

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

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVA-  
TION DIVISION FOR THE PURPOSE  
OF CONSIDERING:

CASE NO. 11696  
ORDER NO. R-10763

APPLICATION OF DEVON ENERGY  
CORPORATION (NEVADA) TO  
QUALIFY SIX WATERFLOOD  
EXPANSION PROJECTS FOR THE  
RECOVERED OIL TAX RATE  
PURSUANT TO THE "ENHANCED OIL  
RECOVERY ACT", EDDY COUNTY,  
NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on January 23, 1997, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 10th day of February, 1997, 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) By Order No. R-2268, as amended, dated June 21, 1962, the Division authorized Sinclair Oil & Gas Company to institute a waterflood project on its Keel-West leases, comprising some 5051.36 acres, and described as follows, by the injection of water into the Grayburg and San Andres formations, Grayburg-Jackson Pool, through seven initial injection wells located in Sections 3 and 4, Township 17 South, Range 31 East, NMPM:

**KEEL-WEST WATERFLOOD PROJECT**  
**TOWNSHIP 17 SOUTH, RANGE 31 EAST, NMPM**  
Sections 3 through 10: All

(3) By Order No. R-3185, as amended, dated February 1, 1967, the Division authorized Sinclair Oil & Gas Company to institute a waterflood project on its C. A. Russell Lease, its Turner "A" Lease and its Turner "B" Lease, comprising some 224.09 acres, 609.43 acres, and 1786.15 acres, respectively, and all described as follows, by the injection of water into the Grayburg and San Andres formations, Grayburg-Jackson Pool, through two initial injection wells on the C. A. Russell Lease, eight initial injection wells on the Turner "A" Lease, and nine initial injection wells on the Turner "B" Lease, all in Township 17 South, Range 31 East, NMPM, Eddy County, New Mexico:

**C. A. RUSSELL WATERFLOOD PROJECT**  
**TOWNSHIP 17 SOUTH, RANGE 31 EAST, NMPM**  
Section 18: NW/4, W/2 NE/4

**TURNER "A" WATERFLOOD PROJECT**  
**TOWNSHIP 17 SOUTH, RANGE 31 EAST, NMPM**  
Section 18: S/2  
Section 19: N/2

**TURNER "B" WATERFLOOD PROJECT**  
**TOWNSHIP 17 SOUTH, RANGE 31 EAST, NMPM**  
Section 17: NW/4 SW/4, S/2 S/2  
Section 20: All  
Section 29: All  
Section 30: S/2

(4) By Order No. R-3265, dated July 10, 1967, the Division authorized Franklin, Aston & Fair, Inc., to institute a waterflood project on its Hudson Federal Lease, comprising some 160 acres, described as follows, by the injection of water into the Grayburg and San Andres formations, Grayburg-Jackson Pool, through two initial injection wells located in Sections 17 and 18, Township 17 South, Range 31 East, NMPM, Eddy County, New Mexico:

**HUDSON FEDERAL WATERFLOOD PROJECT**  
**TOWNSHIP 17 SOUTH, RANGE 31 EAST, NMPM**  
Section 17: W/2 NW/4  
Section 18: E/2 NE/4

(5) By Order No. R-4306, dated May 19, 1972, the Division authorized Atlantic Richfield Company to institute a waterflood project on its Friess-Fren Lease, comprising some 400 acres, described as follows, by the injection of water into the Grayburg and San Andres formations, Grayburg-Jackson Pool, through five initial injection wells located in Sections 19 and 30, Township 17 South, Range 31 East, NMPM, Eddy County, New Mexico:

**FRIESS-FREN WATERFLOOD PROJECT**  
**TOWNSHIP 17 SOUTH, RANGE 31 EAST, NMPM**

Section 19: SE/4, E/2 SW/4

Section 30: NE/4

(6) The applicant, Devon Energy Corporation (Nevada), (Devon), being the current operator of the Keel-West, C. A. Russell, Turner "A", Turner "B", Hudson Federal and Friess-Fren Waterflood Projects, seeks to qualify these six projects for the recovered oil tax rate pursuant to the "Rules and Procedures for Qualification of Enhanced Oil Recovery ("EOR") Projects and Certification for the Recovered Oil Tax Rate", as promulgated by Division Order No. R-9708, and pursuant to the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5).

(7) Applicant testified that it acquired the subject acreage and waterflood projects in January, 1994.

(8) Data regarding previous waterflood operations within the six subject projects, acquired from Division records, are summarized as follows:

<u>PROJECT</u>	<u>COMMENCEMENT DATE (INJECTION)</u>	<u>NO. PRODUCING WELLS</u>	<u>NO. INJECTION WELLS</u>
Keel-West	June, 1962	64	7
C.A. Russell	February, 1967	5	2
Turner "A"	February, 1967	8	8
Turner "B"	February, 1967	29	9
Hudson Fed.	July, 1967	4	1
Friess-Fren	May, 1972	11	5

(9) Applicant testified that although injection operations have continued to the present time, effective waterflood operations within the subject projects were essentially discontinued during the mid-1980's.

(10) Division records and evidence presented by the applicant further indicates that as of January 1, 1994, operations and production within the subject projects were as follows:

<u>PROJECT</u>	<u>NO. PRODUCING WELLS</u>	<u>NO. INJECTION WELLS</u>	<u>OIL PRODUCTION</u>
Keel-West	75	20	600 BOPD
C. A. Russell	6	0	500 BOPD (Includes C.A. Russell, Turner "A", Turner "B", Hudson Federal and Friess-Fren Projects) Projects)
Turner "A"	7	3	
Turner "B"	44	15	
Friess-Fren	10	2	
Hudson Federal	4	0	

(11) The subject waterflood projects were developed essentially on 40-acre spacing with a limited number of injection wells.

(12) At the time the applicant acquired these properties, it initiated a 20-acre infill drilling and waterflood expansion program. Thus far, the applicant's efforts have been concentrated within the Keel-West Project area, however, applicant testified that it will ultimately fully develop all of the subject projects.

(13) Development within the subject projects during the period from January, 1994 through August, 1996, has occurred as follows:

<u>PROJECT</u>	<u>NUMBER OF WELLS DRILLED OR REACTIVATED</u>		<u>TOTAL NUMBER OF WELLS</u>	
	<u>PRODUCING</u>	<u>INJECTION</u>	<u>PRODUCING</u>	<u>INJECTION</u>
Keel-West	77	35	152	55
C. A. Russell	10	0	16	0
Turner "A"	15	0	22	3
Turner "B"	0	0	42	14
Friess-Fren	1	0	11	2
Hudson Federal	5	0	9	0

(14) Current production from the Keel-West, C. A. Russell, Turner "A", Friess-Fren, and Hudson Federal Waterflood Projects is approximately 1900 BOPD, 300 BOPD, 800 BOPD, 150 BOPD, 200 BOPD, respectively.

(15) Applicant submitted evidence and testimony which indicates that at full development within the six subject waterflood projects, the distribution of producing and injection wells will be as follows:

<u>PROJECT</u>	<u>NO. PRODUCING WELLS</u>	<u>NO. INJECTION WELLS</u>
Keel-West	105	128
C. A. Russell	9	8
Turner "A"	17	16
Turner "B"	35	45
Friess-Fren	9	10
Hudson Federal	6	6

(16) Capital costs incurred thus far by the applicant and projected ultimate capital costs to complete the proposed infill drilling and waterflood expansion program are as follows:

<u>PROJECT</u>	<u>CAPITAL COSTS INCURRED THROUGH AUGUST, 1996</u>	<u>FULL DEVELOPMENT COSTS</u>
Keel-West	\$42,920,570	\$43,520,570
C. A. Russell	\$2,898,267	\$3,644,149
Turner "A"	\$5,360,538	\$6,651,832
Turner "B"	\$2,004,167	\$5,664,961
Friess-Fren	\$ 936,705	\$1,932,382
Hudson Federal	\$1,555,527	\$1,947,880

(17) The evidence and testimony presented in this case indicates that:

- a) the addition of injection wells and resultant change in injection pattern proposed to be utilized by the applicant within the subject waterflood projects represents a more efficient injection pattern than that previously utilized;
- b) modern completion technology, deepening of wells and completion of zones previously not subject to waterflood/production operations will enhance the efficiency of these projects;
- c) the increased producing well density and increased efficiency within the six subject waterflood projects should result in the recovery of an additional 12.0 million barrels of oil from these projects which would otherwise not be recovered;
- d) each of the six subject waterflood projects has been so depleted that it is prudent to implement a waterflood injection well pattern reduction and infill drilling program to maximize the ultimate recovery of crude oil from these areas; and,
- e) the proposed expansion is economically and technically feasible and has not been prematurely filed.

(18) The Keel-West, C. A. Russell, Turner "A", Turner "B", Friess-Fren, and Hudson Federal Waterflood Projects, described in Finding Nos. (2), (3), (4), and (5) above, should be qualified as "Enhanced Oil Recovery Projects" pursuant to the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5).

(19) To be eligible for the EOR credit, the operator should advise the Division when water injection into each additional injection well commenced or will commence within each project and at such time request that the Division certify the subject expansion projects to the New Mexico Taxation and Revenue Department.

(20) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the applicant must apply to the Division for certification of positive production response, which application shall identify the area actually benefitting from enhanced recovery operations, and identifying the specific wells which the operator believes are eligible for the credit. The Division may review the application administratively or set it for hearing. Based upon evidence presented, the Division will certify to The Department of Taxation and Revenue those lands and wells which are eligible for the credit.

**IT IS THEREFORE ORDERED THAT:**

(1) Pursuant to the application of Devon Energy Corporation (Nevada), the Keel-West, C. A. Russell, Turner "A", Turner "B", Friess-Fren and Hudson Federal Waterflood Projects, all described as follows, are hereby qualified as "Enhanced Oil Recovery Projects" pursuant to the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5):

**KEEL-WEST WATERFLOOD PROJECT**  
**TOWNSHIP 17 SOUTH. RANGE 31 EAST. NMPM**  
Sections 3 through 10: All

**C. A. RUSSELL WATERFLOOD PROJECT**  
**TOWNSHIP 17 SOUTH. RANGE 31 EAST. NMPM**  
Section 18: NW/4, W/2 NE/4

**TURNER "A" WATERFLOOD PROJECT**  
**TOWNSHIP 17 SOUTH. RANGE 31 EAST. NMPM**  
Section 18: S/2  
Section 19: N/2

**TURNER "B" WATERFLOOD PROJECT**  
**TOWNSHIP 17 SOUTH, RANGE 31 EAST, NMPM**

Section 17: NW/4 SW/4, S/2 S/2  
Section 20: All  
Section 29: All  
Section 30: S/2

**FRIESS-FREN WATERFLOOD PROJECT**  
**TOWNSHIP 17 SOUTH, RANGE 31 EAST, NMPM**

Section 19: SE/4, E/2 SW/4  
Section 30: NE/4

**HUDSON FEDERAL WATERFLOOD PROJECT**  
**TOWNSHIP 17 SOUTH, RANGE 31 EAST, NMPM**

Section 17: W/2 NW/4  
Section 18: E/2 NE/4

(2) The approved "project areas" shall comprise the entire waterflood project areas described in Ordering Paragraph No. (1) above.

(3) To be eligible for the EOR credit, the operator shall advise the Division when water injection into each additional injection well commenced or will commence in each project and at such time request that the Division certify the subject expansion projects to the New Mexico Taxation and Revenue Department.

(4) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the operator must apply to the Division for certification of positive production response, which application shall identify the area actually benefitting from enhanced recovery operations, and identifying the specific wells which the operator believes are eligible for the credit. The Division may review the application administratively or set it for hearing. Based upon evidence presented, the Division will certify to The Department of Taxation and Revenue those lands and wells which are eligible for the credit.

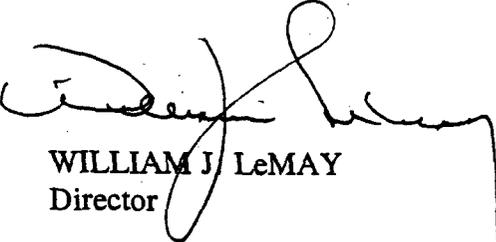
(5) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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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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