

case 3230. Application of HARRY
for amendment of R-2433 which
authorized triple completion.

2830

him, Transcript,
Exhib. Etc.

HUMBLE OIL & REF. CO
N.M. STATE "S"-24

13 3/8 @ 295'
CEM. To Surf.
9 5/8 @ 2645'
CEM. To 1600'

3

Casing:

3-Strings of 2 7/8 O.D.
NON. EUE J-55 with
Beveled Couplings

Centralizers:

101-Positive Type ON
all 3 strings From
7405' to 5365'

20-Positive Type ON
all 3 strings From
3900' to 3600'

Cementing:

First Stage - Down both
Long strings with 100 sf.
Low Fluid Loss Cement followed
by 220 sf Incon Neat.
Reciprocated both Long
strings while cementing.
Circulated down through
short string 4 hours.

Second Stage - Down
Short string with 1350
sf. Low Fluid Loss Cement.
Reciprocated short
string while cementing.

Top Cement - 1845'

Δ = Radio Active Collars

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 3
2830
CASE NO.

STRING NO. 3

STRING NO. 2

STRING NO. 1

3555'

5976'

5570'

6425'
6429'
6430'
6438'

6506'

6152'

6030'
6036'

6111'

7404'

7405'

T.D. - 7411'

QUEEN

GRAYBURG

SAN
ANDRES

GLORIETA

BLINEBRY

TUBB

DRINKARD

ABO

SANDSTONE (AGE UNKNOWN)

GRANITE WASH

DIORITE

3417'

3656'

3830'

5000'

5450'

5917'

6246'

6488'

7270'

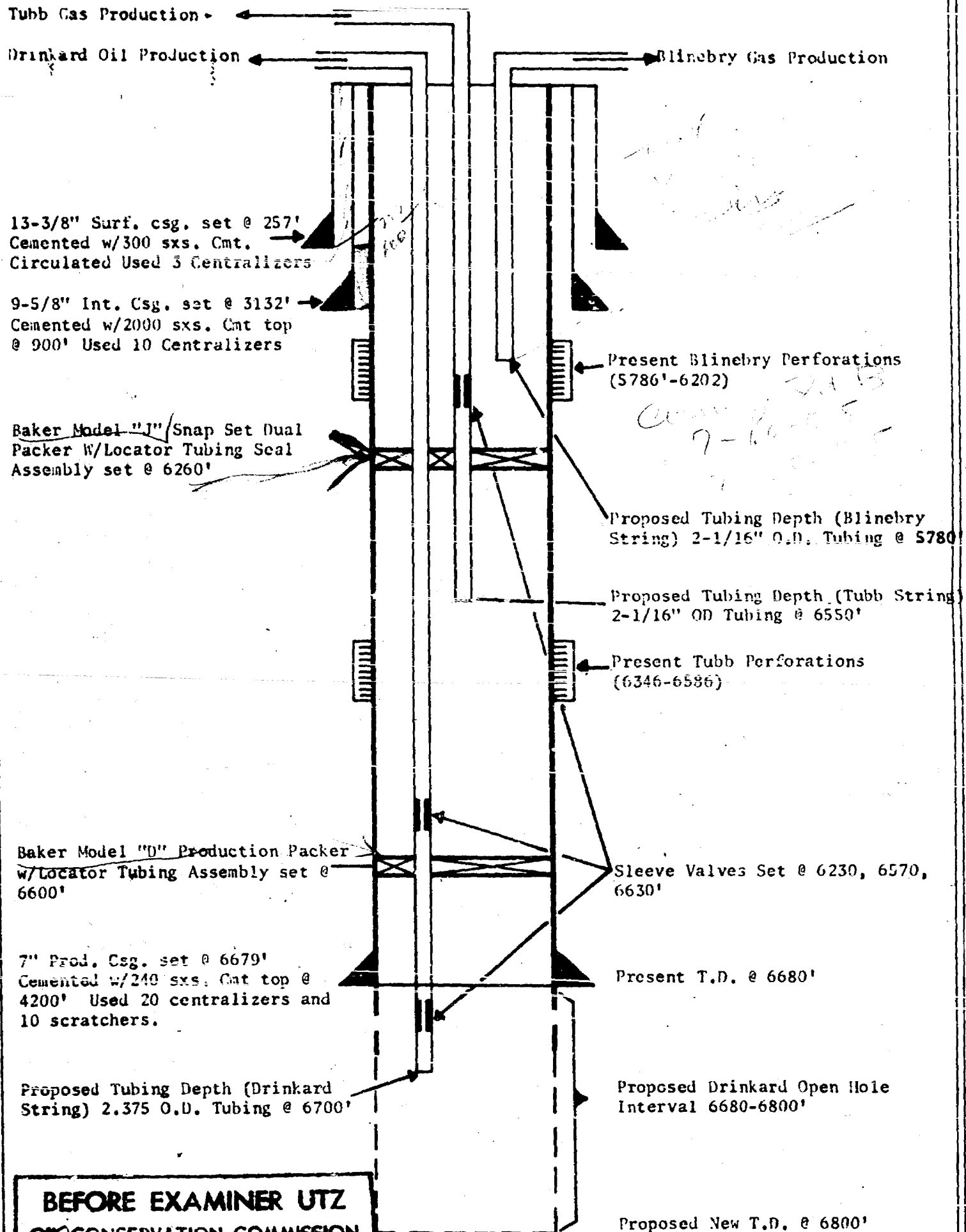
7324'

7350'

CONTINENTAL OIL COMPANY

Proposed Method of Triple Completion

Warren Unit No. 26



BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 2
CASE NO. 2878

DRAFT

JMD/esr
June 10, 1963

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:

APPLICATION OF HUMBLE OIL & REFINING
COMPANY FOR A TRIPLE COMPLETION, LEA
COUNTY, NEW MEXICO.

CASE No. 2830

Order No. R- 2433-A

6-10-63

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on June 5, 1963, at Santa Fe, New Mexico, before Elvis A. Utz, 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 day of June, 1963, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, 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 Order No. R-2433 authorized the triple completion (tubingless) of applicant's State "S" Well No. 24, located in Unit J of Section 2, Township 22 South, Range 37 East, NMDM, to produce oil from the Blinebry, Drinkard, and Abo formations through parallel strings of 2 7/8-inch casing cemented in a common well bore.
- (3) That the applicant now proposes to substitute the Granite Wash for the Blinebry formation in Order No. R-2433.
- (4) That the mechanics of the proposed Drinkard, Abo, and Granite Wash triple completion are feasible and in accord with good conservation practices.
- (5) That approval of the subject application will prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That Order No. R-2433 is hereby amended by substituting the Granite Wash formation in lieu of the Blinebry Oil Pool in all places wherein reference is made to the Blinebry Oil Pool in said order.

(2) That the ~~third~~ proviso to Paragraph 1 on Page 2 of Order No. R-2433 is hereby amended to read in its entirety as follows:

PROVIDED FURTHER, That the applicant shall take zone segregation tests upon completion and annually thereafter during the Gas-Oil Ratio Test Period for the Granite Wash formation.

(3) 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.

HUMBLE OIL & REFINING COMPANY
HUMBLE DIVISION

MAY 13 1963

Box 2347
Hobbs, New Mexico
May 13, 1963

Check 2830

Mr. A. L. Porter, Jr., Secretary-Director
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Dear Mr. Porter:

In Order No. 2433, Case No. 2756, dated February 27, 1963, Humble Oil & Refining Company was authorized to complete its State "S" Well No. 24, (A Field Wildcat) located in Unit J of Section 2, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico, as a triple completion (tubingless) to produce oil from Blinbry and Drinkard Oil Pools and an Undesignated Abo oil pool through parallel strings of 2-7/8 inch casing cemented in a common well bore.

Due to pays and shows encountered while drilling, this well was drilled to the Granite. We are planning to complete this well in the Granite Wash, Abo, and the Drinkard Horizons. Since we will not be able to get on the Docket for a Hearing to amend the above order before June 5, 1963, it is requested that Humble's New Mexico State S-24 Granite Wash Horizon be authorized a temporary allowance upon a successful completion in order that testing and evaluation will not be delayed until the case can be placed on the Docket.

Respectfully yours,

HUMBLE OIL & REFINING COMPANY

5/16/63

*Called Al Carpenter
Humble, Hobbs, today &
DFL/akf advised him this*

R. R. Alworth
R. R. Alworth
District Superintendent

*Temporary triple could not be granted.
Am sending memo to Joe Ramey to
approve an allowance for the Drinkard
and Abo zones but none for the
Granite Wash until approved after the
June 5 hearing. Aker*

Case 2830

HUMBLE OIL & REFINING COMPANY
HEAD OFFICE OCC

1963 MAY 15 PM 1:13

Hobbs, New Mexico
May 15, 1963

Re: Amendment of Order No. 2433
Case No. 2756, dated February 27,
1963. Triple tubingless completion
New Mexico State "S"-24 Field
Wildest located in Unit J, Sec. 2,
T-22-S, R-37-E, NMPM, Lea County,
New Mexico

Mr. A. L. Porter, Jr., Secretary-Director
New Mexico Oil Conservation Commission
Post Office Box 871
Santa Fe, New Mexico

Humble Oil and Refining Company requests amendment to Order No. 2433,
Case No. 2756 dated February 27, 1963. This order (No. 2433) auth-
orized Humble to complete its New Mexico State "S"-24 Unit J, Section 2,
Township 22 South, Range 37 East as a triple completion (tubingless) to
produce oil from the Blinbry, Drinkard Oil Pools and an undesignated
Abo oil pool through parallel strings of 2-7/8-inch casing cemented in
a common well bore.

This well was drilled to Granite due to additional pay zones and shows
encountered while coring. Humble plans to complete this well in the
Granite Wash, Abo and Drinkard horizons; therefore, it is requested
that Order No. 2433 be amended to reflect the changes in completion
intervals from Blinbry, Drinkard and Abo to Drinkard, Abo and Granite
Wash.

Please place this request for amendment on the June 5, 1963 docket.

Yours very truly,

HUMBLE OIL & REFINING COMPANY

R. R. Alworth

R. R. Alworth

ARB/mcb
cc: Offset Operators,
List Attached

DOCKET MAILED

Date *5/23/63*
[Signature]

HUMBLE OIL & REFINING COMPANY

Cities Service Petroleum Company
Box 97
Hobbs, New Mexico

Gulf Oil Corporation
Box 2167
Hobbs, New Mexico

Marathon Oil Company
Box 2107
Hobbs, New Mexico

Sinclair Oil Company
520 East Broadway
Hobbs, New Mexico

Sunray Mid-Continent Oil Company
Box 128
Hobbs, New Mexico

Texas Pacific Coal and Oil Company
Box 1683
Hobbs, New Mexico

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. 2756
Order No. R-2433

APPLICATION OF HUMBLE OIL & REFINING
COMPANY FOR A TRIPLE 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 February 21, 1963, at Santa Fe, New Mexico, before Elvis A. Utz, 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 27th day of February, 1963, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, 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, Humble Oil & Refining Company, seeks authority to complete its State "S" Well No. 24, located in Unit J of Section 2, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico, as a triple completion (tubingless) to produce oil from the Blinbry and Drinkard Oil Pools and an undesignated Abo oil pool through parallel strings of 2 7/8-inch casing cemented in a common well bore.

(3) That the applicant proposes to perforate the lower portion of the Abo formation and subsequently to perforate the upper portion of the Abo formation if production is not obtained at the lower interval.

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

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

(6) That some uncertainty exists as to the proper designation of the common source of supply in the upper portion of the Abo formation in the subject area.

CASE No. 2756
Order No. R-2433

(7) That the applicant should not be assigned an allowable for any production obtained from that portion of the Abo formation above the point depicted at a depth of 6960 feet on the electric log of the Amerada Petroleum Corporation Hare Well No. 6, located in Unit L, Section 33, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, until the proper common source of supply for such production has been designated by the Commission after notice and hearing.

IT IS THEREFORE ORDERED:

(1) That the applicant, Humble Oil & Refining Company, is hereby authorized to complete its State "S" Well No. 24, located in Unit J of Section 2, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico, as a triple completion (tubingless) to ~~produce oil from the Blinberry and Drinkard Oil Pools and an~~ *include Granite Wash.* undesignated Abo oil pool through parallel strings of 2 7/8-inch casing cemented in a common well bore.

PROVIDED HOWEVER, That the applicant shall not be assigned an allowable for any production obtained from that portion of the Abo formation above the point depicted at a depth of 6960 feet on the electric log of the Amerada Petroleum Corporation Hare Well No. 6, located in Unit L, Section 33, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, until the proper common source of supply for such production has been designated by the Commission after notice and hearing.

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

PROVIDED FURTHER, That the applicant shall take zone segregation tests upon completion and annually thereafter during the Gas-Oil Ratio Test Period for the Abo formation.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

JACK M. CAMPBELL, Chairman

S E A L

E. S. WALKER, Member

esr/

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

No. 15-53

DOCKET: EXAMINER HEARING - WEDNESDAY - JUNE 5, 1963

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

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

- CASE 2816: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit C. T. Robertson and all other interested parties to appear and show cause why the Honolulu State "D" Wells Nos. 4 and 5 in Units G and H, respectively, of Section 11, Township 11 South, Range 27 East, Chaves County, New Mexico, should not be plugged in accordance with a Commission-approved plugging program.
- CASE 2827: Application of Texaco Inc. for a triple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the triple completion (combination) of its State "O" Well No. 17 located in Unit N of Section 36, Township 17 South, Range 34 East, Vacuum Field, Lea County, New Mexico, to produce oil from the Wolfcamp and the Pennsylvanian formations through parallel strings of 2 7/8 inch casing and from the Devonian formation through 1 1/2 inch tubing installed within 3 1/2 inch casing, all casing strings to be cemented in a common well bore.
- CASE 2828: Application of Continental Oil Company for a triple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the triple completion (conventional) of its Warren Unit Well No. 26, located in Unit M of Section 27, Township 20 South, Range 38 East, Lea County, New Mexico, to produce gas from the Warren Blinbry Gas Pool and from the Warren-Tubb Gas Pool and oil from the Warren-Drinkard Pool through parallel strings of tubing.
- CASE 2829: Application of Amerada Petroleum Corporation for a dual completion, and for commingling authority, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the dual completion (conventional) of its S. E. Anderson Well No. 1, located in Unit B of Section 30, Township 9 South, Range 35 East, Lea County, New Mexico, to produce oil from the Bough "C" zone of the Pennsylvanian formation and from the Devonian formation through parallel strings of tubing. Applicant further seeks authority to commingle said pools on said lease by use of the subtraction method.

Docket No. 16-63

- CASE 2830: Application of Humble Oil & Refining Company for a triple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an amendment to Order No. R-2433, which order authorized the triple completion (tubingless), of applicant's State "S" Well No. 24 located in Unit J, Section 2, Township 22 South, Range 37 East, to produce oil from the Blinebry, Drinkard, and Abo formations through parallel strings of 2 7/8 inch casing cemented in a common well bore. Applicant now desires to substitute the Granite Wash for the Blinebry formation in said Order No. R-2433.
- CASE 2831: Application of Pan American Petroleum Corporation for an exception to Rules 15 (A) and 15 (B) of the general Rules and Regulations governing prorated gas pools in Northwestern New Mexico. Applicant, in the above-styled cause, seeks to suspend the shut-in provisions of Rules 15(A) and 15(B) of Order No. R-1670, as amended, until September 1, 1963, for the Gallegos Canyon Unit Wells No. 96, 107, 109, 110, and 111 located in Sections 18, 19 and 20, Township 29 North, Range 12 West, and the Gallegos Canyon Unit Wells No. 102, 106, and 108, located in Sections 13 and 24, Township 29 North, Range 13 West, Basin Dakota Pool, San Juan County, New Mexico.
- CASE 2554: (Reopened)
In the matter of Case 2554 being reopened pursuant to the provisions of Order No. R-2253, which order established temporary 80-acre proration units for the South Lane Pennsylvanian Pool, Lea County, New Mexico, for a period of one year. All interested parties may appear and show cause why said pool should not be developed on 40-acre proration units.
- CASE 2820: (Continued from the May 22, 1963 examiner hearing)
Application of Texas Pacific Coal & Oil Company for a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 320-acre non-standard gas proration unit comprising the NE/4 of Section 20 and the NW/4 of Section 21, Township 23-South, Range 36 East, Jalmat Gas Pool, Lea County, New Mexico, to be dedicated to its State "A" A/c-1 Well No. 6, located 2310 feet from the North line and 1650 feet from the West line of said Section 21.
- CASE 2821: (Continued from the May 22, 1963 examiner hearing)
Application of D. W. Falls, Inc. for an extension of Order

No. R-2213, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks the extension of Order No. R-2213, which order assigned a temporary deliverability for allowable purposes to applicant's Federal Well No. 2-11, located in Unit O of Section 11, Township 28 North, Range 13 West, Basin-Dakota Gas Pool, San Juan County, New Mexico.

CASE 2824:

(Continued from the May 22, 1963 examiner hearing)
Application of Texaco Inc. for a triple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the triple completion (combination) of its State "O" Well No. 14, located in Unit J of Section 36, Township 17 South, Range 34 East, Lea County, New Mexico, to produce oil from the North Vacuum-Abo and the Vacuum-Wolfcamp Pools through parallel strings of 2 7/8 inch casing and from the Vacuum-Devonian Pool through 1 1/2 inch tubing installed within 3 1/2 inch casing, all casing strings to be cemented in a common well bore.

CASE 2826:

(Continued from the May 22, 1963 examiner hearing)

Application of Texaco Inc. for a triple completion & for certain administrative procedures, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the triple completion (combination) of its State "L" Well No. 6 located in Unit B of Section 1, Township 18 South, Range 34 East, Lea County, New Mexico, to produce oil from the Vacuum Wolfcamp Pool and an undesignated Pennsylvanian Pool through parallel strings of 2 7/8 inch casing and from the Vacuum-Devonian Pool through 1 1/2 inch tubing installed within 3 1/2 inch casing, all casing strings to be cemented in a common well bore. Applicant further seeks a procedure whereby 1 1/2 inch tubing for Devonian production in this field may be approved administratively.

Case 2830

Heard. 6-5-63

Rec. 6-7-63

1. Grant Humble permission to change order R 2833 to provide for completion in the Humble Wash (Undesignated) rather than the Blinney. No change otherwise.

Thos A. Duff

P.S. The area from 285 ft to 1600 ft is open behind the casing on this well. Included in this zone is the Santa Rosa S.S. which is water bearing in most areas and the Restless Salada which is quite permeable. If the Santa Rosa Water is potable in the area it seems that it should be prevented from going in a thief zone.

Thos A. Duff

GOVERNOR
JACK M. CAMPBELL
CHAIRMAN

State of New Mexico
Oil Conservation Commission



LAND COMMISSIONER
E. B. JOHNNY WALKER
MEMBER

P. O. BOX 571
SANTA FE

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

June 11, 1963

Mr. Howard Bratton
Hervey, Dow & Hinkle
Attorneys at Law
Box 10
Roswell, New Mexico

Re: Case No. 2830
Order No. R-2433-A
Applicant:
Humble Oil & Refining Company

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

ix/

Carbon copy of order also sent to:

Hobbs OCC x

Artesia OCC

Astec OCC

OTHER

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE No. 2830
Order No. R-2433-A

APPLICATION OF HUMBLE OIL & REFINING
COMPANY FOR A TRIPLE 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 June 5, 1963, at Santa Fe, New Mexico, before Elvis A. Utz, 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 11th day of June, 1963, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, 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 Order No. R-2433 authorized the triple completion (tubingless) of applicant's State "S" Well No. 24, located in Unit J of Section 2, Township 22 South, Range 37 East, NMPM, to produce oil from the Blinbry, Drinkard, and Abo formations through parallel strings of 2 7/8-inch casing cemented in a common well bore.

(3) That the applicant now proposes to substitute the Granite Wash for the Blinbry formation in Order No. R-2433.

(4) That the mechanics of the proposed Drinkard, Abo, and Granite Wash triple completion are feasible and in accord with good conservation practices.

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

-2-

CASE No. 2230

Order No. R-2433-A

IT IS THEREFORE ORDERED:

(1) That Order No. R-2433 is hereby amended by substituting the Granite Wash formation in lieu of the Blinbry Oil Pool in all places wherein reference is made to the Blinbry Oil Pool in said order.

(2) That the third proviso to Paragraph 1 on Page 2 of Order No. R-2433 is hereby amended to read in its entirety as follows:

PROVIDED FURTHER, That the applicant shall take some segregation tests upon completion and annually thereafter during the Gas-Oil Ratio Test Period for the Granite Wash formation.

(3) 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

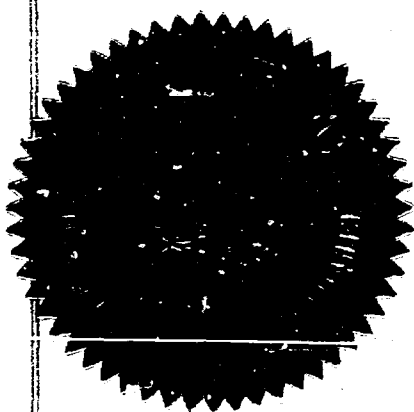
JACK M. CAMPBELL, Chairman

E. S. Walker

E. S. WALKER, Member

A. L. Porter, Jr.

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



esx/

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
June 5, 1963

EXAMINER HEARING

IN THE MATTER OF:

Application of Humble Oil & Refining Company for
a triple completion, Lea County, New Mexico.
Applicant, in the above-styled cause, seeks an
amendment to Order No. R-2433, which order
authorized the triple completion (tubingless),
of applicant's State "S" Well No. 24 located in
Unit J, Section 2, Township 22 South, Range 37
East, to produce oil from the Blinebry, Drinkard,
and Abo formations through parallel strings of
2-7/8 inch casing cemented in a common well bore.
Applicant now desires to substitute the Granite
Wash for the Blinebry formation in said Order
No. R-2433.

CASE 2830

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case 2830.

MR. DURRETT: Application of Humble Oil and Refining
Company for a triple completion, Lea County, New Mexico.

MR. BRATTON: Howard Bratton appearing on behalf of the
Applicant.

MR. UTZ: Are there other appearances? Swear the wit-
ness, please.

(Witness sworn.)

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

DEARNLEY-MEYER REPORTING SERVICE, Inc.

FARGUISON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691



JAMES WHITTEN

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

DIRECT EXAMINATION

BY MR. BRATTON:

Q Will you state your name, by whom you are employed and in what capacity?

A My name is James Whitten, employed by Humble Refining Company as a geologist.

Q Is that in the Hobbs office?

A That is correct.

Q Have you previously testified before this Commission as an expert witness?

A I have.

Q Are you familiar with the matters in Case 2830 and the area covered by the application?

A I am.

Q What is Humble requesting in this application, Mr. Whitten?

A We have received approval to complete a triple in this well, and upon drilling deeper than we anticipated because of shows that we encountered, we kept going deeper and we discovered a new pay. We wish now to substitute, rather than complete in the Blinbry formation we would rather substitute to complete in the Granite Wash, which is the new pay we discovered.

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3871

ALBUQUERQUE, N. M.
PHONE 243-6691



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1102

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-8691

Q We had originally asked for and obtained approval to complete in the Blinebry, the Drinkard, and the Abo. Now we would like to triple complete in the Drinkard, the Abo, and the Granite Wash, is that correct?

A That is correct.

Q Now referring to your Exhibit No. 1, does that show the location of the well, the subject well?

A This does, together with the legend, using symbols showing the producing intervals in the other wells surrounding this particular lease.

Q This lease and this well are in the Drinkard Pool, is that correct?

A Yes, that is correct.

Q And is this well also in the Wantz-Abo Pool?

A It is.

Q That was recently extended, the Wantz-Abo?

A That is correct, by Order R-2485.

Q Now the Granite Wash completion that we're talking about is a new completion in a new reservoir?

A Yes, sir.

Q Is there anything else you care to state about Exhibit No. 1?

A No, sir.

Q Actually the bulk of the Wantz-Abo is to the north and west of this map, is that not correct?



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 583-3971

ALBUQUERQUE, N. M.
PHONE 243-6691

A That is correct.

Q Now turn to your Exhibit No. 2, Mr. Whitten. This is your log of the well, is that correct?

A This is one of the logs of the well. We ran several logs, and I would refer the Commission to pay particular attention to the detailed section where most of the information is. I have labeled the formation tops only on the 2-inch scale, but on the 5-inch scale I've put more information. I would refer you to that section, the bottom of the hole.

Q Now, start with your Drinkard; where does it start on here?

A The top of the Drinkard is at 6245. We are completing or going to attempt to complete in the zone that's shown and in the perforated interval 6425 to 29, and 6436 to 38. This is in the Drinkard Pool. We have other Drinkard wells on this lease.

Q Immediately below that lies your Wantz-Abo, is that correct?

A The top of the Abo is at 6488 and we are attempting now to complete in the perforations 6880 to 86.

Q What is your information shown on the right-hand side of your log here?

A The information I will explain on the right-hand side is the DST's that were taken as the well was being drilled, and on the left is the core interval, core number, and we continuously cored in the Abo from 6600 to T.D. The information is, I think,



self-explanatory. I will go over the abbreviations I used if anyone desires.

Q Please do.

A For instance, in that DST from 6842 to 6895, this tool open 120 minutes, gas to surface in 6 minutes; initial 60-minute shut-in pressure, 2839 pounds, final 60-minutes shut-in pressure, 2797 pounds; initial flow 84 pounds, final flow 210 pounds; recovery, 90 feet of heavy oil and gas-cut mud plus 750 feet of free oil.

Q Go further on down your log, Mr. Whitten, and explain your formation as you go down. You are in the Abo there?

A We top the Abo at 6488; as I mentioned, we drilled, encountered shows through the -- mainly through the DST intervals there are some shows that we recovered in the cores that we didn't test because we didn't think that there was sufficient porosity to test until we got to 7270. There we encountered a change in lithology. We went from a typical dolomite, shaly dolomite section and lime section of the Abo into a sandstone, a shaly sandstone, I should say. This sandstone, I have called it a sandstone although there is some lime and dolomite at the very top. I cannot determine the age. I only know that it's pre-Abo. We encountered this sandstone and cored on to 7324 when we encountered a Granite Wash, also age unknown; and coring further, at 7350 on this log we encountered a diorit which was a basic black igneous rock, and we bottom up in this diorit. We never

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did actually reach granite.

Q Do you have with you some of the cores of this Granite Wash and your diorit?

A These are cores in this well in the Granite Wash. One footage is a cored interval which is a drilled interval, and the other we ran a core gamma on the core so that we could correlate with the logs, and we also have the log interval printed on that core.

Q Explain this core to me. Does it have portions of granite in it?

A Yes. You can see, of course, the first exhibit, the one that you have there in your hand, Mr. Durrett, you can see the large piece of granite embedded in the sand shale complex; actually there's pieces of granite all the way through it. The particular core that Mr. Utz has, there is actually some of the oil staining in the core and you can see the porosity in that particular area.

MR. UTZ: This is actually wetted granite?

A Yes, sir.

Q (By Mr. Bratton) Mr. Whitten, in your opinion is this Granite Wash area shown on this log, is this a separate reservoir from the Abo?

A Yes, sir, it is.

Q Do you have a sample of that diorit?

A Yes, I have this one particular sample.



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Q Which you encountered immediately below the Granite Wash?

A Right. It's actually a rock composed mainly of plagioclase feldspars with augite and hornblend, and you can see some powder right in it.

Q So that in your opinion, Mr. Whitten, the three reservoirs in which you desire to complete here are separate and distinct reservoirs?

A Yes, sir.

Q Is there any further information on the log here down at the bottom that you would like to refer to?

A Yes, sir, I would. We have perforated the section as shown, 7327 to 7346, and after a 4,000 gallon sand-oil frac, we potentialed this particular zone for 190 barrels of oil per day on a 12/64-inch choke on 24-hour test. GOR was 1,110; corrected gravity, 42 degrees.

Q And your pressures as shown on there?

A Yes, flowing tubing pressure of 690 psi.

Q Is there anything else you care to point out in connection with Exhibit No. 2?

A No, sir.

Q Turn to your Exhibit No. 3, Mr. Whitten. Is that your proposed method of completion of this triple completion?

A That is correct. It is the three strings, 2-7/8 tubing set in a common well bore.



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Q That reflects the various formations from the Queen down through this Granite Wash, is that correct?

A Down through the diorit, yes, sir.

Q Now explain if you will the actual mechanics of the completion and your cementing program.

A We ran these three strings; as far as centralizers is concerned, we have 101 positive type centralizers on the pipe. As far as our cementing, our first stage we cemented down the string one and two with 100 sacks of Low Fluid Loss cement, followed by 200 sacks of Incor Neat cement. We reciprocated both long strings while we were cementing, and at the same time circulated down string number three with brine. We anticipated the cement to come back up above the bottom of the string number three, which it did, and we circulated out some cement from this string.

On the second stage of cementing, we cemented down the third string with 1350 sacks of low fluid loss cement, reciprocating the short string while cementing; checking the top of the cement by temperature survey we determined the top of the cement to be 1845.

Q Then your surface program is shown at the upper right, is that correct?

A Right. We have 13-3/8ths inch set at 295 feet, circulated to surface. We then set 9-5/8ths inch casing at 2645 and this is cemented to 1600 feet.



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Q Your perforated intervals are shown on here in the three strings?

A That is correct.

Q Would you explain why you ran the two strings, one and two, to total depth, Mr. Whitten?

A Yes, sir. We are anticipating that there is a possibility of having difficulty in the 2-7/8ths inch tubing and because of the short distance below the Abo that we have to set this other string, we have decided to set two strings for precaution only. This also, another reason would be to increase our volume at the bottom during cementing, increase our annular flow, our annular velocity, and therefore create turbulence and help us to clean the walls of the hole with mud cake and sample.

Q So you just ran the extra 600 feet, one, to get a better cement job; and, two, as insurance if you do run into any troubles in the Granite Wash in the 2-7/8ths?

A That is true.

Q Is there anything else you care to explain in connection with this exhibit?

A Well, these -- if you might wonder what they call these hot collars, radioactive collars are just to help us locate our strings when we perforate. That's the only thing that I think of that has been unexplained on this exhibit.

Q The completions are in the three separate formations, is that correct?



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A That is correct.

Q In your opinion, Mr. Whitten, will the granting of this application prevent waste and protect correlative rights?

A Yes.

Q Were Exhibits 1 through 3 prepared by you or under your supervision?

A Yes.

Q Anything else you care to state in connection with this application?

A No.

MR. BRATTON: We offer Applicant's Exhibits 1 through 3, and we have no further questions at this time.

MR. UTZ: Without objection, Exhibits 1 through 3 will be entered into the record.

(Whereupon, Applicant's Exhibits Nos. 1, 2, and 3 received in evidence.)

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Whitten, your cementing of your three 2-7/8ths strings comes back up into the 9-5/8ths, does it not?

A That is correct.

Q The 9-5/8ths has cement to 1600, the bottom of your 13-3/8ths surface is 295, which leaves about 1305 feet of open hole behind the casing, is that correct?

A That is correct.



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Q What is in this area in the way of water or production?

A From 295 to approximately 1100. Well, you can see it on the detailed log, 1115 feet is the Santa Rosa formation; from 1115 feet to 1202 feet is the Rustler; from 1202 feet to 2610 -- I could be wrong about this, 2610 is approximate top -- no, I take that back, 2480 will probably be the bottom of our salt section.

Q Do any of these zones produce water or oil or gas?

A None of them produce oil and actually the Santa Rosa is used in some areas in Lea County, I don't know, how far from this well, for irrigation purposes.

Q You don't know whether it's productive of water in this area or not?

A No, sir, I don't. I understand it is water-bearing, but I don't know of any wells, water wells completed in it.

Q If there is water in the Santa Rosa, wouldn't it be reasonable to assume that this water would escape from the Santa Rosa and go into other formations in this open hole zone?

A I don't know. It's common practice in this particular area, I know. I cite, oh, 30 some odd wells two or three miles to the southwest in which we brought cement up in the salt section and didn't bring it all the way up through the Rustler. The reason for this is that the salt section is extremely cavernous after it has been drilled, and as such takes a very large amount of cement; and we attempted, at one time, to bring the



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cement to surface through this salt section, but I don't recall how many sacks we used. It was a tremendous amount. Normal practice in the area, I'll say this, is to bring the cement up into the salt and not all the way to the surface.

Q What would be the base of the Santa Rosa in this area, the top of the Rustler?

A Well, the Santa Rosa as such is a sandstone, a shaly sandstone. I think the probable equivalent sand section would be around 970 feet, bottom of the sandy section would be around 970 feet, below there will be shale. Of course, it's pretty hard to determine, I've tried from samples to determine where the sand, the major sandy section is; and it's very difficult because the sandy shale are common throughout this particular formation.

Q Would there be any particular difficulty in setting casing down to, say, 1,000 feet, and circulating?

A I don't think so.

Q The order that you're wanting to amend or supersede,-- which is your desire, an amendment or superseding order to R-2433?

MR. BRATTON: I don't believe we care, Mr. Examiner, that would be up to the Commission.

MR. UTZ: Any other questions of the witness?

MR. DURRETT: Yes, sir.

BY MR. DURRETT:

Q Mr. Whitten, just one or two questions. Will it be more economic for your company to triply complete as proposed in



this application than it would be to drill separate wells?

A Yes, it would.

Q And due to the economic limits of production, would you therefore feel that you would recover oil if this application was approved that would otherwise be left in the ground?

A That is true.

MR. DURRETT: Thank you. That's all.

MR. UTZ: Any other questions? The witness may be excused.

(Witness excused.)

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

We'll take a short recess.

(Whereupon, a short recess was taken.)

* * *

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STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) ss

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 Hearing 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 11th day of June, 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. 2834 heard by me on June 5, 1963.

[Signature]
New Mexico Oil Conservation Commission

