INLAND EARTH SCIENCES

October 31, 2016

Project 1609-0010-001

Mr. Ruurd Veldhuis
Manager
Wind Mill Estates
650 Hornby Road
Grandview, WA 98930

Public Services

OCT 31 2016

Vern Gary Don Lynn
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CUP16-019

SUBJECT: **Hydrogeologic Impact Assessment**
Fryslan Ranch Calf Yard
Wind Mill Estates
Mabton, Washington

Dear Mr. Veldhuis:

Inland Earth Sciences Corporation (IES) is pleased to present Wind Mill Estates (the "Client") this Hydrogeologic Impact Assessment Report (the "Assessment") for the proposed Fryslan Ranch Calf Yard (the "FRCY" or the "Facility"). The Client operates concentrated animal feeding operations (CAFO) that provide replacement cows for four dairies owned by the Client. All Client CAFOs are located within the southeastern Yakima County.

The Client desires to move and consolidate the young calf (70 to 150-pound range) and elementary calf (150 to 300-pound range) operations to the Facility, to be sited approximately 2½ miles southeast of Mabton, Washington. The Facility is located in (1) the southwest quarter (SW¼) of the southwest quarter (SW¼), of Section 8, Township 8 North, Range 23 East, Willamette Meridian, Yakima County Parcel No. 230808-33001 and (2) the northwest quarter (NW¼) of Section 17, Township 8 North, Range 23 East, Willamette Meridian, Yakima County Parcel No. 230817-21001. Currently, the young and elementary calf operations are distributed over four separate locations of various acreage located west-northwest of Grandview, Washington. Locations of the four current operations and proposed Facility are presented on Figure 1.

PURPOSE AND METHODOLOGY

The purpose of this Assessment is to:

- Evaluate current water use by the four existing calf operations, including pumping rates, annual consumption, and identifying the hydrogeologic unit(s) supplying this water;
- Evaluate projected water use at the proposed Facility, including pumping rates, annual consumption, identifying the hydrogeologic unit(s) supplying this water, and examining possible impacts to surrounding wells, and;
- Identify the net effect, if any, on the groundwater system in the lower Yakima Valley due to relocation and consolidation of calf operations to the Facility.

A number of sources were used to compile information related to geology, hydrogeology, and well construction as related to the current operations, the Facility, and the area surrounding the Facility. The sources include:

Hansen, Jr., A. J., Vaccaro, J. J., and Bauer, H. H., 1991, *Ground-Water Flow Simulation of the Columbia Plateau Regional Aquifer System, Washington, Oregon, and Idaho*: U.S. Geological Survey Water-Resources Investigations Report 91-4187, 81p.

Jones, M.A., Vaccaro, J.J., and Watkins, A.M., 2006, *Hydrogeologic framework of sedimentary deposits in six structural basins, Yakima River Basin, Washington*: U.S. Geological Survey Scientific Investigations Report 2006-5116, 24 p.

Jones, M.A., and Vaccaro, J.J., 2008, *Extent and depth to top of basalt and interbed hydrogeologic units, Yakima River Basin aquifer system, Washington*: U.S. Geological Survey Scientific Investigations Report 2008–5045, 22 p., 5 pls.

Vaccaro, J.J., Jones, M.A., Ely, D.M., Keys, M.E., Olsen, T.D., Welch, W.B., and Cox, S.E., 2009, *Hydrogeologic framework of the Yakima River basin aquifer system, Washington*: U.S. Geological Survey Scientific Investigations Report 2009–5152, 106 p.

Washington State Department of Ecology Washington State Well Log Viewer; https://fortress.wa.gov/ecy/waterresources/map/WCLSWebMap/default.aspx

Information gathered from these sources combined with physical measurements and observations made at the facility were used to assess the hydrogeologic conditions and develop conclusions regarding the geology, hydrogeology, current water use, and proposed water use for the current operations and proposed Facility. This assessment and conclusions are presented in the following sections.

CURRENT OPERATIONS

Currently, the Client's young and elementary calf operations are distributed at four separate locations of various acreage located west-northwest of Grandview, Washington (Figure 1). Approximately 8,200 calves (on average) are being raised at the four sites at any given time. These four operations are designated for purposes of this assessment as:

- The "Calf Ranch" operation, located near 771 Hornby Road, Grandview Washington. The Calf Ranch site typically holds approximately 5,000 calves. The calves are supplied water by the well designated "CRW". The location of the well is depicted on Figure 2A and 2B; well specifics are presented in Table 1.

- The "Commodity Barn" operation, located near 180 Wasson Road, Grandview Washington. The Commodity Barn site typically holds approximately 800 calves. The calves are supplied water by the well designated "CBW". The location of the well is depicted on Figures 2A and 2B; well specifics are presented in Table 1.

- The "Van Boven Feed Lot" operation, located near 731 Den Boer Road, Grandview Washington. The Van Boven Feed Lot site typically holds approximately 1,500 calves. The calves are supplied water by the well designated "VBFL". The location of the well is depicted on Figures 2A and 2B; well specifics are presented in Table 1.

- The "Walters Dairy" operation, located near 731 Den Boer Road, Grandview Washington. The Walters Dairy site typically holds approximately 900 calves. The calves are supplied water by the wells designated "WD1" and "WD2". The location of the wells are depicted on Figures 2A and 2B; well specifics for WD1 are presented in Table 1.

Based on analysis of the stratigraphy presented in the logs for wells CRW, CBW, VBFL, and WD1 (Appendix A), all four wells are completed in unconsolidated sedimentary deposits (Jones *et al*, 2006) generally consisting of alluvial, alluvial fan, loess, terrace, dune sand, Touchet, Missoula flood and Ringold Formation deposits. Well depths range from 65 to 125 feet below ground surface (bgs) with depth to water prior to pumping ranging from six to 40 feet bgs. Stratigraphy is described by the logs as primarily sand with sandy and gravely clays and occurrences of broken basalt.

These unconsolidated deposits form important unconfined water-bearing units (Vaccaro *et al*, 2009), as well as semiconfining to confining units. Estimates of effective lateral hydraulic conductivity (K_H) for the complete thickness of the basin-fill deposits ranged from 0.02 to 150,000 feet per day (ft/d). This large range in estimated values is due to the large variation in grain size, depositional regimes, and age of the deposits. The deposits include shale, sandstone, clay, sand, gravel, and cobbles.

Based on information supplied by the Client, calculations of pumping rate and total water consumed on an annual basis can be made for the four facilities; this information is presented in Table 2. Using a per calf consumption of three gallons per day (gpd) in the winter months (October to March) and 4 gpd in the summer months (April to September) an annual average total consumption of approximately 32 acre-feet (ac-ft) for the four facilities is estimated. Estimated pumping rates range from 17 to 23 gallons per minute (gpm) based on the season. Summarizing, approximately 32 ac-ft per year is withdrawn from the shallow, unconsolidated deposits located west-northwest of Grandview by these operations at pumping rates ranging from 17 to 23 gpm.

PROPOSED FACILITY

All young and elementary calves from the current four operations would be relocated to the Facility. Calving operations at the existing operations would be discontinued. The Facility would draw water from well BIF-430, situated in the southwest quarter (SW¼) of the southwest quarter (SW¼), Section. 8, Township 8 North, Range 23 East, Willamette Meridian, and located approximately at latitude 46.1858177, longitude -119.9661942 (NAD83). The Facility, the immediate surrounding area, and well BIF-430 is depicted on Figures 3A and 3B.

Well BIF-430 was constructed and is proposed to be used under the livestock exemption provided as part of the Groundwater Permit Exemption (RCW 90.44.050). Some water will be used for mixing and cleaning of new-born formula and feedings equipment. This accessory use of water related to watering livestock is

claimed to be part of stock watering purposes. Water withdrawals are anticipated to be approximately 30 ac-ft per year (approximately 25,000 gpd), at an average anticipated pumping rate of 18 gpm.

Well BIF-430 is an 8-inch diameter well drilled to a depth of 370 feet bgs. The well log is attached as part of Appendix B. The Well is constructed of welded steel casing. The well is classified as "open pipe"; no screen or perforations were installed as part of the casing. As such, all water is withdrawn from the surrounding formation at 370 feet bgs. The well stratigraphy encountered sediments from ground surface to 118 feet bgs, basalt from 118 to 259 feet bgs, sandstone and clay from 259 to 322 feet bgs, and basalt and broken basalt from 322 to 370 feet bgs. Depth to water in well BIF-430 was recorded at 218 feet bgs at the time of drilling. Depth to water in BIF-430 was measured every 30-minutes from September 21 to September 26, 2016 using a vented pressure transducer and datalogger (INW AquiStar® PT2X). Depth to water at the beginning of the measurement period was 227.80 feet bgs, depth to water at the end of the period was 227.67 feet bgs. During the measurement period, the water level in BIF-430 fluctuated by less than ±0.1 foot from measurement to measurement ("flat-line"), indicating a nearly stable potentiometric surface.

The Washington State Department of Ecology (Ecology) Well Log Viewer was used to evaluate other wells in the surrounding area. The purpose of this evaluation was to gain knowledge of the stratigraphy surrounding the proposed production well and determine what wells may be impaired by the proposed groundwater withdrawal from well BIF-430. A search radius of approximately 1.5 miles from well BIF-430 was selected. Approximately 27 well logs were found for the investigation area; however, it is likely that additional wells are present for which well logs were not submitted or were not recorded in the Ecology database. These wells are summarized on Table 3 and depicted on Figures 3A and 3B. The wells were examined for distance from well BIF-430, completion depth, depth-to-water prior to pumping, and reported stratigraphy. The completion depth combined with the depth-to-water prior to pumping was used to evaluate the Total Head of the well. Evaluation of the Total Head combined with analysis of the stratigraphy can serve to identify the production formation of the well.

Three main water-producing formations are present within the area of well BIF-430: (1) the unconsolidated sedimentary deposits described in the Current Use section of this Assessment; (2) the Saddle Mountain Basalts underlying these unconsolidated sedimentary deposits, and; (3) the Wanapum Basalts underlying the Saddle Mountain Basalts and associated Mabton Interbed. An overview of regional stratigraphy in the Yakima Basin is presented in Figure 4. A brief description of the Saddle Mountain, Mabton, and Wanapum formations is presented below:

Saddle Mountains Basalt

The Saddle Mountain Basalt is the youngest and least extensive of the basalt units (Jones and Vaccaro, 2008). The unit is located within the southeast and south-central part of the Yakima River Basin; the unit is typically hydraulically confined and most of the unit lies beneath the sedimentary basin fill deposits. The Saddle Mountains Basalt (SMB) is composed of at least 13 named flows and 5 interbed members. The SMB flows' texture and composition differ greatly throughout its extent. The sedimentary interbeds contained within the SMB are common, up to 50 feet thick, and range in composition from clay to sand and gravel. The SMB also may contain some of the younger basalts present in the area.

Mabton Interbed

The Mabton Member of the Ellensburg Formation is the sedimentary interbed between the overlying SMB and the Wanapum Basalt (Jones and Vaccaro, 2008). The Mabton is located within the southeast and south-central part of the Yakima River Basin. The unit is hydraulically confined, with most of the unit present beneath the Saddle Mountains Basalt. The Mabton generally consists of clay, shale, claystone, clay with basalt, clay with sand, and sandstone, but also may contain small amounts of sand and sand-and-gravel.

Wanapum Basalt

The Wanapum Basalt is located within the northeast, central, south, and southeastern part of the Yakima River Basin (Jones and Vaccaro, 2008). The Wanapum Basalt is hydraulically confined; most of the Wanapum Basalt lies beneath the basin-fill deposits, Saddle Mountains unit, or Mabton unit. The Wanapum Basalt contains predominantly the basalt and interbed members associated with the Wanapum Basalt. The Wanapum Basalt is composed of at least six named flows and two interbed members. The Wanapum Basalt flows are generally medium-grained to moderately plagioclase-phyric, olivine bearing, and relatively high in iron and titanium oxides. The clay to sand-and-gravel sedimentary interbeds in the Wanapum Basalt are less common than those in the SMB and generally are only a few feet thick. But the Wanapum unit also may contain some of the younger basalt, particularly in areas along the margins of the unit extent and where the younger basalt abuts or overlies the Wanapum Basalt.

The proposed production well (BIF-430) and seven of the wells in the surrounding area were determined to be completed in the Saddle Mountain Basalt formation (Table 3). This determination is based on analysis of the stratigraphy as presented in the well logs in conjunction with total head as recorded in the well prior to pumping. Wells completed in the Saddle Mountain Basalt exhibit a total head ranging from 125 to 300 feet. Eighteen of the wells were determined to be completed in the unconsolidated sediments, based on the same analysis criteria. Total head in the sedimentary wells ranges from 33 to 95 feet. Two wells were determined to be completed in the Wanapum Basalt. Total head in the Wanapum Basalt ranges from 469 to 487 feet.

Figures 3A and 3B depict Well BIF-430 and surrounding wells as available in the Ecology well log database. Of the seven wells in the area surrounding well BIF-430 that completed are in the Saddle Mountain Basalt (Figure 3A and 3B), one well (HARRIGAN) lies between ½ and ¾-mile of the production well, two wells (ALC-037 and BHT-360) lie between ¾ and 1-mile of the production well. Four wells (AHK-705, APK-129, BHT-361, and BIF-445) are located greater than one mile from the production well (Table 3). Well AHK-705 is an irrigation well with a certificated groundwater right (G4-27178C); no other wells have an associated water right.

Effects of groundwater withdrawal from well BIF-430 are expected to be limited to the Saddle Mountain Basalt due to the thickness and confined nature of the formation; there is a very low probability that pumping effects would extend to either the sedimentary or Wanapum Basalt units. Hydraulic characteristics vary greatly within and between the individual basalt flows, members, and hydrogeologic units (Vaccaro *et al*, 2009). Upper zones of the flows were exposed to weathering processes and were broken by subsequent flows, resulting in the formation of conductive "flow tops." These flow tops, when

combined with the base of the overlying basalt flow, form interflow zones that generally exhibit high lateral hydraulic conductivity. In general, the flow tops are brecciated and (or) vesicular and the flow bases are brecciated and may contain pillow complexes if the basalt was extruded within or flowed into water. The interflow zones are separated by the less transmissive entablature and colonnade in which the fractures are typically vertically oriented. The fractures are a result of differential contraction during cooling of basalt flows and of later folding and faulting. The greatest density and lowest lateral hydraulic conductivity generally occurs in the interior or middle of a basalt flow, typically the entablature.

Lateral hydraulic conductivity (referred to as K_H) is a measure of a material's ability to transmit water laterally (Vaccaro *et al*, 2009) typically expressed in units of feet per day (ft/d). Values of K_H can be estimated from specific-capacity data reported on drillers' logs, or determined from aquifer tests or groundwater flow modeling. The lateral hydraulic conductivity of the Saddle Mountain Basalt is estimated to range from 0.007 to 3,200 ft/d (Vaccaro *et al*, 2009), but results from previous studies indicate that the median is about 1 to 2 ft/d with a mean of approximately 1.3 ft/d (Hansen *et al*, 1996). Data from Saddle Mountain Basalt well tests indicated a mean K_H of 18 ft/d in Horse Heaven Hills area, and 10 ft/d in Hanford area (Vaccaro *et al*, 2009). The transmissivity (T) of the Saddle Mountain Basalt is typically estimated at 5.3×10^{-3} ft²/s, or 465 ft²/d (Hansen *et al*, 1996).

The storage coefficient (S) is a measure of a unit's ability to store and release water, and is defined as the volume of water that a unit will absorb or release from storage per unit surface area per unit change in head (Vaccaro *et al*, 2009). It is expressed in units of cubic feet per cubic feet, a dimensionless quantity. Storage coefficients for a confined aquifer can range from 5×10^{-5} to 0.005. Estimated median values for Saddle Mountains storage coefficient, as determined based on specific storage, was 2×10^{-5} (Vaccaro *et al*, 2009) to 2.5×10^{-3} (Hansen *et al*, 1996).

Using the Theis Equation for a well pumping from a confined aquifer, the amount of drawdown produced at a given distance through continuous pumping of the well at a constant rate can be estimated. A full description of the Theis Equation, including all assumptions for use of this equation, is presented in C.W. Fetter's *Applied Hydrogeology* (Fourth Edition, 2001, Prentice Hall). First, a dimensionless constant, *u*, is calculated through the following equation:

$$u = \frac{r^2 S}{4Tt}$$

Where:
- r = **Distance** from the pumping well
- S = **Storage coefficient** of the formation
- T = **Transmissivity** of the formation
- t = **Time** since pumping began

The constant W(u), the *well function*, is determined from u. The calculation method is described in Fetter (2001). This value of W(u) is then used to solve a second equation:

$$\Delta s = \frac{Q}{4\pi T} W(u)$$

Where: Q = **Pumping rate**
T = Transmissivity of the formation
Δs = **Drawdown** at distance r

This second equation provides the drawdown at a given distance from the pumping well discharging at a constant rate.

For purposes of the impact assessment, use of conservative values for transmissivity and the storage coefficient is reasonable. Conservative values are intended to over-estimate the effects of pumping at a given rate, providing an estimate of the greatest likely drawdown at a given distance from the well. Based on the values for K_H, T, and S for the Saddle Mountain Basalt presented in the literature and described above, a transmissivity of 465 ft²/d and a storage coefficient of 2×10^{-4} were selected for calculation of expected drawdown. The published transmissivity value of 465 ft²/d was selected due to a lack of information regarding the aquifer thickness (aquifer transmissivity is equal to lateral hydraulic conductivity multiplied by the aquifer thickness [designated as b], or, $T = K_H \times b$) at well BIF-430. This transmissivity value is expected to be very conservative for the well. A higher transmissivity value is expected for the producing formation if the aquifer thickness exceeds 25 feet, based on mean K_H values of 18 ft/d in the Horse Heaven Hills area. The storage coefficient of 2×10^{-4} was selected as the mean between the highest and lowest expected median values for the Saddle Mountain Basalt.

Table 4 presents the calculation of drawdown at given distances from well BIF-430 under various pumping rates based on a one year continuous pumping period. The one year pumping period is intended to represent steady-state conditions in the aquifer A summary of the results is presented below.

Pumping Rate (gpm)	**Drawdown at Distance (feet)**				
	¼-Mile	½-Mile	¾-Mile	1-Mile	1½-Mile
17	3.92	3.14	2.69	2.37	1.92
18	4.15	3.33	2.85	2.51	2.04
23	5.30	4.25	3.64	3.21	2.60
AVERAGE	**4.46**	**3.58**	**3.06**	**2.70**	**2.19**

Based on these calculations, it is possible that (under steady-state pumping conditions) groundwater extraction by well BIF-430 could cause the Saddle Mountain Basalt aquifer potentiometric surface to decline in the well vicinity. This decline is expected to not to exceed 2.5 feet at 1-mile from the production well under normal pumping conditions of 18 gpm. Based on use of conservative assumptions in making these calculations, it is likely that the actual decline would be significantly less.

CONCLUSIONS

The following conclusions are made based on this Assessment:

- Approximately 32 ac-ft per year of groundwater is used by the current calf operations. This water is withdrawn from the unconsolidated deposits located west-northwest of Grandview. Current pumping rates range from 17 to 23 gpm based on the season.

- Relocation of the current calf operations to the proposed Facility would reduce consumption of shallow groundwater in the area west of Grandview by 32 ac-ft, or approximately 10.5 million gallons, per year.

- The proposed production well (BIF-430) for the proposed Facility is completed in, and would produce water from, the Saddle Mountain Basalt aquifer.

- The Facility would require approximately 30 ac-ft of water per year for calving operations, at an anticipated average pumping rate of 18 gpm. A reduction of approximately 2 ac-ft per year is likely realized via consolidation of the current operations.

- The Saddle Mountain Basalt aquifer is hydraulically isolated from the overlying sedimentary deposit aquifer and underlying Wanapum Basalt aquifer. Withdrawal of water from the Saddle Mountain Basalt aquifer would not impact either of these aquifers.

- Under steady-state pumping conditions groundwater extraction by well BIF-430 could cause the Saddle Mountain Basalt aquifer potentiometric surface to decline in the well vicinity. This decline is expected to not to exceed 2.5 feet at 1-mile from the production well under normal pumping conditions of 18 gpm. Based on use of conservative assumptions in making these calculations, it is likely that the actual decline would be significantly less.

- Three wells completed in the Saddle Mountain Basalt aquifer are located within one mile of the Facility's proposed production well. No wells within a one-mile radius have an associated water right.

- The anticipated impact to current Saddle Mountain Basalt aquifer users located within the vicinity of the proposed production well is minimal.

- Based on the nature of the consolidation and relocation of the calving operations as presented, there is no net change to the volume of groundwater extracted from the lower Yakima Valley, only a change in producing formation.

- The overall impact from the calf operations to groundwater users is lessened by relocation of the current operations to the Facility. Groundwater extraction from the unconsolidated sedimentary deposits within the vicinity of the current operations will be reduced. A significant number of residential wells completed in the unconsolidated sedimentary deposits are located within the vicinity of the current operations' production wells.

LIMITATIONS

IES performs our services in accordance with the generally accepted standard of care ordinarily exercised by members of the profession practicing in the same geographic region under similar conditions at the same time. No warranty either express or implied, is offered, made or intended.

Our services are intended to provide a source of professional advice, opinions and recommendations. Our professional opinions and recommendations are based on limited observations and information, and may depend on, and be qualified by, information gathered previously by others. Our opinions or recommendations may change as new data become available during additional assessment, investigation, remediation, or development. Site activities and governmental regulations beyond our control could change at any time after the completion of our site work. Therefore, this findings, conclusions, opinions and/or recommendations presented in the Report are valid only as of the date of the observations or information upon which they are based.

Even the most rigorous of professional assessments may fail to identify all existing Site conditions. Our services are limited to those items specifically identified in the Report; issues not specifically addressed in the Report were not included in our services. Our services may include the application of judgment to scientific principles; to that extent, certain results of our work product may be based on subjective professional interpretation.

IES assumes no responsibility or liability whatsoever for any claim, loss of property value, damage, or injury which results from pre-existing hazardous substances being encountered or present on the project site, or from the discovery of such hazardous substances. The property owners are solely responsible for notifying all governmental agencies and the public at large, of the existence, release, treatment or disposal of any hazardous substances observed at the subject site.

IES is pleased to provide the services to Wind Mill Estates. If you have any questions or comments regarding this report, please contact the undersigned.

Very Truly Yours,

INLAND EARTH SCIENCES CORPORATION

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ATTACHMENTS

Table 1 – Current Use Wells
Table 2 – Water Use from Current Wells
Table 3 – Proposed Use Well and Surrounding Wells
Table 4 – Projected Impacts from Well BIF-430

Figure 1 – General Location Map
Figure 2A and 2B – Currently Used Wells
Figure 3A and 3B – Proposed Use Well and Surrounding Wells
Figure 4 – General Stratigraphy

Appendix A – Well Logs, Current Use Wells
Appendix B – Well Logs, Proposed Use Well and Surrounding Wells

Table 1 Current Use Wells

Hydrogeological Impact Study
Frysian Ranch Calf Yard
Wind Mill Estates
Mabton, Washington

WELL IDENTIFIER	YAKIMA COUNTY PARCEL No.	ADDRESS	PLS LOCATION	WELL TYPE	WRP No.	DATE INSTALLED	WELL DEPTH (feet)	DEPTH TO WATER (feet)	TOTAL HEAD (feet)	PRODUCTION FORMATION
CRW	230909-32001	Hornby Rd., Grandview	NW¼, SW¼, S. 9, T. 9N, R. 23E W.M.	DOMESTIC/LIVESTOCK	EXEMPT	January 1994	100	27	73	Sedimentary
CBW	230917-21001	180 Wasson Rd., Grandview	NW¼, NW¼, S. 17, T. 9N, R. 23E W.M.	DOMESTIC/LIVESTOCK	EXEMPT	February 1982	94	10	84	Sedimentary
VBFL	230918-42001	731 Den Boer Rd., Grandview	NW¼, SE¼, S. 18, T. 9N, R. 23E W.M.	DOMESTIC/LIVESTOCK	EXEMPT	January 1998	65	6	59	Sedimentary
WD1	230918-34001	3761 Forsell Rd., Grandview	SE¼, SW¼, S. 18, T. 9N, R. 23E W.M.	DOMESTIC/LIVESTOCK	EXEMPT	March 1987	125	40	85	Sedimentary
WD2	230918-34001	3761 Forsell Rd., Grandview	SE¼, SW¼, S. 18, T. 9N, R. 23E W.M.	DOMESTIC/LIVESTOCK	EXEMPT	Unknown	Unknown	Unknown		

Notes:

PLS = Public Land System
WRP = Water Right Permit
Total Head = Difference between completed well depth and measured depth-to-water
NR = Not Recorded

Table 2 Water Use from Current Wells

Hydrogeological Impact Study
Fryslan Ranch Calf Yard
Wind Mill Estates
Mabton, Washington

WELL IDENTIFIER	Number of Calves	Typical Consumpition per Calf (gallons per day)		Typical Use Per Day (gallons)		Typical Pumping Rate (gallons per minute)		Typical Consumption (gallons)		Typical Annual Consumption	
		Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	(gallons)	(acre-feet)
CRW	5,000	4	3	20,000	15,000	14	10	3,650,000	2,737,500	6,387,500	19.6
CBW	800	4	3	3,200	2,400	2	2	584,000	438,000	1,022,000	3.1
VBFL	1,500	4	3	6,000	4,500	4	3	1,095,000	821,250	1,916,250	5.9
WD1 & WD2	900	4	3	3,600	2,700	3	2	657,000	492,750	1,149,750	3.5
TOTALS	**8,200**			**32,800**	**24,600**	**23**	**17**	**5,986,000**	**4,489,500**	**10,475,500**	**32.1**

Notes:

Summer = Period from April to September, defined as 182.5 days in length

Winter = Period from October to March, defined as 182.5 days in length

Table 3 Proposed Use Well and Surrounding Wells

Hydrogeological Impact Study
Fryslan Ranch Calf Yard
Wind Mill Estates
Mabton, Washington

WELL IDENTIFIER	YAKIMA COUNTY PARCEL No.	ADDRESS	PLS LOCATION	WELL TYPE	WRP No.	DATE INSTALLED	WELL DEPTH (feet)	DEPTH TO WATER (feet)	TOTAL HEAD (feet)	PRODUCTION FORMATION
Production Well										
BIF-430	230808-33001		SW¼, SW¼, S. 8, T. 8N, R. 23E W.M.	LIVESTOCK	EXEMPT	June 2015	372	218	154	**Saddle Mtn.**
Zero to 0.25-mile										
ACL-582	230808-34003	610 Christenson Rd., Mabton	SE¼, SW¼, S. 8, T. 8N, R. 23E W.M.	DOMESTIC	EXEMPT	April 1997	157	62	95	Sedimentary
BIF-429	230808-34003	610 Christenson Rd., Mabton	SE¼, SW¼, S. 8, T. 8N, R. 23E W.M.	LIVESTOCK	EXEMPT	June 2015	765	296	469	Wanapum
0.25 to 0.50-mile										
ACE-511	230808-43001	620 Christenson Rd., Mabton	SW¼, SE¼, S. 8, T. 8N, R. 23E W.M.	DOMESTIC	EXEMPT	September 1996	122	50	72	Sedimentary
0.50 to 0.75-mile										
ABL-228	230808-23408	241 Miller Rd., Mabton	SW¼, NW¼, S. 8, T. 8N, R. 23E W.M.	DOMESTIC	EXEMPT	November 1994	100	NR		Sedimentary
ACE-521	230808-23411	271 Miller Rd., Mabton	SW¼, NW¼, S. 8, T. 8N, R. 23E W.M.	DOMESTIC	EXEMPT	June 1996	90	24	66	Sedimentary
ACE-522	230808-23409	371 Miller Rd., Mabton	SW¼, NW¼, S. 8, T. 8N, R. 23E W.M.	DOMESTIC	EXEMPT	June 1996	90	24	66	Sedimentary
ACE-523	230808-23407	371 Miller Rd., Mabton	SW¼, NW¼, S. 8, T. 8N, R. 23E W.M.	DOMESTIC	EXEMPT	July 1996	110	30	80	Sedimentary
ACE-531	230808-23406	371 Miller Rd., Mabton	SW¼, NW¼, S. 8, T. 8N, R. 23E W.M.	DOMESTIC	EXEMPT	July 1996	110	30	80	Sedimentary
BBJ-709	230808-23412	261 Miller Rd., Mabton	SW¼, NW¼, S. 8, T. 8N, R. 23E W.M.	DOMESTIC	EXEMPT	June 2010	82	23	59	Sedimentary
DAWSON	230808-24402	262 Christenson Rd., Mabton	SE¼, NW¼, S. 8, T. 8N, R. 23E W.M.	DOMESTIC	EXEMPT	July 1993	80	47	33	Sedimentary
HARRIGAN	230807-33002	Canal Rd., Mabton	NW¼, SE¼, S. 7, T. 8N, R. 23E W.M.	IRRIGATION	EXEMPT	October 1979	390	95	295	**Saddle Mtn.**
HAMMERSCHMIDT	230808-44003	722 S. Phillips Rd., Mabton	SE¼, SE¼, S. 8, T. 8N, R. 23E W.M.	DOMESTIC / IRRIGATION	EXEMPT	June 1983	122	61	61	Sedimentary
0.75 to 1-mile										
ABX-752	230808-22406	Stettner Rd., Mabton	NW¼, NW¼, S. 8, T. 8N, R. 23E W.M.	DOMESTIC	EXEMPT	July 1995	93	20	73	Sedimentary
ACL-290	230808-12001		NW¼, NE¼, S. 8, T. 8N, R. 23E W.M.	DOMESTIC	EXEMPT	June 1998	80	15	65	Sedimentary
ACL-830	230808-22400	Miller Rd. & Stettner Rd., Mabton	NW¼, NW¼, S. 8, T. 8N, R. 23E W.M.	DOMESTIC	EXEMPT	June 1997	90	11	79	Sedimentary
ALC-037	230807-31002	Allison Rd. S. End, Mabton	NE¼, SW¼, S. 7, T. 8N, R. 23E W.M.	DOMESTIC	EXEMPT	February 2010	159	31	128	**Saddle Mtn.**
BHT-360	230809-31002	S. Phillips Rd., Mabton	NW¼, SW¼, S. 9, T. 8N, R. 23E W.M.	DOMESTIC	EXEMPT	June 2014	225	99	126	**Saddle Mtn.**
COMSTOCK	230808-21401	200 Stettner Rd., Mabton	SE¼, NW¼, S. 8, T. 8N, R. 23E W.M.	DOMESTIC	EXEMPT	April 1976	70	NR		Sedimentary
TAGGERID	230808-22403	201 Miller Rd., Mabton	NW¼, NW¼, S. 8, T. 8N, R. 23E W.M.	DOMESTIC	EXEMPT	June 1997	100	NR		Sedimentary
Greater than 1-mile										
AHK-705	230807-33002		SW¼, SW¼, S. 7, T. 8N, R. 23E W.M.	IRRIGATION	G4-27178C	September 2002	380	90	290	**Saddle Mtn.**
ALF-671	230807-21418	1102 Stettner Rd., Mabton	NE¼, NW¼, S. 7, T. 8N, R. 23E W.M.	DOMESTIC	EXEMPT	June 2000	82	25	57	Sedimentary
ALF-991	230807-33002		SW¼, SW¼, S. 7, T. 8N, R. 23E W.M.	IRRIGATION	G4-27178C	March 2006	685	198	487	Wanapum
APK-129	230806-44402	555 Stettner Rd., Mabton	SE¼, SE¼, S. 6, T. 8N, R. 23E W.M.	DOMESTIC	EXEMPT	June 2007	185	59	126	**Saddle Mtn.**
BERTSCH	230809-31002	Rusk Rd., Mabton	NW¼, SW¼, S. 9, T. 8N, R. 23E W.M.	DOMESTIC	EXEMPT	October 1976	115	70	45	Sedimentary
BHT-361	230809-22002	151 S. Phillips Rd., Mabton	NW¼, SW¼, S. 9, T. 8N, R. 23E W.M.	DOMESTIC	EXEMPT	June 2014	180	48	132	**Saddle Mtn.**
BIF-445	230209-13006	151 S. Fisher Rd., Mabton	NW¼, SW¼, S. 9, T. 8N, R. 23E W.M.	DOMESTIC	EXEMPT	June 2014	260	91	169	**Saddle Mtn.**
CARMAN	230807-23400	1369 Allison Rd., Mabton	SW¼, NW¼, S. 7, T. 8N, R. 23E W.M.	DOMESTIC	Cert. 1272A	November 1950	95	25	70	Sedimentary

Notes:

PLS = Public Land System
WRP = Water Right Permit
Total Head = Difference between completed well depth and measured depth-to-water
NR = Not Recorded

Table 4 Projected Impacts from Well BIF-430

Hydrogeological Impact Study
Fryslan Ranch Calf Yard
Wind Mill Estates
Mabton, Washington

Radius (feet)	Pumping Rate (ft^3/d)	T (ft^2/d)	S	Time (days)	u	W(u)	Drawdown (feet)	Annual Consumption (acre-feet)
Minimum Seasonal Pumping Rate of 17 gpm								
1,320	3272.5	465	0.0002	365	0.00051	6.99795	3.92	27.4
2,640	3272.5	465	0.0002	365	0.00205	5.61319	3.14	
3,960	3272.5	465	0.0002	365	0.00462	4.80482	2.69	
5,280	3272.5	465	0.0002	365	0.00821	4.23304	2.37	
7,920	3272.5	465	0.0002	365	0.01848	3.43231	1.92	
Average Pumping Rate of 18 gpm								
1,320	3465	465	0.0002	365	0.00051	6.99795	4.15	29.0
2,640	3465	465	0.0002	365	0.00205	5.61319	3.33	
3,960	3465	465	0.0002	365	0.00462	4.80482	2.85	
5,280	3465	465	0.0002	365	0.00821	4.23304	2.51	
7,920	3465	465	0.0002	365	0.01848	3.43231	2.04	
Maximum Seasonal Pumping Rate of 23 gpm								
1,320	4427.5	465	0.0002	365	0.00051	6.99795	5.30	37.1
2,640	4427.5	465	0.0002	365	0.00205	5.61319	4.25	
3,960	4427.5	465	0.0002	365	0.00462	4.80482	3.64	
5,280	4427.5	465	0.0002	365	0.00821	4.23304	3.21	
7,920	4427.5	465	0.0002	365	0.01848	3.43231	2.60	

Notes:

ft^3/d = cubic feet per day
T = Transmissivity in feet square per day
S = Storativity, unitless
u = dimensionless constant, refer to report fo calculation
W(u) = Well function corresponding to the given value of u, unitless

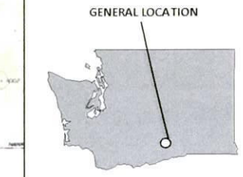
CALF RANCH SITE

COMMODITY BARN SITE

VAN BOVEN FEED LOT SITE

WALTERS DAIRY SITE

GENERAL LOCATION



FRYSLAN RANCH CALF YARD FACILITY

Base Map Source: USGS Mabton East Wash. 7.5 Minute Series Quadrangle 1965, Grandview Wash. 7.5 Minute Series Quadrangle 1978

SCALE 1 : 48,000

0 4000 8000 feet

N

INLAND EARTH SCIENCES

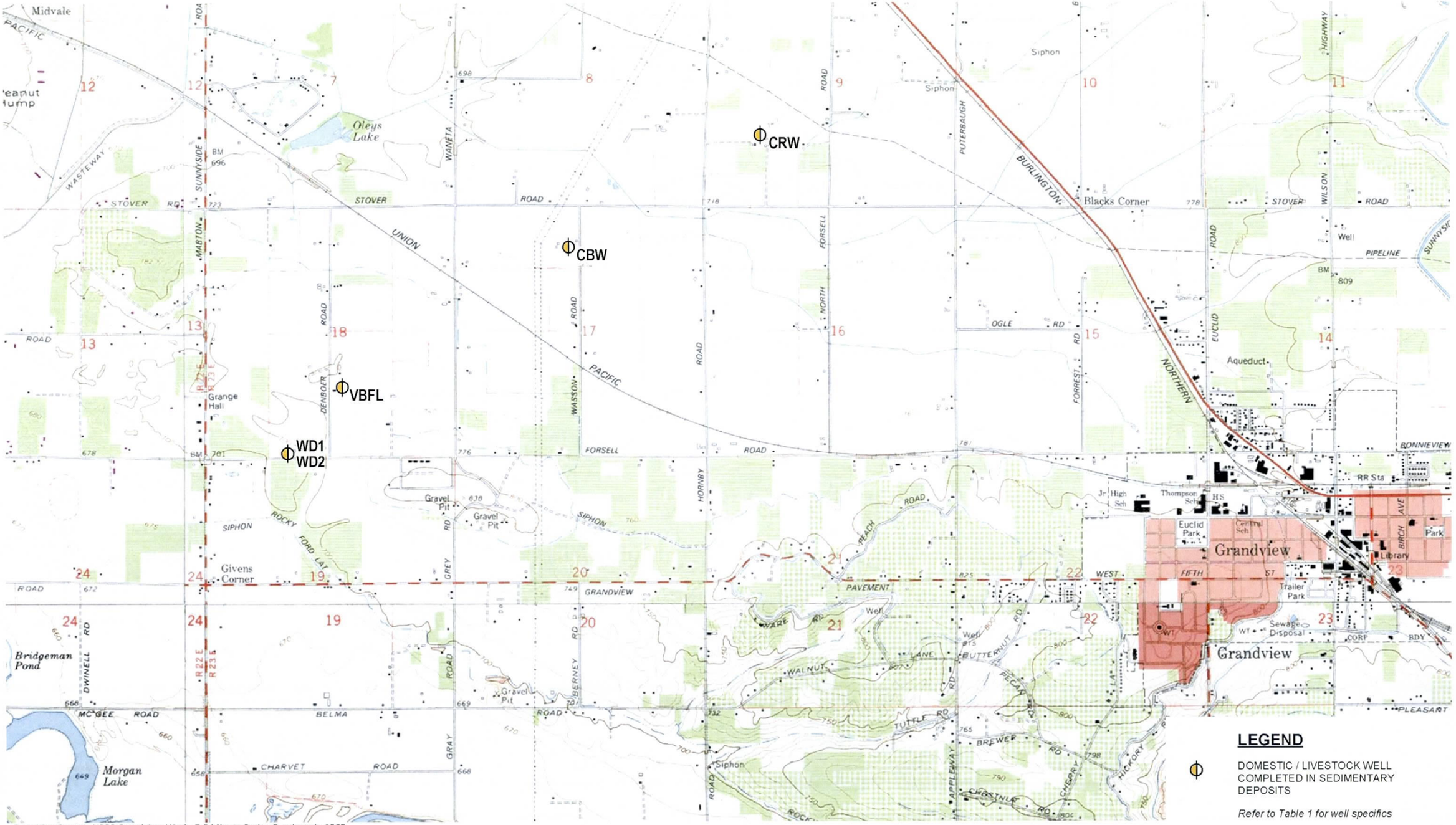
1609-0010-001	October 2016

GENERAL LOCATION MAP

HYDROGEOLOGICAL IMPACT STUDY
FRYSLAN RANCH CALF YARD
WIND MILL ESTSTES
MABTON, WASHINGTON

FIGURE 1

\Projects\1609\0010\001\Figure 1.vsd 10032016



Base Map Source: USGS Grandview Wash. 7.5 Minute Series Quadrangle 1965

SCALE 1 : 24,000

0 2000 4000 feet

N

LEGEND

DOMESTIC / LIVESTOCK WELL COMPLETED IN SEDIMENTARY DEPOSITS

Refer to Table 1 for well specifics

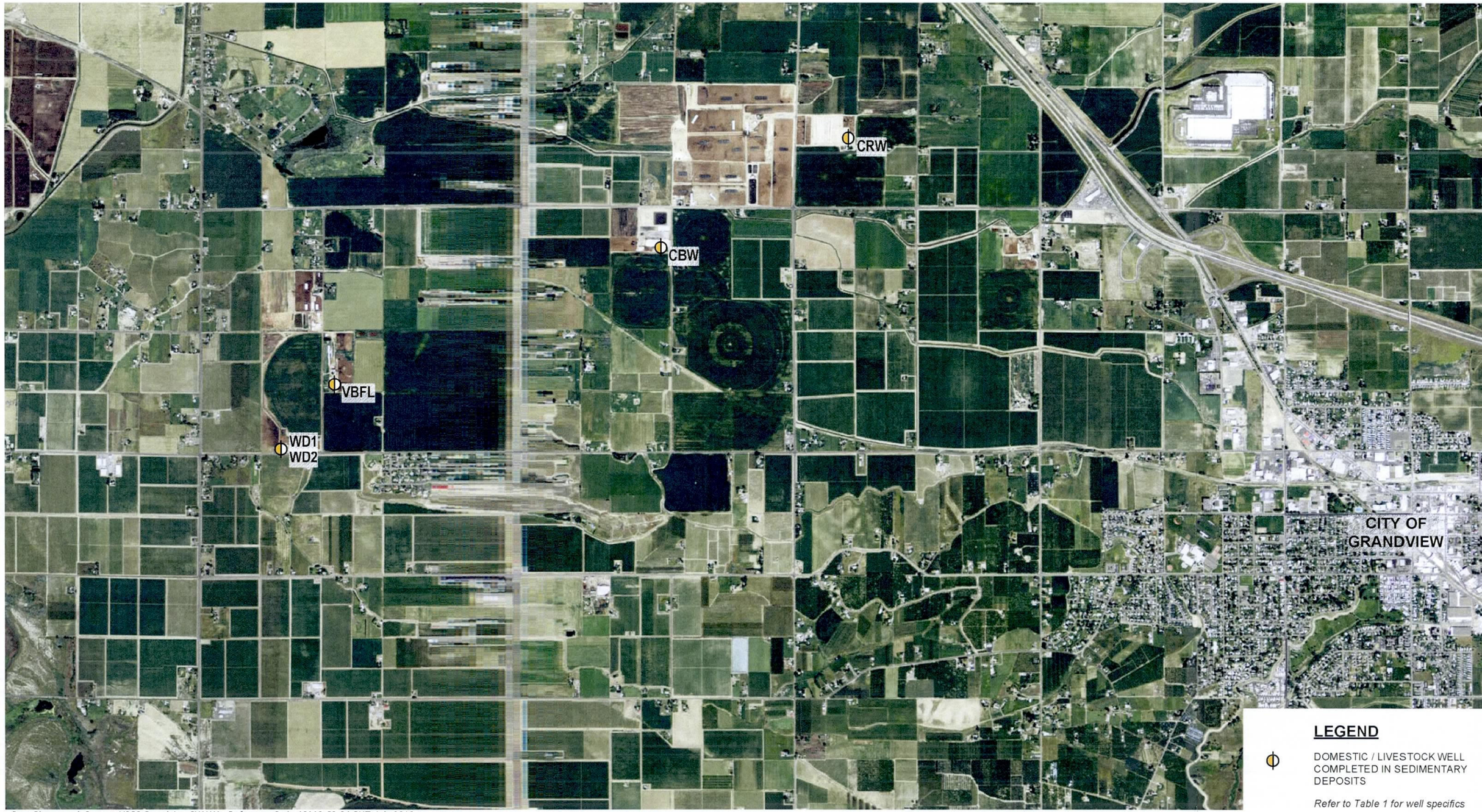
INLAND EARTH SCIENCES

1609-0010-001	October 2016

CURRENTLY USED WELLS
HYDROGEOLOGICAL IMPACT STUDY
FRYSLAN RANCH CALF YARD
WIND MILL ESTSTES
MABTON, WASHINGTON

FIGURE 2A

\Projects\1609\0010\001\Figure 3A.vsd 10032016



LEGEND

DOMESTIC / LIVESTOCK WELL COMPLETED IN SEDIMENTARY DEPOSITS

Refer to Table 1 for well specifics

Base Photograph Source: USGS Grandview SW WA., Reference Code 46119-C8-04-PHT, July 2013

SCALE 1 : 24,000

0 2000 4000 feet

N

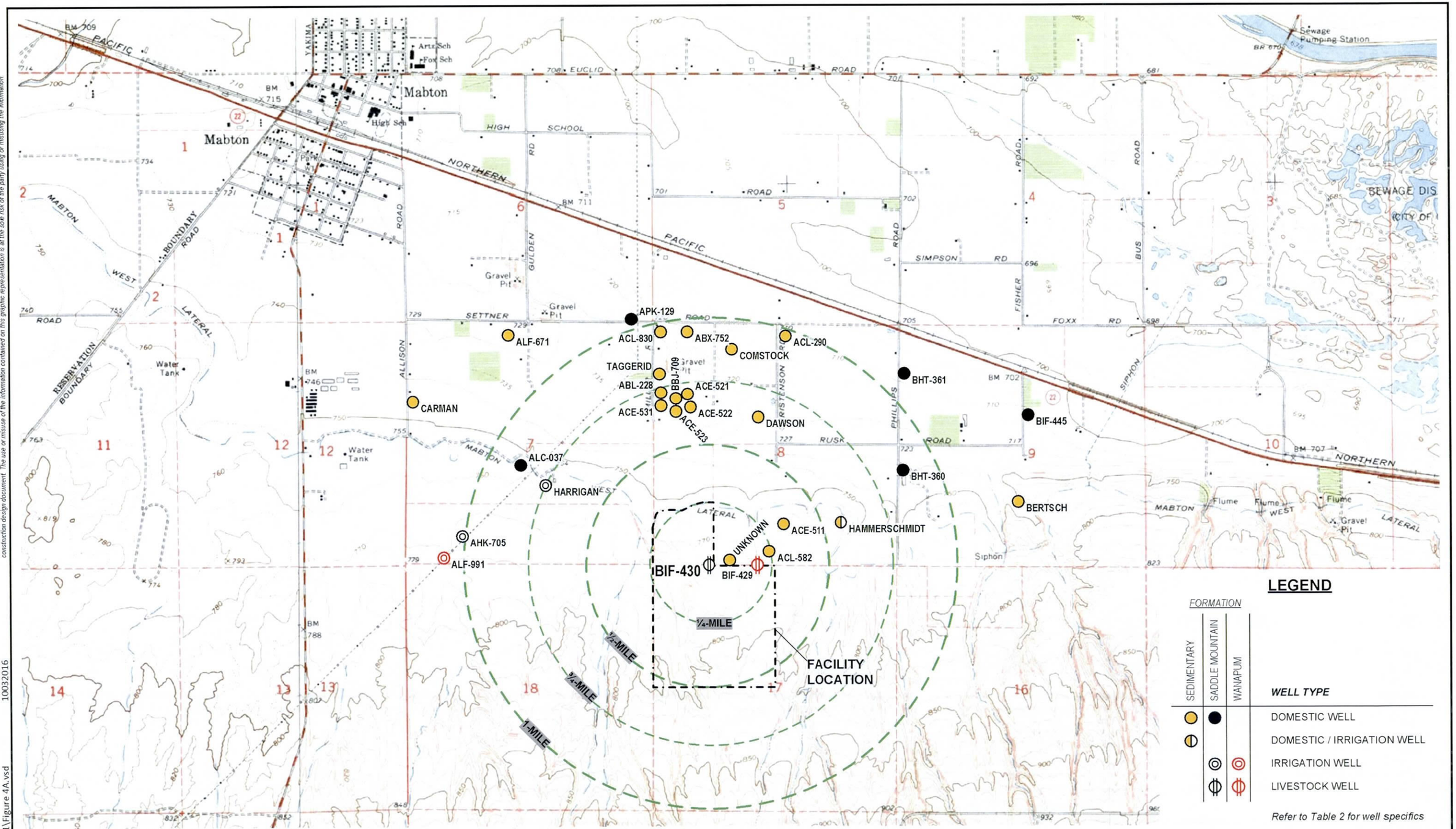
INLAND EARTH SCIENCES

1609-0010-001	October 2016

CURRENTLY USED WELLS
HYDROGEOLOGICAL IMPACT STUDY
FRYSLAN RANCH CALF YARD
WIND MILL ESTSTES
MABTON, WASHINGTON

FIG
2

\Projects\1609\0010\001\Figure 3B.vsd 10032016



LEGEND

FORMATION

SEDIMENTARY	SADDLE MOUNTAIN	WANAPUM	WELL TYPE
●	●		DOMESTIC WELL
◐			DOMESTIC / IRRIGATION WELL
	◎	◎	IRRIGATION WELL
	⊕	⊕	LIVESTOCK WELL

Refer to Table 2 for well specifics

Base Map Source: USGS Mabton East Wash. 7.5 Minute Series Quadrangle 1965

SCALE 1 : 24,000

0 2000 4000 feet

N

INLAND EARTH SCIENCES

1609-0010-001	October 2016

PROPOSED USE WELL AND SURROUNDING WELLS
HYDROGEOLOGICAL IMPACT STUDY
FRYSLAN RANCH CALF YARD
WIND MILL ESTSTES
MABTON, WASHINGTON

FIGURE 3A

\Projects\1609\0010\001\Figure 4A.vsd 10032016

CITY OF MABTON

APK-129
ALF-671
ACL-830
ABX-752
ACL-290
COMSTOCK
TAGGERID
BBJ-709
ABL-228
ACE-521
CARMAN
ACE-531
ACE-522
ACE-523
DAWSON
BHT-361
BIF-445
ALC-037
HARRIGAN
BHT-360
BERTSCH
AHK-705
ALF-991
UNKNOWN
ACE-511
HAMMERSCHMIDT
BIF-430
BIF-429
ACL-582
¼-MILE
½-MILE
¾-MILE
1-MILE
FACILITY LOCATION

LEGEND

FORMATION

SEDIMENTARY	SADDLE MOUNTAIN	WANAPUM	WELL TYPE
●	●		DOMESTIC WELL
◐			DOMESTIC / IRRIGATION WELL
	◎	◎	IRRIGATION WELL
	⊕	⊕	LIVESTOCK WELL

Refer to Table 2 for well specifics

Base Photograph Source: USGS Mabton East NW WA., Reference Code 46119-B8-01-PHT, July 2013

SCALE 1 : 24,000

0 2000 4000 feet

N

INLAND EARTH SCIENCES

1609-0010-001 | October 2016

PROPOSED USE WELL AND SURROUNDING WELLS
HYDROGEOLOGICAL IMPACT STUDY
FRYSLAN RANCH CALF YARD
WIND MILL ESTATES
MABTON, WASHINGTON

FIGURE 3B

10032016

Projects\1609\0010\001\Figure 4B.vsd

\Projects\1609\0010\001\Figure 24.vsd 10032016

ERA	PERIOD	EPOCH	Sediment Stratigraphy	Basalt Stratigraphy	Hydrogeologic Unit
CENEZOIC	Quaternary	Holocene	Alluvium, alpine glaciation, alluvial fan, dune sand, artificial fill, and peat deposits	Quaternary and Pliocene Basalts	Basin-fill deposits
		Pleistocene	Alluvium, alpine glacial drift, alluvial fan, Palouse Formation, Lakedale Drift, Lookout Mountain Ranch Drift, Hayden Creek Drift, Kittitas Drift, Evans Creek Drift, unknown continental sedimentary deposits, dune sand, glacial Lake Missoula flood deposits		
	Tertiary	Pliocene	Alluvial fan, Ringold Formation, Dalles Formation, Thorpe Gravel, and unknown continental sedimentary deposits		
		Miocene	Ellensburg Formation, Ringold Formation, Dalles Formation, Snipes Mountain deposits, and unknown continental sedimentary deposits	Saddle Mountains Basalt flow members and interbeds	Saddle Mountains unit
				Mabton interbed (Mabton Member of the Ellensburg Formation)	Mabton unit
				Wanapum Basalt flow members and interbeds	Wanapum unit
				Vantage interbed (Vantage Member of the Ellensburg Formation)	Vantage unit
				Grande Ronde Basalt flow members and interbeds	Grande Ronde unit
Older Bedrock					

Taken from Figure 6. Correlation chart showing the regional relation between generalized stratigraphy and hydrogeologic units for the Yakima River Basin, Washington *in* Jones, M.A., and Vaccaro, J.J., 2008, *Extent and depth to top of basalt and interbed hydrogeologic units, Yakima River Basin aquifer system, Washington*: U.S. Geological Survey Scientific Investigations Report 2008-5045, 22 p., 5 pls.

INLAND EARTH SCIENCES

1609-0010-001 | October 2016

GENERAL STRATIGRAPHY
HYDROGEOLOGICAL IMPACT STUDY
FRYLAND RANCH CALF YARD
WIND MILL ESTATES
MABTON, WASHINGTON

FIGURE 4

APPENDIX A

WELL LOGS
CURRENT USE WELLS

CBW

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

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name Richard S. Brown Address Rt 1 Bx 1519, Prosser, Wa 99350

(2) LOCATION OF WELL: County Yakima — NW¼ NW¼ Sec. 17 T. 9 N., R. 23 W.M.

Bearing and distance from section or subdivision corner

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

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

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 94 ft. Depth of completed well 94 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 70 ft.
Threaded [ ] ..." Diam. from ... ft. to ... ft.
Welded [X] ..." Diam. from ... ft. to ... ft.

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

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

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

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [X] No [ ]
Type of water? Surface Depth of strata 10'
Method of sealing strata off Seal & Casing

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

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 10 ft. below top of well Date 2-3-82
Artesian pressure ... lbs. per square inch Date ...
Artesian water is controlled by ... (Cap, valve, etc.)

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test 20 gal./min. with 40 ft. drawdown after 1 hrs.
Artesian flow ... g.p.m. Date ...
Temperature of water ... Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG: D

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

MATERIAL	FROM	TO
Brown Dirt & Sand	0'	7'
Brown Sand (Surface water)	7'	17'
Brown Sand	17'	60'
Brown Sand - Trace of Clay (Water Bearing but Fine Sand)	60'	65'
Gray Clay & Sand	65'	70'
Skiff of Gravel & Gray Clay (Aquifer)	70'	72'
Gray Clay & Sand	72'	78'
Skiff of White Pumice Stone & Gray Clay (Aquifer)	78'	81'
Brown Clay & Sand	81'	87'
Skiff of Gravel & Brown Clay	87'	89'
Tan Clay & Sand	89'	90'
Skiff of Gravel & Tan Clay (Aquifer - not as good as above)	90'	92'
Tan Clay & Sand	92'	94'

RECEIVED
FEB 18 1982

Work started 2-1-, 1982 Completed 2-3-, 1982

WELL DRILLER'S STATEMENT:

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

NAME King Well Drillers (Person, firm, or corporation) (Type or print)

Address Rt 2 Bx 2324, Wapato, Wa 98951

[Signed] Patrick D. Barnum (Well Driller)

License No. 0026 Date 2-4-, 1982

(USE ADDITIONAL SHEETS IF NECESSARY)

RJ 2-19-82

ECY 050-1-20

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

30996

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 461C0596
W21427 CRW

Water Right Permit No. _____

(1) OWNER: Name George Higgins Address 3150 Wilson Hiway

(2) LOCATION OF WELL: County Yakima SW ¼ SW ¼ Sec. 9 T. 8 N., R. 23 W.M.

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

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

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

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 100 feet. Depth of completed well 100 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 100 ft.
Welded ☒ Liner installed ☐ Threaded ☐ _____ " Diam. from _____ ft. to _____ ft.
Perforations: Yes ☐ No ☒
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.
Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

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

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 24 ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

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

Time	Water Level	Time	Water Level	Time	Water Level

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

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

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

MATERIAL	FROM	TO
Brown sandy top soil	0	6
Light Clay and sand	6	80
Small Pea Gravel and sand	80	100

RECEIVED
FEB 17 1994

Work started 1-23 19. Completed 1-23 19 94

WELL CONSTRUCTOR CERTIFICATION:

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

NAME Blue Water Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address P.O. Box 70 Prosser WA

(Signed) John Carman (WELL DRILLER) License No. 1452

Contractor's Registration No. BLUEWD087J2 Date 2-2 19 94

(USE ADDITIONAL SHEETS IF NECESSARY)

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

ECY 050-1-20 (10/87) -1329- 18

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
67068

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. W103653
UNIQUE WELL I.D. # VBFL
Water Right Permit No.

(1) OWNER: Name HARRY VAN BOVEN Address 731 DEN BOER, GRANDVIEW

(2) LOCATION OF WELL: County YAKIMA NE ¼ SE ¼ Sec 18 T 9 N. R 23E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) WANETA RD - GRANDVIEW J

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

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

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

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1½ ft. to 45 1/2 ft.
Welded ☒ Liner installed ☐ Threaded ☐ " Diam. from ft. to ft.
" Diam. from ft. to ft.

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

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

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

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

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

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 6 ft. below top of well Date 1-23-98
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest 600 gal./min. with stem set at 60 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

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

MATERIAL	FROM	TO
SOIL	0	10
SILTY / SANDY CLAY	10	32
HARD BROWN CLAY	32	45
MED. BLACK BASALT	45	51
(H_2O) BROWN POROUS BASALT	51	62
HARD BLACK BASALT	62	65

RECEIVED
MAR 1 9 1998
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work started 1-21-98 19. Completed 1-22 19 98

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

NAME FIVE STAR DRILLING (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address DAYTON, WA 99328
(Signed) (WELL DRILLER) License No. 2094
Contractor's Registration No. FIVESS*077MB Date 1-23- 98

(USE ADDITIONAL SHEETS IF NECESSARY)

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

WATER WELL REPORT
STATE OF WASHINGTON

Application No. P WD1
Permit No.

(1) **OWNER:** Name Edward Walters Address RT. 1 Box 1491 Grandview, Wa.

(2) **LOCATION OF WELL:** County YAKIMA SE ¼ SW ¼ Sec. 18 T. 9 N., R. 23 W.M.

Bearing and distance from section or subdivision corner 100' N & 400' E OF THE SW CORNER

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

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

(5) **DIMENSIONS:** Diameter of well 6 inches.
Drilled 125 ft. Depth of completed well 122 ft.

(6) **CONSTRUCTION DETAILS:**

Casing installed: ..." Diam. from ... ft. to ... ft.
Threaded ☐ ..." Diam. from ... ft. to ... ft.
Welded ☑ 6" Diam. from 0 ft. to 120 ft.

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

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

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

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

(7) **PUMP:** Manufacturer's Name BERK
Type: SUB H.P. 2

(8) **WATER LEVELS:** Land-surface elevation above mean sea level ... ft.
Static level 40 ft. below top of well Date 3/19/87
Artesian pressure ... lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 30 gal./min. with 15 ft. drawdown after 2 hrs.
Artesian flow ... g.p.m. Date
Temperature of water ... Was a chemical analysis made? Yes ☐ No ☑

(10) **WELL LOG:**

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

MATERIAL	FROM	TO
CLAY	0	75
SANDY CLAY	75	95
BROWN SAND	95	115
GRAVEL	115	125

RECEIVED
MAR 19 1987
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work started 3/11/ 19 87 Completed 3/16/ 19 87

WELL DRILLER'S STATEMENT:

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

NAME Watkins Well Drilling
(Person, firm, or corporation) (Type or print)

Address R. 2 Box 2457-A Grandview

[Signed] Kenneth L. Watkins
(Well Driller)

License No. 0516 Date 3/17/ 19 87

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

APPENDIX B

WELL LOGS
PROPOSED USE WELL AND SURROUNDING WELLS

WATER WELL REPORT

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

Construction/Decommission ("x" in circle) 127268
- [x] Construction
- [ ] Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number*

CURRENT Notice of Intent No. W 149457 AHK705

Unique Ecology Well ID Tag No. AHK705

Water Right Permit No. G4 27178C

Property Owner Name Steve VanBoven

Well Street Address 2210 Wanecta Rd

City Grandview County: YAKIMA

Location SE 1/4 S 1/2 1/4 SW 1/4 Sec 7 Twn 8 R 23 EWM or WWM (circle one)

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

Tax Parcel No. _____

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

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

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

DIMENSIONS: Diameter of well 10 inches, drilled 386 ft. Depth of completed well 380 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 10" Diam. from +2 ft. to 130 ft.
☒ Liner installed 8" Diam. from -1 ft. to 390 ft.
☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☒ Yes ☐ No
Type of perforator used Torch -181
SIZE of perfs 4 in. by 1/8 in. and no. of perfs 400 from [illegible] ft. to 300 ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot Size _____ from _____ ft. to _____ ft.
Diam. _____ Slot Size _____ from _____ ft. to _____ ft.

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

Surface Seal: ☒ Yes ☐ No To what depth? 22 ft
Materials used in seal Bentonite Holeplug
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level 980 ft.
Static level 90 ft. below top of well Date 9-15-02
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 300 gal./min. with stem set at 220 ft. for 3 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water 58 Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

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

MATERIAL	FROM	TO
Top Soil	0	3
Clay Brown	3	70
Sand & Gravel Cemented	70	125
Basalt Broken Black	125	130
Basalt Hard Black	130	181
Sandstone - water	181	227
Clay Bluish-gray	227	306
Basalt Hard Black	306	380

DEPT. OF ECOLOGY Received SEP 30 2002 CENTRAL REGION OFFICE

Start Date 9-1-02 Completed Date 9-15-02

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

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Josh Carman

Driller/Engineer/Trainee Signature Josh Carman

Driller or Trainee License No. 2219

Drilling Company RUDE DRILLING

Address PO BOX 6834

City, State, Zip KENNEWICK WA 99336

Contractor's Registration No. RUDED**983L Date 9/15/02

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

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 4/01)

ALC037

WATER WELL REPORT

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

Construction/Decommission ("x" in circle) 371806

☒ Construction

○ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. W242697

Unique Ecology Well ID Tag No. AHR037

Water Right Permit No. ———

Property Owner Name VAN Beuren Holding Co. LLC

Well Street Address _____

City Mabton County 39-Yakima

Location NE 1/4-1/4 SW 1/4 Sec 7 Twn 8 R 23 (E or W WM) circle one

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

Tax Parcel No. 230807-31002

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

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

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

DIMENSIONS: Diameter of well 6 inches, drilled 157 ft. Depth of completed well 157 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from +2 ft. to 141 ft.; ☐ Liner installed ___" Diam. from ___ ft. to ___ ft.; ☐ Threaded ___" Diam. from ___ ft. to ___ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

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

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

Manufacturer's Name _____

Type _____ Model No. _____

Diam. ___ Slot size ___ from ___ ft. to ___ ft

Diam. ___ Slot size ___ from ___ ft. to ___ ft.

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

Materials placed from ___ ft. to ___ ft.

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

Material used in seal Bentonite

Did any strata contain unusable water? ☐ Yes ☐ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

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

Static level 31 ft. below top of well Date 2/24/10

Artesian pressure _____ lbs. per square inch Date _____

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

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

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

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

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

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

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

Airtest 15 gal./min. with stem set at 147 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date _____

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

CONSTRUCTION OR DECOMMISSION PROCEDURE

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

MATERIAL	FROM	TO
Top soil, Sandy, Silt	0	19
Silty sandy gravels	19	87
Sandy gravels	87	141
black Basalt	141	157

RECEIVED

MAR 05 2010

DEPARTMENT OF ECOLOGY - CENTRAL REGIONAL OFFICE

Start Date 2/28/10 Completed Date 2/29/10

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

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Aquila Rodes

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2016

Drilling Company Blue Star Enterprises

Address 2019 Butler Loop

City, State, Zip Pasco WA 99352

Contractor's Registration No. Bluesen942RM Date 3-3-10

If TRAINEE,

Driller's Licensed No. _____

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.**

ALF671

WATER WELL REPORT

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

Construction/Decommission ("x" in circle) 378200

X Construction

O Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT
Notice of Intent No. UI 269003

Unique Ecology Well ID Tag No. ALF671

Water Right Permit No. _____

Property Owner Name Anna Chaves

Well Street Address 202 Fen St.

City Mabton County yakima

Location NE 1/4-1/4 SW 1/4 Sec 7 Twn 8N R 23 (E or W WM) circle one

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

Tax Parcel No. 230807-21418

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

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

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

DIMENSIONS: Diameter of well 6" inches, drilled 92 ft. Depth of completed well 82 ft.

CONSTRUCTION DETAILS

Casing Installed: X Welded 6" Diam. from +1 ft. to 81 ft.
☐ Liner installed _____" Diam. from _____ ft. to _____ ft.
☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes X No

Type of perforator used _____

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

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

Manufacturer's Name _____

Type _____ Model No. _____

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

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

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

Materials placed from _____ ft. to _____ ft.

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

Material used in seal Bentonite chips

Did any strata contain unusable water? ☐ Yes X No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

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

Static level 24.8 ft. below top of well 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 X No If yes, by whom? _____

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

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

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

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

Airtest 30 gal./min. with stem set at 25 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water 65 Was a chemical analysis made? ☐ Yes X No

CONSTRUCTION OR DECOMMISSION PROCEDURE

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

MATERIAL	FROM	TO
dirt	0	2
large gravels.	2	11
Brown silty Sand	11	21
Small Gravel, Brown clay	21	30
Silty Sand	30	36
Course Sand, silty	36	68
Medium Gravels (water @ 30 GPM)	68	82

RECEIVED
JUN 09 2010
DEPARTMENT OF ECOLOGY - CENTRAL REGIONAL OFFICE

Start Date 6/3/10 Completed Date 6/3/2010

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

X Driller ☐ Engineer ☐ Trainee Name (Print) _____

Driller/Engineer/Trainee Signature Trent Harper

Driller or trainee License No. 2910

Drilling Company Blue Star Enterprises

Address 2019 Butler Loop

City, State, Zip Richland WA. 99354

Contractor's Registration No. Bluesen 942RR Date 6-4-10

If TRAINEE,
Driller's Licensed No. _____
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.**

ALF991

Please print, sign and return to the Department of Ecology

Water Well Report

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

DEPT. OF ECOLOGY Received MAR 24 2006

Construction/Decommission 191736

☐ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No. W 210568

Unique Ecology Well ID Tag No. ALF 991

Water Right Permit No. G4-27178C

Property Owner Name Steve Van Beek

Well Street Address 1320 ft East & 660 ft North Sec 7

City Mabton County 39-Yakima

Location SE 1/4-1/4 SW 1/4 Sec 7 Twn 8 R 23E (WM or WWM) ☐ circle one

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

Tax Parcel No. _____

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

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

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

DIMENSIONS: Diameter of well _____ inches, drilled _____ ft.

Depth of completed well 695 ft. 3rd

CONSTRUCTION DETAILS

Casing Installed: ☑ Welded 12" Diam. from +1 ft. to 125. ft.

☐ Liner installed 8" Diam. from +2 ft. to 300. ft.

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

Perforations: ☐ Yes ☒ No

Type of perforator used _____

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

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

Manufacturer's Name _____

Type _____ Model No. _____

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

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

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

Materials placed from _____ ft. to _____ ft.

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

Material used in seal Bentonite

Did any strata contain unusable water? ☑ Yes ☐ No

Type of water? Mud/Mud/Sand Depth of strata 50-125 / 225-300

Method of sealing strata off Cased & Cemented

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

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

Static level 198' ft. below top of well Date 3-14-06

Artesian pressure _____ lbs. per square inch Date _____

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

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

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

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

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

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

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

Airtest 150+ gal./min. with stem set at 668 ft. for 4 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water 57° Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

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

MATERIAL	FROM	TO
Brown Sand	0	25
Brown Silty Sand	25	50
Course Gravel	50	125
Gray Basalt	125	170.
Broken Basalt	170	175.
Brown Clay	175	205
Blue Green Clay.	205	250
Blue Green Sand with Clay Mix	250	300
Black & Gray Basalt	300	360.
Gray Basalt	360	410.
Black Basalt	410	460
Black & Gray Broken Basalt	460	495.
Black Basalt	495	520.
Gray Basalt	520	590.
Black Broken Basalt	590	595
Black Basalt	595	680.
Black Broken Basalt	680	685

RECEIVED MAR 22 2006 DEPARTMENT OF ECOLOGY WELL CONSTRUCTION

Start Date 02-18-06 Completed Date 03-14-06

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

Driller/Engineer/Trainee Name (Print) David Smith

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. _____

If TRAINEE, Driller's Licensed No. 2820

Driller's Signature _____

Drilling Company Blue Star Enterprises North West

Address 2019 Butler Loop

City, State, Zip Richland WA. 99354

Contractor's Registration No Blueswe965KG Date 03-15-06

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

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION
AND DEVELOPMENT

WELL LOG

No. Appli. #1830
Cert. #1272A

Date Nov. 17, 1950

Record by Owner

Source Driller record

Location: State of WASHINGTON

County Yakima

Area

Map

SE ¼ NE ¼ sec. 7 T. 8 N., R. 23 E.

DIAGRAM OF SECTION

Drilling Co.

Address

Method of Drilling Date 19

Owner Bert Carman

Address Mabton, Washington

Land surface, datum ft. above / below

CORRELATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
	No log available		
	Pump test:		
	Dim: 95' x 6"		
	SWL: 25'		
	D.D. 56'		
	Yield 50 g.p.m.		
	Casing: not known		
	Perfs. "		

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

Turn up

Sheet of sheets

CARMAN

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

WATER WELL REPORT
STATE OF WASHINGTON

Application No. HARRIGAN
Permit No.

(1) OWNER: Name Harrigan Farms Address 114 S 5th Pasco, Wn

(2) LOCATION OF WELL: County Yakima — — ¼ SE ¼ Sec. 7 T. 8 N., R. 23 W.M.
Bearing and distance from section or subdivision corner 190 acres

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

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

(5) DIMENSIONS: Diameter of well 8 inches.
Drilled 390 ft. Depth of completed well 385 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 8 " Diam. from +1½ ft. to 390 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☒ No ☐ Torch
Type of perforator used
SIZE of perforations ⅝ in. by 6 in.
400 perforations from 380 ft. to 390 ft.
400 perforations from 330 ft. to 350 ft.
300 perforations from 290 ft. to 310 ft.

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

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

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

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

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 95 ft. below top of well Date 10-26-
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

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

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

Time	Water Level	Time	Water Level	Time	Water Level

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

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

MATERIAL	FROM	TO
Green shale, sandstone, sand, mica	285	390
STRATA Above 285' unknown		
AIR Test 500 + GPM		

Work started 10-16, 19 79 Completed 10-29, 19 79

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

NAME T. Lewis Drilling Inc.
(Person, firm, or corporation) (Type or print)
Address Box 1685 Colm, Ida
[Signed] Thom D Lewis
(Well Driller)
License No. 0716 Date 10-29, 19 79

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

31131

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W22306
Unique Well I.D. # ABL228
Water Right Permit No.

ABL228

(1) OWNER: Name RODRIGUEZ, FRANCISCO Address 271 MILLER ROAD BUEVA, WA 98921-

(2) LOCATION OF WELL: County YAKIMA - SW 1/4 NW 1/4 Sec 08 T 08 N., R 23 WM
(2a) STREET ADDRESS OF WELL (or nearest address) ,

E

(3) PROPOSED USE: DOMESTIC

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

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 100 ft. Depth of completed well 100 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from +2 ft. to 98 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

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

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

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

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

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

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level N/A ft. below top of well Date 11/17/94
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

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

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 25+ gal/min. w/ stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

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

MATERIAL	FROM	TO
COBBLES LOAM	0	6
COBBLES GRAVEL	6	14
CLAY GRAVEL GREY	14	29
CLAY BROWN	29	41
CALICHE GRAVEL TAN	41	44
CEMENTED GRAVEL	44	77
SAND GRAVEL	77	88
GRAVEL WITH WATER	88	100
	100	

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DEC - 2 1994
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE
DEC - 5 1994

Work started 11/17/94 Completed 11/17/94

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

NAME PONDEROSA DRILLING
(Person, firm, or corporation) (Type or print)

ADDRESS E 6010 BROADWAY

[SIGNED] License No. 2060

Contractor's
Registration No. PO-ND-RI*248JE Date 11/17/94

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

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No W5ABX752
UNIQUE WELL I D # ABX 752
Water Right Permit No

(1) OWNER Name Howard Carlson Address Raymond & Mabton

(2) LOCATION OF WELL County Yakima NW 1/4 NW 1/4 Sec 8 T 8 N R 23 WM

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

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

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

(5) DIMENSIONS Diameter of well 6 inches
Drilled 93 feet Depth of completed well 93 ft

(6) CONSTRUCTION DETAILS
Casing Installed 6 Diam from +2 ft to 86 ft
Welded ☐ Liner installed ☐ Threaded ☐ Diam from ft to ft
Diam from ft to ft

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

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

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

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

(7) PUMP Manufacturer s Name
Type H P

(8) WATER LEVELS Land surface elevation above mean sea level ft
Static level 20 ft below top of well Date
Artesian pressure lbs per square inch Date
Artesian water is controlled by (Cap valve etc)

(9) WELL TESTS Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes by whom?
Yield 20 gal /min with ft drawdown after hrs

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

Time	Water Level	Time	Water Level	Time	Water Level

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

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

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

MATERIAL	FROM	TO
Soil + Gravel	0	3
Gravel + Clay	3	22
Clay	22	31
Gravel + Sand	31	86
	86	93

JUL 28 1995

Work Started 7-13 19 Completed 7-13 19 95

WELL CONSTRUCTOR CERTIFICATION

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

NAME Rick Poulin Drilling (PERSON FIRM OR CORPORATION) (TYPE OR PRINT)

Address 2 N. 1st St Selah

(Signed) Tom McGuire (WELL DRILLER) License No 0357

Contractor s Registration No POULIWD124P1 Date 7-14 19 95

(USE ADDITIONAL SHEETS IF NECESSARY)

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

ECY 050 1 20 (9/93)

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

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

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

56692

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W086 ACE511

UNIQUE WELL I.D. # ACE-511

Water Right Permit No. _____

(1) **OWNER:** Name Alberto Molima Address 105 N. Elm, Toppenish

(2) **LOCATION OF WELL:** County Yakima SW 1/4 SE 1/4 Sec 8 T. 8 N. R 23 W.M.

(2a) **STREET ADDRESS OF WELL** (or nearest address) End Of Christenson Rd., Mabton

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

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

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

(5) **DIMENSIONS:** Diameter of well 6 inches. Drilled 122 feet. Depth of completed well 122 ft.

(6) **CONSTRUCTION DETAILS:**

Casing Installed: 6 " Diam. from +1 ft. to 120 ft.
Welded [X] " Diam. from ft. to ft.
Liner installed [ ] Threaded [ ] " Diam. from ft. to ft.

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

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

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

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

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

(8) **WATER LEVELS:** Land-surface elevation above mean sea level 740 ft.
Static level 50 ft. below top of well Date 9-3-96
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 100 gal./min. with stem set at 120 ft. for 1 hrs.
Artesian flow _____ g.p.m. Date 9-3-96
Temperature of water 72 Was a chemical analysis made? Yes [ ] No [X]

(10) **WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION**

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

MATERIAL	FROM	TO
Br. Clay & Br. Sand	0	93
Br. Sand & Br. Clay & Gravel & Water	93	122

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SEP - 9 1996
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work Started 8-29-96 19. Completed 9-3-96 19

WELL CONSTRUCTOR CERTIFICATION:

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

NAME OASIS DRILLING (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 2017 S. 16th Ave. Union Gap, WA 98903

(Signed) Rusty L. Rank (WELL DRILLER) License No. 1435

Contractor's Registration No. OASISD*072J9 Date 9-4-96 19

(USE ADDITIONAL SHEETS IF NECESSARY)

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

ECY 050-1-20 (9/93)

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

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy
36794

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W048[illegible]ACE512

UNIQUE WELL I.D. # ACE-521

Water Right Permit No. _____

(1) **OWNER:** Name John Dalrymple Address P.O. Box 546, Sunnyside

(2) **LOCATION OF WELL:** County Yakima NW 1/4 NW 1/4 Sec 8 T. 8 N., R 23 W.M.

(2a) **STREET ADDRESS OF WELL** (or nearest address) 271 Miller Rd., Mabton D

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

(4) **TYPE OF WORK:** Owner's number of well (If more than one) 1

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

(5) **DIMENSIONS:** Diameter of well 6 inches. Drilled 90 feet. Depth of completed well 90 ft.

(6) **CONSTRUCTION DETAILS:**

Casing installed: 6 " Diam. from +1 ft. to 90 ft.
Welded ☒ Liner installed ☐ Threaded ☐ " Diam. from ft. to ft.
" Diam. from ft. to ft.

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

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

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

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

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

(8) **WATER LEVELS:** Land-surface elevation above mean sea level 720 ft.
Static level 24 ft. below top of well Date 6-27-96
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 37 gal./min. with stem set at 90 ft. for 1 hrs.
Artesian flow _____ g.p.m. Date 6-27-96
Temperature of water 68 Was a chemical analysis made? Yes ☐ No ☒

(10) **WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION**

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

MATERIAL	FROM	TO
Large & Small Gravel & Soil	0	12
Large & Small Gravel & Br. Clay & Sand	12	66
Large & Small Gravel & Br. Clay & Sand & Water	66	90
1st Plat Lot #1		

RECEIVED AUG 12 1996 DEPARTMENT OF ECOLOGY CENTRAL REGION OFF

Work Started 6-26-96 19 Completed 6-27-96 19

WELL CONSTRUCTOR CERTIFICATION:

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

NAME OASIS DRILLING (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 2017 S. 16th Ave. Union Gap, WA 98903

(Signed) Doug L. Rook (WELL DRILLER) License No. 1435

Contractor's Registration No. OASISD*072J9 Date 7-3-96 19

(USE ADDITIONAL SHEETS IF NECESSARY)

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

ECY 050-1-20 (9/93)

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

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

36806

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W048~~22~~ACE522

UNIQUE WELL I.D. # ACE-522

Water Right Permit No. _____

(1) **OWNER:** Name John Dalrymple Address P.O. Box 546, Sunnyside

(2) **LOCATION OF WELL:** County Yakima NW 1/4 NW 1/4 Sec 8 T. 8 N., R. 23 W.M.

(2a) **STREET ADDRESS OF WELL** (or nearest address) 371 Miller Rd., Mabton D

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

(4) **TYPE OF WORK:** Owner's number of well (If more than one) 2

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

(5) **DIMENSIONS:** Diameter of well 6 inches. Drilled 90 feet. Depth of completed well 90 ft.

(6) **CONSTRUCTION DETAILS:**

Casing Installed: 6" Diam. from +1 ft. to 90 ft.
Welded ☒ Liner installed ☐ Threaded ☐ _____" Diam. from _____ ft. to _____ ft.
_____" Diam. from _____ ft. to _____ ft.

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

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

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

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

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

(8) **WATER LEVELS:** Land-surface elevation above mean sea level 720 ft.
Static level 24 ft. below top of well Date 6-28-96
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 25 gal./min. with stem set at 90 ft. for 1 hrs.
Artesian flow _____ g.p.m. Date 6-28-96
Temperature of water 68 Was a chemical analysis made? Yes ☐ No ☒

(10) **WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION**

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

MATERIAL	FROM	TO
Large & Small Gravel & Soil	0	12
Large & Small Gravel & Br. Clay & Sand	12	66
Large & Small Gravel & Br. Clay & Sand & Water.	66	90
1st Plat Lot #2		

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DEPARTMENT OF ECOLOGY
CENTRAL REGIONAL

Work Started 6-27-96 19. Completed 6-28-96 19

WELL CONSTRUCTOR CERTIFICATION:

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

NAME OASIS DRILLING (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 2017 S. 16th Ave Union Gap, WA 98903

(Signed) Jerry L. Rawle (WELL DRILLER) License No. 1435

Contractor's Registration No. OASISD*072J9 Date 7-3-96 19

(USE ADDITIONAL SHEETS IF NECESSARY)

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

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

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

36802

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W048[illegible]ACE523

UNIQUE WELL I.D. # ACE-523

Water Right Permit No. _____

(1) **OWNER:** Name John Dalrymple Address P.O. Box 546, Sunnyside

(2) **LOCATION OF WELL:** County Yakima NW 1/4 NW 1/4 Sec 8 T. 8 N. R 23 W.M.

(2a) **STREET ADDRESS OF WELL** (or nearest address) 371 Miller Rd., Mabton

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

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

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

(5) **DIMENSIONS:** Diameter of well 6 inches. Drilled 110 feet. Depth of completed well 110 ft.

(6) **CONSTRUCTION DETAILS:**

Casing installed: 6 Diam. from +1 ft. to 93 ft.
Welded [X]
Liner installed [ ] Diam. from _____ ft. to _____ ft.
Threaded [ ] Diam. from _____ ft. to _____ ft.

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

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

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

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

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

(8) **WATER LEVELS:** Land-surface elevation above mean sea level 725 ft.
Static level 30 ft. below top of well Date 7-2-96
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 60 gal./min. with stem set at 110 ft. for 1 hrs.
Artesian flow _____ g.p.m. Date 7-2-96
Temperature of water 70 Was a chemical analysis made? Yes [ ] No [X]

(10) **WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION**

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

MATERIAL	FROM	TO
Topsoil	0	2
Large & Small Gravel & Br. Clay & Sand	2	34
Br. Sand & Br. Clay	34	65
Large & Small Gravel & Br. Clay & Sand & Water	65	108
Med. Gray Basalt	108	110

2nd Plat
Lot #2

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AUG 12 1996
DEPARTMENT OF ECOLOGY
[illegible] REGIONAL OFFICE

Work Started 7-2-96 19 Completed 7-2-96 19

WELL CONSTRUCTOR CERTIFICATION:

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

NAME OASIS DRILLING (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 2017 S. 16th Ave. Union Gap, WA 98903

(Signed) Larry L. Rank (WELL DRILLER) License No. 1435

Contractor's Registration No. OASISD*072J9 Date 7-3-96 19

(USE ADDITIONAL SHEETS IF NECESSARY)

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

ECY 050-1-20 (9/93)

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

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy
36801

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W048324 ACE531

UNIQUE WELL I.D. # ACE-531

Water Right Permit No. _____

OWNER: Name John Dalrymple Address P.O. Box 546, Sunnyside

(2) LOCATION OF WELL: County Yakima NW 1/4 NW 1/4 Sec 8 T. 8 N. R. 23 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 371 Miller Rd., Mabton D

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

(4) TYPE OF WORK: Owner's number of well (if more than one) 3

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

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 110. feet. Depth of completed well 110 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 93 ft.
Welded ☒ Liner installed ☐ Threaded ☐ " Diam. from ft. to ft.
" Diam. from ft. to ft.

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

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

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

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

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

(8) WATER LEVELS: Land-surface elevation above mean sea level 725 ft.
Static level 30 ft. below top of well Date 7-1-96
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 25 gal./min. with stem set at 110 ft. for 1 hrs.
Artesian flow _____ g.p.m. Date 7-1-96
Temperature of water 70 Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

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

MATERIAL	FROM	TO
Topsoil	0	2
Large & Small Gravel & Br. Clay & Sand	2	34
Gravel & Br. Clay & Br. Sand	34	65
Large & Small Gravel & Br. Clay & Sand & Water	65	108
Med. Gray Basalt	108	110
2nd Plat Lot #1		

RECEIVED AUG 12 1996 DEPARTMENT OF ECOLOGY CENTRAL REGION

Work Started 7-1-96 19. Completed 7-1-96 19

WELL CONSTRUCTOR CERTIFICATION:

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

NAME OASIS DRILLING (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 2017 S 16th Ave Union Gap, WA 98903

(Signed) Jim L Rank (WELL DRILLER) License No. 1435

Contractor's Registration No. OASISD*072J9 Date 7-3-96 19

(USE ADDITIONAL SHEETS IF NECESSARY)

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

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

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

67958

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 1?5-108 AGL4290

UNIQUE WELL I.D. # ACL 290

Water Right Permit No. ______

WNER: Name Comstock, John Address ______

(2) LOCATION OF WELL: County Yakima NW 1/4 NE 1/4 Sec 8 T. 8 N., R 23 W.M.

B

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

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

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

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

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +2 ft. to 78 ft.
Welded ☑ ______ " Diam. from ______ ft. to ______ ft.
Liner installed ☐
Threaded ☐ ______ " Diam. from ______ ft. to ______ ft.

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

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

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

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

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

(8) WATER LEVELS: Land-surface elevation above mean sea level ______ ft.
Static level 15 ft. below top of well Date 6-12 98
Artesian pressure ______ lbs. per square inch Date ______
Artesian water is controlled by ______ (Cap, valve, etc.)

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ______
Bailer test ______ gal./min. with ______ ft. drawdown after ______ hrs.
Airtest 40 gal./min. with stem set at 80 ft. for 1 hrs.
Artesian flow ______ g.p.m. Date ______
Temperature of water 54 Was a chemical analysis made? Yes ☐ No ☑

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

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

MATERIAL		FROM	TO
Topsoil	S	0	11
Boulders + Clay TAN	M	11	13
Clay BRN	S	13	42
gravel cemented SAND	S	42	67
gravel coarse w/B	S	67	80

CENTRAL REGION OFFICE DEPT OF ECOLOGY Received AUG 30 1999

Work Started 6-11-98 19. Completed 6-12 1998

WELL CONSTRUCTOR CERTIFICATION:

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

NAME CRYSTAL WATER (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 505 IRENE Lane
(Signed) Drilled By Ron Ball (WELL DRILLER) License No. 2227

Contractor's Registration No. CRYSTWW*044NW Date 6-12 1999

(USE ADDITIONAL SHEETS IF NECESSARY)

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

ECY 050-1-20 (9/93)

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

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

57593

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W0876 ACL582

UNIQUE WELL I.D. # ACL-582

Water Right Permit No.

OWNER: Name Cindy Crawford Address 1002 Powel Ave., Grandview

(2) LOCATION OF WELL: County Yakima SE 1/4 NW 1/4 Sec 17 T. 8 N., R. 23 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) End Of Christenson Rd. South Side Of Canal, Mabton F

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

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

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

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 157 feet. Depth of completed well 157 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +1 ft. to 127 ft.
Welded ☒ Liner installed ☒ Threaded ☐ 4½" Diam. from 97 ft. to 157 ft.
" Diam. from ft. to ft.

Perforations: Yes ☒ No ☐
Type of perforator used Skill Saw
SIZE of perforations 1/8 in. by 5 in.
80 perforations from 137 ft. to 157 ft.
perforations from ft. to ft.
perforations from ft. to ft.

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

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

Surface seal: Yes ☒ No ☐ To what depth? 23 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

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

(8) WATER LEVELS: Land-surface elevation above mean sea level 700 ft.
Static level 62 ft. below top of well Date 4-1-97
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest 23 gal./min. with stem set at 157 ft. for 1 hrs.
Artesian flow g.p.m. Date 4-1-97
Temperature of water 72 Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

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

MATERIAL	FROM	TO
Br. Clay & Br. Sand	0	107
Br. Clay & Br. Sand & Gravel & Water 15 GPM	107	126
Br. & Gray Basalt & Hd. Br. Clay & Water	126	135
Med. Gray Basalt	135	157

RECEIVED APR 21 1997 DEPARTMENT OF ECOLOGY CENTRAL REGION OFFICE

Work Started 3-28-97 19. Completed 4-1-97 19

WELL CONSTRUCTOR CERTIFICATION:

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

NAME OASIS DRILLING 2017 S. 16th Ave. Union Gap, WA 98903 (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address

(Signed) Terry L Rank (WELL DRILLER) License No. 1435

Contractor's Registration No. OASISD*072J9 Date 4-1-97 19

(USE ADDITIONAL SHEETS IF NECESSARY)

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

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

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

56825

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W08656 ACL830

UNIQUE WELL I.D. # ACL-830

Water Right Permit No. _____

(1) OWNER: Name Juan Vargas Address P.O. Box 101, Mabton

(2) LOCATION OF WELL: County Yakima NW 1/4 NW 1/4 Sec 8 T. 8 N. R 23 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) Miller Rd. & Stettner Rd., Mabton

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

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

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

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 90 feet. Depth of completed well 90 ft.

(6) CONSTRUCTION DETAILS:

Casing Installed: 6 " Diam. from +1 ft. to 78 ft.
Welded [X] _____ " Diam. from _____ ft. to _____ ft.
Liner installed [ ] _____ " Diam. from _____ ft. to _____ ft.
Threaded [ ]

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

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

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

Surface seal: Yes [X] No [ ] To what depth? 23 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

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

(8) WATER LEVELS: Land-surface elevation above mean sea level 700 ft.
Static level 11 ft. below top of well Date 6-19-97
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 50 gal./min. with stem set at 90 ft. for 1 hrs.
Artesian flow _____ g.p.m. Date 6-19-97
Temperature of water 62 Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

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

MATERIAL	FROM	TO
Topsoil	0	2
Br. Clay & Large & Small Gravel & Sand	2	40
Br. Clay & Br. Sand & Gravel & Water	40	78
Br. Basalt & Gray Basalt & Water	78	90

RECEIVED JUL - 2 DEPARTMENT OF ECOLOGY CENTRAL REGION OFFICE

Work Started 6-18-97 19. Completed 6-19-97 19

WELL CONSTRUCTOR CERTIFICATION:

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

NAME OASIS DRILLING (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 2017 S. 16th Ave. Union Gap, WA 98903

(Signed) _____ (WELL CONTRACTOR) License No. 1435

Contractor's Registration No. OASISD*072J9 Date 6-19-97 19

(USE ADDITIONAL SHEETS IF NECESSARY).

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

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

APK129

WATER WELL REPORT

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

ECOLOGY

Construction/Decommission ("x" in circle)
☒ Construction 290738
○ Decommission ORIGINAL INSTALLATION Notice of Intent Number ______

CURRENT Notice of Intent No. W205783
Unique Ecology Well ID Tag No. APK 129
Water Right Permit No. ______
Property Owner Name Miquel Torrez
Well Street Address 730 Stetter Rd
City Mabton County YAKIMA
Location SW 1/4-1/4 NE 1/4 Sec 8 Twn 8 R 23 EWM or WWM (circle one)
Lat/Long (s, t, r Still REQUIRED) Lat Deg ______ Lat Min/Sec ______ Long Deg ______ Long Min/Sec ______
Tax Parcel No. 230806 44402

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

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

DIMENSIONS: Diameter of well 6 inches, drilled 185 ft.
Depth of completed well 160 ft.

CONSTRUCTION DETAILS
Casing Installed: ☒ Welded 6" Diam. from +2 ft. to 92 ft.
☐ Liner installed " Diam. from ____ ft. to ____ ft.
☐ Threaded 4" Diam. from -20 ft. to 180 ft.
Perforations: ☒ Yes ☐ No
Type of perforator used Saw Cut
SIZE of perfs 1/8 in. by 8 in. and no. of perfs 60 from 120 ft. to 160
Screens: ☐ Yes ☒ No ☐ K-Pac Location ______
Manufacturer's Name ______
Type ______ Model No. ______
Diam. ____ Slot size ____ from ____ ft. to ____ ft.
Diam. ____ Slot size ____ from ____ ft. to ____ ft.
Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand ______
Materials placed from ____ ft. to ____ ft.
Surface Seal: ☒ Yes ☐ No To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? ______ Depth of strata ______
Method of sealing strata off ______
PUMP: Manufacturer's Name ______
Type: ______ H.P. ______

WATER LEVELS: Land-surface elevation above mean sea level ______ ft.
Static level 59 ft. below top of well Date 6-8-07
Artesian pressure ______ lbs. per square inch Date ______
Artesian water is controlled by ______ (cap, valve, etc.)

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ______
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Airtest 20 gal./min. with stem set at 160 ft. for 2 hrs.
Artesian flow ____ g.p.m. Date ______
Temperature of water ____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

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

MATERIAL	FROM	TO
Soil, Bolders	0	20
Sand gravel	20	92
Black Basalt	92	115
Tan Clay	115	140
Sandstone water	140	160
Sand	160	185

DEPT OF ECOLOGY Received JAN 28 2008 CENTRAL REGION OFFICE

Start Date 6-5-07 Completed Date 6-8-07

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

☐ Driller ☐ Engineer ☐ Trainee Name (Print) Rob Cox
Driller/Engineer/Trainee Signature [signature]
Driller or trainee License No. 2302

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

Drilling Company Rob Cox Drilling
Address P.O. Box 5524
City, State, Zip Benton City WA 99320
Contractor's Registration No. RWCOXDD922DC Date 6/13/07

Ecology is an Equal Opportunity Employer

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

BBJ709

WATER WELL REPORT

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

Construction/Decommission ("x" in circle) 380792

☒ Construction

○ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT
Notice of Intent No. W 268786

Unique Ecology Well ID Tag No. BBJ 709

Water Right Permit No. _____

Property Owner Name Panfilo Montes

Well Street Address Miller Rd.

City Mabton County Yakima

Location SW1/4-1/4 NW1/4 Sec 08 Twn 08 R 23 EWM or WWM (circle one)

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

Tax Parcel No. 230808-23412

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

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

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

DIMENSIONS: Diameter of well 6 inches, drilled 82 ft. Depth of completed well 82 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6 " Diam. from 72 ft to 78 ft.
☐ Liner installed _____ " Diam. from _____ ft. to _____ ft.
☐ Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

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

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

Manufacturer's Name _____

Type _____ Model No. _____

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

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

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

Materials placed from _____ ft. to _____ ft.

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

Material used in seal Bentonite

Did any strata contain unusable water? ☐ Yes ☐ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

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

Static level 23 ft. below top of well Date 6-22-10

Artesian pressure _____ lbs. per square inch Date _____

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

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

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

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

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

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

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

Airtest 40 gal./min. with stem set at 25 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date _____

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

CONSTRUCTION OR DECOMMISSION PROCEDURE

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

MATERIAL	FROM	TO
Gravel	0	5
Silt + Clay	5	10
Gravel	10	28
Silt + Clay	28	35
Gravel	35	82

RECEIVED
JUN 29 2010
DEPARTMENT OF ECOLOGY - CENTRAL REGIONAL OFFICE

Start Date 6-22-10 Completed Date 6-22-10

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

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Gary Lydia

Driller/Engineer/Trainee Signature Gary Lydia

Driller or trainee License No. 1023

Drilling Company Apple Valley Well Drilling

Address P.O. Box 55

City, State, Zip Selah Wa.

Contractor's Registration No. APPLEVW915RQ Date 6-22-10

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

BIF429

WATER WELL REPORT

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

DEPARTMENT OF ECOLOGY State of Washington

Construction/Decommission *("x" in circle)*

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

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

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

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

DIMENSIONS: Diameter of well 8 inches, drilled 765 ft. Depth of completed well 765 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 10" Diam. from +2 ft. to 138 ft. ☐ Liner installed 8" Diam. from -40 ft. to 340 ft. ☐ Threaded _____" Diam. From _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

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

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

Manufacturer's Name _____

Type _____ Model No. _____

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

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

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

Materials placed from ____ ft. to ____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 20 ft.

Material used in seal BENTONITE

Did any strata contain unusable water? ☒ Yes ☐ No

Type of water? Sandy Depth of strata 320

Method of sealing strata off Bentonite

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

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

Static level 296 ft. below top of well Date 06/03/2015

Artesian pressure ____ lbs. per square inch Date _____

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

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

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

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

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

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

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

Airtest 200+ gal./min. with stem set at 760 ft. for 2 hrs.

Artesian flow ____ g.p.m. Date _____

Temperature of water 57 Was a chemical analysis made? ☐ Yes ☒ No

CURRENT

Notice of Intent No. WE20626

Unique Ecology Well ID Tag No. BIF 429

Water Right Permit No. _____

Property Owner Name Fransisca Vandermuelen

Well Street Address 610 Christinsen rd.

City Grandview County Yakima

Location SW1/4-1/4 SE1/4 Sec 8 Twn 8N R 23E **(s, t, r Still REQUIRED)** EWM ☒ Or WWM ☐

Lat/Long Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

Tax Parcel No. (Required) 23080834003

CONSTRUCTION OR DECOMMISSION PROCEDURE

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

MATERIAL	FROM	TO
Top Soil	0	2
cobbles	2	6
Silty sand	6	17
Brown Clay	17	21
Silty Sand	21	49
Sand and Gravel	49	132
Black Basalt	132	205
Brown Clay	205	247
Sandstone	247	307
Black Basalt	307	391
Basalt	391	458
Broken Basalt	458	464
Black Basalt (hard)	464	687
Broken basalt (soft)	687	725
Soft Basalt	725	750
Hard Basalt	750	765

DEPT OF ECOLOGY Received JUN 2 4 2015 CENTRAL REGIONAL OFFICE

Start Date 05/01/2006 Completed Date 06/04/2015

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

☐ Driller ☐ Engineer ☒ Trainee Name (Print) James Robling

Driller/Engineer/Trainee Signature James Robling

Driller or trainee License No. 3156T

IF TRAINEE: Driller's License No: 1224

Driller's Signature: Tyler O. Cross

Drilling Company Triple A Drilling Inc.

Address PO BOX 278

City, State, Zip Burbank , wa, 99323

Contractor's Registration No. TRIPLDIO937BB Date 06/04/2015

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

BIF430

WATER WELL REPORT

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

DEPARTMENT OF ECOLOGY State of Washington

Construction/Decommission *("x" in circle)*

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

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

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

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

DIMENSIONS: Diameter of well 8 inches, drilled 370 ft. Depth of completed well 370ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 10" Diam. from +2 ft. to 125 ft. ☒ Liner installed 8" Diam. from -50 ft. to 350 ft. ☐ Threaded _____" Diam. From _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

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

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

Manufacturer's Name _____

Type _____ Model No. _____

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

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

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

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 30ft.

Material used in seal bentonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

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

Static level 218ft. below top of well Date 06/15/2015

Artesian pressure _____ lbs. per square inch Date _____

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

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

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

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

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

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

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

Airtest 150+ gal./min. with stem set at 368ft. for 2hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water 57 Was a chemical analysis made? ☐ Yes ☒ No

CURRENT

Notice of Intent No. WE 19505

Unique Ecology Well ID Tag No. BIF 430

Water Right Permit No. _____

Property Owner Name FRH Enterprises

Well Street Address Glade Rd

City Mabton County Yakima

Location SW1/4-1/4 SW1/4 Sec 8 Twn 8N R 23E (s, t, r Still REQUIRED) EWM ☐ Or WWM ☐

Lat/Long Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

Tax Parcel No. (Required) 230808330001

CONSTRUCTION OR DECOMMISSION PROCEDURE

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

MATERIAL	FROM	TO
Top soil	0	3
silty sand	3	14
Clay (brown)	14	89
Sand and gravel	89	118
Black basalt	118	259
Brown Sandstone	259	293
Brown Clay	293	313
Green Clay	313	322
Black Basalt	322	354
Broken basalt	354	365
Black Basalt	365	370

DEPT OF ECOLOGY Received JUN 24 2015 CENTRAL REGION OFFICE

Start Date 06/02/2015 Completed Date 06/18/2015

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

☐ Driller ☐ Engineer ☒ Trainee Name (Print) James Robling

Driller/Engineer/Trainee Signature James Robling

Driller or trainee License No. 3156[illegible]

IF TRAINEE: Driller's License No: 1224

Driller's Signature: Tyler Owen

Drilling Company TripleAdrilling Inc.

Address PO Box 278

City, State, Zip Burbank , Wa, 99323

Contractor's Registration No. TRIPLDI0937BB Date 06/18/2015

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

WATER WELL REPORT
STATE OF WASHINGTON

Application No. COMSTOCK
Permit No.

(1) OWNER: Name JOHN H. COMSTOCK II, Address P.O. Box 636 MABTON

(2) LOCATION OF WELL: County YAKIMA NW¼ NE ¼ NW ¼ Sec. 2 T. 8 N., R. 23 E. WM

Bearing and distance from section or subdivision corner FROM NW COR. 300 EAST & 500 SOUTH

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

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

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 70 ft. Depth of completed well 70 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from 1 ft. to 70 ft. ABOVE
Threaded ☒ Diam. from ft. to ft.
Welded ☒ Diam. from ft. to ft.

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

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

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

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

(7) PUMP: Manufacturer's Name BERKELEY
Type CENTRIFUGAL H.P. 1½

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

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

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

Time	Water Level	Time	Water Level	Time	Water Level

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

(10) WELL LOG:

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

MATERIAL	FROM	TO
Topsoil & Gravel	0	25
Sandy Clay	25	60
Sand & Fine Gravel	60	70

Work started 11/1, 19 71 Completed 11/4/71 19

WELL DRILLER'S STATEMENT:

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

NAME [redacted] (Person, firm, or corporation) (Type or print)
Address [redacted]
[Signed] [redacted] (Well Driller)
License No. 0516 Date [redacted] 19

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356-OS (Rev. 4-71)

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

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

31362

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W 094115 / DAWSON

Water Right Permit No.

(1) OWNER: Name Marshall Dawson Address 262 Christenson Rd Mabton Wa

(2) LOCATION OF WELL: County Yakima Parcel 230808-24012 NE ¼ SE ¼ Sec 8 T 8 N., R 23 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) SE NW

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

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

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

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

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +1 ft. to 80 ft.
Welded ☐ Liner installed ☐ Threaded ☐ " Diam. from ft. to ft.
" Diam. from ft. to ft.

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

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

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

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

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

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 47 ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

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

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

Time	Water Level	Time	Water Level	Time	Water Level

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

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

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

MATERIAL	FROM	TO
Brown Top Soil	0	2
Boulders and Clay and Gravel	2	47
Sand and Gravel	47	60
Gravel	60	80

DEC 6 1994

Work started 7-11, 19 Completed 7-11, 1993

WELL CONSTRUCTOR CERTIFICATION:

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

NAME Blue Water Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address Rt 1 Bx 772-P Prosser Wa

(Signed) [signature] (WELL DRILLER) License No. 452

Contractor's Registration No. [illegible] Date 7-22, 1993

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329- 18

HAMMERSCHMIDT

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

WATER WELL REPORT
STATE OF WASHINGTON

Application No.
Permit No.

(1) OWNER: Name RUDY HAMMERSCHMIDT Address PROSSER, WASH.

(2) LOCATION OF WELL: County BENTON NW ¼ SE ¼ SW ¼ Sec. 8 T. 8 N., R. 23 E.W.M.

Bearing and distance from section or subdivision corner 100' to S.E. Corner

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

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

(5) DIMENSIONS: Diameter of well 8 inches.
Drilled 122 ft. Depth of completed well 122 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 8 " Diam. from +2 ft. to 118 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

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

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

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

Surface seal: Yes ☒ No ☐ To what depth? 40 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

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

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 61 ft. below top of well Date 6/1/83
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

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

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

Time	Water Level	Time	Water Level	Time	Water Level

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

(10) WELL LOG:

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

MATERIAL	FROM	TO
TOP SOIL	0	6
SANDY BR. CLAY & GRAVEL	6	85
GRAVEL MEDIUM SIZE& SAND	85	111
60 G.P.M@ 110'		
BROWN CEMENT GRAVEL	111	116
LOOSE SAND & GRAVEL & WATER	116	122

RECEIVED
JUN 7 1983
DEPARTMENT OF ECOLOGY
CENTRAL REGION

Work started 5/31/83 19 Completed 6/1/83 19

WELL DRILLER'S STATEMENT:

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

NAME RIEBE WELL DRILLING (D.B.J. TAYLOR)
(Person, firm, or corporation) (Type or print)

Address 1503 E. NOB HILL BLVD. YAKIMA, WASH

[Signed] John Riebe
(Well Driller)

License No. 421 Date 6/17/83 19

(USE ADDITIONAL SHEETS IF NECESSARY) ER 3-14-84

ECY 050-1-20

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

WATER WELL REPORT
STATE OF WASHINGTON

Application No. ...

Permit No. TAGGERID

(1) OWNER: Name Mike Taggerid Address Martin Mill Rd.

(2) LOCATION OF WELL: County Spokane NE¼ SE¼ Sec. 8 T. 25 N., R. 23 W.M.

Bearing and distance from section or subdivision corner Parcel No. 23082 22403

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

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

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 100 ft. Depth of completed well 100 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 99 ft.
Threaded ☐ ..." Diam. from ... ft. to ... ft.
Welded ☒ ..." Diam. from ... ft. to ... ft.

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

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

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

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

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

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

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ...
...ller test 20 gal./min. with 25 ft. drawdown after 1 hrs.
Artesian flow ... g.p.m. Date ...
Temperature of water ... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

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

MATERIAL	FROM	TO
Soil	0	3
Gravel + Boulders	3	20
Clay	20	50
Clay Sandy + Boulders	50	60
Sandy Clay	60	80
Gravel Sandy	80	85
Boulders + Gravel	85	95
Gravel Sand & W. with Boulders	95	100

RECEIVED
JUL 6 1977
DEPARTMENT OF ECOLOGY
CENTRAL REGIONAL OFFICE

Work started May 20, 19 77 Completed June 8, 19 77

WELL DRILLER'S STATEMENT:

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

NAME OLTMAN DRILLING
(Person, firm, or corporation) (Type or print)

Address ZILLAH WASH

[Signed] Elmer H Oltman
(Well Driller)

License No. 0377 Date June 8, 19 77

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71).

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

WATER WELL REPORT
STATE OF WASHINGTON

Application No. ____
Permit No. BERTSCH

(1) OWNER: Name EDWIN B. BERTSCH

(2) LOCATION OF WELL: County Yakima E¼ SW¼ Sec. 9 T. 8 N. R. 23 W.M.
Bearing and distance from section or subdivision corner 165' From S.W. Corner of Subdivision Corner

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

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

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

(6) CONSTRUCTION DETAILS:

Casing installed: ..." Diam. from ... ft. to ... ft.
Threaded [ ] ..." Diam. from ... ft. to ... ft.
Welded [X] 6..." Diam. from 1 ft. to 110 ft.

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

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

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

Surface seal: Yes [X] No [ ] To what depth? 30 ft.
Material used in seal CEMENT
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? ... Depth of strata ....
Method of sealing strata off ....

(7) PUMP: Manufacturer's Name Bert
Type: ½ Sub HP ....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 70 ft. below top of well Date 10-13-76
Artesian pressure ... lbs. per square inch Date ....
Artesian water is controlled by ... (Cap, valve, etc.)

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ....
Bailer test 30 gal./min. with NO ft. drawdown after 2 hrs.
Artesian flow ... g.p.m. Date ....
Temperature of water .... Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG:

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

MATERIAL	FROM	TO
Clay	0	95'
Cemented Gravel	95'	115'

RECEIVED
OCT 18 1976
DEPARTMENT OF ECOLOGY
CENTRAL REGIONAL OFFICE

Work started 10-11-, 19 76 Completed 10-13-, 19 76

WELL DRILLER'S STATEMENT:

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

NAME Watkins Drilling Co.
(Person, firm, or corporation) (Type or print)
Address Rt. 2 Box 3578 Grandview
[Signed] Kenneth L. Watkins
(Well Driller)
License No. 0516 Date 10-19-, 19 76

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71).

WWM

BHT360

WATER WELL REPORT

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

Construction/Decommission *("x" in circle)*

☒ Construction CRD

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

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

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

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

DIMENSIONS: Diameter of well 6 inches, drilled 225 ft. Depth of completed well 220 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6 " Diam. from +1 ft. to 90 ft.

☒ Liner installed 4 1/2 " Diam. from 80 ft. to 220 ft.

☐ Threaded _____ " Diam. From _____ ft. to _____ ft.

Perforations: ☒ Yes ☐ No

Type of perforator used SKILL SAW

SIZE of perfs 3/16 in. by 5 in. and no. of perfs 110 from 160 ft. to 220 ft.

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

Manufacturer's Name _____

Type _____ Model No. _____

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

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

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

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 23 ft.

Material used in seal BENTONITE

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

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

Static level 99 ft. below top of well Date 6-16-14

Artesian pressure _____ lbs. per square inch Date _____

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

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

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

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

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

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

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

Airtest 40 gal./min. with stem set at 220 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date 6-16-14

Temperature of water 64 Was a chemical analysis made? ☐ Yes ☒ No

CURRENT

Notice of Intent No. W 363396

Unique Ecology Well ID Tag No. BHT-360

Water Right Permit No. _____

Property Owner Name MENSONIDES DAIRY

Well Street Address S. PHILLIPS RD.

City MABTON County YAKIMA

Location NE 1/4-1/4 SW 1/4 Sec 09 Twn 08 R 23 EWM ☒ Check Or WWM ☐ One

(s, t, r Still REQUIRED)

Lat/Long Lat Deg _____ Lat Min/Sec _____

Long Deg _____ Long Min/Sec _____

Tax Parcel No. (Required) 230809-31002

CONSTRUCTION OR DECOMMISSION PROCEDURE

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

MATERIAL	FROM	TO
TOPSOIL	0	9
BROWN CLAY & BROWN SAND	9	43
BROWN CLAY & BROWN SAND & BROWN SANDSTONE & BASALT GRAVEL	43	47
STIFF BROWN CLAY	47	54
BR. CLAY & BR. SAND & GRAVEL	54	64
BROWN SAND & GRAVEL & WATER	64	89
BROWN AND GRAY BASALT	89	90
GRAY BASALT	90	97
BROWN BASALT	97	106
GRAY BASALT	106	147
BROWN SANDSTONE & BROWN CLAY	147	161
BR. SANDSTONE & BR. CLAY & WATER	161	176
BLUE-GRAY CLAY	176	197
GREEN AND GRAY SANDSTONE & HARD GREEN CLAY & WATER	197	206
LIGHT BLUE CLAY & LIGHT BLUE SANDSTONE & WATER LAYERS	206	222
GRAY SANDSTONE & GRAY SAND	222	225

DEPT OF ECOLOGY Received OCT 1 3 2014 CENTRAL REGION OFFICE

Start Date 6-11-14 Completed Date 6-16-14

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 (First) DERRICK RANK

Driller/Engineer/Trainee Signature Derrick Rank

Driller or trainee License No. 2927

IF TRAINEE: Driller's License No: _____

Driller's Signature: _____

Drilling Company OASIS DRILLING LLC

Address 2017 S. 16TH AVE.

City, State, Zip UNION GAP , WA , 98903

Contractor's Registration No. OASISDL914LH Date 6-17-14

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

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BHT361

WATER WELL REPORT

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

Construction/Decommission ("x" in circle)

☒ Construction CRO

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

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

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

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

DIMENSIONS: Diameter of well 6 inches, drilled 180 ft. Depth of completed well 180 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6 " Diam. from +1 ft. to 70 ft.

☒ Liner installed 4 1/2 " Diam. from 60 ft. to 180 ft.

☐ Threaded _____ " Diam. From _____ ft. to _____ ft.

Perforations: ☒ Yes ☐ No

Type of perforator used SKILL SAW

SIZE of perfs 3/16 in. by 5 in. and no. of perfs 80 from 140 ft. to 180 ft.

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

Manufacturer's Name _____

Type _____ Model No. _____

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

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

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

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 25 ft.

Material used in seal BENTONITE

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

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

Static level 48 ft. below top of well Date 6-23-14

Artesian pressure _____ lbs. per square inch Date _____

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

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

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

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

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

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

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

Airtest 23 gal./min. with stem set at 180 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date 6-23-14

Temperature of water 70 Was a chemical analysis made? ☐ Yes ☒ No

CURRENT

Notice of Intent No. W 363397

Unique Ecology Well ID Tag No. BHT-361

Water Right Permit No. _____

Property Owner Name MENSONIDES DAIRY

Well Street Address 151 S. PHILLIPS RD.

City MABTON County YAKIMA

Location NW 1/4-1/4 NW 1/4 Sec 09 Twn 08 R 23 EWM ☒ Check Or WWM ☐ One

(s, t, r Still REQUIRED)

Lat/Long Lat Deg _____ Lat Min/Sec _____

Long Deg _____ Long Min/Sec _____

Tax Parcel No. (Required) 230809-22002

CONSTRUCTION OR DECOMMISSION PROCEDURE

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

MATERIAL	FROM	TO
TOPSOIL	0	5
BROKEN BROWN AND GRAY BASALT	5	32
& GRAVEL		
BROWN SAND & BROWN CLAY & GRAVEL	32	54
BROWN SAND & GRAVEL & WATER	54	69
GRAY BASALT	69	99
GRAY BASALT & PYRITE	99	107
GRAY BASALT	107	113
BROWN SANDSTONE	113	124
STIFF BROWN CLAY	124	137
BR. CLAY & BR. SANDSTONE & WATER	137	156
GRAY CLAY	156	161
STIFF GREEN CLAY	161	168
GREEN CLAY & GREEN SANDSTONE	168	180
& WATER		

DEPT OF ECOLOGY Received OCT 13 2014 CENTRAL REGIONAL OFFICE

Start Date 6-17-14 Completed Date 6-23-14

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

☒ Driller ☐ Engineer ☐ Trainee Name (print) DERRICK RANK

Driller/Engineer/Trainee Signature Derrick Rank

Driller or trainee License No. 2927

IF TRAINEE: Driller's License No: _____

Driller's Signature: _____

Drilling Company OASIS DRILLING LLC

Address 2017 S. 16TH AVE.

City, State, Zip UNION GAP , WA , 98903

Contractor's Registration No. OASISDL914LH Date 6-24-14

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

Ecology is an Equal Opportunity Employer

BIF445

WATER WELL REPORT

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

Construction/Decommission *("x" in circle)*

(X) Construction CRO

( ) Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. WE 18370

Unique Ecology Well ID Tag No. BIF 445

Water Right Permit No. _____

Property Owner Name [redacted] Fransisca Vanderhueten

Well Street Address 151 S. Fisher Rd

City Mabton County Yakima

Location NE 1/4-1/4 SW 1/4 Sec 9 Twn 8N R 23 (E)WM or WWM (circle one)

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

Tax Parcel No. 230809130006

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

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

(X) New well ( ) Reconditioned *Method:* ( ) Dug ( ) Bored ( ) Driven ( ) Deepened ( ) Cable (X) Rotary ( ) Jetted

DIMENSIONS: Diameter of well 8" inches, drilled 260 ft. Depth of completed well 252 ft.

CONSTRUCTION DETAILS

Casing Installed: (X) Welded 10" Diam. from +1 ft. to 78 ft.

(X) Liner installed 6" Diam. from -6 ft. to 252 ft.

( ) Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: (X) Yes ( ) No

Type of perforator used Skil Saw

SIZE of perfs 1/2 in. by 6 in. and no. of perfs 80 from 192 ft. to 252 ft.

Screens: ( ) Yes (X) No ( ) K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

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

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

Gravel/Filter packed: ( ) Yes (X) No ( ) Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: (X) Yes ( ) No To what depth? 30 ft.

Material used in seal Bentonite

Did any strata contain unusable water? ( ) Yes (X) No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

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

Static level 91 ft. below top of well Date 6-10-14

Artesian pressure _____ lbs. per square inch Date _____

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

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

Was a pump test made? ( ) Yes (X) No If yes, by whom? _____

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

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

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

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

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

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

Airtest 50 gal./min. with stem set at 248 ft. for 2 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water 57° Was a chemical analysis made? ( ) Yes (X) No

CONSTRUCTION OR DECOMMISSION PROCEDURE

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

MATERIAL	FROM	TO
Top Soil + Silt	0	14
Cement Sand + Gravel	14	78
Basalt (Black	78	116
Brown Sandstone	116	139
Tan clay	139	161
Green clay	161	172
Green Sandstone	172	220
white Sand	220	239
Black Basalt	~~239~~ 239	260

DEPT OF ECOLOGY Received OCT 17 2014 CENTRAL REGION OFFICE

Start Date June 6, 2014 Completed Date June 11, 14

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

(X) Driller ( ) Engineer (X) Trainee Name (Print) James Robling

Driller/Engineer/Trainee Signature James Robling

Driller or trainee License No. 3156T

Drilling Company Triple A Drilling Inc

Address P.O. Box 278

City, State, Zip Burbank WA

Contractor's Registration No. TRIPLDI0937BB Date _____

If TRAINEE, Driller's Licensed No. 1724

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.**

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