

RECEIVED
SEP 30 2009
DEPARTMENT OF
WATER RESOURCES

A. GENERAL INFORMATION

Permit No. 78-12159

1. Owner: Kings Pines Estates III HOA, Inc. Phone No.: 208-657-6464

Current Address: 501 W. Lake St., McCall, ID 83638

2. Accompanied by: _____ EXAM DATE: 8/17/2009

Address: _____ Phone No. _____

Relationship to Permit Holder: _____

3. Source: Ground Water tributary to _____

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None

2. Other water rights with the same point of diversion: 78-7396

C. DIVERSION AND DELIVERY SYSTEM

1. Point(s) of Diversion:

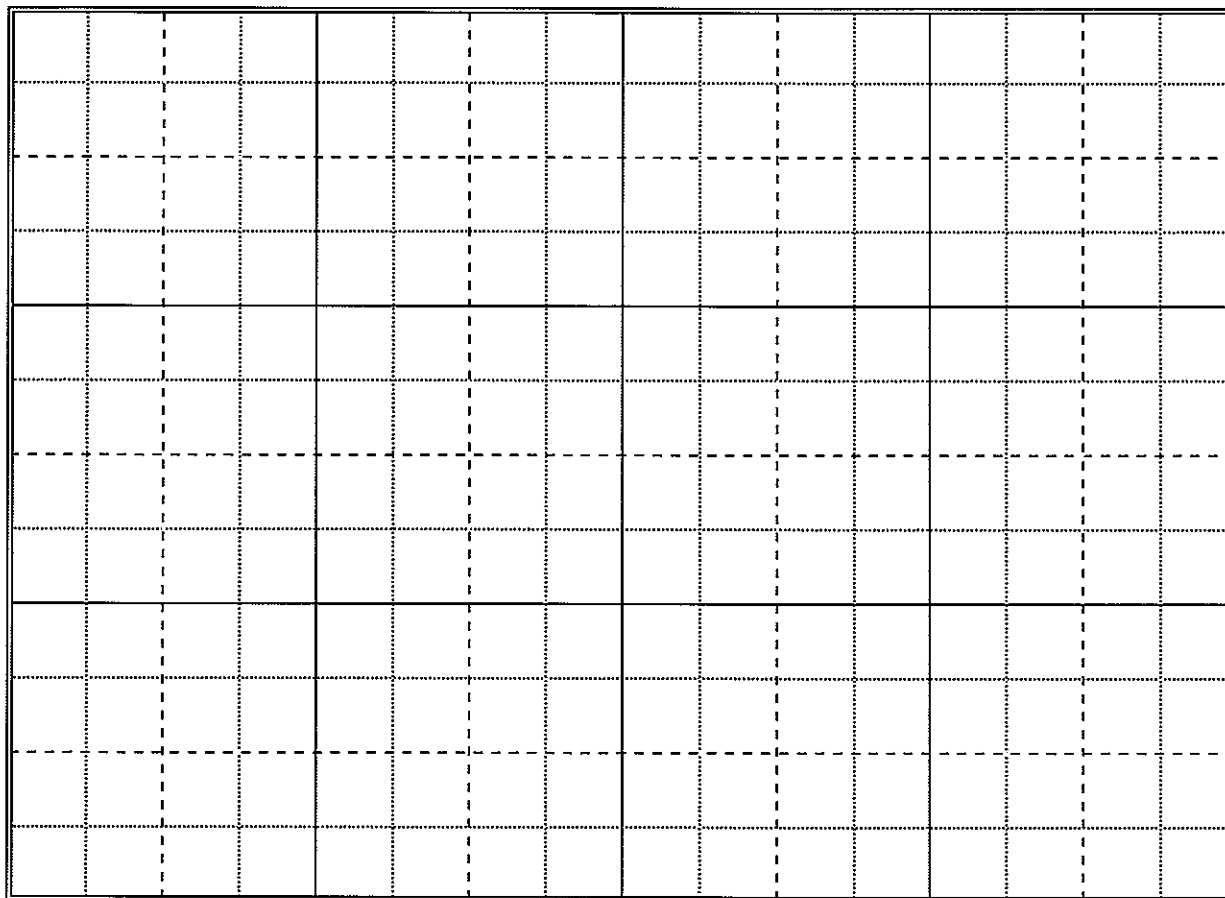
[illegible]

2. Place(s) of Use:

Indicate Method of Determination Field Exam

[illegible]

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
North Well		60		Grundfos Submersible	Model 230S
South Well		30		Grundfos Submersible	Model 150S
Booster Pump 1	Baldor	5	F400	Goulds	J0007588
Booster Pump 2	Baldor	5	F00120522B4	Goulds	E0134312

*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		01-02080-6	6-inch	

2. **Measurements:** Discharge was not measured due to lack of demand in the system at the time of the field exam. System pressure in the well house, on three pressure gages, was measured at 185, 190, and 190 psi.

E. NARRATIVE/REMARKS/COMMENTS

Two 8-inch wells supply domestic water to 32 lots within Kings Pines Estate I under this permit and 64 lots within King's Pines Estates III and IV under permit 78-7396. The North Well is equipped with a 60-hp submersible pump and is located in Lot 12, Block 1, King's Pines Estates IV. The South Well is equipped with a 30-hp submersible pump and is located in Lot 10, Block 1, King's Pines Estates IV. The place of use is described as Lots 1-13, Block 1, Lots 1-12, Block 2, and Lots 1-7, Block 3, King's Pines Estates I.

Both wells discharge through pitless units to a common well house located adjacent to the south well. The well house includes a flow meter, pressure reducing valves, and pressure relief valves.

The system includes a booster station and storage tank located between Lot 1, Block 1, King's Pines Estates III and Lot 12, Block 2, King's Pines Estates I. The booster station includes two Goulds VFD end suction pumps with 5-hp motors and a 25-gallon hydropneumatic pressure tank. A nominal 10,000-gallon storage tank, 14 feet high with a circumference of 12 feet, is located just west of the booster station. The booster station and storage tank enables domestic water to be delivered to the higher elevation lots within Kings Pines Estates I and III. Water is supplied by gravity from the tank (or pumped directly from the wells) to the remaining lots.

The permit lists domestic use (internal only) and lot irrigation for 8.0 acres. Rather than describing domestic use with two components, only domestic use has been recommended for licensing at 1.2 afa per lot to cover both internal and external domestic uses. Each lot is limited to 1/2 acre irrigation and common areas are not included. This proposed amendment does not exceed the permit parameters and/or intent of the original application.

At the time of the exam, all 32 lots had been stubbed into the water delivery system, with thirteen completed homes and two under construction.

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

F. FLOW CALCULATIONS

Yes Additional Computation Sheets Attached

Measured Method:

(Pump Curves, Well Logs, and Test Pump Data; Attachment B)

North Well

Pump Curve: 275 gpm (0.61 cfs) @ 660 feet TDH

PWL @ 0.61 cfs = SWL (153') + DD (275 gpm / 5.5 gpm/ft = 50') = 203'

Discharge Pressure = 190 psi = 439 feet

Friction Loss = 18 feet (600 feet of 6" pipe to well house at 0.5 ft/100 ft, 300 feet of 4" column pipe at 5 ft/100 ft)

TDH = SWL + DD + discharge Pressure + friction loss = 153 + 50 + 439 + 18 = 660 feet

South Well

Pump Curve: 124 gpm (0.28 cfs) @ 689 feet TDH

PWL @ 0.28 cfs = SWL (173') + DD (124 gpm / 2.0 gpm/ft = 62') = 235'

Discharge Pressure = 190 psi = 439 feet

Friction Loss = 15 feet (100 feet of 4' pipe to well house at 1 ft/100 ft, 350 feet of 3" column pipe at 4 ft/100 ft)

TDH = SWL + DD + discharge Pressure + friction loss = 173 + 62 + 439 + 15 = 689 feet

Combined capacity of both wells is 399 gpm (0.89 cfs)

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 8.0 \times 3.0 =$

$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 0.16 \times 200 \times 1.9835 =$

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

2. Volume Calculations for Other Uses:

Internal and External Domestic Uses

Required: 32 lots $\times$ 1.2 af/lot = 38.4 afa

Potential: 0.42 cfs $\times$ 365 days $\times$ 1.9835 = 304.1 afa

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion	Annual Volume
	From	To	Q (cfs)	V (afa)
Domestic	1/1	12/31	0.42	38.4

Not to exceed 0.89 cfs in combination with 78-7396

2. Recommended Amendments

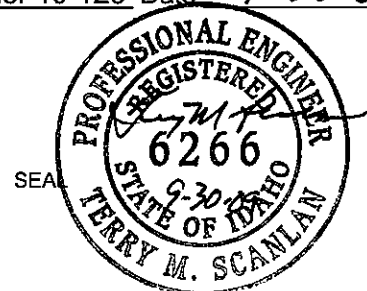
☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☐ None
☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☒ Other (change irrigation use to domestic)

I. AUTHENTICATION

Field Examiner's Name Terry M. Scanlan, P.E., Certified Water Right Examiner 10-129 Date 9-30-09

Field Examiner's Signature 

Reviewer _____ Date _____



ATTACHMENT A

PERMIT RECORD AND PROOF OF BENEFICIAL USE

State of Idaho
Department of Water Resources
Permit to Appropriate Water

NO. 78-12159

Priority: 10/15/2001

Maximum Diversion Rate: 0.42 CFS

This is to certify, that **KINGS PINES ESTATES INC**
PO BOX 704
MC CALL ID 83638

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	0.26 CFS
IRRIGATION	04/15 to 10/31	0.16 CFS

LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER	SW $\frac{1}{4}$ NW $\frac{1}{4}$	Sec. 1, Twp 18N, Rge 02E, B.M.	ADAMS County
GROUND WATER	NW $\frac{1}{4}$ SW $\frac{1}{4}$	Sec. 1, Twp 18N, Rge 02E, B.M.	ADAMS County

PLACE OF USE: IRRIGATION

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
18N 02E 1			1.0									1.0			3.0	3.0	8.0

Total Acres: 8

PLACE OF USE: DOMESTIC, same as Irrigation

CONDITIONS OF APPROVAL

1. Proof of application of water to beneficial use shall be submitted on or before February 1, 2007.
2. Subject to all prior water rights.
3. 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.
4. The issuance of this right does not grant any right-of-way or easement across the land of another.
5. Right holder shall comply with the drilling permit requirements of Section 42-235, Idaho Code.
6. 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.
7. 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.

MICROFILMED

DEC 11 4 2002

State of Idaho
Department of Water Resources
Permit to Appropriate Water

NO. 78-12159

CONDITIONS OF APPROVAL

8. This right when combined with all other rights shall provide no more than 0.02 cfs per acre nor more than 3.0 afa per acre at the field headgate for irrigation of the lands above.
9. Domestic use is for 32 homes and does not include lawn, garden, landscape, or other types of irrigation.
10. Place of use is located within Lots 1-13, Blk. 1; Lots 1-12, Blk. 2; and Lots 1-7, Blk. 3; Kings Pines Estates.

This permit is issued pursuant to the provisions of Section 42-204, Idaho Code. Witness the signature of the Director, affixed at Boise, this 8th day of February, 2002

Karl J. Dreher

KARL J DREHER, Director

for

MICROFILMED

OCT 04 2002

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
STATEMENT OF COMPLETION
FOR SUBMITTING PROOF OF BENEFICIAL USE

FOR OFFICE USE ONLY
Amt. of Fee \$: _____
Receipt No. _____
Receipt By: _____
Date Received: _____

The Idaho Department of Water

Resources considers this form a statement by the permit holder(s) that development of a water right has been completed and that water has been applied to beneficial use to the extent described below. This form must be accompanied by an examination fee, when necessary, or by a completed Beneficial Use Field Report prepared by a certified water right examiner. Please refer to the instructions and fee schedule for this form. If ownership of the permit has changed, please contact any Department office or visit the Department's website at: www.idwr.idaho.gov for an Assignment of Permit form. If you wish to relinquish your permit because you have not established the authorized use of the water and are not applying for an extension, please notify the Department in writing.

1. Permit No. 78-12159 Telephone No. 208-630-0221 **RECEIVED**
2. Name of Permit Holder(s): King's Pines Estates III Homeowners' Association, Inc. **SEP 30 2009**
3. Mailing Address: 501 W. Lake Street City McCall **Department of Water Resources**
State ID Zip 83638 Email: _____

4. Source of Water: Ground Water If **GROUND WATER** (well), Date Drilled: mo. _____ / yr. _____

Well Driller: Robert Dawson Drilling Permit Number: 78-99-W0031-801, 78-99-W0032-801

5. Extent of use(s) completed (as authorized by the water right permit):

Domestic (No. of households): 32 Stockwater (No. and type of stock): _____

Irrigation (No. of acres): 8.0 Other: _____

6. Total rate of diversion or storage volume for which proof is submitted: 0.42 cfs OR _____ acre-feet.

7. Compliance with a Measuring Device requirement and/or other Conditions of Permit: *(Refer to the approval conditions on your permit and respond accordingly.)*

Measuring Device: Is a measuring device required?
If yes, has the measuring device been installed?

Yes ☐ or No ☒
Yes ☒ or No ☐

Conditions of Permit: Does your permit require you to submit additional information in connection with your proof of beneficial use? (If yes, please list the conditions below and provide documents if necessary.)

Completed?

Yes ☐ or No ☐

Completed?

Yes ☐ or No ☐

8. Fee Enclosed: \$ N/A (See Fee Schedule on back of the instructions for filing proof of beneficial use. Proofs filed without an appropriate fee, will be considered incomplete.)

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

Name: _____ Telephone Number: _____

Mailing Address: _____ City _____

State _____ Zip _____ Email: _____

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 and applied to a beneficial use. I understand that any undeveloped portion of the permit is relinquished to the State of Idaho.

Signature of permit holder: *Rich Mooney* Date: 9-24-09
(include your title, if on behalf of company or organization)

Rich Mooney

Rich Mooney

9-24-09

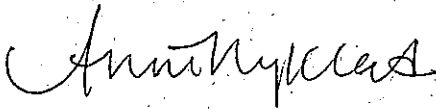
Whitetail

September 24, 2009

To whom it may concern:

The Kings Pines Estates III Homeowners Association had a meeting in 2007, were they elected new directors. Meeting minutes are enclosed to provide further verification. Currently, the directors placed on the annual report form are incorrect. Documents have been submitted to the Secretary of State to change the registered mailing address, office and agent as well as to update the directors. Please let me know if I may provide any further information.

Sincerely,



Annie Myklegard
208-634-1730

**Kings Pine Estates III Homeowners Association
Annual Meeting of the Members
Wednesday, April 25, 2007**

1. Meeting opened at 5:18pm
2. Established Quorum
 - a. Steve Merandi, Block I, Lot 12
 - b. Mark Robinson, Block I, Lot 4
 - c. Phil Feinburg representing Mark Boerner Block I, Lot 5
 - d. Jason Porter, Block I, Lot 2
 - e. Frank Brown representing 25 absent lot owners in Kings Pine Estates III via proxy
 - f. John Sabala – declarant – owning 34 lots in Kings Pine Estates IV
3. Election of Directors
 - a. Mark Robinson
 - b. Rick Mooney
 - ~~c. John Sabala~~ *MIKE HUMMEL*
 - d. Steve Merandi
 - e. Kelsie Medel
 - i. Mark Robinson motioned to approve the nominations, Steve Merandi seconded and motion passed with unanimous vote
4. Review Second Supplemental Declaration of CC & R's of Kings Pine Estates IV
 - a. Steve Millemann noted the addition of language in Article 2, Section 7.1 A and Section 12.2 E to allow road construction (access) to declarant across common area in Kings Pine Estates IV (does not permit access across common area in Kings Pine Estates III)
 - b. John Sabala expressed the declarants intention to gain access from Kings Pine Estates IV to Whitetail Phase III property
 - c. Steve Merandi voted to approve the Second Supplemental Declaration of CC & R's of Kings Pine Estates IV as written and authorize the President, ~~John Sabala~~, to sign, Mark Robinson seconded and the motion passed with unanimous vote
5. Discussion regarding the water system
 - a. Frank Brown presented the Warranty Bill of Sale for the King's Pine Estates Public Water System (DEQ ID # 3020038) to the association
 - b. Steve Merandi suggested King's Pine III and IV create separate associations and create an agreement between the two associations for the water rights
 - c. John expressed the declarant was indifferent to whether or not the two remained as one association
 - d. Steve Millemann stated it would require a majority vote of all King's Pine Estates I, III, and IV owners
6. Discussion regarding the management of the Association
 - a. Frank Brown has been managing the association and will passing it along to the individual who will take over (declarant will determine who that is)

MIKE HUMMEL ←

- b. The manager will be responsible for the annual dues and water use billings, overseeing the water system, obtain HOA liability insurance, transfer of accounts, contact with the title company, etc.
- 7. Board of Directors Meeting
 - a. Will set date of meeting and notify all members
 - b. Elect officers
 - c. Elect individual to run association
 - d. Elect Architecture Control Committee members and review existing guidelines
 - e. Establish budget
- 8. Adjourned at 6:28pm

ATTACHMENT B

**WELL LOGS, PUMP CURVES &
TEST PUMPING REPORT**

WELL DRILLER'S REPORT

59869

NORTH WELL

1. WELL TAG NO. D 0012235
DRILLING PERMIT NO. 65-99-45031-801
Other IDWR No. _____

2. OWNER:
Name Kings Pines Estates, Inc
Address P.O. Box 704
City McCall State ID Zip 83638

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

N		Twp. <u>18</u>		North ☒ or South ☐	
E		Rge. <u>2</u>		East ☒ or West ☐	
S		Sec. <u>1</u>		1/4 SW 1/4 NW 1/4	
W		Gov't Lot _____		County <u>Adams</u>	
		Lat: _____		Long: _____	
		Address of Well Site <u>Fish Lake Rd</u>		City <u>McCall</u>	
		(Give at least name of road - Distance to Road or Landmark)			

Li. _____ Bk. _____ Sub. Name Kings Pines Estates

4. USE:

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

5. TYPE OF WORK check all that apply (Replacement etc.)

☒ New Well ☐ Modify ☐ Abandonment ☐ Other _____

6. DRILL METHOD

☒ Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other _____

7. SEALING PROCEDURES

SEAL/FILTER PACK			AMOUNT		METHOD
Material	From	To	Sacks or Pounds		
Bentonite	6	145	192 lbs	Poor	

Was drive shoe used? ☒ N Shoe Depth(s) 146-25

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

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
8 7/8	4.5	146	322	Steel	☒	☐	☒	☐
6 7/8	-9	350	31	PVC	☐	☒	☐	☒
					☐	☐	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

Perforations Method Saw Slot
Screens Screen Type PVC

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
10	293	1/8x3	180	6 7/8	PVC	☐	☒
293	350	60x12	12	6 7/8	PVC	☐	☒
293	350	1/8x3	480	6 7/8	PVC	☐	☒

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

153 ft. below ground Artesian pressure RECEIVED
Depth flow 156 ft. Describe access port or control devices: _____

DEC 29 1999

FORWARD WATER RESOURCES
WESTERN REGION

Department of Water Resources

11. WELL TESTS:

☐ Pump ☐ Baller ☒ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
<u>200-300</u> <u>190</u>	<u>1-1.8</u>	<u>350</u>	<u>10 hrs</u>

Water Temp. 60.1 Bottom hole temp. 60.2

Water Quality test or comments: SLIGHTLY SALINITY 171

Depth first Water Encounter 224

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

From	To	Remarks: Lithology, Water Quality & Temperature	Y	M
16	0	3 Loose Rock & Soil		X
16	3	8 Loose Rock		X
15	8	11 Loose Rock		X
15	11	19 Boulders		X
15	19	22 Loose Boulders Rock		X
15	22	24 Boulder		X
15	24	30 Rock & Clay		X
	30	38.5 Hard Basalt		X
	38.5	37.5 Fractured Basalt		X
	37.5	63 Hard BLK BSlt		X
15	63	66 SLIGHTLY FINE BRN BSlt		X
	66	71 Brown BLK yellow clay		X
	71	75 Hard BLK BSlt		X
15	75	83 FINE or SOFT BSlt		X
	83	93 FINE BSlt		X
	93	96 Hard BSlt		X
15	96	130 SLIGHTLY FINE BSlt		X
11	130	138 Semi Hard BSlt		X
11	138	139 Fractured BSlt		X
11	139	150 Hard BSlt		X
	150	151 Fractured BSlt		X
8.5	151	161 Hard BSlt		X
	161	171 Broken BLK Rusty BSlt	1	
	171	243 Hard BLK Basalt		X
	243	254 FINE BRN BSlt	3-5	
	254	257 Semi Hard BLK BSlt		X
8.5	257	278 Hard BLK BSlt		X
7.2	278	286 Hard BLK BSlt		X
	286	289 Hard BLK BSlt		X
	289	300 Hard BLK BSlt	4	
	300	301 Fractured BSlt		X
	301	342 Hard BLK BSlt		X
	342	348 Fractured BLK BSlt	10	

Completed Depth 475 (Measurable)

Date: Started 9-19-99 Completed 10-14-99

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 RDD, Inc Firm No. 589

Firm Official Pat Down Date 11-14-99

Driller or Operator _____ Date _____

(Sign once if Firm Official & Operator)

NOV 24 1999

WATER RESOURCES
WESTERN REGION

MODEL 230S

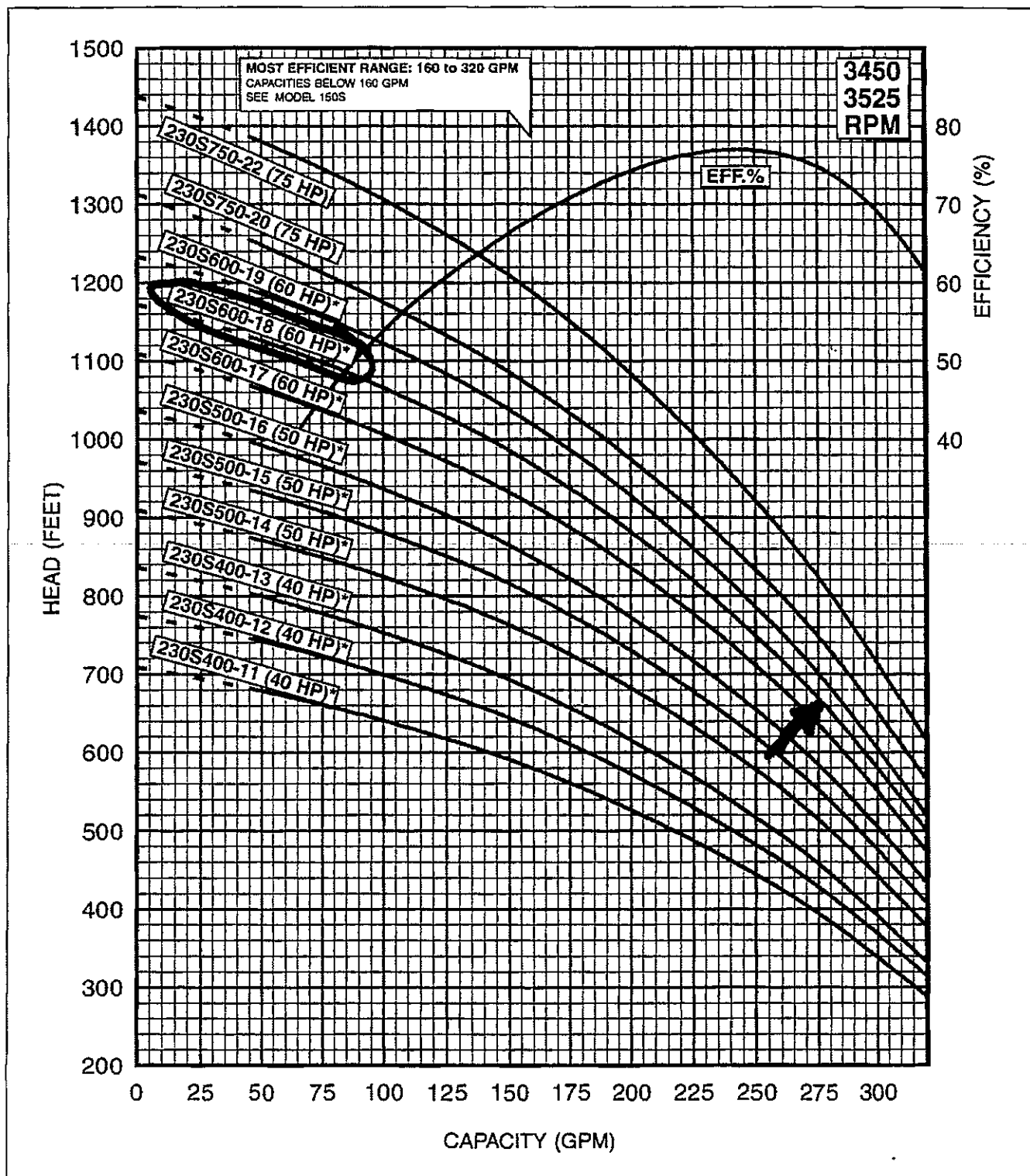
230 GPM

PERFORMANCE CURVES

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 A
@ 8 ft. min. submergence.

WATER RESOURCES
WESTERN REGION

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

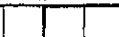
Office Use Only
Inspected by _____
Twp _____ Rge _____ Sec _____
_____ 1/4 _____ 1/4 _____ 1/4
Lat : : Long: : :

1. WELL TAG NO. D 0012250
 DRILLING PERMIT NO. 78-99-W0032 801
 Other IDWR No. _____

2. OWNER: Pinas Pine Estates
Name _____
Address _____
City _____ State _____ Zip _____

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.


 Twp. 18 North ☒ or South ☐
 Rge. 2 East ☒ or West ☐
 Sec. 1 1/4 NW 1/4 SW 1/4
 Gov't Lot _____
 County Adams 10 acres 100 acres
 Lat. : : : Long. : : :
 Address of Well Site _____

(Given as least name of road + distance to flood or landmarks)

Lt. _____ Bk. _____ Sub. _____ Name _____

4. USE:

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

5. TYPE OF WORK check all that apply (Replacement etc.)

☐ New Well ☐ Modify ☐ Abandonment ☐ Other _____

8. DRILL METHOD

☐ Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other

7. SEALING PROCEDURES

SEAL/FILTER PACK			AMOUNT	METHOD
Material	From	To	Sacks or Pounds	

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
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

Perforations	Method
Screens	Screen Type

From	To	Slot Size	Number	Diameter	Material	Coating	Lines
						☐	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

_____ ft. below ground Artesian pressure _____ lb.
Depth flow encountered _____ ft. Describe access port or
control devices: _____

11. WELL TESTS:

☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Level	Time
100	N.A	365	6 hrs +

Water Temp. _____ Bottom hole temp. _____

Water Quality test or comments: _____

12. LITHOLOGIC LOG: (Describe repairs or abandonment) Water

[illegible]

13. DRILLER'S CERTIFICATION

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

Company Name RED INC Firm No. 389

Firm Official *[Signature]* Date *1/14/99*

Driller or Operator _____ Date _____

(Sign once as Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

PERFORMANCE CURVES

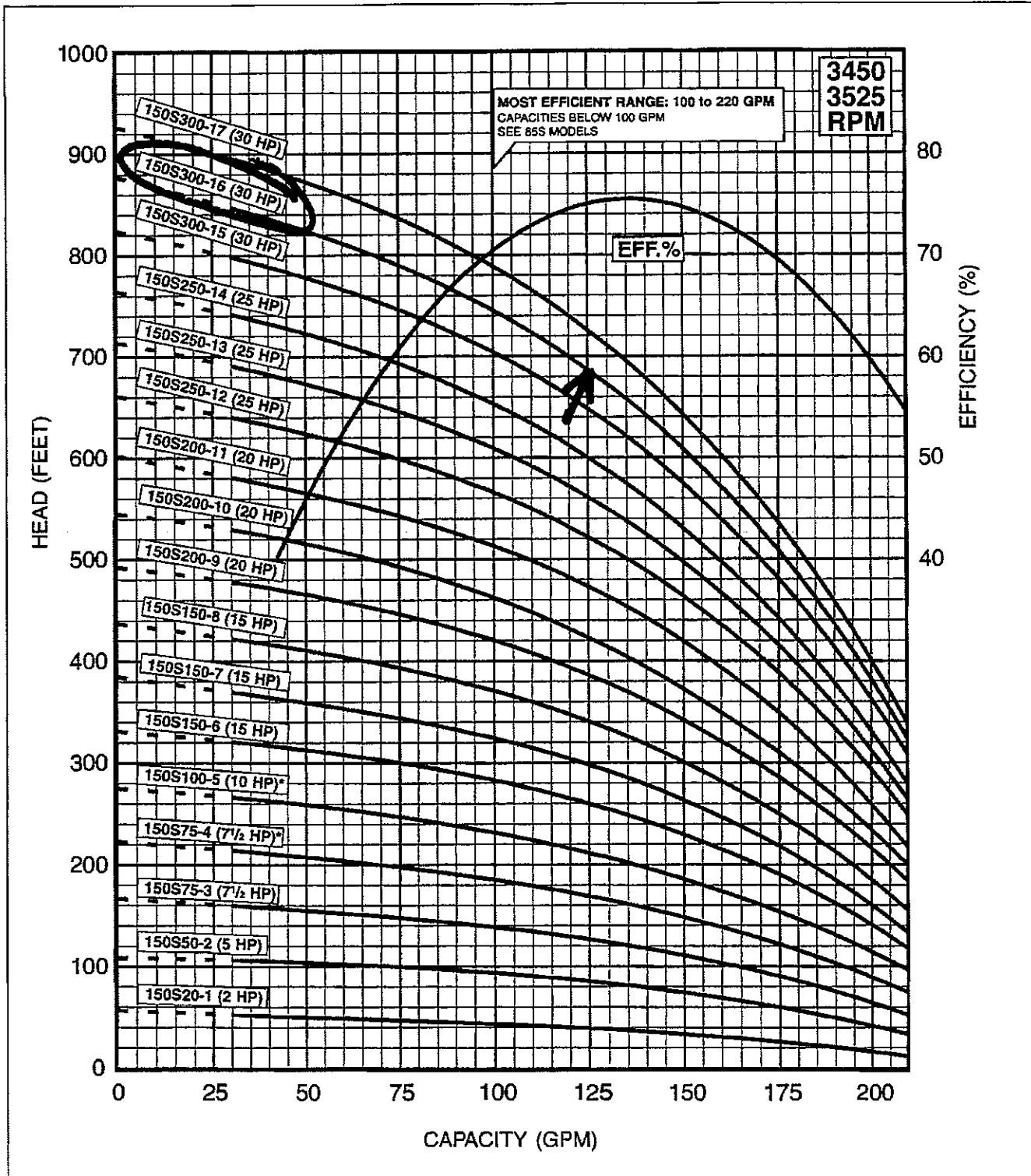
150 GPM

MODEL 150S

FLOW RANGE: 30 -220 GPM

OUTLET SIZE: 3" NPT

NOMINAL DIA. 6"



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

4" MOTOR STANDARD, 2-10 HP/3450 RPM

6" MOTOR STANDARD, 7.5-60 HP/3450 RPM.

8" MOTOR STANDARD, 75 HP/3525 RPM.

* Alternate motor sizes available.

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

King's Pines Estates North Well Test 11-29-98

Time	Elapsed Time (minutes)	t/t	Depth to Water (feet)	Drawdown (feet)	Pumping Rate (gpm)	Totalizer Reading (gallons)	South Well Depth to Water (feet)	South Well Drawdown (feet)	Remarks
10:14			155.45				172.92		
10:15	0				50				on
10:17	2		162.83	7.38		5,521,100			
10:20	5		163.72	8.27	60				
10:22	7				75				40 sec/50 gal
10:24	9		163.80	8.35					
10:27	12		163.85	8.40					
10:30	15								clear, no sand, 15.3 deg C
10:34	19		163.95	8.50					
10:36	21				72				42 sec/ 50 gal
10:39	24		164.01	8.56					
10:42	27		164.05	8.60					
10:45	30		164.11	8.66					increase rate
10:46	31				150				20 sec/5 gal
10:47	32		172.75	17.30					
10:50	35		173.77	18.32					
10:57	42		174.91	19.46					
11:03	48		175.18	19.73					
11:08	53				143				21 sec/50 gal
11:09	54		175.31	19.86					
11:14	59		175.52	20.07					
11:15	60								rate up
11:16	61								slight sulfur odor
11:17	62		187.60	32.15	210				
11:20	65		188.72	33.27					
11:24	69					5,528,500			
11:26	71				205				14.6 sec/50 gal
11:31	76		189.36	33.91					
11:35	80		189.89	34.44					
11:45	90		189.97	34.52					
11:47	92				222				13.5 sec/50 gal
11:48	93		194.14	38.69					
11:51	96		194.74	39.29					
11:54	99				219				13.7 sec/50 gal
11:57	102		194.85	39.40					14.5 deg C
12:01	106						173.37	0.45	
12:04	109		195.19	39.74	218	5,537,200			
12:17	122		195.46	40.01	223				13.4 sec/5 gal
12:29	134		195.82	40.37					
12:34	139						173.45	0.53	
12:38	143		195.88	40.43					
12:40	145				225	5,545,300			
12:55	160		196.05	40.60					
12:58	163				220	5,549,300			13.6 sec/50 gal
13:29	194		196.60	41.15	229	5,556,400			
13:32	197						173.5	0.58	
13:54	219		196.76	41.31	226	5,562,050			
14:13	238		196.90	41.45					
14:14	239				223	5,566,500			
14:17	242						173.59	0.67	
14:42	267		197.29	41.84					
15:10	295		197.60	42.15	227	5,579,300			
15:20	305		197.61	42.16					
15:38	323		197.78	42.33					
15:43	328				226	5,586,750			
15:46	331						173.66	0.74	
16:05	350		198.04	42.59	230	5,591,800			

King's Pines Estates North Well Test 11-29-98

Time	Elapsed Time (minutes)	t/t'	Depth to Water (feet)	Drawdown (feet)	Pumping Rate (gpm)	Totalizer Reading (gallons)	South Well Depth to Water (feet)	South Well Drawdown (feet)	Remarks
16:35	380		198.08	42.63	227	5,598,600			
16:39	384						173.71	0.79	
16:59	404		198.25	42.80	225	5,604,000			
17:00	405								collect samples
17:27	432		198.65	43.20	229	5,610,400			
17:32	437								pH=6.19, T=14.5, SC=160
17:37	442						173.76	0.84	
18:00	465		198.72	43.27		5,617,900			
18:33	498		198.74	43.29	227	5,625,400			
18:34	499					5,625,650			
18:38	503						173.81	0.89	
18:56	521				222				13.5 sec/50 gal
18:58	523		198.79	43.34	227	5,631,100			average rate for test = 211 gpm
19:00	525								pump off, start recovery
19:01:30	527	351.0	166.90	11.45					
19:02	527	263.5	165.00	9.55					
19:03	528	176.0	163.33	7.88					
19:04	529	132.3	162.26	6.81					
19:05	530	106.0	161.45	6.00					
19:07	532	76.0	160.54	5.09					
19:10	535	53.5	159.82	4.37					
19:13	538	41.4	159.35	3.90					
19:16	541	33.8	158.98	3.53					
19:19	544	28.6	158.87	3.42					
19:22	547	24.9	158.78	3.33					
19:28	553	19.8	158.40	2.95					
19:37	562	15.2	158.28	2.83					
19:45	570	12.7	158.04	2.59					
19:52	577	11.1	158.00	2.55					
20:00	585	9.7	157.79	2.34					

King's Pines Estates South Well Test 12/1/99

Time	Elapsed Time (minutes)	t/t'	Depth to Water (feet)	Drawdown (feet)	Pumping Rate (gpm)	Totalizer Reading (gallons)	North Well Depth to Water (feet)	North Well Drawdown (feet)	Remarks
8:05							155.06		
8:17			172.84						
9:05			172.78						
9:06	0				50	5,631,700			pump on
9:08	2		186.33	13.49					ice in flow meter and discharge pipe
9:10	4				50				
9:11	5		186.05	13.21					
9:13	7				48				62 sec / 50 gal
9:15	9		187.19	14.35					
9:20	14		187.94	15.10					
9:26	20		189.36	16.52					
9:33	27		190.03	17.19					
9:35	29		192.86	20.02					discharge thawed; rate up
9:37	31				57				53 sec/50 gal
9:38	32				120				adjust rate up - 25 sec/50 gal
9:40	34		206.25	33.41					
9:42	36		209.80	36.96					
9:45	39		211.51	38.67					
9:48	42		212.42	39.58		5,633,200			
9:50	44				100				30 sec / 50 gal
9:51	45		212.60	39.76					
9:58	52		213.80	40.96					
9:59	53				82	5,634,100			
10:04	58		214.55	41.71	80	5,634,500			
10:05	59		214.61	41.77					
10:06	60				100	5,634,700			rate up
10:07	61		224.05	51.21	150				
10:08	62				162				18.5 sec/50 gal
10:10	64		238.20	65.36					
10:12	66		240.55	67.71					
10:14	68		241.98	69.14					
10:17	71		243.18	70.34					
10:18	72				144				20.9 sec/50 gal
10:19	73								adjust rate up
10:20	74		244.30	71.46					
10:21	75		244.80	71.96					
10:22	76				146				20.5 sec/50 gal
10:23	77		245.11	72.27					
10:27	81		246.25	73.41					
10:28	82				145	5,637,900			
10:35	89		247.57	74.73					
10:40	94		248.02	75.18					
10:43	97				143	5,640,100			21 sec/50 gal
10:45	99		248.51	75.67					
10:49	103						155.3	0.24	
10:53	107		249.27	76.43	135	5,641,450			
10:54	108				150	5,641,600			
11:00	114		249.82	76.98					
11:05	119		250.02	77.18	145	5,643,200			
11:11	125		250.50	77.66					
11:21	135		250.97	78.13	134	5,645,350			
11:31	145		251.33	78.49	135	5,646,700			
11:42	156		251.65	78.81	136	5,648,200			
11:46	160						155.39	0.33	
11:50	164		251.91	79.07	137	5,649,300			
12:01	175		252.24	79.40	127	5,650,700			
12:15	189		252.55	79.71	136	5,652,600			
12:31	205		253.61	80.77	137	5,654,800			
12:53	227		254.41	81.57	136	5,657,800			
13:07	241		254.67	81.83	136	5,659,700			

King's Pines Estates South Well Test 12/1/99

Time	Elapsed Time (minutes)	t/t'	Depth to Water (feet)	Drawdown (feet)	Pumping Rate (gpm)	Totalizer Reading (gallons)	North Well Depth to Water (feet)	North Well Drawdown (feet)	Remarks
13:10	244						155.45	0.39	
13:27	261		254.71	81.87	135	5,662,400			
13:54	288		255.16	82.32	137	5,666,100			
14:12	306		255.24	82.40	133	5,668,500			
14:24	318		255.40	82.56	133	5,670,100			
14:58	352						155.52	0.46	
15:01	355		255.78	82.94	135	5,675,100			
15:35	389		256.06	83.22	132	5,679,600			
16:20	434		256.23	83.39	133	5,685,600			
16:22	436								adjust rate up
16:24	438		258.15	85.31	125	5,686,100			
16:30	444								pH=6.0, T=10.3, SC=132
16:37	451		258.57	85.73	138	5,687,900			clear, sand free
16:43	457						155.57	0.51	
17:00	474								collect water samples
17:07	481		258.57	85.73	137	5,692,000			
17:27	501		258.99	86.15	134	5,694,670			
17:33	507						155.60	0.54	
18:00	534		259.40	86.56	137	5,699,200			
18:30	564		259.48	86.64	137	5,703,300			
19:00	594		259.63	86.79	136	5,707,370			
19:05	599						155.64	0.58	
19:30	624		259.77	86.93	134	5,711,400			
20:00	654		260.00	87.16	136	5,715,470			
20:19	673						155.66	0.60	
20:30	684		260.00	87.16		5,719,500			
21:00	714		260.10	87.26	136	5,723,580			
21:06	720		260.00	87.16					
21:07	721								pump off; start recovery
21:08:30	723	481.7	215.80	42.96					
21:10	725	207.0	208.50	35.66					
21:12	726	145.2	205.00	32.16					
21:16	730	81.1	200.30	27.46					
21:19	733	61.1	198.56	25.72					
21:25	739	41.1	194.90	22.06					
21:27	741	37.0	194.05	21.21					
21:33	747	28.7	191.46	18.62					
21:36	750	25.9	190.40	17.56					
21:40	754	22.8	189.05	16.21					
21:44	758	20.5	188.00	15.16					
21:46	760	19.5	187.21	14.37					
21:48	762	18.6	186.85	14.01					
21:50	764	17.8	186.42	13.58					
21:54	768	16.3	185.55	12.71					
21:58	772	15.1	184.90	12.06					
22:02	776	14.1	183.92	11.08					
22:07	781	13.0	183.25	10.41					

ATTACHMENT C

TOPO MAP AND 2006 AERIAL PHOTO

2006 Photo

T18N R2E

Legend

-  Estate I POU
-  Points of Diversion
-  Booster Station & Storage Tank
-  Sections

Permit 78-12159

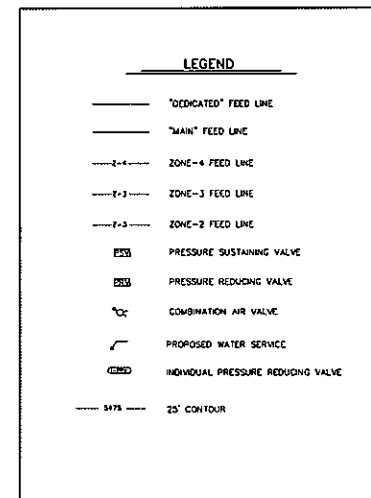
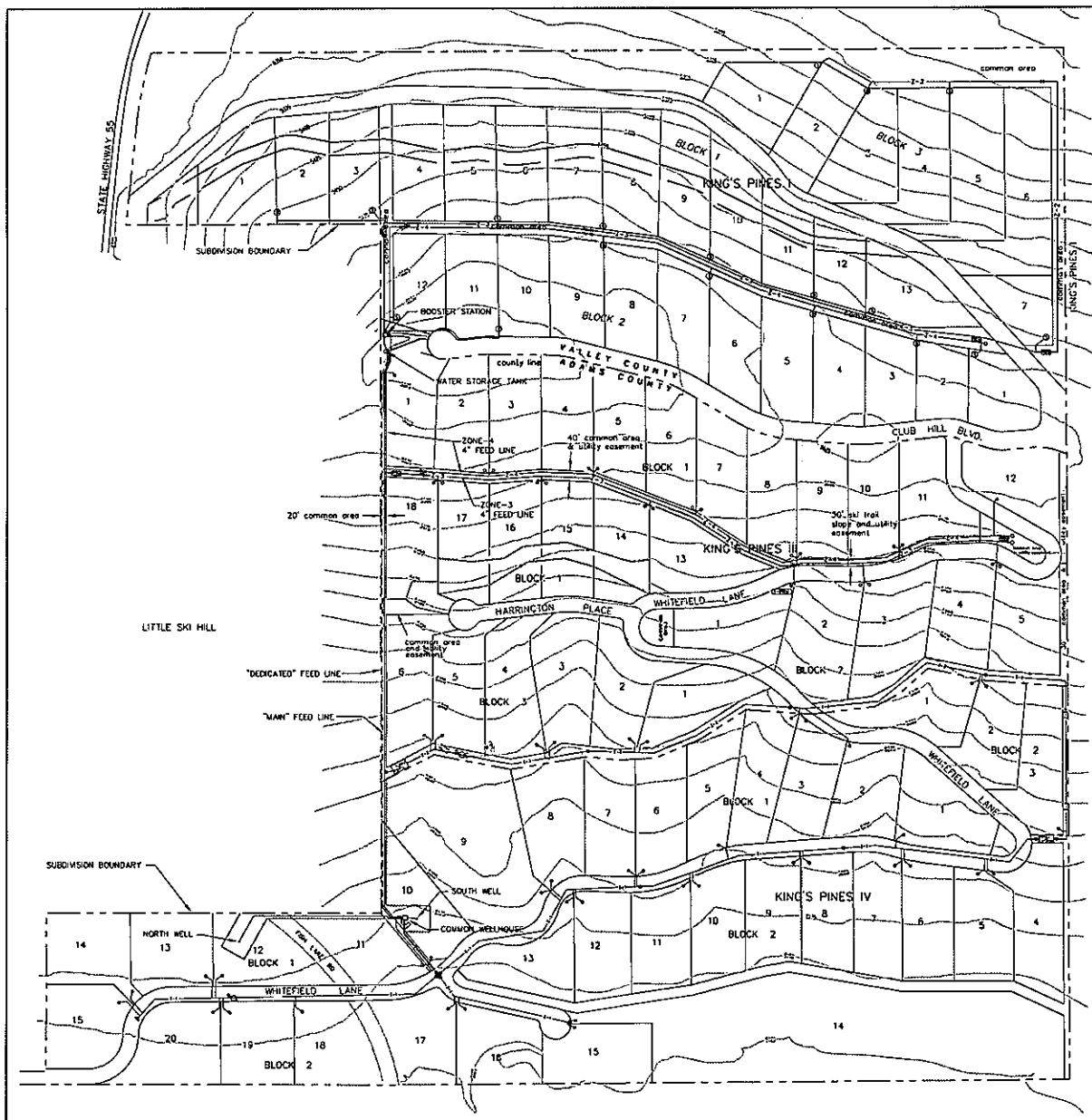


0 600 1,200
Feet



ATTACHMENT D

PLAT MAP & SYSTEM DIAGRAM



NOT TO SCALE

**KINGS PINES ESTATES
PUBLIC WATER SYSTEM
SERVICE AREA & FACILITIES MAP**

ATTACHMENT E
PHOTOS



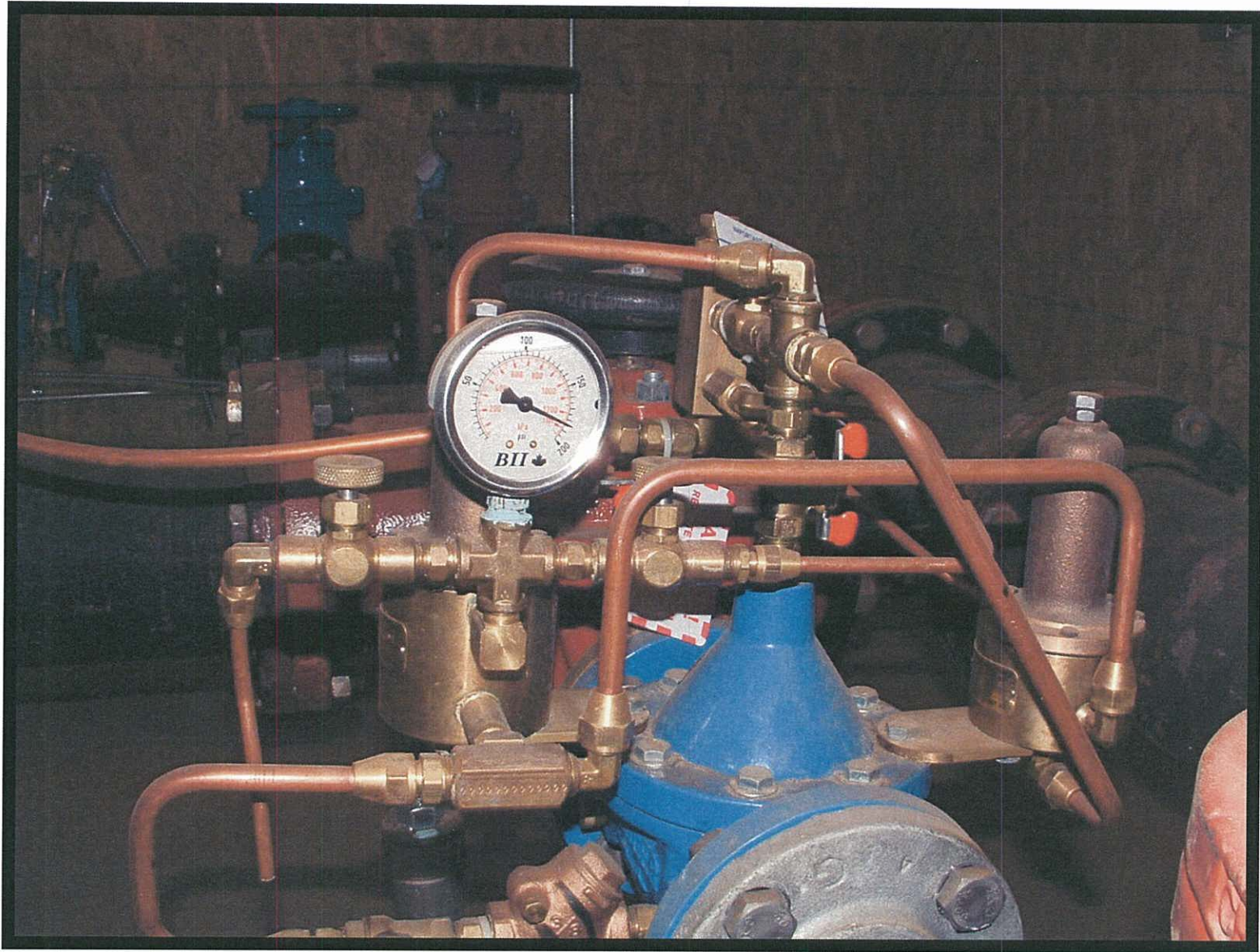
North Well and Pump



South Well and Well House



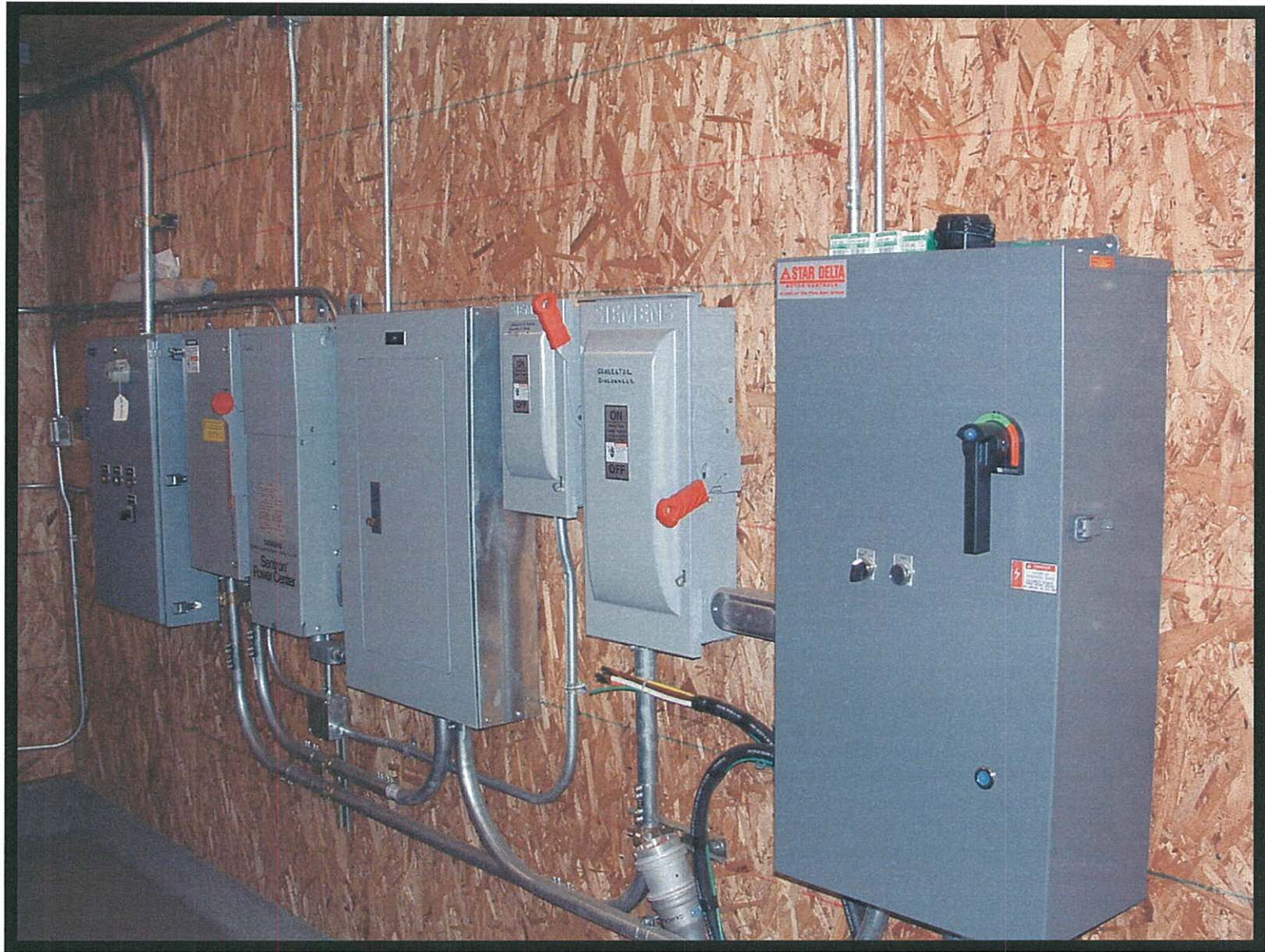
Well Flowmeter



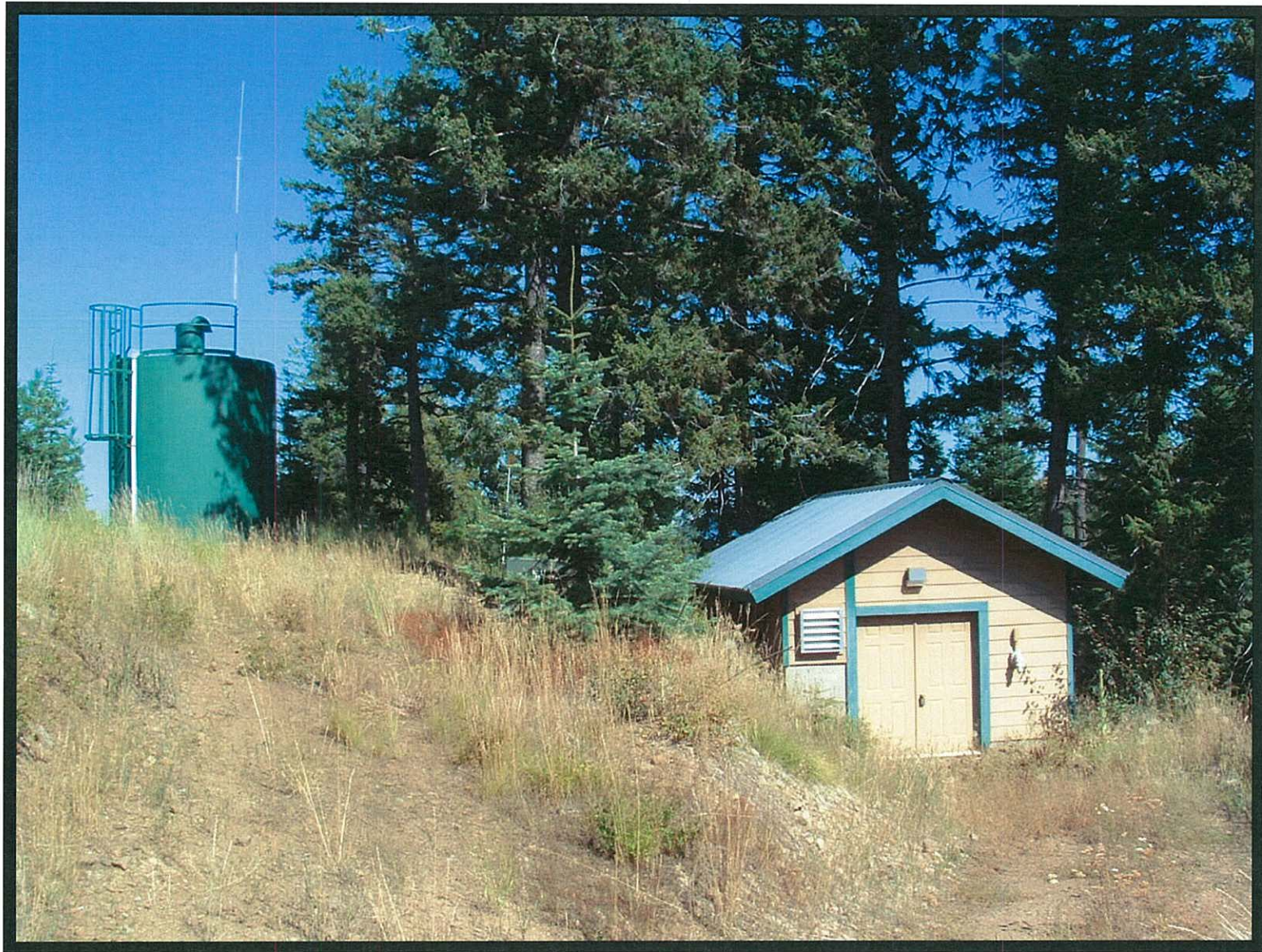
System Pressure Gage in Well House (185-190 psi)



Controlling Works in Well House



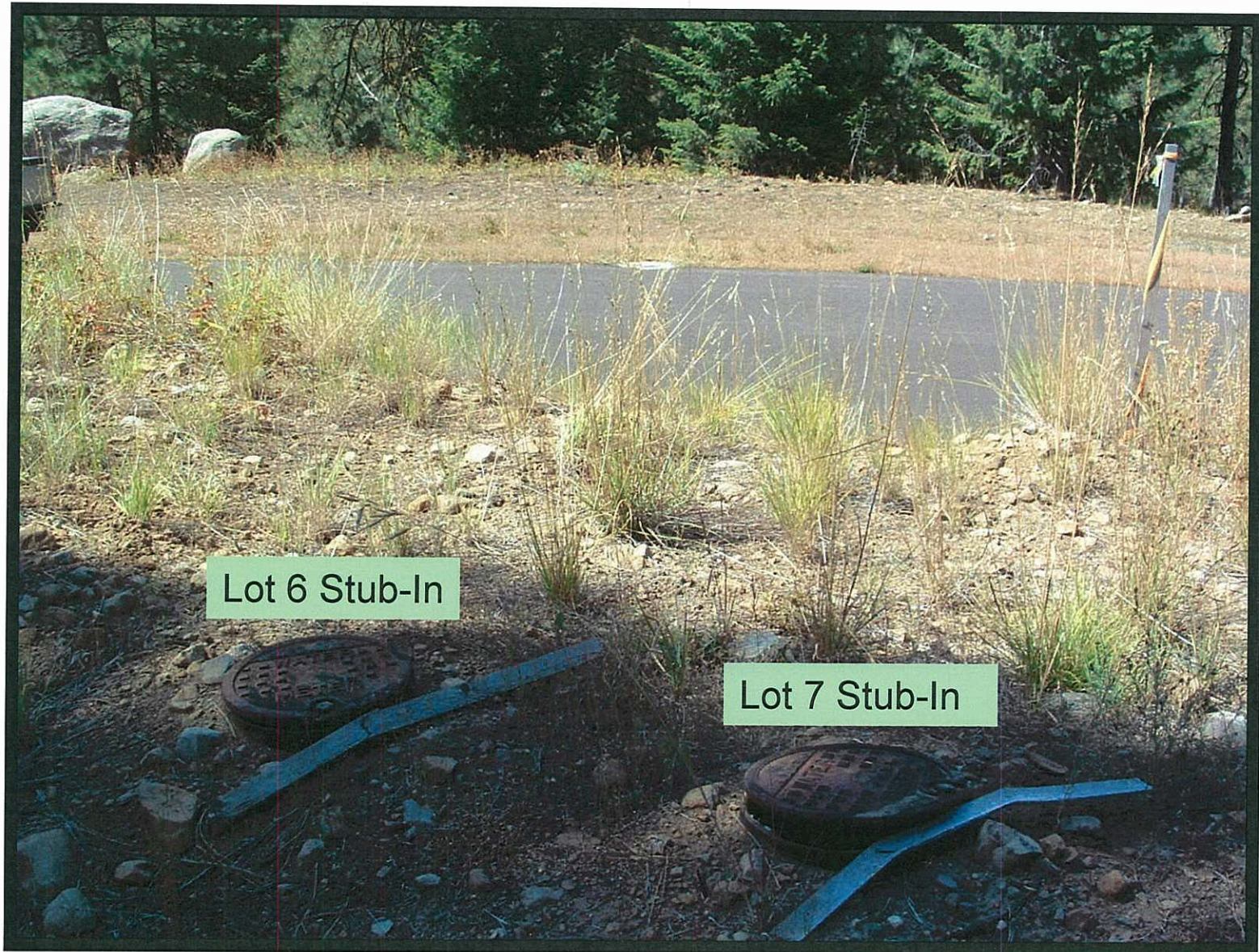
System Control Panels in Well House



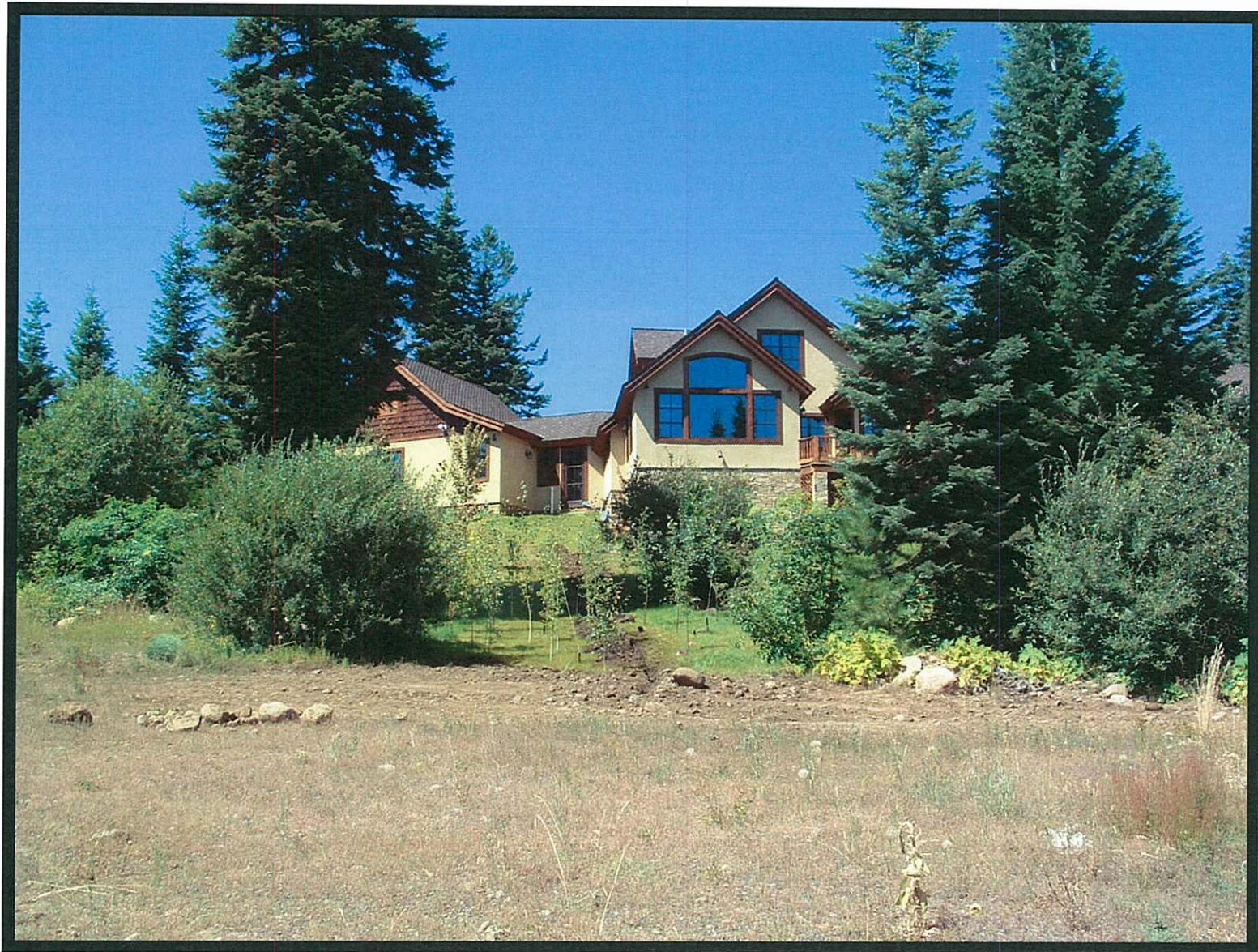
Booster Station and Storage Tank



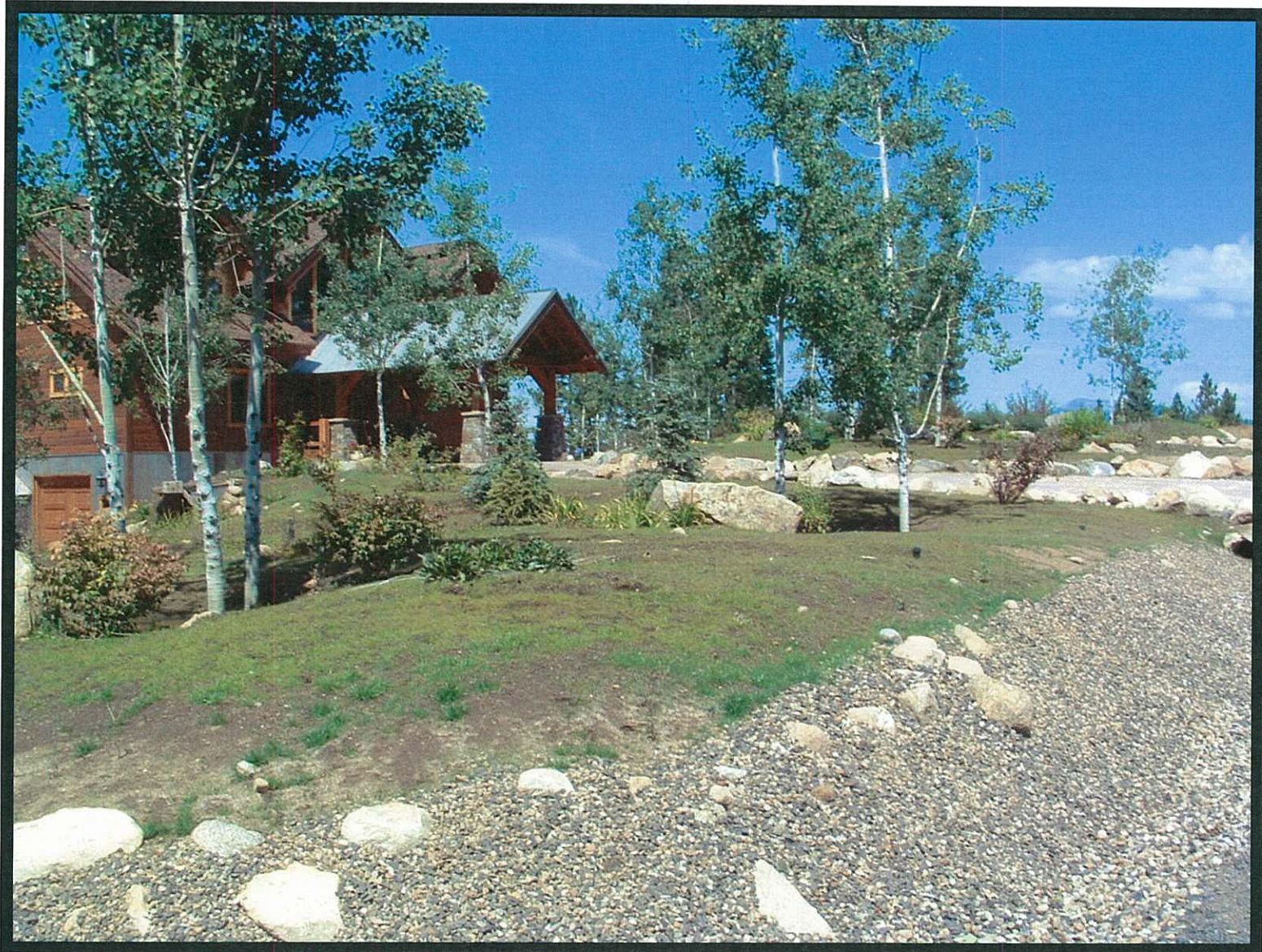
Booster Pumps



Stubs for Lot 6 & Lot 7, Block 1, Kings Pines Estates IV



Typical Landscaping



Typical Landscaping