

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-33238

Exam Date: 6/3/2015

1. Current Owner: STATE OF IDAHO
MILITARY DIVISION
ATTN MAJ E P GUSSENHOVEN
4040 GUARD ST BLDG 600
BOISE ID 83705-5004
(208)422-5474
2. Accompanied by: "Butch" Anderson
Phone No: 208-424-3352
Address: 68 Wilderness Way Boise ID 83716
Relationship to Permit Holder: Water System Manager
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 SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER SE1/4SW1/4 Sec. 3, Twp 02S, Rge 02E, B.M. ADA County

Method of Determination: PLSS map over aerial photography using ArcMap tools. GPS on well drillers report confirmed during field exam visit.

2.

PLACE OF USE: DOMESTIC

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
02S	02E	3												X					

PLACE OF USE: INDUSTRIAL

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
02S	02E	3												X					

Method of Determination: PLSS map over aerial photography using ArcMap tools.

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. Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
D0055849	Unk	Unk	Unk	Unk	Unk

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

D. FLOW MEASUREMENTS

1. Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date

2. Measurements: Measurement not taken during exam.

E. FLOW CALCULATIONS

☐ Additional Computation Sheets Attached

Measured Method:

Water Horsepower for Flow in gal/min

Water horsepower for flow in gal/min can be expressed as:

$$P_{whp} = SG Q_{gal} h / 3960$$

Where:

Q = volume flow rate (gpm)

SG = specific gravity

h = head (ft)

SG for water is 1.001 at 32°F and 0.998 at 80°F.

$$\text{At } 0.04 \text{ cfs: } P_{whp} = SG Q_{gal} h / 3960 = ((1.000) * (0.04) * (800)) / 3960 = 3.5$$

A 3.5 hp pump is a reasonable size pump for the system.

Permit allowed = 0.04 cfs

License recommend for 0.04 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \underline{\hspace{2cm}}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \underline{\hspace{2cm}}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \underline{\hspace{2cm}}$$

1. Volume Calculations for Other Uses:

Domestic use serves office use of bathrooms and sinks for 10-15 employees. General domestic for in home use not including irrigation is defined by 42-111 as 2,500 gal/day.

Depletion of 10,000 gal storage tank for industrial use was estimated at 4 times a year. 40,000 gal = 0.123 af.

G. NARRATIVE/REMARKS/COMMENTS

The field exam was conducted on June 3, 2015 by Patrick Kelly, Water Resource Agent. A Mr Butch Anderson granted access to the property and described the water system and beneficial use.

The system uses a submersible pump to deliver water to the offices and a 10,000 gallon water storage tank. Horsepower of the pump was not made available so a range of small hp's were used in a theoretical. A pressure gauge installed on the system showed 40 psi. Lift of 800 feet was assumed based on the well drillers report. The power required to move 0.04 cfs of water with a lift of 800 feet is 3.5 hp (flow calculation). It is reasonable to assume the system is achieving this diversion rate of 0.04 cfs.

Domestic component serves office use of bathrooms and sinks for 10-15 employees. Admin memo #22 suggests a volume of 0.6 af for single in home use that does not include a half acre irrigation. This is a reasonable amount of water for the domestic component of this right. There are no shower or laundry accommodations so the office only uses water for bathroom facilities and break room with a sink. For these reasons, the 0.6 af is an acceptable limit for this use.

Industrial use is for dust abatement and industrial work on site. The application for permit cited incidental fire protection as a proposed use. Since then, the military program has built a large, new fire facility to the east of the Range Center of Operation and Maintenance Building (RCOM). All fire protection now comes from that department. There is a fill station that enables trucks with 3,000 gal tanks to fill for dust control. Additionally, workers use the water on site for numerous repairs.

The Place of Use will be identified to the RCOM grounds even though applications for dust abatement extend to dirt roads outside of this area. Conditions will be placed on the license to identify use.

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>
DOMESTIC	01/01 to 12/31	0.04 CFS	0.6 AF
INDUSTRIAL	01/01 to 12/31	0.04 CFS	0.2 AF
<u>Totals:</u>		0.04 CFS	0.8 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 Patrick Kelly Date 6-3-2015
Reviewer _____ Date _____





Well

Lat:

43°16.464

Long:

116°12.336



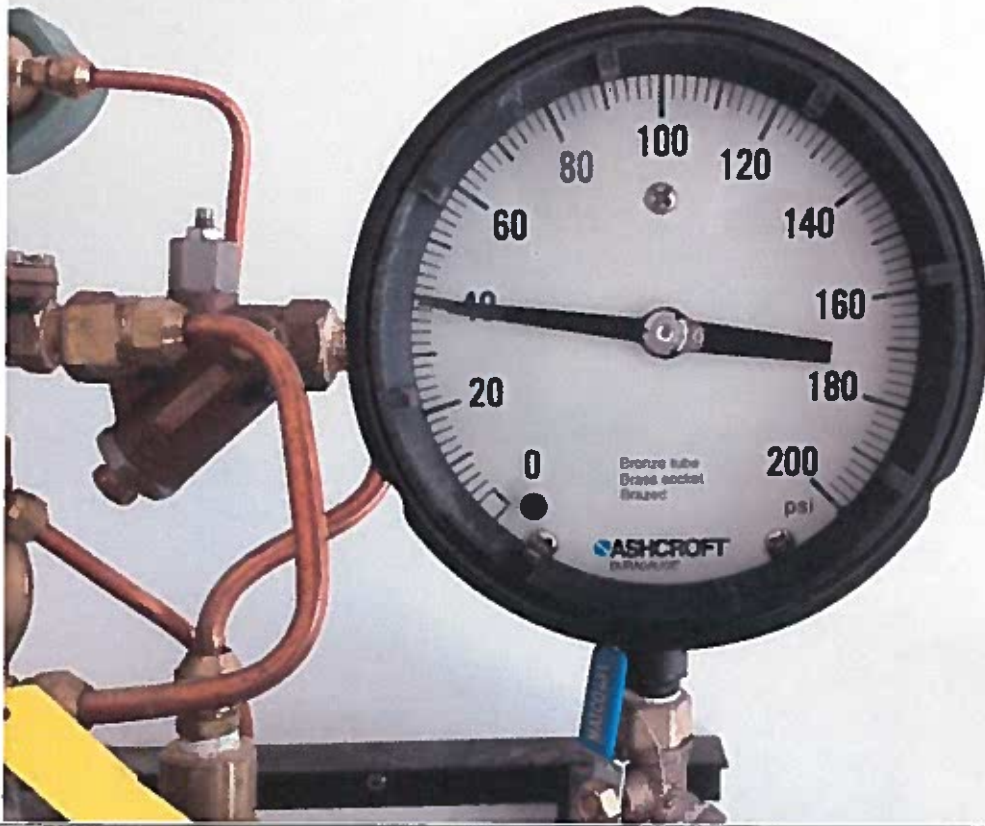
Metal Tag ID:
D0055849



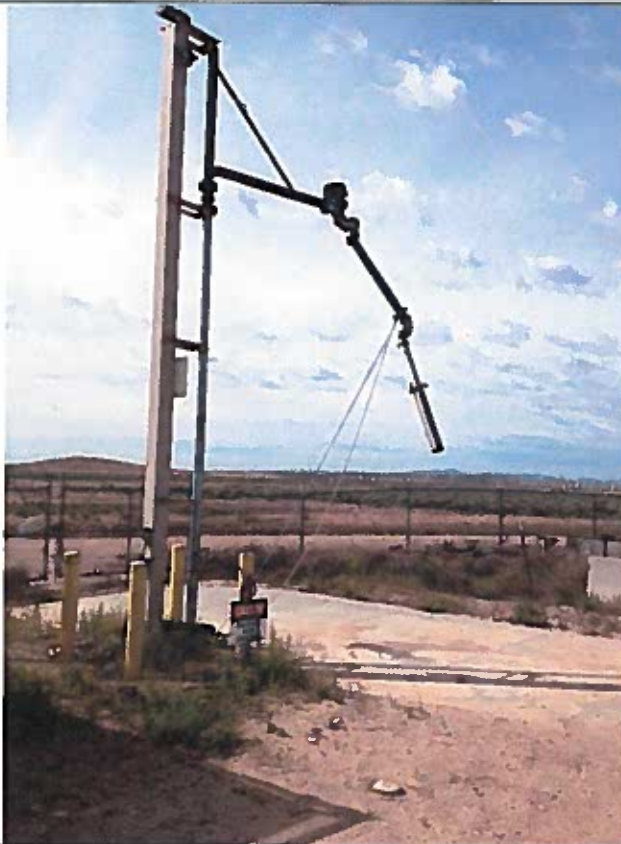
Pump house and
10,000 gallon
storage tank



Pump house
piping. System
has a flow meter
(right) that was
not operating at
the time of the
exam.



Pressure of the system showed 40 psi.



Truck tank fill station.

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

1. WELL TAG NO. D 0055849

Drilling Permit No. 908725-857306

Water right or injection well # N/A

2. OWNER

Name State of Idaho Military Division

Address 4715 S Byrd St, Bldg 518

City Boise

State ID

Zip 83705

3. WELL LOCATION:

Twp. 2 North ☐ or South ☒ Rge. 2 East ☒ or West ☐

Sec. 3 1/4 SE 1/4 SW 1/4

Gov't Lot _____ County Ada

Lat. 43° 16.464 (Deg. and Decimal minutes)

Long. 116° 12.336 (Deg. and Decimal minutes)

Address of Well Site 9 miles west of Orchard, off Orchard access rd.

NW of Airforce Base City Orchard

Range Cntr. of Option
& Maintenance

Lot _____ Blk. _____ Sub. Name

4. USE:

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

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

☒ New Well ☐ Replacement well ☐ Modify existing well
☐ Abandonment ☐ Other

6. DRILL METHOD:

☒ Air Rotary ☐ Mud Rotary ☐ Cable ☐ Other

7. SEALING PROCEDURES

Seal material	From (ft)	To (ft)	Quantity (lbs or ft³)	Placement method/procedure
cement	64'	117'	39 cu/ft	tremie pumped
bent chps 3/8	64'	0'	7600 lbs.	poured

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing	Linear	Threaded	Welded
12"	+2'	118'	.375	steel	☒	☐	☐	☒
8"	+2'	851'	.322	steel	☒	☐	☐	☒

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 851'

9. PERFORATIONS/SCREENS:

Perforations ☐ Y ☒ N Method

Manufactured screen ☐ Y ☒ N Type

Method of installation

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

Length of Headpipe _____ Length of Tailpipe _____

Packer ☐ Y ☒ N Type

10. FILTER PACK:

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

11. FLOWING ARTESIAN:

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

Describe control device

12. STATIC WATER LEVEL and WELL TESTS:

Depth first water encountered (ft) 767 Static water level (ft) 767

Water temp. (°F) 85 Bottom hole temp. (°F) 86.5

Describe access port

Well test:

Test method:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)	Pump	Bailer	Air	Flowing artesian
.5	60	480	☒	☐	☐	☐

Water Quality test or comments:

13. LITHOLOGIC LOG and/or repairs or abandonment:

Bore Dia. (in)	From (ft)	To (ft)	Remarks, lithology or description of repairs or abandonment, water temp.	Water Y N
18"	0'	3'	top soil	
18"	3'	12'	boulders & clay	
18"	12'	35'	broken basalt	
18"	35'	48'	solid basalt	
18"	48'	64'	broken basalt	
18"	64'	71'	solid basalt	
18"	71'	85'	black cinders	
18"	85'	94'	broken basalt	
18"	94'	118'	solid basalt	
12"	118'	144'	solid basalt	
12"	144'	167'	broken basalt	
12"			lost circulation @145'	
12"	167'	185'	solid basalt	
12"	185'	201'	broken basalt	
12"	201'	208'	solid basalt	
12"	208'	232'	cinders	
12"	232'	245'	solid basalt	
12"	245'	270'	broken basalt	
12"	270'	284'	solid basalt	
12"	284'	310'	broken basalt	
12"	310'	340'	solid basalt	
10"	340'	392'	broken basalt	
10"	392'	405'	solid basalt	
10"	405'	445'	broken basalt	
10"	445'	455'	solid basalt	
10"	455'	465'	broken basalt	
10"	465'	475'	cinders	
10"	475'	510'	broken basalt	
10"	510'	530'	solid basalt	
10"	530'	540'	broken basalt	
10"	540'	567'	extreme broken basalt	
10"	567'	582'	cinders	

RECEIVED

OCT 26 2009

WATER RESOURCES
WESTERN REGION

Completed Depth (Measurable)

continued

Date: Started 8/10/09

Completed

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 Down Right Drilling & Pump, Inc. Co. No. 637

*Principal Driller

Date 10-21-09

*Driller

Date 10-21-09

*Operator II

Date

Operator I

Date

* Signature of Principal Driller and rig operator are required.

ANALYSIS SHEET FOR PROOF OF BENEFICIAL USE

Permit No.: 63-33238

Reviewed By: dblock

Date: December 16, 2014

	<u>Yes</u>	<u>No</u>		<u>Yes</u>	<u>No</u>
Proof received timely?	X		Drilling permit required?	X	
License examination fee required?	X		Drilling permit No.:	908725 - 857306	
Appropriate fee submitted?	X		Drilling permit upgrade needed?		X
Receipt No.:	W037681, W042687		Well driller's report filed?		X
Additional Amount Due:			Measuring device required?		X
Name and address same as permit?	X		Measuring device installed?		
Are the water uses correct?	X		Measure device waiver requested?		

Priority Calculation

Date proof received	12/12/2014
Date proof due	- 01/02/2015
Lapse notice sent	-
No. of days late	= 0
Holiday allowance	+
Priority date	+ 07/13/2009
New priority date	= 07/13/2009

Deficiencies of Actions Items

Proof deemed acceptable. Gave file to water right agent for license review. WR Agent will enter the proof made date in AdHoc at the time of licensing.