

Case 2615

AZTEC OIL & GAS COMPANY

920 MERCANTILE SECURITIES BLDG.
DALLAS 1, TEXAS

July 6, 1962

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. A. L. Porter, Jr., Secretary-Director
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Re: Application of Aztec Oil & Gas
Company for Hearing on Waterflood
Project for a Portion of the
Robinson Grayburg-San Andres
Oil Pool, Lea and Eddy Counties,
New Mexico

Dear Mr. Porter:

Application is hereby made by Aztec Oil & Gas Company for approval of a waterflood project to be known as the Aztec-Robinson Waterflood Project. The proposed project would cover the area described by sections or subdivisions thereof set out in Exhibit "A" and designated on the plat attached hereto as Exhibit "B".

It is proposed that water obtained from the Caprock Water Company, or some other commercial source of supply, will be injected into the Grayburg formation encountered at a depth of approximately three thousand eight hundred and fifty feet (3,850') through approximately six (6) injection wells. It is expected that injection will commence at a rate of approximately five hundred (500) barrels per day per injection well.

The casing program of the proposed injection wells is shown on Exhibit "C".

Logs of the proposed injection wells are enclosed with this application.

A list of the names and addresses of all the lessees within a two mile radius of the proposed project area known to applicant is appended to this application.

Pursuant to Rule 701, Aztec Oil & Gas Company respectfully requests permission for such waterflood project and requests that the matter be

Mr. A. L. Porter, Jr.

-2-

July 6, 1962

set for hearing at an early date.

Respectfully submitted,

AZTEC OIL & GAS COMPANY

By Kenneth A. Swanson
Kenneth A. Swanson
Attorney

KAS/et

cc: All Lessees Within
a Two-Mile Radius

EXHIBIT "A"

Aztec-Robinson Waterflood Project Area

Township 16 South, Range 31 East, N.M.P.M.

Section 36: $E\frac{1}{2}SE\frac{1}{4}$, $SW\frac{1}{4}SE\frac{1}{4}$

Township 16 South, Range 32 East, N.M.P.M.

Section 30: $SW\frac{1}{4}SE\frac{1}{4}$

Section 31: $W\frac{1}{2}$, $W\frac{1}{2}E\frac{1}{2}$, $SE\frac{1}{4}SE\frac{1}{4}$

(containing 660.00 acres, more or less)

Lea and Eddy Counties, New Mexico

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF :
AZTEC OIL & GAS COMPANY FOR A SECONDARY :
RECOVERY PROJECT, ROBINSON GRAYBURG-SAN : Case No. 2615
ANDRES POOL, LEA AND EDDY COUNTIES, NEW :
MEXICO. :

APPLICATION FOR DE NOVO HEARING

COMES WATER-FLOOD ASSOCIATES, INC., and BTA OIL
PRODUCERS by their attorneys, Losee and Stewart, and respect-
fully state:

1. That on August 13, 1962, the Oil Conservation
Commission of New Mexico, hereinafter referred to as the
"Commission", pursuant to a hearing held by Daniel S. Nutter,
Examiner, on August 8, 1962, entered its Order Number R-2304
authorizing Aztec Oil & Gas Company to institute a waterflood
project in the Robinson Grayburg-San Andres Pool, Lea and
Eddy Counties, New Mexico, hereinafter referred to as the
"Robinson Pool", by the injection of water into the Grayburg
formation through the wells hereinafter described and provid-
ing that the waterflood project would be governed by the
provisions of Rule 701 and that the Commission would retain
jurisdiction of the cause for the entry of such further orders
as may be necessary.

2. That Water-Flood Associates, Inc., operates 17
wells within said Robinson Pool and is the owner of the
following developed and undeveloped acreage in said pool,

Township 16 South, Range 32 East, N.M.P.M.

Section 30: SE/4

Township 16 South, Range 31 East, N.M.P.M.

Section 25: SW/4 NE/4, SW/4, N/2 SE/4,
SW/4 SE/4

Section 35: N/2, SW/4, W/2 SE/4.

3. That BTA Oil Producers operates 5 wells within said Robinson Pool and is the owner of the following developed and undeveloped acreage in said pool, to-wit:

Township 16 South, Range 31 East, N.M.P.M.

Section 36: NW/4 SE/4, SW/4, N/2 NW/4,
SW/4 NW/4.

4. That Commission Order Number R-2304 authorized the injection of water into the Grayburg formation through the following described wells:

State "RC" Well No. 1, Unit L, Section 31,
Township 16 South, Range 32 East;

State "RC" Well No. 3, Unit P, Section 36,
Township 16 South, Range 31 East;

State "R" Well No. 3, Unit N, Section 31,
Township 16 South, Range 32 East;

Brinson Federal Well No. 1, Unit F, Section 31,
Township 16 South, Range 32 East;

Brinson Federal Well No. 3, Unit B, Section 31,
Township 16 South, Range 32 East; and

Humble State "A" Well No. 3, Unit J, Section 31,
Township 16 South, Range 32 East.

5. That on June 21, 1962, the Commission entered its Order Number R-2270 in Case Number 2580 authorizing Water-Flood Associates, Inc., to institute a waterflood

project in the Robinson Pool by the injection of water into the Grayburg formation through the following described wells:

Kennedy-Johnson "A" Well No. 4, Unit E,
Section 35, Township 16 South, Range 31 East;

Kennedy-Johnson "A" Well No. 5, Unit O,
Section 35, Township 16 South, Range 31 East;

Carper-Johnson "A" Well No. 1, Unit G,
Section 35, Township 16 South, Range 31 East;

Carper-Johnson "A" Well No. 3, Unit K,
Section 35, Township 16 South, Range 31 East;

Water-Flood Associates, Inc., undeveloped
location, Unit C, Section 35, Township 16
South, Range 31 East;

Water-Flood Associates, Inc., undeveloped
location, Unit M, Section 35, Township 16
South, Range 31 East.

The location of these injection wells was an extension of the already established pattern and authorized injection wells of Newmont Oil Company in the Square Lake Pool adjoining the Robinson Pool on the West. Water-Flood Associates, Inc., is presently converting 4 of the above wells into injection wells in conformity with this Order.

6. The injection well pattern authorized by Order R-2304 does not adhere or conform to the injection well pattern established by the previously entered Order R-2270 and therefore at such time as the two opposite injection patterns meet in the Robinson Pool, waste will occur and correlative rights will not be protected.

7. That Applicants are parties adversely affected by that portion of Commission Order Number R-2304 authorizing

the injection of water into the Grayburg formation through the wells described in paragraph number 4 hereof.

WHEREFORE, Applicants pray the orders of the Commission as follows:

(1) That this matter be set for a de novo hearing before the Commission at the next regular hearing date following the expiration of 15 days from the date this application is filed with the Commission and due notice be given thereof as required by law;

(2) That if desired by the Commission and permissible under the rules, such de novo hearing be limited to evidence on the location of the proposed injection wells of Aztec Oil & Gas Company in the project area;

(3) That Commission Order Number R-2304 be modified to authorize an injection well pattern for Aztec Oil & Gas Company which will conform to the established injection well pattern previously authorized in the Robinson Pool and in the adjacent Square Lake Pool; and

(4) For such other relief as may be just in the premises.

WATER-FLOOD ASSOCIATES, INC.
BTA OIL PRODUCERS

By _____

A. J. Losee of
LOSEE AND STEWART
Attorneys at Law
P. O. Drawer 239
Artesia, New Mexico

DOCKET MAILED

Date 10-4-62

AZTEC OIL & GAS COMPANY

Casing Programs
Producing Wells to be Converted to Injection Wells
Robinson Pool
Ica and Eddy Counties, New Mexico
Proposed Aztec-Robinson Waterflood Project
EXHIBIT "C"

Well No.	Location	Surface Casing				Production Casing				Injection Equipment			Perfs
		Casing		Cement		Casing		Cement		Bridge Plug	Injection Tubing		
		Size OD (")	Depth (')	Top Depth (')	Base Depth (')	Size OD (")	Depth (')	Top Depth (')	Base Depth (')	Depth (')	Size OD (")	Est. Depth Pier (')	
State "RC" #4	660 FSL, 1980 FWT, Sec. 36-16S-31E	8-5/8	333	250	Surface 333	4-1/2	3997	225	2325-3997	-	2-3/8	3770	3753-59 3798-3809 3814-20 3823-31 3834-40
State "RC" #1	1980 FSL, 660 FWT, Sec. 31-16S-32E	8-5/8	330	250	Surface 330	4-1/2	4020	200	2775-4020	3900	2-3/8	3725	3776-84 3815-19 3824-32 3835-40 3845-56 3968-78
Drinson Fed. #1	1980 FWT, 2240 FWT, Sec. 31-16S-32E	8-5/8	330	350	Surface 330	4-1/2	4018	225	2325-4018	-	2-3/8	3750	3800-06 3834-48 3859-67

Well No.	Location	Surface Casing			Production Casing			Injection Equipment			Perfs		
		Casing	Cement		Casing	Cement		Bridge Plug	Injection Tubing				
		Size OD (")	Depth (')	Top Depth (')	Base Depth (')	Size OD (")	Depth (')	Top Depth (')	Base Depth (')	Size OD (")	Est. Depth Fkr (')	(')	
Brinson Fed. #3	1980 FWT, 660 FWT, Sec. 31-16S-32E	8-5/8	330	250	Surface 330	4-1/2	4085	225	2350-4085	Previously set at 3970	2-3/8	3800	3848-54 3882-88 3890-92 3903-09 4040-54
State "R" #3	990 FSL, 1700 FWT Sec. 31-16S-32E	8-5/8	331	250	Surface 331	4-1/2	4215	200	3005-4215	3900	2-3/8	3750	3806-18 3823-48 3957-71
Humble State "A" #3	1830 FSL, 1980 FWT Sec. 31-16S-32E	10-3/4	360	100	Surface 360	5-1/2	4033	200	- 4033	-	2-3/8	3750	3805-08 3841-69

Case 2615

AZTEC OIL & GAS COMPANY

920 MERCANTILE SECURITIES BLDG.

DALLAS 1, TEXAS

JUL 10 AM 13

July 6, 1962

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. A. L. Porter, Jr., Secretary-Director
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Re: Application of Aztec Oil & Gas
Company for Hearing on Waterflood
Project for a Portion of the
Robinson Grayburg-San Andres
Oil Pool, Lea and Eddy Counties,
New Mexico

Dear Mr. Porter:

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It is proposed that water obtained from the Caprock Water Company, or some other commercial source of supply, will be injected into the Grayburg formation encountered at a depth of approximately three thousand eight hundred and fifty feet (3,850') through approximately six (6) injection wells. It is expected that injection will commence at a rate of approximately five hundred (500) barrels per day per injection well.

The casing program of the proposed injection wells is shown on Exhibit "C".

Logs of the proposed injection wells are enclosed with this application.

A list of the names and addresses of all the lessees within a two mile radius of the proposed project area known to applicant is appended to this application.

Pursuant to Rule 701, Aztec Oil & Gas Company respectfully requests permission for such waterflood project and requests that the matter be

Mr. A. L. Porter, Jr.

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July 6, 1962

set for hearing at an early date.

Respectfully submitted,

AZTEC OIL & GAS COMPANY

By Kenneth A. Swanson
Kenneth A. Swanson
Attorney

KAS/et

cc: All Lessees Within
a Two-Mile Radius

LIST OF LESSEES AND ADDRESSES KNOWN TO
APPLICANT WITHIN TWO MILES OF PROPOSED
PROJECT AREA

Tidewater Oil Company
P. O. Box 1231
Midland, Texas

Pan American Petroleum Corporation
P. O. Box 480
Farmington, New Mexico

The Pure Oil Company
P. O. Box 671
Midland, Texas

Continental Oil Company
P. O. Box 431
Midland, Texas

Sinclair Oil & Gas Company
P. O. Box 1470
Midland, Texas

Shell Oil Company
P. O. Box 1810
Midland, Texas

Mobil Oil Company
P. O. Box 900
Dallas, Texas

The Atlantic Refining Company
P. O. Box 1610
Midland, Texas

Southern Union Production Company
Fidelity Union Tower
Dallas 1, Texas

Lee Drilling Company
P. O. Box 1109
Midland, Texas

Waterflood Associates, Inc.
3017 Lubbock Avenue
Fort Worth, Texas

Humble Oil & Refining Company
P. O. Box 1600
Midland, Texas

Hudson & Hudson, Inc.
1810 Electric Bldg.
Fort Worth, Texas

Santiago Oil & Gas Company
P. O. Box 1205
Midland, Texas

Mr. I. W. Lovelady
Petroleum Building
Odessa, Texas

Mr. O. F. Featherstone
200 W. First Street
Roswell, New Mexico

Mr. M. A. Machris
707 Midland Tower
Midland, Texas

Hondo Oil & Gas Company
410 E. College Blvd.
Roswell, New Mexico

Blue Pacific Drilling Corporation
P. O. Box 832
Midland, Texas

DOB Oil Properties, Inc.
Western Building
Midland, Texas

EXHIBIT "A"

Aztec-Robinson Waterflood Project Area

Township 16 South, Range 31 East, N.M.P.M.

Section 35: $E\frac{1}{2}SE\frac{1}{4}$, $SW\frac{1}{4}SE\frac{1}{4}$

Township 16 South, Range 32 East, N.M.P.M.

Section 30: $SW\frac{1}{4}SE\frac{1}{4}$

Section 31: $W\frac{1}{2}$, $W\frac{1}{2}E\frac{1}{2}$, $SE\frac{1}{4}SE\frac{1}{4}$

(containing 600.00 acres, more or less)

Lea and Eddy Counties, New Mexico

Case 2615

LAW OFFICES

LOSEE AND STEWART

CARPER BUILDING - P. O. DRAWER 239

ARTESIA, NEW MEXICO

A. J. LOSEE

EDWARD B. STEWART

10 September 1962

Mr. A. L. Porter, Jr., Secretary
New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Re: Application of Aztec Oil & Gas Company for a
secondary recovery project in the Robinson
Pool, Case No. 2615, Order No. R-2304

Dear Mr. Porter:


Enclosed herewith is Application of Water-Flood Associates, Inc.
and BTA Oil Producers for a de novo hearing before the Oil
Conservation Commission of New Mexico on the subject application.

This Application is submitted in triplicate and we are furnishing
each of the parties that receive a carbon of this letter with a
copy of this application.

Our clients' only complaint is with the location of the injection
wells. If permissible under the rules and if desired by the
Commission, the de novo hearing might well be limited to evidence
on the location of the injection wells.

If there is any further information I can furnish you in connec-
tion with this matter, please do not hesitate to advise me.

Very truly yours,



A. J. Losee

AJL/bk
Enclosures

cc Mr. Richard Morris
Seth, Montgomery, Federici and Andrews
Box 871
Santa Fe, New Mexico

DOCKET MAILED

Date 10-4-62

Mr. A. L. Porter, Jr., Secretary

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10 September 1962

cc Aztec Oil & Gas Company
920 Mercantile Securities Building
Dallas 1, Texas

BTA Oil Producers

104 S. Pecos

Midland, Texas

Attention: Mr. Walter D. Jenkins

Mr. Hal Porter

Water-Flood Associates, Inc.

Booker Building

Artesia, New Mexico

DOCKET MAILED

Date _____

**BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO**

SAVING NEW MEXICO
EXHIBIT NO. 3
2615
CASE

CORRECTED

AZTEC OIL & GAS COMPANY

Casing Programs
Producing Wells to be Converted to Injection Wells
Robinson Pool
Lea and Eddy Counties, New Mexico
Proposed Aztec-Robinson Waterflood Project

EXHIBIT "C"

Well No.	Location	Surface Casing			Production Casing			Injection Equipment			Perfs			
		Casing		Cement	Casing		Cement	Bridge Plug	Injection Tubing					
		Size OD (")	Depth (')		Size OD (")	Depth (')			Size OD (")	Depth Pkr (')		Est.		
State "RC" #3	660 FSL, 660 FWL Sec. 36-16S-31E	8-5/8	326	250	Surface	326	4-1/2	3991	200	2640 - 3991	3900	2-3/8	3700	(1)
State "RC" #1	1980 FSL, 660 FWL Sec. 31-16S-32E	8-5/8	330	250	Surface	330	4-1/2	4020	200	2775 - 4020	3900	2-3/8	3725	
Brinson Fed. #1	1980 FWL, 2240 FWL Sec. 31-16S-32E	8-5/8	330	350	Surface	330	4-1/2	4018	225	2325 - 4018	-	2-3/8	3750	3800-06 3834-48 3859-67

Well No.	Location	Surface Casing		Production Casing		Injection Equipment		Perfs
		Casing	Cement	Casing	Cement	Bridge Plug	Injection Tubing	
		Size OD (")	Depth (')	Size OD (")	Depth (')	Depth (')	Size OD (")	
Brinson Fed. #3	1980 FEL, 660 FNL Sec. 31-16S-32E	8-5/8	330	4-1/2	4085	225	2-3/8	3848-54 3882-88 3890-92 3903-09 4040-54
			250	4-1/2	4215	200	2-3/8	3806-18 3823-48 3957-71
			331	4-1/2	4033	200	2-3/8	3805-08 3841-69
State "R" #3	990 FSL, 1700 FNL Sec. 31-16S-32E	8-5/8	330	4-1/2	4085	225	2-3/8	3848-54 3882-88 3890-92 3903-09 4040-54
			250	4-1/2	4215	200	2-3/8	3806-18 3823-48 3957-71
			331	4-1/2	4033	200	2-3/8	3805-08 3841-69
Humble St. "A" #3	1880 FSL, 1980 FEL Sec. 31-16S-32E	10-3/4	360	5-1/2	4033	200	2-3/8	3848-54 3882-88 3890-92 3903-09 4040-54
			100	5-1/2	4033	200	2-3/8	3806-18 3823-48 3957-71
			360	5-1/2	4033	200	2-3/8	3805-08 3841-69

AZTEC OIL & GAS COMPANY

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
AZTEC EXHIBIT No. 4
CASE 2615

Data Sheet
Reservoir Rock and Fluid Properties
Northeast Robinson Pool
Lea and Eddy Counties, New Mexico

Proposed Aztec Robinson Waterflood Project

Original Reservoir Pressure, psig @ +150 Ft	1160
Reservoir Temperature, °F	90
Estimated Original Solution GOR, Cu Ft/Bbl	500
Estimated Formation Volume Factor @ 1160 psig, Bbls/Bbl	1.25
Average Gravity of Crude, °API	36
Producing Mechanism	Solution Gas Drive
Average Porosity, %	15.6
Average Permeability (Air), md	10.2
Average Permeability (Water), md	2.8
Average Permeability (Oil), md	4.5
Average Water Saturation, %	49.2
Average Net Pay in Premier Zone, Ft	10
Gas-Oil or Water-Oil Contacts in Premier	None Indicated
Type Accumulation	Stratigraphic Trap