

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 37-8705

Exam Date: 8/30/2012

1. Current Owner: WILLIAM HUBERT SHAW
411 S 750 E
DIETRICH ID 83324
(208)544-7534
(208)731-2017

2. Accompanied by: owner

3. SOURCE
GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: Big Wood Canal Co. 1630 shares on 3000 acres
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 NE1/4NE1/4 Sec. 29, Twp 06S, Rge 19E, B.M. LINCOLN County

Method of Determination: field visit and already GPSd through WMIS

2.

PLACE OF USE: IRRIGATION

NE	NW	SW	SE
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Twp	Rge	Sec	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	Totals
06S	19E	21											38.0	38.0			35.0	36.0	147
06S	19E	28	34.0	40.0	39.0	35.0							37.0						185
06S	19E	29		38.0	40.0														78
Total Acres: 410.0																			

Total Acres: 410

Method of Determination: field visit and aerial imagery

POU based on 1987 imagery—note that the development was June 1991 thru May 1992. It appears that the application was filed on existing irrigation practices and in 1992 pivots were installed at the POU. The well was installed in 1991 so during the development period the POU most likely reflects the 1987 imagery. When the pivots were installed in 1992, the POU was cut back by 15 acres or so. I will give the permit holder the benefit of the doubt and license this right at the higher number of acres.

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>
A0005518 (site 10)	US Motor	200	1238454	Vertiline	D20011

D. FLOW MEASUREMENTS

1.

<u>Measurement</u> <u>Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
Polysonic						

2. Measurements:

A measurement was taken 9/13/2001 by Corbin Knowles.

E. FLOW CALCULATIONS

 x Additional Computation Sheets Attached
(see Corbin's measurement data)

Measured Method:

Total lift = 265' per the well driller's report
Pressure = 0-10 psi, the system open discharges
Hp = 200 hp

$$8.8 \times 200 \times 0.7 / 265 + (2.31 \times 0) = 1232 / 265 = 4.65 \text{ cfs}$$

$$8.8 \times 200 \times 0.7 / 265 + (2.31 \times 10) = 1232 / 288.1 = 4.28 \text{ cfs}$$

Back-calculate the measurement taken by Corbin in 2001

$$3.9 \text{ cfs} = 1232 / x + (2.31 \times 10) \rightarrow 1232 = 3.9x + 90 \rightarrow x = 292' \text{ where } x \text{ is the total lift}$$

$$3.9 \text{ cfs} = 1232 / x + (2.31 \times 0) \rightarrow 1232 = 3.9x \rightarrow x = 316' \text{ where } x \text{ is the total life}$$

Conclusion: The permit holder submitted evidence that a 300 hp pump was installed during the development of this permit. The information is not sufficient and this right will be licensed using the measurement that Corbin conducted in 2001. The documentation that Hubert submitted does not provide evidence of a 300 hp for the following reasons:

- December 12, 2008--statement from Max Auker who installed the pump and motor: Max states that the pump was set up to pump 7 cfs in 1989-1990. The well was not installed until 1991. Additionally, Max never states that the well contained a 300 hp pump.
- The pump curve that was attached to Max's statement cannot provide for 7 cfs. The performance curve tops out at 6.2 cfs. Additionally, the curve states that there are 6 stages. The next piece of evidence, or the invoice, supports that 6 bowls/bearings were purchased. The total head for this well is ~265 to 292'. Using the curve, there is no way you can get to a 300 hp pump. You can get to a 200 hp pump if there were 4 stages on the pump given the total head.
- The work order from Layne Pumps Inc., dated 6/2/1993, shows that the work is for a 300 hp Layne deep well. Mr. Shaw has several wells. The work order does not indicate which well the work is associated with. It appears that all the evidence that Hubert submitted is for a different well.

I further base my decision to limit the capacity of this system to Corbin's measurement because:

- Mr. Shaw states that he had installed a 200 hp pump on his proof statement
- Corbin Knowles found a 200 hp pump during his measurement in 2001.
- There is no evidence of a 300 hp pump in connection with this right

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 410 \text{ acres} \times 4 \text{ af} = 1640 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 3.9 \text{ cfs} \times 246 \text{ days} \times 1.9835 = 1902 \text{ afa}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 1640 \text{ afa}$$

2. Volume Calculations for Other Uses: NA

Conclusion: This right is supplemental to surface water and will not include a volume on the face of the right, just in the conditions.

G. NARRATIVE/REMARKS/COMMENTS

The application for permit states that this right is to be supplemental to Big Wood Canal Co. shares. This right was developed as supplemental to surface water. While I conducted the field exam, the permit holder was discharging water into a concrete box where canal water is also discharged.

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	3/15 to 11/15	3.900 CFS	supplemental

Totals: 3.900 CFS

2. Recommended Amendments

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None

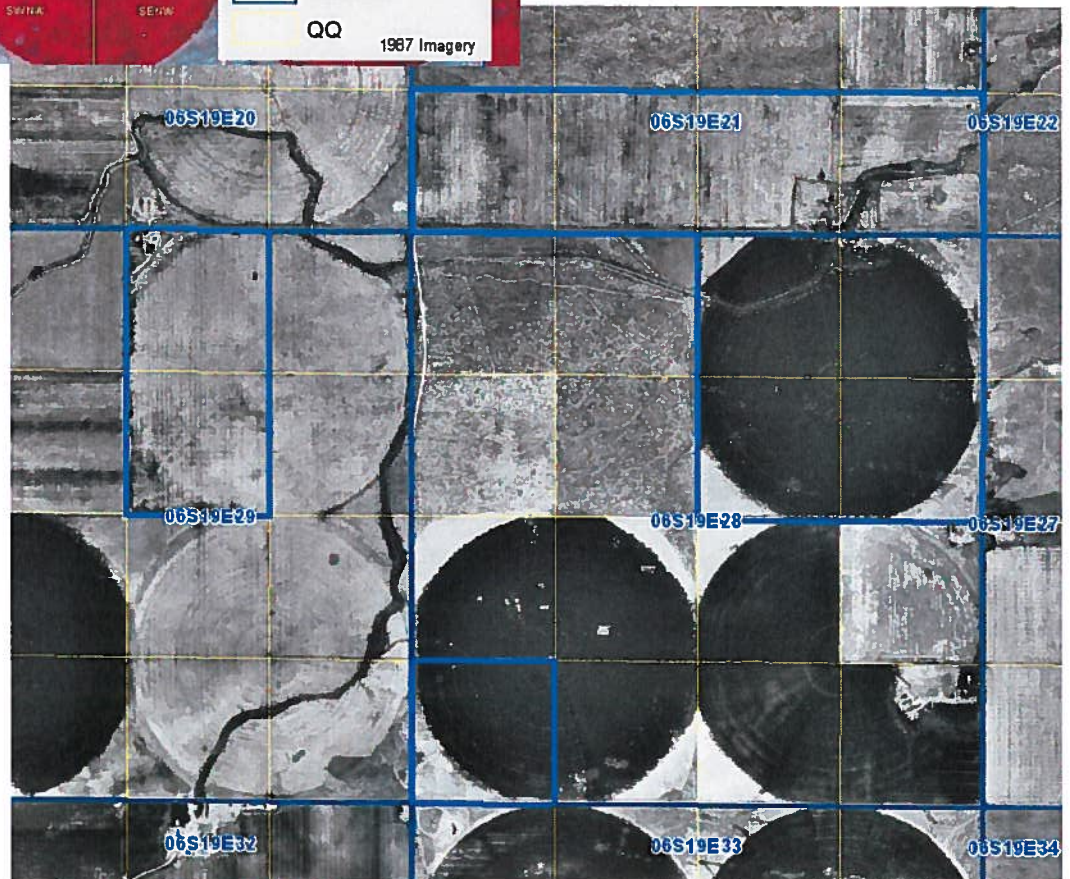
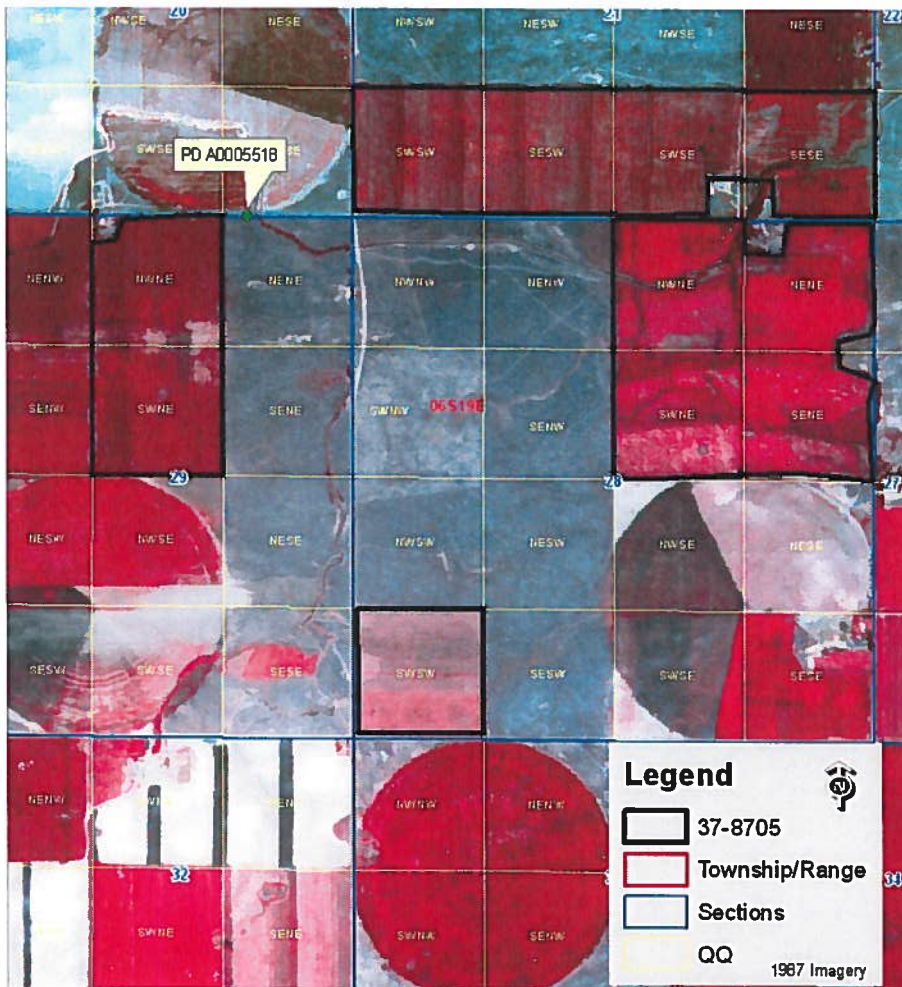
☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION

Field Examiner's Name Cheri Palmer Date 4/4/13

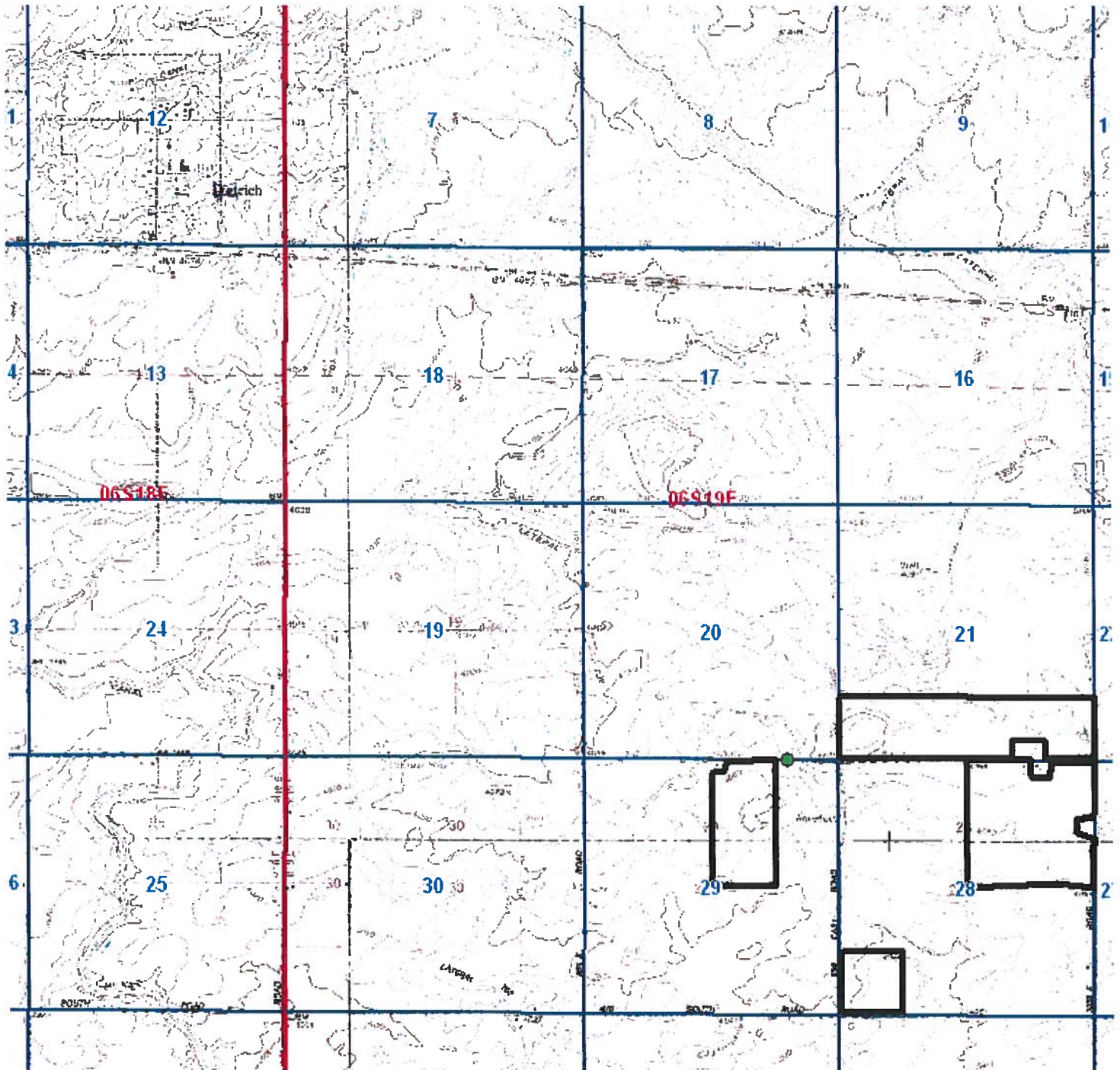
Reviewer _____ Date _____

System Notes: During the development period the system was radically different from what it is now. There are now pivots in place throughout the POU so diagramming the system won't reflect what occurred during the development period. It looks like the POU was irrigated with handlines and maybe even some flood irrigation but the permit holder could not provide specifics on this topic. Currently, there is one well, two re-lift pumps, and 6" pipeline to the pivots.



1992 Aerial Imagery

1992 Imagery

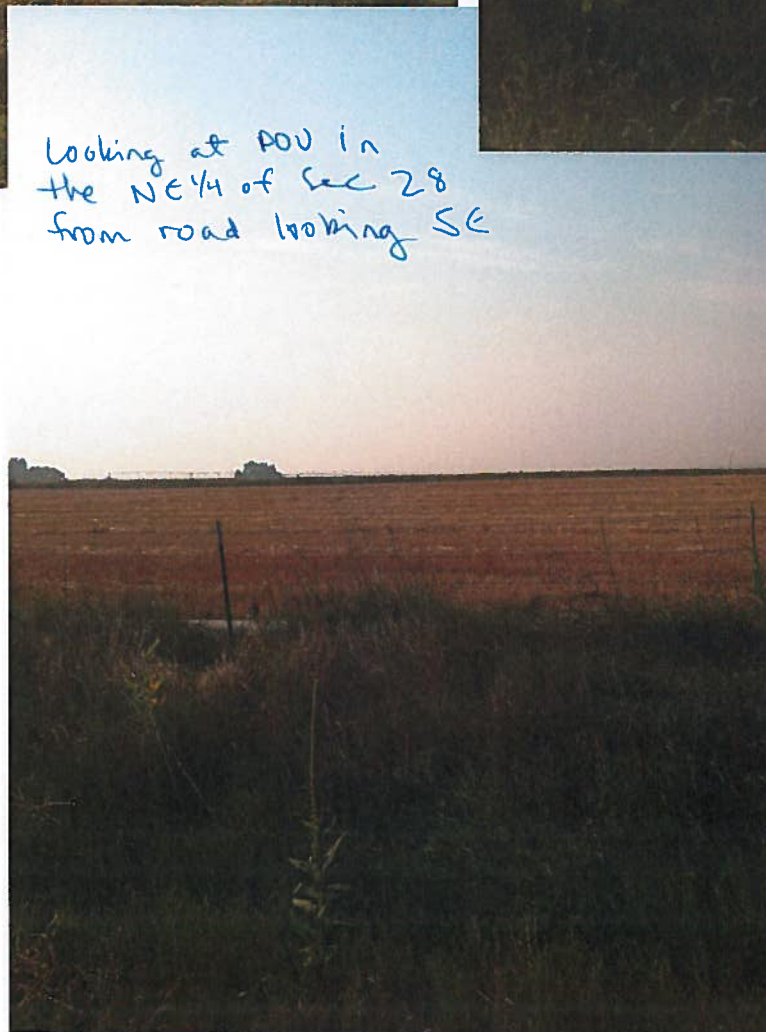
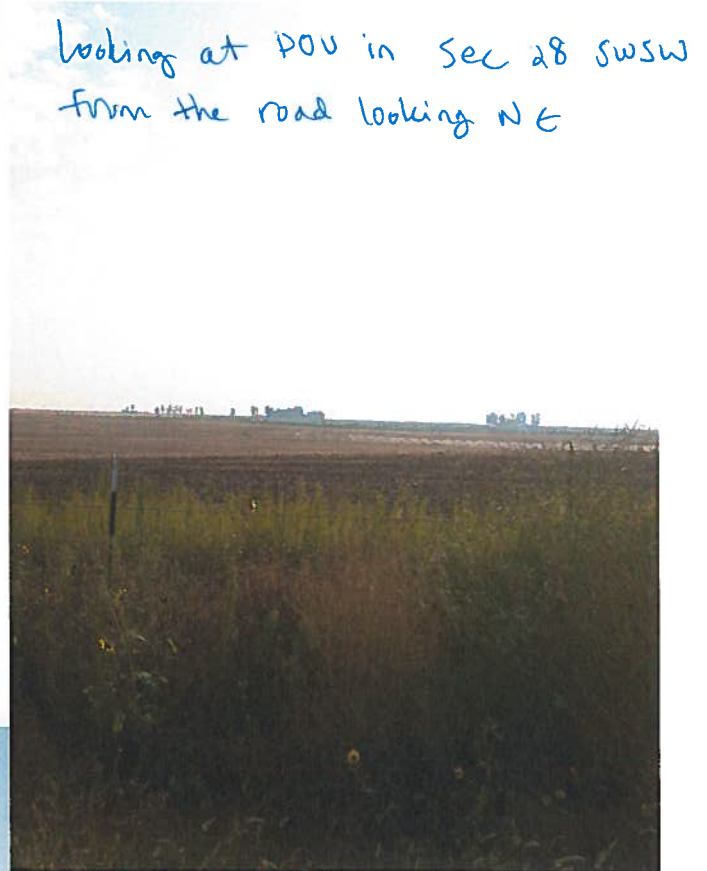
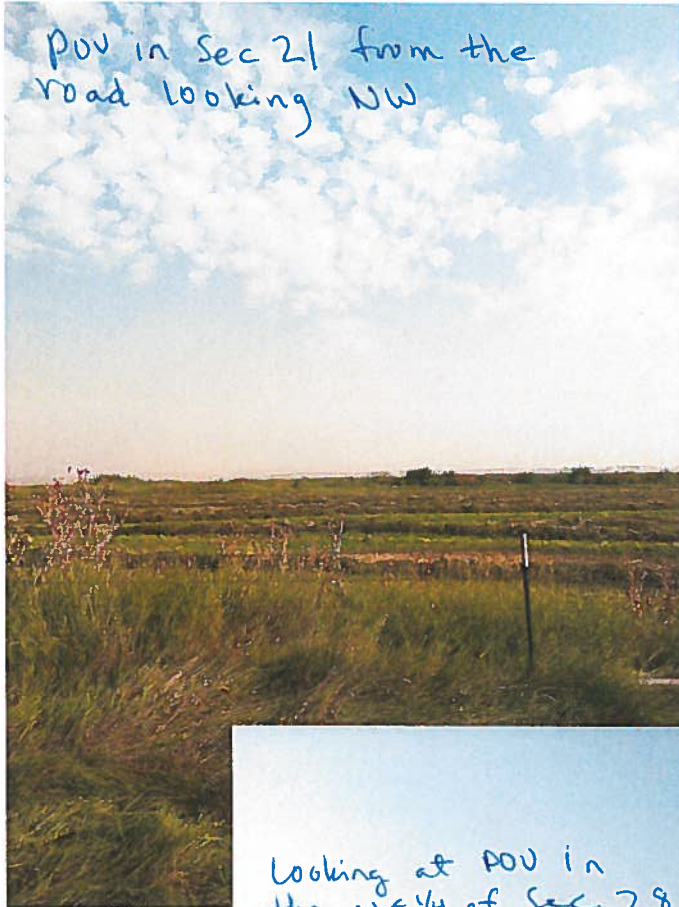


POD A0005518



re-lift pumps

← cement collection box



Photos of the Place of use

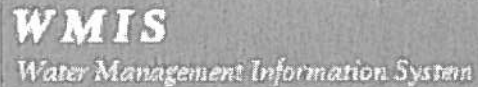
PD at
the
canal



30" pipe that conveys
the right holder's
canal shares



Idaho Department of Water Resources



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Site Visits

You are viewing 401845; A0005518

Report Year	Visit Date	Examiner	Reason for Visit
2001	09/14/2001	CKNOWLES	Timeclock Calibration
Comments This well had the measurement work done on 9-13-01. The owner thought that the pump was rated for 3000 GPM but found that it was only rated for 2000 GPM. The right on this is for around 3000 GPM and he may try and get a larger pump to full fill this. It only pumped around 1780 GPM. I figured out total operating hours with the owner's son. He felt that the pump had run about 75 days around the clock. (or 1800 hours.) No time clock installed but told him to get it done. Will write an official letter to them telling them to get this done.			
Report Year	Visit Date	Examiner	Reason for Visit
1998	03/18/1998	DNELSON	Inventory
Comments			

Type	WR #	Owner	Source	TRS	SWSW	SESW	SWSE	SESE	Total
Permit	37 8705	WILLIAM HUBERT SHAW,	GROUND WATER	06S19E21	38	39	39	35	151
Right	37 10571	ROBERT E DEMPSEY,	GROUND WATER	06S19E21			X		0 na--D&S
Right	37 872	BIG WOOD CANAL COMPANY,	BIG WOOD RIVER	06S19E21	X	X	X	X	0

Type	WR #	Owner	Source	TRS	NENE	NWNE	SWNE	SENE	SWSW
Permit	37 8705	WILLIAM HUBERT SHAW,	GROUND WATER	06S19E28	36	39	40	37	38
Right	37 10573	ROBERT E DEMPSEY,	GROUND WATER	06S19E28	X				na--D&S
Right	37 872	BIG WOOD CANAL COMPANY,	BIG WOOD RIVER	06S19E28	X	X	X	X	X

Type	WR #	Owner	Source	TRS	NWNE	SWNE
Permit	37 8705	WILLIAM HUBERT SHAW,	GROUND WATER	06S19E29	39	40
Right	37 10219	RITA S SHAW, WILLIAM HUBERT SHAW	GROUND WATER	06S19E29	X	
Right	37 872	BIG WOOD CANAL COMPANY,	BIG WOOD RIVER	06S19E29	X	X

Rights from delivery companies that overlap the POU for 37-8705

Rec	37 870	BIG WOOD CANAL COMPANY,	BIG WOOD RIVER
Rec	37 13112	BIG WOOD CANAL COMPANY,	LITTLE WOOD RIVER
Rec	37 13113	BIG WOOD CANAL COMPANY,	LITTLE WOOD RIVER
Rec	37 13114	BIG WOOD CANAL COMPANY,	LITTLE WOOD RIVER
Rec	37 13116	BIG WOOD CANAL COMPANY,	BIG WOOD RIVER
Rec	37 21401	BIG WOOD CANAL COMPANY,	LITTLE WOOD RIVER
Rec	37 21402	BIG WOOD CANAL COMPANY,	LITTLE WOOD RIVER
Rec	37 21403	BIG WOOD CANAL COMPANY,	LITTLE WOOD RIVER
Rec	37 21404	BIG WOOD CANAL COMPANY,	LITTLE WOOD RIVER
Rec	37 21405	BIG WOOD CANAL COMPANY,	LITTLE WOOD RIVER
Rec	37 13043	BIG WOOD CANAL COMPANY,	LITTLE WOOD RIVER
Rec	1 6	UNITED STATES OF AMERICA ACTING	SNAKE RIVER

Conclusion: The only rights that overlap the POU for 37-8705 are delivery co. rights