

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 75-14329
Exam Date: 7/20/2016

1. Current Owner:
DAVID MEACHAM 318 WILLIAMS CRK RD SALMON ID 83467 (208)756-1443 And
KRISTINE MEACHAM 318 WILLIAMS CRK RD SALMON ID 83467 (208)756-1443
2. Accompanied by: David Meacham
Phone No: (208)756-1443
Address: 318 Williams Creek Rd Salmon ID
Relationship to Permit Holder: Permit Holder

3. **SOURCE:**
WILLIAMS CREEK

TRIBUTARY:
SALMON RIVER

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:**

WILLIAMS CREEK L1 (NE¼NE¼) Sec. 11, Twp 20N, Rge 21E, B.M. LEMHI County

Method of Determination: Site visit; gps and imagery

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	
20N	21E	11	5.0 L 1																5.0

Total Acres: 5

Method of Determination: Site visit and imagery

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
A0012313	Baldor	5	36K077W925G1	Berkley	21-1/2TPMS

*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
Pressure Gage						

E. FLOW CALCULATIONS

Measured Method:

2. Measurements:

PSI	GPM		PSI	GPM		
25.00	2.96		40.00	3.74		
38.00	3.74		40.00	3.74		
38.00	3.74		39.00	3.74		
38.00	3.74		40.00	3.74		
38.00	3.74		39.00	3.74		
36.00	3.50		38.00	3.74		
36.00	3.50		38.00	3.74		
35.00	3.50		37.00	3.74		
36.00	3.50		36.00	3.50		
36.00	3.50		36.00	3.50		
	35.42			36.92	gpm	cfs
			Total	72.34		0.161185

Based on University of Idaho Hydraulic Relationships and performance: Nozzle discharge in gallons per minute for 20 sprinklers at a nozzle size of 9/64

Theoretical found 0.20 cfs

 X Additional Computation Sheets Attached

Permit rate 0.14

Recommended Rate: 0.14 cfs**F. VOLUME CALCULATIONS**

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 5 \times 3.5 = 17.5$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 59.4$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 17.5$$

2. Volume Calculations for Other Uses: none

G. NARRATIVE/REMARKS/COMMENTS

A 5 horse power pump in T20N R21E Section 11, Lot 1 NENE, provides water to 5 acres. Williams Creek flows through the south side of the property, from west to east. The permit holder does not irrigate on the south side of the creek. Water from the pump supplies a sprinkler system. The land is primarily pasture for 7 cows and, at the time of the field exam, one horse.

Have conditions of permit approval been met? X 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	04/01 to 10/31	0.14 CFS	

Totals: 0.140 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 ☒ None

I. AUTHENTICATION

Field Examiner's Name Samuel Thiel Date 9/20/2016

Reviewer _____ Date _____

State of Idaho
Department of Water Resources
Water Right License
75-14329

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

R21E

T20N



USDA-FSA 2013 (0.5 meter) Aerial Photography

- Point of Diversion
- Place Of Use Boundary



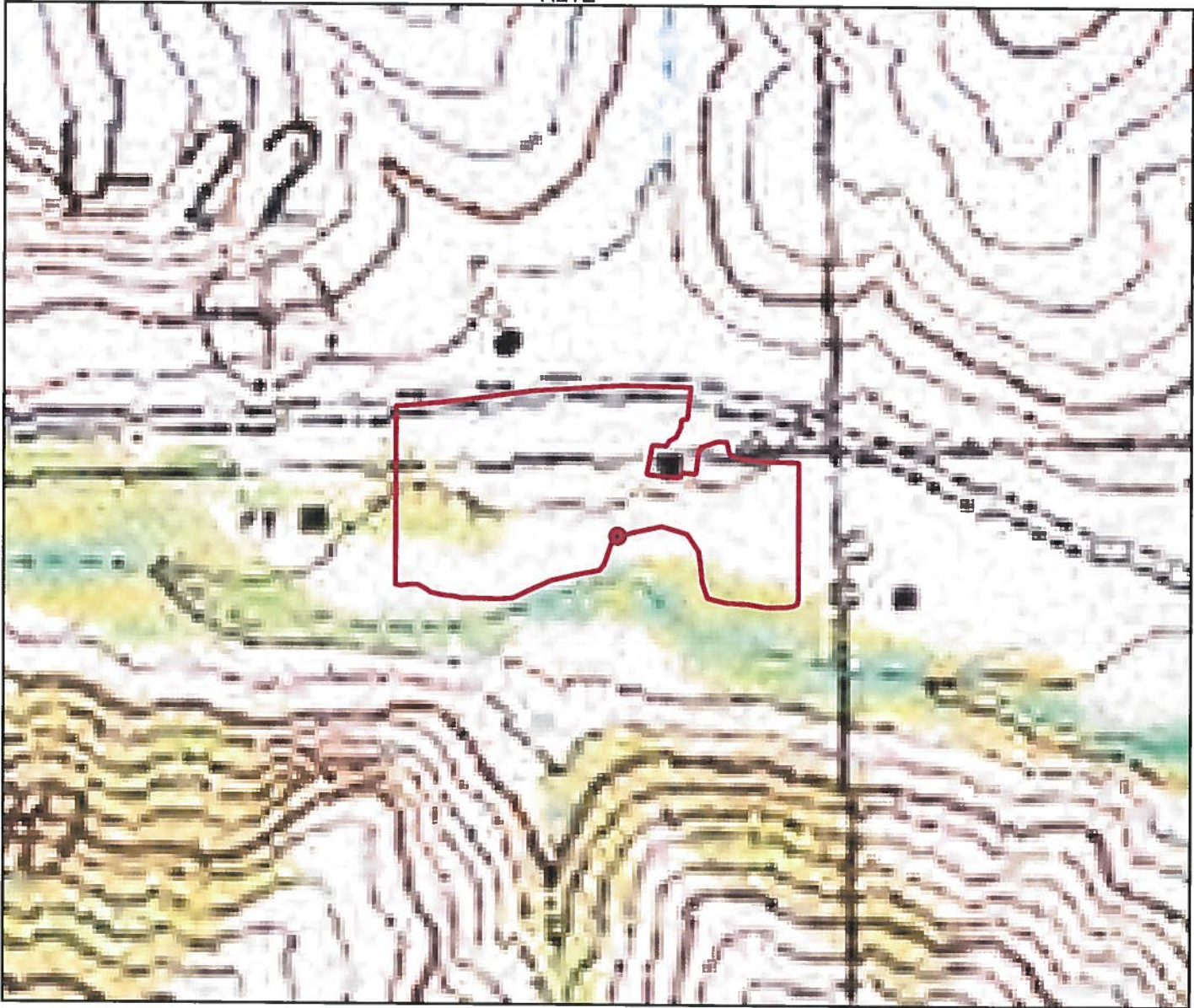
0 500 1,000 Feet

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R21E

T20N



- Point of Diversion
- Place Of Use Boundary



0 500 1,000 Feet

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 75-14329
 Reviewer: Sandy Thiel
 Date of Review: 9/15/2016

P/D No.:

PUMP HORSEPOWER
 BOOSTER HORSEPOWER

PUMPING LEVEL

DISCHARGE PRESSURE

RATE OF FLOW (cfs)

Option 1	OPTION 2	OPTION 3	
5	5	5	
0	0	0	
38	38	38	
40	50	60	
0.24	0.20	0.17	Average
GPM 106	90	78	0.20 91.44

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:

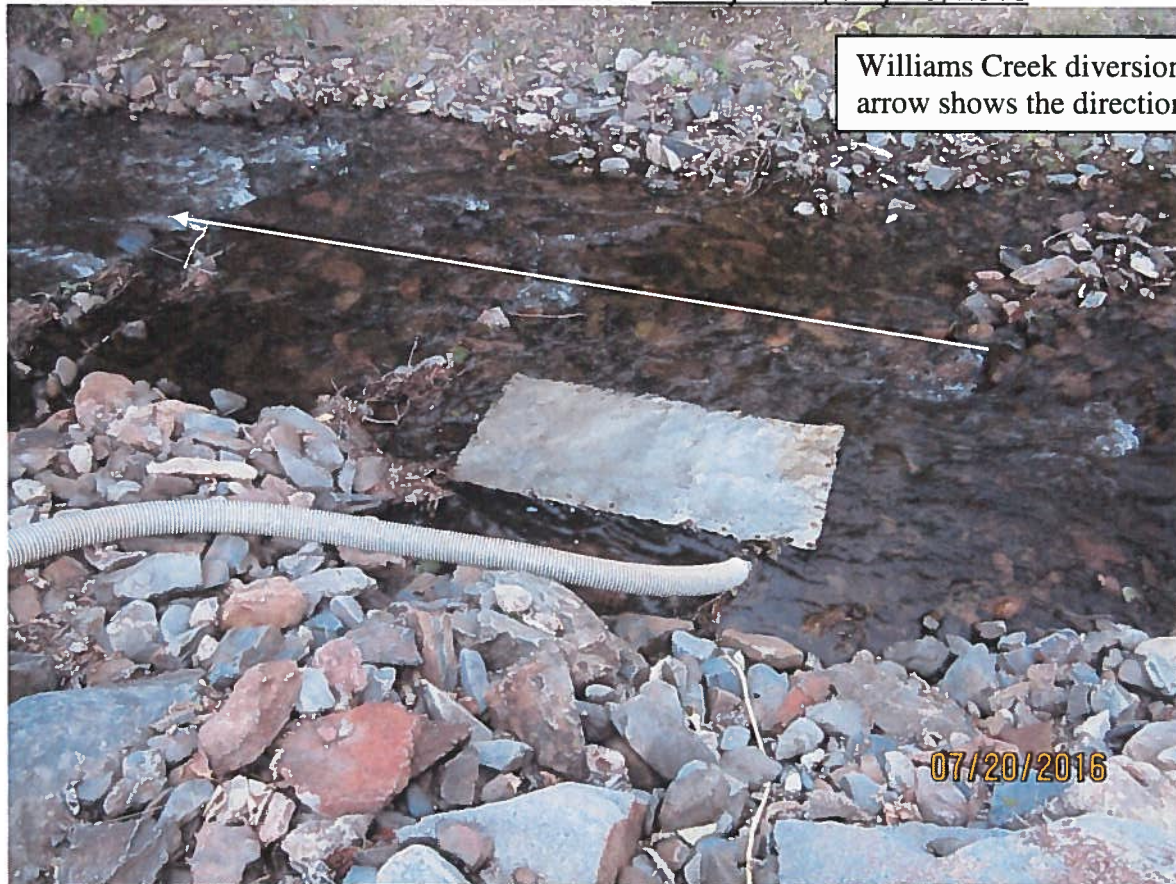
Baldor Reliance Industrial Motor

Water Distribution System Water Right 75-14329



A 5 horse power pump in T20N R21E Section 11, Lot 1 NENE, (location shown above as a green dot) provides water to 5 acres (brown shaded area). Williams Creek flows through the southern part of the property, from west to east. The permit holder does not irrigate on the south side of the creek. Water from the pump supplies a sprinkler system. The land is primarily pasture for 7 cows and, at the time of the field exam, one horse.

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



Williams Creek diversion. The arrow shows the direction of flow



Close up of the metal box that surrounds the pump







Irrigated land to the east and southeast of the house

The pump sits down the hill, south of the house

