

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-9313
Exam Date: 09/18/2018

1. Current Owner:
CAROLE A CHOWNING PO BOX 121 CLARK FORK ID 83811 AND/OR
TERRY A CHOWNING PO BOX 121
CLARK FORK ID 83811

2. Accompanied by: Terry A Chowning
Phone No: (208) 266-1245
Address: Same as above
Relationship to permit Holder: Permit Holder

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: NO Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments: _____

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**
GROUND WATER NE¼ NE¼ SW¼, Sec. 34, Twp 56N, Rge 02E, B.M. BONNER County

Method of Determination: Maps and GPS. POD located at -116° 11.549, 48° 09.525.

PLACE OF USE: COMMERCIAL

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
56N	02E	34								X	X								

Method of Determination: Arcmap and field examination

3. Delivery System Diagram Attached (required). Indicate all major components and distances between components.
☒ 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.
☒ Aerial Photo Attached (required for irrigation of 10+ acres).
☒ Photo of Diversion and System Attached

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
D0051682	Franklin Electric	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 due to piping from well going directly into pressure tank.

E. FLOW CALCULATIONS☒ Additional Computation Sheets Attached

Measured Method: Theoretical pumping equation estimates flow at 0.07 cfs. See attached theoretical pumping equation worksheet.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

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

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

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

2. Volume Calculations for Other Uses:

Garden Center: 200 potted trees x 1 gallon a day x 105 days = 21,000 gallons

Staff use: 20 employees x 15 gallons per day x 214 days = 64,200 gallons

Espresso Shop: 50 people x 1 gallon per day x 153 days = 7,650 gallons

Total Volume = 21,000 gallons + 64,200 gallons + 7,650 gallons = 92,850 gallons / 325,850 gallons per AF = 0.3 AF

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed with the applicant, Terry A. Chowning, showed a well being used for commercial purposes. The well, D0051682, had a 5 HP pump which diverted water into two pressure tanks. I was unable to perform a flow measurement because water was diverted directly into pressure tanks with no proper place to perform measurement. Theoretical pumping equation was used to estimate a flow rate of 0.07 cfs. The pump was estimated to be 425 feet down and the system running at 40 psi (equation attached). A diversion rate of 0.20 cfs was permitted, but based on theoretical pumping equation values, the maximum diversion rate for commercial use will be licensed for 0.07 cfs.

The commercial use was for a road side gift shop, coffee stand, and garden center. The applicant stated he had 20 employees which were staffed from April 1st to November 1st annually. Water usage was calculated at 15 gallons per day per person. Applicant stated 50 people per day on average stopped at the expresso shop, which was open from May 1st to October 1st annually. Water usage was calculated at 1 gallon per day per person to account for coffee and generic cleaning of equipment per day. Applicant stated there were 200 potted trees in the garden center, which was open from Memorial Day to Labor Day annually. Water usage for the garden center was calculated at 1 gallon a day for each tree, which was watered by hand and not by sprinklers. The annual volume when incorporating those factors equated to 0.3 AF (see volume equations above). The maximum diversion volume for commercial use will be licensed for 0.3 AF.

Conditions 046 and 26A were removed from the license. Condition 004 was added to the license to describe water right not granting any right-of-way or easement across the land of another. There are no overlap concerns for this water right.

Have conditions of permit approval been met? ☒ 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>
COMMERCIAL	01/01 to 12/31	0.07 CFS	0.3 AF

Totals: 0.07 CFS 0.3 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

I. AUTHENTICATION Luke Bates - Water Resource Agent

Field Examiner's Name Adam F. Smith Date 4/13/2020
 Reviewer [Signature] Date 4/7/2020

State of Idaho
Department of Water Resources
Attachment to Field Exam
96-9313

COMMERCIAL system diagram.

02E



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

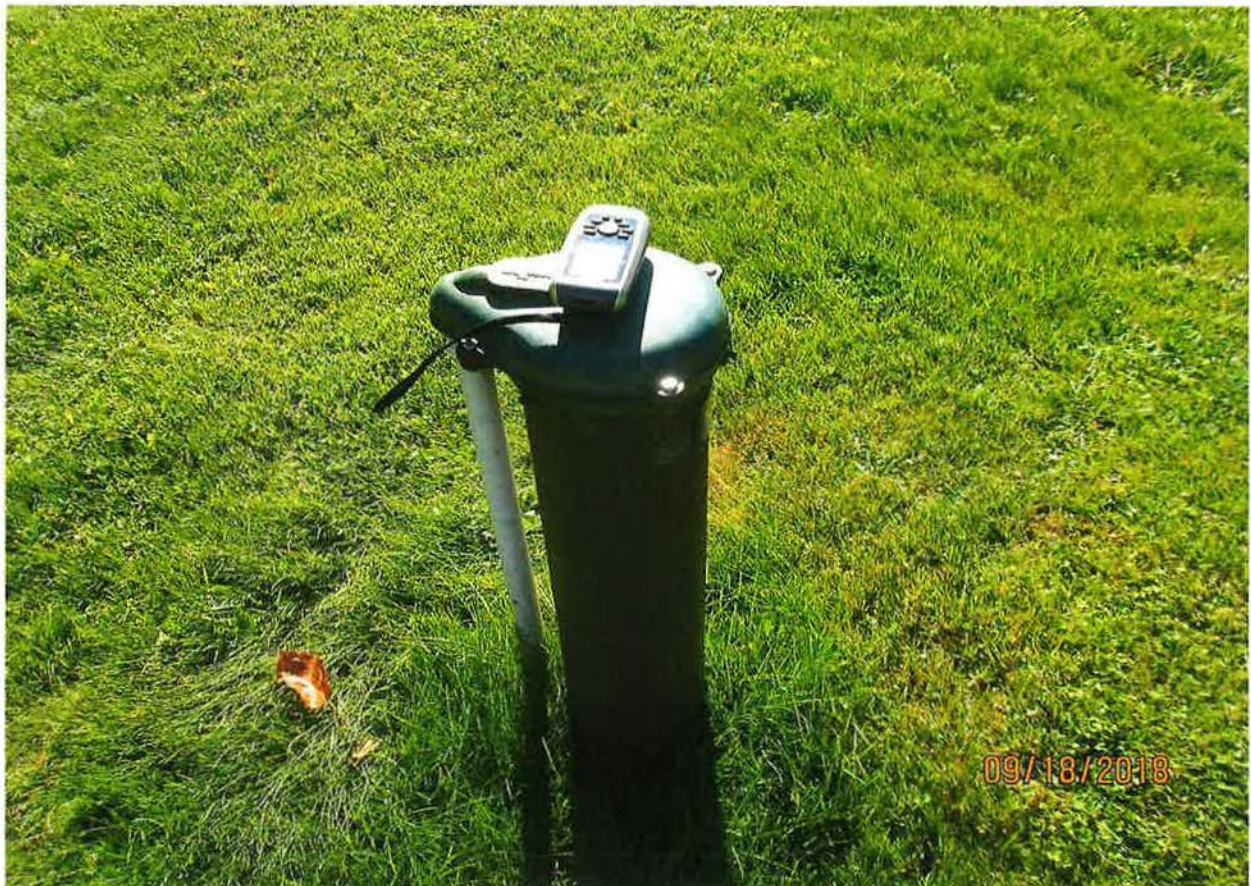
0 0.0375 0.075 0.15 Miles



THEORETICAL PUMPING EQUATION FOR WR# 96-9313

Theoretical Pumping Equation is required because system did not allow for a proper measurement. Pump is estimated to be at 425 ft, and running at 40 psi.

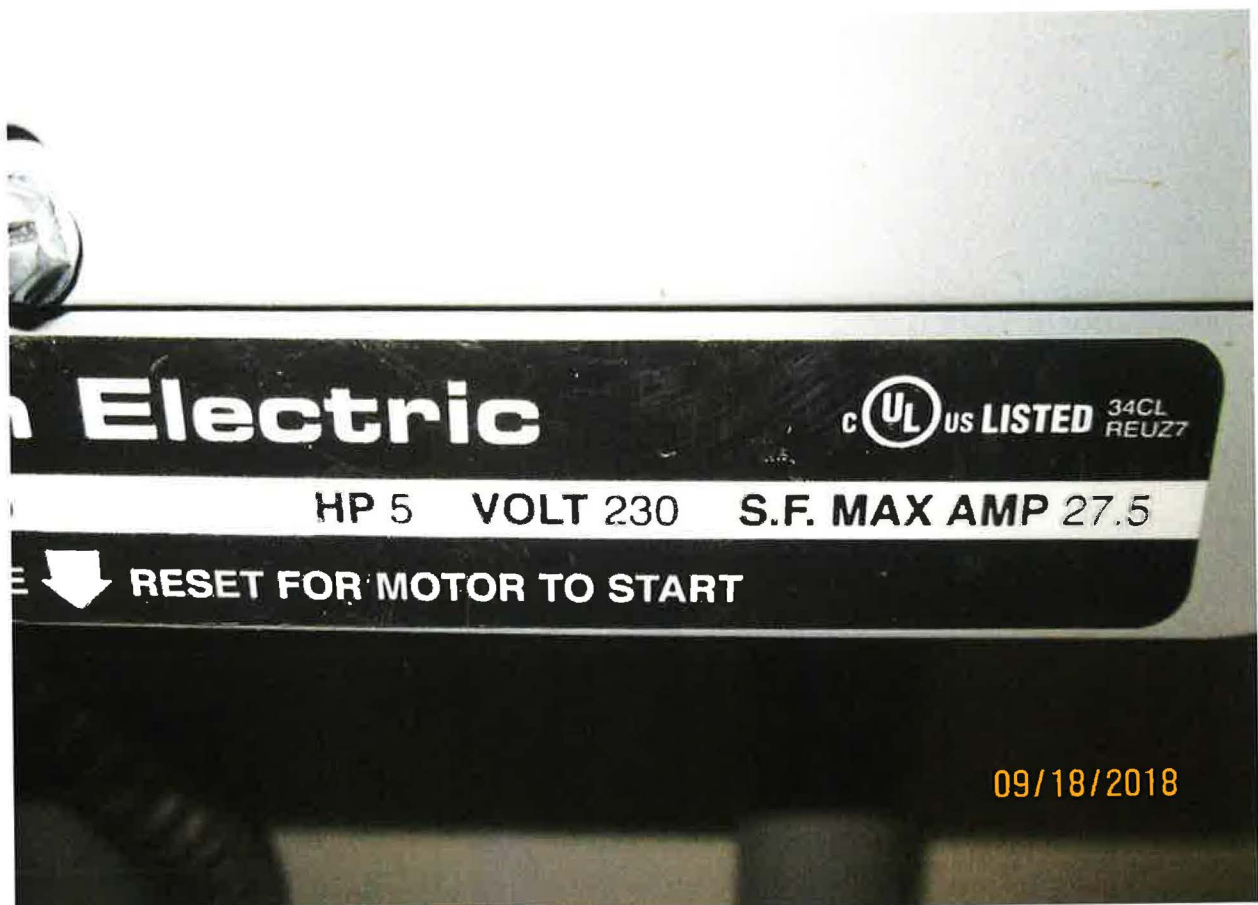
<u>PUMP EQUATIONS</u>						
WATER RIGHT No. 96-9313						
		HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
Q =	HP*8.8*Eff/H	5	517.517	0.8	425	40
Q = 0.068 cfs 30.6 gpm						



POD



POD - D0051682



FRANKLIN ELECTRIC 5 HP PUMP



PRESSURE TANKS



PUMP OPERATING PRESSURE 40 PSI



POU



POU – COFFEE STAND



POU

