.2 perforations from n. by in. 152.2 152.2 152.2 StZE of perforations from n. by in. 152.2 </td <td>150</td>	150
Instance Sold	15Z
Type of perforator used in. by in. genforations in. by in. genforations ft. bo ft. genforations from ft. bo ft. Manufacturer's Name ft. bo ft. Type Model No. ft. ft. Diam. Slot size from ft. to ft. Gravel packed: Yee No Size of gravel ft. ft. Gravel packed: Yee No To what depth? ft. ft. Material used in seal Size of gravel ft. ft. ft. Material used in seal Size of gravel ft. ft. ft. Material used in seal Size of gravel ft. ft. ft. Material used in seal Size of gravel	160
SIZE of perforations in. by in.	198
	200
	
Screens: Yes No Bcreens: Yes No Manufacturer's Name Model No. Type Model No. Diam. Slot size Joiam. Slot size Tope Model No. Diam. Slot size Tope Model No. Diam. Slot size Tope Model No. Gravel packed: Yes Material used in seal Size of gravel Material used in seal Scretific Did any strate contain unusable water? Yes No Type of water? Dof any strate contain unusable water? Yes Method of sealing strate off Depth of strate (7) PUMP: Manufacturer's Name Type: H.P. (8) WATER LEVELS: Land-surface sevention abore mean ase level Be. per equare inch Date Arteelan water is controlled by (Cap. valve, efc.) Work started and/or accept responsibility for construction of this water is controlled by	
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Material used in seal	
Material used in seal	
Image: Strate off	
Image: Strate off	
Image: Strate off	
(B) WATER LEVELS: Land-surface slevation above mean sea level R. Static level /20 ft. below top of well Date R. Artesian pressure be. per equare inch Date Il. Artesian water is controlled by (Cap, valve, etc.) Il constructed and/or accept responsibility for construction of this well compliance with all Washington well construction standards. Materials	
(8) WATER LEVELS: Land-surface slevation above mean sea level n. Static level /20 ft. below top of well Date n. Artesian pressure	
(8) WATER LEVELS: Land-surface elevation above mean sea level It. Static level //20 ft. below top of well Date Artesian pressure be. per equare inch Date Artesian water is controlled by (Cap, valve, etc.) It.	
Artesian water is controlled by(Cap, valve, stc.) T. below top of well Date R. WELL CONSTRUCTOR CERTIFICATION:	
Static level	19
Artesian pressure ibs. per square inch Date Artesian water is controlled by (Cap. valve, etc.) I constructed and/or accept responsibility for construction of this water is controlled by (Cap. valve, etc.)	
(Cap, valve, etc.) compliance with all Washington well construction standards. Materials	-11
the information reported above are true to my hest knowledge and helis	i used and
(9) WELL TESTS: Drawdown is amount water level is lowered below static level	Ħ.
Was a pump test made? Yes No I If yes, by whom? (14 10 10 10 10 10 10 10 10 10 10 10 10 10	
" " Address 794 NE Cape Horn) Conct	te
	(1 C D)
""""" """" "" Address 774 NE Cape Horn) Conche """" """" """ """ """ """" """ """ """ """" """ """ """ """" """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """" """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """ """" """ """	<u></u>
Top To Water (ave)	
Contractor 8	
Registration Registration No No No No	_, 19
(USE ADDITIONAL SHEETS IF NECESSARY)	
Date of test	
Bailer testgal./min. withft. drawdown after hrs. Airtestgal./min. with stem set atft. for hrs. Ecology is an Equal Opportunity and Affirmative Action employer.	. For spe
Arrest gal/min. wur stein sei at h. to traction cial accommodation needs, contact the Water Resources Program	n at (206)
Temperature of water Was a chemical analysis made? Yes No 🗍 407-6600. The TDD number is (206) 407-6006.	

431927	Ecc	o id: 760	458
WATER WELL REPORT Original & 1" copy - Ecology, 2 rd copy - owner, 3 rd copy - driller	CURRENT Notice of Intent No. W042102		
	Unique Ecology Well ID Tag No. ABP205		
Construction/Decommission ("x" in circle)	Water Right Permit No.		
Construction Decommission ORIGINAL INSTALLATION Notice	•		
of Intent Number		·····	
	Well Street Address		
PROPOSED USE: Domestic Industrial Municipal DeWater Irrigation Test Well Other	City County Skagit		
TYPE OF WORK: Owner's number of well (if more than one)	Location <u>SW1/4-1/4</u> <u>SE 1/4</u> Sec <u>8</u> Twn <u>35</u>	R	
71 New well Cl Reconditioned Method : Due Cl Bored Driven	Lat/Long (s, t, r Lat Deg Lat		
Deepened Image: Cable Rotary Jetted DIMENSIONS: Diameter of well 6 inches, drilled 50 ft.			
Dimensions: Diameter of web <u>o</u> lucies, unlest <u>o</u> l. Depth of completed web <u>50</u> ft.	Still REQUIRED) Long Deg Lor	ig Min/Sec	
CONSTRUCTION DETAILS	Tax Parcel No		
Casing Image: Second seco	CONSTRUCTION OR DECOMMISSION	BRACEDU	nr
Threaded Diam. from ft. to ft.	Formation: Describe by color, character, size of material and		
Perforations: 🔲 Yes 📝 No	nature of the material in each stratum penetrated, with at least	one entry for ea	ch chang
Type of perforator used	information. (USE ADDITIONAL SHEETS IF NECES MATERIAL	FROM	т
Screens: Yes Z No K-Pac Location	boulders & sand	1 ft	30 ft
Manufacturer's Name	clay & sand	30 R	44 ft
Type Model No Diamy Slot size from ft to ft.	sand, gravel & water	44 ft	50 ft
Type Model No. Diam. Slot size from ft. to ft. Diam. Slot size from ft. to ft. Gravel/Filter packed; Ves I No Size of gravel/sand ft.		_	l
Gravel/Filter packed: Yes IN No Size of gravel/sandft.			
Surface Seal: 📝 Yes 🔲 No To what depth? 20ft.			
Material used in seal <u>bentonite & totatent</u> Did any strata contain unusable water? Yes Z No Type of water? Depth of strata Method of sealing strata off EVINE: Manufactures's Name Grundfos			
Material used in seal bentonite & testcott Did any strata contain unusable water? Did any strata contain unusable water? Type of water? Depth of strata Method of sealing strata off PUMP: Manufacturer's Name Grundfos Type: submersible H.P1/2			
Material used in seal bentonite & testcott Did any strata contain unusable water? Did any strata contain unusable water? Type of water? Depth of strata Method of sealing strata off PUMP: Manufacturer's Name Grundfos Type: submersible H.P1/2 WATER LEVELS: Land-surface elevation above mean sea level ft.			
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Material used in seal bentonite & transmission Did any strata contain unusable water? Did any strata contain unusable water? Did any strata contain unusable water? Depth of strata Method of sealing strata off PUMP: Manufacturer's Name Grundfos Type: Submersible H.P. WATER LEVELS: Land-surface elevation above mean sea level ft. Static level 32 Artesian pressure Ibs. per square inch Date Artesian water is controlled by			
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Material used in seal bentonite & transmission Did any strata contain unusable water? Did any strata contained to the strata controlled by	Well site meets standards set in SC1248	EIV	
Material used in seal bentonite & total contain unusable water? Yes ✓ No Did any strata contain unusable water? Pepth of strata	Well site meets standards set in SC1248	ĒĪ	
Material used in seal bentonite & controll Did any strata contain unusable water? Yes Did any strata contain unusable water? Pepth of strata Method of sealing strata off	Well site meets standards set in SC1248	EIV	
Material used in seal bentonite & total any strata contain unusable water? Yes No Did any strata contain unusable water? Depth of strata	Well site meets standards set in SC1248 according to information provided by owner.	EIV	
Material used in seal bentonite & controll Did any strata contain unusable water? □ Yes ☑ No Type of water? □ Depth of strata	Well site meets standards set in SC1248	EIV	
Material used in seal bentonite & total any strata contain unusable water? Yes No Did any strata contain unusable water? Pepth of strata	Well site meets standards set in SC1248 according to information provided by owner.	EIV 07.20	
Material used in seal bentonite & test in the state of the state	Well site meets standards set in SC1248 according to information provided by owner.		
Material used in seal bentonite & contain unusable water? Yes No Did any strata contain unusable water? Pepth of strata	Well site meets standards set in SC1248 according to information provided by owner.		
Material used in seal bentonite & control Did any strata contain unusable water? Yes In No Type of water? Depth of strata	Well site meets standards set in SC1248 according to information provided by owner.	EIV 0720	
Material used in seal bentonite & control Did any strata contain unusable water? Yes No Type of water? Depth of strata	Well site meets standards set in SC1248 according to information provided by owner.		
Material used in seal bentonite & contain Did any strata contain unusable water? Yes Did any strata contain unusable water? Pepth of strata Method of sealing strata off	Well site meets standards set in SC1248 according to information provided by owner.		
Material used in seal bentonite & control Did any strata contain unusable water? Yes No Type of water? Depth of strata	Well site meets standards set in SC1248 according to information provided by owner.		- ANN

Driller/Engineer/Traince Signature Ungul Sunce	Address 7940 NE Cape Hom Rd
Driller or trainee License No. 1898	City, State, Zip Concrete, Wash 98237
(ITRAINEE,	Contractor's
Driller's Licensed No	Registration No. Princwd095K4 Date July 29, 1994
Driller's Signature	Ecology is an Equal Opportunity Employer.

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

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 Information on this Well Report.

: 2 Point: 1b 431939	Eco id: 760481
WATER WELL REPORT Original & I" copy - Ecology, 2 st copy - owner, 3 rd copy - driller	CURRENT Notice of Intent No. W042117
Uriginal & F" copy – Ecology, 2" copy – owner, 3" copy – onner E (0 L 0 C Y	Unique Ecology Well ID Tag No. ABP203
Construction/Decommission ("x" in circle)	Water Right Permit No.
Decommission ORIGINAL INSTALLATION Notice	
of Intent Number	Property Owner Name Jim Cook
	Well Street Address
PROPOSED USE: Domestic Industrial Municipal DeWater Irrigation Test Well Other	City County Skagit
	Location <u>SW1/4-1/4</u> <u>SE 1/4</u> Sec <u>8</u> Twn <u>35</u> R <u>8</u> EWM www
TYPE OF WORK: Owner's number of well (if more than one)	
Image: Weight of the secondition of the second s	Lat/Long (s, t, r Lat Deg Lat Min/Sec
DIMENSIONS: Diameter of well 6 inches, drilled 50 ft.	Still REQUIRED) Long Deg Long Min/Sec
Depth of completed well <u>50</u> ft.	
CONSTRUCTION DETAILS	Tax Parcel No
Casing Welded 6 "Diam. from 1 fl. to 50 fl.	
Casing Installed Open form fl. to 50 f	CONSTRUCTION OR DECOMMISSION PROCEDURE
Perforations: 🔲 Yes 🚺 No	 Formation: Describe by color, character, size of material and structure, and the kind nature of the material in each stratum penetrated, with at least one entry for each cha
Type of perforator used	information. (USE ADDITIONAL SHEETS IF NECESSARY.)
SIZE of perfsin. byin. and no. of perfsfromft. toft	
Screens: Yes Z No K-Pac Location	sand, gravel & boulders 1 ft 20 f
Manufacturer's Name	hard pan 20 ft 28 ft
Type Model No. Diam. Slot size from ft. to ft. Diam. Slot size from ft. to ft.	clay, sand & gravel 28 ft 35 ft
DiamSlot sizefromft. toft. Gravel/Filter packed: U Yes Z No C Size of gravel/saud	sand, gravel & water 35 ft 50 ft
Materials placed from ft. Surface Seal: Yes No To what depth? 20 ft. Material used in seal bentonite	
Did any strata contain unusable water? Image: Yes Image: No Type of water? Depth of strata	
Type of water? Depth of strata	
Method of sealing strate of [
PUMP: Manufacturer's Name Grandflos Type: submersible H.P. 1/2	
WATER LEVELS: Land-surface elevation above mean sea levelfl. Static levelfl. below top of well Date	
Artesian pressure lbs. per square inch Date	Well site meets standards set in SC1248
Artesian water is controlled by	according to information provided by owner.
(cap, valve, etc.)	-
WELL TESTS: Drawdown is amount water level is lowered below static level	
Was a pump test made? Z Yes No If yes, by whom? Wayne Prince	CEIVEN
Yield: gal./min. with ft. drawdown after hrs. Yield: gal./min. with ft. drawdown after hrs.	
Yield: gal./tnin. withft. 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	DEC 07 2011 2
	TEL UI EI
	2 5
Date of test	
Bailer testgal./min. witbft. drawdown afterhrs.	RESOURCE
Airtest gal/min, with stem set at ft. forbrs.	"COUNT
Artesian flow g.p.m. Date	
	Start Date Aug I Completed Date Aug 3, 195

	Dritter D Engineer D Traince Name (Print) Wayne Prince	Drilling Company Prince Well Drilling	
/	Driller/Engineer/Trainee Signature Wayne Chunc	Address 7940 NE Cape Horn Rd	
	Driller or trainee License No. 1898	City, State, Zip Concrete, Wash 98237	
	(IT TRAINEE.	Contractor's	
	Driller's Licensed No.	Registration No. Princwd095K4 Date Aug 31, 1994	
	Driller's Signature	Ecology is an Equal Opportunity Empl	loyer

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

Sec		Start Card No LL REPORT UNIQUE WELL I.D. # (ASHINGTON Water Right Permit NoSS_		
(1)		3253 Cemitery Rd Sedre	0000	
<u> </u>		SE 14 SE 1/4 Sec 8 1.3		
	LOCATION OF WELL: county _ TKalg 1 F	<u>5E_1/4.5E_1/4.5ec_8E_1_5</u>	<u> </u>	<u>a w</u> :
(28)	STREET ADDRESS OF WELL (or nearest address)			-
(3)	PROPOSED USE: Domestic Industrial D Municipel	(10) WELL LOG or ABANDONMENT PROCEDURE D		
(4)	TYPE OF WORK: Owner's number of well	Formation: Describe by color, character, size of material and structure, and and the kind and nature of the material in each stratum penetrated, with change of information.	at least one t	es of aquite entry for ea
(7)		MATERIAL	FROM	то
	Deepened Cable Driven	52rd Grace + Baulders		45
	Reconditioned Rotary Jetted	<u> </u>	45	6/
(5)	DIMENSIONS: Diameter of well inches.	Clay Sand + Giaval	61	100
	Drilledfeet. Depth of completed well ft.	- JENEL GIZULI WELL	100	1/4
	CONSTRUCTION DETAILS:	RECEIVED		
(0)				
	Welded D Diam from the D.	UIN 06 1995		
	Threaded blank fromft. to ft.			
	Perforationa: Yes No			
	Type of perforator used	DEPT. OF ECOLOGY		
	SIZE of perforations in. by in.			
	perforations fromft. toft.			
	perforations fromfl. tofl.		ļ	ļ
	perforations from ft. to ft.	Well Site metster	12	k
	Screene: Yes No	Cot Inge 1248 Acc	hall	+
	Manufacturer's Name	to ma ploud by	have	4
	Type Model No	u	=6	
	Diam Slot size tromft. toft.		ļ -	
	DiamSlot sizefromfl. toft.		┥───	
_	Gravel packed: Yes No Size of gravel			+
	Gravel placed fromft. toft.			<u> </u>
_	Surface seal: Yes No D Toywhat depth? 19 1.			<u> </u>
	Material used in seal But tentus			
	Did any strata contain unusable water? Yes 🗌 No 🗌		-	1
			1	
	Type of water? Depth of strata		+ -	
	Type of water? Depth of strata Method of sealing strata off			
	Type of water? Depth of strata Method of sealing strate off PUMP: Manufacturer's Name Gr word No			
(7)	Type of water? Depth of strata			
(7) (8)	Type of water?	Work Started	25	, 19
	Type of water?	Work Started 22_ 19. Completed	25	19
	Type of water? Depth of strata Method of sealing strata off	Work Started 22_, 19. Completed WELL CONSTRUCTOR CERTIFICATION:		19
	Type of water? Depth of strata Method of sealing strate off	Work Started	on of this w ds. Material	a used an
(8)	Type of water?	Work Started	on of this w ds. Material	a used an
(8)	Type of water?	Work Started 22_ 19. Completed WELL CONSTRUCTOR CERTIFICATION: I constructed and/or accept responsibility for construction compliance with all Washington well construction standard the information reported above are true to my best knowled	on of this w ds. Material dge and beli /	susecian lef.
(8)	Type of water?	Work Started 22_ 19. Completed WELL CONSTRUCTOR CERTIFICATION: I constructed and/or accept responsibility for construction compliance with all Washington well construction standar the information reported above are true to my best knowled NAME	on of this w ds. Material dge and beli Ma Paint &	a used an ef.
(8)	Type of water?	Work Started 22_ 19. Completed WELL CONSTRUCTOR CERTIFICATION: I constructed and/or accept responsibility for construction compliance with all Washington well construction standar the information reported above are true to my best knowled NAME	on of this w ds. Material dge and beli Ma Paint &	a used an ef.
(8)	Type of water?	Work Started 22_ 19. Completed WELL CONSTRUCTOR CERTIFICATION: I constructed and/or accept responsibility for construction compliance with all Washington well construction standar the information reported above are true to my best knowled NAME	on of this w ds. Material dge and beli Ma Paint &	a used an ef.
(8)	Type of water?	Work Started 22_ 19. Completed WELL CONSTRUCTOR CERTIFICATION: I constructed and/or accept responsibility for construction compliance with all Washington well construction standar the information reported above are true to my best knowled NAME	on of this w ds. Material dge and beli Ma Paint &	a used an ef.
(8)	Type of water?	Work Started	on of this w ds. Material dge and bell waterial sa PRINT Sa PRINTT SA PRINT SA PRINT SA PRINT SA PRINT SA PRINT SA PRINT SA PRINT	n used an ef. <u>ncu</u> 1898
(8)	Type of water?	Work Started	on of this w ds. Material dge and bell waterial sa PRINT Sa PRINTT SA PRINT SA PRINT SA PRINT SA PRINT SA PRINT SA PRINT SA PRINT	n used an ef. <u>ncu</u> 1898
(8)	Type of water?	Work Started	on of this w ds. Material dge and bell sk PRINT Sk PRIN SK PRINT SK PRINT SK PRINT S	n used an ef. <u>ncu</u> 1898
(8)	Type of water?	Work Started	on of this w ds. Material dge and bell sk PRINT Sk PRIN SK PRINT SK PRINT SK PRINT S	n used an ef. <u>ncu</u> 1898
(8)	Type of water?	Work Started	on of this w ds. Material dge and bell SR PRINTY DR PRINTY New York SARY)	- 19
(8)	Type of water?	Work Started	on of this w ds. Material dge and bell SRPRINTY nee No/ SARY) neenploye	- 19 r. For sp

I Copy — Owner's Copy Copy — Driller's Copy STATE OF W.	Start Card No. WO62205 LL REPORT UNIQUE WELL LD. # <u>HBP 23</u> UNIQUE WELL LD. # <u>HBP 23</u> Watter Right Permit No. <u>35/56/3-R</u> THM Com. a froy RL Ham, I for West
Sopy - Driller's Copy STATE OF VY WWNER: Name 7 m COOK	
	· Constroy Rd Ham, Itom West
OCATION OF WELL: COURSE Straget	
	. <u>SE 1/4 SE 1/4 Sec 8 T.35 N. F.8 N</u>
STREET ADDRESS OF WELL (or nearest actives) SouthSka	ight Hay concrete west
PROPOSED USE: Proposic Industrial D Municipal D	(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION
Inigetion Test Well Other I	Formation: Describe by color, character, size of material and structure, and show thickness of aqui and the kind and nature of the material in each stratum penetrated, with at least one entry for a change of information.
(If more than one)	MATERIAL FROM TO
Deepened Cable D Driven	Cley sand + grower 1 4
	Sand graver + 1500 days 4 41
	Blue Grad Ene Stand 49 63
	Brown, 2t Clay Fine Sand 63 9
	Courser spart Brown 90 10
	Sand gravel + water 100 10
iner installed	
perforations fromft. toft.	
ft. toft.	Well Site mer + Stradgetd
perforations fromft. toft.	set, usc 1248 According
Screens: Yes 🗌 No 🗹	to inthe provided by a france
Aanufacturer's Name	web
ype Model No	
	RECEIVED
	AUG 2 2 1995
	DEPT. OF ECOLOGY
Method of sealing strata off	
Can Car	
PUMP: Manufacturer's NameHP	
	Work Started Aug 7 19. Completed Aug 9 19
Static level a it before the static	WELL CONSTRUCTOR CERTIFICATION:
Artesian water is controlled by (Cap, valve, etc.)	I constructed and/or accept responsibility for construction of this well, and compliance with all Washington well construction standards. Materials used in
NET I TECTO, p	the information reported above are true to my best knowledge and belief.
Was a nump test made? Yes T No I If yes, by whom?	NAME Priver WC Drilling
Yield:	
и и и	Address T94 NE Cape Home Concret
п ц н ц	Address 794 NE Cape Hom Concred. (Signed) Warre Council License No. 189
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)	(WELL DANLER)
nop to watter level) me Water Level Time Water Level Time Water Level	Contractor's
	No. Prince Dogsky Date Aug 14 19_
	(USE ADDITIONAL SHEETS IF NECESSARY)
Date of test	
Date of test	
Date of test	Ecology is an Equal Opportunity and Affirmative Action employer. For sp clal accommodation needs, contact the Water Resources Program at (20 407-6600. The TDD number is (206) 407-6006.
	In more than oney Method: Dug

0

Seco	Site: 2 Point: 2c Site: 2 Point: 2c WATER WE MATER WE STATE OF W		2105 +AX	
	r copy — Driller # Copy	water Hight Permit No		11026
(1) (2) (28)	OWNER: Name & Cool > Addr LOCATION OF WELL: County SKagi } STREET ADDRESS OF WELL (or nearest address)		<u>5</u> N. R.	_/
(3)	PROPOSED USE: Domestic Industrial Municipal Intigation DeWater Test Well Other	(10) WELL LOG or ABANDONMENT PROCEDURE D Formation: Describe by color, character, size of material and structure, and and the kind and nature of the material in each stratum penetrated, with	show thickne	ss of aquiters
(4)	TYPE OF WORK: Owner's number of well (If more than one)	change of Information.	FROM	то
	Abandoned New well Method: Dug Bored Deepened Cable More Driven Reconditioned Rotary Jetted .	Clay Strict + Bouldet	30	30 36
(5)	DIMENSIONS: Diameter of well inches. Drilled feet. Depth of completed well ft.	Stad growel i water	36	50 41 51
(6)	CONSTRUCTION DETAILS: Ceeing installed: Diam. fromt. to98 h. Welded Diam. fromt tot.	Ataming Sand angrand sand + grane 1	81 9 6	98 98
	Welded* Diam. fromft. toft. Liner installed* Diam. fromft. toft. toft.	RECEIVED		
	Perforations: Yes No Type of perforator used	AUG - 1 1994		
	SIZE of perforations in. by in. perforations fromft. toft. perforations fromft. toft.	DEPT. OF ECOLOGY		
	perforations from ft. to ft. Screens: Yes 10 No ft.	Well parts multo Standard		
	Manufacturer's Name Inc. How 2 / J Type	To infor grunil & hy our		- -
	Diam. Slot size from. ft. to ft. Gravel packed: Yes No Size of gravel ft. Gravel placed from			•
	Surface seal: Yes No To what depth? ////////////////////////////////////			
	Type of water? Depth of strata Method of sealing strata off	RECE	VE	P
(7)	PUMP: Manufacturer's Name Corund for Type: Schpman 100pm H.P. 5	AUG 0.		
(8)	WATER LEVELS: Land-surface elevation above mean sea levelft. Static level794	DEMI: OF L		
	Artesian pressure los. per square Inch Date Artesian water is controlled by (Cap. valve, etc.)	Work Started June . 19. Completed June	- 8	. 19 7 4
Ŋ	WELL TESTS: Drawdown is amount water level is lowered below static level Was a pump test made? Yes No II yes, by whom? Way	WELL CONSTRUCTOR CERTIFICATION:		
	Yield: <u>/C gal./min. with</u> <u>J tt. drawdown after</u> <u>Z hre.</u>	I constructed and/or accept responsibility for constructio compliance with all Washington well construction standard the information reported above are true to my best knowled	is. Materials	s used and
	Vecovery data (time taken as zero when pump turned off) (water level measured from well to to water level) Water Level Time Water Level Time Water Level	NAME <u>FINCE</u> <u>()</u> IPERSON FIRM OR COAPORATION (TYPE O Address <u>794</u> <u>NE</u> <u>Cape Hun</u>	Care	de
		(Signed) <u>Ubyyou Comen</u> Licer	ise No. <u>/</u>	898
	Vest gal./min. withft. drawdown afterhrs. gal./min. with stem set atft. forhrs. flowg.p.m. ure of waterWas a chemical analysis made?	Contractor's Registration No. <u>Princ w D095 W Date</u> July (USE ADDITIONAL SHEETS IF NECESS		19 <u>74</u>

A3		Eco id: 87040 Start Card No. (2) 0 63	05
Seco Third	Ind Copy - Owner's Copy STATE OF W	LL REPORT UNIQUE WELL I.D. # AC CHARMENGTON Water Right Permit No. 35-86-9 N	
(1)	OWNER: Name TAMES COOK Add	- 3255 HAmilton Cemetery 12 Scarowoolly	,
••	LOCATION OF WELL: County SKa61 4	- <u>SW 1/4 SW 1/4 Sec. 9 T. 35 N. R.</u>	<u>8</u> ~
(3)	PROPOSED USE: Promestic Industrial Municipal	(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTI	ON
(-)	Inigation Inigation Inigation DeWater Test Well Other	Formation: Describe by color, character, size of material and structure, and show thickne and the kind and nature of the material in each stratum penetrated, with at least one e change of information.	iupa to se
(4)	(If more than one)	MATERIAL FROM	то
	Abandoned C New well 🖉 Method: Dug C Bored C Deepened C Cable C Driven C	Gravel	10
	Reconditioned 🗆 Rotary 🕞 Jetted 🗆	SAND Gravel 10	a
(5)	DIMENSIONS: Diameter of well inches.	Clay SAND 21	35
(-)	Drilled feet. Depth of completed well 87 ft.	SAND Gravel 35	60
		WAter Gravel 60	70
(6)	CONSTRUCTION DETAILS:	cravel water 70	87
	Casing installed: Diam. fromft. toft.		
	Welded Diam. from ft. to tt.		
	Threaded Diam. fromt. tot.		1
	Perforationa: Yes No		1
	Type of perforator used		
	SIZE of perforations In. by In.		
	perforations from ft. to ft.		
	perforations from ft. toft.		
	perforations from ft. to [t.	Well Stansmeets standard	†
		Set in SCI278 accorping	
	Screens: Yes No	to info provided by owner	1
	Type Model No		
	Diam Slot size from ft. toft.		
	Diam. Slot sizeft. toft.		<u> </u>
	Gravel pecked: Yes No Size of gravel		
	Gravel picked; tes [_] No ft. to ft.		1
	· · · · · · · · · · · · · · · · · · ·	RECEIVED	
	Surface seal: Yes A No To what depth? 8		
	Material used in seal <u>Cement</u>	JUL 16 1996	
	Did any strata contain unusable water? Yes 🗌 No 🜌		1
	Type of water? Depth of strata	DEPT. OF ECOLOGY	1
	Method of sealing strata off		1
(7)	PUMP: Manufacturer's Name		
()	Type: Sumburne 10 cm H.P. H.		1
(8)	WATER LEVELS. Land-surface elevation	Work Started June 9 . 19. Completed June 9	
(8)			
	Static level ti. below top of well Data	WELL CONSTRUCTOR CERTIFICATION:	
	the les water is centralied by	I constructed and/or accept responsibility for construction of this we	
	(Cap, valve, etc.)	compliance with all Washington well construction standards. Materials the information reported above are true to my best knowledge and being	usecia sf.
(9)			
	Was a pump test made? Yes No I If yes, by whom? Hayne Prince	NAME Prince Well Drilling	
	Yield: 10 gal./min. with 2 ft. drawdown after 3 hra.		
	31 Str 61 79	Address 794 NE (ADE HOID CONCICHE	
	1) I) II	(Stoned) Wayne Communicense No. 18	99
	Recovery data (time taken as zero when pump turned off) (water level measured from well	(Signed) (Well DRILLER)	
	top to water level) Time Water Level Time Water Level Time Water Level	Contractor's	
		No. PrincwD09524 Date 6/10	_, 19 <u>7(</u>
		(USE ADDITIONAL SHEETS IF NECESSARY)	
	Date of test		
	Bailer test gal./min. with	Ecology is an Equal Opportunity and Affirmative Action employer.	For sp
	Airtest gal,/min. with stem set at rt. for ris. Artesian flow g.p.m. Date	cial accommodation needs, contact the Water Resources Program	n at (20
	Temperature of water Was a chemical analysis made? Yes No	407-6600. The TDD number is (206) 407-6006.	

2 Point: 3b	Eco id: 377851	35-8E.	×
WATER WELL REPORT	CURRENT Notice of Intent No W16746	56	
r's a l'o s y Original & 1st copy Ecology 2nd copy owner, 3rd copy - driller	Unique Ecology Well ID Tag No $4K$	G 204	1
Construction/Decommission (x in cucle) 14780/			
O Construction O Decommission ORIGINAL CONSTRUCTION Notice	Water Right Permit No		
of Intent Number	Property Owner Name Low	lollers_	
PROPOSED USE Domestic Industrial Municipal DeWater Irrigation Test Well Other	Well Street Address Log Stow (City Concrete County	ane	
TYPE OF WORK Owner's number of well (if more than one)	- City Coverste County	Staget_	
New Well Reconditioned Method Dug Bored Driven	Location SW 1/4- 1/4 SW 1/4 Sec 9	Twn 35 R 8	シEW ー o
Deepened Cable Detted	Lat/Long Lat Deg		13713
DIMENSIONS Diameter of well 6 inches drilled 120 ft	(s,t,r still REQUIRED) Long Deg	Lang Mun/Sec	
Depth of completed well <u>12D</u> ft	Tax Parcel No		
CONSTRUCTION DETAILS Casing Welded Diam from ft to /20 ft Installed Diam from ft to ft	ft CONSTRUCTION OR DECOMMIS		E
Installed ft to ft to ft	ft Formation Describe by color character, size of	material and structu	re an
Threaded Diam from ft tof	ft kind and nature of the material in each stratum r entry for each change of information Indicate a		
Perforations Yes No	(USE ADDITIONAL SHEETS IF NECESSAR		
Type of perforator used SIZE of perfsn byn and no of perfs fromft tof	MATERIAL	FROM	тс 28
Screens Yes No K-Pac Location	t Sand	+	<u> </u>
Manufacturer s Name	Silt Sandtgraul	28-1	41
TypeModel No DiamSlot Sizefromft toft	Clay (Blue) Fine Sand	1 41 1	13
Diam Slot Size from ft to ft	Silt Sand + Gravel	63 4	80
Gravel/Filter packed Yes Ko Size of gravel/sand	Les silfs more Gravel	1 8D 8	3-7 7-7
Materials placed fromft toft	A little water Saps	m	
Surface Seal Ves No To what depth? // ft	Sand gravel tweter	87 1	0
Materials used in seal Binlom Did any strata contain unusable water? Yes No	ON/Y Come up in Boin	s –	
Type of water?Depth of strata	about 61t	1/20 1	120
	Sand + gravel	100 [\sim
Method of sealing strata off PUMP Manufacturer's Name Gould 109PM Type Subpager HP 2			
WATER LEVELS. Land surface elevation above mean sea level ft			
Static level 76 ft below top of well Date Feb 13			
Artesian pressurelbs per square inch Date Artesian water is controlled by			
(cap valve etc.)	RECE		
WELL TESTS Drawdown is amount water level is lowered below static level	RECEI APR 2 2 DEPT OF ECC	VED	
Was a pump test made? Yes No If yes by whom? Yield ft drawdown after hrs	MPR 2 2	2004	
Yield gal /min_with ft_drawdown after hrs	DEPTOF		
Yieldgal /min withft drawdown afterhrs Recovery data (time taken as zero when pump turned off)(water level measured from		40GY	
well top to water level)			
Time Water Level Time Water Level Time Water Level			
		+	
Date of test gal/min with _5ft drawdown afterhrs			
Airtestgal /min with stem set atft forhrs			
Artesian flowg p m Date Temperature of waterWas a chemical analysis made? Yes No	Start Date Feb 12 Completed	Date F-cb 13	3
WELL CONSTRUCTION CERTIFICATION I constructed and/or accept resp		-	
Washington well construction standards Materials used and the information i	reported above are true to my best knowledge	and belief	
Driller Engineer Trainee Name (Print) WayNeC Triwc-	<u>Prince</u> W	dl Brillin	~q
Driller/Engineer/Trainee Signature Vayne Clone	- Address 7940 NE CZRE	Hora R&	
Driller or Trainee License No	- City, State, Zip Concrete Wa	sh 9823	37
If trainee, licensed driller's	Contractor's Prince w D0951/4	De Eb 1	70

2 Point: 3c 431932	Eco id: 760467
WATER WELL REPORT Original & 1 st copy - Ecology, 2 nd copy - owner, 3 nd copy - driller	CURRENT Notice of Intent No. W042108
	Unique Ecology Well ID Tag No. ABP202
Construction/Decommission ("x" in circle)	Water Right Permit No.
Construction Decommission ORIGINAL INSTALLATION Notice	_
of Intent Number	Property Owner Name Don Payne
-	Well Street Address South Skagit Hwy
PROPOSED USE: Image: Construction of the second	City Concrete County Skagit
TYPE OF WORK: Owner's number of well (if more than one)	$- \begin{array}{c c} Location \underline{SW1/4-1/4} & \underline{SW1/4} & \underline{Scc 9} & \underline{Twn 35} & \underline{R.8} & \underline{EWM} & \underline{\Box}_{ci} \\ & & & & & \\ & & & & & \\ & & & & & & $
Vew well Reconditioned Method : Dug Bored Driven	Lat/Long (s, t, r Lat Deg Lat Min/Sec
Deepened Cable Rotary Jetted	
DIMENSIONS: Diameter of well 6 inches, drilled 93 fl.	Still REQUIRED) Long Deg Long Min/Sec
Depth of completed well 93ft.	Tax Parcel No.
Ceasing Image: Constant of the second seco	CONSTRUCTION OR DECOMMISSION PROCEDURE
Perforations: Yes ZNo	
Type of perforator used	nature of the material in each stratum penetrated, with at least one entry for each change information. (USE ADDITIONAL SHEETS IF NECESSARY.)
SIZE of perfsin. byin. and no. of perfsfromft. toft	MATERIAL FROM T
Screens: Yes V No K-Pac Location	sand 1 ft 32 ft
Manufacturer's Name	sand, gravel & clay 32 ft 70 ft
Type Model No. Diam. Slot size from ft. to ft. Diam. Slot size from ft. to ft.	clay brown small amount water 70 ft 74 ft
DiamStorsize fromR. ft. toR. DiamSlot size fromR. ft. toR.	hard pan 74 ft 82 ft
Gravel/Filter packed: Yes Yes Size of gravel/sand Materials placed fromfi. tofi.	sand, gravel & clay 82 ft 90 ft
Materials placed fromft. toft.	sand, gravel & water 90 ft 93 ft
Surface Seal: Yes No To what depth? 20 ft ft.	
Material used in seal bentonite & cement	
Did any strata contain unusable water? Yes No Type of water? Depth of strata	
Method of sealing strate off	
PUMP, Manufacturer's Name Grandfos	
Type: submersible H.P. 1/2	
WATER LEVELS: Land-surface elevation above mean sea levelft.	
Static lovel 63 ft. below top of well Date July 1	
Artesian pressure lbs. per square inch Date	Well site meets standards set in SC1248
Artesian water is controlled by	according to information provided by owner.
(cap, valve, etc.)	
WELL TESTS: Drawdown is amount water level is lowered below static level Was a pump test made? 2 Yes D No If yes, by whom? <u>Wayne Prince</u>	TUD.
Yield: 10 ft. drawdown after 2 hrs.	CENCO
Yield: gal/min. with fl. drawdown after hts.	
Yield: pai./min. with fl. drawdown after hrs. Recovery data (time taken as zero when pump turned off) (water level measured from well	
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	DEC OF 2011
Date of test	to Lor
Bailer test <u>22</u> gal/min, with <u>3</u> ft. drawdown after <u>2</u> hrs.	AESOURCE
Airtest gal./min, with stem set at ft. for hrs.	
Artesian flow g.p.m. Date Temperature of water Was a chemical analysis made? D Yes D No	
	Start Date July 1, 1994 Completed Date July 2,1994
	Start Date July 1, 1994 Completed Date July 2,1994 accept responsibility for construction of this well, and its compliance well. Completed Date July 2,1994

ZDriller Engineer Traince Name (Print) Wayne Prince	Drilling Company Prince Well Drilling
Driller/Engineer/Trainee Signature Wayhe Counce	Address 7940 NE Cape Horn Rd
Driller or trainee License No. 1898	City, State, Zip Concrete, Wash 98237
(ITRAINEE,	Contractor's
Driller's Licensed No.	Registration No. Princwd095K4 Date July 20, 1994
Driller's Signature	Ecology is an Equal Opportunity Employer.

ECY	050-	1-20	(Rev	3/05)	
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705) The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.

	Eco id: 87047 Start Card No. <i>いしし309</i> :
cond Copy — Owner's Copy STATE OF W	LL REPORT UNIQUE WELL I.D. # 4 CG 7 8 ASHINGTON Water Right Permit No.
OWNER: Name Connad Wilk & came Add	ZE-CE-CP
SK. K	SE 1/4 SW/4 Sec 9 135 N.R.8 W
LOCATION OF WELL: County      Korsty      STREET ADDRESS OF WELL (or neurest address)	
	(10) WELL LOG OF ABANDONMENT PROCEDURE DESCRIPTION
) PROPOSED USE: Propertic Industrial Municipal Irrigation DeWater Test Well Other	Formation: Describe by color, character, elze of material and structure, and show thickness of squife and the kind and nature of the material in each stratum penetrated, with at least one entry for each
) TYPE OF WORK: Owner's number of well (if more than one)	change of information.
Abandoned 🗆 New well 🖉 Method: Dug 🗆 Bored 🗆	MATERIAL FROM TO
Deepened Cable C Driven	SZAL STRILL Borlow 31 47
DIMENSIONS: Diameter of well inches.	47 69
Drilled 106 feet. Depth of completed well 106 ft.	Cher Franc Sand 67 80
CONSTRUCTION DETAILS:	Cauree Sand Water 100 100
Casing Installed: Diam. from t. to D b t.	Stad grave I water 103 100
Welded D flam. from ft. to ft.	
Threaded Uam. rom	
Type of perforation usedin. byin.	
perforations from ft. to ft.	. will site nette Standard
perforations fromft. toft.	Sit 12 48 according
	for a for promised by prome
Manufacturer's Name Model No	
DiamStot sizefromft. toft.	
DiemSlot sizefromft. toft. toft.	RECEIVED
Gravel packed: Yes No Size of gravel	
Gravel placed from	AUG 0 5 1996
Surface seal: Yes No To what depth? 18 ft. ft.	
Material used in seal Did any strata contain_unusable water? Yes 🗌 No 🗌	DEPT. OF ECOLOGY
Type of water? Bend the Depth of strata	
Method of sealing strate off	
7) PUMP: Manufacturer's Name Cound Pas 1050	
Type: Sudar H.D. K	
8) WATER LEVELS: Land-surface elevation ft.	Work Started Frely 10 19. Completed Terly 11 19
Static level ft. below top of well Date July	WELL CONSTRUCTOR CERTIFICATION:
Arteelan pressure be, per square inch Date Arteelan water is controlled by	I constructed and/or accept responsibility for construction of this well, and
(Cap, valve, etc.)	compliance with all Washington well construction standards. Materials used all the information reported above are true to my best knowledge and belief.
(9) WELL TESTS: Drawdown is amount water level is lowered below static level Was a pump test made? Yes No	
Was a pump test made? Yes No I If yes, by whom? <u>If here</u> is a set of the set	
	Address 794 NE Care Am Concil
н н н н	10 10 1 1 Day met Com License No. 1898
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)	(WELL DALLER)
top to water lave) Time Water Level Time Water Level Time Water Level	Contractor's
	- Registration No. HINCW DOSS Welpate July 16 19
	(USE ADDITIONAL SHEETS IF NECESSARY)
Date of test	
Bailer test gal./min. with ft. drawdown after hrat hrat ft. for hrat ft.	Ecology is an Equal Opportunity and Animitative Action employer. For op
Bailer testgal./min. withft, drawdown afterhni Aintestgal./min. with stem set atft, forhni Antesian flowg.p.m. Date Temperature of waterWas a chemical analysis made? Yes [] No []	Ecology is an Equal Opportunity and Affirmative Action employer. For sp cial accommodation needs, contact the Water Resources Program at (20 407-8600. The TDD number is (206) 407-6006.

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

Secol	rtment of Ecology TATE OF V nd Copy—Owner's Copy STATE OF V		
Third	CopyDriller's Copy	Water Right Permit No.	<u>.</u>
<u> </u>		Address 3537 HUNY 20 SEDED WD	
(2) (2a)	LOCATION OF WELL: County SKAgiT STREET ADDDRESS OF WELL (or nearest address) 4226 DA	NE SW & SOC 9 T35 N. LLes Rd CONCRETE, WA. 9	в <b>а</b> <u>е</u> 8237
	PROPOSED USE: X Domestic Industrial [] Municipal [] [] Irrigation Test Well [] Other []	(10) WELL LOG or ABANDONMENT PROCEDURE DE Formation: Describe by color, character, size of material and struct	ture, and
(4)	TYPE OF WORK: Owner's number of well (if more than one)	Thickness of aquifars and the kind and nature of the material in each strai with at least one entry for each change of information MATERIAL FROM	
	Abandoned Li New well X Method: Dug Li Bored [] Deepened ii Cable X Driven Li Reconditioned Li Rotary Li Jetted Li	SANDA CLAY O REAL HARD HARDRAN 28	28
(5)	Dimensions: Diameter of well6"inches.	COMPACT GRAVEL & WATER 36	<u> </u>
(6)	CONSTRUCTION DETAILS:	··· ·· ·	ŀ
(-,	Casing Installed:         10-10*         Diam. from         0         ft. to         3.9         ft.           Welded         If         If		
	Type of perforation used		
	SIZE of perforations in. by in. by in.	RECEIVED	
	perforations fromft. toft. toft. toft.	MAY 1 2 1992	
	Screens: Yes No	DEPT. OF ECOLOGY	
	Type         Model No.           Diam        ft. to        ft.           Diam        ft. to        ft.		
	Gravel packed: Yes No Size of gravel		
	Gravel placed from n. to n. t		
	Material used in seal		
	Method of sealing strate off		
(7)	Type. Submershame STA-ASTE		<u>+</u>
(8)	WATER LEVELS: Land-surface elevation above mean sea level ft.		<b>_</b>
(-)	Static level 20 ft. below top of well. Date		
	Artesian pressure Ibs. per aquare inch Date		
_		Work started	1
(9)	WELL TESTS: Drawdown is amount water level is lowered below static level Was a pump test made? Yes No I if yes, by whom?	WELL CONSTRUCTOR CERTIFICATION:	
	Well PROduces 540 gPH at 35 FT.		ion stand
	Recovery pata (time taken as zero when pump turned off) (water level measured trom well top to water level) Time Water Level Time Water Level Time Water Level	C.E. Dailly Co	YPE OR PR
• -		Address 2428 N MORFORD Rd	
-	Dete of test	(Signed) Charles License No.	000
	Bailer test	Contractor's	1

CURRENT Notice of Intent No. <u>W002282</u>		
Unique Ecology Well ID Tag No.		
Water Right Permit No		
-		
		<u> </u>
City Concrete County Skagit		
Location <u>SE 1/4-1/4</u> <u>NW1/4</u> Sec <u>9</u> Twn <u>35</u>	R_8 EWM	نہ 🗖 י
Still REQUIRED	na Min/Sa	•
Tax Parcel No		
CONSTRUCTION OF DECOMBUSION	DDOCEDI	ID F
CONSTRUCTION OR DECOMMISSION		
nature of the material in each stratum penetrated, with at least	one entry for ea	
· · · · · · · · · · · · · · · · · · ·		<del>1</del>
		29 ft
		42 ft
		73 ft
		75 ft
		<u> </u>
	<b> </b>	
	<b> </b>	
	<b> </b> _	
Into provided by owner.		
		+
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		<b>_</b>
	KKA-	+
		<u> </u> ار
↓ <b>/</b>	<b>├────</b> ──	+
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	2011-7	╡───
15	<u> </u>	1,
<u> </u>	<u> </u>	1-
L'Eller-		1
	PRO	
Start Date July 17 Complete	ed Date July	19, 199
	Unique Ecology Well ID Tag No Water Right Permit No Property Owner Name Nathan Storms Well Street Address 4240 Grassmere City Concrete County Skagit Location SE 1/4-1/4 NW1/4 Sec 9 Twn 35 Lat/Long (s, t, r Lat Deg Lat Still REQUIRED Long Deg Lon Tax Parcel No CONSTRUCTION OR DECOMMISSION Formation: Describe by color, character, size of material and nature of the material in each stratum penetrated, with at least information. (USE ADDITIONAL SHEETS IF NECES MATERIAL Clay clay, sand, gravel & water sand and gravel Well site meets standard set in SC1248, according to info provided by owner   DEC 07	Notice of Intent No.       W002282         Unique Ecology Well ID Tag No.

L'Dnifer L'Engineer L'Trainée Name (Print) Wayne Finde	Drilling Company Trace Web Drilling
Driller/Engineer/Traince Signature / Dayne Connection	Address 7940 NE Cape Horn Rd
Driller or trainee License No. 1898	City, State, Zip Concrete, Wash 98237
If TRAINEE.	Contractor's
Driller's Licensed No	Registration No. Princwd095K4 Date July 20,1993
Driller's Signature	Ecology is an Equal Opportunity Employer

v 3/05) The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.

	CURRENT Notice of Intent No. W1675537
WATER WELL REPORT Original & 1st copy - Ecology, 2nd copy - owner, 3rd copy - driller	Notice of Intent No. <u>MIE 13 551</u>
	Unique Ecology Well ID Tag No. <u>AKC 217</u>
Construction/Decommission ("x" in circle) 158652	Water Right Permit No
O Decommission ORIGINAL CONSTRUCTION Notice	S. Thomas
of Intent Number	Property Owner Name Sean Thompson
PROPOSED USE: Domestic Industrial Municipal DeWater Irrigation Test Well Other	Well Street Address 768 Mclanie Drive
TYPE OF WORK: Owner's number of well (if more than one)	City Concrete County: Stagel
New Well Reconditioned Method: Dug Bored Driven	Location 5W 1/4- 1/4 NE 1/4 Sec 9 Twn 2 RS EWM or
Deepened Cable Rotary Jetted	Lat/Long: Lat Deg Lat Min/Sec
DIMENSIONS: Diameter of well inches, drilled ft.	(s,t,r still Long Deg Long Min/Sec
Depth of completed wellft.	Tax Parcel No.
CONSTRUCTION DETAILS Casing Welded Diam. fromft. toft. toft.	
Installed: Liner installed Diam. fromft. to	$t_{\rm t}$ (Formation: Describe by color, character, size of material and structure, and t
Diam. fromft. toft.	kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.
Perforations: Yes No	(USE ADDITIONAL SHEETS IF NECESSARY.)
Type of perforator usedfin. and no. of perfs fromft. toft.	MATERIAL FROM TO
Screens: Yes No K-Pac Location	top dant 1 0
Manufacturer's Name	Self Stold grand 6 28 Hard poor 28 80
TypeModel No	Not for 28 80
DiamSlot Sizefromft. toft.           DiamSlot Sizefromft. toft.	Charles Water 80 190
Gravel/Filter packed: Yes No Size of gravel/sand	tible call Come
Materials placed fromft. toft.	us in Come
Surface Seal: Yes No. To what depth?ft	Sand crand water 12 140
Materials used in seal Bulune	
Did any strata contain unusable water? Tyes TNo	
Type of water?Depth of strata Method of sealing strata off	
Method of sealing strata off	
	Will Sate Mosta Standard
Method of sealing strata off PUMP: Manufacturer's Name	Well Sate Mosta Standard Zet in SC n 48 according 10
Method of sealing strata off PUMP: Manufacturer's Name Type: Sub-, H.P. 3/4 WATER LEVELS: Land-surface elevation above mean sea_levelft. Static levelft. below top of well Dateft.	Well Sete Meeta Handad Zet in SCN 48 according to info promised by min
Method of sealing strata off	Well Sate Mosta Standard Zet in SC n 4 g according to info pure and by an
Method of sealing strata off         PUMP:       Manufacturer's Name         Type:       H.P.         WATER LEVELS:       Land-surface elevation above mean sea_level         ft.       below top of well         Date       July         Artesian pressure       lbs. per square inch         Date       (cap,valve, etc.)	Well Sete Meeta Handad Zet in SCN & according to info promoted by an
Method of sealing strata off         PUMP:       Manufacturer's Name         Type:       H.P.         WATER LEVELS:       Land-surface elevation above mean sea_level         ft.       below top of well         Date       July         Artesian pressure       lbs. per square inch         Date       (cap,valve, etc.)         WELL TESTS:       Drawdown is amount water level is lowered below static level.	Well Sate Mosta Standard Zet in SC n 4 g according to info pure and by an RECEIVED
Method of sealing strata off         PUMP:       Manufacturer's Name         Type:       H.P.         WATER LEVELS:       Land-surface elevation above mean sea_level         ft.       below top of well         Date       July         Artesian pressure       lbs. per square inch         Date       (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       6       ft. drawdown after       2       hrs.	RECEIVED
Method of sealing strata off         PUMP:       Manufacturer's Name         Type:       H.P.         WATER LEVELS:       Land-surface elevation above mean sea_level         ft.       below top of well         Date       July         Artesian pressure       lbs. per square inch         Date       (cap,valve, etc.)         WELL TESTS:       Drawdown is amount water level is lowered below static level.         Was a pump test made?       Yes         Yield:       gal/min. with       ft. drawdown after         Yield:       gal/min. with       ft. drawdown after	info promond by min
Method of sealing strata off         PUMP:       Manufacturer's Name         Type:       H.P.         WATER LEVELS:       Land-surface elevation above mean sea_level         ft.       below top of well         Date       July 29         Artesian pressure       lbs. per square inch         Date       (cap,valve, etc.)         WELL TESTS:       Drawdown is amount water level is lowered below static level.         Was a pump test made?       Yes         Yield:       gal/min. with         ft.       drawdown after         Yield:       gal/min. with         ft.       drawdown after         hrs.       hrs.         Yield:       gal/min. with         ft.       drawdown after         hrs.       hrs.         Recovery data (time taken as zero when pump turned off)(water level measured from	RECEIVED AUG 3 1 2004
Method of sealing strata off         PUMP:       Manufacturer's Name         Type:       H.P.         WATER LEVELS:       Land-surface elevation above mean sea_level         ft.       below top of well         Date       July 79         Artesian pressure       lbs. per square inch         Date       (cap,valve, etc.)         WELL TESTS:       Drawdown is amount water level is lowered below static level.         Was a pump test made?       Yes         Yield:       gal/min. with         ft.       drawdown after         Yield:       gal/min. with         ft.       drawdown after         hrs.       hrs.         Yield:       gal/min. with         ft.       drawdown after         hrs.       hrs.         Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)	RECEIVED
Method of sealing strata off         PUMP:       Manufacturer's Name         Type:       H.P.         WATER LEVELS:       Land-surface elevation above mean sea_level         ft.       below top of well         Date       July 29         Artesian pressure       lbs. per square inch         Date       (cap,valve, etc.)         WELL TESTS:       Drawdown is amount water level is lowered below static level.         Was a pump test made?       Yes         Yield:       gal/min. with         ft.       drawdown after         Yield:       gal/min. with         ft.       drawdown after         hrs.       hrs.         Yield:       gal/min. with         ft.       drawdown after         hrs.       hrs.         Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)	RECEIVED AUG 3 1 2004 RECEIVED
Method of sealing strata off         PUMP:       Manufacturer's Name         Type:       H.P.         WATER LEVELS:       Land-surface elevation above mean sea_level         ft.       below top of well         Date       July 79         Artesian pressure       lbs. per square inch         Date       (cap,valve, etc.)         WELL TESTS:       Drawdown is amount water level is lowered below static level.         Was a pump test made?       Yes         Yield:       gal/min. with         ft.       drawdown after         Yield:       gal/min. with         ft.       drawdown after         hrs.       hrs.         Yield:       gal/min. with         ft.       drawdown after         hrs.       hrs.         Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)	RECEIVED NOV 1 0 2004
Method of sealing strata off	RECEIVED AUG 3 1 2004 RECEIVED
Method of sealing strata off	RECEIVED NOV 1 0 2004
Method of sealing strata off	RECEIVED NOV I 0 2004 DEPT OF ECOLOGY
Method of sealing strata off	RECEIVED AUG 3 1 2004 RECEIVED AUG 3 1 2004 RECEIVED NOV I 0 2004 DEPT OF ECOLOGY Start Date Juny 4 Completed Date Juny 29
Method of sealing strata off	RECEIVED NOV 1 0 2004 Start Date <u>Juny</u> 4 Completed Date <u>Juny</u> 4 Completed Date <u>Juny</u> 29 Completed Date <u>Juny</u> 29
Method of sealing strata off         PUMP:       Manufacturer's Name         Type:       H.P.         WATER LEVELS:       Land-surface elevation above mean sealevel         ft.       below top of well         Date       July 29         Artesian pressure       lbs. per square inch         Date       July 29         Artesian pressure       lbs. per square inch         Date       (cap,valve, etc.)         WELL TESTS:       Drawdown is amount water level is lowered below static level.         Was a pump test made?       Yes         Yield:       gal/min. with         ft.       drawdown after         hrs.       hrs.         Yield:       gal/min. with         ft.       drawdown after         hrs.       hrs.         Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)         Time       Water Level         Time       Water Level         Date of test       gal/min. with stem set atft. ft. forhrs.         Artesian flow	RECEIVED AUG 3 1 2004 RECEIVED AUG 3 1 2004 RECEIVED NOV I 0 2004 DEPT OF ECOLOGY Start Date Juny 4 Completed Date Juny 2 9 consibility for construction of this well, and its compliance with all eported above are true to py best knowledge and belief.
Method of sealing strata off         PUMP:       Manufacturer's Name         Type:       H.P.         WATER LEVELS:       Land-surface elevation above mean sealeyel         ft.       ft. below top of well       Date         Artesian pressure       lbs. per square inch       Date         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         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       hrs.         Artesian flow       gal/min. with stem set at       ft. ft. for       hrs.         Artesian flow       gal/min. with stem set at       gt. ft. for       hrs.         Artesian flow       gal/min. with stem set at       ft. for       hrs. <tr< td=""><td>RECEIVED NOV 1 0 2004 Start Date Dimensional Completed Date Dimensional Completed Date Dimensional Completed Date Completed above are true to my best knowledge and belief. Drilling Company Link C.C. Well Delling</td></tr<>	RECEIVED NOV 1 0 2004 Start Date Dimensional Completed Date Dimensional Completed Date Dimensional Completed Date Completed above are true to my best knowledge and belief. Drilling Company Link C.C. Well Delling
Method of sealing strata off         Type:       H.P.         WATER LEVELS:       Land-surface elevation above mean sea level       ft.         Static level       ft. below top of well Date       Dwg 29         Artesian pressure       lbs. per square inch       Date       Dwg 29         Artesian pressure       lbs. per square inch       Date       Dwg 29         Artesian water is controlled by       (cap.valve, etc.)       (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.         Well top to water level       Time       Water Level       measured from well top to water level         Date of test       gal/min. with stem set at       ft. ft. ft. for       hrs.         Artesian flow       g.p.m. Date       measured p.p.m. Date       measured p.p.m. Date         Temperature of water       Was a chemical analysis made?       Yes       No         WetLL CONSTRUCTION CERTIFICATION:       I constructed and/or accept resp         Washington well construction standards. Materials used and the information r	RECEIVED AUG 3 1 2004 RECEIVED AUG 3 1 2004 RECEIVED NOV I 0 2004 DEPT OF ECOLOGY Start Date Juny 4 Completed Date Juny 29 onsibility for construction of this well, and its compliance with all eported above are true to my best knowledge and belief. Drilling Company 1 w c. C. Well Dr. 11 m Address TO40 NE Cafe Horn Rd
Method of sealing strata off	RECEIVED NOV 1 0 2004 Start Date Dimensional Completed Date Dimensional Completed Date Dimensional Completed Date Completed above are true to my best knowledge and belief. Drilling Company Link C.C. Well Delling

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2 Point: 8a 431961	Eco id: 76	30507	
WATER WELL REPORT	CURRENT Notice of Intent No. <u>W222790</u>		<u>.,                                    </u>
Uniform the constant of the c	Unique Ecology Well ID Tag No. AKG288		
Construction/Decommission ("x" in circle)	Water Right Permit No.		
Decommission ORIGINAL INSTALLATION Notice	Property Owner Name Debbie & Rudolph Skonard		
of Intent Number	Well Street Address Sled Run Drive	<u> </u>	
PROPOSED USE: Donnestic Industrial Municipal	7		
DeWater	City Concrete County Skagit		
TYPE OF WORK: Owner's number of well (if more than one)	Location NE1/4-1/4 NN1/4 Sec $9$ Twn 35 R		circle one
Image: New well       Image: Reconditioned       Method : Image: Dug       Image: Bored       Image: Driven         Image: Deepend       Image: Cable       Image: Retary       Image: Deepend       Image: Deepend         Image: Deepend       Image: Cable       Image: Retary       Image: Deepend       Image: Deepend         Image: Deepend       Image: Cable       Image: Retary       Image: Deepend       Image: Deepend         Image: Deepend       Image: Cable       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend         Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend         Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepend       Image: Deepen	Lat/Long (s, t, r Lat Deg Lat N	1in/Sec	
DIMENSIONS: Diameter of well <u>6</u> inches, drilled <u>180</u> ft. Depth of completed well <u>180</u> ft.	Still REQUIRED) Long Deg Long	Min/Sec	
CONSTRUCTION DETAILS	Tax Parcel No		<u> </u>
Casing         Welded         6         Diam. from         1         ft. to         180         ft.           Installed:          Diam. from			
Threaded Diam. from ft. to ft.	CONSTRUCTION OR DECOMMISSION F Formation: Describe by color, character, size of material and stru		hand
Perforations: Yes VINo	nature of the material in each stratum penetrated, with at least on	e entry for each char	
Type of perforator used	information. (USE ADDITIONAL SHEETS IF NECESSA MATERIAL		то
Screens: Yes V No K-Pac Location	······································	<u>PROM</u> 10 ft	
Manufacturer's Name		0 ft 56 ft	t
Type Model No	hard pan 5	6 ft 80 ft	ì
Type         Model No.           Diam.		80 ft 85 ft	
Gravel/Filter packed: 🖸 Yes 🗹 No 🔲 Size of gravel/sand	,	35 ft 120 t	
		20 ft 125 ft 170 ft	
Surface Seat: Yes No To what depth? ]8ft. Material used in seal bentonite		70 ft 180	
Did any strata contain unusable water?	tind Barro & Harr		
Type of water? Depth of strata			
Method of sealing strata off			
PUMP: Manufacturer's Name Goulds Type: submersible H.P. 3/4	[		
WATER LEVELS: Land-surface elevation above mean sea levelfl. Static levelfl. below top of wellfl.			
Artesian pressure Ibs. per square inch Date			
Artesian water is controlled by	Well site meets standards set in SC1248 according to		
(cap, valve, etc.) WELL TESTS: Drawdown is amount water level is lowered below static level	information provided by owner.		
Was a pump test made? 2 Yes No If yes, by whom? <u>Wayne Prince</u>		TIN.	
Yield: 15 gal/min, with 12 ft. drawdown after 2 hrs.		AN WE	∽
Yield:     gal/min. with     ft. drawdown afterbrs.       Yield:    gal/min. withft. drawdown afterbrs.	<u> </u>	¥	
Recovery data (time taken as zero when pump turned off) (water level measured from well	<i> </i> '- -		
top to water level) Time Water Level Time Water Level Time Water Level		C 0752011	
Time Water Level Time Water Level Time Water Level		<del>ᡒ᠆᠃᠂ᡘ᠆ᢓ᠐</del> ᡰᡰ	2
			È
Date of test		A	5,
Bailer testgal/min. withft. drawdown afterhrs.		SOURCES	<u>'</u>
Airtestgal/min. with stem set atft. forhrs.	<u>├</u>		-
Artesian flow g.p.m. Date Temperature of water Was a chemical analysis made? D Yes D No			
i emperature of water was a chemical analysis made? [] Yes [] No	Start Date Sept 10 Completed	Date Sept 17, 20	)06

Driller D Engineer D Traince Name (Print) Wayne Prince	Drilling Company Prince Well Drilling	
Driller/Engineer/Trainee Signature Wayne Come	Address 7940 NE Cape Horn Rd	
Driller or trainee License No. 2788	City, State, Zip Concrete, Wash 98237	· · · · · · · · · · · · · · · · · · ·
If TRAINEE.	Contractor's	
Driller's Licensed No	Registration No. Princwd095K4	Date Sept 19, 2006
Driller's Signature	Ecology	y is an Equal Opportunity Employer.

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

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 Information on this Well Report.

Site: 2 Point: 8b	Eco id: 422191 35-8 E-9,4
WATER WELL REPORT	CURRENT Notice of Intent No. W182090
Control of the second s	Unique Ecology Well ID Tag No. <u>AKC 266</u>
Construction/Decommission ("x" in circle) $73623$	Water Right Permit No.
O Construction O Decommission ORIGINAL CONSTRUCTION Notice	
of Intent Number	Property Owner Name Shawn Thompson
PROPOSED USE: Domestic Industrial Municipal	Well Street Address
DeWater Irrigation Test Well Other	City Concrete County: Shage
TYPE OF WORK: Owner's number of well (if more than one)	City County: County: County: EWM airola
New Well Reconditioned Method: Dug Bored Driven	Location NE1/4- 1/4 NE 1/4 Sec 7 Two 35 RE EWM circle or one
Deepened Cable Rotary Jetted	Lat/Long: Lat Deg Lat Min/Sec
DIMENSIONS: Diameter of well inches, drilled ft.	(s,t,r still
Depth of completed well $\underline{}$ ft.	REQUIRED     Long Deg     Long Min/Sec
CONSTRUCTION DETAILS	Tax Parcel No
Casing Welded Diam. from ft. to SO ft.	CONSTRUCTION OR DECOMMISSION PROCEDURE Formation: Describe by color, character, size of material and structure, and the
Installed: Liner installed Diam. fromft. toft.	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.)
Perforations: Yes No Type of perforator used	
SIZE of perfsin. byin. and no. of perfs fromft. toft.	
Size of perisiii. byiii and no. of perisiioiiiiiiiiii.           Screens:         Yes         No         K-Pac         Locationiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	- sur une quite i
Manufacturer's Name	
TypeModel No	
DiamSlot Sizefromft. toft.	Sind gracel 54 68
Diamft. toft.	and gallel bublic OD 00
Gravel/Filter packed: Yes No Size of gravel/sand	
Materials placed fromft. toft.	
Surface Seal: Yes No To what depth? 18 ft	
Materials used in seal <u>Dentonut</u> Did any strata contain unusable water? Yes No	
Type of water?Depth of strata	
Method of sealing strata off	- Well Sate news Standard
PUMP: Manufacturer's Name Goulds	Set 1248 according
Type: <u>Subn</u> , <u>H.P. 3/4</u>	to use of the and
WATER LEVELS: Land-surface elevation above mean sea levelft.	To interprotection of our
Static level $64$ ft. below top of well Date $9 - 22$ 05	
Artesian pressurelbs. 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: <u>gal/min. with</u> <u>ft. drawdown after</u> <u>hrs.</u> Yield: <u>gal/min. with</u> <u>ft. drawdown after</u> <u>hrs.</u>	RECEIVED
Yield:    ft. drawdown after	
Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)	NOV 0 3 2005
Time Water Level Time Water Level Time Water Level	
	DEPT OF ECOLOGY
Date of testgal./min. withft. drawdown afterhrs.	
Airtestgal/min. with stem set atft. forhrs.	
Artesian flowg.p.m. Date	Start Date 9-2-105 Completed Date 9-2205
Temperature of waterWas a chemical analysis made? Yes No	
WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept resp Washington well construction standards. Materials used and the information r	onsibility for construction of this well, and its compliance with all
Driller Engineer Trainee Name (Print) Werker Prince	
Driller/Engineer/Trainee Signature	- Address 7940 NE Cape Horn Be
Driller or Trainee License No. 2788	_ City, State, Zip Controle Wook 98237
If trainee, licensed driller's	- Contractor's Registration No Revenue 05/4 Date Oct 7 05
Signature and License no	Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 4/01)
	$\sim$

te: 2 Point: 8c	Eco id: 407120	35-8	5E-9A
WATER WELL REPORT	CURRENT Notice of Intent No Unique Ecology Well ID Tag No		
real of the provide the provided th	Notice of Intent No	0711	/
	Unique Ecology Well ID Tag No.	5-C4E	<u>&gt;</u> .
O Construction ("x" in circle) 17205/	Water Right Permit No		
O Decommission ORIGINAL CONSTRUCTION Notice of Intent Number	Property Owner Name Hohme	Friz	self.
PROPOSED USE:	Well Street Address		
TYPE OF WORK: Owner's number of well (if more than one)	City Concrete County		
New Well       Reconditioned       Method:       Dug       Bored       Driven         Deepened       Cable       Rotary       Jetted	Location $\underline{ME}_{1/4}$ 1/4 $\underline{ME}_{1/4}$ Sec_9 T Lat/Long: Lat Deg	-	WWM
DIMENSIONS: Diameter of well inches, drilled ft.	(s,t,r still		
Depth of completed well ft.	REQUIRED) Long Deg	Long Min/Seo	° '
CONSTRUCTION DETAILS	Tax Parcel No.		<u>`</u>
Casing $\Box$ Welded $\Box$	Formation: Describe by color, character, size of m	aterial and struc	cture, and the
Threaded Diam. fromft. toft	kind and nature of the material in each stratum pen entry for each change of information. Indicate all v		
Perforations: Yes No	(USE ADDITIONAL SHEETS IF NECESSARY.)		
Type of perforator used	MATERIAL -	FROM	то
SIZE of perfsin. byin. and no. of perfs fromft. toft	- Bouldera + Sond	1	23
Screens: Yes No K-Pac Location	Statt gravel	23	39
Manufacturer's Name TypeModel No	fine Sand	39	45
DiamSlot Sizefromft. toft.	Sand ground+ water	45	55
DiamSlot Sizefromft. toft.	0		
Gravel/Filter packed: Yes No Size of gravel/sand			
Materials placed fromft. toft.	*		
Surface Seal: Yes No To what depth?ft	RECE	VEN	
Materials used in seal	B. A. S.		
Did any strata contain unusable water? Yes No	MAY 1	2005	
Type of water?Depth of strata Method of sealing strata off	DEPT OF F		
PUMP: Manufacturer's Name Could	DEPT OF E	COLOGY	
Type: Supmer. H.P. 3/4			
WATER LEVELS: Land-surface elevation above mean sea levelft.	- Well Site Meets Sto	hdore	
Static level 25ft. below top of well Date	Set in SC. 1248 acco	zhig_	
Artesian pressurelbs. per square inch Date	to info provided by	Voun-	
Artesian water is controlled by			
WELL TESTS: Drawdown is amount water level is lowered below static level.		····	
Was a pump test made?  Yes No, If yes, by whom?			
Yield: <u>20</u> gal/min.with <u>4</u> ft. drawdown after <u>7</u> hrs. Yield: <u>gal/min.with</u> ft. drawdown after <u>1</u> hrs.			
Yield:gal/min. withft. drawdown afterhrs.	RECEIVE		
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	APR 07 2005		
	UEPT OF ECOLO	GY	
Date of testgal./min. withft. drawdown afterhrs.			
Airtestgal/min. with stem set atft. forhrs.			
Artesian flowg.p.m. Date Temperature of waterWas a chemical analysis made? Yes No	Start Date more 23 Completed Da	ate March	26.05
WELL CONSTRUCTION CERTIFICATION: 1 constructed and/or accept resp Washington well construction standards. Materials used and the information of	onsibility for construction of this well, and its of	compliance w	ith all
$\Box$ Driller $\Box$ Engineer $\Box$ Trainee. Name (Print) $\Box$ $\Box$ $\Delta$ $\Delta$ $\mu$			1.
		41	IQ
Driller/Engineer/Trainee Signature Dayne Comme	Address <u>940 NE Ca</u>	pe Nor	nnc
Driller or Trainee License No	- City, State, Zip Concrete 12	Jose ?	18237
If trainee, licensed driller's	- Contractor's Registration Norwew009554	ate Am	13.00
Signature and License no	Ecology is an Equal Opportunity Employer.		(Rev  4/01)
· · · · · · · · · · · · · · · · · · ·	- Storogy is an Eduar opportunity Employer.		(ICC + (UI) ·

Site: 2 Point: 9	Eco id: 87052
	Start Card No. $(4072957)$ ELL REPORT UNIQUE WELL I.D. # $ACG791$ WASHINGTON Water Right Permit No. $35-8-100$
	1000 769 Burgee Nr11 Rd Concrite
(2) LOCATION OF WELL: County	NW 14 NW14 Sec TO T. 35N.R & W.M.
(2a) STREET ADDRESS OF WELL (or nearest address) Bur per	4.11
(3) PROPOSED USE:  Comestic Industrial  Municipal Infigation DeWater Test Well Other	(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
(4) TYPE OF WORK: Owner's number of well (If more than one)	change of information.
Abandoned  New well  P Method: Dug  Bored  Deepened  C Cable  Driven  Reconditioned  Rotary  Jetted	$\frac{C/2\gamma}{C/2\gamma} = \frac{1}{10}$
(5) DIMENSIONS: Diameter of well Inches. Drilled feet. Depth of completed well ft.	Fine San 61 90
(6) CONSTRUCTION DETAILS: Casing installed: Diam. fromfl. toft. Welded Diam. fromfl. toft. Uner installed Diam. fromfl. toft. Threaded Diam. fromfl. toft.	- Clay Sand + grivel 90 300 Sand + erz vel With 290 300 Clay Sand + grand 300 540
Perforations:         Yes         No           Type of perforation used         Shar           SIZE of perforations         In. by X         In.	Well S. Le. Meets Steadond
Screens:         Yes         No         Manufacture: 's Name           Manufacture: 's Name	Set , NGC 1248 Accordine to, NEO Provided by own
Gravel packed: Yes No Size of gravel Gravel placed fromft. toft.	RECEIVED
Surface seal: Yes No To what depth?	SEP 0 9 1996
Did any strata contain unusable water? Yes No No Type of water? Depth of strata Type of water? Depth of strata Method of sealing strata off	DEPT. OF LUULUUY
(7) PUMP: Manufacturer's Name Gund Gas	
(8) WATER LEVELS: Land-surface elevation	Work Started A eng 19. Completed Aug 10 19.84
above mean sea level ft.  Static level ft. below top of well Date Artesian pressure Ibs, per square inch Date Artesian water is controlled by(Cap, valve, etc.)	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
(9) WELL TESTS: Drawdown is amount water level is lowered below static level Was a pump lest made? Yes No II yes, by whom? <u>Une prior framework</u> Yield:	PERSON FIRM OR CORPORATION (TYPE OR PRINT)
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)	isimen / haus Citarate - inerse No 1898
Time     Water Level     Time     Water Level     Time	Contractor's Registration No. <u>CINCUND095 K (J</u> Date, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19
Bailer test	Ecology is an Equal Opportunity and Affirmative Action employer. For spe- cial accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

Site	e: 3 Point: 1a	Eco ID: 84727
		Start Card No. 094189
Depe	·····	
	Ind Copy — Owner's Copy STATE OF V	WASHINGTON Water Right Permit No. 35-9E-20R
(1)	OWNER: Nome STELSE DERNSALK AD	1224 SW HARboz VISTA CIELE OAK HARSOR
(2)	LOCATION OF WELL: County SKAUT	- <u>SE 1/4 SE 1/4 SE 7 35 N.R. 9 W.M.</u>
(2a)	STREET ADDRESS OF WELL (or nearest address Day SAUK RIVER H	two coucres wa
(3)		(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION
(0)	DeWater Test Well Other	Formation: Describe by color, character, size of material and structure, and show thickness of aquifers
	TYPE OF WORK: Owner's number of well	and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.
(4)	(If more than one)	MATERIAL FROM TO
	Deepened Cable Driven	BRUNN SAND + S. IT 0 7
	Reconditioned  Rotary  Setted	Based Clay 7 13
(5)	DIMENSIONS: Diameter of well inches.	SAND + GRAJEL WATER 15 38
	Drilled 32 feet. Depth of completed well 38 ft.	
(6)	CONSTRUCTION DETAILS:	
	Casing installed: 6 + 1/2 Diam. from 1/2 tt. to 3.8 tt.	Drilled in Compliance with Sec 12 48
	Welded St. Diam. from t. to ft.	Based on information supplied by
	Threaded Diam. fromft. toft.	Owner 1
_	Perforations: Yes No 🕵	Hug Halwaran
	Type of perforator used	
	SiZE of perforations In. by in.	
	perforations fromft. toft. toft.	
	Screens: Yes 🗌 No 🔽	
	Manufacturer's Name Model No	
	Type         Model No.           Diam.         Slot size         from         ft. to        ft.	
	DiamSlot sizefromft. toft.	
-		ADD 9.2 1000
	Gravel packed: Yes No M Size of gravelft. toft. toft.	
	Surface seel: Yes S No . To what depth? ft.	
	Material used in seal	JEPT OF LOOLDUT
	Type of water? Depth of strata	
	Method of sealing strata of	
		<b>-</b>
(7)	Type: SJ	
		Work Started / Morg 92, 19. Completed / Man 78 19
(8)	WATER LEVELS: Land-surface elevation above mean sea level	Work Started / Marge 12, 19. Completed / TVI m. 10 19
	Static level ft. below top of well Date Artesian preasure the per aquare inch Date	WELL CONSTRUCTOR CERTIFICATION:
		I constructed and/or accept responsibility for construction of this well, and its
	(Cap, valve, etc.)	compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.
(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:	NAME AFFORDADLE WARE SUSTEMS
	и и п и	
	Recovery data (time taken as zero when pump turned off) (water level measured from well	(Signed) Neg (Net Datter) License No. 1617
	top to water level)	
	Time Water Level Time Water Level Time Water Level	Contractor's - Registration
		No. HTDR WS 101 RJ Date S MAR 98 19
		USE ADDITIONAL SHEETS IF NECESSARY)
	Date of test	
	Bailer testgal./min, withht. drawdown afterhts.	Ecology is an Equal Opportunity and Ammative Action employer. For spe-
	Airtest _ 20 + _ gal./min. with stem set at ft. for hrs. Artesian flow g.p.m. Date	cial accommodation needs, contact the Water Resources Program at (206)
	Temperature of water Was a chemical analysis made? Yes No K	407-6600. The TDD number is (206) 407-6006.

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ECY 050-1-20 (9/93) ** f

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

Site: 3 Point: 1b		Eco ID: 81872		
File Original and Firat Copy with Department of Ecology	WATER W		~~~~	
Becond CopyOwner's Copy Third CopyDriller's Copy	STATE OF	WASHINGTON 35/9/20	r	
		Water Right Permit No.		
1) OWNER: Name Merle	Brown	Address 9782 Szuk Uly Rd		nen
2) LOCATION OF WELL: County	_ SKZg.t	SENSEN Sec 20 T.	3 <u>5</u> .n., i	r_ <b>7_</b> w.m
2a) STREET ADDDRESS OF WELL	(or nearest address) 0 4782	Szukuly Rd Concrete		
3) PROPOSED USE: Domest	ic Industrial 🗆 Municipal 🗆	(10) WELL LOG or ABANDONMENT PROCEDU	RE DES	CRIPTION
□ Irrigatio	n	Formation: Describe by color, character, size of material a	nd etructu	re, and show
4) TYPE OF WORK: Owner's number (If more than or	ar of well	thickness of aquifers and the kind and nature of the material in e with at least one entry for each change of information.	ach etratu	m penetrated
		MATERIAL	FROM	то
Deepened 🗌	Cable 🗆 Driven 🗖		1	18
Reconditioned	Rotary D Jetted D		18	40
5) DIMENSIONS: Diameter of well	inches.	Jan + gravel	40	50
Drilled. 62 feet. Depth	of completed well <u>62</u> tt.	Stord + gravel water	50	62
6) CONSTRUCTION DETAILS:		Jan + grzod wow	┢	0
Casing Installed: <u>6</u> · Dia	um. from fi. to fi	t.		
Welded 🔲 ' Dia	ım. fromft. toft	t.		
Threaded Diamond Diamond	im. fromft. toft	t.		
Perforations: Yes No	F			
Type of perforator used	in. by In			
	in. by in ft. to ff			
-	ft. toft	PEORUS-	-	
•		RECEIVED		
Screens: Yee No		1AN 2 8 1000		_
Manufacturer's Name		JAN 2 6 1993	-	
Туре	Model No	DEPT. OF ECOLOGY	-	
DiamSlot eize	fromft. toft fromft. toft	1		-
		1. 		-
	Size of gravelt	t		
Gravel placed from	10			
	To what depth?f			
Material used in seal	Yes No	-		
	Depth of strate			
Method of sealing strate off			1	
7) PUMP: Manufacturer's Name(	Gradios	-		
Type: Submer.	н.р. 2	_		
	ice elevation ft			
	low top of well Date Jan 220		<u> </u>	
	a, per square inch Date			<u> </u>
Artesian water is controlled	(Cep, valve, etc.))	Work started Jze Z/ , 19. Completed Jz	<u>2 - 2 - 1</u>	<u>2, 19 7</u>
	unt water level is lowered below static level			
Was a pump test made? Yes Yes Not. Yield: gel, /min. with	If yes, by whom? ft. drawdown after3 hrs	WELL CONSTRUCTOR CERTIFICATION:		of this
		I constructed and/or accept responsibility for con and its compliance with all Washington well co	netruction	n standards
17 17		<ul> <li>Materials used and the information reported above knowledge and belief.</li> </ul>	are true	e to my bea
from well top to water level)	n pump turned off) (water level measured			
Time Water Level Time	Water Level Time Water Level	NAME Trince Dell Dri	(TYPE	
· · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · ·  · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · ·  ·		Address 794 NE Cape b	orr	/con
				• • • ·
Date of test	<b>7</b>	(Signed) USING Contract License	No.	798
	2 ft. drawdown after 2- hr	Contractor's	_	~
Airtest gel./min. with sten	n set at ft. for hr	No. Princewoogspare Jar 2	<u>ר</u>	<u>19</u>
Artesian flow	ann Dete			

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

Site: 3 Point: 2 File Original and First Copy with Department of Ecology Second Copy - Owner's Copy Third Copy - Driller's copy	3518	WATER WELL R
(1) OWNER: Name Bob T		Address 1

Industria

Test Well

Method

Dug

Cable

**X** Rotary

6

Owner's number of well (If more than one)

in. by

ft. to ft. to

ft. to

Municipal

Bored

Driven

Jetted

inches.

ft.

ft.

ft.

ft.

în. ft.

ft.

ft.

75

Other

78

+2 ft. to

ft. to

ft. to

<b>SW</b> _ ^{1/4} _ <b>SW</b> _ ^{1/4} Sec _ <b>21</b>	T35 N.,R _9	E W.N
re Rd		
(10) WELL LOG or DECOMMISSIONING PROCE Formation: Describe by color, character, size of material and struct		
nature of the material in each stratum penetrated, with at least one		
of information. Indicate all water encountered.		
MATERIAL	FROM	то
topsoil	0_	1
brown sand clay	2	14
gray sand clay	14	22
gray gravel	22	53
gray gravel sand water	53	<u>62</u>
gravel water		78
Located in complience with sec12-48 base	ed on	
information supplied by owner.		
09141		
···		
		· · ·
· · · ·		_
	RECEIVE	D
		_
A	UG-0-7-20b	(i
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	3
Le Le	pt of Ecolo	av –
	VR-NWRO	
Work Started 7/28/2009		. 19

Manufacturer's Name alloy	
Type ss Model No. Diam. 6 Slot size 15 from 73 ft. to 78 ft.	
Diam. 6 Slot size 15 from 73 ft. to 78 ft.	
Diam. Slot size from ft. to ft.	
Gravel/Filter packed: Yes XNo 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	RECEIVED
Did any strata contain unusable water?	
Type of water? Depth of strata	AUG -0-7-2009
Method of sealing strata off	
(7) PUMP: Manufacturer's Name berkley	Dept of Ecology
Type: sub_10gpmH.P3/4	
(8) WATER LEVELS: Land-surface elevation	WR-NWRO
above mean sea level ft.	Work Started 7/28/2009 19. Completed 7/28/2009 , 19
Static level 51 ft. below top of well Date 7/28/2009	WELL CONSTRUCTION CERTIFICATION:
Artesian pressure tbs. per square inch Date	I constructed and/or accept responsibility for construction of this well, and its
Artesian water is controlled by	compliance with all Washington well construction standards. Materials used
(Cap, valve, etc)	and the information reported above are true to my best knowledge and belief.
(9) WELL TESTS: Drawdown is amount water level is lowered below static level	Type or Print Name Wayne Logsdon License No. 2146 Licensed Driller/Engineer)
Was a pump test made? X Yes No If yes, by whom? aquatech7/30/	(Licensed Driller/Engineer)
Yield:18 gal./min. with4,5_ ft. drawdown after1_ hrs.	Trainee Name License No.
Yield: gal./min. with ft, drawdown after hrs.	
Yield: gal./min. with ft. drawdown after hrs.	Drilling Company Aquatech_Well_Drilling_&_Pumps_Inc
Recovery data (time taken as zero when pump turned off) (water level measured	1 mil Had PA
from well top to water level)	(Signed) Wall And License No. 2146
Time Water Level Time Water Level Time Water Level	(Vicensed Driller/Engineer)
	Address 2675 Butler Crk Rd SedroWoolley Wa 98284
	Contractor's
	Registration No. AQUATWD040K4 Date 7/31/2009 19
Date of test	
Bailer test 10 gal./min. with 12 ft. drawdown after 1.5 hrs.	(USE ADDITIONAL SHEETS IF NECESSARY)
Airtest gal./min, with stem set at ft. for hrs.	Ecology is an Equal Opportunity and Affirmative Action employer. For
Artesian flow g.p.m. Date	special accommodation needs, contact the Water Resources Program at
Temperature of water Was a chemical analyses made? Yes XNo	(360) 407-6600. The TDD number is (360) 407-6006.

BOD Taylor (2) LOCATION OF WELL: County skagit_____ (2a) STREET ADDRESS OF WELL (or nearest address) 50007 Sauk Store Ro

Inigation

DeWater

X New Well

Deepened

Diameter of well

Yes X No

perforations from

perforations from

perforations from

feet.

Reconditioned

Decommission

_6. " Diam. n.... " Diam. from ∽ from

" Diam. from

X Yes No X K-Pac Location 73

Depth of completed well

TAX PARCEL NO. 350921-006-0400

(3) PROPOSED USE: X Domestic

(4) TYPE OF WORK:

(5) DIMENSIONS:

.80

Casing Installed:

Liner installed

(6) CONSTRUCTION DETAILS:

Drilled

X Welded

Threaded

Screens:

Perforations: Type of perforator used SIZE of perforations

ss 16706 Dunbar Rd, Mt.Vernon, WA 98273____

Eco ID: 607884

Water Right Permit No.

REPORT

884 35-46-21 Notice of Intent <u>W268051</u>

UNIQUE WELL I.D. # BAA535

e: 3 Point: 3a	Eco ID: 3636	305	
WATER WELL REPORT	CIDDENT		
	Notice of Intent No. W168101		
With the Provided Provided August 1 Copy - Ecology, 2nd copy - owner, 3rd copy - driller	Unique Ecology Well ID Tag No.	50/0	2
O Construction ("x" in circle) /34224	Water Right Permit No.	-	
O Decommission ORIGINAL CONSTRUCTION Notice		· ·	
of Intent Number	Property Owner Name Bucomb Al		<u> </u>
PROPOSED USE: Domestic Industrial Municipal DeWater Irrigation Test Well Other	Well Street Address 50,200 Sau		
	City Concrete County:_	SKAQ:+	
TYPE OF WORK: Owner's number of well (if more than one) New Well Reconditioned Method. Dug Bored Driven	City \bigcirc \bigcirc County: Location \bigcirc	_{โพก} 35 ั R 9	
Deepened Cable Rotary Detted			WWM
DIMENSIONS: Diameter of well Le inches, drilled C/Le ft.	(s,t,r still		
Depth of completed well <u>9 Lp</u> ft	REQUIRED) Long Deg	Long Min/Sec	
CONSTRUCTION DETAILS Casing Welded Diam. from ft to 94 ft Installed: Liner installed Diam. from ft. to ft Threaded Diam from ft to ft Perforations: Yes No Type of perforator, used			DE
Casing Welded <u>Co</u> Diam. from <u>c</u> ft to <u>y</u> <u>U</u> ft Installed Diam. from ft to ft	Formation Describe by color, character, size of m	aterial and struct	RE ure, and the
$\Box \text{ Threaded} \qquad ____" \qquad Diam \text{ from }____ft \text{ to }___ft$	kind and nature of the material in each stratum per	netrated, with at l	east one
Perforations: Yes No	(USE ADDITIONAL SHEETS IF NECESSARY)	u –
	MATERIAL	FROM	то
SIZE of perfsin byin and no. of perfsfromft tof	Silty top Soil	1	18
Screens: Yes No K-Pac Location	Sand		22
TypeModel No	Sand + gravel fine sand		28
Diam Slot Size from ft to ft			40
Diamft. toft	Sand, gravel + Silt Sand, gravel + water		89
Gravel/Filter packed: Yes No Size of gravel/sand	Sand, gravel + water	89	94
Materials placed fromft toft Surface Seal: Yes No To what depth?ft			
Materials used in seal Bontonite			
Did any strata contain unusable water? Yes No			
Type of water?Depth of strata	RECE	IVED	
PUMP: Manufacturer's Name		2 2003	
Type <u>Submey</u> HP <u>34</u>			
WATER LEVELS: Land-surface elevation above mean sea levelft	DEPT OF	ECOLOG	/
Static levelft below top of well Date A8,2003			
Artessan pressurelbs. per square inch Date	WEll Site meets stando		•
Artesian water is controlled by	in S.C. 1248 according		
WELL TESTS: Drawdown is amount water level is lowered below static level	into provided by own	₹r.	
Was a pump test made? Yes No If yes, by whom?			
Yieldgal/min. withft drawdown afterhrs Yieldgal/min withft drawdown afterhrs			
Yieldgal /min withft. drawdown afterhrs			
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 <u>10</u> gal /min with <u>4</u> ft drawdown after <u>2</u> hrs	h		
Airtest gal /min with stem set atft forhrs. Artesian flow g p m Date			
Temperature of waterWas a chemical analysis made? Yes No	Start Date 3 - 27 - 03 Completed Da	ite <u>3-28-0</u>	ർ
WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept resp Washington well construction standards. Materials used and the information r			h all
Driller Engineer Trainee Name (Print) WAYA Prince	Drilling Company Prince WEIL D	rilling	
Driller/Engineer/Trainee Signature Woupe Com	- Address 7940 n.E. CAPENDEN RI	0	
Driller or Trainee License No	- City, State, Zip Concrete, WA.		
) Contractor's		
If trainee, licensed driller's Signature and License no	- Registration Northin 40095K4 D		-
	Ecology is an Equal Opportunity Employer	ECY 050-1-20 (Rev 4/01)

Site: 3 Point: 3b	ENTER	D	Eco ID: 85242	RECEIVED JUN - 8 1994	
		STATE OF W	ASHINGTON	Jnique Well I.D. # Water Right Permit No.	1368
(1) OWNER: Name ANDERSON,	TOM	lddress POB	0X 339 CONCRETE, WA 982	57- 3 D	<u> 7 21</u>
(2) LOCATION OF WELL: Co (2a) STREET ADDRESS OF WE	unty SKAGIT [LL (or nearest address) {	736 ADAMS, CONCR	- 52 174 50 174 500. ETE ==================================	21 T 35 N., R 9 WH	
(3) PROPOSED USE: DOMEST	C		; (IV) WELL LUG		
(4) TYPE OF WORK: NEW WELL	Owner's Number of well (If more than one) Method: ROTARY		; formation: Describe by co ; and structure, and show to ; and nature of the materia	hickness of aquiters and th 1 in each stratum penetrate	N8 K1N0
(5) DIMENSIONS:	Diameter of wel Depth of completed wel	16 inches 160 ft.	MATERIAL BROWN CLAY & GRAVEL		M 1 TO 1 56 1 60
(6) CONSTRUCTION DETAILS Casing installed: WELDED	6 "Dia.from.Of "Dia.from.f "Dia.from.f	t. to ft.	HATER & GRAVEL BLUE CLAY	36	
Perforations: NO Type of perforato SIZE of perforati perforation perforation perforation	ons in by sfrom ft.to sfrom ft.to	1n. ft. ft. ft.			
Screens: NO Manufacturer's Na Type Diam. slot Diam. slot	Model No. size from ft. size from ft.	to ft. to ft.			
Gravel packed: ND Gravel placed fro	Size of gra m ft. to ft. To what de		-		
Type of water? Method of cealing	seal BENTONITE ntain unusable water? ND Depth of s	strata ft.	Skagit C	ated According ounty Ordinance	to 12.48
(7) PUMP: Manufacturer's	Name Type	H.P.			
 (B) WATER LEVELS: Static level 5: Artesian Pressure Artesian water conti 	Land-surface elevat above mean sea leva ft. below top of wel lbs. per square inch	tion el ft. 1 Date 06/01/94			
			Work started 06/01/94	Completed 06/01/	7 7 ===============
(9) WELL TESTS: Drawdow static Was a pump test made? Yield: gal./min	is amount water level in level. If yes, by whom?	s lowered below	I constructed and/or struction of this well which is not a struction of the structure	accept responsibility for l, and its compliance with ruction standards. Materi eported above are true to	con- all als used
Recovery data Time Water Level	Time Water Level Ti	me Water Level	ן (Person, firm, or c	orporation) (Type or prin	it)
Air test 4 gal7mi	/min.7 ft.drawdown n.w/stem set at 59 f	t for 1 hrs		License No. 2043	
Artesian flow Temperature of water	g.p.m. Was a chemical an	Date alysis made?	Registration No. DAHLMP	1123LC Date 06/03/9	74 =============

: 3 Point: 3c 123697	Eco ID: 346627
	Eco ID: 346627 35-9E-21P
WATER WELL REPORT	Notice of Intent No
t cology Original & 1st copy Ecology 2nd copy owner 3rd copy driller	Unique Ecology Well ID Tag No AGE041
Construction/Decommission (x in circle) O Construction	Water Right Permit No
O Decommission ORIGINAL CONSTRUCTION Notice of Intent Number	Property Owner Name Ton Torrey
PROPOSED USE Domestic Industrial Municipal	Property Owner Name
DeWater Irrigation Test Well Other	Well Street Address 59506 277 2-20
TYPE OF WORK Owner's number of well (1f more than one)	- City Concil a County Stac, F
Sew Well Reconditioned Method Dug Bored Driven Deepened Cable Kotary Jetted	Location $SE_{1/4} \frac{1}{4} \frac{SW_{1/4}}{Sec^2 I} \frac{1}{Twn 3.5 R 9} EWM$
DIMENSIONS Diameter of well 6 inches drilled 178 ft	Lat/Long Lat Deg Lat Min/Sec
Depth of completed well ft	REQUIRED) Long Deg Long Min/Sec
CONSTRUCTION DETAILS	Tax Parcel No
Casing Weided Diam from ft to //28 ft Installed Diam from ft to ft to ft to ft	Formation Describe by color character size of material and structure and the
Threaded Diam fromft toft	entry for each change of information Indicate all water encountered
Perforations Yes No	(USE ADDITIONAL SHEETS IF NECESSARY)
SIZE of perfsin byin and no of perfsfromft toft	MATERIAL FROM TO
Screens Ves Ko K Pac Location	- Clay Drek Gray / 29
Manufacturer's Name	<u>Clay Blue 24 31</u>
TypeModel No	Sand 31 34 C/24 Blue 34 110
Diam Slot Size from ft to ft	
Diamft toft	52nd 110 118
Gravel/Filter packed Yes Ko Size of gravel/sand	Clay Brown 118 140
Materials placed fromft toft Surface Seal Pres Do To what depth?ft ft	Send + Grevel 140 160 Bilt greve 160 163
Materials used in seal Bental	Silt greit 160 163 Sind yon vi water 163 178
Did any strata contain unusable water? \Box Yes \Box No	Jenergrund Loam 165 1/8
Type of water?Depth of strata	
Method of sealing strata off	_
PUMP Manufacturer's Name Type Cost 10gm H P	
WATER LEVELS Land surface elevation above mean sea levelft	
Static level 77 ft below top of well Date May 2	RECEIVED
Artesian pressurelbs per square inch Date Artesian water is controlled by	
(cap valve etc)	MAY 1 C 2002
WELL TESTS Drawdown 1s amount water level 1s lowered below static level	DEPT OF ECOLOGY
Was a pump test made? Yes No If yes by whom?	
Yield <u><i>lo</i></u> gal/min with <u>7</u> ft drawdown after <u>2</u> hrs Yield <u>gal/min with ft drawdown after</u> hrs	
Yieldgal /min withft drawdown afterhrs	
Recovery data (tume 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 testgal /min_withft drawdown afterhrs	
Airtestgal /min with stem set atft forhrs	
Artesian flowg p m Date Temperature of waterWas a chemical analysis made? Yes No	Start Date April 30 Completed Date MEY 3 12
WELL CONSTRUCTION CERTIFICATION I constructed and/or accept resp	ponsibility for construction of this well and its compliance with all
	reported above are true to my best knowledge and belief
	Dulling Company the side of the 11 of
Driller Engineer Trainee Name (Print) Way a Prince	
Driller Engineer Trainee Name (Print) Will & Prince	- Address 7940 NE CZpeHonn Rd
Driller Engineer Trainee Name (Print) Way a Prince	

	35/9/212
WATER WEL STATE OF W	Unique Well I.D. # ASHINGTON Water Right Permit No.
(1) OWNER: Name RAPP, DON Address 4861	HNY 20 CONCRETE, WA 98237-
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
(2) LOCATION OF WELL: County SKAGIT (2a) STREET ADDRESS OF WELL (or nearest address) 4861 HWY 20, CONG	CRETE
(3) PROPOSED USE: DOMESTIC / Group	; (10) WELL LOS
(4) TYPE OF WORK: Owner's Number of well (If more than one)	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
(5) DIMENSIONS: Diameter of well 6 inches Drilled 185 ft. Depth of completed well 185 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 Type STAINLESS STEEL Model No. TELESCOPING Diam. 6 slot size 30 from 180 ft. to 185 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.	Well Located According To Skagit County Ordinance # 12.48
Method of sealing strata off	RECEIVED
(7) PUMP: Manufacturer's Name Type H.P.	OCT 031994
(B) WATER LEVELS: Static level 154 ft. below top of well Date 07/19/94	DEPT. UP LOOLOUT
Artesian Pressure lbs. per square inch Date Artesian water controlled by	Work started 09/16/94 Completed 09/19/94
(9) WELL TESTS: Drawdown is amount water level is lowered below static level.	: WELL CONSTRUCTOR CERTIFICATION: I ronstructed and/or accept responsibility for con-
Was a pump test made? A If yes, by whom? Yield: gal./min with ft. drawdown after hrs.	<pre>struction of this well, and its compliance with all</pre>
Recovery data Time Water Level Time Water Level Time Water Level	NAME DAHLMAN PUMP & WELL DRILL (Person, firm, or corporation) (Type or print)
	ADDRESS PO BOX 422, BURLINGTON, WA
Date of test / / Bailer test gal/min. 21 ft. drawdown after hrs. Air test 20+ gal/min. w/ stem set at ft. for l hrs. Artesian flow 0.0.0.	
Artesian flow g.p.m. Date Temperature of water Was a chemical analysis made?	Contractor's Registration No. DAHLMPW123LC Date 09/22/94

Site: 3 Point: 4a The Dep The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

Eco ID: 77036

35/9/211

ite: 3 Point: 4b	Eco ID: 403190	35.	9E-ZIL
WATER WELL REPORT	CURRENT Notice of Intent No. W16754	47	· · ·
	Notice of Intent No.	<u>/ / /</u>	· · · · · · · · · · · · · · · · · · ·
Construction/Decommission ("x" in circle)	Unique Ecology Well ID Tag No. 4	60	<u> </u>
O Construction / 4008/	Water Right Permit No		· · · · · · · · · · · · · · · · · · ·
O Decommission ORIGINAL CONSTRUCTION Notice of Intent Number	Property Owner Name MIKI Kalk	Kaski	
PROPOSED USE:       Image: Composition       Industrial       Image: Municipal         DeWater       Image: Image: Composition       Image: Composition       Image: Composition       Image: Composition         DeWater       Image: Composition       I	Well Street Address	· ·	
TYPE OF WORK: Owner's number of well (if more than one)	City Concrete County:		
Image: Conditioned Method:       Dug       Bored       Driven         Image: Deepened       Image: Cable       Rotary       Jetted	Location $\underline{NE}_{1/4-1/4} \underline{SU}_{1/4}$ Sec $\underline{21}_{7}$ Lat/Long: Lat Deg		or one WWM
DIMENSIONS: Diameter of well 6 inches, drilled 1925 ft.	(s,t,r still		
Depth of completed well ft.	REQUIRED) Long Deg Tax Parcel No.	Long Min/Se	c
CONSTRUCTION DETAILS Casing Welded Diam. from ft. to /75_ft.			
Casing Welded Diam. from ft. to //5 ft. Installed: Diam. from ft. to ft. to ft. to ft.	Formation: Describe by color, character, size of m	aterial and strue	cture, and the
Threaded Diam. from ft. to ft.	kind and nature of the material in each stratum per entry for each change of information. Indicate all		
Perforations: Yes No	(USE ADDITIONAL SHEETS IF NECESSARY.	)	
Type of perforator used	MATERIAL	FROM	то
SIZE of perfsin. byin. and no. of perfs fromft. toft.	Silt Sand	1.	10H
Screens: Yes K.Pac Location	Boulder	10	12
TypeModel No	Large Grane It Sand	12	46
DiamSlot Sizefromft. toft.	Hord plan	46	105
DiamSlot Sizefromft. toft.	Sand & grand	105	131
Gravel/Filter packed: Yes No Size of gravel/sand	Car Blue	131	149
Materials placed fromft.	With Real fine Sand	149	195
Surface Seal: Yes No . To what depth? 18 ft Materials used in seal Bentine	SZAZ Gravel Water	160	175
Did any strata contain unusable water? $\Box$ Yes $\Box$ No	Jene grades war		
Type of water?Depth of strata Method of sealing strata off			-
PUMP: Manufacturer's Name Gould	1	·	
туре: <u>5 си в т</u> н.р. <u>3/4</u>			
WATER LEVELS: Land-surface elevation above mean sea levelft. Static levelft. below top of well DateCFZS			
Static level 128 ft. below top of well Date 027 28 Artesian pressure lbs. per square inch Date	Well Site ments St	ruda da	
Artesian water is controlled by	5. + in SC 1248 0C	loch	
(cap,valve, etc.)	to into provided by	bune	
WELL TESTS: Drawdown is amount water level is lowered below static level. Was a pump test made? Yes No If yes, by whom?			
Yield: <u>/O gal/min.with</u> <u>5</u> ft: drawdown after <u>2</u> hrs.			·
Yield:       gal./min. withft. drawdown afterhrs.         Yield:       gal./min. withft. drawdown afterhrs.	<u>_</u>	· · · ·	
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	RECEIVE	<b>P</b>	
	FEB 1 7 200	5	
		<u> </u>	<b>├────┤</b>
Date of test Bailer test gal/min. with ft. drawdown afterhrs.	DEPT OF ECOL	PGY	
Airtestgal/min. with stem set atft. forhrs.	· .		
Artesian flowg.p.m. Date Temperature of waterWas a chemical analysis made? Yes No	Start Date OCHO OC Completed D	ate_OCH	2804
WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept resp Washington well construction standards. Materials used and the information re	eported above are true to my best knowledge a	nd belief.	
Ebriller DEngineer DTraince Name (Print) WayNec Prin	Company Prince We	211 Drei	line
Driller/Engineer/Trainee Signature_ Wayne C Onvie	- Address 7940 NE Cop		,,
Driller or Trainee License No		sh 98	235
	Contractor's	<u> </u>	GNU
If trainee, licensed driller's	- Registration Nor Cull of S		<u>, vy</u>
	- Ecology is an Equal Opportunity Employer	ECY 050-1-2	0 (Rev 4/01)

ile Original with Department of Eco Decond Copy - Ow Ihird Copy - Driller	ner's Copy		ELL RE		Eco ID: 31521	Notice of Intent	-9E.	026
1) OWNER: Na	ame Alfred	Brewer		Addre	ess 9728	Sank Co	anetho	<u></u> RL
a) STREET AD	DF WELL: County DRESS OF WELL: (or r L NO44	nearest address)	2m:	<i>N</i>	1 <u>E 1/4 SW 1/4</u> Se	x <u>21 ⊺35</u>	_NR	WM
) PROPOSED	USE: Domestic Irrigation DeWater	<ul><li>Industrial</li><li>Test Well</li></ul>	Municip     Other	al	(10) WELL LOG or DE Formation: Describe by the kind and nature of th	color, character, size of i le material in each strati	material and stru um penetrated, v	ucture, and with at least
) TYPE OF W	ORK: Owner's numl	ber of well (if more than or Method	ne)		one entry for each chan		FROM	TO
	Deepened	-	Bored		TOP S		1	6
	Decommis	sion - Rotary	□ Jetted		Sandara	Level	6	31
) DIMENSION			6	inches	Serd		31 36	36
Drilled /		f completed well	118	ft	Sand 91	And	<u>&gt;6</u> 41	
) CONSTRUC Casing Insta	TION DETAILS				CAR		$\prec \gamma$	62
· 🗆 Welded		_" Diam from <u></u>	<u>2ft_to/</u>	<u>/8</u> tt	Sand		62	78
Liner insta Threaded	lled	" Diam from " Diam. from	ft to ft to	ft. ft		nd Gravel	78	108
					sand gr	avel vate	108	118
Perforations	: 🛛 Yes 🖓 🖓		-		)			
Type of perfo							-	
SIZE of perfo		in by		in				
		erforations from						· · ·
	•				<u> </u>			1
Screens:		K-Pac Location			Well	Sc Meets		
Manufacturer	s Name	· · · · · · · · · · · · · · · · · · ·			Set in	Provided	- DV OW	ng :
		Model			. TO IN D	Provided	$-pyo\omega$	
		from			-	-		
				n.				
	2	o 🗆 Size of gravel/sand_					-	:
Material place	ed from	ft to		ft				1
Surface seal		1 To what depth?	18	ft		REC	EIVEI	
Material used	in seal <u>13</u>	Ves INO	t	—— I				1
Type of water		Depth of st	rata				3 1 2001	1
Method of sea	aling strata off							
) PUMP: Manu	lfacturer's Name	Gould				DEPLU	EECOLO	<u>GY</u>
туре	a.b.men		HP					1
) WATER LEVI Static level Artesian presi	9.5	ation above mean sea leve ft. below top of wel lbs per square incl	1 Date Jul	y∕a_ ^{ft}	Work Started		ed July	, 29 0
Artesian wate	r is controlled by	(Cap, valve, etc	 2.)	ľ	WELL CONSTRUCTION	CERTIFICATION:		1
WELL TEST		water level in lowered b-1	ow statio lavel	*	I constructed and/or a	ccept responsibility for	construction of t	his well, and its
		water level is lowered below No If yes, by whom?			compliance with all W	ashington well construct	tion standards	Materials used
Yield 10	_gal /min_with	ft drawdow	n after 2	hrs		ported above are true to $P_{a}$	•	
Yield		ft drawdow		hrs	Type or Print Name	Licensed Driller/Engi	License No	582
Yield	-	ft drawdow en pump turned off) (wate				(LICENSED DIMER/ENGI		
well top to wat		,			Trainee Name	r'-10 - 12 1	License No	
Time	Nater Level Time	Water Level	Time Wa	ater Level		rivce Wel		
<u> </u>		· · ·	<u> </u>	· · · ·	(Signed) (Nayn	Licensed Driller/Engi	License No	
					Address 79401	IE CERCHO	r D Ril	Concre
Date of test						,		+
		ft draw ft draw			Registration No Prin	UCWD095KG	Date Ja	1 <u>129 01</u>
		π draw g.p.m				DITIONAL SHEETS IF		
		a chemical analysis made						
		•			Ecology is an Equal Op			
Y 050-1-20 (11/9	8)		· ·		6600. The TDD number i	contact the Water Res s (360) 407-6006.	ources Program	1 at (360) 407-

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

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Water Well Report Original - Ecology, 1 st copy - owner, 2 nd copy - driller	Current Notice of Intent No. <u>W153627</u>	
	Unique Ecology Well ID Tag No. AKY 940	
Construction/Decommission	Water Right Permit No	
Decommission ORIGINAL INSTALLATION Notice	Property Owner Name Brooks, George	
of Intent Number		
	Well Street Address 50223 State Route 20	/····
PROPOSED USE: Domestic Industrial Municipal DeWater Imgation Test Well Other	City Concrete County Skagit	<b>-</b>
TYPE OF WORK: Owner's number of well (1f more than one)	Location <u>SE 1/4-1/4</u> <u>NW1/4</u> Sec <u>21</u> Twn <u>35</u> R <u>9E</u>	
✓ New well Reconditioned Method Dug Bored Doven		wwm 厂
Deepened Deepened Jetted	Lat/Long (s, t, r Lat Deg Lat Min/Se	
DIMENSIONS: Diameter of well <u>6"</u> inches, drilled <u>182</u> ft	still REQUIRED ) Long Deg Long Min	'Sec
Depth of completed well <u>178 5</u> ft CONSTRUCTION DET AILS	Tax Parcel No	
Construction Defails Casing 17 Welded 6" "Diam from +15 ft to 1695 ft		
Casing Installed:         Z Weided         6"         " Diam from +1.5         ft to 169.5         ft           Installed:         Liner installed        "         Diam fromft toft         ft toft           Installed:         Threaded        "         Diam fromft toft         ft toft	CONSTRUCTION OR DECOMMISSION PROC	EDURE
Perforations: Yes VNo	Formation Describe by color, character, size of material and structure, a	
Type of perforator used	nature of the material in each stratum penetrated, with at least one entry information indicate all water encountered (USE ADDITIONAL SHEET	
SIZE of perfsin by in and no of perfsfromft toft	MATERIAL FROM	1.
Screens: ZYes No K-Pac Location	Brown, Topsoil, Cobbles 0	4
Manufacturer's Name <u>Alloy Machine</u>	Brown Gravel, Sand 4	10
Type         Stainless Steel         Model No           Diam         6°         Slot size         10         from         168.5         ft to         178.5         ft           Diam         Slot size         from        ft         to        ft         to	Brown Sand 10	14
Diamft toft	Brown Gravel, Sand 14	30
Gravel/Filter parked: Yes V No Size of gravel/sandft toft	Brown Clay 30	31
	Brown Gravel, Clay, Silt 31 Gray Gravel, Clay, Silt 73	85
Surface Seal:: 🔽 Yes 🗆 No To what depth? <u>18</u> ft Maternal used in seal <u>Bent on the Chips</u>	Brown Gravel, Clay, Silty Sand 85	
Did any strata contain unusable water?	Gray Clay, Gravel, Silty Sand 115	12
Type of water? Depth of strata	Brown Gravel, Sand, Clay, Silt 127	13
Method of sealing strata off	Gray Clay, Gravel, Silt 133	14
PUMP:         Manufacturer's Name_Grundfos           Type         Submersible	Brown Clay, Gravel, Silty Sand 142	15
	Gray Clay, Gravel, Silty Sand 153	16
WATER LEVELS: Land-surface elevation above mean sea levelft Statuc levelft below top of well Date _10/06/03	Tan Gravel, Sand, Fine Sand & Water 162	
Artesian pressure It below top of wear Date Artesian pressure Ibs per square inch Date		
Artesian water is controlled by	BECEWED -0	
(cap, valve, etc)	RECEIVED 34	3
WELL TESTS: Drawdown is amount water level is lowered below static level Was a pump test made? I Yes INO If yes, by whom? Hayes Dniling	OCT 2 4 2003	
Was a pump test made( 12) Yes     INO     If yes, by whom <u>Hayes Driling</u> Yield     15     gal /min     wth 4     ft drawdown after 1     hrs		
Yieldgal /mm withft drawdown afterhrs		
Yield gal /min with ft drawdown after hrs Recovery data (time taken as zero when pump turned off) (water level measured from well	WELL DRILLING UNIT DC N	$\square$
top to water level)		
Time Water Level Time Water Level Time Water Level		
Data offert		
Date of test		
Airtest 12 gal /min with stem set at 165ft. for 1hrs		
Artesian flow gp m Date		
Temperature of water Was a chemical analysis made?  Yes No		
	Start Date 10/02/03 Completed Date 1	0/06/03
WELL CONSTRUCTION CERTIFICATION: I constructed and/or ac	cept responsibility for construction of this well, and its com	pliance
Washington well construction standards. Materials used and the informati		
Dniler/Engineer/Trainee Name (Print) Mike McA dam	Dnihng Company Haves Dniling, Inc	
Inter/Engineer/Trainee Signature M. MCPCIAM	Dining Company <u>Hayes Dining, Hit</u>	

Dimarca Hance Hanz (Hint)	Diming OO
Dniler/Engineer/Trainee Signature M. MCALAM	Address 56
Dniler or trainee License No 2566	City, State,
(If TRAINEE,	Contractor'
Driller's Lizensed No.	Registration
Driller's Signature	Ecologyis

Drilling Company <u>Haves Drilling, Inc</u>	
Address <u>5696 Ershig Road</u>	
City, State, Zip Bow, Wa. 98232	
contractor's	
Registration No <u>HA YESDI10615</u>	Date 10/16/03
Ecology 1s an Equal Opportunity Employer	ECY 050-1-20 (Rev 2/03)

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ile C	4 Point: 1 Doginal with rtment of Ecology	L	WATER W	ELL REPO	Eco id: 304047 RT Notice of Intent	<u>W129</u>	841 FC003		
		~ 14 D	STATE O	F WASHINGTON	TI I UNIQUE WELL	10 # <u>^</u>		.1.0	
hırd	nd Copy - Owner's Co Copy - Dniller's Copy	a5"			Water Right Permit No				-
1)	OWNER Name	Porter	We	A	idress 7279 RANGER STAT	inft	). MARE	Landu	π
:)	LOCATION OF WELL	County S'¢	aqit	· •	<u>SW 1/4 SE 1/4 Sec 1 T</u>	35	<u>NB_10</u>	WWM	
(8)	STREET ADDRESS		est address)	279 RANG	or station RD mar	her	nount	; WA	•
	PROPOSED USE	⊡ Domestic		Municipal	(10) WELL LOG or DECOMMISSION			SCRIPTION	
}	PHOPO3ED USE	Irrigation	Test Weil	Other	Formation Describe by color, character	, size of ma	aterial and str	ructure, and	
		DeWater	· · · · · ·		the kind and nature of the material in e one entry for each change of informatic				
)	TYPE OF WORK	Owner's number o	of well (if more than or Method	ne)	MATERIAL		FROM	то	
		Deepened	🗆 Dug	Bored			1	40	
		Reconditioned     Decommission		Driven     Jetted	sand gravel, olay	······	40	46	
	DIMENSIONS	Diameter of well	261 (1010)	6 Inch	clav	····	46	60	
	Drilled 100		npleted well		sand, water, gravel,	clav	· · · · · · · · ·	80	
					shale, water		80	100	
	CONSTRUCTION DE Casing Installed	TAILS							
2	Welded	<u> </u>	Diam from	1_ft to100			Ì		
	Liner installed Threaded	u	Diam from Diam from		t		<b>†</b>	<b></b>	
					·		<u>†</u>	<u> </u>	
	<b>.</b>						1	<u> </u>	
		Yes ⊡No							
	Type of perforator use	a STAR	1/8 in by	3/4	INAL STE MES	STANI	ARN		
	SIZE of perforations				477 in 40 124		· · · · · ·		
		perfor	rations from <u>65</u>	ft to <u>80</u>		nto			
_						MER	<u> </u>	<u> </u>	
	Screens		K-Pac Location				<u> </u>	<u> </u>	
ļ	Manufacturer's Name						<u> </u>	<u> </u>	
				No	-			<u></u>	
				ft to			1		
								<u> </u>	
					-	CE	VED	/ <b>†</b>	
	Material placed from_		ft_to				,		
5	Surface seal	XC]Yes ⊡No_	To what depth?	18			4 2001		
ŀ	Matenal used in seal_	Ber	ntonite		-			GV	
0	Did any strata contain	unusable water?	□Yes _Q No	rota		TOF	ECOLO		
N N	whethod of sealing stra	ta off	veptn of st	rata					
٦	уре		· · · ·	HP	-				
١	WATER LEVELS La	d-surface elevation	above mean sea leve						
5	Static level	20	ft_below top of well	Date 514 DI	Work Started <u>5-14</u> , 01	Completed			
	Artesian pressure Artesian water is contr			Date					
			(Cap, valve, etc	)	WELL CONSTRUCTION CERTIFICATI	ON			
v	VELL TESTS Drawd	own is amount wate	r level is lowered belo	w static level	I constructed and/or accept responsi	ality for cor	nstruction of t	this well, and	tts
۷	Vas a pump test made	? ⊡Yes ⊡No	If yes, by whom?		compliance with all Washington well	construction	n standards	Materials use	ed
Y	/ield <u>30 g</u> al./mii	with	ft_drawdowi	n afterhrs	and the information reported above a				
Y	/ieldgal /mi	1 with	ft drawdown	n afterhrs	Type or Print Name_Wayne C.			2582	_
				hafterhrs	(Licensed Dri	ier/Enginer	er)		
	recovery data (time ta vell top to water level)	verias zero wnen pi	ump turned on) (water	r level measured from	Trainee Name		_License No	ı	
	ime Water Le	vel Time	Water Level	Time Water Leve	Destance The				
Т				·····	(Signed)(Licensed Dri				
Т -						-			
T - -				<del></del>	Address 7940 N.E. Cape	Horn J	Rd_Conc	rete,WA	982
_	late of test 5-	14 mil			Contractors				
- - D	Pate of test		ft_draw	down after hrs	DDTMA	T7 A			
- - D B	ailer test <u>30</u>	_gal /min_with		down afterhrs down afterhrs	Registration No PRINC wd095	K4	_Date	,	_
- D B A A	ailer test <u>30</u> irtest irtesian flow	_gal /min_with _gal /min_with		down afterhrs Date	Registration No <u>PRINC WC095</u> (USE ADDITIONAL SH				_

ŀ

1) OWNER: Name National Park Service	Address Marblemount, Wa		
2) LOCATION OF WELL: County SKAGIT	- NW1 NE 1 Sec. 12 T	5	10
-			
earing and distance from section or subdivision corner			<u> </u>
3) PROPOSED USE: Domestic [] Industrial [] Municipal XX Irrigation [] Test Well [] Other []	(10) WELL LOG: Formation: Describe by color, character, size of materia	il and stru	cture, at
	show thickness of aquifers and the kind and nature of stratum penetrated, with at least one entry for each o	the mater hange of	formatio
4) TYPE OF WORK: Owner's number of well 1 (if more than one)	MATERIAL	FROM	то
New well <b>I</b> K Method: Dug Bored	Top soil	0	4
Deepened Cable Driven	Silt w/gravel lenses	4	28
	Silt_w/some_gravel & sand		
5) DIMENSIONS: Diameter of well6 inches.	all the way	28	137
Drilled 162 ft. Depth of completed well 162 ft.	Granite	137	162
6) CONSTRUCTION DETAILS:			
Casing installed: <u>6</u> Diam. from <u>+2</u> ft. to <u>143-9</u> ft.			
Threaded []			
Welded 🔯			
Perforations: Yes 🗋 No 🗖		1	r .
Type of perforator used		1	
SIZE of perforations in. by in.		1	† <b>-</b>
perforations from ft. to ft.			<u> </u>
perforations from ft. to ft.			
perforations from	TUT ON 2		<u> </u>
Screens: Yes D No 🕼			
Manufacturer's Name		<u> </u>	<u> </u>
Type		1	<u> </u>
Diam Slot size from ft. to ft.		<u> </u>	†
Diam Slot size from ft. to ft.	- OF White		
Gravel packed: Yes 🗋 No 🛛 Size of gravel:	- DECENVE		+
Gravel placed from ft. to ft.		¥ · · · · -	·
		<u> </u>	
Surface seal: Yes K No D To what depth?			
Material used in seal.		+	
Did any strata contain unusable water? Yes 🗌 No 🗗			+
Type of water?	<u></u>		
Method of Bealing Strata on		<u>+</u>	<u>                                     </u>
7) PUMP: Manufacturer's Name		+	<u> </u>
Туре:		<u> </u>	÷
WATER I EVELS. Land-surface elevation			+
above mean sea level ft.			
atic level			1
rtesian pressure		+	
Artesian water is controlled by (Cap, valve, etc.)		-	
WELL TESTS: Drawdown is amount water level is     lowered below static level		0/17/0	<u> </u>
b) WELL IESTS. lowered below static level	Work started 8/16/82, 19. Completed	0/11/0	<del>.</del> , 19
as a pump test made? Yes D No D If yes, by whom? leld: gal./min. with ft. drawdown after hrs.	WELL DRILLER'S STATEMENT:		
	This well was drilled under my jurisdiction	and this	renort
n n n	true to the best of my knowledge and belief.		100016
ecovery data (time taken as zero when pump turned off) (water level			
measured from well top to water level)	NAME Bartholomew Drilling, Inc.		
Time Water Level Time Water Level Time Water Level	(Person, firm, or corporation)	Type or p	
	Address N. 11525 Nine Mile Rd., Nin	e Mile	Fall
	Address		
	$\Lambda_{1}$ $R = \frac{1}{2} \frac{99026}{2}$		
Date of test	[Signed] (Well Driller)	$\omega$	
MEK test		14.5	
	License No. 0051 Date 11	7.10	105

• 😁 🤋

te: 4 Point: 2b		Eco id: 85463	35/10.	- 121	3
File Original and First Copy with Department of Ecology Second Copy — Owner's Copy Third Copy — Driller's Copy		LL REPORT	Application 1 Permit No	No	
(1) OWNER: Name USDI- North	Cascades Natl. Park	800 State St. SW.	98284		
(2) LOCATION OF WELL: Count	ty Skagit	- Nal, NE	sec.1 2. т.3.	5 n. r.	10w
Bearing and distance from section or subdiv	vision corner DIST. UITICE				
(3) PROPOSED USE: Domestic	🖌 Industrial 📋 Municipal 📋	(10) WELL LOG:			
Irrigation	] Test Well [] Other []	Formation: Describe by color, characte show thickness of aquifers and the kin stratum penetrated, with at least one	r, size of materia d and nature of t	l and struc the materi	cture, e al in e
	mber of well	stratum penetrated, with at least one MATERIAL	entry for each c	FROM	TO
(it more the	an one) Method: Dug 📋 Bored 🗍			0	
Deepened 🛛	Cable 📋 Driven 🗆	Dirty Sand & Gravel		37	- 40
Reconditioned 🗌	Rotary Jetted	Water, Sand & Gravel		40	6
(5) DIMENSIONS: Diamete	er of well inches.	Brown Clay & Gravel		65	
Drilled 7 ft. Depth of co	ompleted well 73 ft.	Gravel & Water		₽ -	p
		S		Þt	
(6) CONSTRUCTION DETAILS:			<u>с                                    </u>	<b>F</b> †	_ ·
Casing installed: 🔏 🛄 Diam. 1	from 0 ft. to 68 ft.		$1 - \infty - 0$	5	
	from ft. to ft.			¥ i	
Welded 🗙	from ft. to ft.			E	
Perforations: Yes 🗆 No 🗹				E	
Type of perforator used				₽	
SIZE of perforations	in. by in.		ш.		
perforations from	ft. to ft.		<u> </u>		
perforations from	ft. to				
perforations from					
Screens: Yes No Diam. Manufacturer's Name. Diam. Slot size 4450 Diam. Slot size 4450	from the ft. to ft.				
Gravel packed: Yes No	Size of gravel:				
Surface seal: Yes No No T Material used in seal.	m./-e-			+	     
Did any strata contain unusab	ole water? Yes 🗋 🛛 No 🙀				·
Type of water?					 
				1	
(7) PUMP: Manufacturer's Name	UD				<u> </u>
Туре:					<u> </u>
(0) WILLING PARTY BOOVE ME	face elevation the sea level.				
Static level	top of well Date 4-76-76				
Artesian pressurelbs. per so	quare inch Date	· · ·			+
Artesian water is controlled by.	(Cap, valve, etc.)				
(a) WEIL TESTS. Drawdown	is amount water level is	0:	Completed	1.26	 •-
(9) WELL ILSIS. lowered be	yes, by whom?	Work started		r=_20	19
	i. drawdown after / hrs.	WELL DRILLER'S STATE	MENT:		
65 1	<u> </u>	This well was drilled under t	my jurisdiction	and this	repoi
		true to the best of my knowled	ge and belief.		
Recovery data (time taken as zero when	pump turned off) (water level	NAME DAHLMAN PUMP & WE	LL DRILLIN	. TNC	_
measured from well top to water level,	Level   Time Water Level	NAME DAHLMAN FUELP & WE (Person, firm, or co		(Type or )	
me Water Level Time Water	To Static				
	<b>7</b>	Address Box 422, Burlin	gton, WA.	95233	
		1/1/	F- //	1	
Date of yest 4-0-9-85		[Signed]	(Well Driller)	~	
Batter test 05 + gal/min. with	.ft. drawdown afterhrs.		(wen briner) 5-2-	-85	
Artesian flowg.p.m Temperature of water	ical analysis made? Yes 🗌 No 🗌	License No1192	Date	-05	, 19

<b></b>	Site: 4 Point: 3a
n this Well Report.	185/34         WATER WELL REPORT         Original & 1° copy - Ecology, 2° copy - owner, 3° copy - dr         Construction/Decommission ("x" in circle)         Construction         Decommission ORIGINAL INSTALLATION Notice         of Intent Number
o no	PROPOSED USE:       Domestic       Industrial       Municipal         DeWater       Irrigation       Test Well       Other
ormati	TYPE OF WORK:       Owner's number of well (if more than one)         Image: Straight of the
r the Inf	Depth of completed well 90       ft.         CONSTRUCTION DETAILS         Casing       [2] Welded       6       " Diam. from 1       ft. to 90         Installed:       Liner installed       " Diam. fromft. to
i and/oi	Perforations:     Yes     ☑ No       Type of perforator used
Data	Manufacturer's Name     Model No.       Type
y the	Gravel/Filter packed: Yes Yos Size of gravel/sand Materials placed from <u>ft</u> to <u>ft</u> Surface Seai: Yes No To what depth? <u>18</u> <u>ft</u>
NOT Warranty the Data and/or the Information on	Material used in seal <u>bentonite</u> Did any strata contain unusable water?         Type of water?         Depth of strata         Method of sealing strata off
S	PUMP: Manufacturer's Name Gould         Type: 10 gpm submersiable         WATER LEVELS: Land-surface elevation above mean sea levelf         Static level 36ft. below top of well Date Sept 1         Artesian pressurelbs. per square inch Date
of Ecology doe	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?         Wayne Prince         Yield:       gal./min. with 3         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
۳.	top to water level)

Eco	id٠	121	024
	iu.	424	024

RT copy – driller	CURRENT Notice of Intent No. W246651				
	Unique Ecology Well ID Tag No. AKG263				
	Water Right Permit No.				
<i>tic</i> e	Property Owner Name Robert Humiston				
<u> </u>	Well Street Address				
cipal	City Marblemount County Skagit	····			
	Location <u>NE1/4-1/4</u> ne 1/4 Sec <u>12</u> Twn <u>35</u>		Circle one		
Driven	Lat/Long (s, t, r Lat Deg Lat				
ft.	Still REQUIRED Long Deg Long	ng Min/Sec			
	Tax Parcel No. P45141				
o <u>90 ft</u> . o ft.	CONSTRUCTION OR DECOMMISSION	PROCEDU	DF		
0ît.	Formation: Describe by color, character, size of material and				
	nature of the material in each stratum penetrated, with at least information. (USE ADDITIONAL SHEETS IF NECES	one entry for ca			
f1_tof1.	MATERIAL	FROM	то		
	Topsoil	1	6		
	Sand, Gravel	6	35		
ft	Clay Blue	35	41		
ft.	Silt, Sand and Gravel	41	78		
	Sand, Gravel & Water	78	90		
ft.					
<u> </u>					
ft.					
ot 1					
e level					
ne Prince		ļ			
hrs.					
hrs. hrs.					
usured from well	RECEI	VED			
-		20.05			
Water Level	SEP 0 9	2005			

hrs. hrs. asured from Time Water Level Time Water Level Time Water Leve Date of test Bailer test 60 gal./min. with 4 ft. drawdown after Airtest _____ gal./min. with stem set at _____ ___ft. for _ Artesian flow _____g.p.m. Date ____ Temperature of water _____ Was a chemical analysis made? 🛄 Ye

Bailer test 60 gal./min. with 4 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         Start Date Sept 1, 2005         Completed Date Sept 1, 2005         WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with the second			DEPT OF ECOLOGY
Start Date         Sept 1, 2005         Completed Date         Sept 1, 2005           WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with the second	Bailer test 60         gal./min. with 4         ft. drawdown after 1         hrs.           Airtest        gal./min. with stem set atft. forhrs.        hrs.           Artesian flow        g.p.m. Date		
		Start Date Sept 1, 2005	Completed Date Sept 1, 2005
		accept responsibility for construction	on of this well, and its compliance

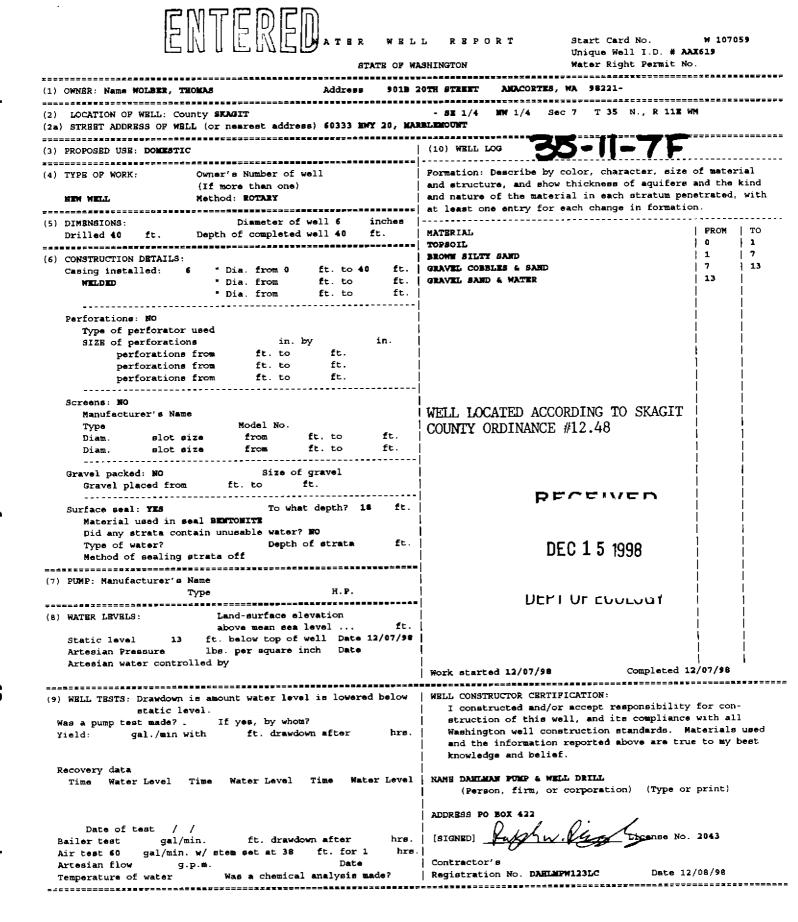
Driller  Engineer  Traince Name (Print) Wayne Prince	Drilling Company Prince Well Drilling	
Driller/Engineer/Trainee Signature Wayne Comme	Address 7940 NE Cape Hom Rd.	
Driller or trainee License No. 2788	City, State, Zip Concrete, WA 98237	
(IT TRAINEE,	Contractor's	
Driller's Licensed No.	Registration No. princwd095k4	Date ASeptember 1, 2005
Driller's Signature	<b>j</b>	Ecology is an Equal Opportunity Employer.

The Department of Ecology does NOT warranty the Data and/or Information on this Well Report. ECY 050-1-20 (Rev 3/05)

Site: 4 Point: 3b		Eco io	d: 1595906	
RESOURCE PROT	ECTION WELL RE		JRRENT tice of Intent No.	AE 35701 SE57184
Construction/Decommission			Type of Well	
Construction			Resource Pro	otection
Decommission ORIGINAL INS	TALLATION Notice		Geotechnica	
of Intent Numb		Property Owner L	uther Pou	ver
Congulting Firm Rlass	Mate Care		3 Powerlin	
Consulting Firm Black	main cons.	City Marblemo	ant co	ounty Skaget
Unique Ecology Well ID Fag No.	B-1	Location 1/4 <u>N</u>	E 1/4 NESec 12	_Twn <u>35</u> R <u>10</u> or WWM
VELL CONSTRUCTION CERTIFICATION: 1	constructed and/or accept responsibility for	Lat/Long (s,t,r Lat Deg	·	Lat Min/Sec
onstruction of this well, and its compliance with	all Washington well construction standards	still Required) Long D	eg	Long Min/Sec
fatenals used and the information reported above	e are true to my best knowledge and belief $\Lambda$	Tax Parcel No.	· · · · · · · · · · · · · · · · · · ·	
Driller Trainee Name (Print) Driller/Trainee Signature	ABET CAUSIAMO	Cased or Uncased Diamet	er (0"	Static Level
Driller/Trainee License No.	2861			THE CONTRACTOR
		Work/Decommision Start	Date	29-16
f trainee, licesned drillers'		Work/Decompilities C	alatad Data	19.11-
ignature and License No.		Work/Decommision Com	pieted Date	a7-16
Construction/Design	W	ell Data	Form	ation Description
	BACKFILL	2 FT	INTO BES	28' FT
			BECI	
				INED 1
	DEPTH OF BORING	28 FT	RECI	4.







Site	: 4 Point: 4b	Eco id: 190227
Dep Seci	Original and First Copy with artment of Ecology and Copy — Owner's Copy d Copy — Driller's Copy	LL REPORT E UNIQUE WELLID. # ACS072 WASHINGTON Water Right Permit No.
(1)	OWNER: Name Strang and Claracher Add	ress 60287 Stht Zi MExplusion
(2)	LOCATION OF WELL: County 5 the the	<u>SE 1/4 Altil 1/4 Sec 7 T 35 N.R 1/ WM.</u>
(2a)	STREET ADDRESS OF WELL (or nearest address)	<u>55.11E.7F</u>
(3)	PROPOSED USE: Démestic industrial () Municipal () Irrigation Test Weil () Other ()	(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
(4)	TYPE OF WORK: Owner's number of well (If more than one)	change of information
	Abandoned Deepened Cable Doven Reconditioned Reconditioned Sector	MATERIAL FROM TO COPSULA / C SQUIDE CNRLE C
(5)	DIMENSIONS:       Diameter of well	Sand ghave water 30 40
(6)	CONSTRUCTION DETAILS: Casing installed: " Diam from ft to	
	Perforations:       Yes       No       Image: Constraint of the state of the	Mell SI to meets Standard Sub - Se 12 45 according to part provided by quart
	Screens:         Yes         No           Manufacturer's Name	RECEIVED
	Diam         Slot size         from         ft         to         ft           Gravel packed:         Yes         No         Size of gravel	SEP 2 0 1999
	Gravel placed fromft toft	
	Surface seal:       Yes       No       To what depth?       If for for the	DEPT OF ECOLOGY
	Method of sealing strata off	
(7)	PUMP: Manufacturer's Name	
(9)	Type     HP       WATER LEVELS:     Land-surface elevation	Work Started 57. 19 2 19 Completed 5 24 1. 52 19 77
(8)	WATER LEVELS:       Land-surface devaluation above mean sea level       ft         Static level       4       ft below top of well       Date       ft         Artesian pressure       ibs per square inch       Date       ft         Artesian water is controlled by       (Cap, valve, etc.)       ft	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
(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:	the information reported above are true to my best knowledge and belief NAME <u>Pri N 2-3 ( ) 2-1 ( ) 1/ ) 1/ me</u> (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT) Address 7740 NEC2 C. (Formers) Cincrede
	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         Image: Second sec	(Signed) <u>Many (WELL ORILLER)</u> Contractor's Registration No <u>France (I)</u> (STA GDate <u>Lange</u> , 19 <u>(USE ADDITIONAL SHEETS IF NECESSARY)</u> Ecology is an Equal Opportunity and Affirmative Action employer. For spe- cial accommodation needs, contact the Water Resources Program at (206)
	Temperature of water Was a chemical analysis made? Yes No	407-6600. The TDD number is (206) 407-6006.

e: 4 Point: 4c	Eco id: 419400	
181572 WATER WELL DEPORT	CURRENT	
WATER WELL REPORT Original & 1 st copy - Ecology, 2 nd copy - owner, 3 rd copy - driller	Notice of Intent No. w222752	
Construction/Decommission ("x" in circle)	Unique Ecology Well ID Tag No. AKG262	
Construction	Water Right Permit No	
Decommission ORIGINAL INSTALLATION Notice	Water Right Permit No. Property Owner Name <u>Connies Kere</u>	stete
of Intent Number	Well Street Address	
PROPOSED USE: Domestic Industrial Municipal DeWater Irrigation Test Well Other	City Marblemount County Skagit	
TYPE OF WORK: Owner's number of well (if more than one)	Location <u>SE 1/4-1/4</u> <u>NW1/4</u> Sec 7 Twn <u>35</u> R <u>11</u>	
Image: Wew well     Reconditioned     Method : Dug     Bored     Driven       Image: December of De	Lat/Long (s, t, r Lat Deg Lat Min/S	Sec
DIMENSIONS: Diameter of well <u>6</u> inches, drilled <u>40</u> ft. Depth of completed well <u>37</u> ft.	Still <b>REQUIRED</b> ) Long Deg Long Min	n/Sec
CONSTRUCTION DETAILS	Tax Parcel No. <u>P45933</u>	
Casing         Image: Construct of the state of the	CONSTRUCTION OR DECOMMISSION PROC	CEDURE
Perforations: Yes ZNo Type of perforator used	<ul> <li>Formation: Describe by color, character, size of material and structure nature of the material in each stratum penetrated, with at least one entr information. (USE ADDITIONAL SHEETS IF NECESSARY</li> </ul>	y for each change
SIZE of perfs in. by in. and no. of perfsfromft. toft.	MATERIAL FRO	
Screens: Yes Z No K-Pac Location	Topsoil 1	6
Manufacturer's Name	Sand, Gravel & Boulders 6	23
Type         Model No.           Diam.         Slot size         from         ft. to         ft.	Silt 23	27
	Sand & Gravel 27	31
Grave/Filter packed: Yes V No Size of gravel/sand	Sand, Gravel & Water 31	37
Material used in seal bentonite Did any strata contain unusable water? Depth of strata Type of water? Depth of strata Method of sealing strata off PUMP: Manufacturer's Name Gould Type: 10 gpm submersiable WATER LEVELS: Land-surface elevation above mean sea level ft Static level 27 ft below top of well Date Aug. 31 Artesian pressure Ibs. 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?       Z Yes       No       If yes, by whom?       Wayne Prince         Yield:       gal./min. with 2       ft. drawdown after       hrs.         Yield:       gal./min. with       ft. drawdown after       hrs.		
Yield:	RECEIV	ED
top to water level) Time Water Level Time Water Level Time Water Level	SEP 0 9 20	105
	DEPT OF ECO	LOGY
Date of test		
Bailer test <u>60</u> gal./min. with <u>4</u> ft. drawdown after <u>1</u> brs.		
Airtest gal./min. with stem set at ft. for hrs. Artesian flow g.p.m. Date		
Artesian flow g.p.m. Date Temperature of water Was a chemical analysis made? ] Yes ] No		
Lembersture of water Was a chemical analysis made? I I Yes I I No.		

Driller/Engineer/Traince Signature O and Change Address 7940 NE Cape Hom Rd. Driller or trainee License No. 2788 City, State, Zip Concrete, WA 98237 Contractor's	Driller's Signature	E	scology is an Equal Opportunity Employer.
Driller/Engineer/Traince Signature Wayne Chance Address 7940 NE Cape Hom Rd.			Date _ September 1, 2005
	Driller or trainee License No. 2788	City, State, Zip Concrete, WA 98237	
Drilling Company Prince Well Drilling	Driller  Engineer  Trainee Name (Rrint) Wayne Prince Trainee Signature Wayne Chance	Drilling Company <u>Prince Well Drilling</u> Address <u>7940 NE Cape Hom Rd</u>	

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

Site: 4 Point: 5	Eco id: 407117	75-11F	7FU
WATER WELL REPORT			
	CURRENT Notice of Intent No. $\omega/67.53$		 
E Co L o C o L o C o L o C o C o C o C o	Unique Ecology Well ID Tag No. AK	G 23	<u> </u>
Construction/Decommission ("x" in circle) $172054$	Water Right Permit No.		
O Decommission ORIGINAL CONSTRUCTION Notice of Intent Number	Property Owner Name DEWN W	î i	
PROPOSED USE: Domestic Industrial Municipal	Well Street Address		
DeWater Irrigation Test Well Other	Citymarble nout County:	Frank	
TYPE OF WORK: Owner's number of well (if more than one)	Location SE 1/4- 1/4 NE 1/4 Sec 7 T	25 11	EWM circle
Image: New Well       Reconditioned       Method:       Dug       Bored       Driven         Image: Deepened       Image: Cable       Image: Cable       Image: Cable       Image: Cable       Image: Cable			or one WWM
Deepened Cable Rotary Jetted	Lat/Long: Lat Deg ;	Lat Min/Sec	`
Dimensions: Diameter of well <u>\$</u> inches, drilled <u>\$</u> O. It. Depth of completed well <u>36</u> ft.	<b>REQUIRED</b> ) Long Deg	Long Min/Sec	
CONSTRUCTION DETAILS	Tax Parcel No.		
Casing Welded Diam. from ft. to 36 ft.	CONSTRUCTION OR DECOMMISSIO		
	Formation: Describe by color, character, size of makind and nature of the material in each stratum pen	aterial and structure,	, and the
	entry for each change of information. Indicate all v	vater encountered.	·
Perforations: Yes No	(USE ADDITIONAL SHEETS IF NECESSARY.)	·····	
Type of perforator used         SIZE of perfsin. byin. and no. of perfs fromft. toft.	MATERIAL	_ FROM _	TO
Size of perisin: byin: and no: of peris nointit: toit:           Screens:         Yes         No         K-Pac         Locationit:	Toop Soil		<u>6</u>
Manufacturer's Name	Sandaravel Silt	$\frac{6}{23}$ $\frac{2}{7}$	
TypeModel No	Sand gravel & weter	$\frac{5}{30}$ $\frac{1}{3}$	
DiamSlot Sizefromft. toft.           DiamSlot Sizefromft. toft.	Dana graver + 63 egy		<u> </u>
	· · · · · · · · · · · · · · · · · · ·	· · · · ·	
Gravel/Filter packed: Yes No Size of gravel/sandft.	· · · · · · · · · · · · · · · · · · ·		
Surface Seal: Pres No To what depth? ft			
Materials used in seal Bentont			
Did any strata contain unusable water? $\Box Yes \Box No$		~	
Type of water?Depth of strata			
Method of sealing strata off		· ·	
Type: Sub / Oc PM H.P. 13			
WATER LEVELS: Land-surface elevation above mean sea levelft.	Well Site meets Stan		· ·
Static levelft. below top of well Date <u>Jane 18 05</u> Artesian pressurelbs. per square inch Date	Set in SCIL 48 accu	ising .	
Artesian pressureios. per square menioate	to into a pint of his	mit	î
Artesian water is controlled by (cap,valve, etc.)	- The former and		
WELL TESTS: Drawdown is amount water level is lowered below static level.			
Was a pump test made? I Yes Do If yes, by whom? <u>glendre</u> Juner Yield: <u>12 gal/min. with</u> <u>ft. drawdown after</u> <u>2</u> hrs.			
Yield:gal /min. withft. drawdown afterhrs.	RECEIVED		
Yield:ft. drawdown afterhrs. Recovery data (time taken as zero when pump turned off)(water level measured from	RECE	IVED	
well top to water level)	MAY <u>1 7</u> 2005 FEB 1	7 2005	
Time Water Level Time Water Level Time Water Level	TOFECOLOGY	4 2005	
· · · · · · · · · · · · · · · · · · ·	DEPT OF I	ECOLOGY	
Date of test	· · · · · ·		
Bailer testgal/min. withft. drawdown afterhrs.         Airtestgal/min. with stem set atft. forhrs.	· · · · · · · · · · · · · · · · · · ·		
Artesian flowg.p.m. Date	Start Date Frank 17 Completed Da	ite Jen 18	05
Temperature of waterWas a chemical analysis made? Yes No	I		
WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responses Washington well construction standards. Materials used and the information re	ported above are true to my best knowledge a	nd belief.	
Driller Engineer Trainee Name (Print) Way Re C Prince	- Drilling Company Prince We	11 Drillin	-9
Driller/Engineer/Trainee Signature Wayse C. Sum	- Address 7940 NE Cope H	orn Rd	
Driller or Trainee License No. 2582	= City, State, ZipConcrete Wa	3h 9823	57
If trainee, licensed driller's	- Registration NorwewD095KD		05
Signature and License no			
	Ecology is an Equal Opportunity Employer.	ECY 050-1-20 (Re	v 4/UI)

1 I

Hie 4 Point: 6       ECO Id: 74997       35//1-092         Discretion of define Copy with second Copy Owers Copy       WATER WELL REPORT       Application No.         State of WASHINGTON       Permit No.       Permit No.         (1) OWNEE: Name Bob Bunting       Address 233D Bank of Calif. Center Se       Address 233D Bank of Calif. Center Se         (2) LOCATION OF WELL: County Skagit       Address 233D Bank of Calif. Center Se       To Six Six R. R.         Reside ad distance from section or suddivision corre 775 Ranger Station Rd. Marblemount . WA.       (1) WELL LOG:       Permit No.         (3) PROPOSED USE: Dement M Industrial Municipal December 9 y color observiter stee of material and anterial of the circle of the distate of eatry for each Change of December 10 and the distance of the stee of material and anterial of the circle of the distate of eatry for each Change of December 10 and the distance of the stee of material and anterial of the circle of the distance of the dista	// w
Address       Address         (2) LOCATION OF WELL: County Sk #git	// w
(2) LOCATION OF WELL: county Skagit       NEw July see for a subdivision correr 775 Renger Station Rd. Marblemount, WA.         (3) PROPOSED USE: Doment M Industrial Municipal Irrigation Test Well Other Irrigation Test Well Other Irrigation Test Well Other Irrigation Reconditions of the Role of Station Rd. Marblemount, WA.       (10) WELL LOCE: Towns in the Role of the Rol	icture, a ial in eq formati TO 3
3) PROPOSED USE:       Domestic M Industrial Municipal Irrigation Test Well       (10) WELL LOG:         4) TYPE OF WORK:       Owner's number of well       Formation: Describe you color, character, size of materre of the mater of the ma	TO
Irregation	TO
4) TYPE OF WORK: Owner's number of well       New well if more than one?       If more than one?       If more than one?         New well if more than one?       If more than one?       If more than one?       If more than one?         Decement I for many I for each change of cable       Decement I for each change of cable       If more than one?       If more than one?         5) DIMENSIONS: Diameter of well       Cable Dorden I for each change of cable of	TO TO 3
New well     Method:     Due     Bored     Internal       Deepened     Cable     Driven     Image: Cable Driven     Image: Cable Driven       S)     DIMENSIONS:     Diameter of well     Image: Cable Driven     Image: Cable Driven       S)     DIMENSIONS:     Diameter of well     Image: Cable Driven     Image: Cable Driven       Drilled     31     ft     Depth of completed well     Image: Cable Driven       S)     DIMENSIONS:     Diameter of well     Image: Cable Driven     Image: Cable Driven       Drilled     31     ft     Depth of completed well     Image: Cable Driven       G)     CONSTRUCTION DETAILS:     Image: Cable Driven     Image: Cable Driven       Casing installed:     Image: Cable Driven     Image: Cable Driven       Medied ID     Diam. from     ft. to     ft.       Vedications:     Yes I     No X       Manufacturer's Name     Image: Cable Driven     Image: Cable Driven       Type     Image: Cable Driven     Image: Cable Driven     Image: Cable Driven       Diam     Slot size     from     ft. to     ft.       Diam     Slot size     from     ft. to     ft.       Diam     Slot size     from     ft. to     ft.       Dim     Slot size <td< td=""><td>3</td></td<>	3
Deepend       Cable       Diven       If I and S i clay       3         Reconditioned       Rointy J intee       If I and S i clay       3         S) DIMENSIONS:       Diameter of well       If I and S i clay       32         S) DIMENSIONS:       Diameter of well       If I and S i clay       32         Drilled       3       ft. Depth of completed well       If I and S i clay       32         So CONSTRUCTION DETAILS:       If I and S i clay       32       If I and S i clay       32         Casing installed:       Diam. from       ft. to       ft.       If I and S i clay       32         Threaded       Diam. from       ft. to       ft.       If I and S i clay       32         Threaded       Diam. from       ft. to       ft.       If I and S i clay       32         Type of perforations from       ft. to       ft.       If I and S i clay       If I an	
5) DIMENSIONS: Drilled 38 ft.       Diameter of well functes Depth of completed well for the functes Depth of completed well for the functes Casing installed:       32         6) CONSTRUCTION DETAILS: Casing installed:       0 man. from 0 ft. to 3/ Timeded 0 for Diam. from ft. to ft. Welted 0 for Diam. from ft. to ft. Welted 0 for Diam. from ft. to ft. Deptorations from ft. to ft. perforations from ft. to ft. perforations from ft. to ft. perforations from ft. to ft. Diam Stot size from ft. to ft. Diam Stot size from ft. to ft. Diam Stot size from ft. to ft. Gravel placed from ft. to ft. Gravel placed from ft. to ft. Size of performer ft. to ft. Diam Stot size from ft. to ft. Gravel placed from ft. to ft. Size of performer ft. to ft. Size seall: yes 0 No 0 Size of gravel. ft. to ft. Diam strata contain unuseble water? Yes No 0 Type of water?       No 0 Type ft. Size book ft. Size seally strata off. ft. Surface seally	32
6) CONSTRUCTION DETAILS: Casing installed: 6. Diam. from 0. ft. to 3/ ft. Threaded 7 Diam. from ft. to ft. Welted 2 7 Diam. from ft. to ft. Perforations: Yes 1 No fX Type of perforations from ft. to ft. perforations from ft. to ft. Diam Siot size from ft. to ft. Gravel packed: Yes 1 No X Size of gravel. Gravel packed: Yes 2 No X Size of gravel. Gravel packed: Yes 2 No X Size of gravel. Material used in seal Did any strata contain unusable water? Yes 1 No X Material used in seal Did any strata contain unusable water? Yes 1 No X Material used in seal Did any strata contain unusable water? Yes 1 No X Material used in seal 1 Depth of atrata Method of sealing strata off. (7) PUMP: Manufacturer's Name Type: HP 8) WATER LEVELS: Land-surface elevation	38
Casing installed: Casing installed: Diam. from 0 ft to 32 ft. Threaded "Diam. from ft to ft. Perforations: yes No X Type of 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. It. to ft. Diam Slot size from ft. to ft. Diam Slot size from ft. to ft. Diam Slot size from ft. to ft. Surface seal: yes No X Size of gravel. Gravel packed: yes No X Size of gravel. Gravel packed: yes No X Size of gravel. Gravel packed: yes No X Size of gravel. Material used in seal Did any strata contain unuseble water? Yes No X Type: (7) PUMP: Manufacturer's Name. Type: 8) WATER LEVELS: Land-surface elevation But Material is the form ft. ft. Land-surface elevation Type: HP. (7) PUMP: Manufacturer's Name. Type: Land-surface elevation But Material is the form ft. ft. Case for the first form ft. ft. The first form ft. The first	1 
Threeded Diam. from	<u> </u>
Welded mail       "Diam. from       ft. to       ft.         Perforations:       Yes []       No [X]         Type of perforations from       ft. to       ft.         manufacturer's Name.       Model No.       ft.         Type.       Model No.       ft.         Diam       Slot size       from       ft. to         Gravel packed:       Yes []       No [X]       Size of gravel:         Gravet placed from       ft. to       ft.         Did any strata contain unuseble water?       Yes []       No [X]         Type of water?       Depth of atrata       ft.         Did any strata contain unuseble water?       Yes []       No [X]         Type:       HP       ft.       ft.         8) WATER LEVELS:       Land-surface elevation       ft.	
Type of perforations       in. by       in.         SIZE of perforations       in. by       in.         perforations from       ft. to       ft.         Manufacturer's Name.       model No.       ft.         Type.       Model No.       ft.         Diam       Slot size       from       ft. to         Diam       Slot size       from       ft. to         Gravel packed: Yes I       No I Size of gravel       ft.         Gravel packed from       ft. to       ft.         Surface seal: Yes I No I To what depth?       ft.       ft.         Material used in seal       intervention       ft.         Did any strata contain unusuble water?       Yes I No I To what depth?       ft.         Type:       HP       ft.       ft.         Watter Levels:       Land-surface elevation       ft.         above mean sea level <td>·  </td>	·
Type of perforations       in. by       in.         SIZE of perforations       in. by       in.         perforations from       ft. to       ft.         manufacturer's Name.       Model No.       ft.         Diam       Slot size       from       ft. to         Diam       Slot size       from       ft. to       ft.         Diam       Slot size       from       ft. to       ft.         Gravel packed:       Yes D       No D       Size of gravel       ft.         Gravel paced from       ft. to       ft.       ft.       ft.         Material used in seal       Size of water?       ft.       ft.       ft.         Did any strata contain unusable water?       Yes D       No       ft.       ft.         Type:       HP       ft.       ft.       ft.       ft.         Swareacontain unusab	+
SIZE of perforations       in. by       in.         perforations from       ft. to       ft.         manufacturer's Name.       model No.       ft.         Diam       Slot size       from       ft. to         Diam       Slot size       from       ft. to       ft.         Gravel packed:       yes       No       Size of gravel:       ft.         Gravel placed from       ft. to       ft.       ft.       ft.         Material used in seal       ft. to       ft.       ft.       ft.         Did any strata contain unusable water?       Yes       No       ft.       ft.         Type of water?       Depth of strata       ft.       ft.       ft.         Method of sealing strata off.       ft.       ft.       ft.       ft.         7)       PUMP:       manufacturer's Name.       ft.       ft.       <	∲
perforations from       ft. to       ft.         perforations from       ft. to       ft.         Screens: yes       No X         Manufacturer's Name.       Model No.         Type.       Model No.         Diam       Slot size         Diam       Slot size         from       ft. to         Diam       Slot size         from       ft. to         Gravel packed: yes       No X         Size of gravel.         Gravet placed from       ft. to         Material used in seal       ft. to         Did any strata contain unusable water?       Yes         No X       No X         Type of water?       Depth of strata         Method of sealing strata off.       ft. off.         7) PUMP:       Manufacturer's Name.         Type:       HP.         Side Strate elevation       ft. off.         Side Strate off.       HP.         Side Strate elevation       ft. off.	+
perforations from       ft. to       ft.         Screens: Yes       No       No         Manufacturer's Name.       Model No.         Type.       Model No.         Diam       Slot size       from         Diam       Slot size       from         Gravel packed: Yes       No       Size of gravel.         Gravel placed from       ft. to       ft.         Surface seal: Yes       No       Size of gravel.         Material used in seal       To what depth?       ft.         Did any strata contain unusable water?       Yes       No         Type of water?       Depth of strata       ft.         Method of sealing strata off.       ft.       ft.         7) PUMP: Manufacturer's Name.       ft.       ft.         Type:       HP       ft.         8) WATER LEVELS:       Land-surface elevation       ft.	
Manufacturer's Name.         Type       Model No         Diam       Slot size       from         Gravel packed:       Yes I       No X         Gravel placed from       ft. to       ft.         Gravel placed from       ft. to       ft.         Surface seal:       Yes I       No X         Type of water?       Depth of strata       ft.         Did any strata contain unusable water?       Yes I       No X         Type of water?       Depth of strata       ft.         Method of sealing strata off.       ft.       ft.         7) PUMP:       Manufacturer's Name       ft.         Type:       H.P       ft.         Substrate       Land-surface elevation       ft.         Substrate       Land-surface elevation       ft.	ļ
Manufacturer's Name.         Type.       Model No.         Diam       Slot size       from       ft. to         Diam       Slot size       from       ft. to       ft.         Diam       Slot size       from       ft. to       ft.         Diam       Slot size       from       ft. to       ft.         Gravel packed:       Yes I       No X       Size of gravel.         Gravel placed from       ft. to       ft.       ft.         Surface seal:       Yes X       No X       ft.         Did any strata contain unusable water?       Yes I       No X         Type of water?       Depth of strata       ft. 5         Method of sealing strata off.       ft. 9         7) PUMP:       Manufacturer's Name.       ft. 9         Type:       H.P.       ft. 9         8) WATER LEVELS:       Land-surface elevation       ft. 9	
Type.       Model No.         Diam       Slot size       from       ft. to         Diam       Slot size       from       ft. to         Diam       Slot size       from       ft. to         Gravel packed:       Yes I       No X       Size of gravel:         Gravel placed from       ft. to       ft.         Surface seal:       Yes X       No X       Size of gravel:         Material used in seal       ft. to       ft.         Did any strata contain unusable water?       Yes I       No X         Type of water?       Depth of strata       ft. to         Method of sealing strata off.       ft. to       ft. to         7) PUMP:       Manufacturer's Name       ft. to         Type:       HP       ft. to         8) WATER LEVELS:       Land-surface elevation       ft. to	<u></u> +
Diam Stot size from ft. to   Gravel packed: Yes No   Gravel placed from ft. to   Gravel placed from ft. to   Gravel placed from ft. to   Surface seal: Yes   No To what depth?   Material used in seal ft.   Did any strata contain unusable water? Yes   No Type of water?   Depth of strata   Method of sealing strata off.	† ·
Gravel placed fromfl. tofl. to	
Material used in seal       Did any strata contain unusable water? Yes       Now         Type of water?       Depth of strata       Image: Contain unusable water? Yes         Method of sealing strata off       Image: Contain unusable water? Yes       Image: Contain unusable water? Yes         (7) PUMP:       Manufacturer's Name       Image: Contain unusable water? Yes       Image: Contain unusable water? Yes         (7) PUMP:       Manufacturer's Name       Image: Contain unusable water? Yes       Image: Contain unusable water? Yes         (8) WATER LEVELS:       Land-surface elevation above mean sea level       Image: Contain unusable water? Yes       Image: Contain unusable water? Yes	
Did any strata contain unusable water?       Yes       No       No <t< td=""><td></td></t<>	
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. (7) Land-surface elevation above mean sea level. (7) Land-surface elevation (7) Land-surface eleva	
(7) PUMP: Manufacturer's Name Type: (8) WATER LEVELS: Land-surface elevation above mean sea level	142.5
Type:     H.P	
8) WATER LEVELS: Land-surface elevation above mean sea level	11:55
6) WALER LEVILLS, above mean sea level	1.JU
tatic level 20 ft. below top of well Date 4-2-81	
Artesian pressure	╡- ──
Artesian water is controlled by(Cap, valve, etc.)	
9) WELL TESTS: Drawdown is amount water level is lowered below static level Work started 4-6-87 19 Completed 4-7-87	L
Von a nump fort made? Yes D No D If yes by whom?	, 19
rield: gal./min. with ft. drawdown after hrs. WELL DRILLER'S STATEMENT:	
This well was drilled under my jurisdiction and this true to the best of my knowledge and belief.	report
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 (Person, firm, or corporation) (Type or p	
Address Box 422, Burlington, WA. 982	:33
$  l \rangle \rangle \langle l \rangle$	
Date of test [Signed] Mindore Mickey	
Bailer test J.O. gal./min, with	
Artesian flow g.p.m. Date. 4-9-87 Temperature of water Was a chemical analysis made? Yes D No X License No. 0623 Date 4-9-87	

Site	: 4 Point: 7a	Eco id: 79781 35/11E/177	B
Depa Seco		Start Card No. <u>664754</u> Start Card No. <u>664754</u> Water Right Permit No	
<u></u>	OWNER: Name Jim Hunter		-· Mang/
(2)	LOCATION OF WELL: County SKAGT	NW XNE X Soc 17 T35 N, R HEW	₩.₩.
(2a)	STREET ADDRESS OF WELL (or nearest eddress)	(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION	
(3)	PROPOSED USE: Domestic Industrial Municipal Domestic Industrial Municipal DeWater Test Well Other D	Formation: Describe by color, character, size of material and structure, and at thickness of aquilers and the kind and nature of the material in each stratum penetra	how
(4)	TYPE OF WORK: Owner's number of well (if more than one)	with at least one entry for each change of information.  MATERIAL FROM TO	
	Abandoned L New well Method: Dug Deepened Discussion Driven Reconditioned Rotary Jetted	Sandy loam brown 0 4	
(5)	DIMENSIONS: Diameter of well <u>4</u> inches.	Cobbles i Clay Grey 4 14	
		Cobbles : Clay (sering) 14 2	<b>/</b>
(6)	CONSTRUCTION DETAILS: Casing installed: Diam. from t. to 5 8 - 6" tt.	gravel clay ( Sing A (constant) 24 40	2
	Welded ' Diam. fromt. tot. Liner installed ' Diam. fromt. tot. Threaded ' Diam. fromt. tott.	11 (Section 1 40 40	Ζ
	Perforations: Yes No No Type of perforator used	Silt Esand brown 42 5	3
	SIZE of perforations in. by In.	Sand Wilsome crevel - 53 69	7
	perforations fromft. toft.	SAND W/SOME GILLI - 33 69	<u></u>
	perforations from ft. to π.		
	Manufacturer's Name_Wested		
	Type <u>STGinless</u> Model No. Diam <u>J 20</u> Slot eize <u>12</u> from <u>S9</u> tt. to <u>69</u> tt.		
	DiamSlot sizeft. toft.		
	Gravel packed: Yes No Size of gravelt.		
	Surface seal: Yes No To what depth? 23		
	Material used in seal <u>Brantwait</u> Did any strate contein unusable water? Yes No	RECEIVED	
	Type of water?Depth of strate Method of sealing strate off		
(7)	PUMP: Menulacturer's Name GoulAS	DEPT: OF ECOLOGY	
(8)	WATED LEVELS. Land-aurisce elevation		
(0)	Static level 12 ft. below top of well Date 5-30-9/		
	Artesian pressure Ibs. per aquare inch Date Artesian water is controlled by (Cap. velve, etc.))	5-20 19 Completed 5-30 19	<u>9</u> 7
(9)	WFIL TESTS: Drawdown is amount water level is lowered below static level	Work started 5-2-8, 19. Completed 3-30 19	<u></u>
(8)	Was a pump (est made? Yes 🖉 No 🛄 , If yes, by whom?	WELL CONSTRUCTOR CERTIFICATION:	
	Yield: gel./min. with tt. drawdown after hre.	I constructed and/or accept responsibility for construction of this and its compliance with all Washington well construction stands	ros.
			best
	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	NAME CARPENTE DE LCU (PERSON, FIRM, OR CORPORATION) (TYPE OR PRIN	IT)
_		Address 2032 So Buy Rol Olymp.	<u>`1</u>
-	Date of test	(Signed License No. 6)	
	Bailer test gal./min. with ft, drawdown after hrs.	Contractor's	91
	Airtest gal./min. with stem set at tt. for hrs. Artesisn flow g.p.m. Date	Registration - OCMB BO Date 5-31	4

(USE ADDITIONAL SHEETS IF NECESSARY)

w

Bailer test	gal./min: with ft, drawdown after	hrs.
Airtest 94	al./min. with stem set at ft. for	hrs.
Artesian flow	g.p.m. Date Was a chemical analysis made? Yes	
Temperature of water .		No

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Site: 4 Point: 7b	Eco id: 84508 $35/11 - 17/B$
File Original and First Copy with Department of Ecology WATER W	VELL REPORT
•	
	Water Right Permit No. Address 6010 S. CASCADE R.O.
(1) OWNER: Name Shubert Hunter	
(2) LOCATION OF WELL: County SKAGIT	11W * NE * Soc 17 T. 35 N. R. 11EWM.
(2a) STREET ADDDRESS OF WELL (or nearest address) 6010 5.	CASCADE Rd- Marblemount, W/T
(3) PROPOSED USE Domestic Industrial D Municipal	
	Formation: Describe by color, character, size of material and structure, and show thickness of aquiters and the kind and nature of the material in each stratum penetrated,
(4) TYPE OF WORK: Owner's number of well (If more than one)	with at least one entry for each change of information
Abandoned 🗆 New well 🦅 Method: Dug 🔲 Bored	
Deepened Cable Driven	
(5) DIMENSIONS: Diameter of well6inche	clay, gravel 5 5mel grey 4 15
	n. ceay, gravel & colole grey 15 28
(6) CONSTRUCTION DETAILS:	leay, graver . cool
Casing Installed: Diam. from H. to	" Clay & Sond (Seepage) brown 28 39
Welded 20 Diam. from ft. to	". The = 0 = 5 md ( water ) brown 39 46
Threaded * Diam. from #. to	-r. Church & Gond ( Water ) brown 39 46
Perforations: Yes No.	(lang silt (sugare) grey 46 48
SiZE of perforations in. by	_in.
pertorations fromft. to	+ Silt & Smil yellow brown 48 53
perforations from ft. to	n Sano (water) yellow brown 53 6/
Screens: Yes No	Surf ( to the grade and the second se
Manufacturer's NameGSCO	
Type Stan less steel Model No.	
Diam. 5 7/8 Stot size 1.5 from 5.2 ft. to 20	
DiamSlot sizefromfr. To Gravel packed: Yes No Size of gravel	
Gravel placed from ft. to	h
Surface apply Yas No To what depth?	tt.
Material used in seal	
Did any strata contain unuaable water? Yes No No No Tupo of water?	
Type of water?Depth of strata Method of sealing strate off	
(7) PUMP: Manufacturer's Name GOULOS	
Type: SubmersibleHP. 73	
(D) WATED LEVELS. Land-surface elevation	n. DEPARTMENT OF ECOLOGY
Static level 18-8" tt. below top of well. Date 10-26-89	
Artesian proseure Ibs. per square inch. Date Artesian water is controlled by (Cap. valve. etc.))	
(9) WELL TESTS: Drawdown is a mount water level is lowered below static l	Work started 10-23-89, 19 Completed 10-26
(9) WELL IESTS: Drawdown is a mount water level is towared ballow station Was a pur pilest made? Yes No If yes, by whom?	WELL CONSTRUCTOR CERTIFICATION:
Yield gel./min. with fl. drawdown after	- hrs. I constructed and/or accept reaponsibility 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 bes
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)	knowledge and belief.
trom well fop to water level/ Time Water Level Time Water Level Time Water Lev	NAME CORPENTER DRILL CU.
	Address 2032 S. BAY for - Orympia
Date of test	(Signey) Throng R. (inputto License No. 067
Bailer test gal / min. with tt. drawdown after	_ hre. Contractor's
Airtest gsl. / min. with stem set at ft. fer Artesian flow g.p.m. Date	- hra. Registration No. CORPCINCING BO Date 10-26 19
Artesian flow G.p.m. Date Temperature of water Was a chemical analysis made? Yes No	USE ADDITIONAL SHEETS IF NECESSARY)
Composition of the second s	

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Site: 4 Point: 7c 472093
DEPARTMENT OF       ECOLOGY         DEPARTMENT OF       Construction/Decommission ("x" in circle)         Image: Construction       Construction
Decommission ORIGINAL INSTALLATION Notice of Intent Number
PROPOSED USE:     Image: Domestic     Industrial     Municipal       DeWater     Irrigation     Test Well     Other
TYPE OF WORK:       Owner's number of well (if more than one)         Image: Second stress of the second stress
DIMENSIONS: Diameter of well <u>6</u> inches, drilled <u>40</u> ft. Depth of completed well <u>37</u> ft.
CONSTRUCTION DETAILS         Casing          Welded <u>6</u> " Diam. from <u>+2</u> ft. to <u>34</u> ft. <u>1nstalled</u> <u>1nstalled</u> <u>"Diam. from ft. to ft.         <u>ft. to ft.         </u> <u>ft. to ft.         </u> <u>ft. to ft.         </u> <u>ft. to ft.         </u> <u>ft.         </u> <u>ft.       </u></u>
Perforations:     Yes     No       Type of perforator used
SIZE of perfsin byin, and no. of perfsfromft. toft.         Screens:       X Yes       No       K-Pac       Location
Manufacturer's Name johnSon
Type         SS         Model No.           Diam. <u>6</u> Slot size <u>12</u> from <u>32</u> ft. to <u>37</u> ft.           Diam.         Slot size         from         ft. to <u></u> ft.
Gravel/Filter packed: ☐ Yes ⊠ No Size of gravel/sand Materials placed fromft, toft.
Surface Seal: 🛛 Yes 🔲 No – To what depth? <u>18</u> ft.
Material used in seal <u>bentonite</u>
Did any strata contain unusable water?     Image: Yes     Image: Yes     Image: Yes       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 fi.
Static level <u>Zft</u> , below top of well Date <u>10/25/12</u>
Artesian pressure los, per square inclinition Date (cap, valve, etc.
WELL TESTS: Drawdown is amount water level is lowered below static level         Was a pump test made?       X         Page 1       No       If yes, by whom?         aquatech
Yield:
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)
Time Water Level Time Water Level Time Water Level
Date of test 10/29/12
Bailer test 20 gal./min, with 4ft. drawdown after 1hrs.
Airtestgal./min. with stem set atft. forhrs.
Artesian flowg.p.m. Date
Temperature of water Was a chemical analysis made? 🔲 Yes 🛛 No

## Eco id: 837464

## CURRENT

CURRENT			
Notice of Intent No.	WE154	31	
Unique Ecology Welt ID Tag	No. BHE572		
Water Right Permit No.		<u> </u>	
Property Owner Name Andy S	Stern/Rose Olive		
Well Street Address8387 Clar			
City Marblemount (			
Location <u>nw</u> 1/4-1/4 <u>sw</u> 1/4 S (s, t, r Still REQUIRED)	ec <u>17</u> 1 wit <u>55</u> K <u>11</u>		or WM⊡
Lat/Long Lat Deg	Lat Min/Se	ec	
Long Deg	Long Min/	Sec	
Tax Parcel No. (Required)			
		BOCEDUDE	
Formation: Describe by color, chara nature of the material in each stratu of information. (USE ADDITIONA	m penetrated, with at least	structure, and I) t one entry for e	ie kind and ach change
MATERIA	L	FROM	ТО
topsoil		0	1
brown silty sand some grave		1	12
brown silty sand wood & wa	ter	12	15 26
tan gravel sand water		15 26	20
tan gravel sand silt water		20	31
tan sand water		31	38
tan sand silt water		38	
Located in compliance with			
sec 12-48 based on informa	tio		
supplied by owner.			
			ļ
12042			
		·	
			<u> </u>
·	<u> </u>		
			<u> </u>
			ł. —
		·· <u>·</u> ·· · · ·	<u>}</u>
FIVED			
	<u></u>	2012	
1AM 1 4 71113	<u></u>		
	- Kors	(0)	·
IEI MARO - WK		1.15	
ICT VINIDO - WK			<u> </u>
Start Data 10/25/12	Completed Dr	ate 10/25/1	2
Start Date <u>10/25/12</u>	Completed Da	uo <u>10/23/1</u>	<u> </u>

WELL CONSTRUCTION CERTIFICATION: 1 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 (P	int ) Brannon Hopke	Drilling Company Aquatech Well Drilling	<u>; &amp; Pumps Inc</u>
Driller/Engineer/Traince Signature		Address 2675 Butler Creek Rd	
Driller or traince License No. 1825		City, State, Zip SedroWoolley	, WA, 98284
IF TRAINEE: Driller's License No:		Contractor's	
Driller's Signature:		Registration No. AQUATWD040K4	Date 10/30/12
	-		

ECY 050-1-20 (Rev 02/10) If you need this document in an alternate format, please call the Water Resources Program at 360-407-6872. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

1

## Site: 4 Point: 8

File Original and First Copy with Department of Ecology Second Copy—Owner's Copy Third Copy—Driller's Copy Eco ID: 84190

RT 35/11 - 1-16 015-472

WATER	WELL	REPOR

STATE OF WASHINGTON

niro (	Copy—Driller's Copy	Weter Right Permit No
1)	OWNER: Name Roy Shreve	Address_ 5317 S. 288th St. Auburn Wa. 98001
<u> </u>		
•	LOCATION OF WELL: CountySkagit	Cascade Marblemount Wa.
a)	STREET ADDDRESS OF WELL (G MELICON CONCOUNTS)	(10) WELL LOG OF ABANDONMENT PROCEDURE DESCRIPTIC
)	PROPOSED USE: Domestic Industrial Dewater Test Well Other Dewater	Formation: Describe by color, character, size of material and structure, and shitble near of anytices and the kind and nature of the material in each stratum penetrat
)	TYPE OF WORK: Owner's number of well (If more than one)	with at least one entry for each change of information.
	Abandoned Deepened Cable Driven Cable Driven Reconditioned Retary Setted	Dirty Sand & Gravel 0 20 Water & Gravel 20 40
<u>,</u>	DIMENSIONS: Diameter of well inches.	
	Drilled 40 teet. Depth of completed well 40 ft.	
_	CONSTRUCTION DETAILS:	
•		
	Casing installed:' Diam. fromft. tott. Welded' Diam. fromft. toft.	
	Liner installed 📙 👘 👘 👘 👘	
	Perforations: Yes No land	
	Type of perforator used	
	SIZE of perforations in. by in. by in. by in.	
	perforations from ft. to ft.	
	perforations fromft. toft.	
		MAR 2 8 1989
	Manufacturer's Name	MAN 20 1000
	Type         Model No           DiamSlot sizefromft. toft.         fromft.	DEPARTMENT OF ECOLOGY
	DiamSlot sizeft toft toft	NORTHWEST REGION
	DiamSlot eizefromft. toft.	
	Gravel packed: Yes No Size of grave)	
_	Gravel placed from ft. to ft. to ft.	
	Surface seal: Yes No Rout To MITE	
	Material used in seal	
	Did any strata contain unusable water / YasNo Type of water?Depth of strata	
_	Method of assling strata off	
<i>r</i> )	PUMP: Manufacturer's Name	
	Туре:Н.Р	
3)	WATER LEVELS: Land-surface elevation above mean sea level	
·	Static level ft. below top of well. Date	
	Artesian pressure Ibs. per square inch Date	
	Artesian water is controlled by (Cap, valve, etc.))	Wort started 3-23- 19 200 mpleted 3-23- 18
<u></u>	WELL TESTS: Drawdown is amount water level is towered below static level	Work started, 197 Zompleted, 197 Zompleted Z
<del>,</del>	Was a pump test made? Yes No IP If yes, by whom?	WELL CONSTRUCTOR CERTIFICATION:
	Yield: gal./min. with ft. drawdown after hra	
		and its compliance with all Washington well construction stands Materials used and the information reported above are true to my
		knowledge and belief.
	Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)	4
	Time Water Level Time Water Level Time Water Level	NAME DAHLMAN Pump & Well Drilling Inc.
		Address P 0 Box 422 Burlington Wa. 98233
_		(Signed) and R inches License No. 0623
_	Date of test	
	Bailer test gal./min. with _// ft. drawdown after hrs	
	10 to desire that has	
	Bailer test gal./min. with _// ft. drawdown after hrs	Contractor's DAHIMPW123IC

ECY 050-1-20

Site: 5 Point: 1	Eco id: 76981		
File Original and First Copy with Department of Ecology WATER W	ELL REPORT Application	No	
Second Copy — Owner's Copy Third Copy — Driller's Copy STATE OF	WASHINGTON Permit No.		
(1) OWNER: Name Dick Hargers.	Address P.O. 130x 93		
(2) LOCATION OF WELL: County Island.			
Bearing and distance from section or subdivision corner			/
(3) PROPOSED USE: Domestic Municipal	(10) WELL LOG:		
Irrigation D Test Well D Other		il and stru the materi change of	cture, and al in each formation
(4) TYPE OF WORK: Owner's number of well (if more than one)	MATERIAL	FROM	то
New well 📜 Method: Dug 🔂 Bored 🖸 Deepened 🗋 Cable 💓 Driven 🗇	Till - Brown	0	30
Reconditioned   Rotary   Jetted	Sand, Gravel - Don - 10050	30	120
(5) DIMENSIONS: Diameter of well 6 inches	Sard - 13 roma . O Dig	120	160
(5) DIMENSIONS: Diameter of well 6 inches. Drilled 329 ft. Depth of completed well 389 ft.	Clay - 15 - and - 5 conto	160	-278
(6) CONSTRUCTION DETAILS:	C/11 y = 13/ml	178	185
Casing installed: <u>6</u> " Diam. from <u>0</u> ft. to <u>384</u> ft. Threaded <u>1</u> Diam. from ft. to <u>1844</u> ft.	cie - Brown/Eren - Silta		
Welded	Sind travel - Branch	192	240
Perforations: Yes D No A	Charles Stranger	240	305
Type of perforator used	Can Jaran Jarag		
SIZE of perforations in, by in.	Sand, Brown, Dry	305-	310
perforations fromft. toft. toft. toft. toft.	Chen, Brown, Selly	310	350
perforations from ft. to ft.	Clay - Brown - upon fine, Sand	350	351
Screens: yes No D - /	crag - with - or - or - or - or	1	
Manufacturer's Name _ 44, 150A	Scal- Vien File, water	357	364
Type Is a life Steel Model No. Diam 6" Slot size 14 trom J.R.4 tt. to 289 tt.	bearing - Gray	<u> </u>	
Diam		264	374
Gravel packed: Yes D No Size of gravel:	la l'Hle coerser		
Gravel placed from ft. to ft.		<u> </u>	
Surface seal: Yes No D To what depth? 18 #	Sand - Gran - Course	374	390
Material used in seal /SC 27RA176	Heavist 3' For every	+	
Did any strata contain unusable water? Yes No Type of water? Depth of strata			
Method of scaling strata off			
(7) PUMP: Manufacturer's Name Fligt & Walling	.		
Type: Sickensesield		+	
returnet to Driller 1/10/87			
Relander applied			
Please provide the information needed			
on the attached well report, (indicated by red checks), and return to this office.		<u>†</u>	
in the solution of a lot	ix started Sc. T. 1. 4, 19 8 / Completed O	'st 1	19. 8
where hegel tilled out.	ELL DRILLER'S STATEMENT:		
Thank you.	This well was drilled under my jurisdiction to the best of my knowledge and belief.	and this	report i
anenou/Mac	1	n 1	
(Resource Management	MELE. Sle Too Well.		
	iress 5-7/6-17th Are N.E	 1	- +{{\sigma}
Date of 1051	[Signed] Clack Land (Well Deflice)	es.e.	
Bailer test-Fride cu. note with the drawdown after			10 E
Temperature : e licai analysis made? Yes 🗋 No [	License No. C. L. S. Date 2		18

(USE ADDITIONAL SHEETS IF NECESSARY)

**e** •

te: 5 Point: 2	Eco id	l: 75009		33//	0-31K
cond Copy — Owner's Copy	LL REPORT		Application : Permit No		. <u>.</u> .
1) OWNER: Name Bob Cook	Address 640	SAUE	Bax 683	Dta	, WA
2) LOCATION OF WELL: County SEQUIT	- Address			33 _{N.R.}	10 5 W.M
earing and distance from section or subdivision corner					
3) PROPOSED USE: Domestic 🖉 Industrial 🗆 Municipal 🗌	(10) WELL LO	G:			
Irrigation 🗌 Test Well 🗌 Other 🗌	Formation: Describe show thickness of aqu	by color, char uifers and the	acter, size of materic kind and nature of	il and stru the materi	cture, and al in each
4) TYPE OF WORK: Owner's number of well (if more than one)	stratum penetrated, i	MATERIAL	one entry jor each c	FROM	TO TO
New well 🗗 Method: Dug 🗌 Bored 🖸	Rown 5	Andy	GrAS	0	30
Deepened 🗌 Cable 🗌 Driven 🗍 Reconditioned 🗌 Rotary 💋 Jetted 🗖	Gray Cl	Ayl	1110	126	59
5) DIMENSIONS: Diameter of well 6, inches. Drilled 6, ft. Depth of completed well ft.	SANDY	GTAUE	(WAFCE	1.5(	67
6) CONSTRUCTION DETAILS:				ļ	i 
Casing installed: 6 " Diam. from O ft. to 58 ft.					
Threaded 🔲					·
Welded 🖉 Diam. from ft. to					
Perforations: yes 🗆 No 🖊				+	
Type of perforator usedin. byin.					<b></b>
perforations from ft. to ft.					
perforations from					
		·		+	<u>↓</u>
Screens: Yes No D					
Type Model No.					
Diam. Slot size from S. e. ft. to ft. R. Diam. Slot size from ft. to ft. ft.					
Gravel packed: Yes No Size of gravel Gravel placed from ft. to				·	
Surface seal: Yes 7 No To what, depth?				+	
Did any strata contain unusable water? Yes 🗌 No 🗾					
Type of water?	[				
7) PUMP: Manufacturer's Name					
Type:	<u> </u>			┥───	
8) WATER LEVELS: Land-surface elevation above mean sea level.					<b>.</b>
tatic level 30 ft. below top of well Date 40972					
rtesian pressure				+	+
(Cap, valve, etc.)					
9) WELL TESTS: Drawdown is amount water level is lowered below static level	Work started DO	Y ZO 19	29 Completed	1147	2 10 79
Vas a pump test made? Yes 🖉 No 🗆 If yes, by whom? . LA //// E K	WELL DRILL				
rield: gal/min. with ft. drawdown after hrs.	This well was	drilled unde	er my jurisdiction	and this	report is
40 941 70-2	true to the best of	f my know	ledge and belief.		_
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)		DELSO	s Deill	199	6
Time Water Level Time Water Level Time Water Level	NAME (P	erson, firm, o	r corporation)	(The or I	print /
	Address 740	<u>(2 2)</u>	out A	E 1	HL I. (
		$\int $	$\sigma$		
Date of test	[Signed]	mp	(Well Driller)	-	<b>`</b>
Bailer test		いっサイ	A	100 -	Z19 Z
Femperature of water	License No		Date 📿	~7	

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Site:	5 Point: 3a	Eco id: 75282	
	4803 (1) OWNER: Name BRADY, J./VANDERWARD, J. Address 17820	L REPORT Start Card No. ISHINGTON Water Right Permit No.	W062285
	(1) OWNER: Name BRADY, J./VANDERWARD, J. Address 17820	64TH DR NW STANWOOD, WA 98292- 35/ 5 / 5	F/31-J
ť	(2) LOCATION OF WELL: County SHOHOMISH (2a) STREET ADDRESS OF WELL (or nearest address) 5279 GRANT RD	- NE 1/4 SE 1/4 Sec 31 T 33 N., R 10E WM	
epo	(3) PROPOSED USE: DOMESTIC	(10) WELL LOG	
⊒. R	(4) TYPE OF WORK: Owner's Number of well (If more than one) 1	Formation: Describe by color, character, size of and structure, and show thickness of aquifers ar	- material nd the kind
Ň	NEW WELL Method: ROTARY	and nature of the material in each stratum penet at least one entry for each change in formation.	rated, with
this	(5) DIMENSIONS: Diameter of well 6 inches Drilied 59 ft. Depth of completed well 58.3 ft.	MATERIAL BROWN SAND	FROM TO
tion on	(6) CONSTRUCTION DETAILS: Casing installed: 6 Dia. from +2.5 ft. to 54 ft. WELDED Dia. from ft. to ft. "Dia. from ft. to ft.	GRAY SAND Gray Gravel Sand Gray Gravel Clay Sand	3         21           21         34           34         35           35         41           41         50
Informat	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.	BROWN SAND GRAVEL & WATER	50
Data and/or the Information on this Well Report.	Screens: YES Manufacturer's Name NAGAOKA Type STAINLESS STEEL Model No. KO Diam. 6 slot size 18 from 53.3 ft. to 58.3 ft. Diam. slot size from ft. to ft.		
ata a	Gravel packed: NO Size of gravel Gravel placed from ft. to ft.	DEPT. OF ECOLOGY	
rranty the D	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	DEDIOE ECOTOCX BEDI¶1882 BECEINED	
	(7) PUMP: Manufacturer's Name AERMOTOR Type SUBMERSIBLE H.P. 3/4		
NOT W.	<ul> <li>(B) WATER LEVELS: Land-surface elevation above mean sea level ft.</li> <li>Static level 41 ft. below top of well Date 08/31/95 Artesian Pressure lbs. per square inch Date Artesian water controlled by</li> </ul>		1
es		Work started 08/30/95 Completed 08/	31/95 
epartment of Ecology does NOT Wa	<ul> <li>(9) WELL TESTS: Drawdown is amount water level is lowered below static level.</li> <li>Was a pump test made? YES If yes, by whom? SIRILO SORIA Yield: 37.5 gal./min with 2.9 ft. drawdown after 4 hrs.</li> </ul>	WELL CONSTRUCTOR CERTIFICATION: I constructed and/or accept responsibility f struction of this well, and its compliance w Washington well construction standards. Mat and the information reported above are true knowledge and belief.	erials used
Я БС	Recovery data Time Water Level Time Water Level Time Water Level 000.5 41.0 001.0 41.0 002.0 41.0	NAME HAYES DRILLING, INC. (Person, firm, or corporation) (Type or p	rint)
nt c	Date of test 09/05/95	ADDRESS 556 ERSHIG RD. BON, WA	1004
artme	Bailer test 15 gal/min. 5 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	Contractor	
je pi			

	Original with Site: 5 Point: 3b WATER WELL REPOR Intment of Ecology Ind Copy - Owner's Copy I Copy - Orther's Copy	CO id: 235215 Notice of Intent <u>W 11 92 41</u> UNIQUE WELL I.D. # <u>AFG 96</u>
(1)	OWNER: Name John WRIMCH Add	KO48
(2) (2a)		<u>VE14 SE 1/4 Soc 3/ T 33 NR /O WM</u> Derring initon 33 - 10E · 31 J
(3)	PROPOSED USE: @*Domestic	(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
(4)	TYPE OF WORK: Owner's number of well (if more than one)	one entry for each change of information. Indicate all water encountered. MATERIAL FROM TO
	🗇 Deepened 🛛 🖓 Dug 💭 Bored	5. If Sind GYLLE 1 5
	Reconditioned      Cable     Driven     Decommission     Protary     Decommission	Jan 4 4 2 2 2 5 28
(5)	DIMENSIONS: Diameter of well	S./F 5222 28 40
(9)	Drilled 25 feet. Depth of completed well 25 ft.	<b>B</b> Silt , 40 43
		Clark Solid staves 43 56
(6)	CONSTRUCTION DETAILS Casing installed:	52nd With 56 70
	$\overrightarrow{Diam. from} = - t. to $	Sand evenue weter 70 75
	Liner installed* Diam. fromft. toft.     Threaded* Diam. fromft. toft.	
	Threaded* Diam. fromft. toft.	
	Perforations: Dives Billio	
	Type of perforator used	
	SIZE of perforationsin. byin.	
	perforations fromft. toft.	
		Well site meets Standard
	Screens: Ves ZANO D K-Pac Location	Sat IN 861248 According
	Manufacturer's Name	The way for providence by a comp
	Type         Model No           Diam.        Slot Sizefromft. toft.	
	DiamSlot Sizeft. toft. toft.	
		RECEIVED
	Gravel/Filter packed: Ves RNO Size of gravel/sand	EIVEL
	Material placed fromft. toft.	
	Surface seal: ZVigs DNo 4 To what depth? 18	AL. APD 0
	Material used in seal Bcallute	N/ APR 24 2000
	Did any strata contain unusable water?  Yes No Dopth of strate	
	Type of water?Depth of strata Method of sealing strata off	UEPL CIA
		UF EGULUGY
(7)	PUNP: Manufacturer's Name	
	Туре:Н.Р	
(8)	WATER LEVELS: Land-surface elevation above mean sea level ft. Static level ft. below top of well Date Date TALESIAN pressure to per square inch Date	Work Started April 13 OD Completed April 14 00
	(Cap. valve, etc.)	WELL CONSTRUCTION CERTIFICATION:
(9)	WELL TESTS: Drawdown is amount water level is lowered below static level Was a pump test made?  Yes a No If yes, by whom?	1 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.
	Yield:gal./min. withft. drawdown afterhrs. Yield:gal./min. withft. drawdown afterhrs.	Type or Print Name WOWNE Prave License No. 1890
	Yield:gal/min. withft. drawdown afterhrs.	(Licensed Driller/Engineer)
	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	Trainee Name License No. Drilling Company PriNCC Well Orill,
		(Licensed Driller/Engineer)
	Date of test April 14 00	Address 7940 NG Cape Howard Concrite
	Bailer test 100 gal/min. with 9	Registration No Princip De9584 Date April 6 02
	Airtest gal./min. with ft. drawdown after hrs.	
	Artesian flowQ.p.m. Date Temperature of waterWas a chemical analysis made?	(USE ADDITIONAL SHEETS IF NECESSARY)
	Temperature of water was a chemical analysis made? Unes Unio 050-1-20 (11/98)	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.

Eco id: 285199 33-10/3/J Site: 5 Point: 3c File Original and First Copy with Department of Ecology Second Copy --- Owner's Copy Third Copy --- Driller's Copy Application No. WATER WELL REPORT STATE OF WASHINGTON Permit No. .... Addres P.O. Box 464 Varington Wa (1) OWNER: Name Col chant NE 1 SE 1 Sec. 3/ T 73N, RIO 5WM (2) LOCATION OF WELL: County.... Spend E 2 of Section 31 Township 33 North Bearing and distance from section or subdivision corner (10) WELL LOG: Domestic 💢 Industrial 🗋 Municipal 🗆 (3) PROPOSED USE: 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. Irrigation 🔲 Test Well 🔲 Other Owner's number of well (if more than one)..... (4) TYPE OF WORK: FROM TO MATERIAL Method: Dug Bored New well 18 Send ton 0 Cable Rotary Driven 🛛 Deepened + Sand 18' 2/ Boulders Jetted Reconditioned 21 Q Gravel O 45 * (5) **DIMENSIONS**: Diameter of well ...... inches. Drilled 53 ft. Depth of completed well 201 ft. 455 Clay (6) CONSTRUCTION DETAILS: above 53 Water bearin Casing installed: 6 " Diam. from ft. to 15 ft. " Diam. from ..... ft. to ..... ft. Threaded 🔲 Welded 55 Perforations: Yes D No 🕱 Type of perforator used..... SIZE of perforations ...... in. by ..... in. perforations from ...... ft. to ...... ft. Screens: Yesy Slot size ..... from ..... ft. to ..... ft. Diam. .... Gravel packed: Yes D No Y Size of gravel: ..... Gravel placed from ..... ft. to ..... ft. Surface seal: Yes K No D 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: Manuforturezie Name Ste Rite туре: Ана нр //2-Land-surface elevation 5.00. (8) WATER LEVELS: Artesian water is controlled by ..... (Cap, valve, etc.) Drawdown is amount water level is lowered below static level , 1976. Completed Sept /C., 1976 (9) WELL TESTS: Eist Ze Work started. Was a pump test made? Yes 📋 No 🛒 If yes, by whom?.... WELL DRILLER'S STATEMENT: ft. drawdown after hrs. gal./min. with Yield: This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief. ... ..... •• ... .... .. •• Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level) NAME CANANO WEIL Drilling (Person. firm, or corporation) (Type or (Type or print) Time Water Level Time Water Level Water Level Time Address P.O. Box 3032 STANWOOD Wa [Signed] Jaseph Junes (Well Driller) ..... Date of test Date of test Bailer test & C gal/min. with 3.5 ft. drawdown after License No. 0.611 Date _ Digst 10, 19.76 

**a a b** a b

Site:	5 Point: 4	Eco id: 81339
File O	righal and First Copy with WATER WE	LL REPORT
-	ment of Ecology	
Secon Third	d Copy—Owner's Copy Copy—Driller's Copy	Water Right Permit No
(1)		Address 2377 E. Sauk Rd, Darrington, W.
	LOCATION OF WELL: CountySkagit	NW w SW w Sec 32 T 33 N, R 10 WM
(2) (2-)	STREET ADDDRESS OF WELL (or nearest address) 2381 SR 53	0. Darrington
		(10) WELL LOG OF ABANDONMENT PROCEDURE DESCRIPTION
(3)	PROPOSED USE: Domestic Industrial D Municipal : Irrigation DeWater Test Well : Other :	Formation: Describe by color, character, size of material and structure, and show thickness of aguifers and the kind and nature of the material in each stratum penetrated,
	TYPE OF WORK: Owner's number of well (if more than one)	with at least one entry for each change of information.
		MATERIAL PROM TO
i	Abandoned Deepened De	Top soil         0         2'           Sand         2         24'
	DIMENSIONS: Diameter of well	Sand & Gravel 24 33'
		Water & Gravel 33 40'
_	Drilled reet. Deptir of completed wow	
(6)	CONSTRUCTION DETAILS:	DECEIVED
	Casing installed:* Diam. fromft. toft.	RECEIVED
	Welded ft. to ft. to ft.	
	Threaded' Diam. fromit, tott	
	Perforations: Yes No.	DEPT. OF ECOLOGY
	Type of perforator used	
	SIZE of perforations in. by in.	
	perforations from ft. to ft. to ft.	
	perforsitions from ft. to ft.	
<u> </u>		
	Manufacturer's Name	
	Type Model No	······································
	Diamflot eizefromfl. tofl.	
	Diam Slot sizefromft. toft.	
	Gravel packed: Yes No Bize of gravel	
	Gravel placed fromft. toft.	
	Surface seal: Yes No To what depth? R.	
	Did any strate contein unusable water? Yes No Depth of strate	
	Nethod of sealing strate off	
(7)	PUMP: Manufacturer's Name	
(•)	не	
	Type:Land-surface elevation	
(8)	Static level 1. below top of well Date n.	
	Ariesian pressure libe, per square inch. Date	
	Artesian water is controlled by (Cap, valve, etc.))	
	WELL TESTS: Drawdown is amount water level is lowered below static level	Work started 5/7/92 , 19. Completed 5/7/32 , 19
(9)	Wes a pump test made? Yes No H free, by whom?	WELL CONSTRUCTOR CERTIFICATION:
	Yield: gal./min. with fl. drawdown after hrs.	I constructed and (or eccept responsibility for construction of this well
		and its compliance with all Washington well construction standards
	Recovery data (time taken as zero when pump turned off) (water level measured	knowledge and belief.
	Hacovery data (time taken as ten in principality and sold (the sold sold as ten in the sold sold as the sold sold sold sold sold sold sold sold	NAME Dahiman Fump & Well Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
		Address P. O. Box 422, Burlington, WA
	Date of test	Be 222 See Au 1810
		(WELL DRILLER)
	Baller test gal./min. with fi. drawdown after ne Airtest gal./min. with stern set at fi. for hre	
	Airteal get / min. with allow and all h. to h. toh. to	No. DAHLMPW123LC Date May 8
	Temperature of water Was a chemical analysis made? Yes No	(USE ADDITIONAL SHEETS IF NECESSARY)
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The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

: 5 Point: 5	Eco id: 385624	33-10	32F
WATER WELL REPORT	CURRENT Notice of Intent No. W1674	87	ء .
With the United Alter and the State of the S	Notice of Intent No.		
	Unique Ecology Well ID Tag No.	KG Z	2.4
Construction/Decommission ("x" in circle) $154152$	Water Right Permit No		
O Decommission ORIGINAL CONSTRUCTION Notice		Bet	
of Intent Number	Property Owner Name Janua	Der	y -
PROPOSED USE: Domestic Industrial Municipal	Well Street Address 23,343	SR 53	<u>D</u>
DeWater Irrigation Test Well Other	City County	Richon	nor
TYPE OF WORK: Owner's number of well (if more than one)	Location SE 1/4- 1/4 NALIA Sec 32	33.4	DEWM circ
Image: Seconditioned Method:       Dug       Bored       Driven         Image: December December       Image: Second control of the second control of			or one WWM
DIMENSIONS: Diameter of wellinches, drilledft.	Lat/Long: Lat Deg	Lat Min/Sec	·
Dimensions: Dianeter of wenincles, unicuit. Depth of completed wellft.	<b>REQUIRED</b> ) Long Deg	Long Min/Sec	
CONSTRUCTION DETAILS	Tax Parcel No.		
Casing Welded Diam. from ft. to \$\$	CONSTRUCTION OR DECOMMISS		
Installed: Liner installed Diam. fromft. toft	Formation: Describe by color, character, size of m kind and nature of the material in each stratum pe	naterial and struct	ure, and the .
Threaded Diam. fromft. toft	entry for each change of information. Indicate all	water encountere	
Perforations: 🗋 Yes 🗋 No	(USE ADDITIONAL SHEETS IF NECESSARY	) · · · ·	
Гур́е of perforator used SIZE of perfsin. byin. and no. of perfs fromft. toft	MATERIAL	FROM	TO
	Jand		18
Screens: Yes No K-Pac Location	Stud gravel	18	40
TypeModel No	SENd growel white	40	54
Diamft. toft.			
Diamft. toft.			
Gravel/Filter packed: Yes No Size of gravel/sand	······································		
Materials placed from ft. to ft.	· · · · · · · · · · · · · · · · · · ·	<u> </u>	
Surface Seal: Yes No. To what depth? ft Materials used in seal Burlington	· · · · · · · · · · · · · · · · · · ·		· · · ·
Did any strata contain unusable water? $\Box$ Yes $\Box$ No			
Type of water?Depth of strata	RECEIVED		
Method of sealing strata off		, 	
PUMP: Manufacturer's Name			
Туре: Н.Р	DEPT OF FCOLOG	· · ·	
WATER LEVELS: Land-surface elevation above mean sea levelft. Static levelft. below top of well Date <b>\$11.04</b>		1 1	····
Static level <u>30</u> ft. below top of well Date <u>811</u> <u>04</u> Artesian pressure lbs. per square inch Date		† †	
Artesian water is controlled by		<u>†                                    </u>	
(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. withft. drawdown afterhrs.			
Yield:gal./min. withft. drawdown afterhrs. Recovery data (time taken as zero when pump turned off)(water level measured from			
Yield:gal/min. withft. drawdown afterhrs. Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)			
Yield:gal./min. withft. drawdown afterhrs. Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)			
Yield:      ft. drawdown afterhrs.         Recovery data (time taken as zero when pump turned off)(water level measured from vell top to water level)         Time       Water Level         Time       Water Level         Time       Water Level         Time       Time         Water Level       Time			
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         Time       Water Level       Time       Water Level       Time       Water Level			
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       Time       Water Level       Time       Time       Water Level       Time       Time       Water Level       Time			
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 measured from Water Level         Time       Water Level       Time       Water Level       Time         Date of test	Start Date_8-10 -4 Completed D	ate <b>8</b> 1/	4
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       Time	Start Date $8-10 - 4$ Completed D	· · · · · · · · · · · · · · · · · · ·	<u> </u>
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       Time       Water Level       Time	onsibility for construction of this well, and its	compliance wit	
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       Time       Water Level       Time       Time       Water Level       Time       Time       Water Level       Time	onsibility for construction of this well, and its eported above are true to my best knowledge a	compliance wit	Ly hall
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       Time       Water Level       Time       Time       Water Level       Time       Time       Time       Mater Level       Time       Time       Mater Level       Time       Time       Mater Level       Time       Time       Time       Time       Mater Level       Time       Mater Level       Time       Time       Mater Level       Time       Time       Mater Level       Time       Mater Level <t< td=""><td>onsibility for construction of this well, and its eported above are true to my best knowledge a Drilling Company</td><td>compliance wit ind belief.</td><td>4 hall</td></t<>	onsibility for construction of this well, and its eported above are true to my best knowledge a Drilling Company	compliance wit ind belief.	4 hall
Yield:gal./min. withft. drawdown afterhrs.         Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)         Time       Water Level         Time       gal./min. withft. drawdown afterhrs.         Artesian flow	onsibility for construction of this well, and its eported above are true to my best knowledge a Drilling Company Pr, NCL U Address 2940 NE C	compliance wit	Ly hall V hall
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       Mater Leve	onsibility for construction of this well, and its eported above are true to my best knowledge a Drilling Company Pr, NCL U Address 2940 NE C City, State, Zip Contractor's	compliance wit ind belief.	hall 24 24 24 25 25 25 282 3 282 3
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       Time       Water Level       Time       Time       Water Level       Time       Time       Time       Mater Level       Time       Time       Mater Level       Time       Time       Mater Level       Time       Time       Time       Time       Mater Level       Time       Mater Level       Time       Time       Mater Level       Time       Time       Mater Level       Time       Mater Level <t< td=""><td>onsibility for construction of this well, and its eported above are true to my best knowledge a Drilling Company Pr, NCL U Address 2940 NE C</td><td>compliance wit ind belief.</td><td>4 hall 2828 Jory</td></t<>	onsibility for construction of this well, and its eported above are true to my best knowledge a Drilling Company Pr, NCL U Address 2940 NE C	compliance wit ind belief.	4 hall 2828 Jory

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Eco id: 330174

AMENDED COPY

33-10E.326

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	3) water wei state of w	Unique Well I.D. # AAX570 VASHINGTON Water Right Permit No.
	OWNER: Name SELF, JUDY Address 23113	SR530 DARRINGTON, WA 98241-
(2) (2a	LOCATION OF WELL: County SKAGIT ) STREET ADDRESS OF WELL (or nearest address) 23113 SR530, DAR	- SW 1/4 NB 1/4 Sec $32$ T $33$ N., R 10B WM RINGTON
(3)	PROPOSED USE: DOMESTIC	(10) WBLL LOG
=== (4)	TYPE OF WORK: Owner's Number of well	Formation: Describe by color, character, size of material
===:	(If more than one) NEW WELL Method: ROTARY	and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with
	DIMENSIONS:Diameter of well 6inchesDrilled 59ft.Depth of completed well 59ft.	MATERIAL   FROM   TO
	CONSTRUCTION DETAILS: Casing installed: 6 " Dia. from 0 ft. to 54 ft. WELDED " Dia. from ft. to ft. " Dia. from ft. to ft.	GRAY SAND & GRAVEL     9     30       GRAVEL & BROWN SAND     30     36
	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	WELL LOCATED ACCORDING TO SKAGIT ORDINANCE #12.48
	Gravel placed from ft. to ft.	
	Material used in seal BENTONITE Did any strata contain unusable water? NO	RECEIVED
	Type of water? Depth of strata ft. Method of sealing strata off	AUG 2 7 2001
	PUMP: Manufacturer's Name Type H.P.	DEPT OF ECOLOGY
8)	WATER LEVELS: Land-surface elevation above mean sea level ft.	
	Static level 29 ft. below top of well Date 09/17/98 Artèsian Pressure lbs. per square inch Date Artesian water controlled by	
		Work started 09/17/98 Completed 09/17/98
Wa Yi	WBLL TESTS: Drawdown is amount water level is lowered below static level. s a pump test made? . If yes, by whom? eld: gal./min with ft. drawdown after hrs.	WBLL CONSTRUCTOR CERTIFICATION I constructed and/or accept responsibility for con- struction 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.
	covery data Time Water Level Time Water Level Time Water Level	NAME DAHLMAN PUMP & WELL DRILL (Person, firm, or corporation) (Type or print)
	Date of test / / iler test gal/min. ft. drawdown after hre.   r test 25 gal/min. w/ stem set at 53 ft. for 1 hre.	ADDRESS PO BOX 422 [SIGNED] HALL W. C. 2043
Ar	tesian flow g.p.m. Date mperature of water Was a chemical analysis made? [	Contractor's Registration No. DAHLMPW123LC Date 09/18/98

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

Site: 5 Point: 7		Eco i	d: 85612	- <del>3</del>	3/0-	3 <b>3 J</b>
File Original and First Copy with Department of Ecology Second Copy — Owner's Copy Thifd Copy — Driller's Copy	WATER WE		Г	Application	33/10 No	0-32 J
	STATE OF W		c = c	Permit No	114	9824
(1) OWNER: Name Unginia (2) LOCATION OF WELL: County St.	Agit	Address 2 36		WE RO DAN.		
Bearing and distance from section or subdivision corne	er					
(3) PROPOSED USE: Domestic 🖌 Industri	al 📋 Municipal 🗋	(10) WELL I				
Irrigation [] Test We	ll 🔂 Other 🗌	Formation: Descri show thickness of	ibe by color, cl aquifers and : d with at lea	haracter, size of materia the kind and nature of st one entry for each o	al and stru the materi change of	cture, and al in each formation.
(4) TYPE OF WORK: Owner's number of we (if more than one)		Aratan penetrate	MATERIA		FROM	TO
New well Method: Du	able [] Bored []	Brown	SAND	+ Gravel	0	40
	otary Z Jetted	Brown	GIAY	(Ay	41	50
(5) DIMENSIONS: Diameter of well Drilled of the Depth of completed w	vell . 6	Brown	<u>EAND</u>	LOGISE WNUEC	<b>_</b>	6(
(6) CONSTRUCTION DETAILS:					• ·- ···	
Casing installed: 6." Diam. from	5n to 58n				<u> </u>	<b></b>
Threaded []						
Welded Z	ft. to ft.				<u></u>	, 
Perforations: Yes 🗆 No 🖌		<del>_</del>				
Type of perforator used SIZE of perforations	y in.					+ — — — — — — — — — — — — — — — — — — —
perforations from	ft, to ft.					 
perforations from	ft. to ft.					
		[				<b></b>
Screens: Yes No 🗋 Manufacturer's Name		· · · · · · · · · · · · · · · · · · ·				
Type Mode Diam 5 Slot size 20 from 5	St. to St.					
Diam Slot size Common from	ft. to ft.					·
	ravel;				-	
Gravel placed from ft. to		]				
Surface seal: Yes of No To what de	18 ft.				·	!
Material used in seal	10			• • • • • • • • • • • • • • • • •		
Did any strata contain unusable water? Type of water?	Yes No Z					
Method of sealing strata off		·····				
(7) PUMP: Manufacturer's Name						
Type: SUBMEISIBLE	Н.Р.					
(8) WATER LEVELS: Land-surface elevat above mean sea lev	ion relft.					
Static level 30 ft. below top of well	Date UUG 69	1				
Artesian pressure						
	ip, valve, etc./					
(9) WELL TESTS: Drawdown is amount lowered below static		Work started.	11923	19 29 Completed	x 2	<u>( 19 7</u> 7
Was a pump test made? Yes No I If yes, by why visid:	n after hrs.	WELL DRI	LLER'S ST	ATEMENT:	-	
Yield: gal./min. with ft. drawnow		This well y	was drilled u	nder my jurisdiction	and this	s report is
······································	" 		st of my kn	owledge and belief.		
Recovery data (time taken as zero when pump turn measured from well top to water level)	ned off) (water level	NAME A	NOFE	son UR	Ellin	y (0
	'ime Water Level		(Person, firm	n, or corporation)	(Type or	seint)
		Address	117 20	our NE	- HC	I WA
		6	•(),	$) Q_{\alpha} (\lambda) =$		
Date of test	un often b	[Signed]	jun	(Well Driller)	- <b>0</b>	
Bailer test	TW11 01157		1777	1 1	7	4
Temperature of water	s made?Yes 🗌 No 🗌	License No.	~ / / /	' Date <b>'2'</b>	7 -	. <i>4</i> ., 19 <i>1</i> /

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Si	ite:	5	Dai	int	· Q	
	ie.	JI		11 I L	. 0	

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

Eco id: 81763

WATER WELL REPORT

STATE OF WASHINGTON

33/10-32/K

Application No.

. ....

Permit No.

(1) OWNEB: Name Mary Jack Address Puget Sound North (2) LOCATION OF WELL: County Skagit - SE % SE % Sec. 32 T.				
earing and distance from section or subdivision corner				
3) PROPOSED USE: Domestic K Industrial 🗆 Municipal 🗋	(10) WELL LOG:	·		
	Formation: Describe by color, character, size of material and strue show thickness of aquifers and the kind and nature of the material stratum penetrated, with at least one entry for each change of j	cture, a al in ea ormatic		
4) TYPE OF WORK: Owner's number of well (If more than one)	MATERIAL	то		
New well X Method: Dug Dered	Top soil 0	1		
Deepened 🗌 Cable 🗍 Driven 🗌		t 5		
Reconditioned 🗌 Rotary 🛄 Jetted 📋	Sand gravel 5	15		
5) DIMENSIONS: Diameter of well inches.	Dalla, Brayer			
Drilled		60		
Drilled Bepar of completed weight				
6) CONSTRUCTION DETAILS:	<u>Clay gray</u> <u>60</u>			
Casing installed:6'' Diam. trom+1 tt. to	_Sand 75	80		
Threaded Diam. from ft. to ft. welded Diam. from ft. to ft.				
Welded LA				
Perforations: Yes 🗋 No gi				
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 🖸		· · ·		
Screens: Yes 🙀 No 🗋 Johnson Manufacturer's Name				
Type				
Diam				
Diam.'				
Gravel packed: Yes D No X Size of gravel:				
Gravel placed from ft. to ft.				
Surface seal: Yes K No D To what depth?				
Material used in seal				
Did any strata contain unusable water? Yes 🗌 No 🗋				
Type of water? Depth of strata		. <u> </u>		
Method of sealing strata off		<u> </u>		
(7) PUMP: Manufacturer's Name				
Туре:				
(8) WATEB LEVELS: Land-surface elevation above mean sea levelft.				
static level 7'5" ft. below top of well Date 4-25-83				
Artesian pressure		T		
Arterian water is controlled by		Ì		
(Cap, valve, etc.)		1		
(9) WELL TESTS: Drawdown is amount water level is lowered below static level	- 1.16.102	<u>.</u>		
(9) WELL IESIS. lowered below static level	Work started 4/6/83			
Was a pump test made? Yes 🛛 No 🗆 If yes, by whom?	WELL DRILLER'S STATEMENT:			
Yield: 30 gai/min. with 323 in orthogon and	This well was drilled under my jurisdiction and this	renord		
	true to the best of my knowledge and belief.			
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)	NAME Bartholomew Drilling, Inc.			
Time Water Level Time Water Level Time Water Level	(Person, firm, or corporation) (Type or p	orint)		
	Address N. 11525 Nine Mile Rd., Nine Mi	le Fa		
	Wa 99026	. 1		
	Isternall the Buthelow	eu		
Data of test	[Signed]			
Date of test	(Well Driller) 0051 _ 5/11			

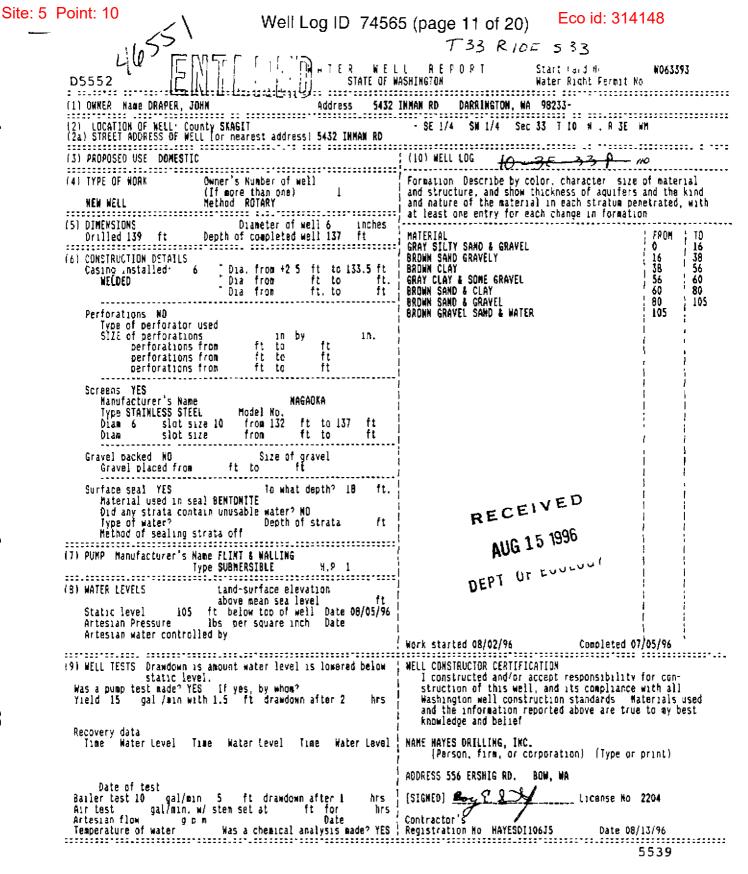
w [∕] Site: 5 Point: 9a		Eco id: 8	30905	53,	1/0 -	- 331
File Original and First Copy with Department of Ecology	WATER WE	LL REPORT		Application N	ło.	
Second Copy — Owner's Copy Chird Copy — Driller's Copy 736 -1435	STATE OF V	ASHINGTON		Permit No	••	
(1) OWNER: Name L. Pollors	Noopen)	Address Star	Rte Box	<b>38</b> d	Jan	inglo
2) LOCATION OF WELL: County			SWy SW y Sec		3 .N., R.,	18 ssi
earing and distance from section or subdivision of	_					<u></u>
3) PROPOSED USE: Domestic P Indu	strial 🔲 Municipal []	(10) WELL LO	G:			
Irrigation 🗌 Test		Formation: Describe	by color, character, si. ulfers and the kind an	ze of material	and stru	cture, and
4) TYPE OF WORK: Owner's number of	well	stratum penetrated,	with at least one entr	y for each ch	ange of	formation.
4) IIIE OF WORK: (if more than one). New well D' Method:	····	·	MATERIAL		FROM	TO
Deepened 🗌	Cable 📋 Driven 🖸	- OS GOT			2	23
Reconditioned	Rotary 🔽 Jetted 🗌	CEMENTEL	S CLAN OP	εη	27	23
5) DIMENSIONS: Diameter of we	in hes.	SAMO ISPA	meu	······	<u>בב</u> ברב	22
Drilled 132 ft. Depth of complete		CLAY GRE	- L Sand	RL	32	43
6) CONSTRUCTION DETAILS:		GPAUEL ME	d wil Spaid P	en mea	43	100
	· · · · · · · ·	SAND GEEY	FILEWISH	EAVING	joa	123
Casing installed: 6 " Diam. from 6		SAND GLEY	MED W/GRAU	<u>el FINE</u>	123	1.32
Welded V		wB '			. <u>-</u> -	
Perforations: Yes D No m						•
Type of perforator used						<del> </del>
SIZE of perforations in.	. by in.					<u>†</u>
perforations from	ft. to ft.					
perforations from	ft. to ft.					
Screens: Yes No D Manufacturer's Name						
TYPE HOWARD SMITH M	odel No	·				
Diam 5 Slot size	27 ft. to 1 50 ft.	····				<del> </del>
Dlam Slot size from	ft. to ft.					
Gravel packed: Yes 🗆 No 🛃 Size o	f gravel:					
Gravel placed from ft.	. to ft.					
Surface seal: Yes P No C To what	depth?	. <u>.</u>				
Material used in seal	τ£.	i				
Did any strata contain unusable wate	r?Yes 🗋 No 🗋				. <u></u>	ł ———
Type of water? Depth Method of sealing strata off	OI BLFALA		0 0 0 0	11700		
(7) PUMP: Manufacturer's Name	VD					
Туре:			t	<u></u>		
(8) WATER LEVELS: Land-surface ele- above mean sea	level 600 ft.		- <b>-</b>	<u> </u>		<u> </u>
Static level 90 ft. below top of w			- OFPA	<u>= 100007</u>		+
Artesian pressureibs. per square in Artesian water is controlled by			<del></del>			
	(Cap, valve, etc.)	37	3	.3	110	
(9) WELL TESTS: Drawdown is amou lowered below sta	unt water level is tic level	Work started.	3. 19 79 co	mpleted		19 77
,	whom?		ER'S STATEMEN			
Iteru. Berringen	own after hrs.					noncet is
		true to the best	drilled under my j of my knowledge a	nd belief.	and this	report is
Recovery data (time taken as zero when pump t					_	
measured from well top to water level)		NAME NAL	WELL D	RILLI	<u>vq</u>	
Time Water Level Time Water Level	Time Water Level	-	erson, firm, or corpor		Type or :	
		Address 5124	E IGOTH	Toco	10A.	w AS
			<b>•</b>	•		
Date of test	,	[Signed]Ken	- H Bla	Driller)	- 92	
Bailer test 20 gal/min. with 0 ft. draw Artesian flow	down afterfhrs.				_	- 4
Temperature of water	ysis made? Yes 🔲 No 🖪	License No	9 <b>0</b> I	0ate5   2	7	, 197.

File Original and First Copy with Department of Ecology Second Copy — Driller's Copy Third Copy — Driller's Copy  $\frac{Application No.}{33/10 - 33N}$ Permit No. ter Roat Steave (1) OWNER: Name. Bn., r. 10. w.m. S₩ (2) LOCATION OF WELL: County Bearing and distance from section or subdivision corner (10) WELL LOG: SAL! (3) PROPOŜED USE: Domestic 💉 Industrial 🗆 Municipal 🗆 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. Other Irrigation 📋 Test Well 🔲 Owner's number of well (if more than one)...... (4) TYPE OF WORK: FROM MATERIAL то Method: Dug Bored at brow Top soil New well 0 ₹ Cable 💉 Driven 🗍 Deepened Jetted 🔲 Rotary 🗌 Reconditioned 40 un clus 3 Drilled 7.32 ft. Depth of completed well 7.32 ft. (5) DIMENSIONS: 40 sown Conclemente (6) CONSTRUCTION DETAILS: grout Casing installed: G ... Diam. from O ft. to BRA. " Diam. from ..... ft. to ..... ft. Threaded "Diam. from ..... ft. to ..... ft. Welded Perforations: Yes D No Type of perforator used..... SIZE of perforations ...... in. by ..... in. 105 perforations from ...... ft. to ..... ft. rest 125 Screens: Yes No 🗌 Manufacturer's Name 40 from 127 ft. to 132 ft. Slot sig Diam. 6 ..... No Size of gravel: .... Gravel packed: Yes 🗆 🚽 ..... ft. Gravel placed from ..... ft. to .... Surface seal: Yes No No Downat depth? Material used in seal Did any strata contain unusable water? Ye ft. No 🛃 Yes Type of water?..... Depth of strata..... Method of sealing strata off..... (7) PUMP: Manufacturer's Name Sunow ..... H.P Туре: ..... Land-surface elevation above mean sea level... (8) WATER LEVELS: 99 ...ft. below top of well Dete.s Static level ..... .ibs. per square inch Date. Artesian pressure ..... Artesian water is controlled by ..... (Cap, valve, etc.) Drawdown is amount water level is lowered below static level . 1977 Completed 5710 (9) WELL TESTS: 1922 Work started. Was a pump test made? Yes 🗌 No 💅 If yes, by whom?...... WELL DRILLER'S STATEMENT: ft. drawdown after hrs. gal./min. with Yield: ... ., This well was drilled under my jurisdiction and this report is .. ... ** true to the best of my knowledge and belief. ... .. ... Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level) TAX WELL DRILLING NAME Water Level Time Water Level Time Water Level (Type or print) Time E. ARLINGTO ..... Address [Signed]. Date of test Bailer test 25 gal/min. with O ft. drawdown after Artesian flow......g.p.m. Date..... Date. License No.. 

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	A STATISTIC STRATE AND A CONTRACT OF THE STATISTICS	
Site: 5 Point: 9c $407857$	Eco id: 715604 33 -	10E-33N
WATER WELL REPORT Original & 1 ⁿ copy - Ecology, 2 nd copy - owner, 3 rd copy - driller	CURRENT Notice of Intent No. 4260	754
ECOLOGY		B 600
Construction/Decommission ("x" in circle)	onique Leonogy went in Tug ito:	2007
Construction O Decommission ORIGINAL INSTALLATION Notice	Water Right Permit No.	100 -R
of Intent Number	Property Owner Name Diana h	1AGNER
	_ Well Street Address <u>56089-0</u>	mond prod
PROPOSED USE:     Domestic     Industrial     Municipal       DeWater     Irrigation     Test Well     Other		KAGIT'
TYPE OF WORK: Owner's number of well (if more than one)	- Location <u>561</u> /4-1/4 <u>561</u> /4 Sec <u>35</u> Twn <u>55</u>	WWM One
New well Reconditioned Method : Dug Bored Driven Deepened Deepened Determined Determined		Min/Sec
DIMENSIONS: Diameter of well inches, drilled ft.	Still REQUIRED) Long Deg Lo	ng Min/Sec
Depth of completed wellft.	Tax Parcel No. 331033-3-004-	03-07 P18917
Casing Welded Diam. from ft. to ft.		
Installed: Diam. from ft. to ft. ft. to ft.	CONSTRUCTION OR DECOMMISSION	N PROCEDURE
Perforations: Ves No Type of perforator used	<ul> <li>Formation: Describe by color, character, size of material and nature of the material in each stratum penetrated, with at least information. (USE ADDITIONAL SHEETS IF NECE)</li> </ul>	one entry for each change of
SIZE of perfs in. by in. and no. of perfsft. toft.	MATERIAL .	FROM TO
Screens: Yes No K-Pac Location	TOP Soil	0 /
Manufacturer's Name		
Type     Orgen State     Model No.       Diam.     Slot size     from     ft. to       Diam.     Slot size     from     ft. to	Silky SAnd & GrAVE	-1
Gravel/Filter packed:  Yes No Size of gravel/sand	Blue clay	19 25
Surface Seal: 2 Yes D No To what depth? ft.	Brown clay	25 32
Did any strata contain unusable water?	Dry sand a gravel	32 80
Type of water?        Method of sealing strata off	Silty sand	80 125
PUMP: Manufacturer's Name (1455 Type; <u>SUD</u> 10 07 H.P	drag med to	125 132
WATER LEVELS: Land-surface elevation above mean sea level	IMASS SAID	102 12
Static levelft. below top of well Date 3-/6-11	1 WATER	
Artesian pressure ibs. per square inch. Date	Silt sand	132 190
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?.		<b> </b>
Yield:hrs.		<u></u>
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		
	<b>S A 12 2</b>	
Date of test	1 E	× I
Bailer test gal/min, withft. drawdown afterhrs.		81
Airtestgal/min. with stem set at ft. for hrs.		
Artesian flow		
Temperature of water Was a chemical analysis made?	Start Date 3-16-11 Complet	ed Date 3-16-0
WELL CONSTRUCTION CERTIFICATION: I constructed and/or ad Washington well construction standards. Materials used and the informat	ccept responsibility for construction of this well, an ion reported above are true to my best knowledge a	d its compliance with all mathematications of the second se
Driller 🗆 Engineer 🗆 Trainee Name (Pring // Art / - der So		Rilling LLC
Driller/Engineer/Traince Signature	Address	E TE GUICH
Driller or trainee License No.	City, State, Zip <u>CRSteven</u>	1 WA 1808
If TRAINEE, Driller's Licensed No.	Contractor's Registration No. Acted 19490	Date <u>3-16-11</u>
Driller's Signature	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.



WELL SITE MEETS ALL SIGHTING CRITERIA UNDER S.C.C.12.48.090 AND WAC 173-160 BASED ON INFORMATION SUPPLIED BY THE OWNER OR OWNER'S AUTHORIZED REPRESENTATIV:

ite: 5 Point: 11a		Eco id: 84987 3	3/10E/33	Gazzo	2
File Original and First Copy with Department of Ecology Second Copy—Owner's Copy	WATER W	ELL REPORT		.D. #	, 
Third Copy-Driller's Copy		WASHINGTON Water Right		- ion	
(1) OWNER: Name 7EM	RUMSEY	Address _2 47//	STURG-EON		
(2) LOCATION OF WELL: Co (2a) STREET ADDDRESS OF WE	$O(\mu) C$	JW SW	SE x Son 33 T	73. R 1982	<u>/06</u> w.m. 41
(3) PROPOSED USE: Dom	ation Automatical Automatical	Examples Describe by color	character size of material	and etructure	, and show
	umber of well	thickness of aquifers and the kind with at least one entry for each cha	and nature of the material in ange of information.		penetrated
Abandoned 🗀 New well	Method: Dug 🔲 Bored 🖾	FRANK IN TOP	ERIAL 50/L - DIK ORN	FROM	то
Despened Reconditione			DK BAN	1	350
(5) DIMENSIONS: Diameter of Drilled	wellinches pth of completed wellft	ZAKOTCAT-C	ORUANIC	B	25
(6) CONSTRUCTION DETAILS	<b>.</b>	MATTER		05	00
		n. CLAY-UNEY n. SAKON (PRAVE	L-BAN	90	105
Liner installed"		" DAN-SANDY C	44	105	110
Perforations: Yes No	<b></b>	CLAY & GRAVEN	BAN	110	120
Type of perforator used	in. by	in ORAVEL-BRN	+ # 2%	140	180
perforations fro	mft. to	n R	CEIVED		
		ft.			
Screens: Yes No		NU1	291993		
Manulacturer's Name Type	Model No	OEPT.	OF ECOLOGY		
Diam Slot size	fromft. to	H			
DiamSlot size Gravel packed: YesNo	fromft. to Size of gravel				
Gravel placed from		. <u>n.</u>		_	
Surface seal: Yes Do		.n.			
Material used in seal <i>126 .</i> Did any strate contain unusable wa					
Type of water?	Depth of strats				
(7) PUMP: Manufacturer's Name		-			
	eurface elevation				
	nean sea level	n			
Artesian pressure Artesian water is contro	lbs, per square inch Date blied by(Cap, valve, etc.))			/	Ξ,
(9) WELL TESTS: Drawdown is	amount water level is lowered below static lev	work started //-// -	, 19. Completed//	-12-	<u> </u>
Was a pump test made? Yes	No If yes, by whom?	- WELL CONSTRUCTOR			of this wa
Yield: gel./min, with		and its compliance wi Materials used and the	ccept responsibility for co th all Washington well o information reported abo	onstruction	standard
Recovery data (time taken as zero from well top to water tevel) Time Water Level Time	when pump turned off) (water level measured Water Level Time Water Level	knowledge and belief.	N WELL DA	PICLIN	16-
		Address 2740	AM, OR CORPORATION	APL	UH PHINT)
Date of test		(Signed h. R.h	Litty_Licen	se No. //	68
	ith ft. drewdown after n stem set at5 ft. for	hrs. (WELL D		•	. 19 9
Artesian flow Was	g.p.m. Date a chemical analysie made? Yes 🗌 No		NAL SHEETS IF NEC		47

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5 Point: 11b Well Log ID 7456	65 (page 14 of 20) Eco id: 314150
SUGG File Original and First Copy with Department of Ecology Second Copy — Owner a Copy Third Copy — Driller's Copy	33-10-33 Q Start Card No W027734 LL REPORT UNQUE WELLID # ACO-015 Washington Water Right Permit No
(1) OWNER Name Laroi Estes	P.O Box 286 Darnington Wash 9824/
(2) LOCATION OF WELL COURY Stagit (20) STREET ADDRESS OF WELL (or nearest actions) 56665 Stur	TUPON ROAD, DAYN+ PUTAN 11/056
(3) PROPOSED USE Q Domestic Industrial Q Municipal ( Irrigation Test Weil Other D	(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION Formation Describe by color character size of material and structure and show fillckneas of squifers and the kind and nature of the material in each stratum percentieled with at least one ontry for each
(4) TYPE OF WORK Owner a number of well (If more than one)	change of information MATERIAL FROM TO
Abendoned Diewweil 🕵 Method Dug Bored Deepened Coble Driven Driven Reconditioned Rotary (Coble Defined Diewen)	Brown Heavy Graved Q 19
(5) DIMENSIONS Diameter of well Inches Divided 132feet. Depth of completed well32 ft	Gravel Sand Brown Silt 20 74
(6) CONSTRUCTION DETAILS Casing installed Diam from fL to ft	Dark Gray Sitt 75 82
Weided          Diam fromf tof.           Uner installed S          Diam fromf tof.           Threaded         Diam fromf.         t.	Gray Heavy Gravel 83 87
Performitions Yes I No 🕅	Grey Silt ucc. Gravel 88 92
SIZE of perforations in byinininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininininin	Grey silt Fine Sand 93 (0)
perforations from ft. to ft. to ft. to ft. to ft.	Gray Silt gravel 102 105
Screens Yes A No No Naga Ka Manufacturer's Name Naga Ka Type Stain KS Model No Dear Shat sure (DIO) from 12.7 R. to 1.32 R.	Grey Silt Heavy Grave 106 119
Diam Slot size from ft. to ft. toft.	clean Grafuel wet 120 132
Gravel placed from         ft         ft           Surface seal.         Yas         No         To what depth?         ft.	
Material used in seal	RECEIVED
Method of sealing strals of	DEC 26 1997
(7) PUMP. Manufacturer's Name H.P H.P	
(8) WATER LEVELS Land surface elevation sbove mean are level	Work Started 18. Completed 19 19 WELL CONSTRUCTOR CERTIFICATION.
Arjesian pressure ibe per equare inch Dete Arjesian water is controlled by (Cap valve stc.)	I constructed and/or eccept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and
(9) WELL TESTS Drawdown is smount water level is towered below static level. Was a pump test made? YegES. No if yes by whom? MR Bill 5 Yield for mits for the drawdown after for mits for mi	the information reported above are live to my best knowledge and belief NAME Mr. Bill's well DRLNG/Pump SRVC
17 bi 19 19 19	Actions 25619 Dahl Rd Atlington Wash.
Recovery data (bine 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	(Signed) <u>(Well Dallen)</u> License No <u>1953</u> Contractor's Registration No <u>MRD I W D033 ND</u> Date <u>12-15 -</u> 19 <u>97</u> (UCF ADDITIONIAL SUFFERENCE ACCESSION OF
Date of feet	(USE ADDITIONAL SHEETS IF NECESSARY) Ecology is an Equal Opportunity and Affirmative Action employer. For spe- clai accommodation needs, contact the Water Resources Program at (206) 407-6600 The TDD number is (206) 407-6006

ECY 050-1 20 (9/93) ** f

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	CURRENT	ť
WATER WELL REPORT Original & 1" copy - Ecology, 2 nd copy - owner, 3 rd copy - driller	Notice of Intent No. <u><i>W</i></u> 207629	
Construction/Decommission ("x" in circle) 98431	Unique Ecology Well ID Tag No. <u>AHP - OH</u>	6
<b>P</b> Construction	Water Right Permit No.	
O Decommission ORIGINAL INSTALLATION Notice of Intent Number	Property Owner Name <u>EDIE</u> FORD	
	Well Street Address 23733 SAVIC	PRAIRIE
PROPOSED USE: 27 Domestic Industrial Municipal DeWater Irrigation Test Well Other	City DARRINGTON County SKAG	
TYPE OF WORK: Owner's number of well (if more than one)	Location <u>S(1</u> /4-1/4 <u>SE</u> 1/4 Sec <u>33</u> Twn <u>37</u> R <u>/C</u>	or circle
Image: New well     Reconditioned     Method : Dug     Desced     Driven       Image: Deepened     Image: Cable     Image: Cable     Image: Cable     Image: Cable	Lat/Long (s, t, r Lat Deg Lat Min	/Sec
DIMENSIONS: Diameter of well inches, drilled <del>730</del> ft. Depth of completed well <b>173</b> ft.	Still <b>REQUIRED</b> ) Long Deg Long M	in/Sec
CONSTRUCTION DETAILS Casing D Welded ( "Diam. from ( ft. to 173 ft.	Tax Parcel No. $P^{\#}1893$	4
Installed: Unier installed Diam. from ft. to ft. □ Threaded Diam. from ft. to ft.	CONSTRUCTION OR DECOMMISSION PRO	
Perforations:  Yes  Perforator used	Formation: Describe by color, character, size of material and structur nature of the material in each stratum penetrated, with at least one en information. (USE ADDITIONAL SHEETS IF NECESSAR)	try for each change of
SIZE of perfsin. byin. and no. of perfsfromft toft.		ком то
Screens: Ves D No De K-Pac Location <u>172</u> Manufacturer's Name <u>JOHN SON</u>		2 16
Type <u>STAINLESS</u> Model No. Diam <u>6</u> " Slot size <u>025</u> from <u>73</u> ft. to <u>78</u> ft. Diam Slot size from ft. to ft.	BROWN CLAY, SAND, GRAVEL 10	6 40
Gravel/Filter packed:  Yes  No  Size of gravel/sandft.	RED SAND & GRAVEL	40 <i>1</i> 4e
Surface Seal: BYes DNo To what depth? 18 ft. Material used in seal BENTON ITE		6 110
Did any strata contain unusable water? 🛛 Yes 🗹 No	DARK GRAY CLAY	10 130
Type of water?          Depth of strata          Method of sealing strata off	BROWN CLAY & GRAVAR 13	30 155
PUMP: Manufacturer's Name F&W Type: <u>SUB, CONSTINUE PRESSUBE</u> H.P. <u>192</u>	GRAY SAND, GRAVER 15	5 180
WATER LEVELS: Land-surface elevation above mean sea levelft.	WATER	
Static levelft. below top of well Date <u>5-17-06</u> Artesian pressure lbs. per square inchr 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? I Yes IP No If yes, by whom?	WELL SITTS METS	
Yield: gal./min. with ft. drawdown after hrs. Yield: gal./min. with ft. drawdown after hrs.	S.L. 12.48 ACCORDING TO	
Yield: gal./min. withft. drawdown after hrs. Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)	INFORMATION SUPPLIED BY	
Time Water Level Time Water Level Time Water Level	THE OWNER,	CEIVER
		N 1 3 2006
Date of test	DEPT	2~~~
Airtest 907 gal./min. with stem set at 172 ft. for / hrs.		JF ECOLOG
Artesian flow g.p.m. Date Femperature of water Was a chemical analysis made? Z Yes D No		
emperature of water was a chemical analysis made? More Yes LI No	Start Date 5-16-06 Completed Date	5-17-06

Driller/Engineer/Trainee Signature	Address 29121 SR 9 NE
Driller or trainee License No. 2711	City, State, Zip ARLINGTON, WA. 98223
If TRAINEE,	Contractor's
Driller's Licensed No.	Registration No. ARLIN ISD 96951 Date 5-19-06
Driller's Signature	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.

33/10-33/K Start Card No. 030386

 A	En		کا حا	REF	<b>U</b> L
	~~ ~ ~~	<b>.</b>			

Site: 5 Point: 12 Eco id: 82974 File Original and First Copy with WATED **14/121 6** S.L Department of Ecology Second Copy—Owner's Copy Third Copy—Driller's Copy STATE OF WASHINGTON Water Right Permit No. ____ Address 17432 35th Ave N E Sp. 24 Arlington Wa. Philip M Sergent % Pioneer Bank (1) OWNER: Name_ (2) LOCATION OF WELL: County____ (2a) STREET ADDDRESS OF WELL (or near Domestic **PROPOSED USE:** h (3) Irrigation Т DeWater (4) TYPE OF WORK: Owner's number of we (if more than one) Meti Abandoned 🗐 New well Deepened Reconditioned 🗌 (5) DIMENSIONS: Diameter of well. Drilled_/80 ___feet. Depth of com (6) CONSTRUCTION DETAILS: 6 . Diam. from **Casing installed:** Welded Liner installed Threaded _____ Diam. from Diam. from No Perforations: Yes Type of perforator used _ SIZE of perforationa . . perforations from .... __ perforations from perforations from _____ No Screens: Yes Manufacturer's Name_ Туре Diam. __ Slot size____ fror _____from Diam._____ Slot size.____ Gravel packed: Yes No Size of g Gravel placed from. Surface seal: Yes No To what BER Material used in seal ..... Did any strata contain unusable water? Yes Type of water?_ Method of sealing strata off (7) PUMP: Manufacturer's Name Туре:_ Land-surface elev. above mean sea le (8) WATER LEVELS: 155 Static level _ _ ft. below top Artesian pressure _ _____ lbs. per se Artesian water is controlled by .... (9) WELL TESTS: Drawdown is smount wate Was a pump test made? Yes No I if ye Yield: _____ gal./min. with ___

LOCATION OF WELL: CountySkagit	<u>SE « SE « sec 33 r.33</u>	<u>n. a_10_w.m</u> .		
STREET ADDDRESS OF WELL (or nearest address)	sen Darrington Wa.			
PROPOSED USE: Domestic Industrial Municipal I Irrigation DeWater Test Well Other I	(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION Formation: Describe by color, character, size of material and structure, and show			
TYPE OF WORK: Owner's number of well	thickness of squilers and the kind and nature of the material in each with at least one entry for each change of information.	h stratum penetrated,		
	MATERIAL	FROM TO		
Abandoned 🗌 New well 📴 Method: Dug 🗌 Bored 🗌 Deepened 🔲 Cable 🗌 Driven 🗌	Brown Clay & Gravel	0 <u>15</u> 0		
Reconditioned D Rotary D Jetted D		50 165		
DIMENSIONS: Diameter of well inches.	Brown Clay & Water 1	65 174		
190 190		74 180		
Drilled 180 feet. Depth of completed well 180 ft.				
CONSTRUCTION DETAILS:				
Casing installed: <u>6</u> · Diam. from <u>9</u> ft. to <u>180</u> ft.				
Welded 🖉 * Diam fromft, toft,				
Liner installed I Threaded I Threaded I Threaded I I I I I I I I I I I I I I I I I I				
Type of perforator used in, by in.				
-		<u> </u>		
perforations fromfl. tofl.				
t. tott.				
perforations from ft. to ft.				
Manufacturer's Name				
Type Madel No				
Diam Slot size fromtt. tott.				
DiemSlot sizefromft. toft.				
Gravel packed: Yes No Size of gravel				
Gravel placed fromft. toft.				
Surface east: Yes Ho To what depth? 18 tt.				
Surace wear in RENTAINTE				
Did any strate contain unueable water? Yes No	UBUBINB			
Type of water?Depth of strata				
Method of sealing strate off				
PUMP: Manufacturer's Name	001 3 0 1303			
Туре:Н.Р				
MATER LEWELC. Land-surface elevation	DEPARTMENT OF ECOLOGY			
WATER LEVELS: above mean sea levelft. Static levelf5_5ft. below top of well. Date9-15-37	NORTHWEST REGION			
Artesian pressure Ibs. per square inch. Date				
Arteelan water is controlled by(Cep. valve, etc.))				
	Work started 9-15- 1989 ompleted 9-15	<u>– 1989</u>		
WELL TESTS: Drawdown is amount water level is lowered below static level				
Was a pump test made? Yee No If yes, by whom? hrs.	WELL CONSTRUCTOR CERTIFICATION:			
Yield: gal./min. with ft. drawdown after hrs.	I constructed and/or accept responsibility for constru-			
	and its compliance with all Washington well constr Materials used and the information reported above an			
Recovery data (time taken as zero when pump turned off) (water level measured	knowledge and belief.	-		
from well top to water level) Time Water Level Time Water Level Time Water Level	NAME Dahlman Pump & Well Drilling I (PERSON, FIRM, OR CORPORATION)	nc.		
	(PERSON, FIRM, OR CORPORATION)	(TYPE OR PRINT)		
	Address P O Box 422 Burlington Wa. 9	8233		
Date of test	(Signed) 2rd (Kucker License No	0623		
Bailer test gal./min. with ft, drawdown siter hrs.	(Signed) (WELL DRILLER) Contractor's			
Airtest for the stem set at ft. for hrs.	RegistrationAHLMPW123LC Data 9-18-	1089		
Artesian flow g.p.m. Date	NoDAHLMPW123LC Date9-10-	, 1 <u>9⁰⁹</u>		
Temperature of water Was a chemical analysis made? Yes No				
	USE ADDITIONAL SHEETS IF NECESS/	4miĭ)		

## Appendix D

Expanded Discussion of Streamflow Depletion and Geology, Hydrogeology, and Hydrostratigraphy of the Skagit River Basin

### 1 Introduction

This appendix to the technical memorandum (memo), *Middle and Upper Skagit River Valley Hydrostratigraphy Characterization*, is intended to provide more detailed description and background on the hydrogeology, geology, and hydrostratigraphy of the Skagit River basin, and provide more details, references, and figures on the concepts and theory of streamflow depletion. The hydrostratigraphic unit extent and continuity for each site, based on the cross sections developed for this study and reviewed reports and geologic maps, is also described in further detail than discussed in the main body of the memo.

### 2 Hydrogeology Summary of the Skagit River Valley

Groundwater in the Skagit River valley occurs in the unconsolidated alluvial and glacial deposits in the main river valleys, and occurs in considerably lesser quantities in the bedrock of the mountain areas (Drost and Lombard 1978). Local-scale variability in the distribution of glacial depositional facies often results in the formation of spatially discontinuous units of varying thickness, and most units are not areally contiguous with thicknesses that may vary considerably over short distances (Savoca et al. 2009). The groundwater-flow system of the Skagit River basin includes water entering the aquifers via recharge from precipitation or infiltration of tributaries at high elevations, which then moves primarily horizontally in the aquifers, traveling sub-parallel to the streams and rivers in a sinuous course or sub-vertically around or through confining units, before discharging to the Skagit River.

### 3 Geology and Hydrogeology of the Areas of Interest

This section provides details from the reviewed literature sources providing a basis for understanding of the hydrogeology of the Skagit basin.

The primary geologic units in the region covering the areas of interest include Pleistocene glacial deposits of till, drift, outwash sand and gravel, remaining in higher areas on the sides of the valleys at higher altitudes. More recent Pleistocene and Holocene alluvium composed of stratified silt, sand and gravel are deposited in the center of the valley and near the river. The walls of the Skagit River valley and shallow bedrock near the valley walls consist of a complex assemblage of volcanic, metamorphic, igneous and sedimentary rocks (GeoEngineers 1998). The geologic units are described in reports and maps by Dragovich et al. (2002), Heller (1979), Lapen (2005), Mitsch (1979) and Tabor et al. (2003). The primary geologic units include:

• Alluvium (Qa; Qp): Holocene alluvium deposits (Qa) of well-stratified, and well-sorted gravel, gravelly sand, sand, and cobbly gravel with rare boulders. Holocene overbank deposits (Qp) of stratified sand, fine sandy silt, silt, silty clay, and minor peat.

- Alluvium (Qp): Mostly loose or soft to stiff, stratified sand, fine sandy silt, silt, silty clay, and minor peat.
- Alluvial fan deposits (Qaf): Holocene alluvial fan deposits consisting of silt, sand and gravel are present in areas where tributaries enter the Skagit River valley. Alluvial fans locally interfinger with alluvium or disconformably overlie glacial or volcanic deposits. Silt deposits are locally divided into unit Qaf_{si} along the distal portions of some large alluvial fan complexes.
- Landslide deposits (Qal): Landslide and mass wasting deposits of boulders, cobbles, and gravel in a soft sand, silt and (or) clay matrix, are located on the edges of the valley in places.
- Glacial outwash deposits (Qga; Qgo), Older Alluvium (Qoa), Glacial Drift (Qgd), Glacial Till (Qgt): Older glacial deposits of alluvium (sand and gravel) and recessional outwash (sand and gravel) are located along the north and south side of the valley in places. Glacial drift and till is usually mapped above the glacial sand and gravel alluvium and outwash deposits.
- Lahar deposits (QvI): Volcanic lahar deposits composed of volcanic alluvium; medium- to coarsegrained sand and thick beds of gravelly sand and cobbly sandy gravel.

On the downstream end of the areas of interest, HDR (2017) reports that the recent (shallow) alluvium and deeper sand and gravel deposits form an unconfined aquifer that is present within most of the study area (middle Skagit River between Lyman and Concrete, Washington). Some fine-grained (low-permeability) silty sand or silt deposits are present but are mostly discontinuous and not extensive. The unconfined aquifer is characterized and discussed in the hydrogeology reports for some of the areas of interest of this study, including at the Grandy Creek Hatchery (Emcon Northwest 1992) and in the Marblemount area (GeoEngineers 1998, 2003). The Grandy Fish Hatchery report (Emcon Northwest 1992) indicates that a low-yielding deep confined aquifer is present that may not be in direct hydraulic connection with the Skagit River, and that the high-yielding shallow aquifer is in direct hydraulic connection with the Skagit River.

GeoEngineers (2003) reports that the aquifer in this area is bounded on the margins of the valley by relatively impermeable bedrock, and that the aquifer appears to have some degree of hydraulic continuity with the Skagit and Cascade Rivers. Semi-confining conditions are noted at the site of Production Well No. 1 near Marblemount due to the presence of low-permeability fine sand with silt lense with a thickness of 36 feet, underlain by water-bearing fine to medium sand with a thickness of at least 59 feet (GeoEngineers 2003). It is also stated in GeoEngineers (2003) that the semi-confined aquifer system likely discharges eventually into the Skagit River. A deep lacustrine silt to silty sand is present in some of the well logs, and is presented in cross section by Dragovich et al. (2002) in the Sauk River valley near Darrington. This unit may be locally considered as a confined aquifer since within it there are wells completed in water-bearing zones, and it overlies a unit locally mapped in cross sections as Older Alluvium (Qoa; described above).

Some of the glacial deposits (outwash deposits primarily) present on the sides of the valleys at higher elevation than the valley floor are likely to contain water-bearing strata, but the water table is at a low elevation, limiting the saturated thickness and potential use of these materials as aquifers. There are only a few groundwater supply wells in these deposits since these deposits are generally not water bearing (HDR 2017). Savoca et al. (2009) describe two glacial till confining units and a glaciolacustrine and distal outwash confining unit that are low-permeability and separate discontinuous bodies of alluvial and recessional outwash aquifers, acting as local groundwater-flow barriers.

Groundwater modeling performed in the basin and the direction of the hydraulic gradient based on groundwater levels from wells reveals that the Skagit River is a gaining river overall, and that nearly all stretches gain water as baseflow from groundwater (HDR 2016, 2017; Johnson and Savoca 2011). In addition, the hydraulic conductivity of the streambed materials for the Skagit River and its tributaries has been modeled to be high enough (similar order of magnitude, or same value, as aquifer materials) such that a relatively strong hydraulic connection with underlying aquifers exists (HDR 2016, 2017; Johnson and Savoca 2011).

### 4 Hydrostratigraphic Cross Sections of the Areas of Interest

This section describes the geologic units mapped in the vicinity of each of the five investigated sites, and continues site-by-site describing depths of wells and reported depth to groundwater for wells used in construction of the hydrostratigraphic cross sections. Descriptions of the hydrostratigraphy, including an interpretation of the relative ranking of hydraulic disconnection between aquifers and streams, follows. The locations of five sites and final cross sections, along with well locations, are presented in **Figures 1 through 6**, while cross sections are illustrated in **Figures 7 through 11** (of the main memo).

### Site #1 - Grandy Creek Confluence

Geologic units mapped at a scale of 1:100,000 in the vicinity of this site include Alluvium (Qa) and Glacial outwash deposits (Qga; Qgo). Well depths (from wells used to construct the cross section) are typically shallow, averaging 85 feet deep, with a minimum of 40 feet and a maximum of 200 feet. The static (non-pumping) depth to groundwater averages 40 feet below ground surface, with a minimum of 10.5 feet, and a maximum of 170 feet.

There are several logged intervals comprised dominantly of fine-grained materials (clay and silt). These provide evidence of confining or semi-confining units covering portions of shallow aquifers, but they appear to be discontinuous and to not completely surround any aquifer bodies, even in cross section. Facies are coarser, and less confining units exist near and south of the Skagit River, with fine-grained materials becoming more pervasive to the north underlying Grandy Creek and terraces at higher elevations. The deeper aquifer (top at elevation of approximately 50 feet) appears to have the presence of a confining unit near the northern edge of the valley, but that unit may pinch out in the southern direction. Evidence from previously developed cross sections from the Middle Skagit Valley Hydrogeologic Assessment report (HDR 2017) indicates that the deeper aquifer is confined for some distance over parts of this site, but it is not clear how continuous the confining unit is since only one well penetrates aguifer material beneath a confining unit (west of Grandy Creek; cross section D-D' from HDR 2017), while the deepest well depicted on the east of Grandy Creek (cross section E-E' from HDR 2017) penetrates to an elevation of 50 feet and encounters sand and gravel. The Grandy Fish Hatchery report (Emcon Northwest 1992) indicates that a low-yielding deep aquifer is not in direct hydraulic connection with the Skagit River, and that the high-yielding shallow aquifer is in direct hydraulic connection with the Skagit River. However, the length of the pump test performed by Emcon Northwest (1992) was 24 hours, which may not have been long enough for the pumping to influence the Skagit River, and it was reported that the cone of depression caused by the pumping well was still expanding at the end of the test period.

Overall, the potential for hydraulically disconnected aquifers for this site is ranked as *moderate*. The evidence from previous studies suggests that a deeper aquifer is overlain by a thick confining unit that has the potential to hydraulically disconnect it from the Skagit River. However, the cross section constructed for this study provides no definitive evidence of an extensive confining unit that would be capable of disconnecting groundwater from the Skagit River, and thereby such a confining condition cannot be extensive and some degree of connection between deep aquifers and the Skagit River or its tributaries may occur. There is some evidence that Grandy Creek may be a losing stream (Emcon Northwest 1992) and the cross section we develop in this study indicates that the base of the creek may be at an elevation that correlates with a confining unit, thereby at least portions of Grandy Creek may not be influenced by well pumping.

#### Site #2 - Concrete, south of Lake Shannon

Geologic units mapped at a scale of 1:100,000 in the vicinity of this site include Alluvium (Qa) and Glacial outwash deposits (Qgo; Qga), with lesser portions of Glacial till (Qgt) and metasedimentary and intrusive bedrock units along the valley margins. Well depths (from wells used to construct the cross section) are typically shallow, averaging 108 feet deep, with a minimum of 39 feet and a maximum of 340 feet. The static (non-pumping) depth to groundwater averages 64 feet below ground surface, with a minimum of 20 feet, and a maximum of 190 feet.

There are several logged intervals comprised dominantly of fine-grained materials (clay and silt), with a higher fraction of coarse-grained materials (sand and gravel) within the eastern and southeastern parts of the site. The fine-grained materials (and depth to groundwater) provide evidence for confining or semi-confining units. In cross section the confining units appear to be largely continuous, but do not completely surround any aquifer bodies. Facies are coarser, and less confining layers exist, near the Skagit River, and especially south of the river, with lenses or beds of sand and gravel clearly interrupting silt and clay facies. Fine-grained materials are more prevalent to the north as the uplands are encountered on the margins of the valley. The deeper aquifer appears to have the presence of a confining unit near the northern edge of the valley that could be continuous for several thousand feet, extending southward at least as far as the Skagit River. Correlating such a confining unit that far is difficult due to limited depth of many of the wells. Additionally, the Skagit River appears to be underlain along the cross section by a thin (approximately 10 feet thick) clay unit.

Overall, the potential for hydraulically disconnected aquifers for this site is ranked as *moderate*. The cross section constructed for this study provides evidence of an extensive confining unit, and potential for a deeper aquifer that may be confined, both of which raise the potential for disconnected aquifers. However, away from the cross section, particularly east and southeast of the cross section, wells contain less fine-grained materials, and in cross section the confining units near the Skagit River are relatively thin.

### Site #3 - West of Rockport State Park

Geologic units mapped at a scale of 1:100,000 in the vicinity of this site include Alluvium (Qa), Glacial outwash deposits (Qgo; Qga), and Alluvial fan deposits (Qaf), with lesser portions of Landslide deposits (Qal), Glacial till (Qgt) and metasedimentary bedrock units along the valley margins. Well depths (from wells used to construct the cross section) are typically shallow, with a few deeper wells, averaging 117 feet deep, with a minimum of 38 feet and a maximum of 185 feet. The static (non-pumping) depth to groundwater averages 83 feet below ground surface, with a minimum of 15 feet, and a maximum of 154 feet. There are several logged intervals comprised dominantly of fine-grained materials (clay and silt), with a somewhat higher fraction of coarse-grained materials (sand and gravel) near, and especially beneath and immediately east, of the Skagit River. The fine-grained materials (and depth to groundwater) provide evidence for confining or semi-confining units. In cross section the confining units appear to be mostly discontinuous and do not completely surround any aquifer bodies. Facies are coarser, and less confining layers exist, near the Skagit River, with lenses or beds of sand and gravel clearly predominating. Fine-grained materials are more prevalent to the north and northeast, and to a lesser extent to the west, of the Skagit River as the uplands are encountered on the margins of the valley. Confined conditions appear to exist as fine-grained materials extend for at least 2,000 feet from northeast to southwest. Local confining conditions exist in the northeast that may largely act to bound aquifer bodies, but determining this is difficult and uncertain due to limited depth and density of the wells.

Overall, the potential for hydraulically disconnected aquifers for this site is ranked as *low* to *moderate*. The cross section constructed for this study, and review of other wells across the site, provides evidence for several confining units, raising the potential for disconnected aquifers. However, several of the wells reviewed do not penetrate any fine-grained (clay and silt) materials.

#### Site #4 - Cascade River Confluence, north of Marblemount

Geologic units mapped at a scale of 1:100,000 in the vicinity of this site include Alluvium (Qa) with lesser portions of Alluvial fan deposits (Qaf), Landslide deposits (Qal) and metamorphic bedrock units along the valley margins. Well depths (from wells used to construct the cross section) are typically shallow, averaging 59 feet deep, with a minimum of 13 feet and a maximum of 162 feet. The static (non-pumping) depth to groundwater averages 19 feet below ground surface, with a minimum of 2 feet, and a maximum of 48 feet.

There are several logged intervals comprised dominantly of fine-grained materials (clay and silt), especially along the margins of the valley and directly underlying the Cascade River. There is evidence for shallow bedrock on margins of the site. The fine-grained materials (and depth to groundwater) provide evidence for limited confining or semi-confining units. In cross section the confining units appear to be largely discontinuous and to not completely surround any aquifer bodies, with the exception of alluvial fan deposits along the western margin of the valley. Facies are coarser, and less confining layers exist, near the Skagit River. Well depths are mostly shallow, making it difficult to decipher the extent of confining units. Despite this, correlating such confining units across the valley does not appear to be borne out by the data.

Overall, the potential for hydraulically disconnected aquifers for this site is ranked as *low* to *moderate*. In cross section the confining units appear to be largely discontinuous and to not completely surround any aquifer bodies, with the exception of alluvial fan deposits along the western margin of the valley. Facies are coarser, and less confining units exist, near the Skagit River. There is the possibility that alluvial fan deposits on the margins of the site represent a disconnected aquifer, although the one neighboring deep well with lithology depicted as a Silt or Silty Sand unit may allow groundwater flow at non-negligible rates since silt or silty sand has higher permeability values than clay, and the log for that well (82436—see **Figure 10** of the main memo) describes there being some "gravel lenses." Therefore, the cross section constructed for this study provides evidence that confining or semi-confining units exist, but they are typically not strong barriers to flow due to relatively coarse material or limited extent.

#### Site #5 - Sauk River, north of Darrington

Geologic units mapped at a scale of 1:100,000 in the vicinity of this site include Alluvium (Qa), Lahar deposits (QvI), and Alluvial fan deposits (Qaf), with lesser portions of Glacial outwash deposits (Qgo), Glacial till (Qgt) and metamorphic bedrock units along the valley margins. Well depths (from wells used to construct the cross section) are generally shallow, with a few deeper wells, averaging 120 feet deep, with a minimum of 40 feet and a maximum of 200 feet. The static (non-pumping) depth to groundwater averages 68.5 feet below ground surface, with a minimum of 7.4 feet, and a maximum of 155 feet.

There are several logged intervals comprised dominantly of fine-grained materials (clay and silt), with a higher fraction of coarse-grained materials (sand and gravel) near and west of the Skagit River, with lenses or beds of sand and gravel clearly predominating. The fine-grained materials (and depth to groundwater) provide evidence for confining or semi-confining units demarcating the upper contact surfaces for at least three aquifers (all three aquifers only visible in one well, 76981—see **Figure 11** of the main memo). In cross section the confining units appear to be mostly discontinuous. In the uplands east of the Skagit River, fine-grained material exists, but a large portion of these units are in the unsaturated zone, so they do not act as confining units. Local confining conditions exist in deeper aquifers on the western margin of the valley that may largely act to bound aquifer bodies, but determining the overall lateral connection of the deep confining units and aquifers is difficult and uncertain due to limited depth and density of the wells. Aspect Consulting (2003) conducted a 24-hour constant-rate pumping test on Darrington Well #3 at 450 gpm in the deeper confined aquifer revealed drawdown declined after about 160 minutes, indicating either a recharge boundary and/or leaky condition, meaning flows sourced from either the nearby Sauk River or from the shallow aquifer through the confining unit above, or both.

The cross sections illustrated on the geologic map of the Darrington 7.5-minute Quadrangle by Dragovich et al. (2002) show a confined aquifer condition in which older Glacial outwash deposits (Qga) are buried by a relatively thick and continuous glacial till (Qgt). On the east side of the valley the base of the glacial till (Qgt) unit is found at an elevation of approximately 370 feet, and about 320 feet on the west side of the valley (see section C-C' of Dragovich et al., 2002), in the vicinity of the cross section developed for this study. This would indicate that the glacial till (Qgt) unit may be above the second (middle) aquifer shown between elevations of 220 and 300 feet. However, it is important to note that those cross sections presented by Dragovich et al. (2002) are located in and around Darrington, and only follow the valley margins near the area of interest.

Overall, the potential for hydraulically disconnected aquifers for this site is ranked as *moderate*. The cross section constructed for this study, and review of other wells across the site, provides evidence for several confining or semi-confining units, raising the potential for disconnected aquifers. One confining unit that has the potential to confine a regional aquifer over a large area is the glacial till (Qgt). However, several of the wells reviewed do not penetrate any fine-grained (clay and silt) materials, and the cross section depicts a lack of lateral continuity of confining units.

### 5 Streamflow Depletion Concepts and Theory

Groundwater pumping causes a decrease in the groundwater levels around a well as water is drawn from storage in the aquifer. The decrease in groundwater levels may affect surface water directly via induced recharge, or capture groundwater that would otherwise discharge to surface water (as

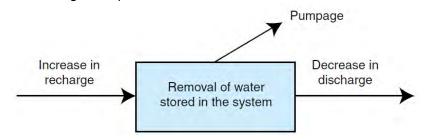
baseflow). The water captured from surface waters by wells is called "streamflow depletion," and the proportion of the water pumped by a well that is captured from surface water is called the "capture fraction." Capture fractions can be calculated for the depletion caused to individual surface water bodies from groundwater pumping at specific well locations (actual or hypothetical) using analytical solutions or numerical groundwater modeling. The effect of groundwater pumping on surface water resources has been described and modeled conceptually and mathematically by Barlow and Leake (2012), Bredehoeft (2002), Glover and Balmer (1954), Jenkins (1968), Leake et al. (2010), and Theis (1940), among others.

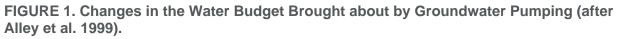
When groundwater is withdrawn from an aquifer by pumping, the abstraction must be supplied by (Theis 1940):

- More water entering the system (increased recharge);
- Less water leaving the system (decreased discharge);
- Removal of water in storage; or
- Some combination of the above three factors.

**Figure 1** shows this concept with regard to the changes in the water budget brought about by groundwater pumping (after Alley et al. 1999).

While moving wells away from the stream tends to filter out annual fluctuations in pumping, a stream set-back regulation distance does nothing to change the total volume of stream depletion caused by pumping a well in an aquifer associated with a stream (Bredehoeft 2011). There are conditions in which water in storage in an aquifer can be "mined," and the pumping drains the water in storage long before stream discharge is captured.





This can be affected by the geometry of the system, including where the saturated thickness is small, or the pumped aquifer is disconnected from surface waters by low-permeability sediments/rocks. Furthermore, if groundwater pumping exceeds any potential capture, the system can never reach a new equilibrium, and groundwater levels will continue to decline until the system is depleted (Bredehoeft and Durbin 2009). The time response of the sources of water to a hypothetical pumping well is illustrated by the curves in **Figure 2**. For this example aquifer, the only sources of water to the well are groundwater releases from storage and streamflow depletion to a nearby stream (Barlow and Leake 2012). Other features can balance water to wells in addition to streams, such as lakes, springs, wetlands, and groundwater evapotranspiration areas. Thereby, these other features can also be depleted along with streamflow where present and connected with aquifers. **Figure 3** presents the model-computed time response of the sources of water to a well located near the San Pedro River, Arizona, including the reduction of discharge to plants via

evapotranspiration. This leads to discussions about sustainable groundwater development, which depends on the compensation of increased groundwater withdrawals by increased recharge and/or decreased discharge, and by this capture being acceptable to stakeholders. Generally, an adaptive management approach is needed to ensure the sustainable development of groundwater in most situations (Seward et al. 2006).

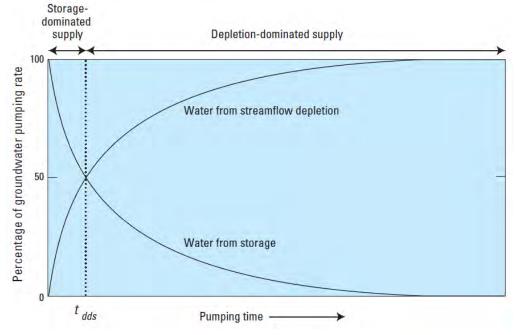


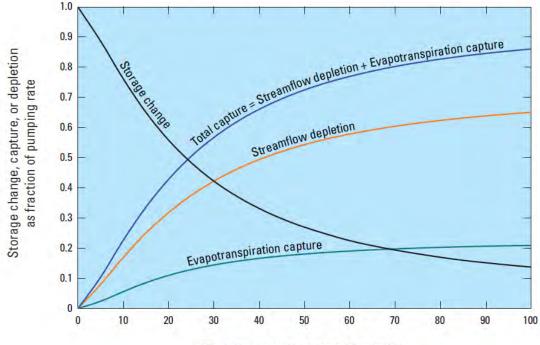
FIGURE 2. Relation of Storage Change and Streamflow Depletion through Time. Storage-dominated supply occurs initially as aquifer storage is reduced. Depletion-dominated supply occurs at time  $t_{dds}$  when more than half the pumping comes from streamflow depletion (after Barlow and Leake, 2012).

According to Seward et al. (2006), the consequences of capture when an aquifer system is subjected to development are:

- 1) Some groundwater must be removed from storage before the system can be brought back into equilibrium;
- 2) The time required to bring the system back into equilibrium depends on the rate at which discharge can be captured;
- The rate at which discharge can be captured is a function of the characteristics of the aquifer system and the placement of pumping wells—spacing, distance to recharge zones, distance to discharge zones; and
- 4) Equilibrium is reached only when pumping is balanced by capture. The dynamics of the groundwater systems are such that long periods of time are necessary before even an approximate equilibrium can be reached (Alley et al. 1999).

The long response times to reach a new equilibrium, as simulated for the Sand Pedro River basin in Arizona (**Figure 3**), are a result of the distance of the well from the river (approximately 3 miles), the characteristics of the groundwater system, including its large areal extent, the thickness of the basin-fill sediments (aquifer facies), and the presence of a silt and clay confining unit (Barlow and Leake

2012). Notice that in **Figure 3** there remains a large portion of pumped water derived from streamflow depletion, despite there being a portion of water derived from evapotranspiration capture. Also, in the example presented in **Figure 3**, the system has not yet reached equilibrium after 100 years since initiation of pumping.



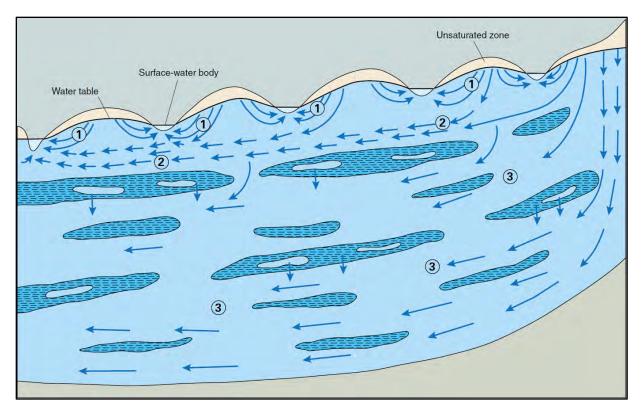
Time, in years since start of pumping

FIGURE 3. Model-Computed Streamflow Depletion, Evapotranspiration Capture, and Total Capture for a Hypothetical Well in the Upper San Pedro Basin, AZ (after Barlow and Leake 2012).

In this case, well pumping has lowered the water table enough to reduce evapotranspiration by phreatophytes, thereby capturing discharge that used to go to evapotranspiration, in addition to depleting streamflow.

Stream-aquifer hydraulic connections are made when aquifer material (high-permeability) have connected pathways to the stream, whether those pathways are largely horizontal, vertical, and require large distances be traversed (**Figure 4** provides a diagram of the conceptual situation). With respect to confining units, Barlow and Leake (2012) list a common misconception of streamflow depletion—pumping groundwater exclusively below a confining unit will eliminate the possibility of depletion of surface water connected to the underlying groundwater system. Barlow and Leake (2012) discuss and model simple synthetic cases covering the effects of confining units on depletion. Geologic features that act as conduits or barriers to groundwater flow can affect the timing of depletion from groundwater pumping and also can affect which streams are affected. In unconsolidated sediments, aquifer material generally consists of sand and gravel, and confining material consists of silt and clay. Confining units may be laterally discontinuous or they may form laterally extensive barriers that separate adjacent aquifers.

# FSS



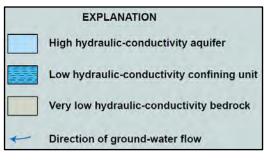


FIGURE 4. A Regional Groundwater-Flow System at Different Scales and a Complex Hydrogeologic Framework with Semi-Confined Aquifers that Contain Lateral Pathways and Connections with Surface Water Bodies.

Note that hydraulic conductivity is synonymous with permeability (after Alley et al. 1999; modified from Sun 1986).

In most cases, confining units between wells and streams slow down the progression of depletion in comparison to equivalent aquifer systems without confining units. Despite this fact, Barlow and Leake (2012) make the following important statements with ramifications in the Skagit River basin:

It is not reasonable to expect that pumping beneath an extensive confining unit will eliminate depletion. Water does move vertically from one aquifer to another through confining units, and drawdown from pumping can propagate through confining units as well. Also, the effective storage coefficient in confined aquifers (beneath confining units) commonly is 2–4 order of magnitude less than in shallow unconfined aquifers with storage properties dominated by specific yield [drainable porosity]. Smaller storage coefficients result in faster lateral propagation of drawdown from pumping locations to distant edges of confining units or locations where drawdown can more easily propagate upward. The argument that pumping beneath a confining unit eliminates the possibility of [stream] depletion implies that the pumped aquifer is without any vertical or lateral connection to aquifer material that is connected to surface water.

Confining units and other geologic features are complexities that can affect the timing of depletion from groundwater pumping (and delay the full impacts of pumping on stream depletion). Where a clay layer lies beneath the river, the depletion is greatly slowed since the propagation of drawdown cannot reach the river until it has migrated around the edge of the clay layer. On the contrary, the existence of clay layers on the edges of the aquifer tends to speed up the stream depletion because it creates a confined aquifer zone that propagates the drawdown toward the river. As much as the work by Barlow and Leake (2012) can be described as theory, their findings must be taken into consideration in the context of the hydrogeologic framework of the Skagit River valley. Their simple hypothetical modeling cases shed light into what would be the expected effects of pumping from the large majority of areas in the Skagit River valley. For further reading on groundwater-surface water interactions in an example from the Puget Sound Lowland, Washington, refer to Alley et al. (1999), specifically to the section, *Effects of Ground-Water Development on Ground-Water Flow to and from Surface-Water Bodies*, and Box C.

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