

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 37-20361

Exam Date: 6/28/2013

1. Current Owner: GREGORY J SORENSON
423 N 100 E
JEROME ID 83338
(208)320-1208

And

ESMERALDA J SORENSON
423 N 100 E
JEROME ID 83338
(208)324-3989

2. Accompanied by: Greg Sorenson via phone
Phone No: 208-320-1208
Address: Same as above
Relationship to Permit Holder: Permit holder

3. **SOURCE****TRIBUTARY**

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None
2. Other water rights with the same point of diversion: None

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER

L2 NW1/4NE1/4

Sec. 2, Twp 04S, Rge 19E, B.M.

LINCOLN County

Method of Determination: Aerial imagery and site visit

2.

PLACE OF USE:

STOCKWATER

Twp	Rge	Sec	NE				NW				SW				SE				Totals
04S	19E	2	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
				X															
				L 2															

Method of Determination: Aerial imagery and site visit

3. ☒ Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
- ☒ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
- ☒ Aerial Photo Attached (required for irrigation of 10+ acres).
- ☒ Photo of Diversion and System Attached

4.

<u>Well or Diversion</u> <u>ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge</u> <u>Size</u>
D0054335		5			

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

D. FLOW MEASUREMENTS

1.

<u>Measurement</u> <u>Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
NA						

2. Measurements: No measurement made per Beneficial Use Examination rules.

E. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Measured Method: NA

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: NA

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

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

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

2. Volume Calculations for Other Uses:

See attached Dairy Spreadsheet. Stockwater volume is 11.0 AF and the volume for washing and cleaning inside the milk barn is 2.9 AF for a total of 13.9 AFA

G. NARRATIVE/REMARKS/COMMENTS

The field exam for permit 37-20361 was accomplished on June 28, 2013. This small dairy is no longer owned by the Sorenson family, but has been sold to Kole Peck; the permit, however, is still in the name of Greg and Esmeralda Sorenson, as a result of an assignment of permit from Thomas and Vickie Sorenson. I spoke by phone with Greg Sorenson on several occasions to gather information for this report.

The dairy is served by a single well on the property, while the two homes are served by a multi-owner water right (37-10315) from a well in the NENENW, Section 2, T04S, R19E. The dairy well was drilled in 1996 and subsequently deepened in 2004. Water is piped to the milking barn and then out into the corrals to 6 water troughs, while one lagoon captures the waste water from the operation.

Mr. Sorenson reported that the dairy held as many as 550 dry and milking cows during the development period, but it was permitted for only 400 head, and that number is being used in the Dairy Spreadsheet for the volume calculation in order to satisfy the condition limiting the volume to 13,000 gallons per day. No measurement was made on flows at the dairy, per Beneficial Use Exam rules that exempt measurements of permitted flows of less than 0.24 cfs. Recommendation is to license flow rate of 0.06 cfs and volume of 13.9 AF.

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

H. RECOMMENDATIONS**1. Recommended Amounts**

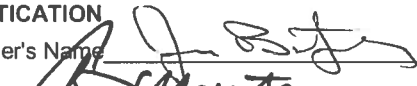
<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
STOCKWATER	01/01 to 12/31	0.060 CFS	13.9 AF
Totals: 0.060 CFS			13.9 AF

2. Recommended Amendments

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None

☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION

Field Examiner's Name  Date 06-28-2013

Reviewer  Date 6/19/2014

FILE NUMBER _____
REVIEWER _____

DAIRIES: WATER USE WORKSHEET

REQUIRED DAIRY DATA

NUMBER OF MILKING CATTLE _____ 400
NUMBER OF DRY CATTLE _____ 0
NUMBER OF REPLACEMENT CATTLE: 0-2 MONTHS _____ 0
3-4 MONTHS _____ 0
5-8 MONTHS _____ 0
9-12 MONTHS _____ 0
13-15 MONTHS _____ 0
16-24 MONTHS _____ 0
ENTER 1 FOR MANUAL COW WASHING, 2 FOR AUTOMATIC, OR 3 IF
SPRINKLERS ARE USED TO FLUSH HOLDING PEN AND WASH COWS _____ 1
IF SPRINKLERS ARE USED: NUMBER OF SPRINKLERS IN HOLDING PEN _____
NOZZLE DISCHARGE (USE 5.0 GPM IF UNKNOWN) _____
OPERATION TIME OF SPRINKLERS (MIN/DAY) _____ 0
NUMBER OF MILKINGS PER DAY _____ 2
AVG. LBS. OF MILK PRODUCED PER DAY PER ANIMAL (IDAHO AVG IS 70 LBS.) _____ 60
HOURS PER DAY PUMP OPERATES FOR STOCKWATER USE _____ 12.0
HOURS PER DAY PUMP OPERATES FOR COMMERCIAL USE _____ 0.0
IS RECYCLED WATER USED TO FLUSH MILKHOUSE AND PARLOR FLOORS? _____ N
IS RECYCLED WATER USED TO WASH COWS? _____ N
IS A PLATE COOLER USED? _____ N
IS RECYCLED WATER USED FOR PLATE COOLER? (IF NO PLATE COOLER,
LEAVE BLANK) _____ N
IF CORRAL MISTERS ARE USED: NUMBER OF MISTERS IN HOLDING PEN _____
NOZZLE DISCHARGE (GPM) _____
OPERATION TIME OF MISTERS (MIN/DAY) _____
DAYS PER YEAR MISTERS ARE USED _____

CALCULATIONS

DIVERSION RATE (CFS):

STOCKWATER
MILKING CATTLE (BASED ON MILK PRODUCTION) _____ 0.03
DRY CATTLE @17.0 GPD/HD _____ 0.00
REPLACEMENT CATTLE _____ 0.00
TOTAL _____ 0.03

COMMERCIAL
TOTAL _____ #####

TOTAL DIVERSION RATE _____ #####

DIVERSION VOLUME (AFA):

STOCKWATER
MILKING CATTLE _____ 11.0
DRY CATTLE _____ 0.0
REPLACEMENT CATTLE _____ 0.0
TOTAL _____ 11.0

COMMERCIAL
WASHING OF BULK TANK AND RELATED EQUIPMENT _____ 0.4
BACKFLUSH _____ 0.4
PARLOR/MILKHOUSE/HOLDING PEN CLEANUP _____ 2.0
CATTLE WASHING BASED UPON METHOD OF WASHING _____ 0.4
PLATE COOLER _____ 0.0
CORRAL MISTERS _____ 0.0
TOTAL _____ 2.9

TOTAL DIVERSION VOLUME _____ 13.9

CONSUMPTIVE USE VOLUME (AFA)(assuming 100% consumptive):

STOCKWATER _____ 11.0
COMMERCIAL _____ 2.9
TOTAL CONSUMPTIVE USE _____ 13.9

THEORETICAL FLOW ESTIMATION WORKSHEET

REQUIRED PUMP INFORMATION

	PUMP 1	PUMP 2	PUMP 3	PUMP 4	PUMP 5
PUMP HORSEPOWER (HP) _____				0.00	0.00
LIFT (FT) _____				0	0
DISCHARGE PRESSURE (PSI) _____		0	0	0	0
FRICTION LOSSES (FT) _____	0.0	0.0	0.0	0.0	0.0
HOURS PER DAY PUMP OPERATES _____				0.0	0.0

CALCULATIONS

THEORETICAL FLOW RATE (CFS) * _____	0.00	0.00	0.00	0.00	0.00
DIVERSION VOLUME (AFA) ** _____	0.0	0.0	0.0	0.0	0.0

* PUMP EFFICIENCY WAS ASSUMED TO BE 70%.

** DIVERSION VOLUME IS THE ABSOLUTE MAXIMUM VOLUME BASED ON THE
THEORETICAL FLOW RATE ASSUMING PUMP RUNS EVERY DAY OF THE YEAR.

EVALUATION OF EQUIVALENT IRRIGATED ACREAGE

IRRIGATION RIGHT (BEFORE CHANGE)

DIVERSION RATE _____	CFS
ACRES OF IRRIGATION _____	ACRES
DIVERSION VOLUME _____	AC-FT/AC
CONSUMPTIVE USE VOLUME _____	AC-FT/AC

IRRIGATION IS BEING CONVERTED FOR WHICH PORTION OF THE
DAIRY OPERATION - STOCKWATER (S), COMMERCIAL (C), OR
BOTH (B)? _____

CALCULATIONS

IRRIGATION DIVERSION RATE PER ACRE _____	#DIV/0!	CFS/AC
REDUCTION OF IRRIGATION BASED ON DIVERSION RATE _____	0.0	ACRES
REDUCTION OF IRRIGATION BASED ON DIVERSION VOLUME _____	0.0	ACRES
REDUCTION OF IRRIGATION BASED ON CONSUMPTIVE USE _____	0.0	ACRES



Pump House

View of Dairy Facility





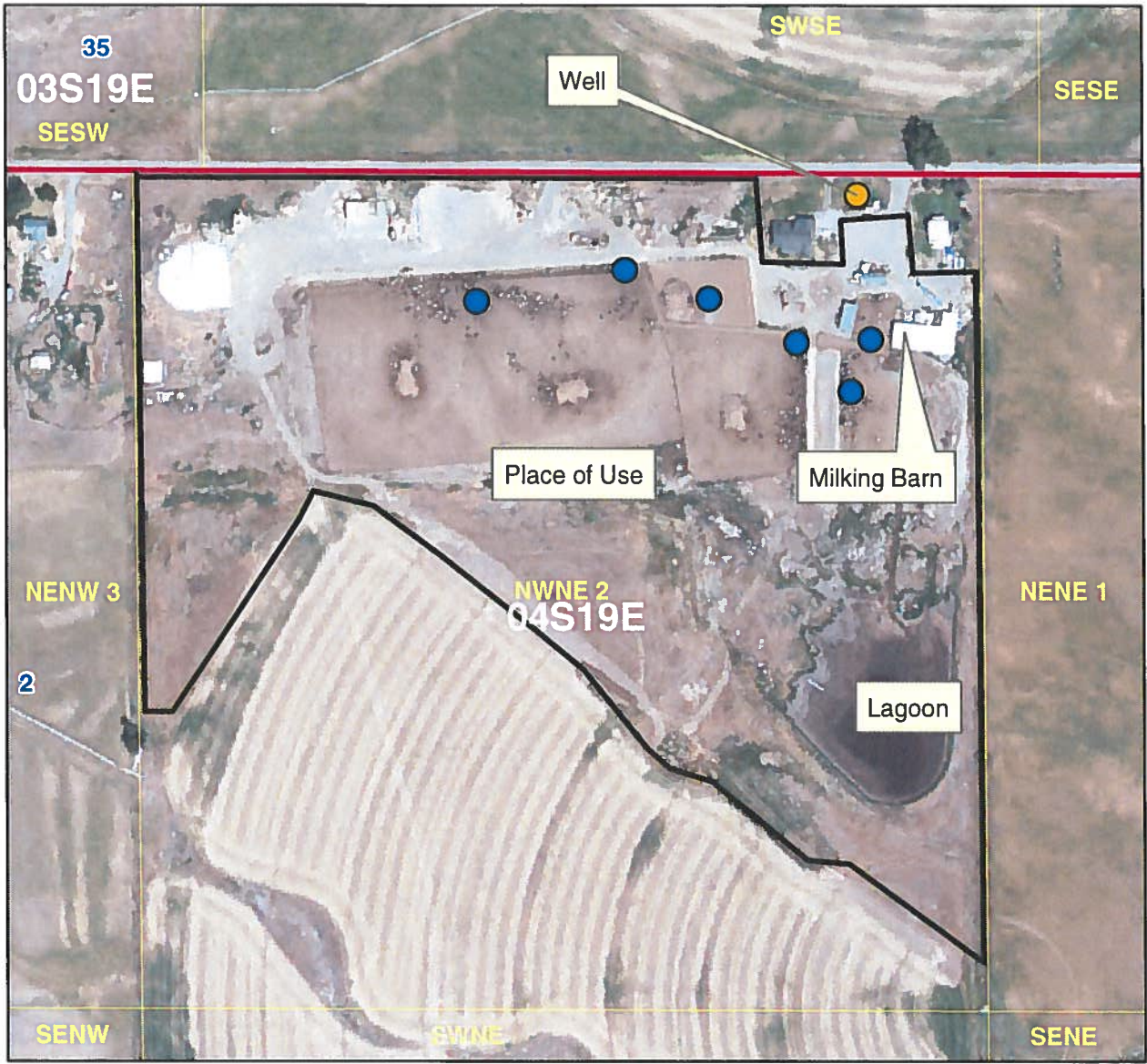
Well

Dairy Barn



Idaho Department of Water Resources

System Diagram



37-20361
Greg and Esmeralda Sorenson

Legend

- Township/Range
- Sections
- QQ
- Water Troughs



0 0.0275 0.055 0.11 Miles

IDAHO DEPARTMENT OF WATER RESOURCES

WELL DRILLER'S REPORT

Use Typewriter or Ballpoint Pen

057888

Office Use Only

Inspected by _____

Twp _____ Rge _____ Sec _____

1/4 _____ 1/4 _____ 1/4 _____

Lat: _____ Long: _____

☒ Air ☐ Flowing Artesian1. DRILLING PERMIT NO. 37-96-C-0155-000

Other IDWR No. _____

2. OWNER:

Name Blair SorensenAddress 1276 E 1170 NCity Richfield State ID Zip 83349

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

N		Twp. <u>45</u>		North ☐	or	South ☒
E		Rge. <u>19 E</u>		East ☒	or	West ☐
S		Sec. <u>2</u>		1/4 <u>NW</u>	1/4 <u>NE</u>	1/4
		Gov't Lot _____		County <u>Lincola</u>		
		Lat: _____		Long: _____		
		Address of Well Site <u>1276 E 1170 N</u>				
		City <u>Richfield</u>				

(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 _____

6. DRILL METHOD

☒ Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other _____

7. SEALING PROCEDURES

SEAL/FILTER PACK			AMOUNT		METHOD
Material	From	To	Sacks or Pounds		
<u>Ben-tonite</u>	<u>0</u>	<u>19</u>	<u>150 lbs</u>		<u>Dry</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"</u>	<u>+1</u>	<u>19</u>	<u>250</u>	<u>Steel</u>	☒	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe +1' Length of Tailpipe 19'

9. PERFORATIONS/SCREENS

☐ Perforations Method _____
☐ Screens Screen Type _____

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
						☐	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

406 ft. below ground Artesian pressure _____ lb.Depth flow encountered 455 ft. Describe access port or control devices: Well cap

11. WELL TESTS:

☐ Pump ☐ Bailer☒ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time

Water Temp. -85° Bottom hole temp. -85°

Water Quality test or comments: _____

Depth first Water Encountered 455'

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
<u>8"</u>	<u>0</u>	<u>3</u>	<u>Brown Sandy Clay</u>		
<u>8 1/2"</u>	<u>3</u>	<u>22</u>	<u>Gray Lava</u>		
<u>6"</u>	<u>22</u>	<u>31</u>	<u>Black Lava</u>		
	<u>31</u>	<u>44</u>	<u>Gray Lava</u>		
	<u>44</u>	<u>51</u>	<u>Red Lava</u>		
	<u>51</u>	<u>60</u>	<u>Gray Lava</u>		
	<u>60</u>	<u>71</u>	<u>Brown Lava</u>		
	<u>71</u>	<u>101</u>	<u>Gray Lava</u>		
	<u>101</u>	<u>102</u>	<u>Crevise</u>		
	<u>102</u>	<u>107</u>	<u>Black + Red</u>		
	<u>107</u>	<u>116</u>	<u>Brown Lava</u>		
	<u>116</u>	<u>119</u>	<u>Black Lava</u>		
	<u>119</u>	<u>161</u>	<u>Gray Lava</u>		
	<u>164</u>	<u>168</u>	<u>Brown Lava</u>		
	<u>168</u>	<u>175</u>	<u>Black + Brown Lava</u>		
	<u>175</u>	<u>178</u>	<u>Black Lava - Soft + Broken</u>		
	<u>178</u>	<u>192</u>	<u>Gray Lava</u>		
	<u>192</u>	<u>194</u>	<u>Broken</u>		
	<u>194</u>	<u>206</u>	<u>Black + Brown Lava - Broken</u>		
	<u>206</u>	<u>215</u>	<u>Gray Lava</u>		
	<u>215</u>	<u>320</u>	<u>Broken - No Returns</u>		
	<u>220</u>	<u>231</u>	<u>Black + Red Lava</u>		
	<u>231</u>	<u>240</u>	<u>Black Lava</u>		
	<u>204</u>	<u>255</u>	<u>Gray Lava</u>		
	<u>255</u>	<u>276</u>	<u>Hard</u>		
	<u>276</u>	<u>278</u>	<u>Broken</u>		
	<u>278</u>	<u>287</u>	<u>Hard</u>		
	<u>287</u>	<u>292</u>	<u>Soft Broken</u>		
	<u>292</u>	<u>310</u>	<u>Med Hard</u>		
	<u>310</u>	<u>311</u>	<u>Crevise</u>		
	<u>311</u>	<u>321</u>	<u>Med Hard</u>		
	<u>321</u>	<u>324</u>	<u>Broken</u>		
	<u>324</u>	<u>329</u>	<u>Med Hard</u>		

Completed Depth 630' (Measurable)Date: Started 10-10-96 Completed 10-15-96

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 Eaton Drilling Firm No. 26Firm Official [Signature] Date 10-22-96and Supervisor or Operator [Signature] Date 10-21-96

(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

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. D0034335

DRILLING PERMIT NO. **824241**

Other IDWR No. **37-20361** **ID 313451**

2. OWNER:

Name **Blair Sorenson**

Address **1276 E. 1170 N.**

City **Richfield** State **ID** Zip **83349**

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

N					
S					

Twp. **4** North ☐ or South ☒
Rge. **19** East ☒ or West ☐
Sec. **2** 1/4 **NW** 1/4 **NE** 1/4
Gov't Lot _____ County **Lincoln**
Lat _____ Long: _____
Address of Well Site **1224 E. 1220 N. 1235 E**
City **Richfield** **1220 N**

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

Lt _____ Blk. _____ Sub. Name _____

4. USE:

- ☐ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☒ Other **livestock**

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

- ☐ New Well ☐ Modify ☐ Abandonment ☒ Other **deepen**

6. DRILL METHOD:

- ☒ Air Rotary ☐ Cable ☐ Mud Rotary ☐ 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:

630 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

Water Temp. **<85** Bottom hole temp. **<85**

Water Quality test or comments: _____

Depth first Water Encounter **630**

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Water Y	N
6	630	641	medium hard lava		
6	641	644	soft lava & breaks	X	
6	644	660	medium hard lava		
6	660	662	soft lava & breaks	X	
6	662	723	medium lava		
6	723	727	soft lava & cinders	X	
6	727	749	medium soft lava & cinders	X	
6	749	755	soft broken lava & cinders	X	

RECEIVED

OCT 15 2004

Department of Water Resources
Southern Region

SCANNED

OCT 19 2004

RECEIVED

NOV - 2 2004

DEPARTMENT OF
WATER RESOURCES

Completed Depth **748'** (Measurable)

Date: Started **9/9/2004** Completed **9/9/2004**

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 **Eaton Drilling & pump**

Firm No. **26**

Firm Official **[Signature]**

Date **9/9/2004**

and

Driller or Operator **[Signature]**

Date **9/9/2004**

(Sign once if Firm Official & Operator)