

CASE 2977: Application of Cities
Service for the dual completion
of its Brunson C Well No. 4.

CASE No.
71

Application,
TRANSCRIPTS,
SMALL Exhibits
ETC.

DRAFT

JMD/esr

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. 2977

Order No. R- 2649

APPLICATION OF CITIES SERVICE OIL
COMPANY FOR A DUAL 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 5, 1964, at Santa Fe, New Mexico, before Examiner 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 day of February, 1964, the Commission, a quorum being present, having considered the ~~application, the~~ testimony, the record, ~~and the~~ and the recommendations of the Examiner, ~~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, Cities Service Oil Company, seeks authority to complete its Brunson C Well No. 4, located in Unit J of Section 3, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico, as a dual completion (conventional) to produce oil from the Blinebry and Drinkard Oil Pools through parallel strings of 1 1/2-inch and 2 1/16-inch tubing, respectively, with separation of zones by a packer set at approximately 6201 feet.

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

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

IT IS THEREFORE ORDERED:

(1) That the applicant, Cities Service Oil Company, is hereby authorized to complete its Brunson C Well No. 4, located in Unit J of Section 3, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico, as a dual completion (conventional) to produce oil from the Blinebry and Drinkard Oil Pools through parallel strings of 1 1/2-inch and 2 1/16-inch tubing, respectively, with separation of zones by a packer set at approximately 6201 feet;

PROVIDED HOWEVER, 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;

PROVIDED FURTHER, 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.

(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.

DOCKET: EXAMINER HEARING - WEDNESDAY - FEBRUARY 5, 1964

9:00 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, Alternate Examiner:

- CASE 2976: Application of Midland Production Corporation for directional drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to directionally drill its Hill & Meeker Phillips Cryer Well No. 34-2 located 2310 feet from the South and West lines of Section 34, Township 10 South, Range 36 East, to bottom in the Devonian formation 1980 feet from the North and West lines of said Section 34, Lea County, New Mexico.
- CASE 2977: Application of Cities Service Oil Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the dual completion (conventional) of its Brunson C Well No. 4, located in Unit J of Section 3, Township 22 South, Range 37 East, Lea County, New Mexico, to produce oil from the Blinbry and Drinkard Oil Pools through parallel strings of 1 1/2 inch and 2 1/16 inch tubing, respectively.
- CASE 2978: Application of Union Oil Company of California for a waterflood expansion, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its South Caprock Queen Unit Waterflood Project, Caprock Queen Pool, Chaves County, New Mexico, by the conversion of nine additional wells located in Sections 28, 29, and 33, Township 14 South, Range 31 East, and Sections 3 and 4, Township 15 South, Range 31 East, to water injection.
- CASE 2979: Application of Pan American Petroleum Corporation for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Abo formation through its U. S. A. Malco Refineries 'G' Well No. 13, located 2302 feet from the South line and 1650 feet from the West line of Section 10, Township 18 South, Range 27 East, Empire Abo Pool, Eddy County, New Mexico.
- CASE 2980: Application of Pioneer Production Corporation for force-pooling and an unorthodox location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Basin-Dakota Pool underlying the W/2 of Section 15, Township 29

-2- Case 2980 continued from page 1

North, Range 13 West, and authorizing the drilling of a well for said unit at an unorthodox location 1625 feet from the South line and 1250 feet from the West line of said Section 15, Town of Farmington, San Juan County, New Mexico.

- CASE 2981: Application of Gulf Oil Corporation for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Northwest Eumont Unit Area comprising 2,760 acres, more or less, of State and fee lands in Township 19 South, Range 36 East, Lea County, New Mexico.
- CASE 2982: Application of Gulf Oil Corporation for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Eumont Gas Pool by the injection of water into the Queen formation through 15 wells in Sections 11, 14, 15, 22 and 23, Township 19 South, Range 36 East, Lea County, New Mexico.
- CASE 2983: Application of The Pure Oil Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Brinninstool Unit Area comprising 17,237 acres, more or less, of Federal and State lands in Townships 23 and 24 South, Ranges 32 and 33 East, Lea County, New Mexico.
- CASE 2984: Application of The Pure Oil Company and Continental Carbon Company to utilize natural gas in a carbon black plant, Lea County, New Mexico. Applicants, in the above-styled cause, seek authority to utilize approximately 7 MCF of Devonian gas per day in the Continental Carbon Company carbon black plant near Eunice, New Mexico, said gas to be produced from The Pure Oil Company Wilson Deep Unit Well No. 1, located in the SE/4 NW/4 of Section 13, Township 21 South, Range 34 East, Lea County, New Mexico.
- CASE 2985: Application of Shell Oil Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Bootleg Ridge Unit Area comprising 10,818 acres, more or less, of State and Federal lands in Townships 22 and 23 South, Ranges 32 and 33 East, Lea County, New Mexico.

-3-

CASE 2986: Application of Shell Oil Company to establish a GOR limit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of a special gas-oil ratio limitation of 5,000 cubic feet of gas for each barrel of oil produced in the Mesa-Queen Pool, Lea County, New Mexico.

CASE 2987: Application of Shell Oil Company for a waterflood project, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pilot waterflood project in the South Bitter Lake-San Andres Pool, by the injection of water into the San Andres formation through three wells at unorthodox locations in Sections 27 and 34, Township 10 South, Range 25 East, Chaves County, New Mexico.

CASE 2480 (Reopened):

In the matter of Case No. 2480 being reopened pursuant to the provisions of Order No. R-2182-A which continued for a period of one year the temporary 80-acre proration units established by Order No. R-2182, Henshaw-Wolfcamp Pool, Eddy County, New Mexico. All interested parties may appear and show cause why said pool should not be developed on 40-acre proration units.

CASE 2988: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit George E. Willett and all other interested parties to appear and show cause why the SDD Hare Well No. 7, located 600 feet from the South line and 1360 feet from the East line of Section 14, Township 29 North, Range 11 West, San Juan County, New Mexico, should not be plugged in accordance with a Commission-approved plugging program.

GOVERNOR
JACK M. CAMPBELL
CHAIRMAN

State of New Mexico
Oil Conservation Commission



P. O. BOX 871
SANTA FE

February 12, 1964

LAND COMMISSIONER
E. B. JOHNNY WALKER
MEMBER

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

Mr. Jason Kellahin
Kellahin & Fox
Attorneys at Law
Box 1769
Santa Fe, New Mexico

Re: Case No. 2977
Order No. R-2649
Applicant:
Cities Service

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

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. 2977
Order No. R-2649

APPLICATION OF CITIES SERVICE OIL
COMPANY FOR A DUAL 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 5, 1964, at Santa Fe, New Mexico, before Examiner
Daniel S. Nutter.

NOW, on this 12th day of February, 1964, the Commission,
a quorum being present, having considered the testimony, the
record, and the recommendations of the Examiner, 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, Cities Service Oil Company, seeks
authority to complete its Brunson C Well No. 4, located in Unit J
of Section 3, Township 22 South, Range 37 East, NMPM, Lea County,
New Mexico, as a dual completion (conventional) to produce oil
from the Elinebry and Drinkard Oil Pools through parallel strings
of 1 1/2-inch and 2 1/16-inch tubing, respectively, with separa-
tion of zones by a packer set at approximately 6201 feet.

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

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

IT IS THEREFORE ORDERED:

(1) That the applicant, Cities Service Oil Company, is
hereby authorized to complete its Brunson C Well No. 4, located

-2-

CASE No. 2977
Order No. R-2649

in Unit J of Section 3, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico, as a dual completion (conventional) to produce oil from the Blinbry and Drinkard Oil Pools through parallel strings of 1 1/2-inch and 2 1/16-inch tubing, respectively, with separation of zones by a packer set at approximately 6201 feet;

PROVIDED HOWEVER, 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;

PROVIDED FURTHER, 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.

(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


E. S. WALKER, Member


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

esr/

OIL CONSERVATION COMMISSION

BOX 1980

HOBBS, NEW MEXICO

Case 2971

Date ¹⁴ January 14, 1964

Oil Conservation Commission
Box 871
Santa Fe, New Mexico

Re: Proposed MC Application

Gentlemen:

I have examined the application dated 1/9/64
for the Cities Service Oil Co. Brunson "C" #4-J 3-22-37
Operator Lease & Well No. S-T-R

and my recommendations are as follows:

Blinebry acreage dedicated to #7-P 3-22-37---E.F.E.

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

Yours very truly,

OIL CONSERVATION COMMISSION

Lea, Co.

Bibliography

6 5/8" set @ 2810'
w/500 sds. circ.

1 1/2" Regular Tbg. 5664!
1.61 in ID

Blinebry Perf. 5790-5820:
5823-30:
5838-42:

rotation
and weight

5 1/2" Csg. @ 6475' w/350 sks.
Top Cement. 4125' Calc.
Drinkard Open Hole 6475-6561'

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Agglic EXHIBIT NO. 3
CASE NO. 2977

2 1/16" I.J. Tog. @ 65180

d. h. "dip"

CD	26	15 lbs	12.33	jard
CD	12	kg	2.2	yard

O.
w/ there fly all day

T.D., 6561:

Page 2977
CITIES SERVICE OIL COMPANY

Box 69

HOBERS, NEW MEXICO

HOBERS OFFICE B.C.D.

JAN 8 3 40 PM '64

January 7, 1964

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

Re: Brunson C #4
J-S3-T22S-R37E
Blaineby & Drinkard
Los County, New Mexico

Dear Sir:

Attached are two copies of Cities Service Oil Company's application to dually complete Brunson C #4 in the Blaineby (Oil) and Drinkard (Oil) Pools. Equipment will be installed as shown on the attached diagrammatic sketch.

The offset operators have been furnished with copies of this proposal.

Yours very truly,

CITIES SERVICE OIL COMPANY

E. H. Furey, Jr.

E. H. Furey, Jr.
District Engineer

RHF/CTA/1ar

cc: Mr. Joe Ramey
Mr. Dan Nutter
State Land Commissioner

DOCKET MAILED

Date 1-24-64

Drinkard

Blincory

Ex. 2977

13" set @ 308'
w/300 sks. circ.

8 5/8" set @ 2810'
w/500 sks. circ.

Dual Packer @
approximately 5775'

1 1/2" Regular Tbg. @ approximately
5800'

Blincory Perf. 5790-5820'
5823-30'
5838-42'

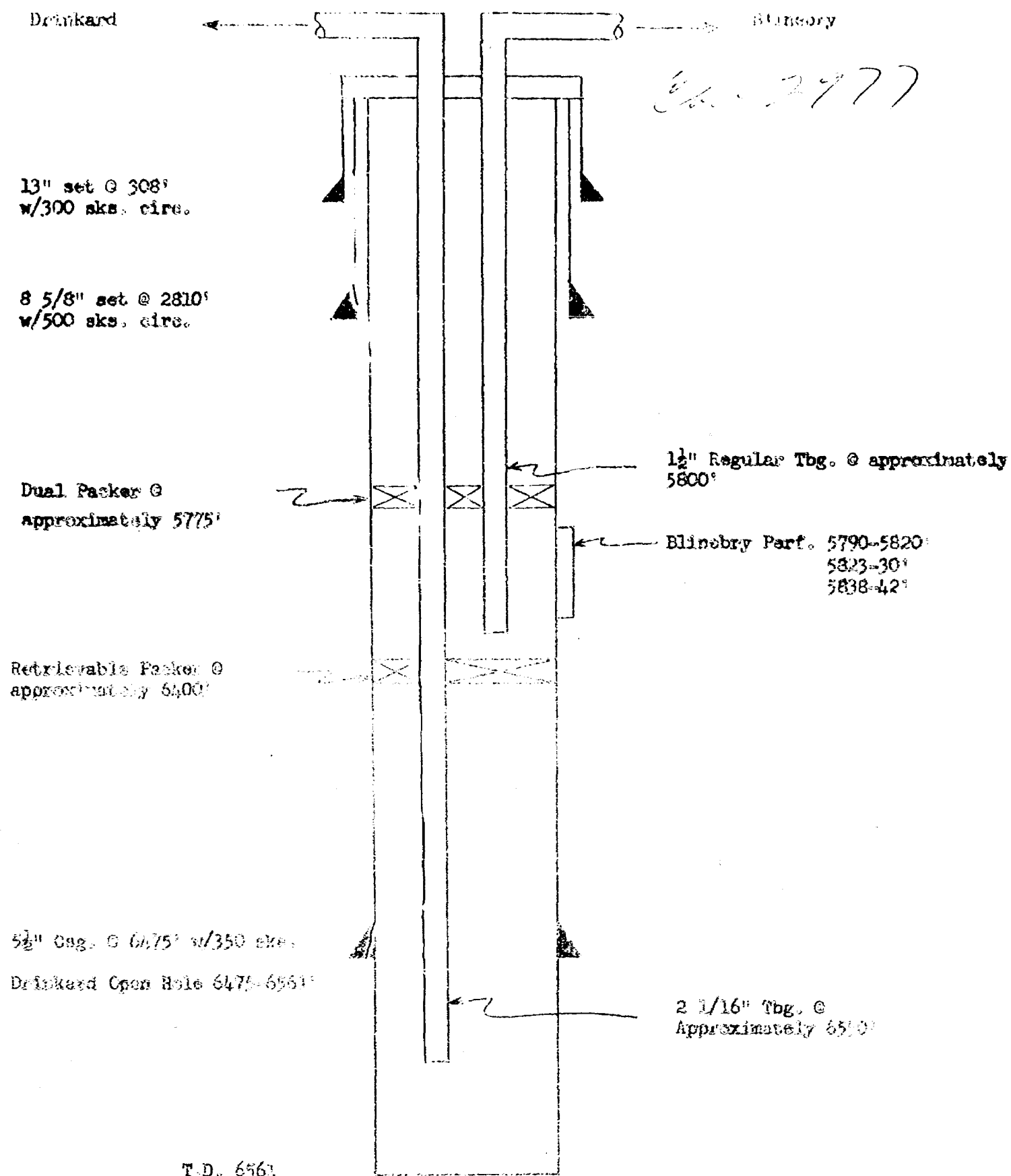
Retrievable Packer @
approximately 6400'

5 1/2" Csg. @ 6175' w/350 sks.

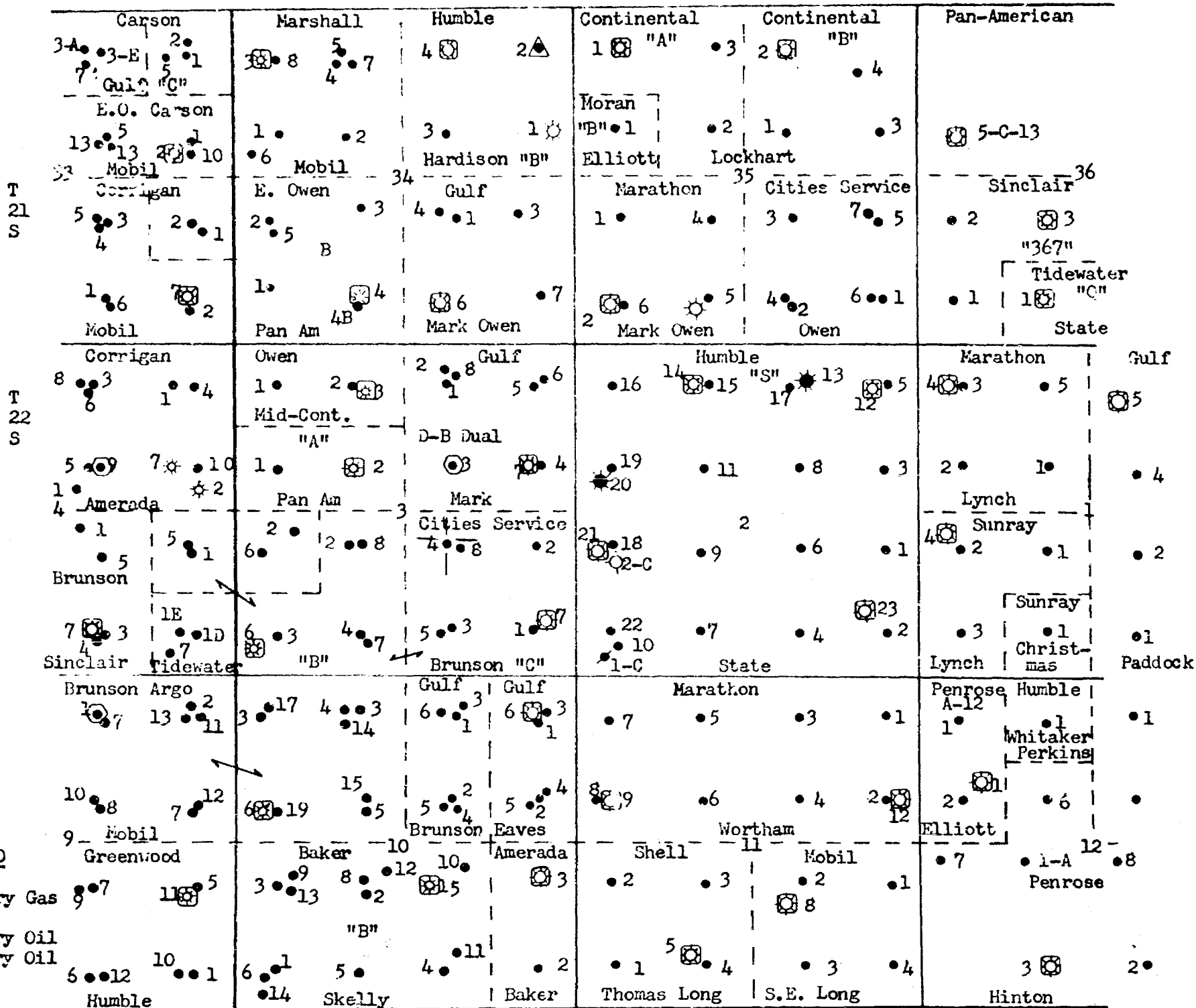
Drinkard Open Hole 6475-6561'

2 1/16" Tbg. @
Approximately 6510'

T.D. 6561



R-37E Lea County, New Mexico



262977

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
February 5, 1964

EXAMINER HEARING

IN THE MATTER OF:

Application of Cities Service Oil Co.
for a dual completion, Lea County, New
Mexico.

Case No. 2977

BEFORE: DANIEL S. NUTTER, EXAMINER

TRANSCRIPT OF HEARING

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
February 5, 1964

EXAMINER HEARING

IN THE MATTER OF:

Application of Cities Service Oil
Company for a dual completion, Lea
County, New Mexico.

CASE NO. 2977

BEFORE: DANIEL S. NUTTER, EXAMINER

TRANSCRIPT OF HEARING

MR. NUTTER: Call next Case No. 2977.

MR. DURRETT: Application of Cities Service Oil Company
for a dual completion, Lea County, New Mexico.

MR. KELLAHIN: Jason Kellahin appearing for the applicant.
We have one witness.

(Witness sworn)

E. F. MOTTER,
called as a witness herein, having been first duly sworn on oath,
was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:



Q Would you state your name, please?

A E. F. Motter.

Q By whom are you employed and in what position?

A Cities Service Oil Company, Division Engineer.

Q Have you testified before the Oil Commission and had your qualifications made a part of the record?

A Yes, sir, I have.

Q All right.

MR. KELLAHIN: The witness' qualifications acceptable?

MR. NUTTER: Yes, sir.

Q (By Mr. Kellahin:) Mr. Motter, are you familiar with the application of Cities Service Oil Company in Case 2977?

A Yes, sir.

Q What is proposed by Cities Service in this case?

A We propose to dual complete the Brunson C No. 4 as a Drinkard and Blinebry oil dual.

Q Now, referring to what has been marked as Exhibit Number One, would you identify that exhibit and discuss the information shown on it?

A Yes. This is a plat of the area, indicating the Brunson, Cities Service Brunson "C" lease colored in yellow with the subject well, the Brunson "C" No. 4 indicated by red hashes. This well is located 1980 from the South line and 1980 from the East line, Section 3, Township 22 South, Range 37 East, Lea County. The well was originally a Drinkard single completion, and has been



producing from seven to ten barrels of oil a day and about 90 MCF of gas per day, penalized. Within the past year, there have been a couple of other duals offsetting this well in the Drinkard and Blinebry. They are the Humble "S" No. 22, Unit "M", Section 2, 22, 37. That has been outlined in red pencil. This well currently is producing through parallel strings of 2 3/8 tubing, producing about eight barrels a day from the Blinebry and four barrels a day from the Drinkard, and both zones are penalized by high ratio.

Immediately north of the proposed dual, is a dual completion in the Drinkard and Blinebry, which is the Gulf No. 3 Mark, and this well is located in Unit "G", Section 3, 22, 37. It is completed in 7 inch casing, with two strings of 2 3/8 inch tubing. Its current production is 17 barrels of oil from the Blinebry and three barrels from the Drinkard. I don't believe the Drinkard would be penalized, but the Blinebry is penalized because of ratio. The Drinkard does have a high ratio, but capacity is somewhat limited. To protect ourselves, we decided we had better go into it and test the Blinebry in the Cities Service Brunson "C"-4, which is completed in the Drinkard and ran a log through the Blinebry formation, which, I believe is Exhibit Two. We perforated the Blinebry from 5790 to 5820, 5823 to 30, 5838 to 42. Acidized with a thousand gallons, followed this with 15,000 gallons lease crude and 15,000 pounds of sand frac. The potential from this zone was 60 barrels of oil per day on 16/64ths choke with a GOR of 5965.

The gravity of the Blinebry is 33 degrees. We have not



DEARNLEY, MEIER, WILKINS and CROWNOVER

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691

run a bottom hole pressure, but we have checked some of the off-sets, and we understand that the pressure is in the neighborhood of 1590 pounds.

Q Do you have any information on the gravities of other zones?

A We plan to dual the Drinkard, which has 37 degrees gravity and bottom hole pressure in the neighborhood of 800 pounds.

Q Now, referring to what has been marked as Exhibit No. 3, would you discuss that exhibit?

A Yes. This is a schematic of the dual completion as we propose it. We will set a Texas Iron Works Retrievable single packer at 6201, and a Texas Iron Works Retrievable dual packer at 5664. The long string to the Drinkard will be composed of 6518 feet of 2 1/16th Interval Joint J-55 tubing and the Blinebry tubing string will be 1 1/2 inch regular tubing, set at 5664. This well has 5 1/2 inch casing, 15 1/2 pound. The drift is 4.825. The OD of the 2 1/16th inch I.J. tubing is 2.33, and the inch and a half regular joint is 2.2, about 30 hundredths of an inch clearance. We have a large surplus of inch and a half tubing on hand, and one of the reasons for running this, it saved a cash outlay of approximately \$3,300.00 for additional string of 2 1/16th, which would comply with the present administrative procedure for multiple completions.

We have run some friction loss calculations on the inch and a half tubing, and at the present allowable of 52 barrels a day with an approximate 6,000 to one ratio, the friction loss is



practically negligible when compared to 2 1/16th tubing. By the way, I think the present rules permit an ID of 1.67 by administrative procedure, internal diameter of inch and a half regular tubing, 1.61.

Q We are talking about six one hundredths of an inch?

A That is about right.

Q Other than that one factor, would this application be eligible for administrative approval?

A That's correct.

Q Is this the type of dual completion that has been approved by the Commission, other than the tubing size?

A Yes, many times.

Q Will all the zones be fully protected?

A Yes, they will. Of course, we will run packer leakage tests on approval of this application, and segregation tests as necessary.

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

A Yes, sir, they were.

MR. KELLAHIN: Like to offer in evidence Exhibits One, Two and Three.

MR. NUTTER: Cities Service's Exhibits One through Three will be admitted in evidence.

MR. KELLAHIN: That is all I have on direct examination.

* * * *



MR. NUTTER: Are there any questions of Mr. Motter?

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Motter, is it expected that the Blinebry will flow on completion?

A Yes, it is.

Q So, you won't have any artificial lift problem?

A No.

Q What did you say the OD was of the 2 1/16th IJ tubing?

A The Interval Joint, the joint portion is 2.33 inches.

Q What about the smaller tubing string?

A The colars are 2.2.

Q Mr. Motter, this Texas Iron Works HDR Retrievable packer is set by what means?

A Mechanically set packer, they are both, dual and single, are set on the 2 1/16th tubing string.

Q Are they set by rotation or weight?

A Set by weight, combination of rotation and weight.

Q Are there any other questions of Mr. Motter?

MR. NUTTER: He may be excused. Do you have anything further, Mr. Kellahin?

MR. KELLAHIN: That is all I have, Mr. Nutter. Thank you.

MR. NUTTER: Does anyone have anything they wish to offer in Case 2977? Take the Case Under advisement.

DEARNLEY, MEIER, WILKINS and CROWNOVER

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691



DEARNLEY, MEIER, WILKINS and CROWNOVER

General Court Reporting Service

Phone 243-6691

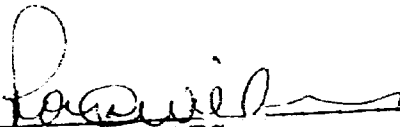
Albuquerque, New Mexico

Suite 1120 Simms Building

STATE OF NEW MEXICO
COUNTY OF BERNALILLO

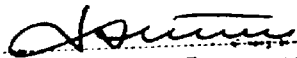
I, ROY D. WILKINS, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill, and ability.

WITNESS my Hand and Seal of Office, this 10th day of February, 1964.


NOTARY PUBLIC

My Commission Expires:
September 6, 1967.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2977 heard by me on 2/5, 1964.

 Examiner
New Mexico Oil Conservation Commission

