



June 2, 2015

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

RECEIVED

JUN 02 2015

Department of Water Resources  
Eastern Region

RE: AQUIFER TEST FOR LUKE AND SHAYNA WALDRON WATER RIGHTS  
APPLICATION

Dear Mr. Cefalo:

A groundwater impact assessment is provided in this letter report for Luke and Shayna Waldron Water Right Application. They have approximately 85 acres of land south of Malad City, Idaho (Figure 1) and their application is for 1.72 cfs. A pumping test was conducted on April 23, 2011 in an existing well 0.93 miles northeast of the proposed drill site, labeled the Davis Irrigation Well in Figure 1. 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 not excessively impact neighboring wells.

#### Nearby PODs

The proposed well location is 15S, 35E, 22 SE NE as shown in Figure 2. A search was made for all existing points of diversions (PODs), i.e. water rights near the Waldron property. In Figures 3 through 6, a blue circle is shown with a ½ mile radius centered on the proposed Waldron well location. The circle encompasses portions of sections 9 and 16, T15S, R35E. Another search was made for all wells in sections 22 and 23 and small portions of sections 14 and 15, T15S R35E. The results of the water right search are provided in Tables 1 and 2 and the results for the well search are provided in Tables 3 and 4. It should be noted that the IDWR website does not have any wells or water rights listed in Section 15 T15S R35E. There are four surface water rights in Section 22, no surface water rights in Section 23, and four in Section 14 T15S, R35E.

#### Nearby Wells

A search was performed of the IDWR drillers' log database for wells within ½ mile of the proposed well location. Eighteen representative well logs are provided in Attachment 1 to show the local hydrogeology. The average total depth of wells in sections 22, 23, and 14 T15S, R35E is 151' below land surface (bls) and the average static water level is 54 ft 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 using the lithologic descriptions 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 2.75 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 it is located about 0.93 miles northeast of the proposed Waldron POD (see Figure 1). The Davis irrigation well is 140 ft deep, being open to 19 ft of formation 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  $9.5 \times 10^4 \text{ ft}^2/\text{day}$ . The match of the late time data is presented in Figure 3-2 and the calculated transmissivity is  $7.7 \times 10^4 \text{ ft}^2/\text{day}$ . 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  $6.24 \times 10^4 \text{ ft}^2/\text{day}$ . Based on the good match to the leaky confined solution the aquifer appears to be leaky confined in this area. For long term pumping calculations it is appropriate to use  $6.24 \times 10^4 \text{ ft}^2/\text{day}$  for the transmissivity with a confined solution for predicting drawdown.

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

Mr. Waldron wishes to irrigate 85 acres per IDWR estimates of usage this should require 0.02 cfs per acre or 772 gpm or 1.72 cfs. To estimate the long-term drawdown and impact to neighboring wells from pumping of the proposed Waldron Well, 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 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. The south boundary is considered a no flow boundary because the close proximity of the Waldron location to the mountain front. Water is allowed to enter the model domain only through the north boundary.



In the model domain the proposed POD well is located 3,940 ft east of the west boundary and 5,080 ft north of the south boundary. The nearby mountains and the no flow southern boundary, which will have the effect of increasing drawdown.

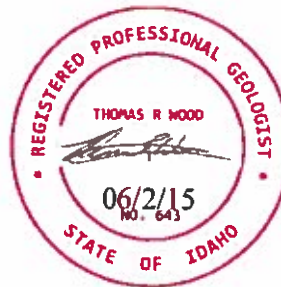
Figure 4-2 shows the AQTESOLV<sup>®</sup> output plot of the forward calculation for the proposed well pumping at 1.72 cfs (772 gpm) constantly for 7 months (April 1 to Oct 31). At the end of the time period the predicted drawdown is estimated to be 1 ft in the proposed POD. The calculated drawdown for wells ½ mile north, east, south and west of the POD is predicted to not be measurable. A second analysis was performed using the more conservative Theis solution, this assumption does not allow water to leak from an overlying aquifer, i.e. the aquifer is confined with no vertical recharge. Figure 4-3 shows the AQTESOLV<sup>®</sup> output plot of the forward calculation for the proposed well pumping at 1.72 cfs (772 gpm) constantly for 7 months (April 1 to Oct 31). At the end of the time period the predicted drawdown is estimated to be 6.25 ft in the proposed POD. The calculated drawdown for wells ½ mile north, east, south and west of the POD is predicted to be less than 3.5 ft.

It is my professional opinion that the Waldron's water right application will not excessively impact his neighbors' right to divert water. I believe that the calculated drawdown over estimates the actual drawdown to be expected for the following reasons: 1) Mr. Waldron will never pump continuously at the maximum rate for 210 days to consume 716 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, and 4) the worst case calculation used confined aquifer conditions for the entire domain, while it is known that the aquifer is leaky confined 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

Luke and Shayna Waldron 4450 W 4500 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.

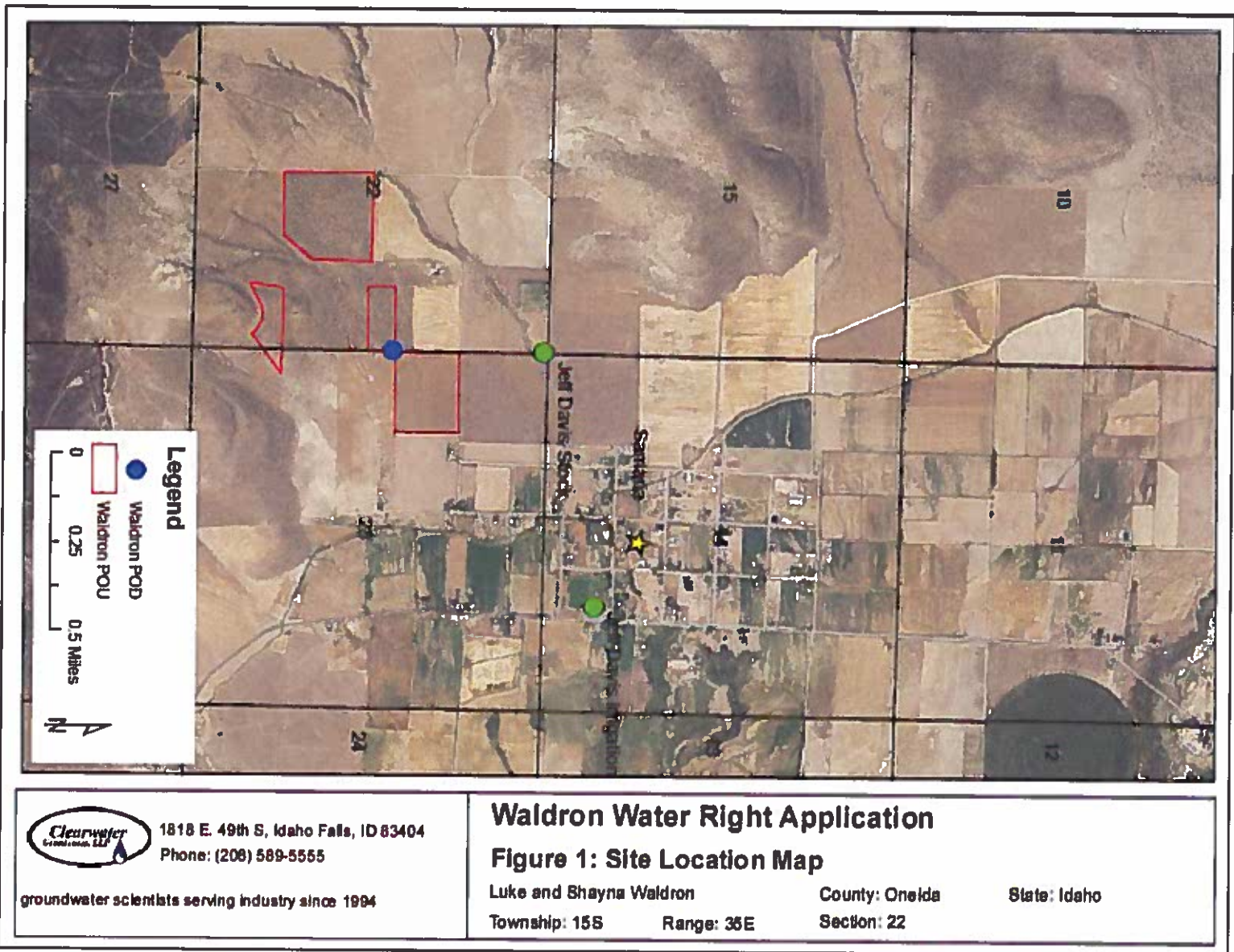


Figure 1. Map showing locations of the Proposed Waldron well and the Jeff Davis Irrigation Well



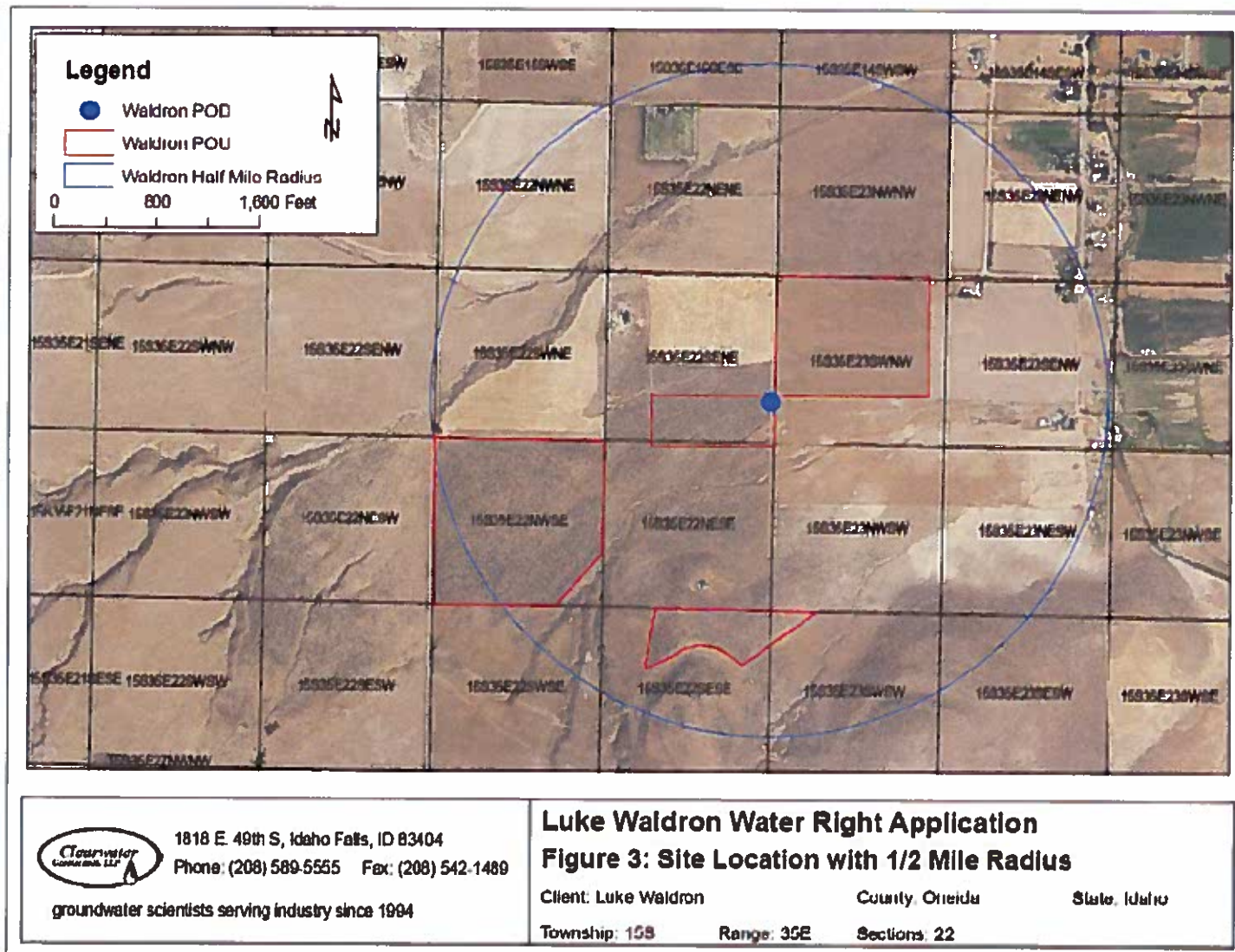


Figure 3 Waldron proposed POD and POU with blue circle showing approximate 1/2 mile radius

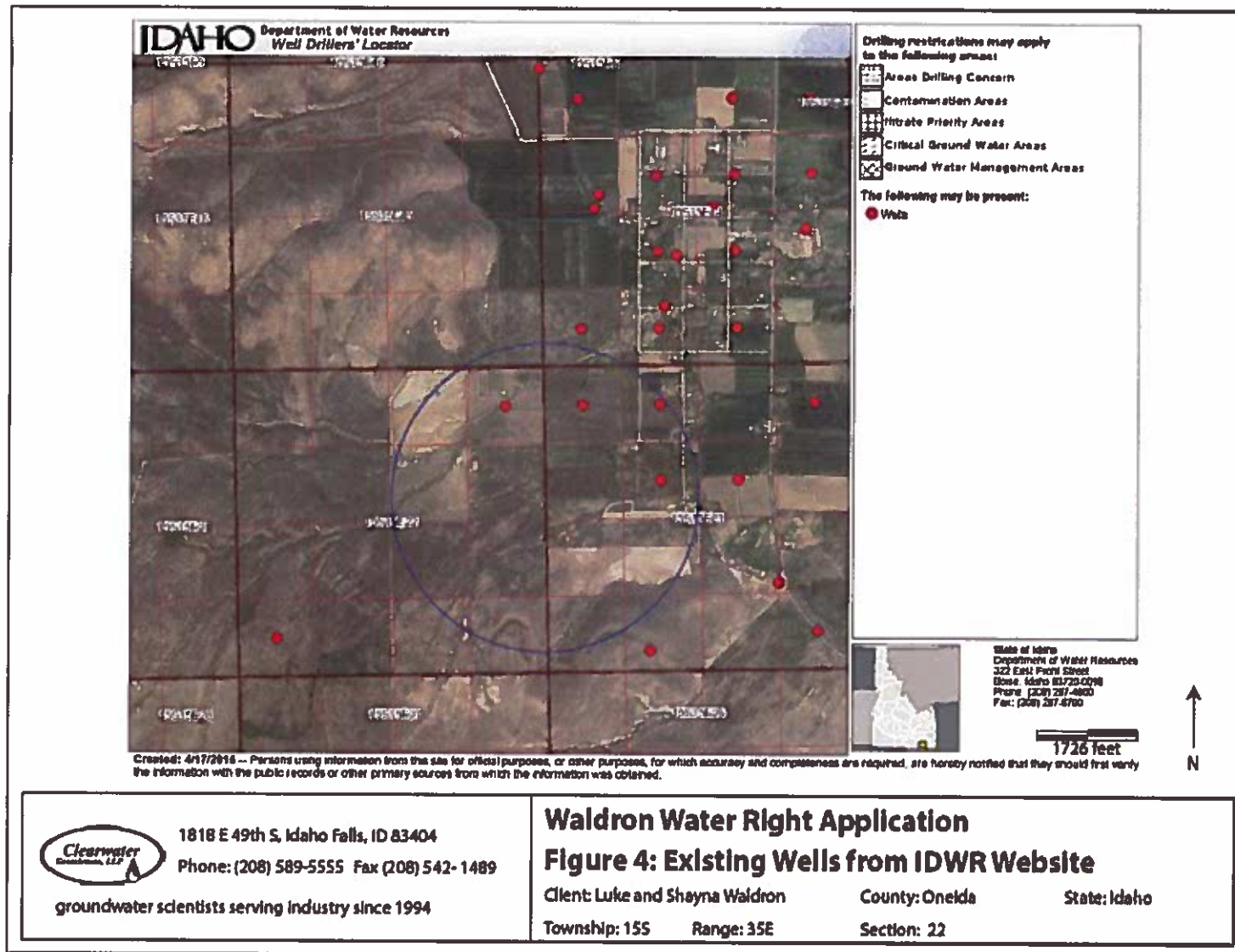


Figure 4 Existing PODs; from IDWR website and blue circle 1/2 mile diameter.

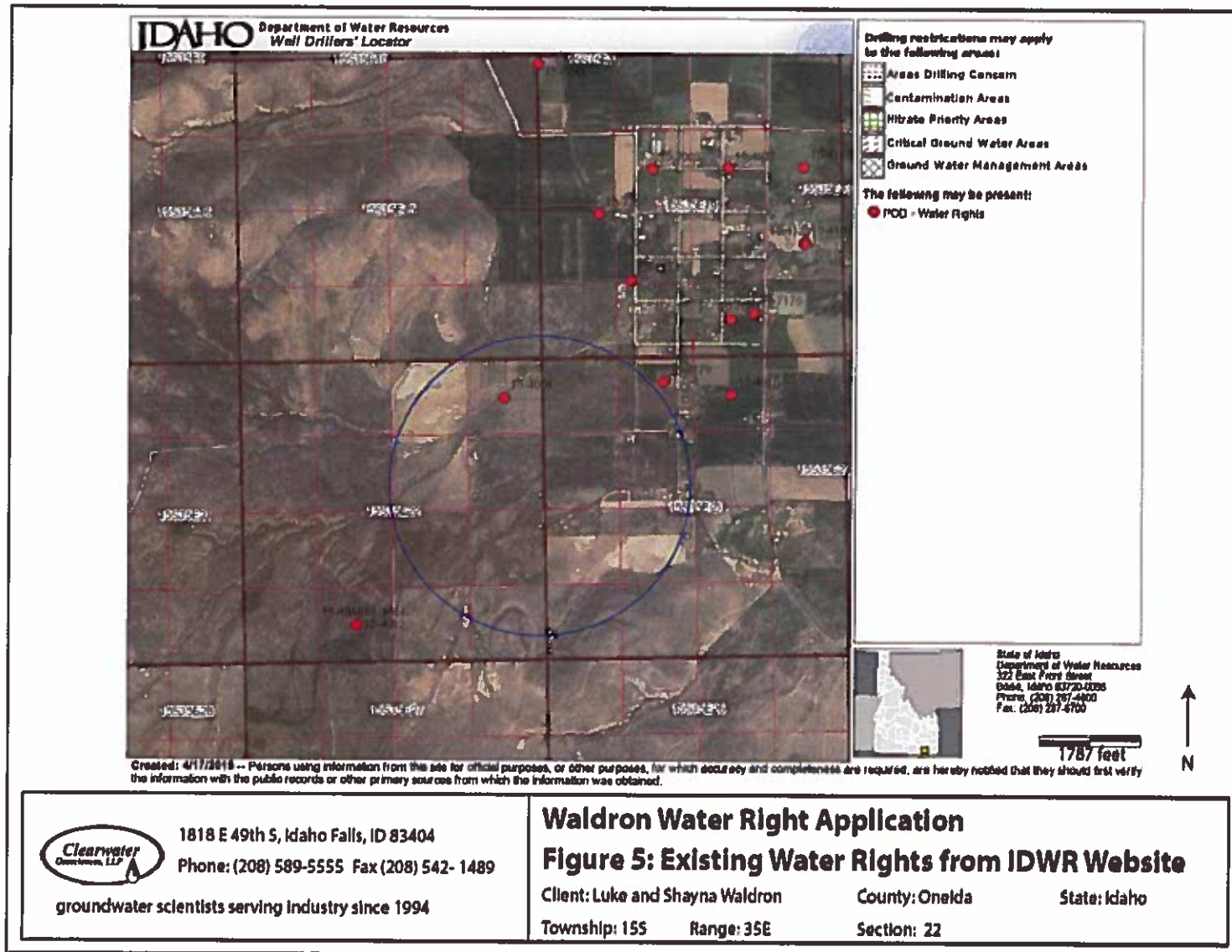


Figure 5 Existing wells from IDWR website and blue circle 1/2 mile diameter.





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Table 1 IDWR Search results for point of diversions in T15S, R35E, Section 22

| Type              | Basin | Sequence | Suffix | Basis           | Status | Priority Date | Div. Rate (cfs) | Source               | Water Use                   | Owner                              |
|-------------------|-------|----------|--------|-----------------|--------|---------------|-----------------|----------------------|-----------------------------|------------------------------------|
| Water Right       | 15    | 4004     |        | Statutory Claim | Active | 3/1/1963      | 0.18            | GROUND WATER         | IRRIGATION                  | SAMARIA CEMETERY DISTRICT          |
| Water Right       | 15    | 4032     |        | Statutory Claim | Active | 07/03/1893    | 6               | MOUNTAIN WATER DITCH | IRRIGATION                  | ATKINSON, LESTER W                 |
| Water Right       | 15    | 4039     |        | Statutory Claim | Active | 07/03/1893    | 6               | MOUNTAIN WATER DITCH | IRRIGATION                  | WILLIAMS, ALVIN T                  |
| Water Right       | 15    | 4044     |        | Statutory Claim | Active | 07/03/1893    | 6               | MOUNTAIN WATER DITCH | IRRIGATION                  | LEWIS, RUTH MARTIN                 |
| Water Permit      | 15    | 7275     |        |                 | Active | 12/16/2005    | 1               | THOMAS DAVIS SPRINGS | FIRE PROTECTION, IRRIGATION | M J DAVIS MEMORIAL LTD PARTNERSHIP |
| Water Permit      | 15    | 7330     |        |                 | Active | 4/10/2009     | 2               | GROUND WATER         | IRRIGATION                  | M J DAVIS MEMORIAL LTD PARTNERSHIP |
| Water Application | 15    | 7406     |        |                 | Active | 4/2/2015      | 1.72            | GROUND WATER         | IRRIGATION, STOCKWATER      | WALDRON, LUKE; WALDRON, SHAYNA     |



Table 2 IDWR Search results for point of diversions in T15S, R35E, Section 23

| Type         | Basin | Sequence | Suffix | Basis           | Status | Priority Date | Div. Rate (cfs) | Source       | Water Use            | Owner                                       |
|--------------|-------|----------|--------|-----------------|--------|---------------|-----------------|--------------|----------------------|---------------------------------------------|
| Water Right  | 15    | 4018     |        | Statutory Claim | Active | 6/1/1908      | 0               | GROUND WATER | DOMESTIC             | THOMAS, ALVIN J;<br>THOMAS, GRACE B         |
| Water Right  | 15    | 7179     |        | License         | Active | 4/10/2000     | 0.2             | GROUND WATER | DOMESTIC, IRRIGATION | M J DAVIS<br>MEMORIAL<br>LTD<br>PARTNERSHIP |
| Water Permit | 15    | 7347     |        |                 | Active | 8/22/2011     | 1.7             | GROUND WATER | IRRIGATION           | PEOA RIVER<br>VALLEY<br>RANCH               |
| Water Permit | 15    | 7370     |        |                 | Active | 8/22/2011     | 1.7             | GROUND WATER | IRRIGATION           | 2M BRAND<br>LLC                             |



Table 4 IDWR Search results for point of diversions in T15S, R35E, Section 14

| Type        | Basin | Sequence | Suffix | 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               | GROUND WATER   | DOMESTIC, IRRIGATION, STOCKWATER | JOHN, DEVERL                       |
| Water Right | 15    | 4138     |        | Statutory Claim | Active | 4/1/1900      | 2.1             | 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      | 0.1             | GROUND WATER   | DOMESTIC, IRRIGATION             | WALDRON, REX P                     |
| Water Right | 15    | 7154     |        | License         | Active | 8/12/1996     | 1.2             | GROUND WATER   | IRRIGATION                       | ATKINSON, DELON                    |
| Water Right | 15    | 7175     |        | License         | Active | 8/30/1999     | 0.3             | GROUND WATER   | IRRIGATION, STOCKWATER           | M J DAVIS MEMORIAL LTD PARTNERSHIP |



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|                    |    |      |  |         |         |            |     |              |                          |                               |
|--------------------|----|------|--|---------|---------|------------|-----|--------------|--------------------------|-------------------------------|
| Water Right        | 15 | 7243 |  | License | Activ e | 2/26/2004  | 0.6 | GROUND WATER | IRRIG ATIO N             | JOHN, ELDON; JOHN, MIKE       |
| Water Right        | 15 | 7267 |  | License | Activ e | 6/4/2008   | 1.8 | GROUND WATER | IRRIG ATIO N             | GLEED, JULI A                 |
| Water Permit       | 15 | 7381 |  |         | Activ e | 8/5/2014   | 0.5 | GROUND WATER | DOM ESTIC , IRRIG ATIO N | JENSEN, ANTON; JENSEN, LACIE  |
| Water Applicati on | 15 | 7387 |  |         | Activ e | 10/16/2014 | 5   | GROUND WATER | IRRIG ATIO N             | SAMARIA WATER & IRRIGATION CO |
| Water Applicati on | 15 | 7405 |  |         | Activ e | 3/30/2015  | 0.2 | GROUND WATER | IRRIG ATIO N             | SAMARIA RECREATION DISTRICT   |

Table 4 IDWR Search results for wells in T15S, R35E, Section 22

| Contact                          | Use | TWP | RNG | Sec | Tract | Gallons Per Minute | Static Water Level | Total Depth | CSG Dia. | Construction Date |
|----------------------------------|-----|-----|-----|-----|-------|--------------------|--------------------|-------------|----------|-------------------|
| MELVIN J DAVIS(Owner/Operator)   |     | 15S | 35E | 22  | NENE  | 20                 | 100                | 162         | 6        | 5/19/1989         |
| DELMAR E RICHERT(Owner/Operator) |     | 15S | 35E | 22  | SWSW  | 20                 | 235                | 280         | 6        | 6/10/1997         |

Table 5 IDWR Search results for wells in T15S, R35E, Section 23

| Contact                                            | Use        | TWP | RNG | Sec | Tract | Gallons Per Minute | Static Water Level | Total Depth | CSG Dia. | Construction Date |
|----------------------------------------------------|------------|-----|-----|-----|-------|--------------------|--------------------|-------------|----------|-------------------|
| M J DAVIS MEMORIAL LTD PARTNERSHIP(Owner/Operator) | Irrigation | 15S | 35E | 23  | NENW  | 40                 | 51                 | 140         | 8        | 36824             |



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|                                                                         |                                  |     |     |    |      |     |     |     |    |            |
|-------------------------------------------------------------------------|----------------------------------|-----|-----|----|------|-----|-----|-----|----|------------|
| PEOA RIVER VALLEY<br>RANCH(Owner/Operator)                              | Domestic-<br>Single<br>Residence | 15S | 35E | 23 | NWSE |     | 44  | 117 | 6  | 9/12/2011  |
| PEOA RIVER VALLEY<br>RANCH(Owner/Operator)                              | Irrigation                       | 15S | 35E | 23 | SESE |     | 50  | 323 | 14 | 4/12/2013  |
| DANIAL<br>EVANS(Owner/Operator)                                         | Domestic-<br>Single<br>Residence | 15S | 35E | 23 | SENE |     | 52  | 156 | 6  | 3/19/2009  |
| TRAVIS<br>HUCKABY(Owner/Operator)                                       | Domestic-<br>Single<br>Residence | 15S | 35E | 23 | SESW |     | 60  | 120 | 6  | 9/14/2011  |
| DAVID EARL<br>HUGHS(Owner/Operator)                                     |                                  | 15S | 35E | 23 | NENE | 15  | 50  | 175 |    | 3/11/1969  |
| REBECCA<br>RAWLINGS(Owner/Operator),<br>TOM<br>RAWLINGS(Owner/Operator) |                                  | 15S | 35E | 23 | NWNW | 7.5 | 130 | 181 | 6  | 11/23/1998 |
| TOM<br>RAWLINGS(Owner/Operator)                                         |                                  | 15S | 35E | 23 | NWNW | 0   | 130 | 126 | 3  |            |
| DAVID REEL(Owner/Operator)                                              | Domestic-<br>Single<br>Residence | 15S | 35E | 23 | NWNE |     | 29  | 180 | 6  | 6/10/2014  |
| LLOYD<br>SORTER(Owner/Operator)                                         |                                  | 15S | 35E | 23 | SENE | 0   | 50  | 160 | 6  | 9/7/1996   |
| DON TUBBS(Owner/Operator)                                               |                                  | 15S | 35E | 23 | NWNW | 15  | 24  | 125 | 6  | 11/5/1994  |
| ROBERT<br>WARREN(Owner/Operator)                                        |                                  | 15S | 35E | 23 | SENE | 50  | 50  | 300 | 6  | 7/13/1998  |
| ROBERT<br>WARREN(Owner/Operator)                                        |                                  | 15S | 35E | 23 | SWNE | 40  | 40  | 140 | 6  | 6/15/1999  |



Table 6 IDWR Search results for wells in T15S, R35E, Section 14

| Contact                                               | Use                              | TWP | RNG | Sec | Tract | Gallons<br>Per<br>Minute | Static<br>Water<br>Level | Total<br>Depth | CSG<br>Dia. | Construction<br>Date |
|-------------------------------------------------------|----------------------------------|-----|-----|-----|-------|--------------------------|--------------------------|----------------|-------------|----------------------|
| HUDD EXCAVATION &<br>CONSTRUCTION(Owner/Operator)     |                                  | 15S | 35E | 14  | NWNW  | 20                       | 27                       | 140            | 6           | 10/11/1999           |
| M J DAVIS MEMORIAL LTD<br>PARTNERSHIP(Owner/Operator) | Irrigation                       | 15S | 35E | 14  | SWSE  | 180                      | 21                       | 140            | 8           | 6/29/2000            |
| US DEPT OF<br>ENERGY(Owner/Operator)                  | Irrigation                       | 15S | 35E | 14  | SWNW  |                          | 0                        | 0              | 0           | 9/28/2004            |
| US DEPT OF<br>ENERGY(Owner/Operator)                  | Domestic-<br>Single<br>Residence | 15S | 35E | 14  | SWNW  |                          | 0                        | 0              | 0           | 9/28/2004            |
| BILLY J<br>ANDERSON(Owner/Operator)                   | Domestic-<br>Single<br>Residence | 15S | 35E | 14  | SWSE  | 25                       | 36                       | 140            | 6           | 11/23/2000           |
| FARRELL D<br>ATKINSON(Owner/Operator)                 |                                  | 15S | 35E | 14  | SWSW  | 0                        | 60                       | 200            | 10          | 5/20/1997            |
| SPENCER<br>ATKINSON(Owner/Operator)                   |                                  | 15S | 35E | 14  | NESW  | 0                        | 40                       | 104            |             | 12/5/1983            |
| MARVIN BERRY(Owner/Operator)                          | Domestic-<br>Single<br>Residence | 15S | 35E | 14  | NWSE  | 30                       | 30                       | 116            | 6           | 7/14/2008            |
| CHRIS<br>BOGGESS(Owner/Operator)                      | Domestic-<br>Single<br>Residence | 15S | 35E | 14  | NESW  |                          | 45                       | 111            | 6           | 9/3/2010             |



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|                                                                          |                                  |     |     |    |      |      |     |     |    |            |
|--------------------------------------------------------------------------|----------------------------------|-----|-----|----|------|------|-----|-----|----|------------|
| ROGER<br>BRADFORD(Owner/Operator)                                        | Stockwater                       | 15S | 35E | 14 | NENE |      | 7   | 160 | 6  | 10/20/2003 |
| SANDRA<br>BRAKER(Owner/Operator)                                         |                                  | 15S | 35E | 14 | SWNE | 100  | 20  | 111 | 6  | 5/22/1996  |
| ANN DELANEY(Owner/Operator)                                              |                                  | 15S | 35E | 14 | NWNE | 20   | 18  | 255 | 6  | 4/15/1998  |
| JOHN J EVANS(Owner/Operator)                                             | Domestic-<br>Single<br>Residence | 15S | 35E | 14 | SWSE | 50   | 44  | 135 | 6  | 9/29/2007  |
| MICHAEL J<br>EVANS(Owner/Operator)                                       | Domestic-<br>Single<br>Residence | 15S | 35E | 14 | NESW |      | 50  | 140 | 8  | 8/4/2000   |
| THOMAS<br>FLINDERS(Owner/Operator),<br>LINDA<br>FLINDERS(Owner/Operator) |                                  | 15S | 35E | 14 | NESE | 100  |     | 175 | 6  | 11/20/1996 |
| JULI A GLEED(Owner/Operator)                                             | Irrigation                       | 15S | 35E | 14 | SWNW | 1000 | 52  | 300 | 10 | 11/28/2005 |
| LIN HIGLAY(Owner/Operator)                                               | Domestic-<br>Single<br>Residence | 15S | 35E | 14 | NWSE | 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 | 20   | 51  | 120 | 8  | 6/18/1998  |
| ELDON JOHN(Owner/Operator),<br>MIKE JOHN(Owner/Operator)                 | Irrigation                       | 15S | 35E | 14 | NWNW |      | 190 | 240 | 10 | 12/11/2003 |



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|                                                          |                                  |     |     |    |      |     |     |     |    |            |
|----------------------------------------------------------|----------------------------------|-----|-----|----|------|-----|-----|-----|----|------------|
| ELDON JOHN(Owner/Operator),<br>MIKE JOHN(Owner/Operator) | Livestock                        | 15S | 35E | 14 | NWNW |     | 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<br>MARTENSEN(Owner/Operator)                       | Domestic-<br>Single<br>Residence | 15S | 35E | 14 | SWNE | 50  | 31  | 117 | 6  | 11/8/2008  |
| SHIRLEY OLSEN(Owner/Operator)                            | Domestic-<br>Single<br>Residence | 15S | 35E | 14 | SENW | 30  | 43  | 114 | 6  | 9/27/2004  |
| DEE TOLMAN(Owner/Operator)                               | Domestic-<br>Single<br>Residence | 15S | 35E | 14 | SWSW | 20  | 56  | 140 | 6  | 11/18/2000 |
| DEE TOLMAN(Owner/Operator)                               | Domestic-<br>Single<br>Residence | 15S | 35E | 14 | SWSE | 40  | 36  | 120 | 6  | 4/15/2006  |
| LUKE<br>WALDRON(Owner/Operator)                          |                                  | 15S | 35E | 14 | NWNE | 30  | 25  | 100 | 6  | 4/27/1999  |
| ALVIN T<br>WILLIAMS(Owner/Operator)                      |                                  | 15S | 35E | 14 | SWNE | 75  | 24  | 105 | 6  | 9/2/1995   |
| DAVID ZUNDEL(Owner/Operator)                             | Domestic-<br>Single<br>Residence | 15S | 35E | 14 | SWNE |     | 27  | 110 | 6  | 11/29/2011 |



# **Attachment 1**

## **REPRESENTATIVE WELL LOGS**



**Clearwater Geosciences, LLP**  
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Fr 2-7

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

Office Use Only  
Inspected by \_\_\_\_\_  
Twp \_\_\_\_\_ Rge \_\_\_\_\_ Sec \_\_\_\_\_  
1/4 \_\_\_\_\_ 1/4 \_\_\_\_\_ 1/4 \_\_\_\_\_  
Lat \_\_\_\_\_ Long \_\_\_\_\_

1. WELL TAG NO. D ED 14152  
DRILLING PERMIT NO. 765240  
Other IDWR No. 15-07179

2. OWNER:  
Name M.J. Davis Memorial Land Project  
Address 2525 HIMALAYA  
City COLORADO SPRING State CO Zip 80919

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 23 1/4 SE 1/4 NW 1/4  
Gov't Lot \_\_\_\_\_ County CATACA  
Lat \_\_\_\_\_ Long \_\_\_\_\_  
Address of Well Site S 054 So 4600 W.  
City SHARAD IDAHO

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/PLUG       | PACK     | AMOUNT    | METHOD           |
|-----------------|----------|-----------|------------------|
| Material        | From     | To        | Back of          |
| <u>Retanite</u> | <u>0</u> | <u>30</u> | <u>H</u>         |
|                 |          |           | <u>OVER-BORE</u> |

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

**8. CASING/LINER:**

| Diameter | From     | To         | Casing    | Material     | Casing                              | Liner                    | Welded                   | Threaded                 |
|----------|----------|------------|-----------|--------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| <u>8</u> | <u>1</u> | <u>121</u> | <u>50</u> | <u>Steel</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Length of Headpipe \_\_\_\_\_ Length of Tailpipe \_\_\_\_\_

**9. PERFORATIONS/SCREENS**

Perforations \_\_\_\_\_ Method \_\_\_\_\_  
Screens \_\_\_\_\_ Screen Type \_\_\_\_\_

| From | To        | Slot Size | Number   | Diameter   | Material     | Casing                   | Liner                    |
|------|-----------|-----------|----------|------------|--------------|--------------------------|--------------------------|
|      | <u>10</u> | <u>20</u> | <u>1</u> | <u>1/2</u> | <u>Steel</u> | <input type="checkbox"/> | <input type="checkbox"/> |

**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:**

| Yield gal/min | Drawdown | Pumping Level | Time         |
|---------------|----------|---------------|--------------|
| <u>30-40</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)**

| Bore      | From       | To         | Remarks: Lithology, Water Quality & Temperature | Y | N |
|-----------|------------|------------|-------------------------------------------------|---|---|
| <u>8</u>  | <u>0</u>   | <u>30</u>  | <u>CLAY &amp; SLIME ROCK</u>                    |   |   |
| <u>8</u>  | <u>30</u>  | <u>60</u>  | <u>CLAY &amp; SLIME ROCK</u>                    |   |   |
| <u>8</u>  | <u>60</u>  | <u>90</u>  | <u>CLAY &amp; SLIME ROCK</u>                    |   |   |
| <u>8</u>  | <u>90</u>  | <u>100</u> | <u>SAND GRAVEL ROCK</u>                         |   |   |
| <u>10</u> | <u>100</u> | <u>120</u> | <u>CLAY &amp; SLIME ROCK</u>                    |   |   |
| <u>12</u> | <u>120</u> | <u>140</u> | <u>CLAY &amp; SLIME ROCK</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 Construction Firm No. 118

Firm Official Bruce Lundstrom Date 10-25-2000

Driller or Operator \_\_\_\_\_ Date \_\_\_\_\_

FORWARD WHITE COPY TO WATER RESOURCES

Figure 1-1 Well log for Jeff Davis Irrigation Well



**Clearwater Geosciences, LLP**  
**Ground Water Development and Exploration**

Form 226-7  
11/87

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

054647

1. WELL TAG NO. D 0006940  
DRILLING PERMIT NO. 15-99-E-0018  
Other IDWR No. \_\_\_\_\_

2. OWNER:  
Name Brad Warren  
Address 5199 S. 4600 W  
City Malden State ID Zip 83252

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

|   |  |                                                                |  |
|---|--|----------------------------------------------------------------|--|
| N |  | Twp <u>15</u> North <input type="checkbox"/> or South <u>S</u> |  |
| E |  | Rge. <u>35</u> East <u>W</u> or West <input type="checkbox"/>  |  |
| S |  | Sec. <u>23</u> 1/4 <u>NE</u> 1/4                               |  |
|   |  | Gov't Lot _____ County <u>Oneida</u>                           |  |
|   |  | Lat _____ Long _____                                           |  |
|   |  | Address of Well Site <u>Samaria</u> City _____                 |  |

(City or town name of road or distance to road or 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**

| SEAL/FILTER PACK |      |    | AMOUNT          |  | METHOD    |
|------------------|------|----|-----------------|--|-----------|
| Material         | From | To | Sacks or Pounds |  |           |
| Bentonite        | 0    | 30 | 4               |  | 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  | Gauge | Material | Casing                   | Liner                    | Welded                   | Threaded                 |
|----------|------|-----|-------|----------|--------------------------|--------------------------|--------------------------|--------------------------|
| 6"       | 0    | 140 | 120   | Steel    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Length of Headpipe \_\_\_\_\_ Length of Tailpipe \_\_\_\_\_

**9. PERFORATIONS/SCREENS**

Perforations \_\_\_\_\_ Method \_\_\_\_\_  
Screens \_\_\_\_\_ Screen Type \_\_\_\_\_

| From | To | Shot Size | Number | Diameter | Material | Casing                   | Liner                    |
|------|----|-----------|--------|----------|----------|--------------------------|--------------------------|
|      |    |           |        |          |          | <input type="checkbox"/> | <input type="checkbox"/> |

**10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:**

140 ft. below ground Artesian pressure \_\_\_\_\_ lb.  
Depth flow encountered \_\_\_\_\_ ft. Describe access port or control devices: \_\_\_\_\_

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

**11. WELL TESTS:**

|                               |                                 |                                         |                                           |
|-------------------------------|---------------------------------|-----------------------------------------|-------------------------------------------|
| <input type="checkbox"/> Pump | <input type="checkbox"/> Bailor | <input checked="" type="checkbox"/> Air | <input type="checkbox"/> Flowing Artesian |
| Yield pattern                 | Drawdown                        | Pumping Level                           | Time                                      |
| <u>140</u>                    |                                 |                                         |                                           |

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

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

| Bore Dia | From | To  | Remarks: Lithology, Water Quality & Temperature | Y | N |
|----------|------|-----|-------------------------------------------------|---|---|
| 6"       | 0    | 20  | Brown clay + Gravel                             |   | x |
| 6"       | 20   | 85  | Brown clay                                      |   | x |
| 6"       | 85   | 90  | Gravel                                          | x |   |
| 6"       | 90   | 98  | Brown clay + Gravel                             |   | x |
| 6"       | 98   | 100 | Gravel + clay                                   | x |   |
| 6"       | 100  | 135 | Brown clay                                      |   | x |
| 6"       | 135  | 140 | Gravel + Fine sand                              | x |   |
| 6"       | 135  | 140 | Gravel Pack                                     |   |   |

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SEP 13 1999  
Department of Water Resources  
Eastern Region

RECEIVED  
SEP 20 1999  
MICROFILMED  
NOV 30 1999  
Department of Water Resources

Completed Depth 135 (Measurable)  
Date: Started 6-12-99 Completed 6-15-99

**13. DRILLER'S CERTIFICATION**

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

Company Name 11th West Well Drilling Firm No. 543

Firm Official Michael Frankson Date 7-15-99

and  
Driller or Operator \_\_\_\_\_ Date \_\_\_\_\_  
(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

Figure 1-2 Well log for Brad Warren Domestic Well



**Clearwater Geosciences, LLP**  
**Ground Water Development and Exploration**

Form 236-7  
8/02

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

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

1. WELL TAG NO. D 0054886  
DRILLING PERMIT NO. \_\_\_\_\_  
Water Right or Injection Well No. \_\_\_\_\_

2. OWNER: Daniel Evans  
Name \_\_\_\_\_  
Address 5071 S. 4600 W  
City Malden State ID Zip 83262

3. LOCATION OF WELL by legal description:  
You must provide address or Lot, Bk, Sub. or Directions to well.  
Twp. 35 North ☐ or South ☒  
Rge. 35 East ☒ or West ☐  
Sec. 23 1/4 SE 1/4 NW 1/4  
Gov't Lot \_\_\_\_\_  
County Ada  
Lat: \_\_\_\_\_ Long: \_\_\_\_\_  
Address of Well Site 5065 S. 4600 W  
City Malden  
Line of best view of road or driveway to road or driveway  
Lt. \_\_\_\_\_ 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 | From | To | Weight / Volume | Seal Placement Method |
|---------------|------|----|-----------------|-----------------------|
| Best Sealant  | 0    | 20 | 8 bags          | Over head             |

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 156  
Was drive shoe seal tested? ☐ Y ☐ N How? \_\_\_\_\_

8. CASING/LINER:

| Diameter | From | To  | Gauge | Material | Casing                              | Liner                    | Welded                              | Threaded                 |
|----------|------|-----|-------|----------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|
| 6        | 0    | 156 | 24    | Steel    | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

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  | Slot Size | Number | Diameter | Material | Casing                              | Liner                    |
|------|-----|-----------|--------|----------|----------|-------------------------------------|--------------------------|
| 140  | 156 | 4/16      | 48     | 6        | Steel    | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

10. FILTER PACK

| Filter Material | From | To | Weight / Volume | Placement Method |
|-----------------|------|----|-----------------|------------------|
|                 |      |    |                 |                  |

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

12. WELL TESTS:

|                               |                                 |                              |                                           |
|-------------------------------|---------------------------------|------------------------------|-------------------------------------------|
| <input type="checkbox"/> Pump | <input type="checkbox"/> Bailor | <input type="checkbox"/> Air | <input type="checkbox"/> Flowing Artesian |
| Yield gal./min. <u>35</u>     | Drawdown                        | Pumping Level                | Time                                      |

Water Temp. Cold Bottom hole temp. Cold  
Water Quality test or comments: Good

13. LITHOLOGIC LOG: (Describe repairs or abandonment)

| Bore Dia | From | To  | Remarks: Lithology, Water Quality & Temperature | Water                               |
|----------|------|-----|-------------------------------------------------|-------------------------------------|
| 10       | 0    | 20  | Brown Clay                                      | <input checked="" type="checkbox"/> |
| 6        | 20   | 25  | Gravel Brown Clay                               | <input checked="" type="checkbox"/> |
| 6        | 25   | 60  | Brown Clay                                      | <input checked="" type="checkbox"/> |
| 6        | 60   | 62  | Gravel & Sand                                   | <input checked="" type="checkbox"/> |
| 6        | 62   | 85  | Brown clay & Sand                               | <input checked="" type="checkbox"/> |
| 6        | 85   | 88  | Gravel                                          | <input checked="" type="checkbox"/> |
| 6        | 88   | 115 | Brown clay & Sand                               | <input checked="" type="checkbox"/> |
| 6        | 115  | 125 | Brown clay                                      | <input checked="" type="checkbox"/> |
| 6        | 125  | 133 | Gravel                                          | <input checked="" type="checkbox"/> |
| 6        | 133  | 136 | Brown Clay Sand                                 | <input checked="" type="checkbox"/> |
| 6        | 136  | 142 | Gravel                                          | <input checked="" type="checkbox"/> |
| 6        | 142  | 156 | Gravel Brown clay & Sand                        | <input checked="" type="checkbox"/> |

RECEIVED

MAR 08 2011

Department of Water Resources  
Eastern Region

Completed Depth 156 (Measurable)  
Date Started 3-18-09 Completed 3-19-09

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 Mid West Well Drilling Firm No. 543

Principal Driller Michael Frandsen Date 3-23-09

Driller or Operator II Melba Frandsen Date 3-22-09

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 1-3 Well log for Daniel Evans Domestic Well





**Clearwater Geosciences, LLP**  
**Ground Water Development and Exploration**

Form 238-7  
6/07

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

1. WELL TAG NO. D 0065325

Drilling Permit No. \_\_\_\_\_

Water right or injection well # \_\_\_\_\_

2. OWNER: David Reel

Name 3330 N Samaria Rd

Address Malad State ID Zip 83232

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

3. WELL LOCATION:

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

Sec. 23 1/4 NW 1/4 NE 1/4

Gov't Lot \_\_\_\_\_ County Owyhee

Lat. 42 06:16.78 (Deg and Decimal minutes)

Long. 112 19:41.16 (Deg and Decimal minutes)

Address of Well Site 3330 S. 4400 W

City Samaria

Lot \_\_\_\_\_ Blk. \_\_\_\_\_ Sub. Name \_\_\_\_\_

4. USE:

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

☐ Other \_\_\_\_\_

5. TYPE OF WORK:

☒ New well ☐ Replacement well ☐ Modify existing well

☐ Abandonment ☐ Other \_\_\_\_\_

6. DRILL METHOD:

☒ Air Rotary ☐ Mud Rotary ☐ Cable ☐ Other \_\_\_\_\_

7. SEALING PROCEDURES:

Seal material \_\_\_\_\_ From (ft) \_\_\_\_\_ To (ft) \_\_\_\_\_ Quantity (lbs or ft<sup>3</sup>) \_\_\_\_\_ Placement method \_\_\_\_\_

\_\_\_\_\_

8. CASING/LINER:

Diameter (nominal) \_\_\_\_\_ From (ft) \_\_\_\_\_ To (ft) \_\_\_\_\_ Gauge or Schedule \_\_\_\_\_ Material \_\_\_\_\_ Casing liner Threaded Welded

6 0.110 250 steel ☒ ☐ ☐ ☒

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 180

9. PERFORATIONS/SCREENS:

Perforations ☒ Y ☐ N Method touch

Manufactured screen ☐ Y ☐ N Type \_\_\_\_\_

Method of installation \_\_\_\_\_

From (ft) \_\_\_\_\_ To (ft) \_\_\_\_\_ Slot size \_\_\_\_\_ Number(s) \_\_\_\_\_ Diameter (nominal) \_\_\_\_\_ Material \_\_\_\_\_ Gauge or Schedule \_\_\_\_\_

160 180 1/4 in 27 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 ft<sup>3</sup>) \_\_\_\_\_ 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) 30 Static water level (ft) 29

Water temp. (°F) 60 Bottom hole temp. (°F) \_\_\_\_\_

Describe access port well cap

Well test: \_\_\_\_\_ Test method: \_\_\_\_\_

Drawdown (feet) \_\_\_\_\_ Discharge or yield (gpm) 40 Test duration (minutes) \_\_\_\_\_ Pump ☐ Saver ☐ Air ☒ Flowing artesian ☐

Water quality test or comments: good

13. LITHOLOGIC LOG and/or repairs or abandonment:

| Core<br>Dip.<br>(ft) | From<br>(ft) | To<br>(ft) | Remarks, lithology or description of repairs or<br>abandonment, water tests. | Water<br>Y N |
|----------------------|--------------|------------|------------------------------------------------------------------------------|--------------|
| 10                   | 0            | 30         | Bm Clay                                                                      |              |
| 10                   | 30           | 38         | Sam Sam (David) Bm Clay                                                      | X            |
| 6                    | 38           | 40         | Sam (David) Bm Clay                                                          | X            |
| 6                    | 40           | 45         | Bm Clay                                                                      |              |
| 6                    | 45           | 46         | Bm Clay, Sm Gravel                                                           | X            |
| 6                    | 46           | 49         | Bm Clay, Sm Gravel                                                           | X            |
| 6                    | 49           | 50         | Gravel Bm Clay                                                               | X            |
| 6                    | 50           | 52         | Bm Clay                                                                      | X            |
| 6                    | 52           | 53         | Gravel                                                                       | X            |
| 6                    | 53           | 54         | Bm Clay, Little Gravel                                                       | X            |
| 6                    | 54           | 55         | Gravel                                                                       | X            |
| 6                    | 55           | 56         |                                                                              |              |
| 6                    | 56           | 57         |                                                                              |              |
| 6                    | 57           | 58         |                                                                              |              |
| 6                    | 58           | 59         |                                                                              |              |
| 6                    | 59           | 60         |                                                                              |              |
| 6                    | 60           | 61         |                                                                              |              |
| 6                    | 61           | 62         |                                                                              |              |
| 6                    | 62           | 63         |                                                                              |              |
| 6                    | 63           | 64         |                                                                              |              |
| 6                    | 64           | 65         |                                                                              |              |
| 6                    | 65           | 66         |                                                                              |              |
| 6                    | 66           | 67         |                                                                              |              |
| 6                    | 67           | 68         |                                                                              |              |
| 6                    | 68           | 69         |                                                                              |              |
| 6                    | 69           | 70         |                                                                              |              |
| 6                    | 70           | 71         |                                                                              |              |
| 6                    | 71           | 72         |                                                                              |              |
| 6                    | 72           | 73         |                                                                              |              |
| 6                    | 73           | 74         |                                                                              |              |
| 6                    | 74           | 75         |                                                                              |              |
| 6                    | 75           | 76         |                                                                              |              |
| 6                    | 76           | 77         |                                                                              |              |
| 6                    | 77           | 78         |                                                                              |              |
| 6                    | 78           | 79         |                                                                              |              |
| 6                    | 79           | 80         |                                                                              |              |
| 6                    | 80           | 81         |                                                                              |              |
| 6                    | 81           | 82         |                                                                              |              |
| 6                    | 82           | 83         |                                                                              |              |
| 6                    | 83           | 84         |                                                                              |              |
| 6                    | 84           | 85         |                                                                              |              |
| 6                    | 85           | 86         |                                                                              |              |
| 6                    | 86           | 87         |                                                                              |              |
| 6                    | 87           | 88         |                                                                              |              |
| 6                    | 88           | 89         |                                                                              |              |
| 6                    | 89           | 90         |                                                                              |              |
| 6                    | 90           | 91         |                                                                              |              |
| 6                    | 91           | 92         |                                                                              |              |
| 6                    | 92           | 93         |                                                                              |              |
| 6                    | 93           | 94         |                                                                              |              |
| 6                    | 94           | 95         |                                                                              |              |
| 6                    | 95           | 96         |                                                                              |              |
| 6                    | 96           | 97         |                                                                              |              |
| 6                    | 97           | 98         |                                                                              |              |
| 6                    | 98           | 99         |                                                                              |              |
| 6                    | 99           | 100        |                                                                              |              |

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JUL 28 2014

Department of Water Resources  
Eastern Region

Completed Depth (Measurable): 180

Date Started: 6-9-14 Date Completed: 6-10-14

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 Mr. Westfield Drilling Co No 543

\*Principal Driller Michael Howard Date 6-22-14

\*Driller Miles Frandsen Date 6-18-14

\*Operator II \_\_\_\_\_ Date \_\_\_\_\_

Operator I \_\_\_\_\_ Date \_\_\_\_\_

\* Signature of Principal Driller and rig operator are required.

Figure 1-5 Well log for David Reel Domestic Well

**Clearwater Geosciences, LLP**  
**Ground Water Development and Exploration**

For 11-4-7

IDAHO DEPARTMENT OF WATER RESOURCES  
WELL DRILLER'S REPORT

1. WELL TAG NO. D 00 14647  
 DRILLING PERMIT NO. 767404  
 Other IDWR No. \_\_\_\_\_

2. OWNER; Name Dee FOINIAN  
Address 4594 West 49th South  
City SAN JUAN State Idaho

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.


 Twp. 15-5 North ☐ or South ☒  
 Rge. 35 East ☒ or West ☐  
 Sec. 14 1/4 SW 1/4 SW 1/4  
 Gov't Lot \_\_\_\_\_ County Adams  
 Lat. \_\_\_\_\_ Long. \_\_\_\_\_  
 Address of Well Site 4690 out 4405  
 City SAMUEL

Lt. \_\_\_\_\_ 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

| BEAL FILTER PAGE |      |    | AMOUNT      | METHOD    |
|------------------|------|----|-------------|-----------|
| Material         | From | To | Secs & Pags |           |
| Betonite         | 0    | 30 | 5           | over link |
|                  |      |    |             |           |

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

**8. CASING/LINER:**

| Diameter | Pran | TN  | Gauge | Water oil | Casing                              | liner                    | Welders                  | Threaded                 |
|----------|------|-----|-------|-----------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| 6        | #1   | 124 | 25    | Steel     | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|          |      |     |       |           | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|          |      |     |       |           | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Length of Headpipe \_\_\_\_\_ Length of Tailpipe \_\_\_\_\_

## 9. PERFORATIONS/SCREENS

|              |                   |
|--------------|-------------------|
| Perforations | Method _____      |
| Screens      | Screen Type _____ |

| From | To | Sh. Size | Number | Diameter | Mileage | Costing | Linear |
|------|----|----------|--------|----------|---------|---------|--------|
|      |    |          |        |          |         |         |        |
|      |    |          |        |          |         |         |        |
|      |    |          |        |          |         |         |        |

**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:

☐ Pump    ☒ Sailing

| Yield gal./min. | Grades | Pipe size | Time  |
|-----------------|--------|-----------|-------|
| 15 20           |        | 140       | 1 hr. |
|                 |        |           |       |
|                 |        |           |       |

Water Temp. \_\_\_\_\_ Bottom hole temp. \_\_\_\_\_  
Water Quality test or comments: \_\_\_\_\_

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

| Bore<br>Dia | From | To  | Remarks: Lithology, Water Quality & Temperature | Y | N |
|-------------|------|-----|-------------------------------------------------|---|---|
| 8           | 0    | 20  | Like 7th Section. Rock                          |   |   |
| 6           | 20   | 70  | 7th & 1st                                       |   |   |
| 6           | 70   | 100 | " "                                             |   |   |
| 6           | 100  | 120 | Rock + gravel                                   |   |   |
| 6           | 120  | 140 | " "                                             |   |   |

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**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 | 11-17-00     |

### 13. DRILLER'S CERTIFICATION

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

Company Name Lundstrom Welding Firm No. 118

Emp Official *[Signature]* Date *11-17-2021*

and  
Driver or Operator \_\_\_\_\_ Date \_\_\_\_\_

(Sign one of Five Critics: A Critique)

FORWARD WHITE COPY TO WATER RESOURCES

**Figure 1-6 Well log for Dee Tolman Domestic Well**



**Clearwater Geosciences, LLP**  
**Ground Water Development and Exploration**

Form 238-7  
6/95

*BMD*

IDAHO DEPARTMENT OF WATER RESOURCES

**WELL DRILLER'S REPORT**

Use Typewriter or Ballpoint Pen

**061318**

|                                                                        |           |           |
|------------------------------------------------------------------------|-----------|-----------|
| Office Use Only                                                        |           |           |
| Inspected by _____                                                     |           |           |
| Twp _____                                                              | Rge _____ | Sec _____ |
| 1/4 1/4 1/4                                                            |           |           |
| Lat _____ Long _____                                                   |           |           |
| <input type="checkbox"/> Air <input type="checkbox"/> Flowing Artesian |           |           |

1. DRILLING PERMIT NO. 15-97-E-0020

Other IDWR No. \_\_\_\_\_

2. OWNER:

Name Del Richert

Address \_\_\_\_\_

City Malad State Idaho

Phone 766-3002 — 766-3005

3. LOCATION OF WELL by legal description:

Sketch map location [must agree with written location]

|                                             |  |                |  |                                                                             |  |
|---------------------------------------------|--|----------------|--|-----------------------------------------------------------------------------|--|
| N                                           |  | Twp. <u>15</u> |  | North <input type="checkbox"/> or South <input checked="" type="checkbox"/> |  |
| E                                           |  | Rge. <u>35</u> |  | East <input checked="" type="checkbox"/> or West <input type="checkbox"/>   |  |
| S                                           |  | Sec. <u>22</u> |  | 1/4 <u>SW</u> 1/4 <u>SW</u> 1/4                                             |  |
| W                                           |  | Govt Lot _____ |  | County _____                                                                |  |
| X                                           |  | Lat _____      |  | Long _____                                                                  |  |
| Address of Well Site <u>4751 S. 5100 W.</u> |  |                |  |                                                                             |  |
| City <u>Malad</u> <u>4-2-98</u>             |  |                |  |                                                                             |  |

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 ☐ Mud Rotary ☐ Other \_\_\_\_\_

7. SEALING PROCEDURES

| SEAL/PLUG PACK |          | AMOUNT     |                | METHOD         |
|----------------|----------|------------|----------------|----------------|
| Material       | From     | To         | Seals or Plugs |                |
| <u>Grout</u>   | <u>0</u> | <u>35'</u> | <u>Seals</u>   | <u>On-line</u> |

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

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

8. CASING/LINER:

| Diameter  | From       | To         | Use/Type   | Material     | Casing                   | Liner                    | Wellhead                            | Threshold                |
|-----------|------------|------------|------------|--------------|--------------------------|--------------------------|-------------------------------------|--------------------------|
| <u>6"</u> | <u>+1</u>  | <u>280</u> | <u>280</u> | <u>Steel</u> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <u>5"</u> | <u>210</u> | <u>280</u> | <u>210</u> | <u>Steel</u> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Length of Headpipe \_\_\_\_\_ Length of Tailpipe \_\_\_\_\_

9. PERFORATIONS/SCREENS

☐ Perforations Method \_\_\_\_\_

☐ Screens Screen Type \_\_\_\_\_

| From       | To         | Slot Size   | Number     | Diameter  | Material     | Casing                              | Liner                    |
|------------|------------|-------------|------------|-----------|--------------|-------------------------------------|--------------------------|
| <u>210</u> | <u>280</u> | <u>1/8"</u> | <u>500</u> | <u>5"</u> | <u>Steel</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

235 ft below ground Artesian pressure \_\_\_\_\_ lb

Depth flow encountered \_\_\_\_\_ ft Describe access port or

control devices: \_\_\_\_\_

11. WELL TESTS:

☐ Pump ☐ Bailor

☐ Air ☐ Flowing Artesian

| Yield gal/min. | Drawdown | Pumping Level | Time |
|----------------|----------|---------------|------|
| <u>20 gpm</u>  |          |               |      |

Water Temp \_\_\_\_\_ Bottom hole temp \_\_\_\_\_

Water Quality test or comments: \_\_\_\_\_

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

| Bore Dia  | From        | To          | Remarks: Lithology, Water Quality & Temperature | Y | N |
|-----------|-------------|-------------|-------------------------------------------------|---|---|
| <u>6"</u> | <u>0</u>    | <u>8'</u>   | <u>Drill and Grout</u>                          |   |   |
|           | <u>8'</u>   | <u>50'</u>  | <u>Drill and Grout. Grout</u>                   |   |   |
|           | <u>50'</u>  | <u>100'</u> | <u>Grout</u>                                    |   |   |
|           | <u>100'</u> | <u>185'</u> | <u>Grout and rock chips in hole</u>             |   |   |
|           | <u>185'</u> | <u>220'</u> | <u>Clay &amp; gravel</u>                        |   |   |
|           | <u>220'</u> | <u>250'</u> | <u>Grout and rock chips</u>                     |   |   |
|           | <u>250'</u> | <u>280'</u> | <u>Grout and rock chips layers</u>              |   |   |

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FEB 11 1998

RECEIVED Department of Water Resources Eastern Region

FEB 20 1998

MICROFILMED

MAY 06 1998

Completed Depth 280' (Measurable)

Date Started May 16-97 Completed June 10-97

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 Harry Vollmer Sons Firm No 403

Firm Official Harry Vollmer Date July 15-97

and Supervisor or Operator Harry Vollmer Date July 15-97

FORWARD WHITE COPY TO WATER RESOURCES

Figure 1-7 Well log for Del Richert Domestic Well



**Clearwater Geosciences, LLP**  
**Ground Water Development and Exploration**

Form 238-7  
5/93

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

Use Typewriter  
or  
Ball Point Pen

DMD ✓ C

56278

1. DRILLING PERMIT NO. 15-94-2 029-000

10. WELL TESTS:

☐ Pump ☐ Baller ☒ Air ☐ Flowing Artesian

2. OWNER:

Name DON TUBBS  
Address 375 MAIN ST  
City SAMARA ID State Idaho

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

|   |  |                |  |                                                                             |
|---|--|----------------|--|-----------------------------------------------------------------------------|
| N |  | T <u>15</u>    |  | North <input type="checkbox"/> or South <input checked="" type="checkbox"/> |
| W |  | R <u>35</u>    |  | East <input checked="" type="checkbox"/> or West <input type="checkbox"/>   |
| S |  | Sec. <u>23</u> |  | Gov't Lot <u>14</u> County <u>Idaho</u>                                     |

Address of Well Site SAME

(Give at least Direction + Distance to Point or Landmark)

Lot No.        Block No.        Subd. Name       

4. PROPOSED USE:

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

5. TYPE OF WORK

☐ New Well ☐ Modify or Repair ☐ Replacement ☐ Abandonment

6. DRILL METHOD

☐ Mud Rotary ☒ Air Rotary ☐ Cable ☐ Other

7. SEALING PROCEDURES

| SEAL/FILTER PACK |      |    | AMOUNT |      | METHOD    |
|------------------|------|----|--------|------|-----------|
| Material         | From | To | Feet   | Feet |           |
| Bentonite        | 0    | 20 | 94     |      | over bore |

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

8. CASING/LINER:

| Diameter | From | To  | Change | Casing | Liner | Steel                               | Plastic                  | Welded                   | Threaded                 |
|----------|------|-----|--------|--------|-------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| 6        | 71   | 103 | 230    | 4      |       | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Final location of shoes 103

Top Packer or Headpipe        Bottom Tailpipe       

9. PERFORATIONS/SCREENS

☐ Perforations Method         
☐ Screens Type        Material       

| From | To | Shot Size | Number | Diameter | Temp Pipe Size | Casing                   | Liner                    |
|------|----|-----------|--------|----------|----------------|--------------------------|--------------------------|
| None |    |           |        |          |                | <input type="checkbox"/> | <input type="checkbox"/> |
|      |    |           |        |          |                | <input type="checkbox"/> | <input type="checkbox"/> |
|      |    |           |        |          |                | <input type="checkbox"/> | <input type="checkbox"/> |
|      |    |           |        |          |                | <input type="checkbox"/> | <input type="checkbox"/> |

| Yield gal/min | Drawdown | Pumping Depth | Time  |
|---------------|----------|---------------|-------|
| 10-15         |          | 125           | 1 hr. |

Temperature of water        Was a water analysis done? Yes ☐ No ☐

By whom?       

Water Quality (odor, etc.)       

Bottom Hole Temperature       

11. STATIC WATER LEVEL:

24 ft. below surface Depth artesian flow found       

Artesian pressure        lb. Describe access port       

Describe Controlling Devices:       

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

| From | To | Remarks: Lithology, Water Quality & Temperature | SPU | SVL |
|------|----|-------------------------------------------------|-----|-----|
| 8    | 0  | BROWN CLAY                                      |     |     |
| 0    | 10 | BROWN w/ th. Rock LAR                           |     |     |
| 10   | 20 | CLAY                                            |     |     |
| 20   | 30 | WHITE CLAY                                      |     |     |
| 30   | 40 | GRAY CLAY                                       |     |     |
| 40   | 50 | HARD BROWN SANDSTONE                            |     |     |
| 50   | 60 | with GRAVEL                                     |     |     |

RECEIVED

DEC 1 1994

MAY 08 1995

Date: Started 10-31 - Completed 11-5

13. DRILLER'S CERTIFICATION

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

Firm Name UNDERSTANDER INC. Firm No. 118

Firm Official Arnold Sundstrom Date 11-5-94

and       

Supervisor or Operator        Date       

(Sign once if Firm Official & Operator)

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Figure 1-8 Well log for Don Tubbs Domestic Well



**Clearwater Geosciences, LLP**  
**Ground Water Development and Exploration**

Form 238-7  
4/95  
Dmg/le

IDAHO DEPARTMENT OF WATER RESOURCES

**WELL DRILLER'S REPORT**

Use Typewriter or Ballpoint Pen

68171

Office Use Only  
Inspected by \_\_\_\_\_  
Twp \_\_\_\_\_ Rge \_\_\_\_\_ Sec \_\_\_\_\_  
1/4 \_\_\_\_\_ 1/4 \_\_\_\_\_ 1/4 \_\_\_\_\_  
Lat. \_\_\_\_\_ Long. \_\_\_\_\_  
☐ Pump ☐ Bailor ☐ Air ☐ Flowing Artesian

1. DRILLING PERMIT NO. 15-97-0019-000  
Other IDWR No. 15-7154

2. OWNER:  
Name Farrell Atkinson  
Address 738 W Hwy 38  
City Malad State EO Zip 83253

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

North arrow pointing up. Grid showing well location. Twp 15 North ☐ or South ES  
Rge 35 East ES or West ☐  
Sec. 14 1/4 SW 1/4 SW 1/4  
Gov't Lot \_\_\_\_\_ County Oneida  
Lat. \_\_\_\_\_ Long. \_\_\_\_\_  
Address of Well Site Same as above 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 ☐ Mud Rotary ☐ Other \_\_\_\_\_

7. SEALING PROCEDURES

| SEAL FILTER PACK |      |    | AMOUNT          | METHOD   |
|------------------|------|----|-----------------|----------|
| Material         | From | To | Sacks or Pounds |          |
| Bentonite        | 0    | 20 | 5               | OverBore |

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 200'  
Was drive shoe seal tested? ☒ Y ☐ N How? \_\_\_\_\_

8. CASING/LINER:

| Diameter | From | To  | Gauge | Material | Casing                              | Inner                    | Welded                   | Threaded                 |
|----------|------|-----|-------|----------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| 10"      | 0    | 200 | 150   | Steel    | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Length of Headpipe \_\_\_\_\_ Length of Tailpipe \_\_\_\_\_

9. PERFORATIONS/SCREENS

☒ Perforations Method Air perforator  
☐ Screens Screen Type \_\_\_\_\_

| From | To  | Slot Size | Number | Diameter | Material | Casing                              | Inner                    |
|------|-----|-----------|--------|----------|----------|-------------------------------------|--------------------------|
| 120  | 125 | 1"        | 100    | 1/4"     | Steel    | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 130  | 135 | 1"        | 100    | 1/4"     | ( )      | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 140  | 145 | 1"        | 100    | 1/4"     | ( )      | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 165  | 175 | 1"        | 200    | 1/4"     | ( )      | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 177  | 175 | 1"        | 150    | 1/4"     | ( )      | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

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

11. WELL TESTS:

| Yard gal/min. | Drawdown | Pumping Level | Time |
|---------------|----------|---------------|------|
|               |          |               |      |
|               |          |               |      |
|               |          |               |      |

Water Temp. Cold Bottom hole temp \_\_\_\_\_  
Water Quality test or comments: good

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

| Bore Dia | From | To  | Remarks: Lithology, Water Quality & Temperature | Y                                   | N                                   |
|----------|------|-----|-------------------------------------------------|-------------------------------------|-------------------------------------|
| 12"      | 0    | 20  | Clay                                            |                                     | <input checked="" type="checkbox"/> |
| 10"      | 20   | 30  | Clay + Gravel                                   |                                     | <input checked="" type="checkbox"/> |
| 10"      | 30   | 50  | Clay                                            |                                     | <input checked="" type="checkbox"/> |
| 10"      | 50   | 65  | Gravel                                          | <input checked="" type="checkbox"/> |                                     |
| 10"      | 65   | 100 | Clay + Gravel                                   |                                     | <input checked="" type="checkbox"/> |
| 10"      | 100  | 110 | Gravel                                          | <input checked="" type="checkbox"/> |                                     |
| 10"      | 110  | 120 | Clay + little Gravel                            |                                     | <input checked="" type="checkbox"/> |
| 10"      | 120  | 123 | Gravel                                          | <input checked="" type="checkbox"/> |                                     |
| 10"      | 123  | 130 | Clay + Gravel                                   |                                     | <input checked="" type="checkbox"/> |
| 10"      | 130  | 135 | Gravel                                          | <input checked="" type="checkbox"/> |                                     |
| 10"      | 135  | 140 | Clay + Gravel                                   |                                     | <input checked="" type="checkbox"/> |
| 10"      | 140  | 145 | Gravel                                          | <input checked="" type="checkbox"/> |                                     |
| 10"      | 145  | 160 | Gravel + Clay                                   |                                     | <input checked="" type="checkbox"/> |
| 10"      | 160  | 163 | Gravel + Sand                                   | <input checked="" type="checkbox"/> |                                     |
| 10"      | 163  | 170 | Gravel                                          | <input checked="" type="checkbox"/> |                                     |
| 10"      | 170  | 177 | Gravel + Sand                                   | <input checked="" type="checkbox"/> |                                     |
| 10"      | 177  | 193 | Gravel                                          | <input checked="" type="checkbox"/> |                                     |
| 10"      | 193  | 198 | Clay                                            |                                     | <input checked="" type="checkbox"/> |
| 10"      | 198  | 200 | Gravel                                          | <input checked="" type="checkbox"/> |                                     |

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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 Completed 5-20-97

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 Drilling Firm No. 543

Firm Official Mike Frandson Date 5-20-97

and Supervisor or Operator \_\_\_\_\_ Date \_\_\_\_\_

(Sign once if Firm Official & Operator)

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Figure 1-9 Well log for Farrell Atkinson Irrigation Well



**Clearwater Geosciences, LLP**  
**Ground Water Development and Exploration**

Form 38-7  
8-82

STATE OF IDAHO  
DEPARTMENT OF WATER RESOURCES

USE TYPEWRITER OR  
BALLPOINT PEN

**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.

| <b>1. WELL OWNER</b><br>Name <u>Joe Davis</u><br>Address <u>SAMARIA IDAHO</u><br>Owner's Permit No. <u>15-89-E-002-000</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              | <b>7. WATER LEVEL</b><br>Static water level <u>100</u> feet below land surface.<br>Flowing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No G.P.M. flow _____<br>Artesian closed in pressure _____ p.s.i.<br>Controlled by: <input type="checkbox"/> Valve <input type="checkbox"/> Cap <input type="checkbox"/> Plug<br>Temperature _____ °F. Quality _____<br><small>Describe artesian or temperature zones below</small>                                                                                                                                                                                                                                                                                                                               |                     |              |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------|------------|------|----------|--------------|----------|--------|----------------------------------------------------------------|---------------------|--------------|------------|------------|--------------|--------------|------------|------------|--------------|--------------|------------|------------|--------|------|----|-----------------|----------|----------|--------------------|------------|--------------|--------------------|------------|------------|-----|--------------|---|--|-----|-----|-----------|----|--|-----|-----|-----------------|----|
| <b>2. NATURE OF WORK</b><br><input checked="" type="checkbox"/> New well <input type="checkbox"/> Deepened <input type="checkbox"/> Replacement<br><input type="checkbox"/> Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              | <b>8. WELL TEST DATA</b><br><input type="checkbox"/> Pump <input type="checkbox"/> Baller <input checked="" type="checkbox"/> Air <input type="checkbox"/> Other _____<br>Discharge G.P.M. <u>20</u> Pumping Level _____ Hours Pumped <u>16</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                     |              |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
| <b>3. PROPOSED USE</b><br><input type="checkbox"/> Domestic <input type="checkbox"/> Irrigation <input type="checkbox"/> Test <input type="checkbox"/> Municipal<br><input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Stock <input type="checkbox"/> Waste Disposal or Injection<br><input type="checkbox"/> Other _____ (specify type)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              | <b>9. LITHOLOGIC LOG</b><br><table border="1"><thead><tr><th>Bore Diam.</th><th>Depth From</th><th>To</th><th>Material</th><th>Water Yes/No</th></tr></thead><tbody><tr><td>9"</td><td>0</td><td>30</td><td>TOPSOIL, SANDY CLAY</td><td></td></tr><tr><td></td><td>30</td><td>42</td><td>CLAY</td><td>1-</td></tr><tr><td></td><td>42</td><td>48</td><td>CLAY</td><td>1-</td></tr><tr><td></td><td>48</td><td>58</td><td>HARD GRAY CLAY</td><td>1</td></tr><tr><td></td><td>58</td><td>78</td><td>GRANITE BEDS</td><td></td></tr><tr><td></td><td>78</td><td>110</td><td>LITTLE WATER</td><td>1</td></tr><tr><td></td><td>110</td><td>112</td><td>BLUE CLAY</td><td>1-</td></tr><tr><td></td><td>112</td><td>113</td><td>SHALE LIKE ROCK</td><td>1-</td></tr></tbody></table> |                     | Bore Diam.   | Depth From | To   | Material | Water Yes/No | 9"       | 0      | 30                                                             | TOPSOIL, SANDY CLAY |              |            | 30         | 42           | CLAY         | 1-         |            | 42           | 48           | CLAY       | 1-         |        | 48   | 58 | HARD GRAY CLAY  | 1        |          | 58                 | 78         | GRANITE BEDS |                    |            | 78         | 110 | LITTLE WATER | 1 |  | 110 | 112 | BLUE CLAY | 1- |  | 112 | 113 | SHALE LIKE ROCK | 1- |
| Bore Diam.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Depth From   | To                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Material            | Water Yes/No |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
| 9"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0            | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | TOPSOIL, SANDY CLAY |              |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 30           | 42                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | CLAY                | 1-           |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 42           | 48                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | CLAY                | 1-           |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 48           | 58                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | HARD GRAY CLAY      | 1            |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 58           | 78                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | GRANITE BEDS        |              |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 78           | 110                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | LITTLE WATER        | 1            |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 110          | 112                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | BLUE CLAY           | 1-           |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 112          | 113                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | SHALE LIKE ROCK     | 1-           |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
| <b>4. METHOD DRILLED</b><br><input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Air <input type="checkbox"/> Hydraulic <input type="checkbox"/> Reverse rotary<br><input type="checkbox"/> Cable <input type="checkbox"/> Dug <input type="checkbox"/> Other _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              | <div style="text-align: center;"><b>RECEIVED</b><br/>SEP 13 1989<br/>Department of Water Resources</div> <div style="text-align: center;"><b>RECEIVED</b><br/>SEP 18 1989<br/>Department of Water Resources</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                     |              |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
| <b>5. WELL CONSTRUCTION</b><br>Casing schedule: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Concrete <input type="checkbox"/> Other _____<br><table border="1"><thead><tr><th>Thickness</th><th>Diameter</th><th>From</th><th>To</th></tr></thead><tbody><tr><td>250 inches</td><td>6 inches</td><td>0 feet</td><td>160 feet</td></tr><tr><td>_____ inches</td><td>_____ inches</td><td>_____ feet</td><td>_____ feet</td></tr><tr><td>_____ inches</td><td>_____ inches</td><td>_____ feet</td><td>_____ feet</td></tr><tr><td>_____ inches</td><td>_____ inches</td><td>_____ feet</td><td>_____ feet</td></tr></tbody></table><br>Was casing drive shoe used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Was a packer or seal used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Perforated? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>How perforated? <input type="checkbox"/> Factory <input type="checkbox"/> Knife <input checked="" type="checkbox"/> Torch<br>Size of perforation _____ inches by _____ inches<br><table border="1"><thead><tr><th>Number</th><th>From</th><th>To</th></tr></thead><tbody><tr><td>30 perforations</td><td>144 feet</td><td>160 feet</td></tr><tr><td>_____ perforations</td><td>_____ feet</td><td>_____ feet</td></tr><tr><td>_____ perforations</td><td>_____ feet</td><td>_____ feet</td></tr></tbody></table><br>Well screen installed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Manufacturer's name _____<br>Type _____ Model No. _____<br>Diameter _____ Slot size _____ Set from _____ feet to _____ feet<br>Diameter _____ Slot size _____ Set from _____ feet to _____ feet<br>Gravel packed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Size of gravel _____<br>Placed from _____ feet to _____ feet<br>Surface seal depth <u>20</u> Material used in seal: <input type="checkbox"/> Cement grout<br><input checked="" type="checkbox"/> Bentonite <input type="checkbox"/> Puddling clay <input checked="" type="checkbox"/> CUTTING<br>Sealing procedure used: <input type="checkbox"/> Slurry pit <input type="checkbox"/> Temp. surface casing<br><input checked="" type="checkbox"/> Overbore to seal depth<br>Method of joining casing: <input type="checkbox"/> Threaded <input checked="" type="checkbox"/> Welded <input type="checkbox"/> Solvent Weld<br><input type="checkbox"/> Cemented between strata<br>Describe access port _____ |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                     | Thickness    | Diameter   | From | To       | 250 inches   | 6 inches | 0 feet | 160 feet                                                       | _____ inches        | _____ inches | _____ feet | _____ feet | _____ inches | _____ inches | _____ feet | _____ feet | _____ inches | _____ inches | _____ feet | _____ feet | Number | From | To | 30 perforations | 144 feet | 160 feet | _____ perforations | _____ feet | _____ feet   | _____ perforations | _____ feet | _____ feet |     |              |   |  |     |     |           |    |  |     |     |                 |    |
| Thickness                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Diameter     | From                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | To                  |              |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
| 250 inches                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 6 inches     | 0 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 160 feet            |              |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
| _____ inches                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | _____ inches | _____ feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | _____ feet          |              |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
| _____ inches                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | _____ inches | _____ feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | _____ feet          |              |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
| _____ inches                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | _____ inches | _____ feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | _____ feet          |              |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
| Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | From         | To                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |              |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
| 30 perforations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 144 feet     | 160 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                     |              |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
| _____ perforations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | _____ feet   | _____ feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                     |              |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
| _____ perforations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | _____ feet   | _____ feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                     |              |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
| <b>6. LOCATION OF WELL</b><br>Sketch map location must agree with written location.<br><table border="1"><tr><td>N</td><td></td><td>E</td></tr><tr><td>W</td><td></td><td>E</td></tr><tr><td>S</td><td></td><td>E</td></tr></table><br>County <u>ONEIDA</u><br><u>NE 1/4 Sec 22, T. 15 N. R. 35 E.</u><br>Subdivision Name _____<br>Lot No. _____ Block No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                     | E            | W          |      | E        | S            |          | E      | <b>10.</b> Work started <u>5/14/89</u> finished <u>5/19/89</u> |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
| N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              | E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                     |              |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
| W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              | E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                     |              |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
| S                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              | E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                     |              |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |
| <b>11. DRILLERS CERTIFICATION</b><br>I/We certify that all minimum well construction standards were complied with at the time the rig was removed.<br>Firm Name <u>DeBree Drilling</u> Firm No. <u>145</u><br>Address <u>P.O. Box 4415</u> <u>ACOTTS IDAHO 83405</u> Date _____<br>Signed by (Firm Official) <u>M. H. DeBree</u><br>and<br>(Operator) <u>M. H. DeBree</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              | <b>11.</b> <u>SEP 18 1989</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                     |              |            |      |          |              |          |        |                                                                |                     |              |            |            |              |              |            |            |              |              |            |            |        |      |    |                 |          |          |                    |            |              |                    |            |            |     |              |   |  |     |     |           |    |  |     |     |                 |    |

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

Figure 1-10 Well log for Joe Davis Stock Well



**Clearwater Geosciences, LLP**  
Ground Water Development and Exploration

Form 626-7  
8/95

IDAHO DEPARTMENT OF WATER RESOURCES

**WELL DRILLER'S REPORT**

Use Typewriter or Ballpoint Pen

56815

Office Use Only  
Inspected by \_\_\_\_\_  
Twp. \_\_\_\_\_ Rge. \_\_\_\_\_ Sec. \_\_\_\_\_  
1/4 1/4 1/4  
Lat: \_\_\_\_\_ Long: \_\_\_\_\_  
☐ Pump ☐ Bader ☐ Air ☐ Flowing Artesian

1. DRILLING PERMIT NO. 15-96-E-0020-000  
Other DWR No. \_\_\_\_\_

2. OWNER:

Name LLOYD SORTER  
Address 8400 So. 4000 W #10  
City WEST JORDAN State UT Zip 84088

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

N  
W  
E  
S  
Twp. 15 North ☐ or South Z  
Rge. 35 East 7 or West ☐  
Sec. 23 SE 1/4 NW 1/4 1/4  
Gov't Lot \_\_\_\_\_ County OXFORD 160 acres  
Lat: \_\_\_\_\_ Long: \_\_\_\_\_  
Address of Well Site 5121 So. 4000 West City MARLBOROUGH  
(Circle at least one of road or reference to roads or landmarks)

Lt. \_\_\_\_\_ 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

| BEAL/FILTER PACK |          | AMOUNT    |               | METHOD           |
|------------------|----------|-----------|---------------|------------------|
| Material         | From     | To        | Backs or Pore |                  |
| <u>Benzo 170</u> | <u>0</u> | <u>20</u> | <u>350</u>    | <u>OVER BORE</u> |

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 160

Was drive shoe seal tested? ☒ Y ☐ N How? \_\_\_\_\_

8. CASING/LINER:

| Diameter  | From       | To         | Gauge      | Material     | Casing                              | Liner                    | Welded                              | Threaded                 |
|-----------|------------|------------|------------|--------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|
| <u>6"</u> | <u>1.5</u> | <u>159</u> | <u>250</u> | <u>STEEL</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Length of Headpipe NA Length of Tailpipe NA

9. PERFORATIONS/SCREENS

☒ Perforations Method MACHINE (KNIFE)  
☐ Screens Screen Type \_\_\_\_\_

| From       | To         | Slot Size | Number | Diameter   | Material | Casing                              | Liner                    |
|------------|------------|-----------|--------|------------|----------|-------------------------------------|--------------------------|
| <u>145</u> | <u>155</u> | <u>1"</u> |        | <u>1/4</u> |          | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <u>130</u> | <u>140</u> | <u>1"</u> |        | <u>1/4</u> |          | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

50 ft. below ground Artesian pressure lb  
Depth flow encountered 145 ft. Describe access port or control devices: TOP

11. WELL TESTS:

| Yield gal/min | Drawdown | Pumping Level | Time |
|---------------|----------|---------------|------|
|               |          |               |      |
|               |          |               |      |
|               |          |               |      |

Water Temp. 67.0 Bottom hole temp. \_\_\_\_\_

Water Quality test or comments: \_\_\_\_\_

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

| Depth | From | To | Remarks: Lithology, Water Quality & Temperature | Y | N |
|-------|------|----|-------------------------------------------------|---|---|
| 0     | 0    | 38 | CLAY (13000)                                    |   |   |
| 38    | 42   |    | CLAY & GRAVEL                                   |   |   |
| 42    | 103  |    | CLAY                                            |   |   |
| 103   | 75   |    | CLAY                                            |   |   |
| 75    | 108  |    | CLAY & GRAVEL                                   |   |   |
| 108   | 110  |    | CLAY                                            |   |   |
| 110   | 120  |    | CLAY & GRAVEL 3100                              |   |   |
| 120   | 131  |    | CLAY (13000)                                    |   |   |
| 131   | 138  |    | CLAY GRAVEL                                     |   |   |
| 138   | 145  |    | CLAY GRAVEL                                     |   |   |
| 145   | 150  |    | CLAY GRAVEL                                     |   |   |
| 150   | 160  |    | GRAVEL                                          |   |   |

RECEIVED

SEP 10 1996

RECEIVED

Department of Water Resources  
Eastern Region

SEP 18 1996

Department of Water Resources

NOV 27 1995

Completed Depth 160 (Measurable)  
Date Started 4-4-96 Completed 9-7-96

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 Well Drilling Firm No 543

Firm Official Mike Franden Date 9-7-96

and  
Supervisor or Operator \_\_\_\_\_ Date \_\_\_\_\_

(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

Figure 1-11 Well log for Lloyd Sorter Domestic Well





**Clearwater Geosciences, LLP**  
Ground Water Development and Exploration

Form 238-7  
6/07

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

1. WELL TAG NO. D 00163006

Drilling Permit No. \_\_\_\_\_

Water right or injection well # \_\_\_\_\_

2. OWNER: Peoa River Valley Ranch

Name \_\_\_\_\_

Address 3970 E Hwy 36

City Malad State ID Zip 83252

3. WELL LOCATION:

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

Sec. 23 SE 1/4 SE 1/4 1/4

Gov't Lot \_\_\_\_\_ County Oneida

Lat. 42 16 08 9 (Deg. and Decimal minutes)

Long. 112 19 81 6 (Deg. and Decimal minutes)

Address of Well Site 5501.5 400 (W)

City Malad

Is a well or water source in the vicinity of the well? \_\_\_\_\_

Lot \_\_\_\_\_ Blk. \_\_\_\_\_ Sub. Name \_\_\_\_\_

4. USE:

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

☐ Other \_\_\_\_\_

5. TYPE OF WORK:

☒ New well ☐ Replacement well ☐ Modify existing well

☐ Abandonment ☐ Other \_\_\_\_\_

6. DRILL METHOD:

☒ Air Rotary ☐ Mud Rotary ☐ Cable ☐ Other \_\_\_\_\_

7. SEALING PROCEDURES:

Seal material Bentonite From (ft) 0 To (ft) 38 Quantity (lbs or ft<sup>3</sup>) 42 bags Placement method overbore

8. CASING/LINER:

Outer diameter (inches) 16 From (ft) 0 To (ft) 217 Gauge or Schedule 30 Material Steel

Using liner ☒ Threaded ☐ Welded ☐

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 217

9. PERFORATIONS/SCREENS:

Perforations ☒ Y ☐ N Method Machine

Manufactured screen ☐ Y ☐ N Type \_\_\_\_\_

Method of installation \_\_\_\_\_

From (ft) 80 To (ft) 87 Slot size 1/2 Number 32 Diameter (inches) 16 Material Steel Gauge or Schedule 30

From (ft) 87 To (ft) 105 Slot size 1/2 Number 4 Diameter (inches) 16 Material Steel Gauge or Schedule 30

From (ft) 105 To (ft) 110 Slot size 1/2 Number 4 Diameter (inches) 16 Material Steel Gauge or Schedule 30

Length of Headpipe \_\_\_\_\_ Length of Tailpipe \_\_\_\_\_

Packer ☐ Y ☐ N Type \_\_\_\_\_

10. FILTER PACK:

Filter Material \_\_\_\_\_ From (ft) \_\_\_\_\_ To (ft) \_\_\_\_\_ Quantity (lbs or ft<sup>3</sup>) \_\_\_\_\_ 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) 80 Static water level (ft) 50

Water temp. (°F) 58 Bottom hole temp. (°F) \_\_\_\_\_

Describe access port plate

Well test: \_\_\_\_\_ Test method: \_\_\_\_\_

Drawdown (feet) \_\_\_\_\_ Discharge or yield (gpm) \_\_\_\_\_ Test duration (min/hrs) \_\_\_\_\_

Pump ☐ Sucker ☐ 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 tests. | Water |
|-----------|---------|---------------------------------------------------------------------------|-------|
|           |         |                                                                           | Y N   |
| 20        | 0       | 15 clay                                                                   | X     |
| 20        | 15      | 40 gravel + clay                                                          | X     |
| 110       | 40      | 65 gravel + clay                                                          | X     |
| 110       | 65      | 80 solid sand and gravel                                                  | X     |
| 110       | 80      | 95 gravel                                                                 | X     |
| 110       | 95      | 110 Brown Rock                                                            | X     |
| 110       | 110     | 125 Sand pea gravel                                                       | X     |
| 110       | 125     | 140 loose Rock Hard                                                       | X     |
| 110       | 140     | 155 gravel                                                                | X     |
| 110       | 155     | 170 clay + gravel                                                         | X     |
| 110       | 170     | 180 gravel                                                                | X     |
| 110       | 180     | 200 gravel clay                                                           | X     |
| 110       | 200     | 220 soft shale + gravel                                                   | X     |
| 110       | 220     | 230 soft shale + little gravel                                            | X     |
| 110       | 230     | 250 Run + Red clay + shale + gravel                                       | X     |
| 110       | 250     | 275 cement/gravel grout very hard                                         | X     |

RECEIVED

MAY 15 2013

Department of Water Resources  
Eastern Region

Completed Depth (Measurable): 323

Date Started: 3-27-13 Date Completed: 8-12-13

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 MTU Drilling Co. No. 543

\*Principal Driller Michael Zander Date 4-13-13

\*Driller \_\_\_\_\_ Date \_\_\_\_\_

\*Operator II John Lee Date 4-13-13

Operator I \_\_\_\_\_ Date \_\_\_\_\_

\*Signature of Principal Driller and rig operator are required.

Figure 1-13 Well log for Peoa River Valley Ranch Irrigation Well



**Clearwater Geosciences, LLP**  
Ground Water Development and Exploration

Form 236-7  
11/77  
DMD

IDAHO DEPARTMENT OF WATER RESOURCES  
**WELL DRILLER'S REPORT 67181**

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

1. WELL TAG NO. D 0004742  
DRILLING PERMIT NO. 1598E-0026  
Other IDWR No. \_\_\_\_\_

2. OWNER:  
Name Robert Kedy Warren  
Address 5196 S. 4600 N  
City Samaria State Idaho Zip 83252

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

Sketch map location must agree with written location.

|                                       |    |        |        |       |        |
|---------------------------------------|----|--------|--------|-------|--------|
| Twp                                   | 15 | North  | or     | South | 52     |
| Rge                                   | 35 | East   | or     | West  | 0      |
| Sec                                   | 23 | 1/4    | SE     | 1/4   | NW 1/4 |
| Gov't Lot                             |    | County | Owyhee |       |        |
| Lat                                   |    | Long   |        |       |        |
| Address of Well Site _____ City _____ |    |        |        |       |        |

(Place at each corner of road - Distance to Road or Landmark)

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

| BEAL/FILTER PACK | AMOUNT  | METHOD          |
|------------------|---------|-----------------|
| Material         | From To | Sacks or Pounds |
| Bentonite        | 0 20    | 4               |
|                  |         |                 |
|                  |         |                 |

Was drive shoe used? ☒ N Shoe Depth(s) 236  
Was drive shoe seal tested? ☐ Y ☐ N How? \_\_\_\_\_

8. CASING/LINER:

| Diameter | From | To  | Gauge | Material | Casing                              | Liner                    | Welded                              | Threaded                 |
|----------|------|-----|-------|----------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|
| 6"       | 0    | 236 | 260   | Steel    | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|          |      |     |       |          | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |

Length of Headpipe \_\_\_\_\_ Length of Tailpipe \_\_\_\_\_

9. PERFORATIONS/SCREENS

Perforations Method Machine MICROFILMED  
Screens Screen Type \_\_\_\_\_

| From | To  | Slot Size | Number | Diameter | Material | Casing                   | Liner                    |
|------|-----|-----------|--------|----------|----------|--------------------------|--------------------------|
| 90   | 100 | 1"        | 130    | 4 1/4    | Steel    | <input type="checkbox"/> | <input type="checkbox"/> |
|      |     |           |        |          |          | <input type="checkbox"/> | <input type="checkbox"/> |

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

58' ft. below ground Artesian pressure \_\_\_\_\_ lb.  
Depth flow encountered \_\_\_\_\_ ft. Describe access port or control devices: \_\_\_\_\_

11. WELL TESTS:

☐ Pump ☐ Baller

| Yield gal/min. | Drawdown | Pumping Level | Time |
|----------------|----------|---------------|------|
| <u>500</u>     |          |               |      |
|                |          |               |      |

Water Temp \_\_\_\_\_ Bottom hole temp. \_\_\_\_\_

Water Quality test or comments: \_\_\_\_\_

Depth first Water Encounter 20'

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

| Bore Dia. | From | To  | Remarks: Lithology, Water Quality & Temperature | T | N |
|-----------|------|-----|-------------------------------------------------|---|---|
| 8 1/2"    | 0    | 20  | clay                                            |   |   |
| 6"        | 20   | 60  | clay                                            |   |   |
| 6"        | 60   | 70  | clay                                            |   |   |
| 6"        | 70   | 75  | Gravel                                          |   |   |
| 6"        | 75   | 90  | clay                                            |   |   |
| 6"        | 90   | 95  | Water & Gravel                                  |   |   |
| 6"        | 95   | 160 | clay                                            |   |   |
| 6"        | 160  | 162 | clay & Gravel & Sand (1.5 ft)                   |   |   |
| 6"        | 162  | 180 | clay                                            |   |   |
| 6"        | 180  | 183 | clay & Gravel & Sand (1.5 ft)                   |   |   |
| 6"        | 183  | 235 | clay                                            |   |   |
| 6"        | 235  | 240 | Cobbles                                         |   |   |
| 6"        | 240  | 295 | clay & Shell & sand                             |   |   |
| 6"        | 295  | 300 | Gravel                                          |   |   |

RECEIVED

JUL 16 1998

Department of Water Resources  
Eastern Region

RECEIVED

JUL 27 1998

Department of Water Resources

Completed Depth 236 (Measurable)  
Date Started 1-1-98 Completed 7-13-98

13. DRILLER'S CERTIFICATION

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

Company Name Mountain West Drilling Firm No. 543

Firm Official Mike Scandeen Date 7-13-98

Driller or Operator \_\_\_\_\_ Date \_\_\_\_\_

(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

Figure 1-14 Well log for Robert Warren Domestic Well



**Clearwater Geosciences, LLP**  
**Ground Water Development and Exploration**

Form 738-7  
3/95

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

Use Typewriter or Ballpoint Pen

94656

Office Use Only  
Inspected by \_\_\_\_\_  
Twp 5S Rge 35E Sec 23  
1/4 NW 1/4 NW 1/4  
Lat: \_\_\_\_\_ Long: \_\_\_\_\_  
☐ Air ☐ Flowing Artesian

1. DRILLING PERMIT NO. 15-98-E-0046-000

Other IDWR No. 00606312

2. OWNER: Tom Rawlings

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

North ☐ or South ☒  
Ege. 3835E East ☐ or West ☐  
Sec. 23 NW 1/4 NW 1/4 1/4 1/4  
Govt Lot \_\_\_\_\_ County \_\_\_\_\_  
Lat: \_\_\_\_\_ Long: \_\_\_\_\_  
Address of Well Site \_\_\_\_\_  
City \_\_\_\_\_  
1/4 or less name of road - Distance to Road or Landmark: \_\_\_\_\_

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 ☐ Mud Rotary ☐ Other \_\_\_\_\_

7. SEALING PROCEDURES

SEAL/FILTER PACK

Material From To AMOUNT (Bags or Pounds) METHOD

Ben Seal 0 25 400 Mix-Powr

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

Was drive shoe seal tested? ☒ Y ☐ N How? \_\_\_\_\_

8. CASING/LINER:

Diameter From To Gauge Material Casing Liner Welded Threaded

6 0 179 1/4 Prime ☒ ☐ ☐ ☐

Length of Headpipe \_\_\_\_\_ Length of Tailpipe \_\_\_\_\_

9. PERFORATIONS/SCREENS

☐ Perforations Method \_\_\_\_\_

☒ Screens Screen Type \_\_\_\_\_

From To Slot Size Number Diameter Material Casing Liner

\_\_\_\_\_

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

130 ft. below ground Artesian pressure \_\_\_\_\_ lb.

Depth flow encountered \_\_\_\_\_ ft. Describe access port or control devices: \_\_\_\_\_

11. WELL TESTS:

☒ Pump ☐ Bailer

| Yield gal/min | Drawdown   | Pumping Level | Time          |
|---------------|------------|---------------|---------------|
| <u>7.5</u>    | <u>42'</u> | <u>178'</u>   | <u>24 min</u> |

Water Temp. Warm Bottom hole temp \_\_\_\_\_

Water Quality test or comments: good

Depth first Water Encountered 95'

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

| Row        | From       | To         | Remarks: Lithology, Water Quality & Temperature | Y                                   | N                                   |
|------------|------------|------------|-------------------------------------------------|-------------------------------------|-------------------------------------|
| <u>10</u>  | <u>0</u>   | <u>3</u>   | <u>Top Soil</u>                                 |                                     | <input checked="" type="checkbox"/> |
| <u>10</u>  | <u>3</u>   | <u>95</u>  | <u>Brown clay &amp; Fresh loess</u>             |                                     | <input checked="" type="checkbox"/> |
| <u>6</u>   | <u>95</u>  | <u>105</u> | <u>gravel sandy</u>                             | <input checked="" type="checkbox"/> |                                     |
| <u>6</u>   | <u>105</u> | <u>136</u> | <u>Brown clay</u>                               |                                     | <input checked="" type="checkbox"/> |
| <u>136</u> | <u>178</u> |            | <u>Brown sand &amp; gravels</u>                 | <input checked="" type="checkbox"/> |                                     |
| <u>178</u> | <u>175</u> |            | <u>white clay</u>                               |                                     | <input checked="" type="checkbox"/> |
| <u>175</u> | <u>181</u> |            | <u>Gravel</u>                                   |                                     | <input checked="" type="checkbox"/> |

RECEIVED

JAN 28 1999

Department of Water Resources

RECEIVED

JAN 19 1999

Department of Water Resources  
Eastern Region

MICROFILMED

MAR 08 1999

Completed Depth 179 (Measurable)

Date Started 10-29-98 Completed 10-23-98

13. DRILLER'S CERTIFICATION

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

Firm Name Volker Ditz Firm No. 403

Firm Official Harry Tolman Date 1-19-99

and Supervisor or Operator Carl Calm Date 1-19-98

(Sign once if Firm Official & Operator)

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Figure I-15 Well log for Tom Rawlings Domestic Well



**Clearwater Geosciences, LLP**  
**Ground Water Development and Exploration**

Form 238-7  
6/07

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

Location Corrected by IDWR To:  
T15S R35E Sec. 23 SWSESW  
By: mciscell 2013-09-11

1. WELL TAG NO. D 0059734  
Drilling Permit No. \_\_\_\_\_  
Water right or injection well # \_\_\_\_\_  
2. OWNER: Travis Huckaby  
Name \_\_\_\_\_  
Address 4666 W. 4900 S  
City Malad State ID Zip 83250

3. WELL LOCATION:  
Twp. 15 North ☐ or South ☒ Rge. 35 East ☒ or West ☐  
Sec. 23 1/4 SE 1/4 SE 1/4  
Gov't Lot \_\_\_\_\_ County Coneida  
Lat. 42 ° 05.956 N (Deg and Decimal minutes)  
Long 112 ° 20.342 W (Deg and Decimal minutes)  
Address of Well Site 4666 W 4900 S  
City Samaroa  
Lot \_\_\_\_\_ Blk \_\_\_\_\_ Sub. Name \_\_\_\_\_

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

5. TYPE OF WORK:  
☒ New well ☐ Replacement well ☐ Modify existing well  
☐ Abandonment ☐ Other \_\_\_\_\_

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

7. SEALING PROCEDURES:  
Seal material Portland From (ft) 038 To (ft) 276 Quantity (bs or ft) 276 Placement method/procedure over bore

8. CASING/LINER:  
Diameter (nominal) 6 From (ft) 0 To (ft) 120 Gauge/Schedule 250 Material Steel  
Casing Liner Threaded Welded  
☒ ☐ ☐ ☐  
☐ ☐ ☐ ☐  
☐ ☐ ☐ ☐

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 120

9. PERFORATIONS/SCREENS:  
Perforations ☒ Y ☐ N Method touch  
Manufactured screen ☐ Y ☐ N Type \_\_\_\_\_  
Method of installation \_\_\_\_\_

From (ft) 102 To (ft) 120 Size size 5/8 Number/ft 54 Diameter (nominal) 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 (bs or ft) 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) 60  
Water temp. (°F) 61 Bottom hole temp. (°F) \_\_\_\_\_  
Describe access port well cap  
Well test:  
Drawdown (feet) \_\_\_\_\_ Discharge or yield (gpm) 40 Test duration (minutes) \_\_\_\_\_  
Test method:  
Pump ☐ Bailor ☐ Air ☒ Flowing artesian ☐

Water quality test or comments: good

13. LITHOLOGIC LOG and/or repairs or abandonment:

| Bore Dia. (in) | From (ft) | To (ft) | Remarks, lithology or description of repairs or abandonment, water log. | Water |   |
|----------------|-----------|---------|-------------------------------------------------------------------------|-------|---|
|                |           |         |                                                                         | Y     | N |
| 10             | 0         | 30      | Run clay                                                                |       | X |
| 10             | 30        | 38      | Run clay gravel                                                         |       | X |
| 6              | 38        | 40      | Run clay gravel                                                         |       | X |
| 6              | 40        | 50      | Run clay                                                                |       | X |
| 6              | 50        | 65      | Run clay gravel                                                         | X     |   |
| 6              | 65        | 70      | Run clay                                                                |       | X |
| 6              | 70        | 80      | Gravel Run clay                                                         | X     |   |
| 6              | 80        | 85      | Gravel                                                                  | X     |   |
| 6              | 85        | 95      | Run clay gravel                                                         | X     |   |
| 6              | 95        | 100     | Gravel                                                                  | X     |   |

Completed Depth (Measurable) 120'  
Date Started 9-13-11 Date Completed 9-14-11

14. DRILLER'S CERTIFICATION:  
We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name MT West Well Drilling No. 543  
Principal Driller Michael Zander Date 9-19-11  
Driller Miles Strandan Date 9-19-11  
Operator II \_\_\_\_\_ Date \_\_\_\_\_  
Operator I \_\_\_\_\_ Date \_\_\_\_\_  
\* Signature of Principal Driller and rig operator are required.

Figure I-16 Well log for Travis Huckaby Domestic Well



**Clearwater Geosciences, LLP**  
**Ground Water Development and Exploration**

Form 236-7  
3/98

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

706458

Office Use Only  
Inspected by \_\_\_\_\_  
Twp \_\_\_\_\_ Rge \_\_\_\_\_ Sec \_\_\_\_\_  
1/4 \_\_\_\_\_ 1/4 \_\_\_\_\_ 1/4 \_\_\_\_\_  
Lat \_\_\_\_\_ Long \_\_\_\_\_  
☐ Pump ☐ Bailor ☐ Air ☐ Flowing Artesian

1. DRILLING PERMIT NO. D-002-1175-7  
Other IDWR No 12-98-B-0025-000

2. OWNER: VERNON HULSE  
Name \_\_\_\_\_  
Address 4100 S 27th W  
City SALT LAKE State UTAH

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

Map grid showing location:  
Twp 15 North ☐ or South ☒  
Rge 35 East ☐ or West ☒  
Sec 14 SW 1/4 SW 1/4 1/4  
Govt Lot \_\_\_\_\_ County DAVIS  
Lat: \_\_\_\_\_ Long: \_\_\_\_\_  
Address of Well Site SALT LAKE  
City \_\_\_\_\_  
Elev at least name of road, distance to well or 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**

| SEAL/FILTER PACK |          | AMOUNT    |                 | METHOD            |
|------------------|----------|-----------|-----------------|-------------------|
| Material         | From     | To        | Sacks or Pounds |                   |
| <u>Potassium</u> | <u>0</u> | <u>30</u> | <u>7</u>        | <u>Grout Pack</u> |

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

**8. CASING/LINER:**

| Thickness   | From     | To        | Gauge      | Material     | Casing                              | Liner                    | Welded                   | Drilled                  |
|-------------|----------|-----------|------------|--------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| <u>8 FT</u> | <u>0</u> | <u>30</u> | <u>1/2</u> | <u>Steel</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Length of Headpipe \_\_\_\_\_ Length of Tailpipe \_\_\_\_\_

**9. PERFORATIONS/SCREENS**

☐ Perforations Method \_\_\_\_\_  
☐ Screens Screen Type \_\_\_\_\_

| From | To | Bot Size | Number | Diameter | Material | Casing                   | Liner                    |
|------|----|----------|--------|----------|----------|--------------------------|--------------------------|
|      |    |          |        |          |          | <input type="checkbox"/> | <input type="checkbox"/> |

**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:**

| Yield gal/min | Drawdown   | Pumping Level | Time        |
|---------------|------------|---------------|-------------|
| <u>20-30</u>  | <u>120</u> | <u>120</u>    | <u>1 hr</u> |

Water Temp \_\_\_\_\_ Bottom hole temp \_\_\_\_\_  
Water Quality test or comments \_\_\_\_\_

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

| Row No.   | From       | To         | Remarks: Lithology, Water Quality & Temperature | Y | N |
|-----------|------------|------------|-------------------------------------------------|---|---|
| <u>10</u> | <u>0</u>   | <u>5</u>   | <u>BROWN CLAY</u>                               |   |   |
| <u>10</u> | <u>5</u>   | <u>20</u>  | <u>CLAY &amp; ROCKS</u>                         |   |   |
| <u>8</u>  | <u>30</u>  | <u>80</u>  | <u>" "</u>                                      |   |   |
|           | <u>80</u>  | <u>110</u> | <u>" "</u>                                      |   |   |
|           | <u>110</u> | <u>120</u> | <u>GRAVEL &amp; ROCK</u>                        |   |   |

RECEIVED

AUG 04 1998

Department of Water Resources  
Eastern Region

RECEIVED

AUG 07 1998

Department of Water Resources

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

**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 Landstrom & Son, Inc. Firm No 118

Firm Office Denver, Colorado Date 6-18-98

and \_\_\_\_\_ Supervisor or Operator \_\_\_\_\_ Date \_\_\_\_\_

(Sign only if Firm Owner & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

Figure 1-17 Well log for Vernon Hulse Domestic Well



## **Attachment 2**

# **DATA PLOTS**

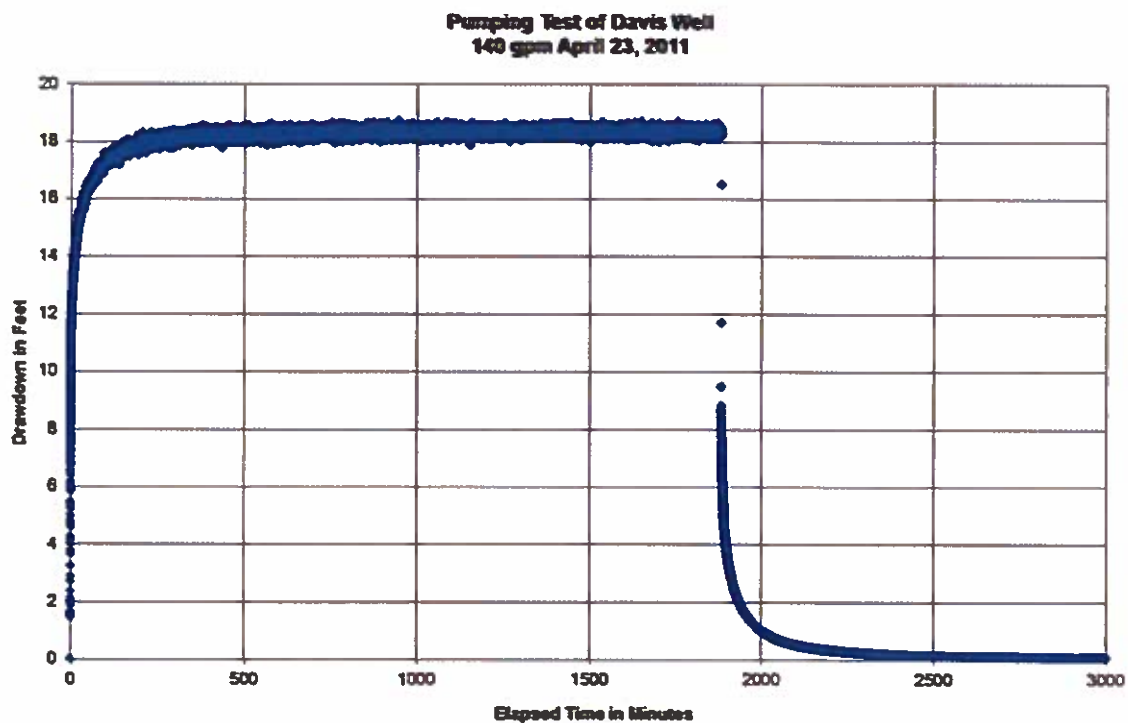


Figure 2-1. Plot of entire data set for pumping test of the Jeff Davis Irrigation well.

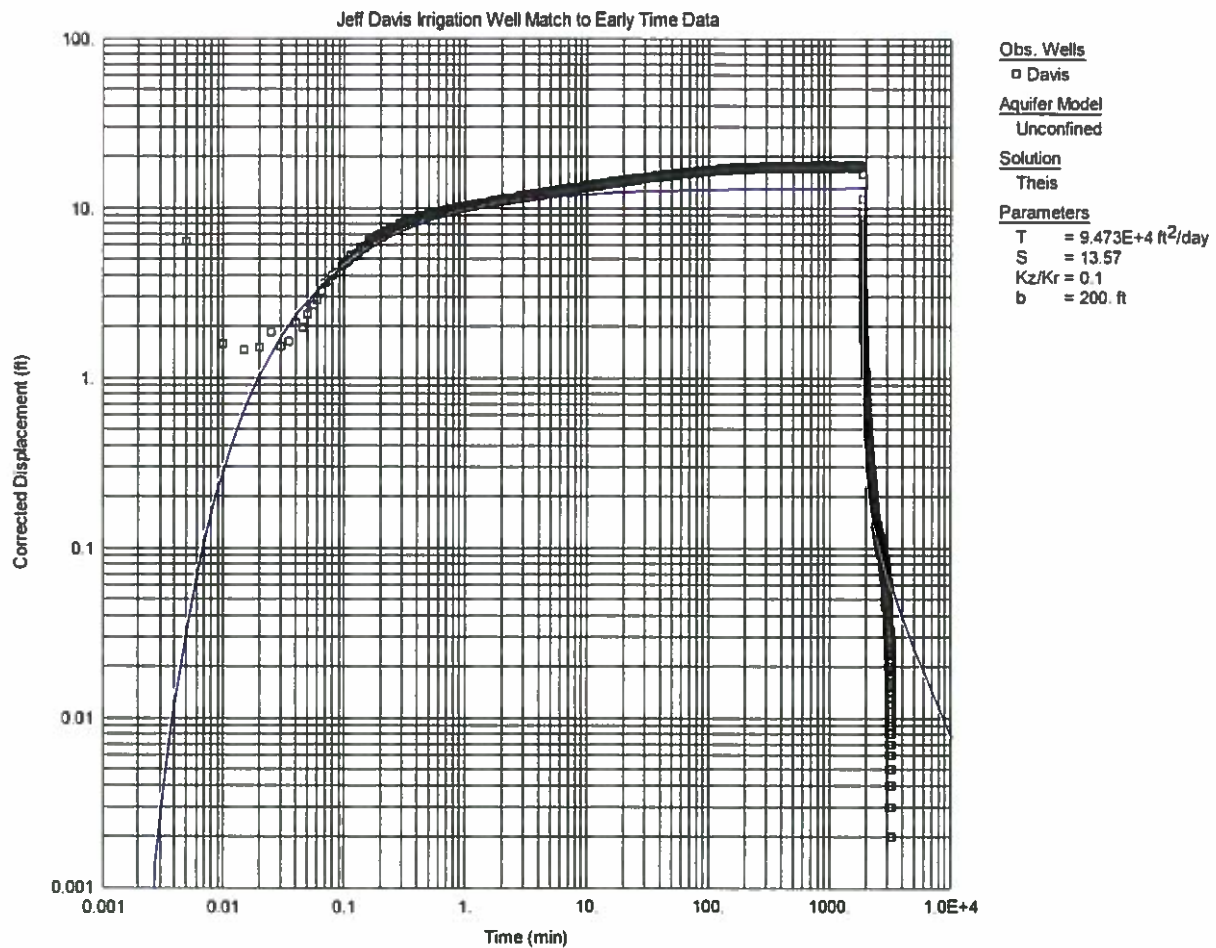


Figure 2-2 Theis unconfined solution matched to early time well data in Jeff Davis Test.

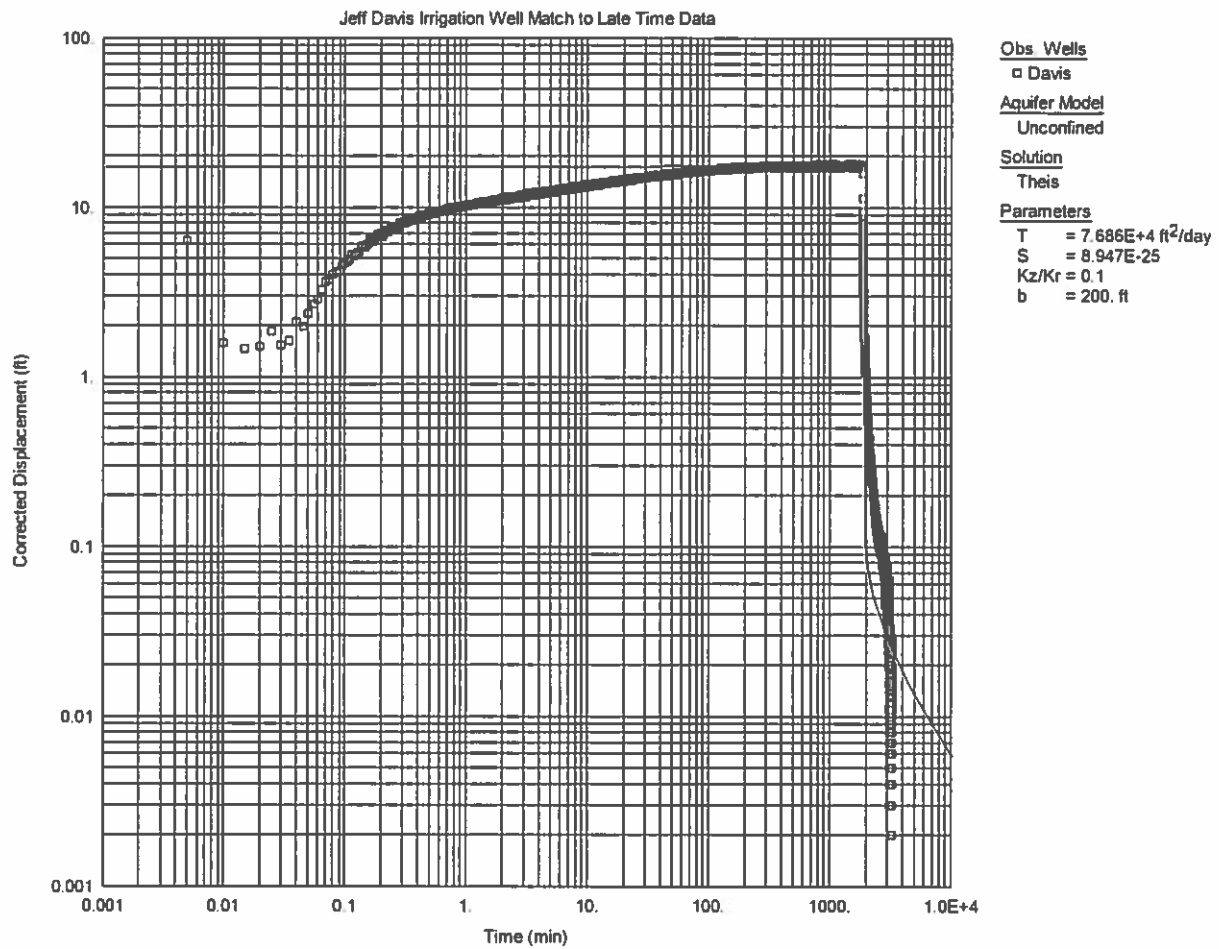


Figure 2-3 Theis unconfined solution matched to late time well data in Jeff Davis Test.

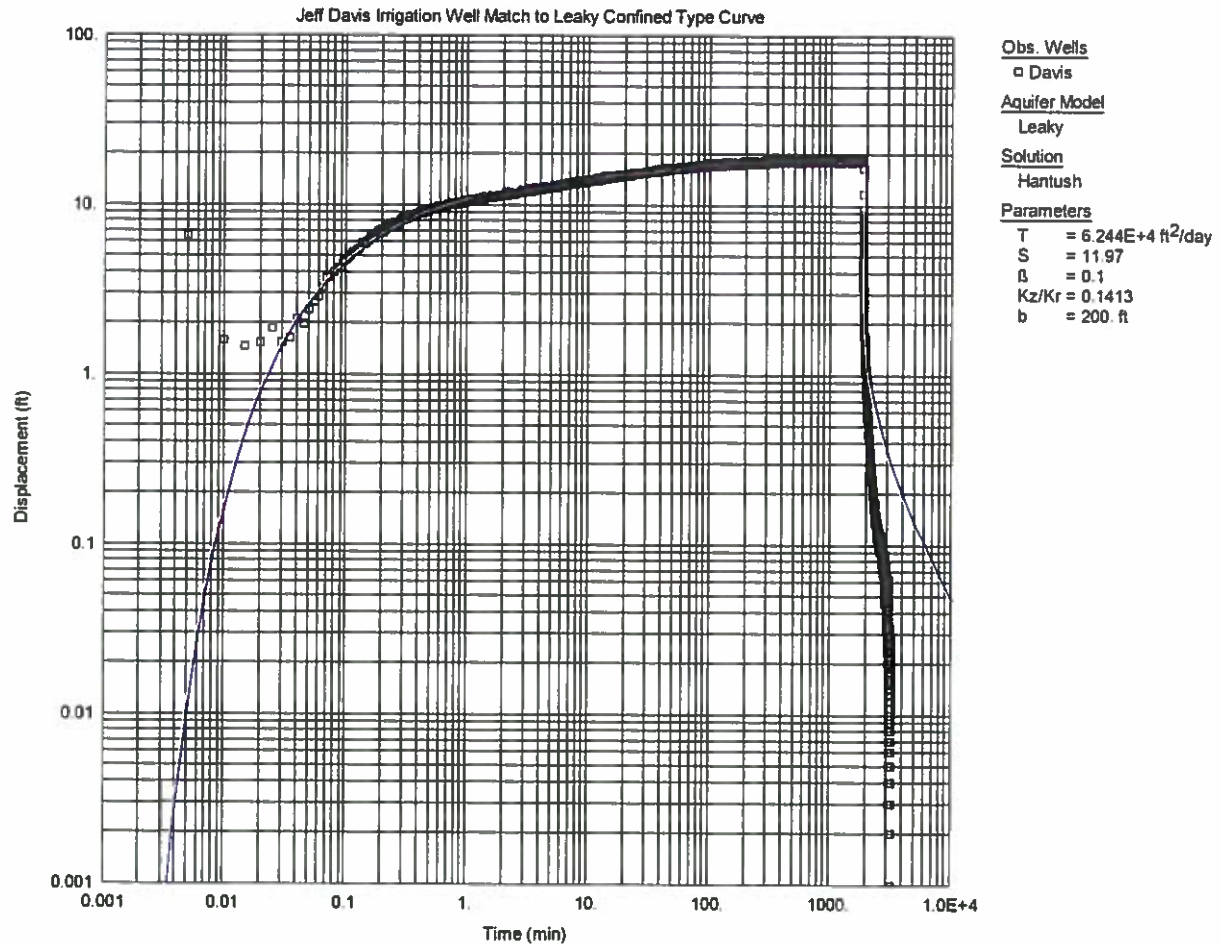


Figure 3-4 Hantush leaky confined solution matched to well data Jeff Davis Test.



## **Attachment 4**

# **AQUIFER IMPACT ANALYSIS**



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

| Parameter             | Value   | Unit               |
|-----------------------|---------|--------------------|
| Transmissivity        | 62,400  | ft <sup>2</sup> /d |
| Storativity           | 0.01    | unitless           |
| Flow Rate             | 772     | gpm                |
| Duration              | 302,400 | min                |
| Total volume          | 716     | 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     |
| Waldron POD         | 3940  | 5080  |
| Well 0.5 mile N     | 3940  | 7700  |
| Well 0.5 mile E     | 6560  | 5080  |
| Well 0.5 mile S     | 3940  | 2460  |
| Location 0.5 mile W | 1320  | 5080  |



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

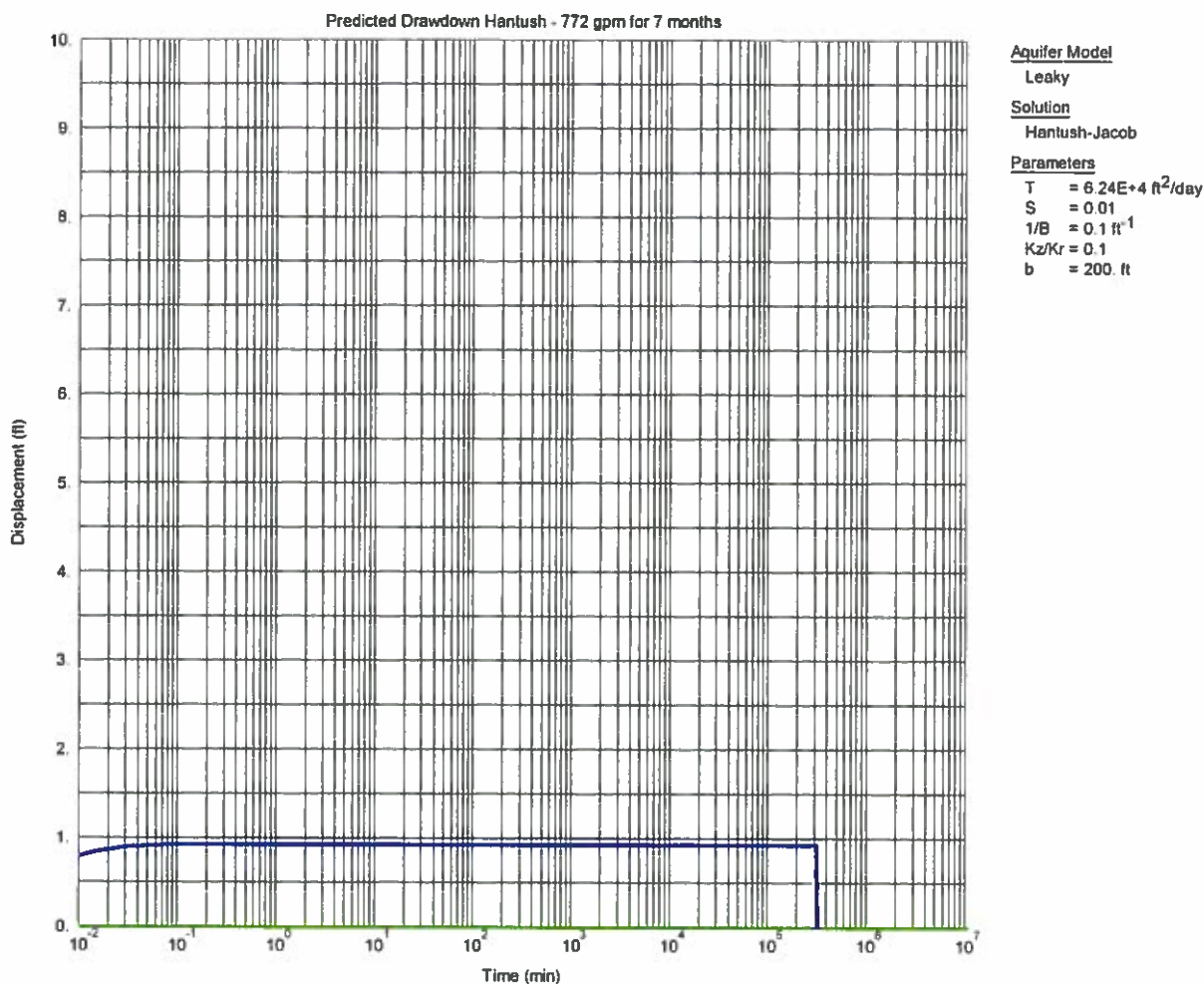


Figure 4-2 Leaky confined predictive plot of drawdown at 772 gpm or 1.72 cfs for the full period of use 210 days.

**Key to line colors**

- Blue Proposed POD for Keetch
- 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

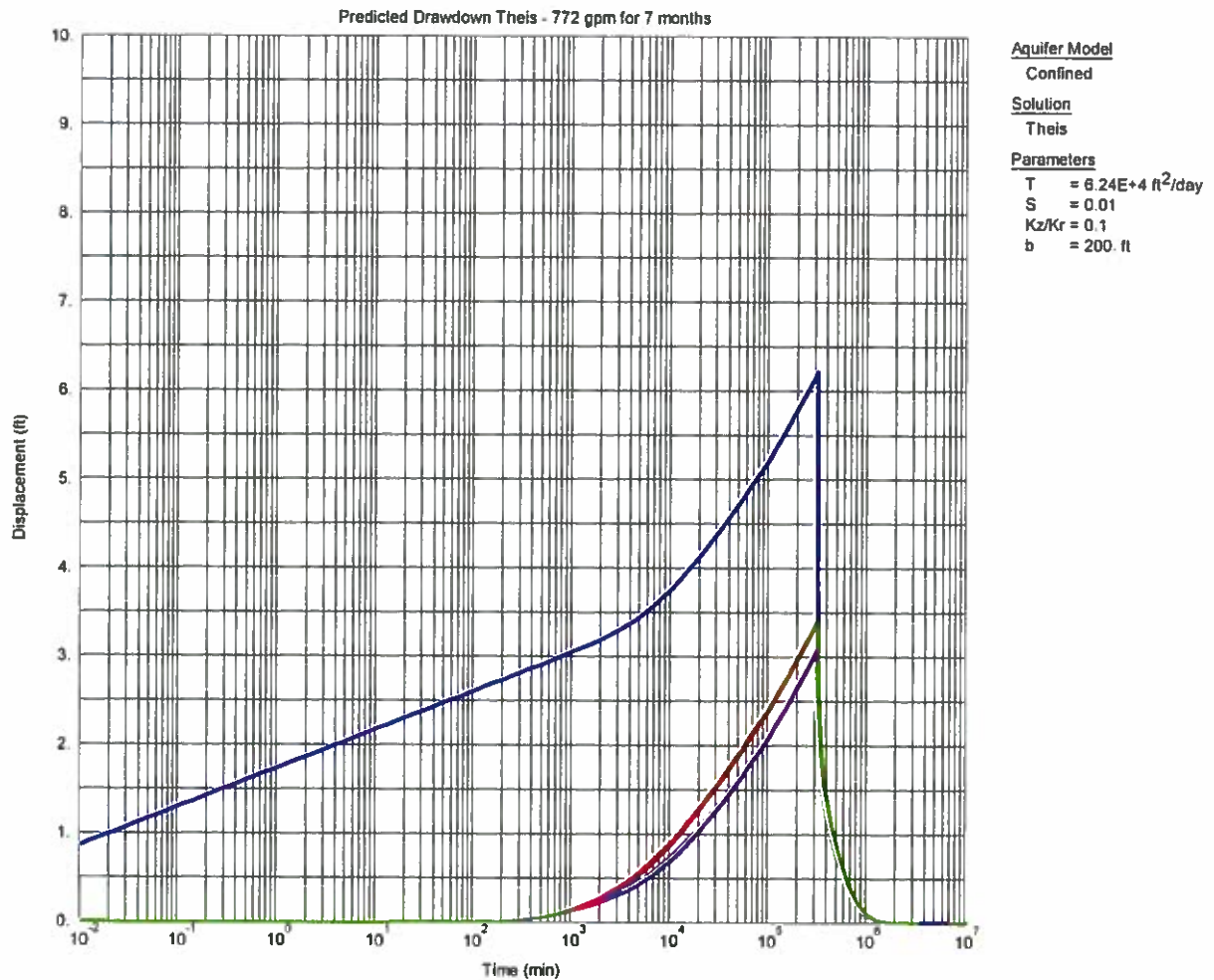


Figure 4-3 Theis confined predictive plot of drawdown at 772 gpm or 1.72 cfs for the full period of use 210 days.

**Key to line colors**

- Blue Proposed POD for Keetch
- Black Imaginary well 1/2 mile north of the proposed POD
- Green Imaginary well 1/2 mile west of the proposed POD
- Red Imaginary well 1/2 mile south of the proposed POD
- Purple Imaginary well 1/2 mile east of the proposed POD