

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
IN-OFFICE REVIEW/BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-33139

Exam Date: 2/14/2014

1. Does this qualify for an in-office field exam (IDAPA 035.02.r)? ☒ Yes ☐ No
- Irrigation of 5 acres or less
 - Storage of up to 14.6 AF for stockwater purposes only
 - Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less
 - Other < >

2. Current Owner: Name: BID LLC
- Owner of Record Correct? ☒ Yes ☐ No
- Address of Record Correct? ☒ Yes ☐ No
- If No: Address

3. Beneficial Use Fees have been paid: ☒ Yes ☐ No Receipt No: CO97954

4. **SOURCE** **TRIBUTARY**

Ground water

Method of Determination: Applicant submitted a driller's report of a well on property.

Change in Source: ☐ Yes ☒ No**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: Overlap? ☐ Yes ☒ No

Water Right No.	Source	Purpose of Use	Basis

Comments: No other water rights exist on property

2. Other water rights with the same point of diversion: Overlap? ☐ Yes ☒ No

Water Right No.	Source	Purpose of Use	Basis

Comments: A second well that is used for the home is connected to the system and the irrigation well serves as a backup. The home does not have a water right for domestic use.

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

Source	Govt. Lot	¼	¼	¼	Sec.	Twp.	Rge.	County
Ground water			SW	SW	08	03N	03E	ADA
Ground water			SW	SW	08	03N	03E	ADA

Method of Determination: Legal Description in permit validated by PLS data and mapping.

Change in POD? ☐ Yes ☒ NoAmendment Required? ☐ Yes ☒ No

2. **PLACE OF USE:** Use: Domestic & Stockwater

TWP	RGE	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
03N	03E	08											0.9						0.9

Method of Determination: Aerial map of property submitted by land owner identifies POU clearly. Validated by PLS data and mapping.

Change in POU? ☐ Yes ☒ No Amendment Required? ☐ Yes ☒ No

☐ Delivery System Diagram Attached (required). Indicate all major components and distances between components.

Indicate weir size/pipe as applicable.

☒ 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
0057633	Unk	5	Unk	Unk	Unk
Well #2	Unk	5	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: In-office field exam. Theoretical taken.

E. FLOW CALCULATIONS

☒ Additional Computation Sheets Attached

Measured Method:

Per App. Processing Memo #17, up to 0.03 cfs/acre for irrigation up to 5 acres acceptable.

0.9 acres * 0.03 cfs = 0.03 cfs

Theoretical for both wells included in attachment.

Measurement = 0.07 cfs
Permit allowed = 0.06 cfs

License recommend for 0.03 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:
- Not required.

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.9 \times 4.5 = 4.1 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.03 \times 231 \times 1.9835 = 13.7 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 4.1 \text{ af}$$

2. Volume Calculations for Other Uses:

G. PURPOSE OF USEIrrigation ☒ Yes ☐ No # Stock 0 Domestic # of Homes 0

Other: < >

Change in Purpose of Use? ☐ Yes ☒ No

Method of Determination: Aerial photography and beneficial use report support what was described in beneficial use report and application for permit.

If Yes: From Use _____ To Use _____ Amount _____ CFS _____ AFA _____

H. NARRATIVE/REMARKS/COMMENTS

Permit 63-33139 authorized the use of 0.06 cfs for irrigation of a 2 acres. The proof of beneficial use indicates that the number of homes for domestic use is 1. However, this is strictly an irrigation right and the domestic use for the land owners home comes from the backup well to the field. 2 wells exist on the property and are tied together with the field well a backup to the home use. Both wells are included as points of diversion in the water permit and have been identified in this water right.

The well drillers report for the home was on file and submitted with the application for permit. I was able to track down a well drillers report for the field well through a well construction search. I used static water levels from both of these reports to calculate lift in the theoretical flow rates. A conversation with Mr. Bates (owner) informed me that both pumps on the wells are 5 hp. Theoretical calculation of both wells supported the capability to pump what was permitted, however the irrigation in place based on aerial photography shows irrigation for 0.9 acres, instead of the 2 acres allowed by permit. Under processing memo #17, this limits the flow rate to 0.03 cfs.

The permit had a condition for the Lindsey Creek Groundwater Management Area (GWMA) I changed the condition to 073 as is standard well logshows water temperature below 85 degrees. So, adding the 073 condition should not be a problem.

Have conditions of permit approval been met? ☒ Yes ☐ No**I. RECOMMENDATIONS****1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
Irrigation	3/15 – 11/15	0.06 cfs	4.1 af
<u>Totals</u>		0.06 cfs	4.1 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 ☒ None

Other: < >

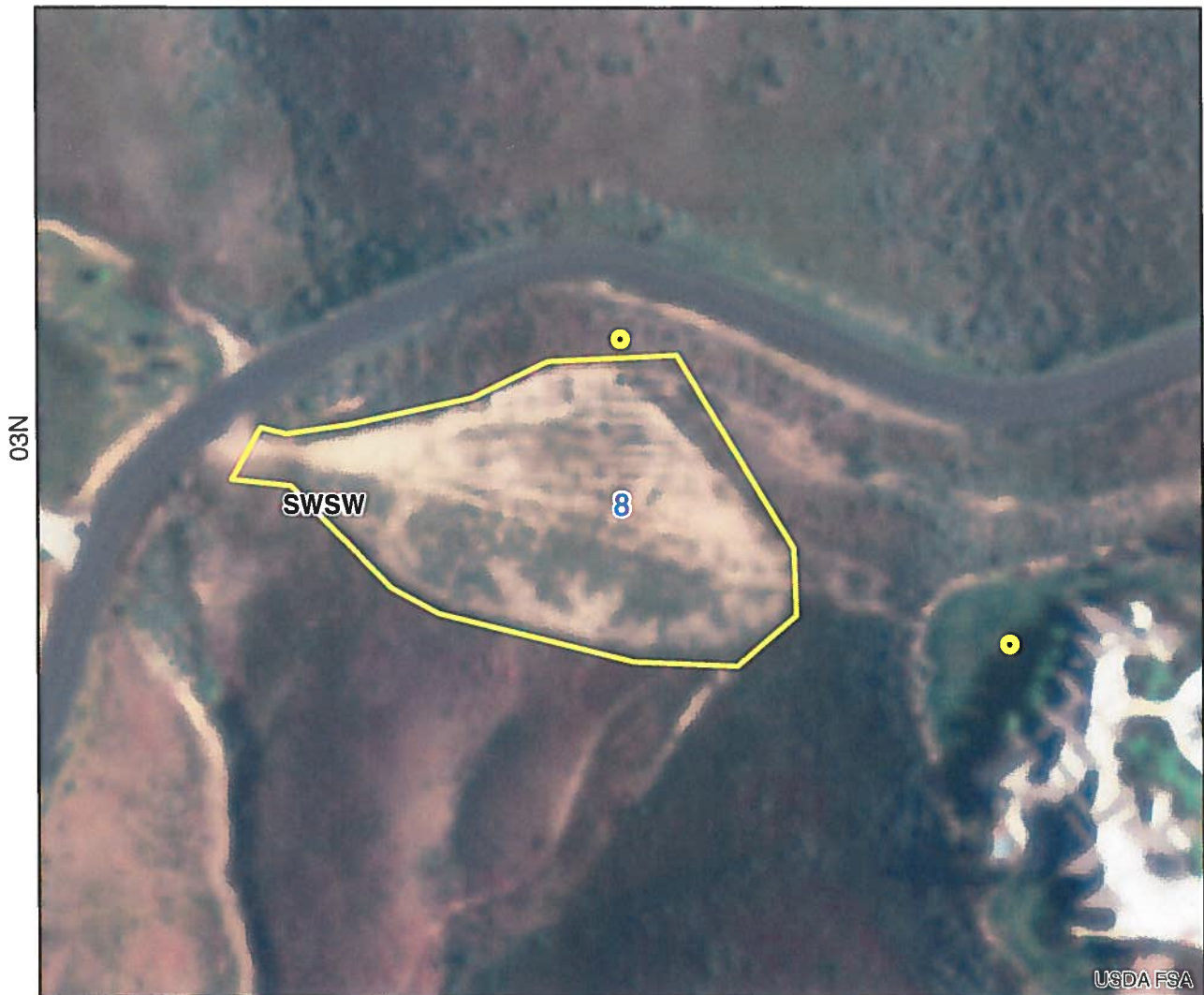
J. AUTHENTICATION

Field Examiner's Name Patricia Wiley Date 03/11/14
Reviewer Daniel A. Miller Date 3-13-14

State of Idaho
Department of Water Resources
Field Exam Map
63-33139

This map depicts the IRRIGATION place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.

03E



-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections
-  Quarter Quarters

0 0.0125 0.025 0.05 Miles



THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 63-33139
 Reviewer: Patrick Kelly
 Date of Review: 2/14/2014

Well : Field

P/D No.:	Senerio 1	Senerio 2	Senerio 3
PUMP HORSEPOWER	5	5	5
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	403	403	403
DISCHARGE PRESSURE	20	30	40
RATE OF FLOW (cfs)	0.07	0.07	0.06 0.07

The above calculates the formula =

$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$$

Assumptions: %70 efficiency.
 No Friction

Examiners Notes: In-office field exam done on 2/14/14
 Used 20-40 psi to account for depth of well.
 Phone conversation with Mr. Bates revealed 5 hp pump.
 Static water level on drillers report is 393 ft. Added 10' per standard C on Theoretical Dynamic Pumping Level.
 Average rate of flow is 0.07 cfs.

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 63-33139
 Reviewer: Patrick Kelly
 Date of Review: 2/14/2014

Well : Home

P/D No.:	Senerio 1	Senerio 2	Senerio 3
PUMP HORSEPOWER	5	5	5
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	438	438	438
DISCHARGE PRESSURE	20	30	40
RATE OF FLOW (cfs)	0.06	0.06	0.06 0.06

The above calculates the formula =

$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$$

Assumptions: %70 efficiency.
 No Friction

Examiners Notes: In-office field exam done on 2/14/14
 Used 20-40 psi to account for depth of well.
 Phone conversation with Mr. Bates revealed 5 hp pump.
 Static water level on drillers report is 428 ft. Added 10' per standard C on Theoretical Dynamic Pumping Level.
 Average rate of flow is 0.06 cfs.

IDAHO DEPARTMENT OF WATER RESOURCES WELL DRILLER'S REPORT

1. WELL TAG NO. D 0057633

Drilling Permit No. 909861-858431

Water right or Injection well # 63-33139

2. OWNER:

Name BID LLC

Address 905 W. Bannock Ste 1050

City Boise State ID Zip 83702

3. WELL LOCATION:

Twp. 3 North ☒ or South ☐ Rge. 3 East ☒ or West ☐

Sec. 8 1/4 SW 1/4 SW 1/4

Gov't Lot _____ County Ada

Lat. 43 36.388 (Deg. and Decimal minutes)

Long. 116 07.928 (Deg. and Decimal minutes)

Address of Well Site 4333 E. Wildhorse Ln

City Boise

(Give at least three of four: Distance to Road or Landmark)

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 ³)	Placement method/procedure
Bentonite	0	200	4250	Dry Pour
Cement	200	600	2790	Tremie

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing Liner	Threaded	Welded
6"	+2	636	.250	Steel	☒	☐	☒
5"	632	637	.188	Steel	☒	☐	☒
5"	647	651	.188	Steel	☒	☐	☒

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

9. PERFORATIONS/SCREENS:

Perforations ☐ Y ☐ N Method _____

Manufactured screen ☒ Y ☐ N Type johnson

Method of Installation placed and casing extracted

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
637	647	.020		5"	Stainless	

Length of Headpipe 5ft Length of Tailpipe 4ft

Packer ☒ Y ☐ N Type double-k

10. FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method
#8 silica sand	600	650	600Lbs	dry pour

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) 410 Static water level (ft) 393

Water temp. (°F) 60DegF Bottom hole temp. (°F) 70DegF

Describe access port _____

Well test:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)
240	25GPM	1h30mins

Test method:

Pump	Boiler	Air	Flowing artesian
☐	☐	☒	☐

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
10	0	2	Sandy top soil		X
"	2	6	coarse sand		X
"	6	14	basalt boulders and coarse sand		X
"	14	37	brown decomposed granite		X
"	37	41	red sandy clay		X
"	41	68	red-brown decomposed granite		X
"	68	79	red sandy clay		X
"	79	114	brown decomposed granite		X
"	114	128	red sandy clay		X
"	128	138	brown granite		X
"	138	141	red sandy clay		X
"	141	159	brown granite		X
"	159	163	red sandy clay		X
"	163	196	brown granite		X
"	196	199	red sandy clay		X
"	199	200	brown granite		X
8"	200	275	brown granite		X
"	275	295	decomposed granite		X
"	295	370	red brown granite		X
"	370	389	decomposed granite		X
"	389	407	soft decomposed granite		X
"	407	410	sandy red clay		X
"	410	445	decomposed granite	X	
"	445	460	granite		X
"	460	465	decomposed granite	X	
"	465	515	fractured granite		X
"	515	535	red decomposed granite	X	
"	535	585	fractured granite		X
"	585	605	blue clay		X
"	605	649	sand and gravel	X	
"	649	651	brown clay		X

Completed Depth (Measurable): 651'

Date Started: 1-15-10

Date Completed: 2-5-10

14. DRILLER'S CERTIFICATION:

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

Company Name Coarse Well Drilling

Co. No. 409

*Principal Driller [Signature] Date 2-5-10

*Driller _____ Date _____

*Operator II [Signature] Date 2-5-10

Operator I _____ Date _____

* Signature of Principal Driller and rig operator are required.

RECEIVED

FEB 09 2010

WATER RESOURCES
WESTERN REGION