

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED

MAY 31 2017

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. 63-342401. Owner City of Boise, Department of Parks and RecreationPhone No. 208-608-7600Current address 1104 Royal Boulevard, Boise, ID 837062. Examiner's name Terry Scanlan, P.E., P.G.EXAM DATE 5/24/20173. Accompanied by Mike WoodwardEmail mwoodward@cityofboise.orgAddress 1104 Royal Boulevard, Boise, ID 83706Relationship to permit holder Horticulture Manager, BPRDPhone No. 608-71894. Source Ground Water

tributary to _____

B. OVERLAP REVIEW1. Other water rights with the same place of use 63-338452. Other water rights with the same source and point of diversion 63-33845**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
	2		NW	NE	2	3N	2E	Ada	Exam, Aerial Photo

2. Place(s) of Use:

Method of determination Exam, aerial photo

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
3N	2E	2		M															
				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" = _____

- ☒ 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
Well Pump	Grundfos	20	Submersible	Grundfos	3-inch, model 150S200-10

*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	Ultra Mag	McCromet	MX03-W	MX16-0137	3-inch	new in 2016

2. Measurements: _____

160 gpm (0.36 cfs) @ 64 psi

E. NARRATIVE/REMARKS/COMMENTS

A 8-inch well equipped with a 20-hp submersible pump provides ground water to a pressurized irrigation system for Boise Hills Park. The well was completed with 8-inch diameter steel casing from +2 to 316 feet and from 336 to 342 feet, with a .030 slot well screen from 316 feet to 336 feet. The surface seal extends from ground surface to 285 feet. Water temperature is 81F.

The nominal capacity of the 20-hp well pump is 150 gpm. The flowmeter measured 160 gpm at the time of the field exam or 0.36 cfs.

The City originally filed permit 63-33845 for the standard flow rate of 0.02 cfs/acre over a 7-acre area. This permit (63-34240) was subsequently filed for additional flow rate to allow irrigation within a short time window when the park is not in use. When combined, the rights are limited to 0.36 cfs and 14.9 afa. See accompanying licensing exam for permit 63-33845.

Exam Attachments

Attachment A: Field Exam Map

Attachment B: System Components and Diagrams

Attachment C: Flow Rate and Volume Calculations

Attachment D: Exam Photos

Attachment E: Proof of Beneficial Use

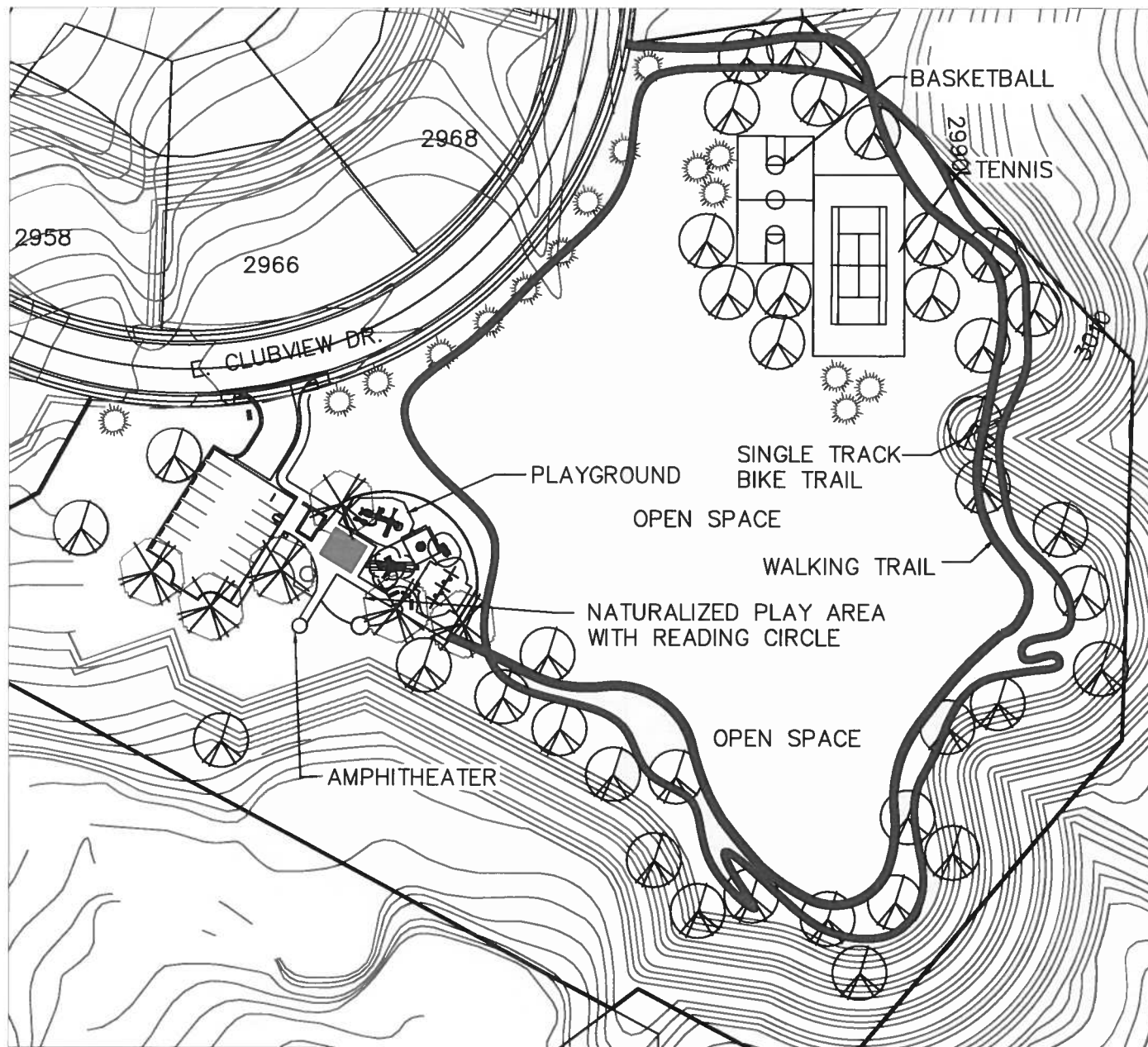
Has the permit holder met all conditions of permit approval, including any mitigation requirements and/or measuring device installation requirements? ☒ Yes ☐ No If no, what must be done to meet the permit requirements?

ATTACHMENT A
FIELD EXAM MAP



ATTACHMENT B

SYSTEM COMPONENTS AND DIAGRAMS



ACTIVITIES	
PLAYGROUND	8
BASKETBALL	8
TREES	7
AMPHITHEATER	6
WALKING TRAILS	6
TENNIS COURTS	6
SPRAY PARK	5
OPEN PLAY AREAS	4
NATURALIZED PLAYGROUND	3

AMENITIES	
SHELTER	
PICNIC AREA	
REST ROOM	
DRINKABLE WATER	
BIKE RACKS	
PUBLIC ART	
CHILDREN'S BIKE TRAIL	

SITE SPECIFIC	
FLAT PLAYING AREAS	
OFF-STREET PARKING	
NATIVE PLANTINGS WITH XERIC TURF GRASS	

BOISE HILLS NEIGHBORHOOD PARK

Master Plan



APPROVED 2.18.10 Revised 11.15.12 Single Track addition

IDAHO DEPARTMENT OF WATER RESOURCES

WELL DRILLER'S REPORT

1. WELL TAG NO. D 0071809

Drilling Permit No 972184-878241

Water right or injection well # 63-33845

2. OWNER: City of Boise

Name Dept. of Parks and Recreation

Address 1104 Royal Blvd.

City Boise State Id. Zip 83706-2898

3. WELL LOCATION:

Twp 3 North ☒ or South ☐ Rge 2 East ☒ or West ☐

Sec 2 10 acres 1/4 N.W. 40 acres 1/4 N.E. 180 acres 1/4

Gov't Lot _____ County Ada

Lat. 43 ° 37.934 (Deg. and Decimal minutes)

Long. 116 ° 10.891 (Deg. and Decimal minutes)

Address of Well Site 651 East Clubview Drive

City Boise

Lot _____ Blk _____ Sub Name Boise Hills Park

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 ft³)	Placement method/procedure
Bentonite/Ceme	16'	285'	112 cubic ft	Pumped

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing Liner	Threaded	Welded
8"	+2'	316'	.322	Steel	☒	☐	☒
8"	336'	342'	.322	Steel	☒	☐	☒
					☐	☐	☐
					☐	☐	☐

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

9. PERFORATIONS/SCREENS:

Perforations ☐ Y ☒ N Method _____

Manufactured screen ☒ Y ☐ N Type Johnson Vee Wire

Method of installation _____

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
316'	360'	.030	20'	8"	Stainless	

Length of Headpipe _____ Length of Tailpipe 6.5'

Packer ☐ Y ☒ N Type _____

10. FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft³)	Placement method
Sand	285'	353'	31 cubic feet	Poured

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) 168' Static water level (ft) 161.5'

Water temp. (°F) 81 Bottom hole temp. (°F) 81

Describe access port Well cap

Well test:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)
<u>29</u>	<u>160</u>	<u>360</u>

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
12"	0	1	Grass & Topsoil		X
	1	2	Brown Sand		X
	2	3	Sand Stone Hardpan		X
	3	27	Brown Cemented Sand		X
	27	35	Blue Clay		X
	35	105	Brown Sand		X
	105	155	Blue Muddy Sand		X
	155	168	Blue Clay		X
	168	195	Blue Sand	X	
	195	262	Lava		X
	262	265	Red Clay		X
	265	300	Blue Clay		X
	300	317	Lava		X
	317	325	Blue Sand	X	
	325	340	Blue Sand & Sandstone Streaks	X	
	340	353	Blue Clay & Sandstone		X

Completed Depth (Measurable): 342' 6"
Date Started: Apr 11, 2016 Date Completed: Apr 28, 2016

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 Stevens & Sons Co. No. 153

*Principal Driller [Signature] Date May 2, 2016

*Driller _____ Date _____

*Operator II _____ Date _____

Operator I _____ Date _____

* Signature of Principal Driller and rig operator are required.

ATTACHMENT C

FLOW RATE AND VOLUME CALCULATIONS

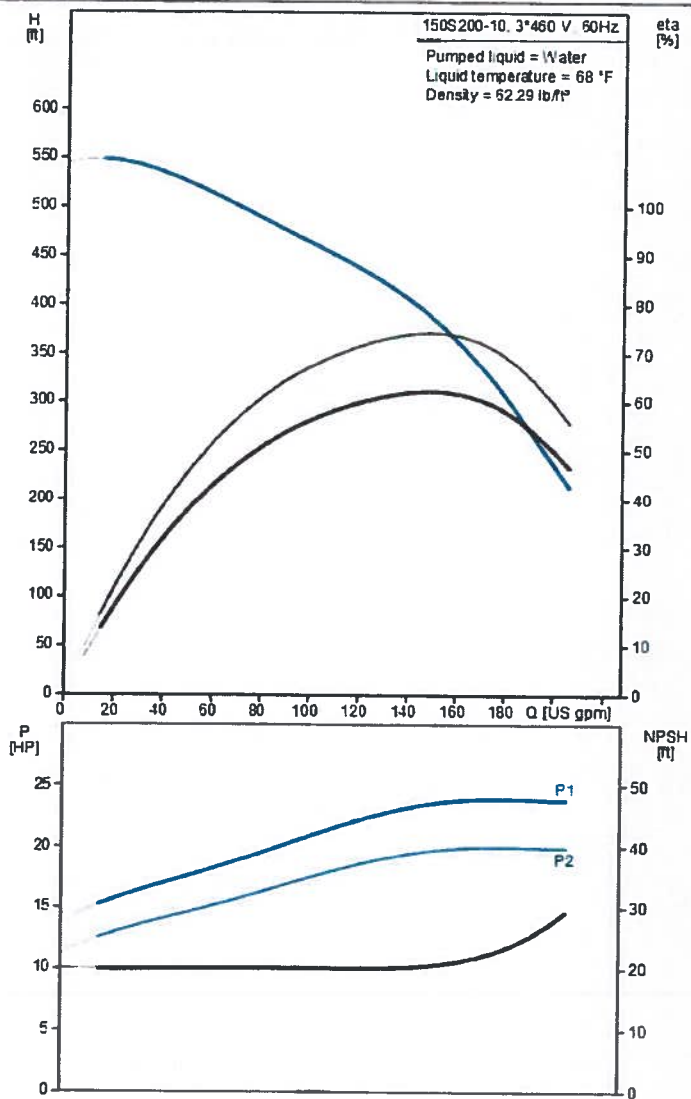
Description	Value
General information:	
Product name:	150S200-10
Product No.:	13B63610
EAN:	5700391427701
Price:	On request
Technical:	
Speed for pump data:	3450 rpm
Rated flow:	159 US gpm
Rated head:	354.3 ft
Impeller reduc.:	NONE
Shaft seal for motor:	SIC/SICNBR
Curve tolerance:	ISO9906 2012 3B
Stages:	10
Model:	B
Valve:	YES
Motor version:	T40

Materials:	
Pump:	Stainless steel EN 1.4301 AISI 304
Impeller:	Stainless steel EN 1.4301 AISI 304
Motor:	Stainless steel DIN W.-Nr. 1.4301 AISI 304

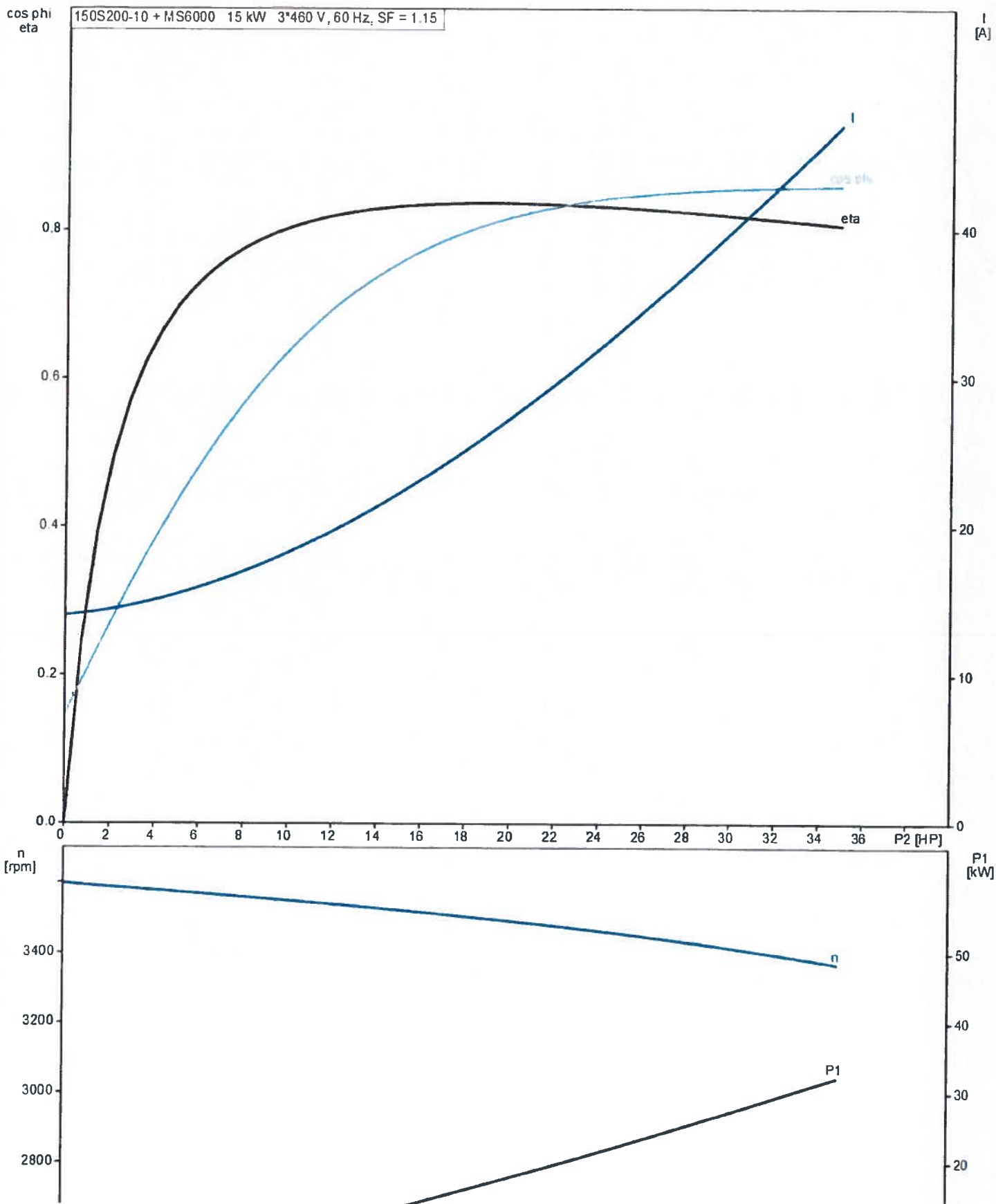
Installation:	
Maximum ambient pressure:	870 psi
Pump outlet:	3"NPT
Motor diameter:	6 inch

Liquid:	
Pumped liquid:	Water
Maximum liquid temperature:	104 °F
Max liquid temperature at 0.15 m/sec:	104 °F
Liquid temp:	68 °F
Density:	62.29 lb/ft³

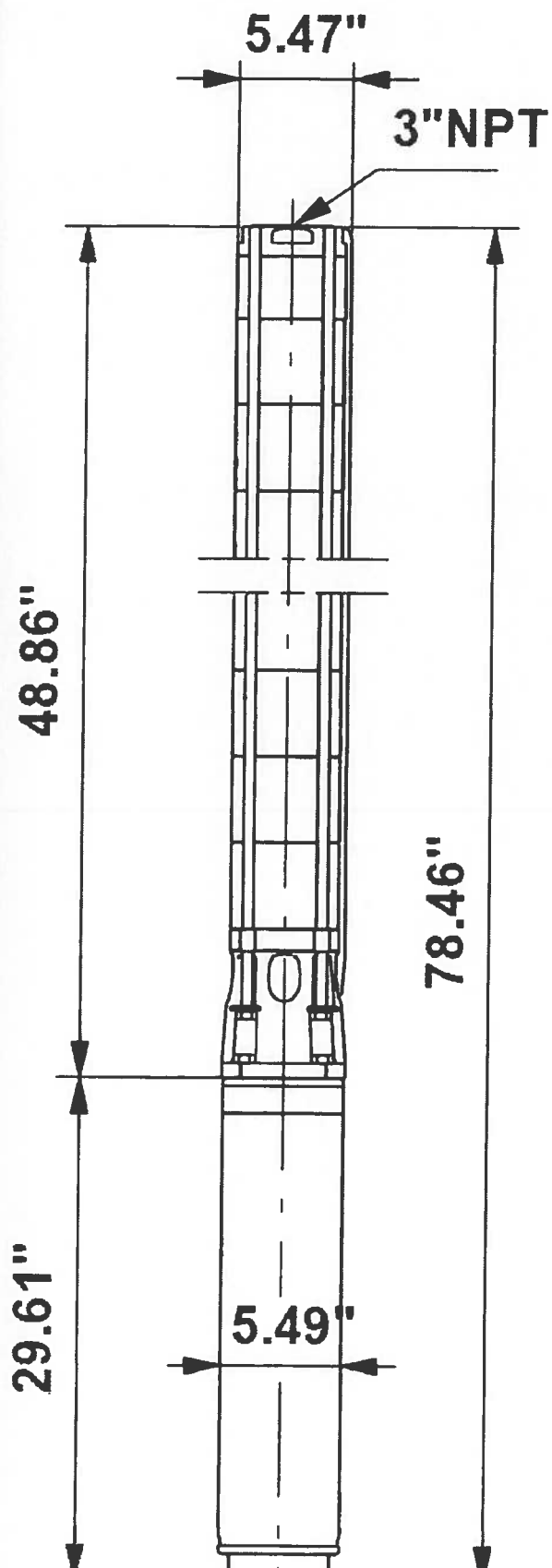
Electrical data:	
Motor type:	MS6000
Applic. motor:	GRUNDFOS
Rated power - P2:	20 HP 20 HP
KVA code:	J
Main frequency:	60 Hz
Rated voltage:	3 x 440-460-480 V
Starter:	2
Service factor:	1.15
Rated current:	33.5-32.5-32.0 A
Starting current:	520-570-610 % 172 A
Cos phi - power factor:	0.85-0.84-0.81
Rated speed:	3450-3470-3480 rpm
Axial load max:	59.5 lb
Motor efficiency at full load:	84.0 %
Start. method:	direct-on-line
Enclosure class (IEC 34-5):	IP68
Insulation class (IEC 85):	F



13B63610 150S200-10 60 Hz



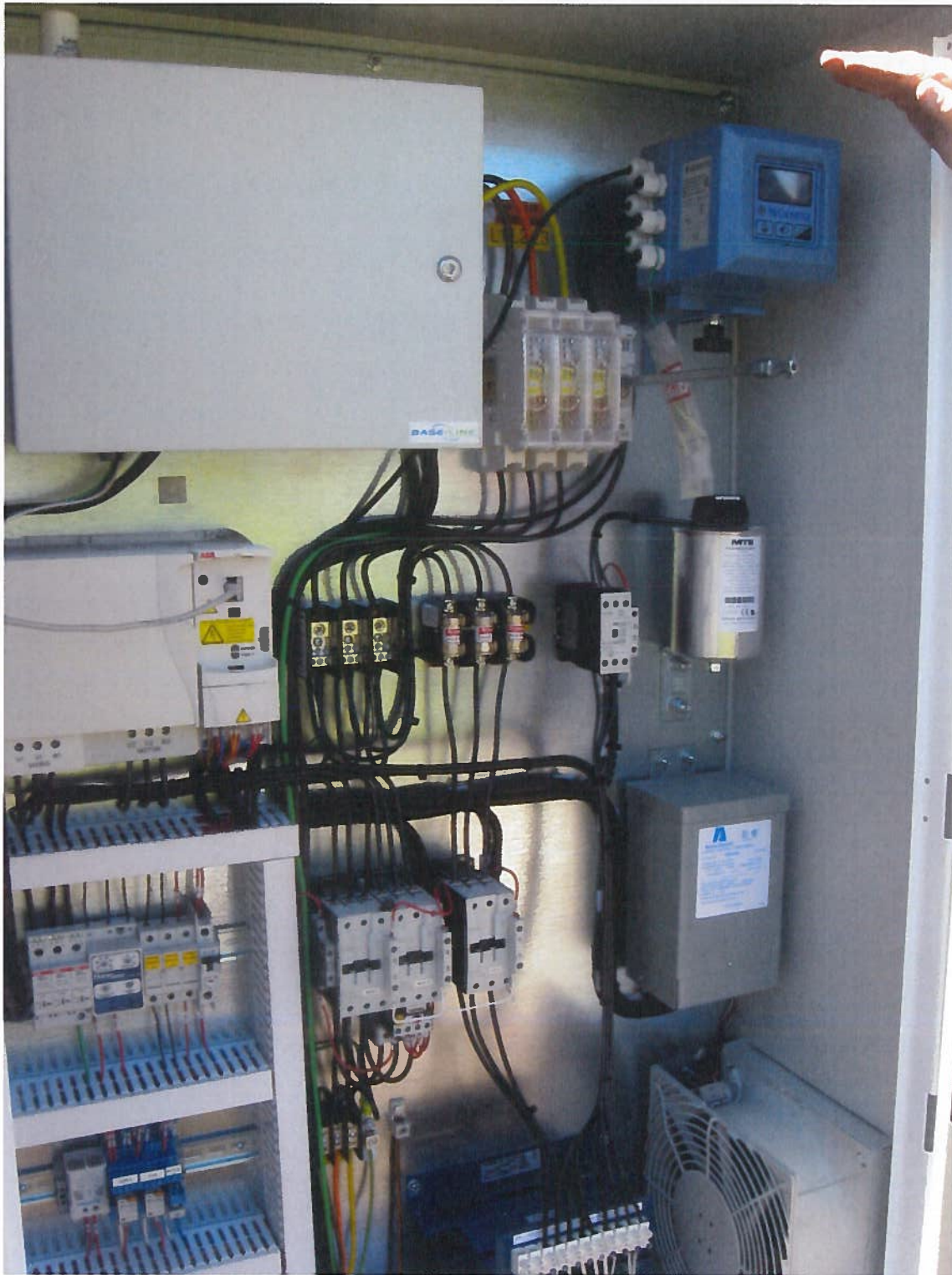
13B63610 150S200-10 60 Hz



ATTACHMENT D
PHOTOS



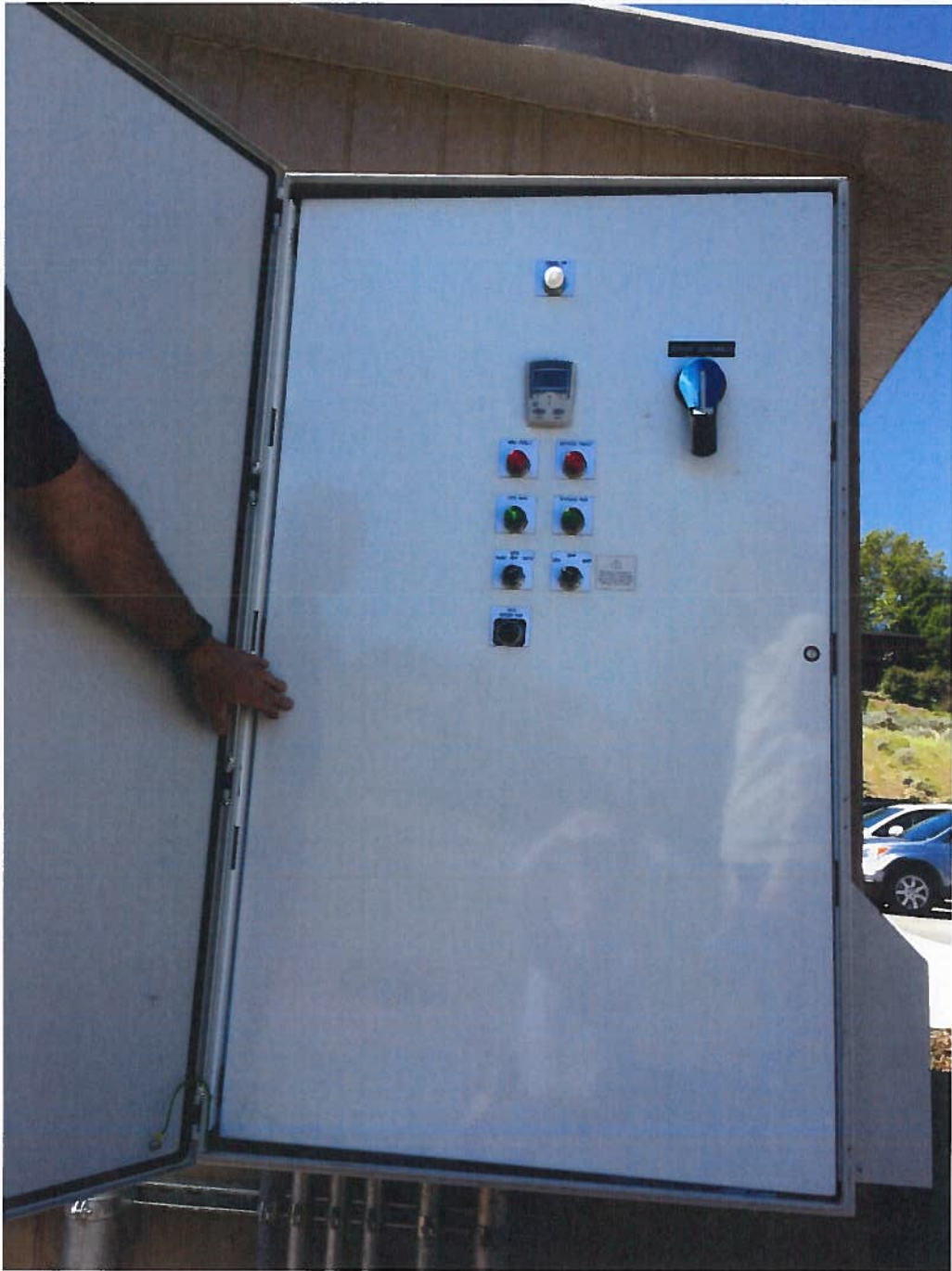
Irrigation well head with adjacent vault containing flow meter and pressure transducer. Submersible well pump discharges through a pitless adapter to the vault.



Inside of pump control panel with flow meter display.



Flow rate 160.83 gpm



Door of pump control panel.



Vault with isolation valve, flush to waste valve, and pressure relief valve.



Place of use with sprinklers operating during exam.



Place of use.

ATTACHMENT E
PROOF OF BENEFICIAL USE