

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-17586
Exam Date: 06/02/2020

1. Current Owner:
PAIGE PLAT WATER ASSOCIATION C/O BOB BINGHAM
PO BOX 540 ATHOL ID 83801
2. Accompanied by: Bob Bingham
Phone No: 208-561-5080
Address: same as above
Relationship to permit Holder: Paige Plat Water Assn Representative

3. **SOURCE:**
GROUND WATER

Method of Determination: Arcmap and DRG.

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis

Comments: _____

2. Other water rights with the same point-of-diversion: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
95-16912	GROUNDWATER	DOMESTIC, STOCKWATER	DECREE

Comments: WR 95-17586 and WR 95-16912 divert water from the same well D0059583, both for domestic use. This water right is for the addition of 2 homes into Paige Plat Water Assn. The diversion rate is the same for both water rights, equal to 0.05 cfs.

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**
GROUND WATER NW¼ NW¼, Sec. 13, Twp 53N, Rge 03W, B.M. KOOTENAI County

Method of Determination: GPS. POD located at -116°39.737, 47°56.423. Well D0059583.

PLACE OF USE: DOMESTIC

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
53N	03W	13						X											

Method of Determination: Field Exam and Arcmap.

3.

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

X

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.

X

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

X

Photo of Diversion and System Attached

X

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
D0059583	GRUNDFOS	5			

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
N/A						

2. Measurements: Unable to perform flow measurement because system pumped directly into pressure tank.

E. FLOW CALCULATIONSX

Additional Computation Sheets Attached

Measured Method: Applicant provided testing results for well pump stating system operated at 60psi with flow rate of 20 gpm, which equals 0.05 cfs. A theoretical pumping equation was completed and derived a flow rate of 27.0 gpm with pump depth estimated at 448 ft, and operating at 60 psi, which equals 0.06 cfs. As the applicant's flow testing is more accurate than a theoretical equation result, the diversion rate of **0.05 cfs** will be applied to license.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A

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

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

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

2. Volume Calculations for Other Uses:

Domestic use for in home only = 0.6 af per home

Domestic use for up to ½ acre irrigation = 0.6 af per home

$$2 \text{ homes} \times (0.6 \text{ af} + 0.6 \text{ af}) = \mathbf{2.4 \text{ af}}$$

G. NARRATIVE/REMARKS/COMMENTS

Field exam conducted on 6/2/2020 with water association representative, Bob Bingham, showed a well being used for domestic purposes. The well, D0059583, has a 5 HP pump which delivers water to 2,100 gallon vaulted storage cisterns, one on each lot, Lot 1 and Lot 3. I was unable to perform a flow measurement because water was diverted directly into pressure tank from well with no proper place to perform measurement. Applicant had the well pumps performance tested, and resulted in a pump flow rate of 20 gpm, which equals 0.05 cfs. A theoretical pumping equation was completed for reference, with pump depth estimated to be 448 ft and the system running at 60 psi (equation attached), with derived flow rate of 0.06 cfs. The license will be issued with a maximum diversion rate of 0.05 cfs, as applicant's flow rate test is likely more accurate than the estimated theoretical pumping equation.

Applicant had applied for 3 homes on 3 separate lots. During licensing review, it was identified that applicant has pre-existing water right 95-16912 for LT2, BLK 1, of the Paige Plat Subdivision; WR 95-16912 was from same well (D005983), for domestic and stockwater use, and was decreed with a priority date of 9/30/2011. As such, 1 home on lot 2 was removed and this license will include LT1 and LT3, BLK 1 equal to 2 homes with irrigation up to ½ acre for domestic uses. Field exam verified 1 home on LT1 was constructed and irrigation occurring by frost free hydrant and above ground sprinklers, and 1 home on LT3 was stubbed-in and the home was currently being constructed. The annual volume applied at time of licensing equals 2 homes x (0.6 af Domestic + 0.6 af irrigation up to ½ acre per lot) = 2.4 af, which will also be applied to Maximum diversion volume for license.

Condition 26A, 046, and 928 were removed from license. Condition X04 was adapted to reflect 2 homes versus 3 homes permitted for. Condition F06 was added describing same well POD for WRs 95-16912 and 95-17586. Conditions X59 and X60 were added to describe locations of POD and POU within Paige Plat Subdivision. All other conditions will remain on license from permit. WR 95-17586 and WR 95-16912 divert water from the same well D0059583, both for domestic use. This water right is for the addition of 2 homes into Paige Plat Water Assn. The diversion rate is the same for both water rights, equal to 0.05 cfs; the domestic use for 1 home associated with WR 95-16912 was removed from this license to mitigate overlap concerns. There are no other overlap concerns for this water right.

Have conditions of permit approval been met? X Yes No

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Annual Volume</u>
DOMESTIC	01/01 to 12/31	0.05 CFS	2.4 AF
<u>Totals:</u>		0.05 CFS	2.4 AF

2. Recommended Amendments

Change P.D. as reflected above Add P.D. as reflected above X None
 Change P.U. as reflected above Add P.U. as reflected above X None

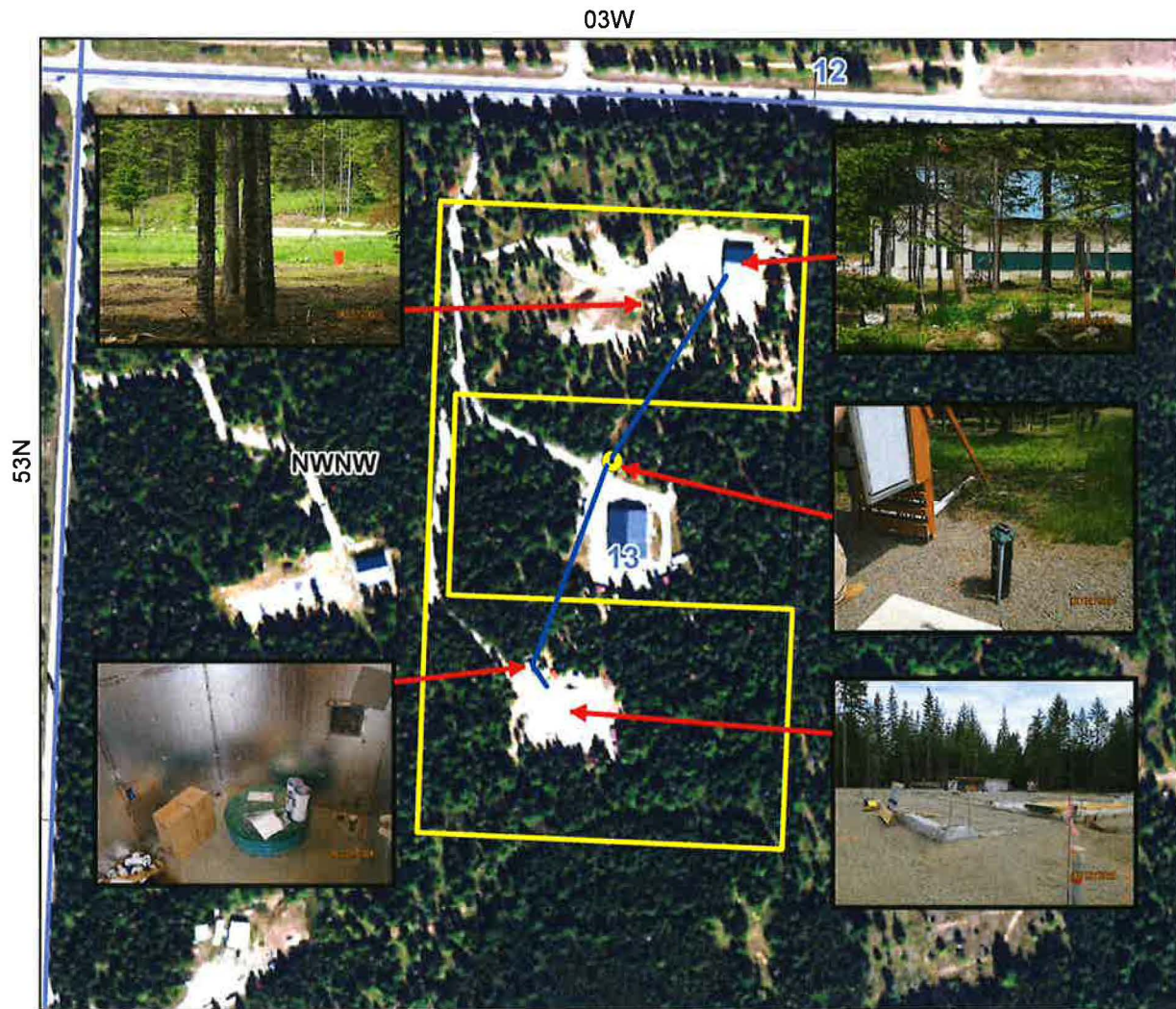
I. AUTHENTICATION Luke Bates - Water Resource Agent

Field Examiner's Name [Signature] Date 6/11/2020

Reviewer [Signature] Date 6/11/2020

State of Idaho
Department of Water Resources
Attachment to Field Exam
95-17586

DOMESTIC system diagram.

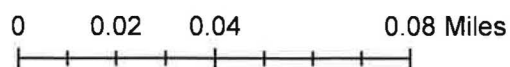
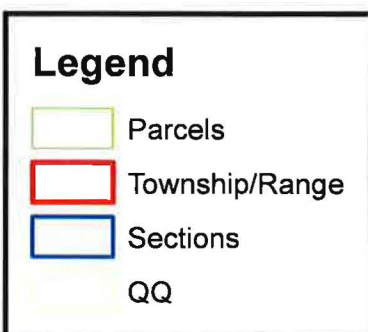
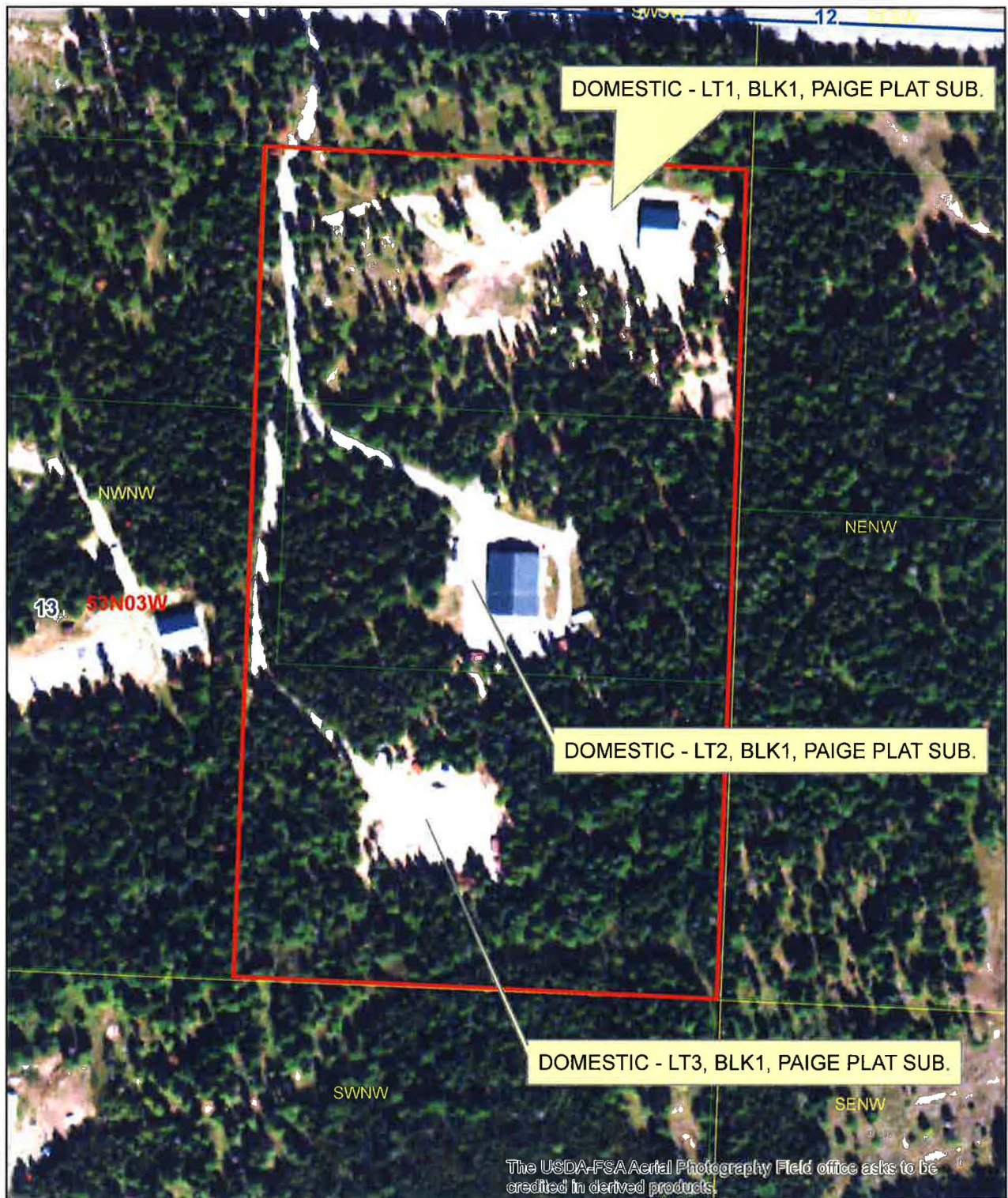


-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections
-  Quarter Quarters

0 0.0375 0.075 0.15 Miles



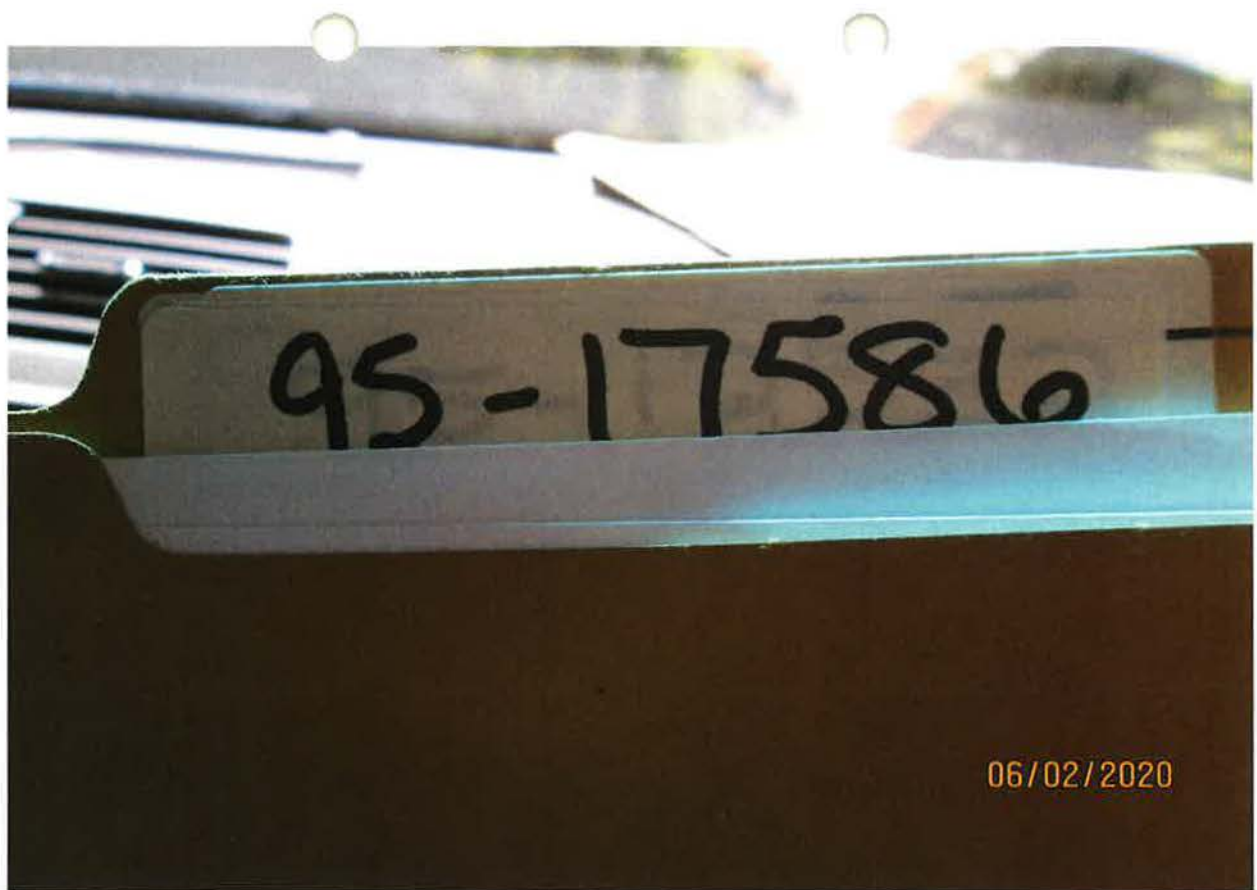
WR 95-17586 KOOTENAI COUNTY 2019 AERIAL IMAGERY



THEORETICAL PUMPING EQUATION FOR WR# 95-17586

Theoretical Pumping Equation is required because system did not allow for a proper measurement. Pump is estimated to be at 448 ft, and running at 60 psi.

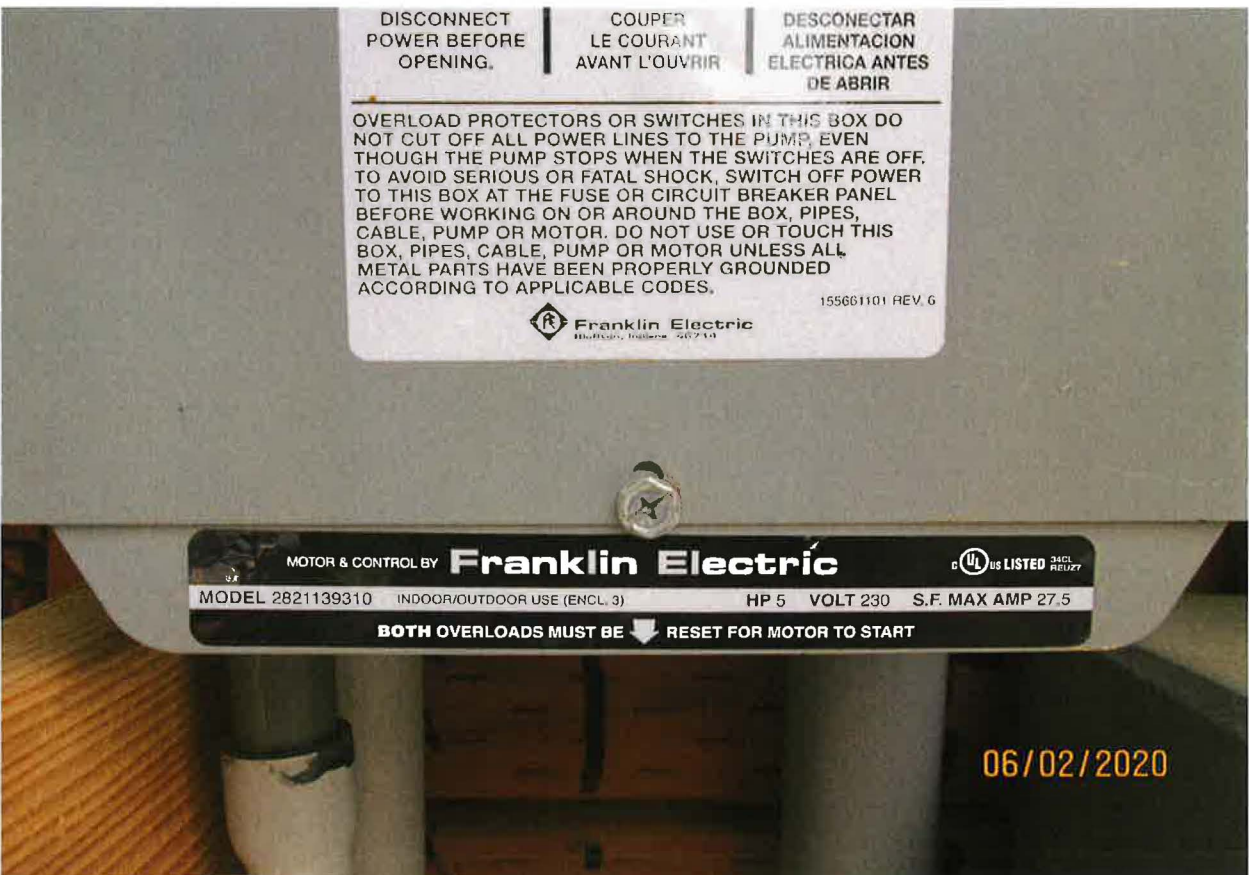
<u>PUMP EQUATIONS</u>						
WATER RIGHT No. 95-17586						
		HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
Q =	HP*8.8*Eff/H	5	586.7755	0.8	448	60
Q = 0.060 cfs		27.0 gpm				



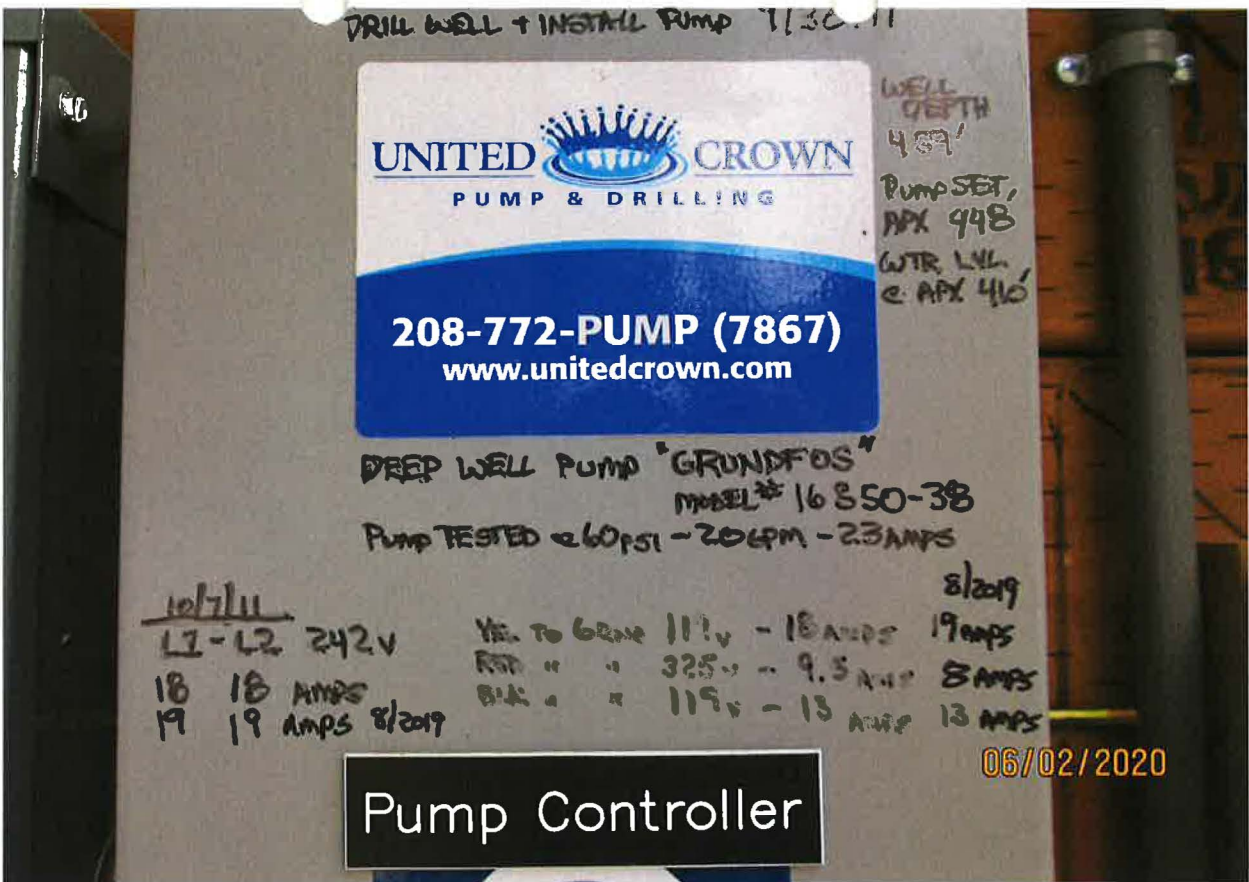
POD - WELL D0059583



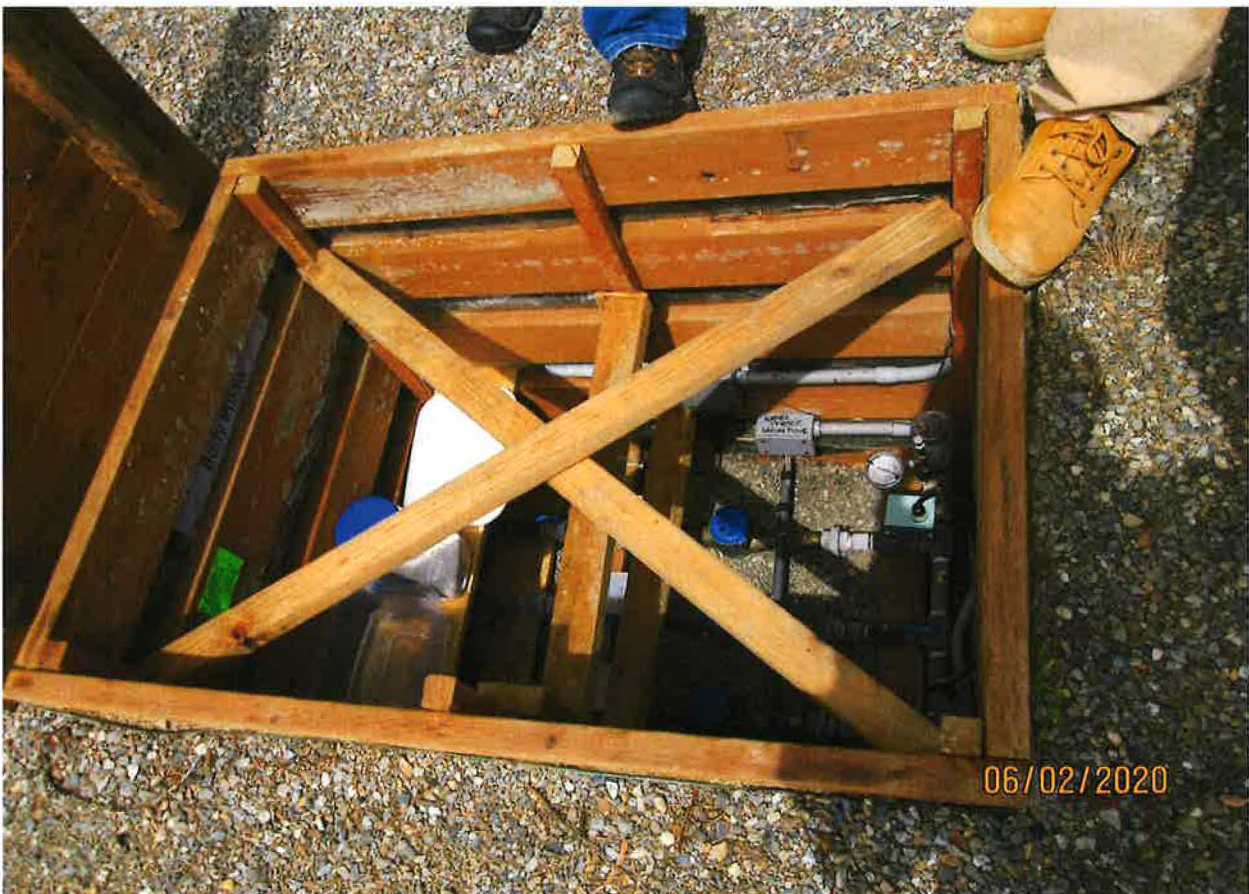
POD WELL



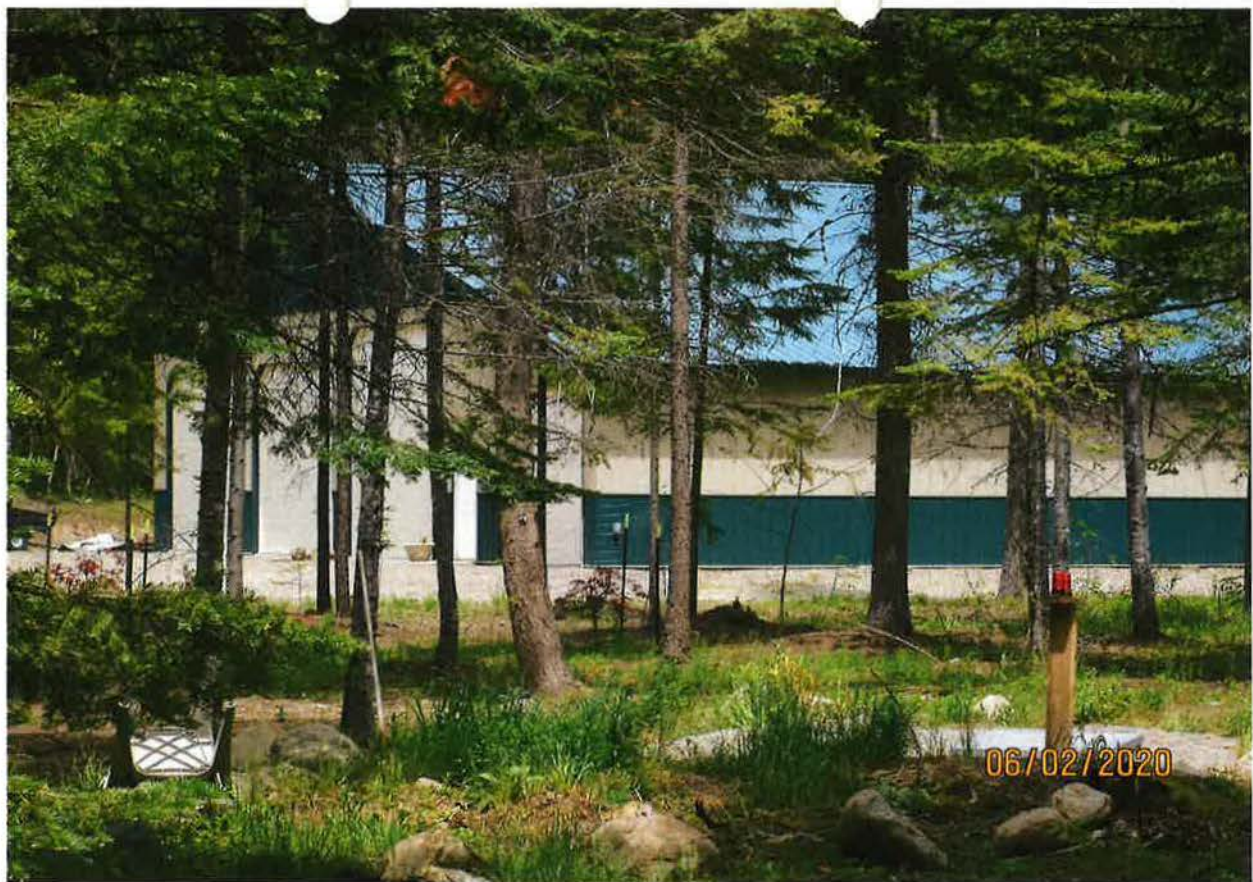
5 HP FRANKLIN ELECTRIC PUMP



FLOW TEST AT 60 PSI – 20 GPM



PUMP HOUSE



DOMESTIC POU – LT 1, BLK 1, PAIGE PLAT SUB. WITH UP TO ½ ACRE IRRIGATION

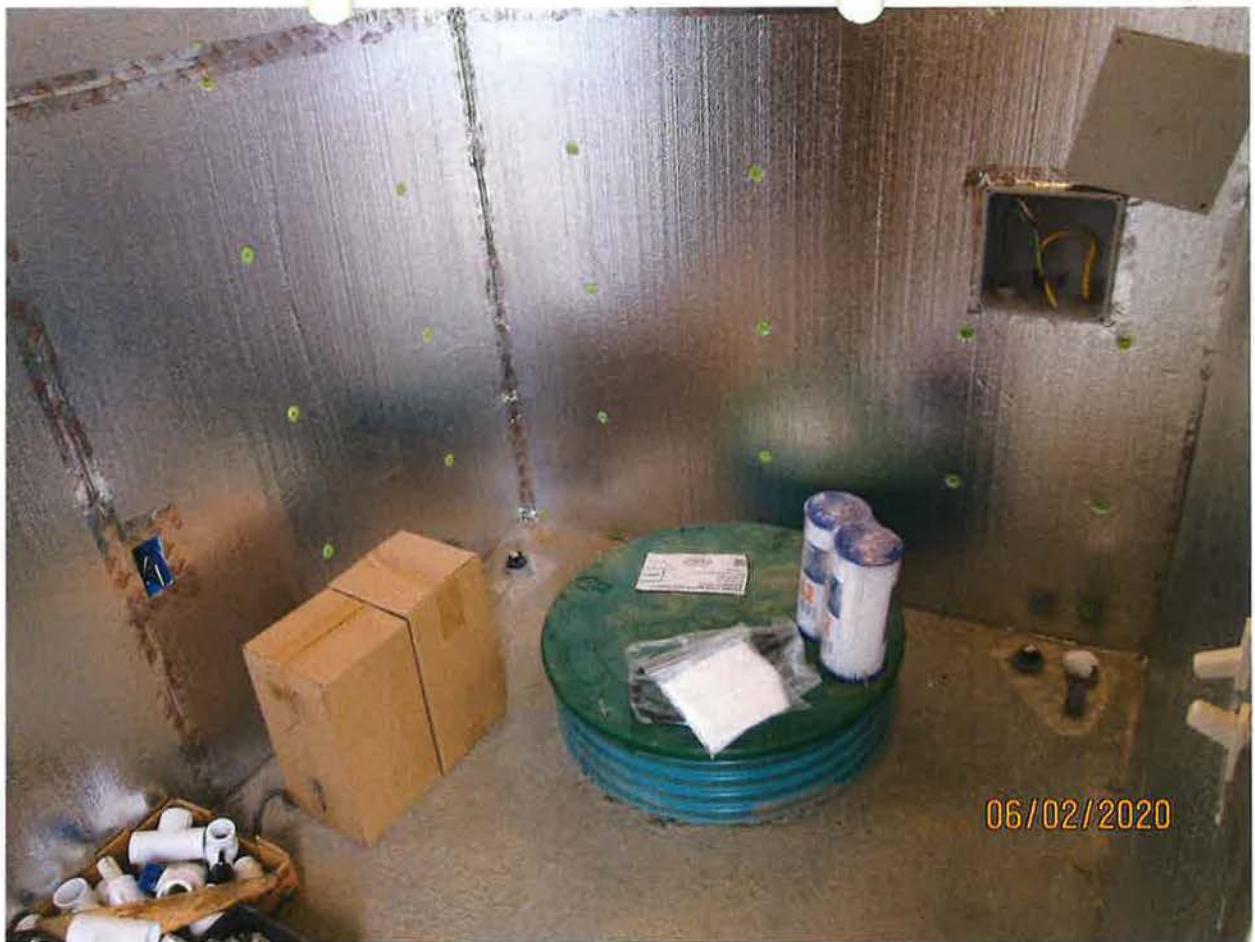




DOMESTIC POU – LT 1, BLK 1, PAIGE PLAT SUB. WITH UP TO ½ ACRE IRRIGATION



DOMESTIC POU – LT 3, BLK 1, PAIGE PLAT SUB. WITH UP TO ½ ACRE IRRIGATION



DOMESTIC POU – LT 3, BLK 1, PAIGE PLAT SUB. STUB-IN