

**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.

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

1b. WELL TYPE: PRODUCTION ( ) INJECTION ( ) HEAT EXCHANGE ( ) OBSERVATION (X) WATER SUPPLY ( ) OTHER ( )

1c. WELL STATUS:

2. NAME OF LESSEE/OPERATOR  
GEO OPERATOR CORPORATION FOR GEO-NEWBERRY CRATER, INC.

3. ADDRESS OF LESSEE/OPERATOR  
1330 NORTH DUTTON AVENUE, SUITE A, SANTA ROSA, CA 95401

15. LOCATION OF WELL  
At surface 4100' north and 500' east of the southwest corner of Section 24, T20S, R12E  
At proposed prod. zone

16. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE  
3.2 miles south from outer northern boundary

17. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE  
9 Miles from N-2

4. LEASE SERIAL NO.  
OR-12004

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

6. UNIT AGREEMENT NAME  
NEWBERRY FLANK UNIT

7. WELL NO.  
N-3

8. PERMIT NO.

9. FIELD OR AREA  
NEWBERRY CRATER

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

11. COUNTY  
Deschutes

12. STATE  
Oregon

13. APPROX. STARTING DATE  
June, 1986

14. ACRES ASSIGNED (WELL SPACING)

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

19. PROPOSED DEPTH  
MEASURED: 4000' ±  
TRUE VERTICAL:

20. ELEVATIONS: ESTIMATED (X) FINAL ( )  
5750' +  
REFERENCE DATUM: GR ( ) NAT ( ) DP ( ) KB ( ) RT ( )  
CASINGHEAD FLANGE ( ) OTHER (X)

21. 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"	10.7#	Diamond Drill Flush Joint 3 Threads/N	A-53	Surf	400'	25 Cu Ft
3-25/32"	1-1/2"	2.9#	Upset	J-55	Surf	4000'	147 Cu Ft Shur-Gel

22. PROPOSED WORK SUMMARY

Pursuant to the approved Plan of Exploration as submitted, 1985.

**COPY**

23. (Use additional space on reverse side of form)

SIGNED Michael J. Cate TITLE SENIOR ENVIRONMENTAL COORDINATOR DATE FEBRUARY 26, 1986

(This space for Federal use)

APPROVED BY [Signature] TITLE Deputy State Director for DATE 2/1/86  
Mineral Resources

CONDITIONS OF APPROVAL, IF ANY: **"APPROVED SUBJECT TO THE ATTACHED CONDITIONS"**

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.