

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 67-14379

Exam Date: 6/4/2012

1. Current Owner: LESLIE G DAVIS
2251 N GRAYS RD
INDIAN VALLEY ID 83632
(208) 256-4311
2. Accompanied by: Leslie Davis
Phone No: (208) 256-4311
Address: 2251 N. Grays Creek Road, Indian Valley, ID 83632
Relationship to Permit Holder:

3. SOURCE
SPRINGS

TRIBUTARY
THORN 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: None

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

SPRINGS NE1/4NE1/4SW1/4 Sec.27, Twp 15N, Rge 01W, B.M.
ADAMS County

Method of Determination: Arc Map (Aerial Photo)

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	
15N	01W	27															4.0		4.0

Total Acres: 4

PLACE OF USE: 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	
15N	01W	27														X			

Method of Determination: Arc Map (Aerial Photo)

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.

<u>Well or Diversion</u>					<u>Pump Serial No. or Discharge</u>
<u>ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Size</u>
CET50AB0_____	_____	_1_	_____	CAP Smith_	2C04_____(1")_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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

D. FLOW MEASUREMENTS (N/A)

1.

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

2. Measurements: No field measurement. Irrigation portable/trash pump not in operation during field exam and could not place 5-gallon bucket beneath 6" PVC stock water pond overflow for measurement.

E. FLOW CALCULATIONS

_____Additional Computation Sheets Attached

Measured Method (Theoretical):

$$Q = 8.8 \times 0.7 \times 1/12 + (2.31 \times 50) = 0.05 \text{ cfs}$$

$$HP = 1$$

$$Z = 12' \text{ (Average Depth of Stock Water Pond)}$$

$$P = 50 \text{ psi (Assumed)}$$

$$Q(\text{theoretical}) = 0.05 \text{ cfs} < 0.10 \text{ cfs } Q(\text{permit})$$

Conclusion: PVC pipe (1" dia.), moved around pasture for sprinkler irrigation. The flow capacity of a 1" diameter pipe is approximately 0.03 cfs. Based on the theoretical calculations and approximate flow capacity of 0.03 cfs for a 1" diameter pipe, the maximum diversion rate for the existing irrigation system is 0.05 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 4 \text{ ac} \times 4 = 16 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.05 \times 246 \times 1.9835 = 24.4 \text{ afa}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 16 \text{ afa}$$

2. Volume Calculations for Other Uses: (Stock Water)

Cattle – 10 head

$$V_r = 10 \times 12 \times 365/325,850 = 0.13 \text{ afa}$$

$$V_d = 0.02 \times 365 \times 1.9835 = 14.5 \text{ afa}$$

$$V = 0.13 \text{ afa}$$

G. NARRATIVE/REMARKS/COMMENTS**IRRIGATION SYSTEM:**

Spring water and overflow from a stock water pond is located on a parcel to the west of the Davis' property and west of Grays Creek Road. The water is diverted to a ditch along Grays Creek Road and conveyed to a 6" steel culvert crossing Grays Creek Road. The water discharges to a small stock water pond. A 1-hp portable/trash pump is used to divert water from the stock pond for sprinkler irrigation of approximately 4 acres of pasture land. The water is diverted from the stock water pond by a 1" suction line. The pasture land is sprinkler irrigated by 1" PVC pipe placed within the pasture land.

STOCK WATER:

The stock water pond is located within the pasture land and provides drinking water for a maximum of 10 head of cattle. The stock water pond water surface elevation is controlled by a 6" PVC overflow pipe which discharges to pasture land to the east of the stock water pond.

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

Condition No.8 (01J): Requirement to install and maintain a measuring device and lockable controlling works. In April, 2009, the right holder submitted a formal request to remove the measuring device requirement. In May, 2009, Joe Stippich, Basin 67A Watermaster, submitted a letter to the department stating that due to the minimal amount of water, installation of a measuring device would be difficult and would not provide accurate flow data. In June, 2009, the Department submitted a letter to the right holder stating that an order has been issued removing the measuring device requirement, but maintain the condition that a lockable device be installed by the right holder. Contacted Joe Stippich, Basin 67A Watermaster, to discuss the Departments condition requiring a lockable device. Mr. Stippich stated that since no diversion structures exist, such as a spring box or headgate, a lockable device cannot be installed. Mr. Stippich confirmed that the spring discharge is at the surface, and is conveyed to the right holders property by natural topography and man-made drain ditches and culverts. Based on the existing natural conveyance system to the right holders property, and the recommendation of the Basin 67A Watermaster, it is recommended that the lockable device requirement in Condition No.8 be removed from the conditions of approval.

RATE &/OR STORAGE RECOMMENDED FOR LICENSING

Description	Rate of Flow (cfs)		Storage (af)
Permit Amount	0.12	&/or	N/A
Beneficial Use Limit	0.12	&/or	N/A
System Measurement	0.05(Theoretical)	&/or	N/A
Proof Fee Amount	0.20	&/or	N/A
Recommended Amount	0.05	&/or	N/A

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	03/15 to 10/31	0.05 CFS	16.0 AFA
STOCKWATER	01/01 to 12/31	0.02 CFS	0.1 AFA
<u>Totals:</u>		0.07 CFS	1 6.1 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

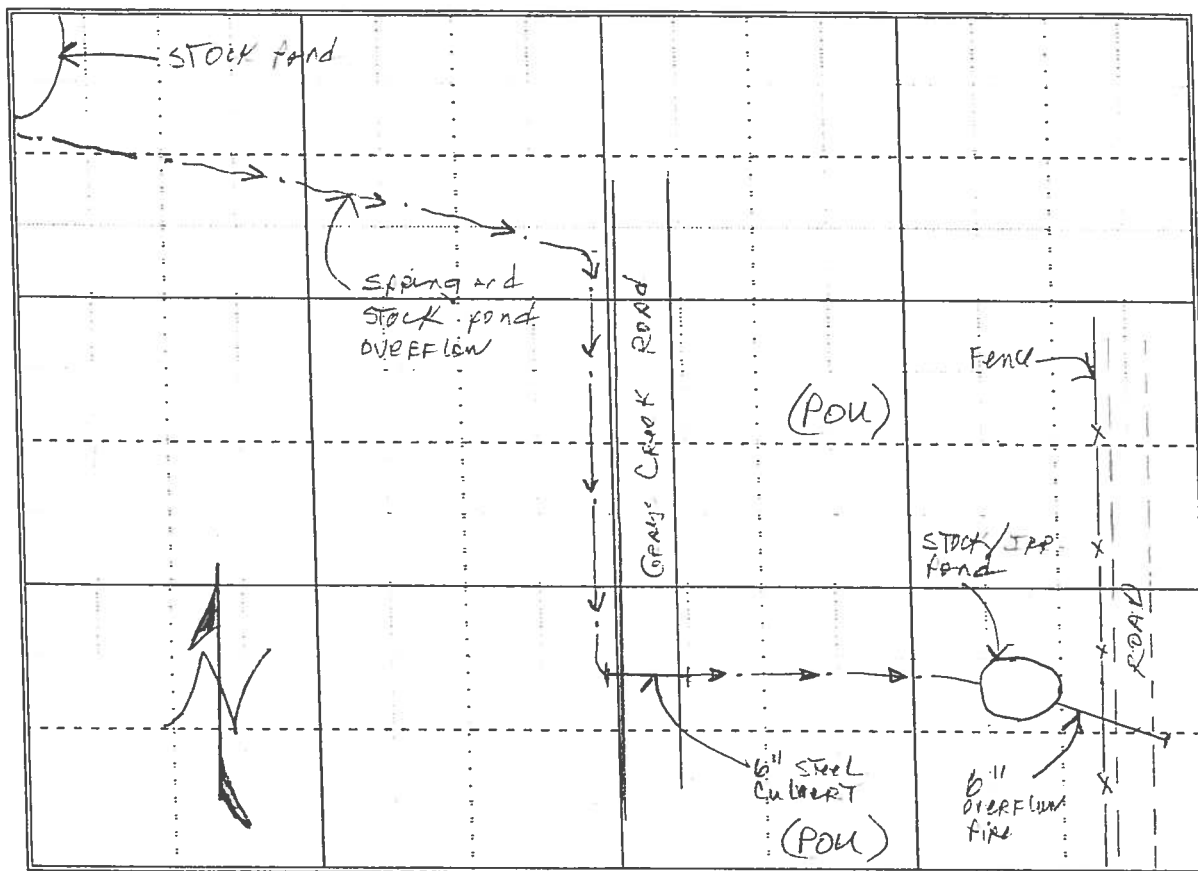
I. AUTHENTICATION

Field Examiner's Name Bick Colquhoun Date 9-11-12

Reviewer _____ Date _____

Form 219 07/11

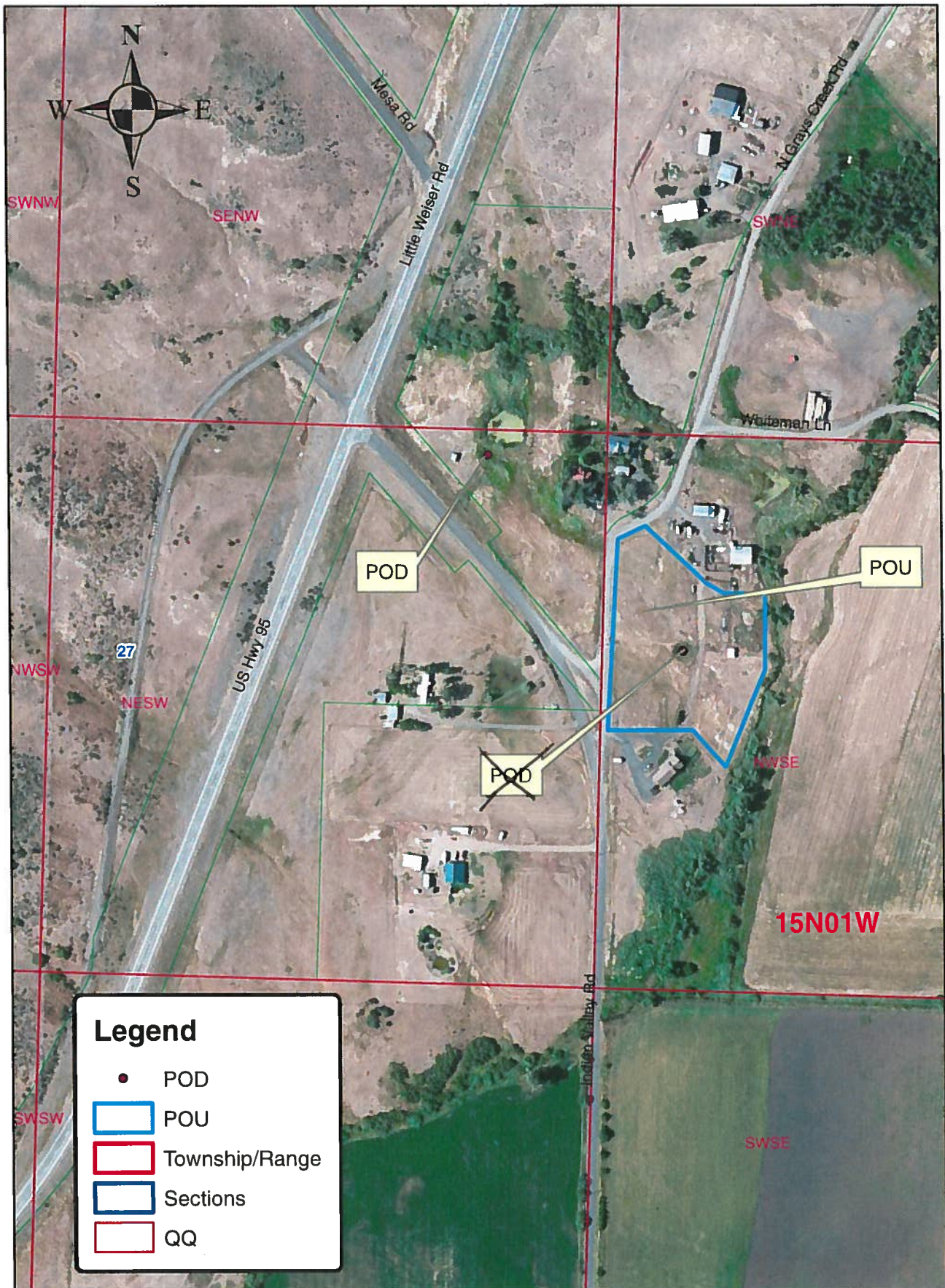
3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe diameter (inside), as applicable. Use the space provided or ☐ see attached.



Scale: 1" = 100'

- ☐ Copy of USGS Quadrangle attached showing location(s) of point(s) of diversion and place(s) of use (required)
☒ Aerial photo attached (required for irrigation of 10+ acres)
☒ Photo of diversion and system attached

67-14379



FIELD EXAM PHOTOS

Water Right Permit: 67-14379

Field Exam Date: 6-4-12

PLS: NW1/4, SE1/4 Section 27, T.15N, R.01W.

Field Examiner: RC



Point of Diversion & Place of Use: View westerly of irrigation and stock water pond. Inlet channel shown west of pond commencing at the 6" steel culvert pipe crossing Grays Creek Road. A portable/trash pump diverts water from the pond to sprinkler irrigate pasture land for cattle. The stock water pond provides water for a maximum of 27 head of cattle.



Portable/Trash pump used to sprinkler irrigate pasture land.



Place of Use: View southwesterly of a portion of irrigated pasture land.