

Case No.

441

Large Exhibits

DEC 3 1952

U. S. DEPARTMENT OF JUSTICE  
ALBUQUERQUE, NEW MEXICO

THE DEPT. OF JUSTICE

440,  
PAGE 104, 141,  
442.

November 26, 1952.

E. E. GREESON  
ADA DEARNLEY  
COURT REPORTERS  
BOX 1292  
PHONES 5-9422 AND 5-9546  
ALBUQUERQUE, NEW MEXICO

BEFORE THE  
OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

November 20, 1952

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In the Matter of:

Application of Humble Oil & Refining Co.  
for dual completion of its Popeano No. 1,  
SE SW 25-20S-36E (Eunice-Monument Pool)  
to permit production of oil from Grayburg,  
gas from Queen.

Case No. 440.

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In the Matter of:

Application of Humble Oil & Refining Co.,  
for dual completion of its State "B" No. 1,  
SW NW 29-21S-36E (Eunice-Monument Pool)  
to permit production of oil from Grayburg,  
gas from Yates.

Case No. 441.

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In the Matter of:

Application of Humble Oil & Refining Co.,  
for dual completion of State "B" No. 7,  
NE SE 29-21S-36E (Eunice-Monument Pool)  
to permit production of oil from Grayburg,  
gas from Yates.

Case No. 442.

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(Consolidated)

(Notice of Publication read by Mr. Graham.)

MR. SHAVER: Prior to filing the applications in these three  
cases we mailed copies of the applications to all the offset  
operators and in Case No. 440 we submitted the application to the

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ECONOMIC REPORTERS  
ROOM 103-106 E. CORTES ST.  
PHONES 7-5545 AND 5-9546  
ALBUQUERQUE NEW MEXICO

United States Geological Survey and secured their approval. I thought you would like the record to show that.

ROBERT S. DEWEY

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. SHAVER:

Q Would you state your name, please?

A Robert S. Dewey.

MR. SHAVER: I am sure the Commission will waive Mr. Dewey's qualifications.

MR. SPURRIER: We have qualified Mr. Dewey some time ago.

MR. SHAVER: I think to expedite this matter we will introduce our exhibits after Mr. Dewey has finished testifying and at this time, Mr. Dewey, we would like for you to explain the matters set forth in the application in all three cases, if you would please.

A The Case 440 concerns the application of Humble Oil and Refining Company to dually complete the well known as Humble Federal 4 Fopeano No. 1 in Eunice-Monument field in Lea County, New Mexico. This well is located in the southeast quarter of the southwest quarter of Section 25, Township 20 South, Range 36 East, Lea County, completed June 17, 1937 total depth 3850 feet. The well had five and one-half casing set at 3699 feet. The relative location of this well with the surrounding property will be shown on one of the Exhibits that we will submit to the Commission. This well is, was completed from 3699 feet to 3850

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COUNTY REPORTERS  
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feet in the Grayburg formation. This application to dually complete the well is our intention to set a formation type packer between the Grayburg formation and produce the oil from the Grayburg formation through the tubing and to produce the gas from above the formation packer from the Queen formation through the tubing casing annulus. We will use conventional type equipment to do this in such a way that the pressures may be taken in either/or both formation. We are familiar with the regulations of the Commission relative to such dually completed wells and will use our best effort to comply with Commission's orders to maintain separation of the production from the two pay horizons. I would like to introduce as Exhibit "A" a plat showing the location of this particular well with the relationship to the offsetting leases and wells surrounding it. In Exhibit "B", which I would like to submit, we have shown a schematic drawing of a current condition of the well relative to depth casing and supplemental mining procedure. In Exhibit "C", which I would like to submit, we have shown the schematic diagram of our intention relative to where we intend to perforate the casing mainly from 3440 feet to 3630 feet and the approximate location of the production packer which will separate the Queen formation from the Grayburg formation and will allow us to produce these two formations in a separate manner. I offer this as an Exhibit in this case.

MR. SHAVER: I think we would like to mark this as Exhibit No. 1 with the attachment and introduce it now in Case 440.

MR. SPURTER: Without objection it will be received.

A Case No. 441 concerns the application of Dumble Oil and Refining Company to dually complete its State "B" No. 1 in Eunice-Monument field, Lea County, New Mexico. This well is located in the southwest quarter of the northwest quarter of Section 29, Township 21 South, Range 11 East, Lea County, New Mexico and was completed November 18, 1934, at a total depth of 3971 feet. Seven inch production casing is set at 3941 feet. This well is currently producing from the open hole from 3941 feet to 3971 feet from the Grayburg formation. Our application concerns itself with permission to dually complete this well in such a way as to produce the oil from the Grayburg formation through the tubing and produce gas from the Yates formation through the tubing casing annulus by perforating a seven inch casing at approximately 3200 to 3550 feet opposite the Yates formation and setting a formation type production packer below the casing formation at approximately 3600 feet to separate the two pay zones. In this well we will set the conventional type of equipment used to effect the purpose of the keeping the two zones separate and allow them to be produced separately. We will comply with all the rules and regulations of the Commission relative to control of dually completed wells. We have here, as Exhibit "A" a plat showing the location of this well with relationship to other wells on the lease and to the surrounding leasehold interests and their wells. On Exhibit "B" we have a schematic drawing showing the current completion of State N.M.

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ALBUQUERQUE, NEW MEXICO

State "B" No. 1 well, showing the location of casing strings, amounts of cement used, total depth and that type of information. On Exhibit No. 3 we have a schematic diagram of proposed dual completion of this well indicating a point at which we desire to perforate the casing and the point at which we intend to set the production packer to keep the two formations separate.

MR. SHAVER: At this time we would like to introduce this application as the Exhibit No. 1 in Case No. 441.

MR. SPURRIER: Without objection it will be received.

(Exhibit No. 1, Case No.  
441 Marked for Identifi-  
cation)

Mr. Dewey: Case 442 concerns itself with application of Humble Oil and Refining Company to dually complete Humble N.M. State "B" No. 7 Eunice-Monument field, Lea County, New Mexico. This well is located in the northeast quarter, the southeast quarter of Section 29, Township 21 South, Range 36 east, Lea County, and was completed February 1st, 1936, to a total depth of 3900 feet. Five and one-half inch casing was set at 3807 feet. This well is currently producing as associated gas well from perforation 3730 and 3775 feet. The well was originally completed as an oil well but is being currently produced as an associated gas well from associated formation. It is our intention to dually complete this well in such a manner as to produce gas from the Grayburg formation through the tubing and gas from the Yates formation through the tubing casing annulus in the following manner: Perforate the 5-1/2 inch casing from approximately 3200

to 3500 feet, set a production type packer below the casing perforation at approximate depth of 3600 feet to separate the two pay zones. The manner or method of dual completion is shown on the Exhibit. We are familiar with and will comply with all rules and regulations of the New Mexico Oil Conservation Commission to maintain separation of these two pay zones.

On Exhibit "A" we have indicated the location of this well on the Humble lease and also its relative position to the surrounding lease holders and the wells thereon. The Exhibit "B" we indicate schematically the manner in which this well was completed relative to casing sizes, casing depths and amount of cement used and also the fact that the bottom of the hole has been cemented back to 4015 feet to approximately 3790 feet.

On exhibit "C" we indicate schematically the points at which we intend to perforate the casing and the point at which we intend to set the production type packer to segregate the two pay zones.

We also submit a radioactive log taken on this well by Lane Wells.

MR. SHAVER: At this time we would like to submit this application with the attachments as Humble's Exhibit No. 1 in Case No. 442.

MR. SPURRIER: Without objection it will be received.

(Humble's Exhibit No. 1,  
in Case 442, Marked for  
Identification)

Q Mr. Dewey, do you have anything else you would like to add to your statements?



A I think not.

MR. SHAVER: I believe that is all we have.

MR. GRAHAM: Why all this influx of dual completions at this time?

A Why, I think it is due to the fact that gas is marketable to where it has not been in the past and of course everybody wants to obtain his share of the market.

MR. GRAHAM: You are not confronted with any drainage problem?

A We will be unless we protect correlative rights by making that gas marketable.

MR. GRAHAM: It is available for - - there are available facilities for marketing the gas?

A There are in this area. We feel we will have no trouble marketing the gas.

MR. SHAVER: Do you have, at this time do you have a market available for the sale of the gas?

A I understand that the final negotiations have not been consummated but they have progressed far enough that we have reasonable assurance it will be marketable.

MR. SPURRIER: Anyone have a question?

MR. DAILEY: I would like to ask a question on Case No. 442. That was on the State "B" No. 7 which ended too. As I understand your testimony it would be gas from the Grayburg and gas from the Yates?

A As far as I know nobody else has a gas to gas dual

completion in New Mexico. Is that what you are driving at?

MR. DAILEY: I don't know of any other. I was just wondering on the volume which might be produced from the Grayburg horizon.

A We intend to market as much gas as we make within the Commission's regulations and within our ability to find a market. We haven't set any definite amount of gas to market from either one of these zones, of course the Commission has certain definite regulations, you know, relative to how much withdrawal can be made.

MR. DAILEY: Would that Grayburg gas be subject to your gas-oil ratio restrictions?

A Associated gas, I understand, is. It comes under the regulations for associated gas. Did you understand otherwise?

MR. DAILEY: Well, I just wanted to be sure.

MR. SPURRIER: Any other questions? If not the witness may be excused.

(Witness excused.)

Any comments in this case? If not we will take the case under advisement and go to Case No. 438.

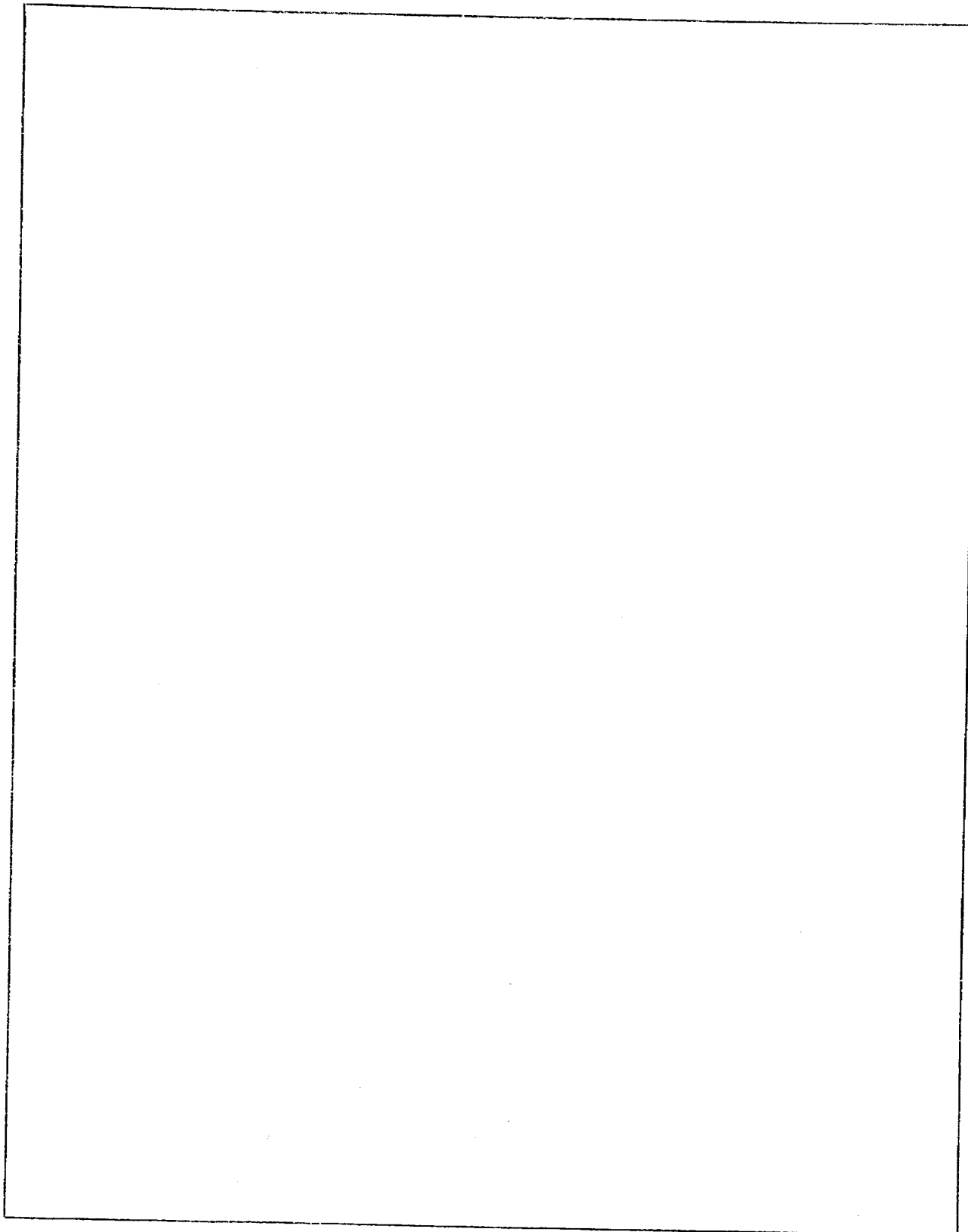
STATE OF NEW MEXICO )  
COUNTY OF BERNALILLO )

I HEREBY CERTIFY that the foregoing and attached transcript of hearing in Case No. 440, 441 and 442, inclusive, before the Oil Conservation Commission, State of New Mexico, at Santa Fe, on November 20, 1952, is a true and correct record of the same to the best of my knowledge, skill and ability.

DATED at Albuquerque, New Mexico, this \_\_\_\_\_ day of November, 1952.

\_\_\_\_\_  
REPORTER

ADA DEARNLEY & ASSOCIATES  
COURT REPORTERS  
ROOM 105-106, EL CORTEZ BLDG.  
PHONES 7-9645 AND 5-9546  
ALBUQUERQUE, NEW MEXICO



E. E. GREESON  
ADA DEARNLEY  
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BOX 1302  
PHONES 5-2422 AND 5-2546  
ALBUQUERQUE, NEW MEXICO

Ex #1 Case 441  
Humble  
Midland, Texas  
October 17, 1952

File: 6-1  
Re: Application to Dually Complete,  
Humble New Mexico State B-1,  
Eunice-Monument Field,  
Lea County, New Mexico

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

Gentlemen:

By means of this application, Humble Oil & Refining Company wishes to state the following:

- (a) Humble Oil & Refining Company New Mexico State B-1, located in the SW/4 of the NW/4 of Section 29, T21S, R36E, Lea County, was completed November 18, 1934, at a total depth of 3971 feet. Seven-inch production casing is set at 3941 feet.
- (b) Appended Exhibit A shows the location of the subject well, other wells on the same lease and all the offset wells to the Humble New Mexico State B lease.
- (c) The subject well was completed as an oil well producing in the open hole section from 3941 to 3971 feet from the Grayburg formation. A schematic diagram of the well completion is shown in Exhibit B.
- (d) The applicant proposes to dually complete the well to produce oil from the Grayburg formation through the tubing and gas from the Yates formation through the tubing-casing annulus in the following manner:
  - (1) Perforate the 7-inch casing from approximately 3200 to 3550 feet opposite the Yates formation.
  - (2) Set a production type packer below the casing perforations at an approximate depth of 3600 feet to separate the two pay zones.

The manner and method of the dual completion is shown in the schematic diagram as Exhibit C.

- (e) Granting of this application for permission to produce the well as a dual completion with oil from the Grayburg formation and gas from the Yates formation is in the interest of conservation and protection of correlative rights.

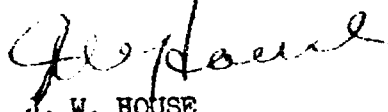
Oil Conservation Commission  
State of New Mexico  
October 17, 1952  
Page 2

- (f) The applicant will comply with all rules and regulations of the New Mexico Oil Conservation Commission to maintain separation of production from the two pay zones.
- (g) The manner and method of the proposed dual completion is mechanically feasible and practical.

Therefore, Humble Oil & Refining Company requests that the New Mexico Oil Conservation Commission set a certain day upon which this application may be heard and after said hearing to grant permission in order that the applicant may dually complete the subject well as proposed in this application.

Respectfully Submitted,

HUMBLE OIL & REFINING COMPANY



J. W. HOUSE  
Division Superintendent

JEG/nrs

Encl.

- Exhibit A: Plot showing location of subject well, other wells on same lease and all offset wells.
- Exhibit B: Schematic diagram of subject well completion.
- Exhibit C: Manner and method of dual completion proposed in subject well.

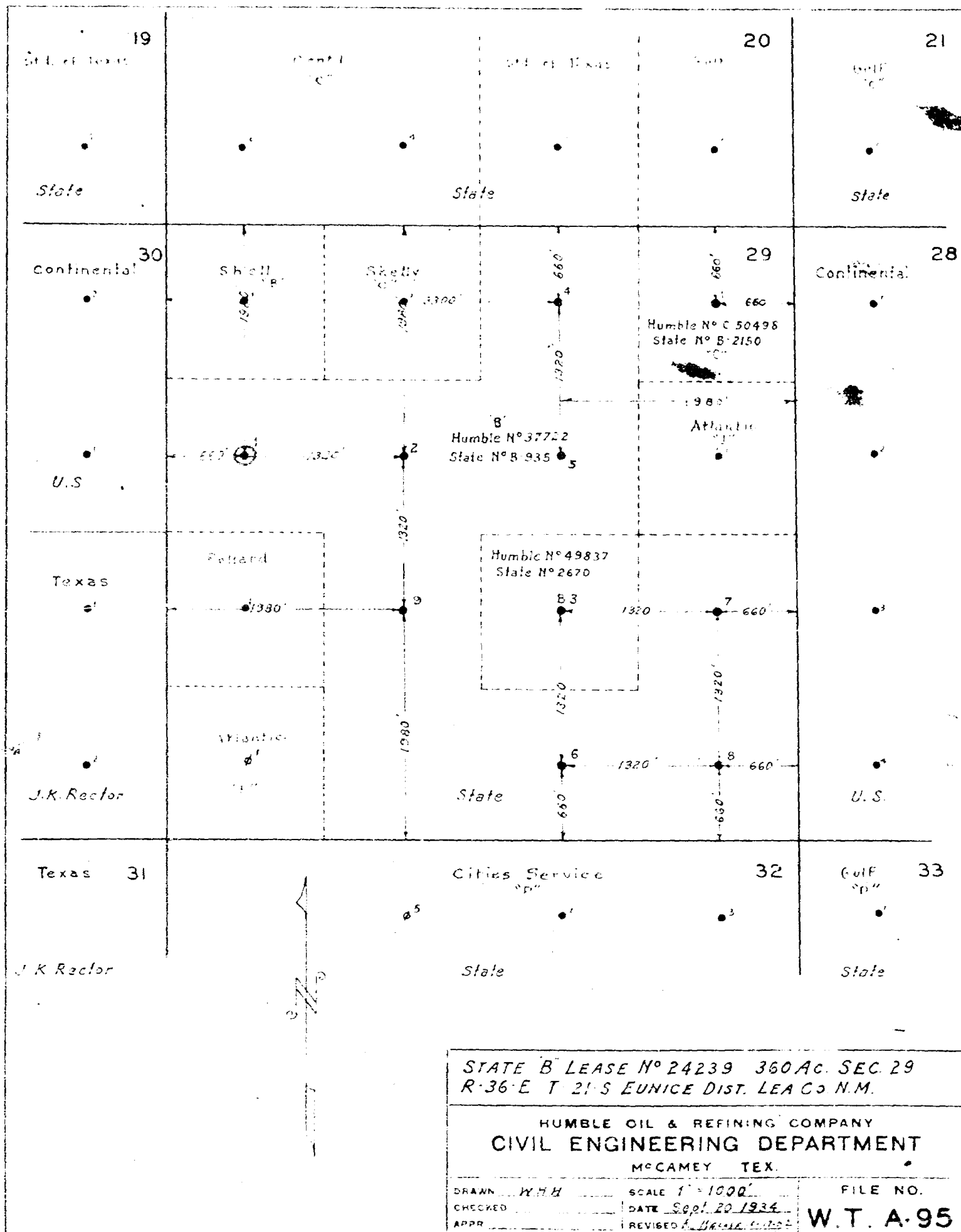


EXHIBIT B - SCHEMATIC DIAGRAM OF CURRENT  
COMPLETION - HUMBLE NEW MEXICO STATE B-1

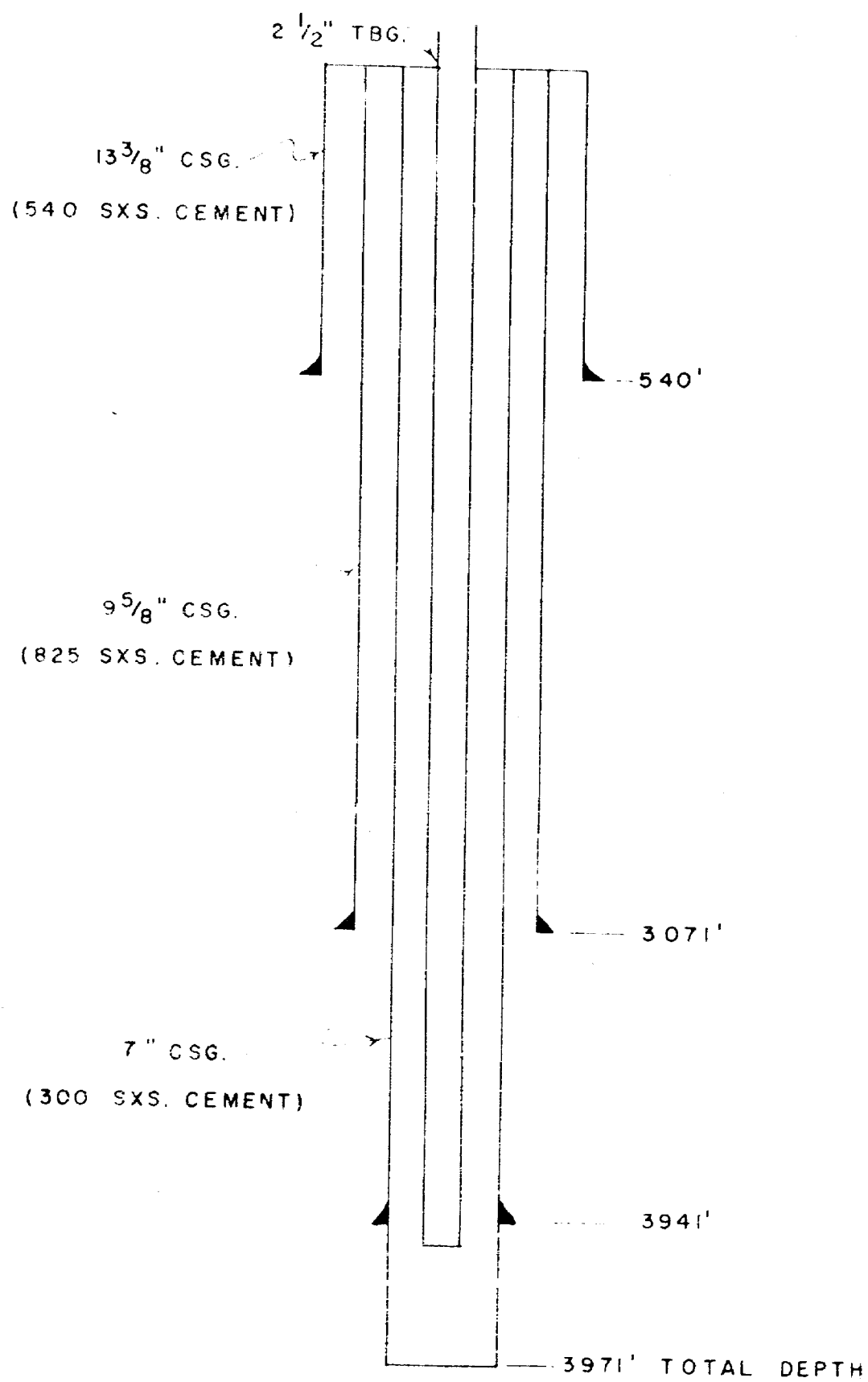
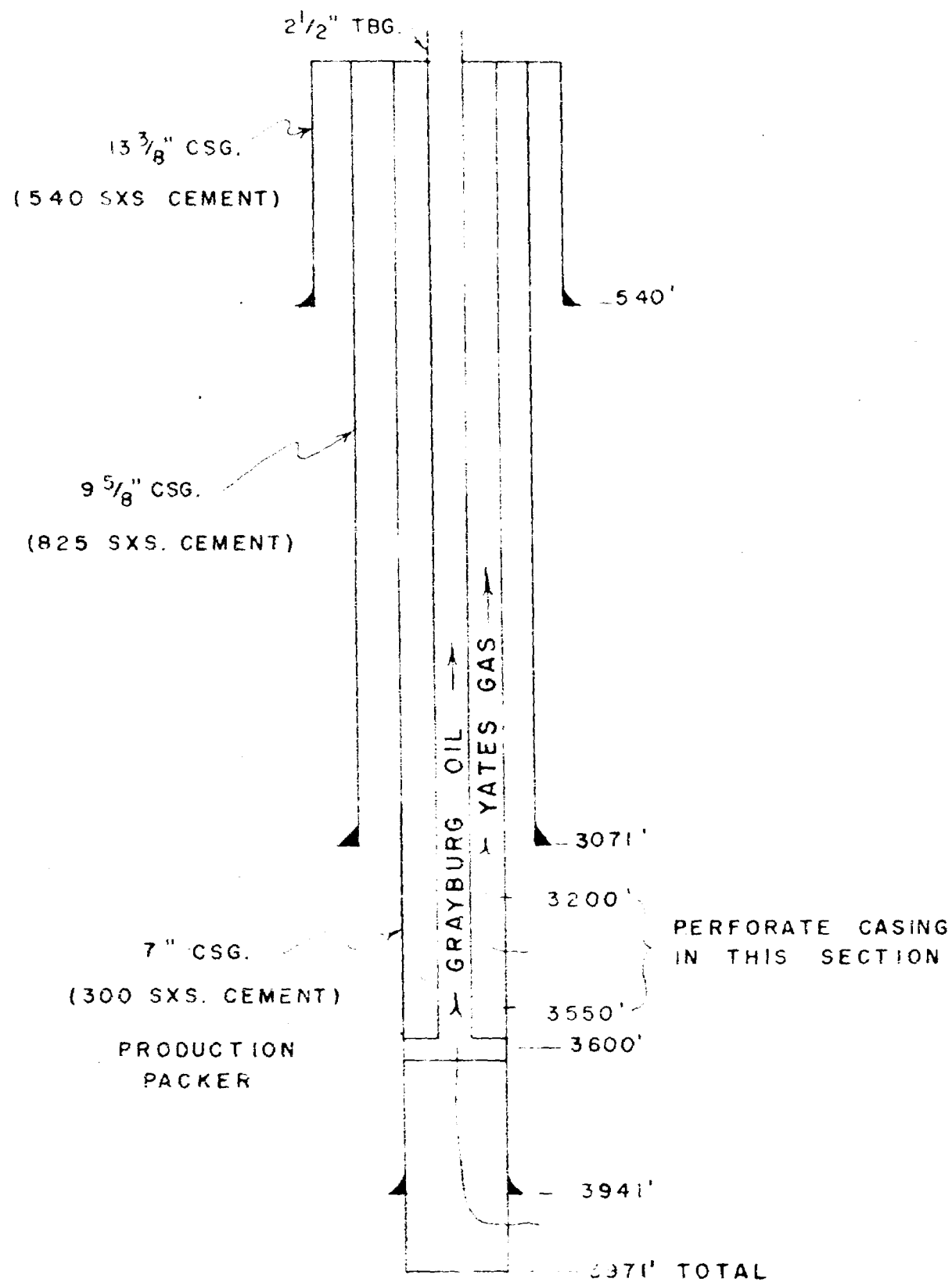




EXHIBIT C - SCHEMATIC DIAGRAM OF PROPOSED  
DUAL COMPLETION - HUMBLE NEW MEXICO STATE B-1



BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

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

CASE NO. 441  
ORDER NO. R-227

THE APPLICATION OF HUMBLE OIL  
AND REFINING COMPANY FOR AN  
ORDER GRANTING PERMISSION TO  
DUALY COMPLETE AND PRODUCE  
ITS STATE "B", WELL NO. 1, LOCATED  
IN THE SW/4 NW/4 OF SECTION 29,  
TOWNSHIP 21 SOUTH, RANGE 36 EAST,  
NMPM, LEA COUNTY, NEW MEXICO,  
IN THE EUNICE-MONUMENT POOL.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock am on November 20, 1952,  
at Santa Fe, New Mexico, before the Oil Conservation Commission, herein-  
after referred to as the "Commission".

NOW, on this <sup>th</sup>28 day of ~~November~~ the Commission, a quorum  
being present, having considered the records and the testimony adduced,  
and being fully advised in the premises,

FINDS:

(1) That due notice having been given as required by law, the Com-  
mission has jurisdiction of the case and the persons and subject matter  
thereof.

(2) That applicant's State "B", Well No. 1, SW/4 NW/4, Section 29,  
Township 21 South, Range 36 East, NMPM, Lea County, New Mexico, was  
completed in November, 1934, as an oil well producing from the Grayburg  
formation in the open-hole interval 3941-3971, having drilled through the  
Yates gas zone at an approximate depth of 3200-3550 feet.

(3) That although recent experiments tend to show that mechanical  
packers and other devices are ordinarily available for successful dual/  
multiple completions of oil - gas wells, the Commission is unconvinced of  
the soundness as a waste-prevention practice, of such dual/multiple  
completions as a general practice in New Mexico without specific controls  
over each such project.

IT IS THEREFORE ORDERED:

That the applicant herein, Humble Oil and Refining Company, be,  
and it hereby is authorized to dually complete and produce its State "B",  
Well No. 1, located in the SW/4 NW/4 Section 29, Township 21 South, Range  
36 East, NMPM, Lea County, New Mexico, in such a manner that gas from  
the Yates formation may be produced through the annular space between the  
casing and the tubing, and oil from the Grayburg formation through the tubing  
by proper perforations and the installation of a proper packer or packers;

CASE NO. 441 - - - ORDER NO. R-227

PROVIDED, HOWEVER, That subject well shall be completed, and thereafter produced, in such a manner that there will be no commingling within the well bore, either within or outside the casing of gas, oil and gas, or oil produced from either or both of the separate strata, and,

PROVIDED FURTHER, That said subject well for dual completion and production shall be equipped in such a way that reservoir pressures may be determined separately for each of the two specified strata, and further, be equipped with all necessary connections required to permit recording meters to be installed and used, at any time, as may be required by the Commission or its representatives, in order that natural gas, oil, or oil and gas from each separate stratum may be accurately measured and the gas-oil ratio thereof determined, and,

PROVIDED FURTHER, That the operator applicant shall make any and all tests, including segregation tests, but not excluding other tests and/or determinations at any convenient time and in such manner as deemed necessary by the Commission; the original and all subsequent tests shall be witnessed by representatives of the Commission and by representatives of offset operators, if any there be, at their election, and the results of each test properly attested to by the applicant herein and all witnesses, and shall be filed with the Commission within ten (10) days after the completion of such test, and,

PROVIDED FURTHER, That upon the actual dual completion of such subject well, applicant shall submit to the Commission a diagrammatic sketch of the mechanical installation which was actually used to complete and produce the seal between the strata, and a special report of production, gas/oil ratio and reservoir pressure determination of each producing zone or stratum immediately following completion.

IT IS FURTHER ORDERED, That jurisdiction of this cause is hereby retained by the Commission for such further order or orders as may seem necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of applicant to comply with any requirement of this order after proper notice and hearing, the Commission may terminate the authority hereby granted and require applicant or its successors and assigns to limit its activities to regular single-zone production in the interests of conservation.

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

*Edwin L. Mechem*

EDWIN L. MECHEM, Chairman

*Guy Shepard*

GUY SHEPARD, Member

*R. R. Spurrier*

R. R. SPURRIER, Secretary

S E A L