

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 57-12010
Exam Date: 01/17/2025

1. Current Owner:
DERUYTER DAIRY LLC PO BOX 580 MARSING ID 83639-0580
2. Accompanied by: SUZANNE DERUYTER
Phone No: (208)-697-4626
Address: 43.575797°, -116.871480°
Relationship to permit Holder: representative of permit holder.

3. SOURCE:

GROUND WATER

Method of Determination: GARMIN GPS MAP 76, GIS, and Owyhee County tax parcel data.**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
2-64, 2-65, 2-10416	SNAKE RIVER	GEM IRR DISTRICT	DECREED 2009

Comments: The permitted place of use (POU) is overlapped by the service area for Gem Irrigation District.

2. Other water rights with the same point-of-diversion: NO Overlap

Water Right No.	Source	Purpose of Use	Basis
NONE	NA	NA	NA

Comments: No water rights share the permitted point of diversion (POD).**C. DIVERSION AND DELIVERY SYSTEM****1. LOCATION OF POINT(S) OF DIVERSION: GPS COORDS: N43.57773, W116.87341**

GROUND WATER SE¼ SE¼, Sec. 24, Twp 03N, Rge 05W, B.M. OWYHEE County

Method of Determination: GARMIN GPS MAP 76, GIS, and Owyhee County tax parcel data.**PLACE OF USE: IRRIGATION**

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
03N	05W	24																2.0	2.0

Total Acres: 2.0 0.6 CP0.6 CP**PLACE OF USE: DOMESTIC**

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
03N	05W	24																X	

Method of Determination: GIS, and Owyhee County tax parcel data.**3.**

Delivery System Diagram Attached (required). Indicate all major components and distances between components.

X Indicate weir size/pipe as applicable.

Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.

XX Aerial Photo Attached (required for irrigation of 10+ acres).X Photo of Diversion and System Attached**4.**

Well or Diversion ID No.*	Motor Make	Hp	Pump Series No.	Pump Make	Pump Serial No. or Discharge Size
D0082559	Grundfos	7.5	77S75-15	Grundfos	2"Dia.

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
NONE	NA	NA	NA	NA	NA	NA

2. Measurements: The configuration of the exposed portion of the 2 1/2" diameter water line is not possible due to the junctions for 4 pressure tanks and backflow valve for the irrigation line. However, the Beneficial Use Examination Rules 37.03.02.035.01.r.i. & iii. state that direct measurement of the diversion rate is not required for irrigation up to five (5) acres and any uses other than irrigation or storage if the total combined diversion rate for all the uses established in connection with the permit does not exceed twenty-four one hundredths (0.24) cubic feet per second.

E. FLOW CALCULATIONS

Additional Computation Sheets Attached

Measured Method: A theoretical calculation based on the system specifications, the static water level, and Administrative Memo #22 regarding domestic use standards (table 1-below) were used to determine a reasonable rate for licensing.

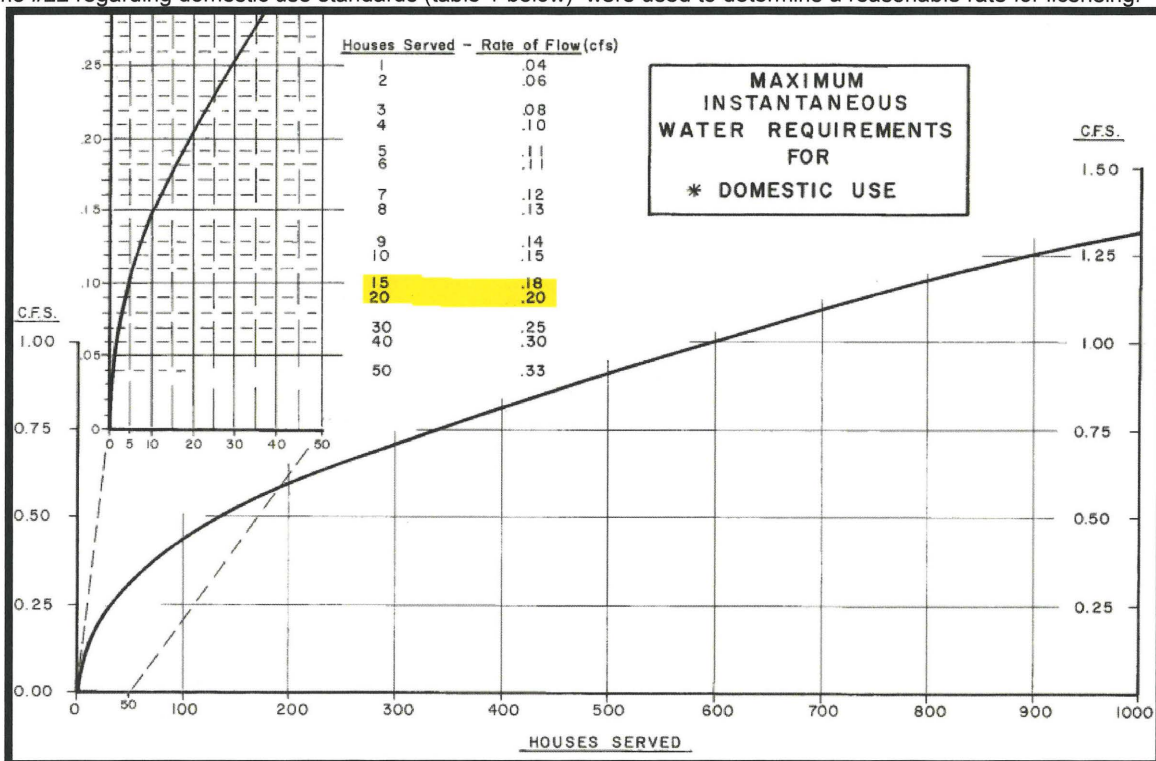


Table 1- Domestic use max. instantaneous rate requirements table and graphs, Page 3 of Administrative Mem

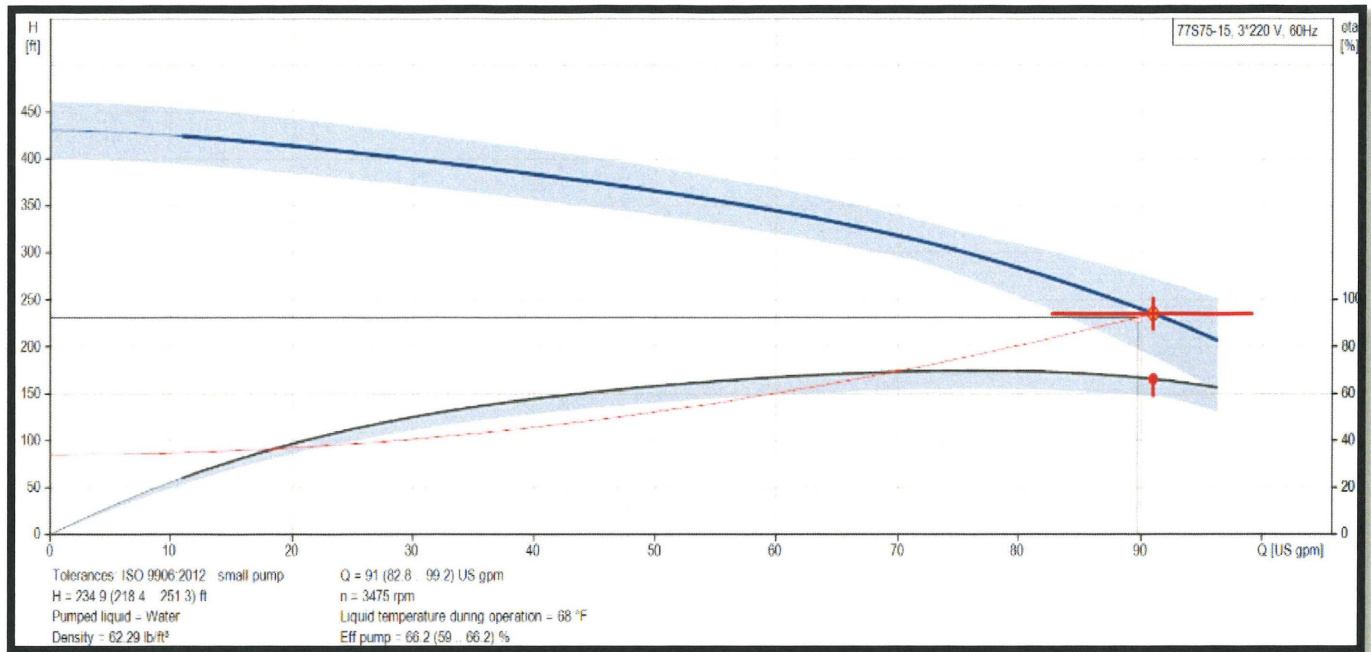


Table 2- Pump curve for Grundfos 77S75-15 7.5 Hp, source: product-selection.grundfos.com/us/products (also attached at back of report)

Pump Curve Rate= 0.18-0.22cfs

Permit allowed = 0.20cfs

BU Limited Rate= 0.20cfs

Recommendation= 0.20cfs

Comments:

At the time of the field examination the VFD in the pump house was set at 70psi. The pump turned on when the pressure dropped to about 58psi. The well drillers log lists the static water level at 85ft and the engineers well specifications require a set depth of 231ft. Beneficial use was developed for 22 mobile homes, but the current permit is limited to service for 18 mobile homes. The pump make and series number were provided by the well driller. The manufacturers pump curve online (Table 2-above) lists the pump at the specified set depth as 82.8 to 99.2 GPM (0.18 to 0.22cfs) indicating that the pump is capable of exceeding the permitted rate. I recommend the license is issued for the full permitted rate of 0.20cfs, per Administrative Memo #22 and the theoretical calculation.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.6\text{acre} \times 4.5 \text{ AFA} = 2.7 \text{ AFA}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.02\text{cfs} \times 260 \text{ days} \times 1.9835 = 10.3 \text{ AFA}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 2.7 \text{ AFA}$$

2. Volume Calculations for Other Uses:

Domestic use (internal only) = 0.6 AF/home x 18 mobile homes = 10.8 AF annually, per Administrative Memo #22.

Comments: The Statement of Completion states there are 24 homes with domestic water hook ups; 24 homes were confirmed through the field examination. However, permit condition #4 limits the development to 18 mobile homes. An additional application for permit will need to be filed for the additional 4 mobile homes (#s 19 through 22). I recommend that the license is issued with an annual volume of 10.8 AF for domestic use and 2.7 AF for the irrigation of 0.6-acre.

G. NARRATIVE/REMARKS/COMMENTS

On November 19, 2024, the Department received the Statement of Completion for permit 57-12010. On section 3, the permit holder stated that use was developed for 24 domestic households and less than 2 acres of irrigation. The permit was only issued for domestic use for 18 homes and 2 acres of irrigation. On January 17, 2025, a field examination was conducted with the permit holder and facilities manager as escorts. At the time of examination 24 mobile homes (skids) and a GIS measured 0.6-acre of irrigation were confirmed. The permit holder stated that 2 of the 26 homes seen in the 2023 NAIP and Google Earth Pro aerial imagery were not connected to the service and were removed from the site during the development. Suzanne M. Deruyter (permit holder) stated that she will be filing an application for permit for the additional 6 households domestic uses, and planned to expand the irrigated areas and will include irrigation on the forthcoming application.

The system is served by a 7.5 Hp Grundfos submersible 77 series submersible pump with a 2" discharge a 2 ½" steel line from the well is connected to a series of four 86.7-gal pressure tanks. The output is controlled by a VFD with a set pressure limit of 70psi. During the examination the drain was open to the tanks and when the pressure dropped to about 58psi the pump switched on until the pressure was restored. A 2 ½" steel domestic service line leads from the pump house to the southeast where it is split into two 2 ½" lines delivering water around the periphery of the skids. At each household a 1" poly service line Ts off the main line ending at the ¾" service line with shutoff valve under each household. The permit holder elected to have the households identified as #1 to 18 as the domestic use area for the license.

The irrigation system is controlled by a Rainbird ESP-TM2 programmable timer and diverted from the 2 ½" steel manifold passing through a backflow valve where the pipe is reduced to a buried 1 ½" PVC line delivering water to control valves (2 were identified at the time of the examination) that distribute water to a total of 48 Rainbird Series 5000 rotary sprinkler heads throughout the irrigation POU. The hand drawn as-built for skids #1-12 and system diagram for the mainline delivering water to each service throughout the POU were provided. The engineers well specifications require a set depth of 231ft, however, the pump specified has been replaced with the higher output Grundfos pump currently in use.

I recommend that the license is issued with a maximum rate of 0.20cfs (review in section E), an annual volume of 10.8 AF for domestic use in 18 homes (Administrative Memo #22), 2.7 AF annually for the irrigation of ½ acre (review in section F), and conditions R69, WB5, & 103. Conditions 26A, 046, and 106 should be removed per current guidance. Condition 121 should be replaced by 103 at licensing per current guidance.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS

1. Recommended Amounts

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Annual Volume</u>
IRRIGATION	03/01 to 11/15	0.02 CFS	2.7 AF
DOMESTIC	01/01 to 12/31	0.20 CFS	10.8 AF
<u>Totals:</u>		0.20 CFS	13.5 AF

2. Recommended Amendments

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None

☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☒ None

I. AUTHENTICATION

Bob Howe - Water Resource Agent, Sr.

Field Examiner's Name BOB HOWE Date _____

Reviewer Cody Date 12/23/25

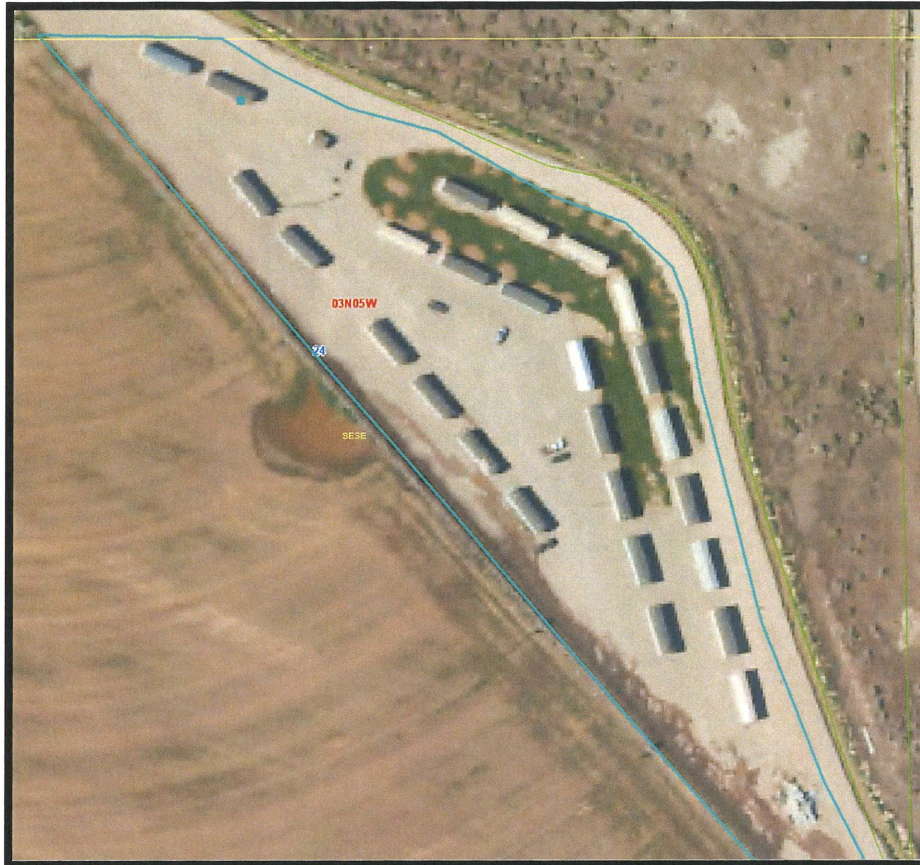


Figure 1-NAIP 2023 imagery of the permit POU.



Figure 2- Google Earth Pro-August 2023 -image of the POU. The two homes removed are marked with a red "x".

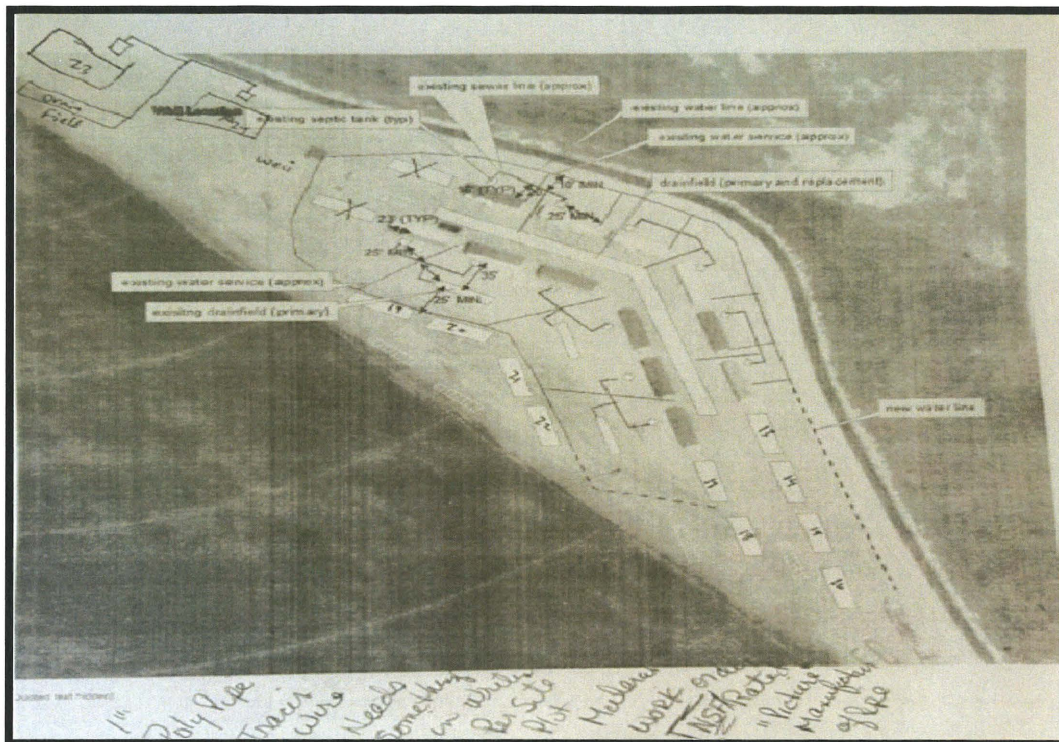


Figure 3- System Drawing of The Main Potable Pipeline and Drains- The 2 ½" steel mainline is as drawn. The 1" service lines to the homes are inferred to be direct from the main in areas they are not drawn in. the homes x-ed out in the upper right corner were later moved to the locations drawn in and seen in the 2023 imagery.

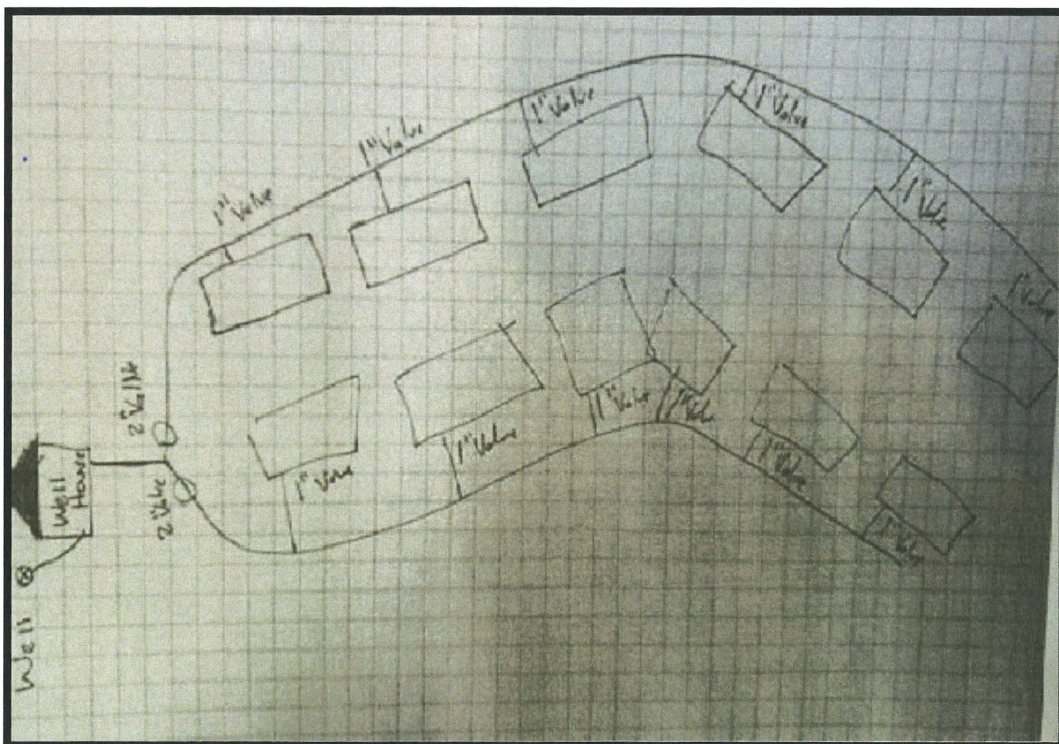


Figure 4- As-built sketch by operator of the buried domestic system for homes #1-12.

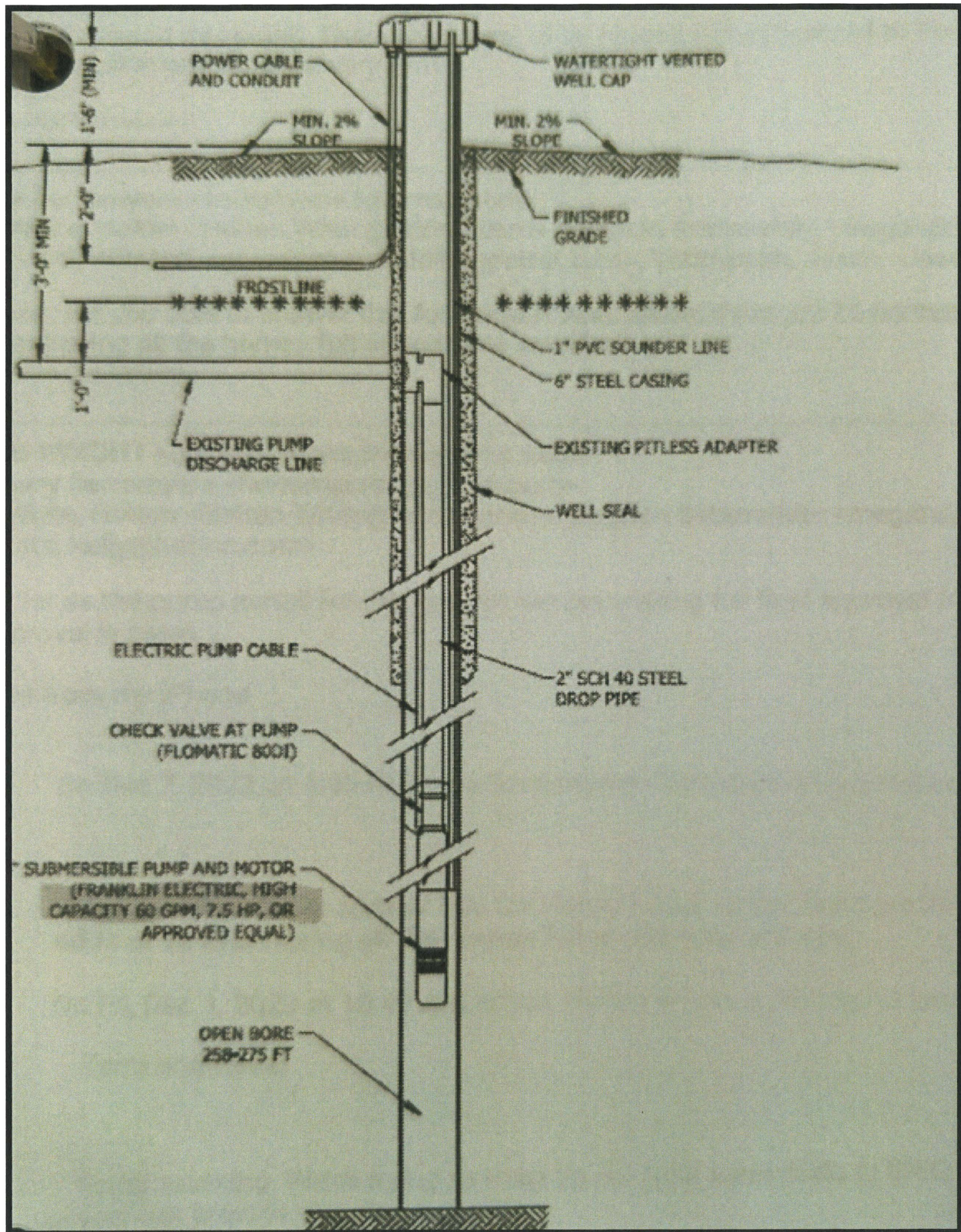


Figure 5- Well Details.

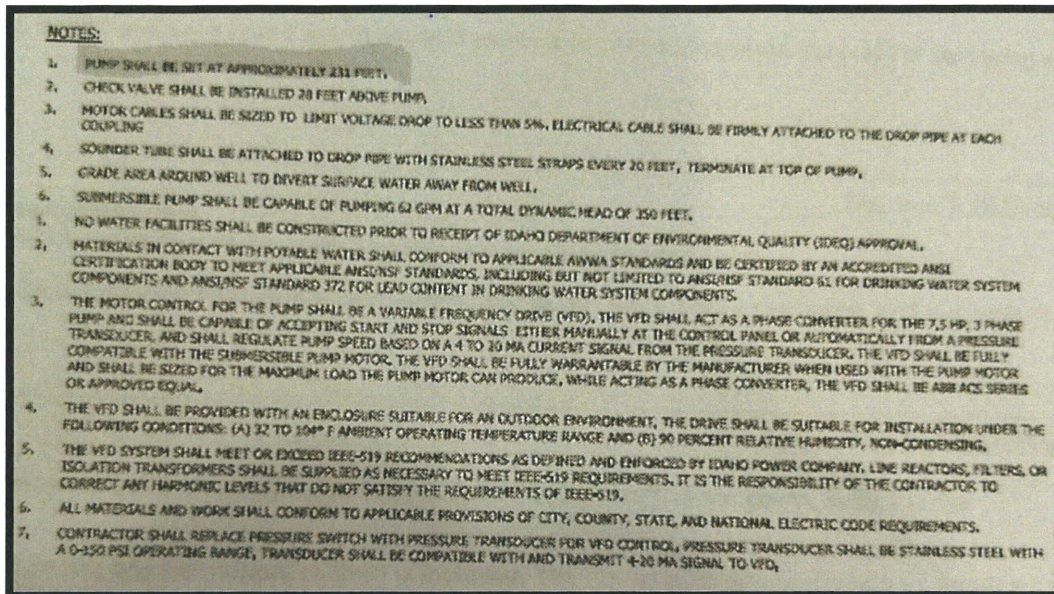


Figure 6- Well specifications. #1 notes that the pump shall be set at approximately 231 feet.

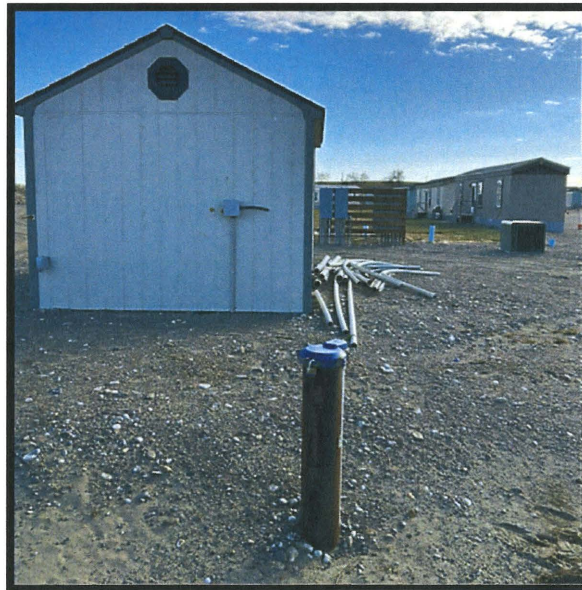


Photo 1- Well head and pump house. Taken facing southeast.



Photo 2- Well head ID Tag.

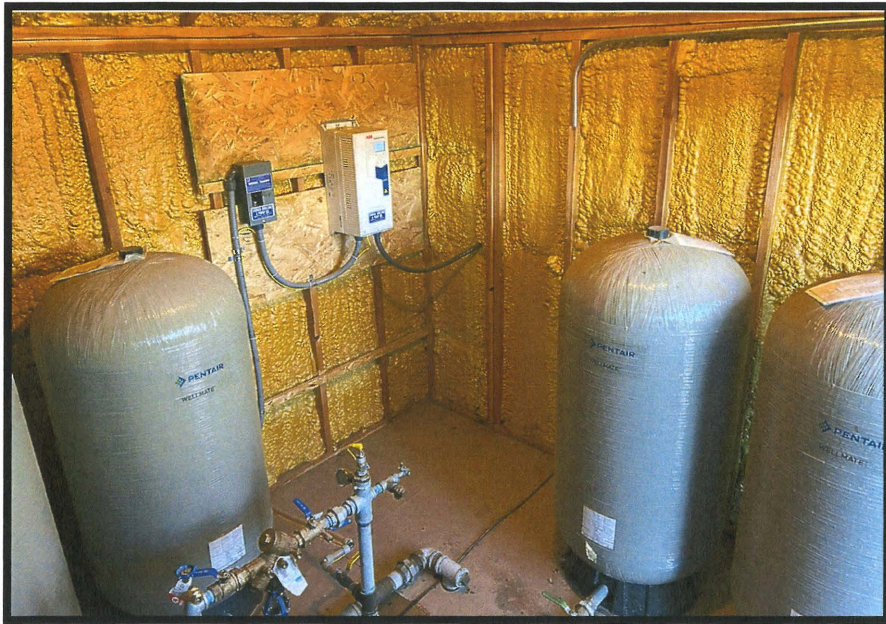
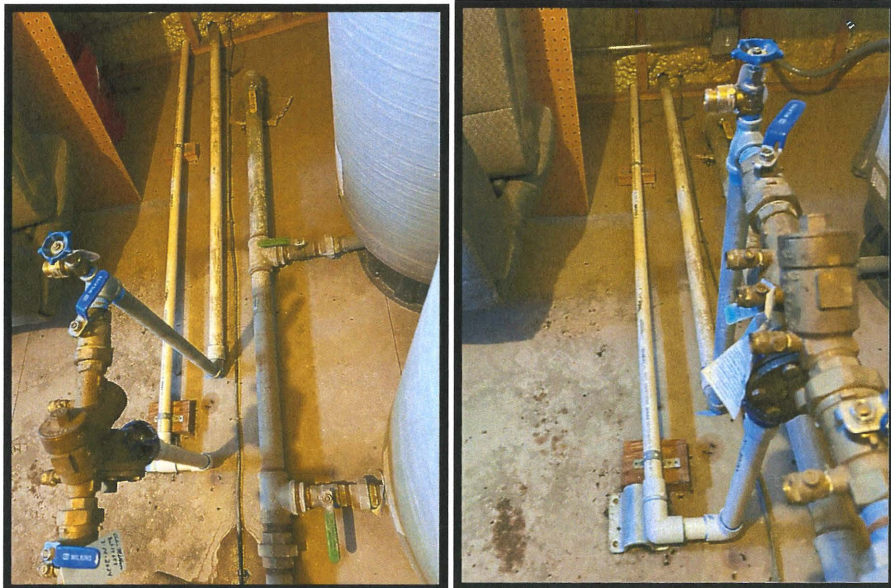


Photo 3- Interior of pumphouse. The VFD and pressure tanks with the pipe from the well entering through the floor in the center of image.



Photos 4 & 5- 2 1/2" steel manifold and 1 1/2" PVC irrigation line with backflow valve. The 1" PVC vent pipe is on the left.



Photo 6- Irrigation control panel- on northwest wall of pump house.

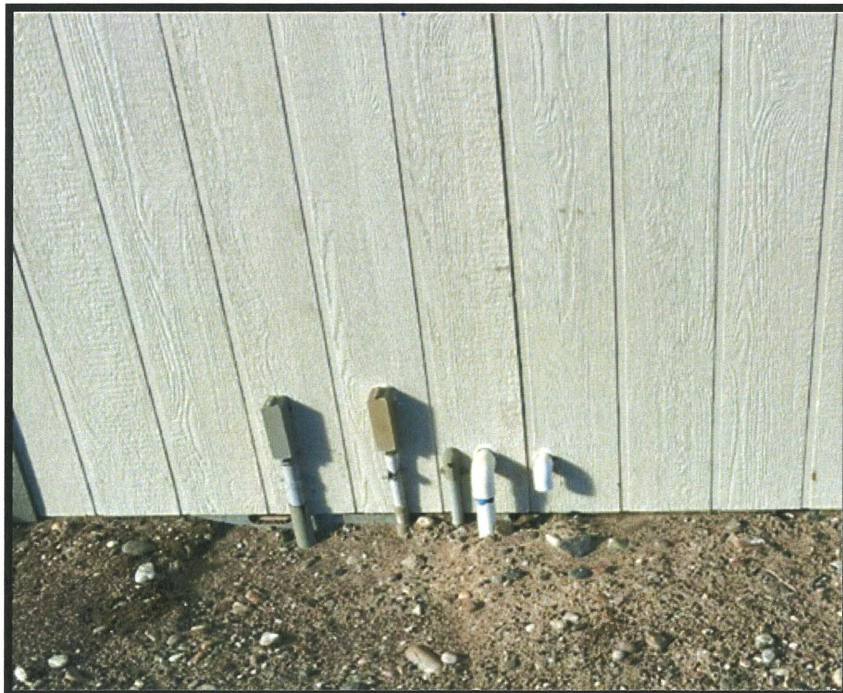


Photo 7- From left to right- Pump control wire, irrigation control wire, irrigation line, and backflow valve vent exiting pumphouse.

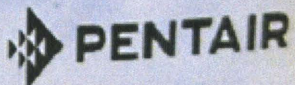
	WM-25 WB CPVC DRAIN	Drawdown - (Gallons/Liters) Qte d'eau soutirée - (Gallons/Liters) Aspiración adicional - (Galones/Litros)		
	CH31056			
	306185593	20-40 psig 138-276 kPa 1.38-2.76 bar	30-50 psig 207-345 kPa 2.07-3.45 bar	40-60 psig 276-414 kPa 2.76-4.14 bar
	2018			
Precharge pressure (psig/kPa/bar)	40 / 276 / 2.76	30 / 112	26 / 98	23 / 85
Pressure (psig/kPa/bar)	125 / 860 / 8.6	 PENTAIR WELLMATE  Pentair Chardon, Ohio 44024		
Operating Pressure (psig/kPa/bar)	125 / 860 / 8.6			
Operating Temperature (°F / °C)	40 / 4 - 120 / 49			
Volume	86.7 gal / 328.2 liter			
 Tested and Certified by the WQA to NSF/ANSI Std. 61 Section 8 for Material Safety and NSF/ANSI Std. 372 for Low Lead compliance DOT-SP 14700 Assembled in the USA of foreign and domestic parts				

Photo 8a- Pressure Tank tag.

ABB
Made in USA
of Foreign Parts

ACQ580-01-046A-2

Input U1 3ph 208/240 VAC
I1 46.2 A / 42.0 A
F1 50/60 Hz

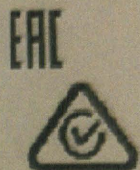
Output U2 3ph 0...U1
I2 46.2 A / 42.0 A
I2 0...500 Hz

FRAME
R3

Air cooling
IP21 SCCR 100 kA
UL type 1
IE2 (90;100) 2.8%

Multiple rated equipment, see hardware manual.





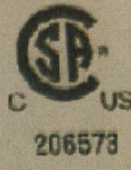


ABB Oy
Hiomatie 13
00380, Helsinki
Finland



S/N 2233302314

Photo 8b- VFD Tag.



Photo 9- Facing SE- The 4 homes at the SW extent of the development.

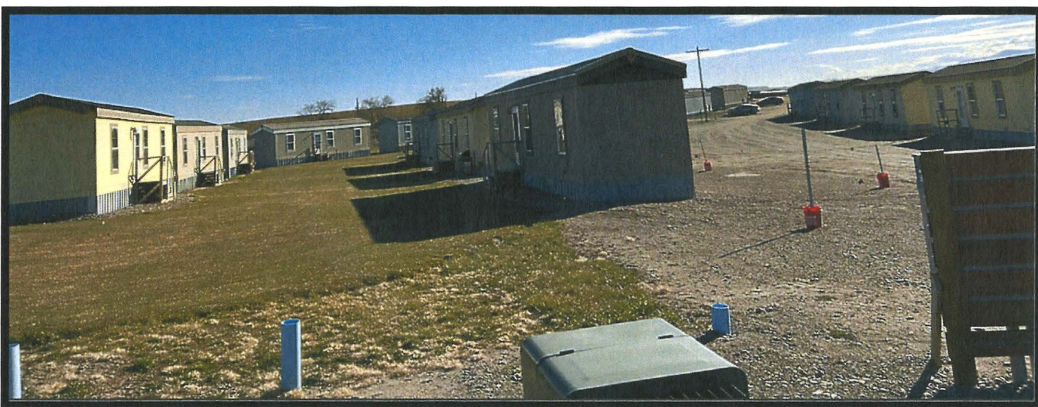


Photo 10- At the NW end of homes facing SE.



Photo 11- At the SE end facing NW.

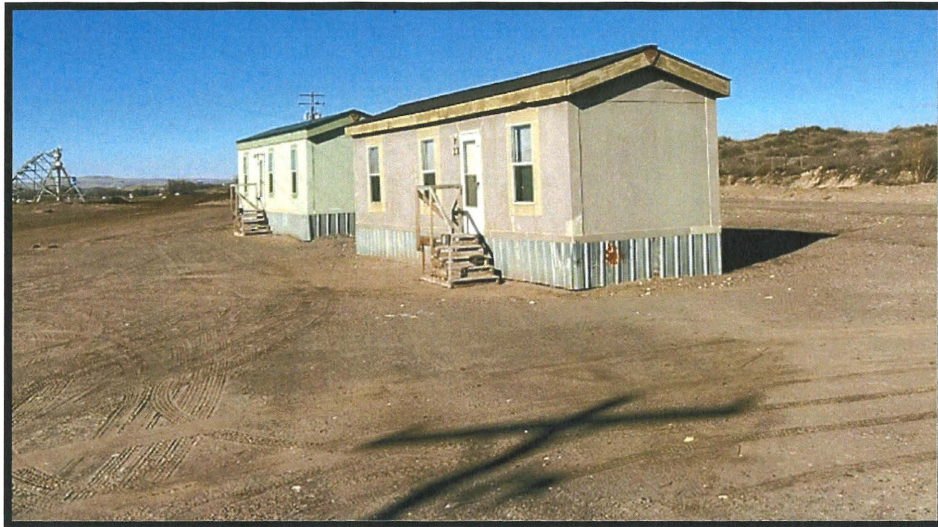


Photo 12- Facing NW- The two homes NW of the pump house.



Photo 13- Control Valve at the SE end in irrigated area between rows of homes.



Photo 14-(above-left) Rainbird sprinkler heads found through out the irrigated areas. Photo 15 (above-right) Rainbird head alongside a home in the NE irrigated area.



Photo 16- Rainbird sprinkler head in the NW of the irrigated area.

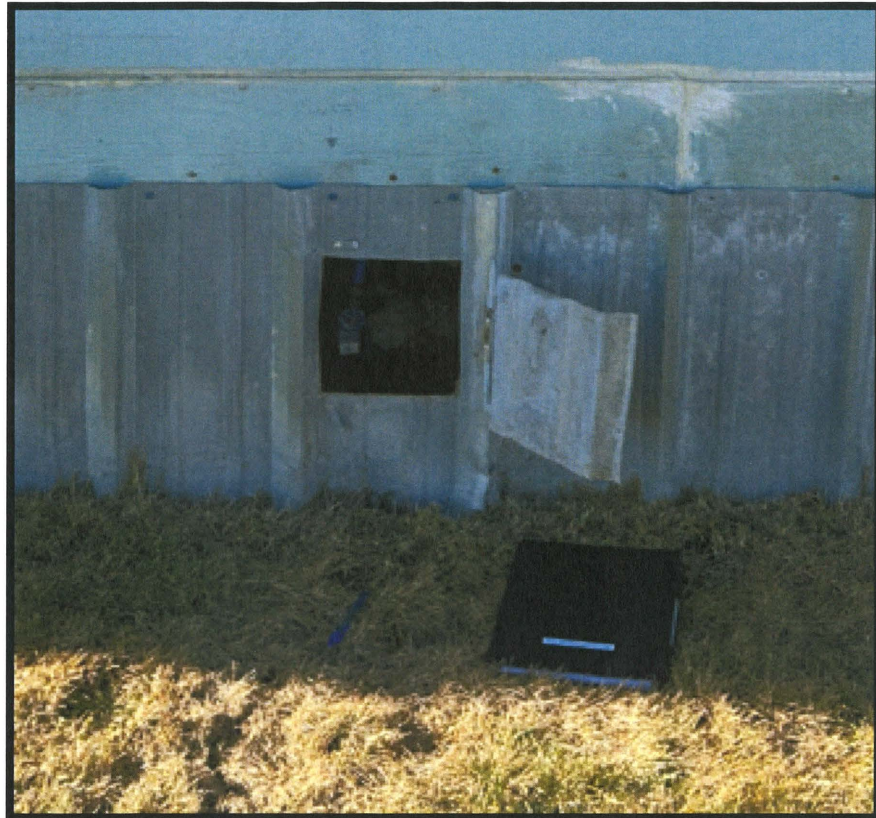
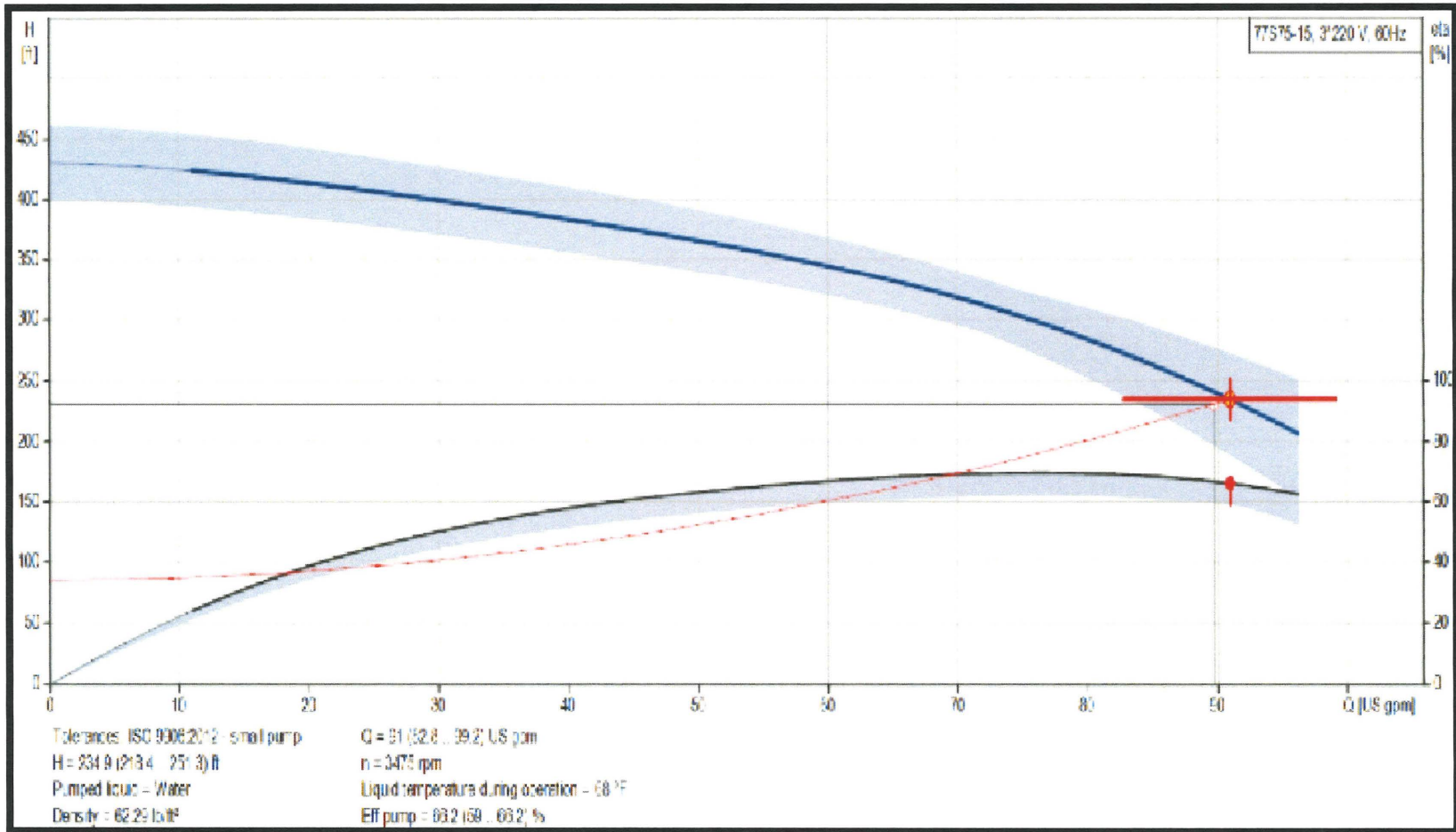


Photo 17 & 18- (above and below) Service hatch for water line into home. The line is reduced to $\frac{3}{4}$ " at the valve.



Grundfos Pump Curve



57

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

RECEIVED

AUG 26 2019

WATER RESOURCES
WESTERN REGION1. WELL TAG NO. D 0082559Drilling Permit No. 889054

Water right or injection well # _____

2. OWNER: DeKuyter DairyName SameAddress 7699 Bantrock RoadCity Marsing State Id Zip 83639

3. WELL LOCATION:

Twp. 03 North ☒ or South ☐ Rge. 05 East ☐ or West ☒Sec. 24 1/4 SE 1/4 SE 1/4Gov't Lot _____ County OwyheeLat. 43 ° 34 ' 66 " (Deg. and Decimal minutes)Long. 116 ° 32 ' 41 " (Deg. and Decimal minutes)Address of Well Site Same as above

(Give at least name of road + Distance to Road or Landmark)

Lot. _____ Blk. _____ Sub. Name _____

4. USE:

☒ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation ☐ Thermal ☐ Injection
☐ Other _____

5. TYPE OF WORK:

☒ New well ☐ Replacement well ☐ Modify existing well
☐ Abandonment ☒ Other _____

6. DRILL METHOD:

☒ Air Rotary ☐ Mud Rotary ☐ Cable ☐ Other _____

7. SEALING PROCEDURES:

Seal material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method/procedure
<u>Pentamix</u>	<u>0</u>	<u>42</u>	<u>41</u>	<u>10' over bore</u>
				<u>Stayed open</u>

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing	Liner	Threaded	Welded
<u>6</u>	<u>0</u>	<u>238</u>	<u>150</u>	<u>Steel</u>	☐	☐	☐	☒
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 260

9. PERFORATIONS/SCREENS:

Perforations ☐ Y ☒ N Method XManufactured screen ☐ Y ☒ N type _____

Method of installation _____

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule

Length of Headpipe _____ Length of Tailpipe _____

Packer ☐ Y ☒ N Type _____

10. FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method

11. FLOWING ARTESIAN:

Flowing Artesian? ☐ Y ☒ N Artesian Pressure (PSIG) _____Describe control device Well cap

12. STATIC WATER LEVEL and WELL TESTS:

Depth first water encountered (ft) 173 Static water level (ft) 85Water temp. (°F) 45 Bottom hole temp. (°F) 65Describe access port Well cap

Well test:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)
<u>195</u>	<u>80+</u>	<u>2 hr</u>

Test method:

Pump	Bailer	Air	Flowing artesian
☐	☐	☒	☐

Water quality test or comments: Good A Little Sulfur Scent

13. LITHOLOGIC LOG and/or repairs or abandonment:

Bore Dia. (in)	From (ft)	To (ft)	Remarks, lithology or description of repairs or abandonment, water temp.	Water	
				Y	N
10	0	45	Sandy Clay		-
10	45	52	Gravel		-
6	52	100	Blue Clay		-
6	100	145	Sandy Clay		-
6	145	173	Blue Clay		-
6	173	185	Sand Black		-
6	185	197	Blue Clay		-
6	197	205	Black Sand		-
6	205	260	Blue Clay		-
6	260	275	Black Sand		-
WBZ 173-275					

Completed Depth (Measurable): 270Date Started: 3-15 Date Completed: 3-25-19

14. DRILLER'S CERTIFICATION:

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name Eric Kemp + Son Co. No. 417Principal Driller Mike Kemp Date 6-20-2019Driller Mike Kemp Date 6-20-2019

Operator II _____ Date _____

Operator I _____ Date _____

* Signature of Principal Driller and rig operator are required.

57-12010