



June 5, 2015

Mr. James Cefalo
Idaho Department of Water Resources
900 North Skyline Drive, Suite A
Idaho Falls, ID 83402-1718

RE: AQUIFER TEST FOR SAMARIA RECREATION DISTRICT WATER RIGHTS APPLICATION

Dear Mr. Cefalo:

A groundwater impact assessment is provided in this letter report Samaria Recreation District's Water Right Application. They have approximately 8 acres of land southwest of Malad City, Idaho (Figure 1) and their application is for 0.16 cfs. A pumping test was conducted on April 23, 2011 in the existing well that Samaria Recreation District plans to use. The parameters from the aquifer test are used in a computer simulation to predict the potential impacts to neighboring wells within ½ mile of the proposed point of diversion (POD). The results of the computer analysis show that the proposed diversion rate will have a minimal or negligible impact on neighboring wells.

Nearby PODs

The proposed well location is 15S, 35E, 14 SW SE as shown in Figure 2. A search was made for all existing points of diversions (PODs), i.e. water rights near the proposed POD. In Figures 3 through 6, a blue circle is shown with a ½ mile radius centered on the proposed Samaria Recreation District POD location. The circle encompasses portions of sections 14, 13, 23, and a small portion of 24 of T15S, R35E. The results of the water right search are provided in Tables 1 through 4. The IDWR website has thirteen water rights listed in section 14 (4 of which are surface water rights), one groundwater right in Section 13, four water rights (all of which are groundwater rights) in Section 23, and three water rights in Section 24 (all of which are surface water rights).

Nearby Wells

A search was performed of the IDWR drillers' log database for wells within ½ mile of the proposed well location. Twenty one representative well logs are provided in Attachment 1 to show the local hydrogeology. The average total depth of wells in sections 14, 13, 23, and 24 of T15S, R35E 154' below land surface (bls) and the average static water level is 55 feet bls.

Hydrogeology

The lithology in this area is a series of unconsolidated sands, gravels and clays. There is not a marker layer or geologic unit that can be correlated over distances between wells (~ ½ mile), at least, as described in the lithology on the well logs. The inability to correlate geologic layers is consistent with the area being situated in a cut and fill sequence of the Malad River. It is further complicated by waxing and waning cycles of Lake Bonneville. For the purposes of this investigation it is assumed that the aquifer thickness is 200 ft in this area. This is based on driller



logs for three irrigations wells in Section 30, T15S, R36E about 2.5 miles southeast of the proposed POD and regional considerations of the hydrogeology. It should be noted that the aquifer is not one homogenous layer but a sequence of permeable lens of sand and gravel stringers, which are primarily confined. However, it is anticipated that locally the shallow sequences of the aquifer are unconfined.

Pumping Test

The test well is an irrigation well owned by Mr. Jeff Davis and is also the well Samaria Recreation District plans on using. The Davis irrigation well is 140 ft deep, being open to a gravel layer from 121 to 140 ft. The well log for the Davis Irrigation well is provided in Attachment 1, Figure 1-1. For the pumping test, the Davis Irrigation Well was equipped with an INSITU brand downhole pressure transducer to collect automated water levels during the pumping test. The pumping test began at 11:20 AM on April 23, 2011 and the well was pumped at a steady rate of 140 gpm for 24 hours. A plot of the data can be found in Attachment 2.

Curve matching methods were conducted using the AQTESOLV aquifer test software. Output plots from the AQTESOLV analyses are presented in Attachment 3. Figure 3-1 shows the match of the early time data to the Theis confined solution corrected for partial penetration. The calculated transmissivity is 9.5×10^4 ft²/day and the storativity is unreliable because there is no observation well. The match of the late time data is presented in Figure 3-2 and the calculated transmissivity is 7.7×10^4 ft²/day. A third calculation is performed using the Hantush method for a leaky confined aquifer and the match to the type curve is presented in Figure 3-3. The match to the leaky confined type curve is excellent and the calculated transmissivity is 6.24×10^4 ft²/day. Based on the good match to the leaky confined solution the aquifer appears to be leaky confined in the area of the Jeff Davis Well. This transmissivity is consistent with another pumping test conducted in the Davis Stock Well located about 1 mile west of the Davis Irrigation Well, which had a measured transmissivity of 5.1×10^4 ft²/day. The storativity cannot be measured reliably with a single well pumping test, so an estimated value of 0.01 is used, which is typical for these types of unconsolidated aquifer materials (Freeze and Cherry, 1979).

Impact Assessment

Samaria Recreation District wishes to irrigate 8 acres per IDWR estimates of usage this should require 0.02 cfs per acre or 72 gpm or 0.16 cfs. To estimate the long-term drawdown and impact to neighboring wells from pumping of the proposed Samaria Recreation District POD, the forward solution capabilities of the AQTESOLV program were employed. The input parameters to the model are listed in Table 4-1 (see Attachment 4). Boundaries in AQTESOLV were enabled as shown in Figure 4-1 to represent Malad Valley. As depicted in Figure 4-1 and listed in Table 4-2 the model is 38,000 ft wide and 50,000 ft long. Because the Malad Valley is bounded by mountains consisting of Paleozoic and Mesozoic sedimentary rock that do not provide much water compared to the unconsolidated valley fill, the east, west and south boundaries are set as impermeable or "no flow" boundaries. Water is allowed to enter the model domain only through the north boundary.

In the model domain the proposed POD well is located 4,690 ft east of the west boundary and 5,600 ft north of the south boundary. This represents the proximity of the proposed POD to the



nearby mountains and the no flow southern boundary, which will have the effect of increasing drawdown.

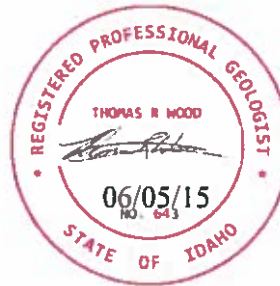
Figure 4-2 shows the AQTESOLV[®] output plot of the forward calculation for a leaky confined aquifer with the proposed well pumping at 0.16 cfs (72 gpm) constantly for 7 months (April 1 to Oct 31). At the end of the time period the predicted drawdown is estimated to be 0.2 feet in the proposed POD. The drawdown for a well ½ mile away of the POD is predicted to be unmeasurable. Figure 4-3 is an AQTESOLV[®] plot for the same calculation with a confined aquifer (Theis). In this more conservative case, the predicted drawdown in the POD is 0.6 ft and 0.25 ft, for a POD and ½ mile away, respectively, at the end of the irrigation season.

It is my professional opinion that Samaria Recreation District's water right application will not excessively impact their neighbors' right to divert water. I believe that the calculated drawdown over estimates the actual drawdown to be expected for the following reasons: 1) Samaria Recreation District will never pump continuously at the maximum rate for 210 days to consume 67 acre – ft in a single year; 2) the Paleozoic/Mesozoic rocks of the mountains are not totally impermeable and will provide some water to the system, thus reducing drawdown, 3) several canals and the Malad River are within the domain of the model and no credit for recharge/leakage is taken in the model (for the Theis case), and 4) the calculated impact used confined or leaky confined aquifer conditions for the entire domain, while it is known that unconfined conditions exist over large parts of the area. All of these factors will reduce the predicted drawdown presented here.

Please do not hesitate to call me if you have any questions about this letter or the calculations presented.

Respectfully,

Thomas R. Wood, PhD, PG



cc

Samaria Recreation District 4426 W 4900 S. Malad Idaho 83252

References

Freeze, R.A. and J.A. Cherry, 1979, Groundwater, ISBN 0-13-365312-9, Prentice-Hall, Inc., Englewood Cliffs, New Jersey 07632.

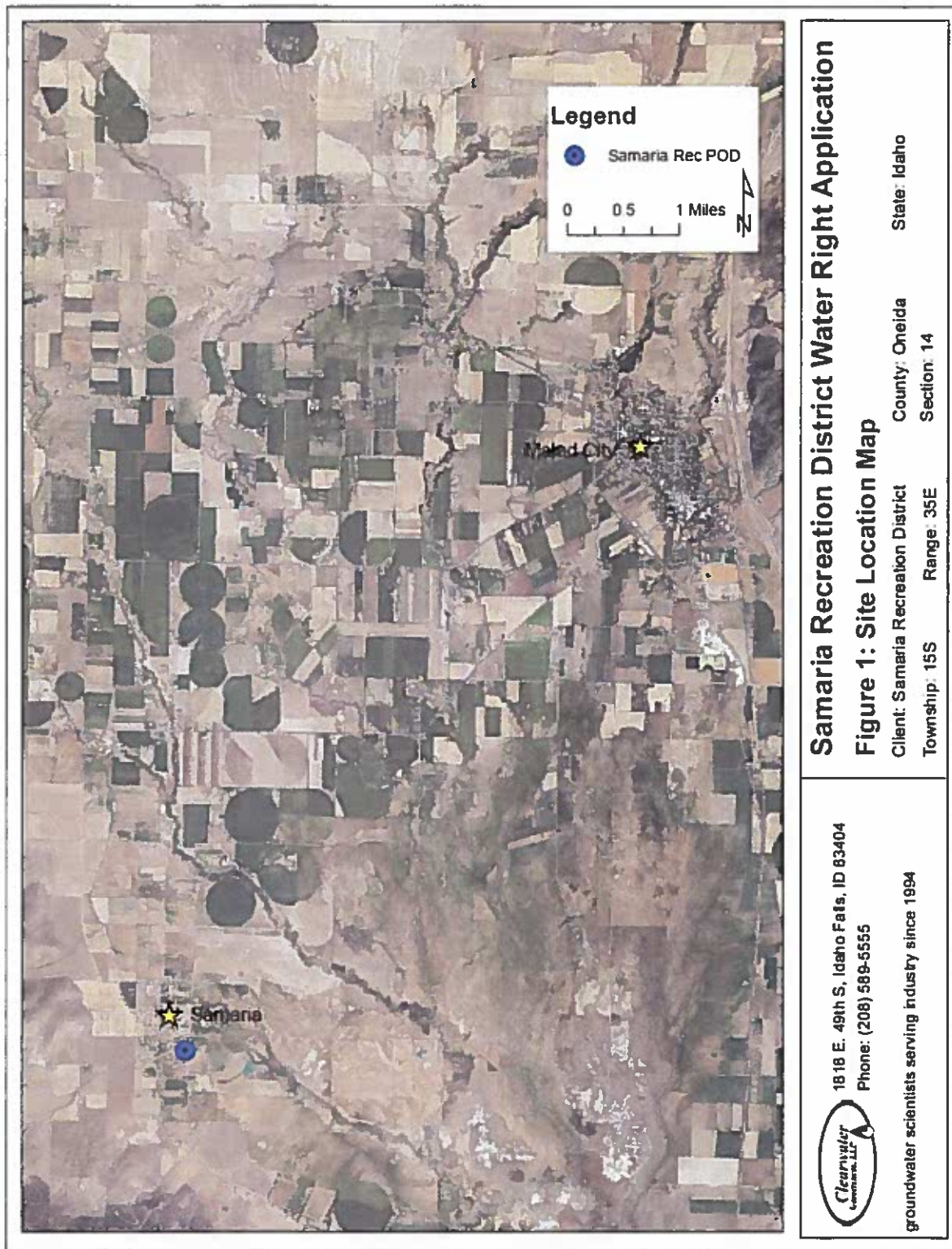


Figure 1. Map showing location of the proposed Samaria Recreation District POD in the existing Jeff Davis Irrigation Well

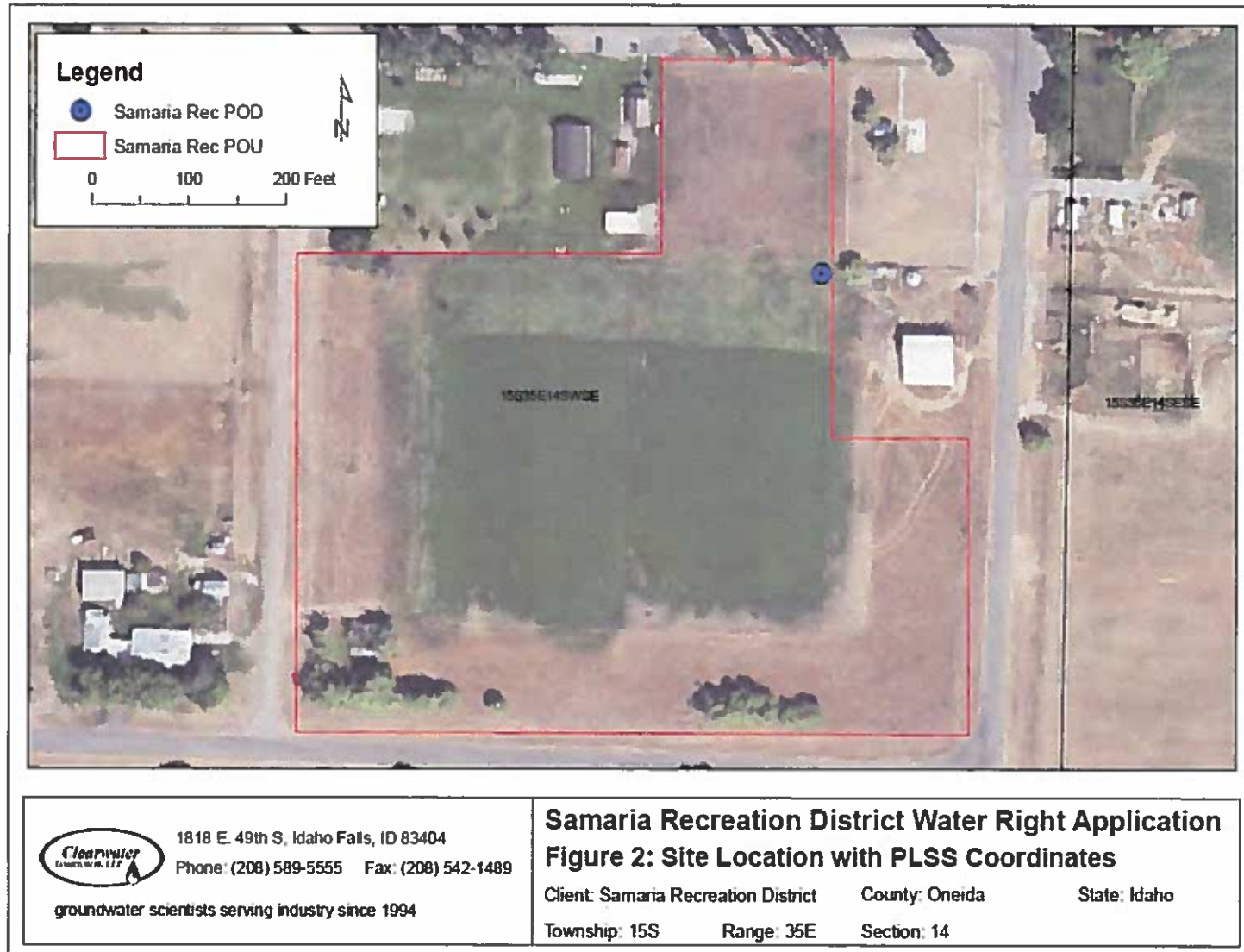


Figure 2 IDWR map area showing the township range section coordinates and the proposed POD and existing well location as a blue dot.

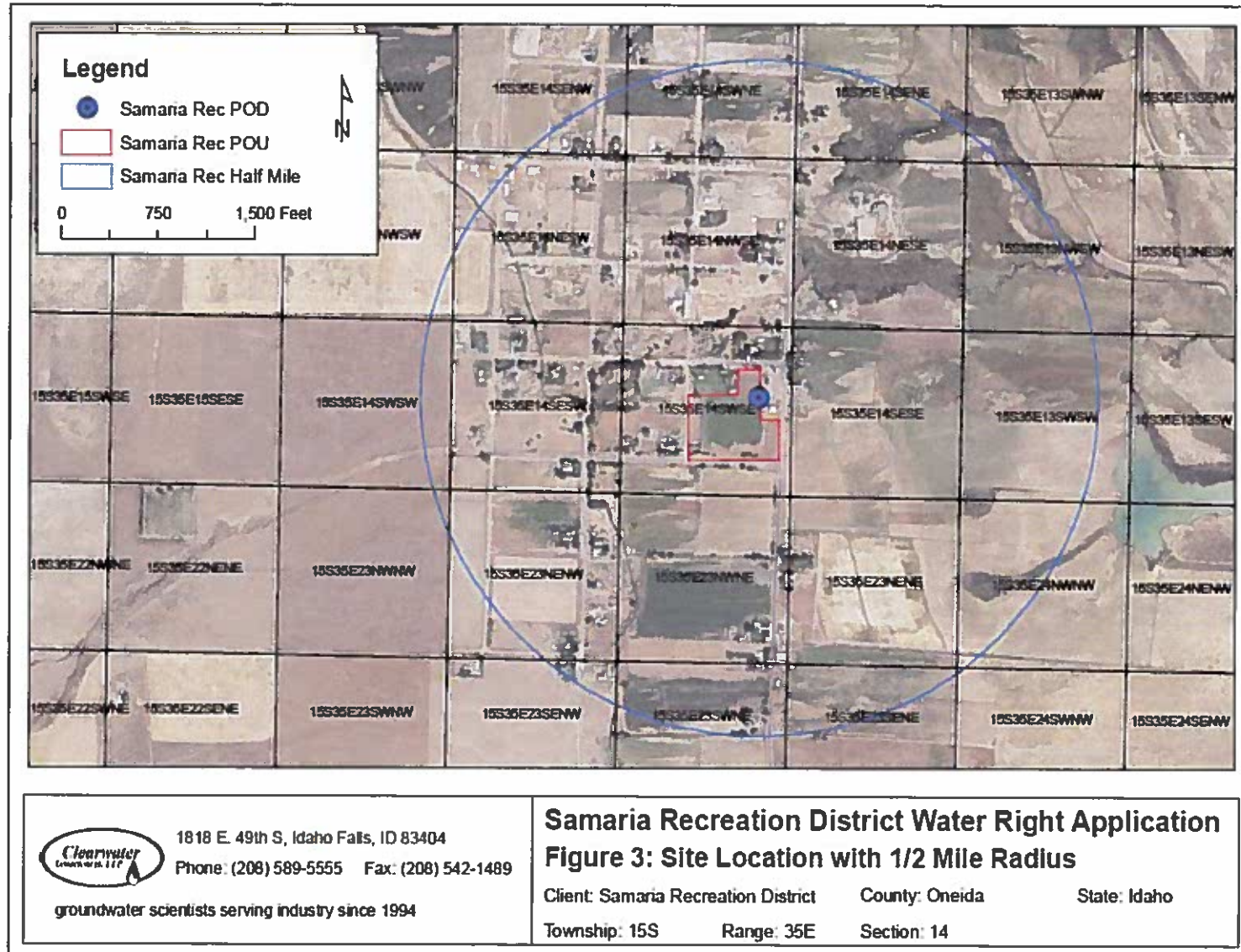


Figure 3 Proposed POD and POU with blue circle showing approximate 1/2 mile radius

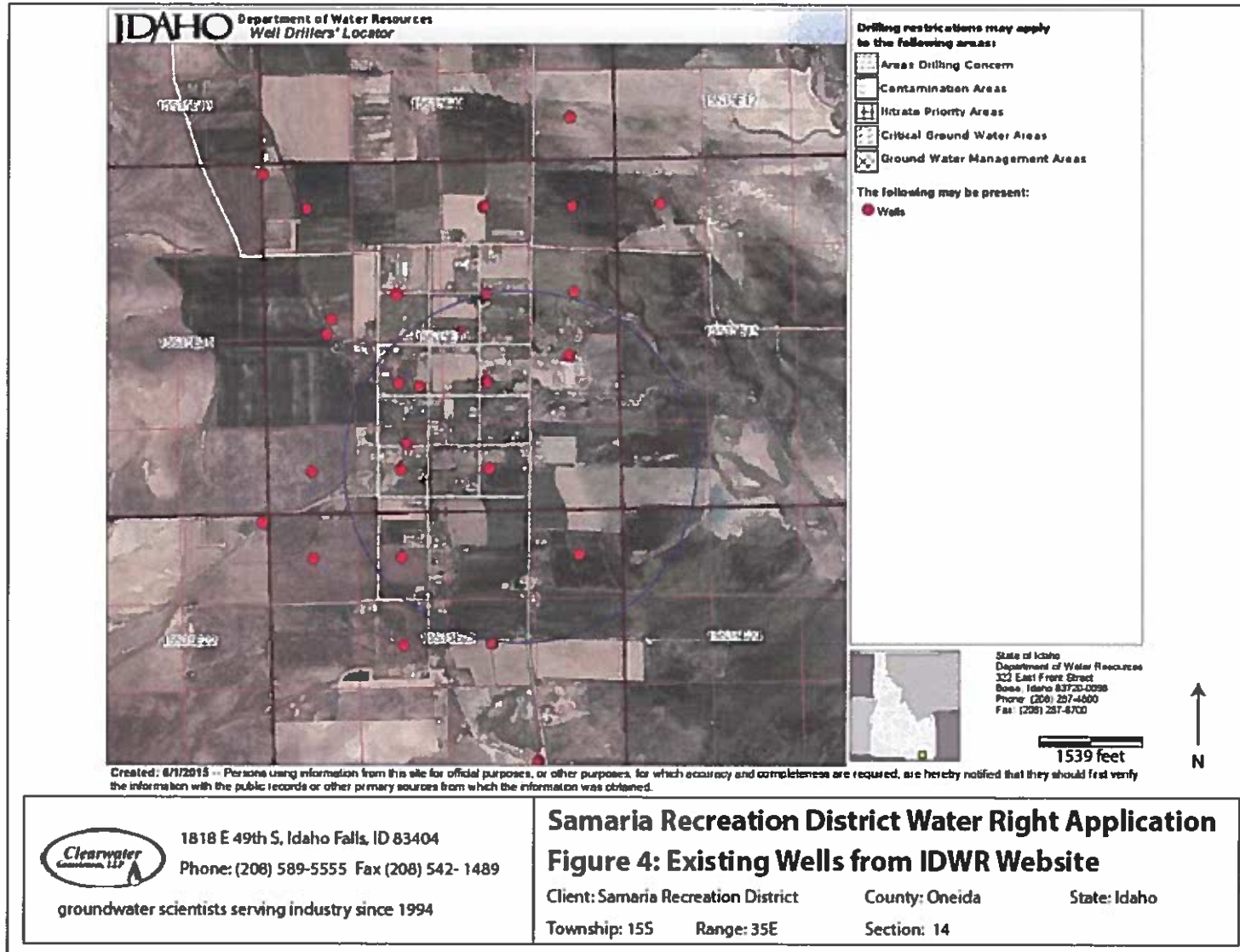


Figure 4 Existing PODs; from IDWR website and blue circle ½ mile diameter.

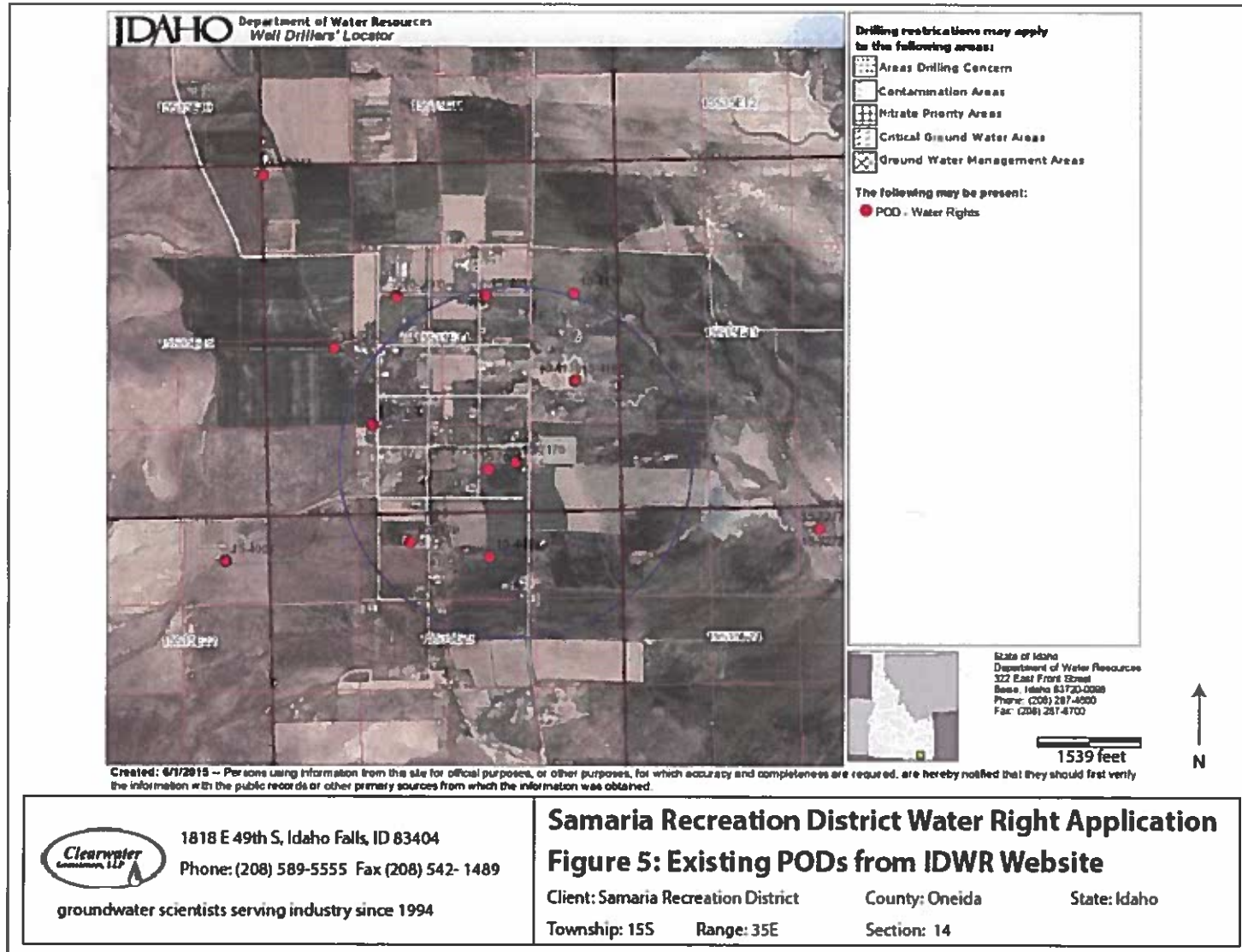


Figure 5 Existing wells from IDWR website and blue circle 1/2 mile diameter.

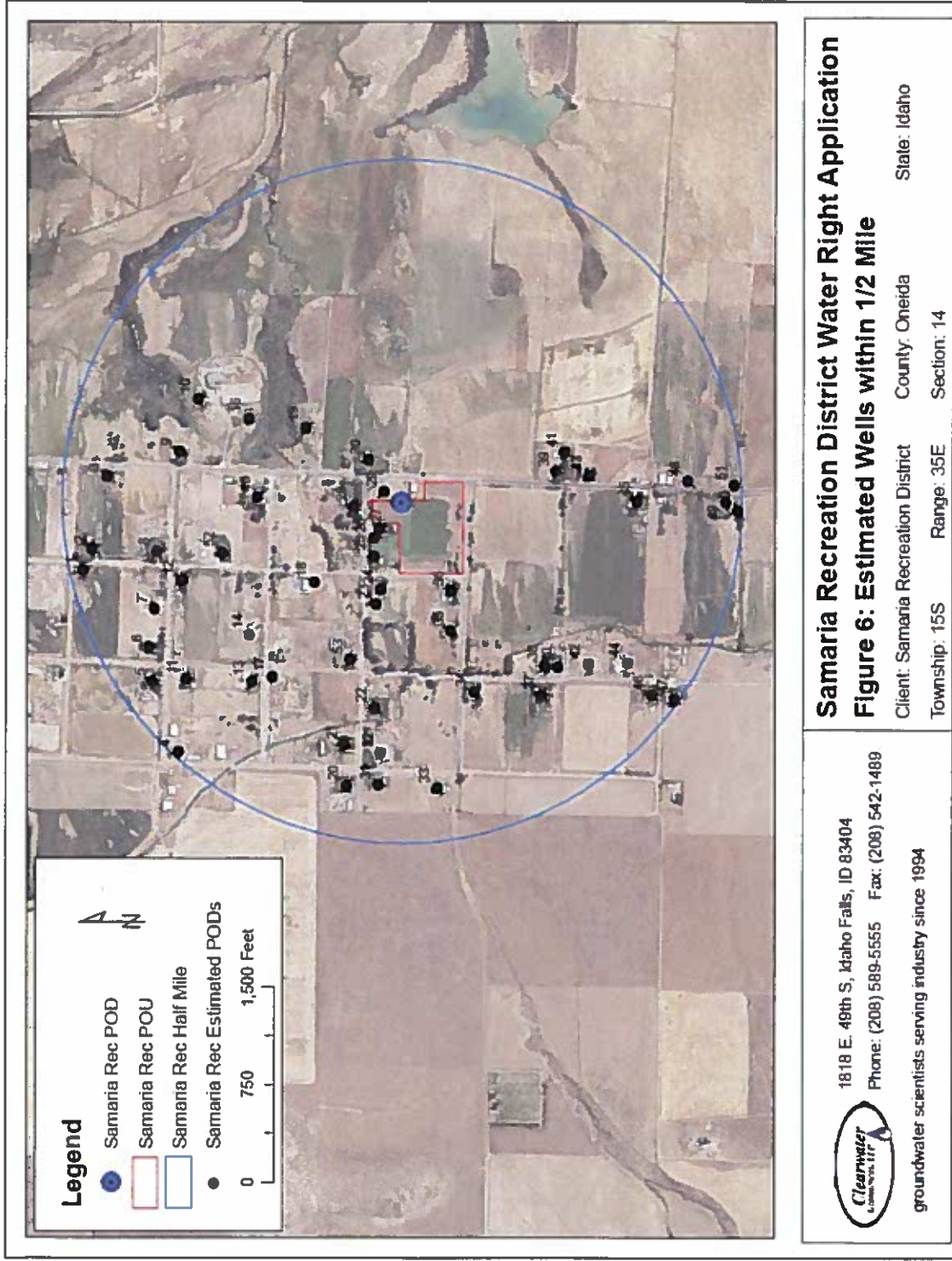


Figure 6 Estimated Wells within 1/2 Mile of proposed Samaria Recreation District's POD.



Table 1 IDWR Search results for point of diversions in T15S, R35E, Section 14

Type	Basin	Sequence	Suffix	Application Number	Basis	Status	Priority Date	Div. Rate (cfs)	Source	Water Use	Owner
Water Right	15	2005			License	Active	3/16/1911	0.2	UNNAMED STREAM	DOMESTIC, IRRIGATION	WILLIAMS, DANIEL M
Water Right	15	4031			Statutory Claim	Active	5/12/1920	0.04	GROUND WATER	DOMESTIC, IRRIGATION, STOCKWATER	JOHN, DEVERL
Water Right	15	4138			Statutory Claim	Active	4/1/1900	2.05	SPRINGS	IRRIGATION	FLINDERS SAMARIA RANCH LC
Water Right	15	4139			Statutory Claim	Active	4/1/1900	2	THORPE SPRINGS	IRRIGATION	THORPE, S GRANT; THORPE, WILLIAM D
Water Right	15	4187			Statutory Claim	Active	5/19/1959	1	SPRING	IRRIGATION	WARD, J MORONI
Water Right	15	7094			License	Active	6/7/1983	0.06	GROUND WATER	DOMESTIC, IRRIGATION	WALDRON, REX P
Water Right	15	7154			License	Active	8/12/1996	1.19	GROUND WATER	IRRIGATION	ATKINSON, DELON
Water Right	15	7175			License	Active	8/30/1999	0.31	GROUND WATER	IRRIGATION, STOCKWATER	M J DAVIS MEMORIAL LTD PARTNERSHIP



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Water Right	15	7243			License	Active	2/26/2004	0.57	GROUND WATER	IRRIGATION	JOHN, ELDON; JOHN, MIKE
Water Right	15	7267			License	Active	6/4/2008	1.8	GROUND WATER	IRRIGATION	GLEED, JULI A
Water Permit	15	7381				Active	8/5/2014	0.48	GROUND WATER	DOMESTIC, IRRIGATION	JENSEN, ANTON; JENSEN, LACIE
Water Application	15	7387		79619		Active	10/16/2014	5	GROUND WATER	IRRIGATION	SAMARIA WATER & IRRIGATION CO
Water Application	15	7405		79937		Active	3/30/2015	0.16	GROUND WATER	IRRIGATION	SAMARIA RECREATION DISTRICT

Table 2 IDWR Search results for point of diversions in T15S, R35E, Section 13

Type	Basin	Sequence	Suffix	Application Number	Basis	Status	Priority Date	Div. Rate (cfs)	Source	Water Use	Owner
Water Permit	15	7320				Active	3/3/2009	2	GROUND WATER	IRRIGATION	FLINDERS SAMARIA RANCH LC



Table 3 IDWR Search results for point of diversions in T15S, R35E, Section 23

Type	Basin	Sequence	Suffix	Application Number	Basis	Status	Priority Date	Div. Rate (cfs)	Source	Water Use	Owner
Water Right	15	4018			Statutory Claim	Active	6/1/1908	0.03	GROUND WATER	DOMESTIC	THOMAS, ALVIN J; THOMAS, GRACE B
Water Right	15	7179			License	Active	4/10/2000	0.15	GROUND WATER	DOMESTIC, IRRIGATION	M J DAVIS MEMORIAL LTD PARTNERSHIP
Water Permit	15	7347				Active	8/22/2011	1.67	GROUND WATER	IRRIGATION	PEOA RIVER VALLEY RANCH
Water Permit	15	7370				Active	8/22/2011	1.67	GROUND WATER	IRRIGATION	2M BRAND LLC



Table 4 IDWR Search results for point of diversions in T15S, R35E, Section 24

Type	Basin	Sequence	Suffix	Application Number	Basis	Status	Priority Date	Div. Rate (cfs)	Source	Water Use	Owner
Water Right	15	2105			License	Active	2/16/1949	0.01	SPRING	STOCKWATER	UNITED STATES OF AMERICA ACTING THROUGH
Water Right	15	4034			Statutory Claim	Active	07/30/1880	0.5	SPRING	IRRIGATION	DURBIN, ILENE J; HUGHES, LEVI
Water Right	15	7277			Statutory Claim	Active	02/15/1875	111.8	SAMARIA CREEK, SPRING	IRRIGATION, IRRIGATION FROM STORAGE, IRRIGATION STORAGE	SAMARIA LAKE IRRIGATING CO

Table 5 IDWR Search results for wells in T15S, R35E, Section 14

Contact	Use	Twp	Rng	Sec	Tract	Address	GPM	Static Water Level	Total Depth	Csg. Dia.	Const. Date
HUDD EXCAVATION & CONSTRUCTION(Owner/Operator)		15S	35E	14	NWNW	4500 S. 4700 W.	20	27	140	6	10/11/1999
M J DAVIS MEMORIAL LTD PARTNERSHIP(Owner/Operator)	Irrigation	15S	35E	14	SWSE	130 S MAIN ST	180	21	140	8	6/29/2000
US DEPT OF ENERGY(Owner/Operator)	Irrigation	15S	35E	14	SWNW	MALAD		0	0	0	9/28/2004
US DEPT OF ENERGY(Owner/Operator)	Domestic-Single Residence	15S	35E	14	SWNW	MALAD		0	0	0	9/28/2004
BILLY J ANDERSON(Owner/Operator)	Domestic-Single Residence	15S	35E	14	SWSE	128 SOUTH MAIN STRET	25	36	140	6	11/23/2000
FARRELL D ATKINSON(Owner/Operator)		15S	35E	14	SWSW		0	60	200	10	5/20/1997



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SPENCER ATKINSON(Owner/Operator)		15S	35E	14	NESW		0	40	104		12/5/1983
MARVIN BERRY(Owner/Operator)	Domestic-Single Residence	15S	35E	14	NWSE	4716 S 4500 W	30	30	116	6	7/14/2008
CHRIS BOGGESE(Owner/Operator)	Domestic-Single Residence	15S	35E	14	NESW	4600 W 4750 S		45	111	6	9/3/2010
ROGER BRADFORD(Owner/Operator)	Stockwater	15S	35E	14	NENE	4523 S 4500 W		7	160	6	10/20/2003
SANDRA BRAKER(Owner/Operator)		15S	35E	14	SWNE	SAMIRA	100	20	111	6	5/22/1996
ANN DELANEY(Owner/Operator)		15S	35E	14	NWNE	4575 WEST 4500 SOUTH	20	18	255	6	4/15/1998
JOHN J EVANS(Owner/Operator)	Domestic-Single Residence	15S	35E	14	SWSE	5071 S 4600 E	50	44	135	6	9/29/2007
MICHAEL J EVANS(Owner/Operator)	Domestic-Single Residence	15S	35E	14	NESW	4643 W 4800 S		50	140	8	8/4/2000
THOMAS FLINDERS(Owner/Operator), LINDA FLINDERS(Owner/Operator)		15S	35E	14	NESE	SAMARIA RD	100		175	6	11/20/1996
JULI A GLEED(Owner/Operator)	Irrigation	15S	35E	14	SWNW	4700 W 4700 S (APPROX 1 BLOCK W OF 4700 W)	1000	52	300	10	11/28/2005
LIN HIGLAY(Owner/Operator)	Domestic-Single Residence	15S	35E	14	NWSE	Malad	40	33	120	6	11/27/2000
VERNON HULSE(Owner/Operator)		15S	35E	14	SESW			75	147		3/28/1979
VERNON HULSE(Owner/Operator)		15S	35E	14	SWSW	4920 SOUTH 4700 WEST USE ADDRESS FIRST NOT THE LEGAL	20	51	120	8	6/18/1998
ELDON JOHN(Owner/Operator), MIKE JOHN(Owner/Operator)	Irrigation	15S	35E	14	NWNW	62 S MAIN STREET		190	240	10	12/11/2003
ELDON JOHN(Owner/Operator), MIKE JOHN(Owner/Operator)	Livestock	15S	35E	14	NWNW	62 S MAIN STREET		190	240	10	10/16/2014
ALBERT JONES(Owner/Operator)		15S	35E	14	SENE		60	12	80		3/8/1974
ALBERT JONES(Owner/Operator)		15S	35E	14	NWSE		100	50	123	6	6/9/1997
VERLA MARTENSEN(Owner/Operator)	Domestic-Single Residence	15S	35E	14	SWNE	SAMARIA	50	31	117	6	11/8/2008
SHIRLEY OLSEN(Owner/Operator)	Domestic-Single Residence	15S	35E	14	SENW	4655 W 4700 S	30	43	114	6	9/27/2004
DEE TOLMAN(Owner/Operator)	Domestic-Single Residence	15S	35E	14	SWSW	4680 WEST 4900 SOUTH	20	56	140	6	11/18/2000
DEE TOLMAN(Owner/Operator)	Domestic-Single	15S	35E	14	SWSE	4921 S 4500 W	40	36	120	6	4/15/2006



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	Residence										
LUKE WALDRON(Owner/Operator)		15S	35E	14	NWNE		30	25	100	6	4/27/1999
ALVIN T WILLIAMS(Owner/Operator)		15S	35E	14	SWNE	1ST N 150 W	75	24	105	6	9/2/1995
DAVID ZUNDEL(Owner/Operator)	Domestic-Single Residence	15S	35E	14	SWNE	4700 S 4500 W NW CORNER		27	110	6	11/29/2011

Table 6 IDWR Search results for wells in T15S, R35E, Section 13

Contact	Use	Twp	Rng	Sec	Tract	Address	GPM	Static Water Level	Total Depth	Csg. Dia.	Const. Date
LINDA FLINDERS(Owner/Operator), THOMAS E FLINDERS(Owner/Operator)	11/26/2002	15S	35E	13	NWNW	RURAL AREA		0	180	16	Irrigation



Table 7 IDWR Search results for wells in T15S, R35E, Section 23

Contact	Use	Twp	Rng	Sec	Tract	Address	GPM	Static Water Level	Total Depth	Csg. Dia.	Const. Date
M J DAVIS MEMORIAL LTD PARTNERSHIP(Owner/Operator)	Irrigation	15S	35E	23	NENW	5054 S 4600 W	40	51	140	8	10/25/2000
PEOA RIVER VALLEY RANCH(Owner/Operator)	Domestic-Single Residence	15S	35E	23	NWSE	1/2 M SOUTH OF SAMARIA		44	117	6	9/12/2011
PEOA RIVER VALLEY RANCH(Owner/Operator)	Irrigation	15S	35E	23	SESE	3970 E HWY 36		50	323	14	4/12/2013
DANIAL EVANS(Owner/Operator)	Domestic-Single Residence	15S	35E	23	SESW	5065 S 4600 W		52	156	6	3/19/2009
TRAVIS HUCKABY(Owner/Operator)	Domestic-Single Residence	15S	35E	23	SESW	4677 W 4900 S		60	120	6	9/14/2011
DAVID EARL HUGHS(Owner/Operator)		15S	35E	23	NENE		15	50	175		3/11/1969
REBECCA RAWLINGS(Owner/Operator), TOM RAWLINGS(Owner/Operator)		15S	35E	23	NWNW		7.5	130	181	6	11/23/1998
TOM RAWLINGS(Owner/Operator)		15S	35E	23	NWNW		0	130	126	3	
DAVID REEL(Owner/Operator)	Domestic-Single Residence	15S	35E	23	NWNE	5130 S 4400 W		29	180	6	6/10/2014
LLOYD SORTER(Owner/Operator)		15S	35E	23	SESW	5121 S 4600 W	0	50	160	6	9/7/1996
DON TUBBS(Owner/Operator)		15S	35E	23	NWNW	375 MAIN ST	15	24	125	6	11/5/1994
ROBERT WARREN(Owner/Operator)		15S	35E	23	SESW		50	50	300	6	7/13/1998
ROBERT WARREN(Owner/Operator)		15S	35E	23	SWNE		40	40	140	6	6/15/1999



Table 8 IDWR Search results for wells in T15S, R35E, Section 24

Contact	Use	Twp	Rng	Sec	Tract	Address	GPM	Static Water Level	Total Depth	Csg. Dia.	Const. Date
WILLARD J HIGLEY(Owner/Operator)		15S	35E	24	SWSW	411 S SAMARIA RD	0		67	6	12/17/1996
MARK PETERSON(Owner/Operator)	Domestic- Single Residence	15S	35E	24	SESW	50 S 3100 W		384	503	6	12/24/2002



Attachment 1

REPRESENTATIVE WELL LOGS



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FD-27 DM

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 _____
2-Alt _____ Flowing Artesian _____

1. WELL TAG NO. D 00 14152
DRILLING PERMIT NO. 765240
Other IDWR No. 15-07174

2. OWNER:
Name M. J. Davis Medaril Limited
Address 2525 HIMALAYA
City CAFEADER SPRING State CO Zip 80919

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location.

Map of town, range, section, and quarter section.
Twp. 15 North ☐ or South ☒
Rge. 35 East ☒ or West ☐
Sec. 23 1/4 SE 1/4 NW 1/4
Gov't Lot _____ County ADAMS
Lat _____ Long _____
Address of Well Site S 0-54 50 4600 W.
City IMPERIAL IDAHO

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	From To	Spade or Shovel	
<u>Retanite</u>	<u>0</u> <u>30</u>	<u>0</u> <u>30</u>	<u>H</u>	<u>QUICK SET</u>

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) _____
Was drive shoe seal tested? ☐ Y ☐ N How? _____

8. CASING/LINER:

Diameter	From To	Depth	Material	Casing	Liner	Welded	Threaded
<u>8</u>	<u>1</u>	<u>121</u>	<u>50 Steel</u>	☒	☐	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

From To	Slot Size	Number	Diameter	Material	Casing	Liner
<u>0</u> <u>121</u>	<u>10</u>	<u>1</u>	<u>12</u>	<u>Steel</u>	☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
51 ft. below ground Artesian pressure _____ lb.
Depth flow encountered _____ ft. Describe access port or control devices: _____

11. WELL TESTS:
☐ Pump ☐ Bailor
Yield gal./min. _____ Drawdown _____ Pumping Level _____ Time _____
Water Temp. _____ Bottom hole temp. _____
Water Quality test or comments: _____

12. LITHOLOGIC LOG: (Describe repairs or abandonment) Water

Depth	From To	Remarks: Lithology, Water Quality & Temperature	Y	N
<u>0</u>	<u>30</u>	<u>CLAY & SLATE ROCK</u>		
<u>30</u>	<u>60</u>	<u>11 ROCK</u>		
<u>60</u>	<u>90</u>	<u>11 ROCK LARGE</u>		
<u>90</u>	<u>140</u>	<u>SAND GRAVEL ROCK</u>		
<u>140</u>	<u>170</u>	<u>11</u>		
<u>170</u>	<u>40</u>	<u>CLAY & ROCK GRAVEL</u>		

RECEIVED
FEB 06 2001
Department of Water Resources
Eastern Region

RECEIVED
DEC 18 2000
Department of Water Resources
Eastern Region

Completed Depth 140 - 120 (Measurable)
Date Started 10-9-2000 Completed 10-25-2000

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 Lundstrom Wellbore Firm No. 118
Firm Office Bozeman, Montana Date 1025200
and _____
Driller or Operator _____ Date _____
(Sign once if Firm Office is Operator)

FORWARD WHITE COPY TO WATER RESOURCES

Figure 1-1 Well log for Jeff Davis Irrigation Well



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FD-200

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

1. WELL TAG NO. D 00146416
DRILLING PERMIT NO. 767297
Other IDWR No. _____

2. OWNER: Billy Anderson
Name Billy Anderson
Address 333 W 2203 N
City PAIDU LLT State ID Zip 83404

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location.

Map showing well location (X) on a grid. Township 15 North, Range 35 East, Section 14.
County Blaine City SAMALIN
Address of Well Site 128 South Main

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-LIEF PACK	AMOUNT	METHOD
Material	From To	
<u>Portland</u>	<u>0</u> <u>30</u>	<u>6</u> <u>000.2 Bore</u>

Was drive shoe used? ☒ Yes ☐ No Size Description _____
Was drive shoe seal tested? ☐ Yes ☐ No How? _____

8. CASING/LINER:

Number	From	To	Material	Casing	Inner	Sealed	Encased
<u>6</u>	<u>0</u>	<u>144</u>	<u>150 Steel</u>	<u>10</u>	<u>1</u>	<u>0</u>	<u>0</u>

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

Perforations Method _____
Screens Screen Type _____

From	To	Net Size	Number	Material	Casing	Inner
<u>DONE</u>						

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

36 ft. below ground Artesian pressure _____ lb.
Depth flow encountered _____ ft. Describe access port or control devices: _____

11. WELL TESTS:

Time	Flow	Pressure	Temp
<u>20-25</u>		<u>140</u>	<u>1-1/2</u>

Water Temp. _____ Bottom hole temp. _____
Water Quality test or comments: _____

12. LITHOLOGIC LOG: (Describe repairs or abandonment) Water

Depth	From	To	Remarks	Lithology	Water Quality & Temperature	Y	N
<u>0</u>	<u>30</u>			<u>CLAY BROWN</u>			
<u>30</u>	<u>100</u>			<u>CLAY + GRAVEL</u>			
<u>100</u>	<u>120</u>			<u>SAND GRAVEL + ROCK</u>			
<u>120</u>	<u>140</u>						

Completed Depth 140 (Measurable)
Date Started 10-26-2000 Completed 11-23-2000

13. DRILLER'S CERTIFICATION

(We certify that all minimum well construction standards were complied with at the time the rig was removed.)
Company Name Lundstrom Well Drilling
Firm Official [Signature] Date 11-23-2000
and _____
Driller or Operator _____ Date _____
(Type and Print Name & Operator)

Figure 1-2 Well log for Billy Anderson Domestic Well



Clearwater Geosciences, LLP
Ground Water Development and Exploration

Form 338-7
RUS
Dmg

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Use Typewriter or Ballpoint Pen

68171

1. DRILLING PERMIT NO. 15-49-98-00054
Other IDWR No. 15-7154

2. OWNER:
Name Farrell Atkinson
Address 738 W Hwy 38
City Malad State EO Zip 83252

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

Map showing Township, Range, Section, and County. Township: 15 North ☐ or South ☐ Range: 35 East ☐ or West ☐ Section: 14 1/4 SW 1/4 SW 1/4 1/4 County: Oneida Address of Well Site: Samira City: Malad

4. USE: ☒ Irrigation ☐ Municipal ☐ Monitor ☐ 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

Material	From	To	Method
Bentonite	0	20	Over Bore

Was drive shoe tested? ☐ Y ☐ N Shoe Depth(s) 200'

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

8. CASING/LINER:

Casing Size	To	Casing Material	Casing Depth	Weight	Thrust
10"	0	200	350	Steel	

Length of Headpipe: Length of Tailpipe:

9. PERFORATIONS/SCREENS

Method: Perforations

☐ Screens Screen Type:

From	To	Slot Size	Number	Material	Casing	Unit
120	125	1"	100	Steel		
130	135	1"	100	Steel		
140	145	1"	100	Steel		
150	155	1"	100	Steel		
160	165	1"	100	Steel		
170	175	1"	100	Steel		
180	185	1"	100	Steel		
190	195	1"	100	Steel		
200	205	1"	100	Steel		

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

60 ft. below ground Artesian pressure 10 ft.

Depth flow encountered _____ ft. Describe access point or control devices:

Office Use Only
Inspected by _____
Twp _____ Rge _____ Sec _____
1/4 _____ 1/4 _____ 1/4 _____
Lat _____ Long _____
☐ Pump ☐ Baller ☐ Air ☐ Flowing Artesian

Water Temp	Bottom Hole Temp
<u>Cold</u>	<u>Good</u>

Water Quality Test or comments: _____

Depth first Water Encountered 50'

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
0	20	Clay		X
20	30	Clay + Gravel		X
30	50	Clay		X
50	65	Gravel	X	
65	100	Clay + Gravel		X
100	110	Gravel	X	
110	120	Clay + little Gravel		X
120	130	Gravel	X	
130	135	Clay + Gravel		X
135	140	Gravel	X	
140	145	Gravel	X	
145	160	Gravel + clay	X	
160	163	Gravel + Sand	X	
163	170	Gravel	X	
170	178	Gravel + Sand	X	
178	183	Gravel	X	
183	198	Clay	X	
198	200	Gravel	X	

RECEIVED

JUN 23 1997

RECEIVED

Department of Water Resources

JUN 10 1997

Department of Water Resources

Eastern Region

Completed Depth 200 (Measurable)

Date Started 5-12-97 Completion 5-20-97

13. DRILLER'S CERTIFICATION

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

Firm Name Mountain West Drilling Firm No. 543

Firm Official Mike Frandsen Date 5-20-97

and Supervisor or Operator _____ Date _____

(Sign only if Firm Official & Cooperator)

FORWARD WHITE COPY TO WATER RESOURCES

Figure 1-3 Well log for Farrell Atkinson Irrigation Well



Clearwater Geosciences, LLP
Ground Water Development and Exploration

Form 238-7
1/78

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

USE TYPEWRITER OR
POINT PEN
RECEIVED
DEC 13 1983

1. WELL OWNER Name <u>Spencer Atkinson</u> Address <u>Rt. 1, Box 36A, Samaria, Idaho</u> Owner's Permit No. _____		7. WATER LEVEL Department of Water Resources Eastern District Office Static water level <u>40</u> feet below land surface. Flowing? ☐ Yes ☒ No G.P.M. flow _____ Artesian closed-in pressure _____ p.s.i. Controlled by: ☐ Valve ☐ Cap ☐ Plug Temperature <u>52</u> °F. Quality <u>Good</u>																																																													
2. NATURE OF WORK ☒ New well ☐ Deepened ☐ Replacement ☐ Abandoned (describe method of abandoning) _____		8. WELL TEST DATA No test available ☐ Pump ☐ Bailor ☐ Air ☐ Other _____ Discharge G.P.M. _____ Pumping Level _____ Hours Pumped _____																																																													
3. PROPOSED USE ☒ Domestic ☐ Irrigation ☐ Test ☐ Municipal ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection ☐ Other _____ (specify type) _____		9. LITHOLOGIC LOG 74007 <table border="1"><thead><tr><th>Hole Diam.</th><th>Depth From</th><th>To</th><th>Material</th><th>Water Yes No</th></tr></thead><tbody><tr><td>12</td><td>0</td><td>2</td><td>Topsoil</td><td>X</td></tr><tr><td>12</td><td>2</td><td>19</td><td>White Clay</td><td>X</td></tr><tr><td>8 1/2</td><td>19</td><td>21</td><td>Gravel & Brown clay</td><td>X</td></tr><tr><td></td><td>21</td><td>29</td><td>Boulders & Brown clay</td><td>X</td></tr><tr><td></td><td>29</td><td>58</td><td>Brown Clay</td><td>X</td></tr><tr><td></td><td>58</td><td>60</td><td>Boulders & Brown clay</td><td>X</td></tr><tr><td></td><td>60</td><td>83</td><td>Brown clay (soft)</td><td>X</td></tr><tr><td></td><td>83</td><td>87</td><td>Gravel</td><td>X</td></tr><tr><td></td><td>87</td><td>92</td><td>Brown clay</td><td>X</td></tr><tr><td></td><td>92</td><td>99</td><td>Gravel</td><td>X</td></tr><tr><td></td><td>99</td><td>104</td><td>Brown clay soft</td><td>X</td></tr></tbody></table>		Hole Diam.	Depth From	To	Material	Water Yes No	12	0	2	Topsoil	X	12	2	19	White Clay	X	8 1/2	19	21	Gravel & Brown clay	X		21	29	Boulders & Brown clay	X		29	58	Brown Clay	X		58	60	Boulders & Brown clay	X		60	83	Brown clay (soft)	X		83	87	Gravel	X		87	92	Brown clay	X		92	99	Gravel	X		99	104	Brown clay soft	X
Hole Diam.	Depth From	To	Material	Water Yes No																																																											
12	0	2	Topsoil	X																																																											
12	2	19	White Clay	X																																																											
8 1/2	19	21	Gravel & Brown clay	X																																																											
	21	29	Boulders & Brown clay	X																																																											
	29	58	Brown Clay	X																																																											
	58	60	Boulders & Brown clay	X																																																											
	60	83	Brown clay (soft)	X																																																											
	83	87	Gravel	X																																																											
	87	92	Brown clay	X																																																											
	92	99	Gravel	X																																																											
	99	104	Brown clay soft	X																																																											
4. METHOD DRILLED ☐ Rotary ☐ Air ☐ Hydraulic ☐ Reverse rotary ☒ Cable ☐ Dug ☐ Other _____		10. Work started <u>11-5-83</u> finished <u>12-5-83</u>																																																													
5. WELL CONSTRUCTION Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____ Thickness _____ Diameter _____ From _____ To _____ _____ inches 8 5/8 inches + 1 feet 104 feet _____ inches _____ inches _____ feet _____ feet _____ inches _____ inches _____ feet _____ feet _____ inches _____ inches _____ feet _____ feet Was casing drive shoe used? ☒ Yes ☐ No Was a packer or seal used? ☐ Yes ☒ No Perforated? ☒ Yes ☐ No How perforated? ☐ Factory ☐ Knife ☐ Torch Size of perforation <u>1/4</u> inches by <u>8</u> inches _____ Number _____ From _____ To _____ _____ perforations _____ feet _____ feet _____ perforations _____ feet _____ feet _____ perforations _____ feet _____ feet Well screen installed? ☐ Yes ☒ No Manufacturer's name _____ Type _____ Model No. _____ Diameter _____ Slot size _____ Set from _____ feet to _____ feet Diameter _____ Slot size _____ Set from _____ feet to _____ feet Gravel packed? ☐ Yes ☒ No ☐ Size of gravel _____ Placed from _____ feet to _____ feet Surface seal depth <u>18</u> Material used in seal: ☐ Cement grout ☒ Puddling clay ☐ Well cuttings Sealing procedure used: ☐ Slurry pit ☐ Temp. surface casing ☒ Overbore to seal depth Method of joining casing: ☐ Threaded ☒ Welded ☐ Solvent Weld ☐ Cemented between plugs Describe access port <u>3/4" threaded plug in sanitary cap.</u>		11. DRILLERS CERTIFICATION <u>DR</u> I/We certify that all minimum well construction standards were complied with at the time the rig was removed. Firm Name <u>Reel Well Drilling</u> Firm No. <u>350</u> P.O. Box <u>20</u> Address <u>Stone, Idaho</u> Date <u>12-8-83</u> Signed by (Firm Official) <u>Steve Reed</u> and (Operator) <u>Steve Reed</u>																																																													
6. LOCATION OF WELL Sketch map location must agree with written _____ Subdivision Name _____ Lot No. _____ Block No. _____ County <u>Oneida</u>																																																															
N.E. 1/4 SW 1/4 Sec. 14, T. 15, R. 35 E.M.																																																															

Figure 1-4 Well log for Spencer Atkinson Domestic Well



Clearwater Geosciences, LLP
Ground Water Development and Exploration

Form 238-7
5/02 IDAHO DEPARTMENT OF WATER RESOURCES

WELL DRILLER'S REPORT

1. WELL TAG NO. D 0049869
DRILLING PERMIT NO _____
Water Right or Injection Well No. _____

2. OWNER:
Name Marvin Berry
Address 4716 S. 4500th
City Malad State ID Zip 83252

3. LOCATION OF WELL by legal description:
You must provide address or Lot, Blk, Sub. or Directions to well.
Twp. 15 North ☐ or South ☒
Rge. 35 East ☒ or West ☐
Sec. 14 1/4 NE 1/4 SE 1/4
Gov't Lot _____
County Conrad State ID
Lat: _____ Long: _____
Address of Well Site Same City _____

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 Material Bentonite From 0 To 20 Weight / Volume 7 bags overline
Seal Placement Method _____
Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 116
Was drive shoe seal tested? ☐ Y ☐ N How? _____

8. CASING/LINER:
Casing Diameter 6 From 0 To 116 Gauge 20 Material steel
Casing Liner Welded Threaded
☒ ☐ ☒ ☐
Length of Headpipe _____ Length of Tailpipe _____
Packer ☐ Y ☐ N Type _____

9. PERFORATIONS/SCREENS PACKER TYPE
Perforation Method fourch
Screen Type & Method of Installation
From 111 To 116 Slot Size 4-6 Number 95 Diameter 6 Material steel
Casing Liner
☒ ☐
☐ ☐

10. FILTER PACK
Filter Material _____ From _____ To _____ Weight / Volume _____ Placement Method _____

11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
30 ft. below ground Artesian pressure _____ lb
Depth flow encountered _____ ft. Describe access port or control devices: _____

Office Use Only
Well ID No. _____
Inspected by _____
Twp _____ Rge _____ Sec _____
1/4 _____ 1/4 _____ 1/4 _____
Lat _____ Long _____
12. WELL TESTS:
☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian
Yield gal min. _____ Drawdown _____ Pumping Level _____ Time _____
Water Temp. cold Bottom hole temp. cold
Water Quality test or comments: good
Depth first Water Encounter 62
13. LITHOLOGIC LOG: (Describe repairs or abandonment)
Water
Bone Dia. From To Remarks: Lithology, Water Quality & Temperature Y N
10 0 15 Bm clay gravel X
10 15 20 Bm clay X
10 20 40 Bm clay X
10 40 60 gravel X
10 60 80 Bm clay X
10 80 100 gravel Bm clay X
10 100 116 gravel X
Completed Depth 116 (Measurable)
Date: Started 7-12-08 Completed 7-14-08

14. DRILLER'S CERTIFICATION
We certify that all minimum well construction standards were complied with at the time the rig was removed.
Company Name Mid West Well Drilling Firm No. 543
Principal Driller Michael Zandura Date 7-16-08
Driller or Operator II Travis Farnham Date 7-14-08
Operator I _____ Date _____
Principal Driller and Rig Operator Required
Operator I must have signature of Driller/Operator II.

FORWARD WHITE COPY TO WATER RESOURCES

Figure 1-5 Well log for Marvin Berry Well



Clearwater Geosciences, LLP
Ground Water Development and Exploration

Form 238-7
8/07

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

10

1. WELL TAG NO. D 0057528

Drilling Permit No. _____

Water right or injection well # _____

2. OWNER: Chris Bogges

Name _____

Address 515 E 7200 S

City Midvale State UT Zip 84047

3. WELL LOCATION:

Twp. 15 North ☐ or South ☒ Rge. 35 East ☒ or West ☐

Sec. 7 1/4 NE 1/4 SW 1/4

Gov't Lot _____ County Oneida

Lat. _____ (Deg. and Decimal minutes)

Long. _____ (Deg. and Decimal minutes)

Address of Well Site 4600.W 4750 S

City Samaria

Lot _____ Bk. _____ 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 ft³) Placement method/procedure

Bentonite 0 38 35 bag overbore

8. CASING/LINER:

Diameter (outside) From (ft) To (ft) Gauge/Schedule Material Casing Liner Threaded Welded

6" 0 111 .250 steel ☒ ☐ ☐ ☒

☐ ☐ ☐ ☐

☐ ☐ ☐ ☐

☐ ☐ ☐ ☐

Was drive shoe used? ☒ ☐ N Shoe Depth(s) 110

9. PERFORATIONS/SCREENS:

Perforations ☒ Y ☐ N Method touch

Manufactured screen ☐ Y ☐ N Type _____

Method of installation _____

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

94 111 1/4-6 45 6 steel .250

☐ ☐ ☐ ☐

☐ ☐ ☐ ☐

Length of Headpipe _____ Length of Tailpipe _____

Packer ☐ Y ☐ N Type _____

10. FILTER PACK:

Filter Material From (ft) To (ft) Quantity (lbs or ft³) Placement method

☐ ☐ ☐ ☐

☐ ☐ ☐ ☐

11. FLOWING ARTESIAN:

Flowing Artesian? ☐ Y ☐ N Artesian Pressure (PSIG) _____

Describe control device _____

12. STATIC WATER LEVEL and WELL TESTS:

Depth first water encountered (ft) 65 Static water level (ft) 45

Water temp. (°F) cold Bottom hole temp. (°F) cold

Describe access port well cap

Well test:

Drawdown (feet) Discharge or yield (gpm) Test duration (minutes) Test method:

35 35 35 ☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Water quality test or comments: good

13. LITHOLOGIC LOG and/or repairs or abandonment:

From (ft) To (ft) Remarks, lithology or description of repairs or abandonment, water temp. Water

10 0 38 Ben clay ☐ Y ☒ N

6 38 55 Ben clay ☐ Y ☒ N

6 55 60 Gravel Ben clay ☐ Y ☒ N

6 60 65 Gravel Ben clay ☒ Y ☒ N

6 65 100 Ben clay ☐ Y ☒ N

6 100 111 Gravel ☒ Y ☐ N

REC-10

OCT 21 2010

Department of Water Resources
Eastern Region

Completed Depth (Measurable): 111

Date Started: 9-5-10 Date Completed: 9-3-10

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 Michael J. Dillig Co. No. 543

*Principal Driller Michael J. Dillig Date 9-10-10

*Driller Miles Sandren Date 9-3-10

*Operator II _____ Date _____

Operator I _____ Date _____

*Signature of Principal Driller and rig operator are required.

Figure 1-6 Well log for Chris Bogges Domestic Well



Clearwater Geosciences, LLP
Ground Water Development and Exploration

Form 238-1
3/85

BMD

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT
Use Typewriter or Ballpoint Pen

093825

Office Use Only		
Inspected by		
Twp. <u>15</u>	Rge. <u>35</u>	Sec. <u>14</u>
<u>1/4</u>	<u>1/4</u>	<u>1/4</u>
Lat. <u>43° 45' N</u>	Long. <u>111° 35' W</u>	
☒ Air	☐ Flowing Artesian	

1. DRILLING PERMIT NO. 15-96-E-0000-000
Other IDWR No. _____

2. OWNER:
Name Sandra Braker
Address 62 South Main
City Malad State ID Zip 83242

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

Twp. <u>15</u> North ☐ or South <u>25</u>	
Rge. <u>35</u> East ☒ or West ☐	
Sec. <u>14</u> 1/4 <u>SW</u> 1/4 <u>NE</u> 1/4	
Govt Lot _____	County <u>Oneida</u>
Lat. _____	Long. _____

Address of Well Site

Samaria

City

Lt. _____ BR. _____ 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			METHOD
Material	From	To	
<u>Benfonite + Portland Cement</u>	<u>0</u>	<u>35</u>	<u>Over Base</u>

Was drive shoe used? Y N Shoe Depth(s) 111
Was drive shoe seal tested? Y ON flow? _____

8. CASING/LINER:

Casement	Size	To	Geog.	Material	Casing	Line	Welded	Insulated
<u>6</u>	<u>0</u>	<u>111</u>	<u>25m</u>	<u>Steel</u>	☒	☐	☒	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

☒ Perforations Method Machine
☐ Screens Screen Type _____

From	To	Slot Size	Number	Diameter	Material	Casing	Line
<u>100</u>	<u>110</u>	<u>1/2</u>	<u>30</u>	<u>1/4</u>	<u>Steel</u>	☒	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

20 ft. below ground Artesian pressure _____ lb.
Depth flow encountered _____ ft. Describe access port or control device: _____

11. WELL TESTS:

☐ Pump ☐ Bailer

Yield gal/min	Drawdown	Pumping Level	Time
<u>100</u>			

Water Temp. cold Bottom hole temp. cold

Water Quality test or comments: good

Depth first Water Encountered 35

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
<u>0</u>	<u>35</u>	<u>Clay</u>		☒
<u>35</u>	<u>40</u>	<u>Clay + Gravel</u>	☒	
<u>40</u>	<u>60</u>	<u>Clay + Gravel</u>	☒	
<u>60</u>	<u>100</u>	<u>Clay</u>		☒
<u>100</u>	<u>111</u>	<u>Clay + Gravel</u>	☒	

RECEIVED

JUN 17 1996

Department of Water Resources
Eastern Region

RECEIVED

JUL 17 1996

Department of Water Resources

SEP 11 1996

Completed Depth <u>111</u>	(Measurable)
Date Started <u>5-21-96</u>	Completed <u>5-22-96</u>

13. DRILLER'S CERTIFICATION

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

Firm Name Mountain West Drilling Firm No. 543

Firm Official Mike Frandsen Date 5-27-96

and Supervisor or Operator _____ Date _____

(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

Figure 1-7 Well log for Sandra Braker Domestic Well



Clearwater Geosciences, LLP
Ground Water Development and Exploration

Form 250-7
GSD

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

1. WELL TAG NO. 0048575
Drilling Permit No. _____
Water right or injection well # _____

2. OWNER: John Evans
Name 5071 S 9600 W
Address _____
City Samaria State ID Zip 83452

3. WELL LOCATION:
Twp 15 North ☐ or South ☒ Rge. 35 East ☒ or West ☐
Sec. 14 1/4 SW 1/4 SE 1/4
Gev'l Lot _____ County Oneida
Lat _____ Long _____
Address of Well Site 4595 W 5000 S
City _____
Lot _____ Blk _____ Sub. Name _____

4. USE:
☒ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation ☐ Thermal ☐ Injection
☐ Other _____

5. TYPE OF WORK:
☐ New well ☒ Replenishment well ☐ Modify existing well
☐ Abandonment ☐ Other _____

6. DRILL METHOD:
☒ Air Rotary ☐ Mud Rotary ☐ Cable ☐ Other _____

7. SEALING PROCEDURES:
Seal material Portland C From (ft) 0 To (ft) 20 Quantity (cu ft) 8609 Placement method on surface

8. CASING/LINER:
Casing/Liner From (ft) 0 To (ft) 135 Gauge thickness 250 Material Steel Casing joint ☒ Threaded ☐ Welded ☒

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 135

9. PERFORATIONS/SCREENS:
Perforations ☒ Y ☐ N Method hand
Manufactured screen ☐ Y ☐ N Type _____
Method of installation _____

From (ft) 117 To (ft) 135 Slot size 4/16 Number of 35 Diameter (inches) 6 Material Steel Gauge or Schedule 250

Length of Headpipe _____ Length of Tailpipe _____
Packer ☐ Y ☐ N Type _____

10. FILTER PACK:
Filter Material _____ From (ft) _____ To (ft) _____ Quantity (cu ft or lb) _____ Placement method _____

11. FLOWING ARTESIAN:
Flowing Artesian? ☐ Y ☒ N Artesian Pressure (PSIG) _____
Describe control device _____

12. STATIC WATER LEVEL and WELL TESTS:
Depth first water encountered (ft) 60 Static water level (ft) 44
Water temp. (°F) cold Bottom hole temp. (°F) cold
Describe access point _____
Well test: _____ Test method: _____
Discharge or yield (gpm) 50 Test duration (min/hrs) _____
Pump ☐ Bailor ☐ As ☒ Flowing ☐ Artesian

Water quality test or comments: good

13. LITHOLOGIC LOG and/or repairs or abandonment:

From (ft)	To (ft)	Remarks, lithology or description of repairs or abandonment, water temp.	Water	
			Y N	
0	20	Barren clay		X
20	40	Barren clay		X
40	45	Gravel Hardpan		X
45	60	Barren clay		X
60	70	Barren clay	X	X
70	77	Barren clay		X
77	85	Gravel Barren clay	X	X
85	95	Barren clay		X
95	100	Gravel Barren clay	X	X
100	115	Gravel Barren clay		X
115	135	Gravel Sandstone	X	

Completed (begin measuring): 135
Date Started: 9-28-07 Date Completed: 9-29-07

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 West Wind Drilling Co. No. 593
Principal Driller Michael Franden Date 10-6-07
Driller Mike Franden Date 10-6-07
Operator II _____ Date _____
Operator I _____ Date _____
* Signature of Principal Driller and rig operator are required.

Figure 1-8 Well log for John Evans Domestic Well



Clearwater Geosciences, LLP
Ground Water Development and Exploration

Form 238-7
11/97

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Office Use Only
Inspected by _____
Twp _____ Rgs _____ Sec _____
1/4 _____ 1/4 _____
Lat _____ Long _____
☒ ~~Flowing~~ ☐ Flowing Artesian

1. WELL TAG NO. D 0014339
DRILLING PERMIT NO. _____
Other IDWR No. 262-970
2. OWNER:
Name Michael Evans
Address 4588 W. H800 S.
City Malad State ID Zip 83252

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

Section _____ Township 15 North ☐ or South SE
Range 35 East ☒ or West ☐
Section 14 NE 1/4 SW 1/4
County Oneida State ID
Lat _____ Long _____
Address of Well Site Samaria
City _____

1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ 12. _____ 13. _____ 14. _____ 15. _____ 16. _____ 17. _____ 18. _____ 19. _____ 20. _____ 21. _____ 22. _____ 23. _____ 24. _____ 25. _____ 26. _____ 27. _____ 28. _____ 29. _____ 30. _____ 31. _____ 32. _____ 33. _____ 34. _____ 35. _____ 36. _____ 37. _____ 38. _____ 39. _____ 40. _____ 41. _____ 42. _____ 43. _____ 44. _____ 45. _____ 46. _____ 47. _____ 48. _____ 49. _____ 50. _____ 51. _____ 52. _____ 53. _____ 54. _____ 55. _____ 56. _____ 57. _____ 58. _____ 59. _____ 60. _____ 61. _____ 62. _____ 63. _____ 64. _____ 65. _____ 66. _____ 67. _____ 68. _____ 69. _____ 70. _____ 71. _____ 72. _____ 73. _____ 74. _____ 75. _____ 76. _____ 77. _____ 78. _____ 79. _____ 80. _____ 81. _____ 82. _____ 83. _____ 84. _____ 85. _____ 86. _____ 87. _____ 88. _____ 89. _____ 90. _____ 91. _____ 92. _____ 93. _____ 94. _____ 95. _____ 96. _____ 97. _____ 98. _____ 99. _____ 100. _____

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

SEALANT	DATE	AMOUNT	METHOD
Material	From	To	Earths 9" Perforations
Bentonite	0	20	6
			Over Bore

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 140
Was drive shoe seal tested? ☐ Y ☐ N How? _____

8. CASING/LINER:

Diameter	From	To	Usage	Material	Casing	User	Welded	Threaded
6"	0	140	140	Steel	X		X	

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

Perforations _____ Method _____
Screens _____ Screen Type _____

From	To	Set Size	Number	Diameter	Material	Casing	User

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

50 ft. below ground Artesian pressure _____ lb.
Depth flow encountered _____ ft. Describe access port or control devices: _____

11. WELL TESTS:

Well	Flow	Pressure	Level	Time
100				

Water Temp. cold Broom hole temp. cold
Water Quality test or comments: good
Depth first Water Encounter 60'

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Depth	From	To	Remarks, Lithology, Water Quality & Temperature	Y	N
0	10		Brown clay		X
10	15		Gravel	X	
15	20		Brown clay		X
20	40		Brown clay		X
40	63		Gravel	X	
63	75		Brown clay		X
75	80		Gravel & clay	X	
80	95		Brown clay		X
95	125		Gravel & clay & sand	X	
125	138		Brown clay		X
138	140		Gravel	X	

RECEIVED

OCT 10 2000

Department of Water Resources

Completed _____ Depth 140' (Measurable)
Date: Started 8-3-00 Completed 8-4-00

13. DRILLER'S CERTIFICATION

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

Company Name Mike West Well Drilling Firm No. 543

Firm Official Michael Evans Date 10-4-00

and
Driller or Operator _____ Date _____
(Signatures of Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

Figure 1-9 Well log for Michael Evans Domestic Well



Clearwater Geosciences, LLP
Ground Water Development and Exploration

Form 238-7
3/05
DMD

IDAHO DEPARTMENT OF WATER RESOURCES

WELL DRILLER'S REPORT 057767

Use Typewriter or Ballpoint Pen

Office Use Only
Inspected by _____
Twp _____ Rge _____ Sec _____
1/4 _____ 1/4 _____ 1/4 _____
Lat. _____ Long. _____
☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

1. DRILLING PERMIT NO. 15-74-E-0030-000

Other IDWRH No _____

2. OWNER:

Name THOMAS FLINDERS

Address 5850 OLD PANCH RD.

City Park City State UT Zip 84098

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

Map showing Township 15 North ☐ or South ☒
Range 35 East ☒ or West ☐
Section 14 NE 1/4 SE 1/4 1/4
Gov't Lot _____ County CRICIDA
1 mi _____ Long _____
Address of Well Site SAMARIA 7th
City SAMARIA

Li _____ Bk _____ 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/PLUG PACK	AMOUNT	METHOD
Material	From To	Shots or Pounds
Bentonite	0 20.5	Over Bore

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 174"

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

8. CASING/LINER:

Flowline	From	To	Gauge	Material	Casing	Line	Weight	Thickness
6"	0	174	20	Steel	4"	C	20	3

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

☐ Perforations Method _____
☒ Screens Screen Type _____

From	To	Shot Size	Number	Flare Size	Material	Casing	Line

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

ft. below ground Artesian pressure 0 lb.
Depth flow encountered 174 ft. Describe access port or control devices: Valve

11. WELL TESTS:

Test	Duration	Quantity	Time
100			

Water Temp. cold Bottom hole temp. cold

Water Quality test or comments: _____

Depth first Water encountered 174

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
8 1/2	0	Clay		X
8 1/2	10	Clay + Gravel	X	
6	40	Clay + Gravel		X
6	63	Clay		X
6	74	Gravel + Water	X	
6	81	Clay		X
6	123	Clay + Gravel		X
6	133	Clay + Gravel + Sand		X
6	158	Gravel + Sand	X	
6	160	Clay		X
6	173	Gravel		X

RECEIVED

NOV 22 1996

Department of Water Resources
Eastern Region

RECEIVED

DEC 05 1996

Department of Water Resources

Completed Depth 174 (Measurable)
Date Started 11-16-96 Completed 11-20-96

13. DRILLER'S CERTIFICATION

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

Firm Name Mountain West Drilling Firm No. 543

Firm Official Mike Farnsworth Date 11-20-96

and Supervisor or Operator _____ Date _____

(Sign below if not Official & Driller)

FORWARD WHITE COPY TO WATER RESOURCES

Figure 1-10 Well log for Thomas Flinders Irrigation Well



Clearwater Geosciences, LLP
Ground Water Development and Exploration

Firm 238-7
1998

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT
Use Typewriter or Ballpoint Pen

100458

Office Use Only
Inspected by _____
Twp _____ Rge _____ Sec _____
1/4 _____ 1/4 _____
Lat _____ Long _____
☐ Air ☐ Flowing Artesian

1. DRILLING PERMIT NO. D-002-1027
Other IDWR No 12-98-E-0025-CXD

2. OWNER: Veron Hulse
Name _____
Address 4440 S 4th St
City Idaho Falls State ID Zip _____

3. LOCATION OF WELL by legal description:
Sketch also location (must agree with written location)

North _____
Twp 15 North ☐ or South ☐
Rge 35 East ☐ or West ☐
Sec 14 SW ☐ SE ☐ NE ☐ NW ☐
Gov't Lot _____ County Blaine Long _____
Address of Well Site SAHLE City _____

Li _____ 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 ☐ Muc Rotary ☐ Other _____

7. SEALING PROCEDURES

SEAL/PLUG PACK	From	To	Amount	Method
Grout	0	30	7	Grout

Was drive shoe used? ☐ Y ☐ N Shoe Depth(s) _____
Was drive shoe seal tested? ☐ Y ☐ N How? _____

8. CASING/LINER:

Diameter	From	To	Depth	Casing	Lines	Water	Sealant
8" TI	0	20	20	Steel			

Length of Head Pipe _____ Length of Tail Pipe _____

9. PERFORATIONS/SCREENS

☐ Perforations Method _____
☐ Screens Screen Type _____

From	To	Screen Size	Material	Diameter	Mesh	Gravel	Line

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

51 ft below ground Artesian pressure _____ lb
Depth flow encountered _____ ft Describe access point or control devices: _____

11. WELL TESTS:

Well (ft/s)	Discharge	Pumping Level	Time
20-30	1.00	1.00	1.00

Water Temp _____ Bottom hole temp _____
Water Quality test or comments _____

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
10	4	BROWN CLAY		
10	4	CLAY & ROCKS		
8	30	" "		
80	110	" "		
110	120	GRAVEL & ROCK		

RECEIVED

AUG 14 1998

Department of Water Resources
Eastern Region

RECEIVED

AUG 17 1998

Department of Water Resources
Microfilm

Department of Water Resources

Date Started 6-18-98 Completed 6-18-98 (Measurable)

13. DRILLER'S CERTIFICATION

(We certify that all minimum well construction standards were complied with at the time the log was removed)

Firm Name Clearwater Geosciences, LLP Firm No 118
Firm Official David Sandstrom Date 6-18-98
and _____
Supervisor or Operator _____ Date _____
(Sign name of Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

Figure 1-11 Well log for Veron Hulse Domestic Well



Clearwater Geosciences, LLP
Ground Water Development and Exploration

USE TYPEWRITER OR
BALL POINT PEN

State of Idaho
Department of Water Resources

WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

1. WELL OWNER Name <u>Vernon Hulse</u> Address <u>RT #1 Box 408 Malad, Idaho</u> Owner's Permit No <u>None Required</u>		7. WATER LEVEL Static water level <u>75</u> feet below land surface Flowing? ☐ Yes ☒ No G.P.M. flow _____ Temperature _____ ° F. Quality _____ p.s.i. Controlled by ☐ Valve ☐ Cap ☐ Plug																																																																																																					
2. NATURE OF WORK ☒ New well ☐ Deepened ☐ Replacement ☐ Abandoned (Describe method of abandoning)		8. WELL TEST DATA ☐ Pump ☐ Bailor ☐ Other Discharge G.P.M. _____ Draw Down _____ Hours Pumped _____																																																																																																					
3. PROPOSED USE ☒ Domestic ☐ Irrigation ☐ Test ☐ Other (specify type) ☐ Municipal ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection		9. LITHOLOGIC LOG <table border="1"><thead><tr><th>Hole Diam.</th><th>Depth From</th><th>To</th><th>Material</th><th>Water Yes, No</th></tr></thead><tbody><tr><td>8"</td><td>0</td><td>1</td><td>Topsoil + gravel</td><td>X</td></tr><tr><td></td><td>1</td><td>3</td><td>Sandy clay</td><td>X</td></tr><tr><td></td><td>3</td><td>6</td><td>Hard pan</td><td>X</td></tr><tr><td></td><td>6</td><td>20</td><td>Brown clay</td><td>X</td></tr><tr><td></td><td>20</td><td>25</td><td>Canyon Bank</td><td>X</td></tr><tr><td></td><td>25</td><td>30</td><td>Gray clay</td><td>X</td></tr><tr><td></td><td>30</td><td>32</td><td>Brown sandy clay</td><td>X</td></tr><tr><td></td><td>32</td><td>36</td><td>Dirty gravel</td><td>X</td></tr><tr><td></td><td>36</td><td>50</td><td>Canyon Bank</td><td>X</td></tr><tr><td></td><td>50</td><td>54</td><td>Brown clay</td><td>X</td></tr><tr><td></td><td>54</td><td>62</td><td>Dirty gravel</td><td>X</td></tr><tr><td></td><td>62</td><td>70</td><td>Brown clay</td><td>X</td></tr><tr><td></td><td>70</td><td>71</td><td>Canyon Bank</td><td>X</td></tr><tr><td></td><td>71</td><td>101</td><td>Brown sandy clay with stripes of gravel</td><td>X</td></tr><tr><td></td><td>101</td><td>106</td><td>Canyon Bank</td><td>X</td></tr><tr><td></td><td>106</td><td>116</td><td>Brown sandy clay</td><td>X</td></tr><tr><td></td><td>116</td><td>118</td><td>Canyon Bank</td><td>X</td></tr><tr><td></td><td>118</td><td>125</td><td>Brown clay</td><td>X</td></tr><tr><td></td><td>125</td><td>147</td><td>Brown clay and boulders</td><td>X</td></tr></tbody></table>		Hole Diam.	Depth From	To	Material	Water Yes, No	8"	0	1	Topsoil + gravel	X		1	3	Sandy clay	X		3	6	Hard pan	X		6	20	Brown clay	X		20	25	Canyon Bank	X		25	30	Gray clay	X		30	32	Brown sandy clay	X		32	36	Dirty gravel	X		36	50	Canyon Bank	X		50	54	Brown clay	X		54	62	Dirty gravel	X		62	70	Brown clay	X		70	71	Canyon Bank	X		71	101	Brown sandy clay with stripes of gravel	X		101	106	Canyon Bank	X		106	116	Brown sandy clay	X		116	118	Canyon Bank	X		118	125	Brown clay	X		125	147	Brown clay and boulders	X
Hole Diam.	Depth From	To	Material	Water Yes, No																																																																																																			
8"	0	1	Topsoil + gravel	X																																																																																																			
	1	3	Sandy clay	X																																																																																																			
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	118	125	Brown clay	X																																																																																																			
	125	147	Brown clay and boulders	X																																																																																																			
4. METHOD DRILLED ☒ Cable ☐ Rotary ☐ Dug ☐ Other																																																																																																							
5. WELL CONSTRUCTION Diameter of hole <u>8</u> inches Total depth <u>147</u> feet Casing schedule: ☒ Steel ☐ Concrete Thickness <u>1/4</u> inches Diameter <u>8</u> inches From <u>1</u> feet To <u>147</u> feet Was casing drive shoe used? ☒ Yes ☐ No Was a packer or seal used? ☐ Yes ☒ No Perforated? ☐ Yes ☒ No How perforated? ☐ Factory ☐ Knife ☒ Torch Size of perforation <u>1/4</u> inches by <u>3</u> inches Number <u>145</u> perforations From <u>80</u> feet To <u>142</u> feet perforations _____ feet _____ feet perforations _____ feet _____ feet Well screen installed? ☐ Yes ☒ No Manufacturer's name _____ Type _____ Model No. _____ Diameter _____ Slot size _____ Set from _____ feet to _____ feet Diameter _____ Slot size _____ Set from _____ feet to _____ feet Gravel packed? ☒ Yes ☐ No Size of gravel <u>1/2 - 1</u> Placed from <u>20</u> feet to <u>132</u> feet Surface seal depth <u>20</u> Material used in seal ☐ Cement grout ☒ Pudding clay ☐ Well cuttings Sealing procedure used ☐ Slurry pit ☐ Temporary surface casing ☒ Overbore to seal depth																																																																																																							
6. LOCATION OF WELL Sketch map location must agree with written location. Subdivision Name _____ Lot No. _____ Block No. _____ County <u>C. H. L.</u> <u>SE 1/4 Sec 14, T. 15, N. 35, E. 1</u>		10. Work started <u>3-6-79</u> finished <u>3-28-79</u>																																																																																																					
		11. DRILLER'S CERTIFICATION Firm Name <u>Reel Well Drilling Firm No. 350</u> Address <u>Stone, Idaho</u> Date <u>3-28-79</u> Signed by (Firm Official) <u>Steve Reel</u> and <u>Steve Reel</u> (Operator)																																																																																																					

USE ADDITIONAL SHEETS IF NECESSARY

FORWARD THE WHITE COPY TO THE DEPARTMENT

Figure 1-12 Well log for Veron Hulse Domestic Well



Clearwater Geosciences, LLP
Ground Water Development and Exploration

USE TYPEWRITER
BALL POINT PEN

State of Idaho
Department of Water Administration
WELL DRILLER'S REPORT

RECEIVED

State law requires that this report be filed with the Director, Department of Water Administration within 30 days after the completion or abandonment of the well.

1. WELL OWNER
Name: Albert Jones
Address: 312 No 200 W
Owner's Permit No. Malak Idaho

2. NATURE OF WORK
☒ New well ☐ Deepened ☐ Replacement
☐ Abandoned (Describe method of abandoning)

3. PROPOSED USE
☒ Domestic ☐ Irrigation ☐ Test ☐ Other (specify type)
☐ Municipal ☐ Industrial ☐ Stock ☐ Waste disposal or injection

4. METHOD DRILLED
☐ Cable ☒ Rotary ☐ Dug ☐ Other

5. WELL CONSTRUCTION
Diameter of hole: 6 inches Total depth: 80 feet
Casing schedule: ☒ Steel ☐ Concrete
Thickness: 1/2 inches Diameter: 6 inches From: 0 feet To: 80 feet
Was a packer or seal used? ☒ Yes ☐ No
Perforated? ☒ Yes ☐ No
How perforated? ☐ Factory ☐ Knife ☒ Torch
Size of perforation: 3/8 inches by 3 inches
Number of perforations: 10 from 59 feet to 80 feet
Well screen installed? ☐ Yes ☒ No
Manufacturer's name: _____
Type: _____ Model No.: _____
Diameter: _____ Slot size: _____ Set from: _____ feet to: _____ feet
Gravel packout? ☐ Yes ☒ No Size of gravel: _____
Placed from: _____ feet to: _____ feet
Surface seal depth: 18 Material used in seal: ☐ cement grout ☐ Packing clay ☐ Well cullings
Sealing procedure used: ☐ Sherry pH ☐ Temporary surface casing ☒ Overbars to seal depth

6. LOCATION OF WELL
Sketch map location must agree with written location:
Subdivision Name: BH 95
Lot No. 2 Block No. 3
County: Blaine
Section: 5E x 7N & Sec. 14 T. 15 N. R. 35 W.

7. WATER LEVEL
Static water level: 12' feet below land surface
Flowing? ☐ Yes ☒ No G.P.M. flow: _____
Temperature: 44 F. Quality: _____
Artesian closed-in pressure: _____ p.s.i.
Controlled by: ☐ Valve ☐ Cap ☐ Plug

8. WELL TEST DATA
☐ Pump ☐ Doler ☒ Other
Discharge G.P.M.: 60 g.p.m. Draw Down: _____ Hours Pumped: 2 hr

9. LITHOLOGIC LOG
M41915
Mole Diam. Depth From To Material Water Yes No
0 0 6 Gap seal L
6 22 Oldy-midgranul L
22 48 Oldy L
48 69 Red sandstone L
69 80 Sandstone with gravel L

10. Work started: 3/8/74 finished: 3/8/74

11. DRILLER'S CERTIFICATION
Firm Name: Northwest A & D Firm No. 238
Address: 1425 Perahia Date: _____
Signed by (Firm Official): Geoffrey Mitchell
and Dean Mitchell
(Operator)

USE ADDITIONAL SHEETS IF NECESSARY FORWARD THE WHITE COPY TO THE DEPARTMENT

Figure 1-13 Well log for Albert Jones Domestic Well



Clearwater Geosciences, LLP
Ground Water Development and Exploration

Form 238-1
6/95
DMD

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT
Use Typewriter or Ballpoint Pen **66418**

Office Use Only
Inspected by _____
Twp _____ Rge _____ Sec _____
1/4 _____ 1/4 _____ 1/4 _____
Lat: _____ Long: _____
☐ Air ☐ Flowing Artesian

1. DRILLING PERMIT NO. 15-97-E-0024-000
Other IDWR No _____

2. OWNER:
Name Albert Jones
Address 280 W 500 N
City Malad State ID Zip 83252

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location.

North _____
Twp. 15 North _____ or South _____
Rge 35 East _____ or West _____
Sec. 14 _____ 1/4 _____ NW 1/4 _____ SE 1/4 _____
Gov't of _____ County Oneida _____
Lat: _____ Long: _____
Address of Well Site Samira
City _____
(City of Malad lands to north - adjacent to 1401.7 (2) Landmark)

Li _____ Bk _____ 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

RFM/FILTER PACK	From	To	ANJOJAT	METHOD
Materials			Seals or Packs	
<u>Bentonite</u>	<u>0</u>	<u>20</u>	<u>2</u>	<u>Over Bore</u>
<u>Pudding clay</u>				

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 123

Was drive shoe seal tested? ☐ Y ☐ N How? _____

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Flow	Water	Time(s)
<u>6"</u>	<u>0</u>	<u>123</u>	<u>120</u>	<u>Steel</u>	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

☐ Perforations Method _____
☐ Screens Screen Type _____

From	To	Slot Size	Number	Material	Casing	Flow
					☐	☐
					☐	☐
					☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

50 ft. below ground Artesian pressure _____ lb.
Depth flow encountered _____ ft. Describe access port or control devices: _____

11. WELL TESTS:

Pump	Boiler	Water Temp.	Bottom hole temp
<u>100</u>		<u>cold</u>	<u>cold</u>

Water Temp. cold Bottom hole temp cold
Water Quality test or comments: good

Depth first Water Encountered 30
12. LITHOLOGIC LOG: (Describe repairs or abandonment) Water

Bore	Feet	To	Remarks: Lithology, Water Quality & Temperature	Y	N
<u>8 1/2</u>	<u>0</u>	<u>30</u>	<u>Clay</u>		☒
<u>6"</u>	<u>20</u>	<u>30</u>	<u>clay</u>		☒
<u>6"</u>	<u>30</u>	<u>50</u>	<u>Gravel & Sand</u>	☒	
<u>6"</u>	<u>50</u>	<u>55</u>	<u>clay</u>		☒
<u>6"</u>	<u>55</u>	<u>73</u>	<u>Gravel</u>	☒	
<u>6"</u>	<u>73</u>	<u>95</u>	<u>Brown clay</u>		☒
<u>6"</u>	<u>95</u>	<u>110</u>	<u>Gravel & Sand</u>	☒	
<u>6"</u>	<u>110</u>	<u>120</u>	<u>Brown clay</u>		☒
<u>6"</u>	<u>120</u>	<u>123</u>	<u>Gravel</u>	☒	

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JUL 28 1997

Department of Water Resources
Eastern Region

RECEIVED

AUG 08 1997

Department of Water Resources

Completed Depth 123 (Measurable)
Date: Started 6-7-97 Completed 6-7-97

13. DRILLER'S CERTIFICATION

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

Firm Name Mountain West Well Drilling Firm No. 543

Firm Official Mike Frandson Date 6-17-97

and Supervisor or Operator _____ Date _____

(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

Figure 1-14 Well log for Albert Jones Domestic Well



Clearwater Geosciences, LLP
Ground Water Development and Exploration

Form 238-7
6/02

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

1. WELL TAG NO. D 0051491
DRILLING PERMIT NO. _____
Water Right or Injection Well No. _____

2. OWNER:
Name Verla Martenson
Address 1395 E. Side Hill Lane
City Idaho Falls State ID Zip 83401

3. LOCATION OF WELL by legal description:
You must provide address or Lot, Blk, Sub. or Directions to well.
Twp. 15 North ☐ or South ☒
Rge. 36 East ☒ or West ☐
Sec. 14 1/4 SW 1/4 NE 1/4
Gov't Lot _____
Lat: _____ Long: _____
Address of Well Site Samara City _____
L1. _____ 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 Material Bentonite From 0 To 750 Weight / Volume _____ Seal Placement Method _____
Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 117
Was drive shoe seal tested? ☐ Y ☐ N How? _____

8. CASING/LINER:
Diameter From To Gauge Material Casing Liner Welded Th. Scaled
6" 0 117 350 Steel ☒ ☐ ☒ ☐
Length of Headpipe _____ Length of Tailpipe _____
Packer ☐ Y ☐ N Type _____

9. PERFORATIONS/SCREENS PACKER TYPE
Perforation Method torch
Screen Type & Method of Installation
From To Shot Size Number Diameter Material Casing Liner
97 117 1/4 45 6 Steel ☒ ☐
☐ ☐

10. FILTER PACK
Filter Material From To Weight / Volume Placement Method

11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
31 ft. below ground Artesian pressure _____ ft.
Depth flow encountered _____ ft. Describe access port or control devices: _____

12. WELL TESTS:
☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian
Yield gal/min. 50 Drawdown _____ Pumping Level _____ Time _____
Water Temp 60.0 Bottom hole temp 60.0
Water Quality test or comments: good

13. LITHOLOGIC LOG: (Describe repairs or abandonment) Water

Bore Dia	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
10	0	20	Bam clay		X
6	20	60	Bam clay		X
6	60	70	gravel	X	
6	70	80	Bam clay		X
6	80	93	gravel	X	
6	93	98	Bam clay gravel	X	X
6	98	115	gravel	X	
6	115	117	Bam clay		X

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NOV-25-2008

Department of Water Resources
Eastern Region

Completed Depth 117 (Measurable)
Date Started 11-6-08 Completed 11-8-08

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 MT. West Well Drilling Firm No. 543
Principal Driller Michael Frandsen Date 11-10-08
and Driller or Operator II Mike Frandsen Date 11-9-08
Operator I _____ Date _____
Principal Driller and Rig Operator Required.
Operator I must have signature of Driller/Operator II.

FORWARD WHITE COPY TO WATER RESOURCES

Figure 1-15 Well log for Verla Martenson Irrigation Well



Clearwater Geosciences, LLP
Ground Water Development and Exploration

Form 2397
6-02

BMD

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

15

Office Use Only
Well ID No. _____
Inspected by _____
Twp _____ Rge _____ Sec _____
Lat: _____ Long: _____

1. WELL TAG NO. D 0034840
DRILLING PERMIT NO. _____
Water Right or Injection Well No. _____

2. OWNER: Shirley Olsen
Name _____
Address 4165549 9700 S.
City Malad State Id Zip 83252

3. LOCATION OF WELL by legal description:
You must provide address or Lot, Blk, Sub or Directions to well.
Twp 15 North ☐ or South ☒
Rge 35 East ☒ or West ☐
Sec 14 1/4 SE 1/4 SW 1/4
Gov't Lot _____ County Blaine
Lat: _____ Long: _____
Address of Well Site Same

LL _____ Bk _____ 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 Material Bentonite From 0 To 8 Weight 8 Volume 8 Seal Placement Method Overhaul
Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 114
Was drive shoe seal tested? ☐ Y ☐ N How? _____

8. CASING/LINER:
Casing 6" From 0 To 114 Gauge 05 Material Steel Casing ☒ Liner ☐ Liner ☐ Liner ☐
Length of Headpipe _____ Length of Tailpipe _____
Packer: ☐ Y ☐ N Type _____

9. PERFORATIONS/SCREENS PACKER TYPE
Perforation Method Touch
Screen Type & Method of Installation
From 96 To 114 Slot Size 14-6 Number 50 Diameter 1/2" Material Steel Casing ☒ Liner ☐

10. FILTER PACK
Filter Material _____ From _____ To _____ Weight/Vol. _____ Placement Method _____

11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
43 ft. below ground Artesian pressure _____ lb.
Depth flow encountered _____ ft. Describe access port or control devices: _____

12. WELL TESTS:
☐ Pump ☐ Bailor ☐ Air ☐ Flowing Artesian
Yield gal/min. _____ Drawdown _____ Pumping Level _____ Time _____
Water Temp. cold Bottom hole temp. 22.3
Water Quality test or comments: good

13. LITHOLOGIC LOG: (Describe repairs or abandonment) Water

Feet	Feet	Remarks: Lithology, Water Quality & Temperature	Y	N
10	0	Brown clay		X
11	20	Brown clay		X
12	60	Brown clay		X
13	60	Brown clay		X
14	93	Gravel same brown clay	X	

Completed Depth 114 (Measurable)
Date Started 9-27-04 Completed 9-27-04

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 Mike West of West Valley Firm No. 543
Principal Driller Michael Francis Date 10-10-04
Driller or Operator Mike Francis Date 10-10-04
Operator _____ Date _____
Principal Driller and Rig Operator Required.
Operator must have signature or Driller/Operator ID.

FORWARD WHITE COPY TO WATER RESOURCES

Figure 1-16 Well log for Shirley Olsen Domestic Well



Clearwater Geosciences, LLP
Ground Water Development and Exploration

For: A-7
11/

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Office Use Only
Inspected by _____
Twp _____ Rge _____ Sec _____
1/4 _____ 1/4 _____ 1/4 _____
Lit _____ Long _____
☒ Pump ☐ Bal or ☐ Flowing Artesian

1. WELL TAG NO. D-00 14697
DRILLING PERMIT NO. 767404
Other IWR No _____

2. OWNER: Dee Tolman
Name _____
Address 4598 West 48th South
City SAMARIA State ID

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location.

Map grid showing location. Twp. 15-S North or South ☒
Rge. 35 East or West ☒
Sec. 14 1/4 SW 1/4 SW 1/4
County Blaine
Address of Well Site 4598 West 48th South
City SAMARIA

LL _____ 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
☒ No Rotary ☐ Cable ☐ Mud Rotary ☐ Other _____

7. SEALING PROCEDURES

SEAL FILTER PACK	AMOUNT	REMARKS
Material	From To	Shells or Threads
Bentonite	0 30	6

Was drive shoe used? ☒ N Shoe Depth(s): _____
Was drive shoe seal tested? ☐ Y ☒ N how? _____

8. CASING/LINER:

Casing	From	To	Gauge	Material	Casing Liner	Welded	Threads
6	11	124	25	Steel	☒	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

Perforators Method _____
Screens Screen Type _____

From	To	Size	Number	Diameter	Material	Casing	Liner
NONE							

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

56 ft. below ground Artesian pressure _____ lb.
Depth flow encountered _____ ft. Describe access port or control devices: _____

11. WELL TESTS:

Test	Drawdown	Flowing Level	Time
15 20		140	1 hr.

Water Temp. _____ Bottom hole temp. _____
Water Quality test or comments: _____

12. LITHOLOGIC LOG: (Describe repairs or abandonment) Water

From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
0	30	CLAY AND SILTSTONE		
30	70	CLAY & SAND		
70	100	CLAY		
100	124	ROCK + GRAVEL		
124	141	CLAY		

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FEB 12 2001

RECEIVED

FEB 06 2001

Department of Water Resources
Eastern Region

RECEIVED

DEC 18 2000

Department of Water Resources
Eastern Region

Completed Depth 124 - 140 (Measurable)
Date Started 11-2-2000 Completed 11-18-2000

13. DRILLER'S CERTIFICATION

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

Company Name Lundstrom Waterworks Firm No. 118

Firm Official Demand Separated Date 11-18-2000

Driller or Operator _____ Date _____

FORWARD WHITE COPY TO WATER RESOURCES

Figure 1-17 Well log for Dee Tolman Domestic Well



Clearwater Geosciences, LLP
Ground Water Development and Exploration

Form 208-7
10/02

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

15

Office Use Only
Well ID No. _____
Inspected by _____
Twp _____ Rge _____ Sec _____
1/4 _____ 1/4 _____ 1/4 _____
Lat _____ Long _____

1. WELL TAG NO. D
DH LUNG PERMIT NO. _____
Water Right or Injection Well No. _____

2. OWNER:
Name Dee Toman
Address 1000 Box 206
City Madras State OR Zip 97552

3. LOCATION OF WELL by legal description:
You must provide address or Lot, Blk, Sec. or Directions to well
Twp 15 North ☐ or South ☒
Rge 35 East ☒ or West ☐
Sec 14 1/4 SW 1/4 SE 1/4
Gov't Lot _____
County Madras
Lat: _____ Long: _____
Address of Well Site 4921 S. 4500 W
City Seaside

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 Material Bentonite From 0 To 20 Weight Volume _____ Seal Treatment Method _____
Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 120
Was drive shoe seal tested? ☒ Y ☐ N How? _____

8. CASING/LINER:
Casing Size 6 In. To 120 ft. Depth Material steel Casing Used ☒ Welded ☒ Threaded ☐
Length of Headpipe _____ Length of Tailpipe _____
Packer ☐ Y ☐ N Type _____

9. PERFORATIONS/SCREENS PACKER TYPE
Perforation Method Leach
Screen Type & Method of Installation _____
From 100 To 120 ft. Slot Size 44 to 30 Mesh 6 Material steel Casing ☒ Liner ☐

10. FILTER PACK
Filter Material _____ From _____ To _____ Weight Volume _____ Placement Method _____

11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
30 ft. below ground Artesian pressure _____ lb
Depth flow encountered _____ ft. Describe access port or control devices _____

12. WELL TESTS

Pump ☐ Ruler ☐ Air ☐ Flowing Artesian ☐
Yield gals/min _____ Direction _____ Static Head _____ Test _____
Water Temp cold Bottom hole temp cold
Water Quality test or comments good Depth first Water Encounter 20

13. LITHOLOGIC LOG: (Describe repairs or abandonment)

Depth	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
10	0	15	Bk. Clay		X
15	15	20	Bk. Clay gravel		X
20	20	25	Bk. Clay gravel		X
25	25	30	Bk. Clay		X
30	30	35	Bk. Clay gravel		X
35	35	40	Bk. Clay gravel		X
40	40	45	Bk. Clay gravel		X
45	45	50	Bk. Clay gravel		X
50	50	55	Bk. Clay gravel		X
55	55	60	Bk. Clay gravel		X
60	60	65	Bk. Clay gravel		X
65	65	70	Bk. Clay gravel		X
70	70	75	Bk. Clay gravel		X
75	75	80	Bk. Clay gravel		X
80	80	85	Bk. Clay gravel		X
85	85	90	Bk. Clay gravel		X
90	90	95	Bk. Clay gravel		X
95	95	100	Bk. Clay gravel		X
100	100	105	Bk. Clay gravel		X
105	105	110	Bk. Clay gravel		X
110	110	115	Bk. Clay gravel		X
115	115	120	Bk. Clay gravel		X

Completed Depth 120 (Measurable)
Date Started 4-15-06 Completed 4-15-06

14. DRILLER'S CERTIFICATION

We certify that all minimum well construction standards were complied with at the time the rig was removed.
Company Name MLK Drilling Firm No. 543
Principal Driller Michael Franden Date 4-25-06
and Driller or Operator II Mike Franden Date 4-25-06
Operator I _____ Date _____
Principal Driller and Rig Operator Required.
Operator I must have signature of Driller/Operator II.

FORWARD WHITE COPY TO WATER RESOURCES

Figure 1-18 Well log for Dee Toman Domestic Well



Clearwater Geosciences, LLP
Ground Water Development and Exploration

Form 238-7
1/85

WMD

IDAHO DEPARTMENT OF WATER RESOURCES

WELL DRILLER'S REPORT

Use Typewriter or Ballpoint Pen

95377

Office Use Only
Inspected by _____
Twp _____ Rge _____ Sec _____
1/4 1/4 1/4
Lat _____ Long _____
☒ Air ☐ Flowing Artesian

1. DRILLING PERMIT NO. D-000-6261
Other IDWR No. 15-99-E-0011

2. OWNER:
Name Luke D. Waldron
Address 4645 S 4500 W
City MAIAD State ID Zip 83252

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

Map grid showing location:
Twp. 15S North ☐ or South ☒
Rge. 9SE East ☒ or West ☐
Sec. 14 NE 1/4 or SE 1/4
Gov't Lot _____ County _____
Lat. _____ Long. _____
Address of Well Site SAME AS ABOVE
City _____

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	Size or Pounds		
Bentonite	0	20	3 sacks		packed

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

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

8. CASING/LINER:

Flareless	From	To	Gauge	Material	Casing	Line	Weight	Threads
	6"	+1	100	250	Steel	☒		

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

☐ Perforations Method _____
☐ Screens Screen Type _____

From	To	Slot Size	Number	Diameter	Material

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

25 ft below ground Artesian pressure _____ lb.
Depth flow encountered _____ ft. Describe access port or control devices: _____

11. WELL TESTS:

☐ Pump ☐ Bailor

Yield gal/min	Drawdown	Pumping Level	Time
30	6 ft	50 ft	2 hrs

Water Temp. 50° Bottom hole temp. 40°

Water Quality test or comments: _____

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Water
6"	0	25	Top Soil + Clay	
	25	45	Sandy Clay	
	45	75	Clay	
	75	90	Clay + gravel	
	90	99	Clay	
	99	100	Gravel	

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MAY 14 1993

Department of Water Resources

RECEIVED

MAY 15 1999

Department of Water Resources
Eastern Region

Completed Depth 100 ft
Date Started 4/26/99 Completed 4/27/99 (Mannable)

13. DRILLER'S CERTIFICATION

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

Firm Name A & J Well Drilling Firm No. 585

Firm Official Lance Adams Date 4/27/99

and Supervisor or Operator Tom Adams Date 4/27/99

FORWARD WHITE COPY TO WATER RESOURCES

Figure 1-19 Well log for Luke Waldron Domestic Well

Form 1/84

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT 057169

**Use Typewriter
or
Ball Point Pen**

1. DRILLING PERMIT NO. 15 . 95 . E - 013 . 000
Other IDWR No. _____

2. OWNER:
Name Alvin T Williams
Address 385 S. 2nd W
City Tampa State FL Zip 33252

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.


 Twp. 15 North ☐ or South ☒
 Rge. 35 East ☒ or West ☐
 Sec. 14 1/4 3/4 SW NE 1/4
 Gov't Lot _____ County San Diego 10 acres 144 1/4 160 acres
 Address of Well Site 1st N 15th W
 City San Diego

Lt. _____ Blk. _____ Sub. Name _____

4. PROPOSED USE:

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

5. TYPE OF WORK

☐ New Well ☐ Modify or Repair ☐ Replacement ☐ Abandonment

8. DRILL METHOD

☐ Mud Rotary ☒ Air Rotary ☐ Cable ☐ Other _____

7. SEALING PROCEDURES

SEAL/FILTER PACK			AMOUNT	METHOD
Material	From	To	Seals or Polypro	
pressure vessel	0	274	660 lb	dry pour

Was drive shoe used? ☒ Y ☐ N ☐ NE

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

B. CASING/LINER:

Diagrams:	From	To	Usage	Material	Coating	Line	Welded	Threaded
6	218'	205'	.75	Steel	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headline 19 " Length of Tailpipe _____

9. PERFORATIONS/SCREENS

☒ Perforations Method fourth per cut
☐ Screens Screen Type _____

From	To	Slot Size	Number	Diameter	Material	Casing	Library
95	105	.2500"	30	6	316L	BL	□
						□	□
						□	□

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

24 ft. below ground Artesian pressure _____ lb.
Depth flow encountered 12 ft. Describe access port or
control devices: well cap

11. WELL TESTS:

☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Pumping Level	Time
75 gpm	40 ft	100'	4 hrs.

Water Temp 42° Bottom hole temp. - 85°

Water Quality test or comments: 0.9

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
8 1/2	0	12	160' clay		X
6	27	32	gravel	X	
6	33	70	gray clay		X
6	73	108	gravel	X	

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OCT 28 1996

Department of Water Resources

OCT 10 1996

Department of Water Resources
Bureau District Office

MICROFILMED

DEC 8 1996

Completed Depth 105' (Measurable)
 Date: Started 8-14-95 Completed 9-2-95

13. DRILLER'S CERTIFICATION

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

Firm Name DB De. H. Co. Firm No. 542

Firm Official Pichayk Romo Date 10-1-96

Supervisor or Operator _____ Date _____

(Sings) *Once It Rains, Official & Open Use*

FORWARD WHITE COPY TO WATER RESOURCES

Figure 1-20 Well log for Alvin Williams Domestic Well



Attachment 2

FIELD TEST RESULTS - BASIS FOR CALCULATED IMPACTS

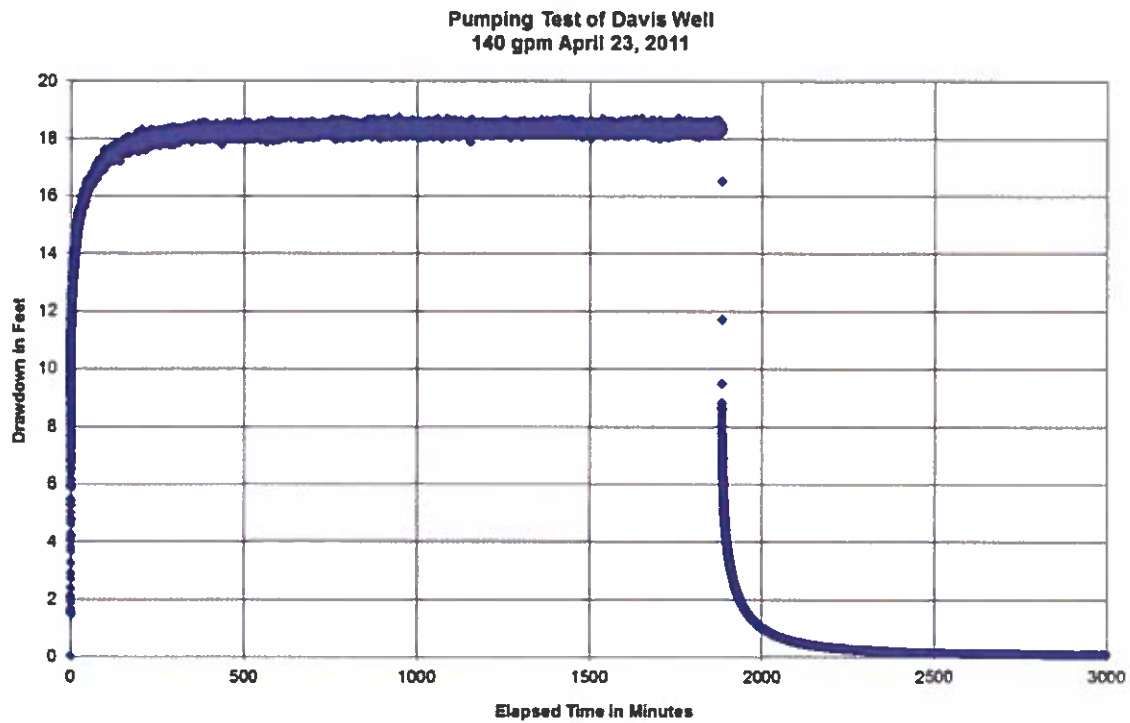


Figure 2-1. Plot of entire data set for pumping test of the Jeff Davis Irrigation well.



Attachment 3

AQTESOLV PLOTS

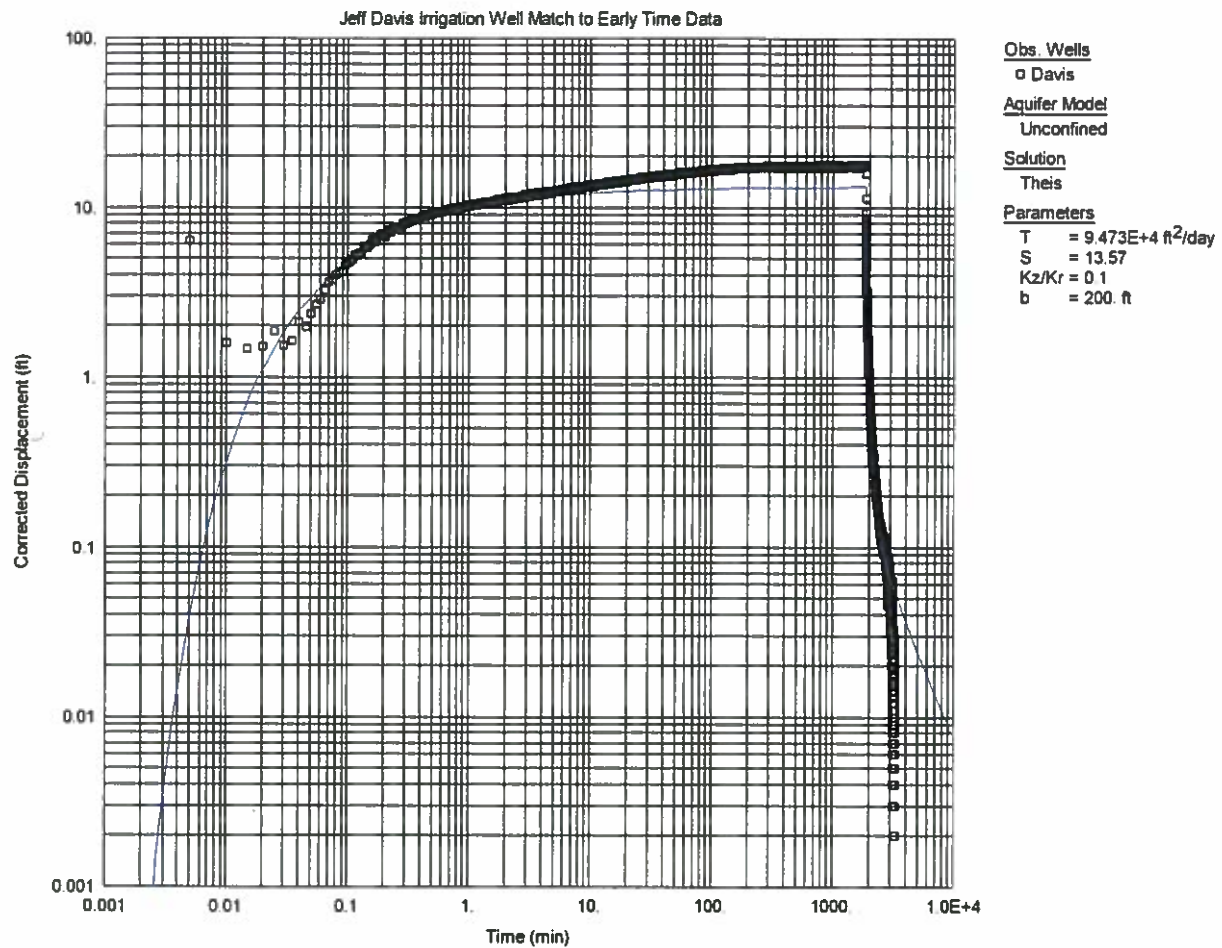


Figure 3-1 Theis unconfined solution matched to early time well data, Jeff Davis Pumping Test.

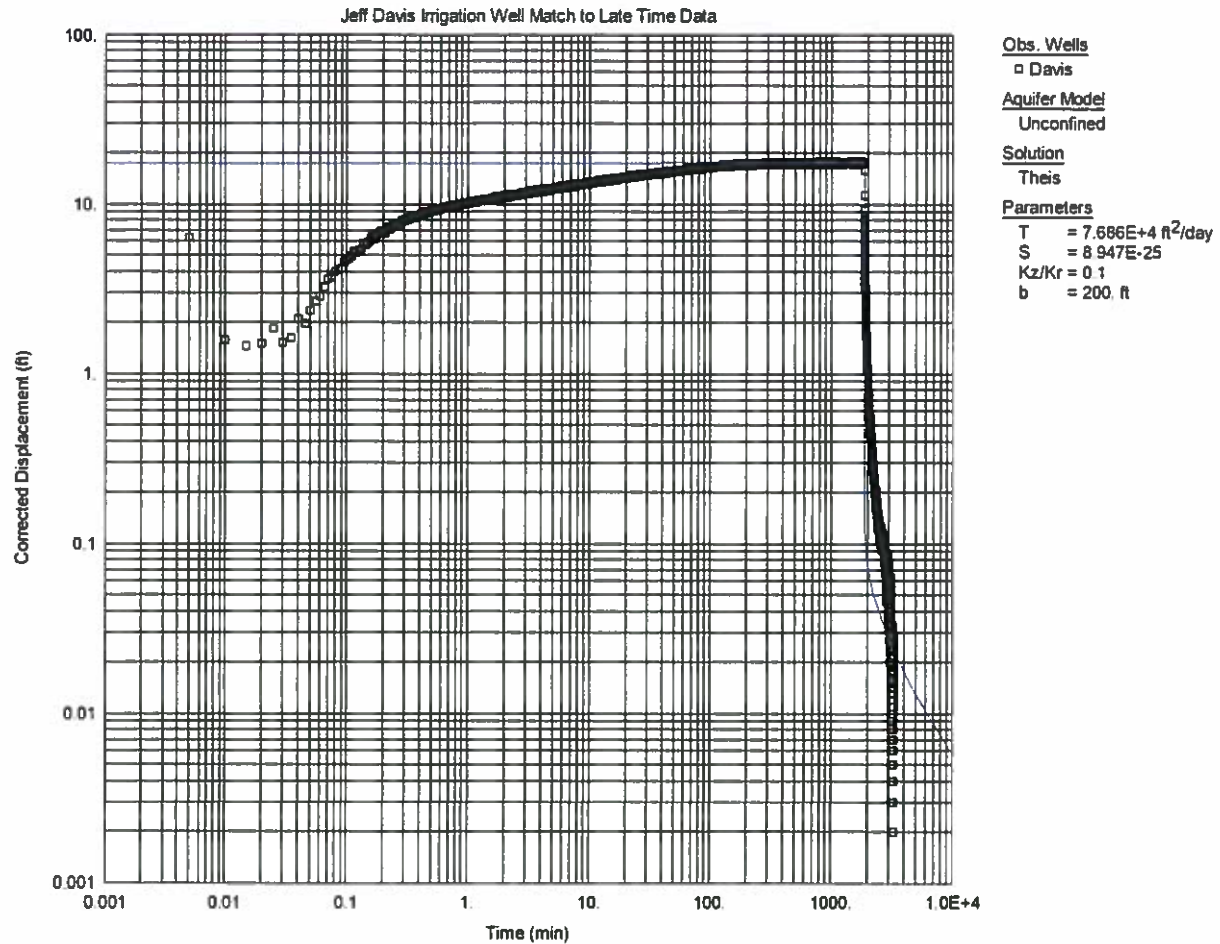


Figure 3-2 Theis unconfined solution matched to late time well data for Jeff Davis pumping test.

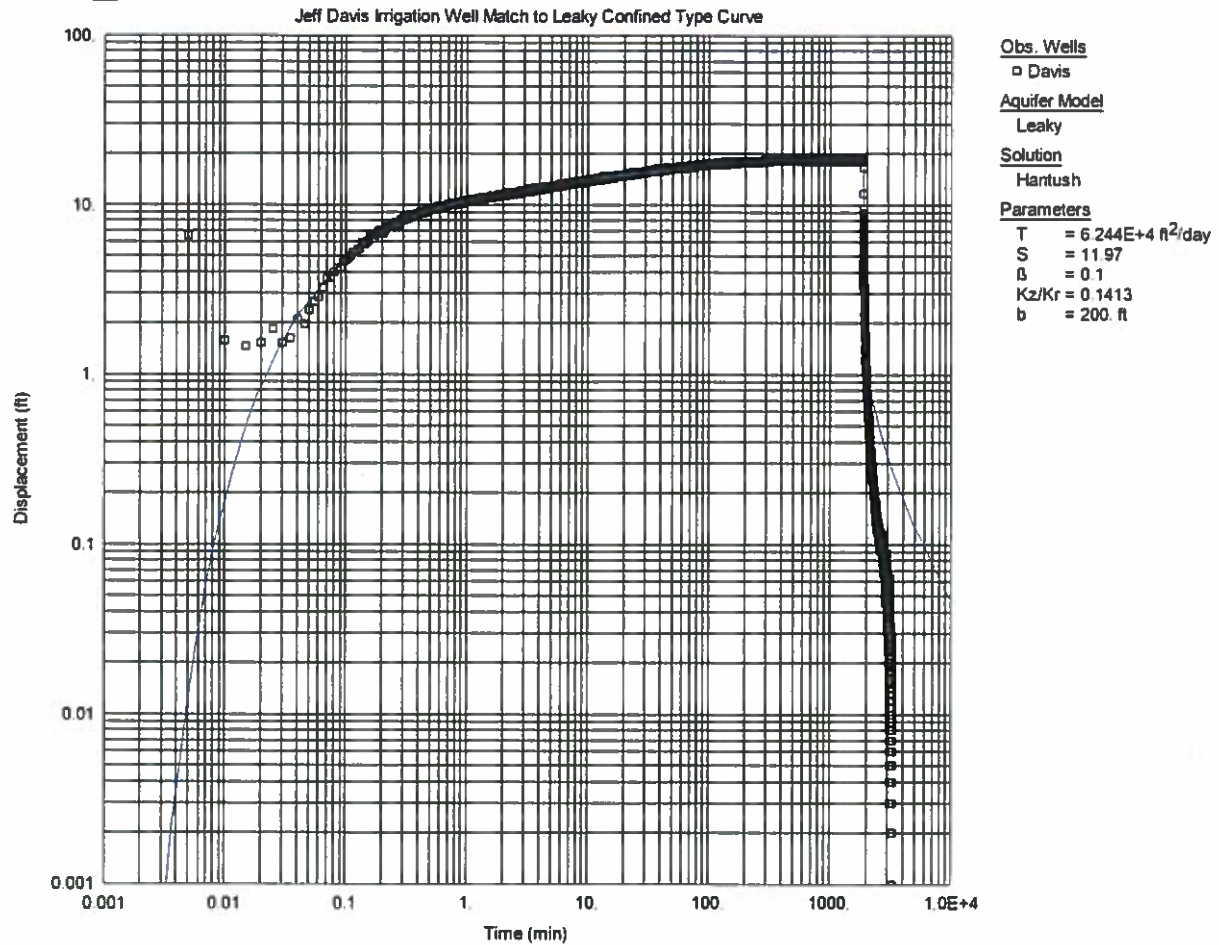


Figure 3-3 Hantush leaky confined solution matched to well data for Jeff Davis Pumping Test.



Attachment 4

AQUIFER IMPACT ANALYSIS



Table 4-1 Table of values used in AQTESOLV simulation.

Parameter	Value	Unit
Transmissivity	62,400	ft ² /d
Storativity	0.01	unitless
Flow Rate	72	gpm
Duration	302,400	min
Total volume	67	ac-ft
aquifer thickness (b)	200	ft
kz/Kr	0.1	na

Table 4-2 Table of locations for various boundary corners and wells used in the AQESOLV simulation.

Location	x	y
NW Corner	0	50000
NE Corner	38000	50000
SW Corner	0	0
SE Corner	38000	0
Price POD	4690	5600
Well 0.5 mile N	4690	8220
Well 0.5 mile W	2070	5600
Well 0.5 mile S	4690	2980
Well 0.5 mile E	7310	5600

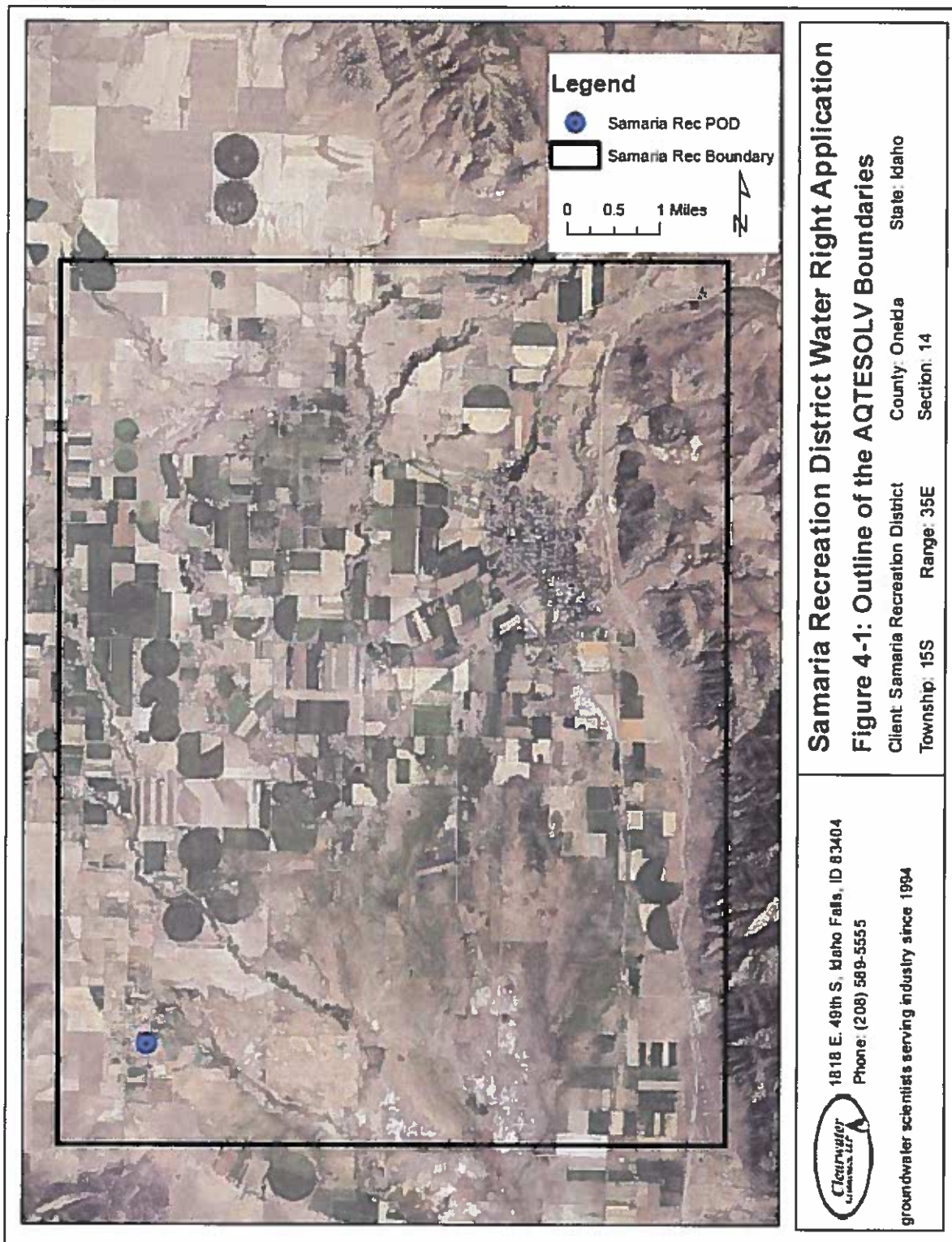


Figure 4-1 Outline of the boundaries used in the AQTESOLV forward solution calculation.

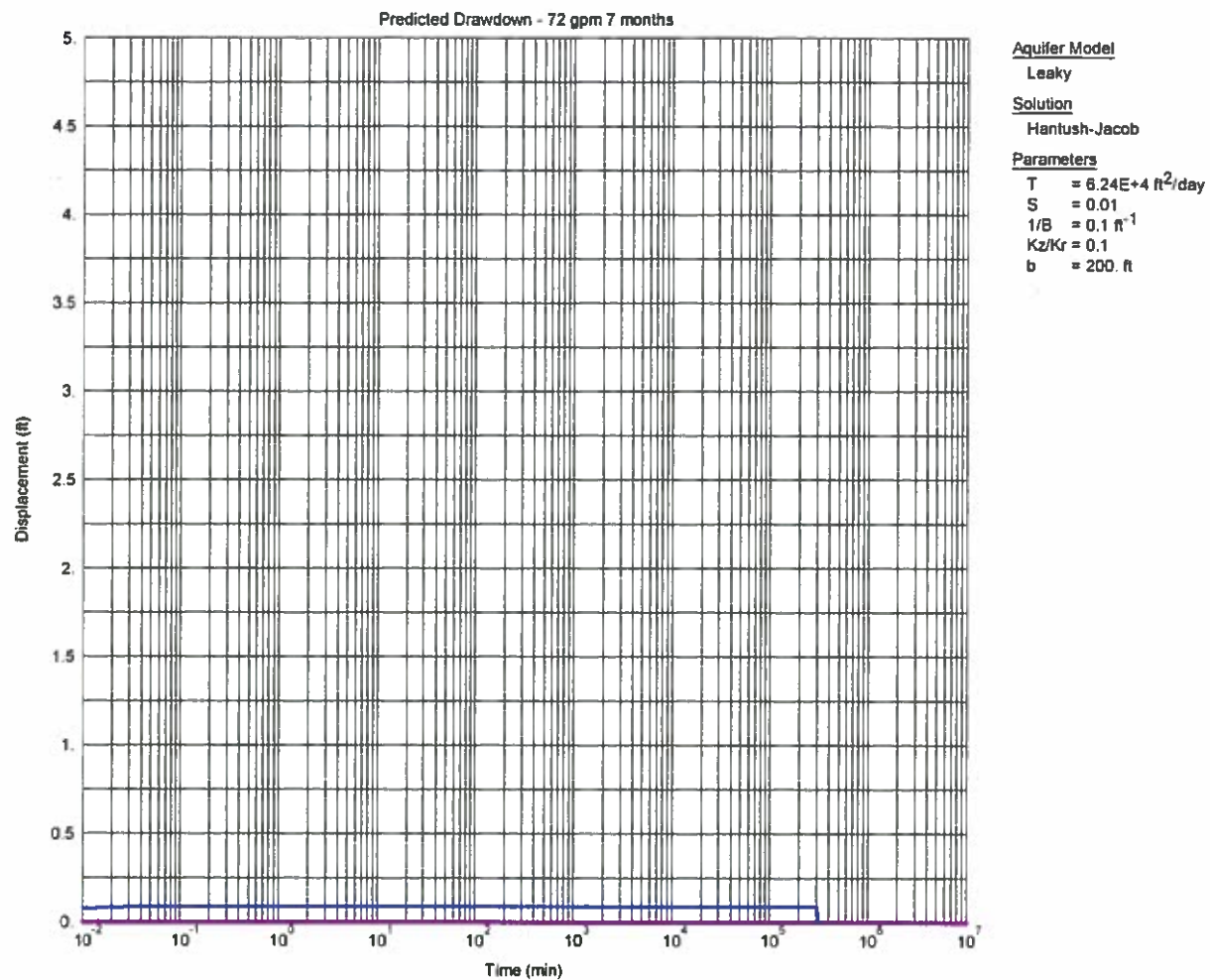


Figure 3-2 **Leaky Confined** - predictive plot of drawdown at 72 gpm or 0.16 cfs for 210 days. The colored lines represented drawdown for the POD and four idealized locations as specified below.

Key to line colors

- Blue Proposed POD for Samaria Recreation
- Black Imaginary well ½ mile north of the proposed POD
- Green Imaginary well ½ mile west of the proposed POD
- Red Imaginary well ½ mile south of the proposed POD
- Purple Imaginary well ½ mile east of the proposed POD

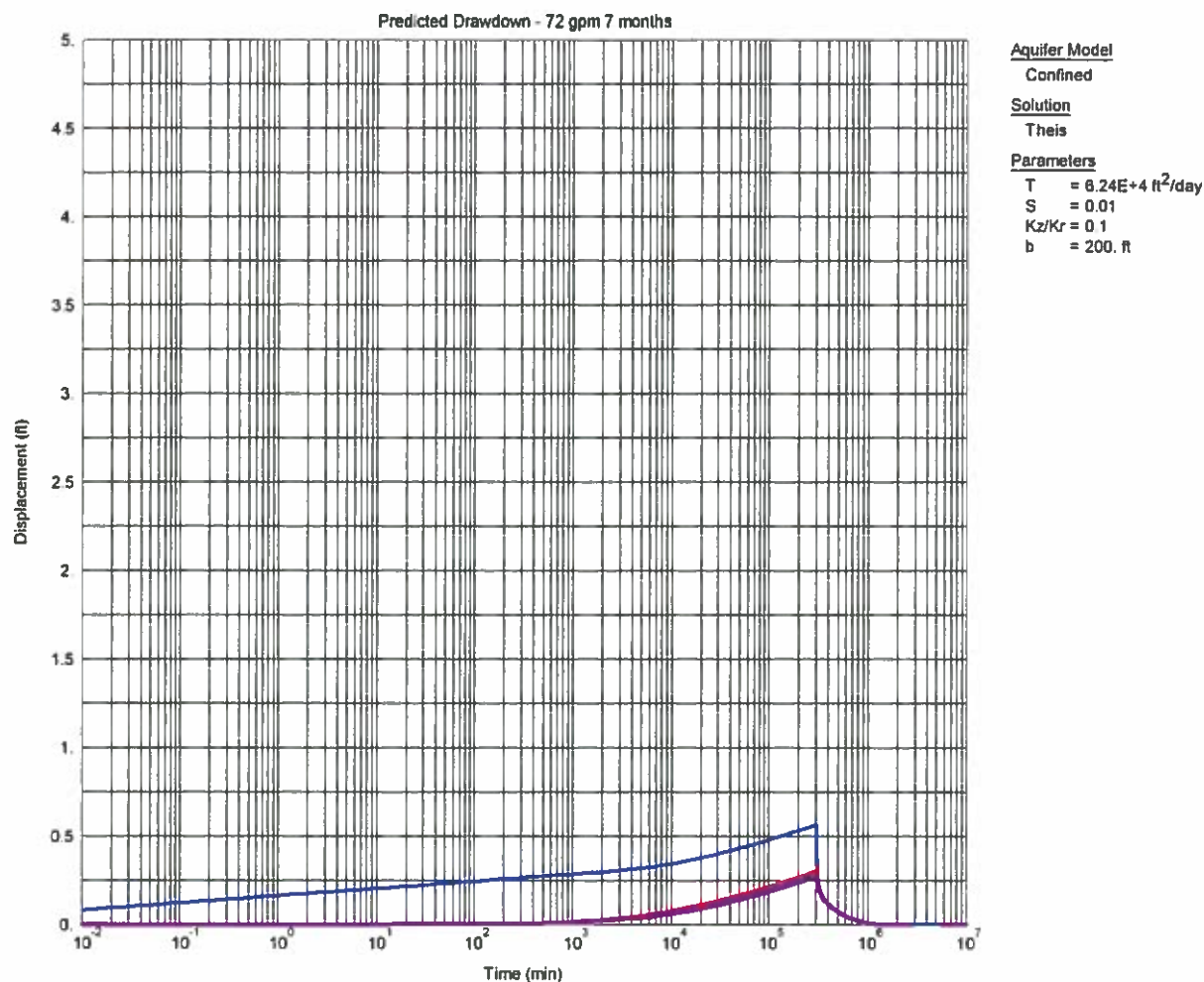


Figure 3-2 **Confined** - predictive plot of drawdown at 72 gpm or 0.16 cfs for 210 days. The colored lines represented drawdown for the POD and four idealized locations as specified below.

Key to line colors

- Blue Proposed POD for Samaria Recreation
- Black Imaginary well ½ mile north of the proposed POD
- Green Imaginary well ½ mile west of the proposed POD
- Red Imaginary well ½ mile south of the proposed POD
- Purple Imaginary well ½ mile east of the proposed POD