

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-16390

Exam Date: 6/16/2016

1. Current Owner:

HOWARD E WELCH 8865 E FERNAN LAKE RD COEUR D ALENE ID 83814-7782 (208)667-2371

And

ROBERTA A WELCH 8865 E FERNAN LAKE RD COEUR D ALENE ID 83814 (208) 667-2371

2. Accompanied by: Howard Welch

3. **SOURCE:**

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 95-7580

2. Other water rights with the same point-of-diversion: 95-7580

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

GROUND WATER SW¼NW¼ Sec. 23, Twp 51N, Rge 04W, B.M. KOOTENAI County

Method of Determination: GPS and maps. POD location at 47° 45.119, 116° 48.445 (A0015437)

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	
51N	04W	23							1.7										1.7

Total Acres: 1.7

Method of Determination: GPS and maps.

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.

XX

Aerial Photo Attached (required for irrigation of 10+ acres).

X

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
95-76-N-80	FRANKLIN	3	2823028110		

*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:

E. FLOW CALCULATIONS

Additional Computation Sheets Attached

Measured Method: UNABLE TO PERFORM FLOW MEASUREMENT. WATER WAS DIVERTED FROM WELL INTO SMALL STORAGE TANK. THEORETICAL PUMPING EQUATION ESTIMATES FLOW RATE AT 23.6 GPM OR 0.05 CFS.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 1.7 \text{ AC} \times 3 \text{ AF} = 5.1 \text{ AF}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.05 \text{ CFS} \times 246 \times 1.9835 = 24.4 \text{ AF}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 5.1 \text{ AF}$$

2. Volume Calculations for Other Uses:

G. NARRATIVE/REMARKS/COMMENTS

Field exam with Mr. Welch showed a well with 3 hp pump being used for the irrigation of 1.7 acres. Theoretical pumping equation was required because well was pumped straight into small storage tank located under pump house where it was pumped into pressure tanks to be supplied to home and for irrigation water. There were frost free hydrants located all around property that hoses and various sprinklers were used for irrigation. Applicant would move sprinklers around to cover property. Theoretical pumping equation estimated flow rate 23.6 gpm or 0.05 cfs. The home is claimed under water right 95-7580 for 0.04 cfs and 1.2 af. This water right will be conditioned so there is no overlap between the two rights. License will be for 0.05 cfs for the irrigation of 1.7 acres with annual volume of 5.1 af.

Have conditions of permit approval been met? X 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 10/31	0.05 CFS	5.1 AF
	<u>Totals:</u>	0.050 CFS	5.10 AF

2. Recommended Amendments

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

Change P.U. as reflected above Add P.U. as reflected above X None

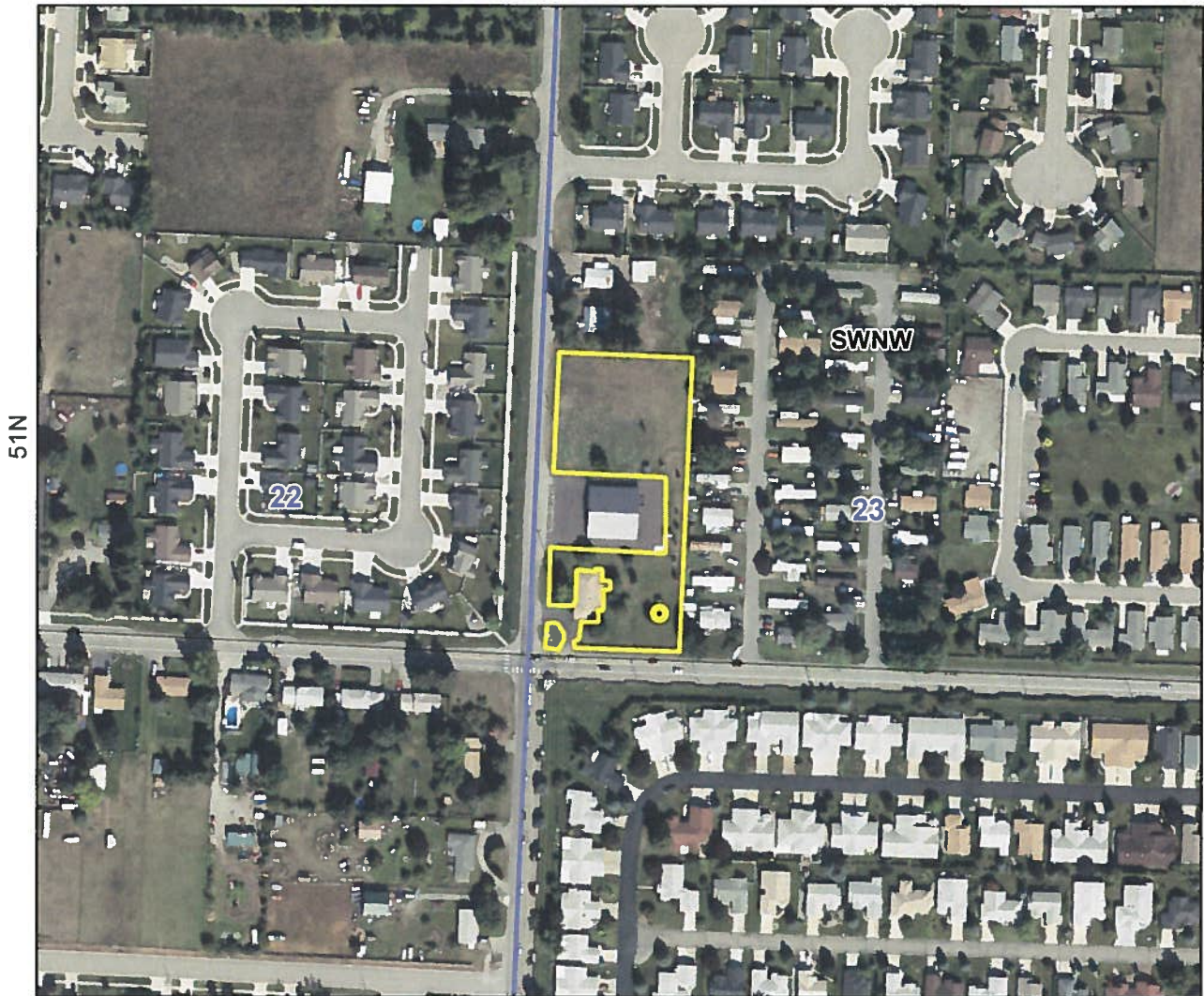
I. AUTHENTICATION

Field Examiner's Name Adam Furdick Date 10-28-2016

Reviewer Morgan Case Date 12/30/2016

State of Idaho
Department of Water Resources
Water Right License
95-16390

04W



0 0.035 0.07 0.14 Miles

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



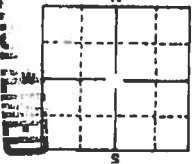
USE TYPEWRITER OR
BALL POINT PEN

State of Idaho
Department of Water Resources

WELL DRILLER'S REPORT

State 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.

RECEIVED
APR 5 1976
Department of Water Resources
Northern District Office

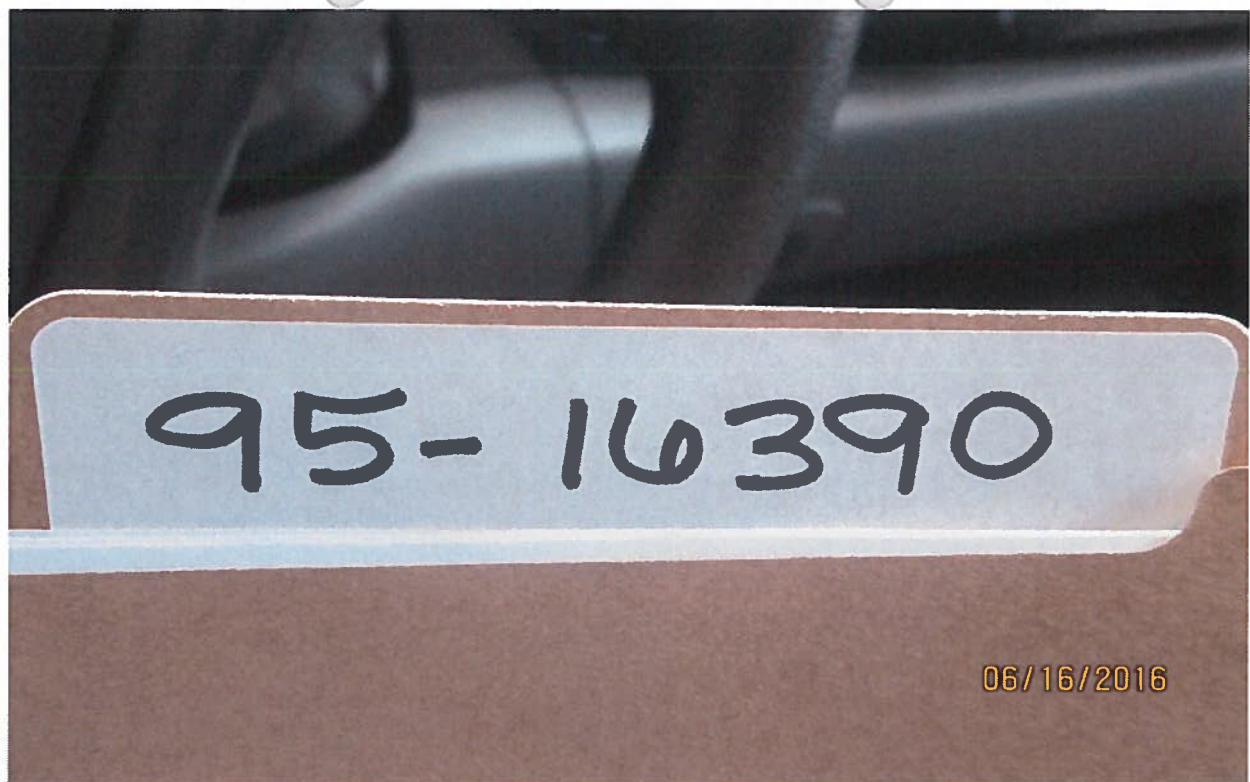
1. WELL OWNER Name <u>NORMAN SPERIE</u> Address <u>HAYDEN LAKE Idaho</u> Owner's Permit No. <u>95-7580</u> W R		7. WATER LEVEL Static water level <u>277</u> feet below land surface Flowing? ☐ Yes ☒ No G.P.M. flow _____ Temperature _____ ° F. Quality _____ Artesian closed-in pressure _____ p.s.i. Controlled by ☐ Valve ☐ Cap ☐ Plug																																																																																																					
2. NATURE OF WORK <u>95-76-N-80</u> ☒ New well ☐ Deepened ☐ Replacement ☐ Abandoned (describe method of abandoning)		8. WELL TEST DATA ☐ Pump ☒ Bailer ☐ Other <table border="1"><thead><tr><th>Discharge G.P.M.</th><th>Draw Down</th><th>Hours Pumped</th></tr></thead><tbody><tr><td><u>20</u></td><td><u>0</u></td><td><u>2</u></td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></tbody></table>		Discharge G.P.M.	Draw Down	Hours Pumped	<u>20</u>	<u>0</u>	<u>2</u>																																																																																														
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3. PROPOSED USE ☒ Domestic ☐ Irrigation ☐ Test ☐ Other (specify type) ☐ Municipal ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection		9. LITHOLOGIC LOG <table border="1"><thead><tr><th rowspan="2">Hole 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>8"</td><td>0</td><td>8</td><td>TOP SOIL AND GRAVEL</td><td>X</td><td> </td></tr><tr><td> </td><td>8</td><td>22</td><td>GRAVEL</td><td>X</td><td> </td></tr><tr><td> </td><td>22</td><td>62</td><td>BOULDERS</td><td>X</td><td> </td></tr><tr><td> </td><td>62</td><td>152</td><td>PEA GRAVEL</td><td>X</td><td> </td></tr><tr><td> </td><td>152</td><td>174</td><td>LARGE GRAVEL</td><td>X</td><td> </td></tr><tr><td> </td><td>174</td><td>181</td><td>BOULDERS</td><td>X</td><td> </td></tr><tr><td> </td><td>181</td><td>197</td><td>" AND CLAY</td><td>X</td><td> </td></tr><tr><td> </td><td>197</td><td>204</td><td>GRAVEL AND "</td><td>X</td><td> </td></tr><tr><td> </td><td>204</td><td>272</td><td>LARGE GRAVEL WITH GRANITE CLAY</td><td>X</td><td> </td></tr><tr><td> </td><td>272</td><td>274</td><td>BOULDERS AND CLAY</td><td>X</td><td> </td></tr><tr><td> </td><td>274</td><td>279</td><td>PEA GRAVEL AND SILT</td><td>X</td><td> </td></tr><tr><td> </td><td>279</td><td>290</td><td>" " " SAND</td><td>X</td><td> </td></tr><tr><td> </td><td>290</td><td>295</td><td>GRANITE BOULDER + "</td><td>X</td><td> </td></tr><tr><td> </td><td>295</td><td>306</td><td>SAND 70% FINE 30% COARSE</td><td>X</td><td> </td></tr><tr><td> </td><td>306</td><td>324</td><td>GRAVEL + SAND 90% COARSE</td><td>X</td><td> </td></tr></tbody></table>		Hole Diam.	Depth		Material	Water		From	To	Yes	No	8"	0	8	TOP SOIL AND GRAVEL	X			8	22	GRAVEL	X			22	62	BOULDERS	X			62	152	PEA GRAVEL	X			152	174	LARGE GRAVEL	X			174	181	BOULDERS	X			181	197	" AND CLAY	X			197	204	GRAVEL AND "	X			204	272	LARGE GRAVEL WITH GRANITE CLAY	X			272	274	BOULDERS AND CLAY	X			274	279	PEA GRAVEL AND SILT	X			279	290	" " " SAND	X			290	295	GRANITE BOULDER + "	X			295	306	SAND 70% FINE 30% COARSE	X			306	324	GRAVEL + SAND 90% COARSE	X	
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4. METHOD DRILLED ☒ Cable ☐ Rotary ☐ Dug ☐ Other		10. Work started <u>Mar 1-76</u> finished <u>Mar 30-76</u>																																																																																																					
5. WELL CONSTRUCTION Diameter of hole <u>8</u> inches Total depth <u>324</u> feet Casing schedule: ☒ Steel ☐ Concrete <table border="1"><thead><tr><th>Thickness</th><th>Diameter</th><th>From</th><th>To</th></tr></thead><tbody><tr><td><u>0.250</u> inches</td><td><u>8</u> inches</td><td><u>1.5</u> feet</td><td><u>292</u> feet</td></tr><tr><td><u>.322</u> inches</td><td><u>8</u> inches</td><td><u>292</u> feet</td><td><u>324</u> feet</td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </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 Size of perforation <u>1/2</u> inches by <u>1/2</u> inches <table border="1"><thead><tr><th>Number</th><th>From</th><th>To</th></tr></thead><tbody><tr><td><u>32</u> perforations</td><td><u>318</u> feet</td><td><u>307</u> feet</td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></tbody></table> Well screen installed? ☐ Yes ☒ No Manufacturer's name _____ Type _____ Model No. _____ 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>18</u> Material used in seal ☐ Cement grout ☒ Pudding clay ☐ Well cuttings Sealing procedure used ☐ Slurry pit ☒ Temporary surface casing ☐ Overbore to seal depth		Thickness	Diameter	From	To	<u>0.250</u> inches	<u>8</u> inches	<u>1.5</u> feet	<u>292</u> feet	<u>.322</u> inches	<u>8</u> inches	<u>292</u> feet	<u>324</u> feet													Number	From	To	<u>32</u> perforations	<u>318</u> feet	<u>307</u> feet							11. DRILLERS CERTIFICATION Firm Name <u>Broad X water works</u> Firm No <u>289</u> Address <u>Rathdrum Idaho</u> Date <u>April 6-76</u> Signed by (Firm Official) <u>Lordon Lordon</u> and (Operator) <u>Same</u>																																																																	
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6. LOCATION OF WELL Sketch map location must agree with written location. <u>(45)</u>  Subdivision Name _____ Lot No. <u>X18P</u> Block No. _____ County <u>Kootenai</u> <u>SW 1/4 NW 1/4 Sec. 23, T. 51 N. R. 4 E</u>																																																																																																							

USE ADDITIONAL SHEETS IF NECESSARY

FORWARD THE WHITE COPY TO THE DEPARTMENT

Theoretical pumping equation for Water Right 95-16390. IDWR will assume pump is set at 309 feet and assumed psi at 40.

PUMP EQUATIONS WATER RIGHT No. 95- 16390						
		HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
Q =	HP*8.8*Eff/H	3	401.517	0.8	309	40
Q = 0.053 cfs 23.6 gpm						



Well drilled in 1976. See attached theoretical pumping equation; estimates flow rate at 23.6 gpm or 0.05 cfs.



3 hp pump in well.



Well pumped in small storage tank under pump house before it was pumped to irrigation and home.



Pressure tanks and pump from storage tank.



Irrigation in front yard facing northwest.



Backyard irrigation facing south.



