

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:

NOMENCLATURE
CASE NO. 11169
ORDER NO. R-10327

**APPLICATION OF CONOCO INC. FOR POOL
CREATION, SPECIAL POOL RULES, AND THE
ASSIGNMENT OF A DISCOVERY ALLOWABLE
LEA COUNTY, NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on December 15, 1994 at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 8th day of March, 1995 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, Conoco Inc. ("Conoco"), seeks the creation of a new pool in Lea County, New Mexico for the production of oil from the Tubb and the Drinkard formations to comprise the following described area:

TOWNSHIP 20 SOUTH, RANGE 37 EAST, NMPM
Section 36: SW/4 NE/4, S/2 NW/4, N/2 SW/4, and NW/4 SE/4.

(3) Conoco proposes that the Division adopt statewide 40-acre oil spacing and proration units and well location restrictions as provided for in Division General Rule 104.B(1)(b); however, the applicant is seeking the promulgation of temporary special rules therefor including a provision for a limiting gas-oil ("GOR") ratio of 10,000 cubic feet of gas per barrel of oil.

(4) Conoco is operator of the only two following described wells within the proposed pool:

- the Hardy "36" State Well No. 1 (**API No. 30-025-32128**), located 1980 feet from the South line and 2230 feet from the West line (Unit K) of said Section 36; and,
- the Hardy "36" State Well No. 3 (**API No. 30-025-32479**), located 2080 feet from the North line and 1730 feet from the East line (Unit G) of said Section 36.

(5) The Hardy "36" State Well No. 3 was spudded on April 25, 1994 and was drilled to a total depth of 7,000 feet, which was reached on May 13, 1994, on August 19, 1994 said well was completed in the Tubb formation through perforations from 6,423 feet to 6,593 feet and production commenced on August 20, 1994. *Conoco is seeking an oil discovery allowable for this well for production from the above-described pool pursuant to Division General Rule 509.*

(6) The Hardy "36" State Well No. 1 was drilled to a total depth of 10,625 feet in December, 1993, on March 21, 1994, Conoco completed said well in the perforated interval from 9,940 feet to 10,285 feet, which has been designated by the Division as a "new discovery" under Division Rule 509 for production from the Hardy Simpson-Ellenburger Pool, see Division Nomenclature Order Nos. R-10177 and R-10303. In October, 1994 said well was recompleted up-hole in the Drinkard formation with perforations from 6,705 feet to 6,746 feet.

(7) Division's records indicate that the Hardy "36" State Well Nos. 1 and 3 are located more than a mile from any current established pool for this production, the closest such pools being the Hardy-Tubb-Drinkard Pool, the Monument-Tubb Pool, and the Weir-Drinkard Pool.

(8) The Hardy "36" State Well No. 3 therefore constitutes a "new discovery" under Division General Rule 509 and is entitled to a discovery oil allowable for production from the Tubb-Drinkard formations.

(9) Conoco proposes that the vertical limits of the Pool shall be from the top of the Tubb formation to the base of the Drinkard formation, identified as being 6,308 feet and 6,886 feet, respectively, on the type-log of the Hardy "36" State Well No. 1, dated November 8, 1994, submitted at the time of the hearing as Exhibit No. 1.

(10) Conoco presented geologic and petroleum engineering evidence which demonstrates that the proposed reservoir is:

(a) a circular shaped feature draped over a structural high located approximately in the center of said Section 36, is of limited extent, trapping is formed by a down structural limit of effective porosity within the Drinkard and Tubb formations;

(b) a single structural feature geologically separated from any other Tubb/Drinkard pools in the area;

(c) a solution gas drive reservoir with both wells having production characteristics of oil wells with high gas/oil ratios;

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

(e) extrapolation of production tests conducted on the discovery well demonstrates that the GOR for the Tubb formation in that well is not rate dependant, and once the pressure in that formation is drawn down to below the bubble point, the GOR will significantly increase;

(f) the wells in the pool can be produced at the requested 10,000 to 1 GOR without adversely effecting oil recovery; and

(g) characteristics of the Tubb and Drinkard production within the proposed pool are compatible and there are no foreseeable reservoir engineering reasons which preclude combination into a

single pool for purpose of conservation regulations.

(11) Based upon the present evidence available concerning the nature of the Tubb and Drinkard formations, both are typical solution gas drive oil pools which are commonly combined by the Division and authorized to be produced at special gas oil ratio rates. It was further demonstrated by Conoco by economic analysis/production data that the Drinkard formation is a low productivity reservoir and cannot be developed in this area unless combined into the same pool with the Tubb formation.

(12) At the time of the hearing the applicant requested designation of the proposed "North Hardy Tubb-Drinkard Pool" and the limiting special gas/oil ratio be made retroactive to the date of first production from the Hardy "36" State Well No. 3, being August 19, 1994.

(13) Evidence presented indicates that mineral interest ownership throughout the acreage proposed for this pool is common; therefore, the protection of correlative rights should be enhanced by this arrangement.

(14) No other operator and/or interest owner appeared at the hearing in opposition to the application or to their request for retroactive compliance.

(15) Approval of this application 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.

(16) As suggested by the applicant 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) The effective date for this order and all provisions included therein shall be made retroactive back to August 19, 1994.

(2) A new oil pool for the production of oil from the Drinkard and Tubb formations is hereby created and designated the North Hardy Tubb-Drinkard Pool with horizontal limits to comprise the following described area in Lea County, New Mexico:

TOWNSHIP 20 SOUTH, RANGE 37 EAST, NMPM

Section 36: SW/4 NE/4, S/2 NW/4, N/2 SW/4, and NW/4 SE/4.

(3) The vertical limits of said pool shall be from the top of the Tubb formation to the base of the Drinkard formation, identified as being 6,308 feet and 6,886 feet, respectively, on the type-log of the Conoco, Inc. Hardy "36" State Well No. 1 (API No. 30-025-32128), located 1980 feet from the South line and 2230 feet from the West line (Unit K) of said Section 36, dated November 8, 1994, submitted at the time of the hearing as Exhibit No. 1.

(4) Temporary Special Rules and Regulations for the North Hardy Tubb-Drinkard Pool are hereby promulgated as follows:

**SPECIAL RULES AND REGULATIONS FOR THE
NORTH HARDY TUBB-DRINKARD POOL**

Rule 1. The limiting gas-oil ratio for the North Hardy Tubb-Drinkard Pool is 10,000 cubic feet of gas for each barrel of oil.

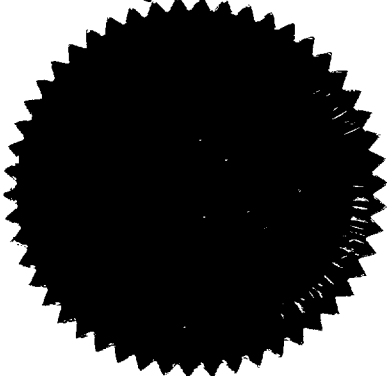
IT IS FURTHER ORDERED THAT:

(5) Effective August 19, 1994, the discovery well for said pool, the applicant's Hardy "36" State Well No. 3 (API No. 30-025-32479), located 2080 feet from the North line and 1730 feet from the East line (Unit G) of said Section 36, is hereby approved and assigned a discovery allowable by the Supervisor of the Hobbs District Office of the Division and in accordance with General Rules 509. F, G, and H.

(6) 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.

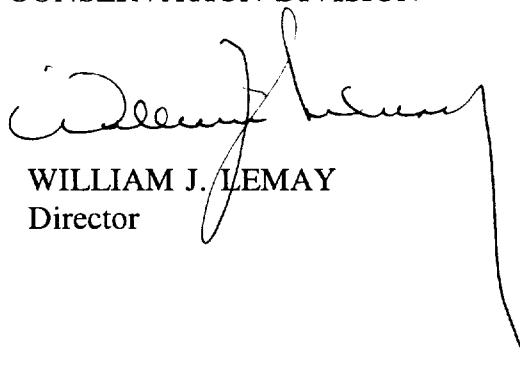
(7) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

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



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STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY
Director