

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**GEOHERMAL WELL COMPLETION REPORT**

FORM APPROVED  
OMB NO. 1004-0132  
Expires: September 30, 1990

The Bureau of Land Management (BLM) requires this form or other BLM-approved forms to be prepared and filed in duplicate with requisite attachments with the authorized officer within 30 days after completion of permitted operations.

1a. Well Type:  Production  Injection  Disposal  Water Supply  Observation  
 Cold  Heat Exchange  Other

1b. Completion:  New  Workover  Deepened  Plugback  Redrill  
 Recompleted  Drilled & Abandoned  Other

2. Name of Lessee/Operator  
Anadarko Petroleum Corporation

3. Address of Lessee/Operator  
835 Piner Rd., Suite A, Santa Rosa CA 95403

18. Location of Well  
At Surface: From NW corner, 3409S and 3562E.  
At Top of Production Zone: Same  
At Total Depth: Same

19. Total Depth  
Measured 2376 True Vertical:

20. Plugback Total Depth  
Measured: NA True Vertical:

21. Elevation:  Estimated  Final 4058  
Reference Datum:  GR  MAT  DF  KB  RT  Casinghead Flange  Other

22. Drilling Media:  Air  Water  Mud  Foam  Other  
List Characteristics:  
MW: 8.6 - 9.5, V: 38 - 54

23. Log Type & Intervals Geologic log (mud & core): 0 - 2376. Temperature and pressure logs: 906 - 2210 (11/1/93); 100 - 2190 (11/2/93); 0 - 1179 (12/7/93). Gamma ray log: 100 - 2190 (11/2/93).

24. CASING RECORD

Size	Weight	Grade	Collars & Threads	Depths Set		Hole Size	Cementing Record (slurry volume)
				Top	Shoe		
9-5/8"	40	J-55	STD	0	45	12-1/4"	52 cu-ft
7"	23	J-55	STD	0	308	8-1/2"	73 cu-ft
4-1/2"	11.6	WC-75	FJ	0	1007	6-1/8"	176 cu-ft

25. LINER RECORD

Size	Weight	Grade	Collars & Threads	Top	Bottom	Perforated Intervals	Cementing Record (slurry volume)

26. TUBING RECORD

Size	Weight	Grade	Depth Set	Packer Depth

27. Cement Squeeze, Acid, Fracture, etc. (detail type, amount, intervals)

28. PERFORATION RECORD

Type	Total No.	Density (No./ft)	Size	Intervals

29. Attachments & Previous Submittals: List all reports, surveys, tests and logs, not listed in item 23, which have resulted from drilling and completion operations. List relevant previously furnished data with date of submittal referenced. (1) Well history, (2) well test report (Thema Source), (3) geochemical data -2 samples.

30. Well Status:  Producing  Shut-In  Suspended  Injection  Disposal  Heat Exchange  Abandoned  Water Supply  Other

31. Do you consider the well to be commercial?  Yes  No Explain:  
The well is not commercial due to small bore size. Well will be used for reservoir monitoring only.

32. I hereby certify the information on this report and the attached information is complete and accurate according to the best of my knowledge.

Signed: RC Edmister Title Atty-in-Fact Date 1/7/94

4. Lease Serial No.  
OR-23843

5. Surface Manager:  BLM  FS  
 Other

6. Unit Agreement Name  
NA

7. Well No.  
66-22A

8. Permit No.

9. Field or Area  
Pueblo Valley

10. Sec., T., R., B. & M.  
Sec 22, T37S, R33E, W6M

11. County  
Harney

12. State  
Oregon

13. Spud Date 10/10/93 Date T.D. Reached 10/31/93

14. Completion Date (Ready to produce)  
NA

15. Directionally Drilled Intervals  
None

16. Surveyed Intervals  
None

17. Core Size and Intervals  
2.5": 1013 - 2376

33. WELL TEST

Test Date 11/2/93	Production Method: <input checked="" type="checkbox"/> Flowing <input type="checkbox"/> Pumping - include size, type, intake depth, etc. <input type="checkbox"/> Other
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34. PRODUCTION

Hours Tested 4	Production During Test			Enthalpy (Btu/lb)
	Total Liquids (lb) 586,000	Steam (lb) 70,000	Water (lb) 516,000	

35. STATIC TEST DATE

Depth 2076 2100	Surface Pressure (psig) 82 PSIA	Subsurface Pressure (psig) 922.5 PSIA	Subsurface Temperature (°F) 325	Water Analysis	
	82 PSIA	932.2 PSIA	325	Total Dissolved Solids 1440	pH 8.49

36. FLOWING TEST DATA

Surface Pressure Wellhead: 62 PSIG Separator: Not recorded	Subsurface Pressure at <u>2100</u> feet 923.5 PSIA	Surface Temperature 298	Subsurface Temperature at top of perms. 316	Avg. Total Mass Flow Rate Per Hour		
				Total (lb/hr) 146,500	Steam (lb/hr) 17,500	Water (lb/hr) 129,000

37. SUMMARY OF POROUS ZONES. Show all important porous zones and contents of each; cored intervals with recoveries, drill stem or formation tests with depth of interval tested, time open, cushion used, and flowing and shut-in pressures, temperatures and recoveries.

38. GEOLOGIC MARKERS (TOP)

Formation	Top	Bottom	Description of Details	Name	Measured Depth	True Vertical Depth
Xtal Tuff	2050	2255	Open, high-angle fractures in xtal tuff of varying composition. Complete circulation loss in fracture at 2074. Entire interval cored with 95% + recovery. See Geologic log and well test report for further details.	Ash tuff (top of volcanics)	1396	1396
				Siltstone	1694	1694
				Xtal Tuff	1934	1934