

CASE 2022: Application of SP WILL NO. 67 - Ed. 1, 1967.

Case No.

2022

Application, Transcript,
Small Exhibits, Etc.



SINCLAIR OIL & GAS COMPANY

P.O. BOX 1470

MIDLAND, TEXAS

MUJUGI 3-2761

R. L. ELSTON
VICE PRES & DIVISION MANAGER

O. G. SIMPSON
ASSISTANT DIVISION MANAGER

July 28, 1960

C. S. TINKLER
DIVISION EXPLOIATION SUPT.

J. MEFFORD
DIVISION PRODUCTION SUPT.

F. C. ROGERS
DIVISION GAS & GAS PRODUCTS SUPT.

New Mexico Oil Conservation Commission
Post Office Box No. 871
Santa Fe, New Mexico

Attention: Mr. D. S. Nutter

Dear Sir:

With reference to the July 27, 1960 hearing of case 2022 concerning Sinclair Oil & Gas Company's application for approval of the dual completion of their Turner "B" SP Well No. 67 in the Grayburg-Jackson Pool and in an undesignated Abo pool, Eddy County, New Mexico.

This is to advise that the packer shown on Exhibit 2, diagrammatic sketch of dual completion installation, will be a Baker, Model "D", permanent type production packer.

Please advise if we can furnish any additional information concerning this matter.

Very truly yours,


R. M. Anderson

RMA/esa

CC: Gilbert, White, & Gilbert
Bishop Building
Santa Fe, New Mexico

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. 2022
Order No. R-1737

APPLICATION OF SINCLAIR OIL & GAS
COMPANY FOR AN OIL-OIL DUAL COMPLETION
IN THE GRAYBURG-JACKSON POOL AND IN AN
UNDESIGNATED ABO POOL IN EDDY COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on July 27, 1960, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 4th day of August, 1960, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, 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 is the owner and operator of the Turner "B" SP Well No. 67, located in Unit L, Section 20, Township 17 South, Range 31 East, NMPM, Eddy County, New Mexico.

(3) That the applicant proposes to dually complete the above-described well in such a manner as to permit the production of oil from the Grayburg-Jackson Pool and the production of oil from an undesignated Abo Pool through parallel strings of 2-inch 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 neither cause waste nor impair correlative rights.

-2-

CASE No. 2022
Order No. R-1737

IT IS THEREFORE ORDERED:

That the applicant, Sinclair Oil & Gas Company, be and the same is hereby authorized to dually complete its Turner "B" SP Well No. 67, located in Unit L, Section 20, Township 17 South, Range 31 East, NMPM, Eddy County, New Mexico, in such a manner as to permit the production of oil from the Grayburg-Jackson Pool and the production of oil from an undesignated Abo Pool through parallel strings of 2-inch EUE tubing.

PROVIDED HOWEVER, That the applicant shall complete, operate, and produce said well in accordance with the provisions of Section V, Rule 112-A.

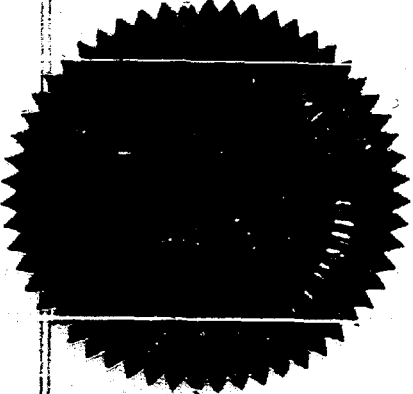
PROVIDED FURTHER, That the applicant shall take packer-leakage tests upon completion and annually thereafter during the Annual Gas-Oil Ratio Test Period for this particular Abo Pool, and at such other times as the Secretary-Director may prescribe.

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 the applicant to comply with any requirement of this order, the Commission may terminate the authority herein granted and require the 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


John Burroughs
JOHN BURROUGHS, Chairman

Murray E. Morgan
MURRAY E. MORGAN, Member

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

esx/

GOVERNOR
JOHN BURROUGHS
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
MURRAY E. MORGAN
MEMBER



STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY DIRECTOR

P. O. BOX 871
SANTA FE
August 4, 1960

Mr. Charles White
Box 787
Santa Fe, New Mexico

Re: Case No. 2022
Order No. R-1737
Applicant:

Sinclair Oil & Gas Co.

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. PORTER, Jr.,
Secretary-Director

ir/

Carbon copy of order also sent to:

Hobbs OCC X
Artesia OCC
Aztec OCC X

Other

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Date July 28, 1960

CASE 2022

Hearing Date DSN - Santa Fe - 9a.m. 7/27

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

Approve Sinclair's application for dual completion of its Turner "B" SP Well No. 67, located in Unit L, Section 20-17 South, Range 31 East, Eddy County, New Mexico to permit production of oil from Grayburg-Jackson Pool and an undesignated Abo Pool through parallel strings of 2 inch OD EUE tubing.

Staff Member

DOCKET: EXAMINER HEARING JULY 27, 1960

Oil Conservation Commission - 9 a.m., Mabry Hall, State Capitol, Santa Fe, N.M.

The following cases will be heard before Daniel S. Nutter, Examiner, or Oliver E. Payne, Attorney, as alternate Examiner:

CASE NOS. 2023 through 2033 will not be heard before 1 p.m. on July 27, 1960.

CASE NOS. 2034 through 2040 will not be heard before 9 a.m. on July 28, 1960.

CASE 2017: Application of Continental Oil Company for an order authorizing an automatic custody transfer system to handle the Maljamar Pool production from its Miller "BX" lease comprising in pertinent part the E/2 of Section 14, Township 17 South, Range 32 East, Lea County, New Mexico.

CASE 2018: Application of Continental Oil Company for an order authorizing the triple completion of its Jicarilla Apache Well No. 27-2, located in the NW/4 NW/4 of Section 27, Township 25 North, Range 4 West, Rio Arriba County, New Mexico, in such a manner as to permit the production of oil from the Gallup formation, the production of oil from the Greenhorn formation and the production of oil from the Dakota formation through parallel strings of 4½ inch, 2 7/8 inch, and 4½ inch casing cemented in a common well bore. Applicant proposes to install tubing to the Gallup and the Dakota formations.

CASE 2019: Application of Continental Oil Company for an order authorizing the triple completion of its Northeast Haynes Apache Well No. 9-1, located in the NW/4 SW/4 of Section 9, Township 24 North, Range 5 West, Rio Arriba County, New Mexico, in such a manner as to permit the production of gas from the Mesaverde formation, the production of gas from the Gallup formation and the production of gas from the Greenhorn formation through parallel strings of 2 7/8 inch, 4½-inch, and 4½-inch casing respectively, cemented in a common well bore. Applicant also proposes to install tubing in the latter two zones.

CASE 2020: Application of Amerada Petroleum Corporation for an order authorizing the triple completion of its Wimberly Well No. 13, located in Unit M, Section 24, Township 25 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of gas from the Langlie Mattix Pool, the disposal of salt water into the Grayburg and San Andres formations in the interval from 3500 feet to 4200 feet, and the production of oil from the Justis-Blinbry Pool by means of two parallel strings of 3½-inch casing cemented in a common well bore. Applicant would dispose of the salt water through one string of casing, produce the Blinbry oil through 1½-inch tubing set in the second string of casing, and produce Langlie Mattix gas through the annulus of the 1½-inch tubing and the second casing string.

CASE 2021: Application of Shell Oil Company for authority to recomplete its State BUA Well No. 2 (formerly its Bluit Unit Well No. 2) at an unorthodox oil well location in the Pennsylvanian formation within one mile of the Bluit Pennsylvanian Pool. Said well is located 1980 feet from the North line and 660 feet from the West line of Section 16, Township 8 South, Range 37 East, Roosevelt County, New Mexico.

CASE 2022: Application of Sinclair Oil & Gas Company for an order authorizing the dual completion of its Turner "B" SP Well No. 67, located in Unit L, Section 20, Township 17 South, Range 31 East, Eddy County, New Mexico, in such a manner as to permit the production of oil from the Grayburg-Jackson Pool and the production of oil from an undesignated Abo pool through parallel strings of 2-inch tubing.

The following cases will not be heard before 1 p.m. on July 27, 1960:

CASE 2023: Application of Honolulu Oil Corporation for an order authorizing it to institute a pressure maintenance project in the Horseshoe-Gallup Oil Pool by the injection of water into the Gallup formation through its Navajo Well No. 4, located in the SE/4 SE/4 of Section 5, Township 31 North, Range 17 West, San Juan County, New Mexico; applicant further seeks the adoption of special rules governing the operation of said project.

CASE 2024: Application of Humble Oil & Refining Company for an order authorizing it to institute a pressure maintenance project in the Horseshoe-Gallup Oil Pool by the injection of water into the Gallup formation through 29 wells located in Sections 3, 4, 9, 10, and 11, Township 31 North, Range 17 West, San Juan County, New Mexico; Applicant further seeks the adoption of special rules governing the operation of said project.

CASE 2025: Application of Socony Mobil Oil Company for permission to convert to water injection its Navajo "A" Well No. 9, located in NE/4 NW/4 of Section 14, Township 31 North, Range 17 West, Rio Arriba County, New Mexico, in conjunction with a proposed adjacent pressure maintenance project in the Horseshoe-Gallup Oil Pool.

CASE 2026: Application of The British American Oil Producing Company for an order authorizing the "slim-hole" completion of its Fullerton Well No. 7, located 1850 feet from the South and West lines of Section 11, Township 27 North, Range 11 West, Dakota Producing Interval, San Juan County, New Mexico, utilizing 2 7/8-inch tubing as casing.

- CASE 2027: Application of Hondo Oil & Gas Company for an amendment of Order No. R-1643 to provide an alternative to the fail-safe features required in the automatic custody transfer system authorized therein for the Hondo-Western-Yates State 647 lease, Empire-Abo Pool, Eddy County, New Mexico.
- CASE 2028: Application of Pan American Petroleum Corporation for an order authorizing it to commingle the production from the Empire-Abo Pool from all wells on eight separate leases in Sections 27 and 34, Township 17 South, Range 28 East, Eddy County, New Mexico. Applicant also seeks authorization of an automatic sustody transfer system to handle said commingled production.
- CASE 2029: Application of Pan American Petroleum Corporation for an amendment of Order R-1399 to permit the commingling of Empire-Abo Pool production from Federal Lease No. LC-064050-A, E/2 SE/4 of Section 34 and NW/4 SW/4 of Section 35, Township 17 South, Range 27 East, with the Empire-Abo Pool production from those leases for which commingling was approved by paragraph one of said order and to permit the commingling of Empire-Abo Pool production from Federal Lease No. NM-025602, NW/4 and N/2 SW/4 of Section 15, Township 18 South, Range 27 East with the Empire-Abo Pool production from those leases for which commingling was approved by paragraph two of said order. Applicant also seeks an amendment of Order No. R-1399-A to permit production from the above-described leases in Eddy County, to be handled by the automatic custody transfer systems authorized in said order.
- CASE 2030: Application of Pan American Petroleum Corporation for permission to commingle the Empire-Abo Pool production from eleven separate State leases in Townships 17 and 18 South, Range 28 East, Eddy County, New Mexico. Applicant further seeks permission to install automatic custody transfer facilities to handle said commingled production.
- CASE 2031: Application of Union Oil Company of California for approval of its South Caprock Queen Unit Agreement, which unit is to embrace 9526 acres in Townships 14 and 15 South, Ranges 30 and 31 East, Caprock Queen Pool, Chaves County, New Mexico.
- CASE 2032: Application of Union Oil Company of California for an order authorizing it to institute a waterflood project in the Caprock-Queen Pool on its proposed South Caprock Queen Unit by the injection of water into the Queen formation through ten wells located in Township 15 South, Range 31 East, Chaves County, New Mexico, and for authority to drill a water injection well at an unorthodox location, being 330 feet West of the East line and 1320 feet South of the North line of Section 18, Township 15 South, Range 31 East.

CASE 2033: Application of Cabeen Exploration Corporation for permission to complete its State 1-K Well located 1980 feet from the South and West lines of Section 11, Township 10 South, Range 32 East, in an undesignated Permo-Pennsylvanian pool in Lea County, New Mexico as a "slim-hole" completion, using 2-7/8 inch casing.

The following cases will not be heard before 9 a.m. on July 28, 1960

CASE 2034: Application of Gulf Oil Corporation for an order authorizing the dual completion of its J. N. Carson Well No. 6, located 330 feet from the South line and 965 feet from the East line of Section 28, Township 21 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Penrose-Skelly Pool and the production of gas from the Blinbry Gas Pool through parallel strings of 2 3/8-inch tubing.

CASE 2035: Application of Gulf Oil Corporation for an order authorizing the dual completion of its W. T. McCormack Well No. 12, located 554 feet from the North line and 1874 feet from the East line of Section 32, Township 21 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Drinkard Pool and the production of oil from the Wantz-Abo Pool through parallel strings of 2 3/8-inch tubing.

CASE 2036: Application of Charles Loveless, Jr., for the establishment of a 280-acre non-standard gas unit in the Atoka-Pennsylvanian Gas Pool consisting of the NE/4, N/2 NW/4 and SW/4 NW/4 of Section 21, Township 18 South, Range 26 East, Eddy County, New Mexico. Applicant proposes that said unit be dedicated to the Brunner No. 1 Dayton Townsite Well to be located on an unorthodox location at a point 1650 feet from the North line and 2310 feet from the East line of said Section 21.

CASE 2037: Application of Sun Oil Company for the creation of a new oil pool for Wolfcamp production to be designated as the Jenkins-Wolfeamp pool and to consist of Sections 2, 3, 4, 8, 9, 10 and 11 of Township 9 South, Range 34 East, Lea County, and Sections 34 and 35, Township 8 South, Range 34 East, Roosevelt County, New Mexico. Applicant further seeks the promulgation of special rules and regulations for said pool including a provision for 80-acre drilling and proration units.

CASE 2038: Application of Benson-Montin-Greer Drilling Corporation for an order authorizing the dual completion of the Jones Well No. 1, located in Unit P, Section 17, Township 28 North, Range 13 West, San Juan County, New Mexico, in such a manner as to permit the production of oil from an undesignated Gallup Pool and the production of gas from the West Kutz-Dakota Pool through parallel strings of 1 1/2-inch OD tubing.

CASE 2039:

Application of Southwest Production Company for approval of an unorthodox oil well location in the Gallegos-Gallup Oil Pool for its Rummel Federal Well No. 1, located 790 feet from the North line and 1190 feet from the West line of Section 36, Township 27 North, Range 12 West, San Juan County, New Mexico.

CASE 2040:

Application of Neville G. Penrose, Inc., for an order authorizing the dual completion of its Grizzel Well No. 1, located in Unit G, Section 5, Township 22 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of gas from the Tubb Gas Pool and the production of oil from the Drinkard Pool through the casing-tubing annulus and 2 3/8-inch tubing respectively.

SINCLAIR OIL & GAS COMPANY

MIDLAND SAVINGS & LOAN BLDG

MIDLAND, TEXAS

LEGAL DEPARTMENT

June 22, 1960

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

Attention: Mr. A. L. Porter, Jr.

Gentlemen:

Sinclair Oil & Gas Company hereby makes application for approval, after notice and hearing, to dual complete its Turner "B" SP Well No. 67 in an undesigned Abo Pool and the Grayburg-Jackson Pool, Eddy County, New Mexico, for production of oil from both formations, and for this purpose we transmit, in triplicate, the following:

1. Application for Dual Completion on the Commission form;
2. An area map showing the location of all wells on applicant's lease and all offset wells on offset leases;
3. A diagrammatic sketch of the dual completion.

It will be noted on the area map that there are two other wells, Nos. 12 and 26, on the 40-acre governmental quarter-quarter section along with subject well No. 67. Both wells Nos. 12 and 26 are completed in the Seven Rivers formation of the Fern Pool and are not affected by this application.

Attorneys of record for the applicant are Gilbert, White and Gilbert of Santa Fe, New Mexico, and the undersigned.

As this is the first oil-oil dual completion to be made in the area, it appears that a hearing will be necessary. Please set this matter for hearing at the earliest convenience.

Very truly yours,

Horace N. Burton
Horace N. Burton
Division Attorney

Handwritten: Hatched, mailed 7/15-60
cc: Gilbert, White and Gilbert
Bishop Building
Santa Fe, New Mexico
(With copy of enclosures)

NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

7-3-58

APPLICATION FOR DUAL COMPLETION

Field Name Grayburg-Jackson		County Eddy		Date June 20, 1960
Operator Sinclair Oil & Gas Company		Lease Turner #B# SP		Well No. 67
Location of Well L	Unit 20	Section 17-S	Range 31-E	

1. Has the New Mexico Oil Conservation Commission heretofore authorized the dual completion of a well in these same pools or in the same zones within one mile of the subject well? YES _____ NO ☒ **X**
2. If answer is yes, identify one such instance: Order No. _____ ; Operator, Lease, and Well No.:

3. The following facts are submitted:	Upper Zone	Lower Zone
a. Name of reservoir	Grayburg-San Andres	Abo
b. Top and Bottom of Pay Section (Perforations)	3000 - 3150 (est.)	7000 - 7100 (est.)
c. Type of production (Oil or Gas)	Oil ✓	Oil ✓
d. Method of Production (Flowing or Artificial Lift)	Flow	Flow

4. The following are attached. (Please mark YES or NO)

- ☒ a. Diagrammatic Sketch of the Dual Completion, showing all casing strings, including size and setting, top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.
- ☒ b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.
- _____ c. Waivers consenting to such dual completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.*
- _____ d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed, it shall be submitted as provided by Rule 112-A.)

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

Fern Oil Company - Address Unknown

Getty Oil Company - Pennsylvania Bldg., Wilmington 1, Delaware

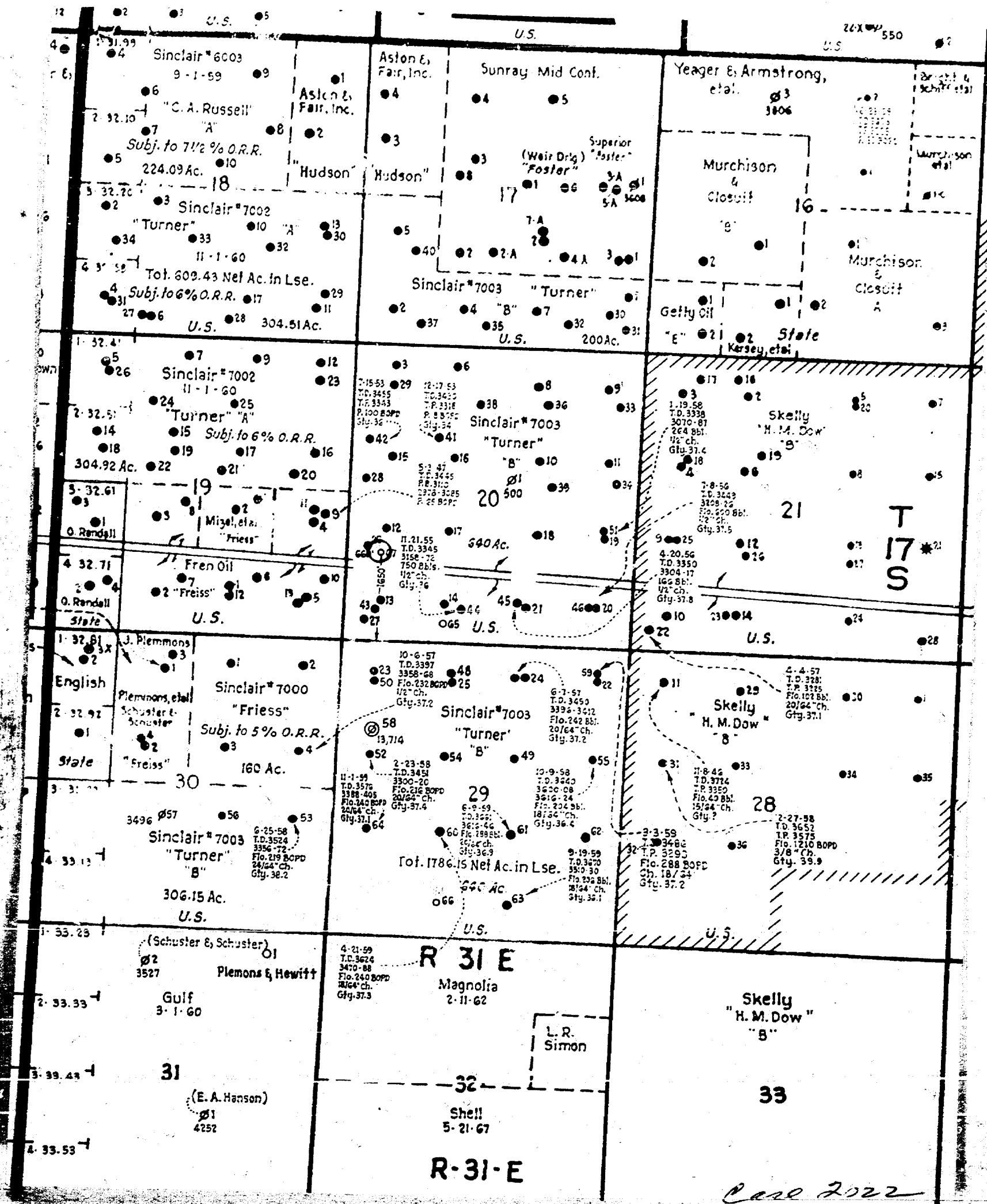
Skelly Oil Company - Drawer "H", Monahans, Texas

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES _____ NO ☒ **X**. If answer is yes, give date of such notification _____.

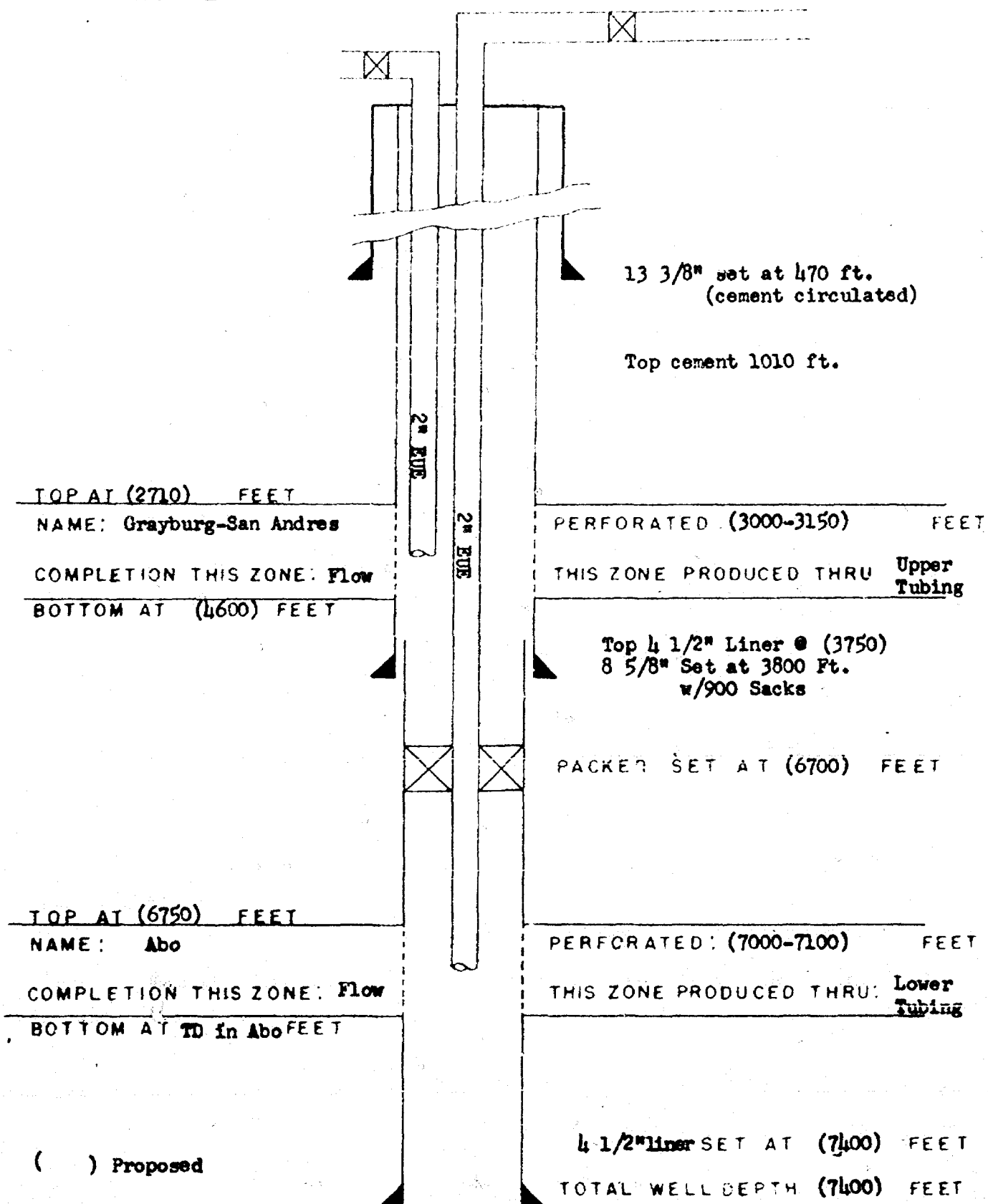
CERTIFICATE: I, the undersigned, state that I am the **Division Production Clerk** of the **Sinclair Oil & Gas Company** (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

E. D. Satterwhite
E. D. Satterwhite Signature

- * Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.
- NOTE:** If the proposed dual completion will result in an unorthodox well location and/or a non-standard production unit in either or both of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

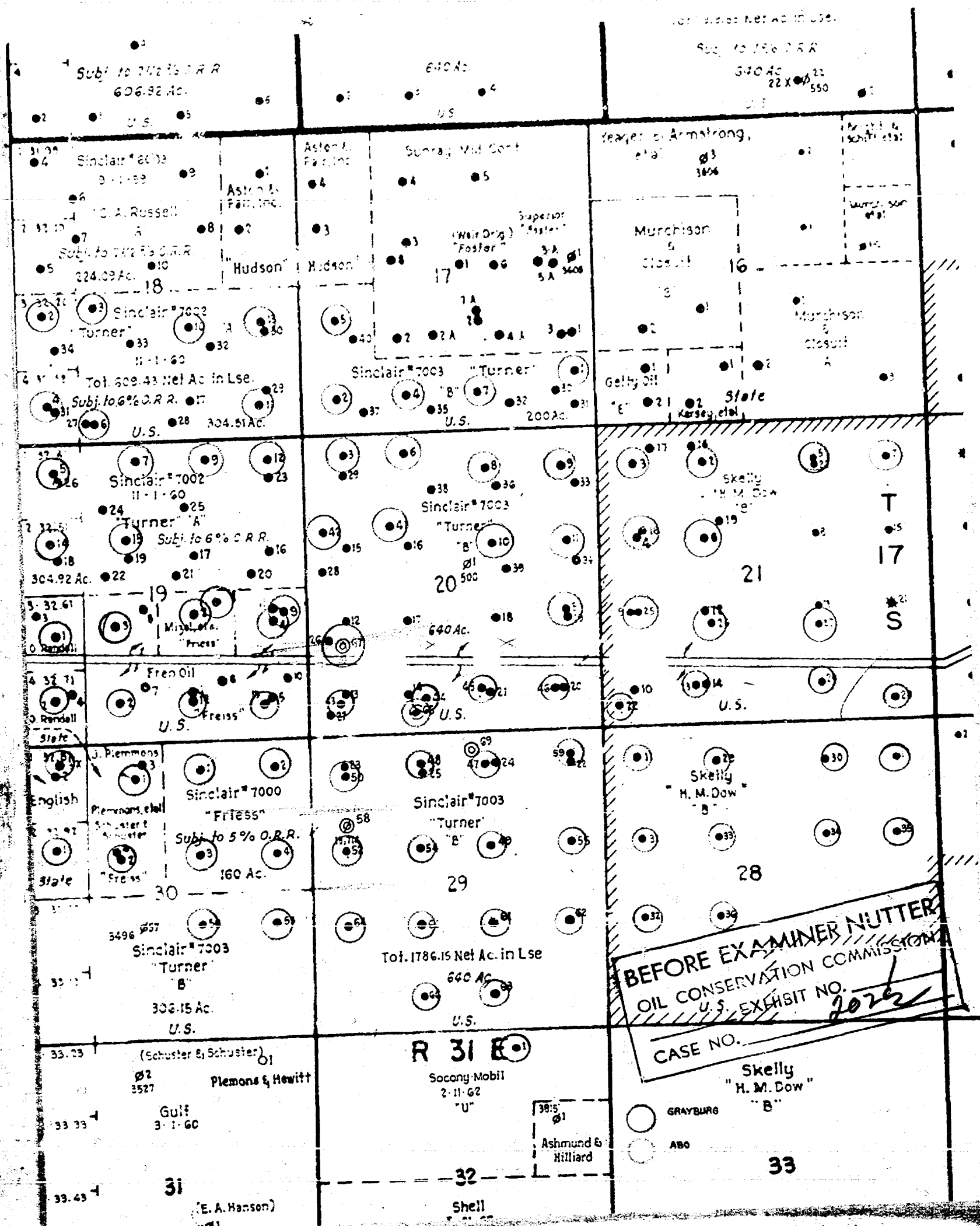


DIAGRAMMATIC SKETCH SHOWING
PROPOSED DUAL COMPLETION INSTALLATION



COMPANY Sinclair Oil & Gas Company
 LEASE Turner "B" SP WELL No. 67
 FIELD Grayburg-Jackson
 DATE June 20, 1960

Case 2022



13 3/8" set at 4' (cement c

Top cement 1010

2" EUE

PERFORATED (3155-3

THIS ZONE PRODUCED

Top 4 1/2" Liner @ 8 5/8" Set at 3800 w/900 Sacks

PACKED SET AT (6

PERFORATED: 7048-7

THIS ZONE PRODUCED

Flow

Retainer at 7080 ft. Perf. 7099-7125 Tested perfs. squeezed.

4 1/2" liner SET AT (cement circu TOTAL WELL DEPTH

- Top cement 1010 ft.

NAME: Grayburg-San Andres

COMPLETION THIS ZONE: Flow

BOY TOM AT 4643 FEET

PERFORATED (3155-3180) FEET

THIS ZONE PRODUCED THRU Upper
Tubing

Top 4 1/2" Liner @ 3697
8 5/8" Set at 3800 Ft.
w/900 Sacks

PACKET SET AT (6700) FEET

NAME: Abc Roof

COMPLETION THIS ZONE: Flow

BOTTOM AT TD in Abo FEET

PERFORATED: 7048-7054 FEET

THIS ZONE PRODUCED THRU: **Lower
Tubing**

Retainer at 7080 ft.
Perf. 7099-7125 Tested water
perfs. squeezed.

4 1/2" liner SET AT 7221 FEET
(cement circulated)

TOTAL WELL DEPTH 7223 FEET

() Proposed

COMPANY Sinclair Oil & Gas Company

LEASE Turner "B" SP

FIELD **Grayburg-Jackson**

DATE June 20, 1960

~~WELL No. 67~~

FILE No. 67
BEFORE EXAMINER NUTTER

WILDLIFE CONSERVATION COMMISSION

EXHIBIT NO.

CASE NO.

Anderson.

(Witness sworn.)

R. M. ANDERSON

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

DIRECT EXAMINATION

BY MR. WHITE:

Q Will you state your full name, please?

A R. M. Anderson.

Q By whom are you employed and in what capacity?

A Sinclair Oil and Gas Company, Senior Petroleum Engineer in their Midland, Texas Division Office.

Q Are you familiar with the application whereby Sinclair seeks to dually complete its Turner "B" SP Well in Eddy County?

A I am.

Q Have you previously testified before the Commission?

A I have.

MR. WHITE: Are the witness's qualifications acceptable?

MR. NUTTER: Yes, sir.

Q Mr. Anderson, will you state the names of the reservoirs in which you propose to dually complete the well?

A The shallow zone will be the Grayburg-San Andres reservoir in the Grayburg-Jackson Field, and the deeper zone will be the Abo Reef in an undesignated Abo Pool.

Q Has the Commission previously approved any dual



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

completions in this area involving these two reservoirs?

A No, sir.

Q Do you have an ownership plat of the area?

A Yes, sir. I have prepared an ownership plat of the area. The well that is the subject of this application is Sinclair's Turner "B" Well No. 67. It is circled in red on the ownership plat, which is our Exhibit No. 1. It is located 660 feet from the West line and 1650 feet from the South line of Section 20, Township 17 South, Range 31 East. The Grayburg wells are circled in green on Exhibit 1, the Abo wells, there is just one Abo well, our No. 65 is circled in yellow, and the uncircled wells are in the Fren Pool and are completed in the Seven Rivers formation.

Q Will you discuss the nature of these fluids?

A The Grayburg crude is about 36 gravity crude. Abo crude is 42 gravity, there's considerable difference in gravities.

Q What type are these crudes, sweet or sour?

A I believe the Grayburg-Jackson crude is a sour crude to the best of my recollection, I don't know positively, the Abo crude is sweet.

Q Have you encountered any corrosion problems in either pool?

A No, we have not had a corrosion problem in the Grayburg-Jackson Pool.

Q Do you have any further testimony as to the characteristics



of the fluids?

A No, sir.

(Whereupon, Sinclair's Exhibit No. 2 was marked for identification.)

Q Will you now refer to what has been marked as Exhibit 2 and explain that diagrammatic sketch?

A This is the diagrammatic sketch showing the proposed dual completion of the well. I have modified the diagrammatic sketch that was originally filed with the application to bring it up-to-date. Many of the items on the original sketch were proposed items and we have progressed further in the drilling of the well and we have some positive data now and I have corrected the proposed data where applicable. So our Exhibit 2 reflects that 13 3/8 surface pipe is set at 470 feet with cement circulated. At this state we do not know of any fresh water existing above the surface of the ground in this area.

We have set an 5/8" liner at 3800 feet and the top of the cement behind the liner is 1010 feet, which is in the salt section. That is not a liner, that is an intermediate casing set at 3800 feet. We have set a liner at 3697 to 7221 feet, and that is a 4 1/2" liner and we have circulated cement behind the 4 1/2" liner all the way back up to the top of the liner at 3697. We have perforated the 4 1/2" liner at 7048 to 7054 feet and have potentialized the Abo Reef formation through those perforations.

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6891

ALBUQUERQUE, NEW MEXICO



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CN 3-6691

ALBUQUERQUE, NEW MEXICO

We propose to set a packer somewhere near the top of the reef at about 6700 feet. We propose to perforate the 8 5/8's inch intermediate string at 3155 to 3180 for the purpose of producing the Grayburg-Jackson Pool. We propose to run parallel strings of two inch EUE tubing as shown on the sketch. We will bottom the tubing somewhere in the vicinity of the perforations of the two zones.

Q Have you logged this well, Mr. Anderson?

A Yes, we have. I have a gamma ray neutron log on this well which I would like to present as Exhibit 3. I have only one copy, if the reporter would mark it, please.

MR. NUTTER: That would be sufficient.

(Whereupon, Sinclair's Exhibit No. 3 was marked for identification.)

MR. NUTTER: Do you need it to testify from?

A No, I don't believe so. I have marked the various tops of the formations as they occurred on the log, and the proposed perforations in the perforated intervals can be found on the diagrammatic sketch for use with the log.

Q What type of solution drives are these reservoirs?

A They're both solution gas drive reservoirs. The Abo is in the very initial stage of depletion, being just penetrated and opened up very recently. Grayburg-Jackson is an old field and is in the later stages of depletion.

Q Do you anticipate that both these reservoirs will flow?



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

A Yes, they'll both flow.

Q Mr. Anderson, what economic savings would be accomplished by the proposed dual completion?

A If this application were granted, it would not be necessary to drill twin wells in order to develop both zones, and I estimate that the savings would be approximately \$34,500.

Q What are your plans as to taking any packer leakage tests?

A We will take packer leakage tests as required by the Commission, and this is a normal type dual completion installation of which there are many similar types in the state, and we will test it in the same manner as we did. I consider it a routine type dual completion.

Q Have similar types of installations been approved by the Commission?

A Yes, they have.

MR. WHITE: We now offer Exhibits 1 through 3.

MR. NUTTER: Sinclair's Exhibit 1, 2 and 3 will be entered.

MR. WHITE: That completes our direct testimony.

MR. NUTTER: Does anyone have any questions.

MR. PAYNE: Yes.

MR. NUTTER: Mr. Payne.



CROSS EXAMINATION

BY MR. PAYNE:

Q What type packer are you going to use on this dual, Mr. Anderson?

A I believe we are going to use a Model D packer. I'm not certain about that, but it will certainly be a packer that will be approved by the Commission.

Q It will be a permanent type packer?

A I believe so. It is not, it is my understanding that it is not necessary to install a permanent type packer. I believe that is our plans. I believe the Commission has approved temporary type packers under certain conditions.

Q So long as we know what type they are, whether they will withstand the particular pressures involved.

A Yes, sir.

Q Along that line, do you have any information on bottom hole pressures that may be encountered in each zone?

A The Empire-Abo wells, which are several miles to the West, have been testing pressures 22, 2300 pounds. We have a drill stem test pressure on our No. 65 Well, reflected bottom hole pressures in the neighborhood of 26, 2700 pounds. The Grayburg-Jackson reservoir pressures, I would estimate there's not a considerable number of pressures available on that reservoir, due to its age recent pressures have not been taken to my knowledge,

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but the pressures there are running around 1500 pounds.

MR. PAYNE: Thank you.

BY MR. NUTTER:

Q Mr. Anderson, when will you know what kind of packer you propose to use in the well?

A Well, I should know that right now.

Q Has the company determined yet the type of packer they'll use?

A I imagine they have.

Q Could you write us a letter and advise us of the packer you propose to install?

A I'm almost certain it will be a Baker Model D packer. If I do not advise you differently, would it be satisfactory to leave it as a Baker Model D packer?

Q Well, the Commission would probably hold the order up until they knew for sure just what kind of packer would be installed. So we wouldn't know how long to wait for silence to give us an indication.

A I'm trying to save the necessity of writing if I can. Could I specify that we will use a Baker Model D packer, and if there is going to be any change on that we'll let you know immediately.

Q We'll hold the order up for a few days waiting to hear from you, or waiting not to hear from you, as the case may be.



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A In that case, I'll write to you.

Q Mr. Anderson, how far does this overlapping of the 4 1/2" liner and the 8 5/8's inch casing extend?

A One hundred three feet.

Q There's cement in the interval of overlap?

A Yes.

Q Do you have any knowledge as to the GOR's of these two respective zones?

A Yes. The Abo zone GOR was 1810 to 1 on the potential test. The Grayburg-Jackson GOR's vary considerably. The area to the South of our well has been coming in at around a thousand to twelve hundred cubic feet per barrel. However, this far North up in the more depleted area the ratios could run higher, could run possibly around two thousand.

Q Where is the general location of the Abo trend here? Would it be to the North of your well or to the South of it, Mr. Anderson?

A The general trend is rather narrow and we have already determined that it is not existing in Well 58, which is to the South of the three locations to the South of the well that's subject to this application. It is not present in Well 58, it is present in Well 65, and it is present in Well 67. I do not anticipate that it will extend much to the North of Well 67.

Q You have determined the Southern limit of it, though?



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A Yes.

Q Somewhere between 55 and 58?

A Yes, sir.

Q Now, this well has been drilled and logged but hasn't been perforated, is this correct?

A Yes, the Abo formation has been perforated and the well has been potentialized in the Abo formation. We have not as yet perforated the Grayburg-Jackson and we will hold up perforating that until we get the approval of the application.

Q This interval that is perforated, this 7048 to 7054 --

A Yes.

Q -- does that represent the entire pay or is there more above?

A The top of the Abo Reef is indicated on the electric log. I would have to refer to that. There's not much pay above those 7048.

Q You have six feet of perforations there and that's about it?

A Yes. May I refer to the electric log, please?

Q Yes.

A We have got the top of the Abo as 6542, but the top of the Abo Reef is at 7045, so there is three feet of Abo Reef above our uppermost perforation; nothing above 7045 will be productive in this Abo reservoir.



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MR. NUTTER: Any further questions of Mr. Anderson?

Mr. Anderson, you may be excused, and thank you for coming.

A Thank you.

(Witness excused.)

MR. NUTTER: Do you have anything further, Mr. White?

MR. WHITE: That's all.

MR. NUTTER: Does anyone have anything further for Case 2022? We will take the case under advisement and recess the hearing until one o'clock.

STATE OF NEW MEXICO)
 : SS
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 1st day of August, 1960.

Ada Dearnley
Notary Public-Court Reporter

My commission expires:

June 19, 1963.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2022 heard by me on 7/27, 1960.

[Signature], Examiner
New Mexico Oil Conservation Commission

