

Case No.

455

Application, Transcript,
Small Exhibits, Etc.

CASE 455: Humble Oil & Ref. Co. dual com-
pletion state 'E' No. 1, NMSW 21-198-37E
(Bullock-Mountment Pool)

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. 455
ORDER NO. R-249

THE APPLICATION OF HUMBLE OIL AND
REFINING COMPANY FOR AN ORDER
GRANTING PERMISSION TO DUALY
COMPLETE AND PRODUCE ITS STATE
"E", WELL NO. 1 LOCATED IN THE
NW/4 SW/4 SECTION 21, TOWNSHIP 19
SOUTH, RANGE 37 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 a.m. on December 16, 1952, at Santa Fe, New Mexico, before the Oil Conservation Commission, hereinafter referred to as the "Commission".

NOW, on this 15th day of January, 1953, 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 Commission has jurisdiction of the case and the persons and subject matter thereof.

(2) That applicant's State "E", Well No. 1, NW/4 SW/4, Section 21, Township 19 South, Range 37 East, NMPM, Lea County, New Mexico, was completed in December, 1936, as an oil well producing from the Grayburg formation in the openhole interval 3740'-3985', having drilled through the Queen gas zone 3550'-3700'.

(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 "E", Well No. 1, NW/4 SW/4, Section 21, Township 19 South, Range 37 East, NMPM, Lea County, New Mexico, in such a manner that gas from the Queen formation may be produced through the annular space between the casing and tubing and oil from the Grayburg formation through the tubing by proper perforations and the installation of a proper packer or packers.

PROVIDED, HOWEVER, That subject well shall be completed, and thereafter produced, in such a manner that there will be no commingling with in 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 interest 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

E. S. Walker
E. S. WALKER, Member

R. R. Spurrer
R. R. SPURRIER, Secretary

CASE 455

HUMBLE NEW MEXICO STATE E-1, EUNICE MONUMENT POOL, LEA COUNTY, N. M.

Case 455 is concerned with the application dated November 13, 1952 of Humble Oil & Refining Company to dually complete their New Mexico State E-1, located in the Eunice Monument Pool, Lea County, New Mexico.

This well is located in the NW/4 of SW/4, Section 21, T-19-S, R-37-E. Its location with reference to other wells on the same lease and to wells of off-set operators is shown on the plat, Exhibit A.

It was completed December 21, 1936 at a total depth of 3985 feet with 5 $\frac{1}{2}$ -inch O.D. production string of casing set at 3740 feet. It is and has been produced from open hole below the casing seat from the Grayburg formation. Exhibit B is a schematic diagram of current completion status of this well.

It is proposed to dually complete this well in such a way as to continue to produce oil from the Grayburg formation through tubing and to produce gas from the Queen formation through the tubing casing annulus. To accomplish this purpose, the 5 $\frac{1}{2}$ -inch casing will be perforated within the approximate interval from 3550 to 3700 feet. A production type packer will be set at approximately 3720 feet and between the Queen and Grayburg formations. A schematic diagram of the proposed dual completion is shown in Exhibit C.

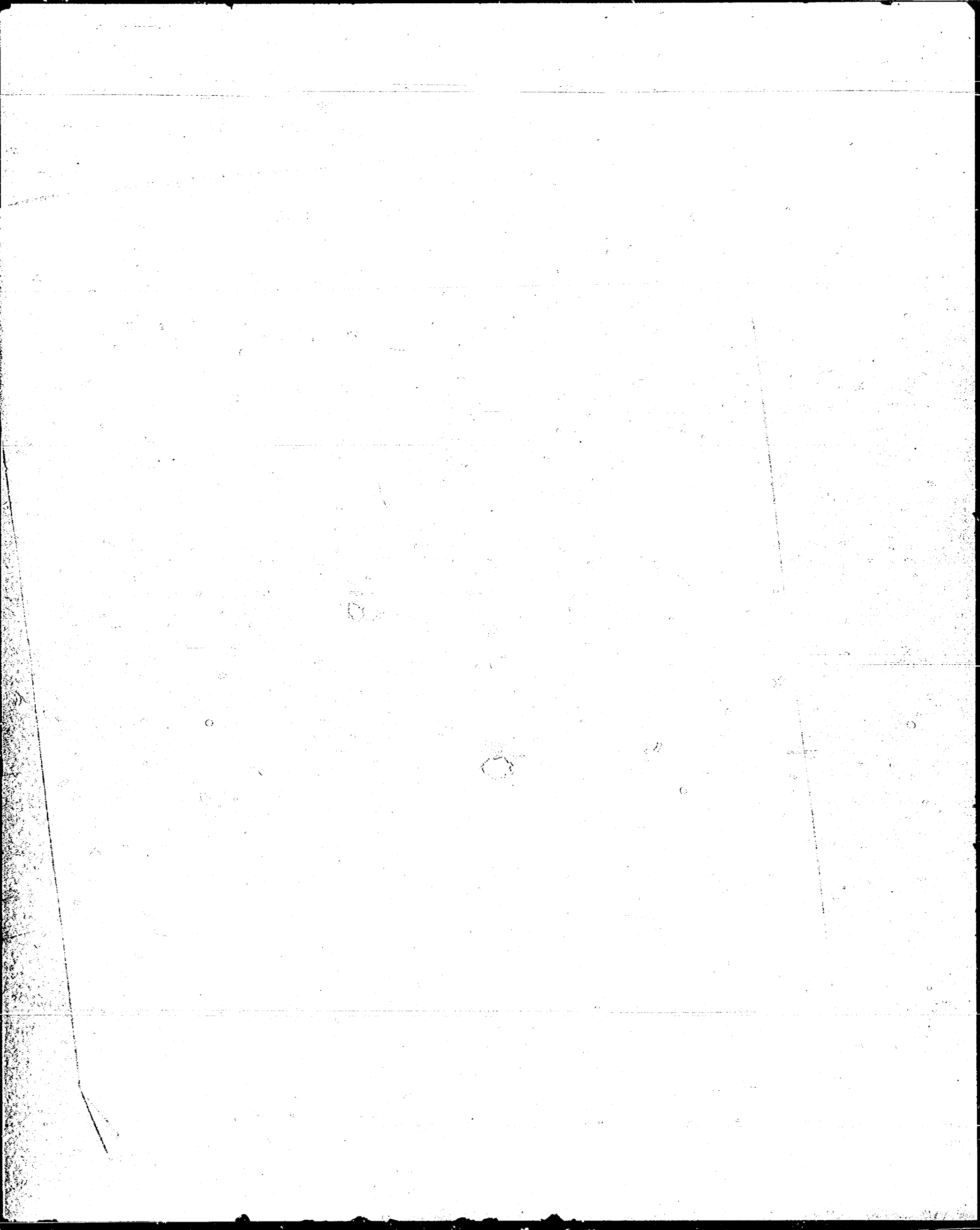
We offer Exhibits A, B, and C for identification as Exhibits in this case.

It is my opinion that the proposed dual completion is mechanically feasible and practical with conventional equipment designed for this purpose.

It is my opinion that the granting of the application for dual completion with oil from the Grayburg and gas from the Queen is in the interest of conservation and protection of correlative rights.

The applicant is acquainted with and will comply with all rules and regulations of the New Mexico Conservation Commission relative to maintaining separation of production from the two pay horizons.

A market arrangement has been made to sell this gas.



Midland, Texas
November 13, 1952

Case 455

File: 6-1
Re: Application to Dually Complete
Humble New Mexico State E-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 E-1, located in NW/4 of SW/4, Section 21, T19S, R37E, Lea County, was completed December 21, 1936 at a total depth of 3985 feet. The 5-1/2-inch OD production string of casing was set and cemented at 3740 feet.
- (b) Exhibit A, attached, is a plat showing the location of the subject well, other wells on the same lease and all the offset wells to the Humble New Mexico State "E" lease.
- (c) The subject well was completed as an oil well producing in open hole from 3740 to 3985 feet in the Grayburg formation.
- (d) The applicant proposes to dually complete the well to produce oil from the Grayburg and gas from the Queens in the following manner:
 - (1) Perforate the 5-1/2-inch casing within the approximate interval of 3550 to 3700 feet opposite the Queens formation. The exact interval can not be determined until a log is run, a copy of which will be furnished to the Commission.
 - (2) Set a production type packer below these perforations at approximately 3725 feet to separate the two pay zones.
 - (3) Produce the Grayburg Oil through the tubing and the Queens gas through the tubing-casing annulus.

The manner and method of the dual completion is shown in Exhibit C:

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

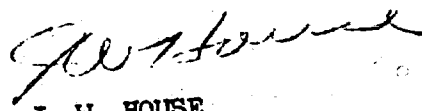
Oil Conservation Commission
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- (g) The manner and method of the proposed dual completion is mechanically feasible and practical.

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,

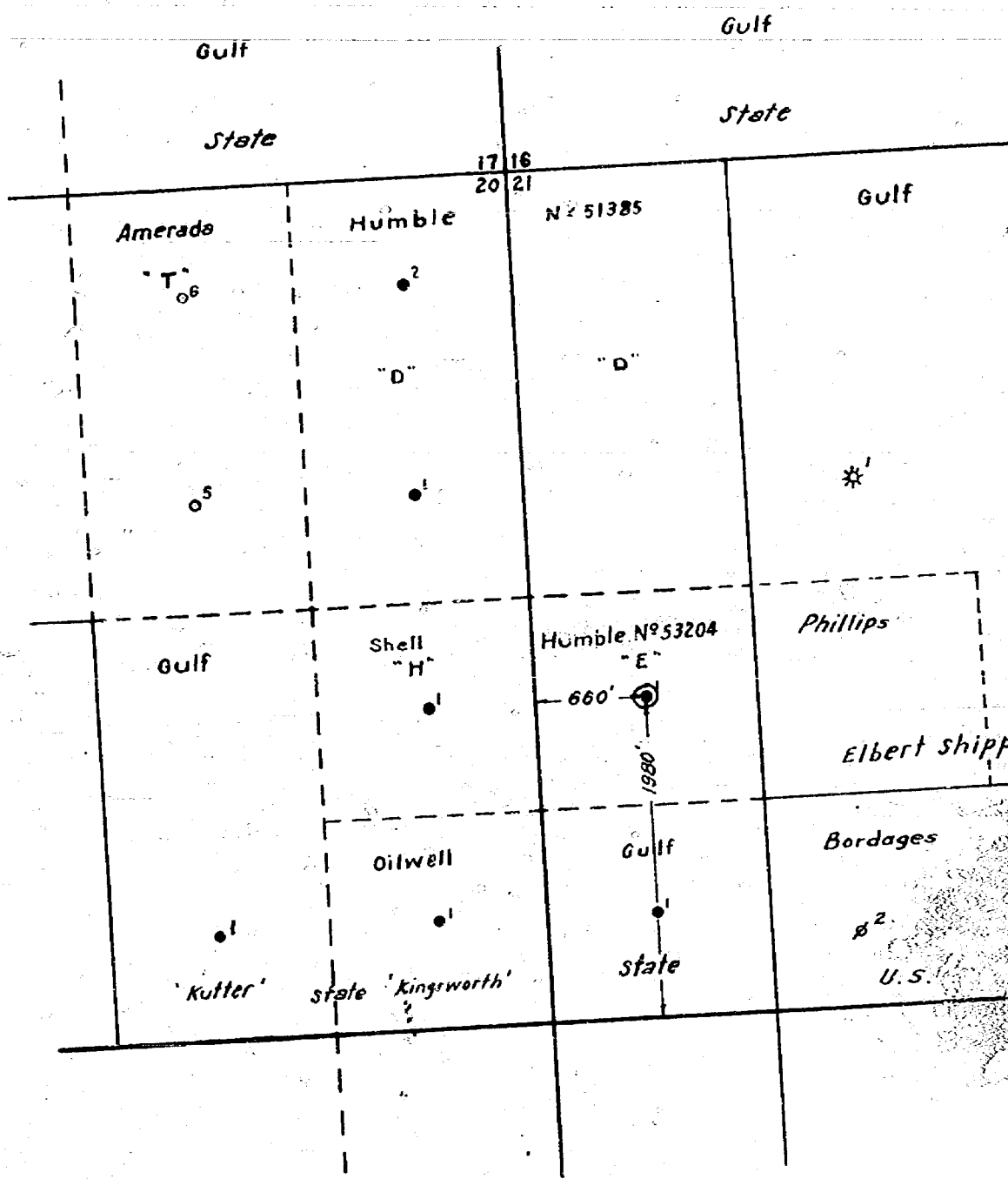
HUMBLE OIL & REFINING COMPANY



J. W. HOUSE
Division Superintendent

JEG/jl

- Encl. Exhibit A - Plat showing location of subject well, other wells on the State "E" lease.
Exhibit B - Schematic Diagram of current completion, Humble New Mexico State E-1.
Exhibit C - Schematic Diagram showing manner and method of the proposed dual completion, Humble New Mexico State E-1.



Case 455
 C.A.

STATE "E"		LSE. No 53204
N.W. 1/4 of S.W. 1/4 of Sec. 21-T195-R37E-Lea-Co. New Mex.		
HUMBLE OIL & REFINING COMPANY		
CIVIL ENGINEERING DEPARTMENT		
DRAWN <u>L.L.M.</u>	SCALE <u>1" = 1000'</u>	FILE NO. <u>WT-A 151</u>
CHECKED _____	DATE <u>11-16-36</u>	
APPR. _____	REVISED _____	

EXHIBIT C: SCHEMATIC DIAGRAM OF PROPOSED DUAL COMPLETION
 HUMBLE'S - NEW MEXICO STATE E-1

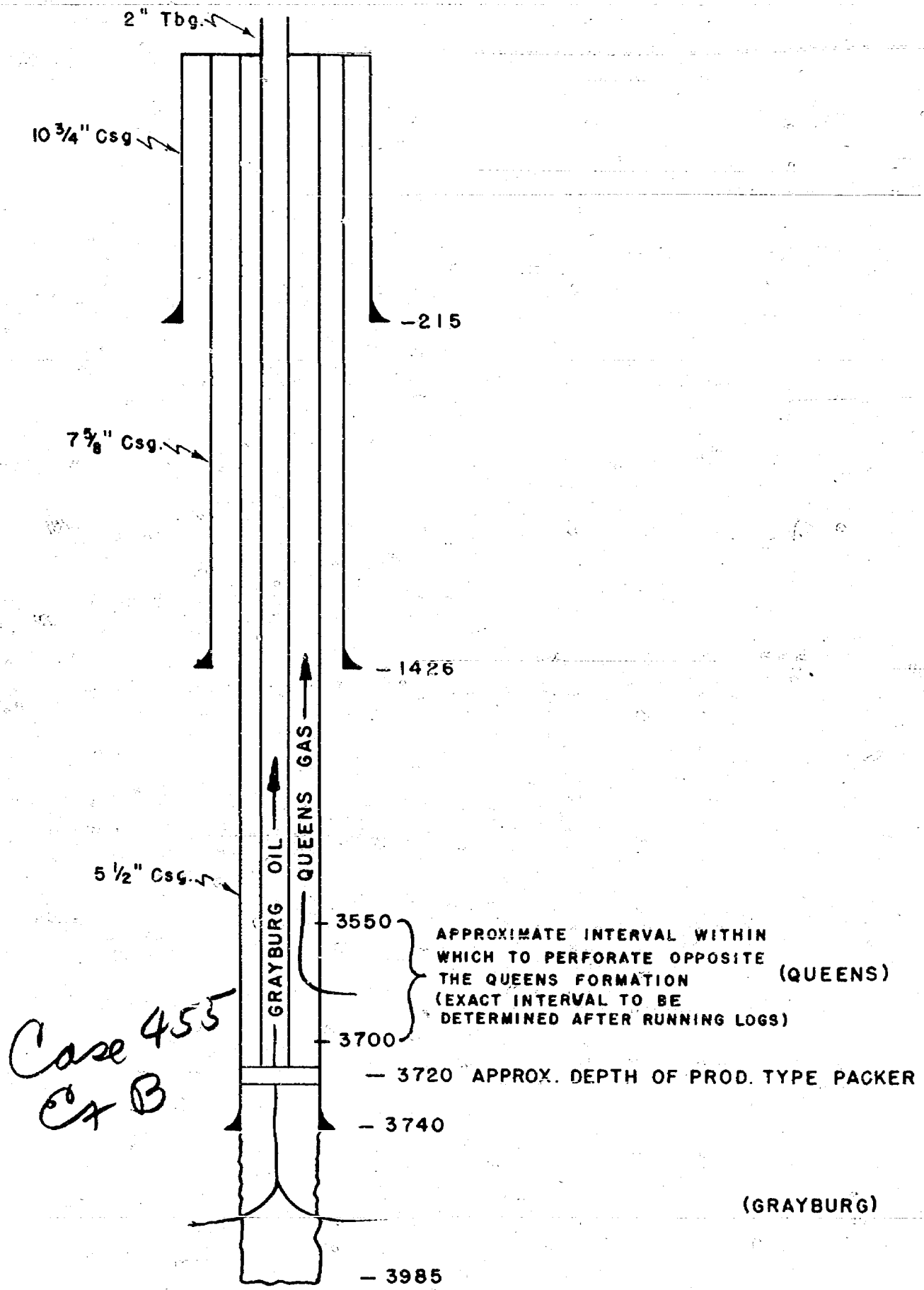


EXHIBIT B: SCHEMATIC DIAGRAM OF CURRENT COMPLETION STATUS - HUMBLE - NEW MEXICO STATE E-1

