

[illegible]

PLACE OF USE: IRRIGATION

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
09S 42E 19		11.4															11.4

Total Acres: 11.4

Method of Determination: Aerial photography 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>
A0010640		5.0			

D. FLOW MEASUREMENTS

- Measurement Equipment: Fuji Ultrasonic Flowmeter
- Measurements: Maximum flow rate observed was 67 gpm.

E. FLOW CALCULATIONS☒ Additional Computation Sheets Attached

Measured Method:

$$\text{Theoretical flow rate} = 8.8 \times 0.7 \times 5.0 / 70 + 2.31 \times 50 = 0.17 \text{ cfs}$$

$$\text{Measured flow rate} = 67 \text{ gpm} = 0.15 \text{ cfs}$$

F. VOLUME CALCULATIONS**1. Volume Calculations for Irrigation:**

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 8.0 \text{ acres} \times 3.5 \text{ af/acre} = 28 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 68 \text{ afa}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 28.0 \text{ afa}$$

2. Volume Calculations for Other Uses:

$$\text{Domestic (standard vol for inside use + } \frac{1}{2} \text{ acre of lawn and garden)} = 1.2 \text{ afa}$$

$$\text{Stockwater} = 3 \text{ horses} \times 12 \text{ gpd} \times 365 / 325850 = 0.1 \text{ afa}$$

G. NARRATIVE/REMARKS/COMMENTS

Two ground water wells located in the NWNE of Section 19. The well developed under 11-7313 is pumped into the same mainline as the well developed under 11-7312. Both water rights provide water for stock, irrigation, and domestic uses. Water for stock is provided by one portable and one fixed stock tank. Two to three horses are watered on the premises. Farm ground is watered by hand lines. The irrigation POU for 11-7313 and 11-7312 are the same and together total 11.4 acres. This right is good for 8.0 acres within the combined POU. This well is connected to Empey well 11-7312, providing water for irrigation use. IDWR site tag A0010640.

PLS grid in this area is not accurate. Caribou County shows the entire Empey property is located within the NWNE of Section 19. Roadways match the QQ lines recognized by the county property records. Water rights 11-7312 and 11-7313 will be licensed to describe the entire place of use within the NWNE of Section 19.

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	0.040 CFS	1.20 AF
STOCKWATER	01/01 to 12/31	0.020 CFS	0.10 AF
IRRIGATION	04/01 to 10/31	0.160 CFS	28.00 AF
<u>Totals:</u>		0.170 CFS	29.30 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 JB Date 9/2011

Reviewer _____ Date _____

	6 'VELOCITY ft/s	'FLOW RAT gal/min	'FLOW RAT %	'TOTALIZE gal	'-TOTALIZER gal
9/26/2011 11:30	3.231	66.9914	20.693	2423.164	-2344.501
9/26/2011 11:31	3.2	66.3386	20.491	2489.872	-2344.501
9/26/2011 11:32	3.224	66.8376	20.645	2556.779	-2344.501
9/26/2011 11:33	3.219	66.732	20.613	2623.035	-2344.501
9/26/2011 11:34	3.224	66.8448	20.648	2689.833	-2344.501
9/26/2011 11:35	3.223	66.8224	20.641	2756.682	-2344.501
9/26/2011 11:36	3.226	66.8853	20.66	2823.626	-2344.501
9/26/2011 11:37	3.207	66.4948	20.539	2890.429	-2344.501
9/26/2011 11:38	3.224	66.8368	20.645	2957.112	-2344.501
9/26/2011 11:39	3.215	66.6619	20.591	3023.426	-2344.501
9/26/2011 11:40	3.222	66.7936	20.632	3090.373	-2344.501

Empey irrigation well -1/- 73/3

667.209 gallons

66.7209 gpm



wellhouse 11-7312



Water trough on Empey Farm



well house 11-7213



Late season - hay field on Empey Farm



Lawn and home supplied by Both 11-7312 and 11-7313



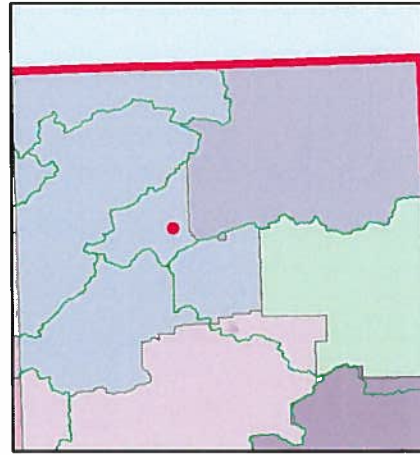
Inside well house - 11-7212



Idaho Department of Water Resources

Water Right
11-7313
(IRRIGATION)

-  Point of Diversion
-  Place of Use
-  State Outline
-  Townships
-  PLS Sections
-  Quarter Quarters



**Caribou County
IDWR Basin 11**

Prepared by Bitzenburg, James
On October 25, 2012
2009 Aerial Photography



Owner: Roger Alvin Empey
NOTE: Only one owner is listed. There may or may not be more than this in the IDWR database.



Irrigation pipe used on Empeg Farm



Water trough on Empeg Property

Idaho Department of Water Resources



Empey
11-7313



Legend

-  11-7313 Irrigation
-  Township/Range
-  Sections
-  QQ

2011 Aerial Photography

1 inch = 307 feet

