

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 43-7186

Exam Date: 9/16/2014

1. Current Owner: UNITED STATES OF AMERICA ACTING THROUGH USDA FOREST SERVICE
2647 KIMBERLY RD
TWIN FALLS ID 83301
(208) 737-3200

2. SOURCE

SPRING

TRIBUTARY

SHIRLEY CREEK

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None
2. Other water rights with the same point of diversion: SRBA decreed right 43-11192, with an 1880 priority date, is from the same spring for stockwater use at the spring location (prior to development of the trough further down the drainage).

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

SPRING

NW1/4SW1/4SW1/4

Sec. 8, Twp 12S, Rge 29E, B.M.

CASSIA County

Method of Determination: GPS, aerial photography, and site investigation

2.

PLACE OF USE: STOCKWATER

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
12S	29E	17						X											

Method of Determination: GPS, aerial photography, and site investigation

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. At the time of the field inspection (September 16), there was just a few drops of water flowing into the trough from the pipeline from the spring (see field exam photos).

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 1.25" dia pipe D = 1.25" = 0.104 ft (1983 Range Water Development Inventory sheet indicates that 1.25" plastic pipe was used)

$$R = 0.104/4 = 0.02604$$

S = h/L = Slope of Energy Grade Line = 0.096 (estimated from USGS quadrangle based on estimated 120 foot elevation difference between spring and trough and 1250 foot distance between spring and trough)

$$V = 1.318 \times 130 \times (0.02604)^{0.63} \times (0.096)^{0.54}$$

$$V = 4.85 \text{ ft / sec}$$

$$Q = VA \text{ where } A = \pi r^2 = \pi (.625/12)^2 = 0.008522 \text{ ft}^2 \text{ for 1.25 inch diameter pipe}$$

$$Q = (4.85 \text{ ft/ sec})(0.008522 \text{ ft}^2) = 0.041 \text{ cfs}$$

Rate exceeds permitted amount of 0.02 cfs, therefore use permitted rate of 0.02 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 43-7186 was filed on January 18, 1983 by the United States Forest Service (USFS) for the diversion of 0.02 cfs from an unnamed stream &/or Antelope Spring # 2 (tributary to Shirley Creek) for stockwater use within the Shirley Creek drainage north of Sublett. Permit 43-7186 was approved on June 21, 1984 and Proof of Beneficial Use was filed on March 7, 1985. On September 16, 2014, I conducted the licensing exam for permit 43-7186. On the way to the exam, I encountered some cowboys working cattle in a corral near Sublett Reservoir. I stopped and spoke to them, in particular, a gentleman named Roger Hicken who claimed he was the one who installed the 43-7186 system. He indicated that there is a spring in the bottom of the draw below (south of) Antelope Spring (identified on the USGS quadrangle) that has been developed with a pipeline feeding a single trough further down the drainage. I visited the site and verified the information obtained from Mr. Hicken.

The 43-7186 system consists of a developed spring with a buried pipeline serving a single trough located approximately 1250 feet down the drainage. A copy of a 1983 document in the IDWR field exam file, titled "Range Water Development Inventory" (apparently obtained from the USFS) indicates that 1.25 inch diameter plastic pipe was buried from the spring to the trough. At the time of the exam, there were just a few drops of water flowing into the trough. An estimate of the system capacity using the Hazen-Williams Formula indicates that the system could theoretically divert more than the permitted rate of 0.02 cfs. During the exam, it was noted that livestock trails appeared to lead to and from the trough location demonstrating likely stockwater use. The trough is actually located in a different 40 acre tract than what was permitted. For this reason, Steve Spencer of the USFS was contacted in an attempt to obtain a licensing amendment. Our office recently received a signed licensing amendment and fee from the USFS allowing for the licensing of right 43-7186.

A couple of items should be noted. It appears that SRBA decree 43-11192 (1880 priority with a source of Antelope Spring #2) is associated with the same source described by permit 43-7186. Note that IDWR database records identify the 43-7186 source as "unnamed stream", but the original application filed by the USFS lists the source as Unnamed Stream (Antelope Spring # 2). Based on observations during the exam, the source of water for 43-7186 appears to be a spring in the bottom of a draw (channel). Lush vegetation existed at the head of the pipeline (point of diversion), with dryer vegetation in the draw (channel) above and below the spring location and the head of the pipeline was buried at the lush vegetation location. It did not appear that surface water flowing in the draw (channel) could enter the pipeline. The USGS quadrangle does not identify a spring at this location (let alone a named spring), but it definitely exists. Therefore, it is recommended that license 43-7186 be issued with a source of "spring" and a condition indicating that the source is locally known as Antelope Spring # 2 (to connect it with SRBA decree 43-11192). Application for permit 43-7186 was originally filed with a USFS address in Ogden, Utah and IDWR database records list an address for the Boise National Forest, but per Steve Spencer's direction (see 9/29/2014 e-mail) it was decided to issue license 43-7186 with a current owner of...

UNITED STATES OF AMERICA ACTING THROUGH USDA FOREST SERVICE
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TWIN FALLS ID 83301
(208) 737-3200

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

H. RECOMMENDATIONS

1. Recommended Amounts

BENEFICIAL USE	PERIOD OF USE	DIVERSION RATE	ANNUAL VOLUME
STOCKWATER	06/01 to 09/30	0.020 CFS	N/A
Totals			:0.020 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

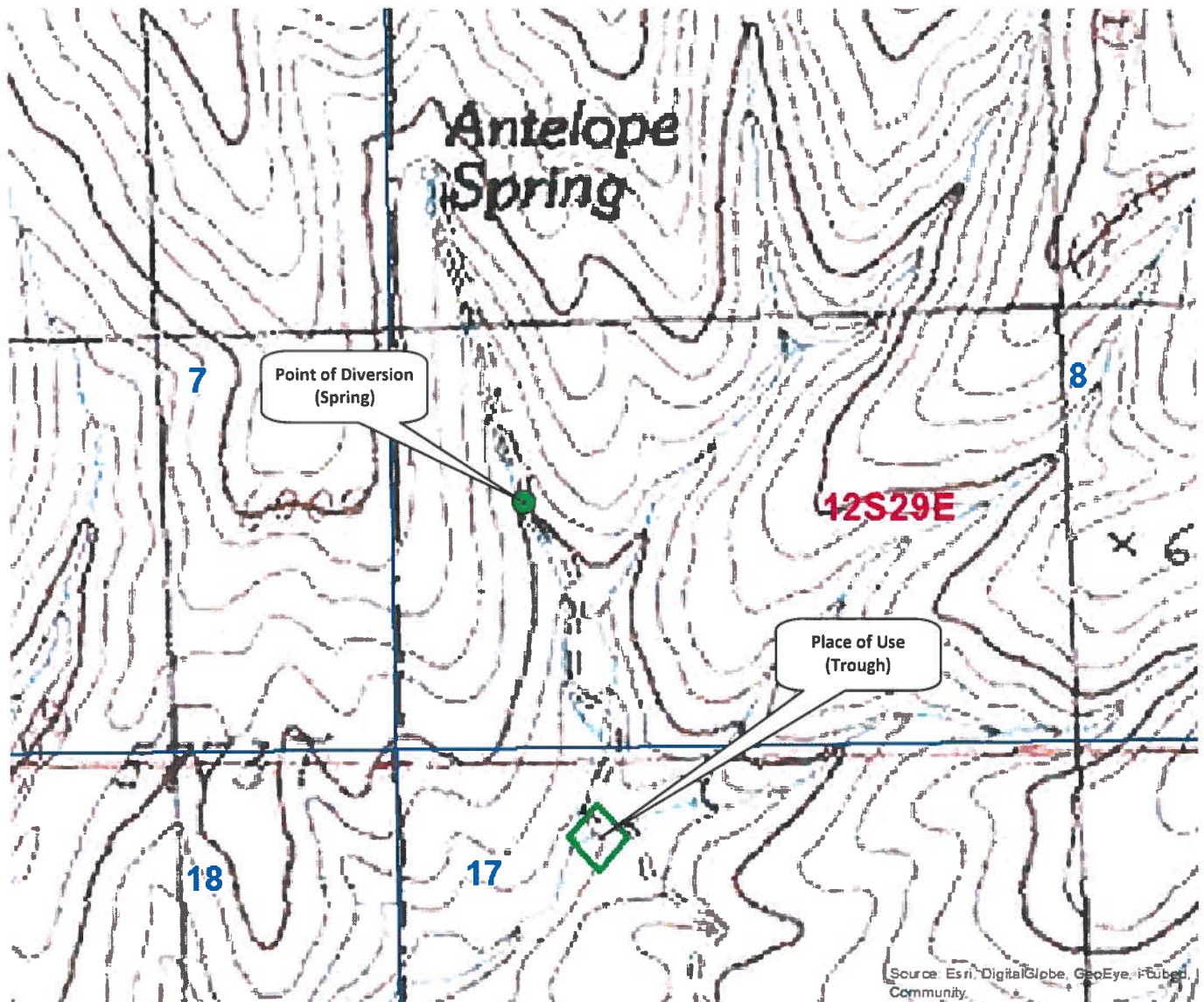
I. AUTHENTICATION

Field Examiner's Name  Date 11/21/2014

Reviewer  Date 11/25/14

Source: Esri, DigitalGlobe, GeoEye, IGN, USDA, USGS, Aero, Getmapping
Community

43-7186 Point of Diversion and Place of Use Map USGS Quadrangle



43-7186 Point of Diversion Photos



ABOVE: View of spring/point of diversion location (under log poles) from access road. Note plastic pipeline leading away from spring, down the drainage.

BELOW: Close up view of spring/point of diversion location shown in view above. Note the light green lid of the spring collection box under the log poles



43-7186 Place of Use Photos



ABOVE: View of trough/place of use located within the NWNW of Section 17, Township 12 South, Range 29 East.

BELOW: Close up view of inlet pipe into trough. Note that at the time of the exam; just a trickle of water was flowing into the trough.



Inflow Pipe to
Trough

State of Idaho
DEPARTMENT OF WATER RESOURCES
WATER RIGHT BENEFICIAL USE FIELD REPORT

43-7186
Permit No.

CONTACT WITH PERMIT HOLDER

	DATE	INITIALS	REMARKS
☐ Appointment letter mailed:			
☒ Telephone call made (List Telephone No. used)	4/29/87	TB	
☒ Appointment scheduled for: (Date, time, location)	4/29/87	TB	Forest S. office Burley

EXAMINATION

Date 4/29/87 Accompanied by Lou Martin dale - Range con Total Q measured _____
Source Spring (Antelope Spr. #2) Tributary to SINKS (L.M.) Supp. annubar measurement sheet used? _____
source is surface water, estimate total flow of source est 1-2 gpm
Methods of measurement Visual Est Meets permit requirements? _____
Measurement calculations: _____

system description doesn't match
legal description. why 1600' of
pipe if trough is near P/D?

WELL / DIV NO. *	HP	MOTOR MAKE	MOTOR SERIAL NO.	PUMP MAKE	PUMP SERIAL NO.	MEASURING DEVICE TYPE	CONDITION OF MEAS. DEVICE	REMARKS

System Description Round 2' fiberglass headbox 1600' of 1 1/4" plastic pipe
to 2' x 3' x 10' stock trough Approx capacity 450 gal
427 head, 45 days, 12 gpd = .71 a/ann. 2 gpm x 45 days ÷ 325851 = 0.4 AFA
Allow 0.4 AFA

code with map on reverse side. Disregard code if only one.

RECOMMENDED AMOUNTS

USE	Irrigation requirement = _____ AFA/Acre			
	Q (cfs)	V (afa)	FROM	TO
Stockwater	.01	0.4 ~~A~~	6/16	9/30
Total	.101	0.4		

Remarks Evidence of old collection box found during excavation. This water probably
originates at Antelope Springs and (Shirley Cr) re surfaces at this location.
427 hd of Cattle are Allowed in this unit for 45 days between 6/16 and 9/30
if extensions are allowed. Sublett Cr below Res, Shirley Cr., Quaking Aspen Sp
and Antelope Spring are other water sources used by the same Cattle during the
same period of use.

SCHEMATIC DIAGRAM OF SYSTEM

(Include distance from pump to measuring device, if applicable.)

SE/SW/SW or SW
point(s) of diversion: SW SW 58 + 125 R29E

Place(s) of Use

TWP.	RGE.	SEC.	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	
12S	29E	8											5						

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

Surveyor's Signature

Quinty for Terry Blum

Checked by

Date

8/17/90

Date

Approved by

Date

FY 83

MAINTENANCE/CONSTRUCTION/RECONSTRUCTION
ALLOTMENT Water Lock
DATE COMPLETED Aug 4, 1983

2. REPAIRS NEEDED OR COMPLETED:

3. MATERIALS NEEDED OR USED:

3 ~~2~~ ^{2x3} ~~3~~ x 10
Size 10'

Trough, Type lifes glass Size 10'

Posts 64000

Poles 3

Pipe, Type *black iron* Size *1 1/4 x 16.00*

Overflow *Complete*

Headbox	Type	Size
	1000	1000

Hand seen complete

50 1872 " 60 1871 Plateau Pine.

Barth has a mark.

Belief Long with it

4. COST OF JOB COMPLETED OR NEEDED:

Man Hours *7.5 hours*

Per Diem

Mileage 120

Other

TOTAL COST TO FOREST SERVICE: \$ 1109.04

PERMITTEE CONTRIBUTION:

Man Hours

Mileage

Other Costs

* * * * *

Engl Wilson shoes and	4.50\$	36.00
Pick up.	\$	15.00

Grand Bryan St and pickup	4.50	\$	36.00
		\$	15.00
		\$	36.00

John Schlegel's Dr. 4.50 \$

TOTAL PERMITTEE CONTRIBUTED COST: \$ 138.00

TOTAL COST OF PROJECT: \$ 1247.04

Signature

Date _____

(Drawing on the Back)

Drawing of development and/or change in development.

Headbox Location

Trough Location

Length of Pipe 1600'

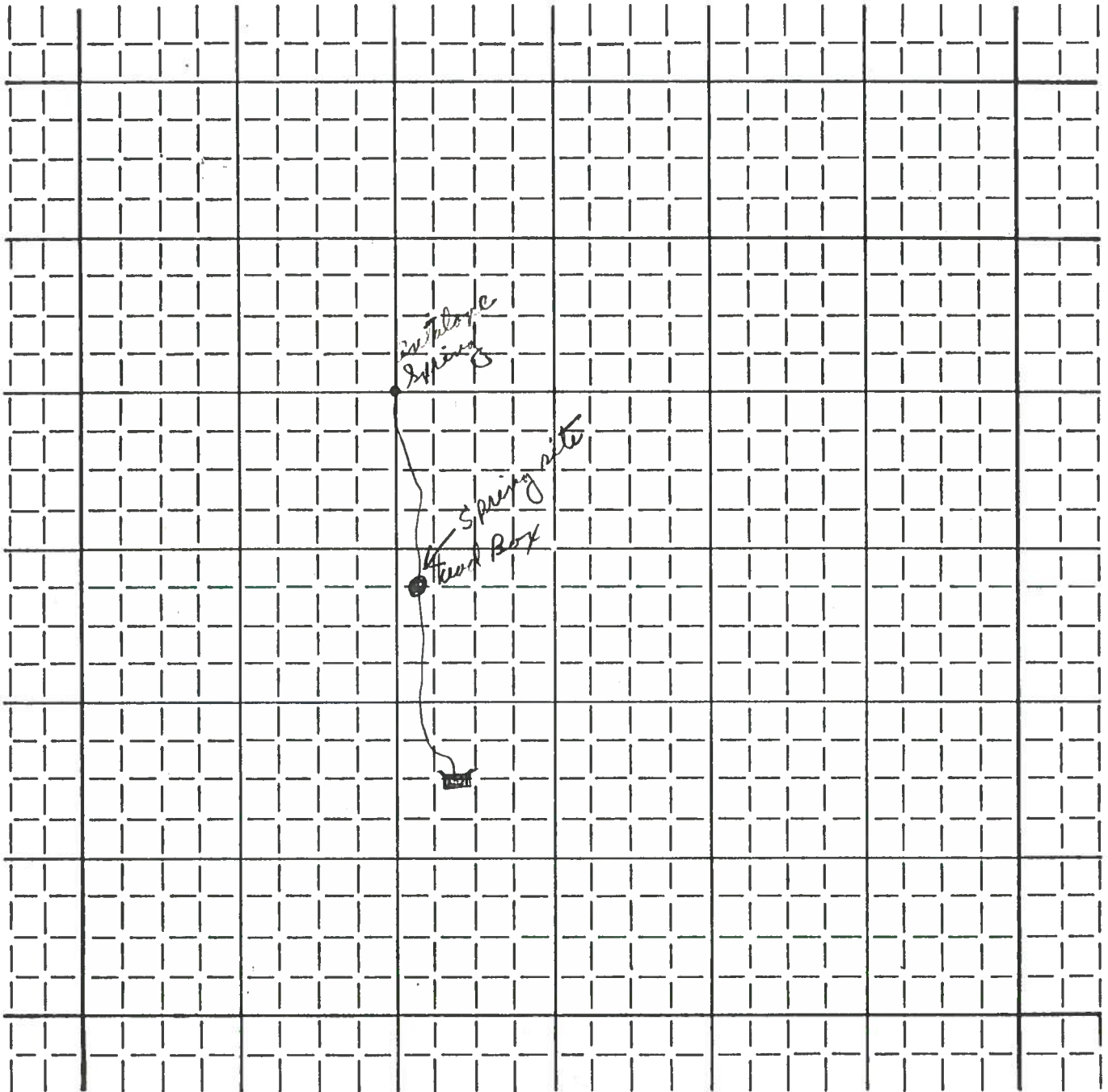
Water flow - Gal/Min.

Water flow - Gal/Min. 16

Township 12 S

Range 29 E

Section 8



5"

Scale:

inches equals one mile

you can drive to this W.D. area & wheel drive.

Young Spring

43-7186

R. 29E

Bruce Young Spring

Canyon

Indian

pole

South

pine

Canyon

Heglar

Eagle Point

Mud Spring

R. 29E

T. 12S

Antelope Spring

8/0
p/u

Quaking Aspen Spring

Upper Fall Creek Spring