



GREENHILL PETROLEUM CORPORATION

16010 BARKER'S POINT LANE, SUITE 325
HOUSTON, TEXAS 77079
TELEPHONE (713) 870-0606
FAX. (713) 870-1831

Incorporated in Delaware, U.S.A.

March 29, 1989

Oil Conservation Division
Attn: Roy Johnson
P. O. Box 2088
Sante Fe, New Mexico 87504-2088

#2593

Re: No. Benson Queen Unit
Lovington San Andres Unit
West Lovington Unit
Lovington Paddock Unit
Eunice Monument Unit
Skaggs Grayburg Unit

Gentlemen:

Please find attached a designation of successor unit operator for the above referenced unit agreements. Also attached is a revised exhibit "B" showing current working interest owners and their ownership.

Please note that the No. Benson Queen, Lovington San Andres, West Lovington and Lovington Paddock Units include Federal, State and Fee lands. The successor forms have been sent to the Bureau of Land Management and the Commissioner of Public Lands. The Eunice Monument Unit has State and Fee lands and has been sent to the Commissioner of Public Lands. The Skaggs Grayburg Unit is all Fee lands. The C-104, Change of Operator forms, have been approved by the Hobbs and Artesia District offices.

If you have any questions or require additional information, please call me at (713) 870-0606.

Sincerely,

GREENHILL PETROLEUM CORPORATION

Gene Linton
Production Coordinator

GL/tlc

Attachments

LOVINGTON SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO
 C.A. #14-08-0001-8539

(3 working interest owners &
 65% Approval Required)

Working Interest Owners

% of Unit Participation

Amerada Hess Corporation Attn: R. W. Mullins P. O. Box 2040 Tulsa, Oklahoma 74102	16.86966
American Exploration Company 2100 Republic Bank Center 700 Louisiana Houston, Texas 77002	4.81453
Amoco Production Company Attn: R. A. Sheppard P. O. Box 3092 Houston, Texas 77253	16.22746
Greenhill Petroleum Corporation 16010 Barker's Point Lane, Suite 325 Houston, Texas 77079	52.95086
Hondo Oil & Gas Company Attn: Bernard Mahony, Jr. P. O. Box 2208 Roswell, New Mexico 88201	4.13188
Late Oil Company Meadows Building 5646 Milton Street, Suite 800 Dallas, Texas 75206	.41826
Margaret Strain Mallard P. O. Box 2 San Angelo, Texas 76902	.06535
Charles Hunter Strain P. O. Box 1631 San Angelo, Texas 76902	.06535
Clara Margaret Strain 1311 Pasco De Vaca San Angelo, Texas 76901	.13071
Sun E & P Company Attn: Linda Guerrero P. O. Box 1861 Midland, Texas 79702-1861	4.05494
PITCO Production Company Attn: Joint Interest P. O. Box 35368 Tulsa, Oklahoma 74153	.27100

Designation of successor Unit Operator Lovington San Andres Unit Area, County of Lea, State of New Mexico. No. _____.

This indenture, dated as of the 29 day of December, 1988, by and between Greenhill Petroleum Corp., hereinafter designated as "First Party", and the owners of unitized working interests, hereinafter designated as "Second Parties."

Witnesseth: Whereas under the provisions of the Act of February 25, 1920, 41 Stat. 437, 30 U.S.C. secs. 181, et seq., as amended by the Act of August 8, 1946, 60 Stat. 950, the Secretary of the Interior, on the 1 day of August, 1962, approve a unit agreement Lovington San Andres Unit Area, wherein Texaco Producing Inc. is designated as Unit Operator, and

Whereas said Texaco Producing Inc. has resigned as such Operator¹ and the designation of a successor Unit Operator is now required pursuant to the terms thereof; and

Whereas the First Party has been and hereby is designated by Second Parties as Unit Operator, and said First Party desires to assume all the rights, duties, and obligations of Unit Operator under the said unit agreement:

Now, therefore, in consideration of the premises hereinbefore set forth and the promises hereinafter stated, the First Party hereby covenants and agrees to fulfill the duties and assume the obligations of Unit Operator under and pursuant to all terms of the Lovington San Andres unit agreement, and the Second Parties covenant and agree that, effective upon arrival of this indenture by the (Name and Title of authorized officer, BLM) First Party shall be granted the exclusive right and privilege of exercising any and all rights and privileges as Unit Operator, pursuant to the terms and conditions of said unit agreement; said unit agreement being hereby incorporated herein by reference and made a part hereof as fully and effectively as though said unit agreement were expressly set forth in this instrument.

In witness whereof, the parties hereto have executed this instrument as of the date hereinabove set forth.

[Signature]
[Signature]
(Witnesses)

(Witnesses)
Greenhill Petroleum Corp.

By: [Signature]
(First Party)
Texaco Producing Inc.
By: [Signature]
(Second Party)

APPROVED AS TO:
Contract 822
Terms MRM
Form ASP

S. L. Chandler, Attorney-in-Fact

I hereby approve the foregoing indenture designating Greenhill Petroleum Corp. as Unit Operator under the unit agreement for the Lovington San Andres Unit Area, this ___ day of _____, 19__.

Authorized officer of the Bureau of Land Mangement

¹Where the designation of a successor Unit Operator is required for any reason other than resignation, such reason shall be substituted for the one stated.



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HOUSTON, TEXAS 77079
TELEPHONE (713) 870-0606
FAX. (713) 870-1831

Incorporated in Delaware, U.S.A.

January 19, 1989

Lovington San Andres Unit Working Interest Owners
(Addressee List Attached)

Re: Lovington San Andres Unit Sale Notification and Change
of Operator

Gentlemen:

Effective November 1, 1988, Texaco Inc. ("Texaco") is selling all of its interests in and to the captioned property to Greenhill Petroleum Corporation ("Greenhill"), 16010 Barker's Point Lane, Suite 325, Houston, Texas 77079.

Greenhill is succeeding Texaco as the new Operator. If you approve of Greenhill as the successor Operator of the captioned Unit, please so signify by signing in the space provided below and returning a copy of this letter to the undersigned.

You will continue to receive billings from Texaco for costs incurred during the period from the November 1, 1988 effective date through December 29, 1988, the closing date. Costs incurred after the closing will be billed by Greenhill.

If you have any questions or comments, please feel free to call the undersigned at (713) 870-0606.

Yours very truly,

Gary E. Edwards
Land Manager

GEE:89609bv

Enclosures

The undersigned hereby approves of Greenhill Petroleum Corporation becoming the successor Operator to Texaco as described above.

COMPANY: Amoco Production Company

By: [Handwritten Signature]
Title: Division Production Manager

PRODUCTION - ADMIN.	
HOUSTON REGION	
JAN 23 '89	
RWG	3,386
WGW	21,190
GLC	21,186
RNH	3,330
MRC	21,199
GEJ	21,108
SRW	21,102
CEP	3,308
MLL	3,310
JMW	3,366
RWC	20,154
LIPF	20,140
DFE	20,102
RWN	20,150
RAF	20,190
TSE	20,120



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Yours very truly,

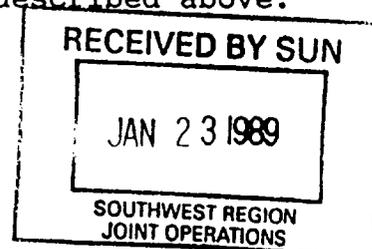
Gary E. Edwards
Land Manager

GEE:89609bv

Enclosures

The undersigned hereby approves of Greenhill Petroleum Corporation becoming the successor Operator to Texaco as described above.

SUN EXPLORATION & PRODUCTION CO _____
DATE APPROVED 1/23/89 _____
BY Linda Guerrero _____
Linda Guerrero, SW Region _____
Joint Operations Engineer _____





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January 19, 1989

Lovington San Andres Unit Working Interest Owners
(Addressee List Attached)

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Yours very truly,

Gary E. Edwards
Land Manager

GEE:89609bv

Enclosures

The undersigned hereby approves of Greenhill Petroleum Corporation becoming the successor Operator to Texaco as described above.

COMPANY: Honda Oil & Gas Company

By: [Signature]
Title: Petroleum Engineer



GREENHILL PETROLEUM CORPORATION

Incorporated in Delaware, U.S.A.

196170100000
9-81570
16010 BARKER'S POINT LANE, SUITE 325
HOUSTON, TEXAS 77079
TELEPHONE (713) 870-0606
FAX (713) 870-1831

January 19, 1989

JAN 24 1988

Lovington San Andres Unit Working Interest Owners
(Addressee List Attached)

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Yours very truly,

Gary E. Edwards
Land Manager

GEE:89609bv

Enclosures

The undersigned hereby approves of Greenhill Petroleum Corporation becoming the successor Operator to Texaco as described above.

COMPANY: American Exploration Co.

By: Clifford G. Thompson 1/29/89
Title: Joint Interest Record



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Incorporated in Delaware, U.S.A.

RECEIVED JAN 30 1989

RECEIVED
JAN 23 1989

January 19, 1989

Lovington San Andres Unit Working Interest Owners
(Addressee List Attached)

Re: Lovington San Andres Unit Sale Notification and Change
of Operator

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Yours very truly,

Gary E. Edwards
Land Manager

GEE:89609bv

Enclosures

The undersigned hereby approves of Greenhill Petroleum Corporation becoming the successor Operator to Texaco as described above.

COMPANY: Late Oil Company

By: F. M. Late
Title: Owner

ARCO PETROLEUM CORPORATION

1600 BARRER
 DALLAS, TEXAS 75201
 TELEPHONE 754-1000
 TWX 910-222-1222

ARCO PETROLEUM CORPORATION
 OFFICE ON SAN ANDRES UNIT
 P.O. BOX 14-001-8518
 EL PASO, TEXAS 79911

ANNUAL DEVELOPMENT

1988

1987

1988
 1987
 1986
 1985

1988
 1987
 1986
 1985

1988
 1987
 1986
 1985

Ac. Int.	Spud.	F.A.	Total
3	3	1	7
6	1	1	8
1	0	1	2
0	4	1	5

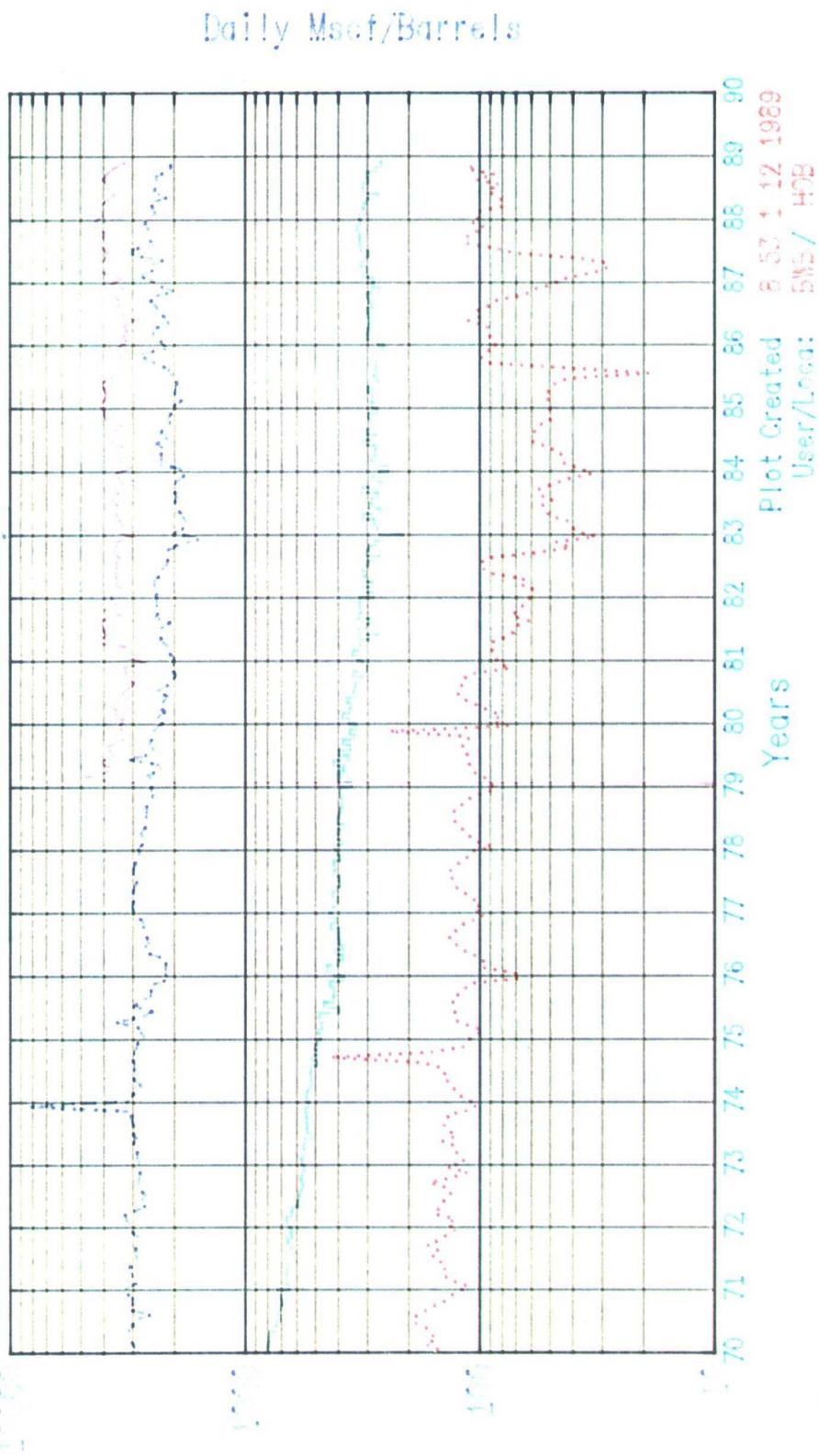
Development plans for 1988.

Development and production.

RR Dist: 01 Operator: GREENHILL
 County: LEA Field: LOVINGTON GB-SA
 State: NEW MEXICO Reservoir: GRAYBURG SAN ANDRES
 Well Count: 34 Lease: LOVINGTON SAN ANDRES UN

1-1-88 323 BEELS / 2372.106 MBBLs
 IP/Cumul: 109 MCF / 677.006 MBOE

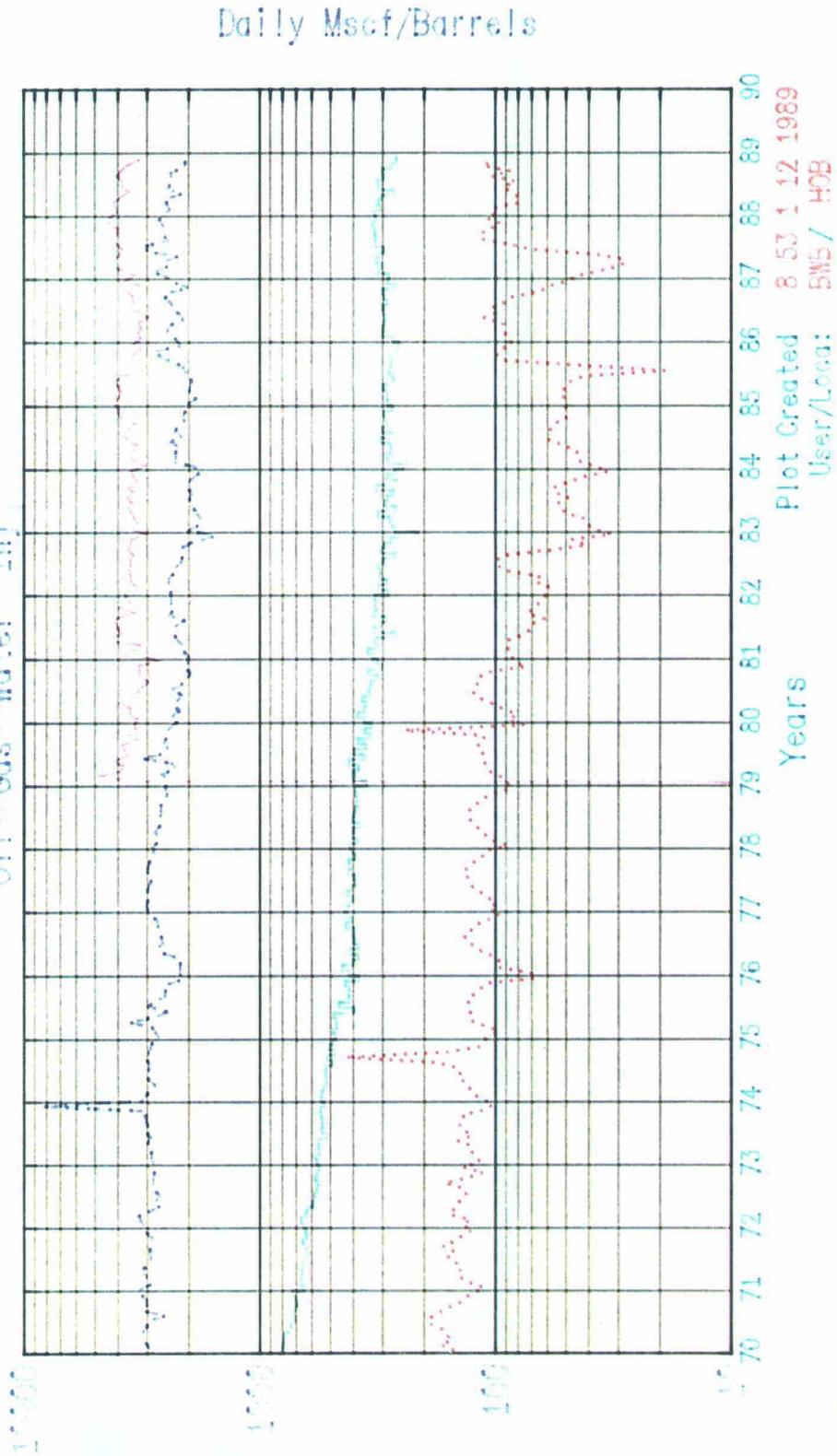
Oil Gas Water Inj Last 6 Pts GOR/BPMM: 326.8/3060.23



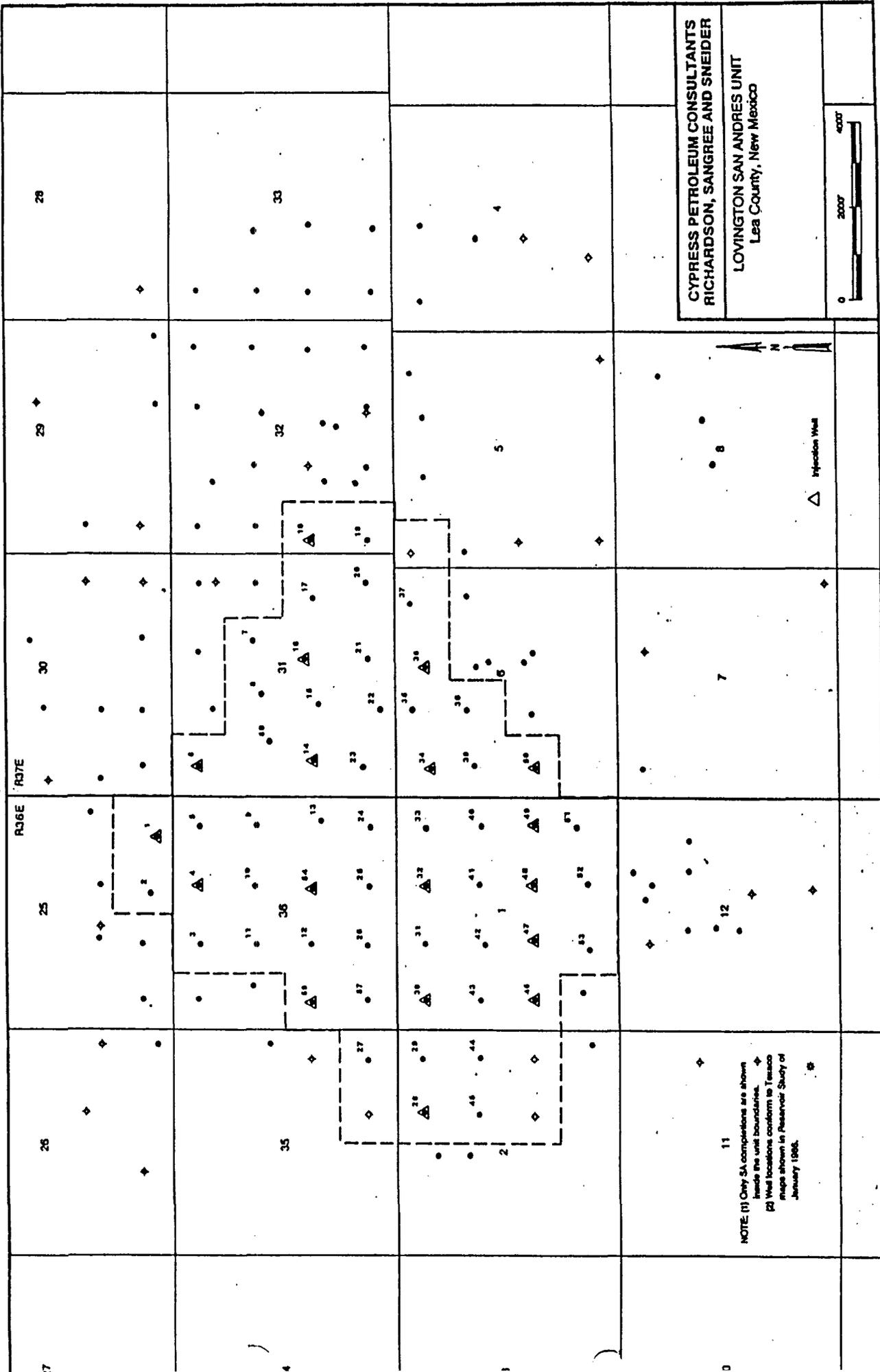
RR Dist: 01 Operator: GREENHILL
 County: LEA Field: LOVINGTON GB-SA
 State: NEW MEXICO Reservoir: GRAYBURG SAN ANDRES
 Well Count: 34 Lease: LOVINGTON SAN ANDRES UN

1-1-88 323 EBLS / 2732.106 MBBLs
 IP/Cumul: 109 MCF / 677.506 MMCF
 Last 6 Pts GOR/BPMM: 326.8/3060.23

- Oil - - - Gas - - - Water - - - Inj

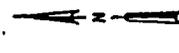


Plot Created 8 53 1 12 1989
 User/Local: SWS / HOB



CYPRESS PETROLEUM CONSULTANTS
 RICHARDSON, SANGREE AND SNEIDER

LOVINGTON SAN ANDRES UNIT
 Lea County, New Mexico



△ Injection Well



11

NOTE: (1) Only SA completions are shown inside the unit boundaries. ◆
 (2) Well locations conform to Texas maps shown in Reservoir Study of January 1966. *



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GREENHILL PETROLEUM CORPORATION
LOVINGTON SAN ANDRES UNIT
C.A. #14-08-0001-8539
LEA COUNTY, NEW MEXICO

1989 PLAN OF DEVELOPMENT

1988 Production Summary

	<u>1988</u>	<u>Cumulative Since Unit</u>
Oil (mbbls)	108.7	4,986.4
Gas (mmcf)	34.6	1,508.9
Produced water (mbbls)	851.8	22,035.0
Injected water (mbbls)	1,415.5	23,047.6

Well Status

	<u>Active</u>	<u>Shut-In</u>	<u>T.A.</u>	<u>Total</u>
Oil	33	3	1	37
Injection	16	1	0	17
Water Supply	1	0	0	1
Total	50	4	1	55

1989 Activities

No development drilling is planned for 1989.

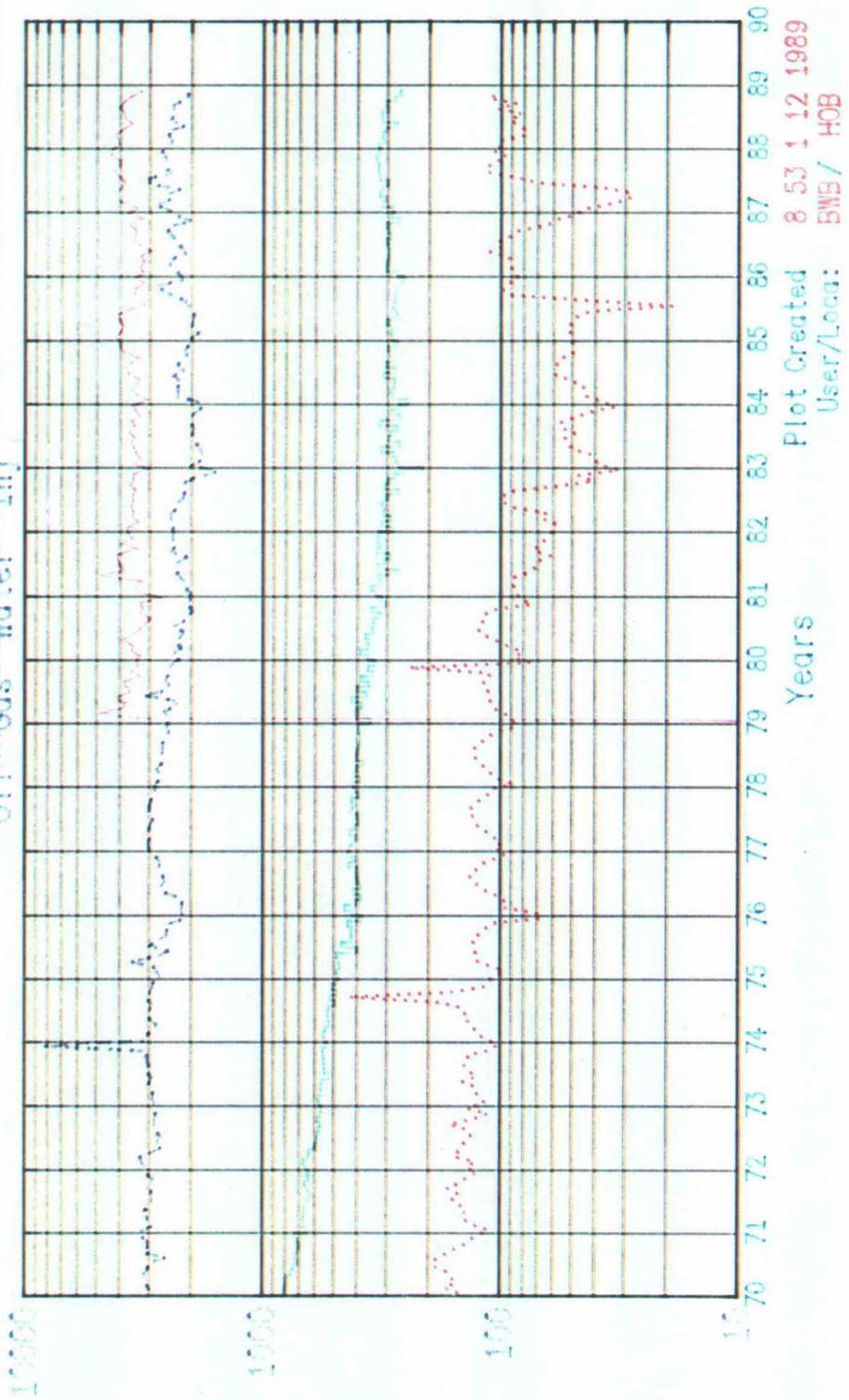
1988 Activities

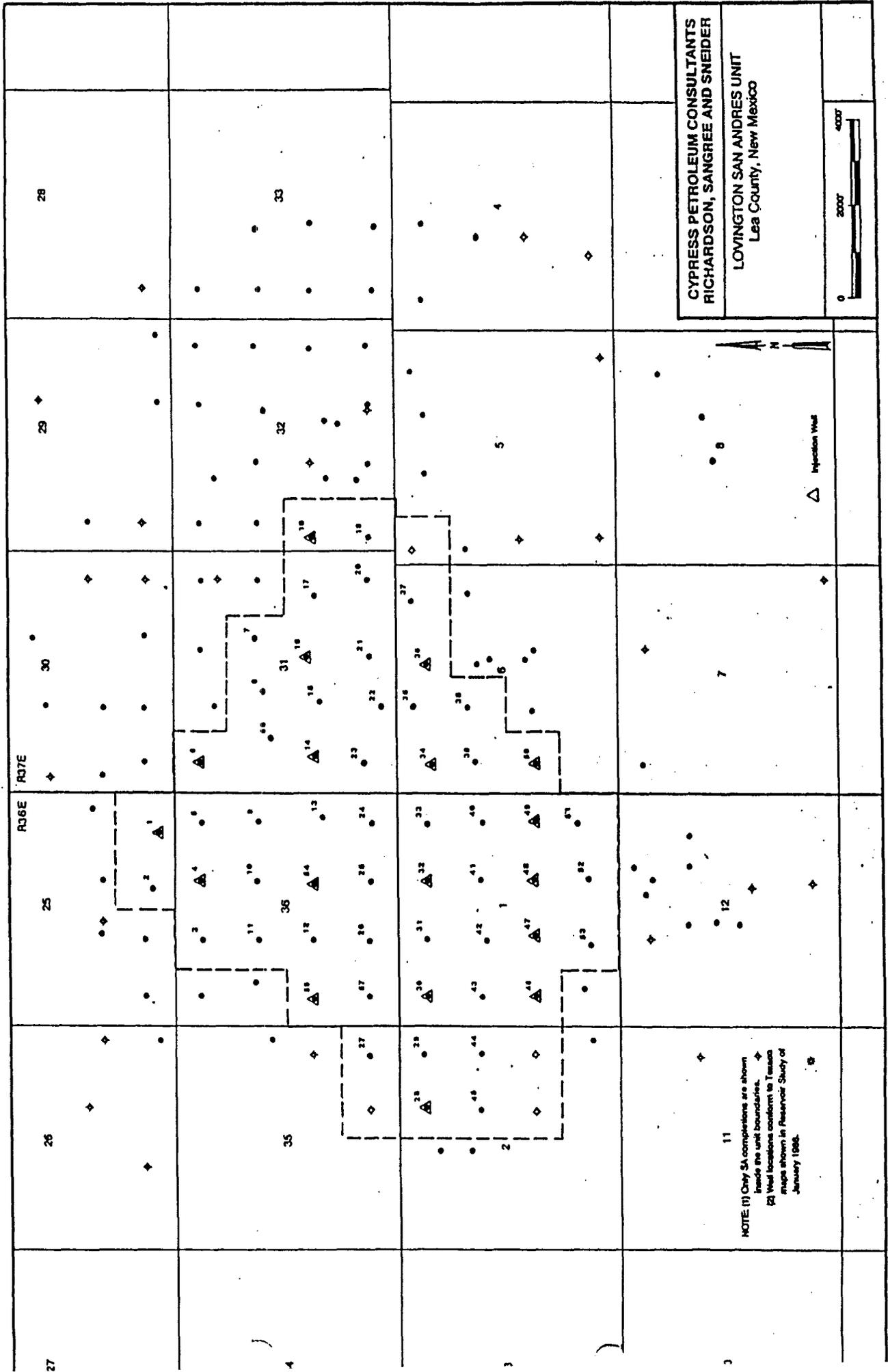
The #46 well was plugged and abandoned.

RR Dist: 01 Operator: GREENHILL
 County: LEA Field: LOVINGTON GB-SA
 State: NEW MEXICO Reservoir: GRAYBURG SAN ANDRES
 Well Count: 34 Lease: LOVINGTON SAN ANDRES UN

1-1-88 323 BBLS / 2732.106 MBBLs
 IP/Cumul: 109 MCF / 677.356 MMCF

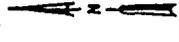
--- Oil --- Gas --- Water --- Inj Last 6 Pts GOR/BPMM: 326.8/3060.23





CYPRESS PETROLEUM CONSULTANTS
 RICHARDSON, SANGREE AND SNEIDER

LOVINGTON SAN ANDRES UNIT
 Lea County, New Mexico



△ Injection Well

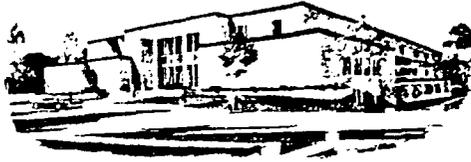


11
 NOTE (1) Only SA completions are shown
 inside the unit boundaries. ◆
 (2) Well locations conform to Texas
 maps shown in Reservoir Study of
 January 1986. □

State of New Mexico



W.R. HUMPHRIES
COMMISSIONER



Commissioner of Public Lands

P.O. BOX 1148
SANTA FE, NEW MEXICO 87504-1148

May 31, 1989

Greenhill Petroleum Corporation
16010 Barker's Point Lane, Suite 325
Houston, Texas 77079

ATTN: Gene Linton

RE: 1989 Plan of Development
Lovington San Andres Unit
Lea County, New Mexico

Gentlemen:

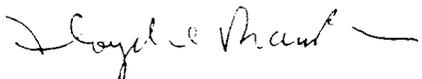
The Commissioner of Public Lands has this date approved the above captioned 1989 Plan of Development. Our approval is subject to like approval by all other appropriate agencies.

Enclosed is an approved copy for your files. If we may be of further help, please do not hesitate to contact us.

Very truly yours,

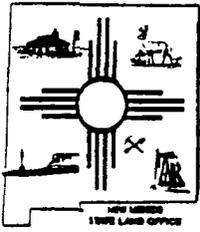
W.R. HUMPHRIES
COMMISSIONER OF PUBLIC LANDS

BY:


FLOYD O. PRANDO, Director
Oil and Gas Division
(505) 827-5749

cc: OCD - Santa Fe, New Mexico
BLM
Unit Correspondence File

WRH/POP/SMH



State of New Mexico
Commissioner of Public Lands

#2593

W. R. Humphries
COMMISSIONER

Advisory Board

George Clark
Chairman

Kristin Conniff
Vice Chairman

Melvin Cordova

Joe Kelly

Robert Portillos

Nancy Lynch Vigil
Rex Wilson

April 24, 1990

Greenhill Petroleum Corporation
12777 Jones Road, Suite 375
Houston, Texas 77070

ATTN: Mr. Michael J. Newport

RE: Lovington San Andres Unit
1990 Plan of Development

Gentlemen:

The Commissioner of Public Lands has this date approved the 1990 Plan of Development for the Lovington San Andres Unit. Our approval is subject to like approval by all other appropriate agencies.

The possibility of drainage by wells outside of the Unit Area and the need for further development of the Unit may exist. You will be contacted at a later date regarding these possibilities.

Enclosed is an approved copy of the 1990 Plan of Development for your files. If we may be of further help, please do not hesitate to contact this office at (505) 827-5746.

Very truly yours,

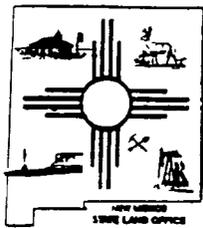
W.R. HUMPHRIES,
COMMISSIONER OF PUBLIC LANDS

BY:

FLOYD O. PRANDO, Director
Oil and Gas Division
(505) 827-5746

cc: OCD - Santa Fe, New Mexico
BLM
Unit Correspondence File
Unit P.O.D. File

WRH/FOP/SMH



State of New Mexico
Commissioner of Public Lands

#2593

W. R. Humphries
COMMISSIONER

Advisory Board

George Clark
Chairman

Kristin Conniff
Vice Chairman

Melvin Cordova

Joe Kelly

Robert Portillos

Nancy Lynch Vigil

Rex Wilson

March 20, 1990

Greenhill Petroleum Corporation
16010 Barker's Point Lane, Suite 325
Houston, Texas 77079

ATTN: Mr. Gene Linton

RE: Lovington San Andres Unit

Gentlemen:

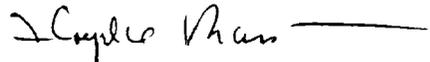
We received your correspondence regarding the approval of the resignation of Texaco as Unit Operator and the designation of Greenhill Petroleum Corporation as Successor Unit Operator for the Lovington San Andres Unit.

The Commissioner of Public Lands has this date approved the resignation of Texaco as Unit Operator and the designation of Greenhill Petroleum Corporation as the successor Unit Operator of the Lovington San Andres Unit. Please advise all interested parties.

If you have any questions, please contact Susan Howarth at (505) 827-5791.

Very truly yours,

W.R. HUMPHRIES,
COMMISSIONER OF PUBLIC LANDS

BY: 

FLOYD D. PRANDO, Director
Oil and Gas Division
(505) 827-5744

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE NEW MEXICO 87501

25/3

January 8, 1975

Skelly Oil Company
P. O. Box 1351
Midland, Texas 79701

Attention: Mr. Leland Franz

Re: 1975 Plan of Development
Lovington San Andres Unit,
Lea County, New Mexico.

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the Plan of Development for 1975 for the Lovington San Andres Unit, Lea County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Two approved copies of the plan are returned herewith.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/JEK/og

cc: Commissioner of Public Lands
Santa Fe, New Mexico

United States Geological Survey
Roswell, New Mexico



SKELLY OIL COMPANY

December 6, 1974

DOMESTIC EXPL. & PROD. DEPARTMENT
WEST CENTRAL E & P DISTRICT

F. L. FRANZ, DISTRICT PRODUCTION MANAGER
M. J. EKMAN, DISTRICT ENGINEER
F. J. HENSLEY, LEAD RESERVOIR ENGINEER
F. J. PETRO, LEAD PRODUCTION ENGINEER

ADDRESS REPLY TO:
P. O. BOX 1351
MIDLAND, TEXAS 79701

File: Lovington San Andres Unit
Lease No. 76008
Lea County, New Mexico

Re: Report of Past Operations and
Plan of Development for 1975.

Director (6)
United States Geological Survey
P. O. Drawer 1857
Roswell, New Mexico 88201

Commission of Public Lands (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico 87501

Oil Conservation Commission (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico 87501

All Working Interest Owners

Gentlemen:

In accordance with Section 11 of the Unit Agreement for the development and operation of the Lovington San Andres Unit, Lea County, New Mexico, Skelly Oil Company respectfully submits for your approval a report of past operations and a plan of development and operation for the unit in 1975.

PAST OPERATIONS

The Lovington San Andres Unit became effective August 1, 1962, with Skelly Oil Company as Unit Operator. Injection of water into fourteen (14) wells commenced on March 29, 1963. The unit was enlarged, effective December 1, 1963, with the inclusion of two additional tracts. During June, 1965, Well No. 1 was converted to injection and Well No. 59 was drilled and completed as an injection well. Well No. 47 was converted to injection status in August, 1969.

Installation of four satellite test stations and a central LACT unit was completed during early 1965. Re-injection of all produced water commenced February 10, 1966, into Wells No. 1, 4, 6, 28, 30, 54 and 59.

Continued monitoring and study by an independent laboratory is being conducted on a regularly scheduled basis to evaluate the quality of injection water and to detect potential problems that might arise. There were no major changes made on the injection system during the year that would significantly affect the unit.

During 1973 a former Lovington San Andres Unit Well No. 52 was recompleted and transferred to the Lovington Paddock Unit. There were no other major changes or revisions made on the unit during the year that would significantly affect the producing system.

Truck treating for corrosion is being continued on all producing wells and all fresh make-up water is treated with sulphur dioxide for oxygen removal. Necessary maintenance, repair, and replacement of lift equipment and producing facilities were performed as required.

Cumulative water injection to November 1, 1974 has been 24,500,585 barrels. The daily average injection rate during October, 1974, was 4,976 BWP/D at an average wellhead pressure of 2,000 psig.

Cumulative oil production since unitization has been 3,118,714 barrels. Cumulatives before project was 8,359,899 barrels for a total of 11,478,613 barrels of oil to November 1, 1974. Oil production rate averaged 482 BOP/D for October 1974.

OPERATION AND DEVELOPMENT PLANS FOR 1975

Plans for 1975 are basically to continue the present system of operations, employing the necessary steps to maintain operating efficiency and optimum performance from the unit.

Some water injection line failures are being experienced which may require extensive replacement or repairs. The problem is being investigated at this time and future plans are being formulated as to the course of remedial action.

Well No. 49, which has been shut-down because of low oil producing rate, is scheduled to be converted to injection during the year.

Continuing studies are being made as to more effective stimulation of producing wells. Temperature surveys, pattern analysis, radio active tracers, and other tools will continue to be used to insure optimum economics and reservoir performance.

Yours very truly,

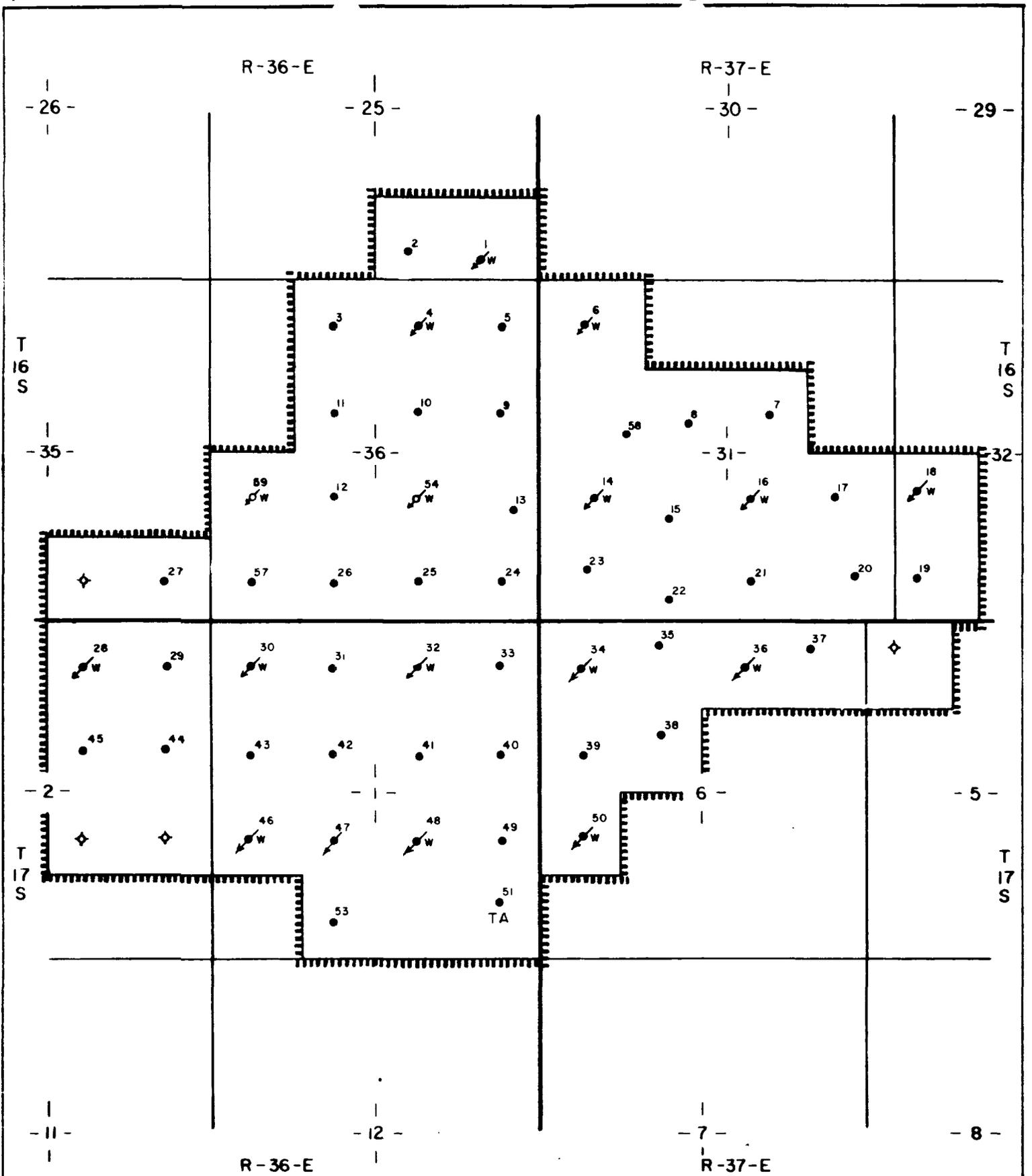

Leland Franz
District Production Manager

BOB/ss
Attach.

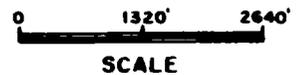
Approved *January 8, 1975*


Secretary-Director

NEW MEXICO OIL CONSERVATION COMMISSION

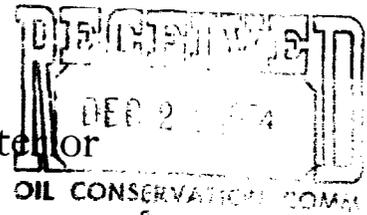


LOVINGTON SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO





United States Department of the Interior



GEOLOGICAL SURVEY
Drawer 1857
Roswell, New Mexico 88201

December 20, 1974

Skelly Oil Company
Attention: Mr. Leland Franz
P.O. Box 1351
Midland, Texas 79701

257

Gentlemen:

The 1975 plan of development submitted for the Lovington San Andres unit area, Lea County, New Mexico, was approved on this date subject to like approval by the appropriate State officials.

Such plan proposes to continue the present system of waterflood operation and four approved copies are enclosed.

Sincerely yours,

CARL C. TRAYWICK
Acting Area Oil and Gas Supervisor

cc:
NMOCC, Santa Fe (ltr only)
Com. Pub. Lands, Santa Fe (ltr only)
Hobbs (w/cy plan)

JAGillham:ds

State of New Mexico

TELEPHONE
505-827-2748



2593

Commissioner of Public Lands

December 18, 1974

ALEX J. ARMIJO
COMMISSIONER

P. O. BOX 1148
SANTA FE, NEW MEXICO

Skelly Oil Company
P. O. Box 1351
Midland, Texas 79701

Re: Lovington San Andres Unit
Lea County, New Mexico
Report of Past Operations and
Plan of Development for 1975

ATTENTION: Mr. Leland Frens

Gentlemen:

The Commissioner of Public Lands has this date approved your Plan of Development and Operation for the Year 1974, for the Lovington San Andres Unit, Lea County, New Mexico. This proposes continuation of the present system of waterflood operations and the conversion of Well No. 49 to an injection well. This approval is subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

Enclosed is one approved copy for your files.

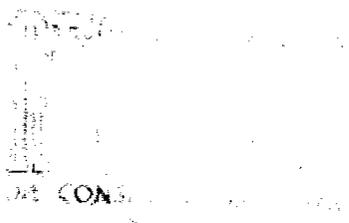
Please remit a Three (\$3.00) Dollar filing fee.

Very truly yours,

RAY D. GRAHAM, Director
Oil and Gas Department

AJA/EDG/s
encls.
cc:

USGS-Roswell, New Mexico
OCC- Santa Fe, New Mexico



OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

January 17, 1974

2593

Skelly Oil Company
P. O. Box 1351
Midland, Texas 79701

Attention: Mr. C. J. Love

Re: 1974 Plan of Development
Lovington San Andres Unit
Lea County, New Mexico

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the 1974 Plan of Development for the Lovington San Andres Unit, Lea County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Two approved copies of the plan are returned herewith.

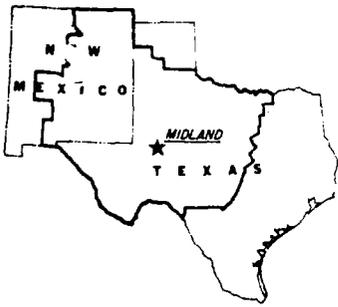
Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/JEK/og

cc: Commissioner of Public Lands - Santa Fe
U. S. Geological Survey - Roswell

C
O
P
Y



SKELLY OIL COMPANY

November 5, 1973

EXPLORATION & PRODUCTION DEPARTMENT
WEST CENTRAL DISTRICT

A. B. CARY, EXPLORATION & PRODUCTION MANAGER
V. E. BARTLETT, EXPLORATION MANAGER
C. J. LOVE, PRODUCTION MANAGER
J. R. AVENT, ADMINISTRATIVE COORDINATOR

ADDRESS REPLY TO:
P. O. BOX 1351
MIDLAND, TEXAS 79701

File: Lovington San Andres Unit
Lease No. 76008
Lea County, New Mexico

Re: Report of Past Operations and
Plan of Development for 1974

Director (6)
United States Geological Survey
P. O. Drawer 1857
Roswell, New Mexico 88201

Commission of Public Lands (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico 87501

Oil Conservation Commission (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico 87501

All Working Interest Owners

Gentlemen:

In accordance with Section 11 of the Unit Agreement for the development and operation of the Lovington San Andres Unit, Lea County, New Mexico, Skelly Oil Company respectfully submits for your approval a report of past operations and a plan of development and operation for the unit in 1974.

PAST OPERATIONS

The Lovington San Andres Unit became effective August 1, 1962, with Skelly Oil Company as Unit Operator. Injection of water into fourteen (14) wells commenced on March 29, 1963. The unit was enlarged, effective December 1, 1963, with the inclusion of two additional tracts. During June, 1965, Well No. 1 was converted to injection and Well No. 59 was drilled and completed as an injection well. Well No. 47 was converted to injection status in August, 1969.

Installation of four satellite test stations and a central LACT unit was completed during early 1965. Re-injection of all produced water commenced February 10, 1966, into Wells No. 1, 4, 6, 28, 30, 54, and 59.

Lovington San Andr Unit
Page No. 2
November 5, 1973

Continued monitoring and study by an independent laboratory is being conducted on a regularly scheduled basis to evaluate the quality of injection water and to detect potential problems that might arise. There were no major changes made on the injection system during the year that would significantly affect the unit.

During the year the former Lovington San Andres Unit Well No. 52 was recompleted and transfered to the Lovington Paddock Unit. There were no other major changes or revisions made on the unit during the year that would significantly affect the producing system.

Truck treating for corrosion is being continued on all producing wells and all fresh make-up water is treated with sulphur dioxide for oxygen removal. Necessary maintenance, repair, and replacement of lift equipment and producing facilities were performed as required.

Cumulative water injection on the unit to October 1, 1973, was 22,485,465 barrels. The daily average injection rate during September, 1973, was 5,416 BWPD at an average wellhead pressure of 2,000 psig.

Cumulative oil production since unitization to October 1, 1973, was 2,815,588 barrels. Oil production from the unit is averaging approximately 550 BOPD.

DEVELOPMENT PLANS

Plans for 1974 are to continue the present system of operations, taking necessary steps to maintain operating efficiency and optimum performance from the unit.

Some water injection line failures are being experienced which may require extensive replacement or repairs. The problem is being investigated at this time and future plans are being formulated as to the course of remedial action.

Temperature surveys are scheduled to be ran on Lovington San Andres injection wells during the coming year. These will be studied and compared with past surveys to aid in determining sweep efficiency and to detect other problems which might require additional investigation or possible remedial work. Some changes in well status are expected.

Continuing studies are being made as to more effective stimulation of producing wells. A computer analyzed pattern analysis is scheduled to be made in the near future to aid in determining what steps should be employed to achieve better pattern balance and performance.

Approved

Jan 17, 1974
[Signature]
Secretary-Director

Yours very truly,

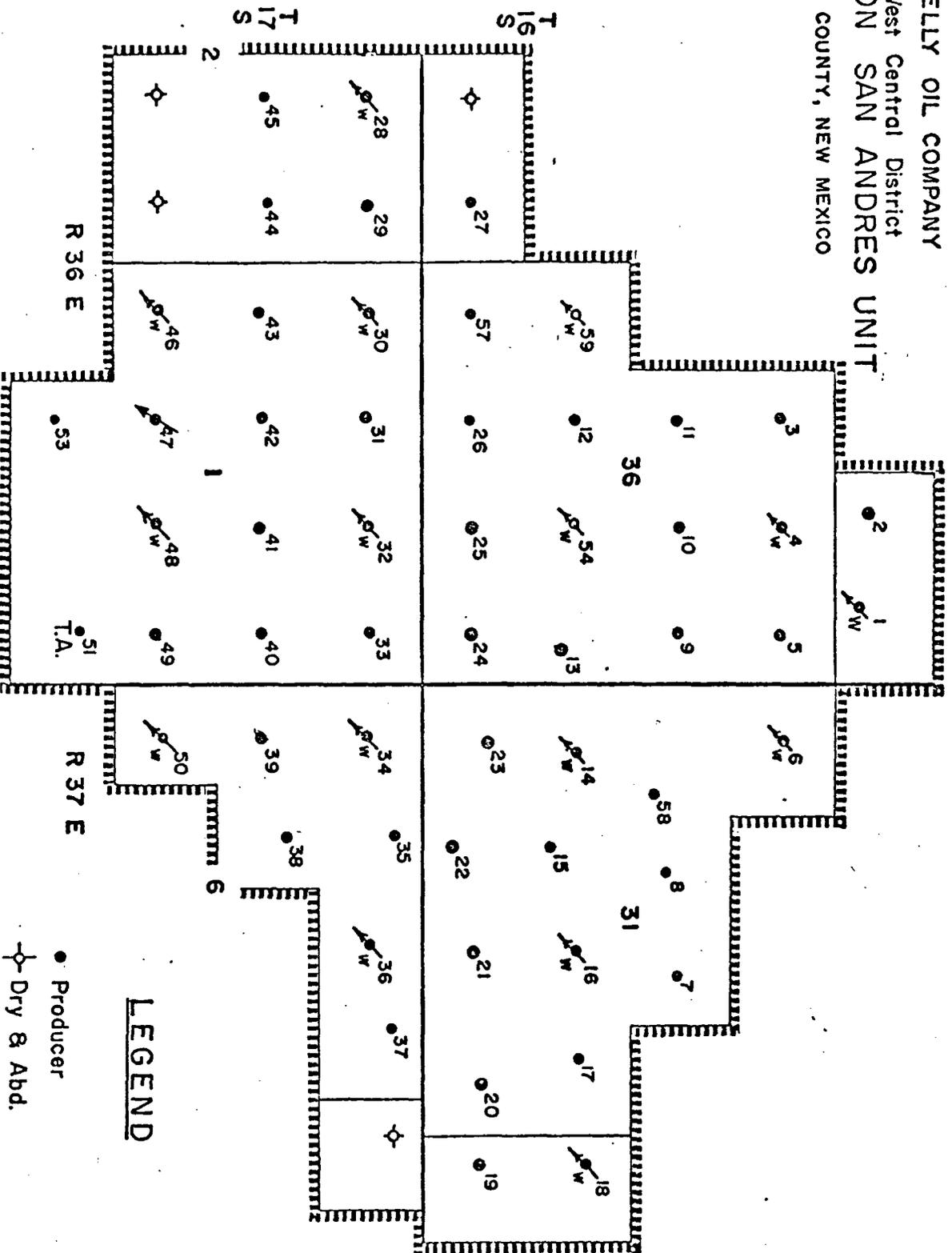
[Signature]

C. J. Love, Chairman
Working Interest Owners' Committee

NEW MEXICO DEPARTMENT OF CONSERVATION COMMISSION

WTT/rc
Attachment

SKELLY OIL COMPANY
 West Central District
LOVINGTON SAN ANDRES UNIT
 LEA COUNTY, NEW MEXICO



LEGEND

- Producer
- ⊕ Dry & Abd.
- ⚡ Water Injection
- ⚡ W Drilled Water Injection
- ⊙ T.A. Temporary Abd.
- Location



United States Department of the Interior

GEOLOGICAL SURVEY

Drawer 1857
Roswell, New Mexico 88201

December 21, 1973

Skelly Oil Company
Attention: Mr. C. J. Love
P.O. Box 1351
Midland, Texas 79701

257-

Gentlemen:

Four approved copies of your 1974 plan of development and operation for the Lovington San Andres unit area, Lea County, New Mexico, proposing continuation of the present system of waterflood operation, are enclosed. Such plan was approved on this date subject to like approval by the appropriate officials of the State of New Mexico.

Sincerely yours,

CARL C. TRAYWICK
Acting Area Oil & Gas Supervisor

cc:
NMOCC, Santa Fe (ltr only)
Com. Pub. Lands, Santa Fe (ltr only)
Hobbs (w/cy plan)

JAGillham:ds

State of New Mexico

TELEPHONE
505-827-2748



Commissioner of Public Lands

November 20, 1973

ALEX J. ARMIJO
COMMISSIONER

P. O. Box 1148
SANTA FE, NEW MEXICO

Skelly Oil Company
P. O. Box 1351
Midland, Texas 79701

2592
Re: Lovington San Andres Unit
Report of Past Operations and
Plan of Development for 1974

ATTENTION: Mr. C. J. Love

Gentlemen:

The Commissioner of Public Lands has this date approved your Plan of Development and Operation for the Year 1974. This approval is subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

Enclosed is one approved copy for your files.

Your Filing Fee in the amount of Three (\$3.00) Dollars has been received.

Very truly yours,

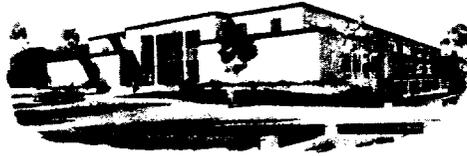
RAY D. GRAHAM, Director
Oil and Gas Department

AJA/RDG/s
encls.
cc:

USGS-Roswell, New Mexico
OCC- Santa Fe, New Mexico ✓

State of New Mexico

TELEPHONE
505-827-2748



Commissioner of Public Lands

ALEX J. ARMIJO
COMMISSIONER

November 14, 1972

P. O. BOX 1148
SANTA FE, NEW MEXICO

Stelly Oil Company
P. O. Box 1391
Midland, Texas 79701

Re: Lovington San Andres Unit
Plan of Development and
Operation for 1973
Lea County, New Mexico

ATTENTION: Mr. C. J. Love

Gentlemen:

The Commissioner of Public Lands has this date approved your Plan of Development and Operation for the year 1973, for the captioned unit, whereby, you will basically continue the present plan of operations and also study the feasibility of transferring the Lovington San Andres Unit Well No. 52 to the Lovington Paddock Unit. This approval is subject to life approval by the United States Geological Survey and the Oil Conservation Commission.

Enclosed is one approved copy for your files.

Please remit a Three (\$3.00) Dollar Filing Fee.

Very truly yours,

RAY D. GRAHAM, Director
Oil and Gas Department

AJA/RDC/s

encls.

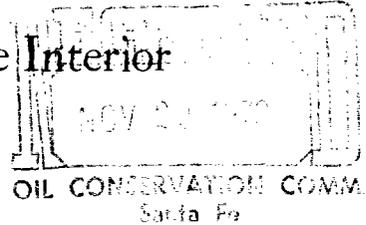
cc: OCG-Santa Fe, New Mexico ✓
USGS-Roswell, New Mexico



United States Department of the Interior

GEOLOGICAL SURVEY

Drawer 1857
Roswell, New Mexico 88201



November 27, 1972

Skelly Oil Company
P. O. Box 1351
Midland, Texas 79701

2590

Attention: Mr. C. J. Love

Gentlemen:

On this date, your 1973 plan of development and operation for the Lovington San Andres unit area, Lea County, New Mexico, wherein you propose to continue the present waterflood operations and determine the feasibility of transferring the Lovington San Andres unit well No. 52 to the Lovington Paddock unit area, was approved. The Oil Conservation Commission and the Commissioner of Public Lands of the State of New Mexico have approved such plan on November 8 and 14, 1972, respectively.

Three approved copies of the plan are enclosed.

Sincerely yours,

(ORIS 669) C11

CARL C. TRAYWICK
Acting Area Oil and Gas Supervisor

cc:
Washington (w/cy plan)
Hobbs (w/cy plan)
NMOCC, Santa Fe (ltr. only) ✓
Com. of Pub. Lands, Santa Fe (ltr. only)

JAGillham:lh

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Jim

November 8, 1972

2570

Skelly Oil Company
P. O. Box 1351
Midland, Texas

Attention: Mr. C. J. Love

Re: 1973 Plan of Operation and
Development, Lovington San
Andres Unit, Lea County,
New Mexico

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the plan of operations and development for the year 1973 for the Lovington San Andres Unit, Lea County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

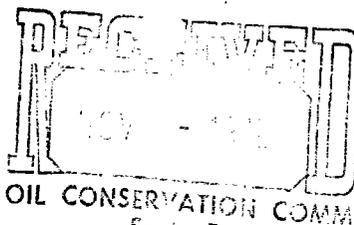
Two approved copies of the plan are returned herewith.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/JEK/og

cc: Commissioner of Public Lands - Santa Fe
United States Geological Survey - Roswell



SKELLY OIL COMPANY

October 31, 1972

EXPLORATION & PRODUCTION DEPARTMENT
WEST CENTRAL DISTRICT

ADDRESS REPLY TO:
P. O. BOX 1351
MIDLAND, TEXAS 79701

A. B. CARY, EXPLORATION & PRODUCTION MANAGER
V. E. BARTLETT, EXPLORATION MANAGER
C. J. LOVE, PRODUCTION MANAGER
J. R. AVENT, ADMINISTRATIVE COORDINATOR

File: Lovington San Andres Unit
Lease No. 76008
Lea County, New Mexico

Re: Report of past operations and
plan of development for 1973.

Director (6)
United States Geological Survey
P. O. Drawer 1857
Roswell, New Mexico 88201

Oil Conservation Commission (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico 87501

Commissioner of Public Lands (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico 87501

All Working Interest Owners

Gentlemen:

In accordance with Section 11 of the Unit Agreement for the development and operation of the Lovington San Andres Unit, Lea County, New Mexico, Skelly Oil Company respectfully submits for your approval a report of past operations and a plan of development and operation for the Unit in 1973.

PAST OPERATIONS

The Lovington San Andres Unit became effective August 1, 1962, with Skelly Oil Company as Unit Operator. Injection of water into fourteen (14) wells commenced on March 29, 1963. The Unit was enlarged effective December 1, 1963, with the inclusion of two additional tracts. During June, 1965, Well No. 1 was converted to injection and Well No. 59 was drilled and completed as an injection well. Well No. 47 was converted to injection status in August, 1969.

Installation of four satellite test stations and a central LACT Unit was completed during early 1965. Re-injection of all produced water commenced February 10, 1966, into Wells No. 1, 4, 6, 28, 30, 54, and 59.

Temperature surveys were ran on all Lovington San Andres Unit injection wells during 1972, and on wells where poor distribution or channeling

Of water was occurring, tracer profile surveys were made, and remedial steps were taken. An impressed current internal cathodic protection system was installed at the water station and on tank battery vessels during the year. Continued monitoring and study by an independent laboratory is being conducted on a regularly scheduled basis to evaluate the quality of injection water and to detect problems that might arise before they become severe. There were no major changes or revisions made on the injection system which would affect the Unit during the year.

There were no significant changes made on the producing system during the year. Necessary maintenance, repair, and replacement of lift equipment and producing facilities were performed as required.

Truck treating of all producing wells is continuing on the Lovington San Andres Unit. Presently a study is being conducted to determine the effectiveness of this type of chemical treatment on the Unit.

Cumulative water injection on the Unit to October 1, 1972, was 20,433,017 barrels. The daily average injection rate during September, 1972, was 5,100 BWPD at an average wellhead pressure of 2,000 psig.

Cumulative oil production since unitization to September 1, 1972, was 2,631,854 barrels. Oil production from the Unit is averaging approximately 575 BOPD.

DEVELOPMENT PLANS

Plans for 1973, are to basically continue the present plan of operations, taking whatever steps are necessary to maintain operating efficiency and optimum performance from the Unit.

A study is now being made as to the feasibility of transferring the Lovington San Andres Unit Well No. 52 to the Lovington Paddock Unit. The well is of no further value to the Lovington San Andres and following transfer and recompletion can be effectively utilized in the Paddock Unit. No further significant changes or revisions are planned at this time.

Yours very truly,

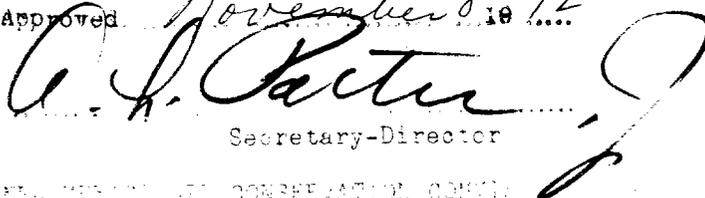


C. J. Love, Chairman
Working Interest Owners Committee

WTT/rc
Attach.

Approved

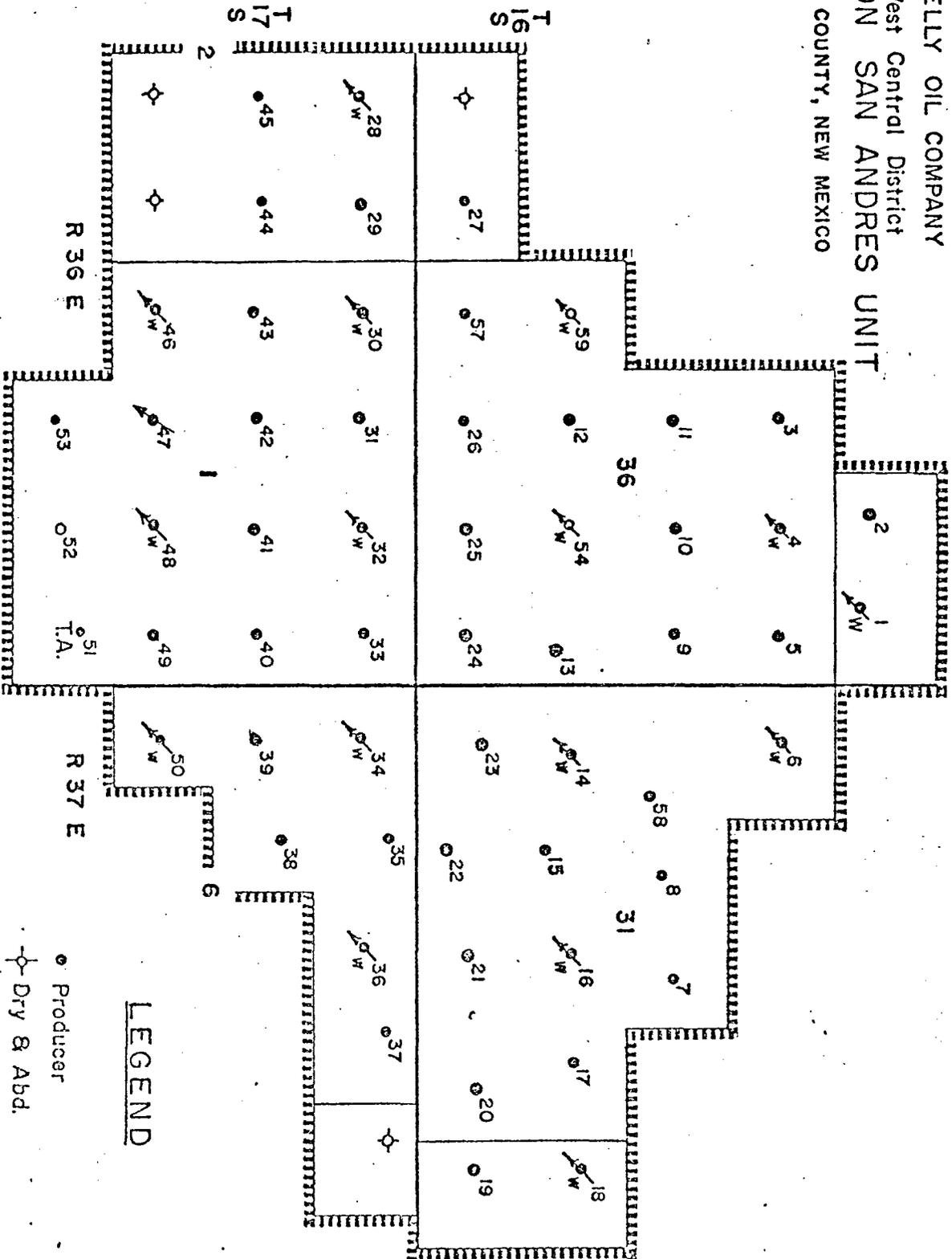
November 8, 1972



Secretary-Director

LOVINGTON SAN ANDRES UNIT CONSERVATION COMMITTEE

SKELLY OIL COMPANY
 West Central District
 LOVINGTON SAN ANDRES UNIT
 LEA COUNTY, NEW MEXICO



LEGEND

- Producer
- ⊕ Dry & Abd.
- ⊕/W Water Injection
- ⊕/W/— Drilled Water Injection
- T.A. Temporary Abd.
- Location

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

January 11, 1972

2593

Skelly Oil Company
P. O. Box 1351
Midland, Texas 79701

Attention: Mr. C. J. Love

Re: 1972 Plan of Development and
Operation, Lovington San Andres
Unit, Lea County, New Mexico

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the 1972 Plan of Development and Operation for the Lovington San Andres Unit, Lea County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Two approved copies of the plan are returned herewith.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/JEK/og

cc: United States Geological Survey - Roswell
Commissioner of Public Lands - Santa Fe

COPY



IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY
Drawer 1857
Roswell, New Mexico 88201

RECEIVED
DEC 20 1971
OIL CONSERVATION COMM.
SANTA FE
December 17, 1971

Skelly Oil Company
P.O. Box 1351
Midland, Texas 79701

Attention: Mr. C. J. Love

Gentlemen:

Your 1972 plan of development and operation, proposing to continue present waterflood operations for the Lovington San Andres unit area, Lea County, New Mexico, has been approved on this date subject to like approval by the appropriate State officials.

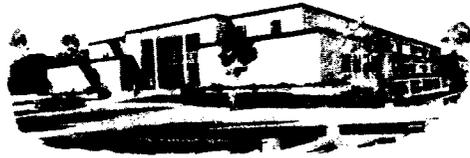
Three approved copies of the plan are enclosed.

Sincerely yours,

N. O. FREDERICK
Regional Oil and Gas Supervisor

cc:
Washington (w/cy of plan)
Hobbs (w/cy of plan)
NMOCC, Santa Fe (ltr. only)
Com. Pub. Lands, Santa Fe (ltr. only)

State of New Mexico



Commissioner of Public Lands

November 17, 1971



ALEX J. ARMIJO
COMMISSIONER

P. O. BOX 1148
SANTA FE, NEW MEXICO

Skelly Oil Company
P. O. Box 1351
Midland, Texas 79701

Re: Lovington San Andres Unit
1972 Plan of Development
Lea County, New Mexico

ATTENTION: Mr. C. J. Love

Gentlemen:

The Commissioner of Public Lands has this date approved your 1972 Plan of Development dated November 2, 1971, proposing to continue present waterflood operations for the Lovington San Andres Unit, Lea County, New Mexico. This approval is subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

Please remit a three (\$3.00) Dollar filing fee.

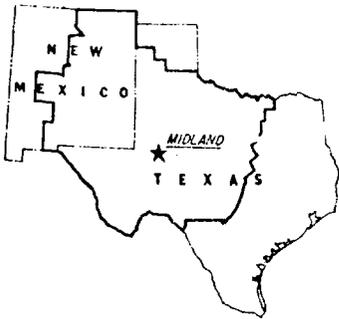
One approved copy is returned herewith.

Very truly yours,

RAY D. GRAHAM, Director
Oil and Gas Department

AJA/RDG/s
encls.

cc: UEGS-Roswell, New Mexico
OCC- Santa Fe, New Mexico



SKELLY OIL COMPANY RECEIVED

EXPLORATION & PRODUCTION DEPARTMENT
WEST CENTRAL DISTRICT

November 2, 1971 NOV 16 1971

ADDRESS REPLY TO:
P. O. BOX 1351
MIDLAND, TEXAS 79701

C. J. LOVE, PRODUCTION MANAGER
B. A. STRICKLING, OPERATIONS SUPERINTENDENT
F. J. PETRO, DISTRICT PRODUCTION ENGINEER
J. D. MCCLAIN, DISTRICT RESERVOIR ENGINEER
K. E. BOHRER, OUTSIDE OPERATIONS SUPERVISOR

OIL CONSERVATION COMM.
SANTA FE

File: Lovington San Andres Unit
Lease No. 76008
Lea County, New Mexico

Re: Report of Past Operations and
Plan of Development for 1972.

Director (6)
United States Geological Survey
P. O. Drawer 1857
Roswell, New Mexico 88201

Commissioner of Public Lands (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico 87501

Oil Conservation Commission (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico 87501

All Working Interest Owners

Gentlemen:

In accordance with Section 11 of the Unit Agreement for the Development and Operation of the Lovington San Andres Unit, Lea County, New Mexico, Skelly Oil Company respectfully submits for your approval a report of past operations and a plan of development and operation for the Unit in 1972.

PAST OPERATIONS

The Lovington San Andres Unit became effective August 1, 1962, with Skelly Oil Company as Unit Operator. Injection of water into fourteen (14) wells commenced on March 29, 1963. The Unit was enlarged, effective December 1, 1963, with the inclusion of Tracts 6 and 10. In June, 1965, Well No. 1 was converted to injection and Well No. 59 was drilled and completed as an injection well. In August, 1969, Well No. 47 was converted to injection.

Installations of a central LACT Unit and four satellite test stations were completed in early 1965. Re-injection of all produced water commenced February 10, 1966, into Wells No. 1, 4, 6, 28, 30, 54, and 59. Make-up and produced water is now being commingled. Emergency produced water storage was installed in December, 1967, to contain produced water in case of injection system malfunction.

Plan of Development and Operation
Lovington San Andres Unit
Page No. 2
November 2, 1971

There were no major revisions made during the past year which would significantly affect the injection system. At present, a study is underway to determine how to more effectively combat the bacteria and corrosion problems which exist in the Unit.

During the past year, two (2) producing wells were worked over and excessive produced water was shut off. More work of this nature is planned for the coming year.

Cumulative water injection to October 1, 1971, was 18,361,443 barrels. The daily average injection rate during September, 1971, was 5,382 barrels at an average pressure of 1634 psig.

Cumulative oil production since unitization to October 1, 1971, was 2,483,000 barrels. Oil production from the Unit averaged 636 barrels per day for September, 1971.

DEVELOPMENT PLANS FOR 1972

Plans for 1972 are to continue the present plan of operations and employ necessary steps to maintain operating efficiency and optimum performance from the Lovington San Andres Unit.

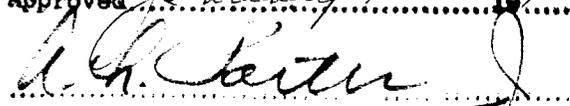
Yours very truly,

SKELLY OIL COMPANY



C. J. Love, Chairman
Working Interest Owners' Committee

WTT/mac
Attachment

Approved *January 11* 1972

Secretary-Director

NEW MEXICO OIL CONSERVATION COMMISSION

THIS APPROVAL GRANTED SUBJECT TO LIKE APPROVAL
BEING GRANTED BY THE UNITED STATES DEPARTMENT OF
SURVEY AND BY THE COMMISSIONER OF PUBLIC LANDS
OF THE STATE OF NEW MEXICO.



IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Drawer 1857
Roswell, New Mexico 88201

00
JAN 8 1971

25/2

January 4, 1971

Skelly Oil Company
P.O. Box 1351
Midland, Texas 79701

Attention: Mr. P. L. Nunley

Gentlemen:

Your 1971 plan of development and operation, proposing to continue present waterflood operations for the Lovington San Andres unit area, Lea County, New Mexico, has been approved on this date subject to like approval by the appropriate State officials.

Three approved copies of the plan are enclosed.

Sincerely yours,

(Signature)

N. O. FREDERICK
Regional Oil and Gas Supervisor

cc:
Washington (w/cy of plan)
Hobbs (w/cy of plan)
NMOCC, anta Fe (ltr only) ✓
Com. of Pub. Lands, Santa Fe (ltr only)

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

257P

November 24, 1970

Skelly Oil Company
P. O. Box 1351
Midland, Texas 79701

Attention: Mr. P. L. Nunley

Re: 1971 Plan of Development
Lovington San Andres Unit
Lea County, New Mexico

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the Plan of Development and Operations for the calendar year 1971 for the Lovington San Andres Unit, Lea County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Two approved copies are returned herewith.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/JEK/og

cc: United States Geological Survey - Roswell
Commissioner of Public Lands - Santa Fe

C
O
P
Y

NOV 9 1970

November 6, 1970

Skelly Oil Company
P. O. Box 1351
Midland, Texas 79701

Re: Lovington San Andres Unit
1971 Plan of Development
Lea County, New Mexico

ATTENTION: Mr. P. L. Munley

Gentlemen:

The Commissioner of Public Lands has this date approved your 1971 Plan of Development proposing to continue water injection under the present conditions, for the Lovington San Andres Unit, Lea County, New Mexico. This approval is subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

Please remit a three (\$3.00) Dollar filing fee.

One approved copy is returned herewith.

Sincerely yours,

GORDON G. MARCUM, II, Director
Oil and Gas Department

AJA/CGM/s
encl.

cc: USGS-Roswell, New Mexico
OCC-Santa Fe, New Mexico



SKELLY OIL COMPANY

November 3, 1970

EXPLORATION & PRODUCTION DEPARTMENT
WEST CENTRAL DISTRICT

ADDRESS REPLY TO:
P. O. BOX 1351
MIDLAND, TEXAS 79701

P. L. NUNLEY, PRODUCTION MANAGER
B. A. STRICKLING, OPERATIONS SUPERINTENDENT
C. J. LOVE, DISTRICT ENGINEER
F. J. PETRO, DISTRICT PRODUCTION ENGINEER
J. D. MCLLAINE, DISTRICT RESERVOIR ENGINEER

File: Lovington San Andres Unit
Lease No. 76008
Lea County, New Mexico

Re: Report of Past Operations and
Plan of Development for 1971.

Director (6)
United States Geological Survey
P. O. Drawer 1857
Roswell, New Mexico 88201

Commissioner of Public Lands (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico 87501

Oil Conservation Commission (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico 87501

All Working Interest Owners

Gentlemen:

In accordance with Section 11 of the Unit Agreement for the Development and Operation of the Lovington San Andres Unit, Lea County, New Mexico, Skelly Oil Company respectfully submits for your approval a report of past operations and a plan of development and operation for the Unit in 1971.

PAST OPERATIONS

The Lovington San Andres Unit became effective August 1, 1962, with Skelly Oil Company as Unit Operator. Injection of water into fourteen (14) wells commenced on March 27, 1963. The Unit was enlarged, effective December 1, 1963, with the inclusion of Tracts 6 and 10. In June, 1965, Well No. 1 was converted to injection and Well No. 59 was drilled and completed as an injection well. In August, 1969, Well No. 47 was converted to injection.

Installations of a central LACT Unit and four satellite test stations were completed in early 1965. Re-injection of all produced water commenced February 10, 1966, into Wells No. 1, 4, 6, 28, 30, 54, and 59. Make-up and produced water is now being commingled. Emergency produced water storage was installed in December, 1967, to contain produced water in case of injection system malfunction.

Lovington San Andres Unit
Operations & Development, 1970-1971
Page 2
November 3, 1970

Cumulative water injection to October 1, 1969, was 16,196,935 barrels. The daily average injection rate during September, 1970, was 6366 barrels at an average pressure of 1645 psig.

Cumulative oil production since unitization to October 1, 1970, was 2,241,041 barrels. Oil production for the unit averaged 710 barrels per day for September, 1970.

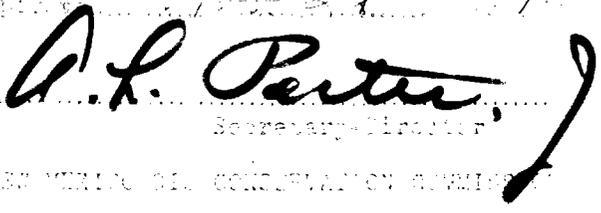
DEVELOPMENT PLANS

The operation of the Unit is expected to proceed by continuing water injection under the present conditions. Continuous studies and monitoring are conducted to keep the operating efficiency of the Unit at a maximum.

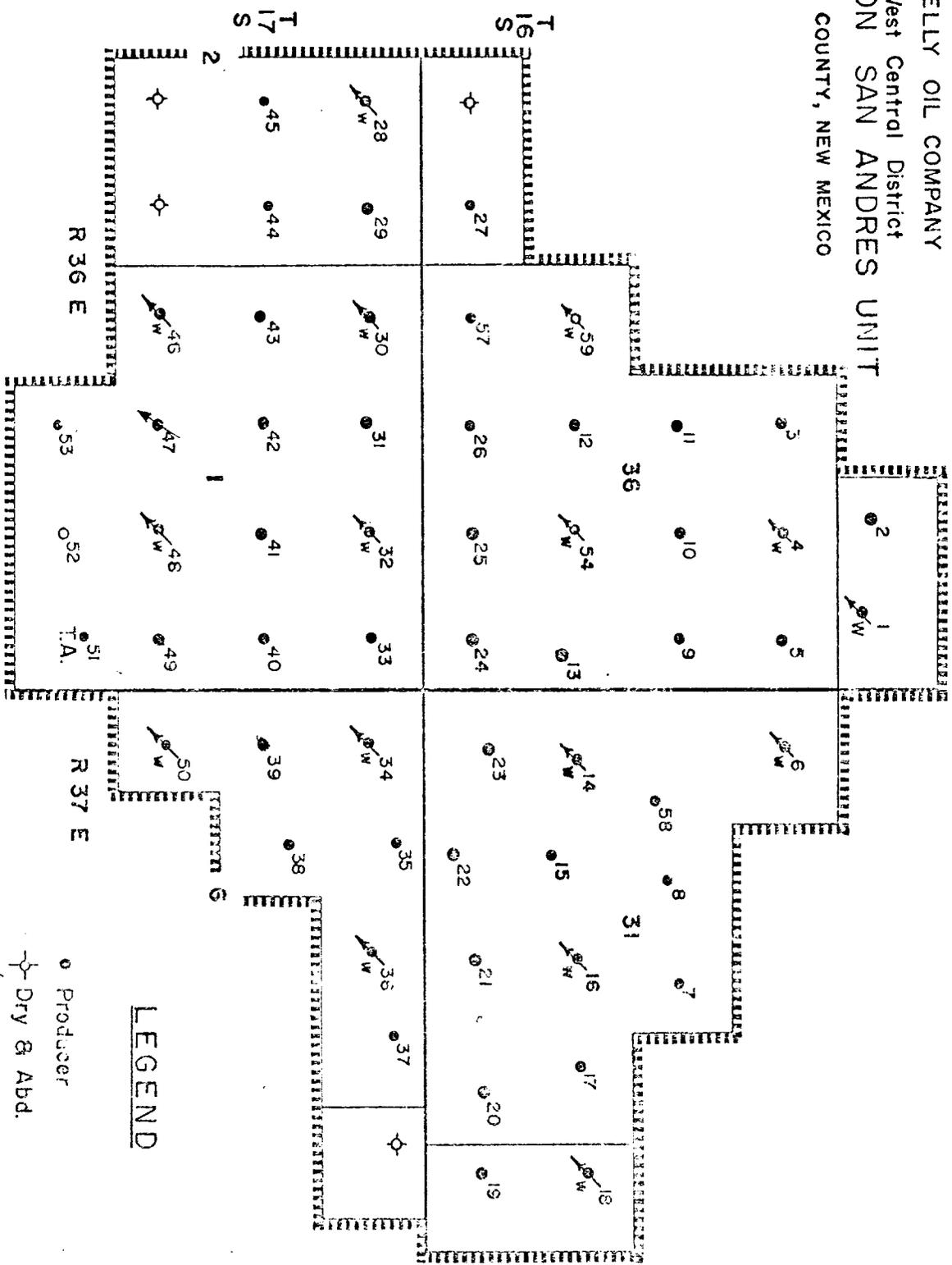
Yours very truly,


P. L. Nunley, Chairman
Working Interest Owners' Committee

BOB/scc
Attachment

Approved: *P. L. Nunley* 11/16

Secretary-Treasurer
WORKING INTEREST OWNERS' COMMITTEE

SKELLY OIL COMPANY
 West Central District
LOVINGTON SAN ANDRES UNIT
 LEA COUNTY, NEW MEXICO



LEGEND

- Producer
- ⊕ Dry & Abd.
- ⊕ W Water injection
- ⊕ W Drilled Water Injection
- T.A. Temporary Abd.
- Location

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

January 22, 1970

2593

Skelly Oil Company
P. O. Box 1351
Midland, Texas 79701

Attention: Mr. P. L. Nunley

Re: Plan of Development and Operation
Lovington San Andres Unit, Lea
County, New Mexico

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the 1970 Plan of Development and Operation dated November 10, 1969, for the Lovington San Andres Unit, Lea County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Two approved copies of the plan are returned herewith.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/JEK/og
Enclosures

cc: United States Geological Survey
Roswell, New Mexico

Commissioner of Public Lands
Santa Fe, New Mexico

COPY

JAN 7 1970

January 5, 1970

Skelly Oil Company
P. O. Box 1351
Midland, Texas 79701

Re: Lovington San Andres Unit
1970 Plan of Development
Lea County, New Mexico

ATTENTION: Mr. P. L. Nunley

Gentlemen:

The Commissioner of Public Lands has this date approved your 1970 Plan of Development proposing to continue water injection under the present conditions, for the Lovington San Andres Unit, Lea County, New Mexico. This approval is subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

One approved copy is returned herewith.

Very truly yours,

Ted Bilberry, Director
Oil and Gas Department

TE/ML/s
encl.

cc: USGS-Roswell, New Mexico
OCC- Santa Fe, New Mexico



IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

JAN 19 1970

Drawer 1857
Roswell, New Mexico 88201

January 15, 1970

Skelly Oil Company
P. O. Box 1351
Midland, Texas 79701

Attention: Mr. P. L. Nunley

Gentlemen:

Your 1970 plan of development and operation, proposing to continue operations under the present waterflood pattern, for the Lovington San Andres unit area, Lea County, New Mexico, has been approved on this date subject to like approval by the appropriate State officials.

Three approved copies of the plan are enclosed.

Sincerely yours.

(ORIG. SCD) CARL C. TRAYWICK

CARL C. TRAYWICK
Acting Oil and Gas Supervisor

cc:
Washington (w/cy of plan)
Hobbs (w/cy of plan)
NMOCC, Santa Fe (ltr. only) ✓
Com. of Pub. Lands, Santa Fe (ltr. only)



JAN 2 1970

SKELLY OIL COMPANY

P. O. Box 1351 Midland, Texas 79701

November 10, 1969

Re: Lovington San Andres Unit
Lea County, New Mexico

Director (6)
United States Geological Survey
P. O. Drawer 1857
Roswell, New Mexico 88201

Commissioner of Public Lands (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico 87501

Oil Conservation Commission of (3) All Working Interest Owners
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico 87501

Gentlemen:

In accordance with Section 11 of the Unit Agreement for the Development and Operation of the Lovington San Andres Unit, Lea County, New Mexico, Skelly Oil Company respectfully submits for your approval a report of past operations and a plan of development and operation for the Unit in 1970.

PAST OPERATIONS

The Lovington San Andres Unit became effective August 1, 1962, with Skelly Oil Company as Unit Operator. Injection of water into fourteen (14) injection wells commenced on March 29, 1963. The Unit was enlarged, effective December 1, 1963, with the inclusion of Tracts 6 and 10. In June 1965, two additional injection wells were added; Unit Well No. 1, a producer, was converted and Unit Well No. 59 was drilled and completed as an injection well. Unit Well No. 47 was converted to injection in August 1969.

A central tank battery with LACT unit and four satellite test stations were installed in late 1964 and early 1965, to permit adequate well testing and improve operating efficiency. Injection of produced water was commenced on February 10, 1966, into Wells Nos. 1, 4, 6, 28, 30, 54, and 59, replacing make-up fresh water. Emergency storage for produced salt water was installed in December 1967 to contain produced water in the event of injection pump shut-down. All produced water is being recycled.

Cumulative water injection to September 1, 1969, was 13,717,217 barrels. The daily average injection rate during August 1969, was 6,323 barrels at 1570 psig.

CELEBRATING OUR



50th ANNIVERSARY

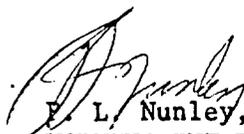
Page 2
Lovington San Andr Unit
Plan of Development and Operation
November 10, 1969

Cumulative oil production since unitization to September 1, 1969, was 1,940,088 barrels. Oil production for the Unit averaged 788 barrels per day for August 1969.

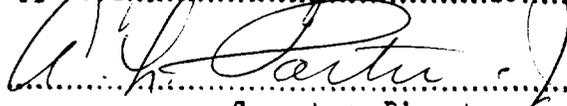
DEVELOPMENT PLANS

The operation of the Unit in 1970 is expected to proceed by continuing water injection under the present conditions. Studies are being made on a continuous basis to keep the operating efficiency of the Unit at a maximum.

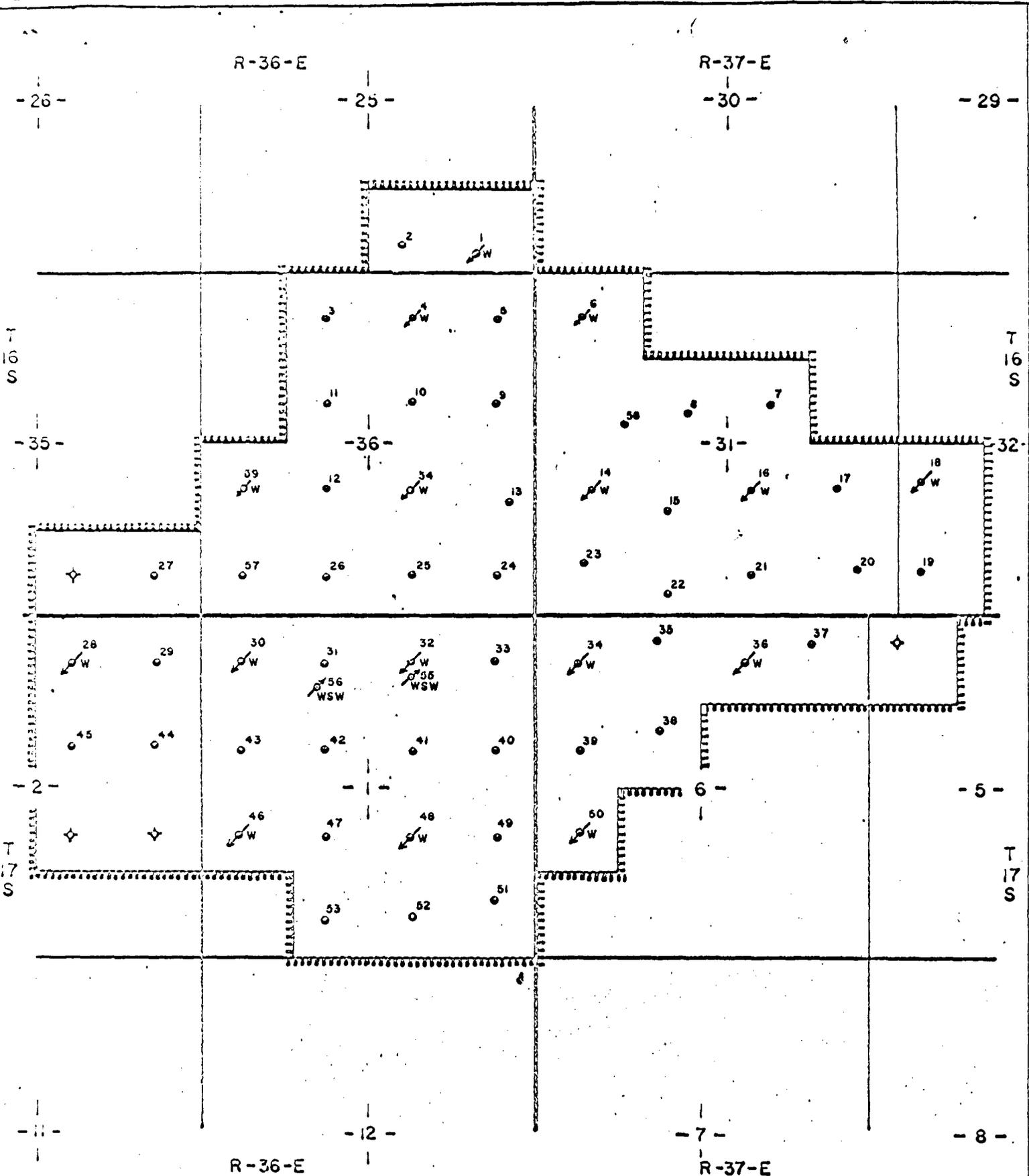
Very truly yours,
SKELLY OIL COMPANY


E. L. Nunley, Chairman
WORKING INTEREST OWNERS COMMITTEE

OVS/ljm

Approved January 22 1970

Secretary-Director

NEW MEXICO OIL CONSERVATION COMMISSION



LOVINGTON SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO





UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Drawer 1857
Roswell, New Mexico 88201

2513
JAN 30 1969

January 29, 1969

Skelly Oil Company
P. O. Box 730
Hobbs, New Mexico 88240

Attention: Mr. V. E. Fletcher

Gentlemen:

Your 1969 plan of development and operation for the Lovington San Andres unit area, Lea County, New Mexico, proposing to continue waterflood operations, has been approved on this date subject to like approval by the appropriate State officials.

Three approved copies of the plan are enclosed.

Sincerely yours,

(ORIG. SGN) CARL C. TRAYWICK

CARL C. TRAYWICK
Acting Oil and Gas Supervisor

cc:
Washington (w/cy of plan)
Hobbs (w/cy of plan)
NMOCC, Santa Fe (ltr. only) ✓
Com. of Pub. Lands, Santa Fe (ltr. only)

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

2-1-

January 9, 1969

Skelly Oil Company
P. O. Box 730
Hobbs, New Mexico 88240

Attention: Mr. V. E. Fletcher

Re: 1969 Plan of Development
Lovington San Andres Unit,
Lea County, New Mexico

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the 1969 Plan of Development dated November 25, 1968, for the Lovington San Andres Unit, Lea County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Two approved copies of the plan are returned herewith.

Very truly yours,

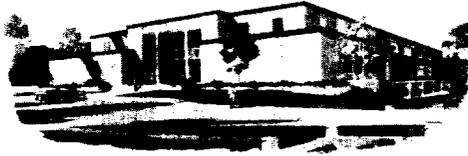
A. L. PORTER, Jr.
Secretary-Director

ALP/JEK/og

cc: United States Geological Survey - Roswell
Commissioner of Public Lands - Santa Fe

C
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Y

State of New Mexico



Commissioner of Public Lands

GUYTON B. HAYS
COMMISSIONER



December 9, 1968

P. O. BOX 1148
SANTA FE, NEW MEXICO

Skelly Oil Company
P. O. Box 730
Hobbs, New Mexico 88240

Re: Lovington San Andres Unit
Lea County, New Mexico

ATTENTION: Mr. V. E. Fletcher

Gentlemen:

The Commissioner of Public Lands has this date approved your 1969 Plan of Development proposing to continue water injection under the present conditions, for the Lovington San Andres Unit, Lea County, New Mexico. This approval is subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

One approved Copy is returned herewith.

Very truly yours,

GUYTON B. HAYS
COMMISSIONER OF PUBLIC LANDS

BY:
Malcolm L. Long, Supervisor
Unit Division

GBH/TE/EL/s
encl.

cc: USGS-Roswell, New Mexico
OCC-Santa Fe, New Mexico



PH 8 44

SKELLY OIL COMPANY

P.O. Box 730, Hobbs, New Mexico 88240

November 25, 1968

Re: Lovington San Andres Unit
Lea County, New Mexico

Director (6)
United States Geological Survey
P.O. Drawer 1857
Roswell, New Mexico 88201

Commissioner of Public Lands (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico 87501

Oil Conservation Commission of (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico 87501

All Working Interest Owners

Gentlemen:

In accordance with Section 11 of the Unit Agreement for the Development and Operation of the Lovington San Andres Unit, Lea County, New Mexico, Skelly Oil Company respectfully submits for your approval a report of past operations and a plan of development and operation for the Unit in 1969.

PAST OPERATIONS

The Lovington San Andres Unit became effective August 1, 1962 with Skelly Oil Company as Unit Operator. Injection of water into fourteen (14) injection wells commenced on March 29, 1963. The Unit was enlarged, effective December 1, 1963, with the inclusion of Tracts 6 and 10. In June 1965 two additional injection wells were added; Unit Well No. 1, a producer, was converted and Unit Well No. 59 was drilled and completed as an injection well.

A central tank battery with LACT unit and four satellite test stations were installed in late 1964 and early 1965 to permit adequate well testing and improve operating efficiency. Injection of produced water was commenced on February 10, 1966, into Wells Nos. 1, 4, 6, 28, 30, 54, and 59, replacing make-up fresh water. Emergency storage for produced salt water was installed in December 1967 to contain produced water in the event of injection pump shut-down. All produced water is being recycled.

Cumulative water injection to October 1, 1968 was 11,636,982 barrels. The daily average injection rate during September 1968 was 6,109 barrels.

Cumulative oil production since unitization to October 1, 1968 was 1,665,261 barrels. Oil production for the Unit averaged 850 barrels per day for September 1968.

Lovington San Andres
Development and Operation

Page No. 2

DEVELOPMENT PLANS

The operation of the Unit in 1969 is expected to proceed by continuing water injection under the present conditions. Studies are being made on a continuous basis to keep the operating efficiency of the Unit at a maximum.

Yours very truly,
SKELLY OIL COMPANY



V. E. Fletcher, Chairman
WORKING INTEREST OWNERS COMMITTEE

OVS/bh

Approved.....*January 9*.....19*69*.....



Secretary-Director

NEW MEXICO OIL CONSERVATION COMMISSION

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LOVINGTON SAN ANDRES UNIT LEA COUNTY, NEW MEXICO





IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Drawer 1857
Roswell, New Mexico 88201

December 21 1967

MAIL ROOM

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Skelly Oil Company
P. O. Box 730
Hobbs New Mexico

Attention: Mr. V. E. Fletcher

Gentlemen:

Your 1968 plan of development and operation dated November 16, 1967, for the Lovington San Andres unit area, Lea County, New Mexico, has been approved on this date subject to like approval by the appropriate State officials.

Three approved copies of the plan are enclosed.

Sincerely yours,

(ORIGINAL) JOHN A. ANDERSON

JOHN A. ANDERSON
Regional Oil & Gas Supervisor

cc:
Washington (w/cy of plan)
Hobbs-(w/cy of plan)
NMOCC, Santa Fe (Ltr. only) ✓
Com. of Pub. Lands, Santa Fe (Ltr. only)

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

25/8

January 4, 1968

Skelly Oil Company
P. O. Box 730
Hobbs, New Mexico

Attention: Mr. V. E. Fletcher

Re: 1968 Plan of Development
Lovington San Andres Unit
Lea County, New Mexico

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the 1968 Plan of Development dated November 16, 1967, for the Lovington San Andres Unit, Lea County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Two approved copies of the plan are returned herewith.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/JEK/og

cc: Commissioner of Public Lands - Santa Fe
United States Geological Survey - Roswell

State of New Mexico



'67 DEC 13 AM 8 48

Commissioner of Public Lands



December 12, 1967

GUYTON B. HAYS
COMMISSIONER

P. O. BOX 1148
SANTA FE, NEW MEXICO

Skelly Oil Company
P. O. Box 730
Hobbs, New Mexico

Re: Lovington San Andres Unit
Lea County, New Mexico
1968 Plan of Development

ATTENTION: Mr. V. E. Fletcher

Gentlemen:

The Commissioner of Public Lands has this date approved your 1968 Plan of Development for the captioned unit. This plan calls for the continuation of water injection operations under the present conditions.

This approval being subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

One approved copy is returned herewith.

Very truly yours,

GUYTON B. HAYS
COMMISSIONER OF PUBLIC LANDS

BY:
Eddie Lopez, Supervisor
Unit Division

GBH/TA/EL/s
encl. 1.

cc: USGS-Roswell, New Mexico
OCC-Santa Fe, New Mexico



SKELLY OIL COMPANY

P.O. Box 730, Hobbs, New Mexico

November 16, 1967

Re: Lovington San Andres Unit
Lea County, New Mexico

Director (6)
United States Geological Survey
P.O. Drawer 1857
Roswell, New Mexico

Commissioner of Public Lands (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico

Oil Conservation Commission of (3)
The State of New Mexico
Capitol Annex Building

All Working Interest Owners

Gentlemen:

In accordance with Section 11 of the Unit Agreement for the Development and Operation of the Lovington San Andres Unit, Lea County, New Mexico, Skelly Oil Company respectfully submits for your approval a report of past operations and a plan of development and operation for the Unit in 1968.

PAST OPERATIONS

The Lovington San Andres Unit became effective August 1, 1962 with Skelly Oil Company as Unit Operator. Injection of water into fourteen (14) injection wells commenced on March 29, 1963. The Unit was enlarged, effective December 1, 1963, with the inclusion of Tracts 6 and 10.

In June 1965 two additional injection wells were added; Unit Well No. 1, a producer, was converted and Unit Well No. 59 was drilled and completed as an injection well.

A central tank battery with LACT Unit and four satellite test stations were installed in late 1964 and early 1965.

Injection of produced water was commenced on February 10, 1966, into Wells No. 1, 4, 6, 28, 30, 54, and 59.

The well status in the Lovington San Andres Unit was changed during 1967 as follows:

	1966	1967
No. of Producing Wells	39	39
No. of Injection Wells	16	16
No. of Water Supply Wells	2	-
No. of Shut-in Wells	<u>2</u>	<u>2</u>
TOTAL	59	57

Lovington San Andres
Development and Operation

Page No. 2

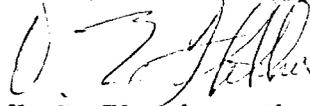
Cumulative water injection to October 1, 1967 has been 9,513,348 barrels. Oil production for the Unit averaged 23,656 barrels per month over the first nine months of 1967. September 1967 production was reported as 22,643 barrels.

DEVELOPMENT PLANS

Plans have been made and approved to install an emergency salt water storage for containing the produced water in the event of an injection pump shut-down. This will be completed by January 1, 1968.

The operation of the Unit in 1968 is expected to proceed by continuing water injection under the present conditions. Studies are being made to keep the operating efficiency of the Unit at a maximum.

Yours very truly,
SKELLY OIL COMPANY



V. E. Fletcher, Chairman
Working Interest Owners Committee

BOB/bh

Approved *[Signature]* 12/68

[Signature]
Secretary-Director

NEW MEXICO OIL CONSERVATION COMMISSION

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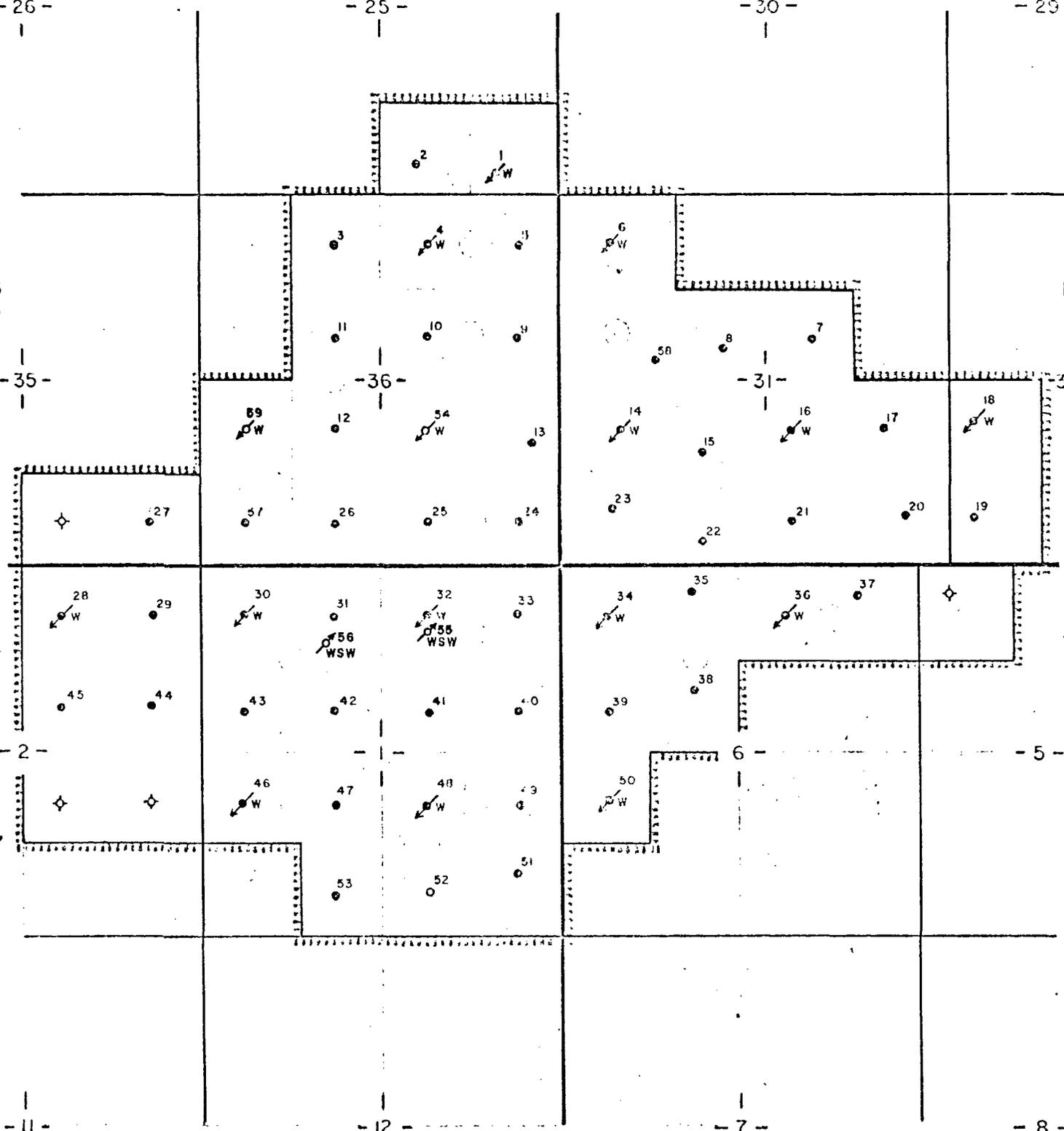
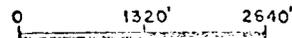
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LOVINGTON SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO



25/3

Drawer 1857
Roswell, New Mexico 88201

May 11, 1967

Wells Oil Company
P. O. Box 739
Roswell, New Mexico

Attention: Mr. W. F. Ash

Gentlemen:

Your 1967 plan of development and operation dated November 8, 1966, for the Lovington San Andres unit area, Lea County, New Mexico, has been approved on this date subject to like approval by the appropriate State officials.

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 of plan)
Hobbs (w/cy of plan)
NMOCC, Santa Fe (ltr. only) ✓
Com. of Pub. Lands, Santa Fe (ltr. only)

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO

25/0

April 27, 1967

C

O

Skelly Oil Company
P. O. Box 730
Hobbs, New Mexico 88240

Attention: Mr. H. E. Aab

P

Re: 1967 Plan of Development
Lovington San Andres Unit
Lea County, New Mexico

Gentlemen:

Y

This is to advise that the New Mexico Oil Conservation Commission has this date approved the 1967 Plan of Development dated November 8, 1966, for the Lovington San Andres Unit, Lea County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Two approved copies of the plan are returned herewith.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/JEK/esr
Enclosures

cc: Commissioner of Public Lands
Santa Fe, New Mexico

United States Geological Survey
Roswell, New Mexico

February 13, 1967

Skelly Oil Company
P. O. Box 730
Hobbs, New Mexico

Re: Lovington San Andres Unit
Lea County, New Mexico
1967 Plan of Development

ATTENTION: Mr. H. E. Aab

Gentlemen:

The Commissioner of Public Lands has this date approved your 1967 Plan of Development for the captioned unit. This plan calls for the continuation of water injection operations under the present conditions.

One approved copy is returned herewith.

Very truly yours,

GUYTON B. HAYS
COMMISSIONER OF PUBLIC LANDS

BY:
Ted Bilberry, Director
Oil and Gas Department

GBH/MSR/s

encl. 1

cc: United States Geological Survey
Roswell, New Mexico

Oil Conservation Commission
Santa Fe, New Mexico



SKELLY OIL COMPANY

P.O. Box 730, Hobbs, New Mexico

November 8, 1966

Re: Lovington San Andres Unit
Lea County, New Mexico

Director (6)
United States Geological Survey
P.O. Drawer 1857
Roswell, New Mexico

Commissioner of Public Lands (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico

Oil Conservation Commission of (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico

All Working Interest Owners

Gentlemen:

In accordance with Section 11 of the Unit Agreement for the Development and Operation of the Lovington San Andres Unit, Lea County, New Mexico, Skelly Oil Company respectfully submits for your approval a report of past operations and a plan of development and operation for the Unit in 1967.

PAST OPERATIONS

The Lovington San Andres Unit became effective August 1, 1962 with Skelly Oil Company as Unit Operator. Injection of water into fourteen (14) injection wells commenced on March 29, 1963. The Unit was enlarged, effective December 1, 1963, with the inclusion of Tracts 6 and 10.

In June 1965 two additional injection wells were added; Unit Well No. 1, a producer, was converted and Unit Well No. 59 was drilled and completed as an injection well.

A central tank battery with LACT Unit and four satellite test stations were installed in late 1964 and early 1965.

Injection of produced water was commenced on February 10, 1966. This produced San Andres water is being injected into Wells No. 1, No. 4, No. 6, No. 28, No. 30, No. 54, and No. 59. This water and the Ogalalla supply water are being handled by separate segments of the injection system and are not being mixed.

The well status in the Lovington San Andres Unit remained unchanged during 1966 and is as follows:

No. of Producing Wells	39
No. of Injection Wells	16
No. of Water Supply Wells	2
No. of Shut In Wells	<u>2</u>
TOTAL	59

Lovington San Andres
Development and Operation

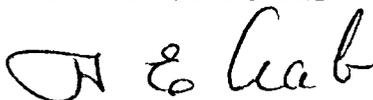
Page No. 2

Cumulative water injection to October 1, 1966 has been 7,347,619 barrels. Of this total 6,946,246 barrels have been Ogalalla supply water and 401,373 barrels have been produced San Andres water. Oil production for the Unit ranged from 25,846 Bbls/Mo to 30,224 Bbls/Mo over the first nine months of 1966. September 1966 production was reported as 28,721 barrels.

DEVELOPMENT PLANS

Operation of the Lovington San Andres Unit will proceed in the forthcoming year by continuing water injection operations under present conditions.

Yours very truly,
SKELLY OIL COMPANY



H. E. Aab, Chairman
Working Interest Owners Committee

LRH/bh

Approved... *April 27* 1967



Secretary-Director

NEW MEXICO OIL CONSERVATION COMMISSION

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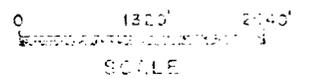
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LOVINGTON SAN ANDRES UNIT LEA COUNTY, NEW MEXICO



OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO

February 1, 1966

Skelly Oil Company
P. O. Box 720
Hobbs, New Mexico

Attention: Mr. H. E. Aab

Re: 1966 Plan of Development
and Operation, Lovington
San Andres Unit, Lea
County, New Mexico.

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the 1966 Plan of Development and Operation for the Lovington San Andres Unit, Lea County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Two approved copies of the plan are returned herewith.

Very truly yours,

A. L. PORTER, Jr.,
Secretary-Director

ALP/JEK/og

cc: Commissioner of Public Lands - Santa Fe
U. S. Geological Survey - Roswell

C
O
P
Y

Drawer 1887
Roswell, New Mexico 88201

MAIN OFFICE OCC

JAN 27 PM 1:14

January 25, 1946

Skelly Oil Company
P. O. Box 730
Hobbs, New Mexico

Attention: Mr. H. E. Ash

Gentlemen:

Your 1946 plan of development and operation dated December 15, 1945, for the Lovington San Andres unit area, Lea County, New Mexico, has been approved on this date subject to like approval by the appropriate State officials.

Three approved copies of the plan are enclosed.

Sincerely yours,

[Handwritten signature]

JOHN A. ANDERSON
Regional Oil & Gas Supervisor

cc:
Washington (w/cy of plan)
Hobbs (w/cy of plan)
N.M.O.C.C. - Santa Fe (ltr. only) ✓
Com. of Pub. Lands - Santa Fe (ltr. only)



SKELLY OIL COMPANY

P.O. Box 730, Hobbs, New Mexico

December 16, 1965

Re: Lovington San Andres Unit
Lea County, New Mexico

Director (6)
United States Geological Survey
P.O. Drawer 1857
Roswell, New Mexico

Commissioner of Public Lands (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico

Oil Conservation Commission of (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico

All Working Interest Owners

Gentlemen:

In accordance with Section 11 of the Unit Agreement for the Development and Operation of the Lovington San Andres Unit, Lea County, New Mexico, Skelly Oil Company respectfully submits for your approval a report of past operations and a plan of development and operation for the Unit in 1966.

PAST OPERATIONS

New flow lines and four satellite test stations were installed in the Lovington San Andres Unit early in the year of 1965. These facilities were tied-in with the LACT Unit that was installed during the third quarter of 1964. The installation of the satellite stations and the LACT equipment has greatly improved the operation of the Unit. During the second quarter of 1965, injection rates were varied and a dye substance was placed in the injection fluid in selected wells to track injected fluid movement. Injectivity profiles were also run in selected wells to ascertain the vertical distribution of injected fluid.

Unit Well No. 59, located 660' FWL and 1980' FSL of Section 36-16S-36E, was drilled and completed as an injection well on June 26, 1965. The well was drilled to the total depth of 5060 feet and 4 1/2" O.D. casing was installed to that depth. The Unit No. 1 well was converted from producing to water injection status on June 29, 1965 to assist in alleviating the limited injection capacity existing in the Northwest portion of the Unit. The current well status in the Unit is as follows:

No. of Producing Wells	39
No. of Injection Wells	16
No. of Water Supply Wells	2
No. of Shut-In Wells	<u>2</u>
	59

Lovington San Andres Unit
Development and Operation

December 16, 1965

Page No. 2

Cumulative water injection to October 1, 1965 has been 5,328,408 barrels. Unit oil production for the first nine months of the year has ranged from 30,863 BBLs/Mo. to 26,799 BBLs/Mo. with September 1965 production reported as 28,252 barrels.

DEVELOPMENT PLANS

Approval from Unit partners has been received by Skelly Oil Company, the Unit Operator, to install equipment for injection of produced water. Installation of these facilities will be started during the first quarter of 1966. Operation of the Lovington San Andres Unit will proceed in the forthcoming year by continuing water injection operations.

Yours very truly,
SKELLY OIL COMPANY



H. E. Aab, Chairman
Working Interest Owners Committee

JTC/bh

Approved..... Feb 1, 1966

.....
Secretary-Director

NEW MEXICO OIL CONSERVATION COMMISSION

MAIL ROOM
'65 JUL 20 PM 2

July 12, 1965

Skelly Oil Company
P. O. Box 730
Hobbs, New Mexico

Attention: Mr. H. E. Aab

Re: Lovington San Andres Unit
Lea County, New Mexico
1965 Plan of Development

Gentlemen:

The Commissioner of Public Lands approves as of July 12, 1965, your 1965 Plan of Development for the Lovington San Andres Unit, Lea County, New Mexico. This instrument was approved by the United States Geological Survey on May 28, 1965.

We are returning one approved copy of the Plan of Development.

Very truly yours,

GUYTON B. HAYS
COMMISSIONER OF PUBLIC LANDS

BY:
(Mr.) Ted Bilberry, Director
Oil and Gas Department

GEM/MSR/d
Enclosures

cc: United States Geological Survey
P. O. Drawer 1857
Roswell, New Mexico
Attention: Mr. John A. Anderson

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

2593

July 13, 1962

Skally Oil Company
Tulsa 2, Oklahoma

Re: Lovington San Andres Unit,
Lea County, New Mexico

Attention: Mr. Robert G. Hiltz
Mr. K. E. Jones

Gentlemen:

The Commissioner of Public Lands has approved as of July 13, 1962, the Lovington San Andres Unit, Lea County, New Mexico.

This Unit Agreement was approved by the Oil Conservation Commission Case No. 2593 by Order No. R-2277 as of July 12, 1962, and the Project Case No. 2592 by Order No. R-2278 as of July 12, 1962.

We are enclosing one original and two copies, of our Certificate of Approval.

May we please be advised as to the action if any, taken by the United States Geological Survey in regard to this Unit Agreement.

Also enclosed is Official Receipt No. 87945 in the amount of Forty-five (\$45.00) Dollars which covers the filing fee.

Very truly yours,

E. S. JOHNNY WALKER
COMMISSIONER OF PUBLIC LANDS

BY:
(Mrs.) Marian M. Rhea, Supervisor
Unit Division

ESW/umr/v

cc: Oil Conservation Commission
Santa Fe, New Mexico

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MAIL ROOM

'65 JUL 20 PM 4

July 12, 1965

Skelly Oil Company
P. O. Box 730
Hobbs, New Mexico

Attention: Mr. H. E. Aab

Re: Lovington San Andres Unit
Lea County, New Mexico
1965 Plan of Development

Gentlemen:

The Commissioner of Public Lands approves as of July 12, 1965, your 1965 Plan of Development for the Lovington San Andres Unit, Lea County, New Mexico. This instrument was approved by the United States Geological Survey on May 28, 1965.

We are returning one approved copy of the Plan of Development.

Very truly yours,

GUYTON B. HAYS
COMMISSIONER OF PUBLIC LANDS

BY:
(Mr.) Ted Bilberry, Director
Oil and Gas Department

GBH/MMR/d
Enclosures

cc: United States Geological Survey
P. O. Drawer 1857
Roswell, New Mexico
Attention: Mr. John A. Anderson

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



IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Drawer 1857
Roswell, New Mexico 88201

May 28, 1965

Skelly Oil Company
P. O. Box 730
Hobbs, New Mexico

Attention: Mr. H. E. Aab

Gentlemen:

Your 1965 plan of development dated November 13, 1964, for the Lovington San Andres unit agreement, Lea County, New Mexico, has been approved on this date subject to like approval by the appropriate State officials.

One approved copy of the plan is enclosed.

Sincerely yours,

(ORIG. 500) BILLY J. SHOGER

BILLY J. SHOGER
Acting Oil and Gas Supervisor

cc:
Washington (w/cy of plan)
Hobbs (w/cy of plan)
MSOCC, Santa Fe (ltr. only) ✓
Com. of Pub. Lands, Santa Fe (ltr. only)

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

July 17, 1962

Mr. George Selinger
Skelly Oil Company
Box 1650
Tulsa 2, Oklahoma

Dear George:

Enclosed herewith is a corrected copy of Order
No. R-2277, entered by the Commission on July 12,
1962.

Please acknowledge receipt of this correction
and destroy the copy of this order which was mailed
to you last week.

Very truly yours,

DANIEL S. MUTTER
Chief Engineer

DSN/esr
Enclosure

C

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OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

July 17, 1962

Mr. Joe D. Ramey
District Supervisor
Oil Conservation Commission
P. O. Box 2045
Hobbs, New Mexico

Dear Joe:

Enclosed herewith is a corrected copy of Order
No. R-2277, entered by the Commission on July 12,
1962.

Please acknowledge receipt of this correction
and destroy the copy of this order which was mailed to
you last week.

Very truly yours,

DANIEL S. NUTTER
Chief Engineer

DSH/ear
Enclosure

C
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OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

July 17, 1962

**Mr. Charlie White
Gilbert, White & Gilbert
P. O. Box 787
Santa Fe, New Mexico**

Dear Charlie:

**Enclosed herewith is a corrected copy of Order
No. R-2277, entered by the Commission on July 12,
1962.**

**Please acknowledge receipt of this correction
and destroy the copy of this order which was mailed
to you last week.**

Very truly yours,

**DANIEL S. NUTTER
Chief Engineer**

**DSN/esr
Enclosure**

C
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OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

July 17, 1962

C
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Mrs. Marian M. Rhea, Supervisor
Unit Division
New Mexico State Land Office
P. O. Box 791
Santa Fe, New Mexico

Dear Mrs. Rhea:

Enclosed herewith is a corrected copy of Order No. R-2277, entered by the Commission on July 12, 1962.

Please acknowledge receipt of this correction and destroy the copy of this order which was mailed to you last week.

Very truly yours,

DANIEL S. NUTTER
Chief Engineer

DSN/esr
Enclosure

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

July 17, 1962

**R. W. Byram & Company
Drawer M
Capitol Station
Austin, Texas**

Gentlemen:

**Enclosed herewith is a corrected copy of Order
No. R-2277, entered by the Commission on July 12,
1962.**

**Please acknowledge receipt of this correction
and destroy the copy of this order which was mailed
to you last week.**

Very truly yours,

**DANIEL S. NUTTER
Chief Engineer**

**DSH/esr
Enclosure**

C
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P
Y

GOVERNOR
EDWIN L. MECHEM
CHAIRMAN

State of New Mexico
Oil Conservation Commission



LAND COMMISSIONER
E. S. JOHNNY WALKER
MEMBER

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

P. O. BOX 871
SANTA FE

July 13, 1962

Mr. George Selinger
Skelly Oil Company
Box 1650
Tulsa 2, Oklahoma

Re: Case No. 2593
Order No. R-2277
Applicant:
Skelly Oil Company

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

ir/

Carbon copy of order also sent to:

Hobbs OCC x

Artesia OCC

Aztec OCC

OTHER Charlie White
 Mrs. Marion Rhea

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 2593
Order No. R-2277

APPLICATION OF SKELLY OIL COMPANY
FOR THE APPROVAL OF A UNIT AGREE-
MENT, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on June 28, 1962, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 12th day of July, 1962, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, 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, Skelly Oil Company, seeks approval of the Lovington San Andres Unit Agreement embracing 2,470 acres, more or less, ~~of Federal, State and Fee lands~~ in Townships 16 and 17 South, Ranges 36 and 37 East, NMPM, Lea County, New Mexico.

(3) That the proposed unit plan will in principle tend to promote the conservation of oil and gas and the prevention of waste.

IT IS THEREFORE ORDERED:

(1) That the Lovington San Andres Unit Agreement is hereby approved.

PROVIDED HOWEVER, That notwithstanding any of the provisions contained in said unit agreement, this approval shall not be considered as waiving or relinquishing, in any manner, any right, duty, or obligation which is now, or may hereafter be, vested in the New Mexico Oil Conservation Commission by law relative to the

supervision and control of operations for exploration and development of any lands committed to said Lovington San Andres Unit Agreement, or relative to the production of oil and gas therefrom.

(2) That the unit area shall be:

LEA COUNTY, NEW MEXICO

TOWNSHIP 16 SOUTH, RANGE 36 EAST, NMPM

Section 25: S/2 SE/4
Section 35: S/2 SE/4
Section 36: E/2, E/2 NW/4, and SW/4

TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM

Section 31: Lots 1, ~~2~~, 3, 4, SE/4 NW/4,
E/2 SW/4, SW/4 NE/4, and
SE/4
Section 32: W/2 SW/4

TOWNSHIP 17 SOUTH, RANGE 36 EAST, NMPM

Section 1: Lots 1, 2, 3, 4, S/2 N/2,
SE/4, N/2 SW/4, and SE/4 SW/4
Section 2: Lots 1, 2, S/2 NE/4, N/2 SE/4

TOWNSHIP 17 SOUTH, RANGE 37 EAST, NMPM

Section 5: Lot 4
Section 6: Lots 1, 2, 3, 4, 5, 6, and
SE/4 NW/4

~~2420~~
containing 2,470 acres, more or less.

(3) That the unit operator shall file with the Commission an executed original or executed counterpart of the unit agreement within 30 days after the effective date thereof. In the event of subsequent joinder by any party, the unit operator shall file with the Commission within 30 days after such action counterparts of the unit agreement reflecting the subscription of those interests having joined or ratified.

(4) That this order shall become effective upon the approval of said unit agreement by the ~~Regional Supervisor of the United States Geological Survey and by the~~ Commissioner of Public Lands for the State of New Mexico, and shall terminate ipso facto upon the termination of said unit agreement. The last unit operator shall notify the Commission in writing of such termination.

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

insert (5)

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 2593
Order No. R-2277

APPLICATION OF SKELLY OIL COMPANY
FOR THE APPROVAL OF A UNIT AGREE-
MENT, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

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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.

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(3) That the proposed unit plan will in principle tend to promote the conservation of oil and gas and the prevention of waste.

IT IS THEREFORE ORDERED:

(1) That the Lovington San Andres Unit Agreement is hereby approved.

PROVIDED HOWEVER, That notwithstanding any of the provisions contained in said unit agreement, this approval shall not be considered as waiving or relinquishing, in any manner, any right, duty, or obligation which is now, or may hereafter be, vested in the New Mexico Oil Conservation Commission by law relative to the

-2-

CASE No. 2593
Order No. R-2277

supervision and control of operations for exploration and development of any lands committed to said Lovington San Andres Unit Agreement, or relative to the production of oil and gas therefrom.

(2) That the unit area shall be:

LEA COUNTY, NEW MEXICO

TOWNSHIP 16 SOUTH, RANGE 36 EAST, NMPM

Section 25: S/2 SE/4
Section 35: S/2 SE/4
Section 36: E/2, E/2 NW/4, and SW/4

TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM

Section 31: Lots 1, 2, 3, 4, SE/4 NW/4,
E/2 SW/4, SW/4 NE/4, and
SE/4
Section 32: W/2 SW/4

TOWNSHIP 17 SOUTH, RANGE 36 EAST, NMPM

Section 1: Lots 1, 2, 3, 4, S/2 N/2,
SE/4, N/2 SW/4, and SE/4 SW/4
Section 2: Lots 1, 2, S/2 NE/4, N/2 SE/4

TOWNSHIP 17 SOUTH, RANGE 37 EAST, NMPM

Section 5: Lot 4
Section 6: Lots 1, 2, 3, 4, 5, 6, and
SE/4 NW/4

containing 2,470 acres, more or less.

(3) That the unit operator shall file with the Commission an executed original or executed counterpart of the unit agreement within 30 days after the effective date thereof. In the event of subsequent joinder by any party, the unit operator shall file with the Commission within 30 days after such action counterparts of the unit agreement reflecting the subscription of those interests having joined or ratified.

(4) That this order shall become effective upon the approval of said unit agreement by the Regional Supervisor of the United States Geological Survey and by the Commissioner of Public Lands for the State of New Mexico, and shall terminate ipso facto upon the termination of said unit agreement. The last unit operator shall notify the Commission in writing of such termination.

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

-3-

CASE No. 2593

Order No. R-2277

DONE at Santa Fe, New Mexico, on the day and year herein-
above designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

E. S. WALKER, Member

A. L. PORTER, Jr., Member & Secretary

S E A L

esr/

CLASS OF SERVICE
This is a fast message unless its deferred character is indicated by the proper symbol.

WESTERN UNION TELEGRAM

W. P. MARSHALL, PRESIDENT

1201 (4-60)

SYMBOLS
DL = Day Letter
NL = Night Letter
LT = International Letter Telegram

The filing time shown in the date line on domestic telegrams is LOCAL TIME at point of origin. Time of receipt is LOCAL TIME at point of destination.

.LA043 DA202

2593
D SAC005 (D MDA019) PD=MIDLAND TEX 29 844A CST=
NEW MEXICO OIL CONSERVATION COMM=
BOX 871 SANTA FE NMEX=

THIS IS TO ADVISE THAT THE TIDEWATER OIL COMPANY
SUPPORTS SKELLY OIL COMPANY IN ITS REQUEST FOR APPROVAL
OF THE LOVINGTON SAN ANDRES UNIT LEA COUNTY NEW MEXICO.
THIS WAS THE NEW MEXICO OIL CONSERVATION COMMISSION CASE
NUMBER 2953=

R H COE DISTRICT PRODUCTION MANAGER
TIDEWATER OIL CO==

2953.



Joe E King

Texaco USA

TEXACO
CORPORATION
1500 TEXAS
ST. HOUSTON,
TEXAS 77001

March 11, 1986

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

Attention: Mr. R. L. Stamets
Director

Gentlemen:

Texaco, as operator of the Lovington San Andres Unit, requests that the NMOCD clarify the unitized interval as defined by the Unit Operating Agreement which was approved under Order No. R-2277. Texaco also requests that the Grayburg zone be included as part of the unitized interval.

History

The Lovington San Andres Unit is comprised of the wells completed in the San Andres formation which are located within the boundary shown on Exhibit No. 1. Most of the wells were completed between 1939 and 1941. In almost every case, the completion practice was to set an intermediate string of casing 50' to 100' above the top of the San Andres and then drill through the San Andres and complete it open hole.

On August 1, 1962, the Lovington San Andres Unit became effective. The Unit Operating Agreement was approved under Order No. R-2277 on July 12, 1962. Actual injection began in March, 1963, with an inverted 9-spot pattern. Currently the Unit produces 275 BOPD and 2300 BWPD. Injection averages 3400 BWPD.

Unitized Interval

Exhibit No. 2 is a copy of Page 3 from the Unit Agreement. Article (h) states that the unitized formation "is defined as the San Andres formation, same being that heretofore established underground reservoir underlying the Unit Area, the top of said reservoir being indicated to be at a depth of 4334 feet and the base thereof at a depth 5240 feet on the Gamma Ray Log of Amerada Petroleum Corporation's State "LA" Lease Well No. 1, located in

March 11, 1986

the NW/4 NE/4 of Section 1, T-17-S, R-36-E, Lea County, New Mexico". Exhibit No. 3, which is a plat of Section 1, T-17-S, R-36-E, shows that the State "LA" Well No. 1 is located in the SE/4 SW/4. Also, the State "LA" Well No. 1 was only drilled to a depth of 4815' as shown in Exhibit No. 4. It appears then, that the wrong well was referenced in the Operating Agreement. None of our records show which well was intended to be referenced. However, we believe that the State "LA" No. 9 is the well which was intended to be used to define the unitized interval. This well was drilled in 1952 and completed in the Abo formation. It is also located in the NW/4 NE/4 of Section 1. Accompanying this letter as Exhibit No. 5 is a copy of the Gamma Ray Log which was run on the State "LA" No. 9. The depths of 4334' and 5240' have been marked as well as the top of the San Andres zone and the Grayburg zone.

Grayburg Zone

Texaco, at the present time, is considering development of the Grayburg as part of the unitized interval. Apparently, when the Unit was formed, the Grayburg zone was not considered a separate formation. To our knowledge, there is no Lovington Grayburg pool defined in the area of the Lovington San Andres Unit. Many wells have been completed in a portion of the Grayburg. An example is Stanolind Oil and Gas Company's State "E" Tract 18 Well No. 10. This well was completed in 1945 at a depth of 5010' with casing set at 4602'. Exhibit No. 6 shows the original well record. This well became injection Well No. 28 in 1963. Exhibit No. 7 is a copy of a Tracer Survey and Gamma Ray Log which was run on July 24, 1974. This log indicates that water was being injected into the Grayburg zone above the top of the San Andres. Exhibit No. 8 shows several other examples where wells within the Unit have been producing from or injecting into the lower portion of the Grayburg zone.

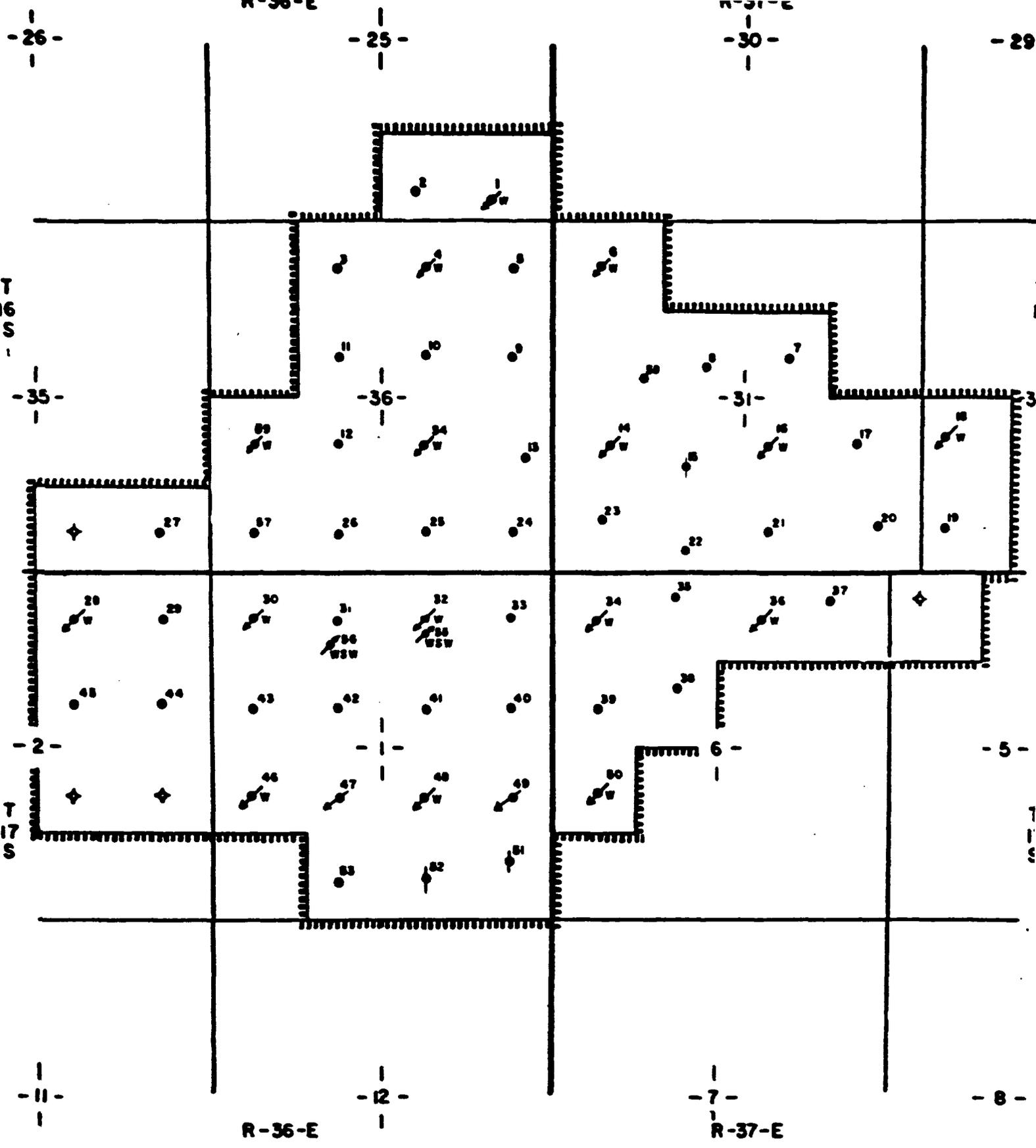
Texaco contends that the original intent of the Unit Agreement was to include the Grayburg zone as part of the unitized interval and that all evidence supports this idea. We therefore request that a ruling be made to confirm this position and to clarify the Operating Agreement.

Yours very truly,



KAW:jm

Attachments



LOVINGTON SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO

EXHIBIT NO. 1



agreement, the following terms and expressions as used herein shall mean:

(a) "Unit Area" is defined as the land depicted on Exhibit "A" and described by Tracts in Exhibit "B" as to which this agreement becomes effective or to which it may be extended as herein provided.

(b) "Commissioner" is defined as the Commissioner of Public Lands of the State of New Mexico.

(c) "Commission" is defined as the Oil Conservation Commission of the State of New Mexico.

(d) "Director" is defined as the Director of the United States Geological Survey.

(e) "Secretary" is defined as the Secretary of the Interior of the United States of America.

(f) "Department" is defined as the Department of the Interior of the United States of America.

(g) "Supervisor" is defined as the Oil and Gas Supervisor of the United States Geological Survey.

(h) "Unitized Formation" is defined as the San Andres Formation, same being that heretofore established underground reservoir underlying the Unit Area, the top of said reservoir being indicated to be at a depth of 4,334 feet and the base thereof at a depth of 5,240 feet on the Gamma Ray log of Amerada Petroleum Corporation's State "LA" Lease Well No. 1, located in the NW/4 NE/4 of Section 1, T-17-S, R-36-E, Lea County, New Mexico.

(i) "Unitized Substances" is defined as all oil, gas, gaseous substances, sulphur contained in gas, condensate, distillate and all associated and constituent liquid or liquefiable hydrocarbons within or produced from the Unitized Formation.

(j) "Working Interest" is defined as the right to search for, produce and acquire Unitized Substances whether held as an incident of ownership of mineral fee simple title, under an oil and gas lease, or otherwise.

(k) "Working Interest Owner" is defined as any party hereto owning a Working Interest, including a carried working interest owner, holding an interest in Unitized Substances by virtue of a lease, operating agreement, fee title or otherwise, which interest is chargeable with and obligated to pay or bear, either in cash or out of production, or otherwise, all or a portion of the cost of drilling, developing and producing the Unitized Substances from the Unitized Formation and the operation thereof hereunder. The owner of oil and gas rights that are free of lease or other instrument conveying the Working Interest to another shall be regarded as a Working Interest Owner to the extent of seven-eighths ($7/8$) of his interest in Unitized Substances, and as a Royalty Owner with respect to his remaining one-eighth ($1/8$) interest therein.

(l) "Royalty Interest" or "Royalty" is defined as an interest other than a Working Interest in or right to receive a portion of the Unitized Substances or the proceeds thereof and includes the royalty interest reserved by the lessor in an oil and gas lease and any overriding royalty interest, oil payment interest, net profit contracts, or any other payment or burden which does not carry with it the right to search for and produce Unitized Substances.

Santa Fe, New Mexico

MISCELLANEOUS NOTICES

Submit this notice in triplicate to the Oil Conservation Commission or its proper agent before the work specified is to begin. A copy will be returned to the sender on which will be given the approval, with any modifications considered advisable, or the rejection by the Commission or its agent, of the plan submitted. The plan as approved should be followed, and work should not begin until approval is obtained. See additional instructions in the Rules and Regulations of the Commission.

Indicate nature of notice

NOTICE OF INTENTION TO TEST CASING SHUT-OFF	X
NOTICE OF INTENTION TO CHANGE PLANS	
NOTICE OF INTENTION TO REPAIR WELL	
NOTICE OF INTENTION TO DEEPEN WELL	

EXHIBIT NO. 4

AMERADA PETROLEUM CORPORATION
STATE "LA" NO. 1

WELL RECORD

Mammoth, New Mexico. January 16, 1939.

Place

Date

OIL CONSERVATION COMMISSION,

Santa Fe, New Mexico.

Gentlemen:

Following is a notice of intention to do certain work as described below at the _____

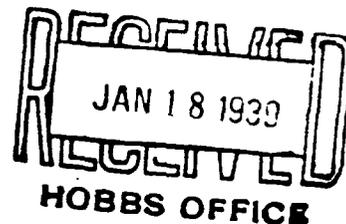
Amerada Petroleum Corporation State LA Well No. 1 in SE 1/4
 Company or Operator Lease
 of Sec. 1 T. 17N R. 30E N. M. P. M. South Lovington Field.
 _____ County.

FULL DETAILS OF PROPOSED PLAN OF WORK

FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS OF THE COMMISSION

This well has been drilled to a total depth of 4815'. 5 1/2" OD 17 1/2" Seamless casing has been set @ 4624' and cemented with 55 sacks of El Tero common cement. This was completed @ 4:40 p.m. 1-14-39.

We propose to let this well stand undisturbed for a period of 72 hours, after which pump pressure of 1200# will be applied to the pipe and well head connections, the valves closed, and the pressure within observed for a period of 30 minutes. If there is no drop in pressure, the cement plug will be drilled and the same test again applied. If there is again no drop in pressure, drilling will be resumed.



JAN 18 1939

Approved _____ 19 _____

except as follows:

AMERADA PETROLEUM CORPORATION

Company or Operator

By J. C. Lewis

Position Superintendent

Send communications regarding well to

Name J. C. Lewis

Address Mammoth, New Mexico.

OIL CONSERVATION COMMISSION

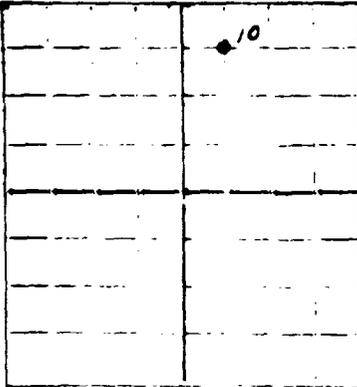
By A. ANDREAS

Title State Geologist

Member Oil Conservation Commission

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico



AREA 640 ACRES
LOCATE WELL CORRECTLY

WELL RECORD



Mail to Oil Conservation Commission, Santa Fe, New Mexico, or its proper agent not more than twenty days after completion of well. Follow instructions in the Rules and Regulations of the Commission. Indicate questionable data by following it with (?). SUBMIT IN TRIPPLICATE.

Stanolind Oil and Gas Company **Box "F", Hobbs, New Mexico**
 Company or Operator Address
State "E" Tract 18 Well No. **10** In **NE/4** of Sec. **2** T. **17-N**
 Lease
 R. **22-2** N. M. P. M. **North Lovington** Field. **Lee** County. _____
 Well is **600** feet south of the North line and **1800** feet west of the East line of **Section 2-17-N**
 If State land the oil and gas lease is No. **2-1888** Assignment No. _____
 If patented land the owner is _____ Address _____
 If Government land the permittee is _____ Address _____
 The Lessee is _____ Address _____
 Drilling commenced **April 24,** 19 **45** Drilling was completed **June 17,** 19 **45**
 Name of drilling contractor **Davidson Drilling Company** Address **Odessa, Texas**
 Elevation above sea level at top of casing. **3244** feet
 The information given is to be kept confidential until _____ 19 _____

OIL SANDS OR ZONES

No. 1, from **4705'** to **5010'** No. 4, from _____ to _____
 No. 2, from _____ to _____ No. 5, from _____ to _____
 No. 3, from _____ to _____

IMPORTANT W.

EXHIBIT NO. 6

Include data on rate of water inflow and elevation to which

No. 1, from _____ to _____
 No. 2, from _____ to _____
 No. 3, from _____ to _____
 No. 4, from _____ to _____

STANOLIND OIL & GAS COMPANY
STATE "E" TRACT 18, WELL NO. 10

WELL RECORD

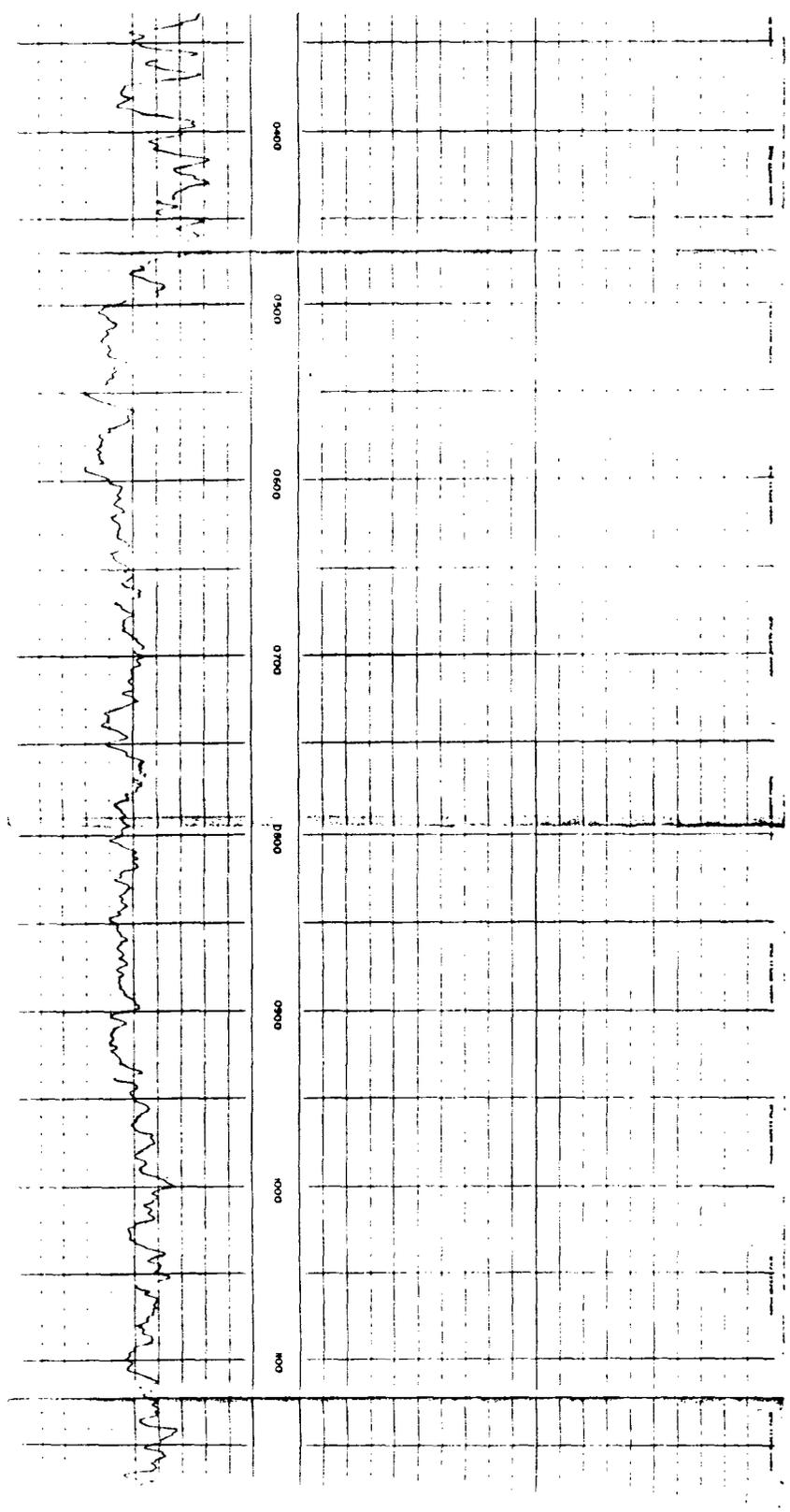
CASING RECORD

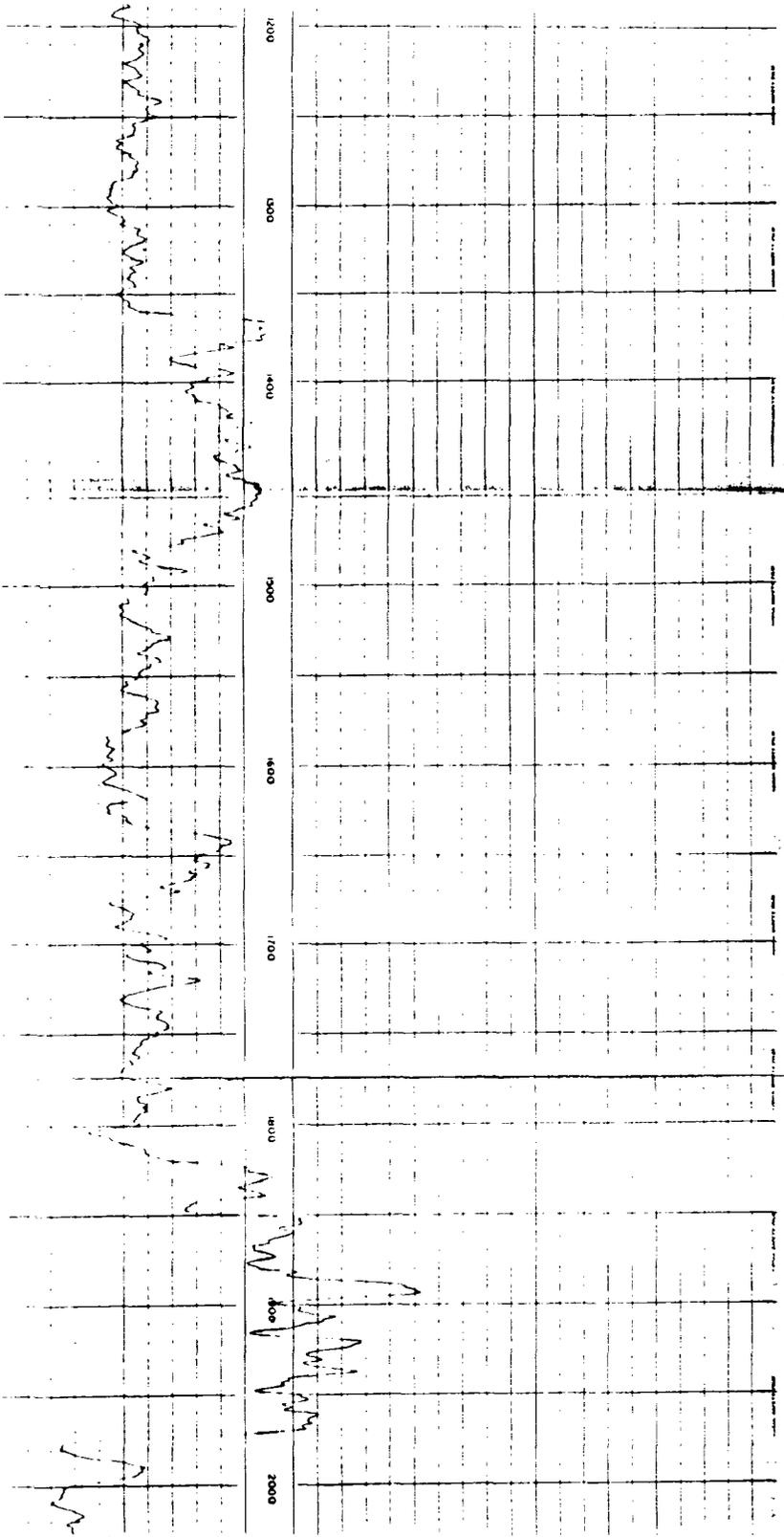
SIZE	WEIGHT PER FOOT	THREADS PER INCH	MAKE	AMOUNT	KIND OF SHOE	CUT & FILLED FROM		PERFORATED		PURPOSE
						FROM	TO	FROM	TO	
2 1/2"	26 1/2	8		277	Ballod					
3 1/2"	26 1/2	8		272	Halliburton					
3 1/2"	14 1/2	8		402	Ballod					

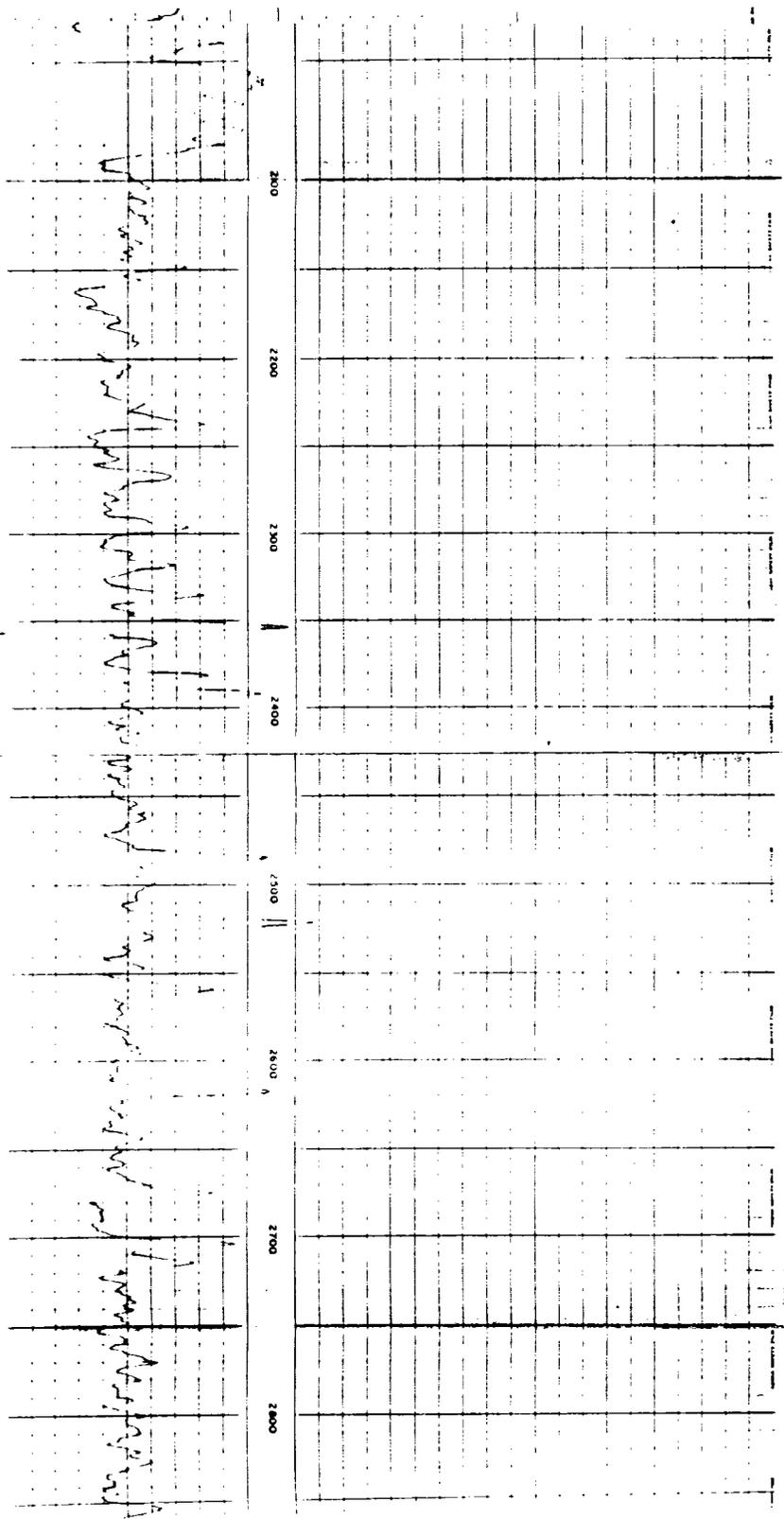
LOVINGTON SAN ANDRES UNIT
WELLS PARTIALLY OPEN IN GRAYBURG ZONE

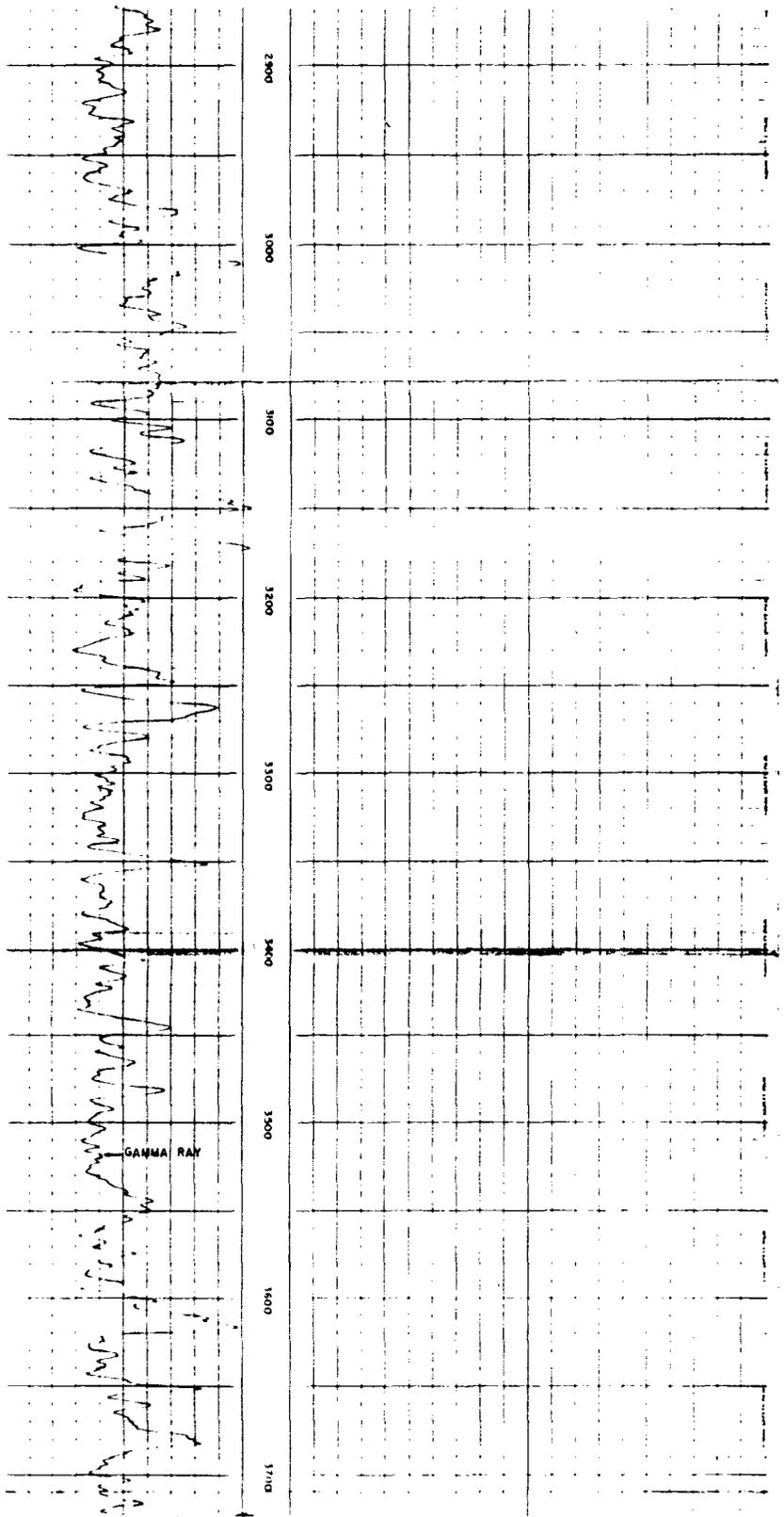
EXHIBIT NO. 8

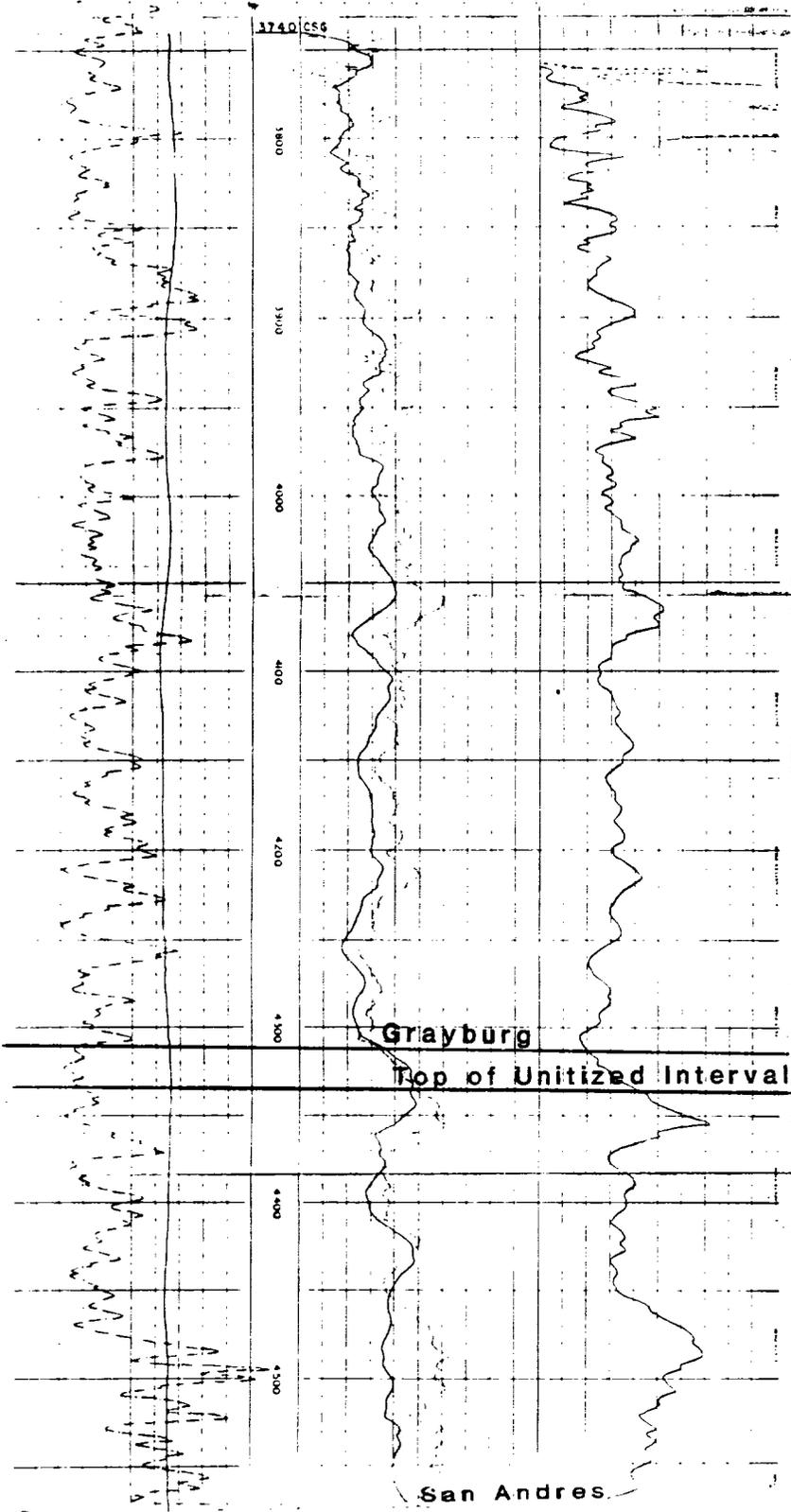
<u>Unit No.</u>	<u>Total Depth</u>	<u>Casing Set At</u>	<u>Top of San Andres</u>
1	5060	4600	4670
2	4996	4620	4668
3	5033	4626	4656
4	5012	4634	4655
5	5000	4625	4662
6	5000	4538	4669
7	5000	4620	4675
8	4978	4610	4660
10	5110	4600	4625
11	5025	4575	4624
12	4990	4580	4625
13	5068	4518	4600
14	5087	4530	4620
15	4972	4531	4600
16	4950	4605	4650
17	4935	4600	4665
18	4900	4655	4670
19	4946	4617	4640
20	4945	4580	4625
21	5032	4570	4600
22	4917	4525	4575
23	5081	4530	4580
24	5075	4515	4592
25	5094	4515	4605
26	5095	4520	4605
27	5000	4600	4660
28	5068	4602	4680
29	4980	4590	4632
30	4970	4543	4595
31	4960	4541	4594
34	4950	4521	4570
35	4942	4570	4603
36	4955	4540	4610
37	4943	4560	4650
38	4945	4590	4621
39	4975	4522	4597
40	4950	4579	4589
42	4938	4536	4585
43	4990	4546	4590
44	4990	4558	4648
45	5147	4577	4656
48	4960	4530	4590
49	4960	4556	4620
50	4975	4587	4640
51	4977	4556	4657
58	4990	4570	4636

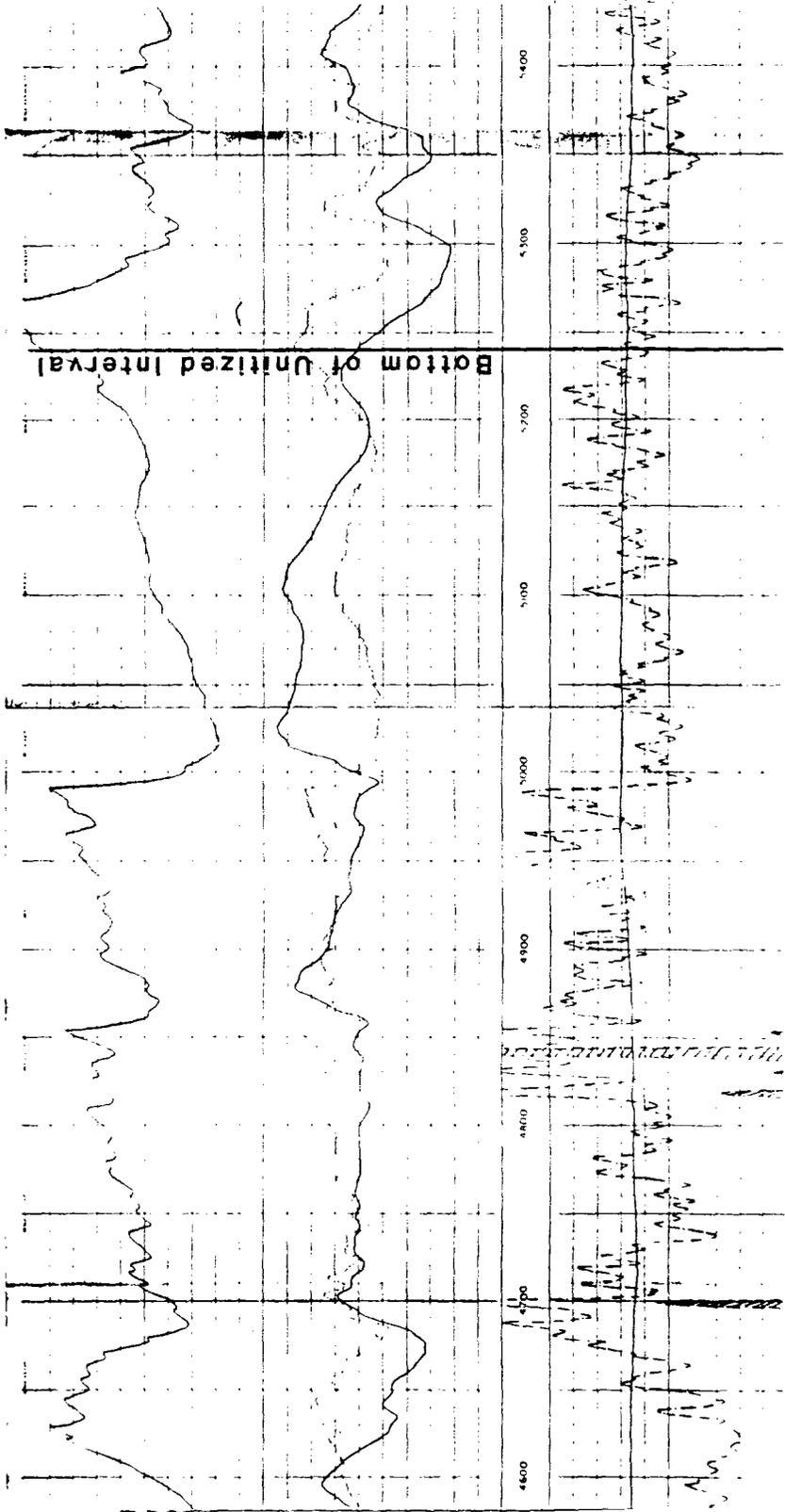


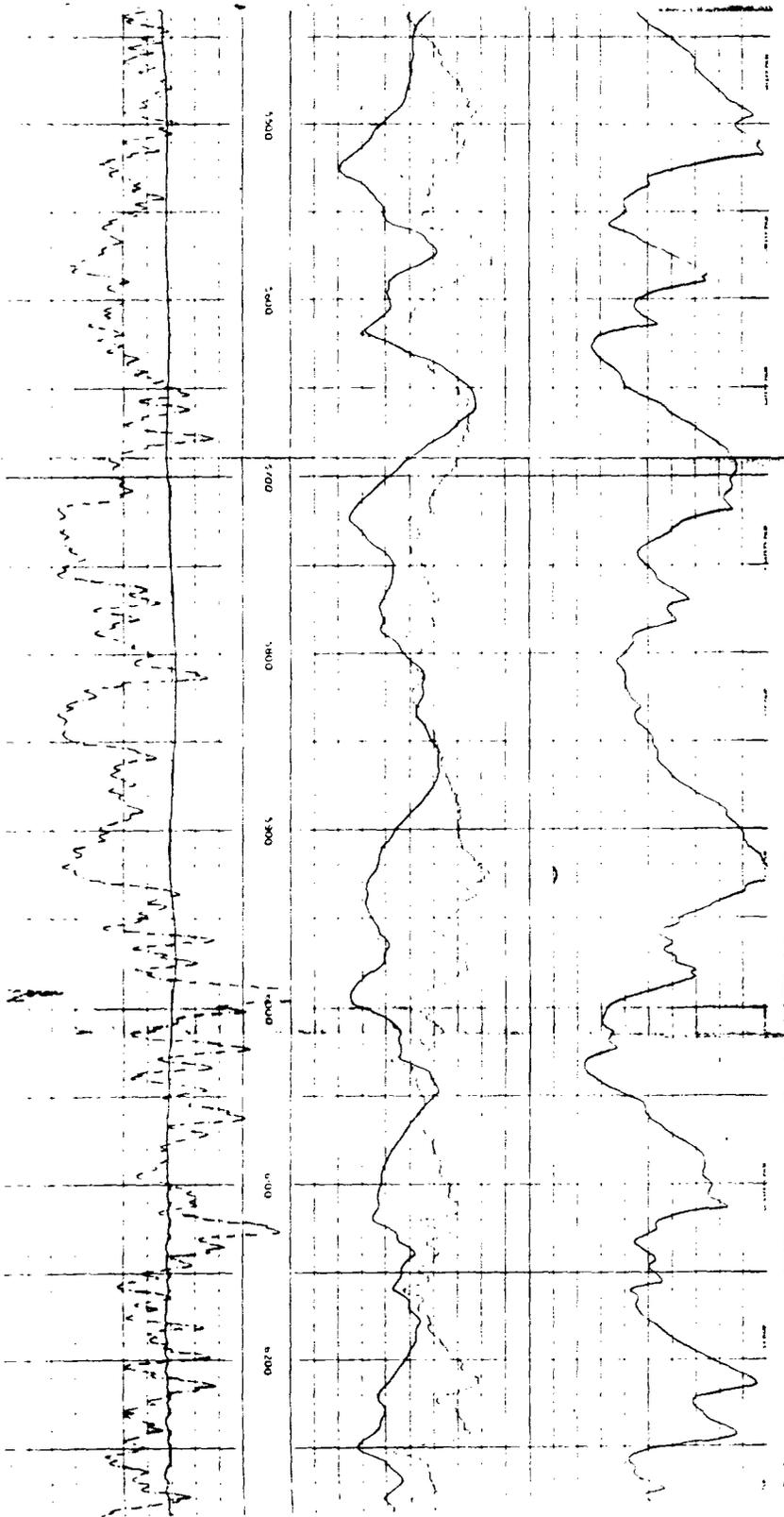


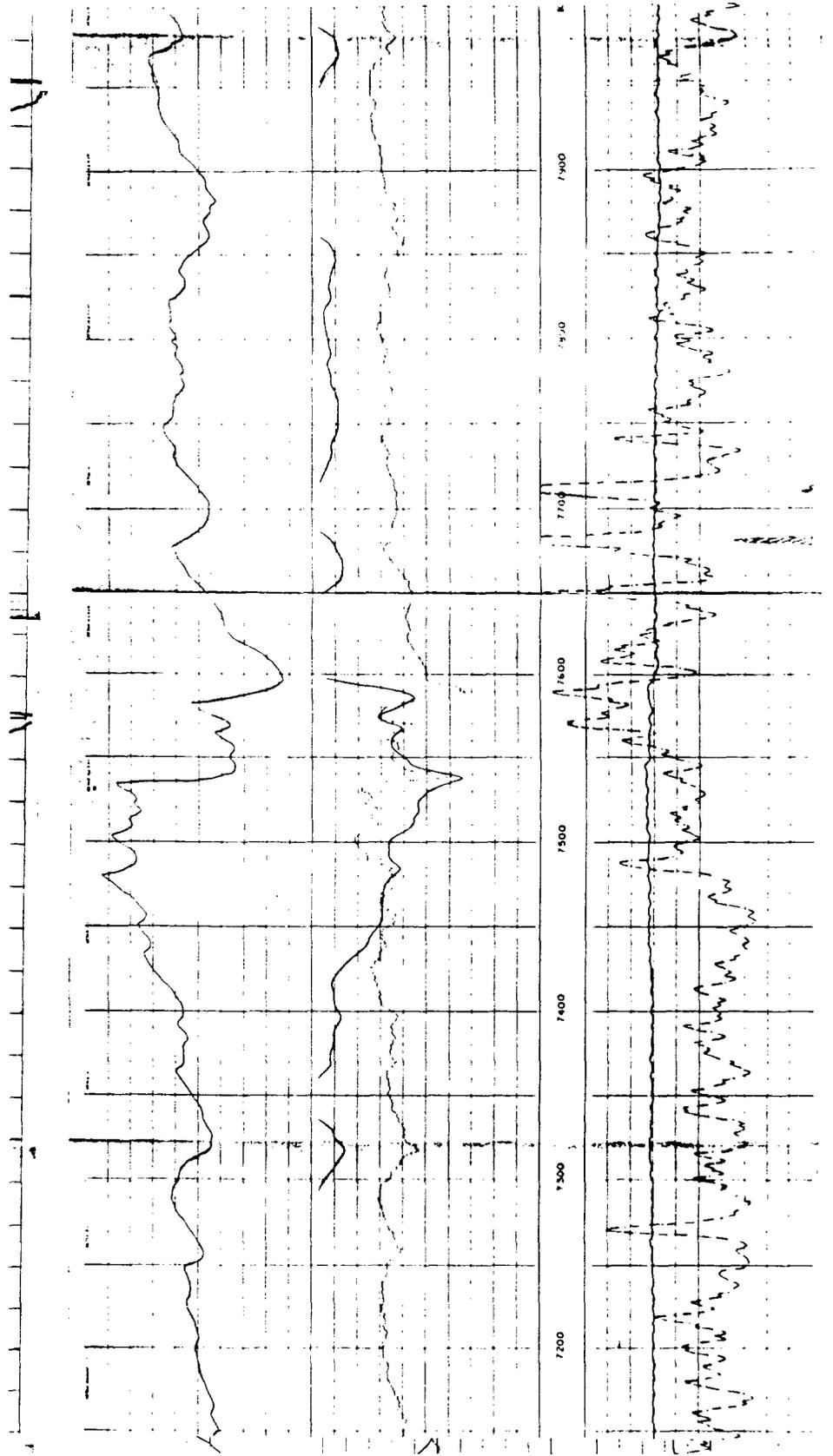


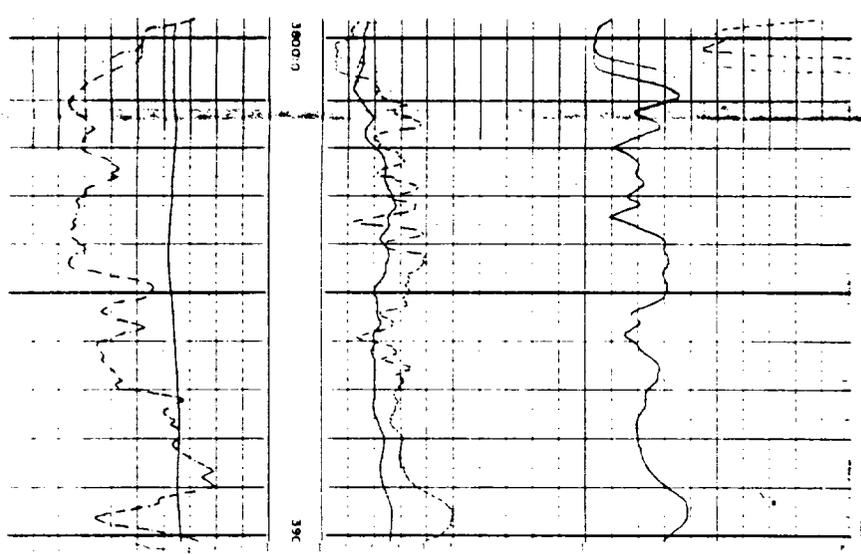
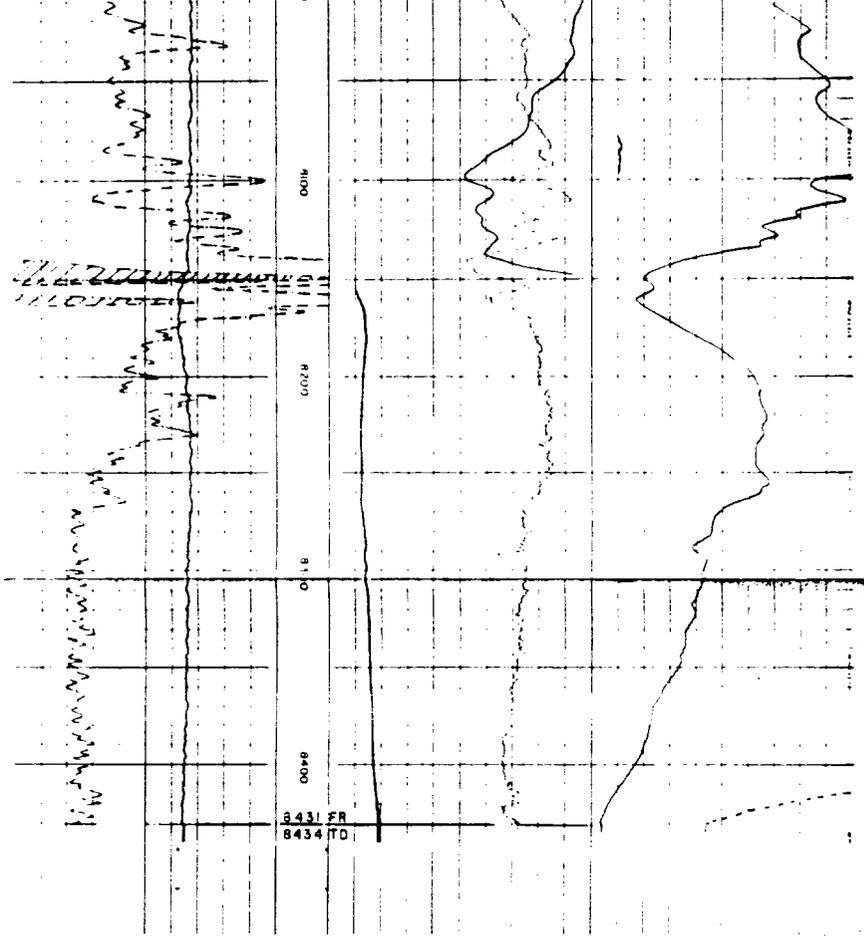


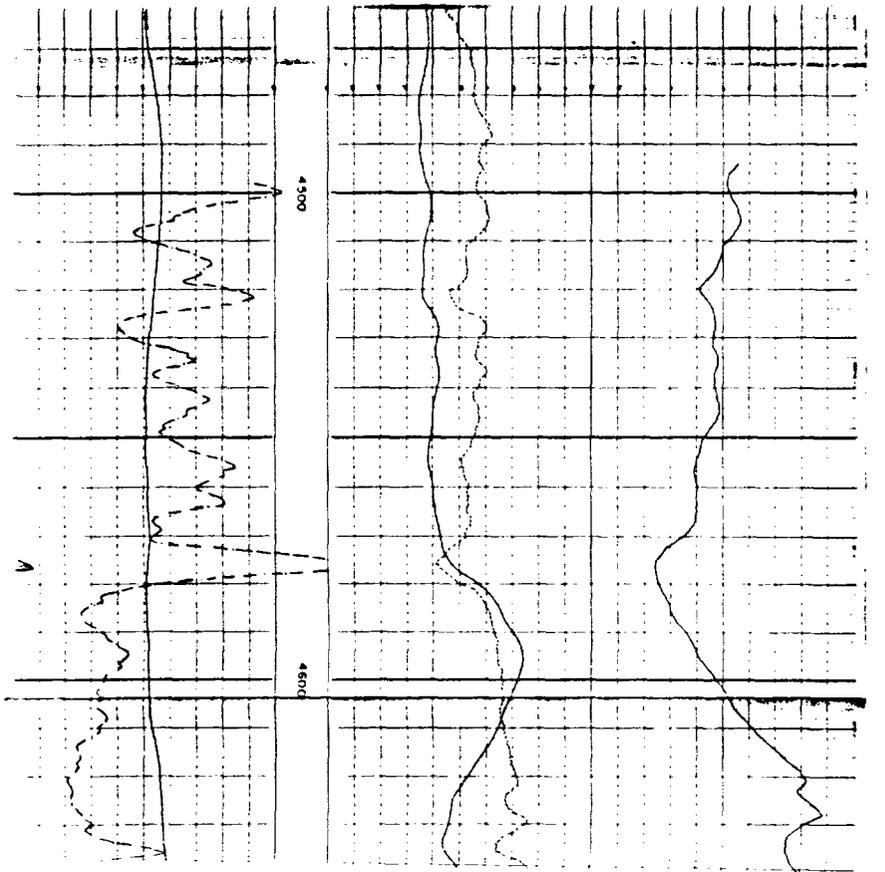
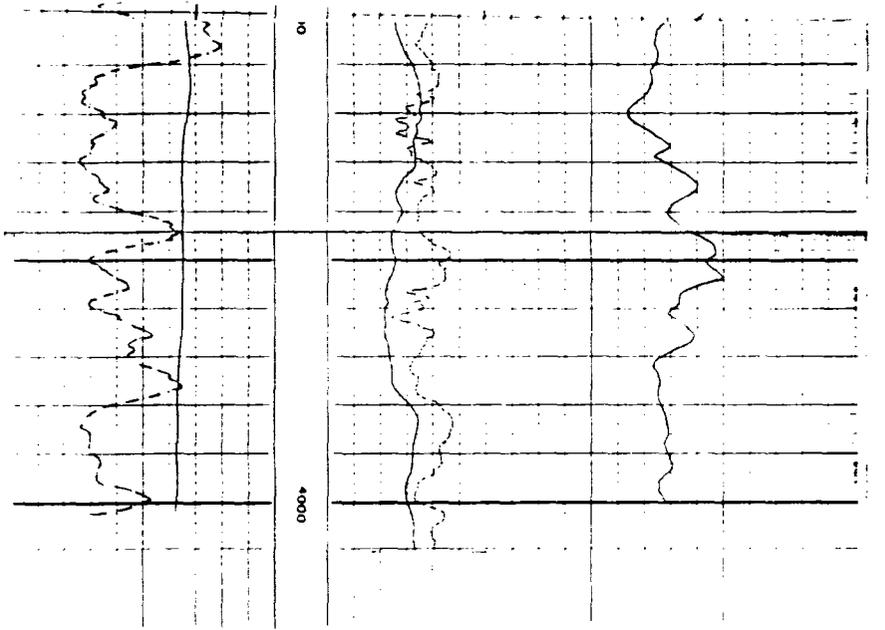


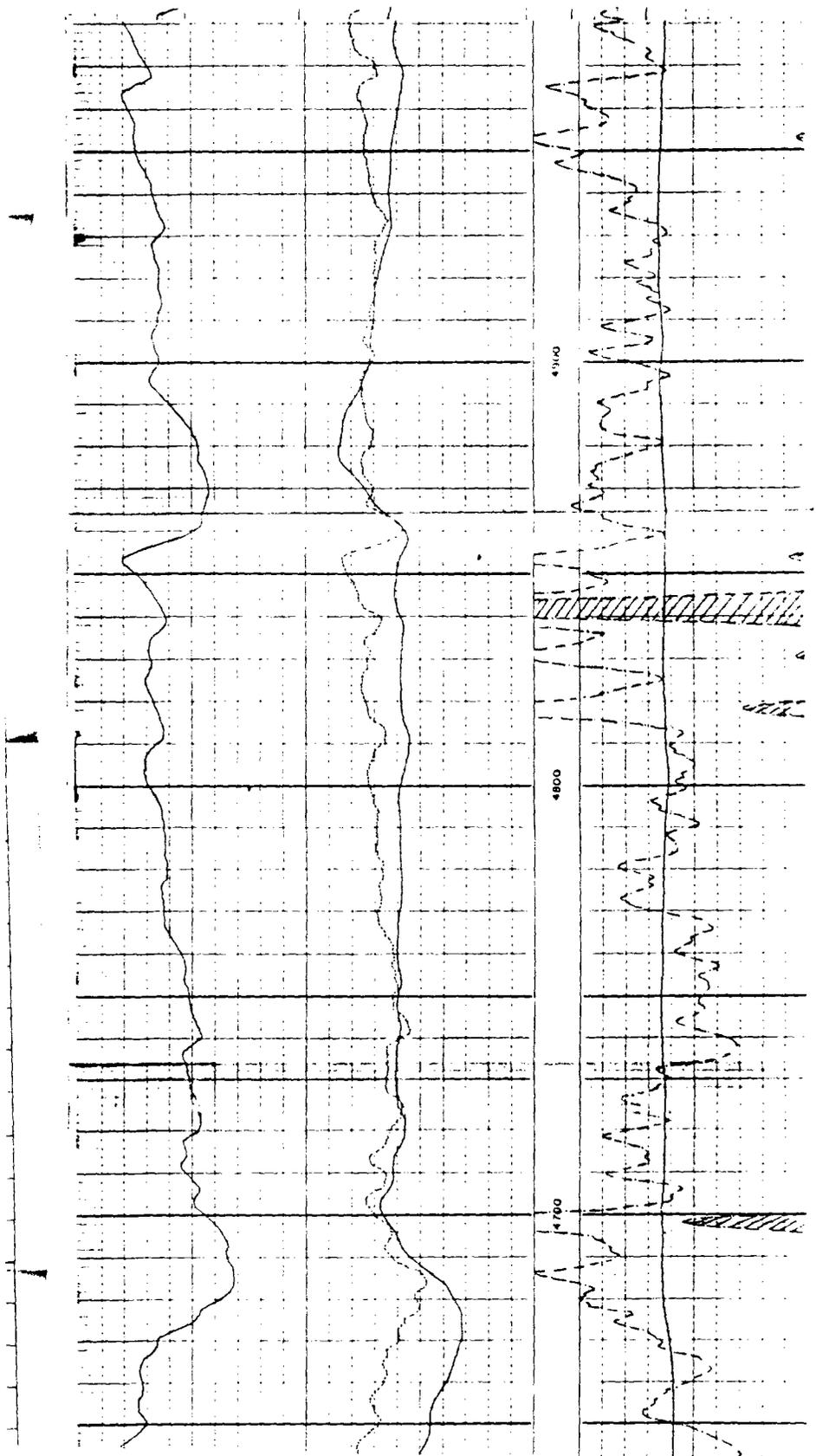


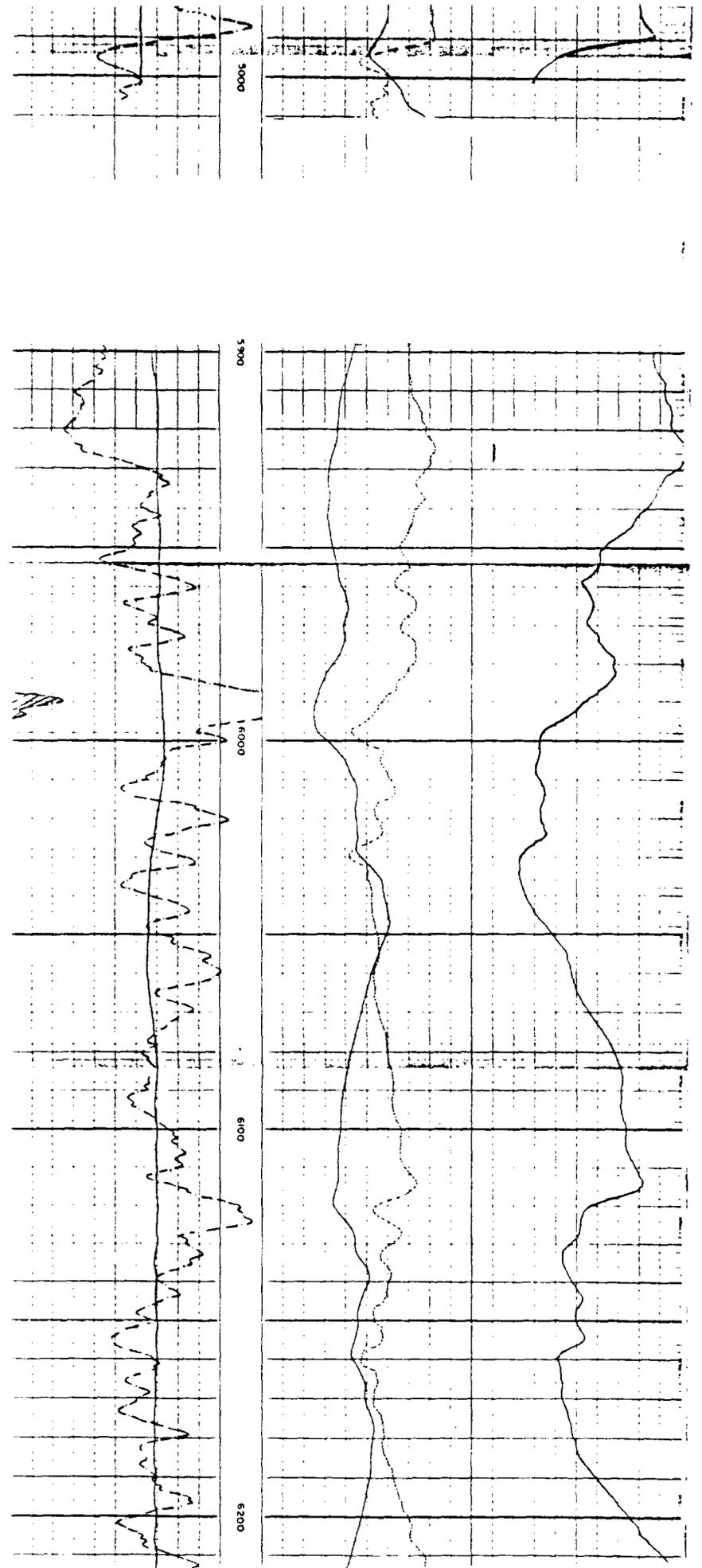


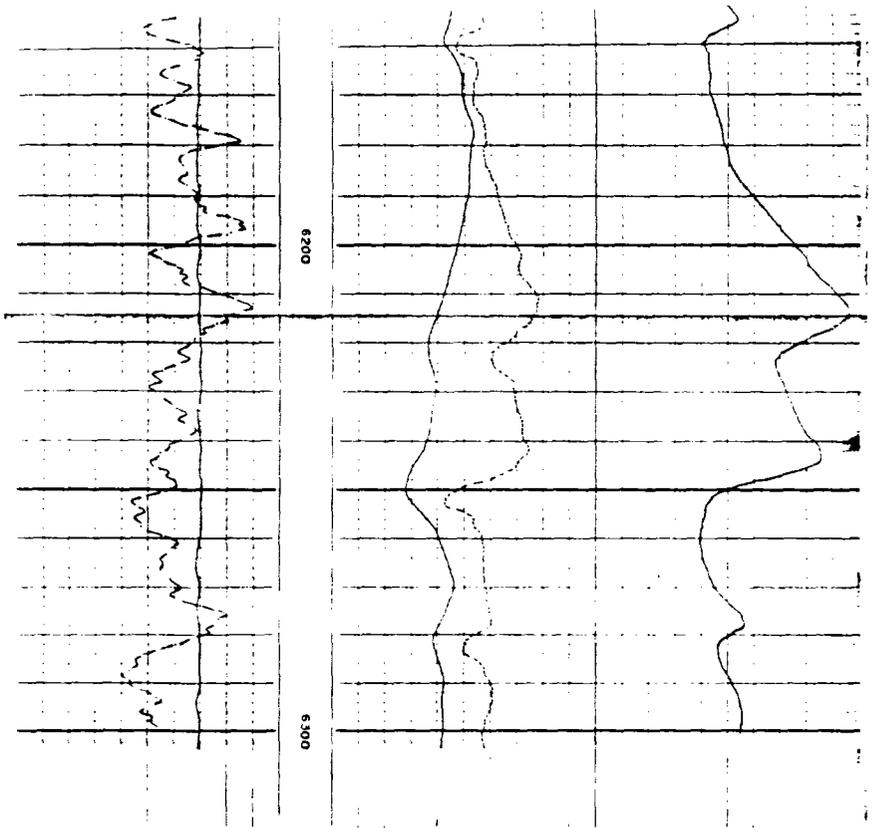


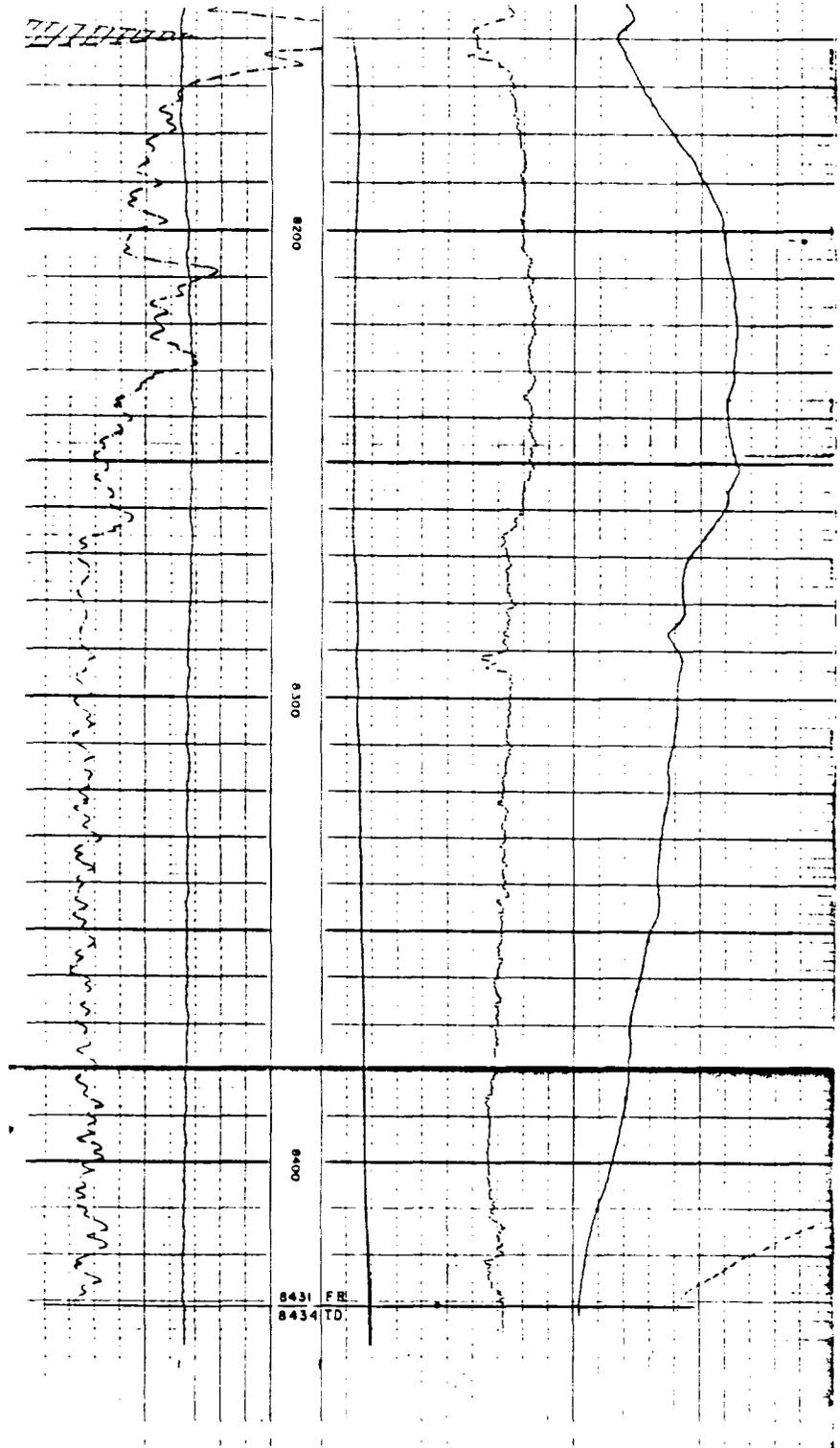












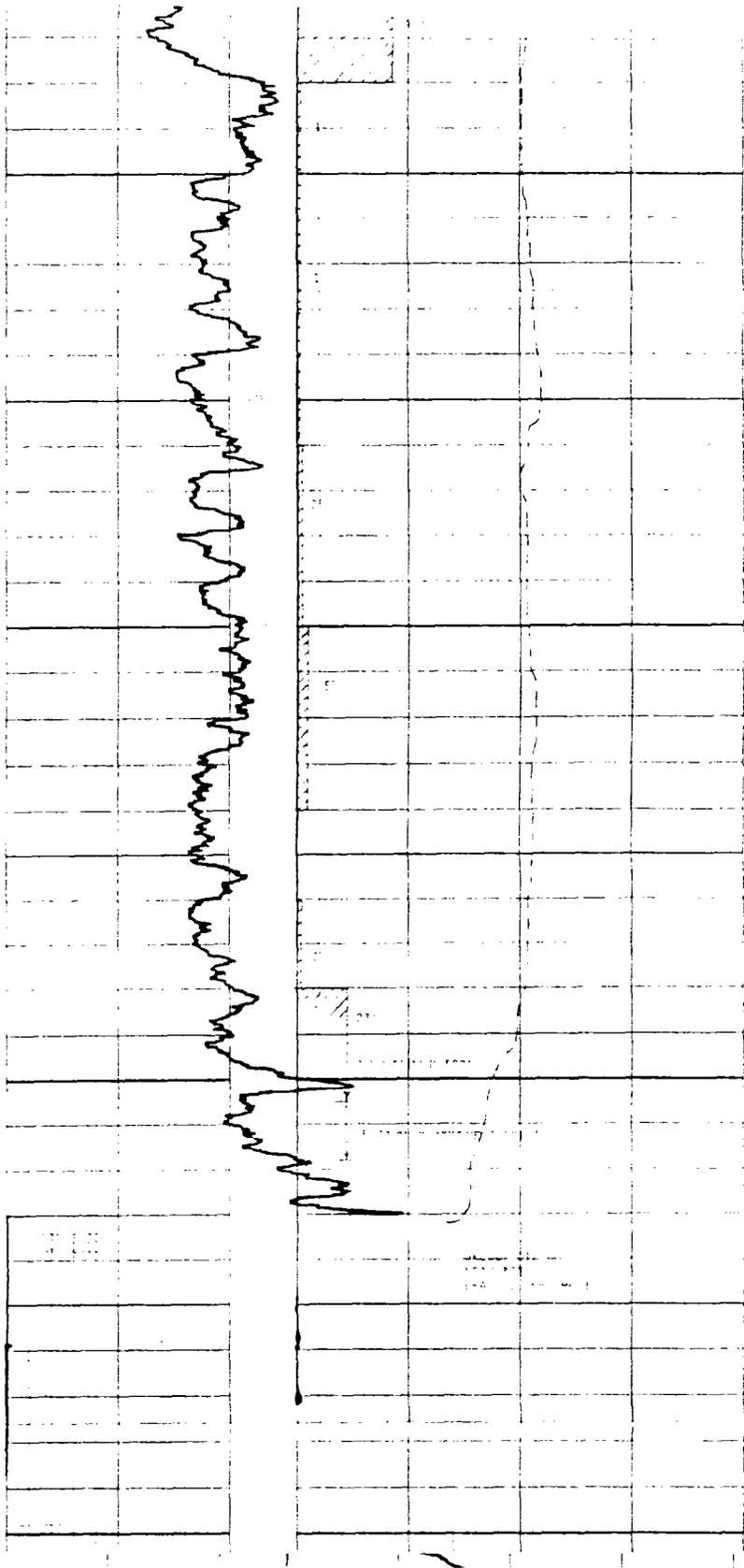
8200

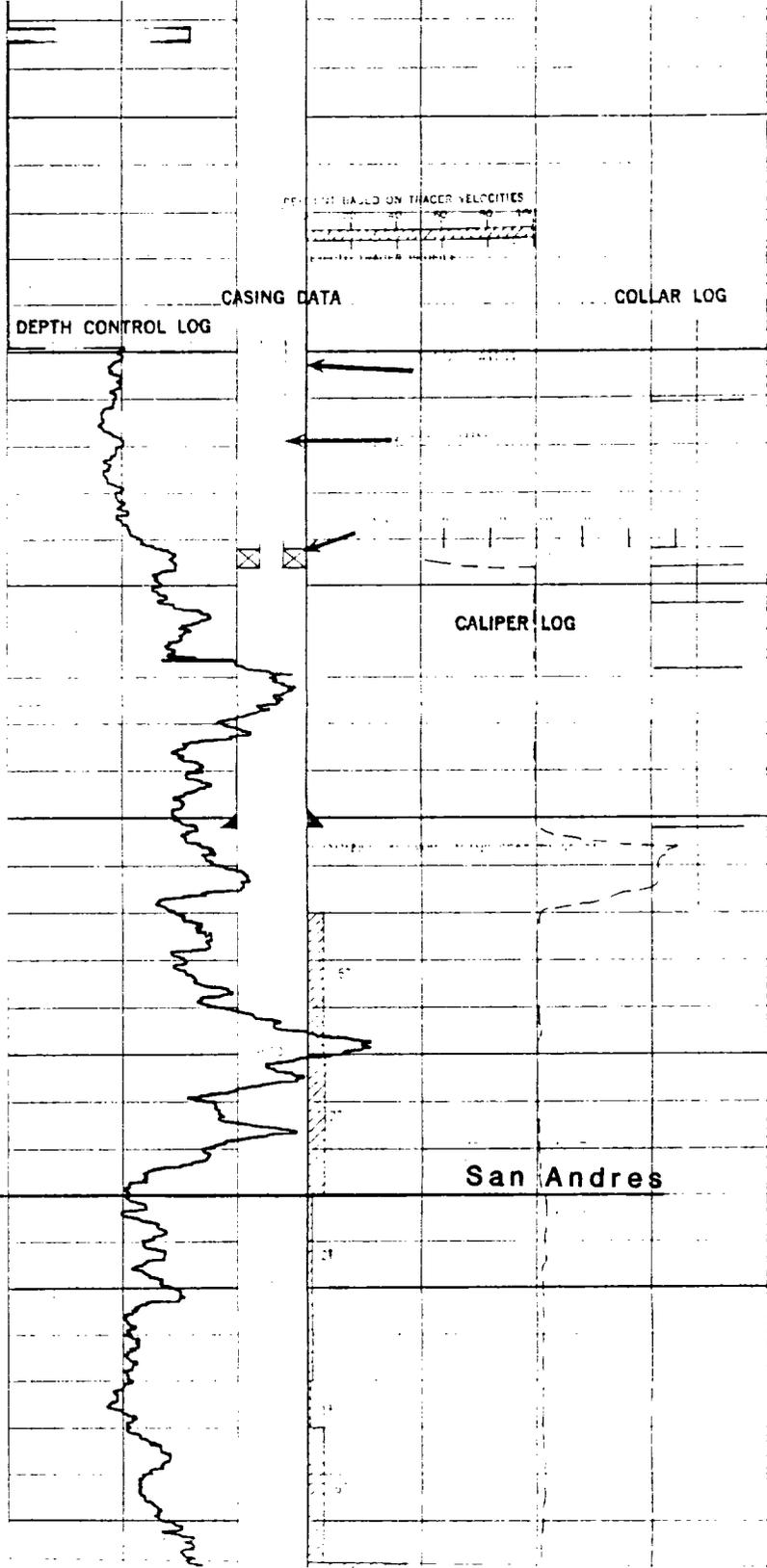
8300

8400

8431 FR
8434 TD

AMERADA PET. CORP.
STATE LA # 3
S. LOVINGTON FIELD
LEA COUNTY, N.M.





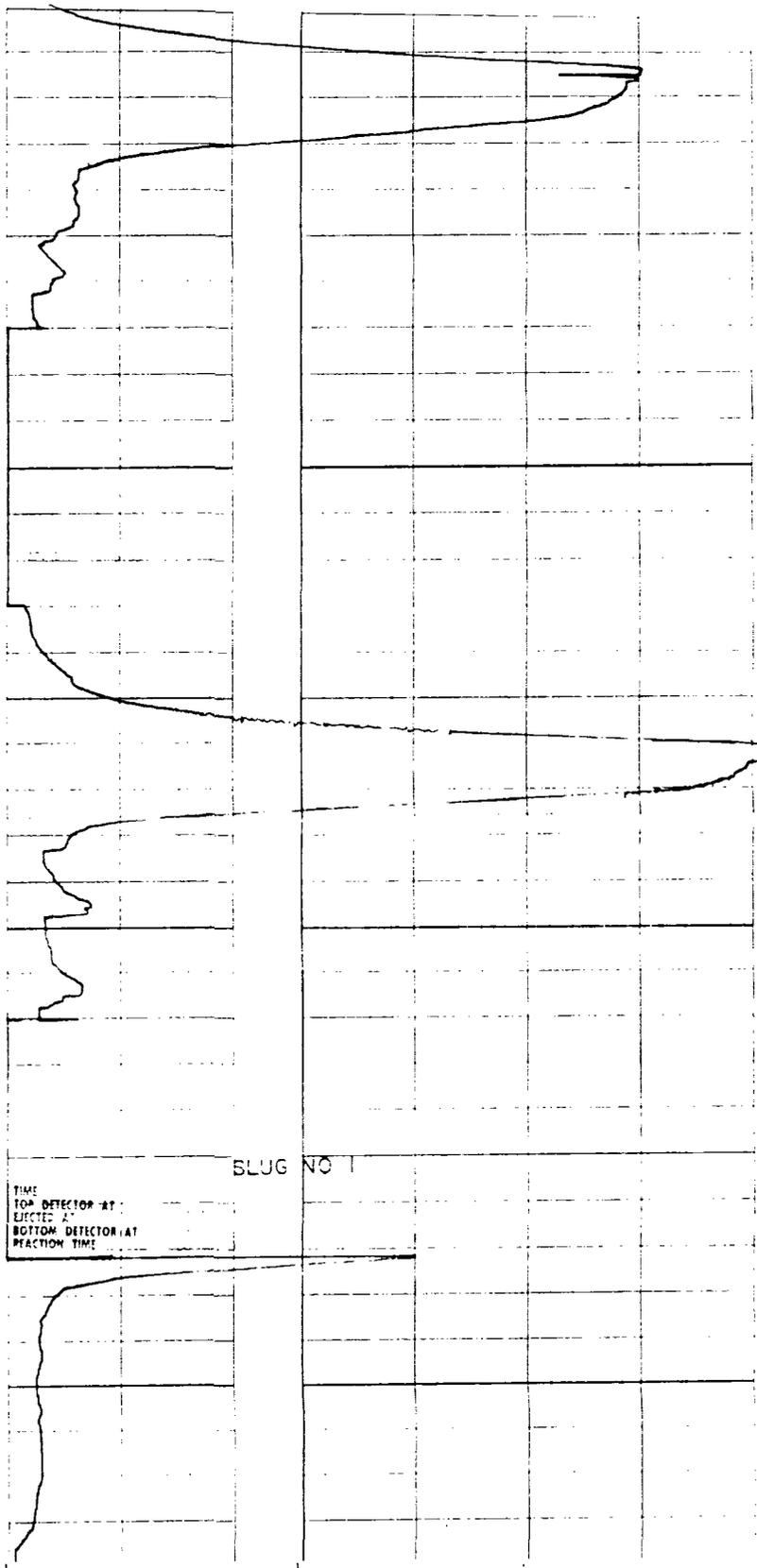
THIS LOG WAS RUN WITH TRACER
TOOL SPACED AS SHOWN BY
SCHEMATIC BELOW

BASE LOG

TOP DET

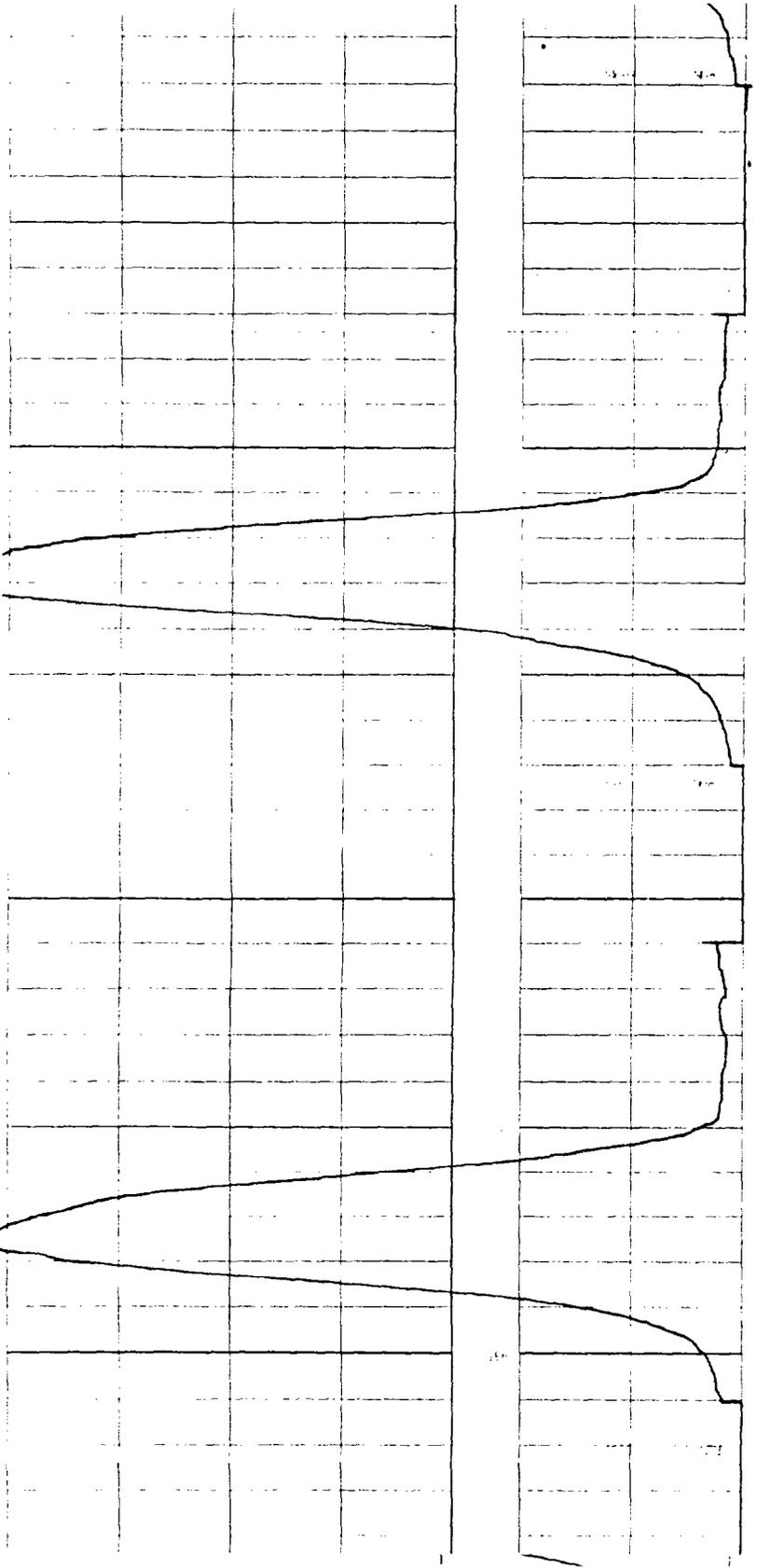
BOTTOM DET

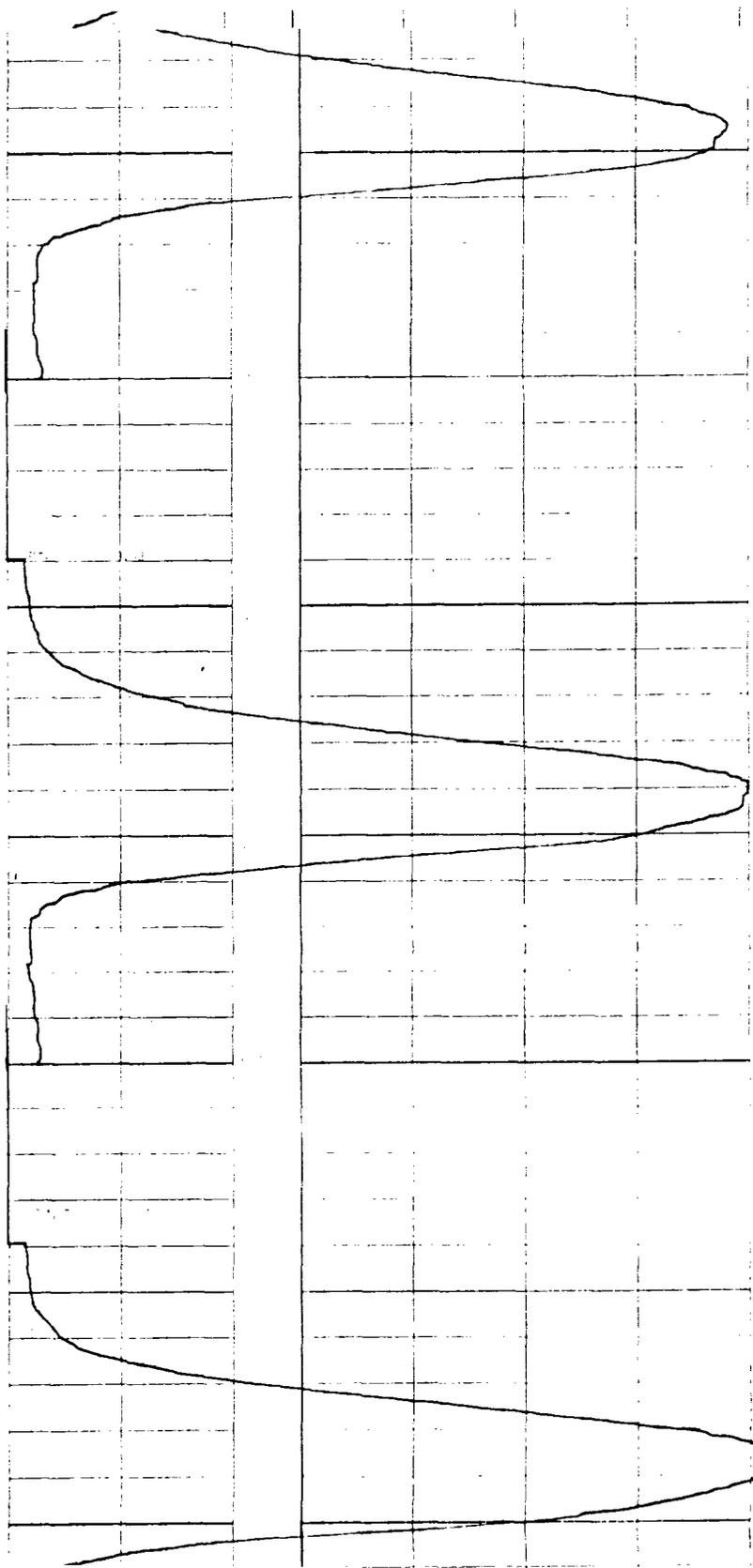


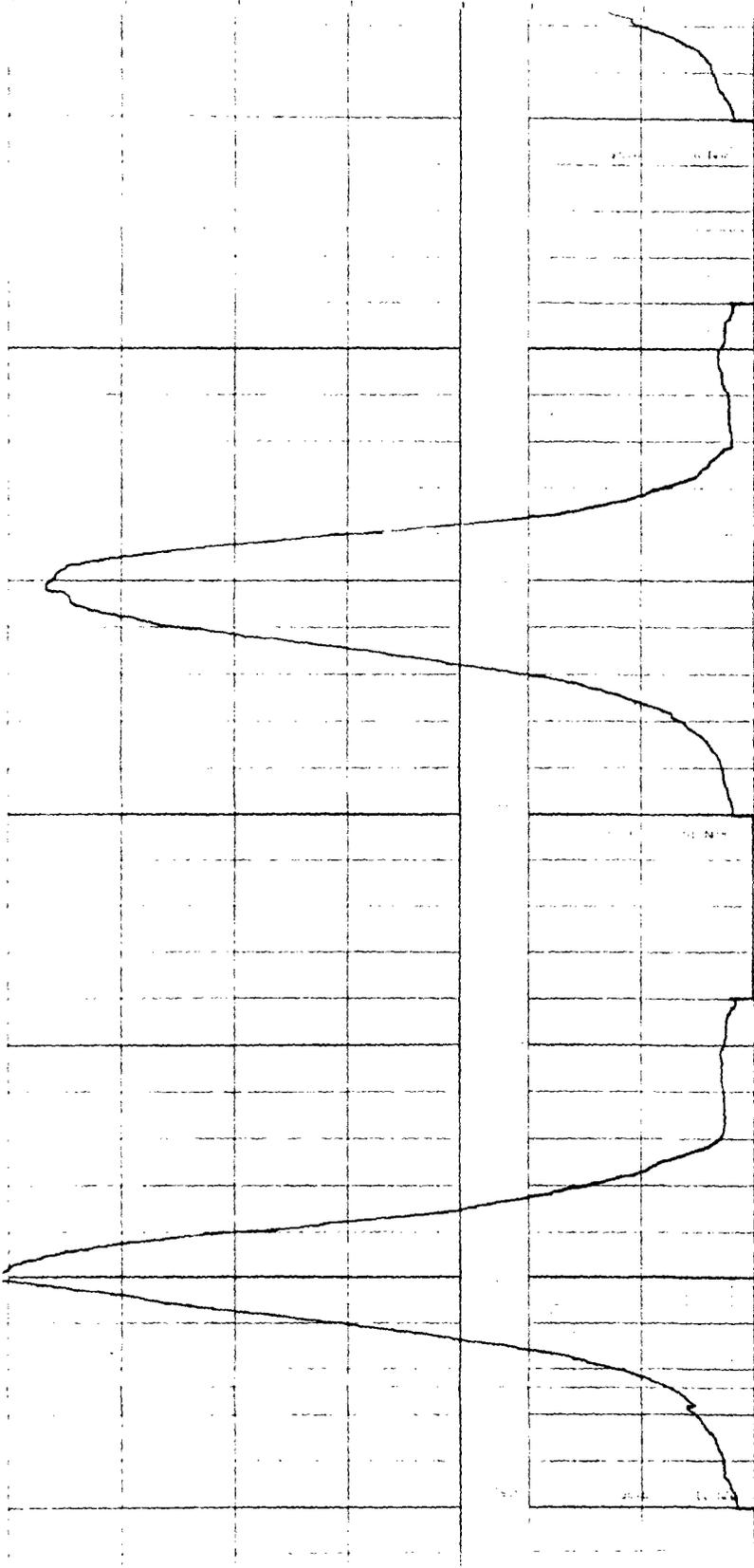


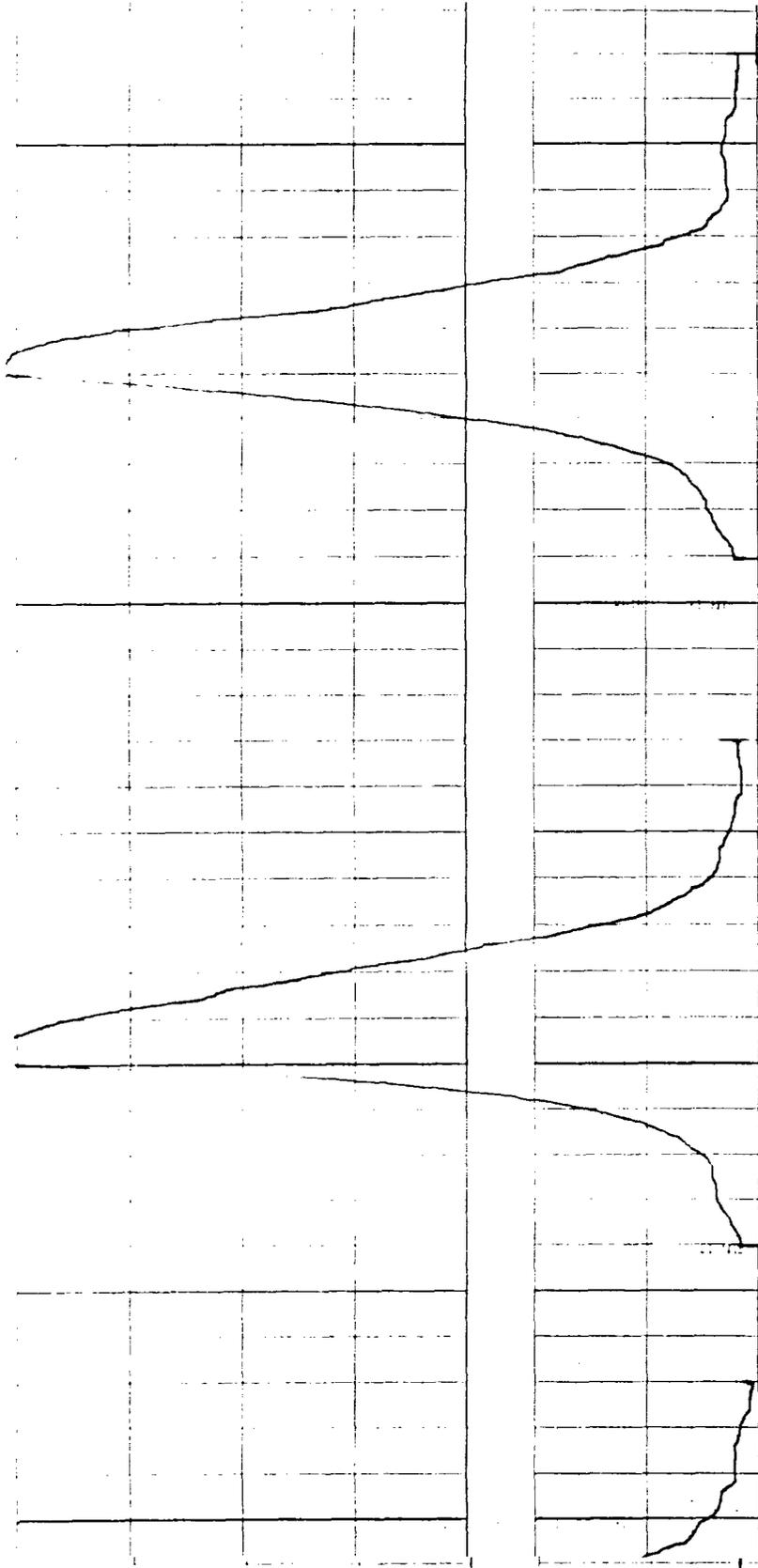
SLUG NO 1

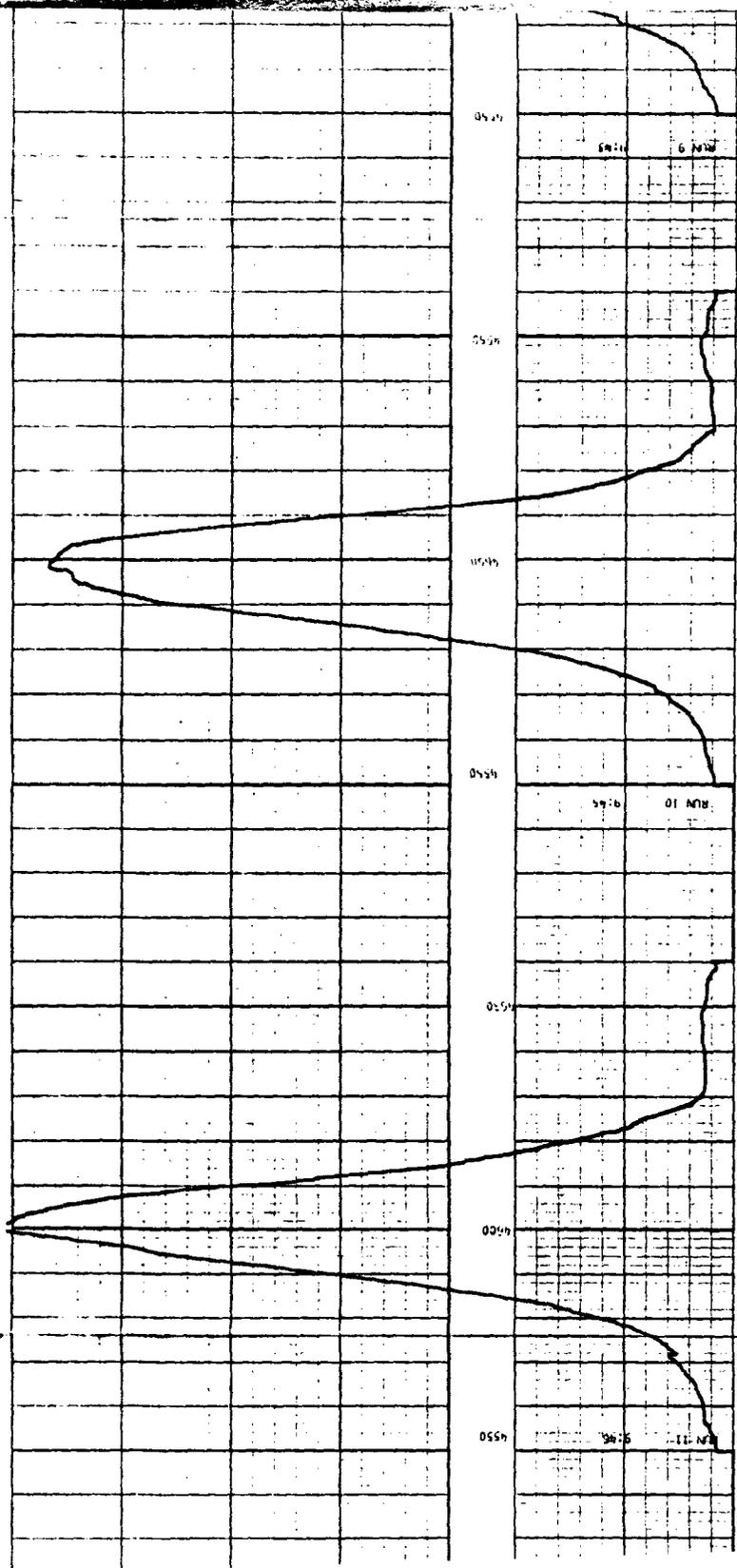
TIME
TOP DETECTOR AT
EJECTED AT
BOTTOM DETECTOR AT
REACTION TIME

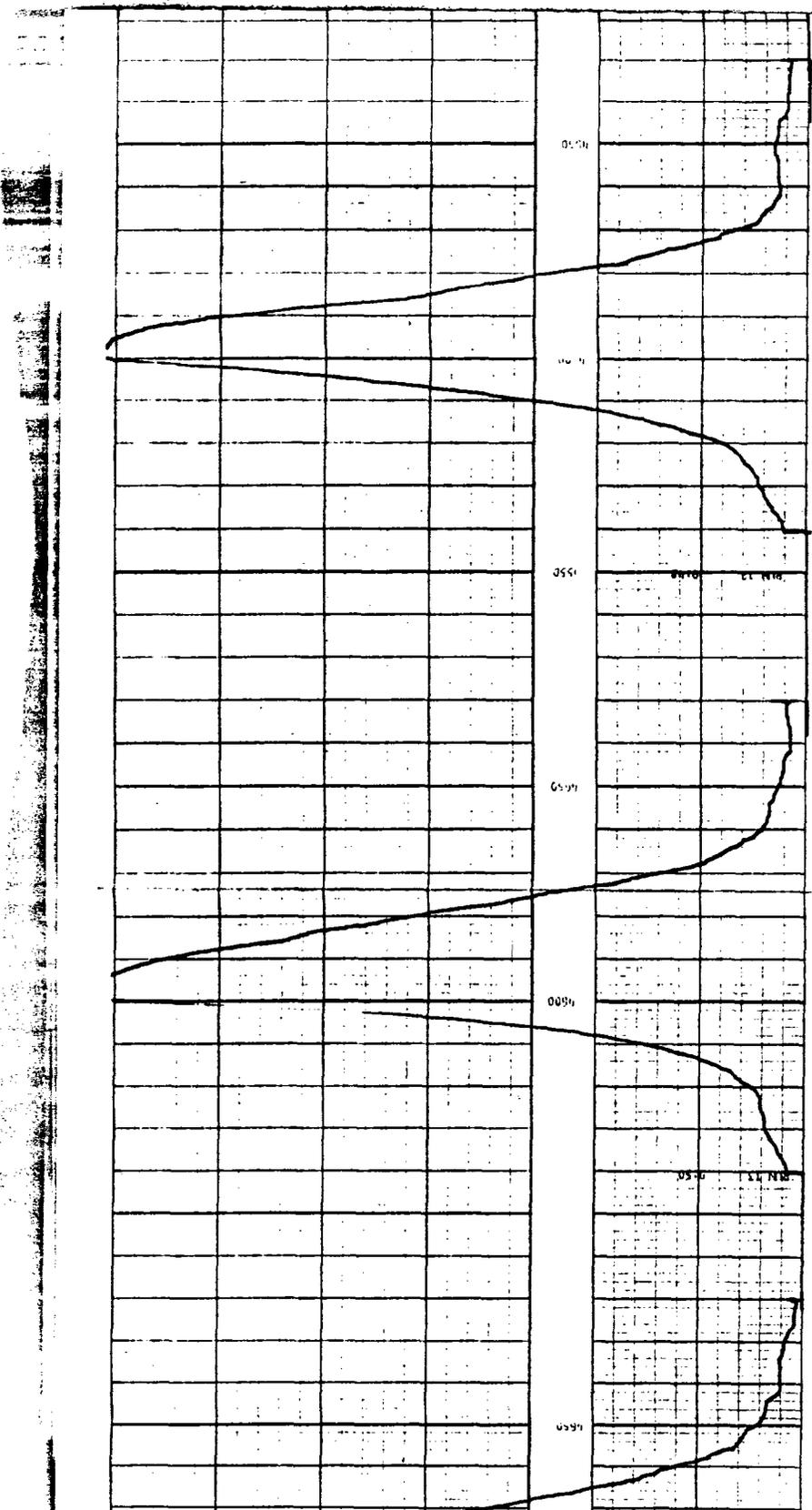


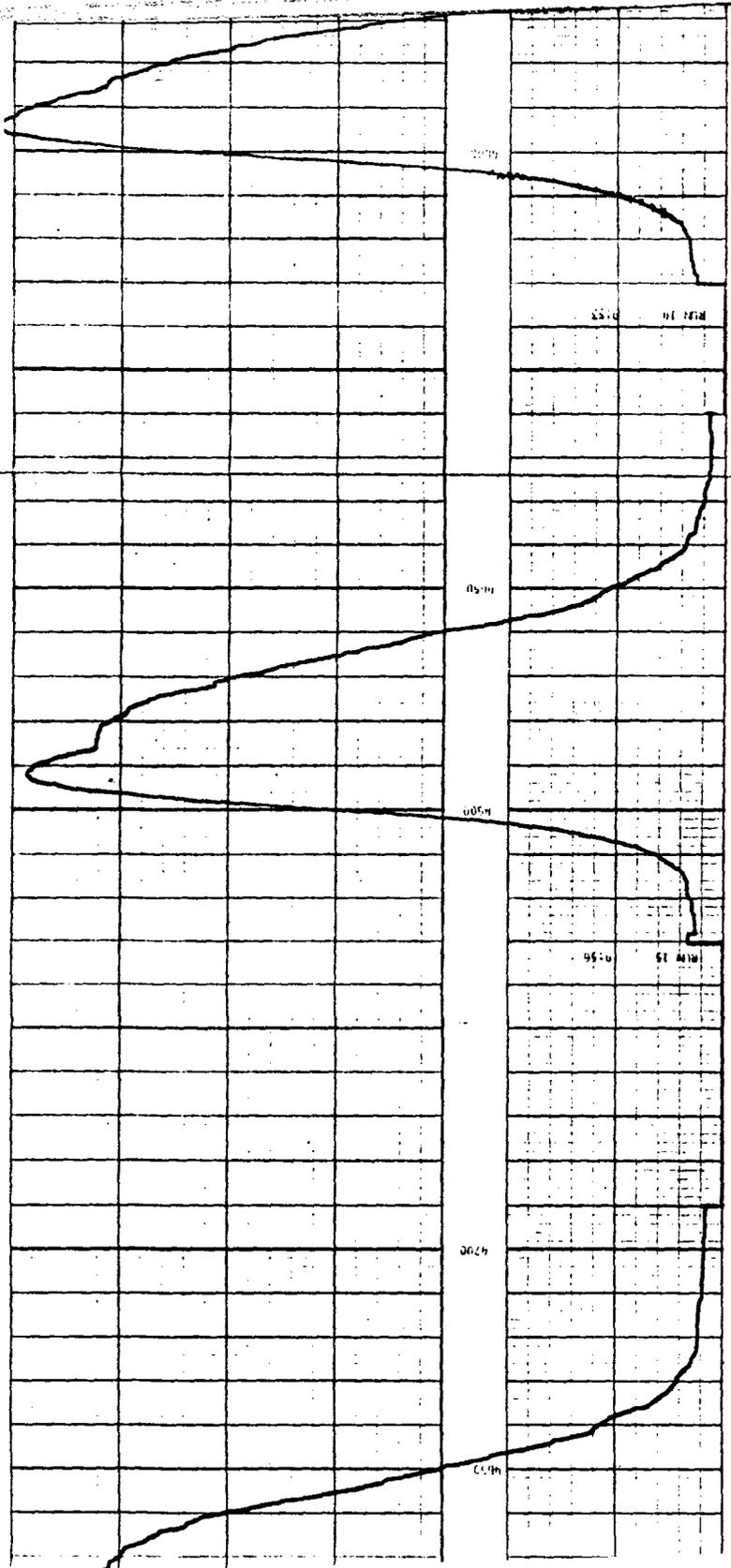


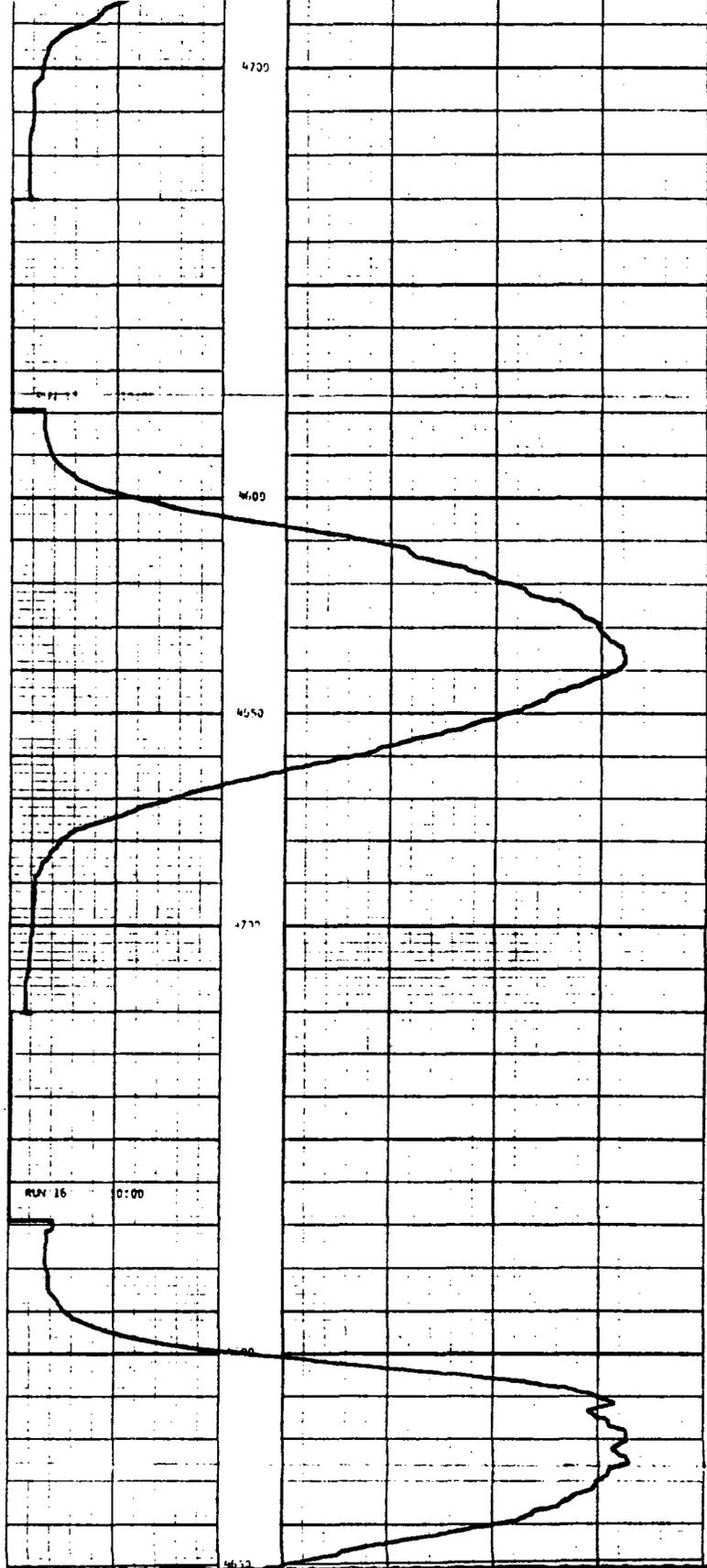


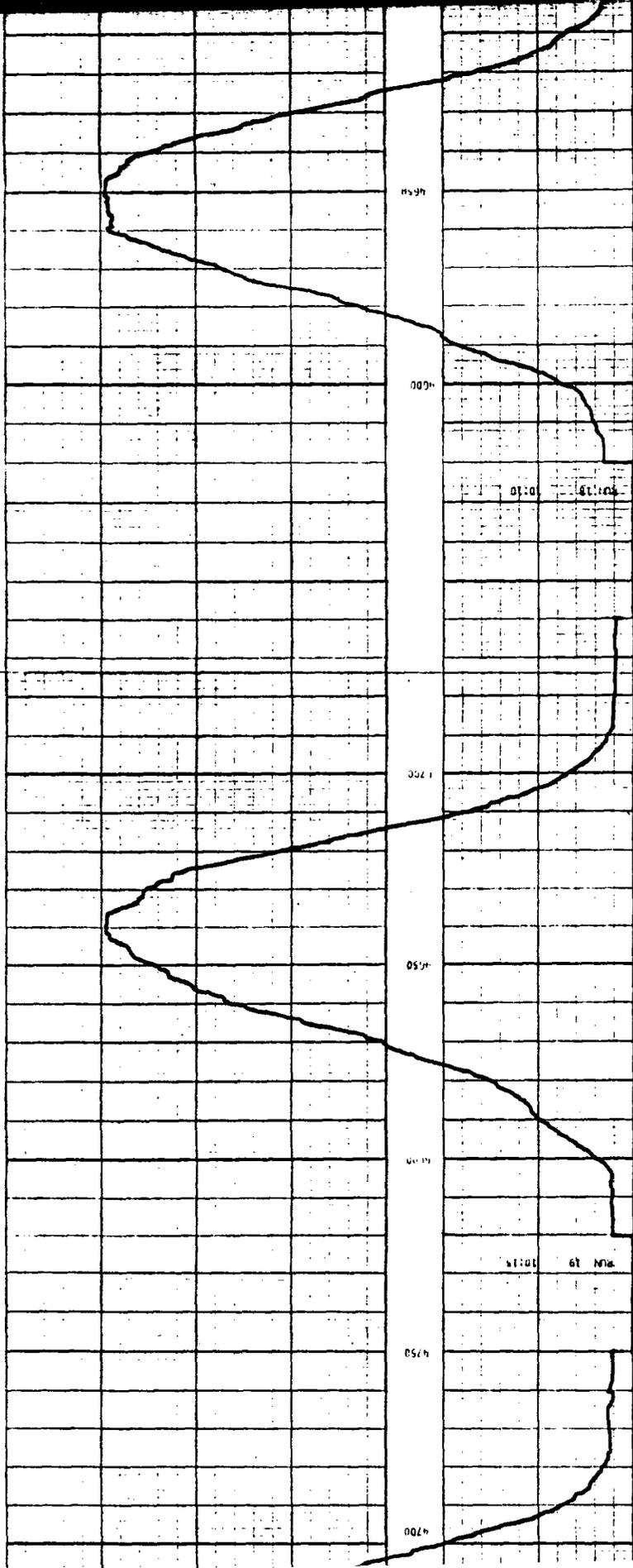


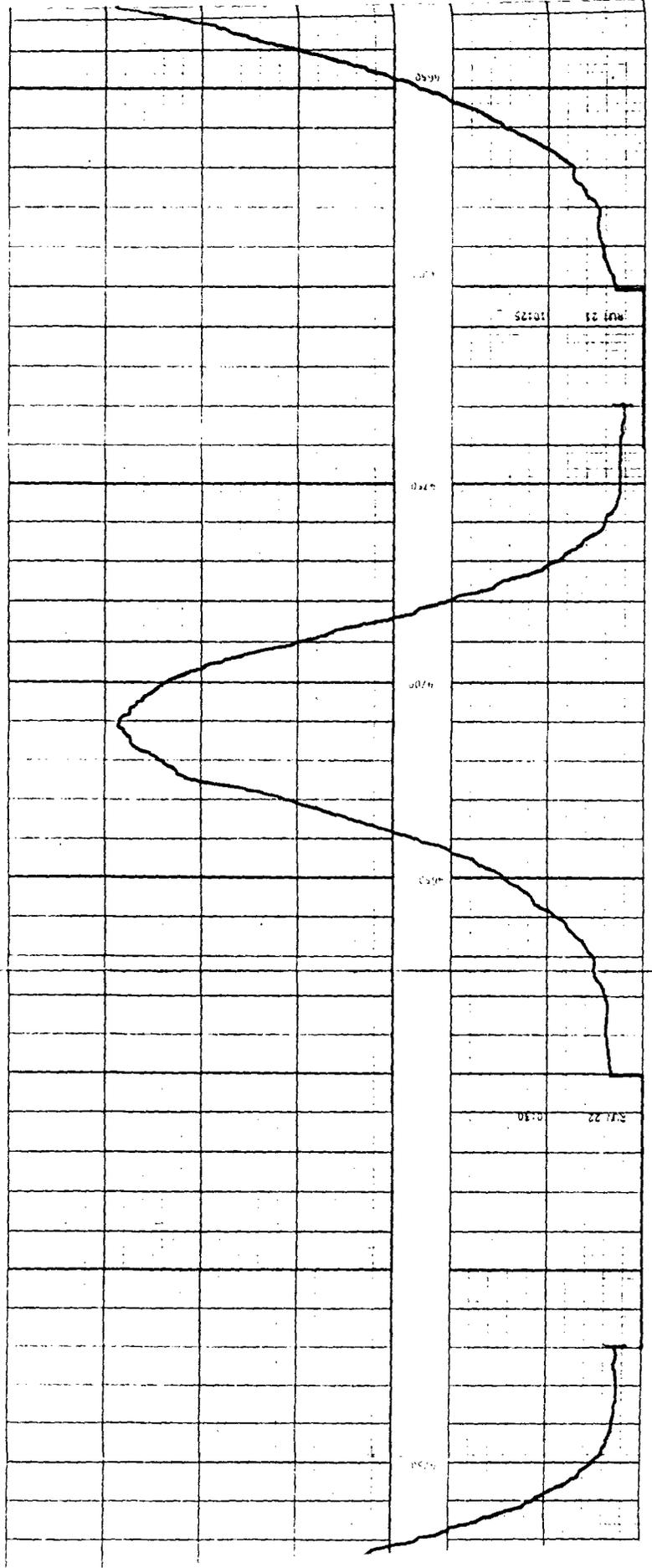


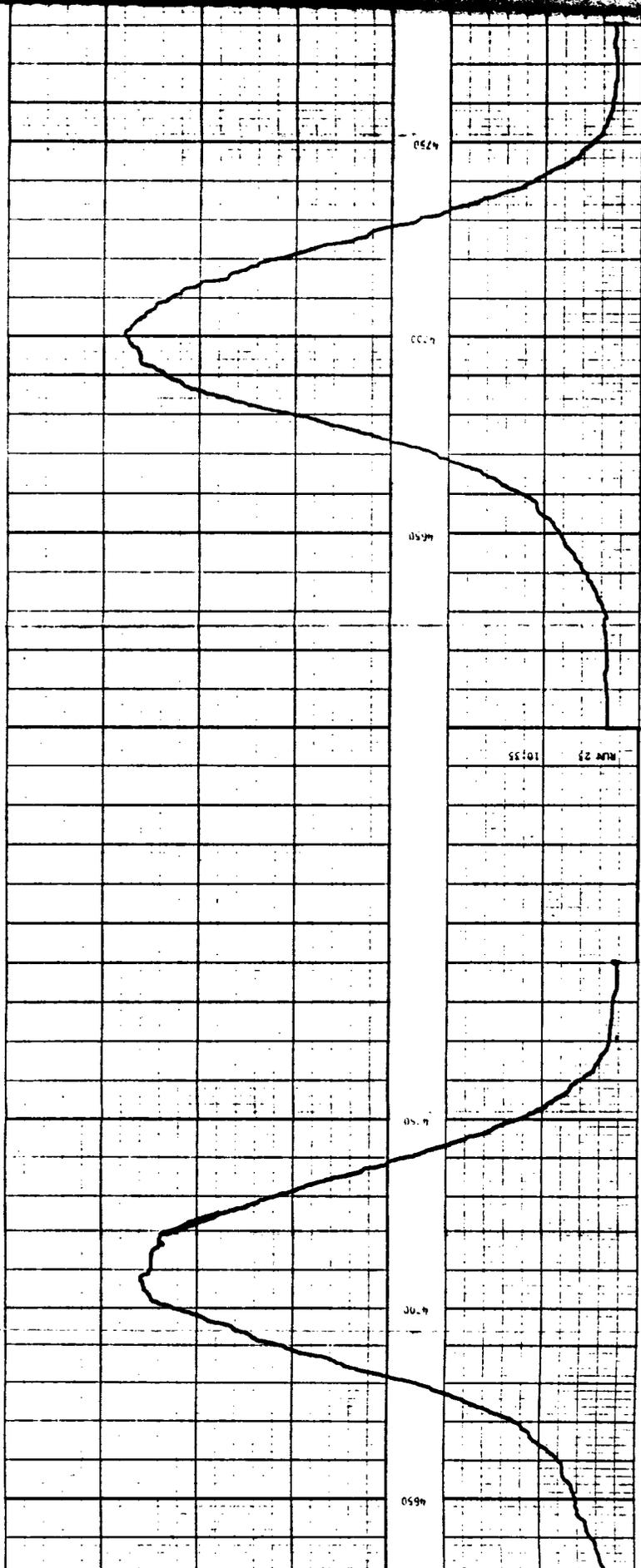














TONEY ANAYA
GOVERNOR

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

50 YEARS



1935 - 1985

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

March 25, 1986

Case 2593

Mr. Joe E. King
District Manager
Texaco USA
P. O. Box 728
Hobbs, N.M. 88240

Dear Mr. King:

The following is in response to your letter of March 11, 1986, seeking clarification as to the unitized interval in the Lovington San Andres Unit.

Based upon the information submitted, it would appear that the Grayburg formation was included with the Upper San Andres in the unitized interval. As can be seen from the attached memorandum, Floyd Prando, Director of the State Land Office Oil and Gas Division, concurs in this opinion.

It should be noted that this action does not change the wording in the unit agreement or the apparent incorrect reference to the type log. I would suggest that Texaco should consult with their attorneys before proceeding too far in committing the unit to flooding the Grayburg zone.

Sincerely,

R. L. STAMETS
Director

RLS:dp

Attachment

cc: Jerry Sexton
Floyd Prando

State of New Mexico



JIM BACA
COMMISSIONER

Commissioner of Public Lands

March 24, 1986

P.O. BOX 1148
SANTA FE, NEW MEXICO 87504-1148

M E M O R A N D U M

TO: Mr. Richard Stamets - New Mexico Oil Conservation Division

FROM: Floyd O. Prando, Director - Oil and Gas Division

SUBJECT: TEXACO REQUEST FOR CLARIFICATION - LOVINGTON SAN ANDRES UNIT.
By: Ernest Szabo, Geologist - New Mexico State Land Office.

The Texaco request is for clarification of interdependent problems:

1. Correction and designation of type well and type log, and
2. Definition of producing zone in unitized interval.

Among data, Texaco provided Exhibit 2, copy of page 3 of the Lovington San Andres Unit Agreement. Paragraph (h) of Exhibit 2 defines the unitized formation by depth and name. Since formation names are more loosely applied in field practice, it is my opinion that footage intervals have greater precision than formation names. Furthermore, it is not a rare happening in geologic practice to re-define (restrict or expand the interval included within the stratigraphic boundaries of a zone, formation or even a group designated by a name.

Texaco also provided Exhibit 5, the Electrical Log of Amerada Petroleum State LA#9, a well in Section 1, T-17S, R-36E. Contention is that this log is the type log for the Lovington San Andres Unit. Texaco further contends that the Amerada State LA#1, designated type log in Paragraph (h), Exhibit 2, was done in error. Furthermore, it is pointed out that the State LA#1 was drilled to a depth of 4815 feet.

Type logs are intended to demonstrate average conditions and show as much of the section as possible. Unless full penetration logs are not available, partial sections are not normally designated as type sections. Furthermore, it would be difficult to designate the bottom of a porous interval which has not been penetrated.

Footage designation in Paragraph (h), Exhibit 3, coincides remarkably well with porosity zones of the State LA#9. Another well, the Amerada 1 State 1C, NENESE $\frac{1}{2}$, Section 1, T-17S, R-36E, also drilled through the San Andres. However, the San Andres

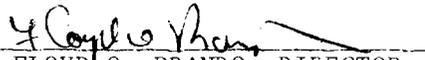
is only partially logged, unacceptable as a type log. The resistivity curve is lacking in the Grayburg and upper San Andres section.

CONCLUSIONS

1. The Amerada State LA#9 log is the best available log in Section 1 and was probably intended as type log. Depth to the top of Grayburg will vary only slightly from well to well in the section. A stratigraphic interval designated by depth will probably be + 20 of the top designated in the LA#9 well on Grayburg or San Andres.
2. In the Unit Working Agreement, the producing interval is specified by both footage and name. Errors are more easily introduced when assigning a name to lithology as compared with direct reading a depth from a log.
3. The designated producing interval, if the Amerada State LA#9 is type log, includes both Grayburg and San Andres intervals. In general mapping practice, the top of San Andres usually picked on the carbonate at 4580 at the base of the sandy zone. Grayburg at 4311 is a reasonable pick.
4. There is no input, neither support nor objection from unit participants.

RECOMMENDATIONS

1. The Amerada State LA#9 should be designated "Type Log" as being the best available log in the area.
2. The Grayburg zone be included in the unitized interval since it was included by depth designation. The zone designation merely seeks an admission that both zones have been produced as one in the past.


FLOYD O. PRANDO, DIRECTOR
OIL AND GAS DIVISION

FOP:cw

cc: San Andres Unit Agreement File

Attachments

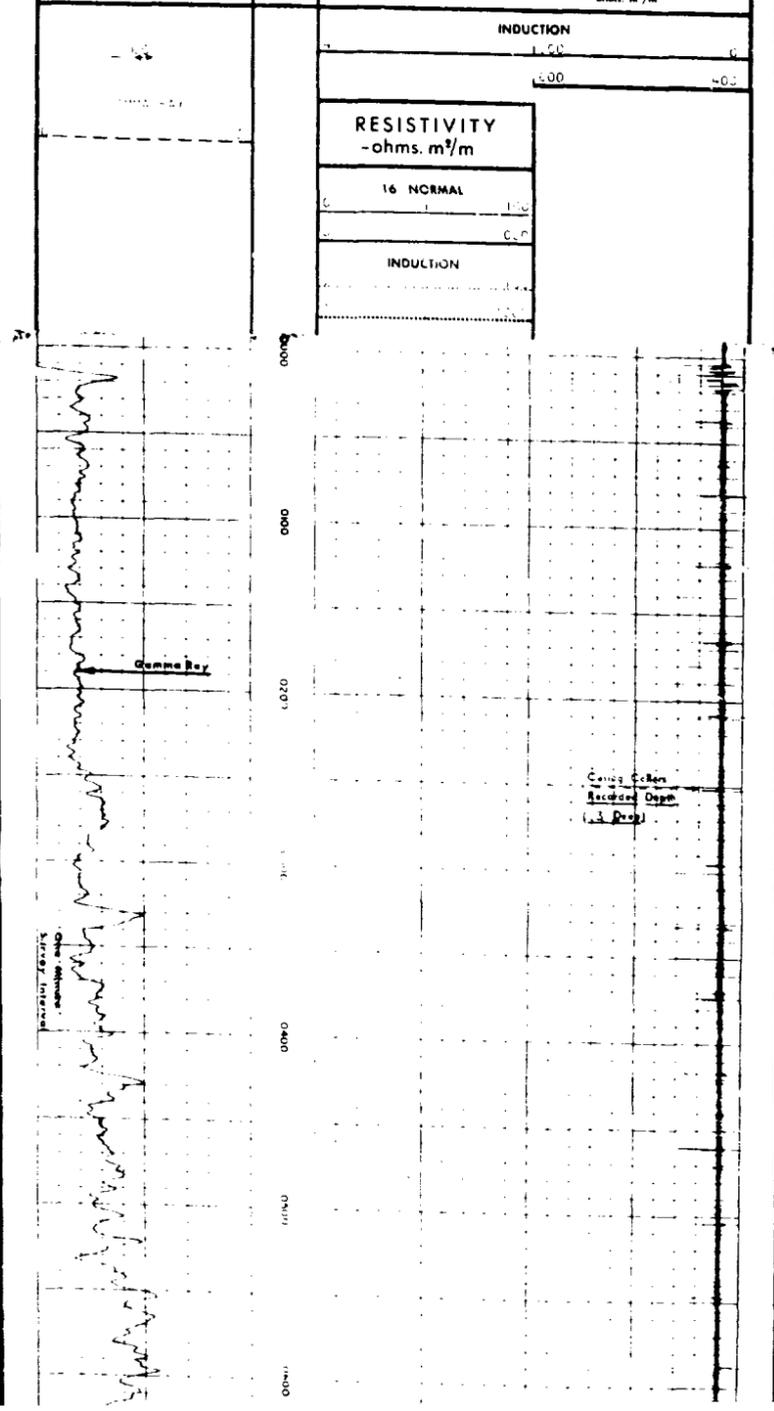
Conradia 1-10 State
NE NE SE
1/175/36E

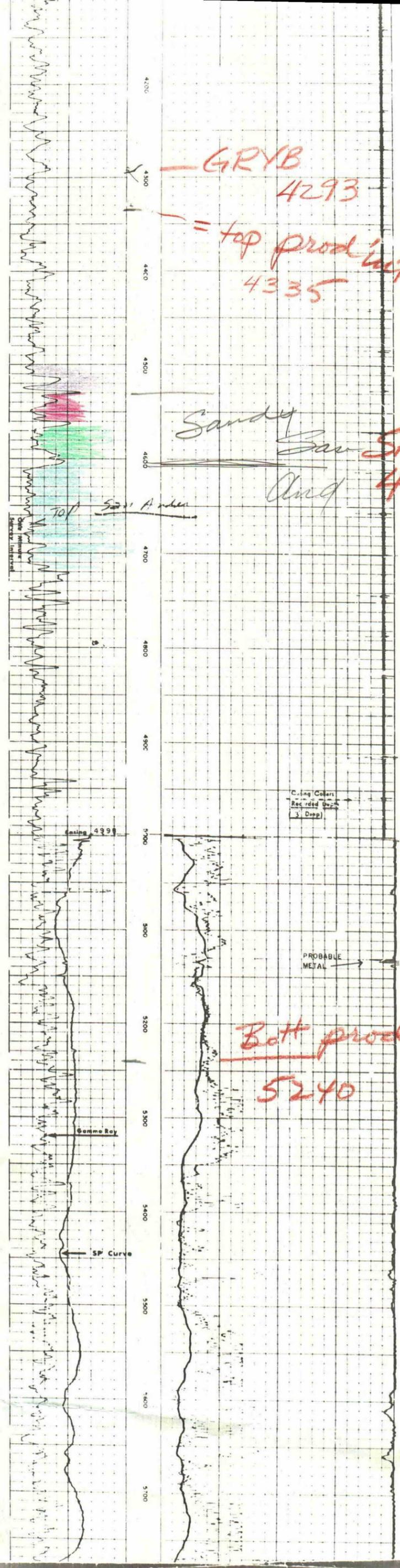
COUNTY: LEE FIELD or LOCATION: WILSON WELL: STATE 111		COMPANY: AMEPAGE PETROLEUM COMPANY AERIALS DESCRIPTION:		Other surveys:	
STATE: ALA.		FIELD: WILSON LOCATION: SEC. 10, T. 25 N., R. 26 E.		Location of Well: 11.00 Feet S/E 500 Feet from ETL	
Elevation of Well: J.F. 6 K.B. or G.L.		FILING No.:		Date: First Reading: Last Reading: Feet Measured: C.G. Station: C.G. Driver: Bottom Method: Bottom Depth: Mud Net: Mud Weight: Mud BHT: Mud Rate: Mud Pipe: Mud Valve: Mud No.: Mud Spec.: AM	

P.O. Box 2045
 Hobbs, New Mexico

REMARKS: CD 50

Carriage No. Panel No. Sonde No.





GRYB
4293

4294

= top product
4335

Sandy Sand SAN
4609

top Sand Area

Casing Colors
Recorded
(3' Deep)

PROBABLE
METAL

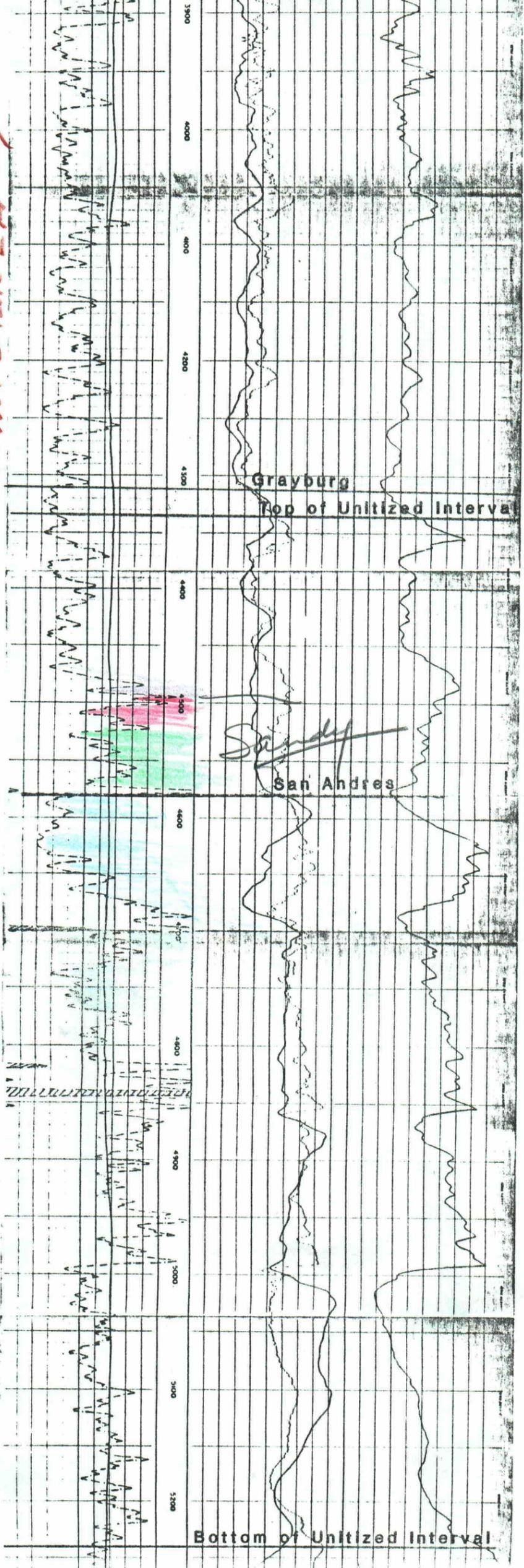
Bottom product
5240

Gummy Boy

SP Curve

See reference
Section attached

Conv. State LA #9





Joe E. King
Director

Texaco USA

135
135
135

March 11, 1986

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

Attention: Mr. R. L. Stamets
Director

Gentlemen:

Texaco, as operator of the Lovington San Andres Unit, requests that the NMOCD clarify the unitized interval as defined by the Unit Operating Agreement which was approved under Order No. R-2277. Texaco also requests that the Grayburg zone be included as part of the unitized interval.

History

The Lovington San Andres Unit is comprised of the wells completed in the San Andres formation which are located within the boundary shown on Exhibit No. 1. Most of the wells were completed between 1939 and 1941. In almost every case, the completion practice was to set an intermediate string of casing 50' to 100' above the top of the San Andres and then drill through the San Andres and complete it open hole.

On August 1, 1962, the Lovington San Andres Unit became effective. The Unit Operating Agreement was approved under Order No. R-2277 on July 12, 1962. Actual injection began in March, 1963, with an inverted 9-spot pattern. Currently the Unit produces 275 BOPD and 2300 BWPD. Injection averages 3400 BWPD.

Unitized Interval

Exhibit No. 2 is a copy of Page 3 from the Unit Agreement. Article (h) states that the unitized formation "is defined as the San Andres formation, same being that heretofore established underground reservoir underlying the Unit Area, the top of said reservoir being indicated to be at a depth of 4334 feet and the base thereof at a depth 5240 feet on the Gamma Ray Log of Amerada Petroleum Corporation's State "LA" Lease Well No. 1, located in

March 11, 1986

the NW/4 NE/4 of Section 1, T-17-S, R-36-E, Lea County, New Mexico". Exhibit No. 3, which is a plat of Section 1, T-17-S, R-36-E, shows that the State "LA" Well No. 1 is located in the SE/4 SW/4. Also, the State "LA" Well No. 1 was only drilled to a depth of 4815' as shown in Exhibit No. 4. It appears then, that the wrong well was referenced in the Operating Agreement. None of our records show which well was intended to be referenced. However, we believe that the State "LA" No. 9 is the well which was intended to be used to define the unitized interval. This well was drilled in 1952 and completed in the Abo formation. It is also located in the NW/4 NE/4 of Section 1. Accompanying this letter as Exhibit No. 5 is a copy of the Gamma Ray Log which was run on the State "LA" No. 9. The depths of 4334' and 5240' have been marked as well as the top of the San Andres zone and the Grayburg zone.

Grayburg Zone

Texaco, at the present time, is considering development of the Grayburg as part of the unitized interval. Apparently, when the Unit was formed, the Grayburg zone was not considered a separate formation. To our knowledge, there is no Lovington Grayburg pool defined in the area of the Lovington San Andres Unit. Many wells have been completed in a portion of the Grayburg. An example is Stanolind Oil and Gas Company's State "E" Tract 18 Well No. 10. This well was completed in 1945 at a depth of 5010' with casing set at 4602'. Exhibit No. 6 shows the original well record. This well became injection Well No. 28 in 1963. Exhibit No. 7 is a copy of a Tracer Survey and Gamma Ray Log which was run on July 24, 1974. This log indicates that water was being injected into the Grayburg zone above the top of the San Andres. Exhibit No. 8 shows several other examples where wells within the Unit have been producing from or injecting into the lower portion of the Grayburg zone.

Texaco contends that the original intent of the Unit Agreement was to include the Grayburg zone as part of the unitized interval and that all evidence supports this idea. We therefore request that a ruling be made to confirm this position and to clarify the Operating Agreement.

Yours very truly,



KAW:jm

Attachments

R-36-E

R-37-E

- 26 -

- 25 -

- 30 -

- 29 -

T
16
S

T
16
S

- 35 -

- 36 -

- 31 -

- 32 -

- 2 -

- 1 -

- 6 -

- 5 -

T
17
S

T
17
S

- 11 -

- 12 -

- 7 -

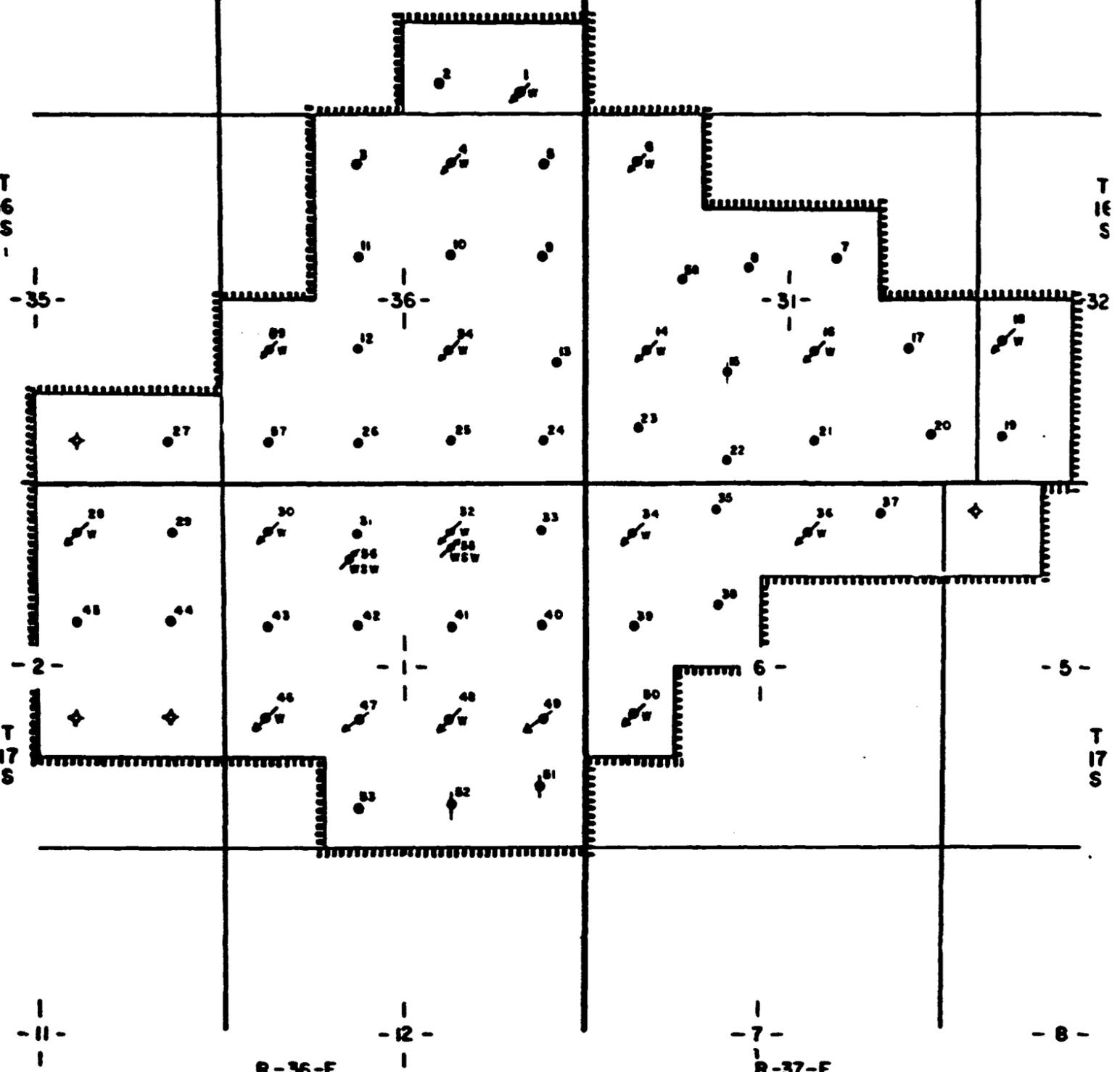
- 8 -

R-36-E

R-37-E

LOVINGTON SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO

EXHIBIT NO. 1



agreement, the following terms and expressions as used herein shall mean:

(a) "Unit Area" is defined as the land depicted on Exhibit "A" and described by Tracts in Exhibit "B" as to which this agreement becomes effective or to which it may be extended as herein provided.

(b) "Commissioner" is defined as the Commissioner of Public Lands of the State of New Mexico.

(c) "Commission" is defined as the Oil Conservation Commission of the State of New Mexico.

(d) "Director" is defined as the Director of the United States Geological Survey.

(e) "Secretary" is defined as the Secretary of the Interior of the United States of America.

(f) "Department" is defined as the Department of the Interior of the United States of America.

(g) "Supervisor" is defined as the Oil and Gas Supervisor of the United States Geological Survey.

(h) "Unitized Formation" is defined as the San Andres Formation, same being that heretofore established underground reservoir underlying the Unit Area, the top of said reservoir being indicated to be at a depth of 4,334 feet and the base thereof at a depth of 5,240 feet on the Gamma Ray log of Amerada Petroleum Corporation's State "LA" Lease Well No. 1, located in the NW/4 NE/4 of Section 1, T-17-S, R-36-E, Lea County, New Mexico.

(i) "Unitized Substances" is defined as all oil, gas, gaseous substances, sulphur contained in gas, condensate, distillate and all associated and constituent liquid or liquefiable hydrocarbons within or produced from the Unitized Formation.

(j) "Working Interest" is defined as the right to search for, produce and acquire Unitized Substances whether held as an incident of ownership of mineral fee simple title, under an oil and gas lease, or otherwise.

(k) "Working Interest Owner" is defined as any party hereto owning a Working Interest, including a carried working interest owner, holding an interest in Unitized Substances by virtue of a lease, operating agreement, fee title or otherwise, which interest is chargeable with and obligated to pay or bear, either in cash or out of production, or otherwise, all or a portion of the cost of drilling, developing and producing the Unitized Substances from the Unitized Formation and the operation thereof hereunder. The owner of oil and gas rights that are free of lease or other instrument conveying the Working Interest to another shall be regarded as a Working Interest Owner to the extent of seven-eighths (7/8) of his interest in Unitized Substances, and as a Royalty Owner with respect to his remaining one-eighth (1/8) interest therein.

(l) "Royalty Interest" or "Royalty" is defined as an interest other than a Working Interest in or right to receive a portion of the Unitized Substances or the proceeds thereof and includes the royalty interest reserved by the lessor in an oil and gas lease and any overriding royalty interest, oil payment interest, net profit contracts, or any other payment or burden which does not carry with it the right to search for and produce Unitized Substances.

	.3			.2		.2
			"M"		49.56 ac.	
			Skelly			
.1	.1	.2	.1	.1		
"AE"	"R" State	"Q"		49.44 ac.	"O"	"182" St
Pan American		Amerada		Sunray-Mid	United Prod.	
.3	.4	6.9	.4	.1	.1	
39.65 ac.	39.75 ac.	39.85 ac.	39.95 ac.	37.33 ac.	40.12 ac.	40.25 ac.
.6	.2	.3	.5	.2	.2	
"E"		"LA"		37.33 ac.		6
Amerada		Mobil		Pan Am.	Skelly	
.7	.2	.1	.2	.1		
		"R"		37.35 ac.		
		Pan American	.5			
	.1					
"LA"		State		37.39 ac.	Caylor	
Cities Prod.		McBee			Phillips	
"AJ"				37.42 ac.		
Amerada			Amerada			

EXHIBIT NO. 3

AMERADA PETROLEUM CORPORATION
 STATE "LA" LEASE
 SECTION 1, T-17-S, R-36-E

"LB"

12

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

MISCELLANEOUS NOTICES

Submit this notice in triplicate to the Oil Conservation Commission or its proper agent before the work specified is to begin. A copy will be returned to the sender on which will be given the approval, with any modifications considered advisable, or the rejection by the Commission or its agent, of the plan submitted. The plan as approved should be followed, and work should not begin until approval is obtained. See additional instructions in the Rules and Regulations of the Commission.

Indicate nature of notice

NOTICE OF INTENTION TO TEST CASING SHUT-OFF	<input checked="" type="checkbox"/>
NOTICE OF INTENTION TO CHANGE PLANS	<input type="checkbox"/>
NOTICE OF INTENTION TO REPAIR WELL	<input type="checkbox"/>
NOTICE OF INTENTION TO DEEPEN WELL	<input type="checkbox"/>

EXHIBIT NO. 4

AMERADA PETROLEUM CORPORATION
STATE "LA" NO. 1

WELL RECORD

Monument, New Mexico, January 16, 1939.

Place

Date

OIL CONSERVATION COMMISSION,

Santa Fe, New Mexico.

Gentlemen:

Following is a notice of intention to do certain work as described below at the _____

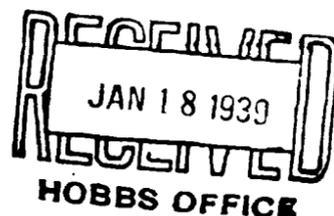
Amerada Petroleum Corporation State LA Well No. 1 in SE SW 1/4
 Company or Operator Lease
 of Sec. 1, T. 17N, R. 30E, N. M. P. M., South Lovington Field,
 _____ County.

FULL DETAILS OF PROPOSED PLAN OF WORK

FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS OF THE COMMISSION

This well has been drilled to a total depth of 4815'. 5 1/2" OD 17 1/2" Seamless casing has been set @ 4634' and cemented with 55 sacks of 11 Tero cement. This was completed @ 4:40 p.m. 1-14-39.

We propose to let this well stand undisturbed for a period of 72 hours, after which pump pressure of 1200# will be applied to the pipe and well head connections, the valves closed, and the pressure within observed for a period of 30 minutes. If there is no drop in pressure, the cement plug will be drilled and the same test again applied. If there is again no drop in pressure, drilling will be resumed.



JAN 18 1939

Approved _____, 19____

except as follows:

AMERADA PETROLEUM CORPORATION

Company or Operator

By J. C. Lewis

Position Superintendent

Send communications regarding well to

Name J. C. Lewis

Address Monument, New Mexico

OIL CONSERVATION COMMISSION

By A. ANDREAS

Title State Geologist

Member Oil Conservation Commission

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

WELL RECORD



	10

Mail to Oil Conservation Commission, Santa Fe, New Mexico, or its proper agent not more than twenty days after completion of well. Follow instructions in the Rules and Regulations of the Commission. Indicate questionable data by following it with (?). SUBMIT IN TRIPLICATE.

AREA 640 ACRES
LOCATE WELL CORRECTLY

Stanolind Oil and Gas Company **Box "F", Hobbs, New Mexico**
Company or Operator Address

State "E" Tract 18 Well No. **10** in **NE/4** of Sec. **8** T. **17-S**

Lease **28-2** **South Lovington** Field, **Lee** County, **Lee**

R. **28-2** N. M. P. M. **South Lovington** Field, **Lee** County, **Lee**

Well is **600** feet south of the North line and **1000** feet west of the East line of **Section 8-17-S**

If State land the oil and gas lease is No. **2-1285** Assignment No. _____

If patented land the owner is _____ Address _____

If Government land the permittee is _____ Address _____

The Lessee is _____ Address _____

Drilling commenced **April 26,** 19 **45** Drilling was completed **June 27,** 19 **45**

Name of drilling contractor **Davidson Drilling Company** Address **Odena, Texas**

Elevation above sea level at top of casing **2044** feet

The information given is to be kept confidential until _____ 19 _____

OIL SANDS OR ZONES

No. 1, from **4700'** to **5010'** No. 4, from _____ to _____

No. 2, from _____ to _____ No. 5, from _____ to _____

No. 3, from _____ to _____

IMPORTANT W.

Include data on rate of water inflow and elevation to which

No. 1, from _____ to _____

No. 2, from _____ to _____

No. 3, from _____ to _____

No. 4, from _____ to _____

EXHIBIT NO. 6

STANOLIND OIL & GAS COMPANY
STATE "E" TRACT 18, WELL NO. 10

WELL RECORD

CASING RECORD

SIZE	WEIGHT PER FOOT	THREADS PER INCH	MAKE	AMOUNT	KIND OF SHOE	CUT & FILLED FROM	PERFORATED FROM TO	PURPOSE
1 1/2"	20 1/2	8		207	Ball			
2 1/4"	24	8		207 1/2	Ball			
3 1/8"	14 1/2	8		400	Ball			

MUDLOG AND CEMENTING RECORD

LOVINGTON SAN ANDRES UNIT
WELLS PARTIALLY OPEN IN GRAYBURG ZONE

EXHIBIT NO. 8

<u>Unit No.</u>	<u>Total Depth</u>	<u>Casing Set At</u>	<u>Top of San Andres</u>
1	5060	4600	4670
2	4996	4620	4668
3	5033	4626	4656
4	5012	4634	4655
5	5000	4625	4662
6	5000	4538	4669
7	5000	4620	4675
8	4978	4610	4660
10	5110	4600	4625
11	5025	4575	4624
12	4990	4580	4625
13	5068	4518	4600
14	5087	4530	4620
15	4972	4531	4600
16	4950	4605	4650
17	4935	4600	4665
18	4900	4655	4670
19	4946	4617	4640
20	4945	4580	4625
21	5032	4570	4600
22	4917	4525	4575
23	5081	4530	4580
24	5075	4515	4592
25	5094	4515	4605
26	5095	4520	4605
27	5000	4600	4660
28	5068	4602	4680
29	4980	4590	4632
30	4970	4543	4595
31	4960	4541	4594
34	4950	4521	4570
35	4942	4570	4603
36	4955	4540	4610
37	4943	4560	4650
38	4945	4590	4621
39	4975	4522	4597
40	4950	4579	4589
42	4938	4536	4585
43	4990	4546	4590
44	4990	4558	4648
45	5147	4577	4656
48	4960	4530	4590
49	4960	4556	4620
50	4975	4587	4640
51	4977	4556	4657
58	4990	4570	4636

CLASS OF SERVICE

This is a fast message unless its deferred character is indicated by the proper symbol.

WESTERN UNION TELEGRAM

W. P. MARSHALL, PRESIDENT

1201 (4-60)

SYMBOLS

DL=Day Letter

NL=Night Letter

LT=International Letter Telegram

The filing time shown in the date line on domestic telegrams is LOCAL TIME at point of origin. Time of receipt is LOCAL TIME at point of destination

LA085 KA214

1962 MAY 31 AM 11 07

K TUA250 PD=FAX TULSA OKLA 31 1134A CST=
RICHARD MORRIS, OIL CONSERVATION COMMISSION=
STATE LAND OFFICE BLDG SANTA FE NMEX=

Case 2593

FILING DATE APPLICATION APPROVAL UNITIZATION AGREEMENT
AND INJECTION PROGRAM, LOCINGTON SAN ANDRES FIELD, LEA
COUNTY. IF POSSIBLE WOULD APPRECIATE SETTING MATTER FOR
JUNE 28TH AS DATE OF HEARING=

GEORGE W SELINGER SKELLY OIL CO.

1962 MAY 31 AM 11 14

MAIN OFFICE OCC

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

Hint



SKELLY OIL COMPANY

P. O. Box 1650
TULSA 2, OKLAHOMA

PRODUCTION DEPARTMENT

C. L. BLACKSHER, VICE PRESIDENT
W. P. WHITMORE, MGR. PRODUCTION
W. D. CARSON, MGR. TECHNICAL SERVICES
ROBERT G. HILTZ, MGR. JOINT OPERATIONS
GEORGE W. SELINGER, MGR. CONSERVATION

June 1, 1962

Rjm

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Attention: Mr. Richard Morris, Attorney

Gentlemen:

We are attaching an original and three copies of an application for approval of the Lovington San Andres Unit Agreement.

For your information we are, also, attaching a list of names and addresses of working interest owners, as well as a list of names and addresses of royalty and overriding royalty owners within the unit area.

We would appreciate this matter being set for hearing on June 28, 1962, as discussed in our telephone conversation and our telegram of May 31, 1962.

Very truly yours,

George W. Selinger

RJJ:br
Attach.

cc: Mr. L. C. White
Gilbert, White and Gilbert
Bishop Building
Santa Fe, New Mexico

[Faint handwritten notes or scribbles]

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

July 17, 1962

Mr. Charlie White
Gilbert, White & Gilbert
P. O. Box 787
Santa Fe, New Mexico

Dear Charlie:

Enclosed herewith is a corrected copy of Order No. R-2277, entered by the Commission on July 12, 1962.

Please acknowledge receipt of this correction and destroy the copy of this order which was mailed to you last week.

Very truly yours,

DANIEL S. NUTTER
Chief Engineer

DSN/esr
Enclosure

C
O
P
Y

Joe Ramey, OCC Hobbs,
acknowledged receipt
of corrected order
July 20, 1962.

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

July 17, 1962

**Mr. Joe D. Ramey
District Supervisor
Oil Conservation Commission
P. O. Box 2045
Hobbs, New Mexico**

Dear Joe:

**Enclosed herewith is a corrected copy of Order
No. R-2277, entered by the Commission on July 12,
1962.**

**Please acknowledge receipt of this correction
and destroy the copy of this order which was mailed to
you last week.**

Very truly yours,

**DANIEL S. NUTTER
Chief Engineer**

**DGN/esr
Enclosure**

C
O
P
Y



SKELLY OIL COMPANY

P. O. Box 1650
TULSA 2, OKLAHOMA

PRODUCTION DEPARTMENT

C. L. BLACKSHER, VICE PRESIDENT

W. P. WHITMORE, MGR. PRODUCTION

W. E. CAPSON, MGR. TECHNICAL SERVICES

ROBERT G. HILTZ, MGR. JOINT OPERATIONS

GEORGE W. SELINGER, MGR. CONSERVATION

July 19, 1962

Re: Lovington Unit
Lea County, New Mexico

Mr. Daniel S. Nutter, Chief Engineer
Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Dear Mr. Nutter:

We acknowledge receipt of a corrected copy of Order No. P-2277, entered by the Commission on July 12, 1962, and in accordance with your letter we will destroy the copy of this Order which was mailed to us last week.

Very truly yours,

GWS:br

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

July 17, 1962

Mr. George Selinger
Shelly Oil Company
Box 1650
Tulsa 2, Oklahoma

Dear George:

Enclosed herewith is a corrected copy of Order
No. R-2277, entered by the Commission on July 12,
1962.

Please acknowledge receipt of this correction
and destroy the copy of this order which was mailed
to you last week.

Very truly yours,

DANIEL S. BUTTER
Chief Engineer

DSH/esr
Enclosure

C
O
P
Y

State of New Mexico



Commissioner of Public Lands

E. S. JOHNNY WALKER
COMMISSIONER



P. O. BOX 791
SANTA FE, NEW MEXICO

July 19, 1962

Mr. Daniel S. Nutter
Chief Engineer
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Re: OCC Case No. 2593
Order No. R-2277

Dear Mr. Nutter:

This Department has received by your letter of July 17, 1962 a corrected copy of Commission Order No. R-2277.

Please be advised we are removing the copy of the order which was in our file and replacing it with the aforementioned corrected order.

Very truly yours,

E. S. JOHNNY WALKER
COMMISSIONER OF PUBLIC LANDS

BY:
(Mrs.) Marian M. Rhea, Supervisor
Unit Division

ESW/mmr/v

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

July 17, 1962

Mrs. Marian M. Rhea, Supervisor
Unit Division
New Mexico State Land Office
P. O. Box 791
Santa Fe, New Mexico

Dear Mrs. Rhea:

Enclosed herewith is a corrected copy of Order
No. R-2277, entered by the Commission on July 12,
1962.

Please acknowledge receipt of this correction
and destroy the copy of this order which was mailed
to you last week.

Very truly yours,

DANIEL S. NUTTER
Chief Engineer

DSN/esr
Enclosure

C
O
P
Y

R. W. BYRAM & COMPANY of New Mexico

Phone GR 8-2551, Drawer M, Capitol Station

AUSTIN, TEXAS

July 25, 1962

AIR MAIL

Mr. Daniel S. Nutter, Chief Engineer
Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Dear Mr. Nutter:

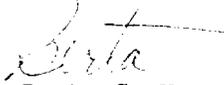
This will acknowledge our receipt of the corrected copy of
Order No. R-2277 and we have destroyed the copy received
originally.

Thank you for sending it to us.

With kindest regards.

Very truly yours,

R. W. BYRAM & COMPANY


Berta S. Vore

ESV:jc

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

July 17, 1962

R. W. Byram & Company
Drawer M
Capitol Station
Austin, Texas

Gentlemen:

Enclosed herewith is a corrected copy of Order No. R-2277, entered by the Commission on July 12, 1962.

Please acknowledge receipt of this correction and destroy the copy of this order which was mailed to you last week.

Very truly yours,

DANIEL S. NUTTER
Chief Engineer

DSN/esr
Enclosure

C
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P
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2-13
PLAIN OFFICE 000

1963 OCT 25 PM 3:09

OCT 24, 1963

Shell, Oil Company
Trust 2, Oklahoma

Re: Lovington San Andres Unit
Lea County, New Mexico

Attention: Mr. Robert C. Filtz

Gentlemen:

We acknowledge receipt of your letter dated October 14, 1963 and the Commissioner of Public Lands accepts and approves ratification and joinder by Shell Oil Co. of tract 8 and 10 of Lovington San Andres Unit, Lea County, New Mexico.

The approval on August 14, 1963 by the Director approves the Unit and expansion of the unit tract which includes a mineral tract of 40 acres.

Enclosed are two copies of our original certificate of approval for this expansion approved thereon.

Very truly yours,

D. G. JOHN R. WALKER
COMMISSIONER OF PUBLIC LANDS

BY:
(Mrs.) Marian M. Rhea, Supervisor
Unit Division

LSW/mmr/c

encl:

CC: Oil Conservation Commission

United States Geological Survey
Roswell, New Mexico

State of New Mexico



ALEX J. ARMIJO
COMMISSIONER



Commissioner of Public Lands

December 28, 1979

2593

P. O. BOX 1148
SANTA FE, NEW MEXICO 87501

Getty Oil Company
P. O. Box 1231
Midland, Texas 79701

Re: 1980 PLAN OF DEVELOPMENT
Lovington San Andres Unit
Lea County, New Mexico

ATTENTION: Audra B. Cary

Gentlemen:

The Commissioner of Public Lands has this date approved your 1980 Plan of Development for the Lovington San Andres Unit, Lea County, New Mexico. Plans for 1980 are to continue the efforts to minimize the operating expenses on the unit, taking advantage of the more versatile operating characteristics of electric power. Continual individual well downhole evaluations will be conducted in efforts to improve the production and injection operations. Our approval is subject to like approval by the United States Geological Survey and the New Mexico Oil Conservation Commission.

Enclosed is one approved copy for your files.

Please remit a Three (\$3.00) Dollar filing fee.

Very truly yours,

ALEX J. ARMIJO
COMMISSIONER OF PUBLIC LANDS

BY:
RAY D. GRAHAM, Director
Oil and Gas Division
AC 505-827-2748

AJA/RDG/s
encl.

cc: OCD-Santa Fe, New Mexico
USGS-Roswell, New Mexico
USGS-Albuquerque, New Mexico

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

January 7, 1980

Getty Oil Company
P. O. Box 1231
Midland, Texas 79701

Attention: Audra B. Cary

Re: Case No. 2593
Lovington San Andres Unit
1980 Plan of Development

Gentlemen:

We hereby approve the 1980 Plan of Development for the Lovington San Andres Unit, Lea County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands.

Two approved copies of the Plan of Development are returned herewith.

Yours very truly,

JOE D. RAMEY
Director

JDR/EP/fd
enc.

cc: U.S.G.S. - Roswell
Commissioner of Public Lands

C

O

P

Y



Getty Oil Company

Central Exploration and Production Division

*OK for approval
1/4/80
E/P*

*3466
2593*

P.O. Box 1231
Midland, Texas
79701
December 7, 1979

Director (3)
United States Geological Survey
P.O. Drawer 1857
Roswell, New Mexico 88201

File: Lovington San Andres Unit
Lease No. 76008
Lea County, New Mexico

Oil Conservation Commission (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico 87501

Commissioner of Public Lands (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico 87501

All Working Interest Owners

Gentlemen:

In accordance with Section 11 of the Unit Agreement for the development and operation of the Lovington San Andres Unit, Lea County, New Mexico, Getty Oil Company respectfully submits for your approval a report of past operations and a plan of development and operation for the unit during 1980.

PAST OPERATIONS

The Lovington San Andres Unit became effective August 1, 1962. Injection of water into fourteen (14) wells commenced on March 29, 1963. The unit was enlarged, effective December 1, 1963, with the inclusion of two additional tracts. During June 1965 Well No. 1 was converted to injection and Well No. 59 was drilled and completed as an injection well. Well No. 47 was converted to injection status in August, 1969 and Well No. 49 in February, 1976.

During 1979 efforts were continued to minimize operating expenses and included the up-grading of bottom hole pump metallurgy, close attention and adjustment to the chemical treating program, replacement of gas driven engines with electric motors except on the water injection plant and water supply well engines. The electrification project is expected to be completed in early 1980.

Cummulative water injection to October 1, 1979, is 32,894,429 barrels. The daily average injection rate during September, 1979 was 3,555 BWPD at an average wellhead pressure of 1,850 psig.

Cummulative oil production since unitization has been 3,683,888 barrels. Cummulative oil production at start of project was 8,359,899 barrels for a total cummulative of 12,043,787 barrels of oil to October 1, 1979. Oil production rate averaged 384 BOPD for September, 1979.

OPERATION AND DEVELOPMENT PLANS FOR 1980

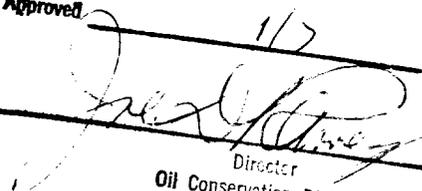
Plans for 1980 are to continue the efforts to minimize the operating expenses on the unit, taking advantage of the more versatile operating characteristics of electric power. Continual individual well downhole evaluations will be conducted in efforts to improve the production and injection operations.

Yours very truly,



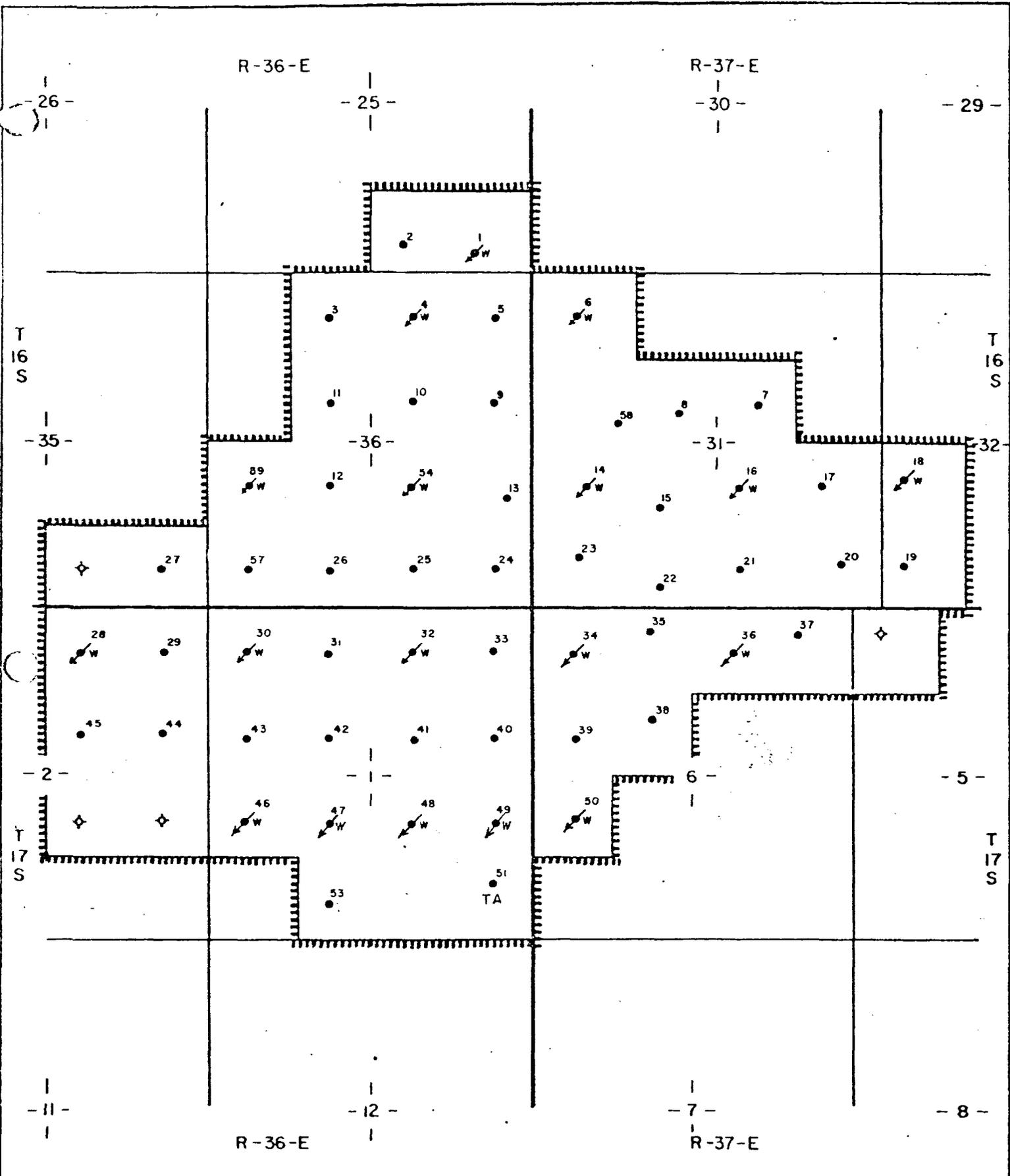
Audra B. Cary, Chairman
Working Interest Owners' Committee

EPM/sv
Attachment

Approved _____ 11/7 19 80


Director
Oil Conservation Division
Energy and Minerals Department

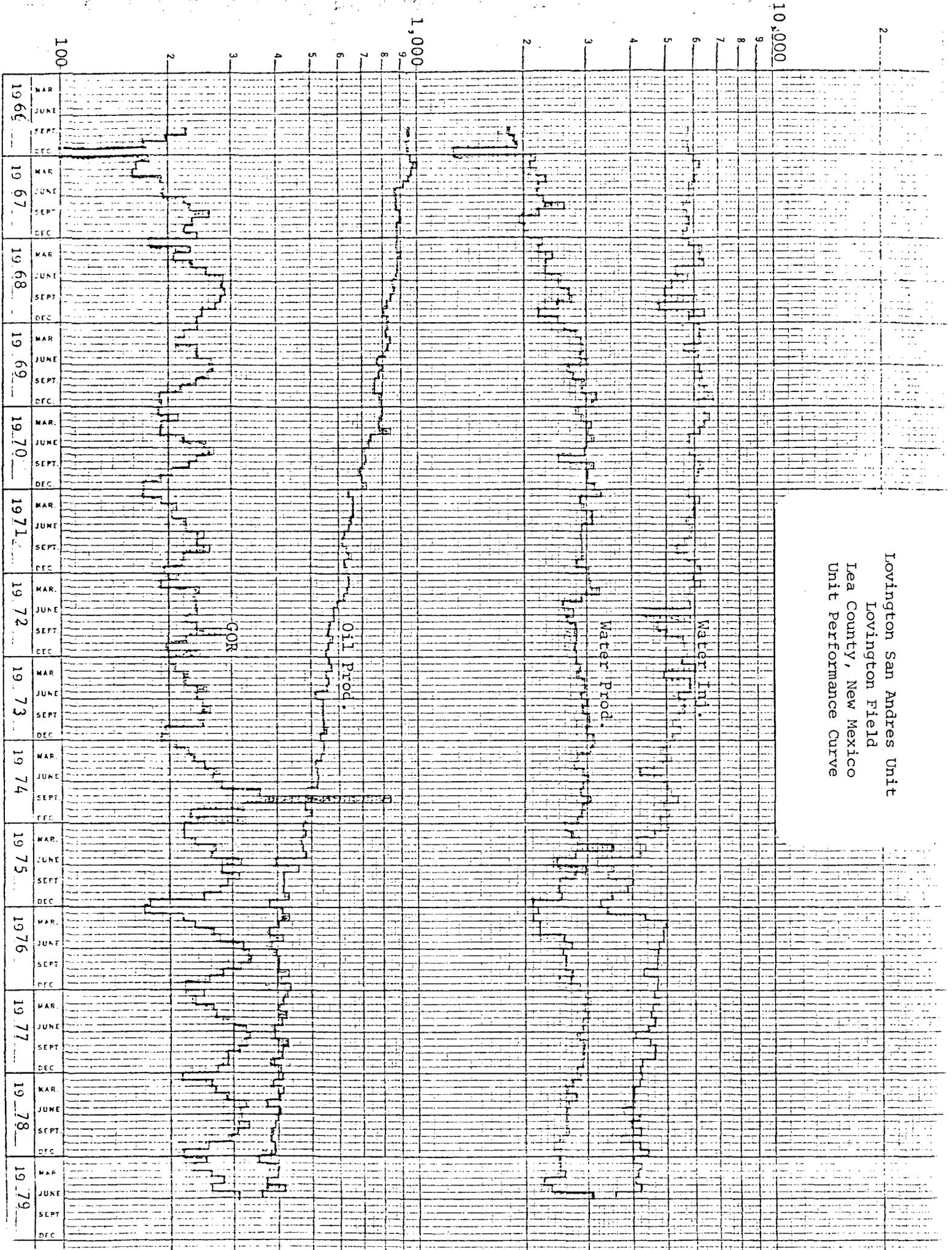
THIS APPROVAL GRANTED SUBJECT TO LIKE APPROVAL
BEING GRANTED BY THE UNITED STATES GEOLOGICAL
SURVEY AND BY THE COMMISSIONER OF PUBLIC LANDS
OF THE STATE OF NEW MEXICO.



LOVINGTON SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO



Oil and Water Production (BBL/Day), Gas-Oil Ratio (SCF/BBL), Water Injection (BBL/Day)



Lovington San Andres Unit
 Lovington Field
 Lea County, New Mexico
 Unit Performance Curve

Conservation Division
P. O. Box 26124
Albuquerque, New Mexico 87125

Getty Oil Company
Attention: Mr. C. L. Wade
P. O. Box 1404
Houston, Texas 77001

7/15/77

Gentlemen:

One approved copy of your 1977 report of past operations and 1978 plan of development for the Lovington San Andres Unit area, Lea County, New Mexico, is enclosed.

Such plan, proposing continuation of present waterflood operations, was approved on this date subject to like approval by the appropriate officials of the State of New Mexico.

Sincerely yours,

JAMES W. SUTHERLAND
Oil and Gas Supervisor, SRMA

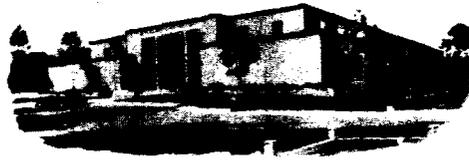
Enclosure

cc:

New Mexico Oil Conservation Commission, Santa Fe (Letter only)
Commissioner of Public Lands, Santa Fe (Letter only)

Received
11-14-77
n

State of New Mexico



Commissioner of Public Lands

PHIL R. LUCERO
COMMISSIONER

November 8, 1977

P. O. BOX 1148
SANTA FE, NEW MEXICO 87501

Getty Oil Company
P. O. Box 1404
Houston, Texas 77001

2-2075

Re: Lovington San Andres Unit
Lea County, New Mexico
REPORT OF PAST OPERATIONS
AND PLAN OF DEVELOPMENT FOR
1978

ATTENTION: Mr. C. L. Wade

Gentlemen:

The Commissioner of Public Lands has this date approved your report of past operations as well as your Plan of Development for the year 1978, for the Lovington San Andres Unit, Lea County, New Mexico. Your plan are to continue the present system of operations, employing the necessary steps to maintain operating efficiency and optimum performance from the unit.

This approval is subject to like approval by the United States Geological Survey and the New Mexico Oil Conservation Commission.

Enclosed is one approved copy for your files.

Please remit a Three (\$3.00) Dollar filing fee.

Very truly yours,

PHIL R. LUCERO
COMMISSIONER OF PUBLIC LANDS

BY:
RAY D. GRAHAM, Director
Oil and Gas Division

PRL/RDG/s
encls.
cc:

NMOCC-Santa Fe, New Mexico ✓
USGS-Roswell, New Mexico
USGS-Albuquerque, New Mexico

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

November 8, 1977

Getty Oil Company
P. O. Box 249
Hobbs, New Mexico 88240

Attention: C. L. Wade

Re: Case No. 2593
Lovington San Andres Unit
1978 Plan of Operation

Gentlemen:

We hereby approve the 1978 Plan of Operation for the Lovington San Andres Unit, Lea County, New Mexico, subject to like approval by the U.S.G.S. and the Commissioner of Public Lands.

Two approved copies of the Plan are returned herewith.

Very truly yours,

JOE D. RAMEY
Secretary-Director

JDR/LT/fd

cc: U.S.G.S. - Roswell
Commissioner of Public Lands

enc.

Getty Oil Company |

1977

October 31, 1977

File: Lovington San Andres Unit
Lease No. 76008
Lea County, New Mexico

Director (3)
United States Geological Survey
P. O. Drawer 1857
Roswell, New Mexico 88201

Commissioner of Public Lands (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico 87501

Oil Conservation Commission (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico 87501

All Working Interest Owners

Gentlemen:

In accordance with Section II of the Unit Agreement for the development and operation of the Lovington San Andres Unit, Lea County, New Mexico, Getty Oil Company respectfully submits for your approval a report of past operations and a plan of development and operation for the unit during 1978.

PAST OPERATIONS

The Lovington San Andres Unit became effective August 1, 1962, with Skelly Oil Company as Unit Operator. Injection of water into fourteen (14) wells commenced on March 29, 1963. The unit was enlarged, effective December 1, 1963, with the inclusion of two additional tracts. During June 1965 Well No. 1 was converted to injection and Well No. 59 was drilled and completed as an injection well. Well No. 47 was converted to injection status in August 1969 and Well No. 49 in February 1976.

Installation of four satellite test stations and a central LACT unit was completed during early 1965. Re-injection of all produced water commenced February 10, 1966, into Wells No. 1, 4, 6, 28, 30, 54, and 59.

Cumulative water injection to October 1, 1977 is 29,155,077 barrels. The daily average injection rate during September 1977 was 4570 BWP/D at an average wellhead pressure of 1,870 psig.

Cumulative oil production since unitization has been 3,572,353 barrels. Cumulative before project was 8,359,899 barrels for a total of 11,932,252 barrels of oil to October 1, 1977. Oil Production rate averaged 405 BOPD for October 1977.

Skelly Oil Company was merged into Getty Oil Company and Getty became the unit operator effective June 1, 1977.

OPERATION AND DEVELOPMENT PLANS FOR 1978

Plans for 1978 are basically to continue the present system of operations, employing the necessary steps to maintain operating efficiency and optimum performance from the unit.

Yours very truly,

Getty Oil Company

C. L. Wade
C. L. Wade
Area Superintendent

Approved.....*11/8*.....1977.

James P. [Signature]
Secretary Director

BOB/db
Attachments

NEW MEXICO OIL CONSERVATION COMMISSION

THIS APPROVAL GRANTED SUBJECT TO LIKE APPROVAL BEING GRANTED BY THE UNITED STATES GEOLOGICAL SURVEY AND BY THE COMMISSIONER OF PUBLIC LANDS OF THE STATE OF NEW MEXICO.

R-36-E

R-37-E

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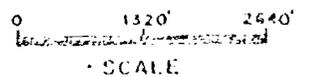
- 7 -

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R-36-E

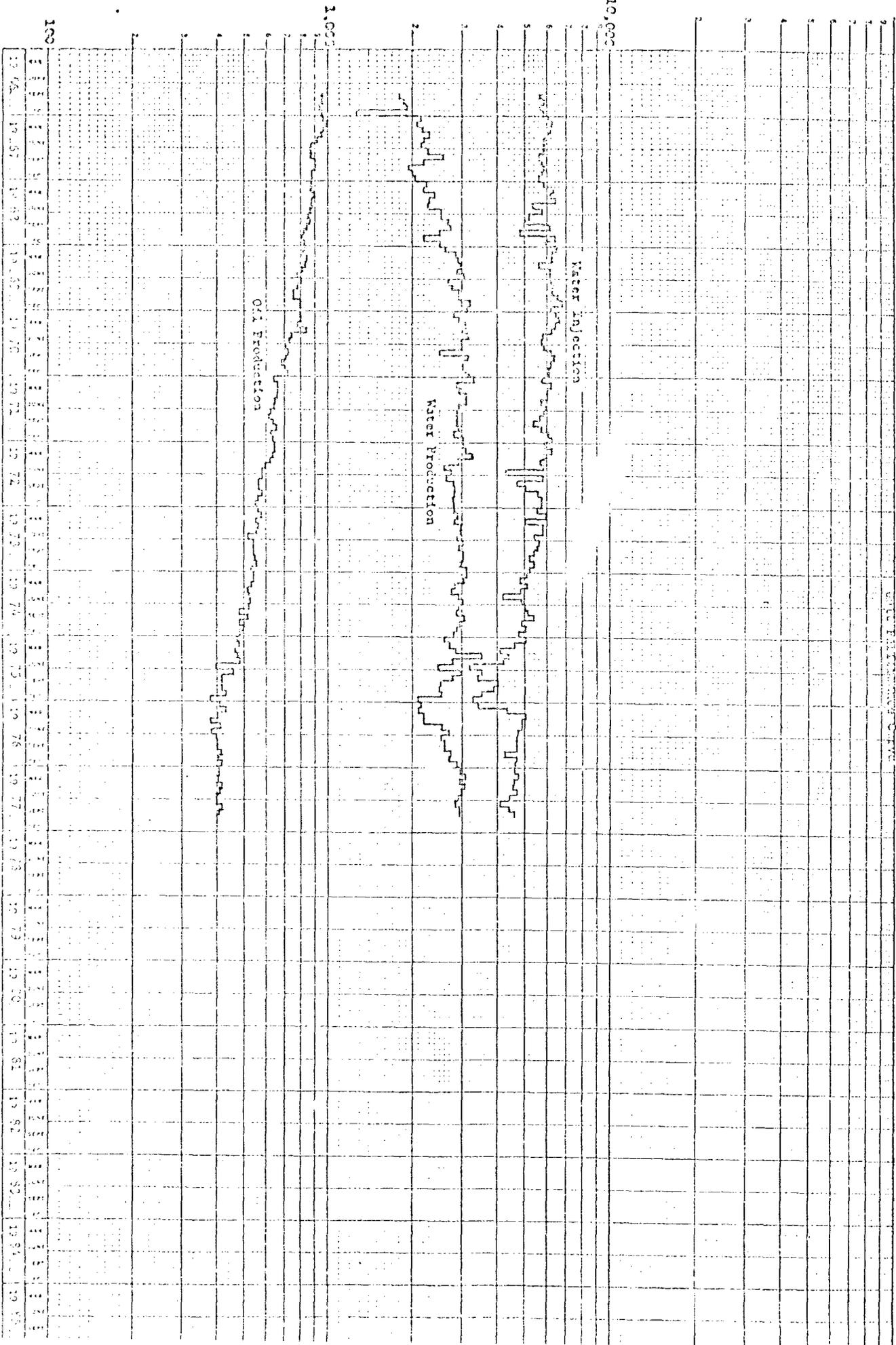
R-37-E

LOVINGTON SAN ANDRES UNIT LEA COUNTY, NEW MEXICO



Oil and Water Production (BBL/Day)

Water Injection (BBL/Day)



Livingston San Andres Unit
Livingston Field
San Antonio, New Mexico
UNIT INFORMATION CENTER

23 15

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

November 23, 1976

Skelly Oil Company
P. O. Box 1351
Midland, Texas 79701

Attention: Mr. Leland Franz

Re: 1977 Development Plans,
Lovington San Andres Unit,
Lea County, New Mexico

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the Development Plans for the calendar year 1977 for the Lovington San Andres Unit, Lea County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Two approved copies of the plans are returned herewith.

Very truly yours,

JOE D. RAMEY
Secretary-Director

JDR/JEK/og

cc: United States Geological Survey
Roswell, New Mexico

Commissioner of Public Lands
Santa Fe, New Mexico



SKELLY OIL COMPANY

November 5, 1976

DOMESTIC EXPL. & PROD. DEPARTMENT

MIDLAND E & P DISTRICT

AUDRA B. CARY, DISTRICT MANAGER

F. L. FRANZ, DISTRICT PRODUCTION MANAGER

J. R. GISBURNE, DISTRICT EXPLORATION MANAGER

J. R. AVENT, DIST. ADMINISTRATIVE COORDINATOR

ADDRESS REPLY TO:

P. O. BOX 1351

MIDLAND, TEXAS 79701

File: Lovington San Andres Unit
Lease No. 76008
Lea County, New Mexico

Director (3)
United States Geological Survey
P. O. Drawer 1857
Roswell, New Mexico 88201

Commissioner of Public Lands (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico 87501

Oil Conservation Commission (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico 87501

All Working Interest Owners

Gentlemen:

In accordance with Section 11 of the Unit Agreement for the development and operation of the Lovington San Andres Unit, Lea County, New Mexico, Skelly Oil Company respectfully submits for your approval a report of past operations and a plan of development and operation for the unit during 1977.

PAST OPERATIONS

The Lovington San Andres Unit became effective August 1, 1962, with Skelly Oil Company as Unit Operator. Injection of water into fourteen (14) wells commenced on March 29, 1963. The unit was enlarged, effective December 1, 1963, with the inclusion of two additional tracts. During June 1965 Well No. 1 was converted to injection and Well No. 59 was drilled and completed as an injection well. Well No. 47 was converted to injection status in August 1969 and Well No. 49 in February 1976.

Installation of four satellite test stations and a central LACT Unit was completed during early 1965. Re-injection of all produced water commenced February 10, 1966, into Wells No. 1, 4, 6, 28, 30, 54, and 59.

Page No. 2
November 1, 1976

Cumulative water injection to October 1, 1976, is 27,503,017 barrels. The daily average injection rate during September 1976 was 4,640 BWPD at an average wellhead pressure of 1,870 psig.

Cumulative oil production since unitization has been 3,420,999 barrels. Cumulative before project was 8,359,899 barrels for a total of 11,780,898 barrels of oil to October 1, 1976. Oil production rate averaged 401 BOPD for September 1976.

OPERATION AND DEVELOPMENT PLANS FOR 1977

Plans for 1977 are basically to continue the present system of operations, employing the necessary steps to maintain operating efficiency and optimum performance from the unit.

Yours very truly,

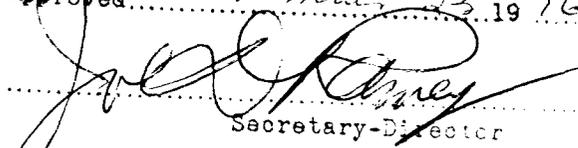
SKELLY OIL COMPANY



Leland Franz, Chairman
Working Interest Owners' Committee

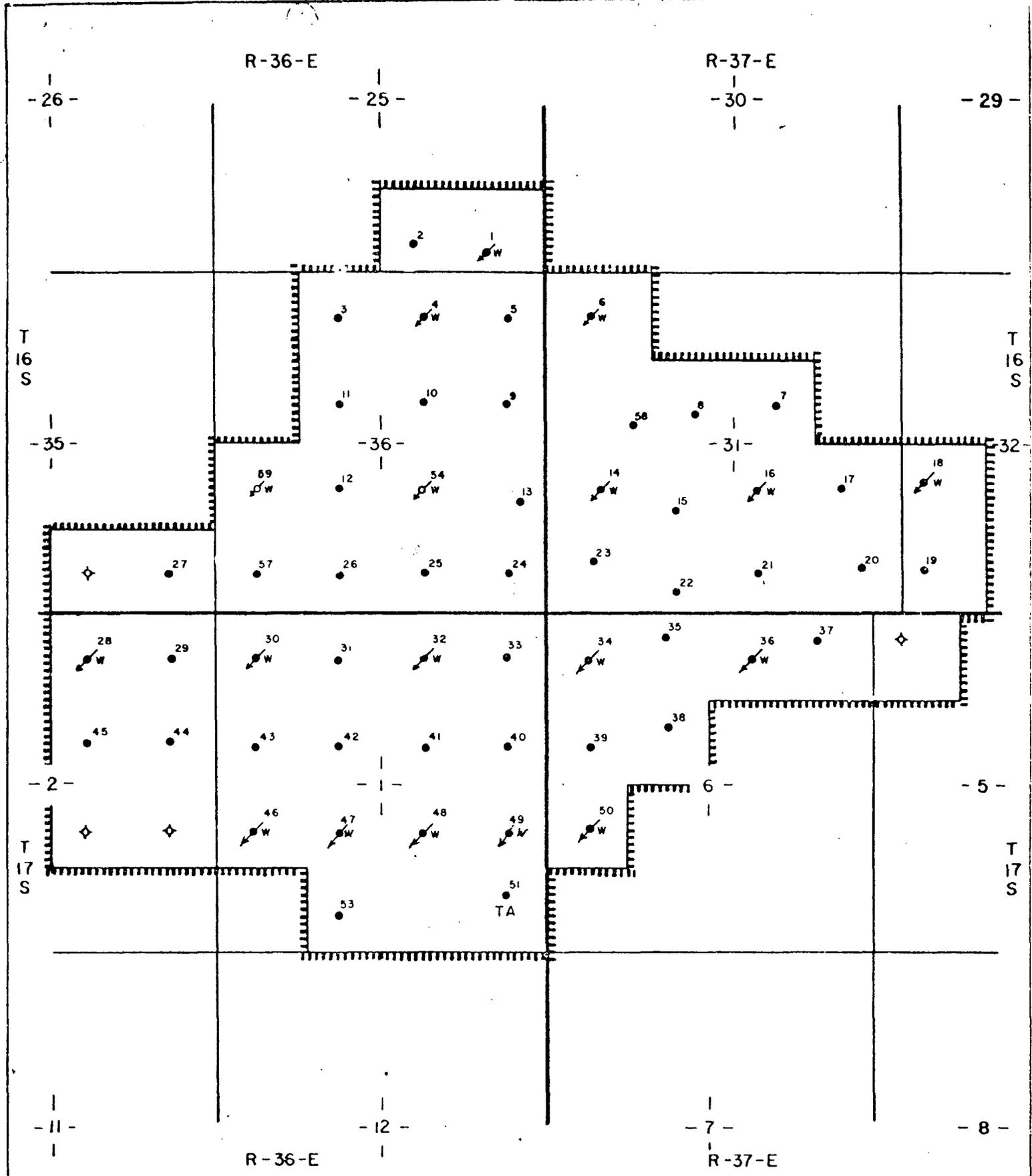
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Attachment

Approved *November 23* 19 *76*



Secretary-Director

NEW MEXICO OIL CONSERVATION COMMISSION

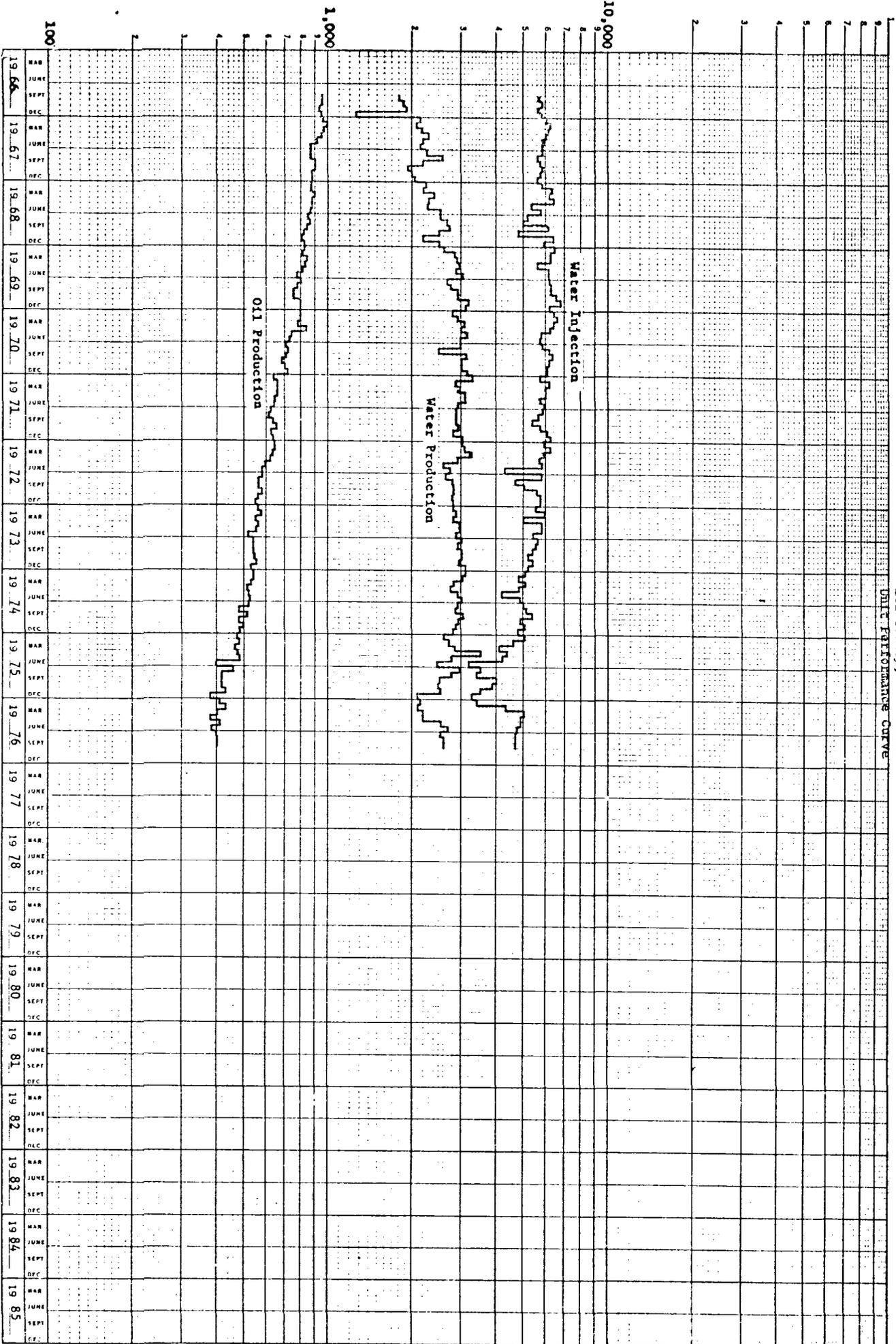


LOVINGTON SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO



Oil and Water Production (BBL/Day)

Water Injection (BBL/Day)



UNIT PERFORMANCE CURVE
Lovington San Andres Unit
Lovington Field
Lea County, New Mexico



United States Department of the Interior

GEOLOGICAL SURVEY
CONSERVATION DIVISION
WESTERN NATIONAL BANK BUILDING
505 MARQUETTE, NW, ROOM 815
ALBUQUERQUE, NEW MEXICO 87102

NOV 8 1976

SKELLY OIL COMPANY
ATTENTION: MR. LELAND FRANZ
P. O. Box 1351
MIDLAND, TEXAS 79701

GENTLEMEN:

ONE APPROVED COPY OF YOUR 1976 REPORT OF PAST OPERATIONS AND
1977 PLAN OF DEVELOPMENT FOR THE BOVINGTON SAN ANDRES UNIT
AREA, LEA COUNTY, NEW MEXICO IS ENCLOSED.

SUCH PLAN, PROPOSING CONTINUATION OF PRESENT WATERFLOOD
OPERATIONS WAS APPROVED ON THIS DATE SUBJECT TO LIKE APPROVAL
BY THE APPROPRIATE OFFICIALS OF THE STATE OF NEW MEXICO.

SINCERELY YOURS,

JOBEL COOPELAND JAMES W. SUTHERLAND

AREA OIL AND GAS SUPERVISOR

CC:
NMOCC, SANTA FE ← This Copy for
COMM. PUB. LANDS, SANTA FE



United States Department of the Interior

GEOLOGICAL SURVEY
P. O. Drawer 1857
Roswell, New Mexico 88201

May 10, 1976

Skelly Oil Company
Attention: Mr. Leland Franz
P. O. Box 1351
Midland, Texas 79701

Gentlemen:

Four approved copies of your 1976 plan of development for the Lovington San Andres unit area, Lea County, New Mexico, proposing continuation of current waterflood operations are enclosed. Such plan was approved on this date subject to like approval by the appropriate officials of the State of New Mexico.

It is requested that you provide this office with a copy of waterflood injection and production data in graphical form at your earliest convenience and include an updated copy of such graph with all subsequent plans of development.

Sincerely yours,

(ORIG. SGD.) CARL C. TRAYWICK

CARL C. TRAYWICK
Acting Area Oil and Gas Supervisor

Enclosure

cc:
NMOCC, Santa Fe (1tr. only) ←
Com. Pub. Lands, Santa Fe (1tr. only)

JAGillham:dlk

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

257:

December 16, 1975

Skelly Oil Company
P. O. Box 1351
Midland, Texas 79701

Attention: Mr. Leland Franz

Re: 1976 Plan of Development
Lovington San Andres Unit,
Lea County, New Mexico

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the Operation and Development Plans for 1976 for the Lovington San Andres Unit, Lea County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Two approved copies of the plan are returned herewith.

Very truly yours,

JOE D. RAMEY
Secretary-Director

JDR/JEK/og

cc: U. S. Geological Survey - Roswell
Roswell, New Mexico

Commissioner of Public Lands
Santa Fe, New Mexico



SKELLY OIL COMPANY

December 1, 1975

DOMESTIC EXPL. & PROD. DEPARTMENT

MIDLAND E & P DISTRICT

F. L. FRANZ, DISTRICT PRODUCTION MANAGER

M. J. EKMAN, DISTRICT ENGINEER

C. F. BOSECKER, LEAD RESERVOIR ENGINEER

F. J. PETRO, LEAD PRODUCTION ENGINEER

ADDRESS REPLY TO:
P. O. BOX 1351
MIDLAND, TEXAS 79701

File: Lovington San Andres Unit
Lease No. 76008
Lea County, New Mexico

Re: Report of Past Operations and
Plan of Development for 1976.

Director (6)
United States Geological Survey
P. O. Drawer 1857
Roswell, New Mexico 88201

Commission of Public Lands (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico 87501

Oil Conservation Commission (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico 87501

All Working Interest Owners

Gentlemen:

In accordance with Section 11 of the Unit Agreement for the development and operation of the Lovington San Andres Unit, Lea County, New Mexico, Skelly Oil Company respectfully submits for your approval a report of past operations and a plan of development and operation for the unit during 1976.

PAST OPERATIONS

The Lovington San Andres Unit became effective August 1, 1962, with Skelly Oil Company as Unit Operator. Injection of water into fourteen (14) wells commenced on March 29, 1963. The unit was enlarged, effective December 1, 1963, with the inclusion of two additional tracts. During June, 1965, Well No. 1 was converted to injection and Well No. 59 was drilled and completed as an injection well. Well No. 47 was converted to injection status in August, 1969.

Installation of four satellite test stations and a central LACT Unit was completed during early 1965. Re-injection of all produced water commenced February 10, 1966, into Wells No. 1, 4, 6, 28, 30, 54 and 59.

Continued monitoring and study by an independent laboratory is being conducted on a regularly scheduled basis to evaluate the quality of injection water and to detect potential problems that might arise. There were no major changes made on the injection system during the year that would significantly affect the unit.

During 1973 a former Lovington San Andres Unit Well No. 52 was recompleted and transferred to the Lovington Paddock Unit. There were no other major changes or revisions made on the unit during the year that would significantly affect the producing system.

Truck treating for corrosion is being continued on all producing wells and all fresh make-up water is treated with sulphur dioxide for oxygen removal. Necessary maintenance, repair, and replacement of lift equipment and producing facilities were performed as required.

Cumulative water injection to November 1, 1975 is 26,028,072 barrels. The daily average injection rate during October, 1975, was 4,100 BWPB at an average wellhead pressure of 2,000 psig.

Cumulative oil production since unitization has been 3,285,492 barrels. Cumulatives before project was 8,359,899 barrels for a total of 11,645,391 barrels of oil to November 1, 1975. Oil production rate averaged 430 BOPD for October 1975.

Well No. 49, which has been shut-down because of low oil producing rate, is scheduled to be converted to injection this year. Conversion is expected to be approved by all concerned during December with actual work being done shortly thereafter.

OPERATION AND DEVELOPMENT PLANS FOR 1976

Plans for 1976 are basically to continue the present system of operations, employing the necessary steps to maintain operating efficiency and optimum performance from the unit.

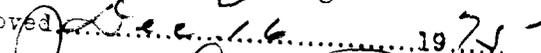
Some water injection line failures are being experienced which require extensive replacement or repairs. Three rather long sections have been replaced and additional replacements are expected to be required in the immediate future. Replacements will be made as the need arises.

Continuing studies are being made as to more effective stimulation of producing wells. Temperature surveys, pattern analysis, radio active tracers, and other tools will continue to be used to insure optimum economics and reservoir performance.

Yours very truly,



Leland Franz
District Production Manager

Approved  1975


Secretary-Director

BOB/slw
Attach.

2572

State of New Mexico

TELEPHONE
505-827-2748



PHIL R. LUCERO
COMMISSIONER

Commissioner of Public Lands
December 10, 1975

P. O. BOX 1148
SANTA FE, NEW MEXICO 87501

Skelly Oil Company
P. O. Box 1351
Midland, Texas 79701

Re: Lovington San Andres Unit
Report of Past Operations and
Plan of Development for 1976
Lea County, New Mexico

ATTENTION: Mr. Leland Franz

Gentlemen:

The Commissioner of Public Lands has this date approved your 1976 Plan of Development whereby you will continue the present system of operations and other work. This approval is subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

Enclosed is one approved copy for your files.

Please remit a Three (\$3.00) Dollar filing fee.

Very truly yours,

PHIL R. LUCERO
COMMISSIONER OF PUBLIC LANDS

BY:
RAY D. GRAHAM, Director
Oil and Gas Division

FRL/RDG/s
encl.
cc:

USGS-Roswell, New Mexico
OCC- Santa Fe, New Mexico