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May 16, 1969

*WAX-316*

Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico

RE: CASE NO. 3779, ORDER R-3431

Gentlemen:

In accordance with the provisions of Order R-3431, Shenandoah Oil Corporation is making Application for Administrative Approval of two additional water injection wells in the Shenandoah Shugart Waterflood Project and its Application in triplicate is enclosed herewith.

If there are any questions or you need additional information, please call us.

Yours very truly,

JENNINGS & COPPLE

  
James T. Jennings

JTJ/mb

Encl.

cc: Union Oil Co. of Calif., Midland Office, w/encl.  
Chambers & Kennedy, w/encl.  
U.S.G.S., Artesia Office, w/encl.  
Shenandoah Oil Corporation

BEFORE THE OIL CONSERVATION COMMISSION

OF THE STATE OF NEW MEXICO

WFX-  
100-100-1

IN THE MATTER OF THE APPLICATION OF  
SHENANDOAH OIL CORPORATION TO CONVERT  
TWO ADDITIONAL WELLS TO WATER INJECTION  
WELLS IN THE SHENANDOAH SHUGART WATERFLOOD  
PROJECT IN THE SHUGART POOL, EDDY COUNTY,  
NEW MEXICO.

CASE NO. 3779

APPLICATION FOR ADMINISTRATIVE APPROVAL  
OF ADDITIONAL WATER INJECTION WELLS

Comes now Applicant, Shenandoah Oil Corporation, and  
hereby makes application for administrative approval of the con-  
version of two additional wells to water injection in the Shenandoah  
Shugart Waterflood Project pursuant to Rule 701 E-5 of the Rules  
and Regulations of the Commission and in support thereof states:

1. That by Order No. R-3431 the Commission authorized  
the Applicant herein to institute a waterflood project in the  
Shugart Pool by the injection of water into the Yates, Seven Rivers,  
Queen and Grayburg formations and the Commission designated the  
waterflood project as the Shenandoah Shugart Waterflood Project.

2. That the conversion of two additional wells to water  
injection wells is necessary for an efficient injection pattern  
and will insure the protection of correlative rights and will re-  
sult in the increased ultimate recovery of oil and prevent waste.

3. That the Applicant desires to convert the following  
described wells to water injection wells:

WELL NUMBER

LOCATION

Shugart A-1

SW $\frac{1}{4}$ SW $\frac{1}{4}$  Sec. 29, T-18-S, R-31-E

Shugart C-2

SW $\frac{1}{4}$ SE $\frac{1}{4}$  Sec. 30, T-18-S, R-31-E

4. That Applicant will inject fresh to brackish water and produced water into the Yates, Seven Rivers, Queen and Grayburg formations and that the injection wells will be completed in the same manner as other injection wells on the project, in that Applicant will use plastic coated tubing and downhole Baker flow regulator control valves and packers.

5. In support of this application and in accordance with the provisions of Rule 701-B, Applicant has heretofore submitted in connection with its original application for waterflood project a plat marked as Exhibit A therein showing the location of Applicant's project relative to the ownership of all other leases within a two mile radius which are producing from one or more of the same geologic formations, and Applicant hereby adopts said exhibit by reference and Applicant submits herewith the following exhibits:

Exhibit B: A plat showing the proposed field pattern, the wells which have been converted to water injection wells and the wells which Applicant proposes to convert to water injection wells.

Exhibit C: A diagramatic sketch of the proposed injection wells showing tops of the cement, perforations and depths.

Exhibit D: Tabulation of cementing data.

Applicant does not have logs available on the wells.

6. That Chambers & Kennedy, the Operator offsetting the Shugart No. 1-A Well, has agreed to place its Monterey State No. 3 located in the NE $\frac{1}{4}$ NW $\frac{1}{4}$  Section 32, Township 18 South, Range 31 East, N.M.P.M., on injection and Union Oil Company of California, the Operator offsetting the Shugart No. C-2 Well, has agreed to place its No. F-1 located in the NE $\frac{1}{4}$ NE $\frac{1}{4}$  Section 31, Township 18 South, Range 31 East, N.M.P.M., on injection, and that copies of this application

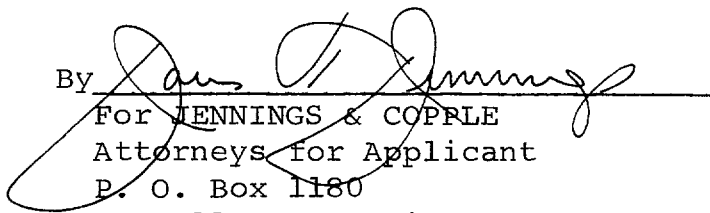
have been mailed to said Operators.

WHEREFORE, Applicant requests that the Secretary-Director of the Commission approve the expansion of the Shenandoah Shugart Waterflood Project to include the above described injection wells and that the Applicant be authorized to inject water into the Yates, Seven Rivers, Queen and Grayburg formations in the above described injection wells located in Sections 29 and 30, Township 18 South, Range 31 East, N.M.P.M.

Respectfully submitted,

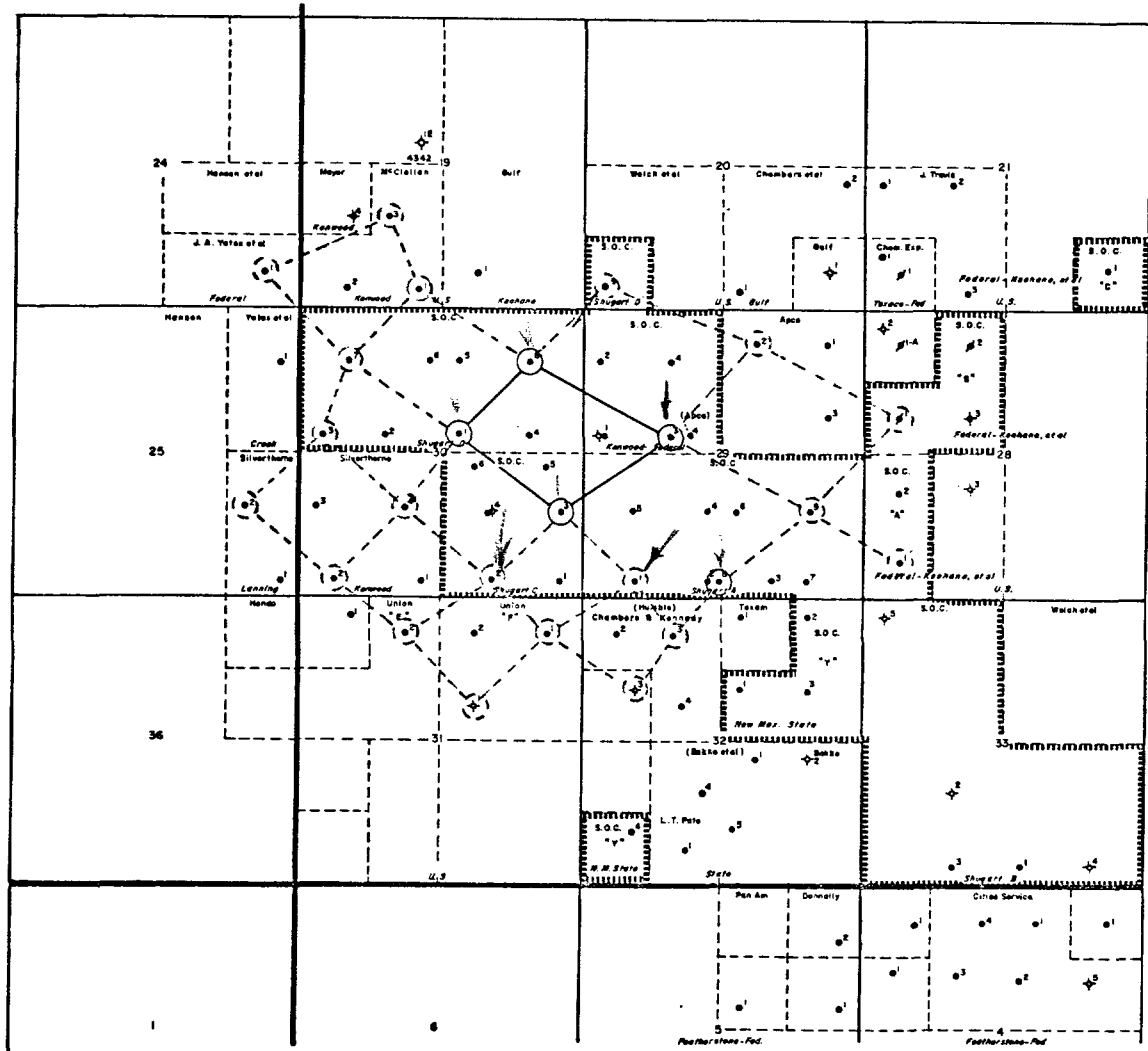
SHENANDOAH OIL CORPORATION

By



For JENNINGS & COPPLE  
Attorneys for Applicant  
P. O. Box 1180  
Roswell, New Mexico

R 31 E

T  
8  
S

**-LEGEND-**

### \*\*\*\*\* LEASE BOUNDARIES

\_\_\_\_\_ Pilot

----- Proposed Field Pattern

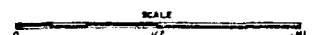
⊙      Converted Pilot Inj. Well

### Proposed Conversion



**SOC**  
SHENANDOAH OIL CORPORATION

FLOOD NO. 4  
SHUGART  
EDDY COUNTY, NEW MEXICO



**JUNE, 1968**

Shugart A-1	EXHIBIT	"C"	Shugart C-2
<p>632' - 8-5/8" csg. w/50 sks. Calc. Top - 238'</p>			
<p>Perf. 3594' - 3626'</p>		<p>761' - 8-5/8" csg. 75 sks. Cement</p>	<p>Perf. (Yates) 2592' - 2608'</p>
<p>Perf. 3662' - 7" O.D. csg. 150 sks.</p>			<p>Perf. 3595' - 3630'</p>
<p>Perf. 3657' - 3669'</p>			<p>3675' - 7" O.D. csg. 200 sks. Cement</p>
<p>5-1/2" Liner 3633' - 3733' Cemented w/20 sks.</p>	<p>T. D. 3740' PBTD 3733'</p>		<p>T. D. 3675' PBTD 3660'</p>

EXHIBIT "D"

LEASE AND WELL NO.	HOLE SIZE	SIZE & DEPTH OF CASING	SACKS OF CEMENT USED	LIN. FEET PER SACK	CALCULATED TOP OF CEMENT
Shugart A-1	10"	8-5/8" O. D. @ 632'	50	7.87	238'
	8 1/4"	7" O. D. @ 3662'	150	10.58	2,075'
	6 1/4"	5" Liner 3633' - 3733'	20	Circ. over Top of Liner	
Shugart C-2	10"	8-5/8" O. D. @ 761'	75	7.87	171'
	8 1/4"	7" O. D. @ 3675'	200	10.58	1,559'