

CAMP RAINBOW GOLD

PUBLIC WATER SYSTEM FACILITY PLAN

Prepared for

Camp Rainbow Gold, Inc.
216 West Jefferson Street
Boise, ID 83702

Prepared by

SPF Water Engineering, LLC
300 E. Mallard Dr., Suite 350
Boise, ID 83706

September 20, 2016



Table of Contents

1. Introduction	1
1.1. Project Description	1
1.2. Project Location.....	1
2. Water Demands	3
2.1. Service Area Overview	3
2.2. Design Demands	3
3. Water Supply.....	6
3.1. Water Rights.....	6
3.2. On-Site Water Resources.....	6
3.3. Groundwater Quality.....	8
4. Water System Conceptual Design.....	10
4.1. Well and Pumping System.....	10
4.2. Water System Appurtenances	11
4.3. System Operating Pressure.....	12
4.4. Treatment	12
4.5. Storage.....	12
4.6. Distribution	13
5. Wastewater System	13
6. Water System Financing and Management.....	13

Tables

Table 1. Appurtenant water rights and permits	6
---	---

List of Figures

Figure 1. Camp Rainbow Gold vicinity map.....	3
Figure 2. Camp Rainbow Gold preliminary layout.....	4
Figure 3. Wells within 1-mile of proposed well.....	9
Figure 4. Well locations for water quality data	10
Figure 5. Example booster pump system (Grundfos CME 10-3/E)	11

Appendices

Appendix A. Well Drillers' Logs

Appendix B. Water Quality Test Results

1. INTRODUCTION

1.1. Project Description

A public water system is proposed for a new summer camp to be constructed, owned, and operated by Camp Rainbow Gold, Inc. The camp will function primarily as a medical youth camp for children diagnosed with cancer and their families. The camp will also be used by groups that serve children battling other medical conditions.

The proposed water system will supply potable water for the camp facilities, including interior fire sprinklers. Non-potable water for irrigation purposes will be provided from the East Fork Big Wood River.

The camp water system will meet the requirements for classification as a transient, non-community public water system, as it will not regularly serve at least 25 of the same people over six months per year. The camp is anticipated to operate approximately 5 months per year. Maximum population on-site at any given time will be 200 persons. The facility will host an average population of approximately 100 persons for the five-month operating season.

This facility plan is intended to comply with applicable rules specified in Idaho Administrative Procedures Act (IDAPA) 58.01.08.

1.2. Project Location

The camp site is located on the East Fork Road, approximately 1.75 miles east of the town of Triumph (

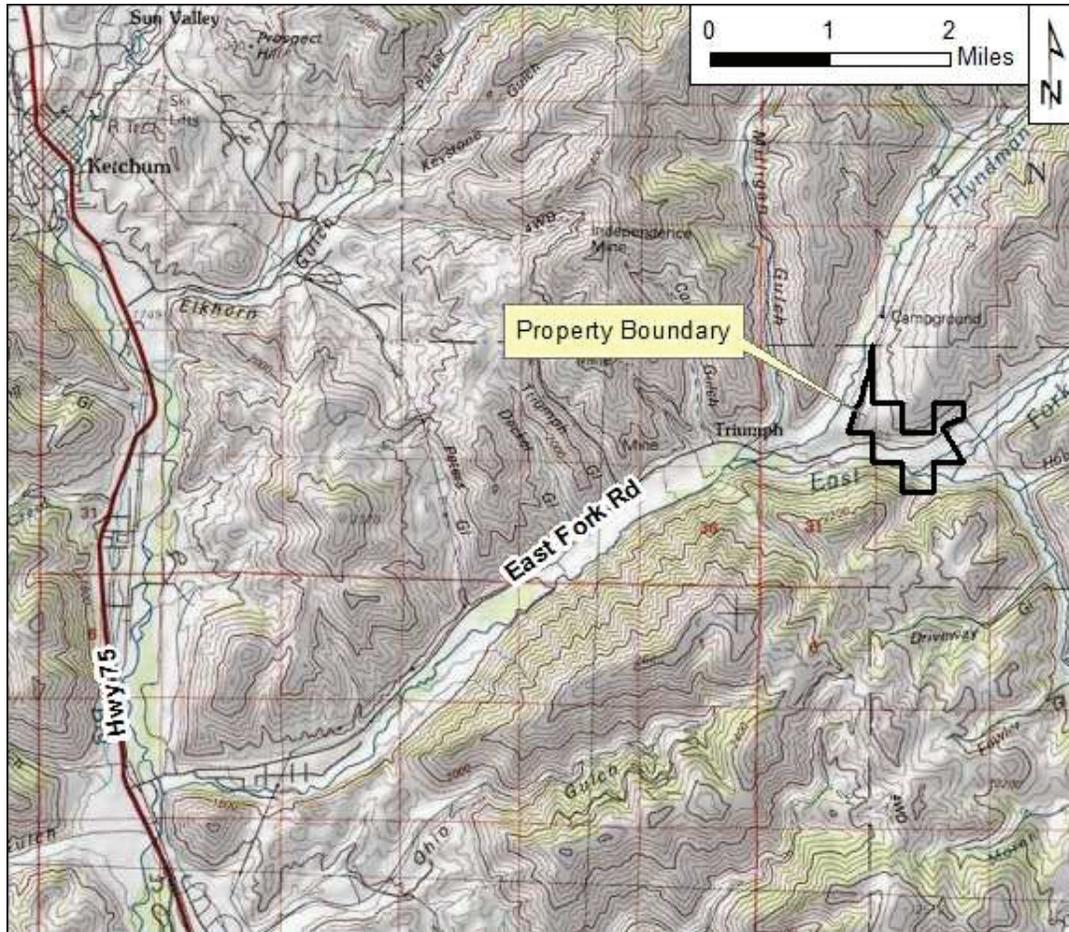


Figure 1). The camp facility will be located primarily within the South ½ of Section 29, Township 4 North, Range 19 East, Blaine County, Idaho. The project is reached by traveling approximately 6 miles north from Hailey on Highway 93, then 8 miles east on East Fork Road.

The camp property totals approximately 275 acres. The area to be developed for the camp is located south of East Fork Road and totals less than 100 acres.

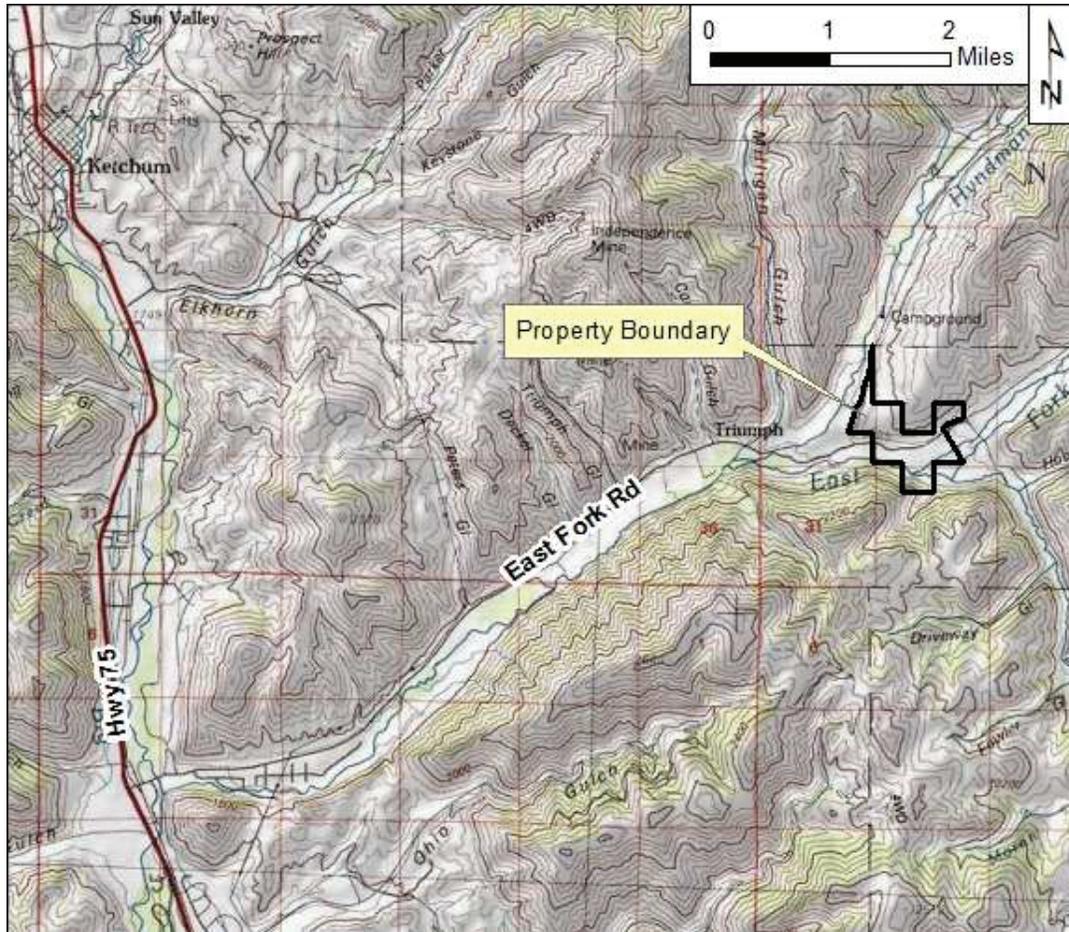


Figure 1. Camp Rainbow Gold vicinity map.

2. WATER DEMANDS

This section summarizes the service area and design demands.

2.1. Service Area Overview

The public water system will provide domestic potable water for cabins, dining hall, medical facility, and support buildings. Figure 2 shows the preliminary layout for the camp, including buildings (cabins, staff housing, maintenance, dining, medical facility, and recreation center), well site and water lines (in blue), wastewater gravity collection lines and lift stations (in purple), wastewater force mains (in pink), and wastewater septic tanks drainfield (in purple).

2.2. Design Demands

Peak-day potable demands are estimated 10,000 gallons per day, based on 50 gallons per person per day and a maximum population of 200 persons.

Peak-hour domestic demand is currently estimated at 70 gpm based on a peaking factor of 10. Peak-hour demand will be recalculated using a fixture-unit method when plumbing fixture counts are known.

Additional demand components include fire sprinklers and possibly fire hydrants installed along the water distribution system. Fire sprinkler demands depend on the number of sprinklers within a room or building, but demands typically range from approximately 20 to 40 gpm for residential sprinklers up to more than 100 gpm for larger commercial facilities. For purposes of this facility plan, we are assuming a maximum fire sprinkler demand of 150 gallons per minute for 60 minutes.

Two options exist for providing the required additional fire water supply and include:

- Three hydrants installed on the pressurized water distribution system as approved by the Ketchum Rural Fire District
- Or three 10,000 gallon cisterns to meet the requirements of the Blaine County Fire Protection Ordinance.

The installation of buried tanks in areas of high groundwater presents flotation concerns, therefore cisterns will be installed only if they can be located above high groundwater or they can be securely anchored.

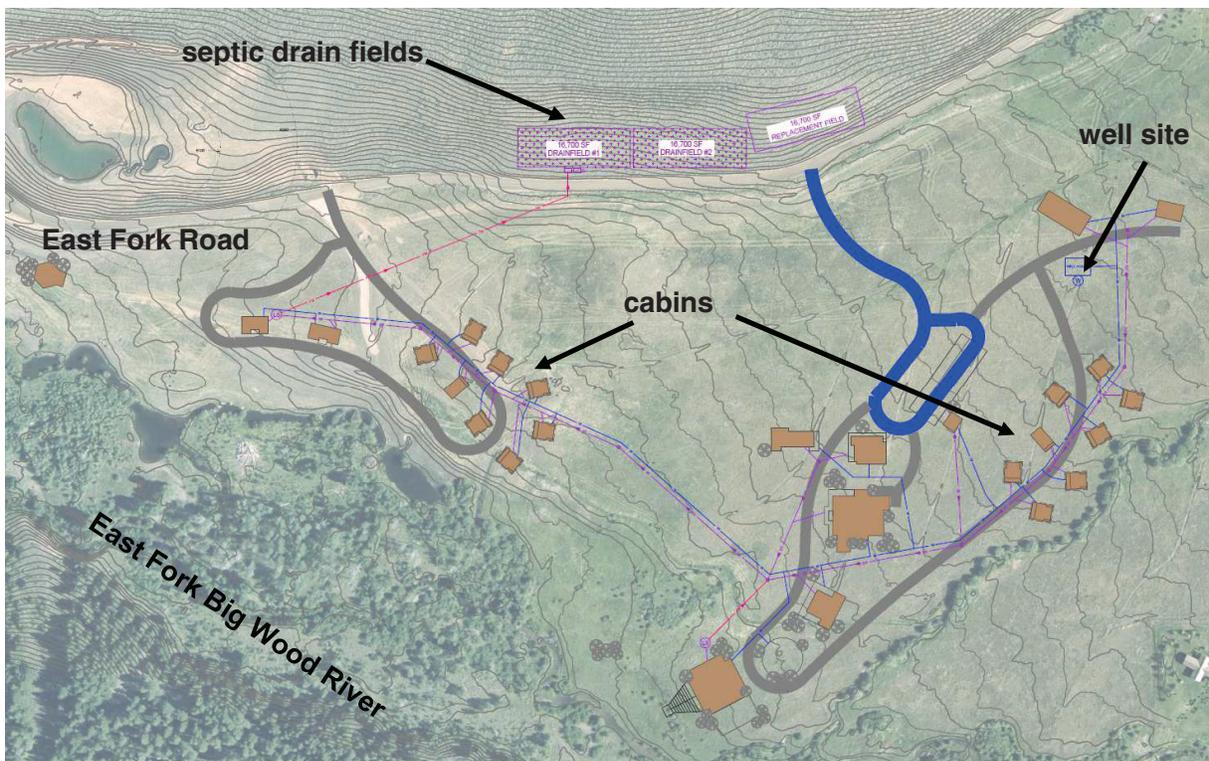


Figure 2. Camp Rainbow Gold preliminary layout.

The project site is currently gravity irrigated using surface water diverted from the East Fork Big Wood River. Upon development, irrigation supply will continue to be derived from the East Fork Big Wood River. The water will be delivered through a non-potable

pressurized irrigation distribution system for sprinkler and drip irrigation of landscaping and developed areas within the camp. Undeveloped portions of the property may continue to receive irrigation by gravity methods.

3. WATER SUPPLY

Section 3 summarizes on-site water resources, water rights, and groundwater quality.

3.1. Water Rights

The property currently has decreed water rights for irrigation and domestic purposes, and a water right permit for diversion to storage, storage (aesthetic, recreation, and irrigation) and irrigation. In combination, the water rights authorize irrigation of 76.2 acres. Water rights associated with the property are summarized in Table 1.

Water Right No.	Priority Date	Source	Use	Diversion Rate (cfs)	Combined Diversion Rate (cfs)	Diversion Volume (ac-ft)	Area (ac)
37-891A	7/24/1924	Wood River, E. Fk.	Irrigation	10.50			7,366.0
37-892	9/1/1920	Wood River, E. Fk.	Irrigation	11.232			
37-10808	6/8/1915	Ground Water	Domestic	0.04			
37-21386	5/1/1913	Wood River, E. Fk.	Mitigation*	0.02	4.16		72.3
			Irrigation	0.38			
37-21793	6/1/1884	Wood River, E. Fk.	Irrigation	4.16			
			Mitigation*	0.25			
37-22769	5/3/2012	Spring	Diversion To Storage	1.00	1.00		
			Irrigation	0.12			3.9
			Storage			2.3	

Table 1. Appurtenant water rights and permits

Water for domestic purposes at the camp will be diverted under the domestic exemption of Idaho Code sections 42-227 and 42-111, which allow diversion of up to 13,000 gpd groundwater for domestic use in “organization camps” without a permit. If more than 13,000 gpd of groundwater will be needed in the future, the camp should be able to obtain a permit for such use that can be mitigated by reducing the acres irrigated under existing decreed irrigation water rights.

Water for irrigation includes 4.16 cfs of East Fork Wood River for irrigation of 72.3 acres (water rights 37-21386 and 37-21793) and 236 shares within the Upper Wood River Water Users Association (water rights 37-891A and 37-892). Water right permit 37-22769 is authorizes irrigation of 3.9 acres and storage of 2.3 acre feet from a spring source.

3.2. On-Site Water Resources

Groundwater is available beneath the camp property from a shallow alluvial aquifer and from deep bedrock aquifers. The source of supply for the public water system will be one newly constructed on-site groundwater well (Well 1). The reported capacities of eight

domestic water supply wells (

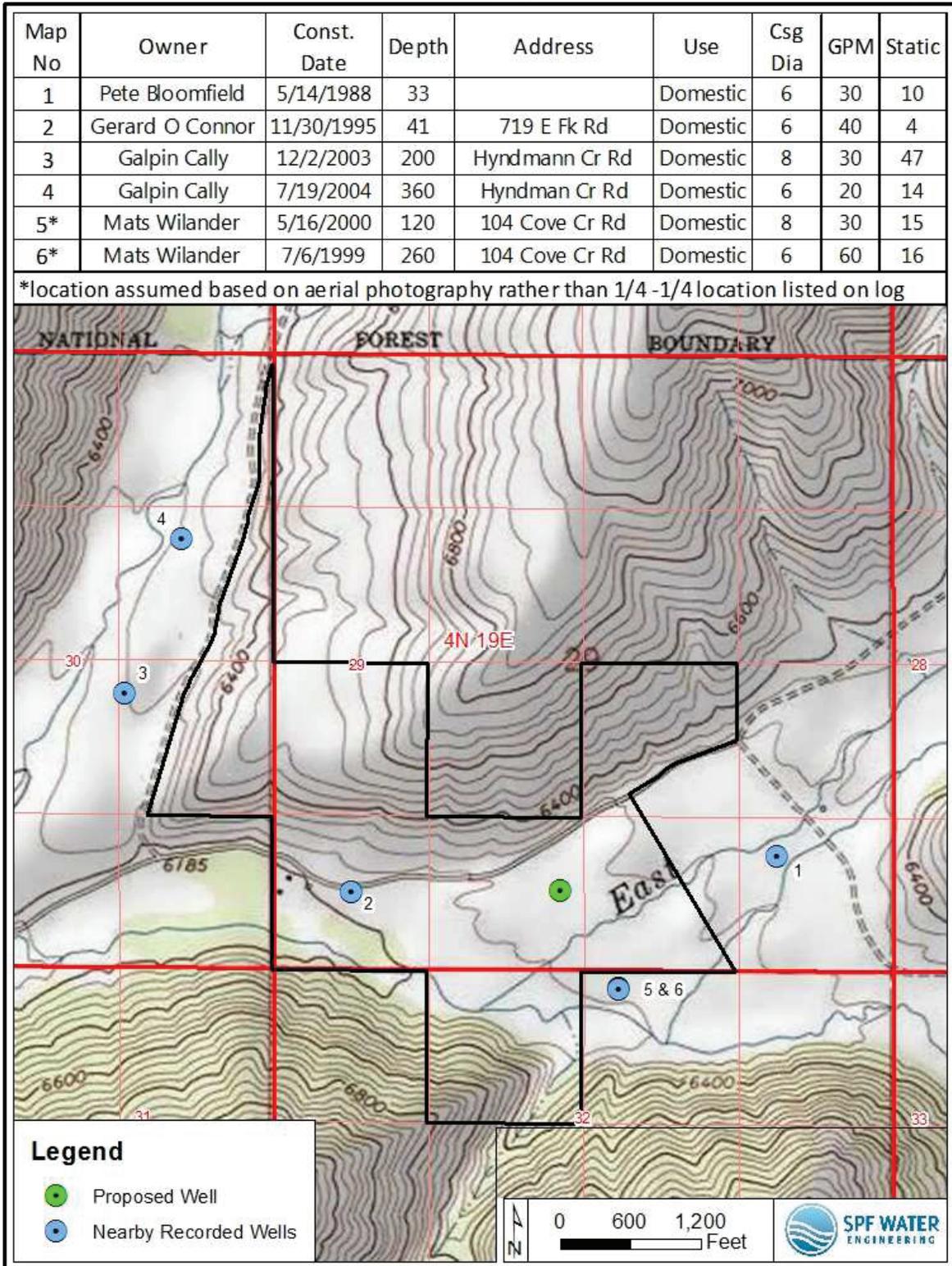


Figure 3) completed within 1 mile of the camp within similar lithologic conditions anticipated for this site range from 20 gpm to 60 gpm (well logs are provided in Appendix

A). Based on this information, Well 1 is expected to be capable of supplying the peak day demand of 10,000 gpd (7 gpm 24-hour average flow).

The proposed well will initially target bedrock aquifer zones below a depth of 100 feet. However, if sufficiently productive bedrock zones are not encountered, the well can be completed in the shallow aquifer to a depth of approximately 30 feet.

As previously noted, surface water from the East Fork Big Wood River is available for irrigation supply and will be delivered to sprinklers through a separate non-potable pressurized irrigation system.

3.3. Groundwater Quality

As a transient, non-community public water system, this system will be required to comply with water quality standards for nitrate and bacteria. It is anticipated that Well 1 will have acceptable quality with regards to these standards. The land use in the area upgradient from the site is primarily rangeland and forest, without known contaminant sources. Potential contamination associated with mining at Triumph is downgradient from the site.

The Idaho Department of Water Resources (IDWR) online searchable database was accessed in September 2016 for available groundwater quality datasets. The water quality results obtained for 4 wells are summarized in Appendix B. The well locations are shown in Figure 4. None of the wells are in the close vicinity of the project site, but they show typical water quality for groundwater in the Big Wood River drainage. Specifically, the water has low to moderate levels of total dissolved solids. Concentrations of nitrate were less than 10% of the maximum contaminant level (MCL) of 10 mg/L, and concentrations of all other analyzed constituents were below applicable MCLs for drinking water.

Based on the water quality results of nearby wells, it is anticipated that Well 1 will meet water quality standards for a transient, non-community water system. Water from the well will be chlorinated. Otherwise, additional treatment is not anticipated.

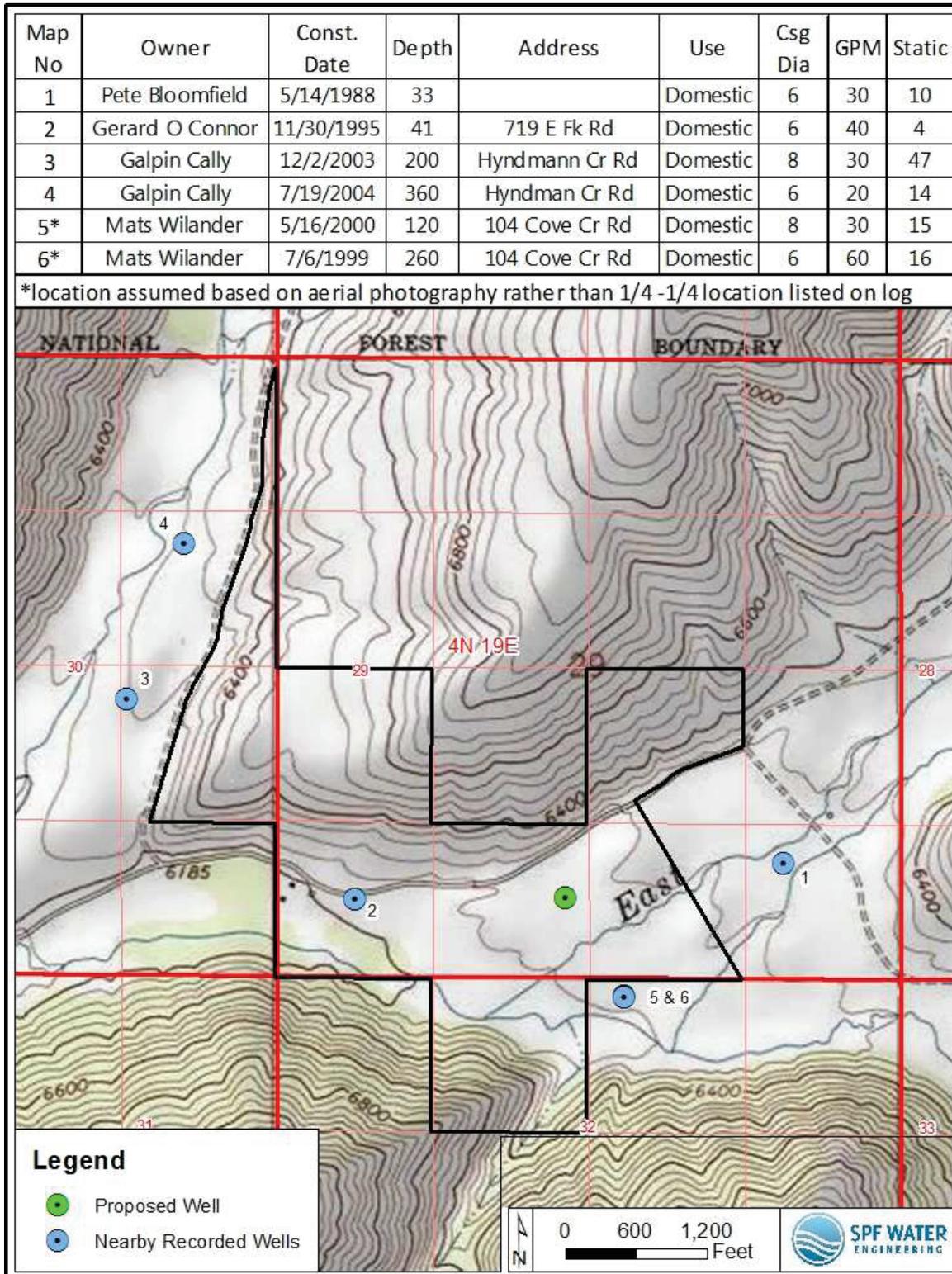


Figure 3. Wells within 1-mile of proposed well

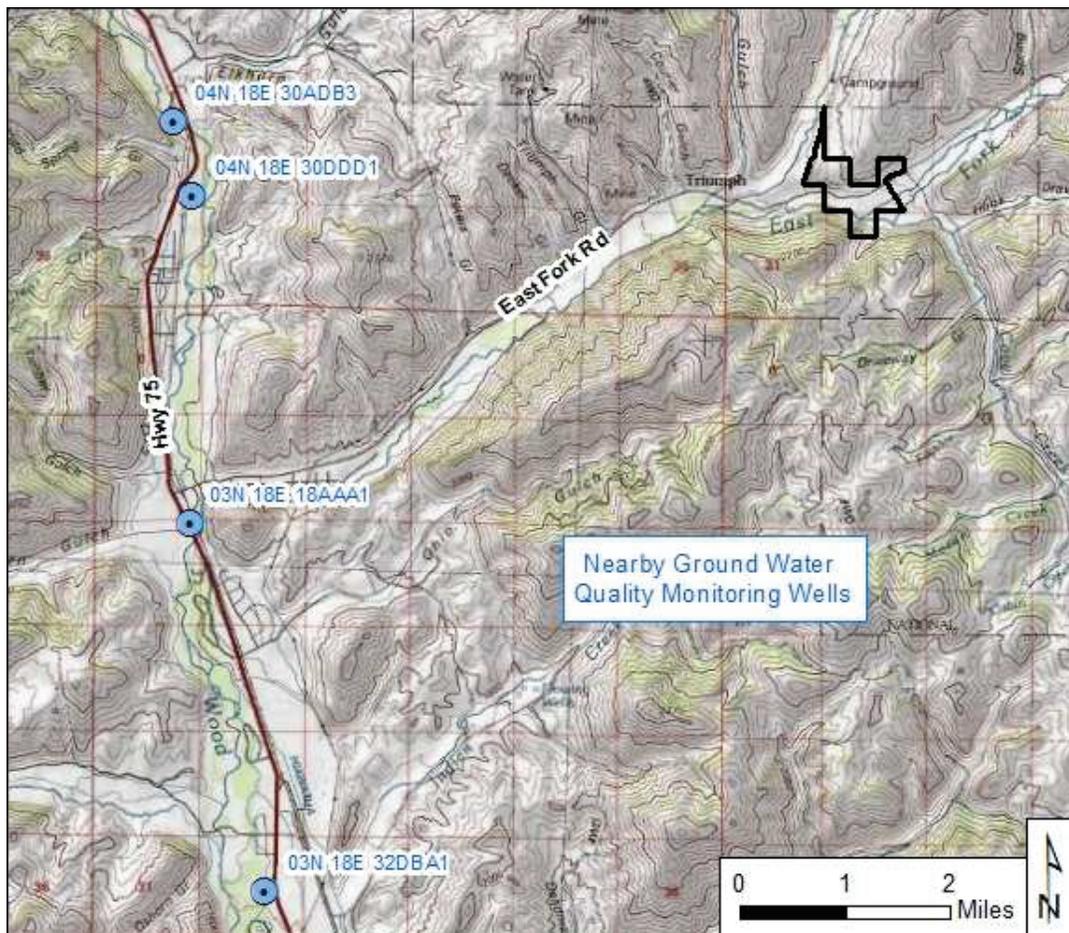


Figure 4. Well locations for water quality data

4. WATER SYSTEM CONCEPTUAL DESIGN

Section 4 summarizes the plans for the well and pumping system, appurtenances, operating pressure, and storage.

4.1. Well and Pumping System

One new well (Well 1) is proposed on-site to serve as the source of supply for the camp public water system. Detailed information regarding the proposed well site will be contained in the Well Site Evaluation submitted after the Facility Plan.

Well 1 will be constructed to public water system standards (IDAPA 58.01.08) and well construction standards (IDAPA 37.03.09), with an anticipated 6-inch diameter casing and equipped with a 4-inch diameter submersible pump rated to produce the target capacity

of 20 gpm with a discharge pressure 0 pounds per square inch (psi) at the storage tank. Target well depth is 250 feet. The well will be sealed to a minimum depth of 58 feet.

We anticipate that the well will be equipped with a pump capable of supplying approximately 20 gpm, and will pump to a storage tank that can be used to meet peak hour demands. Final pump sizing will ultimately depend upon well production, but is not expected to vary significantly from the sizing described above. It is anticipated that the well pump will be constant speed, controlled by a float switch in the storage tank. A 1.5-hp motor is anticipated.

A booster pump system will be used to provide pressure for water distribution. Assuming a fire sprinkler demand of approximately 150 gpm and cisterns are installed for fire protection, the booster pump system will consist of three 5-hp pumps, each capable of producing approximately 70 gpm at 65 psi. One or more of the pumps will be variable speed. The pump system will be a Grundfos Hydro Multi-B CME 10-3 or similar (Figure 5). This pump system will produce a flow rate of 240 gpm at a discharge pressure of 45 psi (105 feet) to meet combined domestic and fire sprinkler demands. The booster pump (and storage tank) size may be increased or decreased depending on final requirements for fire sprinklers and if hydrants are installed in lieu of cisterns.

A back-up generator will be provided for the well and booster pump systems in the event of a utility power outage. It has not been determined whether this generator will be dedicated to the water system, or will provide for site-wide back-up power.

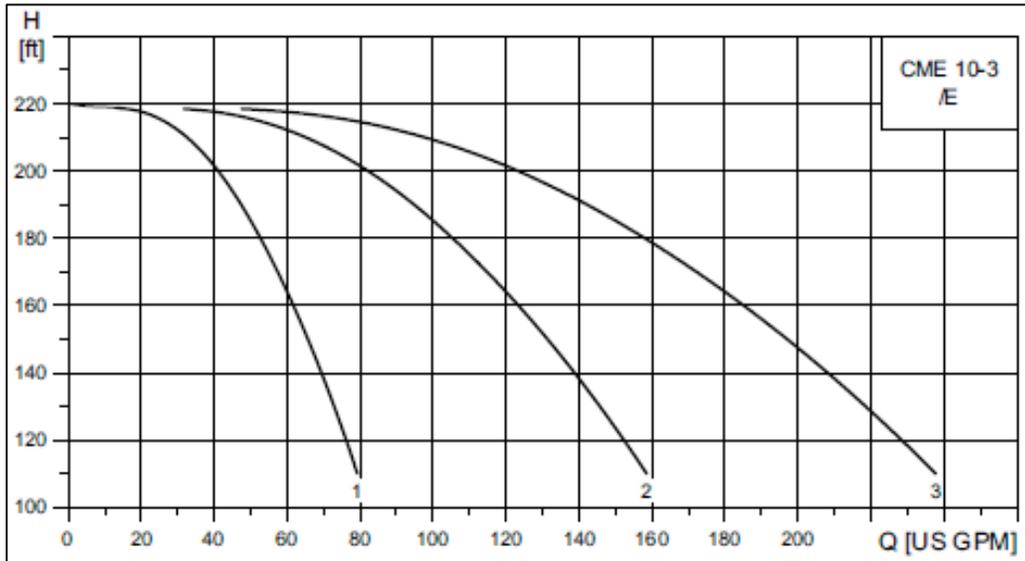


Figure 5. Example booster pump system (Grundfos CME 10-3/E)

4.2. Water System Appurtenances

The Idaho Rules for Public Drinking Water Systems (IDAPA 58.01.08) require that all public water system wells have the following appurtenances:

- Sample tap for collecting water quality samples
- Discharge piping and valving to allow well to be pumped to waste

- Pressure gauge
- Flow meter
- Accessible check valve.

Along with required appurtenances, a pressure relief valve will be provided to prevent over-pressurization of the water system. One or more hydropneumatic tanks, along with variable speed pumps, will be used to meet low system demands to minimize pump cycling.

Water system appurtenances, booster pumps, and motor controls will be housed in a mechanical room in a well house building. The selected location will meet the requirements for public water system well houses as set forth by IDAPA 58.01.08. These requirements are as follows:

- Building will be protected from flooding and be adequately drained.
- The floor will be greater than 6 inches above surrounding grade.
- The building will be of durable construction (fire and weather resistant).
- Heat will be provided to prevent freezing of pipes and equipment.
- The mechanical room will have locking doors to prevent unauthorized access.
- The mechanical room shall be readily accessible for operation, maintenance, and repair at all times.
- No hazardous materials will be stored in the mechanical room.

4.3. System Operating Pressure

The booster pump system will be selected to provide a system pressure of approximately 60 psi. A minimum pressure of 40 psi will be maintained in the distribution system during peak hour demands per IDAPA 58.01.08. Static pressure in the system will ordinarily not exceed 65 psi and never exceed 75 psi.

4.4. Treatment

Treatment to meet drinking water standards is not anticipated to be required. However, it is likely that the water will be chlorinated to maintain a disinfection residual within the water system. Chlorination will be accomplished with using liquid chlorine.

4.5. Storage

It is anticipated that potable storage will be required to meet peak hour demands. The volume of storage currently proposed is 20,000 gallons, equivalent to two days of peak demand. The capacity will assume a typical reserve of 9,000 gallons for fire sprinkler storage (150 gpm for 60 minutes) and 10,000 gallons for domestic storage. Storage capacity may be increased if required for fire sprinklers.

Storage will consist of one or more tanks located adjacent to, or within, the well house and booster pump building.

Note that one or more non-potable fire protection cisterns will likely be located within the project site. These cisterns will be available for use by pumper trucks for fire suppression, but will have no direct connection to the potable water system.

4.6. Distribution

Water will be conveyed through the camp through a 6-inch buried water main (C900 PVC) as shown on Figure 1. Lateral lines to individual buildings will be sized to meet building demands. A blow-off will be provided at the far end of the water main for flushing.

5. WASTEWATER SYSTEM

The proposed wastewater system for Camp Rainbow Gold will consist of a gravity collection pipe system, two lift stations, septic tanks, and a pressurized drain field (Figure 2). The proposed drainfield site is north of East Fork Road, where normal depths to groundwater are expected to exceed 8 feet as required for large soil absorption systems (i.e., >2,500 gpd) constructed in Type B soils. The drainfield sites are hydraulically down-gradient from the well sites.

6. WATER SYSTEM FINANCING AND MANAGEMENT

The construction of the water system will be financed by the Owner, Camp Rainbow Gold, Inc. Water system operations and maintenance will be financed by the Owner. Transient, non-community water systems are not required to be supervised by a licensed operator. A qualified representative of the Owner will oversee the water system.

APPENDIX A – WELL DRILLERS' LOGS

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

USE TYPEWRITER OR
BALLPOINT PEN

State law requires that this report be filed with the Director, Department of Water Resources
within 30 days after the completion or abandonment of the well.

PH 9/88

<p>1. WELL OWNER</p> <p>Name <u>Pete Bloomfield</u></p> <p>Address <u>East Fork, Box 331 Ketchikan, Id.</u></p> <p>Owner's Permit No. <u>37-88-S-032</u></p>	<p>7. WATER LEVEL</p> <p>Static water level <u>10ft</u> feet below land surface.</p> <p>Flowing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No G.P.M. flow _____</p> <p>Artesian closed-in pressure _____ p.s.i.</p> <p>Controlled by: <input type="checkbox"/> Valve <input type="checkbox"/> Cap <input type="checkbox"/> Plug</p> <p>Temperature _____ OF. Quality _____</p> <p><i>Describe artesian or temperature zones below.</i></p>																																		
<p>2. NATURE OF WORK</p> <p><input checked="" type="checkbox"/> New well <input type="checkbox"/> Deepened <input type="checkbox"/> Replacement</p> <p><input type="checkbox"/> Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)</p>	<p>8. WELL TEST DATA</p> <p><input type="checkbox"/> Pump <input type="checkbox"/> Bailor <input checked="" type="checkbox"/> Air <input type="checkbox"/> Other _____</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Discharge G.P.M.</th> <th>Pumping Level</th> <th>Hours Pumped</th> </tr> <tr> <td style="text-align: center;"><u>30</u></td> <td style="text-align: center;"><u>25</u></td> <td style="text-align: center;"><u>1</u></td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	Discharge G.P.M.	Pumping Level	Hours Pumped	<u>30</u>	<u>25</u>	<u>1</u>																												
Discharge G.P.M.	Pumping Level	Hours Pumped																																	
<u>30</u>	<u>25</u>	<u>1</u>																																	
<p>3. PROPOSED USE</p> <p><input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Irrigation <input type="checkbox"/> Test <input type="checkbox"/> Municipal</p> <p><input type="checkbox"/> Industrial <input type="checkbox"/> Stock <input type="checkbox"/> Waste Disposal or Injection</p> <p><input type="checkbox"/> Other _____ (specify type)</p>	<p>9. LITHOLOGIC LOG</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Bore Diam.</th> <th colspan="2">Depth</th> <th rowspan="2">Material</th> <th colspan="2">Water</th> </tr> <tr> <th>From</th> <th>To</th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">8</td> <td style="text-align: center;">1</td> <td style="text-align: center;">15</td> <td>Boulders & Dirt</td> <td style="text-align: center;">X</td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;">6</td> <td style="text-align: center;">15</td> <td style="text-align: center;">25</td> <td>Gravel set in place</td> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">6</td> <td style="text-align: center;">25</td> <td style="text-align: center;">30</td> <td>Water Water in place</td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;">6</td> <td style="text-align: center;">30</td> <td style="text-align: center;">33</td> <td>Rock Limestone</td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> </tbody> </table>	Bore Diam.	Depth		Material	Water		From	To	Yes	No	8	1	15	Boulders & Dirt	X		6	15	25	Gravel set in place		X	6	25	30	Water Water in place			6	30	33	Rock Limestone		
Bore Diam.	Depth		Material	Water																															
	From	To		Yes	No																														
8	1	15	Boulders & Dirt	X																															
6	15	25	Gravel set in place		X																														
6	25	30	Water Water in place																																
6	30	33	Rock Limestone																																
<p>4. METHOD DRILLED</p> <p><input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Air <input type="checkbox"/> Hydraulic <input type="checkbox"/> Reverse rotary</p> <p><input type="checkbox"/> Cable <input type="checkbox"/> Dug <input type="checkbox"/> Other _____</p>	<div style="text-align: center;"> <p>RECEIVED</p> <p>JUN 29 1988</p> <p>Department of Water Resources SOUTHERN REGION OFFICE</p> </div> <div style="text-align: center; margin-top: 20px;"> <p>RECEIVED</p> <p>JUN 27 1988</p> </div>																																		
<p>5. WELL CONSTRUCTION</p> <p>Casing schedule: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Concrete <input type="checkbox"/> Other _____</p> <table style="width:100%;"> <tr> <td>Thickness</td> <td>Diameter</td> <td>From</td> <td>To</td> </tr> <tr> <td><u>150</u> inches</td> <td><u>6</u> inches</td> <td><u>1</u> feet</td> <td><u>30</u> feet</td> </tr> <tr> <td>_____ inches</td> <td>_____ inches</td> <td>_____ feet</td> <td>_____ feet</td> </tr> <tr> <td>_____ inches</td> <td>_____ inches</td> <td>_____ feet</td> <td>_____ feet</td> </tr> <tr> <td>_____ inches</td> <td>_____ inches</td> <td>_____ feet</td> <td>_____ feet</td> </tr> </table> <p>Was casing drive shoe used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Was a packer or seal used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Perforated? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>How perforated? <input type="checkbox"/> Factory <input type="checkbox"/> Knife <input type="checkbox"/> Torch</p> <p>Size of perforation _____ inches by _____ inches</p> <table style="width:100%;"> <tr> <td>Number</td> <td>From</td> <td>To</td> </tr> <tr> <td>_____ perforations</td> <td>_____ feet</td> <td>_____ feet</td> </tr> <tr> <td>_____ perforations</td> <td>_____ feet</td> <td>_____ feet</td> </tr> <tr> <td>_____ perforations</td> <td>_____ feet</td> <td>_____ feet</td> </tr> </table> <p>Well screen installed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Manufacturer's name _____</p> <p>Type _____ Model No. _____</p> <p>Diameter _____ Slot size _____ Set from _____ feet to _____ feet</p> <p>Diameter _____ Slot size _____ Set from _____ feet to _____ feet</p> <p>Gravel packed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Size of gravel _____</p> <p>Placed from _____ feet to _____ feet</p> <p>Surface seal depth <u>20</u> Material used in seal: <input type="checkbox"/> Cement grout</p> <p><input checked="" type="checkbox"/> Bentonite <input type="checkbox"/> Puddling clay <input type="checkbox"/> _____</p> <p>Sealing procedure used: <input type="checkbox"/> Slurry pit <input type="checkbox"/> Temp. surface casing</p> <p><input checked="" type="checkbox"/> Overbore to seal depth</p> <p>Method of joining casing: <input type="checkbox"/> Threaded <input checked="" type="checkbox"/> Welded <input type="checkbox"/> Solvent Weld</p> <p><input type="checkbox"/> Cemented between strata</p> <p>Describe access port _____</p>	Thickness	Diameter	From	To	<u>150</u> inches	<u>6</u> inches	<u>1</u> feet	<u>30</u> feet	_____ inches	_____ inches	_____ feet	_____ feet	_____ inches	_____ inches	_____ feet	_____ feet	_____ inches	_____ inches	_____ feet	_____ feet	Number	From	To	_____ perforations	_____ feet	_____ feet	_____ perforations	_____ feet	_____ feet	_____ perforations	_____ feet	_____ feet	<p>10. Work started <u>May 13, 88</u> finished <u>May 14, 88</u></p>		
Thickness	Diameter	From	To																																
<u>150</u> inches	<u>6</u> inches	<u>1</u> feet	<u>30</u> feet																																
_____ inches	_____ inches	_____ feet	_____ feet																																
_____ inches	_____ inches	_____ feet	_____ feet																																
_____ inches	_____ inches	_____ feet	_____ feet																																
Number	From	To																																	
_____ perforations	_____ feet	_____ feet																																	
_____ perforations	_____ feet	_____ feet																																	
_____ perforations	_____ feet	_____ feet																																	
<p>6. LOCATION OF WELL</p> <p>Sketch map location <u>must</u> agree with written location.</p> <table style="width:100%; text-align: center;"> <tr> <td>N</td> <td colspan="2">Subdivision Name _____</td> </tr> <tr> <td>W</td> <td style="border: 1px dashed black; width: 50px; height: 50px; position: relative;"> <div style="position: absolute; top: 0; left: 0; right: 0; bottom: 0; border: 1px dashed black;"> <div style="position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%);">X</div> </div> </td> <td>E</td> </tr> <tr> <td>S</td> <td>Lot No. _____</td> <td>Block No. _____</td> </tr> </table> <p>County <u>Blaine</u></p> <p><u>SE 1/4 SE 1/4</u> Sec. <u>29</u>, T. <u>40</u>, R. <u>190</u>W.</p>	N	Subdivision Name _____		W	<div style="position: absolute; top: 0; left: 0; right: 0; bottom: 0; border: 1px dashed black;"> <div style="position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%);">X</div> </div>	E	S	Lot No. _____	Block No. _____	<p>11. DRILLERS CERTIFICATION</p> <p>I/We certify that all minimum well construction standards were complied with at the time the rig was removed.</p> <p>WOOD RIVER DRILLING AND PUMP</p> <p>Firm No. <u>165</u> 788-3163 Firm No. <u>265</u></p> <p>HAILEY, IDAHO 83333</p> <p>Address _____ Date <u>6-12-88</u></p> <p>Signed by (Firm Official) <u>Ken Smith</u></p> <p>and (Operator) <u>Mary Jones</u></p>																									
N	Subdivision Name _____																																		
W	<div style="position: absolute; top: 0; left: 0; right: 0; bottom: 0; border: 1px dashed black;"> <div style="position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%);">X</div> </div>	E																																	
S	Lot No. _____	Block No. _____																																	

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT 63056

Use Typewriter
or
Ball Point Pen

1. DRILLING PERMIT NO. 37-95-S-0050-200
Other IDWR No. _____

2. OWNER:
Name JERRY O'CONNOR
Address P.O. BOX 48
City BELLEVUE State ID Zip 83313

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location.

N		Twp <u>4</u>		North <input checked="" type="checkbox"/>	or	South <input type="checkbox"/>
E		Rge <u>19</u>		East <input checked="" type="checkbox"/>	or	West <input type="checkbox"/>
W		Sec <u>29</u>		1/4 SW 1/4 SW 1/4		
S		Gov't Lot _____		County <u>BLAINE</u>		

Address of Well Site 719 EAST FORK ROAD
City HAILEY
(Give at least name of road + Distance to Road or Landmark)

Lt _____ Rlk _____ Sub. Name _____

4. PROPOSED USE:
 Domestic Municipal Monitor Irrigation
 Thermal Injection Other _____

5. TYPE OF WORK
 New Well Modify or Repair Replacement Abandonment

6. DRILL METHOD
 Mud Rotary Air Rotary Cable Other _____

7. SEALING PROCEDURES

SEAL/FILTER PACK			AMCUR/		ME-THUD
Material	From	To	Sacks or Pounds		
BENTONITE	0	19	100#		OVERBORE

Was drive shoe used? Y N Shoe Depth(s) _____
Was drive shoe seal tested? Y N How? _____

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
6.825	1.5	41	250	STEEL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS
 Perforations Method _____
 Screens Screen Type _____

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
						<input type="checkbox"/>	<input type="checkbox"/>

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
4 ft. below ground Artesian pressure _____ lb.
Depth flow encountered _____ ft. Describe access port or control devices: _____

11. WELL TESTS:

Yield gal./min.	Drawdown	Pumping Level	Time
30-40			

Water Temp. 48 Bottom hole temp. _____
Water Quality test or comments: _____

12. LITHOLOGIC LOG: (Describe repairs or abandonment) Water

Bole Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
0	11		SURFACE DIRT	Y	
11	16		BOULDERS CLAY GRAVEL		Y
16	23		BOULDERS CLAY GRAVEL		Y
23	24		GRAVEL CLAY	Y	
24	35		GRAVEL CLAY		Y
35	41		GRAVEL SAND	Y	
41					Y

RECEIVED
FEB 13 1996
Department of Water Resources

RECEIVED
JAN 08 1996
Department of Water Resources
Southern Region

Completed Depth 41' (Measurable)
Date: Started 11/30/95 Completed 11/30/95

13. DRILLER'S CERTIFICATION
I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Firm Name WALKER WATER SYSTEMS INC. Firm No. 15
Firm Official Paul Walk Date 01/05/96
and Supervisor or Operator _____ Date 01/05/96
(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

App 880413

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Office Use Only
Inspected by _____
Twp _____ Rge _____ Sec _____
1/4 _____ 1/4 _____ 1/4 _____
Lat: : : Long: : :

1. WELL TAG NO. D_0030082
DRILLING PERMIT NO. 809249
Other IDWR No. ID 380022
2. OWNER: Galpin Cally
Address P.O. Box 4747
City Ketchum State ID Zip 83340

RECEIVED
DEC 16 2003

11. WELL TESTS:

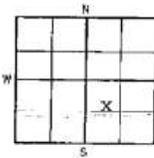
Pump Bailor Air Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
50			1 hour

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

(located in NESE per aerial photo)



Twp. 22 North or South
Rge. 19 East or West
Sec. 30 1/4 NW 1/4 SE 1/4
Gov't Lot _____ County Blaine
Lat: : : Long: : :

Address of Well Site Hyndman Creek Rd
City Hailey

(Give at least name of road & distance to road or landmark)

Tax Lot 7376 Blk. _____ Sub. Name East Fork

4. USE:

- Domestic Municipal Monitor Irrigation
 Thermal Injection Other

5. TYPE OF WORK check all that apply (Replacement etc.)

- New Well Modify Abandonment Other

6. DRILL METHOD

- Air Rotary Cable Mud Rotary Other

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	AMOUNT		METHOD
	From	To	
Bentonite	0	20	18Sks Overbore

Was drive shoe used? N Shoe Depth(s) 67'

Was drive shoe seal tested? N How?

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
8"	+1 1/2	67	.250	Steel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6"	60	200	.250	Steel	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

Perforations Method Torch

Screens Screen Type _____

From	To	Shot Size	Number	Diameter	Material	Casing	Liner
60	200	3 1/2	30	6"	Steel	<input type="checkbox"/>	<input checked="" type="checkbox"/>

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

47 ft. below ground Artesian pressure _____ lb.
Depth flow encountered _____ ft. Describe access port or control devices: _____

12. LITHOLOGIC LOG: (Describe repairs or abandonment) Water

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
12	0	3	Top Soil-Boulders		X
12	3	20	Subsoil-Boulders		X
8	20	60	Clay-Gravel-Boulders		X
8	60	120	Black Slate	X	
8	120	200	Black Slate-Quart-Limestone	X	

Completed Depth 200' (Measurable)
Date: Started 11-26-03 Completed 12-02-03

13. DRILLER'S CERTIFICATION

(We certify that all minimum well construction standards were complied with at the time the rig was removed.)

Company Name Wood River Drilling Firm No. 265 & Pump Inc.

Firm Official Ken Smith Date 12-11-03

and Driller or Operator [Signature] Date _____
(Sign once if Firm Official Operator)

Form 238-7
11/97

Basin 37
AP 841681
Per 764444

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Office Use Only			
Inspected by	_____	_____	_____
Twp	_____	Rge	_____
	1/4	1/4	1/4
Lat	_____	Long	_____

1. WELL TAG NO. D 0008744
DRILLING PERMIT NO. _____
Other IDWR No. _____

2. OWNER:
Name Mats & Sonya Wilander
Address P.O. Box 1746
City Ketchum State ID Zip 83340

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location.

(located in NWNE per aerial photo)

			X

Twp. 4 North or South
Rge. 19 East or West
Sec. 32 1/4 NE 1/4 NE 1/4
Gov't Lot _____ County Blaine
Lat: _____ Long: _____

Address of Well Site 104 Cove Creek
Road _____ City Hailey
(Give at least name of road + distance to road or landmark)

Lt. 4 Blk. _____ Sub. Name Cove Creek Sub.

4. USE:
 Domestic Municipal Monitor Irrigation
 Thermal Injection Other _____

5. TYPE OF WORK check all that apply (Replacement etc.)
 New Well Modify Abandonment Other _____

6. DRILL METHOD
 Air Rotary Cable Mud Rotary Other _____

7. SEALING PROCEDURES

SEAL/FILTER PACK		AMOUNT		METHOD
Material	From To	Sections	Pounds	
Bentonite	0 20	13	skts	Overbore

Was drive shoe used? Y N Shoe Depth(s) 25ft.
Was drive shoe seal tested? YES N How? _____

8. CASING/LINER:

Diameter	From To	Gauge	Material	Casing	Liner	Welded	Threaded
6"	+1 1/2	25	.250 Steel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5"	+1 1/2	45	.188 Steel	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS
Perforations _____ Method Torch
Screens _____ Screen Type _____

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
25'	45"	3"	30		Steel	<input checked="" type="checkbox"/>	<input type="checkbox"/>

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
15 ft. below ground Artesian pressure _____ lb.
Depth flow encountered _____ ft. Describe access port or control devices: _____

11. WELL TESTS:

Pump Bailor Air Flowing Artesian

Yield gal/min	Drawdown	Pumping Level	Time
30			1 hour

Water Temp. _____ Bottom hole temp. _____
Water Quality test or comments: _____
Depth first Water Encounter _____

12. LITHOLOGIC LOG: (Describe repairs or abandonment) Water

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
8"	0	3	Top Soil		X
8"	3	20	Gravel-Clay-Boulders	X	
8"	20	24	Broken Limestone	X	
8"	24	25	Limestone		X
6"	25	29	Limestone		X
6"	29	32	Slate	X	
6"	32	36	Limestone	X	
6"	36	38	Clay	X	
6"	38	40	Soft Limestone	X	
6"	40	78	Limestone	X	
6"	78	90	Slate-Brown Shale	X	
6"	90	110	Limestone	X	
6"	110	117	Soft Limestone Tale	X	
6"	117	120	Limestone	X	

Completed _____ Depth 120ft. (Measurable)
Date: Started 05-12-00 Completed 05-16-00

13. DRILLER'S CERTIFICATION
We certify that all minimum well construction standards were complied with at the time the rig was removed.
Company Name Wood River Drilling Firm No. 265
& Pump, Inc.
Firm Official Ken Smith Date 05-23-00
and
Driller or Operator [Signature] Date 5-23-00
(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

APPENDIX B – WATER QUALITY DATA

