

GEOTHERMAL 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 (X) WATER SUPPLY ( ) OTHER ( )  
**Temperature Gradient Core hole**

1c. WELL STATUS:

2. NAME OF LESSEE/OPERATOR  
**CALIFORNIA ENERGY COMPANY, INC. (707) 526-1000**

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

15. LOCATION OF WELL  
At surface **Approx. 2,225 feet west and 725 feet north of the**  
At proposed prod. zone **SW corner Section 10, T31S, R7½E**

16. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE  
**Approx. .43 miles SE of MZ I Unit boundary**

17. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE  
**Approx. .6 miles north of MZ I-II**

4. LEASE SERIAL NO.  
**OR 34669**

5. SURFACE MANAGER: BLM ( ) FS (X)  
**Winema National Forest**

6. UNIT AGREEMENT NAME  
**Mazama I**

7. WELL NO. **MZI - 11A\*** 8. PERMIT NO.

9. FIELD OR AREA

10. SEC. T., R., B. & M.  
**SE¼, SW¼, Sec. 10 T31S, R7½E**

11. COUNTY  
**Willamette B & M**

11. COUNTY  
**Klamath**

12. STATE  
**Oregon**

13. APPROX. STARTING DATE  
**July 1, 1985**

14. ACRES ASSIGNED (WELL SPACING)  
**NA**

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

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

20. ELEVATIONS: ESTIMATED (X) FINAL ( )  
**6050'**  
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 8-5/8" conductor pipe (optional)				Surf.	6-7'	To Surface
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 condition.							

22. PROPOSED WORK SUMMARY

\* Approx. Kettleman designation: 47-10

See attached drilling program.

NOTE: The January 1984 stipulations approved by the State Geologist are conditions of this permit.

This permit is valid only if land use approval is obtained from the county or city in which the drilling takes place, and provided the 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.

RECEIVED - PTLD  
APR 24 1985  
DEPT. OF GEOLOGY  
& MINERAL INDUSTRIES

23. James L. Moore Vice President Exploration April 12, 1985  
SIGNED TITLE DATE

(This space for Federal use)  
APPROVED BY David A. Cabane TITLE Deputy State Director for Mineral Resources DATE May 9, 1985

CONDITIONS OF APPROVAL, IF ANY:  
**See Attached Conditions and Requirements**

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.