

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-11819

Exam Date: 7/30/2014

1. Current Owner: J C WATSON CO INC
PO BOX 300
PARMA ID 83660
(208)722-5141
2. Accompanied by: Jon Watson
Phone No: same
Address: same
Relationship to Permit Holder: same

3. SOURCETRIBUTARY

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: Wilder Irrigation District shares
2. Other water rights with the same point of diversion: none

C. DIVERSION AND DELIVERY SYSTEM1. LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER

NE1/4SW1/4

Sec. 7, Twp 03N, Rge 03W, B.M.

CANYON County

Method of Determination: Garmin GPS N 43.61075, W - 116.74302

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	
03N	03W	7									38.0	27.0	30.0						95.0
											L 3	L 4							

Total Acres: 95

Method of Determination:

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

x

4.

<u>Well or Diversion ID No.*</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>
<u>well</u>	<u>Grundfos</u>	<u>50</u>	<u>unknown</u>	<u>Grundfos 800d500-2-1</u>	<u></u>

*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>
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2. Measurements: none taken

E. FLOW CALCULATIONS Additional Computation Sheets Attached

THEORETICAL CALCULATION: pump set at 147', assume Q IS 140'; 50 HP, 50 psi

$$8.8 \times .7 \times 50 / 140 + [2.31 \times 50 \text{ psi}] = 308 / 255.5 = 1.21 \text{ cfs}$$

Measured Method:

PUMP CURVE:

$$770 \text{ gpm at } 150' \text{ head} = 770 / 448.8 = 1.72 \text{ cfs.}$$

$$820 \text{ gpm at } 140' \text{ head} = 820 / 448.8 = 1.83 \text{ cfs}$$

These values are within 10 % of the permitted diversion rate of 1.9 cfs. Recommend for licensing 1.9 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 95 \text{ acres} \times 4.5 \text{ af} = 427.5 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 1.9 \times 261 \times 1.9835 = 983.6 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 427.5 \text{ af}$$

2. Volume Calculations for Other Uses: not applicable

G. NARRATIVE/REMARKS/COMMENTS

The permit was issued for 1.9 cfs from groundwater for the supplemental irrigation of 95 acres. The irrigation is supplemental to Wilder Irrigation District surface water. Jon Watson, a principal of permittee corporation JC Watson Co. Inc, accompanied me on the file exam. He stated that the water has not yet been used to supplement the surface water.

The POD is a 12 -inch diameter well, tag no. D0064444. The pump is a Grundfos submersible, 50 hp, set at 147 feet. From the well, a 10 inch diameter steel pipe carries water to a concrete ditch about 20 feet north of the well. The ditch is also used for the Wilder Irrigation District surface water. There is a pressure gauge and Mr. Watson reported that the pumping pressure is 50 psi.

The water travels west through the concrete ditch and the fields south of the ditch are flood irrigated with siphon tubes. There is power in the northwest of the NWSW quarter – quarter where Mr. Watson will use a portable pump assembly to pump out of the concrete ditch to irrigate the place of use south of the Embankment Drain. A 6-inch diameter PVC mainline will be connected to the portable pump so that these fields can be either drip or sprinkler irrigated. The fields were planted in beets and mint this year. The POU is 95 acres, as permitted.

Mr. Watson provided a pump curve which indicates that the well can produce 770 gpm [1.72 cfs] at 140 feet of head, and 820 gpm [1.83 cfs] at 150 feet of head. These rates are within 10% of the permitted rate of 19. cfs, so 1.9 cfs is recommended for licensing.

The volume recommended is 427.5 af, the lesser of the Vir and Vdr calculations.

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	03/01 to 11/15	1.900 CFS	427.50 AF
<u>Totals:</u>		1.900 CFS	427.50 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

Field Examiner's Name Walter M. McC Date 8-29-14

Reviewer _____ Date _____



63-11818-- 2013 NAIP. POU outlined in purple. Well is the POD. POD and delivery system labeled.

Music, Vicky

From: Jon Watson [jon@SOOBRAND.COM]
Sent: Wednesday, July 23, 2014 2:20 PM
To: Music, Vicky
Subject: FW: Huston Well
Attachments: BRN001BA994ECEC_008381.pdf

From: Rory Walund [<mailto:rory@rsicorp.net>]
Sent: Wednesday, July 23, 2014 12:07 PM
To: jonw@soobrand.com
Cc: Jon Watson
Subject: Huston Well

Jon,

Attached is the pump curve. Below is the information on that.

147' Pump Setting 6" diameter column pipe
Grundfos 800S500-2-1 Submersible Pump
Grundfos 50 HP, 480 volt submersible motor.

I will have that quote to you for Adrian, as soon as I get a second.

Thanks,
Rory

Performance Curves

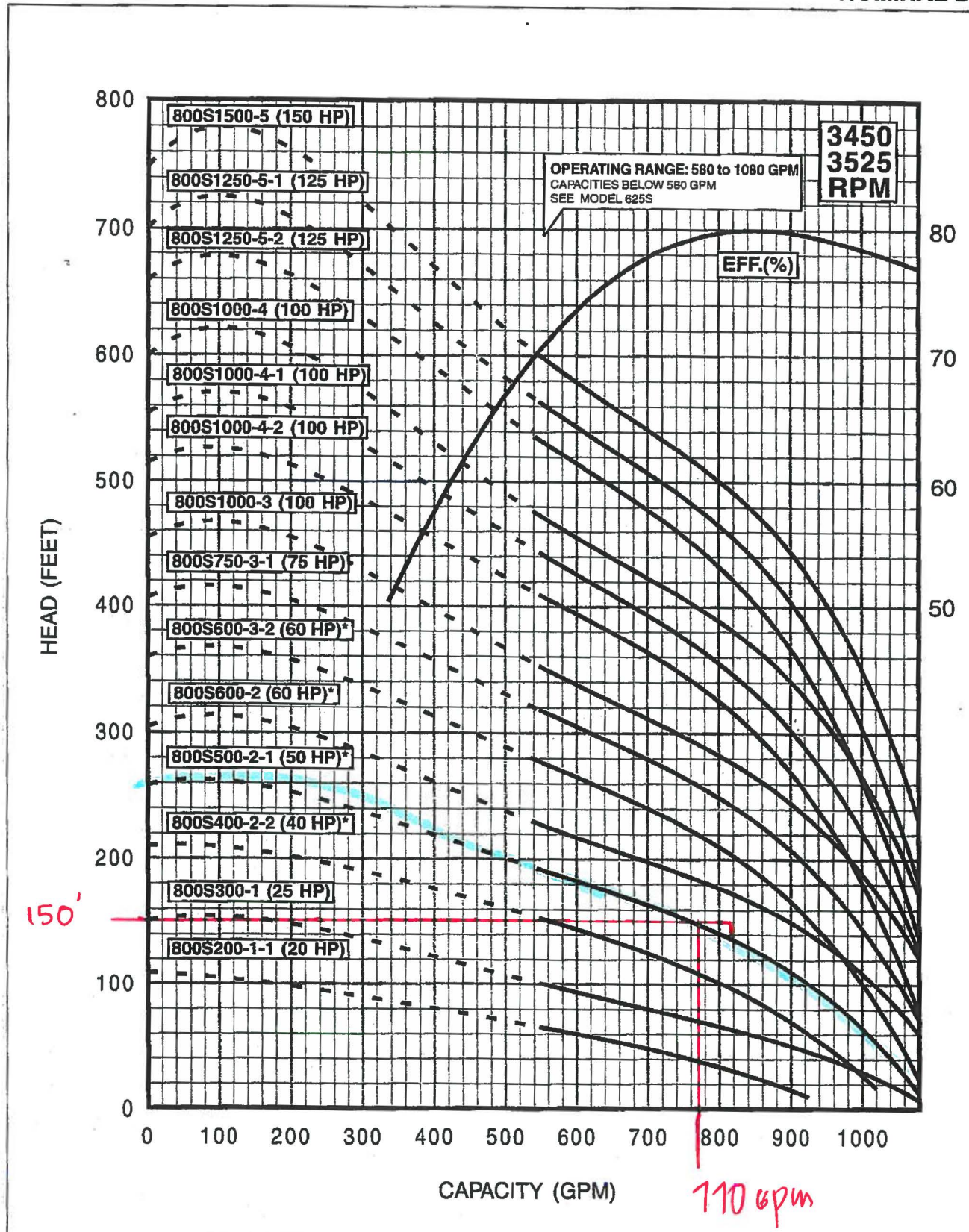
Model 800S

800 GPM

FLOW RANGE: 580 - 1080 GPM

OUTLET SIZE: 6" NPT

NOMINAL DI



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

6" MOTOR STANDARD, 20-50 HP/3450 RPM.

8" MOTOR STANDARD, 60-150 HP/3525 RPM.

* Alternate motor sizes available.

Performance conforms to ISO 2
@ 10 ft. min. submergence.

63-11819 Field Exam photographs



POD is a 12-inch diameter well, tag # D0064444. Water is pumped through 10-inch steel pipe to a concrete ditch about 20 feet north of the well. The ditch is also used for Wilder Irrigation surface water. The field in the back left is part of the POU.

63-11819 Field Exam photographs



Looking southwest at the irrigated POU in the NWSW Lot 3.



This portable pump system was located on other property irrigated by the permittee. This is the type of system that would be moved to the POU and used with a 6-inch PVC mainline to irrigate part of the NWSE Lot 3 and the SWSW Lot 4.

63-11819 Field Exam photographs



Looking west at the southernmost field in the POU. It does not look irrigated but in aerals for the past 10 years, it has clearly been irrigated.

IDAHO DEPARTMENT OF WATER RESOURCES WELL DRILLER'S REPORT

PAGE 1 of 2

1. WELL TAG NO. D 0064444
Drilling Permit No. 962381-868440 ✓
Water right or injection well # 63-11819
2. OWNER: J.C. Watson Co., Inc.

Name _____
Address P.O. Box 300
City Parma State ID Zip 83660

3. WELL LOCATION:
Twp 03 North ☒ or South ☐ Rge. 03 East ☐ or West ☒
Sec. 07 1/4 NE 1/4 SW 1/4

Gov't Lot _____ County Canyon
Lat. 43 36.643 (Deg. and Decimal minutes)
Long. 116 44.581 (Deg. and Decimal minutes)
Address of Well Site 1/2 mile NE of the intersection of HWY 55 & Malt Rd.
City Caldwell
(Give at least name of road - Distance to Road or Landmark)
Lot. _____ Blk. _____ Sub Name _____

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

5. TYPE OF WORK:
☒ New well ☐ Replacement well ☐ Modify existing well
☐ Abandonment ☐ Other _____

6. DRILL METHOD:
☐ Air Rotary ☐ Mud Rotary ☐ Cable ☒ Other Reverse

Seal material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method/procedure
3/4" Bentonite	0	169	17,500	Pour

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing	Liner	Threaded	Welded
12"	+2	175		S.S.	☒	☐	☐	☒
12"	195	235		S.S.	☒	☐	☐	☒
12"	255	352		S.S.	☒	☐	☐	☒
12"	362	396		S.S.	☒	☐	☐	☒

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

9. PERFORATIONS/SCREENS:
Perforations ☐ Y ☒ N Method _____
Manufactured screen ☒ Y ☐ N Type Johnson
Method of installation One string set

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
175	195	.025		12"	S.S.	
235	255	.025		12"	S.S.	
352	362	.025		12"	S.S.	

Length of Headpipe _____ Length of Tailpipe 5'
Packer ☐ Y ☒ N Type _____

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method
10x20 Sand	169	495	39,000	Pour

11. FLOWING ARTESIAN:
Flowing Artesian? ☐ Y ☒ N Artesian Pressure (PSIG) _____
Describe control device _____

12. STATIC WATER LEVEL and WELL TESTS:
Depth first water encountered (ft) 33 Static water level (ft) 33
Water temp. (°F) 71 Bottom hole temp (°F) _____
Describe access port 2" pipe on casing

Well test:			Test method:			
Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)	Pump	Bailer	Air	Flowing artesian
83	1,100	420	☒	☐	☐	☐
			☐	☐	☐	☐

Water quality test or comments: _____

13. LITHOLOGIC LOG and/or repairs or abandonment:					
Bore Dia. [in]	From [ft]	To (ft)	Remarks, lithology or description of repairs or abandonment, water temp.	Water	
				Y	N
20"	0	5	Top soil		X
20"	5	18	Caliche		X
20"	18	43	Brown clay		X
20"	43	49	Fine to coarse brown sand	X	
20"	49	55	Burnt brown clay		X
20"	55	61	Med to coarse brown sand	X	
20"	61	65	Brown clay		X
20"	65	75	Med to fine brown sand	X	
20"	75	82	Small to med gravel	X	
20"	82	89	Med to fine brown sand	X	
20"	89	91	Burnt brown clay		X
20"	91	95	Small to med gravel	X	
20"	95	101	Brown clay		X
20"	101	104	Med to fine brown sand	X	
20"	104	129	Small to large gravel	X	
20"	129	140	Brown clay		X
20"	140	148	Med to fine brown sand	X	
20"	148	150	Brown clay		X
20"	150	152	Fine brown sand	X	
20"	152	157	Brown clay		X
20"	157	163	Med to fine brown sand	X	
20"	163	165	Blue clay		X
20"	165	171	Blue clay		X
20"	171	174	Brown clay		X
20"	174	175	Blue clay		X
20"	175	180	Fine to coarse blue sand	X	
20"	180	182	Blue clay		X
20"	182	193	Med to coarse blue sand	X	
20"	193	239	Blue clay		X
20"	239	253	Med to fine blue sand	X	
20"	253	352	Blue clay		X
20"	352	361	Fine to coarse blue sand	X	

Completed Depth (Measurable): 490'
Date Started: Jun 3, 2013 Date Completed: Jul 5, 2013

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

Company Name Riverside, Inc. Co. No. 333
*Principal Driller [Signature] Date 7-23-13
*Driller [Signature] Date 07-23-13
*Operator II _____ Date _____
Operator I _____ Date _____

* Signature of Principal Driller and rig operator are required.

RECEIVED

JUL 26 2013

WATER RESOURCES



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region • 2735 Airport Way • Boise, Idaho 83705-5082

Phone: (208) 334-2190 • Fax: (208) 334-2348 • Website: www.idwr.idaho.gov

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

July 23, 2014

J C WATSON CO INC
PO BOX 300
PARMA, ID 83660

Re Permit To Appropriate Water No. 63-11819

Dear J C WATSON CO INC:

The letter I sent you dated 7/22/ 2014 contained errors and this letter corrects them. I am sorry for any misunderstanding this may have caused.

The permit referenced above was issued for the irrigation of 95 acres from ground water. The permitted irrigation is supplemental to irrigation surface water provided by Wilder Irrigation District. This letter is to request that you call me to schedule the field exam for this permit. A field exam is required by Idaho law before a license can be issued, at which time it becomes a water right. The license is the end product needed for continued water use.

Additionally, please have available at the exam someone familiar with the system and its construction, and have available copies of the following information for my file:

- 1 – pump and motor specs;
- 2 – the depth at which **the pump** is set **[not the well]**; and
- 3 – a pump curve.

Please call me as soon as possible at 208.334.2190, to set an appointment for the exam. Failure to respond to this letter request **by August 22, 2014, [not 2013]**, may result in the permit being voided or a license issued for less than the permitted amount. Thank you.

Sincerely,

Vicky Music
Sr. Water Resource Agent



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region • 2735 Airport Way • Boise, Idaho 83705-5082

Phone: (208) 334-2190 • Fax: (208) 334-2348 • Website: www.idwr.idaho.gov

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

July 22, 2014

J C WATSON CO INC
PO BOX 300
PARMA, ID 83660

Re Permit To Appropriate Water No. 63-11819

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Sincerely,

Vicky Music
Sr. Water Resource Agent