

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-33505
Exam Date: 08/12/2020

1. Current Owner:
STUART FAMILY TRUST
3705 ELMORE RD
PARMA, ID 83660-6166
(408) 219-8410
2. Accompanied by: Kevin O'Neil
Phone No: (208) 739-8333
Address: 3705 Elmore Rd Parma ID 83660
Relationship to permit Holder: Owner of property and permit at the time of the field examination.

3. SOURCE:
GROUND WATER

Method of Determination: Permit application, IDWR records, and field examination

B. OVERLAP REVIEW

1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
65-2900	Tunnel No 2 Drain	Irrigation	Decreed
65-2433	Payette River	Irrigation	Decreed
63-2878	Elijah Drain	Irrigation	Decreed
63-2322	Wilson Slough	Irrigation	Decreed

Comments: Overlap with surface water supplied by Black Canyon Irrigation District

2. Other water rights with the same point-of-diversion: NO Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments: none

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER NE¼ SE¼, Sec. 35, Twp 07N, Rge 05W, B.M. PAYETTE County

Method of Determination: Field examination, Garmin Handheld GPS, and ArcMap tools with aerial imagery.

PLACE OF USE: IRRIGATION

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
07N	05W	35													9.5				9.5

Total Acres: 9.5

Method of Determination: Aerial Imagery, ArcMap Tools, and field exam

3.

X Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.

 Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.

X Aerial Photo Attached (required for irrigation of 10+ acres).

X Photo of Diversion and System Attached

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
D0060358	Gould	2.5			

Two Booster pumps both Baldor Reliance JML1409T 5 HP

Pump from pond Baldor Reliance JPL1511T 10 HP

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date

2. Measurements:

E. FLOW CALCULATIONS

X Additional Computation Sheets Attached

Measured Method: Theoretical Calculations

Nozzle Discharge Calculations: Lawn and garden

Pop-up rotor system: Rainbird 5000 Series sprinklers with blue nozzles

Permit holder reported nozzle flow rate: 2.0 gpm but did not know flow pressure

Water right holder reported sprinkler heads: 4 zones running 25 heads each

1 zone x 25 heads x 2.0 gpm = 50.0 gpm total or 0.11 cfs

Nozzle Discharge Calculations: Irrigated Pasture, Handlines (3 field length lines and 2 spur lines from line 3)

Line #	Pipe, ft	Heads
line 1	720	18
line 2	440	11
line 3	600	15
line 3a	320	8
line 3b	80	2
	2,160	54

Using common nozzle diameters and pressures for handlines: 9/64" (0.141 in) nozzle @ 55 psi discharges 4.37 gpm.
18 heads x 4.37 gpm = 78.7 gpm or 0.18 cfs

Standard Beneficial Use Rate: 9.5 acres x 0.02 cfs/acre = 0.19 cfs

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 9.5 \text{ acres} \times 4.5 \text{ ac-ft} = 42.8 \text{ ac-ft}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = (0.19 \text{ cfs}) \times (260 \text{ days}) \times 1.9835 = 97.9 \text{ ac-ft}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 42.8 \text{ ac-ft}$$

2. Volume Calculations for Other Uses:

G. NARRATIVE/REMARKS/COMMENTS

At the time of the field exam, Kevin O'Neil was the owner of permit 63-33505 for irrigation use in Canyon County. This permit was approved on 8/31/2011 with a proof due date of 8/1/2012. The proof of beneficial use completion statement was submitted on 6/15/2012 with an examination fee of \$100. A field exam was conducted on 8/12/2020. Kevin O'Neil accompanied the water resource agent on the field exam. According to Zillow.com, the property was sold on 9/15/2023. An ownership change was filed with the Department to change ownership of the permit to the Stuart Family Trust.

This property is located at 3705 Elmore Rd in Parma, ID. The source of water for this water right permit is from a 6-inch well, tag# D0060358, drilled on April 13, 2012. Mr. O'Neil claimed that the well had a 2.5 hp Gould's pump set at 210 feet. The well log reports a depth of 310 feet. Water from this well flows in a pipe approximately 150 feet down hill and open discharges from a 4-inch pipe into a 0.7-acre pond. A Baldor Reliance JPL1511T 10 hp pumps water 450 feet back up the hill to two Baldor Reliance JML1409T 5 hp pumps where water is distributed to irrigate approximately 2.0 acres of lawn and 7.25 acres of pasture and cropland. The permittee asserted that the system did not extend to the 7 acres north of the house which was originally part of the permit.

The original permit was issued solely for the diversion of 0.6 cfs of water to irrigate the entire 42.8 acres and as a supplemental right to surface water supplied by Black Canyon. However, the property has largely been developed to accommodate two motocross tracks and a BMX bike track. According to the permit holder 68 fixed sprinklers have been placed in the track areas for dust abatement. Irrigation development includes a 4.25-acre pasture, 3.0 acres of cropland, 2 acres of lawn, landscaping and two golf greens (one of the greens is artificial turf, but the surrounding trees are irrigated, 0.25 acres). The pond in the southwest corner of the property is developed for irrigation storage as well as recreation as attested to by the additional features of a wakeboard pulley, wakeboard and jet ski jumps, a rope swing, and a Tiki Hut. Other water features on the property include a cascade water feature at the driveway entrance, a pool, and a built-in hot tub with a water feature. Also, there is a domestic well, D0018205, which was drilled on March 28, 2001.

Three handlines and two spur lines are used to irrigate the 4.25-acre pasture. Aerial imager was used to estimate the length of each line and then divided by 40 feet to estimate the number of nozzles. The longest line was estimated to have 18 nozzles with a total of 54 nozzles on all lines. It is unknown how many nozzles are running during irrigation of the pasture. A common nozzle size is a 9/64" diameter with a common operating pressure for handlines of 55 psi. Using these common figures, results in a nozzle discharge of 4.37 gpm. For 18 nozzles at 4.37 gpm this equals a discharge rate of 0.18 cfs (78.7 gpm). The lawn and garden ran a Rainbird 5000 series pop-up rotor system of sprinklers with blue nozzles. The permit holder asserted that there were 4 zones with 25 sprinklers each with 2.0 gpm nozzle flow rates. The calculated discharge rate for the lawn and garden areas equals 0.11 cfs (50 gpm). The beneficial use rate for 9.5 acres of irrigation at 0.02 cfs/acre is 0.19 cfs. Given that the estimated rate for pasture irrigation is close to the BU rate and the uncertainties of not being able to obtain a source measurement from the buried system, I am proposing this permit be licensed for the BU standard of 0.19 cfs for 9.5 acres of irrigation.

Since the original permit was for irrigation only the irrigation developed will be addressed in this report. The additional beneficial uses of diversion to storage, irrigation storage, recreation storage, and dust abatement will need to be addressed through the application and permit processes.

Changes in Condition from Permit to Licensing. Condition 046 was removed as per department licensing standards. Condition 004 was removed since it is not a concern. Condition 121 was updated to 103 as per department licensing standards. Retained condition 01M. Updated supplemental conditions R65, 065 and 104 with R61, 943, and WB7.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS

1. Recommended Amounts

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Volume</u>
IRRIGATION	03/01 to 11/15	0.19 CFS	42.8 AF

Totals: 0.19 CFS 42.8 AF

2. Recommended Amendments

☐ Change P.D. as reflected above ☒ Add P.D. as reflected above ☐ None

☐ Change P.U. as reflected above ☒ Add P.U. as reflected above ☐ None

I. AUTHENTICATION

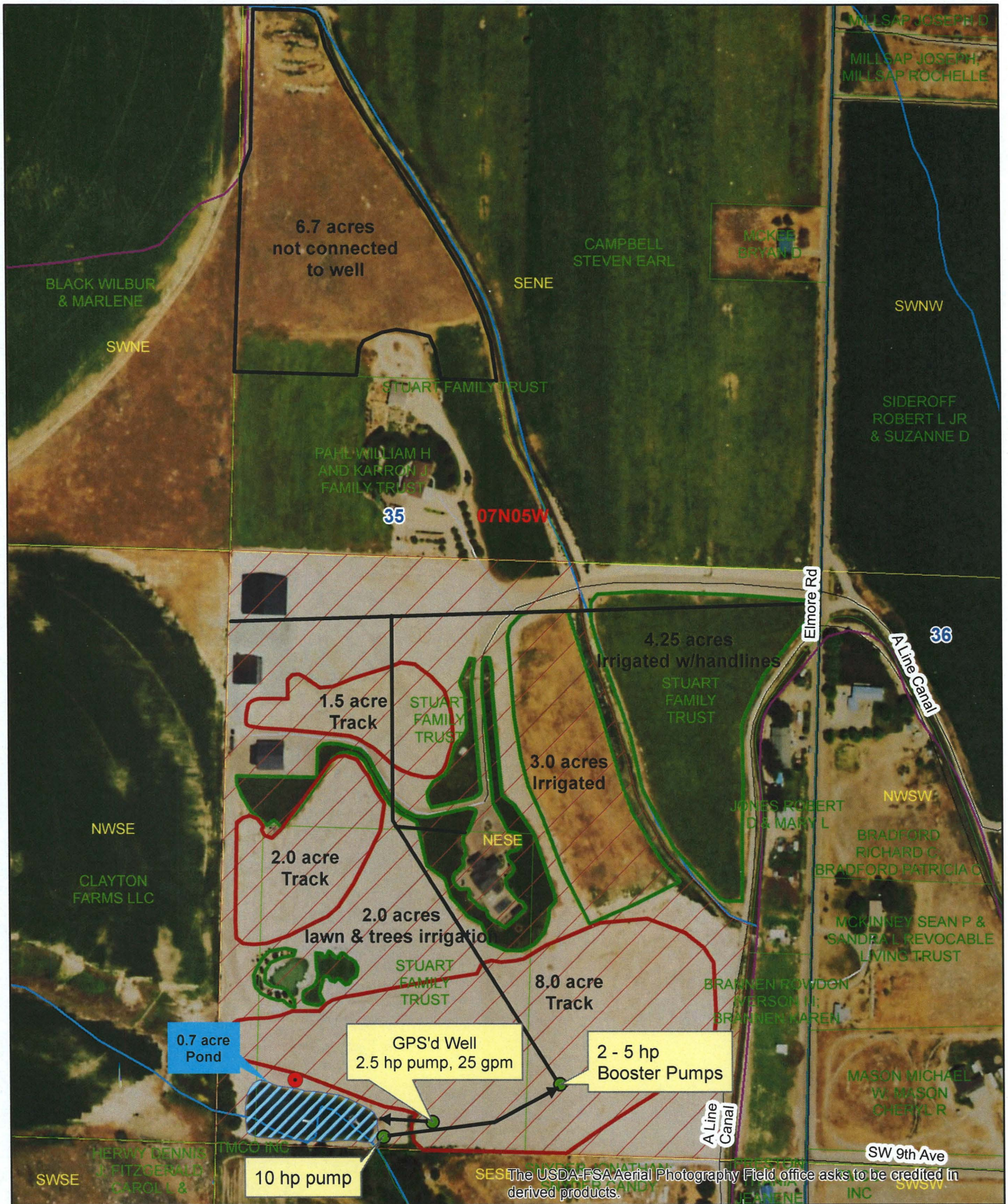
Allen Bradbury - Water Resource Agent, Senior

Field Examiner's Name Allen Bradbury Date 5/3/24

Reviewer [Signature] Date 5/10/2024

63-33505 O'Neil

System Map



- 63-33505_POD
- Pipeline
- Motocross & BMX Tracks
- Irrigation
- Dust Abatement Area

0 0.1 0.2 Miles

1 inch = 300 feet 1 inch = 0.06 miles

The USDA-FSA Aerial Photography Field office asks to be credited in derived products.

5000 PRS Std. Angle Rain Curtain™ Nozzle Performance

Pressure psi	Nozzle	Radius ft.	Flow gpm	Precip In/h	Precip In/h
25	1.5	33	1.12	0.2	0.23
	2.0	35	1.5	0.24	0.27
	2.5	35	1.81	0.28	0.33
	3.0	36	2.26	0.34	0.39
	4.0	36	2.91	0.43	0.49
	5.0	37	3.72	0.52	0.66
	6.0	37	4.25	0.60	0.69
	8.0	33	5.9	1.26	1.5
35	1.5	34	1.35	0.22	0.26
	2.0	36	1.81	0.27	0.31
	2.5	37	2.17	0.31	0.35
	3.0	38	2.71	0.36	0.41
	4.0	40	3.5	0.42	0.49
	5.0	41	4.47	0.51	0.59
	6.0	43	5.23	0.54	0.63
	8.0	41	7.06	0.94	1.1
45	1.5	35	1.54	0.24	0.28
	2.0	37	2.07	0.29	0.34
	2.5	37	2.51	0.35	0.41
	3.0	39	3.09	0.37	0.43
	4.0	42	4.01	0.44	0.51
	5.0	43	5.09	0.48	0.56
	6.0	44	6.01	0.55	0.63
	8.0	44	8.03	0.92	1.06
55 – 75	1.5	35	1.59	0.25	0.29
	2.0	37	2.14	0.3	0.35
	2.5	37	2.6	0.37	0.42
	3.0	39	3.2	0.39	0.44
	4.0	42	4.15	0.45	0.52
	5.0	43	5.27	0.5	0.58
	6.0	44	6.22	0.57	0.65
	8.0	44	8.31	0.72	0.84

5000 PRS Std. Angle Rain Curtain™ Nozzle Performance METRIC

Pressure bar	Nozzle	Radius m	Flow m³/h	Flow l/m	Precip mm/h	Precip mm/h
1.7	1.5	10.1	0.25	4.2	5	6
	2.0	10.7	0.34	5.4	6	7
	2.5	10.7	0.41	6.6	7	8
	3.0	11.0	0.51	8.4	8	10
	4.0	11.3	0.66	10.8	10	12
	5.0	11.9	0.84	13.8	12	14
	6.0	11.9	0.97	16.2	14	16
	8.0	11.0	1.34	22.2	22	26
2.0	1.5	10.2	0.28	4.8	5	6
	2.0	10.8	0.36	6.0	6	7
	2.5	10.9	0.44	7.2	7	9
	3.0	11.2	0.55	9.0	9	10
	4.0	11.6	0.71	12.0	11	12.6
	5.0	12.1	0.91	15.0	13	15
	6.0	12.4	1.05	17.4	15	17
	8.0	11.8	1.45	24.0	32	37
2.5	1.5	10.4	0.31	5.4	6	7
	2.0	11.0	0.41	6.6	7	8
	2.5	11.3	0.50	8.4	8	9
	3.0	11.2	0.62	10.2	9	11
	4.0	12.3	0.81	13.2	11	13
	5.0	12.7	1.03	17.4	13	15
	6.0	13.2	1.21	20.4	14	16
	8.0	13.3	1.63	27.0	24	18
3.0	1.5	10.6	0.34	6.0	6	7
	2.0	11.2	0.45	7.8	7	8
	2.5	11.3	0.56	9.6	9	10
	3.0	12.1	0.69	11.4	9	11
	4.0	12.7	0.89	16.8	11	13
	5.0	13.5	1.13	18.6	12	14
	6.0	13.9	1.34	22.2	14	16
	8.0	14.1	1.79	30.0	23	27
3.5 – 5.2	1.5	10.6	0.35	6.0	6	7
	2.0	11.2	0.47	7.8	8	9
	2.5	11.3	0.58	10.2	9	11
	3.0	12.1	0.71	12.0	10	11
	4.0	12.7	0.92	15.6	12	13
	5.0	13.5	1.17	19.2	13	15
	6.0	13.9	1.39	22.8	14	17
	8.0	14.1	1.85	31.2	18	21

Precipitation rates based on half-circle operation

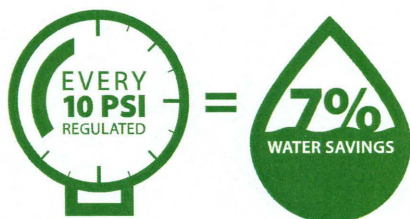
■ Square spacing based on 50% diameter of throw

▲ Triangular spacing based on 50% diameter of throw

Performance data collected in zero wind conditions

Performance data derived from tests that conform with ASABE Standards; ASABE S398.1.

See page 198 for complete ASABE Test Certification Statement.



623
Form 238-7
6/07

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

863152

1. WELL TAG NO. D 0060358

Drilling Permit No. 914518-863152
Water right or injection well # 63-33505

2. OWNER

Name Kevin O'Neil
Address 3705 Elmore
City Parma State ID Zip 83660

3. WELL LOCATION:

Twp. 7 North ☒ or South ☐ Rge. 5 East ☐ or West ☒
Sec. 35 1/4 NE 1/4 SE 1/4
10 acres 40 acres 160 acres

Gov't Lot County Payette
Lat. 43° 53.907' (Deg. and Decimal minutes)
Long. 116° 53.835' (Deg. and Decimal minutes)
Address of Well Site 3705 Elmore Rd
City Parma

(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 check all that apply (Replacement etc.)

☒ 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
grt.cem/bent	7'	228'	120 cu/ft	pump/tremie
bent chips	0'	7'	350 lbs	poured

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing	Liner	Threaded	Welded
6"	+3'	23'	.280	steel	☒	☐	☐	☒
6"	23'	243'	SDR-17	PVC	☒	☐	☒	☐

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

9. PERFORATIONS/SCREENS:

Perforations ☐ Y ☒ N Method
Manufactured screen ☒ Y ☐ N Type slotted PVC
Method of installation set in w/casing screen

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
243'	303'	.020		6"	PVC	SDR-17

Length of Headpipe Length of Tailpipe

Packer ☐ Y ☒ N Type

10. FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft³)	Placement method
10-20 sand	228'	310'	3950 lbs	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) N/A Static water level (ft) 73'
Water temp. (°F) 70 Bottom hole temp. (°F) 70

Describe access port

Well test:

Test method:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)	Pump	Bailer	Air	Flowing artesian
44	150	240	☒	☐	☐	☐

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'	2'	top soil		X
12"	2'	31'	gravel		X
12"	31'	48'	brown clay		X
12"	48'	55'	coarse sand		X
12"	55'	56'	brown clay		X
12"	56'	58'	coarse sand		X
12"	58'	62'	brown clay		X
12"	62'	70'	coarse & fine sand		X
12"	70'	91'	sand with clay strips		X
12"	91'	94'	gravel		X
12"	94'	105'	fine sand with clay strips		X
12"	105'	128'	fine & coarse sand	X	
12"	128'	167'	tan clay		X
12"	167'	194'	blue clay		X
12"	194'	205'	brown clay		X
12"	205'	215'	brown clay with sand strips	X	
12"	215'	222'	blue clay		X
12"	222'	235'	brown clay		X
12"	235'	250'	brown clay with cracks		X
12"	250'	296'	brown clay with sand strips	X	
12"	296'	310'	blue clay		X

RECEIVED

APR 26 2012

WATER RESOURCES
WESTERN REGION

Completed Depth (Measurable)

306

Date: Started 4-04-12

Completed 4-13-12

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 Down Right Drilling & Pump, Inc Co. No. 637

*Principal Driller Date

*Driller Date

*Operator II Date 4-23-12

Operator I Date

* Signature of Principal Driller and rig operator are required.



Figure 1. Well head located at 43°53.911'N, 116°53.833'W is the point of diversion. The water right holder asserted that the pump is a 2.5 hp Goulds pumping 25 gpm.



Figure 2. Well #D0060358 is a 6" well drilled for irrigation purposes on 4/13/2012. The well is 310 feet deep with the pump set at 210 feet.

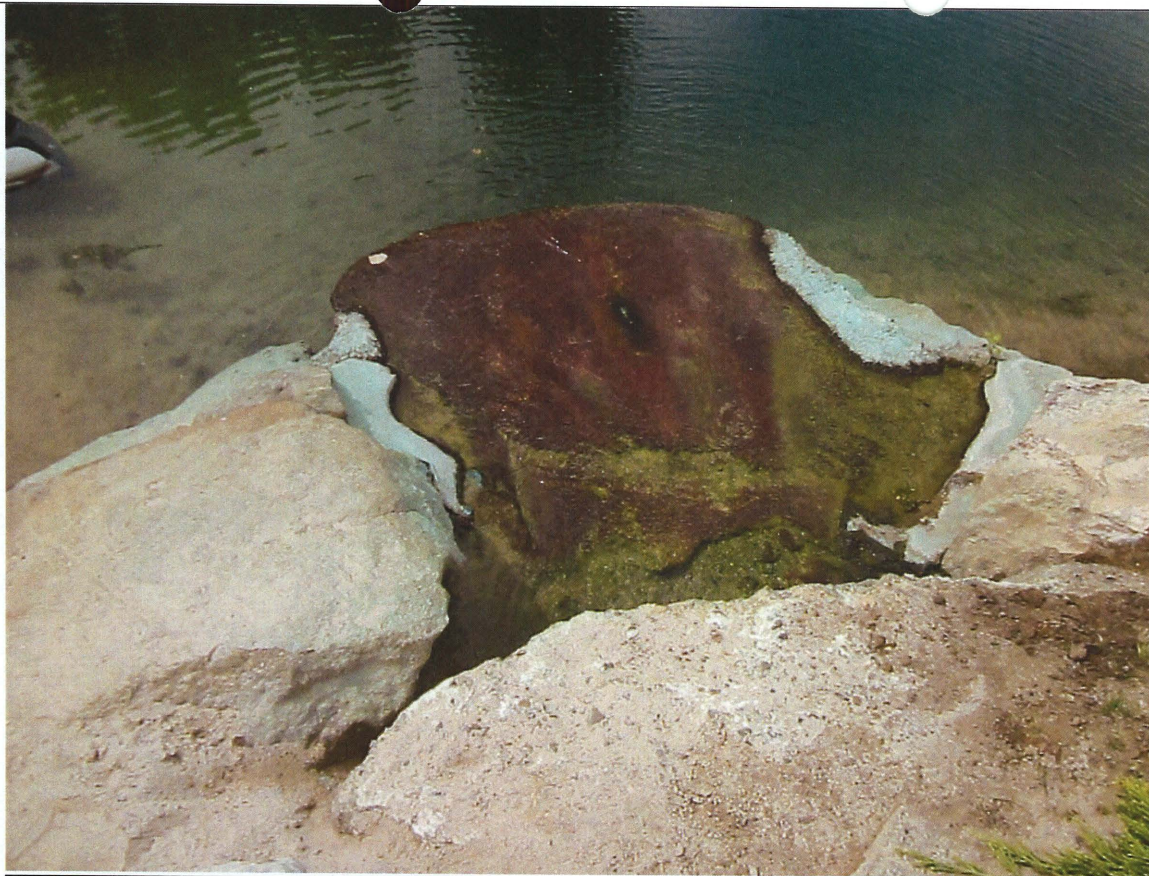


Figure 3. Open discharge from well into pond.



Figure 4. The 0.7 acre storage pond is used for recreation and irrigation.



Figure 5. Pump shelter next to pond with 2" pipe exiting box.

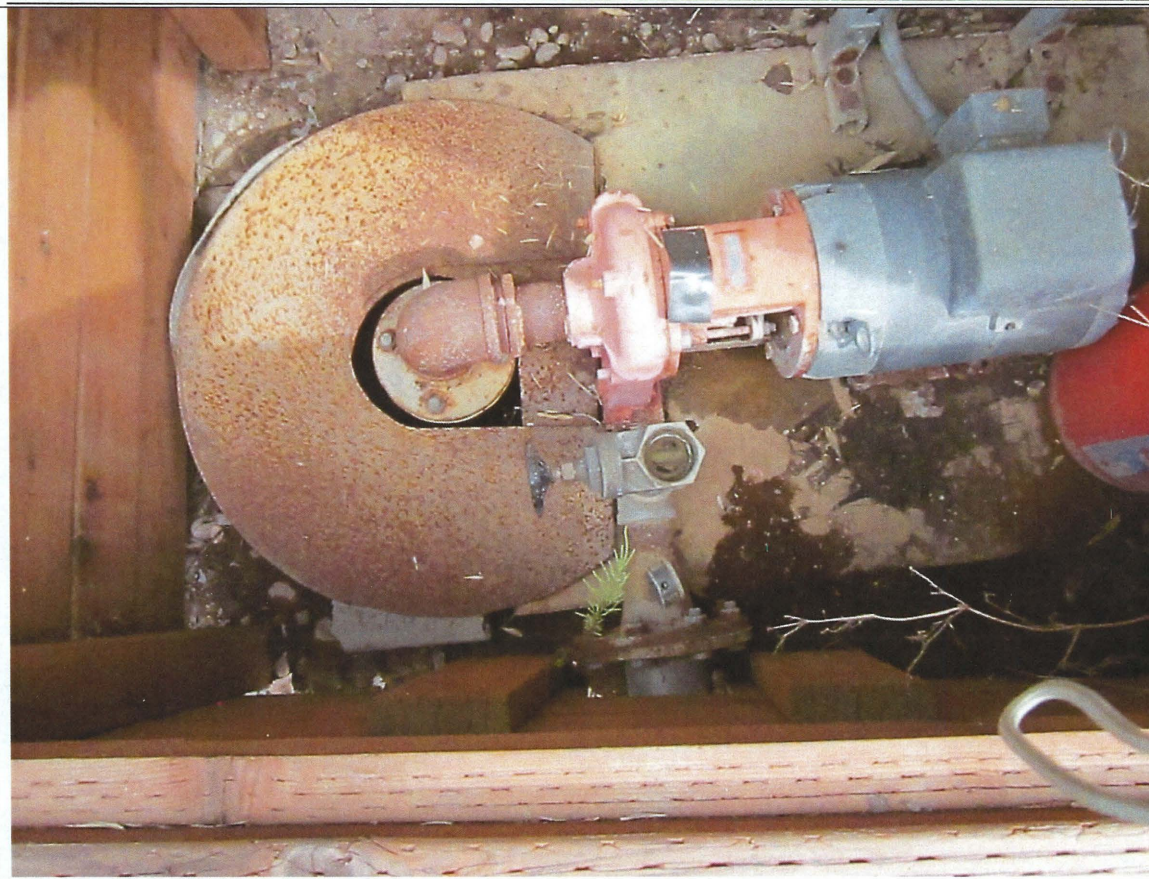


Figure 6. Baldor-Reliance 10 hp pump from pond.



Figure 7. Two Baldor-Reliance 5 hp booster pumps distribute water to system.



Figure 8. Baldor-Reliance 5 hp booster pump.



Figure 9. Golf tee box to artificial green.



Figure 10. There are 68 fixed sprinkler sets mounted on vertical stand pipes with a 5 gpm discharge that are use for dust abatement on motocross tracks and a BMX track.



Figure 11.
Approximately
1.95 acres of lawn
irrigated with 4
zones with 25
sprinklers per
zone.



Figure 12.
Rainbird 5000 pop
up sprinklers with
blue— nozzles.



Figure 13. 3.0 acres of irrigated field in front of house on west side of canal.



Figure 14. 4.25-acre irrigated pasture on east side of canal.