

Case Number.

4211

Application

Transcripts.

Small Exhibits

ETC.



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SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO

BEFORE: THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
September 10, 1969

EXAMINED HEARING

IN THE MATTER OF:

Application of Mobil Oil)
Corporation for a special gas-)
oil ratio limitation, Chaves,)
County, New Mexico.)

Case No. 4211

BEFORE: Daniel Nutter, Examiner.

TRANSCRIPT OF HEARING

MR. NUTTER: Case 4211.

MR. HATCH: Case 4211. Application of Mobil Oil Corporation for a special gas-oil ratio limitation, Chaves County, New Mexico.

MR. SPERLING: James E. Sperling, Modrall, Seymour, Sperling, Rhoad and Harris, Albuquerque, appearing for the Applicant. We have one witness.

MR. NUTTER: The record will show he is still under oath.

(Whereupon, Applicant's Exhibits 1 through 7 were marked for identification.)

DIRECT EXAMINATION

BY MR. SPERLING:

Q State your name, please.

A My name is C. R. Kreuz.

Q You are the same C. R. Kreuz that testified in Case 4210?

A Yes, sir, I am.

Q Would you please explain what is sought by Mobil Oil Corporation in Case 4211?

A Mobil is requesting an exception to Rule 506 of the Commission's Rules and Regulations to provide for a limiting gas-oil ratio in excess of the existing limit

of two thousand cubic feet per barrel in the Lightcap Pennsylvanian Pool.

Q Would you please refer to Exhibit 1 and state what is shown on that exhibit?

A Exhibit 1 is an area map showing the Lightcap Penn Pool area. It shows the one well which is currently completed in the Lightcap Penn Pool.

This well being Mobil Oil Corporation's C. L. O'Brian Well No. 1. This well, which is a dual completion, dually completed in the Lightcap Pennsylvanian Pool and the Lightcap Devonian Pool is located 660 feet out of the Northeast corner of Section 7, Township 8 South, Range 29 East, and this well is the discovery well for the Lightcap Penn Pool and it was completed and potentialized in February of 1969, for 89 barrels of oil per day in a gas-oil ratio of 12,989 cubic feet per barrel.

Q Now, refer to Exhibit No. 2 and state what it shows.

A Exhibit No. 2 is a set of three sheets which show the allowable schedule for July, August and September of 1969. On these three schedules I have underlined the one well completed in the Lightcap Penn Field, the C. L. O'Brian Well No. 1, showing that this well has a GOR

penalized allowable of 17 barrels a day for the month of July and then 16 barrels a day for the month of August and September.

Q What does Exhibit No. 3 show?

A Exhibit No. 3 is a production summary showing all production, gas production and gas-oil ratio for Mobil C. L. O'Brian Well No. 1 in the Lightcap Penn Pool for --- starting in February of 1969 and going on through July of 1969. This shows that the producing GOR was in the range of six thousand cubic feet per barrel in February, less than a thousand cubic feet per barrel in March and then increasing and somewhere in order of 50 to 60,000 cubic feet per barrel during the months of May, June and July.

Q Exhibit 4?

A Exhibit 4 is a graphic representation of the tabular data shown on Exhibit No. 3.

Q Now, refer to Exhibit 5 and explain it.

A Exhibit 5 is a plot of gas-oil ratio tests that Mobil has made --- performed on this well since it was completed. This plot shows the gas-oil ratio in cubic feet per barrel plotted against production and barrels of oil per day. Here we can see on this exhibit that our GOR

does not appear to be rate sensitive in that the gas-oil ratio increases as production increases.

Here we see the peculiarity that is as your production increases your gas-oil ratio goes down and here again, I think this is perhaps due to the tubing loading up and liquid falling out and gas breaking out of tubing due to low velocity resulting from low producing rates.

Q Is the gas from this well being marketed?

A Yes, sir, it is.

Q To whom?

A It's being marketed to City Service Oil Company.

Q Is that reflected by Exhibit 6?

A Yes, sir. Exhibit 6 is a letter from Mr.

Donald A. Board with City Service Oil Company to Mobil Oil Corporation verifying that City Service is purchasing gas from Mobil C. L. O'Brian lease in the Lightcap Penn Pool under a casing head contract dated June 4, 1968.

Mr. Board verifies that this gas is from this lease is processed in their Bluit Gas Processing Plant and also states that City Service shall continue to take all available gas as long as it is economical to do so.

Q Have you had any tests made on this well relating to liquid tests samples and so on?

A Yes, sir, we have.

Q Is that reflected by Exhibit 7?

A Yes, sir. Exhibit 7 is a letter to Mobil Oil Corporation from Core Lab, Incorporated, in regard to a reservoir fluid analysis that they performed on our C. L. O'Brian Well No. 1 in the Lightcap Penn Pool.

We had this test made thinking that perhaps the Penn reservoir was a gas reservoir. And, Core performed this analysis for us and they stated that they observed a retrograde dew point at 5,443 PSIG. And the original reservoir pressure, which we took when this well was completed -- was 2,957 PSIG.

So, we are well below the dew point in this reservoir and due to the gravity of the liquid that we obtained from this well and we just really didn't have any definite conclusion as to whether or not this is an oil reservoir or a gas reservoir. They do state in here, in Core's letter -- they do state that at the reservoir pressure of 2,957 PSIG that the volume of retrograde liquid condensation was measured to be 4.7 percent of the total hydrocarbon pore space.

Q And attached to the letter to which you have referred is considerable data obtained as result of the sampling and analysis of the reservoir fluids, is that correct?

A Yes, sir: that's correct.

Q Does the exhibit have any other significance to you, Mr. Kreuz?

A No, sir. It doesn't really. I have just submitted this exhibit more or less for the Commission's perusal and because we had taken the tests, I thought perhaps they could use this information in making a determination in this case.

Q Well, you still haven't determined whether it's a gas reservoir or an oil reservoir?

A No, sir, I haven't.

Q Do you think that continued production will give you anymore information along this line?

A Yes, sir, it will.

Q What recommendations do you have with regard to the establishment of gas-oil ratio limit?

A I would recommend that the GOR limitation in the Lightcap Pennsylvanian Pool be increased to thirty thousand cubic feet per barrel. This is more or less what

is currently -- gas-oil ratio of the well is currently producing at and perhaps a little bit higher than that.

Q You previously stated that this is the only Penn well in this pool. Does Mobil contemplate additional development in the Pennsylvanian?

A No, sir, we do not.

Q In your opinion, Mr. Kreuz, will the granting of this application be in the best interest of conservation of natural resources?

A Yes, sir, it will.

Q Were Exhibits 1 through 6 prepared by you or under your supervision?

A Yes, sir. One through six were prepared by me or under my supervision.

Q And you have identified Exhibit 7 as a report on the test conducted by Core Laboratories?

A Yes, sir.

MR. SPERLING: I offer Exhibits 1 through 7, Mr. Examiner.

MR. NUTTER: Applicant's Exhibits 1 through 7 will be admitted in evidence.

MR. SPERLING: That's all we have.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Kreuz, now that reservoir pressure that Core Lab refers to in this letter of 2957, that was the original bottom hole pressure when this well was completed in the pool, is that right?

A That is correct, sir.

Q So, at the time you completed the well you were already down below the retrograde condensation point and the liquids had been formed in the reservoir, then?

A Yes, sir.

Q Now, what type of liquids do we have here? I note that their analysis gives the gravity as being 51.9. What do we have here, black oil or is it light condensate type of material or just what?

A I don't know, sir. I haven't seen a sample of the liquid. I can obtain this for you and submit it to you later.

Q I would appreciate knowing some of the characteristics of it including the color and such as that?

A Yes, sir.

Q It would appear that there is a very good possibility that this might be a gas reservoir. Would

Mobil have any objection to the Commission at a nomenclature hearing considering the reclassification of this Pennsylvanian oil reservoir as a gas reservoir?

A No, sir.

MR. SPERLING: Mr. Examiner, in fact, Mobile considered making application to have this pool reclassified to a gas reservoir. However, here, we had the Lightcap Devonian Pool underlying the Lightcap Penn and it would be easier for us to operate both reservoirs as an oil reservoir or both reservoirs as a gas reservoir.

Q (By Mr. Nutter) You are selling approximately a million feet of gas a day from this well?

A Yes, sir.

Q You do have the acreage that would be required to dedicate a standard unit to a gas well in the event it should be reclassified?

A Yes, sir.

MR. PORTER: Is the royalty the same?

THE WITNESS: Yes, sir.

MR. PORTER: If you had the 320 as it is under the 30 or whatever was available --

THE WITNESS: Yes, sir.

MR. NUTTER: You have the whole section on that lease?

THE WITNESS: Yes, sir. I might add we wouldn't get a better price for our gas. We would have to rewrite the contract because the contract just refers to casing head gas; but, I have checked with our gas contract people and we would not obtain a better price for this gas being gas well as opposed to casing head gas. This is the only outlet that is available in the area.

MR. NUTTER: Are there any further questions of Mr. Kreuz? He may be excused.

(Witness excused.)

MR. NUTTER: Do you have anything further, Mr. Sperling?

MR. SPERLING: No, sir.

MR. NUTTER: Does anyone have anything they wish to offer in Case 4211? We will take the case under advisement and call Case 3857.

I N D E X

<u>WITNESS</u>	<u>PAGE</u>
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STATE OF NEW MEXICO)
) ss
 COUNTY OF BERNALILLO)

I, CLEND A BURKS, Court Reporter in and for the
 County of Bernalillo, State of New Mexico, do hereby
 certify that the foregoing and attached Transcript of
 Hearing before the New Mexico Oil Conservation Commission
 was reported by me: and that the same is a true and correct
 record of the said proceedings to the best of my knowledge,
 skill and ability.

Glenda Burks
 Notary Public

My Commission Expires:

March 12, 1973

I do hereby certify that the foregoing is
 a complete record of the proceedings in
 the Examiner hearing of Case No. 4211
 heard by me on 9/10, 1969.

[Signature] Examiner
 New Mexico Oil Conservation Commission

I do hereby certify that the foregoing is
 a complete record of the proceedings in
 the Examiner hearing of Case No. 4211
 heard by me on 9/10, 1969.

[Signature] Notary Public
 New Mexico Oil Conservation Commission



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

P. O. BOX 2088 - SANTA FE

87801

GOVERNOR
DAVID F. CARGO
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER

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

October 15, 1969

Mr. James Sperling
Modrall, Seymour, Sperling, Roehl
& Harris
Attorneys at Law
Public Service Building - Box 2168
Albuquerque, New Mexico

Re: Case No. 4211
Order No. R-3851
Applicant:
Mobil Oil Corporation

Dear Sir:

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

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x

Artesia OCC x

Aztec OCC

Other

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. 4211
Order No. R-3851
NOMENCLATURE

APPLICATION OF MOBIL OIL CORPORATION
FOR A SPECIAL GAS-OIL RATIO LIMITATION,
CHAVES COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on September 10, 1969, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 14th day of October, 1969, the Commission, a quorum being present, 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 Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Mobil Oil Corporation, seeks an exception to Rule 506 of the Commission Rules and Regulations to provide for a limiting gas-oil ratio in excess of the existing ratio of 2000 cubic feet of gas per barrel of oil in the Lightcap-Pennsylvanian Pool, Chaves County, New Mexico.

(3) That while the Lightcap-Pennsylvanian Pool is presently classified as an oil pool, the reservoir characteristics of the subject pool presently available indicate that the pool is in fact a gas reservoir.

(4) That the Lightcap-Pennsylvanian Pool should be reclassified as a gas pool and redesignated the Lightcap-Pennsylvanian Gas Pool.

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CASE No. 4211

Order No. R-3851

(5) That said Lightcap-Pennsylvanian Gas Pool should be governed by all Commission Rules and Regulations applicable to gas pools in Lea, Chaves, Eddy, and Roosevelt Counties of Pennsylvanian age or older.

IT IS THEREFORE ORDERED:

(1) That the Lightcap-Pennsylvanian Pool is hereby reclassified as a gas pool for Pennsylvanian production and is hereby redesignated the Lightcap-Pennsylvanian Gas Pool.

(2) That the horizontal limits of the Lightcap-Pennsylvanian Gas Pool are hereby established as follows:

LIGHTCAP-PENNSYLVANIAN GAS POOL
CHAVES COUNTY, NEW MEXICO
TOWNSHIP 8 SOUTH, RANGE 30 EAST, NMPM
Section 7: E/2

(3) That effective immediately, the Lightcap-Pennsylvanian Gas Pool, Chaves County, New Mexico, shall be governed by all Commission Rules and Regulations applicable to gas pools in Lea, Chaves, Eddy, and Roosevelt Counties of Pennsylvanian age or older including the provision for 320-acre spacing for such wells.

(4) That the locations of all wells presently drilling to or completed in the Lightcap-Pennsylvanian Gas Pool or in the Pennsylvanian formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the Hobbs District Office of the Commission in writing of the name and location of the well on or before November 1, 1969.

(5) That, pursuant to Paragraph A. of Section 65-3-14.5, NMSA 1953, contained in Chapter 271, Laws of 1969, existing wells in the Lightcap-Pennsylvanian Gas Pool shall have dedicated thereto 320 acres in accordance with Rule 104 C of the Commission Rules and Regulations; or, pursuant to Paragraph C. of said Section 65-3-14.5, existing wells may have non-standard spacing or proration units established by the Commission and dedicated thereto.

Failure to file new Forms C-102 with the Commission dedicating 320 acres to a well or to obtain a non-standard unit approved by the Commission within 60 days from the date of this order shall subject the well to cancellation of allowable. Until

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CASE No. 4211

Order No. R-3851

said Form C-102 has been filed or until a non-standard unit has been approved, and subject to said 60-day limitation, each well presently drilling to or completed in the Lightcap-Pennsylvanian Gas Pool or in the Pennsylvanian formation within one mile thereof shall receive no more than a 40-acre allowable.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


DAVID F. CARGO, Chairman


ALEX J. ARMILLO, Member


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



esr/

Docket No. 25-69

DOCKET: EXAMINER HEARING -- WEDNESDAY -- SEPTEMBER 10, 1969

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

The following cases will be heard before Daniel S. Nutter, Examiner, or
Elvis A. Utz, Alternate Examiner:

CASE 4210: Application of Mobil Oil Corporation for a special gas-oil ratio limitation, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 506 of the Commission Rules and Regulations to provide for a limiting gas-oil ratio in excess of the existing ratio of 2000 cubic feet of gas per barrel of oil in the Lightcap (Devonian) Pool, Chaves County, New Mexico.

CASE 4211: Application of Mobil Oil Corporation for a special gas-oil ratio limitation, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 506 of the Commission Rules and Regulations to provide for a limiting gas-oil ratio in excess of the existing ratio of 2000 cubic feet of gas per barrel of oil in the Lightcap-Pennsylvanian Pool, Chaves County, New Mexico.

CASE 3857: (Reopened)

In the matter of Case No. 3857 being reopened pursuant to the provisions of Order No. R-3504, which order established 160-acre spacing units and 80-acre proportional factors of 4.77 for the Tulk-Pennsylvanian Pool, Lea County, New Mexico, for a period of one year. All interested parties may appear and show cause why said pool should not be developed on less than 160-acre spacing units and why the 80-acre proportional factor of 4.77 should or should not be retained.

CASE 4212: Application of General American Oil Company of Texas for an unorthodox oil well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill its Maddren "B" Well No. 12, a producing oil well, at an unorthodox location 1295 feet from the West line and 1815 feet from the South line of Section 27, Township 17 South, Range 30 East, as an infill well in its Grayburg Jackson Premier Unit Waterflood Project area, Grayburg-Jackson Pool, Eddy County, New Mexico.

CASE 4213: Application of Texo Oil Company for pool redelineation, creation of a new gas pool, an unorthodox gas well location, and non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the redelineation of the vertical limits of the South Corbin-Queen Pool to permit the

(Case 4213 continued)

creation of a new basal Penrose gas pool for its Buffalo unit Well No. 11 located at an unorthodox gas well location 2310 feet from the South line and 330 feet from the West line of Section 35, Township 18 South, Range 33 East, Lea County, New Mexico. Applicant further seeks approval of an 80-acre non-standard gas proration unit comprising the N/2 SW/4 of said Section 35, to be dedicated to the above-described well.

CASE 4214: Application of Amerada Hess Corporation for approval of an unorthodox injection well location and the amendment of Order No. R-2197, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox water injection well location for its Langlie-Mattix Woolworth Unit Well No. 710 at a point 1950 feet from the North line and 50 feet from the East line of Section 27, Township 24 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico. Applicant also seeks further amendment of Order No. R-2197 to provide for an administrative procedure whereby additional injection wells might be approved at locations no closer than 50 feet to the outer boundary of the unit area.

CASE 4215: Application of Standard Oil Company of Texas to directionally drill, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to directionally drill its Smith Federal Well No. 1, a wildcat located 1650 feet from the South and East lines of Section 34, Township 20 South, Range 24 East, Eddy County, New Mexico. Said well was drilled to a total depth of 7845 feet. Applicant proposes to plug the well back to approximately 5500 feet, set a whipstock at said depth and directionally drill to a depth of approximately 7800 feet to bottom said well in the Cisco formation at a point approximately 200 feet East of the present bottom hole location.

CASE 4216: Application of Tamarack Petroleum Company, Inc. for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Northeast Pearl-Queen Unit Area comprising 920 acres, more or less, of State and fee lands in Sections 15, 22, 23, and 24, Township 19 South, Range 35 East, Pearl-Queen Pool, Lea County, New Mexico.

Examiner Hearing - September 10, 1969

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Docket No. 25-69

CASE 4217: Application of Tamarack Petroleum Company, Inc. for a water-flood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a water-flood project in its Northeast Pearl-Queen Unit Area by the injection of water into the Queen formation through eight wells located in Sections 15, 22, 23, and 24, Township 19 South, Range 35 East, Pearl-Queen Pool, Lea County, New Mexico.

CASE 4181: (Continued from the August 6, 1969, Examiner Hearing)

Application of J. M. Huber Corporation for a dual completion and salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete it Stoltz Federal Well No. 1 located in Unit J of Section 12, Township 15 South, Range 34 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Morton-Wolfcamp Pool and the disposal of produced salt water through the 8 5/8 X 4 1/2-inch casing-casing annulus into the San Andres, Tubb, Abo, and possibly other formations in the open-hole interval from approximately 4330 feet to 9750 feet.

Mobil Oil Corporation

September 11, 1968

SEP 12 4 00 12
P.O. BOX 633
MIDLAND, TEXAS 79701

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

Att: Mr. Daniel S. Nutter

APPLICATION OF MOBIL OIL CORPORATION
FOR A SPECIAL GAS-OIL RATIO LIMITATION
LIGHTCAP DEVONIAN AND PENNSYLVANIAN
POOLS, CHAVES COUNTY, NEW MEXICO
CASE NOS. 4010 & 4211

Dear Mr. Nutter:

The color of the liquid hydrocarbons from both of the subject pools is light straw. This information is submitted in answer to the question posed by you during the subject cases.

Very truly yours,

C. R. Kreuz

C. R. Kreuz
Senior Production Engineer

CRK/bje

LEONARD QUEEN SOUTH CONTINUED

COMPANY	WELL	JULY	COMPANY	WELL	JULY
LEASE	UNIT S.T.R.	DAILY GOR.	LEASE	UNIT S.T.R.	DAILY GOR.
TEXAS PACIFIC OIL CO.			LOVINGTON ABO		
South Leonard Unit			Top Allowable 192 GOR Limit 2,000		
Tr. 3	(4) 7 E	24-26-37 4	AMERADA PETROLEUM CORP.		
"	(10) 8 F	" 5	State 1A(191) 8 A	1-17-36 191	666
Tr. 4	(26) 9 G	" 26	" (184) 9 B	" 184	655
Tr. 3	6 H	T.A.	" (94) 11 G	" 90	627
"	11 I	Input	" (8) 12 K	" 8	572

TOTAL 3 35

TEXAS PACIFIC OIL CO.

Project. Allowable (10 x 64 = 640).

South Leonard Unit

Tr. 3	13 K	24-26-37 2
Tr. 4	3 D	" 8
"	4 C	" 3
"	5 B	" 8
"	14 J	" 4
"	15 M	" 3
Tr. 1	1 N	13-26-37 Input
Tr. 2	2 A	23-26-37 "
Tr. 3	12 L	24-26-37 T.A.
Tr. 4	16 N	" Input

TOTAL 6 28

POOL TOTAL 10 64

LIGHTCAP DEVONIAN

Top Allowable 150 GOR Limit 2,000

MOBIL OIL CORP.

L'Cap. (32)	1 P	6-8-30 32	**6750
O'Brien (48)	1 A	7-9-30 33	*9000

POOL TOTAL 2 65

LIGHTCAP PENN

Top Allowable 150 GOR Limit 2,000

MOBIL OIL CORP.

C.L.O'Brien(84)1A	7-8-30 17	*18000
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LITTLE LUCKY LAKE DEVONIAN

Top Allowable 363 GOR Limit 2,000

TEXACO INC.

Perry Fed. (132)1G	29-15-30 132	**4300
" (15) 2 O	" 15	TSTM
" (385) 3 K	" 363	940
V. G. Kinahan Federal		
" (10) 1 O	20-15-30 10	TSTM

POOL TOTAL 4 520

LITTMAN SAN ANDRES

Top Allowable 64 No GOR Limit

ATLANTIC RICHFIELD CO.

East Eunice Federal		
" (26) 1 N	21-21-38 13	461
Acreage factor 1.150		

SONIO PETROLEUM CO.

Littman San Andres Unit

Tr. 1	(8) 1 A	17-21-38 5
Tr. 2	(17) 3 I	8-21-38 8
Tr. 3	(10) 1 N	9-21-38 5
Acreage factor 1.125		
" (8) 2 M	" 3	
Tr. 4	(13) 1 C	16-21-38 8
Acreage factor 1.125		

Tr. 2	2 K	9-21-38
Tr. 3	3 K	9-21-38

Acreage factor	1.015	
Tr. 4	2 D	16-21-38

TOTAL 5

POOL TOTAL 6 42

COMPANY	WELL	JULY
LEASE	UNIT S.T.R.	DAILY GOR.
LOVINGTON ABO		
Top Allowable 192 GOR Limit 2,000		
AMERADA PETROLEUM CORP.		
State 1A(191) 8 A	1-17-36 191	666
" (184) 9 B	" 184	655
" (94) 11 G	" 90	627
" (8) 12 K	" 8	572

TOTAL 4 473

ASHLAND OIL & REFINING CO.

C.S.Caylor(74)3 C	6-17-37 74	1326
" (2) 4 F	" 2	1750

TOTAL 2 76

ATLANTIC RICHFIELD CO.

St.182-A(114) 4 K	31-16-37 110	351
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CITIES SERVICE OIL CO.

State AE(105) 1 M	36-16-36 105	86
" (142)2Y L	" 142	366

TOTAL 2 247

GETTY OIL CO.

State M (21) 2 I	36-16-36 21	810
" (120) 3 J	" 100	558
State P (30) 2 D	32-16-37 30	433
" (36) 3 M	" 36	806
" (33) 4 N	" 33	939

TOTAL 5 220

PAN AMERICAN PETROLEUM CORP.

State E-18(139)15C	1-17-36 130	374
" (95) 16 D	" 80	242
" (136)17 F	" 130	301
" (27) 18 A	2-17-36 27	630
" (90) 19 E	1-17-36 85	367
" (42) 20 H	2-17-36 42	1167
" (20) 21 B	" 20	**2000
" (17) 22 G	" 17	630

TOTAL 8 531

SKELLY OIL CO.

Caylor (58) 3 B	6-17-37 58	397
" (11) 4 G	" 10	1091
State O (48) 9 M	31-16-37 48	542
Acreage factor 1.225		
" (53) 10 L	" 53	660
Acreage factor 1.250		
" (27) 11 O	" 10	1259
" (44) 12 J	" 44	1182
" (9) 14 I	" 9	1444
State Q (77) 3 P	36-16-36 77	571
" (68) 4 O	" 68	603
State R (43) 5 N	" 43	791
" (134) 6 K	" 134	485
State S (116) 2 P	35-16-36 116	466

TOTAL 12 670

SUN OIL CO. - DX DIVISION

Caylor (143) 3 D	6-17-37 143	418
Acreage factor .925		
" (33) 7 E	" 33	187
Acreage factor .925		

TOTAL 2 176

POOL TOTAL 36 2503

LOVINGTON DEVONIAN
(80 Acre Spacing)

Top Allowable 427 GOR Limit 2,000

UNION OIL COMPANY OF CALIFORNIA

Midway St.(350)1 F	12-17-36 350	154
" 2 B	" 351	

(74) POOL TOTAL 2 701

BEFORE EXAMINER NUTTER

OILS CONSERVATION COMMISSION

EXHIBIT NO. 2

CASE NO. 29 4211

LEAMEX PENN CONT'D.

COMPANY	WELL	AUGUST	GOR
LEASE	UNIT S.T.R.	DAILY	

PHILLIPS PETROLEUM CORP. CONT'D.

Leamex	(42) 7 F	24-17-33	42
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POOL TOTAL	2		99
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LEAMEX MOLE CAMP

Top Allowable	290	No GOR Limit	
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PHILLIPS PETROLEUM CO.

Leamex	(40) 9 O	16-17-33	30
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"	(28) 10 I	"	24
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POOL TOTAL	2		54
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LEONARD SEVEN RIVERS

Top Allowable	62	GOR Limit	2,000
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TENNECO OIL CO.

Federal	(4) 1 J	11-26-37	3 TSTH
---------	---------	----------	--------

"	(2) 2 N	"	2 **3000
---	---------	---	----------

POOL TOTAL	2		5
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LEONARD QUEEN SOUTH

Top Allowable	62	GOR Limit	10,000
---------------	----	-----------	--------

TENNECO OIL CO.

Leon. Fed.	(1) 5 I	14-26-37	1 **60500
------------	---------	----------	-----------

TEXAS PACIFIC OIL CO.

South Leonard Unit

Tr. 3	(4) 7 E	24-26-37	4 TSTM
-------	---------	----------	--------

"	(10) 8 F	"	5 "
---	----------	---	-----

Tr. 4	(26) 9 G	"	26 2076
-------	----------	---	---------

TOTAL	3		35
-------	---	--	----

TEXAS PACIFIC OIL CO.

Project.	Allowable	(10 x 62 = 620).	
----------	-----------	------------------	--

South Leonard Unit

Tr. 3	13 K	24-26-37	2
-------	------	----------	---

Tr. 4	3 D	"	8
-------	-----	---	---

"	4 C	"	3
---	-----	---	---

"	5 B	"	8
---	-----	---	---

"	14 J	"	4
---	------	---	---

"	15 M	"	3
---	------	---	---

Tr. 1	1 N	13-26-37	Input
-------	-----	----------	-------

Tr. 2	2 A	23-26-37	"
-------	-----	----------	---

Tr. 3	6 H	"	T.A.
-------	-----	---	------

"	11 I	"	Input
---	------	---	-------

"	12 L	24-26-37	T.A.
---	------	----------	------

Tr. 4	16 N	"	Input
-------	------	---	-------

TOTAL	6		28
-------	---	--	----

POOL TOTAL	10		64
------------	----	--	----

LIGHTCAP DEVONIAN

Top Allowable	145	GOR Limit	2,000
---------------	-----	-----------	-------

MOBIL OIL CORP.

L'Cap.	(32) 1 P	6-8-30	32 **6750
--------	----------	--------	-----------

O'Brien	(48) 1 A	7-9-30	32 *9000
---------	----------	--------	----------

POOL TOTAL	2		64
------------	---	--	----

LIGHTCAP PENN

Top Allowable	145	GOR Limit	2,000
---------------	-----	-----------	-------

MOBIL OIL CORP.

C.L.O'Brien	(34) 1A	7-8-30	16 *18000
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LITTLE LUCKY LAKE DEVONIAN

Top Allowable	352	GOR Limit	2,000
---------------	-----	-----------	-------

TEXACO INC.

Perry Fed.	(132) 1G	29-15-30	132 **4300
------------	----------	----------	------------

"	(15) 2 O	"	15 TSTM
---	----------	---	---------

"	(385) 3 K	"	352 940
---	-----------	---	---------

V. C. Kinahan Federal

"	(51) 1 O	20-15-30	51 TSTM
---	----------	----------	---------

POOL TOTAL	4		550
------------	---	--	-----

COMPANY	WELL	AUGUST	GOR
LEASE	UNIT S.T.R.	DAILY	

LITTLE SAN ANDRES

Top Allowable	52	No GOR Limit	
---------------	----	--------------	--

ATLANTIC RICHFIELD CO.

East Eunice Federal			
---------------------	--	--	--

"	(26) 1 B	21-21-38	13 461
---	----------	----------	--------

Acreage factor	1.150		
----------------	-------	--	--

SOHIO PETROLEUM CO.

Littman San Andres Unit			
-------------------------	--	--	--

Tr. 1	(8) 1 A	17-21-38	5
-------	---------	----------	---

Tr. 2	(17) 3 I	8-21-38	8
-------	----------	---------	---

Tr. 3	(10) 1 N	9-21-38	5
-------	----------	---------	---

Acreage factor	1.125		
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"	(3) 2 A	"	3
---	---------	---	---

Tr. 4	(13) 1 C	15-21-38	8
-------	----------	----------	---

Acreage factor	1.125		
----------------	-------	--	--

Tr. 2	2 P	3-21-38	Input
-------	-----	---------	-------

Tr. 3	3 K	9-21-38	"
-------	-----	---------	---

Acreage factor	1.125		
----------------	-------	--	--

Tr. 4	2 D	15-21-38	"
-------	-----	----------	---

TOTAL	5		29
-------	---	--	----

POOL TOTAL	6		42
------------	---	--	----

LONE MISSISSIPPIAN

Top Allowable	186	GOR Limit	2,000
---------------	-----	-----------	-------

BWP, INC.

General American Federal			
--------------------------	--	--	--

"	(17) 1 E	7-7-31	17 **10900
---	----------	--------	------------

LOVINGTON ABO

Top Allowable	186	GOR Limit	2,000
---------------	-----	-----------	-------

AMERADA HESS CORP.

State LA	(191) 8 A	1-17-36	136 656
----------	-----------	---------	---------

"	(184) 9 B	"	184 555
---	-----------	---	---------

"	(94) 11 G	"	99 627
---	-----------	---	--------

"	(8) 12 K	"	8 572
---	----------	---	-------

TOTAL	4		468
-------	---	--	-----

ASHLAND OIL & REFINING CO.

C.S. Caylor	(74) 3 C	5-17-37	74 1326
-------------	----------	---------	---------

"	(2) 4 F	"	2 1750
---	---------	---	--------

TOTAL	2		76
-------	---	--	----

ATLANTIC RICHFIELD CO.

St. 182-A	(114) 4 K	31-16-37	110 351
-----------	-----------	----------	---------

CITIES SERVICE OIL CO.

State AE	(105) 1 H	35-16-36	105 86
----------	-----------	----------	--------

"	(142) 2Y L	"	142 366
---	------------	---	---------

TOTAL	2		247
-------	---	--	-----

GETTY OIL CO.

State M	(21) 2 I	36-16-36	21 810
---------	----------	----------	--------

"	(120) 3 J	"	100 558
---	-----------	---	---------

State P	(30) 2 D	32-16-37	30 433
---------	----------	----------	--------

"	(36) 3 M	"	36 306
---	----------	---	--------

"	(33) 4 R	"	33 939
---	----------	---	--------

TOTAL	5		220
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PAN AMERICAN PETROLEUM CORP.

State E	-18(139) 15C	1-17-36	130 374
---------	--------------	---------	---------

"	(95) 16 D	"	80 242
---	-----------	---	--------

"	(136) 17 F	"	130 301
---	------------	---	---------

"	(27) 18 A	2-17-36	27 630
---	-----------	---------	--------

"	(90) 19 E	1-17-36	85 367
---	-----------	---------	--------

"	(42) 20 H	2-17-36	42 1167
---	-----------	---------	---------

"	(20) 21 B	"	20 **2000
---	-----------	---	-----------

"	(17) 22 G	"	17 630
---	-----------	---	--------

TOTAL	8		531
-------	---	--	-----

COMPANY	WELL	SEPTEMBER	
LEASE	UNIT S.T.R.	DAILY	GOR.
<u>LEONARD SEVEN RIVERS</u>			
Top Allowable	62	GOR Limit	2,000
TENNECO OIL CO.			
Federal (4)	1 J 11-26-37	3	TSTM
" (2)	2 N "	2	**3000
POOL TOTAL	2	5	

COMPANY	WELL	SEPTEMBER	
LEASE	UNIT S.T.R.	DAILY	GOR.
<u>LEONARD QUEEN SOUTH</u>			
Top Allowable	52	GOR Limit	10,000
TENNECO OIL CO.			
Leon. Fed. (1)	5 J 14-26-37	1	**60500

COMPANY	WELL	SEPTEMBER	
LEASE	UNIT S.T.R.	DAILY	GOR.
TEXAS PACIFIC OIL CO.			
South Leonard Unit			
Tr. 3	(4) 7 E 24-26-37	4	TSTM
"	(10) 8 F "	5	"
Tr. 4	(26) 9 G "	26	2076

COMPANY	WELL	SEPTEMBER	
LEASE	UNIT S.T.R.	DAILY	GOR.
TOTAL 3 35			
TEXAS PACIFIC OIL CO.			
Project. Allowable (10 x 62 = 620).			
South Leonard Unit			
Tr. 3	13 K 24-26-37	2	
Tr. 4	3 D "	8	
"	4 C "	3	
"	5 B "	8	
"	14 J "	4	
"	15 M "	3	
Tr. 1	1 N 13-26-37	Input	
Tr. 2	2 A 23-26-37	"	
Tr. 3	6 H "	T.A.	
"	11 I "	Input	
"	12 L 24-26-37	T.A.	
Tr. 4	16 N "	Input	

COMPANY	WELL	SEPTEMBER	
LEASE	UNIT S.T.R.	DAILY	GOR.
TOTAL	6	28	
POOL TOTAL	10	64	

COMPANY	WELL	SEPTEMBER	
LEASE	UNIT S.T.R.	DAILY	GOR.
<u>LIGHTCAP DEVONIAN</u>			
Top Allowable	145	GOR Limit	2,000
MOBIL OIL CORP.			
L'Cap. (32)	1 P 6-8-30	32	**6750
O'Brien (48)	1 A 7-9-30	32	*9000
POOL TOTAL	2	64	

COMPANY	WELL	SEPTEMBER	
LEASE	UNIT S.T.R.	DAILY	GOR.
<u>LIGHTCAP PENN</u>			
Top Allowable	145	GOR Limit	2,000
MOBIL OIL CORP.			
C.L.O'Brien (84)	1 A 7-8-30	16	*18000

COMPANY	WELL	SEPTEMBER	
LEASE	UNIT S.T.R.	DAILY	GOR.
<u>LITTLE LUCKY LAKE DEVONIAN</u>			
Top Allowable	352	GOR Limit	2,000
TEXACO INC.			
Perry Fed. (132)	1 G 29-15-30	132	**43000
" (15)	2 O "	15	TSTM
" (385)	3 K "	352	940
V.G. Kinahan Federal			
" (51)	1 O 20-15-30	51	TSTM
POOL TOTAL	4	550	

COMPANY	WELL	SEPTEMBER	
LEASE	UNIT S.T.R.	DAILY	GOR.
<u>LITTMAN SAN ANDRES</u>			
Top Allowable	62	No GOR Limit	
ATLANTIC RICHFIELD CO.			
East Eunice Federal			
" (26)	1 N 21-21-38	13	461
Acreage factor 1.150			

COMPANY	WELL	SEPTEMBER	
LEASE	UNIT S.T.R.	DAILY	GOR.
SOHIO PETROLEUM CO.			
Littman San Andres Unit			
Tr. 1	(8) 1 A 17-21-38	5	
Tr. 2	(17) 3 I 8-21-38	8	
Tr. 3	(10) 1 N 9-21-38	5	
Acreage factor 1.125			
" (8)	2 M "	3	

COMPANY	WELL	SEPTEMBER	
LEASE	UNIT S.T.R.	DAILY	GOR.
SOHIO PETROLEUM CO. CONT'D			
Littman San Andres Unit			
Tr. 4	(13) 1 C 16-21-38	8	
Acreage factor 1.125			
Tr. 2	2 P 8-21-38	Input	
Tr. 3	3 K 9-21-38	"	
Acreage factor 1.125			
Tr. 4	2 D 16-21-38	"	

COMPANY	WELL	SEPTEMBER	
LEASE	UNIT S.T.R.	DAILY	GOR.
TOTAL	5	29	
POOL TOTAL	6	42	

COMPANY	WELL	SEPTEMBER	
LEASE	UNIT S.T.R.	DAILY	GOR.
<u>LONE MISSISSIPPIAN</u>			
Top Allowable	186	GOR Limit	2,000
BWP, INC.			
General American Federal			
" (17)	1 E 7-7-31	17	**10909

COMPANY	WELL	SEPTEMBER	
LEASE	UNIT S.T.R.	DAILY	GOR.
<u>LOVINGTON ABO</u>			
Top Allowable	186	GOR Limit	2,000
AMERADA HESS CORP.			
State LA (191)	8 A 1-17-36	157	666
" (184)	9 B "	184	655
" (95)	11 G "	95	603
" (8)	12 K "	8	572

COMPANY	WELL	SEPTEMBER	
LEASE	UNIT S.T.R.	DAILY	GOR.
TOTAL	4	444	
ASHLAND OIL & REFINING CO.			
C.S. Caylor (74)	3 C 6-17-37	74	1326
" (2)	4 F "	2	1750

COMPANY	WELL	SEPTEMBER	
LEASE	UNIT S.T.R.	DAILY	GOR.
TOTAL	2	76	
ATLANTIC RICHFIELD CO.			
St. 182-A (114)	4 K 31-16-37	110	351

COMPANY	WELL	SEPTEMBER	
LEASE	UNIT S.T.R.	DAILY	GOR.
CITIES SERVICE OIL CO.			
State AE (105)	1 M 36-16-36	105	86
" (142)	2 Y L "	142	366

COMPANY	WELL	SEPTEMBER	
LEASE	UNIT S.T.R.	DAILY	GOR.
TOTAL	2	247	
GETTY OIL CO.			
State M (21)	2 I 36-16-36	21	810
" (120)	3 J "	100	558
State P (30)	2 D 32-16-37	30	433
" (36)	3 M "	36	806
" (33)	4 N "	33	939

COMPANY	WELL	SEPTEMBER	
LEASE	UNIT S.T.R.	DAILY	GOR.
TOTAL	5	220	
PAN AMERICAN PETROLEUM CORP.			
State E-18 (139)	15 C 1-17-36	130	374
" (95)	16 D "	80	242
" (136)	17 F "	130	301
" (27)	18 A 2-17-36	27	630
" (90)	19 E 1-17-36	85	367
" (42)	20 H 2-17-36	42	1167
" (20)	21 B "	20	**2000
" (17)	22 G "	17	630

COMPANY	WELL	SEPTEMBER	
LEASE	UNIT S.T.R.	DAILY	GOR.
TOTAL	8	531	
SKELLY OIL CO.			
Caylor (58)	3 B 6-17-37	58	397
" (11)	4 G "	10	1091
State O (48)	9 M 31-16-37	48	542
Acreage factor 1.225			
" (53)	10 L "	53	660
Acreage factor 1.250			
" (27)	11 O "	10	1259
" (44)	12 J "	44	1182
" (9)	14 I "	9	1444
State Q (77)	3 P 36-16-36	77	571
" (68)	4 O "	68	603
State R (43)	5 N "	43	791
" (134)	6 K "	134	485
State S (116)	2 P 35-16-36	116	466

COMPANY	WELL	SEPTEMBER	
LEASE	UNIT S.T.R.	DAILY	GOR.
(73) TOTAL	12	670	

PRODUCTION SUMMARY
LIGHTCAP PENNSYLVANIAN POOL

Month	Year	C. L. O'Brien Well No. 1		
		Oil Bbls	Gas Mcf	GOR cf/Bbl
Jan.	1969	---	---	---
Feb.		989	6,708	6,855
March		723	695	961
April		1,754	35,176	20,055
May		506	28,276	55,881
June		515	30,979	60,153
July		639	30,687	48,023

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 3
CASE NO. 4211

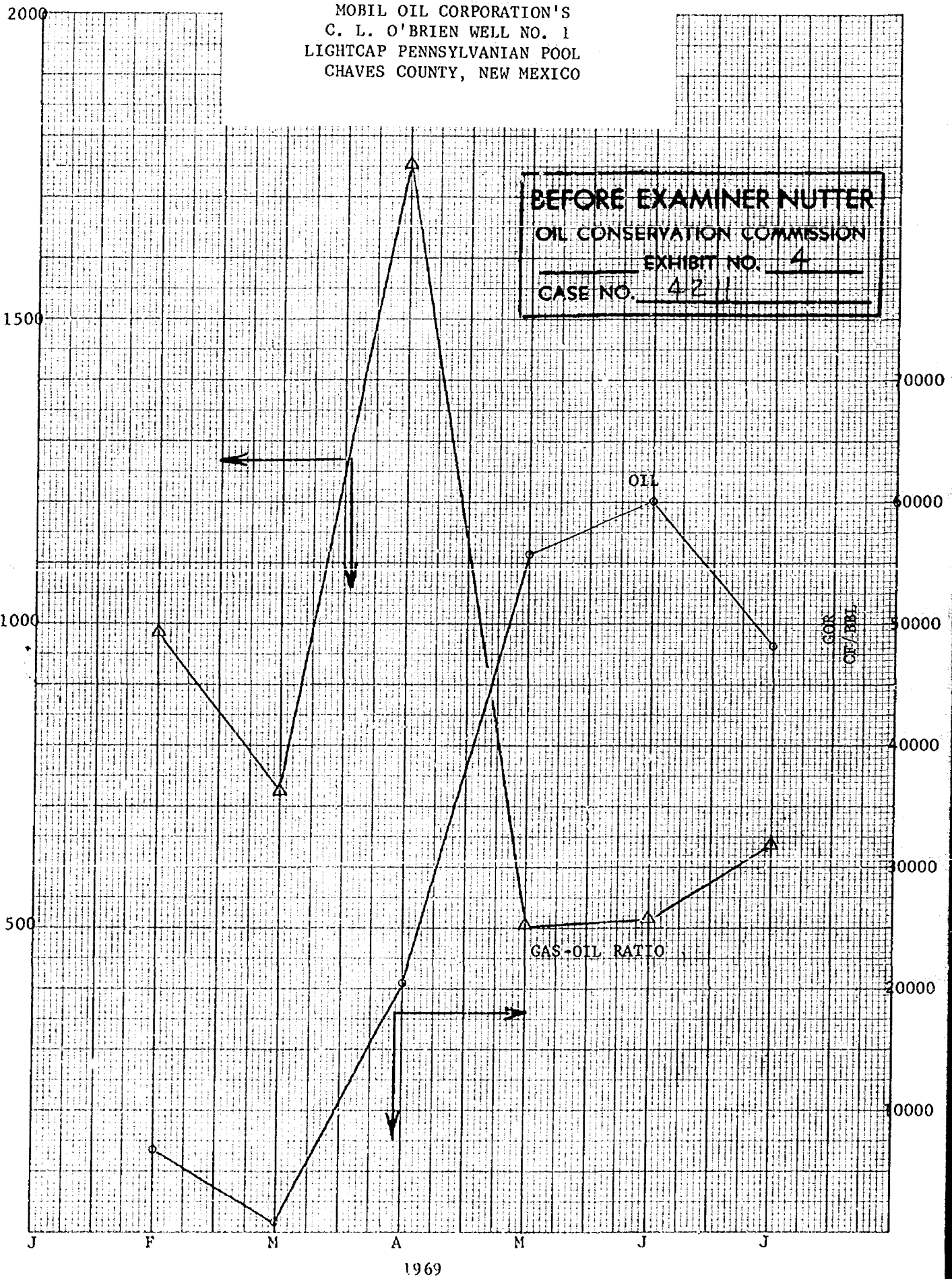
CRKreuz/bje
9/5/69

MOBIL OIL CORPORATION'S
C. L. O'BRIEN WELL NO. 1
LIGHTCAP PENNSYLVANIAN POOL
CHAVES COUNTY, NEW MEXICO

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 4
CASE NO. 4211

WELL 10 X 10 TO 1/2 INCH 46 1323
WELL 7 X 8 TO INCHES 46 1324
ACQUIFER & ESSER CO.

PRODUCTION - BBL'S OIL



10 X 10 1/2 INCH 46 1323
7 X 10 INCH
KREUZ

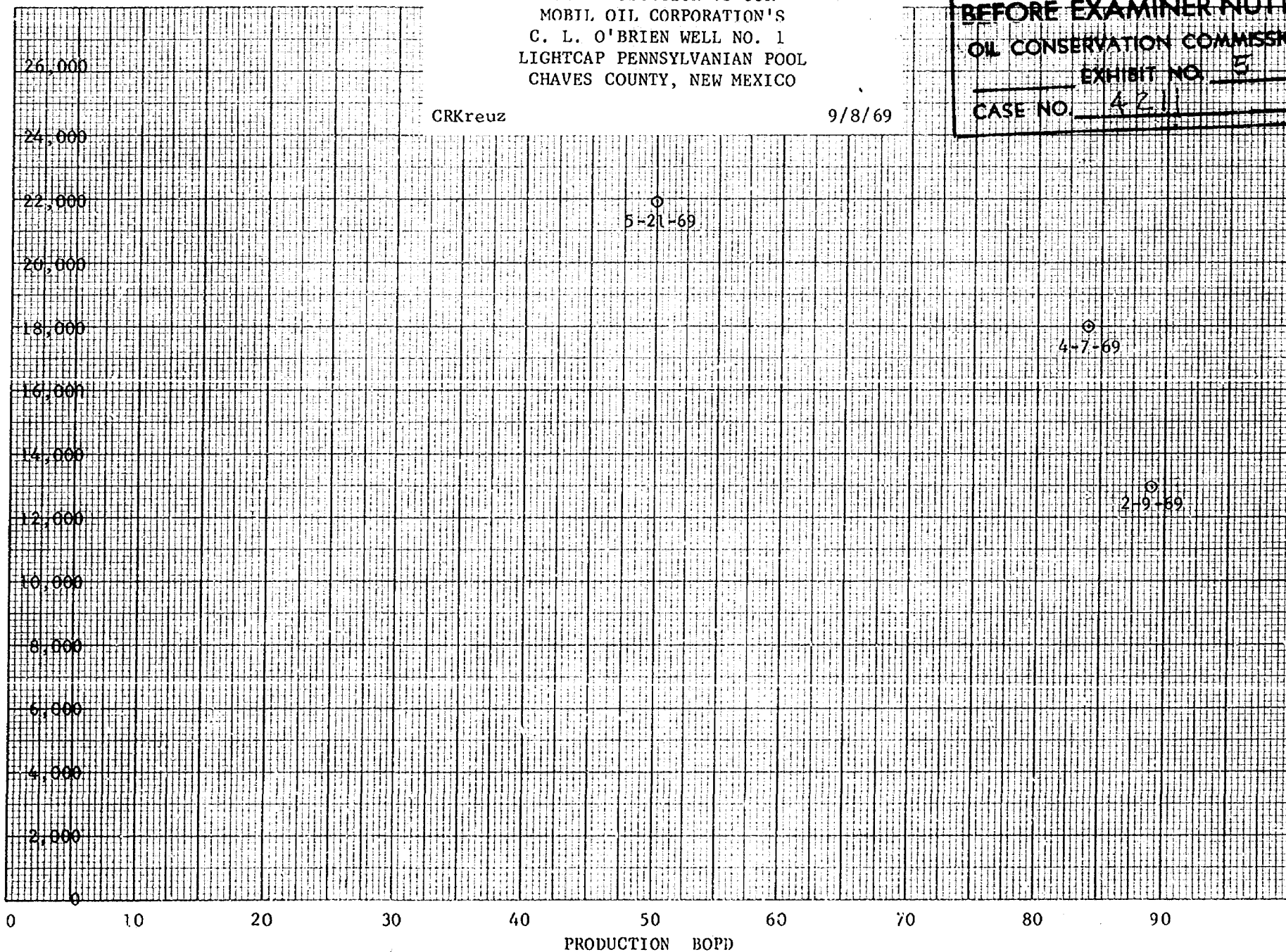
OIL PRODUCTION VS GOR
MOBIL OIL CORPORATION'S
C. L. O'BRIEN WELL NO. 1
LIGHTCAP PENNSYLVANIAN POOL
CHAVES COUNTY, NEW MEXICO

CRKreuz

9/8/69

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 5
CASE NO. 4211

GOR cF/Bbl





CITIES SERVICE OIL COMPANY

Oil Center Building
Box 300, Tulsa, Oklahoma 74102
Telephone: 918 LU 2-1531
August 1, 1969

Mobil Oil Corporation
P. O. Box 633
Midland, Texas 79701

Gentlemen:

This letter will verify that Cities Service Oil Company is purchasing casinghead gas from the Lightcap Land Company and C. L. O'Brien Leases producing from the Lightcap (Devonian and/or Pennsylvanian) Field, Chaves County, New Mexico, under a Casinghead Gas Contract dated June 4, 1968.

The gas from these leases is processed in the Bluit Gas Processing Plant and Cities Service shall continue to take all the available gas as long as it is economical to do so.

It is understood that the above information will support your application to the New Mexico Conservation Commission for an exemption to the 2000-1 rule.

Very truly yours,

NATURAL GAS LIQUIDS GROUP

Donald A. Board
Donald A. Board

DAB:lb

BEFORE EXAMINER NUTTER	
OIL CONSERVATION COMMISSION	
EXHIBIT NO.	6
CASE NO.	4211

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS 75207

June 17, 1969

RESERVOIR FLUID ANALYSIS

Mobil Oil Corporation
P. O. Box 1800
Hobbs, New Mexico 88240

Attention: Mr. J. C. Gordon, Jr.

Subject: Phase Determination
C. L. O'Brien No. 1 Well
Lightcap Field
Chaves County, New Mexico
Our File Number: RFL 5798

Gentlemen:

Samples of primary separator liquid and vapor collected at 35 psig and 86°F. were submitted to our Dallas laboratory for use in a reservoir phase determination. Presented in this report are the results of this phase determination, along with the hydrocarbon analyses of the separator products.

The producing gas-liquid ratio was calculated to be 21,946 cubic feet of gas at 14.696 psia and 60° F. per barrel of stock tank liquid at 60° F. In our laboratory this ratio was found to be equivalent to 21,793 standard cubic feet of separator gas per barrel of separator liquid at 35 psig and 60° F. The separator products were then physically recombined to this producing gas-liquid ratio and the resultant mixture examined in a visual cell at the reservoir temperature of 141° F. During a constant composition expansion at this temperature a retrograde dew point was observed at 5443 psig. At the reservoir pressure of 2957 psig, the volume of retrograde liquid condensation was measured to be 4.7 percent of the total hydrocarbon pore space. This information was reported by telephone to Mobil Oil Corporation and we were subsequently requested to terminate this study.

BEFORE EXAMINER NUTTER	
OIL CONSERVATION COMMISSION	
EXHIBIT NO.	7
CASE NO.	4211

Mobil Oil Corporation
C. L. O'Brien No. 1 Well

Page Two

It has been our pleasure to make these measurements for Mobil Oil Corporation. Should you have any questions or if we may assist you further, please do not hesitate to contact us.

Very truly yours,

Core Laboratories, Inc.
Reservoir Fluid Analysis

P. L. Moses HS

P. L. Moses
Manager

PLM:HS:dr
7 cc. - Addressee

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

Page 1 of 3

File RFL 5798

Company Mobil Oil Corporation Date Sampled May 21, ~~1961~~ 1969
 Well C. L. O'Brien No. 1 County Chaves
 Field Lightcap State New Mexico

FORMATION CHARACTERISTICS

Formation Name Bough C
 Date First Well Completed January 26, 19 69
 Original Reservoir Pressure _____ PSIG @ _____ Ft.
 Original Produced Gas-Liquid Ratio 14482 SCF/Bbl
 Production Rate 112 Bbls/Day
 Separator Pressure and Temperature 35 PSIG _____ ° F.
 Liquid Gravity at 60° F. 51.9 ° API
 Datum _____ Ft. Subsea

WELL CHARACTERISTICS

Elevation 4064 GL Ft.
 Total Depth 8115 Ft.
 Producing Interval 7130-7168 Ft.
 Tubing Size and Depth 2-7/8 In. to 7074 Ft.
 Open Flow Potential _____ MMSCF/Day
 Last Reservoir Pressure 2957 PSIG @ 7149 Ft.
 Date February 22, 19 69
 Reservoir Temperature 140* ° F. @ 7049 Ft.
 Status of Well Shut in
 Pressure Gauge Amerada

SAMPLING CONDITIONS

Flowing Tubing Pressure (16/64-inch choke) 1500 PSIG
 Flowing Bottom Hole Pressure _____ PSIG
 Primary Separator Pressure 35 PSIG
 Primary Separator Temperature 86 ° F.
 Secondary Separator Pressure _____ PSIG
 Secondary Separator Temperature _____ ° F.
 Field Stock Tank Liquid Gravity _____ ° API @ 60° F.
 Primary Separator Gas Production Rate 1097.3 MSCF/Day
 Pressure Base 14.696 PSIA
 Temperature Base 60 ° F.
 Compressibility Factor (F_{pv}) 1.004
 Gas Gravity (Laboratory) 0.771
 Gas Gravity Factor (F_g) 0.8820
 Stock Tank Liquid Production Rate @ 60° F. 50 Bbls/Day
 Primary Separator Gas/ Stock Tank Liquid Ratio 21946 SCF/Bbl
 or 45.57 Bbls/MMSCF
 Core Laboratories, Inc., Engineer Tefteller, Inc.

REMARKS:

* Temperature extrapolated to mid-point of producing interval = 141° F.

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

Page 2 of 3

File RFL 5798

Company Mobil Oil Corporation Formation Bough C
Well C. L. O'Brien No. 1 County Chaves
Field Lightcap State New Mexico

HYDROCARBON ANALYSIS OF Separator GAS SAMPLE

COMPONENT	MOL PER CENT	G P M
Hydrogen Sulfide		
Carbon Dioxide	0.13	
Nitrogen	5.92	
Methane	74.96	
Ethane	8.92	2.247
Propane	4.83	1.326
iso-Butane	0.85	0.277
n-Butane	1.70	0.534
iso-Pentane	0.63	0.230
n-Pentane	0.61	0.220
Hexanes	0.53	0.216
Heptanes plus	0.92	0.417
	100.00	5.467

Calculated gas gravity (air = 1.000) = 0.771

Calculated gross heating value = 1246 BTU
per cubic foot of dry gas at 14.696 psia at 60° F.

Collected at 35 psig and 86 ° F.

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

Page 3 of 3

File RFL 5798

Company Mobil Oil Corporation Formation Bough C
Well C. L. O'Brien No. 1 County Chaves
Field Lightcap State New Mexico

HYDROCARBON ANALYSIS OF Separator Liquid SAMPLE

COMPONENT	MOL PER CENT	WEIGHT PER CENT	DENSITY @ 60° F. GRAMS PER CUBIC CENTIMETER	° API @ 60° F.	MOLECULAR WEIGHT
Hydrogen Sulfide					
Carbon Dioxide	Trace	Trace			
Nitrogen					
Methane	1.02	0.12			
Ethane	0.78	0.18			
Propane	1.48	0.49			
iso-Butane	0.67	0.29			
n-Butane	1.91	0.84			
iso-Pentane	1.71	0.93			
n-Pentane	2.13	1.16			
Hexanes	6.03	3.90			
Heptanes plus	84.27	92.09	0.7959	46.1	145
	100.00	100.00			

Core Laboratories, Inc.
Reservoir Fluid Analysis

P. L. Moses _{HS}

P. L. Moses
Manager

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

Mobil Oil Corporation

P.O. BOX 633
MIDLAND, TEXAS 79701

October 21, 1969

gm
file -
Case 4211

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

ORDER NO. R-3851
LIGHTCAP-PENNSYLVANIAN POOL
CHAVES COUNTY, NEW MEXICO

Gentlemen:

In compliance with Order No. R-3851, reclassifying the Lightcap-Pennsylvanian Pool from oil to gas, Mobil is submitting Form C-102, dedicating the E/2 of Sec. 7 (320 acres), T-8-S, R-30-E, Chaves County, New Mexico to the C. L. O'Brien Well #1. This well is located 660 ft from the north and east lines of said Section 7 in Unit A.

With a copy of this letter, the Commission's District Office in Hobbs is being advised of the location of C. L. O'Brien Well #1 and also advised that it does have an unorthodox location.

Very truly yours,

Ira B. Stitt

Ira B. Stitt
Division Operations Engineer

ADBond/bje
Attachment

cc: NMOCC - Hobbs (w/attach.)

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

OCT 23 1969

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the corner boundaries of the section.

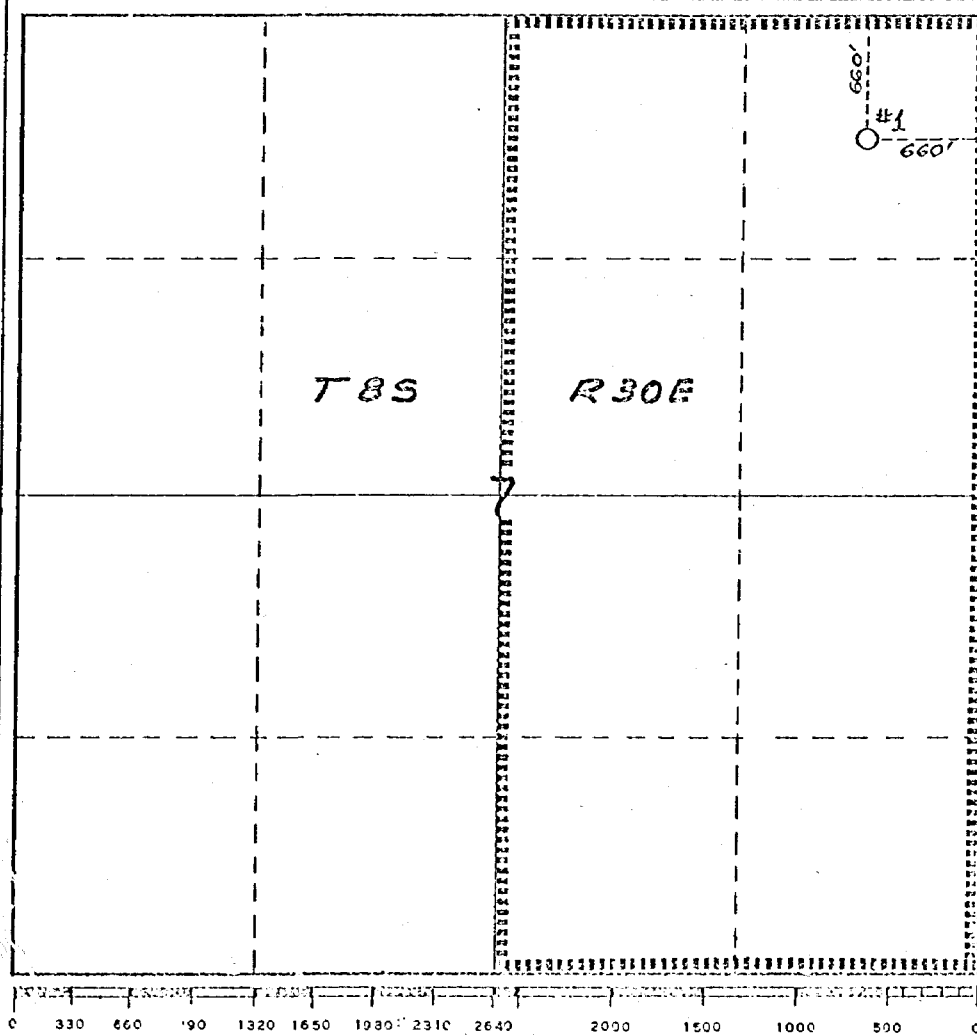
Operator Mobil Oil Corporation		Lease C. L. O'Brien		Well No. 1
Unit Letter A	Section 7	Township 8-S	Range 30-E	County Chaves
Actual Footage Location of Well:				
660 feet from the North line and		660 feet from the East line		
Ground Level Elev. --	Producing Formation Pennsylvanian	Pool Lightcap	Dedicated Acreage: 320 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

A. D. Bond

Name
A. D. Bond
Position
Proration Staff Assistant
Company
Mobil Oil Corporation
Date
October 21, 1969

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
Registered Professional Engineer and/or Land Surveyor

Certificate

J. R. MODRALL
JAMES E. SPERLING
JOSEPH E. ROEHL
GEORGE T. HARRIS, JR.
DANIEL A. SISK
LELAND S. SEDBERRY, JR.
ALLEN C. DEWEY, JR.
FRANK H. ALLEN, JR.
JAMES P. SAUNDERS, JR.
JAMES A. PARKER

JOHN R. COONEY
KENNETH L. HARRIGAN
PETER J. ADANG
DALE W. EK
PETER J. BROULLIRE, III
CAMERON R. GRAHAM

LAW OFFICES OF
MODRALL, SEYMOUR, SPERLING, ROEHL & HARRIS
PUBLIC SERVICE BUILDING
P. O. BOX 2168
ALBUQUERQUE, NEW MEXICO 87103

JOHN F. SIMMS (1885-1954)
AUGUSTUS T. SEYMOUR
(1907-1965)

TELEPHONE 243-4511
AREA CODE 505

August 13, 1969

69 AUG 14 AM 8 17

Case 4211

Mr. A. L. Porter, Jr.
Secretary
Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Application of Mobil Oil Corporation
to Increase the GOR Limitation in
the Lightcap Devonian and Lightcap
Pennsylvanian Pools, Chaves County,
New Mexico

Dear Mr. Porter:

Enclosed herewith, please find above-referenced applica-
tion, which we would appreciate your filing and docketing
for Examiner's Hearing as soon as possible.

Very truly yours,

James E. Sperling

JES:jv

Enclosures (3)

cc: Mr. Ira B. Stitt, w/encl.
Mobil Oil Corporation

DOCKET MAILED

Date 8-28-69

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION
OF MOBIL OIL CORPORATION TO
INCREASE THE GOR LIMITATION IN
THE LIGHTCAP DEVONIAN AND LIGHTCAP
PENNSYLVANIAN POOLS, CHAVES COUNTY,
NEW MEXICO

Case No. 4211

A P P L I C A T I O N

Applicant, Mobil Oil Corporation, whose address is Post Office Box 633, Midland, Texas, respectfully requests that the gas-oil ratio limit of 2000 to 1 be increased as this Commission may determine above the generally applicable 2000 to 1 limit in the Lightcap Devonian and Lightcap ~~Devonian~~ Pennsylvanian Pools, Chaves County, New Mexico, and in support of its request states:

1. Applicant is the only operator in these pools having completed one well in the Lightcap Pennsylvanian Pool and two wells in the Lightcap Devonian Pool.

2. The granting of this application will be in the interest of prevention of waste, physical and economical, and will not impair correlative rights.

WHEREFORE, applicant requests that this matter be set for hearing as provided by law and that the Commission issue its order increasing the gas-oil ratio limit in the above-mentioned pools.

Respectfully submitted,

MOBIL OIL CORPORATION

BY: MODRALL, SEYMOUR, SPERLING, ROEHL & HARRIS

By

James E. Sperling
James E. Sperling, its attorneys
800 Public Service Building
P. O. Box 2168
Albuquerque, New Mexico 87103

DRAFT

GMH/esr

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:

RECORDS CENTER

CASE No. 4211

Order No. R- 3851

APPLICATION OF MOBIL OIL CORPORATION
FOR A SPECIAL GAS-OIL RATIO LIMITATION,
CHAVES COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on September 10, 1969,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this day of October, 1969, the Commission, a
quorum being present, 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 Commission has jurisdiction of this cause and the subject
matter thereof.

(2) That the applicant, Mobil Oil Corporation, seeks an
exception to Rule 506 of the Commission Rules and Regulations to
provide for a limiting gas-oil ratio in excess of the existing
ratio of 2000 cubic feet of gas per barrel of oil in the Lightcap-
Pennsylvanian Pool, Chaves County, New Mexico.

(3) That while the Lightcap-Pennsylvanian Pool is presently
classified as an oil pool, the reservoir characteristics of the
subject pool presently available indicate that the pool is in
fact a gas reservoir.

(4) That the Lightcap-Pennsylvanian Pool should be reclassi-
fied as a gas pool and redesignated the Lightcap-Pennsylvanian
Gas Pool.

(5) That said Lightcap-Pennsylvanian Gas Pool should be governed by all Commission Rules and Regulations applicable to gas pools in Lea, Chaves, Eddy, and Roosevelt Counties of Pennsylvanian age or older.

IT IS THEREFORE ORDERED:

(1) That the Lightcap-Pennsylvanian Pool is hereby reclassified as a gas pool for Pennsylvanian production and is hereby redesignated the Lightcap-Pennsylvanian Gas Pool.

(2) That the horizontal limits of the Lightcap-Pennsylvanian Gas Pool are hereby established as follows:

LIGHTCAP-PENNSYLVANIAN GAS POOL
CHAVES COUNTY, NEW MEXICO
TOWNSHIP 8 SOUTH, RANGE 30 EAST, NMPM
Section 7: E/2

(3) That effective immediately, the Lightcap-Pennsylvanian Gas Pool, Chaves County, New Mexico, shall be governed by all Commission Rules and Regulations applicable to gas pools in Lea, Chaves, Eddy, and Roosevelt Counties of Pennsylvanian age or older including the provision for 320-acre spacing for such wells.

(4) That the locations of all wells presently drilling to or completed in the Lightcap-Pennsylvanian Gas Pool or in the Pennsylvanian formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the Hobbs District Office of the Commission in writing of the name and location of the well on or before

November 1, 1969.

(5) That, pursuant to Paragraph A. of Section 65-3-14.5, NMSA 1953, contained in Chapter 271, Laws of 1969, existing wells in the Lightcap-Pennsylvanian Gas Pool shall have dedicated thereto 320 acres in accordance with Rule 104 C of the Commission Rules and Regulations; or, pursuant to Paragraph C. of said Section

-3-
CASE No. 4211

65-3-14.5, existing wells may have non-standard spacing or proration units established by the Commission and dedicated thereto.

Failure to file new Forms C-102 with the Commission dedicating 320 acres to a well or to obtain a non-standard unit approved by the Commission within 60 days from the date of this order shall subject the well to cancellation of allowable. Until said Form C-102 has been filed or until a non-standard unit has been approved, and subject to said 60-day limitation, each well presently drilling to or completed in the Lightcap-Pennsylvanian Gas Pool or in the Pennsylvanian formation within one mile thereof shall receive no more than a 40-acre allowable.

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

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

CASE 4212: Appli. of GENERAL
AMERICAN FOR UNORTHODOX OIL WELL
LOCATION, EDDY COUNTY, N.M.