

GEO-THERMAL DRILLING PERMIT

Form Approved
Budget Bureau No. _____

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 ()

1c. WELL STATUS: _____

2. NAME OF LESSEE/OPERATOR: California Energy Company, Inc. (707) 526-1000

1. ADDRESS OF LESSEE/OPERATOR: 3333 Mendocino Ave., Ste. 100, Santa Rosa, CA 95401

15. LOCATION OF WELL: 2000'N and 2050'W of SE Corner, Section 13
At surface
At proposed prod. zone

16. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE: Approx. 1600' from Unit Boundary

17. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE: No proposed nor existing geothermal wells.

4. LEASE SERIAL NO. OR34681

5. SURFACE MANAGER: BLN () FS () Other () Winema N.F.

6. UNIT AGREEMENT NAME: Mazama II

7. WELL NO. MZII-1 8. PERMIT NO. _____

9. FIELD OR AREA _____

10. SEC. T., R., S. & M. Section 13, T32S, R6E WM

11. COUNTY: Klamath

12. STATE: Oregon

13. APPROX. STARTING DATE: September 15, 1986

14. SPACING ASSIGNED (WELL SPACING): N/A

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

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

20. ELEVATIONS: ESTIMATED FINAL () 4665'
REFERENCE DATUM: GR 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" | 4-1/2 | 11.5# | 8RD ST&C | K55 | Surf. | 550' | To Surface |
| Drill out cement plug and resume drilling with 3.782 OD (HQ) wireline coring system. | | | | | | | |
| Reduce core size to 2.980 OD (NQ), as mandated by drilling conditions. | | | | | | | |

22. PROPOSED WORK SUMMARY

* Approximate Kettleman designation: 66-13

See attached Proposed Drilling and Coring Procedure.

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

SIGNED: James L. Moore TITLE: Senior Vice President Exploration DATE: 8/21/86

(This space for Federal use)

APPROVED BY: James L. Moore TITLE: Director DATE: 8/21/86

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.