

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 75-07620
Exam Date: 7/19/2016

1. Current Owner:
SANDRA PUCKETT PO BOX 38 ELLIS ID 83235 (208)894-2428 And
VERNON D PUCKETT PO BOX 38 ELLIS ID 83235-0038 (208)894-2428
2. Accompanied by: NA
Phone No:
Address:
Relationship to Permit Holder:

3. **SOURCE:**
GROUND WATER

TRIBUTARY:**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 SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER L6 (SW¼NW¼) Sec. 4, Twp 16N, Rge 21E, B.M. LEMHI County

Method of Determination: GPS

2.

PLACE OF USE: IRRIGATION and STOCKWATER

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
16N	21E	4							0.4 L 6			1.4							1.8
16N	21E	5				1.7 L 7									7.5 L 7				9.2

Total Acres: 11

Method of Determination: SPOT Imagery from 1998 and 2002 (see attachment)

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.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
D0020222	Meyers				

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

D. FLOW MEASUREMENTS none

1.

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

2. Measurements: none

E. FLOW CALCULATIONS

Measured Method: none

 X Additional Computation Sheets Attached

11 acres X 0.02 = 0.22 cfs

Permit allows 1.0 for irrigation

According to the Proof Statement, the pump was 7.5 HP. The well drillers report gives a pumping level of 43 feet and a pressure of 50 psi.

A theoretical analysis found an average of 0.22 cfs

Recommended rate for irrigation: 0.22 cfsAccording to the Table *Recommended Diversion Rates for Stockwater* 90 sheep and goats require 0.02 cfsRecommended rate for Stockwater: 0.02 cfsRecommended rate for water right 0.24**F. VOLUME CALCULATIONS**

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 11 \times 3.5 = 38.5$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = .19 \times 214 \times 1.9835 = 80.6$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 38.5 \text{ AF}$$

Recommended volume for irrigation: 38.5

2. Volume Calculations for Other Uses: Based upon the number of animals, 90 sheep and goats provided on the proof statement.

90 sheep and goats at 2 gpd/head

$$180 \times 0.00112014 \text{ (conversion from gpd)} = 0.2 \text{ af/year}$$

Recommended volume for Stockwater: 0.2 AFRecommended volume for water right: 38.7**G. NARRATIVE/REMARKS/COMMENTS**

The place of use has been abandoned and I was unable to contact the permit holders. After several attempts, I was able to contact the current property owner to obtain permission to conduct a field exam. Allison Burnop from the Planning section visited the site in November 2013 and was able to take images of the pump. At the time of my visit, the irrigation pump was gone and there was only a ¾ HP pump that I believe supplied water to the house. At the time of the field exam there was no power at the site, the buildings were abandoned and there was no irrigation taking place.

The Department received the proof statement on May 4, 1998 and there is clear evidence of irrigation on the 1998 and 2002 SPOT imagery. The irrigated acres were determined using the imagery from those years. The capacity of the system was confirmed by a theoretical equation (see attachment). According to the proof statement, the irrigation pump was 7.5 horse power. It was not possible to determine the horse power from the images of the pump taken in 2013.

The permit gave the point of diversion as lot 6 (SWSWNW). The SWNW QQ includes government lot 5 which is across the river. The point of diversion is in lot 6 as defined. The permit describes the place of use as lot 7 NESE. Lot 7 covers a portion of the SENE. The QQ is not included on the permit. However, the official legal is Lot 7 which is described in the

public land survey data as 43.3 acres encompassing the SENE and the NESE. Including 1.7 acres in the SENE only refines the description; because both QQ are considered Lot 7 no amendment is required.

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

Proof was due on May 1, 1998. A Order of Reinstatement allowed proof to be submitted on May 4, 1998 with an advancement in priority date.

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
STOCKWATER	01/01 to 12/31	0.02 CFS	0.2 AF
IRRIGATION	04/01 to 10/31	0.22 CFS	38.5 AF
	<u>Totals:</u>	0.240 CFS	38.70 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 Sandra T. Paul Date 11/15/2016

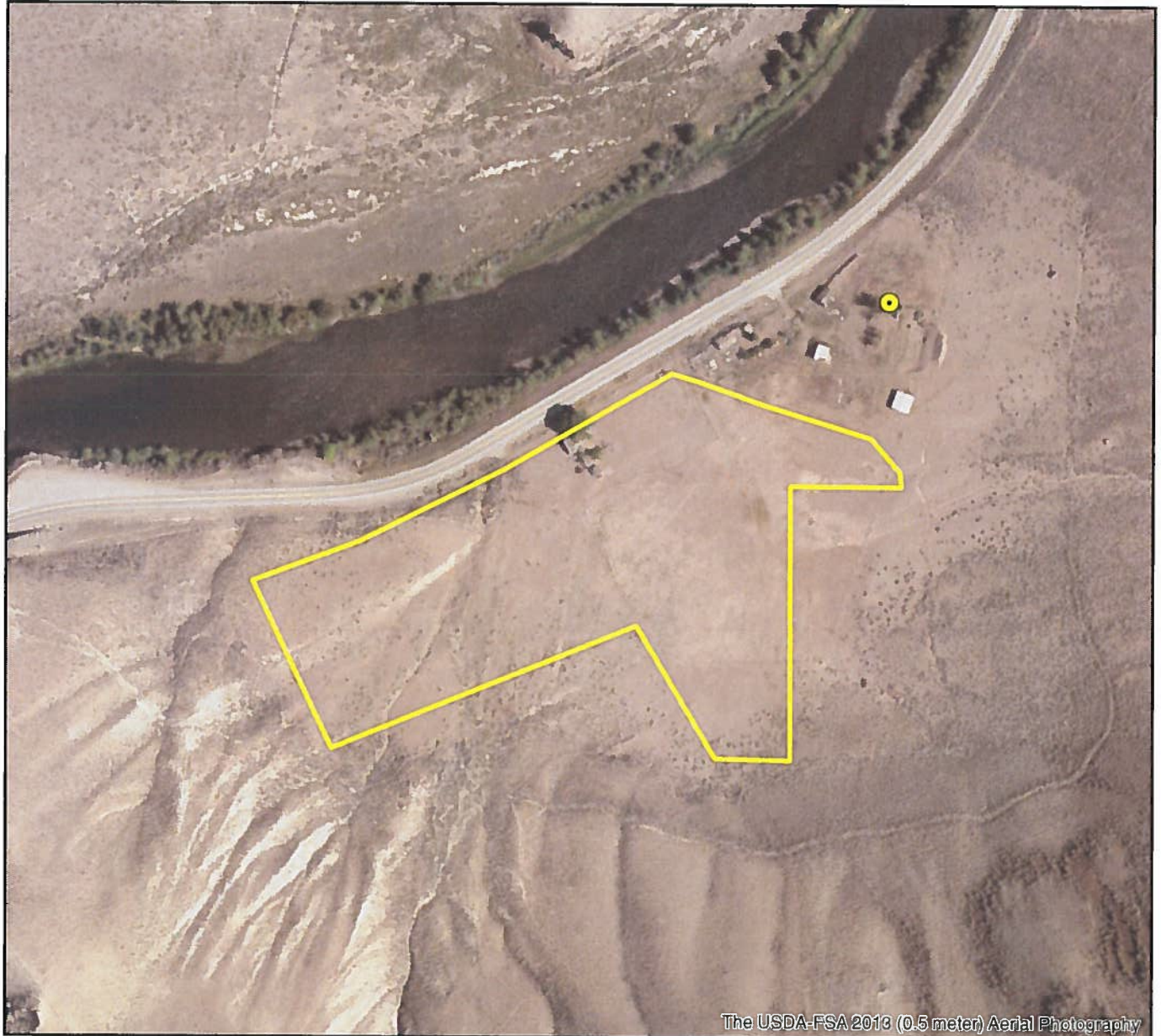
Reviewer _____ Date _____

State of Idaho
Department of Water Resources
Water Right License
75-7620

This map depicts the IRRIGATION and STOCKWATER place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.

R21E

T16N



The USDA-FSA 2013 (0.5 meter) Aerial Photography

- Point of Diversion
- Place Of Use Boundary

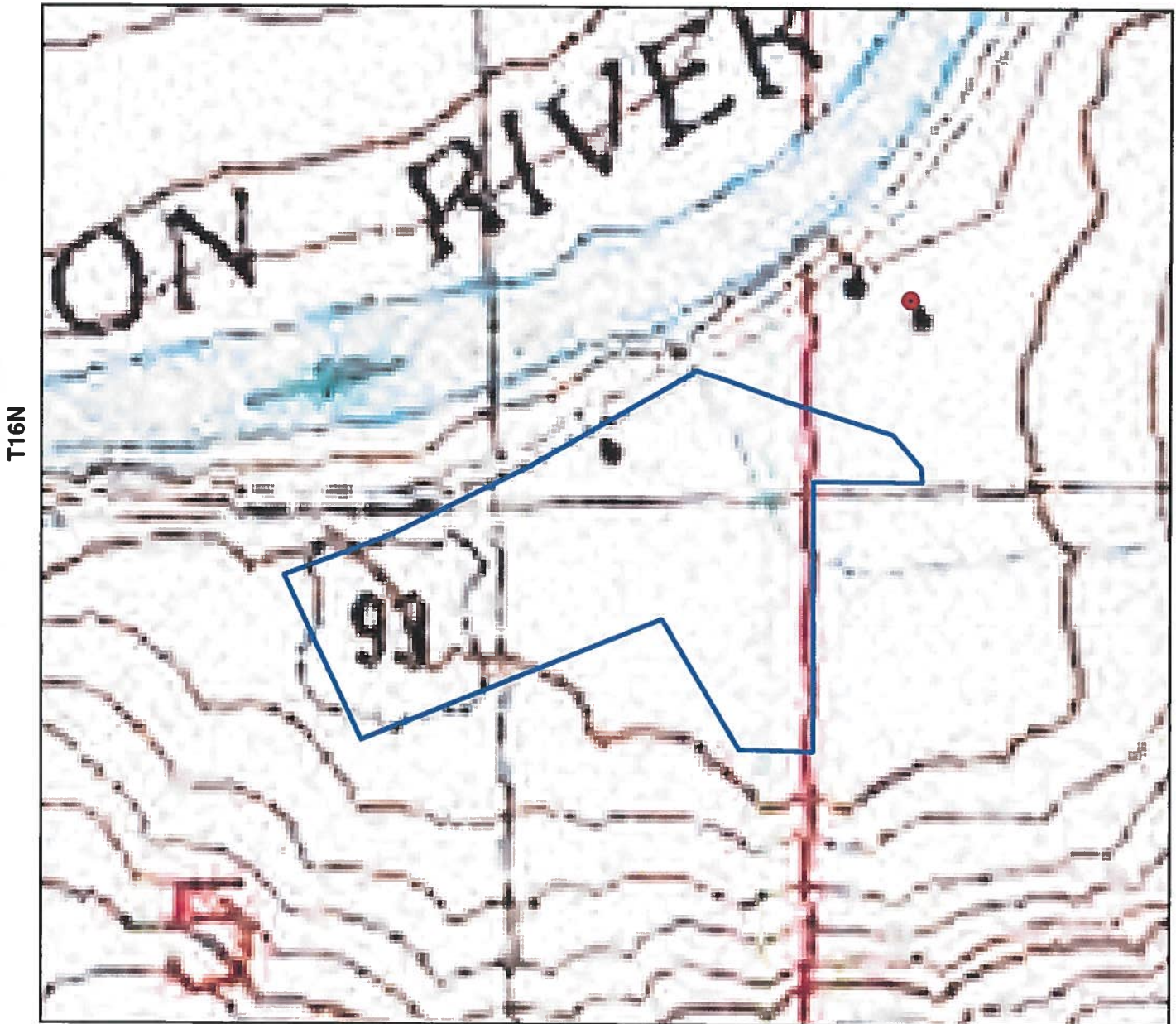


0 500 1,000 Feet

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R21E



- Point of Diversion
- Place Of Use Boundary



0 500 1,000 Feet

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 75-7620
 Reviewer: Sandy Thiel
 Date of Review: 10/21/2016

P/D No.:

PUMP HORSEPOWER
 BOOSTER HORSEPOWER

PUMPING LEVEL

DISCHARGE PRESSURE

RATE OF FLOW (cfs)

Well #1
7.5
0
26
79
0.22
99

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.
 No Friction

Examiners Notes:

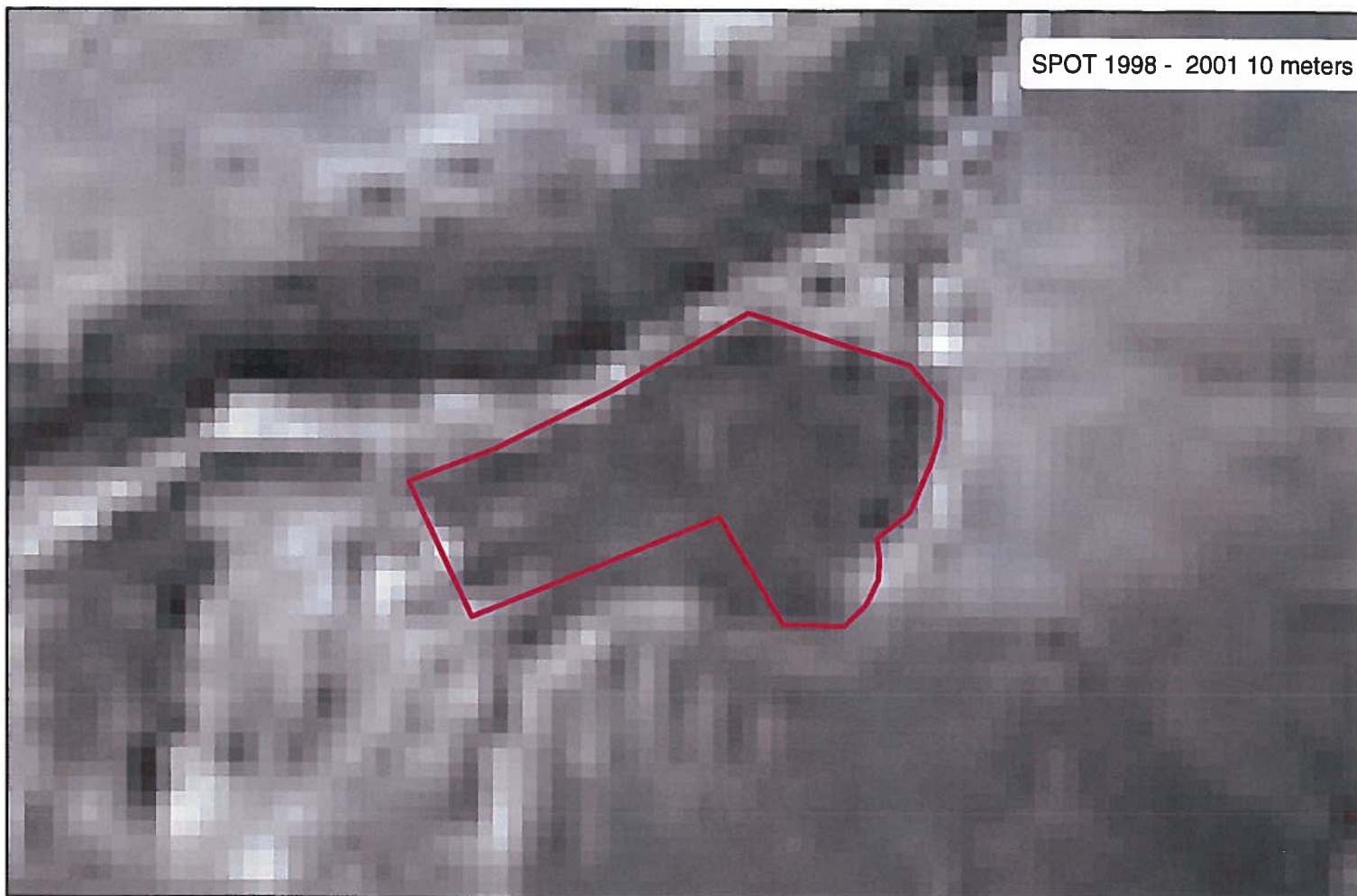
At the time of the field exam, the irrigation pump was no longer at the site. According to the proof submitted on May 4, 1998, the pump was 7.5 hp. The well driller report gave the pumping level as 43 feet. I used the 10 meter Digital Elevation Model to determine the difference between the elevation at the well and the elevation at highest end of the irrigated field. The elevation difference between the well and the top of the field is 66 feet.

Convert feet to psi: 66 feet / 2.31 = 28.578 or 29

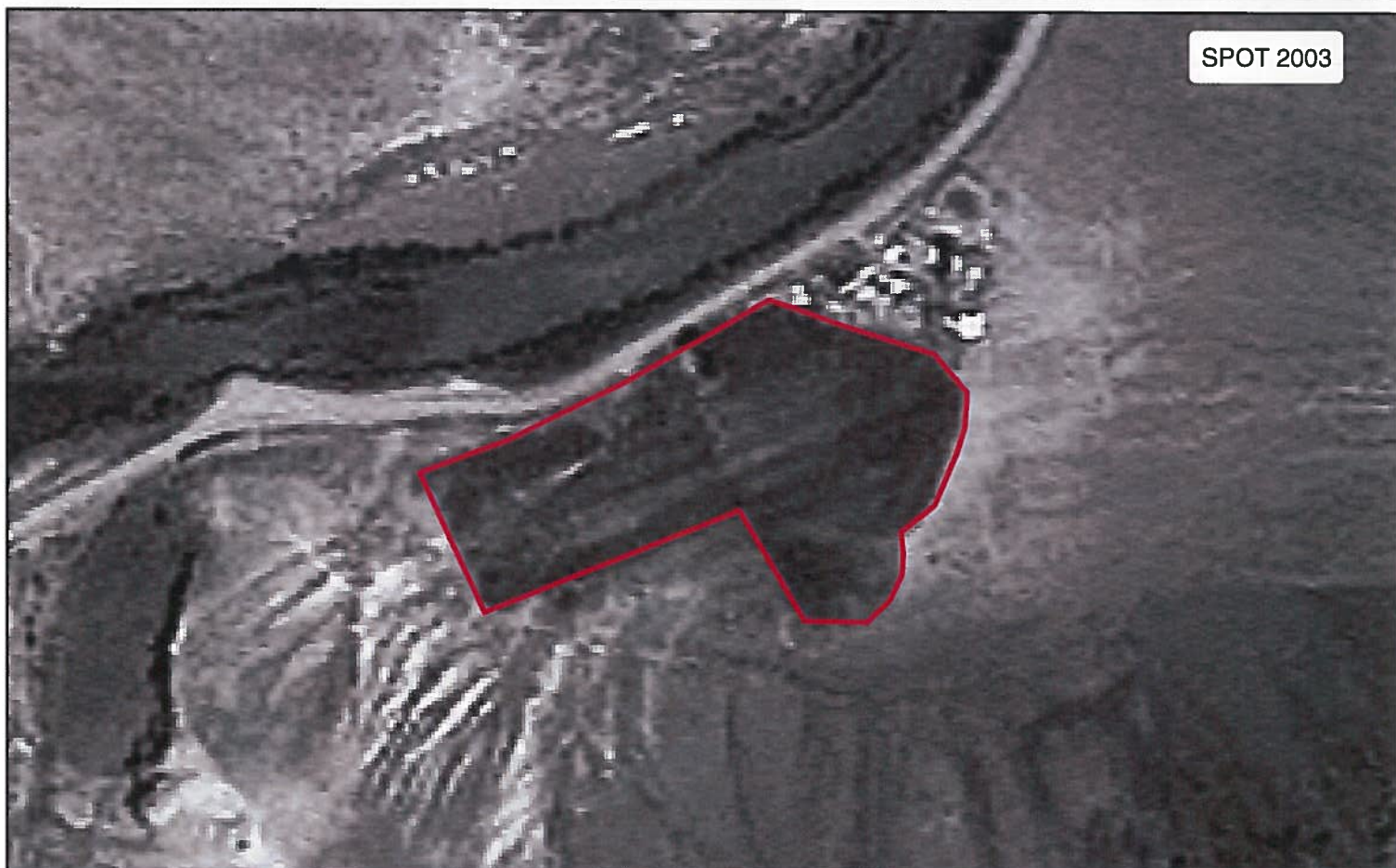
Discharge pressure from the proof of beneficial use: 50

50 + 29 = 79

SPOT 1998 - 2001 10 meters



SPOT 2003



System for Water Right 75-7620



The place of use has been abandoned. At the time of the field exam there was no power at the site, the buildings were abandoned and there was no irrigation taking place. There is clear evidence of irrigation on the 1998 and 2002 SPOT imagery. The irrigated acres were determined using the imagery from those years. The image above shows the formerly irrigated land with a background of the 2015 NAIP imagery. The place of use is shaded brown. The location of the well is displayed as a green dot.

The irrigated land extended into T16N R21e Section 4 NWSW. However, that land is owned by the Bureau of Land Management.

PHOTOGRAPHER AND DATE OF PHOTOS Sandy Thiel, July 20, 2016



Well location





Formerly irrigated land

