

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 47-7419

Exam Date: 3/5/2015

1. Current Owner: RUDY PRUDEK
1052 E 3700 N
BUHL ID 83316
(208)543-4936
2. Accompanied by: Vladimir Prudek
Phone No: (208) 543-4673
Address: 1531 E. 4230 N., Buhl, ID 83316
Relationship to Permit Holder: Current Owner and brother to Rudy Prudek

3. **SOURCE**

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 180 shares from Twin Falls Canal Co. Rights 1-4; 1-10; 1-10509 and 1-209.
2. Other water rights with the same point of diversion: N/A

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

GROUND WATER

SW1/4SE1/4

Sec. 20, Twp 10S, Rge 14E, B.M.

TWIN FALLS County

Method of Determination: GPS measurement using Garmin GPSmap 60CSx.

2.

PLACE OF USE: STOCKWATER

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
10S	14E	20	X	X	X											X	X		

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
10S	14E	20	19.0	39.0	40.0											40.0	37.0		175.0

Total Acres: 175

Method of Determination: Place of use determined by using 2011 and 2013 aerial imagery. Place of use appears to be located as recorded. See attached map.

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>
	Deutz AG	70	70 Hp diesel motor		

*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>
Sparling Meter						July 2012

2. Measurements:

Meter measures 1 AF x .001 per revolution = 325,850 gal/af x .001 = 325.85 gallons per revolution

Conversion to cfs = $(325.85_{\text{gal}} \times 60_{\text{secs/min}} / \text{secs}) / 448.83_{\text{gpm/cfs}} = \text{cfs}$

Seconds measured per revolution (10 sample times):

55s = 0.79 cfs 53s = 0.82 cfs

54s = 0.81 cfs 55s = 0.79 cfs

52s = 0.84 cfs 56s = 0.78 cfs

55s = 0.79 cfs 53s = 0.82 cfs

56s = 0.78 cfs 52s = 0.84 cfs

Total 8.06 / 10 = 0.806 cfs, rounded to **0.81cfs**

E. FLOW CALCULATIONS: N/A

Measured Method:

_____ Additional Computation Sheets Attached

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 180.0 \text{ acres} \times 4.0 \text{ AF} = 720.0 \text{ AF}$

$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.81 \text{ cfs} \times 246 \text{ days} \times 1.9835 = 395.2 \text{ AF}$

$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \underline{\underline{395.2 \text{ AF}}}$

2. Volume Calculations for Other Uses: Stockwater:

300 range cattle (per application for permit) at 12 gpd:

$(12 \text{ gpd/head} \times 300 \text{ head} \times 90 \text{ days}) / 325,850 \text{ gallons/af} = 0.99 \text{ AF}$

Total = 1.0 AFA

G. NARRATIVE/REMARKS/COMMENTS

Application for permit 47-7419 was filed on 07/28/1977; three extensions of time for proof of beneficial use were filed and approved extending the proof of beneficial use filing date to 10/01/1991. On 07/31/1991 the Department sent the permit holder a proof due notice and on 11/25/1991 the Department sent a lapse notice. On 05/26/1992 the applicant submitted proof of beneficial use to the Department. The Department then processed an order on 06/05/1992 reinstating the permit and advancing the priority date to 05/26/1992. On 07/05/2005 the permit was assigned from the Prudek Brothers to Rudy Prudek. Rudy Prudek passed away in 2009, and the property is now owned by Vladimir Prudek, the youngest of the three brothers. A change of ownership will be processed after the permit is licensed.

The original permit was filed for 2.0 cfs for the irrigation of 180 acres and 0.07 cfs of stockwater for 300 head of range cattle using groundwater. It was noted in the remarks section of the application that the water would be "supplemental water due to poor irrigation conditions on the property" and the application indicated that Twin Falls Canal Co. water was used on the farm. I visited the Twin Falls Canal Co. and verified that Mr. Prudek currently has 180 shares of canal water that he uses on the farm.

Information provided by the Prudek Brothers indicated that the well has never produced the permitted rate of 2.0 cfs. On two of the filed requests for extension of time to submit proof of beneficial use, there are statements indicating the well was not producing enough water to meet their needs and one states the well was producing 40"- 50" (0.8 to 1.0 cfs) of water. When I met with Vladimir Prudek, the current owner and youngest of the three Prudek brothers, he indicated the well likely never produced more than 1.0 cfs and that the flow rates it currently produces are fairly close to what the well has produced historically. We met on the farm on 3/5/2015 to conduct a field exam and attempt a sonic measurement using a Fuji Portaflow meter. After looking at the 10" pipe the water was conveyed through and the culvert it discharged into, it was obvious that I wouldn't be able to use the sonic meter as there was no way to back up enough water to completely fill the pipe. I also brought along a device which is basically a section of pipe with a Hersey-Sparling impeller type meter, model #61015, mounted on the pipe section (State of Idaho ID Serial no. 4335) that I was able to attach to a gated pipe connector inserted into an opening in a diversion culvert directly downstream of the well and capture all of the flow. 10 separate timed measurements resulted in averaged measured flow rate of 0.81 cfs (see section D. (2) for all measurements and calculations).

Irrigation water from the well is delivered to the farm through a system of gated pipe along the west side of the property and the east side of the canal that manages to cover 175 acres of actual irrigation. Reviewing GIS imagery in ArcMap seems to verify his statement as the majority of the farm acres appear irrigated. There is a small 1.2 acre portion in the NENE portion on the east side of Deep Creek that appeared dry in 2013 imagery, but appears to be irrigated in imagery from other years, including the beneficial use development period.

Although this permit is for a supplemental water right, there is evidence from the water right back file that beneficial use under this right likely occurred during the beneficial use development period. A letter from the Prudek Brothers dated 06/04/1992 discusses development of the well to augment canal shares because the slope of the land returns all the excess water applied through gravity irrigation either to Twin Falls Canal Co. Lateral #7 or to the Deep Creek channel. They claimed this prevented them from capturing any of the canal shares and reusing them as waste water. It goes on to state that the well was used to irrigate all 180 acres in the early spring, late fall and as stockwater for 250 head of cattle. An additional Memorandum (03/22/1996) also in the water right back file, discusses alleged well interference caused by pumping from the permitted well at a domestic well approximately 1/8 mile away. While this use was reported after the beneficial use developmental period, it is an indication from a third party that the ground water from the well was put to beneficial use.

Overlap review finds a domestic and stockwater right, 47-11913, which provides in-house domestic water to two homes and water to the stock corrals on the west side of the SWSE1/4. The stockwater used under this permit is delivered through the gated pipe system and directly out to pasture when stock are present there. Stockwater to the corrals is provided under ground water right 47-11913. The lawns around the homes are irrigated using canal shares and the irrigation portion of this permit when needed. The stockwater portion of this right is only delivered out to the cattle when they are in pasture, preventing any overlap between the two stockwater systems on this property.

Recommend licensing 0.81cfs and 395.2 afa for irrigation and 0.07 cfs and 1.0 afa for stockwater.

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>
STOCKWATER	12/01 to 02/28	0.070 CFS	1.00 AF
IRRIGATION	03/15 to 11/05	0.810 CFS	395.20 AF
<u>Totals:</u>		0.810 CFS	396.20 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

Date

Reviewer

Date



Figure 1: Deutz diesel motor and wellhead.



Figure 2: Diversion culvert where discharge was measured with Sparling Meter.



Figure 3: Looking north at gated pie on the farm.



Figure 4: Looking southwest at southern end of farm.



Figure 5: Diesel fuel pump.

System Diagram

