

**GEO-THERMAL DRILLING PERMIT**

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

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

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

3. WELL STATUS: Core hole to be drilled. No existing wells.

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

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

6. LOCATION OF WELL  
At surface 4100' North & 500' East of the Southwest corner of Sec 24, T20S, R12E

7. At proposed prod. zone  
N/A

8. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE  
3.2 miles south of outer northern boundary of unit

9. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE  
9 miles from N-2 (950' West & 2600' North of the Southeast corner of Sec 32, T21S, R12E)

4. LEASE SERIAL NO.

5. SURFACE MANAGER: BLM ( ) FS (X) Other ( )

6. UNIT AGREEMENT NAME  
Newberry Flank (GEO Newberry)

7. WELL NO.  
N-3

8. PERMIT NO.

9. FIELD OR AREA  
Newberry

10. SEC. T., R., S. & M.  
24 20S 12E

11. COUNTY  
Deschutes

12. STATE  
Oregon

13. APPROX. STARTING DATE  
July 1985

14. ACRES ASSIGNED (WELL SPACING)  
N/A

18. DRILLING MEDIA AND CHARACTERISTICS: AIR ( ) WATER ( ) MUD (X) FOAM ( ) OTHER ( )

19. PROPOSED DEPTH MEASURED: 4000'

20. ELEVATIONS: ESTIMATED (X) FINAL ( )  
5750'

REFERENCE DATUM: GR (X) NAT ( ) DP ( ) CE ( ) RT ( )  
CASINGHEAD FLANGE ( ) OTHER ( )

TRUE VERTICAL: \_\_\_\_\_

11. 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

12. PROPOSED WORK SUMMARY

Refer to attached Drilling Program.

(Use additional space on reverse side of form)

SIGNED Michael J. Cale TITLE Sr. Env. 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 170.71; 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.