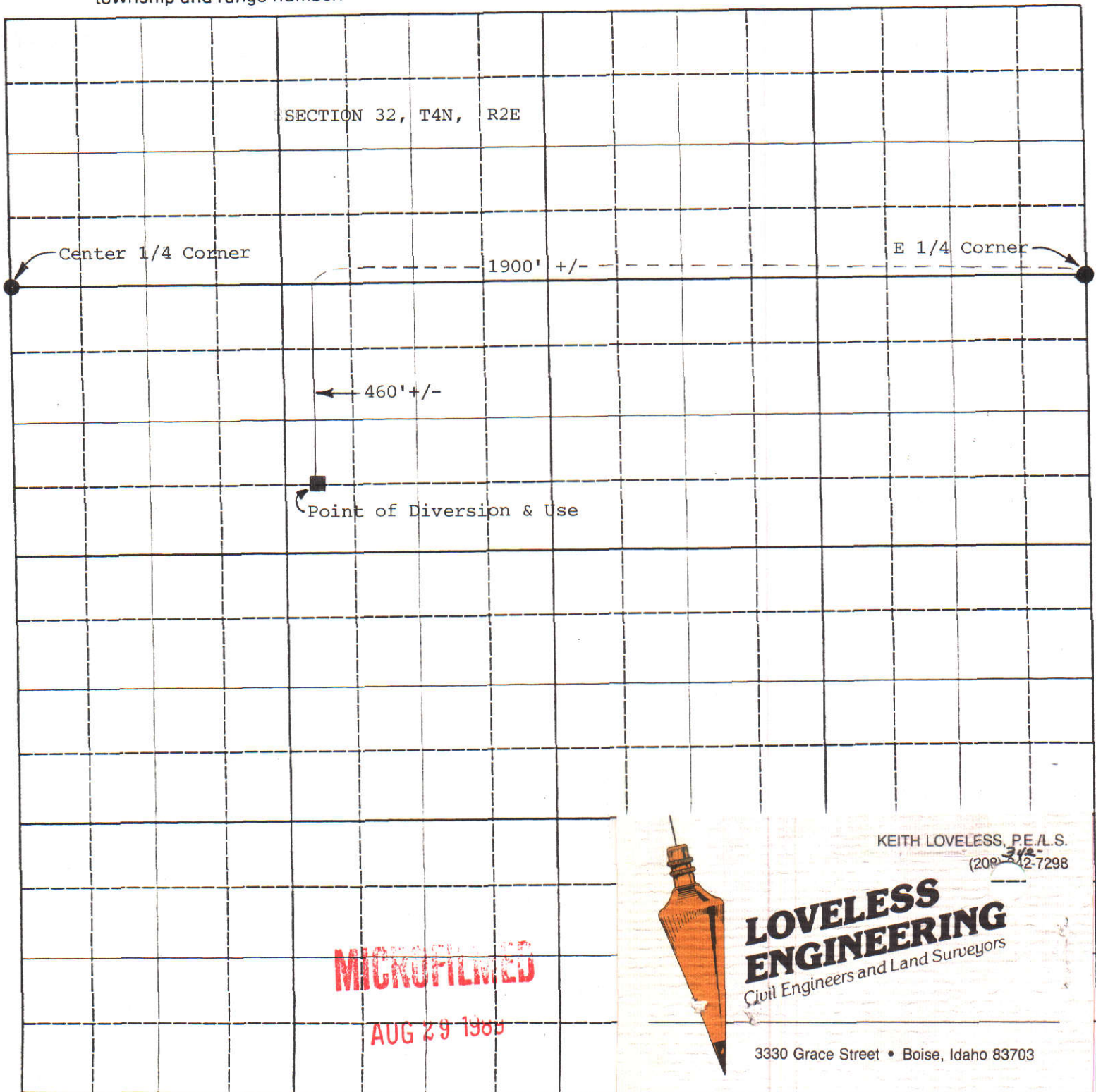


13. Map of proposed project: show clearly the proposed point of diversion, place of use, section number, township and range number.



Scale: ~~2000 FEET EQUAL 1 INCH~~ 1 inch equals 1 mile 330'

BE IT KNOWN that the undersigned hereby makes application for permit to appropriate the public waters of the State of Idaho as herein set forth.

Virginia E. Loveless
(Applicant)

565.00

40

24.40

80

NOR

63-10765

640

NOR

640

N. 89° 49' W.

N. 89° 46'

83.00

2

32.16

40

BOISE

42.15

NORTH

70.5

80

80.00

4

39.00

160

ec. 31

33.77

40

31.89

13

14.25

1.86

Sec. 32

30.00

3

37.39

40

NORTH

THN Sec. 33

640

MICROFILMED
AUG 29 1989

30

38.87

7

10

37.79

9

U.S.

HAY

40

RE S.

8

38.61

RIVER

45.43

1

82.50

41.10

24.82

14.08

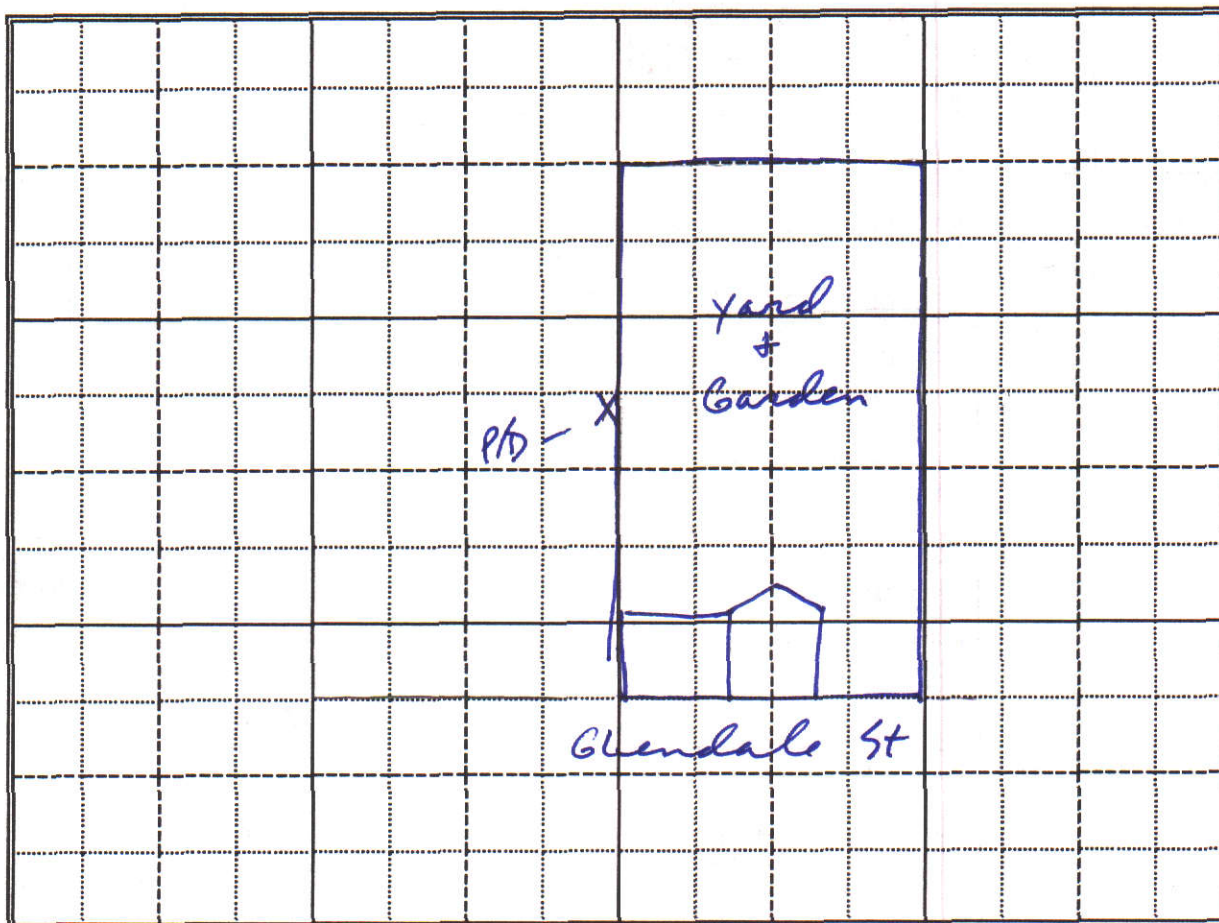
1.26

R 2E

0 1.13

MADE FROM THE OFFIC

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 Quadrange 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
		1	submersible		

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

D. FLOW MEASUREMENTS

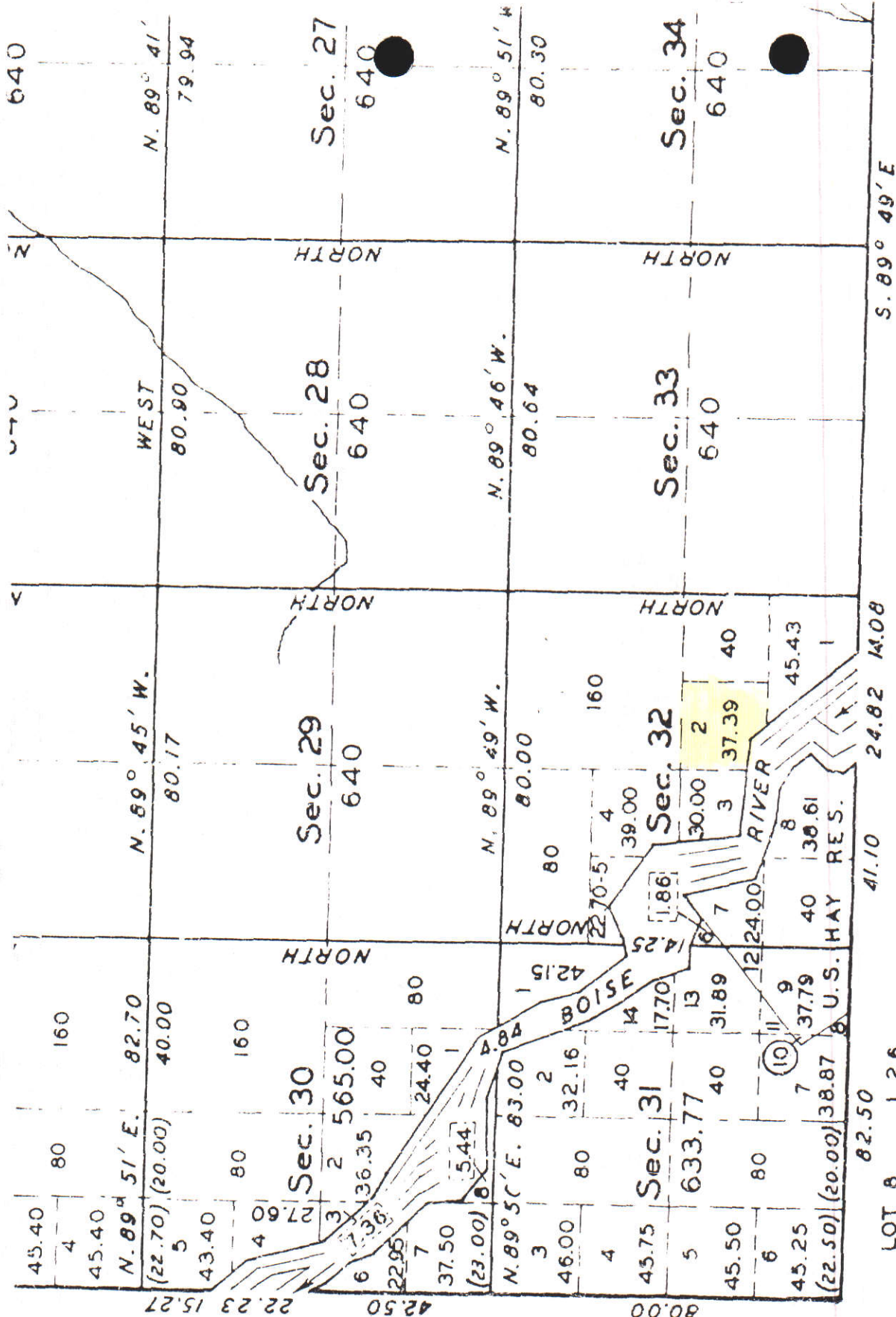
1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date

2. Measurements:

see attached

APR 15 1994



MADE FROM THE OFFICIAL RECORDS OF T.

- LOT 8 1.26
- LOT 10 1.13
- LOT 11 0.95
- LOT 12 7.37

APR 15 1994

1 INCH
 ON 18° 45' E.

T4N
R2E
Sec 32

P/D
PM

T4N

T3N



Produced by the Geological Survey
in cooperation with the U.S. Forest Service

Orthophotograph prepared from 1:80,000-scale
aerial photographs taken Sept. 4, 1975

Projection and 10,000-foot grid ticks: Idaho coordinate
system, west zone (transverse Mercator)
1000-metre Universal Transverse Mercator grid,
zone 11. 1927 North American datum

APR 15 1994

Idaho Department of Water Resources pursuant to
and objections in the Snake



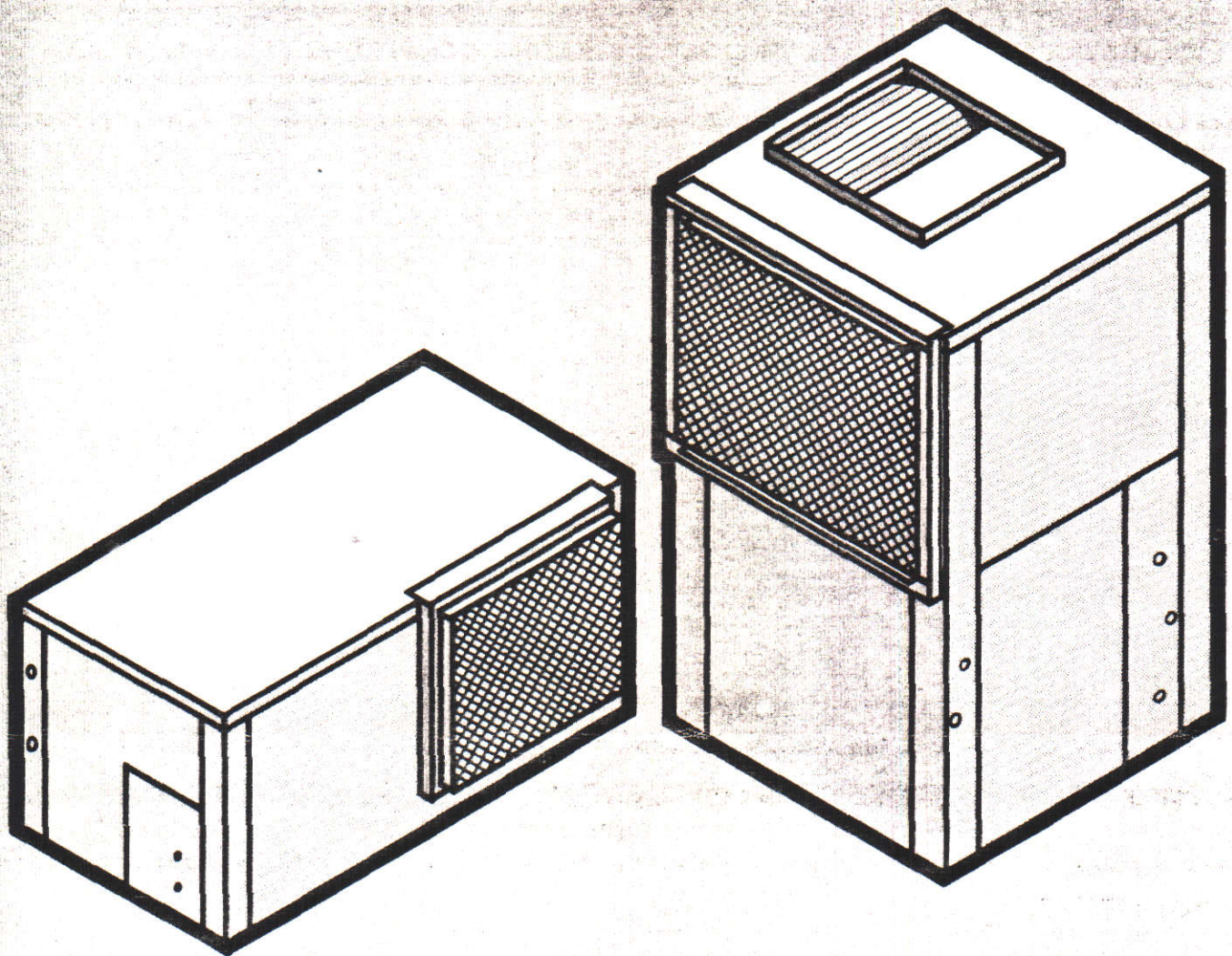
6" well
1 HP submersible
pump



1
— p/u

BRIDGEMAN
APR 15 1994

SPECIFICATIONS

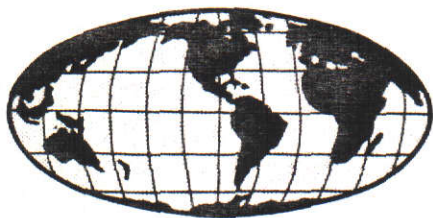


Climate Master 803/804

VERTICAL

HORIZONTAL

**WATER-TO-AIR
HEAT PUMPS**



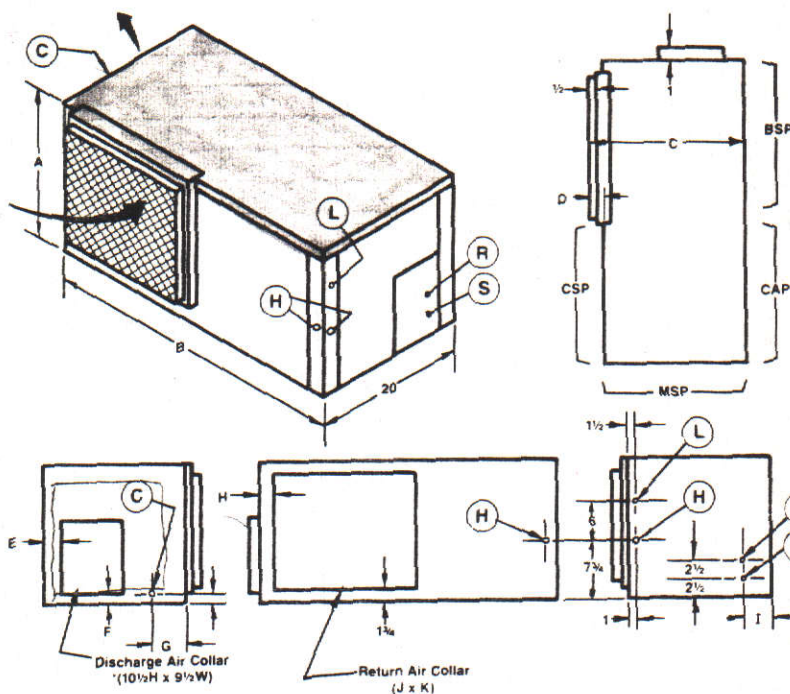
50 HERTZ

MICROFILMED

AUG 29 1989

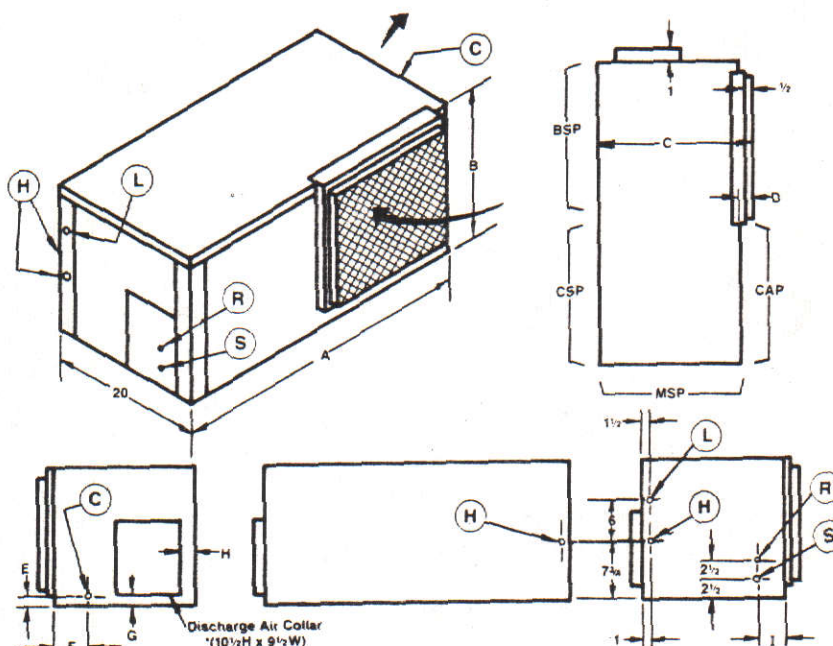
Friedrich
Climate Master®

Left Hand Return — End Blow



	025/031	037/043
A	19	21
B	43	47
C	21-3/4	21-1/2
D	1-3/4	1-1/2
E	2-5/8	4
F	1-1/16	2-1/16
G	5-1/8	5
H	1-3/4	2-1/4
I	4-1/8	5-1/4
J	16-1/4H	18-1/4H
K	20-1/2W	23W

Right Hand Return — End Blow



	025/031	037/043
A	43	47
B	19	21
C	21-3/4	21-1/2
D	1-3/4	1-1/2
E	1-1/8	1-1/4
F	5-1/8	5
G	1-1/16	2-1/16
H	2-5/8	4
I	4-1/8	5-1/4
J	1-3/4	2-1/4
K	16-1/4H	18-1/4H
L	20-1/2W	23W

Condensate Trapping: Differential Trapping Required.
Filter Size: 18 x 22 1/4 x 1" (1 Req.) 037 and 043 Models: 20 x 25 x 1" (1 Req.)
Filter Access: Left and Right on Inlet By Removing Side Clip.

- Ⓟ Ⓡ — 3/4 FPT—Supply & Return Water Connections
- Ⓢ — 3/4 FPT—Condensate Connection
- Ⓜ — Hi Voltage—1 1/2"—3/4"—Combination Knockout (Optional Location On Side)
- Ⓛ — Lo Voltage—1/2" Dia.

Return Air Collar
(K x L)

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AUG 29 1969

State of Idaho
Department of Water Resources

WATER RIGHT LICENSE

WATER RIGHT NO. 63-10765

Priority: October 31, 1990

Maximum Diversion Rate:

0.07 CFS

Maximum Diversion Volume:

10.6 AF

This is to certify, that VIRGINIA E LOVELESS

3935 GLENDALE ST

BOISE ID 83703

has complied with the terms and conditions of the permit, issued pursuant to Application for Permit dated February 21, 1989; and has submitted Proof of Beneficial Use on October 31, 1990. An examination indicates that the works have a diversion capacity of .070 cfs of water from a **GROUNDWATER** source, and a water right has been established as follows:

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>RATE OF DIVERSION</u>	<u>ANNUAL VOLUME</u>
HEATING	10/16 to 05/14	0.03 CFS	9.0 AF
COOLING	05/15 to 10/15	0.01 CFS	1.0 AF
DOMESTIC	01/01 to 12/31	0.04 CFS	0.6 AF
	Totals	0.07 CFS	10.6 AF

LOCATION OF POINT(S) OF DIVERSION: Lot 2(NWSE), Sec. 32, Township 04N, Range 02E
ADA County

PLACE OF USE: HEATING

TWN RGE SEC

04N 02E 32 Lot 2(NWSE)

PLACE OF USE:

COOLING, same as HEATING use

PLACE OF USE:

DOMESTIC, same as HEATING use

CONDITIONS/REMARKS:

1. The maximum diversion volume is defined as the maximum allowable volume of water that may be diverted annually from the source under this right. The use of water confirmed by this right is limited to the amount which can actually be beneficially used. The maximum diversion volume may be adjusted to more accurately describe the beneficial use or to implement accepted standards of diversion and use efficiency.
2. This water right is appurtenant to the described place of use.
3. This right is subject to all prior water rights and may be forfeited by five years of non-use.
4. Modifications to or variance from this license must be made within the limits of Section 42-222, Idaho Code, or the applicable Idaho law.
5. Return flow if discharged to a subsurface system must be authorized by a separate injection well permit, and return flow if discharged to a surface water system shall meet Idaho Water Quality Standards.

State of Idaho
Department of Water Resources

WATER RIGHT LICENSE

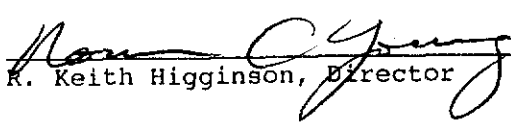
WATER RIGHT NO. 63-10765

CONDITIONS/REMARKS:

6. Heating and cooling uses are for a domestic heat pump.
7. Domestic use is for 1 home.

This license is issued pursuant to the provisions of Section 42-219, Idaho Code.
Witness the seal and signature of the Director, affixed at Boise, this 9TH
day of April, 1994.

Acting for


R. Keith Higginson, Director

APR 15 1994

BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE
STATE OF IDAHO

IN THE MATTER OF PERMIT	)	
NO. 63-10765 IN THE NAME OF	)	ORDER OF REINSTATEMENT
VIRGINIA E. LOVELESS	)	

This matter having come before the Idaho Department of Water Resources (Department) the Department finds as follows:

FINDINGS OF FACT

1. On July 18, 1989 the Director of the Department of Water Resources issued Permit No. 63-10765 with a condition of approval that proof of construction of works and application of water to beneficial use be submitted on or before August 1, 1990.

2. On May 31, 1990 the Department sent a proof due notice to the permit holders.

3. On August 13, 1990 the Department sent a lapse notice to the permit holder since neither proof of beneficial use nor a request for extension of time had been received from the permit holder.

4. On October 31, 1990 Proof of Beneficial Use was received by the Department from the permit holder.

5. Section 42-218a, Idaho Code, authorizes the Department to reinstate a lapsed permit, with the priority date advanced to the date that proof of beneficial use was received,

MICROFILMED

DEC 18 1990

upon submittal of evidence clearly establishing the extent of beneficial use prior to the proof due date and a showing of reasonable cause why the proof was submitted late.

6. The permit holder submitted evidence to confirm that water has been put to beneficial use. Evidence includes copies of two checks made to the well driller and well pump installer respectively for drilling and pump installation services. The checks are dated April 12 and May 5, 1989.

7. A representative of the permit holder has stated that he was handling all correspondence and matters relating to the permit and that he misplaced the proof due and lapse notices. Due to this oversight, the permit holder was late in submitting proof of beneficial use.

CONCLUSIONS OF LAW

1. The permit holders have submitted proof of beneficial use along with supporting evidence which establishes that water was in fact beneficially used as identified on the permit.

2. The permit holders have shown sufficient cause why the proof of beneficial use was not submitted in a timely manner.

3. The permit can be reinstated with the date of priority advanced to the date proof of beneficial use was received by the Department.

MICROFILMED

00018 1990

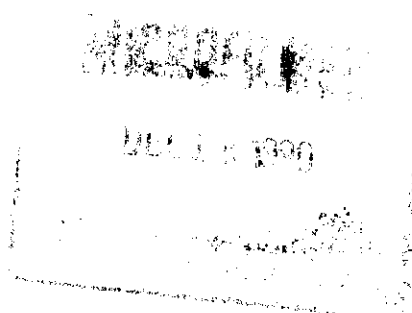
ORDER

IT IS HEREBY ORDERED that Permit No. 63-10654 is
reinstated.

IT IS FURTHER ORDERED that the date of priority of this
permit is advanced to October 31, 1990.

Dated this 6th day of December, 1990.


L. GLEN SAXTON
Chief, Water Allocation Bureau



STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
PROOF OF BENEFICIAL USE

RECEIVED
OCT 31 1990

The Idaho Department of Water Resources will consider this form as a statement that the permit holder(s) has/have completed all development that will occur under this permit and that water has been applied according to the provisions of the permit for the beneficial use(s) described below. This form must be accompanied by a license examination fee or a completed field examination report prepared by a certified water right examiner who has been appointed by the department.

Permit No. 63-10765 Telephone No. 343-7363

Name(s) of Permit Holder(s): VIRGINIA E. Loveless

Post Office Address: 3935 Glendale

Source of Water: Groundwater

If ground water, well driller's name: Shelley Stateline Drilling Date drilled: April 89

Extent of Use: (+ heat pump)
Domestic 1 (No. of households) Irrigation _____ (No. of acres)
Stockwater _____ (No. and type of stock) Other _____

Total rate and/or volume for which proof is submitted 0.07 cfs _____ acre/feet

Show date water was first diverted and beneficially used under this permit: Apr 89 or May

One of the following may be a condition of approval of your permit:

Measuring device: Required? Yes ☒ No Installed? Yes ☒ No

OR

Flow Measurement Port: Required? Yes ☒ No Installed? Yes ☒ No

Fee Enclosed: \$ 50⁰⁰ (See License Examination Fee Schedule)

Person to contact to accompany the Department representative during the field examination:

See above
Name Telephone No.

Address

The above information is my true statement of the extent to which the above numbered permit has been developed and I relinquish any undeveloped portion of the permit to the state of Idaho.

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DEC 18 1990

10/31/1990 Date x Virginia E. Loveless Signature (and title if on behalf of a company or organization)

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT

To appropriate the public waters of the State of Idaho

APPROVED

1. Name of applicant Virginia E. Loveless Phone 343-7363
Post office address 3935 Glendale St., Boise, ID 83703

2. Source of water supply Ground Water which is a tributary of _____

3. Location of point of diversion is _____ $\frac{1}{4}$ of NW $\frac{1}{4}$ of SE $\frac{1}{4}$, Govt. Lot ----- 2
Sec. 32 Township 4N Range 2E B.M. Ada County; additional
points of diversion if any: _____

4. Water will be used for the following purposes:

Amount 0.01 for cooling purposes from May 15 to Oct 15 (both dates inclusive)
(cfs or acre-feet per annum)

Amount 0.03 for heating purposes from Oct 16 to May 14 (both dates inclusive)
(cfs or acre-feet per annum)

Amount 0.04 for domestic purposes from Jan 1 to Dec 31 (both dates inclusive)
(cfs or acre-feet per annum)

Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)

5. Total quantity to be appropriated is (a) 0.07 and/or (b) _____
cubic feet per second acre feet per annum

6. Proposed diverting works:

a. Description of ditches, flumes, pumps, headgates, etc. 1 hp submersible pump with piping to
home, discharge water from heat pump will be discharged to perc trench meeting legal
requirements of less than 12 foot depth.

b. Height of storage dam N/A feet; active reservoir capacity _____ acre-feet; total
reservoir capacity _____ acre-feet; period of year when water will be diverted to storage:
_____ to _____ inclusive.

c. Proposed well diameter is 6 inches; proposed depth of well is 60 feet.

d. Is ground water with a temperature of greater than 90°F being sought? No

7. Time required for the completion of the works and application of the water to the proposed beneficial use is
1 years (minimum 1 year).

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AUG 29 1989

8. Description of proposed uses *in irrigation only, go to item 9*:

- a. Hydropower; show total feet of head and proposed capacity in KW. N/A
- b. Stockwatering; list number and kind of livestock. N/A
- c. Municipal; show name of municipality. N/A
- d. Domestic; show number of households. One (1)
- e. Other; describe fully. irrigate approx. 1/2 acre surrounding single family home

9. Description of place of use:

- a. If water is for irrigation, indicate acreage in each subdivision in the tabulation below.
- b. If water is used for other purposes, place a symbol of the use (example: D for Domestic) in the corresponding place of use below. See instructions for standard symbols.

TWP	RANGE	SEC.	NE 1/4				NW 1/4				SW 1/4				SE 1/4				TOTALS
			NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	
<u>4</u> <u>2N</u>	<u>2E</u>	<u>32</u>															<u>0.5</u>		<u>0.5</u>
																	D		
																	G		
																	L		
																	<u>1.2</u>		

per map on
pg. 3
SL
3/1/89

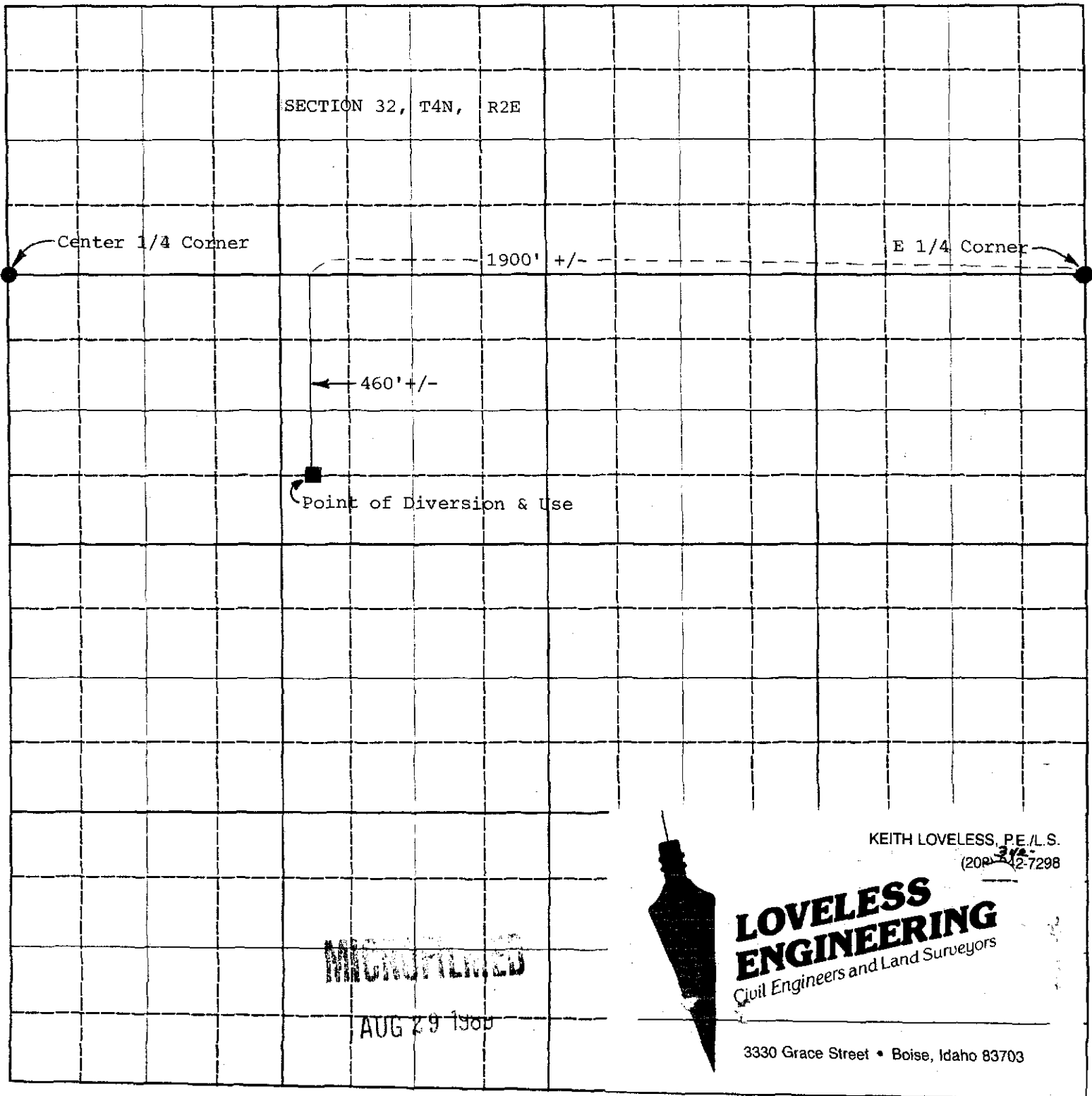
IRRIGATION IS PART OF SINGLE-FAMILY DOMESTIC USE PER ITRM
Total number of acres to be irrigated 0.5 3/1/89

10. Describe any other water rights used for the same purposes as described above. No filed rights, only those created from beneficial use from 1947 to date.
11. a. Who owns the property at the point of diversion? Virginia E. Loveless
- b. Who owns the land to be irrigated or place of use? Virginia E. Loveless
- c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing.

12. Remarks: The existing 4" well has been used for domestic and irrigation since April 1947. I have resided at this home since this date. I wish to replace the 4" cased well with a new 6" which will support a submersable pump and a water to air heat pump system.

Point of diversion and place of use in Lot 17, Bell Subdivision (per well drilling application submitted concurrently, SL 3/1/89).

13. Map of proposed project: show clearly the proposed point of diversion, place of use, section number, township and range number.



BE IT KNOWN that the undersigned hereby makes application for permit to appropriate the public waters of the State of Idaho as herein set forth.

Virginia E. Loveless
(Applicant)

565.00

40

24.40

80

NOR

63-10765

640

NOR

640

N. 89° 49' W.

N. 89° 46'

80.00

80.64

30

32.16

40

BOISE

42.15

80

4

160

39.00

ec. 31

17.70

14.25

1.86

Sec. 32

33.77

40

31.89

30.00

3

37.39

40

NORTH

T4N

Sec. 33

640

30

10

37.79

40

38.61

45.43

38.87

U.S.

HAY

RES.

41.10

24.82 14.09

82.50

1.26

1.13

R2E

MICROFILMED

AUG 29 1989

LINE FROM THE OFFICE

Proposed Priority 2/21/89

Received by et Date 2-21-89 Time 3:10 pm Preliminary check by SL

Fee \$ 30⁰⁰ Received by et # W2224 Date 2-21-89

Publication prepared by GG Date 3-8-89 Published in Idaho Statesman

Publication approved _____ Date 3/16 & 3/23/89

ACTION OF THE DIRECTOR, DEPARTMENT OF WATER RESOURCES

This is to certify that I have examined Application for Permit to appropriate the public waters of the State of Idaho No. 63-10765, and said application is hereby APPROVED.

1. Approval of said application is subject to the following limitations and conditions:

a. SUBJECT TO ALL PRIOR WATER RIGHTS.

b. Proof of construction of works and application of water to beneficial use shall be submitted on or before

August 1, 19 90.

c. The rate of diversion, if water is to be used for irrigation under this permit, when combined with all other water rights for the same land shall not exceed 0.02 cubic feet per second for each acre of land.

d. The water right acquired under this permit if for hydropower purposes shall be junior and subordinate to all rights to the use of water, other than hydropower, within the State of Idaho that are initiated later in time than the priority of this permit and shall not give rise to any right or claim against any future rights to the use of water, other than hydropower, within the State of Idaho initiated later in time than the priority of this permit.

e. Other: Permit holder shall comply with the drilling permit requirements of Section 42-235, Idaho Code.

Return flow if discharged to a subsurface system must be authorized by a separate injection well permit, and return flow if discharged to a surface water system shall meet Idaho Water Quality Standards.

The point of diversion identified in this permit is located within the boundaries of the Boise Front Low Temperature Geothermal Resource Ground Water Management Area. If water with a temperature greater than 85°F is encountered by the driller, the Department must be immediately notified and drilling must immediately cease pending a review of drilling conditions by the Department.

Drilling fluid return temperatures shall be monitored each 20 feet during drilling, and a report shall be prepared of this data. This report, plus a determination of the static temperature gradient within the well shall be submitted to the Department when the well is completed or when 85°F water is encountered, whichever is first.

Witness my hand this 18th day of July, 1989.

Minister of Water Resources

AUG 29 1989

A. Glen Saylor



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000

Phone: (208) 327-7900 FAX: (208) 327-7866

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

April 11, 1994

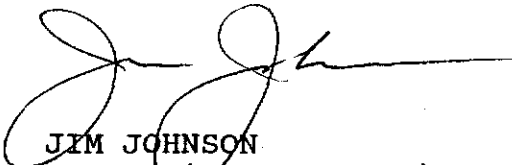
VIRGINIA E LOVELESS
3935 GLENDALE ST
BOISE ID 83703

RE: WATER RIGHT NO. 63-10765

Dear Water Right Holder(s):

Enclosed herewith is a copy of the Water Right License issued on the above referenced permit. If you have any questions, please contact me within 10 days of receipt of this license.

Sincerely,



JIM JOHNSON
Water Rights Supervisor

JJ:dc

Enclosure

RECEIVED
APR 15 1994

APR 15 1994

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED

FEB 23 1994

Department of Water Resources

A. GENERAL INFORMATION

Permit No. 63-10765

1. Owner: Virginia Louless Phone No. 343-7363

Current Address: 3935 Blendale St

2. Accompanied by: Virginia EXAM DATE: 10/18/93

Address: _____ Phone No. _____

Relationship to Permit Holder: owner

3. Source: Ground Water tributary to _____

B. OVERLAP REVIEW

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

2. Other water rights with the same point of diversion: _____

C. DIVERSION AND DELIVERY SYSTEM

1. Point(s) of Diversion:

Ident No.	Gov't Lot	1/4	1/4	1/4	Sec.	Twp.	Rge.	County	Method of Determination/Remarks
	2		NW	SE	32	4N	2E	Ada	USGS Quad

2. Place(s) of Use:

Indicate Method of Determination

TWP	RGE	SEC	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
4N	2E	32														1/2			
																H			
																C			
																D			

APR 15 1994

APR 15 1994

2. Measurements:

see attached

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date

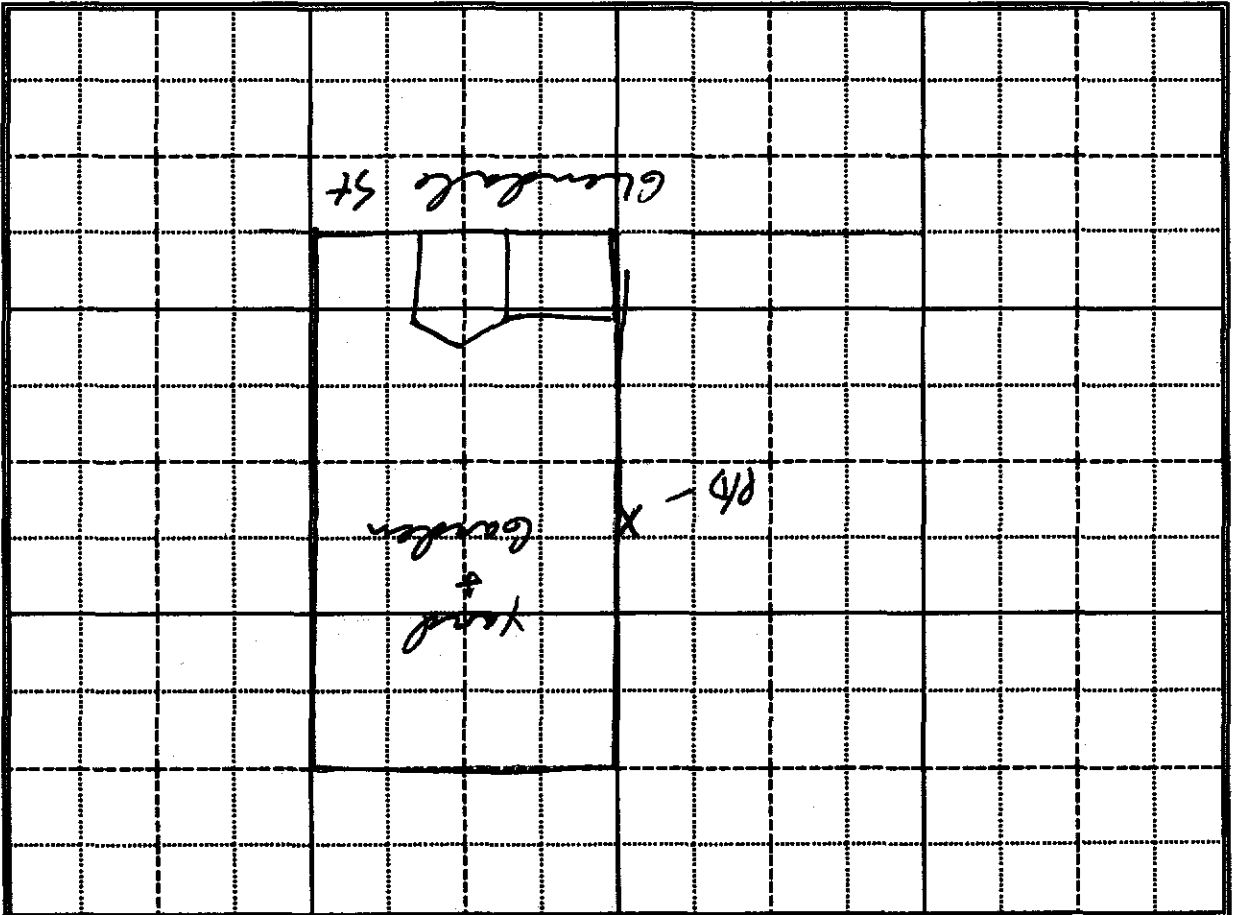
D. FLOW MEASUREMENTS

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

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size

4.

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



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

E. NARRATIVE/REMARKS/COMMENTS

A 6" well with a 1 hp submersible pump supplies water to a water to air heating + cooling system for 1 home. From this system, the water is discharged into a 3' shallow percolation trench below ground surface. Nothing is exposed. The well is also used for external domestic use for irrigation. City water is used for internal domestic use. No other nts are used.

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

APPROVED

APR 15 1994

Date _____

Field Examiner's Name

Date _____

Change P.D. as reflected above

Change P.U. as reflected above

☒ Add P.D. as reflected above
☐ Add P.U. as reflected above
☐ Other _____
☐ None _____

Beneficial Use

H. RECOMMENDATIONS

external domestic use = .16 of the

See attached for heating/cooling calc.

2. Volume Calculations for Other Uses:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

1. Volume Calculations for Irrigation:

G. VOLUME CALCULATIONS

per well log
psi + HP per owner

$$\text{std } L_0 = \frac{18.2 \times 0.8 + 51}{L' \times 8.8 \times 1}$$

Measured Method:

F. FLOW CALCULATIONS

Additional Computation Sheets Attached

RESIDENTIAL SPACE HEATING/COOLING REQUIREMENTS FOR COLD OR GEOTHERMAL SOURCES

Worksheet created by Cindy Hodges, 11/93.

Data entered by: LORI GRAVES
Exam Date: 10/18/1993
File No: 63-10765
Computations for: HEATING

REQUIRED DATA:

Area of livable floor space, ft2 (A) 1500
2 story? (N=1, Y=2) 1
House efficiency factor (e) * 0.44
Inside design temperature (Ti) 70
Average outside temperature (To) ** 4
Source temperature, degrees F (S) 55
Heating/cooling days per season (D) 211
Hours/day system operates (H) 12

* e values are as follows:

- 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)

** Suggested average outside temperatures:

WINTER

4 deg F Boise
6 deg F Grand View
-8 deg F Cascade

SUMMER

80 deg F Boise
90 deg F Grand View
70 deg F Cascade

CALCULATED DATA:

DESIGN HEAT LOAD (BTU/hr required)
Formula: $E = [e \times (Ti - To)] \times A$
Applies factor of 0.8 for two-story dwelling

E = 43,560 BTU/hour

TEMPERATURE DROP ACROSS SYSTEM
Formula: $Ts = 0.3 \times [S - Ti]$

Ts = 4.5 degrees F

FLOW RATE REQUIRED (at given source temperature)
Formula: $Q = E / (500 \times Ts) \times 448.8$

Q = 0.04 cfs

DIVERTED VOLUME OVER SEASON
Formula: $Vdiv = Q \times D \times H / 24 \times 1.9835$

Vdiv = 9.0 AFA

Permit limit @ .03 cfs

RESIDENTIAL SPACE HEATING/COOLING REQUIREMENTS FOR COLD OR GEOTHERMAL SOURCES

Worksheet created by Cindy Hodges, 11/93.

Data entered by: LORI GRAVES
Exam Date: 10/18/1993
File No: 63-10765
Computations for: COOLING

REQUIRED DATA:

Area of livable floor space, ft² (A) 1500
2 story? (N=1, Y=2) 1
House efficiency factor (e) * 0.44
Inside design temperature (Ti) 70
Average outside temperature (To) ** 80
Source temperature, degrees F (S) 55
Heating/cooling days per season (D) 154
Hours/day system operates (H) 12

* e values are as follows:

- 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)

** Suggested average outside temperatures:

WINTER

4 deg F Boise
6 deg F Grand View
-8 deg F Cascade

SUMMER

80 deg F Boise
90 deg F Grand View
70 deg F Cascade

CALCULATED DATA:

DESIGN HEAT LOAD (BTU/hr required)
Formula: $E = I_e \times (T_i - T_o) \times A$
Applies factor of 0.8 for two-story dwelling

E = 6,600 BTU/hour

TEMPERATURE DROP ACROSS SYSTEM
Formula: $T_s = 0.3 \times [S - T_i]$

Ts = 4.5 degrees F

FLOW RATE REQUIRED (at given source temperature)
Formula: $Q = E / (500 \times T_s) \times 448.8$

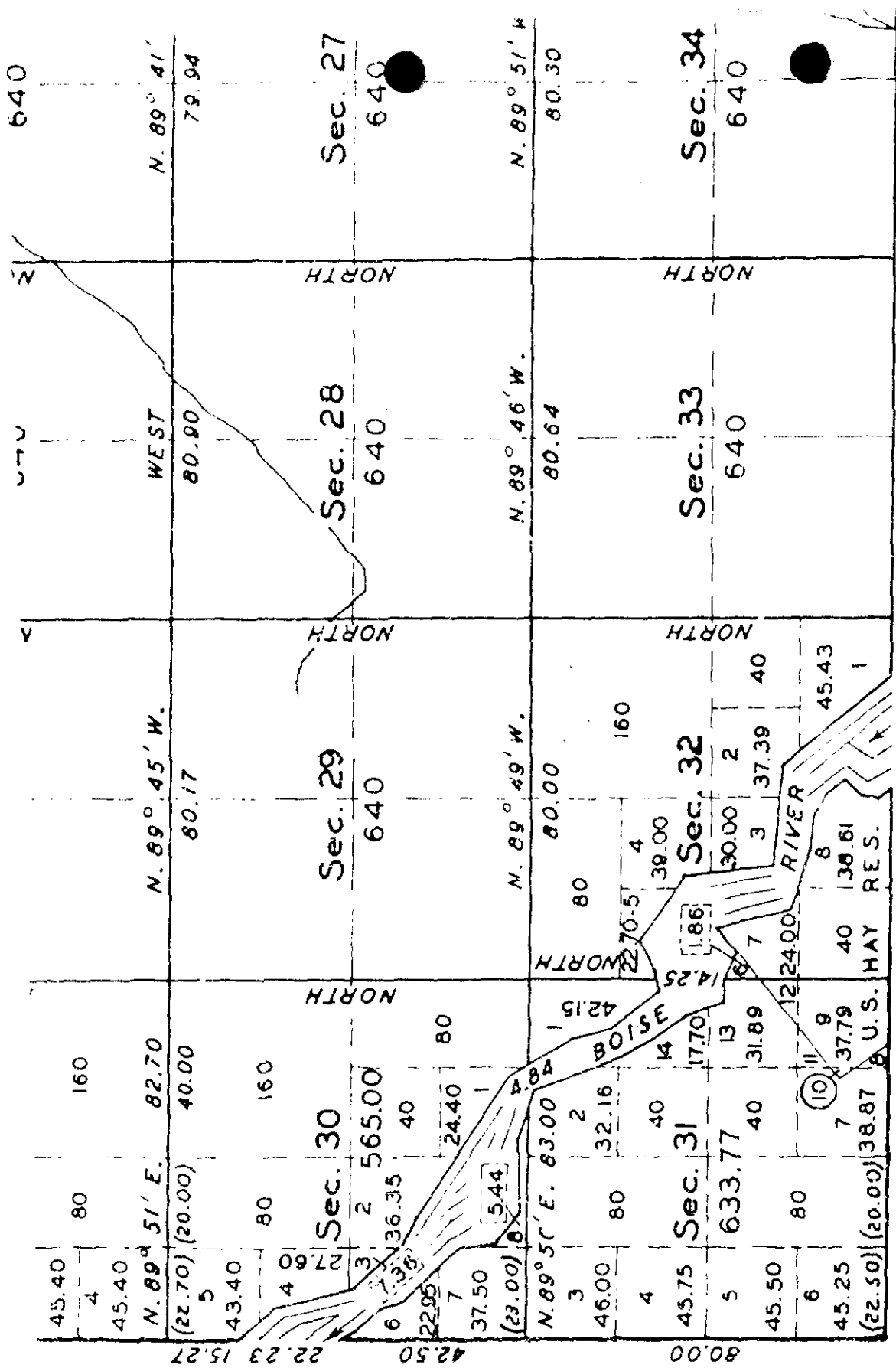
Q = 0.01 cfs

DIVERTED VOLUME OVER SEASON
Formula: $V_{div} = Q \times D \times H / 24 \times 1.9835$

Vdiv = 1.0 AFA

APPROVED

OCT 15 1994



S. 89° 49' E

41.10 24.82 14.08

82.50

- LOT 8 1.26
- LOT 10 1.13
- LOT 11 0.95
- LOT 12 7.37

MADE FROM THE OFFICIAL RECORDS OF T

80

1 INCH

ON 18° 45' E.

APR 15 1994

T4N
R2E
Sec 32

P/D
P/M

T4N

T3N



Produced by the Geological Survey
in cooperation with the U.S. Forest Service

Orthophotograph prepared from 1:80,000-scale
aerial photographs taken Sept. 4, 1975

Projection and 10,000-foot grid ticks: Idaho coordinate
system, west zone (transverse Mercator)
1000-metre Universal Transverse Mercator grid,
zone 11. 1927 North American datum

APR 15 1994

IDAHO DEPARTMENT OF WATER RESOURCES

WELL INSPECTION FORM

1. DRILLING PERMIT NO: 63-89-W-045 OTHER APPLICABLE NO: 63-10765

2. OWNER: Virginia Louclers Phone: 343-7363
Address: 3935 Blendale St Boise

3. WELL LOCATION: Twp 4N, Rge. 2E, Sec. 32, NW 1/4 SE 1/4
County Ada (Provide sketch map and photo on reverse.)

4. DRILLER: Frank Shelling Lic. No. 326
When Drilled? 1989

5. WELL CONSTRUCTION:

Casing Diameter 6 inches Water tight cap? ☒ Yes ☐ No Access Port: ☒ Yes ☐ No

Casing $\geq$ 12 inches above ground? ☒ Yes ☐ No - Describe _____

Depth of Casing 44 ft. Method Drilled Cable

Condition of Well Casing: ☒ Good ☐ Fair ☐ Poor Describe _____

Control Valve? ☐ Yes ☒ No Pressure Gauge: ☐ Yes ☐ No

Condition of Piping and Valving _____

Auger to a depth of _____ ft. Evidence of Annular Seal ☐ Yes ☐ No

Are there obvious construction problems that may be a source for contamination or waste of water?
☐ Yes ☒ No (Describe in Remarks and Attach Photo - On Reverse)

HYDROLOGIC INFORMATION:

Depth to Static Water 10 ft. Water Temperature 55 °F

Flowing Artesian ☐ Yes ☒ No Pressure: ~30 (psi)

Water Sample Taken? ☐ Yes ☒ No If yes, describe purpose _____

Water Quality Measurements/Observations (Describe) _____

WELL USE:

☒ Domestic ☐ Irrigation ☐ Stock

☐ Test ☐ Municipal ☐ Industrial

☐ Abandoned ☐ Waste Disposal/Injection ☐ Not Used

☒ Other: heating/cooling

APR 15 1994

APR 16 1994

11:00 AM

PHOTOS, DRAWINGS, OTHER ATTACHMENTS:

Signature of Dept. Representative & Title

Inspection Date

1/3/93

REMARKS:

9.

How far away from the well is this source?

If yes, what Type?

Is there a possible source of contamination nearby? ☐ Yes ☒ No

If yes, is there a check-valve? ☐ Yes ☒ No

Is there evidence of Chemigation? ☐ Yes ☒ No

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

USE TYPEWRITER OR
BALLPOINT PEN

SEP 21 1989

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 Virginia Lovelace
Address 3935 Gladalest Drive
Owner's Permit No. 63-89-W.045

7. WATER LEVEL

Static water level 10 feet below land surface.
Flowing? ☐ Yes ☒ No G.P.M. flow _____
Artesian closed-in pressure _____ p.s.i.
Controlled by: ☐ Valve ☐ Cap ☐ Plug
Temperature 55 °F. Quality good
Describe artesian or temperature zones below.

2. NATURE OF WORK WR # 63-10765

- ☒ New well ☐ Deepened ☐ Replacement
☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

8. WELL TEST DATA

☐ Pump ☒ Bailer ☐ Air ☐ Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped
<u>30</u>	<u>14</u>	<u>3</u>

3. PROPOSED USE

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

4. METHOD DRILLED

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

5. WELL CONSTRUCTION

Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____
Thickness 1.250 inches Diameter 6 inches + 1 feet 44 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 4 inches
Number 50 From 42 feet To 36 feet
_____ 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
☒ Bentonite ☐ Puddling clay ☐ _____
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 San Seal

9. LITHOLOGIC LOG

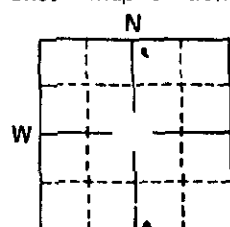
Bore Diam.	Depth		Material	Water	
	From	To		Yes	No
10	0	2	Topsoil		X
10	2	10	Brn Clay		X
10	10	18	Brn Sand		X
6	18	27	Silt Sand	X	
6	27	44	Sand: gravel	X	

RECEIVED
SEP 25 1989
Department of Water Resources
Western Regional Office

RECEIVED
JUN 20 1991

6. LOCATION OF WELL

Sketch map location must agree with written location.



Subdivision Name Bell sub.
Lot No. 17 Block No. _____

County Ada
NW 1/4 NE 1/4 Sec. 32, T. 40, R. 20W.

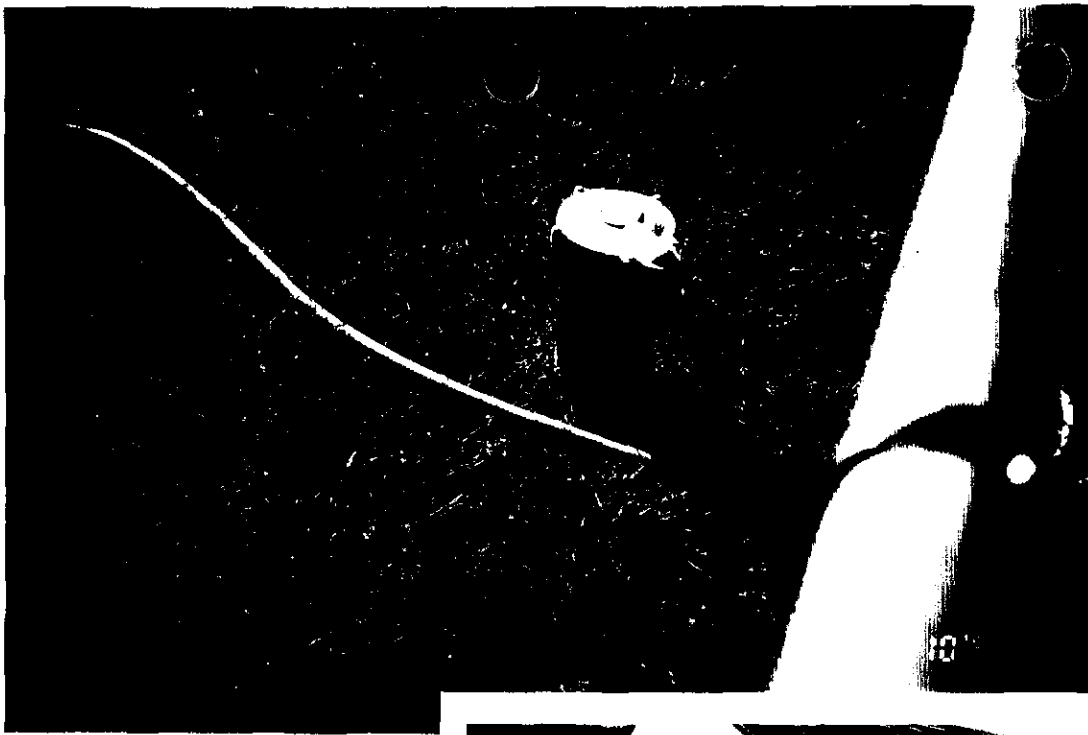
10.

Work started 4-9-87 finished 4-10-89

11. DRILLERS CERTIFICATION

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

Firm Name Frank Shelly Firm No. 326
Address Payette Date _____
Signed by (Firm Official) Frank Shelly
and
(Operator) _____



6" well
1 Hl submersible
pump



1
- p/n

RECEIVED
JAN 15 1994

January 14, 1991

RE: Permit No. 63-10765

Virginia Loveless
3935 Glendale St.
Boise, ID 83703

Dear Permit Holder(s):

We received your supporting documentation necessary to reinstate the above referenced permit.

Before a license can be issued, a field examination will be made by a representative of this Department. Enclosed is an Order of Reinstatement. Please note that the priority date has been advanced to October 31, 1990.

If you have any questions regarding this matter, please contact this office or our Western Regional Office at 334-2190.

Sincerely,

JIM JOHNSON
Water Rights Supervisor

JJ:blm

Enclosure

RECEIVED

JAN 17 1991

VIRGINIA E. LOVELESS
3935 GLENDALE STREET 343-7363
BOISE, ID 83703

3018

April 12 1989

92-11241

PAY TO THE ORDER OF *Shelley's State Bank Building* \$ *900.00*

Nine hundred and no/100 DOLLARS

IDAHO FIRST NATIONAL BANK
WEST STATE OFFICE 61
P.O. Box 7368
Boise, Idaho 83707

FOR *Virginia E. Loveless*

⑆124100019⑆ 110061074104⑆ 0180 ⑆0000090000⑆

The late response is not of V. Loveless
but Keith A. Lovelorn TELLS who misplaced
correspondence on my Desk.

K.A. Lovelorn
12-4-90

VIRGINIA E. LOVELESS
3935 GLENDALE STREET 343-7363
BOISE, ID 83703

3039

May 5 1989

92-11241

PAY TO THE ORDER OF *DAVE KNIE* \$ *1,142.00*

ONE THOUSAND ONE HUNDRED FORTY-TWO & no/100 DOLLARS

IDAHO FIRST NATIONAL BANK
WEST STATE OFFICE 61
P.O. Box 7368
Boise, Idaho 83707

FOR *Puma & Puma* *Virginia E. Loveless*

⑆124100019⑆ 110061074104⑆ 0180 ⑆0000090000⑆

MICROFILMED

DEC 18 1990



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720 -(208) 327-7900

CECIL D. ANDRUS

GOVERNOR

R. KEITH HIGGINSON

DIRECTOR

November 12, 1990

Virginia Loveless
3935 Glendale St.
Boise, ID 83703

RE: Permit No. 63-10765

Dear Ms. Loveless:

The Department received your proof of beneficial use statement for the above referenced permit on October 31, 1990. The permit lapsed August 1, 1990 so the 60-day late period during which the permit can be readily reinstated has passed.

Pursuant to Section 42-218a, Idaho Code, (copy enclosed) the permit can now be reinstated only if you submit the following:

- a) Evidence to show that beneficial use of the water did commence and to show the extent of the use of water during the authorized permit period from the time the permit was issued until the proof due date.
- b) Reasonable cause why the proof of beneficial use was filed late.

Your proof of beneficial use statement along with any information which may have been submitted with it will remain on file in this office for 60 days to allow you an opportunity to assemble and submit the additional required information.

Please feel free to contact this office if you have additional questions.

Sincerely,

TIM LUKE
Sr. Water Resource Spec.

MICROFILMED
DEC 18 1990

WARNING

CANCELLED OR LAPSED

This permit has been officially CANCELLED or LAPSED.

Ninety days following the date of official action this file will be DESTROYED.

August 13, 1990

VIRGINIA E. LOVELESS
3935 GLENDALE ST.
BOISE, ID 83703

LAPSE NOTICE

RE: PERMIT NO. 63-10765

Dear Permit Holder:

You are hereby notified that under the provisions of Section 42-218A, Idaho Code, the above referenced permit has lapsed and is of no further force nor effect. The department provided the proper forms to you in our proof due notice dated May 31, 1990. No further construction or additional development is authorized under this permit unless it is reinstated.

The permit can only be reinstated if you submit an acceptable proof of beneficial use or an acceptable request for extension of time to the department within sixty (60) days of the mailing of this lapse notice. An acceptable proof of beneficial use submittal must include the examination fee or a completed field examination report. A request for extension of time must be accompanied by a fifteen dollar (\$15) fee.

Enclosed again for your use are a proof of beneficial use form and a request for extension of time form. Please note that only one extension of time can be granted unless the project has not been completed because of lack of a necessary approval by a government agency or by litigation which may bring title to the water in question.

L. GLEN SAXTON
Chief, Water Allocation Bureau

Enclosures

LGS:RF

MICROFILMED

DEC 18 1990

CERTIFICATION OF MAILING

I hereby certify that on Aug 22
a copy/an original of this document was
deposited in the United States mail,
postage prepaid addressed to the
individual(s) named above.

138820
May 31, 1990

VIRGINIA E. LOVELESS
3935 GLENDALE ST.
BOISE, ID 83703

PROOF DUE NOTICE

RE: PERMIT NO. 63-10765

Dear Permit Holder:

One of the conditions of approval of the above referenced water permit was that proof of the extent of your beneficial use must be submitted to this office on or before August 1, 1990. (See last page of your approved permit or your last approved extension request.) Enclosed is a form which when accompanied by the license examination fee or a complete field examination report prepared by a certified water right examiner may be used to submit the required proof.

If you have not fully completed your project, and you or a previous owner of this permit have not received a prior extension of time, you may request an extension of time if the delay is for reasonable cause as provided in Section 42-204, Idaho Code. If you have been prevented from proceeding by a governmental agency or by litigation which might bring title to the water in question, more than one extension of time can be granted. An extension of time request form is enclosed for your convenience.

Either an acceptable proof of beneficial use submittal or an acceptable request for an extension of time must be received by this department on or before the above described proof due date. If neither is received, the department will send you a lapse notice. Within sixty (60) days of the mailing of the lapse notice, the permit will no longer be of any force nor effect.

SINCERELY,

Rita Fleck
Secretary/Records Manager

Enclosures

MICROFILMED

DEC 18 1990

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

Statehouse
Boise, Idaho 83720
(208) 334-7900
July 19, 1989

VIRGINIA E. LOVELESS
3935 GLENDALE ST.
BOISE, ID 83703

PERMIT APPROVAL NOTICE

RE: PERMIT NO. 63-10765

Dear Permit Holder:

Enclosed is a copy of your approved application for permit. We direct your attention to the conditions of approval on the final page.

You should be aware that the groundwater you propose to divert is located within a drainage basin where surface waters are regulated during the months of low flow. It is possible that diversion of groundwater may have an adverse impact on these surface water flows. Information available to us at this time does not warrant refusing to issue permits in your area, but we do caution that diversions of groundwater are not allowed to deplete flows available for surface water users with earlier priority dates. Siting your well as far from surface sources as possible and casing out upper water producing zones may reduce the potential of interference.

Section 42-235, Idaho Code, requires that a "drilling permit" must be obtained from the department for all wells constructed after July 1, 1987. A drilling permit is a separate permit that must be issued in addition to your permit to appropriate water. Commencement of well construction or diversion of water under your permit to appropriate water is prohibited unless a drilling permit is obtained.

We have enclosed a form entitled "Instructions for Proof of Beneficial Use". Please read the instructions carefully since you must take further action to develop this permit. Also enclosed for your convenience is a form entitled "Proof of

MICROFILMED

AUG 29 1989

Beneficial Use" that must be submitted to the Department when your project is completed. If development is complete, you may submit proof of beneficial use immediately.

Sincerely,

GARY SPACKMAN, Supervisor
Water Right Permits Section

GS: SC
Enclosures

REC'D

AUG 20 1970

The Idaho Statesman

P.O. BOX 40, BOISE, IDAHO 83707

LEGAL ADVERTISING INVOICE

Amount Due

25.08

Account Name Idaho Department of Water Resources (Western)			Account Number #47628	
Address 2735 Airport Way		City/State Boise, ID		Zip 83705
Ordered By Judy Pense	P.O. Number	Rate NT	Run Dates 1989 April 20, 27	
Identification Notice of Correction: Water Right No. 63-10765			Estimated Inches	Real Inches
1 Number of Affidavits Requested				Legal Number #2413

NOTICE OF CORRECTION

Notice is hereby given that on March 16 & 21, 1989, Notice of Application for Water Right No. 63-10765, in the name of Virginia E. Loveless, was advertised in error. The Place of Use was listed as T03N R2E S32 NWSE 0.5 ACRES TOTAL whereas, the place of use should be T04N R2E S32 Lot 2 (NWSE).

Any protest against approval of this water right application must be filed with the Director, Dept. of Water Resources, Western Region, 2735 Airport Way, Boise, ID 83705, on or before May 8, 1989.

R. KEITH HIGGINSON
Director

Pub. Apr. 20, 27, 1989

2413

STATE OF IDAHO)

) ss.

COUNTY OF ADA)

Debbie Richards

, being duly

sworn, deposes and says: That she is the Principal Clerk of The Idaho Statesman, a daily newspaper printed and published at Boise, Ada County, State of Idaho, and having a general circulation therein and which said newspaper has been continuously and uninterruptedly published in said County during a period of twelve consecutive months prior to the first publication of the notice, a copy of which is attached hereto; that said notice was published in The Idaho Statesman in conformity with Section 60-108, Idaho Code as amended, for 2

☒ consecutive weekly ☐ consecutive daily ☐ single ☐ odd skip

insertion(s) beginning with the issue of April 20, 19 89

and ending with the issue of April 27, 19 89

Debbie Richards

MICROFILMED

Subscribed and sworn to before me this 27th

AUG 29 1989

day of April, 19 89

[Signature]
Notary Public for Idaho, Residing at Boise, Idaho

Notice of Correction

Notice is hereby given that on March 16 & 23, 1989, Notice of Application for Water Right No. 63-10765, in the name of Virginia E. Loveless, was advertised in error.

The Place of Use was listed as T03N R2E S32 NWSE 0.5 ACRES TOTAL whereas, the place of use should be T04N R2E S32 LOT 2 (NWSE).

Any protest against approval of this water right application must be filed with the Director, Dept. of Water Resources, Western Region, 2735 Airport Way, Boise, ID 83705 on or before May 8, 1989.

R. Keith Higginson, Director

Advertised in the Idaho Statesman 4/20 & 4/27/1989.

MICROFILMED

AUG 29 1989



State of Idaho
DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way, Boise, Idaho 83705 - (208) 334-2190

CECIL D. ANDRUS

GOVERNOR

R. KEITH HIGGINSON

DIRECTOR

March 30, 1989

Mr. Keith Loveless, P.E./L.S.
3330 Grace Street
Boise, ID 83703

Dear Mr. Loveless:

Enclosed are three copies of the drilling permit that has been approved. One copy is for your files and the other two are for the driller. He should keep one with him and one in his office.

If we can assist you further, please call this office.

Sincerely,

Sue Taylor
Secretary

MICROFILMED

AUG 29 1989

Drilling Per. No. 63-89-W-045
Water Permit No. 62-10765
Injection Permit No. _____

State of Idaho
Department of Water Resources

DRILLING PERMIT

(Authorizing Construction of a Well)*

1. Applicant Virginia E. Loveless
2. Address 3935 Glendale St., Boise, ID 83703
Telephone 343-7363
(X) Well Owner () Well Operator () Other, specify _____
3. Proposed well location NW 1/4 SE 1/4, or Gov't lot No. _____,
Sec. 32, Twp. 4N, Rge. 2E, County Ada,
Lot, block and subdivision Lot 17, Bell Subdivision
4. Proposed use of well: (Check all that apply)
(X) Domestic () Stockwater () Monitoring
N/A Irrigation () Industrial () Municipal
3/1/89 () Injection (X) Other, Specify Heating & Cooling
5. Well construction information:
() New well () Deepen (X) Replace
Proposed surface diameter 6" Maximum depth 65 ft.
Anticipated bottom hole temperature:
(X) 85°F or less (Cold water well)
() 85°F to 212°F (Low temp. geothermal well)
() 212°F or more (Geothermal well)
6. Anticipated construction start date March, 1989
7. Well Driller (if known) Shelley's Stateline Drilling Co. (#326)
Address 960 NW 14th Ave. Payette ID 83661
8. Applicant's signature Virginia E. Loveless
Title Owner
Date 2/21/89

MICROFILMED

AUG 29 1989

* After other pre-requisite approvals have been obtained.

* Fee is \$10 for single family domestic. Other uses may be \$100, \$50 or \$10.

App. 63-10765
Fee .07 cts

**LOVELESS
ENGINEERING**
Civil Engineers and Land Surveyors

*Response to request for
data supporting estimated flow rate*
March 23, 1989

RECEIVED
MAR 23 1989

HAND DELIVERED *✓*

Mr. Steve Lester
Idaho Department of Water Resources
Western Region
2735 Airport Way
Boise, ID 83705

Department of Water Resources
Western Regional Office

RE: Water Right Application
Virginia E. Loveless

Dear Mr. Lester:

The water right requested over and above the normal domestic use is for a water-to-air heat pump system utilizing the ground water at its ambient temperature which is estimated to be 58°F. The water used for this purpose will be returned to a shallow infiltration trench for disposal.

The heat pump will serve an existing residence of approximately 1800 s.f. with heating and cooling. The heat pump was sized by Mr. Warren Wyatt of CASPER HEATING AND AIR CONDITIONING, Boise, ID. He may be reached at phone number 939-2017.

The heat pump chosen is a FRIEDRICH MODEL NO. 804-031. The unit is designed to run in open or a closed loop mode, with the open loop mode being used. This will replace an electric baseboard resistance type heating system. The heat pump, duct work and floor insulation is being financed by an energy loan from the Idaho Department of Water Resources and meets or exceeds all of the energy conservation directives required by the program.

I have enclosed some catalog data on the unit for your information. Please note that the water consumptions given are general and the application presented is based on data furnished to me for this installation.

If you have further questions, please call me at this office.

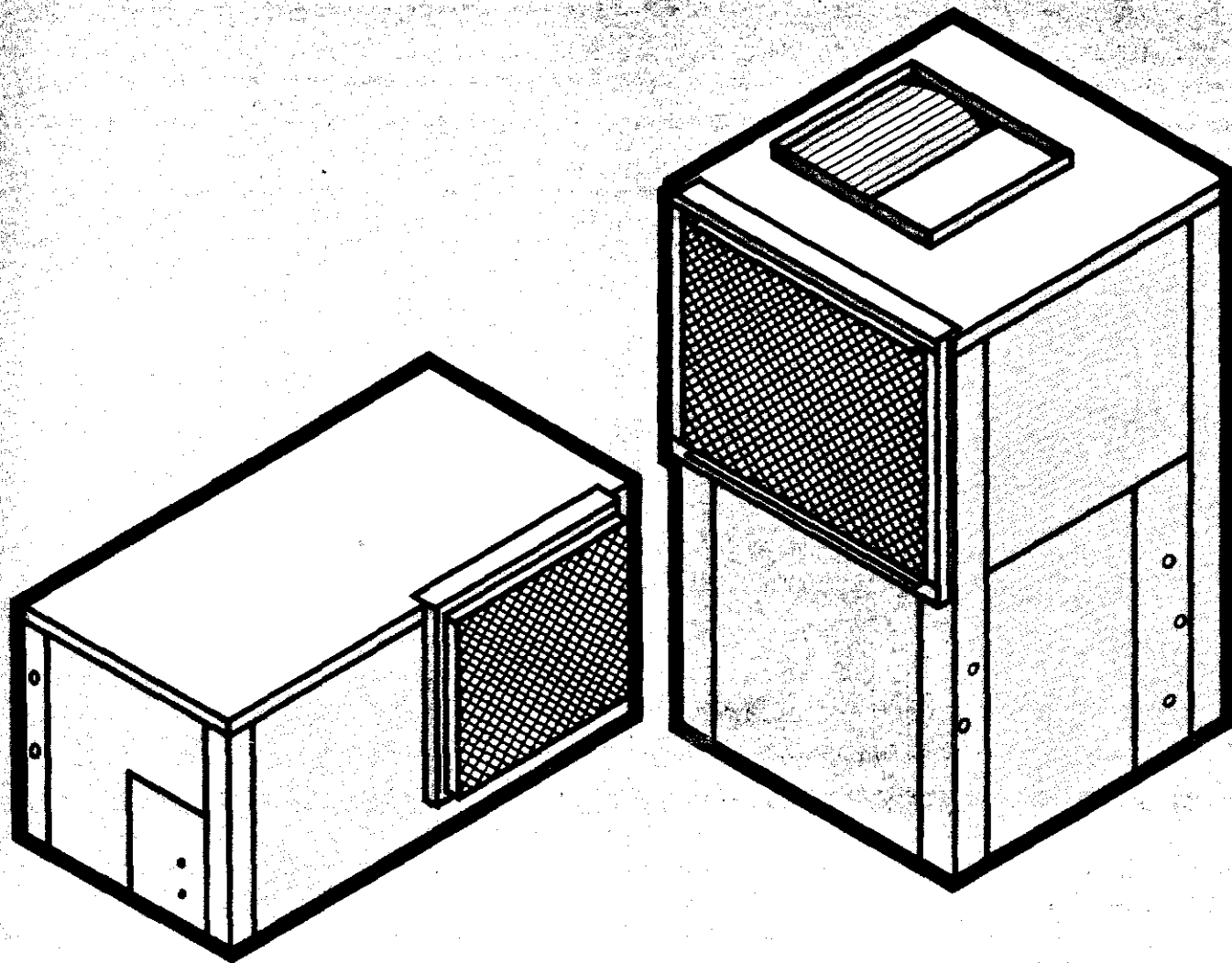
Sincerely,

Keith A. Loveless
Keith A. Loveless, P.E./L.S.

encl.

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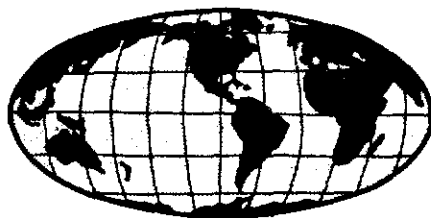
AUG 29 1989



Climate Master 803/804

VERTICAL

HORIZONTAL



50 HERTZ

MICROFILMED

AUG 29 1989

**WATER-TO-AIR
HEAT PUMPS**

Friedrich
Climate Master

ARI RATINGS

803/804 SERIES PERFORMANCE DATA AT ARI RATING CONDITIONS (ARI STD. 320-81)

Cooling								Heating					
Model Number	Net BTUH	Sensible BTUH	Power Input Watts	EER Rating	Heat of Reject. BTUH	Water GPM	Air CFM	Net BTUH	Power Input Watts	COP	Heat of Absorp. BTUH	Water GPM	Air CFM
803-009 804-009	8100	5750	710	11.58	10550	2.4	270	9800	725	3.9	7125	2.4	270
803-012 804-012	11125	7680	1055	10.5	14725	3.34	360	13975	1140	3.6	10085	3.34	360
803-015 804-015	12905	9165	1205	10.7	17020	3.90	450	16910	1310	3.8	12440	3.90	450
803-019 804-019	16910	12345	1505	11.2	22045	5.0	585	20470	1615	3.7	14960	5.0	585
803-024 804-025	22610	15650	1960	11.5	29300	6.6	720	31150	2280	4.0	22370	6.6	720
803-030 ~~804-031~~	26708	19455	2500	10.7	35230	8.0	900	36045	2750	3.8	26670	8.0	900
803-036 804-037	31685	21720	2890	10.9	41545	9.4	1125	37825	3055	3.6	27400	9.4	1125
803-042 804-043	38270 37380	28630 27950	3440 3485	11.1 10.7	50005 49270	11.3 11.2	1350 1305	50730 50730	3615 3830	4.1 3.9	38400 37665	11.3 11.2	1350 1305
803-048 804-048	42720	33150	4085	10.4	56660	12.8	1530	52510	4000	3.8	38870	12.8	1530
803-060 804-060	55180	41650	5250	10.5	73100	16.6	1800	60520	4815	3.7	44100	16.6	1800
804-096	85440	66700	8090	10.5	113045	25.6	3060	99680	7825	3.7	72980	25.6	3060
804-120	110360	83260	10490	10.5	146150	33.1	3600	121930	9890	3.6	88185	33.1	3600

GENERAL DATA CHART

Model Number	Voltage	PH	Min. Wire	Min. CRC Ampacity	Max. Fuse	Comp LRA	Comp RLA	Blower FLA	Total FLA	Blower Whl. Dia.	Blower Whl. Lth.	Blower HP	Ref. to Air Face Area	Coil Depth	Fins In.	Blower Type	Shipping Wt. Lbs.
803-009 804-009	220	1	#14	4.6	15	20.0	2.9	.38	3.3	5.5	5.0	1/20	.97	3.00	14	DDMS	118 108
803-012 804-012	220	1	#14	8.7	15	31.0	5.5	.61	6.1	6.0	4.0	1/10	.97	3.75	14	DDMS	123 117
803-015 804-015	220	1	#14	8.25	15	36.0	5.2	.65	5.85	6.0	5.0	1/12	2.22	2.25	14	DDMS	150 153
803-019 804-019	220	1	#14	11.1	15	34.6	6.7	1.14	7.84	9.0	4.0	1/6	2.22	3.0	14	DDMS	173 180
803-024 804-025	220	1	#10	16.4	25	54.0	10.4	1.22	11.62	9.0	7.0	1/4	2.50	2.25	13	DDMS	210 213
803-030 ~~804-031~~	220 ~~380~~	1 3	#10 ~~#14~~	19.5 ~~8.5~~	30 15	65.0 38.0	12.4 4.4	1.52 1.0	13.92 6.4	10.0	6.0	1/4	2.50	3.0	13	DDMS	225
803-036 804-037	220 380	1 3	#8 #14	23.0 8.3	35 15	75.8 32.0	14.0 5.2	2.43 1.8	16.43 7.0	9.0	7.0	1/2	3.33	2.25	14	DDMS	248 235
803-042 804-043	220 380	1 3	#6 #14	28.7 9.6	45 15	93.0 41.0	17.1 6.3	2.6 1.8	19.7 8.1	10.0 9.0	8.0 7.0	1/2	3.33	3.00 2.25	14	DDMS	278 240
803-048 804-048	220 380	1 3	#6 #14	30.0 11.0	45 15	104.0 35.0	17.5 7.0	4.1 2.2	21.6 9.2	10.0	10.0	3/4	4.17	3.25	14	DDMS	312 300
803-060 804-060	220 380	1 3	#4 #12	39.8 12.5	60 20	132.0 54.0	22.9 7.9	4.4 2.6	27.3 10.5	12.0	10.0	1	4.17	4.33	13	DDMS	339 357
804-096	380	3	#10	18.4	25	35.0	7.0	2.6	16.6	(2) 10.0	(2) 10.0	1-1/2	3.25	4.33	11	BDMP	680
804-120	380	3	#10	21.2	25	54.0	7.9	3.4	19.2	(2) 12.0	(2) 10.0	2	8.33	4.33	15	BDMP	800

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PERFORMANCE

0247/030
025/031

Unit Model Numbers	COOLING PERFORMANCE TABLE						HEATING PERFORMANCE TABLE			
	Ent. Wat. Temp. °F	Water Flow GPM	Cooling Total BTUH	Sensible BTUH	Heat of Reject. BTUH	Power Input Watts	Heating Total BTUH	Heat of Absorp. BTUH	Power Input Watts	P.D. Ft. of Water
803-019 804-019	60	2.50	17426	12064	22049	1355	16732	11581	1510	3.40
		3.00	17515	12847	22020	1320	17132	11937	1522	4.50
		3.50	17551	11935	21983	1299	17533	12308	1531	5.80
		4.00	17586	11899	21966	1283	17978	12695	1548	8.50
		5.00	17622	11846	21937	1264	18556	13215	1565	10.10
		6.50								
	65	2.50	17284	12166	22068	1402	18334	13006	1561	3.40
		3.00	17302	12095	21968	1367	18690	13333	1569	4.50
		3.50	17444	12051	22043	1346	19046	13660	1578	5.80
		4.00	17498	12006	22032	1329	19402	13972	1591	8.50
		5.00	17533	11962	22000	1309	19803	14314	1608	10.10
		6.50	17578	11903	22010	1299				
	75	2.50	16910	12344	22046	1505	20648	15071	1634	3.40
		3.00	17044	12291	22077	1475	20915	15294	1647	4.50
		3.50	17141	12246	22087	1449	21182	15532	1655	5.80
		4.00	17195	12215	22067	1428	21538	15858	1664	8.50
		5.00	17284	12166	22083	1406	21850	16140	1673	10.10
		6.50	17355	12122	22066	1360				
	85	2.50	16340	12420	21844	1812	22339	16557	1894	3.40
		3.00	16563	12411	21834	1574	22695	16883	1703	4.50
		3.50	16688	12398	21985	1552	22828	17002	1707	5.80
		4.00	16785	12380	22010	1531	23051	17195	1716	8.50
		5.00	16910	12344	22047	1505	23363	17463	1729	10.10
		6.50	17000	12309	22062	1484				
	95	5.00	16348	12420	21852	1812	24252	18235	1763	8.50
		6.50	16483	12402	21810	1561	24430	18384	1772	10.10
803-024 804-025	60	4.00	24008	15887	29731	1677	25365	18027	2150	5.20
		5.00	24155	15833	29790	1651	25988	18532	2184	8.30
		6.00	24297	15780	29844	1625	26789	19319	2189	10.60
		7.00	24364	15744	29867	1612	29121	21607	2202	13.90
		8.00	24430	15709	29890	1600	27456	19913	2210	17.60
	65	4.00	23696	15913	29655	1746	27278	19750	2206	5.20
		5.00	23875	15900	29715	1711	28102	20529	2219	8.30
		6.00	24052	15887	29776	1677	28925	21308	2232	10.60
		7.00	24141	15851	29791	1655	29147	21501	2240	13.90
		8.00	24230	15815	29807	1634	29370	21695	2249	17.60
	75	4.00	22984	15762	29441	1892	31039	23246	2283	5.20
		5.00	23193	15824	29533	1858	31542	23705	2298	8.30
		6.00	23398	15886	29621	1823	32040	24144	2313	10.60
		7.00	23500	15900	29635	1797	32262	24337	2322	13.90
		8.00	23598	15913	29645	1772	32485	24545	2326	17.60
	85	4.00	22161	15370	29191	2060	33153	25134	2350	5.20
		5.00	22395	15484	29270	2015	33353	25307	2357	8.30
		6.00	22628	15597	29350	1989	33553	25481	2365	10.60
		7.00	22740	15682	29329	1931	33664	25563	2374	13.90
		8.00	22846	15762	29304	1892	33775	25645	2382	17.60
	95	4.00	21271	15308	28961	2253	25365	18027	2150	5.20
		6.00	21761	15130	29098	2150	34265	26090	2395	10.60
		8.00	22028	15255	29189	2098	34577	26373	2404	17.60
803-030 804-031	60	4.00	29170	19642	36977	2288	29726	20627	2666	2.10
		6.00	30170	19633	37392	2118	31595	22364	2705	4.60
		8.00	30616	19576	37602	2047	30794	21563	2705	7.80
		10.00	28391	20203	36257	2305				11.60
	65	4.00	30616	19575	37602	2047	31595	22364	2705	2.10
		6.00	29437	20381	36921	2193	32975	23626	2739	4.60
		8.00	30037	20203	37317	2133	34042	24621	2761	7.80
		10.00	30215	19936	37363	2084	34621	25155	2773	11.60
	75	4.00	26745	19460	35256	2494	35333	25823	2786	2.10
		6.00	27879	19598	35980	2374	37113	27412	2842	4.60
		8.00	28480	19642	36348	2305	37914	28154	2859	7.80
		10.00	28791	19660	36511	2262	38448	28630	2877	11.60
	85	4.00	24831	19055	34047	2700	38537	28719	2877	2.10
		6.00	25077	18366	34853	2571	39872	29907	2920	4.60
		8.00	26700	19464	35212	2494	40406	30323	2954	7.80
		10.00	27100	19510	35495	2460	40673	30576	2958	11.60
	95	8.00	24720	19054	33936	2700	41786	31542	3001	7.80
		10.00	25053	19152	34181	2675	41919	31616	3019	11.60

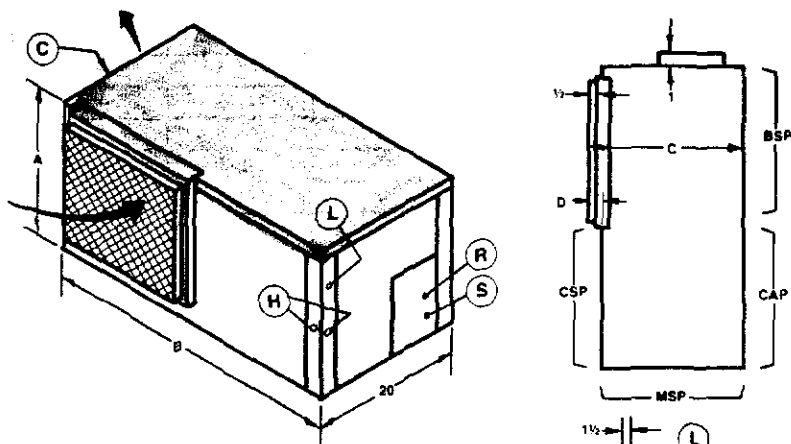
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round up to 0.03 cfs
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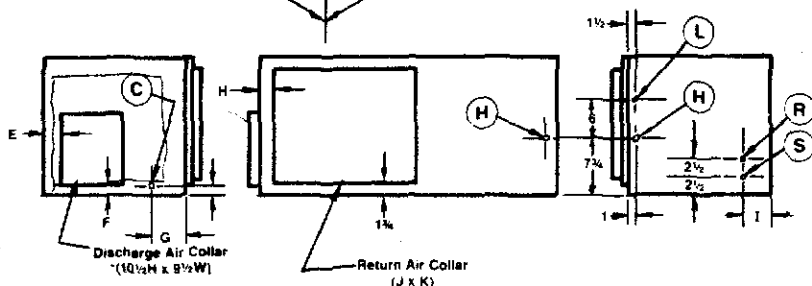
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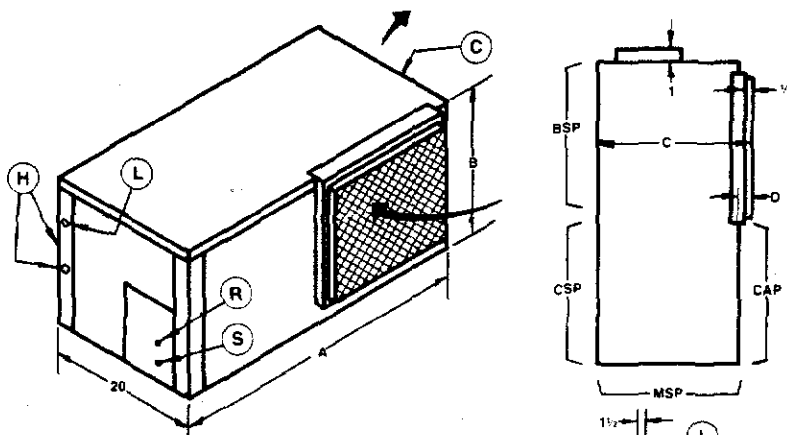
Left Hand Return — End Blow



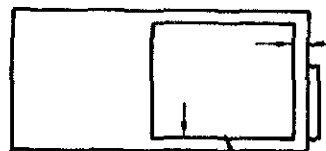
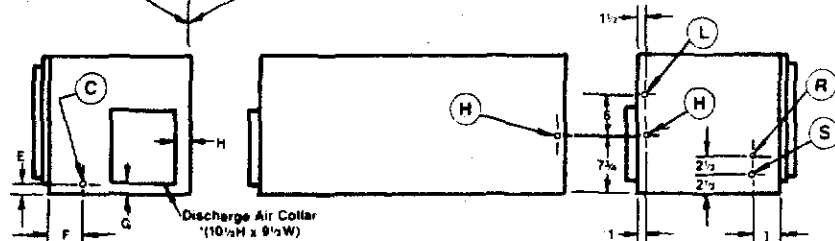
	025/031	037/043
A	19	21
B	43	47
C	21-3/4	21-1/2
D	1-3/4	1-1/2
E	2-5/8	4
F	1-1/16	2-1/16
G	5-1/8	5
H	1-3/4	2-1/4
I	4-1/8	5-1/4
J	16-1/4H	18-1/4H
K	20-1/2W	23W



Right Hand Return — End Blow



	025/031	037/043
A	43	47
B	19	21
C	21-3/4	21-1/2
D	1-3/4	1-1/2
E	1-1/8	1-1/4
F	5-1/8	5
G	1-1/16	2-1/16
H	2-5/8	4
I	4-1/8	5-1/4
J	1-3/4	2-1/4
K	16-1/4H	18-1/4H
L	20-1/2W	23W



Condensate Trapping: Differential Trapping Required.

Filter Size: 18 x 22 1/4 x 1" (1 Req.) 037 and 043 Models: 20 x 25 x 1" (1 Req.)

Filter Access: Left and Right on Inlet By Removing Side Clip.

- ⑧ ⑧ — 1/4 FPT—Supply & Return Water Connections
- ③ — 1/4 FPT—Condensate Connection
- ④ — Hi Voltage—1 1/4"—1/4"—Combination Knockout (Optional Location On Side)
- ④ — Lo Voltage—1/4" Dia.

Return Air
1 1/4" x 1 1/4"

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SPECIFICATIONS

These specifications are subject to change without notice.

OPTIONS

CABINETRY

RETURN AIR DUCT COLLAR (803 Series only). The cabinet shall include a factory mounted return air duct collar designed to accept a return air filter.

Note: Standard on the 804 Series.

HANGER/VIBRATION ISOLATOR KIT (804 Series only). The units shall be provided with hardware to facilitate installation and minimize vibration.

REFRIGERANT CIRCUIT

CUPRO-NICKEL EXCHANGER. The coaxial (tube in tube) refrigerant to water heat exchanger shall be 90/10 cupro-nickel inner water tube and steel refrigerant outer tube design.

COOLING ONLY. The units shall be designed to perform in the cooling mode only with heating supplied by others.

BUILT-IN HOT WATER GENERATOR. The unit shall be supplied with a refrigerant to water heat exchanger designed to absorb superheat from the discharge gas. An adjustable thermostat shall be installed to control the maximum leaving water temperature from 140 degree F to 180 degree F. A standby temperature limit control shall be added for safety. The water pump impeller shall be magnetically driven to eliminate potential leakage. The entire mechanism shall be factory mounted with fittings provided for field piping. Note: Available for 803 Series, 208/230 Volt Models 024 thru 060 only.

ELECTRICAL

REMOTE THERMOSTAT. The unit shall be provided with a 24 volt anticipating type wall thermostat:

1. **Manual Changeover** — The thermostat shall be a manual changeover type with OFF/HEAT/COOL selector switch and FAN/AUTO selector switch.
2. **Programmable Solid State** — The thermostat (manual changeover) shall be of solid state microelectronics designed to change temperature up to twice a day, five or seven days per week. The offset temperature difference shall be adjustable from 0 to 15 degrees.

3. **Auto Changeover** — The thermostat shall be an auto changeover type with OFF/AUTO selector switch and FAN/AUTO selector switch.
4. **Thermostat Cover** — The thermostat shall be covered with a clear (or Beige) plastic cover with tumbler type key lock. (The cover locks in place of the standard cover with the temperature thermometer visible or concealed — AM5417 or AM5409).

PROGRAM RELAY. The unit shall have factory mounted program relay that accepts a 24 volt signal from a centrally located time clock which establishes the occupied/unoccupied modes.

PROGRAM CONTROL BOX. The unit shall have a factory wired, externally mounted program control box with a random start relay. The box will accept an override timer. The zero to two hour timer shall override a 24 volt signal from a centrally located time clock which establishes the occupied/unoccupied modes. The box will also accept a thermostat to establish a nite setback temperature with a minimum space temperature of 50 degree F.

RANDOM START RELAY. The unit shall be provided with a factory mounted, heater type or solid state random start relay which delays the normal start of the compressor.

POWER SUPPLY RESET. The unit shall be wired so that the compressor lock-out circuit shall allow reset only from the main power breaker.

PIPING

PREASSEMBLED HOSE KITS. The units shall be provided with factory assembled hose kits for the supply and return connections to expedite zone piping. A two or three foot hose shall be factory installed with male and female brass fittings and rated at 250 PSI working pressure and 1000 PSI burst pressure. The hose shall be available in 1/2", 3/4" and 1" sizes.

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GENERAL

All units must be designed and tested in accordance with ARI Standard 320-81 and UL Standard 559. The manufacturer's standard warranty and unit serviceability shall be given consideration in bids. Tabulated efficiency and capacity shall be considered minimum.

CABINETRY

Shall be of commercial grade galvanized steel, electrostatically painted and baked to form a thermoset coating for corrosion protection. The interior side of the cabinet shall be insulated with ½" fiberglass. There shall be an insulated partition between the blower and compressor compartments to minimize compressor sound transmission. All water connections shall be female pipe threaded and mounted flush to the cabinet exterior. Service panels shall be easily removable, and sufficiently large to allow access to all components. All units (except horizontal units under 14,000 BTU capacity) shall allow sufficient service access to replace the compressor without removing unit. Standard construction shall include a factory mounted discharge air duct collar and filter retaining rack (804 series only).

REFRIGERANT CIRCUIT

Hermetic compressors shall be internally sprung and externally isolated to minimize sound transmission. Coaxial (tube in tube) refrigerant to water heat exchanger shall be of copper inner water tube and steel refrigerant outer tube design, rated to withstand 450 PSI refrigerant working pressure.

The fin-tube refrigerant to air heat exchanger shall be of aluminum fin and copper tube construction rated to withstand 425 PSI refrigerant working pressure. A four-way solenoid activated refrigerant reversing valve shall allow heating operation should the solenoid fail to function. R-22 refrigerant charge shall be precisely metered and the refrigerant metering device (Capillary tubes or expansion valves) shall be carefully selected for optimum performance. Refrigerant high and low pressure cut-outs (low water temperature cutout on 009 and 012 units) shall protect the system against hazardous operation. All interconnecting tubing shall be copper. Access fittings shall be factory installed on the high and low refrigerant lines to facilitate field service.

ELECTRICAL

Single phase blower motors shall be PSC type. All units through 5 tons nominal capacity shall be direct drive with three speed taps. All units over 5 tons shall be belt driven with variable-pitch sheaves. All compressor and blower motors shall be individually protected against current and/or heat overload. Blower motors shall be permanently lubricated.

CONTROLS

Unit control shall be 24 volt, including a unit mounted 24V terminal board (and an optional remote thermostat). The compressor lock-out circuit shall allow reset at the remote thermostat or via the main power breaker.

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Friedrich®

Climate Master®

Friedrich Air Conditioning & Refrigeration Co.
International Division
4200 N. Pan Am Expressway
Post Office Box 1540
San Antonio, Texas 78295 — U.S.A.
Telephone: 512/225-2000
Telex: WUI 68-666-11
Cable: FLOATINAIR

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Continuing engineering research results in steady improvements. Therefore, these specifications are subject to change without notice.

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INT-SPE803/804 (6/83)

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MAR 24 1989

The Idaho Statesman

P.O. BOX 40, BOISE, IDAHO 83707

LEGAL ADVERTISING INVOICE

Department of Water Resources
Western Regional Office

Amount Due

56 76

Account Name		Account Number	
Idaho Department of Water Resources (Western)		#47628	
Address		City/State	Zip
2735 Airport Way		Boise, ID	83705
Ordered By	P.O. Number	Rate	Run Dates
Gail Garrett		NT	1989 March 16, 23
Identification		Estimated Inches	Real Inches
Applications for Water Rights			
Number of Affidavits Requested			Legal Number
1			#2123

NOTICE OF APPLICATION FOR WATER RIGHT

The following application(s) have been filed to appropriate the public waters of the State of Idaho:

63-10765 ✓

Loveless, Virginia E.
2735 Glendale St.
Boise, ID 83703

Source: Groundwater
Diversion Pt: NWSE Sec. 32 T
04N R 02E

Use: Heating (.030 CFS)

Use: Cooling (.010 CFS)

Use: Domestic (.040 CFS)

Date Filed: 02/21/1989

In: T3N R2E S32 NWSE ADD
0.5 ACRES TOTAL L&T2

62-10772 done

Mariani, Tony
4000 E. McMillan Rd.
Meridian, ID 83442

Source: Groundwater
Diversion Pt: NESW Sec. 28 T
04N R 01E

Use: Irrigation (.400 CFS)

Use: Irrigation Storage (5.000 AFA)

Use: Irrigation from Storage (5.000 AFA)

Diversion to Storage (.400 CFS)

Date Filed: 2/23/1989

In: T04N R01E S28 NESW
20.0 ACRES TOTAL

The permit(s) will be subject to all prior water rights. Protests must be filed with the Director, Dept. of Water Resources, Western Regional, 2735 Airport Way, Boise, Idaho 83705 on, or before, April 3, 1989.

R. KEITH HIGGINSON
Director

Pub. Mar. 16, 23, 1989

2123

STATE OF IDAHO)

) ss.

COUNTY OF ADA)

Debbie Richards

, being duly

sworn, deposes and says: That she is the Principal Clerk of The Idaho Statesman, a daily newspaper printed and published at Boise, Ada County, State of Idaho, and having a general circulation therein and which said newspaper has been continuously and uninterruptedly published in said County during a period of twelve consecutive months prior to the first publication of the notice, a copy of which is attached hereto; that said notice was published in The Idaho Statesman in conformity with Section 60-108, Idaho Code as amended, for ²

☒ consecutive weekly ☐ consecutive daily ☐ single ☐ odd skip

insertion(s) beginning with the issue of March 16, 19 89

and ending with the issue of March 23, 19 89

Debbie Richards

Subscribed and sworn to before me this 23rd

arch, 19 89

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AUG 29 1989

Notary Public for Idaho, Residing at Boise, Idaho

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
Western Region
2735 AIRPORT WAY

Boise, Idaho 83705
(208) 334-2190

MARCH 8, 1989

The Idaho Statesman
P.O. Box 40
Boise, ID 83707

Dear Legal Dept.:

Enclosed you will find a legal notice which we wish to have published on the dates indicated (once a week for two consecutive weekly issues) in your newspaper. If you cannot publish the notice on the proposed dates, please contact us immediately.

An affidavit of publication must be submitted to the Department along with the publication bill. Your cooperation is appreciated.

Please send the affidavit of publication and publication billing to this office before APRIL 3, 1989.

Yours truly,

JUDY PENSE
Secretary

Encl.

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AUG 29 1989

63-10765

LOVELESS, VIRGINIA E.
3935 GLENDALE ST.
BOISE, ID 83703

Source: GROUNDWATER

Diversion Pt: NWSE Sec 32 T 04N R 02E

Use: HEATING	(.030 CFS)
COOLING	(.010 CFS)
DOMESTIC	(.040 CFS)

Date Filed: 2/21/1989

In: T03N R02E S32 NWSE

0.5 ACRES TOTAL

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