

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 85-15342

Exam Date: June 14, 2012

1. Current Owner: COTTONWOOD CEMETERY DIST
PO BOX 336
COTTONWOOD ID 83522
(208)962-3910

2. Accompanied by: Caretaker- Lorenzo
Phone No: 983-7494 Andrew Uhlorn's phone #

3. **SOURCE**
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 SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER NW1/4NW1/4 Sec. 4, Twp 31N, Rge 01E, B.M. IDAHO County

Method of Determination: GPS

2.

<u>PLACE OF USE:</u>			IRRIGATION																
Twp	Rge	Sec	NE				NW				SW				SE				
			<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>Totals</u>
31N	01E	4						3.2											3.2
								L4											
32N	01E	32																2.0	2.0
32N	01E	33											1.4						1.4

Total Acres: 6.6

3. ☒ Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
☒ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
☒ Aerial Photo Attached (required for irrigation of 10+ acres).
☒ Photo of Diversion and System Attached

4.

<u>Well or Diversion</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>
ID No.* D0013984			15	01B19-21-0119	Goulds-70J15	

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>
Polysonic	Tyme-Flyte		150232			03-2012
Stopwatch and Storage Tank						

2. Measurements: A). I ran the polysonic for 12 minutes and collected 12 measurements during that time. B). In addition to the polysonic measurement, I observed the storage tank filling at the rate of 0.15 cfs. The tank is see-through and is marked in 200 gallon increments. I ran two measurements as described below.

E. FLOW CALCULATIONS

x Additional Computation Sheets Attached

Measured Method: A). The well produces 700 gallons over 10 minutes or 70 gpm = 0.16 cfs

B). I started the stopwatch when it hit the 1600 mark and stopped it when it hit the next increment on the tank, 1800 gallons. It took 177 seconds for the well to produce 200 gallons. My second measurement was from 1800 gallons to 2000 gallons and it took 176.7 seconds for the well to produce 200 gallons. Now I must convert that to cfs:

$$(200 \text{ gallons}/177 \text{ seconds}) \times 60 \text{ seconds/minute} = 67.80 \text{ gpm or } 0.15$$

$$(200 \text{ gallons}/176.7 \text{ seconds}) \times 60 \text{ seconds/minute} = 67.9 \text{ gpm or } 0.15$$

The second measurement method had some room for error since it was obtained by visually estimating the level in the tank. I believe that the polysonic obtained a solid measurement however this right is limited by the duty of water for 6.6 acres x 0.02 = 0.13 cfs.

F. VOLUME CALCULATIONS

- ### 1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 3af/\text{acre} \times 6.6 \text{ acres} = 19.8$$

$$V_{DB} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.13 \text{ cfs} \times 246 \times 1.9835 = 63.4 \text{ af}$$

$$V = \text{Smaller of } V_{I.B.} \text{ and } V_{D.B.} = 19.8 \text{ af}$$

2. Volume Calculations for Other Uses: NA

G. NARRATIVE/REMARKS/COMMENTS

There is a 3000 storage tank on the system that actually tops out at 2500 gallons before it begins to overflow. The water from the well comes from the bottom via a 2" pipe. Domestic use was not developed on this system.

The irrigation system is set up into 6 different zones that run one at a time. All the sprinklers on the system are Rainbird 2045A.

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>
IRRIGATION	03/15 to 11/15	0.130 CFS	19.8 AF
	Totals:	0.130 CFS	19.8 AF

2. Recommended Amendments

 Change P.D. as reflected above Add P.D. as reflected above None

 x Change P.U. as reflected above Add P.U. as reflected above Other

I. AUTHENTICATION

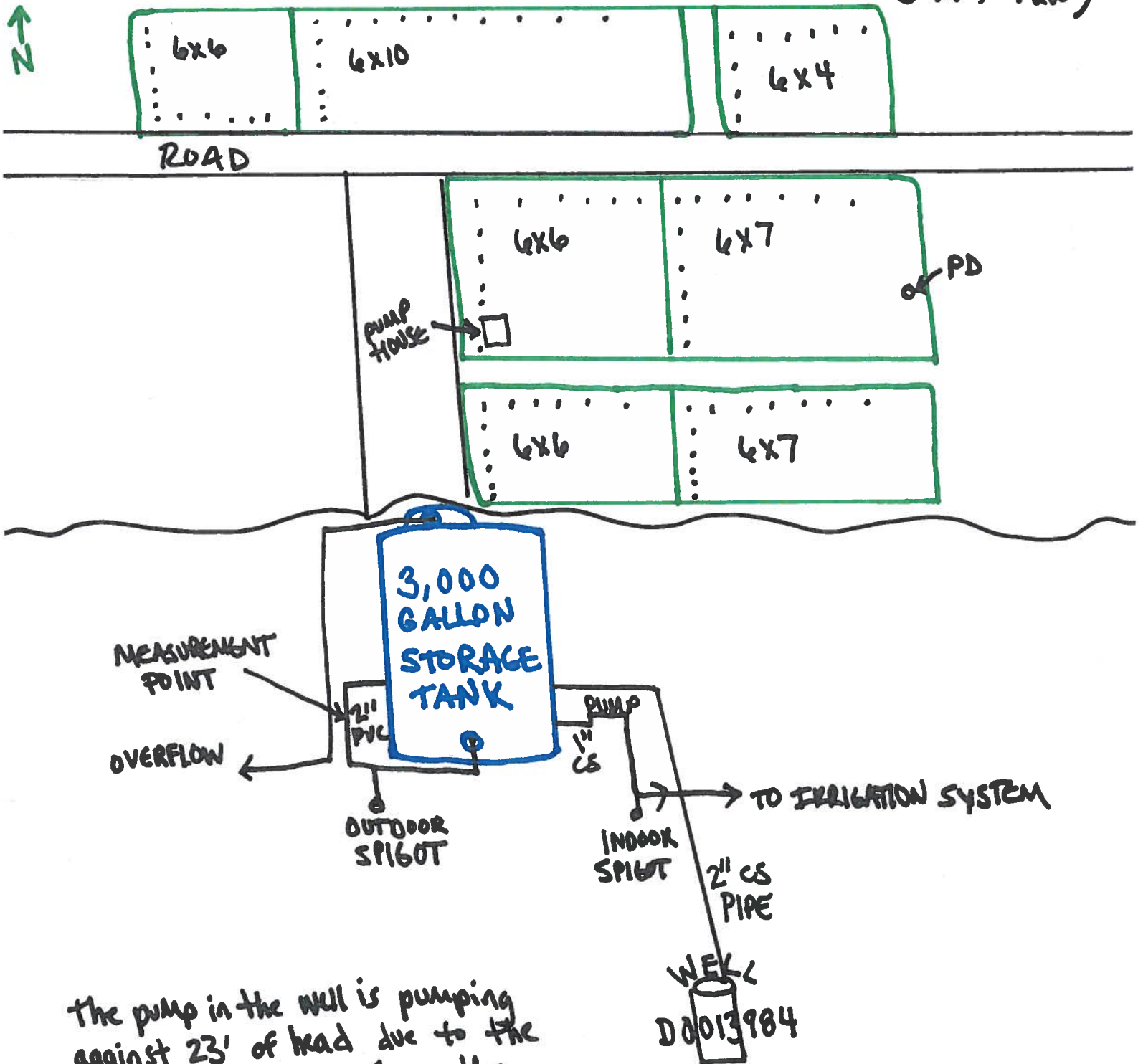
Field Examiner's Name Cheryl Kline Date 7/15/2012

Reviewer _____ Date _____

3 Attachments
#1 - polysonic tape
#2 - over lap analysis
#3 - well driller's report

Delivery System

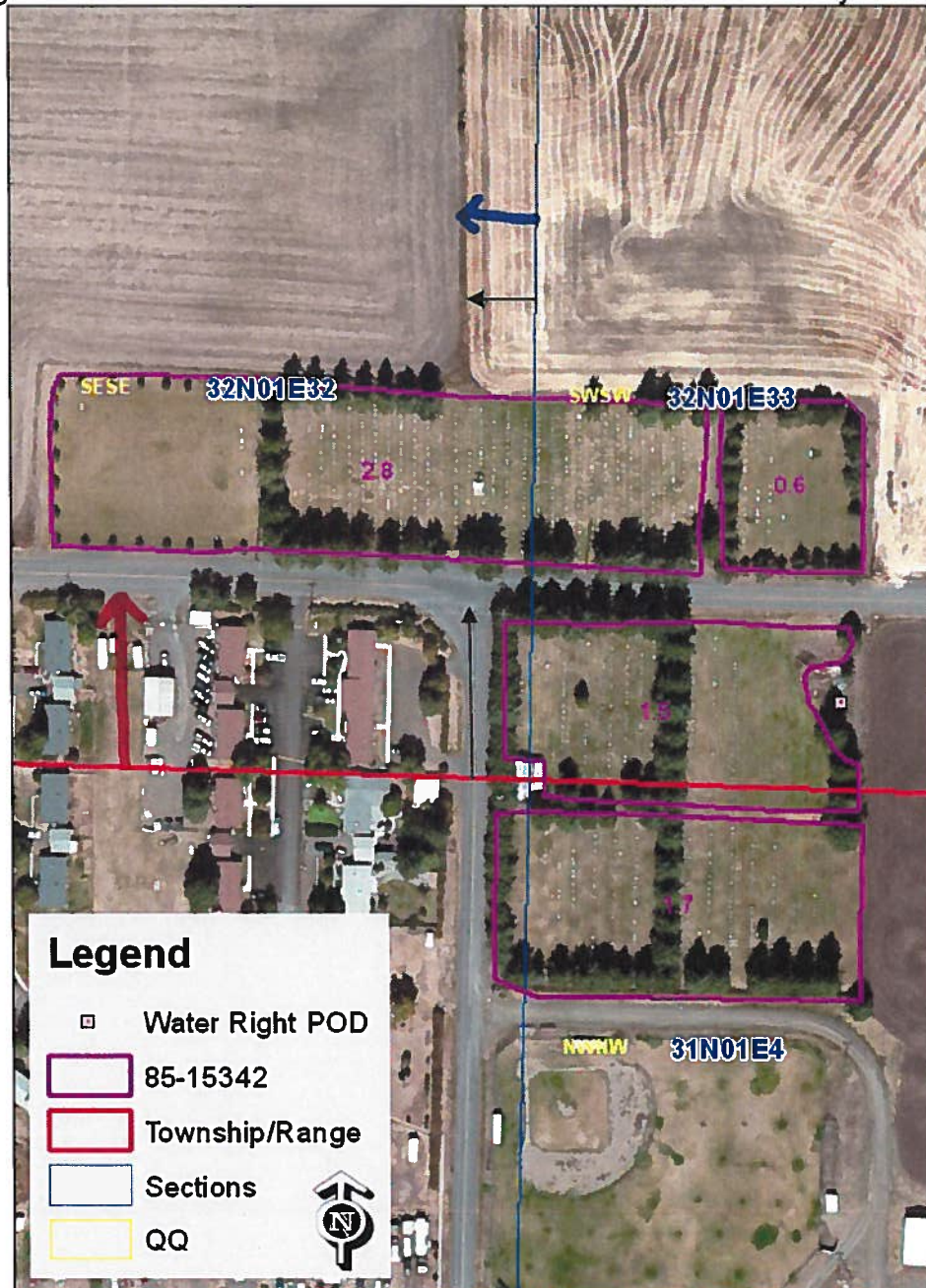
SPRINKLER system consists of 6 zones + 276 Sprinklers
(Rainbird 2045A)
(MAX-Paw)



The pump in the well is pumping against 23' of head due to the change in elevation from the well to the storage tank.

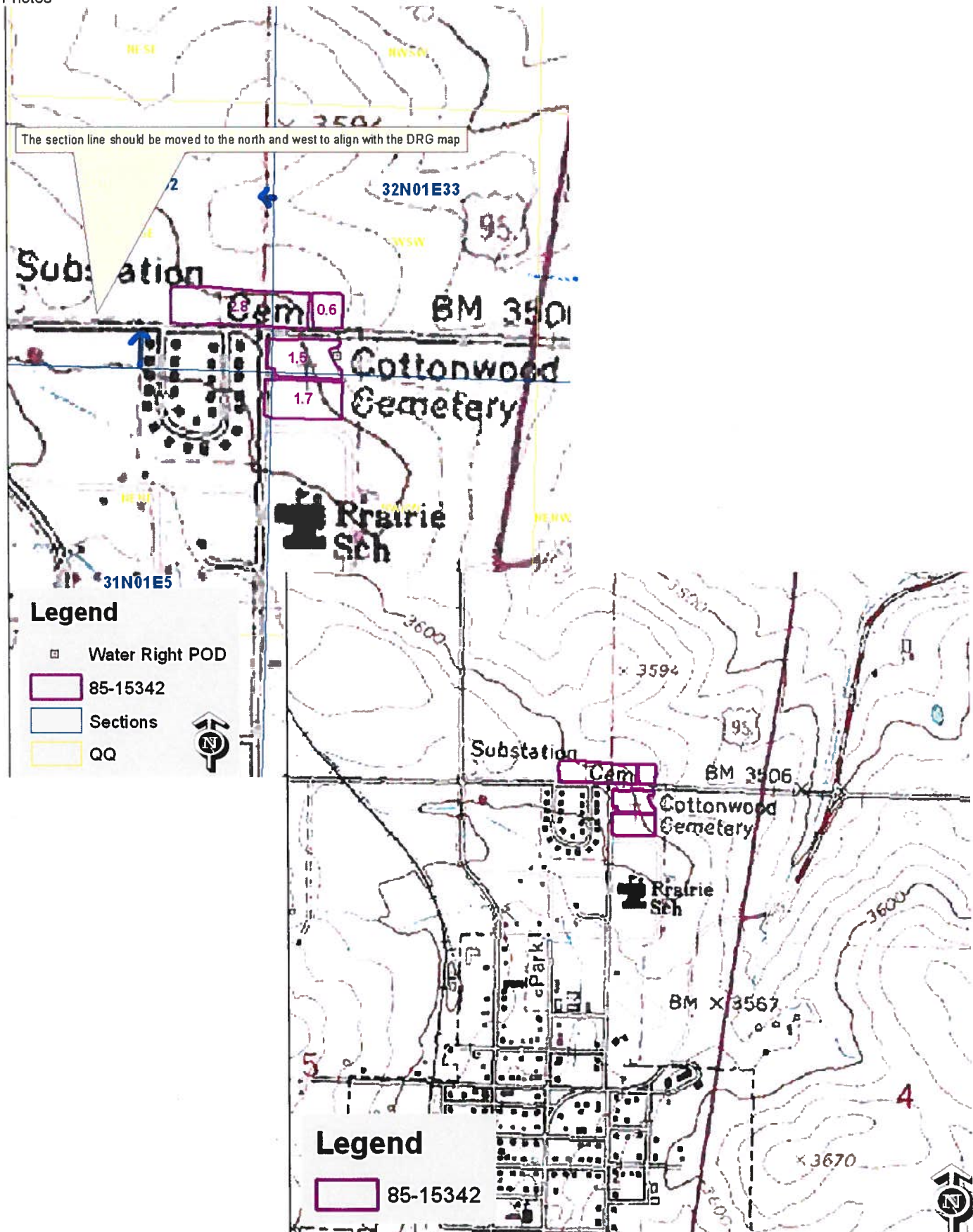
Map and Aerial Imagery

Irrigated Area for 85-15342 Cottonwood Cemetery District



I have confirmed that the PLS layer pictured here should be shifted to the NW.

Photos





PD



Well tag

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

GOULDS PUMPS

5" and Larger Submersible Pump
Installation and Operation Instructions

Dr. 1142 - Jim Ulling
Drilled -
Depth - 580'
Static - 350'
Yield - 100'
Flowing - 8"
Line -
Pump Column - 36 legs - f
2 1/2"
- 3" pitless

Pump 6-7-01 - 70 J 15 hp
600/65
480 V/15

Table of Contents

SUBJECT	PAGE
1.0 Preparing for Installation	2
2.0 Mechanical Installation	2
3.0 Electrical Instructions	3
4.0 Operate Pump	5
5.0 Literature and IOM	5
6.0 Accessories	5
Single Phase Wiring	6
Three Phase Wiring	7
Technical Data	8
Single Phase - 60 Hz Motor Specifications	10
Three Phase - 60 Hz Motor Specifications	11
Three Phase Power Unbalance	12
Troubleshooting	13
Goulds Pumps Limited Warranty	40

Owner's Information

Pump Model Number: *70J15* **480V**
Pump Serial Number: *60139049*
Motor Model Number: *3189 31-019*
Motor Serial Number: *3189 31-019*
Dealer: *Whitcomb Pump Service*
Dealer Telephone: *208 962 3274*
Purchase Date: *June 2001*
Installation Date: *June 6, 2001*

Goulds Pumps and the ITT Engineered Blocks symbol are registered trademarks and trademarks of ITT Industries.
Dole® is a Registered Trademark of Eaton Corporation.
Gla-Val™ is a Trademark of Griswold Inc.

Goulds Pumps

Well Pump Specs.



Electrical box



Sprinklers



Pipe conveys water
from storage tank
to irrigation system



Water comes from the well to the storage tank



overflow



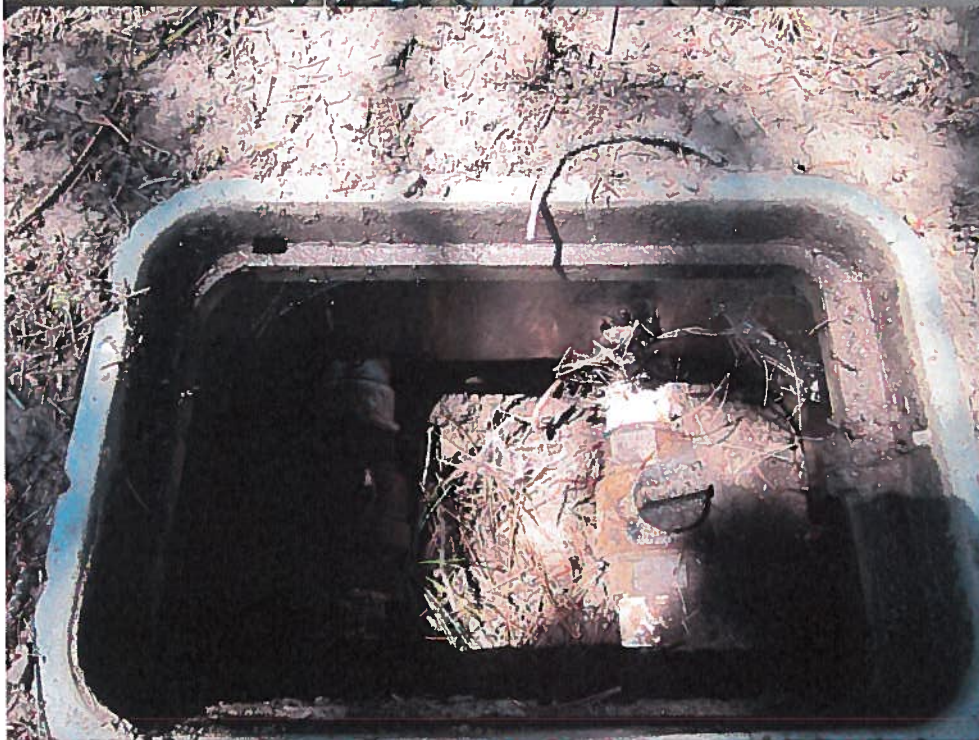
Measurement point



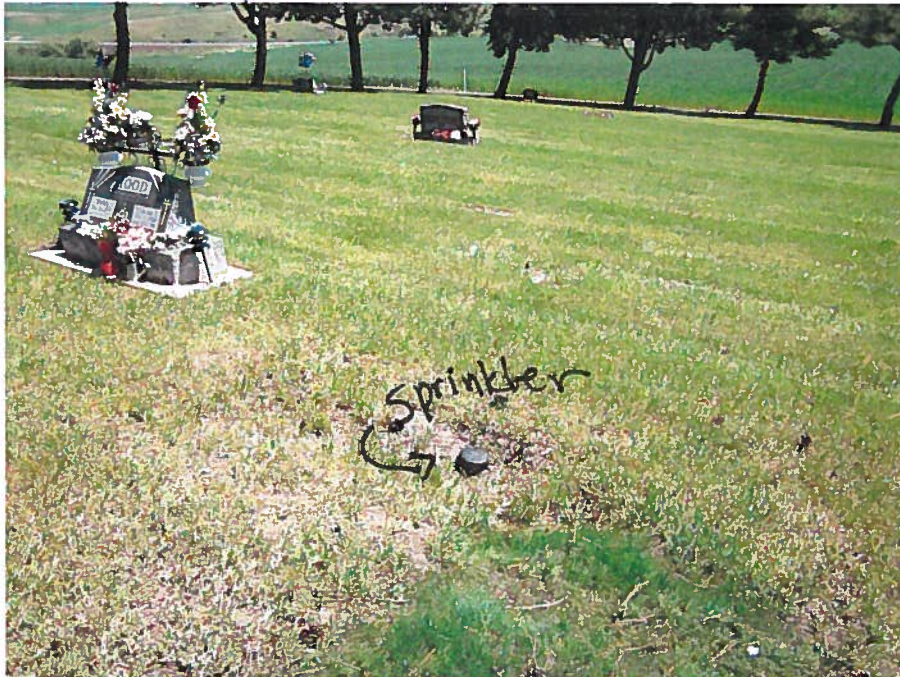
Pipe comes from well to pump house



Polysonic
Measurement



Sprinkler box



POV - Looking NE



Sprinkler valves (3)

Looking west



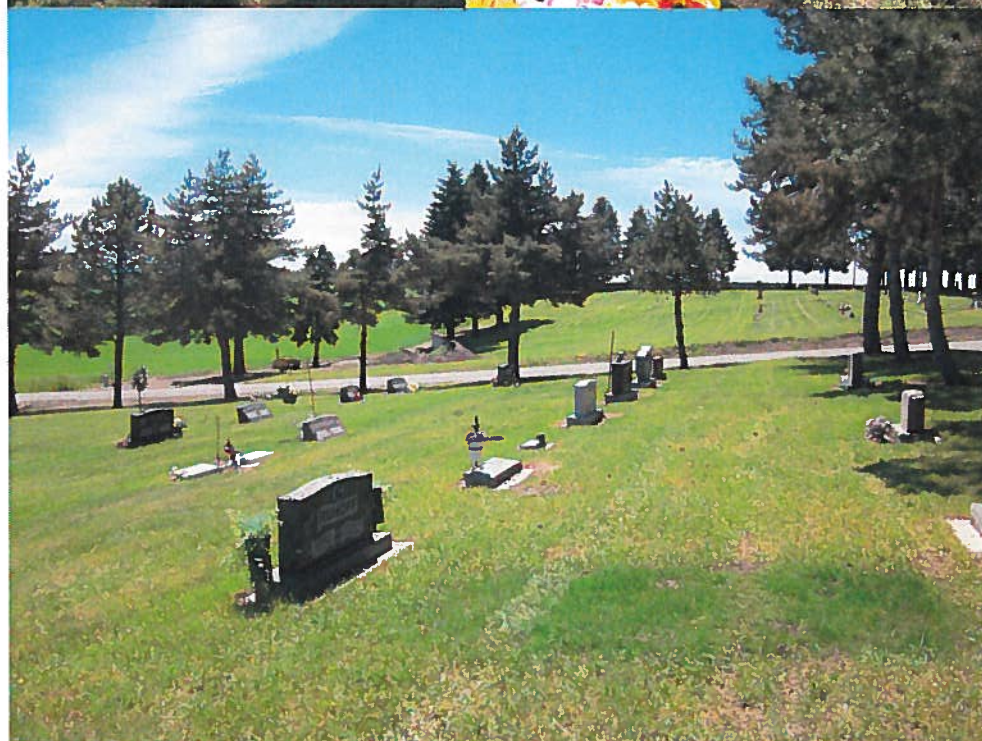
POV



POV



POV



POV - Looking South

06-14 13:1300 *H
+0003.10 % AI2

06-14 13:2800 *R
+0003.10 % AI2

0078.5 MMSEC
102.79 % T0

Space = 0.386

13:34-630.842E-16PM 00R
- 6.177E 0FPS 00R
+00000 *10 G 00R
-00000 *10 G 00R

13:35+705.603E-16PM 00R
+ 6.909E 0FPS 00R

+00000 *10 G 00R
-00006 *10 G 00R

turned on
the integrator = 70gpm

13:36+716.698E-16PM 00R
+ 7.017E 0FPS 00R
+00007 *10 G 00R
-00006 *10 G 00R

13:37+695.565E-16PM 00R
+ 6.811E 0FPS 00R
+00014 *10 G 00R
-00006 *10 G 00R

13:38+692.130E-16PM 00R
+ 6.778E 0FPS 00R
+00021 *10 G 00R
-00006 *10 G 00R

13:39+698.999E-16PM 00R
+ 6.843E 0FPS 00R
+00028 *10 G 00R
-00006 *10 G 00R

13:40+695.565E-16PM 00R
+ 6.811E 0FPS 00R
+00035 *10 G 00R
-00006 *10 G 00R

13:41+696.885E-16PM 00R
+ 6.824E 0FPS 00R
+00042 *10 G 00R
-00006 *10 G 00R

13:42+708.245E-16PM 00R
+ 6.935E 0FPS 00R
+00049 *10 G 00R
-00006 *10 G 00R

13:43+708.245E-16PM 00R
+ 6.935E 0FPS 00R
+00056 *10 G 00R
-00006 *10 G 00R

13:44+697.942E-16PM 00R
+ 6.833E 0FPS 00R
+00063 *10 G 00R
-00006 *10 G 00R

13:45+701.112E-16PM 00R
+ 6.866E 0FPS 00R
+00070 *10 G 00R
-00006 *10 G 00R

Attachment #1

06-14 13:1300 *H
+0003.10 % AI2

06-14 13:2800 *R
+0003.10 % AI2

0078.5 MMSEC
102.79 % T0

Space = 0.386

13:34-630.842E-16PM 00R
- 6.177E 0FPS 00R
+00000 *10 G 00R
-00000 *10 G 00R

13:35+705.603E-16PM 00R
+ 6.909E 0FPS 00R

+00000 *10 G 00R
-00006 *10 G 00R

turned on
the integrator = 70gpm

13:36+716.698E-16PM 00R
+ 7.017E 0FPS 00R
+00007 *10 G 00R
-00006 *10 G 00R

13:37+695.565E-16PM 00R
+ 6.811E 0FPS 00R
+00014 *10 G 00R
-00006 *10 G 00R

13:38+692.130E-16PM 00R
+ 6.778E 0FPS 00R
+00021 *10 G 00R
-00006 *10 G 00R

13:39+698.999E-16PM 00R
+ 6.843E 0FPS 00R
+00028 *10 G 00R
-00006 *10 G 00R

13:40+695.565E-16PM 00R
+ 6.811E 0FPS 00R
+00035 *10 G 00R
-00006 *10 G 00R

13:41+696.885E-16PM 00R
+ 6.824E 0FPS 00R
+00042 *10 G 00R
-00006 *10 G 00R

13:42+708.245E-16PM 00R
+ 6.935E 0FPS 00R
+00049 *10 G 00R
-00006 *10 G 00R

13:43+708.245E-16PM 00R
+ 6.935E 0FPS 00R
+00056 *10 G 00R
-00006 *10 G 00R

13:44+697.942E-16PM 00R
+ 6.833E 0FPS 00R
+00063 *10 G 00R
-00006 *10 G 00R

13:45+701.112E-16PM 00R
+ 6.866E 0FPS 00R
+00070 *10 G 00R
-00006 *10 G 00R

Water Right Overlap for 85-15342

Type	WR #	Owner	Source	TRS	NWNW	Significant Overlap Y/N?
Permit	85 15741	ROMAN CATHOLIC DIOCI	GROUNDW	31N01E4	X	n
Permit	85 15741	ROMAN CATHOLIC DIOCI	GROUNDW	31N01E4	X	n
Right	85 4149	CITY OF COTTONWOOD,	GROUND V	31N01E4	X	n
Right	85 7006	CITY OF COTTONWOOD,	GROUND V	31N01E4	X	n
Right	85 7232	CITY OF COTTONWOOD,	GROUND V	31N01E4	X	n
Right	85 15388	CITY OF COTTONWOOD,	GROUND V	31N01E4	X	n
Right	85 15342	COTTONWOOD CEMETE	GROUND V	31N01E4	10	

The cemetery got off of the city's water service and is only receiving water from their well.

Attachment #2

Form 238-11/97 **MAR 26 2001**

Form
11/97

IDWR/North

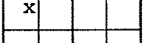
1. WELL TAG NO. D 0013984

DRILLING PERMIT NO. _____
Other IDWR No. 768173

2. OWNER:
Name Cottonwood Cemetery District
Address PO Box 185
City Cottonwood State ID Zip 83522

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.


 Twp. 31 North ☒ or South ☐
 Rge. 1 East ☒ or West ☐
 Sec. 4 NW 1/4 NW 1/4 1/4
10 acres 10 acres 10 acres
 Gov't Lot _____ County Idaho
 Lat. : Long. :
 Address of Well Site East St. & Butte
 Road City Cottonwood
 (Give at least name of road = Distance to Road or Landmark)

Lt. _____ Blk. _____ Sub. Name _____

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 Sacks or Pounds	METHOD
Material	From	To			
Bentonite	0	38	15	Dry	

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 65

Was drive shoe seal tested? ☒ Y ☐ N How? air

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
8	+2	65	25	Steel	☒	☐	☒	☐
6	20	540	200	PVC	☐	☒	☐	☐
					☐	☐	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

Perforations Method slotted

Screens	Screen Type
---------	-------------

From	To	Slot Size	Number	Diameter	Material	Casing	Lines
540	580	3/16	80	6	PVC	☐	☒
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

388 ft. below ground Artesian pressure _____ lb.
Depth flow encountered 555 ft. Describe access port or
control devices: well cap

3, N, É 4

11. WELL TESTS:

☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
100			

Water Temp. 58 Bottom hole temp. _____

Water Quality test or comments: good

Depth first Water Encounter 495

12. LITHOLOGIC LOG: (Describe repairs or abandonment) Well[illegible]

Completed	Depth	580	(Measurable)
-----------	-------	-----	--------------

Date: Started 3-19-01 Completed 3-22-01

13. DRILLER'S CERTIFICATION

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

Company Name JRU Well Drilling Firm No. 539

Firm Official Jim R. White Date 3-23-01

and Class 1

4/4/20 Date

(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES