

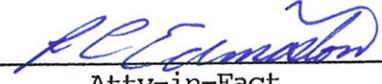
STATE OF OREGON  
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES  
910 State Office Building Portland, Oregon 97201

Permit No. 153

**HISTORY OF GEOTHERMAL WELL**  
(Submit in duplicate)

In compliance with rules and regulations adopted pursuant to ORS 522.355 (Chapter 522 OL 1975)

Operator Anadarko Petroleum Corporation Field Pueblo Valley  
Well No. 25-22A, Sec. 22 T. 37S R. 33E W.B. & M.

Date November 17, 1993 Signed   
Title Atty-in-Fact  
(President, Secretary or Agent)

It is of the greatest importance to have a complete history of the well. Use this form in reporting the history of all important operations at the well, together with the dates thereof, prior to the first production. Include in your report such information as size of hole drilled to cementing or landing depth of casings, number of sacks of cement used in the plugging, number of sacks or number of feet of cement drilled out of casing, depth at which cement plugs started, and depth at which hard cement encountered. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Date

A two-page well history accompanies this form.

**ANADARKO PETROLEUM CORPORATION  
PUEBLO VALLEY FEDERAL 25-22A  
WELL HISTORY  
RE-ENTRY AND DEEPENING**

**PROPRIETARY DATA**

09/22/93      MIRU WLCT.

09/23/93      RU WLCT.

09/24/93      NUBOPS, TSTD RAMS TO 1,000 PSI, TSTD HD TO 700 PSI, TSTD CHK MF TO 1,000 PSI, TST WITNESSED BY BLM.

09/25/93      CORING: 1530 (49), MW 9.5, V 45. TIH W/RBP RETR TOOL ON HQ CORE RODS, DISPL WTR W/9.5 PPG MUD. ENGAGED RBP @ 991, TSTD CASING ABOVE RBP TO 280 PSI. TOH W/RBP. WELL TRYING TO FLOW. REC RBP. TIH W/WLC HQ TOOLS (3.65"). WSHD & RMD TO 1481. CORED FROM 1481 TO 1530 W/PART TO NO RET.

09/26/93      CORING: 1601 (71), MW 8.6-9.6, V 41. CORED W/NO RET FROM 1530 TO 1601 IN DENSELY WELDED TUFF W/FRACS. WTR ENTRY @ 1554 IN OPEN FRAC. PMPD 9.6 PPG MUD.

09/27/93      CORING: 1663 (62), MW 8.9-9.8, V 47. CORED FROM 1601 TO 1616, WTR ENTRY @ 1616. TOH, WELL TRYING TO FLOW. PMPD 9.8 PPG MUD. TIH W/BIT #2, CORED FROM 1616 TO 1663 IN DENSELY WELDED TUFFS W/NO RET USING 8.9 PPG MUD.

09/28/93      CORING: 1749 (86), MW 8.7, V 43. CORED FROM 1663 TO 1749 IN DENSELY WELDED TUFF W/NO RET. LESS FRACD THAN ABOVE. NO WTR ENTRIES USING 8.7 PPG MUD.

09/29/93      CORING: 1880 (131), MW 8.7, V 45. CORED FROM 1749 TO 1880 WITH NO MUD RET IN WELDED TUFF, RHY TUFF & TUFF BX. OPEN FRACS IN CORE @ 1742, 1747, 1849-1851, 1858.

09/30/93      CORING: 1990 (110), MW 8.7, V 45. CORED FROM 1880 TO 1990 WITH NO MUD RET IN RHY ASH TUFF. BX ZONES: 1897-1901, 1921-1925, 1935-1941. OPEN FRACS: 1903, 1924.

10/01/93      CORING: 2073 (83), MW 8.7-9.8, V 45. CORED FROM 1990 TO 2046. TOH FOR NEW BIT. TIH W/BIT #3. CORED FROM 2046 TO 2073 WITH NO MUD RET IN RHY ASH TUFF. OPEN FRACS: 2046-2053.

10/02/93      CORING: 2173 (100), MW 8.7, V 44. CORED FROM 2073 TO 2173 WITH NO MUD RET IN HIGHLY FRACD RHY ASH TUFF.

10/03/93      CORING: 2273 (100), MW 8.7, V 42. CORED FROM 2173 TO 2273 WITH NO MUD RET IN HIGHLY FRACD RHY ASH TUFF. FRACS HELD OPEN W/BRECCIA.

10/04/93      CORING: 2373 (100), MW 8.7, V 47. CORED FROM 2273 TO 2373 WITH NO MUD RET IN FRACD RHY ASH TUFF.

10/05/93      CORING: 2460 (87), MW 8.7, V 45. CORED FROM 2373 TO 2460 WITH NO MUD

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RET. TUFF BX: 2362-2372, MIXED BX: 2372-2412, BASALT BX: 2412-2419,  
BASALT: 2419-2460. OPEN FRAC AT 2419. WELL ATTEMPTED TO FLOW AT 2450.

10/06/93 RD: 2508 TD (48), MW 8.7-9.8, V 43. CORED FROM 2460 TO 2471 WITH NO MUD  
RET. TOH FOR NEW BIT. TIH W/BIT #4. CORED FROM 2471 TO 2508. BASALT BX:  
2460-2475, BASALT: 2475-2508. OPEN CAVITIES (1CM): 2450-2454, 2466-2471.  
POH, LD DP. RD.

10/07/93 MO: 2508 TD (0). MOVED RIG TO NEXT LOCATION.