

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

A. GENERAL INFORMATIONPermit No: 29-13970

Exam Date: 1/22/2016

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: R. Dennis and Cortney J. Flynn
 Owner of Record Correct? X Y N
 Address of Record Correct? Y N
 If No: Address

Tax lot data shows the Flynn's own a portion of the property, and a Richard and Shelia Mason own the other portion. There is a notarized statement in the file that allows the Flynn's to file for this water right as long as the Mason's portion of use is covered. The Mason's were not included as an owner of the water right, and the tax lot data available doesn't show a current address to contact them to file a change of owner ship to include their names on the water right or enter them as a party of interest in the database.

3. Beneficial Use Fees have been paid: X Y N Receipt No: C0
 4. SOURCE TRIBUTARY
 St Joe River Coeur D Alene Lake

Method of Determination: GIS and Taxlot DataChange in Source: Y X N**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: NO Overlap

Water Right No.	Source	Purpose of Use	Basis
NONE			

Comments: There are no water rights that directly overlap the place of use.

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 water rights that overlap the point of diversion.**1. LOCATION OF POINT(S) OF DIVERSION:**

Source	Govt. Lot	¼	¼	¼	Sec.	Twp.	Rge.		County
Well			NE	NW	23	6S	39E	B.M.	Caribou
								B.M.	
								B.M.	

Method of Determination: GIS and Tax Lot data.Change in POD? X N Amendment Required? X N

C. DIVERSION AND DELIVERY SYSTEM2. **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	
6S	39E	23								D									
		Lot #																	
Total Acres =																			

Method of Determination: GIS and Tax Lot DataChange 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 pump	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 X Additional Computation Sheets Attached

Measured Method:

A theoretical analysis shows that a diversion rate of 0.09 cfs is possible with a 3 Hp pump. A 3 Hp pump is a reasonable size pump for a domestic well with two homes attached.

Theoretical Calculation = 0.09 cfs

Admin. Memo #22 allows 0.06 cfs for 2 homes for in house use and 0.03 cfs for up to 1 acre of irrigation for a total of 0.09 cfs.

Permit allowed = 0.08 cfs

I am recommending a diversion rate of 0.084 cfs, since it appears as though this pump can deliver the 0.08 cfs applied for in the permit.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \underline{\hspace{1cm}} \times 3.5 = \underline{\hspace{1cm}}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \underline{\hspace{1cm}} \times 214 \times 1.9835 = \underline{\hspace{1cm}}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \underline{\hspace{1cm}}$$

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 this permit for the two homes. The permit stated that domestic use would be for two cabins and the aerial photos show two homes with minimal irrigation use.

G. PURPOSE OF USEIrrigation X Y N # Stock Domestic # of Homes 1

Other: < >

Change in Purpose of Use? Y NMethod of Determination: Taxlot data and water right file.If Yes: From Use To Use Amount CFS AFA **H. NARRATIVE/REMARKS/COMMENTS**

This permit is qualified for an in-house exam. The aerial photos clearly show two homes have been constructed at this location. The well driller's report has a GPS location for the well, but I feel this location is incorrect. The aerial photos show a small well house or structure at the point marked on the application for permit. The point GPS'ed by the well driller appears to be down where the driveway enters the main roadway. I think the well driller GPS'ed the well on their way out of the site, and did not get an accurate location of the well. There are no other water right filings in the either 40 acre tracts described in this permit.

All of the conditions will be carried over to licensing except for conditions 5 (26A0 and 6 (046), which will be removed as is standard. No additional conditions are necessary.

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>
Domestic	01/01 to 12/31	0.08 CFS	2.4 AF
<u>Totals:</u>		0.08 CFS	12.4 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

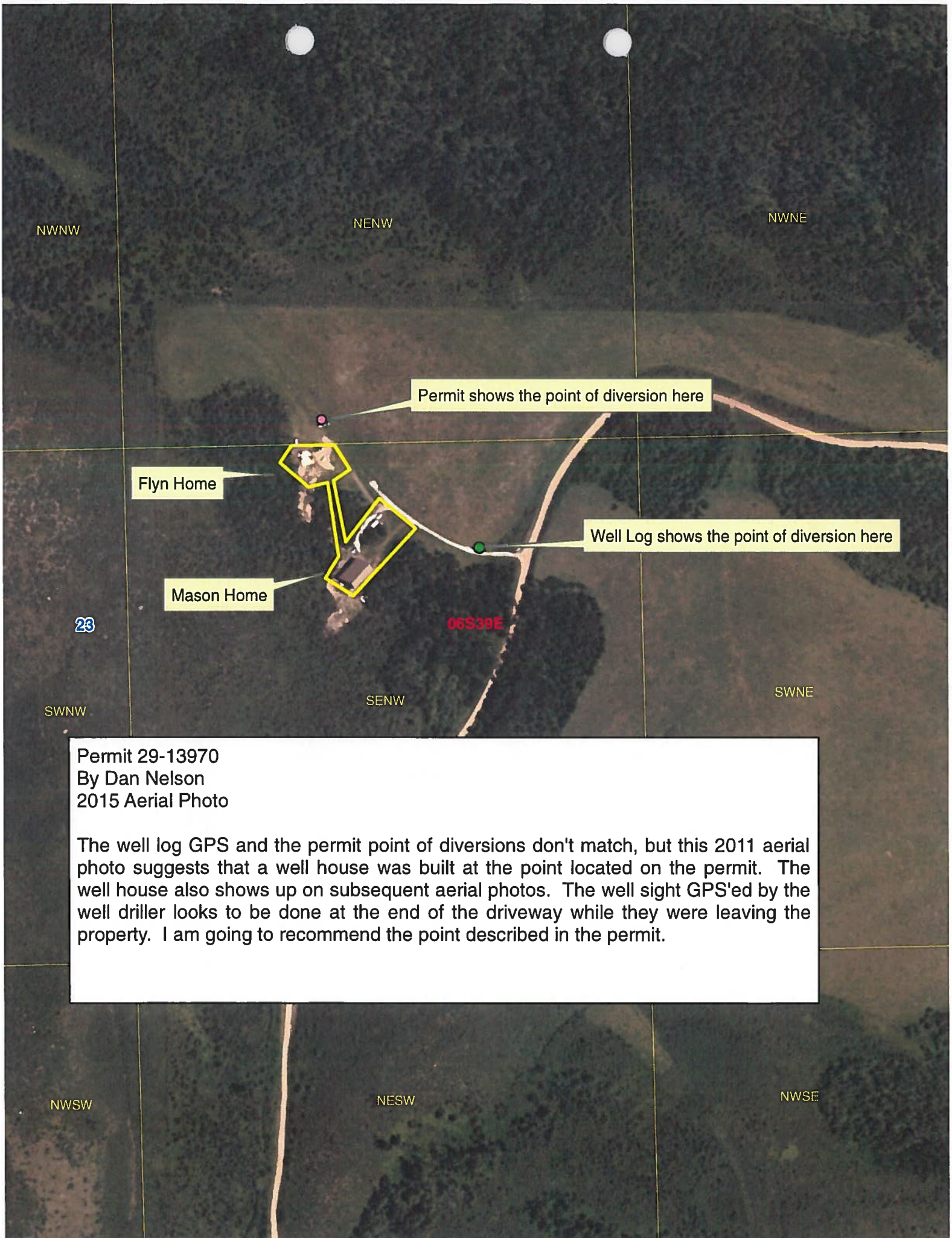


Date

1-22-12

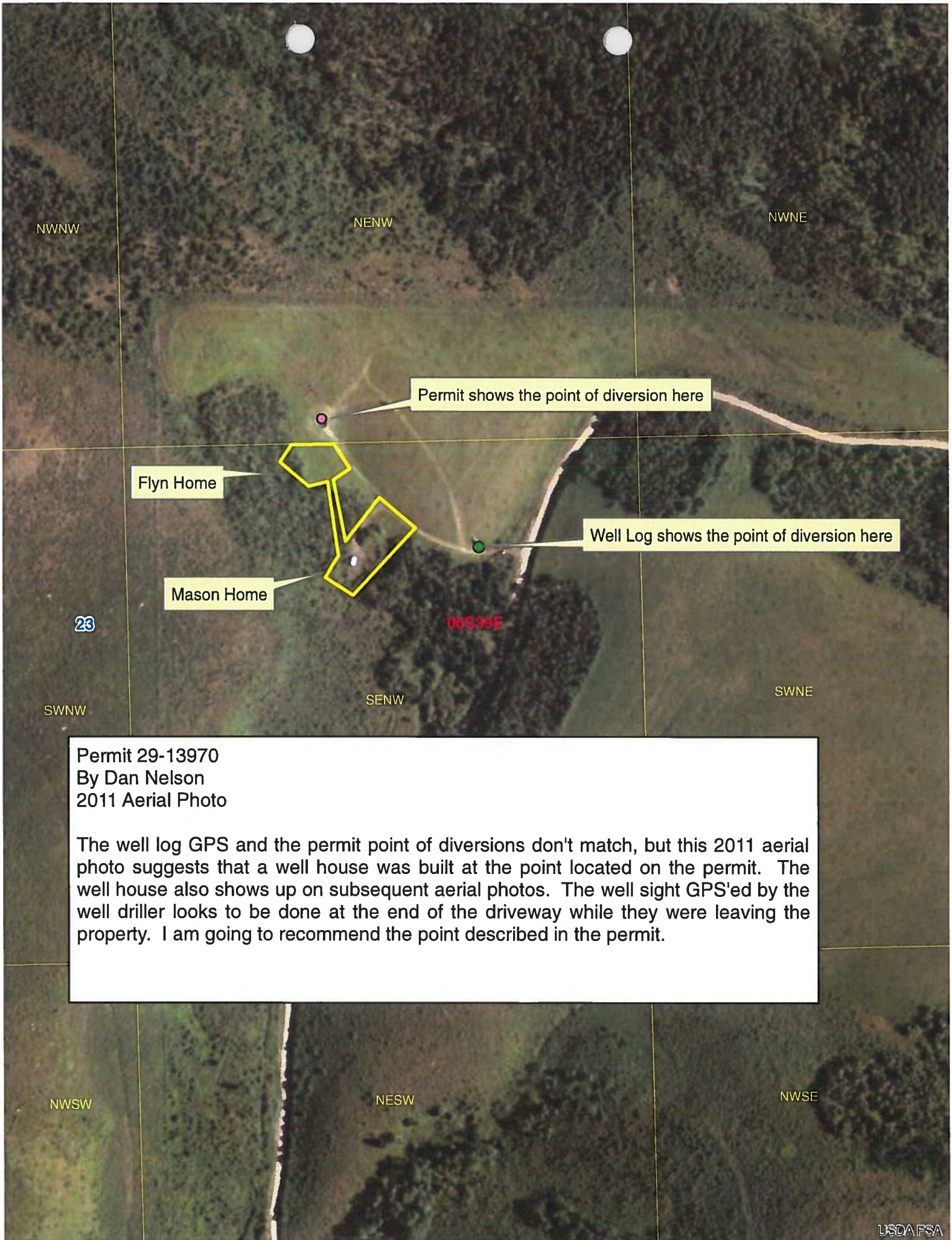
Reviewer

Date



Permit 29-13970
By Dan Nelson
2015 Aerial Photo

The well log GPS and the permit point of diversions don't match, but this 2011 aerial photo suggests that a well house was built at the point located on the permit. The well house also shows up on subsequent aerial photos. The well sight GPS'ed by the well driller looks to be done at the end of the driveway while they were leaving the property. I am going to recommend the point described in the permit.



Permit 29-13970
By Dan Nelson
2011 Aerial Photo

The well log GPS and the permit point of diversions don't match, but this 2011 aerial photo suggests that a well house was built at the point located on the permit. The well house also shows up on subsequent aerial photos. The well sight GPS'ed by the well driller looks to be done at the end of the driveway while they were leaving the property. I am going to recommend the point described in the permit.

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 29-13970
 Reviewer: Dan Nelson
 Date of Review: 1/22/2016

P/D No.:	Scenario 1	Scenario 2	Scenario 3
PUMP HORSEPOWER	1	2	3
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	82	82	82
DISCHARGE PRESSURE	50	50	50
RATE OF FLOW (cfs)	0.03	0.06	0.09
	14	28	42

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 well log shows a static water level of 72 feet, so I estimated a standard drawdown of 10 feet for a small pump system for a total of 82 feet of lift. I used an average pressure of 50 psi, since most domestic systems operate between 40 and 60 psi. Using the above theoretical calculations, I determined that 0.09 cfs could be diverted using a 3 Hp well pump. This sounds reasonable for a system with two homes. The permit allowed up to 0.08 cfs, so it reasonable to allow the full permitted amount of 0.08 cfs.

Form 238-7
6/07

IDAHO DEPARTMENT OF WATER RESOURCES WELL DRILLER'S REPORT

Location Corrected by IDWR To:

T06S R38E Sec. 24 NESENW

By: mciscell 2013-09-13

1. WELL TAG NO. D 0059653

Drilling Permit No. _____

Water right or injection well # _____

2. OWNER:

Name Dennis Flynn (AAU-CART)

Address 154 East Gordon Lane

City Murray State UT Zip 84107

3. WELL LOCATION:

Twp. 6 North ☐ or South ☒ Rge. 39 East ☒ or West ☐

Sec. 23 1/4 SE 1/4 NW 1/4

Gov't Lot _____ County Caribou

Lat. 42 53.168 (Deg. and Decimal minutes)

Long. 111 51.450 (Deg. and Decimal minutes)

Address of Well Site Cow Camp Road 1 mile east of Chesterfield

City Bancroft

(Give at least name of road - Distance to Road or Landmark)

Lot. _____ Blk. _____ Sub. Name _____

4. USE:

☒ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation ☐ Thermal ☐ Injection
☐ Other _____

5. TYPE OF WORK:

☒ New well ☐ Replacement well ☐ Modify existing well
☐ Abandonment ☐ Other _____

6. DRILL METHOD:

☒ Air Rotary ☐ Mud Rotary ☐ Cable ☐ Other _____

7. SEALING PROCEDURES:

Seal material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method/procedure
Bentonite	0	-40'	1400 lbs	Annular

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing	Linear	Threaded	Welded
6"	+2'	-158'	.250	Steel	☒	☐	☐	☒

Was drive shoe used? ☐ Y ☒ N Shoe Depth(s) _____

9. PERFORATIONS/SCREENS:

Perforations ☒ Y ☐ N Method Cut

Manufactured screen ☐ Y ☒ N Type _____

Method of installation _____

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
-100'	-158'	1/4x6	50	6"	Steel	.250

Length of Headpipe _____ Length of Tailpipe _____

Packer ☐ Y ☒ N Type _____

10. FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method
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11. FLOWING ARTESIAN:

Flowing Artesian? ☐ Y ☒ N Artesian Pressure (PSIG) _____

Describe control device _____

12. STATIC WATER LEVEL and WELL TESTS:

Depth first water encountered (ft) 72 Static water level (ft) 72

Water temp. (°F) _____ Bottom hole temp. (°F) _____

Describe access port Well Cap

Well test:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)
	30	60

Test method:

Pump	Bailer	Air	Flowing artesian
☐	☐	☒	☐

Water quality test or comments: _____

13. LITHOLOGIC LOG and/or repairs or abandonment:

Bore Dia. (in)	From (ft)	To (ft)	Remarks, lithology or description of repairs or abandonment, water temp.	Water	
				Y	N
10	0	8	Topsoil		X
10	8	17	Broken Rock & Clay		X
10	17	40	Firm Grey Limestone		X
8	40	70	Firm Grey Limestone		X
8	70	115	Fractured Grey Limestone	X	
8	115	158	Cemented Gravel	X	
8	158	200	Cemented Gravel	X	

Completed Depth (Measurable) 200

Date Started: Aug 4, 2011

Date Completed: Aug 5, 2011

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 Independent Drilling/KC Co. No. 343

*Principal Driller [Signature] Date Aug 5, 2011

*Driller _____ Date Aug 5, 2011

*Operator II [Signature] Date _____

Operator I _____ Date _____

* Signature of Principal Driller and rig operator are required.