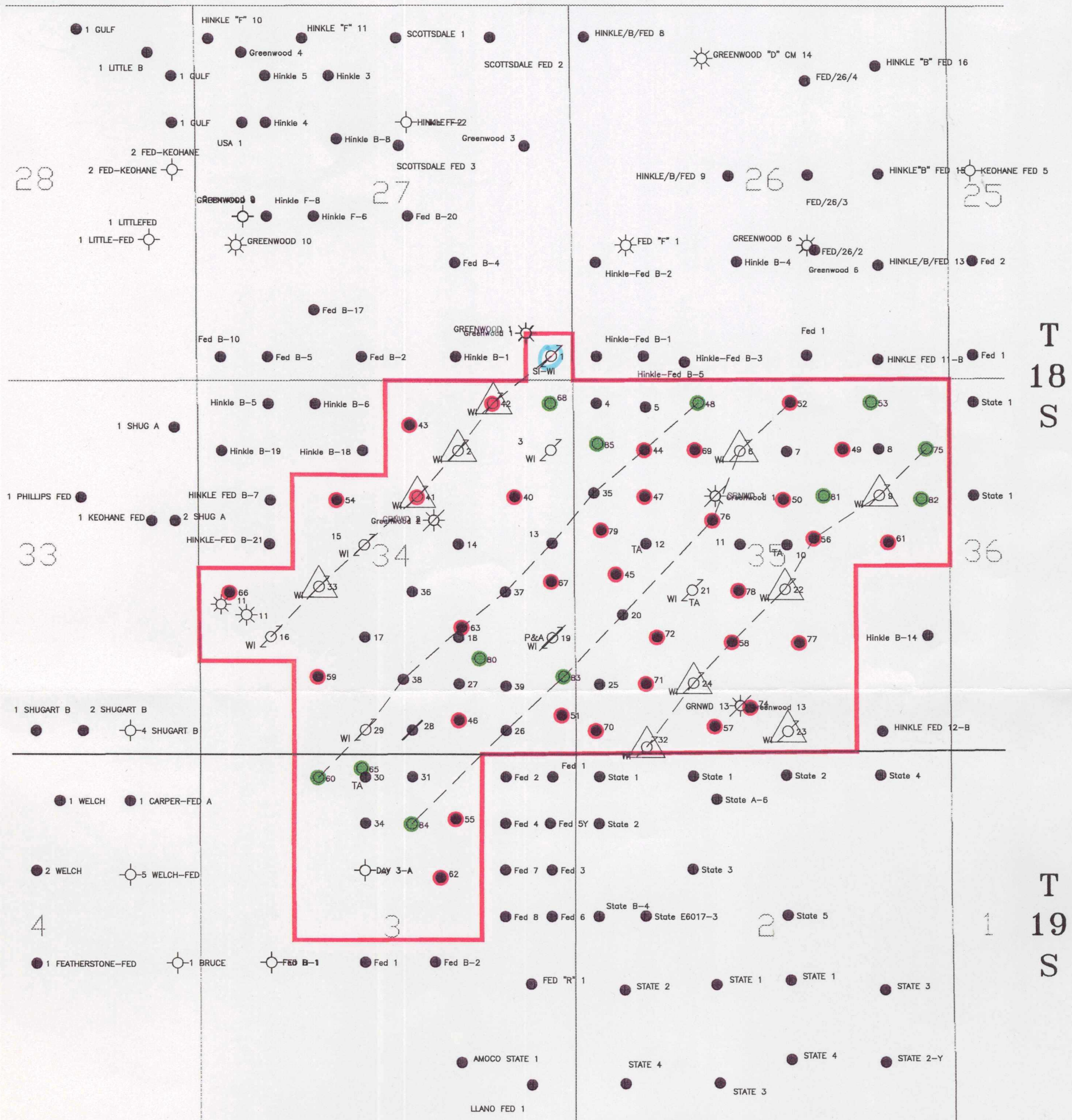


R 31 E



INFILL WELLS DRILLED AFTER 1/1/94

INJECTION CONVERSIONS OR  
REACTIVATIONS AFTER 1/1/94

PROPOSED INFILL WELLS

## PROPOSED LINE DRIVE INJECTION PATTERNS



**devon**  
ENERGY CORPORATION

## EAST SHUGART UNIT

EDDY COUNTY, NEW MEXICO

Before the Oil Conservation Division  
State of New Mexico  
Case No. 11695  
Devon Energy Exhibit No. 1  
January 23, 1997

Scale in Feet

1000      0      1000      2000      3000      4000

## (SHUGART (ATLANTIC-RICHFIELD-QUEEN PILOT WATER-FLOOD) POOL - Cont'd.)

(5) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

## IT IS THEREFORE ORDERED:

(1) That the applicant, Atlantic-Richfield Company, is hereby authorized to institute a pilot waterflood project in the Shugart Pool by the injection of water into the Queen formation through an injection well to be drilled at an unorthodox location 100 feet from the North line and 100 feet from the West line of Section 23, Township 18 South, Range 31 East, NMPM, Eddy County, New Mexico.

(2) That the subject pilot waterflood project is hereby designated the Atlantic Richfield Shugart Panco Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(3) That monthly progress reports of the pilot waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

SHUGART POOL  
(Atlantic Richfield East Shugart Waterflood)  
Eddy County, New Mexico

Order No. R-3769, Authorizing Atlantic Richfield Company to Institute a Waterflood Project in the East Shugart Unit Area, Shugart Pool, Eddy County, New Mexico, May 28, 1969.

Application of Atlantic Richfield Company for a Waterflood Project and Unorthodox Injection Well Location, Eddy County, New Mexico.

CASE NO. 4138  
Order No. R-3769

## ORDER OF THE COMMISSION

BY THE COMMISSION: This cause came on for hearing at 9 a.m. on May 21, 1969, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 28th day of May, 1969, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

## FINDS:

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

(2) That the applicant, Atlantic Richfield Company, see permission to institute a waterflood project in its East Shugart Unit Area, Shugart Pool, by the injection of water into the Yates and Queen formations through 10 injection wells in Sections 23, 34, and 35, Township 18 South, Range 31 East, NMPM, Eddy County, New Mexico, and through the following-described wells which is to be drilled at an unorthodox location:

East Shugart Unit Well No. 32, to be located 100 feet from the South line and 990 feet from the West line of said Section 35.

(3) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(4) That the proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(5) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

## IT IS THEREFORE ORDERED:

(1) That the applicant, Atlantic Richfield Company, is hereby authorized to institute a waterflood project in its East Shugart Unit Area, Shugart Pool, by the injection of water into the Yates and Queen formations through the following-described wells in Township 18 South, Range 31 East, NMPM, Eddy County, New Mexico:

Well	No.	Unit	Section	New Unit Well No.
Atlantic Richfield Co. Hinkle "B"	3	P	27	1
Atlantic Richfield Co. Hinkle "A"	13	A	34	3
Atlantic Richfield Co. Hinkle "B"	5	F	34	15
Atlantic Richfield Co. Hinkle "A"	3	I	34	19
Atlantic Richfield Co. Hinkle "B"	6	L	34	16
Atlantic Richfield Co. Hinkle "B"	1	N	34	29
Cities Service Oil Co. Hinkle "A"	1	O	34	28
Atlantic Richfield Co. Hinkle "A"	12	C	35	6
Atlantic Richfield Co. Hinkle "B"	4	J	35	22
Atlantic Richfield Co. Hinkle "B"	7Y	O	35	23
East Shugart Unit Well No. 32 to be drilled at an unorthodox location 100' FSL and 990' FWL - Section 35				

(2) That the subject waterflood project is hereby designated the Atlantic Richfield East Shugart Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

Before the Oil Conservation Division  
State of New Mexico  
Case No. 11695  
Devon Energy Exhibit No. 2  
January 23, 1997



BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION

ADMINISTRATIVE APPLICATION OF DEVON  
ENERGY CORPORATION (NEVADA) TO  
QUALIFY A WATERFLOOD EXPANSION  
PROJECT FOR THE RECOVERED OIL  
TAX RATE, EDDY COUNTY, NEW MEXICO.

APPLICATION

Devon Energy Corporation (Nevada) files this application pursuant to the Enhanced Oil Recovery Act (L. 1992, Ch. 38) and Division Order No. R-9708. In support thereof, applicant states:

1. The name of the operator is Devon Energy Corporation (Nevada), whose address is Suite 1500, 20 North Broadway, Oklahoma City, Oklahoma 73102.

2. The waterflood project is referred to as the East Shugart Unit Waterflood Project, and the project area for the expansion is as follows:

Township 18 South, Range 31 East, N.M.P.M.

Section 27: SE $\frac{1}{4}$ SE $\frac{1}{4}$   
Section 34: E $\frac{1}{2}$ , SE $\frac{1}{4}$ NW $\frac{1}{4}$ , N $\frac{1}{2}$ SW $\frac{1}{4}$ , and SE $\frac{1}{4}$ SW $\frac{1}{4}$   
Section 35: N $\frac{1}{2}$ , SW $\frac{1}{4}$ , and W $\frac{1}{2}$ SE $\frac{1}{4}$

Township 19 South, Range 31 East, N.M.P.M.

Section 3: Lots 3, 4, SW $\frac{1}{4}$ NE $\frac{1}{4}$ , and SE $\frac{1}{4}$ NW $\frac{1}{4}$

containing 1239.40 acres, more or less.

A plat outlining the project area for the East Shugart Unit Waterflood Project is attached hereto as Exhibit A. The subject pool is the Shugart Pool.

3. The project area was unitized by Division Order No. R-3765, as amended. Devon Energy Corporation (Nevada) is the sole working interest owner in the Unit as to the Shugart Pool.

Before the Oil Conservation Division  
State of New Mexico  
Case No. 11695  
Devon Energy Exhibit No. 3  
January 23, 1997

4. Secondary recovery shall be by a waterflood project. The injection formations are the Yates and Queen formations of the Shugart Pool, with the injected water consisting of produced water from the Shugart Pool, and makeup water (if necessary) from the Double Eagle fresh water system. The waterflood project was approved by Division Order No. R-3769.

5. Pursuant to Order No. R-9708, project data is summarized on Exhibit B attached hereto, and includes:

- (a) Number of producing wells;
- (b) Number of injection wells;<sup>1</sup>
- (c) Capital cost of additional facilities;
- (d) Estimated net value of incremental production recovered from the project;
- (e) Anticipated injection commencement date; and
- (f) Anticipated injection volumes.

This project qualifies as an expansion which is entitled to the recovered oil tax rate because the number of injection and producing wells is being significantly increased, greatly expanding the waterflood pattern. Also, fracture stimulation and completion technology has improved significantly since the waterflood project was instituted, which will allow greater recovery of oil within the project area.

6. The projected primary plus secondary production from the project expansion is shown on Exhibit C attached hereto.<sup>2</sup>

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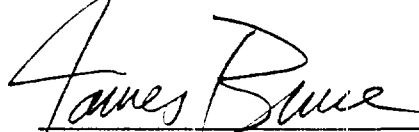
<sup>1</sup>The injection and producing wells in the project area are shown on Exhibit A. The number of producing wells in August 1996 is greater than the number of producing wells at full development because certain wells will initially be producers, but will later be converted to injection.

<sup>2</sup>The initial increase in production is due to drilling new wells in the project area, which are being produced before being converted to injection.

WHEREFORE, Applicant requests that the Division administratively qualify the expansion of the East Shugart Unit Waterflood Project as an Enhanced Oil Recovery Project, and certify the project for the Recovered Oil Tax Rate.

Respectfully submitted,

HINKLE, COX, EATON, COFFIELD  
& HENSLEY, L.L.P.

A handwritten signature in cursive script, appearing to read "James Bruce", is written over a horizontal line.

James Bruce  
P. O. Box 2068  
Santa Fe, New Mexico 87504  
(505) 982-4554

Attorneys for Devon Energy  
Corporation (Nevada)

cc: Artesia District Office

VERIFICATION

STATE OF OKLAHOMA                    )  
COUNTY OF OKLAHOMA                )

Dick Morrow, being duly sworn upon his oath, deposes and states that: he is a petroleum engineer and an employee of applicant; he is familiar with the matters set forth in the foregoing application; and the statements therein are true and correct to the best of his knowledge.

Dick Morrow  
Dick Morrow

SUBSCRIBED AND SWORN TO before me this \_\_\_\_\_ day of November, 1996 by Dick Morrow.

Aida Peters  
Notary Public

My Commission expires:

Jan. 24, 1998

**DEVON ENERGY  
EAST SHUGART UNIT**

Number of Producing Wells:	January, 1994	20
	August, 1996	50
	Full Development	46

Number of Injection Wells:	January, 1994	5
	August, 1996	15
	Full Development	31

Total Capital Cost:	Through August, 1996	\$10,452,285
	Full Development	\$13,752,285

Injection Volumes:	January, 1994	36,068 BWPM
	August, 1996	141,624 BWPM
	Full Development	290,000 BWPM

Anticipated injection commencement date:	Waterflood expansion began August, 1995
	Infill drilling began mid-1993

Estimated net value of incremental production:	\$13,642,151
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# EAST SHUGART UNIT

