

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
IN-OFFICE REVIEW/BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATIONPermit No: 84-12282

Exam Date: 07/02/13

1. Does this qualify for an in-office field exam (IDAPA 035.02.r)?
- X
- Y
-
- N

a. Irrigation of 5 acres or less

b. Storage of up to 14.6 AF for stockwater purposes only

c. Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less

d. Other < >

2. Current Owner: Name: <>

Owner of Record Correct? X Y NAddress of Record Correct? X Y N

If No: Address

3. Beneficial Use Fees have been paid:
-
- X
-
- Y
-
- N Receipt No: C0

4. **SOURCE****TRIBUTARY**

Spring

Sinks

Method of Determination: GIS and Telephone Conversation with owner.Change in Source: Y X N**B. OVERLAP REVIEW**

1. Other water rights with the same place of use:
-
- X
-
- NO Overlap

Water Right No.	Source	Purpose of Use	Basis
NONE			

Comments: Water Right 84-7067 appears to overlap the property, but this right is for a Mr. West who own's the property to the north of the permit holder. The permit holder confirmed this in his telephone call.

2. Other water rights with the same point of diversion:
-
- X
-
- NO Overlap

Water Right No.	Source	Purpose of Use	Basis
NONE			

Comments: Water Right 84-7067 appears to overlap the property, but this spring diversion is actually on a Mr. Bernston's property and the spring serves Mr. Bernston and Mr. West's Property.

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

Source	Govt. Lot	¼	¼	¼	Sec.	Twp.	Rge.		County
Spring		SE	NW	SE	26	34N	5E	B.M.	Idaho
								B.M.	
								B.M.	

Method of Determination: Aerial Photos, Tax lot Data, and a Telephone Conversation with the owner.Change in POD? X N Amendment Required? X N

2. PLACE OF USE: 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	
34N	5E	26														D			
		Lot #																	
Total Acres =																			

Method of Determination: : Aerial Photos, Tax lot Data, and a Telephone Conversation with the owner.Change in POU? X N Amendment Required? X N X Delivery System Diagram Attached (required). Indicate all major components and distances between components.

Indicate weir size/pipe as applicable.

 X Aerial Photo Attached (required for irrigation of 10+ acres). Photo of Diversion and System Attached (**None Available and none required on an in-house exam**)

4. Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Spring Pump	Unknown	1	Unknown	Unknown	Unknown

*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
Theoretical						

2. Measurements: The owner didn't know the make or type of pump he had in the cistern, but he did know it was a 1 Hp pump.**E. FLOW CALCULATIONS** X Additional Computation Sheets Attached

Measured Method: Theoretical Calculation

Measurement = 0.05 cfs

Permit allowed = 0.04 cfs

License recommend for 0.04 cfs as designated by the permit.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \underline{\quad X 3.5 \quad} =$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \underline{\quad X 214 X 1.9835 \quad} =$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \underline{\hspace{2cm}}$$



This Spring Point of Diversion should be on Bernston property to the north.

Bernston Property

West Property

84-7067 pou Bernston and West share a spring.

Field Exam Map 84-12282
By Dan Nelson
This permit has a spring that supplies two homes on property under the same ownership. Per a telephone conversation with the owner, the spring is located southeast of the small house in the draw. I place the point of diversion based on the conversation with the owner. The owner also stated that the point of diversion for water right 84-7067 is actually on the Bernston property. The point of diversion in arc map appears to be placed in the middle of the 40 acre tract.

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 84-12282
 Reviewer: Dan Nelson
 Date of Review: 11/19/2014

Well #1
 Full
 Drawdown

P/D No.:	Well #1	Well #2		Well #1 Full Drawdown
PUMP HORSEPOWER	1	1		1
BOOSTER HORSEPOWER	0	0		0
PUMPING LEVEL	10	10		10
DISCHARGE PRESSURE	40	50		60
RATE OF FLOW (cfs)	0.06	0.05		0.04
	27	22		19
				0.05
				22.54

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:

The owner told me that the pump was a 1 Hp pump. That was about all he could tell me about the system. Therefore, I used a standard pressure tank on off values of 40 psi to 60 psi for the pressure and an estimated lift of 10 feet from the cistern. The diversion rate appears to be correct.

MEMORANDUM

TO: File 84-12282

FROM: Daniel Nelson – Staff Hydrologist

DATE: November 19, 2014

SUBJECT: Telephone Conversation memo.

Water right 84-12282 qualifies as an in-house exam. The file seemed pretty straight forward, but I needed a couple of questions answered, so I called the owner. The first question was concerning overlapping water right 84-7067. The point of diversion places the spring for 84-7067 in the same exact location as this permit. However, both this permit and 84-7067 placed the point of diversions in are GIS system in the middle of the 40 acre tract. Neither point of diversion are in the middle of the 40 acre tract.

The owner also told me that system consists of a cistern collecting the spring water with a 1 Hp pump that is used to pump the water to the two homes. The owner identified the two homes as the large building with a red roof, and the brown building at the end of the other driveway.

With this information, I believe we can move forward with licensing of this permit.