

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 67-14913

Exam Date: 7/26/2013

1. Current Owner: STEVEN E RYALS
2429 LAPPIN LN
COUNCIL ID 83612
(208)484-1722
2. Accompanied by: Steve Ryals
Phone No: Same
Address: Same
Relationship to Permit Holder:

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 SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER

SE1/4SW1/4

Sec. 25, Twp 17N, Rge 01W, B.M.

ADAMS County

Method of Determination: Arc Map (Aerial Photo); GPS – Latitude N.44°46.557', Longitude W.116°24.190'; Datum – NVD83.

2.

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
17N	01W	25	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
														3.0			6.0		9.0

Total Acres: 9

Method of Determination: Arc Map (Aerial Photo); Tax Lots.

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 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 Size</u>
D0055548	_Unknown_	_25_	_Unknown_	_Grundfos_	_2 1/2" _
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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

D. FLOW MEASUREMENTS

1.

<u>Measurement Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
N/A	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

2. Measurements: No field measurement. Irrigation system operating pressure of 85 psi (gauge), and 81 psi (VFD).

E. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Measured Method: (Theoretical Horsepower Equation)

$$Q = 8.8 \times 0.7 \times 25/504 + (2.31 \times 81) = 154.0/691.11 = 0.22 \text{ cfs}$$

$$Q(\text{theoretical}) = 0.22 \text{ cfs} > 0.20 \text{ cfs } Q(\text{permit})$$

$$HP = 25$$

$$Z = 504'$$

$$P = 81 \text{ psi (VFD)}$$

Appears that the current pumping system can attain the permit diversion rate of 0.20 cfs. However, since only 9 Acres is currently being irrigated, recommend a diversion rate of 0.18 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 9.0 \times 4.0 = 36.0 \text{ AFA}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.18 \times 246 \times 1.9835 = 87.8 \text{ AFA}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 36.0 \text{ AFA}$$

2. Volume Calculations for Other Uses: N/A

G. NARRATIVE/REMARKS/COMMENTS**WATER SUPPLY SYSTEM:**

A 25-hp submersible pump diverts water from a ground water well for irrigation of 9.0 acres of pasture area. The pump start-up and operation is controlled by a Dunfoss VLT Aqua Drive Variable Frequency Drive (VFD).

IRRIGATION SYSTEM

The ground water well submersible pump discharges water through 2 ½" galvanized pipe to the pressurized irrigation system. Water is conveyed through 2" PVC and 3" PVC main lines.

The pressurized irrigation system is comprised of 34 stations. Each station located within the main pasture area is comprised of two (2) high-impact sprinklers. The high-impact sprinklers contain 11/32" nozzles, which are rated to discharge 35.5 gpm at 80 psi operating pressure. The small narrow pasture area south of the home is comprised of five (5) rotary pop-up sprinklers. The Hunter I-25 Plus rotary pop-up sprinklers with #13 nozzles, are rated to discharge 13 gpm at 70 psi operating pressure.

OVERLAP ANALYSIS:

Point of Diversion: There are no point of diversion overlaps for Water Right Permit No. 67-14913.

Place of Use: There are no place of use overlaps for Water Right Permit No. 67-14913.

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

RATE &/OR STORAGE RECOMMENDED FOR LICENSING

Description	Rate of Flow (cfs)		Storage (af)
Permit Amount	0.20	&/or	N/A
Beneficial Use Limit	0.18	&/or	N/A
System Measurement	0.22(theoretical)	&/or	N/A
Proof Fee Amount	0.20	&/or	N/A
Recommended Amount	0.18	&/or	N/A

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	03/15 to 11/15	0.180 CFS	36.0 AFA
<u>Totals:</u>		0.180 CFS	36.0 AFA

2. Recommended Amendments

___ Change P.D. as reflected above ___ Add P.D. as reflected above X None

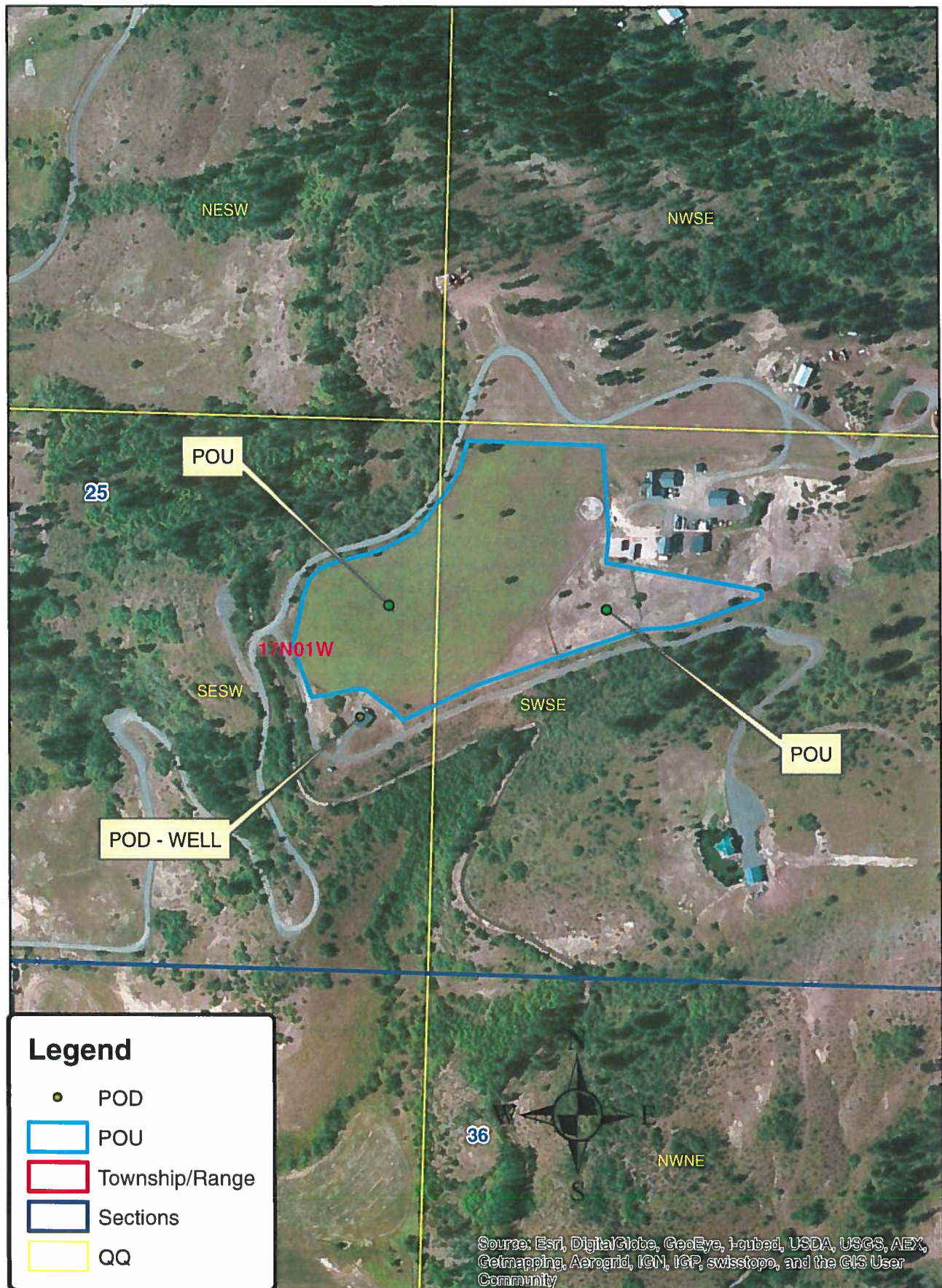
___ Change P.U. as reflected above ___ Add P.U. as reflected above ___ Other

I. AUTHENTICATION

Field Examiner's Name Rick Collingwood Date 11/27/13
 Reviewer _____ Date _____

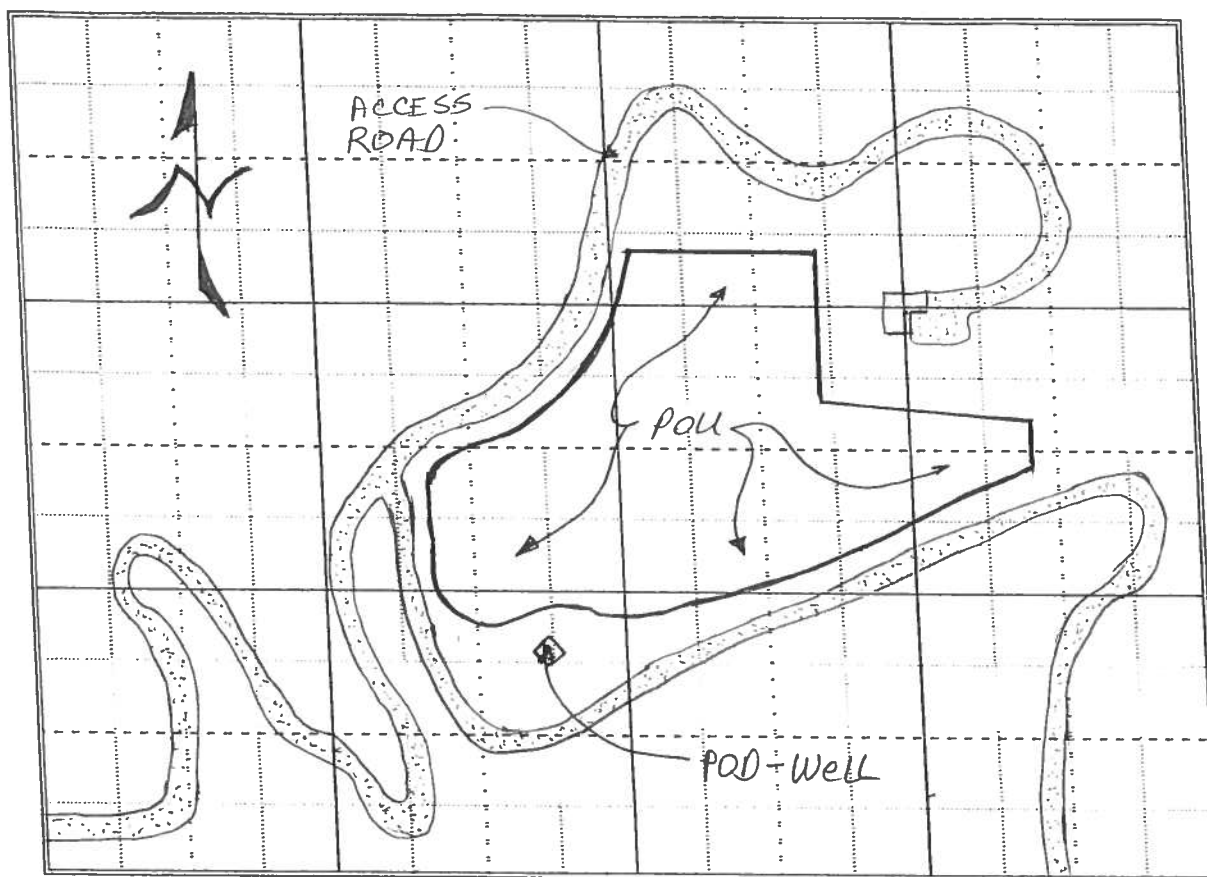
67-14913

ESRI AERIAL PHOTO - 2012



Form 219 07/11

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe diameter (inside), as applicable. Use the space provided or ☐ see attached.



Scale: 1" = NTS

- ☐ Copy of USGS Quadrangle attached showing location(s) of point(s) of diversion and place(s) of use (required)
- ☒ Aerial photo attached (required for irrigation of 10+ acres)
- ☒ Photo of diversion and system attached

97

852824

Form 238-7
6/07

IDAHO DEPARTMENT OF WATER RESOURCES WELL DRILLER'S REPORT

1. WELL TAG NO. D D00 55548

Drilling Permit No. _____
Water right or injection well # _____

2. OWNER

Name STEVE RYALS
Address PO BOX 719
City COUNCIL State ID Zip 83612

3. WELL LOCATION:

Twp. 17 North ☒ or South ☐ Rge. 01 East ☐ or West ☒
Sec. 25 SE 1/4 SE 1/4 SW 1/4
10 acres 40 acres 160 acres

Gov't Lot -- County COUNCIL
Lat. 44 ° 46.534 (Deg. and Decimal minutes)
Long. 116 ° 24.209 (Deg. and Decimal minutes)
Address of Well Site 2429 LAPPIN LANE
City COUNCIL

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
BENTONITE	0	265	1600#	TOP POUR

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing	Liner	Threaded	Welded
8"	+2	322	.250	STEEL	☒	☐	☐	☒
6"	300	680	~~.250~~	STEEL	☐	☒	☐	☒
			<u>188</u>		☐	☐	☐	☐

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 322

9. PERFORATIONS/SCREENS:

Perforations ☒ Y ☐ N Method SAW

Manufactured screen ☐ Y ☒ N Type _____

Method of installation _____

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
600	680	1/8 X 4	100	6"	STEEL	.250

Length of Headpipe N/A Length of Tailpipe _____

Packer ☒ Y ☐ N Type FORMATION

10. FILTER PACK:

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

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) 656 Static water level (ft) 420
Water temp. (°F) 55 Bottom hole temp. (°F) _____
Describe access port TOP OF CASING - CAP

Well test:

Test method:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)	Pump	Bailer	Air	Flowing artesian
	100	1.5	☐	☐	☒	☐

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
12	0	63	FRACTURED BASALT W/CLAY	X
12	63	102	TAN CLAY	X
12	102	176	FRACTURED BASALT W/CLAY	X
12	176	265	TAN STICKY CLAY	X
12	265	280	BROKEN BASALT	X
8	280	291	BROKEN BASALT	X
8	291	323	TAN CLAY	X
8	323	335	SOFT BROWN BASALT	X
8	335	407	TAN STICKY CLAY	X
8	407	436	FRACTURED BASALT W/CLAY	X
8	436	489	MEDIUM HARD BASALT	X
8	489	510	BRN W-BASALT	X
8	510	606	MED HARD BASALT	X
8	606	613	RED W-BASALT	X
8	613	656	MED HARD BASALT	X
8	656	680	RED W-BASALT	X

RECEIVED

SCANNED

SEP 08 2008

SEP 10 2008

WATER RESOURCES
WESTERN REGION

Completed Depth (Measurable) 22 680
Date: Started 08/11/08 Completed 08/10/08

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 TWO U. DRILLING, LLC Co. No. 125

*Principal Driller TU Date 08/10/08

*Driller ND Date 08/10/08

*Operator II _____ Date _____

Operator I _____ Date _____

* Signature of Principal Driller and rig operator are required.

FIELD EXAM PHOTOS

Water Right Permit: 67-14913

Field Exam Date: 7-26-13

PLS: SE1/4, SW1/4 Section 25, T.17N, R.01W.

Field Examiner: RC



Point of Diversion: View inside of well house of the 2 1/2" galvanized well discharge piping and the Danfoss VLT Aqua Drive VFD.



Place of Use: View northerly of a pasture area being irrigated by the pressurized irrigation system.



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way • Boise, Idaho 83705-5082

Phone: (208) 334-2190 • Fax: (208) 334-2348 • Web Site: www.idwr.idaho.gov

C. L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Interim Director

June 21, 2013

Steven E. Ryals
2429 Lappin Lane
Council, ID 83612

RE: Scheduling Field Exam for Water Right Permit No. 67-14913

We are planning to **conduct water right field examinations** in the vicinity of the above-referenced permit **during the week of July 15, 2013**. An examination is needed to verify your water use in order to issue a water right license.

Please be advised that you will need to operate your system under normal operating conditions during the examination. The permit authorizes the diversion of 0.20 cfs of ground water for irrigation of 10.0 acres.

In order to conduct your exam as efficiently as possible, we ask that you call this office to schedule a day and time convenient for you. **Please call me at 208-334-2190 by July 12, 2013, to conduct the exam during the week of July 15, 2013.** If there is a problem with scheduling or conducting the examination at this time, please let me know so we can reschedule or make other arrangements.

I appreciate your attention to this matter and I look forward to hearing from you.

Sincerely,

Rick Collingwood, P.E.
Water Resource Agent, Sr.