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JUL 05 2013

DEPARTMENT OF
WATER RESOURCESSTATE 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.

**Please direct inquiries to Ed Squires at 342-8369.*

A. GENERAL INFORMATIONPermit No. 63-316061. Owner: Castle Rock Development, Inc. Phone No. (208) 608-0040Current Address: 1017 S Arbor Island Way, Eagle, Idaho 836162. Examiners' names: Carlton Parker and Ed Squires EXAM DATE: May 24, 20133. Accompanied by: _____ Email ed@hydrologicinc.netAddress: 1002 West Franklin Street, Boise, Idaho 83702-5431Relationship to Permit Holder: Hydro Logic Inc. - consultant Phone No. 342-83694. Source: Ground water tributary to N/A**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: Applicant owns 42 shares of Middleton Mill Ditch Company water rights which will be used for irrigation purposes for subdivision lots and common areas. 63-338711, 63-31812, 63-31813, 63-31814, 63-31974, and 63-31975 (all Castle Rock Development, Inc. water rights appurtenant to the property that will be used for maintenance of the 6 small storage ponds.

2. Other water rights with the same point of diversion: none**C. DIVERSION AND DELIVERY SYSTEM****1. Point(s) of Diversion:**

Ident. No.	Govt Lot	¼	¼	¼	Sec	Twp.	Rge.	County	Method of Determination/Remarks
Rivervine Well #1		SE	NW	NE	15	4N	1W	Ada	Site visit, USGS 7½ -minute Topographic Series maps and GPS Lat: N 43° 41' 19.05" Long: W 116° 26' 19.79" IDWR Well Tag: D0031203

2. Place(s) of Use: Rivervine Subdivisions Nos. 1 & 2 Indicate Method of Determination Site Visit, USGS 7½ -min topographic map

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	1W	15		D	D											D			
																Govt Lot 2			

See attached map and aerial photographs
Figures 1-2 and Appendix D.

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size / ditch size / pipe I.D. as applicable. Use space provided or ☒ see attached.

See attached
annotated
photographs

Scale: 1" =

- ☒ Copy of USGS Quadrangle Attached showing location(s) of point(s) of diversion and place(s) of use (Figure 1).
- ☒ Aerial Photo Attached (Figure 2).
- ☒ Photos of Diversion and System Attached (Figures 3-4).

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Rivervine Well #1	unavailable	7.5	unavailable	Goulds Pumps	5 CLC 4-stage 3.3125" trim
See Well Driller's Report on back of Figure 8.					

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calibration Date
Installed Flow-Meter	Propeller	Water Specialties	VF-29	20042736	4-inch	Dec. 2, 2004
Original testing	using a	4-inch	McPropeller flow-	meter to	nearby	pond

- 2. Measurements** The discharge measurements for this examination are comprised of observations and measurements taken on several different occasions. In addition to the permanently installed propeller flow meter listed above (Figures 3 and 4), we also use discharge measurements from a temporary 4-inch “McPropeller” flow meter installed for a six-hour hydraulic test of the well to the nearby pond (Figure 5). All water-level measurements were taken with calibrated (with steel tape) “Powers®” electric sounders. On Rivervine Supply Well #1, the installed “Water Specialties” brand flow-meter (Figure 3) meets manufacturer’s specifications (Appendix A) with respect to minimum straight pipe lengths

upstream of the flow-meter but the the minimum length of straight pipe required in the downstream direction does not meet the installation requirements of the manufacturer (Appendix A) because 2 pipe diameters of straight-run pipe (8-inches) are not available because a check valve is flange-connected immediately to the flow-meter (Figure 4). The minimum length of straight pipe required in the upstream direction is 5 pipe diameters (20-inches in this case). Rivervine Supply Well #1 has ~48-inches of straight pipe present in the upstream direction (assuming straight pipe to frost line depth) and 0-inches of straight pipe present in the downstream direction (Figure 4). Based on our comparisons of the pump-performance curve (Figure 6) with our previous on-site pumping water level measurements, we believe that the existing high-quality flow-meter and installation is providing sufficiently accurate discharge readings for all purposes including this licensing examination.

E. NARRATIVE/REMARKS/COMMENTS

The May 24, 2013 field examination for this permit was carried out by Ed Squires and Carlton Parker (hydrogeologists with Hydro Logic, Inc.). The additional pumping tests cited by this examination were also carried out by Hydro Logic, Inc. hydrogeologists including Ed Squires and his staff. Rivervine Supply Well #1 is housed inside of a 13-foot by 10-foot wood-framed and sided pump control house (Figure 7). The 10-inch diameter well (Figure 8) is equipped with a Goulds Pumps 4-stage, Model 5CLC pump set on 40-feet of 2-inch pump column. The design point of the pump is 100 gallons per minute (gpm) at 145-feet of total dynamic head (Figure 6). The pump is driven by a 7.5 hp, 230 volt, 3600 rpm submersible electrical motor. The 4-inch diameter well head discharge-piping is comprised of a series of 4-inch plumbing fittings and fixtures, including check-valve, tees, couplings, flow-meter, and control valve (Figure 9) prior to exiting through the pump-house floor where it joins with the distribution system mainline for Rivervine subdivisions. The pumping plant is equipped with a variable speed drive unit (Figure 9) designed to operate the pump directly to the pressurized water distribution system. The well pump is set to operate within a predetermined pressure range in the distribution system that varies with demand; typically 60-to-90 psi. Of course the well produces somewhat more water against less system pressure compared to when system pressure is higher.

When we arrived on-site, the Well #1 pump was not operating and the line pressure was 62 psi (Figure 4). Non-pumping water level in the well was measured at 1.85 feet below measuring point (bmp) which is 3.25 feet above ground level (Figure 11); very similar to the non-pumping water level we measured seven years earlier (Figure 11 and 12, Tables 1 and 2, and Calculations section of this report). The totalizing read-out of the flow-meter on our arrival was 355,400 gallons (Figure 3). Because the well owner could not be present for the licensing examination, and because the Rivervine subdivision does not have a back-up well source, we were hesitant to pump the 9-year-old pumping plant at high volume for fear of a malfunction that could leave the subdivision without a source of domestic water. Instead, we relied upon the pump performance curve of the installed pump and two previous hydraulic tests of the Rivervine Well #1 by Hydro Logic, Inc.

Hydro Logic Inc. conducted a six-hour, constant-rate hydraulic test of the Well #1 at 350 gpm on May 19th, 2004 using a temporary test pump (Figure 12). The previous day, Hydro Logic, Inc. had conducted a stepped-rate discharge test of the well at four different discharge rates (Figure 11). Two years later, on March 7th, 2006, Loren Pearson with Hydro Logic, Inc. observed the installed permanent pump performance by pumping the well at 100 gpm (Figure 13). Discharge to the 4-inch diameter flushing line extending to a nearby irrigation/aesthetic amenity pond was valved-back to 100 gpm as measured by the permanently installed Water Specialties flow-meter listed above.

According to our measurements, the pump performance curve (Figure 6), installed HP, and available discharge piping, it appears that Well #1 is capable of instantaneous discharge rates up to 144 gpm (0.32 cfs) pumping against reasonable summertime system pressures in the range of 40 psi and above (see calculations section), but is capable of producing up to 162 gpm at 24 psi line pressure (fire-flow minimum pressure). Therefore, the installed capacity (pumping plant) and the well itself are both more than capable of the instantaneous discharge rate requested in this report. The supply well, underground discharge (pit-less unit), and well head plumbing in the nearby pump control house are all completed and operational. Six homes have been constructed within the subdivision and the water distribution system is installed beneath the paved streets including stub-outs to four remaining undeveloped, but stubbed-in, lots (Appendix B). Electrical power has also been extended to all lots. The water system is pressurized. Other useful details on the water system are included in Appendix C.

We found six constructed homes with operational water services and 4 vacant lots that were stubbed in with water and power services making a total of 10 water services that may be included in the submittal of proof of beneficial use. This is eight less than the originally applied-for 18 homes of the water right application. Using the Department's Administrative Memo #22 - "Maximum Instantaneous Water Requirements for Domestic Use chart, 10 homes may appropriate 0.15 cfs for domestic in-home use. To this discharge rate, I added an additional 0.01 cfs for each home for supplemental irrigation equaling 0.10 cfs for that purpose. Therefore, the total recommended diversion rate is 0.25 cfs, down 0.11 cfs from the original applied for amount of 0.36 cfs.

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?

All conditions except Condition No. 1 of the Permit No. 63-33606 (Appendix D) have been met. Condition No. 1 states "Proof of application of water to beneficial use shall be submitted on or before May 1, 2013." Because proof was not submitted on time, the Department issued a lapse notice. This proof of beneficial use licensing exam is submitted within 60 days of the lapse notice and we recommend that the Department reinstate the permit for processing into a license. We understand that the water right can be reinstated but that the priority date will be advanced commensurate to the number of days past the proof due date before proof was submitted. In this case, we are 65 days past the proof due date so the priority date should be advanced to July 6, 2002.

F. FLOW CALCULATIONS

☒ Additional Computation Sheets Attached

Measured Method:

See Appendix C

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \text{up to 5 acres} \times 0.02 \text{ cfs/acre} = 0.10 \text{ cfs for supplemental irrigation.}$

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

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

2. Volume Calculations for Other Uses:

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
10 home in-house domestic	Jan. 1	Dec. 31	0.15	
Supplemental Irrigation	Mar. 15	Nov. 15	0.10	
Totals:			0.25 cfs	

2. Recommended Amendments

- 1) The priority date should be advanced by 65 days to July 6, 2002.
- 2) Include only the point of diversion in the NW ¼, NE ¼, Section 15, T4N, R1W and delete the other two PODs.
- 3) Delete Conditions #3 and #4.
- 4) Change Condition #10 to "Point of Diversion is located within Lot 18, Block 1, Rivervine Subdivision No. 2.
- 5) Change Condition #11 to "Place of use is within Block 1, Lots 3, 6, 7, 10, 13, and 16, and Block 2, Lots 19, 20, 21, and 22."
- 6) Change Condition #13 to "Domestic use is for 10 homes."

- ☒ 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 ☒ Other see above



I. AUTHENTICATION

Field Examiner's Name Edward Squires CWRE No. 125 and Carlton Parker CWRE No. 150 Date July 5, 2013

SEAL

Reviewer _____ Date _____

FIGURES

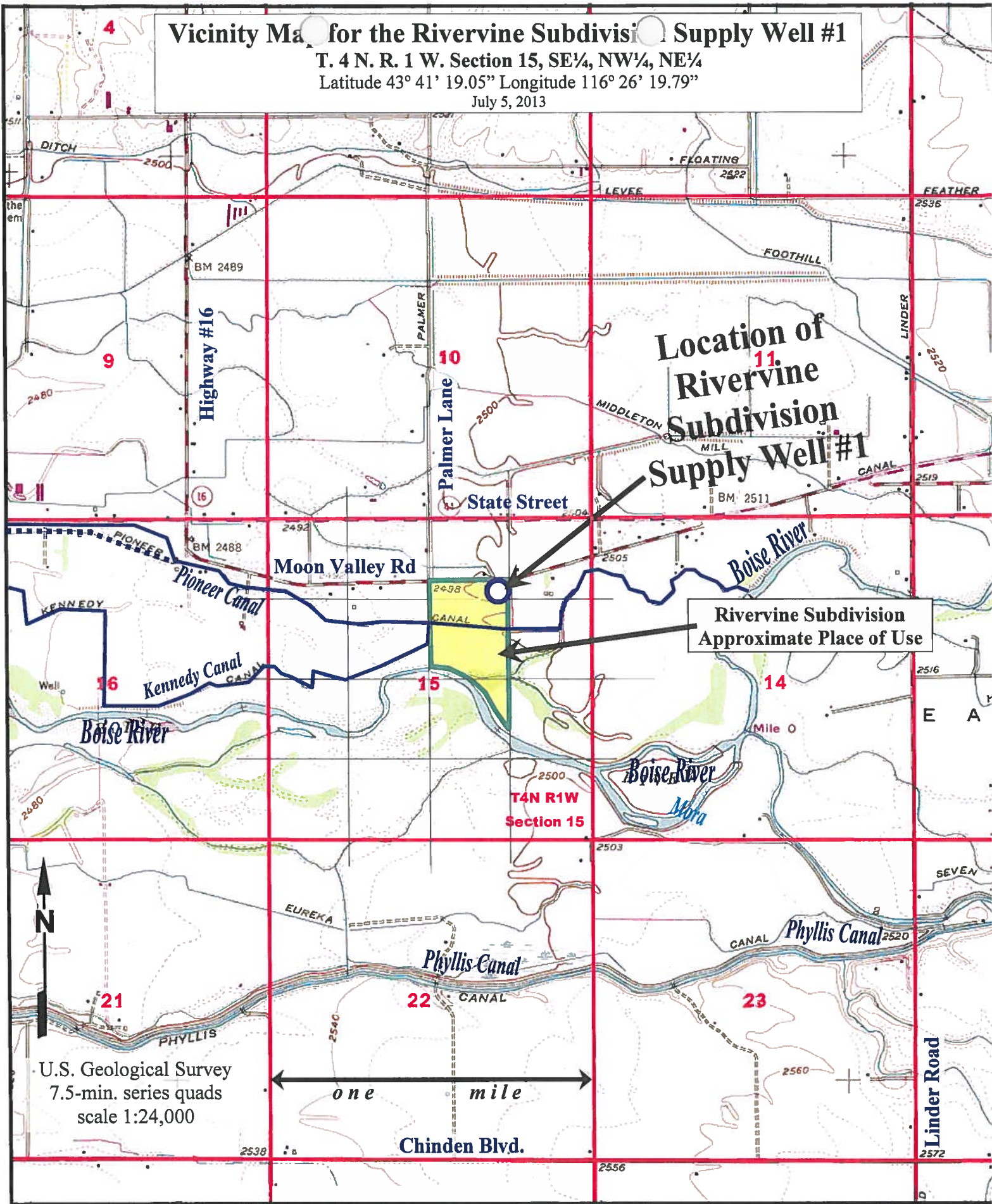
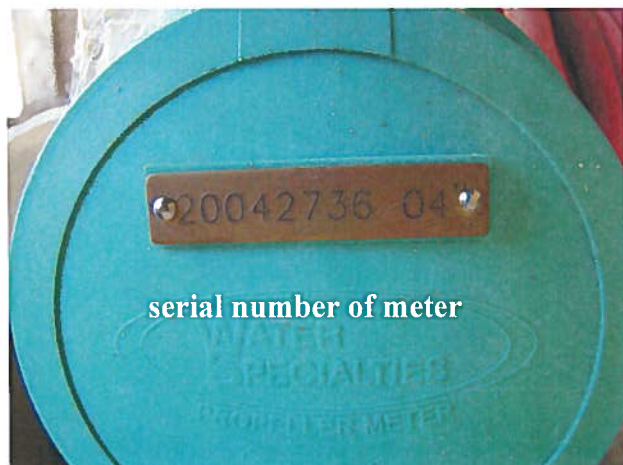
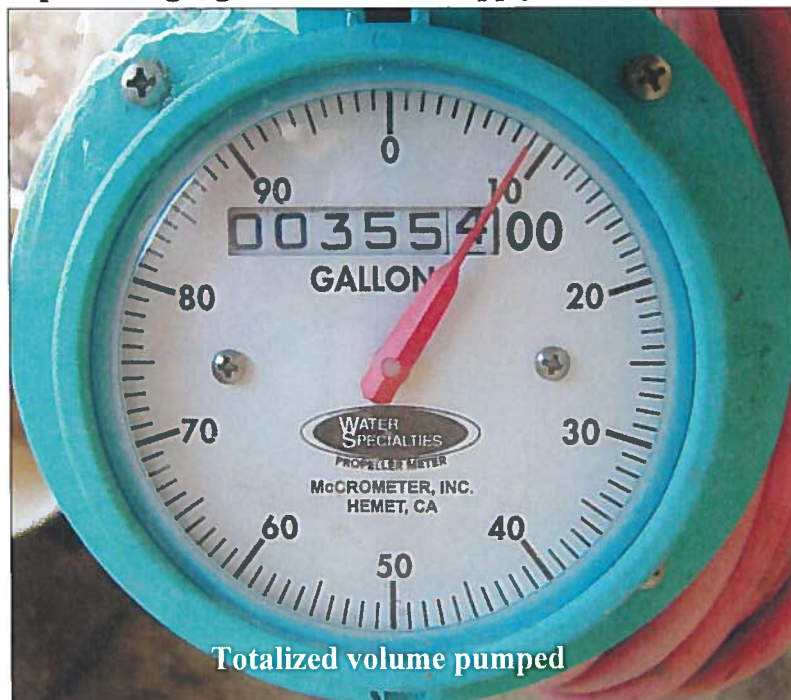


Figure 1.



Figure 2. Annotated aerial photograph of the Rivervine Subdivision with well location and showing the approximate locations of the field located water service stub-outs for the 4 undeveloped lots and the 6 constructed lots. Map from Google Earth, image date: 10-5-2012.

Figure 3. Photos of the 4-inch flow meter and line-pressure gauge for Rivervine Supply Well #1



WATER SPECIALTIES CORPORATION

Flow meter model

ACCURACY TEST

This meter has been wet flow calibrated in an NIST traceable flow lab per manufacturer's specification for the listed size and model number. The final reading on the totalizer is the result of this final form testing.

4 " MODEL VF-29

Calibrated For 4.000

Serial No. 20042736

TOTALIZER READING:

5730

DATE: 12/2/04 BY: [Signature]

FORM 507-1299

Figure 3. May 24, 2013 photographs of the 4-inch Water Specialties flow meter and Campbell line pressure gauge in the Rivervine Supply Well #1 discharge piping.

Figure 4. Photos of the Flow Meter for Rivervine Supply Well #1

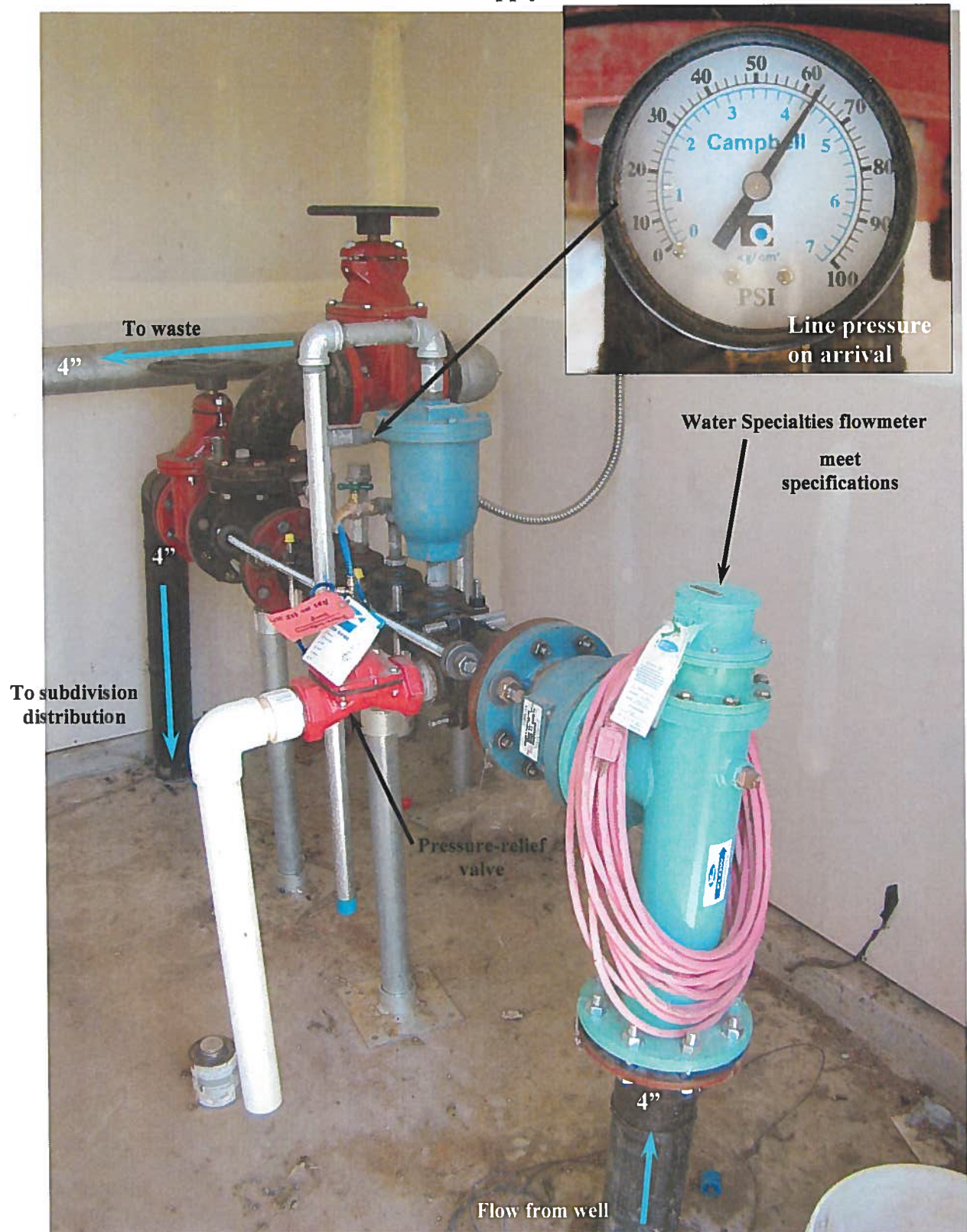
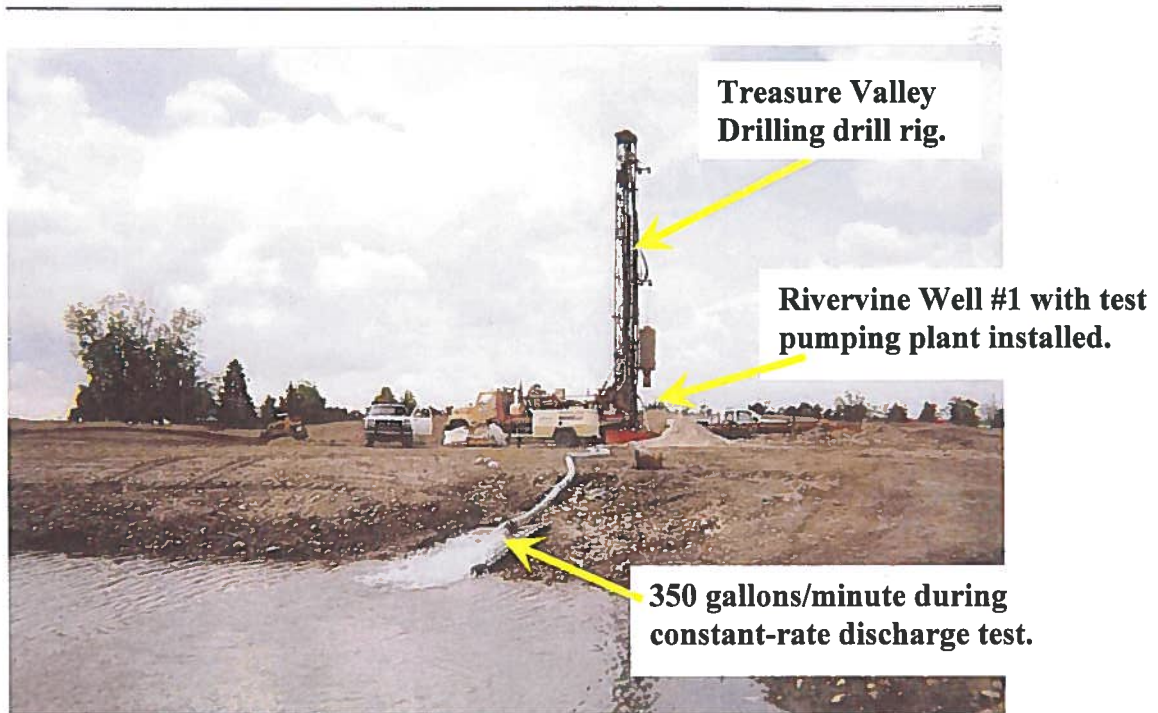
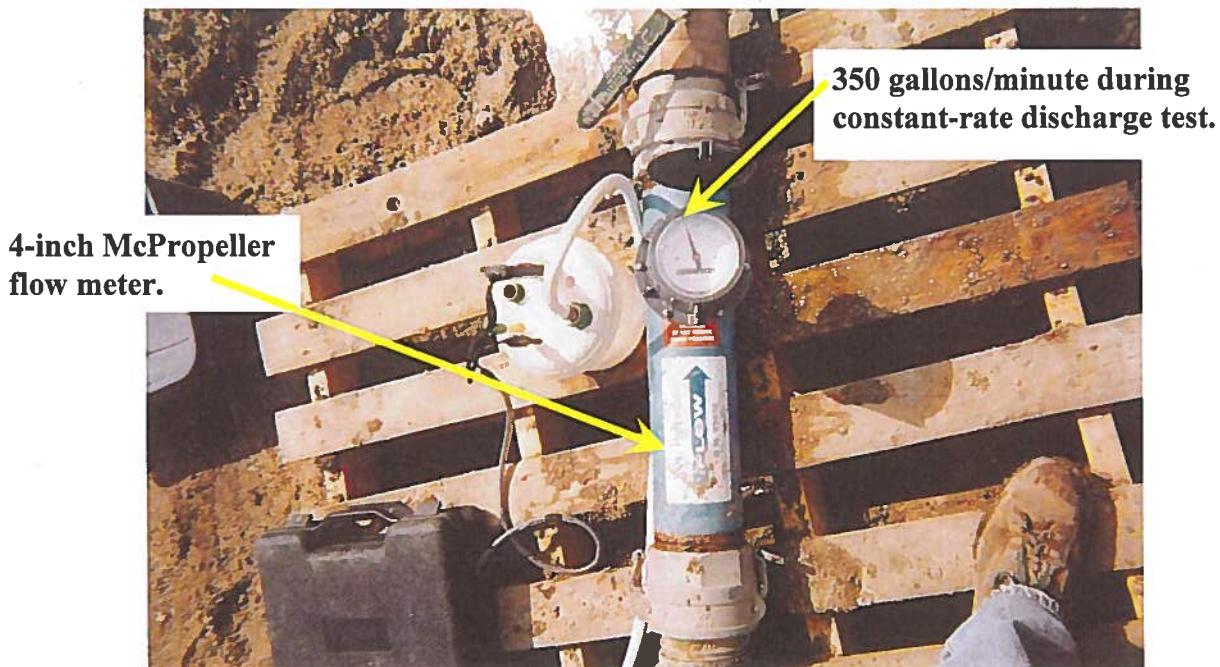


Photo of Water Specialties flow-meter as installed in well head plumbing in the Rivervine Supply Well #1 pumphouse and the line pressure in the system upon arrival.

Figure 5. Photos of original Rivervine Supply Well #1 pump testing by Treasure Valley Drilling.



a) May 19, 2004 photograph looking north at Well #1 pump test.



b) May 19, 2004 photo of 4" McPropeller flow meter used to measure flow during testing.

Figure 6. Pumping Plant Performance Curve for Rivervine Supply Well #1

Feb 24 06 08:05p

Jack Young -- TVP

(208)495-2151

P. 3

Treasure Valley Pump
RE: Rivervine Sub.

PUMP DATA SHEET
Submersible

10/20/04

Selection list: --

Search Criteria:

Flow: 100 US gpm
Head: 136 ft
Tolerance: -- % of head

Fluid: Water

Temperature: 60 °F
SG: 1
Viscosity: 1.105 cP
Vapor pressure: 0.2563 psi a
Atm pressure: 14.7 psi a

NPSHa: -- ft

Advanced Criteria:

Preferred Operating Area: --
Secondary Operating Point: --
Max temperature: -- °F
Max suction pressure: -- psi g
Max sphere size: -- in
Max power: -- bhp
Max suction specific speed: -- (Nss)
Min trim: -- % of max diameter
Min head rise: -- % to shutoff

Curve Corrections: none

Catalog: Goulds Sub 60Hz vers 2.03

Pump: 5CLC (4 stages)

Type: Submersible

Synch speed: 3600 rpm

Speed: 3450 rpm

Dia: 3.3125 in

Curve no.: E6205CFPC2

Specific Speeds

Ns: 2140

Nss: --

Dimensions:

Suction: -- in

Discharge: -- in

Vertical Turbine:

Bowl size: 5.13 in

Max lateral: 0.25 in

Thrust K factor: 1.2 lb/ft

Pump Limits:

Temperature: 120 °F

Pressure: 480 psi g

Sphere size: 0.22 in

Power: -- bhp

Motor: 7.5 hp

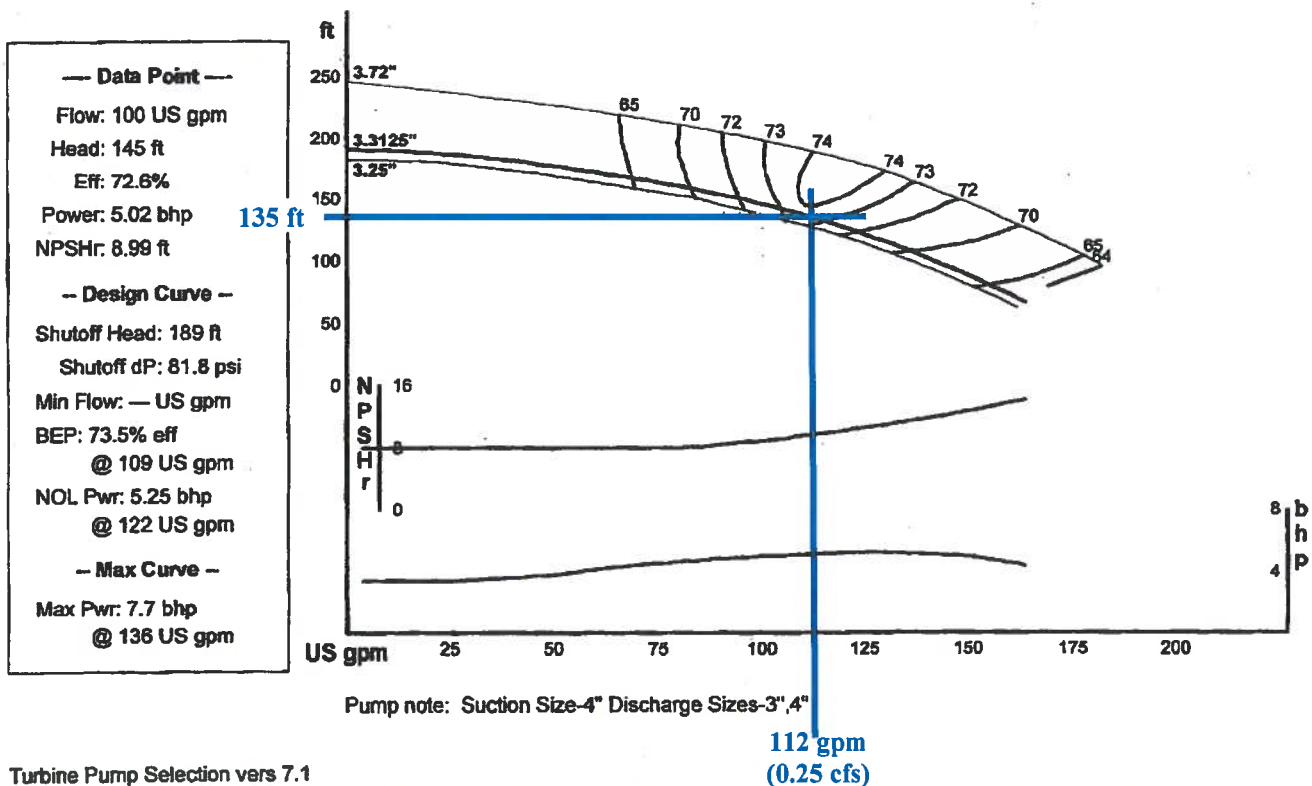
Speed: 3600

Frame: "6"

Standard: NEMA

Enclosure: SUB

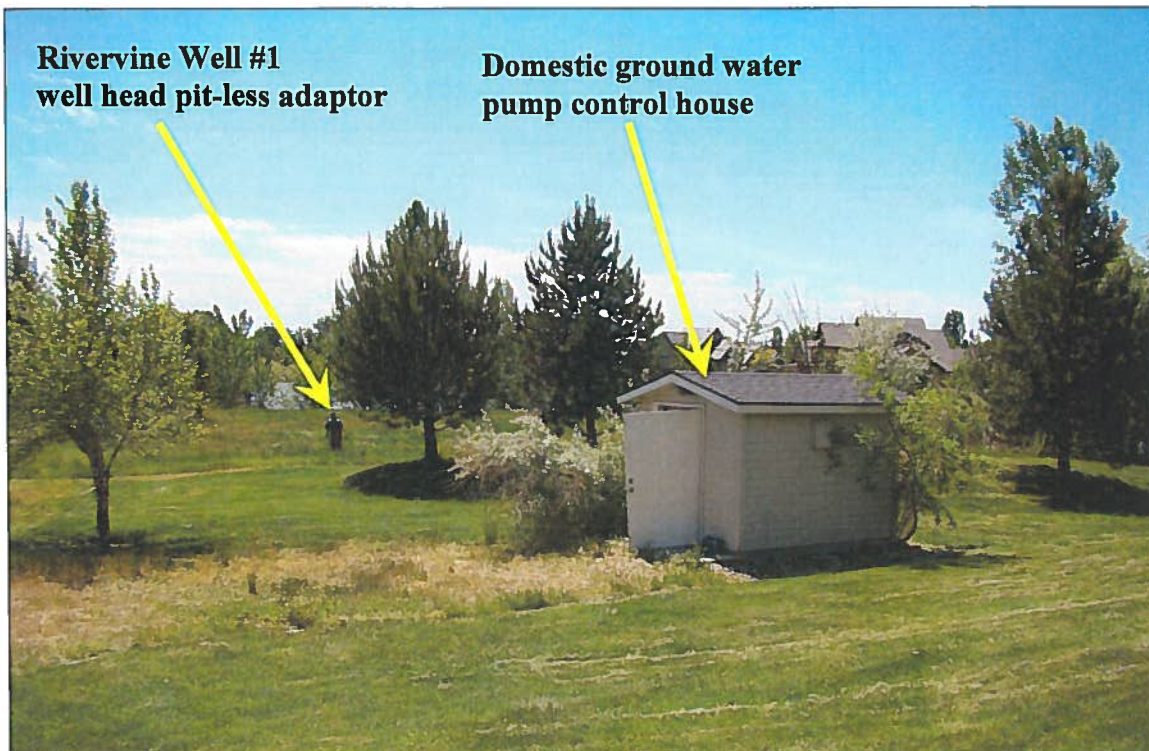
Sizing criteria: Max Power on Design Curve



Turbine Pump Selection vers 7.1

Figure 7. Original design-point pump performance curve for the Rivervine submersible pumping plant is shown with the performance of the pump at 112 gpm (0.25 cfs) plotted at 135 ft of head (blue lines).

Figure 7. Photos of Rivervine Subdivision Supply Well #1 pump control house.



a) May 24, 2013 photograph looking southwest at Well #1 pump house.



b) Photo looks northeast at Well #1 pump house.

As-Built Well Construction

(horizontal scale 0.2"=1" and vertical scale 1"=20")
all measurements to ground level

Rivervine Well #1

T. 4 N. R. 1 W. Section 15, SE¼, NW¼, NE¼
Latitude 43° 41' 19.05" Longitude 116° 26' 19.79"
Well Completed May 2004

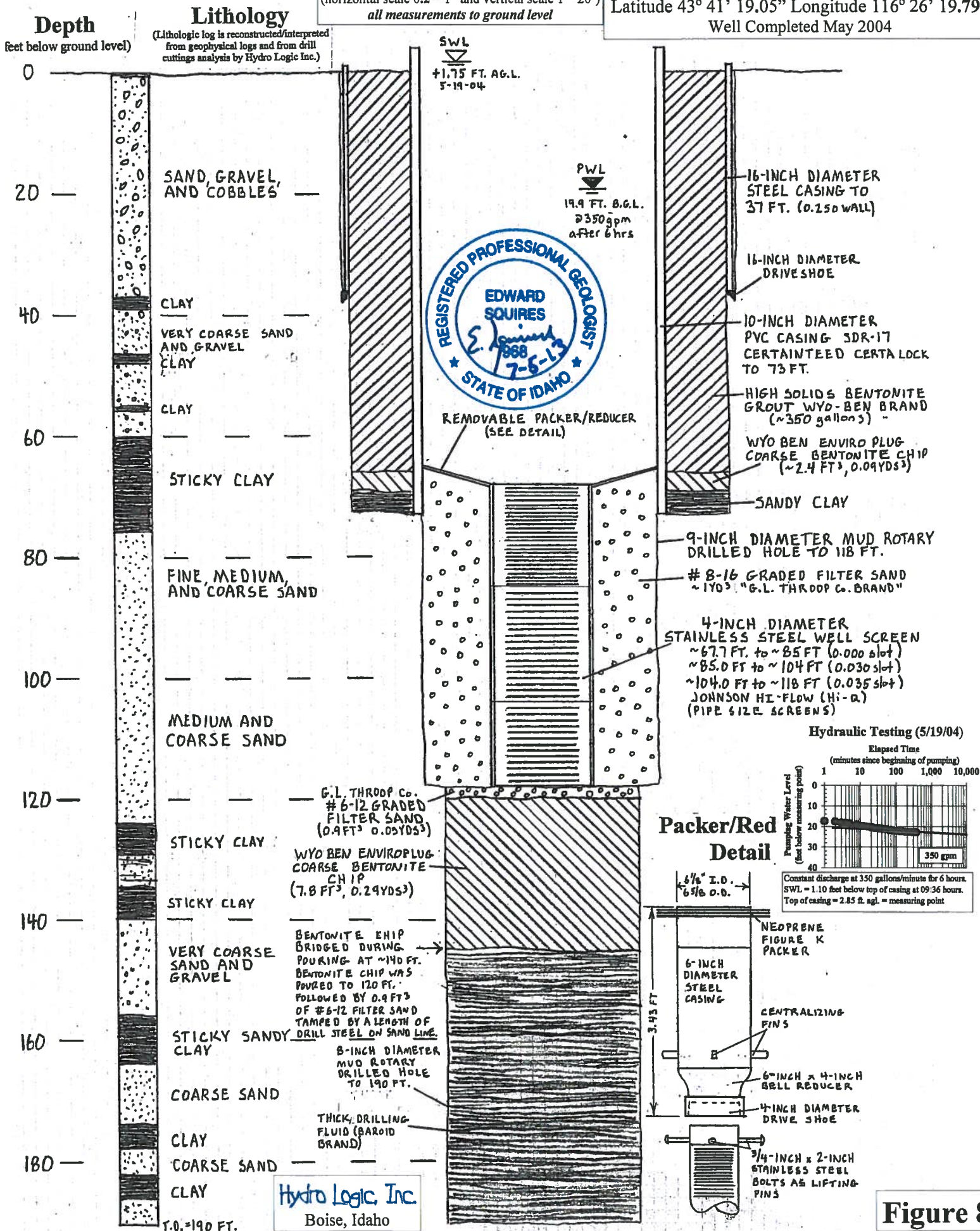


Figure 8.

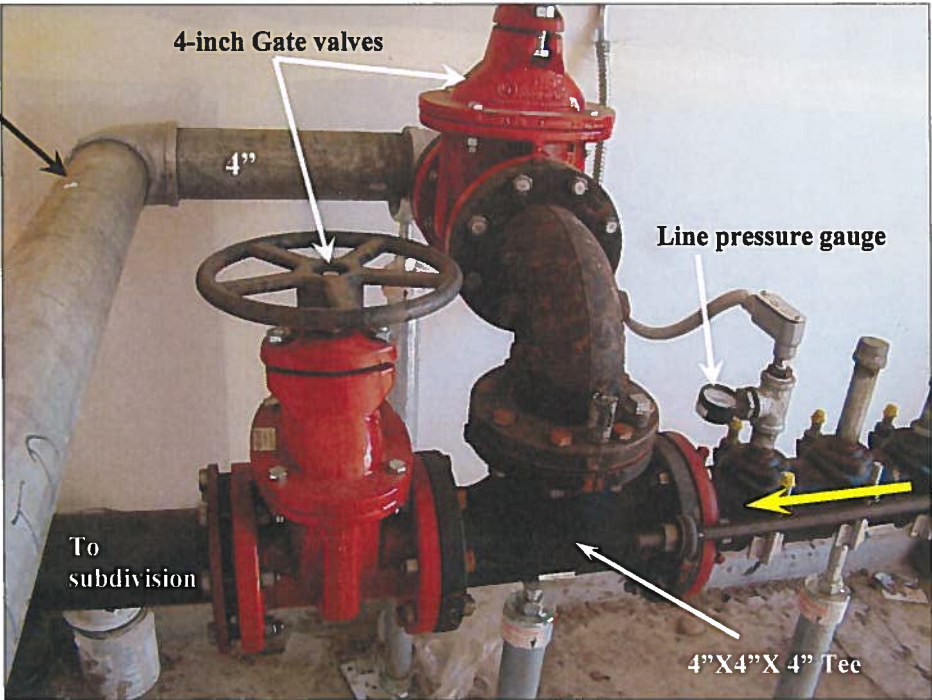
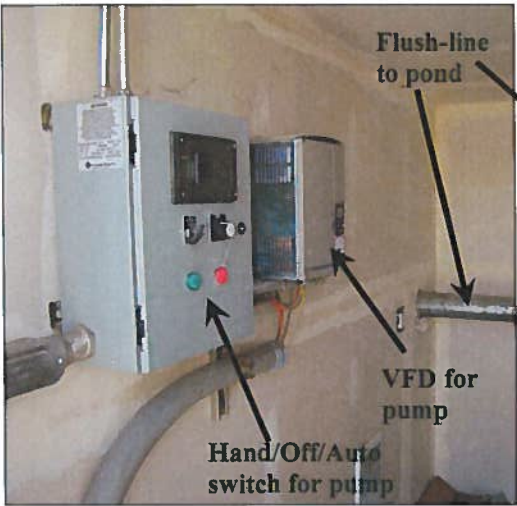
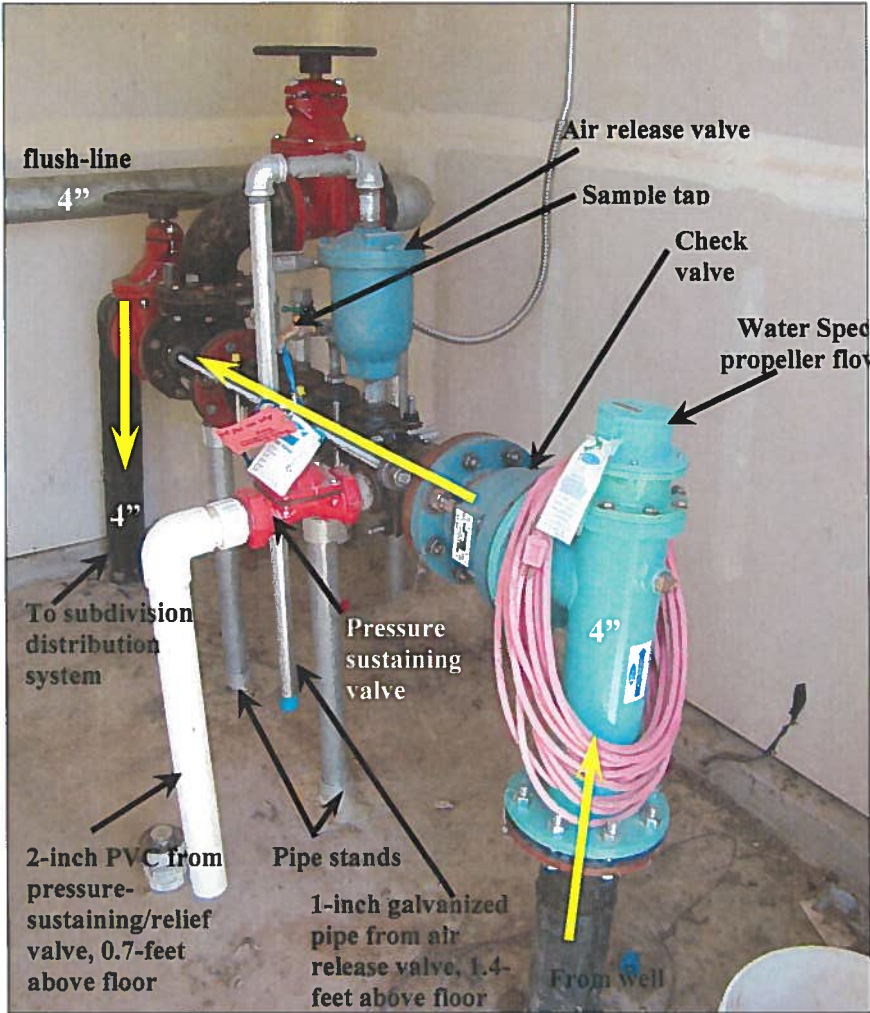
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WELL DRILLER'S REPORT

Long: : :

FORWARD WHITE COPY TO WATER RESOURCES

Figure 9. Photographs of the discharge piping for Rivervine subdivision supply Well #1



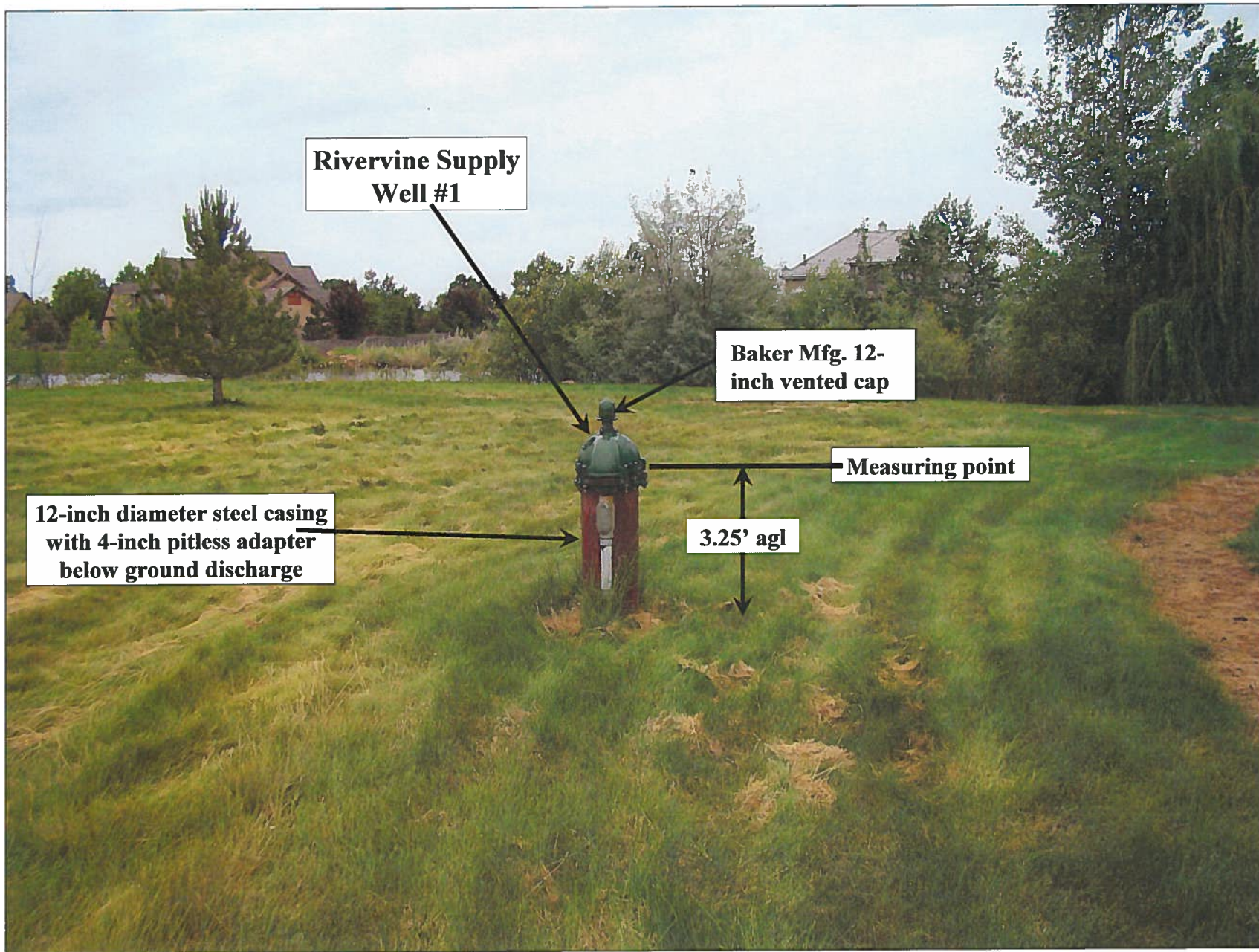


Figure 10. 12-inch well head casing of the Rivervine Well #1 during water level measurements. The well casing has a 4-inch pitless adapter below ground discharge.

Rivervine Subdivision Supply Well #1

Stepped-Rate Discharge Test - 100, 200, 300, and 400 gallons / minute
May 18, 2004

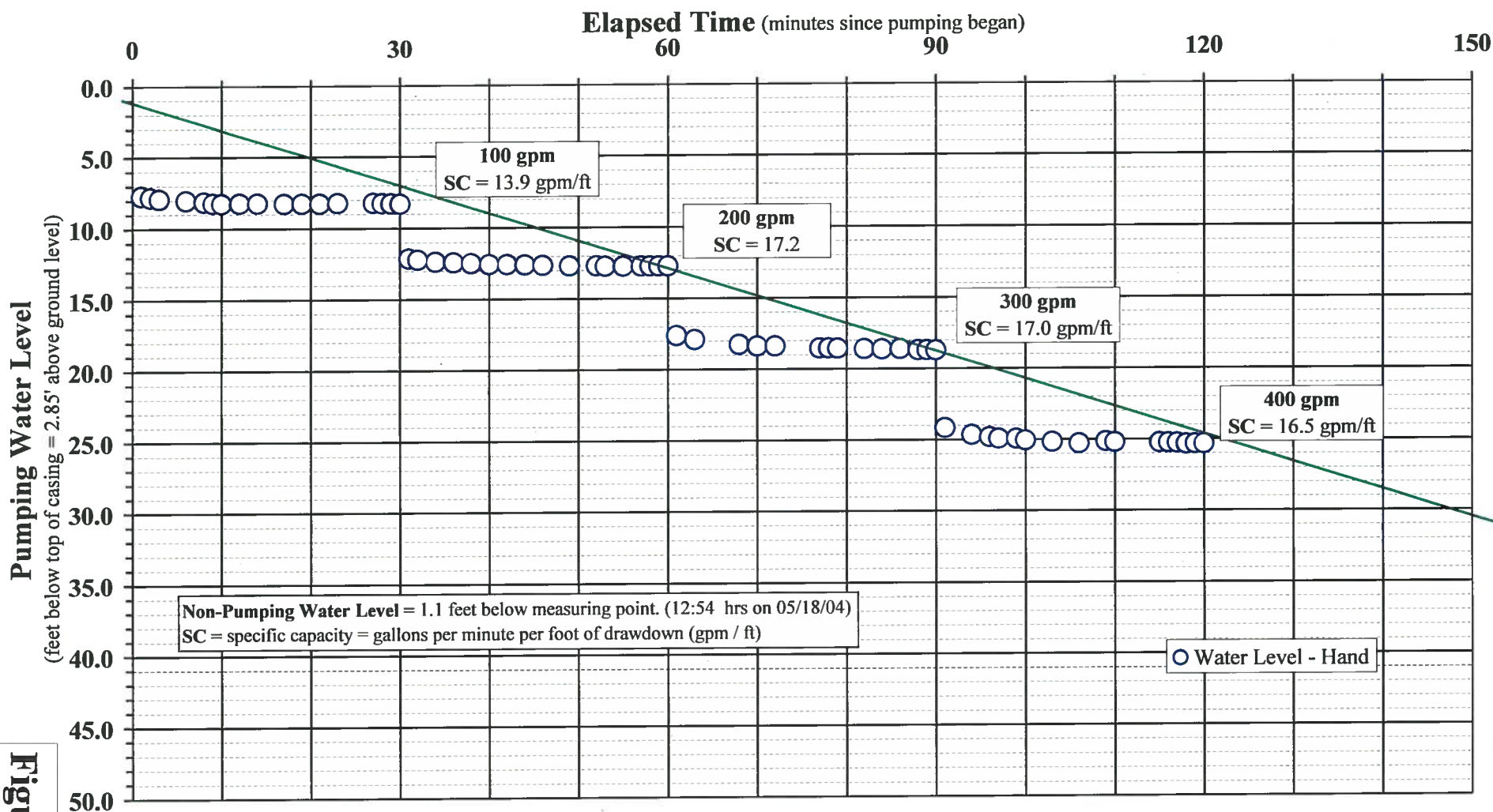


Figure 11. Specific capacities of stepped-discharge test at 100, 200, 300, and 400 gallons / minute of the Rivervine Supply Well #1 from original test conducted on 5/18/2004.

Rivervine Subdivision Supply Well #1

Constant-Rate Discharge Test - 350 Gallons / Minute for Six-Hours

May 19, 2004

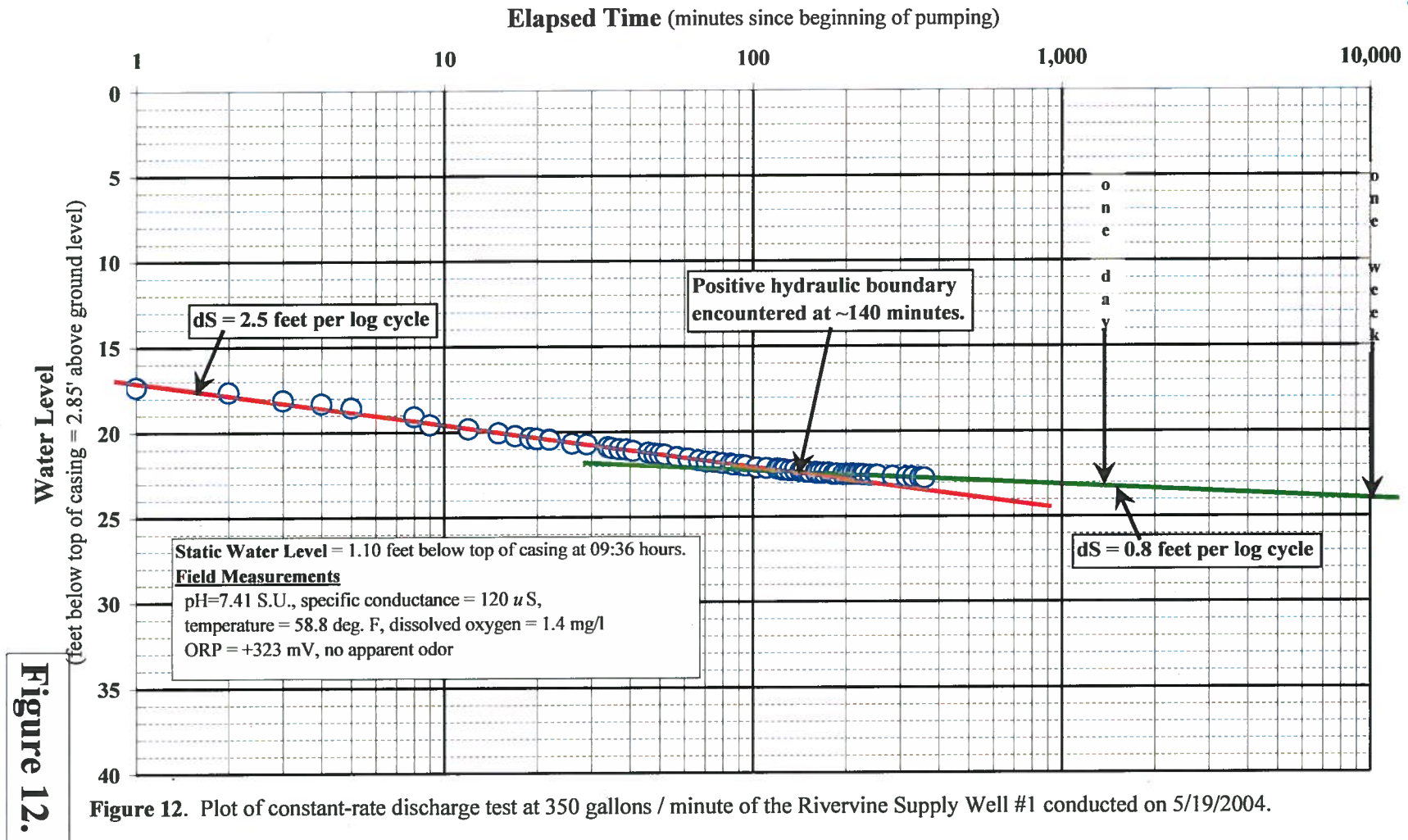


Figure 12. Plot of constant-rate discharge test at 350 gallons / minute of the Rivervine Supply Well #1 conducted on 5/19/2004.

SUBJECT		CALCULATIONS AND DESIGN DATA	PREPARED BY	L. Pearson
Rivervine #1			DATE	3/7/06
Flush Well and Distribution System - Sample Water for Bacteria			SHEET	1 of 5

onsite 1009 hrs

- red warning light blinking on pump house

SWL = 3.26 to c agl
 ~ 0.55
 + 2.65' agl

1039 hrs Turned pump on by opening bypass line
 at pump house to waste at 20 gpm
 - Heavy "methane" odor to water

1043 hrs met Reed Demordaunt at pump house

Reed showed me where the valves to open water line(s) are
 located in street by new house

1055 hrs Reed leaves

- Pump On at 100 gpm (Maximum without overflowing)

- no more odor from water

- minor degradation in odor no sand

measured we

1211 hrs Acquired W

- note: no

1216 hrs Turned o
 built.

- the water

• the pi

vault

• flow

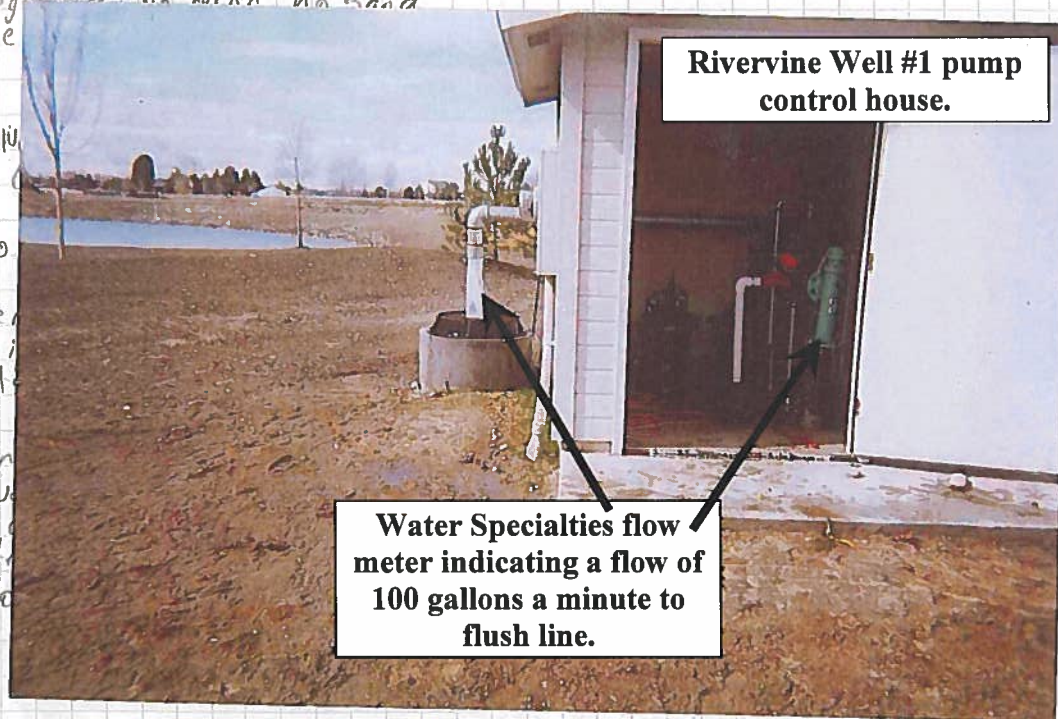
- water ran

1310 hrs opened w

1331 hrs sampled

1342 hrs off site

- did not lo



Rivervine Well #1 pump
 control house.

Water Specialties flow
 meter indicating a flow of
 100 gallons a minute to
 flush line.

notes: Well on at 100 gpm minimum for 1-hour before sampling well at
 hose bib in pump house. Distribution system was flushed at two water
 meter vaults in lots adjacent to new house for ~ 1/4 hour at 100 gpm. Then
 the water was turned on at new house in meter vault for ~ 15-min and
 a sample to check for bacteria was taken. The distance from well to
 sampling location is ~ 200 feet. All samples were taken from clear, sand-free,
 water

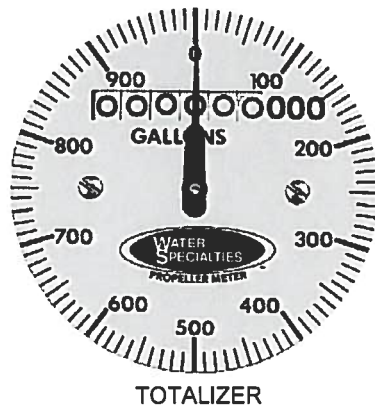
APPENDICES

Appendix A.

**Manufacturer's installation specifications for the 4-inch Water Specialties
propeller flow meter installed on the Rivervine Supply Well #1**



MODEL VF29
VERTICAL UPFLOW TEE TUBE METER
SEALED METER MECHANISM - MAGNETIC DRIVE
SEALED TOTALIZER
SIZES 4" thru 20"



DESCRIPTION

MODEL VF29 VERTICAL UPFLOW TEE TUBE METERS are designed to meet AWWA specifications. The flanged end tee design permits use in a wide range of applications with up to 150 psi working pressure. The base and side outlets are 150 lb. AWWA class "D" flat face steel flanges. Fabricated steel meter tubes have straightening vanes and are protected internally and externally with 12-15 mils of NSF approved, fusion epoxy resin.

INSTALLATION is made to any vertical discharge line with the proper size flange connection or to vertical discharge concrete turnouts with the proper anchor bolts. The meter must be installed upright for a full flow of liquid through the pipe to assure proper accuracy. Fully opened gate valves, fittings or other obstructions that tend to set up flow disturbances should be a minimum of five pipe diameters upstream and two pipe diameters downstream from the meter.

PROPELLER is magnetically coupled with the drive mechanism through the sealed separator assembly. This completely eliminates water entering the meter assembly, as well as the need for any packing gland. The propeller is a conical shaped three bladed propeller, injection molded of thermoplastic material resistant to normal water corrosion and deformity due to high flow velocities.

BEARING in propeller is a water lubricated ceramic sleeve and spindle bearing system with a ceramic/stainless steel spindle. Dual ceramic thrust bearings, standard on all meters, handle flows in both forward and reverse directions. The bearing design promotes extended periods of maintenance free propeller operation. Bearings within the sealed meter mechanism are shielded precision stainless steel bearings and are factory lubricated for the life of the meter.

TOTALIZER is o-ring sealed and magnetically coupled with the driving mechanism, and features a six digit totalizer with a full 3" diameter, 100 division, center sweep dial that permits extremely accurate readings for timing purposes in determining flow rates. The totalizer dial can be furnished in gallons, cubic feet, acre feet or any standard liquid measuring units. The bonnet, with padlock hasp, can be positioned in four different directions for the easiest possible reading when the meters are mounted in unusual positions.

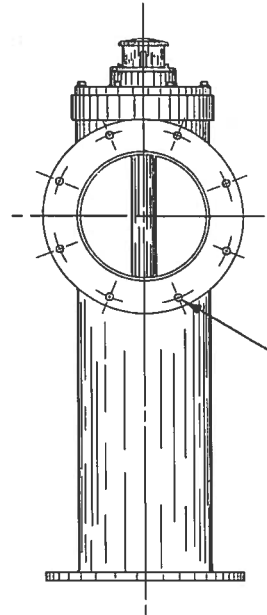
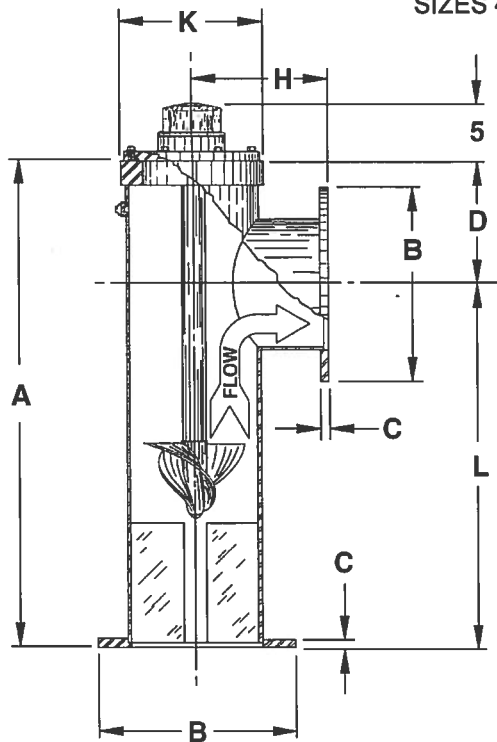
CHANGE GEARS may be easily exchanged in the field when changing the dial, or when recalibrating for different pipe sizes. It is not necessary to remove pressure from the line for these changes.

O-RING SEALS are used at the meter head and all points where seals are required, making the meter mechanism completely immune to any of the corrosive effects of atmospheric moisture or the liquids measured by the meter assembly.

SPECIFICATIONS

ACCURACY	Plus or minus 2% of actual flow within the range specified for each meter size.
PRESSURE RANGE	Up to 150 PSI maximum working pressure.
TEMPERATURE RANGE	140° F Maximum. Consult factory for special construction for higher temperatures.
MINIMUM FLOWS	As shown for each meter size and construction are required for accurate registration. See flow chart. NOTE: Minimum flow will be higher when auxiliary equipment is added.
MAXIMUM FLOWS	As shown for each meter size and construction are rated for continuous operation. See flow chart.
INTERMITTENT FLOWS	as shown for each meter size are rated for 10% to 15% of the total time the meter is operating. Consult factory for High Velocity construction when intermittent flows are higher than shown on flow chart and/or when longer operating periods are required.
MATERIALS	used in construction are chosen to minimize the corrosive effects of the liquids measured by the meter assembly. MAGNETS - permanent ceramic type INTERIOR BEARINGS - shielded stainless steel PROPELLER BEARING - ceramic sleeve type PROPELLER SPINDLE - ceramic coated stainless steel PROPELLER - injection molded thermoplastic DROP-PIPE - stainless steel SEPARATOR - stainless steel SHAFTS AND BOLTS - stainless steel METER HEAD - cast iron, NSF approved, fusion epoxy coated. METER TUBE - fabricated steel with 12-15 mils of NSF approved, fusion epoxy resin.
OPTIONAL EQUIPMENT	A meter mounted Fwd. & Rev. Totalizer, Totalizer Extensions and a wide range of controls and instruments for indicating, totalizing and recording flow data for each meter. Special constructions and materials are available upon request.
ORDERING INFO	Must be specified by the customer and includes: Minimum & maximum flow ranges Temperature of meter environment Totalizer dial units Type of materials and construction Optional equipment desired

MODEL VF29
VERTICAL UPFLOW TEE TUBE METER
SEALED METER MECHANISM - MAGNETIC DRIVE
SEALED TOTALIZER
SIZES 4" thru 20"



METER & PIPE SIZE	FLOW RANGES, GPM			STANDARD DIAL FACE (GPM/GAL)	DIMENSIONS										EST SHIPPING WEIGHT POUNDS
	MIN.	MAX.	INT.		A	B	C	D	E	F	G	H	K	L	
4	55	500	700	500/100	18	9	5/8	4 1/2	7 1/2	8	5/8	5	6	13 1/2	180
6	130	1200	1500	1200/1000	40	11	11/16	10	9 1/2	8	3/4	9	11	30	190
8	170	1500	2000	1500/1000	40	13 1/2	11/16	10	11 3/4	8	3/4	10	11	30	240
10	200	2000	3000	2000/1000	40	16	11/16	10	14 1/4	12	7/8	11	11	30	330
12	220	3000	3500	3000/1000	40	19	13/16	10	17	12	7/8	12	11	30	440
14	320	4000	4500	4000/1000	40	21	15/16	10	18 3/4	12	1	14	11	36	520
16	420	5000	6000	5000/1000	54	23 1/2	1	11 1/2	21 1/4	16	1	15	11	42 1/2	620
18	720	6000	7500	6000/1000	60	25	11/16	12	22 3/4	16	1 1/8	18	11	48	720
20	870	8000	9000	8000/10000	66	27 1/2	1 1/8	14	25	20	1 1/8	20	11	52	820



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Appendix B.

**May 24, 2013 photographs of the Rivervine subdivision utility
water “stub-ins” for the planned 10 home lots.**



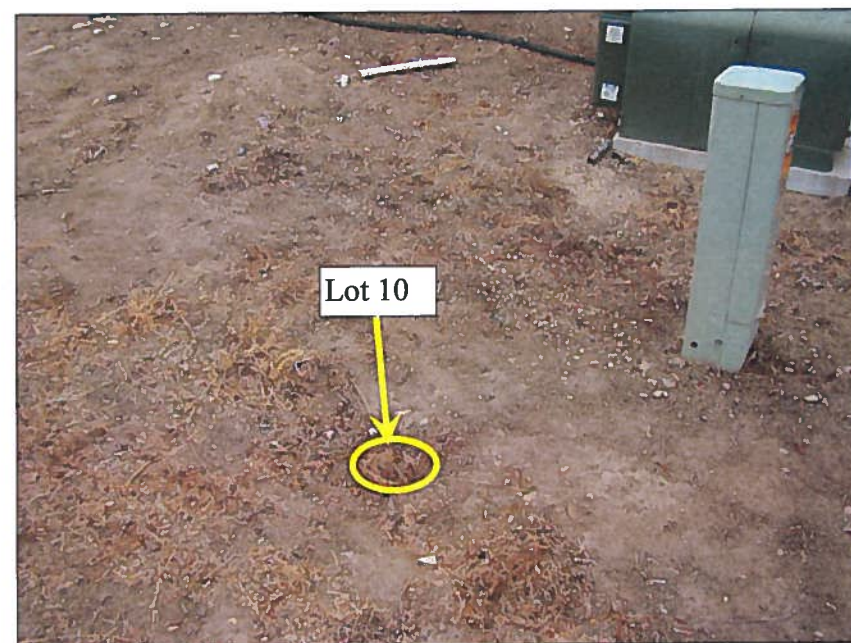
Water utility connection supplied for home built in Rivervine Subdivision, Block 1, lot 3.



Water utility connection supplied for home built in Rivervine Subdivision, Block 1, lot 6.



Water utility "stub-ins" for Rivervine Subdivision, Block 1, lot 7.



Water utility "stub-ins" for Rivervine Subdivision, Block 1, lot 10. Riser inside yellow oval.



Water utility “stub-ins” for Rivervine Subdivision, Block 1, lot 13.



Water utility “stub-ins” for Rivervine Subdivision, Block 1, lot 16.



Water utility connection supplied for home built in Rivervine Subdivision, Block 2, lot 19.



Water utility connection supplied for home built in Rivervine Subdivision, Block 2, lot 20.

Ada County Assessor



Water utility connection supplied for home built in Rivervine Subdivision, Block 2, lot 21.

Ada County Assessor



Water utility connection supplied for home built in Rivervine Subdivision, Block 2, lot 22.

Appendix C.

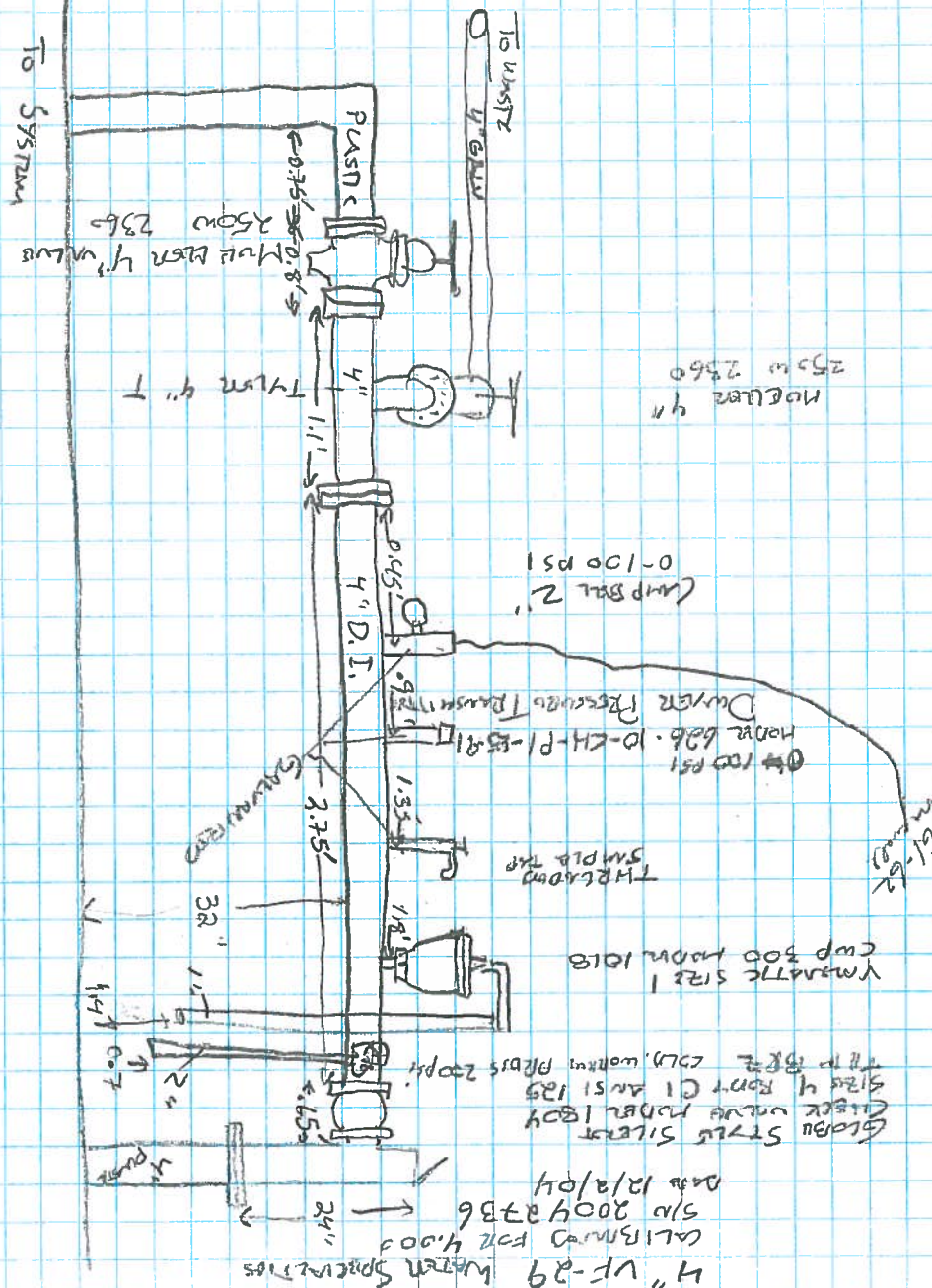
**Field notes of Carlton Parker from the May 24th, 2013 and June 25th, 2013 Proof of
Beneficial Use Field Licensing Examination of the Rivervine Supply Well #1**

CALCULATIONS AND DESIGN DATA		PREPARED BY C PARKER
SUBJECT RIVERVIEW	DATE 24 May 2013	
POBU VISIT	SHEET 1 OF 2	

Well Head - Conduit Broken - SEE PHOTOS to D0031203
 N 43° 41' 19.0" W 116° 26' 19.8" ± 12'

Door to Pump House 43° 41' 19.7" ± 19'
 116° 26' 19.8" ± 19'

14:55 WL
 1.85' BTSC
 MP 3.25' AGL



00355402 Cal 13305/47
 9:00 PM
 5716 D0355402 @ 14:35

CALCULATIONS AND DESIGN DATA

PREPARED BY

C PARKER

SUBJECT

RIVERVIEW
POBU VISIT

DATE 24 May 2013

SHEET 2 OF 2

Box 1. Hand-Off-Auto - / SIEMENS LOGO! 12/24 RC

Box 2 ALTIVAR 58 TRX FREQ BETWEEN: ^{MIN} 0 ^{MAX} 29.9- 52.0 Hz

5.5kW 7.5HP
208/230V

ATV 58 HU 90M2Z
MAN. WDED 397048

ELECTRICAL BOXES, SOUTH WALL OF PUMP HOUSE

Rivervine Proof of Beneficial Use Exam CalculationsNon-pumping water-level

5-24-2013

$$\begin{aligned} \text{MP} &= 3.25 \text{ ft above ground level} \\ &\quad - 1.85 \text{ ft below measure point} \\ &= + 1.40 \text{ ft above ground level} \end{aligned}$$

3-7-2006

$$\begin{aligned} \text{MP} &= 3.20 \text{ ft above ground level} \\ &\quad - 0.55 \text{ ft below measure point} \\ &= + 2.65 \text{ ft above ground level} \end{aligned}$$

Discharge rate

0.15 cfs = in-home maximum instantaneous water requirements for domestic use (Administrative Memo # 22 - IDWR) for 10 homes (from chart)

0.10 cfs = 10 homes X 0.01 cfs/home supplemental irr.

0.25 cfs = Max instantaneous diversion rate

System Pressure

$$0.25 \text{ cfs} \times 448.8 \text{ gpm/cfs} = 112 \text{ gallons per minute}$$

$$112 \text{ gpm} = 135 \text{ ft total dynamic head (pump curve)}$$

$$135 \text{ ft} \div 2.31 \text{ psi/ft} = 58.4 \text{ psi line pressure}$$

(draw down negligible)

Appendix D.

Rivervine Subdivisions No. 1 and No. 2 Plat Maps

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD BRC
C1	23.80	15.00	90°53'55"	15.24	21.38	S45°26'53"W
C2	88.70	87.97	57°46'14"	48.53	84.99	S28°53'02"W
C3	38.28	37.97	57°46'09"	20.95	36.88	S28°53'04"W
C4	76.62	223.81	19°36'50"	38.69	76.24	S09°48'25"E
C5	91.62	273.81	19°10'17"	46.24	91.19	S10°01'42"E
C6	124.71	197.02	36°16'08"	64.53	122.64	S17°41'30"W
C7	99.20	146.88	38°41'47"	51.57	97.32	S16°28'40"W
C8	113.32	123.92	52°23'33"	60.97	109.41	S29°04'01"E
C9	421.38	274.09	88°05'07"	265.08	381.08	S11°31'14"E
C10	147.47	124.21	68°01'24"	83.82	138.96	S01°11'22"E
C11	184.07	799.39	13°11'35"	92.44	183.66	S41°47'52"E
C12	49.66	1349.15	2°06'32"	24.83	49.66	S47°20'23"E
C13	38.25	50.63	43°17'27"	20.09	37.35	S67°55'51"E
C14	153.48	50.00	175°52'22"	1387.60	99.94	S01°32'37"E
C15	73.89	50.00	84°40'02"	45.55	67.34	S51°16'25"E
C16	14.03	10.00	80°24'34"	8.45	12.91	N49°08'41"W
C17	75.34	100.63	42°53'49"	39.53	73.59	S67°44'02"E
C18	47.82	1299.15	2°06'32"	23.91	47.81	N47°20'23"W
C19	195.58	849.39	13°11'35"	98.23	195.15	S41°47'52"E
C20	344.50	224.09	88°05'07"	216.72	311.57	N11°31'14"W
C21	159.03	173.92	52°23'34"	85.56	153.55	S29°04'01"E
C22	132.97	196.88	38°41'47"	69.13	130.45	S16°28'40"W
C23	93.06	147.02	36°16'08"	48.15	91.52	N17°41'30"E
C24	74.89	223.81	19°10'17"	37.80	74.54	N10°01'42"W
C25	128.03	273.81	26°47'25"	65.21	126.86	S06°13'08"E
C26	66.66	87.97	43°24'55"	35.02	65.07	S28°53'02"W
C27	17.40	19.70	50°35'34"	9.31	16.84	N25°17'42"E
C28	23.33	15.00	89°06'06"	14.77	21.05	N44°33'07"W
C29	51.57	53.97	54°44'54"	27.94	49.63	N27°22'33"E
C30	56.43	62.97	51°20'31"	30.27	54.56	S29°04'34"W
C31	99.96	248.81	23°01'09"	50.66	99.29	S08°06'16"E
C32	83.25	248.81	19°10'17"	42.02	82.87	N10°01'42"W
C33	108.89	172.02	36°16'08"	56.34	107.08	N17°41'30"E
C34	116.08	171.88	38°41'47"	60.35	113.89	S16°28'40"W
C35	136.17	148.92	52°23'34"	73.26	131.48	S29°04'01"E
C36	382.94	249.09	88°05'07"	240.90	346.33	N11°31'14"W
C37	189.83	824.39	13°11'35"	95.34	189.41	S41°47'52"E
C38	48.74	1324.15	2°06'32"	24.37	48.73	N47°20'23"W
C39	57.09	75.63	43°14'56"	29.98	55.74	S67°54'35"E
C40	66.24	77.25	49°07'35"	35.31	64.23	N66°26'17"W
C41	37.68	50.00	43°10'55"	19.79	36.80	S72°00'59"E
C42	36.20	50.00	41°29'08"	18.94	35.42	S29°40'58"E
C43	33.93	174.21	11°09'34"	17.02	33.88	S28°37'17"E
C44	15.02	174.21	4°56'21"	7.51	15.01	S21°34'19"E
C45	15.02	174.21	4°56'20"	7.51	15.01	S16°37'59"E
C46	142.86	174.21	46°59'08"	75.72	138.90	S09°19'45"W
C47	135.27	149.21	51°56'26"	72.68	130.68	S06°51'06"W
C48	41.88	149.21	16°04'57"	21.08	41.75	S27°09'35"E
C49	60.66	75.00	46°20'34"	32.10	59.02	S85°50'08"E
C50	378.49	1113.35	19°28'40"	191.09	376.67	N74°13'20"W
C51	120.18	1098.59	6°18'10"	60.15	120.12	N84°56'46"W
C52	48.75	60.00	46°33'25"	25.81	47.42	S85°43'43"E
C53	383.84	1128.35	19°29'26"	193.79	381.99	N74°12'57"W
C54	49.58	35.00	81°09'57"	29.98	45.54	S46°53'05"E
C55	231.13	50.00	26°43'10"	54.71	73.82	S41°16'22"W
C56	93.44	115.49	46°21'20"	49.44	80.91	N63°30'27"W
C57	244.13	1098.35	12°44'06"	122.57	243.63	N75°26'40"W
C58	90.29	1098.35	4°12'35"	45.17	90.26	N66°43'11"W
C59	70.12	90.00	44°38'32"	36.95	68.36	S86°41'10"E
C60	454.60	1098.29	23°42'56"	230.60	451.36	N76°13'26"W
C61	149.34	1098.35	7°47'26"	74.79	149.23	N50°28'11"W
C62	152.98	1098.35	7°58'50"	76.62	152.86	N52°35'15"W
C63	38.83	1098.35	2°01'33"	19.42	38.83	S45°02'27"E
C64	87.84	50.00	100°39'32"	60.29	76.97	S40°49'22"E
C65	143.28	50.00	164°11'29"	360.13	99.05	N88°23'51"W
C66	195.99	898.35	12°29'59"	98.38	195.60	N62°49'29"W
C67	195.99	898.35	12°30'00"	98.38	195.60	N50°19'20"W
C68	73.43	876.51	4°47'59"	36.74	73.41	N41°40'10"W
C69	132.46	876.51	8°39'31"	66.36	132.33	N34°56'25"W
C70	23.11	30.00	44°08'03"	12.16	22.54	N22°04'01"E
C71	144.03	90.00	91°41'28"	92.70	129.14	S01°42'41"E
C72	33.20	40.00	47°13'25"	17.62	32.26	N23°46'43"W
C73	429.46	1880.82	13°04'58"	215.67	428.53	N84°21'21"E
C74	43.62	49.47	50°31'29"	23.24	42.22	N25°15'41"E
C75	14.14	4.50	180°00'00"	N/A	9.00	N89°39'55"E
C76	51.56	58.47	50°31'29"	27.59	49.91	S25°15'41"W
C77	14.14	4.50	180°00'00"	N/A	9.00	N38°28'35"W
C78	205.89	876.51	13°27'31"	103.42	205.41	S37°20'25"E

LINE TABLE		
LINE	LENGTH	BEARING
L1	50.22	S00°00'04"E
L2	36.11	S00°00'05"E
L3	34.45	S00°00'05"E
L4	48.77	S89°06'10"E
L5	49.24	S89°06'10"E
L6	62.65	S70°59'35"W
L7	38.27	N70°59'35"E
L8	38.28	S70°59'35"W
L9	53.39	N56°04'24"W



RIVERVINE SUBDIVISION NO.1

LOCATED IN THE EAST 1/2 OF SECTION 15,
TOWNSHIP 4 NORTH, RANGE 1 WEST, OF THE BOISE MERIDIAN
ADA COUNTY, IDAHO
2004

R.O.S. #5840
UNPLATTED

HEALTH CERTIFICATE

SANITARY RESTRICTIONS AS REQUIRED BY IDAHO CODE, TITLE 50, CHAPTER 13 HAVE NOT BEEN SATISFIED AND ARE IN FORCE FOR THE FOLLOWING LOTS:

BLOCK 1, LOTS 1-17

NO OWNER SHALL CONSTRUCT ANY BUILDING, DWELLING, OR SHELTER WHICH NECESSITATES THE SUPPLYING OF WATER OR SEWAGE FACILITIES FOR PERSONS USING SUCH PREMISES UNTIL SANITARY RESTRICTION REQUIREMENTS ARE SATISFIED AND LIFTED.

Malcolm McHugh R.E.H.S. 11-16-04
DISTRICT HEALTH DEPARTMENT, EHS DATE

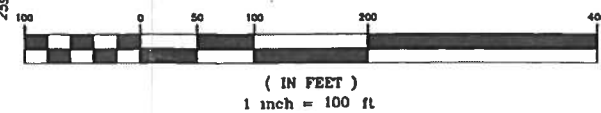
LEGEND

- FOUND REBAR (AS NOTED)
- SET 5/8" REBAR W/ PLASTIC CAP MARKED "LS 7314"
- △ CALCULATED POINT NO PIN SET
- ⊕ BRASS CAP
- ① LOT NUMBER

(XX'00'00") RECORD INFORMATION

- CENTER LINE
- SUBDIVISION BOUNDARY
- LOT LINE
- EASEMENT LINE
- SECTIONAL LINE

GRAPHIC SCALE



(BASIS OF BEARINGS—R.O.S. #3216)
N89°08'34"W 2624.58'

STATE HIGHWAY "44"

1312.29'

10 15
NORTH 1/4
SECTION 15
BRASS CAP
C.P. & F.R. 8504514
(SEE R.O.S. 0706)

FD 5/8" REBAR
L.S. 6901

"TRUE POINT OF BEGINNING"
FD 5/8" REBAR
NO CAP
SET CAP "LS 5901"

LONGITUDINAL CENTERLINE OF SECTION 15

UNPLATTED

R.O.S. #2691
R.O.S. #2135

FOUND 1/2" REBAR
REPLACED WITH 5/8" REBAR

SHEET 1 OF 3

Anderson Survey Group
Land Surveying Services
357 Waterlous Ln., Suite P
Meridian, Idaho 83642
(208) 884-7345

RIVERVINE SUBDIVISION NO.2

LOCATED IN THE NORTHEAST QUARTER OF SECTION 15,
TOWNSHIP 4 NORTH, RANGE 1 WEST, OF THE BOISE MERIDIAN
ADA COUNTY, IDAHO
2006

LEGEND

- SUBDIVISION BOUNDARY
- CENTER LINE
- LOT LINE
- EASEMENT LINE
- SECTIONAL LINE
- FOUND 5/8" REBAR W/ PLASTIC CAP MARKED "LS 7314"
- SET 5/8" REBAR W/ PLASTIC CAP MARKED "LS 7314"
- CALCULATED POINT NO PIN SET
- BRASS CAP
- RECORD INFORMATION

(XXX'00'00")

1/4 CORNER SECTION 15
C.P. & F.R. 99121618
(SEE R.O.S. 0706)

OS 1/4E FULL IN BEARING ROAD
AND UNDER A FULLER TREE 5' 0"
AND W 0.4' OF TRUE POSITION
REFERENCE MONUMENT

16' UTILITY EASEMENT
INSTRUMENT NO. 105033545
800'38'00"W
10.43'

80.85'
800'00'00"W

800'38'00"W
10.43'

800'38'00"W
10.43'

800'38'00"W
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800'38'00"W
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800'38'00"W
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800'38'00"W
10.43'

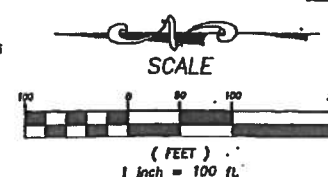
800'38'00"W
10.43'

800'38'00"W
10.43'

800'38'00"W
10.43'

800'38'00"W
10.43'

11 14
10 15
NORTHEAST CORNER SECTION 15
C.P. & F.R. 0114892
(SEE R.O.S. 0706)



(BASIS OF BEARINGS—R.O.S. 3216)
N89°08'34"W 2624.57'
1309.67'

NORTH 1/4
SECTION 15
BRASS CAP
C.P. & F.R. 8504614
(SEE R.O.S. 0706)

01237ad1-phase2.dwg 01/20/06 sms

HONALEE SUBDIVISION

W. MOON VALLEY ROAD

589°05'10"E 694.05'

589°05'10"E 694.05'

589°05'10"E 694.05'

589°05'10"E 694.05'

POINT OF BEGINNING

10' UTILITY DRAINAGE & IRRIGATION ESMT.

FOUND BRASS CAP
BY MON

FOUND 5/8" REBAR
L.S. 6901

FOUND 5/8" REBAR
L.S. 6901

FOUND 5/8" REBAR
L.S. 6901

FOUND 5/8" REBAR
L.S. 6901

FOUND 5/8" REBAR
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L.S. 6901

FOUND 5/8" REBAR
L.S. 6901

FOUND 5/8" REBAR
L.S. 6901

FOUND 5/8" REBAR
L.S. 6901

CURVE	LENGTH	RADIUS	DELTA	CHORD	CHORD BEG
C1	33.00	15.00	89°33'55"	21.38	848°24'31"W
C2	88.70	87.87	87°46'14"	84.89	578°31'02"W
C3	38.38	37.97	87°46'14"	36.68	838°31'02"W
C4	76.92	22.81	18°38'30"	75.34	528°44'25"E
C5	81.82	273.87	18°10'17"	81.19	510°01'42"E
C6	124.71	187.02	34°18'08"	122.84	517°11'30"W
C7	86.30	148.88	38°11'41"	87.32	516°28'30"W
C8	113.31	183.82	62°23'34"	109.41	628°04'01"E
C9	421.37	274.89	68°06'01"	381.08	511°37'47"E
C10	142.47	124.21	68°06'01"	138.96	501°11'22"E
C11	184.07	799.39	15°11'35"	183.66	541°57'32"E
C12	49.66	1348.18	8°08'34"	49.66	547°27'33"E
C13	36.35	80.63	43°17'27"	37.35	587°38'51"E
C14	428.48	1800.82	13°04'38"	428.83	584°21'51"W
C15	153.68	80.00	175°34'32"	98.84	301°32'37"E
C16	75.39	80.00	84°23'34"	68.43	843°11'47"E
C17	12.60	224.09	2°34'04"	12.60	843°30'18"E
C18	228.54	274.09	42°21'27"	220.15	844°30'31"E
C19	37.36	274.09	115°28'26"	87.25	873°08'54"W
C20	100.33	274.09	20°58'22"	99.77	809°30'18"W
C21	84.54	274.09	50°7'49"	24.53	852°41'53"W
C22	78.09	50.00	88°28'28"	78.39	844°41'24"W
C23	372.49	50.00	31°24'42"	40.48	806°07'11"E
C24	71.80	273.87	15°38'30"	71.40	818°27'20"W
C25	20.01	273.87	41°11'17"	20.01	822°32'12"W
C26	20.04	197.02	8°19'39"	20.03	822°32'12"W

LINE	LENGTH	BEARING
L1	61.49	543°39'12"E
L2	36.44	543°39'12"E
L3	34.45	800°00'00"E
L4	22.03	589°18'47"W
L5	68.29	589°18'47"W
L6	7.00	800°11'15"W

NOTES

- THIS DEVELOPMENT RECOGNIZES IDAHO CODE 22-4501, RIGHT TO FARM ACT, WHICH STATES: "NO AGRICULTURAL OPERATION ON AN APPEARANCE TO IT SHALL BE OR BECOME A NUISANCE, PRIVATE OR PUBLIC, BY ANY CHANGED CONDITIONS IN OR ABOUT THE SURROUNDING NONAGRICULTURAL ACTIVITIES AFTER THE SAME HAS BEEN IN OPERATION FOR MORE THAN ONE (1) YEAR WHEN THE OPERATION WAS NOT A NUISANCE AT THE TIME THE OPERATION BEGAN; PROVIDED, THAT THE PROVISIONS OF THIS SECTION SHALL NOT APPLY WHENEVER A NUISANCE RESULTS FROM IMPROPER OR NEGLIGENT OPERATION OF ANY AGRICULTURAL OPERATION ON APPEARANCE TO IT."
- ANY RESUBDIVISION OF THIS PLAT SHALL COMPLY WITH THE APPLICABLE REGULATIONS IN EFFECT AT THE TIME OF RESUBDIVISION.
- BUILDING SETBACKS AND DIMENSIONAL STANDARDS IN THIS SUBDIVISION SHALL BE IN COMPLIANCE WITH THE APPLICABLE ZONING REGULATIONS OF ADA COUNTY AT THE TIME OF ISSUANCE OF THE BUILDING PERMIT.
- LOT 18, BLOCK 1 IS AN OPEN SPACE LOT OWNED BY CASTLE ROCK DEVELOPMENT INC., BUT OPERATED, REPAIRED AND MAINTAINED BY THE RIVERVINE HOMEOWNERS ASSOCIATION, INCLUDING THE PEDESTRIAN PATHWAY. THE ASSOCIATION SHALL HAVE A NON-EXCLUSIVE EASEMENT ON, OVER, ACROSS AND THROUGH THE OPEN SPACE FOR PURPOSES OF FULFILLING ITS OPERATION, REPAIR AND MAINTENANCE OBLIGATIONS. THIS EASEMENT MAY BE MODIFIED OR TERMINATED BY CASTLE ROCK DEVELOPMENT INC. IN THE EVENT THE OPEN SPACE IS FURTHER SUBDIVIDED.
- THERE IS A STATUTORY EASEMENT FOR INGRESS, EGRESS, OPERATIONS, MAINTENANCE, CLEANING AND REPAIR PURPOSES IN FAVOR OF PIONEER DITCH CO., LTD., THE CENTERLINE OF WHICH IS SHOWN HEREON.
- IRRIGATION WATER HAS BEEN PROVIDED FROM THE MIDDLETON MILL DITCH COMPANY IN COMPLIANCE WITH IDAHO CODE 31-3205(b). THE PONDS WILL RECEIVE WATER AND THE HOMEOWNERS ASSOCIATION WILL BE ENTITLED TO IRRIGATION WATER RIGHTS, AND WILL BE OBLIGATED FOR ASSESSMENTS FROM THE MIDDLETON MILL DITCH COMPANY.
- ALL RESIDENTIAL STRUCTURES WILL BE PROVIDED WITH WATER SERVICES FOR FIRE SPRINKLER SYSTEMS IN ACCORDANCE WITH STAR FIRE DEPARTMENT STANDARDS.
- THIS SUBDIVISION IS SUBJECT TO THE BOISE RIVER GREENWAY OVERLAY DISTRICT STANDARDS.
- UNLESS OTHERWISE SHOWN ON THE PLAT, THERE SHALL BE A 10 FOOT WIDE PUBLIC UTILITY EASEMENT ADJACENT TO AND PARALLEL WITH ALL ROAD RIGHT-OF-WAYS, SUBDIVISION BOUNDARY LINES AND CENTERED ON LOT SIDE LINES.
- INDIVIDUAL LOT OWNERS SHALL CONNECT TO A MUNICIPAL SEWAGE COLLECTION AND TREATMENT FACILITY WHEN REASONABLY AVAILABLE. PER SECTION 8-1A-1 OF THE ADA COUNTY CODE, REASONABLY AVAILABLE SHALL MEAN WHEN A MUNICIPAL WASTEWATER COLLECTION AND TREATMENT SYSTEM IS WITHIN THREE HUNDRED FEET (300') OF ANY PROPERTY LINE OF THE SUBJECT PROPERTY.



Anderson Survey Group
Land Surveying Services
387 Veterans Ln., Suite 7
Meridian, Idaho 83442
(208) 886-7314

Appendix E.

Water right Permit No. 63-31606

State of Idaho
Department of Water Resources
Permit to Appropriate Water

NO. 63-31606

Priority: December 23, 2002

Maximum Diversion Rate: 0.36 CFS

This is to certify, that **CASTLE ROCK DEVELOPMENT INC**
1639 LAKEMOOR WAY
EAGLE ID 83616

has applied for a permit to appropriate water from:

Source: GROUND WATER

and a permit is **APPROVED** for development of water as follows:

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>RATE OF DIVERSION</u>
DOMESTIC	01/01 to 12/31	0.36 CFS

LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER NW $\frac{1}{4}$ NE $\frac{1}{4}$, Sec. 15, Twp 04N, Rge 01W, B.M., ADA County
GROUND WATER SW $\frac{1}{4}$ NE $\frac{1}{4}$, Sec. 15, Twp 04N, Rge 01W, B.M., ADA County
GROUND WATER L2 (NW $\frac{1}{4}$ SE $\frac{1}{4}$), Sec. 15, Twp 04N, Rge 01W, B.M., ADA County

PLACE OF USE: DOMESTIC

Twp Rge Sec	NE				NW				SW				SE				
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	Totals
04N 01W 15	X	X	X	X										X			L2

CONDITIONS OF APPROVAL

1. Proof of application of water to beneficial use shall be submitted on or before **May 01, 2008**.
2. Subject to all prior water rights.
3. Right holder shall comply with the drilling permit requirements of Section 42-235, Idaho Code and applicable Well Construction Rules of the Department.
4. Project construction shall commence within one year from the date of permit issuance and shall proceed diligently to completion unless it can be shown to the satisfaction of the Director of the Department of Water Resources that delays were due to circumstances over which permit holder had no control.
5. The Director retains jurisdiction to require the right holder to provide purchased or leased natural flow or stored water to offset depletion of Lower Snake River flows if needed for salmon migration purposes. The amount of water required to be released into the Snake River or a tributary, if needed for this purpose, will be determined by the Director based upon the reduction in flow caused by the use of water pursuant to this permit.
6. The right holder shall make full use of all appurtenant surface water rights in conjunction with groundwater diverted for irrigation purposes under this right.
7. If the surface water right(s) appurtenant to the place of use is sold, transferred, leased or used on any other place of use, this right to divert groundwater shall not be used for irrigation purposes without an approved transfer pursuant to Section 42-222, Idaho Code, or approval of the Department if a transfer is not required.
8. The domestic use authorized under this right shall not exceed 13,000 gallons per day per home.

MICROFILMED

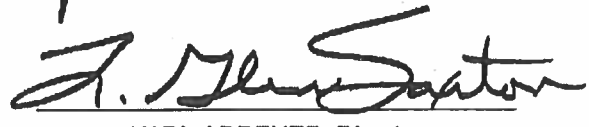
JUN 9 5 2003

State of Idaho
Department of Water Resources
Permit to Appropriate Water

NO. 63-31606

9. After specific notification by the Department, the right holder shall install a suitable measuring device or shall enter into an agreement with the Department to determine the amount of water diverted from power records and shall annually report the information to the Department.
10. Point of diversion is located within Block 1, Rivervine Subdivision.
11. Place of use is located within Block 1, Lots 2, 4, 6, 8, 10, 12, 13, 14, 15, 16, and 17, and five un-numbered lots in Rivervine Subdivision, and Block 1, Lots 1 and 2 in Honalee Subdivision.
12. The irrigation occurring under this domestic use shall not exceed 1/2 acre within each platted subdivision lot upon which a home has been constructed. This right does not provide for irrigation of common areas or for irrigation of lots upon which homes have not been constructed.
13. Domestic use is for 18 homes.

This permit is issued pursuant to the provisions of Section 42-204, Idaho Code. Witness the signature of the Director, affixed at Boise, this 25th day of April, 2003.


for
KARL J DREHER, Director

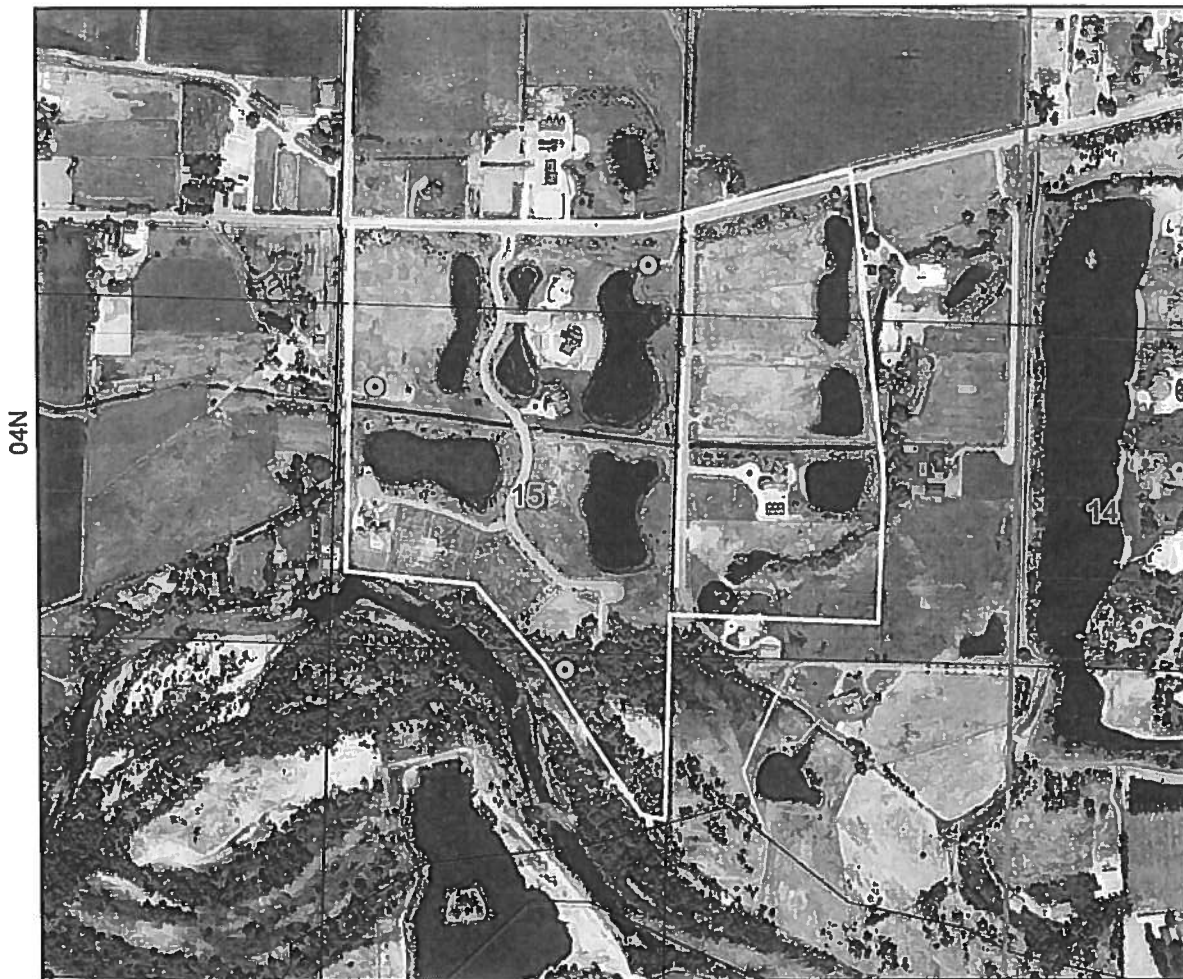
MICROFILMED
JUN 9 5 2003

State of Idaho
Department of Water Resources
Permit To Appropriate Water
63-31606

DOMESTIC

The map depicts the place of use for the water use listed above and point(s) of diversion of this right as currently derived from interpretations of the paper records and is used solely for illustrative purposes. Discrepancies between the computer representation and the permanent document file will be resolved in favor of the actual water right documents in the water right file.

01W



○ Point of Diversion

Place Of Use Boundary

Townships

PLS Sections

Quarter Quarters

Taxlots

0 0.075 0.15 0.3 Miles



STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
REVIEW of BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATIONPermit No: 63-31606

Exam Date: 07/15/13

1. Does this qualify for an in-office field exam (IDAPA 035.02.r)? X Y N
- Irrigation of 5 acres or less
 - Storage of up to 14.6 AF for stockwater purposes only
 - Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less
 - Other: REVIEW OF BENEFICIAL USE FIELD REPORT

2. Current Owner: Name: CASTLEROCK DEVELOPMENT INC
 Owner of Record Correct? Y X N Several lots in subdivision sold.
 Address of Record Correct? X Y N
 If No: Address

3. Beneficial Use Fees have been paid: Y N Receipt No:

4. SOURCE TRIBUTARY

Groundwater

Method of Determination: Well Log. Treasure Valley Drilling IDWR Tag #D0031203 WellID 383404, PermitID 812697

Change in Source: Y X N**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: No Overlap

Irrigation of common areas and subdivision lots over ½ acre are covered by shares in the Middleton Mill Ditch Co.

Water Right No.	Source	Purpose of Use	Basis

Comments: 63-31974, 63-31975, and 63-31811 to 63-31814 are for storage ponds in subdivision. Other Ditch Cos. With overlapping LPOUs – Middleton Irrigation Assoc. & Pioneer Ditch Co. Eureka Water Co. across river to South.

City of Eagle – overlapping municipal LPOU – 63-11413, 63-12448, 63-32089, & 63-9331

City of Meridian – overlapping municipal LPOU – 63-31630

63-15693 – For taxlots North of HWY 44.

63-28665 – Across river to the south in NWSE Lot. 7

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

Water Right No.	Source	Purpose of Use	Basis
63-31811	Groundwater	Aesthetic Storage	Permit
63-31812	Groundwater	Aesthetic Storage	Permit
63-31813	Groundwater	Aesthetic Storage	Permit
63-31814	Groundwater	Aesthetic Storage	Permit
63-31974	Groundwater	Aesthetic Storage	Permit
63-31975	Groundwater	Aesthetic Storage	Permit

Comments: Unable to determine if same POD or not from Field Exam. Per Field Exam, Waste line does drain to a nearby pond. Ponds developed on imagery in 2004 but proof due date extended until 2017 for permits listed above. Only one well log as been found appurtenant to the Riverine Subdivisions. POD on permits SWNE 04N01W15

63-15693 - For taxlots North of HWY 44.

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**

Source	Govt. Lot	¼	¼	¼	Sec.	Twp.	Rge.		County
Groundwater			NW	NE	15	04N	01W	B.M.	Ada
								B.M.	

Method of Determination: Well Log. Treasure Valley Drilling IDWR Tag #D0031203 WellID 383404, PermitID 812697

Only one well drilled of 3 on permit.

Change in POD? ☒ X ☐ Y ☐ N Amendment Required? ☐ Y ☒ X ☐ N

2. **PLACE OF USE:** Use: Domestic

TWP	RGE	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
04N	01W	15		X	X											X			
		Lot #														2			
Total Acres =																			

Method of Determination: Taxlot data and GIS Imagery.

Only 9 owners in subdivision besides Castlerock Development Inc. Only 5 homes visible on 2011 GIS imagery. Aerial photo provided by field examiner shows 6 developed homes. 4 additional taps to potential homes.

Change in POU? ☐ X ☐ N Amendment Required? ☐ X ☐ N

☐ Delivery System Diagram Attached (required). Indicate all major components and distances between components.

Indicate weir size/pipe as applicable.

☐ 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
See field exam					

*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
See field exam						

2. Measurements: < >

E. FLOW CALCULATIONS

☐ Additional Computation Sheets Attached

Measured Method:

Irrigation: No irrigation separate from the ½ acre per platted subdivision lot upon which a home is constructed. – Conditions on

permit.

Storage: No storage is authorized under this permit.

Domestic:

Per Administrative Memo #22 – 10 homes = 0.15 cfs for interior domestic.

For exterior irrigation under a domestic use: 0.5 acre allowed per home. 10 homes at 0.5 acers = 5 acres maximum allowable exterior irrigation.

Per Application Processing Memo #17 – under 5 acres allowed up to 0.03 cfs. $5 \times 0.03 = 0.15$ cfs

Maximum allowable for 10 homes for internal domestic plus external irrigation up to 0.5 acre = 0.15 cfs + 0.15 cfs = 0.30 cfs

Capacity:

Per Field Exam– 7.5 hp pump. Per IDWR standard: Assume pump efficiency = 0.7 (70%) and PSI = XX psi Lift estimated from well log – 21 ft. plus 10.

Average Q = 0.35 cfs - See attached Theoretical Horsepower Equation Worksheet

Measurement = 0.35 cfs
Permit allowed = 0.36 cfs

License recommend for 0.30 cfs

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \underline{\hspace{2cm}}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \underline{\hspace{2cm}}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \underline{\hspace{2cm}}$$

2. Volume Calculations for Other Uses:

13000 gal/day condition so exempt from domestic volume requirement.

G. PURPOSE OF USE

Irrigation ___Y___X___N # Stock _____ Domestic # of Homes ___18___

Other: < >

Change in Purpose of Use? ___Y___X___N

Method of Determination: 5 Homes on GIS Imagery. Aerial photo provided by field examiner shows 6 developed homes. 4 more taps to potential homes.

If Yes: From Use _____ To Use _____ Amount _____ CFS _____ AFA _____

H. NARRATIVE/REMARKS/COMMENTS

- Late Proof – extend priority date.

-Need reinstatement order.

-Condition 121 – salmon mitigation

- Condition 100 and 104 – surface water rights used for irrigation.

- Domestic use limited to 13000 gal/day per home under permit.

-Condition 070 – irrigation limited to only ½ acre per home constructed.

- Irrigation over 0.5 ac per home is covered by irrigation company rights.

Have conditions of permit approval been met? ___X___Yes ___No

I. RECOMMENDATIONS**1. Recommended Amounts**a. SAME AS FIELD EXAMINTER ____Y__ **X**__N

b. If No, Recommendations:

Recommend 0.30 cfs vs. 0.25 calculated by consultant because consultant only allowed 0.02 cfs/acre for external irrigation instead of 0.03 cfs/acre allowed for 5 acres or less.

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
Domestic	01/01 to 12/31	0.30 CFS	Exempt AF
<u>Totals:</u>		0.30 CFS	Exempt AF

Comments:

2. Recommended Amendments

____Change P.D. as reflected above ____Add P.D. as reflected above __X__None

____Change P.U. as reflected above ____Add P.U. as reflected above __X__None

Other: < >

J. AUTHENTICATION

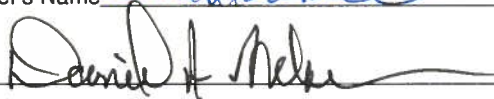
Field Examiner's Name



Date

07/17/13

Reviewer



Date

7-23-2013

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 63-31606
 Examiner: D. Favreau
 Date of Field Exam: 7/17/2013

	Option 1	OPTION 2	OPTION 3	
P/D No.:				
PUMP HORSEPOWER	7.5	7.5	7.5	
BOOSTER HORSEPOWER	0	0	0	
PUMPING LEVEL	21	21	21	
DISCHARGE PRESSURE	40	50	60	
FRICTION	0	0	0	
RATE OF FLOW (cfs)	0.41	0.34	0.29	AVE
(gpm)	182.9	151.9	129.9	0.35

The above calculates the formula =

$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$$

Assumptions: %70 efficiency.

Examiners Notes:

Lift was taken from well log. Hp was found during site visit. A standard psi for domestic use of 40 to 60 psi was used to estimate the pressure against the pump.

Other IDWR No.

City **Eagle** State **ID** Zip **83616**

Sketch map location must agree with written location.



Twp. 4 North ☒ or South ☐
 Rge. 1 East ☐ or West ☒
 Sec. 15 1/4 SW 1/4 NE 1/4
70 acres 40 acres 160 acres
 Gov't Lot _____ County Ada
 Lat: _____ Long: _____
 Address of Well Site Moon Valley Road (S.

City Star

Lt. **Blk. 1** Sub. Name **Rivervine**

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

☒ New Well ☐ Modify ☐ Abandonment ☐ Other☐ Air Rotary ☐ Cable ☒ Mud Rotary ☐ Other

Seal/Filter Pack			AMOUNT	METHOD
Material	From	To	Sacks or Pounds	
Grout	0	73	420 gal	Pump
6x12 Sand	68	119	1 yd	Pour
3/4 Bentonite	119	145	680 #	Pour

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 73

Was drive shoe seal tested? ☒ Y ☐ N How? **Pressure**

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
16	0	38	.250	steel	☒	☐	☒	☐
10	+16	73		PVC- SDRM	☒	☐	☒	☐
12	+2	0	.250	steel	☒	☐	☒	☐

Length of Headpipe 68-85 Length of Tailpipe 0

☐ Perforations Method _____

☒ Screens Screen Type **Johnson** ***Tight Wound**

From	To	Slot Size	Number	Diameter	Material	Casing	Line
68	85	.00	~~1~~ TW	4	SS	☐	☒ X
85	104	.030		4	SS	☐	☒ X
104	118	.035		4	SS	☐	☒ X

+1 _____ ft. below ground Artesian pressure 1/2 _____ lb.
Depth flow encountered 80 _____ ft. Describe access port or control
devices: Steel Plate

☒ Pump ☐ Baller ☐ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
400	21	60	10 hrs

Water Temp. 56 Bottom hole temp. 56

Water Quality test or comments:

Depth first Water Encounter 10

Water

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
16	0	4	Top Soil		
16	4	38	Gravel & Sand	X	
16	36	40	Tan Clay		
16	40	67	Sand w/ Gravel	X	
18	67	73	Tan Clay		
15	73	79	Tan Clay		
15	79	124	Quartz Sand	X	
15	124	145	Sticky Tan Clay		

RECEIVED

~~SEP 27 2004~~

WATER RESOURCES
WESTERN REGIONCompleted Depth **118** (Measurable)

Date: Started **5/16/2004** Completed **5/22/2004**

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

Company Name **Treasure Valley Drilling**

Firm No. 560

Firm Official

Date 9/22/2004

and

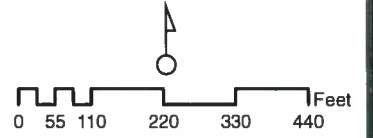
Driller or Operator

Date 9/22/2004

(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

63-31606



D. Favreau

07/15/13

NENW

NWNE

NENE

SENW

15 04N01W

SENE

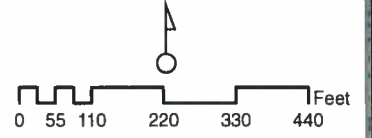
NESW 3

NWSE 2

NESE

Source: Esri, DigitalGlobe, GeoEye, Earthstar, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community

63-31606



D. Favreau

07/15/13

NENW

NWNE

NENE

SENW

15 04N01W

SENE

NESW 3

NWSE 2

NESE

NWSE

USDA FSA

Process	Basin Sequence	Draft	Owner	Source	POD/ POU	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	Total Acres	Transf er Table	Tran sfe r Ro
Water Permit	63-11413	N	CITY OF EAGLE	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0		
Water Right	63-12346	N	CALDWELL, ROBERT E	GROUND WATER	POD					X												0		
Water Right	63-12346	N	CALDWELL, ROBERT E	GROUND WATER	POU					X												0		
Water Right	63-12444	N	EAGLE CHRISTIAN CHURCH	GROUND WATER	POD						X											0		
Water Right	63-12444	N	EAGLE CHRISTIAN CHURCH	GROUND WATER	POU						X											0		
Water Right	63-12448	Y	CITY OF EAGLE	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0		
Water Right	63-124N	N	MIDDLETON MILL DITCH CO	BOISE RIVER	POU	X	X	X	X									X	X			0		
Water Right	63-125G	N	MIDDLETON MILL DITCH CO	BOISE RIVER	POU	X	X	X	X													0		
Water Right	63-125G	N	MIDDLETON MILL DITCH CO	BOISE RIVER	POU	X	X	X	X									X	X			0		
Water Right	63-126E	N	MIDDLETON MILL DITCH CO	BOISE RIVER	POU	X	X	X	X									X	X			0		
Water Right	63-145	N	EUREKA WATER CO	BOISE RIVER	POU												X	X	X	X	X	0		
Water Right	63-15578	N	BYARD, MARGIE G; GRAHAM, REUBEN	GROUND WATER	POD					X												0		
Water Right	63-15578	N	BYARD, MARGIE G; GRAHAM, REUBEN	GROUND WATER	POU					X												0		
Water Right	63-15693	N	GRIFFITH, JANICE C; GRIFFITH, WYLIE H	GROUND WATER	POD		X															0		
Water Right	63-15693	N	GRIFFITH, JANICE C; GRIFFITH, WYLIE H	GROUND WATER	POU		2.0															2		
Water Right	63-15693	N	GRIFFITH, JANICE C; GRIFFITH, WYLIE H	GROUND WATER	POU		X															0		
Water Right	63-161X	N	MIDDLETON MILL DITCH CO	BOISE RIVER	POU	X	X	X	X									X	X			0		
Water Right	63-16383	N	EUREKA WATER CO	PHYLLIS SLOUGH	POU												X			X	X	0		
Water Right	63-16383	N	EUREKA WATER CO	PHYLLIS SLOUGH	POU												X	X	X	X	X	0		
Water Right	63-168B	N	MIDDLETON IRRIGATION ASSN	BOISE RIVER	POU	X	X	X	X									X	X			0		
Water Right	63-168D	N	MIDDLETON MILL DITCH CO	BOISE RIVER	POU	X	X	X	X									X	X			0		
Water Right	63-173	N	MIDDLETON MILL DITCH CO	BOISE RIVER	POU	X	X	X	X									X	X			0		
Water Right	63-17994	N	CALDWELL, ROBERT E	GROUND WATER	POD					X												0		
Water Right	63-17994	N	CALDWELL, ROBERT E	GROUND WATER	POU					X												0		
Water Right	63-183	N	PIONEER DITCH CO LTD	BOISE RIVER	POU	X	X	X	X	X	X	X	X	X	X		X					0		
Water Right	63-19513	N	KILBURN, PAULINE E	GROUND WATER	POD						X											0		
Water Right	63-19513	N	KILBURN, PAULINE E	GROUND WATER	POU						X											0		
Water Right	63-198AC	N	MIDDLETON IRRIGATION ASSN	BOISE RIVER	POU	X	X	X	X									X	X			0		
Water Right	63-21921	N	KILBURN, PAULINE E	GROUND WATER	POD	X																0		

[illegible]

[illegible]