

A. GENERAL INFORMATION

Exam Date: 7/19/2012

- | 3. <u>SOURCE</u> | <u>TRIBUTARY</u> |
|------------------|------------------|
| GROUND WATER | |

1. Other water rights with the same place of use: None
2. Other water rights with the same point of diversion: None

1. LOCATION OF POINT(S) OF DIVERSION:

Method of Determination: Arc Map (Aerial Photo); GPS N.43°44.042', E.116°23.278', Datum – NAD83.

PLACE OF USE: IRRIGATION

[illegible]

PLACE OF USE: DOMESTIC

[illegible]

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 ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge Size</u>
		5			

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

D. FLOW MEASUREMENTS

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>
Pitot Tube						

2. Measurements: Pitot Tube – Operating pressure of 45 psi. Pitot tube orifice too small, so measurement was not accurate. Assume operating pressure = 50 psi.

E. FLOW CALCULATIONS

____ Additional Computation Sheets Attached

Measured Method: (Theoretical)

$$HP = 5$$

$$Z = 100' \text{ (Assumed based on static water levels for area wells)}$$

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

$$Q(\text{theoretical}) = 8.8 \times 0.7 \times 5/100 + (2.31 \times 50) = 30.8/215.5 = 0.14 \text{ cfs}$$

$$Q(9/64'' \text{ heads @ } 50 \text{ psi}) = 4.18 \text{ gpm}$$

$$\text{Sprinkler Head Table: } Q = 6 \times 4.18 \text{ gpm} = 25.1 \text{ gpm (0.06 cfs)}$$

Only 3.5 acres is irrigated, which requires a diversion rate of 0.03 cfs per acre, or 0.11 cfs. Including the domestic use diversion rate of 0.04 cfs, the right holder may divert a total of 0.15 cfs. Based on the theoretical calculation, it appears that the current well pumping system can attain the 0.15 cfs permit diversion rate.

F. VOLUME CALCULATIONS**1. Volume Calculations for Irrigation:**

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 3.5 \times 4.5 = 15.8 \text{ AFA}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.11 \times 260 \times 1.9835 = 56.7 \text{ AFA}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 15.8 \text{ AFA}$$

2. Volume Calculations for Other Uses: (Domestic Internal)

$$V = 1 (\text{home}) \times 0.6 \text{ AFA} = 0.6 \text{ AFA}$$

G. NARRATIVE/REMARKS/COMMENTS**WATER DISTRIBUTION SYSTEM:**

A 5 hp pump diverts ground water from a well for domestic internal use for one home, and irrigation of 3.5 acres, which comprises two pastures and lawn, gardens, and landscaping within the homesite.

IRRIGATION SYSTEM:

The pasture pressurized irrigation system is comprised of 1 ½" PVC mainlines to PVC risers with Rainbird sprinkler heads. The sprinkler head sizes are 3/16" and 9/64". The pasture pressurized irrigation system is divided into 9 stations, with 6 sprinkler head per station.

The homesite pressurized irrigation system is divided into 4 stations, and uses Hunter brand pop-up sprinklers.

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

CONDITION NO.3 – Water bearing zone to be appropriated is between 100 and 130 feet. Although no well log was located, the water right application indicates that the proposed depth of the well shall be 130 feet, which complies with the condition.

CONDITION NO.5 – Domestic use is for one home. Irrigation of lawn, gardens, and landscaping associated with the home is authorized under the irrigation component. Right holder irrigates the pastures, lawn, gardens, and landscaping under the irrigation component of the water right permit.

RATE &/OR STORAGE RECOMMENDED FOR LICENSING

Description	Rate of Flow (cfs)		Storage (af)
Permit Amount	0.19	&/or	N/A
Beneficial Use Limit	0.19	&/or	N/A
System Measurement	0.14 (theoretical)	&/or	N/A
Proof Fee Amount	0.20	&/or	N/A
Recommended Amount	0.15	&/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	03/01 to 11/15	0.110 CFS	15.8 AFA
DOMESTIC	01/01 to 12/31	0.040 CFS	0.60 AFA
<u>Totals:</u>		0.150 CFS	16.4 AFA

2. Recommended Amendments

___ Change P.D. as reflected above ___ Add P.D. as reflected above ☒ None

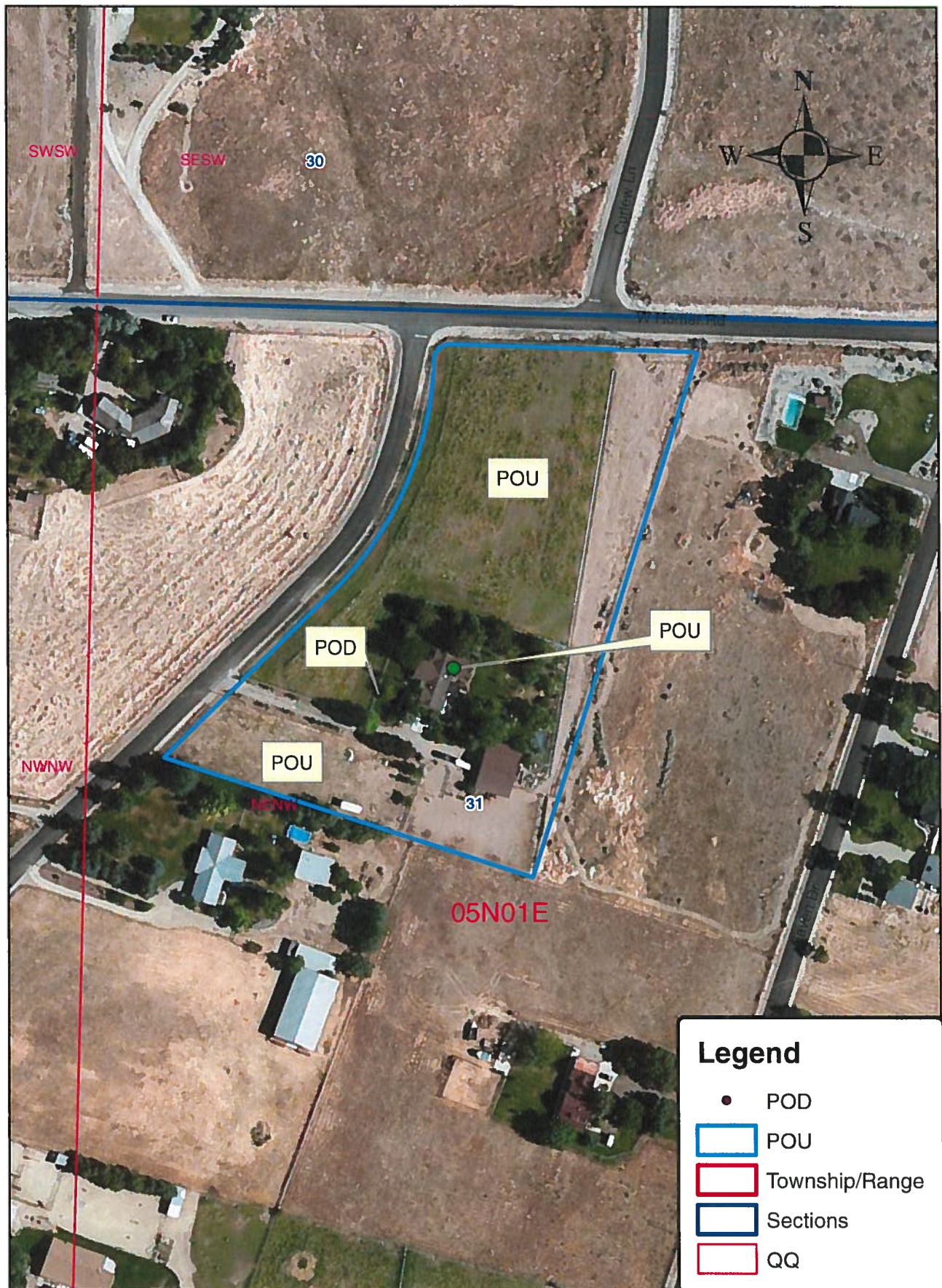
___ Change P.U. as reflected above ___ Add P.U. as reflected above ___ Other

I. AUTHENTICATION

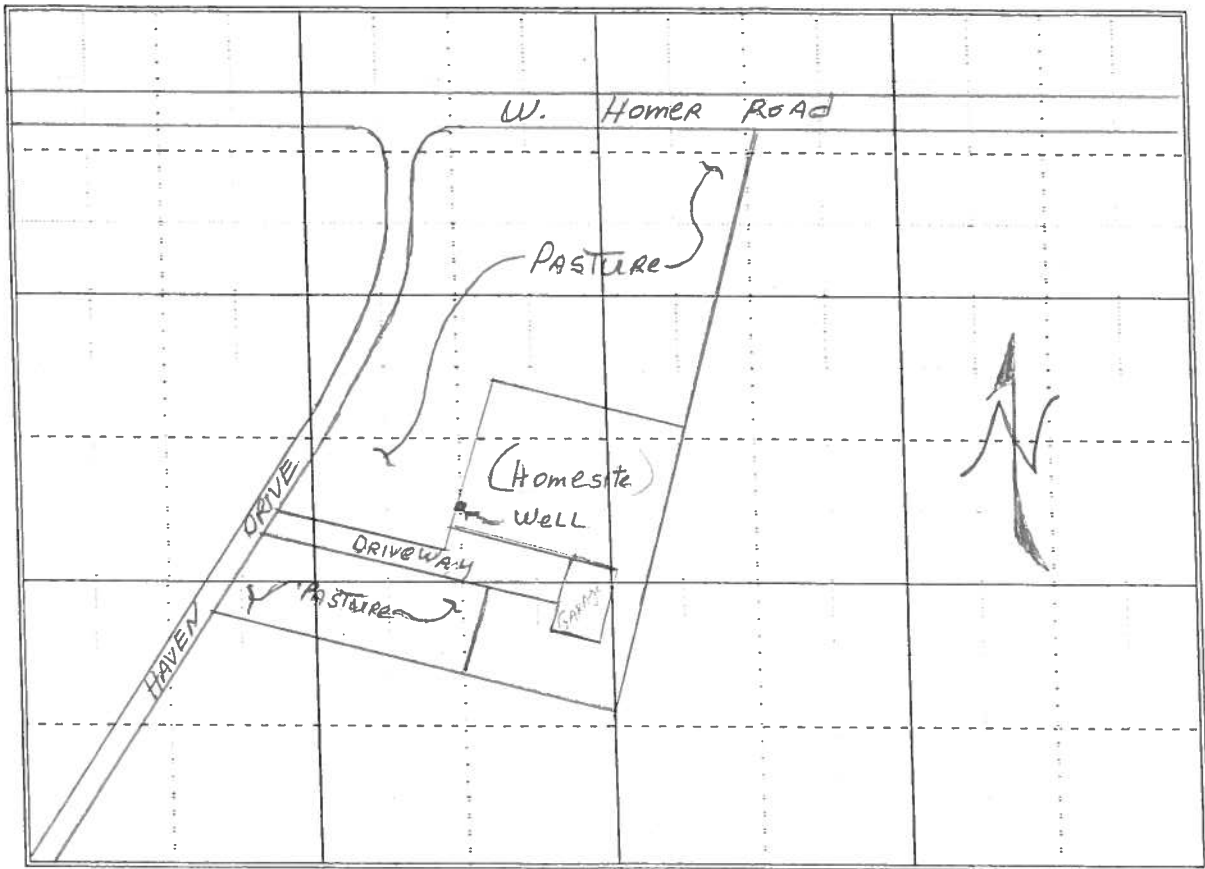
Field Examiner's Name Rick Collingwood Date 9/26/12

Reviewer _____ Date _____

63-12309



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" = NTS

- ☐ 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

63-12309



FIELD EXAM PHOTOS

Water Right Permit: 63-12309

Field Exam Date: 7-19-12

PLS: NE1/4, NW1/4 Section 31, T.05N, R.01E.

Field Examiner: RC



Point of Diversion: View northwesterly of domestic and irrigation well located next to fence separating the lawn area and pasture.



Place of Use: View northerly of irrigated pasture. The pasture irrigation system is comprised of a 1 1/2" PVC main line, 9 stations, and 6 rainbird sprinkler heads per station.