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STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:

CASE NO. 11018  
ORDER NO. R-\_\_\_\_\_

APPLICATION OF TEXACO EXPLORATION  
AND PRODUCTION INC. FOR POOL CREATION  
INCLUDING SPECIAL POOL RULES,  
LEA COUNTY, NEW MEXICO

TEXACO EXPLORATION AND PRODUCTION INC.'S  
PROPOSED  
ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on July 7, 1994, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this \_\_\_\_ day of July, 1994, the Division Director, having considered the testimony, the record and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, Texaco Exploration and Production Inc. ("Texaco"), seeks the creation of a new pool for the production of oil and gas from the Drinkard formation and the Abo formation comprising the NE/4NE/4 of Section 8 and the N/2NW/4 and NW/4NE/4 of Section 9, T23S, R37E, NMPM, Lea County, New Mexico and to be designated as the North Teague Drinkard-Abo Oil Pool ("the Pool").

(3) Texaco further proposes that the Division adopt statewide 40-acre oil spacing and proration units including the adoption of temporary special rules and regulations for the pool including a special limiting gas-oil ratio of 10,000 cubic feet of gas per barrel of oil.

(4) Texaco proposes that the vertical limits of the Pool shall be from the top of the Drinkard formation to the base of the Abo formation, identified as being 6346 feet and 7160 feet, respectively, on the log of the F. B. Davis Well No. 1 located in Unit A of Section 8, T23S, R37E, NMPM.

(5) If Texaco's application is approved there will be two currently producing wells in the Pool:

F. B. Davis Well No. 1 (Unit A) Sec 8;  
G. W. Sims Well No. 1 (Unit B) Sec 9.

(6) The F. B. Davis Well No. 1 is currently completed with the Abo being produced up tubing and the Drinkard being produced up the annulus. The G. W. Sims Well No 1 is a single completion in the Abo formation.

(7) Division records indicate that the two closest Drinkard formation oil pools are the South Drinkard Oil Pool established in January 1950 consisting of all of Section 3, T23S, R37E and currently with no production, and the Teague Drinkard Oil Pool, established in March, 1982 and consisting of the NE/4 of Section 17, T23S, R37E, NMPM with one producing well.

(8) Division records further establish that although the boundaries of the Teague-Drinkard Pool have not been extended to include any portion of the proposed Pool, both the F. B. Davis Well No. 1 and the G. W. Sims Well No. 1 are classified as Teague-Drinkard Pool producers. The Abo production from the F. B Davis Well No. 1 is classified as undesignated Abo production.

(9) Texaco was only interested party to appear and provide technical geologic and engineering testimony concerning the reservoir and its classification.

(10) Texaco is the only operator in the proposed pool and currently all categories of owners in the pool have common ownership.

(11) Texaco's proposed plan of development for the Pool is in conjunction with the Tubb formation (NMOCD Case 11016) and the Lower Paddock and Blinebry formations (NMOCD Case 11017) whereby Texaco will drill or has drilled a Drinkard-Abo formation well in each 40-acre tract and then intends to dually produced that production so that within a 160-tract, two wells are dualed with Tubb formation production and the remaining two wells are dualed with Paddock-Blinebry production in a checkerboard pattern.

(12) Texaco presented geologic and petroleum engineering evidence which demonstrates that The Pool is:

(a) a circular shaped feature draped over a structure high centered approximately in the NW/4 of Section 9, is of limited extent. The trap of the reservoir is formed by a down structural limit of effective porosity within the Drinkard and Abo formation;

(b) a single structure feature geologically separated from the Teague Drinkard Oil Pool which is located to the south of the Pool and from the South Drinkard Oil Pool which is located to the northeast of the Pool;

(c) a single source of common supply ("reservoir") separated from and not in communication with any other Drinkard-Abo pool in this area as evidenced by bottomhole pressure buildup data and other reservoir pressure data.

(13) Texaco presented geological and petroleum engineering data and conclusions to demonstrate that the Drinkard and Abo formations constitute one single common source of supply ("reservoir") in this particular area and that there is no geologic, petroleum engineering or conservation reason to require that they be treated as separate pools.

(14) Texaco presented geological and engineering data and conclusions to demonstrate that:

(a) the pool is a solution gas drive reservoir with all three wells have production characteristics of a oil wells with high GORs;

(b) there is no indication that a gas cap exists or is being formed up-structure to the oil wells;

(c) the occurrence of increased volumes of gas production in the Pool is attributed to the presence of small higher porosity stringers in the Drinkard-Abo which are both laterally and horizontally discontinuous;

(d) variable rate tests conducted on the G. W. Sims Well No. 1 demonstrates that the GOR for the Abo formation in that well is not rate dependant, and therefore the well can be produced at the requested 10,000 to 1 GOR without adversely effecting oil recovery. (See Texaco Exhibit 13).

(e) in addition, the variable rate test shows that the G. W. Sims Well No. 1 is more efficiently able to recover oil/liquid hydrocarbons from the Pool at a gas rates in excess of the rates established by the statewide 2,000 cubic feet of gas per barrel of oil GOR limit. (See Texaco Exhibit 13)

(f) Assuming a depth bracket oil allowable of 142 BOPD (40-acre oil spacing), the maximum casinghead gas allowable based upon a 2,000 to 1 GOR is 284 MCFPD and at 10,000 to 1 GOR is 1420 MCFPD.

(G) Variable producing rate tests conducted in accordance with standard petroleum engineering material balance calculations on the G. W. Sims Well No. 1 demonstrate that:

(1) if the well is produced at a choke setting of 8/64th in order to comply with a 2,000 to 1 GOR then the producing GOR for the well escalates to 15,653 to 1 GOR and the oil rate drops to an average of 32 BOPD,

(2) but if the well is produced at a choke setting of 13/64th in order to comply with a 10,000 to 1 GOR then the producing GOR for the well drops to 12,710 to 1 GOR and the oil rate increases to an average of 75.3 BOPD. (See Texaco Exhibit 13).

(15) Based upon the present evidence and testimony as to the nature of the reservoir with regards to the creation of a new pool and the proper classification of that pool as either oil or gas, Texaco's engineering evidence indicates that this is an oil pool with a high GOR

(16) Texaco presented engineering evidence and testimony, specifically, results of production step rate tests on the only Drinkard oil well in the pool which demonstrate that in general the pool is a solution gas drive reservoir and is not rate sensitive but that more hydrocarbon liquids are recovered per cubic feet of gas produced at GOR up to 10,000 to one thereby preventing waste and potentially improving ultimate recovery.

(17) Texaco presented geologic and reservoir data, including core data and water compatibility information, which demonstrates that the Drinkard formation and the Abo formation in this area can be combined into a single Pool without causing waste or impairing correlative rights;

(18) That the evidence indicates that 40-acre oil well spacing is the appropriate spacing patterns to adopt for this pool.

(19) That in order to avoid the arbitrary effect of having any well in the Pool shut-in or curtailed as a result of allowables being calculated based upon inapplicable statewide rules the effective date of this order should made retroactive to July 1, 1994.

(20) That there was no evidence or testimony presented upon which to base a denial of this application.

(21) No other operator and/or interest owner appeared at the hearing in opposition to the application.

(22) Approval of Texaco's request will allow the interest owners the opportunity to economically recover their share of the oil and gas in the subject pool, will not reduce ultimate recovery from the subject pool, and will not violate correlative rights.

(23) This case should be reopened at an examiner hearing in January, 1996, at which time the operators in the Pool should be prepared to appear and present evidence and testimony as to the nature of the reservoir with regards to making these rules permanent.

**IT IS THEREFORE ORDERED THAT:**

(1) A new oil pool for the production of oil and gas from the Drinkard and Abo formations is hereby created and designated as the North Teague Drinkard-Abo Oil Pool with horizontal limits comprising the NE/4NE/4 of Section 8 and the NW/4NE/4 and the N/2NW/4 of Section 9, T23S, R37E, NMPM, Lea County, New Mexico.

(2) The vertical limits of the Pool shall be the top of the Drinkard formation to the base of the Abo formation being defined at 6346 feet and 7160 feet, respectively, on the log of the F. B. Davis Well No. 1 located in Unit A of Section 8, T23S, R37E, NMPM.

(3) Temporary Special Rules and Regulations for the North Teague Drinkard-Abo Oil Pool shall be effective on July 1, 1994 and are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS  
FOR THE  
NORTH TEAGUE DRINKARD-ABO OIL POOL

That the limiting gas-oil ratio shall be 10,000 cubic feet of gas for each barrel of oil.

IT IS FURTHER ORDERED THAT:

(4) Pursuant to Paragraph A of Section 70-2-18, NMSA (1978), existing oil wells in the Pool shall have dedicated thereto 40-acre in accordance with the foregoing pool rules; or, pursuant to Paragraph C of said Section 70-2-18, existing wells may have non-standard spacing or proration units established administratively by the Division and dedicated thereto.

(5) Failure to file a new Form C-102 with the Division dedicating the appropriate acreage to a well or to obtain a non-standard unit approved by the Division within 60-days from the date of this order shall subject the well to cancellation of allowable until a non-standard spacing unit has been approved and, subject to said 60-day limitation, each well presently drill to or completed i the Pool or in its corresponding vertical limits or within one mile thereof shall receive no more than a 40-acre allowable for the pool

(6) The special rules and regulations for this pool established herein shall remain in effect for a temporary period until such time as the Division has entered further orders in this matter.

(7) This case shall be reopened at an Examiner hearing in January, 1996, at which time the operators in the Pool should be prepared to appear and present evidence and testimony as to the nature of the reservoir with regards to making these rules permanent.

(8) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY  
Director

S E A L



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



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September 27, 1994

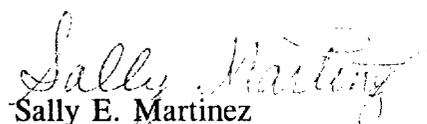
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Santa Fe, New Mexico 87504

RE: CASE NO. 11018  
ORDER NO. R-10199

Dear Sir:

Enclosed herewith are two copies of the above-referenced Division order recently entered in the subject case.

Sincerely,

  
Sally E. Martinez  
Administrative Secretary

cc: BLM - Carlsbad