

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

**A. GENERAL INFORMATION**

Permit No: 95-9342

Exam Date: 10/24/2014

1. Does this qualify for an in-office field exam (IDAPA 035.02.r)? ☒ Yes ☐ No
- Irrigation of 5 acres or less
  - Storage of up to 14.6 AF for stockwater purposes only
  - Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less
  - Other < >

2. Current Owner: Name: Larry & Velma Gray  
Owner of Record Correct? ☒ Yes ☐ No  
Address of Record Correct? ☒ Yes ☐ No  
If No: Address

3. Beneficial Use Fees have been paid: ☒ Yes ☐ No Receipt No: N017462

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

Groundwater

Method of Determination: Applicant submitted an aerial photo map that outlined POD & POU. I was able to locate the well drillers report for the property.

Change in Source: ☐ Yes ☒ No

**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: Overlap? ☒ Yes ☐ No

| Water Right No. | Source                        | Purpose of Use | Basis   |
|-----------------|-------------------------------|----------------|---------|
| 95-8206         | W Branch Little Plummer Creek | Domestic       | License |
|                 |                               |                |         |

Comments: 95-8206 is a water right which serves the same parcel of land but from a different point of diversion.

2. Other water rights with the same point of diversion: Overlap? ☐ Yes ☒ No

| Water Right No. | Source | Purpose of Use | Basis |
|-----------------|--------|----------------|-------|
|                 |        |                |       |
|                 |        |                |       |

Comments: No POD overlap.

**C. DIVERSION AND DELIVERY SYSTEM**

1. **LOCATION OF POINT(S) OF DIVERSION:**

| Source         | Govt. Lot | ¼ | ¼  | ¼  | Sec. | Twp. | Rge. |  | County  |
|----------------|-----------|---|----|----|------|------|------|--|---------|
| WELL #D0040074 |           |   | SE | NW | 5    | 45N  | 4W   |  | BENEWAH |
|                |           |   |    |    |      |      |      |  |         |

Method of Determination: Legal Description in permit validated by PLS data and mapping.

Change in POD? ☐ Yes ☒ No

Amendment Required? ☐ Yes ☒ No

2. **PLACE OF USE:** Use: Domestic ~~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 |        |
| 45N | 04W | 5   |    |    |    |    |    |    |    | X  |    |    |    |    |    |    |    |    |        |

Method of Determination: Map of property submitted by land owner identifies POU clearly. PLSS data through ArcMap match.

Change in POU? ☐ Yes ☒ No

Amendment Required? ☐ Yes ☒ No

3.

☒ Delivery System Diagram Attached (required). Indicate all major components and distances between components.

Indicate weir size/pipe as applicable.

☒ Aerial Photo Attached (required for irrigation of 10+ acres).

☐ Photo of Diversion and System Attached

| 4. Well or Diversion Identification No.* | Motor Make | Hp  | Motor Serial No. | Pump Make | Pump Serial No. or Discharge Size |
|------------------------------------------|------------|-----|------------------|-----------|-----------------------------------|
| Unk.                                     | Unk        | Unk | Unk              | Unk       | Unk                               |

\*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 |
|-------------------------|------|------|-----------|------------|------|-------------|
|                         |      |      |           |            |      |             |
|                         |      |      |           |            |      |             |

2. Measurements: In-office field exam so flow measurements not taken.

**E. FLOW CALCULATIONS**

☒ Additional Computation Sheets Attached

Measured Method:

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

Efficiency = 0.70

Depth to water = 210 ft.

psi = 50-70

hp= 1-5

See attached theoretical sheet.

Average flow rate is 0.05 cfs

**Measurement = 0.05 cfs**

**Permit allowed = 0.04 cfs**

**License recommend for 0.04 cfs.**

**F. VOLUME CALCULATIONS**

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \underline{\hspace{2cm}}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \underline{\hspace{2cm}}$$

V = Smaller of  $V_{I.R.}$  and  $V_{D.R.}$  = \_\_\_\_\_

2. Volume Calculations for Other Uses:

Administrator Memo #22 recommends the volume of 1.2 af for domestic purposes of 1 home when irrigation is included.

**G. PURPOSE OF USE**

Irrigation ☐ Yes ☒ No # Stock 0 Domestic # of Homes 1

Other: < >

Change in Purpose of Use? ☐ Yes ☒ No

Method of Determination: Information in the water right file is consistent with aerial photography of the property.

If Yes: From Use \_\_\_\_\_ To Use \_\_\_\_\_ Amount \_\_\_\_\_ CFS \_\_\_\_\_ AFA \_\_\_\_\_

**H. NARRATIVE/REMARKS/COMMENTS**

Permit 95-9342 authorized the diversion of 0.20 cfs from ground water for domestic and commercial purposes. A second extension request was denied on June 18, 2014. The applicant submitted proof of beneficial use of 0.04 cfs for domestic use only. Based on the small permitted diversion rate and POU, this qualifies for an in-office field exam. The exam was completed on Oct. 24, 2014 by WRA Patrick Kelly.

Legal description of POU & POD were used to locate the property in the name of Larry E Gray. A home was located on the property and I was able to secure a well drillers report associated with the land. A map outlining the POU and POD was submitted with the application for permit. No errors in the property ownership, POU or POD were found.

Overlap review showed a domestic water right 95-8206 for the property in the name of Larry Gray. Diversion for this right is surface water from the West Branch Little Plummer Creek. A combined use limit condition of 0.04 cfs and 1.2 af will be added to the license.

Horsepower range of typical domestic purposes was used. Lift of 210 feet was calculated by adding 10 feet to water depth of 200. Discharge pressure of 50-70 psi accounts for common domestic pressure in use. Theoretical average flow rate is 0.05 cfs

I recommend the permit be licensed for 0.04 cfs and 1.2 af.

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

**I. RECOMMENDATIONS**

**1. Recommended Amounts**

| <u>BENEFICIAL USE</u> | <u>PERIOD OF USE</u> | <u>DIVERSION RATE</u> | <u>ANNUAL VOLUME</u> |
|-----------------------|----------------------|-----------------------|----------------------|
| Domestic              | 01/01-12/31          | 0.04 cfs              | 1.2                  |
|                       | <u>Totals</u>        | 0.04 cfs              | 1.2                  |

**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

Other:   <   >

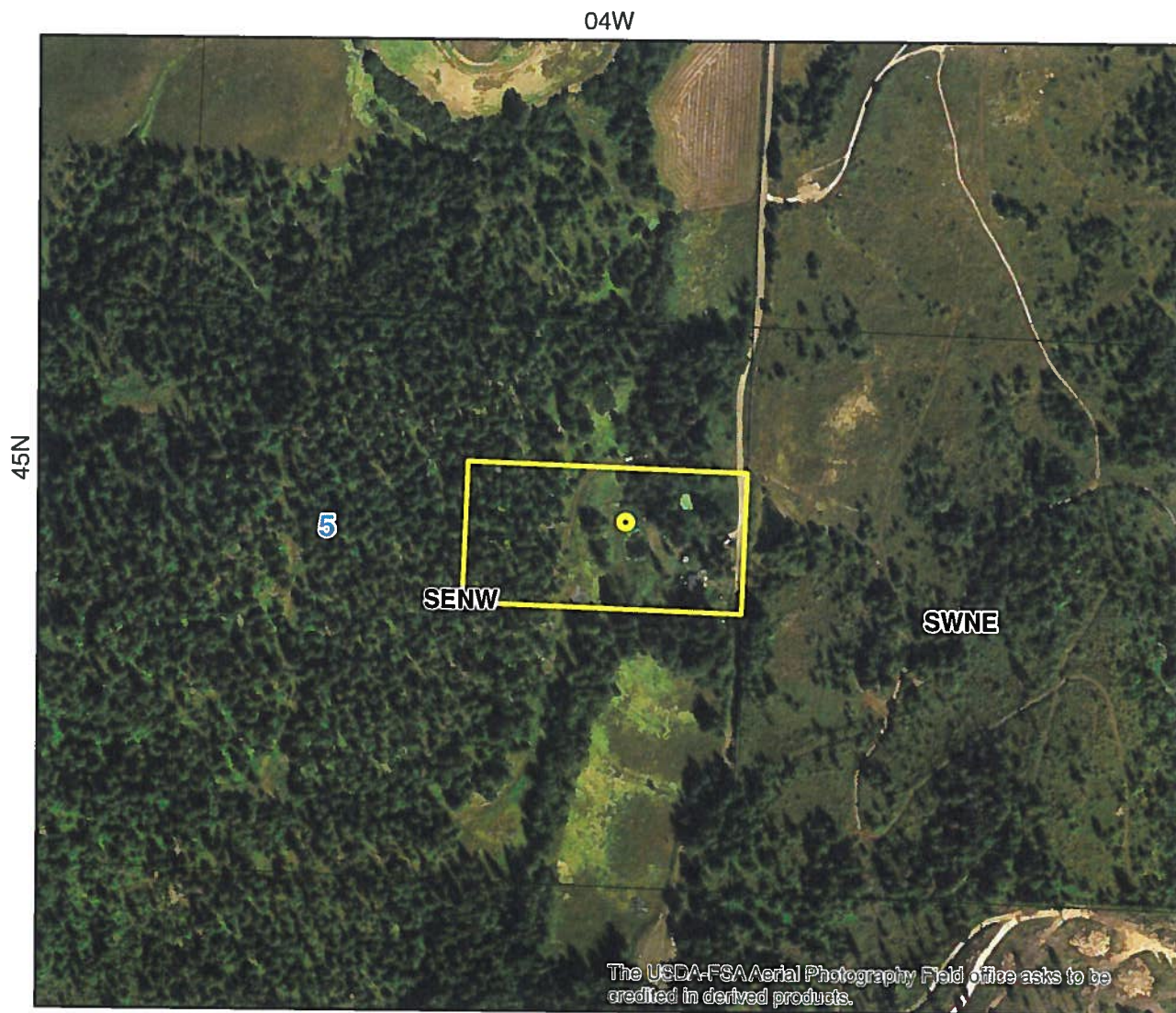
**J. AUTHENTICATION**

Field Examiner's Name Patricia Wiley Date 10/24/2014

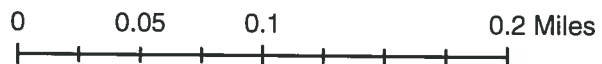
Reviewer Candace S. Skaggs Date 10-31-2014

State of Idaho  
Department of Water Resources  
**Field Exam Map**  
95-9342

This map depicts the DOMESTIC place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.



- Point of Diversion
- Place Of Use Boundary
- Townships
- PLS Sections
- Quarter Quarters



THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 95-9342  
 Reviewer: Patrick Kelly  
 Date of Review: 10/24/2014

| P/D No.:           | Senerio 1 | Senerio 2 | Senerio 3 |
|--------------------|-----------|-----------|-----------|
| PUMP HORSEPOWER    | 1         | 2         | 5         |
| BOOSTER HORSEPOWER | 0         | 0         | 0         |
| PUMPING LEVEL      | 210       | 210       | 210       |
| DISCHARGE PRESSURE | 50        | 60        | 70        |
| RATE OF FLOW (cfs) | 0.02      | 0.04      | 0.08 0.05 |

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:**

Horsepower range of typical domestic purposes was used. Lift of 210 feet was calculated by adding 10 feet to water depth of 200. Discharge pressure of 50-70 psi accounts for common domestic pressure in use. Theoretical average flow rate is 0.05 cfs.

IDAHO DEPARTMENT OF WATER RESOURCES  
**WELL DRILLER'S REPORT**

| Office Use Only    |           |             |         |
|--------------------|-----------|-------------|---------|
| Well ID No. _____  |           |             |         |
| Inspected by _____ |           |             |         |
| Twp _____          | Rge _____ | Sec _____   |         |
| _____ 1/4          | _____ 1/4 | _____ 1/4   |         |
| Lat: _____         | : _____   | Long: _____ | : _____ |

1. WELL TAG NO. D 0040074  
 DRILLING PERMIT NO. 832768  
 Water Right or Injection Well No. \_\_\_\_\_

2. OWNER:

Name Barry Gray  
 Address 4546 Tresize Rd  
 City Raymond State Idaho Zip 98577

3. LOCATION OF WELL by legal description:

You must provide address or Lot, Blk, Sub. or Directions to well.

Twp. 45N North ☒ or South ☐  
 Rge. 4 East ☐ or West ☒  
 Sec. 5 1/4 51E 1/4 1/4 1/4  
 Gov't Lot \_\_\_\_\_  
 County Benzon  
 Lat: \_\_\_\_\_ Long: \_\_\_\_\_  
 Address of Well Site 5 mile on mmpressalld to Gray  
Sane City Plummer  
 (Give at least name of road + Distance to Road or Landmark)  
 Lt. \_\_\_\_\_ Blk. \_\_\_\_\_ Sub. Name \_\_\_\_\_

4. USE:

☒ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation  
☐ Thermal ☐ Injection ☐ Other \_\_\_\_\_

5. TYPE OF WORK check all that apply (Replacement etc.)

☒ New Well ☐ Modify ☐ Abandonment ☐ Other \_\_\_\_\_

6. DRILL METHOD:

☒ Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other \_\_\_\_\_

7. SEALING PROCEDURES

| Seal Material    | From     | To        | Weight / Volume | Seal Placement Method |
|------------------|----------|-----------|-----------------|-----------------------|
| <u>Bentonite</u> | <u>0</u> | <u>20</u> | <u>4000K</u>    | <u>Pack</u>           |

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 173  
 Was drive shoe seal tested? ☒ Y ☐ N How? Air

8. CASING/LINER:

| Diameter | From       | To         | Gauge      | Material     | Casing                              | Liner                               | Welded                              | Threaded                 |
|----------|------------|------------|------------|--------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|
| <u>6</u> | <u>+2</u>  | <u>173</u> | <u>200</u> | <u>Steel</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <u>4</u> | <u>-15</u> | <u>275</u> | <u>160</u> | <u>PVC</u>   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |

Length of Headpipe \_\_\_\_\_ Length of Tailpipe \_\_\_\_\_  
 Packer ☐ Y ☒ N Type \_\_\_\_\_

9. PERFORATIONS/SCREENS PACKER TYPE

Perforation Method Drill  
 Screen Type & Method of Installation \_\_\_\_\_

| From       | To         | Slot Size | Number    | Diameter  | Material   | Casing                   | Liner                               |
|------------|------------|-----------|-----------|-----------|------------|--------------------------|-------------------------------------|
| <u>175</u> | <u>275</u> | <u>1"</u> | <u>42</u> | <u>4"</u> | <u>PVC</u> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

10. FILTER PACK

| Filter Material | From | To | Weight / Volume | Placement Method |
|-----------------|------|----|-----------------|------------------|
|                 |      |    |                 |                  |

11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

172 ft. below ground Artesian pressure \_\_\_\_\_ lb.  
 Depth flow encountered 220 ft. Describe access port or control devices: \_\_\_\_\_  
Cap

12. WELL TESTS:

☐ Pump ☐ Bailor ☒ Air ☐ Flowing Artesian

| Yield gal/min. | Drawdown | Pumping Level | Time         |
|----------------|----------|---------------|--------------|
| <u>100 +</u>   |          |               | <u>2 hrs</u> |

Water Temp. 49 Bottom hole temp. \_\_\_\_\_

Water Quality test or comments: clear no odor

Depth first Water Encounter 200

13. LITHOLOGIC LOG: (Describe repairs or abandonment)

| Bore Dia. | From       | To         | Remarks: Lithology, Water Quality & Temperature | Water | Y | N |
|-----------|------------|------------|-------------------------------------------------|-------|---|---|
| <u>8</u>  | <u>0</u>   | <u>20</u>  | <u>Clay Brown</u>                               |       |   |   |
|           | <u>20</u>  | <u>25</u>  | <u>Clay Gray</u>                                |       |   |   |
|           | <u>25</u>  | <u>50</u>  | <u>Clay Brown</u>                               |       |   |   |
|           | <u>50</u>  | <u>75</u>  | <u>Shale Brown</u>                              |       |   |   |
|           | <u>75</u>  | <u>100</u> | <u>Shale Blue/Brown</u>                         |       |   |   |
|           | <u>100</u> | <u>110</u> | <u>Clay Brown</u>                               |       |   |   |
|           | <u>110</u> | <u>125</u> | <u>Shale Gray</u>                               |       |   |   |
|           | <u>125</u> | <u>136</u> | <u>Sand Stone</u>                               |       |   |   |
|           | <u>136</u> | <u>150</u> | <u>Decomposed Shale</u>                         |       |   |   |
|           | <u>150</u> | <u>225</u> | <u>Shale Gray</u>                               |       |   |   |

RECEIVED

JUN 15 2005

IDWR North

RECEIVED

JUN 15 2005

IDWR North

Completed Depth 225 (Measurable)

Date: Started 4/21/05 Completed 4/28/05

14. DRILLER'S CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name Always Drilling Inc Firm No. 510

Principal Driller Paul Kwope Date 6/15/05

Driller or Operator II D. Kwope Date 6/15/05

Operator I \_\_\_\_\_ Date \_\_\_\_\_

Principal Driller and Rig Operator Required.  
 Operator I must have signature of Driller/Operator II.