

Case No.

1468

Application, Transcript,  
Small Exhibits, Etc.

CASE 14849 Continental Oil Co. application  
for establishment of new Blinberry gas pool  
A promulgation of special rules and reg.

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. 1468  
Order No. R-1235

APPLICATION OF CONTINENTAL OIL  
COMPANY FOR THE ESTABLISHMENT  
OF THE WARREN-BLINEBRY GAS POOL  
IN LEA COUNTY, NEW MEXICO, AND  
FOR THE PROMULGATION OF SPECIAL  
RULES AND REGULATIONS FOR SAID  
POOL.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on June 11, 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 6<sup>th</sup> day of August, 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 "BT" No. 8 Well, located 1980 feet from the South line and 1980 feet from the East line of Section 28, Township 20 South, Range 38 East, NMPM, Lea County, New Mexico, which well discovered a new gas pool in the Blinebry formation when it was completed in said formation January 22, 1957. The top of the perforations in the Blinebry formation is at 5755 feet.

(3) That the applicant now requests that the Commission designate the above-described pool as the "Warren-Blinebry Gas Pool" with horizontal limits comprising the E/2 of said Section 28, and the vertical limits extending from a point 75 feet above the "Blinebry Marker" downward to the "Tubb Marker."

(4) That the "Blinebry Marker" shall be that point encountered in the Humble Oil and Refining Company State 'S' Well No. 20, SW/4 NW/4 Section 2, Township 22 South, Range 37 East, NMPM, at a depth of 5457 feet (Elevation 3380, Subsea Datum Minus 2077).

(5) That the "Tubb Marker" shall be that point encountered in the said Humble Oil and Refining Company State 'S' Well No. 20 at a depth of 5921 feet (Elevation 3380, Subsea Datum Minus 2541).

(6) That the applicant further proposes that Special Rules and Regulations be adopted for the Warren-Blinebry Gas Pool.

(7) That the Warren-Blinebry Gas Pool should be created as requested by the applicant; provided however, the horizontal limits should be restricted to the SE/4 of said Section 28 inasmuch as the NE/4 of said section has not yet been proven to be productive of gas from the same common source of supply.

(8) That no evidence was presented to justify a change in the size of the standard gas proration unit in the Warren-Blinebry Gas Pool from the 160-acre unit prescribed by the statewide Rules and Regulations.

(9) That Special Rules and Regulations should be promulgated for the Warren-Blinebry Gas Pool in order to prevent waste and protect correlative rights.

(10) That under present conditions, proration of gas is not necessary in the Warren-Blinebry Gas Pool.

(11) That gas purchasers from the Warren-Blinebry Gas Pool should be on a ratable basis with gas purchases from the Blinebry Gas Pool.

IT IS THEREFORE ORDERED:

(1) That a new gas pool for Blinebry production, be and the same is hereby created and designated as the Warren-Blinebry Gas Pool, with vertical and horizontal limits as shown on Exhibit "A" attached hereto and made a part hereof.

(2) That gas purchases from the Warren-Blinebry Gas Pool shall be on a ratable basis with gas purchases from the Blinebry Gas Pool.

(3) That special rules and regulations applicable to the Warren-Blinebry Gas Pool be and the same are hereby promulgated as follows:

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**SPECIAL RULES AND REGULATIONS  
FOR THE WARREN-BLINEBRY GAS POOL**

**Acreage Requirements for Drilling Tracts:**

**RULE 1.** Any well drilled to the Blinebry formation within one mile of the boundary of the Warren-Blinebry Gas Pool and not nearer to nor within the boundaries of another designated Blinebry pool, shall be spaced, drilled, and operated, in accordance with the regulations in effect in the Warren-Blinebry Gas Pool.

**RULE 2 (A)** Wells shall be drilled on a tract consisting of approximately 160 surface contiguous acres substantially in the form of a square which shall be a legal sub-division (quarter section) of the United States Public Land Surveys.

Non-standard drilling units may be formed after notice and hearing or under the provisions of paragraph (B) of this rule.

Any unit containing between 158 and 162 acres shall be considered to contain 160 acres for purposes of these rules.

**(B)** The Secretary-Director of the Commission shall have authority to grant an exception to Rule 2 (A) without notice and hearing where application has been filed in due form and where the following facts exist and the following provisions are complied with:

1. The proposed non-standard unit consists of less than 160 acres or where the unorthodox size or shape of the tract is due to a variation in legal subdivision of the U. S. Public Land Surveys.
2. The non-standard unit consists of contiguous quarter-quarter sections and/or lots.
3. The non-standard unit lies wholly within a single governmental section.
4. The entire non-standard unit may reasonably be presumed to be productive of gas from the Warren-Blinebry Gas Pool.
5. The applicant presents written consent in the form of waivers from:

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(a) All operators owning acreage in the quarter section in which any part of the non-standard unit is situated, which acreage is not included in said non-standard unit.

(b) All operators owning interests in acreage offsetting the non-standard unit.

6. In lieu of sub-paragraph 5 of this rule, the applicant may furnish proof of the fact that said operators were notified by registered mail of his intent to form such non-standard unit. The Secretary of the Commission may approve the application if, after a period of 30 days following the mailing of said notice, no operator has made objection to formation of such non-standard unit.

Well Location Requirements:

**RULE 3 (A)** Wells shall be located at least 660 feet from the outer boundaries of the drilling tract and no closer than 330 feet from any quarter-quarter section line or subdivision inner boundary.

(B) The Secretary-Director of the Commission shall have authority to grant exception to Rule 3 (A) without notice and hearing where the application has been filed in due form and where the following facts exist and the following provisions are complied with:

1. The necessity for the unorthodox location is based on topographical conditions or the recompletion of an existing well, and

2. (a) The ownership of all oil and gas leases within a radius of 660 feet of the proposed location is common with the ownership of the oil and gas leases under the proposed location, or

(b) All owners of oil and gas leases within such radius consent in writing to the proposed location.

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(c) In lieu of paragraph 2 (b) of this rule the applicant may furnish proof of the fact that said operators were notified by registered mail of his intent to drill an unorthodox location. The Secretary-Director of the Commission may approve the application if, after a period of twenty days following the mailing of said notice, no operator has made objection to the drilling of the unorthodox location.

**RULE 4.** When filing Form C-101, "Notice of Intention to Drill," or ~~USGS~~ Form 9-331-a (whichever is applicable), all operators shall strictly comply with the applicable provisions of Rule 104. Accompanying the above form shall be a plat (Form C-128) of the acreage contained in the unit showing the ownership of the dedicated acreage.

**RULE 5.** If the acreage assigned to a well is changed, the operator shall immediately notify the District Supervisor and Secretary-Director in writing of such change.

**RULE 6.** Each gas purchaser in the Warren-Blinbry Gas Pool shall take ratably from all gas wells in the pool, apportioning its takes during any given calendar year among said wells on the basis of the acreage dedicated thereto.

**RULE 7.** No natural gas nor casinghead gas produced from the Warren-Blinbry Gas Pool shall be flared or vented unless specifically authorized by the Commission after notice and hearing.

**RULE 8.** The monthly gas production from each well shall be metered separately and the gas production and associated liquid hydrocarbon production therefrom shall be reported to the Commission in accordance with the applicable Commission Rules and Regulations.

**RULE 9:** Shut-in pressure tests shall be conducted annually during the month of October on all wells in the Warren-Blinbry Gas Pool. Prior to taking such tests, the well shall be:

(a) produced a minimum of 24 hours at a rate of flow high enough to clear the well of liquids.

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(b) shut-in for not less than 60 hours  
nor more than 75 hours.

The results of such tests shall be reported to the Commission on Form C-124 on or before the 15th day of November. The Secretary-Director of the Commission may grant an exception to the above shut-in requirement if, in his opinion, such shut-in would cause injury to the well.

**RULE 10.** Gas produced from each well in the Warren-Blinbry Gas Pool shall be produced into a separate high-pressure separator. The high-pressure gas shall then be metered separately prior to entering a gas transportation facility.

**RULE 11.** The distillate separated from the high-pressure gas in the high-pressure separator shall then be directed into a low-pressure separator. The distillate may be commingled with other distillate produced by any other well or wells producing from the Warren-Blinbry or Warren-Tubb Gas Pool on the same basic lease following separation from the high-pressure gas in the high-pressure separator, provided gas-distillate test facilities are available and periodic tests are made.

Following the separation of distillate and low-pressure gas in the low-pressure separator, the low-pressure gas shall be directed into a low-pressure gas gathering system. Said low-pressure gas need not be measured separately from other low-pressure gas produced on the lease, provided that adequate test facilities are available and periodic tests made.

**RULE 12.** Each year during the month of October the operator of each gas well producing from the Warren-Blinbry Gas Pool shall cause to be taken an annual gas-distillate ratio test. The results of such test shall be submitted to the Commission office (P. O. Box 2045, Hobbs, New Mexico) on or before November 15. The test shall outline the amount of high-pressure gas produced during the 24-hour test period, the amount of distillate produced during the test period, the amount of low-pressure gas produced during the test period, the high-pressure gas-distillate ratio, and the low-pressure gas-distillate ratio. Failure to submit the required test by November 15 will subject the well to shut-in until the date the required information is submitted.

**RULE 13.** In submitting Form C-115 (Operator's Monthly Report) for wells producing from the Blinbry and Tubb zones in which distillate is commingled and/or the low-pressure gas is commingled



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on the lease, the operator shall measure or estimate the volumes produced by each well in each pool by using the ratios as reflected by the most recent tests.

**RULE 14.** The Secretary-Director of the Commission shall have authority to grant exception to the provisions set forth in Rule 10 through Rule 13 inclusive, where it can be shown that compliance with these rules is un-economic or impractical. Applications for exception shall be submitted in triplicate to the Oil Conservation Commission, P.O. Box 871, Santa Fe, New Mexico, with a copy of each application being furnished offset operators.

**RULE 15.** Low-pressure gas produced by any gas well in the Warren-Blinbry Gas Pool shall not be charged to said well in determining its ratable share of the pool production.

**RULE 16.** At no time will the horizontal boundaries of the Warren-Blinbry Gas Pool conflict with or overlap the horizontal boundaries of the Terry-Blinbry Oil Pool.

**RULE 17.** A gas well in the Warren-Blinbry Gas Pool shall mean a well producing from within the vertical and horizontal limits of the Warren-Blinbry Gas Pool which:

(a) Produces liquid hydrocarbons possessing a gravity of 51° API, or greater, or

(b) Produces liquid hydrocarbons possessing a gravity of less than 51° API, but with a producing gas-liquid hydrocarbon ratio of 32,000 cubic feet of gas or more per barrel of liquid hydrocarbon.

**RULE 18.** A well producing from within the horizontal and vertical limits of the Warren-Blinbry Gas Pool and not classified as a gas well as defined in Rule 12 shall be classified as an oil well in the Warren-Blinbry Gas Pool.

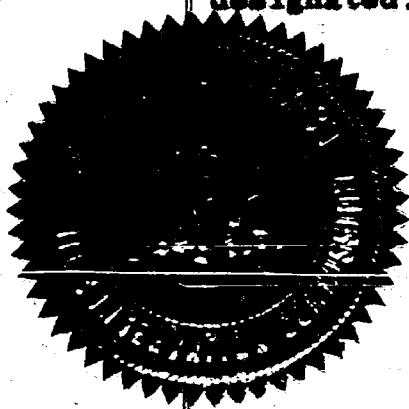
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

*S. J. L.*  
EDWIN L. MECHEM, Chairman

*Murray E. Morgan*  
MURRAY E. MORGAN, Member

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



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EXHIBIT "A"

Vertical and horizontal limits of the Warren-Blinebry Gas Pool.

VERTICAL LIMITS

From a point 75 feet above the Blinebry Marker downward  
to the Tubb Marker.

HORIZONTAL LIMITS

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM  
Section 28: SE/4

BEFORE THE  
OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE NO. 1468

TRANSCRIPT OF HEARING

JUNE 11, 1958

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

## I N D E X

DIRECT      CROSS

J. Nelson Edge

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E. V. Boynton

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BEFORE THE  
OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO  
JUNE 11, 1958

IN THE MATTER OF:

CASE NO. 1468 Application of Continental Oil Company:  
for the establishment of a new Bline-  
bry gas pool and for the promulgation  
of special rules and regulations. Ap-  
plicant, in the above-styled cause,  
seeks an order establishing a new pool  
for Blinebry gas production to be de-  
signated as the Warren-Blinebry Gas  
Pool with horizontal limits consisting  
of the E/2 of Section 28, Township 20  
South, Range 38 East, Lea County, New  
Mexico. The applicant further seeks  
the promulgation of special pool rules  
similar to those adopted for the  
Blinebry Gas Pool, as set forth in  
Order R-610, subject to modification  
of certain of said rules.

BEFORE:

Daniel S. Nutter, Examiner.

T R A N S C R I P T    O F    P R O C E E D I N G S

MR. NUTTER: The hearing will come to order, please. The  
first case on the docket this afternoon will be Case 1468.

MR. PAYNE: Application of Continental Oil Company for the  
establishment of a new Blinebry gas pool and for the promulgation  
of special rules and regulations.

MR. KELLAHIN: Jason Kellahin of Kellahin & Fox, Santa Fe,  
representing the applicant, Continental Oil Company. The same two

witnesses who testified in Case 1467 and were sworn for the purpose of this case also, will be the witnesses. I would like to call as the first witness, Mr. Edge.

J. NELSON EDGE,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Will you state your name, please?

A J. Nelson Edge.

Q Are you the same Mr. Edge who testified in Case 1467 and was sworn for purposes of this case?

A I am.

MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. NUTTER: Yes, sir, they are.

Q Mr. Edge, have you made a study of the area involved in the application in Case 1468?

A Yes, I have.

Q Have you studied the structure of the Blinebry pay zone in this area?

A I have.

Q Have you prepared a geological structure map in the process of this study?

A Yes, sir, we have. The structure map on the Blinebry, which will be marked as Exhibit 1, we would like to submit.

Q Now, referring to what has been marked as Exhibit No. 1, Mr. Edge, what does that show?

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A This structure, in the same area as the previous case, is similar, almost identical, in structure. The contour interval here is on the Blinebry marker as designated by the Commission, and the contour interval in this case is 25 feet also. Here you can see again, the closure on the Warren unit structure in question, and the amount of closure would be approximately the same as that of the Tubb, possibly a little less. We have a minimum closure between the low well and the highest well there of approximately 50 feet, again, and the significant fact again, is the existence of this separate structure. The wells -- Terry-Blinebry oil wells have been colored green, the proposed unit is outlined in red, and the gas -- the oil wells are green, and the gas wells are red -- colored red, and dry holes are yellow.

Q Is this a closed anticline structure?

A This is a close anticline structure as was the case before.

Q Comparing the structure between the area in this application and the Blinebry gas pool?

A This closure would compare to the larger structure to the south. The Blinebry gas pool in the Terry-Blinebry fringes around this. It is relatively small, but horizontal structure -- vertical structure, I am sorry, is approximately 150, 200 feet, 200 to 250 feet on the Blinebry Pool itself, whereas we have 60 to 80 feet of closure on the Warren unit structure.

Q Are you familiar with the lithology of the Blinebry pay zone involved in this case?

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A Yes. Here again, I have run samples on nearby wells through this zone and have correspondence.

Q Would you describe this study and tell its significance?

A The lithology of the Blinebry pay zone which is the upper member of the Yesc formation is primarily dolomite. The texture of the dolomite is generally fine crystalline, granular having a tan to light brown color. Associated with this dolomite are varying amounts of evaporites in the form of anhydrite inclusions. These inclusions are interstitial in nature and probably have direct relationship to the porosity and permeability of these oil bearing strata. The erratic nature of the porosity and the permeability here would be the significant factor in this case.

Q Now, have you prepared a cross-section study of the area involved?

A I have.

Q Is that shown on Exhibit No. 1? I mean, the location of the wells involved?

A Yes. The line of the cross-section is traced by the brown dashed line, and the wells included are circled.

Q Now, referring to what has been marked as Exhibit No. 2, will you state what that shows?

A Exhibit No. 2 is a north-south cross-section extending from the Warren Unit Drinkard No. 10 over the Warren unit structure down through the Terry Blinebry producing oil zone and back up to the Blinebry on top of the Blinebry Gas Pool. Here the designation of colors are: the perforated intervals have been colored red in the



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wells that are classified as gas wells, and the perforated intervals are green, colored green where they are classified as oil wells in the Terry Blinebry Oil Pool. These would then be the gas wells in the Blinebry Gas Pool. The structure -- structural comparison is roughly equivalent; these wells are somewhat higher than produce gas.

Q Which wells are you referring to as being higher, Mr. Edge?

A The three gas wells on the cross-section, the Shell Taylor No. 1, Shell Livingston No. 1, and the Conoco Hawk "B" 3 are gas wells and they compare somewhat higher to the Continental Unit "BT" No. 8. You can see that the effect between the two structures -- structurally relationship has some bearing on the type of accumulation, evidently.

Q Now, based on your study of structural and lithology of the Blinebry producing zone, is it reasonable to conclude that there is a separation between the Terry Blinebry and the proposed Warren Blinebry Pools?

A In answer to that question, we can look at the cross-section and it can be seen that the structurally high wells do, in fact, produce gas, whereas the lower wells in the saddle do produce oil. Therefore, there is some relationship shown as to the location on the structure as to what the fluid of the formation is. And we have further evidence, reservoir data, that will be submitted later that will probably add to this.

Q Now, if a separation does exist, as has been found by the

Commission previously between the Blinebry and the Terry Blinebry, would on the same reasoning, a separation exist between the pools involved and the proposed Warren Blinebry Pool?

A It would be logical to presume so.

Q Were Exhibits 1 and 2 prepared by you or under your direction and supervision?

A Yes, sir, they were.

MR. KELLAMIN: At this time we would like to offer in evidence Exhibits 1 and 2.

MR. NOTTER: Without objection, Continental's Exhibits 1 and 2 in Case 1463 will be admitted.

MR. KELLAMIN: That's all the questions I have of the witness.

CROSS EXAMINATION

BY MR. NOTTER:

Q Mr. Edge, there is one principal difference, is there not, between the proposed new pool to the north and the pool to the south, as compared with the previous case for the Tubb, in that the interval between the two zones or the two pools in the Tubb was penetrated by dry holes, and this is productive all the way, is it not?

A That's true, yes. That is the main difference. This one unit, Blinebry 21, was one well that went to the Tubb that separated the two Tubb structure closures, and it was dry in the Tubb, but it does produce oil here.

Q That was one of the wells that was dry in the Tubb in the other case?

A Yes, it was dry in the Tubb.

Q Does there seem to be any difference in the permeability and porosity as you go from south to north on this cross-section?

A Well, by the log itself you cannot determine the amounts of permeability. The porosity indicated by the neutron, indicates to be a good porosity development in the first zone or the upper zone of the Blinebry BT No. 8. You can see, by correlation between the wells roughly, the porosity zones that have been perforated and are productive intervals and they are essentially the same or are correlative to those that produce gas on the higher wells.

Q Is it your opinion that Warren unit Well No. 8 there is producing gas from the lower portion of the perforated interval?

A I don't have the facts on that. I believe they were individual tests, were they not?

Q So, to your knowledge, you don't know where the gas is coming from in that well, whether it be the upper or lower perforations?

A No.

Q Well, in your opinion, Mr. Edge, the distance between the Warren unit No. 8 and the Warren Unit No. 21 is relatively short, being something like a half a mile. What would be the principal cause for one well to be a gas producing well and the other a oil producing well?

A I am sure that would be a reservoir problem, and I could not answer it, but just the fact that it does produce gas is all I could say.

Q Now, is it possible to have a gas well in the Terry Blinebry Oil Pool?

A To my knowledge, it isn't.

Q So if you have a gas well producing from the Blinebry formation in an area north of the Terry Blinebry Oil Pool, it of necessity requires another Blinebry Pool, doesn't it?

A It seems so.

Q Geologically speaking, do you see why -- any reasons that the Rules to be adopted for the Warren Blinebry Pools should be different for the Blinebry Gas Pool?

A Geologically speaking, no.

MR. NUTTER: Anyone have any questions of Mr. Edge?

MR. KELLAHIN: I would like to ask one more question, please.

Q Mr. Edge, in line with the questioning by Mr. Nutter, as to the different situation between this and the preceding case in that oil production is found between the two pools, is that the same type of situation upon which the Commission based a finding of separation between the Terry Blinebry Oil Pool and the Blinebry Gas Pool?

A Yes, that was part of the basis.

MR. KELLAHIN: That's all.

MR. NUTTER: Any further questions of Mr. Edge? If not, he

may be excused.

(Witness excused)

E. V. BOYNTON,

recalled as a witness, having been previously duly sworn, testified  
as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q State your name, please.

A E. V. Boynton.

Q Are you the same Mr. Boynton who testified in Case 1467 and  
were sworn -- and was sworn for the purpose of this case?

A I am.

MR. KELLAHIN: Are the witness' qualification acceptable?

MR. NUTTER: Yes, sir. He may proceed.

Q (By Mr. Kellahin) Mr. Boynton, are you familiar with the  
application in Case 1468?

A Yes, I am.

Q Referring to Exhibit No. 1, which has been introduced in  
evidence, do you have any further comment to make on that Exhibit?

A Some of the things that the Exhibit shows were not mentioned.  
The outline of the proposed new pool is shown in red, the outline  
of the Terry Blinebry Oil Pool is shown encompassing the oil wells  
colored in green, which are Terry Blinebry oil wells, and the outline  
of the Blinebry Gas Pool is also outlined in green.

Q Now, does that also show the distance of the subject gas  
well in this case from the nearest Blinebry gas production?

A Yes. The distance to the nearest Blinebry Gas Well is 10,500 feet.

Q And, in your opinion, is the Warren unit BT Well No. 3 located on a separate distinct structure, Blinebry Gas Pool to the south?

A It is.

Q Now, referring to Exhibit No. 2, which is in evidence, do you have any comments to make in connection with that Exhibit?

A This, as I stated previously, is a north-south cross-section through the Warren unit structure and the saddle through the Blinebry Gas Pool to the south. The perforation in wells that produced gas are colored in red, arbitrarily, and those that produce oil, green, arbitrarily, and down here, the wells are classified as gas wells.

Q Well now, examining the Exhibit, Mr. Boynton, it would appear that the Shell Taylor No. 1 is producing gas from the lower interval and those which Continental has offsetting the Terry-Blinebry producing oil. Do you have any explanation of that?

A I have it unofficially that it was a poor cement job on that well, in which case the gas from this well is probably coming from the upper zone. However, if there is a good cement job, and that is not the case, then it would indicate that the higher structural wells will produce gas. Each zone has its own gas cap, and we will produce gas on the higher structural wells.

Q Now, have you made an examination of back pressure test on the Blinebry formation?

A I have an Exhibit No. 3, which is a 4. back pressure test in the Blinebry zone taken March 25, 1958. I might point out here that this Exhibit shows the open flow capacity of the well to be 2700 MCF per day whereas the application showed it to be approximately 7600 MCF a day. The difference in potentials there is the result of having to kill the well with oil or mud twice. It also shows the gas-oil ratio to be 26,186 to 1, and the gravity of the liquid hydrocarbon to be 56 degrees API.

Q Now, have you made a study of the formation in regard to the isobars and prepared an isopach map?

A From the October, 1957 bottom hole pressure survey we have prepared an isobaric map, which is Exhibit No. 4. On this map, the Warren Unit "BT" No. 8 is colored in red, which indicates that it is a gas well. Terry-Blinebry oil wells are colored in green, and Blinebry gas wells to the south are colored in red, and Terry-Blinebry dry holes are colored in yellow. Again, we have the outline of the Terry-Blinebry Pool shown in green, and the outline of the Blinebry Gas Pool shown in green.

Q Now, what does that Exhibit indicate as to the pressure in relation to structure, if anything?

A This Exhibit, if you will compare it to Exhibit No.1, indicates that bottom hole pressures closely follow structure in this area and is an indication that as we go down structure the permeability decreases.

Q Is that the significance of the pressure variation, then?

A That is. This is on the same basis, as stated a while ago, that the Terry Blinebry Pool was separated from the Blinebry Pool, and it was shown -- previous tests showed that hydrocarbons would not migrate from one of these areas to another, since this same situation exists -- has existed between the Blinebry and Terry Blinebry except between the Warren unit and Terry Blinebry Pool, by analogy, then, I believe the Warren BT No. 8 is producing from a separate reservoir.

Q You referred to a previous case. Would that be case 277 which was the base for Order R-610?

A That's true, yes.

Q Do you have any evidence that there is no communication between well bores in the low pressure area?

A Well, there is certain indications that there is no communication. One is that we were unable to get our Terry Blinebry oil wells to produce before they were fractured, and the formation up in this area would give up nothing on drill stem test until they were fractured. Also, recently I caused a communications test to be conducted. If you will look at Exhibit 4 in Section 34, Wells Nos. 18, 20, and 14, and in Section 33, Well No. 17 were shut in for a period of forty-eight hours, and then at that time Wells No. 20, No. 17 and 14 were opened and flowed at a rate of flow that would draw their casing pressure down to around 160 to 200 pounds. This was continued for a period of two weeks, and there was no in-



dication of the drop in the bottom hole pressure in Well No. 18. During the flow period of the other three wells, there was a bottom hole pressure bomb constantly in Well No. 18.

Q Do you have any reason to believe that these wells are draining an area in excess of the limits of the fractured --

A Since they would not produce, naturally I have no reason to believe that they are, no.

Q Now, in the event a new pool was designated for Blinebry production from the Warren unit BT Well No. 8, do you have any suggestion as to Rules governing production from the pool?

A I suggest that Rules be adopted for the Warren unit, Warren Blinebry Gas Pool similar to those now in effect in the Blinebry Gas Pool.

Q Do you have any specific recommendation as to any change that should be made?

A Again, since this was a wildcat, we were looking for production. We perforated below the lower limits of the Blinebry as they exist in the Blinebry Gas Pool and to almost the top of the formation. We would like to include that with the pool limits.

Q In connection with the application which was filed in this case, certain changes in the present Rules in the Blinebry Gas Pool were suggested as Rules for the proposed pool. Do you have any comment on those?

A The change in Rules No. 7 and No. 9 were merely to get the word Warren Blinebry Gas Pool into the record, and Rule No. 18,

which defines a gas well in the Warren Blinebry Pool, also defined a gas well in the Blinebry Gas Pool. However, we withdraw that proposal and would adopt the same definition for gas wells and oil wells in this pool as previously designated in the Blinebry Pool.

Q Are there any other proposed changes other than changing the name of the pool?

A Rule No. 22 in which Paragraph 2 was deleted, deleted the six months' waiting period for reclassification of wells. And Rule No. 23 merely eliminates a date in which gas could not be flared from the Blinebry Gas Pool Well, which was May the 1st, 1955, and does not apply in this case. Rule No. 24 proposed an annual bottom hole pressure test rather than semiannual, and that's the extent of the changes proposed. However, as I say, except for the necessity of changing the wording in some Rules to include Warren Blinebry, we have no objection to their being adopted.

Q Now, referring again to Exhibit No. 1, what would happen to the Warren unit Blinebry No. 21 under these Rules?

A Warren unit Blinebry No. 21 did test the Tubb and was dry in the Tubb, and it is almost dry in the Blinebry. I think it produced 16 barrels of oil per day on completion with a ratio of about 17,000 to 1. It still produces about that gas rate with 7 barrels of oil per day, so it is almost dry in the Blinebry. It could possibly be classified as a gas well in the Warren Blinebry Gas Pool, its but since it was prorated under the Terry Blinebry, we didn't feel it was important in this instance. We would have no objection to

being placed in the Warren unit Blinebry.

Q Where would you draw the line between the Terry Blinebry and Warren unit gas production?

A According to the isobaric map here, it probably would be drawn about the 2,000 pound pressure line.

Q Is that based on the difference in pressures?

A Between the two wells, yes.

Q 8 and 21. Why don't the lower zones in the No. 8 produce oil since they are lower than the upper intervals, than the Terry Blinebry Wells?

A I don't know. It might be that the point brought out in the Shell Taylor Glen a while ago applies here, and -- but we have no individual tests on these lower zones, so we actually don't know what they are producing. However, experience in the lower zones in the Terry Blinebry would lead us to believe that they are contributing very little to production, and the main producing zones here is the upper zone.

Q That would then indicate that where the upper zone is below structurally, it is apt to produce oil, and where it is high structurally it is apt to produce gas?

A If you will notice on the neutron curve, the Warren unit No. 8, the upper zone of the Blinebry, this is absent through the saddle here, and is again evidenced over in these gas wells in the Blinebry Pool. It seems to indicate that where the upper zone is well developed and has a high structural position, the well is a gas well;

where it is not well developed, and is low on the structure, it produces oil. It is -- apparently it is a determining factor in the type of completion unit.

Q Now, with reference to the "BT" Well No. 8, do you have any evidence to show there is no communication between the Tubb and the Blinebry zones?

A Yes, we do have evidence that there is no communication. As a matter of fact, when the well was completed initially, we ran a back pressure test on the Tubb, and when we started and went on the Blinebry and started one on the Blinebry, it showed evidence of communication, so we prepared a packer and the same thing happened the second time, and we changed types of packer and now there is no indication whatever of communication between the two zones. If you would like, I can show you the charts on that, and coupled with the difference in gravities of the hydrocarbons, it certainly indicated that there is no communication.

Q Now, is it your recommendation that the Commission create a new pool for production from the Warren "BT" Well No. 8?

A Yes, it is.

Q And what name do you recommend for that pool?

A Warren Blinebry Gas Pool.

Q Were Exhibits 3 and 4 prepared by you or under your direction and supervision?

A They were.

MR. KELLAHIN: At this time we would like to offer Exhibits 3 and 4.

MR. NUTTER: Without objection, Continental\*s Exhibits 3 and 4 will be admitted in Case 1468.

MR. KELLAHIN: That\*s all the questions I have.

MR. NUTTER: Any questions of Mr. Boynton? Mr. Payne.

CROSS EXAMINATION

BY MR. PAYNE:

Q Mr. Boynton, is the producing capacity of the Blinebry in excess of market demand?

A It, is, yes.

MR. PAYNE: Thank you. That\*s all.

QUESTIONS BY MR. NUTTER:

Q Mr. Boynton, do you have any opinion as to whether the "BT" 8 No. -- "BT" Well No. 8 is producing gas from the lower perforations or not?

A I would hesitate to say that it is. I rather think that it isn't, and the production is coming from the upper zone -- I mean, if it produced anything, it probably would be oil.

Q Does that well make very much liquid?

A The gas liquid ratios are indicated at the various rates of flow on Exhibit No. 3, 42, 68, 79 and 86. That's -- each of those flow rates are well above the daily allowable.

Q The gravity of the liquids produced in this well is such that the well would be classified as a gas well under the Rules of the Blinebry Gas Pool, isn't it?

A That's true, yes.

Q Mr. Boynton, you stated that as you came down structure,

it seems as though the permeability decreases. Does this apply as you come north and northeast of the main structure of the Blinebry formation?

A Yes, it does.

Q And does it also apply as you come north into the trough?

A I would just have to say I guess it does because we have no core data there and, of course, I can't read permeability off of a radio active log. But apparently the same situation has occurred here as has occurred on the main structure.

Q Mr. Boynton, how long did you say you flowed Wells Nos. 20, 17 and 14 on that communication test?

A For approximately two weeks.

Q And you had no pressure drop in No. 18?

A None.

Q Do you think that if the formation is as impermeable as would be indicated by that, that a test of forty-eight hours would be sufficient to have a pressure build-up?

A We have numerous build-up tests in the Blinebry, and actually, I don't know how long it would take to build the well up to its top allowable.

Q Would forty-eight hours usually show a considerable build-up of pressure?

A It will show the main build-up, but the well will keep building up after that gradually for an indefinite period.

Q They made quite -- some progress in reaching their ultimate

pressure in forty-eight hours?

A Yes, sir.

Q What is the present status of Well No. 10 up in the northwest of the northeast of Section 28?

A That's a Drinkard Well.

Q Does Continental have any immediate plans as far as the Blinebry or Tubb formation is concerned for that well?

A We have approval to dual the well in the Blinebry Tubb formation.

Q And you expect that it will be productive in those formations in those new pools?

A Yes.

MR. NUTTER: Does anyone have any further questions of Mr. Boynton?

QUESTIONS BY MR. NUTTER:

Q Mr. Boynton, I didn't get this written down, when you testified as to what the vertical limits of the Warren Blinebry Pool should be, in your opinion. Would you read those again, please?

A I would like to include that lower set of perforations as shown on the cross-section, and include all the intervals to the top of the Tubb formation. The present limits of the Blinebry Gas Pool are defined as extending from a point 75 feet above the Blinebry marker, to a point 300 feet below the Blinebry marker.

Q Would the uppermost part of the vertical limits as defined be suitable for the Warren Blinebry Pool?

A They would, yes.

Q And would you repeat the lower limits, then?

A Approximately 100 feet below the lower limits -- present lower limits of the Blinebry.

Q In other words, the lower limits would extend to a point 400 feet --

A That's right.

Q -- below the Blinebry marker?

A That's right.

Q These vertical limits will not extend into the limits for any other pool, if they are so extended, will they?

A If they are described as the top of the Tubb formation, they will not; if that limit is put on them, yes. That is only because again, we were looking for oil. Actually, I don't think that lower zone is contributing any production at all to the well, but since it is open we would like to request --

Q Well now, where is the top of the Tubb formation, Mr. Boynton, with relation to the Tubb marker?

A It is 100 feet above the Tubb marker.

Q The Tubb formation, then, commences at a point 100 feet above the Tubb marker; --

A Right.

Q -- which is the same as the vertical limits for the Tubb Pool?

A Yes. I assume that is so, as I understand it. Actually no formation is involved there. It is merely producing intervals, porous producing intervals in the Yesso formation. The formations, as such, there are none.

Q So if the limits of the Warren Blinebry Pool were defined as from a point 75 feet above the Blinebry marker to a point 100



feet above the Tubb marker, that would give you continuous designation of that vertical interval in either one of those two pools, but it would not overlap, would it?

A That's right. It would not. Here is our situation. Since this was a wildcat, of course, we had no pool limitations. If you would choose to disregard this bottom set of perforations here, we would just as soon have the present limits of the Blinebry.

Q You don't expect that these perforations are productive of gas?

A I don't think they are productive of anything. We were unable to treat this particular set of perforations and had to pull a packer up here and treat this altogether.

Q Is the perforated interval from 6055 to 6120 open at the present time?

A They are.

Q And that has been treated?

A That has been treated.

Q Mr. Boynton, what was the reason that you weren't able to treat that lower set of perforations?

A Communication with the upper. I think we ran to it about 65,000 pounds, something like that, and then we moved it up the hole and treated it as a lower pressure up there.

Q And that one perforated interval is the only set, however, that would fall in this extra hundred feet that you are proposing, --

A That's true.

Q -- adding to the vertical limits?

A Yes.

MR. PAYNE: Did you set out the proposed vertical limit in your application, Mr. Boynton?

A No, we did not.

Q (By Mr. Nutter) Now, let's see. That last set of perforations is from what interval to what?

A 6160 to 6210.

MR. NUTTER: Does anyone else have any further questions of Mr. Boynton? If not, he may be excused.

(Witness excused)

MR. NUTTER: Anyone else have anything further they wish to offer in Case 1468? We will take the case under advisement and take the next Case, 1469.

C E R T I F I C A T E

STATE OF NEW MEXICO )  
: ss  
COUNTY OF BERNALILLO )

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

WITNESS my hand and Seal, this, the 14<sup>th</sup> day of July, 1958, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

*Joseph A. Trujillo*  
Notary Public

My Commission Expires:  
October 5, 1960.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 1468 heard by me on 6-11, 1958.

*Samuel M. Butler*, Examiner  
New Mexico Oil Conservation Commission

OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Date 6-16-58

CASE NO. 1468

HEARING DATE 9am 6-11-58 DSN@SF

My recommendations for an order in the above numbered case(s) are as follows:

Enter an order creating the Warren Blumberg gas Pool and establishing pool rules identical w/ the Blumberg Gas Pool. Establish horizontal limits as the SE  $\frac{1}{4}$  of Sec 28, T20S, R38E (instead of the E  $\frac{1}{2}$  of the Sec as advocated by applicant) and the vertical limits as being from a point 75 ft. above the Blumberg marker (as said marker is defined in Order R-464) to the Tubbs marker (as said marker is defined in Order R-464). Establish definitions of oil wells, gas wells, GOR limits the same as is done in the Blumberg Gas Pool. ~~Except~~ an oil well shall be called an oil well in a gas pool rather than create an oil pool when a well is classified as an oil well. [Provide that gas shall be purchasedatably on the same basis as the Blumberg Gas Pool]

See Rules  
Staff Member

Examiner

OK [make BHP tests on an annual basis instead of semi-annual as req'd in Pl. rules]

DOCKET: EXAMINER HEARING JUNE 11, 1958

Oil Conservation Commission 9 a.m., Mabry Hall, State Capitol, Santa Fe, NM

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

- CASE 1337: Application of Gulf Oil Corporation for an order amending Order R-1093. Applicant, in the above-styled cause, seeks an order amending Order R-1093 to provide for the commingling, in exception to Rule 303, but only after separate measurement, of oil produced from the Fusselman, Ellenburger, and McKee formations underlying its Learcy McBuffington Lease, comprising the S/2 of Section 13, Township 25 South, Range 37 East, Lea County, New Mexico, and the transfer of said production by means of automatic custody transfer equipment, in exception to Rule 309 (a); applicant also seeks authority to commingle the production, after separate measurement, from the Blinebry and Drinkard formations and the Langlie-Mattix Pool underlying the above-described McBuffington Lease, and to transfer said production by means of automatic custody transfer equipment. Applicant further seeks authority to produce more than 16 wells into each of the common transfer facilities described above, in exception to Rule 309 (a).
- CASE 1341: Application of Jal Oil Company, Inc. for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Sarkeys Well No. 2, located 660 feet from the North and West lines of Section 25, Township 21 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Blinebry Oil Pool and oil from the Tubb Gas Pool through parallel strings of tubing.
- CASE 1464: Application of Amerada Petroleum Corporation for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Ida Wimberley Well No. 3, located 1980 feet from the South line and 990 feet from the West line 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 Fusselman adjacent to the Justis-Fusselman Pool, and oil from the Drinkard formation adjacent to the Justis-Drinkard Pool through parallel strings of tubing.
- CASE 1465: Application of Magnolia Petroleum Company for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its New Mexico "S" No. 1 Well, located 990 feet from the North line and 1650 feet from the East line of Section 2, Township 16 South, Range 32 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Wolfcamp formation adjacent to the Anderson Ranch-Wolfcamp Pool and oil from the Anderson Ranch-Devonian Pool through parallel strings of tubing.

CASE 1466: Application of Tidewater Oil Company for an exception to Rule 309 of the Commission Rules and Regulations. Applicant, in the above-styled cause, seeks an order authorizing the installation of automatic custody transfer equipment with positive displacement meters and automatic sampling equipment and other related facilities to receive, measure, and transfer custody of oil from the Justis-Ellenburger Pool produced from the wells located on its Coates "C" Lease, which comprises the E/2, SE/4 NW/4, and NE/4 SW/4 of Section 24, Township 25 South, Range 37 East, Lea County, New Mexico.

CASE 1467: Application of Continental Oil Company for the establishment of a new Tubb gas pool and for the promulgation of special rules and regulations. Applicant, in the above-styled cause, seeks an order establishing a new pool for Tubb gas production to be designated as the Warren-Tubb Gas Pool with horizontal limits consisting of the E/2 of Section 28, Township 20 South, Range 38 East, Lea County, New Mexico. The applicant further seeks the promulgation of special pool rules similar to those adopted for the Tubb Gas Pool, as set forth in Order R-586, subject to modification of certain of said rules.

CASE 1468: Application of Continental Oil Company for the establishment of a new Blinebry gas pool and for the promulgation of special rules and regulations. Applicant, in the above-styled cause, seeks an order establishing a new pool for Blinebry gas production to be designated as the Warren-Blinebry Gas Pool with horizontal limits consisting of the E/2 of Section 28, Township 20 South, Range 38 East, Lea County, New Mexico. The applicant further seeks the promulgation of special pool rules similar to those adopted for the Blinebry Gas Pool, as set forth in Order R-610, subject to modification of certain of said rules.

CASE 1469: Application of Phillips Petroleum Company for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order establishing a 320-acre non-standard gas proration unit in the Eumont Gas Pool consisting of the S/2 of Section 14, Township 19 South, Range 36 East, Lea County, New Mexico, said unit to be dedicated to the applicant's Bern "A" Well No. 1, located 660 feet from the South and East lines of said Section 14.

CASE 1470: Application of Phillips Petroleum Company for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order establishing a 320-acre non-standard gas proration unit in the Eumont Gas Pool consisting of the N/2 of Section 12, Township 19 South, Range 36 East, Lea County, New Mexico, said unit to be dedicated to the applicant's Monument Well No. 1, located 1977 feet from the North line and 660 feet from the East line of said Section 12.

CASE 1471: Application of Phillips Petroleum Company for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order establishing a 240-acre non-standard gas proration unit in the Tubb Gas Pool consisting of the NW/4 and the W/2 SW/4 of Section 24, Township 22 South, Range 37 East, Lea County, New Mexico, said unit to be dedicated to the applicant's Sims Well No. 3, located 1980 feet from the North and West lines of said Section 24.

CASE 1472: Application of Sunray Mid-Continent Oil Company for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its State Land 15 Well No. 3, located 660 feet from the South line and 1980 feet from the East line of Section 16, Township 21 South, Range 37 East, Lea County, New Mexico, to permit the production of oil from the Drinkard Pool and oil from the Blinebry Oil Pool through parallel strings of tubing.

Case 1468



## CONTINENTAL OIL COMPANY

825 PETROLEUM BUILDING  
ROSWELL, NEW MEXICO

R. L. ADAMS  
DIVISION SUPERINTENDENT  
OF PRODUCTION  
NEW MEXICO DIVISION

May 9, 1958

New Mexico Oil Conservation Commission  
Box 871  
Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr., Secretary-Director

Gentlemen:

Attached are three copies of Continental Oil Company's application for a new pool designation for Blinebry gas production from its Warren Unit BT Well No. 8, located 1980 feet from the south and east lines of Section 28, T-20S, R-38E, NMPM, Lea County, New Mexico, and for the establishment of pool rules to govern the production from this pool. It is respectfully requested that this matter be set for hearing at the earliest convenient date.

Yours very truly,

*R. L. Adams*

RLA-JC

Enc

cc: HLJ, FTE

*Docket mailed  
5-27-58*



BEFORE THE OIL CONSERVATION COMMISSION  
OF THE  
STATE OF NEW MEXICO

Case 1168

IN THE MATTER OF THE APPLICATION OF  
CONTINENTAL OIL COMPANY FOR A NEW  
GAS POOL DESIGNATION FOR BLINEBRY  
PRODUCTION FROM ITS WARREN UNIT BT  
WELL NO. 8 LOCATED IN SECTION 28,  
T20S, R38E, LEA COUNTY, NEW MEXICO,  
THE HORIZONTAL LIMITS OF SAID POOL  
TO ENCOMPASS THE E/2 OF SECTION 28,  
T20S, R38E, N.M.P.M., LEA COUNTY,  
NEW MEXICO: AND FOR THE ESTABLISH-  
MENT OF POOL RULES TO GOVERN THE  
PRODUCTION FROM THIS POOL.

A P P L I C A T I O N

Comes now applicant, Continental Oil Company, and respectfully petitions the Commission for a new pool designation for Blinebry gas production from its Warren Unit BT No. 8 well, located 1980 feet from the South and East lines of Section 28, T20S, R38E, N.M.P.M., Lea County, New Mexico, and for pool rules governing the production from this pool. In support of this application, applicant would show:

1. That applicant is operator of the Warren Unit which contains, in addition to other lands, Section 28, T20S, R38E, N.M.P.M., Lea County, New Mexico.
2. That applicant drilled and completed on March 12, 1950, its Warren Unit Drinkard Well No. 8 as an oil well in the Drinkard formation at a location 1980 feet from the South and East lines of said Section 28.
3. That said well was plugged back and dual completed for gas production from the Tubb and Blinebry formations during February, 1957. The calculated open flow potential for the Blinebry zone was 7560 MCF of gas per day. At a producing rate of 4677 MCF per day, the well produced distillate at a rate of 147 barrels per day for a gas-distillate ratio of 31,816 to 1. After recompletion, the well was redesignated the Warren Unit BT No. 8.
4. That the attached plat, contoured on the Blinebry marker, indicates the location of the Warren Unit BT No. 8, the location and distance to the nearest Blinebry gas production, the general topographical features of the Blinebry formation in this area, and the area suggested for inclusion in the proposed new pool.

5. That the nearest Blinebry gas producer, the Shell-Taylor Glenn No. 1, is located approximately 10,500 feet South in the Blinebry Gas Pool.

6. That the nearest Terry-Blinebry oil producer, the Continental Warren Unit No. 21, is located approximately 2640 feet South of the Warren Unit BT No. 8.

7. That the accumulation of gas under the Warren Unit BT No. 8 is separated from the Terry-Blinebry oil production to the South by an area of relatively low permeability as evidenced by pressure differentials between the two areas.

8. That the suggested name for this new pool is the Warren Blinebry Gas Pool.

That applicant further respectfully requests pool rules governing this proposed new pool similar to those adopted for the Blinebry Gas Pool but with certain specific rules as included in Order R-610 being changed to read as indicated herewith:

Rule 7: In the event an oil well producing from the Blinebry zone is reclassified as a gas well in the Warren Blinebry Gas Pool, the operator of such well will be afforded the opportunity to form a non-standard proration unit for the well; provided, however, that until such unit is formed, such well shall be allocated a gas allowable commensurate with the acreage contained in the unit formerly dedicated to the oil well.

Rule 9: The dual completion of a well so as to produce gas from the Warren Blinebry Gas Pool and oil from the Blinebry formation is hereby prohibited.

Rule 18: A gas well in the Warren Blinebry Gas Pool shall mean a well producing from within the vertical and horizontal limits of the Warren Blinebry Gas Pool which:

- (a) Produces liquid hydrocarbons possessing a gravity of 48° API or greater, or,
- (b) Produces liquid hydrocarbons possessing a gravity of less than 48° API, but with a gas liquid ratio of 10,000 cubic feet gas, or more, per barrel of liquid hydrocarbon.

O.K. of  
same as Blinebry

Rule 19: A well producing from within the horizontal and vertical limits of the Warren Blinebry Gas Pool and not classified as a gas well as defined in Rule 18, shall be classified as an oil well.

Rule 22: Delete paragraph 2.

Rule 23: No gas, either dry or casinghead gas, shall be flared, vented or otherwise wasted in the Warren Blinebry Gas Pool at any time after ninety (90) days from the date of completion of a well in said pool.

Paragraph 2 & 3 - no change.

Rule 24: Bottom hole pressure tests will be conducted annually during the month of May on all wells producing from the Warren Blinebry Gas Pool. Results of such tests will be reported to the Commission on Form C-124 on or before the 25th day of June of each calendar year.

Paragraph 2 & 3 - no change.

Wherefore, applicant respectfully prays that this application be set for hearing before the Commission's duly appointed examiner at Hobbs, New Mexico, that due notice thereof be given, and that upon hearing an order be entered establishing a new pool designation and pool rules for the Continental Oil Company Warren Unit BT No. 8 Blinebry formation.

Respectfully submitted

By

R. L. Adams

NEW MEXICO OIL CONSERVATION COMMISSION  
BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

EXHIBIT 1468 MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Unassigned Formation Blaine County Lea

Initial Annual Special X Date of Test 3-25-58

Company Continental Oil Company Lease Warren Unit B.T. Well No. 8

Unit J Sec. 28 Twp. 20-S Rge. 38-E Purchaser El Paso Natural Gas Co.

Casing 7" Wt. 23# I.D. 6.336 Set at PB 6692 Perf. 5875 To 6210

Tubing 2" OD Wt. 4.7 I.D. 1.995 Set at 5999 Perf.  To

Gas Pay: From 5875 To 6210 L 5875 xG-MIX .791 -GL 4647 Bar.Press. 13.2

Producing Thru: Casing  Tubing X Type Well G.G. Dual

Date of Completion: 2-11-57 Packer 6240 Reservoir Temp. 100°

OBSERVED DATA

Tested Through (Flowmeter) (Orifice) (Meter) Type Taps Flange

No.	Flow Data			Tubing Data		Casing Data		Duration of Flow Hr.
	(Line) Size	(Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	
SI						1835		72
1.	4	1.50	632	5.8	48	1510		24
2.	4	1.50	593	17.6	55	1255		24
3.	4	1.50	616	24.0	63	1073		24
4.	4	1.50	585	33.6	63	902		24
5.								

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor F <sub>t</sub>	Gravity Factor F <sub>g</sub>	Compress. Factor F <sub>pv</sub>	Rate of Flow Q-MCFPD @ 15.025 psia
1.	13.99	61.18	645.2	1.0117	.9427	1.092	891
2.	13.99	103.29	606.2	1.0048	"	1.075	1482
3.	13.99	122.89	629.2	.9971	"	1.074	1736
4.	13.99	141.77	598.2	.9971	"	1.070	1994
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 23,186 cf/bbl.  
Gravity of Liquid Hydrocarbons 56 deg.  
F<sub>c</sub> 9.936 (1-e<sup>-s</sup>) 0.274  
Specific Gravity Separator Gas .675  
Specific Gravity Flowing Fluid .791  
P<sub>c</sub> 1848.2 P<sub>c</sub><sup>2</sup> 3415.8

No.	P <sub>w</sub> P <sub>t</sub> (psia)	P <sub>t</sub> <sup>2</sup>	F <sub>c</sub> Q	(F <sub>c</sub> Q) <sup>2</sup>	(F <sub>c</sub> Q) <sup>2</sup> (1-e <sup>-s</sup> )	P <sub>w</sub> <sup>2</sup>	P <sub>c</sub> <sup>2</sup> -P <sub>w</sub> <sup>2</sup>	Cal. P <sub>w</sub>	P <sub>w</sub> /P <sub>c</sub>
1.	1523.2	2320.1	8.85	78.32	21.46	2341.6	1074.2	1530.2	.75
2.	1268.2	1608.3	14.73	216.97	59.45	1739.8	1676.0	1319.0	.71
3.	1086.2	1179.8	17.25	297.56	81.53	1261.3	2154.5	1123.1	.61
4.	915.2	837.6	19.81	392.44	107.53	945.1	2470.7	972.2	.53
5.									

Absolute Potential: 2,700 MCFPD; n .97

COMPANY Continental Oil Company

ADDRESS Box 427, Hobbs, New Mexico

AGENT and TITLE W. D. Howard, Gas Tester

WITNESSED

COMPANY

REMARKS

Flow Rate No. 1 2 3 4

Bbls. Distillate Production 42 68 79 86

Gas-Oil Ratio 21,214 21,794 21,975 23,186

### INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

### NOMENCLATURE

- $Q$  = Actual rate of flow at end of flow period at W. H. working pressure ( $P_w$ ).  
MCF/da. @ 15.025 psia and 60° F.
- $P_c$  = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater.  
psia
- $P_w$  = Static wellhead working pressure as determined at the end of flow period.  
(Casing if flowing thru tubing, tubing if flowing thru casing.) psia
- $P_t$  = Flowing wellhead pressure (tubing if flowing through tubing, casing if  
flowing through casing.) psia
- $P_f$  = Meter pressure, psia.
- $h_w$  = Differential meter pressure, inches water.
- $F_g$  = Gravity correction factor.
- $F_t$  = Flowing temperature correction factor.
- $F_{pv}$  = Supercompressibility factor.
- $n$  = Slope of back pressure curve.

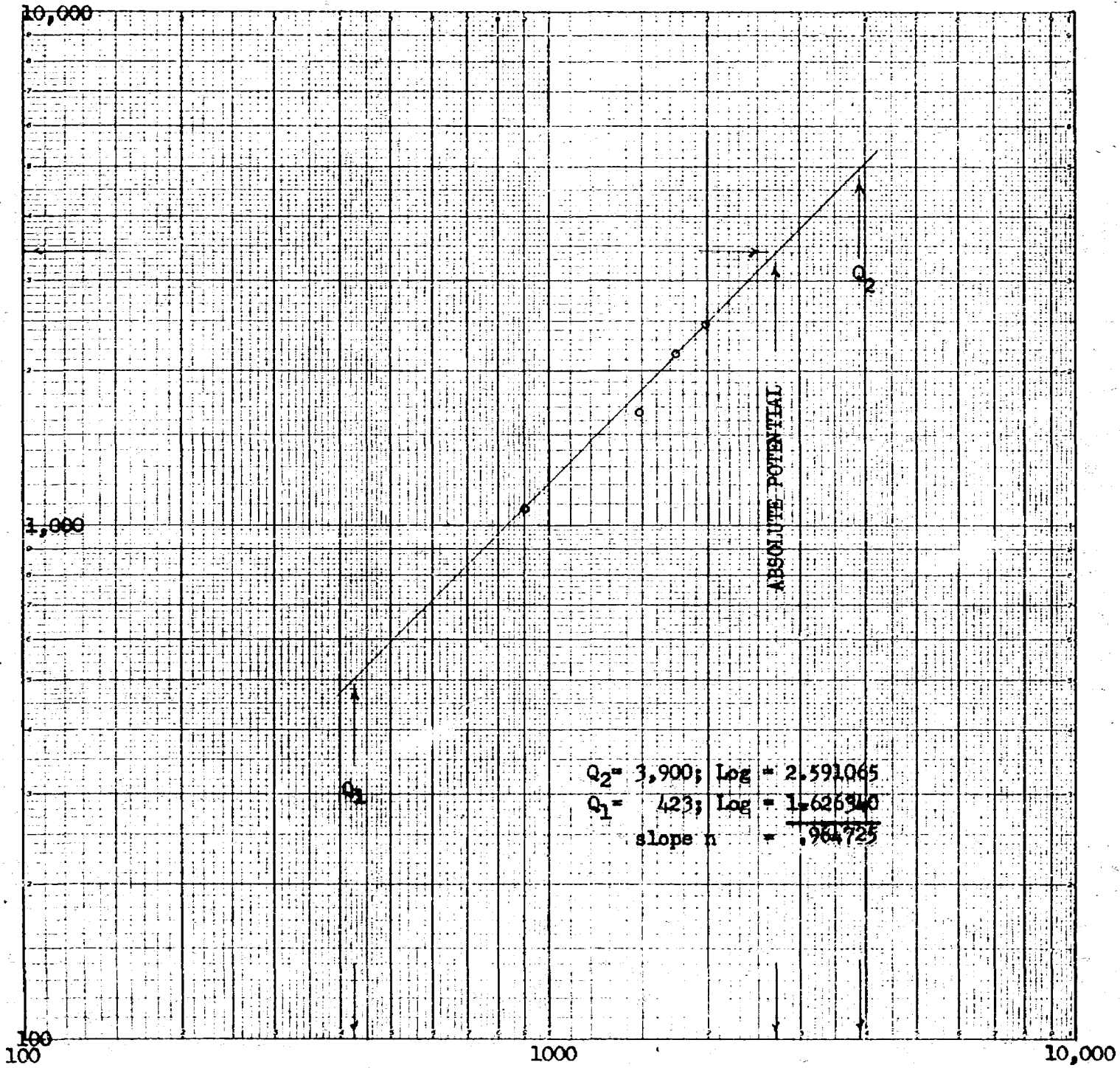
Note: If  $P_w$  cannot be taken because of manner of completion or condition of well, then  $P_w$  must be calculated by adding the pressure drop due to friction within the flow string to  $P_t$ .

COMPANY Continental Oil Co.  
 WELL Warren Unit BT No.8 (Blaineby)  
 LOCATION J 28-20S-38E  
 COUNTY Lea  
 DATE 2-25-58

CODEX BOOK COMPANY, INC. NORWOOD, MASSACHUSETTS  
 PRINTED IN U.S.A.

NO. 31.291 LOGARITHMIC: 2 BY 2 3/4-INCH CYCLES (BASE SHORT WAY)

$p_c^2 - p_w^2$  (thnds.)



$Q - \text{MCF/D} - 15.025 \text{ psia.}$