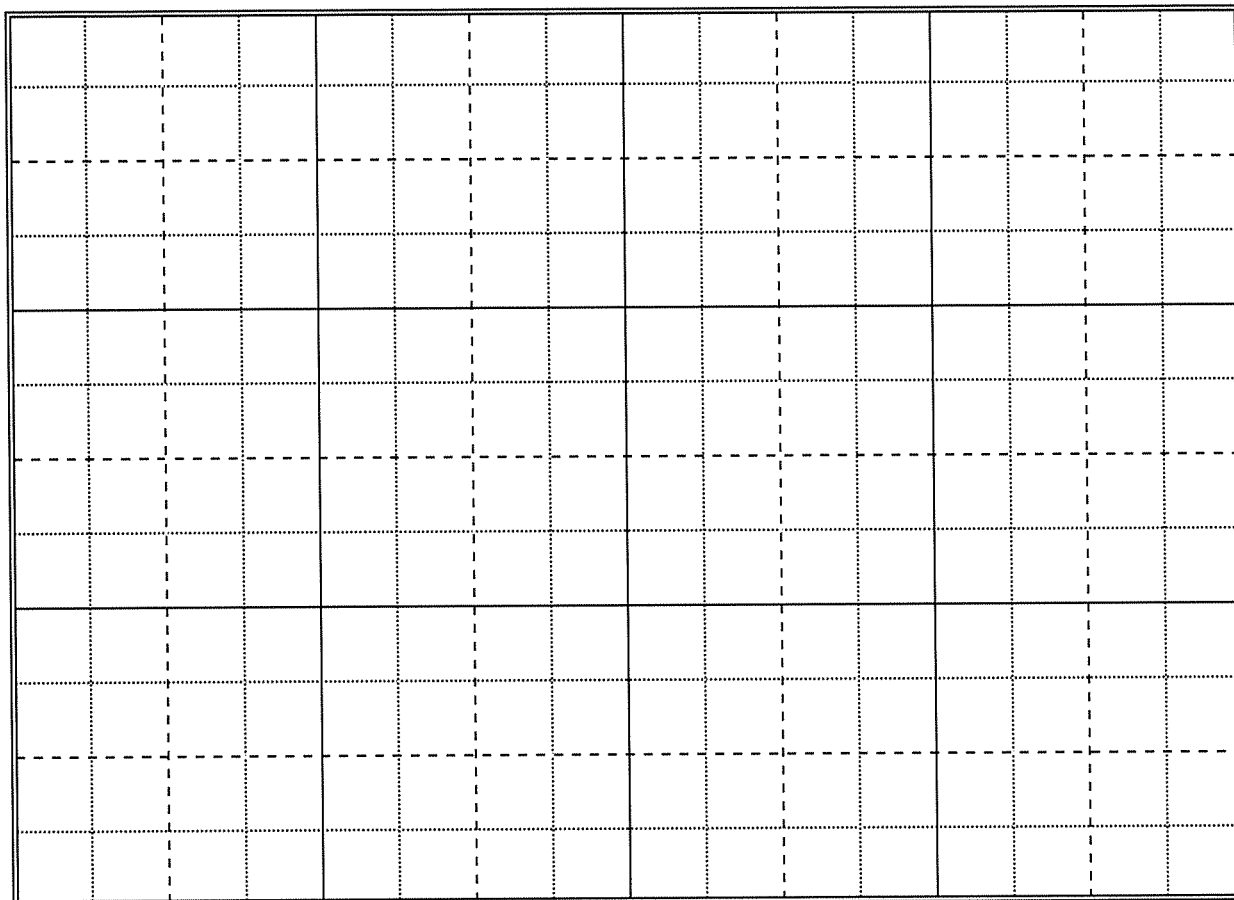


TWP	RGE	SEC	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
3N	1W	5										D							

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe id as applicable. **See Attachment D**



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 1 Pump (Secondary)	Grundfos	20	Submersible	Grundfos- Model 475S	475S200-6; 6-in x 126-ft submersible column pipe
Well 2 Pump (Primary)	Grundfos	20	Submersible	Grundfos- Model 230S	230S200-2; 4-in x 126-ft submersible column pipe

*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	Propeller	McCrometer	24608	02-07258-6	4"	April, 2008

2. **Measurements:** Pump curves supplied by Adamson Pump & Drilling (Attachment B & C)
- Assume interference drawdown of 40 gpm/ft based testing Well 2 while observing depth to water change in Well 1 (9' to 24.9')

Well 1 Pump (Back-up Well)

- Well 1 tested at 552 gpm 65.92' drawdown after 7.8 hours (8.4 gpm/ft); tested 8/28/02
- Static 9.0 feet below ground surface
- 300 gpm at 160 feet TDH (pump curve)
- PWL at 300 gpm is 53 feet (i.e., 36' drawdown $(300/8.4 \text{ gpm/ft}) + 9$ static water level + 8 feet interference drawdown $(300 \text{ gpm}/40 \text{ gpm/ft})$)
- Friction loss in column is 1 foot per 100 feet, or $126'/100 \times 1 = 1.3'$ per 126 feet.
- Assume friction through valves and mechanical piping is 5 feet. Therefore total friction loss is 6.3 feet $(1.3 + 5)$
- Discharge pressure will be 160 feet – 53 feet – 6 feet = 101 feet = 44 psi

Well 2 Pump (Primary Well)

- Well 2 tested at 576 gpm with 36.75 feet drawdown after 7.4 hours (15.7 gpm/ft); tested 9/19/02
- Static 8.5 below ground surface
- 300 gpm at 150 feet TDH (pump curve)
- PWL at 300 gpm is 35 feet (i.e., 19 drawdown $(300/15.7 \text{ gpm/ft}) + 8.5'$ static water level + 7.5 feet interference drawdown $(300 \text{ gpm}/40 \text{ gpm/ft})$)
- Friction loss in column is 5 feet per 100 feet, or $126'/100 \times 5 = 6.3$ feet per 126 feet.
- Assume friction through valves and mechanical piping is 10 feet. Therefore total friction loss is 16.3 feet $(6.3 + 10)$
- Discharge pressure will be 150 feet – 35 feet – 16 feet = 99 feet = 43 psi

System capacity with both pumps operating at 43 psi is 300 gpm + 300 gpm = 600 gpm = 1.34 cfs

E. NARRATIVE/REMARKS/COMMENTS

Two 12-inch wells located on lot 14, block 2, each equipped with a 20 hp variable speed submersible pump, supply domestic water to thirty-one (31) residential lots (lots 2-20, block 1 & lots 2-13, block 2) within Silver Spur Ranch Subdivision. The system consists of four 135-gallon storage tanks, a 6-inch distribution system and 31 one-inch service lines. As required, the wells provide domestic water for internal potable uses only. A separate surface water system has been installed to supply irrigation water from the Stafford Lateral.

The permit lists one well. Proof of Beneficial Use was filed September 29, 2003 for two wells. To alleviate the discrepancy, the permit holder filed a permit amendment December 28, 2006 to add a second well. Rather than processing the application, a field exam was scheduled so that the second well could be authorized with a licensing amendment. The permit holder hired SPF Water Engineering to conduct the licensing exam rather than the department. Copies of the Proof of Beneficial Use and Application for Amendment are included in Attachment A. With this information, a licensing amendment to add the second well will not have to be solicited.

The permit lists a water-bearing zone of 90 to 150 feet. Water-bearing zone was changed to 90 to 240 feet by Scanlan Engineering letter request dated 7/23/02 and approved by S. Keen memo to file dated 7/26/02.

Have conditions of permit approval been met? X yes ___ no

F. FLOW CALCULATIONS

Yes Additional Computation Sheets Attached

Measured Method:

(Pump Curves and Well Pumping Tests, Attachment B & C)

Well 1, 20 hp pump curve: 300 gpm (0.67 cfs)

Well 2, 20-hp pump curve: 300 gpm (0.67 cfs)

When combined, system capacity = 1.34 cfs

Limited to 0.24 cfs per permit

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

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

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

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

2. Volume Calculations for Other Uses:

Potential volume = 0.24 cfs x 365 days x 1.9835 af/cfs-day = 173.8 afa

Required volume = 31 homes x 0.6 afa = 18.6 afa

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
Domestic	1/1	12/31	0.24	18.6
Total			0.24 cfs	18.6 afa

2. Recommended Amendments (see Attachment A)

☐ 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

I. AUTHENTICATION

Field Examiner's Name Terry M. Scanlan, P.E., P.G. Date January 19, 2009

Field Examiner's Signature 

Reviewer _____ Date _____





ATTACHMENT A

PERMIT RECORD
PROOF OF BENEFICIAL USE
PERMIT AMENDMENT

Close

IDAHO DEPARTMENT OF WATER RESOURCES
Water Permit Report

1/5/2009

WATER RIGHT NO. 63-31362

<u>Owner Type</u>	<u>Name and Address</u>
Current Owner	CENTERS CONSTRUCTION INC 325 N MERIDIAN RD MERIDIAN, ID 83642 (208)888-1852

Priority Date: 11/20/2001
Status: Active

<u>Source</u>	<u>Tributary</u>
GROUND WATER	

<u>Beneficial Use</u>	<u>From</u>	<u>To</u>	<u>Diversion Rate</u>	<u>Volume</u>
DOMESTIC	01/01	12/31	0.24 CFS	
Total Diversion			0.24 CFS	

Location of Point(s) of Diversion:

GROUND WATER|NWSW|Sec. 05|Township 03N|Range 01W|CANYON County

Place(s) of use:

Place of Use Legal Description: DOMESTIC CANYON County

<u>Township</u>	<u>Range</u>	<u>Section</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>
03N	01W	5		NWSW										

Conditions of Approval:

- | | | |
|----|-----|--|
| 1. | 26A | 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. |
| 2. | 046 | Right holder shall comply with the drilling permit requirements of Section 42-235, Idaho Code. |
| 3. | WB5 | Domestic use is for 31 homes and does not include lawn, garden, landscape, or other types of irrigation. |
| 4. | X59 | Point of diversion is located within Lot 14, Blk. 2, Silver Spur Ranch Subdivision. |
| 5. | X60 | Place of use is located within Lots 2-20, Blk. 1 and Lots 2-13, Blk. 2, Silver Spur Ranch Subdivision. |
| 6. | | Water bearing zone to be appropriated is 90 to 150 feet. |

Dates:
Proof Due Date: 03/01/2004
Proof Made Date: 09/29/2003
Approved Date: 02/27/2002
Moratorium Expiration Date:
Enlargement Use Priority Date:
Enlargement Statute Priority Date:
Application Received Date: 11/20/2001
Protest Deadline Date: 01/22/2002
Number of Protests: 0
Field Exam Date:.
Date Sent to State Off:
Date Received at State Off:

Other Information:
State or Federal:
Owner Name Connector:

Water District Number:
Generic Max Rate per Acre:
Generic Max Volume per Acre:
Swan Falls Trust or Nontrust:
Swan Falls Dismissed:
DLE Act Number:
Cary Act Number:
Mitigation Plan: False

SCANLAN ENGINEERING

Groundwater and Environmental Engineering

July 23, 2002

RECEIVED

JUL 29 2002

Department of Water Resources

Shelley Keen
Idaho Department of Water Resources
1301 North Orchard Street
Boise, ID 83706

Subject: Water-Bearing Zone for Permit No. 63- 31362

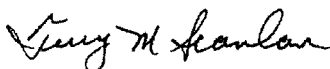
Dear Shelley:

On behalf of Centers Construction, Inc., this letter is a request to change the water-bearing zone remark on permit 63-31362. The permit currently lists a water-bearing zone of 90 to 150 feet. We would like to change the water-bearing zone to 90 to 240 feet.

The reason for the requested change is that we propose to develop for the best aquifer zone (in terms of quantity and quality) within this depth range. The aquifer at this location consists primarily of layers of coarse to fine sand separated by layers and lenses of clay. Although the entire water-bearing interval proposed for appropriation can be considered a single aquifer, the water quality and potential yield will vary from layer to layer. We plan to drill our first borehole to approximately 200 feet total depth, and then complete the well in the most promising aquifer zone encountered. Depending on the quality and quantity of water obtained from the first well, we may attempt to complete the second well in either the same zone or in a different zone. We do not anticipate any impact to local wells or water rights by this change.

Please contact me with any questions.

Sincerely,



Terry M. Scanlan, P.E., P.G.

Cc: Robert Walker P.E.
Lee Centers

MICROFILMED

JUL 29 2002

600 East River Park Lane, Suite 105
Boise, Idaho 83706

Telephone (208) 383-4140
Facsimile (208) 383-4156

MEMORANDUM

DATE: July 26, 2002

TO: Water Right File 63-31362

FROM: Shelley W. Keen *SWK*

RE: Request to drill deeper than 150 ft.

This morning I discussed with Mark Slifka and Rob Whitney the applicant's request to drill the well deeper than 150 ft., as indicated on the water appropriation permit. Mark did not have any concerns about drilling deeper, as long as the uncased portion of the well was not more than 25% of the total depth. Rob indicated that drilling deeper might even avoid a potential nitrate problem. They agreed to amend the drilling permit as long as doing so does not violate the water appropriation permit. A change in the depth of the well in this instance is not a "substantial change" to the proposed method of diversion and/or use of water. Therefore, an amendment of permit is not required pursuant to §42-211, *Idaho Code*.

MICROFILMED

AUG 15 2002

FOR OFFICE USE ONLY

Amt. of Fee \$ 100.00
Receipt No. 6571049
Receipt By: [Signature]
Date Received: 9-29-03

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

RECEIVED

PROOF OF BENEFICIAL USE

SEP 29 2003

The Idaho Department of Water Resources considers this form a statement that the permit holder(s) has/have completed all development that will occur under this permit and that water has been applied according to the provisions of the permit for the beneficial use(s) described below. This form must be accompanied by a license examination fee, when necessary, or be accompanied by a completed field examination report prepared by a certified water right examiner.

1. Permit No. 63-31362 Telephone No. (208) 888-1852

2. Name of Permit Holder(s): CENTERS CONSTRUCTION, INC.

3. Mailing Address: 325 N. MERIDIAN ROAD

City MERIDIAN State ID. Zip 83642

4. Source of Water: GROUNDWATER If GROUNDWATER (well), Date Drilled: mo. 9 / yr. 2002

Well Driller: ADAMSON PUMP & DRILLING Drilling Permit Number: 0025350 & 0025629

5. Use(s) (as authorized by the water right permit):

Domestic (No. of households): 31 Stockwater (No. and type of stock): N/A

Irrigation (No. of acres): N/A Other: N/A

6. Total rate of diversion and/or volume for which proof is submitted: 0.24 cfs OR acre-feet

7. Measuring Device Requirement: (refer to the approval conditions on your permit and respond accordingly)
(This question is **not** optional. Please check either yes or no. Proofs returned not checked accordingly, will be considered incomplete)

Measuring Device: Is a measuring device required?
Has the measuring device been installed?

Yes X or No
Yes X or No

8. Fee Enclosed: \$ 100.00 (See Fee Schedule on back of the instructions for filing proof of beneficial use)

9. Person to contact to accompany the Department representative during field examination of the water system.

Name: ROBERT P. WALKER Telephone Number: (208) 880-1345

Address: 5710 W. RANDOLPH DR., BOISE, IDAHO 83705

10. The information given on this form is my true statement of the extent to which the above numbered permit has been developed and water has been diverted. I agree to relinquish any undeveloped portion of the permit to the State of Idaho.

Signature of permit holder: [Signature] Date: 9-4-03
(include your title, if on behalf of company or organization)

MICROFILMED

FEB 10 2004

RECEIVED

DEC 28 2006

WATER RESOURCES
WESTERN REGIONSTATE OF IDAHO
DEPARTMENT OF WATER RESOURCESFee \$50
Receipt W034482
Received by JL
Date 12/28/06

APPLICATION FOR AMENDMENT OF A PERMIT

Name of Applicant CENTERS CONSTRUCTION INC. Phone (208) 888-1852Mailing address 325 N. MERIDIAN RD., MERIDIAN, IDAHO 83642I am the owner and the holder of Permit to Appropriate the Public Waters of the State of Idaho No. 63-31362, and request that the permit and permit map be amended and/or changed as follows:

Purpose of Amendment: _____ Change point of diversion X Add point of diversion
 _____ Change place of use _____ Change nature of use _____ Change period of use _____ Other

1. Point of diversion: _____ $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$, Section 5, Township 3 N., Range 1 W., B.M.,
 County of CANYON. Other points of diversion GROUNDWATER WELL ON SAME LOT (LOT 14, BLK 2, SILVER SPUR RANCH SUBD.) AS WELL DESIGNATED IN PERMIT No. 63-31362.

2. Period and nature of use: (irrigation, domestic, stockwatering, industrial, etc.)

Amount 0.24 CFS for DOMESTIC purposes from 01/01 to 12/31 (both dates inclusive)
 (cfs or acre-feet per annum) (water use) (Begin Month) (End month)

Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
 (cfs or acre-feet per annum) (water use) (Begin Month) (End month)

Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
 (cfs or acre-feet per annum) (water use) (Begin Month) (End month)

3. Place of use or land to be irrigated: N/A

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	

Total number of acres to be irrigated _____

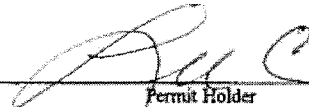
4. a. Who owns the property at the point of diversion? CENTERS CONSTRUCTION INC.
- b. Who owns the land to be irrigated at the place of use? HOMEOWNERS WITHIN SILVER SPUR RANCH SUBD
- c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing:
APPLICANT IS DEVELOPER OF SILVER SPUR RANCH SUBDIVISION
AND AS SUCH HAS DEVELOPED A DOMESTIC WATER SYSTEM
TO SERVE ALL HOMEOWNERS WITHIN THE SUBDIVISION.

Complete the following map by showing land and point of diversion as proposed by this amendment.
Show $\frac{1}{4}$ section, township, range and ditches. (the smallest subdivision represents 40 acres)

Scale: 2 inches equal 1 mile

I hereby request approval of this change subject to the fact that no one will be injured by the change, and that the change will be made at my own risk.

Signed this 22ND day of DECEMBER, 2006.


Permit Holder

ACTION OF THE DEPARTMENT OF WATER RESOURCES

Preliminary check by AR Publication prepared by _____ Date _____

Published in _____ Publication dates _____

I, _____, of the Department of Water Resources hereby

Witness my hand this _____ day of _____, 20 _____.

SIGNATURE



ATTACHMENT B
WELL NO. 1
WELL LOG, PUMP CURVE, WELL PUMPING TEST

IDAHO DEPARTMENT OF WATER RESOURCES WELL DRILLER'S REPORT

WELL #1
780377

1. WELL TAG NO. D 0025350
DRILLING PERMIT NO. _____
Other IDWR No. _____

2. OWNER:
Name Silver Spur Ranch % Center's Const
Address 325 N. Meridian Rd
City Meridian State Id Zip 83642

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

N		Twp. <u>3</u>		North ☒ or South ☐	
E		Rge. <u>1</u>		East ☐ or West ☒	
S		Sec. <u>5</u>		NW 1/4 SW 1/4 SE 1/4 1/4	
W		Gov't Lot _____		County <u>Canyon</u>	
X		Lat: _____		Long: _____	

Address of Well Site Star Rd between
Utah & Cherry Lane City Meridian
(Give at least name of road, distance to road or landmark)

Lt. _____ Blk. _____ Sub. Name Silver Spur

4. USE:

☐ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☒ Other Public Water Supply

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/FILTER PACK			AMOUNT		METHOD
Material	From	To	Sacks or Pounds		
Bentonite	0	40	7,200		pour
Neat cement	40	175	16yds		pressured grouted
Silica Sand	175	240	15,000		pour

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

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
12"	±2	181	3/8	Steel	☒	☐	☒	☐
12"	191	205	3/8	Steel	☒	☐	☒	☐
12"	215	223	3/8	Steel	☒	☐	☒	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

Perforations Method _____
Screens Screen Type Johnson

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
181	191	.020		12"	SS	☐	☐
205	215	.030		12"	SS	☐	☐
223	233	.030 w/end		12"	SS	☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

14' ft. below ground Artesian pressure _____ lb.

Depth-flow encountered _____ ft. Describe access port or control devices: metal plate

11. WELL TESTS:

☒ Pump ☐ Baller ☐ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
500-600	65'	147'	8 hours

Water Temp. 58° Bottom hole temp. _____

Water Quality test or comments: Iron .5 PH 7.5

Grains 7 Depth first Water Encounter _____

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
20	0	2	clay soil		
	2	10	top soil & hard pan		
	10	30	sand & gravel	X	
	30	35	clay & sand		
19'	35	60	sand	X	
	60	63	clay		
	63	75	sand	X	
	75	84	clay		
	84	86	sand	X	
	86	92	clay & sandy clay	X	
	92	100	clay		
	100	101	sand stringers		
	101	125	clay		
	125	134	clay w/ sand stringers		
	134	135	sand	X	
	135	136	clay		
	136	138	clay w/ sand stringers		
	138	143	sand	X	
	143	150	clay & softer clay w/ coarse sand		
	150	154	hard clay w/ sand stringers		
	154	163	hard & soft clay		
	163	165	soft clay		
	165	182	soft clay		
	182	189	sand	X	
	189	192	hard clay		
	192	193	sandy clay		
	193	194	hard clay		
	194	201	clay w/ sand stringers		
	201	204	clay		
	204	207	clay		
	207	215	sand	X	
	215	225	sandy clay		

Cont'd

Completed _____ Depth 233' (Measurable)
Date: Started 7-19-02 Completed 8-23-02

13. DRILLER'S CERTIFICATION

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

Company Name Edgmon Pump & Drill Firm No. 457

Firm Official Dave Edgmon Date 8-30-02

and Driller or Operator DAVE ADAMSON Date 8-30-02

(Sign once if Firm Official & Operator)

PERFORMANCE CURVES

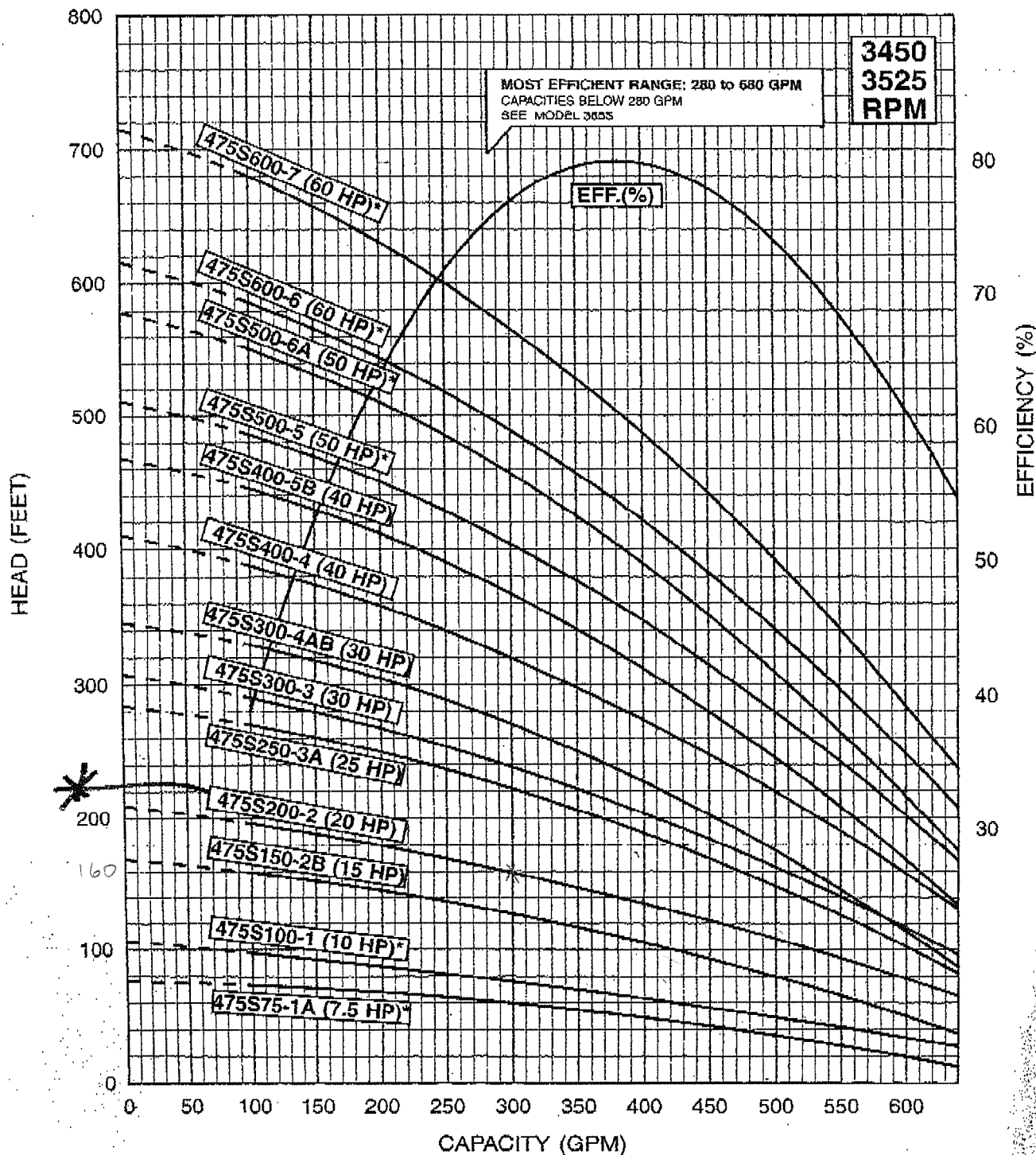
Secondary Pump
475 GPM

WELL #1
MODEL 475S

FLOW RANGE: 95 - 680 GPM

OUTLET SIZE: 6" NPT

NOMINAL DIA. 8"



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

6" MOTOR STANDARD, 10-60 HP/3450 RPM.

8" MOTOR STANDARD, 75-125 HP/3525 RPM.

* Alternate motor sizes available.

Performance conforms to ISO 9906 Annex A
@ 8 ft. min. submergence.

SILVER SPUR RANCH WELL NO. 1 (SOUTHEAST WELL)
CONSTANT-RATE PUMPING TEST 8/28/02

Pumping rate measured with totalizing flow meter

Water level measuring point is top of well casing at approximately 2.3 feet above ground level

Water levels measured with well sounder

Time	Elapsed Time (minutes)	Depth to Water (feet)	Draw-down (feet)	Averaged Pumping Rate (gpm)	Totalizer Reading (100 gallons)	Remarks
7:58	0	11.25			7825	
8:00	2	56.50	45.25	550	7836	start pump
8:02	4	57.08	45.83	0	7836	
8:04	6	58.08	46.83	600	7848	
8:06	8	60.21	48.96	700	7862	
8:09	11	60.75	49.50	500	7877	
8:13	15	61.37	50.12	600	7901	
8:18	20	61.79	50.54	540	7928	
8:22	24	61.92	50.67	625	7953	
8:27	29	62.58	51.33	500	7978	
8:30	32	62.42	51.17	667	7998	
8:35	37	62.75	51.50	540	8025	
8:42	44	63.04	51.79	571	8065	
8:55	57	63.54	52.29	569	8139	T=60.1 deg F, SC=540 uS, EC=441 uS, pH=7.03
9:05	67	63.75	52.50	590	8198	
9:19	81	64.08	52.83	550	8275	
9:32	94	64.29	53.04	569	8349	
9:48	110	64.46	53.21	537	8435	
10:00	122	64.62	53.37	592	8506	
10:15	137	64.84	53.59	553	8589	
10:30	152	65.00	53.75	560	8673	
11:00	182	65.21	53.96	567	8843	
11:30	212	65.42	54.17	570	9014	
12:00	242	65.64	54.39	570	9185	
12:30	272	65.75	54.50	547	9349	
13:00	302	65.96	54.71	590	9526	T=60.1 deg F, SC=508 uS, EC=417 uS, pH=7.16 finish water sampling shut down pump prior to sand sampling restart sand sample
13:25	327	66.00	54.75	568	9668	
13:27	329					
13:38	340					
13:38	340					
14:00	362	65.00	53.75		9832	
14:30	392	65.50	54.25	540	9994	
15:00	422	65.75	54.50	593	10172	
15:30	452	65.88	54.63	537	10333	
15:46	468	65.92	54.67	552	10410	stop pump, 552 gpm test average
15:47	469	19.50	8.25			
15:50	472	18.50	7.25			
15:55	477	17.00	5.75			
16:00	482	16.00	4.75			
16:05	487	15.84	4.59			
16:10	492	15.16	3.91			
16:15	497	15.84	4.59			
16:20	502	15.08	3.83			
16:25	507	15.00	3.75			
16:30	512	14.08	2.83			

ATTACHMENT C
WELL NO. 2
WELL LOG, PUMP CURVE, WELL PUMPING TEST

PERFORMANCE CURVES

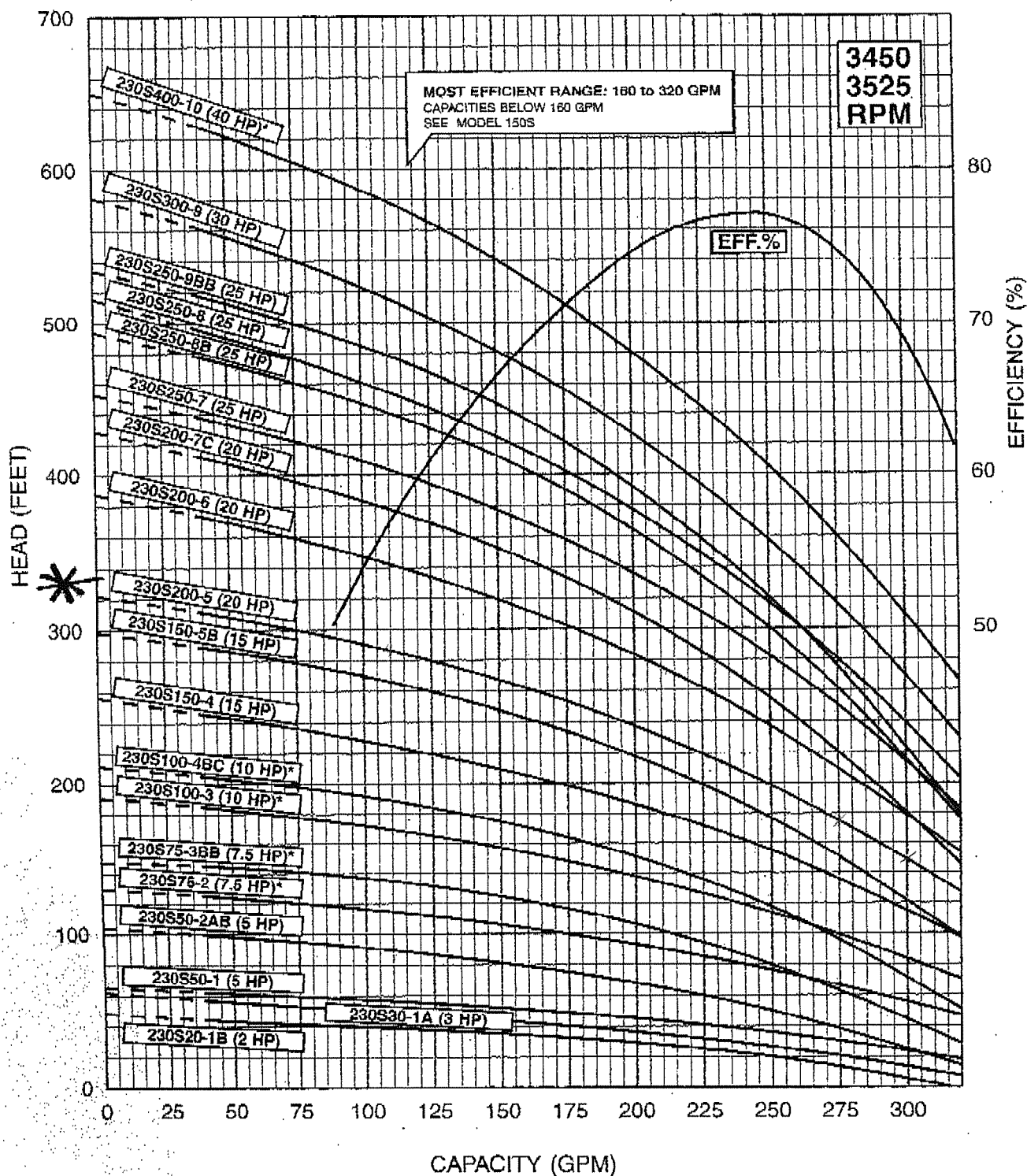
Primary Pump
230 GPM

WELL #2
MODEL 230S

FLOW RANGE: 160 -320 GPM

OUTLET SIZE: 3" NPT

NOMINAL DIA. 6"



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

4" MOTOR STANDARD, 7.5 HP/3450 RPM
6" MOTOR STANDARD, 10-60 HP/3450 RPM.
8" MOTOR STANDARD, 75 HP/3525 RPM.

* Alternate motor sizes available.

Performance conforms to ISO 9906 Annex
@ 8 ft. min. submergence.

Silver Spur Well No. 2 (Northwest Well)
Constant-Rate Pumping Test - 9/19/02

Pumping rate measured with totalizing flow meter

Water level measuring point is top of well casing at approximately 2' agl

Water levels measured with well sounder

Time	Elapsed Time (minutes)	Depth to Water (feet)	Draw- down (feet)	Averaged Pumping Rate (gpm)	Totalizer (gallons)	Remarks
8:35		10.50	0.00		797	Start Pump
8:40	5	40.59	30.09	640	829	
8:45	10	41.84	31.34	620	860	
8:50	15	42.64	32.14	720	896	
8:55	20	43.04	32.54	400	916	
9:00	25	43.46	32.96	580	945	
9:10	35	44.00	33.50	590	1004	
9:20	45	44.46	33.96	580	1062	
9:32	57	45.00	34.50	608	1135	
9:45	70	45.21	34.71	531	1204	
9:55	80	45.50	35.00	670	1271	
10:05	90	45.84	35.34	590	1330	
10:20	105	45.96	35.46	507	1406	
10:35	120	46.04	35.54	567	1491	
10:50	135	46.29	35.79	593	1580	
11:05	150	46.33	35.83	593	1669	
11:50	195					T=59.5 deg F, 392 uS, 482 uS, pH=7.01
12:25	230					24.8 ft dtw in Well No. 1; finish sample collection
12:36	241	46.92	36.42	577	2194	
13:06	271	46.96	36.46	573	2366	
13:36	301	46.92	36.42	560	2534	
15:00	385	47.00	36.50	570	3013	
15:35	420	47.12	36.62	583	3217	
16:00	445	47.25	36.75	576	3361	stop pump; 576 gpm average for test



ATTACHMENT F
PHOTOS



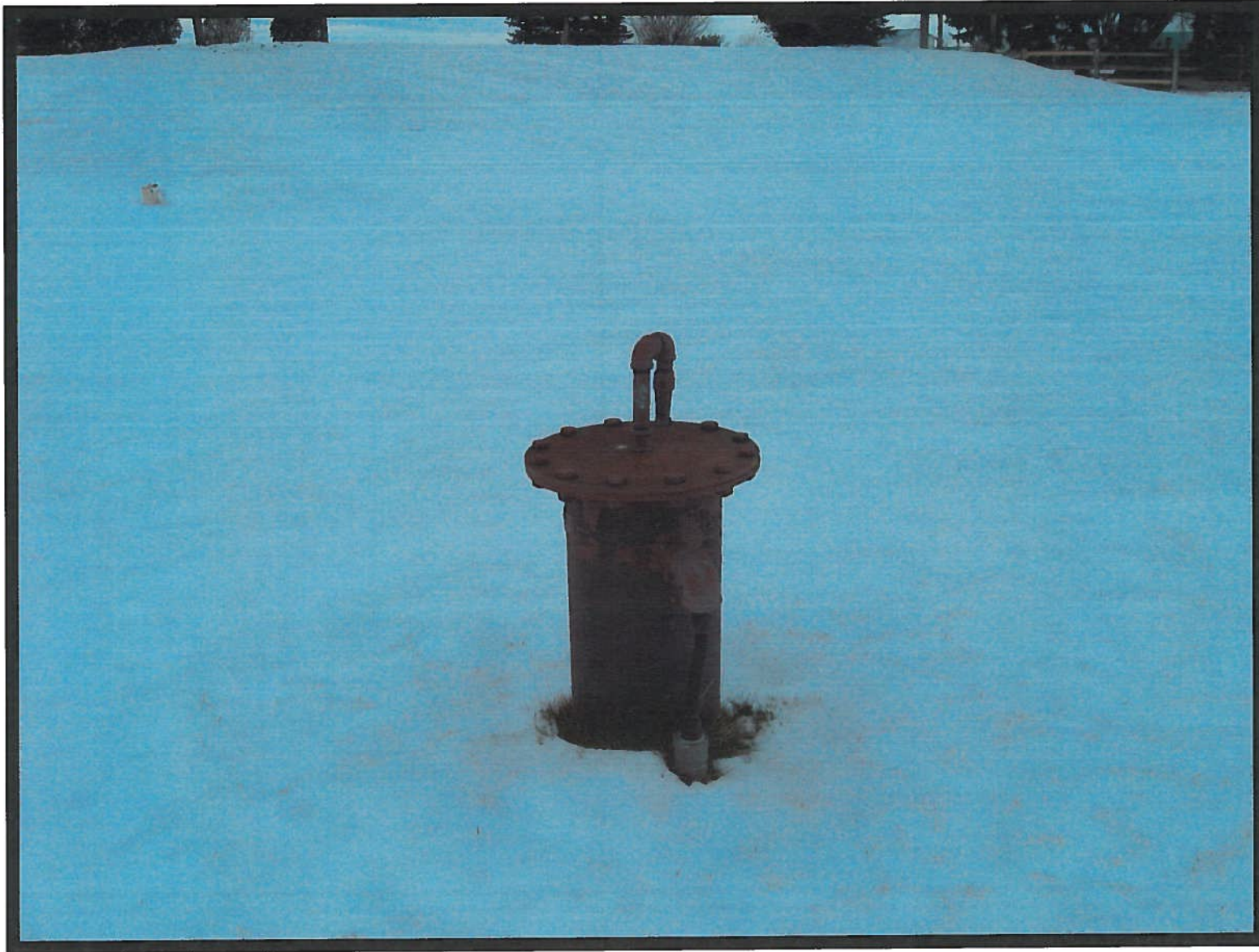
McCrometer Flowmeter, Pressure Gage, 135 Gallon Storage Tanks



Place of Use: Lots 2-20, Block 1 & Lots 2-13, Block 2, Silver Spur Ranch Subdivision



Well House: Lot 14, Block 2, Silver Spur Ranch Subdivision



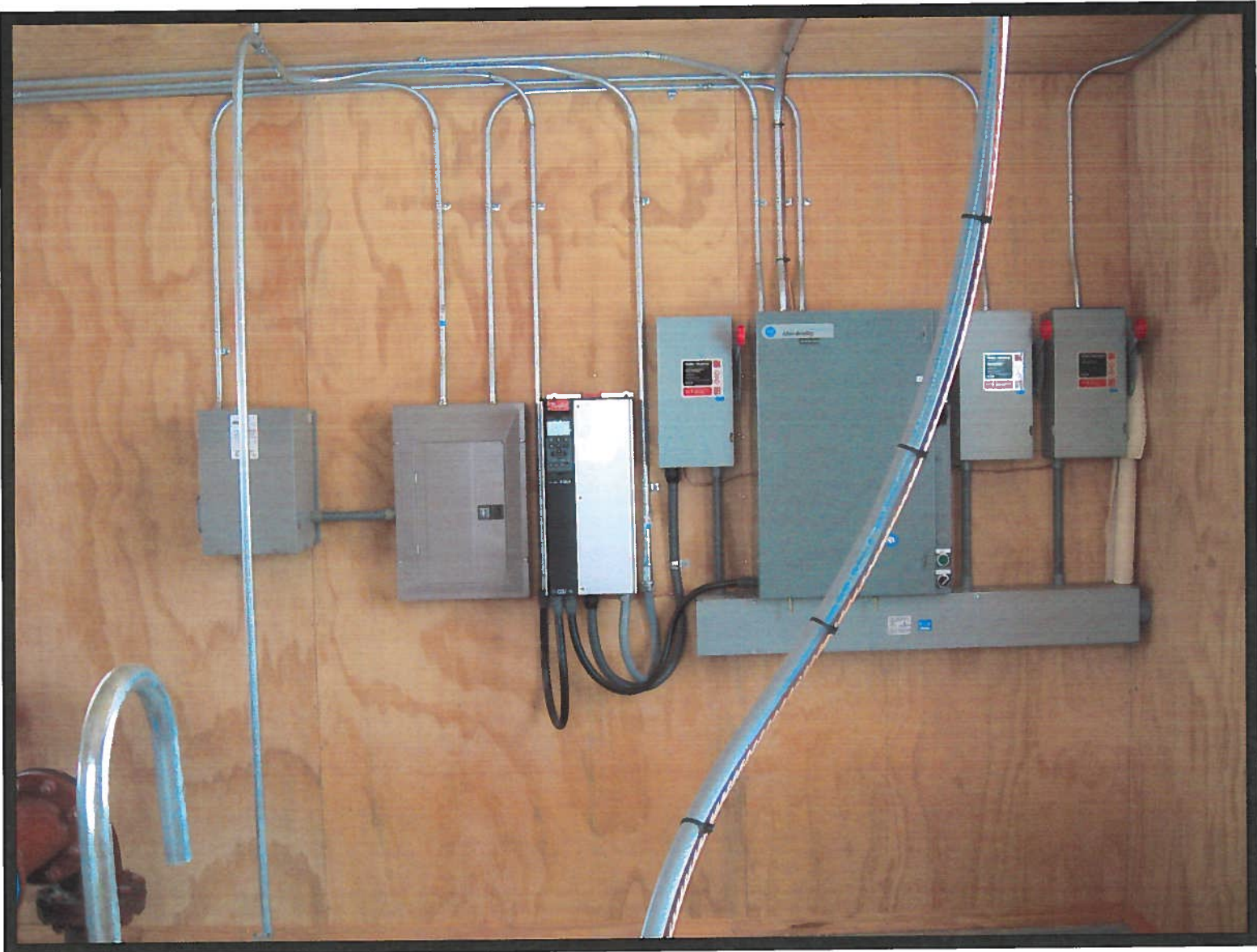
Primary Well No. 2 Located 20 feet NW of the Well House



System Overview



System Overview



Controlling Works



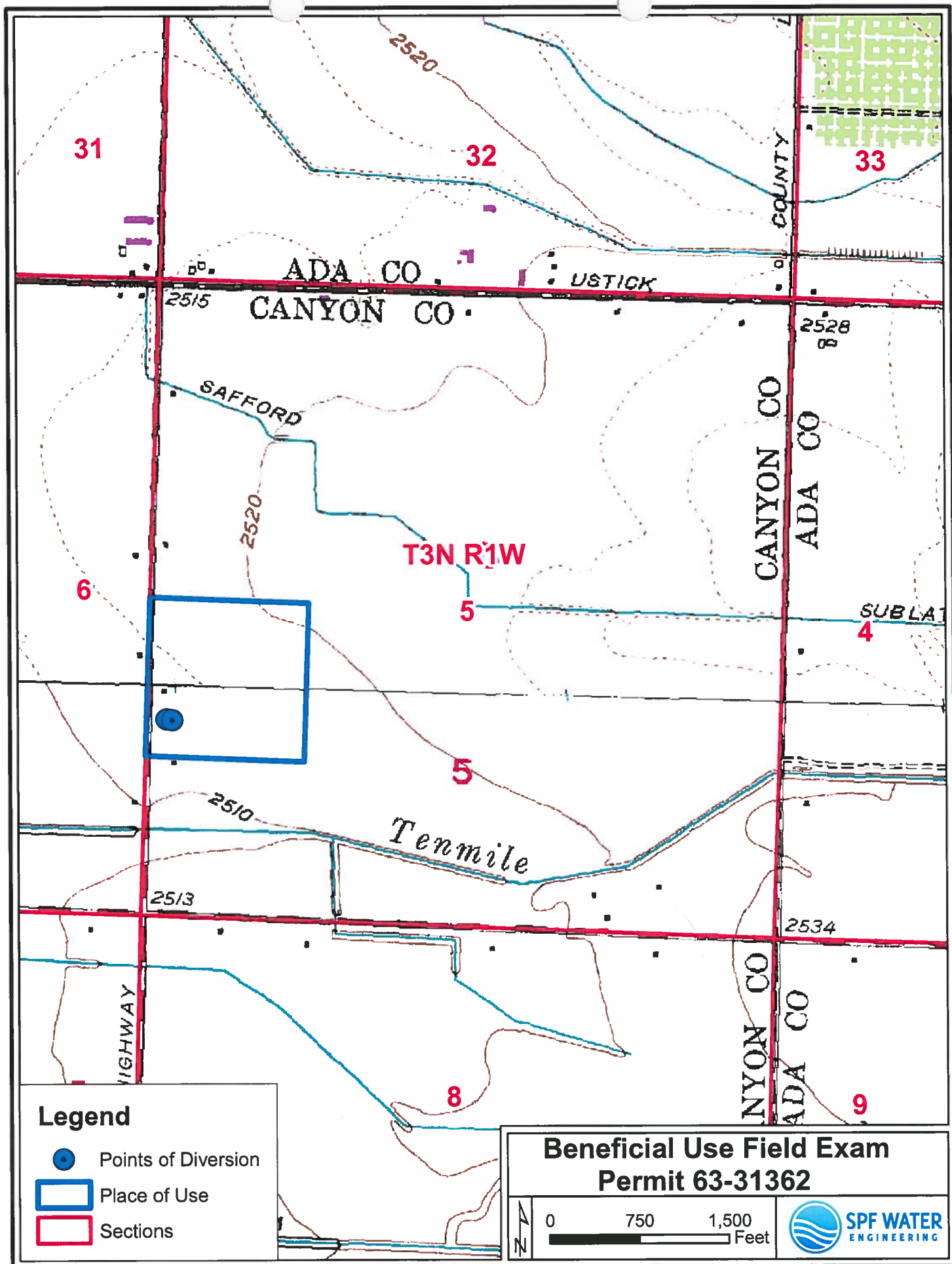
Back-up Well No. 1 Located Inside the Well House

ATTACHMENT D
PLAT MAP & SYSTEM DIAGRAM



ATTACHMENT E

TOPO MAP AND 2006 AERIAL PHOTO



2006 AERIAL PHOTO

31

32

33

T3N R1W

6

5

4

8

9

Legend



Points of Diversion



Place of Use



Sections

Beneficial Use Field Exam Permit 63-31362



0 750 1,500
Feet



SPF WATER
ENGINEERING