

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

A. GENERAL INFORMATIONPermit No: 55-13927Exam Date: 1/6/201512-03-15 Doc

1. Does this qualify for an in-office field exam (IDAPA 035.02.r)? X Y N
- 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: Michael E. and Gloria J. Stanford
- Owner of Record Correct? X Y N
- Address of Record Correct? Y N
- If No: Address

3. Beneficial Use Fees have been paid: X Y N Receipt No: C101044

4. **SOURCE** **TRIBUTARY**
- Spring Juniper Creek

Method of Determination: GIS, Taxlot Data and communications with permit holder.

Change in Source: Y X N

B. OVERLAP REVIEW

1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
55-7387	Spring	Stockwater	Decree

Comments: Water right 55-7387 is a decreed stockwater right that supplies water to the same stock from a separate spring. There are several springs in this area, and this permit is the only water right filing for the spring described in this permit.

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

Water Right No.	Source	Purpose of Use	Basis
55-7387	Spring	Stockwater	Decree

Comments: Water right 55-7387 is from a separate spring for the same stockwater purposes. Both springs use the same water delivery system. Therefore, they are direct overlapping water rights.

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

Source	Govt. Lot	¼	¼	¼	Sec.	Twp.	Rge.		County
Spring		NW	SE	SW	9	9S	5W	B.M.	Owyhee
								B.M.	
								B.M.	

Method of Determination: GIS, Tax Lot data, and conversations with the property 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	
9S	5W	9												D					
		Lot #												S					
Total Acres =																			

Method of Determination: GIS, Tax Lot Data, and conversations with the owner.

PLEASE NOTE: It appears as though some of the stockwater use may used in a barn that appears to be on BLM property. However, I am not certain that aerial photos and the PLS data are correctly aligned in this area. The USGS Topographic Map Symbols guide states that dashed section lines signify that the location of the section line is doubtful. This area has a dashed line for the section lines on the topographical maps, so there is some concern about their accuracy. It is highly unlikely that BLM would allow structures to be built on lands they manage. Therefore, I only recommended the place of use on land owned by the permit holder per the tax lot data.

Change in POU? ☒ X ☐ N Amendment Required? ☒ X ☐ N☐ 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

4. Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Spring	Unknown	0.5	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
NONE						

2. Measurements: No measurement is required for an in-house exam, but a theoretical calculation was used to determine if the diversion rate is reasonable.

E. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Measured Method:

A theoretical analysis shows that a diversion rate of 0.04 cfs is possible with a 1/2 Hp pump. I will recommend a diversion rate of 0.04 cfs, which is what was requested on their application for permit.

Theoretical Calculation = 0.05 cfs

Permit allowed = 0.04 cfs

This license is recommended for 0.02 cfs of domestic use and 0.02 cfs for stockwater use. This permit when combined with water right 55-7387 should be limited to a total diversion rate of 0.04 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

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

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

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

2. Volume Calculations for Other Uses:

This is a domestic use. According to processing memo #22, and Domestic use for in-house and yard irrigation can have up to 1.2 acre feet of annual water use per home. I am recommending 2.4 af for the domestic use for this permit. The permit stated that owner has 100 head of range cattle, and 10 horses. Range cattle and horse both have a maximum requirement of 12 gallons per day. Therefore the stockwater portion of the permit should be limited to 1.5 af (12 gpd X 110 animals X 365 days / 325850 = 1.47859 af). Water right 55-7387 allows up to 300 head of livestock watering, and this permit was only filed for 110 head of the 300 head allowed by 55-7387, so the diversion rate and volume should not exceed the amounts allowed by water right 55-7387 for more livestock. When combined with 55-7387 the total combined stockwater use should be limited to 4.0 af as allowed by the decreed water right.

G. PURPOSE OF USE

Irrigation Y N # Stock 110 head Domestic # of Homes 2

Other: < >

Change in Purpose of Use? Y N

Method of Determination: Taxlot data and conversations with owner.

If Yes: From Use To Use Amount CFS AFA

H. NARRATIVE/REMARKS/COMMENTS

This permit is qualified for an in-house exam. I was originally concerned that this permit used the same spring described in water right 55-7387, by the owner confirmed that there are actually 2 separate springs diverted on this property for stockwater use. Both systems are tied together at a stockwater trough and a storage tank on the system. The water from the storage tank then travels to the home and is used in the home and a barn.

It appears from the aerial photos that the barn is in the SWSE ¼ of section 9, but this land is owned by BLM according to the tax records. I reviewed the BLM surveys, and it is really difficult to tell if the section lines in our mapping system are accurately registered to the aerial photography. In order to avoid confusion, I only place the stockwater use on the lands owned by the permit holder, which are the same lands described in the permit. Both homes are in the correct legal description, so I am not as worried about them.

All of the conditions should be removed except for the condition describing the domestic use as being for two homes. There is some evidence of yard irrigation around the older home, and the 2015 aerial photo does show some green areas in front of the home, but I can't confirm that it is a conventional yard. I am going to include condition X35 to say when the stockwater portion of this right is combined with water right 55-7387 they should be limited to 0.04 cfs and 4 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 to 12/31	0.02 CFS	2.4 AF
Stockwater	01/01 to 12/31	0.02 CFS	1.5 AF
<u>Totals:</u>		0.04 CFS	3.9 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 ☐ None

Other: < >

J. AUTHENTICATION – DANIEL A. NELSON – STAFF HYDROLOGIST

Field Examiner's Name

Daniel A. Nelson

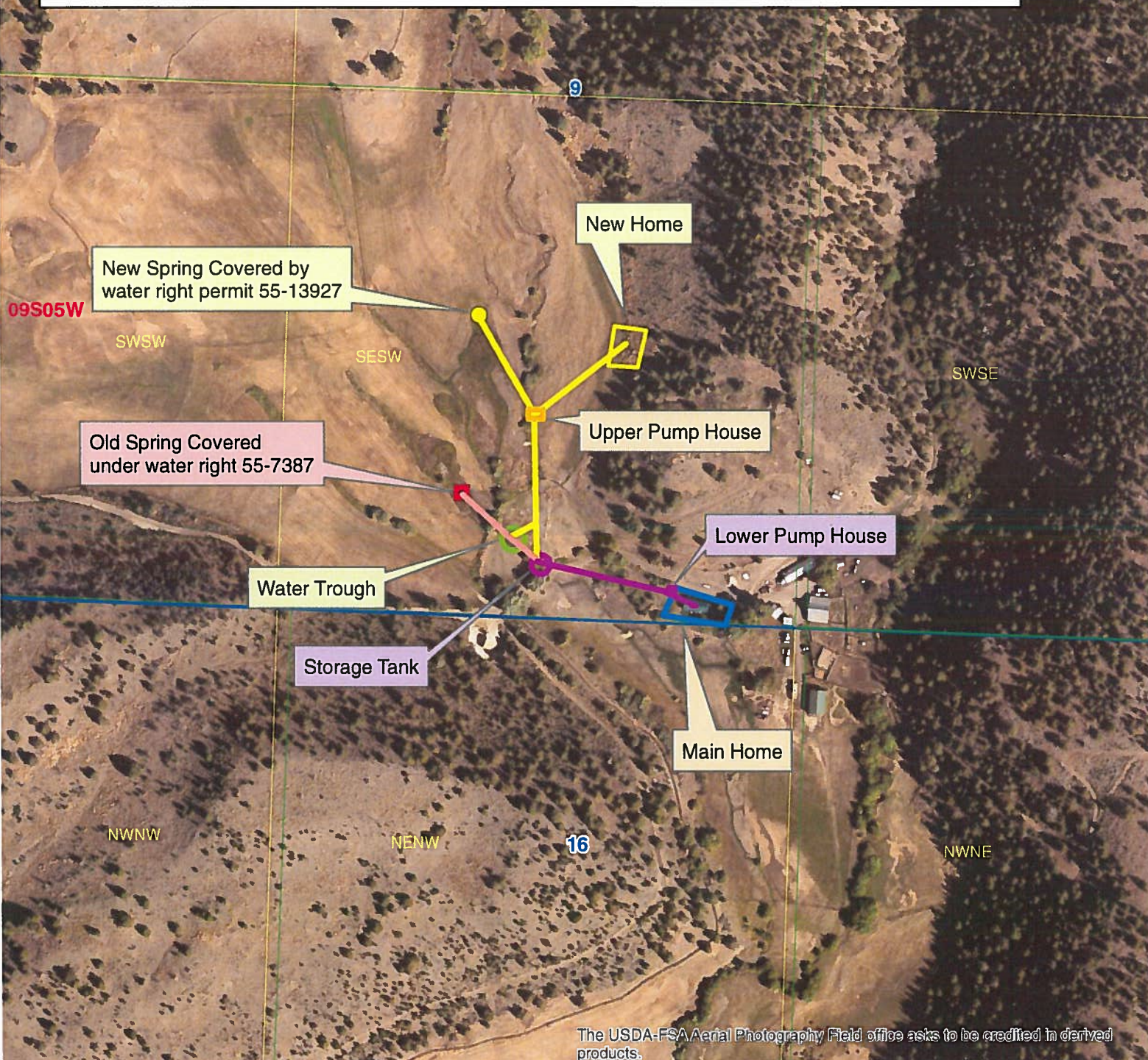
Date

12-7-15

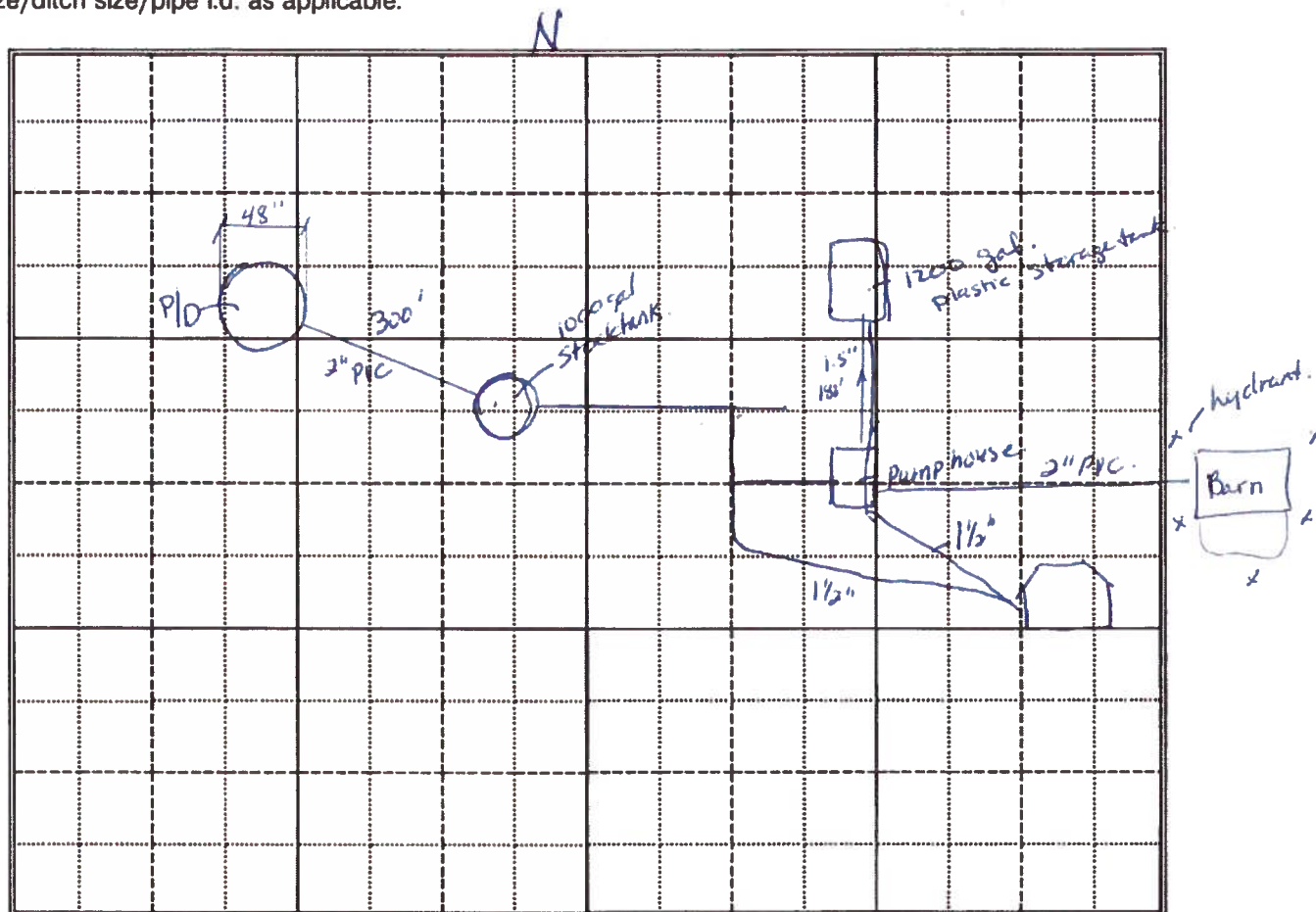
Reviewer

Date

Taking information from a telephone call with the permit holder and the field exam performed on water right 55-7387, I was able to determine what I think is the way the system is set up. This is an in-house field exam, so I was not able to visit the site. However, I feel this is a reasonable depiction of what is happening at this site. The water from the upper spring comes down to a pump house that delivers water to the new home (trailer home), and then sends the water down to the stockwater trough or the water storage tank. From the water storage tank, the water is transported to the pump house west of the home and is pressurized to supply water to the home and to the barn. The barn appears to be in several different 40 acre tracts, but I am not sure an amendment is necessary. The barn appears to sit on lands owned by BLM, so I did not include the area around the barn, since I am not sure our maps are correctly registered to the the tax lot and PLS lines.



3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate well size/ditch size/pipe i.d. as applicable.



Scale: 1" = _____

____ 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

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
_____	_____	1/2		TAIT Model 345P	5K465A

*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
Bucket / stop watch					5 gal	

2. Measurements: 24 gpm

MICROFILMED

APR 13 1999

System Diagram FROM Field Exam FOR 53-7387. DGN # 12-2-15

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

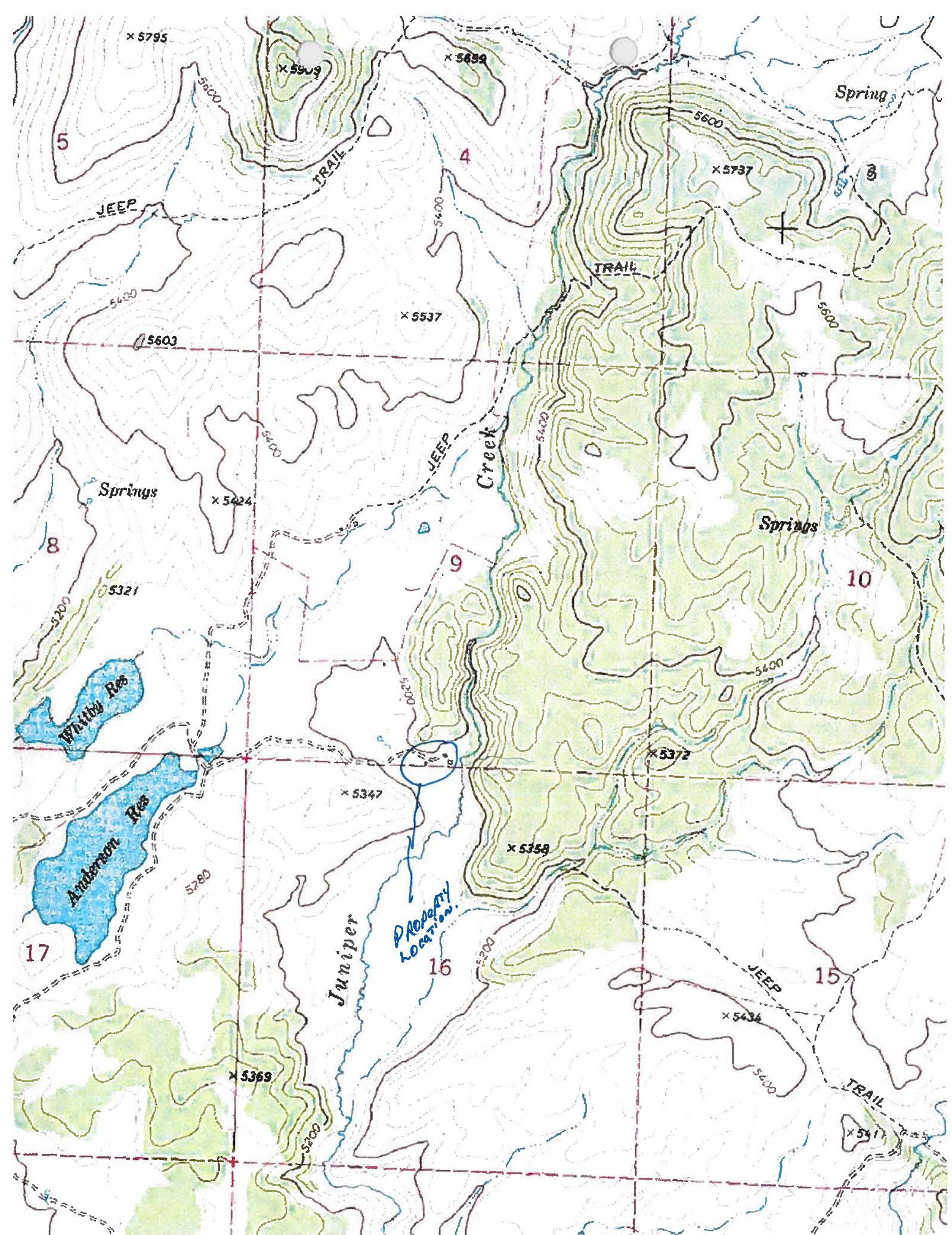
Water Right No.: 55-13927
 Reviewer: Dan Nelson
 Date of Review: 12/2/2015

P/D No.:	Scenario 1	Scenario 2	Scenario 3	
PUMP HORSEPOWER	0.5	0.5	0.5	
BOOSTER HORSEPOWER	0	0	0	
PUMPING LEVEL	15	15	15	
DISCHARGE PRESSURE	15	20	25	
RATE OF FLOW (cfs)	0.06	0.05	0.04	Average
	28	23	19	0.05
				23.14

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 stated that the system has a 1/2 Hp pump that pumps to a 1,000 gallon plastic storage tank. This is a spring, so the lift would be relatively minimal. I conservatively gave a maximum lift of 15 feet, which is probably much more than the actual lift for this system. The system open discharges into a 1,000 gallon storage tank, so I am not sure of the height of the tank. The area around the spring is relatively flat, so the pressure against the pump would be minimal. I estimated between 15 and 25 psi or 35 to 58 feet of head against the pump. It is doubtful that this tank if it sits above ground is more than 12 feet tall, so these pressures seem reasonable. From the estimations above it is more than reasonable to assume that permit holder can divert the 0.04 cfs allowed by this permit.



MEMORANDUM

TO: File 55-13927

FROM: Daniel Nelson – Staff Hydrologist

DATE: November 25, 2015

SUBJECT: Telephone conversation concerning springs.

I spoke with Michael E. Stanford concerning the springs on this property. Mr. Stanford confirmed that there are two springs, and that the map that I sent him on October 28, 2015 was accurate. Mr. Stanford also stated that the stockwater portion of the permit involves moving portable water troughs around the property to water the cattle depending on which pasture that he is keeping the cattle in at the time.



State of Idaho

DEPARTMENT OF WATER RESOURCES

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C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

October 28, 2015

MICHAEL S STANFORD
AND GLORIA J STANFORD
3581 CLIFFS RD
JORDAN VALLEY OR 97910

RE: Water Right Permit No. 55-13927

Dear Permit Holder(s):

The Department of Water Resources (Department) has received your Proof of Completion form and I am reviewing the permit referenced above prior to issuing a water right license. By issuing a license, the Department confirms the extent of development that has been established in compliance with the terms of the permit. Before I move forward with the licensing of this permit, I need to verify how your system is operated.

Based on the Department's records, you already have an existing spring licensed under water right 55-7387 that supplied water to the main home. You filed this permit to add a new spring to the system, and include a second or new home. I have tried to depict this information on the attached map.

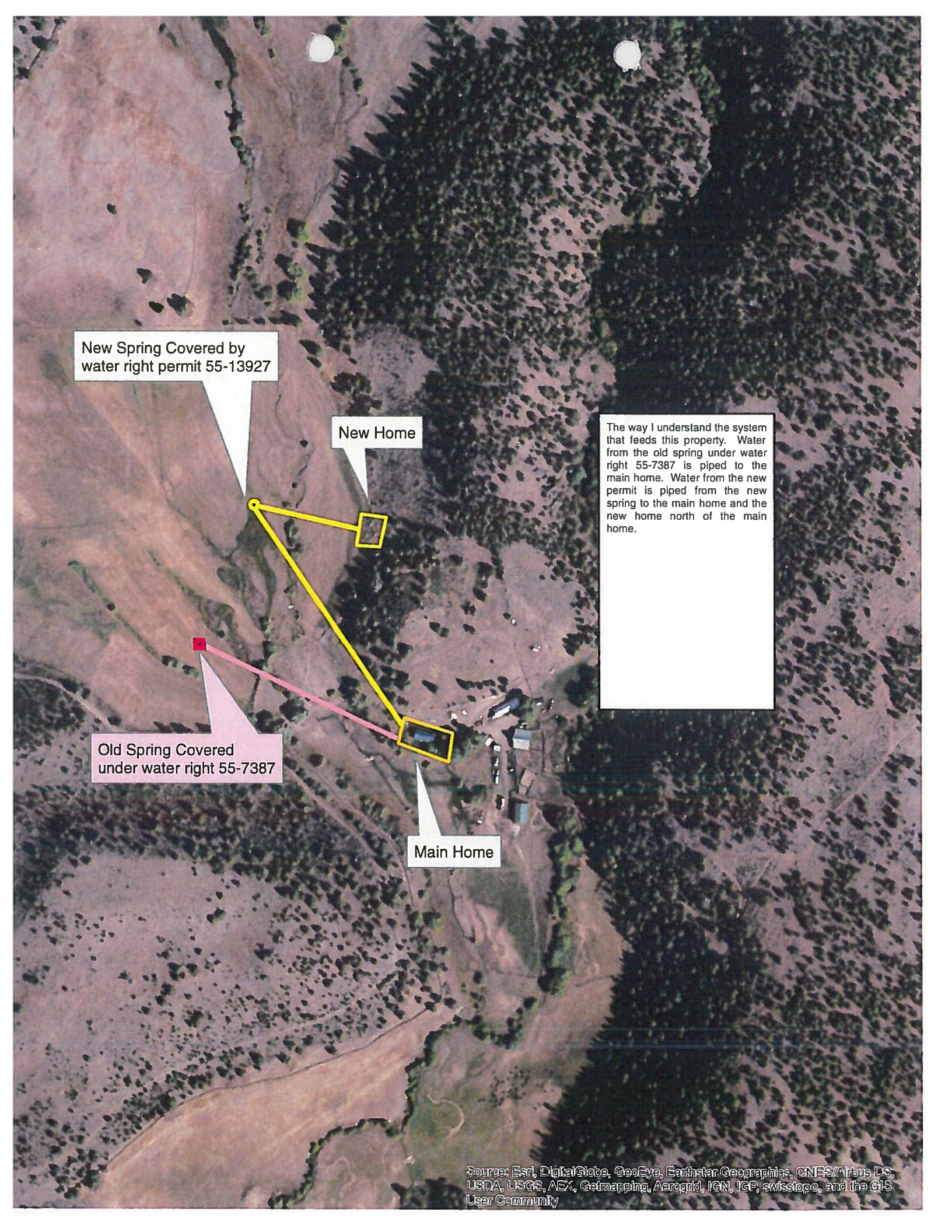
Please review the attached map, and let me know if the attached map correctly describes your current water system. If it doesn't describe your water system correctly, please make any corrections that are necessary and return the map to me with a written explanation of how the system is operated.

If I do not hear from you by November 12, 2015, I will assume the map is correct and prepare the license accordingly. If you have any questions, please contact me by November 12, 2015.

Sincerely,

Daniel Nelson
Staff Hydrologist
Idaho Department of Water Resources
Telephone (208) 287-4856
Fax (208) 287-6700 (attn: Dan Nelson)

Enclosures



New Spring Covered by
water right permit 55-13927

New Home

The way I understand the system that feeds this property. Water from the old spring under water right 55-7387 is piped to the main home. Water from the new permit is piped from the new spring to the main home and the new home north of the main home.

Old Spring Covered
under water right 55-7387

Main Home