

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 15-07264
Exam Date: 6/68/2015

1. Current Owner:
SETH D SEAMONS 2223 S 5400 W MALAD CITY ID 83252 2087664890
2. Accompanied by: Seth Seamons
Phone No: 208 339-3890 (Lorinda Seamons, wife)
3. **SOURCE:** GROUND WATER **TRIBUTARY:**

B. OVERLAP REVIEW

1. Other water rights with the same place of use: Samaria Irrigation Company shares
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 SE¼NE¼ Sec. 3, Twp 15S, Rge 35E, 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	
15S	35E	2							36.0										36.0
15S	35E	3				16.0													16.0

Total Acres: 52.0

Method of Determination: meeting with appropriator, aerial photography, and ArcMap.

3.

Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.

 X Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.

 X Aerial Photo Attached (required for irrigation of 10+ acres).

 X Photo of Diversion and System Attached

4. WELL INFORMATION

25 hp vertical turbine pump.

D. FLOW MEASUREMENTS

There was no suitable measurement location for an ultrasonic flow meter.

The rate listed on the right results from a theoretical calculation based on psi and sprinkler discharge. A second theoretical calculation, based on pump hp and depth to water table, was performed to check the sprinkler-based theoretical discharge.

E. FLOW

 X Additional Computation Sheets Attached

CALCULATIONS

1) Sprinkler-based theoretical discharge calculation.

The system runs 96 5/32" nozzle sprinklers on two ¼ mile wheel lines and various handlines. A psi of 38 was observed at the time of the field examination.

"Exhibit 9 – Sprinkler System Discharge" (attached) notes that at 35 psi a 5/32" sprinkler yields 4.31 gpm, while at 40 psi the 5/32" sprinkler yields 4.61 gpm.

$(4.31 \text{ gpm} + 4.61 \text{ gpm}) / (35 \text{ psi} + 40 \text{ psi}) = 8.92 \text{ gpm} / 75 \text{ psi} * 38 \text{ psi} = 4.52 \text{ gpm/sprinkler}$.

$4.52 \text{ gpm/sprinkler} * 96 \text{ sprinklers/system} = 433.92 \text{ gpm/system} / 448.83 \text{ gpm/cfs} = 0.97 \text{ cfs/system}$.

2) Pumping level and pump size calculation (check on theoretical calculation 1).

The irrigation well that serves as a point of diversion for this right was drilled December 2007. *The well driller's report for the irrigation well does not note a static water level or comment on drawdown.* The well driller's report does indicate that water was first encountered at 40 ft.

A *domestic well* was drilled on the property in the same QQ as the irrigation well in September/October of 1997. The well driller's report notes that water was first encountered at 60 ft, and that *static level was 20ft below ground*. It does not comment on drawdown resulting from pumping.

As a result of the domestic well's well driller's report, a *20 ft pumping level was used*.

The result of the theoretical calculation (attached) was 1.43 cfs.

The result of this theoretical calculation is greater than the sprinkler-discharge calculation, providing evidence that the well can produce at least the licensed 0.97 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 52.0 \text{ acres} \times 3.5 \text{ AF/acre} = 182.0 \text{ AF}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.97 \text{ cfs} \times 214 \text{ days} \times 1.9835 = 411.7 \text{ AF}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 182.0 \text{ AF}$$

G. NARRATIVE/REMARKS/COMMENTS

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

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u> IRRIGATION	<u>PERIOD OF USE</u> 04/01 to 10/31	<u>DIVERSION RATE</u> 0.97 CFS	<u>ANNUAL VOLUME</u> 182.0 AF
<u>Totals:</u>		0.970 CFS	182.0 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

I. AUTHENTICATION

Field Examiner's Name Cooper Fritz Date 10/19/2017

Reviewer James Cefalo Date 10/20/17

15-7264 Place of Use and Point of Diversion at Licensing



2015 Imagery

Legend

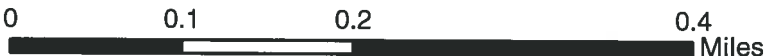
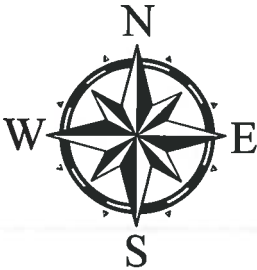
 Water Right POU

 Water Right POD

 Township/Range

 Sections

 QQ





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

T/SS R35E Sec 3 SE 1/4 NE 1/4
IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

15

1. WELL TAG NO. D 0049298

Drilling Permit No. _____

Water right or injection well # _____

2. OWNER:

Name Seth ScammoneAddress 2223 S. 5400 WCity Malad State ID Zip 83252

3. WELL LOCATION:

Twp. 15 North ☐ or South ☒ Rge. 35 East ☒ or West ☐Sec. 2 1/4 SW 1/4 NE 1/4 SWGov't Lot _____ County oneida

Lat. _____ (Deg. and Decimal minutes)

Long. _____ (Deg. and Decimal minutes)

Address of Well Site Same

(Give nearest name of road - distance to road or landmark) City _____

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)	Placement method/procedure
Bentonite	0	20	16 bags	overhead

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing	Liner	Threaded	Welded
10	0	375	250	steel	☒	☐	☐	☒

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 375

9. PERFORATIONS/SCREENS:

Perforations ☒ Y ☐ N Method machineManufactured screen ☐ Y ☐ N Type _____

Method of installation _____

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
295	350	1/4-1	330	10"	steel	250
350	360	1/4-1	100	10"	steel	250
360	373	1/4-1	30	10"	steel	250

Length of Headpipe _____ Length of Tailpipe _____

Packer ☐ Y ☐ N Type _____

10. FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft)	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) 40 Static water level (ft) 0Water temp. (°F) cold Bottom hole temp. (°F) med

Describe access port _____

Well test:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)
	50	

Test method:

Pump	Boiler	Air	Flowing artesian
☐	☐	☐	☒

Water quality test or comments: good

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
13 1/2	0	20	Bm clay		☒
10	20	30	Bm clay		☒
10	30	35	Bm clay gravel		☒
10	35	40	Bm clay		☒
10	40	58	Bm clay gravel	☒	☒
10	58	85	gravel	☒	☒
10	85	95	gravel		☒
10	95	100	Bm clay		☒
10	100	125	gravel Bm clay		☒
10	125	135	Bm clay		☒
10	135	140	gravel Bm clay		☒
10	140	190	gravel Bm clay	☒	☒
10	190	197	Bm clay		☒
10	197	205	gravel Bm clay	☒	☒
10	205	240	Bm clay gravel		☒
10	240	250	gravel clay	☒	☒
10	250	260	Bm clay		☒
10	260	295	Bm clay gravel		☒
10	295	360	gravel clay	☒	☒
10	360	370	Bm clay	☒	☒
10	370	375	orange clay		☒
10	375	383	Hardpan Rock layer	☒	☒
10	383	390	gravel clay	☒	☒
10	390	395	Sand	☒	☒
10	395	400	gravel clay	☒	☒

RECEIVED

APR 08 2008

RECEIVED

MAR 25 2008

Department of Water Resources	Department of Water Resources
Completed Depth (Measurable): <u>375</u>	Eastern Region
Date Started: <u>12-6-07</u>	Date Completed: <u>12-30-07</u>

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 Midwest Well Drilling Co. No. 543Principal Driller Michael Zander Date 1-8-08Driller Miles Franden Date 1-5-08

Operator II _____ Date _____

Operator I _____ Date _____

Signature of Principal Driller and Operator are required

SCANNED

SCANNED

APR 02 2008

APR 02 2008

Irrigation Well

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 15-7264

Examiner: Cooper

Date of Field Exam: 7/6/2017

Option 1

P/D No.:

PUMP HORSEPOWER 25

BOOSTER HORSEPOWER 0

PUMPING LEVEL 20

DISCHARGE PRESSURE 38

FRICTION 0

RATE OF FLOW (cfs) 1.43
(gpm) 641.3

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 38 was observed during the field examination and used as pressure against the pump.