

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. 63-318841. Owner L222 3 ID SUMMERWIND LLCPhone No. 208-938-8577Current address 1059 E IRON EAGLE DR STE 155, EAGLE, ID 836162. Examiner's name SCOTT N. KING, P.E.EXAM DATE NOVEMBER 13, 20183. Accompanied by TOM MEHIELEmail tom@valleyhydro.comAddress 1904 E BEECH, CALDWELL, ID 83605Relationship to permit holder WATER SYSTEM OPERATORPhone No. (208) 941-59894. Source GROUND WATER

tributary to _____

B. OVERLAP REVIEW1. Other water rights with the same place of use 63-2946, 63-3358A, 63-9350A, 63-3033A, Wilder Irrigation District2. 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	1/4	1/4	1/4	Sec	Twp	Rge	County	Method of Determination/Remarks
1			SW	SW	32	4N	4W	CANYON	GPS, On-site inspection
2			SW	SW	32	4N	4W	CANYON	GPS, On-site inspection

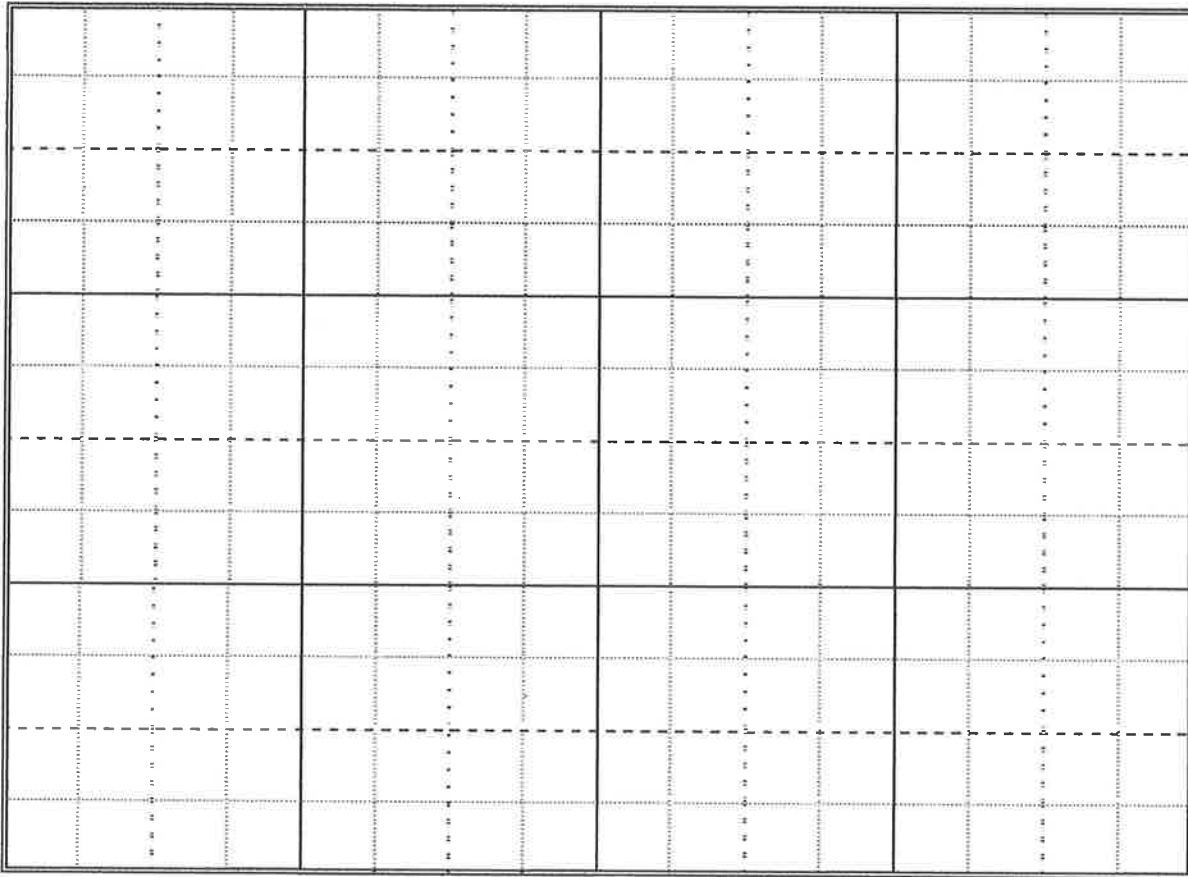
2. Place(s) of Use:

Method of determination Aerial imagery, on-site inspection

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	4W	32									D/F	D/F	D/F	D/F	D/F	D/F	D/F	D/F	

D = Domestic, F = Fire Protection

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
1 (D0016837)	unknown	75	unknown	Berkeley	model 8T-500
2 (D0047175)	unknown	30	unknown	Berkeley	model 6T-200

*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
1. Flowmeter	Magnetic	Ultramag		UM20070319	6 inch	
2. Flowmeter	Magnetic	Ultramag		UM20070318	4 inch	

2. **Measurements:** _____

Well 1 = 466 gpm (1.04 cfs) @ 26 psi.

Well 2 = 207 gpm (0.46 cfs) @ 30 psi.

E. NARRATIVE/REMARKS/COMMENTS

Two wells equipped with submersible pumps divert groundwater for a residential development, providing water for domestic and fire protection uses. The development consists of 92 residential lots, of which about 1/3 have homes completed or under construction. Water supply is stubbed into each lot.

Both wells are equipped with Ultramag magnetic flowmeters which were used to measure flow. Well 1 produced 466 gpm (1.04 cfs) at 26 psi, and Well 2 produced 207 (0.46 cfs) gpm at 30 psi for a combined flow of 1.50 cfs. These pressures are close to what would be expected during fire fighting.

The system also provides water to the clubhouse. This use is not included on the permit and a new application should be filed to cover this use.

Residential irrigation is supplied through a pressurized irrigation system receiving water from Wilder Irrigation District, on site irrigation wells. Residents may also use the the potable system, so an irrigation volume component is included.

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:

See attached sheets documenting a diversion rate of 1.50 cfs.

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

 $V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$ _____ $V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 =$ _____ $V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} =$ _____

2. Volume Calculations for Other Uses:

Domestic: 1.2 afa/lot x 92 lots = 110.4 afa

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
Domestic	1/1	12/31	0.6	110.4
Fire Protection	1/1	12/31	1.5	
Totals:			1.5	110.4

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

Scott M. King

Date

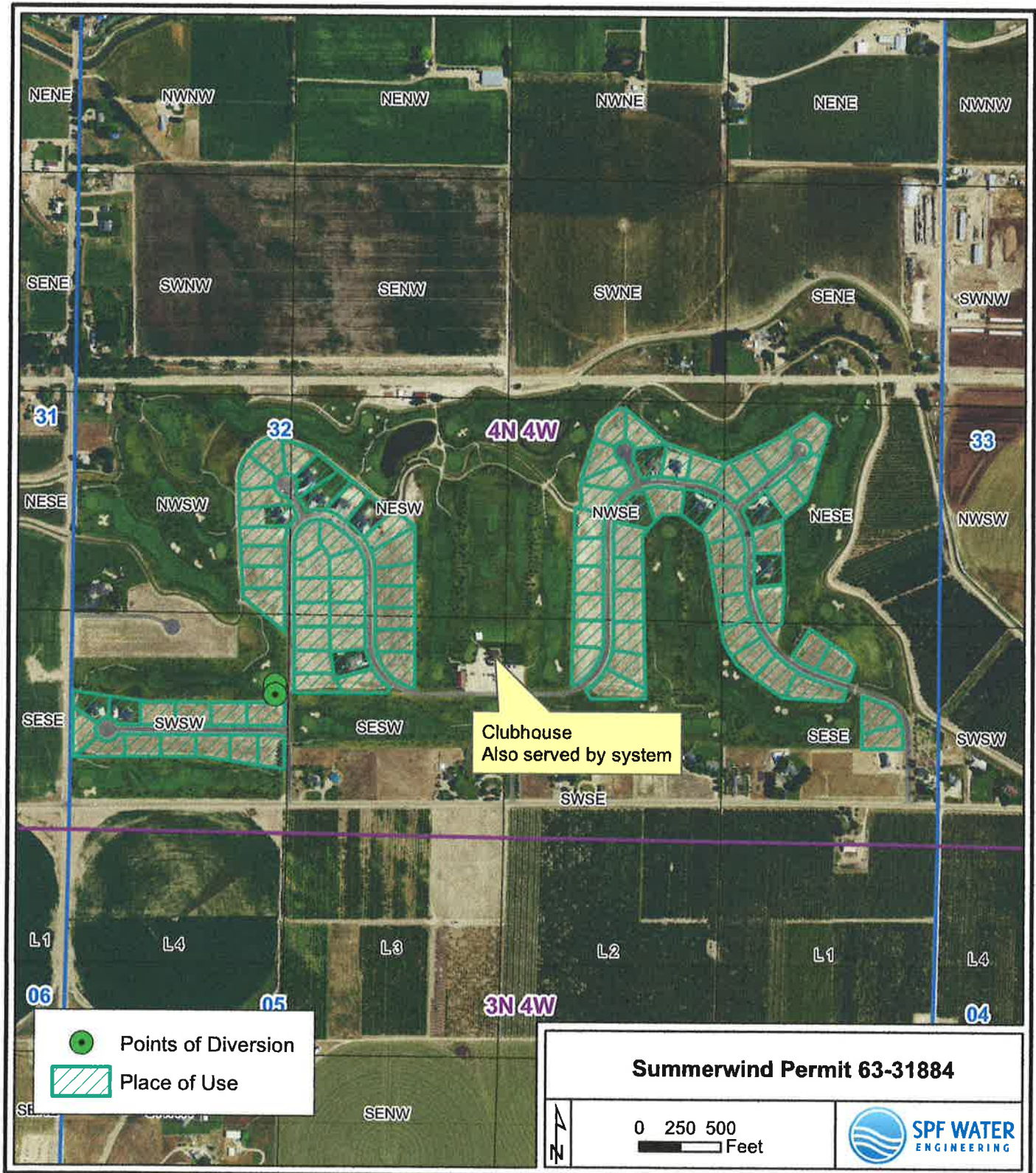
11/21/2018

Reviewer

Date



Attachment A
Field Exam Map



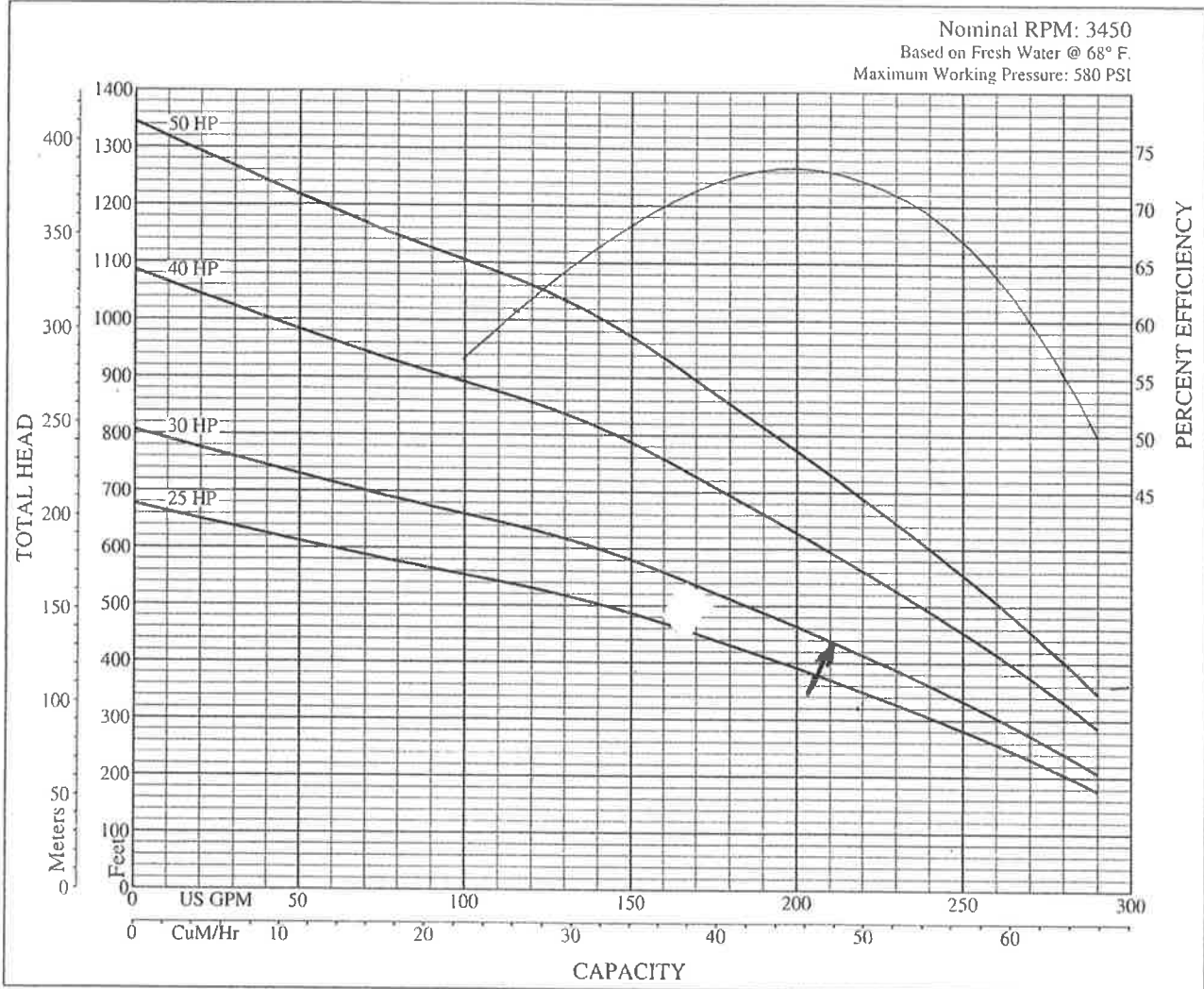
Attachment B

Pump Curves



SUBMERSIBLE TURBINE

6T-200



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

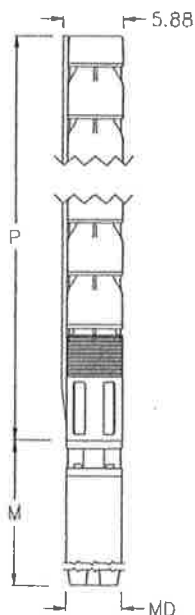
Note: dimensions = inches; weight = U.S. lbs.

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

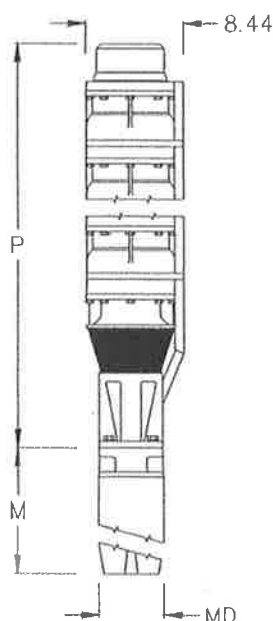
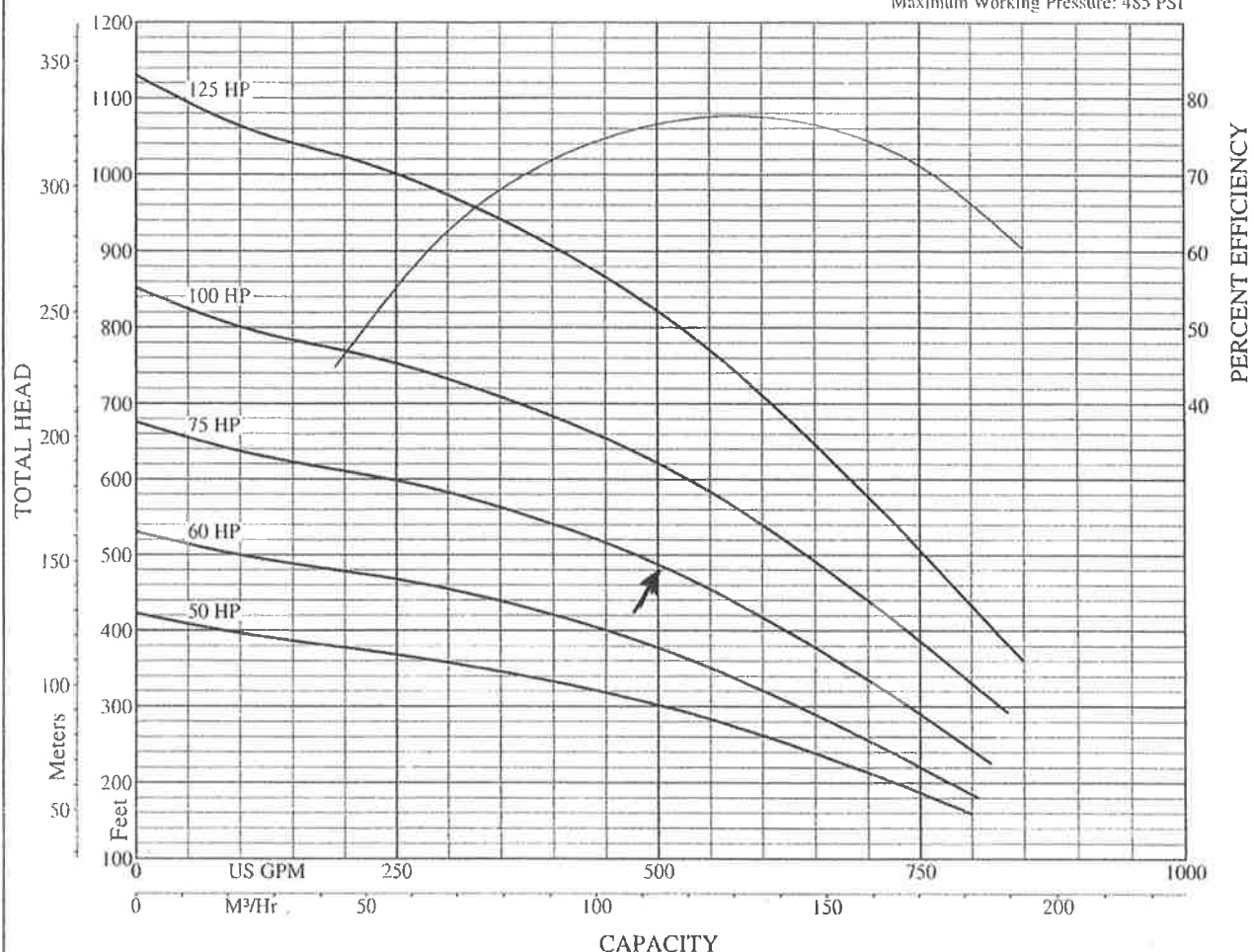
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Nominal RPM: 3450
Based on Fresh Water @ 68° F.
Maximum Working Pressure: 485 PSI



OUTLINE DIMENSIONS / WEIGHTS

HP	stages	Motor size	P length	M* length	MD* dia.	Mtr. wt.	Pump wt.
50	3	6"	45.13	55.30	5.44	304	189
60	4	6"	52.38	61.30	5.44	335	233
75	5	8"	60.25	54.90	7.50	433	280
100	6	8"	67.50	58.90	7.50	478	323
125	8	8"	82.00	68.80	7.70	709	411

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

M* Maximum length (Franklin Electric Motor)

MD* Motor diameter (Franklin Electric Motor)

SPECIFICATIONS

Minimum Well I.D.	10.0 Inches
Minimum Submergence @ BEP (above inlet)	10.0 Feet
Capacity Range	147 - 865 GPM
Discharge	6" F NPT
See manufacturer's data for motor cooling requirements	

SUPERSEDES

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Attachment C

Flow Rate Calculations

Permit: 63-31884
 Owner: L22 3 ID SUMMERWIND LLC
 Site Name: WELL 1
 POD Location: 4N 4W 32 SWSW
 Tag No: D0016837
 Meter: Ultramag
 Type: Magnetic
 Serial Number: UM20070319
 Operator: Scott King

Minutes	Volume (gal/m)	(+)Total (gal)	PSI
0.00	480	11330000	28
2.06	477	11331000	26
4.19	468	11332000	26
6.33	468	11333000	26
8.45	466	11334000	26
10.60	463	11335000	26
12.73	462	11336000	26
14.95	460	11337000	26

Time	12.89 minutes (2.06 to 14.95)
Volume	6000 gallons
Rate	466 gpm
Rate	1.04 cfs

Permit: 63-31884
 Owner: L22 3 ID SUMMERWIND LLC
 Site Name: WELL 2
 POD Location: 4N 4W 32 SWSW
 Tag No: D0047175
 Meter: Ultramag
 Type: Magnetic
 Serial Number: UM20070318
 Operator: Scott King

Minutes	Volume (gal/m)	(+)Total (gal)	PSI
0.00	flow not noted	34699000	30
4.83	210	34700000	30
9.66	204	34701000	30
14.52	204	34702000	30

Time	14.52 minutes
Volume	3000 gallons
Rate	207 gpm
Rate	0.46 cfs

Attachment D

Exam Photos



Figure 1: Well 2 in foreground with Well 1 in background, near the backup generator (almost hidden by operator's left leg).



Figure 2: Well house mechanical piping. Well 1 6-inch flowmeter (green) in foreground with Well 2 4-inch meter closer to pressure tanks.



Figure 3: Flowmeter displays.



Figure 4: Both pumps are equipped with variable speed drives.



Figure 5: Lot stub-ins identified by the two white pipes sticking out on undeveloped lot, left of photo center.



Figure 6: Typical development (place of use).



Figure 7: TimberStone Golf Course clubhouse is also connected to the domestic water system.