PACIFIC groundwater group

SAN JUAN COUNTY ANNUAL GROUNDWATER MONITORING REPORT 2008

DECEMBER 2008

SAN JUAN COUNTY ANNUAL GROUNDWATER MONITORING REPORT 2008

Prepared for:

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SIGNATURE

This report, and Pacific Groundwater Group's work contributing to this report, were reviewed by the undersigned and approved for release.

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1.0 SUMMARY OF FINDINGS

San Juan County has established a well network to monitor groundwater quality and elevation. The networks are currently focused on the Eastsound and Lopez Village areas.

The monitoring network currently includes 17 groundwater quality and groundwater elevation monitoring wells on Lopez Island and the East-sound area of Orcas Island.

Groundwater quality samples were collected on April 23 and April 24, 2008 and again on October 21 and 22, 2008. Data loggers were initially installed on January 29 and 30, 2008 and downloaded during groundwater sampling events. Further data loggers have been installed during subsequent download events.

The following findings may be drawn from this report:

- In the Eastsound region, groundwater generally flows towards town from the two bedrock uplands east and west of town.
- All groundwater concentrations were below their respective Ground Water Quality Criteria (WAC173-200) in the Eastsound monitoring network except for sodium. Sodium concentrations were above the GWQC (20 mg/L) in six of the ten wells monitored. The concentrations ranged from 10.7 to 52.7 mg/L and are within the range of naturally occurring sodium.
- In the Eastsound monitoring network, elevated nitrate concentrations were detected in the Curtis (5 and 4.7 mg/L), School (1.3 mg/L), and EWUA #1R (2.5 and 2.4 mg/L) wells. All concentrations were below the GWQC (10 mg/L).
- All groundwater concentrations were below their respective GWQCs in the Lopez Village monitoring network except for sodium and specific conductance.
- Sodium concentrations were above the GWQC of 20 mg/L in all Lopez wells. So-

dium was above background concentrations in the Langenbach (145 mg/L) and Greene (84.5 and 87.8 mg/L) wells. The source of the elevated sodium concentration in the Greene well is likely saltwater intrusion since this well is also elevated in chloride. The source of elevated chloride in the Langenbach well is unknown.

• Specific conductance was above the GWQC (700 mg/L) in four of the seven Lopez Village wells: Greene (1320 and 1280 mg/L), Roberts (898 and 872 mg/L), Langenbach (846 and 768 mg/L) and Meng's Arena (747 and 735 mg/L).

2.0 INTRODUCTION

San Juan County's water resources are provided by local rainfall only and are characterized by the rain shadow created by the Olympic Mountains to the south and Vancouver Island to the west, by predominantly steep terrain and bedrock geology, by small watershed catchment areas, and by extensive shoreline. These conditions result in low rainfall, limited groundwater storage, and extensive runoff and discharge to the sea. Key issues for San Juan County include:

- Very low recharge to aquifers,
- Seawater intrusion,
- Water right allocations by the state that exceed water available,
- Areas where current use of water exceeds aquifer capacity,
- Water development that is occurring primarily via exempt wells,
- Failure of many individual and community wells during summer months,
- Lack of capacity to serve areas designated by the county's GMA process for growth,
- A gap in responsibility and authority between state and county agencies,
- Lack of comprehensive monitoring and assessment of water resource capacity, and

• Lack of coordinated, cooperative resource management.

Recommendations in the recently adopted San Juan County Water Resources Management Plan include a program to develop local management of the water resource. Future management of water resources in San Juan County will require careful, on-going assessment of the availability of fresh water; groundwater monitoring is an essential component of this effort.

Sound Hydrogeology produced a Quality Assurance Project Plan in December 2007 that outlines procedures to be used in the monitoring program.

2.1 MONITORING SYSTEM DESCRIPTION

San Juan County has developed a groundwater monitoring network to collect groundwater elevation and quality data. These data are used in management of the County's groundwater resources. Specific technical uses of the data are diverse and include:

- Seawater intrusion evaluation
- Groundwater elevation trend analysis
- Groundwater flow model calibration
- Water quality sampling

The monitoring network currently includes 17 groundwater quality groundwater elevation monitoring wells in the vicinity of Lopez Village on Lopez Island and the Eastsound area of Orcas Island. These two locations were selected because they are currently experiencing the most population growth and associated water quantity and quality issues. Network wells are presented in Table 1 and Figures 1 and 2.

All wells are screened in the primary aquifer. The monitoring locations were selected based on availability, access, spatial distribution, and availability of prior sampling data. Additional wells areas will be selected as part of this program based on the same criteria.

The Eastsound, monitoring network currently includes the Clark, Curtis, EWUA#1, EWUA #4, EWUA #5, Fischer, Greer, NAPA, Pearson, and School wells (Figure 1). The Lopez Island monitoring network currently includes the Aiken, Grant, Greene, Langenbach, Lopez Village Park, Mengs Arena, Roberts, and Top of the World wells (Figure 2).

Each monitoring location records a time-series of water level and, in some cases, water quality measurements with dedicated transducers (Table 1). Monitoring wells in the Eastsound network have Solinst Levelogger transducers which record water level and temperature on an hourly basis. All monitored wells on Lopez Island except for Top of the World are outfitted with CTD Divers which also measure electrical conductivity. The Top of the World well is monitored with a Levelogger. Barometric dataloggers (Barologger) are installed in the Village Park well on Lopez Island and EWUA #5 on Orcas for barometric compensation of transducer water level measurements.

It is anticipated that the network will gradually be expanded to cover most areas of the County, with an emphasis on areas experiencing higher rates and/or densities of growth, and areas experiencing groundwater quality and/or quantity issues. The network will utilize domestic water wells as sampling locations for collection of water level and groundwater quality data.

2.2 WELLHEAD SURVEY SOURCES

Domestic wells included in the Lopez Village monitoring system were surveyed by the County in 2002 as part of the Lopez Village Saltwater Intrusion Modeling Project. The Aiken well was not included in this survey so the elevation was estimated from the Digital Elevation Model of the County. Eastsound wells were surveyed by the County in 2008 as part of this project. All elevations were surveyed in NGVD 29. Mean



Sea Level is approximately 0.1 feet above the surveyed 0 elevation.

3.0 FIELD NARRATIVE

Groundwater monitoring tasks were completed during four field mobilizations including:

- January 29 and 30, 2008: transducer installation at Eastsound and Lopez Island locations
- April 23 and 24, 2008: groundwater sampling and transducer data downloads at Eastsound and Lopez Island locations
- May 12, 2008: transducer maintenance at Lopez Island locations
- October 21 and 22, groundwater sampling and transducer data downloads at Eastsound and Lopez Island locations

San Juan County installed Solinst Leveloggers in nine Eastsound wells on January 29, 2008. The County installed a specially constructed well cap with a 2-inch PVC riser and cap in wells that were not easily accessible for water level measurements and transducer installation. Transducers were hung from direct-read cables and started in the field with a Solinst Leveloader.

CTD Divers were installed in seven Lopez Island wells on January 30, 2008. CTD Divers were calibrated for conductivity and set to record on an hourly basis on the previous evening. Transducers were hung from direct read cables. All wells were outfitted with the specially constructed well caps with 2-inch PVC risers. The Grant well was outfitted with a Solinst Levelogger.

Groundwater samples were collected at Eastsound wells on April 23, 2008. No pumps were installed at the Beemer or EWUA #4 wells so no samples were collected. When the data was downloaded from the Clark, Pearson, Greer, Beemer/Minnis, and NAPA transducers, it was noted that the time-interval had been incorrectly set to record at too high a rate, resulting in filling of the memory cache in less than two days. Transducers were reset to record on an hourly basis.

Groundwater samples were collected at Lopez Island wells on April 24, 2008. When water level and conductivity data were downloaded from the CTD Divers, the Leveloader reported low battery levels in the transducers.

San Juan County returned to Lopez Island on May 12, 2008 to replace the transducers which indicated low voltages. Because it was believed that the hourly sampling rate was drawing down the battery, the sampling rate in replacement transducers was set to once every four days. A Solinst Levelogger was also placed in each well and set to record water levels once every two hours. A CTD Diver was not installed in the Top of the World well because of the difficulty in feeding transducers past the discharge piping and wiring.

When the CTD Divers pulled from the Lopez Island wells were connected directly to a computer via optical reader they reported nearly full batteries. The Leveloader does not appear to report accurate battery levels when connected to CTD Divers via direct read cable.

Readings in the EWUA #4 logger were all above 8000 feet after June 26. This logger is slated for replacement.

Insufficient bottles during the October sampling event prevented analysis of all constituents for the Eastsound network.

3.1 GROUNDWATER SAMPLING ANALYTES

Samples were analyzed for total alkalinity, bicarbonate alkalinity, carbonate, dissolved calcium, chloride, fluoride, hydroxide, nitrate, specific conductance, sulfate, magnesium, potassium, and sodium by Analytical Resources Incorporated of Tukwila, WA.

4.0 MONITORING RESULTS

Groundwater elevation and quality data were collected for the Eastsound and Lopez Village monitoring networks. Results for each network are described below.

4.1 EASTSOUND WELLS

Groundwater elevation contours for the Eastsound monitoring system on October 21, 2008 are presented in Figure 1. This date was selected because the greatest number of data points was available. The water level in the Napa well was likely pumping at the time of measurement and therefore was estimated based on the measurement collected during April, 2008.

Groundwater generally flows towards Eastsound from the three bedrock uplands to the north, south east and south west. The current groundwater flow directions indicated by the contours may be due to the limited number of monitoring points and may change as further points are added to the network.

Figure 3 presents time series plot of groundwater elevations. Groundwater elevation data for the Clark, Pearson, Greer, Beemer/Minnis, School, and NAPA wells are not presented on time series plots because of data issues (see Section 3). All wells indicate influences of pumping except for the Fisher well. EWUA #1, #4, and #5 are high capacity production wells and show longterm pumping and recovery cycles. The groundwater time series plot for the Curtis well indicates short pumping periods with rapid recovery. The Fisher well is apparently not pumped. The time series plots for Curtis and EWUA #2, and EWUA #5 indicate seasonal groundwater elevation change with peak groundwater elevations occurring in February.

Groundwater concentration results for April 23 and October 21, 2008 are presented in Tables 2 and 3. Groundwater concentrations were compared to their respective Ground Water Quality Standards (GWQCs) from WAC-173-200. All concentrations were below their respective GWQCs except for sodium. Chloride concentrations were not elevated and are not indicative of saltwater intrusion.

Nitrate concentrations (Figure 4) were all below the detection limit of 0.1 mg/L except for three wells: Curtis (5 mg/L and 4.7 mg/L), School (1.3 mg/L), and EWUA #1R (2.5 mg/L, 2.5 mg/L). All of the detections are below the groundwater quality criteria (GWQC) of 10 mg/L. The elevated nitrate concentrations are not likely from the same source given their locations relative to the groundwater flow directions. Sources of nitrate contamination are discussed in more detail in (PGG, 2008).

Sodium concentrations in the Eastsound wells were above the GWQC (20 mg/L) in six of the ten wells monitored. The concentrations ranged from 10.7 to 52.7 mg/L and are within the range of naturally occurring sodium.

Figure 5 presents a trilinear diagram for the Eastsound water quality sampling results from the first quarter of 2008. Eastsound wells plot as a calcium carbonate water type, with the exception of the Pearson well, which has a relatively elevated sodium concentration. None of the wells show any indications of seawater intrusion.

The analytes required for trilinear diagram generation were not available for the Eastsound fourth quarter sampling round. For those parameters that were sampled for in the fourth quarter, no significant deviations were found in comparison with the first quarter results, with the exception of EWUA #13 which showed a significant drop in sulfate concentrations (9.5 mg/l in Q1 to 3.1 mg/l in Q4). Average chloride concentrations dropped slightly between the first and fourth quarters. Additional rounds of sampling will need to be collected before a statistically valid evaluation of trends in water quality can be made.

4.2 LOPEZ ISLAND WELLS

There are currently insufficient data points to present a groundwater contour map of the Lopez Island monitoring system. However, groundwater elevations from January 30, 2008 are presented in Figure 2. The anomalous elevations in the Greene and Aiken wells are likely due to inconsistent survey results or the effects of tidal influence on non-synchronous spot groundwater elevation measurements. Further data collection will allow for average groundwater elevations to be presented.

Figure 6 presents a groundwater elevation time series plot for monitored wells on Lopez Island. Groundwater elevation data for the Aiken well are not presented on time series plots because of the anomalous results discussed above. Village Park is the closest well to the shore and indicates tidal influence. The Greene well also suggests some variability that may be tidally derived. The Greene well water level record indicated an anomalous 7+ foot water level rise over a two hour period on January 31, 2008. A correction has been applied but the source of the rise is unknown.

All wells indicate some degree of seasonal variability except for Top of the World. Peak water levels occurred in February and declined until August in all wells in 2008.

Tables 4 and 5 present the groundwater quality results collected from the Lopez Island monitoring wells on April 24 and October 22, 2008. All concentrations were below their respective GWQCs except for sodium and specific conductance.

Chloride concentrations in all Lopez wells were below the GWQC of 250 mg/L as indicated in Table 3 and Figure 7. Generally, chloride concentrations were near background concentrations except for the Greene well which had a chloride concentration of 186 mg/L in April and 172 mg/L in October. Chloride concentrations in the Greene well have been elevated since it was first monitored in 2002. Sodium concentrations were above the GWQC of 20 mg/L in all Lopez wells for both sampling events. Sodium was above background concentrations in the Langenbach (145 mg/L) and Greene (84.5 and 87.8 mg/L) wells. The source of the elevated sodium concentration in the Greene well is likely saltwater intrusion since this well is also elevated in chloride. The source of elevated chloride in the Langenbach well is unknown.

Specific conductance was above the GWQC (700 mg/L) in four of the seven wells: Greene (1320 and 1280 mg/L), Roberts (898 and 872 mg/L), Langenbach (846 and 768 mg/L) and Meng's Arena (747 and 735 mg/L).

Trilinear diagrams are useful in evaluating the degree of salt water intrusion in wells. Figures 8 and 9 present trilinear diagrams for the 2008 Q1 and 2008 Q3 sampling events at Lopez Island. In general, the effect of seawater intrusion is to move the plotted location of the datapoint in the upper diamond of the piper diagram from the background water quality location (in this case, Aiken, Lopez Village Park, and Top of the World wells) upward and then to the right. It is not uncommon for intruded wells to improve during the wetter, lower water use months only to re-intrude the following summer.

The results from the first quarter of 2008 (Figure 8) plot as a calcium carbonate water type, with the exception of the Langenbach water sample. The Langenbach sample has very low to non-detectable levels of potassium, calcium and magnesium, and relatively elevated levels of sodium. This combination of results is indicative of water that has been treated by an ion-exchange water softener, so it is possible that this sample was collected from a faucet that provided softened / treated water.

The Aiken, Lopez Village Park, and Top of the World wells appear to be unaffected by seawater intrusion during the first quarter 2008 sampling event. The Langenbach, Roberts, and Meng's Arena wells have slightly elevated chloride concentrations, with both the Roberts and Meng's Arena wells showing shifts in relative chemistry indicative of the early onset of seawater intrusion (relative to the unaffected wells). Because of the apparent softening of the Langenbach sample, relative chemistry cannot be evaluated. The Greene well has significantly elevated chloride concentrations, and shows shifts in relative chemistry indicative of seawater intrusion.

Figure 9 shows a trilinear plot for the Lopez Island water quality sampling results from the fourth quarter of 2008. As with the first quarter sampling, the fourth quarter water quality from the Greene well indicated elevated chloride and shifts in relative chemistry indicative of seawater intrusion. In general water quality between the first round and fourth round did not vary significantly (with the exception of the Langenbach softened and un-softened samples). Average chloride concentrations dropped slightly between the first and fourth quarters. Additional rounds of sampling will need to be collected before a statistically valid evaluation of trends in water quality can be made.

4.3 **PRECIPITATION**

Precipitation is monitored at three stations:

- Eastsound by Paul Kamin of EWUA
- Lopez Village at 818 Cross Road by Scott Rozenbaum
- Lopez Island at 1412 Bakerview Road by Jack Giard

Precipitation data for 2008 are presented in Figure 10. Eastsound showed greater precipitation for 2008 as consistent with published isohyetal maps. For 2008, the increased precipitation in Eastsound generally fell during the winter months.

5.0 RECOMMENDATIONS

The following recommendations are made based on the findings of this report:

- Expand the Eastsound groundwater monitoring network towards north to include wells between Greer and EWUA #4, the School well, and wells east of Beemer-Minnis.
- Expand the Lopez groundwater monitoring network by adding previously surveyed monitoring points including Stephens, Duncan, Carter, Bennett, Marsh, Erisman, Horn, Arnold, Normandy Heights, Mariner Hill, Galley, Cormorant, and Harbor.
- Survey the measuring point of the Aiken, Greene, and Lopez Village wells so they can be included in groundwater elevation contouring.

6.0 REFERENCES

- Sound Hydrogeologic, 2008. Quality Assurance Project Plan, Ambient Groundwater Monitoring, San Juan County, Washington. Consultants report prepared for San Juan County Community Planning Services.
- Pacific Groundwater Group, 2008. Interim Aquifer Protection Report, Eastsound, San Juan County, Washington. Consultant's Report to the San Juan County Department of Health and Community Services.

Table 1. Groundwater Monitoring Network Configuration

San Juan County, Washington

			Measuring		Groundwater
Well	Ecology ID	Transducer	Point Elevation	Data Logger	Sample Collected
Eastsound					
Beemer-Minnis	AAH 572	23915		Levelogger	
Clark	ALQ 041	24080	85.7	Levelogger	Х
Curtis	AGQ 153	20775	51.4	Levelogger	Х
EWUA #1	AER 014	23835	38.6	Levelogger	Х
EWUA #4	AER 004	24575	12.5	Levelogger	
EWUA #5	Not Listed	20774	101.1	Levelogger	Х
Fisher	AEC 764	24568	86.5	Levelogger	Х
Greer	AGA 330	23841	98.3	Levelogger	Х
NAPA	ACW 193	23827	80.1	Levelogger	Х
Pearson	AHH 533	20769	30.8	Levelogger	Х
School	ALQ 042	31023847	66.1	Levelogger	Х
Lopez Island					
Aiken	AFJ 405	62083/20779	16.4	CTD Diver	Х
Grant	AEC 760	62086/23909	93.69	CTD Diver	
Greene	ABO 736	85138/24574	127.33	CTD Diver	Х
Langenbach		85176/23850	128.11	CTD Diver	Х
Lopez Village Park	AAB 776	85170/24573	25.33	CTD Diver/Baro	Х
Mengs Arena	ABO 733	85173	145.66	CTD Diver	Х
Roberts	AAE 786	85137/20911	112.23	CTD Diver	Х
Top Of The World	ACJ 942	23845	277.85	Levelogger	Х

System configuration as of October 24, 2008.

Survey Datum = NGVD 29

Table 2. Eastsound Groundwater Concentrations, April 23, 2008

San Juan County, Washington

Constituent	Units	GWQC ¹	Clark	Curtis	EWUA #1R	EWUA #3R	EWUA #5	Fischer	Greer	NAPA	Pearson	School
Inorganic Parameters												
Alkalinity as CaCO3, Total	mg/L CaCO3		152	94.8	119	167	173	170	232	166	144	127
Alkalinity, Bicarbonate	mg/L CaCO3		142	94.8	119	163	173	170	232	166	137	127
Carbonate	mg/L		10.2	1U	1U	4.2	1U	1U	1U	1U	7.6	1U
Calcium, Dissolved	mg/L		13.7	24.4	49.7	28.4	42.2	34.2	52.8	27.3	14.8	53.2
Chloride	mg/L	250	33.8	26.7	18	29.1	25.1	29.5	25.1	18.4	27.4	14.5
Fluoride	mg/L	2	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.2	0.1U
Hydroxide	mg/L		1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Nitrate as N	mg/L as N	10	0.1U	5	2.5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	1.3
Specific Conductance @ 25C	umhos/cm	700	423	378	369	418	484	413	523	377	356	376
Sulfate	mg/L	250	8.1	33.6	31.4	9.5	38.4	10.1	19.5	6.7	0.1	38.2
Metals												
Magnesium	mg/L		18.5	18.4	7.39	17.3	19.7	18.4	23.8	13.8	5.56	7.85
Potassium	mg/L		4.2	2	0.8	4.1	3	2.2	3.4	5	3.2	0.7
Sodium	mg/L	20 ²	29.6	19	12.7	30.4	26.9	22.8	18.6	26.1	52.7	10.8

Bolded values are above their corresponding GWQC

¹ Ground water quality criteria (GWQC) as reported in WAC 173-200, also inlcudes maximum contaminant levels reported in WAC 246-290-310.

² The EPA has established a recommended level of 20 mg/L for sodium as a level of concern for those consumers that me be restricted for daily sodium intake in their diets.

U = Compound not detected

Note: EWUA Well 3R is also referred to as EWUA 13.

Table 3. Eastsound Groundwater Concentrations, October 21, 2008

San Juan County, Washington

Constituent	Units	GWQC ¹	Curtis	EWUA #1R	EWUA #3R	EWUA #5	Greer	Pearson
Chloride	mg/L	250	25.2	18	25.1	25.9	22.2	26.2
Fluoride	mg/L	4	0.1U	0.1U	0.1U	0.1U	0.1U	0.2
Nitrate as N	mg/L as N	10	4.7	2.4	0.1U	0.1U	0.1U	0.1U
Sulfate	mg/L	500	31.4	30.6	3.1	40.7	14.5	0.1U

¹ Ground water quality criteria (GWQC) as reported in WAC 173-200, also inlcudes maximum contaminant levels reported in WAC 246-290-310.

U = Compound not detected

Note: EWUA Well 3R is also referred to as EWUA 13.

Table 4. Lopez Island Groundwater Concentrations, April 24, 2008

San Juan County, Washington

						Lopez Village	Mengs		Top Of The
Constituent	Units	GWQC ¹	Aiken	Greene	Langenbach	Park	Arena	Roberts	World
Inorganic Parameters									
Alkalinity as CaCO3, Total	mg/L CaCO3		218	417	351	267	339	397	266
Alkalinity, Bicarbonate	mg/L CaCO3		218	417	351	267	339	397	266
Carbonate	mg/L		1U	1U	1U	1U	1U	1U	1U
Calcium, Dissolved	mg/L		48.7	88.2	0.05U	45.1	75.8	75.3	58.2
Chloride	mg/L	250	25.2	186	45.7	20.1	38.3	37.8	24
Fluoride	mg/L	2	0.1U	0.1U	0.1U	0.1	0.1U	0.1	0.1U
Hydroxide	mg/L		1U	1U	1U	1U	1U	1U	1U
Nitrate as N	mg/L as N	10	0.1U	0.1U	0.1U	0.3	0.1U	0.1U	0.3
Specific Conductance @ 25C	umhos/cm	700	494	1320	846	534	747	898	556
Sulfate	mg/L	250	15	76.8	38.2	8.3	35.1	71.8	10
Metals									
Magnesium	mg/L		18.4	76.7	0.05U	24.4	36.7	53.9	22.5
Potassium	mg/L		2.8	12.4	0.6	3.9	6.8	8.1	5.3
Sodium	mg/L	20^{2}	23.9	84.5	145	37.1	32.9	36.1	25

Bolded values are above their corresponding GWQC

¹ Ground water quality criteria (GWQC) as reported in WAC 173-200, also includes maximum contaminant levels reported in WAC 246-290-310.

² The EPA has established a recommended level of 20 mg/L for sodium as a level of concern for those consumers that may be restricted for daily sodium intake in their diets.

 $\mathbf{U} = \mathbf{Compound}$ not detected

Table 5. Lopez Island Groundwater Concentrations, October 22, 2008

San Juan County, Washington

						Lopez Villago	9	
Constituent	Units	GWQC ¹	Aiken	Greene	Langenbach	Park	Mengs Arena	Roberts
Inorganic Parameters								
Alkalinity as CaCO3, Total	mg/L CaCO3		214	403	346	265	336	392
Alkalinity, Bicarbonate	mg/L CaCO3		214	403	346	265	336	392
Calcium, Total	mg/L		52.9	90.5	82	46.8	76.8	80
Carbonate	mg/L		1U	1U	1U	1U	1U	1U
Chloride	mg/L	250	24.3	172	45	17.8	39.2	37.2
Conductivity	umhos/cm	700	505	1280	768	535	735	872
Fluoride	mg/L	4	0.1U	0.1U	0.1U	0.1U	0.1U	0.1
Hydroxide	mg/L		1U	1U	1U	1U	1U	1U
Nitrate as N	mg/L as N	10	0.1U	0.2	0.1U	0.3	0.1U	0.1U
Sulfate	mg/L	500	14.5	76.8	39.7	7.7	36.1	69.5
Total Dissolved Solids	g/L		0.282	0.796	0.474	0.306	0.454	0.554
Metals								
Magnesium, Total	mg/L		19.9	77.5	38	24.9	36.2	55.7
Potassium, Total	mg/L		2.8	12.5	6.7	4	6.7	8.5
Sodium, Total	mg/L	20 4	24.4	87.8	32	36.6	31.4	36.2

Bolded values are above their corresponding GWQC

¹ Ground water quality criteria (GWQC) as reported in WAC 173-200, also includes maximum contaminant levels reported in WAC 246-290-310.

² The EPA has established a recommended level of 20 mg/L for sodium as a level of concern for those consumers that may be restricted for daily sodium intake in their diets.



Figure 1 Eastsound Groundwater Elevations October 21, 2008

Monitoring Report



Greer 45.4 Well Locations Groundwater Elevation Contours (Dashed where infered)

Note:

The NAPA well appeared to be pumping during measurement so the reading from 4/24/08 was substituted.

Elevations in NGVD29















APPENDIX A EASTSOUND MONITORING NETWORK WELL LOGS Please print sign and return to the Department of Ecology

Please plint, sign and return	to the Department of Ecology
Water Well Report Original - Ecology, 1 st copy - owner, 2 nd copy - driller	Current Notice of Intent No. W 132465
ECOLOGY Construction/Decommission -79,1	Unique Ecology Well ID Tag No. AHH 5/2
Construction decommission	Water Right Permit No.
Decommission ORIGINAL INSTALLATION Notice	Property Owner Name Beemy 2 Minnis
of Intent Number	Well Street Address
PROPOSED USE: Domestic Industrial Municipal	City East Sound County San Juan
DeWater	Location SF1/4-1/4 NF1/4 Sec 14 Twn 37R 2 EWM sitcle
TYPE OF WORK: Owner's number of well (if more than one)	
New well Reconditioned Method : Dug Bored Driven	Lat/Long (s, t, r Lat Deg Lat Min/Sec
DIMENSIONS: Diameter of well inches, drilled ft.	still REQUIRED) Long Deg Long Min/Sec
Depth of completed wellft.	Tay Darred No
CONSTRUCTION DETAILS	
Installed: Liner installed Diam. from ft. to ft.	CONSTRUCTION OR DECOMMISSION PROCEDURE
Perforations: Yes Viso	Formation: Describe by color, character, size of material and structure, and the kind and
Type of perforator used	information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)
SIZE of perfs in. by in. and no. of perfs from ft. toft.	MATERIAL FROM TO
Screens: Ves No UK-Pac Location	light brown clayey 0
Manutacturer's Name - Chymae Model No.	graver 2
Diam. 6 Slot size 6 from 48 ft. to 103 ft.	Tan silt same annuel 3
Gravel/Filter nacked: Yes 4 No Size of gravel/sand	and copple till 13
Materials placed fromft. toft.	
Surface Seal: : 2 Yes No To what depth?	Gray chavey sitt sand 13
Material used in seal	& gravel 34
Did any strata contain unusable water? Ves Derthof strata	Come sulty and us 94
Method of sealing strata off	dian leoses 81
PUMP: Manufacturer's Name	
Туре:НРЦА	Gray fine Sand 97 111
WATER LEVELS: Land-surface elevation above mean sea levelft.	
Artesian pressure lbs. per square inch Date	Gray clayer sitt, 111 113
Artesian water is controlled by	Sand a Sugar
(cap, valve, etc.)	
Was a pump test made? Yes Ves If No If yes, by whom?	
Yield:gal./min. withft. drawdown afterhrs.	
Yield: nrs. Yield: nrs.	
Recovery data (time taken as zero when pump turned off) (water level measured from well	RECEIVED
Time Water Level Time Water Level Time Water Level	MAY 2 5 2005
	DEPT OF ECOLUGY
Bailer test 30 + gal/min with 15 ft drawdown after 2 hrs	
Airtestgal./min. with stem set atft. forhrs.	
Artesian flow g.p.m. Date	
Temperature of water Was a chemical analysis made? 🗌 Yes 🚺 No	2-1-05 Completed Date 3-11"D
WELL CONSTRUCTION CERTIFICATION: I constructed and/or ac	cept responsibility for construction of this well, and its compliance with all ion reported above are true to my best knowledge and belief Λ
wasnington well construction standards, Materials used and the information	Drilling Company M. Squalar Drilling Brand Such
Driller/Engineer/Trainee Signature	Address 77 EJ Young RE
Driller or trainee License No	City, State, Zip Olga WQ. 98279
(If TRAINEE.	Contractor's
Driller's Licensed No.	Registration No. MSAWYDOJSND Date 7-03-05

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

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Driller's Licensed No. _ Driller's Signature _

Date <u>4-25-05</u> ECY 050-1-20 (Rev 2/03)

Ecology is an Equal Opportunity Employer.

37-2W-14#

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185345		57	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
WATER WELL REPORT	CURRENT	0	
Original & 1 st copy – Ecology, 2 nd copy – owner, 3 rd copy – driller E C 0 L 0 6 Y	Unique Ecology Well ID Tag No. AL0041		
Construction/Decommission (" x " in circle)	Were Distance in the matter in the matter		
	Water Right Permit No. Supplemental to all EW	UA GW Rights	3
Decommission ORIGINAL INSTALLATION Notice	Property Owner Name Gary Clark		
	Well Street Address Mt Baker Road & Deye Ln	·	
PROPOSED USE: Domestic Industrial Municipal DeWater Irrigation Test Well Other	City Eastsound County San Jua	រ <u>ា</u>	
	Location <u>SE 1/4-1/4</u> <u>SE 1/4</u> Sec <u>11</u> Twn <u>37</u>	R_2 EWM	
Image: Second time Method : Dug Bored Driven Image: Second time Method : Dug Bored Driven	Lat/Long (s, t, r Lat Deg Lat	www Min/Sec	✓ one
DIMENSIONS: Diameter of well 12 inches, drilled 234 ft.	Still REQUIRED	ng Min/Sec	· · · · · · · · · · · · · · · · · · ·
Depth of completed wellft.			
CONSTRUCTION DETAILS	Tax Parcel No		
Casing Welded <u>12</u> "Diam. from <u>+.5</u> ft. to <u>130</u> ft. Installed: Liner installed <u>8</u> "Diam. from <u>+2</u> ft. to <u>140</u> ft.	CONSTRUCTION OR DECOMMISSION	PROCEDUR	F
Threaded "Diam, from ft. to ft.	Formation: Describe by color, character, size of material and	structure, and the	kind and
Type of perforator used	nature of the material in each stratum penetrated, with at least information (USE ADDITIONAL SHEETS IF NECES	one entry for each SSARY.)	h change of
SIZE of perfsin. byin. and no. of perfsfromft. toft.	MATERIAL	FROM	то
Screens: Ves No K-Pac Location	Topsoil	0	1
Manufacturer's Name JOhnson	Brn Silty Sand, some Gravel	1	3
Diam. 8-inch Slot size 30 from See Attached ft. toft.	Glacial Till (hardpan)	3	112
Diam. Slot size from Comp.Design fl. to fl.	Gry. Sandy Silt	. 112	126
Gravel/Filter packed: Ves No Size of gravel/sand	y. fine Gry. Sand, WB (dirty)	126	136
Materiars placed from 230 n. to 86 n.	v. fine Gry. Sand with cemented layers	136	149
Surface Seal; √Yes No Tô what depth? 18ft.	v. fine - fine Gry. Sand, WB	149	156
Material used in seal Bentonite	Gry. Silty Sand, WB, (tight)	156	163
Did any strata contain unusable water? Yes V No	v. fine to fine Gry. Sand, WB	163	213
Type of water? Depth of strata	fine to med Gry. Sand with Shell Fragments, WB	213	227
Method of sealing strata off	Gry. Silt	227	234
PUMP: Manufacturer's Name Type:			<u> </u>
WATER LEVELS: Land-surface elevation above mean sea level approx_80ft.	LOG FOR EWUA - Clark Production Well		
Static level	Prepared by CR Hydrogeologic Consulting		
Artesian pressure lbs. per square inch Date			
Artesian water is controlled by (cap. valve. etc.)			
WELL TESTS: Drawdown is amount water level is lowered below static level	·		
Was a pump test made? 🗹 Yes 🛛 🗖 No If yes, by whom? <u>CR Hydrogeo.</u>			
Yield: <u>87</u> gal./min. with <u>17.35</u> ft. drawdown after <u>24</u> hrs.	BECEIV	ED	
Yield:gal./min.withft. drawdown afterhrs.	REU-		<u></u>
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)	JUL 2 8 2	ρυ <u>υ</u>	
Time Water Level Time Water Level Time Water Level		hIOGY	
1 78.80 15 76.35 120 74.35	DEPT OF EU	02-	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		L	
Date of test _5/15/05 - 5/16/05			
Bailer test gal./min. with ft. drawdown after hrs.			<u> </u>
Airtestgal./min. with stem set atft. forhrs.			
Artesian flowg.p.m. Date		┣-───┤	
Temperature of water 51 F Was a chemical analysis made? 🗹 Yes 🗖 No			
	Start Date 4/19/05 Complete	ed Date 3/16/0	<u>,</u>
WELL CONSTRUCTION CERTIFICATION: I constructed and/or acc	cept responsibility for construction of this well, and	f its complian	ce with all

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.							
Driller Engineer Trainee Name Prigt Ray dy Holt	Drilling Company Holt Dr'illing Boart Longyear						
Driller/Engineer/Trainee Signature	Address Po Box 1890						
Driller or trainee License No. 1099	City, State, Zip Milton WA 98354						
(If TRAINEE,	Contractor's						
Driller's Licensed No.	Registration No. BOart LCO55PZ Date 7-20-05						
Driller's Signature	Ecology is an Equal Opportunity Employer.						

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

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			3/ 4/		
F	ile Original and First Copy 121665 WATER WEL	L REPORT	Start Card No Well ID No	WE0053	6 53
נ ר	Second Copy- Owner's Copy STATE OF W hird Copy- Driller's Copy	ASHINGTON	Water Permit No Tax Parcel No	2711570	004
ゼ	OWNER NameBARTON & SHELLEY CURTIS Address12	5 SEAVIEW STREET, EASTSOUND), WA 98245		
	a STREET ADDRESS OF WELL (or nearest address)BLANCHARD	/4SW_1/4 Sec_11_ T_37_ N , R _ ROAD, EASTSOUND, WA 98245_	.2_ W M		
Ř	PROPOSED USE _X_ Domestic Industrial Municipal	10 WELL LOG or ABANDONME	NT PROCEDURE D	ESCRIPTI	ON
/ell	Irrigation Test Well Other DeWater	and show thickness of aquifers an	ter, size of material d the kind and natur	and structure of the	lle
S. ₹	TYPE OF WORK Owner's number of well	material in each stratum penetrate each change of information	d, with at least one	entry for	
ţ	bandoned New Well _X_ Method Dug Bored	MATERIAL		FROM	то
Ы	Deepened Cable _X_ Driven Reconditioned Rotary Jetted	BROWN SILTY SAND & PEBBI	FS	0	5
		BROWN SANDY SILT		5	28
ati	Drilled6et Depth of completed well84 ft	BROWN FINE SAND BROWN CLAYEY SAND		28 43	43 61
Ē		BROWN FINE SAND (WATER I BROWN FINE TO MEDIUM SA	BEARING) ND (H2O BEARING	61) 72	72 84
Ĵ.	Casing installed6" Diam from+1ft to69ft	BROWN CLAY		84	-
<u>۔</u>	Welded _X" Diam fromft toft				
ţ	Threaded Diam from ft to ft				
P	Perforations Yes NoX_				
nd	Type of perforator used				
a	perforation fromft toft				
ati	$\underline{\qquad \qquad } \pi to \underline{\qquad } \pi$		REC	EIVE	D
С Ф	Screens Yes No _X		TOO	9 1 00	
ţ	Manufacturer's NameJOHNSON			2 I 200	Z
Ę	Diam _6Slot size_0 008_ from69ft_to74ft		DEPT di	F ECOL	.OGY
rar	Diam6 Slot size_0 010_ from74ft to84ft				
Var	Gravel packed Yes No _X Size of gravel Gravel placed fromft toft				
Ē	Surface Seal Yes X_ No To what depth?18ft				
g	Material used in sealBENTONITE CHIPS Did any strata contain unusable water? YesNo_X				
ŝ	Type of water? Depth of strata				
ğ.	Method of sealing strata off				
N	PUMP Manufacturer's Name Type				
008	WATER LEVELS Land surface elevation	1			
8	above mean sea level60ft Static level 47 ft below top of well Date 8/16/02	Work Started 8/3/02	Completed 8/	16/02	
Т Ш	Artesian pressurelbs Per square inch Date				
o t	(cap. valve, etc.)	I constructed and/or accept resp	consibility for constr	uction of th	IS
Jen,	WELL TESTS Drawdown is amount water level is lowered below static level. Was a pump test made? Yes No. X	well and it's compliance with all standards. Materials used and t	Washington Well co	onstruction	
Ę	If yes, by whom?	are true to my best knowledge	and belief		
pal	Recovery data (time taken as zero when pump turned off) (water	NAMEMARTEL WE			
De	level measured from well top to water level) Time Water Level Time Water Level Time Water Level	(Person, Firm, o	r Corporation) (Type or Pr	int)
he		Address _P O_BOX 905,	FRIDAY HARBOR,	WA 98250)
F		All an	11.4		
	Date of test Bailer test gal /min with 10 ft drawdown after 1.5 hrs	(Signed) / ////// [Contractor's	Lici	ense No	_2438_
	Airtest 9 0 gal /min with stem set atft forhrs	Registration	4DA Nata 9/22	(0.2	
	Temperature of water Was a chemical analysis made? Yes				-
	No _X_	USE ADDITIONAL	SHEETS IF NECE	SSARY)	

37-2W-112

File (Depa Seco Third	Original with artment of Ecology and Copy - Owner's Copy d Copy - Driller's Copy	WATER WELL REPOR STATE OF WASHINGTON	Notice of Intent W UNIQUE WELL I.D. # Water Right Permit No. G X 03	683C
(1)	OWNER: Name East Sound	Water USOS ASSOC Add	ress P.O. BOX 115 East S.	ound wa. 4824
(2) (2a)	LOCATION OF WELL: County 50. STREET ADDRESS OF WELL: (or near TAX PARCEL NO.: 271350	Juan N astaddressi Lorner of terril 025	W 1/4 NE 1/4 Sec 13 T 37 Brach Rd 3 M+ Ba 37-2W-	hr Rd.
3)	PROPOSED USE: Domestic	Industrial Test Well Other	(10) WELL LOG or DECOMMISSIONING PRO Formation: Describe by color, character, size of or the kind and nature of the material in each stratu	CEDURE DESCRIPTION naterial and structure, and moenetrated, with at least
(4)	TYPE OF WORK: Owner's number of TYPE OF WORK: Owner's number of TYPE Well Deepened Beepened	of well (if more than one)	one entry for each change of information. Indicate MATERIAL	e all water encountered. FROM TO 5
5)	DIMENSIONS: Diameter of well Drilled 5.5 feet Donth of another	Rotary Jetted	Blue clay Big Rocks	15 36
6)	CONSTRUCTION DETAILS Casing installed:	Diam. fromft. toft. Diam. fromft. toft. Diam. fromft. toft.	Becomin Slight by course with Detter- Sand Course Gravel, Smull Rog.KS-Gray Silt Bome of Cemented	36 49 49 55
	Perforations: Yes A-No Type of perforator used SIZE of perforationsperfor	in. byin. rations fromft. toft.		
	Screens:	Model No.	RECE	IVED
	Surface seel: No Material used in seal VCA Did any strata contain unusable water? Type of water? Method of sealing strata off	To what depth? 35 h. CCMCNT 6% Bentonik Ves 7% Depth of strata	JUL 8	9 2000
7)	PUMP: Manufacturer's Name		Departmer	t of Ecology
8)	WATER LEVELS: Lang-surface elevation Static level Artesian pressure	to below top of well Date 7-14-ZOOD	Work Started 8-16,-99 . Completed	7-16-200
	Artesian water is controlled by	(Cap, valve, stc.)	WELL CONSTRUCTION CERTIFICATION:	
9)	WELL TESTS: Drawdown is amount wat Was a pump test made? Yes Y No Yield:gal/min. with Yield:gal/min. with Pield:gal/min. with Recovery data (time taken as zero when p	er level is lowered below static level if yes, by whom?hrs. ft. drawdown afterhrs. ft. drawdown afterhrs. pump turned off} (water level measured from	I constructed and/or accept responsibility for or compliance with all Washington well construction and the information reported above are true to Type or Print Name Mar Saw www. (Licensed Dritler/Engine Trainee Name	onstruction of this well, and its on standards. Materials used my best knowledge and belief License No License No
	Date of test Bailer test	Water Level Time Water Level	Drilling Company M. Sawyer Dr. Hu (Signed) March Jan- (Licensed Driller/Engine Address 62/0654244m P Contractor's Registration No. MSAWY DSOSSNB	Brump Sul Pan License No. 2461 ass Ad Olga we. Date 7-17-20
-	Artesian flow gal./min. with Artesian flow Temperature of water Was a c	t. drawoown afterhrs. g.p.m. Date hemical analysis made? □ Yes ▲Ho	(USE ADDITIONAL SHEETS IF N Ecology is an Equal Opportunity and Affirmative accommodation needs, contact the Water Resor	NECESSARY) Action employer. For specia urces Program at (360) 407

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SLIL JUAA 414 Eni Flie Original and First Copy with Department of Ecology Second Copy - Owner's Copy Ford Copy - Driffer's Copy Apple the in 107.85 AL WATER WELL REPORT Permit No (1) OWNER: Some EAST. SOUND WATER SERAcrem EAST. SQUND. WORL . 9827 .-(2) LOCATION OF WELL: County SAN JUAN 14 N W 14 Sec. 11 T. 37 N. H. 26 . W. M. SE Bearing and distance from section or subdivision somer 240' NORTH AND 500 Fast Fort for Gout tory, Sec 11 (3) PROPOSED USE: Domestic [] Industrial [] Municipal V. (10) WELL LOG: KX IT trigation [] Test Well [] Other Formalion: Describe by color, character, ner of undertained structure, and show thickness of aquiters and the kind and nature of the naterial in each strutum penetrated, with at least one entry for each change of formation. (1) (4) TYPE OF WORK: Owner's number of well of more than onel... MATERIAL. TTO FROM New well N Method: Dug Bored () Deepened Cable 5 :1 Driven () Clay :0 Peronditioned C Sand Laquel Rentary () Jatted (5) DIMENSIONS: Distances of well . 2 Inches. Rock 63 ft. ater ruled 1stocalas 63 (6) CONSTRUCTION DETAILS: Back Partointed Casing installed: 8 - Diam. from . 0 h. to . 6.3. n. Threaded G st. ft. Rock Welded M " Diam. from ft. to ft. Holi Perforations: Yes & No () havel. Type of perforator used SIZE of perforations . in by f an perforations from . #2 11 fl. Screens: Yes & No D Johnson Manufacturer's Name Joh. Type STGally Steel _ Model No_ Diam. 2 Slot size from . ft. to ... Gravel packed: Yes C No A Size of gravel: Grave! placed from _____ ft. to _____ ft. 5 1215 . C. Surface seal: Yes D No D To what depth! ---11 12 2 Masterial uned in ytal i head war (7) PUMP: Manufacturer's Name St. 2. 1 Star of the set Type 23.45 TEC ... (8) WATER LEVELS: Land-surface elevation 31 fr above mean sea level 51 fr Static level 6 ft. below top of well Date 6 ft. 19 Artesian pressure 10. per square inch Date 1. 12 1. 15 1.1.5 10.1 Artesten water is controlled by (Cap. valve, etc.) : 14 -S ... 2 (9) WELL TESTS: Drawdown is smouth water level is lowared below static level 19.7. Work started MICHAR all is 72 umplaced after the Was a pump test made! Yes > No | If yes, by whom? Yield: gal/min. with ft. drawdown after WELL DRILLER'S STATEMENT: hrs. This well was drilled under my jurisdiction and this report is - 84 true to the best of my REDRICE H. BROWN 11 K . 14 . 5 . 4 And the Constant Recovery data (time inten as zero when pump turned off) (weier level) measured from well top to water level) Wes Dritting NAME (Person lan har her person ligh) at a (Type or prant) Water Level | Time Water Level Time Water Lavel Time Address, Date of test ______ fall tain with LL. It. drawdown after ______ hrs. [Signed] / hrs. Date MUN 75 19.72 ttenas Bow License No. OK In (USE ADDITIONAL SHEETS IF NECESSARY) ATT 1. F. No. 7354-OB-(Hav, 4-71).

EWUA Well 4 Conversion Construction Details

CR Hydrogeologic Consulting Conversion date 5/3/04

			1112
	3//	02~ ~	
ile Original and First Copy with WATER WE	LL REPORT EWUA#5 Application	NO	••••
econd Copy - Owner's Copy	ASHINGTON Permit No.		
Ind copy Dinate of State of W			-
(1) OWNER: NameRAST SOUND WATER DEP.	Address ORCAS, WARHINGTON 98245		
(1) Contract of WEYL, Con Tuen (Buene Vi	ata Hta) atta 14 y y an m	NB	W M
(2) LOCATION OF WELL: County SED JURN LDURDS YI			
searing and distance from section or subdivision corner	SERY SNRY Sec 11, T3	INTE	24
	(10) WELL LOG:		
(3) PROPUSED USE: Domestic [] Industrial [] Mainteparties	Terretion: Describe by color character size of mater	rial and stru	ture, and
Irrigation 🗌 Test Well 📑 Other 📋	show thickness of aquifers and the kind and nature o	f the materi	al in each
(A) THE OF HOPE, Owner's number of well -7%	stratum penstratea, with at least one entry for each		TO TO
(4) TYPE OF WORK: (if more than one)	MATERIAL	FROM	10
New well 22 Method: Dug 1 Bored 1	Sandy top soil	0	
	sand & small rocks	2	6
	brown clav & sand	6	90
5) DIMENSIONS: Diameter of well	blue clav	90	107
Drilled /20 ft. Depth of completed well //5 ft.	thin laver of gravel on clay		
	3 to 5 mm		
(6) CONSTRUCTION DETAILS:	<u> </u>	107	114
Cosing installed: P " new men + 2 + in 105 +	NATOT DIFLOR SAIN	111	118
Thereaded C " Diam from ft. to		440	120
Welded IV "Diam. from	water & Tine sand	 ## 0	140
Astag Tk. Internet Digna that a			
Perforations: Yes 🗆 No 🖂			
Type of perforator used			
SIZE of perforations in, by in,			
perforations from ft. to ft.			
perforations from			
perforations from			
Screens: Yes P No			
Model No.			
Diem I'' Slot size 20 from 10.5 ft. to 11.5 ft.			
Diam Slot size from ft, to ft.			
		_ 	+
Gravel packed: Yes G No D Size of gravel:			<u> </u>
Gravel placed from ft. to ft.			
Surface seal: Yes D No D To what depthy			
Material used in stall	1		
Did any strate contain unusable water 100 1 100 1			
Type of water:			
Method of Sealing State Cal			
			<u>}</u>
(7) PUMP: Manufacturer's Name			
(7) PUMP: Manufacturer's Name			
(7) PUMP: Manufacturer's Name			
(7) PUMP: Manufacturer's Name Type: HP			
(7) PUMP: Manufacturer's Name Type: HP (8) WATER LEVELS: Land-surface elevation above mean sea level			
(7) PUMP: Manufacturer's Name Type: HP (8) WATER LEVELS: Land-surface elevation above mean sea level. (8) WATER LEVELS: Land-surface elevation above mean sea level. (7) Static level Image: Comparison of the sea level. Artesian pressure Ibs. per square inch			
(7) PUMP: Manufacturer's Name Type: HP (8) WATER LEVELS: Land-surface elevation above mean sea level. (8) WATER LEVELS: Land-surface elevation above mean sea level. (7) Static level Image: Static level image: Static lev			
(7) PUMP: Manufacturer's Name Type: HP. (8) WATER LEVELS: Land-surface elevation above mean sea level. Static level Image: Static level image: Stati			
(7) PUMP: Manufacturer's Name Type: HP. (8) WATER LEVELS: Land-surface elevation above mean sea level. Static level Image: Static level <t< td=""><td></td><td>8/27/</td><td>102.5</td></t<>		8/27/	102.5
(7) PUMP: Manufacturer's Name	Work started 7/// 197/ Completed	R/27/	
 (7) PUMP: Manufacturer's Name	Work started 2///	<u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u>	
 (7) PUMP: Manufacturer's Name	Work started 2///	$\frac{1}{\frac{1}{27}}$	
(7) PUMP: Manufacturer's Name	Work started 7///	$\frac{1}{1}$	
 (7) PUMP: Manufacturer's Name	Work started 7///	$\frac{1}{1}$. 192 /
 (7) PUMP: Manufacturer's Name	Work started ?///	$\frac{1}{1}$	i report is
 (7) PUMP: Manufacturer's Name	Work started ?///	$\frac{F/2.7}{I}$	i report is
 (7) PUMP: Manufacturer's Name	Work started ?///	$\frac{F/27}{I}$, 1925 report is print) 5/52
 (7) PUMP: Manufacturer's Name	Work started ?///	$\frac{1}{1}$, 192 /
 (7) PUMP: Manufacturer's Name	Work started ?///	$\frac{1}{1}$	report is
 (7) PUMP: Manufacturer's Name	Work started ?///	en and this	report is
 (7) PUMP: Manufacturer's Name	Work started 7///	en and this	, 192. report is print)
 (7) PUMP: Manufacturer's Name	Work started 2///	en and this	1925 report is print)

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			Fisher	r Well	1.005	
File Origi	inel and First Copy with			Start Card No. <u>V</u>	$\frac{1025}{2}$	
Becond C	Copy — Owner's Copy				HÈC	<u>164</u>
Third Cop	py — Driller's Copy STATEC		Smington Weler R	light Permit No.	N-11	<u>K</u>
(1) OV	WNER: Nome Ed Sullivan	Address	- P.O. Box	1018 East Sound	Wa 4	2 SHAC
	CATON OF WELL AND SOME THOSE		51	Fin Colf man 11 -	27	Z. W
(2) 00	DEET ADDRESS OF WELL COMPANY MILE R. K. 4.	ц.	<u></u>	E <f< th=""><th><u></u>N., H_</th><th><u></u>W.M.</th></f<>	<u></u> N., H_	<u></u> W.M.
	THE ADDRESS OF WELL (OF NORMAL ACTION) DA NU			<u> </u>		
(3) PA	IOPOSED USE: X Domestic industrial Aunicipal		(10) WELL LOG or A	BANDONMENT PROCEDURE	DESCRIPT	
			and the kind and nature of the chaose of information	e meterial in each stratum penetrated, wit	h at least one	entry for each
(4) TY	PE OF WORK: Owner's number of well (If more than one)	_ F		MATERIAL	FROM	то
Abi	andoned 🗌 New well 🤰 Method: Dug 🗆 Bored 🔂 Descened 🗐 Cable 🗌 Driven 🕃		70	P Soil	σ	2
	Reconditioned 🗆 Rotary 🗲 Jetted 🗆		San	23 Grave	2	6
(5) Dii	MENSIONS: Diameter of weit inch	zhee. 📙	Tan	<u>clay</u>	6	17
Drill	led <u></u>	- n	King	Clay Dha Cla	17	6
(6) CO	INSTRUCTION DETAILS:	-	<u> </u>	y BILLE CHAY	195	130
Ca	eing installed: Diam. from <u>"+1.5</u> ft. to <u>140</u>	- <u>*</u> [
Un De	routed Clam. fromf. to	-* [······································			
			-		_	
Per Tvo	norations: Yes L No VZN-	-	• • • • •			<u> </u>
SIZI	E of performations in. by					<u> </u>
	perforations from R. to	- <u>*</u> [
	perforations from R. to	╶╖┝				+
					+	
Mer	nufacturer's Name	_	· · · ·		1	<u>+</u>
Тур	e Model No	[RECEI	UEIT	
Diau	m. <u>2</u> Skoteize <u>a U 47</u> from <u>777</u> ft. 10 <u>767</u>	-* -		• ···-	_	_
		_*+		EED 9.3	1999	
Gra	wel placed from	_n -	· · · · ·	FED #V		+
	rtere each Van Martin In To what death?	 _				
Mat	terial used in seal Bentoik	_`` ┝		DEPT OF E	<u>illudi</u>	1
Did	any strata contain unusable water? Yee 🔲 No	-		·····		
Тур	e of water? Depth of strata					
(7) PU	IMP: Manufacturer's Name Arco Weber		·			· ·
		_			, <u> </u>	
(8) W/	above mean see level 9()	-∦ ह	Work Staned	, 19. Completed		**7
Arte	esian pressure its determining of wear locate results and a second se		WELL CONSTRUCTO	DR CERTIFICATION:		
	Artesian water is controlled by(Cap. valve. etc.)		I constructed and/or compliance with all V	r accept responsibility for construct Mashington well construction stands	on of this w	ell, and its
(9) WI	ELL TESTS: Drawdown is amount water level is lowered below static level		the information report	ted above are true to my best knowle	dge and belk	of.
Was	a a pump test made? Yes 🔲 Ng🛃- If yes, by whom?	_	NAME M.Sawyr	Dritin 2 pund S	r En	<u>ب</u>
Yiel	id:gal./min. with ft. chawdown after ft	hrs.		PERION, FIRM, OR CONFORMION) (TYPE	or Print)	
	81 \$3 	"	Address HL Box	160 01gh Wh 47	<u>ring</u>	
 Rer	n n povery data (time taken as zero when cumo turned offi (water level measured from w	" Well	(Signed) Mark	Aurelia Lion	inse No.	<u> 461</u>
top Time	to water level) Water Level Time Water Level Time Water Leve		• • • •	(MELL STRLEY		
			Contractor's Registration	CAPONIA -	7 +	
		—	No. <u>1715/9160 4 D</u>		<u> </u>	_, 19 <u>7 Ø</u>
	Date of test	-1	(USE AI	DDITIONAL SHEETS IF NECES	isariy)	
Bei	ier test gal./min. with ft. drawdown after f	his.	Ecology is an Ecual C	Donortunity and Affirmative Actio	n emolouer	For ene-
Ain	heat <u>75</u> gal./min. with starm set at <u>746</u> t. for <u>7</u>	<u>i hrs.</u>	clai accommodation n	veeds, contact the Water Resour	ces Program	n at (206)
Ten	npersture of water Was a chemical analysis made? Yes No-	•	407-6600. The TDD n	number is (206) 407-6006.		
	_					

nd Copy-Dwner's Copy d Copy-Driller's Copy	STATE OF WASHINGTON	Start Ea Water Perm	rd No : 974957 it No	_
DWNER : Name:HARRY GREER	Address:P.O. BOX 136, EAST	SOUND, WA 98245.		
DCATION OF WELL : CountySAN JUAN	NE1/4 _SE1/4 Sec _12_	T _37_ N., R _2_ W.M.		
STREET ADDRESS OF WELL (or nearest address)	ANDERSEN ROAD	BANDONNENT PROCEDURE DESCRIPT	ION	
Irrigation Test WellR	ECEIVED	he by color character 5128	 of material and	t stra
DeWater	.rormacion; vescri	s of adulfers and the kind an	d nature of the	eate
TYPE OF WORK: Owner's number of well J	IUW, TO DOU (in each stratum p linformation.	enetrated, with at least one	entry for each	C 194Ú
AbondonedNew WellMethod: Duo_O	EPT. OF ECOLOGY		:=====================================	= 76
Deesened Lable Cable Reconditioned Rotari	_XDriven	1941 EN 192		
	inches 16HT BROWN SAN	4D	0	1
Drilled101feet. Depth of completed well	LIGHT BROWN CLA	IVEY SILTY GRAVEL	1	36 96
CONSTRUCTION DETAILS: Caring installed: 5 " Diam. from t1 "	ft. to 91 ft. ; GREY MEDIUM SAN	ND & SMALL GRAVEL	90	101
Welded _X* Diam. from	ft. toft.			
Liner installed Ulam, from Threaded Diam, from	it. toft.			
Perforations: Yes No 1	1			
Type of perforator used				
SIZE of perforations	ft.			
perforation fromft to	ft.			
perioración (100, re co				
Screens: YesNo Manufacturer's NameJDHNSGN				
TypeSTAINLESSModel No	n 101 ft.			
DiamSlot sizefromft. t	oft.			
Gravel packed: Yes No1 Size of a	ravel			
Gravel placed fromft. to	ft,			i i
Surfact Seal: Yes No To what depth?	918ft.			
Did any strata contain unusable water? Yes	No			
Type of waterDepth of stra Nethod of sealing strata off	ita			•
PUMP : Manufacturer : Name				; 4
WATER LEVELS: Land surface elevation				
above mean sea level60 Static level 56 ft below top of well	Date			; 7
Artesian pressurelbs. per square inch	Date ; Work started :	MAY 16, 1993. Completed 	NAT 17, 197. 	****** ?*
Arcesian water is conclusive by(cap.valve	etc) WELL CONSTRUCTI	(ON CERTIFICATION: 1 and/or accent responsibility	v for construct	ion of
WELL TESTS: Drawdown is amount water level is static level. Was a pump test made? Yes	NO _	s compliance with all Washing	ton well constru	uction above
If yes, by whom?	after hrs true to ay be	Materials used and the instru- est knowledge and belief.	stion reported i	80046
	ened off) (water NAME : NAME	RTEL WELL DRILLING INC.		
Recovery data (time taken as zero when pump to level measured from well top to water level)	(Per	rson, Firm, Or Corporation:	(тур е О	r Prin
Time Water Level Time Water Level Time	Water Level : Adoress : 2.0.	. BOX 905, FRIDAY HARBOR, MA	98250	
		Al Mault	Liscense No. :	054:
Date of test		(Well Driller)		
Bailer test 12.9 gal./min. with 2 ft. drawd	own after _1_brs : Contractor 5 ft. forbrs : Repistration			
Hittest There will will be an an an	Nucher t	MARTEWD12102 Date : MAY	19, 1993	

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

nd Copy-Dwner's Copy d Copy-Driller's Copy	STATE OF WASHINGTON	Start Water P	Card No Card No ermit No	-
NNER ; Nase:HARRY GREER	Address:P.O. BOX 136, EAS	TSDUND, WA 98245		
DCATION OF WELL : County	NE_ 1/4 _SE_ 1/4 Sec _12	_ T _37_ N., R _2_ N.H.		
TREET ADDRESS OF WELL (or nearest address)	NORTH BEACH, ORCAS ISLAND.	ARANDOMENT PROCEDURE DESCR		
	Other			
DeWater	Formation: Descr Land show thickne	ibe by color, character, 51 ss of aquifers and the kind	and nature of the	o stru e mate
YPE OF WORK: Owner's number of well	in each stratue	penetrated, with at least o	ne entry for each	chang
(if more than one)	Bored Bored	***************************************		
Deepened Cable	_X_ Driven	MATERIAL	; FRUM ; ;;	1U
Keconoliloneo Kola				
DIMENSIONS: Diameter of well6		AND & GRAVEL	8	38
CONSTRUCTION DETAILS:	GREY CLAYEY SI		38	82
Casing installed:6_* Diam. from+1	ft. to84ft. ! BREY CUARSE SA	ND & SARLE BRAVEL		07
Liner installed Diam. from	ft. toft.			
Threaded Diam. from	ft. toft.			
Perforations: Yes NoX				
Type of perforator used	in.	RECEIVE		
perforation fromft to	<u> </u>			
perforation fromft to	ft.	DEC 2 1 1002		
Screens: YesX ND Manufarturer's NameSMITH		DEFT. OF ECOLOGY		
TypeSTAINLESSNodel No				
Diam6Slot_size20from64ft, t Diam51ot_sizefromft, t	toft.			
Course and the No. 1 Size Of (nravel			
Gravel placed fromit. to	ft.			
Surfact Seals Yes X No. To what depth?	? 18ft.			
Material used in sealBENTONITE				
Did any strata contain unusable water? Tes Type of water?Depth of stri	ato			•
Nethod of sealing strate off				• • •
Type :H.P				L 7 1
WATER LEVELS: Land surface elevation	<i>f</i> †		4 }	r 1 1
Static levelft below top of well	Date	NOUCHDED 20 1002 Comple	;; ted • DECENSER 4.	1992.
Artesian pressurelbs. per square inch Artesian water is controlled by	Date ; pork started ; }*sassessessessessessessessessessessessess		222572222222222222	= # 2 2 2 2
(cap,valve	,etc) : WELL CONSTRUCT	ION CERTIFICATION: d and/or accent responsibil	ity for construct:	ion of
WELL TESTS: Drawdown is apount water level is static level. Was a pump test made? Yes	No ! well, and it	s compliance with all Washi	ngton well constru	uctio
If yes, by whom?	; standarós.	Materials used and the info est knowledge and belief.	rmation reported a	90046
71210;Gal/#10 WIChTC Ura#00WB				
Recovery data (time taken as zero when pump to lovel ensured from well too to water level)	rned off) (water : NAME : <u>NA</u> : (Pe	rich well prilling inc. rson, Firm, Or Corporation)	{Type O	r Pri
Time Water Level Time Water Level Time	Water Level		10 99250	
	Rooress : <u>P.U</u>	A A A A A A A A A A A A A A A A A A A	<u>n (ULVY)</u>	
	(Signed)	(Hall Drillar)	Liscense No. :	<u>192</u>
Date of test Bailer test 12.0 mal./min. with 1 ft. drawd	own after _ 2brs Contractor's	(METT ALTITEL)		
Airtest gal./min. with stem set at	ft. forhrs Registration	- HARTENNIDIAN Bata - BE	CENBER 4. 1992.	
	* #1186.87	1 111111 <u>5999344994</u> 99555 995	and the second s	

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

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

VASHINGTON	NAPA	WELT
	TAT TT T T	

	Start Card N Well ID No.	NoW106223 ACW193
L	Water Permit No. Tax Parcel No.	

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1. OWNER: Name: PERRY & MARY PUGH Address:	P.O. BOX 92, EASTSOUND, WA 98245
2a. STREET ADDRESS OF WELL (or nearest address) . MT BAKER R	D 37_25_11+
3. PROPOSED USE: _X_ Domestic Industrial Municipal Irrigation Test Well Other DeWater	10. WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION Formation: Describe color, character, size of material and structure and show thickness of aquifers and the kind and nature of the material in each strating penetrated with at least one optim
4. TYPE OF WORK: Owner's number of well (if more than one)	each change of information.
Abandoned New Well _X_ Method: Dug Bored Deepened Cable _X_ Driven	_ MATERIAL FROM TO
Reconditioned Rotary Jetted	BROWN SILTY CLAYEY SAND & GRAVEL 0 6 BROWN SILTY SAND 6 14
5. DIMENSIONS: Diameter of Well6 inches. Drilled97 feet. Depth of completed well91 ft.	GRAY SANDY CLAY 14 39 GRAY TILL 39 65
6. CONSTRUCTION DETAILS: Casing installed:* Diam. from+1ft. to86ft. WeldedX* Diam. fromft. toft. Liner installed* Diam. fromft. toft.	GRAY ROCK 92 97 (HOLE BACKFILLED TO 91 FT WITH BENTONITE CHIPS)
Perforations: Yes No_X_ Type of perforator used	
Screens: Yes_XNo Manufacturer's NameJOHNSON	RECEIVED
Gravel packed: Yes No _X Size of gravel Gravel placed fromft. toft.	JUN 1 4 1999
Surface Seal: Yes X_ No To what depth?18ft. Material used in sealNEAT CEMENT Did any strata contain unusable water? Yes No X Type of water? Depth of strata Method of sealing strata off	DEPT OF ECULUGY
7. PUMP : Manufacturer's Nama	
8. WATER LEVELS: Land surface elevation	SALINITY TEST PPM
above mean sea level62	Work Started:3/11/99 Completed:3/23/99
Artesian water is controlled by (cap, valve, etc.)	WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this
 WELL TESTS: Drawdown is amount water level is lowered below static level. Was a pump test made? Yes No _X If yes, by whom?	well and it's compliance with all Washington Well construction standards. Materials used and the information reported above are true to my best knowledge and belief.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level) Time Water Level Time Water LevelTime Water Level	NAME :MARTEL WELL DRILLING
Date of test	(Signed) (Signed) License No. : _2483
Bailer test_1500_gal./DAY, with25_ft. drawdown after2_hrs. Airtestgal./min. with stem set atft. forhrs. Artesian flowg.p.m. Date Temperature of waterWas a chemical analysis made? Yes	/ Contractor's Registration Number :_MARTEWD044PA_ Date:
No _X_	(USE ADDITIONAL SHEETS IF NECESSARY)

	37-2W-14A
WATER WELL REPORT	CURRENT Notice of Internal No. (A) \75758
College γ Original & 1st copy Ecology 2nd copy owner, 3rd copy driller	Nonce of Intent No Contraction ALLA 523
Construction/Decommission ($x = m circle$) 149033	Unique Ecology Well ID Tag No
Construction	Water Right Permit No
of Intent Number	Property Owner Name Steve Prason
PROPOSED USE Domestic Industrial Municipal	Well Street Address Enchanted Farrast Rd
DeWater Irrigation Test Well Other	City Kastsome County San Juan
TYPE OF WORK Owner s number of well (if more than one) New Well Reconditioned Method Dug Bored Driven Deepened Cable Rotary Jetted	Location NE1/4 1/4 WIK 1/4 Sec 14 Twn 37 R C EWM
DIMENSIONS Diameter of well 6 inches drilled 380 ft Depth of completed well 62 ft	(s,t,r still REQUIRED) Long Deg Long Min/Sec
CONSTRUCTION DETAILS	Tax Parcel No 271912001
Casing \square Welded \square Diam from \square ft to \square fto \square ft to ft to \square ft to \square ft to \square ft to \square ft to	CONSTRUCTION OR DECOMMISSION PROCEDURE Formation Describe by color character size of material and structure and t kind and nature of the material in each stratum penetrated with at least one
Perforations Pes No	(USE ADDITIONAL SHEETS IF NECESSARY)
Type of perforator used	MATERIAL FROM TO
SIZE of perfsin byin and no of perfs fromft toft	<u> </u>
Screens HTes INO IK Pac Location	Pete 1 3
TypeModel No	EVIL A PL AL VIX CO
Diam <u>4</u> Slot Size <u>70</u> from <u>5</u> <u>6</u> ft to <u>6</u> <u>7</u> ft	Pack Soft S7 110
$\int \lim_{n \to \infty} S_{n}(x) ^{2} = \int $	$\frac{1}{(44)} \frac{1}{44} \frac{1}{44} \frac{1}{14} \frac{1}{14}$
Gravel/Filter packed $\frac{1}{25}$ I No Size of gravel/sand $\frac{1}{25}$ ft to $\frac{1}{25}$ ft t	Sant Struck 160 380
Surface Seal $\square \forall $	
Materials used in seal Bentondic	Hydrotacture 2 B
Did any strata contain unusable water? Yes No	Well caved in Z Days
Method of sealing strata off	later casing cut at
PUMP Manufacturer s Name	63 The Bortom or
Туре Н Р	Reation le - 4" We instal
WATER LEVELS. Land-surface elevation above mean sea level_59ft	with 10 ft of Screen B
Static leveltt below top of well Date	Brand Packed, Stell Cabina
Artesian water is controlled by CAP	Pulled to 25'
(cap valve etc.)	
WELL TESTS Drawdown is amount water level is lowered below static level Was a pump test made? \Box Yes \Box No. If yes, by whom?	
Yieldgal /min withft drawdown afterhrs	BECRIVED
Yieldgal /min 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	MAY <u>1</u> <u>3</u> <u>2004</u>
vell top to water level) Time Water Level Time Water Level Time Water Level	
	DEPT OF LOOLO
	DEPTOFLOOLO
Date of testgal /min_withft_drawdown afterhrs	DEPTOFLOOLO
Date of test	DEPTOPLOOLO
Date of test	Start Date 2-5-04 Completed Date 4-12-04
Date of test	$\frac{\text{DEPTOPLOOLOT}}{\text{Start Date} \overline{2 - 5 - 0 \ 4}} \text{Completed Date} \underline{4 - 12 - 0 \ 4}$ $\frac{1}{\text{Depted Date} \underline{4 - 12 - 0 \ 4}}{\text{Depted Date} \underline{4 - 12 - 0 \ 4}}$
Date of test	Start Date $\overline{2-5-04}$ Completed Date $\underline{4/-12-04}$ Description of this well, and its compliance with all exported above are true to my best knowledge and belief $1000000000000000000000000000000000000$
Date of test	Start Date <u>7-5-04</u> Completed Date <u>4-12-04</u> Start Date <u>7-5-04</u> Completed Date <u>4-12-04</u> possibility for construction of this well, and its compliance with all eported above are true to my best knowledge and belief Drilling Company <u>M Sawyer Dalla 3fung</u> Address <u>621</u> Obstruction fass Rd
Date of test	$\frac{\text{DEPT OF LOOLOT}}{\text{DEPT OF LOOLOT}}$ $\frac{\text{DEPT OF LOOLOT}}{\text{Start Date} = 2 - 5 - 04}$ $\frac{\text{Completed Date} = 4 - 12 - 04}{\text{Completed Date} = 2 - 04}$ $\frac{\text{Dept of Loolot}}{\text{Date} = 2 - 04}$ $\frac{\text{Completed Date} = 4 - 12 - 04}{\text{Completed Date} = 2 - 04}$ $\frac{\text{Completed Date} = 4 - 04 - 04 - 04 - 04 - 04 - 04 - 04 $
Date of test	Start Date $\overline{Z} - 5 - 04$ Completed Date $4 - 12 - 04$ Deprind Date $4 - 12 - 04$ Description of this well, and its compliance with all eported above are true to my best knowledge and belief Drilling Company $\underline{M} \\ \underline{Sawyer} \\ Dnlling \\ \underline{Sawyer} \\ Dnlling \\ \underline{Sawyer} \\ Dnlling \\ \underline{Sawyer} \\ Dnlling \\ \underline{State}, \\ \underline{State}$

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3	7-	2	W.	(31)
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Unique Ecology Well ID Tag No. <u>ALQ042</u> Water Right Permit No. <u>Supplemental to all EWU</u> Property Owner Name <u>Eastsound School District</u>		
Water Right Permit No. <u>Supplemental to all EWU</u> Property Owner Name <u>Eastsound School District</u>		
Property Owner Name Eastsound School District		•••••
Property Owner Name Eastsound School District	A GW Rights	
Well Street Address <u>Mt Baker Road @ Buck Park</u>		
City Eastsound County San Juan	2 EWM	
Location $\frac{11}{14}$ $\frac{11}{4}$ $\frac{11}{14}$ $\frac{11}{14}$ Sec $\frac{13}{15}$ 1 $\frac{10}{14}$ R	or	⊂ circle
Lat/Long (s, t, r Lat Deg Lat N	/in/Sec	
Still REQUIRED) Long Deg Long	g Min/Sec _	
Tax Parcel No. P271322002		
· · · · · · · · · · · · · · · · · · ·		
CONSTRUCTION OR DECOMMISSION I	PROCEDUR	E
Formation: Describe by color, character, size of material and str nature of the material in each stratum penetrated, with at least or	ructure, and the re entry for each	kind and h change of
information. (USE ADDITIONAL SHEETS IF NECESS	ARY.)	
MATERIAL	FROM	то
Brn. Silty Clay	0	17
Brn. Silty Sand	75	13
Gry y fine to fine Sand	118	158
City. V. Inic to The Salid	110	
LOG FOR EWUA - Eastsound School Well		
Prepared by CR Hydrogeologic Consulting		
		· · · · · · · · · ·
RECEN	/ED	·····
K The Income Marcal Marcal		
	2005 	
		,
·····		
	_	
Start Date 5/10/05 Completed	Date6/15	/05
	Location Int see Lat N Still REQUIRED) Long Deg Long Tax Parcel NoP271322002 CONSTRUCTION OR DECOMMISSION Formation: Describe by color, character, size of material and stil nature of the material in each stratum penetrated, with at least or information. (USE ADDITIONAL SHEETS IF NECESS MATERIAL Brn. Silty Clay Brn. Silty Clay Brn. fine to med. Sand Gry. v. fine to fine Sand LOG FOR EWUA - Eastsound School Well Prepared by CR Hydrogeologic Consulting 	Location

Washington well construction standards. Materials used and the information re-	eported above are true to my best knowledge and belief.
BDriller Engineer Trainee NangePfint) Randy Holt	Drilling Company Holt Drilling Boart Longyear
Driller/Engineer/Traince Signature	Address PO Box 1890
Driller or trainee License No. 1099	City, State, Zip Milton WA 98354
(IF TRAINEE,	Contractor's
Driller's Licensed No.	Registration No. BOARTLEOSS PZ Date 7-20-05
Driller's Signature	Ecology is an Equal Opportunity Employer.
Driller's Licensed No	City, State, Zip <u>Milton</u> <u>WA</u> <u>98354</u> Contractor's Registration No. <u>BOART LEOSS PZ</u> Date <u>7-20-05</u> 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.

APPENDIX B LOPEZ ISLAND MONITORING NETWORK WELL LOGS

File (Depa Seco Third	Dinginal with artment of Ecology and Copy - Owner's Copy I Copy - Driller's Copy	RT ENT Former W 11321 Water Right Permit No.
(1)	OWNER: Name Davis Aithen Ad	gross 124 Erisman Drive, Lopez Is, Wa 9506
(2) (2a)	LOCATION OF WELL: County San Juan Fisherm	an Bay Rd. 35-2W-22H
(3)	PROPOSED USE: Domestic D Industrial Dunicipal Irrigation Dest Well Dother DeWater	(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) New Well Method: Despend Dug Bored Reconditioned Cable Driven Decommission Botev Letted	one entry for each change of information. Indicate all water encountered. MATERIAL FROM Too South South 0 South 6
(5)	DIMENSIONS: Diameter of well SIXinches	Brown Clay 31 291 Stud amust 291 461
(6)	CONSTRUCTION DETAILS Casing installed: Casing installed: Casing installed: Diam. fromft. toft. Casing installed Diam. fromft. toft. Diam. fromft. toft. Diam. fromft. toft. Perforations: SIZE of perforationsin. byin.	
	Screens: Yes No K-Pac Location Manufacturer's Name	RECEI
	Grave/Finer packed: Ves XNO Size of grave/sand	MI, FEB 14 m
	Surface seal: Yes No To what depth? If: Material used in seal Brencho Auffed If: If: Did any strata contain unusable water? Yes No Type of water? Depth of strata Method of sealing strata off	
(7)	PUMP: Manufacturer's Name Goci Lds	
(8)	WATER LEVELS: Land-surface elevation above mean sea level	Work Started 1-26-00 Completed 1-27-00
(9)	WELL TESTS: Drawdown is amount water level is lowered below static level Was a pump test made? Yes Yield: hrs. Yield: hrs. Yield: hrs. Yield: hrs. Yield: hrs. Yield: hrs.	I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief. Type or Print Nam& gance R. Amothicense No. 1084 (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 Date of test	Trainee Name License No Drilling Company AEA Well Brilling (Signed) Agamie R Annott License No. 1084 (Licensed Driller/Engineer) Address [30] Ferry Rd., Lopez Is., Wa.
	Bailer test	Contractor's Registration Not ALDELD JSCJ Date 2-11-00 (USE ADDITIONAL SHEETS IF NECESSARY)

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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.

eparti econo	ment of Edology STATE OF Y	VASHINGTON 35	12/	15 k
hird C	Copy-Driller's Copy	Water Right Permit No		
I) (OWNER: Nome Lopez Chamber of Commerce	Address PO Box 65 Lopez We		<u>.</u>
2)	LOCATION OF WELL: County San Juan	SE SE A Sec 15 TS	3.5_N., R.	2_w.m
le)	STREET ADDDRESS OF WELL (or nearest address)	2 11d - Weeks Fring,		_
		(10) WELL LOG or ABANDONMENT PROCEDU	JRE DESC	RIPTION
)	DeWater Test Well Other	Formation: Describe by color, character, size of material a thickness of aquifers and the kind and nature of the material in	and atructure	, and show
0	TYPE OF WORK: Owner's number of well	with at least one entry for each change of information.	1 5704	
·,	(if more than one) Bored D	NATERIAL		1
	Despended C Cable M Driven C	Del an Alex - Some Gravel	+	24
		alue Silty Cley	24	57
5)	DIMENSIONS: Diameter of wellinches.	Sand Gravel WB	37	63
[Drilled <u>65</u> feet. Depth of completed well <u>65</u> ft.			ļ
6)	CONSTRUCTION DETAILS:			<u> </u>
-,	Casing installed: 6 Diam. from + 1 h. to 61 ft.		_ 	. <u> </u>
1	Welded 📓 ? Diam. from fl. to fl.			
ļ	Liner installedt. tot. tot.			<u> </u>
			<u> </u>	+
-	Type of perforator used			<u> </u>
	SIZE of perforations in. by in.			+
	perforations fromtt. tott.		_ 	┨────
	perforations from ft. to ft.		- -	
	perforations from ft. to ft.	BEORING.		+
		RECEIVED		+
	Manufacturer's Name		+	
	Type Stain wess Model No	JUN <u> </u>		+
	Diam. 5 Slot size 119 from 01 ft. to 92 ft.			1
	Diam Slot sizefromft. toft.	UEPT. UF ECOLOGY		
	Gravel packed: Yes No 25 Size of gravel			
	Gravel placed fromfl. tofl.			
	Surface seal: Yes No No To what depth?			
	Material used in seal Portland Ceptent			
	Did any strate contain unusable water? Yes No		_ 	
	Type of water? Depth of strate			<u> </u>
	Method of sealing strate off			
(7)	PUMP: Manufacturer's Name			
	Type:H.P			
(8)	WATER LEVELS: Land-surface elevation 30 th.		_ 	+
(u)	Static level ft. below top of well Date		_	
	Artesian preseure ibe, per square inch. Date	-	-	
	Arteelan water is controlled by(Cap. valve, etc.))	a 21 so completed for	-23	19.
<u>/0</u> \	VAREA I TESTS. Drawdown is amount water level is lowered below static level	Work startedte. competes		
(9)	West a pump test made? Yes No 20 If yes, by whom?	WELL CONSTRUCTOR CERTIFICATION:		
	Yield: gal./min. with ft. drawdown after hr	I constructed and/or accept responsibility for c	onstruction	of this we natendari
	N N N	and its compliance with all washington went Materials used and the information reported about the information reported ab	ove are tru	e to my be
_	weter level measured	knowledge and belief.		
	Recovery data (time taken as zero when pomp furned on) (when interesting the form well top to water level)	-1 211 Dail	ling	
	Time WaterLevel Time WaterLevel time waterLevel	NAME CONASON WEIL VIII	- Harris	E OR PRINT)
		PORALLO LOOPS	62	9626
_		- Address EU DOR JUE -		
		The the Kong the second star	No LS	30
	30 and inter the 7 to describe after 4 hr	(Signed) Lice		
	Bailer test gai, / min. with start and at h	Contractor's	,	(
		No. TO HASCOLOTY NY Date CF	<u> </u>	, 19

			Nye I Yi	14 F
le Original and First Copy with repartment of Ecology recond Copy — Owner's Copy hird Copy — Driller's Copy	VATER WELL REPOR STATE OF WASHINGTON	CT Appl Perm	/ Ication No	
1) OWNER: Nome Edward R Lan	ganback Storm 165	9 Remling Lan	e Bellow	ve 4
2) LOCATION OF WELL: County San	Juan	SE MW vs sec 19	TIS N. E	М .м.
earing and distance from section or subdivision corner	(10) WELL	1.0C·		
3) PROPOSED USE: Domestic M Industrial Irrigation () Test Well	Municipal (10) Willing Other Formation: Desc	ribe by color, character, size of	material and stru	ture, and
	show thickness c straium penetral	of aquifers and the kind and no ted, with at least one entry fo	ture of the materia r each change of j	il in each ormation.
i) TYPE OF WORK: Owner's number of well		MATERIAL	FROM	то
Deepened Cabl	Driven D Ipp So	<u></u>		<u></u>
Reconditioned [] Rota	ry D Jetted D Brown	0/74	29	34
DIMENSIONS: Diameter of well	inches Sana t	Counte	<u> </u>	110
Drilled	J.L. a Sand 4	arnvel	110	132
	Sand	<u></u>	132	134
b) CONSTRUCTION DETAILS:	136 QX840	/		134
Casing installed: "Diam. from	n. to Z	Blue	/.34	
Welded 97	n. to			
	· · · · · · · · · · · · · · · · · · ·			
SIZE of perforations in. by	in.			
perforations from ft.	to			
perforations from ft.	to ft			
Screens: Yes D No 🙀 Manufacturer's Name	No.			
Diam Slot size from			<u>ः ि</u> }	
Diam. Slot size from	ft. to ft.			
Gravel packed: Yes I No X Size of grav	vel;	DEC 1 5 15	83	
Surface seal: Yes No D fo what dept	ан — — — — — — — — — — — — — — — — — — —		<u>,</u>	
Did any strata contain unusable water?	Yes . No 🖉		الاستخباق	
Type of water? Depth of sta	rata			
Method of sealing strate off				
(7) PUMP: Manufacturer's Name				[
Type:	н.р			
(8) WATER LEVELS: Land-surface elevation	30			ļ
Static level 126 ft. below top of well I	Date:			ļ
Artesian pressure	Date			
Artesian water is controlled by	valve, etc.)			
(9) WELL TESTS: Drawdown is amount w	vater level is	7 20 . 88	Bay F	1083
Was a numo test made? Yes in No in If yes, by whor	Work startedie			
Yield: gal./min. with ft. drawdown	after hrs. WELL DRI	ULER'S STATEMENT		
n <u>n</u> n	This well	was drilled under my juri	sdiction and this belief.	report i
11 14 <u>H</u>	d off) (water level			
Recovery data (time taken as zero when pump turne measured from well top to water level)	NAME S	anduan Di	11013	
Time Water Level Time Water Level Tim	is Water Level	(Person, firm, or corporatio	n) (Type or :	ريو ريو
	Address	12 B z 329	× 40pt	<u>, K</u> n
		a. In-		-
Date of test	[Signed]	DAY OT LA	mason	ı
Bailer test	n afterhrs.	(Well Dr	mer) -	-
		A 11 (P 1)		

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File Original and First Copy WATER WI with Department of Ecclogy Second Copy-Owner's Copy Third Copy-Dailogic Copy	HINGTON 35-2-15 B Start Card No: W054185
1. OWNER : Name: RON & JENNIFER MENG	Weil 11 No Water Permit No P.O. BOX 88. LOPEZ. WA 98261
2. LOCATION OF WELL : CountySAN JUANNW_ 1/4	1/4 Sec _15_ T _35_ N., R _2_ W.M.
2a.STREET ADDRESS OF WELL (or nearest address)	10. WELL LOG OF ABANDONMENT PROCEDURE DESCRIPTION
<pre>Irrigation Test Well Uther DeWater 4. TYPE OF WORK: Owner's number of well (if more than one)</pre>	Formation: Describe by color, character, size of material and structure and show thickness of aquifers and the kind and nature of of the material in each stratum penetrated, with at least one entry for each change of information.
AbondonedNew WellMethod: DugBored DeepenedCable _XDriven ReconditionedRotaryJetted	MATERIAL FROM TO
5. DIMENSIONS: Diameter of well6inches. Drilled150feet. Depth of completed well150ft 6. CONSTRUCTION DETAILS: Casing installed:6 Diam. fromft. to150_ft. WeldedX Diam. fromft. toft. Liner installed Diam. fromft. toft. Threaded Diam. fromft. toft.	BROWN SANDY LOAM01BROWN SANDY GRAVEL14BROWN SANDY SILT4BROWN SANDY SILT38BROWNISH GRAY TILL38BROWNISH GRAY TILL (NORE GRAVEL)137137147BROWN MEDIUM GRAVEL (H2O)147
Perforations: Yes No X	R
Screens: Yes No X	OFPT. OF ECOL
Gravel packed: YesWoX Size of gravel Gravel placed fromft. toft.	DEY
Surfact Seal: Yes X No To what depth? 18ft. Material used in seal BENTONITE Did any strata contain unusable water? Yes No X No X Type of water? Depth of strata Method of sealing strata off Depth of strata 7. PUMP : Manufacturer's Name H.P	
Static levelft below top of well Date 9/21/95	Work started : SEPTEMBER 15, 1995. Completed : SEPTEMBER 21, 1995
Artesian water is controlled by	WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.
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 : <u>MARTEL WELL DEILLING INC.</u> (Person, Firm, Or Corporation) (Type Or Print) Address : P.O. Ref 905, FEIDAY MARBOE, WA 98250.
Date of test	(Signed) Alax and License No. : 0222 (Well Driller) Contractor's Registration Number : MARTEND12107 Date : SEPTEMBER 26, 1995.
Artesian flow g.p.m. Date Temperature of water Was a chemical analysis made? Yes No	(USE ADDITIONAL SHEETS IF NECESSARY)

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

Top of the World Well	1 35.0-23 N Parce ($^{\pm}$ 350	人からひひ! え 3 300 4	{ /
	Start Card No	01382	7
The Original and First Copy with LUN UUUWAUER WE Department of Ecology Record Copy — Owner's Copy Third Copy — Driller's Copy	LL REPORT UNKQUE WELL 1.D. # VASHINGTON Weiter Right Permit No	ACJ 9	42
1) OWNER: Norro Andrew Marin_ At	P.O. Box 577 Lopez Is., Wa	. 9826	
2) LOCATION OF WELL: County San Juan County	<u>. SW 1/4 SW 1/4 Sec 23 T. 3</u>	<u>35 n. r.</u>	2
24) STREET ADDRESS OF WELL (or nouver models)		DESCRIPTIC	
PROPOSED USE: A Domestic Industrial Municipal Infigation DeWater Test Well Other	Formation: Describe by color, character, size of material and structure, an and the kind and nature of the material in each stratum penetrated, with chance of information.	d show thickness at least one of	s of aquifers itry for each
4) TYPE OF WORK: Owner's number of well (if more than one)	MATERIAL	FROM	то
Abendoned D New well 🙀 Method: Dug D Bored D	Too soil	0	1
Reconditioned C Rotary S Jetted C	Clay, Gravel, Brown Sand		12
8) DIMENSIONS: Diameter of well (2 inches.	Clay Gray, Gravel, Sand	12	<u>29</u>
Diller 289 feet Depth of completed well 289 tt.	Sand, Gravel, Clay Gray	29	105
	- Sand, Silt, Clay Bhay 9	105	204
8) CONSTRUCTION DETAILS:	Gravel, Sand, Clay Brown	12091	276
Cesing Installed: Diam. from + 1ft. toft.	Gravel, Sand	1276	289
Weided 20 Diam. fromft. toft.			
Threaded Diam. fromft. toft.			
Type of performance used			
SiZE of perforations in. byin.			
perforations fromft. toft.			
perforations fromft. toft.			
perforations fromft. toft.			
	P.		
Tune Model No.			
Diem Sictaize fromt. tot.	JANDR ED		
Diam Sintaiza from ft. toft.	DEF. 28		
	<u> </u>		
Surface seal: Yes A No . To what depth? R.			
Material used in seal <u>BENTONITE</u>			
Did any strata contain unusable water? Yes 🗌 No 🔀			
Type of water? Depth of strats			
Method of sealing shata off			
Type: H.P.			
	Work Started 12-8-97 se Completed 12	-22	
to, which a 173 above mean sea level to			
Static level T. below top of well Date	WELL CONSTRUCTOR CERTIFICATION:		
Artesian water is controlled by	constructed and/or accept responsibility for construct	ion of this we	ell, and its
(Cap, valve, etc.)	compliance with all Washington well construction stands the information reported shows are true to my best knowledge	vos. Materials edge and beik	supped almo. M.
(9) WELL TESTS: Drawdown is amount watar level is lowered below static level		•	
Was a pump test made? Yes 🔯 No 🗌 If yes, by whom? <u>A E A-</u>	NAME AEA Well Swilling		
Yield: gal./min. with ft. drawdown after hra		 	1.00-
11 II I	Address Kt. a 130x 3246 2000	لما ، حد له	<u>10, 10</u> 0
и р н р	isional Lynnie R anat us	ense No. <u>//</u>	284
Recovery data (time taken as zero when pump turned of) (water level measured from well	(WELL DRULER)		
Time Water Level Time Water Level Time Water Level	Contractor's		
	- Registration		109R
			<u></u>
	- (USE ADDITIONAL SHEETS IF NECE	SSARY)	
Date of test			
Baller testgal./min. withn. drawdown amernn	Ecology is an Equal Opportunity and Affirmative Activ	on employer	For spe-
Ainestigel./nin, was seen en etit. toit.	cial accommodation needs, contact the Water Resou	rces Progran	n at (206)
Temperature of water Was a chemical analysis made? Yes 🕅 No 🗌	407-6600. The TDD number is (206) 407-6006.		
	1		

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Contract of Coology Copy Roberts STATE OF	MASSINGTON Permit No.	1.1	A.
NAMER: Name REMIE N. CAUSSACO	- Address P.A. Bex ZZA LATER his	98	261
ACATION OF WELL: County	WHY MIY Sol T		P/w
IN POPOSED USE: Dementic V Industrial C. Municipal	(10) WELL LOG:		Yay
Irrigation Test Well Other	Formation : Describe by color, character, size of materi	al and str	icture. G
	show thickness of aquifers and the kind and nature of stratum penetrated, with at least one entry for each	the mater change of	ial in ees
(4) TYPE OF WORK: Owner's number of well (If more than one)	MATERIAL	FROM	TO
New well D' Method: Dug D Bored	Nocky Fill	0	2
Reconditioned Rotary Jetted	Bock / Glay, brown	2	7
	Class Blue	2	15
) DIMENSIONS: Diameter of well pinches.	Clay Stone	15	58
Drilled	Sand & silit	58	82
CONSTRUCTION DETAILS:	Sand, Coarse	82	97
Casing installed: 6 +116	Grave	27	125
Threaded D "Diam from the to	V	-	0,40
Welded Diam. from ft. to ft.			
Perforations: Yes No D			
Type of perforator used			-13
SIZE of perforations in. by in.			
perforations from the to the fit			
perforations from ft. to ft.			
			1.11
Screens: Yes No D			1.5
Manufacturer's Name			1
Type			
Diam. Slot size from from ft. to ft.			
Diam. Stot size from ft. to ft.			
Aravel packed: Yes D No D Size of gravel			
Gravel placed from			
Surface seal: when the second la			
Material used in seal AATIVE CLAV	1		
Did any strata contain unusable water? Yes No			
Type of water? Depth of strata			
Method of sealing strata off			
PUMP: Manufacturar's Name			
Type: HP			3
WATER LEVELS: above mean sea level 150 ft.			
tic level 10 10 st. below top of well Date 5/23/88			
erian pressure			
(Cap, valve, etc.)			
Drawdown is amount water level is			
Iowered below static level	Work started // 19 19 Completed		19
s a permp test made? Yes No K If yes, by whom?	WELL DRILLER'S STATEMENT		13
id: gal/min. with Et. drawoewn arter hrs.	TTALAS STATESTALING O GARAGEMENT	1.	
	This wall was drilled under my jurisdiction :	and this	report b
	the set and sets of my anow total and bellet.		
povery cals (time taken as zero when pump turned ed) (writer level measured from well top to water level)	Sin Jucan Drillo	5	
fime Water Level Time Water Level Time Water Level	(Person, frm, er corperation) (Type or p	rint)
	Addres		
a of test	[Signed]		
som Date 5/23/RR	(Weil Drilliar)	170	0
inserature of water	License No.	47	, 19 8
	Earl R. Thomas		
	HETTS IF NECESSARY)	÷	
(032 ADDITIONAL &	# 0497	~	-
1 (777 (777)	Rt. 2 Box 329	L	
			· · · ·

(1) OWNER: Name E.S. GREENE	Address LOD.= 2 15 LAND WASI	4	
(1) LOCATION OF WELL MATTER SUN (12)	RIT AU IT	25 4	-
(2) LOCATION OF WELL: County 220 Cherry	-NR / Sec. 2 TI	22. N. R.	#**
Bearing and distance from section or subdivision corner (APP/PL) 3.8	25 FI VY, JOPTIS; OF NE COMP	X504	4
(3) PROPOSED USE: Domestic Defindustrial D Municipal	(10) WELL LOG:	7736	_
Irrigation 🗌 Test Well 🗌 Other 🔲	Formation: Describe by color, character, size of mate	rial and stru	ct
	show thickness of aquifers and the kind and nature o stratum penetrated, with at least one entry for each	f the materi	al
(4) TYPE OF WORK: Owner's number of well (if more than one)	MATERIAL	FROM	F
New well 😰 Method: Dug 🗌 Bored 🗌	Blu Mais	0	H
Beconditioned Batary Jetted	Neur Part	170	H
	- March I can	20	ť
(5) DIMENSIONS: Diameter of well (Jane Muchy un	50	-
Drilled 12 Art. Depth of completed well 15.8 rt.	- Macapon + Mohelans -	11	1
	Computer Macapton	105	-
(b) CONSTRUCTION DETAILS:	- the sond + grant	111	1
Casing installed: Diam. from ft. to ft.	Mary dand	119	1
Threaded Diam. from ft. to ft.	Male to course source	131	-
Welded D	- Walter Mexima		
Perforations: No. 7			L
Type of perforator used			L
SIZE of perforations in. by in.		_	L
perforations from ft, to ft.		_	L
perforations from ft. to ft.		_	L
perforations from ft. to ft.			
Screens: Yes the No T			L
Manufacturer's Name CCOK		-	L
Type Stainless Model No. WW			
Diam. 6 Slot size 14 trom 123 tt. to 123 tt.			
Diam Slot size from ft. to ft.			
Gravel neeked:			
Completend tors No 2 Size of gravel:			
Graves placed from			Γ
Surface seal: Yes No - To what depth? ft.			Γ
Material used in seal			Γ
Did any strata contain unusable water? Yes 🗌 No 🗌			
Type of water? Depth of strata			
Method of sealing strats on			I.
(7) PUMP: Manufactures's Name Bedit SuB.	DR.11 CPURAtik		
Type: SUB HP/HP			
	STANKY FREEMAN	Ino	6
(8) WATER LEVELS: Land-surface elevation above mean sea level		1	7
Static level 15 C ft. below top of well Date 6.5-69		0	
Artesian pressure			
Artesian water is controlled by			
			-
(9) WELL TESTS: Drawdown is amount water level is lowered below static level	1. 25 total	2-5	-
Was a pump test made? Yes D No 2-If yes, by whom?	work started	2 d	****
Yield: gal./min. with ft. drawdown after hrs.	WELL DRILLER'S STATEMENT:		
u u u u	This well was drilled under my jurisdiction	and this	re
0 0 0 0	true to the best of my knowledge and belief.		
Recovery data (time taken as zero when pump turned off) (water level	Jaile and de la	2	
measured from well top to water level)	NAME HE INFUER DR. MINGC	6 .	
THUE Mater Pener Truce Mater Pener Truce Mater Pener	(Person, firm, or corporation)	(Type or pr	rir
	Address 1.424 LAG WIN BLUE	INE	
	Pintani Ilaite		
Data ad tast 6-5-1969	all mero		
aller text 20 gal/min with O ft. drawdown attar	[Signed] V.L. II Eget IC_		
new web and the second state of the second sta	(Weit Driller)		

(USE ADDITIONAL SHEETS IF NECESSARY)

× 3

He Original and First Copy with partment of Ecology recond Copy – Owner's Copy hird Copy – Driller's Copy	ASHINGTON Water Right Permit No.	AEC	760
OWNER: Name LATTY MORROW Addre	\$ 1.0. Box 446 Lovez Wa.	9826	1-041
LOCATION OF WELL: COUNTY SAN JUAN	SW1/4 SW 1/4 Soc 14 T. 3	5NN.R	ZVWM
a) STREET ADDRESS OF WELL (or nearest actives) fish or when S	Bay Rd.	2514	
	(10) WELL LOG or ABANDONMENT PROCEDURE D	ESCRIPTI	ON
beWater Test Well Other	Formation: Describe by color, character, size of material and structure, and and the kind and nature of the material in each stratum penetrated, with a change of information.	show thicknes at least one e	is of aquiter ntry for eac
4) TYPE OF WORK: Owner's number of well (If more than one)	MATERIAL	FROM	то
Abandoned New well M Method: Dug Bored Deepened Cable Driven Reconditioned Rotary Jetted	SANDY LOAM Tan clay	17	-2
5) DIMENSIONS: Diameter of well inches.	Brw Sand	415	47
Drilled <u>125'</u> teet. Depth of completed well <u>125</u> tt.	ISTUC Clay	51	5.2
6) CONSTRUCTION DETAILS:	Rive clay SZ	52	69
Casing Installed: 6 Diam. from + 2 ft. to - 120 ft.	illuc (lay] blade)	29	83
Welded	Blue Sand-	73	27
Threaded Diam. tromt. tot.	Blue clay	87	120
Perforations: Yes No &	Water Bearing (OURSE Grave)	120	162
Type of perforator used			
perforations fromft. toft.			
perforations fromft. toft.			
perforations fromft. toft.			
Gravel packed: Yes No No Size of gravel rGravel placed from ft. to ft. to Surface seal: Yes No To what depth? ft. Material used in seal BCATOTIC No ft. Did any strata contain unusable water? Yes No No			
Type of water? Depth of strata			-
(7) PUMP: Manufacturer's Name			
(9) WATER EVELS- Land-surface elevation CI	With transformers at Will I to complete JUN	410	19 4
Static level <u><u>40</u> Addiag processon Addiag pro</u>	WELL CONSTRUCTOR CERTIFICATION:	1.1.2	
Artesian water is controlled by (Cap, valve, etc.)	I constructed and/or accept responsibility for construction compliance with all Washington well construction standard	n of this w ds. Material	ell, and it s used an
(9) WELL TESTS: Drawdown is amount water level is lowered below static level Was a pump test made? Yes No X If yes, by whom?	NAME M. SAWY C/ Dr. 11. 200 BY PERSON, FIRM, OR CORPORATION, AYPEC	Punt A PRINT)	2 500
11 N N N	Address HCI Box 160 Olica	wh 7	1827
11 11 11 11 11 11 11 11 11 11 11 11 11	(Staned) Mar Aum Lice	nse No. 2	305
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	(well priller) Contractor's		
	No. MEAWYDSCSSNIS Date 8-2		_ 19 9
Date of test	(USE ADDITIONAL SHEETS IF NECES	SARY)	
Bailer testgal./min. withft. drawdown afterhrs. Airtestft. forhrs.	Ecology is an Equal Opportunity and Affirmative Actio	n employe	r. For sp am at (20

1

P 206.329.0141 | F 206.329.6968 2377 Eastlake Avenue East | Seattle, WA 98102

P 206.842.3202 | F 206.842.5041 8150 West Port Madison NE | Bainbridge, WA 98110

P 360.570.8244 | **F** 360.570.0064 1627 Linwood Avenue SW | Tumwater, WA 98512

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