

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 29-7803

Exam Date: 4/22/2014

1. Current Owner: JIMMY KAY BOWMAN
5779 S MARSH CREEK RD
MCCAMMON ID 83250
(208)254-3109

2. Accompanied by: Jimmy Bowman

3. SOURCE

GROUND WATER

TRIBUTARY**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 – ground water well also used for domestic/stockwater

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

GROUND WATER

NW1/4SW1/4

Sec. 34, Twp 08S, Rge 36E, B.M.

BANNOCK County

Method of Determination: GPS (Metal Tag #A0018288)

2. PLACE OF USE:

IRRIGATION

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>	
08S	36E	34										4.8							4.8

Total Acres: 4.8

Method of Determination: Site inspection, aerial photos, and discussion with Mr. Bowman.

D. FLOW MEASUREMENTS

Direct flow measurement was not possible due to system configuration. Assuming data provided with proof of beneficial use (5 hp pump, 60 psi delivery pressure, 88ft pumping level), theoretical pumping capacity = 0.14 cfs.

0.14 cfs provide a diversion rate of 0.03 cfs/acre, the standard rate for irrigated acres < 5 acres.

E. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 4.8 \text{ acres} \times 3.5 \text{ af/acre} = 16.8 \text{ acre-feet}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.14 \text{ cfs} \times 214 \text{ days} \times 1.9835 = 59.4 \text{ acre-feet}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 16.8 \text{ acre-feet}$$

2. Volume Calculations for Other Uses: N/A

F. NARRATIVE/REMARKS/COMMENTS

Simple irrigation system. Will license at 0.03 cfs /acre.

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

G. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	04/01 to 10/31	0.140 CFS	16.80 AF
<u>Totals:</u>		0.140 CFS	16.80 AF

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

H. AUTHENTICATION

Field Examiner's Name James Cefalo Date 4/26/2014

Reviewer _____ Date _____

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 29-7803
 Examiner: James
 Date of Field Exam: 4/22/2014

P/D No.: Option 1

PUMP HORSEPOWER 5
 BOOSTER HORSEPOWER 0
 PUMPING LEVEL 88
 DISCHARGE PRESSURE 60
 FRICTION 0

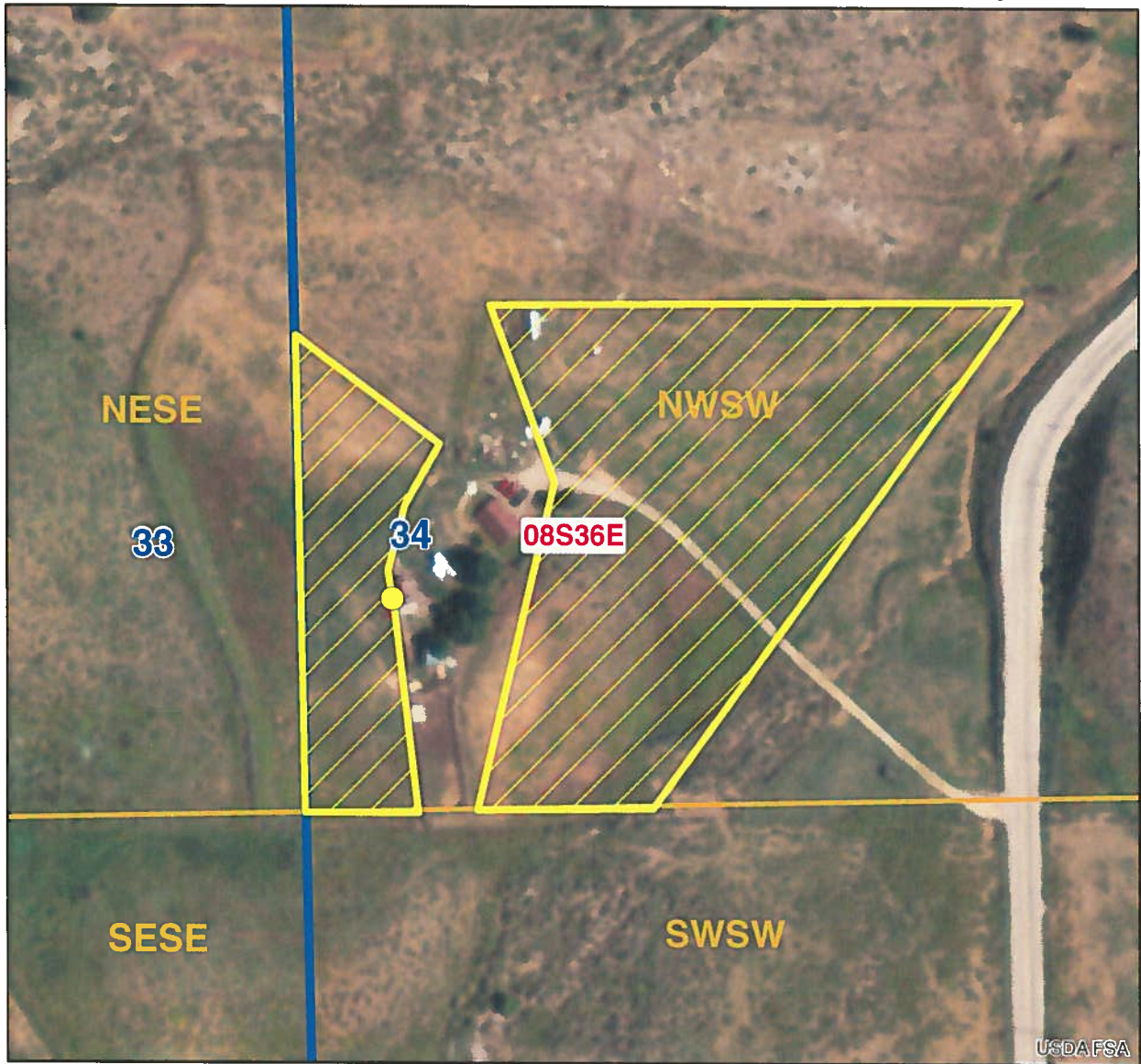
RATE OF FLOW (cfs) 0.14
 (gpm) 61.0

The above calculates the formula = $Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$

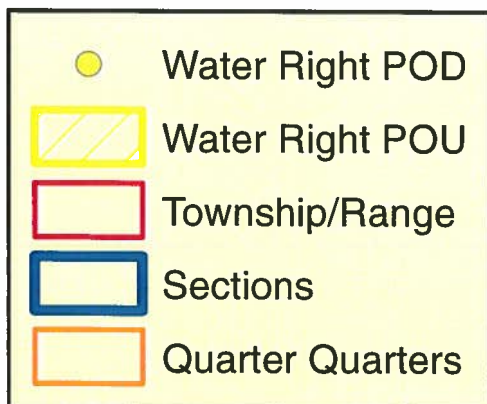
Assumptions: %70 efficiency.

Examiners Notes:

Water Right License 29-7803 (Bowman)



2011 Aerial Photography



0 200 400
Feet



