

Case No.

1410

Application, Transcript,
Small Exhibits, Etc.



7

OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

April 28, 1958

C
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P
Y

Mr. William Kastler
Gulf Oil Corporation
P.O. Box 669
Roswell, New Mexico

Dear Mr. Kastler:

We enclose two copies of Orders R-1161, R-1164 and R-1166 issued April 22, 1958, by the Oil Conservation Commission in Cases 1411, 1409 and 1410, respectively, which were heard on April 9th at Santa Fe before an examiner.

Very truly yours,

A. L. Porter, Jr.
Secretary - Director

bp
Encls.

**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. 1410
Order No. E-1166**

**APPLICATION OF GULF OIL CORPORATION
FOR AN OIL-ON OIL DUAL COMPLETION IN AN
UNDESIGNATED WOLF CAMP POOL AND IN THE
ANDERSON RANCH-DEVONIAN POOL IN LEA
COUNTY, NEW MEXICO.**

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on April 9, 1958, at Santa Fe, New Mexico, before Elvin A. Utz, Examiner duly appointed by the New Mexico Oil Conservation Commission, hereinafter referred to as the "Commission," in accordance with Rule 1314 of the Commission Rules and Regulations.

NOW, on this 22nd day of April, 1958, the Commission, a quorum being present, having considered the application, the evidence adduced and the recommendations of the Examiner, Elvin A. Utz, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Gulf Oil Corporation, is the owner and operator of the Lea State "R" Well No. 1, located 990 feet from the North line and 660 feet from the East line of Section 2, Township 16 South, Range 32 East, NMPM, Lea County, New Mexico.

(3) That the applicant proposes to dually complete the said Lea State "R" Well No. 1 in such a manner as to permit the production of oil from an undesignated Wolfcamp pool and to permit the production of oil from the Anderson Ranch-Devonian Pool through parallel strings of 2 3/8-inch OD EUE tubing.

(4) That the mechanics of the proposed dual completion are feasible and in accord with good conservation practices.

(5) That approval of the subject application will not cause waste nor impair correlative rights.

(6) That the subject application should be approved.

IT IS THEREFORE ORDERED:

That the applicant, Gulf Oil Corporation, be and the same is hereby authorized to dually complete its Lea State "R" Well No. 1, located 990 feet from the North line and 660 feet from the

East line of Section 2, Township 16 South, Range 32 East, NEPM, Lea County, New Mexico, in such a manner as to permit the production of oil from an undesignated Wolfcamp pool and to permit the production of oil from the Anderson Ranch-Devonian Pool through parallel strings of 2 3/8-inch OD NUP tubing.

PROVIDED HOWEVER, That subject well shall be completed and thereafter produced in such a manner that there shall 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,

PROVIDED HOWEVER, That prior to the actual dual completion the operator shall make pressure tests of the casing to prove that no casing leaks exist. In the event a casing leak is apparent the operator shall take appropriate steps to adequately repair the leak. The results of these tests shall be reported to the Commission on Form C-163.

PROVIDED FURTHER, That upon the actual dual completion of such subject well applicant shall submit to the appropriate District Office of the Commission copies of Oil Conservation Commission Form C-163, Form C-164, Form C-116, and Form C-122, outlining the information required on these forms by existing Rules and Regulations, and two copies of the electric log of the well.

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 or gas-liquid ratio thereof determined, and

PROVIDED FURTHER, That the operator shall make any and all tests, including segregation and packer-leakage tests upon completion and annually thereafter during the Gas-Oil Ratio Test Period for the Anderson Ranch-Devonian Pool, commencing in the year 1959, and whenever the packer is disturbed, but not excluding any other tests and/or determinations as deemed necessary by the Commission; the original and all subsequent tests shall be witnessed 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, shall be filed with the Commission within fifteen (15) days after the completion of such tests, and further, that applicant shall file with the Commission in duplicate a packer-setting affidavit, which affidavit shall be due within fifteen (15) days of the dual completion or whenever the packer is disturbed, and

PROVIDED FURTHER, That upon the actual dual completion of such subject well, applicant shall submit to the Commission a

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Case No. 1410
Order No. B-1106

diagrammatic sketch of the mechanical installation which was actually used to complete and produce the pool between the strata, and a special report of production, gas-oil ratio or gas-liquid ratio, and reservoir pressure determination for each producing zone or stratum immediately following completion.

IT IS HEREBY ORDERED: That jurisdiction of this case is hereby retained by the Commission for such further order or orders as may seem necessary or appropriate for the protection of waste and/or protection of correlative rights, with 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

E. L. Nechem

EDWIN L. NECHEM, Chairman

Murray E. Morgan

MURRAY E. MORGAN, Member

A. L. Porter, Jr.

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



lr/

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Date 4-11-58

CASE 1410

Hearing Date 4-11-58

My recommendations for an order in the above numbered cases are as follows:

1. Approve as ~~requested~~ using Std. Twin string
oil - oil dual order.
2. Approve completion in Wolfcamp undesignated.
3. Lower " " Leveaux-Anderson Ranch

Staff Member



PETROLEUM AND ITS PRODUCTS

GULF OIL CORPORATION

P. O. DRAWER 1290 · FORT WORTH 1, TEXAS

E. HOSFORD
DIVISION PRODUCTION COORDINATOR

FORT WORTH
PRODUCTION DIVISION

March 12, 1958

Oil Conservation Commission
State of New Mexico
P. O. Box 871
Santa Fe, New Mexico

Re: Application for Permit to Oil-Oil Dually Complete Gulf's
Lea State "R" (NCT-A) Well No. 1, Anderson Ranch (Devon-
ian) and (Wolfcamp) Pools, Sections 1 and 2, T-16-S,
R-32-E, Lea County, New Mexico

Gentlemen:

Gulf Oil Corporation respectfully requests a hearing to consider our application for permission to dually complete Lea State "R" (NCT-A) Well No. 1 in such a manner that the Devonian and Wolfcamp Reservoirs may be produced through parallel strings of tubing, and in support thereof states the following:

- (1) Gulf Oil Corporation is the owner and operator of the Lea State "R" (NCT-A) 100.79-acre lease which consists of Lot 1, Section 2, and Lot 4 in Section 1 of T-16-S, R-32-E, Lea County, New Mexico, as shown on the attached plat. Gulf's Lea State "R" (NCT-A) Well No. 1 is located 990 feet from the north and 660 feet from the east lines of said Section 2.
- (2) Subject well has 13-3/8" casing set at 611 feet and cement circulated with 725 sacks. The 9-5/8" casing is set at 4174 feet and cement circulated with 2770 sacks. Well was drilled to a total depth of 13,420 feet with 7" casing set and cemented at 13,391 feet with 1152 sacks. Lea State "R" (NCT-A) Well No. 1 was potentialed in the Devonian zone on February 27, 1958, and on the initial test, flowed 247 barrels of 52° API gravity oil in 13 hours through a 30/64" choke from the open hole interval 13,391 to 13,420 feet.
- (3) On a 4½-hour drill stem test from the interval 9820 to 9962 feet in the Wolfcamp, the well flowed 373.60 barrels of 42 gravity oil and 41.20 barrels of water through 5/8" choke. Thirty minute BHP was 3575 pounds.

March 12, 1958

- (4) Applicant proposes to perforate the 7" casing opposite the Wolfcamp Formation in an interval approximately 9820 to 9920 feet and dually complete through the use of parallel strings of tubing in the manner set out in the diagrammatic sketch attached hereto. The two producing intervals will be separated by means of a Baker Production Packer capable of withstanding any differential in pressures expected to be encountered between the two producing formations. If approved, applicant plans to run 2-3/8" O.D. EUE tubing from each producing horizon.

The manner and method of the proposed dual completion is mechanically feasible and practical and the granting of this application is in the interest of conservation and the protection of correlative rights. Applicant will comply with all rules and regulations of the New Mexico Oil Conservation Commission to maintain separation of production from the two pays.

By copy of this letter of application, all offset operators are notified of the proposed dual completion.

Respectfully submitted,

GULF OIL CORPORATION

By E. Hoofard
Division Production Coordinator

cc: Oil Conservation Commission
P. O. Box 2045
Hobbs, New Mexico

Mr. Edward G. Burke, Jr.
Milam Building
San Antonio 5, Texas

Humble Oil & Refining Company
P. O. Box 1600
Midland, Texas

Magnolia Petroleum Company
P. O. Box 727
Kermit, Texas

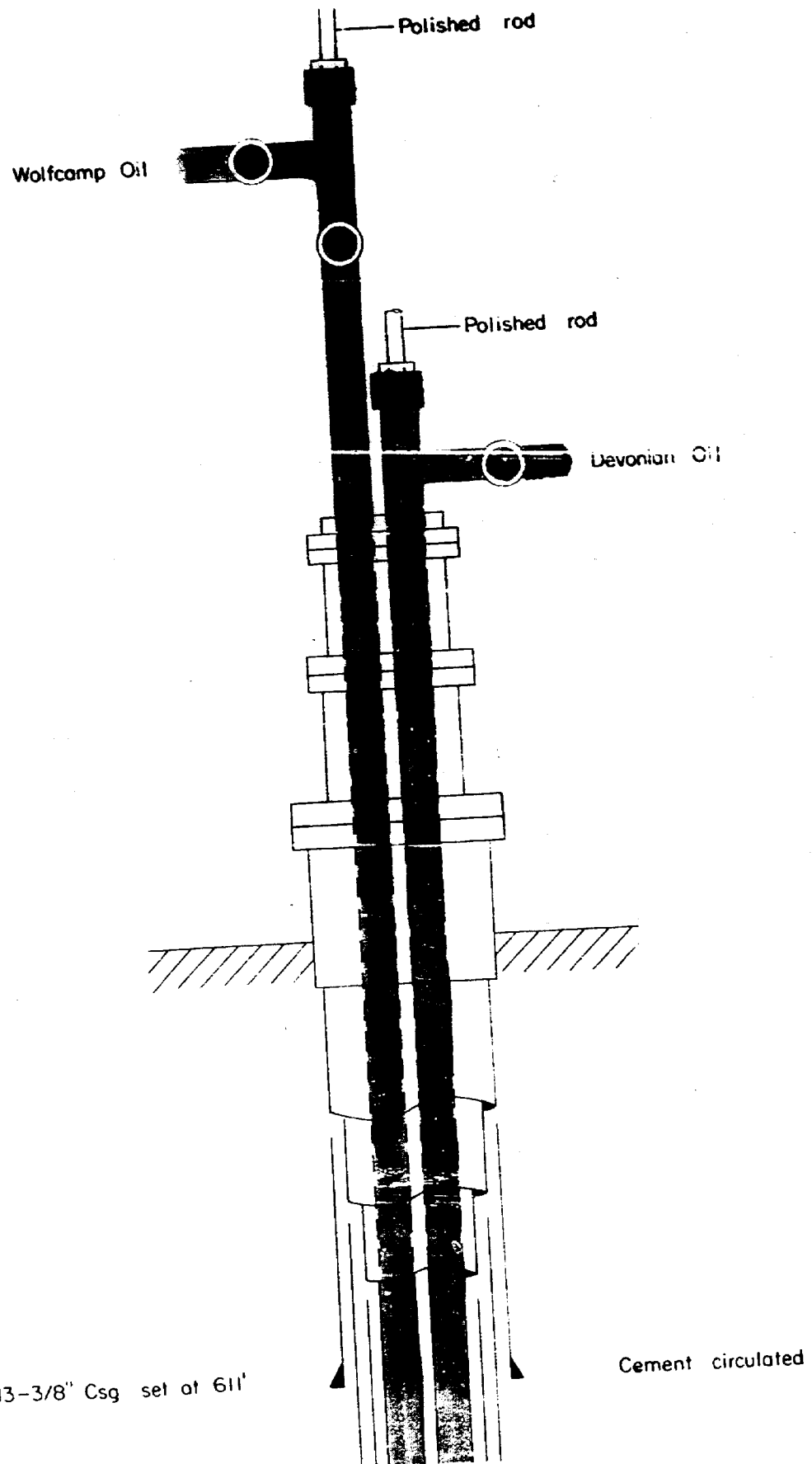
McAlester Fuel Company
P. O. Box 783
McAlester, Oklahoma

Phillips Petroleum Company
P. O. Box 2105
Hobbs, New Mexico

Sunray Mid-Continent Oil Corporation
Wilco Building
Midland, Texas

Union Oil Company of California
619 West Texas Avenue
Midland, Texas

SCALE 1" = 3000'



9-5/8" Csg. set at 4174'

Cement circulated

2-3/8" OD EUE J-55 tubing

2-3/8" OD EUE N-80 & J-55 tubing
(approx. 3500' N-80 tbg. on top,
then J-55 tbg. to bottom)

Seating Nipple

Proposed Wolfcamp perf. in the
approx. interval 9820-9920'

Baker Parallel String Anchor with
Latching Sub for short string.

Baker Model "C-2" Tubing Seal
Receptacle Unit

Baker Anchor Tubing Seal Assy.
Baker Model "D" Retainer Prod. Pkr.

GOT Type "BC" CV

Proposed Devonian Perfs. in the
approx. interval 13,300-13,500'

Plan to set 7" csg. at approx. TD
of 13,500' (Proposed cement top
in approx. interval 7000-8000.)

Est. TD 13,500'

Case No. _____

Exhibit No. _____

Note!

Drawing not to scale

**PROPOSED MECHANICAL INSTALLATION
WOLFCAMP OIL-DEVONIAN OIL DUAL COMPLETION
LEA STATE "R" (NCT-A) NO. 1**

Gulf Oil Corporation
Pet. Engineering

Ft. Worth Prod. Div.

DOCKET: EXAMINER HEARING APRIL 9, 1958

OIL CONSERVATION COMMISSION 9 a.m., MABRY HALL, STATE CAPITOL, SANTA FE, NM

The following cases will be heard before Elvis A. Utz, Examiner:

- - -

- CASE 1356: Application of Cities Service Oil Company for an order amending Order No. R-1128. Applicant, in the above-styled cause, seeks an order amending Order No. R-1128 to authorize the transfer of allowable from water injection wells to other wells on the same basic lease, to establish a lease allowable for the applicant's Government "B" Lease, and to authorize administrative approval for additions to, or deletions from the pilot area and/or injection wells.
- CASE 1404: Application of Continental Oil Company for permission to produce more than eight oil wells into a common tank battery. Applicant, in the above-styled cause, seeks an order authorizing the production of a maximum of eleven oil wells in the Jalmat Gas Pool into a common tank battery. Said wells are located on the applicant's Eaves A-19 lease comprising the S/2, S/2 NW/4, and NW/4 NW/4 of Section 19, Township 26 South, Range 37 East, Lea County, New Mexico.
- CASE 1405: Application of Continental Oil Company for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its A. M. Lockhart B-14 "A" No. 1-D Well, located 1980 feet from the North line and 660 feet from the East line of Section 14, Township 21 South, Range 37 East, Lea County, New Mexico, in such a manner as to produce oil from the Terry Blinebry Oil Pool and oil from the Drinkard Oil Pool through parallel strings of tubing.
- CASE 1406: Application of Continental Oil Company for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order establishing a 200-acre non-standard gas proration unit in the Eumont Gas Pool consisting of the S/2 S/2 and the NW/4 SW/4 of Section 13, Township 20 South, Range 37 East, Lea County, New Mexico, said unit to be dedicated to the applicant's SEMU Permian Well No. 41 located 660 feet from the South and East lines of said Section 13.
- CASE 1407: Application of Delhi-Taylor Oil Corporation for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order establishing a 169.42-acre non-standard gas proration unit in the Aztec-Pictured Cliffs Gas Pool consisting of the SW/4 and S/2 NW/4 of Section 31, Township 29 North, Range 8 West, San Juan County, New Mexico, said unit to be dedicated to the applicant's Prichard Well No. 4-C. located 1450 feet from the South line and 790 feet from the West line of said Section 31.

- CASE 1408: Application of Delhi-Taylor Oil Corporation for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order establishing a 170.58-acre non-standard gas proration unit in the Aztec-Pictured Cliffs Gas Pool consisting of the SW/4 of Section 30 and the N/2 NW/4 of Section 31, all in Township 29 North, Range 8 West, San Juan County, New Mexico, said unit to be dedicated to the applicant's Jones Well No. 3, located 1750 feet from the South line and 1090 feet from the West line of said Section 30.
- CASE 1409: Application of Gulf Oil Corporation for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Lea State "CL" Well No. 1, located 2651 feet from the North line and 1650 feet from the East line of Section 2, Township 16 South, Range 32 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Wolfcamp formation adjacent to the Anderson Ranch-Wolfcamp Pool and oil from the Anderson Ranch-Devonian Pool through parallel strings of tubing.
- CASE 1410: Application of Gulf Oil Corporation for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Lea State "R" Well No. 1, located 990 feet from the North line and 660 feet from the East line of Section 2, Township 16 South, Range 32 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Wolfcamp formation adjacent to the Anderson Ranch-Wolfcamp Pool and oil from the Anderson Ranch-Devonian Pool through parallel strings of tubing.
- CASE 1411: Application of Gulf Oil Corporation for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its J. F. Janda "F" Well No. 3, located 1980 feet from the North and West lines of Section 4, Township 22 South, Range 36 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Jalmat Gas Pool and oil from the South Eunice (Oil) Pool through parallel strings of tubing.
- CASE 1412: Application of John M. Kelly for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order establishing a 240-acre non-standard gas proration unit in the Eumont Gas Pool consisting of the E/2 SW/4, W/2 SE/4, and W/2 NE/4 of Section 16, Township 19 South, Range 37 East, Lea County, New Mexico, said unit to be dedicated to the applicant's Humble State No. 1 Well located 1980 feet from the South and West lines of said Section 16.
- CASE 1413: Application of Austral Oil Exploration Company for an exception to Rule 309 of the Commission Rules and Regulations. Applicant, in the above-styled cause, seeks an order authorizing it to commingle the production from all wells completed in the Townsend-Wolfcamp Pool, Lea County, New Mexico, on the following described leases:

CASE 1413

Continued:

W. M. Snyder "B" Lease - Township 16 South, Range 36 East
Section 6: Lots 9, 10, 15, & 16
and SE/4

W. M. Snyder "C" Lease - Township 16 South, Range 36 East
Section 5: Lot 5
Section 6: Lots 1, 7, & 8

CASE 1414:

Application of The Texas Company for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its C. H. Weir "B" Well No. 1, located in the SE/4 NE/4 of Section 11, Township 20 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Skaggs-Drinkard Pool and oil from an undesignated Glorieta oil pool through parallel strings of tubing.

CASE 1415:

Application of Phillips Petroleum Company for authority to effect an oil-oil dual completion and to commingle the production from two separate pools. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Santa Fe Well No. 18, located in the NW/4 NE/4 of Section 34, Township 17 South, Range 35 East, Lea County, New Mexico, in such a manner as to produce oil from the Yates formation adjacent to the Vacuum-Yates Pool and from the Vacuum (San Andres) Pool through parallel strings of tubing. Applicant further seeks authority to commingle the oil produced from the separate reservoirs in common storage after measuring the Yates oil through dump-type meters.

CASE 1416:

Application of Aztec Oil and Gas Company for a non-standard location. Applicant, in the above-styled cause, seeks an order authorizing a non-standard gas well location for its Culpepper-Martin Well No. 9, to be located 1850 feet from the North line and 1950 feet from the West line of Section 30, Township 32 North, Range 12 West, Blanco Mesaverde Pool, San Juan County, New Mexico.

CASE 1417:

Application of Sinclair Oil and Gas Company for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its A. M. York "B" Well No. 2, located in the NE/4 NE/4 Section 20, Township 21 South, Range 37 East, Lea County, New Mexico, to produce oil from the Tubb Gas Pool and from the Drinkard Oil Pool through parallel strings of tubing.

CASE 1418:

Application of Shell Oil Company for an exception to Rule 309 of the Commission Rules and Regulations. Applicant, in the above-styled cause, seeks an order authorizing the transportation, prior to measurement, of oil produced on its E. W. Mudge No. 4 Lease, comprising All of Sections 21, 28, 33, and 34, to its L. M. Phillips No. 2 Lease, comprising the S/2, NE/4, and Lots 1 and 2 of Section 4, N/2 Section 9, SW/4 and E/2 Section 10, All Section 15, N/2 and SE/4 Section 22, and W/2 Section 27,

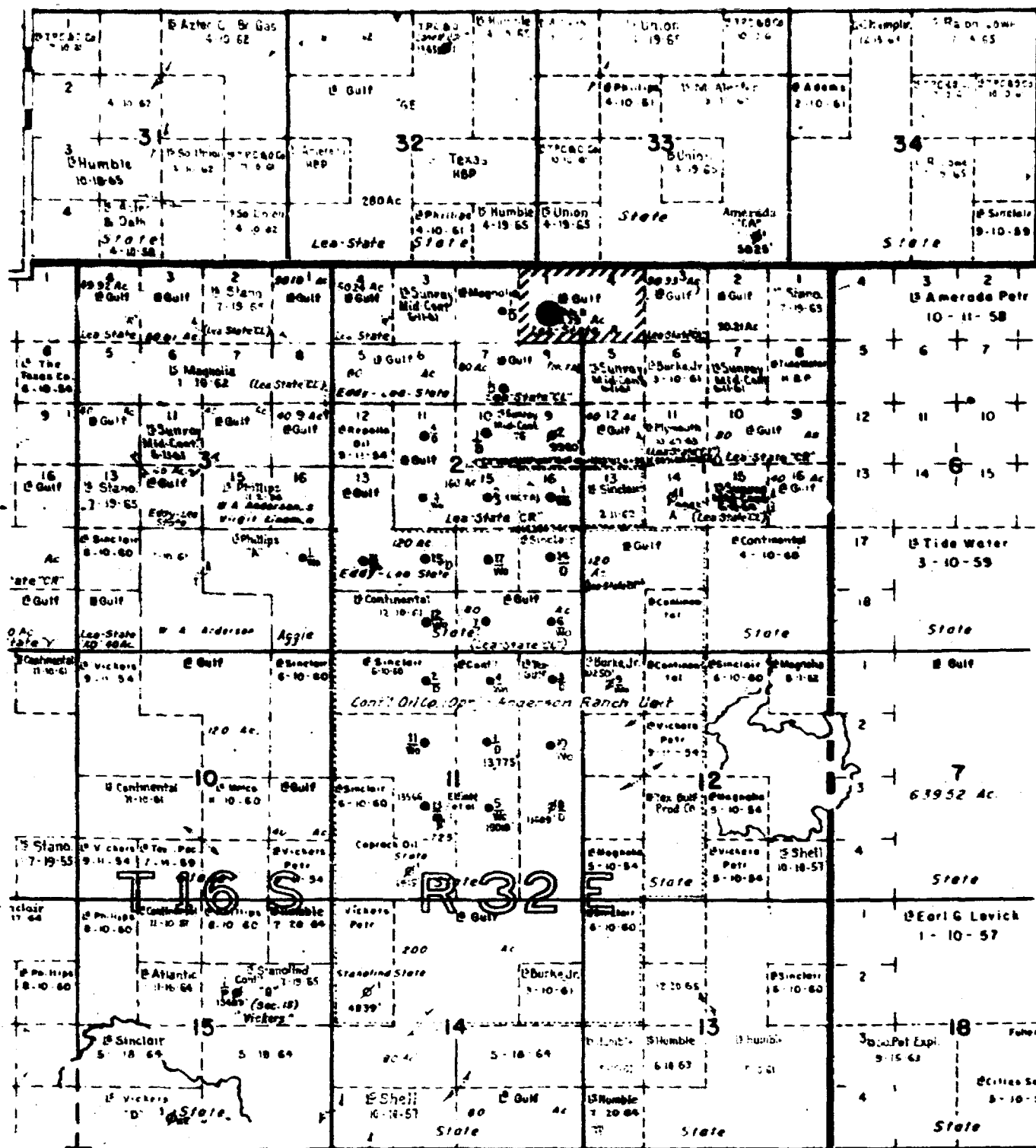
-4-
Docket No. 10-58

Examiner Hearing April 9, 1958

CASE 1418
Continued:

all in Township 25 North, Range 12 West, San Juan County, New Mexico. Applicant further seeks authority to commingle the production from each of said leases after separately measuring said production by means of positive displacement meters.

ir/



LEASE PLAT
LEA-STATE "R"
ANDERSON RANCH-WOLFCAMP & DEVONIAN POOLS
LEA COUNTY, NEW MEXICO

- LEGEND -

- Pertinent Gulf Lease
- Pertinent Gulf Well

Gulf Oil Corporation

April 9, 1958

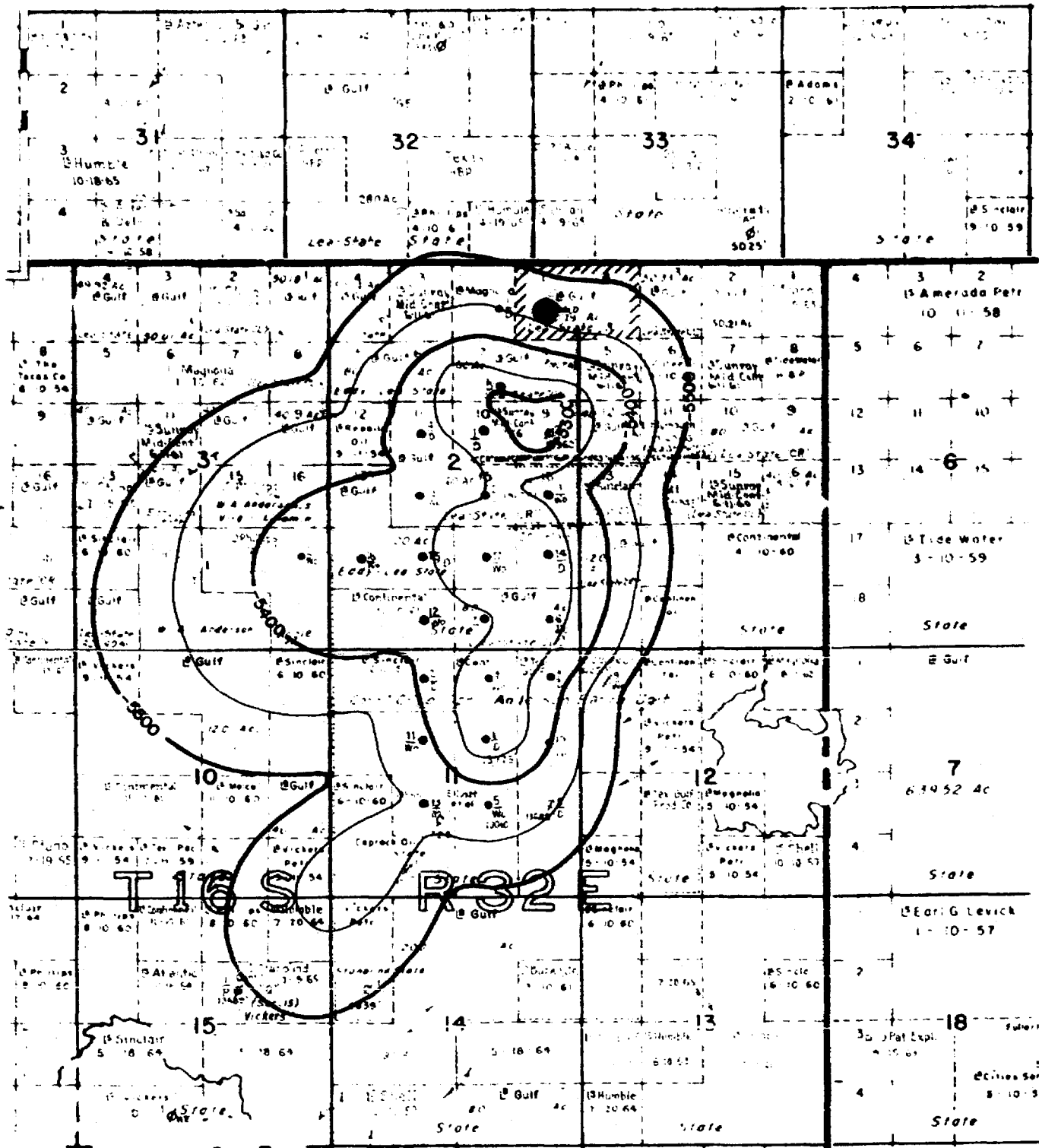
BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

EXHIBIT No. 1
CASE 1410

Case No. 1410

Exhibit No. 1

ILLEGIBLE



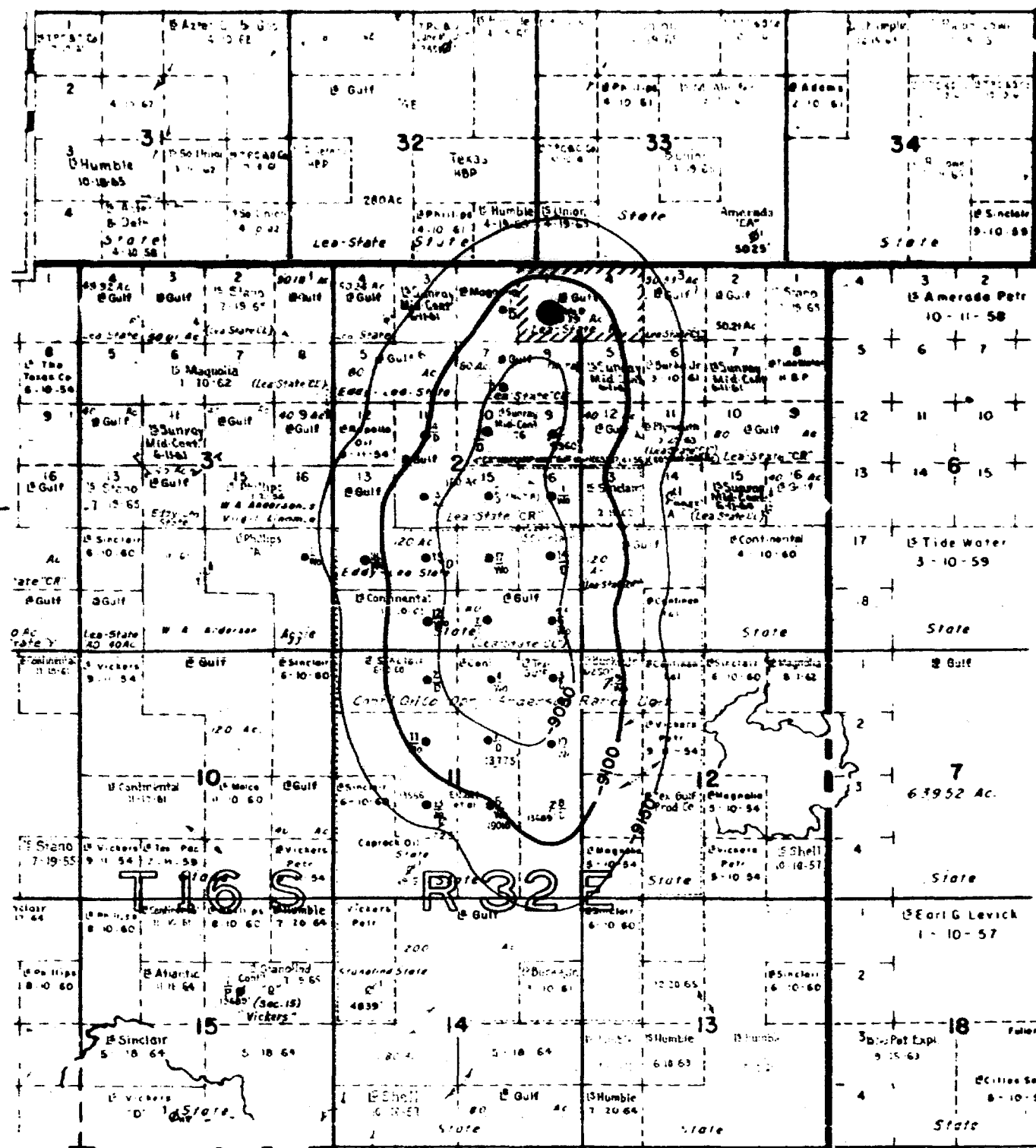
Contour Map on top of Wolfcamp Main Pay

Case No. 1410 Exhibit No. 2

Gulf Oil Corporation April 9, 1958

BEFORE THE
OIL CONS. & COM. COMMISSION
SANTA FE, NEW MEXICO
Gulf Oil Corporation
CASE 1410 EXHIBIT No. 2

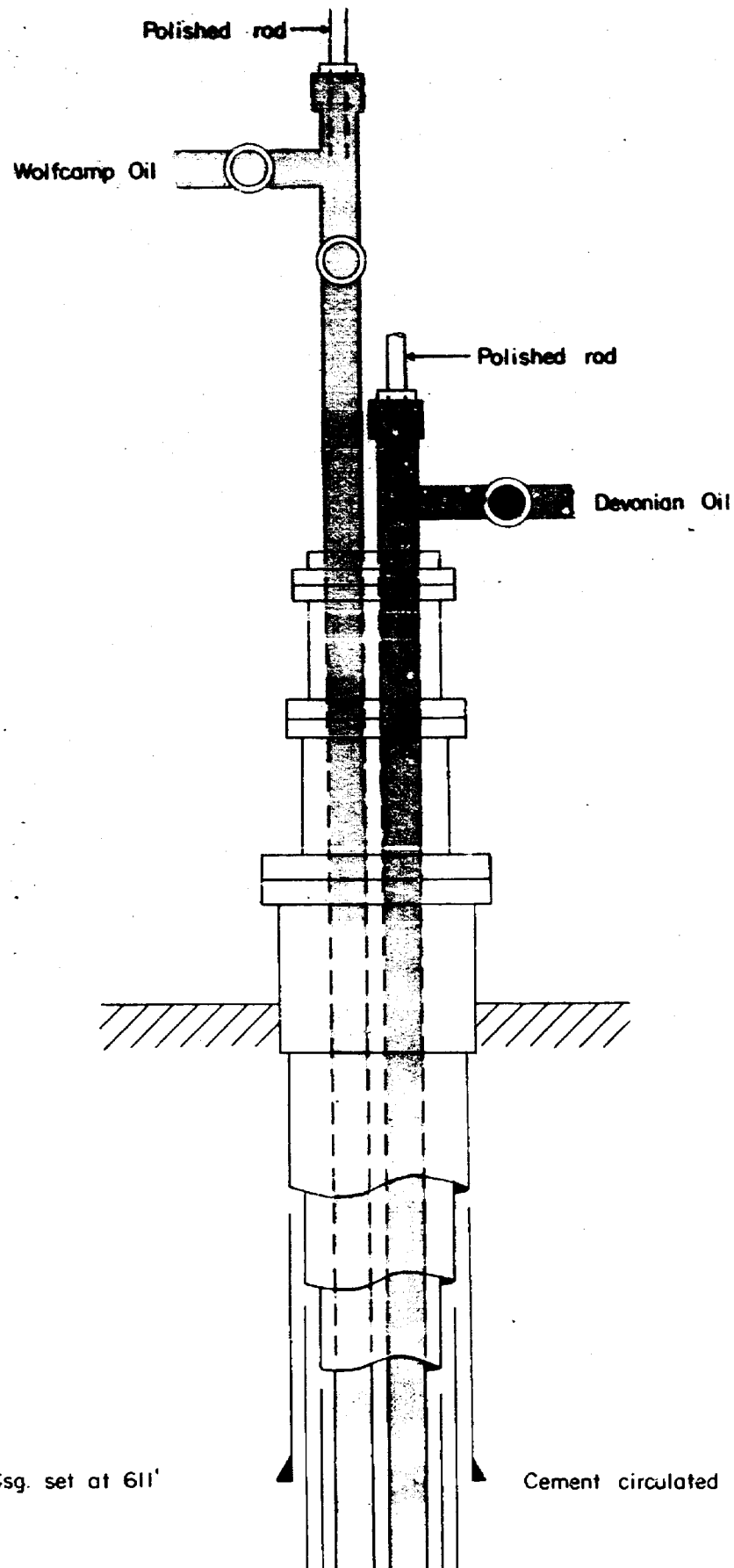
ILLEGIBLE



Contour Map on top of Devonian
Case No. 1410 Exhibit No. 3
Gulf Oil Corporation April 9, 1958

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
Ref. EXHIBIT No. 3
CASE 1410

ILLEGIBLE



9-5/8" Csg. set at 4174' ✓

Cement circulated

2-3/8" OD EUE J-55 tubing
set at 9882' in tubing anchor

2-3/8" OD N-80 tubing set
at 13,410'

Seating Nipple set at 9850'

42 hr. 19850'

Wolfcamp perforations at
9828'-9840' and 9852'-9862'

Baker Parallel String Anchor with
Latching Sub for short string set
at 9882'.

Stiff less than 200'

Baker Model "C-2" Tubing Seal
Receptacle Unit.

Baker Anchor Tubing Seal Assy.
Baker Model "D" Retainer Prod.
Packer set at 13,318'

GOT Type "BC" CV set at 13,349'

Seating Nipple set at 13,379'

7" Csg. set at 13,391'

cemented w/1252 sax
cement top at 7600'

Devonian completed in open hole
pay 13,391' to 13,420'.

TD 13,420'

Note:

Drawing not to scale

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Gulf EXHIBIT No. 5
CASE 1410

Case No. 1410

Exhibit No. 5

PROPOSED MECHANICAL INSTALLATION
OIL-OIL DUAL COMPLETION
LEA-STATE "R" (NCT-A) NO. 1
ANDERSON RANCH-WOLFCAMP & DEVONIAN POOLS
LEA COUNTY, NEW MEXICO

Gulf Oil Corporation
Pet. Engineering

Ft. Worth Prod. Div.
April 9, 1958

EXAMINER HEARING
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
April 9, 1958

IN THE MATTER OF: Case No. 1410

TRANSCRIPT OF PROCEEDINGS

DEARNLEY - MEIER & ASSOCIATES
INCORPORATED
GENERAL LAW REPORTERS
ALBUQUERQUE, NEW MEXICO
3-6691 5-9546

Application of Gulf Oil Corporation for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Lea State "R" Well No. 1, located 990 feet from the North line and 660 feet from the East line of Section 2, Township 16 South, Range 32 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Wolfcamp formation adjacent to the Anderson Ranch-Wolfcamp Pool and oil from the Anderson Ranch-Devonian Pool through parallel strings of tubing.

Case 1410

TRANSCRIPT OF PROCEEDINGS

MR. PAYNE: Case 1410: Application of Gulf Oil Corporation
for an oil-oil dual completion.

MR. KASTLER: Bill Kastler, representing Gulf Oil Corporation as an attorney. The first witness is Mr. Savage, who has previously been sworn.

GERALD SAVAGE

called as a witness, having been first duly sworn on oath, testified as follows:

DIRECT EXAMINATION

By MR. KASTLER:

Q Will you please state your name and position?

A Gerald Savage, production geologist with Gulf Oil Corporation in Roswell, New Mexico.

Q You previously testified as an expert witness before this Commission. Are you familiar with the geology of the area surrounding Gulf's well known as No. 1 Lea State "R"?

A Yes, sir, reasonably so.

Q Have you prepared or caused to be prepared a location plat showing this general area, the surrounding operators, and the wells completed in the respective pay zones pertinent to this case?

A Yes, sir, and this lease plat I have labeled Exhibit 1.

Q Will you please describe what is shown on Exhibit No. 1?

A Shown specifically is Gulf's Lea State "R" lease consisting of Lot 1, Section 2, Township 16 South, Range 32 East, and Lot 4 of Section 1, same township and range, consisting of approximately 100 acres. Shown also is the Lea State "R" Well No. 1 located 990 feet from the north line and 660 feet from the east line of Lot 1, Section 2, in the same township and range.

Q Will you state where this proposed dually completed well lies in connection with the Lea State "CL" well which was the subject of Case No. 1409?

A The No. 1 Lea State "R" is located approximately 3/8ths of a mile northeast of the No. 1 Lea State "CL".

Q The Lea State No. 1 "R", being the subject well in this case, is it proposed to dually complete this well in the same formations as in Case No. 1409?

A The No. 1 Lea State "R" was drilled to a depth of 13,391 feet, where 7-inch casing was set. The well was then drilled to a total depth of 13,420 feet, where Devonian production was established. The Wolfcamp zone has been perforated in the intervals 9,828 feet to 9,840 feet, and 9,852 feet to 9,862 feet. It is proposed to dually complete the well in the Wolfcamp and Devonian zones.

Q Is there any other history of the well which you would care to give at this time?

A Nothing, unless it might be that the Wolfcamp zone was drill stem tested while the well was being drilled, and commercial production was established at that time.

Q Is the well presently perforated in the Wolfcamp zone, or is that a proposal?

A The Wolfcamp zone has been perforated in the intervals given.

Q Have you prepared or caused to be prepared a contour map showing the location of the subject well on the structures?

A I have copies of the contour map on top of the Wolfcamp main pay.

Q Is this labeled Exhibit No. 2, Case 1410?

A Yes, sir, it is.

Q Will you please state what is shown on Exhibit No. 2?

A Specifically shown are contours on top of the Wolfcamp main pay with contour interval of 50 feet, and the pertinent Gulf lease as previously described, and the Lea State "R" Well No. 1 located in Lot 1 of Section 2, and it shows that this well lies on the north flank of the Anderson Ranch field structure.

Q Have you prepared or caused to be prepared another contour map showing the subject well in the Devonian structure?

A Yes, sir, I have.

Q Is this Exhibit No. 3?

A Yes, sir, it is.

Q Will you state where this well is situated as shown on Exhibit No. 3?

A It is shown to be the same as on the contour map on top of the Wolfcamp, as previously stated; everything else is the same and it shows that the No. 1 Lea State "R" lies on the north flank of the Anderson Ranch field structure, as shown by contours on the top of the Devonian formation.

Q The other wells shown on Exhibits No. 2 and 3 are those which are also in this vicinity, completed in the Wolfcamp and Devonian formations, is that correct?

A Yes, sir, the other wells are shown on Exhibits No. 2 and 3.

Q Have you prepared or caused to be prepared a log showing the intervals perforated in this well?

A Yes, sir. These logs have been labeled Exhibit No. 4.

Q Specifically what information is shown in the log pertinent to this case?

A Specifically shown at a depth of 8,933 feet, the top of the Wolfcamp limestone, and in the Wolfcamp main pay zone, the perforated intervals of 9,828 feet to 9,840 feet, and 9,852 to 9,862 feet. Also shown, just for information, the top of the Mississippian limestone at 12,616 feet, and then the top of the Devonian formation at a depth of 13,387 feet, which is producing from the open hole interval below the casing from 13,391 feet to 13,420 feet. On a 13-hour test on February 28, 1958, through 2-3/8 inch tubing and 34/64 inch choke, the Devonian flowed 247 barrels of oil, which extended to 24 hours is a potential of 456 barrels of oil, with a gas volume of 299,000 cubic feet of gas per day, gives us a GOR of 656, gravity of that oil was 52 degrees.

Q Has a copy of your application been sent to all offset operators in order to give them notice of this proposed dual completion?

A Yes, it has.

Q To your knowledge has any objection been received?

A No, sir, no objection.

MR. KASTLER: These are the only questions I have of this witness at this time. I would like to move to admit Exhibits 1, 2, 3, and 4, in evidence in this case.

MR. UTZ: Is there objection to the entrance of Exhibits 1, 2, 3, and 4? If not, they will be accepted. Are there any questions of the witness? Mr. Nutter.

CROSS EXAMINATION

By MR. NUTTER:

Q Would it be your expectation, Mr. Savage, that the Wolfcamp zone in this particular well would be as prolific as the Wolfcamp in your State "CL" No. 1?

A Yes, sir, I might compare the drill stem tests on those, on the Wolfcamp zone of those two wells. In the Wolfcamp in the No. 1 Lea State "R", a test for 45 hours flowed 373 barrels of oil and 41 barrels of water through a 5/8 inch choke, and the information on drill stem test in the Wolfcamp zone in the No. 1 Lea State "CL" shows that it flowed 35 barrels of oil in the first hour and 45 barrels of oil in the second hour with no water.

Would you like me to go over that again?

Q No, sir, it's in the record.

MR. NUTTER: I believe that's all.

MR. UTZ: Any further questions? If no further questions, the witness will be excused.

(Witness excused.)

JOHN HOOVER

called as a witness, having been first duly sworn on oath, testified as follows:

DIRECT EXAMINATION

By MR. KASTLER:

Q Mr. Hoover, you have previously been sworn and are under oath. Will you please state your name and by whom you are employed and what your position is?

A John Hoover, petroleum engineer with Gulf Oil Corporation, Roswell, New Mexico.

Q Have you previously appeared and testified as a qualified expert before this Commission?

A Yes, I have.

Q Are you familiar with the engineering aspects of Gulf's application to dually complete its Lea State "R" Well No. 1?

A Yes.

Q Have you prepared or caused to be prepared a schematic diagram to explain the features of this proposed installation?

A Yes, and we have marked it as Exhibit No. 5.

Q Will you please explain Exhibit No. 5 to the Examiner?

A This is a schematic drawing of the mechanical installation of the proposed oil-oil dual completion on our Lea State "R" A Well No. 1. We have 13-3/8 inch casing set at 1611 feet with the cement circulated to the surface, 9-5/8 inch set at 4174 feet, and cement circulated to the surface. We have 7-inch casing set at 13,391 feet and by temperature survey indicated the top of the cement at 7600 feet. We propose to run two parallel strings of 2-3/8 inch tubing with the long string set through a Baker Model "D" Retainer

Production Packer, which is set at 13,318 feet, and we'll have a Baker parallel string anchor set, run in this long string at about 9,982 feet, or is run at 9,982 feet. The short string of 2-3/8 inch is set into this parallel string anchor. Again the pink shows the Devonian flow, the green shows the Wolfcamp. This equipment being standard equipment of proved design in actual operation will prevent the commingling of fluids within the well bore. We can determine if there is commingling by a difference of gravity, being 42 in the Wolfcamp, 52 in the Devonian. The tubing is such that both zones can be pumped independently of the other. The differential pressure across the packer will be less than 200 pounds from our calculations of both static and flowing conditions.

We also have another way of checking if there is commingling, due to the Wolfcamp oil being sour, having about one percent hydrogen sulphide, the Devonian oil being sweet. We have a difference in the pressure on the tubing in which a shut-in test could be made by the tubing pressure on the Wolfcamp, being approximately 1300 pounds, on the Devonian 300 pounds, would readily indicate be equalization of pressure if there was leakage.

Q Mr. Hoover, is the proposed dual installation and completion in this case identical or nearly so with that proposed in Case 1409 in Gulf's Lea State "CL" A No. 1?

A Almost identical, with the exception of footage.

Q The size of tubing is identical?

A Yes.

Q The Baker packer is identical?

A Yes, it is.

Q And the Baker parallel string anchor with latching is identical?

A It is identical.

Q Other characteristics in the Devonian and Wolfcamp being the same or approximately the same, would you expect to have the same success in making this dual completion?

A Yes, we would.

Q And would you expect to have the same success in separation of pays in the well bore?

A Yes.

Q If this application were granted, would Gulf comply with the operating tests, reports and procedures required by the Commission?

A Yes, we would.

Q Is this application in the interest of prevention of economic waste?

A Yes.

Q Will it adversely affect any correlative rights?

A No.

MR. KASTLER: Those are the only questions I have, Mr. Utz. I would like to request that Exhibit No. 5 be admitted into evidence at this point.

MR. UTZ: Is there objection to the entrance of Exhibit

No. 5? If not, it will be received. Any questions of the witness?
The witness may be excused.

(Witness excused.)

MR. UTZ: Do you have anything further in this case?

MR. KASTLER: Nothing further.

MR. UTZ: Any other statements to be made? If not, we
will take the case under advisement.

* * * * *

C E R T I F I C A T E

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in stenotype and reduced to typewritten transcript under my personal supervision, and that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal this 25th day of April, 1958,
in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Ada Dearnley
NOTARY PUBLIC

My commission expires:
June 19, 1959.

I do hereby certify that the foregoing is
a complete and correct transcript of the proceedings in
the examination hearing of Case No. 1410,
heard by the Commission on April 9, 1958.

DEARNLEY, MEIER & ASSOCIATES, General Law Reporters, Albuquerque, New Mexico, Oil Conservation Commission
Phone CHapel 3-6691