

CASE 3838: Appli. of CONTINENTAL  
for amendment to Order R-872 and  
an unorthodox gas well location.

Case Number

3838

Application

Transcripts.

Small Exhibits

ETC.

State of New Mexico  
Oil Conservation Commission



P. O. BOX 2038  
SANTA FE

3818	3848
3826	3838
3839	3817
3840	
3842	

Re: Case No. 3843  
Order No. R-3482, 3483, 3484,  
Applicants: 3485, 3487, 3488,  
3489, 3490, 3491  
Continental & Eugene Nearburg

A. L. Porter, Jr.  
Secretary-Director

Hobbs OCC       x        
 Artesia OCC   R-3483   & R-3489  
 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. 3830  
Order No. R-3490

APPLICATION OF CONTINENTAL OIL COMPANY  
FOR AN AMENDMENT TO ORDER NO. R-872 AND  
AN UNORTHODOX GAS WELL LOCATION, LEA  
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 21, 1968,  
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 9th day of September, 1968, 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, Continental Oil Company, is the  
co-owner and operator of the Lockhart "B" Lease consisting of the  
W/2 of Section 13 and the E/2 E/2 of Section 14, Township 21  
South, Range 36 East, NMPM, Lea County, New Mexico.

(3) That by Order No. R-872, dated August 30, 1956, the  
Commission approved a 480-acre non-standard gas proration unit  
in the Eumont Gas Pool comprising the acreage in said Lockhart  
"B" Lease to be dedicated to applicant's Lockhart "B-14" Well  
No. 4 (presently designated the Lockhart "B" Well No. 4), located  
1980 feet from the North line and 660 feet from the East line of  
said Section 14.

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CASE No. 3838

Order No. R-3490

(4) That the applicant now seeks the amendment of said Order No. R-872 to permit the simultaneous dedication of the non-standard gas proration unit authorized therein to the aforesaid Well No. 4 and to its Lockhart "B" Well No. 7 located at an unorthodox location 330 feet from the North line and 330 feet from the West line of said Section 13; that the applicant further seeks authority to produce the allowable assigned to said unit from either of the aforesaid wells in any proportion.

(5) That the aforesaid Lockhart "B" Well No. 7 was drilled at a standard location for the production of oil from the Eunice Pool but has been recompleted as a gas well in the Eumont Gas Pool.

(6) That the proposed non-standard gas proration unit can be efficiently and economically drained and developed by the Continental Lockhart "B" Wells Nos. 4 and 7.

(7) That approval of the proposed non-standard gas proration unit and unorthodox well location will afford the applicant the opportunity to produce its just and equitable share of the gas in the Eumont Gas Pool, will prevent the economic loss caused by the drilling of unnecessary wells, will avoid the augmentation of risk arising from the drilling of an excessive number of wells, and will otherwise prevent waste and protect correlative rights.

(8) That Order No. R-872 should be superseded.

IT IS THEREFORE ORDERED:

(1) That a 480-acre non-standard gas proration unit in the Eumont Gas Pool comprising the W/2 of Section 13 and the E/2 E/2 of Section 14, Township 21 South, Range 36 East, NMPM, Lea County, New Mexico, is hereby established and simultaneously dedicated to the Continental Oil Company Lockhart "B" Well No. 7, located at an unorthodox location 330 feet from the North line and 330 feet from the West line of Section 13, and to the Continental Oil Company Lockhart "B" Well No. 4, located 1980 feet from the North line and 660 feet from the East line of Section 14, both in Township 21 South, Range 36 East, NMPM, Lea County, New Mexico.

(2) That the allowable assigned to the above-described non-standard gas proration unit shall be based upon the unit size of

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CASE No. 3838

Order No. R-3490

480 acres and that the operator may produce the allowable assigned to the unit from the subject wells in any proportion.

(3) That Order No. R-872, dated August 30, 1956, is hereby superseded.

(4) 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*  
DAVID F. CARGO, Chairman

*Guyton B. Hays*  
GUYTON B. HAYS, Member

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

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 THE STATE OF NEW  
MEXICO FOR THE PURPOSE OF  
CONSIDERING:

CASE NO. 1113  
Order No. R-872

THE APPLICATION OF CONTINENTAL  
OIL COMPANY FOR AN ORDER GRANTING  
APPROVAL OF AN EXCEPTION TO RULE  
5 (a) OF THE SPECIAL RULES AND REGULA-  
TIONS FOR THE EUMONT GAS POOL AS SET  
FORTH IN ORDER NO. R-520 IN ESTABLISH-  
MENT OF A NON-STANDARD GAS PRORATION  
UNIT OF 480 CONTIGUOUS ACRES CONSISTING  
OF THE W/2 OF SECTION 13 AND THE E/2 OF  
THE E/2 OF SECTION 14, TOWNSHIP 21 SOUTH,  
RANGE 36 EAST, NMPM, LEA COUNTY, NEW  
MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on July 25, 1956, at Hobbs, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the New Mexico Oil Conservation Commission, hereinafter referred to as the "Commission", in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 30th day of August, 1956, the Commission, a quorum being present, having considered the application, the evidence adduced, the recommendations of the Examiner, Daniel S. Nutter, and being fully advised in the premises,

FINDS:

(1) That due notice of the time and place of hearing and the purpose thereof having been given as required by law, the Commission has jurisdiction of this case and the subject matter thereof.

(2) That applicant, Continental Oil Company is the owner of a federal oil and gas lease in Lea County, New Mexico, the land consisting of other

than a legal section, and described as follows, to-wit:

Township 21 South, Range 36 East, NMPM

Section 13: W/2

Section 14: E/2 of the E/2

containing 480 acres, more or less.

(3) That applicant, Continental Oil Company has a producing well on the aforesaid lease known as the Lockhart "B-14" No. 4 Well located 1980 feet from the North line and 660 feet from the East line of said Section 14.

(4) That the applicant's aforesaid Lockhart "B-14" No. 4 Well is at present a marginal well producing oil from the Grayburg formation of the Eunice Pool, and that applicant will recomplete said well to produce gas from the Eumont Gas Pool either by plugging back and perforating within the vertical limits of the Eumont Gas Pool or by dually completing the well to produce oil from the Eunice Pool and gas from the Eumont Gas Pool.

(5) That it is impractical to pool applicant's said lease with adjoining acreage in the Eumont Gas Pool and that the owners of adjoining acreage in said area have not objected to the formation of the proposed proration unit of 480 acres.

(6) That unless a proration unit consisting of applicant's aforesaid acreage is permitted, applicant will be deprived of the opportunity to recover its just and equitable share of the natural gas in the Eumont Gas Pool.

(7) That creation of a proration unit consisting of the aforesaid acreage will not cause but will prevent waste, and will protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the application of Continental Oil Company for approval of a non-standard gas proration unit in the Eumont Gas Pool consisting of the following described acreage:

Township 21 South, Range 36 East, NMPM

Section 13: W/2

Section 14: E/2 of the E/2

be and the same is hereby approved, and a proration unit consisting of the aforesaid acreage is hereby created.

(2) That applicant's Lockhart "B-14" No. 4 Well, located in the SE/4 of the NE/4 of said Section 14, shall be granted an allowable in the proportion that the above described 480-acre unit bears to the standard proration unit for said pool, all until further order of the Commission.

IT IS FURTHER ORDERED:

That approval of the above described 480-acre gas proration unit shall be contingent upon the successful recompletion of the applicant's Lockhart "B-14" No. 4 Well in accordance with the applicable Rules and Regulations of the Oil Conservation Commission.

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

S/John F. Simms, Chairman

S/E. S. Walker, Member

S/A. L. Porter, Jr., Member & Secretary

S E A L

DOCKET: EXAMINER HEARING - WEDNESDAY - AUGUST 21, 1968

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 3825: Application of Pan American Petroleum Corporation for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of the East Buffalo Valley Unit Area comprising 15,350 acres, more or less, of Federal, State and Fee lands in Township 14 South, Ranges 28 and 29 East, Chaves County, New Mexico.

CASE 3826: Application of Eugene E. Nearburg for salt water disposal, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation in the open-hole interval from approximately 7965 feet to 8015 feet in his Magnolia Burt Federal Well No. 1 located in Unit P, Section 5, Township 8 South, Range 30 East, Cato Field, Chaves, County, New Mexico.

CASE 3837: Application of Continental Oil Company for the consolidation of three non-standard gas proration units, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of a 640-acre standard gas proration unit comprising all of Section 26, Township 23 South, Range 36 East, Jalmat Gas Pool, Lea County, New Mexico, to be simultaneously dedicated to its Lynn B-1 Wells Nos. 1, 3, and 4 located in Units J, C, and M, respectively, of said Section 26, and authority to produce the allowable assigned to the unit from the subject wells in any proportion. Said Well No. 1 is presently dedicated to a 320-acre unit comprising the E/2 of said Section 26, said Well No. 3 is presently dedicated to a 160-acre unit comprising the NW/4 of said Section 26, and said Well No. 4 is presently dedicated to a 160-acre unit comprising the SW/4 of said Section 26.

In the alternative, applicant seeks the consolidation of the non-standard units comprising the E/2 and the SW/4 of said Section 26 into one 480-acre non-standard unit to be dedicated to said Well No. 1.

CASE 3838: Application of Continental Oil Company for an amendment to Order No. R-872 and an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-872 to permit the dedication of the non-standard proration unit authorized therein to its Lockhart "B" Well No. 4 located in Unit H of Section 14 and its Lockhart "B" Well No. 7 located at an unorthodox location 330 feet from the North line and 330 feet from the West line of Section 13, both in Township 21 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico. Applicant further seeks authority to produce the allowable assigned to said unit from either of the aforesaid wells in any proportion.

CASE 3839: Application of Continental Oil Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks

*Set for hearing  
any 28, 1968*

JUL 22 11 00 AM '68



*Case 3838*

# CONTINENTAL OIL COMPANY

P. O. Box 460

HOBBS, NEW MEXICO 88240

PRODUCTION DEPARTMENT  
HOBBS DIVISION  
L. P. THOMSON  
Division Manager  
G. C. JAMIESON  
Assistant Division Manager

1001 NORTH TURNER  
TELEPHONE 393-4141

July 19, 1968

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

Attention of Mr. A. L. Porter, Jr.,  
Secretary-Director

Re: Application to Amend Order  
R-872

Forwarded herewith in triplicate is our application  
to amend Order R-872 so as to allocate the 480-acre non-  
standard gas proration unit jointly to Lockhart "B" Wells  
Nos. 4 and 7, Section 13 and 14, T21S, R36E, Lea County,  
New Mexico in the Eumont Gas Pool.

Please set this matter for hearing at your earliest  
examiner hearing.

Yours very truly,

VTL-JS

RLA JJB JWK  
Attach

DOCKET MAILED

Date 8-8-68

IN THE MATTER OF THE APPLICATION  
OF CONTINENTAL OIL COMPANY FOR  
AMENDMENT OF ORDER NO. R-872 TO  
ALLOCATE THE 480-ACRE NON-STANDARD  
GAS PRORATION UNIT JOINTLY TO ITS  
LOCKHART "B" WELLS NOS. 4 AND 7,  
LOCATED IN SECTIONS 14 AND 13,  
RESPECTIVELY, T21S, R36E, LEA COUNTY,  
NEW MEXICO, AND FOR APPROVAL OF AN  
UNORTHODOX LOCATION FOR SAID WELL  
NO. 7

*Case 3838*

A P P L I C A T I O N

COMES NOW Continental Oil Company and respectfully  
petitions the Commission to amend Order No. R-872 so as to  
allocate the 480-acre non-standard gas proration unit in the  
Eumont Gas Pool established by said order jointly to appli-  
cant's Lockhart "B" Wells Nos. 4 and 7 located in Sections 14  
and 13, respectively, T21S, <sup>36E</sup> R37E, Lea County, New Mexico, and  
for approval of an unorthodox location for said Well No. 7,  
and in support thereof would show:

1. Applicant is operator and co-owner of the  
Lockhart "B" Lease described as W/2 Section 13  
and E/2 of E/2 Section 14, T21S, R36E, Lea County,  
New Mexico.
2. Order No. R-872 approved a 480-acre non-standard  
gas proration unit for applicant's Lockhart "B"  
Lease and allocated said unit to applicant's  
Lockhart "B" Well No. 4 (formerly Lockhart B-14  
Well No. 4) located in Unit II of said Section 14.
3. Applicant has recompleted as a Eumont gas well  
its Lockhart "B" Well No. 7 located 330 feet from  
the North line and 330 feet from the West line of  
said Section 13.
4. Applicant's Lockhart "B" Well No. 4 is unable to  
produce the allowable normally assigned a 480-acre  
unit and has been classified as a marginal well in  
the Eumont gas pool.

5. Producing data is not available on applicant's Lockhart "B" No. 7 which would permit an appropriate division of the 480-acre proration unit between wells Nos. 4 and 7.
6. In the interest of avoiding additional hearings in the future, applicant desires to assign the 480-acre non-standard gas proration unit jointly to both of said wells 4 and 7.
7. The unorthodox location of said Well No. 7 is the result of plugging the well back from the Eunice Pool to which the well was drilled in compliance with rules governing said pool.
8. The granting of this application is in the interest of preventing waste and protecting correlative rights.

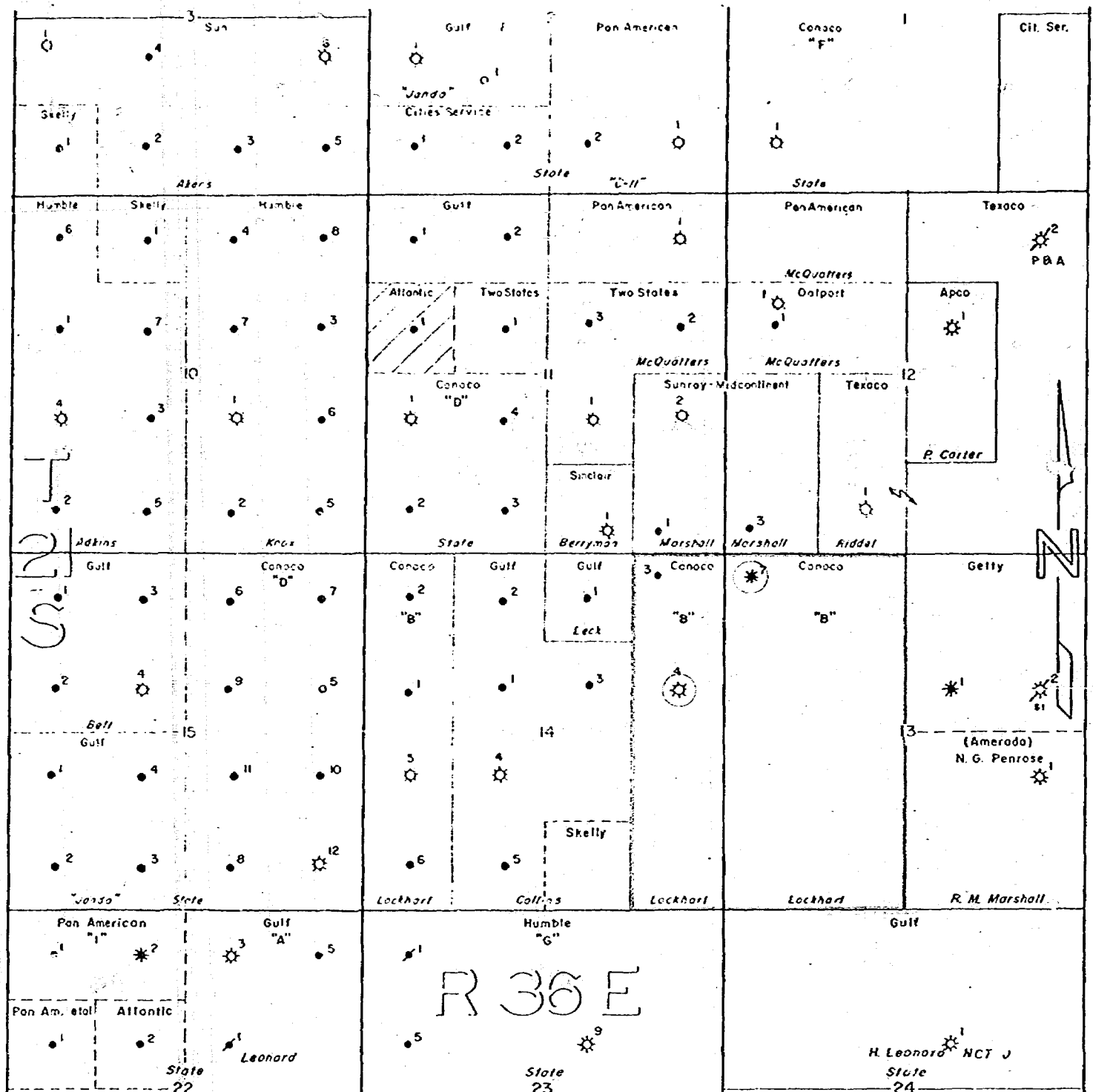
WHEREFOR, applicant respectfully requests that this matter be set for hearing before the Commission's duly appointed examiner and that, upon hearing, Order R-872 be amended assigning the 480-acre non-standard gas proration unit in the Eumont Gas Pool jointly to its Lockhart "B" Wells No. 4 and 7 described above,

Respectfully submitted,

CONTINENTAL OIL COMPANY

  
L. P. THOMPSON

VTL-JS



**CONTINENTAL OIL COMPANY**  
 PRODUCTION DEPARTMENT — HOBBS DIVISION

**EUMONT GAS POOL**  
 Lea County, New Mexico

*Case 3838* SCALE 0 1000 2000

dearnley-meier reporting service, inc.

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

1120 SIMAS BLDG. • P. O. BOX 1092 • PHONE 243-4491 • ALBUQUERQUE, NEW MEXICO

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
August 21, 1968

IN THE MATTER OF:

Application of Continental Oil  
Company for an amendment to Order  
No. R-872 and an unorthodox gas  
well location, Lea County,  
New Mexico.

Case No. 3838

BEFORE: D. S. NUTTER  
Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: Call Case 3838.

MR. HATCH: Application of Continental Oil Company for an amendment to Order No. R-872 and an unorthodox gas well location, Lea County, New Mexico.

MR. KELLAHIN: If the Examiner please, may the record show the same appearance and the witness, Victor T. Lyon, has been sworn and qualified.

MR. NUTTER: Are you asking for an amendment to an Order here when I was examiner in 1956? I don't remember this one.

(Applicant's Exhibits 1 and 2 marked for identification.)

\* \* \* \* \*

VICTOR T. LYON, called as a witness, having been previously duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A Victor T. Lyon.

Q The same Mr. Lyon who testified in Case 3837?

A The same.

Q Are you familiar with the application of Continental Oil Company in Case 3838?

A Yes, sir.

Q What is proposed by Continental in this case?

A Case 3838 is the application of Continental Oil Company for amendment of Order No. R-872 for the assignment of the 480-acre non-standard gas proration unit which was approved by that order, so that this unit may be assigned jointly to Wells No. 4 and 7. The unit has to this date been allocated only to Well No. 4.

Q Under the Order, was that designated as Well No. 4?

A Yes, sir. We have redesignated the wells on this lease and this well was formerly designated Lockhart B-14 No. 4.

Q Now, you refer to it as Lockhart B No. 4, is that the correct designation in use today?

A Yes, sir.

Q Referring to what has been marked as Exhibit No. 1, will you identify that exhibit?

A Exhibit No. 1 is a location plat showing the lease outlined in red which is coincident with the proration unit approved by Order R-872. The two wells to which we intend to allocate this acreage on a joint basis, the lease and proration unit is described as the west half of Section 13 and the east half of the east half of Section 14, Township 21 South, Range 36 East. This is in the Eumont Gas Pool,

incidentally. Well No. 4 which has been the unit well for this proration unit is shown circled in red at a location 1980 feet from the north line, 660 feet from the east line of Section 14, Well No. 7, which is a recently completed Eumont gas well, is located 330 feet from the north line and 330 feet from the west line of Section 13.

Q Now, referring to what has been marked as Exhibit No. 2, would you identify that exhibit?

A Exhibit No. 2 is a copy of a portion of the Gamma Ray Neutron log which was run in the Lockhart B No. 7 just prior to its recompletion. It shows the top of the Queen at approximately 3374, the top of the Grayburg at approximately 3696, it shows that a bridge plug was set at 3705, and then the well was perforated as shown by the arrows which are shown in the interior, the open section of the log. These perforations were then treated with 34,000 gallons of jell brine and 34,000 pounds of salt and 687 mcf of carbon dioxide.

Q What was the well prior to its recompletion?

A It was formerly a Eunice.

Q Grayburg San Andres?

A Grayburg San Andres oil well, it was completed in the Grayburg.

Q That accounts for the 330 foot location out of the

corner?

A Yes, sir, this was an acceptable location for the rules governing that pool.

Q Why was the Lockhart No. 7 recompleted to the Eumont Gas Pool?

A Well No. 4 has encountered difficulty in producing the allowable for the acreage assigned to it, and I believe is a marginal well, but we needed the additional producing capacity so that the allowable assigned to this acreage could be produced.

Q Why are you asking that the acreage be assigned jointly to the two wells?

A At the time that this application was made, we had only a very short test on the well and we were not certain at that time, of its ability to produce, so we did not know what size unit could be assigned to it. Also, its location is such that it could not receive administrative approval for a unit larger in size than 160 acres and we felt that it would probably be necessary to allocate more acreage than this to it and with these factors in mind we requested that the acreage be assigned jointly.

Q Are you requesting that you be permitted to produce the allowable assigned to the four hundred eighty acres from

either well in any proportion?

A Yes, sir.

Q Do you have any tests on these two wells?

A I don't have them with me. I'm sure that we do have them in our files at the office as to No. 4. There has been a four point back pressure test conducted by El Paso and these figures have been supplied to me based on a telephone conversation. We have not received the official report form and I am not certain of the duration of these tests. I think that they were probably tested through a flow-prover and the gas vented to the atmosphere and I believe that there has not been a test into the actual line.

Q As soon as that test is available, will you supply it to the Commission?

A Oh, yes.

Q Will you make available the test on the No. 4 well?

A Yes, sir.

Q Were Exhibits 1 and 2 prepared by you or under your supervision?

A Yes, sir, they were.

MR. KELLAHIN: At this time, I offer in evidence Exhibits 1 and 2.

MR. NUTTER: Continental's Exhibits 1 and 2 will

be admitted in evidence.

(Whereupon, Applicant's Exhibits  
1 and 2 offered and admitted  
in evidence.)

MR. KELLAHIN: That completes our case, Mr. Nutter.

CROSS EXAMINATION

BY MR. NUTTER:

Q What did the telephone conversation indicate as  
far as the productivity of the No. 7 on your four point test?

A It's a very good well, as I recall it tested on the  
fourth rate at about 1.1 million.

Q And the No. 4 is classified as a marginal well  
at this time?

A Yes, it is, this is my recollection, I'm not  
positive.

Q The statement in the application is that it is a  
marginal well.

A Then it is, because I checked that before I wrote  
the application.

MR. NUTTER: Does anyone have anything further of  
Mr. Lyon? He may be excused.

(Witness excused.)

MR. NUTTER: Do you have anything further?

MR. KELLAHIN: That's all I have in this case.

MR. NUTTER: Does anyone have anything to offer in  
Case 3838? We will take the case under advisement.

STATE OF NEW MEXICO     )  
                                  ) ss  
COUNTY OF BERNALILLO   )

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

WITNESS my hand this 3rd day of September, 1968.

*Ada Dearnley*  
Ada Dearnley

I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Bernalillo hearing of Case No. 3838,  
heard by me on 8/21, 1968.

*[Signature]*, President  
New Mexico Oil Conservation Commission

I N D E X

<u>WITNESS</u>	<u>PAGE</u>
<u>VICTOR T. LYON</u>	
Direct Examination by Mr. Kellahin	2
Cross Examination by Mr. Nutter	7

<u>EXHIBITS</u>	<u>MARKED</u>	<u>OFFERED AND ADMITTED</u>
Applicant's 1 and 2	2	7



# CONTINENTAL OIL COMPANY

P. O. Box 480

HOBBS, NEW MEXICO 88240

PRODUCTION DEPARTMENT  
HOBBS DIVISION  
L. P. THOMPSON  
Division Manager  
G. C. JAMIESON  
Assistant Division Manager

1001 NORTH TURNER  
TELEPHONE 393-4141

August 23, 1968

*File*

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

Attention of Mr. D. S. Nutter

Re: Case 3838 August 21, 1968  
Examiner Docket

Gentlemen:

As requested by the examiner at the hearing on Case No. 3838, there are forwarded herewith the most recent tests on Lockhart "B" Wells Nos. 4 and 7. Well No. 4 is shown to have produced at a rate of 317 MCFPD on December 1, 1967. Well No. 7 was tested on July 25, 1968 for a short duration 4-point back pressure test and on the final rate produced at a rate of 1577 MCFPD for a one-hour period.

Please advise if additional information is required.

Yours very truly,

*V. T. Lyon*  
V. T. LYON

VTL-JS  
Attach

68 AUG 26 AM 8 42

PIONEERING IN PETROLEUM PROGRESS SINCE 1875

El Paso Natural Gas Company  
**MINIMUM CONTRACT TEST**  
 Form 15-30 (10-67)

Company <b>Continental Oil Company</b>					Lease <b>Lockhart B-14 No. 4</b>
Unit <b>H</b>	Sec. <b>14</b>	Twp. <b>21</b>	Rge. <b>36</b>	County <b>Lea</b>	Pool <b>Evanston</b>
Type Well <b>Single</b>		Producing Thru	Tubing <b>X</b>	Casing	Top of Pay <b>3448</b>
Date of Previous Minimum Contract Test <b>5-26-67</b>		n <sub>1</sub> of Previous Back Pressure Test <b>.634</b>		Gravity <b>.692</b>	Bar. Pressure <b>13.2</b>
				Meter Sta. No. <b>60-935</b>	Compressor <b>On</b>
				Acre Factor <b>3.00</b>	

FLOW DATA					FLOWING PRESSURES, PSIA		DURATION OF FLOW HOURS
Prover Line Size	X Choke Orifice Size	Static Pressure P <sub>sig.</sub>	Diff. h <sub>w</sub>	Temp. °F	Tubing	Casing	
		170			185.2	344.2	24

**VOLUME CALCULATIONS**

Coefficient (24 - Hour)	$\sqrt{h_w P_m}$	Pressure P <sub>sig.</sub>	Flow Temp. Factor F <sub>t</sub>	Gravity Factor F <sub>g</sub>	Super. Compress. Factor F <sub>sp</sub>	Rate of Flow Q-MCF/D @ 15.025 Psia.
						317

$$D_i = Q \left[ \frac{P_c^2 - P_d^2}{P_c^2 - P_t^2} \right]^{n_1}$$

P <sub>r</sub>	Temp. R	T <sub>r</sub>	Z

**SHUT-IN DATA, PSIA**

DURATION	TUBING	CASING
24 Hour	262.2	418.2
48 Hour	273.2	433.2
72 Hour	276.2	438.2

LINE	ITEM	SOURCE	113.2	263.2	613.2	863.2
1	P <sub>c</sub> <sup>2</sup>		192.0			
2	P <sub>d</sub> <sup>2</sup>		12.8			
3	P <sub>t</sub> <sup>2</sup>		34.3			
4	P <sub>c</sub> <sup>2</sup> - P <sub>d</sub> <sup>2</sup>	1 - 2	179.2			438.2
5	P <sub>c</sub> <sup>2</sup> - P <sub>t</sub> <sup>2</sup>	1 - 3	157.7			276.2
6	S	4 ÷ 5	1.136			162.0
7	Log S		.055378			1.3
8	n <sub>1</sub>		.634			1.07
9		7 x 8	.035110			.114
10	B <sup>n<sub>1</sub></sup>	Antilog 9	1.084			
11	Q-MCF/D		317			
12	D <sub>i</sub>	10 x 11	344			

- n<sub>1</sub> = Slope of Wellhead Deliverability Curve (P<sub>c</sub><sup>2</sup> - P<sub>t</sub><sup>2</sup> vs Q)  
 Q = Actual flow @ end of Flow Period at Wellhead Press., P<sub>t</sub>  
 P<sub>c</sub> = Maximum Shut-in Pressure, Psia Observed in a 72 Hour Period  
 P<sub>t</sub> = Flowing Wellhead Pressure (tubing if flowing thru tubing and vice versa), Psia  
 P<sub>d</sub> = Deliverability Pressure, Psia  
 D<sub>i</sub> = Wellhead Deliverability @ Deliverability Pressure (P<sub>d</sub>), MCF/Day

Witnessed By: (Name)	
Company:	200 AUG 26 AM 8 42
Tested By:	Bobby G. Boaz
Calculated By:	Bobby G. Boaz

MEXICO OIL CONSERVATION COM. ON  
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122  
Revised 9-1-65

Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special					Test Date 7.25.68	
Company CONTINENTAL OIL CO				Connection NONE		
Pool EUMONT				Formation QUEEN		Unit
Completion Date 6-12-41		Total Depth 3885		Plug Back TD 3710		Elevation 3575
Csg. Size 5 1/2	Wt. 17	d 4.892	Set At 3720	Perforations: From 3433 To 3679		Farm or Lease Name LOCKHART B
Thg. Size 2 3/8	Wt. 47	d 1.995	Set At 3654	Perforations: From To		Well No. 7
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE				Packer Set At		County LEA
Producing Thru TBG		Reservoir Temp. °F		Mean Annual Temp. °F		State N.M.
L	H	Gg .674	% CO <sub>2</sub>	% N <sub>2</sub>	% H <sub>2</sub> S	Prover 8'
FLOW DATA			TUBING DATA		CASING DATA	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F
SI						
1.	2 x	7/8	24			75
2.	2 x	1	24			70
3.	2 x	1 1/8	36			69
4.	2 x	1 1/2	34			67
5.						
RATE OF FLOW CALCULATIONS						
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P <sub>m</sub>	Flow Temp. Factor F <sub>t</sub>	Gravity Factor F <sub>g</sub>	Super Compress. Factor, F <sub>pv</sub>
1	13.00		37.2	.9859	1.218	NEG
2	17.09		37.2	.9905	"	"
3	21.89		49.2	.9915	"	"
4	27.63		47.2	.9933	"	"
5						
NO.	P <sub>t</sub>	Temp. °R	T <sub>r</sub>	Z	Gas Liquid Hydrocarbon Ratio Mcf/bbl.	
1.			52		A.P.I. Gravity of Liquid Hydrocarbons Deg.	
2.			52		Specific Gravity Separator Gas XXXXXXXXXX	
3.					Specific Gravity Flowing Fluid XXXXXX	
4.					Critical Pressure P.S.I.A. P.S.I.A.	
5.					Critical Temperature R R	
$P_c = 560.2$ $P_c^2 = 313.8$						
NO.	P <sub>L</sub> <sup>2</sup>	P <sub>w</sub>	P <sub>w</sub> <sup>2</sup>	P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>	$(1) \frac{P_c^2}{P_c^2 - P_w^2} = \frac{313.8}{53.5}$	
1		537.2	288.6	25.2	$(2) \left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 5.865$	
2		528.2	279.0	34.8		
3		520.2	270.6	43.2		
4		510.2	260.3	53.5		
5						
$AOF = Q \left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 9249.1$					68 AUG 26 AM 8 1/2	
Absolute Open Flow 9,249			Mcf @ 15.025		Angle of Slope 45	
Slope, n 1.000						
Remarks: W.D. RECER - CONTINENTAL OIL CO						
Approved By Commission:		Conducted By: JACK WHITLING		Calculated By:		Checked By:

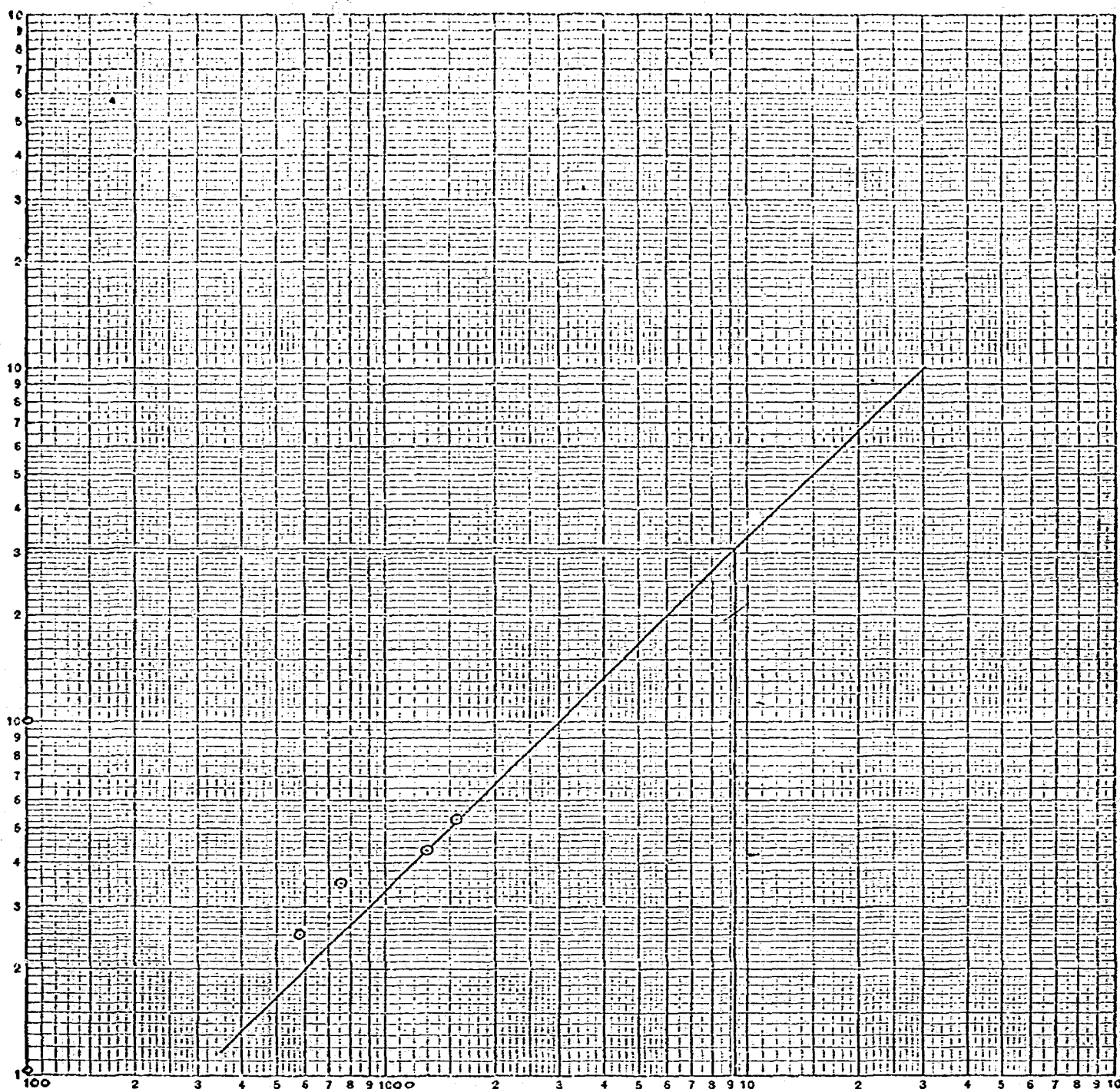
1  
AN

CONTINENTAL OIL CO  
LOCKHART B T 57

7-25-68

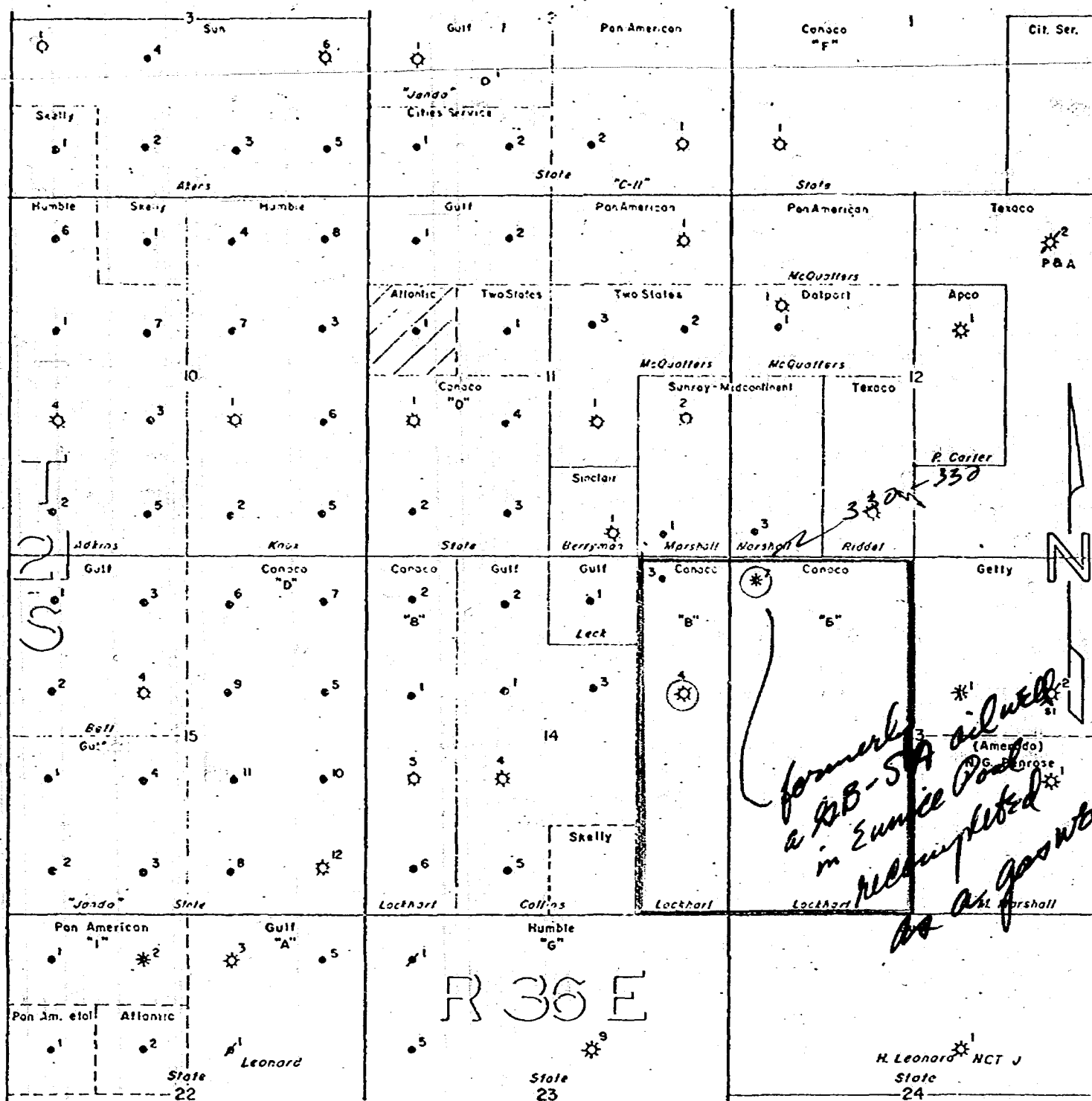
$P^2 - P_w$

KEE LOGARITHMIC 358-120  
KEUFFEL & ESSER CO. MADE IN U.S.A.  
5 X 5 CYCLES



Q, MCFPD

60 AUG 26 AM 3 42



app. CASE NO. 1  
CASE NO. 3838

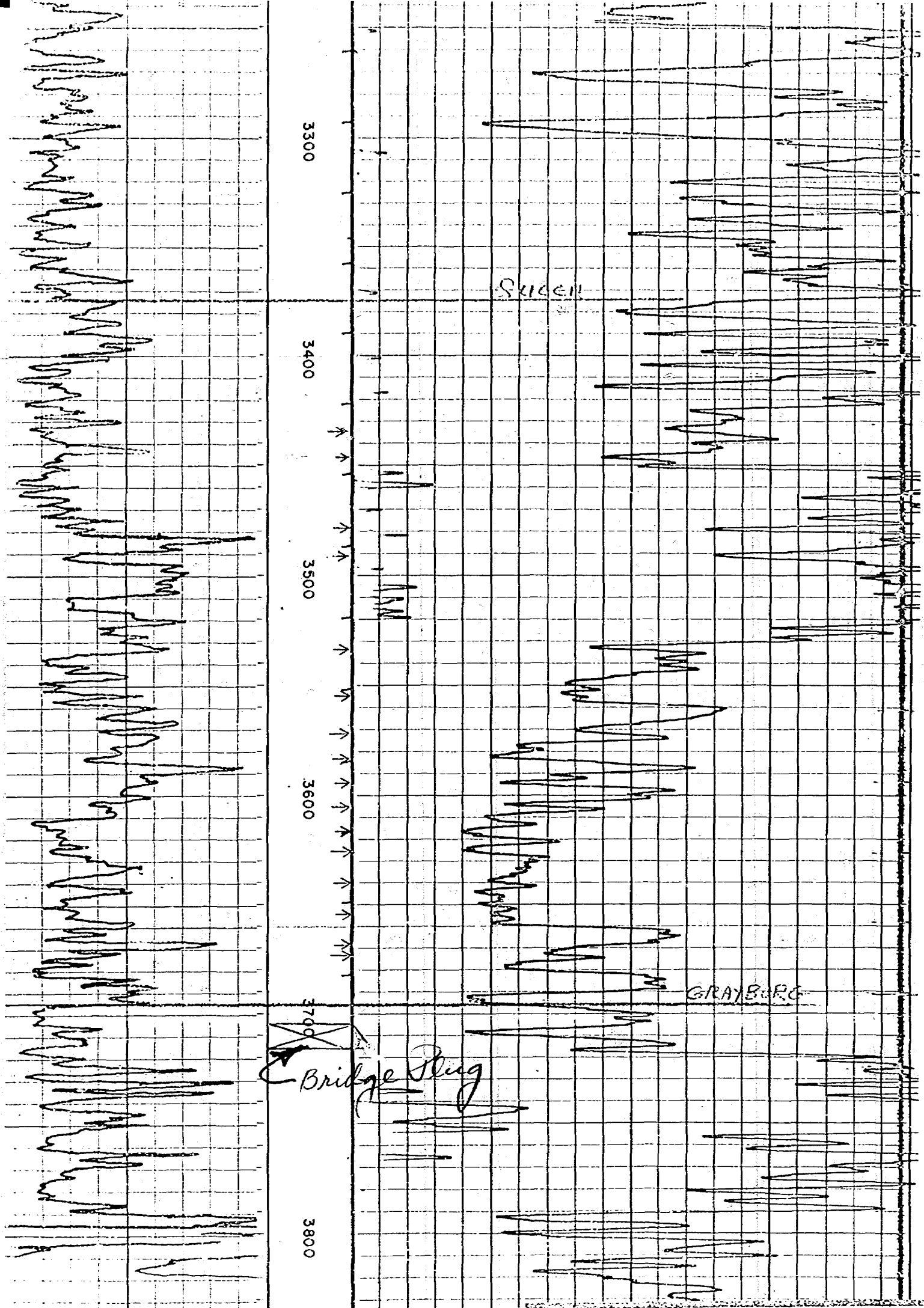
**CONTINENTAL OIL COMPANY**

PRODUCTION DEPARTMENT — HORBS DIVISION

**EUMONT GAS POOL**

Lea County, New Mexico

SCALE  
0 1000 2000



BEFORE EXAMINED - BUTTER

NO. 2  
3832

LOCKHART "B" NO. 7  
Gamma Ray-Neutron Log

EXHIBIT NO. 2