

Project No. 426-02-2009

Multiple Well Effect Analysis of Transfer 75529

Prepared for: Greg DeVries and requested by Stan Haye

Greg and Julie DeVries
3971 N 1200 E
Buhl, ID 83316

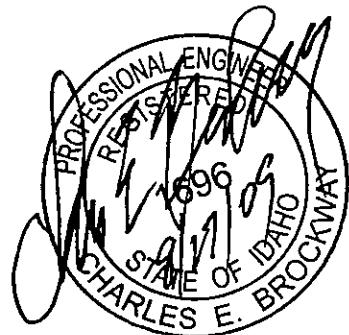
August 27, 2009

For information concerning this report, contact
Charles E. Brockway, Ph.D., P.E.
Greg Sullivan, M.S., E.I.T.



CHARLES E. BROCKWAY, PH.D., P.E.
CHARLES G. BROCKWAY, PH.D., P.E.

2016 NORTH WASHINGTON, SUITE 4
TWIN FALLS, IDAHO 83301



Historical Summary

Greg DeVries has purchased 0.25/49.6 CFS/AFA irrigation water from Mathers Ranch LLC and desires to change the beneficial use of the water to stock and commercial water. Transfer 75529 was prepared by Stan Hays of Snake River Management and submitted to the Idaho Department of Water Resources June 25, 2008. The transfer was processed and advertised for public notice. A notice of protest was filed by DuWayne Kimball. Mr. Kimball is concerned that if transfer 75529 was approved that his water right 47-10987 would be injured.

The proposed point of diversion (POD) identified in transfer 75529 is located in Township 10 South Range 14 East Section 9 SENE.

The POD for 47-10987 (Protestant) is located in Township 11 South Range 14 East Section 2 SWNESW.

Methodology

The Theis Equation is a standard tool used to analyze the effects of discharge from an aquifer will have on surrounding wells that may be affected by an increase or decrease in discharge. The effects would be a decrease of the static water level (SWL) within a designated well. The required characteristics of the aquifer needed to utilize for the Theis Formula is the hydraulic conductivity (K), transmissivity (T) and the storativity (S). Other variables included in the Theis Formula include radius of analysis, length of time of discharge (T) and discharge rate (Q).

The Theis equation calculates the amount of draw down of the static water level in an aquifer at a designated radius and time with a know discharge rate.

Data Collection

A total of ten well logs (see Wells Analysis for Transfer map) were examined in the Idaho Department of Water Resources database. The examined wells form a rough dotted line between the proposed POD for transfer 75529 and the POD of 47-10987. At the time of drilling of the wells, the drillers performed pump tests and recorded them in the drillers log. These pump tests were performed with an actual pump or by forcing pressurized air in to the well to determine how much water is available in the well. From the ten well logs the hydraulic conductivity and saturation depth of the aquifer was estimated. Only the well logs with pump tests performed with a pump were used to calculate the hydraulic conductivity of 37.5 ft/day for the aquifer (Table 1).

The proposed POD for transfer 75529 is approximately 5.0 miles from the POD for 47-10987 (see Transfer Protestant Location map). The 5.0 mile estimate is based on protestants domestic residence as identified by Stan

Haye. The 5.62 miles is based on the POD for 47-10987 as decreed by IDWR.

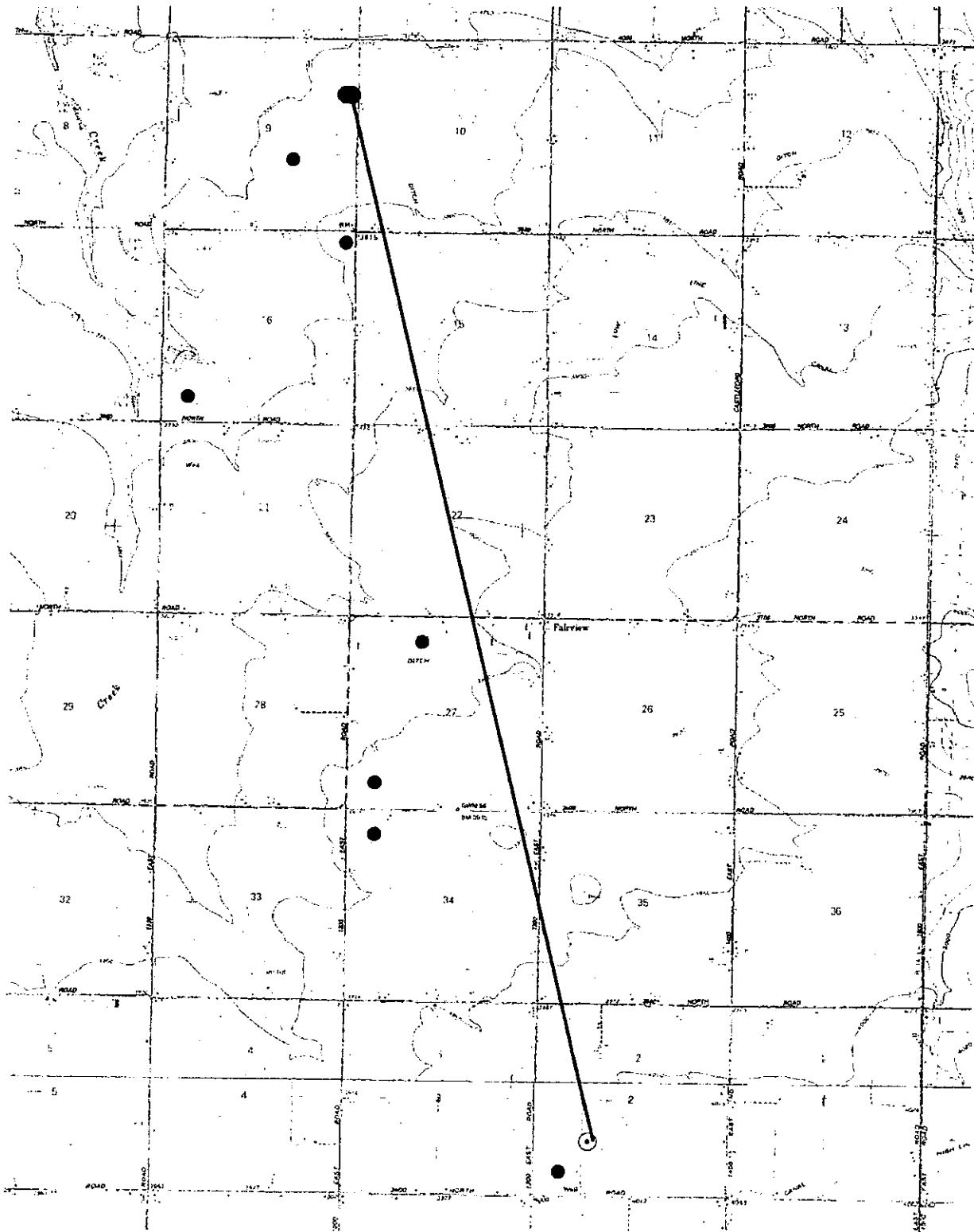
Analysis

A total of five radiuses were examined. This analysis assumes a constant continual diversion of 0.25 CFS. The first is at 0.5 ft which represents the well in which the 0.25 CFS of water is being discharged from. The second radius of 100 ft represents a well that is 100 ft from the proposed POD. The third radius of 1000 ft represents a well that is 1000 ft from the proposed POD. The radius of 1 mile represents a well that is 1 mile from the proposed POD. The radius of 5 miles represents the POD of 47-10987 in relation to the proposed POD for transfer 75529 (Table 2).

The elapsed time for the analysis is 2.0 years which is equivalent to 740 days. At the elapsed time of 2.0 years the SWL at the POD (well) for transfer 75529 will decrease 7.2 ft. At the elapsed time of 2.0 years the SWL at a radius of 100 ft will decrease 2.2 ft. At the elapsed time of 2.0 years the SWL at a radius of 1000 ft will decrease 0.3 ft. At the elapsed time of 2.0 years the SWL at a radius of 1 mile will decrease 0.0 ft. At the elapsed time of 2.0 years the SWL at the POD for 47-10987 will decrease 0.0 ft (Figure 1).

Conclusion

From this analysis, the 0.25/49.6 CFS/ AFA diversion proposed for Mr. DeVries will have no distinguishable impact on 47-75529 as a result of the approval and implementation of transfer 75529. The aquifer appears to be in a stable condition based upon the well logs and the related hydrological characteristics.



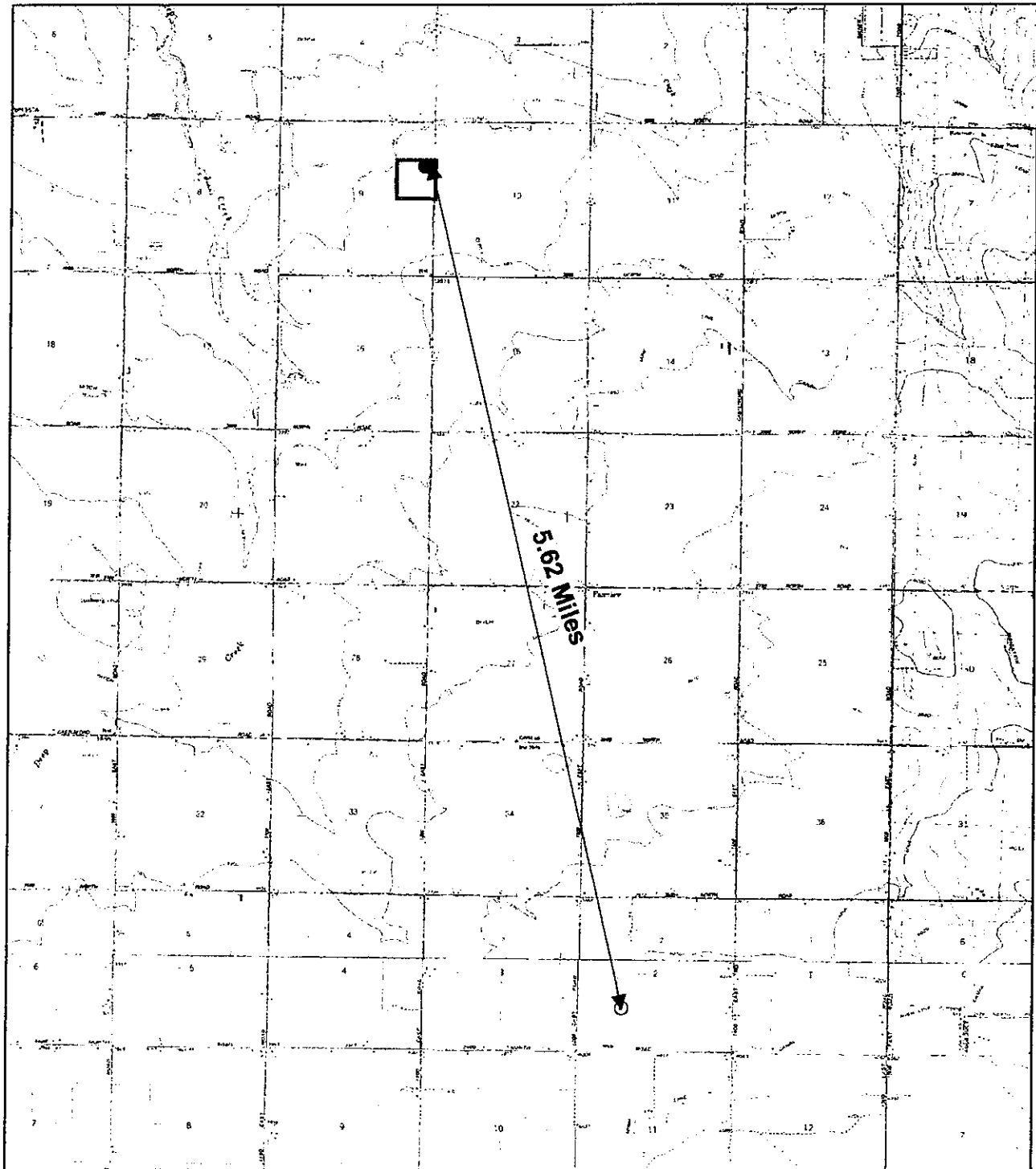
1 inch equals 4,200 feet

DEVRIES, GREGORY
WELLS ANALYSIS FOR TRANSFER
USGS 1:24,000 TOPOGRAPHICAL

Legend

- 47-10987 Protestant Kimball POD
- Devries Point of Diversion
- Wells in Area





1 inch equals 1.00 miles

DEVRIES, GREGORY
TRANSFER PROTESTANT LOCATION
USGS 1:24,000 TOPOGRAPHY MAP

Legend

- Devries Point of Diversion
- Devries Proposed POU
- Protestant Kimball POD
- Protestant Kimball POU



Table 1

ESTIMATION OF HYDRAULIC CONDUCTIVITY USING SPECIFIC CAPACITY

Project: Greg DeVries Stock and Commercial Well Analysis
Brookway Engineering, PLLC 8/21/09

Assumed specific yield 0.01

Well I.D.	SWL (ft)	Bore diam (in)	Pumping rate (gpm)	Pumping duration (hrs)	Pumping WL (ft)	Saturated Depth (ft)	Drawdown (ft)	Specific Cap (gpm/ft)	Estimated T (ft ² /d)*		Average T from the two methods	Estimated K (ft/d)***		Average K from the two methods		Test Type
									Method 1	Method 2		Method 1	Method 2			
Greg DeVries	49	6	35	0.5	95	52	46	0.8	98	203	150.5	1.0	2.1	1.5		Air
Bowers	4.6	6	145	0.5	13.1	63.4	8.5	17.1	2194	4555	3374.2	22.3	46.3	34.3		pump
Bowers	7	6	195	0.5	10.4	48	3.4	57.4	7376	15313	11344.4	74.9	155.6	115.2		pump
Bowers	6	6	150	0.5	12	51	6	25.0	3215	6675	4945.0	32.7	67.8	50.2		pump
Wray	80	6	30	2	81	60	1	30.0	4369	8010	6189.6	44.4	81.4	62.9		Air
Kaufman	32	6	35	1	100	69	68	0.5	71	137	104.0	0.7	1.4	1.1		Air
William	105	6	30	1	150	105	45	0.7	91	178	134.7	0.9	1.8	1.4		pump
Bothof	100	6	75	0.5	190	160	90	0.8	107	223	164.8	1.1	2.3	1.7		air
Blick	117	6	30	4	118	183	1	30.0	4625	8010	6317.4	47.0	81.4	64.2		pump
West	42	6	15	2	100	193	58	0.3	38	69	53.4	0.4	0.7	0.5		pump
Average	54.3	6.0	74.0	1.3	87.0	98.4	32.7	16.2	2218	4337	3278	22.5	44.1	33.3		

* Method 1: Theis (1963)

Method 2: Thomasson, et al. (1963)

** K = T / b, where b = average saturated depth

Well Drillers Logs

Owner:	Legal
Greg DeVries	T10S R14E Sec. 9 SENE
Bowers	T10S R14E Sec. 9 NWSE
Bowers	T10S R14E Sec. 9 NWSE
Bowers	T10S R14E Sec. 9 NWSE
Wray	T10S R14E Sec. 16 NENENE
Kaufman	T10S R14E Sec. 16 SWSW
WilliamS	T10S R14E Sec. 27 NENW
Bothof	T10S R14E Sec. 27 SWSW
Blick	T10S R14E Sec. 34 NWNW
West	T11S R14E Sec. 2 SWSW

Hydraulic Conductivity (K)	
Over all Average	33.3
Average excluding high and low values	27.1
Average for only Pump Test values	44.3
Average excluding high and low values	37.5

Transmissivity (T)	
Over all Average	3278
Average excluding high and low values	2382
Average for only Pump Test values	4362
Average excluding high and low values	3693

Table 2

Greg DeVries Stock and Commerical Well Analysis

Well Interference Analysis

Brockway Engr, PLLC

Greg Sullivan 8/21/09

AQUIFER PROPERTIES BASED ON WELL LOGS AND CALCULATED AQUIFER CHARACTERISTICS

USING THIS FORMULA $S=114.6 \cdot Q \cdot T \cdot W(u)$

Q= PUMPING RATE GPM

T= COEFFICIENT OF TRANSMISSIBILITY

W(u)= WELL FUNCTION OF U

W(u)= $-5772 \cdot \log_{10} u + U \cdot 2 \cdot (2/21) \cdot U \cdot 3 \cdot (3/3) \cdot U \cdot 4 \cdot (4/4)$ U= $1.87 \cdot r^2 \cdot S / (t \cdot L)$

L= DISTANCE IN FT. FROM CENTER OF PUMPED WELL TO DRAWDOWN POINT

S= COEFFICIENT OF STORAGE

T= COEFFICIENT OF TRANSMISSIBILITY, GPD/FT

t= TIME SINCE PUMPING STARTED, DAYS

INPUT

r= 0.500 FT

L= 100 FT

S= 0.000434

T= 2.80E-02

t= 8280 FT

L= 1 mile

S= 0.01

T= 27527 GPD/FT

t= 112.2 GPM = 0.2560 CFS

OWELL

Pumping Rate (cfs)= 0.25

Pumping Rate (gpm)= 112.21

Proposed Diversion

Proposed Diversion

Radius 1

Radius 2

Radius 3

Radius 4

Radius 5

WELL

WELL

WELL

WELL

WELL

WELL

WELL

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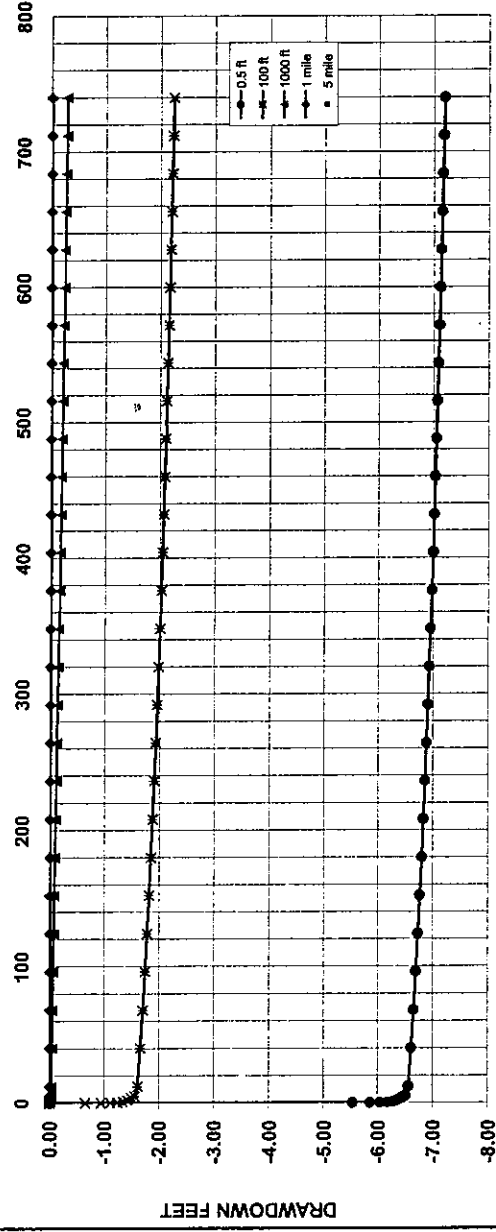
WELL

WELL

Table 2 continued

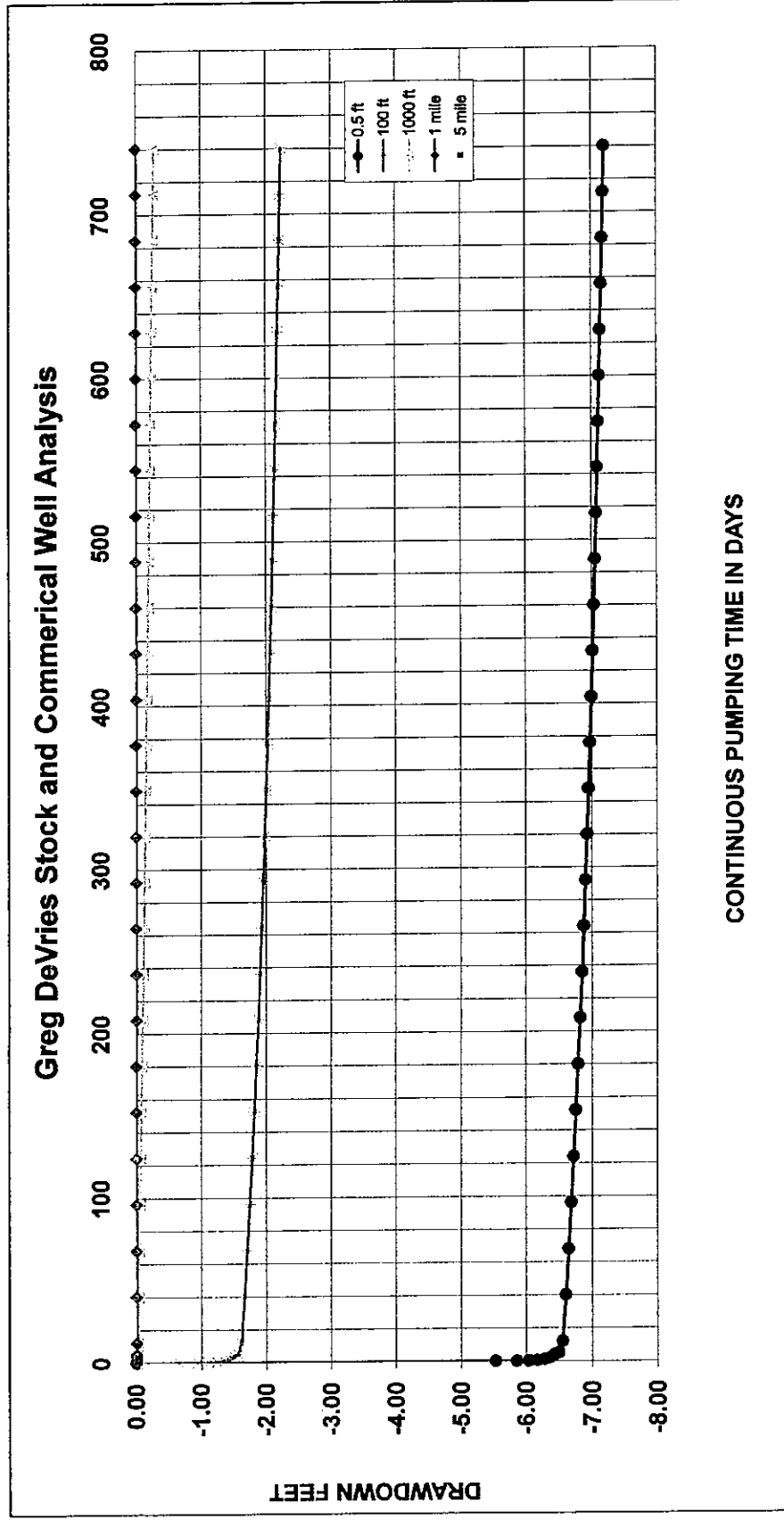
		Greg DeVries Stock and Commerical Well Analysis									
		Aquifer Drawdown Analysis Using Theis Equation									
		R= 0.5 ft R= 100 ft R= 1000 ft R= 5280 ft R= 26400 ft									
Hours	Years	Days	0	0	0	0	0	0	0	0	0
0	0.0	0.00	-5.5	-0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	0.0	0.04	-5.5	-0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.08	-5.9	-0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.13	-6.0	-1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.42	-6.2	-1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	1.00	-6.3	-1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	0.0	2.00	-6.4	-1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96	0.0	4.00	-6.4	-1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120	0.0	5.00	-6.5	-1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
288	0.0	12.00	-6.6	-1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
560	0.1	40.00	-6.6	-1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1632	0.2	68.00	-6.6	-1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2304	0.3	96.00	-6.7	-1.7	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
2976	0.3	124.00	-6.7	-1.8	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
3648	0.4	152.00	-6.8	-1.8	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
4320	0.5	180.00	-6.8	-1.8	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
4992	0.6	208.00	-6.8	-1.9	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
5664	0.6	236.00	-6.9	-1.9	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
6336	0.7	264.00	-6.9	-1.9	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
7008	0.8	292.00	-6.9	-2.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
7680	0.9	320.00	-6.9	-2.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
8352	1.0	348.00	-6.9	-2.0	-0.2	0.0	0.0	0.0	0.0	0.0	0.0
9024	1.0	376.00	-7.0	-2.0	-0.2	0.0	0.0	0.0	0.0	0.0	0.0
9696	1.1	404.00	-7.0	-2.0	-0.2	0.0	0.0	0.0	0.0	0.0	0.0
10368	1.2	432.00	-7.0	-2.1	-0.2	0.0	0.0	0.0	0.0	0.0	0.0
11040	1.3	460.00	-7.0	-2.1	-0.2	0.0	0.0	0.0	0.0	0.0	0.0
11712	1.3	488.00	-7.0	-2.1	-0.2	0.0	0.0	0.0	0.0	0.0	0.0
12384	1.4	516.00	-7.1	-2.1	-0.2	0.0	0.0	0.0	0.0	0.0	0.0
13056	1.5	544.00	-7.1	-2.1	-0.2	0.0	0.0	0.0	0.0	0.0	0.0
13728	1.6	572.00	-7.1	-2.2	-0.2	0.0	0.0	0.0	0.0	0.0	0.0
14400	1.6	600.00	-7.1	-2.2	-0.2	0.0	0.0	0.0	0.0	0.0	0.0
15072	1.7	628.00	-7.1	-2.2	-0.2	0.0	0.0	0.0	0.0	0.0	0.0
15744	1.8	656.00	-7.1	-2.2	-0.3	0.0	0.0	0.0	0.0	0.0	0.0
16416	1.9	684.00	-7.2	-2.2	-0.3	0.0	0.0	0.0	0.0	0.0	0.0
17088	1.9	712.00	-7.2	-2.2	-0.3	0.0	0.0	0.0	0.0	0.0	0.0
17760	2.0	740.00	-7.2	-2.2	-0.3	0.0	0.0	0.0	0.0	0.0	0.0

Greg DeVries Stock and Commerical Well Analysis



CONTINUOUS PUMPING TIME IN DAYS

Figure 1



IDAHO DEPARTMENT OF WATER RESOURCES WELL DRILLER'S REPORT

1. WELL TAG NO. D DO043040
DRILLING PERMIT NO. _____
Water Right or Injection Well No. _____

2. OWNER:
Name BREG DEVIZES
Address 3871 N 1200 E
City Bah State ID Zip 83316

3. LOCATION OF WELL by legal description:
You must provide address or Lot, Blk, Sub. or Directions to well.
Twp. 10 North ☐ or South ☒
Rge. 14 East ☒ or West ☐
Sec. 9 1/4 SE 1/4 NE 1/4
Gov't Lot _____
County _____
Lat: _____ Long: _____
Address of Well Site same City _____
(Give at least name 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 Replacement

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

7. SEALING PROCEDURES

Seal Material	From	To	Weight / Volume	Seal Placement Method
<u>Bentonite</u>	<u>0</u>	<u>39</u>	<u>400#</u>	<u>overbore/pont</u>

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
<u>6 1/2</u>	<u>1</u>	<u>39</u>	<u>250</u>	<u>steel</u>	☒	☐	☒	☐

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

9. PERFORATIONS/SCREENS PACKER TYPE

Perforation Method _____
Screen Type & Method of Installation _____

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
						☐	☐

10. FILTER PACK

Filter Material	From	To	Weight / Volume	Placement Method

11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

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

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

12. WELL TESTS:

☐ Pump ☐ Bailor ☒ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
<u>75</u>		<u>95</u>	<u>30 min.</u>

Water Temp. -55° Bottom hole temp. _____

Water Quality test or comments: Clear & no odor

Depth first Water Encounter 73

13. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
<u>8</u>	<u>0</u>	<u>5</u>	<u>Topsoil</u>		
	<u>5</u>	<u>7</u>	<u>white shale</u>		
	<u>7</u>	<u>39</u>	<u>Lava</u>		
<u>6</u>	<u>39</u>	<u>73</u>	<u>Lava</u>		
	<u>73</u>	<u>101</u>	<u>Lava w/ water table</u>		☒

RECEIVED

JUL 27 2006

DEPT. OF WATER RESOURCES
SOUTHERN REGION

Completed Depth 101 (Measurable)
Date: Started 6/22/06 Completed 6/22/06

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 Bishop Well Drilling Firm No. 647

Principal Driller [Signature] Date 7/15/06

Driller or Operator II _____ Date _____

Operator I _____ Date _____

Principal Driller and Rig Operator Required.
Operator I must have signature of Driller/Operator II.

Well No. _____

Permit No. _____

(DO NOT FILL IN)

Owner Dale Bowers Address Buhl
 Driller Lincoln Heatner Address Twin Falls Lic. No. _____
 Location of Well: NW 1/4 SE 1/4 Sec. 9, T. 10 N. S. R. 14 E. Twin Falls County,
 and _____ feet N/S, and _____ feet E/W from _____ Corner of _____ 1/4 _____ 1/4 Sec. _____
 Size of Drilled Hole 6 1/4 Total depth of Well 68
 Give depth of standing water from surface 4.6 Water Temp. _____ °Fahrenheit
 On pumping test delivery was 145 g.p.m. or _____ c.f.s. Drawdown was 8.5 feet.
 Size of pump and motor used to make the test 3 in centrifugal
 Length of time pumped during check was _____ hr., 30 minutes.
 If flowing well, give flow in c.f.s. _____ or g.p.m. _____ and shut in pressure _____
 If flowing well, describe control works _____
 (TYPE AND SIZE OF VALVE, ETC.) _____
 Water will be used for drainage Weight of casing per linear foot _____
 Thickness of casing 3/16 Casing material Steel
 E.G., PIPE, CONCRETE, WOOD.
 Diameter, length and location of casing 6 1/4" x 4' top & bottom
 (CASING 12" IN DIAMETER AND UNDER GIVE INSIDE DIAMETER;
 CASING OVER 12" IN DIAMETER GIVE OUTSIDE DIAMETER.)
 Number and size of perforations none located _____ feet to _____ feet
 from surface of ground.
 Other perforations _____
 Date of commencement of well 1-15-62 Date of completion of well 1-17-62
 Type of well rig spudding machine

CASING RECORD

DIAM. CASING	FROM FEET	TO FEET	LENGTH	REMARKS -- SEALS, GROUTING, ETC.
<u>6 1/4</u>	<u>0</u>	<u>4</u>	<u>4</u>	

GENERAL INFORMATION—Pumping Test, Quality of Water, Etc.

NWSE 5.9 10S 14Eused

WELL LOG

[illegible]

WELL DRILLERS' STATEMENT

This well was drilled under my jurisdiction and the above information is true and correct to the best of my knowledge and belief.

Signed Elmo C. Green

By _____

Dated Feb - 22 -, 1962

License No. 78

**WELL LOG AND REPORT TO THE
STATE RECLAMATION ENGINEER OF IDAHO**

098016
RECEIVED
JAN 23 1962

Log No. _____
Department of Reclamation
Rec'd. _____, 19____
Well No. _____
Permit No. _____

(DO NOT FILL IN)

Owner Dale Bowers Address _____
Driller Lincoln Hestner Address Twin Falls Lic. No. _____
Location of Well NW 1/4 SE 1/4 Sec. 9, T. 10 S., R. 14 E., Twin Falls County,
and _____ feet N/S, and _____ feet E/W from _____ Corner of _____ 1/4 Sec. _____
Size of Drilled Hole 6 1/4 Total depth of Well 55
Give depth of standing water from surface 7 ft Water Temp. _____ °Fahrenheit
On pumping test delivery was 195 g.p.m. or _____ c.f.s. Drawdown was 3.4 feet.
Size of pump and motor used to make the test 3 in. centrifugal
Length of time pumped during check was _____ hr., 30 minutes.
If flowing well, give flow in c.f.s. _____ or g.p.m. _____ and shut in pressure _____
If flowing well, describe control works _____ (TYPE AND SIZE OF VALVE, ETC.)
Water will be used for drainage Weight of casing per linear foot _____
Thickness of casing 3/16 Casing material Steel
E.G., PIPE, CONCRETE, WOOD.
Diameter, length and location of casing 6 1/4 x 7'6" to 7'6"
(CASING 12" IN DIAMETER AND UNDER GIVE INSIDE DIAMETER;
CASING OVER 12" IN DIAMETER GIVE OUTSIDE DIAMETER.)
Number and size of perforations _____ located _____ feet to _____ feet
from surface of ground.
Other perforations _____
Date of commencement of well 1-11-62 Date of completion of well 1-15-62
Type of well rig Cable tools

CASING RECORD

DIAM. CASING	FROM FEET	TO FEET	LENGTH	REMARKS -- SEALS, GROUTING, ETC.
<u>6 1/4</u>	<u>0</u>	<u>7</u>	<u>7-6</u>	

GENERAL INFORMATION—Pumping Test, Quality of Water, Etc.

NW SE S. 9 10S 14E

used

WELL LOG

[illegible]

WELL DRILLERS STATEMENT

This well was drilled under my jurisdiction and the above information is true and correct to the best of my knowledge and belief.

Signed Ernest C. Jones

By *****

Dated Jan 18, 1962.

License No. 28

**WELL LOG AND REPORT TO THE
STATE RECLAMATION ENGINEER OF IDAHO**

098014

RECEIVED

Log No. _____
 Rec'd _____ 19____
 Department of Reclamation
 Well No. _____
 Permit No. _____

(DO NOT FILL IN)

Owner Dale Bowers Address _____
 Driller Lincoln Hestner Address Twin Falls Lic. No. _____
 Location of Well: NW 1/4 SE 1/4 Sec. 9, T. 10 N, R. 14 E, TF County,
 and _____ feet N/S, and _____ feet E/W from _____ Corner of _____ 1/4 Sec. _____
 Size of Drilled Hole 6 1/2 Total depth of Well 57
 Give depth of standing water from surface 6-4 Water Temp. _____ °Fahrenheit
 On pumping test delivery was _____ g.p.m. or _____ c.f.s. Drawdown was 6 feet.
 Size of pump and motor used to make the test 3 in centrifugal pump
 Length of time pumped during check was _____ hr., 30 minutes.
 If flowing well, give flow in c.f.s. _____ or g.p.m. _____ and shut in pressure _____
 If flowing well, describe control works _____ (TYPE AND SIZE OF VALVE, ETC.) _____
 Water will be used for drainage Weight of casing per linear foot _____
 Thickness of casing 3/8 Casing material steel
E.G., PIPE, CONCRETE, WOOD.
 Diameter, length and location of casing 6 1/2" x 4' top 4 ft
(CASING 12" IN DIAMETER AND UNDER GIVE INSIDE DIAMETER;
CASING OVER 12" IN DIAMETER GIVE OUTSIDE DIAMETER.)
 Number and size of perforations _____ located _____ feet to _____ feet
 from surface of ground.
 Other perforations _____
 Date of commencement of well 1-9-62 Date of completion of well 1-11-62
 Type of well rig Cable tools

CASING RECORD

DIAM. CASING	FROM FEET	TO FEET	LENGTH	REMARKS -- SEALS, GROUTING, ETC.
<u>6 1/2</u>	<u>0</u>	<u>3 1/2</u>	<u>4</u>	

GENERAL INFORMATION—Pumping Test, Quality of Water, Etc.

NWSE 8.9 10S14E

used

WELL LOG[illegible]

WELL DRILLERS STATEMENT

This well was drilled under my jurisdiction and the above information is true and correct to the best of my knowledge

and belief.

Signed L. J. Green

By _____

License No. 78

Dated Jan 18, 1962

FORWARD WHITE COPY TO WATER RESOURCES

1. WELL OWNER

Name Blaine Williams
Address Rt. 1 Box 145A Buhal ID
Drilling Permit No. 47-94-5-0170-000
Water Right Permit No. _____

7. WATER LEVEL

Static water level 105 feet below land surface.
Flowing? ☐ Yes ☒ No G.P.M. flow _____
Artesian closed-in pressure _____ p.s.i.
Controlled by: ☐ Valve ☐ Cap ☐ Plug
Temperature - 85 °F. Quality Clear & No Odor
Describe artesian or temperature zones below.

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement
☐ Well diameter increase
☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

8. WELL TEST DATA

☒ Pump ☐ Baller ☐ Air ☐ Other _____

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

4. METHOD DRILLED

☒ Rotary ☒ Air ☐ Hydraulic ☐ Reverse rotary
☐ Cable ☐ Dug ☐ Other _____

5. WELL CONSTRUCTION

Casing schedule: ☒ Steel ☐ Concrete ☐ Other

Thickness		Diameter		From		To		
<u>250</u>	inches	<u>6</u>	inches	+	<u>1</u>	feet	<u>19</u>	feet
_____	inches	_____	inches	_____	_____	feet	_____	feet
_____	inches	_____	inches	_____	_____	feet	_____	feet
_____	inches	_____	inches	_____	_____	feet	_____	feet

Was casing drive shoe used? ☐ Yes ☒ No
Was a packer or seal used? ☐ Yes ☒ No
Perforated? ☐ Yes ☒ No

How perforated? ☐ Factory ☐ Knife ☐ Torch ☐ Gun
Size of perforation _____ inches by _____ inches

Number	From	To
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet

Well screen installed? ☐ Yes ☒ No

Manufacturer's name _____
Type _____ Model No. _____

Diameter _____ Slot size _____ Set from _____ feet to _____ feet
Diameter _____ Slot size _____ Set from _____ feet to _____ feet

Gravel packed? ☐ Yes ☒ No ☐ Size of gravel _____
Placed from _____ feet to _____ feet

Surface seal depth 15 Material used in seal: ☐ Cement grout
☒ Bentonite ☐ Puddling clay ☐ _____

Sealing procedure used: ☐ Slurry pit ☐ Temp. surface casing
☒ Overbore to seal depth

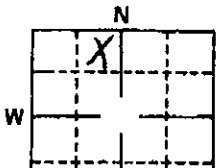
Method of joining casing: ☐ Threaded ☒ Welded ☐ Solvent Weld

☐ Cemented between strata

Describe access port _____

6. LOCATION OF WELL

Sketch map location must agree with written location.



Subdivision Name _____

10.

MAY 8 1995 Work started 10-4-94 finished 10-5-94

11. DRILLERS CERTIFICATION

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

Firm Name Bishop Drilling Firm No. 540

Address 3521 N 1100 E Date 10-29-94

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT1. WELL TAG NO. D 00030209
DRILLING PERMIT NO. 810A86
Water Right or Injection Well No. 381200

2. OWNER:

Name BARBARA BOTTORF
Address 3616 N. 1200E
City BUTTE State ID Zip 83316

3. LOCATION OF WELL by legal description:

You must provide address or Lot, Blk, Sub. or Directions to well.

Twp. 10 North ☐ or South ☒
Rge. 1A East ☒ or West ☐
Sec. 27 SW 1/4 SW 1/4 SW 1/4
Gov't Lot _____
County TWIN FALLS State ID Zip 83316
Lat: _____ Long: _____
Address of Well Site SAMECity _____
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 Material	From	To	Weight / Volume	Seal Placement Method
BENTONITE	1	39	7350*	OVERBORE/POUR

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	Wellhead	Throughput
65/8	+1	39	230	STEEL	☒	☐	☒	☐

Length of Headpipe _____ Length of Tailpipe _____

Packer ☐ Y ☐ N Type _____

9. PERFORATIONS/SCREENS PACKER TYPE

Perforation Method _____

Screen Type & Method of Installation _____

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
						☐	☐

10. FILTER PACK

Filter Material	From	To	Weight / Volume	Placement Method

11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

100 ft. below ground

Artesian pressure _____ lb.

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

WELL CAP

12. WELL TESTS:

☐ Pump ☐ Bailor ☒ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
75		190	30 MIN

Water Temp. 55

Bottom hole temp. _____

Water Quality test or comments: _____

13. LITHOLOGIC LOG: (Describe repairs or abandonment)

Water

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
8	0	4	TOPSOIL		
8	4	30	GREY LAVA		
	30	35	BLACK & BROWN LAVA		
	35	39	GREY LAVA		
6	39	112	GREY LAVA		
	112	160	BLACK & BROWN LAVA		
	160	204	GREY LAVA		
	204	243	GREY LAVA w/ WATER-TALC	X	
	243	260	RED CINDERS	X	

RECEIVED

FEB 05 2004

Idaho Department of Water Resources
Eastern RegionCompleted Depth 265 (Mensurable)Date: Started 01/29/04 Completed 02/02/04

14. DRILLER'S CERTIFICATION

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

Company Name Brito-Wal Drilling, Inc. Firm No. 647Principal Driller _____ Date 02/02/04and _____
Driller or Operator II _____ Date _____

Operator I _____ Date _____

Principal Driller and Rig Operator Required.
Operator I must have signature of Driller/Operator II.

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093874

1. DRILLING PERMIT NO. 47-96-S-0075-100

Other IDWR No. _____

2. OWNER:

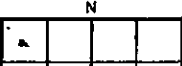
Name SCOTT BLICK

Address 1221 E 3600 N

City BURL State TX Zip 83316

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.



Twp. 10 North ☐ or South ☒
 Rge. 14 East ☒ or West ☐
 Sec. 34 $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$
 Gov't Lot _____ County TWIN FALLS $\frac{10 \text{ acres}}$ $\frac{40 \text{ acres}}$ $\frac{160 \text{ acres}}$

Address of Well Site 1221E 3600N
 City Buhl
 (Give at least name of road + Distance to Road or Landmark)

Lt. _____ Blk. _____ Sub. Name _____

4. PROPOSED USE:

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

5. TYPE OF WORK

☐ New Well ☒ Modify or Repair ☐ Replacement ☐ Abandonment

6. DRILL METHOD

☐ Mud Rotary ☐ Air Rotary ☒ Cable ☐ Other

7. SEALING PROCEDURES

SEAL/FILTER PACK			AMOUNT	METHOD
Material	From	To	Sacks or Pounds	

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
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

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:

117 ft. below ground Artesian pressure _____ lb.

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

11. WELL TESTS:

☒ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
30	0	117	4 HRS

Water Temp. -80 Bottom hole temp. -80

Water Quality test or comments: Good

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Water

[illegible]

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 CENTRAL VALLEY DRILLING Firm No. 501

Firm Official Bernard E. Smith Date 5/25/96
and

Supervisor or Operator _____ Date _____

(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES



DEVRIES, GREGORY
TRANSFER PROTESTANT KIMBALL 47-10987
NAIP 2006 AERIAL PHOTO

BROCKWAY ENGINEERING, PLLC
ALR - AUG. 25, 2009

Legend

- 47-10987 Protestant Kimball POD
- 47-10987 Protestant Kimball POU
- 11s14e_Sections
- t11s14e



Well Maps

Sec 02

T 11 S

R 14E

and

Surrounding

Area



Legend

Protestor Home

CAFO Property

Wells

<all other values>

WellUse

Commercial

Domestic

Domestic-Livestock

Domestic-Multiple Individual

Domestic-Multiple Individual Users

Domestic-Multiple Residence

Domestic-Public Water Supply

Domestic-Single Residence

Industrial

Injection

Irrigation

Livestock

Public Water Supply

Stockwater

Twin Falls County Roads

1 inch equals 0.3 miles

0

1,150

2,300

Feet