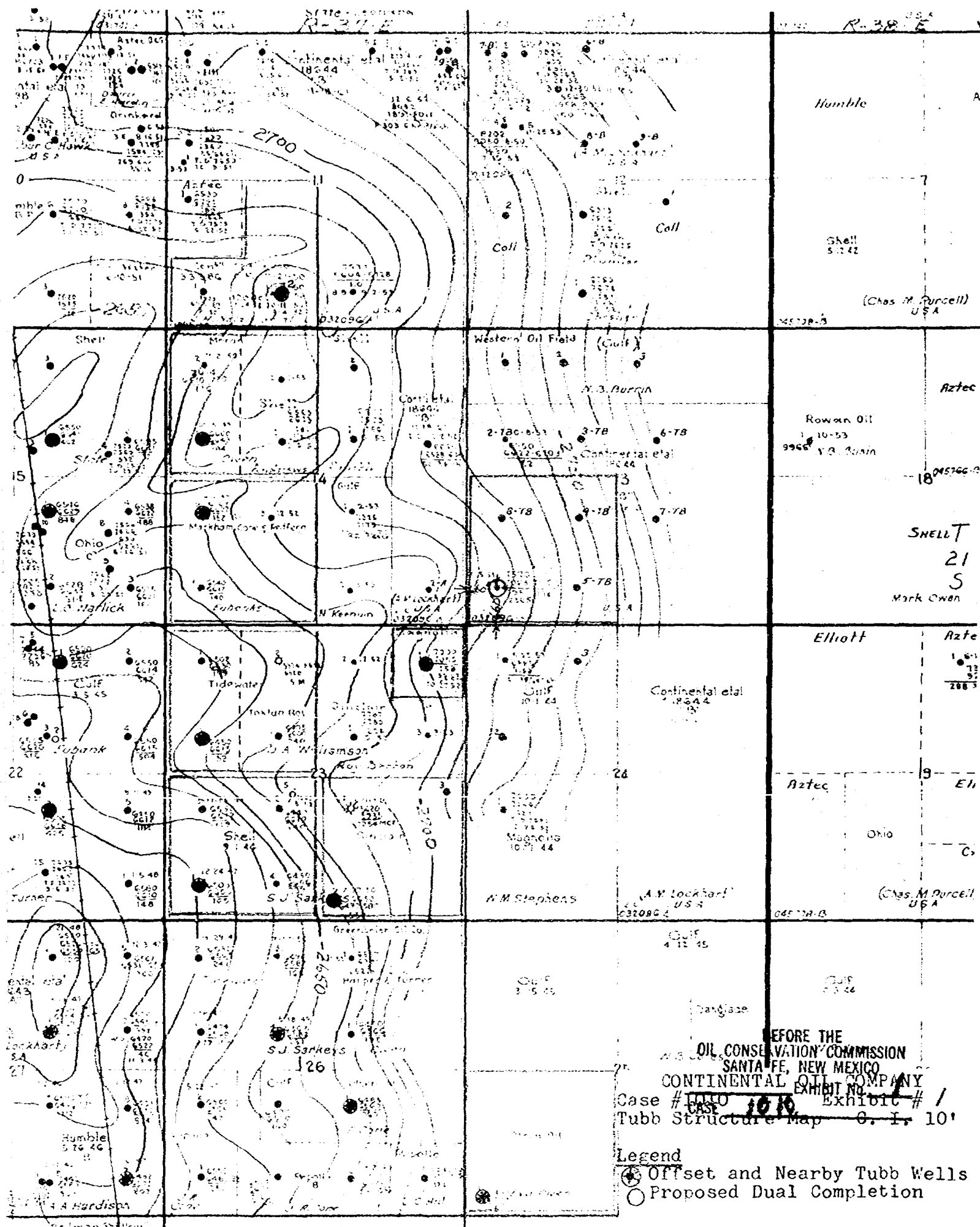


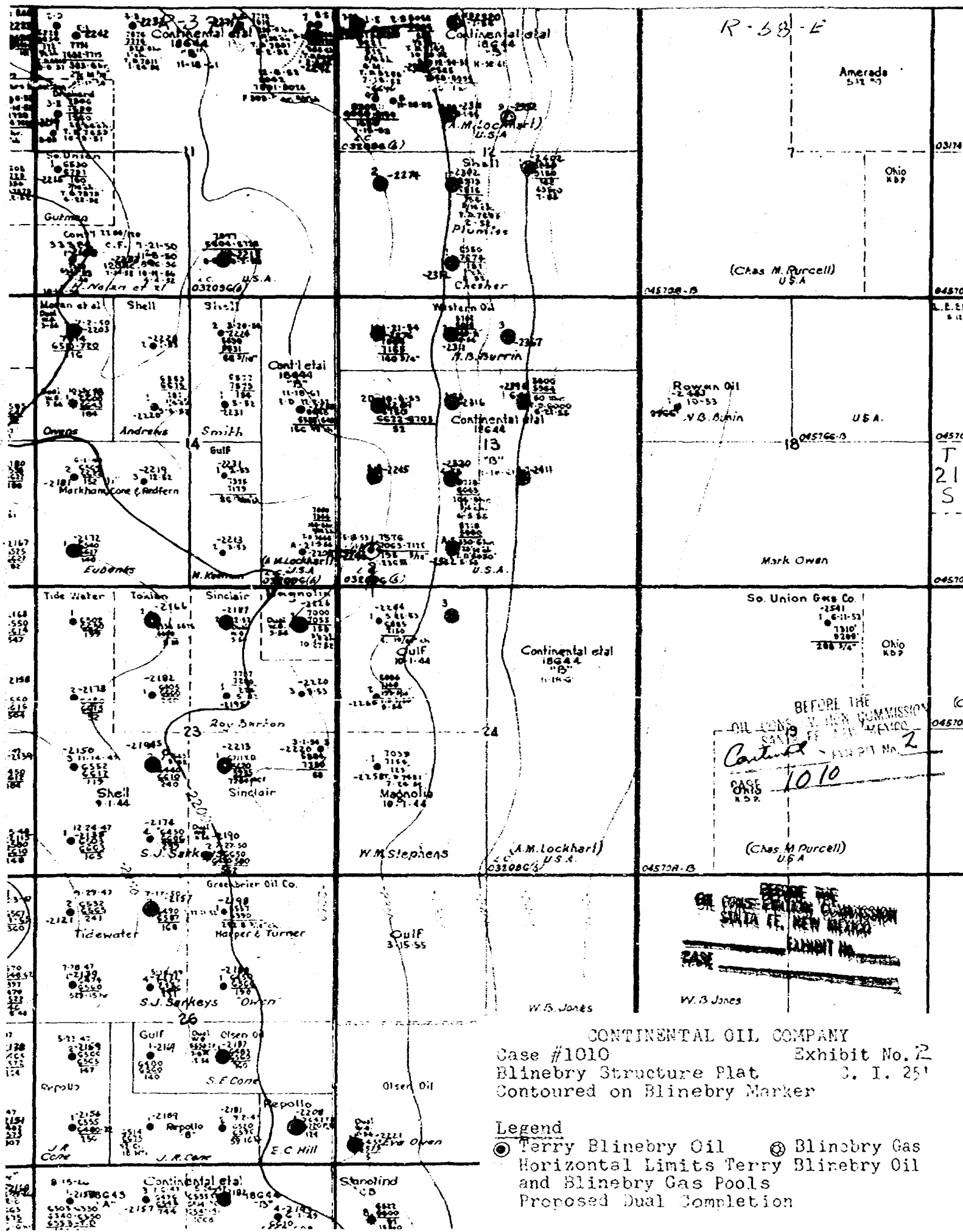
Case No.

1010

Application, Transcript,  
Small Exhibits, Etc.

CASE 1010: Continental application for dual  
completion in Tubb Gas Pool & Terry-Blinbry  
Oil Pool (Lockhart B-13 "A" Well No. 1-A)





THE STATE OF NEW MEXICO BY ITS OIL CONSERVATION COMMISSION HEREBY GIVES NOTICE PURSUANT TO LAW AND THE RULES AND REGULATIONS OF SAID COMMISSION PROMULGATED THERE- UNDER OF THE FOLLOWING PUBLIC HEARINGS TO BE HELD AT 10:00 O'CLOCK A.M. ON FEBRUARY 8, 1956, AT THE AUDITORIUM LOCATED IN THE OFFICES OF THE NEW MEXICO OIL CONSERVATION COMMISSION, HOBBS, NEW MEXICO, BEFORE WARREN W. MANKIN, EXAMINER, DULY APPOINTED FOR SAID HEARING AS PROVIDED BY LAW.

CASE NO. 1010

IN THE MATTER OF THE APPLICATION OF CONTINENTAL OIL COMPANY FOR PERMISSION TO EFFECT A DUAL COMPLETION OF THE TUBB GAS AND BLINEBRY OIL ZONES FOUND IN ITS LOCKHART B-13 A NO. 1-A WELL LOCATED IN SECTION 13, T-21-S, R-37-E, N.M.P.M. LEA COUNTY, NEW MEXICO.

Comes now Continental Oil Company, hereinafter called applicant, and would respectfully show the following:

1. Applicant is co-owner and is the operator of a lease designated the Lockhart B-13 "A" Lease consisting of S/2 and S/2 N/2 Section 13, T-21-S, R-37-E, N.M.P.M. Lea County, New Mexico.
2. Applicant drilled and completed on May 15, 1953 its No. 1-A well as an oil well in the Wantz Abo pool producing between the depths of 7063-7125 feet.
3. 13 3/8" surface casing was set at 238 feet and cemented with 250 sacks. 9 5/8" intermediate casing was set at 3150 feet and cemented with 1576 sacks. 7" production casing was set at 7576 feet and cemented with 730 sacks.
4. Applicant proposes to plug back the well and recomplete in the Tubb gas pool from various intervals between 6050'-6355', and the Blinebry oil pool from various intervals between 5723'-5945'. Each of the two producing zones will be produced separately through paralld strings of 2" tubing. The zones will be adequately separated by means of a production packer set between the two producing zones.
5. The proposed completion as outlined above is practical and economically feasible, and will not result in the commingling of fluids between the oil and gas reservoirs.
6. A plat is attached showing the location of the wells on this lease and the ownership and location of wells on offsetting leases.

WHEREFORE, applicant respectfully requests that this matter be set for hearing by the Commission examiner at Hobbs, New Mexico on due notice and that upon hearing the Oil Conservation Commission enter its order authorizing applicant to dually complete said well in accordance with the foregoing application.

CONTINENTAL OIL COMPANY

By: H. L. Johnston

The above mentioned Plat is on file at the OCC in Santa Fe, New Mexico.

January 16, 1956

IN THE MATTER OF THE APPLICATION OF  
CONTINENTAL OIL COMPANY FOR PERMISSION  
TO EFFECT A DUAL COMPLETION OF THE TUBB  
GAS AND BLINEBRY OIL ZONES FOUND IN ITS  
LOCKHART B-13 A NO. 1-A WELL LOCATED IN  
SECTION 13, T-21-S, R-37-E, NMPM LEA  
COUNTY, NEW MEXICO

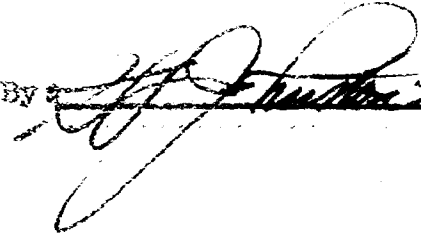
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called applicant, and would respectfully show the following:

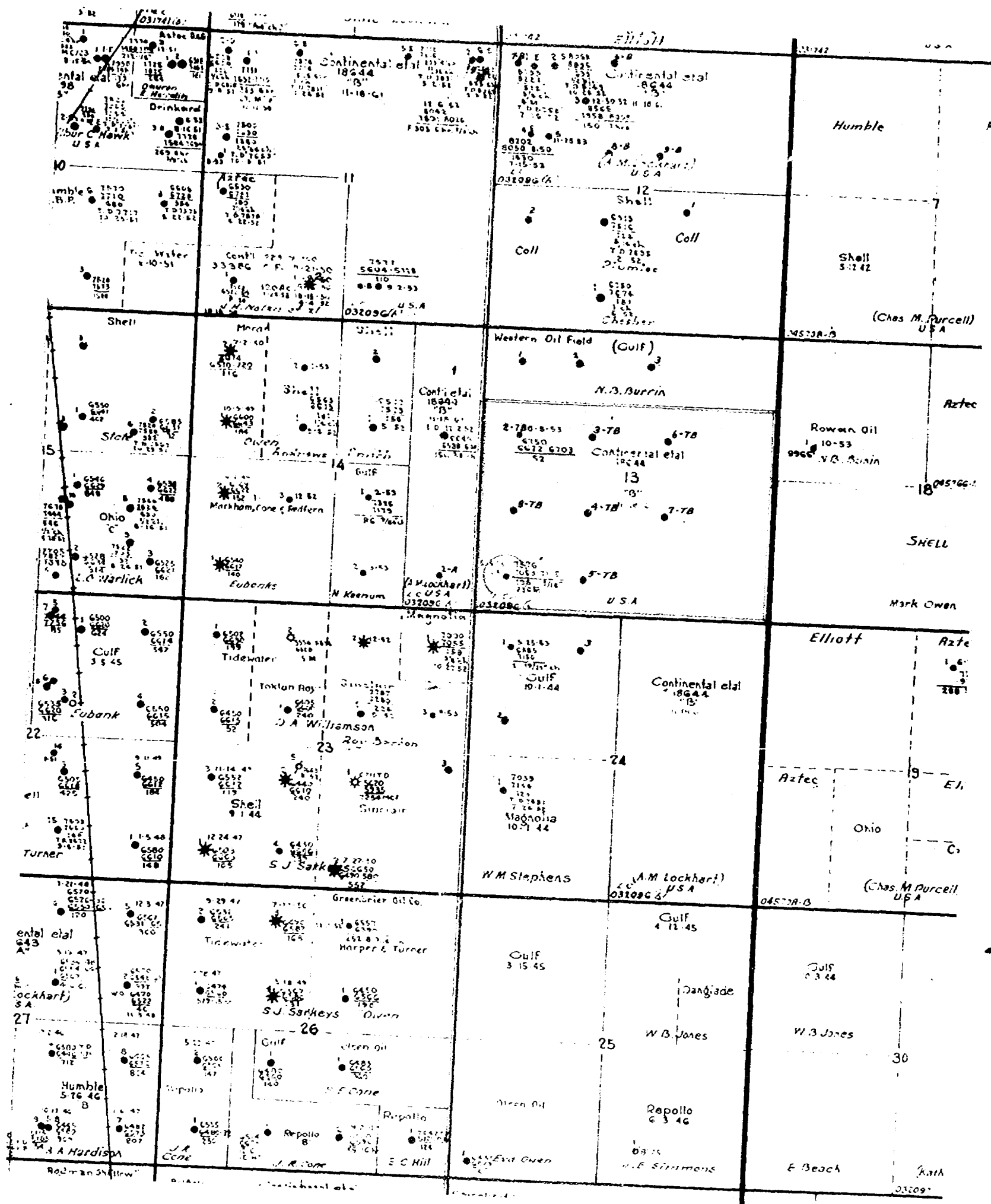
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and recomplete in the Tubb gas pool from  
various intervals between 6050'-6355' and  
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intervals between 5723'-5945'. Each of the  
two producing zones will be produced separ-  
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The zones will be adequately separated by  
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6. A plat is attached showing the location of the wells on this lease and the ownership and location of wells on offsetting leases.

WHEREFORE, applicant respectfully requests that this matter be set for hearing by the Commission examiner at Hobbs, New Mexico on due notice and that upon hearing the Oil Conservation Commission enter its order authorizing applicant to dually complete said well in accordance with the foregoing application.

CONTINENTAL OIL COMPANY

By: 





## CONTINENTAL OIL COMPANY

FAIR BUILDING  
FORT WORTH 2, TEXAS

H. L. JOHNSTON  
REGIONAL MANAGER OF PRODUCTION  
SOUTHWESTERN REGION

January 11, 1956

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

Attention of Mr. W. B. Macey,  
Secretary-Director

Re: Continental Oil Company  
application for permission  
to dually complete its Lockhart  
B-13 "A" Well No. 1-A in Sec.  
13, T-21-S, R-37-E.

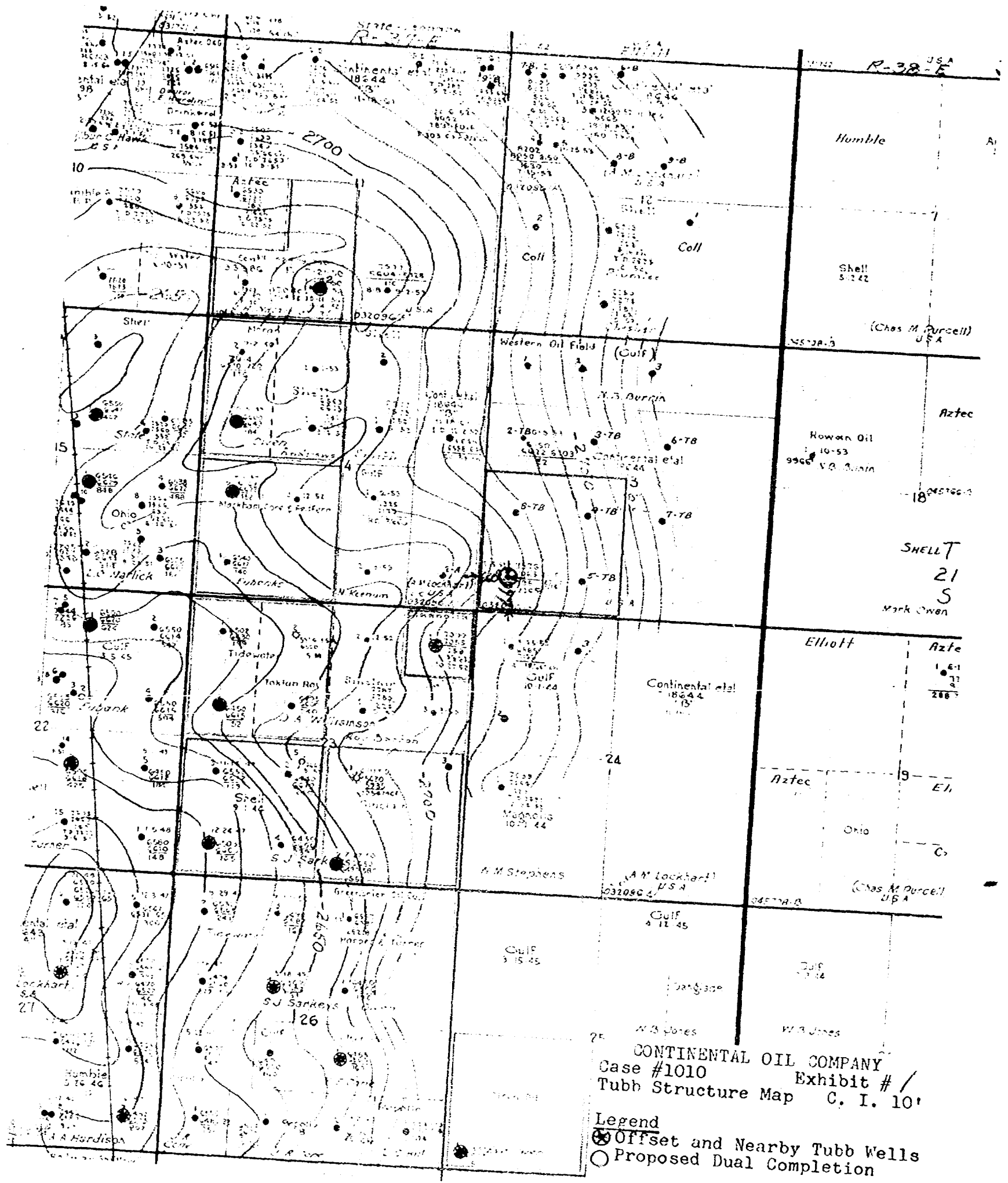
Gentlemen:

Please refer to our application and letter dated  
January 6, 1956 on the subject above. It has been brought to  
our attention that in several places wherein we refer to the  
Blinebry zone or pool, we should properly have referred to the  
"Terry-Blinebry" oil pool.

We should appreciate your amending the instruments  
mentioned above by this reference and issue hearing notice in  
accordance with this amendment.

Yours very truly,

HLJ-MC





# CONTINENTAL OIL COMPANY

FAIR BUILDING  
FORT WORTH 2, TEXAS

H. L. JOHNSTON  
REGIONAL MANAGER OF PRODUCTION  
SOUTHWESTERN REGION

January 6, 1956

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

Attention of Mr. W. B. Macey,  
Secretary-Director

Gentlemen:

We are forwarding herewith application in triplicate for permission to dually complete our Lockhart B-13 "A" well No. 1-A in the Tubb and Blinebry pools. This application, as we understand it, is not susceptible of administrative approval since the uppermost of the two zones is oil productive.

As indicated in the application we respectfully request an examiner hearing in Hobbs at the earliest convenient date.

Yours very truly,

HLJ-MC  
Enc

PIONEERING IN PETROLEUM PROGRESS SINCE 1875

*Examiner Hearing*

*on 1/8/56*

*10 AM*

*1/10/56*

*talked to Vic Hyman  
on 1/11/56 &  
he will submit  
amended application  
to ask for dual  
in Tubbs  
& Terry Blinbry  
oil pools*

*Not in Blinbry  
oil pool  
(Wm)*

IN THE MATTER OF THE APPLICATION OF  
CONTINENTAL OIL COMPANY FOR PERMISSION  
TO EFFECT A DUAL COMPLETION OF THE TUBB  
GAS AND BLINEBRY OIL ZONES FOUND IN ITS  
LOCKHART B-13 A NO. 1-A WELL LOCATED IN  
SECTION 13, T-21-S, R-37-E, NMPM LEA  
COUNTY, NEW MEXICO

Comes now Continental Oil Company, hereinafter  
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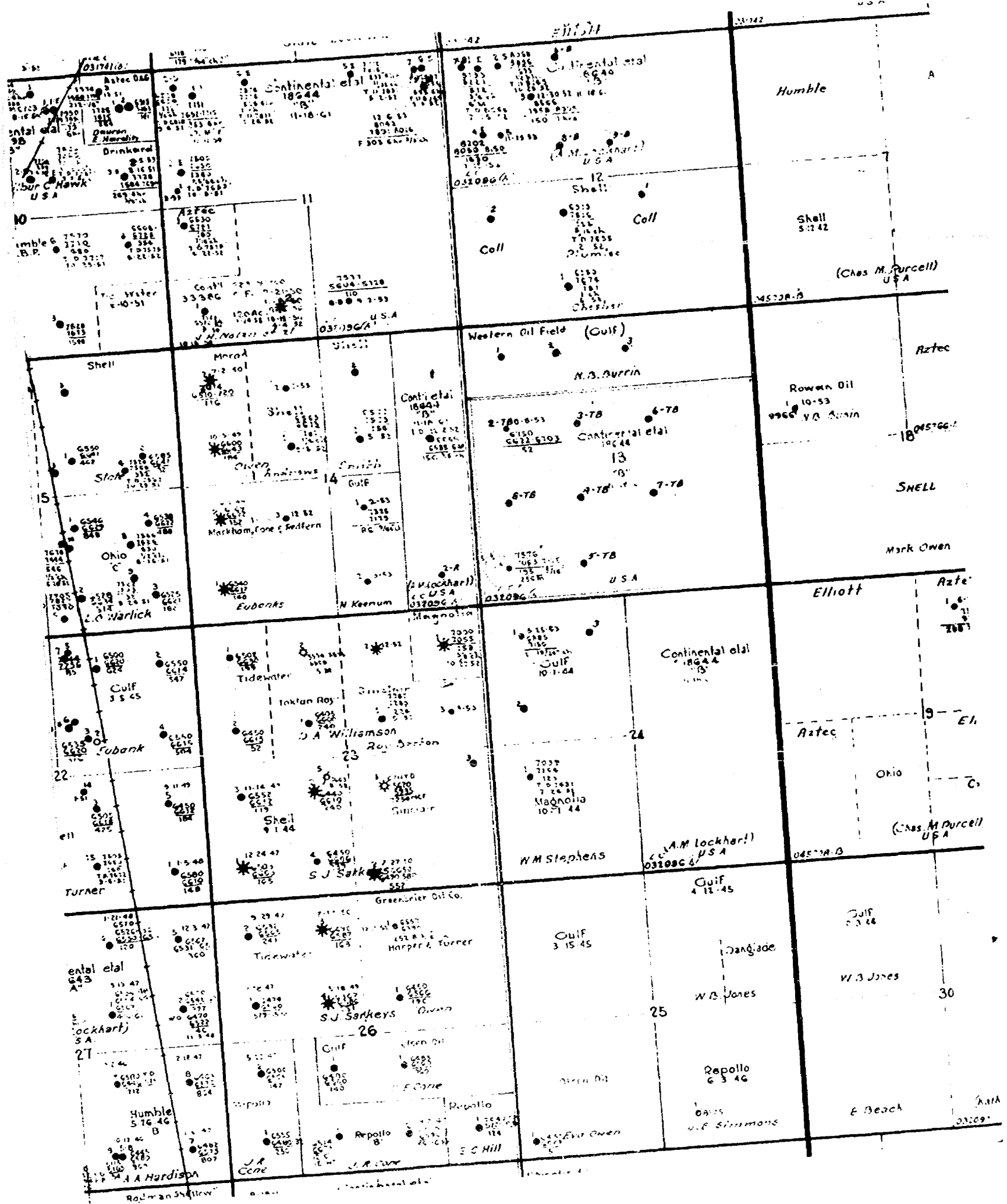
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The zones will be adequately separated by  
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two producing zones.
5. The proposed completion as outlined above is  
practical and economically feasible, and will  
not result in the commingling of fluids be-  
tween the oil and gas reservoirs.

6. A plat is attached showing the location of the wells on this lease and the ownership and location of wells on offsetting leases.

WHEREFORE, applicant respectfully requests that this matter be set for hearing by the Commission examiner at Hobbs, New Mexico on due notice and that upon hearing the Oil Conservation Commission enter its order authorizing applicant to dually complete said well in accordance with the foregoing application.

CONTINENTAL OIL COMPANY

By: 



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

April 11, 1956

Mr. Jason Kellahin  
P.O. Box 597  
Santa Fe, New Mexico

Dear Sir:

In behalf of your client, Continental Oil Company, we enclose two copies of Order R-777 issued March 29, 1956, by the Oil Conservation in Case 1010, which was heard February 8, 1956 at Hobbs, New Mexico.

Very truly yours,

A. L. Porter, Jr.  
Acting Secretary - Director

ALP:brp  
Encls.

C  
O  
P  
Y

**Memo**

4/16/56

Re: Case #1010 <sup>From</sup> *Wum*

To  
*JWB*

OK to go ahead and  
write approval  
order for dual  
with the usual  
dual specifications.

*W*

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF THE STATE OF NEW  
MEXICO FOR THE PURPOSE OF  
CONSIDERING:

CASE NO. 1010  
Order No. R-777

THE APPLICATION OF CONTINENTAL OIL  
COMPANY FOR AN ORDER GRANTING  
PERMISSION TO DUALY COMPLETE ITS  
LOCKHART B-13 "A" WELL NO. 1-A IN  
THE TUBB GAS POOL AND THE TERRY-  
BLINEBRY OIL POOL, SAID WELL BEING  
LOCATED IN THE SW/4 SW/4 SECTION 13,  
TOWNSHIP 21 SOUTH, RANGE 37 EAST,  
NMPM, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on  
February 8, 1956, at Hobbs, New Mexico, before Warren W. Mankin,  
Examiner duly appointed by the Oil Conservation Commission of New  
Mexico, in accordance with Rule 1214 of Order No. R-581.

NOW, on this 29<sup>th</sup> day of March 1956, the Oil Con-  
servation Commission of New Mexico, hereinafter referred to as  
the "Commission", a quorum being present, having considered said  
application, the evidence adduced, and the recommendations of the  
Examiner, Warren W. Mankin and being fully advised in the premises,

FINDS:

(1) That due notice of the time and place of hearing  
and the purpose thereof having been given as required by law,  
the Commission has jurisdiction of this case and the subject matter  
thereof.

(2) That applicant, Continental Oil Company, is the  
owner and operator of an oil and gas lease in Lea County, New  
Mexico, which consists in part of the following described acreage,  
to-wit:

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM  
S/2, S/2 N/2 Section 13

containing 480 acres more or less, lying within the horizontal  
limits of the Tubb Gas Pool and the Terry Blinebry Oil Pool.

(3) That applicant's Lockhart B-13 "A" Well No. 1-A  
located in the SW/4 SW/4 of Section 13, Township 21 South, Range  
37 East, is now producing from the Wentz Abo Pool.

(4) That applicant proposes to plug back and produce  
from the Tubb Gas Pool and Terry Blinebry Oil Pool through parallel  
strings of tubing.

(5) That the mechanics of the proposed dual completion as outlined by applicant are feasible and in good practice.

IT IS THEREFORE ORDERED:

(1) That the applicant herein, Continental Oil Company be and it is hereby authorized to dually complete and produce its Lockhart "B"-13 "A" Well No. 1-A, located in the SW/4 SW/4 of Section 13, Township 21 South, Range 37 East, NMPN, Lea County, New Mexico, in such a manner that the gas from the Tubb formation of the Tubb Gas Pool shall, by proper perforations of the casing be produced through the tubing from below the packer and the oil from the Blinbry formation of the Terry Blinbry Oil Pool may be produced through a second string of tubing from perforations above the packer, by proper perforations of the casing and the installation of a suitable down-hole packer and suitable surface wellhead equipment for separating and maintaining the separation of the oil from the Terry-Blinbry zone and the gas from the Tubb zone.

PROVIDED HOWEVER, That upon the actual dual completion of said subject well, applicant shall submit to the district office of the Commission in which the subject well is located, Form C-103, Form C-104, Form C-110 and Form C-122, outlining the information required on these forms by existing Rules and Regulations.

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, and

PROVIDED FURTHER, That said subject well for dual completion and production shall be equipped in such a way that reservoir pressures may be determined separately for each of the two specified strata and further be equipped with all necessary connections required to permit recording meters to be installed and used at any time as may be required by the Commission or its representatives in order that natural gas, or oil and gas from each separate stratum may be accurately measured and the gas-oil ratio thereof determined and

PROVIDED FURTHER, That the operator-applicant, shall make any and all tests, including segregation tests, and packer leakage tests but not excluding other tests and/or determinations at any convenient time and in such manner as deemed necessary by the Commission; the original and all subsequent tests shall be witnessed by representatives of offset operators if any there be at their election, and the results of each test properly attested to by the applicant herein, and all witnesses and shall be filed with the Commission within ten (10) days after the completion of such tests and,

PROVIDED FURTHER, That upon the actual dual completion of such subject well, applicant shall submit to the Commission, a diagrammatic sketch of the mechanical installation which was actually used to complete and produce the seal between the strata and a special report of production gas/oil ratio and reservoir pressure determination of each producing zone or stratum immediately following completion.

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

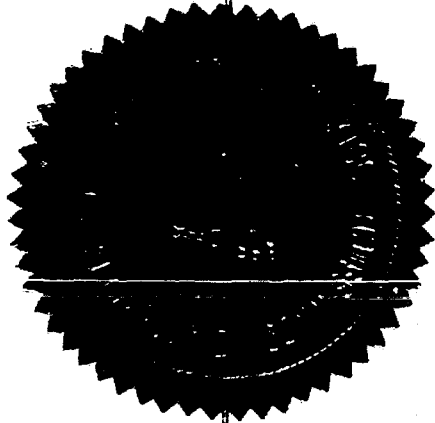
DONE at Santa Fe, New Mexico on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

  
JOHN F. SIMMS, Chairman

  
E. S. WALKER, Member

  
W. B. MACEY, Member and Secretary



ir/

BEFORE THE  
OIL CONSERVATION COMMISSION  
Hobbs, New Mexico

IN THE MATTER OF:

CASE NO. 1010

TRANSCRIPT OF PROCEEDINGS

BEFORE THE  
CONSERVATION COMMISSION  
February 8, 1956  
Hobbs, New Mexico

Application of Continental Oil Company  
for an order approving a dual completion  
in the Tubb Gas Pool and the Terry-  
Blinebry Oil Pool in compliance with Rule  
112-A of the Commission's Rules and  
Regulations.

Applicant, in the above-styled cause, seeks an order granting them permission to dually complete their Lockhart B-13 "A" Well No. 1-A in the Tubb Gas Pool and the Terry-Blinebry Oil Pool; said well being located in the SW/4 SW/4 Section 13, Township 21 South, Range 37 East, Lea County, New Mexico; said Tubb Gas Pool zone and Terry-Blinebry Oil Pool zone to be produced through parallel strings of tubing.

Case No. 1010

BEFORE:

Warren W. Mankin, Examiner

## TRANSCRIPT OF HEARING

EXAMINER MANKIN: The hearing will come to order. The next and last case is Case 1010, the application of Continental for dual completion in the Tubb Gas Pool and the Terry-Blinebry Oil Pool.

MR. KELLAHIN: If the Commission please, Jason Kellahin of Santa Fe, New Mexico, appearing on behalf of the applicant. We will have one witness, Mr. Richard C. Lannen.

RICHARD C. LANNEN

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

DIRECT EXAMINATION

By: MR. KELLAHIN:

Q. Would you state your name please.

A. Richard C. Lannen.

Q. Where do you live Mr. Lannen?

A. Eunice, New Mexico.

Q. By whom are you employed?

A. Continental Oil Company.

Q. And what is your position with Continental?

A. District Engineer.

Q. Mr. Lannen have you testified before the Oil Conservation Commission of New Mexico as an expert witness?

A. Yes.

Q. And have your qualifications been accepted by the Commission?

A. Yes.

Q. Are the witness' qualifications acceptable?

MR. MANKIN: They are.

Q. Mr. Lannen are you familiar with the application filed by Continental Oil Company in Case No. 1010?

A. Yes, sir.

Q. Have you a plat showing the location of the well and lease involved in this application?

A. Yes, sir.

Q. Referring to what has been marked as Continental Oil Company's Exhibit 1, would you state what that shows?

A. Exhibit No. 1 is a Tubb structure plat showing the Lockhart B-13 "A", the location of the well and the location of the subject well.

Q. And how are they shown?

A. Encircled in red. And the offset leases and ownerships and Tubb wells and gas proration unit assigned outlined in green.

Q. Now referring to the exhibit, what are the offset leases-----what is the ownership of the offset leases?

A. Well, the offset lease ownership would be the Gulf Oil Corporation, and Magnolia Oil Corporation and the remaining acreage is owned by Continental.

Q. Now the contours appear on this map, would you state what those are?

A. That is a contour interval of 10 foot on a Tubb marker.

Q. Now, does the exhibit show the location of any Tubb gas wells?

A. Yes, sir it does.

Q. How are they shown?

A. They are encircled in green.

Q. Now is the 160 acres outlined in red the proposed unit for a Tubb gas well as submitted in the application?

A. Yes, sir.

Q. Is that 160 acres located within the horizontal limits of the Tubb Gas Pool?

A. At the present time it is outside the horizontal limits---within a quarter of a mile.

Q. Within a quarter of a mile---referring to the exhibit is the Magnolia well shown in the NE/4 NE/4 of Section 23 within the Tubb Pool?

A. Yes, sir.

Q. Now is the acreage proposed to be dedicated to this well located within the vertical limits of the Tubb formation as shown by your contours?

A. Yes.

Q. Is the Tubb formation productive of gas at this location?

A. It is reasonably presumed to be gas productive, yes.

Q. On what do you base that statement, Mr. Lannen?

A. Well, the Magnolia Williamson located to the southwest and it is--- the structural difference between it and the proposed well is only 10 feet, and it is productive of Tubb gas. The Eva Owen or rather the Olsen Oil Company Eva Owen No. 1, located a mile and half south and structurally comes close to the lease is also a Tubb gas well. Based on these two wells the Lockhart B-13 "A" lease can reasonably be presumed to be gas productive.

Q. May the 160 acres proposed to be dedicated to this well as a Tubb gas well reasonably be presumed to be productive?

A. Yes, sir.

Q. Now referring to what has been marked as Continental's Exhibit No. 2, Mr. Lannen, would you state what that is?

A. That is a structure plat contoured on the Blinebry marker showing the Terry-Blinebry oil wells and Blinebry gas wells and the horizontal limits of the Terry- Blinebry Oil and the Blinebry Gas Pools and the proposed well.

Q. And how is the proposed well shown, sir?

A. Encircled in red.

Q. Does the exhibit show the outlines of the Blinebry Gas Pool?

A. Yes, it does.

Q. Does it show the outlines of the Terry-Blinebry Oil Pool as defined by the Commission?

A. Yes, sir.

Q. Is the acreage proposed to be dedicated to this well located within the horizontal limits of the Terry-Blinebry Oil Pool?

A. Yes, sir.

Q. Now the contour interval---the contours shown on here, what do they indicate?

A. Well, they indicate the structure of the Blinebry in this vicinity and the contour interval is 25 feet and they would indicate that the proposed well would be productive of oil in the Terry-Blinebry.

Q. On what do you base that statement?

A. Well, the offset wells of the proposed well, the Lockhart B-13 "A" No. 8 TB, located to the north and No. 5 TB located to the northeast---the No. 4 TB is to the northeast and the No. 5 is to the east and the Nancy Stevens-- Gulf's Nancy Stevens No. 3 is to the southeast are all productive of oil in the Terry-Blinebry.

Q. Do those plats indicate to you that a well located as your proposed dual completion in this case would be productive of oil in the Terry-Blinebry?

A. Yes.

Q. May the 40 acres which would be proposed to be dedicated to this well as a Terry-Blinebry oil well reasonably be presumed to be productive of gas---of oil?

A. Of oil, yes.

Q. And will the well be completed in the event this application is approved as an oil well?

A. In the Terry-Blinebry, yes.

Q. Referring to what has been marked as Continental's Exhibit No. 3, would you state what that is?

A. That is an electric log of the proposed well, the Lockhart B-13 "A" No. 1.

Q. Is that a producing well Mr. Lannen?

A. Yes, sir it is a producing well, producing from the Wantz Abo Pool, at the present time it is pumping four barrels of oil per day.

Q. Now what is proposed to be done with the abo production in the event this application is approved?

A. It will be squeezed off and the well will be plugged back.

Q. And what did you say the production was at the present time?

A. Pumping four barrels of oil per day.

Q. Now, does Exhibit No. 3 give any information as to the formation involved in this application?

A. Yes sir, it has Blinebry marker, the Tubb marker, top of the Abo, Drinkard and top of the Glorieta, all indicated in red.

Q. And at what depths are those shown?

A. The Glorieta top at 5235, the Blinebry marker at 5680, the Tubb marker at 6134, the top of the Drinkard 6485, the top of the Abo 6810 and the present plug back depth is 7140.

Q. Are those measurements given from the surface?

A. Yes sir.

Q. Referring to the part that has been marked as exhibit---Continental's Exhibit No. 4, Mr. Lannen, what does that show?

A. Exhibit No. 4 is a diagram---simplified diagram of the present condition of the well and the proposed dual completion.

Q. And what does that exhibit show as to the present condition?

A. It shows the casing points, the present perforations, and the proposed plug back depths and the dual completion. The present condition of the well as shown on the diagram. The well has 2 inch tubing in it and 7 inch production casing set at 7576. The pumping equipment is on the well at the present time.

Q. Where is the surface string, Mr. Lannen?

A. The surface is 13 3/8 set at 238 feet.

Q. Is there an intermediate string?

A. And the intermediate is 9 5/8 set at 3150.

Q. Now, how is it proposed to plug back that well?

A. As indicated on the diagram, it is proposed to plug back to 7,020 by squeezing off the abo perforations---the present producing interval by cementing.

Q. And what does the exhibit show in regard to the proposed dual completion?

A. The proposed dual completion will consist of a parallel tubing string, one producing---or rather the Terry-Blinbry Oil Zone producing from----- through one string and the Tubb Gas Zone producing through another string, and

the zones separated by production packer.

Q. Now referring to the exhibit you have a point marked there as Blinebry oil zone, is that correct?

A. That is the Terry-Blinebry oil zone.

Q. And to that extent do you wish to have the exhibit corrected?

A. Yes sir.

MR. MANKIN: It will be so corrected.

Q. Referring to the exhibit again, Mr. Lannen, how will that well be completed?

A. Well it will be completed with parallel tubing strings.

Q. What is proposed to be done in mechanical operations and completions.

A. The well will be plugged back out of the Abo formation and recompleted in the Tubb gas zone first and then dually completed in the Terry-Blinebry oil zone.

Q. Where will the perforations be in the Tubb gas zone?

A. The proposed perforations in the Tubb gas zone are from 6050 to 6355 in that interval.

Q. And where will the perforations be in the Terry-Blinebry oil zone?

A. They will be from 5723 to 5945.

Q. And how are----how will the two zones be separated?

A. They will be separated with a Baker Model "D" production packer.

Q. Is that type of packer effective in the prevention of communication between these two zones?

A. Yes sir.

Q. In your opinion will it prevent communication between the two zones?

A. Yes sir.

Q. Is there a pressure differential between the Tubb gas zone and the Blinebry oil-----Terry-Blinebry oil zone?

A. Yes sir.

Q. Is it an appreciable difference or could you say what it is?

A. It will vary from between 50 and 150 pounds.

Q. Is that in the oil business generally considered excessive pressure for completions of this nature?

A. No sir.

Q. Now referring to what has been marked as Continental's Exhibit No. 5, Mr. Lannen, would you state what that is?

A. Exhibit No. 5 is an equipment diagram of the dual completion equipment to be used in the hole and the wellhead equipment to be used.

Q. And would you, for the benefit of the Commission, please give us an explanation of that equipment?

A. This equipment consists of Baker down hole equipment and OCT wellhead equipment. The dual completion will consist or will be made by parallel----using a parallel tubing string with one Baker Model "D" production packer segregating the oil zone from the gas zone. This picture or rather this diagram is a complete explanation of the equipment to be used in the dual completion.

Q. Would you explain----you have already stated briefly how the well would be recompleted----would you explain with reference to this exhibit as to what operations will be carried on?

A. Yes sir. The method to be used is somewhat similar to previous dual completions that have been made with the oil zone below and the gas zone above. In this situation the gas zone will be below and the oil zone will be above. The well will first be plugged back out of the Abo formation and the Tubb

zone will be perforated, treated and tested and a gas completion made. If the productivity of the gas zone is sufficient to continue the dual completion then a Baker Model "D" production packer will be set by a wire line and tubing will be run in the hole with the pictured equipment, the Baker Model C-1 tubing seal receptacle unit, the Baker Model E anchor tubing seal assembly and the Garrett circulating valve. The circulating valve will be open when the tubing is run in the hole. The casing will be pressured up to test the packer seat and the tubing sealed. The Garrett sleeve will be closed and the tubing will be pressured up to test the sleeve and the tubing seal in the tubing. At this point if all equipment tests are satisfactory and there is no communication the tubing will be unlatched at the tubing seal receptacle unit and removed from the hole. The completion of the Blinebry or Terry-Blinebry oil zone will be made at this point the oil zone will be perforated, treated, tested and when sufficiently productive a long string of tubing will be run into the hole with the tubing seal nipple on the bottom and the tubing will be connected to the tubing seal receptacle, latched in and the second string of tubing---well in this long string of tubing will be a Baker parallel string anchor with a latching-sub. The second string of tubing will be run with a perforated nipple and a seating nipple latched in this parallel string anchor latching-sub. The wellhead will be assembled and the producing zones swabed in and put on production.

Q. Is it proposed to make any further tests after the completion in the two zones to determine if there is communication?

A. Yes sir. After the completion is made and the tubing is assembled all on the well, the completion is finished. A test for communication will be made at the surface with a two pen recorder flowing one string of tubing or flowing

one zone and observing the pressure from the other zone and then reversing the procedure.

Q. Now referring to what has been marked as Exhibit No. 6, Mr. Lannen, what does that show?

A. Exhibit No. 6 is a cut-away of the parallel tubing string, dual completion and christmas tree assembly. It shows the or rather it is a blow-up of the head shows the method of preventing communication or method of segregation at the surface in the head and on this cut-away a back pressure----Otis back pressure valve is indicated installed which will be used in the event of remedial work after completion.

Q. Are there separate valves for the two strings of tubing?

A. Yes. One valve for each string of tubing.

Q. In connection with exhibit No. 6, Mr. Lannen, does it show how the tubing strings will be connected in the head---what I mean by that is are they kept entirely separate always?

A. Yes sir. The tubing string is individually---is separated---is completely separated or isolated, each tubing string is isolated all the way through the head with an individual valve with seals at each landing joint; the seals are double taper metal seals which have been tested under conditions of 30,000 pounds per square inch and are used elsewhere in high pressure gas completions.

Q. Now, with this type of a completion will it be possible to do any remedial work in either or both of the productive zones?

A. Yes sir.

Q. Will you explain how that can be done?

A. If it is necessary to work on the lower zone, treating can be performed through the tubing, acidizing or sandfracing, but perforating cannot be done.

Additional perforations cannot be made. It is anticipated at the time of completion that all possible pay zones will be perforated and treated. If any additional treatment is necessary other than treating---or rather than sandfracing or acidizing it will be necessary to kill both zones to ----and drill out this Baker packer to get to the lower zone. But the upper zone--remedial work can be performed on it easily down the tubing either by acidizing or fracing and if it is necessary to pull the tubing the lower zone will be completely isolated and it will not be necessary to tamper with it. This will be accomplished by either one of two methods. In Exhibit 5 it is shown that a Garrett circulating valve installed in the long string-- at the same time there will be installed in the head a hanger for a Otis back pressure valve. If the Garrett circulating valve at any later stage of the producing well's life will not operate, the Otis back pressure valve can be used to effectively shut off the lower zone while removing the tubing--the second string of tubing and working on the upper zone.

Q. Do I understand your testimony then to be that all remedial work which may be foreseeably necessary in the Tubb-Blinbry could be done with the exception of the perforations?

A. Yes.

Q. That is in the lower zone?

A. Yes.

Q. And all remedial work which may possibly become necessary including perforations could be done in the upper zone or the Terry-Blinbry oil zone?

A. Yes sir.

Q. And without interfering with the completion of the well in the lower zone?

A. Yes sir. The lower zone will be completely isolated at all times. Even after completion if remedial work is possible in the upper zone.

Q. Mr. Lannen, do you foresee the possibility of any need for remedial work in the lower zone which could not be done through the tubing?

A. No, sir.

Q. In your opinion will a completion such as this effectively separate the two zones and prevent any communication?

A. Yes sir.

Q. Is this an accepted method of dual completion in the industry?

A. Yes sir.

Q. Do you know whether it has been used in other areas than this?

A. It has been used in West Texas considerably. And it has been used in one case in New Mexico.

Q. In New Mexico?

A. Yes sir, a gas-gas dual.

Q. And has Continental had any experience with this type of dual completion?

A. Yes sir, they have.

Q. Has that been during recent years?

A. Yes sir, it has.

Q. Now, while the records show the location and designation of this well Mr. Lannen, would you state for the benefit of your testimony just where this well is located and the designation of it?

A. This is the Continental Oil Company Lockhart B-13 "A" No. 1. It is located 660 feet from the South line and 660 feet from the West line of Section 13, Township 21 South, Range 37 East, NMPM, Lea County.

Q. And what acreage does Continental have dedicated to that well as a Tubb gas well?

A. It is proposed to conform to standard rules and regulations and assign 160 acres to the well.

Q. And Continental has that 160 acres?

A. Yes sir.

Q. And what acreage would you propose to be assigned to it as a Terry-Blinebry oil well?

A. A 40-acre allocation would be made and it will be the SW/4 of the SW/4 of Section 13, Township 21 South, Range 37 East.

Q. And does Continental have that acreage available to dedicate to the well?

A. Yes sir.

Q. And all of the testimony you have given pertains to the well located on the lease which you have described?

A. Yes.

Q. That is all.

MR. MANKIN: Mr. Lannen, do you anticipate this well will make any liquids in the Tubb Gas zone?

A. Yes.

Q. It has been the practice or it has been found in the area of wells adjoining this that Tubb wells do make some liquids.

A. Yes.

MR. MANKIN: Do you feel that it would be a sizable amount or a very small amount?

A. It will not be a sizable amount. Possibly from 100 to 200 barrels of distillate.

MR. MANKIN: In other words, the number of barrels per million--it would be very small?

A. Yes sir.

MR. MANKIN: You indicated pressure differential between the Blinebry oil zone and the Tubb gas zone would be, I believe, in the neighborhood of 100 to 150 pounds, was that it?

A. 50 to 150.

MR. MANKIN: In what range would that be? In other words, how many pounds for one zone and how many pounds for the other?

A. In the Terry-Blinebry oil zone there would be approximately 1800 pounds and in the Tubb about 1900 to 2000 pounds.

MR. MANKIN: The Tubb is anywhere from 50 to 150 pounds higher differential being the lower zone. In regard to the Wantz-Abo field which is being plugged back --is this on the edge of the Wantz-Abo Field and of questionable commercial value at the present time?

A. It has reached its economic limit after a production of 12,116 barrels of oil.

MR. MANKIN: Then there will be no Wantz-Abo production on this particular 160 acres which is the SW/4 of that particular section?

A. No. The Wantz will be finished---the Abo.

MR. MANKIN: Is there further question of this witness? If there are no further questions, the witness may be excused. Is there any statements to be made in this case? If not we will take the case under advisement and the hearing is adjourned.

STATE OF NEW MEXICO )  
COUNTY OF SANTA FE ) ss.

I, Joan Hadley, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Hobbs, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

Dated this 1st. day of March, 1956.

Joan Hadley