

CASE 2971: Appli. of CAULKINS for
unorthodox locations, dual comple-
tions & expansion of waterflood.

CASE - No.
2971

Application,
TRANSCRIPTS,
SMALL Exhibits
ETC.

DRAFT

JMD/esr

January 28, 1964

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. 2971

Order No. R-1191-C

APPLICATION OF CAULKINS OIL COMPANY
FOR UNORTHODOX LOCATIONS, DUAL COM-
PLETIONS, AND EXPANSION OF A WATER-
FLOOD PROJECT, RIO ARRIBA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on ^{Examiner} January 22, 1964, 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 January day of January, 1964, the Commission, a quorum being present, having considered the ~~application~~ ^{testimony}, the record, ~~and the recommendations of the Examiner,~~ 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, Caulkins Oil Company, seeks expansion of the South Blanco Water Injection Project Area established by Rule 11 (a)-1 of the Special Rules and Regulations for the South Blanco-Tocito Oil Pool promulgated by Order No. R-1191, as amended by Order No. R-1191-A, to include the NE/4 of Section 10, the N/2, E/2 SW/4 and SE/4 of Section 11, all of Section 12, the N/2 of Section 13, and the N/2 of Section 14, Township 26 North, Range 6 West, NMPM, Rio Arriba County, New Mexico.

(3) That the applicant also seeks an exception to the Special Rules and Regulations for the South Blanco-Tocito Oil

(3) That since the issuance of Order No R-1191-A the Secretary-Director of the Commission has granted administrative approval of expansion of the project area to include the S/2 S/2 of Section 10, Township 26 North, Range 6 West, NMPM, Rio Arriba

Pool to drill its Breech C Well No. D-189 at an unorthodox location 1850 feet from the South line and 790 feet from the West line of said Section 12, and to drill its Breech C Well No. D-248 at an unorthodox location 1140 feet from the North line and 900 feet from the East line of said Section 13.

(5) That the applicant also seeks authority to complete its Breech^C/Well No. D-189 as a dual completion (conventional) to produce oil from the Tocito formation through 2 3/8-inch tubing and gas from the Dakota formation through 1 1/4-inch tubing, with separation of zones by a packer at approximately 7250 feet.

(6) That the applicant also seeks authority to complete its Breech C Well No. D-248 as a dual completion (conventional) to produce oil from the Tocito formation through 2 7/8-inch tubing and gas from the Dakota formation through the casing-tubing annulus by a crossover assembly with separation of zones by a packer at approximately 7200 feet.

(7) That the proposed expansion of the South Blanco Water Injection Project Area should result in increased ultimate recovery of oil, thereby preventing waste.

(8) That approval of the proposed unorthodox locations will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

(9) That the mechanics of the proposed dual completions are feasible and in accord with good conservation practices; that approval of the proposed dual completions will prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That Rule 11(a)-1 of the Special Rules and Regulations for the South Blanco Tocito Oil Pool promulgated by Order No. R-1191, as amended by Order No. R-1191-A, is hereby amended to read in its entirety as follows:

(a)-1. The project area shall comprise that area described as follows:

TOWNSHIP 26 NORTH, RANGE 6 WEST, NMPM

Section 3: S/2 SW/4 → Section 5: S/2 S/2
Section 4: S/2
Section 6: All
Section 7: NE/4
Section 8: N/2
Section 9: N/2 and N/2 S/2
Section 10: N/2, N/2 SW/4, and SE/4
Section 11: All
Section 12: All
Section 13: N/2
Section 14: N/2

(2) That the applicant is hereby granted an exception to the Special Rules and Regulations for the South Blanco-Tocito Oil Pool to drill its Breech C Well No. D-189 at an unorthodox location 1850 feet from the South line and 790 feet from the West line of Section 12, and to drill its Breech C Well No. D-248 at an unorthodox location 1140 feet from the North line and 900 feet from the East line of Section 13, Township 26 North, Range 6 West, NMPM, *South Blanco-Tocito Oil Pool* Rio Arriba County, New Mexico.

(3) That the applicant is hereby authorized to complete its Breech C Well No. D-189 as a dual completion (conventional) to produce oil from the Tocito formation through 2 3/8-inch tubing and gas from the Dakota formation through 1 1/4-inch tubing, with separation of zones by a packer at approximately 7250 feet; that the applicant is hereby authorized to complete its Breech C Well No. D-248 as a dual completion (conventional) to produce oil from the Tocito formation through 2 7/8-inch tubing and gas from the Dakota formation through the casing-tubing annulus by a crossover assembly with separation of zones by a packer at approximately 7200 feet.

PROVIDED HOWEVER, That the applicant shall complete, operate, and produce said wells 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 Deliverability Test Period for the Basin-Dakota Gas Pool.

(4) 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.

Caulkins



STATE OF NEW MEXICO
STATE ENGINEER OFFICE
SANTA FE

S. E. REYNOLDS
STATE ENGINEER

January 15, 1964

ADDRESS CORRESPONDENCE TO:
STATE CAPITOL
SANTA FE, N. M.

Mr. A. L. Porter, Jr.
Secretary-Director
Oil Conservation Commission
Santa Fe, N. M.

Dear Mr. Porter:

Please be advised that this office has not received a copy of the application of Caulkins Oil Company which is subject of Case 2971 which has been docketed for hearing on January 22, 1964.

Yours truly,

S. E. Reynolds
State Engineer

FEI/ma
cc-Caulkins Oil Co.

By: *Frank E. Irby*
Frank E. Irby
Chief
Water Rights Division

*Rec'd in [illegible] by [illegible] and
I've had that a copy would be
supplied to Mr. [illegible].*

JASON W. KELLAHIN
ROBERT E. FOX

KELLAHIN AND FOX
ATTORNEYS AT LAW
5412 EAST SAN FRANCISCO STREET
POST OFFICE BOX 1713
SANTA FE, NEW MEXICO

TELEPHONES
983-9396
982-2991

December 24, 1963

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

Gentlemen:

Enclosed find original and two copies of application of
Caulkins Oil Company for an unorthodox location for its
wells, Breech C No. D-248 and Breech C No. D-189 and
for the dual completion of said wells, for filing. It
would be appreciated if this application were set for
hearing as soon as possible.

Very truly yours,

Jason W. Kellahin
JASON W. KELLAHIN

jwk:mas
enclosures
cc with enclosure: Caulkins Oil Company

DOCKET MAILED

Date 1-10-64

Name

Address

Ph.

Remarks:

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

T R State
or County

DOCKET: EXAMINER HEARING - WEDNESDAY - JANUARY 22, 1964

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, Alternate Examiner:

CASE 2682: (Reopened and continued from January 8, 1964 Examiner Hearing.)

In the matter of Case 2682 being reopened pursuant to the provisions of Order No. R-2375, which order established temporary 80-acre oil proration units for the Simpson-Gallup Oil Pool, San Juan 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 2967: (Continued from the January 8th Examiner Hearing)

Application of Standard Oil Company of Texas for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Jurnegan Point Unit Area comprising 7680 acres, more or less, of State and Fee land in Township 24 South, Ranges 24 and 25 East, Eddy County, New Mexico.

CASE 2969: Application of H. N. Sweeney for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Good Hope Unit Area comprising 1919.72 acres, more or less, of State and fee land in Township 19 South, Range 23 East, Eddy County, New Mexico.

CASE 2970: Application of Cima Capitan Incorporated for an amendment of Order No. R-2395, Eddy County, New Mexico. Applicant, in the above styled cause, seeks amendment of Order No. R-2395 to delete the seven water injection wells authorized therein for its Artesia Pool Waterflood Project, Eddy County, New Mexico, and to substitute therefor the following four injection wells in Section 17, Township 18 South, Range 28 East:

Welch State No. 1-W, 1330 feet from the South and West lines;

Welch State No. 4-W, 2630 feet from the South line and 2230 feet from the West line;

Case 2970 continued from page 1

Adkins Williams State No. 1-W, 10 feet from the South line and 2630 feet from the East line;

Adkins Williams State No. 6-W, 1180 feet from the South line and 1595 feet from the East line.

CASE 2971: Application of Caulkins Oil Company for unorthodox locations, dual completions, and expansion of a waterflood project, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval of the dual completion (conventional) of its Breech C No. D-189 and Breech C No. D-248 wells to produce oil from the Toccito formation through 2½ inch tubing and gas from the Dakota formation through the casing-tubing annulus at unorthodox locations 1850 feet from the South line and 790 feet from the West line of Section 12 and 1140 feet from the North line and 900 feet from the East line of Section 13, Township 26 North, Range 6 West, Rio Arriba County, New Mexico. Applicant also seeks expansion of the South Blanco-Toccito Pressure Maintenance Project Area to include said wells.

CASE 2727: (Reopened)

In the matter of Case No. 2727 being reopened pursuant to the provisions of Order No. R-2408 which order established temporary 80-acre proration units for the Oil Center-Blinebry 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 2972: Application of Pan American Petroleum Corporation for force-pooling, 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 22, Township 29 North, Range 13 West, City of Farmington, San Juan County, New Mexico.

CASE 2973: Application of Pan American Petroleum Corporation for force-pooling, 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 13, Township 30 North, Range 12 West, San Juan County, New Mexico.

CASE 2974: Application of Pan American Petroleum Corporation for a triple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the triple completion (conventional) of its South Mattix Unit Well No. 16, located in Unit 0 of Section 15, Township 24 South, Range 37 East, Lea County, New Mexico, to produce gas from the Fowler Paddock and Fowler Tubb Gas Pools and from an undesignated Lower Paddock through parallel strings of tubing.

CASE 2975: Application of Amerada Petroleum Corporation for an un-orthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of an un-orthodox location for a proposed triple completion in the Vacuum-Devonian, Vacuum-Wolfcamp, and North Vacuum-Abo Pools, Lea County, New Mexico, said well to be drilled at a point within 200 feet of the center of the NE/4 SW/4 of Section 36, Township 17 South, Range 34 East.

BEFORE THE OIL CONSERVATION COMMISSION OF NEW MEXICO

IN THE MATTER OF THE APPLICATION
OF CAULKINS OIL COMPANY FOR APPROVAL
OF AN UNORTHODOX LOCATION FOR ITS
BREECH C No. D-248 AND ITS BREECH
C No. D-189 WELLS FOR PRODUCTION
OF OIL FROM THE TOCITO FORMATION
AND FOR THE DUAL COMPLETION OF SAID
WELLS, RIO ARriba COUNTY, NEW MEXICO.

Feb 29 1971

APPLICATION

Comes now Caulkins Oil Company and applies to the Oil
Conservation Commission of New Mexico for approval of an un-
orthodox location for its Breech C No. D-248 well, 1,140 feet
from the North line and 900 feet from the east line of Section
13, Township 26 North, Range 6 West, for production of oil
from the ^{*undesignated*} South Blanco-Tocito Oil Pool; for the dual completion
of said well by use of a permanent-type packer above the
^{*Basin Dakota Gas Pool*} Dakota formation and a retrievable-type packer above the Tocito
formation with crossover assembly permitting production of
Dakota gas through annulus of 4½-inch casing and oil from the
Tocito through 2½-inch tubing; and for the inclusion of said
well in the South Blanco-Tocito Waterflood Project with authority
to commingle oil from the Tocito with oil produced in the South
Blanco-Tocito Waterflood Project, and for approval of an un-
orthodox location for its Breech C No. D-189 well, 790 feet from
the west line and 1,850 feet from the south line of Section 12,
Township 26 North, Range 6 West, for production of oil of
said well by use of a permanent-type packer above the
^{*S B Tocito pool*}
^{*Gas Pool*} Dakota formation and a retrievable-type packer above the Tocito
^{*Basin*} formation with crossover assembly permitting production of
Dakota gas through annulus of 5½-inch casing and oil from the

Tocito through 2½-inch tubing; and for the inclusion of said well in the South-Blanco-Tocito Waterflood Project with authority to commingle oil from the Tocito with oil produced in the South Blanco-Tocito Waterflood Project;

WHEREFORE, applicant prays that this application be set for hearing and after notice and hearing, the Commission enter its order approving this application as prayed for.

CAULKINS OIL COMPANY

BY Jason W. Kellahin
Jason W. Kellahin
Kellahin & Fox
P. O. Box 1713
Santa Fe, New Mexico
ATTORNEYS FOR APPLICANT
CAULKINS OIL COMPANY

CAULKINS OIL COMPANY

DENVER 2, COLORADO

January 30, 1964

New Mexico Oil Conservation Commission
Box 881
Santa Fe, New Mexico

Attention: Mr. James Durret

Re: South Blanco Tocito Water
Injection Program

Gentlemen:

Attached is a copy of the order relating to the addition of the S 1/2
S 1/2 of Section 5, Township 26 North, Range 6 West to the above captioned
project.

A copy of this order is being furnished in accordance with your
request to Mr. Jason Kellahin.

Yours very truly,

CAULKINS OIL COMPANY

A. F. Holland
A. F. Holland (ams)

AFH:ams
Encl.

GOVERNOR
JOHN BURROUGHS
CHAIRMAN

State of New Mexico
Oil Conservation Commission



LAND COMMISSIONER
MURRAY E. MORGAN
MEMBER

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

P. O. BOX 871
SANTA FE

February 28, 1960

Caulkins Oil Company
P. O. Box 967
Farmington, New Mexico

Attention: Mr. Frank Gray

Re: Expansion of the South Blanco-
Tocito Water Injection Project
Area, Rio Arriba County, New
Mexico.

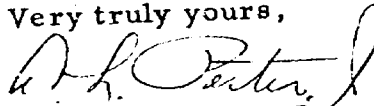
Gentlemen:

This is to advise that the Secretary-Director of the Commission has this date approved the expansion of the South Blanco-Tocito Water Injection Project Area to include the following described acreage:

S/2 S/2 of Section 5, Township 26 North, Range 6
West, NMPM, Rio Arriba County, New Mexico.

The approval of this expansion is made pursuant to the provisions of Rule 11 (a) of Order No. R-1191-A.

Very truly yours,


A. L. PORTER, Jr.,
Secretary-Director

ALP/JEK/og

cc: Oil Conservation Commission - Aztec

Case 2871

Heard 1-22-64

Rec. 1-23-64

1. Grant Cuelkins approval to Dually complete their D189 + TD-248 in a manner shown on their exhibit its # 4 + 3 - respect,
Lower Completions in Basin - Dakota +
Upper " " S. Blanco Toits

2. Grant. Allow old locations for the S. Bl. - Toits for the TD-189
780/W - 1850/S lines sec. 12 - 26 N - 6 W.
The TD # 248 - 1140/N + 800/E lines sec 13
26 N - 6 W.

3. Cement R-1691-A to expand the secondary project area to include sec. 10 - NE 1/4

- ✓ 11 - N/2, E/2 SW 1/4 + SE 1/4
- ✓ 12 - A 11
- ✓ 13 - N/2
- ✓ 14 - N/2

Thos A. W.

GOVERNOR
JACK M. CAMPBELL
CHAIRMAN

State of New Mexico
Oil Conservation Commission



LAND COMMISSIONER
E. B. JOHNNY WALKER
MEMBER

P. O. BOX 871
SANTA FE

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

February 5, 1964

Mr. Jason Kellahin
Kellahin & Fox
Attorneys at Law
Post Office Box 1713
Santa Fe, New Mexico

Re: Case No. 2971
Order No. R-1191-C
Applicant:
Caulkins Oil 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.
Secretary-Director

ix/

Carbon copy of order also sent to:

Hobbs OCC x

Artesia OCC x

Antes OCC x

OTHER Mr. Frank Irby

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. 2971
Order No. R-1191-c

APPLICATION OF CAULKINS OIL COMPANY
FOR UNORTHODOX LOCATIONS, DUAL COM-
PLETIONS, AND EXPANSION OF A WATER-
FLOOD PROJECT, RIO ARriba COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on
January 22, 1964, at Santa Fe, New Mexico, before Examiner
Elvis A. Utz.

NOW, on this 5th 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, Caulkins Oil Company, seeks expan-
sion of the South Blanco Water Injection Project Area established
by Rule 11(a)-1 of the Special Rules and Regulations for the
South Blanco-Tocito Oil Pool promulgated by Order No. R-1191, as
amended by Order No. R-1191-A, to include the NE/4 of Section 10,
the N/2, E/2 SW/4 and SE/4 of Section 11, all of Section 12, the
N/2 of Section 13, and the N/2 of Section 14, Township 26 North,
Range 6 West, NMPM, Rio Arriba County, New Mexico.

(3) That since the issuance of Order No. R-1191-A, the
Secretary-Director of the Commission has granted administrative
approval of expansion of the project area to include the S/2 S/2
of Section 5, Township 26 North, Range 6 West, NMPM, Rio Arriba
County, New Mexico.

(4) That the applicant also seeks an exception to the
Special Rules and Regulations for the South Blanco-Tocito Oil
Pool to drill its Breech C Well No. D-189 at an unorthodox

-2-

CASE No. 2971

Order No. R-1191-C

location 1850 feet from the South line and 790 feet from the West line of said Section 12, and to drill its Breech C Well No. D-248 at an unorthodox location 1140 feet from the North line and 900 feet from the East line of said Section 13.

(5) That the applicant also seeks authority to complete its Breech C Well No. D-189 as a dual completion (conventional) to produce oil from the Tociito formation through 2 3/8-inch tubing and gas from the Dakota formation through 1 1/4-inch tubing, with separation of zones by a packer at approximately 7250 feet.

(6) That the applicant also seeks authority to complete its Breech C Well No. D-248 as a dual completion (conventional) to produce oil from the Tociito formation through 2 7/8-inch tubing and gas from the Dakota formation through the casing-tubing annulus by a crossover assembly with separation of zones by a packer at approximately 7200 feet.

(7) That the proposed expansion of the South Blanco Water Injection Project Area should result in increased ultimate recovery of oil, thereby preventing waste.

(8) That approval of the proposed unorthodox locations will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

(9) That the mechanics of the proposed dual completions are feasible and in accord with good conservation practices; that approval of the proposed dual completions will prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That Rule 11(a)-1 of the Special Rules and Regulations for the South Blanco-Tocito Oil Pool promulgated by Order No. R-1191, as amended by Order No. R-1191-A, is hereby amended to read in its entirety as follows:

(a)-1. The project area shall comprise that area described as follows:

TOWNSHIP 26 NORTH, RANGE 6 WEST, NMPM
Section 3: S/2 SW/4
Section 4: S/2
Section 5: S/2 S/2
Section 6: All
Section 7: NE/4
Section 8: N/2
Section 9: N/2 and N/2 S/2
Section 10: N/2, N/2 SW/4, and SE/4

-3-

CASE No. 2971

Order No. R-1191-3

Section 11: All
Section 12: All
Section 13: N/2
Section 14: N/2

(2) That the applicant is hereby granted an exception to the Special Rules and Regulations for the South Blanco-Tocito Oil Pool to drill its Breech C Well No. D-189 at an unorthodox location 1850 feet from the South line and 790 feet from the West line of Section 12, and to drill its Breech C Well No. D-248 at an unorthodox location 1140 feet from the North line and 900 feet from the East line of Section 13, Township 26 North, Range 6 West, NMPM, South Blanco-Tocito Oil Pool, Rio Arriba County, New Mexico.

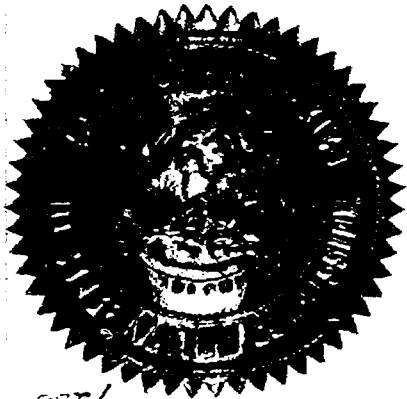
(3) That the applicant is hereby authorized to complete its Breech C Well No. D-189 as a dual completion (conventional) to produce oil from the Tocito formation through 2 3/8-inch tubing and gas from the Dakota formation through 1 1/4-inch tubing, with separation of zones by a packer at approximately 7250 feet; that the applicant is hereby authorized to complete its Breech C Well No. D-248 as a dual completion (conventional) to produce oil from the Tocito formation through 2 7/8-inch tubing and gas from the Dakota formation through the casing-tubing annulus by a crossover assembly with separation of zones by a packer at approximately 7200 feet.

PROVIDED HOWEVER, That the applicant shall complete, operate, and produce said wells 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 Deliverability Test Period for the Basin-Dakota Gas Pool.

(4) 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.



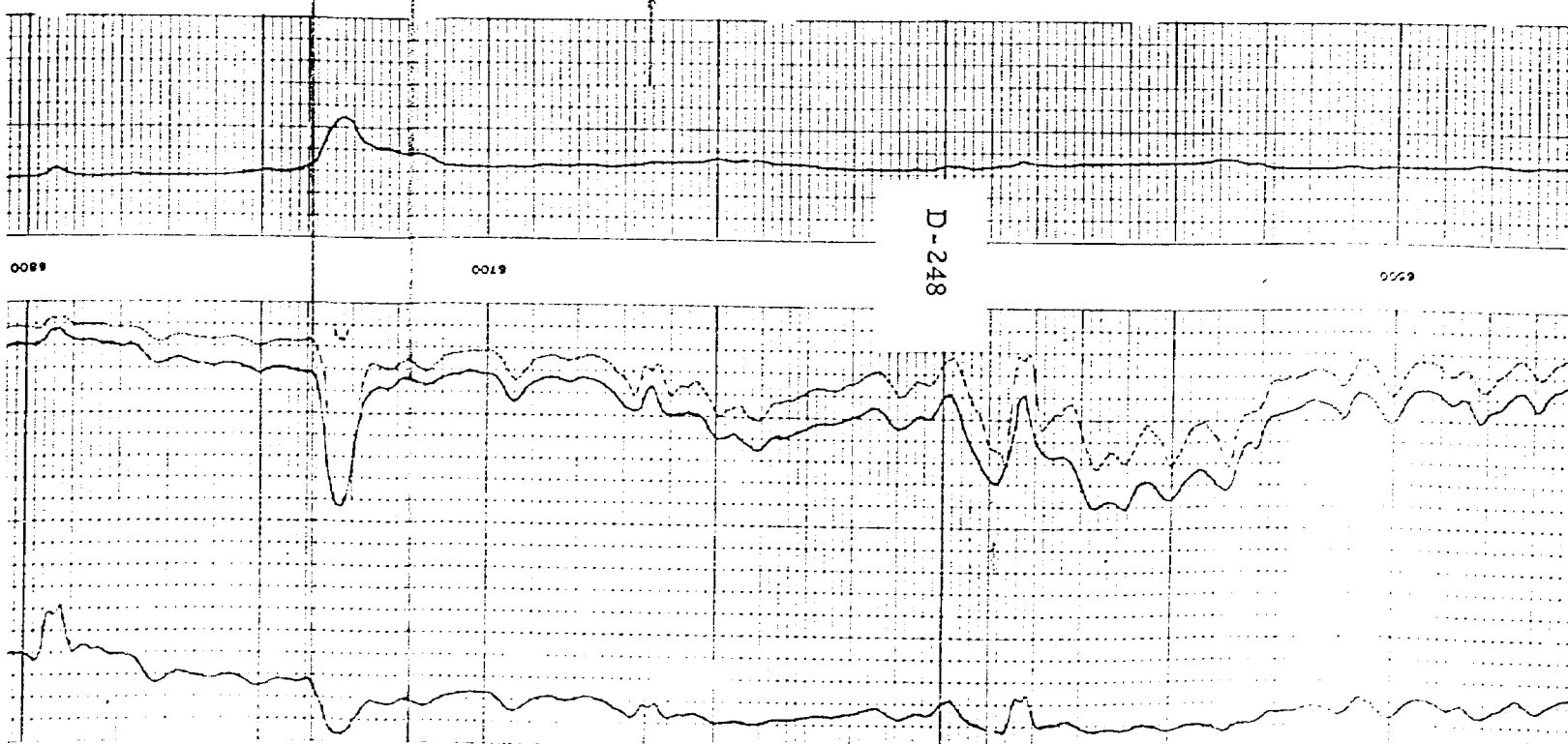
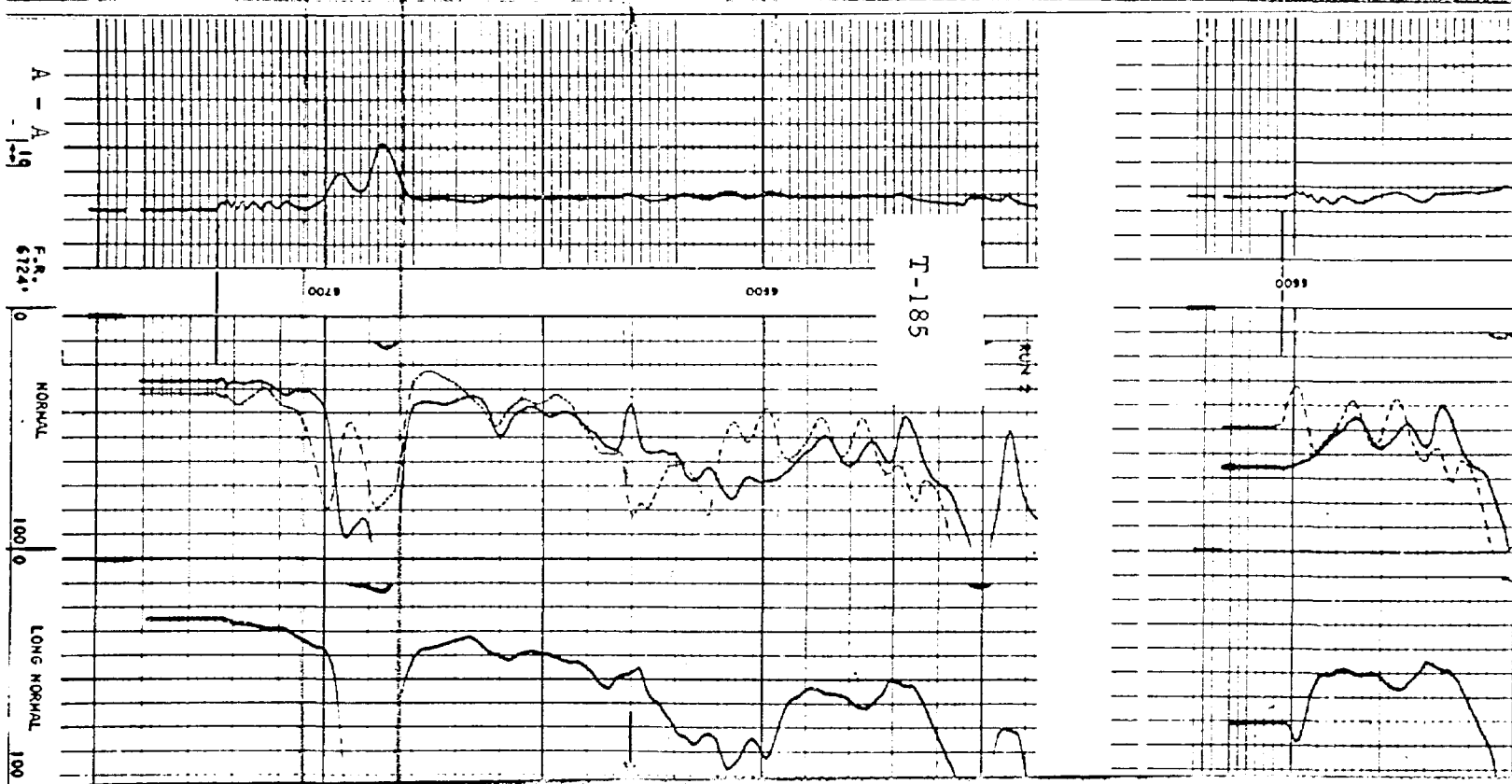
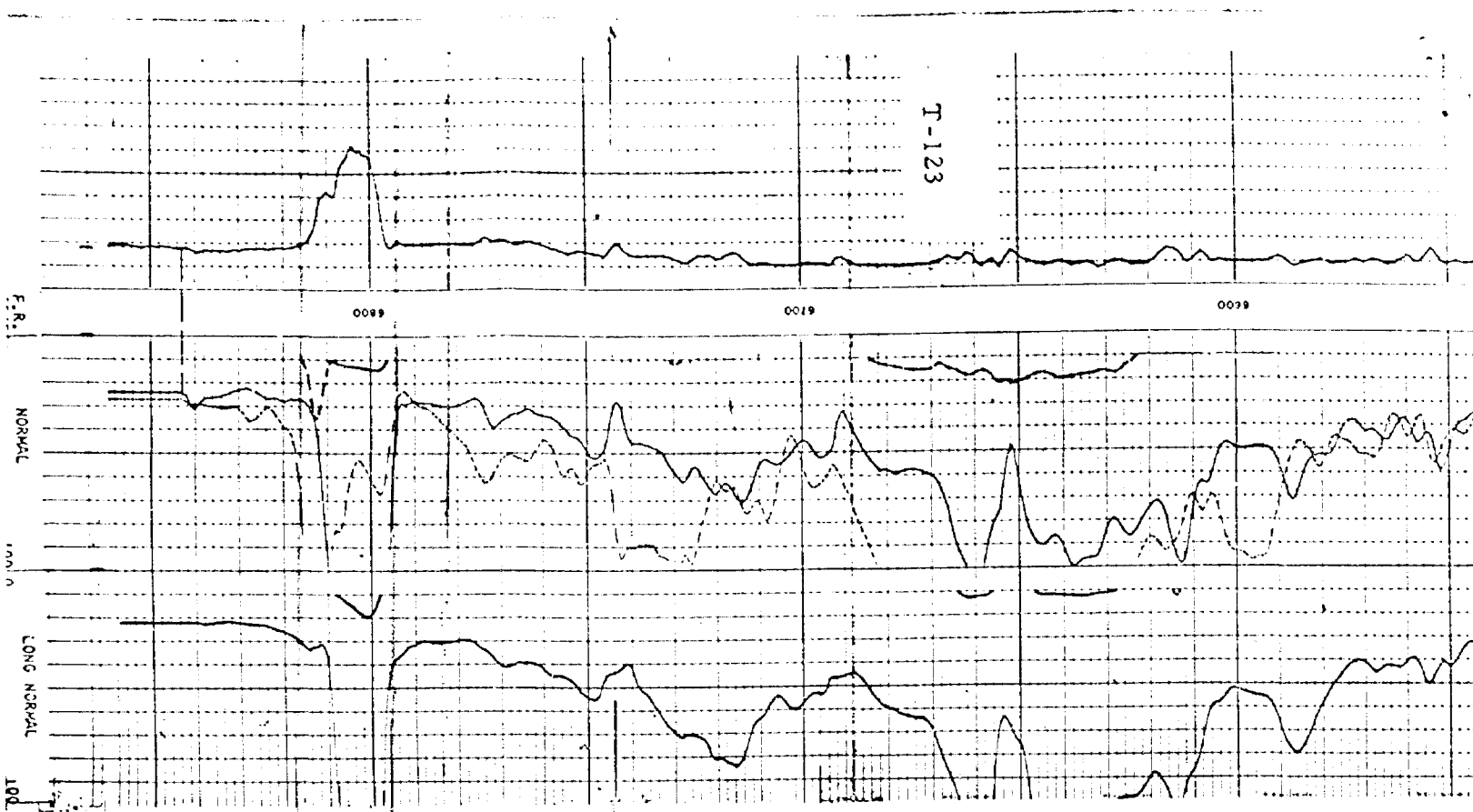
ESR/

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



BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
January 22, 1964

EXAMINER HEARING

IN THE MATTER OF:

Application of Caulkins Oil Company for
unorthodox locations, dual completions,
and expansion of a waterflood project,
Rio Arriba County, New Mexico.

Case No. 2971

BEFORE: ELVIS A. UTZ, EXAMINER.

TRANSCRIPT OF HEARING

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691



DEARNLEY, MEIER, WILKINS and CROWNOVER
General Court Reporting Service
Albuquerque, New Mexico
Suite 1120 Simms Building
Phone 243-6691

MR. UTZ: Case 2971.

MR. DURRETT: Application of Caulkins Oil Company for unorthodox locations, dual completions, and expansion of a water-flood project, Rio Arriba County, New Mexico.

MR. KELLAHIN: Jason Kellahin, Kellahin and Fox, Santa Fe, representing the Applicant. I have one witness I would like to have sworn, please.

(Witness sworn.)

(Whereupon, Applicant's Exhibits 1 through 7 were marked for identification.)

FRANK GRAY

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A Frank Gray.

Q By whom are you employed and what position?

A I am employed by Caulkins Oil Company as superintendent of their operation in the Farmington, New Mexico area.

Q Have you ever testified before the Oil Conservation Commission and made your qualifications a matter of record?

A Yes, sir.



MR. KELLAHIN: Are the witness's qualifications acceptable?

MR. UTZ: Yes, sir, they are.

Q Are you familiar with the application of Caulkins Oil Company in Case 2971?

A Yes, sir.

Q Would you state briefly what Caulkins proposes in this case?

A We seek the extension of the South Blanco-Tocito Pool to include a well recently completed in Section 13, 26 North, 6 West and other acreage that's in the South Blanco-Tocito Pool, and other acreage that now appears to have possibilities of being productive in the Tocito sand. Also the approval of two unorthodox locations in the pool and the expansion of the South Blanco-Tociot water injection project to include the tracts on which these two wells, which the one well has been drilled and the other one is being drilled, as well as other acreage that now appears to have possibilities of Tocito production. Also the dual completion of these two wells.

Q What wells are you referring to, Mr. Gray?

A The Breech C D-248 in the Northeast of Section 13, 26 North, 6 West, and the Breech C D-189 in the Southwest of Section 12, 26 North, 6 West.



Q What is the present status of the two wells?

A The D-248 well has been drilled to a total depth of 7482, perforated and fracked and cleaned up in the Tocito sand; a Baker magnesium bridge plug has been set above the Dakota perforations. The well has been perforated and sand-oil fracked in the Tocito sand as being operated as a single Tocito producer at this time. We are in the processes of drilling the D-189 location to the Dakota sand.

Q Do you propose to complete it in the same fashion?

A We will complete it in the same manner with the exception of the casing. We will use 5½" casing instead of 1½" as we used in D-248.

Q Were these wells drilled in a standard formation to the Dakota formation?

A Yes. They comply with the Basin-Dakota Pool spacing rules.

Q What occasions the unorthodox location for the South Blanco-Tocito?

A The South Blanco-Tocito Pool requires that wells be drilled either in the South, Southeast or Southeast one-fourth on the Northeast one-fourth of a Governmental Quarter Section, 660 feet from the subdivision lines, with 100 foot tolerance for obstructions, surface obstructions, that is.



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The Basin-Dakota Pool requires that the wells be spaced 790 feet from the subdivision line, so it's not possible to drill one that will comply with the rules in both pools.

Q For that reason, then, you are seeking an exception to make a dual completion for the Dakota and the Tocito, is that correct?

A Yes.

Q Have you made other dual completions of this type in the Tocito Pool?

A Yes, we have, it's in the South Blanco-Tocito Pool we have our D-204 well.

Q What zone is it completed in?

A It's in the Dakota and Tocito. It's in Section 9, 26, 6.

Q Is the acreage on which these wells are located adjacent to the South Blanco-Tocito Pool?

A The tract on which D-189 is being drilled is approximately three-quarters of a mile from the limits of the South Blanco-Tocito Pool. The other one is about one and three-quarter miles.

Q How close is it located to the present participating area of the water injection project?

A The D-189 would be approximately one mile from the



nearest producer in the participating area.

Q Now, referring to what has been marked as Exhibit Nos. 1 and 2, would you identify those exhibits, please, and point out any information that's contained on them?

A Exhibit No. 1 is a Schlumberger electric log of the D-248 with the Tocito sand marked, that is the top of the Tocito sand is marked on it; the No. 2 exhibit is an electric log of the D-189 well.

Q Now, referring to Exhibit No. 3, would you identify that exhibit and discuss the information shown on it?

A The D-248, or excuse me, the Exhibit No. 3 is an illustrative drawing of the plan we would like to follow in making a dual Tocito-Dakota producer of the Breech C D-248. This well is completed with 4½" casing and our plans, or the plan that we propose would use a Baker Model D packer to be set at approximately 7200, or just above the Dakota perforations with a Baker Model R packer run on tubing and set just above the Tocito perforations with a crossover collar installed immediately above the Model R packer.

With this arrangement the Dakota gas would flow through tubing to the crossover and then through casing to the surface. The Tocito oil would flow through the packer to the crossover collar and from that point to the surface through 2½" tubing.



Q Referring to the Exhibit No. 4, would you discuss that exhibit?

A Exhibit No. 4 is an illustrative drawing showing the mechanical arrangement that we propose for the dual completion of D-189 in the Dakota and Tocito formation. The plan here would use a Baker Model D packer set just above the Dakota perforations with 2½" tubing from the surface locked into that packer and a Baker dual string crossover anchor installed at approximately the level of the Tocito perforations.

Using this arrangement, gas would flow from the Dakota through 2" tubing to the crossover and from there to the surface through one and a quarter inch integral joint tubing which would be locked in the dual string crossover anchor. The Tocito production would flow through 2" tubing to the surface.

Q Other than the size of the casing is the recompletion in the two wells substantially the same?

A Yes.

Q Are these the type of completions that have heretofore been approved by this Commission?

A I believe there have been approvals of installations like we propose for D-248. The installation for D-189 is more or less standard.

Q In your opinion will all the producing zones be fully



protected by this type of completion?

A Yes, sir.

Q Will any water zones encountered in the area be protected?

A Yes, sir.

Q In the event you were to convert either or both of these wells to water injection, what procedure would you use at that point, Mr. Gray?

A It would first be necessary to squeeze off the perforations that we would not plan to use for water injection. For instance, we would have to squeeze off the Dakota perforations if we, or at least plug them off if we were going to inject water into the Tocito, which is the only likely sand we would inject water into, and if we follow the same plan that we have in other injection wells we would pull the tubing out and inject down casing.

Q Has that been a satisfactory procedure in this South Blanco-Tocito water injection program?

A We had no trouble thus far. This thing was started in 1953 and at this time we've not had any trouble.

Q You had no corrosion problems up to the present time?

A Actually we have no corrosion problems at all that could be considered serious.



Q Now, referring to what has been marked as Exhibit No. 5, would you identify that exhibit and discuss it?

A Exhibit No. 5 is a map contoured on top of the Tocito sandstone showing the wells in the area, and bordered in red are the wells that are in the participating area of the South Blanco-Tocito water injection project. Bordered in green is the area that we propose to add to the participating area.

Q Referring to Exhibit No. 6, would you identify that exhibit and discuss it?

A Exhibit No. 6 is a comparison of portions of Schlumberger electric logs in Wells T-123, T-185 and D-248. These 123 and 185 being producing wells, were producing wells at one time in the participating area of the project. The Tocito sand on that comparison is bordered in red.

Q Exhibit No. 7?

A It's the same comparison of portions of Schlumberger electric logs of Wells T-157, T-185 and D-248, the Tocito sand is set out in the same manner.

Q The acreage you propose to add to the South Blanco-Tocito project, is the working interest ownership and the royalty ownership common?

A Yes, it is. Part of Section 10 that we propose to add is already in the participating area and Sections, the parts in



Sections 11, 12, 13 and 14 have the same royalty and working interest ownership as the participating area.

Q As lands already within the project, is that correct?

A Yes. The owners of the royalty and working interests approve the expansion and, in fact, desire it. The majority of the acreage, all of the acreage is on federal leases and the Geological Survey is also in Favor of the expansion.

Q Then when you referred to the royalty interest you had reference also to overriding royalties, is that correct?

A Yes, sir.

Q And they are agreeable to the expansion of the project?

A Yes, sir.

Q Will approval of this, in your opinion, facilitate the operation of the South Blanco-Tocito project?

A Yes, very much as far as the operation of the project is concerned. We have compressors that we can use for the compression and sale of gas for these wells, we have facilities for reinjecting the produced water. We have flow lines that are not now, not at the present time being used that we can use in the operation of this expansion. We have facilities for treating oil and water emulsions that can be used in outfitting these wells.

Q But that can only be done if they are included within the South Blanco-Tocito project, is that correct?



A Yes.

Q In your opinion will approval of this application result in an increase in the ultimate recovery of oil from the formation?

A Yes, I think it will.

Q Were Exhibits 1 through 7 prepared by you or under your supervision?

A Yes, sir.

MR. KELLAHIN: At this time I would like to offer in evidence Exhibits 1 through 7, inclusive.

MR. UTZ: Without objection Exhibits 1 through 7 will be entered into the record of this case.

(Whereupon, Applicant's Exhibits Nos. 1 through 7 were offered and admitted in evidence.)

MR. KELLAHIN: That's all I have on the direct examination.

CROSS EXAMINATION

BY MR. UTZ:

Q I was wondering why you decided to use a different type of completion in the 189 than you used in the 248?

A We have 4½" casing in D-248 and we are running 5½" in the other one. We do not have sufficient space in the 4½" casing to permit us to run two strings of tubing large enough to



satisfactorily operate both zones. One and a quarter inch tubing or two strings of one and one-quarter inch tubing is the largest that we can use. We do have a serious paraffin problem in operating those wells, and I believe that it would be almost impossible to keep one and a quarter inch tubing clean. In the D-189 wells with 5½" casing we do have room enough to run one string of 1" tubing and one string of inch and a quarter, and by crossing the Dakota gas over into the inch and a quarter tubing we have 2" tubing for the Tocito production which is large enough to permit the use of most mechanical devices for keeping the paraffin out of the tubing.

Q Actually the 189 is pretty much a conventional dual string completion?

A Yes, the only difference is the crossover. That is done to make it possible for us to use the 2" tubing for Tocito production.

Q On this particular Model R-2 packer, the packer is set above the Tocito in this case and the oil flows through the center of the packer?

A It flows around the barrel of the packer.

Q Around the Dakota tubing?

A Yes, sir.

Q And then somehow gets through this area up here at the



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top of the sketch where the Dakota gas crosses over--

A Yes.

Q -- into the annulus and goes out into the 27/8's tubing?

A Yes, sir.

Q Do you anticipate any paraffin problems in that packer?

A I don't anticipate any trouble at all at that depth.

We've never had any paraffin accumulations below 2,000 feet.

Actually I believe 2500 feet is as deep as we've had any trouble.

The bottom hole temperature at the depth at which this packer would be set is approximately 175 degrees.

Q Will this completion enable you to pump this well if necessary, or do you feel it will be necessary to pump it?

A No, sir, I don't think it can be pumped, not satisfactorily. But the 2½" tubing is large enough to accommodate a macaroni string of tubing that can be used for gas lift purposes.

Q What did you say the spacing was in regard to the Southeast or Northeast Quarters in the South Blanco-Tocito order, the Southeast Quarter or Northeast Quarter?

A The South Blanco, it provides that the wells shall be located in the center of the Northwest one-quarter or Southeast Quarter of a governmental Quarter Section with a tolerance of 100 in either direction to avoid surface obstructions.

Q I gather that your failure to drill on either of these



Quarter Sections wouldn't be so good for the Tocito?

A I didn't understand you.

Q I gather to drill a Tocito well on either the Northwest or Southeast Quarter of either Section 12 or 13 would be risky as far as Tocito production is concerned?

A In Section 13?

Q In 12 or 13.

A Well, the D-189 location is approximately where it should be. I don't know if I'm answering your question correctly. It's, oh, some 184 feet from the standard South Blanco-Tocito spacing. The D-248 well, I think, probably the entire Quarter Section on which it's located would be productive, but the sand was about six feet thick and to drill a well for Tocito production only would be risky.

Q To drill anywhere else would give you a non-standard location in the Dakota, would it?

A If you comply with Tocito or South Blanco-Tocito spacing you could not comply with Dakota spacing. They don't fit.

Q In regard to the project area, that is set out in a red outline on Exhibit 5?

A Yes.

Q Is that true?

A Yes.



Q Is that outline set out by order of the Commission?

A That's all covered by either two or three Commission orders.

Q I must have missed it because I couldn't find it. Do you happen to know which order that sets that out?

A I might add that the South Half of the South Half of Section 5 was by administrative order. That was by letter dated February 28, 1960.

MR. DURRETT: Does that have an administrative order number on it?

A It says "The approval of this expansion is made pursuant to the provisions of Rule 11-A of Order R 1191-A." It doesn't bear a number.

MR. DURRETT: What was the date of the letter again, Mr. Gray?

A February 28, 1960.

Q (By Mr. Utz) Who signed that letter?

A Signed by A. L. Porter, Junior.

Q How many orders do you know covers this entire area, two or three?

MR. KELLAHIN: More than that I think.

A Order 1191-A covers the South Half of the Southwest Quarter of Section 3, the South Half of Section 4, all of Section



6, the Northeast Quarter of Section 7, the North Half of Section 8, the North Half and the North Half of the South Half of Section 9, the Northwest Quarter, the North Half of the Southwest Quarter and the Southeast Quarter, Section 10, Section 11, the West Half of the Southwest Quarter.

Q It covers all of it then?

A Yes, sir.

Q That was the order I couldn't find. In your application here you are asking for an extension to those limits as outlined in green?

A Yes, sir.

Q Would you prefer an amendment to 1191-A or have a new order?

MR. KELLAHIN: I don't think it would make any particular difference, either way that would suit the convenience of the Commission in keeping track of what has been done. Do you want the proposed expansion read into the record, Mr. Utz?

MR. UTZ: The exhibit is a matter of record.

Q (By Mr. Utz) These sections are standard sections, are they not?

A Yes.

MR. UTZ: Are there any other questions of the witness?
Mr. Irby.



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MR. IRBY: Frank Irby, State Engineer's Office.

BY MR. IRBY:

Q Mr. Gray, what is the source of the water that's being used for this pressure maintenance?

A It's coming from water sands between 1500 and 2,000 feet deep in a water well drilled in Section 9, 26, 6.

Q 9, 26, 6?

A Yes, sir.

Q Do you know what formation that is, Mr. Gray?

A No, sir, off-hand I don't. It's a series of sands that were perforated from an electric log.

Q Do you have an analysis of the water?

A Yes, sir.

Q Do you have it with you?

A No, sir, I don't have it with me. I thought I had previously furnished the State Engineer's Office a copy of it.

Q I thought I had it but I can't find it in my file.

A In response to a telegram that I received several months ago. I'll be glad to furnish you another copy.

MR. IRBY: That's all I have.

BY MR. UTZ:

Q Which well was that?

A Our source well is called No. 130.



Q That isn't shown on Exhibit 5?

A No, sir. It's about a thousand feet east of the T-129 location.

Q How deep is that well, do you know off-hand?

A It's a little over 2,000 feet deep.

Q The Pictured Cliff in this area is twenty-six or twenty-seven hundred?

A At that location it would be 2900 feet.

Q So this would be coming from above the Pictured Cliff?

A Yes.

Q Possibly the Ogallala?

A It's just above the Ogallala.

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

(Witness excused.)

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



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STATE OF NEW MEXICO)
COUNTY OF BERNALILLO)

ss

I, ADA DEARNLEY, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 13th day of February, 1964.

Notary Public-Court Reporter

My commission expires:
June 19, 1967.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2976, heard by me on Jan 22, 1964.
_____, Examiner
New Mexico Oil Conservation Commission

