

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 43-13292

Exam Date: 6/10/2011

1. Current Owner: UNITED STATES OF AMERICA ACTING THROUGH
USDI BUREAU OF LAND MANAGEMENT
IDAHO STATE OFFICE
1387 S VINNELL WAY
BOISE ID 83709-1657
(208)373-4000

2. SOURCE

SPRING

TRIBUTARY

SINKS

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:**

SPRING NE1/4SW1/4NW1/4 Sec. 15, Twp 15S, Rge 26E, B.M.
CASSIA County

Method of Determination: Waypoints were collected with a Garmin GPS map 76S receiver and downloaded into an ArcMap shapefile that corresponds with 2009 aerial photography and verified the points of diversion to be in Twp 15S Rge 26E S 15 NESWNW¼. See attached map.

2.

PLACE OF USE: STOCKWATER

Twp	Rge	Sec	NE				NW				SW				SE				
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	Totals
15S	26E	15								X									

PLACE OF USE: WILDLIFE

Twp	Rge	Sec	NE				NW				SW				SE				
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	Totals
15S	26E	15								X									

Method of Determination: Waypoints were collected with a Garmin GPS map 76S receiver and downloaded into an ArcMap shapefile that corresponds with 2009 aerial photography and verified the points of diversion to be in Twp 15S Rge 26E S 15 SENW¼. See attached map.

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

D. FLOW MEASUREMENTS – No flow measurement possible

1.

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

E. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Measured Method: Hazen Williams Full Pipe Flow Calculation:

$$Q = 0.432 C_1 D^{2.63} S^{0.54}$$

Where:

C_1 = roughness coefficient

D = Diameter in feet

S = Slope

$S = 6' \text{ elevation drop} / 297' \text{ distance} = 0.02$

$C_1 = 140$ (coefficient for polyethylene)

$D = .105'$ (1.5" polyethylene pipe)

$$Q = 0.0195 \text{ cfs}$$

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

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

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

2. Volume Calculations for Other Uses: Stockwater/Wildlife:

324 Range Cattle at 12 gpd/head:

$$12 \text{ gpd/head} \times 324 \text{ head} \times 275 \text{ days} / 325850 \text{ gallons/AF} = 3.3 \text{ AFA}$$

30 ungulates (wildlife) at 12 gpd/ungulate:

$$12 \text{ gpd/head} \times 30 \text{ head} \times 365 \text{ days} / 325580 \text{ gallons/AF} = 0.40 \text{ AFA}$$

$$\text{Total Recommended} = 3.3 \text{ AFA (Stock)} + 0.40 \text{ AFA (Wildlife)} = 3.7 \text{ AFA}$$

G. NARRATIVE/REMARKS/COMMENTS

Permit 43-13292 is for 0.02 cfs stockwater/wildlife into two adjoining troughs supplied water from a spring.

Application for permit 43 -13292 submitted by US Dept of Interior/ Bureau of Land Management was filed on June 17, 2003, and proof of Beneficial Use was submitted April 25, 2008.

Existing system consists of a headbox in a spring that supplies water through a 1.5" polyethylene pipe over a distance of 302' to two troughs placed end to end. Each trough measures 14' L x 3.75' W x 1.58' D. The water level in the troughs is regulated by a single float valve on the west end of the trough closest to the spring, and both were filled to capacity on the day of the exam. Headbox contained water but no measurable flow was present, therefore the Hazen Williams Full Pipe Flow Calculation was utilized to obtain potential rate of diversion.

Fourteen cattle were present at the trough on the day of the exam. Three cowhands on horseback arrived and drove them into a herd of approximately 100 head. I spoke with the lead cowhand who conveniently directed me to the headbox. He also informed me that the name on the survey marker was incorrect as the springs named on the marker (Bridge Springs) were actually about a mile due west. According to Steve Davis, BLM Hydrologist, the site is utilized by 324 range cattle. Wildlife use of 30 deer was assumed from numbers used in previous exams. I saw no evidence of deer at the trough, but I did see two black-tailed jackrabbits in the brush by the springs.

Per, Steve Davis, the BLM has changed grazing seasons on open range from a defined season of use to a flexible season based on range and weather conditions. Based on this policy the BLM requests a period of use is from 01/01 to 12/31. Volume calculations are based on a potential of nine months of usage by cattle, as cattle may be present on range any time of year, but aren't likely to be on the range more than nine months in a given year.

Recommend permitting a rate of diversion of 0.02 cfs and an annual volume of 3.7 af.

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>
STOCKWATER	01/01 to 12/31	0.020 CFS	3.3 AFA
WILDLIFE	01/01 to 12/31	0.010 CFS	0.40 AFA
<u>Totals:</u>		0.020 CFS	3.7 AFA

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 Biel Mill Date 6/16/2011

Reviewer Am Date 8/5/11



Figure 1: Headbox at spring

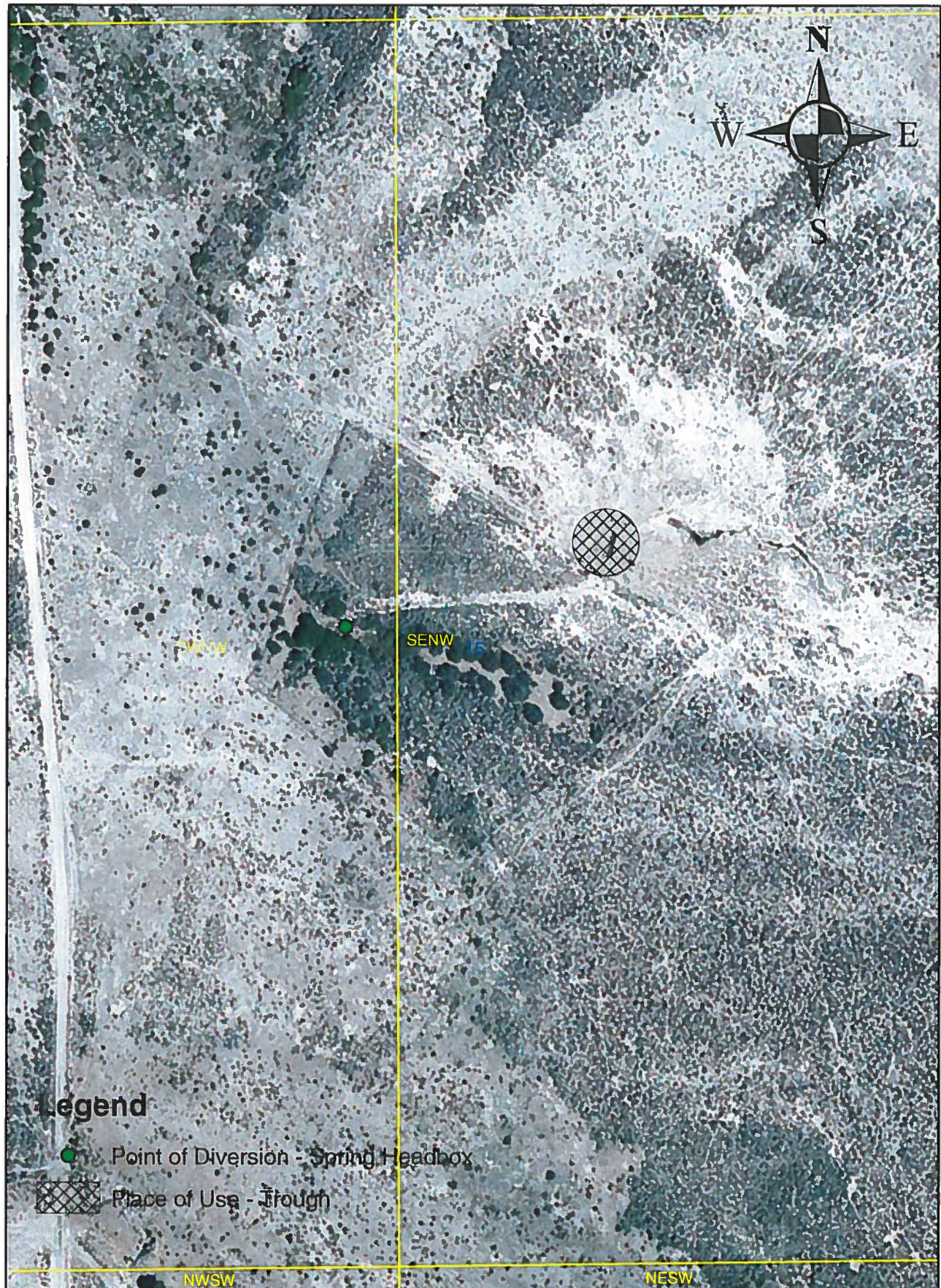


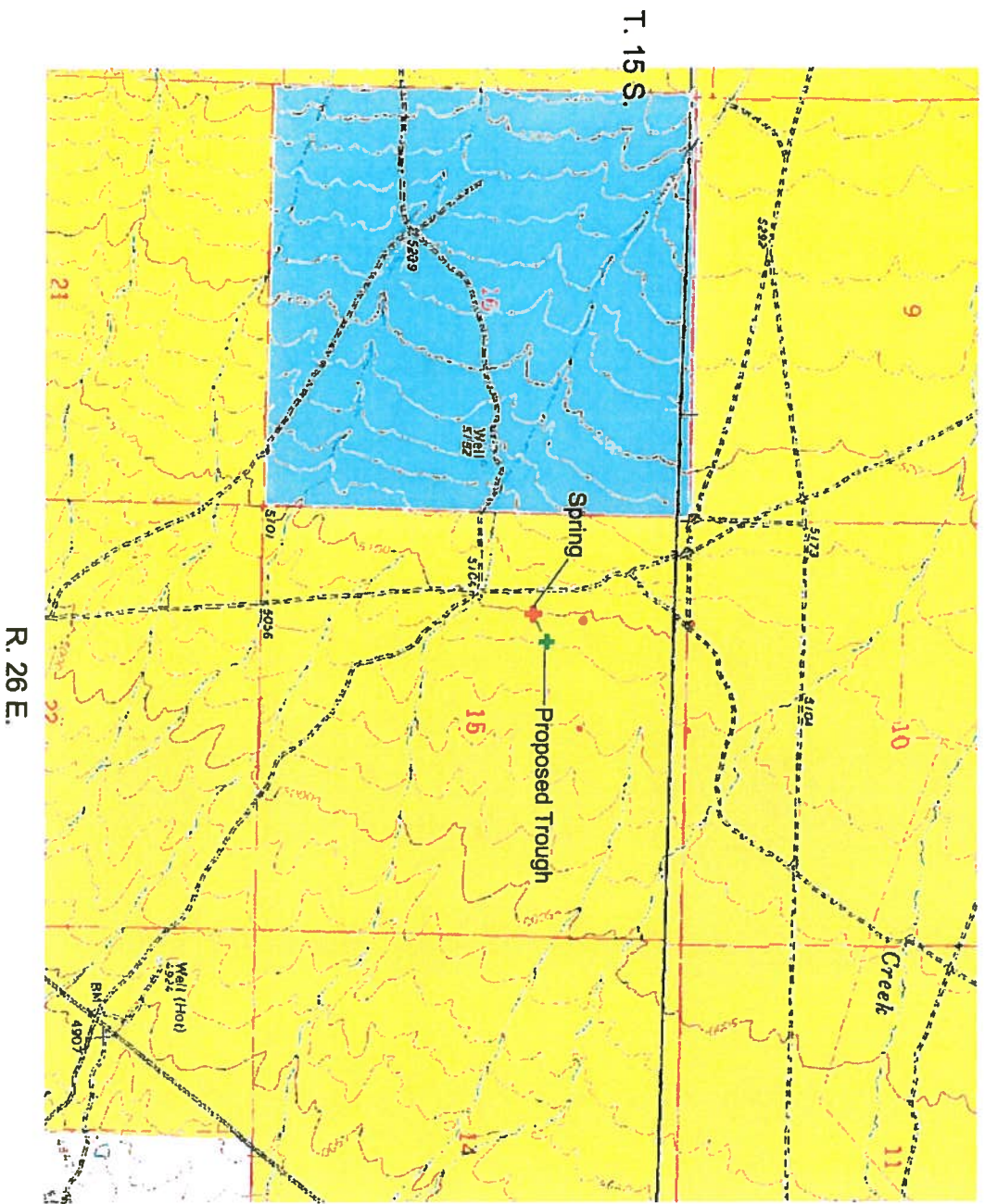
Figure 2: Marker at spring



Figure 3: View of troughs looking to the west

Permit #43-13292





- + Point Determined by GPS
- + Digitized Point
- Digitized Pipeline (not in actual location)
- Surface Ownership
- BLM
- BIA
- LU_DOI
- LU_USDA
- MFL
- NPS
- USFWS
- PRIVATE
- STATE
- US Forest Service



Quad Map Name: Chokecherry Canyon

022403em

