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. 10994
ORDER NO. R-5771-B

APPLICATION OF ENSERCH EXPLORATION, INC. FOR THE ASSIGNMENT OF A SPECIAL POOLWIDE DEPTH BRACKET OIL ALLOWABLE, ROOSEVELT COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on June 23, 1994 and on July 21, 1994, at Santa Fe, New Mexico, before Examiners Michael E. Stogner and Jim Morrow, respectively.

NOW, on this 3rd day of November, 1994 the Division Director, having considered the testimony, the record and the recommendations of the Examiners, 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) By Division Order No. R-5771, dated July 17, 1978, the South Peterson-Fusselman Pool was defined and created for the production of oil from the Fusselman formation. The horizontal limits for said pool, as currently designated, include the following described lands in Roosevelt County, New Mexico:

TOWNSHIP 5 SOUTH, RANGE 32 EAST, NMPM
Section 25: SE/4
Section 36: NE/4

TOWNSHIP 5 SOUTH, RANGE 33 EAST, NMPM
Section 30: S/2
Section 31: All

TOWNSHIP 6 SOUTH, RANGE 33 EAST, NMPM
Section 1: Lots 3 and 4
Section 2: All
Section 3: Lots 1 and 2
Section 10: NE/4

(3) Said Order No. R-5771, as amended by Division Order No. R-5771-A, promulgated special rules and regulations for the South Peterson-Fusselman Pool which established 80-acre spacing and proration units and designated well location requirements. This pool is operated under these special rules and regulations and the General Rules of the Division which set a depth bracket allowable for an 80-acre unit of 267 barrels of oil per day and a limiting gas/oil ratio of 2,000 cubic feet of gas per barrel of oil which results in a casinghead gas allowable of 534 MCF per day.

(4) The applicant in this matter, Enserch Exploration, Inc. ("Enserch"), now seeks the assignment of a special depth bracket allowable for the South Peterson-Fusselman Pool, pursuant to General Rule 505(d), of 500 barrels of oil per day to replace the current depth bracket allowable for said pool of 267 barrels of oil per day.

(5) There are currently three operators in the subject pool; Enserch, Phillips Petroleum Company, and Bledsoe Petro Corporation.

(6) Phillips Petroleum Company ("Phillips"), who currently operates three wells in said Pool, appeared at the hearing and presented geologic and petroleum engineering evidence in opposition to increasing the oil allowable in the subject Pool.

(7) The Fusselman formation in this pool is highly fractured which results in oil being produced from a dual porosity system (the fracture system and the matrix system) and a strong bottom water drive is the reservoir drive mechanism in the South Peterson-Fusselman Pool, which results in wells with high water cuts. Currently there are six wells producing from this pool, one of which is outside of the structural feature being shared by the other five wells all in Section 31, Township 5 South, Range 33 East, NMPM, Roosevelt County, New Mexico.

(8) Evidence presented by Enserch suggests that:

(a) the Enserch Lambrith Well No. 1, located in Unit "K" of said Section 31, and the Phillips Lambrith "A" Well No. 2, located in Unit "F" of said Section 31, have the potential to produce in excess of the current 267 barrels of oil per day allowable and that the Enserch Lambrith Well No. 1 could produce at a rate as high as 500 barrels of oil per day;

(b) although structurally up-dip to both Phillips' wells, the Enserch well does not have any advantage because the base of the current perforations in each of these wells is at the same correlative point;

(c) the reservoir is in an advanced state of depletion with the oil in the fracture system having been produced and the remaining oil production coming primarily from the matrix;

(d) increasing the production rate of total fluids from wells in this pool creates a pressure differential in the reservoir which increases oil production from the matrix and lowers water cuts;

(e) use of high volume lift installation ("HVL") in an Ellenburger, a Devonian and a Strawn reservoir in West Texas, each of which was a natural water-drive reservoir, had resulted in an apparent increase in oil rate and ultimate oil recovery higher than that expected with conventional lift methods (see Enserch Exhibit No. 10 "SPE paper 7463 presented October 1, 1979 in Houston, Texas at the 53rd Annual Fall Technical Conference and Exhibition of the Society of Petroleum Engineers of A.I.M.E."); and,

(f) based upon this technical paper, Enserch theorized that by adding large submersible pumps which could lift 3,000 total fluids per day in certain wells, additional oil recovery could be attained in the Pool.

(9) In opposition, Phillips presented evidence which suggests that:

(a) the aforementioned Enserch Lambrith Well No. 1 is situated at the highest structural portion of the reservoir being some 56 feet and 69 feet, respectively, up-dip to said Phillips Lambirth "A" Well Nos. 1 and 2;

(b) as a result of previous tests with the installation of submersible pumps in both the Phillips' wells a dramatic increase in water cuts was observed

(c) the reservoir is sensitive to the rate of withdrawals and increasing the rate of oil production would serve in adversely effecting the ultimate recovery from the pool thereby causing waste;

(d) the Enserch Lambrith No. 1 well has already produced 38% of the total oil in the entire pool while only having 20% of the original oil in place under its assigned 80-acre spacing and proration unit; and,

(h) increasing the rate of the oil allowable in this pool would serve to benefit only one well in the pool, the Enserch Lambrith Well No. 1, and will cause that higher capacity oil well to drain oil from the adjoining spacing units including those operated by Phillips which cannot be protected by their existing wells.

(10) At this time there is insufficient data available to assure that an increased oil allowable for the South Peterson-Fusselman Pool will not result in the impairment of other operators' and mineral interests' correlative rights in the pool and would not result in the prevention of waste.

(11) This application should therefore be denied.

IT IS THEREFORE ORDERED THAT:

(1) The application of Enserch Exploration, Inc. for the assignment of a special depth bracket allowable for the South Peterson-Fusselman Pool, Roosevelt County, New Mexico, pursuant to General Rule 505(d), of 500 barrels of oil per day to replace the current depth bracket allowable for said pool of 267 barrels of oil per day is hereby DENIED.

(2) All other provisions of the Special Rules and Regulations for the South Peterson-Fusselman Pool, as promulgated by Division Order No. R-5771, as amended shall remain in full force and effect until further notice.

(3) 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

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