

Webster, Clay

From: Webster, Clay
Sent: Wednesday, August 31, 2016 2:40 PM
To: 'Marci Pape'
Subject: RE: POU shapefile for permit 63-33451

Marci,

Thank you for the assistance.

Clay

From: Marci Pape [<mailto:Mpape@spfwater.com>]
Sent: Wednesday, August 31, 2016 2:32 PM
To: Webster, Clay
Subject: POU shapefile for permit 63-33451

Clay –

Here's the POU shapefile from the Beneficial Use Field Exam for the new Ridgevue High School, permit 63-33451. Also attached is the shapefile that includes the POD and lateral turnout locations. Let me know if you need anything else.

Thanks,

Marci Pape, P.E. | Project Engineer

SPF Water Engineering, LLC
300 E Mallard Drive, Suite 350 | Boise, ID 83706
p. 208.383.4140 | f. 208.383.4156 | d. 208.489.2143
e. mpape@spfwater.com | w. www.spfwater.com





May 25, 2016

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MAY 26 2016

**DEPARTMENT OF
WATER RESOURCES**

Idaho Department of Water Resources
PO Box 83720
Boise, ID 83720-0098

Attn: Shelley Keen

*Subject: Vallivue School District No. 139
Permit No. 63-33451
Beneficial Use Field Report*

Dear Mr. Keen,

Enclosed on behalf of Vallivue School District No. 139 is a completed Beneficial Use Field Report for the above-referenced permit and a signed Statement of Completion. If you would like digital shapefiles of the point of diversion or place of use, please let me know and I will forward them to you.

Please let me know if you have any questions regarding these documents.

Sincerely,

A handwritten signature in black ink that reads "Marci S. Pape". The signature is written in a cursive style with a large, stylized 'M' and 'P'.

Marci S. Pape, P.E.
Project Engineer
CWRE No. 142

Enclosures

cc: Pat Charlton, Vallivue School District No. 139

File: 1108.0040

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED**MAY 26 2016****DEPARTMENT OF
WATER RESOURCES**

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. 63-334511. Owner Vallivue School District No. 139Phone No. 208-454-0445Current address 5207 S. Montana, Caldwell, ID 836072. Examiner's name Marci Pape, P.E. (Examiner 15-142)EXAM DATE 05/12/20163. Accompanied by Danny Turner, Franz Witte Landscape Contracting Email dannyt@franzwitte.comAddress 9770 W. State St., Boise, ID 83714Relationship to permit holder Subcontractor to Beniton (Gen. Contractor) Phone No. (208) 602-59924. Source Ground Water tributary to _____**B. OVERLAP REVIEW**1. Other water rights with the same place of use Pioneer Irrigation District Water, Nampa Municipal water2. Other water rights with the same source and point of diversion None**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
			SW	NE	34	4N	2W	Canyon	Well Report Coordinates, Exam, GPS
									N 43 38' 39.6" W 116 33' 33.3"

2. Place(s) of Use: _____ Method of determination 2015 aerial photo, exam

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
4N	2W	34		11	22														33

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
	Franklin Electric	30		Franklin Electric	6-inch; 120-foot setting
				submersible,	
				375STS6	

*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
Flowmeter	magnetic		AG2000-600		6-inch	

2. **Measurements:** _____

Examiner measured 0.94 cfs.

E. NARRATIVE/REMARKS/COMMENTS

A total of 33 acres within the 65.0 ac. PPU are currently being irrigated. Those irrigated acres are shown on the attached map, and include 11 acres within the NWNE and 22 acres within the SWNE of Section 34. The final seeding was recently completed at the northwest corner of the property, which was the only area not yet showing growth at the time of the exam.

This right is for supplemental irrigation, when surface water is unavailable. The surface water turnout is at a point on the lateral just beyond the east edge of the property, northeast of the well site. The surface water is diverted underground to a wet well adjacent to the groundwater well, then distributed to the system using a combination of two 20-hp pumps and a jockey pump.

The submersible well, equipped with a 30-hp submersible pump, is isolated from the surface water diversion works, and is used primarily during the early spring and late fall, when water from Pioneer Irrigation District is not available.

The examiner measured a flow rate of 0.94 cfs with 15 zones operating and a pressure of 40 psi at the well.

Based on exam findings, permit 63-33451 is recommended to be licensed for 0.94 cfs and 33 acres of irrigation within the authorized 65-acre place of use.

The recommended diversion rate per acre for this right is 0.0285 cfs/ac (0.94 cfs/33 ac), which exceeds the standard of 0.02 cfs/ac. Per Application Processing Memo #60, diversion rates that exceed the statutory standard are allowed for the irrigation of turf grass in public places. Because the place of use for this right is a high school campus with recreational fields, the bulk of the irrigation must occur during the night and early morning hours. At 0.0285 cfs/ac, the system would operate for approximately 17 hours per day, allowing 7 hours of non-irrigation per day.

$$(0.02\text{cfs/ac}/0.0285\text{cfs/ac}) \times 24 \text{ hrs} = 16.9 \text{ hrs}$$

The water right should include a condition limiting the daily volume diverted to 1.31 ac-ft/day.

$$(0.94 \text{ cu ft/sec} \times 60 \text{ sec/min} \times 60 \text{ min/hr} \times 16.9 \text{ hrs/day})/43560 \text{ sq ft/ac} = 1.31 \text{ ac-ft/day}$$

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:

Discharge was measured at 0.94 cfs. See Remarks for detailed description.

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I,R} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 33 \text{ ac} \times 4.5 \text{ ac-ft/yr-ac} = 148.5 \text{ ac-ft/yr}$$

$$V_{D,R} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 0.94 \text{ cfs} \times 260 \text{ days} \times 1.9835 = 484.8 \text{ ac-ft/yr}$$

$$V = \text{Smaller of } V_{I,R} \text{ and } V_{D,R} = 148.5 \text{ ac-ft/yr}$$

2. Volume Calculations for Other Uses:

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use From To		Rate of Diversion Q (cfs)	Annual Volume V (afa)
Irrigation	3/1	11/15	0.94	148.5
Totals:			0.94 cfs	148.5 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

Marc S. Pape

Date

5/25/16

Reviewer

Date



ATTACHMENT A

PERMIT RECORD AND PROOF OF BENEFICIAL USE

State of Idaho
Department of Water Resources
Permit to Appropriate Water

NO. 63-33451

Priority: November 19, 2010

Maximum Diversion Rate: 1.40 CFS

This is to certify, that VALLIVUE SCHOOL DISTRICT NO 139
5207 S MONTANA
CALDWELL ID 83607

has applied for a permit to appropriate water from:

Source: GROUND WATER

and a permit is APPROVED for development of water as follows:

BENEFICIAL USE

IRRIGATION

PERIOD OF USE

03/01 to 11/15

RATE OF DIVERSION

1.40 CFS

LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER

NW1/4NE1/4

Sec. 34, Twp 04N, Rge 02W, B.M., CANYON County

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	
04N	02W	34			32.5	32.5													65.0

Total Acres: 65

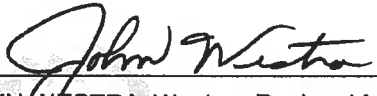
CONDITIONS OF APPROVAL

1. Proof of application of water to beneficial use shall be submitted on or before **June 01, 2016**.
2. Subject to all prior water rights.
3. After specific notification by the Department, the right holder shall install a suitable measuring device or shall enter into an agreement with the Department to use power records to determine the amount of water diverted and shall annually report the information to the Department.
4. The Director retains jurisdiction to require the right holder to provide purchased or leased natural flow or stored water to offset depletion of Lower Snake River flows if needed for salmon migration purposes. The amount of water required to be released into the Snake River or a tributary, if needed for this purpose, will be determined by the Director based upon the reduction in flow caused by the use of water pursuant to this permit.
5. Project construction shall commence within one year from the date of permit issuance and shall proceed diligently to completion unless it can be shown to the satisfaction of the Director of the Department of Water Resources that delays were due to circumstances over which the permit holder had no control.
6. Right holder shall comply with the drilling permit requirements of Section 42-235, Idaho Code and applicable Well Construction Rules of the Department.

State of Idaho
Department of Water Resources
Permit to Appropriate Water
NO. 63-33451

7. The right holder shall make full beneficial use of all surface water rights available to the right holder for irrigation of the lands authorized to be irrigated under this right. The right holder shall limit the diversion of ground water under this right to those times when the surface water supply is not available or the surface water supply is not reasonably sufficient to irrigate the place of use authorized under this right.
8. If the surface water right(s) appurtenant to the place of use is abandoned, forfeited, sold, transferred, leased or used on any other place of use, this right to divert ground water shall not be used without an approved transfer pursuant to Section 42-222, Idaho Code, or approval of the Department if a transfer is not required.
9. This right is limited to the irrigation of 35 acres within the authorized place of use in a single irrigation season.
10. This right when combined with all other rights shall provide no more than 4.5 afa per acre at the field headgate for irrigation of the place of use.

This permit is issued pursuant to the provisions of Section 42-204, Idaho Code. Witness the signature of the Director, affixed at Boise, this 18th day of May, 20 11.



JOHN WESTRA, Western Regional Manager

ATTACHMENT B
WELL DRILLERS REPORT

IDAHO DEPARTMENT OF WATER RESOURCES WELL DRILLER'S REPORT

1. WELL TAG NO. D 0066271

Drilling Permit No. 966020-812079
Water right or injection well # _____

2. OWNER: Vallivue School District # 139

Name _____
Address 5207 S. Montana Ave.
City Caldwell State ID Zip 83607

3. WELL LOCATION:

Twp. 4 North ☒ or South ☐ Rge. 2 East ☐ or West ☒
Sec. 34 10 acres 1/4 SW 1/4 NE 1/4

Gov't Lot _____ County Canyon
Lat. 43 38.657 (Deg. and Decimal minutes)
Long. 116 33.556 (Deg. and Decimal minutes)
Address of Well Site 18800 Madison Rd.

City Nampa
(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 _____

7. SEALING PROCEDURES:

Seal material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method/procedure
3/4 Bent.	0'	100'	6000 lbs.	Slow Pour Surface

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing	Linear	Threaded	Welded
10"	+2	128'	.365	Steel	☒	☐	☐	☒
10"	158'	180'	.365	Steel	☒	☐	☐	☒

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

9. PERFORATIONS/SCREENS:

Perforations ☐ Y ☒ N Method _____
Manufactured screen ☒ Y ☐ N Type Wire Wrap Stainless Steel
Method of installation Set in Place

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
128'	158'	.030		10"	SS	Standard
180'	200'	.030		10"	SS	Standard

Length of Headpipe _____ Length of Tailpipe _____

Packer ☐ Y ☒ N Type _____

10. FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method
CO. Silica Sand	100'	200'	6000 lbs.	Tremmie P.

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) _____ Static water level (ft) 14'
Water temp. (°F) 58 Bottom hole temp. (°F) _____

Describe access port Well Seal

Well test:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)
37' 5"	400 GPM	7 hours
51' 5" TOP		

Test method:

Pump	Bailer	Air	Flowing artesian
☒	☐	☐	☐
☐	☐	☐	☐

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
15"	0'	6'	Topsoil		
15"	6'	32'	Cobblestone & Sand		
15"	32'	44'	Sandy Clay		
15"	44'	46'	Tan Clay		
15"	46'	53'	Tan Sandy Clay		
15"	53'	56'	Sandy Clay		
15"	56'	59'	Tan Clay		
15"	59'	65'	Sandy Clay		
15"	65'	75'	Sand & Clay Layers		
15"	75'	80'	Hard Tan Clay		
15"	80'	82'	Sand		
15"	82'	97'	Hard Clay		
15"	97'	116'	Sand & Clay Seams		
15"	116'	125'	Clay & Sand Stratas		
15"	125'	130'	Clay		
15"	130'	138'	Sand		
15"	138'	144'	Clay & Sand		
15"	144'	145'	Clay		
15"	145'	158'	Sand & Clay Layers		
15"	158'	173'	Clay		
15"	173'	175'	Sand		
15"	175'	179'	Clay		
15"	179'	191'	Sand		
15"	191'	193'	Clay		
15"	193'	204'	Sand		
15"	204'	205'	Clay		

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WESTERN REGION

Completed Depth (Measurable): 200'

Date Started: Apr 25, 2014 Date Completed: May 5, 2014

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 Adamson Pump & Drilling Co. No. 457

*Principal Driller Dave Adamson Date 5-22-14

*Driller _____ Date _____

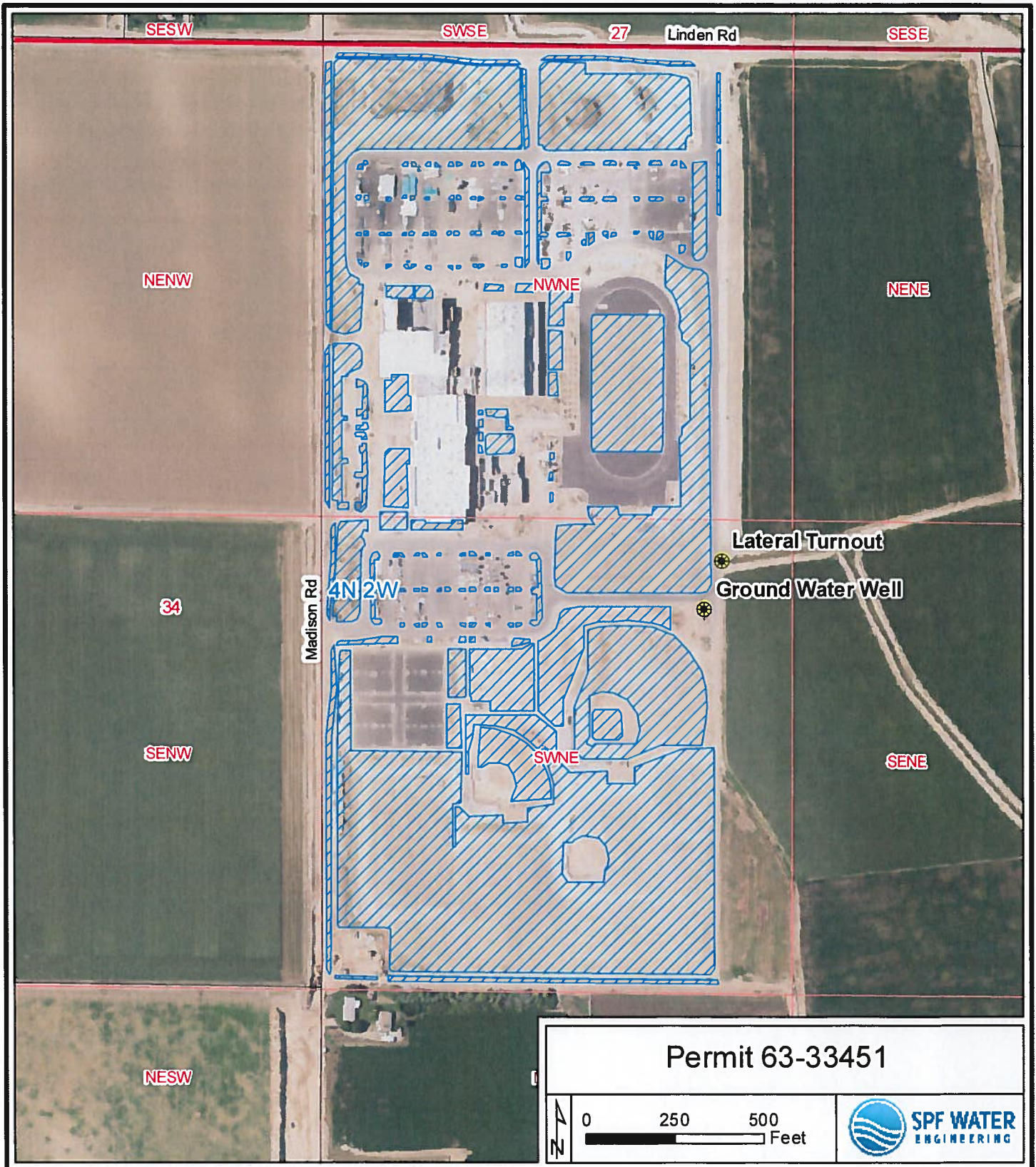
*Operator II _____ Date _____

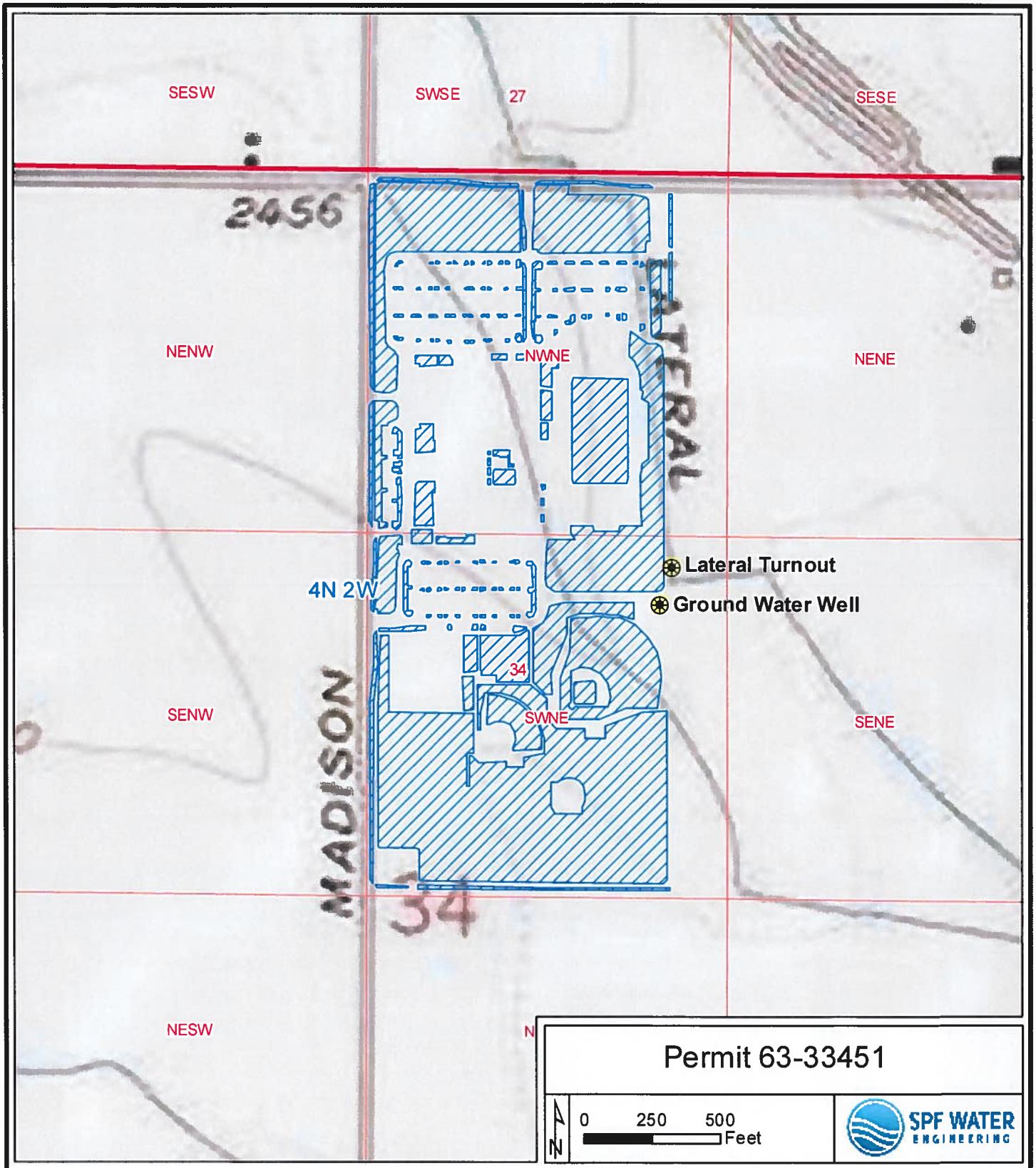
Operator I _____ Date _____

* Signature of Principal Driller and rig operator are required.

ATTACHMENT C

2015 AERIAL PHOTO AND TOPO MAP





ATTACHMENT D
PHOTOS



Figure 1. Well is equipped with 30 hp submersible pump, looking northeast

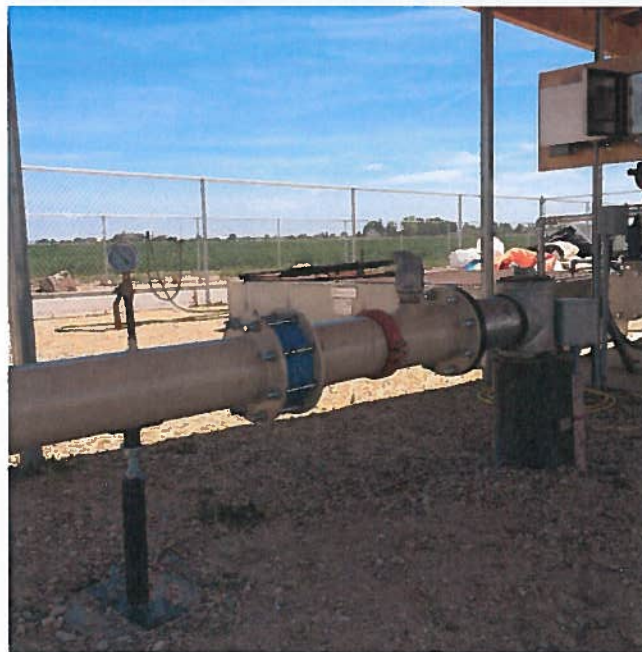


Figure 2. Well with surface water wet well in background, looking southeast

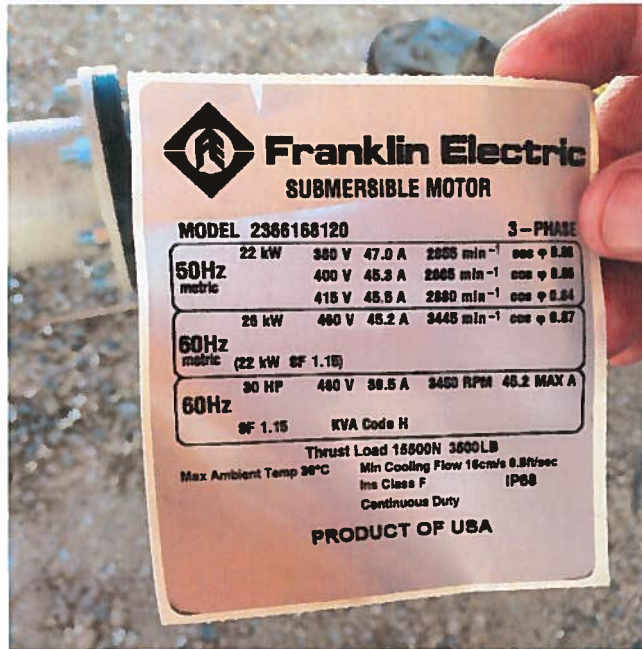


Figure 3. 30 hp pump motor information

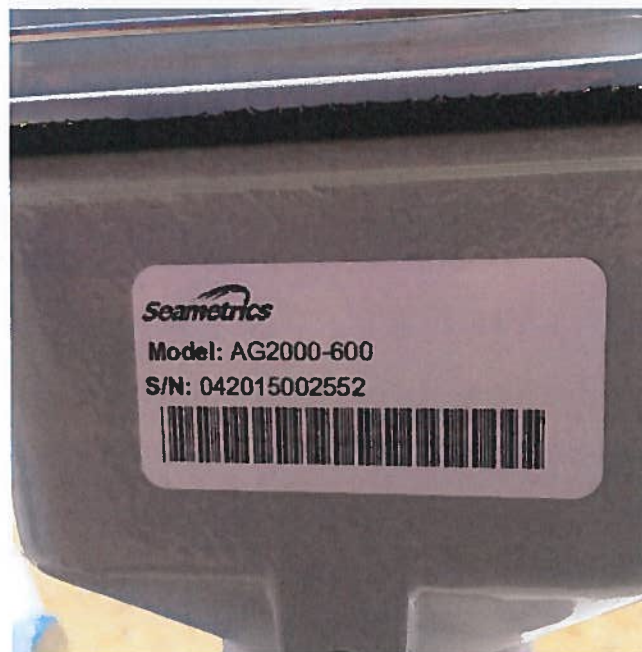


Figure 4. Magnetic flowmeter information



Figure 5. Magnetic flowmeter reading during testing



Figure 6. Control panel for surface and ground water, which are operated independently; looking north

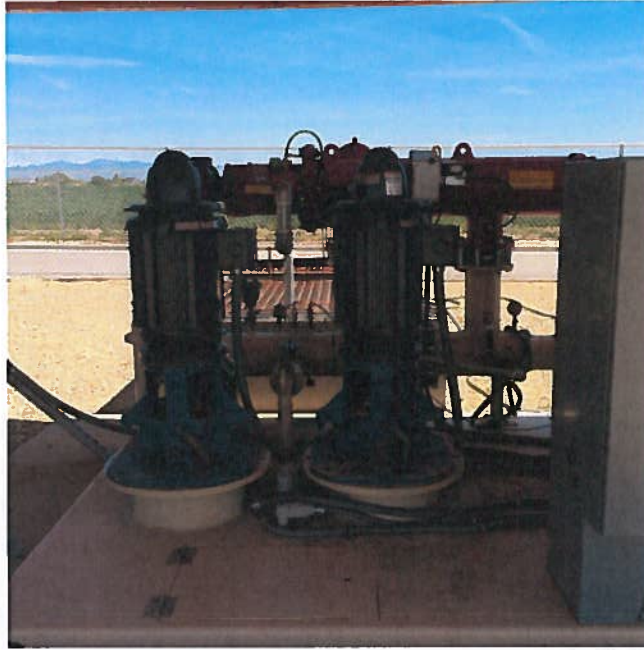


Figure 7. Surface water pumps, with wet well in background, looking east



Figure 8. Turnout for surface water supply from Pioneer Irrigation District is located across school access road, southeast of track and northeast of well



Figure 9. Irrigated football field and surroundings, looking north



Figure 10. Irrigated baseball, softball fields, etc., looking south



Figure 11. Irrigation along west edge of property, looking north



Figure 12. Recently seeded area at northwest corner of property, looking east

ATTACHMENT E
FLOW MEASUREMENT

Permit: 63-33451
 Owner: Vallivue School District No. 139
 Site Name: Production Well
 POD Location: 4N 2W 34 SWNE
 Tag No: D0066271
 Meter: Seametrics AG2000-600
 Type: Electromagnetic Flowmeter
 Serial Number: 42015002552
 Calibration Date:
 Operator: Permanent Installation; test conducted by Marci Pape

Start Date/Time	End Date/Time	Elapsed Time (min)	Start Volume (gal)	End Volume (gal)	Δ Volume (gal)	Rate (gpm)	Rate (cfs)	Avg Pressure (psi)	Notes:
5/12/2016 13:28	5/12/2016 13:38	10	5584.3	5587.4	3100	310	0.69	72	7 zones operating; complete coverage, good operating pressure
5/12/2016 13:41	5/12/2016 13:51	10	5587.5	5591.3	3800	380	0.85	61	10 zones operating; complete coverage, some loss of pressure
5/12/2016 13:55	5/12/2016 14:05	10	5591.5	5595.7	4200	420	0.94	40	15 zones operating; noticeable loss of coverage and pressure, but still reasonable coverage

Max. Flow Rate:	420 gpm 0.94 cfs
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