

CASE 3562: Appli. of CONTINENTAL  
for a dual completion (Table Mesa  
Well No. 29), San Juan County.

CASE No.  
3562

Application,  
TRANSCRIPTS,  
SMALL Exhibits  
ETC.

Case 3562

Heard 4-25-67

Rec. 4-27-67

1. Grant approval of Continental's Dual completion (Conventional) as requested for their Sable Mesa #29 well.

The upper zone is in Sable Mesa Perm. 'C' - Gas Pool.

The Lower zone is an Undesignated Mississippian Gas Pool.

2. Packer to be set at approx. 7098' to separate zones. Another packer will be set at approx. 7480 on top of the Mississippian as a water shut-off.

2 3/8 tubing is set thru the packers & Miss will be produced thru this.

Shuttliff

State of New Mexico  
Oil Conservation Commission



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

Re: Case No. 3561  
Order No. 3562  
R-3223 & R-3225  
Applicant:  
Continental Oil Company

A. L. PORTER, Jr.  
Secretary-Director

Hobbs OCC       x        
 Artesia OCC                     
 Aztec OCC x      R-3225        
 Other

**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. 3562  
Order No. R-3225**

**APPLICATION OF CONTINENTAL OIL COMPANY  
FOR A DUAL COMPLETION, SAN JUAN COUNTY,  
NEW MEXICO.**

**ORDER OF THE COMMISSION**

**BY THE COMMISSION:**

This cause came on for hearing at 9 a.m. on April 26, 1967, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 3rd day of May, 1967, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, 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, Continental Oil Company, seeks authority to complete its Table Mesa Well No. 29, located in Unit H of Section 9, Township 27 North, Range 17 West, NMDM, San Juan County, New Mexico, as a dual completion (conventional) to produce gas from the Table Mesa-Pennsylvanian "C" Gas Pool through the casing-tubing annulus and from an undesignated Mississippian gas pool through 2 3/8-inch tubing, with separation of zones by a packer set at approximately 7098 feet.

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

(4) That approval of the subject application will prevent waste and protect correlative rights.

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CASE No. 3562  
Order No. R-3225

**IT IS THEREFORE ORDERED:**

(1) That the applicant, Continental Oil Company, is hereby authorized to complete its Table Mesa Well No. 29, located in Unit H of Section 9, Township 27 North, Range 17 West, NMPM, San Juan County, New Mexico, as a dual completion (conventional) to produce gas from the Table Mesa-Pennsylvanian "C" Gas Pool through the casing-tubing annulus and from an undesignated Mississippian gas pool through 2 3/8-inch tubing, with separation of zones by a packer set at approximately 7098 feet;

**PROVIDED HOWEVER,** that the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A of the Commission Rules and Regulations insofar as said rule is not inconsistent with this order;

**PROVIDED FURTHER,** that the applicant shall take packer-leakage tests upon completion and annually thereafter during the Annual Deliverability Test Period for the Mississippian formation.

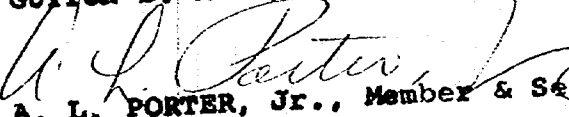
(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

  
DAVID F. CARGO, Chairman

  
GUYTON B. HAYS, Member

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



esr/

MAIN OFFICE 000

MAR 26 PM 7 32



# CONTINENTAL OIL COMPANY

LEGAL DEPARTMENT

A. T. SMITH  
GENERAL ATTORNEY  
C. R. HAMPTON  
F. E. RADLOFF  
C. R. ROBERTS  
JERE D. THESNER  
ROBERT W. COOK, JR.  
WILLIAM V. COX  
ATTORNEYS

1755 GLENARM PLACE  
DENVER, COLORADO 80202  
March 23, 1967

*Case 3562*

Mr. A. L. Porter, Jr.  
Secretary-Director, New Mexico  
Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Application of Continental Oil  
Company for Multiple Completion,  
Table Mesa Well No. 29, Section  
9, Township 27 North, Range 17 West,  
San Juan County, New Mexico

Dear Mr. Porter:

Submitted herewith in triplicate is Continental Oil  
Company's Application for Multiple Completion, dated March 8,  
1967, on Form C-107, pertaining to the subject well.

As you can see, the Application for Multiple Completion  
has attached thereto the following:

1. Diagrammatic sketch of the multiple completion;
2. Plat showing the location of all wells on  
applicant's lease, all offset wells and the  
names and addresses of operators of leases  
offsetting applicant's lease;
3. Portions of electrical log of the subject  
well, showing tops and bottoms of producing  
zones and intervals.

By a carbon copy of this letter I am transmitting a  
copy of this application to all offset operators.

Copies to  
Sunray DX Oil Company  
Amerada Petroleum Corp.  
Pan American Petroleum Corp.  
Union Oil Co. of California

Very truly yours,

*Charles R. Roberts*  
Charles R. Roberts  
DOCKET MAILED

NEW MEXICO OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO  
APPLICATION FOR MULTIPLE COMPLETION

Form C-107  
5-1-61

*Case 3562*

Operator <b>Continental Oil Company</b>		County <b>San Juan</b>	Date <b>March 8, 1967</b>
Address <b>P. O. Box 1621, Durango, Colorado</b>		Lease <b>Table Mesa</b>	Well No. <b>29</b>
Location of Well	Unit <b>H</b>	Section <b>9</b>	Township <b>27N</b>
			Range <b>17W</b>

1. Has the New Mexico Oil Conservation Commission heretofore authorized the multiple 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	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	<b>Table Mesa (Penn. "C")</b>		<b>San Juan Undesig. (Miss.)</b>
b. Top and Bottom of Pay Section (Perforations)	<b>7037'-7042'</b>		<b>7498'-7502'</b>
c. Type of production (Oil or Gas)	<b>Gas</b>		<b>Gas</b>
d. Method of Production (Flowing or Artificial Lift)	<b>Flowing</b>		<b>Flowing</b>

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

- |                                     |                                     |   |
|-------------------------------------|-------------------------------------|---|
| Yes                                 | No                                  |   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | a. Diagrammatic Sketch of the Multiple Completion, showing all casing strings, including diameters and setting depths, centralizers and/or turbolizers and location thereof, quantities used and 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. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 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.   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | c. Waivers consenting to such multiple completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.*  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 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.

**Sunray DX Oil Company, P. O. Box 1416, Roswell, New Mexico**

**Amerada Petroleum Corp., P. O. Box 1469, Durango, Colorado**

**Pan American Petroleum Corp., Security Life Bldg., Denver, Colorado**

**Union Oil Co. of California, Drawer 1611, Casper, Wyoming**

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

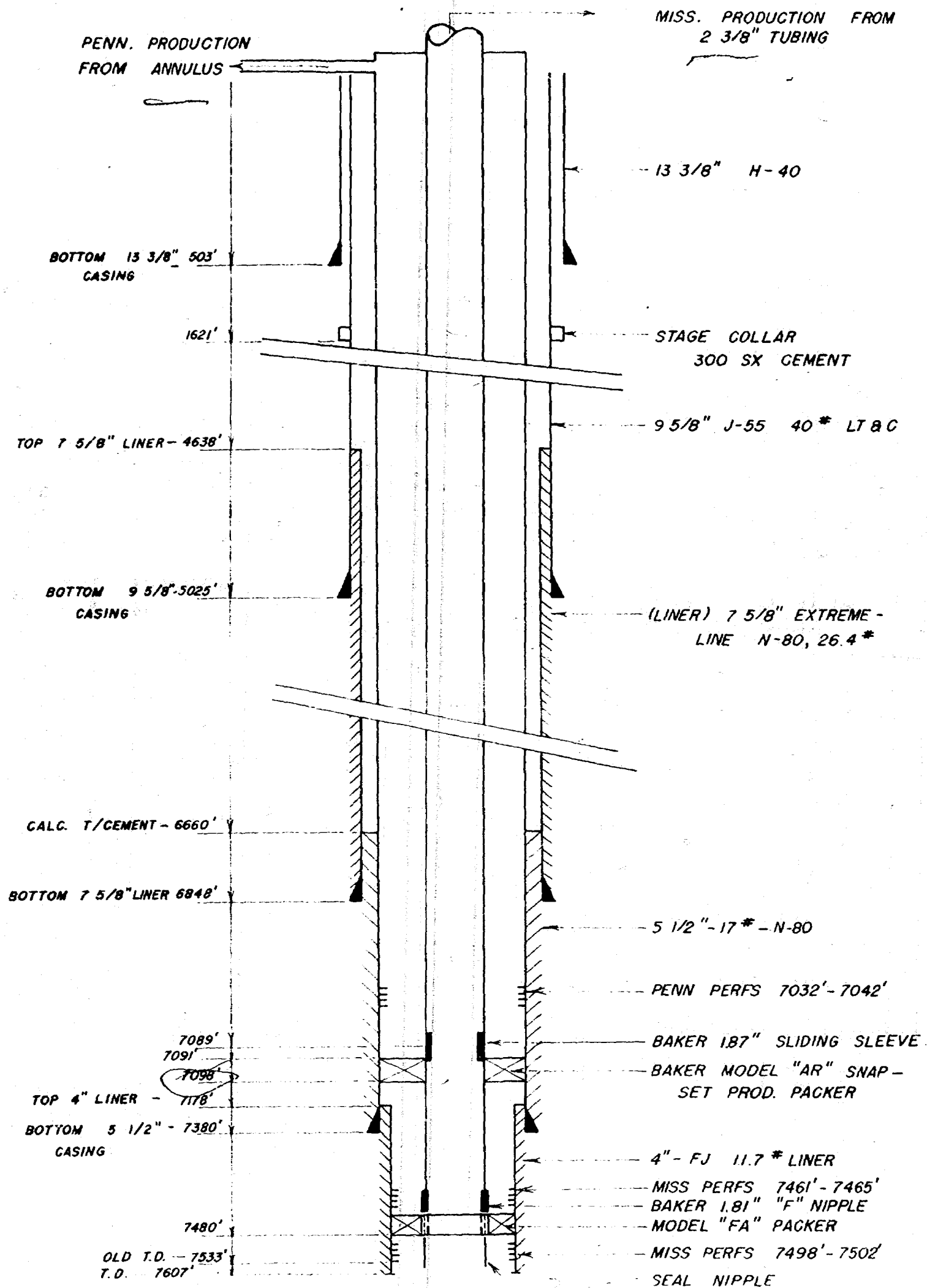
CERTIFICATE: I, the undersigned, state that I am the **District Manager** of the **Continental Oil Company** (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct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

*[Signature]*  
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 multiple completion will result in an unorthodox well location and/or a non-standard proration unit in one or more of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.





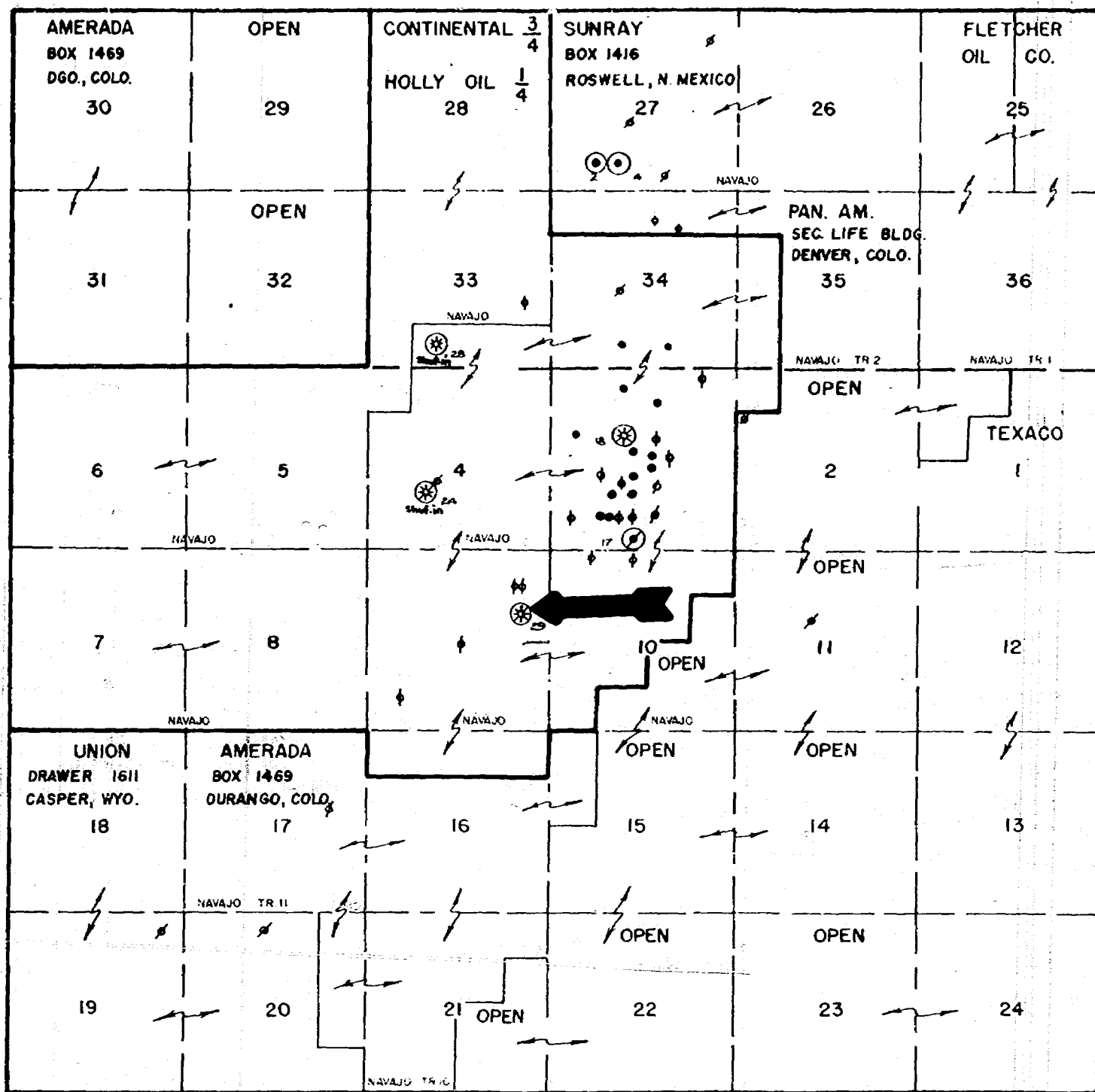
CONTINENTAL OIL COMPANY

DIAGRAMATIC SKETCH OF DUAL COMP  
PENNSYLVANIA & MISSISSIPPIAN FORMATIONS  
TABLE MESA WELL NO. 29  
TABLE MESA FIELD  
SAN JUAN COUNTY, N. MEXICO

MARCH, 1967

Case 3562

R 17 W



LEASE PLAT	
TABLE MESA FIELD AREA	
SCALE: 1" = 4,000'	MARCH, 1967
CONTINENTAL OIL COMPANY DGO., COLO.	

LEGEND:

- DAKOTA OIL WELL
- ⊙ PENN. OIL WELL
- ⊗ HELIUM GAS WELL

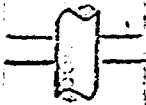
Case 3562

# Table Mess

Case 356 2 T/ Table Mess (P. 10) C. N. 1000

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B/ Table Mess (P. 10) C.



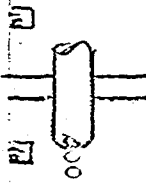
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T/ Miss Scale Change

1400



T/ Ouray E/ Miss

T/ Elbert

T. P.

CASE 3559: Application of BTA Oil Producers for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the South Flying "M"-Pennsylvanian Pool, Lea County, New Mexico, including a provision for 80-acre proration units.

CASE 3560: Application of Phillips Petroleum Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Hat Mesa Unit Area comprising 7874 acres, more or less, of Federal and State lands in Township 21 South, Ranges 32 and 33 East, Lea County, New Mexico.

CASE 3561: Application of Continental Oil Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Meyer B-4 Well No. 19 located in Unit O of Section 4, Township 21 South, Range 36 East, to produce oil from an undesignated Paddock pool and from the Oil Center-Blinebry Pool through parallel strings of tubing.

CASE 3562: Application of Continental Oil Company for a dual completion, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Table Mesa Well No. 29 in Unit H of Section 9, Township 27 North, Range 17 West, San Juan County, New Mexico, to produce gas from the Table Mesa-Pennsylvanian "C" Gas Pool and from an undesignated Mississippian gas pool through the casing-tubing annulus and 2-inch tubing, respectively.

CASE 3563: Application of Skelly Oil Company for an amendment to the Southeast New Mexico Gas Proration Rules and Regulations. Applicant, in the above-styled cause, seeks an amendment to Order No. R-1670, as amended, Rules and Regulations for Pro-rated Gas Pools, Lea, Eddy, Chaves and Roosevelt Counties, New Mexico, to provide an administrative procedure whereby wells ordered shut-in for extended periods to make up accumulated overproduction could be permitted to produce up to 500 MCF each month during such shut-in.

CASE 3564: Application of Maxwell Oil Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of its Taylor Unit Area comprising 640 acres, more or less, of federal lands in Sections 12 and 13, Township 18 South, Range 31 East, Eddy County, New Mexico.

Docket No. 12-67

DOCKET: EXAMINER HEARING - WEDNESDAY - APRIL 26, 1967

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,  
STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Elvis A. Utz, Examiner,  
or Daniel S. Nutter, Alternate Examiner:

- - - -
- CASE 3554: Application of Coastal States Gas Producing Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Flying "M" San Andres Unit Area comprising 4080 acres, more or less, of State, Federal and Fee lands in Township 9 South, Range 33 East, Lea County, New Mexico.
- CASE 3555: Application of Coastal States Gas Producing Company for a pressure maintenance expansion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand the pressure maintenance project in its Flying "M" San Andres Unit by the injection of water into the San Andres formation through 8 injection wells located in Sections 15, 16, 17, 20, 22, 28, 29 and 33, Township 9 South, Range 33 East, Lea County, New Mexico. Applicant further seeks the promulgation of special rules for said project, including provision for future expansion.
- CASE 3556: Application of Southland Royalty Company for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a proposed Devonian gas test well at an unorthodox gas well location 660 feet from the North and West lines of Section 12, Township 25 South, Range 35 East, Lea County, New Mexico. The well would be dedicated to the N/2 of said Section 12.
- CASE 3557: Application of Gulf Oil Corporation for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Inbe-Pennsylvanian Pool underlying the E/2 SW/4 of Section 13, Township 11 South, Range 33 East, Lea County, New Mexico.
- CASE 3558: Application of BTA Oil Producers for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill its Lowe 671 Ltd. Well No. 1 as an exception to the well location requirements of Order No. R-2929 for the Nonombre-Upper Pennsylvanian Pool and the Nonombre-Lower Pennsylvanian Pool, Lea County, New Mexico. The proposed well would be located 560 feet from the North and West lines of Section 5, Township 14 South, Range 34 East.

-3-

Docket No. 12-67

April 26, 1967 Examiner Hearing

CASE 3565: Application of Jomar Industries, Inc. for a non-standard oil proration unit, several non-standard locations, temporary exception to Rule 307, and capacity allowables, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill 64 oil wells at non-standard locations on a non-standard oil proration unit comprising the S/2 NW/4 SE/4 and the N/2 SW/4 SE/4 of Section 30, Township 18 South, Range 33 East, Lea County, New Mexico, for production from the Ogallala formation. Said wells would be drilled to a density of four wells to each 2.5 acres and would be no nearer than 32.5 feet to the outer boundary of the unit and no nearer than 165 feet to another well producing from the same formation. Applicant also seeks a temporary exception to Rule 307 for each well to permit utilization of a vacuum-type drilling unit during the drilling and completion operation. Applicant further seeks authority to produce the wells at capacity even though the aggregate production from said wells exceeds the 40-acre normal unit allowable.

CASE 3566: Application of William A. and Edward R. Hudson for a water-flood expansion, Eddy County, New Mexico. Applicants, in the above-styled cause, seek authority to expand their Puckett Waterflood Project, Maljamar Pool, by the injection of water into the Grayburg-San Andres formations through 10 wells in Sections 24 and 25, Township 17 South, Range 31 East, Eddy County, New Mexico. Applicant further seeks an administrative procedure for future expansion of said project.

ir/

# PAN AMERICAN PETROLEUM CORPORATION

PRODUCING DEPARTMENT  
H. T. HUNTER  
DIVISION PRODUCTION  
MANAGER

SECURITY LIFE BUILDING  
DENVER, COLORADO 80202

April 4, 1967

File: SBR-188-986.511

Re: Application of Continental Oil  
Company for Multiple Completion,  
Table Mesa Well No. 29,  
Section 9, Township 27  
North, Range 17 West,  
San Juan County, New Mexico

*Case 3562*

Mr. A. L. Porter, Jr.  
Secretary - Director  
New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Dear Mr. Porter:

This is to acknowledge receipt of a copy of the application of Continental Oil Company concerning the above matter. Pan American Petroleum Corporation, one of the offsetting lease owners, has no objection to the granting of the relief requested by the applicant.

Yours very truly,

*J. B. Richards*

cc: C. R. Roberts  
Continental Oil Company  
1755 Glenarm Place  
Denver, Colorado

DOCKET MAILED

Date 4-14-67

*R*

MAIN OFFICE

APR 6 1967

DISTRICT SUPERINTENDENTS  
W. M. JONES  
A. E. PIPER  
T. M. CURTIS  
JOINT INTEREST  
SUPERINTENDENT  
S. B. RICHARDS

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

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BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
EXAMINER HEARING

April 26, 1967

IN THE MATTER OF:

Application of Continental Oil Company  
for a dual completion, San Juan County,  
New Mexico.

Case 3562

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING



MR. UTZ: Case 3562.

MR. HATCH: Case 3562, application of Continental Oil Company for a dual completion San Juan County, New Mexico.

MR. KELLAHIN: Jason Kellahin, Kellahin and Fox, appearing for the Applicant. I have one witness I would like to have sworn, please.

(Witness sworn.)

LEO CICHOWICZ, called as a witness on behalf of the Applicant, first having been duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A Leo Cichowicz, C-i-c-h-o-w-i-c-z.

Q By whom are you employed and in what position?

A Continental Oil Company, Senior Engineer.

Q Where are you located, Mr. Cichowicz?

A Durango, Colorado.

Q Have you ever testified before the Oil Conservation Commission of New Mexico and made your qualifications a matter of record?

A I have.

MR. KELLAHIN: Are the witness' qualifications acceptable?

dearnley-meier

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

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1400 FIRST NATIONAL BANK EAST • PHONE 256-1294 • ALBUQUERQUE, NEW MEXICO 87108

MR. UTZ: Yes, sir, they are.

Q (By Mr. Kellahin) Mr. Cichowicz, are you familiar with the application of Continental Oil Company in Case 3562?

A I am.

Q What is proposed by Continental Oil Company in this case?

A Dual completion of the Table Mesa Number 29 in the Mississippian and Pennsylvanian formations.

Q Did you cause an application to be filed with the Commission for this dual completion?

A I have.

Q Attached to the application is there a plat showing the well location and the acreage ownership in the vicinity of the well?

A Yes, sir.

MR. KELLAHIN: We would like to make reference to the application and offer the lease plat, together with the diagram attached to that as exhibits in this case.

MR. UTZ: The lease plat?

MR. KELLAHIN: And the schematic diagram and the log.

MR. UTZ: This is exhibits?

MR. KELLAHIN: Yes, sir. I have a set of them here, if you would like to have them marked separate?

MR. UTZ: 107?

MR. KELLAHIN: 107, also, yes, sir.

MR. UTZ: You just want to get them marked?

MR. KELLAHIN: Yes, sir.

(Whereupon, Applicant's Exhibits 1 through 5 were marked for identification.)

Q (By Mr. Kellahin) Now, Mr. Cichowicz, passing over for just a moment Exhibit Number 1, would you refer to Exhibit Number 2 and identify that, please?

A Exhibit Number 2 is the Commission Form C-107, which outlines the proposed dual completion and the zones of completion, the type of production expected and the method of production, the off-set operators and the distribution made of the exhibits referred to.

Q Now is there a dual completion in these two zones in this area?

A No, there is not.

Q Is that the reason the application had to be made for hearing in this case?

A That is correct.

A Referring to what has been marked as Exhibit Number 3, would you identify that please?

A Exhibit Number 3 is the schematic of the dual completion as proposed for the well.

dearnley-meier

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS  
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1400 FIRST NATIONAL BANK EAST • PHONE 256-1294 • ALBUQUERQUE, NEW MEXICO 87108

Q Now, on that exhibit does it show the location of the packer to be set in the well?

A Yes, it does.

Q Would you outline that, please?

A A Model FH Packer, a permanent type packer is set to separate the two zones perforated within the Mississippian formation and the Model AR, Baker Model AR Snap Set Production Packer, is set at 7098 for the purpose of segregating production from the Pennsylvanian and Mississippian zones.

Q Now, you have set a packer between the two zones within the Mississippian. What is the reason for that?

A Well we conducted separate tests of the Mississippian because the upper interval tested a large quantity of water and only a small amount of gas and the lower quantity tested an appreciable quantity of gas and was deemed advisable for completion. This particular production packer was set at this point.

Q Now, have you achieved effective separation between the water producing zone of the Mississippian and the lower zone which is gas productive?

A Yes, we have.

Q Referring to the snap-set packer which is between the Mississippian and the Penn formations, why has that type

of packer been used here.

A This particular packer is manufactured by Baker Oil Tube Company and designed for use in wells in which combinations of packers must be set. The tool is rotationally locked and set in compression and it has three rubber packing elements and those slip. We found it adaptable for use in this particular well, since it is removable by counter-rotation in the event the tubing must be removed. In that case, the packer is removed with the tubing and any future or subsequent remedial work can be done without too much problem.

Q Now, the way the well will be completed, you will produce the Pennsylvanian through the annulus and the Mississippian through the tubing, is that correct?

A That is correct.

Q Will the type of packer you have used in your opinion, give effective separation between the Pennsylvanian and the Mississippian formations?

A Yes, it will, as is evidenced by the packer leakage test as submitted.

Q Is that marked as Exhibit Number 1?

A That is correct.

Q And is that the regular packer leakage test which was made pursuant to the directions of this Commission?

A That's correct.

dearnley-meier

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

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dearnley-meier

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS  
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1400 FIRST NATIONAL BANK EAST • PHONE 256-1294 • ALBUQUERQUE, NEW MEXICO 87108

Q Has it been filed with the Commission?

A Yes, sir.

Q In your opinion, will there be any danger of communication between the two producing horizons in this well?

A No.

Q Does your Exhibit Number 3 also show your cementing program on this well?

A Yes, it does.

Q Now, referring to what has been marked as Exhibit Number 4, would you identify that exhibit, please?

A Exhibit Number 4 is a lease plat outlining the location of well, other wells located within the lease area, the names and addresses of all off-set operators.

Q Referring to what has been marked as Exhibit Number 5, would you identify that exhibit?

A Exhibit Number 5 is a gamma ray neutron log of the intervals, of the completion within the Table Mesa Number 9 -- excuse me, Table Mesa Number 29.

Q Does the exhibit also reflect the two zones you mentioned in the Mississippian?

A Yes, it does.

Q Are they marked on the log?

A Yes, they are.

Q Were Exhibits 1 through 5 prepared by you or under

your supervision?

A Yes, they were.

MR. KELLAHIN: I offer in evidence Exhibits 1 through 5, inclusive.

MR. UTZ: Without objection Exhibits 1 through 5 will be entered into the record of this case.

Q (By Mr. Kellahin) Mr. Cichowicz, is the type of completion that you have proposed here one that has been approved by this Commission in other cases?

A Yes, I believe that it is.

MR. KELLAHIN: That's all I have, Mr. Utz.

CROSS EXAMINATION

BY MR. UTZ:

Q Does the gas below the lower packer contain helium?

A Yes, approximately six percent in volume.

MR. KELLAHIN: What is your market for the gas from these zones?

THE WITNESS: The gas is sold to the helium plant located in Shiprock, New Mexico.

MR. KELLAHIN: And that is from both the Pennsylvanian and the Mississippian?

THE WITNESS: That is correct. The gas is commingled at the surface and pipelined to the plant at Shiprock.

dearnley-meier

MR. KELLAHIN: Are you making separate measurements before co-mingling?

THE WITNESS: Yes, the gas is measured separately before it is co-mingled.

MR. KELLAHIN: What is the helium content of the Pennsylvanian gas.

THE WITNESS: Approximately 5.81 percent.

MR. KELLAHIN: And is there any commercial use for it, other than for the extraction of the helium?

THE WITNESS: No.

MR. KELLAHIN: It has a high concentration of nitrogen, does it?

THE WITNESS: That is correct. That is the reason that it is no longer commercial after the helium has been extracted.

Q (By Mr. Utz) Which zone was flowing on your packer test?

A The Mississippian was flowing and the Pennsylvanian was shut-in as you will note, there was only a three pound pressure drop in the time interval test, which -- Let's see, 327 at 11:15 P.M. to 328 at 10:30 P.M. Approximately twenty-three hours and forty-five minutes.

Q In affect on your casing program, you have a solid sheet of cement outside the different strings of casing from

dearnley-meier

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the bottom up to 4638, is that correct, sir?

A That is correct, sir.

Q And from 503 up, was it circulated?

A Yes, sir, the cement circulated.

Q Where does it say that, or does it?

A It doesn't say it, sir, but I guess it should have been reported as such, but it is not shown here.

Q What kind of pressures do you have in these two zones?

A The initial pressure in the Pennsylvanian Zone by drill-stem test was measured as 2707 PSI. The initial pressure in the Mississippian Zone was measured 2707 PSI. That also was measured on DST.

Q And, these wells don't produce any liquids, I presume?

A Yes, they do. The initial potential of the zone of completion in the Mississippian was 2,300 MCF of gas, 140 barrels of condensate and 220 barrels of water. This test was taken in April 22, 1967.

Q 200 barrels?

A 220 barrels of water.

MR. KELLHAIN: What was the gravity of that condensate?

THE WITNESS: The initial gravity was 68° API.

Q (By Mr. Utz) And how much condensate was it?

A 140 barrels.

Q The gravity of these gasses would undoubtedly be pretty high, wouldn't it?

A The gravity of the gas is .921 in the Pennsylvanian and .93 in the Mississippian.

Q Six percent helium didn't lighten it up much, did it?

A No, sir, not too much.

MR. UTZ: Any questions of the witness? You may be excused.

(Witness excused.)

MR. UTZ: Any statements in this case? The case will be taken under advisement.

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STATE OF NEW MEXICO )  
 ) SS.  
COUNTY OF BERNALILLO )

I, JERRY POTTS, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission Examiner 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 15th day of June, 1967.

Jerry Potts  
Notary Public-Court Reporter

My Commission Expires:

July 10, 1970

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No 3562, heard by me on June 26, 1967.  
Thos. L. [Signature], Examiner  
New Mexico Oil Conservation Commission

dearnley-meier

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This form is not to be used for reporting packer leakage tests in Southeast New Mexico

NEW MEXICO OIL CONSERVATION COMMISSION

NORTHWEST NEW MEXICO PACKER-LEAKAGE TEST

RECEIVED  
DURANGO PROD.

APR 10 1967

Operator Continental Oil Company Lease Table Mesa Well No. 29  
Location of Well: Unit B Sec. 9 Twp. 27N Rge. 17W County San Juan  
Name of Reservoir or Pool Undesignated Penn. Type of Prod. Gas Method of Prod. Flow Prod. Medium Casing  
Name of Reservoir or Pool Undesignated Miss. Type of Prod. Gas Method of Prod. Flow Prod. Medium Tubing

PRE-FLOW SHUT-IN PRESSURE DATA

Upper Compl	Hour, date Shut-in	Length of time shut-in	Prolonged	SI press. psig	1908#	Stabilized? (Yes or No)	Yes
Lower Compl	Hour, date Shut-in	Length of time shut-in	45 Min.	SI press. psig	2110#	Stabilized? (Yes or No)	No

FLOW TEST NO. 1

Commenced at (hour, date)*				10:45 A.M. 3/27/67				Zone producing (Upper or Lower):	
Time (hour, date)	Lapsed time since*	Pressure		Prod. Zone		Remarks			
11:15 A.M. 3/27/67	30 Min.	Upper Compl.	Lower Compl.	Temp.		With DW Gauge			
10:30 A.M. 3/28/67	23 Hours 45 Min.	1912#	1180#			With DW Gauge			
		1915#	1027#						

Production rate during test

Oil: \_\_\_\_\_ BOPD based on \_\_\_\_\_ Bbls. in \_\_\_\_\_ Hrs. \_\_\_\_\_ Grav. \_\_\_\_\_ GOR \_\_\_\_\_  
Gas: \_\_\_\_\_ MCFPD; Tested thru (Orifice or Meter): \_\_\_\_\_

MID-TEST SHUT-IN PRESSURE DATA

Upper Compl	Hour, date Shut-in	Length of time shut-in	SI press. psig	Stabilized? (Yes or No)
Lower Compl	Hour, date Shut-in	Length of time shut-in	SI press. psig	Stabilized? (Yes or No)

FLOW TEST NO. 2

Commenced at (hour, date)**				Zone producing (Upper or Lower):	
Time (hour, date)	Lapsed time since **	Pressure		Prod. Zone	
		Upper Compl.	Lower Compl.	Temp.	Remarks

Production rate during test

Oil: \_\_\_\_\_ BOPD based on \_\_\_\_\_ Bbls. in \_\_\_\_\_ Hrs. \_\_\_\_\_ Grav. \_\_\_\_\_ GOR \_\_\_\_\_  
Gas: \_\_\_\_\_ MCFPD; Tested thru (Orifice or Meter): \_\_\_\_\_

REMARKS: Pressures @ 10:00 A.M. 3/27/67 were: Penn. 1912#, Miss. 1104#

I hereby certify that the information herein contained is true and complete to the best of my knowledge.

Approved: 4-7 1967  
New Mexico Oil Conservation Commission  
By G. R. Kendrick  
Title PETROLEUM ENGINEER DIST. NO. 3

RMOC(3) File Foreman

Operator Continental Oil Company  
Original Signed By: \_\_\_\_\_  
By William K. Dietrich  
Title Asst. District Manager  
Date April 5, 1967

RECEIVED  
APR 7 1967  
OIL CON. COM.  
DIST. 3

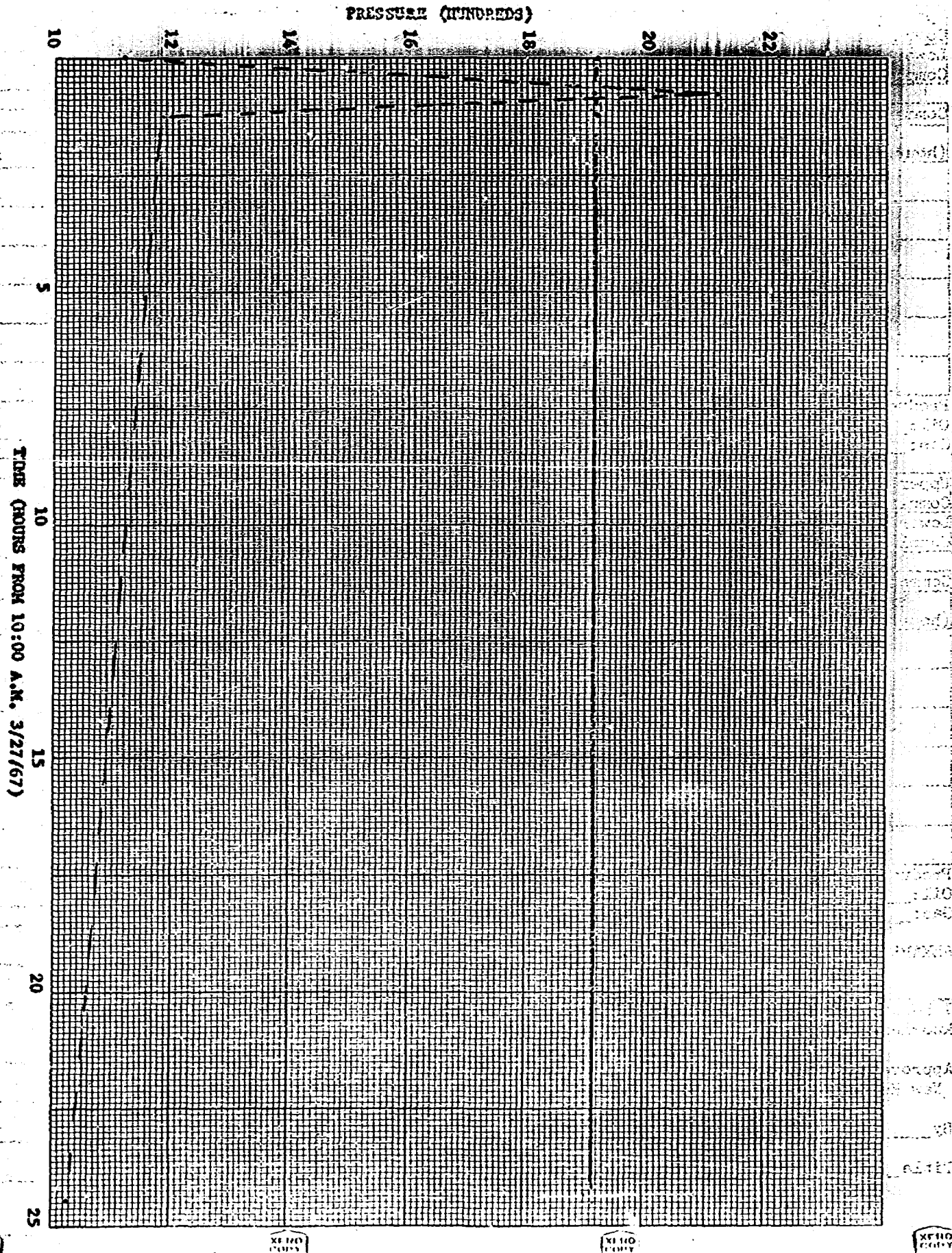
# NORTHWEST NEW MEXICO PACKER LEAKAGE TEST INSTRUCTIONS

1. A packer leakage test shall be commenced on each multiple completed well within seven days after actual completion of the well, and annually thereafter as prescribed by the order authorizing the multiple completion. Such tests shall also be commenced on all multiple completions within seven days following recompletion and/or chemical or fracture treatment, and whenever remedial work has been done on a well during which the packer or the tubing have been disturbed. Tests shall also be taken at any time that communication is suspected or when requested by the Commission.
2. At least 72 hours prior to the commencement of any packer leakage test, the operator shall notify the Commission in writing of the exact time the test is to be commenced. Offset operators shall also be so notified.
3. The packer leakage test shall commence when both zones of the dual completion are shut-in for pressure stabilization. Both zones shall remain shut-in until the well-head pressure in each has stabilized, provided however, that they need not remain shut-in more than seven days.
4. For Flow Test No. 1, one zone of the dual completion shall be produced at the normal rate of production while the other zone remains shut-in. Such test shall be continued for seven days in the case of a gas well and for 14 hours in the case of an oil well. Note: If, on an initial packer leakage test, a gas well is being flowed to the atmosphere due to the lack of a pipeline connection the flow period shall be three hours.
5. Following completion of Flow Test No. 1, the well shall again be shut-in, in accordance with Paragraph 3 above.
6. Flow Test No. 2 shall be conducted even though no leak was indicated during Flow Test No. 1. Procedure for Flow Test No. 2 is to be the same as for Flow Test No. 1 except that the previously produced zone shall remain shut-in while the zone which was previously shut-in is produced.

7. Pressures for gas-oil tests must be measured on each zone with a deadweight pressure gauge at time intervals as follows: 3-hour tests: immediately prior to the beginning of each flow-period, at fifteen-minute intervals during the first hour thereof, and at hourly intervals thereafter, including one pressure measurement immediately prior to the conclusion of each flow period. 7-day tests: immediately prior to the beginning of each flow period, at least one time during each flow period (at approximately the midway point) and immediately prior to the conclusion of each flow period. Other pressures may be taken as desired, or may be requested on wells which have previously shown questionable test data.

14-hour oil zone tests: all pressures, throughout the entire test, shall be continuously measured and recorded with recording pressure gauges, the accuracy of which must be checked at least twice, once at the beginning and once at the end of each test, with a deadweight pressure gauge. If a well is a gas-oil or an oil-gas dual completion, the recording gauge shall be required on the oil zone only, with deadweight pressures as required above being taken on the gas zone.

8. The results of the above-described tests shall be filed in triplicate within 15 days after completion of the test. Tests shall be filed with the State District Office of the New Mexico Oil Conservation Commission on Northwest New Mexico Packer Leakage Test Form Revised 11-1-58, with all deadweight pressures indicated thereon as well as the flowing temperatures (gas zones only) and gravity and GOR (oil zones only). A pressure versus time curve for each zone of each test shall be constructed on the reverse side of the Packer Leakage Test Form with all deadweight pressure points taken indicated thereon. For oil zones, the pressure curve should also indicate all key pressure changes which may be reflected by the recording gauge charts. These key pressure changes should also be tabulated on the front of the Packer Leakage Test Form.



**BEFORE EXAMINER** **UTZ**  
**NEW MEXICO OIL CONSERVATION COMMISSION**  
**SANTA FE, NEW MEXICO**  
**OIL CONSERVATION COMMISSION APPLICATION FOR MULTIPLE COMPLETION**  
**3562 EXHIBIT NO. 2**  
**CASE NO. 3562**

Form C-107  
5-1-61

Operator **Continental Oil Company** County **San Juan** Date **March 8, 1967**  
Address **P. O. Box 1621, Durango, Colorado** Lease **Table Mesa** Well No. **29**  
Location of Well Unit **H** Section **9** Township **27N** Range **17W**

1. Has the New Mexico Oil Conservation Commission heretofore authorized the multiple 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	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	<b>Table Mesa (Penn. "C")</b>		<b>San Juan Undeag. (Miss.)</b>
b. Top and Bottom of Pay Section (Perforations)	<b>7037'-7042'</b>		<b>7498'-7502'</b>
c. Type of production (Oil or Gas)	<b>Gas</b>		<b>Gas</b>
d. Method of Production (Flowing or Artificial Lift)	<b>Flowing</b>		<b>Flowing</b>

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

Yes	No	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	a. Diagrammatic Sketch of the Multiple Completion, showing all casing strings, including diameters and setting depths, centralizers and/or turbolizers and location thereof; quantities used and 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.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	c. Waivers consenting to such multiple completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.*
<input checked="" type="checkbox"/>	<input type="checkbox"/>	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.

**Sunray DX Oil Company, P. O. Box 1416, Roswell, New Mexico**

**Amerada Petroleum Corp., P. O. Box 1469, Durango, Colorado**

**Pan American Petroleum Corp., Security Life Bldg., Denver, Colorado**

**Union Oil Co. of California, Drawer 1611, Casper, Wyoming**

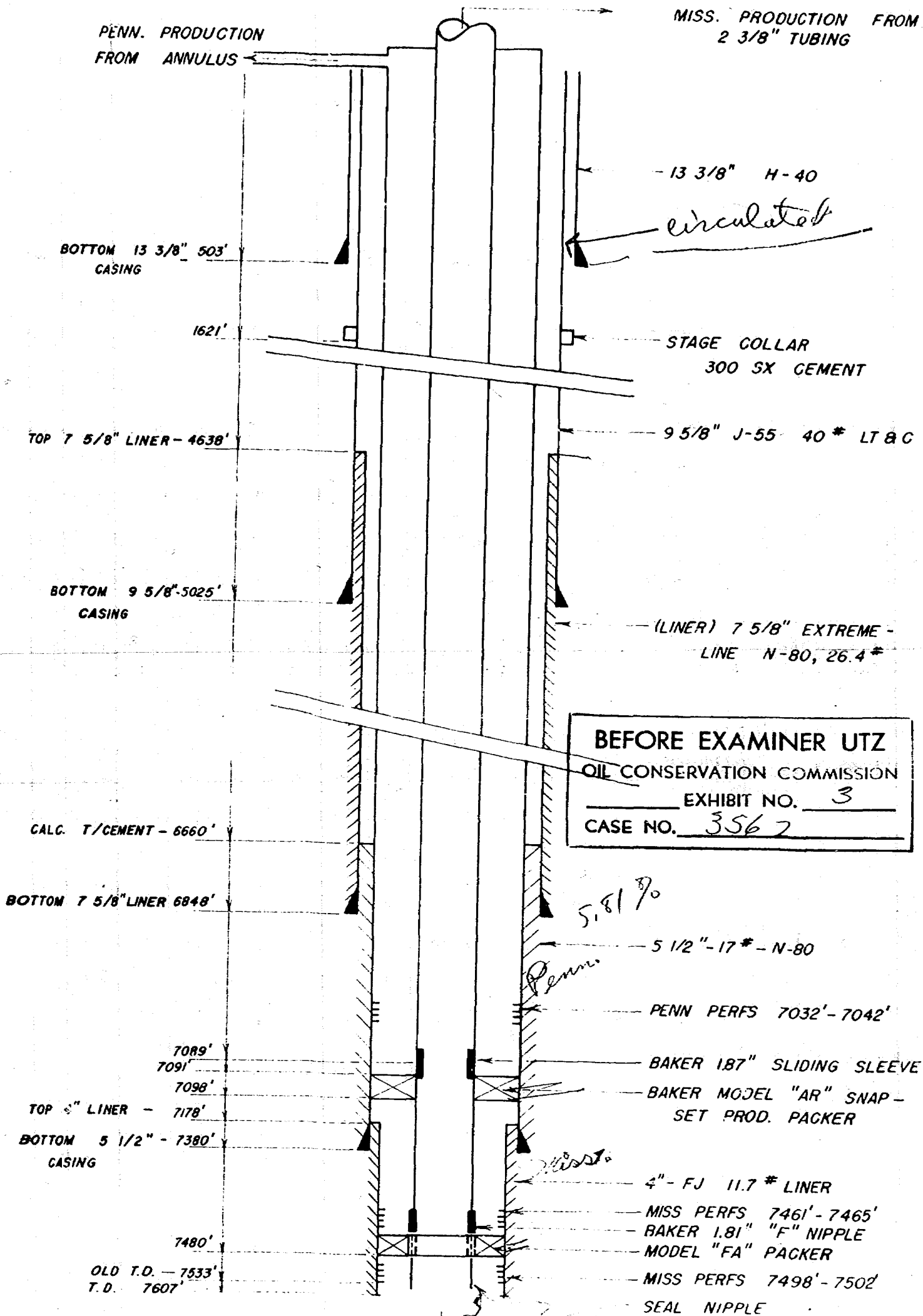
6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES **X** NO \_\_\_\_\_. If answer is yes, give date of such notification \_\_\_\_\_

CERTIFICATE: I, the undersigned, state that I am the **District Manager** of the **Continental Oil 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.

*[Signature]*  
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 multiple completion will result in an unorthodox well location and/or a non-standard proration unit in one or more of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.



BEFORE EXAMINER UTZ  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 3  
CASE NO. 3562

CONTINENTAL OIL COMPANY

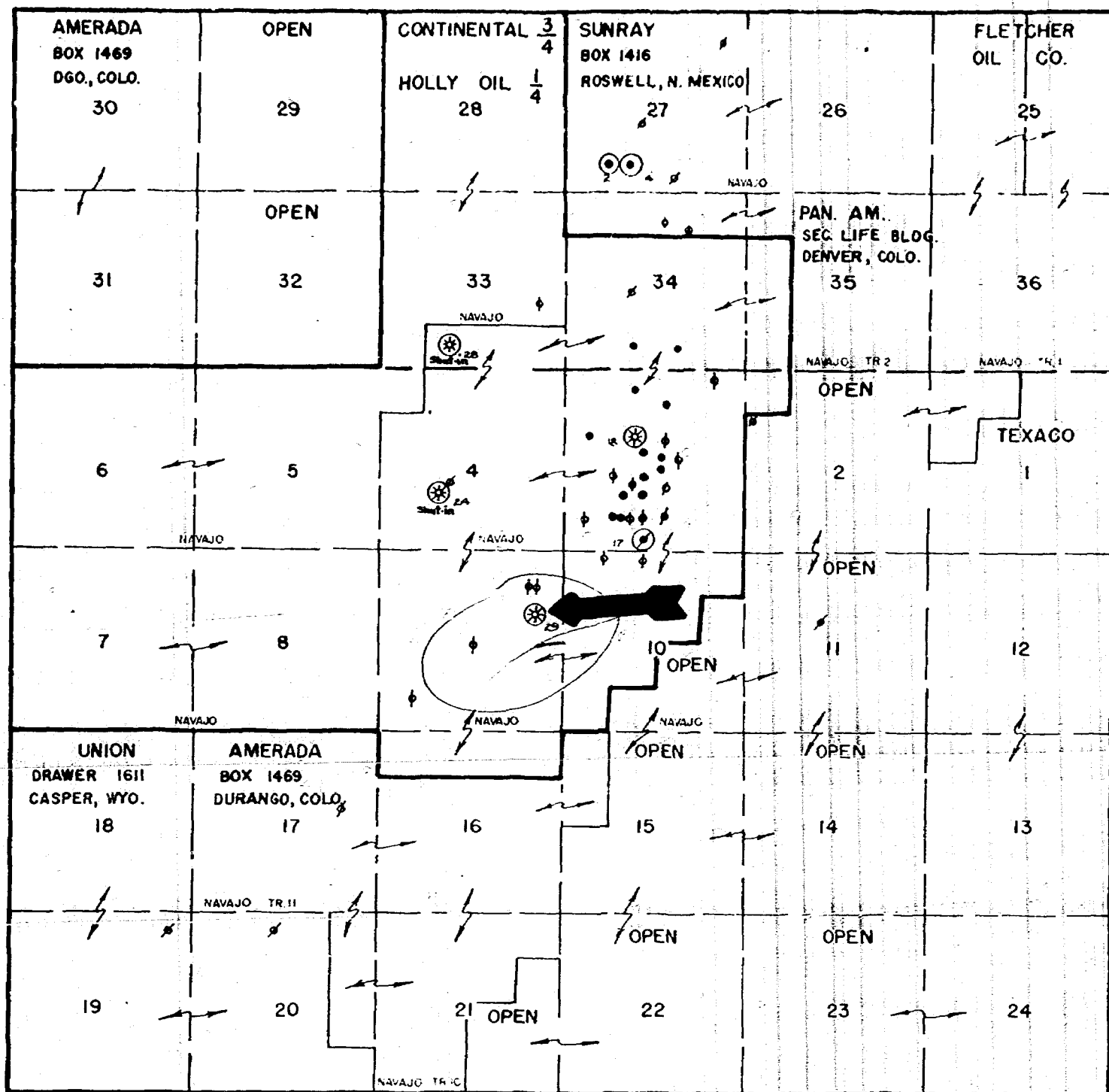
DIAGRAMATIC SKETCH OF DUAL COMP  
PENNSYLVANIA & MISSISSIPPIAN FORMATIONS  
TABLE MESA WELL NO. 29  
TABLE MESA FIELD  
SAN JUAN COUNTY, N. MEXICO

MARCH, 1967

Case 3562



R 17 W



LEASE PLAT

TABLE MESA FIELD AREA

SCALE: 1" = 4,000'

MARCH, 1967

CONTINENTAL OIL COMPANY DGO., COLO.

*Case 3562*

- LEGEND:
- DAKOTA OIL WELL
  - ⊙ PENN. OIL WELL
  - ⊗ HELIUM GAS WELL

BEFORE EXAMINER UTZ

OIL CONSERVATION COMMISSION

EXHIBIT NO. 4

CASE NO. 3562



Table Mesa #70

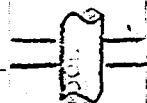
Gamma Ray

T/ Table Mesa Peruv. C

Neutron

2

B/ Table Mesa Peruv. C



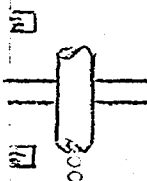
1200

T/ Molas

000

T/ Molas  
Scale Change

1400



T/ Overly B/ Miss

T/ Elbert

I. P.

BEFORE EXAMINER UTZ

OIL CONSERVATION COMMISSION

EXHIBIT NO. 6

CASE NO. 3562

Case 3562