

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 25-14431
Exam Date: 10/11/2016

1. Current Owner:
PACIFICORP
1407 W NORTH TEMPLE STE 110
SALT LAKE CITY UT 84116
(801)220-2252
2. Accompanied by: Jeff Tucker; Dennis Vanderbeek
Phone No: 801-220-2252
Address:
Relationship to Permit Holder: Pacificorp Employees

3. **SOURCE:**
GROUND WATER

TRIBUTARY:

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 25-07403 (Licensed)
2. Other water rights with the same point-of-diversion: 25-07403 (Licensed)

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

GROUND WATER SE¼NE¼ Sec. 25, Twp 02N, Rge 37E, B.M. BONNEVILLE County

Method of Determination: GPS, Aerial Photography

2.

PLACE OF USE: WATER QUALITY IMPROVEMENT

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
02N	37E	25				X													

Method of Determination: GPS, Aerial Photography

3.

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

☒ 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.

☒ Aerial Photo Attached (required for irrigation of 10+ acres).

☒ Photo of Diversion and System Attached

4. For well information see attached document labeled 2010-2011 Well field construction summary.

D. FLOW MEASUREMENTS

1. 14 installed magnetic flowmeters, Endress Hauser Promag 50.
2. Measurements: See attached document for the flow measurements.

E. FLOW CALCULATIONS

☒ Additional Computation Sheets Attached

Measured Method: Utilized 14 installed magnetic flow meters. Rate of diversion observed = 212.3gpm (0.47cfs)

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: NA

$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \text{NA}$

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

$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = \text{NA}$

2. Volume Calculations for Other Uses:

- 0.47 CFS x 1.9835 AF x 365 Days = 340 AF

- This water right is limited to 241.0 AF

G. NARRATIVE/REMARKS/COMMENTS

PacifiCorp's water delivery system consists of 14 pumps diverting water through 14 mainlines equipped with flowmeters, into a V Notch Weir that could be used if the flow meters were not working. The system then travels into a settling tank, a wet well sump, and then through a set of carbon filters, before discharging into the Snake River.

Using PacifiCorp's flow meters and a computer based system 212.3 GPM (0.47 CFS) was observed being pumped through their system.

The 14 points of diversion are located in SENE, Section 25, T02N, R37E. The points of diversion are interconnected through a series of pipes that bring the water into the water treatment facility.

The place of use is located in the SENE, Section 25, T02N, R37E. The water is discharged through a pipe exiting the building heading North. The discharge pipe heads north from the building, approximately 300 feet before it turns west, going under US Highway 26 through an industrial area, and into the Snake River.

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

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
WATER QUALITY IMPROVEMENT	01/01 to 12/31	0.47 CFS	241.0 AF
	<u>Totals:</u>	0.470 CFS	241.00 AF

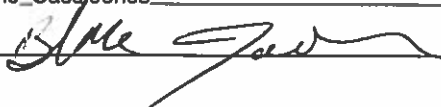
2. Recommended Amendments

☐ 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

Field Examiner's Name Cass Jones Date 10/12/2016

Reviewer  Date 10/25/2016

Name	Aquifer	Operation Mode	Elevation (ft)	DTW (ft)(1)	DTP (ft)(2)	Flow (gpm)
A1	1	AUTO	4553.11	145.00	164.33	2.9
B1	1	AUTO	4559.28	138.53	162.00	8.0
C1	1	AUTO	4544.78	152.72	168.00	8.0
R6	1	AUTO	4550.49	147.07	170.00	16.0
R5	1	AUTO	4543.76	153.56	165.00	2.0
R11	1		4570.72	127.94	161.10	0.0
R12	1		4571.25	126.71	159.80	0.0
Total						36.9

Name	Aquifer	Operation Mode	Elevation (ft)	DTW (ft)(1)	DTP (ft)(2)	Flow (gpm)
A2	2	AUTO	4451.54	247.47	284.00	15.9
B2	2	AUTO	4565.18	132.45	241.00	32.0
MW9	2	AUTO	4562.33	134.87	201.80	1.7
R2	2	AUTO	4534.52	165.93	246.50	26.6
R7	2	AUTO	4533.87	165.13	254.00	34.9
R8	2	AUTO	4537.39	163.06	251.00	29.1
R10	2	AUTO	4557.82	140.95	258.00	35.0
Total						175.2

Barometer
12.5 PSI

(1) Depth To Water: Measured from standard
(2) Depth To Pump: Measured from standard

For backwash only

Pause
Pumping

Shutdown
All Wells

Specific
Capacity

Log
Comments

System Status



Reset



Influent Water Flow

212.3 gpm

Effluent Water

171.6

Totalized Eff
Flow
(YTD)
6639973

NAVIGATION

WELL SUMMARY

Aquifer 1

Aquifer 2

Water
Treatment

Alarm
Summary

Alarm
Log

Login

Logout

Chal
Pass

10/11/2016 9:27:04 AM

Refresh Event Queue

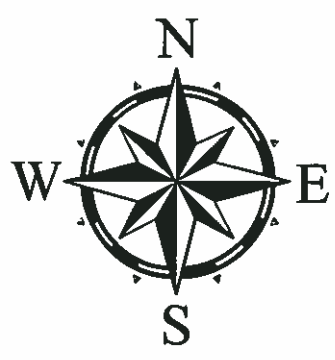
display Well_FP /PWell_R8

Start Pacificorp Water Trea... WIN911 *LITE* Monitor ... 7-Day Forecast for Labit... Document1 - Microsoft ...



Legend

-  Pacificorp Wells
-  Water Right Place of Use
-  Township/Range
-  Sections
-  QQ

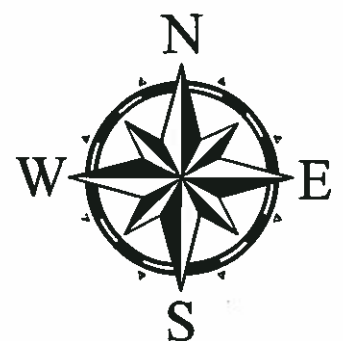


Map Created By: Cass Jones
October 17, 2016
2015 Aerial Photography



Legend

- Pacificorp Wells
 - Pacificorp Discharge Point
 - Pacificorp Discharge Pipe
 - Water Right Place of Use
 - Township/Range
 - Sections
 - QQ
- 0 0.015 0.03 0.06 0.09 0.12 Miles
- *Discharge pipe is an approximation of its location beneath the surface.



Map Created By: Cass Jones
October 17, 2016
2015 Aerial Photography

AQUIFER 1

Aquifer 1 Flow Rate 37 gpm

Barometer
12.5 PSI



4571.35 ft



4570.72 ft
-0.2 gpm



4553.11 ft
2.9 gpm



4571.71 ft



4543.75 ft
2.0 gpm



4544.79 ft
8.0 gpm



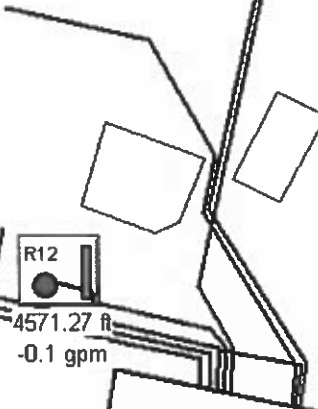
4559.29 ft
8.0 gpm



4550.49 ft
16.0 gpm



4563.01 ft



Water Treatment Building



4563.26 ft



4563.53 ft

Shutdown
All Wells

Aquifer Setup

Log
Comments

Refresh Event Queue 0 0 36 0

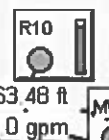
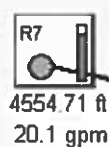
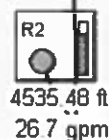


Display Aquifer_1

AQUIFER 2

Aquifer 2 Flow Rate 99 gpm

Barometer
12.5 PSI



Water Treatment Building



Shutdown
All Wells

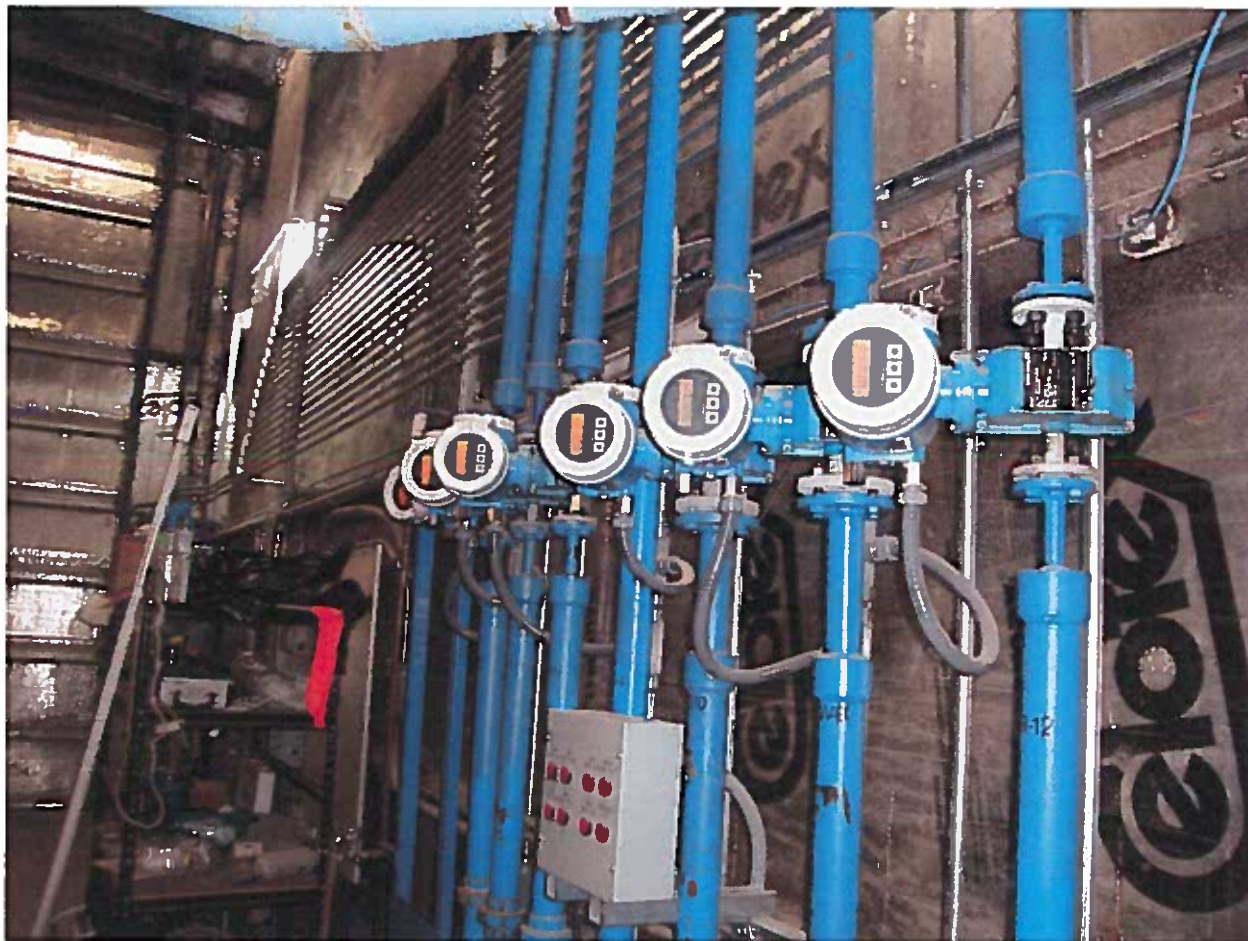
Aquifer Setup

Log
Comments

Refresh Event Queue 0 0 36 0

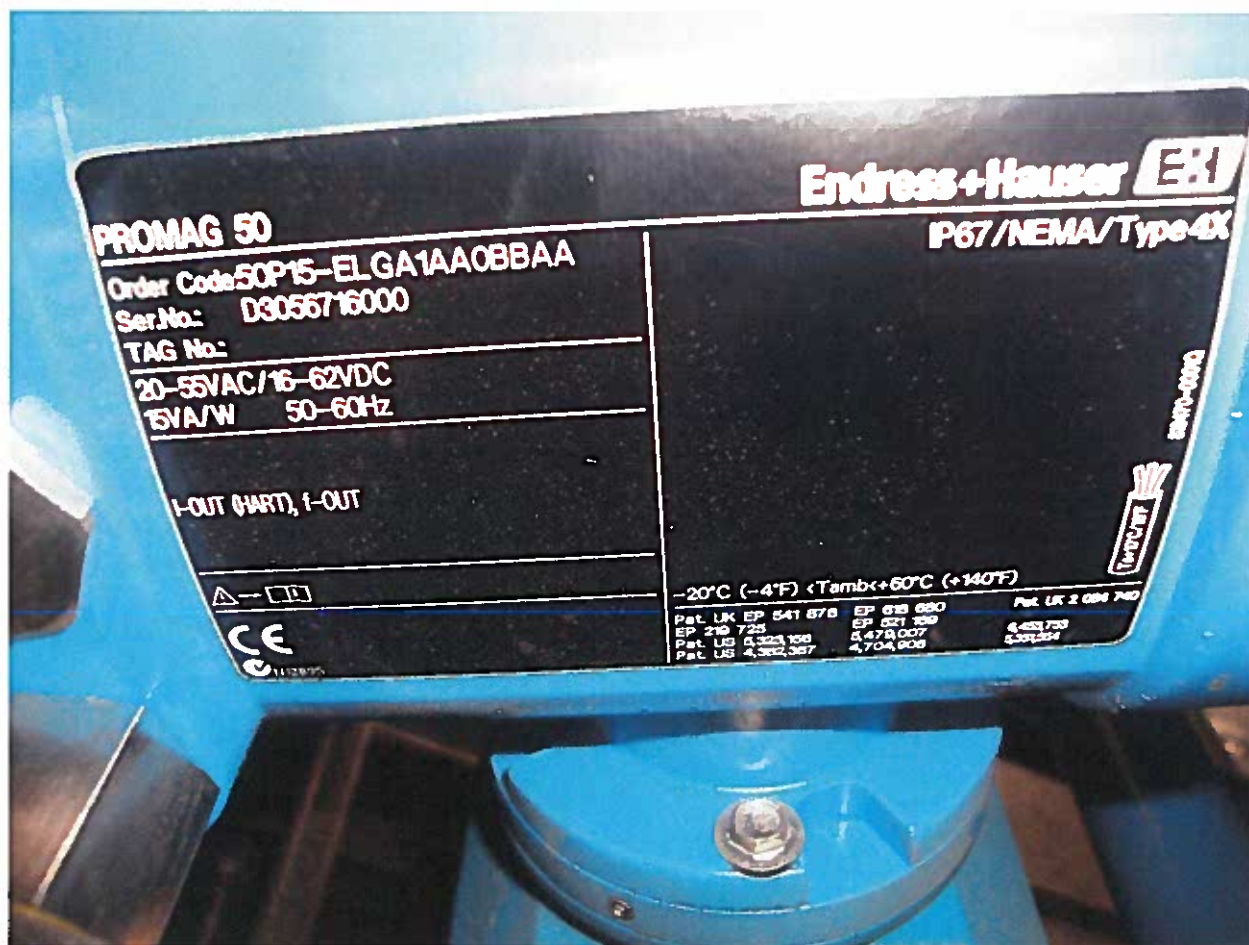


Display Aquifer_2



Above: Located inside the water treatment facility, looking at 6 of the 14 flow meters in the system.

Below: The back of the flow meters, showing the make, model, etc.





Above: Looking inside one of the culverts at the piping from the well that leads into the building.

Below: Looking at the settling tank on the left and the carbon filters on the right.





Above: Looking at the wet well sump.

Below: Looking North in the SENE¼ of Section 25, T02N, R37E. The series of wells, protected by culverts.



Jordan, Blake

From: Tucker, Jeff [Jeff.Tucker@pacificorp.com]
Sent: Wednesday, October 12, 2016 8:40 AM
To: Conder, Claudia; Vanderbeek, Dennis; Jordan, Blake
Subject: RE: Idaho Falls Pole Yard water right proof-field visit w/IDWR
Attachments: Coordinates for IFPY Extraction Wells.pdf

Blake,

Attached is the table with the extraction wells and their gps coordinates that you requested during your visit. Let me or Dennis know if you need anything else.

Jeff Tucker

Geographic Coordinates for Idaho Falls Pole Yard Extraction Wells

<i>State Plane</i>		<i>Latitude / Longitude</i>		<i>Point Description</i>	<i>Measuring Reference Point</i>	<i>Top of Ground Surface</i>
<i>Northing</i>	<i>Easting</i>	<i>(WGS 84)</i>	<i>(WGS 84)</i>		<i>(MRP) Elevation-NAVD88</i>	<i>Elevation-NAVD88</i>
660185.77	687881.583	43°28'39.56930"N	112°02'52.41776"W	B2	4697.63	4695.64
660358.893	687999.141	43°28'41.27709"N	112°02'50.82042"W	R-2	4700.45	4698.59
660320.274	687990.232	43°28'40.89588"N	112°02'50.94195"W	R-8	4700.45	4697.82
660310.522	687935.921	43°28'40.80036"N	112°02'51.67857"W	R-7	4698.99	4697.27
660257.585	687935.752	43°28'40.27764"N	112°02'51.68188"W	R-10	4698.12	4696.45
660242.616	687945.537	43°28'40.12971"N	112°02'51.54949"W	R-12	4697.98	4695.39
660238.59	687954.762	43°28'40.08983"N	112°02'51.42449"W	MW-9	4697.20	4695.08
660238.714	687862.948	43°28'40.09234"N	112°02'52.66942"W	R-11	4698.73	4696.20
660203.326	687833.348	43°28'39.74332"N	112°02'53.07145"W	A-2	4699.01	4695.91
660193.665	687831.159	43°28'39.64796"N	112°02'53.10131"W	A-1	4698.11	4695.81
660222.312	687902.698	43°28'39.92983"N	112°02'52.13075"W	R-5	4697.32	4695.58
660198.525	687933.222	43°28'39.69451"N	112°02'51.71732"W	C-1	4697.50	4695.36
660170.282	687879.436	43°28'39.41640"N	112°02'52.44716"W	B-1	4697.81	4695.77
660166.144	687913.507	43°28'39.37507"N	112°02'51.98527"W	R6	4697.56	4695.60

TABLE 10.2

2010 - 2011 WELLFIELD CONSTRUCTION SUMMARY

Well No.	New Pump Installed Y or N	Date Motor Installed	New or Existing Pump Make/Model/HP/ Voltage/Phase	Well Casing	SRP Elevation (NAVD88) (ft)	Depth to Bottom of Well from SRP (ft)	Pump Depth from SRP (In HMI) (ft)	Approx Drop Pipe Length (to Landing Plate)	(to (ft)	Pump Discharge Pipe (Nominal Diameter in Inches and Material Type)*	Transducer Type	Transducer Cable Type and Length (type / ft)	Transducer Depth to SRP (in HMI) (ft)	Access Tube (Nominal Diameter in Inches and Material Type)	Access Tube Length (ft) / Drilled Intervals	Other Comments
A-1	Y	Apr-2010	Grundfos / 16S10-10 / 1.5 Hp / 460VAC / 3PH	5" OD PVC Flush Thread	4698.11	172.1	164.33	162		1-1/4" SST	LevelTROLL 500 (30 PSI)	Polyurethane / 165	163.05	1" PVC SCH. 40 Flush Thread	162 / Bottom 10 ft	
B-1	Y	Mar-2010	Grundfos / 16S10-10 / 1.5 Hp / 460VAC / 3PH	5" OD PVC Flush Thread	4697.81	168.5	170.08	168		1-1/4"	LevelTROLL 500 (30 PSI)	Polyurethane / 165	160.95	1" PVC SCH. 40 Flush Thread	168 / Bottom 10 ft	
C-1	Y	Jun-2010	Grundfos / 16S10-10 / 1.5 Hp / 460VAC / 3PH	5" OD PVC Flush Thread	4697.50	172.7	168	168		1-1/4" SST	LevelTROLL 500 (30 PSI)	Polyurethane / 165	168.00	1" PVC SCH. 40 Flush Thread	160 / Bottom 10 ft	
D-1	Y	Oct-2010	Grundfos / 16S10-10 / 1.5 Hp / 460VAC / 3PH (need to confirm)	5" OD PVC Flush Thread	4697.24	168.5	--	160		1-1/4"	LevelTROLL 500 (30 PSI)	Polyurethane / 170	161.09	1" PVC SCH. 40 Flush Thread	160 / Bottom 10 ft	
MW-4	Y	Sep-2010	Grundfos / 7S10-19 / 1.0 Hp / 230VAC / 1 PH	4" ID PVC	4698.50	150*	--	145.7		1" PVC	LevelTROLL 500 (30 PSI)	Polyurethane / 170	146.26	1" PVC SCH. 40 Flush Thread	145.7 / Bottom 10 ft	Old pump is stuck in the well. Elevation of the top of the stuck pump is approximately 4547.8 NAVD 88 (7 feet below top of screen). New pump installed above the one that is stuck.
MW-13	N	--	Grundfos / 10S05-9 / 1.0 Hp / 230VAC / 1 PH	4" ID PVC	4697.14	158.8	--	152.5		1" SST	LevelTROLL 500 (30 PSI)	Polyurethane / 165	155.72	1" PVC SCH. 40 Flush Thread	152.5 / Bottom 10 ft	
MW-16	N	--	Grundfos / 10S07-12 / 1.5 Hp / 230VAC / 1PH	4" ID PVC	4696.77	156.3	--	150		1" PVC	LevelTROLL 500 (30 PSI)	Polyurethane / 165	151.16	1" PVC SCH. 40 Flush Thread	150 / Bottom 10 ft	
R-4	N	--	Grundfos / 14S / 1.5 Hp / 460VAC / 3 PH	6" ID CS	4698.10	171.5	--	157		2" SST	LevelTROLL 500 (30 PSI)	Polyurethane / 170	158.06	1-1/4" PVC SCH. 40 Flush Thread	157 / Bottom 10 ft	
R-5	N	--	Grundfos / 10S05-9 / 0.75 Hp / 460VAC / 3PH	6" ID CS	4697.32	168.7	165	165		1-1/2" SST (3 - 20' 0") 1-1/4" CS (5 - 21' 0")	LevelTROLL 500 (30 PSI)	Polyurethane / 180	159.07	1-1/4" PVC SCH. 40 Flush Thread	165 / Bottom 10 ft	
R-6	Y	Sep-2010	Grundfos / 25S15-9 / 1.5 Hp / 460VAC / 3PH	6" ID CS	4697.56	171.8	170	168		1-1/4" SST	LevelTROLL 500 (30 PSI)	Polyurethane / 180	169.63	1-1/4" PVC SCH. 40 Flush Thread	168 / Bottom 10 ft	
R-11	N	--	Grundfos / 10S05-9 / 0.5 Hp / 460VAC / 3PH	6" ID CS	4698.66	171.5	161.1	161		1-1/4" CS (5 - 20' 0") 1-1/4" SST (3 - 20' 0")	LevelTROLL 500 (30 PSI)	Tefzel / 170	161.02	1-1/4" PVC SCH. 40 Flush Thread	160 / Bottom 10 ft	
R-12	N	--	Grundfos / 10S07-12 / 0.75 Hp / 460VAC / 3PH	6" ID CS	4697.96	168.5	159.8	156.8		1-1/4" SST (6 - 20' 3") 1-1/4" CS (1 - 15' 0") 1-1/4" Galv. (1 - 20' 0")	LevelTROLL 500 (30 PSI)	Tefzel / 170	161.76	1-1/4" PVC SCH. 40 Flush Thread	156.8 / Bottom 10 ft	
A-2	Y	Apr-2010	Grundfos / 40S50-15 / 5 Hp / 460VAC / 3PH	5" OD PVC Flush Thread	4699.01	274	264	261		2" Galv.	LevelTROLL 300 (100 PSI)	Tefzel / 270	263.51	1" PVC SCH. 40 Flush Thread	261 / Bottom 10 ft 145 - 160 ft BGS	
B-2	N	Sep-2010	Grundfos / 25S30-15 / 3 Hp / 460VAC / 3PH	5" OD PVC Flush Thread	4697.63	271.2	241	240		2" SST	LevelTROLL 500 (30 PSI)	Polyurethane / 165	156.10	1" PVC SCH. 40 Flush Thread	241 / Bottom 10 ft 145 - 160 ft BGS	
C-2	N	--	Berkeley / 10MG10-07 / 0.75 Hp / 230VAC / 1PH	5" OD PVC Flush Thread	4697.31	270.7	--	240		2" Galv.	LevelTROLL 500 (30 PSI)	Polyurethane / 165	154.71	1" PVC SCH. 40 Flush Thread	160 / Bottom 15 ft	
D-2	N	--	Berkeley / 10MG10-07 / 0.75 Hp / 230VAC / 1PH	5" OD PVC Flush Thread	4697.20	278.2	--	240.6		1-1/4" Galv. (First 6") 2" SST (Remainder to Pump)	LevelTROLL 500 (30 PSI)	Polyurethane / 165	153.94	1" PVC SCH. 40 Flush Thread	240.6 / Bottom 10 ft 145 - 160 ft BGS	A 2" x 1-1/4" reducer and a 6" x 1-1/4" dia. Nipple was placed at the top of well D-2. The remainder of the drop pipe is 2" SST.
E-2	Y	Nov-2010	Grundfos / 25S30-15 / 3 Hp / 460VAC / 3PH (need to confirm)	4" ID CS	4697.89	276.8		260		1" SST	LevelTROLL 500 (30 PSI)	Polyurethane/165	165.49	1" PVC SCH. 40 Flush Thread	260 ft / Bottom 15 ft 245 - 260 ft	Pump depth is approximate and should be confirmed the next time the pump is pulled. Make, model, and HP of pump / motor should also be confirmed.
MW-9	Y	Jul-2010	Grundfos / 25S30-15 / 3 Hp / 460VAC / 3PH	4" ID PVC	4697.20	216 (to fracture)	201.8	201		1" SST	LevelTROLL 500 (30 PSI)	Polyurethane / 165	156.99	1" PVC SCH. 40 Flush Thread	201 / Bottom 10 ft 145 - 160 ft BGS	
MW-12	N	--	Berkeley / 4AM-15 / 0.75 HP 230VAC / 1PH	4" ID PVC	4696.83	257	--	251		1" PVC	LevelTROLL 500 (30 PSI)	Polyurethane / 165	152.59	1" PVC SCH. 40 Flush Thread	160 / Bottom 15 ft	A 1-1/4" galvanized nipple was installed at the landing plate to connect to the existing quick connect.
MW-14	Y	May-2010	Grundfos / 10S07-12 / 1.5 Hp / 230VAC / 1PH	4" ID PVC	4698.54	263.4	--	256		1" PVC	LevelTROLL 500 (30 PSI)	Polyurethane / 165	154.68	1" PVC SCH. 40 Flush Thread	160 / Bottom 15 ft	
MW-17	N	--	Berkeley / 10MG10-07 / 0.75 Hp / 230VAC / 1PH	4" ID PVC	4696.79	260.6	--	255		1" PVC	LevelTROLL 500 (30 PSI)	Polyurethane / 165	152.18	1" PVC SCH. 40 Flush Thread	160 / Bottom 15 ft	
R-1	N	--	Grundfos / 16S10-10 / 1.0 Hp / 240VAC / 1PH	4" ID PVC	4700.31	159.5	--	155		1" SST	LevelTROLL 300 (30 PSI)	Polyurethane / 165	152.26	1" PVC SCH. 40 Flush Thread	150 ft / Bottom 15 ft	
R-2	Y	Apr-2010	Grundfos / 60S50-9 / 5 Hp / 460VAC / 3PH	8" ID CS	4700.45	261	246.5	246		1-1/2" SST	LevelTROLL 300 (100 PSI)	Tefzel / 265	246.33	1-1/4" SCH. 40 PVC Flush Thread	226 / Bottom 10 ft 145 - 160 ft BGS	
R-7	Y	Apr-2010	Grundfos / 60S50-9 / 5 Hp / 460VAC / 3PH	6" ID CS	4698.99	266.4	254	254		2" Galv.	LevelTROLL 500 (100 PSI)	Polyurethane / 250	231.06	1-1/4" SCH. 40 PVC Flush Thread	254 / Bottom 10 ft 145 - 160 ft BGS	
R-8	Y	Jun-2010	Grundfos / 25S30-15 / 3 Hp / 460VAC / 3PH	6" ID CS	4700.45	268.6	251	251		2" SST (7 - 20' 3") 2" CS (5 - 20' 0") 2" CS (1 - 4' 0")	LevelTROLL 500 (30 PSI)	Polyurethane / 165	165.12	1-1/4" SCH. 40 PVC Flush Thread	251 / Bottom 10 ft 145 - 160 ft BGS	
R-9	N	--	Berkeley / 10MG10-07 / 0.75 Hp / 230VAC / 1PH	6" ID CS	4698.08	267.9	--	255		1" SST	LevelTROLL 500 (30 PSI)	Polyurethane / 165	155.91	1-1/4" SCH. 40 PVC Flush Thread	160 / Bottom 15 ft	
R-10	Y	Jun-2010	Grundfos / 60S50-9 / 5 Hp / 460VAC / 3PH	6" ID CS	4698.74	265.5	258	258		2" SST	LevelTROLL 300 (100 PSI)	Polyurethane / 265	257.75	1-1/4" SCH. 40 PVC Flush Thread	260 / Bottom 10 ft 145 - 160 ft BGS	

Notes: * All drop pipe is SCH 40 threaded pipe with external couplings; ** Indicates standard elevations that have changed

Acronyms:

BGS - Below Ground Surface
CS - Carbon Steel
ft - Feet
hp - Horse Power
ID - Inside Diameter

OD - Outside Diameter
PH - Phase
PSI - Pound per Square Inch
PVC - Polyvinyl Chloride
SRP - Surveyed Reference Point

SST - Stainless Steel
VAC - Volts Alternating Current
-- Not applicable