

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED

JUN 27 2012

DEPT. OF WATER RESOURCES
SOUTHERN REGION

A Beneficial Use Field Report is prepared by a water right examiner as the result of an examination to clearly confirm and establish the extent of the beneficial use of water established in connection with a permit during the development period authorized by the permit and any extensions of time previously approved.

A. GENERAL INFORMATIONPermit No. 47-75781. Owner Russell Thompson (son of HH Thompson)Phone No. 208-543-6565Current address 4592 River Road, Buhl, ID 833162. Examiner's name G. Erick PowellEXAM DATE 6/8/20123. Accompanied by Russell Thompson

Email _____

Address 4592 River Road, Buhl, ID 83316Relationship to permit holder Son and now Current Property OwnerPhone No. 208-543-65654. Source Groundwater

tributary to _____

B. OVERLAP REVIEW1. Other water rights with the same place of use None2. Other water rights with the same source and point of diversion 47-7115B, 47-7174A, 47-7566, 47-7567, 47-7575
47-10276, 47-16763**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
		NE	SE	NE	9	9S	14E	Twin Falls	GPS Location, GIS, and Aerial photo

2. Place(s) of Use:Method of determination GPS, GIS, and Aerial Photo

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
9S	14E	10							D										
9S	14E	10							G										
9S	14E	10							R										

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe diameter (inside), as applicable. Use the space provided or ☒ see attached.

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
POD	NA	NA	NA	NA	NA

*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
5-gal bucket	NA	NA	NA	NA	5-gal	2007

2. **Measurements:** _____

The flow rate was measured from the outside house faucet by measuring the time it took to fill a measured 5-gal bucket. The measurement was repeated several time with the result averaged.

See Attached Narrative.

[illegible]

The permit was originally issued on November 5, 1979 with the proof of construction of works and application of water due November 1, 1984. According to the County assessor's office, the shop/residence was constructed in 1982 with water provided from the well as described in the permit. Mr. Russel Thompson is the son of the permit holder, H.H. Thompson, who has passed away. IDWR agent Corey Skinner indicated that IDWR may have had multiple addresses on-file for H.H. Thompson, which may have resulted in mail not reaching H.H. Thompson. Also, Mr. Russell Thompson has indicated that his father's physical and mental health could have resulted in ignoring repeated communication from IDWR regarding this permit. While the proof was not filed, the construction was completed in 1982 (Twin Falls County Assessor) and the water delivery for in-house, heating, and recreation has been used since the structure was completed.

F. FLOW CALCULATIONS☒ Additional computation sheets attached

Measured Method:

Avg time to fill 5-gallon bucket was 7.3 sec. This equates to 41 gpm or 0.09 cfs

Heating requirements for the residence and shop was calculated to be 0.37 cfs. As this is larger than the measured flow rate, the measured flow rate will govern.

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

 $V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$ _____ $V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 =$ _____ $V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} =$ _____

2. Volume Calculations for Other Uses:

Volume for Domestic use was determined by allowing a maximum of 13,000 gal/day (0.02 cfs) for 24 hours/day for 365 days resulting in a total volume of 14.5 afa. The heating requirement spreadsheet indicated that the annual volume would be approximately 48 acft; however if heating is occurring for approximately 250 days/year at a flow rate of 0.09 cfs, then the calculated volume would be approximately 44.6 afa. The recreation volume was determined to be 65.2 afa which is the maximum volume of 0.09 cfs flowing all year.

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion	Annual Volume
	From	To	Q (cfs)	V (afa)
Domestic	1/1	12/31	0.02 cfs	14.5 afa
Heating	1/1	12/31	0.09 cfs	44.6 afa
Recreation	1/1	12/31	0.09 cfs	65.1 afa
Totals:			0.09 cfs	65.1 afa

2. Recommended Amendments

☐ Change P.D. as reflected on page 1☐ Add P.D. as reflected on page 1☒ None☐ Change P.U. as reflected on page 1☐ Add P.U. as reflected on page 1☐ Other**I. AUTHENTICATION**

Field Examiner's Signature

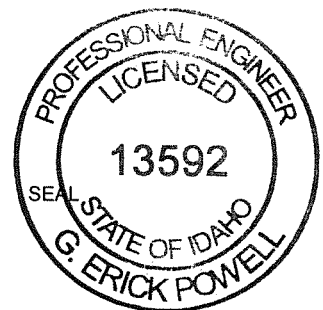


Date

6/27/2012

Reviewer

Date





0 80 160 320 Feet

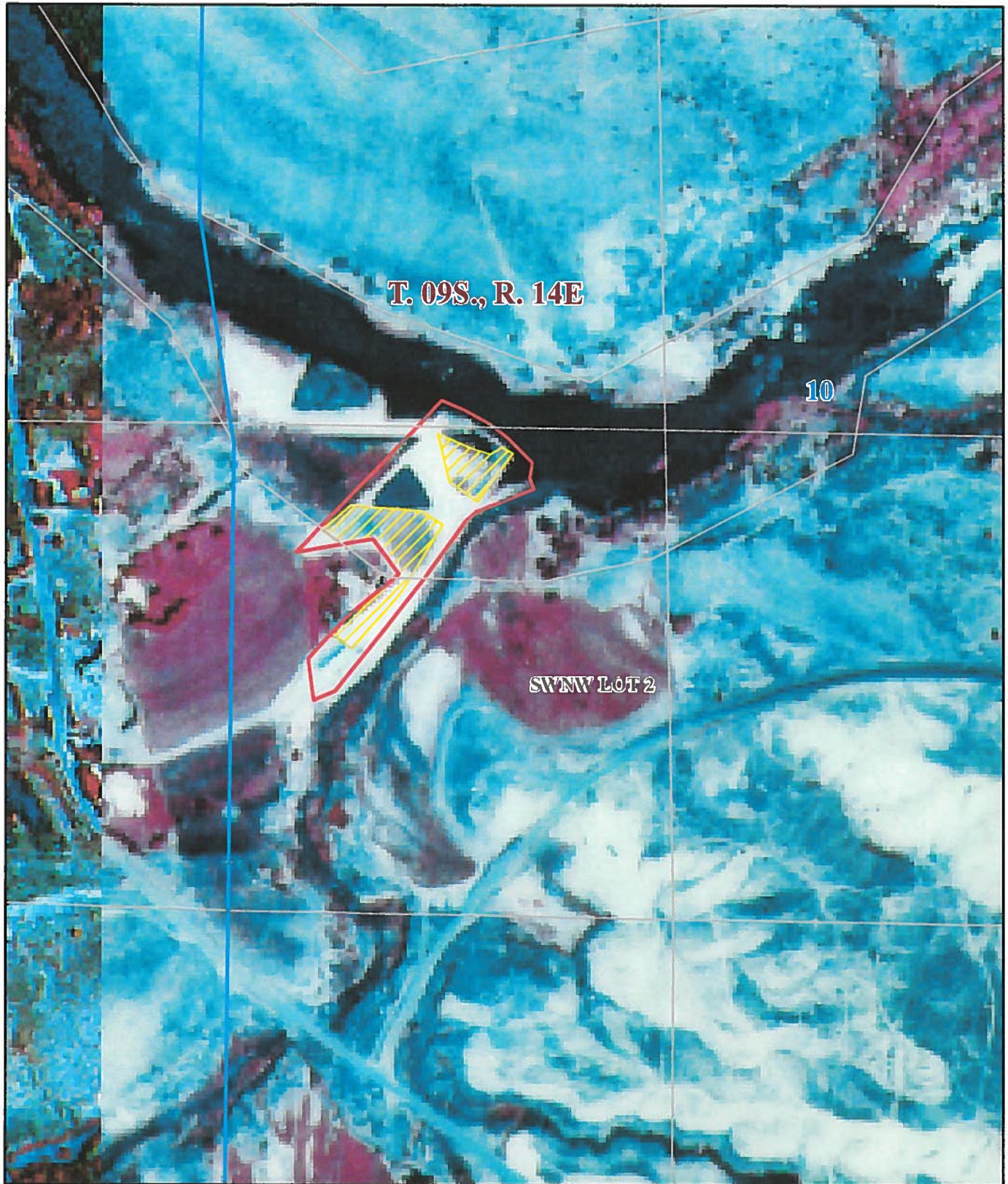
**THOMPSON, RUSSELL
IRRIGATION ANALYSIS 1984
USDA 1984 AERIAL**

FIGURE 1

Legend

-  1984_IRR = 1.0 AC.
-  Thompson_Parcel
-  Township/Range
-  Sections
-  QQ





0 162.5 325 650 Feet

**THOMSPON, RUSSELL
IRRIGATION ANALYSIS 1987
FSA 1987 AERIAL**

FIGURE 2

BROCKWAY ENGINEERING, PLLC.
ALR - JUNE 26, 2012

Legend

-  Thompson_Parcel
-  Potential Irr 1987, 1.7 ac
-  Township/Range
-  Sections
-  QQ





0 125 250 500 Feet

**THOMPSON, RUSSELL
IRRIGATION ANALYSIS 1989
FSA 1989 AERIAL**

FIGURE 3

Legend

-  Irrigation_1989=2.06 ac.
-  Thompson_Parcel
-  Township/Range
-  Sections
-  QQ





0 125 250 500 Feet

**THOMPSON, RUSSELL
WATER SYSTEM MAP
FSA 2011 AERIAL**

FIGURE 4

BROCKWAY ENGINEERING, PLLC.
ALR - JUNE 26, 2012

Legend

-  Well
-  Thompson_Parcel
-  Township/Range
-  Sections
-  QQ



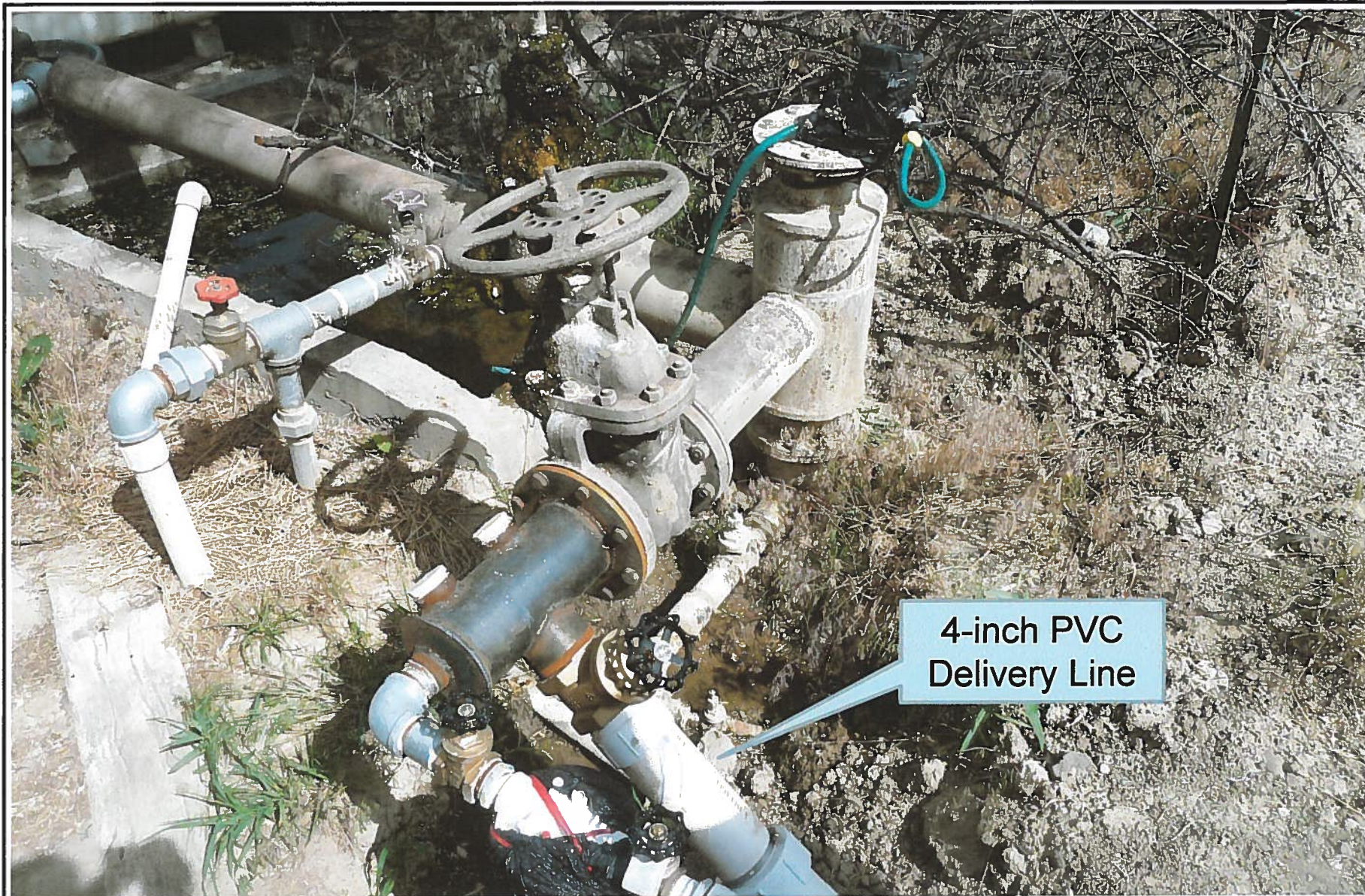


FIGURE 5: PERMIT POD WELL HEAD
RUSSELL THOMPSON PERMIT NOS. 47-7578 AND 47-7579
SITE VISIT ON 6/8/2012



FIGURE 6: SUPPLY LINE ENTERING THE HOUSE AND VALVE FOR HEATING
RUSSELL THOMPSON PERMIT NOS. 47-7578 AND 47-7579

SITE VISIT ON 6/8/2012



FIGURE 7: VALVE TO IRRIGATION AND RECREATIONAL POND
RUSSELL THOMPSON PERMIT NOS. 47-7578 AND 47-7579

SITE VISIT ON 6/8/2012



FIGURE 8: IRRIGATION SYSTEM VALVE
RUSSELL THOMPSON PERMIT NOS. 47-7578 AND 47-7579
SITE VISIT ON 6/8/2012



FIGURE 9: IRRIGATION SYSTEM VALVES
RUSSELL THOMPSON PERMIT NOS. 47-7578 AND 47-7579
SITE VISIT ON 6/8/2012



FIGURE 10: IRRIGATION SYSTEM SPICKET
RUSSELL THOMPSON PERMIT NOS. 47-7578 AND 47-7579
SITE VISIT ON 6/8/2012



Appendix A
Russell Thompson Letter

June 14, 2012

Dear Sirs,

In September 2004 I inherited my father's property following his death. In prior years my father had told me when he purchased the property it included rights to the well shared by neighbors. He told me he had filed for right to the well and had filed for rights to the waste water that flows through the property.

Recently a neighbor told me he thought my father had never filed on his right to the well. I checked with the Department of Water Resources and found he had filed but the permits had lapsed.

Checking through my father's files, I did not find any letters from the Department of Water Resources concerning water rights. I did find a well agreement with the neighbor's which included an application for permit, November 5, 1979. Why my father did not have the proper permits prior to his death, I can only speculate. I do know in conversations with him over the years he believed his rights were in order.

While looking through micro-film with Corey Skinner from the Department of Water Resources, we noticed there were three different addresses for my father. We discussed the possibility that the letters never reached my father at the correct address.

As my father aged, he had difficulty keeping up with the changing times. I believe this was due to old age and poor physical and mental health. I believe in his mind he felt he had filed for the water rights and no follow-up was needed.

I can say my father told me repeatedly over the years how important the water rights were to his property. He even bragged about filing for the waste water rights, telling me everyone laughed at the idea. "Mark my words, son, that waste water will be important to you someday." He would say.

I was surprised to find the permits had lapsed. I was not surprised this matter had slipped by him given his mental and physical state.

Thank you for your time and consideration.

Sincerely,



Russell Thompson
4592 River Road
Buhl, ID 83316
208 543 6565

Appendix B

Twin Falls County Assessor Documents
Structure completed in 1982

OUTBUILDINGS

DEL # 09514E 10 3000

SHEET 1 OF 1

G.P. BLDG		BLDG # 1 3222	LOCATION		AREA	BASE RATE	LUMP SUM
SS 5	YR BLT 1982		FIRST FLOOR	36 X 100	3,600	4.37	15,732
ECTED BY m.n.	DATE 6-77-82		SECOND FLOOR	36 X 100	3,600		
PUTED BY m.n.	DATE 6-77-82						
EWED BY	DATE						

12	36
100	LEAN TO
36	DW FINISH 15
36	



BLDG #		LOCATION				AREA	BASE RATE	LUMP SUM
SS	YR BLT	FIRST FLOOR						
ECTED BY	DATE	SECOND FLOOR						
PUTED BY	DATE	BASEMENT						
VIEWED BY	DATE	FOUNDATION						
		CONC	MSRY	ROCK	WD	PIER		
		FLOOR						
		DIRT	WD	CONC				
		EXTERIOR WALL		FRAME	Ht.			
		POLE	STUD	STEEL				
		SIDING						
		WD	BLCK	GALV	BKD ENAM			
		ROOF		TYPE				
		GAB	GAMB	SHED				
		FRAME	WD	STEEL				
		COVER						
		COMP	WD	GALV	BKD ENAM			
		15 X 36 AREA ON END OF Shop IS FINISHED AND USED AS OWNER'S RESIDENCE.						
		SEE NEW APPRAISAL						
		PHYSICAL P F A G E						
		FUNCTIONAL P F A G E						
		ECONOMIC P F A G E						
		TOTAL BASE COST						
		LOCAL COST MODIFIER X					%	
		MARKET ADJUSTMENT X					%	
		MARKET VALUE						

OUTBUILDINGS

County _____

Owner H.H. Thompson

Location 10.9.14

Address _____

Sheet _____ of _____

City and State _____

Type Shop

Class B11

Built 1982

Per. _____

Ht. 12

Square Feet			
Basement	1st	2nd	
	<u>3600</u>		

BASE COST 1589

Sq. Ft. Items		Lump Sums
+	-	
<u>810</u>		

Foundation CONC

Exterior Wall B116

Roof CGI Wd MA-10

Floor CONC

3600

Partitions _____

Interior Components 15X30 24.70 5470 x 11.20

4048

Electrical 220-110

Plumbing 1-PR

120

Heating _____

Equipment _____

Total Lump Sums

Appraised _____ By _____ Area 3100 sf x \$ 8.2 psf + TLS = TBC \$ 29,100
 Computed _____ By _____ 19 _____ LCM x Qual. _____ % = _____ % Mod x TBC = \$ 31,520
 Reviewed _____ By _____ Depreciation: Physical, Functional and Economic = Percent Good 95 %
 Construction Cost \$ _____ Depreciated Replacement Cost \$ 37,550

Type _____

Class _____

Built _____

Per. _____

Ht. _____

Square Feet			
Basement	1st	2nd	

BASE COST

Sq. Ft. Items		Lump Sums
+	-	

Foundation _____

Exterior Wall _____

Roof _____

Floor _____

Partitions _____

Interior Components _____

Electrical _____

Plumbing _____

Heating _____

Equipment _____

Appraised _____ By _____
 Computed _____ By _____
 Reviewed _____ By _____
 Construction Cost \$ _____

REMARKS: _____



Assessor's Conclusion for _____ sheets \$ _____ Assessor _____ Date _____

TLS - Total Lump Sums; TBC - Total Base Cost; Mod - Modifier



Appendix C
Well Driller's Log

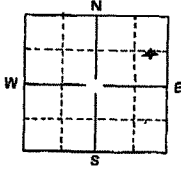
USE TYPEWRITER OR
BALL POINT PEN

State of Idaho
Department of Water Administration

WELL DRILLER'S REPORT

State law requires that this report be filed with the State Reclamation Engineer within 30 days after completion or abandonment of the well.

RECEIVED
Apr 11 1973
Department of Water Administration

1. WELL OWNER Name <u>Ed Kerpa</u> Address <u>Rt 3 Buhl, Idaho</u> Owner's Permit No. _____		7. WATER LEVEL Static water level _____ feet below land surface Flowing? ☒ Yes ☐ No G.P.M. flow <u>3000</u> Temperature <u>88</u> ° F. Quality <u>good</u> Artesian closed-in pressure <u>122</u> 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 ☐ Bailer ☐ Other Discharge G.P.M. _____ Draw Down _____ Hours Pumped _____																																																																																																																																																																																																																													
3. PROPOSED USE ☐ Domestic ☐ Irrigation ☐ Test ☐ Municipal ☐ Industrial ☒ Stock cat fish		hole drilled 12" 0-63 feet hole drilled 8" 63-229 feet 9. LITHOLOGIC LOG <u>045816</u>																																																																																																																																																																																																																													
4. METHOD DRILLED ☒ Cable ☐ Rotary ☐ Dug ☐ Other		<table border="1"><thead><tr><th rowspan="2">Hole Diam.</th><th colspan="2">Depth</th><th rowspan="2">Material</th><th colspan="2">Water</th></tr><tr><th>From</th><th>To</th><th>Yes</th><th>No</th></tr></thead><tbody><tr><td>6</td><td>0</td><td>2</td><td>Sand & rocks</td><td></td><td>X</td></tr><tr><td></td><td>2</td><td>9</td><td>Green basalt</td><td></td><td>X</td></tr><tr><td></td><td>9</td><td>21</td><td>Grey basalt</td><td></td><td>X</td></tr><tr><td></td><td>21</td><td>35</td><td>Brown clay</td><td></td><td>X</td></tr><tr><td></td><td>35</td><td>44</td><td>Grey clay</td><td></td><td>X</td></tr><tr><td></td><td>44</td><td>55</td><td>Black basalt</td><td></td><td>X</td></tr><tr><td></td><td>55</td><td>75</td><td>Grey basalt</td><td></td><td>X</td></tr><tr><td></td><td>75</td><td>149</td><td>Black basalt</td><td></td><td>X</td></tr><tr><td></td><td>149</td><td>219</td><td>Brown shale sand in some</td><td>X</td><td></td></tr><tr><td></td><td>219</td><td>245</td><td>Sand & gravel</td><td>X</td><td></td></tr><tr><td></td><td>245</td><td>249</td><td>Grey shale</td><td></td><td>X</td></tr><tr><td></td><td>249</td><td>254</td><td>Sand</td><td>X</td><td></td></tr><tr><td></td><td>254</td><td>269</td><td>Grey shale</td><td></td><td>X</td></tr><tr><td></td><td>269</td><td>285</td><td>Grey sand</td><td>X</td><td></td></tr><tr><td></td><td>285</td><td>290</td><td>Grey shale</td><td></td><td>X</td></tr><tr><td></td><td>290</td><td>298</td><td>Grey sand</td><td>X</td><td></td></tr><tr><td></td><td>298</td><td>334</td><td>Grey green shale & clay</td><td></td><td>X</td></tr><tr><td></td><td>334</td><td>337</td><td>Basalt boulders</td><td></td><td>X</td></tr><tr><td></td><td>337</td><td>355</td><td>Grey clay</td><td></td><td>X</td></tr><tr><td></td><td>355</td><td>356</td><td>Grey sand</td><td>X</td><td></td></tr><tr><td></td><td>356</td><td>377</td><td>Grey shale</td><td></td><td>X</td></tr><tr><td></td><td>377</td><td>383</td><td>Grey shale</td><td></td><td>X</td></tr><tr><td></td><td>383</td><td>384</td><td>Sand</td><td>X</td><td></td></tr><tr><td></td><td>384</td><td>402</td><td>Grey shale</td><td></td><td>X</td></tr><tr><td></td><td>402</td><td>403</td><td>Sand</td><td>X</td><td></td></tr><tr><td></td><td>403</td><td>490</td><td>Grey shale</td><td></td><td>X</td></tr><tr><td></td><td>490</td><td>515</td><td>Brown shale</td><td></td><td>X</td></tr><tr><td></td><td>515</td><td>560</td><td>light grey shale</td><td></td><td>X</td></tr><tr><td></td><td>560</td><td>570</td><td>Green clay</td><td></td><td>X</td></tr><tr><td></td><td>570</td><td>582</td><td>Black clay</td><td></td><td>X</td></tr><tr><td></td><td>582</td><td>580</td><td>Grey shale</td><td></td><td>X</td></tr><tr><td></td><td>580</td><td>597</td><td>Sand & shale</td><td>X</td><td></td></tr><tr><td></td><td>597</td><td>610</td><td>Black rhyolite</td><td>X</td><td></td></tr><tr><td></td><td>610</td><td>613</td><td>Grey shale</td><td></td><td>X</td></tr><tr><td></td><td>613</td><td>750</td><td>Black rhyolite</td><td>X</td><td></td></tr></tbody></table> Picked up most of flow 735-750		Hole Diam.	Depth		Material	Water		From	To	Yes	No	6	0	2	Sand & rocks		X		2	9	Green basalt		X		9	21	Grey basalt		X		21	35	Brown clay		X		35	44	Grey clay		X		44	55	Black basalt		X		55	75	Grey basalt		X		75	149	Black basalt		X		149	219	Brown shale sand in some	X			219	245	Sand & gravel	X			245	249	Grey shale		X		249	254	Sand	X			254	269	Grey shale		X		269	285	Grey sand	X			285	290	Grey shale		X		290	298	Grey sand	X			298	334	Grey green shale & clay		X		334	337	Basalt boulders		X		337	355	Grey clay		X		355	356	Grey sand	X			356	377	Grey shale		X		377	383	Grey shale		X		383	384	Sand	X			384	402	Grey shale		X		402	403	Sand	X			403	490	Grey shale		X		490	515	Brown shale		X		515	560	light grey shale		X		560	570	Green clay		X		570	582	Black clay		X		582	580	Grey shale		X		580	597	Sand & shale	X			597	610	Black rhyolite	X			610	613	Grey shale		X		613	750	Black rhyolite	X	
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	613	750	Black rhyolite	X																																																																																																																																																																																																																											
5. WELL CONSTRUCTION Diameter of hole <u>6</u> inches Total depth <u>750</u> feet Casing schedule: ☒ Steel ☐ Concrete Thickness _____ Diameter _____ From _____ To _____ <u>.250</u> inches <u>8 7/8</u> inches <u>+1</u> feet <u>63</u> feet <u>.250</u> inches <u>6 7/8</u> inches <u>+2</u> feet <u>332</u> feet _____ inches _____ inches _____ feet _____ feet _____ inches _____ inches _____ feet _____ feet _____ inches _____ inches _____ feet _____ feet Was a packer or seal used? ☐ Yes ☒ No Perforated? ☐ Yes ☒ No How perforated? ☐ Factory ☐ Knife ☐ Torch Size of perforation _____ inches by _____ inches 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? ☒ Yes ☐ No To what depth <u>63</u> feet Material used in seal ☒ Cement grout ☐ Puddling clay		6. LOCATION OF WELL Sketch map location must agree with written location.  County <u>Twin falls</u> <u>SE 1/4 NE 1/4 Sec. 9 T. 9 N. R. 14 E. 1/2</u>																																																																																																																																																																																																																													
10. Work started <u>13 Feb 1973</u> finished <u>9 April 1973</u>		11. DRILLER'S CERTIFICATION This well was drilled under my supervision and this report is true to the best of my knowledge. <u>Boley & Henry</u> <u>86</u> Driller's or Firm's Name Number <u>Montaugh, Idaho</u> Address <u>Boley Boley</u> <u>25 April</u> Signed By Date																																																																																																																																																																																																																													

USE ADDITIONAL SHEETS IF NECESSARY

FORWARD THE WHITE, BLUE, AND PINK COPIES TO THE DEPARTMENT



Appendix D

Geothermal Heating Calculations

RESIDENTIAL GEOTHERMAL HEATING PEAK FLOW AND MONTHLY AVERAGE FLOW REQUIREMENT

Brockway Engineering PLLC

6/27/2012

Total square footage of livable space (A)	3600 s.f.
Inside design temperature (Ti)	72 F
Resource temperature (Ts)	88 F
2-story (No = 1, Yes = 2)	1
Efficiency factor (e)**	0.9
Design outside temperature for peak load (Tp)	11 deg F

PEAK FLOW CALC:	Heat load	197640 BTU/hr	
	T drop	4.8 deg F	
	Peak Q	82.4 gpm =	0.18 cfs

MONTHLY FLOW CALC:

Month	No. Days	To [deg F]*	Heat Load [BTU/hr]	T drop [deg F]	Average Req'd Q (gpm)	Volume [ac-ft]
January	31	28.0	142625	4.8	59.4	8.14
February	28	33.2	125647	4.8	52.4	6.48
March	31	40.7	101477	4.8	42.3	5.79
April	30	49.3	73516	4.8	30.6	4.06
May	31	56.8	49183	4.8	20.5	2.81
June	30	64.3	25110	4.8	10.5	1.39
July	31	73.2	-3985	4.8	-1.7	-0.23
August	31	70.8	4018	4.8	1.7	0.23
September	30	61.8	33016	4.8	13.8	1.82
October	31	51.5	66290	4.8	27.6	3.78
November	30	39.3	106013	4.8	44.2	5.86
December	31	30.6	134168	4.8	55.9	7.66

*Average monthly temperature at Buhl, ID [degrees F]	Annual volume Excluding Negatives	48.02
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*Efficiency factors:

- 0.28 Best energy efficiency - extra insulation, caulked and weatherstripped, with storm windows and doors
- 0.44 Better energy efficiency - standard insulation, caulked and weatherstripped, with storm windows and/or doors
- 0.67 Average residence - standard insulation, no weatherproofing but with storm windows or double panes
- 1.11 Poor energy efficiency - minimal insulation, no weatherproofing or storm windows (older homes, shops or greenhouses)