



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 GEOLOGICAL SURVEY PROGRAM
**CLOSED LOOP HEAT PUMP
 CERTIFICATION RECORD**

FOR OFFICE USE ONLY

REF NO.	DATE RECEIVED
CR NO.	CHECK NO.
STATE CERT NO.	REVENUE NO.

ROUTE / / /	APPROVED	DATE	ENTERED
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OWNER INFORMATION	
NAME	TELEPHONE NUMBER WITH AREA CODE
MAILING ADDRESS	CITY STATE ZIP CODE
PHYSICAL ADDRESS OF WELL SITE (IF DIFFERENT THAN MAILING ADDRESS)	CITY VARIANCE NUMBER (If issued)

PRE-NOTIFICATION AND HVAC COMPANY INFORMATION	LOCATION INFORMATION
Pre-notification made for installation of grout plugs <input type="checkbox"/> Yes <input type="checkbox"/> No	Lat. _____ ° _____ ' _____ " Drill Area _____ (Office use only)
HVAC company installing fluid <input type="checkbox"/> Yes <input type="checkbox"/> No	Long. _____ ° _____ ' _____ " County _____
HVAC company connecting loops <input type="checkbox"/> Yes <input type="checkbox"/> No	_____ 1/4 _____ 1/4 _____ 1/4
Contractual agreement was made with the HVAC company to install the system <input type="checkbox"/> Yes <input type="checkbox"/> No	Section _____ Township _____ N Range _____ <input type="checkbox"/> E <input type="checkbox"/> W
If yes to any of the above, please provide name of HVAC company below:	

CLOSED LOOP MATERIAL INFORMATION	HEAT PUMP WELL INFORMATION
PROPOSED TYPE OF HEAT TRANSFER FLUID <input type="checkbox"/> Methanol <input type="checkbox"/> Ethanol <input type="checkbox"/> Glycol <input type="checkbox"/> Water <input type="checkbox"/> Other _____	NUMBER OF HOLES DRILLED
HEAT PUMP RATING _____ Tons	DIAMETER OF BOREHOLES _____ In.
DIAMETER OF PIPE _____ In.	DEPTH OF BOREHOLES _____ Ft.
TOTAL AMOUNT OF PIPE _____ Ft.	PIPE MATERIAL <input type="checkbox"/> Polybutylene <input type="checkbox"/> Polyethylene <input type="checkbox"/> Copper
HOW WAS LOOP MATERIAL CONNECTED <input type="checkbox"/> Thermal <input type="checkbox"/> Other _____	GROUT TYPE <input type="checkbox"/> Bentonite slurry <input type="checkbox"/> Non slurry bentonite <input type="checkbox"/> Thermal grout slurry <input type="checkbox"/> Other _____
PERMANENT CASING INSTALLED <input type="checkbox"/> Yes <input type="checkbox"/> No	METHOD OF INSTALLATION <input type="checkbox"/> Gravity <input type="checkbox"/> Pump thru tremie <input type="checkbox"/> Gravity thru tremie
FILL MATERIAL CHLORINATED <input type="checkbox"/> Yes <input type="checkbox"/> No	ARE ALL WELLS CONSTRUCTED THE SAME <input type="checkbox"/> Yes <input type="checkbox"/> No, attach differences in construction
	POSITION OF GROUT SEAL <input type="checkbox"/> Full length <input type="checkbox"/> Series of 5 Ft. plugs
	NUMBER SACKS PER HOLE (Excluding oil and gas plug)
	LBS PER SACK
	STATIC WATER LEVEL

CASING INFORMATION	PLUG INFORMATION	DEPTH	FORMATION DESCRIPTION
LENGTH _____ Ft.	Bentonite plugs hydrated after emplacement <input type="checkbox"/> Yes <input type="checkbox"/> No	FROM	
DIAMETER OF CASING _____ In.	Depth to top and bottom of near surface plug as measured from original ground surface Top _____ Ft. Bottom _____ Ft.	TO	
MATERIAL <input type="checkbox"/> Steel <input type="checkbox"/> Plastic	List depth to top of each plug		
Weight (Lb.), SDR#, SCH#	1. _____ Ft.		
CASING DRIVEN <input type="checkbox"/> Yes <input type="checkbox"/> No	2. _____ Ft.		
DIAMETER OF DRILL HOLE _____ In.	3. _____ Ft.		
PACKER USED ON PVC CASING <input type="checkbox"/> None <input type="checkbox"/> Rubber boot <input type="checkbox"/> Coupling <input type="checkbox"/> Inverted bell	4. _____ Ft.		
GROUT MATERIAL Cement _____ Bentonite _____ <input type="checkbox"/> Type I <input type="checkbox"/> Chips <input type="checkbox"/> Granular <input type="checkbox"/> Type III <input type="checkbox"/> Pellets <input type="checkbox"/> Slurry	5. _____ Ft.		
Number of sacks used _____	TOTAL DEPTH		
Lbs. per sack _____	DATE WELL DRILLING WAS COMPLETED		
METHOD OF INSTALLATION <input type="checkbox"/> Gravity <input type="checkbox"/> Open hole <input type="checkbox"/> Pressure <input type="checkbox"/> Tremie			
DRILLING SUSPENDED <input type="checkbox"/> Yes _____ Hrs <input type="checkbox"/> No			

OIL OR GAS INFORMATION	
Oil/gas encountered <input type="checkbox"/> Yes <input type="checkbox"/> No	
Well terminates in an oil/gas zone <input type="checkbox"/> Yes <input type="checkbox"/> No	
Depth oil/gas zone encountered Top _____ Bottom _____	
Depth of plug Top _____ Bottom _____	
Amount of grout used for cement plug _____ Sacks	
I hereby certify the heat pump herein described was constructed in accordance with department of natural resources requirements. (All fields must be completed but only one signature is required)	
PRIMARY CONTRACTOR (IF DIFFERENT THAN WELL INSTALLATION CONTRACTOR)	PERMIT NUMBER DATE
WELL INSTALLATION CONTRACTOR	PERMIT NUMBER DATE
WELL INSTALLATION CONTRACTOR APPRENTICE (IF APPLICABLE)	PERMIT NUMBER DATE