

GEOOTHERMAL 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 ()
Drill/Core Temperature Gradient Core Hole

1b. WELL TYPE: PRODUCTION () INJECTION () HEAT EXCHANGE () OBSERVATION () WATER SUPPLY () OTHER ()
Temperature Gradient Core Hole

1c. WELL STATUS:
N/A

2. NAME OF LESSEE/OPERATOR
CALIFORNIA ENERGY COMPANY, INC., OPERATOR

3. ADDRESS OF LESSEE/OPERATOR
3333 Mendocino Avenue, Suite 100, Santa Rosa, CA 95401

15. LOCATION OF WELL
At surface SW $\frac{1}{4}$, NE $\frac{1}{4}$, SE $\frac{1}{4}$ Sec. 4 T21S, R12E
At proposed prod. zone
N/A *From SE cor. 1100 N, 1500 W.*

16. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE
1130' North of Southern Boundary of Section 4.

17. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE
N/A

4. LEASE SERIAL NO.
OR 11985

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

6. UNIT AGREEMENT NAME
N/A

7. WELL NO. **76-4 (CE-NB-4)** B. PERMIT NO.

8. FIELD OR AREA
North of Newberry KGRA

10. SEC. T., R., B. & M.
Sec. 4, T21S, R12E

11. COUNTY
Deschutes

12. STATE
Oregon

13. APPROX. STARTING DATE
July 1, 1986

14. ACRES ASSIGNED (WELL SPACING)
N/A

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

19. PROPOSED DEPTH
MEASURED: **5000'**
TRUE VERTICAL:

20. ELEVATIONS: ESTIMATED () FINAL (X)
5780'
REFERENCE DATUM: GR (X) MAT () DP () KB () RT () CASINGHEAD 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	
Set 6-7' of 3-5/8" conductor pipe (optional)							
7-7/8"	5-1/2"	14#	8RD ST&C	K55	Surf	400'+	To Surface
Drill out cement plug and resume drilling with 4.872" OD wireline coring system.							
Reduce core size as mandated by drilling conditions.							

22. PROPOSED WORK SUMMARY
See Attached Drilling Program

RECEIVED - PTLD
JUN 3 1986

NOTE: This permit is valid only if land use approval is obtained from the county or city in which the drilling takes place, and provided these authorities make a determination of compliance with statewide goals. Issuance of this permit is not a finding of compliance with the Statewide Planning Goals or the acknowledged comprehensive plan. Permit expires 180 days from date of issue. The January 1984 stipulations approved by the State Geologist are conditions of this permit.

(Use additional space on reverse side of form)

23. *James L. Moore* Vice President Exploration May 30, 1986
SIGNED James L. Moore TITLE DATE

(This space for Federal use)
APPROVED BY *Dennis L. Olmstead* TITLE Petroleum Engineer (DOGAMI) DATE July 8, 1986

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.