

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 65-23523

Exam Date: 24-Aug-2012

1. Current Owner: GEM COUNTY
415 E MAIN ST
EMMETT ID 83617
(208) 365-4561
2. Accompanied by: Verl Schmidt
Phone No: none. Supervisor Chuck Shambaugh – cshambauth@co.gem.id.us
Address:
Relationship to Permit Holder: Maintenance person

3. SOURCE TRIBUTARY
GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None
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 L8 SE1/4SW1/4 Sec. 6, Twp 06N, Rge 01W, B.M. GEM County

Method of Determination: **GPS and visual inspection**

2.

PLACE OF USE: DOMESTIC

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
06N 01W 6											X	X					
											L 7						
06N 01W 7					X	X											

Method of Determination: **GIS analysis using 2009, Bing and 2011 Imagery. Application for permit and permit notes from parent permit 65-13775 indicates Domestic POU is the same as Irrigation POU. Condition indicates Domestic use is for the Gem Island Recreation Complex and does not include lawn, garden, landscape, or other types of irrigation. POU shape reflects same location as irrigation since water could be used for other purposes at same location.**

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

Yes Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.

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

Yes 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
WellHouse	Unknown	3	Unknown	Submersible	1 inch

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

Well log difficult to correlate. We believe it may be drilled by ADD COMMENTS

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Theoretical						

2. Measurements: Information recorded from power distribution panel inside well house indicating pump size as 3 hp. The pressure gauge on the tanks measures 85 psi. The nozzles on the Bury hydrants are 3/4 inch. According to manufactures specifications, the Bury hydrant is rated at 34 gpm at 80 psi.

E. FLOW CALCULATIONSX Additional Computation Sheets Attached

Measured Method: See product specification sheets to support 34 gpm.

Theoretical equals 0.09 cfs. (See attached sheet)

Permit limits use to 0.04 cfs, therefore license limited to 0.04 cfs.**F. VOLUME CALCULATIONS**

1. Volume Calculations for Domestic Use:

$$V = (\# \text{ nozzels}) \times (\text{rated flow}) = 6 \times 34 = 204 \text{ gpm} \quad (204 \text{ gpm} \div 448 = 0.455 \text{ cfs})$$

I.R.

$$V = [\text{Diversion Rate (cfs)}] \times (\text{Days in a year}) \times 1.9835 = .455 \times 365 \times 1.9835 = 329.67 \text{ cfs}$$

D.R.

$$V = \text{Smaller of } V_{\text{I.R.}} \text{ and } V_{\text{D.R.}} = 0.455 \text{ cfs}$$

2. Volume Calculations for Other Uses: N/A

License conditions limit domestic use not to exceed 2,500 gallons per day.**G. NARRATIVE/REMARKS/COMMENTS**

After meeting with Shelley, Craig and Dan, it was decided to split 65-13775 into three children and associate Irrigation, Domestic and Recreation Storage with the child. The three new numbers are:

65-23522	Irrigation
65-23523	Domestic
65-23524	Recreation Storage

Domestic Use - The well is located in a well house at the north end of the park. This well didn't have a well tag but was GPS'ed. The power label on the wall indicates a 3 HP pump. The pressure gauge on this well read 87 psi without any water running. The well pumps into (2) pressure tanks which feed (6) "Bury" hydrants around the park, all of which are padlocked and labeled with "non-potable water". All hydrants have a standard 3/4 " hose nozzle. Four hydrants are located at the baseball diamonds and are used to wet down the fields before games. The 5th hydrant is located by the road between the baseball diamonds and the well house. Mr. Schmidt indicated he had never seen this faucet used. The 6th hydrant is located at the maintenance shack by the main irrigation well and is used to wash off equipment, mix chemicals and general maintenance duties.

There are picnic areas around the park with benches but no drinking water is available. All Restrooms have holding tanks and no running water.

Permit No: 65-23523

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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	0.040 CFS	
	<u>Totals:</u>	0.040 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 ☐ Other

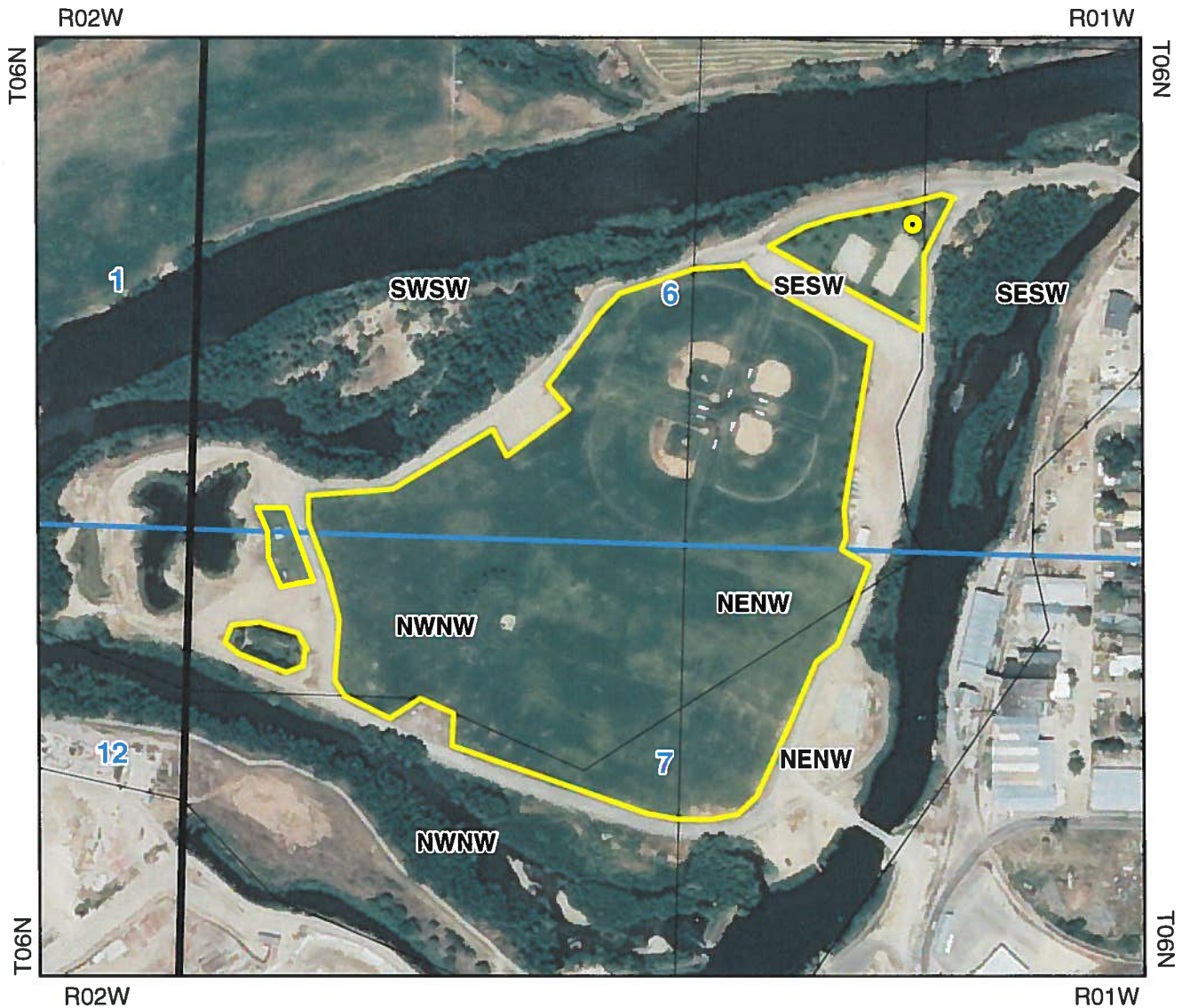
I. AUTHENTICATION

Field Examiner's Name Glen Sandlin Date 31 Aug 2012

Reviewer _____ Date _____

State of Idaho
Department of Water Resources
Attachment To Water Right License
65-23523

This map depicts the DOMESTIC place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.

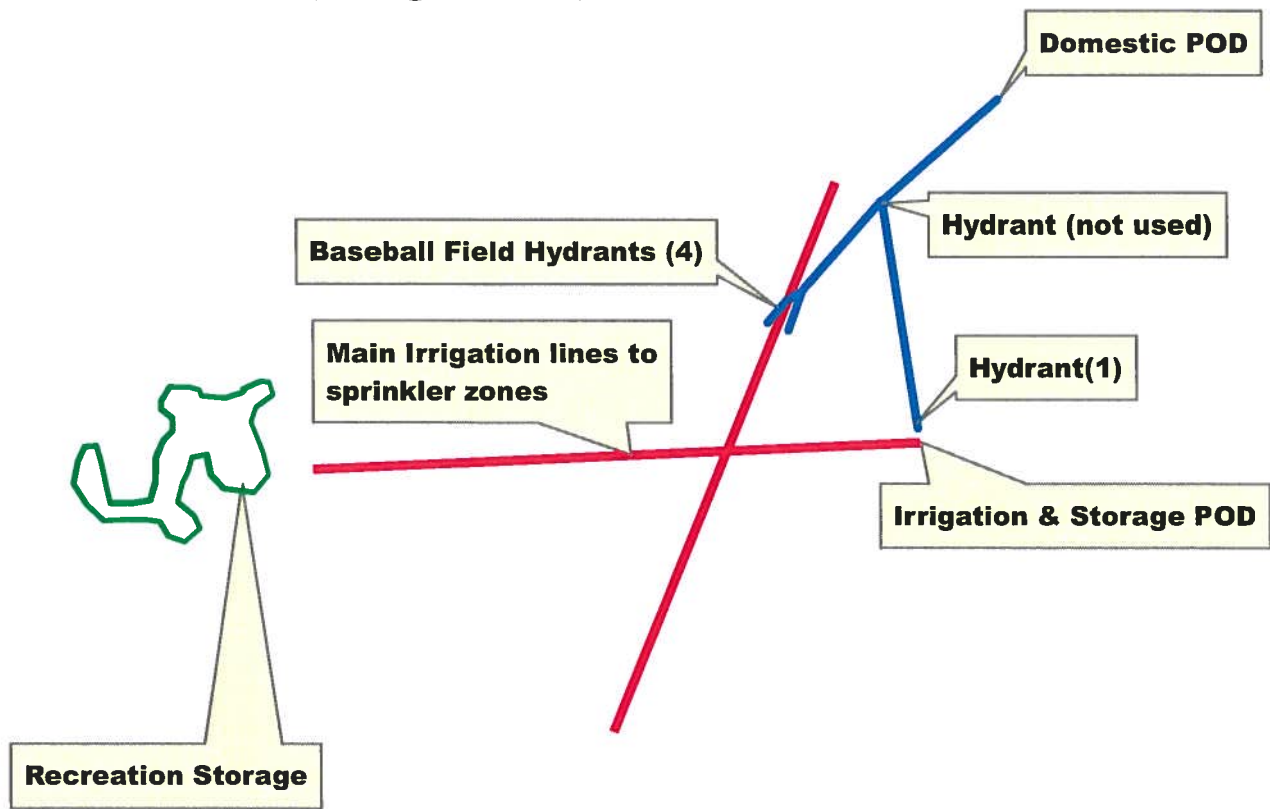


0 0.05 0.1 0.2 Miles

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



**Field Exam System Diagram for 65-23523 (parent 65-13775)
Glen Gardiner, August 24, 2012**



The 2nd well line (in Blue) supplies (6) "Bury" type hydrants which are padlocked when not in use. Four of the hydrants supply water to the four baseball fields and are used to wet the field before games. One hydrant is never used and the last hydrant is located at the maintenance shed and used to clean equipment, mix chemicals and general maintenance usage. All hydrants are labeled "non-potable". (65-23523)

The main irrigation lines (in Red) supply 19 sprinkler zones to water all grass areas in the park. The POD is located at the right end of the horizontal main line. Sprinkler types are all Rainbird Model 6504 with #12 nozzles. Flow calculations were made using Zone #3 which runs 34 Rainbirds. (65-23522)

Recreation Storage is for the pond which intercepts shallow ground water and is a tributary of the Payette River. (65-23524)

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 65-23523
 Examiner: Glen Gardiner
 Date of Field Exam: 8/24/2012

Option 1

P/D No.: *

PUMP HORSEPOWER 3
 BOOSTER HORSEPOWER 0
 PUMPING LEVEL 15
 DISCHARGE PRESSURE 85
 FRICTION 0

RATE OF FLOW (cfs) 0.09
 (gpm) 39.2

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.

Examiners Notes:



PFAF Series Frost Proof Yard Hydrants

Product Features

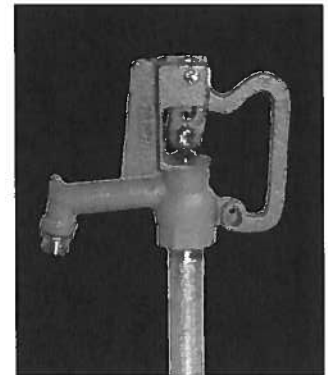
- Lever control with variable flow
- Heavy-duty solid brass hose adapter
- Pipe and threads are galvanized to prevent rust
- Head and lever can be padlocked when not in use to prevent unauthorized use
- Drains below the frost line once hydrant is shut off
- Inlet: 3/4" NPT in brass casting
- Outlet: 3/4" brass hose thread
- Stainless steel operating rod thru teflon packing
- Automatic self-adjusting plunger
- 1" galvanized pipe and 7/16" galvanized operating rod
- Overall length is 34" plus bury depth (bury depth is stenciled on pipe)

Available Kits

PFAF7500RK

Repair Kit for PFAF7500 Series Yard Hydrant includes one each of the following:

- Draw straps (pair)
- Pivot connector and nuts
- Packing nut
- Valve stem packing
- Plunger assembly

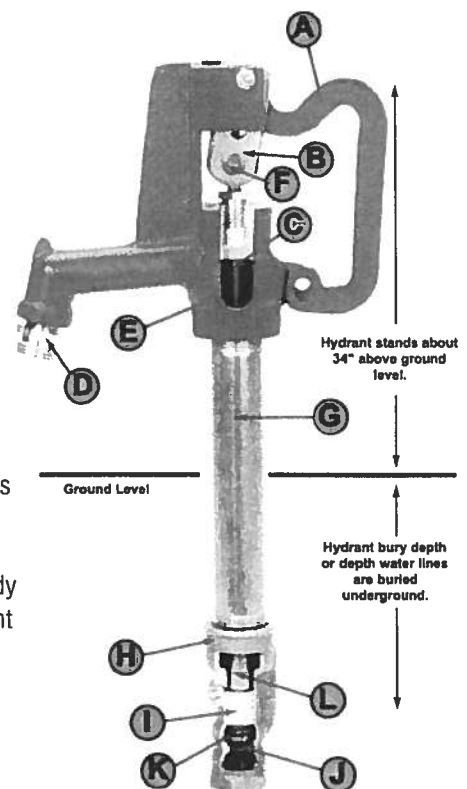


PFAF SERIES

	DESCRIPTION	OVERALL LENGTH (INCHES)
PFAF7501	1 FT BURY PREMIUM FREEZELESS YARD HYDRANT	45.5
PFAF75015	1-1/2 FT BURY PREMIUM FREEZELESS YARD HYDRANT	51.5
PFAF7502	2 FT BURY PREMIUM FREEZELESS YARD HYDRANT	57.5
PFAF7503	3 FT BURY PREMIUM FREEZELESS YARD HYDRANT	69.5
PFAF7504	4 FT BURY PREMIUM FREEZELESS YARD HYDRANT	81.5
PFAF7505	5 FT BURY PREMIUM FREEZELESS YARD HYDRANT	93.5
PFAF7506	6 FT BURY PREMIUM FREEZELESS YARD HYDRANT	105.5
PFAF7507	7 FT BURY PREMIUM FREEZELESS YARD HYDRANT	117.5

WATER SYSTEM PRESSURE	GALLONS PER MINUTE (GPM)									
	0	5	10	15	20	25	30	35	40	45
20 PSI	18 GPM @ 20 PSI									
30 PSI	21 GPM @ 30 PSI									
40 PSI	24 GPM @ 40 PSI									
60 PSI	30 GPM @ 60 PSI									
80 PSI	34 GPM @ 80 PSI									
100 PSI	40 GPM @ 100 PSI									
NOTE: Most common 1/2 hp submersible pumps output is 10 GPM.										

- A - Lever Control
- B - Draw Straps
- C - SS Operating Rod
- D - Heavy-Duty Solid Brass Hose Adapter
- E - Extra Thick Walled Head Casting
- F - Pivot Connector with Two Nuts
- G - USA Schedule 40 Galvanized Pipe
- H - Extra Thick Walled Valve Body
- I - Patented Plunger Arrangement
- J - Beveled Bibb Washer
- K - SS Spring
- L - Swivel Parts



Warranty and Codes

This PROFLO product carries a 1-year limited warranty.

Product Catalog

- Frost Proof Yard Hydrants
- Pitless Units, Kits, Adapters
- Well Caps, Well Seals
- Floats, Air Volume Controls, Tank Acc.
- Tank Tees, Manifolds, Tee Kits, Tee Accessories
- Pressure Switches, Pressure Gauges
- Splice Kits, Torque Arrestors, Couplings
- Well Points, Pump Rod, Cup Leathers
- Insert Fittings for Poly Pipe, Clamps
- Frost Proof Wall Faucets
- Check Valves, Foot Valves

Resources

- Technical Drawings 
- Hydrant Installation Documents
- Hydrant Installation Video

Merrill's Product Catalog: Frost Proof Yard Hydrants

Any Flow® Series

- Merrill Quality Features and Benefits
- Specifications, Flow Rates & Order Numbers
- Optional Accessories
- Parts Kits
- Parts List



Brass
Any Flow
Hydrant



Hi-Capacity
Any Flow
Hydrant

Specifications

Std. 3/4"

- Inlet - 3/4" NPT in Heavy Casting
- Outlet - 3/4" Brass House Thread
- Stainless Steel Operating Rod Thru Teflon Packing
- Automatic Self-Adjusting Plunger
- 1" Galv. Stand Pipe and 7/16" Galv. Operating Rod

Brass 3/4"

- Inlet - 3/4" NPT in Heavy Casting
- Outlet - 3/4" Brass House Thread
- Stainless Steel Operating Rod Thru Teflon Packing
- Automatic Self-Adjusting Plunger
- 1" Red Brass Pipe and 7/16" Red Brass Rod

Hi-Cap 1"

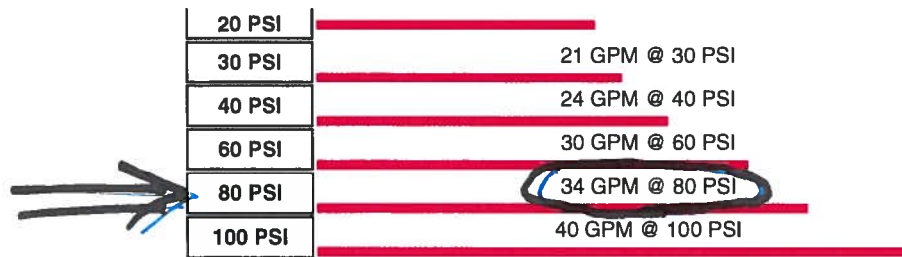
- Inlet - 1" NPT in Heavy Casting
- Outlet - 3/4" Brass House Thread Adapter and Outside of Nozzle has 1" Pipe Thread
- Stainless Steel Operating Rod Thru Teflon Packing
- Automatic Self-Adjusting Plunger
- 1-1/4" Galv. Stand Pipe and 7/16" Galv. Operating Rod

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Any Flow® 3/4" Flow Rates

Water System Pressure	Gallons Per Minute (GPM)								
	0	5	10	15	20	25	30	35	40

18 GPM @ 20 PSI



NOTE: Most common 1/2 hp submersible pumps output is 10 GPM.

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Any Flow® 1" Flow Rates

Water System Pressure	Gallons Per Minute (GPM)											
	0	5	10	15	20	25	30	35	40	45	50	55
10 PSI					15 GPM @ 10 PSI							
20 PSI					20 GPM @ 20 PSI							
30 PSI					26 GPM @ 30 PSI							
40 PSI					32 GPM @ 40 PSI							
60 PSI					40 GPM @ 60 PSI							
80 PSI					46 GPM @ 80 PSI							
100 PSI					54 GPM @ 100 PSI							

NOTE: Most common 1/2 hp submersible pumps output is 10 GPM.

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Standard 3/4" Any Flow® Frost Proof Yard Hydrants

Order Number	UPC Bar Code (Qty. 1)	Size & Length	Stand Pipe	Overall Length	Approx. Wt. / Lbs.
AF7501	6 42367 00738 6	3/4" x 1" Bury	1" Galv.	45.5"	13.5
AF7502	6 42367 00739 3	3/4" x 2" Bury	1" Galv.	57.5"	15.5
AF7503	6 42367 00740 9	3/4" x 3" Bury	1" Galv.	69.5"	17.5
AF7504	6 42367 00741 6	3/4" x 4" Bury	1" Galv.	81.5"	19.5
AF7505	6 42367 00742 3	3/4" x 5" Bury	1" Galv.	93.5"	21.5
AF7506	6 42367 00743 0	3/4" x 6" Bury	1" Galv.	105.5"	23.5
AF7507	6 42367 00744 7	3/4" x 7" Bury	1" Galv.	117.5"	25.5
AF7508	6 42367 00745 4	3/4" x 8" Bury	1" Galv.	129.5"	27.5
AF7510	6 42367 00746 1	3/4" x 10" Bury	1" Galv.	153.5"	31.5

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Brass 3/4" Any Flow® Frost Proof Yard Hydrants

Order Number	UPC Bar Code (Qty. 1)	Size & Length	Stand Pipe	Overall Length	Approx. Wt. / Lbs.
AFB7501	6 42367 00747 8	3/4" x 1" Bury	1" Brass	45.5"	14.0
AFB7502	6 42367 00748 5	3/4" x 2" Bury	1" Brass	57.5"	16.0
AFB7503	6 42367 00749 2	3/4" x 3" Bury	1" Brass	69.5"	18.0
AFB7504	6 42367 00750 8	3/4" x 4" Bury	1" Brass	81.5"	20.5
AFB7505	6 42367 00751 5	3/4" x 5" Bury	1" Brass	93.5"	22.5
AFB7506	6 42367 00752 2	3/4" x 6" Bury	1" Brass	105.5"	24.5
AFB7507	6 42367 00753 9	3/4" x 7" Bury	1" Brass	117.5"	27.0
AFB7508	6 42367 00754 6	3/4" x 8" Bury	1" Brass	129.5"	29.0
AFB7510	6 42367 00755 3	3/4" x 10" Bury	1" Brass	153.5"	33.0

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Hi-Cap 1" Any Flow® Frost Proof Yard Hydrants

Order Number	UPC Bar Code (Qty. 1)	Size & Length	Stand Pipe	Overall Length	Approx. Wt. / Lbs.
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AF101	6 42367 00729 4	1" x 1" Bury	1-1/4" Galv.	45.5"	16.0
AF102	6 42367 00730 0	1" x 2" Bury	1-1/4" Galv.	57.5"	18.5
AF103	6 42367 00731 7	1" x 3" Bury	1-1/4" Galv.	69.5"	21.0
AF104	6 42367 00732 4	1" x 4" Bury	1-1/4" Galv.	81.5"	23.5
AF105	6 42367 00733 1	1" x 5" Bury	1-1/4" Galv.	93.5"	26.0
AF106	6 42367 00734 8	1" x 6" Bury	1-1/4" Galv.	105.5"	28.5
AF107	6 42367 00735 5	1" x 7" Bury	1-1/4" Galv.	117.5"	31.0
AF108	6 42367 00736 2	1" x 8" Bury	1-1/4" Galv.	129.5"	33.5
AF110	6 42367 00737 9	1" x 10" Bury	1-1/4" Galv.	153.5"	38.5

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RECEIVED

JUN 23 1969

Department of Reclamation

REPORT OF WELL DRILLER
State of Idaho

State law requires that this report shall be filed with the State Reclamation Engineer within 30 days after completion or abandonment of the well.

WELL OWNER:

Name Henry Estill

Address 703 So. Washington Ave.

Cammett Idaho

Owner's Permit No. _____

NATURE OF WORK (check): Replacement well ☐

New well ☒ Deepened ☐ Abandoned ☐

Water is to be used for: Domestic

METHOD OF CONSTRUCTION: Rotary ☐ Cable ☒

Dug ☐ Other _____

(explain)

CASING SCHEDULE: Threaded _____ Welded ☒

1 1/2" "Diam. from 12" above ft. to 33 ft.

"Diam. from _____ ft. to _____ ft.

"Diam. from _____ ft. to _____ ft.

"Diam. from _____ ft. to _____ ft.

Thickness of casing: _____ Material: _____

Steel ☐ concrete ☐ wood ☐ other ☐

(explain)

PERFORATED? Yes ☒ No ☐ Type of

perforator used: Rotary Trench

Size of perforations: 1/4" " by 4 1/2" "

186 perforations from 32 ft. to 42 ft.

perforations from _____ ft. to _____ ft.

perforations from _____ ft. to _____ ft.

perforations from _____ ft. to _____ ft.

WAS SCREEN INSTALLED? Yes ☐ No ☐

Manufacturer's name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ Set from _____ ft. to _____ ft.

Diam. _____ Slot size _____ Set from _____ ft. to _____ ft.

CONSTRUCTION: Well gravel packed? Yes ☐

No. ☐ size of gravel _____ Gravel

placed from _____ ft. to _____ ft. Surface seal

provided? Yes ☒ No ☐ To what depth?

18 ft. Material used in seal: Clay

Did any strata contain unusable water? Yes ☐

No. ☒ Type of water: _____

Depth of strata _____ ft. Method of sealing

strata off: _____

Surface casing used? Yes ☒ No. ☐

Cemented in place? Yes ☐ No ☒

Locate well in section

 x

Size of drilled hole: 6 1/2" Total
depth of well: 42 ft Standing water
level below ground: 5 ft Temp. 60
Fahr. ° Test delivery: 20 gpm
or _____ cfs Pump? ☐ Bail ☒
Size of pump and motor used to make test: _____

Length of time of test: 1 Hrs. Min.

Drawdown: 15 ft. Artesian pressure: ft.

above land surface _____ Give flow _____ cfs

or _____ gpm. Shutoff pressure: _____

Controlled by: Valve ☐ Cap ☐ Plug ☐

No control ☐ Does well leak around casin

Yes ☐ No ☒

DEPTH MATERIAL 073091 WATE

FROM TO 073091 YES OR

FEET FEET

0 3 Sand no

3 18 Gravel yes

18 20 Red sand yes

20 23 white sand fine yes

23 42 Coarse white sand yes

Photographer and date of Photos Glen Gardiner Aug 24, 2012
File Number 65-23523



The well house located through trees at the north end of the park.



North well feeds 2 tanks. Tank on left forward, not connected. This is a 3 HP pump as indicated by the tag on the power distribution panel.

Photographer and date of Photos Glen Gardiner Aug 24, 2012
File Number 65-23523



"Bury" hydrant located next to maintenance shack with a standard $\frac{3}{4}$ inch hose nozzle.