

Permit No: 63-11185

field
8/23/2004
rw

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STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-11185

Exam Date: 7/3/1991

1. Current Owner: SETTLERS IRRIGATION DISTRICT
PO BOX 7571
BOISE ID 83707
(208)344-2471
2. Accompanied by: Nathan Draper
Phone No: (208) 344-2471-office (208) 870-6509-Cell
Address: SAME AS APPLICANT
Relationship to Permit Holder: IRRIGATION DISTRICT MANAGER

3. SOURCE TRIBUTARY
GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: SETTLER IRRIGATION DISTRICT RIGHTS AND SEVERAL INDIVIDUAL SUPPLEMENTAL WATER RIGHTS FOR INDIVIDUAL USERS.
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 NE1/4SE1/4NE1/4 Sec. 28, Twp 04N, Rge 01W, B.M.
ADA County

Method of Determination:

2.

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
04N	01W	20															18.1	37.4	55.5
04N	01W	21									26.8	38.9	38.3					37.8	141.8
04N	01W	28	12.9	37.7	39.6	5.7	38.6	30.5	10.0	28.4					7.9				211.3

Total Acres: 408.6

Please Note: This license is limited to 352 acres within the above-described permissible place of use.

Method of Determination:

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.
4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
P/D WELL	BERKELEY	15	#8T15-725	BERKELEY	#8T15-725

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

D. FLOW MEASUREMENTS

1.

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

2. Measurements:

Used pump curve to calculate flow rate.**E. FLOW CALCULATIONS**YES Additional Computation Sheets Attached

Measured Method:

Pump Curve → 700 gpm or 1.56 cfs
 Permit Limit → 1.00 cfs or 448.8 gpm
 Use permit limit for licensing.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 352 \text{ acres} \times 4.5 \text{ afa} = 1584 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 1.00 \text{ cfs} \times 260 \text{ days} \times 1.9835 = 515.7 \text{ afa}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 515.7 \text{ afa}$$

2. Volume Calculations for Other Uses:

NONE

G. NARRATIVE/REMARKS/COMMENTS

I was asked to complete this exam originally started by Sara West. A second review of the site was needed.

The water for this permit is diverted from a 15 inch well located on the north side of a private lane in the NESENE of S28 T4N R1W. The water is open discharged into the McMullen Lateral. The water from this point flows westward to a series of ditches and laterals that supply water to 408.6 acres on the west end of the Settlers Irrigation District system (please see system diagram). The well was developed to alleviate drainage problems in the area. A permit was filed for this well in May of 1963 to ensure the water users at the end of the system received their full supply of water. Proof of beneficial use was never filed on the earlier permit, but the well has been used as needed since that time.

There was some confusion during the processing of this permit regarding the number of acres this system served and the diversion rate of the pump. It seems as though the diversion rate was reduced below the pump capacity after IDWR staff questioned the capacity. The acre amounts were also reduced. The permit does not seem to have been filed to the capacity of the irrigation districts system or the capacity of the well. Therefore, I have proposed to the irrigation district that we license this right for the amount requested under this permit of 1.00 cfs and 352 acres within the 408.6 acre permissible place of us. Since the well drilled and the irrigation use started in 1963, I have recommended that the irrigation district file for another permit to cover the remaining well capacity of 0.56 cfs and to cover the entire 408.6 acres where the well water can be used. This will allow them to use the full capacity of the system. A new application can be filed on this system, since it was developed prior to 1987.

There are several overlapping water rights under Settlers Irrigation District's portfolio of water rights. Most of these rights are from surface water sources and should not affect the licensing of this water right. There are several other supplemental water rights owned by individual landowners to supplement the Settlers Irrigation District water. None of these rights should affect the licensing of this permit. This permit is only used when Settlers is delivering water through their canal system, so the well is not used once their full delivery of the surface water has been accomplished. Therefore, the individual supplemental rights would not generally be in use while Settler's well is in operation.

I recommend that this applicant be licensed with the condition that they use the full allocation of surface water when available prior to using this well. The well can only be used when the system cannot supply a full allocation of surface water to the lands described in this permit. This well can only supply water to the 408.6 acres described above. Therefore, it should be limited directly to those acres and not be moved unless a formal transfer has been filed. When combined with all other water rights, this right should be limited to 0.02 cfs and 4.5 afa at the field headgate.

Have conditions of permit approval been met? X Yes No

A cipoletti weir is available for measurement when needed. Due to power demand charges it was not reasonable to ask the permit holder to turn on the pump at this time for a measurement.

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	04/01 to 11/01	1.000 CFS	515.80 AF
<u>Totals:</u>		1.000 CFS	515.80 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

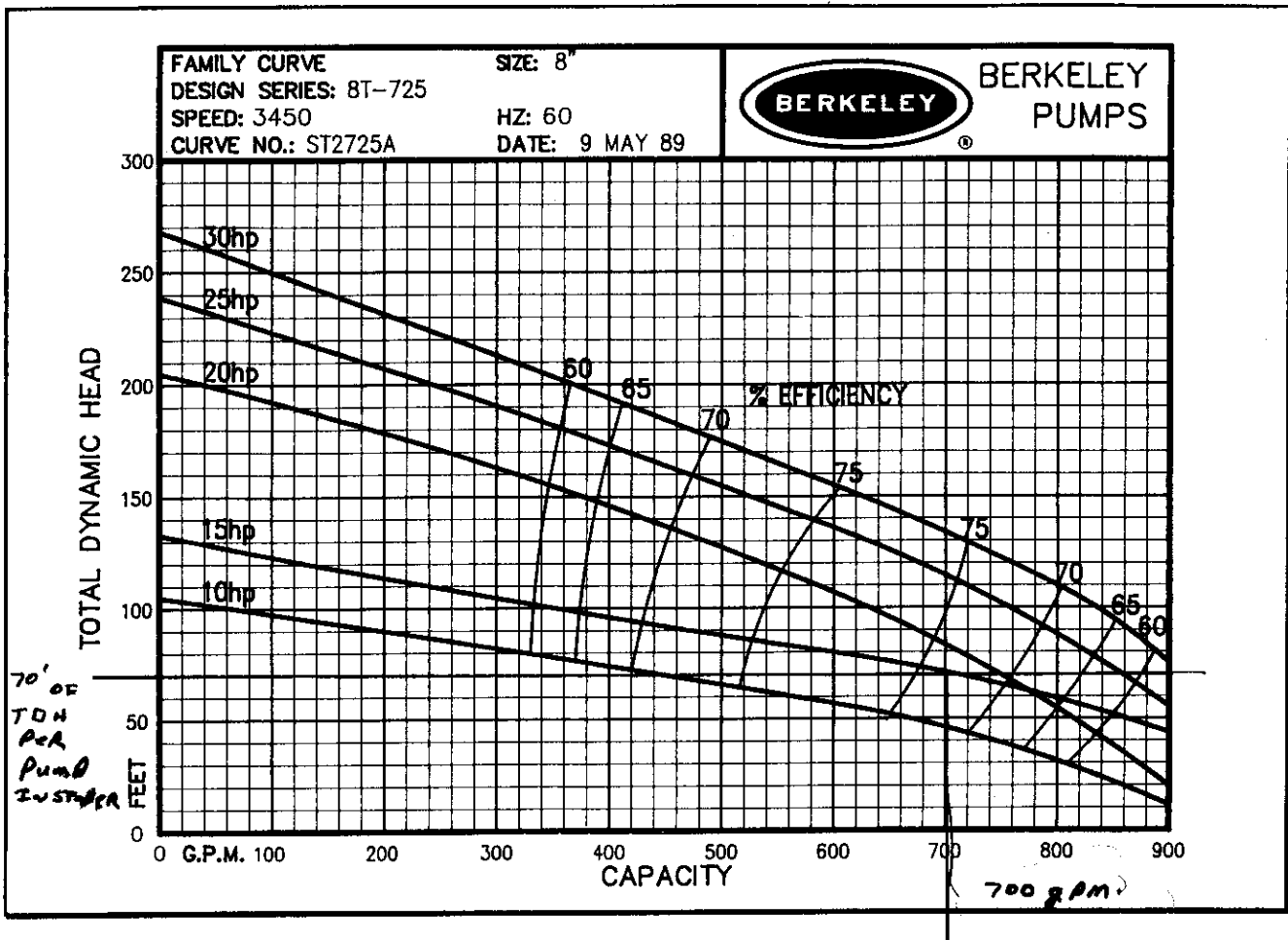
I. AUTHENTICATION

Daniel A. Nelson

Field Examiner's Name *Daniel A. Nelson* Date *7-27-04*

Reviewer _____ Date _____

Submersible Turbine Model 8T-725



Specifications

LIQUID END WEIGHTS

DESCRIPTION	WEIGHT LBS.	HP RATING	MOTOR FLANGE
ONE STAGE L.E.	107.5	10-30	6"
ONE STAGE L.E.			
ONE STAGE L.E.			
EACH ADDED STAGE	29.0	ALL	ALL

CURVE No. ST2725A

IMPELLER DATA

TYPE: ENCLOSED EYE AREA 12.14 Sq. In.
 THRUST CONSTANT K 4.65 Lbs./Ft of HEAD.

HP	IMPELLER No.	STAGES	IMPELLER Dia.
30	P5-34D	2	5.32"
25	P5-34DC	2	5.07"
20	P5-34DB	2	4.73"
15	P5-34D	1	5.32"
10	P5-34DB	1	4.73"

OUTLINE DIMENSIONS

A- ONE STAGE LIQUID END LENGTH
 B- SUCTION CONNECTION LENGTH
 C- STAGE LENGTH
 D- DISCHARGE CONNECTION LENGTH
 E- BOWL DIAMETER
 F- DIAMETER ACROSS LEAD GUARD

BOWL DATA

BOWL No. P101-50 PUMP SHAFT Dia. 1 1/4"
 TYPE: THREADED DISCHARGE SIZE 6" NPT

NOTE: For each additional stage add 'C'

A	B	C	D	E	F	HP RATING	MOTOR FLANGE
35.00	13.38	6.75	8.12	7.38	7.94	10-30	6"

890509

INVOICE



CARON PUMP COMPANY

11026 CULDESAC WAY
BOISE, ID 83703
PH. (208) 939-9198

DATE	INVOICE #
03/31/04	10564

BILL TO:

SETTLER'S IRRIGATION DISTRICT
1910 N. GARDEN ST.

Boise, ID 83706

P.O. NUMBER	TERMS	PROJECT

QUANTITY	DESCRIPTION	RATE	AMOUNT
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PER MR. NATHAN DRAPER
C/O **BLACK CAT PUMP STATION - 5865 BLACK CAT RD.**
RE: NEW 15 HP., PUMP AND MOTOR

THIS WELL IS: 15" X 88' DEEP, STATIC WATER LEVEL IS AT 15' AND THE PUMP IS SET ON 84' OF 6" PIPE.

WE PULLED UNIT OUT OF WELL AND FOUND A BAD PUMP, MOTOR AND PIPE. THE EQUIPMENT NEEDS TO BE REPLACED.
WE CAME BACK AND REINSTALLED NEW EQUIPMENT, STARTED SYSTEM AND FOUND PUMP WORKING GOOD.

- 1 - BERKELEY #8T15-725 PUMP END
THIS PUMP WILL PRODUCE; 700 GPPM FROM 70' @ 74% EFFICIENCY
- 1 - FRANKLIN 15 HP., 460 VOLT, THREE PHASE MOTOR
- 1 - 84' OF 6" T & C PIPE
- 1 - 95' OF #10-4 HEAVY DUTY FLAT JACKET SUB. WIRE
- 1 - WATER TIGHT WIRE SPLICE KIT
- 4 - ROLLS OF 2" PIPE WRAP
- 1 - LABOR TO PULL, PLUMB AND WIRE EQUIPMENT

*pump
84*

TOTAL COST OF PROJECT - PER QUOTE \$4,238.00

Balance Due: 4,238.00

*V# 3730
4/5/04*

TOTAL

IDAHO DEPARTMENT OF WATER RESOURCES

WELL INSPECTION FORM

1. DRILLING PERMIT NO: UNKNOWN OTHER APPLICABLE NO: 63-11185
870-6509 Cell
2. OWNER: SETTLERS IRRIGATION DIST Phone: 344-2471 OFFICE
Address: P.O. BOX 7571, Boise ID 83707
3. WELL LOCATION: Twp 4N, Rge. 1W, Sec. 28, SE 1/4 NE 1/4
County ADA (Provide sketch map and photo on reverse.)
4. DRILLER: UNKNOWN (well log not legible) Lic. No. _____
When Drilled? JUNE 14, 1963
5. WELL CONSTRUCTION:
Casing Diameter 15 inches Water tight cap? [☒] Yes [☐] No Access Port: [☒] Yes [☐] No
Casing ≥ 12 inches above ground? [☒] Yes [☐] No - Describe _____
Depth of Casing unknown ft. Method Drilled UNKNOWN
Condition of Well Casing: [☐] Good [☒] Fair [☐] Poor Describe VERY OLD well - casing BEGINNING TO RUST
Control Valve? [☒] Yes [☐] No Pressure Gauge: [☐] Yes [☒] No
Condition of Piping and Valving OK
Auger to a depth of 0 ft. Evidence of Annular Seal [☐] Yes [☒] No
Are there obvious construction problems that may be a source for contamination or waste of water?
[☐] Yes [☒] No (Describe in Remarks and Attach Photo - On Reverse)
6. HYDROLOGIC INFORMATION:
Depth to Static Water 15 ft. Water Temperature UNKNOWN °F
Flowing Artesian [☐] Yes [☒] No Pressure: N/A (psi)
Water Sample Taken? [☐] Yes [☒] No If yes, describe purpose _____
Water Quality Measurements/Observations (Describe) _____
7. WELL USE:
[☐] Domestic [☒] Irrigation [☐] Stock
[☐] Test [☐] Municipal [☐] Industrial
[☐] Abandoned [☐] Waste Disposal/Injection [☐] Not Used
[☐] Other: _____

8. POSSIBLE CONTAMINATION SOURCES:

Is there evidence of Chemigation? ☐ Yes ☒ No

If yes, is there a check-valve present? ☐ Yes ☒ No

Is there a possible source of contamination nearby? ☐ Yes ☒ No

If yes, what Type? _____

How far away from the well is this source? _____

9. REMARKS:

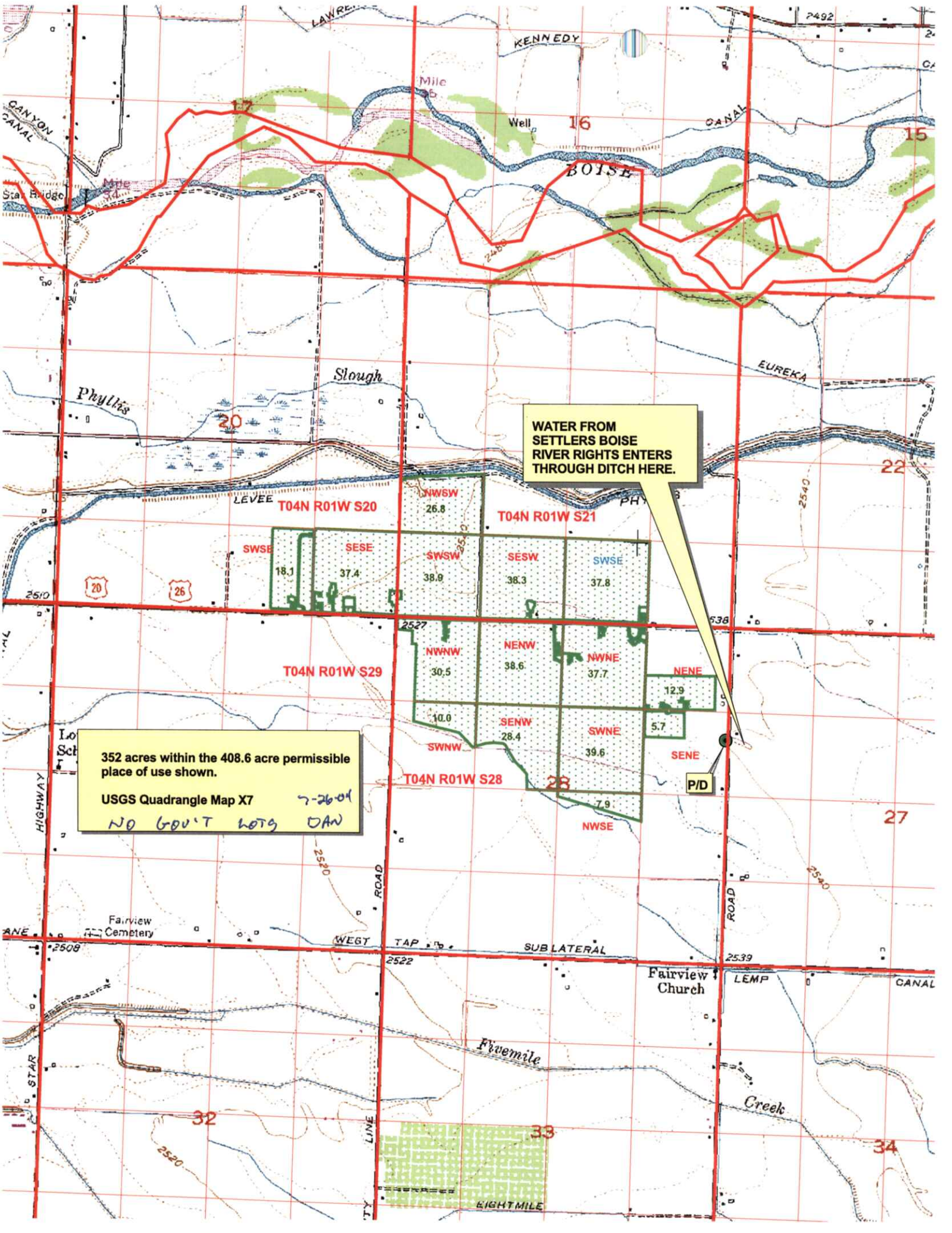
This is an older well with very little information available. This well was originally in a well house. There was a cement pad around the well in the 1990's. The cement has broken away around the well casing and the well house is no longer there. Although everything looks alright now - ~~there is~~ I am concerned of how the well hold up in the future.

Daniel A. Nelson 7-15-04
Signature of Dept. Representative & Title

7-15-04
Inspection Date

PHOTOS, DRAWINGS, OTHER ATTACHMENTS:

See Field Exam Pictures.



WATER FROM
SETTLERS BOISE
RIVER RIGHTS ENTERS
THROUGH DITCH HERE.

352 acres within the 408.6 acre permissible
place of use shown.
USGS Quadrangle Map X7 7-26-04
NO GOV'T LOTS DAW

WATER FROM
SETTLERS BOISE
RIVER RIGHTS ENTERS
THROUGH DITCH HERE.

352 acres within the 408.6 acre permissible
place of use shown.

1992 aerial photo X7 DOQ

T04N R01W S20

NWSW
26.8

T04N R01W S21

SWSE
18.1

SESE
37.4

SWSW
38.9

SESW
38.3

SWSE
37.8

T04N R01W S29

NWNW
30.5

NENW
38.6

NWNE
37.7

NENE
12.9

10.0

SESW
28.4

SWNE
39.6

5.7

T04N R01W S28

SWNW

SENE

P/D

7.9

NWSE

WATER FROM
SETTLERS BOISE
RIVER RIGHTS ENTERS
THROUGH DITCH HERE.

IRRIGATION DELIVERY SYSTEM

1992 AERIAL PHOTO

P/D



PHOTOGRAPHER AND DATE OF PHOTOS DANIEL A NELSON 7/27/2004

FILE NUMBER 63-11185



This is a current view of the well. The well house is no longer standing.



↓
open discharge
(see next pic.)

PHOTO ONE--

↑ well



PHOTO TWO--



pump control box

PHOTO THREE-



(well)
pump house

→ well

PHOTO FOUR-



Cipolletti
→ weir

≈ 100' from P/d

PHOTO FIVE-



→ P/u

≈ 1/8 mi.
from P/d

PHOTO SIX-



Phyllis

T- Canyon
3.3 1986

HWY 26

Not To Scale

B6

T651

7653

T652

2.9 +

10. 101

NW

HEL

2
26.0

34

38.
44

T654

T6602

T644

308

2.2

A/E

175

HEL

10

3

230

367

T646

2A
195

HEL

4

HEL

451

29	20
32	33

T692

1648

