

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. 9138  
Order No. R-8480

APPLICATION OF DAMSON OIL  
CORPORATION FOR EXTENSION  
OF THE WEST LUSK-DELAWARE  
POOL AND AN EXCEPTION TO  
GENERAL RULE 505, LEA COUNTY,  
NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on May 20, 1987, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 23rd day of July, 1987, 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, Damson Oil Corporation, seeks approval of an extension of the horizontal limits of the West Lusk-Delaware Pool to include its Southern California Federal Well No. 1, located 1980 feet from the North line and 660 feet from the East line (Unit H) of Section 29, Township 19 South, Range 32 East, NMPM, Lea County, New Mexico. Applicant also seeks relief from possible Division shut-in requirements by permitting the subject well to produce at a reduced rate until overproduction from the well is offset.
- (3) Applicant is the operator of the Southern California Federal Well No. 1. As of October, 1986, said well was producing approximately 30 barrels of oil per day from the Lusk-Strawn Pool and had 160 acres (the NE/4 of said Section 29) dedicated to it.

(4) On or about September 28, 1986, a casing leak developed in the subject well at 4631-4646 feet subsurface.

(5) In October, 1986, while applicant was repairing the casing leak, applicant experienced additional problems while fishing the packer over the Strawn formation. These problems resulted in an expenditure of money in excess of the amount authorized by other working interest owners to repair the casing leak in the subject well.

(6) While obtaining authorization for additional expenditures on the subject well, applicant put the well back on production. At that time (October, 1986), the well suddenly began producing approximately 200 barrels of oil per day, and later increased to over 300 barrels of oil per day.

(7) In January, 1987, applicant re-entered the well to determine which formation the well was producing from. Because of the age of the subject well and the manner in which it was completed when first drilled in 1962, its downhole condition is fragile and normal methods of identifying the horizon from which it is producing through the casing leak could not be used without the possibility of a complete casing collapse and loss of the well.

(8) On February 3, 1987, applicant discovered that the well was producing from a hole in the casing located at 4615-4677 feet subsurface.

(9) Due to downhole mechanical problems the Strawn and Morrow formations were plugged and abandoned in April, 1987. This had no effect on well production.

(10) Subsequently, on or about April 30, 1987, the Bone Spring formation was isolated by a retainer set at 7812 feet, but the well continued to produce without any reduction in rate of production. As a result, the only potential productive formation was the Delaware formation.

(11) There are two Delaware formation oil pools of the subject well: (a) the Lusk-Delaware Pool, which includes the Amoco Plains Unit Well No. 7 located in the NW/4 NW/4 of Section 33, Township 19 South, Range 32 East, NMPM. Said well produces from perforations located at 4712-4732 feet subsurface. Wells in this pool have an allowable of 80 barrels per day; and (b) the West Lusk-Delaware Pool, which was created by Division Order No. R-8461, dated June 25, 1987 and made effective July 1, 1987. The discovery well for this pool is the Texaco State of New Mexico "CR" Well No. 1 located in the NW/4 NW/4 of Section

32, Township 19 South, Range 32 East, NMPM. Said well was originally completed as a Strawn producer and was temporarily abandoned in 1972. The Texaco well was recently re-entered and completed as a producer and is producing from perforations located at 6416-6422 feet subsurface. Wells producing from this pool have an allowable of 142 barrels per day.

(12) A Schlumberger temperature log run on the subject well on April 7, 1987, reveals that beginning at 6450 feet subsurface, and uphole for approximately 1200 feet, the temperature gradient varies from a calculated gradient by a significant amount, indicating that warm fluid is flowing outside the casing beginning at approximately 6450 feet subsurface.

(13) A chromatographic analysis of oil and gas taken from the subject well, the Texaco well in the NW/4 NW/4 of Section 32, and the Amoco well in the NW/4 NW/4 of Section 33, reveals that the oil and gas from the subject well has properties essentially identical to the oil and gas produced from the Texaco State of New Mexico "CR" Well No. 1 and is different from the oil and gas produced from Amoco's Plains Unit Well No. 7. This also indicates that the subject well is producing from the West Lusk-Delaware Pool.

(14) Maximum sustained production from the Amoco Plains Unit Well No. 7 when first completed was 100 barrels of oil per day, while the subject well has produced for extended periods at over 250 barrels per day, indicating a difference in pool performance between the two wells.

(15) There are no thief zones between the lower and upper Delaware zones.

(16) Applicant presented geological testimony that the E/2 and SW/4 of Section 29, Township 19 South, Range 32 East, NMPM, Lea County, New Mexico, is or may be productive of hydrocarbons at an interval which corresponds with the West Lusk-Delaware Pool.

(17) Prior to October, 1986, the subject well had been assigned to the Lusk-Strawn Pool with a 160-acre proration unit (the NE/4 of said Section 29) assigned to the well and a 605 barrel per day depth bracket allowable.

(18) Prior to January 24, 1987, applicant, based on its best information, believed the well was producing from the Strawn formation or Bone Spring formation. On January 24, 1987, Damson determined that it was producing from the Delaware formation. Subsequent tests determined that the subject well was producing from approximately 6450 feet subsurface.

(19) Because the well has been producing, on a regular basis, over 200 barrels of oil per day and because wells producing from the West Lusk-Delaware Pool have an allowable of 142 barrels of oil per day, the well is currently in an overproduced status.

(20) Due to the foregoing circumstances, applicant should be required to make up for overproduction only since January 24, 1987.

(21) Because of the age of the subject well and its downhole condition, a shut-in of the well, or further completion attempts, may cause a complete loss of the well, resulting in waste.

(22) Limiting production from the subject well to a rate of 100 barrels of oil per day until overproduction accumulated since January 24, 1987, is made up will prevent damage to the well and will not affect correlative rights of other interest owners in the West Lusk-Delaware Pool.

(23) There is no danger of hydrocarbons or salt water migrating to a fresh water zone as the well is currently completed.

(24) Approval of this application is in the best interests of conservation, will not result in waste, and will not violate correlative rights.

IT IS THEREFORE ORDERED THAT:

(1) The application of Damson Oil Corporation for the extension of the West Lusk-Delaware Pool to include the Southern California Federal Well No. 1 located in the SE/4 NE/4 of Section 29, Township 19 South, Range 32 East, NMPM, Lea County, New Mexico, is hereby granted.

(2) The West Lusk-Delaware Pool should be extended to include the E/2 and SW/4 of Section 29, Township 19 South, Range 32 East, NMPM, Lea County, New Mexico.

(3) Applicant is authorized to produce the subject well as it currently exists without further remedial or completion work.

(4) Applicant is authorized to make up overproduction which has accumulated since January 24, 1987, by producing the subject well at a rate of 100 barrels per day, with the

-5-

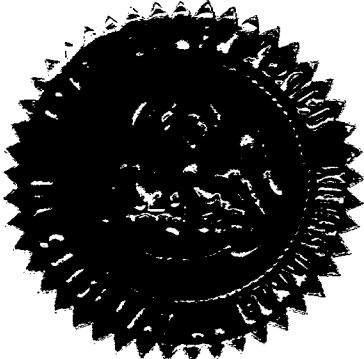
Case No. 9138  
Order No. R-8480

excess allowable (42 barrels per day) used to offset accumulated overproduction.

(5) Applicant shall file amended Form C-115's with the Division within 30 days of the date of this order.

(6) 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.



S E A L

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

A handwritten signature in black ink, appearing to read "William J. Lemay", written over the typed name and extending to the right with a long, thin tail.

WILLIAM J. LEMAY  
Director

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