

**BEFORE THE
OIL CONSERVATION DIVISION**
Santa Fe, New Mexico

Case No. 10775 Exhibit No. 14

Submitted by: Texaco Exploration and
Production Inc.

Hearing Date: October 7, 1993

New Mexico Oil Conservation Division Hearing

October 7, 1993; Case No. 10775

Subject: Santa Fe Energy Operating Partners, L.P. request for an unorthodox gas well location and simultaneous dedication regarding the S/2 of Section 1, Township 24 South, Range 28 East, N.M.P.M., Eddy County, New Mexico.

SANTA FE PROPOSAL

(1) Santa Fe Energy Operating Partners, L.P. is the operator of the S 1/2 of Section 1, Township 24 South, Range 28 East, N.M.P.M., Eddy County, New Mexico.

(2) Santa Fe seeks approval of an unorthodox gas well location 1980 feet FSL and 660 feet FEL in Section 1, Township 24 South, Range 28 East, designated as the Malaga Federal 1 No. 2 Well ("the No. 2 Well").

(3) Santa Fe operates the Malaga Federal 1 No. 1 Well ("the No. 1 Well") located at a standard gas well location 1980 feet FWL and 660 feet FSL to which the S 1/2 of Section 1 is dedicated. The No. 1 Well is completed in and is producing gas from the Atoka formation (Malaga - Atoka Gas Pool).

(4) Santa Fe requests permission to drill an infill well, the No. 2 well, in the SE 1/4 of Section 1 to test the Atoka formation, and to dedicate the S 1/2 of Section 1 to the No. 1 Well and the No. 2 Well. Santa Fe also requests permission to produce both the No. 1 Well and the No. 2 Well continuously and concurrently. Therefore, Santa Fe requests an exception to Division Rule 104(C)(2)(b).

TEXACO'S PROTEST

(1) Texaco E&PI protests the application and will present evidence designed to show that the unorthodox location is contrary to Division rules and would adversely affect Texaco's correlative rights in Section 6, Township 24 South, Range 29 East.

TEXACO'S GEOLOGIC TESTIMONY

(1) Summary of drilling and production history - Getty Harroun Com "6" No. 1, Section 6, Township 24 South, Range 29 East.

6/30/81 Spud by cable tool.

12/15/81 Spud by rotary rig.

3/12/82 TD 13,300' in Morrow Clastics.

4/30/82	Completed from perforations in Morrow Clastics. Gross interval 12,557-13,226'; CAOF 1.47 MMCFGPD.
2/29/84	PBTD 12,195'; recompleted from Massive Atoka Carbonate. Perf. 12,144-150'; FPCAOF 14,630 MCFGPD.
6/4/84	Tested 730 MCFG Massive Atoka Carbonate.
8/2/84	Perf. 12,019-032' Ivanovia (Atoka) Bank (Texaco Atoka "D").
7/29/90	Perf. 11,981-991' Lower Atoka Sand (Texaco Atoka "C" Sand). IP 10 BO, 3 BW, 2078 MCFG.

(2) The Getty Harroun Com "6" No. 1 well is located 1980 feet FNL and 1880 feet FWL Section 6 at a standard gas well location for a standup 320-acre gas spacing unit.

(3) The proposed Santa Fe No. 2 Well in SE 1/4 Section 1 is about 2500 feet northeast from the Santa Fe No. 1 well in the SW 1/4 Section 1 and about 2800 feet southwest from the Getty Harroun Com "6" No. 1 Well in the NW 1/4 Section 6 (refer to geologic cross section).

(4) As there is a high probability that there is continuity of reservoirs between the Getty Harroun Com. "1" No. 1 Well and the Santa Fe No. 1 Well (refer to geologic displays), it is also highly probable that the proposed Santa Fe No. 2 Well will encounter the same Atoka reservoirs that are being produced in the Getty Harroun Com "6" No. 1 and the Santa Fe No. 1 Wells.

(5) The proposed Santa Fe No. 2 Well is updip to the Getty Harroun Com "6" No. 1 Well and down dip from the Santa Fe No. 1 Well.

(6) The Getty Harroun Com "6" No. 1 Well has produced 1.731 BCFG. Using production and pressure data from the PI database, three methods were used to calculate its EUR. They were P/Z vs Cum Gas, Rate vs Cum Gas, and Rate vs Time with both hyperbolic and exponential declines. The resulting EURs range from 1.990 to 2.287 BCF, comparable to the Swanson's Mean of 2.495 BCF for Atoka wells in the Malaga field area. Thus, estimated reserves remaining to be produced range from 0.259 to 0.556 BCF.

(7) Through July, the Getty Harroun "6" No. 1 Well has produced 75 MMCFG in 1993. The average daily production during July, 1993 was 287 MCFG.

(8) Texaco's Hobbs Area office reported on October 4, 1993 that the three Atoka productive zones in the Getty Harroun "6" No. 1 Well (i.e. 11,981-991' - "C"; 12,019-032' - "D"; 12,143-150' - "MAC") were reperforated and acidized. The well is reported to be flowing at a rate of 1.3 MMCFGD with 700 psi FTP.

(9) The proposed unorthodox Santa Fe No. 2 Well would more adversely affect Texaco from recovering the remaining gas reserves in the Getty Harroun Com "6" No.1 Well than an infill well at a standard location in the SE 1/4 Section 1.

(10) By drilling the Santa Fe No. 2 Well at the proposed unorthodox gas well location, Santa Fe is gaining a significant advantage over Texaco. In order to offset the advantage gained by Santa Fe, a sizable penalty should be applied to the well's allowable based on the distance the well is moved from a standard location to the boundary between Section 1, Township 24 South, Range 28 East and Section 6, Township 24 South, Range 29 East according to the following formula for a laydown 320-acre gas production unit:

$$\frac{\text{east - west variance}}{\text{standard setback (1980')}} = \text{PENALTY}$$
$$\frac{(1980' - 660')}{1980'} = \frac{1320'}{1980'} = 67\% \text{ PENALTY}$$

(11) Texaco's correlative rights in Section 6 will be protected by assigning a 67% production penalty factor to the allowable for Santa Fe's proposed unorthodox location in the SE 1/4 of Section 1.

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10/5/93

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