

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

A. GENERAL INFORMATIONPermit No: 37-22903Exam Date: 3/6/2015

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: Dean M. and Deanna R. Issac
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: C0

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

Ground water

Method of Determination: GIS and permit shapesChange 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
NONE			

Comments: Water right permit 37-21294 shares a similar 40 acre tract, but it is south of railroad tracks and not part of this property.

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

Water Right No.	Source	Purpose of Use	Basis
NONE			

Comments: There are no overlapping water rights in the same legal description as this well.

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

Source	Govt. Lot	¼	¼	¼	Sec.	Twp.	Rge.		County
Ground water			SW	SE	17	1S	16E	B.M.	Cama

Method of Determination: GIS, Permit Map, and Spatial data.Change in POD? X N Amendment Required? X N

2. **PLACE OF USE:** Use: Irrigation

TWP B	RG E	Sec	NE				NW				SW				SE				Total s
			NE	N W	S W	SE	NE	N W	SW	SE	NE	N W	S W	SE	NE	N W	S W	SE	
10S	20E	29	S	S	S	S	S	S		S									
Total Acres =																			

Method of Determination: GIS and Permit ApplicationChange 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
Well	Unknown	1	Unknown	Unknown	Unknown

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

Please Note: This is an in-house exam, so no field exam was performed. We relied on the information supplied by the owner in the permit to determine the Horsepower of the pump.

D. FLOW MEASUREMENTS

1.Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
NONE						

2. Measurements: A theoretical calculation was done based on the Horsepower provided in the permit. The calculation used the information from the permit and a nearby well driller's report to determine lift. A minimum pressure was used to ensure that the maximum possible diversion rate was being recommended. Please see the attached theoretical calculation sheet.

E. FLOW CALCULATIONSYes Additional Computation Sheets Attached

Measured Method:

A theoretical analysis shows that a diversion rate of 0.06 cfs is possible with a 1 Hp pump at this location. The owner provided the pump information from the permit application. The calculation used the information from the permit and the well driller's report to determine lift. A minimum pressure was used to ensure that the maximum possible diversion rate was being recommended. Please see the attached theoretical calculation sheet.

Theoretical Calculation = 0.06 cfs**Permit allowed = 0.06 cfs**

The permit allowed 0.06 cfs and the system capacity is estimated at 0.6 cfs. Therefore, I am recommending a diversion rate for this permit of 0.06 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 permit has a condition that limits the daily diversion volume to 13,000 gallons per day. This diversion rate can provide the 13,000 gallons per day limitation in the permit. 300 range cattle drink approximately 12 gallons per day per the Field Examiner's Handbook. Using the Field Examiner's Handbook estimation, would limit the amount of volume needed for the 300 cows described in the permit would be 3600 gallons. Therefore, the 13,000 gallon per day condition should be carried onto the license and no other volume limitations should be included on the license.

G. PURPOSE OF USE

Irrigation Y N # Stock X Domestic # of Homes

Other: < >

Change in Purpose of Use? Y X 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 allows the use of stockwater for 300 cattle in Section 17 in Township 1 South, Range 16 East excluding the SWNW ¼ and the entire south ½ of the section. The place of use seems like a very large area, but without doing a field exam, I cannot determine the actual location of the stockwater troughs, so I feel it is necessary to allow the large place of use provided by the owner of the permit. There are what appears to be several water troughs in the place of use, so I am confident the water is being used for stock watering purposes.

There are no significant overlaps for this property, so that should not be a concern.

Condition N13 limiting the use to 13,000 gallons per day was carried forward to licensing. The stockwater number condition was removed at licensing. The trust water condition was updated to the license condition per standard practice.

Have conditions of permit approval been met? X Yes No

I. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
Stockwater	01/01 to 12/31	0.06 CFS	
<u>Totals:</u>		0.06 CFS	

2. Recommended Amendments

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☐ None

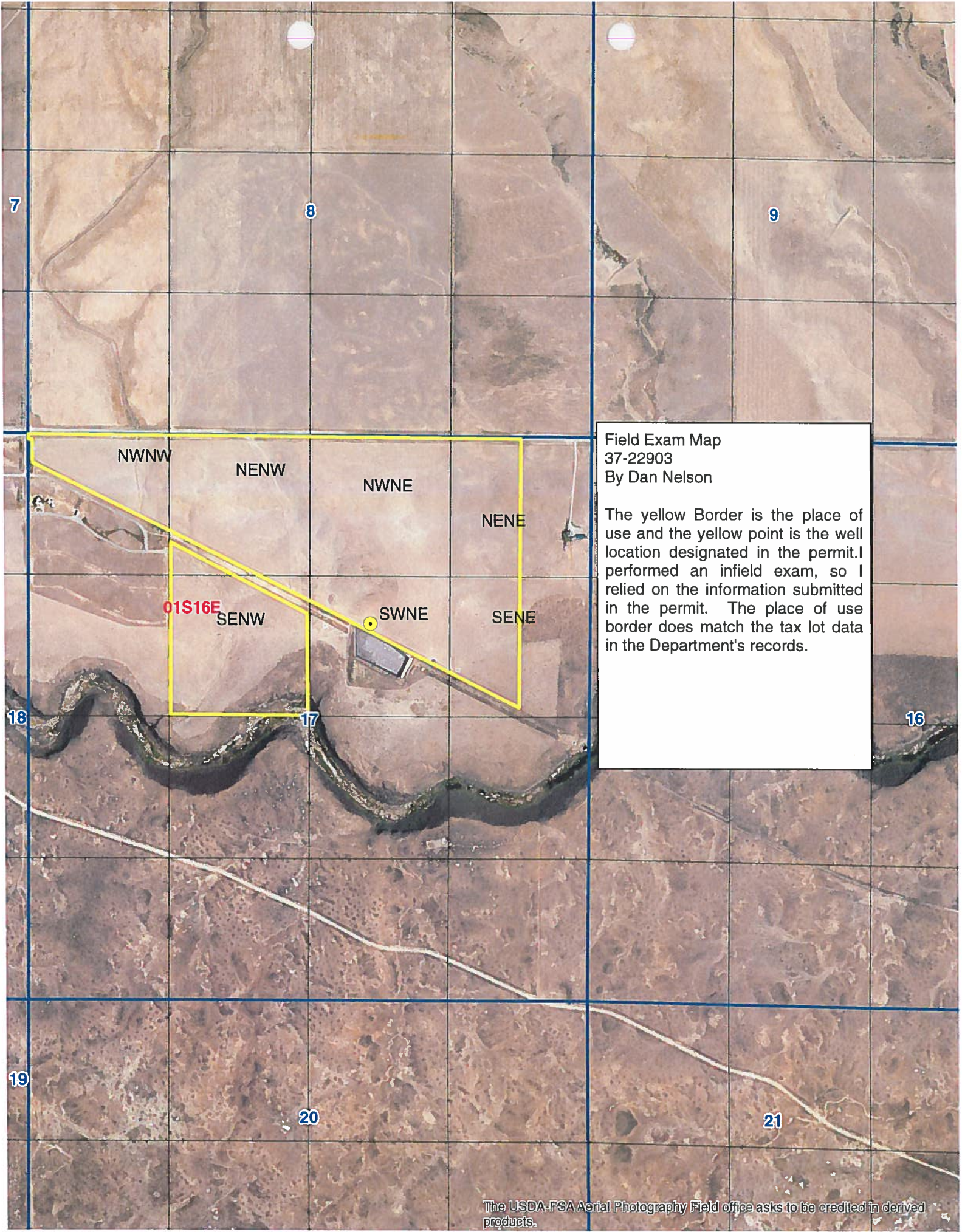
☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ None

Other: < >

J. AUTHENTICATION Daniel A. Nelson – Staff Hydrologist

Field Examiner's Name Daniel A. Nelson Date 3-6-15

Reviewer _____ Date _____



Field Exam Map
37-22903
By Dan Nelson

The yellow Border is the place of use and the yellow point is the well location designated in the permit. I performed an infield exam, so I relied on the information submitted in the permit. The place of use border does match the tax lot data in the Department's records.

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 37*-22903
 Reviewer: Dan Nelson
 Date of Review: 3/5/2015

P/D No.:	Well #1	Well #2	Well #1 Full Drawdown
PUMP HORSEPOWER	1	1	1
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	100	100	100
DISCHARGE PRESSURE	5	10	16
RATE OF FLOW (cfs)	0.06 25	0.05 22	0.04 20 0.05 22.48

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 permit states that a 1 Hp pump would be used. According to the well log, the lift is 100 feet for 50 gpm. I used that lift. A standard open discharge pressure ranges from 5 to 10 psi. The well diverts to several troughs and according to the elevation lines across the property, there is a 14 foot elevation difference resulting in an additional psi need of up to 6 psi. Therefore, I estimated the psi from 5 to 16 psi. All of the flows were reasonably close, and since I used the highest lift estimation, I am recommending the 0.06 cfs, which was what was allowed on the permit.

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

[illegible]

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

Process	Basin Sequence	Draft	Owner	Source	POD/POU	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	Total Acres
Water Right	37-19538	N	UNITED STATES OF AMERICA ACTING	CAMAS CREEK	POD									X	X							0
Water Right	37-19538	N	UNITED STATES OF AMERICA ACTING	CAMAS CREEK	POU									X	X							0
Water Right	37-19539	N	UNITED STATES OF AMERICA ACTING	CAMAS CREEK	POD													X	X			0
Water Right	37-19539	N	UNITED STATES OF AMERICA ACTING	CAMAS CREEK	POU													X	X			0
Water Right	37-19540	N	UNITED STATES OF AMERICA ACTING	CAMAS CREEK	POD										X							0
Water Right	37-19540	N	UNITED STATES OF AMERICA ACTING	CAMAS CREEK	POU										X							0
Water Permit	37-21294	N	CAMAS DEVELOPERS LLC	GROUND WATER	POD						X											0
Water Permit	37-21294	N	CAMAS DEVELOPERS LLC	GROUND WATER	POU						X	X										0
Water Permit	37-22903	N	ISAAC, DEAN M; ISAAC, DEANNA R	GROUND WATER	POD			X														0
Water Permit	37-22903	N	ISAAC, DEAN M; ISAAC, DEANNA R	GROUND WATER	POU	X	X	X	X	X	X		X									0
Water Right	37-3058	N	UNITED STATES OF AMERICA ACTING	UNNAMED STREAM	POD														X			0
Water Right	37-3058	N	UNITED STATES OF AMERICA ACTING	UNNAMED STREAM	POU														X			0

Permit 37-51294 is SOUTH OF THE RAIL ROAD TRACKS ON A DIFFERENT TAX LOT. THE MAJORITY OF THIS PERMIT IS NORTH OF THE TRACKS EXCEPT FOR THE SENW