

**SPF**

Water Engineering, LLC
water resource consultants

September 19, 2007

Scott DeSeelhorst
Arena Valley Vineyards, LLC
9304 Burnett Drive
Boise, ID 83709

Subject: Data for Beneficial Use Field Exam – Permit 63-31133

Dear Scott:

Enclosed please find documents that may be useful for your beneficial use field examination scheduled for September 20.

A proof of beneficial use form was submitted last year that indicated that you completed development of the water right permit, and that you have the ability to divert up to 0.65 cfs from two wells for irrigation of 76 acres and commercial use at the winery. The 0.65 cfs diversion rate is based on a maximum pumping rate of 0.55 cfs (250 gpm) from the winery well and 0.10 cfs (45 gpm) from the house well.

The winery well pumping rate is based on both theoretical and measured flow rates.

- My notes show that I measured a pumping rate of 254 gpm from a pumping water level of 169 feet on September 5, 2003.
- The installed pump is a Berkeley 6T200 set at a depth of 175 feet on 4-inch pipe. The pump performance curve indicates that the pump is rated to produce 250 gpm at a total dynamic head of 280 feet. From a 170-foot pumping water level, allowing for friction loss of 15 feet through the pipe and valves, this pump should produce 250 gpm with a discharge pressure of approximately 40 psi.

The house well pumping rate is based on a measurement that I made on May 28, 2001. The pump produced 45 gpm from a pumping water level of 219 feet. I do not have any information on the pump. I believe that the well is 353 feet deep based on the attached well driller's report.

The allowable irrigated area under the permit is 76 acres. The attached preliminary irrigated acreage determination indicates an irrigated area boundary of approximately 78.9 acres. Subtracting roadways and other non-irrigated areas can reduce the irrigated area to 76 acres. A proposed distribution of groundwater-irrigated acres is provided in the following table.

Twp	Rge	Sec	NE ¼				NW ¼				SW ¼				SE ¼				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
4N	6W	1	11	17			10		11	4		22							75
5N	6W	36																1	1

Total Acres 76

Wilder Irrigation District provides surface water supply for 67.5 acres within the property. Therefore, ground water diverted under this permit is supplemental to surface water on 67.5 acres. The groundwater is the primary supply for the remaining 8.5 acres. I suggest that you apply groundwater as the primary supply to 7.5 acres in the northeast ¼ of the northeast ¼ of Section 1 and 1.0 acres in the SESE of Section 36. The reason to do so is that this eastern portion of the irrigation system can most logically be isolated from the remainder of the irrigation system served by Irrigation District water if the Irrigation District will not allow commingling of water sources.

Sincerely,



Terry M. Scanlan, P.E., P.G.

Enclosures

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Office Use Only			
Inspected by			
Twp	Rge	Sec	
1/4	1/4	1/4	
Lat: : :	Long: : :		

1. WELL TAG NO. D 18920
 DRILLING PERMIT NO. 63-31133
 Other IDWR No. _____

2. OWNER: Arena Valley Vineyards
 Name 9304 Burnett Av
 Address Wildier Boise State ID Zip 83709
 City _____

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

N W E S	Twp. <u>5</u>	North ☒ or South ☐
	Rge. <u>6</u>	East ☐ or West ☒
	Sec. <u>36</u>	1/4 S/E 1/4 S/E 1/4
	Gov't Lot _____	County <u>Canyon</u>
Lat: : :		Long: : :
Address of Well Site <u>Arena Valley Rd.</u>		City <u>Wildier</u>

(Give at least name of road + Distance to Road or Landmark)

Lt. _____ Blk. _____ Sub. Name 500' north of
Golden Gate Canal

4. USE:

☐ Domestic ☐ Municipal ☐ Monitor ☒ Irrigation
☐ Thermal ☐ Injection ☐ Other Commercial

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 grout	0	150	60 sk		pumped
#6-9 sand	150	215	58 sk		poured

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

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
8	42	171	322	steel	☒	☐	☒	☐
8	201	211	322	steel	☒	☐	☒	☐
6	201	211	280	steel	☐	☒	☒	☐

Length of Headpipe _____ Length of Tailpipe 10'

9. PERFORATIONS/SCREENS

Perforations _____ Method _____
 Screens _____ Screen Type Johnson V-wire

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
171	201	40		8	stnls	☒	☐
170	201	40		8	tel. stnls	☐	☒

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

128 ft. below ground Artesian pressure _____ lb.
 Depth flow encountered _____ ft. Describe access port or control devices: _____

11. WELL TESTS:

Yield gal./min.	Drawdown	Pumping Level	Time
230	42	170	4 hr

Water Temp. _____ Bottom hole temp. _____

Water Quality test or comments: _____

Depth first Water Encounter _____

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Water	Y	N
12	0	2	silty sand			X
	2	10	clay			X
	10	17	pea gravel			X
	17	58	coarse to fine gravel			X
	58	170	pea gravel with coarse gravel			X
	170	201	sand & pea gravel	X		
	201	310	blue clay			X

RECEIVED

SEP 25 2001

WATER RESOURCES
WESTERN REGION

Completed _____ Depth 211' (Measurable)
 Date: Started 7/25/01 Completed 8/27/01

13. DRILLER'S CERTIFICATION

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

Company Name Stevens & Soas Firm No. 153

Firm Official Ron Stevens Date 9/13/01

and _____
 Driller or Operator _____

BALLPOINT-PEN.

DEC 20 1964

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.

DEC 22 1982

Department of Water Resources

~~Western Regional Office~~

[illegible]

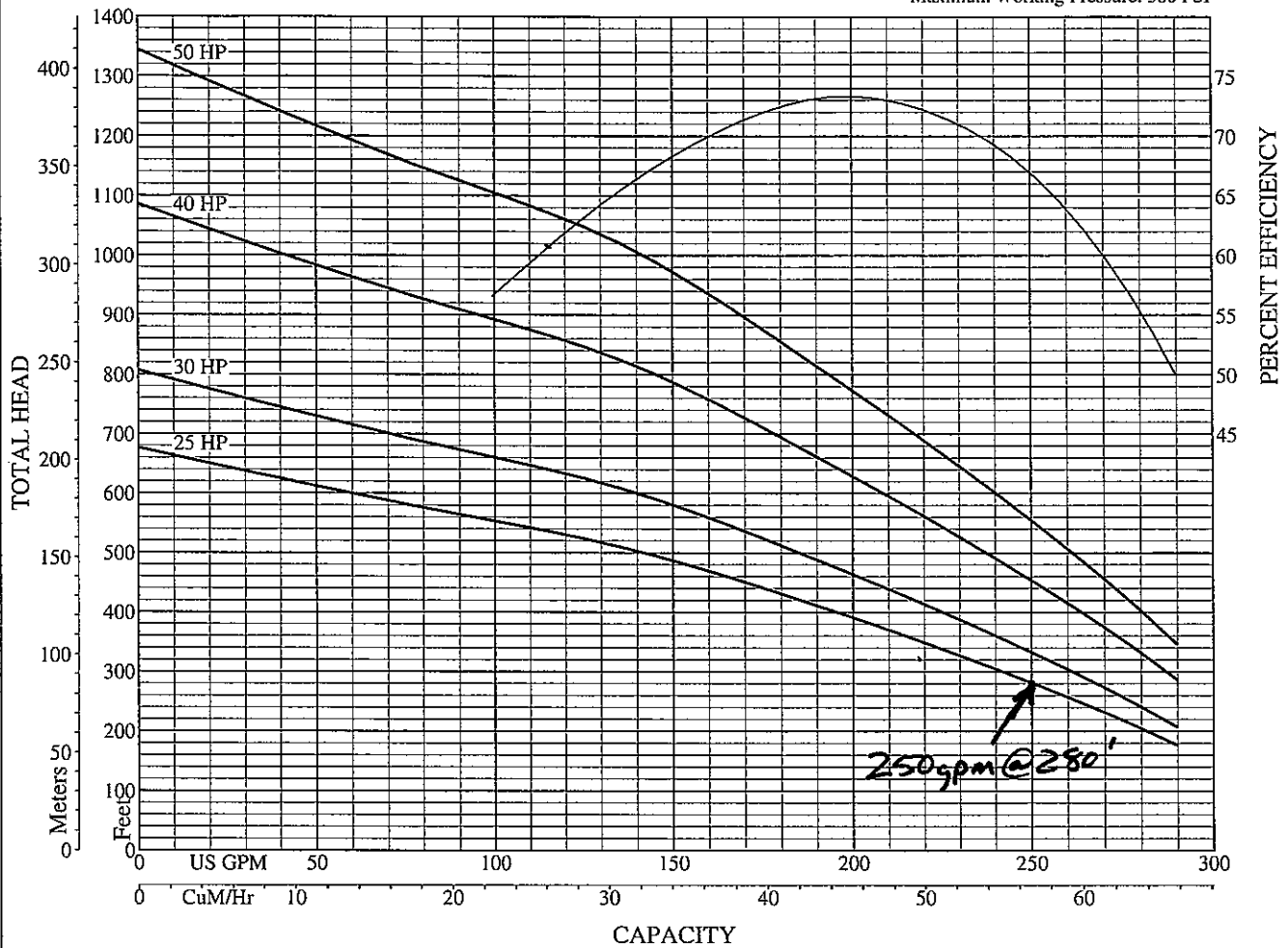
USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT



SUBMERSIBLE TURBINE

6T-200

Nominal RPM: 3450
Based on Fresh Water @ 68° F.
Maximum Working Pressure: 580 PSI



OUTLINE DIMENSIONS / WEIGHTS

HP	stages	Motor size	P length	M* length	MD* dia.	Mtr. wt.	Pump wt.
25	10	6"	63.98	33.13	5.38	148	233
30	12	6"	73.98	35.69	5.38	162	272
40	16	6"	93.98	40.81	5.38	195	350
50	20	6"	113.98	57.83	5.38	310	429

Note: dimensions = inches; weight = U.S. lbs.

M* Maximum length (Franklin Electric Motor)

MD* Motor diameter (Franklin Electric Motor)

SPECIFICATIONS

Minimum Well I.D.	6.0 Inches
Minimum Submergence @ BEP (above inlet)	10.0 Feet
Capacity Range	95 - 290 GPM
Discharge	3" F NPT
See manufacturer's data for motor cooling requirements	

SUPERSEDES

All Previous

Date 04/15/96

Section **ST**

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