

Case No.

19

Application, Transcript,
Small Exhibits, Etc.

October 4, 1941

Honorable Glenn Staley
Proration Office
Hobbs, New Mexico

Re: Case #19, Order #237.

My dear Glenn:

As requested, enclosed please find a copy of
the above captioned Order.

With kindest personal regards.

Cordially yours,

Oil Conservation Commission

By

Carl B. Livingston
Chief Clerk & Legal Advisor

CBL:KS

RULES AND REGULATIONS FOR GAS-OIL RATIO SURVEYS
IN NEW MEXICO

INTRODUCTION

All operating gas-oil ratio tests shall be taken under the supervision of the Oil Conservation Commission of New Mexico.

DUTIES OF THE OIL CONSERVATION COMMISSION:

(1) Assemble the information supplied by the operators as recommended in Section 3 herein, and arrange test schedule; (2) to assign engineers to supervise tests except that such engineer shall not be in charge of the test on his employers property; (3) to properly instruct all engineers in the proper operation of measuring equipment and procedure in conducting the tests; (4) to calibrate and maintain all metering equipment in first-class condition; (5) to furnish, calculate, record and file all gas measurement charts and records; (6) compute all gas-oil ratios; (7) determine whether the test was properly conducted, and if necessary schedule retests.

DUTIES OF THE ENGINEER IN CHARGE OF TESTS:

The duties of the engineer are restricted to: (1) The supervision of the installation of the gas measuring equipment; (2) the proper operation of the equipment; (3) the proper gauging of the lease tanks to accurately determine the production of oil and water; (4) the proper recording of the pertinent data required; (5) the supervision of the placing of seals or locking devices.

DUTIES OF THE OPERATOR:

The operator shall: (1) in accordance with existing rules and regulations of the Conservation Commission, each well shall be equipped to conveniently make a gas-oil ratio test; (2) furnish the Oil Conservation Commission a complete list of his wells showing the type of metering equipment best adaptable for accurate gas measurement in accordance with rules contained herein; such infor-

mation shall include the size of vent line, size of orifice flange or connection available, and if possible, the desirable size of orifice in the orifice plate; (3) furnish sufficient and qualified lease labor to install and manipulate all lease equipment, including the installation and/or changing orifice, raising or lowering vent lines, etc.

MANNER OF TESTING:

1. For the purpose of stabilization, each well shall be produced for a period of 24 hours at a rate as nearly as possible to the normal manner of operation but not less than the daily allowable.
2. Lease tanks shall be gauged by the supervisor at the beginning and end of this stabilization period.
3. No change shall be made which affects the rate of production during the last 18 hours of the stabilization period.
4. The test period shall consist of 24 hours. Oil shall be gauged for the full period and gas shall be measured for a period of at least six hours.
5. In case of a heading or stop-cocked well the gas shall be measured for the full 24 hour period.
6. If for any reason should gas be withdrawn from the casing, this volume of gas shall be added to that produced through tubing in computing the gas-oil ratio and such gas shall be measured for the full 48 hours of stabilization and test periods, and the largest volume whether the first or second 24 hour period, shall be used in computing the gas-oil ratio.
7. For gas-lift or jetted wells the total volume of gas to be used in computing the operating gas-oil ratio is the total output volume minus the total input volume.

LIQUID MEASUREMENTS:

1. All tanks shall be gauged to the nearest $1/8$ inch. Care should be exercised to keep the gauge line taut and in case there are ripples or foam on the oil surface the tank should be allowed to stand until the fluid reaches equilibrium and the foam can be brushed aside.
2. Tanks shall be thieved immediately before and after the test and water percentage determined in accordance with the A.P.I. specifications.
3. The total volume of liquid produced shall be calculated in accordance with the latest pipeline strapping tables of the tanks.
4. The net volume of oil shall be the total volume of fluid less the volume of B.S. and W. as determined by Paragraph 2 above.
5. Fluid level must be maintained relatively constant, such that the oil dump valve is covered at all times by at least 12 inches of liquid.
6. If it is necessary to use a flow tank for the separation of water the water-oil level must be the same at the beginning and end of the test and the water removed from the flow tank must be measured or metered.
7. All liquid measurements shall be in barrels of 42 gallons and shall be carried to the second decimal.

GAS MEASUREMENT:

1. A calibrated pressure gauge shall be installed on each separator and readings taken periodically. In the event the operator chooses to conduct the test at abnormally high pressures, a recording pressure gauge will be installed on the separator and the measured gas-oil ratio may be increased by the measured or estimated volume of gas going to the tanks. Estimated volume shall be based on the gas-solubility vs. pressure curves for the field or area in which the well is located.
2. For computing the volume of all gas produced the standard of pressure shall be 10 oz. above an atmospheric pressure of 14.4 lbs/sq. in., the standard

page 4

temperature shall be 60° F. and the standard of specific gravity shall be 0.85 as compared to air. All measurements of gas shall be adjusted by computation to these standards. In case the gas measurement is made at an abnormally high pressure the measurement may be adjusted in accordance to deviation from Boyles Law. Gas volumes will be computed in cubic feet and gas-oil ratios in cubic feet per barrel of oil.

3. Only recording type gas measuring devices may be used.
4. Orifice well testers, orifice meters and side pressure test ~~snipples~~ are approved as measuring devices and the side pressure test snipples are approved only when it is necessary to measure volumes larger than can conveniently be measured by orifice meter.

ANY WELL THAT CANNOT BE TESTED UNDER THE PRECEDING RULES SHALL BE REFERRED TO THE OIL CONSERVATION COMMISSION FOR SPECIAL CONSIDERATION AND RULES.

ALL WELLS MUST BE TESTED.

CLASS OF SERVICE
This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable symbol above or preceding the address.

(40)

WESTERN UNION

1220

R. B. WHITE
PRESIDENT

NEWCOMB CARLTON
CHAIRMAN OF THE BOARD

J. C. WILLEVER
FIRST VICE-PRESIDENT

SYMBOLS
DL = Day Letter
NL = Night Letter
LC = Deferred Cable
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Received at

VE52 TWS PAID 5=HX FORTWORTH TEX 19 1146A

J O SETH=

1111 SANFRANCISCO

CONFIRMING TELEPHONE CONVERSATION BELIEVE SUBDIVISION FIRST SHOULD READ QUOTE FIRST AS TO THE LEA COUNTY FIELDS ANY OIL PRODUCING UNIT PRODUCING WITH A NET GAS OIL RATIO IN EXCESS OF THE ASSIGNED MAXIMUM FOR ANY PARTICULAR FIELD AS SET OUT IN THE COLUMN HEREINDELOW SHALL BE ALLOWED TO PRODUCE DAILY ONLY THAT VOLUME OF GAS OBTAINED BY MULTIPLYING ITS DAILY OIL ALLOWABLE BY THE GAS OIL LIMIT FOR THE PARTICULAR FIELD. THE GAS VOLUME THUS OBTAINED SHALL BE KNOWN AS THE DAILY GAS LIMIT OF SUCH OIL PRODUCING UNIT. THE DAILY OIL ALLOWABLE OF SUCH OIL PRODUCING UNIT SHALL THEN BE DETERMINED AND ASSIGNED BY DIVIDING ITS DAILY GAS LIMIT BY ITS NET PRODUCING GAS OIL RATIO IN CUBIC FEET PER BARREL OF OIL UNQUOTE. SUBDIVISION SECOND COULD BE REWRITTEN IN THE SAME MANNER. UNITS IN HOBBS AND MONUMENT HAVING ALLOWABLES BELOW AVERAGE TOP UNIT ALLOWABLE IN LEA COUNTY SHOULD BE ALLOWED TO PRODUCE SAME AMOUNT OF GAS AS TOP UNIT ALLOWABLE WELL WITH TOP RATIO AS SET FOR EACH FIELD=

END 1.

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

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Received at

VE52 2=

TOP RATIO FOR COOPER IS SET AT 10,000 AND FOR EAVES AT 4,000
MANY WELLS IN BOTH FIELDS BEING GAS LIFTED AND NOTHING IN
PROPOSED ORDER PROVIDES FOR MAXIMUM INPUT RATIO BELIEVE
ADVISABLE FOR COMMISSION ADOPT RULE SETTING MAXIMUM INPUT
RATIO FOR ALL GAS LIFT WELLS IN STATE AT 10,000 CUBIC FEET
PER BARREL. THIS GAS WOULD BE IN ADDITION TO AMOUNT OF GAS
PRODUCED NATURALLY FROM WELL. THIS IS FIGURE FEBY STATUTE
IN TEXAS=

J H MOYAR.

10,000 4,000 10,000 .

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

November 21, 1939

To Lea County Operators Committee:

At a special meeting of the Hobbs-Monument Operators held in Ft. Worth October 16, 1939, a motion was adopted to the effect that a special engineering committee of five members be appointed by Mr. C.G. Staley to study the problem of gas wastage in the Monument Field.

This committee met in Fort Worth November 20, 1939, and after a study of the information and data furnished by the Proration Office and various companies, arrived at the following unanimous conclusions:

First, that it is to the best interest of all operators to promote conservation to the fullest extent and prevent waste of reservoir energy.

Second, it is believed that improvement can be made in the gas-oil ratios of a number of wells in the Monument Pool and in several other pools in Southeastern New Mexico.

Third, that it is desirable for the operators to institute a program of remedial work and conservation practices at once. The Oil Conservation Commission has expressed its cooperation with the operators on any reasonable plan that tends to conserve reservoir energy.

Fourth, due to the complex sub-surface conditions existing in the Monument Field, no rule of general applications can be recommended for reducing gas-oil ratios, but that each well is an individual problem and should be considered as such.

On the basis of the above conclusions the following recommendations are herewith submitted:

1. Remedial work is recommended at once on all wells having a gas-oil ratio above 10,000.
2. That a standing Engineering Committee be appointed to make a study of field conditions for the prevention of physical waste and recommend from time to time remedial work, with the view that all reasonable work will be performed.
3. The Engineering Committee to report their findings to the Executive, or sub-committee of the Lea County Operators Committee.
4. The Executive Committee will contact the owner of the well in question, insisting that remedial work be done.
5. In case the operator refuses to do the necessary corrective work, all available information shall be presented to the Deputy of the Conservation Commission for action.
6. If the operator after applying all reasonable means, is unable to improve the condition of his well, it shall be given special study and recommendations made to the Commission on the basis of existing conditions in the individual well, and or pool.

7. In order to promote cooperation, it may be desirable to empower C.G. Staley with authority to allow transfer of oil from high gas oil ratio wells to other wells on the same basic lease for a period of 30 to 60 days while remedial work is being performed. This has particular reference to marginal wells or under unusual conditions may apply to non-marginal wells.
8. That the present established privilege of allowing an operator to make up any shortage that has occurred by reason of a shut down for remedial work, remain in force.
9. That the Executive Committee be acquainted with the fact that the Proration Office may need additional personnel to effectively carry out the intent of these recommendations.

After the various committees have been functioning for a short period and have given the problem a concentrated study they should be in a position to recommend whether general penalties should be applied and the desirability of instituting pressure maintenance operations, or other artificial means of conserving reservoir energy.

The committee feels that these recommendations apply, not only to the Monument Field, but to all Fields in the State and should be adopted for all areas.

Attached hereto is a summary of all high ratio wells as reported to the Proration Office for the Month of August, 1939.

Submitted by,

R.S. Christie, Amerada Pet. Corp.	R. Van A. Mills, Continental Oil Co.
M. Albertson, Shell Oil Co.	F.E. Heath, Sun Oil Co.
L.L. Gray, Gulf Oil Corp.	Glenn Staley, Chairman Engineering Committee

P.S. Mr. Van A. Mills was unable to attend this meeting.
Mr. J.P. Malott and E.P. Keeler substituted for Mr. Mills

COMPANY	TOTAL WELLS	"GAS OIL RATIOS"		
		3500-5000	5000-10,000	Above 10,000
Amerada	103	4	8	6
Anderson-Prichard	12		1	1
Atlantic	1			
Barnsdall	8			
Cities Service	9		2	
Continental	69	16	7	
Enniskope	2			
General Crude	1			
Great Western	2	1		
Gulf	81	1	4	9
Humblo	12	3		
Ohio	23	5	4	
Oil Well Drlg. Co.	5			1
Phillips	10	1		
Repollo	28	6	4	2
Republic	2			2
Shell	22		1	1
Skelly	17			
Stanolind	8	2		1
Sun	11		3	3
Superior	5			
Texas	42	3	4	2
Tidewater	16	1		
Turner	1			1
Two States	2		1	1
Total	493	43	39	30

	<u>Cooper</u>		<u>Eunice</u>		<u>Eaves Area</u>		<u>Hardy</u>		<u>Hobbs Field</u>		<u>Jal Field</u>		<u>Langite</u>	
	Over	Over	Over	Over	Over	Over	Over	Over	Over	Over	Over	Over	Over	Over
	10,000	5,000	10,000	5,000	10,000	5,000	10,000	5,000	10,000	5,000	10,000	5,000	10,000	5,000
Amerada Petroleum Corp.	1	2	1	2	0	0	0	0	2	0	0	0	0	0
Anderson Pritchard	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Atlantic Refining Co.	0	0	2	6	0	0	0	0	0	0	0	0	0	0
Bradley Oil Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cities Service Oil Company	0	0	4	5	0	0	0	0	0	0	0	0	0	0
Continental Oil Company	0	0	3	15	0	0	0	0	1	0	0	0	0	0
Dan, Wade and Glover	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Devonian Oil Company	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Gulf Oil Corporation	2	3	14	32	0	0	0	0	1	0	0	0	0	0
Hirschback Drilling Company	0	3	0	4	0	1	0	0	0	0	0	0	0	0
Humble Oil Company	3	3	3	4	0	0	0	0	0	0	2	3	1	2
Kagnolia Pet. Company	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Midcontinent Oil Corporation	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Ohio Oil Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil Well Drilling Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parker Drilling Company	0	0	9	0	0	0	0	0	0	0	0	0	0	0
Pemrose and Rowan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phillips Petroleum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phillips Pure	11	11	0	3	0	0	0	0	0	0	0	0	0	0
Regolio Oil Company	0	0	4	6	0	0	0	0	0	0	0	0	0	0
Republic Production Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Samedan Oil Corporation	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shell Oil Company	0	0	8	13	0	0	0	0	1	3	0	0	1	1
Skelly Oil Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southern Petroleum Company	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Standard Oil of Texas	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Standard Oil Company	0	0	4	6	0	0	0	0	0	0	0	0	0	0
Sun Oil Company	0	0	0	0	0	2	0	0	1	1	0	0	0	0
Texas Company	0	0	1	4	0	0	0	0	0	0	0	0	0	0
Texas Pacific Coal and Oil Co.	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Texas-Richmond Drilling Co.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tidewater Associated Oil Co.	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Two States Oil Company	0	0	0	3	0	0	0	0	0	0	0	0	0	0
TOTALS	21	20	46	105	0	3	2	13	1	11	3	6	5	10

	Lynn		Mattix		Monument		Penrose		Stagers		Skelly		S. Eunice			
	Over	10,000	Over	5,000	Over	10,000	Over	5,000	Over	10,000	Over	5,000	Over	10,000	Over	5,000
Amerada Petroleum Corp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anderson Pritchard	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Atlantic Refining Co.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bradley Oil Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cities Service Oil Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Continental Oil Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dan'lade and Clower	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Devonian Oil Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gulf Oil Corporation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hirschback Drilling Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Humble Oil Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Magnolia Pet. Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Midcontinent Oil Corporation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ohio Oil Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil Well Drilling Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parker Drilling Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Penrose and Rowan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phillips Petroleum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phillips Pure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repollo Oil Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Republic Production Co.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Samedan Oil Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shell Oil Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Skelly Oil Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southern Petroleum Co.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Standard Oil of Texas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Standard Oil Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sun Oil Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Texas Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Texas Pacific Coal and Oil Co.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Texas Richmond Drilling Co.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tidewater Associated Oil Co.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Two States Oil Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TOTALS	0	4	6	14	30	63	14	42	0	1	2	5	5	19
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RECOMMENDATION FOR A GAS DISPLACEMENT
FACTOR FOR WELLS IN LEA COUNTY.

1. Any well producing with a net gas-oil ratio in excess of ten thousand (10,000) cubic feet per barrel of oil produced, shall be allowed to produce daily a total volume of gas equivalent to that quantity obtained by multiplying the average unit allowable for Lea County by 1,000. The displacement volume will vary from time to time as the allowable production for units is changed.

In applying the displacement factor to the unit allowable in a field, the ^{units} wells penalized in daily allowable shall first be set up on the schedule and the remaining oil distributed to the remaining units of the field.

There are some fields with high ratio wells producing large volumes of water which may warrant a temporary exception to this rule. Net gas is defined as gas coming from the formation with the oil produced from the well and not returned to the reservoir.

2. Within sixty (60) days after the inauguration of this temporary order, a study of all fields shall be made and evidence presented at an open hearing; such evidence to be used as a basis for establishing a proper gas-oil ratio limit for each field, after which an order shall be prepared and enforced. *and enforced immediately*

3. That a committee of field engineers be appointed by Mr. Staley to determine a standard method of taking gas measurements for the calculation of gas-oil ratios.

4. That a quarterly gas-oil ratio survey shall be made and reported on all wells in all fields in Lea County.

January 8, 1940

Honorable Ernest A. Hanson
U. S. G. S.
Roswell, New Mexico

Re: Case No. 19, the adoption of regulations governing oil-gas ratios in the various producing fields in New Mexico.

My dear Ernest:

The reporter who reported the above captioned case has been engaged in completing the transcript on Case No. 14, Hobbs Division, and has not as yet had time to reach case No. 19 concerning oil-gas ratios.

With kindest personal regards,

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik

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(21)

WESTERN UNION

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VE119 29 GOVT DL XC=ROSWELL NMEX 8 1218P

FRANK WORDEN=

COMMISSIONER OF PUBLIC LANDS

PLEASE FORWARD US AS EARLY AS POSSIBLE A TRANSCRIPT OF
REPORT AND RECOMMENDATIONS OF CHRISTY'S COMMITTEE ON GAS
OIL RATIOS AT YOUR DECEMBER HEARING TOGETHER WITH THE
STATES ACTION=

ERNEST A HANSON=

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

OIL CONSERVATION COMMISSION

February 1, 1940

C
O
P
Y

Mr. Ernest A. Hanson
Supervisor, Oil & Gas Operations
U. S. Geological Survey
P. O. Box 997
Roswell, New Mexico

Re: Case No. 19, hearing to consider adoption of maximum gas-oil ratios for the various fields of New Mexico.

Dear Mr. Hanson:

In reply to your letter of January 24, the Commission does not have transcripts in the above captioned hearing for distribution, but these may be obtained from Miss Esther Barton of Santa Fe, who was employed by the Commission for the purpose of reporting this and other hearings held during December. Ordinarily, the various interested parties at the time of the hearing place their orders with the reporter for transcripts, as is the practice in the District Court. The Commission only has prepared the official original certified to by the reporter and copies for the use of the members of the Commission.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl E. Livingston
Attorney

CBL:lk

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

P.O. Box 997
Roswell, New Mexico
January 24, 1940

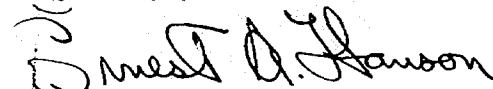
Mr. Carl B. Livingston, Attorney
State Conservation Commission
Santa Fe, New Mexico

Dear Mr. Livingston:

Reference is made to my telegram to
Mr. Worden dated January 8, 1940, and your re-
ply of the same date.

We are desirous of receiving a trans-
cript of Mr. Christy's report to the Commission
on December 9, 1939, in the hearing known as
Case No. 19. When this has been transcribed,
which we assume will be done prior to February
5, we will appreciate it if you will send us,
preferably, the entire transcript of Case No.
19, but at least a transcript of Christy's
testimony, including the questions and answers.

Very truly yours



ERNEST A. HANSON
Supervisor, Oil and Gas Operations.

ECA:ERA

A. M. McCORKLE, CHAIRMAN
OPERATORS COMMITTEE

GLENN STALEY, CHAIRMAN
ENGINEERING COMMITTEE

LEA COUNTY OPERATORS COMMITTEE

HOBBS, NEW MEXICO

January 19, 1940

Hon. Carl Livingston
Oil Conservation Commission,
Santa Fe, N.M.

Dear Carl:

I am enclosing herewith a copy of a letter from E.A. Hanson of the U.S.C.S., Roswell, addressed to Mr. McCorkle. Mr. McCorkle's secretary has asked me to answer the letter.

From previous correspondence with members of the Commission I note that a transcript of the hearing was not completed when this information was first requested by Mr. Hanson. However, the information is now available. I will, therefore, appreciate it if you will forward to Mr. Hanson a copy of that part of the evidence asked for in the enclosed letter.

I will also appreciate it if, when the transcript is completed, you will send me a copy for the permanent files in this office so that Mr. Hanson and his staff and the operators can refer to same.

As soon as we receive a copy of the Commission's order pertaining to gas-oil ratios for each field the order will be mimeographed and mailed to all operators.

With the sincere hope that Mrs. Livingston is well on the road to recovery and with kindest personal regards to you both, I am,

Yours very truly,


Glenn Staley

GS:M

cc: A.M. McCorkle
E.A. Hanson

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Box 997

Roswell, N.M.
Jan 24-1940

Mr. A.Z. McCorkle
Stanolind Oil & Gas Co.
Ft. Worth, Texas

Dear Mr. McCorkle:

Reference is made to your letter dated January 10, 1940, relative to furnishing us a copy of the Christy Committee's report and recommendations relative to gas-oil ratios in Lea County, New Mexico.

Before receiving your letter, we had asked the Conservation Commission for a transcript of Mr. Christie's statement at the hearing of December 9, 1939, but as you will probably recall, the committee's report was not submitted as evidence.

We were not certain from your letter of January 10, whether or not you intended sending us a copy of the Christie Committee's report after obtaining your committee's permission, but apparently you did not so intend it. We are still very desirous of obtaining two copies of this report.

You will, of course, readily understand that it is necessary that we acquire all available information on gas-oil ratios in Southeastern New Mexico, in order that we may be fully informed on the matter when the State Conservation Commission issues its order limiting gas-oil ratios on State and fee lands in certain fields in Lea County.

Yours very truly,

Sgd.

E.A. Hanson
Supervisor, Oil & Gas Operations

December 14, 1939

Mr. Geo. P. Livermore, President
Great Western Producers, Inc.
Odessa, Texas

Dear Sir:

This will acknowledge receipt of your letter of December 11, in which you state that your Company would present to the Commission at the hearing scheduled for the first Monday in February, 1940, either by letter or by testimony, certain data which would support a protest to the setting of a maximum gas-oil ratio on their Leonard Lease located in Section 37, Twp. 23 S., Range 37 E.

Very truly yours,

Frank Worden
Commissioner of Public Lands
and Secretary of the Commission

FW:ik

GREAT WESTERN PRODUCERS, INC.

Odessa, Texas
December 11, 1939

RECEIVED
STATE LAND OFFICE
DEC 13 9 17 AM '39
SANTA FE, N. M.

The Honorable Frank Worden,
New Mexico State Land Commissioner,
Santa Fe, New Mexico.

Dear Sir:

At the gas-oil ratio hearing held at Santa Fe, New Mexico, on December 9th, 1939, it was stated that Great Western Producers, Inc., would present data by letter to the New Mexico Oil Conservation Commission which would support a protest to the setting of a maximum gas-oil ratio on their Leonard Lease located in Section 37, Twp. 23 S, Range 37 E.

We wish to state that this Company is in favor of setting a maximum gas-oil ratio for Lea County, but we feel that some provision should be made for exceptions to this rule. The data which we propose to submit will substantiate the need for the provision of an exception clause in the order.

We wish to advise that after talking with you and Governor Miles, this data will be presented to the Commission at the hearing scheduled to be held in Santa Fe on the first Monday in February 1940, either by letter or by testimony.

Yours very truly,

GREAT WESTERN PRODUCERS, INC.

By:

H. P. Lincum
President

RCD/h

2 - 1940

January 30, 1940

Special Delivery

Mr. Glenn Staley
Proration Umpire
Hobbs, New Mexico

My dear Glenn:

Enclosed please find the following orders of the Commission:

Order No. 238, prescribing maximum gas-oil ratios for the various fields in New Mexico;

Order No. 237, a companion order of the above order, prescribing regulations for gas-oil ratio surveys in New Mexico;

Order No. 236, setting the date of March 4 as the date upon which any interested party having any objections to the two foregoing orders may make them before the Commission at a hearing on said date;

Order No. 235, governing the issuance of the monthly proration schedule with the Commission's certificate thereto as to legality of oil produced thereunder and the making up of certain shortages.

You will note in the last paragraph of Order No. 235 a saving clause was introduced for the taking under further advisement and the issuance of a supplemental order governing transportation of crude oil and its products by means other than by pipe line. This is intended for an order governing transportation by trucks, tank cars and the like, but I have not the data before me and my recent experience in trying to get into shape the above orders at long range has convinced me that it is next to impossible to draw orders one place with the engineers who advise upon these matters in some other place. It is advisable that I come down and sit with you and other engineers on the spot and work out the details at a convenient time. On the other hand, you and other engineers, acting in the capacity of the advisory committee, could come to Santa Fe. But the difficulty is that they have other interests and other things to do and are in a hurry to get away and I, in turn, being accessible to everyone, would be handicapped by constant interruptions. In a matter of this kind, one simply has to be quiet with a little time for thought and technical information from the advisory committee readily at hand.

The hearing upon the Monument proration plan, Case No. 14, which was continued by the Commission on December 9 to the first

Mr. Glenn Staley

-2-

1/30/40

Thursday

Monday in February (the 5th), conflicts with the committee hearing in Washington on the Cole Bill, and will necessarily be continued. The Commission has unofficially set Monday, March 7, at ten o'clock A. M., for the hearing in the above captioned matter and an order is to be entered by the Commission on February 5 formally and officially, as a Court, continuing that hearing.

C
O
P
Y

Enclosed is a list of appearances of the operators whom I surmise you would like to notify as to all of the above matters by mimeograph or such other way as you see fit. However, since time is so short, I have today sent out a notice to all parties appearing in Case No. 14 that the hearing upon the Monument proration plan was unofficially continued to March 7, and that on February 5 the Commission expected to issue a formal order to that effect.

In another connection, relating to the petition of the various operators to the New Mexico Corporation Commission to change its Rule 9 as to tank tables by eliminating the 2% arbitrary deduction, Honorable Robert Valdez of the Corporation Commission yesterday advised that the matter was set down for formal hearing before the Corporation Commission on March 6. The petitioners should be reminded that they have the burden of making their case before the Commission. They should get together with their counsel and make preparation for the presenting of their case. In this matter the Corporation Commission, as I see it, sits as a court. By all means, after the Cole Committee hearing in Washington, the petitioners (which means the operators) should hold an informal meeting themselves a week or two before the hearing before the Commission so a plan of legal strategy can be devised. Otherwise the proceedings of a large number of operators against a small handful of pipe line companies might be as ineffectual as the large Russian Army against the little Finns. I gave Mr. Worden a memorandum to advise Governor Murray somewhat along the lines of the foregoing suggestions.

Very truly yours,

Carl B. Livingston
Attorney

CBL:ik
Enc.

OIL CONSERVATION COMMISSION

March 27, 1940

C
O
P
Y

Honorable Glenn Staley
Proration Umpire
Hobbs, New Mexico

My dear Mr. Staley:

Enclosed please find copy of Gas-Oil
Ratio Order No. 250 as an order of temporary
nature revising Order No. 238 of temporary
nature, pending the adoption of a final order.

Yours very truly,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Enc.

November 17, 1939

Honorable Gail Carter
Director, Bureau of Revenue
Santa Fe, New Mexico

Re: Case No. 19, adoption of regu-
lations governing oil-gas ratios
in the various producing fields
in New Mexico.

My dear Gail:

The date for the above hearing is ten
o'clock A. M., Saturday, December 9. I
thought perhaps you would wish it for the
Governor's calendar. The Governor stated
at the meeting yesterday evening that this
date would meet his approval.

Very truly yours,

OIL CONSERVATION COMMISSION

By

Carl B. Livingston
Attorney

CBL:ik

November 17, 1939

Honorable A. M. McCorkle
Chairman, Lea County Operators Committee
P. O. Box 1410
Fort Worth, Texas

Re: Case No. 19, adoption of regulations governing oil-gas ratios in the various producing fields in New Mexico.

My dear Mr. McCorkle:

Enclosed please find copy of Notice of Hearing in the above captioned matter.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Enc.

November 17, 1939

Honorable J. O. Seth
Attorney at Law
Santa Fe, New Mexico

Re: Case No. 17, adoption of regulations
governing oil-gas ratios in the various
producing fields in New Mexico.

My dear Judge Seth:

Enclosed please find copy of Notice of Hearing in
the above captioned matter.

This matter came up suddenly late yesterday, pursuant to a meeting of operators at Hobbs. Mr. Andreas 'phoned in from Hobbs, suggesting December 9 for the hearing. This matter, I take it, is the outgrowth of the Government's attempt on foot to take over conservation matters. Conservation matters in New Mexico have been well taken care of, except perhaps in this one particular. In other words, when this gap is filled, the operators can quite pointedly show the Senate Committee that there is no necessity whatever for government interference.

Very truly yours,

OIL CONSERVATION COMMISSION

By _____
Carl B. Livingston
Attorney

CBL:ik
Enc.

OIL CONSERVATION COMMISSION

November 17, 1939

C
Honorable J. O. Seth
Attorney at Law
Santa Fe, New Mexico

O
Re: Case No. 19, adoption of regulations
governing oil-gas ratios in the various
producing fields in New Mexico.

P
Y
My dear Judge Seth:

Enclosed please find copy of Notice of Hearing in
the above captioned matter.

This matter came up suddenly late yesterday, pursuant to a meeting of operators at Hobbs. Mr. Andreas 'phoned in from Hobbs, suggesting December 9 for the hearing. This matter, I take it, is the outgrowth of the Government's attempt on foot to take over conservation matters. Conservation matters in New Mexico have been well taken care of, except perhaps in this one particular. In other words, when this gap is filled, the operators can quite pointedly show the Senate Committee that there is no necessity whatever for government interference.

Very truly yours,

OIL CONSERVATION COMMISSION

By _____
Carl B. Livingston
Attorney

CBL:ik
Enc.

November 17, 1939

New Mexico Examiner
Santa Fe, New Mexico

Gentlemen:

There is enclosed herewith a Notice for Publication, which you are kindly requested to publish once immediately. You are also requested to furnish this Commission with a copy containing this publication.

Immediately upon completion of the publication be sure to transmit to the Oil Conservation Commission your affidavit of publication.

Upon sending to the Commission your affidavit of publication, please send your statement in duplicate and enclosed purchase voucher, also in duplicate.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Encls.

November 17, 1939

Hobbs Daily News-Sun
Hobbs, New Mexico

Gentlemen:

There is enclosed herewith a Notice for Publication, which you are kindly requested to publish once immediately. You are also requested to furnish this Commission with a copy containing this publication.

Immediately upon completion of the publication be sure to transmit to the Oil Conservation Commission your affidavit of publication.

Upon sending to the Commission your affidavit of publication, please send your statement in duplicate and enclosed purchase voucher, also in duplicate.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Encls.

November 17, 1939

Honorable Earl Foster
Conservation Attorney
Corporation Commission of Oklahoma
Oklahoma City, Oklahoma

Re: Case No. 19, adoption of regu-
lations governing oil-gas ratios
in the various producing fields
in New Mexico.

My dear Mr. Foster:

Enclosed please find copy of Notice of
Hearing in the above captioned matter.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Enc.

November 17, 1939

Honorable Glenn Staley
Proration Umpire
Hobbs, New Mexico

Re: Case No. 19, adoption of regulations governing oil-gas ratios in the various producing fields in New Mexico.

My dear Glenn:

Enclosed please find copy of Notice of Hearing in the above captioned matter.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Enc.

November 17, 1939

Honorable Roy Yarbrough
Oil Conservation Commission
Hobbs, New Mexico

Re: Case No. 19, adoption of regulations
governing oil-gas ratios in the various
producing fields in New Mexico.

My dear Mr. Yarbrough:

Enclosed please find copy of Notice of
Hearing in the above captioned matter.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:lk
Enc.

November 17, 1939

Honorable James M. Murray
Lieutenant Governor
Hobbs, New Mexico

Re: Case No. 19, adoption of regulations
governing oil-gas ratios in the
various producing fields in New Mexico.

My dear Jim:

Enclosed please find copy of Notice of Hearing
in the above captioned matter.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Enc.

November 17, 1939

Honorable C. J. Dexter
c/o C. J. Dexter Company
Artesia, New Mexico

Re: Case No. 19, adoption of regulations
governing oil-gas ratios in the various
producing fields in New Mexico.

My dear Mr. Dexter:

Enclosed please find copy of Notice of
Hearing in the above captioned matter.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Enc.

November 17, 1939

Honorable Harry Leonard
Roswell, New Mexico

Re: Case No. 19, adoption of regulations governing oil-gas ratios in the various producing fields in New Mexico.

My dear Harry:

Enclosed please find copy of Notice of Hearing in the above captioned matter.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Enc.

November 17, 1939

Honorable R. M. Henson
Trans-Pecos Pipe Line Co.
Artesia, New Mexico

Re: Case No. 19, adoption of regulations
governing oil-gas ratios in the various
producing fields in New Mexico.

My dear Mr. Henson:

Enclosed please find copy of Notice of
Hearing in the above captioned matter.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Enc.

November 17, 1939

Honorable Hollis Watson
Artesia, New Mexico

Re: Case No. 19, adoption of regulations
governing oil-gas ratios in the various
producing fields in New Mexico.

My dear Hollis:

Enclosed please find copy of Notice of
Hearing in the above captioned matter.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Enc.

November 17, 1939

Honorable J. O. Seth
Attorney at Law
Santa Fe, New Mexico

Re: Case No. 19, adoption of regulations
governing oil-gas ratios in the various
producing fields in New Mexico.

My dear Judge Seth:

Enclosed please find copy of Notice of Hearing
in the above captioned matter.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Enc.

November 17, 1939

Honorable H. M. Dow
Roswell, New Mexico

Re: Case No. 19, adoption of regulations
governing oil-gas ratios in the various
producing fields in New Mexico.

My dear Hi:

Enclosed please find Notice of Hearing in
the above captioned matter.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

EBL:ik
Enc.

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. 19.

ORDER NO. 238.

THE ADOPTION OF REGULATIONS GOVERNING
GAS-OIL RATIOS IN THE VARIOUS PRODUCING
FIELDS IN NEW MEXICO.

ORDER OF THE COMMISSION
REGULATING AND PRESCRIBING MAXIMUM
GAS-OIL RATIOS FOR THE VARIOUS FIELDS
OF THE STATE OF NEW MEXICO

BY THE COMMISSION:

This cause came on for hearing at ten o'clock A. M.
on the 9th day of December, 1939, in the chamber of the House of
Representatives, in the State Capitol, Santa Fe, New Mexico.

NOW, on this 13th day of January, 1940, the Commission
having before it for consideration the evidence adduced at the
hearing in said case and being fully advised in the premises,
the Commission adopted the following regulations governing gas-
oil ratios in the various producing fields in New Mexico, as
follows:

The system of gas-oil ratio control in the State of
New Mexico shall be known as that of volumetric control, which
penalizes the unit of production for exceeding the maximum gas
volume established for each field by decreasing its monthly
allowable in accordance with the formula as provided hereinafter.

The maximum gas-oil ratio assigned to each field in New Mexico is listed below:

<u>FIELD</u>	<u>RATIOS</u>
Cooper	10,000
Eaves	4,000
Eunice	7,000
West Eunice	1,000
Halfway	1,000
Hardy	5,000
Hobbs	3,500
Jal	10,000
Langlie	5,000
Lynch	1,000
Lynn	3,000
Mattix	5,000
Monument	5,000
N. Lynch	1,000
Penrose	7,000
Rhodes	1,000
Skaggs	1,000
Skelly	5,000
S. Eunice	5,000
S. Lovington	1,500
Vacuum	2,000
Artesia	1,000
Grayburg-Jackson	1,000
High Lonesome	1,000
Leonard	1,000
Loco Hills	1,000
Maljamar	1,000
N. Maljamar	1,000
Red Lakes	1,000
Robinson	1,000
Shugart	1,000
Barber	1,000
Getty	1,000

1. Any oil producing unit with a net gas-oil ratio in excess of the assigned maximum for the field in which it is situated as listed in the table above shall be allowed to produce daily a total volume of oil which, when multiplied by the gas-oil ratio of the unit will result in a total gas volume that does not exceed the allowance per top allowable unit as fixed in the current monthly proration schedule of the Commission for the field in which the unit is situated times the gas-oil ratio for said field. Provided, that nothing herein contained shall have the effect of

increasing the oil allowable of any unit above that fixed in the current proration schedule.

2. All units to which gas-oil ratio corrections are applied shall be set up in the proration schedule first and the remaining oil equitably reallocated to the other producing units in the state.

3. A marginal well shall be permitted to produce the same total volume of gas which it would be permitted to produce if it were a non-marginal well.

4. In the event that gas-oil ratios are not reported for any unit, then that unit will be omitted from the proration schedule.

5. The gas-oil ratio used in calculating penalties for any producing unit shall be those reported immediately prior to the beginning of the proration period on form C-104A or those measured under the supervision of the Oil Conservation Commission.

DONE at Santa Fe, New Mexico, this 13th day of January, 1940.

NEW MEXICO OIL CONSERVATION COMMISSION

By *Paul Worden*
Commissioner of Public Lands

By *A. Andres*
State Geologist

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. 19.

ORDER NO. 237.

THE ADOPTION OF REGULATIONS GOVERNING
GAS-OIL RATIOS IN THE VARIOUS PRODUCING
FIELDS IN NEW MEXICO.

ORDER OF THE COMMISSION¹ PRESCRIBING
RULES AND REGULATIONS FOR GAS-OIL
RATIO SURVEYS IN NEW MEXICO.

BY THE COMMISSION:

This cause came on for hearing at ten o'clock A. M. on the
9th day of December, 1939, in the chamber of the House of Repre-
sentatives, in the State Capitol, Santa Fe, New Mexico.

NOW, on this 13th day of January, 1940, the Commission
having before it for consideration the evidence adduced at the
hearing in said case and being fully advised in the premises,
the Commission adopted the order herein simultaneously with the
adoption of:

Order No. 236 of the Commission, setting a time for
the purpose of presenting objections to the Commission
as to Order No. 238 of the Commission (Regulating and
prescribing maximum gas-oil ratios for the various
fields of the State of New Mexico) and as to Order No.
237 of the Commission (prescribing rules and regulations
for gas-oil ratio surveys in New Mexico.)

Order No. 238 of the Commission, regulating and pre-
scribing maximum oil-gas ratios for the various fields
of the State of New Mexico.

The rules and regulations set out hereinbelow shall govern
gas-oil ratio surveys in New Mexico:

All operating gas-oil ratio tests shall be taken under the supervision of the Oil Conservation Commission of New Mexico.

DUTIES OF THE OIL CONSERVATION COMMISSION:

(1) Assemble the information supplied by the operators as recommended in Section 3 herein, and arrange test schedule; (2) to assign engineers to supervise tests except that such engineer shall not be in charge of the test on his employers property; (3) to properly instruct all engineers in the proper operation of measuring equipment and procedure in conducting the tests; (4) to calibrate and maintain all metering equipment in first-class condition; (5) to furnish, calculate, record and file all gas measurement charts and records; (6) compute all gas-oil ratios; (7) determine whether the test was properly conducted, and if necessary schedule retests.

DUTIES OF THE ENGINEER IN CHARGE OF TESTS:

The duties of the engineer are restricted to: (1) The supervision of the installation of the gas measuring equipment; (2) the proper operation of the equipment; (3) the proper gauging of the lease tanks to accurately determine the production of oil and water; (4) the proper recording of the pertinent data required; (5) the supervision of the placing of seals or locking devices.

DUTIES OF THE OPERATOR:

The operator shall: (1) in accordance with existing rules and regulations of the Conservation Commission, each well shall be equipped to conveniently make a gas-oil ratio test; (2) furnish the Oil Conservation Commission a complete list of his wells showing the type of metering equipment best adaptable for accurate gas measurement in accordance with rules contained herein; such information shall include the size of vent line,

size of orifice flange or connection available, and if possible, the desirable size of orifice in the orifice plate; (3) furnish sufficient and qualified lease labor to install and manipulate all lease equipment, including the installation and/or changing orifice, raising or lowering vent lines, etc.

MANNER OF TESTING:

1. For the purpose of stabilization, each well shall be produced for a period of 24 hours at a rate as nearly as possible to the normal manner of operation but not less than the daily allowable.
2. Lease tanks shall be gauged by the supervisor at the beginning and end of this stabilization period.
3. No change shall be made which affects the rate of production during the last 18 hours of the stabilization period.
4. The test period shall consist of 24 hours. Oil shall be gauged for the full period and gas shall be measured for a period of at least six hours.
5. In case of a heading or stop-cocked well the gas shall be measured for the full 24 hour period.
6. If for any reason should gas be withdrawn from the casing, this volume of gas shall be added to that produced through tubing in computing the gas-oil ratio and such gas shall be measured for the full 48 hours of stabilization and test periods, and the largest volume whether the first or second 24 hour period, shall be used in computing the gas-oil ratio.
7. For gas-lift or jetted wells the total volume of gas to be used in computing the operating gas-oil ratio is the total output volume minus the total input volume.

LIQUID MEASUREMENTS:

1. All tanks shall be gauged to the nearest 1/8 inch. Care should be exercised to keep the gauge line taut and in case there are ripples or foam on the oil surface the tank should be allowed to stand until the fluid reaches equilibrium and the foam can be brushed aside.
2. Tanks shall be thieved immediately before and after the test and water percentage determined in accordance with the A.P.I. specifications.
3. The total volume of liquid produced shall be calculated in accordance with the latest pipeline strapping tables of the tanks.
4. The net volume of oil shall be the total volume of fluid less the volume of B.S. And W. as determined by Paragraph 2 above.
5. Fluid level must be maintained relatively constant, such that the oil dump valve is covered at all times by at least 12 inches of liquid.
6. If it is necessary to use a flow tank for the separation of water the water-oil level must be the same at the beginning and end of the test and the water removed from the flow tank must be measured or metered.
7. All liquid measurements shall be in barrels of 42 gallons and shall be carried to the second decimal.

GAS MEASUREMENT:

1. A calibrated pressure gauge shall be installed on each separator and readings taken periodically. In the event the operator chooses to conduct the test at abnormally high pressures, a recording pressure gauge will be installed on the separator and the measured gas-oil ratio may be increased by the measured or estimated volume of gas going to the tanks. Estimated volume shall be based on the gas-solubility vs. pressure curves for the field or area in

which the well is located.

2. For computing the volume of all gas produced the standard of pressure shall be 10 oz. above an atmospheric pressure of 14.4 lbs/sq. in., the standard temperature shall be 60° F. and the standard of specific gravity shall be 0.85 as compared to air. All measurements of gas shall be adjusted by computation to these standards. In case the gas measurement is made at an abnormally high pressure the measurement may be adjusted in accordance to deviation from Boyles Law. Gas volumes will be computed in cubic feet and gas-oil ratios in cubic feet per barrel of oil.
3. Only recording type gas measuring devices may be used.
4. Orifice well testers, orifice meters and side pressure test nipples are approved as measuring devices and the side pressure test nipples are approved only when it is necessary to measure volumes larger than can conveniently be measured by orifice meter.

ANY WELL THAT CANNOT BE TESTED UNDER THE PRECEDING RULES SHALL BE REFERRED TO THE OIL CONSERVATION COMMISSION FOR SPECIAL CONSIDERATION AND RULES.

ALL WELLS MUST BE TESTED.

DONE at Santa Fe, New Mexico, this 13th day of January,
1940.

NEW MEXICO OIL CONSERVATION COMMISSION

By Frank Worden
Commissioner of Public Lands

By A. Andreas
State Geologist

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. 19.

THE ADOPTION OF REGULATIONS GOVERNING
GAS-OIL RATIOS IN THE VARIOUS PRODUCING
FIELDS IN NEW MEXICO.

ORDER NO. 236.

ORDER OF THE COMMISSIN SETTING A TIME FOR
THE PURPOSE OF PRESENTING OBJECTIONS TO THE
COMMISSION AS TO ORDER NO. 238 OF THE COMMISSION
(REGULATING AND PRESCRIBING MAXIMUM GAS-OIL
RATIOS FOR THE VARIOUS FIELDS OF THE STATE OF
NEW MEXICO) AND AS TO ORDER NO. 237 OF THE
COMMISSION (PRESCRIBING RULES AND REGULATIONS
FOR GAS-OIL RATIO SURVEYS IN NEW MEXICO).

BY THE COMMISSION:

This cause came on for hearing at ten o'clock A. M. on the
9th day of December, 1939, in the chamber of the House of Repre-
sentatives, in the State Capitol, Santa Fe, New Mexico.

NOW, on this 13th day of January, 1940, the Commission
having before it for consideration the evidence adduced at the
hearing in said case and being fully advised in the premises,
the Commission adopted the following order simultaneously with
the adoption of the two orders named hereinbelow:

This case is continued to Monday, March 4, 1940, at ten
o'clock A. M., at the State Capitol, Santa Fe, New Mexico, for
the purpose of presenting to the Commission the objections which
any party in interest may have as to the orders of the Commission
described hereinbelow in order that said orders may be respectively
revised as the exigencies may require:

Order No. 238 of the Commission, regulating and
prescribing maximum gas-oil ratios for the various
fields of the State of New Mexico.

Order No. 237 of the Commission, prescribing rules
and regulations for gas-oil ratio surveys in New Mexico.

DONE at Santa Fe, New Mexico, this 13th day of January,
1940.

NEW MEXICO OIL CONSERVATION COMMISSION

By Frank W. Warden
Commissioner of Public Lands.

By A. Anderson
State Geologist

CASE NO. 19

BEFORE THE OIL CONSERVATION COMMISSION
FOR THE STATE OF NEW MEXICO

HEARING TO CONSIDER REGULATIONS
COVERING OIL-GAS RATIOS FOR THE
PRODUCING FIELDS IN THE STATE OF
NEW MEXICO

THE CAPITOL, SANTA FE, NEW MEXICO
DECEMBER 9th, 1939

Pursuant to notice, duly given and published, hearing in the above entitled matter was convened in the Hall of the House of Representatives, Capitol Building, Santa Fe, New Mexico, at the hour of ten o'clock, A. M., of December 9th, 1939, the Commission sitting as follows:

Hon. John E. Miles, Governor, Chairman of Commission
Hon. Frank Worden, Commissioner of Public Lands, Secretary

Owing to the fact that hearing in Case No. 14, which was set for December 6th, 1939, was not finished at ten o'clock on December 9th, 1939, and was suspended for the hearing in Case No. 19, appearances of interested parties were not re-taken for this hearing, but the appearances entered in Case No. 14 were entered in this case as follows:

J. O. Seth	Stanolind Oil & Gas Co.	Santa Fe, New Mexico
D. D. Bodie	Cities Service Oil Co.	Hobbs, New Mexico
J. D. Atwood	Cities Service Oil Co.	Roswell, New Mexico
Lloyd L. Gray	Gulf Oil Corporation	Tulsa, Oklahoma
P. H. Bohart	Gulf Oil Corporation	Tulsa, Oklahoma
Russell G. Lowe	Gulf Oil Corporation	Tulsa, Oklahoma
R. S. Knappen	Gulf Oil Corporation	Tulsa, Oklahoma
S. G. Sanderson	Gulf Oil Corporation	Tulsa, Oklahoma
A. D. Curtis	Barnsdall Oil Co.	Tulsa, Oklahoma
J. S. Noland	Barnsdall Oil Co.	Tulsa, Oklahoma
W.M.Fleetwood, Jr.	Barnsdall Oil Co.	Tulsa, Oklahoma
E. P. Keeler	Continental Oil Co.	Hobbs, New Mexico
R. S. Dewey	Humble Oil & Rfg. Co.	Midland, Texas
W. E. Hubbard	Humble Oil & Rfg. Co.	Houston, Texas
R. A. Koenig	Ohio Oil Co.	Hobbs, New Mexico
Glenn Bish	Ohio Oil Co.	Hobbs, New Mexico
H. L. Johnston	Continental Oil Co.	Hobbs, New Mexico
H. B. Hurley	Continental Oil Co.	Fort Worth, Texas
D. R. McKeithan	Phillips Petroleum Co.	Bartlesville, Okla.
A. E. Willig	The Texas Co.	Fort Worth, Texas
Ira Van Tyl	Gulf Oil Corp.	Hobbs, New Mexico
Ross M. Stuntz, Jr.	Gulf Oil Corp.	Tulsa, Oklahoma
S. P. Hannifin	Magnolia Petroleum Co.	Roswell, New Mexico
Delmer R. Guinn	Cities Service Oil Co.	Hobbs, New Mexico
Allen B. Gibson	Cities Service Oil Co.	Hobbs, New Mexico
D. A. Powell	Drlg. & Exploration Co.	Hobbs, New Mexico
Jack H. Rankin	Repollo Oil Co.	Midland, Texas
N. B. Larsh	Repollo Oil Co.	Midland, Texas
H. J. Summy	Repollo Oil Co.	Midland, Texas
Frank Gray	Anderson-Prichard Oil Corp.	Hobbs, New Mexico
Weston Payne	Anderson-Prichard Oil Corp.	Oklahoma City, Okla.
H. J. Kemler	Shell Oil Co.	Midland, Texas

O. D. Crites	Shell Oil Co.	Houston, Texas
M. T. Smith	Shell Oil Co.	Midland, Texas
F. E. Heath	Sun Oil Co.	Dallas, Texas
Harvey Hardison	Standard Oil Co. of Texas	Houston, Texas
Francis C. Wilson	Wilson Oil Co.	Santa Fe, New Mexico
Weldon Brigance	Rowan Drilling Co.	Fort Worth, Texas
R. S. Christie	Amerada Petroleum Co.	Fort Worth, Texas
G. G. Campbell	Tex.-Pacific Coal & Oil	Midland, Texas
O. F. Hedrick	Tex.-Pacific Coal & Oil	Midland, Texas
G. W. Selinger	Skelly Oil & Getty Oil	Tulsa, Oklahoma
Colin C. Rabe	Skelly Oil Co.	Tulsa, Oklahoma
M. Albertson	Shell Oil Co., Inc.	Houston, Texas
R. G. Schuehle	Shell Oil Co.	Midland, Texas
E. W. Childers	Tidewater Assoc. Oil Co.	Midland, Texas
Edgar Kraus	Atlantic Pfg. Co.	Carlsbad, New Mexico
Lig Biddick	Samedan Oil Corp.	Ardmore, Oklahoma
J. P. Cusack	J. P. Cusack, Inc.	Midland, Texas
A. M. McCorkle	Stanolind Oil & Gas Co.	Fort Worth, Texas
G. H. Card	Stanolind Oil & Gas Co.	Fort Worth, Texas
Howard P. Holmes	Two States Oil Co.	Dallas, Texas
Roy Yarborough	Oil Conservation Comm.	Hobbs, New Mexico
Rex E. Rader	Stanolind Oil & Gas Co.	Hobbs, New Mexico
R. W. Tesch	Stanolind Oil & Gas Co.	Fort Worth, Texas
Guy H. Woodward	Stanolind Oil & Gas Co.	Tulsa, Oklahoma
G. S. Bays	Stanolind Oil & Gas Co.	Tulsa, Oklahoma

The hearing was opened by Governor Miles.

Thereupon, at the request of Mr. Worden, the Notice for Publication for the hearing was read as follows:

"NOTICE FOR PUBLICATION

STATE OF NEW MEXICO

OIL CONSERVATION COMMISSION

Pursuant to Chapter 72, Session Laws of 1935, State of New Mexico, by which Act the Oil Conservation Commission of New Mexico was created, investing said Commission with the jurisdiction and authority over all matters relating to the conservation of oil and gas in this State and of the enforcement of all provisions of said Act, notice is hereby given that a public hearing will be held at the Capitol, Santa Fe, New Mexico, on the 9th day of December, 1939, at ten o'clock A. M., for the purpose of considering the following:

Case No. 19.

The adoption of regulations governing oil-gas ratios in the various producing fields in New Mexico.

Any person having any interest in the subject of the said hearing shall be entitled to be heard.

Given under the seal of said Commission at Santa Fe, New Mexico, on November 16, 1939.

OIL CONSERVATION COMMISSION

By (Sgd.) JOHN E. MILES
Governor

By (Sgd.) FRANK WORDEN
Commissioner of Public Lands

(SEAL)

A. M. McCORKLE,

being called as a witness, and being first duly sworn to tell the truth, the whole truth, and nothing but the truth, was examined by Mr. Seth, and testified as follows:

DIRECT EXAMINATION

Q Your name is A. M. McCorkle?

A Yes, sir.

Q You are Chairman of the Lea County Operators?

A I am.

Q You may make any statement you wish, Mr. McCorkle.

A For a great many years the matter of gas-oil ratios, and corrective work to reduce the same, has been given a great deal of serious attention, and a great deal of work has been done to remedy the same in the Lea County, New Mexico fields. Several months ago, prior to the notice of this hearing, at a meeting of the Monument-Hobbs operators, this matter was discussed, and Mr. Staley, the umpire at Hobbs, was instructed to appoint a special engineering committee of five to study the subject and to recommend some method of penalizing the high gas-oil ratio wells in order to further encourage corrective work to eliminate physical waste. This study, at that time, was primarily for the Monument Pool, but was later enlarged to include all Lea County pools, and at a meeting -- a special meeting of the Lea County Operators in this room on December 7, 1939, the operators moved -- that is, a majority of the operators present instructed the Chairman of this Special Engineering Committee, who is Mr. R. S. Christie, to present their recommendations to the Commission at this hearing for taking care of this matter, at least temporarily until a detailed study could be made of all the pools.

I believe that is all.

BY GOVERNOR MILES: Has that study been made?

A Mr. Christie, I believe, will testify as to that.

BY MR. KRAUS: Have there been any other counties working on this

problem? Have there been any remedial programs instituted, even before this?

A I believe I undertook to state in my remarks, this matter has been under consideration, and considerable work toward reducing gas-oil ratios has been done for several years. The Hobbs Engineering Committee meets regularly, and a review of the minutes of their meetings will show that, so far as I can recall, there was never a meeting but what the matter has been brought up, the corrective work that has been done since the last meeting, the results of the same, and discussion of additional corrective work.

WITNESS DISMISSED.

R. S. CHRISTIE,

being called as a witness, and being first duly sworn to tell the truth, the whole truth, and nothing but the truth, was examined by Mr. Seth, and testified as follows:

DIRECT EXAMINATION

Q Your name is R. S. Christie?

A Yes, sir.

Q You are petroleum engineer for the Amerada?

A Yes, sir.

Q You have had many years experience in the Lea County oil fields?

A Yes, sir.

Q You have heard Mr. McCorkle's testimony about the engineering committee that was appointed?

A Yes, sir.

Q Have you the recommendations of that committee?

A I have.

Q Will you please state the names of the members of the committee, and read into the record the recommendations of the committee?

A The members of this committee are Mr. Lloyd Gray, of the Gulf Oil Corporation; Mr. Van A. Mills, of the Continental Oil Company; and R. S. Christie, of the Amerada Petroleum Corporation; Mr. Glenn Staley, Chairman of the Lea County Engineering Committee; Mr. F. E. Heath, of the Sun Oil Company.

Q Will you read the recommendations?

"RECOMMENDATION FOR A GAS DISPLACEMENT FACTOR FOR
WELLS IN LEA COUNTY.

1. Any well producing with a net gas-oil ratio in excess of ten thousand (10,000) cubic feet per barrel of oil produced, shall be allowed to produce daily a total volume of gas equivalent to that quantity obtained by multiplying the average unit allowable for Lea County by 10,000. The displacement volume will vary from time to time as the allowable production for units is changed.

In applying the displacement factor to the unit allowable in a field, the units penalized in daily allowable shall first be set up on the schedule and the remaining oil distributed to the remaining units of the field.

There are some fields with high ratio wells producing large volumes of water which may warrant a temporary exception to this rule.

Net gas is defined as gas coming from the formation with the oil produced from the well and not returned to the reservoir.

2. Within sixty (60) days after the inauguration of this temporary order, a study of all fields shall be made and evidence presented at an open hearing; such evidence to be used as a basis for establishing a proper gas-oil ratio limit for each field, after which an order shall be prepared and made effective immediately.

3. That a committee of field engineers be appointed by Mr. Staley to determine a standard method of taking gas measurements for the calculation of gas-oil ratios.

4. That a quarterly gas-oil ratio survey shall be made and reported on all wells in all fields in Lea County."

Q Mr. Christie, do you recommend to the Commission the adoption of these recommendations of the committee?

A Yes, I do.

Q Do you believe these recommendations would be a start, at least, in the right direction for the conservation of oil and gas?

A I do.

Q The committee contemplates, after setting out conditions, the adjustment of, and lowering of the ratios?

A That is correct. This committee did not feel it had time enough

to go thoroughly into all fields, therefore they recommend this sixty days, at which time ratios for all fields should be set.

Q If this recommendation is put into effect immediately in will conserve a large amount of gas in Lea County?

A Well, there are approximately 127 wells with a ratio above 10,000 cubic feet.

Q This will immediately bring them down to this limit, unless corrective measures are immediately put into effect?

A That is correct. For some reason or other, we have checked 107 of those wells with a ratio above 10,000, and the average ratio of those 107 wells is 25,836 cubic feet.

Q Would the effect of this regulation be to reduce the well with 25,000 cubic feet ratio, cut the allowable down approximately two-fifths, unless corrective work is done?

A Yes. If we assume that the allowable on these 107 wells is 46 barrels, we save a total of 77,000,000 cubic feet by using the displacement factor of 10,000 cubic feet, and we feel that is a pretty good start, if we can correct all of those and, in the meantime, work out details for other fields -- to be a very good conservation measure.

BY MR. COLE (The Texas Company):

Q Mr. Christie, there are a number of wells, essentially gas wells, which nevertheless produce a small quantity of oil, the gas being sold to pipe lines for fuel, domestic and otherwise. Did your committee give consideration to those wells in this recommendation?

A Not specifically. I believe this applies to those set up on the proration schedule. Are those wells set up on the proration schedule? Of course, there would have to be exceptions. You could not cut a gas well down to 10,000 cubic feet.

Q You think those wells which are essentially gas wells should be exempt from the order?

BY MR. SETH: You mean, provide in the order for gas wells?

BY MR. COLE: Provide in the order for gas wells supplying the pipe line market.

A Yes, I certainly do.

BY MR. COLE: I would like particularly to call the Commission's

attention to that condition, and ask their consideration.

BY MR. LIVERMORE (Great Western Producers, Inc.)

Q Was your recommendation that this order go into effect immediately in cutting back all allowables?

A On 10,000, all wells above 10,000 cubic feet.

BY MR. LIVERMORE: I would like to register a protest on that, unless we be given time to present evidence -- I have evidence that it would result in further loss; also we would like to have time to go into it. By increasing the allowables still further, I believe we would reduce the ratios, and by putting that order into effect, it would bring about material loss. I have evidence I can produce, and I feel it would be a hardship to me if that was put in effect.

A Of course, this is a recommendation to the Commission. That would be a problem for them to settle.

BY MR. SETH: Isn't 10,000 felt to be quite liberal?

A Yes, I think it is, I am satisfied that is. It is probably high for a number of fields, and probably too low for one or two fields.

BY MR. McKEITHAN (Phillips Petroleum Co.): I would like to say, in general, we think the recommendations are very constructive. I would like to ask Mr. Christie a few questions.

Q You are familiar with production in the Cooper field?

A Yes, sir.

Q Then you know that large volumes of water are being produced along with the oil in that field?

A That is correct.

Q As a result of these large volumes of water being produced, the gas, in many cases, is apparently very high, the gas-oil ratio.

A I understand the gas-oil ratio is in excess of 12,000 in the Cooper field, so the value of all wells would be penalized. That is our reason for the second to the last paragraph in our first recommendation.

Q If the 10,000 ratio is put into immediate effect that might result in considerable waste in the Cooper pool?

A I believe that is true.

Q Would you recommend in the Cooper Pool, due to these conditions,

that the Commission might not put into effect these proposed rules until a regular hearing has been held for the permanent work?

A I believe that would be reasonable for that pool. I would like to correct that statement -- I doubt very much if it would tend to create physical waste, but it might cause some hardship.

Q Many wells would be shut down?

A Yes, sir.

Q And probably never produce again?

A That is right.

BY MR. RANKIN (Repollo Oil Co.): The Repollo Oil Company is very much in favor of any measure that will reduce the gas-oil ratios and produce conservation. However, we think more equity would result in volumetric withdrawals rather than flat measurements, in the Lea County allowables, in that in a number of pools it is necessary to produce gas in order to flow the wells.

I would like to recommend, or ask, that the Commission consider that the volumetric withdrawal of the gas be based on 10,000 cubic feet -- whatever the Commission desires -- that be multiplied by the highest allowable for any well in the field, and this be the top gas allowable for any well in the field, and upon production of that volume of gas and oil, production up to or below the well's allowable be allowed for a well.

BY MR. LIVERMORE: I would like to clear up one statement. I am not objecting to a reasonable conservation of gas. However, there are conditions you sometimes can't regulate without special consideration of the problem. In the problem I have referred to, I have already spent a considerable amount of money trying to correct conditions as they exist, and have gone to considerable expense in remedial work. But this rule, if enforced, would tend to impair the wells down there, and if continued, would result in complete loss. If it is necessary, and you think proper, I can present the evidence here at this time.

BY GOVERNOR MILES: Any further questions? How long would it take you to produce your evidence? Could you submit that in writing to the Commission?

BY MR. LIVERMORE: I will, yes, sir.

BY GOVERNOR MILES: Before proceeding further in this matter, Mr. Kraus,

I have a question I would like to ask you. How many wells are there in Lea County?

BY MR. KRAUS: I am sorry -- I have a schedule covering the period to September 16th -- on the schedule the total is 2318. Since them there must be at least 100 more.

BY GOVERNOR MILES: How many of those wells show over 10,000 cubic feet?

BY MR. KRAUS: Mr. Christie just testified 125, about 5%. I think the number now is slightly less than 5%.

BY MR. DEWEY: I think Mr. Christie failed to point out in his report that it was a majority report, and that there were several operators who did not concur fully. In behalf of the Humble Oil and Refining Company I wish to state it was our opinion that the 10,000 cubic feet per barrel ratio was somewhat high, and it is our hope that when the fields are more adequately studied, this ratio will be very materially reduced in the majority of the fields.

BY MR. RANKIN: I would like to have the record and minutes of all previous hearings be made a part of the record at this hearing.

BY MR. COLE: On behalf of the Texas Company I wish to state we concur in the recommendation, as one of the operators in the county, of 10,000 cubic feet as a temporary measure only, in that we believe it will be found, when individual fields are studied, that a lower ratio will be found desirable. We consider 10,000 too high as a blanket measure for all fields. A much lower ratio should be applied to most fields, and for that reason, we would concur with the understanding that each individual field be given further consideration for ultimate orders.

BY MR. RAE: (To Mr. Christie):

Q Do you know approximately what the approximate gas-oil ratio is in Lea County on wells there?

A This is from memory -- approximately 3300 I believe.

Q In your opinion, would that ratio compare favorably with other operating fields in the United States?

A I believe that is a very reasonable figure.

Q What would be the investment in well costs, in these 127 wells that

have a ratio greater than 10,000 cubic feet, for wells that would be penalized or worked over?

A What would it cost to work them over?

Q I mean, the total cost to each well, the cost of drilling and completing each well?

A I would not attempt to answer that, it would take in the whole of Lea County.

Q What would you assume would be a fair average cost to drill those wells?

A Roughly, \$30,000.00.

Q The wells, the 127 wells, would represent an investment of \$30,000.00 times 127 -- that would be three or four million dollars, approximately?

A That is right.

Q In your opinion, where the ratio in general is low, the fact that the committee recommended this work be done on these wells, they considered that would be a reasonable start toward corrective work?

A Yes, sir.

BY GOVERNOR MILES: If there are no further questions or testimony, the Commission will take this matter under advisement.

C E R T I F I C A T E

I hereby certify that the foregoing and attached nine and a half pages of typewritten matter are a true, correct and complete transcript of the shorthand notes taken by me at the hearing in the above entitled matter on the 9th day of December, 1939, and by me extended into typewriting.

Witness my hand this 10th day of January, 1940.

Esther Barton

AFFIDAVIT OF PUBLICATION

State of New Mexico, }
County of Lea }

I, THOMAS G. SUMMERS
PUBLISHER

Of the Hobbs Daily News-Sun, a
daily newspaper published at Hobbs,
New Mexico, do solemnly swear that
the clipping attached hereto was
published once a week in the regular
and entire issue of said paper, and
not in a supplement thereof for a

period of _____
ONE DAY ~~*****~~

beginning with the issue dated _____
NOVEMBER 20, 1939

and ending with the issue dated _____
NOVEMBER 20, 1939

Thomas G. Summers
Publisher.

Sworn and subscribed to before me
this 20TH day of _____

NOVEMBER, 1939
John Barber
Notary Public.

My commission expires _____
Oct 17, 1943, 193_____
(Seal)

This newspaper is duly qualified
to publish legal notices or ad-
vertisements within the mean-
ing of Section 3, Chapter 167,
Laws of 1937, and payment of
fees for said publication has
been made.

LEGAL NOTICE

(Published Nov. 20, 1939)
**NOTICE FOR PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION
COMMISSION**

Pursuant to Chapter 72, Ses-
sion Laws of 1935, State of New
Mexico, by which Act the Oil
Conservation Commission of New
Mexico was created, investing
said Commission with the juris-
diction and authority over all
matters relating to the conserv-
ation of oil and gas in this State
and of the enforcement of all
provisions of said Act, notice is
hereby given that a public hear-
ing will be held at the Capitol,
Santa Fe, New Mexico, on the
9th day of December, 1939, at
ten o'clock A. M., for the pur-
pose of considering the follow-
ing:

Case No. 19.

The adoption of regulations
governing oil-gas ratios in
the various producing fields
in New Mexico.

Any person having any inter-
est in the subject of the said
hearing shall be entitled to be
heard.

Given under the seal of said
Commission at Santa Fe, New
Mexico, on November 16, 1939.

**OIL CONSERVATION
COMMISSION**

By (Sgd.) JOHN E. MILES
Governor.

By (Sgd.) FRANK WORDEN
Commission of Public Lands
(SEAL)

Legal Notice

NOTICE FOR PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION
COMMISSION

Pursuant to Chapter 72, Session Laws of 1935, State of New Mexico, by which Act the Oil Conservation Commission of New Mexico was created, investing said Commission with the jurisdiction and authority over all matters relating to the conservation of oil and gas in this State and of the enforcement of all provisions of said Act, notice is hereby given that a public hearing will be held at the Capitol, Santa Fe, New Mexico, on the 9th day of December, 1939, at ten o'clock A. M., for the purpose of considering the following:

Case No. 12.

The adoption of regulations governing oil-gas ratios in the various producing fields in New Mexico.

Any person having any interest in the subject of the said hearing shall be entitled to be heard.

Given under the seal of said Commission at Santa Fe, New Mexico, on November 15, 1939.

OIL CONSERVATION
COMMISSION

By (Sgd.) JOHN E. MILES
Governor

By (Sgd.) FRANK WORDEN
Commissioner of Public
Lands

(S.F.A.L.)
Publish—Nov. 18, 1939.

Affidavit of Publication

Dec. 11, 1939

OF NEW MEXICO
COUNTY OF SANTA FE
CITY OF SANTA FE

ss.

I, Larry Bynon, hereby swear that I am the Publisher of New Mexico Examiner, a newspaper of general circulation of Santa Fe, the County of Santa Fe, and the State of New Mexico, printed daily in the City of Santa Fe; that the at-

a true copy of Publication appeared in the New Mexico Examiner, issues of

November 18, 1939, in a full and complete the paper.

newspaper is duly qualified to publish legal notices or advertisements in the meaning of Sec. 3, Chapter 167, Laws of 1937.

Signed:

Larry Bynon

STATE OF NEW MEXICO
COUNTY OF SANTA FE
CITY OF SANTA FE

ss.

Larry Bynon appeared before me this 11 day of Dec, 1939, known to me to be the person above making affidavit, and after being duly sworn, deposes and says that the statements above made are true and accurate to the best of his knowledge.

Edna Draper
Notary Public in and for Santa Fe
County, State of New Mexico.

My Commission expires:

Apr 24, 1943

NOTICE FOR PUBLICATION

STATE OF NEW MEXICO

OIL CONSERVATION COMMISSION

Pursuant to Chapter 72, Session Laws of 1935, State of New Mexico, by which Act the Oil Conservation Commission of New Mexico was created, investing said Commission with the jurisdiction and authority over all matters relating to the conservation of oil and gas in this State and of the enforcement of all provisions of said Act, notice is hereby given that a public hearing will be held at the Capitol, Santa Fe, New Mexico, on the 9th day of December, 1939, at ten o'clock A. M., for the purpose of considering the following:

Case No. 19.

The adoption of regulations governing oil-gas ratios in the various producing fields in New Mexico.

Any person having any interest in the subject of the said hearing shall be entitled to be heard.

Given under the seal of said Commission at Santa Fe, New Mexico, on November 16, 1939.

OIL CONSERVATION COMMISSION

By

John E. Miles
Governor

By

Frank E. Worden
Commissioner of Public Lands

Case No.

19

File #2

Application, Transcript,
Small Exhibits, Etc.

After considering the discussion and numerous changes, a final version of the report of the operators' product concerning the investigation and solution of the problem to which this letter refers, has been prepared and submitted to the Board of Directors of the American Telephone and Telegraph Company, dated 11-1-1933.

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PROPOSED ORDER FOR GAS-OIL RATIO

NEW MEXICO

1. The gas-oil ratio of a unit regardless of the number of wells thereon, as applied in this order shall be the total output gas less the total input gas divided by the barrels of oil produced.

2. A marginal unit is one incapable of producing the acreage allowable for the pool in which the well is located.

3. The normal oil allowable of a non-marginal unit is the allowable it will receive before the gas-oil ratio adjustment is applied.

4. A standard gas-oil ratio test shall be made on each well or unit in accordance with the rules set out in Order No. 237 once each year. The tests shall be made not more than 60 days prior to the effective date* for the pool in which the well or unit is located, as shown in Exhibit A attached.

5. A standard gas-oil ratio test shall be made within 30 days after the completion of, a new well, remedial work, work-over, clean out, acidation, or any changes which effect subsurface producing conditions. The effective date of such tests shall be the beginning of the next succeeding 15-day proration period except that the Commission must be notified that the well or unit is ready for test at least five days before the beginning of such proration period. Tests shall not be required due to changes in choke opening or in subsurface pumping equipment unless requested by the owner or operator of the well or unit. All wells included in this section shall be retested on the next regular survey either annual or semi-annual.

6. A standard gas-oil ratio test shall be made at the discretion of the Commission or its duly authorized deputy on any well or unit whenever a written request is submitted to the Commission or its duly authorized deputy by any operator in the pool in which the well or unit is located. Also, tests may be made on any wells selected by the Commission or the Proration Umpire for any reason whatsoever. The effective date of such tests shall be the same as provided in paragraph 5 above.

7. A standard gas-oil ratio test shall be made semi-annually on all wells tested in accordance to paragraphs 4 and 6 above that had a gas-oil ratio in excess of 80% of the maximum provided for the pool in which the well is located. The tests shall be made not more than 60 days prior to the effective date for the pool in which the well or unit is located as shown in Exhibit A attached.

8. The oil allowable of each well or unit producing with a gas-oil ratio in excess of the maximum provided for the pool in which the well or unit is located shall be adjusted as hereinafter provided. The maximum gas-oil ratio permitted each pool and undesignated area is shown in Exhibit A, attached.

9. The application of the gas-oil ratio adjustment shall be as follows:

(a) The oil allocation shall be distributed to the various pools and the pools within Lea County in the same manner, used prior to February 1, 1940.

(b) In each pool, except Hobbs and Monument, the amount of oil allocated to marginal adjusted units shall be deducted from the pool allocation. From the balance shall be deducted the oil allocated to adjusted units, both marginal and non-marginal. The remaining oil shall be distributed equally to non-marginal unadjusted units. The oil allowable of each unit having a gas-oil ratio higher than the pool permitted maximum shall be, the maximum gas-oil ratio of the pool multiplied by the normal unit allowable for the pool (as determined in sub-paragraph (a) above) and divided by the gas-oil ratio of the well, except at a marginal unit shall not be allocated an amount of oil exceeding its capacity to produce.

9. (c) In the Hobbs and Monument Pools the proration schedule shall be calculated in the normal manner according to the order of the Commission for that field. Each unit having an allowable equal to or less than the average unit allowable for the pool shall be allowed to produce an amount of gas equal to the product of the permitted maximum gas-oil ratio of the pool multiplied by the average unit allowable; provided that a unit, the oil allowable of which has been ^{adjusted} penalized by high gas-oil ratio shall not exceed the allowable as determined by the proration formula for that particular field.

Any unit having an allowable greater than the average unit allowable for that field shall be allowed to produce only that amount of gas determined by the product of the permitted ~~gas~~ ^{gas-oil ratio} maximum and the oil allowable assigned to it by the proration formula for that pool.

From the pool allocation shall be deducted the amount of oil allocated to marginal and wells penalized for high gas-oil ratio. The remaining oil shall be distributed to the remaining unpenalized wells in accordance with the pool proration plan.

10. Legal overage and shortage shall be handled as in the past. That is, the adjusted oil allowable shall be the current oil allowable plus approved shortage or the current allowable less the overage, whichever applies in the particular case.

11. In order to encourage repressuring or the maintenance of reservoir pressure, the volume of gas injected into the reservoir may be deducted from the output gas in determining the net gas-oil ratio. The exact manner of applying this section shall be determined after a public hearing before the Commission.

12. When remedial work has been completed on a unit back allowable will be granted from the date of starting such work for a period not exceeding 60 days calculated on the basis of the standard gas-oil ratio test made subsequent to remedial work.

13. In any reservoir, within a pool in the county in this State, the content of which is designated by the Commission as predominantly gas, the wells producing therefrom shall not be subject to the gas-oil ratio adjustment provided for herein for oil wells; provided that no such well or unit shall be permitted to produce more oil than the normal allowable of a unit in the county.

14. Units producing gas only from a reservoir not designated as a gas reservoir, as provided in Section 13 above, shall be allowed to produce only as much gas as would result in a reservoir voidage on a volumetric basis equal to that voided by an oil well producing with a maximum gas-oil ratio permitted for that reservoir.

15. Marginal units produced primarily for gas sale in a reservoir, as described in Section 14 above, shall be permitted to produce a volume not to exceed that permitted in Section 14 above.

16. Wells in newly discovered or undesignated pools shall be allowed to produce with a limiting gas-oil ratio of 2,000 cu. ft. per barrel for purposes of allocation until a hearing shall have been called and testimony presented upon which a ratio can be set. Such hearing shall be called and rules issued within six months after the completion of the discovery well or upon the completion of ten producing wells in the new pool, whichever occurs first.

17. For the purpose of establishing limiting gas-oil ratios the pool designation and boundaries now used by the Commission and Proration Office shall be continued, except: That a new pool area, ARROWHEAD, is designated comprising parts of the former Eunice, South Eunice and Penrose pools and described as follows: E/2 Sec. 34; all Sec. 35 and 36, T. 21S., R. 36 E; also E/2 Sec. 3 and 14 and all Sec. 1, 2, 11, 12, 13 and 24, T. 22S., R. 36E; and NW/4 S/2 Sec. 7, W/2 Sec. 17 and 20; all Secs. 18 and 19, T. 22 S., R. 37 E., and that a SOUTH PENROSE and NORTH PENROSE pool be formed by dividing the present Penrose pool, the limits of each being described as follows: NORTH PENROSE All Sec. 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15 and 16 and NE/4 Sec. 7; also E/2 Sec. 17, T. 22 S., R. 37 E. SOUTH PENROSE All Sec. 21, 22, 23, 24, 25, 26, 27, 28, 29 and 30 and E/2 Sec. 20, T. 22 S., R. 37 E.

18. The gas-oil ratio adjustment shall be based on the last standard gas-oil ratio test of the unit except that wells now producing shall be penalized on the basis of the gas-oil ratio listed on notarized Form C-104A until standard gas-oil ratio survey becomes effective for the pool as shown in Exhibit A, attached.

19. In any case where it appears that serious ^{inequities} as to property rights, or irreparable damage to a well or wells may be caused by the application of the gas-oil ratio adjustments above defined, the Commission shall postpone application of such penalties upon proper application for a hearing from the party or parties who may be injured, until such time as a hearing has been held and a decision reached. The decision of the Commission as a result of such hearing shall be retroactive to the date at which the gas-oil ratio adjustment became effective as to other wells in the field.

21. The above suggested rules and regulations shall, upon presentation of appropriate evidence, before this Commission in hearings called at the request of any operator and in accordance with the provisions of Section 5, Chapter 72 of the Session Laws of 1935, be subject to such exception and modification in particular cases as the Commission may deem advisable or necessary to prevent waste or confiscation of property.

*Effective date as referred to herein shall mean the date the standard gas-oil ratio tests shall be used in the various pools to adjust the oil allowable for gas-oil ratio as listed in Exhibit A.

EXHIBIT A

	Maximum Gas-Oil Ratio	Effective Date	
		Annual Survey	Semi-Annual Survey
Arrowhead	5,500	June 1	Dec. 1
Cooper	10,000	July 1	Jan. 1
Corbin		Aug. 1	Feb. 1
Eaves	7,000	Aug. 1	Feb. 1
Eunice	7,000	May 1	Nov. 1
Half Way		Aug. 1	Feb. 1
Hardy	5,000	June 1	Dec. 1
Hobbs	4,000	July 1	Jan. 1
Jal	10,000	July 1	Jan. 1
Langlie	7,000	July 1	Jan. 1
Lynch		Aug. 1	Feb. 1
North Lynch		Aug. 1	Feb. 1
Lynn	5,000	July 1	Jan. 1
Mattix	7,000	June 1	Dec. 1
Monument	6,000	Apr. 1	Oct. 1
No. Penrose	7,000	June 1	Dec. 1
So. Penrose	7,000	June 1	Dec. 1
Rhodes		July 1	Jan. 1
Skaggs	5,000	June 1	Dec. 1
Skelly	7,000	June 1	Dec. 1
So. Eunice	7,000	May 1	Nov. 1
West Eunice		May 1	Nov. 1
So. Lexington	2,000	Aug. 1	Feb. 1
Vacuum	2,000	Aug. 1	Feb. 1
Artesia		Sept. 1	Mar. 1
Grayburg-Jackson		Sept. 1	Mar. 1
Leonard		Sept. 1	Mar. 1
Loco Hills		Sept. 1	Mar. 1
Maljamar		Sept. 1	Mar. 1
Red Lake		Sept. 1	Mar. 1
Robinson		Sept. 1	Mar. 1
Shugart		Sept. 1	Mar. 1
Barker		Sept. 1	Mar. 1
Getty		Sept. 1	Mar. 1
Non-designated wells or pools	2,000	Sept. 1	Mar. 1

PROPOSED EMERGENCY ORDER NO. _____

The application of the gas-oil ratio adjustment shall be as follows:

(a) The oil allocation shall be distributed to the various pools in the same manner used prior to February 1, 1940.

(b) In each pool, except Hobbs and Monument, the total amount of oil allocated to marginal ^{units} ~~limits~~ not subject to the gas-oil ratio adjustment shall first be subtracted from the pool total oil allocation. Each remaining unit shall be given a percentage rating the value of such rating depending upon its gas-oil ratio. Each unit having a gas-oil ratio equal to or less than the maximum permitted that pool shall be rated at 100. The rating of units having a gas-oil ratio in excess of the permitted maximum shall be calculated according to the following fraction:

$$\text{Rating} = \frac{\text{pool maximum gas-oil ratio} \times 100}{\text{unit gas-oil ratio}}$$

The remaining oil shall be distributed to each remaining unit in the ratio that the rating of each unit bears to the sum of all ratings in the pool.

(c) In the Hobbs and Monument Pools the proration schedule shall be calculated in the normal manner according to the order of the Commission for that field. Each unit having an allowable equal to or less than the average ~~unit~~ allowable for the pool shall be allowed to produce an amount of gas equal to the product of the permitted maximum gas-oil ratio of the pool multiplied by the average ~~unit~~ allowable; provided that a unit, the oil allowable of which has been penalized by high gas-oil ratio shall not exceed the allowable as determined by the proration formula for that particular field.

Any unit having an allowable greater than the average unit allowable that field shall be allowed to produce only that amount of gas determined the product of the permitted maximum gas-oil ratio and the oil allowable assigned to it by the proration formula for that pool.

page 2.

From the pool allocation shall be deducted the amount of oil allocated to marginal and wells penalized for high gas-oil ratio. The remaining oil shall be distributed to the remaining unpenalized wells in accordance with the pool proration plan.

Substitute (c) In the Hobbs or Monument Pools the proration schedule shall be calculated in the normal manner according to the order of the Commission for that pool. Units allocated average allowable or more shall be rated as in paragraph (b) above. Wells allocated less than average allowable shall be rated by the following formula:

$$\text{Rating} = \frac{\text{pool average oil allowable} \times 100 \times \text{pool max. gas-oil ratio}}{\text{unit oil allowable} \times \text{unit gas-oil ratio}}$$

Provided that no unit shall be rated more than 100. Marginal units not subject to the gas-oil ratio adjustment shall not be rated.

The tentative allowable of all rated units shall be totaled. (A) The allowable of each unit shall be multiplied by its rating B and the total of all such products (C) shall be deducted from the total (A) above. The difference shall be divided by the total products (C) above and the quotient multiplied by the product of each unit and the resulting product (D) when added to the previous product (C) shall constitute the allowable of the well

EXAMPLE

tentative allowable		Rating (B)	Product ₁	Product ₂	current allowable
50	X	100 %	= 50 x .2727 = 13		63
40	X	80	= 32 " = 9		41
30	X	60	= 18 " = 5		23
20	X	50	= 10 " = 3		13
<u>140 A</u>			<u>110 (C)</u>		<u>140</u>
		140			
		<u>110</u>			
		30	30 ÷ 110 = .2727		

GAS-OIL RATIO PLAN - EXAMPLE

CONTINENTAL PROPERTIES

EUNICE POOL

MARGINAL WELLS	WELL	NO. WELLS	RATING	MARG. ALLOW.	CURRENT ALLOW.	
Meyer B-8	1	1		38	38	4412 Total company allocation
						38 Total unadjusted marginal allow.
						4374

NON-MARGINAL
HIGH GAS-OIL
RATIO WELLS

Lock. A-18	4	1	59.508 X Factor		28
Meyer B- 8	3	1	75.373 "		35
State D-15	7	1	76.943 "		35
Lock. B-31	1	1	15.992 " 10		7
"	2	1	38.474 " 40		18
			266.290		

NON-MARGINAL
WELLS

Total	91	9100 --	4277	47 bbls. per day now using Tap.
	97	9366.290	4439	
			4412	
			27	over allocated due to fractional bbls.

$$4374 \div 9366.290 = .4668 \text{ factor}$$

*It is suggested that par. C be used because substitute C would
maintain the working the previous schedule time.*

J. O. SETH
A. K. MONTGOMERY

SETH AND MONTGOMERY
ATTORNEYS AND COUNSELORS AT LAW

111 SAN FRANCISCO ST.
SANTA FE, NEW MEXICO

March 11, 1940.

Oil Conservation Commission,
Santa Fe, New Mexico.

Gentlemen:

In connection with the proposed revision of the gas-oil ratio regulations and particularly paragraph 9 (c) thereof, I am taking the liberty of bringing to your attention the following:

This proposed rule number 9 (c), for application in Hobbs and Monument Pools, reads in part as follows:

" In the Hobbs and Monument Pools, the proration schedule shall be calculated in the normal manner, according to the order of the Commission for that field. Each unit having an allowable equal to or less than the average unit allowable for the pool shall be allowed to produce an amount of gas equal to the production of the permitted maximum gas-oil ratio of the pool, multiplied by the average unit allowable, provided that a unit, the oil allowable of which has been penalized by high gas-oil ratio, shall not exceed the allowable as determined by the proration formula for that particular field."

The above is as recommended by the majority of the operators affected. Only three or four operators favored a gas allowable for each unit, equal to the field maximum allowable of gas-oil ratio, multiplied by the barrels allowed to each unit, as computed in the schedule, before applying any penalty.

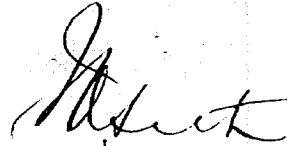
The state conservation law provides that each operator is entitled to his share of the reservoir energy in the opportunity guaranteed him to produce his proportional share of the recoverable reservoir oil. In both the Hobbs and Monument hearings, it was brought out by undisputed evidence, that permeability is the measure of the energy required to produce oil; low permeability requires more energy than high permeability areas within the reservoir, and that the energy requirements to produce oil are inversely proportional to the permeability of the reservoir. Thus, if one area be five times more permeable than another, it would require only one-fifth the amount of reservoir energy to produce.

Generally units of less than average allowable are less than average permeability and will require more than average the amount of gas to produce. The least energy that should be allowed such unit would be the average as covered by the recommended rule. Actually it has been shown by uncontradicted

3/11/40

evidence that it is entitled to a greater amount of energy than the average by that amount of allowable it has been given under the average. The reason for recommending an allowable of gas production, based on the field average, is to comply with the anti-waste provision of the statute. This compromise might be proven to conflict with the provisions of the law, if an operator could prove that this gave him only the average field gas allowable, when his just share of reservoir energy was necessarily more than the average, would be discriminatory. The rule as recommended should more nearly fulfill the requirements of the law, therefore, than the rule supported by the minority of the operators.

Very truly yours,



JOS:IG



CONTINENTAL OIL COMPANY

Hobbs, New Mexico
February 29, 1940

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Gentlemen:

Referring to Case No. 19, Order No. 238, of January 13, 1940, limiting gas/oil ratios in Lea County Fields, this order placed a maximum permissible gas/oil ratio of 1000 in the Skaggs Field. The Hardy Field, joining the Skaggs Field on the south, was given a maximum permissible gas/oil ratio of 5000. The Monument Pool, which is adjacent to the Skaggs Field on the west, was given a maximum permissible gas/oil ratio of 5000. The Eunice Field, which is adjacent to the Skaggs Field on the southwest, was given a maximum permissible gas/oil ratio of 7000.

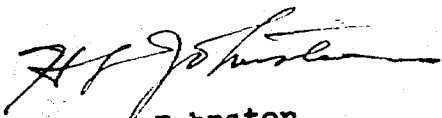
In view of the unusually low ratio set for the Skaggs Field, which appears to be inconsistent with the maximum permissible ratios placed on adjacent fields, it appears that an inequitable condition exists, which unduly

penalizes the Continental Oil Company.

Your attention is called to the similarity of formations and producing conditions in the three Skaggs Field wells and those in the wells in the north end of the adjacent Hardy Field.

In the light of these facts and in order to make an equitable adjustment of the permissible gas/oil ratios, we request that you set a permissible gas/oil ratio of 5000 for the Skaggs Field.

Respectfully submitted,



H. L. Johnston
Superintendent N. M. Dist.
Texas-New Mexico Division
Production and Drlg. Dept.

HLJ:SC

July 8, 1940

Franklin Petroleum Corporation
607 Franklin Building
Oklahoma City, Oklahoma

ATTENTION: LaDara Lucas.

Gentlemen:

Reference is made to your request dated
July 5 for copy of Gas-Oil Ratio Order No. 238.

That order is no longer in existence. I
assume that you desire the existing order which
is Order No. 250, supplemented by Emergency Order
No. 259, which latter is being revived for every
bimonthly proration period until the Commission
can adopt a final order after the gas-oil ratio
surveys have been completed.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Encls.

FRANKLIN PETROLEUM CORPORATION

WIRT FRANKLIN, PRESIDENT
R. W. FAIR, VICE PRESIDENT
BERT ABTON, SECRETARY-TREAS.

RECEIVED
STATE LAND OFFICE

JUL 8 9 35 AM '40

SANTA FE, N. M.

607 Franklin Building
Oklahoma City, Oklahoma
July 5, 1940

Oil Conservation Commission
Santa Fe, New Mexico

Gentlemen:

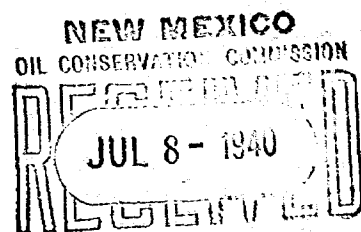
Will you please send us copy of the
Oil-Gas Ratio Order No. 238, and
oblige.

Yours truly,

FRANKLIN PETR. CORP.

LL:AB

By *L. D. Lucas*



The application of the gas-oil adjustment shall be as follows:

(a) The oil allocation shall be distributed to the various pools in the same manner used prior to Feb. 1, 1940.
 (b) In each pool, except Hobbs & Monument, the amount of oil allocated to marginal units shall be deducted from the pool allocation. Each other unit shall be given a percentage rating based upon its relation to the maximum gas-oil ratio times 100 divided by the gas oil ratio of the unit shall be its rating provided that all non-marginal units shall be gas-oil ratios less than the maximum shall be rated at 100. Each well shall be allocated on amount of oil from the total non-marginal prorable oil in the proportion its rating bears to the sum of ratio of all non-marginal units in the pool.

(c) In the Hobbs or Monument Pools the proration schedule shall be calculated in the normal manner according to the Order of the Commission or that pool. From the total oil allocated to the pool there shall be deducted the amount of oil allocated to marginal units. Wells allocated average top allowable or more shall be rated as in paragraph (b) above. Wells allocated less than average shall be rated by the following fraction.

$$\frac{\text{Post average oil allowable} \times 100 \times \text{Max Pool Gas Oil Rates.}}{\text{Unit oil allowable} \times \text{Unit Gas oil Ratio.}}$$

Provided that no unit shall be rated greater than 100.

The allowable of each unit shall be multiplied by its rating (a) and the difference between the sums of these products B. and the total original allowable for the pool (c) shall be divided by the sum of the ratings D. The resulting factor E. Shall be again multiplied by the rating of each well and the product F. added to the previous product. G. The sum of the two products shall be the allowable H. of the well.

	A	G	F	H
50	50%	25	8	33
40	60%	24	10	34
30	80%	24	13	37
20	100%	20	16	36
140 (c)	290%	93 (B)		140
	0.162 (E)			
290	47.0			
	290			

March 15, 1940

Honorable Roy Yarbrough
State Oil & Gas Inspector
Hobbs, New Mexico

Dear Mr. Yarbrough:

Enclosed please find copy of Emergency
Order No. 248 of the Commission, which is self-
explanatory, promulgated for the purpose of
granting temporary relief in certain meritorious
cases.

Very truly yours,

OIL CONSERVATION COMMISSION

By _____
Commissioner of Public Lands

By _____
State Geologist

CBL:ik
Enc.

March 15, 1940

Honorable Glenn Staley
Proration Umpire
Hobbs, New Mexico

Dear Mr. Staley:

Enclosed please find copy of Emergency
Order No. 248 of the Commission, which is self-
explanatory, promulgated for the purpose of
granting temporary relief in certain meritorious
cases.

Very truly yours,

OIL CONSERVATION COMMISSION

By Commissioner of Public Lands

By State Geologist

CBL:k
Enc.

J. P. CUSACK

Box 208
Midland, Texas

February 10, 1940

Honorable John A. Miles
Chairman, Conservation Commission
Hobbs, New Mexico

Dear Governor Miles:

Supplementing my statement before the Commission with reference to the Hobbs proration plan, which testimony was offered on or about December 12 in behalf of J. P. Cusack, Inc., I feel that the more equitable plan would be on a flat basis. However, should the Commission, after reviewing the testimony, feel that the present plan of 60 per cent acreage and 40 per cent potential should be the most equitable, then I feel that the Commission should take into consideration the bottom hole pressure, which all companies without exception have admitted is in error. This being the fact, according to their findings, then the equitable position to take would be to go back to the original potentials which occurred sometime in 1934 and predicate the present allowables upon that basis (that is, 60 per cent to be given to the acreage factor, which is a 40 acre unit, and 40 per cent to be given to the potentials as of on or about 1934.)

Referring to my statement before the Commission, in which I pointed out that by reason of bottom hole pressures, due to water drive, wells in 1934 that had approximately 16,000 barrel potential have increased by reason of the plan in force and effect; namely, bottom hole pressuring, to a potential of approximately 26,000 barrels. As stated before the Commission, it is preposterous that a well after producing five years at a given potential of 16,000 barrels, considering depletion, would still have a potential better by 10,000 barrels than its original given potential.

We have now before us your Case No. 19, Order No. 235, the same being with reference to oil-gas ratios which you have placed in effect as of February 1, using as a gauge the December gas-oil ratios as turned in by the operators.

While I do not wish to take exception to this provision, it seems to me that, before any plan as to gas and oil ratios can be rightfully placed, it should be upon actual gas-oil ratio tests. My reason for this objection is due to the fact that, as I have found it over a period of time in the oil and gas business, affidavits don't particularly give the facts. To be more explicit, I am inclined to believe that affidavits are used mostly for a selfish purpose. It appears, then, that those that have turned in affidavits setting forth gas-oil ratios which possibly are in error would be gaining an advantage and those who have turned in affidavits that definitely fit the position in the case are being penalized.

My suggestion, then, would be that the gas-oil ratios be withheld until such time as the actual tests on all wells and each individual pool have been taken.

Respectfully submitted,
J.P.CUSACK, INC. by J. P. Cusack, President

RECOMMENDATION FOR CONSOLIDATION OF

LYNN AND COOPER POOLS, LEA COUNTY

NEW MEXICO

2045 B

TEXAS PACIFIC COAL AND OIL COMPANY

FORT WORTH,
TEXAS

C. E. YAGER
VICE PRESIDENT

March 1, 1940

In re: Recommendation for
Consolidation of Lynn and
Cooper Pools, Lea County,
New Mexico

New Mexico Conservation Commission
Santa Fe, New Mexico

Gentlemen:

Attention of Mr. Andreas

For several years the Lynn and Cooper Pools have been classified as separate and distinct pools. Attention is hereby called to the fact that they are in reality one and the same pool producing from a common reservoir.

The north line of Township 24 South has been designated as the north line of the Cooper Pool and the south line of the Lynn Pool; yet several wells in the Lynn Pool are direct offsets to those in the Cooper Pool.

We are enclosing herewith a subsurface map and a geologic cross section covering the north part of the Cooper Pool and across all of the Lynn Pool. The subsurface map is contoured on top of the "Yates Sand", which is one of the most reliable structural markers in the area. It is clearly evident from this map that the two pools are in reality one common reservoir, as there is no evidence of either structural closure or stratigraphic change between them. The geologic cross section shows that the producing horizons are the same, and there is nothing to indicate two separate pools.

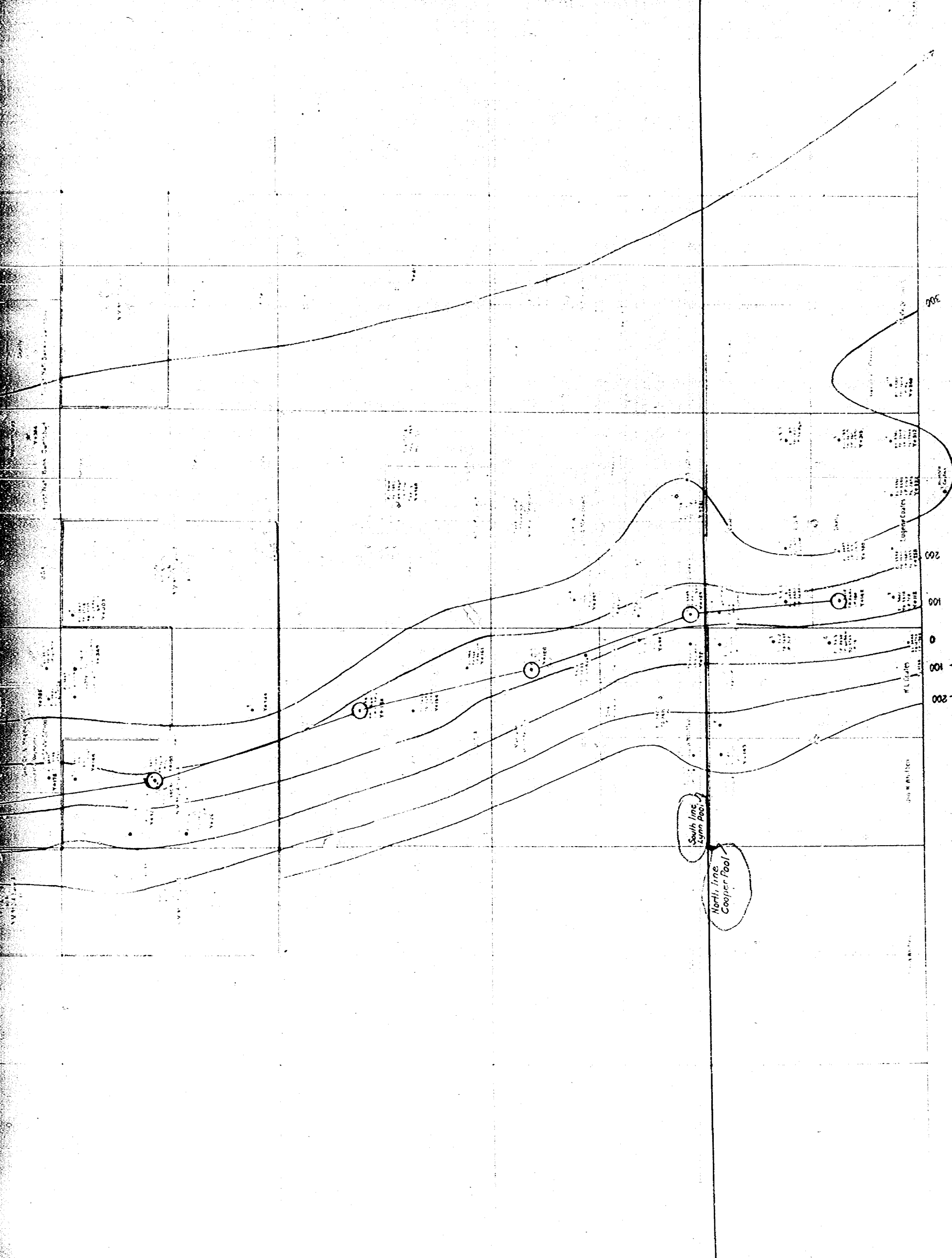
It is our understanding that the recent orders of the Commission set up an allowed gas-oil ratio in the Cooper Field of 10,000 cubic feet per barrel; whereas in the Lynn Pool it is only 3,000 cubic feet per barrel. This disparity, we feel, should be remedied since the recent gas-oil ratio survey shows that the ratios in the two pools are comparable.

We trust that you, after examination of these maps, will see the necessity of consolidating the Lynn and Cooper Pools into one and designating it as the Cooper-Lynn Pool and set up a permissible gas-oil ratio of 10,000 cubic feet per barrel.

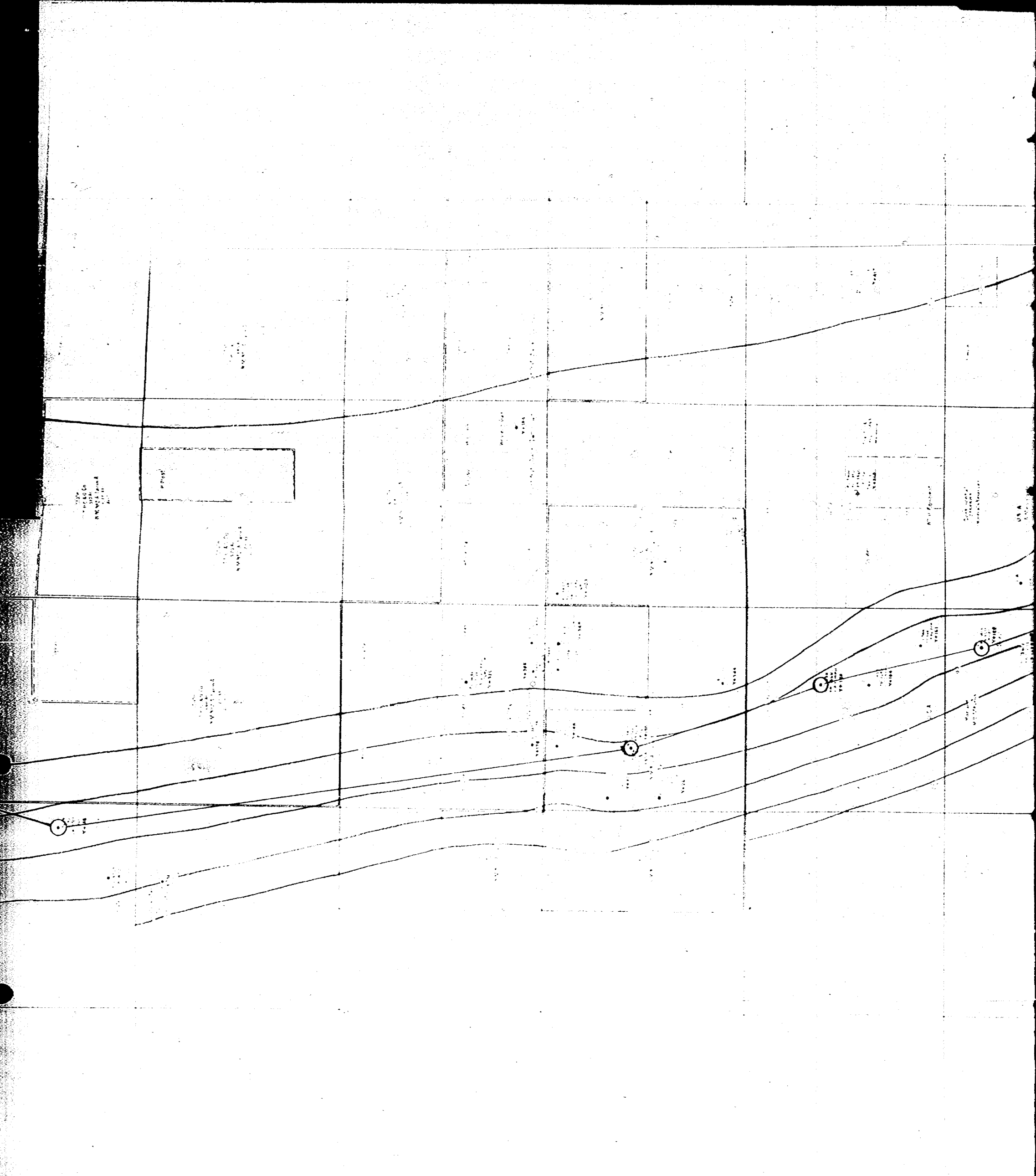
Yours very truly

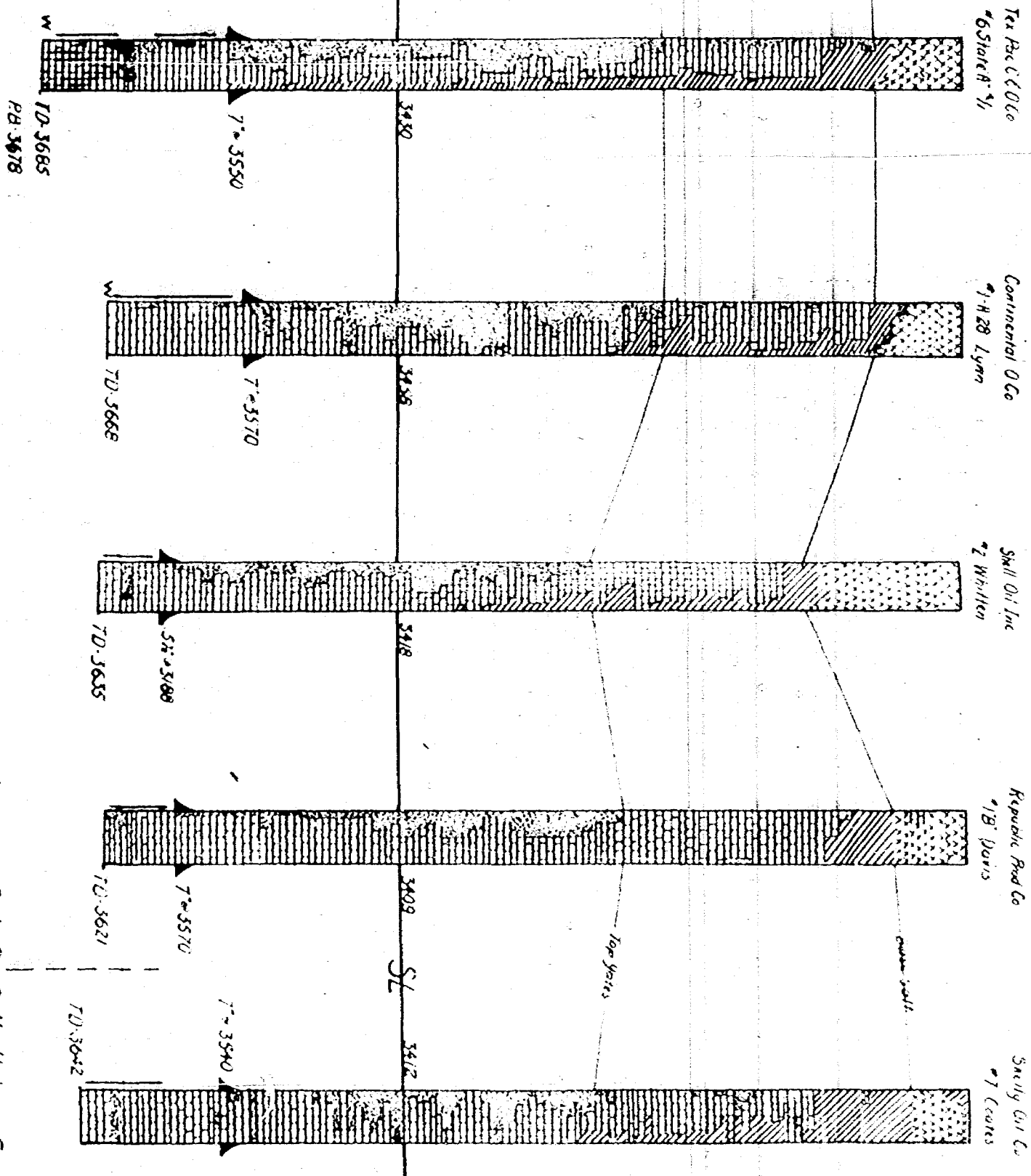


CEY:DK
CC:Mr. Glenn Staley



R 36 E
Los County, New Mexico
Lynn-Cooper Pools
Geological Map
Scale 1:25,000
Date 1958





Cross Section
Showing
Continuation of Producing Horizon
From Cooper Pool to Lynn Pool
Lea County, N. Mexico.
Vertical Scale 1" = 100'

South Line Lynn Pool North Line Cooper Pool

TWO STATES OIL COMPANY

DALLAS, TEXAS

March 14, 1940

MAR 16 8 57 AM '40

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Attention: A. Andreas, State Geologist

Gentlemen:

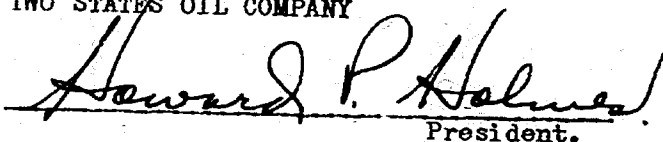
While in New Mexico at the recent hearing on gas-oil ratios, the writer discussed with you, several times, the problem of the Langlie and sand areas in Lea County, New Mexico, as it is affected by the problem of gas-oil ratios.

On Thursday, March 7, you were presented with three letters, signed by the Two States Oil Company, Culbertson & Irwin, Inc., and Harry Leonard, making a recommendation which would handle the condition as it now exists in these areas. Since leaving Santa Fe, we have discussed this problem with several other operators, and we enclose, herewith, identical letters, signed by the Plains Production Company; R. K. Stovall, as a member of the partnership of Culbertson & Irwin, Inc. and R. K. Stovall; and Carl B. King, for the Carl B. King Drilling Company. All of these companies are interested in a very material fashion in the production in the Langlie area and are, therefore, concerned about that particular condition.

We want to thank you, Mr. Worden, and Governor Miles for your thoughtful consideration of our problem, and to submit the recommendation to be acted upon as you consider best.

Very truly yours,

TWO STATES OIL COMPANY


President.

HPH:S

Encls.

March
Sixth
1940.

MAR 10 10 57 AM '40

POSTAL TELEGRAPH

Conservation Commission of the State of New Mexico
Santa Fe, New Mexico

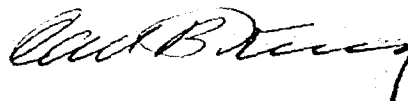
Gentlemen:

At the hearing for the State Conservation Commission on March 5th, a recommendation was made by the Lea County Operators Committee which does not adequately handle the situation as it occurs in the Langlie Pool in Lea County, New Mexico. The particular situation which we have in mind is a group of wells in the Pool where the gas being produced is being sold for use to the El Paso Natural Gas Company. It is our contention that inasmuch as this gas is being used there is no actual waste and that the handling of the problem in this manner fulfills the basic thought of conservation. It is therefore our suggestion that the following clause should be appended to the end of Paragraph 14 on Page 4 of the Recommendations of the Lea County Operators and that this same clause should also be appended to the end of Paragraph 15 on Page 4 of the Recommendations of the Lea County Operators:

"Except that gas produced and sold to a pipe line for commercial or domestic use or gas produced and sold to a gasoline plant for processing where the residue is to be delivered to a commercial or domestic outlet for a consideration shall be credited and shall not be considered in the gas-oil ratio, the effect being that such delivery and sale are approved."

Testimony of a general nature has been offered you in this case although we believe the conditions stated are well known to your group officially.

Very truly yours, L



CARL B. KING DRILLING COMPANY

clb/

cc

March
Sixth
1940.

MAR 16 8 57 AM '40

Santa Fe, N.M.

Conservation Commission of the State of New Mexico
Santa Fe, New Mexico

Gentlemen:

At the hearing for the State Conservation Commission on March 5th, a recommendation was made by the Lea County Operators Committee which does not adequately handle the situation as it occurs in the Langlie Pool in Lea County, New Mexico. The particular situation which we have in mind is a group of wells in the Pool where the gas being produced is being sold for use to the El Paso Natural Gas Company. It is our contention that inasmuch as this gas is being used there is no actual waste and that the handling of the problem in this manner fulfills the basic thought of conservation. It is therefore our suggestion that the following clause should be appended to the end of Paragraph 14 on Page 4 of the Recommendations of the Lea County Operators and that this same clause should also be appended to the end of Paragraph 15 on Page 4 of the Recommendations of the Lea County Operators:

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Testimony of a general nature has been offered you in this case although we believe the conditions stated are well known to your group officially.

Very truly yours,

Culbertson & Irwin, & R.K. Stovall,

By-

R. K. Stovall

clb/

March
Sixth
1940.

MAR 15 11 58 AM '40
SANTA FE, N. M.

Conservation Commission of the State of New Mexico
Santa Fe, New Mexico

Gentlemen:

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"Except that gas produced and sold to a pipe line for commercial or domestic use or gas produced and sold to a gasoline plant for processing where the residue is to be delivered to a commercial or domestic outlet for a consideration shall be credited and shall not be considered in the gas-oil ratio, the effect being that such delivery and sale are approved."

Testimony of a general nature has been offered you in this case although we believe the conditions stated are well known to your group officially.

Very truly yours,

Plarino Prodromos E.
By A. D. Hannan
Vice Pres

elt/

March
Sixth
1940.

Conservation Commission of the State of New Mexico
Santa Fe, New Mexico

Gentlemen:

At the hearing for the State Conservation Commission on March 5th, a recommendation was made by the Lea County Operators Committee which does not adequately handle the situation as it occurs in the Langlie Pool in Lea County, New Mexico. The particular situation which we have in mind is a group of wells in the Pool where the gas being produced is being sold for use to the El Paso Natural Gas Company. It is our contention that inasmuch as this gas is being used there is no actual waste and that the handling of the problem in this manner fulfills the basic thought of conservation. It is therefore our suggestion that the following clause should be appended to the end of Paragraph 14 on Page 4 of the Recommendations of the Lea County Operators and that this same clause should also be appended to the end of Paragraph 15 on Page 4 of the Recommendations of the Lea County Operators:

"Except that gas produced and sold to a pipe line for commercial or domestic use or gas produced and sold to a gasoline plant for processing where the residue is to be delivered to a commercial or domestic outlet for a consideration shall be credited and shall not be considered in the gas-oil ratio, the effect being that such delivery and sale are approved."

Testimony of a general nature has been offered you in this case although we believe the conditions stated are well known to your group officially.

Very truly yours,

Two States Oil Company.
by Howard P. Holmes, Pres.

elb/

March
Sixth
1940.

Conservation Commission of the State of New Mexico
Santa Fe, New Mexico

Gentlemen:

At the hearing for the State Conservation Commission on March 5th, a recommendation was made by the Lea County Operators Committee which does not adequately handle the situation as it occurs in the Langlie Pool in Lea County, New Mexico. The particular situation which we have in mind is a group of wells in the Pool where the gas being produced is being sold for use to the El Paso Natural Gas Company. It is our contention that inasmuch as this gas is being used there is no actual waste and that the handling of the problem in this manner fulfills the basic thought of conservation. It is therefore our suggestion that the following clause should be appended to the end of Paragraph 14 on Page 4 of the Recommendations of the Lea County Operators and that this same clause should also be appended to the end of Paragraph 15 on Page 4 of the Recommendations of the Lea County Operators:

"Except that gas produced and sold to a pipe line for commercial or domestic use or gas produced and sold to a gasoline plant for processing where the residue is to be delivered to a commercial or domestic outlet for a consideration shall be credited and shall not be considered in the gas-oil ratio, the effect being that such delivery and sale are approved."

Testimony of a general nature has been offered you in this case although we believe the conditions stated are well known to your group officially.

Very truly yours,

Culbertson & Irwin, Inc.

By: Wallace J. Irwin

elb/

March
Sixth
1940.

Conservation Commission of the State of New Mexico
Santa Fe, New Mexico

Gentlemen:

At the hearing for the State Conservation Commission on March 5th, a recommendation was made by the Lea County Operators Committee which does not adequately handle the situation as it occurs in the Langlie Pool in Lea County, New Mexico. The particular situation which we have in mind is a group of wells in the Pool where the gas being produced is being sold for use to the El Paso Natural Gas Company. It is our contention that inasmuch as this gas is being used there is no actual waste and that the handling of the problem in this manner fulfills the basic thought of conservation. It is therefore our suggestion that the following clause should be appended to the end of Paragraph 14 on Page 4 of the Recommendations of the Lea County Operators and that this same clause should be also appended to the end of Paragraph 15 on Page 4 of the Recommendations of the Lea County Operators:

"Except that gas produced and sold to a pipe line for commercial or domestic use or gas produced and sold to a gasoline plant for processing where the residue is to be delivered to a commercial or domestic outlet for consideration shall be credited and shall not be considered in the gas-oil ratio, the effect being that such delivery and sale are approved."

Testimony of a general nature has been offered you in this case although we believe the conditions stated are well known to your group officially.

Very truly yours,

Harry Leonard

elb/

CASE NO. 19.

FOR THE PURPOSE OF PRESENTING OBJECTIONS TO THE COMMISSION'S
GAS-OIL RATIO ORDER NO. 235 AND THE COMMISSION'S ORDER PRE-
SCRIBING RULES AND REGULATIONS FOR GAS-OIL RATIO SURVEYS
NO. 237.

<u>NAME</u>	<u>COMPANY</u>	<u>ADDRESS</u>
A. McCorkle	Standard Oil Co.	Fat Worth
J. O. Seth		Santa Fe
J. R. Vandever	Sunray Oil Co.	Wichita Falls, Texas
Henry Leonard	Leonard Oil Co.	Roswell N. M.

BEFORE THE OIL CONSERVATION
COMMISSION OF THE STATE
OF NEW MEXICO

IN THE MATTER OF GRANTING TEMPORARY EXCEPTIONS
TO GAS-OIL RATIO ORDER NO. 238 PENDING THE
PROMULGATION OF GAS-OIL RATIO ORDER NOW UNDER
ADVISEMENT, HEARING UPON WHICH WAS HELD MARCH 5,
1940.

EMERGENCY ORDER NO. 243

ORDER OF THE COMMISSION

BY THE COMMISSION:

WHEREAS, in Case No. 19, a recessed public hearing was held before the Commission at Santa Fe, New Mexico, on March 5, 1940, for the purpose of presenting objections to Gas-Oil Ratio Order No. 238;

WHEREAS, the evidence adduced before the Commission at said hearing is being considered by the Commission for the purpose of promulgating a proper order pursuant to said hearing;

WHEREAS, in order to prevent inequities in the meantime, an emergency is hereby declared.

IT IS THEREFORE ORDERED that within the discretion of the Oil Conservation Commission, exceptions may be granted to Gas-Oil Ratio Order No. 238, where, in particular instances, palpable inequities are apparent under the provisions of said Gas-Oil Ratio Order No. 238, or where actual waste is not being committed so as to warrant the application of said Order.

Any such exceptions granted by the Commission prior to the effective date of this emergency order are hereby ratified and confirmed.

This emergency order shall endure for the last half of the monthly proration period, March 16, 1940, to March 31, 1940, and any exceptions granted thereunder shall be retroactive to the effective date of said Gas-Oil Ratio Order No. 238.

DONE at Santa Fe, New Mexico, this 13th day of March, 1940.

OIL CONSERVATION COMMISSION

BY FRANK WILDER
Commissioner of Public Lands

By A. Andreas
State Geologist

(SEAL)

With regard to the Artesia-Grayburg-Jackson-Maljamar Area, the Commission issued Emergency Order No. 249, which is for a continuance of Emergency Order No. 98 for the period of March 18 to 31, 1940.

There being no further business the meeting adjourned.

OIL CONSERVATION COMMISSION

FRANK WORDEN, COMMISSIONER OF PUBLIC LANDS

A. ANDREAS, State Geologist

(SGD) FRANK WORDEN
Secretary.

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. 19.

THE ADOPTION OF REGULATIONS GOVERNING
GAS-OIL RATIOS IN THE VARIOUS PRODUCING
FIELDS IN NEW MEXICO.

ORDER NO. 250.

ORDER OF THE COMMISSION
REGULATING AND PRESCRIBING MAXIMUM
GAS-OIL RATIOS FOR THE VARIOUS FIELDS
OF THE STATE OF NEW MEXICO, AND VACATING
GAS-OIL RATIO ORDER NO. 238.

BY THE COMMISSION:

WHEREAS, pursuant to the hearing in this cause held on the 9th day of December, 1939, in the Chamber of the House of Representatives in the Capitol, Santa Fe, New Mexico, the Commission on the 13th day of January, 1940, adopted gas-oil ratio order No. 238 of a temporary nature in this, to-wit: Simultaneously with the adoption of said order, the Commission adopted Order No. 236 continuing this cause to Monday, March 4, 1940, at ten o'clock A. M. at the Capitol, Santa Fe, New Mexico, for the purpose of presenting to the Commission the objections which any party in interest may have as to said Order, in order that it may be revised as the exigencies may require.

WHEREAS, said continued hearing was opened on March 4 at the hour and place as indicated hereinabove, and upon oral motion presented to the Commission said hearing was further continued to ten o'clock A. M., Tuesday, March 5, 1940, and was accordingly held on said date and at said hour in the Chamber of the House of Representatives.

NOW, on this 27th day of March, 1940, the Commission having before it for consideration the evidence adduced at said recessed

hearing in said case and being fully advised in the premises, the Commission finds that before promulgating a final order governing gas-oil ratios, a further order of temporary nature is advisable, pending the completion of the gas-oil ratio survey now in progress under the supervision of the Commission pursuant to Order No. 237 prescribing rules and regulations for gas-oil ratio surveys promulgated in this cause, and the securing of additional field data incident to such gas-oil ratio survey, and therefore makes reservation herein for the issuance of a final order in this cause and promulgates as such further temporary order the following regulations governing gas-oil ratios in the various producing fields of the State of New Mexico, as follows:

1. This order is effective from April 1, 1940, until a final order in this cause is adopted and on April 1, 1940, the order herein vacates and sets aside said gas-oil ratio order No. 238.
2. The system of gas-oil ratio control in the State of New Mexico shall be known as that of volumetric control, which penalizes the unit of production for exceeding the maximum gas volume established for each field by decreasing its monthly allowable in accordance with the formula as provided hereinafter.
3. The maximum gas-oil ratio assigned to each field in New Mexico is listed below:

<u>FIELD</u>	<u>RATIOS</u>
Arrowhead	5,000
Cooper	10,000
Eaves	7,000
Eunice	7,000
West Eunice	2,000
Halfway	2,000
Hardy	5,000
Hobbs	4,000
Jal	10,000
Langlie	7,000
Lynch	2,000
Lynn	5,000
Mattix	7,000
Monument	6,000
N. Lynch	2,000

<u>FIELD</u>	<u>RATIOS</u>
N. Penrose	7,000
Rhodes	2,000
Skaggs	5,000
Skelly	7,000
S. Eunice	7,000
S. Lovington	2,000
S. Penrose	7,000
Vacuum	2,000
Artesia	2,000
Grayburg-Jackson	4,000
High-Lonesome	2,000
Leonard	2,000
Loco Hills	2,000
Maljamar	4,000
N. Maljamar	4,000
Red Lakes	2,000
Robinson	2,000
Shugart	2,000
Barber	2,000
Getty	2,000

4. Any oil producing unit with a net gas-oil ratio in excess of the assigned maximum for the field in which it is situated as listed in the table above shall be allowed to produce daily a total volume of oil which, when multiplied by the gas-oil ratio of the unit will result in a total gas volume that does not exceed the allowance per top allowable unit as fixed in the current monthly proration schedule of the Commission for the field in which the unit is situated times the gas-oil ratio for said field. Provided, that nothing herein contained shall have the effect of increasing the oil allowable of any unit above that fixed in the current proration schedule.

5. All units to which gas-oil ratio corrections are applied shall be so indicated in the proration schedule.

6. A marginal well shall be permitted to produce the same total volume of gas which it would be permitted to produce if it were a non-marginal well.

7. In the event that gas-oil ratios are not reported for any unit, then that unit will be omitted from the proration schedule.

8. The gas-oil ratio used in calculating penalties for any producing unit shall be those reported immediately prior to the beginning of the proration period on form C-104A or those measured under the supervision of the Oil Conservation Commission.

9. For the purpose of establishing limiting gas-oil ratios the pool designation and boundaries now used by the Commission and Proration Office shall be continued, except: That a new pool area, ARROWHEAD, is designated comprising parts of the former Eunice, South Eunice and Penrose pools and described as follows: E/2 Sec. 34; all Sec. 35 and 36, T. 21S., R. 36 E; also E/2 Sec. 3 and 14 and all Sec. 1, 2, 11, 12, 13 and 24, T. 22S., R. 36E; and NW/4 and S/2 Sec. 7, W/2 Sec. 17 and 20; all Secs. 18 and 19, T. 22 S., R. 37 E., and that a SOUTH PENROSE and NORTH PENROSE pool be formed by dividing the present Penrose Pool, the limits of each being described as follows: NORTH PENROSE All Sec. 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15 and 16 and NE/4 Sec. 7; also E/2 Sec. 17, T. 22 S., R. 37 E. SOUTH PENROSE All Sec. 21, 22, 23, 24, 25, 26, 27, 28, 29 and 30 and E/2 Sec. 20, T. 22 S., R. 37 E., all in Lea County, New Mexico.

10. Within the discretion of the Commission, exceptions may be granted to gas-oil ratio order No. 250 where in particular instances palpable inequities are apparent under the provisions of said order, or where actual waste is not being committed so as to warrant the application of said order. Within the discretion of the Commission, relief may be granted from absurd, unreasonable and unintended effects resulting in definite instances in carrying out the provisions of said order. Any such exception or relief granted may continue until modified or rescinded as may appear advisable in the discretion of the Commission.

11. Any such exception or reliefs granted by the Commission prior to the effective date of this order are hereby ratified, confirmed and continued until otherwise modified or rescinded as provided herein.

DONE at Santa Fe, New Mexico, on the date hereinabove indicated.

NEW MEXICO OIL CONSERVATION COMMISSION

By Frank Worden
Commissioner of Public Lands

By R. Andrus
State Geologist

BEFORE THE OIL CONSERVATION
COMMISSION OF THE STATE OF
NEW MEXICO

IN THE MATTER OF THE APPLICATION
OF GAS-OIL RATIO ADJUSTMENT.

EMERGENCY ORDER NO. 259.

EMERGENCY ORDER OF THE COMMISSION

BY THE COMMISSION:

WHEREAS, in connection with Gas-Oil Ratio Order No. 250, it appearing to the Commission that said order should be supplemented in order more nearly to serve justice and equity, an emergency is hereby declared.

IT IS THEREFORE ORDERED by the Commission as follows:

(a) The oil allocation shall be distributed to the various pools in the same manner used prior to February 1, 1940.

(b) In each pool, except Hobbs and Monument, the total amount of oil allocated to marginal units not subject to the gas-oil ratio adjustment shall first be subtracted from the pool total oil allocation. Each remaining unit shall be given a percentage rating the value of such rating depending upon its gas-oil ratio. Each unit having a gas-oil ratio equal to or less than the maximum permitted that pool shall be rated at 100. The rating of units having a gas-oil ratio in excess of the permitted maximum shall be calculated according to the following fraction:

$$\text{Rating} = \frac{\text{pool maximum gas-oil ratio} \times 100}{\text{unit gas-oil ratio}}$$

The remaining oil shall be distributed to each remaining unit in the ratio that the rating of each unit bears to the sum of all ratings in the pool. For clarity is the following example:

GAS-OIL RATIO PLAN - EXAMPLE

CONTINENTAL PROPERTIES

EUNICE POOL

MARGINAL WELLS	WELL	NO. WELLS	RATING	MARG. ALLOW.	CURRENT ALLOW.	
Meyer B-8	1	1		38	38	4412 Total company allocation
						38 Total unadjusted marginal allow.
						<u>4374</u>
NON-MARGINAL HIGH GAS-OIL RATIO WELLS						
Lock. A-18	4	1	59.508	X Factor	28	
Meyer B- 8	3	1	75.373	"	35	
State D-15	7	1	76.943	"	36	
Lock. B-31	1	1	15.992	" 10	7	
"	2	1	38.474	" 40	18	
			<u>266.290</u>			
NON-MARGINAL WELLS						
		91	9100	--	4277	47 bbls. per day
Total		<u>97</u>	9366.290		<u>4439</u>	
					<u>4412</u>	
					27	over allocated due to fractional bbls.

$$4374 \div 9366.290 = .4669 \text{ factor}$$

(c) In the Hobbs and Monument Pools the proration schedule shall be calculated in the normal manner according to the order of the Commission for that field. Each unit having an allowable equal to or less than the average allowable for the pool shall be allowed to produce an amount of gas equal to the product of the permitted maximum gas-oil ratio of the pool multiplied by the average allowable; provided that a unit, the oil allowable of which has been penalized by high gas-oil ratio shall not exceed the allowable as determined by the proration formula for that particular field.

Any unit having an allowable greater than the average unit allowable for that field shall be allowed to produce only that amount of gas determined by the product of the permitted maximum gas-oil ratio and the oil allowable assigned to it by the proration formula for that pool.

From the pool allocation shall be deducted the amount of oil allocated to marginal and wells penalized for high gas-oil ratio. The remaining oil shall be distributed to the remaining unpenalized wells in accordance with the pool proration plan.

(d) It is further ordered by the Commission that the descriptions of the ARROWHEAD, NORTH PENROSE and SOUTH PENROSE Pools as outlined in said gas-oil ratio order No. 250 for gas-oil ratio purposes be and are hereby adopted also for the purposes of proration.

(e) This emergency order shall endure for the first half of the monthly proration period of May 1, 1940, to May 15, 1940, and suspends for its duration any other order in so far as there is any conflict.

DONE at Santa Fe, New Mexico, this 29th day of April, 1940.

NEW MEXICO OIL CONSERVATION COMMISSION

By Frank Worden
Commissioner of Public Lands

By A. Andrews
State Geologist

BEFORE THE OIL CONSERVATION
COMMISSION OF THE STATE
OF NEW MEXICO

IN THE MATTER OF GRANTING TEMPORARY
EXCEPTIONS TO GAS-OIL RATIO ORDER NO. 238
AND RELIEFS FROM UNINTENDED EFFECTS IN
CARRYING OUT THE PROVISIONS OF SAID ORDER,
PENDING THE PROMULGATION OF GAS-OIL RATIO
ORDER NOW UNDER ADVISEMENT, HEARING UPON
WHICH WAS HELD MARCH 5, 1940.

EMERGENCY ORDER NO. 248-A
MODIFYING EMERGENCY ORDER
NO. 248.

ORDER OF THE COMMISSION

BY THE COMMISSION:

WHEREAS, in Case No. 19, a recessed public hearing was held before the Commission at Santa Fe, New Mexico, on March 5, 1940, for the purpose of presenting objections to Gas-Oil Ratio Order No. 238;

WHEREAS, the evidence adduced before the Commission at said hearing is being considered by the Commission for the purpose of promulgating a proper order pursuant to said hearing;

WHEREAS, in order to prevent inequities in the meantime, an emergency is hereby declared.

IT IS THEREFORE ORDERED that within the discretion of the Commission, exceptions may be granted to Gas-Oil Ratio Order No. 238 where in particular instances palpable inequities are apparent under the provisions of said order, or where actual waste is not being committed so as to warrant the application of said order. Within the discretion of the Commission, relief may be granted from absurd, unreasonable and unintended effects resulting in definite instances in carrying out the provisions of said order.

Any such exceptions granted by the Commission prior to the effective date of this emergency order are hereby ratified and confirmed.

This emergency order shall endure from the date hereof for the remainder of the last monthly proration period of March, 1940, and

any exceptions or reliefs granted hereunder shall be retroactive to
the effective date of said Gas-Oil Ratio Order No. 238.

DONE at Santa Fe, New Mexico, this 26th day of March, 1940.

OIL CONSERVATION COMMISSION

By Hackwood
Commissioner of Public Lands

By A. Andrews
State Geologist

BEFORE THE OIL CONSERVATION
COMMISSION OF THE STATE
OF NEW MEXICO

IN THE MATTER OF GRANTING TEMPORARY EXCEPTIONS
TO GAS-OIL RATIO ORDER NO. 238 PENDING THE
PROMULGATION OF GAS-OIL RATIO ORDER NOW UNDER
ADVISEMENT, HEARING UPON WHICH WAS HELD
MARCH 5, 1940.

EMERGENCY ORDER NO. 248.

ORDER OF THE COMMISSION

BY THE COMMISSION:

WHEREAS, in Case No. 19, a recessed public hearing was held before the Commission at Santa Fe, New Mexico, on March 5, 1940, for the purpose of presenting objections to Gas-Oil Ratio Order No. 238;

WHEREAS, the evidence adduced before the Commission at said hearing is being considered by the Commission for the purpose of promulgating a proper order pursuant to said hearing;

WHEREAS, in order to prevent inequities in the meantime, an emergency is hereby declared.

IT IS THEREFORE ORDERED that within the discretion of the Oil Conservation Commission, exceptions may be granted to Gas-Oil Ratio Order No. 238, where, in particular instances, palpable inequities are apparent under the provisions of said Gas-Oil Ratio Order No. 238, or where actual waste is not being committed so as to warrant the application of said Order.

Any such exceptions granted by the Commission prior to the effective date of this emergency order are hereby ratified and confirmed.

This emergency order shall endure for the last half of the monthly proration period, March 16, 1940, to March 31, 1940, and any exceptions granted thereunder shall be retroactive to the effective date of said Gas-Oil Ratio Order No. 238.

DONE at Santa Fe, New Mexico, this 13th day of March, 1940.

OIL CONSERVATION COMMISSION

By Frank Woodruff
Commissioner of Public Lands

By A. Andrews
State Geologist

CASE NO. 19

BEFORE THE OIL CONSERVATION COMMISSION
FOR THE STATE OF NEW MEXICO

HEARING FOR THE PURPOSE OF CONSIDERING
THE ADOPTION OF REGULATIONS GOVERNING
GAS-OIL RATIOS IN THE VARIOUS PRODUCING
FIELDS IN NEW MEXICO.

TRANSCRIPT OF PROCEEDINGS AT HEARING AT
STATE CAPITOL BUILDING
SANTA FE, NEW MEXICO
MARCH 5, 1940

Pursuant to recess granted on March 4, 1940, hearing in
the above entitled cause was convened at ten o'clock, A. M., of
March 5, 1940, in the hall of the House of Representatives, Capitol
Building, Santa Fe, New Mexico, the Commission sitting as follows:

HON. FRANK WORDEN, Commissioner of Public Lands, Secretary
HON. A. ANDREAS, State Geologist, Member
HON. CARL B. LIVINGSTON, Attorney for Commission.

APPEARANCES:

<u>NAME</u>	<u>COMPANY</u>	<u>ADDRESS</u>
E. C. Arnold	U.S.G.S.	Roswell, N. M.
Hale B. Soyster	U.S.G.S.	Washington, D. C.
Raymond M. Myers	Magnolia Pet. Co.	Dallas, Texas
Ed. Downing	" " "	Kermit, Texas
S. P. Hannifin	" " "	Roswell, N. M.
Bert Aston	Franklin Pet. Co.	Artesia, N. M.
J. W. House	H.O.R.Co.	Midland, Texas
F. W. Brigance	Rowan Drilling Co.	Ft. Worth, Texas
Weston Payne	Anderson Prichard Oil Corp.	Oklahoma City, Okla.
Franck Gray	" " " "	Hobbs, N. M.
C. C. Cragin	El Paso Natural Gas Co.	El Paso, Texas
E. A. Markley	Barnsdall Oil Co.	Tulsa, Okla.
Edgar Kraus	Atlantic Rfg. Co.	Carlsbad, N. M.
M. Albertson	Shell Oil Co., Inc.	Houston, Texas
J. N. Dunlavey	Skelly Oil Co.	Hobbs, N. M.
George W. Selinger	" " "	Tulsa, Okla.
N. E. Brambill	The Ohio Oil Co.	Hobbs, N. M.
J. F. Wheeler	" " " "	Houston, Texas
Glenn Bish	" " " "	Hobbs, N. M.
J. J. Frommer	" " " "	Houston, Texas
A. B. Gibson	Cities Service Oil Co.	Hobbs, N. M.
A. E. Willig	The Texas Co.	Ft. Worth, Texas
A. J. Holland	" " "	Hobbs, N. M.
Ernest A. Hanson	U.S.G.S.	Roswell, N. M.
Harry Leonard	Leonard Oil Co.	Roswell, N. M.
F. B. Sudderth	ME Tex	Hobbs, N. M.
J. P. Cusack	J. P. Cusack, Inc.	Midland, Texas
R. T. Winiford		Ft. Worth, Texas
J. H. Curtis	Culbertson & Irwin & R. K. Stovall	Jal, N. M.
J. R. Vandever	Sunray Oil Co.	Wichita Falls, Tex.
Wallace W. Irwin	Culbertson & Irwin, Inc.	Midland, Texas
J. B. Hendley	So. Pet.	Roswell, N. M.
Howard P. Holmes	Two States Oil Co.	Dallas, Texas
R. C. DelWoody	Great Western Prod. Inc.	Odessa, Texas
J. E. Warren	Carl B. King Drg.Co.	Dallas, Texas
W. P. Livermore	Great Western Prod. Inc.	Odessa, Texas

O. F. Hedrick	Texas Pacific Coal & Oil	Midland, Texas
C. G. Campbell	" " " "	Midland, Texas
W.M. Fleetwood, Jr.	Barnsdall Oil Co.	Tulsa, Okla.
A. P. Loskamp	" " "	Midland, Texas.
R. D. Curtis	" " "	Tulsa, Okla.
Paul N. Colleston	Phillips Pet. Co.	Midland, Texas
Rex E. Rader	Stanolind Oil & Gas	Hobbs, N. M.
C. A. Daniels	Phillips Petroleum Co.	Amarillo, Texas.
H. F. Chapman	" " "	Odessa, Texas
R. S. Christie	Amerada Petroleum Corp.	Ft. Worth, Texas
E. H. Foster	Phillips Petroleum Co.	Amarillo, Texas
D. R. McKeithan	" " "	Bartlesville, Okla.
F. E. Heath	Sun Oil Co.	Dallas, Texas
J. S. Noland	Barnsdall Oil Co.	Tulsa, Okla.

The meeting was called to order by Mr. Frank Worden, who announced that the Governor was absent from the city, but would probably be home tomorrow, and that the meeting would proceed. Mr. Worden then called upon Mr. Livingston to read the announcement of the meeting.

BY MR. LIVINGSTON: Pursuant to the hearing of this same case on the 9th of December, 1939, on the 13th of January the Commission promulgated two orders, No. 238, the Gas-Oil Ratio Order, and order No. 237, the order for making rules for the taking of gas-oil ratio surveys, and at the same time the Commission adopted order No. 236, reserving this time for the hearing of any objections on those two orders that anyone may have. I will read only the matter pertinent to that order.

(Reading) "NOW, on this 13th day of January, 1940, the Commission having before it for consideration the evidence adduced at the hearing in said case and being fully advised in the premises, the Commission adopted the following order simultaneously with the adoption of the two orders named hereinbelow.

This case is continued to Monday, March 4, 1940, at ten o'clock A. M., at the State Capitol, Santa Fe, New Mexico, for the purpose of presenting to the Commission the objections which any party in interest may have as to the orders of the Commission described hereinbelow in order that said orders may be respectively revised as the exigencies may require:

Order No. 238 of the Commission, regulating and prescribing maximum gas-oil ratios for the various fields of the State of New Mexico.

Order No. 237 of the Commission, prescribing rules and regulations for gas-oil surveys in New Mexico.

DONE at Santa Fe, New Mexico, this 13th day of January, 1940".

BY MR. McCORKLE: The Lea County Engineering Advisory Committee, together with the Supervisory Committee, have worked up some recommendations for proposed conservation under the gas-oil ratio orders, which have been approved by a majority of Lea County operators committee, which we wish to submit to the Commission through Mr. Dewey at this time.

R. S. DEWEY,

being first duly sworn to tell the truth, the whole truth, and nothing but the truth, was examined by Mr. J. O. Seth, and testified as follows:

DIRECT EXAMINATION

Q Please state your name.

A R. S. Dewey

Q What is your profession, Mr. Dewey?

A Division engineer, Humble Oil Company.

Q How long have you been familiar with conditions in Lea County?

A For the past ten years.

BY MR. SETH: I think the Commission will recognize Mr. Dewey as a qualified engineer.

BY MR. WORDEN: Yes.

Q Will you please read the recommendations to which Mr. McCorkle referred?

A (Reading): "PROPOSED ORDER FOR GAS-OIL RATIO
NEW MEXICO

1. The gas-oil ratio of a unit regardless of the number of wells thereon, as applied in this order shall be the total output gas less the total input gas divided by the barrels of oil produced.

2. A marginal unit is one incapable of producing the acreage allowable for the pool in which the well is located.

3. The normal oil allowable of a non-marginal unit is the allowable it will receive before the gas-oil ratio adjustment is applied.

4. A standard gas-oil ratio test shall be made on each well or unit in accordance with the rules set out in Order No. 237 once each year. The tests shall be made not more than 60 days prior

to the effective date* for the pool in which the well or unit is located, as shown in Exhibit A attached."

(Explaining) Exhibit A -- this is a list of the fields in Lea County, which are listed alphabetically, first, the company; the second column, the maximum gas oil ratio; the third column, the date for the annual survey; and the fourth and last column, the suggested date for the semi-annual survey.

(Reading): Company	Maximum Gas-Oil Ratio	Effective Date	
		Annual Survey	Semi-Annual Survey
Arrowhead	5,000	June 1	Dec. 1
Cooper	10,000	July 1	Jan. 1
Eaves	7,000	Aug. 1	Feb. 1
Eunice	7,000	May 1	Nov. 1
Hardy	5,000	June 1	Dec. 1
Hobbs	4,000	July 1	Jan. 1
Jal	10,000	July 1	Jan. 1
Langlie	7,000	July 1	Jan. 1
Lynn	5,000	July 1	Jan. 1
Mattix	7,000	June 1	Dec. 1
Monument	6,000	Apr. 1	Oct. 1
No. Penrose	7,000	June 1	Dec. 1
So. Penrose	7,000	June 1	Dec. 1
Skaggs	5,000	June 1	Dec. 1
Skelly	7,000	June 1	Dec. 1
So. Eunice	7,000	May 1	Nov. 1
So. Lovington	2,000	Aug. 1	Feb. 1
Vacuum	2,000	Aug. 1	Feb. 1

Non-designated wells or pools 2,000"

Q Mr. Dewey, right there I notice the gas-oil ratios are limited to Lea County pools. The committee made no recommendations in respect to Eddy?

A No, this is the Lea County operators' recommendation.

Q The recommendations are intended to apply to nothing but Lea County pools?

A That is correct. There is a note to paragraph 4, previously read: (Reading note:)

"*Effective date as referred to herein shall mean the date the standard gas-oil ratio tests shall be used in the various pools to adjust the oil allowable for gas-oil ratio as listed in Exhibit A."

Paragraph 5 (Reading)" A standard gas-oil ratio test shall be made within 30 days after the completion of, a new well, remedial work, work-over, clean out, acidation, or any changes which effect subsurface producing conditions. The effective date of such tests shall be the beginning of the next succeeding 15-day proration period except that the Commission must be notified that the well or unit is ready for test at least five days before the beginning of such proration period. Tests shall not be required due to changes in choke opening or in subsurface pumping equipment unless requested by the owner or operator of the well or unit. All wells included in this section shall be retested on the next regular survey either annual or semi-annual.

6. A standard gas-oil ratio test shall be made at the discretion of the Commission or its duly authorized deputy on any well or unit whenever a written request is submitted to the Commission or its duly authorized deputy by any operator in the pool in which the well or unit is located. Also, tests may be made on any wells selected by the Commission or the Proration Umpire for any reason whatsoever. The effective date of such tests shall be the same as provided in paragraph 5 above.

7. A standard gas-oil ratio test shall be made semi-annually on all wells tested in accordance to paragraphs 4 and 6 above that had a gas-oil ratio in excess of 80% of the maximum provided for the pool in which the well is located. The tests shall be made not more than 60 days prior to the effective date for the pool in which the well or unit is located as shown in Exhibit A attached.

8. The oil allowable of each well or unit producing with a gas-oil ratio in excess of the maximum provided for the pool in which the well or unit is located shall be adjusted

as hereinafter provided. The maximum gas-oil ratio permitted each pool and undesignated area is shown in Exhibit A, attached.

9. The application of the gas-oil ratio adjustment shall be as follows:

(a) The oil allocation shall be distributed to the various pools and the pools within Lea County in the same manner, used prior to February 1, 1940.

(b) In each pool, except Hobbs and Monument, the amount of oil allocated to marginal adjusted units shall be deducted from the pool allocation. From the balance shall be deducted the oil allocated to adjusted units, both marginal and non-marginal. The remaining oil shall be distributed equally to non-marginal unadjusted units. The oil allowable of each unit having a gas-oil ratio higher than the pool permitted maximum shall be, the maximum gas-oil ratio of the pool multiplied by the normal unit allowable for the pool (as determined in sub-paragraph (a) above) and divided by the gas-oil ratio of the well, except at ---"

(Explaining) Correction, change "at" to "that".

"that a marginal unit shall not be allocated an amount of oil exceeding its capacity to produce.

9. (c) In the Hobbs and Monument Pools the proration schedule shall be calculated in the normal manner according to the order of the Commission for that field. Each unit having an allowable equal to or less than the average unit allowable for the pool shall be allowed to produce an amount of gas equal to the product of the permitted maximum gas-oil ratio of the pool multiplied by the average unit allowable; provided that a unit, the oil allowable of which has been penalized by high gas-oil ratio shall not exceed the allowable as determined by the proration formula for that particular field.

Any unit having an allowable greater than the average unit allowable for that field shall be allowed to produce only that amount of gas determined by the product of the permitted (Reporter's explanation:) ("gas" deleted before word "maximum"

and the words "gas-oil ratio" inserted after the word "maximum".
Correction made by operators before opening of hearing) "maximum
gas-oil ratio and the oil allowable assigned to it by the prora-
tion formula for that pool.

From the pool allocation shall be deducted the amount of
oil allocated to marginal and wells penalized for high gas-oil
ratio. The remaining oil shall be distributed to the remaining
unpenalized wells in accordance with the pool proration plan.

10. Legal overage and shortage shall be handled as in
the past. That is, the adjusted oil allowable shall be the
current oil allowable plus approved shortage or the current
allowable less the overage, whichever applies in the particular
case.

11. In order to encourage repressuring or the maintenance
of reservoir pressure, the volume of gas injected into the
reservoir may be deducted from the output gas in determining
the net gas-oil ratio. The exact manner of applying this
section shall be determined after a public hearing before the
Commission.

12. When remedial work has been completed on a unit back
allowable will be granted from the date of starting such work
for a period not exceeding 60 days calculated on the basis of
the standard gas-oil ratio test made subsequent to remedial work.

13. In any reservoir, within a pool in the (Reporter's
note: The word "the" struck out, and the word "Lea" inserted
in lieu thereof. Correction made by operators before opening
of hearing). "Lea county in this State, the content of which
is designated by the Commission as predominantly gas, the wells
producing therefrom shall not be subject to the gas-oil ratio
adjustment provided for herein for oil wells; provided that no
such well or unit shall be permitted to produce more oil than
the normal allowable of a unit in the county.

14. Units producing gas only from a reservoir not designa-
ted as a gas reservoir, as provided in Section 13 above, shall
be allowed to produce only as much gas as would result in a
reservoir voidage on a volumetric basis equal to that voided

by an oil well producing with a maximum gas-oil ratio permitted for that reservoir.

15. Marginal units produced primarily for gas sale in a reservoir, as described in Section 14 above, shall be permitted to produce a volume not to exceed that permitted in Section 14 above.

16. Wells in newly discovered or undesignated pools shall be allowed to produce with a limiting gas-oil ratio of 2,000 cu. ft. per barrel for purposes of allocation until a hearing shall have been called and testimony presented upon which a ratio can be set. Such hearing shall be called and rules issued within six months after the completion of the discovery well or upon the completion of ten producing wells in the new pool, whichever occurs first.

17. For the purpose of establishing limiting gas-oil ratios the pool designation and boundaries now used by the Commission and Proration Office shall be continued, except: That a new pool area, ARROWHEAD, is designated comprising parts of the former Eunice, South Eunice and Penrose pools and described as follows: E/2 Sec. 34, all Sec. 35 and 30, T. 21S., R. 36 E; also E/2 Sec. 3 and 14 and all Sec. 1, 2, 11, 12, 13 and 24, T. 22S., R. 36E; and NW/4 --"

(Explaining) I wish to make a correction on page 5, paragraph 17, at the beginning of the 8th line, by the insertion of "and" between "NW/4" and S/2 Sec. 7".

"and S/2 Sec. 7, W/2 Sec. 17 and 20; all Secs. 18 and 19, T. 22 S., R. 37 E., and that a SOUTH PENROSE and NORTH PENROSE pool be formed by dividing the present Penrose Pool, the limits of each being described as follows: NORTH PENROSE All Sec. 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15 and 16 and NE/4 Sec. 7; also E/2 Sec. 17, T. 22 S., R. 37 E. SOUTH PENROSE All Sec. 21, 22, 23, 24, 25, 26, 27, 28, 29 and 30 and E/2 Sec. 20, T. 22 S., R. 37 E.

18. The gas-oil ratio adjustment shall be based on the last standard gas-oil ratio test of the unit except that wells

now producing shall be penalized on the basis of the gas-oil ratio listed on notarized Form C-104A until standard gas-oil ratio survey becomes effective for the pool as shown in Exhibit A, attached.

19. In any case where it appears that serious inequities as to property right, or irreparable damage to a well or wells may be caused by the application of the gas-oil ratio adjustments above defined, the Commission shall postpone application of such penalties upon proper application for a hearing from the party or parties who may be injured, until such time as a hearing has been held and a decision reached. The decision of the Commission as a result of such hearing shall be retro-active to the date at which the gas-oil ratio adjustment became effective as to other wells in the field.

20. The above suggested rules and regulations shall, upon presentation of appropriate evidence, before this Commission in hearings called at the request of any operator and in accordance with the provisions of Section 5,"

BY MR. KRAUS: That should be "Section 15".

BY MR. DEWEY: (Reading) "Section 15, Chapter 72 of the Session Laws of 1935, be subject to such exception and modification in particular cases as the Commission may deem advisable or necessary to prevent waste or confiscation of property."

BY MR. SETH: It has been suggested there be added at the end of paragraph 17 "All in Lea County, New Mexico". I think the paragraph shows it, but there will be no objection, and it has been suggested that addition be made.

BY MR. DEWEY: I would like to insert, at the end of paragraph 17, "All in Lea County, New Mexico".

Q Mr. Dewey, at one place these recommendations refer to a gas-oil ratio survey now being made. Is there one being made, and under what supervision, at this time?

A Under different time schedules; it is under the order for a complete survey of all wells.

Q How much work has been done, approximately?

A I understand in the neighborhood of eight or nine wells.

- Q Is this recommendation of the operators committee intended to be merely tentative, pending the result of the figures on that survey?
- A It has to be tentative until complete information is obtained.
- Q Is that survey going ahead at this time?
- A Yes, it is going on at the present time.
- Q For the purpose of the record, will you state the importance of this survey, that is, for the conservation of reservoir energy?
- A It is well recognized that ultimate recovery depends, to a great extent, upon the amount of conservation that takes place in the production of oil, so that the gas-oil surveys that are being taken now will lead to the conservation of oil, in the production of oil.
- Q The purpose of establishing the gas-oil ratios is to do precisely that, and thereby increase the ultimate recovery of oil?
- A Yes, sir.
- Q Is it necessary, in a field where gas is present, to produce some amount of gas with every barrel of oil?
- A There is always a certain amount of gas in solution with the oil, and it is impossible to produce that oil without producing the amount of gas in solution in the oil.
- Q And the purpose of this recommendation is to hold the amount of gas produced within reasonable limits?
- A That is right. It can't be reduced beyond a certain point -- it is physically impossible.
- Q What effect does production -- rather, the depletion of a pool have on the gas-oil ratio?
- A As pools become more and more depleted, the tendency is for the pressures to lower and the gas-oil ratios to increase, so that the older pools usually have higher gas-oil ratios than the newer pools.
- Q Mr. Dewey, as an engineer, do you believe that these regulations would tend to enable every lessee, oil operator and property owner to recover his share of the oil beneath his property, and also tend to give him the right to use his just and equitable

share of the reservoir energy?

A That was the intention in drafting these rules, to be fair with all interests, to give them the opportunity to recover the ultimate oil and use their share of the reservoir energy.

Q Was it the consensus of opinion that these regulations would tend to do that?

A They will tend to do that; they are probably not perfect, but the tendency is in that direction.

Q Would it likewise tend to prevent waste?

A Yes, sir, tend to prevent waste.

CROSS EXAMINATION BY
Mr. Howard Holmes, of Two States Oil Co.

Q In addition to the fact of depletion, with regard to gas-oil ratios, wouldn't some other factors have to be considered?

A There are a great many factors.

Q Does structural position have anything to do with the question of ratios?

A Yes, it has a modifying influence.

Q There are also some particular sand or lime conditions which would effect ratios?

A That is true.

Q And are there places where there is considerable oil in place -- in storage -- where it is necessary to produce quite a volume of gas to get the oil there?

A There are places where the oil and gas and water are so intimately connected it is impossible to produce one without the other. It is very difficult to control the gas-oil ratio.

CROSS EXAMINATION BY
Mr. George Livermore:

Q That condition is taken into consideration in these recommendations?

A We attempted to take it into consideration. I don't think we are able to evaluate all individual properties in that respect, but we attempted to consider that fact in making the recommendations for particular areas.

RE-DIRECT EXAMINATION By Mr. Seth:

Q Paragraphs 19 and 20 tend to give a chance for fair consideration in those unusual conditions, isn't that true?

A It is certainly impossible, where conditions are so diversified and there are so many wells, to obtain sufficiently accurate information in a short time to consider all points that may occur, and for that reason those two paragraphs have been inserted here with the idea that where there are peculiar or per pertinent conditions concerning a property, the operator may present them to the Commission, without trying to cover them in a general way.

Q And he will not be penalized while he is presenting his case?

A These rules request he should not be penalized while doing that.

Witness dismissed.

BY MR. WORDEN: Anyone else present who have objections to any of these paragraphs that we might take up at this time and get a little further information, or get a slant on somebody else's views? I would like to have an expression, if there is such.

(No reply from those present to Mr. Worden's request)

BY MR. ASTON: Are you ready to hear from Eddy County?

BY MR. WORDEN: We will be as soon as we are able to dispose of this. I would like to keep on one subject until it is finished.

BY MR. HOWARD HOLMES: There are going to be some objections taken to the recommendations as made, of course. What is the procedure with regard to that question?

BY MR. LIVINGSTON: Mr. Holmes, if I may answer you for the Commission. You asked the Commission as to any objections as to the proposed recommendations. They may be made in such way as anyone sees fit. I think also they should be substantiated by evidence, wherever possible, so that the Commission, in adopting any order, can fully consider any order they may adopt as well as statements made by anyone.

BY MR. HOLMES: That should be filed when?

BY MR. SETH: You mean, if the Commission should adopt these rules, what procedure should you take to get an exception?

BY MR. HOLMES: That is one. The other case is where it is perfectly obvious that there will be no exception taken.

BY MR. SETH: These recommendations provide you should file formal objections.

BY MR. HOLMES: That is, if the order is adopted. We are talking about before the order is adopted.

BY MR. SETH: I think you ought to have them right here, now.

BY MR. ANDREAS: You should submit a complete history of the well, the time it was spudded in, the location, and everything.

BY MR. HOLMES: What I was particularly thinking about was the complete --

BY MR. ANDREAS: A complete history of your well.

BY MR. HOLMES: You would suggest that should be filed in writing?

BY MR. ANDREAS: Yes, sir.

BY MR. WORDEN: You gentlemen have heard the reading of this proposed set of rules. The Commission desires at this time to thank the engineers who compiled it, and we will take them under advisement and render our decision some time in the future. Is there anyone else here at this time who wishes to offer anything, or any changes or improvements regarding these? We would be glad to have them at this time.

BY MR. LIVERMORE: There are a great many of us vitally interested in the attitude of how paragraph 19 is handled -- the Commission's attitude in this matter, and a great deal of testimony, or complaints of conditions, will be governed according to what your attitude is going to be along that line. Now, any reaction you see fit to give us on that will help us out in the matter so that we will know how to proceed from this point. Mr. Worden, a great many, at the present time -- I am speaking for those in southeast Lea County -- the information you have on record is taken from the forms on gas-oil ratios turned in here, were true ratios at the time they were taken, but we have a field that has a tendency to increase the gas-oil ratios over night, and when the engineers get in there, they will find a great many

ratios in excess of what was put on those reports. Others in the same condition -- I am rather reluctant -- at the time the reports were made they were true ratios, and I think you understand that a great many operators take ratios at various intervals, anywhere from six months on, therefore their ratios are higher than show in the reports, which were true at the time they were taken, but they are not now, and some operators know they are not. They are rather reluctant to commit themselves on what the ratios are if they are going to be penalized, until such time as you have had an opportunity to examine the area and see what the conditions are. Operators down there do all in their power to try to correct this condition. There is a big experiment under way that is going to require a few months, and if that pans out, all interests will be conserved. In the meantime, we do not know what to do, and we are reluctant to put our necks on the chopping block.

BY MR. WORDEN: I think we can assure you, and every other producer, the Commission is not going to do anything deliberately that will put you out of business. What the Commission is trying to do is to help you, and every other producer operating in that area. We realized at the time we issued that order that we would have problems, and the only way we could sift the wheat out, segregate those problems, make things work out, was to make a blanket order. That is what we are trying to do now. As far as the Commission is concerned, I will say we are going to be fair. Until we have a chance to take this up with the Chairman of the Commission, probably sometime this week, as soon as he returns, we cannot say just what the policy will be.

BY MR. LIVERMORE: At the present time some of the operators are being penalized.

BY MR. WORDEN: We appreciate that and are going to try to get to their cases in the next few days. We are not going to put you out of business if it is possible not to. Anyone else here who wants to be heard?

BY MR. NEVILLE PENROSE: We have one property in the gas area, in

T. 22-37, 240 acres, with four wells. These wells make about 2400 barrels per month, approximately 20 barrels apiece. The wells were drilled several years ago. We bought the property last fall. The wells always made considerable gas. When we bought the property last fall we cut the production from 2400 barrels down to 2,000, in order to conserve gas. I paid \$50,000 for the property, paid \$10,000 in cash and borrowed \$40,000 on the property, every month to return the money at the rate of \$1,000 a month. The first of February, under this order, we were cut to about six or seven hundred barrels a month. As it happens, last summer about \$12,000 was spent on this property, trying to equalize the gas-oil ratio. That was not successful. We are now trying to find out what we could do to effect this end, but we have no assurance it can be satisfactorily done. We do intend to do all we can to remedy this condition. In the meantime, we have this money we have to pay out, and with six or seven hundred barrels, we are suffering very greatly through this order.

BY MR. ANDREAS: Will you submit that evidence in writing as to those wells?

BY MR. PENROSE: I will be glad to.

BY MR. HANSON, of the Department of the Interior: The Department of the Interior is vitally interested in this particular conservation measure, in so far as it applies to federal lands. It is understood we will have time and opportunity to review this order before it is promulgated?

BY MR. WORDEN: Yes, sir. Anybody else want to submit any evidence on wells in that trouble zone being heavily penalized, we would like to have any and all of them submit it in writing, giving a history of the well, conditions as they were before we issued this order, and as they are since we issued the order, so that we will have something we can work on. We have a couple already in that have been presented. We would appreciate it very much if any, and all, having that trouble, would submit their evidence in writing.

BY MR. MILLS: We have a few exceptions to request, and I want to make

sure this is the time to submit written request for those exceptions.

BY MR. ANDREAS: Yes, you can submit them here.

BY MR. WORDEN: If there are no other parties to be heard from in the Lea County case, we will start on Eddy County.

BERT ASTON, representing Franklin Petroleum Company, and Aston & Fair:

I want to submit a unanimous recommendation from the Eddy County operators. In view of the fact that in this request, which we believe was very well prepared, and in view of the fact that in the final analysis, it does allocate a gas-oil ratio in all pools not designated, the unanimous request of the Eddy County operators is that we be allowed to operate under this order, if it is accepted by the Commission, with the deleting of that portion, which would be paragraph 9 and paragraph 17, which refers particularly to Lea County and its problems -- all of 9, including a, b and c, and all of 17.

We make this request in view of the fact that we have at this time no proper setup, engineering committee or department in Eddy County. Lea County has in the past given us the benefit of their cooperation, for which we wish to express our appreciation, and we would like to profit a little, plagiarize a little and use a portion of this request as to Eddy County, with those exceptions, that in Exhibit A, we request the full gas-oil ratio based on a very fragmentary survey which we have been able to make with our inadequate engineering facilities, as follows:

Artesia	2,000 cubic feet, Sept. 1	March 1
Jackson-Grayburg	4,000 "	"
Leonard	2,000 "	"
Loco Hills	2,000 "	"
Maljamar	4,000 "	"
Red Lakes	2,000 "	"
Robinson	2,000 "	"
Shugart	2,000 "	"
Barber	2,000 "	"

Getty 2,000 cubic feet.

BY MR. ANDREAS: I notice in Maljamar you do not have that segregated as they do now, north, and south?

BY MR. ASTON: No.

BY MR. ANDREAS: 4,000 applies to that same area.

BY MR. ASTON: They just said "Maljamar", and I am not familiar with that new gas-oil ratio. They are preparing to take one down there. I am not an engineer, but I had an engineering group in there, and we did the best we could to obtain some information as rapidly as possible. There is nothing more we have to offer except to make that recommendation, if the Commission please.

BY MR. MILLS, of the Continental: May we ask for an explanation from the gentleman who just spoke, why he wants to drop out paragraph 9, and why he does not write an additional paragraph 9 for Eddy County.

BY MR. ASTON: Paragraph 9, as I read it, applies particularly to Lea County problems. (Consulting with Eddy County operators) It has been called to my attention by some other operator that we do need paragraph 9 - a and b, and it was 9-c that should be deleted.

BY MR. ANDREAS: Mr. Aston, do you suggest eliminating the entire paragraph 9-c, the three paragraphs under 9-c, or the first?

BY MR. ASTON: We would like to retain 9-a and b, and insert "Eddy County" where it says "Lea County", and deleting "c" under 9, which is applicable only to certain pools in Lea County.

BY MR. ANDREAS: Mr. Aston, in 9-b don't you want to eliminate "except Hobbs and Monument"?

BY MR. ASTON: Yes.

BY MR. ANDREAS: In 9-c do you want to eliminate only the first paragraph? There are three paragraphs.

BY MR. ASTON: Don't the other two paragraphs refer to --

BY MR. ANDREAS: Is there anything wrong in retaining to two paragraphs for Eddy County?

A Yes, the last two paragraphs can apply. They are, of course, in that instance, referring to the paragraphs just above. However, they would apply to our operations in the same manner.

To make it clear, it has been suggested we request the elimination of the first paragraph on page 3, which is paragraph 9-c, and retain the balance, with the exception of paragraph 17, which is strictly applicable to certain areas.

BY MR. ANDREAS: If there is no further testimony or objection or recommendation to be submitted, we will consider case No. 19 closed as to testimony, and the Commission will take the recommendations under advisement.

C E R T I F I C A T E

I hereby certify that the foregoing and attached seventeen and a fraction pages of typewritten matter are a true, correct and complete transcript of the shorthand notes made by me on the 5th day of March, 1940, in the hearing before the Oil Conservation Commission in Case No. 19, and by me extended into typewriting.

Witness my hand this 6th day of March, 1940.

Esther Barton

CASE NO. 19.

(Continued to Ten O'clock Tuesday, March 5, 1940.)

FOR THE PURPOSE OF PRESENTING OBJECTIONS TO THE COMMISSION'S
GAS-OIL RATIO ORDER NO. 238 AND THE COMMISSION'S ORDER PRE-
SCRIBING RULES AND REGULATIONS FOR GAS-OIL RATIO SURVEYS
NO. 237.

* * * * *

NAME	COMPANY	ADDRESS
El Arnold	U.S.G.S.	Roswell
Hale B. Soyler	U.S.G.S.	Washington, D.C.
Raymond M. Myers	Magnolia Pet Co	Dallas, Texas.
E. J. Downing	Magnolia Pet Co.	Kermit, Texas
J. P. Hannifin	Magnolia Pet. Co.	Roswell, N.M.
Bert A. Acker	Franklin Petroleum	Artesian N.M.
J. M. House	H. O. R. Co.	Midland Texas
J. W. Briggance	Rowan Drilling Co	Fort Worth Texas
Weston Payne	Anderson Trucking & Oil Corp	Oklahoma City
Frank D. Gray		Hobbs
C. C. Craig	El Paso Natural Gas Co	El Paso Texas
E. G. Macphley	Barnsdall Oil Co	Tulsa Okla
Edgar K. Raper	Atlantic Refg Co	Coleman, Texas
M. L. Alberton	Shell Oil Co Inc.	Houston Texas
J. N. Dunaway	Shelley Oil	Hobbs N.M.
George W. Selinger	Shelley Oil Co	Tulsa Okla.
N. E. Brumhall	Shelley Oil Co	Hobbs N.M.
J. B. Wheeler	" " "	Houston, Tex.
W. L. Bishop	" " "	Hobbs N.M.
B. J. Grommer	The Ohio Oil Co	Houston, Tex.
N. J. Gibson	The Ohio Oil Co	Hobbs, N.M.
A. E. Wilking	The Texas Co	Hillevorth, Tex.
J. J. Jolley	" " "	Hobbs N.M.
Ernest J. Hanson	U.S.G.S.	Roswell N.M.
Harry J. Jolley	Leonard Oil Company	Roswell N.M.
J. B. Luddick	M. S. Tex	Hobbs N.M.

J. O. Quack	R. C. [unclear]	[unclear]
R. T. [unclear]	North [unclear]	Ft Worth
J. A. [unclear]	Laurel [unclear] & [unclear] & R. H. [unclear]	Lat 11 [unclear]
J. P. [unclear]	Sunray Oil Co.	Wichita Falls, Tex.
William [unclear]	Cutbertson & [unclear] Inc.	Midland, Tex.
J. H. [unclear]	So. Pet. Co.	Rawlins New Mex.
Howard P. [unclear]	Two States Oil Co.	Dallas, Tex.
R. E. [unclear]	Great Western Prod. Inc.	Odessa, Tex.
[unclear]	Carl B. King Dr. Co.	Dallas Tex.
W. P. [unclear]	Great Western Prod. Inc.	Odessa Texas
O. H. [unclear]	Texas Petroleum Co.	Midland, Tex.
C. H. [unclear]	"	"
M. H. [unclear]	Barnsdall Oil Co.	Tulsa
T. P. [unclear]	"	Midland Texas
R. D. [unclear]	"	Tulsa, Okla.
Paul M. [unclear]	Phillips Pet. Co.	Midland, Texas
R. E. [unclear]	Stavola & [unclear]	Hotts New Mex.
Ed [unclear]	Phillips Petroleum Co.	Amorville Tex.
H. Z. [unclear]	Phillips Petroleum Co.	Odessa Texas
R. S. [unclear]	Amerada Petroleum Corp.	Ft. Worth Texas
E. H. [unclear]	Phillips Petroleum Co.	Amarillo, Tex.
D. M. [unclear]	"	Barstoville, Okla.
F. [unclear]	Sun Oil Co.	Dallas, Tex.
J. S. [unclear]	Barnsdall Oil Co.	Tulsa, Okla.

CASE NO. 19

BEFORE THE OIL CONSERVATION
COMMISSION OF THE STATE
OF NEW MEXICO

HEARING TO CONSIDER THE ADOPTION OF
REGULATIONS GOVERNING GAS-OIL RATIOS
IN THE VARIOUS PRODUCING FIELDS IN
NEW MEXICO.

Pursuant to order heretofore duly made and entered on the 13th day of January, 1940, continuing the hearing in the above entitled case until the 4th day of March, 1940, at ten o'clock A. M., hearing in the above entitled matter was convened in the Hall of the House of Representatives, Capitol Building, Santa Fe, New Mexico, at the hour of ten o'clock, A. M., on the 4th day of March, 1940, the entire Commission sitting as follows:

HON. JOHN E. MILES, Governor, Chairman of Commission
HON. FRANK WORDEN, Commissioner of Public Lands, Secretary
HON. A. ANDREAS, State Geologist, Member
Hon. Carl B. Livingston, Attorney for Commission.

APEARANCES:

NAME	COMPANY	ADDRESS
A. E. McCorkle	Stanolind Oil & Gas Co.	Fort Worth, Texas
J. O. Seth	" " " "	Santa Fe, N. M.
J. R. Vandever	Sunray Oil Co.	Wichita Falls, Tex.
Harry Leonard	Leonard Oil Co.	Roswell, N. M.

The hearing was called to order by Governor Miles, Chairman of the Commission, who requested the Secretary to read the call; whereupon Mr. Livingston stated that this meeting was a recessed meeting continued from January 13, 1940 by order of the Commission duly made and entered.

BY GOVERNOR MILES: The Commission has information that a request will be presented to the Commission for a continuance until tomorrow, and we will hear such request.

BY MR. A. M. McCORMEL: The engineers have been in session since they arrived until one o'clock this morning on this proposition, toward submitting their findings to the operators this afternoon, and if we could have some additional time I think we would be able to arrive at some agreement, if this hearing could be recessed until ten o'clock tomorrow morning.

BY GOVERNOR MILES: The recess will be granted and this hearing is recessed until ten o'clock A. M. of Tuesday, March 5, 1940.