

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 29-8110

Exam Date: 8/7/1995

1. Current Owner: TYHEE ESTATES WATER CO INC
13234 N BILLY LN
POCATELLO ID 83202
(208)237-9059
2. Accompanied by: Tim Shurtliff
Phone No: (208) 233 - 1963
Address: PO BOX 11
POCATELLO, ID 83204
Relationship to Permit Holder: Project Engineer

3. SOURCETRIBUTARY

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: Yes
2. Other water rights with the same point of diversion: Yes 29-7549

C. DIVERSION AND DELIVERY SYSTEM1. LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER	SW1/4SW1/4SW1/4	Sec. 26,	Twp 05S,	Rge 34E, B.M.
BANNOCK County				
GROUND WATER	SE1/4SE1/4	Sec. 26,	Twp 05S,	Rge 34E, B.M.
BANNOCK County				

Method of Determination: comparison of plat maps with aerial photography overlaid by tax lots in ArcView

2.

PLACE OF USE: DOMESTIC

Twp	Rge	Sec	NE				NW				SW				SE				
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	Totals
05S	34E	26										X	X						

3. ☒ Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
☐ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
☐ Aerial Photo Attached (required for irrigation of 10+ acres).
☒ Photo of Diversion and System Attached

4.

<u>Well or Diversion ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge Size</u>
700311	Franklin	5	2366039020		
700322					

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1.

<u>Measurement Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
Flow meter		McCrometer		98-3-6227	0-250 GPM	

2. Measurements:

- at 53 PSI pumping 95 – 100 GPM on the McCrometer Flow meter
- 180 GPM 40 PSI according to Tim Shurtliff, project engineer

E. FLOW CALCULATIONS

☐ Additional Computation Sheets Attached

Measured Method:

POD No. 700311 $Q_{cfs} = [(15 \text{ hp}) * 8.814 * 0.70] \div [(150 \text{ ft lift}) + (53 \text{ psi} * 2.308)] = 0.34 \text{ cfs}$
100 gpm as indicated on McCrometer Flow meter = $100 \div 448.8 = 0.22 \text{ cfs}$

POD No. 700322 $Q_{cfs} = [(15 \text{ hp}) * 8.814 * 0.70] \div [(220 \text{ ft lift}) + (40 \text{ psi} * 2.308)] = 0.30 \text{ cfs}$

Limited to 0.22 cfs by permit

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

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

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

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

2. Volume Calculations for Other Uses:

$$25 \text{ homes} \times 1.2 = 30 \text{ afa}$$

G. NARRATIVE/REMARKS/COMMENTS

Homes are permitted 1/3 acre of lawn etc. to water. Any water used for additional irrigation is to come from Fort Hall Irrigation System. This rule is listed in the subdivisions restrictive covenants. Permit 29 8110 was intended to provide water for phase I of the Tyhee subdivision, 25 homes. Phase II was to have another well. However, the system 29 8110 is now linked with 29 7544; S+N Esatates, a neighboring subdivision. S+Ns well is currently being updated with a larger pump to provide water with 29 8110 for (S+N, Tyhee I and Tyhee II). The permit number for S+N's updated well is 29 7549. A water right exam will need to be done on it at a future date. Tyhee II is covered under 29 8130.

The System is quite new and well maintained. The flowmeter was inside a building and appeared to be functioning well, see photos.

I have included a pumping flow test done by the well driller pumping at atmospheric pressure. It indicates the pump was putting 250 GPM before being hooked up to the subdivisions system.

Tyhee Estates Water Company INC. C/O Dale Higgins

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

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
DOMESTIC	01/01 to 12/31	0.220 CFS	30.00 AF
	<u>Totals:</u>	0.220 CFS	30.00 AF

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 Steve Mueller Date August 7, 1995

Reviewer Nate Arave Nate Arave Date March 2, 2007 3-2-2007

Permit No. 29-8110

Current Address: 13234 N. Billy Lane, Pocatello, ID 83202

Address: P.O. Box 11, Pocatello, ID 83204 Phone No. (208) 233-1963

3. Source: Groundwater tributary to

1. Other water rights with the same place of use: Yes Fort Hall Irrigation

2. Other water rights with the same point of diversion: 29-7549

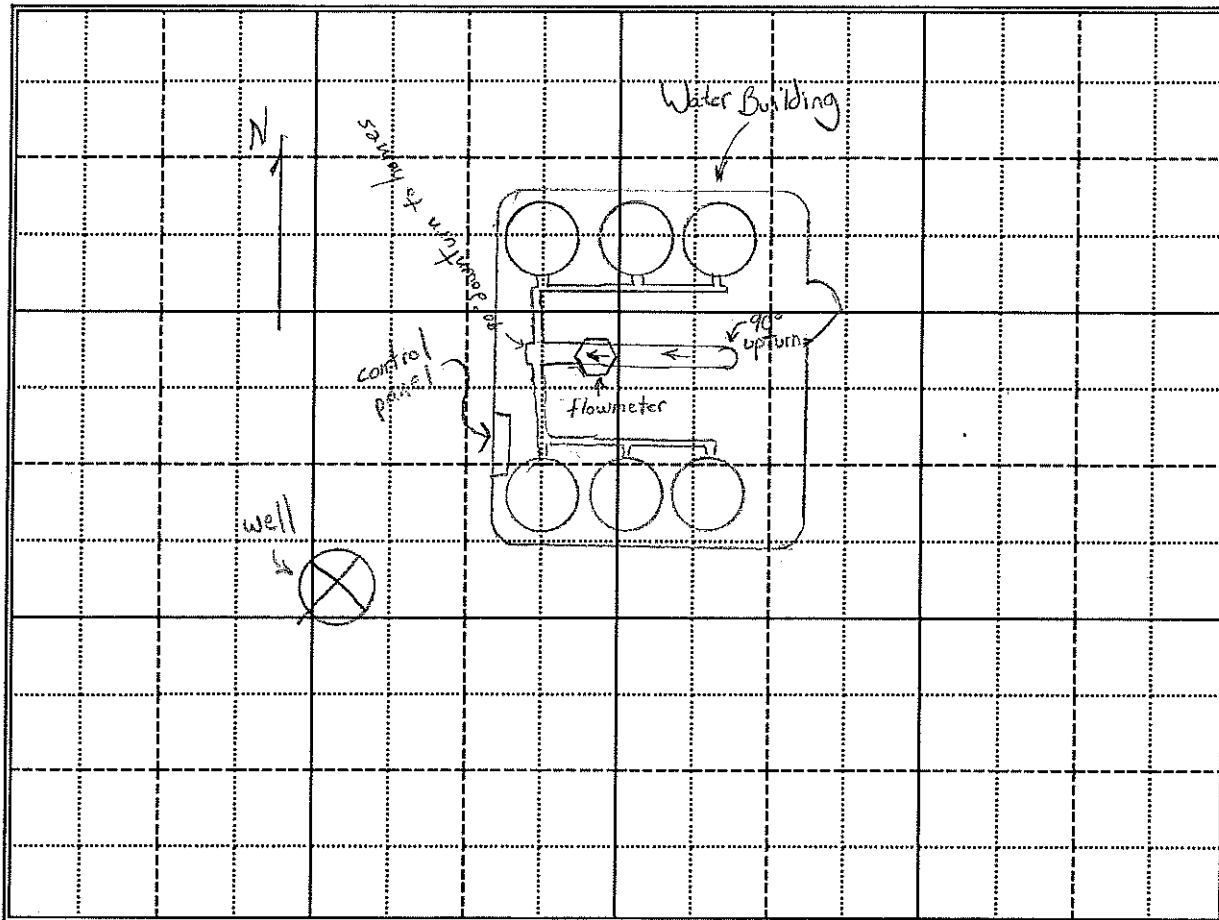
1. Point(s) of Diversion:

[illegible]

Indicate Method of Determination

[illegible]

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



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
Submersible	Franklin	15	model 2366039020		

*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		Mcrometer		98-3-6227	0-250 gal per minute	

2. Measurements: at 53 psi pumping 95-100 gal per min on the Mcrometer flowmeter.
180 gpm at 40 psi according to Tim Shortliff, project engineer.

E. NARRATIVE/REMARKS/COMMENTS

* Homes are permitted $\frac{1}{3}$ acre of lawn etc. to water. Any water used for additional irrigation is to come from Fort Hall Irrigation system. This rule is listed in the subdivisions restrictive covenants.

Permit # 29-8110 was intended to provide water for phase I of the Tyhee subdivision, 25 homes. Phase II was to have another well. However, the system 29-8110 is now linked with (29-7549) S+N Estates, a neighboring subdivision. S+N's well is currently being updated with a larger pump to provide water with 29-8110 for (S+N, Tyhee I + Tyhee II). The permit number for S+N's updated well is 29-7549. A water right exam will need to be done on it at a future date. Tyhee II is covered under 29-08130 (Permit)

The system is quite new and well maintained. The flowmeter was inside a building and appeared to be functioning well. See photos.

I have included a pumping flow test done by the well driller pumping at atmospheric pressure. It indicates the pump was putting out 250 GPM before being hooked up to the subdivisions system.

Tyhee Estates Water Company Inc. c/o Dale Higgins

Have conditions of permit approval been met? ☒ yes ☐ no

F. FLOW CALCULATIONS

Additional Computation Sheets Attached

Measured Method:

$$\frac{H_p (8.814) (Eff)}{Lift (psi \times 2.308)} = \frac{(15 h_p) \times (8.814) \times (.7)}{150 + (53 \times 2.308)} = \frac{92.547}{272.324} = .34 \text{ CFS}$$

$$100 \text{ GPM as indicated on McCrometer Flowmeter} = \frac{448.8}{100} = .22 \text{ CFS}$$

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

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

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

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

2. Volume Calculations for Other Uses:

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
Totals:			_____	_____

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. AUTHENTICATIONField Examiner's Name Steve Mueller Date 8-7-95Reviewer Nate Arave Date 3-2-07

SEAL

THEORETICAL PUMP FLOW CALCULATIONS

Formula:

$$Q_{cfs} = [(Hp)(8.814)(Eff)] \div [Lift + (psi \times 2.308)]$$

$$Hp = \text{Horsepower} = \underline{15}$$
$$Eff = \text{Efficiency} = \underline{70} \quad (\text{Usually } 70\%)$$

Lift: (Static Level + Assumed Drawdown)

$$\text{Static Water Level} = \underline{79 \text{ ft}} \text{ ft.}$$

$$\text{Assumed Drawdown} = + \underline{\hspace{1cm}} \text{ ft.}$$

$$\text{Lift} = \underline{150 \text{ ft}} - \text{well log}$$

OR

$$\text{Measured Dynamic Water Level} = \underline{\hspace{1cm}} \text{ ft.}$$

$$psi = \text{Operating Pressure} = \underline{53} \text{ psi}$$

$$Q_{cfs} = \left[\frac{15}{Hp} \times 8.814 \times \frac{70}{Eff} \right] \div \left[\frac{150}{Lift} + \left(\frac{53}{psi} \times 2.308 \right) \right]$$

$$Q_{cfs} = \left[\underline{92.547} \right] \div \left[\underline{272.324} \right]$$

$$Q_{cfs} = \underline{.3398} \text{ cfs}$$

0.22 cfs
limited by permit

PERMIT NO. _____

Comment Report

29-8110

1. smueller 8/7/1995 Field Report Narrative

Comment: Homes are permitted 1/3 acre of lawn etc. to water. Any water used for additional irrigation is to come from Fort Hall Irrigation System. This rule is listed in the subdivisions restrictive covenants.

Permit 29 8110 was intended to provide water for phase I of the Tyhee subdivision, 25 homes. Phase II was to have another well. However, the system 29 8110 is now linked with 29 7544; S+N Esatates, a neighboring subdivision. S+Ns well is currently being updated with a larger pump to provide water with 29 8110 for (S+N, Tyhee I and Tyhee II). The permit number for S+N's updated well is 29 7549. A water right exam will need to be done on it at a future date. Tyhee II is covered under 29 8130.

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Tyhee Estates Water Company INC. C/O Dale Higgins

2. narave 2/28/2007 POD

Comment: Updated shape

3. narave 2/28/2007 POD

Comment: Updated PLS

4. narave 2/28/2007 POD

Comment: Updated shape

5. narave 3/2/2007 POU

Comment: Updated Shape

6. narave 3/2/2007 POU

Comment: Updated Shape

7. narave 3/2/2007 POU

Comment: Updated PLS

8. narave 3/2/2007 POU Overlap

Comment: The POU overlaps with 29 7437, 29 8130

9. MILLER 12/14/1992 MORATORIUM EXEMPTION

Comment: This permit falls within the acceptable parameters of the Snake River Basin Moratorium. CORPORATE OFFICERS The corporate officers for Albers, Inc. are the following individuals: Richard Albers - President Alford C. Albers - Secretary

10. MILLER 12/16/1992 IRRIGATION RIGHT

Comment: This development obtains irrigation water from the Fort Hall canal.

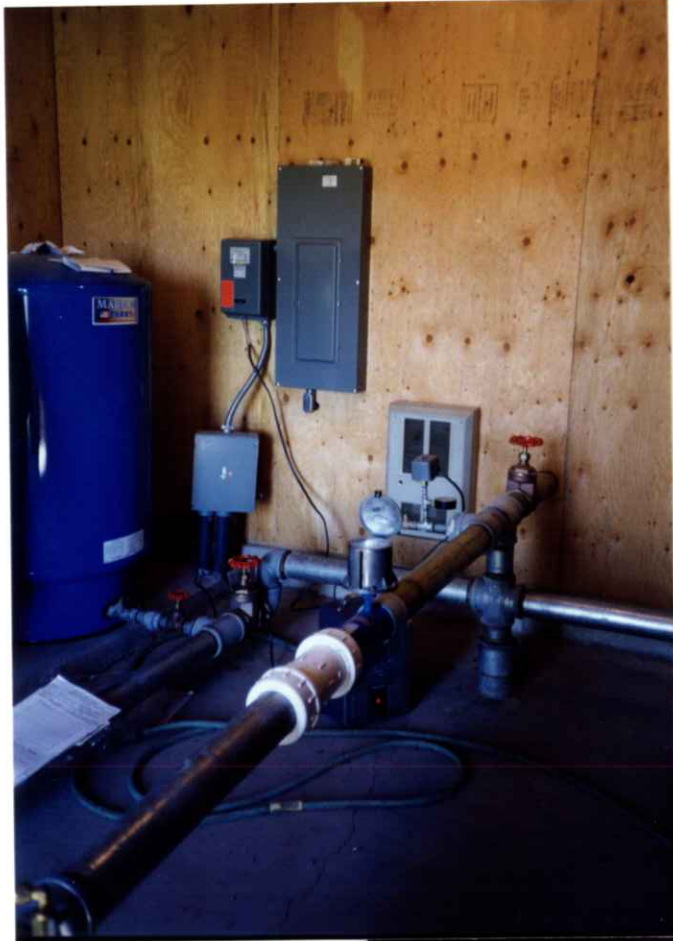
Type	WR #	Owner	Source	TRS	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	Total
Right	27 2007	US DEPT OF INTERIOR,	BLACKFOOT RIVER	05S34E26																	0
Right	27 2035	US DEPT OF INTERIOR,	BLACKFOOT RIVER	05S34E26																	0
Right	29 7431	CITY OF POCATELLO,	WASTE WATER	05S34E26																	89
Permit	29 7437	J R SIMPLOT CO,	WASTE WATER	05S34E26	8			40													4
Permit	29 8110	TYHEE ESTATES WATER CO INC,	GROUND WATER	05S34E26																	234
Right	29 7912	D & M WATER ASSN,	GROUND WATER	05S34E26																	0
Right	29 12868	JOAN BARNEY, ROY BARNEY,	GROUND WATER	05S34E26					X												0
Right	29 11141	DON R COOK, BERNICE COOK,	GROUND WATER	05S34E26																	0
Right	29 12227	VIVA PETERSON, FLOYD PETERSON,	GROUND WATER	05S34E26																	0
Right	29 12227	VIVA PETERSON, FLOYD PETERSON,	GROUND WATER	05S34E26																	0
Right	29 4091	EDWIN R DE KAY,	GROUND WATER	05S34E26																	0
Right	29 4091	EDWIN R DE KAY,	GROUND WATER	05S34E26									X								0
Right	29 11649	RONALD COOK, GWENDA COOK,	GROUND WATER	05S34E26																	0
Right	29 11865	L JOYCE BROWN, GEORGE W BROWN,	GROUND WATER	05S34E26																	0
Right	29 11865	L JOYCE BROWN, GEORGE W BROWN,	GROUND WATER	05S34E26																	0
Right	29 11514	IELEEN EMPY, DALE A EMPY,	GROUND WATER	05S34E26																	0
Right	29 11966	MARIE A BIRCH, RICK L BIRCH,	GROUND WATER	05S34E26																	0
Right	29 11966	MARIE A BIRCH, RICK L BIRCH,	GROUND WATER	05S34E26																	0
Right	29 10681	SANDY HEDDON, RAYMOND HEDDON,	GROUND WATER	05S34E26																	0
Right	29 10681	SANDY HEDDON, RAYMOND HEDDON,	GROUND WATER	05S34E26																	0
Right	29 7428	BERTHA BROWN, ROBERT L BROWN,	GROUND WATER	05S34E26																	0
Right	29 12885	CARMEN FLOCKHART, WILLIAM D FLOCKHART,	GROUND WATER	05S34E26																	8.8
Permit	29 8130	TYHEE ESTATES WATER CO INC,	GROUND WATER	05S34E26																	0
Right	29 2521	BERTHA BROWN, ROBERT L BROWN,	GROUND WATER	05S34E26																	0
Right	29 2521	BERTHA BROWN, ROBERT L BROWN,	GROUND WATER	05S34E26																	1.6
Right	29 7367	D & M WATER ASSN,	GROUND WATER	05S34E26																	0
Right	29 7281	D & M WATER ASSN,	GROUND WATER	05S34E26																	1.6
Right	29 7854	SMITH ROAD WATER USERS ASSOC,	GROUND WATER	05S34E26																	0
Right	29 7854	SMITH ROAD WATER USERS ASSOC,	GROUND WATER	05S34E26																	16
Right	29 7819	WHITEWATER WATER USERS ASSN,	GROUND WATER	05S34E26																	0
Rec	29 7431	CITY OF POCATELLO,	WASTE WATER	05S34E26																	0
Right	29 24388	WHITEWATER WATER USERS ASSN,	GROUND WATER	05S34E26																	89
Right	29 24388	WHITEWATER WATER USERS ASSN,	GROUND WATER	05S34E26																	37
Right	29 8110	TYHEE ESTATES WATER CO INC,	GROUND WATER	05S34E26	20	14		21	7												62
Right	29 8130	TYHEE ESTATES WATER CO INC,	GROUND WATER	05S34E26																	0

Point of diversion



29-8110

Control room.



Flow meter



29-8110