

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A Beneficial Use Field Report is prepared by a water right examiner as the result of an examination to clearly confirm and establish the extent of the beneficial use of water established in connection with a permit during the development period authorized by the permit and any extensions of time previously approved.

A. GENERAL INFORMATIONPermit No. 63-118181. Owner JF Watson Farms CoPhone No. 208-722-5141Current address PO Box 300, Parma, Idaho 836602. Examiner's name Cody ParkerEXAM DATE 08/18/173. Accompanied by Irrigation Operator

Email _____

Address _____

Relationship to permit holder _____

Phone No. _____

4. Source Ground Water

tributary to _____

B. OVERLAP REVIEW1. Other water rights with the same place of use 63-10647B, Boise Project (surface water)2. Other water rights with the same source and point of diversion 63-10647B**C. DIVERSION AND DELIVERY SYSTEM**

1. Point(s) of Diversion:

Ident. No.	Gov't Lot	¼	¼	¼	Sec	Twp	Rge	County	Method of Determination/Remarks
			NW	NE	7	03N	04W	Canyon	GPS, Digital PLS Mapping

2. Place(s) of Use:

Method of determination 2015 aerial imagery, digital PLS Mapping

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	04W	7		1.4															1.4

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe diameter (inside), as applicable. Use the space provided or ☒ see attached.

Scale: 1" = _____

- ☒ Copy of USGS Quadrangle attached showing location(s) of point(s) of diversion and place(s) of use (required)
☒ Aerial photo attached (required for irrigation of 10+ acres)
☒ Photo of diversion and system attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Well ID 303549		15			8"

*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

2. Measurements: _____

Theoretical Only _____

E. NARRATIVE/REMARKS/COMMENTS

SEE ATTACHED

Has the permit holder met all conditions of permit approval, including any mitigation requirements and/or measuring device installation requirements? ☒ Yes ☐ No If no, what must be done to meet the permit requirements?

F. FLOW CALCULATIONS☐ Additional computation sheets attached

Measured Method:

$$Q = (8.8 \times 15 \times 0.7) / (2.31 \times 55 + 100) = 0.41 \text{ cfs (Maximum Estimate)}$$

$$Q = (8.8 \times 15 \times 0.7) / (2.31 \times 55 + 210) = 0.27 \text{ cfs (Minimum Estimate)}$$

$$\text{Owner Estimate} = 200 \text{ gpm} = 0.44 \text{ cfs}$$

$$\text{BU Standard} = 1.4 \text{ acres} \times 0.02 \text{ cfs/acre} = 0.03 \text{ cfs}$$

$$\text{Total requirement with overlapping rights} = 0.56 \text{ cfs}$$

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 1.4 \text{ acres} \times 4.5 \text{ afa/acre} = 6.3 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 0.03 \text{ cfs} \times 260 \times 1.9835 = 15.5 \text{ afa}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 6.3 \text{ afa}$$

2. Volume Calculations for Other Uses:

No other uses

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
Irrigation	03/01	11/15	0.03 cfs	6.3 afa
Totals:			0.03 cfs	6.3 afa

2. Recommended Amendments

☐ Change P.D. as reflected on page 1☐ Add P.D. as reflected on page 1☒ None☐ Change P.U. as reflected on page 1☐ Add P.U. as reflected on page 1☐ Other**I. AUTHENTICATION**

Field Examiner's Signature

Date 09/05/17

Reviewer

Date 9/11/17

SEAL

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

NARRATIVE

On August 18, 2017 I visited the place of use for this permit as part of the beneficial use field examination. I was accompanied by an irrigation operator working for the farm and I later got additional information about the POD from Brad Watson, an owner of the farm. The system was not in use during the time of the exam and groundwater is used to supplement surface water.

The point of diversion is a 12" diameter, 503' deep well which was drilled in 1992 and has no metal tag. The GPS coordinates for the well are N 43°37'03.3" by W 116°51'34.1" putting it in the NWNE of Section 7, Township 03 North, Range 04 West, Boise Meridian. At the time of the exam, the irrigation system was running off of surface water from the irrigation ditch which runs along the eastern edge of the place of use. There was no pump set in the well. I spoke with the farm owner/manager Brad Watson over the phone. He says that the well has collapsed and they plan to reconstruct it. He further states they usually have a 15 hp submersible pump in the well, set between 215' and 230' below ground surface. The pump diverts water through an 8" mainline at 55 psi to 1" risers at the east end of each row of hops. Water flows from the riser into ½" drip line. The watering is split into 2 zones which are the north and south halves of the POU.

The owner estimates the capacity of the well at 200 gpm or 0.44 cfs. There is no available information concerning the pumping level of the well. The pump is set between 215' and 230' and, according to the well log, the static water level is 90' below ground surface. Using a pumping level 10' below static (100') in the HP equation gives an upper estimate of diversion capacity of 0.41 cfs. Using a pumping level of 210' (just above the pump set depth) gives a minimum estimate of 0.27 cfs for the capacity. The upper estimate is more in line with the owner's estimate.

The application for this permit was submitted in May of 1992. A temporary moratorium permit was approved in June of the same year, specifying that the permit expires at the end of the '92 irrigation season. In July of 1992 the drilling permit was approved for construction of the POD. The well was constructed that same month. In April of 1994, transfer 4184 was processed, splitting right 63-10647 into parts A and B. Following the approval of the transfer, right 63-10647B authorized the diversion of 0.53 cfs and 119.7 afa from the well mentioned above to irrigate 26.6 acres of the place of use for permit 63-11818. Then in August of 2008, permit 63-11818 was approved following the end of the moratorium for this area. However, by the time the permit was approved, right 63-10647B authorized irrigation of most of the place of use from the same point of diversion. Therefore, this license is being recommended for any irrigation exceeding 26.6 acre at the location described on the permit.

From 2015 aerial imagery, I have measured 28.0 acres of irrigation within the NWNE of Section 7, Township 03 North, Range 04 West, B.M. Right 63-10647B already covers 26.6 acres of irrigation. Therefore, the additional use developed is 1.4 acres of irrigation, which is the acreage recommended for this license. The diversion rate for the license is based on the standard of 0.02 cfs/acre. Admin AP Memo 17 suggests that we would allow up to 0.03 cfs/acre for this right because it is less than 5 acres. However, because the system is used to irrigate a total of 28 acres,

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it does not seem that the economy of scale argument presented in the memo applies in this case. The diversion rate I have recommended is 0.03 cfs (0.02 cfs/acre x 1.4 acres). The annual diversion volume is based on a headgate requirement of 4.5 afa/acre and is recommended at 6.3 afa.

The two overlapping rights, when combined, require a total diversion rate of 0.56 cfs. However, the capacity of the system appears to be 0.44 cfs. A combined use limit should be added to ensure that the two rights when combined do not exceed the diversion capacity of the well, but because the existing right already exceeds the estimated capacity, the combined use limit cannot restrict that rate further. Therefore, the two rights when combined will be restricted to a combined diversion rate of 0.53 cfs. It is likely that the watering requirements do not exceed 0.44 cfs because, as mentioned above, only half of the 28 acres are watered at any given point (2^{af} zones run separately). The two rights combined account for a total annual diversion ~~3.33~~^{VOLUME} of 126 afa, which comes out to 4.5 afa/acre and does not exceed the standard. Both of the overlapping rights authorize supplemental groundwater use.

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Figure 1 The 12" well used as the POD. According to the farm owner, the well has failed and will be replaced. There was no pump at the time of the exam.



Figure 2 The gage pressure reading at the start of the mainline showing 55 psi. The pressure shown is the pressure when water from the ditch is used.

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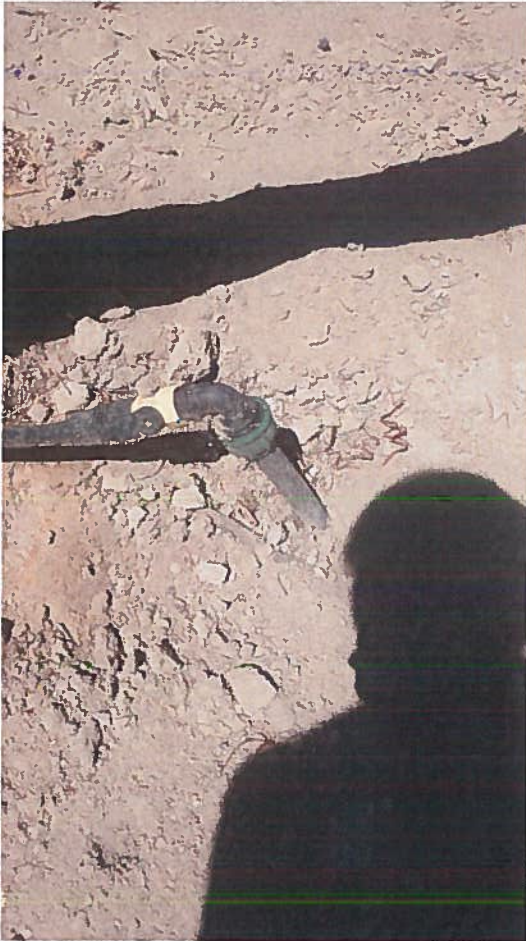


Figure 3 A 1" riser at the start of a row of hops leading into 1/2" drip line.



Figure 4 Rows of hops irrigated at the place of use.

State of Idaho
Department of Water Resources
Attachment to Water Right License
63-11818

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.

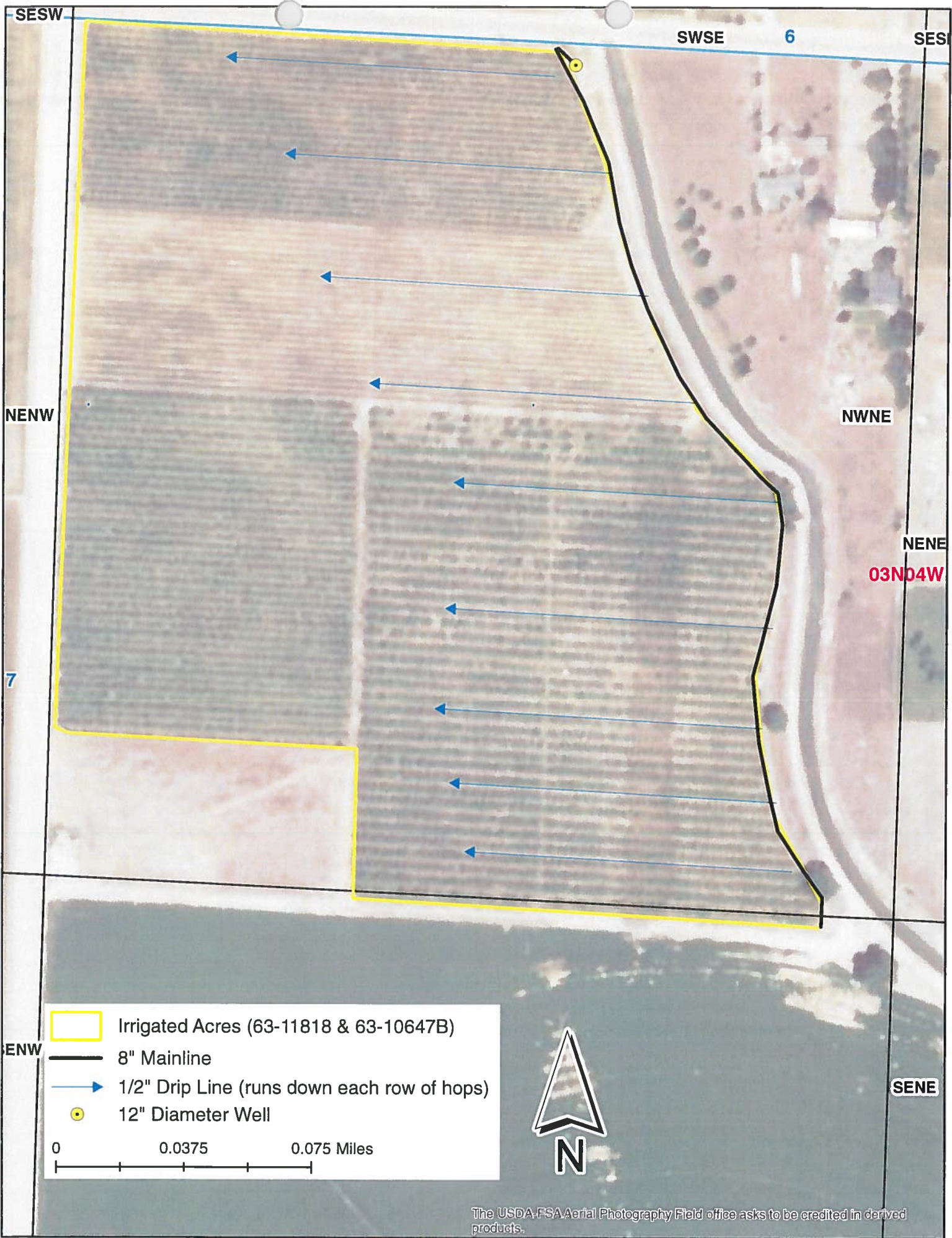
04W



-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections

0 0.035 0.07 0.14 Miles





 Irrigated Acres (63-11818 & 63-10647B)

 8" Mainline

 1/2" Drip Line (runs down each row of hops)

 12" Diameter Well

0 0.0375 0.075 Miles



03N04W7

BasinSequi Owner	Source	Use
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63-10647B J F WATSON F GROUND W. IRRIGATION

63-11786 GARRETT RAN GROUND W. IRRIGATION

63-11818 J F WATSON F GROUND W. IRRIGATION

63-136 BARKER ROSH BOISE RIVER IRRIGATION

63-137B BARKER ROSH BOISE RIVER IRRIGATION

63-161BJ BRANDT, DON BOISE RIVER IRRIGATION

63-200A BARKER ROSH BOISE RIVER IRRIGATION

63-2106 UNITED STATE FIVEMILE CF IRRIGATION

63-233K AMERICAN DI' BOISE RIVER IRRIGATION

63-2388A UNITED STATE BOISE RIVER IRRIGATION

63-2392F BOISE PROJEC WASTE WAT IRRIGATION

63-251A UNITED STATE BOISE RIVER IRRIGATION

63-301A UNITED STATE BOISE RIVER IRRIGATION

63-302A UNITED STATE BOISE RIVER IRRIGATION

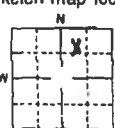
63-33251 BOISE PROJEC INDIAN CREI IRRIGATION

63-33253 BOISE PROJECT TEN MILE CB IRRIGATION

63-373A UNITED STATE BOISE RIVER IRRIGATION

[illegible]

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. *pg 1 of 2*

1. WELL OWNER Name <u>J.F. Watson</u> Address <u>PO Box 300, Parma, ID 83660</u> Drilling Permit No. <u>63-92-C-208</u> Water Right Permit No. <u>63-11818</u>	7. WATER LEVEL Static water level <u>90</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 _____ °F. Quality _____ 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" style="width:100%; border-collapse: collapse;"><thead><tr><th>Discharge G.P.M.</th><th>Pumping Level</th><th>Hours Pumped</th></tr></thead><tbody><tr><td>190</td><td>195'</td><td>26.5 hrs</td></tr><tr><td>375</td><td>216'</td><td>Total</td></tr><tr><td>425</td><td>220'</td><td></td></tr></tbody></table>	Discharge G.P.M.	Pumping Level	Hours Pumped	190	195'	26.5 hrs	375	216'	Total	425	220'																																																																																															
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3. PROPOSED USE ☐ Domestic ☒ Irrigation ☐ Monitor ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection ☐ Other _____ (specify type)	9. LITHOLOGIC LOG <table border="1" style="width:100%; border-collapse: collapse;"><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>28"</td><td>0</td><td>5</td><td>Top soil</td><td></td><td>X</td></tr><tr><td>28"</td><td>5</td><td>9</td><td>Sand, river rock</td><td></td><td>X</td></tr><tr><td>"</td><td>9</td><td>21</td><td>Cleach, river rock</td><td></td><td>X</td></tr><tr><td>"</td><td>21</td><td>25</td><td>Cleach</td><td></td><td>X</td></tr><tr><td>"</td><td>25</td><td>28</td><td>Sand, cleach</td><td></td><td>X</td></tr><tr><td>"</td><td>28</td><td>62</td><td>Cleach, clay</td><td></td><td>X</td></tr><tr><td>"</td><td>62</td><td>76</td><td>Brown sand</td><td>X</td><td></td></tr><tr><td>"</td><td>76</td><td>215</td><td>Yellow & blue clay</td><td></td><td>X</td></tr><tr><td>"</td><td>215</td><td>226</td><td>Fine sand</td><td>X</td><td></td></tr><tr><td>"</td><td>226</td><td>238</td><td>Clay</td><td></td><td>X</td></tr><tr><td>"</td><td>238</td><td>258</td><td>Clay w/ layers fine sand</td><td></td><td></td></tr><tr><td>"</td><td>258</td><td>278</td><td>Fine sand</td><td>X</td><td></td></tr><tr><td>"</td><td>278</td><td>288</td><td>Clay w/ fine sand</td><td>X</td><td></td></tr><tr><td>"</td><td>288</td><td>328</td><td>Clay</td><td></td><td>X</td></tr><tr><td>"</td><td>328</td><td>338</td><td>Clay</td><td></td><td>X</td></tr><tr><td>"</td><td>338</td><td>503</td><td>Blue clay</td><td></td><td>X</td></tr></tbody></table>	Bore Diam.	Depth		Material	Water		From	To	Yes	No	28"	0	5	Top soil		X	28"	5	9	Sand, river rock		X	"	9	21	Cleach, river rock		X	"	21	25	Cleach		X	"	25	28	Sand, cleach		X	"	28	62	Cleach, clay		X	"	62	76	Brown sand	X		"	76	215	Yellow & blue clay		X	"	215	226	Fine sand	X		"	226	238	Clay		X	"	238	258	Clay w/ layers fine sand			"	258	278	Fine sand	X		"	278	288	Clay w/ fine sand	X		"	288	328	Clay		X	"	328	338	Clay		X	"	338	503	Blue clay		X
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4. METHOD DRILLED ☐ Rotary ☐ Air ☐ Auger ☒ Reverse rotary ☐ Cable ☐ Mud ☐ Other _____ (backhoe, hydraulic, etc.)	RECEIVED SEP - 8 1992 Department of Water Resources																																																																																																										
5. WELL CONSTRUCTION *See Sectional Attached Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____ <table border="1" style="width:100%; border-collapse: collapse;"><thead><tr><th>Thickness</th><th>Diameter</th><th>From</th><th>To</th></tr></thead><tbody><tr><td>* .250 inches</td><td>12 inches</td><td>+ _____ feet</td><td>_____ feet</td></tr><tr><td>_____ inches</td><td>_____ inches</td><td>_____ feet</td><td>_____ feet</td></tr><tr><td>_____ inches</td><td>_____ inches</td><td>_____ feet</td><td>_____ feet</td></tr></tbody></table> Was casing drive shoe used? ☐ Yes ☒ No Was a packer or seal used? ☐ Yes ☒ No Perforated? ☐ Yes ☒ No How perforated? ☐ Factory ☐ Knife ☐ Torch ☐ Gun Size of perforation? _____ inches by _____ inches <table border="1" style="width:100%; border-collapse: collapse;"><thead><tr><th>Number</th><th>From</th><th>To</th></tr></thead><tbody><tr><td>_____ perforations</td><td>_____ feet</td><td>_____ feet</td></tr><tr><td>_____ perforations</td><td>_____ feet</td><td>_____ feet</td></tr><tr><td>_____ perforations</td><td>_____ feet</td><td>_____ feet</td></tr></tbody></table> Well screen installed? ☒ Yes ☐ No * Manufacturer <u>ROSCOE MOSS</u> Type <u>Wire WRAP</u> Top Packer or Headpipe _____ Bottom of Tailpipe _____ * Diameter <u>12"</u> Slot size <u>.040</u> Set from _____ feet to _____ feet Diameter _____ Slot size _____ Set from _____ feet to _____ feet Gravel packed? ☒ Yes ☐ No ☐ Size of gravel <u>3/8 minus</u> Placed from <u>140</u> feet to <u>503</u> feet Surface seal depth _____ 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 <u>2" plug in well cap</u>	Thickness	Diameter	From	To	* .250 inches	12 inches	+ _____ feet	_____ feet	_____ inches	_____ inches	_____ feet	_____ feet	_____ inches	_____ inches	_____ feet	_____ feet	Number	From	To	_____ perforations	_____ feet	_____ feet	_____ perforations	_____ feet	_____ feet	_____ perforations	_____ feet	_____ feet	10. Work started <u>7-29-92</u> finished <u>8-1-92</u>																																																																														
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6. LOCATION OF WELL Sketch map location must agree with written location.  Subdivision Name _____ Lot No. _____ Block No. _____ County <u>Canyon</u> Address of Well Site <u>Honedale Rd</u> (give at least name of road) <u>NW</u> 1/4 <u>NE</u> 1/4 Sec. <u>7</u> , R. <u>4</u> T. <u>3</u> N ☒ or S ☐ E ☐ or W ☒	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>Riverside Drilling</u> No. <u>333</u> <u>PO Box 720</u> Address <u>Parma, ID 83660</u> Date <u>8-20-92</u> Signed by Drilling Supervisor <u>[Signature]</u> and (Operator) <u>[Signature]</u> (If different than the Drilling Supervisor)																																																																																																										



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

May 4, 2017

JF WATSON FARMS CO
PO BOX 300
PARMA ID 83660

RE: Scheduling Field Exam for Water Right Permit No. 63-11818

Dear Permit Holder:

We are planning to conduct water right examinations in the vicinity of the above-referenced permit **this season**. An examination is needed to verify the water use in order to issue a water right license.

The above-referenced permit authorizes **0.80 cfs** of **GROUND WATER** for **irrigation** use. **If you have developed a beneficial use and still own the place of use property, please contact me at your earliest convenience to schedule an examination.**

If you did not develop a beneficial use of water under the permit during the beneficial use period, a license cannot be issued and the permit should be relinquished. If that use was developed, but have ceased using the water and you currently carry no interest in it, please relinquish the permit by submitting the enclosed Relinquishment of Permit form (no fee required).

If you did develop a beneficial use of water under the permit, but you no longer own the place of use property identified in the permit, please submit the enclosed Assignment of Permit form with the applicable \$25 processing fee.

Please contact me within the next thirty (30) days at (208) 334-2190 to either schedule an examination or submit a relinquishment or assignment form. If you no longer own the place of use property and/or do not respond to this letter, the department will work with the current property owner to issue a license or void the permit.

Sincerely,

Cody Parker
Water Resource Agent

Enclosures: Relinquishment of Permit form
Assignment of Permit form
Water Permit Report and Map