

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. 63-12097

1. Owner Wilson Properties LP Phone No. 208-424-9322
 Current address 1101 West River Street, Suite 150, Boise, ID 83702
2. Examiner's name Terry Scanlan (CWRE No. 129) EXAM DATE July 23, 2018
3. Accompanied by Sam Davis Email bldrmtn@msn.com
 Address c/o Boise Ranch Golf Course, 6501 S Cloverdale Road, Boise, ID 83709
 Relationship to permit holder Employee Phone No. 208-407-8020
4. Source ground water tributary to NA

B. OVERLAP REVIEW

1. Other water rights with the same place of use New York Irrigation District, 63-4607B, 63-18152, City of Meridian
2. Other water rights with the same source and point of diversion 63-11831, 63-32232, 63-11874

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
1			SW	SE	33	3N	1E	Ada	GPS/GIS/Aerial Photography
2			SW	NE	4	2N	1E	Ada	GPS/GIS/Aerial Photography

2. Place(s) of Use: Method of determination _____

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
2N	1E	4	24	31	32	23.5													110.5
			L1	L2															

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" = 600 feet

- ☒ 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
1 (tag A0019161)	Submersible	30	unknown	unknown	6-inch
2 (tag D0077513)	Submersible	40	unknown	Goulds 10RJLC	8-inch

*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
Panametrics Portable Flowmeter	Ultrasonic	GE	PT878	7140	various	April 18, 2018

2. Measurements:

Well 1 - See 10 minute flow rate at 415 gpm (0.93 cfs) average in Attachment C.

Well 2 - See 10 minute flow rate at 962 gpm (2.14 cfs) average in Attachment C.

E. NARRATIVE/REMARKS/COMMENTS

Two wells provide supplemental irrigation water for Boise Ranch Golf Course. Well 1 is located north of Lake Hazel Road and is utilized under a shared well agreement with water rights 63-11831, 63-32232, 63-11874. Well 1 is 10-inch diameter, with total depth of 276 feet. The submersible pump in Well 1 is described in the 63-11831 field exam as a 30-hp National with 126-foot setting depth. Note that the well location is very close to the 1/4 1/4 section line between SWSE and SESW Section 33. Location put in SWSE to be consistent with other water rights listing the well as POD.

Well 2 is located within the golf course and is used for this permit only. Well 2 is 12-inch diameter with total depth of 335 feet and is equipped with a 40-hp Goulds 1-stage submersible set at 147 feet on 8-inch drop pipe.

A third well (D0053380) was constructed in the NWNE but was not equipped with a pump at the time of the field examination.

Both wells discharge through pipe to a pond system. The Well 1 pipe is buried and the pipe diameter is unknown; mechanical pipe at the well head is 6-inch. Well 2 was discharging through 10-inch above-ground aluminum pipe; mechanical pipe at well head is 8-inch. After discharging from the pipes, the water flows through the pond system to a pressure irrigation pump station, and is then pumped into a pressurized irrigation distribution system for sprinkler irrigation of the golf course.

The pressure irrigation pumps consist of two 60 hp vertical turbine pumps at one of the ponds. Capacity is approximately 1200 gpm (2.7 cfs) based on Maxicom flow (Attachment B) and calculated flow at 115 psi and 120 hp. Primary irrigation water supply is from New York Irrigation District with additional supplementation from Tenmile Creek right 63-4607B. These surface water supplies are delivered to the pressure irrigation pump system through the same pond system as the groundwater.

Exam Attachments

Attachment A: Field Exam Map

Attachment B: System Components, Well Reports, and Diagrams

Attachment C: Flow Measurement Data

Attachment D: Exam Photos

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:

Flow meter. See attachment C.

Total measured flow rate from Wells 1 and 2 (0.93 cfs + 2.14 cfs) is 3.07 cfs.

Recommended flow rate = 110.5 ac x 0.02 cfs/ac = 2.21 cfs

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 110.5 \text{ acres} \times 4.5 \text{ afa/ac} = 497.3 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 2.21 \text{ cfs} \times 260 \text{ days} \times 1.9835 = 1,139.7 \text{ afa}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 497.3 \text{ afa}$$

2. Volume Calculations for Other Uses:

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion	Annual Volume
	From	To	Q (cfs)	V (afa)
irrigation	03/01	11/15	2.21 cfs	497.3 afa
Totals:			2.21 cfs	497.3 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

Terry M. Scanlan

Date

7/25/18

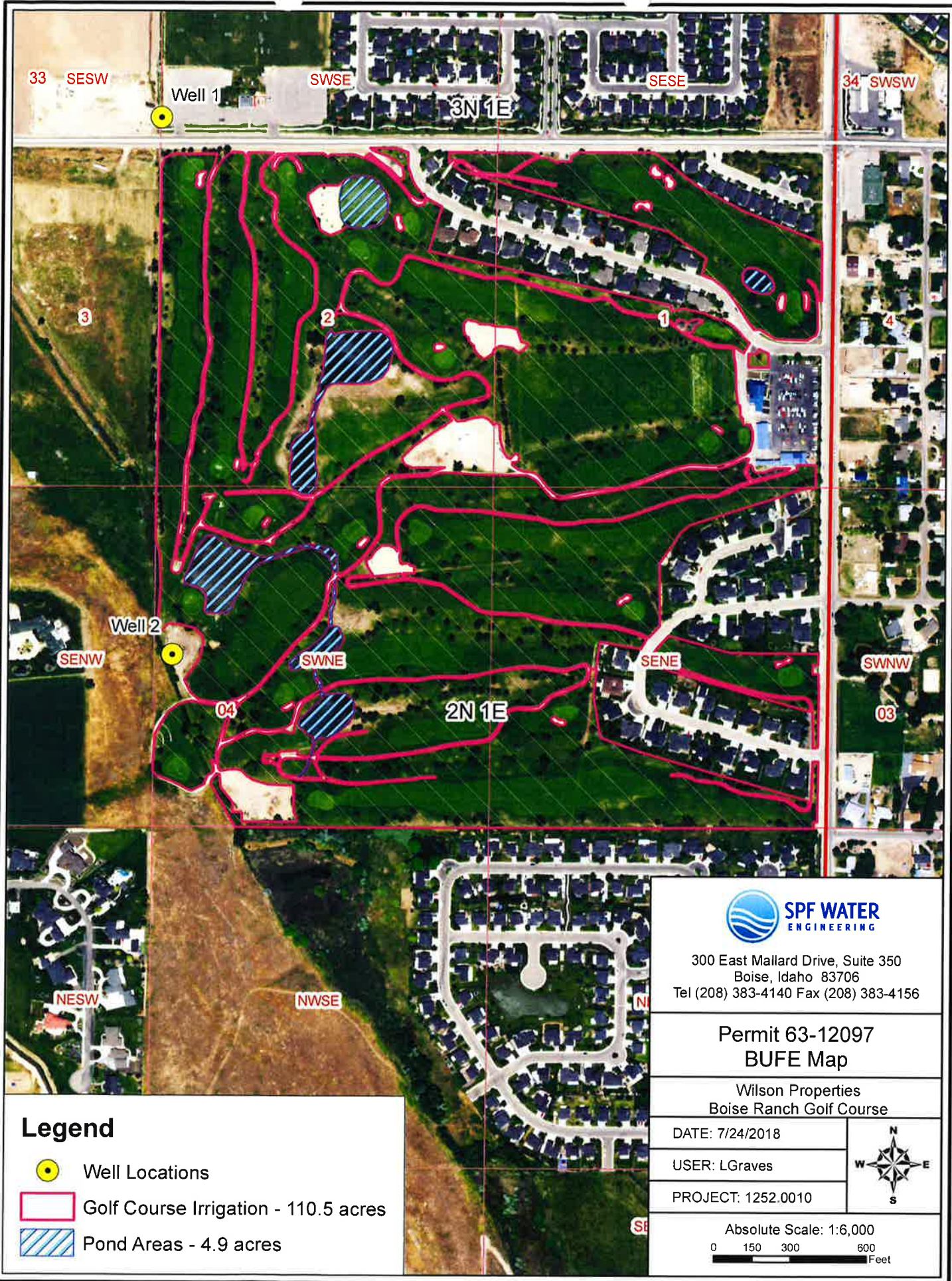
Reviewer

Date



Attachment A
Field Exam Map

Path: S:\PROJECTS\12520010 Boise Ranch GC Well0010 Well Consultation\PROJECT\GIS\ArcMap_Projects\BUFE Map (topo).mxd



Legend

-  Well Locations
-  Golf Course Irrigation - 110.5 acres
-  Pond Areas - 4.9 acres



300 East Mallard Drive, Suite 350
Boise, Idaho 83706
Tel (208) 383-4140 Fax (208) 383-4156

Permit 63-12097
BUFE Map

Wilson Properties
Boise Ranch Golf Course

DATE: 7/24/2018

USER: LGraves

PROJECT: 1252.0010

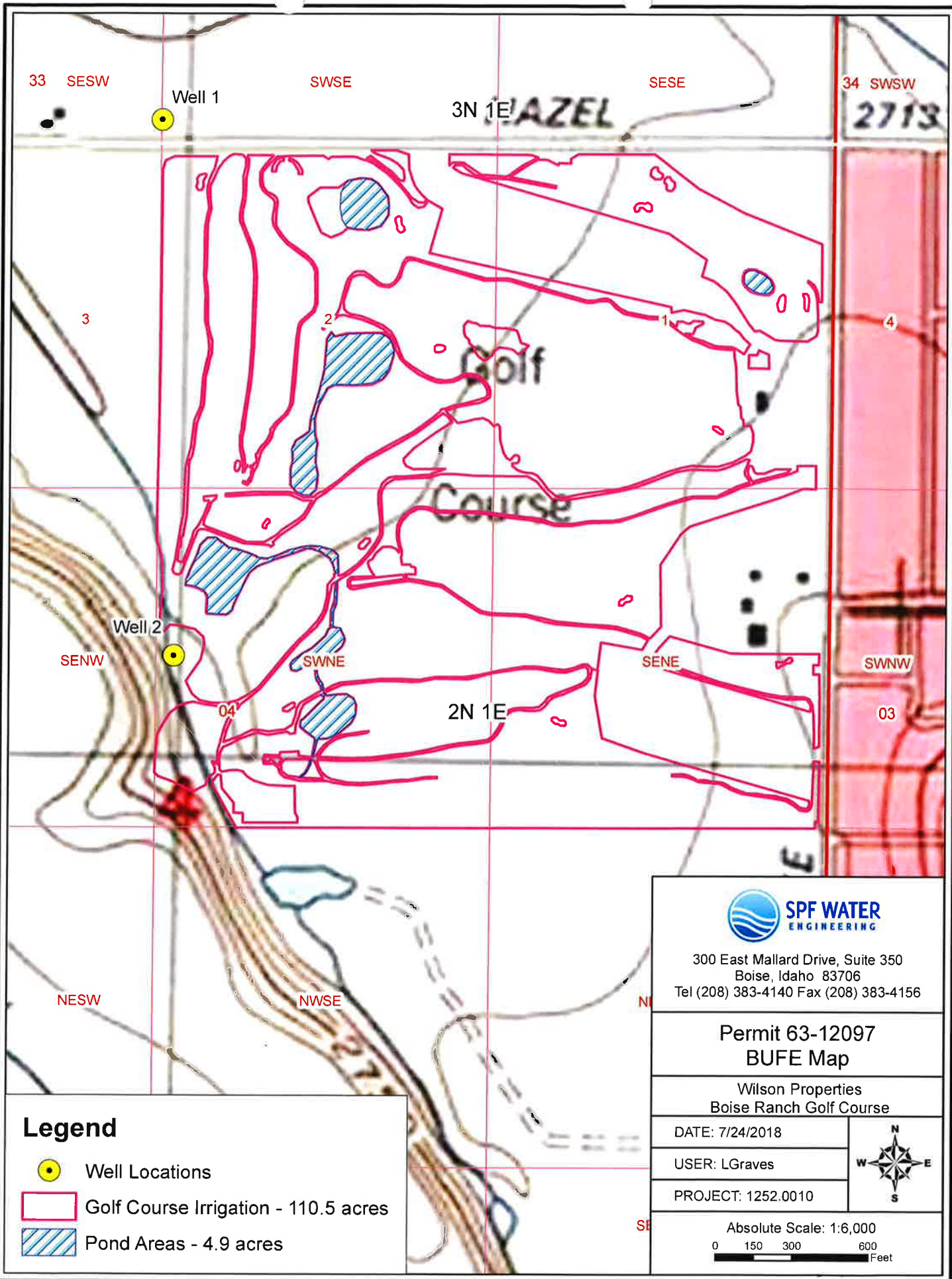


Absolute Scale: 1:6,000

0 150 300 600
Feet

COORDINATE REFERENCE SYSTEM: NAD 1983 2011 StatePlane Idaho West FIPS 1103 Ft US

Path: S:\PROJECTS\1252\12520010 Boise Ranch GC Well0010 Well Consultation\PROJECT\GIS\ArcMap - Projects\BUFE Map (topo).mxd



Attachment B

System Components, Well Reports, and Diagrams

Boise Ranch Golf Course Irrigation Well - Original Well Test 5/22/2018

Tested by Layne of Idaho, Supervised by Kurt Newbry (SPF Water Engineering).

Pump type: Line-shaft turbine set at 220 feet . Powered by V16 diesel motor.

Flow measured with Seametrics electronic flow meter.

Water level measured with electric well sounder.

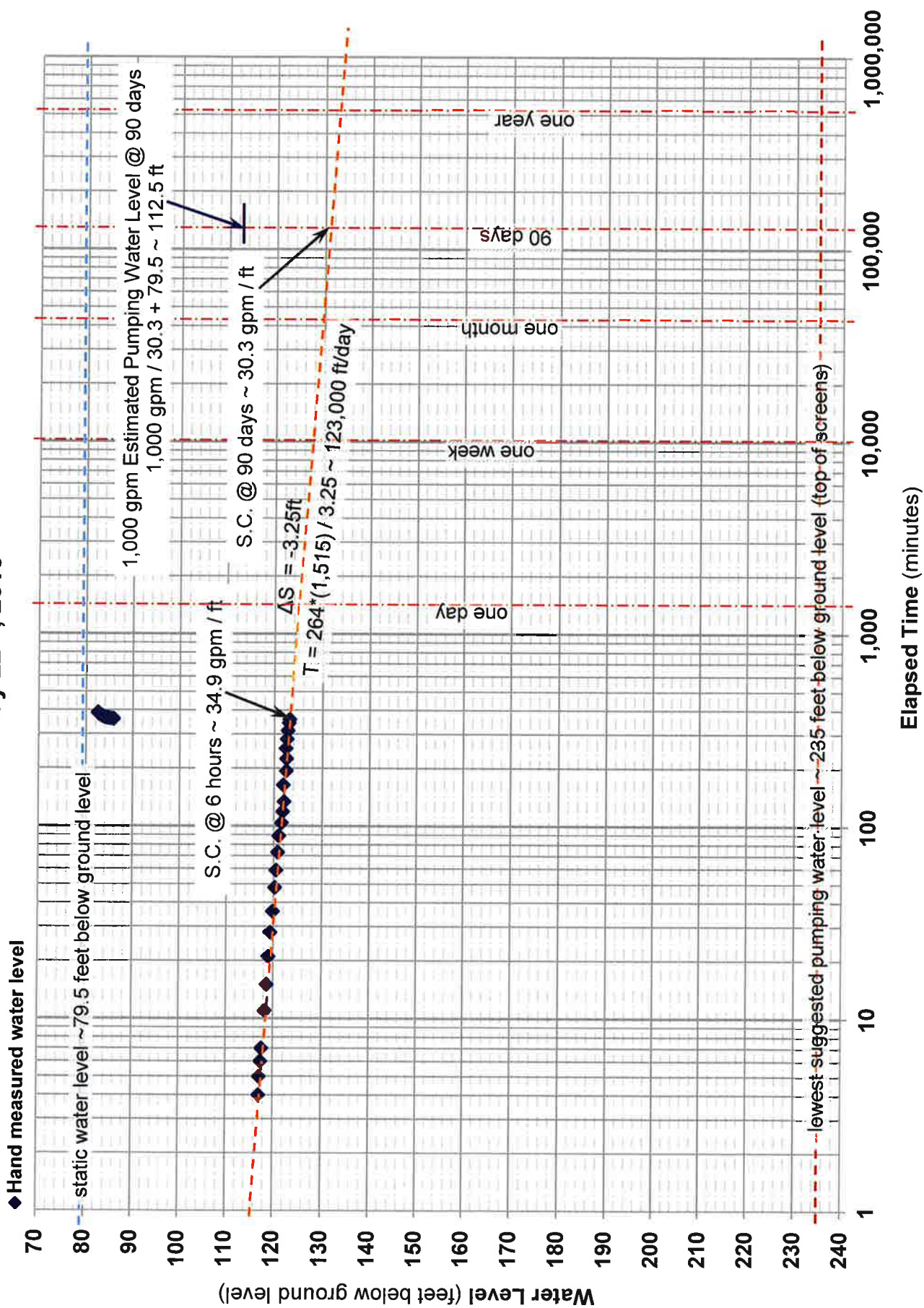
Measurement point top of casing =2.5 feet above ground surface.

Time (MST)	Date Time	t (min)	t/t'	DTW (ft bmp)	DTW (ft bgs)	Drawdown (ft)	Q (gpm)	Specific Capacity	Remarks
8:46	5/22/18 8:46	0		82.08	79.58				Pump on, minor cloudiness upon initial start up, clears up in 30 sec.
8:50	5/22/18 8:50	4		119.45	116.95	37.37	1,515	40.54	minor sand, clear water
8:51	5/22/18 8:51	5		119.55	117.05	37.47	1,515	40.43	
8:52	5/22/18 8:52	6		119.87	117.37	37.79	1,515	40.09	
8:53	5/22/18 8:53	7		120.02	117.52	37.94	1,525	40.20	
8:57	5/22/18 8:57	11		120.72	118.22	38.64	1,508	39.03	
9:01	5/22/18 9:01	15		121.08	118.58	39.00	1,528	39.18	
9:07	5/22/18 9:07	21		121.42	118.92	39.34	1,519	38.61	
9:14	5/22/18 9:14	28		121.77	119.27	39.69	1,504	37.89	
9:22	5/22/18 9:22	36		122.26	119.76	40.18	1,313	32.68	
9:34	5/22/18 9:34	48		122.68	120.18	40.60	1,513	37.27	
9:45	5/22/18 9:45	59		122.92	120.42	40.84	1,515	37.10	
9:59	5/22/18 9:59	73		123.24	120.74	41.16	1,514	36.78	no sand, clear water
10:15	5/22/18 10:15	89		123.42	120.92	41.34	1,507	36.46	
10:30	5/22/18 10:30	104		124.00	121.50	41.92	1,511	36.04	
10:45	5/22/18 10:45	119		124.25	121.75	42.17	1,524	36.14	
11:00	5/22/18 11:00	134		124.50	122.00	42.42	1,522	35.88	
11:30	5/22/18 11:30	164		124.33	121.83	42.25	1,512	35.78	
12:00	5/22/18 12:00	194		124.92	122.42	42.84	1,515	35.37	
12:30	5/22/18 12:30	224		125.00	122.50	42.92	1,515	35.30	
13:00	5/22/18 13:00	254		124.83	122.33	42.75	1,517	35.48	
13:30	5/22/18 13:30	284		125.08	122.58	43.00	1,510	35.11	
14:00	5/22/18 14:00	314		125.25	122.75	43.17	1,514	35.07	
14:30	5/22/18 14:30	344		125.50	123.00	43.42	1,522	35.05	
14:45	5/22/18 14:45	359		125.58	123.08	43.50	1,518	34.89	Pump off
14:46	5/22/18 14:46	360	360	88.33	85.83	6.25	0		
14:47	5/22/18 14:47	361	181	88.33	85.83	6.25			
14:48	5/22/18 14:48	362	121	87.83	85.33	5.75			
14:49	5/22/18 14:49	363	91	87.42	84.92	5.34			
14:50	5/22/18 14:50	364	73	87.33	84.83	5.25			
14:51	5/22/18 14:51	365	61	87.08	84.58	5.00			
14:52	5/22/18 14:52	366	52	86.92	84.42	4.84			
14:53	5/22/18 14:53	367	46	86.58	84.08	4.50			
14:54	5/22/18 14:54	368	41	86.42	83.92	4.34			
14:55	5/22/18 14:55	369	37	86.42	83.92	4.34			
14:57	5/22/18 14:57	371	31	86.17	83.67	4.09			
14:59	5/22/18 14:59	373	27	85.92	83.42	3.84			
15:01	5/22/18 15:01	375	23	85.83	83.33	3.75			
15:03	5/22/18 15:03	377	21	85.75	83.25	3.67			
15:05	5/22/18 15:05	379	19	85.50	83.00	3.42			
15:08	5/22/18 15:08	382	17	85.25	82.75	3.17			
15:11	5/22/18 15:11	385	15	85.08	82.58	3.00			
15:15	5/22/18 15:15	389	13	85.00	82.50	2.92			

Boise Ranch Golf Course Irrigation Well

1,515 GPM Constant Rate Discharge Test

May 22nd, 2018



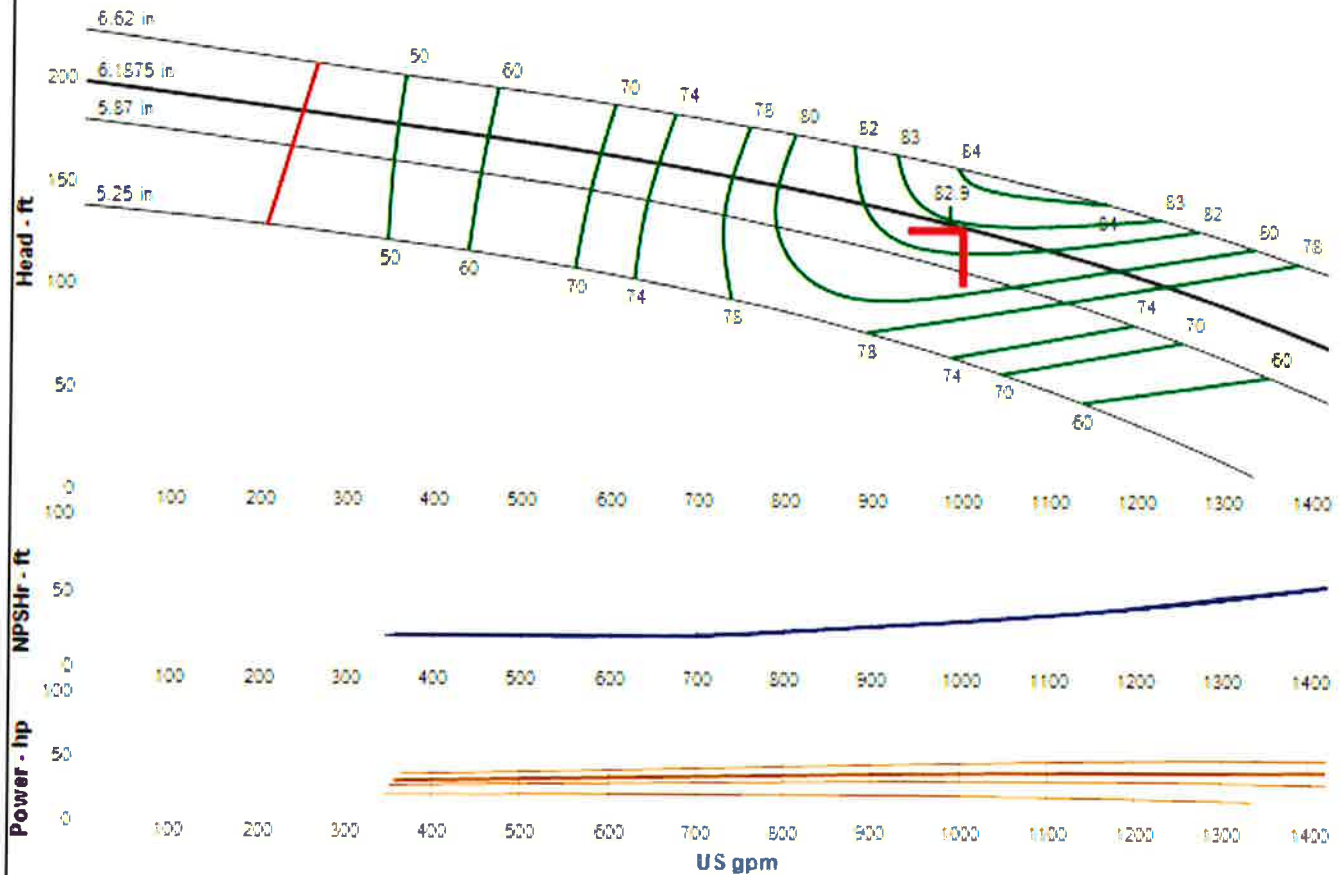


PERFORMANCE CURVE

Quote Number: 9003-180523-013

Product Name: VIS -Submersible Vertical Turbine (Borehole) Pumps

Product Id: GWT_VIS



Sizing Criteria

Series	GWT_VIS	Max Power on Design Curve	41 Hp
Size	10RJLC	Max Power on Max Imp Trim	50 Hp
Additional Size	-	Flow at BEP	985 USGPM
Speed	3540	Head at BEP	130 ft
Number of Stages	1	NPSH Required	32 ft
Stages	1 Stage	Specified NPSH Avail.	34 ft
Frequency	60 Hz	NPSHaMargin	2 ft
Impeller Trim	6.1875 inch	Min Flow	246 USGPM
Additional Impeller Trim	0 inch	Flow on Max Imp Trim @ Max Power	1335 USGPM
Impeller Maximum Trim	6.62 in inch	Shut-Off Head	198 ft
Specified Flow	1000 USGPM	Shut-Off Disc Pressure	85.7 psi
Specified Head	127 ft	Fluid Type	Water
Flow at Design	1000 USGPM	Temperature	70 F
Head at Design	129 ft	Allowable Sphere Size	0.75 inch
Head at Design	129 ft	Exact Bowl Diameter	9.5 inch
Run-Out Flow	0 USGPM	Curve ID	E6410REPC1
Run-Out Head	0 ft	Thrust K Factor [lb/ft]	7
Efficiency at Design	82.8	Add Thrust K Factor [lb/ft]	7
Best Efficiency	82.9	Max Lateral	0.75 inch
Driver Size	50 Hp		

Form 238-7
4/92STATE OF IDAHO
DEPARTMENT OF WATER RESOURCESUSE TYPEWRITER OR
BALLPOINT PEN

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.

1. WELL OWNER Name <u>Darwin McKay</u> Address <u>3220 E. Lake Hazel Rd. Meridian, ID</u> Drilling Permit No. <u>63-92-W-0960-000</u> Water Right Permit No. <u>63-11831</u>	7. WATER LEVEL Static water level <u>64</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>350</td> <td></td> <td>1</td> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Discharge G.P.M.	Pumping Level	Hours Pumped	350		1																																																																																																																																																																						
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3. PROPOSED USE ☐ Domestic ☒ Irrigation ☐ Monitor ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection ☐ Other _____ (specify type)	9. LITHOLOGIC LOG 090916 <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>"</td><td>1</td><td>2 1/2</td><td>Top Soil</td><td></td><td></td></tr> <tr><td>"</td><td>2 1/2</td><td>80</td><td>Sand & Gravel</td><td></td><td></td></tr> <tr><td>"</td><td>80</td><td>81</td><td>Clay Layer</td><td></td><td></td></tr> <tr><td>"</td><td>81</td><td>83</td><td>Coarse Sand</td><td></td><td></td></tr> <tr><td>"</td><td>83</td><td>90</td><td>Clay Tan Hard</td><td></td><td></td></tr> <tr><td>"</td><td>90</td><td>107</td><td>Sand (Med.-Coarse)</td><td></td><td></td></tr> <tr><td>"</td><td>107</td><td>113</td><td>Sandy Clay</td><td></td><td></td></tr> <tr><td>"</td><td>113</td><td>115</td><td>Sand-coarse-gravel</td><td></td><td></td></tr> <tr><td>"</td><td>115</td><td>125</td><td>Sand " " v. little</td><td>X</td><td></td></tr> <tr><td>"</td><td>125</td><td>130</td><td>Fractured Clay-Sand-Gravel</td><td></td><td></td></tr> <tr><td>"</td><td>130</td><td>135</td><td>Sand/fine</td><td></td><td>X</td></tr> <tr><td>"</td><td>135</td><td>140</td><td>Sand/fine</td><td></td><td>X</td></tr> <tr><td>"</td><td>140</td><td>145</td><td>Sandy Clay</td><td></td><td></td></tr> <tr><td>"</td><td>145</td><td>155</td><td>Sand/pea gravel v. litt</td><td>X</td><td></td></tr> <tr><td>"</td><td>155</td><td>157</td><td>Soft Clay</td><td></td><td></td></tr> <tr><td>"</td><td>157</td><td>175</td><td>Sandy w/gravel</td><td></td><td></td></tr> <tr><td>"</td><td>175</td><td>195</td><td>Sandy w/gravel</td><td></td><td></td></tr> <tr><td>"</td><td>195</td><td>199</td><td>Sandy Clay Tan</td><td></td><td></td></tr> <tr><td>"</td><td>199</td><td>209</td><td>Sand a lot</td><td>X</td><td></td></tr> <tr><td>"</td><td>209</td><td>216</td><td>Clay</td><td></td><td></td></tr> <tr><td>"</td><td>216</td><td>217</td><td>Sand fine</td><td></td><td>X</td></tr> <tr><td>"</td><td>217</td><td>220</td><td>Clay & Sand Pocket</td><td>X</td><td></td></tr> <tr><td>"</td><td>220</td><td>221</td><td>Clay</td><td></td><td></td></tr> <tr><td>"</td><td>221</td><td>228</td><td>Coarse Sand</td><td></td><td>X</td></tr> <tr><td>"</td><td>228</td><td>235</td><td>Sand & Clay Mix</td><td></td><td></td></tr> <tr><td>"</td><td>235</td><td>256</td><td>Gravel & Sand</td><td></td><td></td></tr> <tr><td>"</td><td>256</td><td></td><td>Sand & Pea Gravel a lot</td><td>X</td><td></td></tr> </tbody> </table>	Bore Diam.	Depth		Material	Water		From	To	Yes	No	"	1	2 1/2	Top Soil			"	2 1/2	80	Sand & Gravel			"	80	81	Clay Layer			"	81	83	Coarse Sand			"	83	90	Clay Tan Hard			"	90	107	Sand (Med.-Coarse)			"	107	113	Sandy Clay			"	113	115	Sand-coarse-gravel			"	115	125	Sand " " v. little	X		"	125	130	Fractured Clay-Sand-Gravel			"	130	135	Sand/fine		X	"	135	140	Sand/fine		X	"	140	145	Sandy Clay			"	145	155	Sand/pea gravel v. litt	X		"	155	157	Soft Clay			"	157	175	Sandy w/gravel			"	175	195	Sandy w/gravel			"	195	199	Sandy Clay Tan			"	199	209	Sand a lot	X		"	209	216	Clay			"	216	217	Sand fine		X	"	217	220	Clay & Sand Pocket	X		"	220	221	Clay			"	221	228	Coarse Sand		X	"	228	235	Sand & Clay Mix			"	235	256	Gravel & Sand			"	256		Sand & Pea Gravel a lot	X	
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4. METHOD DRILLED ☒ Rotary ☒ Air ☐ Auger ☐ Reverse rotary ☐ Cable ☐ Mud ☐ Other _____ (backhoe, hydraulic, etc.)	10. Work started <u>12/31/92</u> finished <u>4/14/93</u>																																																																																																																																																																												
5. WELL CONSTRUCTION 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><u>.250</u> inches</td> <td><u>10</u> inches</td> <td><u>2</u> feet</td> <td><u>254</u> 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 Number _____ From _____ To _____ _____ perforations _____ feet _____ 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>30</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>Top of Well</u>	Thickness	Diameter	From	To	<u>.250</u> inches	<u>10</u> inches	<u>2</u> feet	<u>254</u> feet	_____ inches	_____ inches	_____ feet	_____ feet	_____ inches	_____ inches	_____ feet	_____ feet	11. DRILLER'S CERTIFICATION We certify that all minimum well construction standards were complied with at the time the rig was removed. Firm Name <u>Adamson Pump & Drilling</u> Firm No. <u>457</u> Address <u>Nampa, ID</u> Date <u>4/15/93</u> Signed by Drilling Supervisor <u>Dave Adamson</u> and <u>DAVE ADAMSON</u> (Operator) <u>(If different than the Drilling Supervisor)</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>Ada</u> Address of Well Site <u>3220 E. Lake Hazel Rd.</u> Meridian, ID (give at least name of road) T. <u>3</u> N ☒ or S ☐ SW <u>1/4</u> SE <u>1/4</u> Sec. <u>33</u> R. <u>1</u> E ☒ or W ☐	USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT																																																																																																																																																																												



Attachment C
Flow Measurement Data

Permit: 63-12097
 Owner: Wilson Properties LP
 Site Name: Well 2
 POD Location: 2N 1E 04 SWNE
 Tag No: 77513
 Meter: GE TransPort PT878
 Type: Portable Ultrasonic Time Flight Liquid Flow Meter
 Serial Number: 7140
 Calibration Date: April 18, 2018
 Operator: Scott King

Date/Time	Volume (gal/m)	(+)Total (gal)	(-)Total (gal)	Error #
7/23/2018 13:12	963	3853	0	0
7/23/2018 13:13	959	4772	0	0
7/23/2018 13:14	959	5746	0	0
7/23/2018 13:15	958	6717	0	0
7/23/2018 13:16	963	7692	0	0
7/23/2018 13:17	963	8636	0	0
7/23/2018 13:18	962	9586	0	0
7/23/2018 13:19	964	10577	0	0
7/23/2018 13:20	964	11515	0	0
7/23/2018 13:21	959	12505	0	0
7/23/2018 13:22	961	13454	0	0

Time	10 minutes
Volume	9600 gallons
Rate	962 gpm
Rate	2.14 cfs

Discharge Pressure <5 psi

Permit: 63-12097
 Owner: Wilson Properties LP
 Site Name: Well 1
 POD Location: 3N 1E 33 SESW
 Tag No: A0019161
 Meter: GE TransPort PT878
 Type: Portable Ultrasonic Time Flight Liquid Flow Meter
 Serial Number: 7140
 Calibration Date: April 18, 2018
 Operator: Scott King

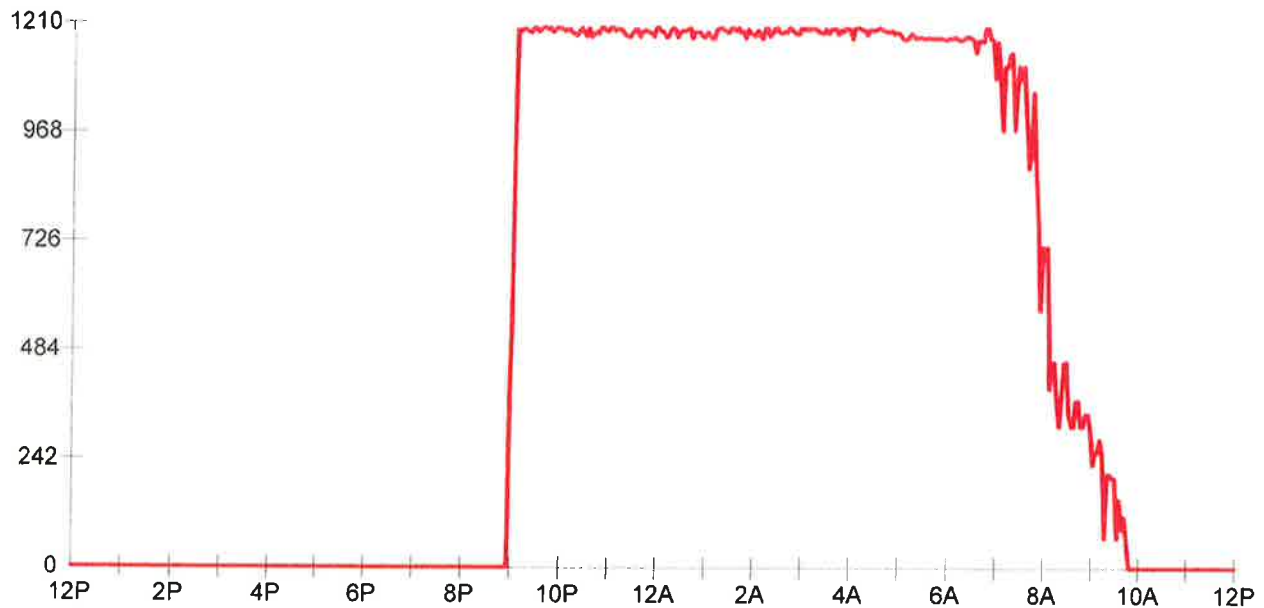
Date/Time	Volume (gal/m)	(+)Total (gal)	(-)Total (gal)	Error #
7/23/2018 14:01	410	28653	0	0
7/23/2018 14:02	411	29081	0	0
7/23/2018 14:03	412	29494	0	0
7/23/2018 14:04	413	29902	0	0
7/23/2018 14:05	411	30314	0	0
7/23/2018 14:06	417	30727	0	0
7/23/2018 14:07	413	31138	0	0
7/23/2018 14:08	409	31553	0	0
7/23/2018 14:09	410	31967	0	0
7/23/2018 14:10	410	32373	0	0
7/23/2018 14:11	413	32785	0	0

Time	10 minutes
Volume	4132 gallons
Rate	415 gpm
Rate	0.93 cfs

Maxicom

7/23/18

Today Total Flow: 794939 gallons



Maxicom flow logging for Boise Ranch Golf Course
pressure irrigation pump station provided by Sam Davis.
Flow rate shown in gallons per minute.

Attachment D
Exam Photos



Well 1 Tag



Well 1



Well 1 discharge piping with portable flow meter attached



Well 1 pump controls. Controls for unrelated surface water pump also.



Well 2 Pump Panel. Pump is constant speed.



Output frequency, amperage, and voltage from temporary generator for Well 2. Permit holder is waiting for Idaho Power to install permanent 3-phase power supply. Note that frequency is 58 hz. Pump capacity at 60 hz (utility power) will be slightly greater than measured during field exam.



Well 2 and discharge piping. Mechanical piping appurtenances (from right to left) include discharge elbow, air/vacuum valve, pressure gage, check valve, 2-inch ball valve for winterization, straight spool for future flow meter, pressure relief valve, and butterfly valve (not visible, but located immediately past pressure relief valve).



Temporary 10-inch aluminum mainline. Permanent mainline will be installed after golf season. Portable ultrasonic flow meter used for flow measurement shown on pipe.



Temporary mainline discharging to golf course pond system. Headgate and trash rack to downstream ponds in foreground.



Temporary mainline discharging to golf course pond system. Headgate and trash rack to downstream ponds in background. Irrigation District water enters from right side. Mixed water flows in buried pipe approximately 200 feet to reach intermediate pond to the north.



Intermediate pond located between pump station pond and discharge point from Well 2. Mixed Well 2 groundwater and irrigation district water enters the pond through a buried pipe (right side of photo, SE corner of pond) and exits the intermediate pond through a channel to the north.



Pressure irrigation pump station (right) and pond (left) looking north-northwest. Water from Well 1 enters north side of this pond through buried pipe. Water from Well 2 enters southwest corner of pond through open channel.



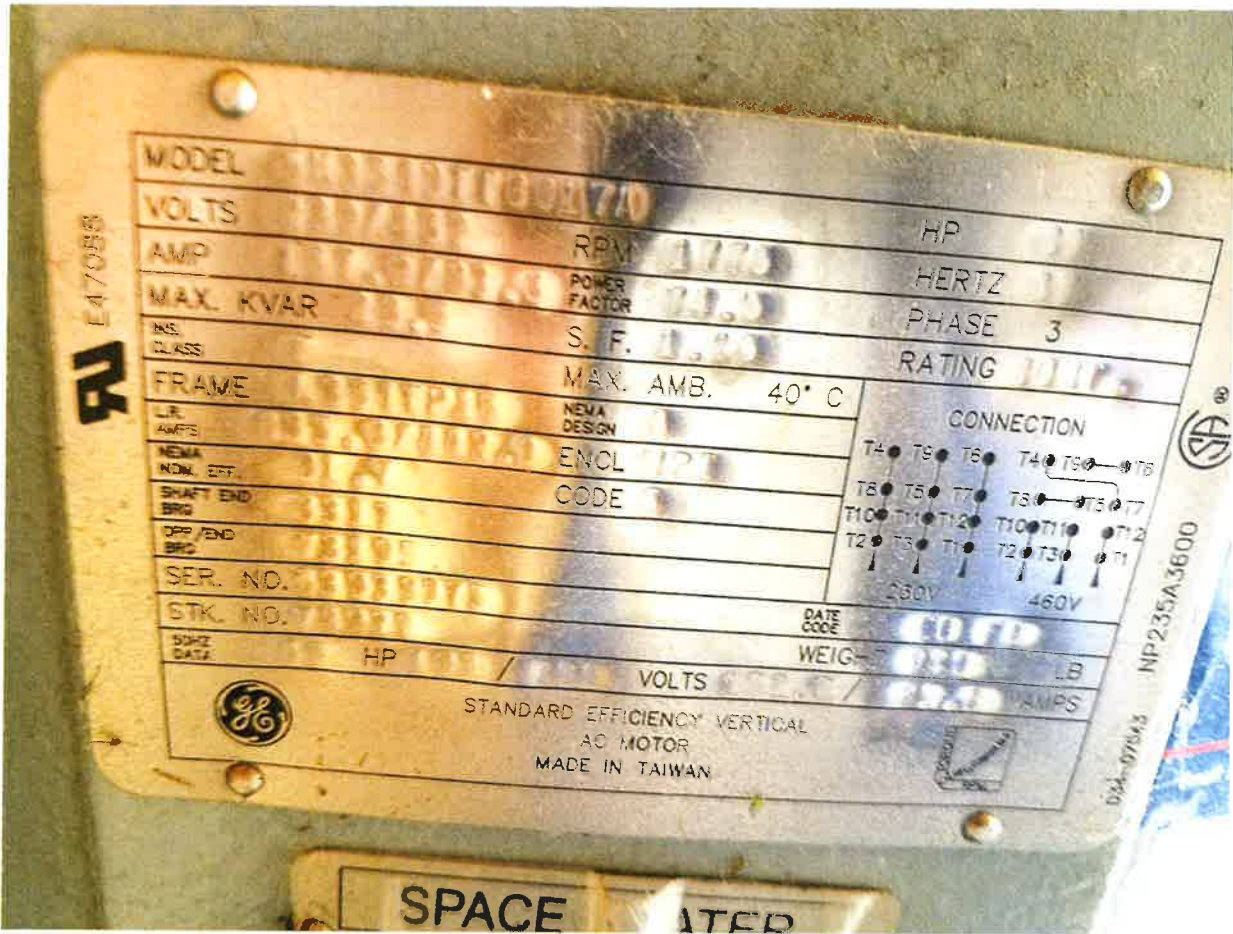
Pressure irrigation pump station with discharge pipe and filter (foreground) looking west.
Water from Well 2 enters the pond through an open channel at far side of the pond.



Discharge piping from pressure pump station. Insertion flow meter for Maxicom irrigation controls is visible.



Vertical turbine pressure irrigation pumps. Both motors are 60 hp.



Nameplate on south 60-hp motor.



Close-up of nameplate on south 60-hp motor.



Nameplate on north 60-hp motor.



Pressure irrigation pump station motor controls



Pressure irrigation pump station discharge pressure.