CASE NO.

7613

APPlication, Transcripts, Small Exhibits,

ETC.

1		2
2	INDEX	
3		
4	CLAYTON ROTH	
5	Direct Examination by Mr. Kellahin	3
6	Cross Examination by Mr. Nutter	11
7		· 1 4
8		
9		
10		
11		
12		
13	EXHIBITS	
14		
15	Applicant Exhibit One, Isopach	4
16	Applicant Exhibit Two, Cross Section	5
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18		;
19		
20		
21		
22		
23		a de A
4		27
5		

1	3		
2			
	MR. NUTTER: We'll call next Case Number		
3	7613.		
4	MR. PEARCE: That is the application of		
5	Tenneco Oil Company for an unorthodox gas well location, Lea		
6	County, New Mexico.		
7	MR. KELLAHIN: If the Examiner please,		
8	I'm Tom Kellahin of Santa Fe, New Mexico, appearing in asso-		
9	ciation with Cynthia Wood, a member of the Texas Bar and an		
10	attorney for Tenneco Oil Company.		
11	We have one witness, Mr. Clayton Roth,		
12	R-O-T-H.		
13			
14	(Witness sworn.)		
15			
16	CLAYTON ROTH		
ا 17	being called as a witness and being duly sworn upon his oath,		
18	testified as follows, to-wit:		
19			
20	DIRECT EXAMINATION		
21	BY MR. KELLAHIN:		
22			
23			
	state your name and occupation?		
4	A. Clayton Roth, geological engineer with		
5	Tenneco Oil.		

The exhibit is a net sand Isopach of what we're calling the Atoka "B" Sand. The proposed location is in Section 28, 660 from the south and west lines.

And what is the proposed proration unit

22

23

24

5 for that location? 2 320 acres, the west half of Section 28. 3 Q. Let's take a moment and have you explain 5 your map for us. Would you identify for the Examiner what percentage cutoff you've used and any other information from 6 which you've prepared the exhibit? 7 In constructing the net sand Isopach I used as a porosity cutoff approximately 6 percent based on a 9 10 cross plot of neutron density and an API gamma ray cutoff of 11 50 percent. 12 All right, sir, what wells did you use in 13 the immediate area for control of your Isopach work? 14 They are the ones that are highlighted in 15 The -- Section 30, the State LF-30 No. 1; Section 29, yellow. 16 State LF-29 No. 2, and the KDU No. 1, and in Section 33, the 17 Mobil State AE No. 1. 18 All those wells appear on your cross sec-19 tion that's Exhibit Number Two, do they not? 20 A. Yes, sir, they do. 21 All right, Mr. Roth, would you generally Q. 22 describe why you have selected the proposed unorthodox loca-23 tion for the drilling of this well? 24 It's based upon our previous wells that 25 I just mentioned, the LF-30 No. 1, the LF-29 No. 2, and the

```
2
     KDU No. 1. They encountered substantial thicknesses of the
 3
     Atoka Sand and production has been established which produces
     a direct correlation between sand thickness and production.
                         In Section 30, LF-30 No. 1 has a net sand
 5
 6
     thickness of 25 feet. The average production from that well
 7
     is approximately 9-million a day.
 8
                         That's a current average production?
              Q.
9
                         That's a current average production.
10
                         When was that well first placed on pro-
11
    duction?
12
                         That was in November of 1970 -- no, I'm
13
    sorry, that was April of '81.
14
                         And what is the cumulative production for
              Q.
15
    that well?
16
                         It is 1.4 Bcf right now.
17
                        All right, sir, and proceeding then to the
18
    east, and what is your second well?
19
                        The second well will be the State LF-29
20
    No. 2.
21
                        And what does that well currently produce?
22
                       That is currently producing 6-million a
23
    day.
24
                        All right, sir, and when was that well
             Ç
25
    first placed on production?
```

1 That was first placed on production in April of 1981. 3 With a cumulative production of what? Q. 5 Of 1 Bcf. A. The second well in Section 29, farther to the east, describe that well for us. That is the KDU No. 1. It has 12 feet of 9 It is currently producing an average rate of approxi-10 mately 1900 Mcf a day. 11 It was first put on production in November 12 of 1978 and it has since cumed .65 Bcf. 13 And then the last well on your cross sec-14 tion is the well in Section 33. Describe for us that well. 15 Okay. This well was production tested 16 through perforations. It produced 9 barrels of oil and 114 17 barrels of water. 18 Based upon your study, Mr. Roth, is there 19 a direct correlation between the number of net feet of sand 20 that you have mapped in the Atoka and the productivity of the 21 wells? 22 I believe there is. The production figures 23 I have given you for those previous wells plus in our LF-20 24 No. 1, which is in Section 20 immediately to the north, we

encountered a Morrow -- or an Atoka sand of three feet. We

and Market Line (1997)

i

conducted a repeat formation test there and found that the porosity was fairly low in that thin bed and also that permeability was also quite low, so the correlation that I have drawn is that thicker sands have better production, better permeability, whereas your thinner sands will have less permeability and less porosity; therefor, less production.

Q. Mr. Roth, your application on behalf of Tenneco requests approval of an unothodox gas well location for Pennsylvanian formations. You've indicated here that the principal objective is the Atoka. Are there any other formations in the Pennsylvanian that might be productive at this location?

A. There's always the possibility that there could be -- could possibly be Morrow or Strawn production.

Q. All right, sir. In your opinion, Mr. Roth is the proposed location the optimum location from which to penetrate the Atoka formation and to produce the reserves, if any, that underly this proration unit?

A. Yes, it is.

Q. Let's turn then to your cross section,
Mr. Roth, which is Exhibit Two.

Going from left to right, then, with the first well up in the left, would you generally describe what you have found on the log for each of the wells?

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Q.

A. For our State LF-30 No. 1 we have approximately 24 feet of sand. As you continue to the east, just going to our LF-29 No. 2, sand thickness is approximately the same in about 23 feet. Going further to the east --

Q. You're looking at the Atoka "B" Sand, there?

A. Atoka "B" Sand, yes.

All right, sir.

A. The thickness in the Kenmitz Deep Unit, which I've been caling the KDU No. 1, is approximately 12 net feet, although the gross feet, as indicated on the cross section is larger, including that small shale break in there that's identified by the gamma ray.

As you go to the southeast towards the Mobil State AE No. 1, the Atoka thickens dramatically down to 10 feet. We feel that our proposed location will have the better chance of encountering the thicker unit of sand than one which would be further to the north.

Q. Let's go back for a moment to your Isopach map.

In studying the Atoka production in this area, Mr. Roth, have you found any Atoka wells to the north of the zero line that cuts through the west half of Section 28?

There was one up in Section 16, the No. 1

1	10			
2	Elk Diamond State with 19 net feet; however, that has been			
3	since depleted by now.			
4	Q. You've not extended your Atoka interval			
5	you've mapped here on up to Section 16, have you, sir?			
6	A. No, I have not.			
7	Q. Is the indication of the zero line cutting			
8	through the west half of Section 20 a conclusive indication			
9	that a portion of the proration unit is not going to contri-			
10	bute production to a well located as you proposed?			
11	4. That is not conclusive. A zero line is			
12	always a subjective line.			
13	Q All right, sir. In your opinion, is the			
14	proration unit to be assigned to this well, the west half of			
15	Section 28, a reasonably productive from a well located as			
16	you propose?			
17	A. Yes, I believe it would be. I think the			
18	chance of encountering the thicker sands are much better.			
19	Q. All right. Were Exhibits One and Two			
20	prepared by you or compiled under your direction and super-			
21	vision?			
22	A. Yes, they were.			
23	0. And in your opinion. Mr. Roth, would ap-			

proval of this application be in the best interests of con-

servation, the prevention of waste, and the protection of

Well, are they productive from the Morrow?

1		12			
2	A.	On our KDU No. 1 we did perforate the Mor	·— :		
3	row but that has	been since plugged back. That was not th	at		
4	was not shown to be economic.				
5	Q	Which well is that?			
6	A.	Section 29, the one with the 12 net feet.			
7	Q.	Okay, that's the third well on the cross	Ì		
8	section				
9	A.	Yes, sir.			
10	Q.	the 1-29, and it produced a small			
11	amount from the Morrow				
12	A.	Small amount from the Morrow, yes.			
13	Q.	and then was depleted.			
14	A.	Yes.			
15		MR. NUTTER: Are there any further ques-			
16	tions of Mr. Roth?	He may be excused.			
17		Do you have anything further, Mr. Kellahin	u\.		
18		MR. KELLAHIN: No, sir.			
19	,	MR. NUTTER: Does anyone have anything			
20	to offer in Case Number 7613?				
21		We'll take the case under advisement.			
22					
23		(Hearing concluded.)			
24			- - - -		
25					

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CERTIFICATE

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sary W. Boyd Coz

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 76/3.

_, Examiner

Oil Conservation Division

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STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 97501 (505) 827-2434

July 2, 1982

Mr. Thomas	Kellahin
Kellahin &	Kellahin
Attorneys a	at Law
Post Office	Box 1769
Santa Fe,	New Mexico

Re: CASE NO. 7613 ORDER NO. R-7015

Applicant:

Tenneco Uil Company

Dear Sir:

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

Yours very truly,

JOE D. RAMEY

Director

JDR/fd

Copy of order also sent to:

Hobbs OCD X
Artesia OCD X
Aztec OCD

Other_

STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

CASE NO. 7613 Order No. R-7015

APPLICATION OF TENNECO OIL COMPANY FOR AN UNORTHODOX GAS WELL LOCATION, LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on June 23, 1982, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 2nd day of July, 1982, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Tenneco Oil Company, seeks approval of an unorthodox gas well location 660 feet from the South line and 660 feet from the West line of Section 28, Township 16 South, Range 34 East, NMPM, to test the Pennsylvanian formation, Kemnitz Field, Lea County, New Mexico.
- (3) That the W/2 of said Section 28 is to be dedicated to the well.
- (4) That a well at said unorthodox location will better enable applicant to produce the gas underlying the proration unit.
- (5) That no offset operator objected to the proposed unorthodox location.
- (6) That approval of the subject application will afford the applicant the opportunity to produce its just and equitable share of the gas in the subject pool, will prevent the economic

-2-Case No. 7613 Order No. R-7015

loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

- (1) That the application of Tenneco Oil Company for an unorthodox gas well location for the Pennsylvanian formation is hereby approved for a well to be located at a point 660 feet from the South line and 660 feet from the West line of Section 28, Township 16 South, Range 34 East, NMPM, Kemnitz Field, Lea County, New Mexico.
- (2) That the W/2 of said Section 28 shall be dedicated to the above-described well.
- (3) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY,

Director

Dockets Nos. 21-82 and 22-82 are tentatively set for July 7 and 21, 1982. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: COMMISSION HEARING - TUESDAY - JUNE 22, 1982

OIL CONSERVATION COMMISSION - 9 A.M. MORGAN HALL, STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO

The following cases were continued from the June 2, 1982, Commission hearing:

CASE 7522: (DE NOVO)

Application of Santa Fe Exploration Co. for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox location 660 feet from the North and West lines of Section 14, Township 20 South, Range 25 East, Permo-Penn, Strawn, Atoka and Motrow formations, the N/2 of said Section 14 to be dedicated to the well.

Upon application of Chama Petroleum Company, this case will be heard De Novo pursuant to the provisions of Rule 1220.

CASE 7521: (DE NOVO)

Application of William B. Barnhill for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox location 660 feet from the South and West lines of Section 35, Township 19 South, Range 25 East, Permo-Penn, Strawn, Atoka and Morrow formations, the S/2 of said Section 35 to be dedicated to the well.

Upon application of Chama Petroleum Company and William B. Barnhill, this case will be heard De Novo pursuant to the provisions of Rule 1220.

Docket No. 20-82

DOCKET: EXAMINER HEARING - WEDNESDAY - JUNE 23, 1982

9 A.M., MORGAN HALL, STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Caniel S. Nutter, Examiner, or Richard L. Stamets, Alternate Examiner:

CASE 7610: Application of Stevens Oil Company for salt water disposal, Chaves County, New Mexico.

Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the perforated interval from 2724 feet to 2745 feet in its O'Brien "J" Well No. 9 located in Unit A, Section 31, Township 8 South, Range 29 East, Twinlakes-San Andres Pool.

CASE 7611: Application of Texaco Inc. for special pool rules, Lea County, New Mexico.

Applicant, in the above-styled cause, seeks special pool rules for the Skaggs-Drinkard Pool, including provision for a limiting gas-oil ratio of 10,000 cubic feet of gas per barrel of oil.

CASE 7612: Application of B & E, Inc. for salt water disposal, Eddy County, New Mexico.

Applicant, in the above-styled cause, seeks authority to install and operate a commercial facility for the disposal of salt water into the Southeast end of Laguna Tres in Section 12, Township 23 South, Range 29 East and/or into the Northeast side of Laguna Cuatro in Section 6, Township 23 South, Range 30 East.

Application of Tenneco Oil Company for an unorthodox gas well location, Lea County, New Mexico.

Applicant, in the above-styled cause, seeks approval for the unorthodox location of a Pennsylvanian test well to be located 660 feet from the South and West lines of Section 28, Township 16 South, Range 34 East, the W/2 of said Section 28 to be dedicated to the well.

CASE 7548: (Continued from June 9, 1982, Examiner Hearing)

Application of Tahoe Oil & Cattle Co. for salt water disposal, Les County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the perforated interval from 4932 feet to 4992 feet in its Schwalbe Well No. 1, located in Unit P of Section 21, Township 9 South, Range 37 East, West Sawyer-San Andres Pool.

CASES 7614 AND 7615: Application of Inexco Oil Company for compulsory pooling, Lea County, New Mexico.

Applicant, in each of the following cases seeks an order pooling all mineral interests from the surface through the Strawn formation underlying the lands specified in each case, to form a standard 30-acre oil proration unit in the South Humble City-Strawn Pool to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said wells and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the wells and a charge for risk involved in drilling said wells:

CASE 7614: W/2 NE/4 Section 23, Township 17 South, Range 37 East

CASE 7615: E/2 NE/4 Section 23, Township 17 South, Range 37 East

CASES 7616 AND 7617: Application of Southland Royalty Company for compulsory pooling, Eddy County, New Mexico.

Applicant, in each of the following cases seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the lands specified in each case, to form a standard 320-acre gas spacing and proration unit to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said wells and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the wells and a charge for risk involved in drilling said wells:

CASE 7616: N/2 Section 21, Township 18 South, Range 29 East

CASE 7617: S/2 Section 21, Township 18 South, Range 29 East

CASE 7618:

Application of Doyle Hartman for an unorthodox gas well location, Les County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a gas well to be drilled 1450 feet from the South line and 1980 feet from the East line of Section 20, Township 20 South, Range 37 East, Eumont Gas Pool, the SE/4 of said Section 20 to be dedicated to the well.

(Continued from June 9, 1982, Examiner Hearing) CASE 7605:

> Application of Yates Petroleum Corporation for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the top of the Wolfcamp formation through the uppermost 100 feet of the Mississippian Chester Limestone underlying the W/2 of Section 35, Township 19 South, Range 24 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 7458: (Continued from April 28, 1982, Examiner Hearing)

Application of Marks & Garner Production Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of salt water into the Bough C formation in the perforated interval from 9596 feet to 9616 feet in its Betenbough Well No. 2, located in Unit M of Section 12, Township 9 South, Range 35 East.

(This case was heard on May 26, 1982. However, due to an error in originally advertising the case in the Torrance County newspaper, it has been resdvertised in Torrance County only and will be reopened June 23, 1982, with respect to Torrance County only.) CASE 7598:

> Application of ANR Production Company and Yates Petroleum Corporation for designation of a tight formation in San Miguel, Torrance, Guadalupe, De Baca, Lincoln and Chaves Counties, New Mexico. Pursuant to Section 107 of the Natural Gas Policy Act of 1978 and 18 CFR Section 271.701-705, applicants, in the above-styled cause, seeks the designation as a tight formation of the Abo formation underlying the following described lands in the above-named counties.

4 6 18 18

Townships I thru 4 North, Ranges 14 thru 27 East; Townships 5 thru 11 North, Ranges 14 thru 26 East; Townships 5 thru 11 North, Ranges 14 thru 27 East; Township 1 South, Ranges 14 thru 27 East; Townships 2 thru 5 South, Ranges 14 thru 21 East; Townships 6 thru 11 South, Ranges 15 thru 21 East; Township 12 South, Ranges 17 thru 21 1/2 East; and Townships 13 and 14 South, Ranges 17 thru 21 East;

containing 5,168,563 acres, more or less, but excluding the not yet defined Capitan Wilderness Area.

KELLAHIN and KELLAHIN

Attorneys at Law

500 Don Gaspar Avenue
Post Office Box 1769

Santa Fe, New Mexico 87501

Jason Kellahin
W. Thomas Kellahin
Karen Aubrey

June 1, 1982

Telephone 982-4285 Area Code 505

Mr. Joe D. Ramey Oil Conservation Division P. O. Box 2088 Santa Fe, New Mexico 87501

Re:

Tenneco Oil Company

Case 76/3

Dear Joe:

Please set the enclosed Application for hearing on June 23, 1982.

Very truly yours

W. Thomas Kellahin

WTK:rb Enclosure

cc: Mr. David Motloch, Tenneco-San Antonio

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STATE OF NEW MEXICO

DEPARTMENT OF ENERGY AND MINERALS OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION OF TENNECO OIL COMPANY FOR APPROVAL OF AN UNORTHODOX GAS WELL LOCATION. LEA COUNTY, NEW MEXICO.

CASE 76/3

APPLICATION

COMES NOW Tenneco Oil Company by and through its attorneys, Kellahin & Kellahin and applies to the New Mexico Oil Conservation Division for approval of an unorthodox gas well location, 660 feet from the South Line and 660 feet from the West line, Section 28, Township 16 South, Range 34 East, NMPM, Lea County, New Mexico, and in support thereof would show:

- 1. Applicant is the operator of the W/2 of Section 28 T16S, R34E, NMPM, Lea County, New Mexico and proposes to dedicate said W/2 to a Pennsylvanian well drilled at an unorthodox well location.
- 2. Applicant proposes to drill the subject well at a location 660 feet from the West and South lines of Section 28.
- 3. Applicant's requested location is more advantageous for drilling than a standard location and will more likely result in the recovery of gas that would not otherwise be recovered.

WHEREFORE, Applicant requests that the Application be set for hearing before the Division's Examiner and that after notice and hearing the Application be granted as requested.

Lord Marchine Committee Co

KELLAHIN & KELLAHIN

THOMAS

P. O. Box 1769

Santa Fe, New Mexico 87501 (505) 982-4285

Crokher

STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

Jak

CASE NO. 7613

Order No. R-70/5

APPLICATION OF TENNECO OIL COMPANY
FOR AN UNORTHODOX GAS WELL LOCATION,
LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

ms.

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on June 23, 1982, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____day of July, 1932, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Tenneco Oil Company, seeks approval of an unorthodox gas well location 660 feet from the South line and 660 feet from the West line of Section 28, Township 16 South, Range 34 East, NMPM, to test the Pennsylvanian formation, Kemnitz Field, Peel, Lea County, New Mexico.
- (3) That the W/2 of said Section 28 is to be dedicated to the well.
- (4) That a well at said unorthodox location will better enable applicant to produce the gas underlying the proration unit.
- (5) That no offset operator objected to the proposed unorthodox location.
- (6) That approval of the subject application will afford the applicant the opportunity to produce its just and equitable share of the gas in the subject pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the application of Tenneco Oil Company for an unorthodox gas well location for the Pennsylvanian formation is hereby approved for a well to be located at a point 660 feet

from the South line and 660 feet from the West line of Section Kemnitz Field
28 , Township 16 South, Range 34 East, NMPM, Lea County, New Mexico.

- (2) That the W/2 of said Section 28 shall be dedicated to the above-described well.
- (3) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY,
Director

SEAL

