

Form 1-15 9-1987

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY, CONSERVATION DIVISION

GEOTHERMAL DRILLING PERMIT

Form Approved
Budget Bureau 16.

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 REDELL DIEZEN PLUG BACK DIRECTIONALLY DRILL OTHER

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

1c. WELL STATUS: Proposed

2. NAME OF LESSEE/OPERATOR
ANADARKO PETROLEUM CORPORATION

3. ADDRESS OF LESSEE/OPERATOR
835 Piner Road, Suite A, Santa Rosa, CA 95403

15. LOCATION OF WELL
At surface: **From NW corner 2800' E, 875' S**
At proposed prod. zone: **2880 850**

16. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE
2480' W of E Boundary

17. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE
2450' NE of observation well 25-22A

LEASE SERIAL NO.
OR-23843

SURFACE MANAGER: BLM FS
Other

UNIT AGREEMENT NAME
NA

WELL NO. **52-22A** PERMIT NO.

FIELD OR AREA
Pueblo Valley

SEC. T., R., U.S.M.
Sec. 22, T37S, R33E, W6M

COUNTY
Harney

STATE
Oregon

APPROX. STARTING DATE
4/3/90

ACRES ASSIGNED (WELL SPACING)
NA

18. DRILLING MEDIA AND CHARACTERISTICS: AIR
WATER MUD FOAM Other **core**

19. PROPOSED DEPTH MEASURED: **2500'**
THIS VERTICAL:

20. ELEVATIONS: ESTIMATED FINAL **4090'**
REFERENCE DATUM: GN MAM M KM MT
CAST/STAMP PLANGE 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 & Breads)	GRADE	SETTING DEPTH		QUANTITY OF CEMENT
					TOP	BOTTOM	
8-3/4"	7"	23#	STD	N-80	0	300'	69 cubic feet
6-1/4"	4-1/2"	11.6#	STD	N-80	0	1000'	120 cubic feet

22. PROPOSED WORK SUMMARY

See attached drilling prognosis.

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

SIGNED: [Signature] Attorney-in-Fact DATE: 12/27/89

(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.

(See instructions on reverse side)