

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 37-22672

Exam Date: 9/19/2017

1. Current Owner:

WILLIAM R RATLIFF
206 BAYHORSE RD
BELLEVUE ID 83313
(503) 780-2972

And/Or

KATHLEEN L RATLIFF
206 BAYHORSE RD
BELLEVUE ID 83313
(503) 780-2972

2. Accompanied by: Bill Ratliff

Phone No: same as above

Address: same as above

Relationship to Permit Holder: Permit holder

3. SOURCE:

GROUND WATER

TRIBUTARY:

B. OVERLAP REVIEW

- Other water rights with the same place of use: 37-577BY (Big Wood River, Mitigation by non-use for this right) and 37-20450 (ground water, also mitigation by non-use for this right)
- Other water rights with the same point-of-diversion: 37-20450 (domestic portion is diverted through this POD) and 37-21965, which, along with this right, was split from 37-7720, but it retained this POD, though it does not use this POD.

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

GROUND WATER L4 (SW¼SW¼SW¼) Sec. 31, Twp 02N, Rge 19E, B.M. BLAINE County

Method of Determination: ArcMap aerial imagery, site visit

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	
02N	19E	31											4.4 L 4						4.4

Total Acres: 4.4

Method of Determination: ArcMap aerial imagery

- 3.
- X 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 or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
		5	Per parent WR file		

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

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date

2. Measurements: No measurement made per Beneficial Use Exam Rules as it is under 0.24 cfs. This acreage could be granted a higher flow rate (0.13 cfs), but is limited to the permitted **0.08 cfs**.

E. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Measured Method: Limited to the 0.08 cfs.

Theoretical calculation: $8.8 \text{ (constant)} \times 5 \text{ (HP)} \times 0.7 \text{ (efficiency)} / 76 \text{ (lift)} + (50 \text{ (pressure)} \times 2.31 \text{ (psi/foot)}) = 0.16 \text{ cfs}$. Well is sufficient to pump permitted amount and amount allowed under domestic portion of 37-20450.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 4.4 \text{ acres} \times 3.5 \text{ AF/acre} = \mathbf{15.4 \text{ AF}}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.08 \text{ cfs} \times 200 \text{ days} \times 1.9835 = 31.7 \text{ AF}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 15.4 \text{ AF}$$

2. Volume Calculations for Other Uses: NA

G. NARRATIVE/REMARKS/COMMENTS

The field exam for permit 37-22672 was conducted on September 9, 2017 with Bill Ratliffe accompanying. This right has been permitted with a surface right (37-577BY, Big Wood River, 0.1 cfs) and a ground water right (irrigation portion of 37-20450, 0.06 cfs) converted to mitigation by non-use. The non-use of these rights has been confirmed by the Watermaster of WD-37, Kevin Lakey (see email with Field Report). The water is pumped by a 5 HP submersible pump and is used in the home or to water the ½ acre of irrigation associated with the domestic portion of right 37-20450, or is directed through an installed flowmeter out to irrigate the horse pasture. Seven irrigation risers feed water to hand lines which are generally left in place throughout the irrigation season.

The flow rate for irrigation under 5 acres is allowed to be 0.03 cfs/acre, but since this permit is for only 0.08 cfs, it is limited to that amount for licensing purposes. The volume is calculated as 4.4 acres at 3.5 AF/acre, or 15.4 AF.

The ArcMap location of the POD of right 37-20450 was corrected to the same POD location of this right. Right 37-21965 was split from 37-7720 along with 37-20450, and, on paper, still shares this POD, but is not diverted from this POD.

Have conditions of permit approval been met? X Yes No

H. RECOMMENDATIONS**1. Recommended Amounts****BENEFICIAL USE****PERIOD OF USE****DIVERSION RATE****ANNUAL VOLUME**

IRRIGATION

04/15 to 10/31

0.08 CFS

15.4 AF

Totals:

0.080 CFS

15.40 AF

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 X None

I. AUTHENTICATION

Field Examiner's Name



Date

9-19-17

Reviewer

Date

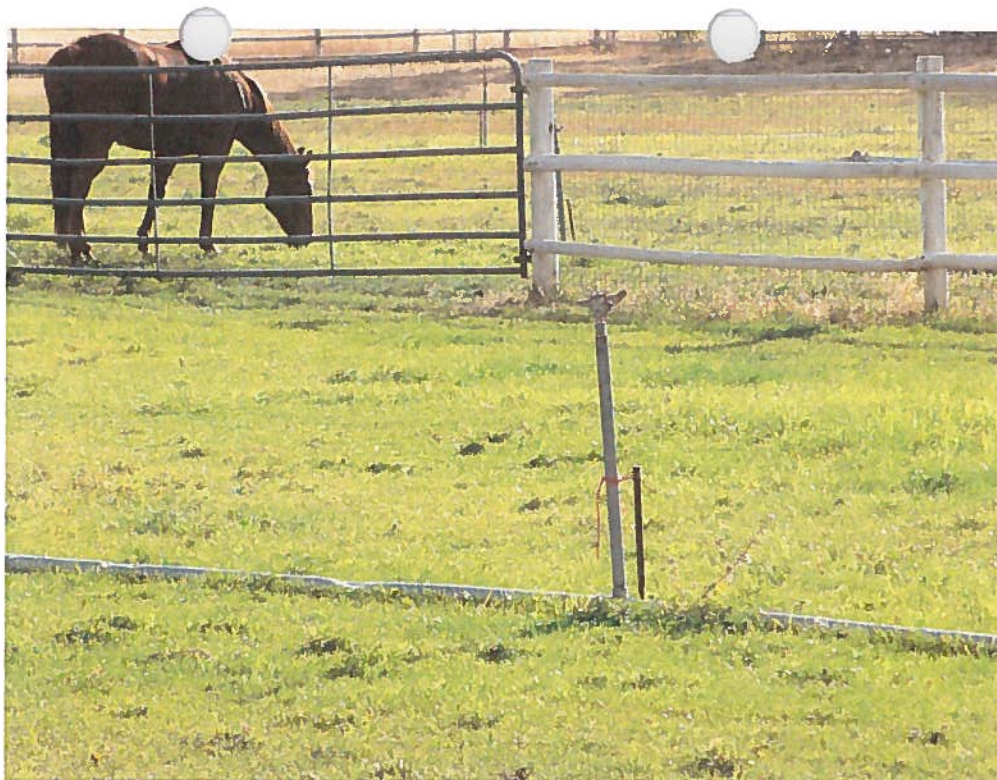


Well head and piping to domestic use (blue arrow) and irrigation use (green arrow). Flow meter is at yellow arrow.

Two of seven risers on the property.



Field Exam 37-22672



Irrigation system and pasture on Ratliffe property



Field Exam 37-22672

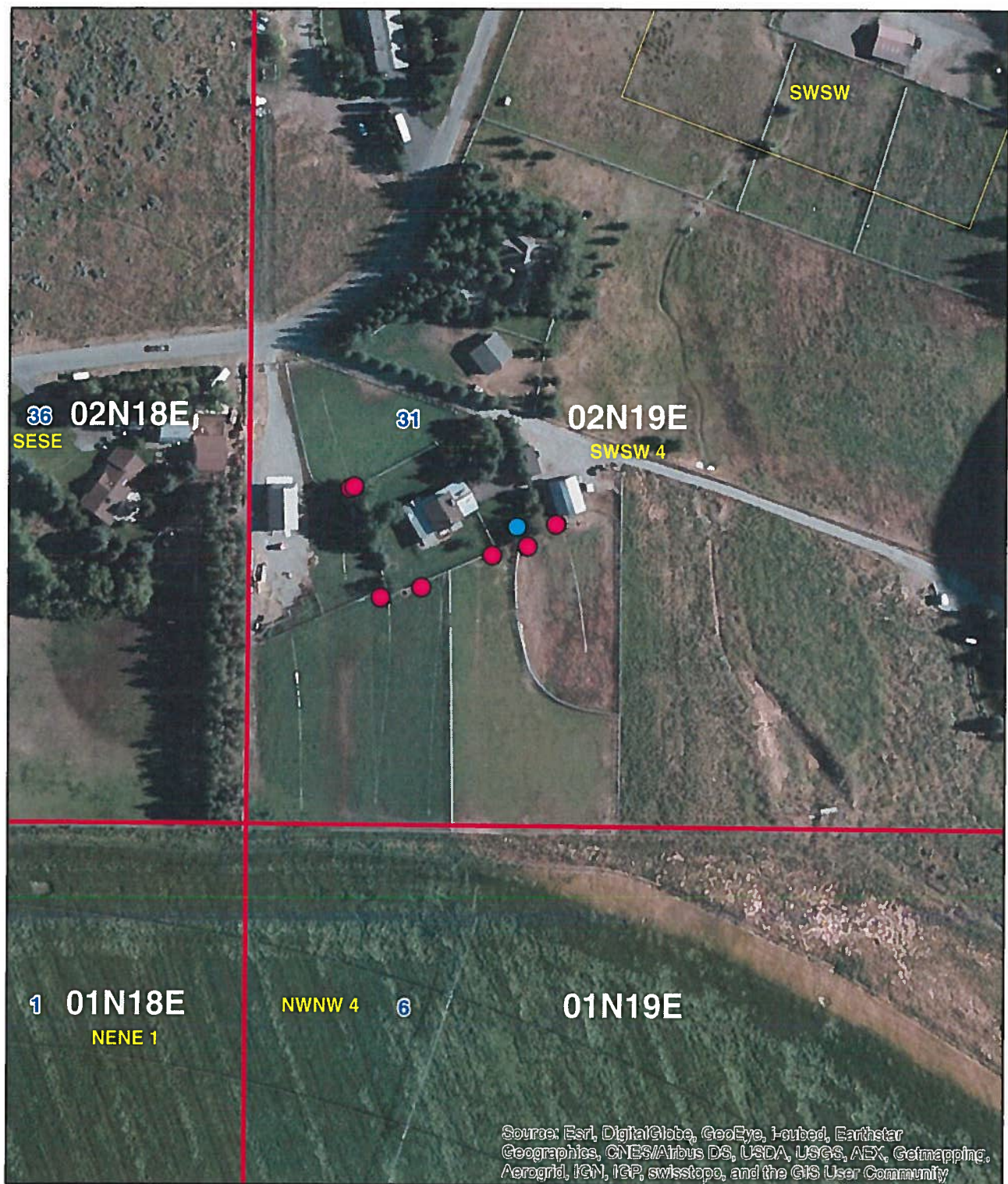


Hand lines and pasture irrigated by 37-22672



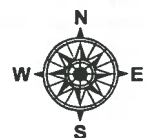
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3122672 System Diagram



Legend

-  Township/Range
 Sections
 QQ
 Risers
 POD (well)



0 0.0175 0.035 0.07 Miles

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State of Idaho
Department of Water Resources
Water Right License
37-22672



-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections

0 0.035 0.07 0.14 Miles



Field exam 37-22672