

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 () 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, #A, SANTA ROSA, CA 95401

15. LOCATION OF WELL 2750' south and 2188' west of the northeast corner
At surface of Section 35, T21S, R13E (East Lake Quad)
At proposed prod. zone

16. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE
3125' east of inner eastern unit boundary

17. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE
7.25 miles from N-1

4. LEASE SERIAL NO.
OR-12004

5. SURFACE MANAGER: BLN () FS (X)
OUMR

6. UNIT AGREEMENT NAME
NEWBERRY FLANK UNIT

7. WELL NO.
N-4

8. PERMIT NO.

9. FIELD OR AREA
NEWBERRY CRATER

10. SEC. T., R., S. & N.
S35, T21S, R13E

11. COUNTY
DESCHUTES

12. STATE
OREGON

13. APPROX. STARTING DATE
JUNE, 1987

14. ACRES ASSIGNED (WELL SPACING)

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

19. PROPOSED DEPTH MEASURED: 5000'
TRUE VERTICAL:

20. ELEVATIONS: ESTIMATED (X) FINAL ()
±6280'
REFERENCE DATUM: GR () NAT () DP () KB () RT ()
CASSINGHEAD FLANGE () OTHER ()

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	
7-7/8"	4-1/2"	10.7#	Diamond Drill Flush Joint 3 Threads/N	A-53	Surf	500'	114 Cu Ft
3-25/32"	1-1/2"	2,8#	Upset	J-55	Surf	5000'	320 Cu Ft - Shur-Gel or comparable grade product

22. PROPOSED WORK SUMMARY

Pursuant to the approved Plan of Exploration as amended for 1987.

(Use additional space on reverse side of form)

23.

SIGNED Michael J. Cole TITLE SR. ENVIRONMENTAL COORDINATOR DATE 1/8/87

(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.