

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 75-07669
Exam Date: 6/25/2013(7/20/2016)

1. Current Owner:
JAMES D WALKER 20 CHERRY HILL LN NORTH FORK ID 83466 (208)865-2612 And
SHIRLEY WALKER 20 CHERRY HILL LN NORTH FORK ID 83466 (208)865-2612

2. Accompanied by: Shirley Walker
Phone No: (208)
Address: 20 Cherry Hill Lane; North Fork Idaho 83466
Relationship to Permit Holder: Permit holder

3. **SOURCE:** **TRIBUTARY: NA**
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 SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER L6 (SW¼SE¼) Sec. 35, Twp 24N, Rge 21E, B.M. LEMHI 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	
24N	21E	35														3.2	L 5		3.2

Total Acres: 3.2

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

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Irrigation	Red Jacket	1.5	See attachments		
Domestic	Franklin Electric	1	2801084915		

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

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
5 gallon bucket						
stop watch						

2. Measurements:

E. FLOW CALCULATIONS

Measured Method:

 X Additional Computation Sheets Attached

The pump that supplies water for the orchard also connects to standpipes. The first is next to the shed, approximately 30 feet to the northwest from the pump house. The second is on the northeast corner of the pump house. Both pipes were turned on to full capacity and allowed to stabilize. Bucket and stop watch measurements were taken at each standpipe.

Measurements ranged from 16 to 19.2 seconds to fill the 5 gallon bucket

Average for measurements taken at two standpipes: 0.06 cfs

Permit rate 0.18

3.2 acres X 0.03 = 0.096 cfs

Recommended rate 0.10 cfs

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 3.2 \times 3.5 = 11.2 \text{ AF}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.1 \times 214 \times 1.9835 = 42.4 \text{ AF}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 11.2$$

No volume on the permit

Recommended Volume: 11.2 AF

2. Volume Calculations for Other Uses: None

G. NARRATIVE/REMARKS/COMMENTS

The Department issued a permit to James and Shirley Walker on June 15, 1999, to divert 0.18 cfs of water for irrigation of 9.2 acres. The Walkers submitted a second application for permit 75-14589 on December 17, 2008 for 0.14 cfs to irrigate 7.0 acres. Their parcel is 9.5 acres. The two permits appear to completely overlap.

Two wells located in T24N R21E Section 35 NWSE Lot 5 serve two houses, a trailer house and a cherry orchard. Both wells feed into a pump house. A 1 horse power pump supplies water for Shirley Walker's house and the house next to her to the south. The south house on the property is on one acre and they do not irrigate. The trailer house to the north of the Walker house is on the same system as the orchard. A 1.5 horsepower pump feeds a 2 inch pipe, up the hill approximately 107 feet to the trailer and orchard. A drip irrigation system provides water to the cherry orchard.

According to GPS measurements, the elevation at the pump house is 3,704 feet; the top of the orchard is 3,811 feet. All three houses and the orchard receive irrigation water from the two wells at the bottom of the hill. There are two pressure tanks in the well house, one for each pump.

There are two well driller's reports for Dan Walker in T24N R21E Section 35. Well tag D0000371 falls within the quarter quarter identified on this permit. It has a depth of 43 feet. A second report identifies a well in SENE quarter quarter. This well has a depth of 200 feet. Based on the information provided during the field exam, it is not entirely clear which well serves the orchard and which provides water to the two houses.

Permit 75-7669 requires an Amendment to move the place of use from Lot 6 (SWSE) to Lot 5 (NWSE)

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	04/01 to 10/31	0.10 CFS	11.2 AF
	<u>Totals:</u>	0.100 CFS	11.20 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 ☐ None

I. AUTHENTICATION

Field Examiner's Name Sam Thiel Date 8/4/2016

Reviewer _____ Date _____

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 75-7669
 Reviewer: Sandy Thiel
 Date of Review: 7/28/2016

P/D No.:

PUMP HORSEPOWER
 BOOSTER HORSEPOWER

PUMPING LEVEL

DISCHARGE PRESSURE

RATE OF FLOW (cfs)

Option 92	OPTION 99
1	1.5
0	0
200	36
30	30
0.02	0.09
GPM 10	39

Total

0.11
49.65

The above calculates the formula =

$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$$

Assumptions: %70 efficiency.
 No Friction

Examiners Notes:

Red Jacket Pump 1 1/2 HP Submersible Pump: Well depth 43
 Franklin Electric 1 HP Pump well depth 200 feet

State of Idaho
Department of Water Resources
Water Right Amendment
75-7669

This map depicts the IRRIGATION place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.

R21E

T24N



- Point of Diversion
- Place Of Use Boundary

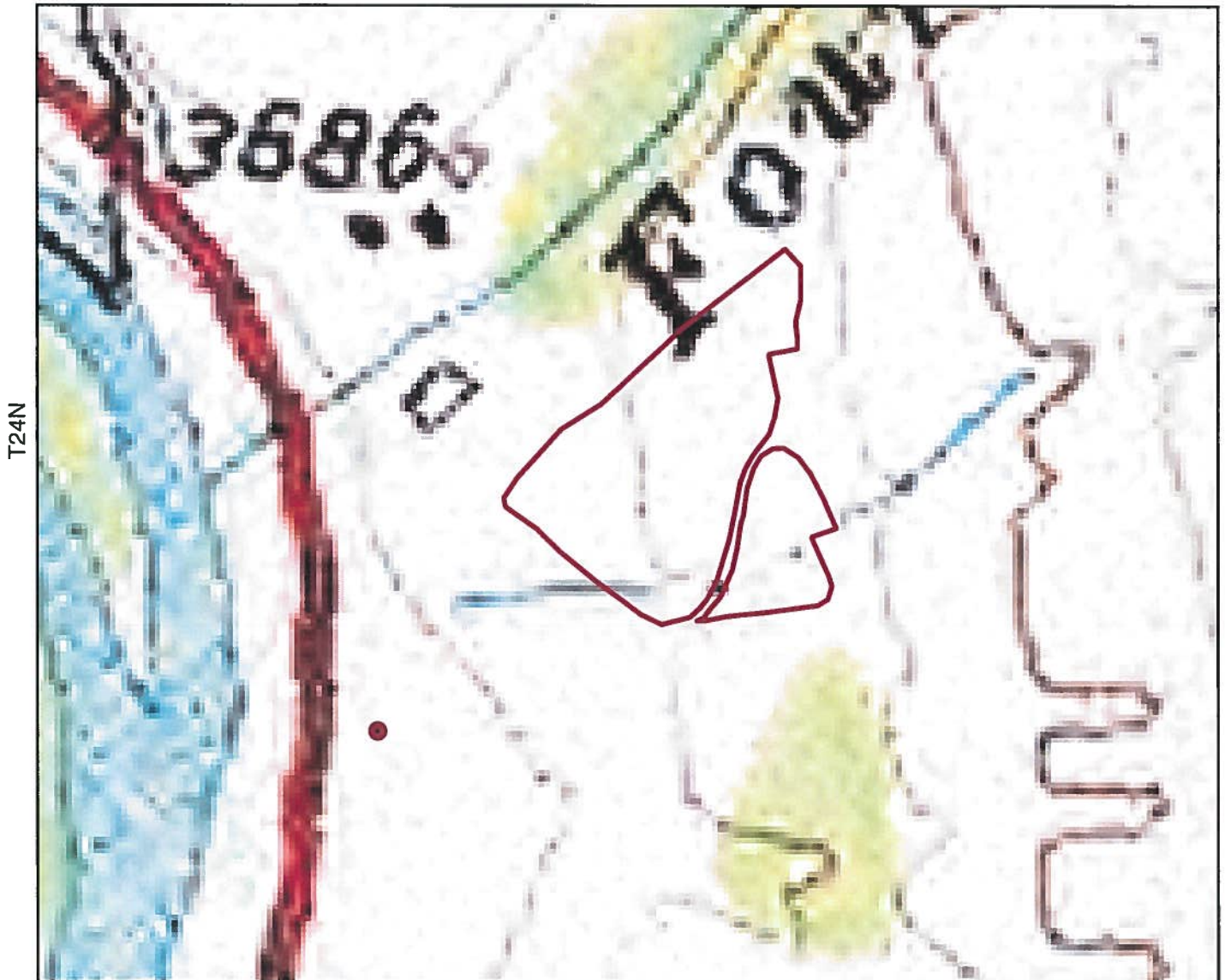


0 500 1,000 Feet

State of Idaho
Department of Water Resources
Water Right Amendment
75-7669

This map depicts the IRRIGATION place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.

R21E



- Point of Diversion
- Place Of Use Boundary



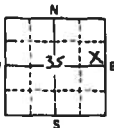
0 500 1,000 Feet

System Diagram for Water Right 75-7669



Two wells (green dots) located in T24N R21E Section 35 NWSE Lot 5 serve two houses, a trailer house and a cherry orchard. Both wells feed into a pump house (white house). A 1 horse power pump supplies water for Shirley Walker's house and the house next to her to the south. The south house on the property is on one acre and they do not irrigate. The trailer house to the north of the Walker house is on the same system as the orchard. A 1.5 horsepower pump feeds a 2 inch pipe (green line), up the hill approximately 107 feet to the trailer and orchard. A drip irrigation system provides water to the cherry orchard. The second system supplies water to the Walker house, and the house to the south (dashed orange line).

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORTUSE TYPEWRITER OR
BALLPOINT PENState 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 <u>J. Dan Walker</u> Address <u>315 Ave A, Salmon 83467</u> Drilling Permit No. <u>75-92E-027026</u> Water Right Permit No. _____	7. WATER LEVEL Static water level <u>11</u> feet below land surface. Flowing? ☐ Yes ☒ No G.P.M. flow _____ Artesian closed-in pressure _____ p.s.i. Controlled by: ☐ Valve ☐ Cap ☐ Plug Temperature <u>52</u> °F. Quality <u>Good</u> Describe artesian or temperature zones below.																																																																																																				
2. NATURE OF WORK ☒ New well ☐ Deepened ☐ Replacement ☐ Well diameter increase ☐ Modification ☐ Abandoned (describe abandonment or modification procedures such as liners, screen, materials, plug depths, etc. in lithologic log, section 9.)	8. WELL TEST DATA ☐ Pump ☐ Bailer ☒ Air ☐ Other _____ <table border="1"><thead><tr><th>Discharge G.P.M.</th><th>Pumping Level</th><th>Hours Pumped</th></tr></thead><tbody><tr><td><u>6</u></td><td><u>200</u></td><td><u>2</u></td></tr></tbody></table> 28343	Discharge G.P.M.	Pumping Level	Hours Pumped	<u>6</u>	<u>200</u>	<u>2</u>																																																																																														
Discharge G.P.M.	Pumping Level	Hours Pumped																																																																																																			
<u>6</u>	<u>200</u>	<u>2</u>																																																																																																			
3. PROPOSED USE ☒ Domestic ☐ Irrigation ☐ Monitor ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection ☐ Other _____ (specify type)	9. LITHOLOGIC LOG <table border="1"><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><u>6</u></td><td><u>0</u></td><td><u>2</u></td><td><u>TOP SOIL</u></td><td></td><td>☒</td></tr><tr><td></td><td><u>2</u></td><td><u>10</u></td><td><u>BOULDERS</u></td><td></td><td>☒</td></tr><tr><td></td><td><u>10</u></td><td><u>12</u></td><td><u>SILT</u></td><td>☒</td><td></td></tr><tr><td></td><td><u>12</u></td><td><u>16</u></td><td><u>GRAVEL BOULDERS</u></td><td>☒</td><td></td></tr><tr><td></td><td><u>16</u></td><td><u>36</u></td><td><u>HARD GRANITE</u></td><td></td><td>☒</td></tr><tr><td></td><td><u>36</u></td><td><u>37</u></td><td><u>FRACTURE</u></td><td>☒</td><td></td></tr><tr><td></td><td><u>37</u></td><td><u>60</u></td><td><u>GREY HARD</u></td><td></td><td>☒</td></tr><tr><td></td><td><u>60</u></td><td><u>80</u></td><td><u>WHITE ROCK</u></td><td></td><td>☒</td></tr><tr><td></td><td><u>80</u></td><td><u>90</u></td><td><u>GREY</u></td><td></td><td>☒</td></tr><tr><td></td><td><u>90</u></td><td><u>120</u></td><td><u>WHITE HARD</u></td><td></td><td>☒</td></tr><tr><td></td><td><u>120</u></td><td><u>140</u></td><td><u>GREY GRANITE</u></td><td></td><td>☒</td></tr><tr><td></td><td><u>140</u></td><td><u>142</u></td><td><u>REDON FRACTURE</u></td><td>☒</td><td></td></tr><tr><td></td><td><u>142</u></td><td><u>172</u></td><td><u>GREY</u></td><td></td><td>☒</td></tr><tr><td></td><td><u>172</u></td><td><u>180</u></td><td><u>BROWN</u></td><td></td><td>☒</td></tr><tr><td></td><td><u>180</u></td><td><u>200</u></td><td><u>GREY HARD</u></td><td></td><td>☒</td></tr></tbody></table>	Bore Diam.	Depth		Material	Water		From	To	Yes	No	<u>6</u>	<u>0</u>	<u>2</u>	<u>TOP SOIL</u>		☒		<u>2</u>	<u>10</u>	<u>BOULDERS</u>		☒		<u>10</u>	<u>12</u>	<u>SILT</u>	☒			<u>12</u>	<u>16</u>	<u>GRAVEL BOULDERS</u>	☒			<u>16</u>	<u>36</u>	<u>HARD GRANITE</u>		☒		<u>36</u>	<u>37</u>	<u>FRACTURE</u>	☒			<u>37</u>	<u>60</u>	<u>GREY HARD</u>		☒		<u>60</u>	<u>80</u>	<u>WHITE ROCK</u>		☒		<u>80</u>	<u>90</u>	<u>GREY</u>		☒		<u>90</u>	<u>120</u>	<u>WHITE HARD</u>		☒		<u>120</u>	<u>140</u>	<u>GREY GRANITE</u>		☒		<u>140</u>	<u>142</u>	<u>REDON FRACTURE</u>	☒			<u>142</u>	<u>172</u>	<u>GREY</u>		☒		<u>172</u>	<u>180</u>	<u>BROWN</u>		☒		<u>180</u>	<u>200</u>	<u>GREY HARD</u>		☒
Bore Diam.	Depth		Material	Water																																																																																																	
	From	To		Yes	No																																																																																																
<u>6</u>	<u>0</u>	<u>2</u>	<u>TOP SOIL</u>		☒																																																																																																
	<u>2</u>	<u>10</u>	<u>BOULDERS</u>		☒																																																																																																
	<u>10</u>	<u>12</u>	<u>SILT</u>	☒																																																																																																	
	<u>12</u>	<u>16</u>	<u>GRAVEL BOULDERS</u>	☒																																																																																																	
	<u>16</u>	<u>36</u>	<u>HARD GRANITE</u>		☒																																																																																																
	<u>36</u>	<u>37</u>	<u>FRACTURE</u>	☒																																																																																																	
	<u>37</u>	<u>60</u>	<u>GREY HARD</u>		☒																																																																																																
	<u>60</u>	<u>80</u>	<u>WHITE ROCK</u>		☒																																																																																																
	<u>80</u>	<u>90</u>	<u>GREY</u>		☒																																																																																																
	<u>90</u>	<u>120</u>	<u>WHITE HARD</u>		☒																																																																																																
	<u>120</u>	<u>140</u>	<u>GREY GRANITE</u>		☒																																																																																																
	<u>140</u>	<u>142</u>	<u>REDON FRACTURE</u>	☒																																																																																																	
	<u>142</u>	<u>172</u>	<u>GREY</u>		☒																																																																																																
	<u>172</u>	<u>180</u>	<u>BROWN</u>		☒																																																																																																
	<u>180</u>	<u>200</u>	<u>GREY HARD</u>		☒																																																																																																
4. METHOD DRILLED ☒ Rotary ☒ Air ☐ Auger ☐ Reverse rotary ☐ Cable ☐ Mud ☐ Other _____ (backhoe, hydraulic, etc.)																																																																																																					
5. WELL CONSTRUCTION Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____ Thickness <u>250</u> inches Diameter <u>6</u> inches + <u>1</u> feet <u>20</u> feet <u>PVC</u> inches <u>4 1/2</u> inches <u>10</u> feet <u>200</u> feet _____ inches _____ inches _____ feet _____ feet Was casing drive shoe used? ☒ Yes ☐ No Was a packer or seal used? ☐ Yes ☒ No Perforated? <u>PVC</u> ☒ Yes ☐ No <u>SAW</u> How perforated? ☐ Factory ☐ Knife ☐ Torch ☒ Burn Size of perforation? <u>1/8</u> inches by <u>4</u> inches Number _____ From _____ To _____ <u>300</u> perforations <u>10</u> feet <u>200</u> feet _____ perforations _____ feet _____ feet _____ perforations _____ feet _____ feet Well screen installed? ☐ Yes ☒ No Manufacturer _____ Type _____ Top Packer or Headpipe _____ Bottom of Tailpipe _____ 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 <u>10</u> Material used in seal: ☐ Cement grout ☒ Bentonite ☐ Pudding 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 <u>sanitary well seal</u>																																																																																																					
6. LOCATION OF WELL Sketch map location must agree with written location.  Subdivision Name <u>Rockpoint</u> Lot No. <u>2</u> Block No. _____ County <u>Lemhi</u> SE 1/4 NE 1/4 Sec. <u>35</u> , T. <u>24</u> N. <u>1</u> E. <u>1</u> S. <u>1</u> R. <u>21</u> W. <u>1</u>	11. DRILLER'S CERTIFICATION I/We certify that all minimum well construction standards were complied with at the time the rig was removed. Firm Name <u>HABBER DRILLING COMPANY</u> Firm No. <u>430</u> Post Office Box 194 Address <u>Carmen Creek Road</u> Date <u>8/8/92</u> <u>CARMEN, IDAHO 83462-0194</u> Signed by Drilling Supervisor <u>[Signature]</u> and (Operator) _____ (If different than the Drilling Supervisor)																																																																																																				

IDAHO DEPARTMENT OF WATER RESOURCES

WELL DRILLER'S REPORT

RECEIVED
JUL 12 1999

1. WELL TAG NO. D 0000 371

DRILLING PERMIT NO. 75 99 E-0025

Other IDWR No.

2. OWNER:

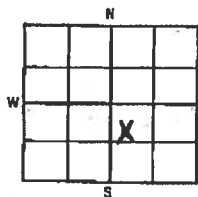
Name DAN WALKER

Address HC 10 Box 13

City CARMEN State ID Zip 83462

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.



Twp. 23 North ☒ or South ☐
Rge. 21 East ☒ or West ☐
Sec. 35 SW 1/4 NW 1/4 SE 1/4
Gov'l Lot County Lemhi
Lat. : : Long. : :
Address of Well Site Hwy 93 N
and 4th of July Creek City North Fork

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		METHOD
Material	From	To	Sacks or Pounds		
Bentonite	0	18	800 #		Poured

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 26 ft

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

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
8"	+2	26	.250	Steel	☒	☐	☒	☐

Length of Headpipe Length of Tailpipe

9. PERFORATIONS/SCREENS

Perforations Method
Screens Screen Type

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

7 ft. below ground Artesian pressure — lb.
Depth flow encountered — ft. Describe access port or control devices: Removable well cap

11. WELL TESTS:

☐ Pump ☐ Bailor ☒ Air ☐ Flowing Artesian

Yield gal./min	Drawdown	Pumping Level	Time
30 gpm	N/A	36 ft	4 HRS

Water Temp. Cold Bottom hole temp. Cold

Water Quality test or comments: good, clean

Depth first Water Encounter 11 ft

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

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
12"	0	2	top soil		X
	2	18	med. gravel, med sand	X	
			small amount clay mix		
8"	18	27	med to small gravel	X	
			med to coarse sand mix		
	27	43	lite blue hard shale	X	
			with small layers of Quartzite		

RECEIVED

JUN 30 1999

MICROFILMED

Department of Water Resources
Eastern Region

Completed Depth 43 ft. (Measurable)
Date: Started 6-2-99 Completed 6-5-99

13. DRILLER'S CERTIFICATION

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

Company Name JAFCD Firm No. 504

Firm Official Jerry Smith Date 6-27-99

and
Driller or Operator Date

(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

Well tag # given on Permit 75-14589



ITT

RED JACKET WATER PRODUCTS Residential Water Systems

CENTRIPRO 4" SINGLE-PHASE MOTORS

Red Jacket No.	Type	HP	Volts	Length in. (mm)	Weight lb. (kg.)
50C201	2-wire PSC	.5	115	11.0 (279)	19.2 (8.7)
50C211		.5	230	11.0 (279)	19.2 (8.7)
75C211		.75	230	12.4 (314)	22.7 (10.3)
100C211		1	230	13.3 (337)	24.5 (11.1)
150C211		1.5	230	14.9 (378)	28.9 (13.1)
50C301	3-wire	.5	115	10.0 (253)	18.9 (8.6)
50C311		.5	230	9.7 (246)	18.1 (8.2)
75C311		.75	230	10.8 (275)	21.4 (9.7)
100C311		1	230	11.7 (297)	23.1 (10.5)
150C311		1.5	230	13.6 (345)	27.4 (12.4)
200C311		2	230	15.1 (383)	31.0 (14.1)

CENTRIPRO 4" THREE-PHASE MOTORS

Order No.	HP	Volts	Length in. (mm)	Weight lb. (kg.)
100C313	1	230	11.7 (297)	23.1 (10.5)
150C313	1.5		11.7 (297)	23.1 (10.5)
200C313	2		13.8 (351)	27.4 (12.4)
100C353	1	460	11.7 (297)	23.1 (10.5)
150C353	1.5		11.7 (297)	23.1 (10.5)
200C353	2		13.8 (351)	27.4 (12.4)

SPECIFICATIONS

Model	Flow Range GPM	Horsepower Range	Best Eff. GPM	Discharge Connection	Min. Well Size	Rotation [®]
AE	1.2 – 8.5	½ – 1½	5	1¼"	4 "	CCW
VB	1.5 – 10	½ – 2	7	1¼"	4 "	CCW
BC	3 – 13	½ – 1½	10	1¼"	4 "	CCW
CC	6 – 25	½ – 1½	18	1¼"	4 "	CCW
GC	8 – 31	1 – 1½	22	1¼"	4 "	CCW

[®] Rotation is counterclockwise when viewed from pump discharge end

NEMA MOTOR

- Corrosion resistant stainless steel construction.
- Built-in surge arrestor is provided on single phase motors through 5 HP.
- Stainless steel splined shaft.
- Hermetically sealed windings.
- Replaceable motor lead assembly.
- CSA certified.
- UL 778 recognized.
- NEMA mounting dimensions.
- Control box is required with 3 wire single phase units.
- Three phase motors require a magnetic starter with Class 10 overload protection.



ITT

RED JACKET WATER PRODUCTS Residential Water Systems

1½ HP Submersible Pumps

Capacity in gallons per minute against discharge pressures shown.

Motor Pump End	1½ HP					1½ HP					1½ HP					1½ HP					1½ HP				
	CNS32AEI					CNS25VBI					CNS18BC					CNS11CC					CNS10GC				
Discharge Pressure	20#	30#	40#	50#	60#	20#	30#	40#	50#	60#	20#	30#	40#	50#	60#	20#	30#	40#	50#	60#	20#	30#	40#	50#	60#
0																									
20															13.9	24.5	23.9	23.5	22.8	21.8		30.1	29.3	28.2	26.3
40														13.9	13.7	24.0	23.6	22.9	21.9	20.8	30.2	29.5	28.4	26.6	24.0
60													14.0	13.8	13.5	23.6	23.0	22.1	20.9	19.8	29.6	28.6	26.9	24.4	21.5
80					8.0					10.0		14.0	13.8	13.6	13.1	23.1	22.2	21.1	19.9	18.8	28.7	27.1	24.8	21.9	19.0
100				8.0	7.8				10.0	10.1	14.0	13.8	13.6	13.3	13.0	22.3	21.3	20.1	19.0	17.9	27.4	28.1	22.3	19.4	16.9
120				7.8	7.5				10.1	9.8	13.8	13.6	13.4	13.1	12.7	21.4	20.2	19.1	18.1	17.0	25.5	22.7	19.8	17.2	14.7
140			7.8	7.6	7.3			10.1	9.9	9.4	13.7	13.4	13.1	12.7	12.3	20.4	19.3	18.2	17.1	15.7	23.1	20.2	17.5	15.1	11.6
160		7.9	7.5	7.3	7.1		10.1	9.9	9.5	9.0	13.4	13.2	12.8	12.3	11.8	19.4	18.4	17.3	15.9	14.0	20.6	17.8	15.4	12.2	
180	7.8	7.8	7.4	7.1	6.9	10.1	10.0	9.6	9.1	8.7	13.2	12.8	12.4	11.9	11.3	18.5	17.4	16.1	14.3	11.6	18.2	15.8	12.8	6.4	
200	7.7	7.4	7.2	7.0	6.8	10.0	9.6	9.2	8.7	8.4	12.9	12.5	12.0	11.4	10.8	17.6	16.3	14.6	12.0	8.5	16.1	18.3	7.6		
220	7.4	7.2	7.0	6.8	6.6	9.7	9.2	8.8	8.5	8.2	10.5	12.0	11.5	10.9	10.2	16.5	14.9	12.4	9.0	4.7	13.8	8.7			
240	7.2	7.0	6.8	6.6	6.4	9.3	8.8	8.5	8.2	8.0	12.1	10.5	10.9	10.3	9.7	15.1	12.8	9.5	5.3		9.7				
260	7.0	6.8	6.6	6.4	6.2	8.9	8.5	8.3	8.0	7.8	11.6	11.0	10.4	9.8	9.2	13.2	10.0	5.9							
280	6.9	6.7	6.5	6.3	6.1	8.6	8.3	8.1	7.9	7.6	11.1	10.5	9.9	9.2	8.6	10.5	6.5								
300	6.7	6.5	6.3	6.1	5.9	8.3	8.1	7.9	7.6	7.3	10.6	9.9	9.3	8.7	8.1	7.1	2.6								
320	6.5	6.3	6.1	5.9	5.7	8.1	7.9	7.7	7.4	7.0	10.0	9.4	8.8	8.2	7.5	3.2									
340	6.3	6.1	5.9	5.7	5.5	7.9	7.7	7.4	7.1	6.6	9.5	8.9	8.3	7.6	6.7										
360	6.2	6.0	5.7	5.5	5.3	7.7	7.5	7.1	6.7	6.2	9.0	8.3	7.7	6.8	5.6										
380	6.0	5.8	5.5	5.3	5.0	7.5	7.2	6.8	6.3	5.8	8.4	7.8	7.0	5.8	4.0										
400	5.8	5.6	5.3	5.1	4.8	7.2	6.8	6.4	5.9	5.4	7.9	7.1	6.0	4.3											
420	5.6	5.4	5.1	4.8	4.5	6.9	6.4	6.0	5.5	5.1	7.2	6.1	4.5												
440	5.4	5.1	4.9	4.6	4.3	6.5	6.0	5.6	5.1	4.7	6.3	4.8													
460	5.2	4.9	4.6	4.3	4.0	6.1	5.6	5.2	4.8	4.4	5.0														
480	4.9	4.7	4.3	4.0	3.7	5.7	5.2	4.8	4.5	4.0															
500	4.7	4.4	4.1	3.7	3.3	5.3	4.9	4.5	4.1	3.3															
520	4.4	4.1	3.8	3.4	3.0	4.9	4.6	4.1	3.5	2.2															
540	4.1	3.8	3.4	3.1	2.6	4.6	4.2	3.6	2.4																
560	3.9	3.5	3.1	2.7	2.3	4.3	3.7	2.6																	
580	3.5	3.2	2.8	2.3	1.8	3.8	2.8																		
600	3.2	2.8	2.4	1.9	1.4	3.0																			
620																									
640																									
660																									
680																									
700																									
720																									
740																									
Shutoff PSI	342					294					236					158					133				
Best Efficiency	5 GPM					7 GPM					10 GPM					18 GPM					22 GPM				

PHOTOGRAPHER AND DATE OF PHOTOS: Sandy Thiel, July 20, 2016
FILE NUMBER 75-7669



Orchard

Pump house

Location of one well in relation to the
pump house and the orchard

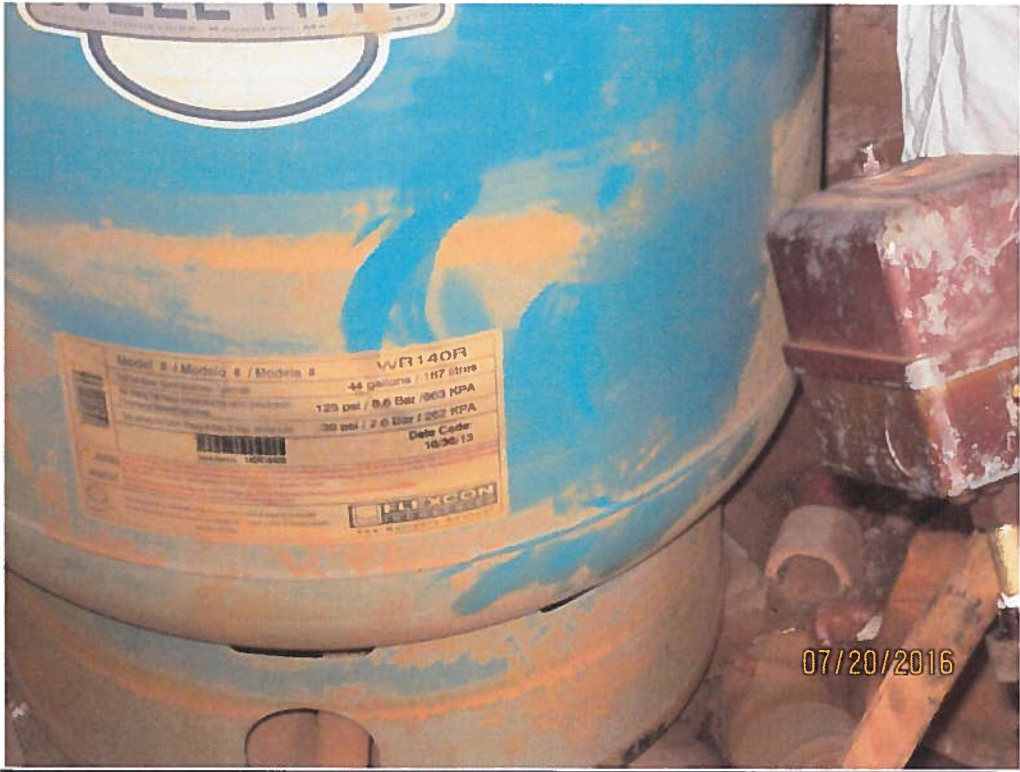


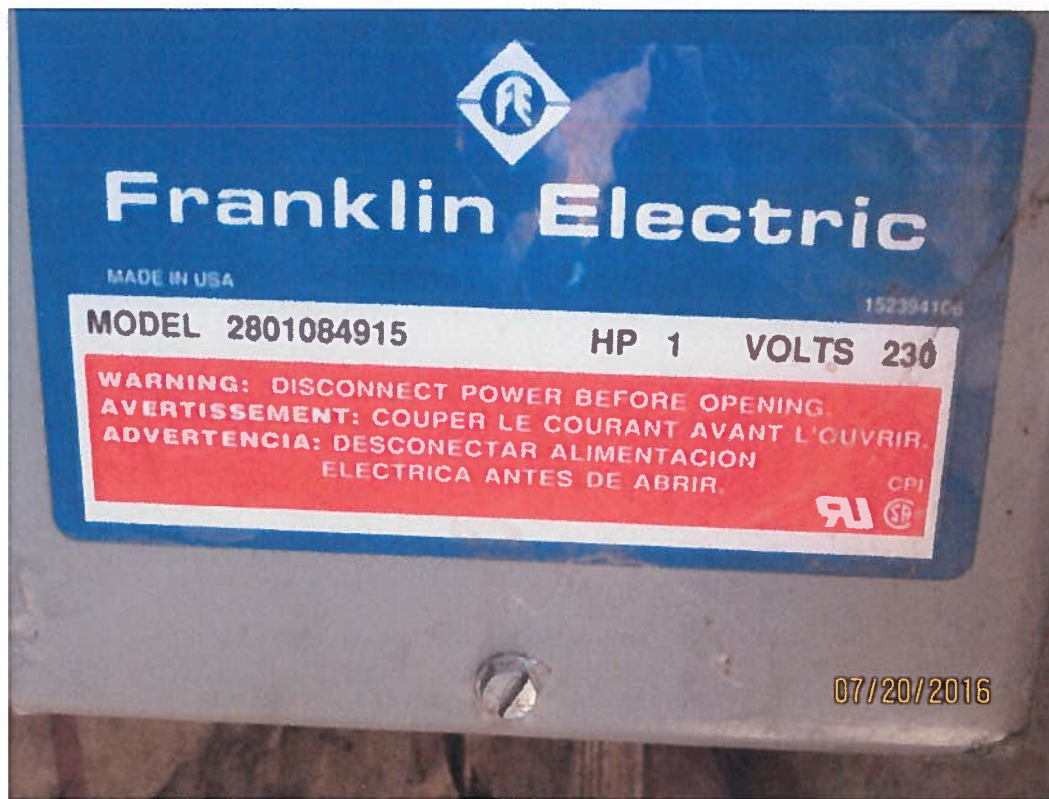
Second well location in relation to the
pump house and the orchard

The two wells are less than 100 feet
apart



Pressure tanks, one for each well





Location of wells

Pump house

Orchard