

156 CASE 1565: Continental Oil Co. application
for gas-oil dual of Warren Unit Well #9,
27-20S-38E.

Case No.

1565

Application, Transcript,
Small Exhibits, Etc.

BEFORE THE
OIL CONSERVATION COMMISSION
DECEMBER 10, 1958

IN THE MATTER OF:

APPLICATION OF CONTINENTAL OIL COMPANY, CASE 1564 ¹⁵⁶⁵

TRANSCRIPT OF HEARING

DEARNLEY, MEIER & ASSOCIATES
GENERAL LAW REPORTERS
ALBUQUERQUE NEW MEXICO
Phone CHapel 3-6691

BEFORE THE
OIL CONSERVATION COMMISSION
DECEMBER 10, 1958

IN THE MATTER OF:

Application of Continental Oil Company for a dual completion. Applicant, in the above-styled cause, seeks an order authorizing it to dually complete its Warren Unit Well No. 9 located in the SW/4 NW/4 of Section 27, Township 20 South, Range 38 East, Lea County, New Mexico, in such a manner as to permit the production of gas from the Warren-Tubb Gas Pool and oil from the Warren-Drinkard Oil Pool through parallel strings of tubing.

) Case 1565

BEFORE:

Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

MR. NUTTER: The hearing will come to order, please.

The next case on the docket will be Case 1565.

MR. PAYNE: Case 1565, Application of Continental Oil Company for a dual completion.

MR. KELLAHIN: Jason Kellahin, of Kellahin and Fox, Santa Fe, New Mexico, representing the Applicant. We will have one witness, Mr. Francis.

(Witness sworn.)

R. J. FRANCIS

the witness, having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q State your name, please?

A R. J. Francis.

Q By whom are you employed, Mr. Francis?

A By Continental Oil Company.

Q What is your position?

A Production engineer working in the Hobbs District.

Q Have you testified before this Commission as a production engineer and had your qualifications as a production engineer accepted?

A Yes, sir, I have.

MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. NUTTER: Yes, sir, please proceed.

Q (By Mr. Kellahin) Mr. Francis, are you familiar with the application in Case 1565?

A Yes, sir.

Q Would you state briefly what is proposed in that application?

A An order for development and production in the Tubb formation underlying the proposed well and unit as proven by offset development. It is proposed to dually complete our Warren Unit Well No. 9, currently completed as a Warren-Drinkard oil well as a dual, producing Tubb gas from the Warren-Tubb Pool and Drinkard oil from the Warren-Drinkard Pool.

Q Referring to what has been marked as Exhibit 1, would you state what that shows?

(Marked Continental Oil Company
Exhibit 1 for identification.)

A Exhibit 1 is a structure map of the vicinity of the subject well contoured on top of the Tubb. The subject well is encircled in red and as located there is situated 1980 feet from the north and 660 feet from the west, 4838 east. The proposed unit to be assigned to the well for the production of Tubb gas is outlined in Red. Outlined in green is the offset wells completed in the Tubb formation, with the unit assigned to them also outlined in green.

It may be seen from the structure map that the subject well in the proposed unit occupies a comparable position to those offset wells completed in the Tubb.

Q On the pays, and that will be productive of gas from the Tubb?

A Yes, sir.

Q What is the present status of the well that is proposed to be dually completed?

A The well is presently completed in the Drinkard pay, the Warren-Drinkard pay. It has a present allowable of 30 barrels of oil a day based on a recent test of 43 API with a penalized ratio of 4,000 to 47.

(Marked Continental Oil Company
Exhibit 2 for identification.)

Q Referring to Exhibit 2, particularly the portion of the sketch to the left of the exhibit, would you describe the completion in the Warren-Drinkard Unit Drinkard Well No. 3?

A Primarily that portion which you refer to is the casing record for the well as it now exists. It may be seen that a string of 13 3/8 inch surface casing is set at 269 feet, cemented with sufficient cement to return to the surface. The intermediate string is a 9 5/8 inch casing set at a depth of 3050 feet, the cement returning to about 1150 feet behind the pipe. The production string is set at a plugged-back depth of 7775 feet, beside a 5 1/2 inch 17 pound pipe cemented with sufficient cement to return behind the pipe to approximately 3632 feet.

Q With that cementing program, is there any danger of communication behind the casing if this dual completion is approved as applied for?

A It isn't anticipated. Referring to the proposed dual completion equipment and the proposed perforated intervals in the Tubb and the present perforated intervals in the Drinkard, it may be seen there is approximately 143 feet separating these two pays, and it is believed that will be sufficient distance to prevent the breaking down of the cement sheet between the two zones as a result of treatment.

Q Referring to the remaining portion of what is marked Exhibit Two, describe what is proposed to be done in this well?

A With respect to the proposed dual completion, it is proposed to utilize a Baker Model D permanent type production packer to be set at 6700 feet to separate the production from the Tubb gas zone and the Drinkard gas zone to prevent the commingling

of production.

The well will be equipped with parallel strings of tubing, with the Drinkard oil being produced below the packer through two inch non upset 4.6 pound tubing. Production from the Tubb zone above the packer will be through 1.8 pound Hydril "CS" joint tubing.

Q Now, the exhibit shows the installation of three circulating valves. What is the function of those?

A Circulating valves as they are situated -- well, primarily the reason for the circulating valves is so that we can by manipulation of these valves we can isolate the Drinkard zone and open the valve above the packer for determining the bottom hole pressures in the Tubb zone. The reason for having two circulating valves in the Drinkard pay is that it's anticipated eventually the Drinkard zone will require pumping, and because of the higher ratio, it's thought it would be necessary to utilize probably hollow rods to produce that amount, use a rod tubing annulus to produce gas.

Q On this type of completion, will it be possible to pump the Drinkard oil zone?

A Yes, sir, I think so.

Q Will you be able to produce the Drinkard to depletion with this type of equipment?

A Yes, sir.

Q In regard to the Tubb gas zone using one inch tubing,

will there be any production losses as a result of that?

A Yes, sir, there will be. The present bottom hole pressure will not affect the allowable of the well. This will maintain a production of 2 million cubic feet of gas per day through the one inch line with a bottom hole pressure of 2700 pounds. In the later stages of depletion, it is anticipated probably the one inch tubing will not be capable of producing allowable production.

Q What will be done in that event?

A We propose to produce the Tubb gas through another casing annulus with the one inch tubing used to produce the distillate in the well bore.

Q Is there any danger of communication, in your opinion, between the Tubb and Drinkard zones?

A No, I don't see why we should anticipate any communication.

Q Will that type of completion enable you to make such tests as are necessary and may be required by the Commission of the two zones?

A Yes, sir.

Q And will that type of completion permit you to perform any reasonably anticipated treatment as may be necessary to the two different zones?

A Yes, sir. We could do any, make any necessary treatment with this hookup as we could otherwise. It may be noted that

for acidizing or such as that, the one inch tubing could be utilized. That would be any minor stimulation to the Tubb zone. Of course, any treatment to the Drinkard zone would necessarily have to be down tubing under the packer.

In the event major stimulation was necessary to the upper zone, it would be possible for us to blank off the Drinkard zone with a tubing plug and pull over the safety joint to the seating nipple as shown on the schematic diagram and pull this tubing and either use it to treat that.

Q Has this particular type of dual completion been approved by the Commission in other areas?

A In essence it has. The only variation would be that we are utilizing one inch tubing as opposed to larger diameters in some other areas.

Q Now, referring to what has been marked as Exhibit Three, explain what that is?

A Before leaving Exhibit Two, I would like to mention something. If you will note the copies of the exhibit I submitted today, you will see that on the schematic drawing of the proposed dual has been amended to show there is a gas outlet on the casing where it is not shown on there.

MR. NUTTER: Thank you, sir.

A Getting back to Exhibit Three, this is a copy of the radio activity log from the subject well, and shown thereon is the top of the Tubb and the top of the Drinkard which, too, define

define the vertical limits of the Warren-Tubb Pool; and also shown are the existing Drinkard perforations for Tubb gas. As shown thereon, the proposed packer setting depth is approximately 6700 feet.

Q In your opinion, is the approval of this application in the interest of conservation and the prevention of waste?

A Yes, sir.

Q Were Exhibits One, Two and Three prepared by you or under your direction and supervision?

A Yes, sir.

MR. KELLAHIN: At this time, we'd like to offer in evidence Exhibits One, Two and Three.

MR. NUTTER: Without objection, Continental Exhibits One through Three inclusive will be admitted in evidence.

Q (By Mr. Kellahin) Did you have anything else to add to that?

A No -- I might point out that in regard to possible producing of the Tubb gas zone through the casing, since it is essentially a gas reservoir with gas and distillate existing as one phase in the reservoir there would be no loss of reservoir energy that would result from producing the well through the casing.

Q Would it be possible to produce the Tubb to depletion by that method?

A I believe we could produce gas through the casing. Any

distillate that accumulated in the well bore as a result of condensation could be unloded through the one inch tubing.

MR. KELLAHIN: That's all the questions I have.

MR. NUTTER: Any questions of Mr. Francis?

CROSS EXAMINATION

BY MR. FISCHER:

Q In your normal flow the Tubb gas will be through the tubing into the casing head, not through your one inch tubing?

A No, at the present time the normal flow of gas will be through the tubing. I recognize the fact that the question might be brought up as to whether this one inch tubing would be capable of producing to depletion. Since we are producing into a 600 pound pipe gathering line, it would restrict the capacity of the well in the later stages of depletion. That would be when pressures drop below a thousand pounds, in which event we would have to resort to producing through the casing.

Q You don't ever expect to have to work through that one inch tubing, do you?

A No.

Q Your one inch tubing will be swinging at about opposite those Tubb perforations?

A About mid way through.

Q You don't have to pump the Drinkard now, do you?

A No, we don't.

Q Well, in that bottom circulating valve, how will it be

sitting on the string? Would you have to jar down on that or up to open?

A I don't know the function of that valve.

Q If your shifting tool can't get through the seating hole --

Q Maybe I should have brought that out. In order to manipulate that lower valve, it will be necessary to beam this seating nipple out to I.D. 25/32, which is 1/32 over.

Q You propose to get down to that bottom sleeve and shift it?

A Yes.

Q And the two bottom sleeves will be open during all production of your Drinkard zone?

A No. Until such time as it is necessary to pump the well, we will keep that top valve closed. It's possible since it is under the packer there might be a small gas cap develop within the casing there. If we were to have this happen, why it might contribute to excessive GOR, which might be avoided by keeping it closed.

MR. FISCHER: Thank you.

EXAMINATION BY MR. NUTTER:

Q Mr. Francis, do you expect you will have corrosion problems in this dual completion?

A No. Of course, there will be a certain amount of corrosion; there will be nothing severe. We have never had any

severe corrosion problems in that area. Normally, producing equipment will last the life of the well.

Q Is the pool created for each of these zones?

A I believe the Warren-Tubb pool was created. It is defined as the southwest quarter of the Section 28, Township 13 South, Range 38 East as being the pool limits. The pool rules provided any wells developed within one mile of the pool boundaries would be governed by -- unless they fell within the limits of another Tubb pool -- would be governed by the rules of the Warren-Tubb Pool and that it could be included within the pool by administrative approval.

Q That's a 160 acre pool?

A Yes, sir.

Q You have a standard 160 acre unit?

A Yes, sir.

MR. NUTTER: Thank you.

A I might point out at the present time that the Warren-Drinkard acreage which was the other well in that area is a Blinebry-Tubb dual and is producing, as is Number 26, Blinebry-Tubb. It is 660 from the west line of 27. At the present time, we are in the process of plugging and dually completing what was the Warren-Drinkard 10 situated -- I'm not certain of that -- I believe 660 from the north and 2310 from the east line of Section 28. We have obtained successful Tubb completion or in the process of completing in the Blinebry.

Q You intend to make a Blinebry-Tubb deal out of that?

A Yes, sir, and it has been approved by the Commission.

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

If not, he may be excused.

(Witness excused.)

MR. NUTTER: Anyone have anything further in Case 1565? We will take the case under advisement.

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

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

WITNESS my Hand and Seal this 18th day of December, 1958, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

John Calvin Bevell
NOTARY PUBLIC

My Commission Expires:

January 24, 1962

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 1564 heard by me on 12-10, 1958.

[Signature], Examiner
New Mexico Oil Conservation Commission

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. 1565
Order No. R-1309

APPLICATION OF CONTINENTAL OIL
COMPANY FOR AN ORDER AUTHORIZING
A GAS-OIL DUAL COMPLETION IN THE
WARREN-TUBB GAS POOL AND THE
WARREN-DRINKARD OIL 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 December 10, 1958, 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 17th day of December, 1958, 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, Continental Oil Company, is the owner and operator of the Warren Unit Well No. 9, located 1980 feet from the North line and 660 feet from the West line of Section 27, Township 20 South, Range 38 East, NMPM, Lea County, New Mexico.

(3) That the applicant proposes to dually complete the said Warren Unit Well No. 9 in such a manner as to permit the production of gas from the Warren-Tubb Gas Pool and the production of oil from the Warren-Drinkard Oil Pool through parallel strings of 1-inch tubing and 2-inch non-upset tubing respectively.

(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.

-2-

Case No. 1565
Order No. R-1309

(6) That the subject application should be approved.

IT IS THEREFORE ORDERED:

That the applicant, Continental Oil Company, be and the same is hereby authorized to dually complete its Warren Unit Well No. 9, located 1980 feet from the North line and 660 feet from the West line of Section 27, Township 20 South, Range 38 East, NMPN, Lea County, New Mexico, in such a manner as to permit the production of gas from the Warren-Tubb Gas Pool and the production of oil from the Warren-Drinkard Oil Pool through parallel strings of 1-inch tubing and 2-inch non-upset tubing respectively.

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

PROVIDED FURTHER, That applicant shall take packer-leakage tests upon completion and annually thereafter during the Annual Gas-Oil Ratio Test Period for the Warren-Drinkard Oil Pool.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

E. L. Mechem

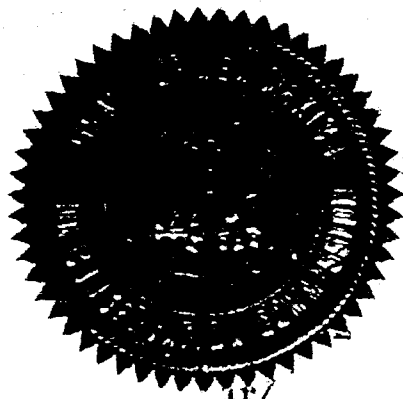
EDWIN L. MECHEM, Chairman

Murray E. Morgan

MURRAY E. MORGAN, Member

A. L. Porter, Jr.

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



CASE 1562: (con't)

special rules and regulations be promulgated to govern the above-described project, which would include among other things conversion of additional injection wells without notice and hearing, transfer of allowables from injection wells, transfer of allowables from wells shut-in for observation purposes or to increase the efficiency of the project, exemption of all leases connected with the project from gas-oil ratio limitation provided gas produced therefrom is reinjected, and such other rules and regulations the Commission may deem appropriate.

CASE 1563:

Application of Caulkins Oil Company for a dual completion. Applicant, in the above-styled cause, seeks an order authorizing it to dually complete its Breech "A" Well No. D-204, located in the SE/4 SE/4 of Section 9, Township 26 North, Range 6 West, Rio Arriba County, New Mexico, in such a manner as to permit the production of oil from the South Blanco-Tocito Oil Pool and the production of gas from the South Blanco-Dakota Gas Pool through parallel strings of tubing.

CASE 1564:

Application of Great Western Drilling Company for approval of a unit agreement and a pilot water flood project. Applicant, in the above-styled cause, seeks an order approving its proposed North Central Caprock Queen Unit Agreement embracing 2,040 acres, more or less, of state and federal lands in Sections 13, 14, 15, and 24, of Township 13 South, Range 31 East, and Sections 17, 18, and 19, of Township 13 South, Range 32 East, Caprock-Queen Pool, Chaves and Lea Counties, New Mexico, and for authority to institute a pilot water flood project in the Queen formation underlying said unit area.

CASE 1565:

Application of Continental Oil Company for a dual completion. Applicant, in the above-styled cause, seeks an order authorizing it to dually complete its Warren Unit Well No. 9 located in the SW/4 NW/4 of Section 27, Township 20 South, Range 38 East, Lea County, New Mexico, in such a manner as to permit the production of gas from the Warren-Tubb Gas Pool and oil from the Warren-Drinkard Oil Pool through parallel strings of tubing.

CASE 1566:

Application of Pan American Petroleum Corporation for approval of a unit agreement. Applicant, in the above-styled cause, seeks an order approving its East Saunders Unit Agreement embracing approximately 2,320 acres of state acreage in Township 14 South, Range 34 East, Lea County, New Mexico.

CASE 1567:

Application of Olsen Oils, Inc., for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order establishing a 160-acre non-standard gas proration unit in the Tubb Gas Pool consisting of the N/2 NW/4, SW/4 NW/4 and the NW/4 SW/4 of Section 25, Township 22 South, Range 37 East, Lea County, New Mexico; or in the alternative for a compulsory pooling order pooling all interests within the vertical limits of the Tubb Gas Pool in the NW/4 of said Section 25 as one Tubb Gas Unit and a like order pooling all interests within the vertical limits of the Tubb Gas Pool in the SW/4 of said Section 25 as another Tubb Gas Unit.

DOCKET: EXAMINER HEARING DECEMBER 10, 1958OIL CONSERVATION COMMISSION 9 a.m., Mabry Hall, State Capitol, Santa Fe, New Mexico

The following cases will be heard before Daniel S. Nutter, Examiner:

- CASE 1558: Application of Sunray Mid-Continent Oil Company for permission to commingle the production from two separate oil pools. Applicant, in the above-styled cause, seeks an order authorizing it to commingle the production from the Blinebry Oil Pool and Drinkard Pool on its State Land "15" Lease comprising the S/2 S/2 of Section 16, Township 21 South, Range 37 East, Lea County, New Mexico. Applicant proposes to meter the production from the Blinebry Oil Pool prior to being commingled and to determine Drinkard Pool production by subtracting the metered volume on the total gauged production in the common tank battery.
- CASE 1559: Application of Sunray Mid-Continent Oil Company for an order authorizing a secondary recovery project in San Juan County, New Mexico, and for the promulgation of special rules and regulations in connection with said project. Applicant, in the above-styled cause, seeks an order authorizing it to institute a secondary recovery project in the Bisti-Lower Gallup Oil Pool for the injection of dry gas into the Gallup formation through its Federal "C" Well No. 18, located in the SW/4 NE/4 of Section 7, Township 25 North, Range 12 West, San Juan County, New Mexico. Applicant further proposes that special rules and regulations be promulgated to govern the operation of the above-referenced project, which rules would provide among other things for the conversion of additional injection wells without notice and hearing, the transfer of allowables from injection wells to producing wells, transfer of allowables from wells which have been shut-in for observation or to increase the efficiency of the project, exemption of all leases connected with the project from gas-oil ratio limitation provided gas produced therefrom is reinjected, and such other rules and regulations the Commission may deem appropriate.
- CASE 1560: Application of El Paso Natural Gas Company for a dual completion. Applicant, in the above-styled cause, seeks an order authorizing it to dually complete its Huerfano Unit Well No. 92 (DG) located in the SW/4 NW/4 of Section 7, Township 26 North, Range 9 West, San Juan County, New Mexico, in such a manner as to permit the production of gas from an undesignated Gallup gas pool and gas from an undesignated Dakota gas pool.
- CASE 1561: Application of Tidewater Oil Company for a dual completion. Applicant, in the above-styled cause, seeks an order authorizing it to dually complete its A. B. Coates "C" Well No. 17, located in the SE/4 NE/4 of Section 24, Township 25 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Justis-McKee Pool and oil from the Justis-Ellenburger Pool through parallel strings of tubing.
- CASE 1562: Application of British American Oil Producing Company for permission to institute a secondary recovery project in San Juan County, New Mexico, and for the promulgation of special rules and regulations in connection therewith. Applicant, in the above-styled cause, seeks an order authorizing it to institute a secondary recovery project in the Bisti-Lower Gallup Oil Pool for the injection of dry gas and/or liquefied petroleum gas into the Gallup formation through four wells located in Sections 27 and 28, Township 26 North, Range 13 West, San Juan County, New Mexico. Applicant further proposes that

Case 1565

OIL CONSERVATION COMMISSION

HOBBS, NEW MEXICO
SANTA FE OFFICE OCC

1000 OCT 31 AM 3:10

October 29, 1958

C
O
P
Y

Continental Oil Co.
Box 68
Eunice, New Mexico

Gentlemen:

We note that on the Application for Dual Completion form which you have recently submitted to this office for your Warren Unit Well No. 9 in Unit E of Section 27, T-20-S, R-38-E you have indicated that the Commission has not previously authorized the dual completion of a well in these same pools or in the same zones within one mile of the subject well.

Under the provisions of Commission Order R-1214, since such a dual completion has not been previously authorized, it will be necessary that this application be set for a Hearing, and we suggest that this request be made by letter addressed to our Santa Fe office.

Yours very truly,
OIL CONSERVATION COMMISSION

R. F. Montgomery
Proration Manager

mc
cc-OCC, Santa Fe

Cool 1565 693
NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

7-3-58

APPLICATION FOR DUAL COMPLETION

Field Name Warren-Tubb Gas : Warren-Drinkard Oil		County Lea	Date October 23, 1958
Operator Continental Oil Company		Lease Warren Unit	Well No. 9
Location of Well E	Unit 27	Township 20-S	Range 38-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	Tubb	Drinkard
b. Top and Bottom of Pay Section (Perforations)	6412' - 6647'	6790' - 6842'
c. Type of production (Oil or Gas)	Gas	Oil
d. Method of Production (Flowing or Artificial Lift)	Flowing	Flowing

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

- Yes** 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.
- Yes** 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.
- Yes** 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.*
- Yes** 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.

Continental Oil Company, 825 Petroleum Bldg., Roswell, New Mexico

Remarks: The proposed 160-acre gas unit for the well is located within Continental Oil Company's Warren Unit and is completely surrounded by Warren Unit acreage.

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 **October 23, 1958**.

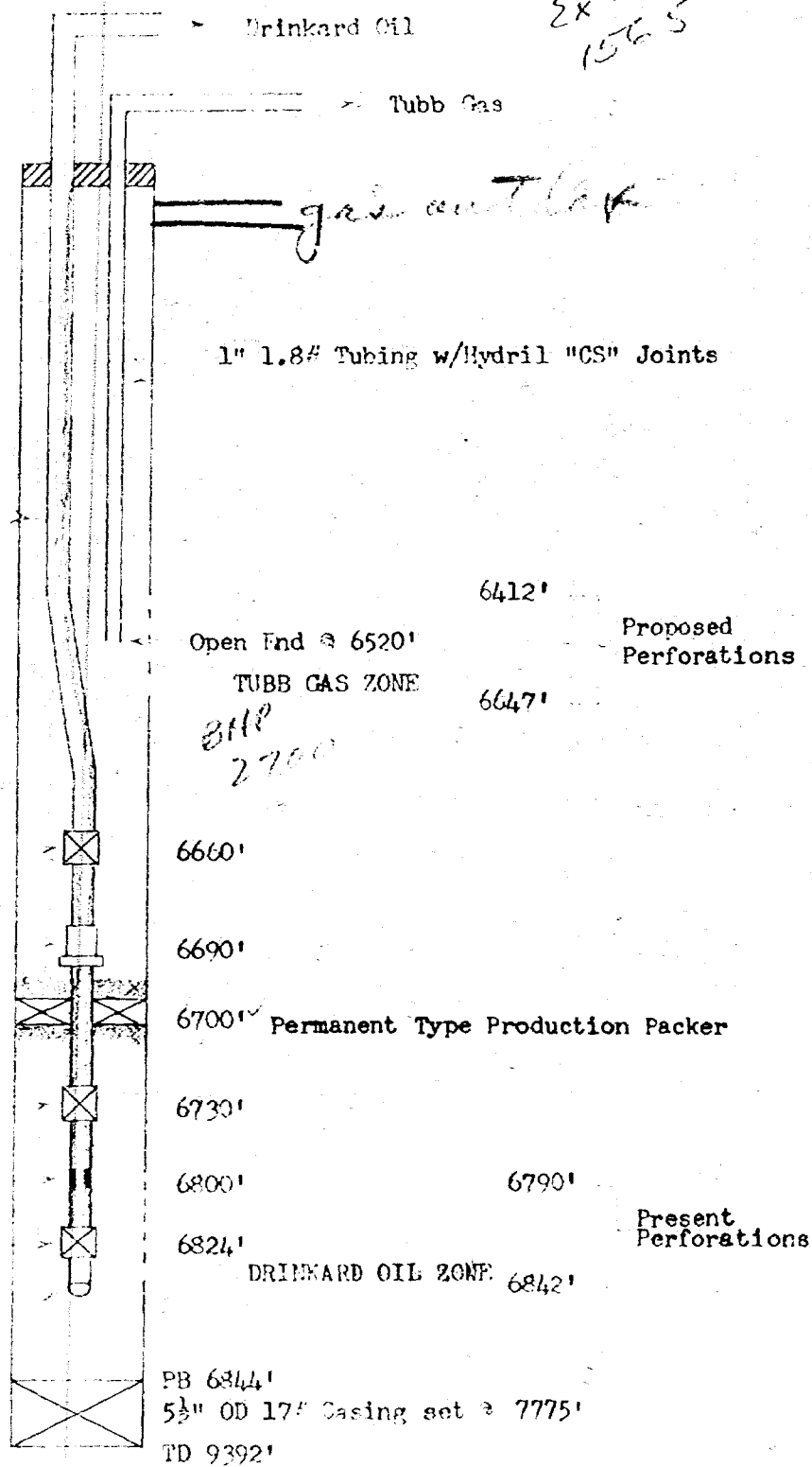
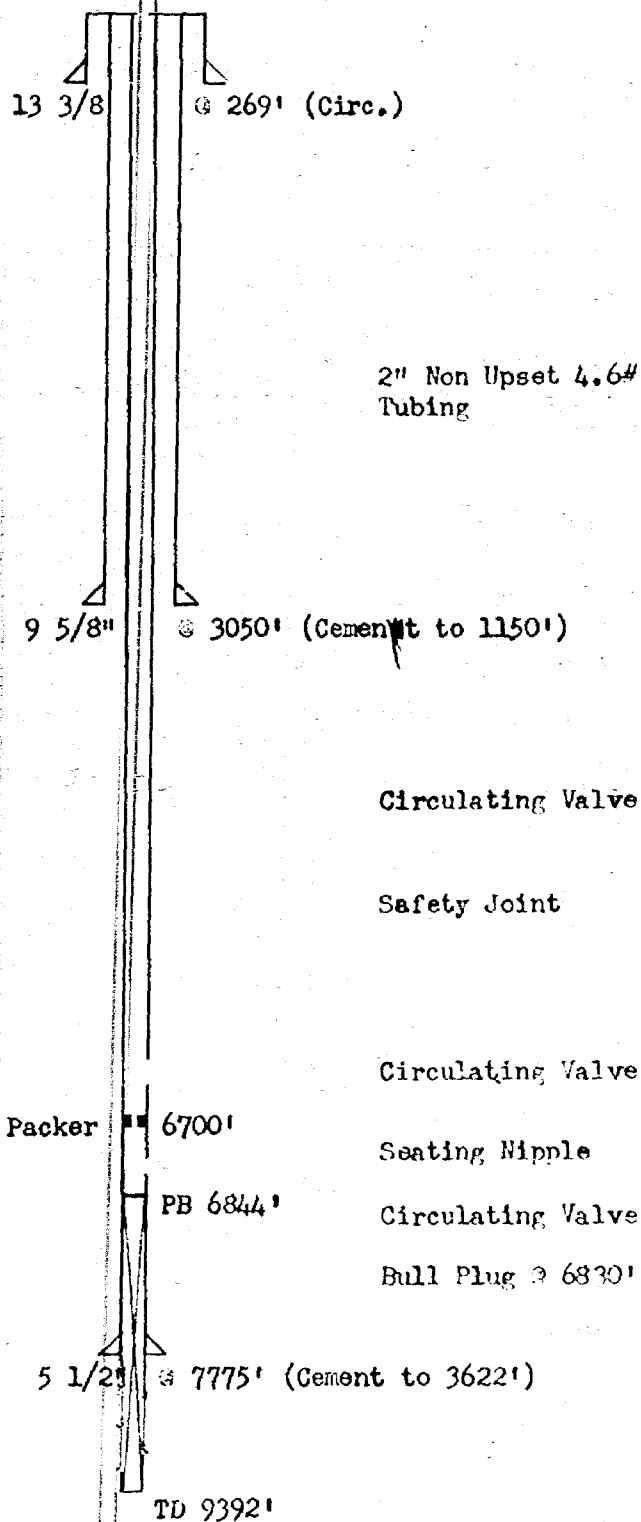
CERTIFICATE: I, the undersigned, state that I am the **Division Supt.** of the **Continental Oil Company** (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct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

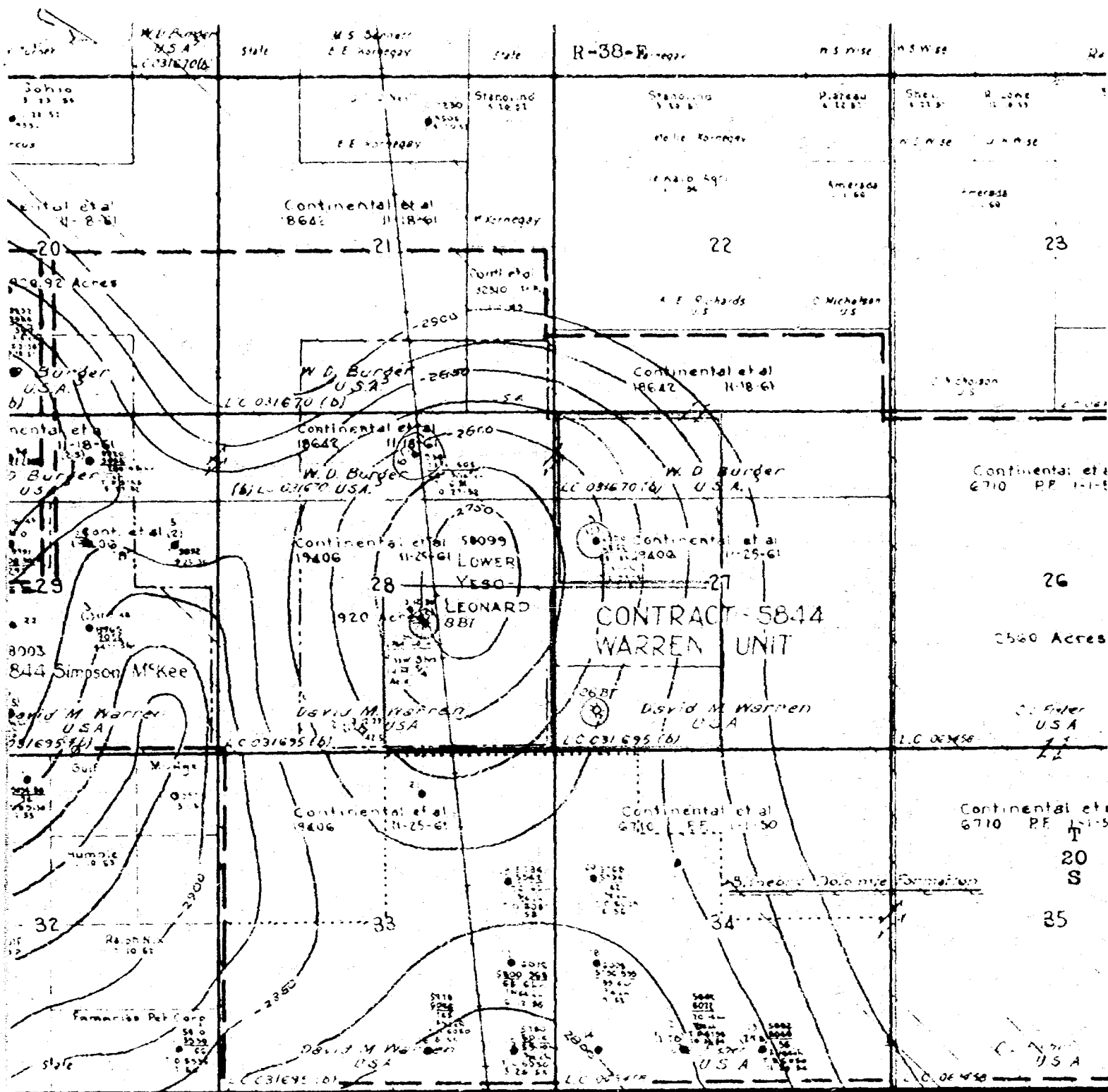
R. L. Adams
Signature

- * 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 perforation unit in either or both of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

CONTINENTAL OIL COMPANY
 Warren Unit-Drinkard No. 9
 PROPOSED DUAL COMPLETION EQUIPMENT

CASING RECORD





STRUCTURE MAP - TUBB AREA

Contoured on Top of Tubb Marker

Contour Int: 25'

Scale: 1"=2000'

Proposed Gas Well
Proposed Gas Unit

Offset Gas Well
Offset Gas Unit

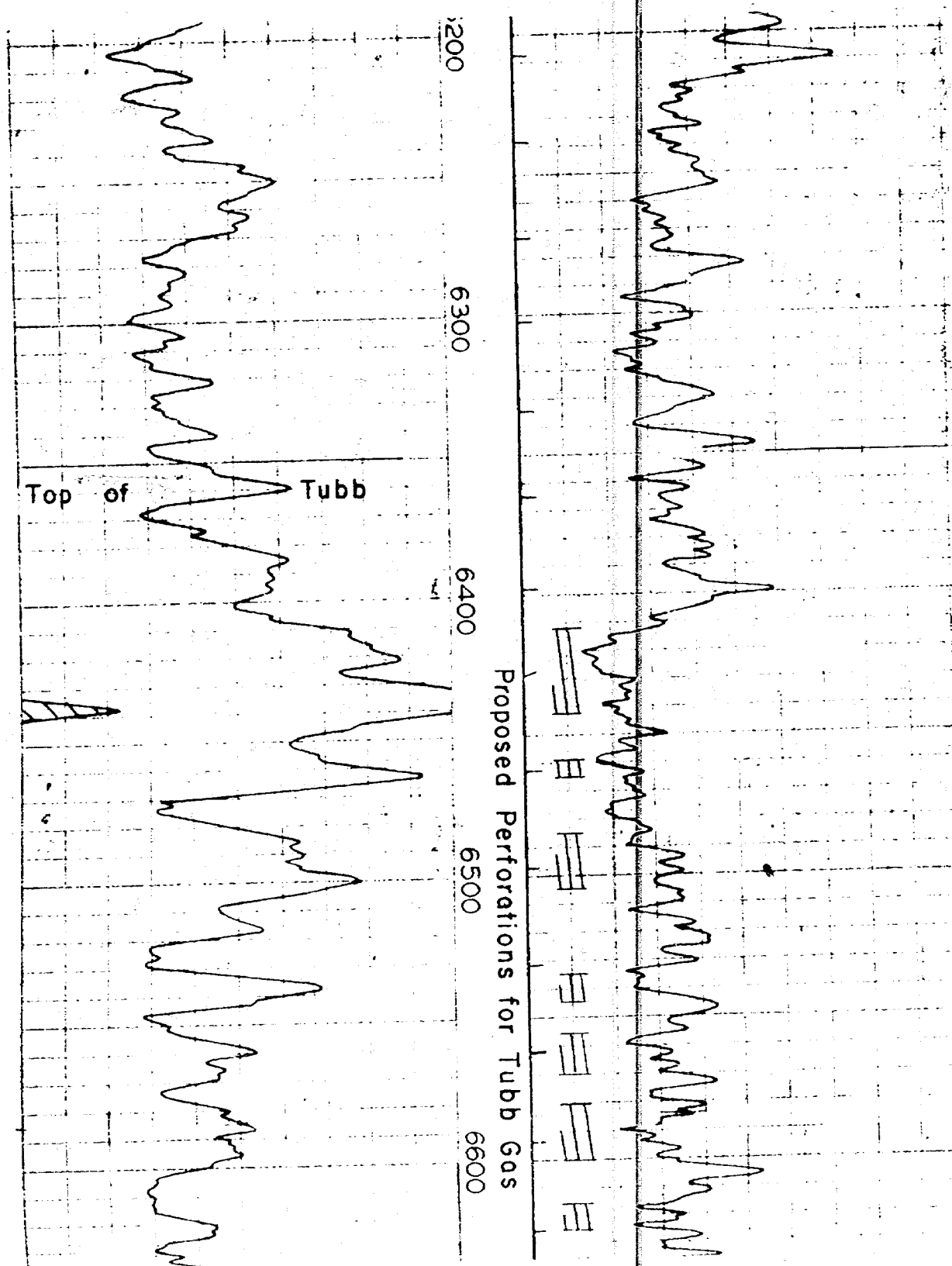
Continental Oil Co.

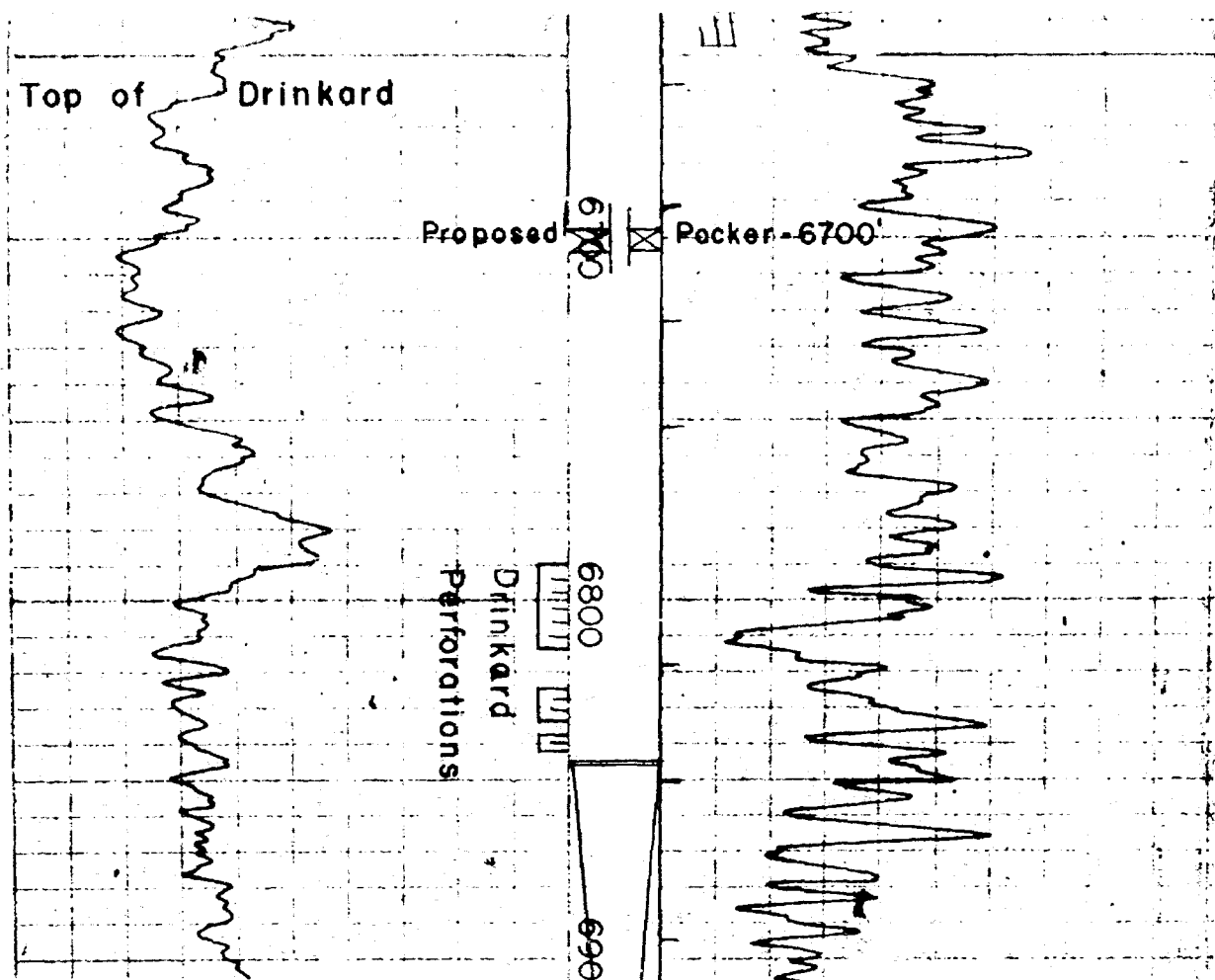
February, 1958.

CONTINENTAL OIL COMPANY

Warren Unit Drinkard No. 9

Elev 3552'





PROVIDED HOWEVER, That applicant shall complete, operate,
and produce said well in accordance with the provisions of Section V,
Rule 112-A, as amended by Order R-1214.

PROVIDED FURTHER, That applicant shall take packer-leakage
tests upon completion and annually thereafter during the _____
Annual Gas-oil Ratio Test Period
for the Drinkard Pool.

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

DONE at Santa Fe, New Mexico etc.

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

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-103.

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-103, Form C-104, Form C-110, and Form C-122, outlining the information required on those 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 _____ Test Period for the _____ Pool, commencing in the year 19____, 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 diagrammatic sketch of the mechanical installation which was actually used to complete and produce the seal between the strata, and a special report of production, gas-oil ratio or gas-liquid ratio, and reservoir pressure determination for each producing zone or stratum immediately following completion.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

S E A L

THE APPLICATION OF
FOR PERMISSION TO EFFECT DUAL COMPLETION
OF ITS _____

Order No. DC _____

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION COMMISSION

Under the provisions of Rule 112-A (c) _____
made application to the New Mexico Oil Conservation Commission on _____
for permission to dually complete its _____

Same as above

Now, on this _____ day of _____, 19____, the Secretary-Director finds:

- (1) That application has been duly filed under the provisions of Sub-section 'c' of Rule 112-A of the Commission's Rules and Regulations;
- (2) That satisfactory information has been provided that all operators of offset acreage have been duly notified; and
- (3) That no objections have been received within the waiting period as prescribed by said rule.
- (4) That the proposed dual completion will not cause waste nor impair correlative rights.
- (5) That the mechanics of the proposed dual completion are feasible and consonant with good conservation practices.

IT IS THEREFORE ORDERED:

That the applicant herein, _____,
be and the same is hereby authorized to dually complete its _____,
located _____

Same as above

in such a manner as to produce _____ from _____
Pool and _____ from _____ Pool, through
parallel strings of tubing.

the tubing and the casing tubing annulus respectively,
the casing tubing annulus and the tubing respectively.

(scratched out two)

THE APPLICATION OF Continental Oil Co.

ORDER NO. DC 693

FOR PERMISSION TO EFFECT

DUAL COMPLETION OF ITS Warren Unit Well No. 9,
SW/4 NW/4

LOCATED in FEET FROM THE LINE AND

FEET FROM THE LINE OF SECTION 27, TOWNSHIP

20 South, RANGE 38 East, NMPM,

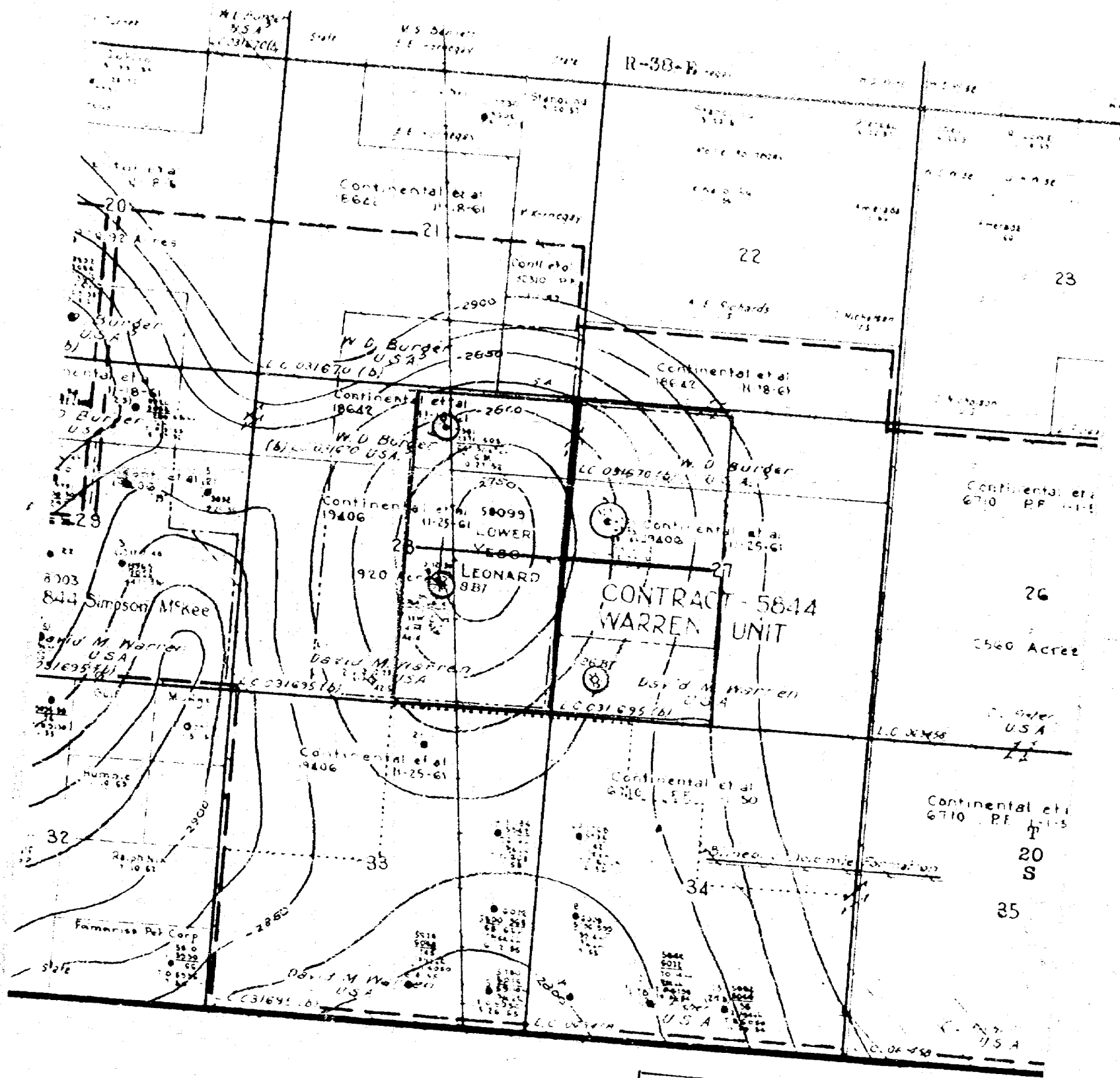
Lea COUNTY, NEW MEXICO, IN SUCH A

MANNER AS TO PERMIT THE PRODUCTION OF oil

FROM THE Drinkard (pool, ~~formation~~) AND THE

PRODUCTION OF gas FROM THE Tubb

(POOL, ~~FORMATION~~).



BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 156
CASE NO. 156

STRUCTURE MAP - TUBB AREA
Contoured on Top of Tubb Map
Contour Int: 25'

Scale: 1"=2000'

Proposed Gas Well
Proposed Gas Unit

Offset Gas Well
Offset Gas Unit

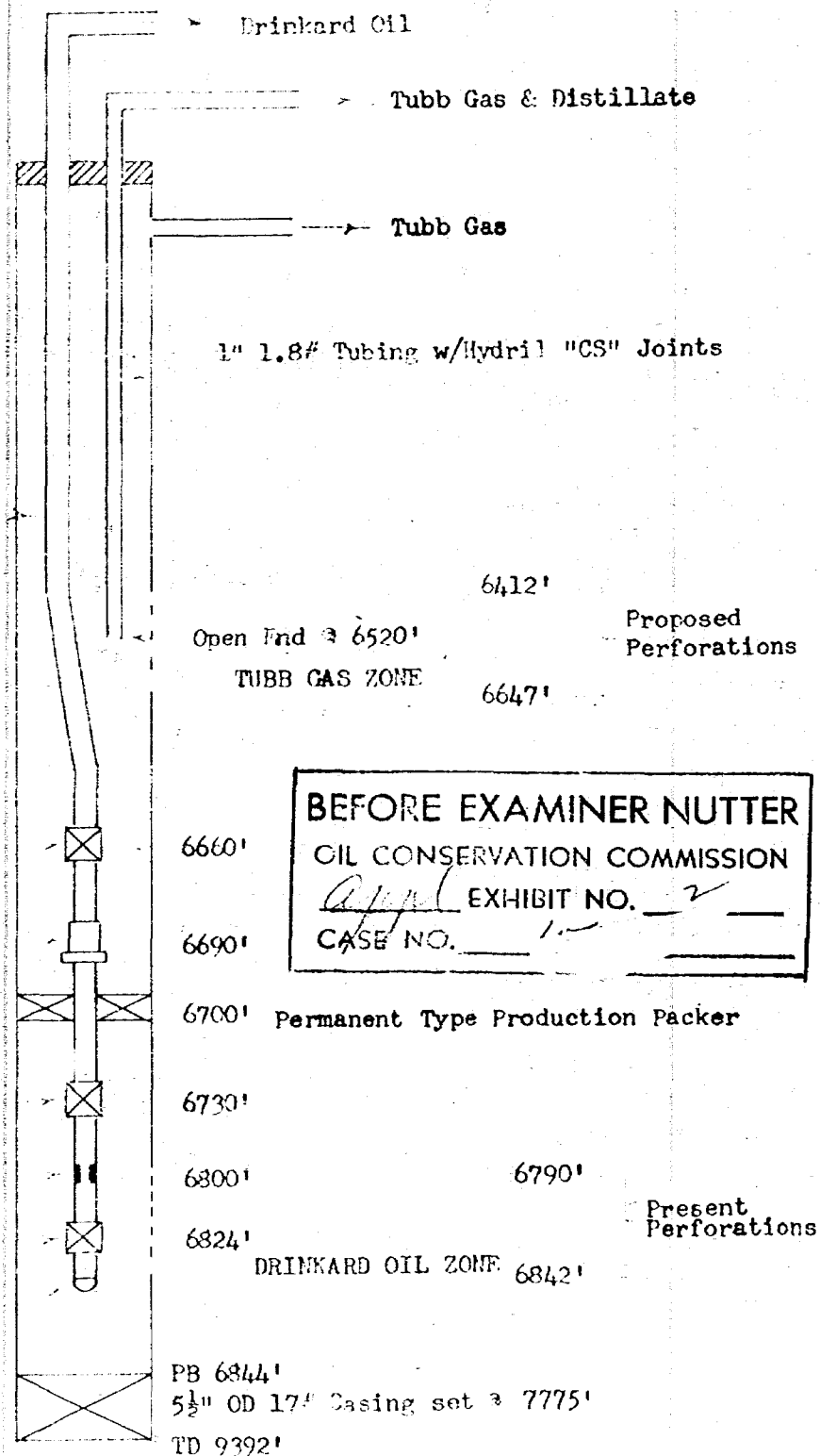
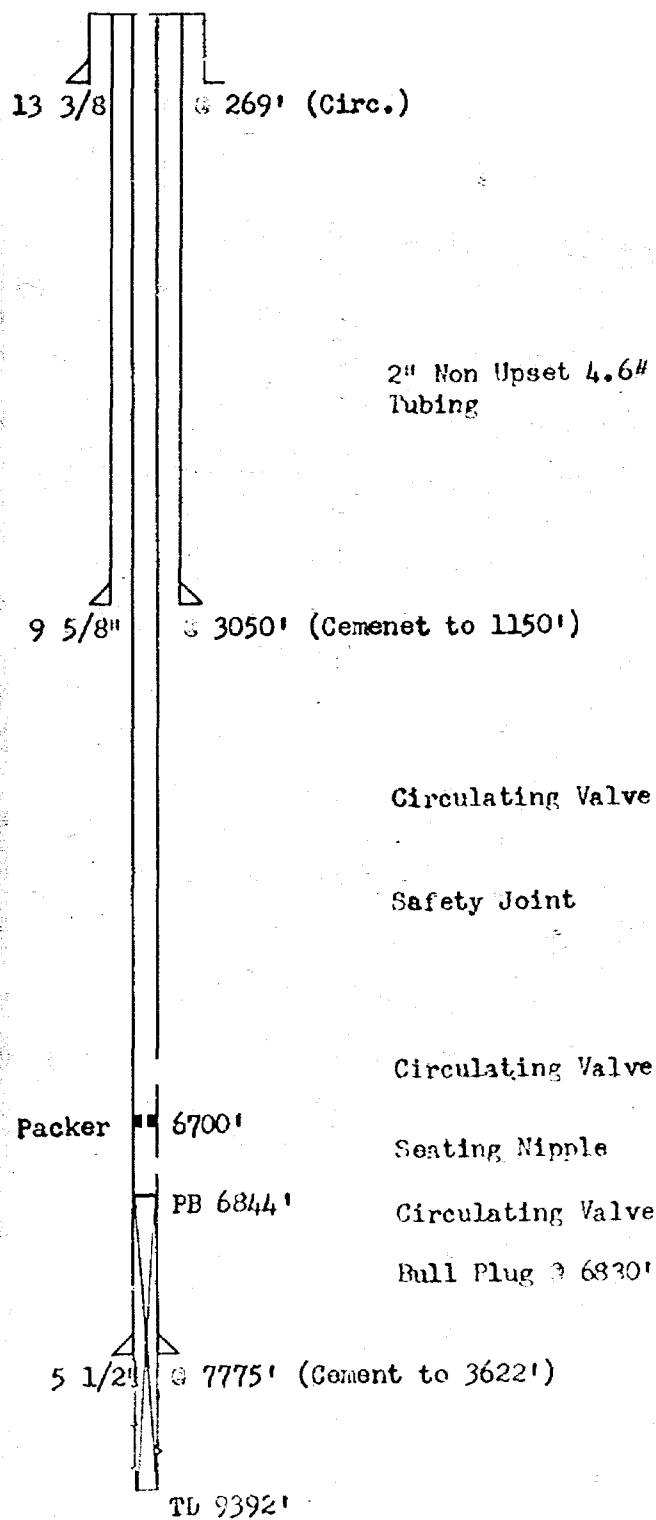
Continental Oil Co.

Nov. '58.

CASE 1120
EXHIBIT 1

CONTINENTAL OIL COMPANY
Warren Unit-Drinkard No. 9
PROPOSED DUAL COMPLETION EQUIPMENT

CASING RECORD



BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 2
CASE NO. 1

CASE 1545
EXHIBIT 2