

**GEO THERMAL DRILLING PERMIT**

The U.S. Geological Survey requires this form or other Supervisor approved form to be prepared and filed in triplicate with requisite attachments with the Supervisor. The Supervisor must approve this permit prior to any lease operation.

a. TYPE OF WORK: DRILL NEW WELL ( ) REDRILL ( ) DEEPEN ( ) PLUG BACK ( ) DIRECTIONALLY DRILL ( ) OTHER (X)

b. WELL TYPE: PRODUCTION ( ) INJECTION ( ) HEAT EXCHANGE ( ) OBSERVATION ( ) WATER SUPPLY ( ) OTHER (X)

c. WELL STATUS: Core Hole to be drilled. No existing wells.

d. NAME OF LESSEE/OPERATOR  
GEO Operator Corporation (GEO-Newberry)

e. ADDRESS OF LESSEE/OPERATOR  
2300 County Center Dr. #250 Santa Rosa, CA 95401

f. LOCATION OF WELL  
At surface 3500' West & 2450' North of the Southeast corner of Sec 25,  
At proposed prod. zone T225, R12E  
N/A

g. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE  
2.5 miles south of inner southern boundary of unit

h. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE  
6.5 miles from N-2  
(950' West & 2600' North of the Southwest corner of Sec 24, T20S, R12E)

1. LEASE SERIAL NO.

2. SURFACE MANAGER: ELM ( ) FS (X)  
Other ( )

3. UNIT AGREEMENT NAME  
Newberry Flank (GEO Newberry)

4. WELL NO. N-1

5. FIELD OR AREA  
Newberry

6. SEC. T., R., S. & M.  
25 225 12E

7. COUNTY  
Deschutes

8. STATE  
Oregon

9. APPROX. STARTING DATE  
July 85

10. ACRES ASSIGNED (WELL SPACING)  
N/A

11. DRILLING MEDIA AND CHARACTERISTICS: AIR ( ) WATER ( ) MUD (X) FOAM ( ) Other ( )

12. PROPOSED DEPTH MEASURED: 4,000'  
TRUE VERTICAL:

13. ELEVATIONS: ESTIMATED ( ) FINAL ( ) 5850'

REFERENCE DATUM: GA (X) MAT ( ) OP ( ) KB ( ) XT ( )  
CASTINGHEAD FLANGE ( ) OTHER ( )

14. EXISTING AND/OR PROPOSED CASING AND CEMENTING PROGRAM (List existing program first, followed by proposed program, and separate by a sufficient space to clearly distinguish the two programs)

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	COUPLING (Collars & Threads)	GRADE	SETTING DEPTH		QUANTITY OF CEMENT
					TOP	BOTTOM	
5-5/8"	4 1/2"	7.7#	Diamond Drill Flush Joint 3 threads/in.	A-120	Surf	400'	25 cu.ft.
3-7/8"	2-3/4"	6.4#	Flush Joint	J-55	Surf	4,000'	14.7 cu.ft. Shur-Gel

15. PROPOSED WORK SUMMARY

Refer to attached Drilling Program.

(Use additional space on reverse side of form)

16. SIGNED: Michael J. Cale TITLE: Senior Environmental Coordinator DATE: 3-26-85

(This space for Federal use)

APPROVED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

This permit is required by law (30 U.S.C. 1023); regulations: 30 CFR 270.71; Federal Geothermal Lease Terms and Stipulations and other regulatory requirements. The United States Criminal Code (18 U.S.C. 1001) makes it a criminal offense to make a willfully false statement or representation to any Department or Agency of the United States as to any matter within its jurisdiction.