

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-34605
Exam Date: 06/12/2020

1. Current Owner:
PARADISE HOMEOWNERS ASSN INC 2482 N PINE FEATHERVILLE RD PINE ID 83647
2. Accompanied by: Harold Johnson
Phone No: 208-316-5526
Address: 2514 Pine Featherville Rd, Mountain Home, ID 83647
Relationship to permit Holder: Representative

3. **SOURCE:**
GROUND WATER

Tributary
SOUTH FORK BOISE RIVER

Method of Determination: Site visit, well logs

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
63-10559	Groundwater	Commercial, Domestic	License
63-10560	Springs	Domestic, Heating, Recreation	License
63-12316	Spring	Heating	License
63-12317	Groundwater	Domestic, Stockwater	License
63-31526	Spring	Recreation	License
63-32016	Springs	Heating	License
63-4221	Grouse Creek	Cooling, Irrigation	Decreed

Comments: The following rights are owned by the permit holder and overlap place of use and nature of use. Stockwater overlap with 63-12317; Commercial overlap with 63-10559; Domestic overlap with 63-10559, 63-10560.

2. Other water rights with the same point-of-diversion: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
63-10559	Groundwater	Commercial, Domestic	License
63-12317	Groundwater	Domestic, Stockwater	License

Comments: 63-10559 & 63-12317 both operate out of the same wells and diversion systems as permit 63-34605.

C. DIVERSION AND DELIVERY SYSTEM

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

GROUND WATER L4 (SE¼ NW¼), Sec. 33, Twp 03N, Rge 10E, B.M. ELMORE County
GROUND WATER L4 (SE¼ NW¼), Sec. 33, Twp 03N, Rge 10E, B.M. ELMORE County

Method of Determination: Handheld GPS device

PLACE OF USE: DOMESTIC

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
03N	10E	33		X	X		X			X									

Method of Determination: Site visit, aerial imagery

3.

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

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

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

X Photo of Diversion and System Attached

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Well 1	n/a	3	n/a	Sta-rite	2" steel/PVC pipe
Well 2	n/a	3	M30412	Gould	2" steel/PVC pipe

*It cannot be determined which well contains which pump

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
n/a	n/a	n/a	n/a	n/a	n/a	n/a

2. Measurements:

No measurements were taken. The two well POD's have variable submersible pumps that are triggered by a float switch within the holding tank. Both wells do not typically run at the same time.

E. FLOW CALCULATIONS

X Additional Computation Sheets Attached

Measured Method:

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

See attached theoretical sheet for multiple scenarios.

Permit	0.11 cfs
B.U. Standard Allowance	1.14 cfs
B.U. Proof Fee	\$50 → 0 to 0.20 cfs
Theoretical Average	0.08 cfs
License Recommendation	0.08 cfs

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:
2. Volume Calculations for Other Uses:

Stockwater: --6 mixed stock x 12 gpd x 365 days = 26,280 gal = 0.08 afa

-- Use covered by 63-12317

Commercial: --53 fixtures x 0.55 gpm/fixture = 29.15 gpm = 0.06 cfs = 43.44 afa

--2,500 gpd x 365 days = 912,500 gal = 2.8 afa

Limited by condition to 2,500 gpd

--Use covered by WR 63-10559

Domestic: 1.2 afa (IDWR standard) x 19 homes = 22.8 afa

Limited by condition to 13,000 gpd

G. NARRATIVE/REMARKS/COMMENTS

This permit authorizes a total diversion of 0.11 cfs for stockwater, commercial, and domestic uses within the administration area of Paradise Homeowners Association Incorporated in Elmore County. Proof was filed on September 23, 2019 along with a \$50 field exam fee. A field exam was conducted on June 12, 2020 by WR agent Tyler Smith and was accompanied by WR Supervisor Patrick Kelly and Harold Johnson, the representative for the permit.

The diversion system includes two existing wells, ID #400776 and #395090, which divert water to a holding tank from the wells through 2" steel pipes. The well on left side of pump house, herein referred to as Well 1, has a GPS location of N 43.55452°, W -115.27508°. The well on right side of pump house, herein referred to as Well 2, has a GPS location of N 43.55458°, W -115.27505°. Both wells use 3 hp variable speed submersible pumps, one being Sta-rite and the other Gould. Water is fed from both wells into a larger pipe that supplies water to a holding tank.

The holding tank is across Hwy 61 from the wells and up a steep hill, creating a sharp pressure gradient. Solar panels on the holding tank provide power for a float pump switch. The holding tank is approximately 12 feet tall and 25-30 feet in diameter, which puts its capacity between 44,000 and 63,000 gallons. Mr. Johnson indicated that the storage tank has a capacity of 48,000 gallons, but couldn't say with certainty. Given the license recommendation has a maximum diversion rate of 0.08 cfs, the maximum daily volume impoundment allowed under the Department's "24-hour rule" is not at risk of being exceeded. Therefore, no storage component is required for licensing. Due to the high pressure gradient created from the holding tanks elevation, when water leaves the holding tanks it travels through a pressure reduction system before it is supplied to various destinations.

The stockwater use provides water to 6 horses that are present seasonally. Corrals provided evidence of stockwater use at the place of use. According to AP memo #3, six horses falls in the range of 0-10 head of mixed livestock which allows for a rate of 0.02 cfs and volume of 0.1 afa. Water right 63-12317 grants 0.02 cfs and 0.1 afa for stockwater use from the wells. No additional beneficial use was developed by the permit.

The commercial use for the lodge complex includes an outbuilding, staff cabin, laundry/spa building, and 2 rental cabins. The complex has a capacity of 35-50 people and is open all year round to guests, although it sees the majority of its guests during the summer months. The commercial water use specifications for the lodge were provided by the lodge manager on the attached sheet. There were 53 fixtures identified throughout the complex. According to public building

water requirements in the Hydraulic Handbook, hotels with 51-100 fixtures average 0.55 gpm/fixture. This rate multiplied by 53 fixtures equals 29.15 gpm, or 0.06 cfs and an annual volume of 43.4 af. However, this does not account for the seasonal variance in use the lodge experiences and is likely much higher than actual use. If the 53 fixtures ran for 1 hr each day, the total volume would be 1.96 af. Rural and domestic water uses under exhibit 13 of the field examiners handbook recommends 60 gpd for each person. If the lodge serviced the capacity of 50 people for 1/2 of the year, 1.7 af of water would be used. However, water right 63-10559 also provides commercial use to the lodge at a rate of 0.06 cfs and volume of 2.0 afa. Therefore, 63-10559 covers the entire commercial use for the lodge, and no additional beneficial use was established by the permit.

According to Mr. Johnson, there is a total of 70 houses/buildings built or stubbed in within the entire HOA. The stubbing is by 2 culverts on each lot. The culvert closer to the road is the cold water system, and the culvert further from the road is the hot water system, with a few exceptions. Current tax lot data shows a total of 16 lots within the domestic place of use allowed by this permit, although Mr. Johnson mentioned that some of these lots had been split into multiple lots. 51 homes within the subdivision are already licensed under water right 63-10559 and this additional 16 homes would bring the number of total lots close to the 70 described by Mr. Johnson. Although the permit allows for 70 domestic homes, it seems that out of the 70 permitted, 51 are already licensed, and therefore the domestic use allowed under this permit should bring the amount up to 70, and not add an additional 70 homes. Therefore, the domestic use recommended for licensing is 19 homes. Most lots are less than 1/2 an acre and use is highly seasonal, so there is no reason to believe irrigation of 1/2 acre per lot permitted by domestic use will be exceeded. The domestic use overlaps water rights 63-10559 and 63-12317, both of which use the same diversion system allowed by this permit. 63-10559 and 63-12317 have domestic rates of 0.06 cfs and 0.08 cfs, respectively. 63-12317 has a total diversion rate of 0.1 cfs, indicating a diversion system capacity of 0.1 cfs. Therefore, a domestic rate combined use limit for these three rights should be 0.1 cfs.

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

H. RECOMMENDATIONS

1. Recommended Amounts

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>
DOMESTIC	01/01 to 12/31	0.08 CFS

Totals: 0.08 CFS

2. Recommended Amendments

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

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

I. AUTHENTICATION

Tyler Smith - Water Resource Agent

Field Examiner's Name Tyler Smith Date 6/19/2020

Reviewer Patricia Wiley Date 6-24-2020

Domestic PPU

Pump house

Well 2

Well 1

Pressure reduction system

Holding tank

Pipe from pump house to holding tank

Pipe from holding tank to distribution system

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

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TRINITY HOT SPRINGS (208) 653-2123

- Dana Stream (206) 979-2580

Lodge [1020 N. Warm Springs Dr.]

7 Rooms w/ 7 Bathrooms (Toilet, Sink, Showers)

2 Bathrooms (Toilet, Sink)

1 Kitchen (Sink, Dishwasher) ← Daily Year Round

Out Building ← (Daily Year Round)

1 Bathroom (Toilet, Sink, Shower)

(2-3 Outdoor Showers in the works)

1 Hose (1-2 more Hose Bibs in the works)

Staff Cabine ← (Daily Year Round)

1 Bathroom (Toilet, Sink, Tub/Shower)

1 Kitchen (Sink) & 1 Hose Bib

Laundry/Spa Cabine ← (Daily Year Round)

2 Bathrooms (Toilet/Sink)

2 Washing Machines

Cabin Rooms

2 Bathrooms (Toilet, Sink, Tub/Shower)

Cabin Suite

1 Bathroom (Toilet, Sink, Shower)

Separate Property [Gwenter's Chalet [2443 Pine Featherwill Rd]]

1 Kitchen (Sink, Dishwasher)

2 Bathrooms (Toilet, Sink, < (Tub Shower)

2 Hose Bibs

RURAL AND DOMESTIC WATER USES

Residence - Rural:

Each person per day, for all purposes.....	60 gal.
Each horse, dry cow or beef animal per day.....	12 gal.
Each milking cow per day.....	35 gal.
Each hog per day.....	4 gal.
Each sheep per day	2 gal.
Each 100 chickens per day.....	6 gal.

Residence - Urban:

Drinking fountain, continuously flowing.....	50 to 100 gal. per day.
Each shower bath.....	25 to 60 gal.
To fill a bathtub.....	35 gal.
To flush toilet.....	3 to 7 gal.
To fill lavatory.....	1 to 2 gal.
Dish Washing Machine - per load.....	10 to 20 gal.
Automatic washer - per load.....	30 to 50 gal.

By Fixtures:

Shower.....	4 to 6 gpm
Bathtub.....	4 to 8 gpm
Toilet.....	4 to 5 gpm
Lavatory.....	1 to 4 gpm
Kitchen sink.....	2 to 5 gpm

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 63-34605
 Reviewer: Tyler Smith
 Date of Review: 6/12/2020

P/D No.:	Scenario 1	Scenario 2	Scenario 3
PUMP HORSEPOWER	6	6	6
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	300	300	300
DISCHARGE PRESSURE	30	70	165
RATE OF FLOW (cfs)	0.10	0.08	0.05 0.08

The above calculates the formula =

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

Assumptions: %70 efficiency.
 No Friction

Examiners Notes:

Each well is equipped with a 3 hp pump, making the total system 6 hp. The pumping level was measured with DRG from the wells to the holding tank. It can be assumed that discharge pressure is lower when it is an open discharge into the holding tank, and a range of discharge pressure was provided for scenarios, ending with the observed discharge of 165 psi at the wells. The theoretical rate of 0.08 cfs is consistent with what applicant believed the system capacity to be. It is also consistent with the estimated size of the holding tank. Theoretical average flow rate is 0.08 cfs.

Floyd Lilly Co.

249676

WORK ORDER

46324

Phone Id

Bill To Paradise Homeowners

Address _____

Place #2 Pine well

Direction From _____

Remarks GPS Well Tag
A0003950

Date 8-19-19

Delivery Wanted _____

Type of Pump _____

Depth of Well 116' 8-19-19

Depth of Water 18' 27'

Length of Pipe in the Well 105 100'

Size of Pipe 1 1/4 Sch 120 SS

Motor Size _____ Tank Size couplers

Pump Sr. No. _____

Motor Sr. No. _____

1	18G530 Pump 3hp				liner in well at 9'
1	AR. M30412 3hp motor				20P4HH Franklin
1	12-4 Heatshrink				
1	4032 check valve				Joint at 23
1	4202ERDE check valve				Water 27
100	1 1/4 sch 120 PVC Pipe				Joint 63
1	Roll pipe wrap tape				Joint 83
1	305203902 Rva Capacitor				103

Tax

29.5870 Slitz in casing
LINER cut/cyl

flow test pump.
check draw down
water level. Camera
well. Pull & replace
Pump.

a lot of floaters
in water

850.00

Model 18GS

PHOA

SELECTION CHART

Horsepower Range $\frac{3}{4}$ – 5, Recommended Range 6 – 28 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																												
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740	780	820	860
18GS07	¾	0			28.2	26.5	24.0	21.0	17.9	13.5																					
		20	27.7	25.9	23.0	20.0	16.5	10.8																							
		30	25.0	22.0	18.8	15.7	9.5																								
		40	22.2	18.9	15.1	9.0																									
		50	18.4	15.0	7.5																										
		60	13.5	5.0																											
Shut-off PSI			74	66	58	49	40	32	23	14																					
18GS10	1	0					27.0	25.5	23.6	21.2	18.8	15.9	12.0																		
		20		28.0	26.6	25.1	22.7	20.0	17.6	14.0	10.0																				
		30	27.9	26.1	24.3	22.2	19.8	17.1	13.8	8.3																					
		40	26.0	24.1	22.0	19.7	17.0	13.1	8.0																						
		50	24.0	22.0	19.1	16.5	13.0	7.1																							
		60	21.0	18.6	15.8	12.0																									
Shut-off PSI			103	94	86	77	68	60	51	42	34	25	16																		
18GS15	1½	0						28.4	27.2	26.0	24.8	23.0	21.4	19.6	17.5	15.0	12.1														
		20				27.8	26.8	25.4	24.0	22.2	20.6	18.8	16.7	14.0	10.0																
		30			27.7	26.5	25.3	23.8	22.0	20.2	18.5	16.1	13.5	10.0																	
		40		27.5	26.3	25.0	23.6	22.0	20.1	18.1	16.0	13.1	9.5																		
		50	27.6	26.4	25.0	23.4	21.8	20.0	18.0	15.5	13.0	9.2																			
		60	26.0	24.6	23.0	21.2	19.5	17.5	15.0	12.0	7.9																				
Shut-off PSI			143	134	126	117	108	100	91	82	74	65	56	48	39	30	22														
18GS20	2	0								28.0	27.1	26.2	25.1	24.0	22.9	21.4	20.0	16.8	12.8												
		20						27.8	26.8	25.8	24.6	23.7	22.6	21.0	19.5	18.0	16.0	11.6													
		30					27.5	26.5	25.5	24.5	23.3	22.1	20.6	19.0	17.5	15.8	13.6	6.5													
		40			28.5	27.4	26.4	25.4	24.4	23.2	22.0	20.5	18.9	17.4	15.7	13.5	11.0														
		50		28.0	27.2	26.2	25.3	24.3	23.0	21.8	20.3	18.7	17.0	15.3	13.1	10.5	6.0														
		60	28.0	27.1	26.2	25.1	24.0	22.9	21.4	20.0	18.3	16.8	14.8	12.8	9.5																
Shut-off PSI			183	174	165	157	148	139	131	122	113	105	96	87	79	70	61	44	27												
18GS30	3	0											28.0	27.4	26.7	26.0	25.0	23.5	21.5	19.2	16.9	14.2	10.5								
		20										27.7	27.0	26.3	25.8	24.9	24.0	23.0	21.0	18.9	16.5	13.5	9.0								
		30									27.6	26.9	26.2	25.5	24.8	23.9	22.9	21.9	19.8	17.5	14.9	11.2									
		40							27.5	26.9	26.2	25.4	24.6	23.8	22.8	21.8	20.9	18.5	16.0	13.3	8.0										
		50						27.4	26.8	26.0	25.2	24.5	23.6	22.6	21.7	20.6	19.5	17.3	14.5	11.0											
		60				28.0	27.4	26.7	26.0	25.0	24.3	23.5	22.5	21.5	20.5	19.2	18.0	15.7	12.8	7.0											
Shut-off PSI						225	216	208	199	190	182	173	164	156	147	139	130	113	95	78	61	43	26								
18GS50R	5	0															27.7	26.6	25.4	24.0	22.5	20.8	19.0	16.9	14.5	11.7	8.1				
		20														27.6	27.0	26.4	25.2	23.8	22.2	20.5	18.7	16.6	14.1	11.2	7.4				
		30												28.0	27.5	26.9	26.3	25.7	24.4	22.9	21.3	19.5	17.5	15.2	12.5	9.1					
		40											27.9	27.4	26.8	26.2	25.6	25.0	23.5	22.0	20.3	18.4	16.2	13.7	10.6	6.7					
		50										27.9	27.3	26.7	26.1	25.5	24.8	24.1	22.7	21.0	19.2	17.2	14.8	12.0	8.5						
		60								27.8	27.2	26.7	26.1	25.4	24.7	24.0	23.3	21.7	20.0	18.1	15.9	13.3	10.1	6.0							
Shut-off PSI										261	252	244	235	226	218	209	200	183	166	148	131	114	96	79	62	44	27				
18GS50	5	0																27.9	26.8	25.8	24.8	23.7	22.6	21.2	19.9	18.4	16.8	14.8	12.4	9.7	
		20																27.5	26.6	25.6	24.5	23.3	22.2	21.0	19.8	18.0	16.2	14.3	12.0	8.8	
		30																28.0	26.9	26.0	25.0	23.9	22.9	21.6	20.3	18.6	17.0	15.0	13.0	10.2	6.2
		40														28.0	27.4	26.3	25.3	24.4	23.2	22.1	20.1	19.4	17.9	16.0	14.0	11.6	8.0		
		50													27.9	27.3	26.8	25.9	24.9	23.8	22.7	21.3	20.1	18.5	16.9	14.9	12.8	10.0	6.0		
		60													27.9	27.2	26.8	26.2	25.2	24.1	23.0	21.9	20.7	19.2	17.5	15.8	13.6	11.0	7.8		
Shut-off PSI														307	298	290	281	264	246	229	212	195	177	160	143	125	108	91	73	56	39



RECEIVED

MAY 16 2013

WATER RESOURCES
WESTERN REGION

4" submersible pumps - 10, 15, 20, 30, and 50 gpm

20 Gallons per Minute

PUMP PERFORMANCE (Capacity in Gallons Per Minute)

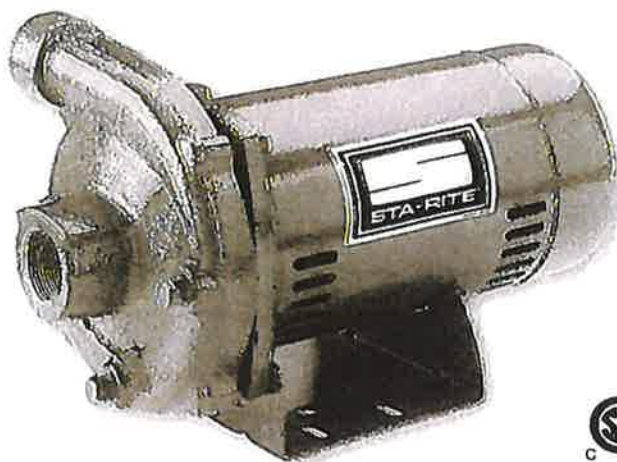
HP	PSI	Pumping Depth in Feet																				Shut-Off Head							
		20	40	60	80	100	125	150	175	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	Feet	PSI	
3/4	0	—	—	29.2	26.9	23.5	19.0	13.7	1.8																				
	20	28.5	25.8	22.5	18.5	14.5	3.4																						
	30	25.2	22.0	18.3	13.9	4.5																							
	40	21.3	17.6	13.0	3.0																								
	50	17.2	11.4	1.8																									
	60	10.2																										180	78
1	0	—	—	31.0	29.6	28.0	25.3	22.4	18.8	15.5																			
	20	30.5	29.2	27.4	25.1	22.8	19.5	16.1	10.1																				
	30	28.8	27.2	24.9	22.5	19.8	16.5	10.6																					
	40	27.0	24.5	22.0	19.4	16.8	11.6	2.6																					
	50	24.2	21.5	19.0	16.3	12.5	3.3																						
	60	21.3	18.6	16.0	11.1	3.7																							251
1-1/2	0	—	—	—	30.9	29.8	28.2	26.4	24.0	21.6	16.4	5.4																	
	20	—	30.5	29.4	28.2	26.8	24.4	22.0	19.5	16.8	6.8																		
	30	30.3	29.3	28.0	26.5	24.7	22.2	19.6	17.1	13.9																			
	40	29.1	27.8	26.2	24.3	22.3	19.8	17.3	14.2	8.0																			
	50	27.5	26.0	24.1	22.1	20.0	17.5	14.5	8.3																				
	60	25.6	23.9	21.9	19.8	17.5	14.8	9.1	2.2																				323
2	0	—	—	—	31.5	30.7	29.7	28.6	27.3	26.0	23.2	20.2	16.2	8.5															
	20	—	31.3	30.5	29.7	28.8	27.5	26.1	24.9	23.4	20.6	16.7	9.5																
	30	31.1	30.3	29.5	28.7	27.6	26.2	25.0	23.5	22.1	19.1	13.8	4.8																
	40	30.2	29.4	28.5	27.5	26.4	25.1	23.7	22.2	20.8	17.2	10.1																	
	50	29.3	28.3	27.2	26.1	25.1	23.8	22.3	20.9	19.3	14.0	5.7																	
	60	28.1	27.1	26.0	25.0	23.9	22.4	21.0	19.4	17.3	10.8																		420
3	0	—	—	—	31.9	31.1	30.6	29.7	29.0	27.2	25.3	23.5	21.3	19.1	16.0	11.3	3.6												
	20	—	—	31.7	31.1	30.7	29.9	29.1	28.3	27.3	25.4	23.6	21.6	19.3	16.1	12.0	5.0												
	30	—	32.0	31.0	30.6	29.9	29.2	28.5	27.4	26.6	24.8	22.7	20.6	18.1	14.5	9.0													
	40	31.6	31.0	30.5	29.8	29.2	28.6	27.5	26.7	25.5	23.8	21.7	19.6	16.8	12.5	5.3													
	50	30.9	30.0	29.7	29.1	28.6	27.6	26.7	25.6	24.9	22.8	20.8	18.5	15.0	9.5														
	60	30.3	29.6	29.1	28.5	27.7	26.8	25.7	24.9	23.9	21.8	19.8	16.9	12.7	5.6														605
5	0	—	—	—	—	—	—	31.7	31.1	30.5	29.5	28.5	27.5	26.5	25.2	24.0	22.8	21.5	20.2	18.9	17.0	14.3	11.0	6.8	2.0				
	20	—	—	—	—	—	31.7	31.2	30.9	30.6	29.5	28.6	27.6	26.6	25.3	24.1	22.9	21.6	20.3	19.0	17.3	14.0	11.2	7.3	2.6				
	30	—	—	—	—	31.8	31.3	30.9	30.7	30.0	29.0	28.0	27.1	26.0	24.9	23.5	22.2	21.0	19.9	18.2	16.2	13.3	9.5	5.2					
	40	—	—	—	31.7	31.4	31.0	30.7	30.0	29.6	28.7	27.7	26.7	25.4	24.2	22.9	21.7	20.4	19.1	17.5	14.4	11.5	7.7	3.1					
	50	—	32.0	31.7	31.2	31.0	30.8	30.0	29.6	29.1	28.1	27.2	26.0	25.0	23.6	22.3	21.1	20.0	18.4	16.3	13.5	9.9	5.7						
	60	31.9	31.6	31.2	30.9	30.8	30.1	29.7	29.1	28.8	27.8	26.8	25.5	24.3	23.0	21.8	20.5	19.2	17.7	14.9	12.0	8.0	3.7						1005
HP	PSI	Pumping Depth in Feet														Shut-Off Head													
		200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	Feet	PSI											
7-1/2	0	—	—	—	—	28.7	27.3	25.7	24.3	23.1	21.5	19.9	16.4	11.3	4.1														
	20	—	—	—	—	28.3	26.7	25.3	23.7	22.3	20.8	18.9	14.7	8.5	1.3														
	30	—	—	—	—	28.0	26.5	25.1	23.5	22.1	20.6	18.3	13.4	7.0															
	40	—	—	—	29.2	27.5	26.3	24.7	23.3	21.7	20.2	17.3	12.1	5.3															
	50	—	—	—	28.7	27.3	25.7	24.5	22.7	21.3	19.7	16.0	10.6	3.6															
	60	—	—	—	28.4	26.9	25.5	24.3	22.5	21.0	19.3	15.1	9.5	2.1															1450
10	0	—	—	—	—	—	—	—	28.0	26.8	25.7	24.7	23.7	22.6	21.6	20.7	19.5	17.1											
	20	—	—	—	—	—	28.6	27.5	26.4	25.3	24.4	23.3	22.1	21.3	20.1	18.5	16.0												
	30	—	—	—	—	—	28.4	27.3	26.2	25.0	24.1	23.0	21.9	21.0	19.9	18.0	15.0												
	40	—	—	—	—	—	28.0	27.0	25.7	24.9	24.0	22.8	21.7	20.8	19.7	17.6	14.7												
	50	—	—	—	—	29.2	27.8	26.7	25.5	24.7	23.6	22.5	21.5	20.6	19.4	17.0	14.0												
	60	—	—	—	—	28.7	27.5	26.4	25.3	24.4	23.3	22.2	21.3	20.2	18.5	16.1	12.5												1950

CAUTION: DO NOT use pump at flow rates indicated by the symbol '—'. To do so can cause premature failure of unit. Pump warranty void when failure occurs under these conditions. Tested and rated in accordance with Water Systems Council Standards.

NOTE: Pumps installed with a PRO-Source™ tank require a 100 PSI relief valve. Pumps installed with a conventional tank require a 75 PSI relief valve. Relief valve must be capable of relieving entire flow of pump at relief pressure.



general purpose centrifugal pumps



The J/JB Series Pumps have a heavy-duty cast iron construction and are offered in high and medium head models, with Noryl® or silicon bronze impeller.

APPLICATIONS

- **Water systems and sprinkling...** for homes, farms and industry.

SPECIFICATIONS

Body and Seal Plate – Close-grained cast iron
Base – Steel 12 gauge
Impeller – J Series – Noryl
Impeller – JB Series – Silicon bronze
Shaft – 416 stainless steel
Mechanical Seal – Carbon/ceramic, Buna-N

J/JB SERIES

FEATURES

1/3 through 2-1/2 HP – High head and medium head models, with heavy-duty motors, easy service design and four-position discharge.

Drain Port – Provided for easy winterizing.

Medium Head Models – Deliver up to 110' of head with capacities to 140 GPM.

High Head Models – Deliver up to 140' of head with capacities to 90 GPM.

Easy Serviceability – All models include replaceable wear ring and feature back pull-out design.

J Series with Noryl Impellers – Abrasion-resistant for normal applications with working temperatures to 140°F.

JB Series with Silicon Bronze – JB pumps equipped with shaft seals rated for temperatures to 225°F.

ORDERING INFORMATION

HIGH HEAD

Catalog Number	Noryl® Impeller	Silicon Bronze Impeller	HP	Pipe Tapping Sizes		Motor Voltage	Phase	Approx. Wt. Lbs.
				Suct.	Disch.			
JHB	JHB	JHB	1/3	1-1/4"	1"	115	1	38
JHC	JHC	JHC	1/2	1-1/4"	1"	115/230	1	39
JHC3	JHC3	JHC3	1/2	1-1/4"	1"	208-230/460	3	39
JHD	JHD	JHD	3/4	1-1/4"	1"	115/230	1	42
JHD3	JHD3	JHD3	3/4	1-1/4"	1"	208-230/460	3	42
JHE	JHE	JHE	1	1-1/4"	1"	115/230	1	45
JHE3	JHE3	JHE3	1	1-1/4"	1"	208-230/460	3	45
JHF	JHF	JHF	1-1/2	1-1/4"	1"	115/230	1	49
JHF3	JHF3	JHF3	1-1/2	1-1/4"	1"	208-230/460	3	49
JHG	JHG	JHG	2	1-1/2"	1-1/4"	115/230	1	69
JHG3	JHG3	JHG3	2	1-1/2"	1-1/4"	208-230/460	3	69
JHHG	JHHG	JHHG	2-1/2	2"	1-1/2"	115/230	1	74
JHHG3	JHHG3	JHHG3	2-1/2	2"	1-1/2"	208-230/460	3	74

MEDIUM HEAD

Catalog Number	Noryl® Impeller	Silicon Bronze Impeller	HP	Pipe Tapping Sizes		Motor Voltage	Phase	Approx. Wt. Lbs.
				Suct.	Disch.			
JMB	JMB	JMB	1/3	1-1/4"	1"	115	1	38
JMC	JMC	JMC	1/2	1-1/4"	1"	115/230	1	39
JMC3	JMC3	JMC3	1/2	1-1/4"	1"	208-230/460	3	39
JMD	JMD	JMD	3/4	1-1/4"	1"	115/230	1	42
JMD3	JMD3	JMD3	3/4	1-1/4"	1"	208-230/460	3	42
JME	JME	JME	1	1-1/2"	1-1/4"	115/230	1	43
JME3	JME3	JME3	1	1-1/2"	1-1/4"	208-230/460	3	43
JMF	JMF	JMF	1-1/2	1-1/2"	1-1/4"	115/230	1	54
JMF3	JMF3	JMF3	1-1/2	1-1/2"	1-1/4"	208-230/460	3	54
JMG	JMG	JMG	2	1-1/2"	1-1/4"	115/230	1	66
JMG3	JMG3	JMG3	2	1-1/2"	1-1/4"	208-230/460	3	66
—	JBMMG	JBMMG	2-1/2	2"	1-1/2"	115/230	1	74
—	JBMMG3	JBMMG3	2-1/2	2"	1-1/2"	208-230/460	3	74

Noryl® is a registered trademark of General Electric Co. PRO-Source™ is a trademark of Pentair Water. In order to provide the best products possible, specifications are subject to change.



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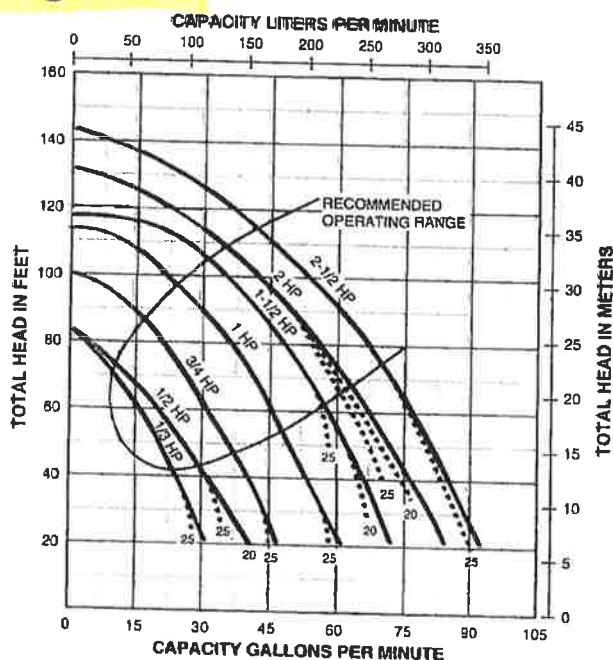
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WATER RESOURCES
WESTERN REGION

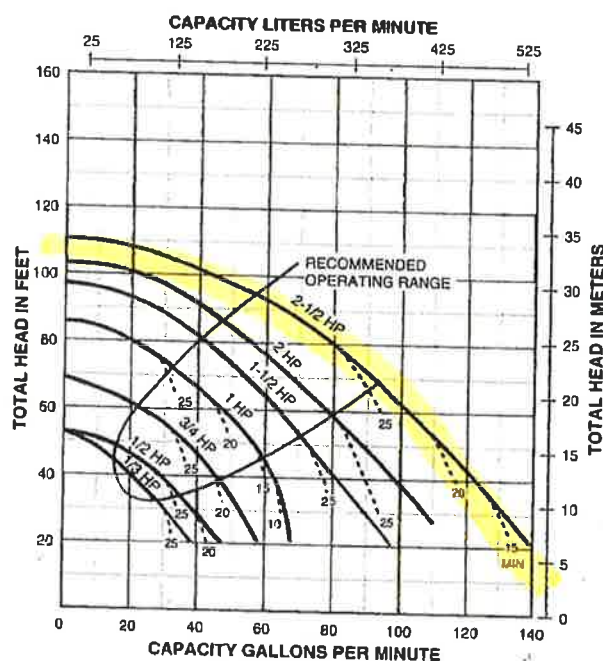
general purpose centrifugal pumps

PUMP PERFORMANCE

High Head



Medium Head



NOTE: Dotted lines indicate performance reduction at high suction lift.

PUMP PERFORMANCE (Capacity in Gallons Per Minute)

HIGH HEAD

HP	Discharge Pressure		Dynamic Suction Lift				
	PSI	Feet Head	5'	10'	15'	20'	25'
1/3	10	23.1	—	26	24	22	20
	20	46.2	20	18	15	11	10
	30	69.3	6	—	—	—	—
1/2	10	23.1	—	34	32	29	26
	20	46.2	25	21	18	15	11
	30	69.3	10	—	—	—	—
3/4	10	23.1	—	—	42	39	37
	20	46.2	35	32	30	28	26
	30	69.3	24	22	19	15	10
1	20	46.2	48	46	45	43	40
	30	69.3	38	35	31	28	25
	40	92.4	23	20	15	—	—
1-1/2	20	46.2	62	60	58	55	52
	30	69.3	50	48	44	40	37
	40	92.4	37	32	29	22	—
2	20	46.2	71	68	66	62	60
	30	69.3	60	57	52	59	45
	40	92.4	45	40	36	31	24
2-1/2	50	115.5	22	15	—	—	—
	20	46.2	81	79	76	74	71
	30	69.3	69	67	63	60	56
2-1/2	40	92.4	56	51	47	44	38
	50	115.5	33	30	22	15	—

Tested and rated in accordance with Water Systems Council Standards.

NOTE: Pumps installed with a PRO-Source™ tank require a 100 PSI relief valve. Pumps with a conventional tank require a 75 PSI relief valve. Relief valve must be capable of relieving entire flow of pump at relief pressure.

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

This is a copy of the original as taken from our records.

Resources
COPY SENT TO
WILLIS CARRIE
4/30/78

USE TYPEWRITER OR
BALLPOINT PEN

FEB 1 1978

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.

[illegible]

USE ADDITIONAL SHEETS IF NECESSARY – FORWARD THE WHITE COPY TO THE DEPARTMENT

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORTUSE TYPEWRITER OR
BALLPOINT PENState 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 <u>Jim Carrie</u> Address <u>Wagon Town</u> Owner's Permit No. _____	7. WATER LEVEL Static water level <u>25</u> feet below land surface. Flowing? ☐ Yes ☒ No G.P.M. flow _____ Artesian closed-in pressure _____ p.s.i. Controlled by: ☐ Valve ☐ Cap ☐ Plug Temperature _____ °F. Quality _____																																										
2. NATURE OF WORK ☒ New well ☐ Deepened ☐ Replacement ☐ Abandoned (describe method of abandoning) _____	8. WELL TEST DATA ☐ Pump ☐ Bailor ☒ Air ☐ Other _____ <table border="1" style="width: 100%; border-collapse: collapse;"><tr><th>Discharge G.P.M.</th><th>Pumping Level</th><th>Hours Pumped</th></tr><tr><td style="text-align: center;">30</td><td></td><td style="text-align: center;">1</td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></table>	Discharge G.P.M.	Pumping Level	Hours Pumped	30		1																																				
Discharge G.P.M.	Pumping Level	Hours Pumped																																									
30		1																																									
3. PROPOSED USE ☒ Domestic ☐ Irrigation ☐ Test ☐ Municipal ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection ☐ Other _____ (specify type) _____	9. LITHOLOGIC LOG <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th rowspan="2">Hole Diam.</th><th colspan="2">Depth</th><th rowspan="2">Material</th><th rowspan="2">Water Yes No</th></tr><tr><th>From</th><th>To</th></tr></thead><tbody><tr><td>8"</td><td>0</td><td>37</td><td>Sand + GRAVEL</td><td></td></tr><tr><td>8-1/2"</td><td>37</td><td>59</td><td>GRANITE</td><td></td></tr><tr><td>6"</td><td>59</td><td>60</td><td>BROKEN GRANITE</td><td>✓</td></tr><tr><td>6"</td><td>60</td><td>78</td><td>GRANITE</td><td></td></tr><tr><td>6"</td><td>78</td><td>81</td><td>BROKEN GRANITE</td><td>✓</td></tr><tr><td>6"</td><td>81</td><td>94</td><td>GRANITE</td><td></td></tr><tr><td>6"</td><td>94</td><td>120</td><td>BROKEN GRANITE</td><td>✓</td></tr></tbody></table>	Hole Diam.	Depth		Material	Water Yes No	From	To	8"	0	37	Sand + GRAVEL		8-1/2"	37	59	GRANITE		6"	59	60	BROKEN GRANITE	✓	6"	60	78	GRANITE		6"	78	81	BROKEN GRANITE	✓	6"	81	94	GRANITE		6"	94	120	BROKEN GRANITE	✓
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6"	81	94	GRANITE																																								
6"	94	120	BROKEN GRANITE	✓																																							
4. METHOD DRILLED ☒ Rotary ☒ Air ☐ Hydraulic ☐ Reverse rotary ☐ Cable ☐ Dug ☐ Other _____	RECEIVED FEB 24 1982 Department of Water Resources Western Regional Office RECEIVED SEP 15 1982 FEB 19 1982 Upgrades Department of Water Resources																																										
5. WELL CONSTRUCTION Casing schedule: ☒ Steel ☐ Concrete ☒ Other <u>P.V.C.</u> <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th>Thickness</th><th>Diameter</th><th>From</th><th>To</th></tr></thead><tbody><tr><td><u>250</u> inches</td><td><u>6 3/4</u> inches</td><td><u>1</u> feet</td><td><u>39</u> feet</td></tr><tr><td><u>125</u> inches</td><td><u>4 3/4</u> inches</td><td><u>5</u> feet</td><td><u>120</u> feet</td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr></tbody></table> 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 <u>4</u> inches by <u>4</u> inches <u>5 AW</u> <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th>Number</th><th>From</th><th>To</th></tr></thead><tbody><tr><td><u>660</u> perforations</td><td><u>40</u> feet</td><td><u>120</u> feet</td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></tbody></table> 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 <u>37</u> 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 Weld ☐ Cemented between strata Describe access port _____	Thickness	Diameter	From	To	<u>250</u> inches	<u>6 3/4</u> inches	<u>1</u> feet	<u>39</u> feet	<u>125</u> inches	<u>4 3/4</u> inches	<u>5</u> feet	<u>120</u> feet									Number	From	To	<u>660</u> perforations	<u>40</u> feet	<u>120</u> feet							10. Work started <u>9-8-81</u> finished <u>9-15-81</u>										
Thickness	Diameter	From	To																																								
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<u>660</u> perforations	<u>40</u> feet	<u>120</u> feet																																									
6. LOCATION OF WELL Sketch map location must agree with written location.  Subdivision Name _____ Lot No. _____ Block No. _____ County <u>Elmore</u> <u>S1E 1/4 Sec. 33, T. 3 N., R. 10 E.</u>	11. DRILLERS CERTIFICATION <u>DR</u> I/We certify that all minimum well construction standards were complied with at the time the rig was removed. Firm Name <u>H. L. Weston Drilling</u> Firm No. <u>35</u> Address <u>MT Home</u> Date <u>9-15-81</u> Signed by (Firm Official) <u>[Signature]</u> and (Operator) <u>[Signature]</u>																																										

BasinSeq	Owner	Source	Use	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	TotalAcres
63-10559	PARADISE HO	GROUND WATER	COMMERCIAL								X									
63-10559	PARADISE HO	GROUND WATER	DOMESTIC			X		X			X									
63-10560	PARADISE HO	SPRINGS	DOMESTIC								X									
63-10560	PARADISE HO	SPRINGS	HEATING		X	X		X			X									
63-12316	PARADISE HO	SPRING	HEATING			X					X									
63-12317	PARADISE HO	GROUND WATER	DOMESTIC			X					X									
63-12317	PARADISE HO	GROUND WATER	STOCKWATER			X					X									
63-24214	UNITED STAT	BOISE RIVER	STOCKWATER										X							
63-24378	UNITED STAT	GROUSE CREEK	STOCKWATER				X									X				
63-27144	HT RECOVERY	BOISE RIVER	RECREATION					X			X									
63-27144	HT RECOVERY	BOISE RIVER	RECREATION STORAGE					X			X									
63-27144	HT RECOVERY	GROUSE CREEK	RECREATION					X			X									
63-27144	HT RECOVERY	GROUSE CREEK	RECREATION STORAGE					X			X									
63-30437	HAMMETT LN	GROUND WATER	DOMESTIC								X									
63-31526	PARADISE HO	SPRING	RECREATION			X														
63-31976	BOESIGER FA	SPRING	DOMESTIC			X														
63-32016	PARADISE HO	SPRINGS	HEATING		X	X		X			X									
63-34605	JOHNSON, HA	GROUND WATER	COMMERCIAL		X	X		X			X									
63-34605	JOHNSON, HA	GROUND WATER	DOMESTIC		X	X		X			X									
63-34605	JOHNSON, HA	GROUND WATER	STOCKWATER		X	X		X			X									
63-4221	PARADISE HO	GROUSE CREEK	IRRIGATION			2.5		0.5			5								8	
63-5268	HAMMETT LN	BOISE RIVER	IRRIGATION		2			18.5											20.5	
63-5268	HAMMETT LN	GROUSE CREEK	IRRIGATION		2			18.5											20.5	
63-5269	HAMMETT LN	BOISE RIVER	IRRIGATION						7.75	23				0.5					31.25	
63-5269	HAMMETT LN	UNNAMED STREA	IRRIGATION						7.75	23				0.5					31.25	
63-5269	HAMMETT LN	WAGONTOWN CH	IRRIGATION						7.75	23				0.5					31.25	

= this right

= overlap

Beneficial Use Field Exam

BasinSequence	Owner	Source	NENE	NWNE	SWNE	SENE	NENW	NWNNW	SWNNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE
63-10559	PARADISE HOME	GROUND WATER								X								
63-10560	PARADISE HOME	SPRINGS			X					X								
63-12316	PARADISE HOME	SPRING			X					X								
63-12317	PARADISE HOME	GROUND WATER								X								
63-24214	UNITED STATES OF	BOISE RIVER										X						
63-24378	UNITED STATES OF	GROUSE CREEK			X													
63-27144	HT RECOVERY LLC	BOISE RIVER				X				X								
63-27144	HT RECOVERY LLC	GROUSE CREEK				X				X								
63-30437	HAMMETT LIVESTOCK	GROUND WATER								X								
63-31526	PARADISE HOME	SPRING			X					X								
63-31976	BOESIGER FAMILY	SPRING			X													
63-32016	PARADISE HOME	SPRINGS			X					X								
63-34605	JOHNSON, HAROLD	GROUND WATER								X								
63-4221	PARADISE HOME	GROUSE CREEK			X													
63-5268	HAMMETT LIVESTOCK	GROUSE CREEK								X								
63-5269	HAMMETT LIVESTOCK	UNNAMED STREAM						X										

 = this right

 = overlap



Fig. 1 – Pump house, Well 1 left of pump house, Well 2 right of pump house. View looking NW.



Fig. 2 – Well 1, left of pump house, view looking NW. GPS Coordinates N 43.55452°, W 115.27508°.



Fig. 3 – Well 2, right of pump house, view looking NW. GPS coordinates N 43.55458°, W 115.27505°.



Fig. 4 – Well 2.



Fig. 5 – View inside pump house. Pipe in the foreground comes from Well 1, pipe in background (not seen) comes from Well 2. Larger pipe in middle is fed by both wells and goes to storage tank.

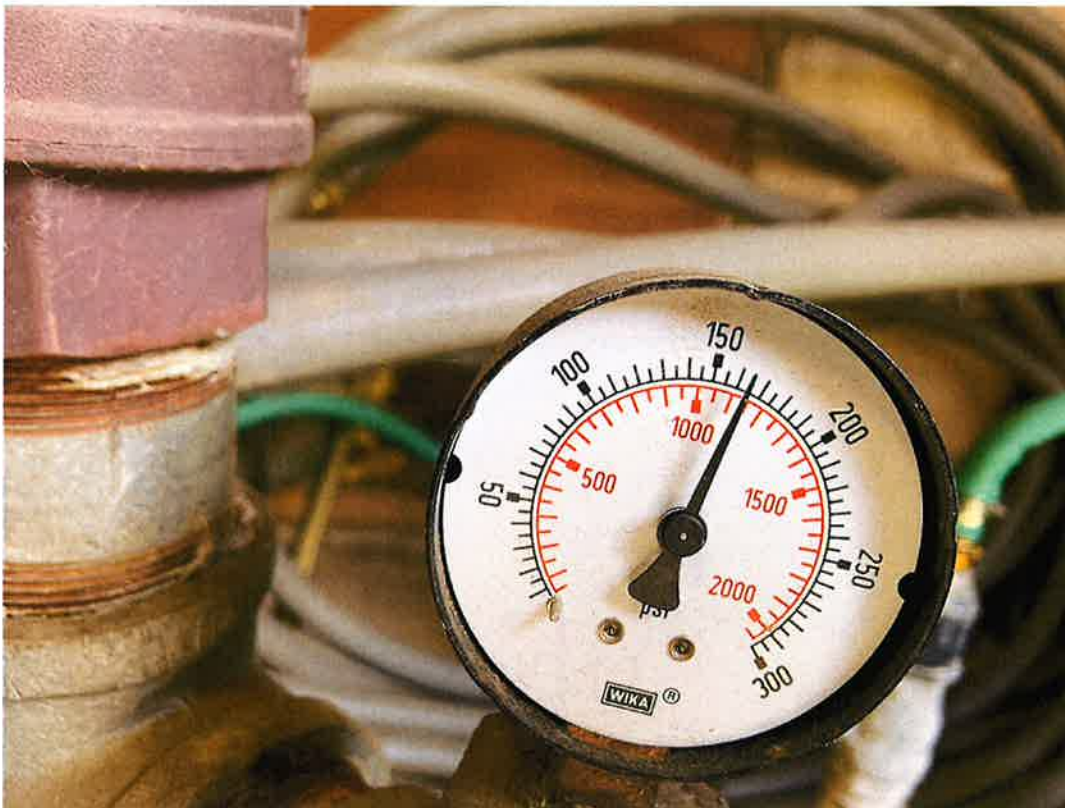


Fig. 6 – Pressure gauge on pipe fed from both wells supplying the holding tank.



Fig. 7 – Culvert where domestic water source is stubbed in for residential lots.



Fig. 8 – Culvert in a residential lot currently being developed in the Willis Carries Paradise Subdivision.



Fig. 9 – Pressure reduction system house, downhill from holding tanks. View looking east.



Fig. 10 – Pressure reduction system. Sunglasses for scale.



Fig. 11 – Holding tank, approx. 12' tall, 25-30' diameter. WRS Patrick Kelly for scale.



Fig. 12 – Holding tank with updated solar system in background used to power float pump switch



Fig. 13 – View inside of staff cabin adjacent to lodge.



Fig. 14 – Laundry/Spa cabin adjacent to lodge. View looking north.



Fig. 15 – Cabin for rent under management from the lodge. View looking north.



Fig. 16 – Advertisement within Willis Carries Paradise Subdivision providing evidence of lots being stubbed in.



Fig. 17 – Stockwater corral within Willis Carries Paradise Subdivision. View looking SE.