

Big Sky Partnership Beneficial Use Exam

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SEP 26 2005

WATER RESOURCES
WESTERN REGION**BENEFICIAL USE FIELD REPORT NARRATIVE
PERMIT NOS. 63-8067, 9672, 10272, 11513, 11514
– BIG SKY PARTNERSHIP**

C. E. Brockway, P.E, Certified Water Rights Examiner
Brockway Engineering, PLLC
September 23, 2005

Permit Nos. 63-8067, 9672, 10272, 11513 and 11514 were granted to Robert Rhead for irrigation beginning in 1975. The permits are appurtenant to the Little Camas Ranch in Elmore County, above Anderson Ranch Reservoir located in T. 1 S., R. 9 E., Sections 3, 4, 5, 8 & 9 and T. 1 N., R. 9E., Sections 27, 28, 32, 33 & 34 (see the attached vicinity map).

An initial exam was performed by Steve Lester of IDWR, accompanied by Daryl Rhead. Mr. Rhead was the agent for the property at the time. The farm has been cultivated to the extent that water was available via 4 wells during the 1991 exam, and during a flurry of activity during 1996 5 additional wells were constructed. Throughout the development of the ground water supply system, stable dependable water supply has been a continuing challenge due to the low hydraulic conductivity apparent on much of the property.

System description

Irrigation water is supplied primarily through the ground water supply, however some surface water is diverted into the storage reservoir and subsequently pumped into the irrigation distribution system which can also be fed by each of the 9 wells. At the time of this review, well #'s 2, 8 & 9 are unused due to decreasing aquifer water levels, however they were utilized at the time proof was filed. Crops are irrigated through handline and wheelline sprinklers, and more recently, center pivot systems.

Rhead Ranch Reservoir is currently estimated to contain 380 acre-ft of water at maximum water level.

Capacity of the ground water irrigation system

Proof of beneficial use was submitted for permits 63-11513 and 63-11514 during the fall of 1996, and since that time some wells have become unproductive. This examination will seek to determine system capacity at the time proof was filed primarily based on well pump and motor specifications. In general, total system diversion capacity appears undersized for the project irrigated acreage, however rotation of irrigated acreage appears to have been and will likely continue to be characteristic for the farm.

Exact well development is uncertain due to difficulty in proper identification of drilling logs and the apparent unavailability of the drilling log for Well #4. Exhaustive analysis of the available logs with field examination has hopefully provided a reasonably accurate correlation between the actual wells and their associated drilling logs. It is helpful that several of the recorded logs show permit #63-11514 specifically.

Permit conditions

These permits require that a suitable measuring device be installed (or that the power-consumption method be pursued with IDWR).

Other rights

Permits 63-8067, 9672, 10272, 11513 and 11514 are all appurtenant to the property and are used in combination to provide irrigation water throughout the farm.

Recommended licensing amendments

1. The entire distribution system (wells, reservoir & surface water) is interconnected and serves the entire property. All applicable water rights should be appurtenant to the entire property.
2. Irrigation season for all water rights should be adjusted to reflect the standard season for this area (April 1st – October 31st)

Total ground water diversion recommendation

1. Total ground water diversion capacity has been estimated from system characteristics and is not a determination of historical beneficial use.

Total annual volume recommendation

1. Total authorized diversion volume was calculated based on continuous diversion at system capacity throughout the irrigation season of 213 days with the addition of the 380 acre-ft of storage water impounded in Rhead Ranch Reservoir.

Total acreage recommendation

1. Total cultivated acreage has been determined from site visits and review of aerial photo information.

Township	Range	Sec	QQ	LOT #	IRR Acres	
01N	09E	27	NESW	0	9.2	
01N	09E	27	NWSW	0	7.8	
01N	09E	27	SWSW	0	33	
01N	09E	27	SESW	0	39	
01N	09E	27	NESE	0	6.8	
01N	09E	27	NWSE	0	0.8	
01N	09E	27	SWSE	0	32	
01N	09E	27	SESE	0	27	
						155.6
01N	09E	28	SWSW	0	1.7	
01N	09E	28	SESW	0	3	
01N	09E	28	NESE	0	2.6	
01N	09E	28	SWSE	0	8.3	
01N	09E	28	SESE	0	28	
						43.6
01N	09E	32	NENE	0	31	
01N	09E	32	NWNE	0	24	
01N	09E	32	SWNE	0	31	
01N	09E	32	SENE	0	34	
01N	09E	32	SENE	0	18	
01N	09E	32	NESW	0	35	
01N	09E	32	SWSW	0	16	
01N	09E	32	SESW	0	38	
01N	09E	32	NESE	0	40	
01N	09E	32	NWSE	0	40	
01N	09E	32	SWSE	0	40	
01N	09E	32	SESE	0	40	
						387
01N	09E	33	NENE	0	15	
01N	09E	33	NWNE	0	39	
01N	09E	33	SWNE	0	40	
01N	09E	33	SENE	0	39	
01N	09E	33	NENW	0	37	
01N	09E	33	NWNW	0	40	
01N	09E	33	SWNW	0	40	
01N	09E	33	SENE	0	40	
01N	09E	33	NESW	0	39	
01N	09E	33	NWSW	0	40	
01N	09E	33	SWSW	0	28	
01N	09E	33	SESW	0	23	
01N	09E	33	NESE	0	39	
01N	09E	33	NWSE	0	40	
01N	09E	33	SWSE	0	38	
01N	09E	33	SESE	0	38	
						575
01N	09E	34	NENE	0	38	
01N	09E	34	NWNE	0	29	
01N	09E	34	SWNE	0	28	
01N	09E	34	SENE	0	30	
01N	09E	34	NENW	0	37	
01N	09E	34	NWNW	0	29	
01N	09E	34	SWNW	0	34	
01N	09E	34	SENE	0	35	
01N	09E	34	NESW	0	35	
01N	09E	34	NWSW	0	36	
01N	09E	34	SWSW	0	40	
01N	09E	34	SESW	0	38	

01N	09E	34	NESE	0	23	
01N	09E	34	NWSE	0	32	
01N	09E	34	SWSE	0	35	
01N	09E	34	SESE	0	36	
						535
01S	09E	3	NENE	1	24	
01S	09E	3	NWNE	2	24	
01S	09E	3	SWNE	0	39	
01S	09E	3	SENE	0	38	
01S	09E	3	NENW	3	22	
01S	09E	3	NWNW	4	25	
01S	09E	3	SWNW	0	37	
01S	09E	3	SENW	0	35	
01S	09E	3	NESW	0	32	
01S	09E	3	NWSW	0	25	
01S	09E	3	SWSW	0	7	
01S	09E	3	SESW	0	5.4	
01S	09E	3	NESE	0	30	
01S	09E	3	NWSE	0	28	
						371.4
01S	09E	4	NENE	1	25	
01S	09E	4	NWNE	2	25	
01S	09E	4	SWNE	0	31	
01S	09E	4	SENE	0	30	
01S	09E	4	NENW	3	12	
01S	09E	4	NWNW	4	18	
01S	09E	4	SWNW	0	29	
01S	09E	4	SENW	0	15	
01S	09E	4	NESW	0	26	
01S	09E	4	NWSW	0	40	
01S	09E	4	SWSW	0	27	
01S	09E	4	SESW	0	9.5	
01S	09E	4	NESE	0	0.1	
						287.6
01S	09E	5	NENE	1	25	
01S	09E	5	NWNE	2	25	
01S	09E	5	SWNE	0	39	
01S	09E	5	SENE	0	39	
01S	09E	5	NENW	3	25	
01S	09E	5	NWNW	4	11	
01S	09E	5	SWNW	0	1	
01S	09E	5	SENW	0	33	
01S	09E	5	NESW	0	18	
01S	09E	5	SESW	0	12	
01S	09E	5	NESE	0	39	
01S	09E	5	NWSE	0	39	
01S	09E	5	SWSE	0	39	
01S	09E	5	SESE	0	39	
						384
01S	09E	8	NENE	0	37	
01S	09E	8	NWNE	0	27	
01S	09E	8	NENW	0	0.4	
						64.4
01S	09E	9	NWNW	0	13	
01S	09E	9	SWNW	0	0	
						13
						2816.6

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No.: 63-11513

1. Owner: BIG SKY PARTNERSHIP C/O D MC FARLAND & T BULLERS

Phone No.: (208)825-5258

Current Address: PO BOX 268 EDEN, ID 83325-0268

2. Accompanied by: _____

Exam Date: 6/23/2005

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: 63-8067, 63-9672, 63-10272, 63-11514

2. Other water rights with the same point of diversion: 63-8067, 63-9672, 63-10272, 63-11514

C. DIVERSION AND DELIVERY SYSTEM

1. Point(s) of Diversion:

Ident No	Gov't Lot	¼	¼	¼	Sec.	Twp.	Rge.	County	Method of Determination / Remarks
1		SE	SE	SE	32	1N	9E	Elmore	Well #1
2		SW	SW	SW	33	1N	9E	Elmore	Well #2
3		SW	SE	NW	33	1N	9E	Elmore	Well #3
4		NW	SE	NW	33	1N	9E	Elmore	Well #4
5		SW	NW	NE	33	1N	9E	Elmore	Well #5
6		SW	NE	NE	33	1N	9E	Elmore	Well #6
7		SE	NE	NE	33	1N	9E	Elmore	Well #7
9		SE	SE	NE	32	1N	9E	Elmore	Well #9
Re1		SE	NW	NW	9	1S	9E	Elmore	Rhead Reservoir Re-Diversion
Re2		SE	NW	NW	4	1S	9E	Elmore	Booster Pump

2. Place(s) of Use:

Indicate Method of Determination: NAIP Aerial Photo

TWP	RNG	SEC	NE				NW				SW				SE				TOTALS
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
1N	9E	27									9.2	7.8	33	39	6.8	0.8	32	27	155.6
		28											1.7	3	2.6		8.3	28	43.6
		32	31	24	31	34				18	35		16	38	40	40	40	40	387
		33	15	39	40	39	37	40	40	40	39	40	28	23	39	40	38	38	575
		34	38	29	28	30	37	29	34	35	35	36	40	38	23	32	35	36	535
1S	9E	3	Lot 1 24	Lot 2 24	39	38	Lot 3 22	Lot 4 25	37	35	32	25	7	5.4	30	28			371.4
		4	Lot 1 25	Lot 2 25	31	30	Lot 3 12	Lot 4 18	29	15	26	40	27	9.5	0.1				287.6
		5	Lot 1 25	Lot 2 25	39	39	Lot 3 25	Lot 4 11	1	33	18			12	39	39	39	39	384
		8	37	27			0.4												64.4
		9							13										13

Total number of acres irrigated: 2,816.6

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ ditch size/ pipe i.d. as applicable.

See Attached Map sheet

- ☒ 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	GE	75	EMJS12416	Layne-10RKHC	8" - 12 stages Serial # 45817
Well #2	U.S. Electric	150	C2688-01-498	Unk. sim. To Well #1	14" - 10 stages
Well #3	U.S. Electric	100	R9983-04-122	Layne - 11BH	8" - 8 stages Serial # T81103
Well #4	U.S. Electric	150	R6375-04-882	Layne - 11BEH	8" - 8 stages Serial # T81102
Well #5	U.S. Electric	100	1334581	Aurora - 10RKHC	8" - 12 stages Serial # 97-74200
Well #6	U.S. Electric	200	6342/3L 324070	Verti-Line - 12RH-M	8" - 9 stages Serial # 97-74192
Well #7	GE	200	VTJ 823003	Layne - 12RM	8" - 9 stages
Well #9	GE	100	Unk.	Layne - 12RM	8" - 9 stages
Re1		150			Re-Diversion from reservoir
Re2		100			Booster pump into northern main

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calibration
Ultrasonic flowmeter	Portaflow	Fuji	FLC 52011	N5L3138		4/11/03

2. Measurements: _____

1) Measured flowrate into Rhead Reservoir on 12" buried pipe ~1/2 mile upstream of reservoir discharge

2) Measured open discharge diversion from wells 6 and 7 Sec. 34

E. NARRATIVE / REMARKS / COMMENTS

1) Maximum measured flow rate through 12" mainline into reservoir = 10.18 cfs (4,780 gpm observed at full-open reservoir valve)

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

F. FLOW CALCULATIONS

☒ Additional Computation Sheets Attached

Measured Method: _____

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = (2816.6 \text{ ac.}) \times (4.0 \text{ af/ac}) = 11,266.4 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = (4.48 \text{ cfs}) \times (213 \text{ days}) \times 1.9835 = 1,892.7 \text{ afa}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 380 \text{ afa (Limited by reservoir capacity)}$$

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		
<u>Irrigation</u>	<u>4/1</u>	<u>10/31</u>	<u>4.48</u>	<u>1893</u>
<u>Irrigation Storage</u>	<u>1/1</u>	<u>12/31</u>	<u> </u>	<u>380</u>
<u>Irrigation From Storage</u>	<u>4/1</u>	<u>10/31</u>	<u>4.48</u>	<u>380</u>
<u>Diversion to Storage</u>	<u>1/1</u>	<u>12/31</u>	<u>4.48</u>	<u>380</u>
TOTALS:			<u>4.48 cfs</u>	<u>1893</u>

2. Recommended Amendments

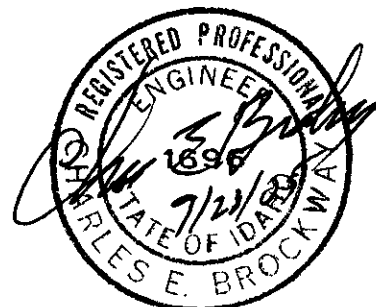
- | | | |
|--|---|--------------------------------|
| ☒ Change P.D. as reflected above | ☒ Add P.D. as reflected above | ☐ None |
| ☒ Change P.U. as reflected above | ☒ Add P.U. as reflected above | ☐ Other |

I. AUTHENTICATION

Field Examiner's Name: Charles E. Brockway Date: 9/22/05

Reviewer: _____ Date: _____

SEAL



STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

USE TYPEWRITER OR
BALLPOINT PEN

State law requires that this report be filed with the Director, Department of Water Resources
within 30 days after the completion or abandonment of the well.

1. WELL OWNER

Name Bob Rhoad
Address Little Camas
Owner's Permit No. _____

2. WATER LEVEL

Static water level 344' feet below land surface.
Flowing? ☐ Yes ☒ No G.P. flow _____
Artesian closed in pressure _____ p.s.i.
Controlled by: ☐ Valve ☐ Cap ☐ Plug
Temperature _____ OF Quality _____

3. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement
☐ Abandoned (describe method of abandoning) _____

4. WELL TEST DATA

☒ Pump ☐ Bailor ☐ Air ☐ Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped
<u>200</u>	<u>400</u>	<u>1</u>
<u>637</u>	<u>400</u>	

5. PROPOSED USE

☐ Domestic ☒ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

6. LITHOLOGIC LOG

Hole Diam.	Depth		Material	Water Yes No
	From	To		
14	0	12	Chy	
12	12	25	GRAY LAVA	
12	25	50	BROWN LAVA	
12	50	55	GRAY LAVA	
12	55	75	ARKER (P. ARTER)	
12	75	100	GRAY LAVA	
12	100	115	BROWN LAVA	
12	115	140	GRAY LAVA	
12	140	155	BROWN LAVA	
12	155	175	BROWN LAVA	
12	175	235	5-FT. ARTERIA	
12	235	300	CHALKY LAVA	X
12	300	350	ARKER CINDERS	X
12	350	400	ARKER CINDERS	X
12	400	500	BROWN LAVA & CINDERS	X

7. METHOD DRILLED

☒ Rotary ☒ Air ☐ Hydraulic ☐ Reverse rotary
☐ Cable ☐ Dug ☐ Other _____

8. WELL CONSTRUCTION

Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____

Thickness	Diameter	From	To
<u>2.50</u> inches	<u>12</u> inches	<u>1</u> feet	<u>12</u> feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet

Was casing drive shoe used? ☐ Yes ☒ No
Was a pecker or seal used? ☐ Yes ☒ No
Perforated? ☐ Yes ☒ No
How perforated? ☐ Factory ☐ Knife ☐ Torch
Size of perforation _____ inches by _____ inch

Number	From	To
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet

Well screen installed? ☐ Yes ☒ No
Manufacturer's name _____

Type _____ Model No. _____

Diameter _____ Slot size _____ Set from _____ feet to _____ feet
Diameter _____ Slot size _____ Set from _____ feet to _____ feet

Gravel packed? ☐ Yes ☒ No ☐ Size of gravel _____

Placed from _____ feet to _____ feet

Surface seal depth 18' Material used in seal: ☐ Cement grout

☒ Puddling clay ☐ Well cuttings

Sealing procedure used: ☐ Slurry pit ☐ Temp. surface casing

☒ Overbore to seal depth

Method of joining casing: ☐ Threaded ☐ Welded ☐ Solvent

☐ Welded

☐ Cemented between struts

Describe access port _____

RECEIVED
SEP 4 1980

Department of Water Resources
Water Resources Div. 2

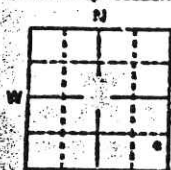
SEP 4 1980 SEP 2 1980

SEP 4 1980 SEP 2 1980

Department of Water Resources

9. LOCATION OF WELL

Sketch map location must agree with written location.



Subdivision Name _____

Lot No. _____ Block No. _____

County EMERY

SE 1/4 SE 1/4 Sec. 32 T. 1 N. R. 9 E. 1/2

10.

Work started 7/12/80 finished 7/10/80

11. DRILLERS CERTIFICATION

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

Firm Name Hiddleston Drilling Firm No. 35

Address Mtn Home Date 7/10/80

Signed by (Firm Official) [Signature]

and

(Operator) Mike Hiddleston

USE TYPEWRITER OR
BALL POINT PEN

State of Idaho
Department of Water Resources

WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

1. WELL OWNER

Name Robert C. Rhead

Address Star Rt B, Box 20, Mtn Home 83647

Owner's Permit No. Owner applying

7. WATER LEVEL

Static water level 327 feet below land surface

Flowing? ☐ Yes ☒ No G.P.M. flow

Temperature 54 ° F. Quality Good

Artesian closed-in pressure p.s.i.

Controlled by ☐ Valve ☐ Cap ☐ Plug

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement

☐ Abandoned (describe method of abandoning)

8. WELL TEST DATA

☐ Pump ☐ Bailor ☐ Other

Discharge G.P.M. Draw Down Hours Pumped

3. PROPOSED USE

☐ Domestic ☒ Irrigation ☐ Test ☐ Other (specify type)

☐ Municipal ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection

4. METHOD DRILLED

☒ Cable ☐ Rotary ☐ Dug ☐ Other

5. WELL CONSTRUCTION

Diameter of hole 20 inches Total depth 440 feet

Casing schedule: ☒ Steel ☐ Concrete

Thickness	Diameter	From	To
0.375 inches	26 inches	0 feet	33 feet
0.250 inches	16 inches	33 feet	440 feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet

Was casing drive shoe used? ☒ Yes ☐ No

Was a packer or seal used? ☐ Yes ☒ No

Perforated? ☒ Yes ☐ No

How perforated? ☒ Factory ☐ Knife ☒ Torch

Size of perforation 3/16 inches by 3 inches

Number	From	To
117 torch perforations	433 feet	440 feet
6,400 perforations	420 feet	320 feet
_____ perforations	_____ feet	_____ feet

Well screen installed? ☐ Yes ☒ No

Manufacturer's name _____

Type _____ Model No. _____

Diameter _____ Slot size _____ Set from _____ feet to _____ feet

Diameter _____ Slot size _____ Set from _____ feet to _____ feet

Gravel packed? ☐ Yes ☒ No Size of gravel _____

Placed from _____ feet to _____ feet

Surface seal depth 33 Material used in seal ☐ Cement grout

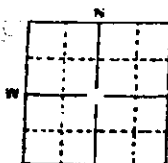
☒ Pudding clay ☐ Well cuttings

Sealing procedure used ☐ Sherry gel ☐ Temporary surface casing

☒ Overbars to seal depth

6. LOCATION OF WELL

Sketch map location must agree with written location.



Subdivision Name _____

Lot No. _____ Block No. _____

County Elmore

34 x 54 Sec 33 T. 1N R. 9E E-W

10.

Work started Sept 17, 1974 finished Nov 29, 1974

11. DRILLER'S CERTIFICATION

Firm Name Mountain Home Well Driller Firm No. 89

Address PO Box 112, Harzett, 83626 Date Dec 1, 1974

Signed by (Firm Official) T.H. Burdick

and Arthur Schults

(Overseer) Hugh Harder

USE ADDITIONAL SHEETS IF NECESSARY

FORWARD THE WHITE COPY TO THE DEPARTMENT

FD-2382

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES

TYPEWRITER OR
BALLPOINT PEN

WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources
within 30 days after the completion or abandonment of the well.

Department of Water Resources

WELL OWNER Name <u>ROBERT C. RHEAD</u> <u>STAR RT. 8, BOX 20</u> Address <u>MOUNTAIN HOME, IDAHO 83647</u> Owner's Permit No. _____		7. WATER LEVEL Western Regional Office TOP OF 16" Static water level <u>456</u> feet below <u>land surface</u> . Flowing? ☐ Yes ☒ No G.P.M. flow _____ Artesian closed-in pressure _____ p.s.i. Controlled by: ☐ Valve ☐ Cap ☐ Plug Temperature _____ °F. Quality <u>GOOD</u>																																																																																																																																																																																
NATURE OF WORK ☒ New well ☐ Deepened ☐ Replacement ☐ Abandoned (describe method of abandoning) _____		8. WELL TEST DATA ☒ Pump ☐ Bailor ☐ Air ☐ Other _____																																																																																																																																																																																
PROPOSED USE ☐ Domestic ☒ Irrigation ☐ Test ☐ Municipal ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection ☐ Other _____ (specify type) _____		9. LITHOLOGIC LOG -- REFERENCED TO TOP OF 16" <table border="1"> <thead> <tr> <th>Hole Diam.</th> <th>Depth From</th> <th>To</th> <th>Material</th> <th>Water Yes No</th> </tr> </thead> <tbody> <tr><td>16"</td><td>0</td><td>1492</td><td></td><td></td></tr> <tr><td>14"</td><td>1492</td><td>617</td><td></td><td></td></tr> <tr><td></td><td>0</td><td>3</td><td>SOIL AND SUBSOIL</td><td>x</td></tr> <tr><td></td><td>3</td><td>31</td><td>GREY BOULDERS, CLAY SEAMS</td><td></td></tr> <tr><td></td><td>31</td><td>35</td><td>GREY BASALT, BROKEN</td><td></td></tr> <tr><td></td><td>35</td><td>43</td><td>GREY BASALT, HARD</td><td></td></tr> <tr><td></td><td>43</td><td>70</td><td>GREY BASALT, FRACTURED</td><td></td></tr> <tr><td></td><td>70</td><td>75</td><td>GREY BASALT, HARD</td><td></td></tr> <tr><td></td><td>75</td><td>87</td><td>GREY BASALT, FRACTURED</td><td></td></tr> <tr><td></td><td>87</td><td>1120</td><td>GREY BASALT BOULDERS, VERY LARGE, CLAY SEAMS</td><td></td></tr> <tr><td></td><td>112</td><td>114</td><td>RUBBLE, GREY, GRAVEL</td><td></td></tr> <tr><td></td><td>114</td><td>138</td><td>GREY BASALT, HARD</td><td></td></tr> <tr><td></td><td>138</td><td>141</td><td>BROWN CLAY</td><td></td></tr> <tr><td></td><td>141</td><td>146</td><td>GREY BASALT, OPEN FISSURES</td><td></td></tr> <tr><td></td><td>146</td><td>151</td><td>GREY BASALT</td><td></td></tr> <tr><td></td><td>151</td><td>159</td><td>CINDERS, GRAVEL, RUBBLE</td><td></td></tr> <tr><td></td><td>159</td><td>163</td><td>GREY BASALT</td><td></td></tr> <tr><td></td><td>163</td><td>165</td><td>BLACK GRAVEL</td><td></td></tr> <tr><td></td><td>165</td><td>182</td><td>BOULDERS, RUBBLE</td><td></td></tr> <tr><td></td><td>182</td><td>190</td><td>BLACK BASALT</td><td></td></tr> <tr><td></td><td>190</td><td>227</td><td>BROWN BASALT, VERY HARD</td><td></td></tr> <tr><td></td><td>227</td><td>229</td><td>BLACK BASALT, FRACTURED</td><td></td></tr> <tr><td></td><td>229</td><td>247</td><td>GREY BASALT</td><td></td></tr> <tr><td></td><td>247</td><td>257</td><td>CINDERS, BOULDERS, BROWN CLAY, CEMENT</td><td></td></tr> <tr><td></td><td>257</td><td>300</td><td>GREY BASALT, SOFT, BROKEN</td><td></td></tr> <tr><td></td><td>300</td><td>312</td><td>GREY BASALT, HARD</td><td></td></tr> <tr><td></td><td>312</td><td>314</td><td>RYHOLITE</td><td></td></tr> <tr><td></td><td>314</td><td>469</td><td>CINDERS & GRAVEL</td><td></td></tr> <tr><td></td><td></td><td></td><td>BOULDERS AT 369--352</td><td></td></tr> <tr><td></td><td></td><td></td><td>475--417</td><td></td></tr> <tr><td></td><td></td><td></td><td>427--431</td><td></td></tr> <tr><td></td><td></td><td></td><td>445--449</td><td></td></tr> <tr><td></td><td>449</td><td>466</td><td>BLACK SAND, POORLY SORTED</td><td>*</td></tr> <tr><td></td><td>466</td><td>511</td><td>BLACK BASALT</td><td>*</td></tr> </tbody> </table>		Hole Diam.	Depth From	To	Material	Water Yes No	16"	0	1492			14"	1492	617				0	3	SOIL AND SUBSOIL	x		3	31	GREY BOULDERS, CLAY SEAMS			31	35	GREY BASALT, BROKEN			35	43	GREY BASALT, HARD			43	70	GREY BASALT, FRACTURED			70	75	GREY BASALT, HARD			75	87	GREY BASALT, FRACTURED			87	1120	GREY BASALT BOULDERS, VERY LARGE, CLAY SEAMS			112	114	RUBBLE, GREY, GRAVEL			114	138	GREY BASALT, HARD			138	141	BROWN CLAY			141	146	GREY BASALT, OPEN FISSURES			146	151	GREY BASALT			151	159	CINDERS, GRAVEL, RUBBLE			159	163	GREY BASALT			163	165	BLACK GRAVEL			165	182	BOULDERS, RUBBLE			182	190	BLACK BASALT			190	227	BROWN BASALT, VERY HARD			227	229	BLACK BASALT, FRACTURED			229	247	GREY BASALT			247	257	CINDERS, BOULDERS, BROWN CLAY, CEMENT			257	300	GREY BASALT, SOFT, BROKEN			300	312	GREY BASALT, HARD			312	314	RYHOLITE			314	469	CINDERS & GRAVEL					BOULDERS AT 369--352					475--417					427--431					445--449			449	466	BLACK SAND, POORLY SORTED	*		466	511	BLACK BASALT	*
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STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources, within 30 days after the completion or abandonment of the well.

RECEIVED
OCT 21 1980

Rhead
Cont.

WELLOWNER Name <u>ROBERT C. RHEAD --PAGE 2</u> Address _____ Owner's Permit No. _____	7. WATER LEVEL OCT 21 1980 Static water level _____ Department of Water Resources Flowing? ☐ Yes ☐ No Water Resources Office Artesian closed-in pressure _____ p.s.i. Controlled by: ☐ Valve ☐ Cap ☐ Plug Temperature _____ OF. Quality _____																																																																			
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LOCATION OF WELL Sketch map location must agree with written location. Subdivision Name _____ Lot No. _____ Block No. _____ City _____ County _____ SW 1/4 Sec. 33 T. 1N. R. 9E E.W.	10. SEPTEMBER 23, 1980 Work started <u>JANUARY 15</u> finished <u>XXXXXX</u> 11. DRILLERS CERTIFICATION I/We certify that all minimum well construction standards were complied with at the time the rig was removed. Firm Name <u>ARTESIAN CO.</u> Firm No. <u>318</u> <u>7425 W. 36TH E.</u> Address <u>MOUNTAIN HOME, IDAHO</u> Date <u>Nov. 8, 1980</u> Signed by (Firm Official) <u>Hugh Harden</u> and (Operator) <u>Hugh Harden</u>																																																																			

FORWARD WHITE COPY TO WATER RESOURCES

Use Typewriter or Ballpoint Pen

Lat: Long:

FORWARD WHITE COPY TO WATER RESOURCES

IDAHO DEPARTMENT OF WATER RESOURCES

WELL DRILLER'S REPORT

Use Typewriter or Ballpoint Pen

Use Only	
By	Sec
1/4	1/4
Lat	Long

1. DRILLING PERMIT NO. 63 - 96 - W - 0541 - 000

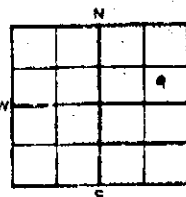
Other IDWR No. _____

2. OWNER:

Name BIG SKY PARTNERSHIPAddress 350 WALLS AVECity TWIN FALLS State ID Zip 83301

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.



Twp. 1 North ☒ or South ☐
 Rge. 9 East ☒ or West ☐
 Sec. 33 1/4 SE 1/4 NE 1/4
 Gov't Lot _____ County ELMORE
 Lat: _____ Long: _____

Address of Well Site _____

City CANAS

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

Lt. _____ Bld. _____ Sub. Name _____

4. USE:

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

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

☒ New Well ☐ Modify ☐ Abandonment ☐ Other _____

6. DRILL METHOD

☒ Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other _____

7. SEALING PROCEDURES

SEAL/FILTER PACK			AMOUNT Sacks or Pounds	METHOD
Material	From	To		
BENTONITE	0	24	8 sack	OVERBORE

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	+1	24	250	STEEL	☒	☐	☒	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

☐ Perforations Method _____
☐ Screens Screen Type _____

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
						☐	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

252 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
1780	380	450	6 hr.

Water Temp. _____

Bottom hole temp. _____

Water Quality test or comments: _____

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Soil Dis.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
15	0	6	soil		
15	6	17	broken lava & boulder		
15	17	22	brown clay & some gravel		
12	22	44	gray lava		
12	44	52	brown lava & broken		
12	52	116	gray lava		
12	116	365	broken gray & brown lava some clay		
12	365	438	black lava some clay		
12	438	452	brown clay		
12	452	467	gray clay		
12	467	545	black lava & some clay		
12	545	550	granite & some gravel		

Completed Depth 550' (Measurable)Date: Started 8-26-96 Completed 8-30-96

13. DRILLER'S CERTIFICATION

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

Firm Name HIDDLESTON & SON, INC. Firm No. 35Firm Official Ken Koch Date 9-5-96and Supervisor or Operator Ken Koch Date 9-5-96

(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

Form 238-7
3/95-C96IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

767139

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

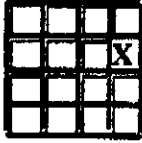
1. DRILLING PERMIT NO. _____
Other IDWR No. D0015081

2. OWNER:
Name Big Sky Partnership #4
Address 350 Falls Ave

City Twin Falls State ID Zip 83301

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location
N

W  E
Twp. 1 North X or South ☐
Rge. 9 East X or West ☐
Sec. 33 1/4 SE 1/4 NE 1/4
10 acres 40 acres 160 acres
S Gov't lot _____ County Elmore
Lat: _____ Long: _____
Address of Well Site _____
City Canias

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

Lt. _____ Blk. _____ Sub. Name _____

4. USE:

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

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

☐ New Well X Modify ☐ Abandonment ☐ Other

6. DRILL METHOD

☐ Air Rotary X Cable ☐ Mud Rotary ☐ Other

7. SEALING PROCEDURES

SEAL/FILTER PACK		AMOUNT		METHOD
Material	From	To	Sacks or Pounds	
Bentonite	0	24	2800 lbs	Overbore

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

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

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
16"	+2	24	250	Steel	X		X	
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

☐ Perforations Method _____

☐ Screens Screen Type _____

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
						☐	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

252 ft below ground

Depth flow encountered _____

devices: _____

Artesian Pressure _____ lb

Describe access port or control

11. WELL TESTS:

☐ Pump ☐ Bailor ☐ Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Level	Time
1780			1 hr.

Water Temp. _____ Bottom hole temp. _____

Water Quality test or comments: _____

Depth first Water Encountered 252

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Water

Bore Dia	From	To	Remarks: Lithology, Water Quality & Temp.	Y	N
19"	0	6	Top Soil		X
19	6	17	Broken Lava & Boulder		X
19	17	22	Brown Clay & Some Gravel		X
19	22	24	Lava		X
16	24	44	Lava		X
16	44	52	Brown Lava & Broken		X
16	52	116	Lava		X
16	116	365	Brown Lava w/ Some Clay	X	
16	365	438	Black Lava w/ Some Clay	X	
16	438	452	Brown Clay		X
16	452	467	Gray Clay		X
16	467	545	Black Lava w/ Some Clay	X	
16	545	550	Granite & Some Gravel	X	

RECEIVED

SEP 29 2000

WATER RESOURCES
WESTERN REGION

RECEIVED

AUG 14 2000

WATER RESOURCES
WESTERN REGION

Completed Depth: 550' (Measurable)

Date: Started 5/1/00

Completed 6/30/00

13. DRILLER'S CERTIFICATION

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

Firm Name Hiddleston & Son, Inc.

Firm No. 35

Firm Official Mark Hiddleston

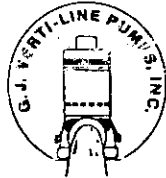
Date 8/6/00

Supervisor or Operator John F. Hiddleston

(Sign once if Firm Official & Operator)

Date 7/6/00

FORWARD WHITE COPY TO WATER RESOURCES



G.J. VERTI-LINE PUMPS, INC.

1970 Highland Ave. East - P.O. Box 892

Twin Falls, Idaho 83303

Fax (208) 733-5009

Phone (208) 733-4278

RECEIVED

SEP 26 2005

WATER RESOURCES
WESTERN REGION

09/25/2002

9/29/04

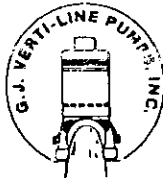
Don McFarland
731-6530

The following is the information on your pumps at Little Camas:

#7 200 HP Layne
Plate under head - no access to well
Design: 1100 GPM at 522 ft. head 10/10/03 10' Extension
Setting: 410 ft. of 8 x 2 1/2 x 1 11/16 420' setting
Bowls: 9 stage 12 RM
Static water level: 328 ft. - 1998
Well Depth: 443 ft.

#6 200 HP Verti-line # 97-74192
Pumping Level? 382 ft. steady reading
Amp Load 150-220 surging
Design: 1350 GPM at 515 ft. head 10/9/03 20' Extension
Setting: 400 ft. of 8 x 2 1/2 x 1 11/16 420' setting
Bowls: 9 stage 12 RH-M
Static water level: 247 ft. - 2000
Well Depth: 527 ft.

#5 100 HP Aurora #97-74200
Static water level: 337 ft. - 9-2002 10/9/03 20' Extension
Design: 600 GPM at 500 ft. head 420' setting
Setting: 400 ft. of 8 x 2 1/2 x 1 1/2
Bowls: 12 stages 10 RM-L
Static water level: 279 ft. - 1997
Well Depth: 472 ft.



G.J. VERTI-LINE PUMPS, INC.

1976 Highland Ave. East - P.O. Box 892

Twin Falls, Idaho 83303

Fax (208) 733-5009

Phone (208) 733-4278

Little Camas Pumps

Page 2

150 HP Layne #T81102

Unable to get sounder past 272 ft.

#4

Design: 900 GPM at 488 ft. head

Setting: 340 ft. 8 x 2 1/2 x 1 1/2

Bowls: 11 BEH 8 stage

Static water level: 300 ft. in 1981

Well Depth: 460 ft. ~

100 HP Layne #T81103

Pump is surging

#3

Design: 700 GPM at 494 ft. head

Setting: 360 ft. 8 x 2 1/2 x 1 1/2

Bowls: 11 BH 8 stage

Static water level: 210 ft. in 1981

Well Depth: 480 ft.

#9

Abandoned well East of house and pond

Static water level: 316 ft. - 12" hole

75 HP Layne #45817

Pulling 90 amps then dropping off to 70.

Its not surging as badly as the other two pumps

Design: 400 GPM at 568 ft. head

Setting: 300 ft. of 8 x 2 1/2 x 1 1/2

Bowls: 10 BKH 12 stage

Static water level: 252 ft. - 1976

Well Depth: 440 ft.

#1

CURVE NO.
18-083
5-1-79

No. Stages	Eff. Change	MATERIAL	Eff. Change
1	-4	IMP.—C.I.	-2
2	-2	IMP.—NI-RI	-1
3	-1	BOWL—BRZ.	-1
4	0	BOWL—NI-R.	-1

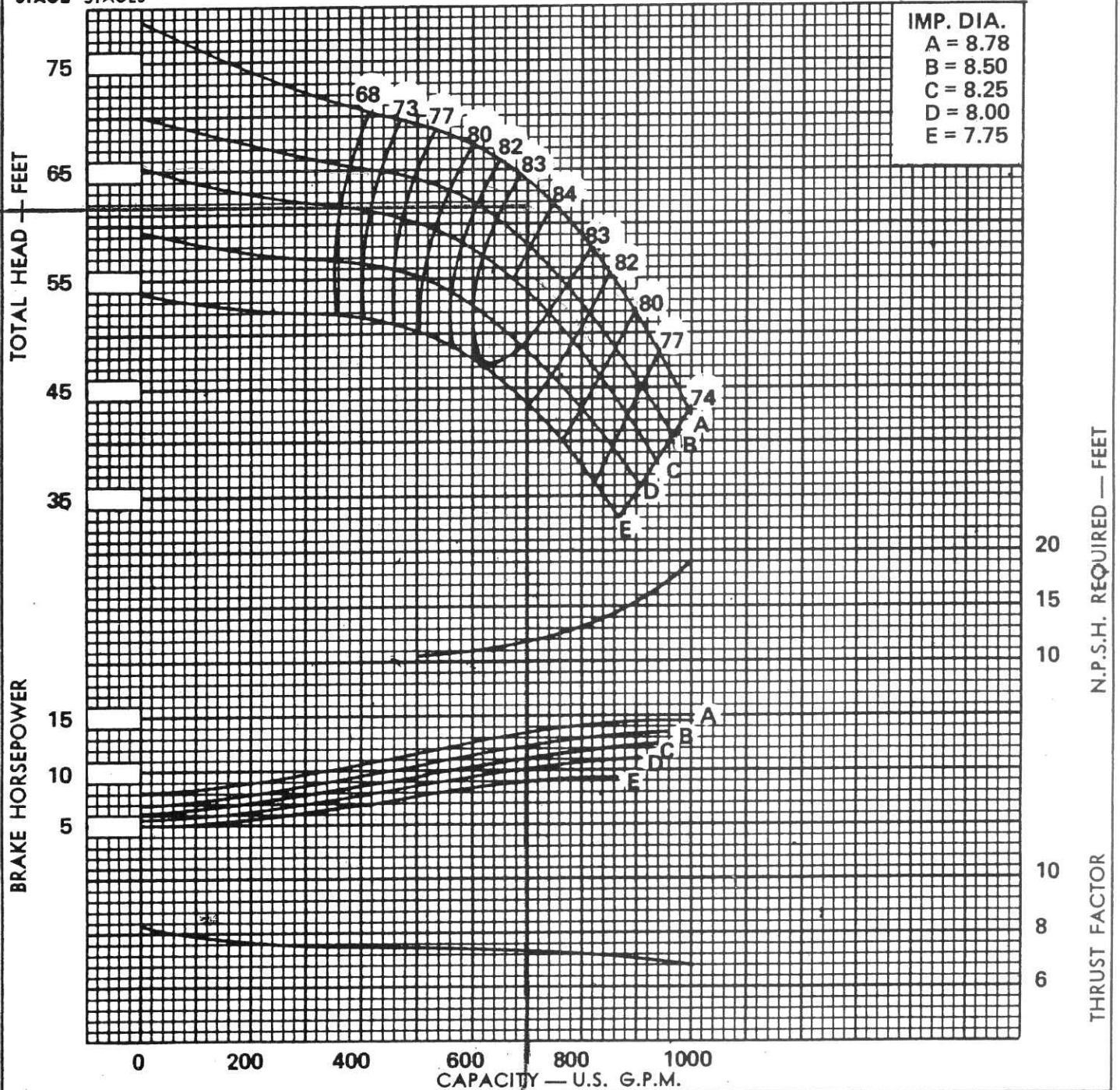
11 BHC 1770 R.P.M.

SINGLE STAGE LAB PERFORMANCE WITH STANDARD MATERIALS. EFFICIENCY SHOWN FOR 4 OR MORE STAGES. HORSE POWER SHOWN FOR ONE STAGE BASED ON 4 STAGE EFFICIENCY. CORRECTIONS SHOULD BE MADE FOR STAGES AND MATERIAL.

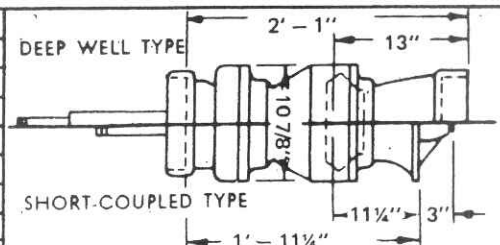
ONE (8)
STAGE STAGES

100 H.P. LAYNE T81103
700 G.P.M. @ 494' Head / 8 = 61.8'

522' / 8 = 65.3' / stage
600 GPM @ 522' TDH



EYE AREA — SQ. IN.	= 14.71	IMPELLER WT.—LBS.	= 12.7
WR ² PER IMPELLER	= 0.74 LB.-FT. ²	ONE STAGE WT.—LBS.	= 188
MAX. SPHERE SIZE	= 0.62 in.	ADD'L STAGE WT.—LBS.	= 74
MAX. NO. STD. STAGES	= 13	IMPELLER NUMBER	= 55B17
MAX. OPERATING P.S.I.	= 430	DISCH. SIZES	= 8, 6
STD. LATERAL	= 0.62 in.	SUCTION SIZES	= 8
STD. SHAFT DIA.	= 1.500 in.	MAX. LATERAL	= — in.
MAX. SHAFT DIA.	= 1.687 in.	BOWL CONN.	FLANGED—COLLET
MIN. SUBMERGENCE	= 22 in.	ADD 9% "	PER ADDITIONAL STAGE.



CURVE NO.
18-105
3-15-78

No. Stages	Eff. Change	MATERIAL	Eff. Change
1	-4	IMP.—C.I.	-2
2	-2	IMP.—NI-RI	-1
3	-1	BOWL—BRZ.	-1
4	0	BOWL—NI-R.	-1

11 BEH

1770 R.P.M.

SINGLE STAGE LAB PERFORMANCE WITH STANDARD MATERIALS. EFFICIENCY SHOWN FOR 4 OR MORE STAGES. HORSE POWER SHOWN FOR ONE STAGE BASED ON 4 STAGE EFFICIENCY. CORRECTIONS SHOULD BE MADE FOR STAGES AND MATERIAL.

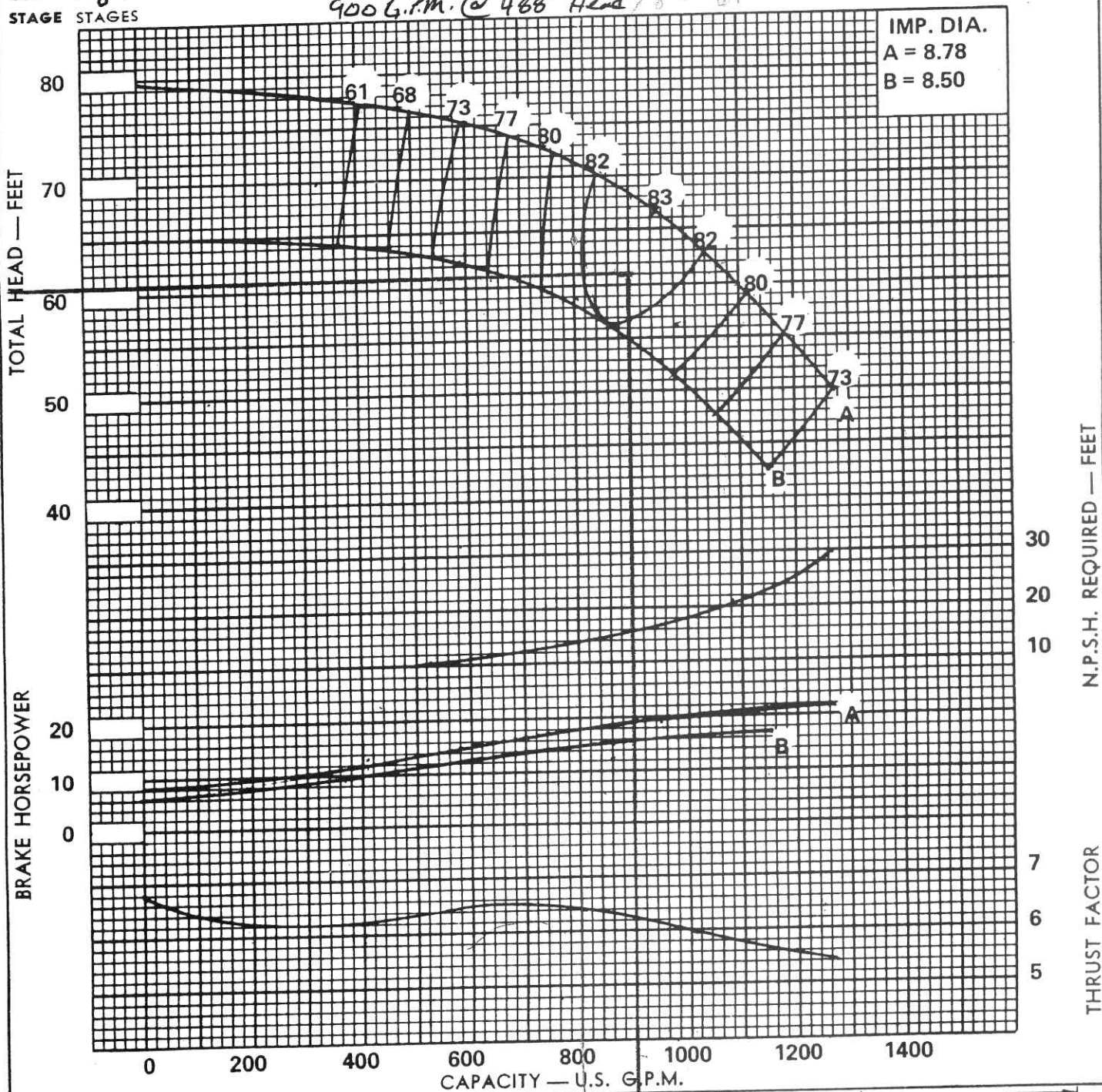
ONE (8)
STAGE STAGES

150 H.P. LAYNE #T81102

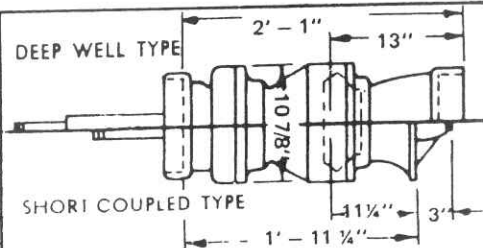
900 G.P.M. @ 488' Head / 8 = 61'

516' / 8 = 64.5'

800 G.P.M. @ 516' TDH



EYE AREA — SQ. IN.	= 15.11	IMPELLER WT.—LBS.	= 12.7
WR ² PER IMPELLER	= 0.74 LB.-FT ²	ONE STAGE WT.—LBS.	= 186
MAX. SPHERE SIZE	= 0.62 in.	ADD'L STAGE WT.—LBS.	= 74
MAX. NO. STD. STAGES	= 10	IMPELLER NUMBER	= 55B19
MAX. OPERATING P.S.I.	= 430	DISCH. SIZES	= 8
STD. LATERAL	= 0.56 in.	SUCTION SIZES	= 8
STD. SHAFT DIA.	= 1.500 in.	MAX. LATERAL	= — in.
MAX. SHAFT DIA.	= 1.687 in.	BOWL CONN.	FLANGED—COLLET
MIN. SUBMERGENCE	= 25 in.	ADD 9% " PER ADDITIONAL STAGE	



10RM SERIES 1110

Verli-Line PUMP

100 H.P. AURORA # 97-74200

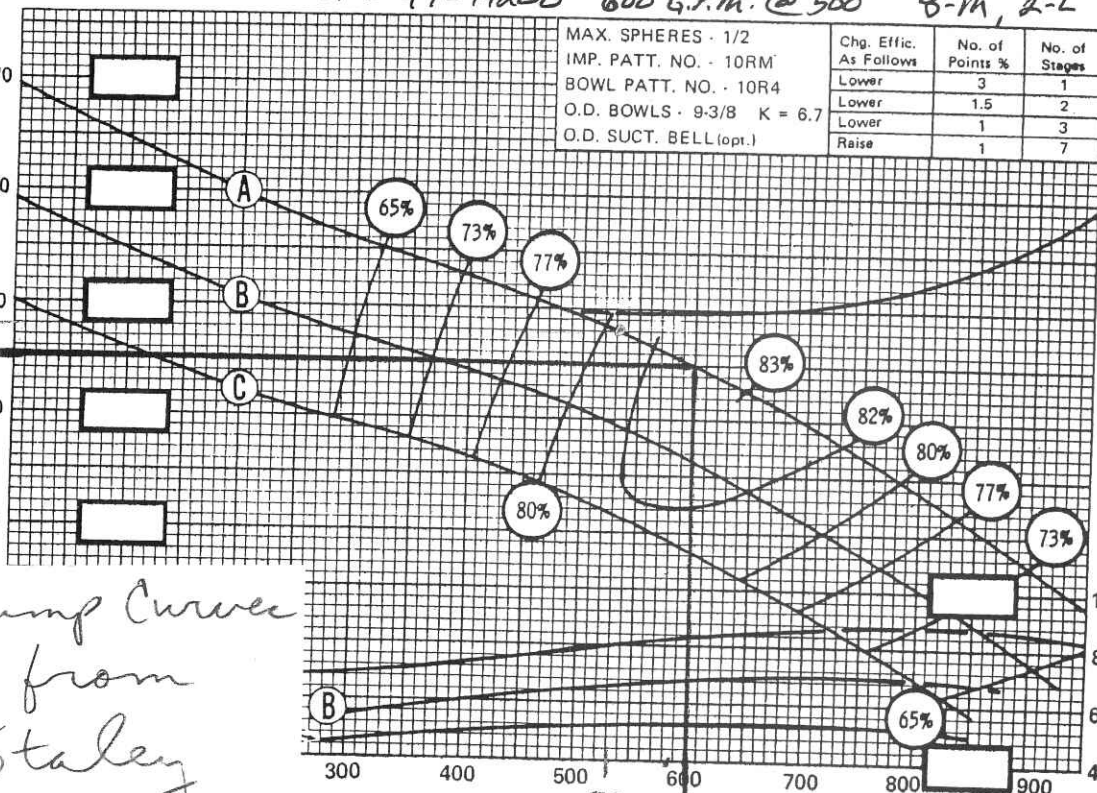
600 G.P.M. @ 500

8-M, 2-L Full Diameter

8-RM

1770 R.P.M.

AL DYNAMIC HEAD-Feet



Pump Curves from Staley

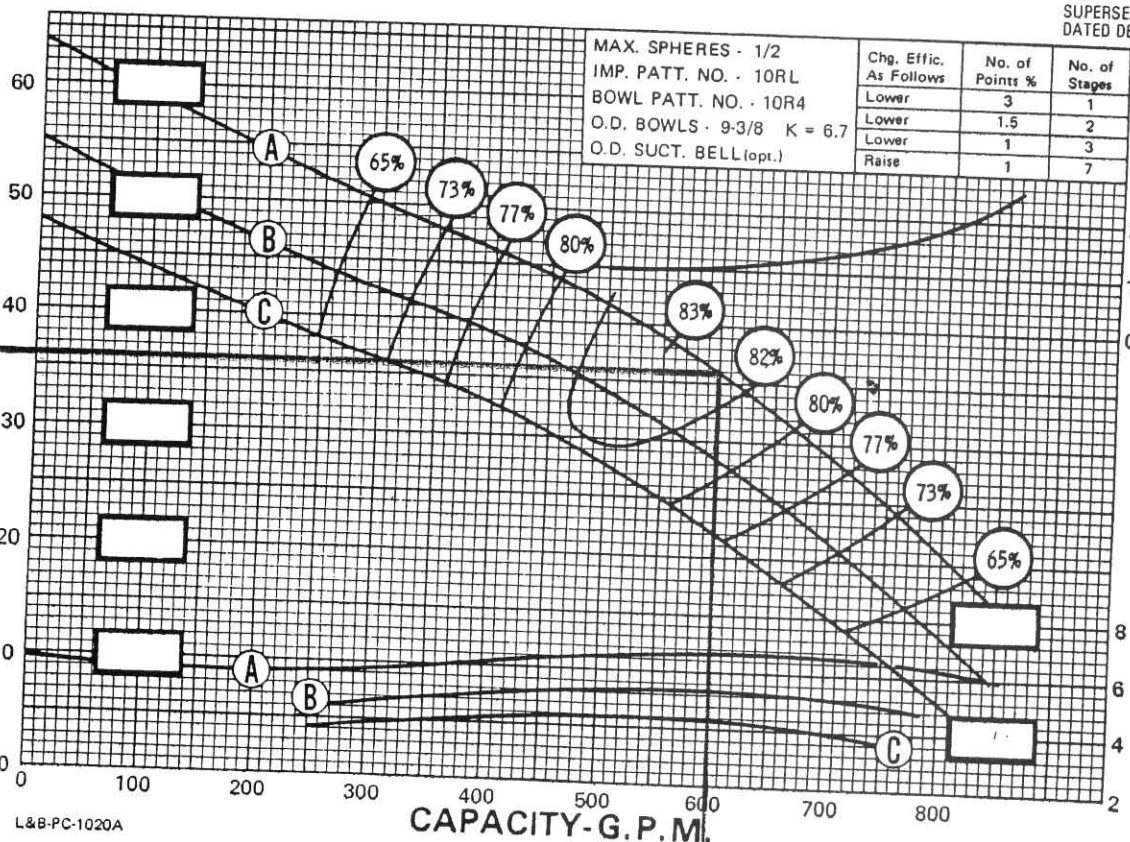
10RL SERIES 1110

Verli-Line PUMP

SUPERSEDES PAGE 533
 DATED DECEMBER 1981

4-RL

TOTAL DYNAMIC HEAD-Feet



L&B-PC-1020A

CAPACITY-G.P.M.

9PC-119364



Surge: 380 + 148 = 528
 B. J. VERTI-LINE PUMPS, INC.

A = 7.750

1770 R.P.M.

DATED MARCH 1988

SUPERSEDES PAGE 564
DATED DECEMBER 1981

12RH SERIES 1110

Verli-Line PUMP

200 H.P. L&B # 97-74192

1350 GPM @ 515'

7 @ 65' = 456

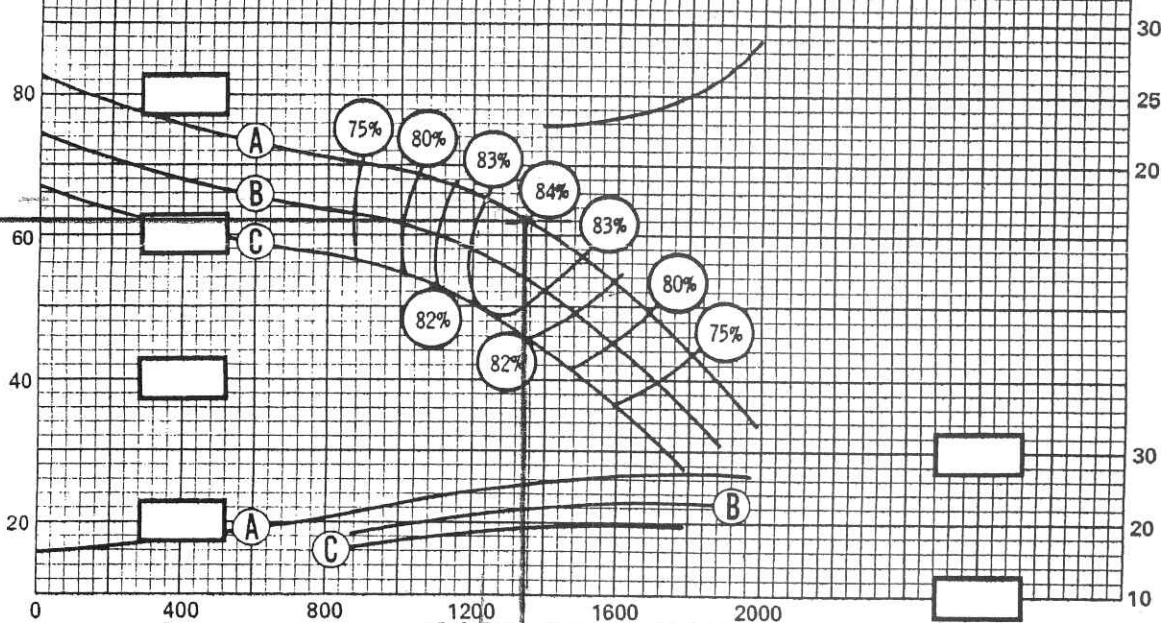
1250 GPM @ 543'

7-4

MAX. SPHERES - 3/4
IMP. PATT. NO. - 12RH
BOWL PATT. NO. - 12R4
O.D. BOWLS - 11-3/8 K = 9.4
O.D. SUCT. BELL (opt.)

Chg. Effic. As Follows	No. of Points %	No. of Stages
Lower	3	1
Lower	1	2
Raise	0	4
Raise	1	6

TOTAL DYNAMIC HEAD-Feet



N.P.S.H.

H.P.

2 @ 435 = 87

2 @ 405 = 81

12RM SERIES 1110

Verli-Line PUMP

DATED MARCH 1988

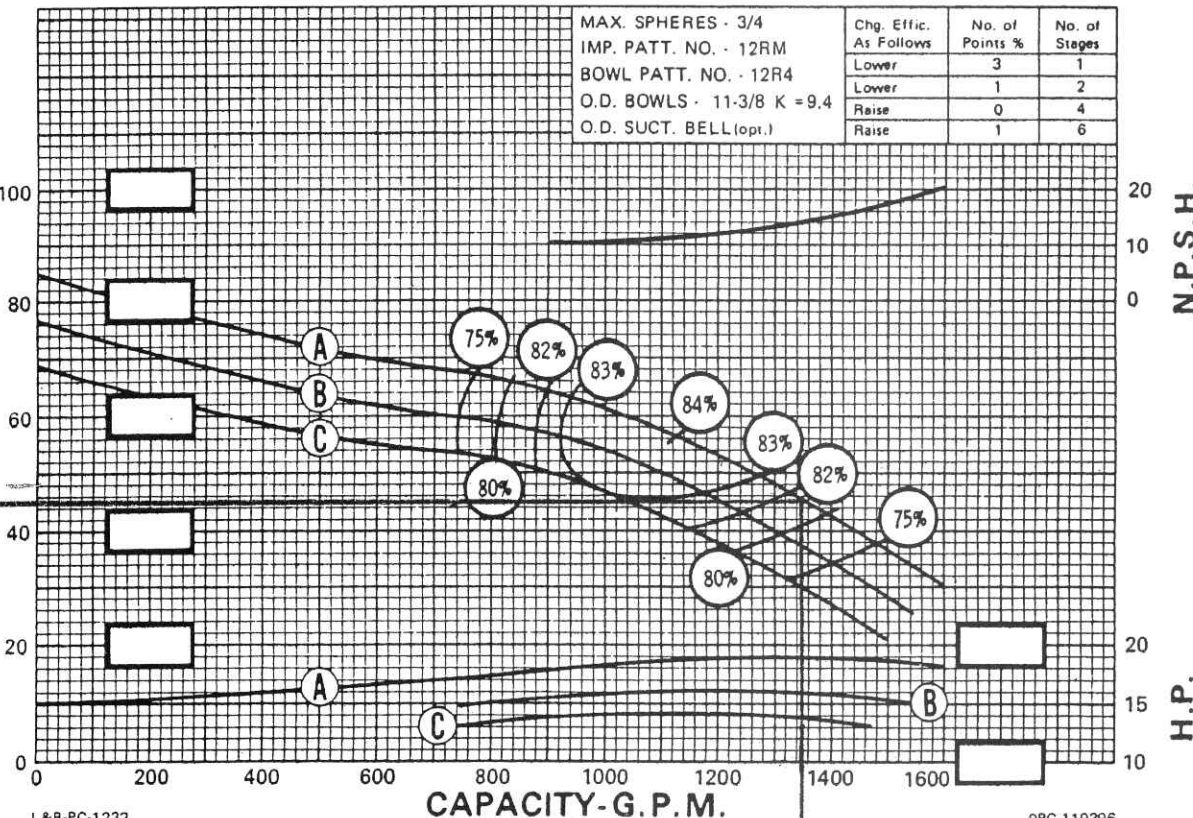
SUPERSEDES PAGE 563
DATED DECEMBER 1981

2-M

MAX. SPHERES - 3/4
IMP. PATT. NO. - 12RM
BOWL PATT. NO. - 12R4
O.D. BOWLS - 11-3/8 K = 9.4
O.D. SUCT. BELL (opt.)

Chg. Effic. As Follows	No. of Points %	No. of Stages
Lower	3	1
Lower	1	2
Raise	0	4
Raise	1	6

TOTAL DYNAMIC HEAD-Feet



N.P.S.H.

H.P.

1770
R.P.M.

L&B-PC-1232

CAPACITY-G.P.M.

9PC-119396

456 + 87 = 543

(A) = 1 RR

Don McFarlane Sites for wells.

PUMPS

DISCRIPTION	GPS COORDINATE	ELEVATION	
EAST SIDE PIVOT #2 BY ROAD TO LAGOON	N 43° 21.796' $\{X = 387068.440\}$ W 115° 23.976' $\{Y = 251793.463\}$	4924	DRY
BOOSTER	N 43° 22.119' 387078.4344 W 115° 23.981' 252389.1696	4971	
<i>Swing wind</i> -PUMP #1 <i>old well</i>	N 43° 22.230' 386948.6716 W 115° 24.080' 252596.1214	4993	JULY 15, 1980 ON PAD
SOUTH OF PUMP #1 30' ~~POLE~~ POLE 01N 09E 32 20	N 43° 22.225' 386947.1712 W 115° 24.081' 252596.9226	4946	DRY 
HINES ~~NOW DRY~~ (I DRILLED) POLE 01N 09E 32 10 #2 1976	N 43° 22.685' 387063.6646 W 115° 24.055' 253433.5768	4946	NOW DRY 
HINES DOMESTIC	N 43° 22.875' 386729.2115 W 115° 24.258' 253789.7133	4901	NOT USED Pump Pulled 
- PUMP #3 SMALLER (SOUTH) POLE 01N 09E 33 40 <i>old</i>	N 43° 22.700' 387431.3859 W 115° 23.732' 253455.0862	4994	
- PUMP #4 LARGER (NORTH) POLE 01N 09E 33 41 <i>old</i>	N 43° 22.825' 387417.7555 W 115° 23.745' 253686.9144	4992	
- PUMP #5 POOR PRODUCER POLE 01N 09E 33 12 1976	N 43° 22.885' 387871.5929 W 115° 23.409' 253789.0230	4991	POOR PRODUCER
- PUMP #6 POLE 01N 09E 33 11 1976	N 43° 22.883' 388293.9229 W 115° 23.095' 253778.3572	4970	
- PUMP #7 1976 POLE 01N 09E 33 10	N 43° 22.884' 388599.3129 W 115° 22.868' 253775.0877	4960	
NORTH HOUSE DOMESTIC	N 43° 23.039' 388550.2414 W 115° 22.908' 254061.8435	4961	

EAST OF #7 ⁸
~~GET~~---I DRILLED) 1996

N 43° 22.878' 388583.9531 4984
W 115° 22.581' 254314.0072

DRY

ON TOP OF HILL
"HOLLER" WELL

N 43° 22.182' 387470.2790
W 115° 22.586' 253043.2106 5128
23.390

DRY ?

EAST (IN HOLE)

N 43° 22.234' 388669.5968 4995
W 115° 22.503' 253119.6410

DRY ?

No log

DOMESTIC
(HEADQUARTERS)

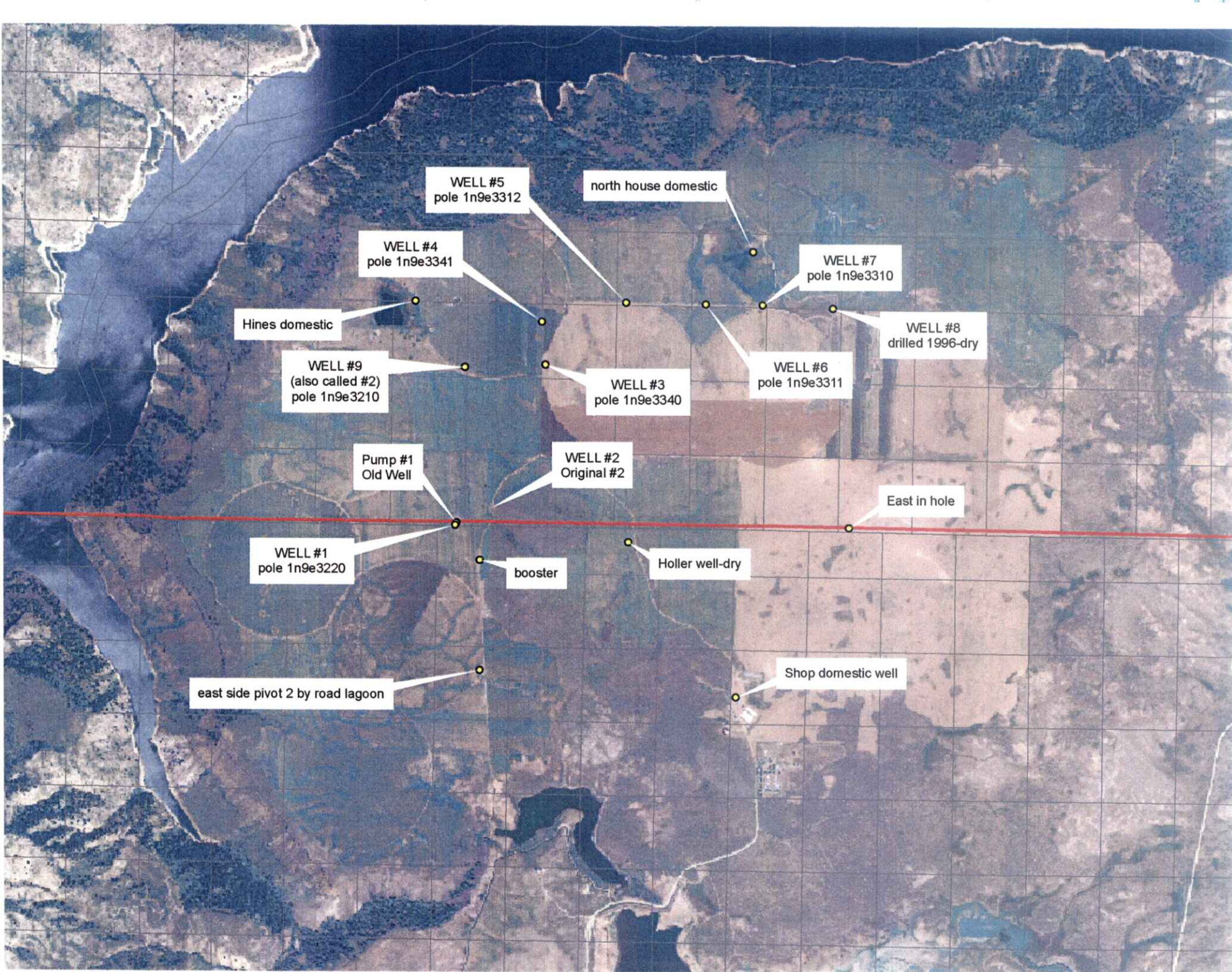
N 43° 21.733' 388217.9452 5046
W 115° 22.952' 252202.3370

FORT RUNNUNG BEAR

N 43°
W 115°

?

Have 2
Logs



WELL #5
pole 1n9e3312

north house domestic

WELL #4
pole 1n9e3341

WELL #7
pole 1n9e3310

Hines domestic

WELL #8
drilled 1996-dry

WELL #9
(also called #2)
pole 1n9e3210

WELL #3
pole 1n9e3340

WELL #6
pole 1n9e3311

Pump #1
Old Well

WELL #2
Original #2

East in hole

WELL #1
pole 1n9e3220

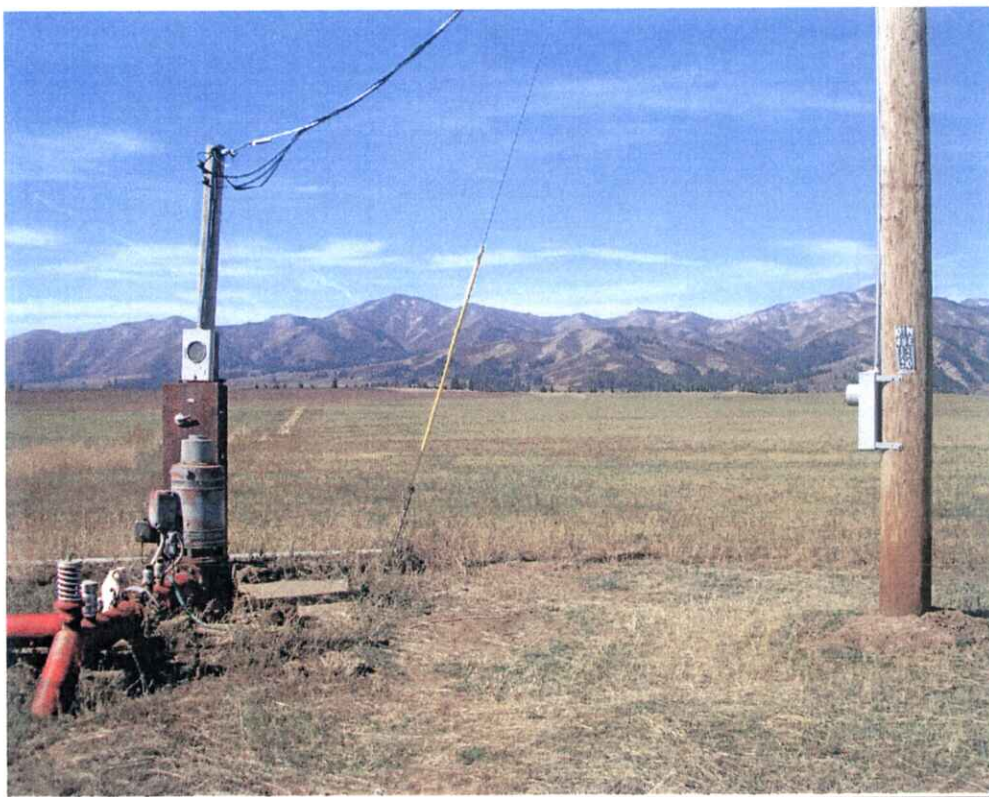
booster

Holler well-dry

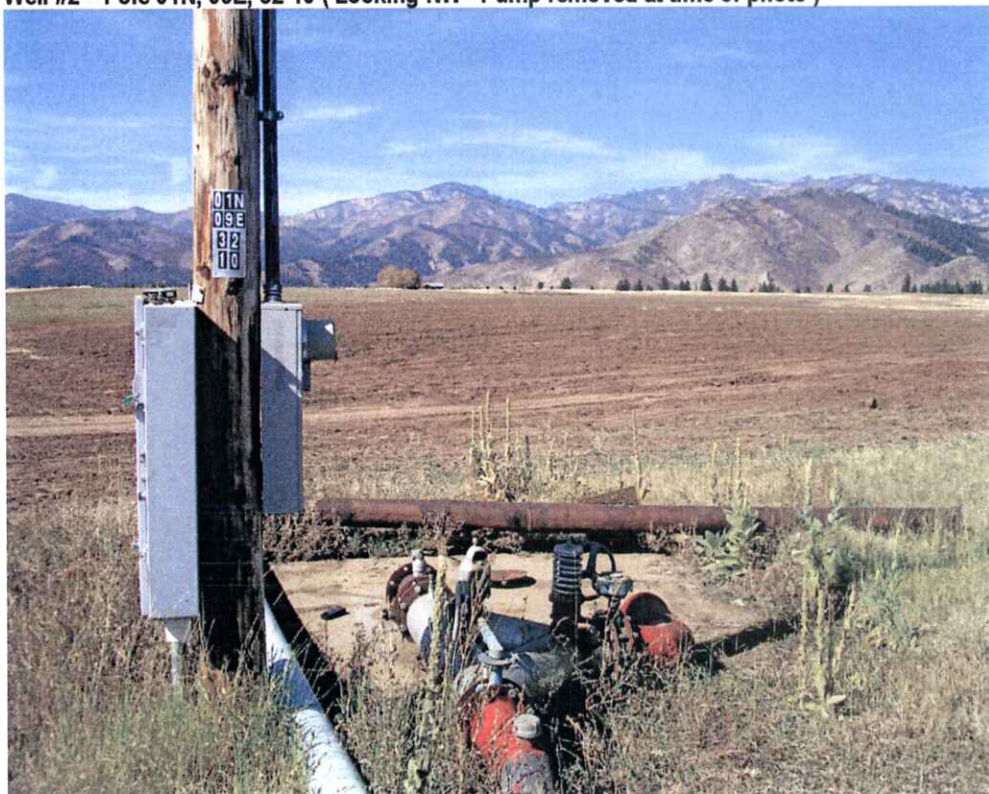
east side pivot 2 by road lagoon

Shop domestic well

Well #1 – Pole 01N, 09E, 32-20 (Looking W / NW)



Well #2 – Pole 01N, 09E, 32-10 (Looking NW - Pump removed at time of photo)



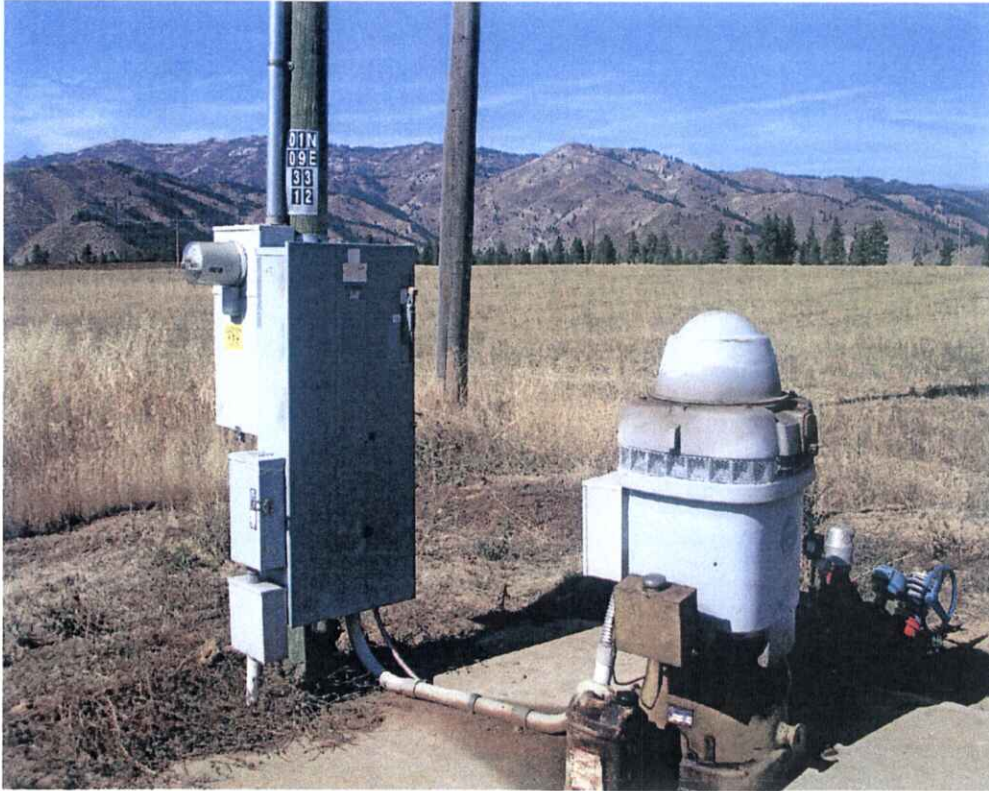
Well #3 – Pole 01N, 09E, 33-40 (Looking NW. Well #4 shown background right)



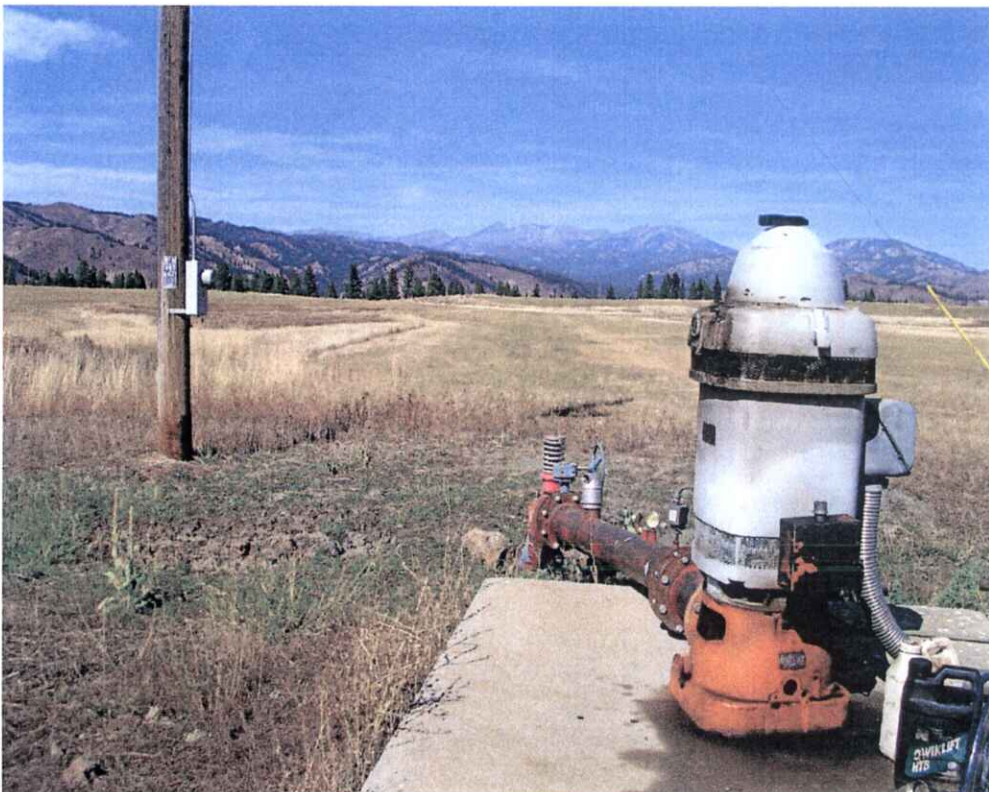
Well #4 – Pole 01N, 09E, 33-41 (Looking NW)



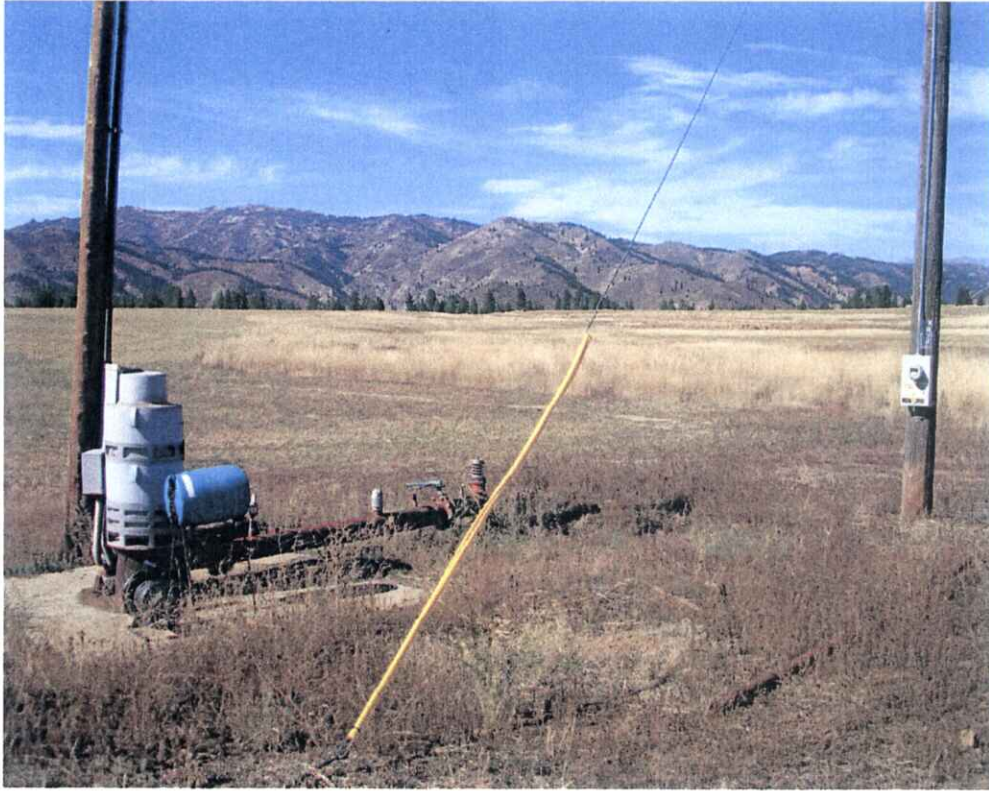
Well #5 – Pole 01N, 09E, 33-12 (Looking NW)



Well #6 – Pole 01N, 09E, 33-11 (Looking NW)



Well #7 – Pole 01N, 09E, 33-10 (Looking NW)



Rhead Reservoir Pumping Plant (Looking N / NE)



Booster Pump – Pole 01S, 09E, 04-40 (Looking East)

