

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 15-7303

Exam Date: 07/09/2015

1. Current Owner: DAVID SAXTON
PO BOX 195
FIELDING UT 84311
(435) 458-3047

Or

DIANA SAXTON
PO BOX 195
FIELDING UT 84311
(435) 458-3047

2. Accompanied by: Diana Saxton

3. SOURCETRIBUTARY

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: *Cherry Creek - unrecorded water use*
2. Other water rights with the same point of diversion: None

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

GROUND WATER

NE1/4SW1/4SE1/4

Sec. 14, Twp 16S, Rge 36E, B.M.

ONEIDA County

Method of Determination: GPS and ArcMap

2.

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	
16S	36E	14														.3	6.3		6.6

Total Acres: 6.6

Method of Determination:

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. **Pump Information:** Submerged 15 HP pump.

D. FLOW MEASUREMENTS

No suitable measuring point for flow meter, so a theoretical was performed. At the time of examination, 11.5 acres were being irrigated under the 6.6 acre permit.

There was not a PSI port or installed PSI indicator at the site. The system was 34 sprinklers with 5/32" nozzles. At 20 PSI, the lowest rated PSI available, each 5/32" sprinkler discharges 3.26 gallons per minute.

$34 \text{ sprinklers/system} \times 3.26 \text{ gpm/sprinkler} = 110.84 \text{ gpm/system}$

A theoretical measurement based on 15 HP, a depth to water of 80 feet (from well driller report), and 20 psi, confirms that the system can produce at least 110.84 gpm.

E. FLOW CALCULATIONS

☐ Additional Computation Sheets Attached

Measured Method:

$110.84 \text{ gpm/system} / 448.83 \text{ gpm/cfs} = 0.25 \text{ cfs/system}$

$6.6 \text{ acres} \times 0.02 \text{ cfs/acre} = 0.13 \text{ cfs}$

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 6.6 \text{ acres} \times 3.5 \text{ AFA} = 23.1 \text{ Acre Feet}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.13 \times 214 \times 1.9835 = 55.18$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 23.1 \text{ AF}$$

2. Volume Calculations for Other Uses: N/A

G. NARRATIVE/REMARKS/COMMENTS

At time of visit, 11.5 acres being irrigated. Groundwater combines with Cherry Creek water in the system. A house was being built at the time of visit, but was not completed during the beneficial use period.

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>
IRRIGATION	04/01 to 10/31	0.130 CFS	23.10 AF
<u>Totals:</u>		0.130 CFS	23.10 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 _____ Cooper Fritz _____ Date _____ 12/17/2015 _____

Reviewer _____ Date _____

15-7303 POD and POU at Licensing



2013 Imagery

Legend

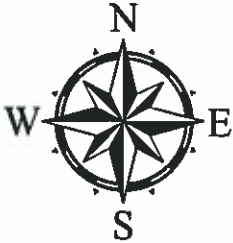
Water Right POD

Water Right POU

Township/Range

Sections

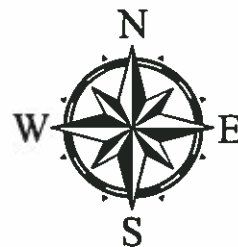
QQ



15-7303 POD and POU at Licensing



2015 Preliminary Imagery -- Slightly Shifted



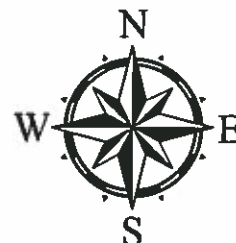
15-7303 POD, Mainline, and POU at Licensing



2013 Imagery

Legend

-  Water Right POD
-  Mainline
-  Water Right POU
-  Township/Range
-  Sections
-  QQ



0 0.0325 0.065 0.13 Miles



07/09/2015 12:46

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 15-7303
Examiner: Cooper Fritz
Date of Field Exam: 7/9/2015

Option 1

P/D No.:

PUMP HORSEPOWER	15
BOOSTER HORSEPOWER	0
PUMPING LEVEL	80
DISCHARGE PRESSURE	20
FRICTION	0

RATE OF FLOW (cfs)
(gpm)

0.73
328.6

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.

Examiners Notes:

Lift was taken from well log. Hp was found during site visit. A PSI of 20 was used in accordance with the theoretical measurement in the Field Exam.

IDAHO DEPARTMENT OF WATER RESOURCES WELL DRILLER'S REPORT

1. WELL TAG NO. D 63032

Drilling Permit No. _____

Water right or injection well # 15-7303

2. OWNER: David or Diana Barton

Name _____

Address PO Box 195

City Fielding State Id Zip 84311

3. WELL LOCATION:

Twp. 16 North ☐ or South ☒ Rge. 36 East ☒ or West ☐

Sec. 14 NE 1/4 SW 1/4 SE 1/4

Gov't Lot _____ County Oneida

Lat. _____ (Deg. and Decimal minutes)

Long. _____ (Deg. and Decimal minutes)

Address of Well Site _____

City Malad

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
<u>cement</u>	<u>0</u>	<u>60</u>	<u>2 1/2 yds</u>	<u>pumping</u>

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing	Liner	Threaded	Welded
<u>10</u>	<u>+2</u>	<u>240</u>	<u>250</u>	<u>steel</u>	☒	☐	☐	☒

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

9. PERFORATIONS/SCREENS:

Perforations ☒ Y ☐ N Method mills knife

Manufactured screen ☐ Y ☒ N Type _____

Method of installation _____

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
<u>180</u>	<u>240</u>	<u>3/8</u>	<u>16</u>	<u>10</u>	<u>A53</u>	<u>250</u>

Length of Headpipe _____ Length of Tailpipe _____

Packer ☐ Y ☒ N Type _____

10. FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method
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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) 80 Static water level (ft) 80

Water temp. (°F) 51 Bottom hole temp. (°F) 51

Describe access port well cap

Well test:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)
<u>190</u>	<u>230</u>	<u>2 hrs</u>
<u>40</u>	<u>140</u>	<u>2 hrs</u>

Test method:

Pump ☒ Bailer ☐ 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
<u>16</u>	<u>0</u>	<u>60</u>	<u>clay</u>		☒
<u>10</u>	<u>60</u>	<u>170</u>	<u>clay sand + gravel</u>	☒	
<u>10</u>	<u>170</u>	<u>220</u>	<u>sand + gravel</u>	☒	
<u>10</u>	<u>220</u>	<u>240</u>	<u>gravel</u>	☒	

Completed Depth (Measurable): 240

Date Started: 4-18-13 Date Completed: 5-10-13

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 High Plains Co. No. 299

*Principal Driller Marion F. Linder Date 8-15-13

*Driller Travis Taylor Date 8-15-13

*Operator II _____ Date _____

Operator I _____ Date _____

*Signature of Principal Driller and rig operator are required.

SPRINKLER SYSTEM DISCHARGE

NOZZLE DISCHARGE - GALLONS PER MINUTE							
psi	3/32	1/8	9/64	5/32	11/64	3/16	13/64
20	1.17	2.09	2.65	~~3.26~~	3.92	4.69	5.51
25	1.31	2.34	2.96	3.64	4.38	5.25	6.16
30	1.44	2.56	3.26	4.01	4.83	5.75	6.80
35	1.55	2.77	3.50	4.31	5.18	6.21	7.30
40	1.66	2.96	3.74	4.61	5.54	6.64	7.80
45	1.76	3.13	3.99	4.91	5.91	7.03	8.30
50	1.85	3.30	4.18	5.15	6.19	7.41	8.71
55	1.94	3.46	4.37	5.39	6.48	7.77	9.12
60	2.03	3.62	4.50	5.65	6.80	8.12	9.56
65	2.11	3.77	4.76	5.87	7.06	8.45	9.92
70	2.19	3.91	4.96	6.10	7.34	8.78	10.32
75	2.27	4.05	5.12	6.30	7.58	9.08	10.66
80	2.35	4.18	5.29	6.52	7.84	9.39	11.02
85	2.42	4.31	5.45	6.71	8.07	9.67	11.35
90	2.49	4.43	5.61	6.91	8.31	9.95	11.69
95	2.56	4.56	5.76	7.09	8.53	10.20	11.99
100	2.63	4.67	5.91	7.29	8.76	10.50	12.32

AVERAGE APPLICATION RATE - INCHES PER HOUR

Spacing in Feet	Discharge From Each Sprinkler						
	2 gpm	3 gpm	4 gpm	5 gpm	6 gpm	7 gpm	8 gpm
20x20	0.48	0.72	0.96	1.20	1.44	1.70	1.95
20x30	0.32	0.48	0.64	0.80	0.96	1.12	1.28
20x40	0.24	0.36	0.48	0.60	0.72	0.84	0.96
30x30	0.21	0.32	0.43	0.54	0.64	0.75	0.88
30x40	0.16	0.24	0.32	0.40	0.48	0.56	0.64
30x50	0.13	0.19	0.25	0.32	0.38	0.45	0.51
40x40	0.12	0.18	0.24	0.30	0.36	0.42	0.48
40x50	0.1	0.14	0.19	0.24	0.29	0.34	0.38
40x60		0.12	0.12	0.20	0.24	0.28	0.32