STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 21-7390
Exam Date: 2/6/2013

1. Current Owner: BIG HORN HILLS ESTATES
   PO BOX 254
   ROBERTS ID 83444
   (208)228-3330
2. Contact: Ray Finch (208) 558-9269
3. **SOURCE** **TRIBUTARY**
   GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 21-11090 (single home domestic)
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 SE1/4SW1/4 Sec. 6, Twp 15N, Rge 44E, B.M. FREMONT County

Method of Determination: GPS and aerial photography

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	
15N	44E	6									X	X	X	X					

Method of Determination: Aerial photography and plat map

3. __X__ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use.
   __X__ Aerial Photo Attached.
   __X__ Photo of Diversion and System Attached

4. IDEQ Public Water System #7220011
   IDWR Well Tag # E0006537
   7.5 hp pump, 26,000 gal storage tank, 2 fire spigots

D. FLOW CALCULATIONS

No measurement required. De minimus flow rate.
Permitted diversion rate is less than the standard rate expected for 94 homes.

E. VOLUME CALCULATIONS

In house use: 94 homes x 0.6 af/year = 56.4 af/year

Dom Irrig: 94 homes x 0.3 af/year = 28.2 af/year

(assuming an avg of ¼ acre irrig per lot)

Total volume: 56.4 af/yr + 28.2 af/yr = 84.6 af/year

F. NARRATIVE/REMARKS/COMMENTS

Field exam completed by IDWR in 2008. Also acquired field notes from IDEQ exam completed in 2004. Single ground water well. 7.5 hp pump. Static water level in well = 225 feet. Water open discharges into a 26,000 gallon storage tank. Water distributed to homes from storage tank at about 60 psi.

Original water system was built in the mid 1970s. Permit application was not filed until 1988. Subdivision includes 101 lots. Only 35 homes have been built so far. There is no record at IDEQ or otherwise showing the make-up of the 1970s water infrastructure. The homeowners association does not even have a map of the original system. In recent years, large sections of the main system have been replaced. The excavated old pipe indicates that the original system included connections to every subdivision lot. Because there is no map of these connections, however, they are very difficult to find. Most people simply construct a new connection to the main pipe using modern materials. All lots are fronted by the main water line.

Because the subdivision lots are small, some people have purchased two lots and combined them into a single cabin use. Six property owners have made this type of consolidation. Further, no home will be built on the well lot. Therefore, the total number of homes that can be built should be reduced to 94 homes. Some of the lots use outside water. Based on the smaller lots, I have assumed an average outside use of 1/4 acre per lot.

Have conditions of permit approval been met? __X__Yes _____No

G. RECOMMENDATIONS

1. Recommended Amounts

BENEFICIAL USE	PERIOD OF USE	DIVERSION RATE	ANNUAL VOLUME
DOMESTIC	01/01 to 12/31	0.200 CFS	84.6 AF
	Totals:	0.200 CFS	84.6 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 ___Other

H. AUTHENTICATION

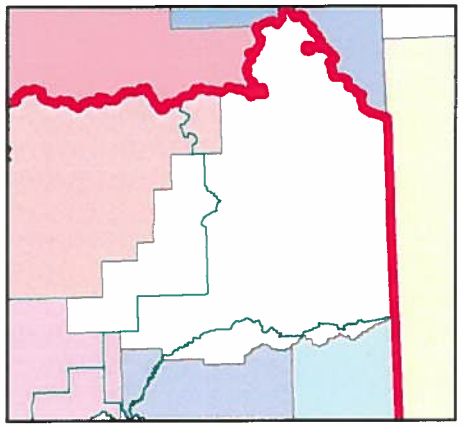
Field Examiner's Name Dave Carlson Date Feb 2013

Reviewer_____ Date_____

Idaho Department of Water Resources

Water Right
21-7390
(DOMESTIC)

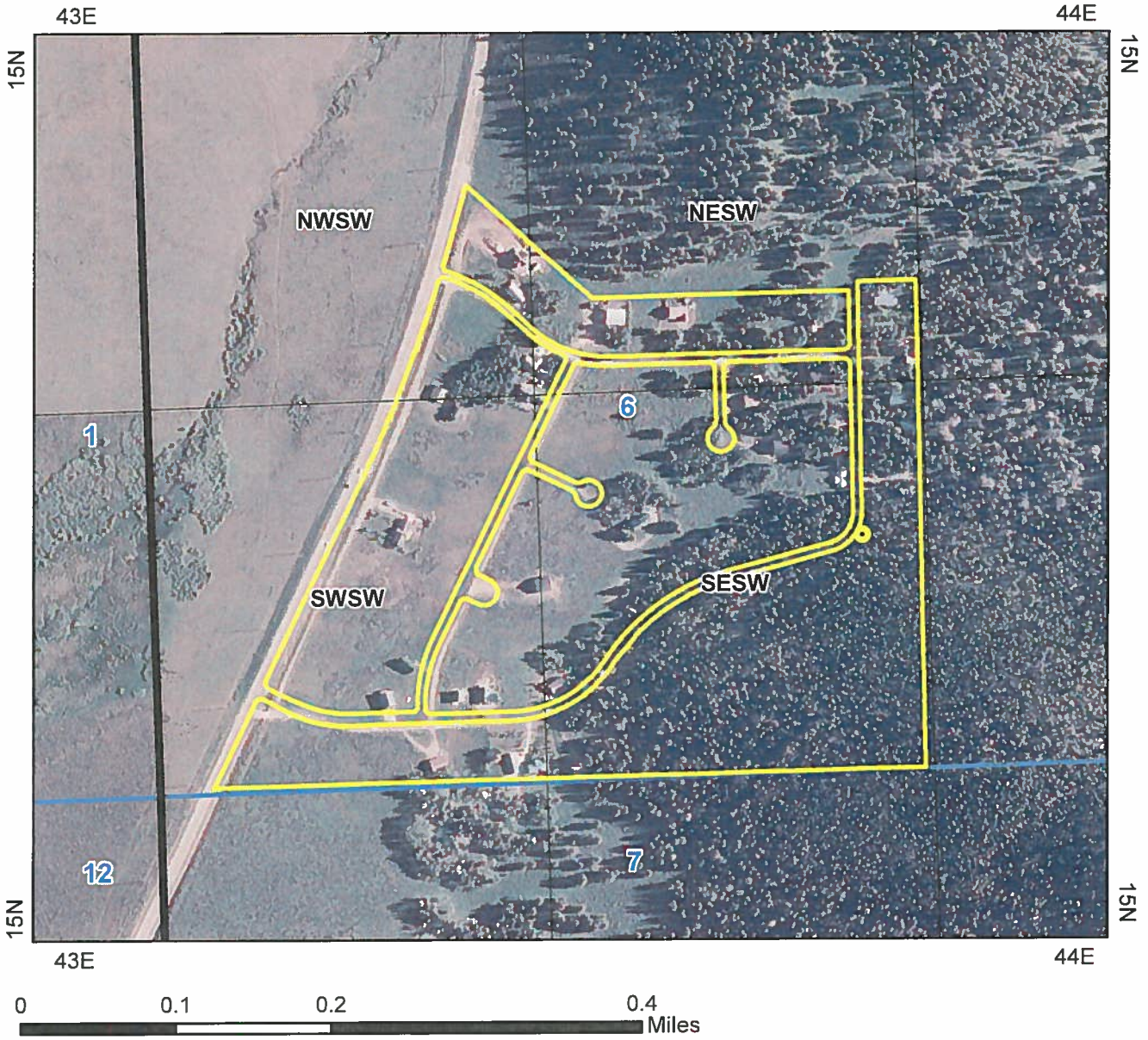
- Point of Diversion
- Place of Use
- State Outline
- Townships
- PLS Sections
- Quarter Quarters

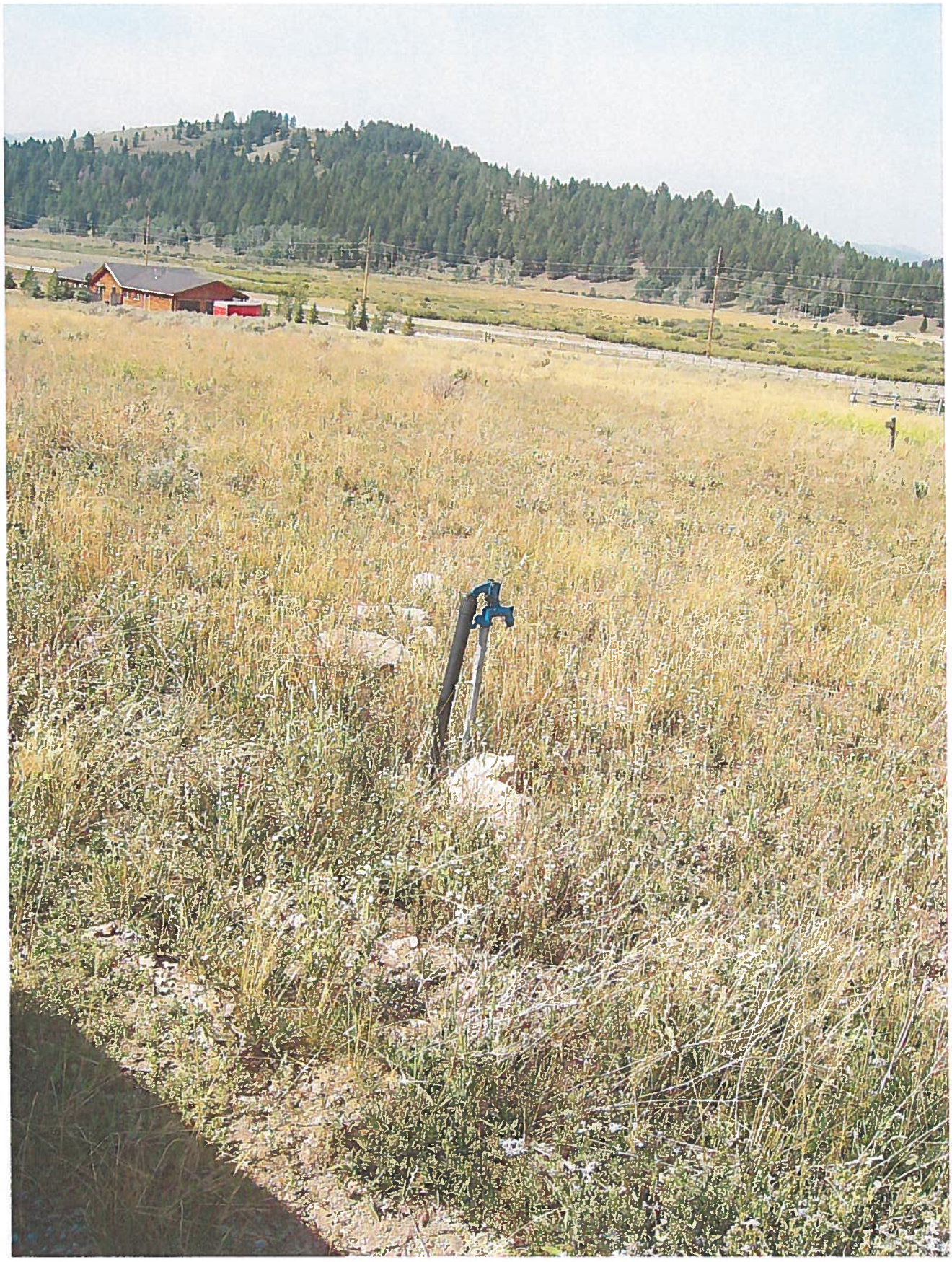


Fremont County
IDWR Basin 21

Prepared by Carlson, Dave

2009 Aerial Photography





9529
CAUTION
HIGH VOLTAGE POWER CABLES
IF OPENED OR DAMAGED CALL
FALL RIVER RURAL ELECTRIC
PHONE 208-652-7431

State of Idaho Public Water System Enhanced Sanitary Survey

WATER SYSTEM INVENTORY INFORMATION

SURVEY DATE: 27 May 04 (mm/dd/yyyy) | PWS #: 7220011

Name of Public Water System: **Bighorn Hills Property Owners**

No. of Groundwater Sources: 1 | No. of Surface Sources: None | No. of Storage Facilities: One | Total Storage: 26,000 Gallons

Date of Last Survey: 10/07/1998

Health District: ☐ N/A — Health District Seven

DEQ Region: ☐ N/A — IFRO

County: Fremont

Number of Service Connections: 20

Residential Population: 30

Status: ☑ Approved ☐ Disapproved

Water Purchased From: ☑ N/A — Name: — PWS No.:

Water Sold To: ☑ N/A — Name: — PWS No.:

Owner Type: Private

Service Category: HA; OT

☐ Community Water System
☐ Nontransient Noncommunity
☑ Transient Noncommunity - TNC

Combined Source? ☐ Yes ☑ No — If yes, ☐ Well Fields ☐ Manifolds

System Certification Class: N / A

Seasonal Operation Dates: ☑ N/A — Date Open: — Date Closed:

Responsible Person In Charge (RIC): (Identify Operator here for TNC PWS)

☑ Mr. ☐ Ms. Ray Finch

RIC Properly Certified? ☐ Yes ☐ No ☑ N/A-TNC — Certification Level: ☑ N/A

Mailing Address: 4216 Mountain View Drive

City, State, Zip Code: Island Park ID 83429

Telephone: Day: (208) 754-8182 Night: (208) 558-9269 Fax:

E-mail:

Substitute (RIC): ☑ No Sub. RIC Identified (N/A for TNC PWS)

☐ Mr. ☐ Ms.

Sub.RIC Properly Certified? ☐ Yes ☐ No ☑ N/A-TNC — Certification Level: ☑ N/A

Mailing Address:

City, State, Zip Code:

Telephone: Day: Night: Fax:

E-mail:

Legal Owner's Name:

☑ Mr. ☐ Ms. Bighorn Hills Property Owners

Mailing Address: P. O. Box 39

City, State, Zip Code: Lewisville ID 83431

Telephone: Day: (208) 785-4686 Night: (208) 785-4686 Fax:

E-mail:

Personnel present during evaluation:

Name: John Moss — Title: Senior EHS

Name: Ray Finch — Title: Owner / Operator

Name: — Title:

Physical location of the PWS (Township, Section, Range): T 15 N; R 44 E; Section 6 NE SW

Samples taken at the time of survey by inspector?
☐ Yes ☑ No
If yes, what:

Survey performed by:
Name: John Moss
Title: Senior EHS
Phone #: (208) 523-5382

Agency:
☐ IDEQ
☑ Health Dept.
☐ Other:_____

General Information

yes	no	n/a	unk	note	
☐	☑	☐	☐	☐	1. Have there been any interruptions in service during the past year?
☐	☑	☐	☐	☐	2. Have modifications been made to the PWS since the last ESS?
☐	☐	☑	☐	☐	3. If yes, are the modifications considered to be significant?
☐	☐	☑	☐	☐	4. If yes, were plans and specs submitted to and approved by DEQ?

Comments:

Sanitary Survey Index

Modules used:

- ☑ General Information
- ☑ Groundwater Source
- ☑ Storage
- ☐ Hydropneumatic Tanks
- ☑ Distribution
- ☐ Pumping
- ☑ Financial Capacity
- ☑ Managerial Capacity
- ☐ Disinfection
- ☐ Chemical Application
- ☐ Treatment - Softening
- ☐ Treatment - Iron & Manganese
- ☐ Waste Handling and Disposal
- ☐ Treatment - Taste and Odor
- ☐ Notes
- ☑ Photo Log and Photos

SANITARY SURVEY INVESTIGATION AND ANALYSIS

Sources of Information

- Mr. Ray Finch
- Field Investigation by John Moss

1. Groundwater Source

- Water for this PWS is currently obtained from a single groundwater source by means of a single well. There is a tag number on the well, tag No. E 0006537. The wellhead is located approximately 10 feet up the hill (south) from the main road in the subdivision. The homes in the subdivision are the only service connections. No other facilities in the area obtain water from this source. There is a copy of the well log in the system file at HD 7. A search of the IDWR database was successful in finding this log.

- The well is equipped with a submersible pump that pushes the water further uphill another 200 feet to the concrete storage tank. The overall integrity of the well is satisfactory and operation has been adequate to meet the needs of the homes. The wellhead seal was in place and firmly attached, however it has a large crack along the side. The wellhead is not vented. At the time of the survey, the well was delivering adequate pressure to the storage tank to keep it full; however, there is no pressure gauge between the well and the tank indicating pressure. The tank is delivering 60 psi to the distribution system as measured by the inspector at the Finch home. The distribution system from the tank operates by gravity flow. No flow meter or pressure gauge is installed in the line after the tank.

- The land use surrounding the wellhead is dirt, pine tress, grass, shrubbery, and the gravel road. The surrounding area is clean and neat with no evidence of potential contaminants in the vicinity. The terrain grade in the vicinity is adequate to prevent flooding around the wellhead and the tank.

- Under the federal surface water treatment regulations, all groundwater sources serving public drinking water systems must be evaluated to determine if they are directly influenced by surface water or at risk with regards to giardia, cryptosporidium, or other microbial contamination. The Ground Water Under Direct Influence (GWUDI) assessment was conducted on this system on 7 October 1998. The results of this analysis indicated that the well in this system is classified as groundwater.

- Deficiencies noted: The sanitary seal at the top of the well casing has a large open crack around the edge. The crack must be sealed as soon as possible to prevent possible contamination of the well. The seal may be replaced, or use a high grade exterior caulking on the existing cap.

- Recommendations: None.

2. Disinfection

This PWS has no disinfection system installed.

3. Treatment

There are no treatment systems installed.

4. Storage

Water is delivered from the well by means of the submersible pump in the well uphill approximately 200 feet to a 26,000 gallon concrete storage tank. The tank is structurally sound with no evidence of leaking or damage. The access hatch on top was firmly held in place by a chain and lock. It is properly equipped with a valve for dumping to waste.

- Deficiencies: None
- Recommendations: None

5. Distribution

The visible distribution system between the well, the storage tank, and downhill to the homes consists of steel galvanized pipe. The system is gravity flow from the tank down to the homes. No leaks or structural problems were noticed, and the distribution system is providing adequate pressure for the demand of the homes.

- Deficiencies: None
- Recommendations: None

6. Pumping Data

There is a submersible pump in the well for pushing the water further uphill to the storage tank. It is maintaining adequate pressure to the system.

- Deficiencies: None
- Recommendations: None

7. Financial Capacity

Fees for the system are current. Adequate resources are available to operate and maintain the system properly.

- Deficiencies: None
- Recommendations: None

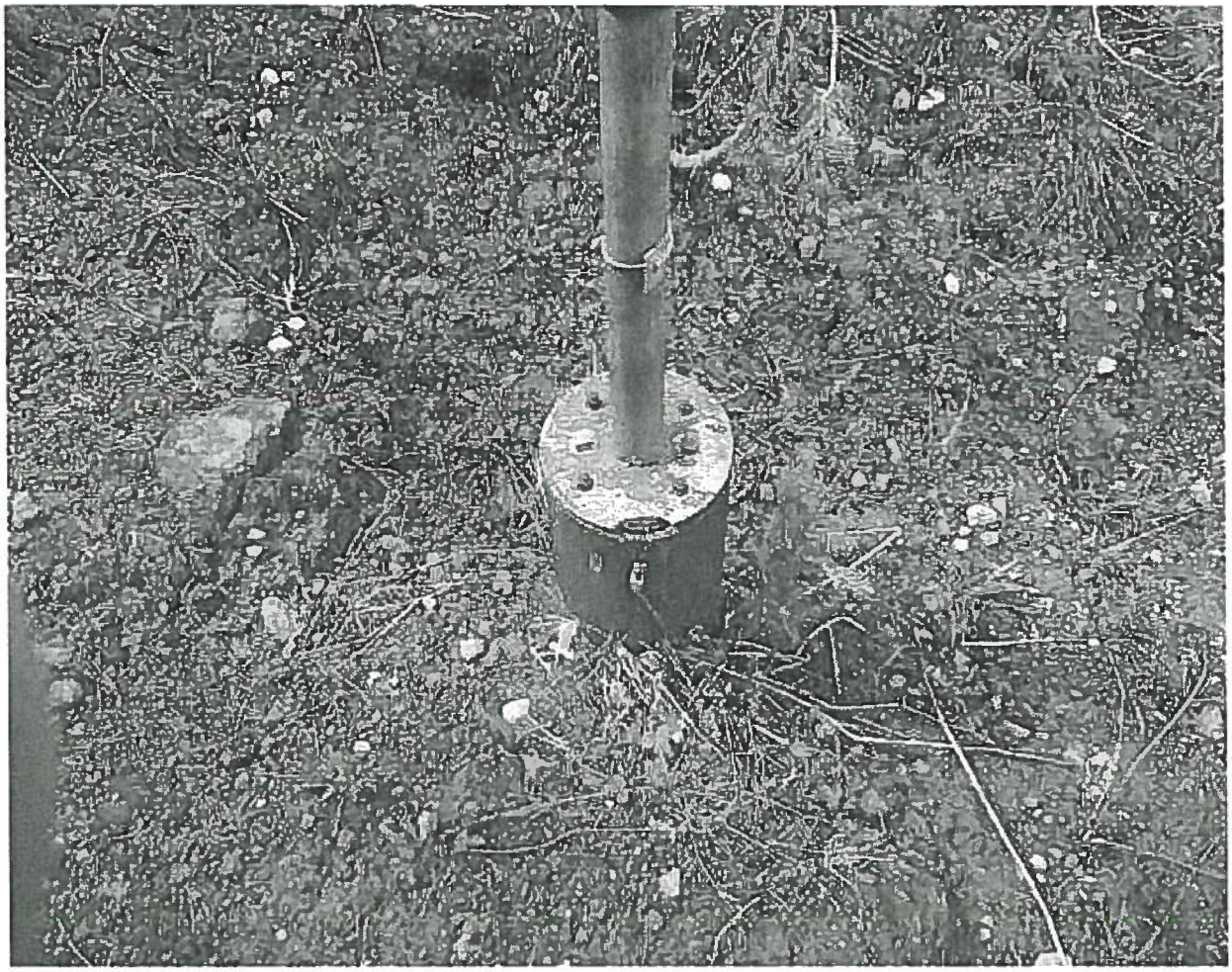
8. Managerial Capacity

The system is in large measure operated and maintained properly. The owner / operator is substantially knowledgeable and committed to properly operating the system and protecting the public health.

- Deficiencies: None
- Record keeping is satisfactory.
- Recommendations: None

Attachments

1. State of Idaho Public Water System Sanitary Survey Checklist
2. Photographic Log



Picture No. 2; Wellhead with tag with open seal (crack).

Picture No. 3; Wellhead with tag with open seal (crack).

Picture No. 4; Storage tank.

Picture No. 6; Pump to waste plug.

Form 238-7
9/82

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

USE TYPEWRITER OR BALLPOINT PEN

WELL DRILLER'S REPORT

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.

1. WELL OWNER

Name Jack Randall and John Bowen

Address Bowen Music Store: Rexburg, Idaho

Owner's Permit No. _____

2. NATURE OF WORK

☑ New well ☐ Deepened ☐ Replacement
☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

3. PROPOSED USE

☑ Domestic ☐ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

4. METHOD DRILLED

☑ Rotary ☐ Air ☐ Hydraulic ☐ Reverse rotary
☐ Cable ☐ Dug ☐ Other _____

5. WELL CONSTRUCTION

Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____

Thickness	Diameter	From	To
.250 inches	8 inches	+ 1 feet	26 feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet

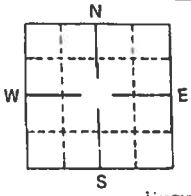
Was casing drive shoe used? ☐ Yes ☒ No
Was a packer or seal used? ☐ Yes ☒ No
Perforated? ☐ Yes ☒ No
How perforated? ☐ Factory ☐ Knife ☐ Torch
Size of perforation _____ inches by _____ inches

Number		From	To
_____	perforations	_____ feet	_____ feet
_____	perforations	_____ feet	_____ feet
_____	perforations	_____ feet	_____ feet

Well screen installed? ☐ Yes ☒ No
Manufacturer's name _____
Type _____ Model No. _____
Diameter ___ Slot size ___ Set from _____ feet to _____ feet
Diameter ___ Slot size ___ Set from _____ feet to _____ feet
Gravel packed? ☐ Yes ☒ No ☐ Size of gravel _____
Placed from _____ feet to _____ feet
Surface seal depth 19 Material used in seal: ☐ Cement grout
☑ Bentonite ☐ Puddling clay ☐ _____
Sealing procedure used: ☐ Slurry pit ☐ Temp. surface casing ☐ Overbore to seal depth
Method of joining casing: ☐ Threaded ☐ Welded ☐ Solvent Weld ☐ Cemented between strata
Describe access port _____

6. LOCATION OF WELL

Sketch map location must agree with written location.



Subdivision Name _____

Lot No. _____ Block No. _____

County Fremont

¼ ¼ Sec. 6, T. 15 N/S, R. 44 E/W.

7. WATER LEVEL

Static water level 225 feet below land surface.
Flowing? ☐ Yes ☐ No G.P.M. flow _____
Artesian closed-in pressure _____ p.s.i.
Controlled by: ☐ Valve ☐ Cap ☐ Plug
Temperature _____ °F. Quality _____
Describe artesian or temperature zones below.

8. WELL TEST DATA

☐ Pump ☐ Baller ☐ Air ☐ Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped

9. LITHOLOGIC LOG

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
8	0	5	Topsoil		
	5	18	Clay and Boulders		
	18	75	Yellow Shale		
	75	85	Brown Shale		
	85	100	Firm Brown Shale		
	100	110	Firm Yellow Shale		
	110	120	Firm Brown Shale		
	120	190	Yellow Shale		
	130	205	Firm Brown Shale		
	205	210	Green Firm Shale		
	210	260	Broken Green Shale	X	
	260	275	Firm Green Shale	X	
	275	300	Broken Green Shale	X	
	300				

RECEIVED
JUN 12 1989
Department of Water Resources

10.

Work started June 4, 1973 finished July 7, 197

11. DRILLERS CERTIFICATION

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

Firm Name Andrew WELl Drilling Firm No. 5

Address 1268 E. 17th Street
Idaho Falls, Idaho 83401

Signed by (Firm Official) _____ AUG 02 1989

and

(Operator) _____

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT