

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED
MAY 09 2018
DEPT 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. 65-232451. Owner Second Fork, LLCPhone No. 208-377-0998Current address PO Box 8126, Boise, 837022. Examiner's name Scott King, P.E. (Examiner No. 133)EXAM DATE April 30, 20183. Accompanied by Brett Seward & Clay Lanam

Email _____

Address 26969 Sand Rd, Parma, ID 83660 (Brett)Relationship to permit holder Owners RepresentativePhone No. 208-739-56554. Source Ground Water

tributary to _____

B. OVERLAP REVIEW1. Other water rights with the same place of use Squaw Creek Irrigation District water (65-2925, 65-2974)2. 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
Well			NW	SE	35	11N	1E	Gem	Exam, 2017 Aerial Photo, GPS

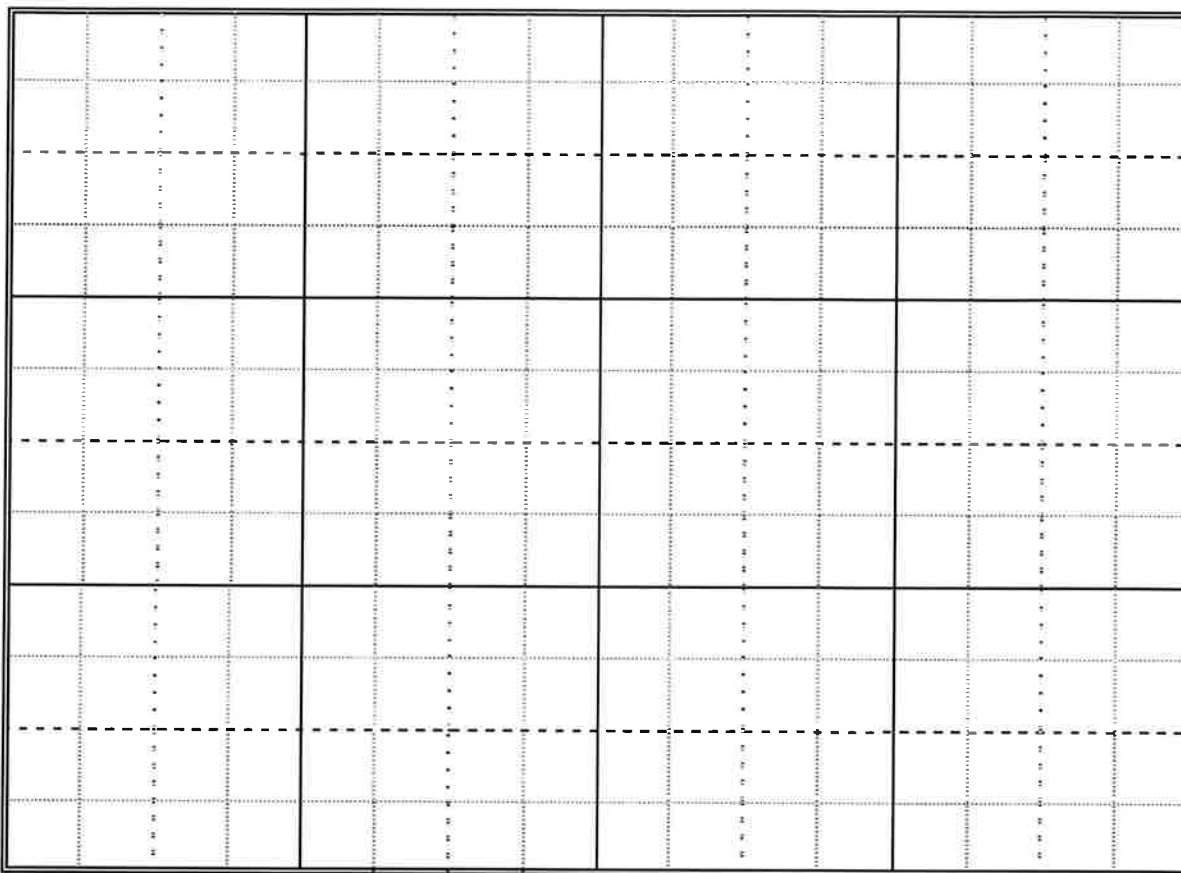
2. Place(s) of Use:

Method of determination Exam, 2017 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	
11N	1E	35														17	6		23
															S	S			

S = Stockwater place of use (same as irrigation)

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 (tag no. D0052839)	Unknown	unk	Unknown	Unknown	6-inch discharge at well head

*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	4/18/2018

2. **Measurements:** _____

Flow measured with ultrasonic flowmeter on discharge pipe.

E. NARRATIVE/REMARKS/COMMENTS

A 10-inch diameter well constructed to 423 feet below ground surface serves as the ground water point of diversion for stockwater and irrigation of 23 acres. Water is diverted from the well to a 6-inch diameter steel pipe which discharges to ditches running along the west and northeast field edges for gravity-flood irrigation. Motor and pump data are unknown.

The measured discharge was 0.69 cfs. The recommended irrigation diversion rate is 0.46 cfs based on irrigation of 23 acres at the standard 0.02 cfs/acre duty. Theoretical discharge capacity is 0.97 cfs.

Stockwater place of use is the same as irrigation. Stockwater volume is based on 200 head at 12 gpd per head for 365 days.

Exam Attachments

Attachment A: Field Exam Maps

Attachment B: Well Driller's Report

Attachment C: Flow Measurement Data

Attachment D: Exam Photos

Attachment E: Proof of Beneficial Use Statement

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:

Measured Discharge = 0.69 cfs (see attached sheet)

Theoretical = $8.8 \times 70\% \text{ efficiency} \times 22.2 \text{ hp (measured from power meter)} / 141 \text{ ft TDH} = 0.97 \text{ cfs}$

TDH based on 1 psi discharge pressure (open discharge), 20 ft column friction losses (estimated), and pumping water level of 119 ft (calculated). PWL calculated on well specific capacity from driller's report (360 gpm / 128 ft drawdown = 2.8 gpm/ft); drawdown = 312 gpm (measured) / 2.8 gpm/ft = 111 ft. PWL = 8 ft (SWL) + 111 ft (drawdown) = 119 ft.

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 23 \text{ acres} \times 3.5 \text{ afa} = 80.5 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 0.46 \text{ cfs} \times 1.9835 \times 231 \text{ days} = 210.8 \text{ afa}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 80.5 \text{ afa}$$

2. Volume Calculations for Other Uses:

Stockwater: 200 head x 12 gpd per head x 365 days / 325,850 gallons per af = 2.69 af

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
Irrigation	3/15	10/31	0.46 cfs	80.5 afa
Stockwater	1/1	12/31	0.05 cfs	2.7 afa
Totals:			0.51 cfs	83.2 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

Scott N. King

Date

May 7, 2018

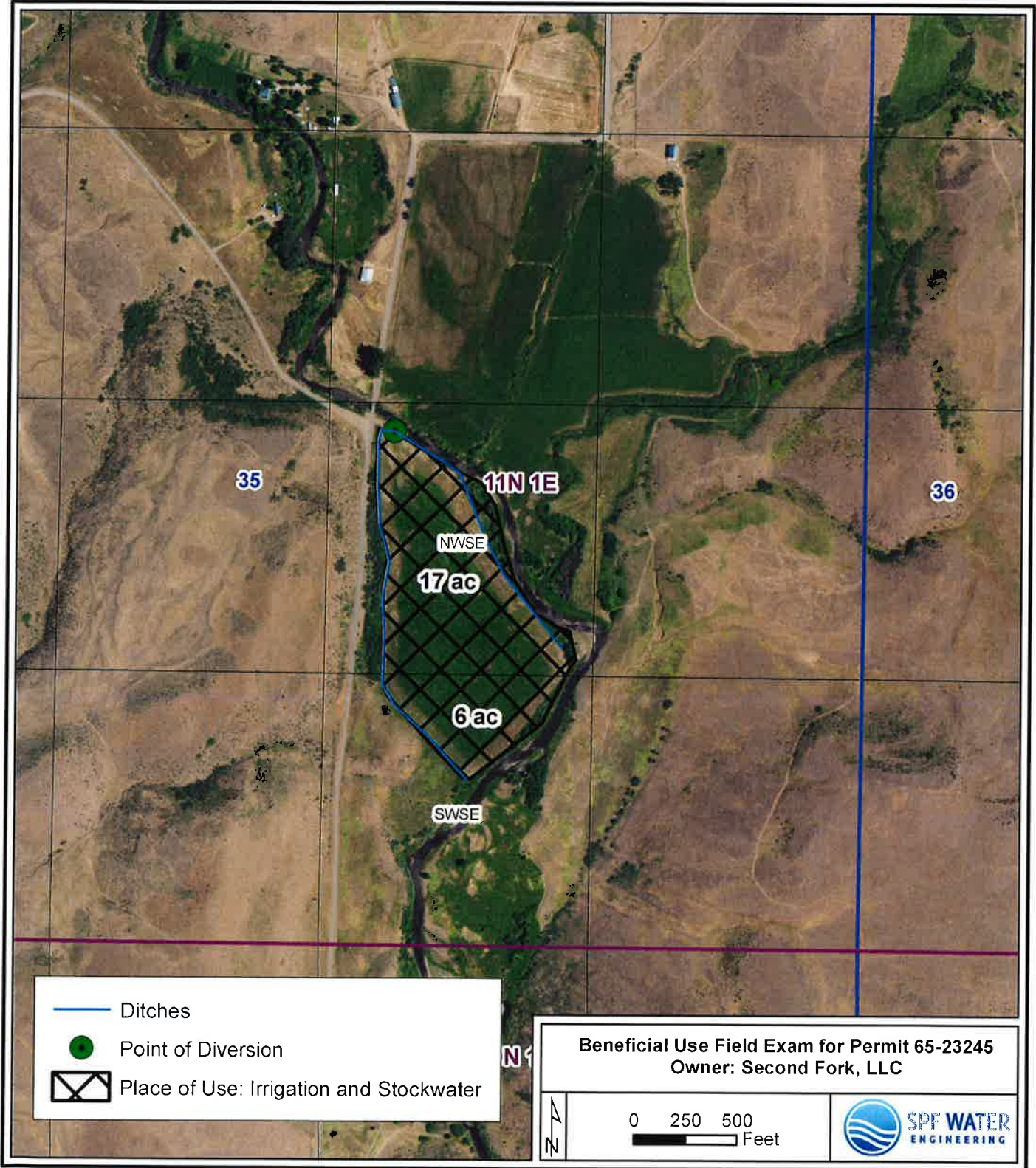
Reviewer

Date

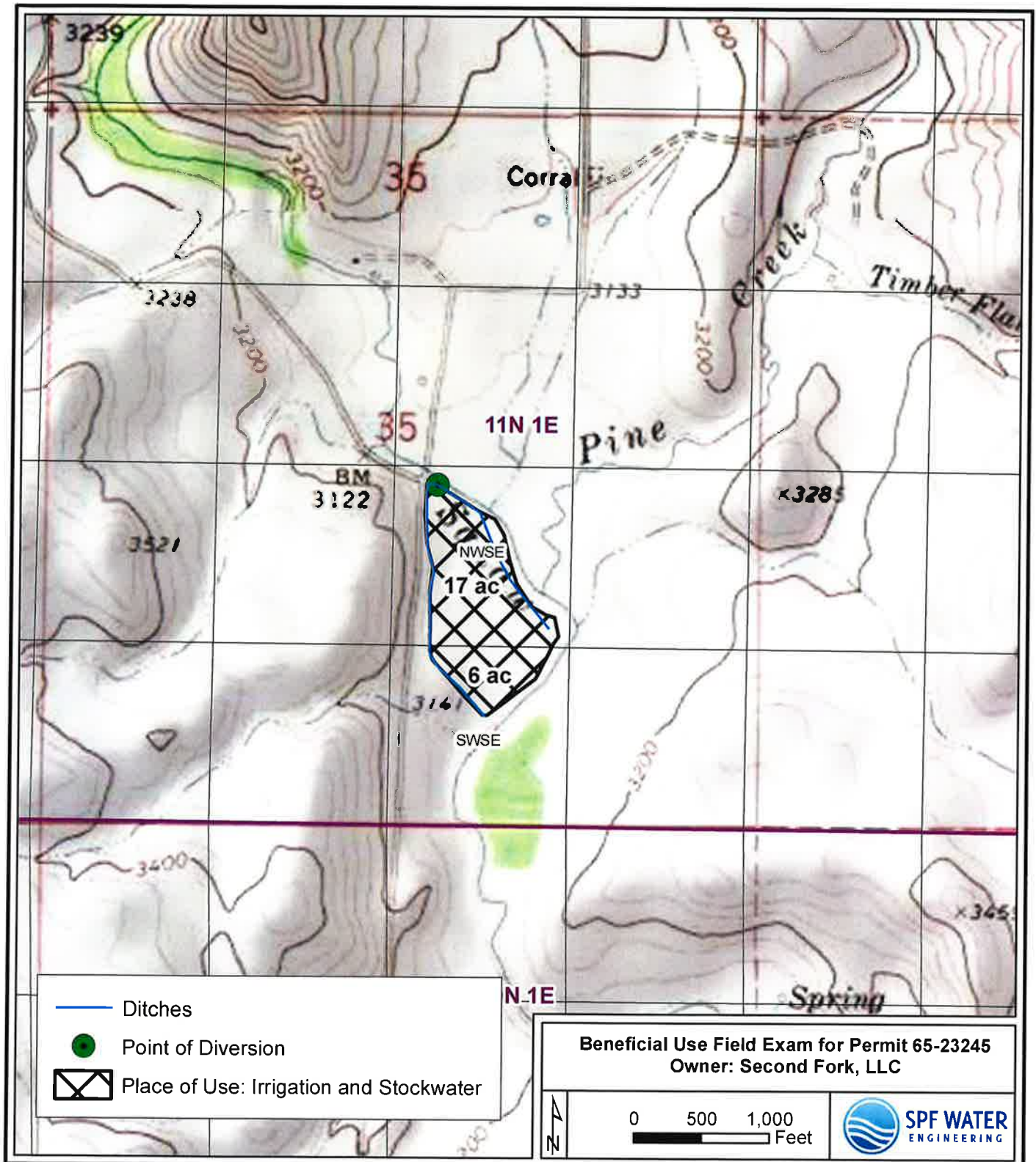


Attachment A
Field Exam Map

Attachment to Field Exam



Attachment to Field Exam



Attachment B
Well Driller's Report

Form 238-7 IDAHO DEPARTMENT OF WATER RESOURCES
6/02 WELL DRILLER'S REPORT

Office Use Only
Well ID No. 421257
Inspected by _____
Twp _____ Rge _____ Sec _____
1/4 1/4 1/4
Lat: _____ Long: _____

1. WELL TAG NO. D D0052839

DRILLING PERMIT NO. 904469-851460

Water Right or Injection Well No. 65-23245

2. OWNER

Name James Smith

Address 11606 Cartwright Rd.

City Boise State Id Zip 83714

3. LOCATION OF WELL by legal description:

You must provide address or Lot, Blk, Sub. or Directions to well.

Twp. 11 North ☒ or South ☐
Rge. 1 East ☒ or West ☐
Sec. 35 NW 1/4 NW 1/4 SE 1/4
10 acres 40 acres 160 acres

Gov't Lot _____ County Gem

Lat: 44:14:663'N Long: 116:18:124'W

Address of Well Site Corner of 2nd Fork & 3rd Fork on East Side South of the creek City Ola

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

Lt. _____ Blk. _____ Sub. Name _____

4. USE:

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

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 Material	From	To	Weight/ Volume	Seal Placement Method
5/8 Bentonite	0	33	1000 lbs.	14" Overbore

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 339'

Was drive shoe seal tested? ☐ Y ☒ N How? _____

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
10"	2	339	.250	Steel	☒	☐	☒	☐
8"	308	317	.250	Steel	☐	☒	☒	☐

Length of Headpipe 9.1 Length of Tailpipe 0

Packer ☒ Y ☐ N Type Rubber K-Packer

9. PERFORATIONS/SCREENS PACKER TYPE

Perforation Method Factory Slotted

Screen Type & Method of Installation Drop-In

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
317	397	1/8"	.250	8"	Steel	☐	☒

10. FILTER PACK

Filter Material	From	To	Weight/Volume	Placement Method
N/A				

11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

8 ft. below ground Artesian pressure _____ lb.

Depth flow encountered 340 ft. Describe access port or control devices: _____

12. WELL TESTS:

Yield gal./min.	Drawdown	Pumping Level	Time
360 GPM	128'	168'	4 HRS.

Water Temp. _____ Bottom hole temp. _____

Water Quality test or comments: _____

Depth first Water Encounter _____

13. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
14"	0	3	Top Soil		X
	3	14	Gravel		X
	14	21	Brown Clay		X
	21	33	Tan Clay		X
10"	33	55	Cemented Sand w/ Clay		X
	55	64	Grey Clay		X
	64	95	Blue Clay w/ Cemented Sand		X
	95	105	Grey Hard Clay		X
	105	109	Brown Soft Clay		X
	109	113	Hard Clay		X
	113	116	Cemented Sand w/ Clay		X
	116	140	Sandy Brown Clay		X
	140	160	Cemented Sand w/ Clay		X
	160	168	Hard Clay		X
	168	175	Cemented Sand		X
	175	190	Brown Broken Shale		X
	190	210	Brown Shale		X
	210	215	Cemented Sand		X
	215	275	Brown Shale w/ Sand	X	
	275	287	Red Shale		X
	287	317	Brown Shale		X
	317	339	Hard Brown Shale		X
	339	370	Black Rock		X
	370	380	Red Rock		X
	380	423	Black Rock		X

RECEIVED

JUL 03 2008

WATER RESOURCES
WESTERN REGION

Completed Depth 423' (Measurable)
Date: Started 5/28/08 Completed 6/10/08

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 Dennis Phipps Well Drilling Inc. Firm No. 332

Principal Driller [Signature] Date 6/10/08

and Driller or Operator II Date 6/10/08

Operator I [Signature] Date 6/10/08

Principal Driller and Rig Operator Required.

Operator I must have signature of Driller/Operator II.

FORWARD COPY TO WATER RESOURCES

Form provided by Forms On-A-Disk (214) 340-9429 www.FormsOnADisk.com

Attachment C
Flow Measurement Data

Permit: 65-23245
 Owner: Tree Top Ranches
 Site Name: Irrigation Well
 POD Location: 11N 1E 35 NWSE
 Tag No: D0052839
 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 #
4/30/2018 13:57	317	5347	0	0
4/30/2018 13:58	316	5654	0	0
4/30/2018 13:59	315	5975	0	0
4/30/2018 14:00	316	6295	0	0
4/30/2018 14:01	314	6601	0	0
4/30/2018 14:02	313	6918	0	0
4/30/2018 14:03	311	7234	0	0
4/30/2018 14:04	310	7531	0	0
4/30/2018 14:05	308	7845	0	0
4/30/2018 14:06	307	8157	0	0
4/30/2018 14:07	306	8470	0	0

Time	10 minutes
Volume	3124 gallons
Rate	312 gpm
Rate	0.69 cfs

Attachment D
Exam Photos



Figure 1: Well and discharge piping. The pipe on left discharges to the ditch along the field's northeast side. The pipe on right discharges to the ditch along the field's west side. All flow diverted to the left pipe during exam.



Figure 2: Well being pumped with flowmeter mounted on 6-inch PVC pipe about 12 feet downstream of the well head. PVC pipe was temporary for the flow measurement.



Figure 3: Well and discharge piping. The pipe on left discharges to the ditch along the field's northeast side. The pipe on right discharges to the ditch along the field's west side. All flow diverted to the left pipe during exam.



Figure 4: Well being pumped with flowmeter mounted on 6-inch PVC pipe about 12 feet downstream of the well head. PVC pipe was temporary for the flow measurement and water is normally directed to the ditch on left.



Figure 5: Ditch along west side of field running south.



Figure 6: Ditch along northeast edge of field flowing southeasterly toward Squaw Creek.



Figure 7: Photo taken at southern end of place of use facing northerly, toward well.

Attachment E
Proof of Beneficial Use