Jim -
Telegram inside

Continue to 1st

~~2nd~~ Ex. hearing
in January, 1963

CASE 2716: Application of MARKHAM, CONE & REDFERN for multiple completion of Eubanks Well No. 3.

2716

...tion, Transcript,

...l Exhibits, Etc.

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. 2716
Order No. R-2451

APPLICATION OF MARKHAM, CONE & REDFERN
FOR A MULTIPLE COMPLETION, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on January 3, 1963, 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 20th day of March, 1963, 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, Markham, Cone & Redfern, seeks authority to complete its Eubanks Well No. 3, located in Unit K of Section 14, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, as a multiple completion to produce oil from two perforated intervals of the Drinkard Pool through 2 1/16-inch tubing and to produce gas and oil from two perforated intervals of the Blinebry formation, one interval in the Blinebry Gas Pool and one interval in the Blinebry Oil Pool, through a parallel string of 2 1/16-inch tubing.

(3) That the applicant proposes to set a packer at approximately 6525 feet to separate the two zones of Drinkard production; to set a packer at approximately 5675 feet to separate the two zones of Blinebry production; and to set a packer at approximately 6320 feet to separate Drinkard production from Blinebry production.

(4) That the applicant proposes to produce oil from the upper zone of the Drinkard formation into the tubing through a

side door at approximately 6520 feet, and to produce gas from the Blinebry formation through a side door at approximately 5665 feet.

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

(6) That approval of the subject application will neither cause waste nor impair correlative rights.

(7) That the intake ports in the side door used to produce Blinebry gas should be sized to produce not more than 6,000 cubic feet of gas multiplied by top unit oil allowable for the Blinebry Oil Pool in accordance with the Special Rules for the Blinebry Oil Pool and Rule 506 of the General Rules and Regulations.

(8) That the Commission should assure that the operator does not inadvertently produce more than 6,000 cubic feet of gas multiplied by top unit oil allowable for the Blinebry Oil Pool.

IT IS THEREFORE ORDERED:

That the applicant, Markham, Cone & Redfern, is hereby authorized to complete its Eubanks Well No. 3, located in Unit K of Section 14, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, as a multiple completion to produce oil from two perforated intervals of the Drinkard Pool through 2 1/16-inch tubing with production of oil from the upper zone of the Drinkard formation entering said tubing through a side door at approximately 6520 feet, and to produce gas and oil from two perforated intervals of the Blinebry formation, one interval in the Blinebry Gas Pool and one interval in the Blinebry Oil Pool, through a parallel string of 2 1/16-inch tubing with production of gas from the Blinebry Gas Pool entering said tubing through a side door at approximately 5665 feet.

PROVIDED HOWEVER:

(1) That a packer shall be set at approximately 6525 feet to separate the two zones of Drinkard production; that a packer shall be set at approximately 5675 feet to separate the two zones of Blinebry production; and that a packer shall be set at approximately 6320 feet to separate Drinkard production from Blinebry production.

(2) That the intake ports in the side door used to produce Blinebry gas shall be sized to produce not more than 6,000 cubic feet of gas multiplied by top unit oil allowable for the Blinebry Oil Pool.

(3) That the operator of the subject well shall notify the Commission's Hobbs District Office when the intake ports in the

Blinebry side door have been properly sized; that the wellhead shall then be sealed by a Commission representative; and that the seal shall not thereafter be broken unless written approval is first obtained from the Commission's Hobbs District Office.

(4) That the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A of the Commission Rules and Regulations insofar as said rule is not inconsistent with this order.

(5) That the applicant shall take packer-leakage tests upon completion and annually thereafter during the Gas-Oil Ratio Test Period for the Drinkard Oil Pool.

IT IS FURTHER ORDERED:

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

Jack M Campbell

JACK M. CAMPBELL, Chairman

E S Walker

E. S. WALKER, Member

A. L. Porter, Jr.

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

esr/

GOVERNOR
JACK M. CAMPBELL
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
E. S. JOHNNY WALKER
MEMBER

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

P. O. BOX 871
SANTA FE

March 20, 1963

Mr. Charlie White
Gilbert, White & Gilbert
Attorneys at Law
Box 787
Santa Fe, New Mexico

Re: Case No. 2716
Order No. R-2451
Applicant:
Markham, Cone & Redfern

Dear Sir:

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

Very truly yours,

A. L. Porter, Jr.

A. L. PORTER, Jr.
Secretary-Director

ir/

Carbon copy of order also sent to:

Hobbs OCC x
Artesia OCC
Aztec OCC
OTHER

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Date 3/11/63

CASE 2716 Hearing Date 9am 1-3-63

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

Enter an order providing that the applicants Markham Cone & Redfern may recomplete their Eastanke #3 in K 14-21S-37E to produce oil from two perforated intervals ~~zones~~ of the Drinkard separated by a packer, and gas and oil from two perforated intervals ~~zones~~ of the Blinebry separated by a packer, with overall separation achieved by means of a 3rd packer set @ approx 6320. Provide that the two zones of the Drinkard shall be produced through a string of 2 1/16" tubing with production from the upper zone entering through a PSI model S-2 side door. Gas from the upper Blinebry zone & oil from the lower Blinebry zone shall be produced through a parallel string of 2 1/16 inch tubing, the gas entering through a side door equipped with ports properly sized to obtain the desired gas-oil ratio. ~~Each~~ Upon installation of the desired ports, the well shall be sealed by a rep. of the OCC. Said seal shall be broken & the ports changed only upon notification and approval of the Aztec OCC.

No. 1-63

DOCKET: EXAMINER HEARING - THURSDAY - JANUARY 3, 1963

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

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

CASE 2724: Application of Skelly Oil Company for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authorization for the dual completion (conventional) of its Dow "B" Well No. 21, located in Unit I of Section 21, Township 17 South, Range 31 East, Eddy County, New Mexico, to produce oil from the Fren and Grayburg-Jackson Pools through parallel strings of tubing.

CASE 2725 Application of Standard Oil Company of Texas for allowable transfer, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to conduct pressure interference tests on its Jicarilla 4-26 lease, Section 26, Township 28 North, Range 1 West, Boulder-Mancos Pool, Rio Arriba County, New Mexico. Applicant proposes to shut-in Well No. 4 and produce its allowable equally from Wells Nos. 2 and 3.

CASE 2726: Application of Continental Oil Company for a dual completion, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authorization for the dual completion (conventional) of its Rattlesnake Well No. 144, located in Unit N, Section 2, Township 29 North, Range 19 West, as a dual completion (conventional) to produce gas from the Upper Pennsylvanian formation and oil from the Lower Pennsylvanian formation, Rattlesnake Pennsylvanian Field, San Juan County, New Mexico.

CASE 2727: Application of Continental Oil Company to establish special rules and regulations, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of special rules and regulations for the Oil Center-Blinebry Pool in Township 21 South, Range 36 East, Lea County, New Mexico, including a provision for 80-acre spacing units.

CASE 2728: Application of Continental Oil Company for commingling authority, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle the production from the Drinkard, Tubb and Wantz Abo Oil Pools on its J. H. Nolan lease with Blinebry Gas Pool liquids pro-

duced on its J. H. Nolan Unit, Section 11, Township 21 South, Range 37 East, Lea County, New Mexico.

CASE 2729: Application of Scanlon-Shepard for a waterflood project, Chaco Wash Oil Pool, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks authority to inject water into the Mesaverde formation through certain wells in Sections 21, 22, 27 and 28, Township 20 North, Range 9 West, McKinley County, New Mexico.

Reset to Jan 22

CASE 2716: (Continued)
Application of Markham, Cone & Redfern for a multiple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order authorizing the multiple completion of its Eubanks Well No. 3, located in Unit K, Section 14, Township 21 South, Range 37 East, Lea County, New Mexico, in such a manner as to produce a limited amount of gas from the Blinebry Gas Pool, oil from the Blinebry Oil Pool and oil from each of two pays in the Drinkard Pool. Separation of the four zones would be achieved by means of three packers.

iqg/

RESIDENCE PHONE
SHERWOOD 4-8173

OFFICE PHONE
PORTER 3-7329

J. R. CONE

ROOM 1706 - GREAT PLAINS LIFE BLDG.

LUBBOCK, TEXAS

December 30, 1962

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

Attention: Mr. Daniel S. Nutter

Re: Case 2716

Dear Mr. Nutter:

Enclosed please find two copies of the electrical log of Markham, Cone & Redfern Eubanks No. 3 showing pertinent correlation and casing perforation data. This information is in support of our application for dual completion of Eubanks No. 3 which is scheduled for Examiner Hearing January 3, 1963, as Case 2716.

Yours very truly,

L. C. Storm

cc: J. R. Cone
L. C. White

CLASS OF SERVICE

This is a fast message unless its deferred character is indicated by the proper symbol.

WESTERN UNION

TELEGRAM

W. P. MARSHALL, PRESIDENT

1201 (4-60)

SYMBOLS

DL = Day Letter

NL = Night Letter

LT = International Letter Telegram

The filing time shown in the date line on domestic telegrams is LOCAL TIME at point of origin. Time of receipt is LOCAL TIME at point of destination

LA018 KA074

K TUA100 RX PD=FAX TULSA OKLA 3 850A CST=
OIL CONSERVATION COMMISSION=
STATE LAND OFFICE SANTA FE NMEX=

REFERENCE CASE 2716 SET FOR JANUARY 3, WE UNDERSTAND APPLICANT WILL REQUEST ONE ALLOWABLE ONLY FROM EACH OF THE BLINEBRY AND DRINKARD FORMATIONS TO WHICH WE HAVE NO OBJECTION. WE DO OBJECT TO A SEPARATE GAS AND OIL ALLOWABLE FROM THE BLINEBRY AND TWO OIL ALLOWABLES FROM THE DRINKARD IF THIS IS THE APPLICANTS INTENTION AND OUR UNDERSTANDING IS INCORRECT=
R S CHRISTIE AMERADA PETROLEUM CORP=

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

2716 3=

RESIDENCE PHONE
SHERWOOD 4-8173

J. R. CONE
ROOM 1706 - GREAT PLAINS LIFE BLDG.
LUBBOCK, TEXAS

OFFICE PHONE
PORTER 3-7329

November 28, 1962

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

Attention: Mr. Daniel S. Nutter

Re: Dual Completion
Markham, Cone & Redfern
Eubanks Well No. 3
Lea County, New Mexico
Case 2716

Dear Mr. Nutter:

This will confirm our telephone conversation of this date relative the captioned matter. We shall appreciate postponment of Case 2716 from Docket No. 36-62 set for December 6, 1962 to the last Examiner Hearing Docket for January, 1963.

Yours respectfully,

J. R. CONE

By L. O. Storm
L. O. Storm

DOCKET MAILED
Date 12/21/62

duced on its J. H. Nolan Unit, Section 11, Township 21 South, Range 37 East, Lea County, New Mexico.

CASE 2729: Application of Scanlon-Shepard for a waterflood project, Chaco Wash Oil Pool, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks authority to inject water into the Mesaverde formation through certain wells in Sections 21, 22, 27 and 28, Township 20 North, Range 9 West, McKinley County, New Mexico.

CASE 2716: (Continued)
Application of Markham, Cone & Redfern for a multiple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order authorizing the multiple completion of its Eubanks Well No. 3, located in Unit K, Section 14, Township 21 South, Range 37 East, Lea County, New Mexico, in such a manner as to produce a limited amount of gas from the Blinebry Gas Pool, oil from the Blinebry Oil Pool and oil from each of two pays in the Drinkard Pool. Separation of the four zones would be achieved by means of three packers.

iqg/

No. 1-63

DOCKET: EXAMINER HEARING - THURSDAY - JANUARY 3, 1963

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

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

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CASE 2725 Application of Standard Oil Company of Texas for allowable transfer, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to conduct pressure interference tests on its Jicarilla 4-26 lease, Section 26, Township 28 North, Range 1 West, Boulder-Mancos Pool, Rio Arriba County, New Mexico. Applicant proposes to shut-in Well No. 4 and produce its allowable equally from Wells Nos. 2 and 3.

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CASE 2728: Application of Continental Oil Company for commingling authority, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle the production from the Drinkard, Tubb and Wantz Abo Oil Pools on its J. H. Nolan lease with Blinebry Gas Pool liquids pro-

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

Case 2716

November 19, 1962

COPY

Mr. L. O. Storm
209 Turner Drive
Hobbs, New Mexico

Dear Mr. Storm:

We are in receipt of your application for administrative approval of the multiple completion of Markham, Cone & Redfern's Eubank Well No. 3, dated November 16, 1962.

Inasmuch as the proposed completion and method of operation is some what unique, it is our belief that this application should be set for hearing. Accordingly it has been placed on our docket for 9:00 A.M. December 6, 1962.

Very truly yours,

Daniel S. Nutter
Chief Engineer

dag

DOCKET MAILED

Date_____

DOCKET MAILED

Date 11-21-62

Case 2716

OIL CONSERVATION COMMISSION

BOX 2045

HOBBS, NEW MEXICO

DATE Nov. 26, 1962

OIL CONSERVATION COMMISSION
BOX 871
SANTA FE, NEW MEXICO

Re: Proposed NSP_____

Proposed NSL_____

Proposed NFO_____

Proposed DC X

Gentlemen:

I have examined the application dated 11/19/62

for the Markham, Cone & Redfern Eubanks #3-K 14-21-37
Operator Lease and Well No. S-T-R

and my recommendations are as follows:

O.K.---E.F.E.

Geologically O.K.---J.W.R.

Yours very truly,

OIL CONSERVATION COMMISSION

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
January 3, 1963

EXAMINER HEARING

IN THE MATTER OF:
(Continued)
Application of Markham, Cone & Redfern for a multiple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order authorizing the multiple completion of its Eubanks Well No. 3, located in Unit K, Section 14, Township 21 South, Range 37 East, Lea County, New Mexico, in such a manner as to produce a limited amount of gas from the Blinebry Gas Pool, oil from the Blinebry Oil Pool and oil from each of two pays in the Drinkard Pool. Separation of the four zones would be achieved by means of three packers.

CASE 2716

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF PROCEEDINGS

MR. NUTTER: We will call next Case 2716.

MR. DURRETT: Application of Markham, Cone & Redfern for a multiple completion, Lea County, New Mexico.

MR. WHITE: Charles White of Gilbert, White and Gilbert, Santa Fe, New Mexico, appearing on behalf of the Applicant. We have one witness to be sworn at this time, Mr. Storm.

(Witness sworn.)

(Whereupon, Applicant's Exhibits Nos. 1, 2 & 3 marked for identification.)

MR. WHITE: We only have one copy of Exhibit No. 3. We have a small copy of the exhibit which is attached to the applica-

tion. It is not near as clear or complete as this one. It may be difficult for the Examiner to follow this one.

L. O. STORM

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

DIRECT EXAMINATION

BY MR. WHITE:

Q Mr. Storm, will you state your full name for the record, please?

A Louis Oliver Storm.

Q By whom are you employed and in what capacity?

A I am employed by J. R. Cone, independent producer of Lubbock, Texas, the operating partner in the Markham, Cone & Redfern Eubanks No. 3. My position is engineer.

Q Have you previously testified before the New Mexico Oil Conservation Commission --

A I have.

Q -- as an engineer?

A Yes, sir.

Q Have your qualifications been accepted?

A They have been.

Q Will you briefly state what the Applicant is seeking in the subject application?

A The application is for a parallel tubing string dual completion in the Drinkard and Blinebry Oil Pools of Lea County,

New Mexico, reference Martin, Cone, Redfern Eubanks Well No. 3 located in Unit K of Section 14, Township 21 South, Range 37 East, NMPM.

Q To make the record clear, are you seeking a double allowable for the Blinebry gas-oil pool?

A We are not. We are seeking single allowables for each of the pays, the Drinkard pay and the Blinebry Oil Pool.

Q Would you refer to what's been marked Exhibit No. 1 and explain what that is intended to show?

A Exhibit No. 1 is a reproduction of a commercial map. I cannot swear to the authenticity of all the information shown on it.

Q From what source did you obtain the data that you depicted there?

A The data that I have added in the green circle, the green circles reflect what are designated as Blinebry and Terry-Blinebry oil wells taken from the January, 1963, New Mexico Oil Conservation Commission oil proration schedule. The red circles depict Blinebry Gas Pool wells taken from the December, 1962 Conservation Commission gas schedule for Lea County. Posted adjacent to the green circles in red figures are the gas-oil ratios noted for the Blinebry Oil Pool and Terry-Blinebry oil wells.

Q Would you mind stating what, if any, significance the GOR's might have?

A I think they reflect a broad character in Blinebry oil

completions, producing characteristics of the Blinebry wells and Terry-Blinebry wells, with GOR's ranging from the mid 600's to figures in excess of 70,000 cubic feet per barrel of oil. I think it might be inferred that the excessive ratios result from channeling perhaps behind the casing of the gas zone down into the oil zone perforations, and then into the producing string.

Q Mr. Storm, will you briefly give the well history of the subject well, No. 3?

A Markham, Cone and Redfern Eubanks Well No. 3 was drilled in late 1952 to granite, total depth of 2775 feet. It was completed initially at that time as an open oil Abo formation producer. A year later, in December, 1953 -- may I correct myself, I think I said the initial completion was '53, it was December, '52 in the Abo. A year later in the year 1953, the well was re-completed in the main Drinkard pay and has produced from that formation to the present time.

Q What is the well's present status?

A It is a single zone Drinkard producer with a capacity of approximately 20 barrels of oil per day.

Q Will you refer to what's been marked Exhibit 2 and explain what that is intended to show; and in so doing, where you can, refer to Exhibit 3 and give a further explanation of your testimony.

A If the Commission please, I will discuss Exhibit 2, which was prepared by me, starting from the bottom of the well up.

At the time the well was recompleted from the Abo to the Drinkard, a production retainer was set at 6732 feet. The Drinkard was perforated and brought in production. The tubing was then landed into the production retainer with a check valve; and above the check a sleeve in the open pesition in order to admit the Drinkard production to the tubing, the check valve serving to block off the Abo production.

The interval shown as now open to Drinkard production is equivalent to that in most of the wells in the area. However, in the past year with the completion work in the Upper Drinkard, which is signified on Exhibit 2 as the proposed perforated interval, 6448 to 6500 has been opened in four wells immediately adjacent to the north of the Eubanks lease. Very high fracturing pressures were required to establish production from this Upper Drinkard zone, and in one well virtually bottom hole pressure was recorded of approximately 2650 pounds.

The old producing pay, we do not have bottom hole pressures on the Eubanks No. 3 but based on the shut-in pressures of wells in the area, we estimate the formation pressure between 800 and 1,000 pounds. We feel that it would be poor production practice to open the Upper Drinkard zone and arbitrarily permit it to mix with the partially depleted main pay, based on the pressure differential which could approach 1800 pounds.

Therefore, we intend to install a production retainer between the two Drinkard sets of perforations with a sleeve above

the retainer to admit the upper zone production, and a standing vaive with check installed below the packer to hold the high pressure production from the upper zone from equalizing downward. In other words, if this technique is successful insofar as the Drinkard is concerned, at least in the initial life of the -- producing life of the upper zone, the production will be primarily from the upper zone until the pressures equalize. Then the check valve will open itself and both zones will be produced. One allowable is asked for each zone.

We are attempting to hold the old zone because it does have producing ability. The wells to the north of us, which have been recompleted, were essentially depleted in the main zone and abandoned before the Upper Drinkard was reopened and recompleted.

Q Will this type of installation in the Drinkard conserve the reservoir installation, in your opinion?

A If we can make the mechanical duals work, it would. This is all we hope to achieve for the Drinkard formation by the packer, the sleeve and valve depicted in the lower part of the drawing. Moving upward, naturally separation must be provided for the Blinebry formation and the Drinkard formation. Therefore, we plan to install another production retainer at approximately 6320 feet to achieve that separation. I think before I go too far, I should mention that the production retainer now installed in the well at 6732 feet, we plan to block with what is known as

an expendable plug. This plug can be moved mechanically by pushing it out, it can be pumped out hydraulically. This tube will be tested by packer to determine it is not leaking before any additional work is done on the well, any perforating or any testing. This will be the first step that we will undertake.

Q I don't want to interfere with your trend of thought, but the operation will be, you'll go in and kill the well, is that correct?

A Correct.

Q Will you use a cement bond log or anything of that nature?

A We anticipate initially running both a bond log and a gamma ray neutron log to try to determine the effectiveness of the initial primary cement job between the 5-1/2 production casing and, of course, from the gamma ray neutron, gain additional information for perforating control in the Drinkard and the Blinebry.

Q Now continue with the Blinebry, please.

A The interval shown between 5705 and 5790 is the approximate stratigraphic equivalent open in the wells surrounding the Markham, Cone and Redfern Eubanks lease, and open in Eubanks Well No. 4, which well was completed approximately three years ago as a parallel string Blinebry oil Drinkard producer. In addition to the oil zones perforations, we contemplated a few perforations opposite the Blinebry gas section for two very particular reasons. The Commission is as aware as the operator that the technique as

completed, as we have presented here, is fraught with some negative possibilities. If there is any question from the bond log, we anticipate squeeze cementing opposite the Blinebry and/or the Drinkard to try to assure good bond outside of the casing before any of the Upper Drinkard or Blinebry section is opened. If the squeeze cementing is not necessary, we would hope to establish whether communication is present between the Blinebry gas and Blinebry oil perforations by packer and pump test before the fracture treatment of those zones is committed. If communication is present, we will attempt to squeeze and eliminate it before we fracture any of these pays.

The purpose of the Blinebry gas perforations would be to permit entry through a ported tool of a limited quantity of gas so that we can achieve Blinebry oil production at or near the limiting gas-oil ratio of 6,000 to one, which applies to the Blinebry Oil Pool.

Of course, separation of the Blinebry oil and gas zones would be achieved by a retrievable packer set at 5675 feet. We're interested in this technique from the standpoint of the performance of Eubanks Well No. 4, which well to November -- well, to this date has produced approximately 50,000 barrels of oil. The current gas-oil ratio is in the vicinity of 1600. It started in the mid 600's. An operator producing that much oil, say, with a GOR of 5,000 could realize appreciable added revenue in the operation of his lease. We would hope that if this technique is approved

by the Commission that we can apply it similarly to the other wells on the lease in their overhaul; and if we were not permitted to withdraw some oil from the gas zone, then all four wells will be recompleted as Blinebry oil wells.

We believe that we would be protecting our correlative rights to a part of that gas production to the gas wells surrounding the lease.

Q In other words, rather than have your production governed by your GOR's, you are asking to be permitted to produce the oil and the gas by mechanical control, is that correct?

A I'll answer the first part of your question as no, Counsel. We would be controlled by the GOR as specified in the regulation and by liquid gravity of the production; those would be the overriding controls of our Blinebry production. We could go in and open all the Blinebry section, put the well on production and then take what the regulations would permit, based on the characteristics of the production; but if we can achieve the kind of separation that appears to exist in our Well No. 4 by overhaul, we believe we can produce the gas-oil ratio below 6,000, that we will not be infringing on correlative rights, that we will be protecting our right to withdraw a little of the gas cap and return maximum revenue to the operator, and the industry is certainly interested in that.

Q Would you say that this is an installation to meet your offset obligations to these zones?

A I didn't understand your question.

Q In other words, would you say that this is an installation to meet your offset obligations to these zones?

A In a large part, yes. The Eubanks lease is surrounded on the -- totally surrounded on the west, north and east by Blinebry oil wells, and by one Blinebry gas well on the south. In this recompletion, we would be meeting offset obligations drilled in both the Drinkard and Blinebry that now exist against that 40-acre Unit.

Q Will you refer again to Exhibit 2 and state what your casing and cementing program is and will be contemplated to be?

A Well, the top of the schematic drawing shows 13-3/8 was cemented at 249 feet with 200 sacks. The cement circulated to the surface in the annular space. 8-5/8 was cemented at 2857 feet with 1600 sacks cement; circulation was obtained. 5-1/2 casing was swung off bottom at 6852 with 600 sacks. Temperature survey was not run at the time. We would only have to guesstimate the cement top, and it's probably within the vicinity of 2500 to 3,000 feet above the shoe of the 5-1/2 inch casing. This is one of the reasons we want to run a bond log to see where we stand on our initial casing before we undertake any further remedial work on the well. Because we are dealing with 5-1/2 inch casing, we contemplate using both short and long tubing string, the deep string to be full opening to its total depth.

Q Will you refer now to Exhibit 3 and explain that to the

Examiner?

A Exhibit 3 is a reproduction of that portion of the initial electrical survey run on the well in 1952, covering the Blinebry, Tubb, Drinkard and Upper Abo formations in the Eubanks Well No. 3. Depicted on it are the approximate intervals that we would propose to open in the Drinkard and Blinebry zones in recompleting the well. The mechanical information relative to packers and so forth is not shown on this log.

Q Mr. Storm, would you give the crude characteristics?

A I can, relative the Blinebry production on the Markham, Cone and Redfern Eubanks No. 4. The oil zone in Well No. 4 produces liquid gravity of approximately 39 degrees API, very minor amount of water which appears to be typical of Blinebry oil wells in the area. You will note from Exhibit 1 that also on the Eubanks lease, Well No. 1 produces from the Blinebry gas zone. No. 1 is a Drinkard oil-Blinebry gas dual effected in about May of 1952. If and when No. 3 is completed in the Blinebry formation, 40 acres of the area now dedicated to No. 1 will be removed from the area allocated to No. 1.

The liquid produced by No. 1 is a true condensate; at the high pressure separator it will run approximately 70 to 72 gravity and is water clear.

Q Do you anticipate any paraffine problems?

A We do. We have had them in both the Drinkard and Blinebry production on the lease; and in an effort to eliminate the

problem, we contemplate on the parallel strings of tubing, the top 2500 feet of each string will be internally plastic coated. The bore of the wellhead will be plastic coated, and both flow lines to the separators will be plastic coated internally.

Q Do you believe that to be a satisfactory method of caring for this problem?

A For the money expended, we hope so.

Q Would you mind stating what economic advantages you seek to obtain by this type of completion?

A Well, I've touched on it with respect to the Blinebry, and putting much weight on the performance history of Eubanks Well No. 4. As I have said, it has produced approximately 50,000 barrels of oil. The average gas-oil ratio over that 50,000 has been less than 1,000 cubic feet of gas per barrel. Had that been produced with an average ratio of say 5,000 cubic feet of gas per barrel, the revenue would have exceeded $12,000 to the operator, gross revenue before royalties and taxes.

Q Were these exhibits prepared by you or under your direction?

A Exhibits 1 and 2,and 3 all were prepared by me. As you are aware, they are reproductions in the case of 1 and 3.

Q Do you find them to be true and accurate to the best of your knowledge and estimation?

A To the best of my knowledge, they are.

Q Does that conclude your testimony?

A I might make this observation, that if in the fracturing and treatment work against the Blinebry section, we are unable to achieve a well similar to Eubanks Well No. 4, we would -- those zones will be produced as per the existing Blinebry regulations. We would probably not even open the sleeve that is provided in the stub string, the Blinebry string above the top packer. We would watch the performance of the well if that sleeve were opened in order to maintain the ratio between the 6,000 limiting ratio. We would observe the ported tube that would be inserted in the sleeve.

Q One other question I have. What acreage do you intend to dedicate to the Blinebry gas in the event this is a successful installation?

A If this were successful, only the west 80 acres would be dedicated to the Blinebry gas zone in Well No. 1.

MR. WHITE: At this time we offer the exhibits.

MR. NUTTER: Applicant's Exhibits 1 through 3 will be admitted in evidence.

(Whereupon, Applicant's Exhibits Nos. 1 through 3 admitted in evidence.)

MR. WHITE: That concludes our testimony on direct.

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

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Storm, first of all, down here, this standing valve

assembly that you have at 6620 is designed to seal off the lower zone from the upper zone until such time as the pressures in the two zones have equalized, is that correct?

A This would be a simple standing valve which would seat down. In other words, if the excess pressure were above the standing valve, the valve would seat down and if -- you'll understand I have said many "if's" in this thing, as you can see, they're possible -- if we can develop from the Upper Drinkard production comparable to that on the offset leases, we will have a reservoir with about 1800 pounds, with higher pressure in the section of the Drinkard than that now open. This is the reason for the standing valve, to permit just uncontrolled equalization of pressures within the over-all Drinkard reservoir.

Q The present Drinkard perforations, are they flowing?

A Yes, sir.

Q And the new Drinkard perforations presumably would also flow?

A So far as I know, those wells that have opened the Upper Drinkard are all flowing. They are top allowable and that has generated an interest on our part.

Q How do the GOR's run?

A On the new zone?

Q On both zones.

A I would have to refer to the proration schedule rather than my memory, Mr. Nutter. They are above the 2,000 limiting

ratio insofar as the old producing pay is concerned, I think in all wells in the vicinity. However, it is high enough in our No. 3 that until about now we have taken a penalty. The well has about reached the stage where penalty would not affect its production appreciably. The upper zone production I don't think is old enough for me to make any statements on its performance ratio-wise. They have been below and a little above 2,000, the few wells that have been successful in establishing production from the Upper Drinkard section.

Q Now coming up the hole, I see that you have PSI Model S-3 side door with a separation sleeve at 5665 for annular unloading and controlled gas entry. Would that mean that the gas from the proposed new Upper Blinebry perforations would have controlled entry into the Blinebry tubing string?

A Let me explain, Mr. Nutter. That PSI means Pressure Surveys, Inc., the manufacturer of this sleeve. They build three, S-1, S-2, S-3, the internal bores being graduated for multiple applications in jobs similar to this. The S-3 has the largest internal bore. If the sleeve should leak, an insert can be installed in it to absolutely block it off, or in this insert a ported entry can be provided, all this done by wire line.

Now, depending on the performance of the Blinebry zone, I would want the Commission to understand that we would test extensively the oil zone before we would open this sleeve in the Blinebry tubing string. We would want to know the ratio of

performance of that oil zone, that it was in order.

Q Now the controlled gas entry is into the tubing string, is that correct?

A Into the tubing string, our feeling being that from a production practice standpoint, better to keep any liquids that might accumulate in there unloaded from the bottom, from above that packer.

Q What actual control do you have on the rate of gas entry into that tubing string?

A That would be empirical, trial and error until the producing, by production test at the top of the ground until we came up with the ratio that was within the regulations.

Q What variety of ports do you have available, just those three, the S-1, 2, and 3?

A You mean with the Garrett sleeve?

Q Yes.

A Well, the PSI sleeve as such is similar, but it will receive inside of it another sleeve that is wire line retrievable that may or may not be ported, a side door choke arrangement, if you chose.

Q What assurance would the Commission have, if an operator were to make an installation such as this, that the well would be produced with the same sleeve or the same port that it was tested at?

A None. I think the Commission would be interested

primarily in the correct liquid gravity, next to gas-oil ratios that were below the 6,000 limiting ratio. We might put a port in there, say a quarter-inch in diameter, and start out with a 5,000 ratio; and in six months it goes to 7,000, I would pull then and put a smaller port in it to depress the producing ratio something below the 6,000. This could be reported to the Commission whenever any change is made.

Q The Blinebry rules, Mr. Storm, provide that Blinebry gas production from the gas well go through two-stage separation. In effect, this would be gas from the Blinebry Gas Pool. Would this casinghead gas be going through two-stage separation?

A I think it would be considered casinghead and would be going through the single stage, the current installation on the lease for Blinebry wells.

Q On the Eubank lease you are selling gas. What does that gas bring insofar as MCF price is concerned?

A I can't say exactly, in the amount of $90.00 a million after the recovery for the gasoline plant is applied to the price.

Q What is your casinghead?

A It would approximate $70.00 to the million under the same terms.

Q You said that the No. 4 Eubank had started out with a GOR of about 600 to one?

A Before I answer your question, may I confer with Counsel? I think we can answer your question better, Mr. Nutter,

with a graph that I have prepared. We don't know it would have any particular value in the case.

(Whereupon, Applicant's Exhibit No. 4 marked for identification.)

MR. WHITE: You want to explain Exhibit 4?

A Exhibit No. 4 merely depicts the producing gas-oil ratio versus cumulative production on Markham, Cone and Redfern Eubanks 4 from the initial completion in January, 1960 to approximately November, October 21, 1962. The Commission will note that until the cumulative production of approximately 30,000 barrels had been reached, the average ratio was below the 1,000 cubic feet of gas per barrel. These data are taken from the semi-annual tests required by the Commission and from the packer leakage tests. We consider our No. 4 an outstanding Blinebry oil well.

Q (By Mr. Nutter) These test ratios are taken from sales against accumulated production?

A I think in most cases they were taken on our own meters rather than the purchasing company's meters. Does this answer your question?

Q Yes.

A I would have to go back and double check. I'm sure we have both types, where I took visual readings from the purchaser's meters. I know the majority are taken from our own test meter.

MR. NUTTER: Are there any other questions of Mr. Storm? Mr. Kastler.

BY MR. KASTLER:

Q By submitting this proposal, would this in effect allow you to take a greater amount of either the Blinebry oil or the Blinebry gas than you would otherwise realize under the allowables?

A I think the answer would be yes, assuming that we can achieve an entirely satisfactory recompletion, and by that I use once again our Eubanks Well No. 4 as a model.

Q You believe that correlative rights would be protected thereby, at least until the other operators were forced to make similar completions?

A I wouldn't use the word "forced". If the Commission would choose to recognize this sort of thing on an administrative procedure, I think any operator would then have the right to apply for it and undertake it if they wanted to go to this much trouble and expense.

Q How much expense is involved, approximately?

A Additional expense?

Q Yes.

A In mechanical equipment alone, something over $2,000 on the downhole packer, standing valve, and PSI sleeve for the stub string.

Q Isn't it also true that a number of operators don't find themselves in this advantageous position that you do presently in regard to the Blinebry zone, wherein they are able to complete both by mechanical completion as regulated flows of gas and oil

in the Blinebry gas and Blinebry oil?

A I would have to agree that not everybody would be in the advantageous position of Eubanks No. 4. The two Shell wells immediately to the north on the Smith tract have gas-oil ratios in the 600's. These are fairly recent recompletions, they are parallel string Blinebry oil-Upper Drinkard, the Upper Drinkard zone that I have been discussing here, recompletions. Moran Producing and Drilling Company has recently completed two wells north of the Eubanks lease. These appear to be fairly normal gas-oil ratios, in the vicinity of 1600. If you check -- I didn't pretend to present all Blinebry oil wells on this plat. Those just in the general vicinity of the Eubanks lease. As I said, the ratios run the gamut, and I think this is a reflection of the luck and absence of control that an operator may have been able to maintain during his recompletion operation.

Q Is it possible that having made this completion, your well might turn either to a whole oil well or whole gas well as to the Blinebry zone?

A Certainly, no doubt. We have such a well that has eaten both the Commission and our lunch and is now sitting shut-in. We opened it and fracked it and shut it in and went home. It is now offset. I think the explanation is obvious; it channeled behind the pipe back into the gas section. Luck will be involved, there is no question. If it doesn't work, then what we're asking for here is dead. We won't even attempt to operate.

Q How do you distinguish this from a very near approach, if it's not in itself a very close approach to dual dedication of acreage? You stated at the outset that you did not intend any dual dedication of acreage?

A Not relative to the Blinebry or the Drinkard. To my knowledge, there's nothing in the Commission regulations relating to the Blinebry, the Terry-Blinebry or Blinebry Oil Pools that would deny Markham, Cone and Redfern the right to go in and perforate the entire Blinebry section, which in gross interval approximates 300 feet, treat the well, put it on production and go home. The liquid and ratio characteristics resulting would control the well. There are wells in the vicinity of the Eubanks lease with GOR's that are well above the 6,000 limiting ratio. On this basis, I think that those operators are obtaining from the gas zone their share of the gas cap. If Markham, Cone and Redfern, as I have said before, overhauled all four wells on the lease, disregarded the gas zone, and were successful in developing wells similar to Eubanks No. 4, I think we could demonstrate that we were getting no drainage whatever from the gas section and that we would be surrendering our part of those reserves to the gas wells that are producing from it and the oil wells of excessive ratios.

Q Are you familiar with Rule 30 of Order R-1670 of the Blinebry Gas Pool rules, which expressly prohibits dual dedication of acreage?

A All right.

Q And are you further familiar with the fact that heretofore no operator in the combined or associated pool has attempted to or made any dual dedications?

A With Mr. Nutter's permission, I can answer that question. There's one dual completion in the Blinebry oil and Blinebry gas pools with dual dedication of acreage and two allowables.

Q When was it established?

A Prior to the regulations. This is an old well. Not in this area. I think it can be argued whether our approach to Blinebry is or is not dual completion. If I eliminate the top packer, it is not a dual, and I can probably withdraw more gas than I planned to withdraw here.

Q Wouldn't that be more advantageous for you than realizing a gas well?

A I don't think so because using, for example, J. R. Cone Anderson Well No. 1, which is located in Unit I of Section 21, 21, 37, I alluded to this well earlier, where we had gone in and just perforated opposite the oil zone, the same stratigraphic equivalent as proposed here, treated it and went home; and we have a well that alternately crosses between the oil and the gas borderline and is now offset by two of Continental's recompletions that appear to be fairly normal Blinebry oil wells. The ratios are less than 6,000.

MR. PORTER: You indicated that the well alternated between the oil and gas well; is this based on the ratio?

A It produces 40 gravity liquid, but the ratio is beyond the regulations and so on. After the -- three or four months after we have been ordered to be shut-in, we open it, and it has been a headache to us, and right now it has been shut-in. Unless Mr. Cone takes a different position, it will stay that way.

MR. KASTLER: Those are the only questions I have now.

MR. NUTTER: Are there any other questions of Mr. Storm?

MR. WHITE: I would like to ask --

MR. NUTTER: Mr. White.

REDIRECT EXAMINATION

BY MR. WHITE:

Q Mr. Kastler states that, is it not possible that some of the other producers in this pool may not be quite as fortunate, but isn't it true with any drilling operation or production in any pool, some operators can produce more than other wells in the pool; and is he not in fact asking that if another operator can't produce as much as you can, you shouldn't be allowed to do it? Take a well that is out on the edge of the pool, it can't produce its full allowable. He, in essence, is saying that the operator who can produce a full allowable be not allowed to do so. Are you not actually saying that if it's possible by mechanical means you would be able to produce the Blinebry oil production

near the limiting gas-oil ratio of 6,000 to one, you would like the right to do it by mechanical means?

MR. DURRETT: Is that a question?

MR. WHITE: Yes, sir.

A I think in answer to the first part of Mr. White's question we would have to say many things influence character or caliber of a completed well, where the reservoir characteristics, luck certainly is involved, technique, and how the mechanical tools stand up that we try to apply to a job. I wouldn't condemn any operator's procedures or techniques. This area was drilled primarily some -- over the last ten to fifteen years. I think generally the techniques were not the best, certainly they are getting better with the passage of time. We might come up with a better well. I underline the word "might". If we do, we would like to operate it under the conditions as presented in our application.

I would hope that we don't come up with a Cone Anderson No. 1, and there are many others, as the Commission is aware, in the general area, that have had to be reclassed as gas wells because the ratios went up like a balloon.

MR. WHITE: That concludes our testimony. At this time we would like to offer Exhibit No. 4.

MR. NUTTER: Applicant's Exhibit No. 4 will be admitted in evidence.

(Whereupon, Applicant's Exhibit No. 4 admitted in evidence.)

MR. NUTTER: Any further questions? He may be excused.

(Witness excused.)

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

MR. WHITE: If the Examiner please, on behalf of Marian Oil Producing and Drilling Corporation, which is an offset operator to the Applicant, I'm authorized to state that they concur in the matters sought by the application.

MR. NUTTER: Does anyone have anything further they wish to offer in Case 2716? Mr. Kastler.

MR. KASTLER: I have a statement to read. I want to say at the outset that we came here prepared to oppose the application, on the grounds that in our opinion we believed it would constitute dual dedication. I believe that point is still pertinent and therefore I would like to read my statement.

Gulf Oil Corporation, the owner of acreage offsetting the Applicant's, objects to this application insofar as it applies to simultaneous completions in the Blinebry Gas and Blinebry Oil Pools. We object on the grounds that we believe this constitutes dual completion, dual dedication, which is expressly prohibited by Rule 30 of 1670 of Blinebry Gas Pool rules. In good faith, in compliance with this principle, Gulf has in completing Blinebry oil wells, actually reduced its Blinebry gas units by 880 acres, rededicating this production to oil wells only. We believe that dual dedication violates correlative rights and that any failure to control an operator is inequitable and unfair.

MR. NUTTER: Thank you. Anyone have anything further? Any other statements?

MR. DURRETT: I have another statement I would like to read at this time, in case Mr. White would like to comment. It is a communication in the form of a telegram received from Amerada Petroleum Corporation, received by the Commission on the 2nd of January, reading in its entirety as follows:

"Reference Case 2716 set for January 3. We understand Applicant will request one allowable only from each of the Blinebry and Drinkard formations, to which we have no objection. We do object to a separate gas and oil allowable from the Blinebry and two oil allowables from the Drinkard, if this is the Applicant's intention and our understanding is incorrect." That's signed, indicated signed by R. S. Cristy for Amerada Petroleum Corporation.

MR. WHITE: We have already stated as to what allowables.

MR. NUTTER: Do you have anything further?

MR. WHITE: That's all.

MR. NUTTER: If nothing further in Case 2716, we will take the case under advisement and the hearing is adjourned.

(Whereupon, the hearing was adjourned.)

* * * *

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, 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; and that the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal this 22nd day of January, 1963.

Ada Dearnley
NOTARY PUBLIC

My Commission Expires:

June 19, 1963.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2716, heard by me on 1-3, 1963.

, Examiner
New Mexico Oil Conservation Commission

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
December 6, 1962

EXAMINER HEARING

IN THE MATTER OF:

Application of Markham, Cone & Redfern for a multiple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order authorizing the multiple completion of its Eubanks Well No. 3, located in Unit K, Section 14, Township 21 South, Range 37 East, Lea County, New Mexico, in such a manner as to produce a limited amount of gas from the Blinebry Gas Pool, oil from the Blinebry Oil Pool and oil from each of two pays in the Drinkard Pool. Separation of the four zones would be achieved by means of three packers. CASE 2716

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: Call 2716.

MR. DURRETT: Application of Markham, Cone & Redfern for a multiple completion, Lea County, New Mexico. If the Examiner please, the Commission has in its file a letter received November 29th. I would like to read this letter into the record at this time.

The letter reads as follows: "Dear Mr. Nutter: This will confirm our telephone conversation of this date relative the captioned matter. We shall appreciate postponement of Case 2716 from Docket 36-62 set for December 6, 1962, to the last Examiner Hearing Docket for January, 1963." Signed, J. L. Cone by L. C.

Storm.

MR. NUTTER: The case will be continued and set on the docket of the last Examiner Hearing, which is set for January 23, 1962.

* * *

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, 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, and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal this 18th day of December, 1962.

Ada Dearnley
NOTARY PUBLIC

My Commission Expires:

June 19, 1963.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2716, heard by me on 12-18, 1962.

, Examiner
New Mexico Oil Conservation Commission

RESIDENCE PHONE
SHERWOOD 4-8173

J. R. CONE
ROOM 1706 - GREAT PLAINS LIFE BLDG.
LUBBOCK, TEXAS

OFFICE PHONE
PORTER 3-7329

November 16, 1962

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

Gentlemen:

Application is made herewith for an administrative order authorizing dual completion of Markham, Cone & Redfern Eubanks Well No. 3 as an oil over oil Blinebry Oil Pool-Drinkard Pool producer. The location of this well is 1980 feet from the South line and 1830 feet from the West line of Section 14, T-21-S, R-37-E, NMPM, Lea County, New Mexico. The subject well was completed initially in December 1952 in the Wantz Abo Pool. However, since December 1953 Eubanks No. 3 has produced from the Drinkard Pool through casing perforations opposite the middle and lower Drinkard.

From the attached diagrammatic sketch it will be noted that a conventional dual completion is contemplated by utilizing parallel strings of 2-1/16-inch OD tubing inside the 5-1/2-inch production casing. Further, the proposed recompletion anticipates producing the present Drinkard pay and opening the upper Drinkard, the Blinebry oil zone and the Blinebry gas zone. Separation of the various zones will be achieved with two retainer production packers and one retrievable packer. The latter packer will be a part of a down-hole mechanical arrangement intended to permit controlled withdrawls from the Blinebry gas section so as to obtain overall Blinebry Oil Pool production near the limiting gas-oil ratio of 6,000 cubic feet per barrel.

Also attached are: (1) OCC Application For Dual Completion form; (2) plat showing the Eubanks and all surrounding leases; and, (3) copy of letter to all offset operators. The electrical log of Eubanks No. 3 will be filed with the Commission upon completion of the proposed work.

Waivers are not being requested from offset operators as it is planned to abide by the waiting period prescribed in the Commission regulations for multiple completion applications under administrative procedure. However, all offset operators to the Eubanks lease are being furnished with copies of the afore-mentioned forms and plats.

Please advise if you require anything further relative this application.

Respectfully submitted,

MARKHAM, CONE & REDFERN

By L. O. Storm
L. O. Storm, Agent

cc: OCC, Hobbs (2)
All offset operators (7)

DOCKET MAILED

Date 11-21-62

NEW MEXICO OIL CONSERVATION COMMISSION

Case 1716

SANTA FE, NEW MEXICO

7-3-58

APPLICATION FOR DUAL COMPLETION - CONVENTIONAL

Field Name	County	Date
Blinebry Oil and Drinkard	Lea	November 16, 1962
Operator	**Lease**	**Well No.**
Markham, Cone & Redfern	Eubanks	3
Location of Well: Unit	**Section**	**Township**	**Range**
K	14	21-South	37-East, NMPM

1. Has the New Mexico Oil Conservation Commission heretofore authorized the dual completion of a well in these same pools or in the same zones within one mile of the subject well? YES X NO

2. If answer is yes, identify one such instance: Order No. DC - 878 ; Operator, Lease, and Well No.:

Markham, Cone & Redfern Eubanks No. 4, Unit N, Section 14, T-21-S, R-37-E, NMPM.

3. The following facts are submitted.

	Upper Zone	Lower Zone
a. Name of reservoir	Blinebry Oil	Drinkard
b. Top and Bottom of Pay Section (Perforations)	5645 (for controlled gas entry) 5705-5790 (oil)	6448-6500 (new) 6544-6636 (old)
c. Type of production (Oil or Gas)	Oil	Oil
d. Method of Production (Flowing or Artificial Lift)	Flow	Flow

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

Yes a. Diagrammatic Sketch of the Dual Completion, showing all casing strings, including size and setting, top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.

Yes b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.

No c. Waivers consenting to such dual completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.*

No d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed, it shall be submitted as provided by Rule 112-A.)

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

Gulf Oil Corporation, P. O. Box 2167, Hobbs, New Mexico

Kirby Petroleum Company, 629 Kennedy Building, Tulsa, Oklahoma

Moran Oil Producing & Drilling Company, P. O. Box 1718, Hobbs, New Mexico

The Ohio Oil Company, P. O. Box 2107, Hobbs, New Mexico

Shell Oil Company, P. O. Box 1858, Roswell, New Mexico

Sinclair Oil & Gas Company, 520 E. Broadway, Hobbs, New Mexico

Tidewater Oil Company, P. O. Box 547, Hobbs, New Mexico

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES X NO . If answer is yes, give date of such notification November 16, 1962 .

CERTIFICATE: I, the undersigned, state that I am the Agent of xx Markham, Cone & Redfern (company), and that I am authorized by said company to make this report, and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

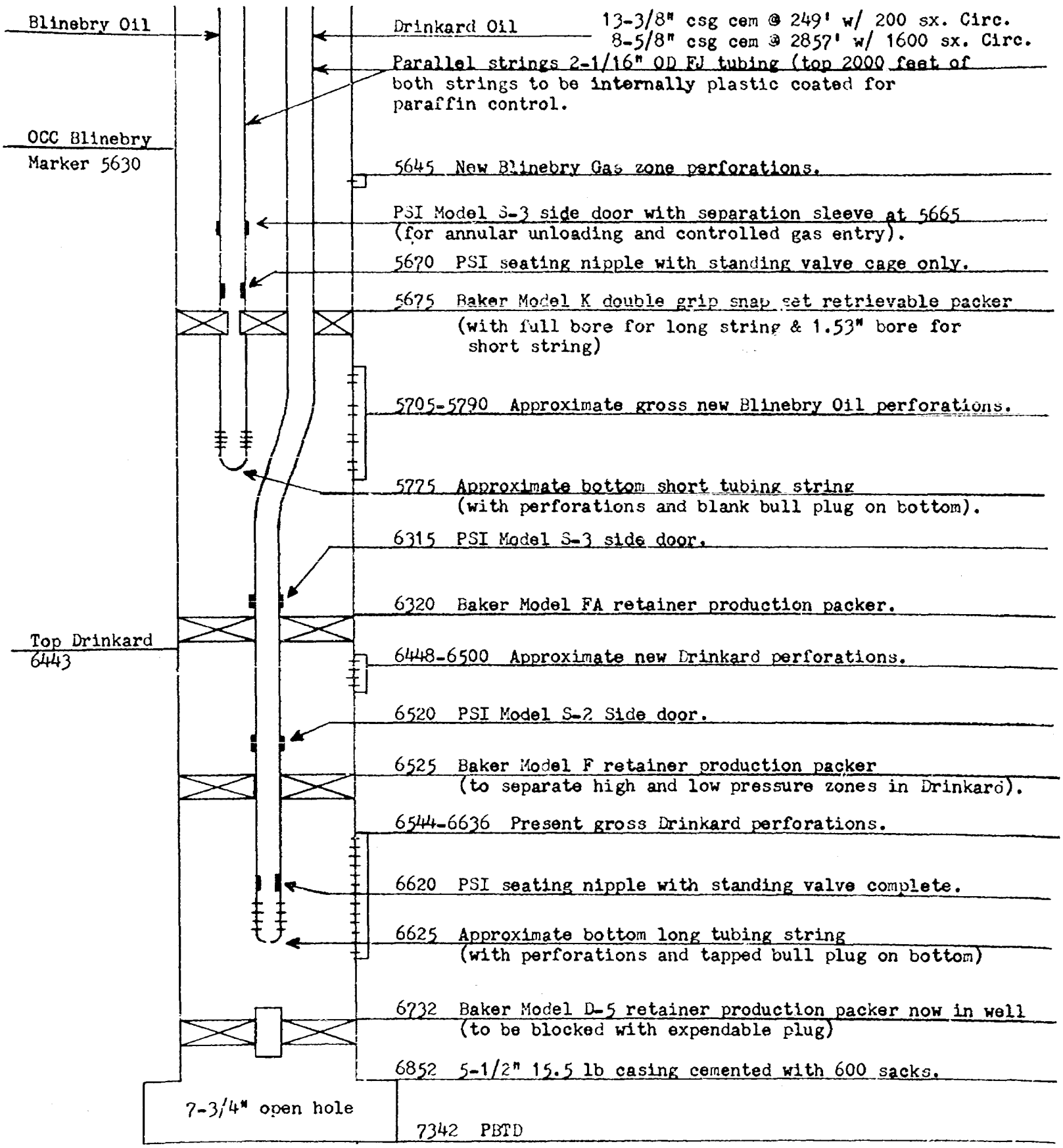
L. O. Storm
Signature

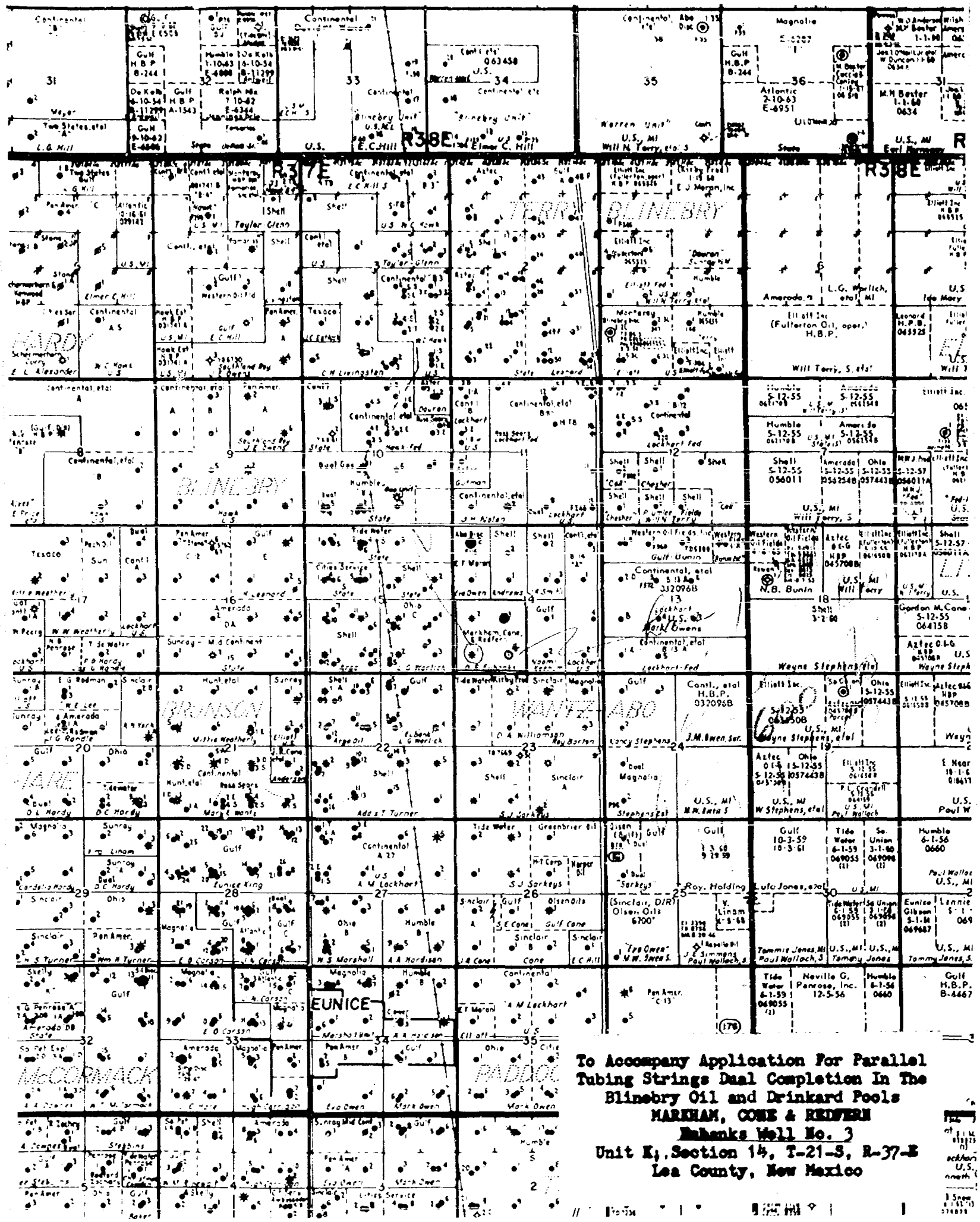
L. O. Storm, P. E.

* Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest or request for hearing is received by the Santa Fe office, the application will then be processed.

NOTE: If the proposed dual completion will result in an unorthodox well location and/or a non-standard proration unit in either or both of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

Markham, Cone & Redfern Eubanks No. 3
NE SW Sec. 14, T-21-S, R-37-E, Lea County, New Mexico
Diagrammatic Sketch of Down-hole Equipment For Dual Completion
Blinebry Oil and Drinkard Pools




R38E
R37E
R38E
TERRY-BLINEBRY
BLINEBRY
DRINKARD
ABO
MAHNEY
EUNICE
MONUMENT
McCORMICK
PADDOCK
To Accompany Application For Parallel Tubing Strings Dual Completion In The Blinebry Oil and Drinkard Pools
MARKHAM, COBB & REDFERN
Mahanks Well No. 3
Unit K, Section 14, T-21-S, R-37-E
Lea County, New Mexico

RESIDENCE PHONE
SHERWOOD 4-8173

OFFICE PHONE
PORTER 3-7329

J. R. CONE
ROOM 1706 - GREAT PLAINS LIFE BLDG.
LUBBOCK, TEXAS

November 16, 1962

Gulf Oil Corporation
P. O. Box 2167
Hobbs, New Mexico

Kirby Petroleum Company
629 Kennedy Building
Tulsa, Oklahoma

Moran Oil Producing & Drilling Co.
P. O. Box 1718
Hobbs, New Mexico

The Ohio Oil Company
P. O. Box 2107
Hobbs, New Mexico

Shell Oil Company
P. O. Box 1858
Roswell, New Mexico

Sinclair Oil Company
520 E. Broadway
Hobbs, New Mexico

Tidewater Oil Company
P. O. Box 547
Hobbs, New Mexico

Gentlemen:

Attached is a copy of application to the New Mexico Oil Conservation Commission for an administrative order authorizing dual completion of Markham, Cone & Redfern Eubanks Well No. 3. This well is located in Unit K of Section 14, T-21-S, R-37-E, NMPM, Lea County, New Mexico.

It is our intention to abide by the 20-day waiting period prescribed in the Commission regulations for the handling of multiple completion applications under administrative procedure. However, we shall be pleased to answer any question you may have regarding this application.

Yours very truly,

Markham, Cone & Redfern

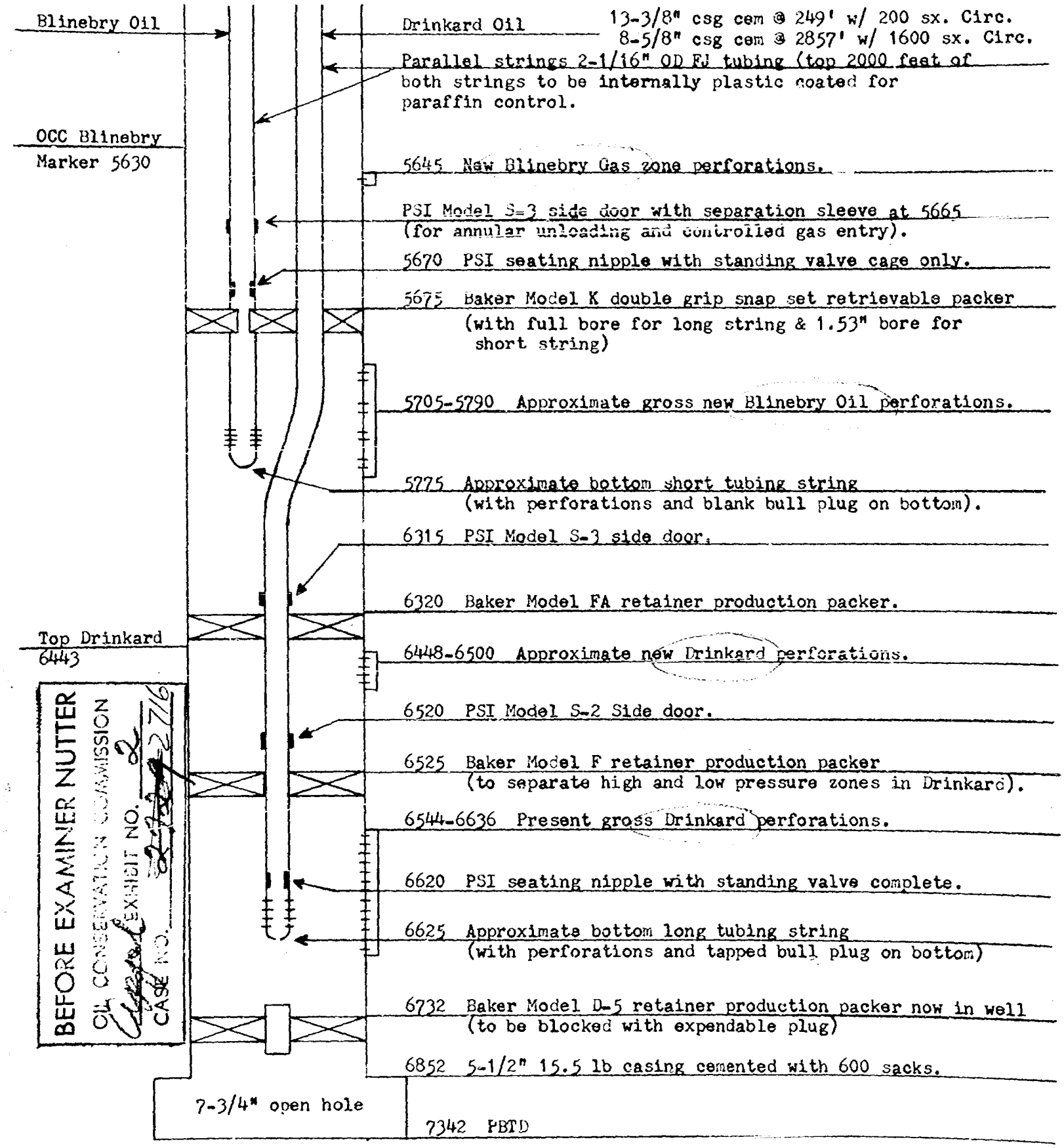
By L. O. Storm
L. O. Storm, Agent

cc: Conservation Commission

Attachments:
Letter to OCC
Application Form
Diagrammatic Sketch
Lease & Location Plat

NM 2716

Markham, Cone & Redfern Eubanks No. 3
NE SW Sec. 14, T-21-S, R-37-E, Lea County, New Mexico
Diagrammatic Sketch of Down-hole Equipment For Dual Completion
Blinebry Oil and Drinkard Pools



Date	Cum. Oil Bbl.	GOR Cu. Ft./Bbl.
1/25/60	270	1,089
2/17/60	1,195	687
3/18/60	2,638	676
5/31/60	6,249	1,024
10/ 2/60	11,711	866
3/22/61	19,237	785
5/ 4/61	23,086	727
10/16/61	28,644	796
4/10/62	36,983	1,690
5/ 9/62	38,340	1,205
10/21/62	45,850	1,615

Markham, Cone & Redfern
Eubanks Well No. 4
Unit N, Sec. 14, T-21-S, R-37-E
Lea County, New Mexico

Plat of Blinebry Oil Pool
Gas-Oil Ratio vs Cumulative Oil Prod.

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 4
CASE NO. 2729

Blinebry Oil Pool limiting gas-oil ratio 6,000:1

Gas-Oil Ratio, Cubic Feet/Barrel

Cumulative Oil Production in Thousands of Barrels

EXHIBIT NO.

Case 2716:
Application for parallel strings dual completion in Blinebry Oil and Drinkard Pools,
Markham, Cone & Redfern
Eubanks Well No. 3

RESIDENCE PHONE
SHERWOOD 4-8173

OFFICE PHONE
PORTER 3-7329

J. R. CONE
ROOM 1706 - GREAT PLAINS LIFE BLDG.
LUBBOCK, TEXAS

January 6, 1962

Mr. Daniel S. Nutter
Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Dear Mr. Nutter:

Enclosed for your information is the most recent catalog of PSI Division Baker Oil Tools, Inc. You will find descriptive information on the PSI Type "S" Sliding Sleeve and its accessory Type "SYE" Separation Sleeve commencing on Page 6.

These are the PSI tools referred to in Case 2716, Application of Markham, Cone & Redfern for parallel tubing strings dual completion of their Eubanks Well No. 3.

You will note from the tabulated data on Page 8 of the catalog that, for 2 1/16-inch tubing, the Type S Sliding Sleeve is available in four different sizes. Each size has a different internal bore so as to receive the appropriate Type "SYE" sleeve. Thus, where it is desired to provide more than one side door in one tubing string, these tools provide the desired flexibility.

The "SYE" Separation Sleeve may be used to seal off a leaking S Sleeve; or, the mandrel of the SYE sleeve may be drilled so as to develop the equivalent of a side door choke. This latter is the application desired for the PSI assembly in the stub or Blinebry Oil tubing string for Eubanks No. 3 and shown on Exhibit No. 2, Case 2716.

We hope that the foregoing comments and the enclosed catalog will answer any questions you may have had on the PSI Sleeves or "side doors" referred to in Case 2716.

Yours very truly,

L. O. Storm

cc: OCC, Hobbs
J. R. Cone
L. C. White