

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 37-21648

Exam Date: 7/20/2015

1. Current Owner: DUAINA HAGEN
372 ROAD 4EU
MEETEETSE WY 82433
(307)868-2140

And

SHEILA HAGEN
372 ROAD 4EU
MEETEETSE WY 82433
(307)868-2140

2. Accompanied by: Duaine Hagen

3. SOURCE

UNNAMED STREAM

TRIBUTARY

MC DONALD GULCH CREEK

B. OVERLAP REVIEW

1. Other water rights with the same place of use: Instream stockwater right 37-22567 for same property. Also unrecorded domestic and stockwater use from a well operating under domestic exemption. Well was drilled in 2013 after proof was filed for permit 37-21648.

2. Other water rights with the same point of diversion: None

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

UNNAMED STREAM

NE1/4NW1/4SE1/4

Sec. 1, Twp 01N, Rge 15E, B.M.

CAMAS County

Method of Determination: Site visit and aerial photography

2.

PLACE OF USE: DOMESTIC

Twp	Rge	Sec	NE				NW				SW				SE				Totals
01N	16E	6	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
									X										
									L 2										

PLACE OF USE: STOCKWATER

Twp	Rge	Sec	NE				NW				SW				SE				Totals
01N	16E	6	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
										X									

Method of Determination: Site visit and aerial photography

D. FLOW MEASUREMENTS

Not required for permits with irrigation of less than five (5) acres or permits with the total combined diversion rate for all the uses established in connection with the permit not exceeding twenty-four one hundredths (0.24) cubic feet per second per new Beneficial Use Examination Rules implemented 3/29/2012.

E. FLOW CALCULATIONSHazen-Williams Formula

$$V = 1.318 \times C_h \times R^{0.63} \times S^{0.54}$$

V = Velocity (ft/s)

C_h = Hazen-Williams Friction Coefficient = 130 (for old/plastic pipe)

R = Hydraulic Radius = Cross Sectional Area / Wetted Perimeter = D/4 (for round pipes)

for 2" dia pipe D = 2" = 0.167 ft (the permit holder indicated that 2" diameter poly pipe was installed)

$$R = 0.167/4 = 0.04167$$

S = h/L = Slope of Energy Grade Line = 0.0416 (obtained from approximate POD elevation of 5560 ft per quad map and approximate POU elevation of 5400 ft per quad map and estimated pipe length of 3850 ft measured via ARCMAP)

$$V = 1.318 \times 130 \times (0.04167)^{0.63} \times (0.0416)^{0.54}$$

$$V = 4.16 \text{ ft / sec}$$

$$Q = VA \text{ where } A = \pi r^2 = \pi (1/12)^2 = 0.0218 \text{ ft}^2 \text{ for 2 inch diameter pipe}$$

$$Q = (4.16 \text{ ft/ sec})(0.0218 \text{ ft}^2) = 0.091 \text{ cfs}$$

Rate exceeds permitted amount of 0.04 cfs, therefore use permitted rate of 0.04 cfs

F. VOLUME CALCULATIONS

Not required for 42-111 type domestic uses per new Beneficial Use Examination Rules implemented 3/29/2012. Stockwater use can be considered a "part a" domestic use (up to 13,000 gpd).

G. NARRATIVE/REMARKS/COMMENTS

Application for Permit 37-21648 was filed on February 6, 2006 for the diversion of 0.04 cfs from a spring for domestic and stockwater use in the Willow Creek drainage northeast of Fairfield. Permit 37-21648 was approved on June 15, 2006 with a Proof of Beneficial Use due date of June 1, 2007. Proof of Beneficial Use was filed on May 08, 2007. On July 20, 2015, I met Duaine Hagen, the permit holder, at the site and conducted the licensing exam for permit 37-21648.

The system consists of a buried two inch poly line from an unnamed stream to a cabin and faucet that feeds a trough at a corral. Using ARCMAP it is estimated that the pipeline is approximately 3,850 feet long from the point of diversion to the place of use. An estimate of the system capacity using the Hazen-Williams Formula indicates that the system could theoretically divert at least twice the permitted rate of 0.04 cfs. During the exam it was noted that the head of the pipeline diverts water from the unnamed stream (tributary to Mc Donald Gulch Creek) some distance below the actual spring that feeds the stream. In addition, it was noted that the cabin (domestic place of use) is located within Government Lot 2 (SWNW) of Section 6 rather than the permitted location. For these reasons, a licensing amendment was solicited from the permit holder to clarify the point of diversion/source and to correct the place of use. The signed licensing amendment and fee was recently received allowing for the licensing of 37-21648.

One item of note relating to the licensing of 37-21648 is the fact that permit 37-21648 was permitted with conditions indicating it was located within a water district (#37) and that in the future the right holder may have to install lockable works and a measuring device. When water district 37B was recently created, domestic and stock water rights as defined by 42-111 Idaho Code were specifically excluded from the water district. Therefore, it is recommended that license 37-21648 be issued without water district conditions.

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>
DOMESTIC	01/01 to 12/31	0.040 CFS	N/A
STOCKWATER	01/01 to 12/31	0.040 CFS	N/A
<u>Totals:</u>		0.040 CFS	N/A

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 (Change Source)

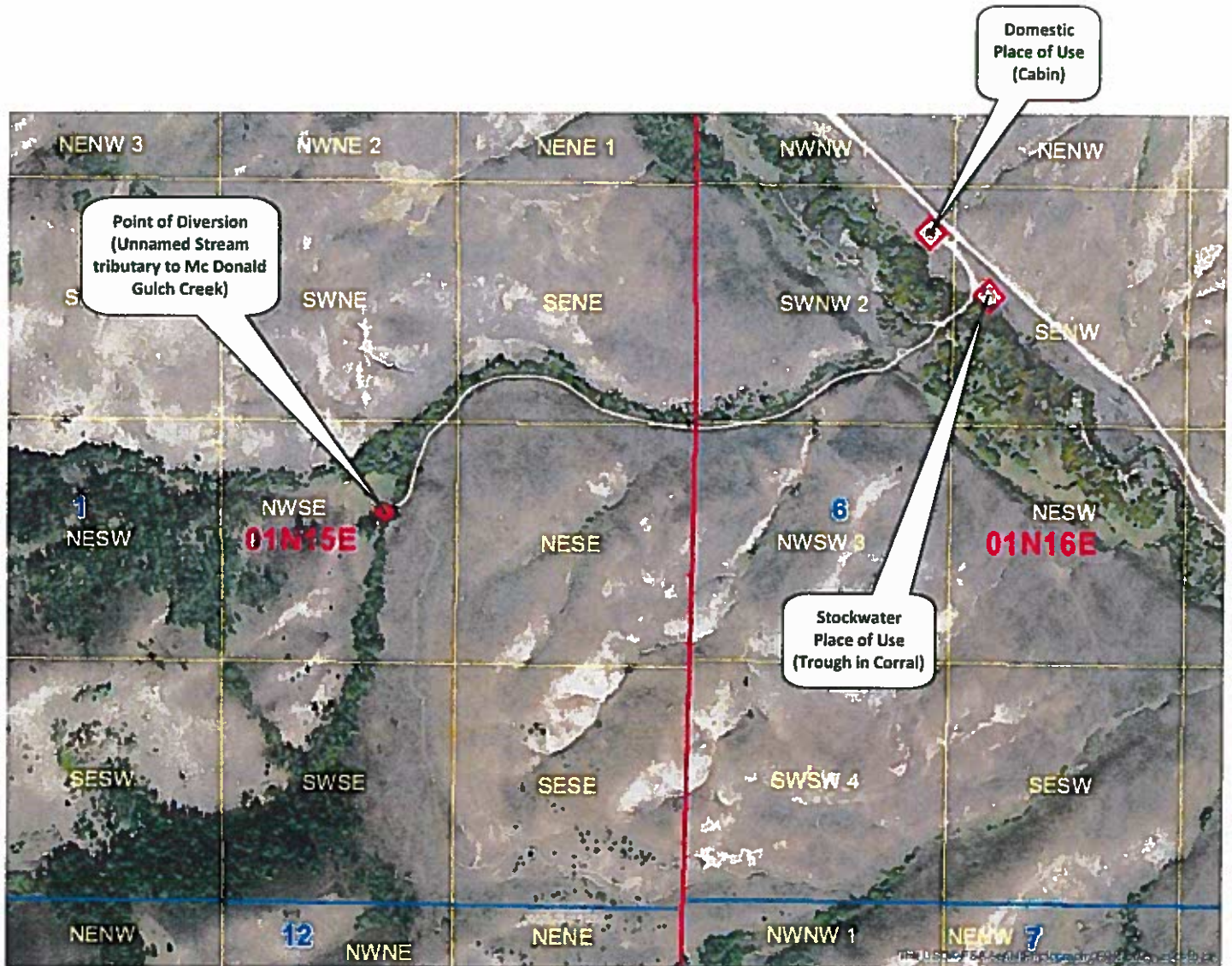
I. AUTHENTICATION

Field Examiner's Name *[Signature]* Date 9/18/2015

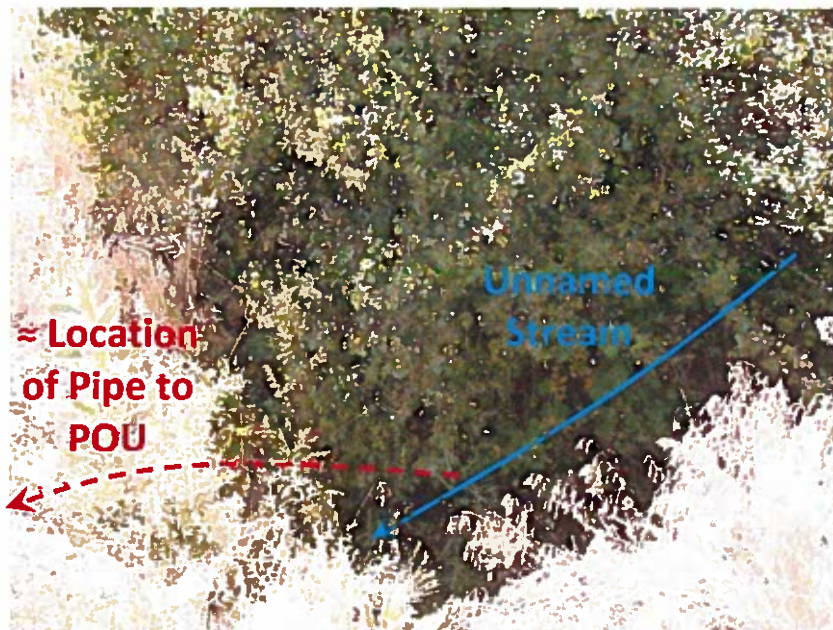
Reviewer *[Signature]* Date 10/5/15

37-21648

Point of Diversion & Place of Use Map



37-21648 Point of Diversion & Place of Use Photos



LEFT: View of point of diversion location (head of the pipeline to the domestic and stockwater place(s) of use below. Note that the pipeline actually diverts water from the unnamed stream in the area shown in this view. The spring that feeds this stream is located some distance further up the hill.



LEFT: View of stockwater use location in the SENW of Section 6. Note faucet and hose feeding trough in the corral.



BELOW: View of domestic use in Govt' Lot 2 of Section 6. Filtered water from the pipeline is used inside the home.