

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 97-7506

Exam Date: 5/20/2013

1. Current Owner: CITY SERVICE VALCON LLC
PO BOX 1
KALISPELL MT 59903
(406) 755-4321
2. Accompanied by: ROB COX
Phone No: (208) 661-3841
Address: PO BOX 38000 OLD TOWN ID 83822
Relationship to Permit Holder: SERVICE MANAGER

3. SOURCE TRIBUTARY
GROUND WATER N/A

B. OVERLAP REVIEW

1. Other water rights with the same place of use: Statutory claim 97-4201 for commercial use within the same ¼¼, overlap not found during exam.
2. Other water rights with the same point of diversion: None

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

GROUND WATER SW1/4SE1/4 Sec. 20, Twp 56N, Rge 05W, B.M.
BONNER County

Method of Determination: GPS Location N48° 10.873' W116° 59.363'

2. PLACE OF USE: COMMERCIAL

Twp Rge Sec	NE				NW				SW				SE				Totals
56N 05W 29	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
		X															
56N 05W 20															X		

DOMESTIC

Twp Rge Sec	NE				NW				SW				SE				Totals
56N 05W 29	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
					X												
					L7												

Method of Determination: Bing (2011) Aerial Photography w/ field verification.

3. X Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
- X 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

4. <u>Well or Diversion</u>					
<u>ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge Size</u>
A0003209	Franklin Electric	3 hp	unknown	unknown	unknown

D. FLOW MEASUREMENTS

1. <u>Measurement</u>						
<u>Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
N/A	N/A	N/A	N/A	N/A	N/A	N/A

2. Measurements: measurement not taken

E. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Method: Theoretical HP Equation:

$$HP = 3$$

$$PSI = 40 \text{ (standard for domestic type systems)}$$

$$Z = \text{ft [avg. pumping level area per well log - see well log in file. Also 10 feet added to static water level for small systems per theoretical dynamic pumping level diagram for well guidance]}$$

$$Q = (8.8 \times 0.7 \times HP) / [Z + (2.31 \times PSI)] = (8.8 \times 0.7 \times 3) / [130 + (2.31 \times 10)] = 0.08 \text{ cfs est. capacity of pumping system}$$

Theoretical HP Equation est. capacity of pumping system = **0.08 cfs**

Permitted Rate = **0.04 cfs**

Beneficial Use Limit = **0.04 cfs**

Proof of Beneficial Use fee paid = \$50.00 = up to **0.2 cfs**

Recommend Rate = 0.04 cfs

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: Commercial

Volume estimates taken from non-irrigation water requirements, table 3 in the field examiners handbook.

Chevron gas station and associated warehouse:

$$\text{Gas station: 2 bathrooms, 400 gal/day per bathroom} = 800 \text{ gal} \times 365 \text{ days} = 292,000 \text{ gal/year}$$

$$292,000 \text{ gal} / 325,850 = 0.9 \text{ ac-ft}$$

$$\text{Warehouse: 1 bathroom, 400 gal/day per bathroom} = 400 \text{ gal} \times 365 \text{ days} = 146,000 \text{ gal/year}$$

$$146,000 \text{ gal/year} / 325,850 = 0.5 \text{ ac-ft}$$

Total Volume = 1.4 ac-ft

G. NARRATIVE/REMARKS/COMMENTS**SYSTEM DESCRIPTION:**

System consists of a 4 inch diameter, 675 foot deep well with a 1.25 inch pipe coming from well. Lines then to the house, gas station, and shop. Verified about a ½ acre of irrigation associated with the house (domestic use).

Have conditions of permit approval been met? ☒ Yes ☐ No

H. 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	0.04 CFS	
COMMERCIAL	01/01 to 12/31	0.04 CFS	1.4 AF
	<u>Totals:</u>	0.04 CFS	1.4 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 ☐ Other

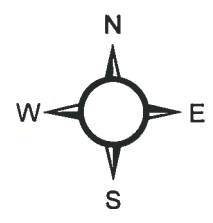
I. AUTHENTICATION

Field Examiner's Name Nicholas Van Dyke Date 1/9/2014
Reviewer _____ Date _____



Legend

-  Township/Range
-  Sections
-  QQ



Map Created By:
Nick Van Dyke, IDWR
January 9, 2014

2013 aerial imagery



- photo of well/point of diversion & power supply/control



- photo of IDWR site Tag no. A0003209 affixed to well head. Note the tag directly above an IDEQ public drinking water chemical sampling location tag



- view looking SW of the service station & the house associated with the domestic use. Shot Taken from right by the well.



- view looking SE of the service station & the shop. Shot Taken from the northwestern corner of commercial lot.



- looking NW at the service station
from the entrance to the station off
Hwy 2



- view of the front of the shop.