

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 35-14288

Exam Date: 1/9/2014

1. Current Owner: LESLIE GARNER
2013 S 65TH W
IDAHO FALLS ID 83402
(208)523-8393

And/Or

KAY R GARNER
2013 S 65TH W
IDAHO FALLS ID 83402
(208)523-8393

2. Accompanied by: In-office field exam

Phone No:

Address:

Relationship to Permit Holder:

3. **SOURCE**

TRIBUTARY

GROUND WATER

B. OVERLAP REVIEW

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

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER

L1 NW1/4NW1/4

Sec. 30, Twp 02N, Rge 37E, B.M.

BONNEVILLE County

Method of Determination: Aerial photography, well drilling report.

2.

PLACE OF USE:

HEATING

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
02N	37E	30						X											
								L 1											

PLACE OF USE:

COOLING

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
02N	37E	30						X											
								L 1											

Method of Determination: Aerial photography

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

D. FLOW MEASUREMENTS

In-office field exam. No measurement taken

E. FLOW CALCULATIONS

☐ Additional Computation Sheets Attached

Measured Method:

Two Bosch CE heating and cooling pumps. At full capacity each pump requires between 6-12 gallons per minute (see operating chart). Assume each pump requires 9.0 gallons per minute total rate of diversion is 18.0 gallons per minute or 0.04 cfs.

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:

Two heating and cooling systems. Outflow from the two heating and cooling systems is estimated to be 2.0 gallons per minute when in operation.

2.0 gmp X 60Min/hr * 24 Hrs/day X 365 days/year = 1,051,200 gallons or 3.2 acre-feet.

G. NARRATIVE/REMARKS/COMMENTS

In-office filed exam. Groundwater is diverted to two heat and cooling systems and then discharged through an exposed pipe into the permit holders back yard. House size is approximately 6000 square feet. Pictures of the heat and cooling system, and heat pump discharge are provided by Kay Garner (permit holder).

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>
HEATING	01/01 to 12/31	0.040 CFS	3.2 AF
COOLING	01/01 to 12/31	0.040 CFS	3.2 AF
<u>Totals:</u>		0.040 CFS	3.2 AF

2. Recommended Amendments

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

☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION

Field Examiner's Name Blake Sordan Date 1/13/2014

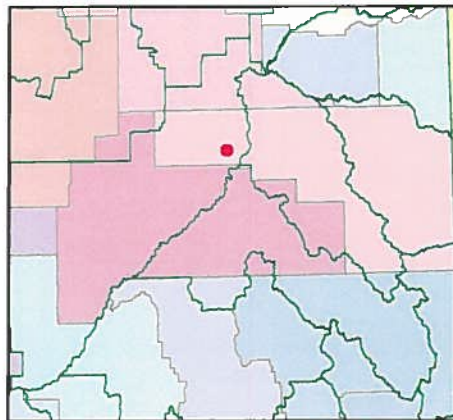
Reviewer _____ Date _____



Idaho Department of Water Resources

Water Right
35-14288
(HEATING, COOLING)

-  Point of Diversion
-  Place of Use
-  State Outline
-  Townships
-  PLS Sections
-  Quarter Quarters



Bonneville County
IDWR Basin 35

Prepared by Jordan, Blake

2013 Aerial Photography

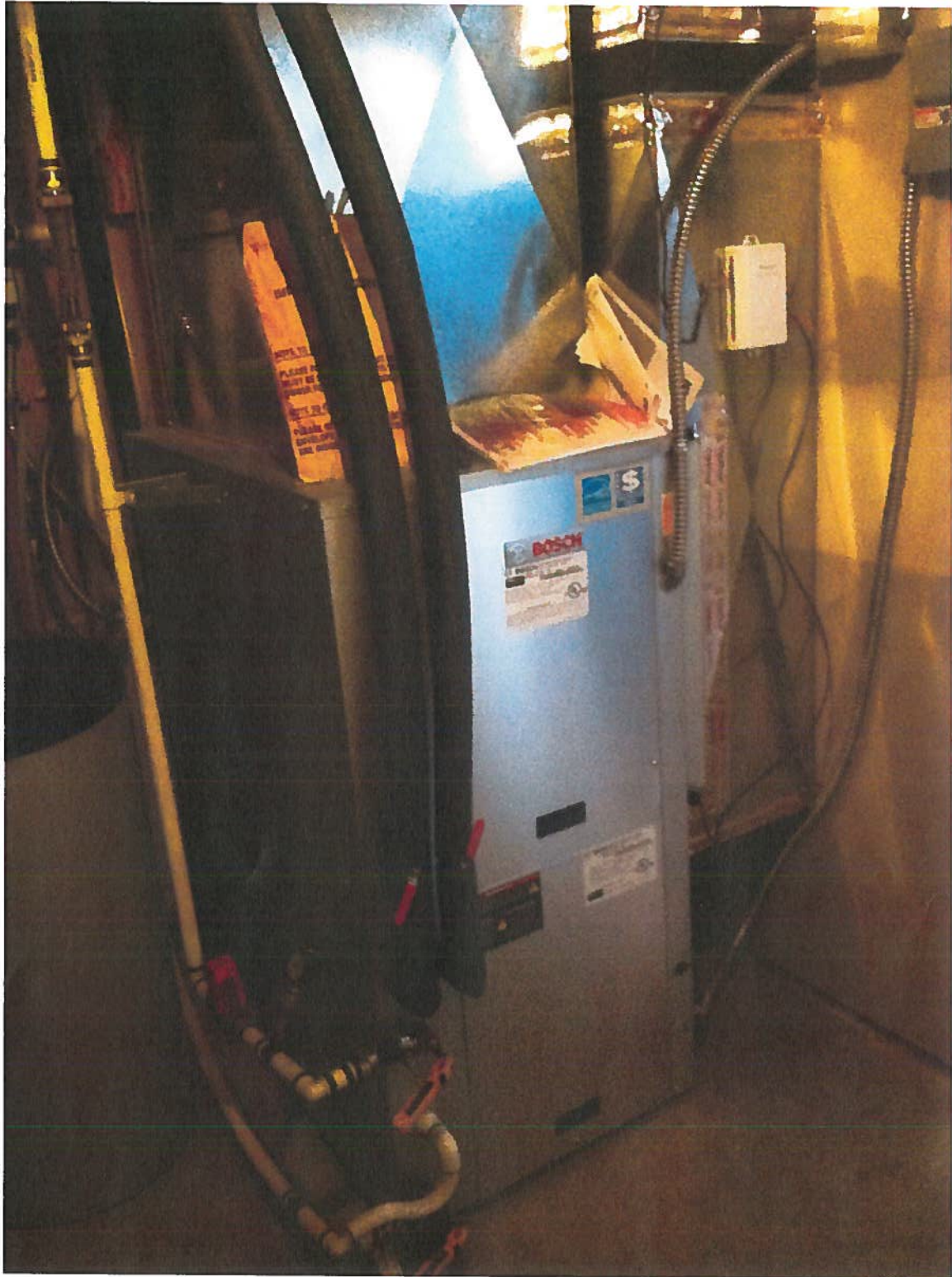


The USDA-FSA Aerial Photography Field office asks to be credited in derived products.

Heat Pump 1



Heat Pump 2



Heat Pump Discharge



OPERATING PRESSURES & TEMPERATURES

Environmentally Safe R-410A Refrigerant

Operating Data

			COOLING				HEATING (+)			
Model	Entering Water Temp. °F	Water Flow GPM	Suction Pressure PSIG	Discharge Pressure PSIG	Water Temp Rise °F	Air Temp Drop °F	Suction Pressure PSIG	Discharge Pressure PSIG	Water Temp Drop °F	Air Temp Rise °F
CE035 Full Capacity	30°	4.5					74-90	244-299	3-4	13-15
		9.0					78-95	251-306	2-3	13-16
	40°	4.5	122-149	183-224	14-18	19-23	87-106	257-314	4-5	15-18
		9.0	117-143	172-210	8-10	20-24	91-111	263-322	3-3	16-19
	50°	4.5	131-160	214-261	14-18	18-22	164-201	269-329	5-6	17-20
		9.0	126-154	201-245	8-10	19-24	173-211	276-337	3-4	18-22
	60°	4.5	136-166	244-298	14-17	18-22	111-136	282-344	6-7	19-23
		9.0	131-160	230-281	8-10	19-23	117-143	289-353	4-5	20-24
	70°	4.5	141-172	275-336	14-17	17-21	124-152	294-360	7-8	21-25
		9.0	135-165	258-316	8-10	18-22	131-160	302-369	5-6	22-27
	80°	4.5	145-178	310-378	14-17	17-20	136-166	307-375	8-9	23-28
		9.0	140-171	291-356	8-10	18-22	143-175	314-384	5-6	24-30
	90°	4.5	150-183	349-426	14-17	16-20	149-182	319-390	8-10	25-30
		9.0	144-176	328-401	8-9	17-21	156-191	327-400	6-7	26-32
	100°	4.5	155-189	392-480	13-16	16-19				
		9.0	149-182	369-451	8-9	17-21				
CE049 First Step	30°	4.0					64-78	248-303	5-6	15-18
		6.0					67-82	254-311	3-4	16-19
	40°	4.0	109-134	183-224	18-22	19-23	75-91	261-319	6-8	17-21
		6.0	105-128	172-210	10-12	20-25	79-96	267-327	4-5	18-23
	50°	4.0	118-144	214-261	18-22	19-23	142-173	273-334	8-10	20-24
		6.0	113-138	201-245	10-12	20-24	149-182	280-342	5-7	21-26
	60°	4.0	122-149	244-298	17-21	18-22	96-117	286-349	9-11	22-27
		6.0	117-143	230-281	10-12	19-24	101-123	293-358	6-8	24-29
	70°	4.0	126-154	275-336	17-21	18-22	107-131	299-365	11-13	25-30
		6.0	121-148	258-316	10-12	19-23	113-138	306-374	7-9	26-32
	80°	4.0	130-159	310-378	17-21	17-21	117-143	311-380	12-15	27-33
		6.0	132-153	291-356	10-12	18-22	123-151	319-390	8-10	29-35
	90°	4.0	134-164	349-426	17-20	17-20	128-157	324-396	13-16	29-36
		6.0	129-158	328-401	9-12	18-22	135-165	332-406	9-11	31-38
	100°	4.0	139-170	392-480	16-20	16-20				
		6.0	133-163	369-451	9-11	17-21				
CE049 Full Capacity	30°	6.0					71-87	277-339	6-7	15-19
		12.0					75-92	284-347	4-5	16-20
	40°	6.0	118-144	194-237	21-25	19-23	84-102	291-356	7-9	18-22
		12.0	113-138	182-223	12-14	20-24	88-108	299-365	5-6	19-23
	50°	6.0	127-155	226-276	21-25	18-22	159-194	305-373	9-11	20-25
		12.0	122-149	213-260	12-14	19-24	167-204	313-383	6-7	21-26
	60°	6.0	131-160	259-316	21-25	18-22	108-132	320-391	10-13	23-28
		12.0	126-154	243-297	12-14	19-23	113-138	328-400	7-9	24-29
	70°	6.0	136-166	291-355	20-25	17-21	120-147	334-408	12-15	25-31
		12.0	130-159	273-334	12-14	18-22	126-154	342-418	8-10	27-32
	80°	6.0	140-171	328-401	20-24	17-20	131-161	348-425	14-17	27-34
		12.0	135-165	308-377	11-14	18-22	138-169	356-436	9-11	29-36
	90°	6.0	145-177	369-451	20-24	16-20	144-176	362-442	15-18	30-37
		12.0	139-170	347-424	11-14	17-21	151-185	371-453	10-12	32-39
	100°	6.0	149-183	415-508	19-24	16-19				
		12.0	143-175	391-477	11-14	17-21				

This chart shows approximate temperatures and pressures for a unit in good repair. The values shown are meant as a guide only and should not be used to estimate system charge. This chart assumes rated air flow and 80° d.b./67° w.b. entering air temperature in cooling, 70° d.b. entering air temperature in heating. Heating data at entering fluid temperatures below 50° assumes the use of antifreeze. As a result of continuing research and development, specifications are subject to change without notice.



Form 228-7
895
DMP

IDAHO DEPARTMENT OF WATER RESOURCES

WELL DRILLER'S REPORT

Use Typewriter or Ballpoint Pen

061468

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

1. DRILLING PERMIT NO. 35-95-E-0147-000

Other IDWR No. _____

2. OWNER:

Name Kay Garner

Address 2013 S 65 W

City IDAHO FALLS State ID Zip 83402

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

N					
S					

Twp. 2 North ☒ or South ☐
Rge. 37 East ☒ or West ☐
Sec. 30 NW 1/4 NW 1/4 1/4
Gov't Lot _____ County Bonneville 10 acres 40 acres 160 acres
Lat: : : Long: : :
Address of Well Site _____
City _____
(Give at least name of road - distance to Road or Landmark)

Lt. _____ Blk. _____ 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'	20'	400 lbs.	overbore to S.D.

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
8"	+12"	20'	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:

195 ft. below ground Artesian pressure _____ lb.

Depth flow encountered _____ ft. Describe access port or control devices: _____

11. WELL TESTS:

- ☐ Pump ☐ Baller ☐ Air ☐ Flowing Artesian

Yield gal./m.n.	Drawdown	Pumping Level	Time

Water Temp. _____ Bottom hole temp. _____

Water Quality test or comments: _____

Depth first Water Encountered _____

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
12"	0'	1'	Top soil		
	1'	20'	Black Lava		
8"	20'	45'	Black Lava		
	45'	65'	Gray Lava		
	65'	73'	Red Lava		
	73'	91'	Brown Lava		
	91'	120'	Gray Lava		
	120'	127'	Red Lava		
	127'	160'	Gray Lava		
	160'	170'	Black Lava		
	170'	185'	Gray Lava		
	185'	205'	Red Lava	X	
	205'	215'	Gray Lava		
	215'	235'	Red Lava	X	
	235'	255'	Gray Lava		
	255'	275'	Red Lava	X	
	275'	280'	Gray Lava		
	280'	295'	Red Lava	X	

RECEIVED

JAN 27 1998

Department of Water Resources
Eastern Region

RECEIVED

JAN 30 1998

Department of Water Resources

Completed Depth _____ (Measurable)
Date: Started 12-22-95 Completed 1-20-96

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 MARTIN'S WELL SERVICE Firm No. 478

Firm Official R. J. [Signature] Date 1-26-96

and [Signature]

Supervisor or Operator [Signature] Date 1-27-96

(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

35-14982