

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 57-11618

Exam Date: 9/25/2012

1. Current Owner: MARVIN WALLIN
RT 1 BOX 420
MARSING ID 83639
(208)869-4626
2. Accompanied by: Ted Schroder
Phone No: 208-941-4292
Address: RT 1 BOX 420, MARSING ID 83639
Relationship to Permit Holder: Maintenance staff

3. SOURCE TRIBUTARY
GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 57-10610, and Gem Irrigation District rights.
2. Other water rights with the same point of diversion: None

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER SW1/4SW1/4 Sec. 32, Twp 03N, Rge 04W, B.M. OWYHEE County

Method of Determination: GPS and visual inspection

2.

PLACE OF USE: COMMERCIAL AND FIRE PROTECTION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
03N	04W	32											X						

Method of Determination: Visual inspection and ArcMap

3. YES Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
YES Aerial Photo Attached (required for irrigation of 10+ acres).
YES Photo of Diversion and System Attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
D0018784	Berkeley	20	Unknown	Berkeley	3"
Booster #1	Baldor	20	20303240055	Gould	3"
Booster #2	Baldor	20	20304170081	Gould	3"

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date

2. Measurements: No measurement was possible. A theoretical calculation was performed.**E. FLOW CALCULATIONS** X Additional Computation Sheets Attached

Measured Method:

Theoretical calculation = 0.57 cfs.

Pump Curve = 266 gpm or 0.59 cfs

Permit allows 1.00 cfs

Recommend 0.57 cfs diversion rate for licensing.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

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

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

2. Volume Calculations for Other Uses:

Flowmeter reading were taken between 1/23/2010 and 1/25/2011. The flowmeter had a 100 gallon multiplier. The following readings show the annual volume during this time period.

$$1/25/2011 = 52830$$

$$- \quad \underline{1/23/2011 = 44716}$$

$$8114 \times 100 = 811400 / 325850 = 2.5 \text{ af of Commercial volume}$$

G. NARRATIVE/REMARKS/COMMENTS

Water is diverted from the well located north of the well house in T03N R04W S32 SWSW and travels due south to the well house. The water from the well is diverted into two 10,000 gallon storage tanks. Water from the storage tanks is pumped out through two 20 Hp pumps to the mainline. The main travels south to the tire store and office building and continues on to the gas station and convenience store. Another mainline travels in a northwesterly direction to another office building.

Conditions 26A and 106 were met and were dropped at licensing per instructions. Conditions 077 and commercial use condition were carried forward from permitting and updated.

Overlapping right 57-10610 is for a domestic home that is no longer on the property. The home was removed and replaced by this commercial facility. The well for 57-10610 is still in existence and is not used as part of this commercial use. The Gem Irrigation District overlaps this POU and the owner has agreed in a memo to D. Gibson dated 2/13/2002 that they will retain shares from Gem Irrigation District in the case of mitigation. The memo also states that irrigation is not a beneficial use of this water right since the applicant did not apply for it.

Have conditions of permit approval been met? X Yes No

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
COMMERCIAL	01/01 to 12/31	0.570 CFS	2.50 AF
FIRE PROTECTION	01/01 to 12/31	0.570 CFS	
<u>Totals:</u>		0.570 CFS	2.50 AF

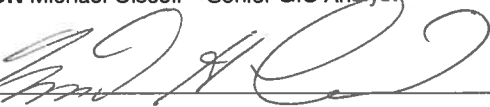
2. Recommended Amendments

___ 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 ___ Other

I. AUTHENTICATION Michael Ciscell – Senior GIS Analyst

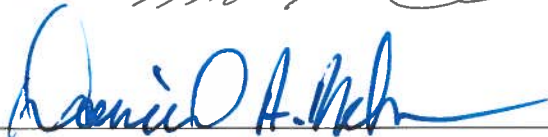
Field Examiner's Name



Date

7/2/2013

Reviewer

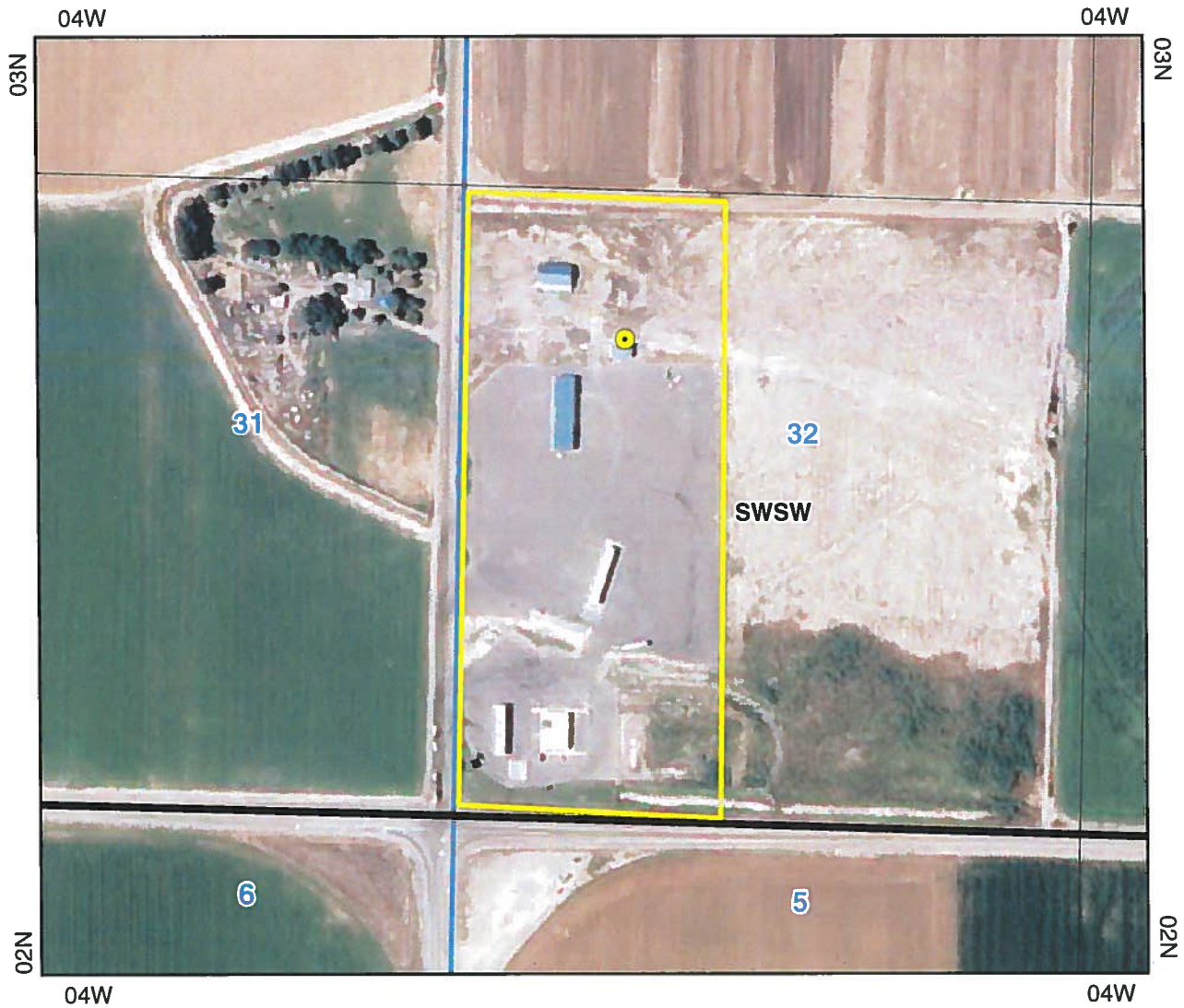


Date

7-2-2013

State of Idaho
Department of Water Resources
Field Exam Map
57-11618

This map depicts the COMMERCIAL AND FIRE PROTECTION place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.



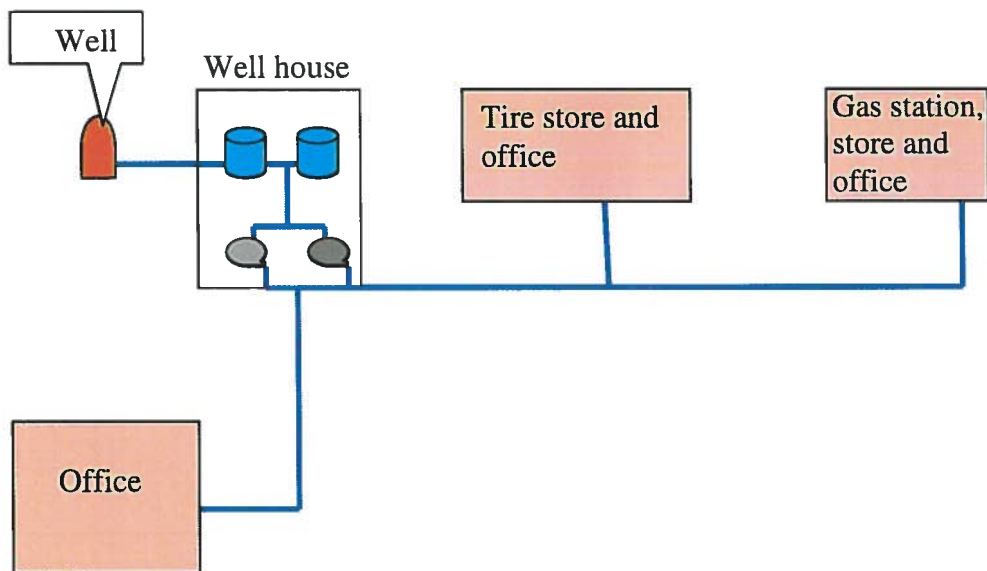
-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections
-  Quarter Quarters

0 0.045 0.09 0.18 Miles



System Diagram for 57-11618
By: Michael Ciscell

Water is diverted from the well located north of the well house in T03N R04W S32 SWSW and travels due south to the well house. The water from the well is diverted into two 10,000 gallon storage tanks. Water from the storage tanks is pumped out through two 20 Hp pumps to the mainline. The main travels south to the tire store and office building and continues on to the gas station and convenience store. Another mainline travels in a northwesterly direction to another office building.



THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 57-11618
 Examiner: Michael Ciscell
 Date of Field Exam: 7/1/2013

	Option 1	OPTION 2	OPTION 3	
P/D No.:				
PUMP HORSEPOWER	20	20	20	
BOOSTER HORSEPOWER	0	0	0	
PUMPING LEVEL	101	101	101	
DISCHARGE PRESSURE	40	50	60	
FRICITION	0	0	0	
RATE OF FLOW (cfs)	0.64	0.57	0.51	AVE
(gpm)	285.9	255.4	230.8	0.57

The above calculates the formula =

$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$$

Assumptions: %70 efficiency.

Examiners Notes:

Lift was taken from well log. Hp was found during site visit. A standard psi for domestic use of 40 to 60 psi was used to estimate the pressure against the pump.

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Office Use Only			
Inspected by _____			
Twp _____	Rge _____	Sec _____	
_____ 1/4	_____ 1/4	_____ 1/4	
Lat: _____	_____	Long: _____	_____

1. WELL TAG NO. D 0018784

DRILLING PERMIT NO. _____

Other IDWR No. _____

2. OWNER:

Name Marylin Wallin Ranch

Address Rt. 1 Box 222

City Marsing State ID Zip 83639

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

N		Twp. <u>3</u>		North ☒ or South ☐	
E		Rge. <u>4</u>		East ☐ or West ☒	
S		Sec. <u>32</u>		1/4 <u>SW</u> 1/4 <u>SW</u> 1/4	
W		Gov't Lot _____		County <u>Owyhee</u>	
		Lat: _____		Long: _____	
Address of Well Site <u>1000 Ft. north of Hwy</u>					

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

Lt. _____ Blk. _____ Sub. Name _____

4. USE:

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

5. TYPE OF WORK: check all that apply (Replacement etc.)

☒ New Well ☐ Modify ☐ Abandonment ☐ Other _____

6. DRILL METHOD:

☒ Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other _____

7. SEALING PROCEDURES:

Seal/Filter Pack		AMOUNT		METHOD
Material	From To	Seals or Pounds		
Bentonite 5/8	0 130	3750		pour
Sil. Sand 8-18	130 160	5000		pour
Sil. Sand 10-20	160 273	22000		pour

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 58

Was drive shoe seal tested? ☒ Y ☐ N How? air

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
16	+1	58	375	steel	☒	☐	☒	☐
10	+2	145	375	steel	☒	☐	☒	☐
10	195	235	375	steel	☒	☐	☒	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS:

☐ Perforations Method _____
☒ Screens Screen Type Johnson

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
145	195	.20		10	S.S.	☐	☒
235	245	.20		10	S.S.	☐	☒
258	268	.20		10	S.S.	☐	☒

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

17 ft. below ground Artesian pressure _____ lb.
Depth flow encountered 145-269 ft. Describe access port or control devices: CAP

11. WELL TESTS:

☒ Pump ☐ Bailor ☐ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
150	55	130	1 HR
200	67	130	1 HR
250	84	130	1 HR

Water Temp. 56 Bottom hole temp. 56

Water Quality test or comments: _____

Depth first Water Encounter 19

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Water	Y	N
20	0	2	TOP SOIL			
20	2	4	HARD PAN			
20	4	19	SANDY BROWN CLAY			
16	19	40	GRAVEL		X	
16	40	97	BROWN & BLUE CLAY			
16	97	106	GRAY CLAY			
16	106	118	FINE BLACK SAND		X	
16	118		FINE BLACK SAND & CLAY			
		135	STRIPS		X	
16	135	145	GREY SANDY CLAY			
16	145	170	FINE SAND & CLAY STRIPS		X	
16	170		GREY SANDY CLAY & CLAY			
		195	LAYERS		X	
16	195	207	GREY SANDY CLAY			
16	207	235	SM. CRACKS GREY SAND & CLAY		X	
16	235		BLACK SAND & SANDY CLAY			
		244	STRIPS		X	
16	244	254	SANDY CLAY W/FINE SAND			
16	254	269	FINE BLACK SAND & CLAY		X	
16	269	300	GREY SANDY CLAY			

RECEIVED

OCT 24 2001

WATER RESOURCES
WESTERN REGION

Completed Depth 273 (Measurable)

Date: Started 7/12/2001 Completed 7/30/2001

13. DRILLER'S CERTIFICATION:

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

Company Name Treasure Valley Drilling

Firm No. 560

Firm Official _____

Date 10/19/2001

and _____

Driller or Operator _____

Date 10/19/2001

(Sign once if Firm Official & Operator)

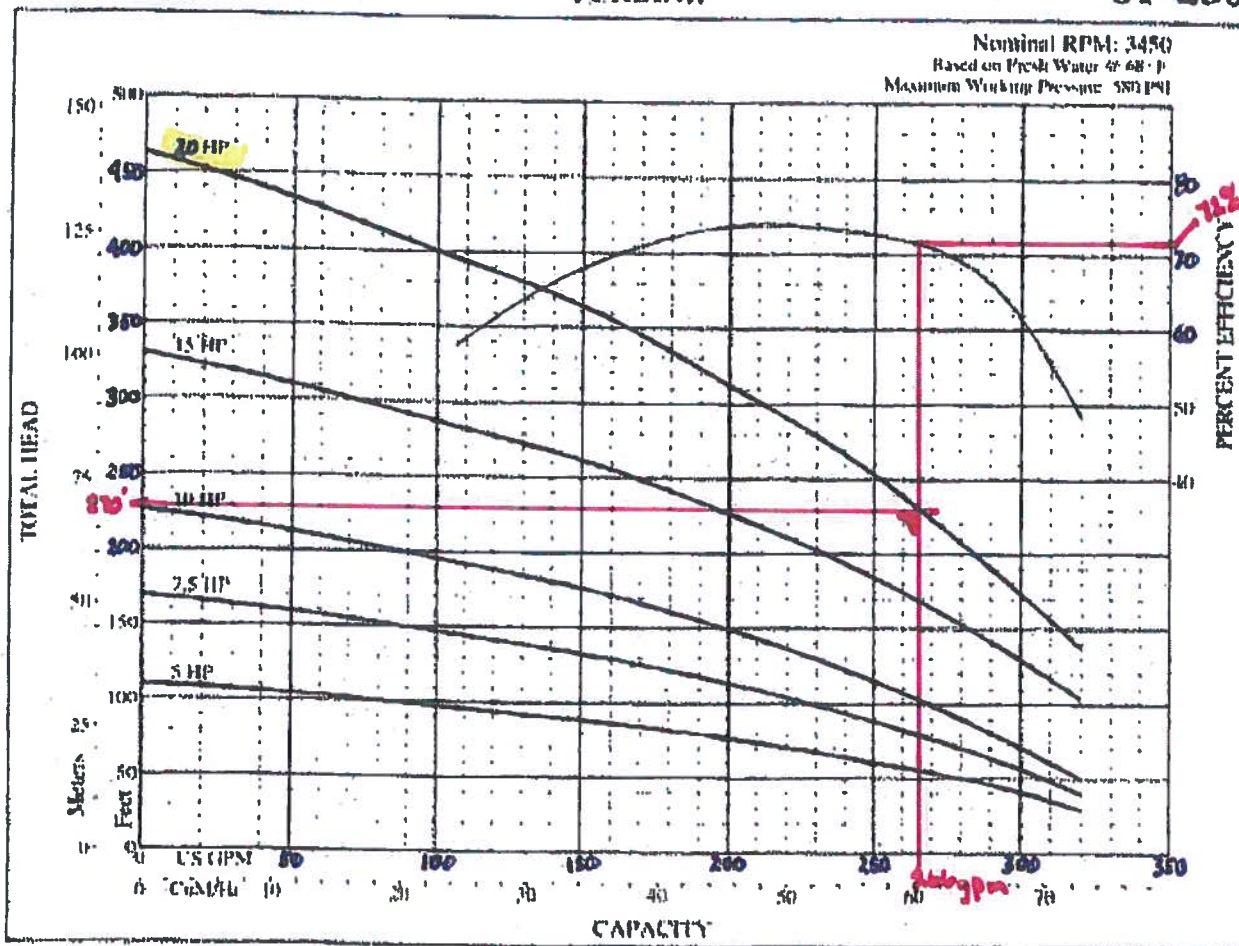
FORWARD WHITE COPY TO WATER RESOURCES

1-0-N Truck Stop Commercial Well Pump Performance Curve



**SUBMERSIBLE
TURBINE**

6T-250



OUTLINE DIMENSIONS / WEIGHTS

HP	Stages	Motor size	P length	M* length	MD* dia.	Mr. wt.	Pump wt.
5	1	6"	23.98	25.44	5.38	105	75
7.5	2	6"	28.98	28.00	5.38	120	95
10	3	6"	33.98	30.56	5.38	135	114
15	5	6"	38.98	33.13	5.38	146	133
20	7	6"	48.98	38.56	5.38	155	172

Note: dimensions = inches, weight = U.S. lbs.

M* Maximum length (Franklin Electric Motor)

MD* Motor diameter (Franklin Electric Motor)

SPECIFICATIONS

Minimum Well I.D.	6.0 inches
Minimum Submergence @ 100 GPM (above inlet)	10.0 Feet
Capacity Range	100 - 320 GPM
Discharge	1" F NPT

See manufacturer's data for motor cooling requirements

SUPPERSIDES

All Previous

Date 04/15/96

Section **ST**

Page 14.01

As-Built Diagram of I-O-N Truck Stop Supply Well

June 18, 2013

T. 3 N. R. 4 W. Section 32, SW¼, SW¼ — Latitude 43° 32' 53.1" Longitude 116° 51' 2.2"

SHEET 1 OF 1

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Lithology

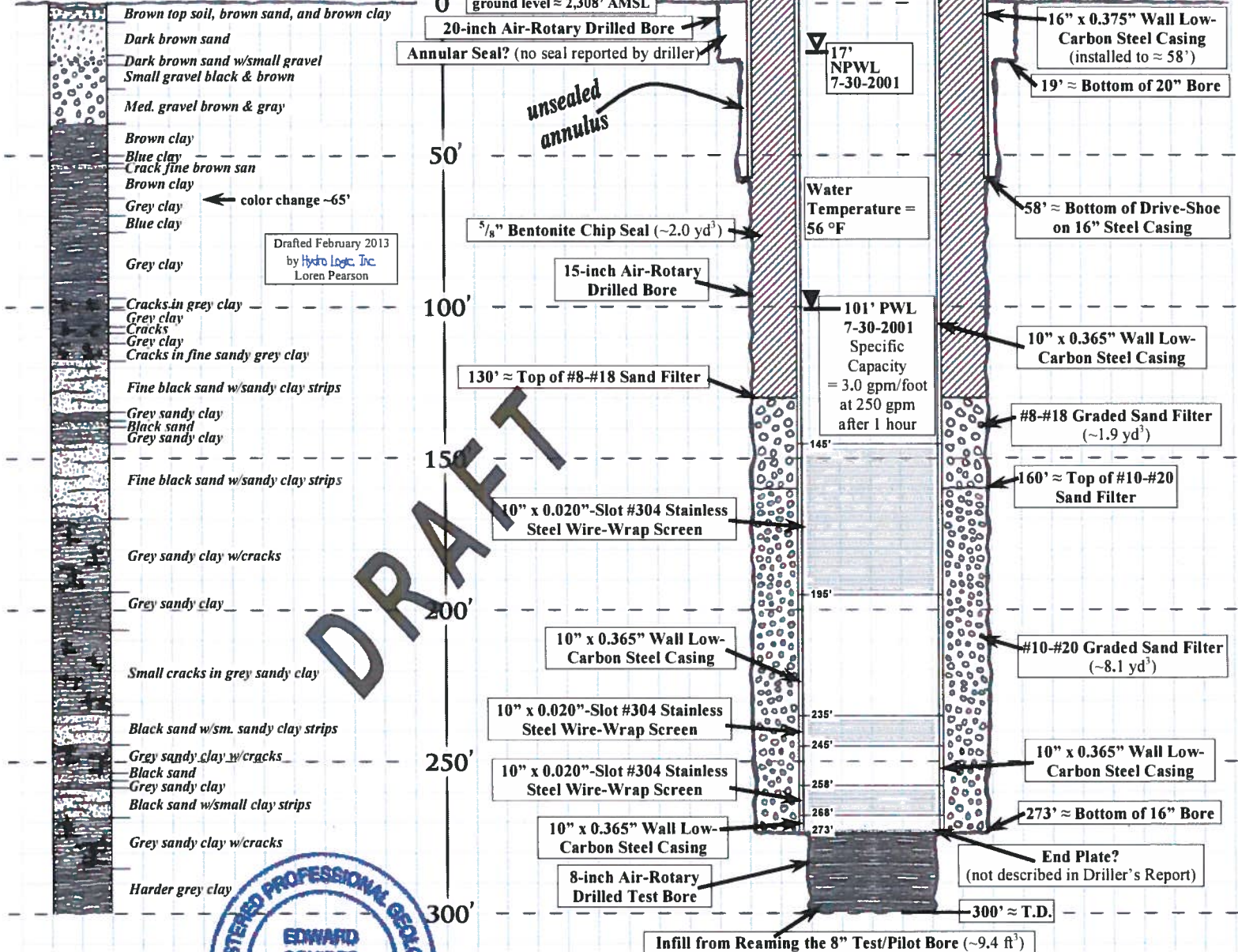
Hydro Logic, Inc. lithologic log is interpreted and drawn from the "Well Driller's Report" by Frank Skinner of SOS Well Drilling. The drill cuttings were sampled by the driller during drilling of the 8" test/pilot bore.

Depth

(feet below ground level)

As-Built Well Construction

Constructed by Treasure Valley Drilling, John Post Driller, in July 2001
(horizontal scale 0.1"=1' & vertical scale 1"=100')
all measurements to ground level



Note: All seal and filter pack material volumes were checked against volumetric calculations of the borehole and pipe sizes and were found to be significantly different than the volumes required for the standard borehole and pipe sizes annular spaces. The bentonite chip seal volume is 31% less than required to fill the nominal annular space. The #8-#18 sand filter required 271% more than is typical to fill the nominal annular space. The #10-#20 sand filter required 324% more than is typical to fill the nominal annular space.

Figure X. Text here.

1-9-10
1-23-10
3-20-10

044449
044716
045714

Sat 1:00 pm
1:00 Sat
12:30 Sat

5-6-10
5-25-10

046624
046989

3:00 Thurs
8:30 Tues

6-28-10

047806

4:45 Monday

Done

8-13-10

049390

4:30 Friday

Repair
" "

9-6-10
9-17-10
9-19-10
9-27-10

050148
050396
050436
050825

8:00 Monday
1:05 Friday
9:15 Sunday
2:35 Monday

10-13-10
10-21-10
10-21-10
10-26-10

051225
051381
051488
051577

107 5:20 Tuesday
10:00 Thurs
11:00
7:30 Tues

11-4-10
11-15-10
11-22-10

051735
051898
052038

11:00 Thurs
5:30 Mon
12:00 Noon

12-13-10
12-22-10

052313
052426

12:30
12:30

Flowmeter readings for production
well - Permit 057-11618. supplied
by owner.

[Signature]

25.11 052830
28.11 053021
3-3.11 053324
3-23.11 053576

5:00 pm
6:30 pm
11:00 am
12:00

5-5.11 053804

3:45 pm

5-4.11 054375
5-23.11 054757

4:00 pm
3:15 pm

July 1.11 055711
July 26 056598

1:30 pm
8:00 pm

Sept 25 058572
29 059850

4:30 pm
6:30 pm

Dec 26 060274

4:15 pm

Mar 22 061680

4:30 pm

June 5 063293
June 22 063728
July 30 065029

12:00 pm
9:30 Am
3:00 pm

PHOTOGRAPHER AND DATE OF PHOTOS Michael Ciscell 9/25/2012

FILE NUMBER 57-11618



Well and office looking NW
from Pump House.



Pump House from parking lot
looking NW. Well located
behind (north) of Pump House.



Flowmeter from Well to Storage
Tanks inside the well house on
back wall.

PHOTOGRAPHER AND DATE OF PHOTOS Michael Ciscell 9/25/2012

FILE NUMBER 57-11618



The above picture on the left shows the two 10,000 gallon storage tanks inside the Pump House, and the picture on the right shows the piping coming from the tanks to the booster pumps and on to the POU.



The above picture on the left shows a close-up of the two 20 Hp booster pumps and the picture on the right show the Flowmeter from the booster pumps to the POU.