

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

AUG 15 1967

Atlantic-Richfield Company
P. O. Box 1978
Roswell, New Mexico 88201

Attention: Mr. W. P. Tomlinson

Gentlemen:

Your application of June 20, filed with the Oil and Gas Supervisor, Roswell, New Mexico, requests the designation of the East Shugart unit embracing 1359.40 acres, more or less, Eddy County, New Mexico, as logically subject to operations under the unitization provisions of the Mineral Leasing Act as amended. The proposed unit area is comprised of 1319.40 acres (97.06 percent) of Federal land and 40 acres (2.94 percent) of State of New Mexico land.

Unitization is for the purpose of conducting secondary recovery operations by water flooding and will be limited to the Yates, Seven Rivers, Queen, and Grayburg formations, as defined in Section 2(b) of the unit agreement. The area has been developed by 35 wells completed in the formations to be unitized. Participation in unitized substances is based 50 percent on producing rate and 50 percent on remaining primary reserves for Phase I, and 95 percent on ultimate primary reserves and 5 percent on surface acres for Phase II. You estimate that the proposed water flood project will result in the recovery of 2,870,000 barrels of oil over and above that recoverable by primary methods.

The land outlined on your plat marked "Exhibit A, East Shugart Unit, Eddy County, New Mexico" is acceptable as a logical unit area for secondary recovery operations. Your proposed form of unit agreement which modifies the standard Federal form (1961 reprint) to the extent necessary to cover conditions incidental to secondary recovery operations in a producing unit, will be acceptable if further modified as marked in colored pencil and/or by attached riders. One copy of the marked form is returned herewith and the remaining copies are retained for distribution to appropriate offices of the Geological Survey.

In the absence of any type of land requiring special provisions or any objections not now apparent, a duly executed agreement conformed to the marked copy and approved by the appropriate officials of the State of New Mexico will be approved if submitted in approvable status within a reasonable period of time. However, the right is reserved to deny approval of any executed agreement that, in our opinion, does not have the full commitment of sufficient lands to afford effective control of secondary recovery operations.

Please include the latest status of all lands in the executed agreement when it is submitted for final approval. The format of the sample exhibits attached to the 1961 reprint of the standard form should be followed closely in preparation of Exhibits A and B.

Inasmuch as the proposed unit area contains State of New Mexico lands, please contact the Commissioner of Public Lands, Santa Fe, New Mexico, before soliciting joinders regardless of prior contacts with, or clearance from the State.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Arthur A. Bohlen".

Acting Director

DEVON OIL CONSERVATION DIVISION
ENERGY RECEIVED 20 North Broadway
CORPORATION JAN 14 AM 8 56 Suite 1500
Oklahoma City, Oklahoma 73102

405/235-3611
Fax 405/552-4550

January 10, 1994

4137

Director
U. S. Department of the Interior
Bureau of Land Management
Roswell District Office
P. O. Box 1397
Roswell, New Mexico 88202 - 1397

Oil Conservation Division of
The New Mexico Department of
Energy and Minerals
P.O. Box 2088
Santa Fe, New Mexico 87504

Commissioner of Public Lands
The State of New Mexico
Oil & Gas Division
P.O. Box 1148
Santa Fe, New Mexico 87504 - 1148

RE: Report of Past Operations
1994 Plan of Development
East Shugart Unit
Eddy Co., New Mexico

Gentlemen:

1992 Report of Operations

The East Shugart Unit produced 40,536 BO; 4,012 MCF; and, 180,384 BW for 1992. Cumulative oil production from the date of unitization through December 31, 1992 was 3,734,496 BO. Total injection for 1992 was 334,165 BW. Cumulative water injection through December 31, 1992 was 21,215,918 BW.

In March 1992 the ESU #13 was perforated in the Lower Queen 3 and 4 and acidized. This work increased the well's oil production from 17 BOPD to 45 BOPD. In June 1992 the Queen formation at ESU #31 was acidized with 3000 gallons of 15% HCL acid. No increase in production resulted from this work. In July 1992 ESU #20 was re - activated and was producing 5 BOPD and 36 BWPD.

1993 Report of Operations

The East Shugart Unit produced 63,469 BO; 4275 MCF; and 260,584 BW for 1993. Cumulative oil production from the date of unitization through December 31, 1993 was 3,797,965 BO. Total injection for 1993 was 296,571 BW. Cumulative water injection through December 31, 1993 was 21,512,489 BW.

There were nine wells drilled at the East Shugart Unit during 1993. Five of the wells were drilled and completed in the Second and Third Quarters of 1993. These five wells (ESU #35 - #39) increased the total Unit's production from 85 BOPD to 270 BOPD. The remaining four wells will not be completed and placed on production until the First Quarter of 1994.

Three workovers were performed during 1993. In July 1993 the open hole section of the ESU #27 was cleaned out and equipped with a slotted liner. The Lower Queen intervals were acidized and the well placed back on production. Following the workover production increased from 3 BOPD to 8 BOPD. In August 1993 the ESU #14 was cleaned out and the Lower and Upper Queen intervals acidized. A production increased from 0 BOPD to 11 BOPD resulted from this workover. During October 1993 the ESU #13 was cleaned out and the Upper and Lower Queen intervals acidized. Following the workover production increased from 8 BOPD to 11 BOPD.

1994 Plan of Development

During the First Quarter of 1994 at least five new wells will be completed in the Queen formation. Plans during 1994 are to continue to develop the Queen formation through an infill drilling program. Several infill locations have been identified but the actual number of wells to be drilled will depend upon the results of the wells completed during the First Quarter.

Feel free to notify us should you need any additional information.

Sincerely,



Randy Jackson
District Engineer

Hondo Oil & Gas Company

Box 2208
Roswell, New Mexico 88202
(505)625-8700

#4137
DIVISION
MAR 8 26



March 10, 1992

Director
U.S. Department of the Interior
Bureau of Land Management
Roswell District Office
P.O. Box 1397
Roswell, NM 88202-1397

Oil Conservation Division of
The New Mexico Department of
Energy and Minerals
P.O. Box 2088
Santa Fe, NM 87504

Commissioner of Public Lands
The State of New Mexico
Oil & Gas Division
P.O. Box 1148
Santa Fe, NM 87504-1148

RE: Report of Past Operations
1992 Plan of Development
East Shugart Unit
Eddy Co., NM

Gentlemen:

1990 Report of Operations

The East Shugart Unit had production of 46,706 BO, 3,308 MCF and 220,501 BW for 1990. Cumulative oil production through December 31, 1990 was 3,649,322 BO. Total injection for 1990 was 568,468 BW. Cumulative water injection through December 31, 1990 was 20,548,137 BW.

In June the Queen formation in well #2 was additionally perforated, acidized and fraced. Production increased from 4 BOPD to 30 BOPD.

1991 Report of Operations

The East Shugart Unit produced 44,638 BO, 3,024 MCF and 281,473 BW during 1991. Cumulative oil production from the date of unitization through December 31, 1991 was 3,693,960 BO. Total injection for 1991 was 333,616 BW. Cumulative water injection through December 31, 1991 was 20,881,753 BW.

Well #15 was returned to injection in March. In April well #18 was deepened 330' to new pay zones and production increased from 15 BOPD to 50 BOPD. In November additional zones in #13 were perforated and acidized. As a result of this workover, production from #13 increased from 2 BOPD to 37 BOPD. Two new wells were drilled in 1991. Well #34 was completed 1/1/91 and well #33 was completed 3/14/91. Both were put on production but shut-in due to non-commercial producing rates.

1992 Plan of Development

In 1992 plans are to continue workovers to open additional Queen pay through perforating or deepening. Several possible infill locations have also been identified to recover reserves from discontinuous pay zones.

If you have any questions or need further information, please advise.

Sincerely,

E. L. Buttross, Jr.

E. L. Buttross, Jr.
Petroleum Engineer

ELB/lb

Hondo Oil & Gas Company

Box 1397
Roswell, New Mexico 88202
(505) 261-0100

DIVISION

RECEIVED

'90 MAY 10 2 06 46



MAR 19 1 07 14 '90

BULL. 1001
ROSWELL DISTRICT

March 15, 1990

Director
U. S. Department of the Interior
Bureau of Land Management
Roswell District Office
P. O. Box 1397
Roswell, NM 88202-1397

#4137

Oil Conservation Division of
The New Mexico Department of
Energy and Minerals
P. O. Box 2088
Santa Fe, NM 87504

Commissioner of Public Lands
The State of New Mexico
Oil & Gas Division
P. O. Box 1148
Santa Fe, NM 87504-1148

RE: 1989 Report of Operations
1990 Plan of Development
East Shugart Unit
Eddy County, New Mexico

Gentlemen:

1989 Report of Operations

The East Shugart Unit had production of 47,214 BO, 15,521 MCF and 130,627 BW for 1989. Cumulative oil production through December 31, 1989 was 3,602,616 BO. The total injection for 1989 was 630,217 BW. Cumulative water injection through December 31, 1989 was 19,979,669 BW.

Two wells in the unit were deepened and recompleted in 1989. Well no. 5 was deepened from 2827' to 4360', 4 1/2" casing was set @ 4360', and the well was made a producer from perforations @ 3318-3893'. Well no. 31 was deepened from 2665' to 4361', 4 1/2" casing was set @ 4361', and the well was made a producer from perforations @ 3314-3864'.

In addition, the following well status changes were made in 1989:
(1) injection wells no. 1 and 16 were returned to active injectors,

(2) injection well no. 32 was shut-in, (3) producing wells no. 10 and 31 were returned to production, and (4) producing wells no. 8 and 11 were shut-in.

1990 Plan of Development

Hondo Oil & Gas Company is presently evaluating the possibility of drilling a new well in the unit. Should this happen a supplemental plan of development will be submitted.

We plan to continue injection of produced water. Routine repairs and maintenance work will be performed as needed in 1990.

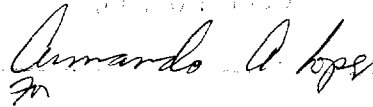
If you need further information or have any questions, please advise.

Sincerely,



Ron Brown
Petroleum Engineer

RB/lb



Armando A. Lopez

#4137
Hondo Oil & Gas Company

Box 2208
Roswell, New Mexico 88202
(505) 625-8700
DIVISION
RECEIVED

'90 MAR 19 AM 9 24



March 15, 1990

Director
U. S. Department of the Interior
Bureau of Land Management
Roswell District Office
P. O. Box 1397
Roswell, NM 88202-1397

Oil Conservation Division of
The New Mexico Department of
Energy and Minerals
P. O. Box 2088
Santa Fe, NM 87504

Commissioner of Public Lands
The State of New Mexico
Oil & Gas Division
P. O. Box 1148
Santa Fe, NM 87504-1148

RE: 1989 Report of Operations
1990 Plan of Development
East Shugart Unit
Eddy County, New Mexico

Gentlemen:

1989 Report of Operations

The East Shugart Unit had production of 47,214 BO, 15,521 MCF and 130,627 BW for 1989. Cumulative oil production through December 31, 1989 was 3,602,616 BO. The total injection for 1989 was 630,217 BW. Cumulative water injection through December 31, 1989 was 19,979,669 BW.

Two wells in the unit were deepened and recompleted in 1989. Well no. 5 was deepened from 2827' to 4360', 4 1/2" casing was set @ 4360', and the well was made a producer from perforations @ 3318-3893'. Well no. 31 was deepened from 2665' to 4361', 4 1/2" casing was set @ 4361', and the well was made a producer from perforations @ 3314-3864'.

In addition, the following well status changes were made in 1989:

(1) injection wells no. 1 and 16 were returned to active injectors,

(2) injection well no. 32 was shut-in, (3) producing wells no. 10 and 31 were returned to production, and (4) producing wells no. 8 and 11 were shut-in.

1990 Plan of Development

Hondo Oil & Gas Company is presently evaluating the possibility of drilling a new well in the unit. Should this happen a supplemental plan of development will be submitted.

We plan to continue injection of produced water. Routine repairs and maintenance work will be performed as needed in 1990.

If you need further information or have any questions, please advise.

Sincerely,

A handwritten signature in cursive script that reads "Ron Brown".

Ron Brown
Petroleum Engineer

RB/lb

Hondo Oil & Gas Company

Box 2208
Roswell, New Mexico 88202
(505)625-8700



RECEIVED

July 25, 1989

JUL 27 1989

OIL CONSERVATION DIV.
SANTA FE

Director
U.S. Department of the Interior
Bureau of Land Management
P. O. Box 1778
Carlsbad, NM 88220

Oil Conservation Division of
The New Mexico Department of
Energy and Minerals
P. O. Box 2088
Santa Fe, NM 87504

Commissioner of Public Lands
The State of New Mexico
310 Old Santa Fe Trail
Santa Fe, NM 87501

File: East Shugart Unit
Eddy County, New Mexico

RE: Report of Past Operations and
Plans for Development for 1989

Gentlemen:

1988 Report of Operations

Oil production for 1988 was in the amount of 30,476 barrels with a cumulative of 3,555,402 barrels through December 31, 1988. The daily average during December, 1988, was 80 barrels per day.

Cumulative water injection through December 31, 1988, was 19,349,452 barrels. The total figure for 1988 was 93,552 barrels. The daily average water injection during December, 1988, was 243 barrels per day with an average pressure of 1175 psig.

Only routine repairs and maintenance were performed in 1988.

4137

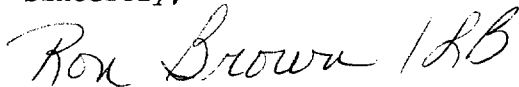
1989 Plan of Development

We plan to continue injection of produced water.

Also planned is the deepening and recompletion of 2 existing wells. The East Shugart #5 is to be deepened from a TD of 2827' to 4360'. The East Shugart #31 is to be deepened from a TD of 2665' to 4361'. In addition, each well will have newly perforated intervals.

If you need any further information, please advise.

Sincerely,

A handwritten signature in cursive script that reads "Ron Brown" followed by the initials "RB".

Ron Brown
Petroleum Engineer

RB/lb

Hondo Oil & Gas Company

Box 2208
Roswell, New Mexico 88202
(505)625-8700



July 25, 1989

#4137

Director
U.S. Department of the Interior
Bureau of Land Management
P. O. Box 1778
Carlsbad, NM 88220

Oil Conservation Division of
The New Mexico Department of
Energy and Minerals
P. O. Box 2088
Santa Fe, NM 87504

Commissioner of Public Lands
The State of New Mexico
310 Old Santa Fe Trail
Santa Fe, NM 87501

RE: Update for 1989 Plan of Development
East Shugart Unit
Eddy County, New Mexico

Gentlemen:

Please consider the following as an after-the-fact supplement to the enclosed 1989 Plan of Development.

The East Shugart Unit #5 has been deepened to a new TD of 4360' with 4 1/2" casing having been set at such depth with 500 sx. of cement. It was recompleted 4/13/89 through new perforations 3318-3893' (55 holes).

Also having been deepened was the East Shugart Unit #31. 4 1/2" casing was set at the new TD of 4361' with 650 sx. of cement. This well was recompleted 3/28/89 through new perforations from 3314-3530' (30 holes) and 3584-3864' (30 holes).

Drawer 1857
Roswell, New Mexico 88201

September 11, 1969

Atlantic Richfield Company
P. O. Box 1973
Roswell, New Mexico 88201

Attention: Mr. Dan Goodwin

Gentlemen:

The following described instruments relative to the commitment of interests to the East Shugart unit agreement, No. 14-08-0001-11572, Eddy County, New Mexico, were filed in this office on August 29, 1969:

1. One original of a joinder to the unit agreement executed on June 17, 1969, by Van Phillip Welch, Jr., as owner of overriding royalty interests under Federal tracts 1b, 1d, 2b, 2c, and 2d, lease Las Cruces 029392(a) and Las Cruces 029392(b).
2. One original of a joinder to the unit agreement executed on August 27, 1969, by Thomas F. Welch, as owner of overriding royalty interests under Federal tract No. 2c, lease Las Cruces 029392(b).
3. Your letter of August 28, 1969, as working interest owner in the above identified tracts, consenting to the joinders mentioned in items 1 and 2 above.

The joinders listed above are held to be effective as of September 1, 1969. Copies of the joinders are being distributed to the Federal agencies concerned. It is requested that you furnish appropriate notice of this commitment to any other interested principal.

Sincerely yours,

(ORIG. SGD.) CARL C. TRAYWICK

CARL C. TRAYWICK
Acting Oil and Gas Supervisor

cc:
Washington (w/cy joinder)
Artesia w/joinder
BIM, Santa Fe (w/joinder)
HROCC, Santa Fe (ltr. only) ✓
Accounts



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Drawer 1857
Roswell, New Mexico 88201

MAIN OFFICE

'69 JUL 24 PM 2 08

IN REPLY REFER TO:

July 22, 1969

Atlantic Richfield Company
P. O. Box 1978
Roswell, New Mexico 88201

Attention: Mr. Dan Goodwin

Gentlemen:

Your letter of July 18, 1969, transmits four copies of a "Certificate of Effectiveness" for the East Shugart unit agreement, No. 14-08-0001-11572. Such instrument is filed pursuant to Section 21 of the East Shugart unit agreement to substantiate the effective date of the agreement as July 1, 1969. The "Certificate of Effectiveness" is hereby accepted for the record and copies thereof are being furnished the appropriate Federal offices.

Your letter of June 12, 1969, which transmitted the East Shugart unit agreement for final approval, also transmits four copies of a revised Exhibit B corrected to show the Phase I and Phase II participation percentages of the committed and qualified tracts. The exhibit has been checked, found correct, and is hereby accepted effective July 1, 1969, the effective date of the East Shugart unit agreement. Copies of such revised Exhibit B are being distributed to the Federal offices involved.

Sincerely yours,

(ORIG. SGD.) JOHN A. ANDERSON

JOHN A. ANDERSON
Regional Oil and Gas Supervisor

cc:
Washington (w/attachments)
BIM, Santa Fe (w/attachments)
Artesia (w/attachments)
NMOCC, Santa Fe (ltr. only) ✓
Accounts

AtlanticRichfieldCompany

North American Producing Division

New Mexico-Arizona District

Post Office Box 1978

Roswell, New Mexico 88201

Telephone 505 622 4041

W. P. Tomlinson

District Engineer



SEP 9 AM 8 11

September 8, 1969

New Mexico Oil Conservation Commission

P. O. Box 2088

Santa Fe, New Mexico 87501

Attention: Mr. A. L. Porter, Jr.

Re: East Shugart Unit

Order No. R-3769

Gentlemen:

This is to advise that Atlantic Richfield Company has started water injection into the following unit wells as per the Plan of Operation.

<u>Well</u>	<u>Date Injection Started</u>
East Shugart Unit No. 3	8-30-69
East Shugart Unit No. 6	9-3-69

Yours very truly,

W. P. Tomlinson

WPT:jcb

cc: United States Geological Survey

P. O. Drawer "U"

Artesia, New Mexico 88210

New Mexico Oil Conservation Commission

P. O. Drawer DD

Artesia, New Mexico 88210

4137

AtlanticRichfieldCompany

North American Producing Division
New Mexico-Arizona District
Post Office Box 1978
Roswell, New Mexico 88201
Telephone 505 622 4041

Jack Biard
District Landman

MAILED 11

JUL 22 AM 8 48



4137

July 18, 1969

East Shugart Unit
T-18 and 19-S, R-31-E
Eddy County, New Mexico

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Gentlemen:

In connection with the subject unit, I am submitting for your files a Xerox copy of the Certification-Determination instrument issued by the United States Geological Survey on June 24, 1969, and a Certificate of Effectiveness, as required by Section 21 of the Unit Agreement, prepared by Atlantic Richfield Company, as operator, dated July 18, 1969.

Yours very truly,

ATLANTIC RICHFIELD COMPANY

Dan Goodwin
Land Department

DG/dlm
Encls.

CERTIFICATION--DETERMINATION


Pursuant to the authority vested in the Secretary of Interior, under the act approved February 25, 1920, 41 Stat. 437, as amended, 30 U. S. C. secs. 181, et seq., and delegated to the Oil and Gas Supervisors of the Geological Survey (33 F.R. 5812), I do hereby:

A. Approve the attached agreement for the development and operation of the East Shugart Unit Area, State of New Mexico.

B. Certify and determine that the unit plan of development and operation contemplated in the attached agreement is necessary and advisable in the public interest for the purpose of more properly conserving the natural resources.

C. Certify and determine that the drilling, producing, rental, minimum royalty, and royalty requirements of all Federal leases committed to said agreement are hereby established, altered, changed, or revoked to conform with the terms and conditions of this agreement.

Dated June 24, 1969.


Regional Oil and Gas Supervisor
United States Geological Survey

Contract Number 14-08-0001-11572

CERTIFICATE OF EFFECTIVENESS
EAST SHUGART UNIT
EDDY COUNTY, NEW MEXICO
EFFECTIVE DATE: JULY 1, 1969

WHEREAS, a Unit Agreement dated January 1, 1969, unitizing working and royalty interest in the East Shugart Unit, was approved by the Oil Conservation Commission for the State of New Mexico by Order No. R-3765 dated May 23, 1969, and Nunc Pro Tunc Order No. R-3765-A dated June 3, 1969, and the United States Geological Survey by the Certification-Determination No. 14-08-0001-11572, dated June 24, 1969.

WHEREAS, said Unit Agreement further provides that Unit Operator shall, within thirty (30) days after the effective date, file for record a certificate to the effect that said agreement has become effective according to its terms and stating further the effective date and the location of the governmental agency offices where copies of the Unit Agreement are filed.

NOW, THEREFORE, Atlantic Richfield Company, as Unit Operator, does hereby declare and certify that the effective date of said Unit is 7:00 o'clock a.m., MDT, July 1, 1969, and that descriptions of the said lands and formations as to which said Unit is effective are as follows:

NEW MEXICO PRINCIPAL MERIDIAN, NEW MEXICO
EDDY COUNTY, NEW MEXICO

Township 18 South, Range 31 East

Section 27: $SE\frac{1}{4}SE\frac{1}{4}$

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

Section 35: $W\frac{1}{2}$, $NE\frac{1}{4}$, $W\frac{1}{2}SE\frac{1}{4}$

Township 19 South, Range 31 East

Section 3: Lot 2, Lot 3, $SW\frac{1}{4}NE\frac{1}{4}$, $SE\frac{1}{4}NW\frac{1}{4}$

containing 1,239.40 acres, more or less.

The Unitized Formation is defined as that subsurface portion of the Unit Area commonly known as the Yates, Seven Rivers, Queen, and Grayburg formations, the top of which is found at 2,312 feet on the Lane Wells radioactivity log dated July 1, 1957 for the Atlantic Richfield Hinkle "A" No. 6 well located 2310' FNL and 330' FEL Section 34, T-18-S, R-31-E, and the bottom of which is a point 2,000 feet below the point at 2,312 feet on the said log, such measurement being made from the derrick floor.

In addition, the Unit outline also includes the following lands which did not qualify under the terms of the East Shugart Unit Agreement and therefore are not entitled to participation in the production of Unitized Substances therefrom:

Township 19 South, Range 31 East

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

Township 18 South, Range 31 East

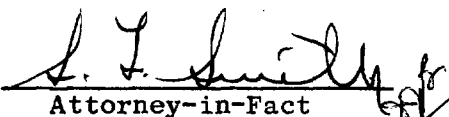
Section 36: $SW\frac{1}{4}NW\frac{1}{4}$

containing 120.00 acres, more or less.

Copies of the East Shugart Unit Agreement have been filed with the United States Geological Survey, Roswell, New Mexico, office, and with the New Mexico Oil Conservation Commission.

IN WITNESS WHEREOF, this certificate is executed this 18th day of July, 1969, by the undersigned, as Unit Operator.

ATLANTIC RICHFIELD COMPANY

By 
Attorney-in-Fact

A C K N O W L E G M E N T

STATE OF NEW MEXICO)
) ss.
COUNTY OF CHAVES)

The foregoing instrument was acknowledged before me this 18th day of
July, 1969, by S. L. Smith, Attorney-in-Fact for Atlantic
Richfield Company, a Pennsylvania corporation, on behalf of said corporation.

Lorathay L McGee
Notary Public

My Commission Expires:

July 14, 1971



RECEIVED
JUN 27 1969
AM 11

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

IN REPLY REFER TO:

Drawer 1857
Roswell, New Mexico 88201

June 27, 1969

Atlantic Richfield Company
P. O. Box 1978
Roswell, New Mexico 88201

Attention: Mr. W. P. Tomlinson

Gentlemen:

Your initial plan of development, dated June 11, 1969, for the East Shugart unit area, Eddy County, New Mexico, proposing to (1) continue water injection into four existing injection wells, (2) subsequently to convert six additional wells to water injection status, and (3) to drill one new water injection well, has been approved on this date. The New Mexico Oil Conservation Commission approved the project and the use of said 11 wells as water injectors by order No. R-3769 dated May 28, 1969.

Three approved copies of the plan are enclosed.

Sincerely yours,

(ORIG. SGD.) JOHN A. ANDERSON

JOHN A. ANDERSON
Regional Oil and Gas Supervisor

cc:
Washington (w/cy plan)
Artesia (w/cy plan)
NMOCC, Santa Fe (ltr. only) ✓

MAIN OFFICE

'69 JUN 25 A

Drawer 1657
Roswell, New Mexico 88201

June 24, 1969

Atlantic Richfield Company
P. O. Box 1978
Roswell, New Mexico 88201

Attention: Mr. Dan Goodwin

Gentlemen:

The East Shugart unit agreement, Eddy County, New Mexico, was approved on June 24, 1969, effective July 1, 1969. This agreement has been designated No. 14-00-0001-11572. Please furnish this office with a certificate of effectiveness pursuant to Section 21 of the unit agreement.

Enclosed are three approved copies of the unit agreement for your records. Please furnish the New Mexico Oil Conservation Commission and all other interested principals with appropriate evidence of this approval.

Sincerely yours,

(ORIG. SGN) JOHN A. ANDERSON

JOHN A. ANDERSON
Regional Oil and Gas Supervisor

cc:

Washington

BLH, Santa Fe

Artesia

NEOCC, Santa Fe

BOMC, Roswell



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

P. O. BOX 2088 - SANTA FE

87501

GOVERNOR
DAVID F. CARGO
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER

STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

June 3, 1969

Mr. Clarence Hinkle
Hinkle, Bondurant & Christy
Attorneys at Law
Post Office Box 10
Roswell, New Mexico 88201

Re: Case No. 4137
Order No. R-3765-A
Applicant:
Atlantic Richfield Co.

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x

Artesia OCC x

Aztec OCC

Other Unit Division - State Land Office



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

P. O. BOX 2088 - SANTA FE

87501

GOVERNOR
DAVID F. CARGO
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER

STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

May 23, 1969

Mr. Clarence Hinkle
Hinkle, Bondurant & Christy
Attorneys at Law
Post Office Box 10
Roswell, New Mexico 88201

Re: Case No. 4137
Order No. R-3765
Applicant:
Atlantic Richfield

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x

Artesia OCC x

Aztec OCC

Other Unit Division - State Land Office

CLARENCE E. HINKLE
W. E. BONDURANT, JR.
S. B. CHRISTY IV
LEWIS C. COX, JR.
PAUL W. EATON, JR.
CONRAD E. COFFIELD
HAROLD L. HENSLEY, JR.
STUART D. SHANOR

C. D. MARTIN
PAUL J. KELLY, JR.

LAW OFFICES
HINKLE, BONDURANT & CHRISTY
600 HINKLE BUILDING
ROSWELL, NEW MEXICO 88201

MIDLAND, TEXAS OFFICE
521 MIDLAND TOWER
(915) MU 3-4691

May 28, 1969

TELEPHONE (505) 622-6510
POST OFFICE BOX 10

'69 MAY 29 PM 1 40

Mr. Elvis A. Utz
Oil Conservation Commission
Box 2088
Santa Fe, New Mexico 87501

Re: Case No. 4137, Order R-3765

Dear Elvis:

We have just received copy of the order of the Commission entered on May 23 in the captioned case, being the application of Atlantic Richfield Company for approval of the East Shugart Unit Agreement, Eddy County.

We note in Paragraph (4) that the order is to become effective upon approval of the unit by the Commissioner of Public Lands of the State of New Mexico and the Director of the U.S.G.S. It is true that the unit contains one 40 acre tract of state land, being the SW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 36, Township 18 South, Range 31 East; however, the testimony at the hearing was to the effect that Texaco would not commit this 40 acres to the unit and consequently it will not be necessary to have the unit approved by the Commissioner of Public Lands before becoming effective, as all of the other lands involved are federal lands.

I wonder if it would be possible to issue a correction order modifying Paragraph (4) so as to eliminate reference to approval by the Commissioner of Public Lands. I believe that the evidence would justify a finding to the effect that although the boundaries of the unit contain one 40 acre tract of state land, the testimony indicated that this would not be committed to the unit.

Mr. Elvis A. Utz


-2-

May 28, 1969

Atlantic Richfield is planning to submit the unit for approval by the U.S.G.S. within the near future and for that reason we would appreciate revision of the order, if possible, at your very earliest convenience.

Yours sincerely,

HINKLE, BONDURANT & CHRISTY

By 

CEH:cs

INITIAL PLAN OF DEVELOPMENT
EAST SHUGART UNIT

The East Shugart Unit consists of some 1,359.40 acres in Eddy County, New Mexico. (See attached Unit plat.) The area is contained in portions of Sections 27, 34, 35, 36, Township 18 South, Range 31 East and Section 3, Township 19 South, Range 31 East. In the Unit Area Texaco chose not to participate with their two tracts consisting of 120 acres. Therefore, the remaining 1,239.40 acres is to be developed for waterflooding.

The zones to be flooded are the Yates, Seven Rivers and Queen. Attached is a cross-section (Fig. 2) showing the relative position of the zones. The Yates is found at about 2700', the Seven Rivers at about 3300' (shown as Upper Queen "1" on cross-section) and the Queen at about 3400'. The bottom interval in the Queen to be flooded is found at about 3900'. In all, some nine separate zones are to be flooded in the three formations.

The trap in this area of the Shugart Pool is primarily stratigraphic in nature in all three formations with the productive limits being determined by sand pinchouts. The only exception being that the southern limits of production for the two lower Yates zones in this area are controlled by the presence of an aquifer. The producing mechanism for all zones has been solution gas drive with no appreciable water production occurring during the primary phase.

There are now within the participating unit boundary, 26 active producing wells, one shut-in well and four injectors. The wells are presently producing some 164 BOPD for an average of 63 BOPD per producing well. The cumulative production for the participating area is some 2,330,000 barrels with estimated remaining primary reserves of 490,000 barrels.

The existing four injectors were converted in May, 1966 and with unitization it is planned to have a total of 11 injectors. The wells will form essentially two large perimeter type patterns as shown in Figure No. 1. Those patterns include the drilling of one additional well to be located 100' FSL and 990' FWL in Section 35 to be used as an injector. It is planned to inject separately into the Yates and inject together into the Seven Rivers Queen. In the wells that have 7" casing we plan to run two strings of 2-3/8" O.D. tubing with dual packers (Fig. 3) to separate the two intervals. In the wells with smaller casing we plan to inject down the annulus into the Yates and down tubing into the Seven Rivers Queen with a packer set between the Yates and Seven Rivers Queen zones (Fig. 4). Listed below are the 11 wells that will be injectors.

<u>Well</u>	<u>Location</u>
East Shugart Unit Well No. 1	SE/4 SE/4 Section 27
East Shugart Unit Well No. 3	NE/4 NE/4 Section 34
East Shugart Unit Well No. 6	NE/4 NW/4 Section 35
East Shugart Unit Well No. 15	SW/4 NW/4 Section 34

<u>Well</u>	<u>Location</u>
East Shugart Unit Well No. 16	NW/4 SW/4 Section 34
East Shugart Unit Well No. 19	NE/4 SE/4 Section 34
East Shugart Unit Well No. 22	NW/4 SE/4 Section 35
East Shugart Unit Well No. 23	SW/4 SE/4 Section 35
East Shugart Unit Well No. 28	SW/4 SE/4 Section 34
East Shugart Unit Well No. 29	SE/4 SW/4 Section 34
East Shugart Unit Well No. 32	SW/4 SW/4 Section 35

Approximately 7000 BWPD will be injected in the 11 injection wells. The supply water will be purchased from Double Eagle Corporation and facilities for produced water gathering and re-injection will be constructed. The water will be treated to assure a minimum amount of corrosion and frequent checks will be made to insure that control is maintained. It is estimated that an additional 2.8 MMBO will be recovered due to waterflooding and the project will have a 13 year life.

Atlantic Richfield Company, as operator of the East Shugart Unit, will act prudently to preserve all rights of the mineral owners and to effectively and efficiently recover the reserves in the Unit Area. The company will meet all economical offset obligations and act as to prevent undue waste.