

CASE 3157: Application of PURE
OIL CO. for a dual completion,
Lea County, New Mexico.

CASE No.

3 / 57

Application,

Transcripts,

Small Exhibits

ETC.

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

December 2, 1964

Mr. Richard S. Morris
Seth, Montgomery, Federici & Anderson
Attorneys at Law
Post Office Box 2307
Santa Fe, New Mexico

Case No. 3157
Order No. R-2819
Applicant:
THE PURE 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
Antec OCC

OTHER Mr. George Hunker, Mr. John Russell, Mr. Donald Pray

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

LEGAL DIVISION
PHONE 827-2741

November 20, 1964

C
O
P
Y

Mr. George H. Munker, Jr.
Attorney at Law
418 Hinkle Building
P. O. Box 2086
Roswell, New Mexico

Re: Case No. 3157, Pure Oil Company, Dual Completion
Case No. 3158, Pure Oil Company, 640-acre spacing-
Wolfcamp
Case No. 3159, Pure Oil Company, 640-acre spacing-
Pennsylvanian

Dear George:

We have your letters of November 17 and 18, 1964,
entering your appearance in the above cases and request-
ing continuance of the cases.

As Dick Morris has advised me that his clients desire
to resist the motions for continuance, it will be necessary
to argue the motions at the hearing on November 24, 1964,
when the cases are called.

Very truly yours,

J. M. DURRETT, Jr.
Attorney

JMD/esr

cc: Mr. Richard S. Morris
Attorney at Law
350 East Palace Avenue
P. O. Box 2307
Santa Fe, New Mexico

DOCKET: EXAMINER HEARING - TUESDAY - NOVEMBER 24, 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 3147: Application of Newmont Oil Company for a waterflood expansion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its West Square Lake Waterflood Project by the injection of water into the Grayburg and San Andres formation through 10 wells in Sections 32, 33, and 35, Township 16 South, Range 30 East, and Section 4, Township 17 South, Range 30 East, Eddy County, New Mexico.
- CASE 3148: Application of Newmont Oil Company for a waterflood buffer zone, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks establishment of the NW/4 SE/4 of Section 28, the W/2 SW/4 of Section 33, and the SE/4 NW/4 and SE/4 NE/4 of Section 34, all in Township 16 South, Range 31 East, as a buffer zone adjacent to its Square Lake Waterflood Project, Eddy County, New Mexico.
- CASE 3149: Application of Newmont Oil Company for amendment of Order No. R-2178-B, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an amendment of Order No. R-2178-B to include the S/2 SE/4 of Section 11, Township 18 South, Range 29 East, in Stage I of the Loco Hills Sand Unit Waterflood Project, to approve two Stage I water injection wells in said Section 11, and to include the NE/4 NE/4 of Section 15, Township 18 South, Range 29 East, in Stage III of the waterflood project.
- CASE 3150: Application of California Oil Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Bogle Flats Unit Area comprising 11,091 acres, more or less, of State and Federal lands in Township 22 South, Range 23 East, Eddy County, New Mexico.
- CASE 3151: Application of Jake L. Hamon for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the dual completion (conventional) of its State E-8321 Well No. 1 located in Unit L of Section 4, Township 21 South, Range 35 East, Lea County, New Mexico, to produce oil from the Wolfcamp and Strawn formations through parallel strings of tubing.
- CASE 3152: Application of Jake L. Hamon for the creation of a new oil pool and for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new oil pool for Wolfcamp production for its State E-8321 Well No. 1 located in Unit L of Section 4, Township 21 South, Range 35 East, Lea County, New Mexico, and for the promulgation of special rules for said pool, including a provision for 80-acre spacing and fixed well locations.

- CASE 3153: Application of Jake L. Hamon for the creation of a new oil pool and for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new oil pool for Strawn production for its State E-8321 Well No. 1 located in Unit L. of Section 4, Township 21 South, Range 35 East, Lea County, New Mexico, and for the promulgation of special rules for said pool, including a provision for 80-acre spacing and fixed well locations.
- CASE 3154: Application of Atlantic Refining Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Culwin Queen Unit Area comprising 820 acres, more or less, of State and Federal lands in Townships 18 and 19 South, Ranges 30 and 31 East, Eddy County, New Mexico.
- CASE 3155: Application of Atlantic Refining Company for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Shugart Pool in its Culwin Queen Unit Area by the injection of water into the Queen formation through six injection wells in Section 36, Township 18 South, Range 30 East, Section 31, Township 18 South, Range 31 East, Section 1, Township 19 South, Range 30 East, and Section 6, Township 19 South, Range 31 East, Eddy County, New Mexico.
- CASE 3156: Application of Continental Oil Company for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Cass Pool, Lea County, New Mexico, including a provision for 80-acre spacing and the transfer of allowables.
- CASE 3157: Application of The Pure Oil Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to complete its Red Hills Unit Well No. 1 located 330 feet from the South line and 2310 feet from the East line of Section 32, Township 25 South, Range 33 East, Lea County, New Mexico, as a dual completion (conventional) to produce gas from the Wolfcamp and Pennsylvanian formations through parallel strings of tubing.
- CASE 3158: Application of The Pure Oil Company for the creation of a new gas pool and for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Wolfcamp gas pool for its Red Hills Unit Well No. 1 located 330 feet from the South line and 2310 feet from the East line of Section 32, Township 25 South, Range 33 East, Lea County, New Mexico, and the promulgation of special pool rules including a provision for 640 acre spacing.
- CASE 3159: Application of The Pure Oil Company for the creation of a new gas pool and for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Pennsylvanian gas pool for its Red Hills Unit Well No. 1, located 330 feet from the South line and 2310 feet from the East line of Section 32, Township 25 South, Range 33 East, Lea County, New Mexico, and the promulgation of special pool rules including a provision for 640-acre spacing.

November 24th Examiner Hearing

- CASE 3160: Application of Texaco Inc. for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the dual completion (tubingless) of its State of New Mexico "R" (NCT-4) Well No. 1 located in Unit C of Section 7, Township 18 South, Range 35 East, Lea County, New Mexico, to produce oil from the Vacuum-San Andres and Vacuum-Abo Reef Pools through parallel strings of 2-7/8 inch casing cemented in a common well bore.
- CASE 3161: In the matter of the hearing called by the Oil Conservation Commission upon its own motion to permit Southern Union Production Company and all other interested parties to show cause why the Robert Mims-State Well No. 1 located in Unit M of Section 16, Township 29 North, Range 9 West, San Juan County, New Mexico, should not be properly repaired or plugged in accordance with a Commission approved plugging program.
- CASE 3162: Application of Continental Oil Company for a waterflood expansion and an administrative procedure, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to convert to water injection its General American Green "B" Wells Nos. 4 and 7, located in Unit H of Section 7 and Unit L of Section 5, respectively, Cave Pool Waterflood Project, Township 17 South, Range 29 East, Eddy County, New Mexico. Applicant further seeks an administrative procedure in exception to Rule 701 whereby additional wells in said project could be converted to water injection prior to receiving response from flooding operations.

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

November 5, 1964

Mr. Jerald Schuman
1109 Petroleum Club Building
Tulsa, Oklahoma

DOCKET MAILED

Date 11-13-64

Dear Mr. Schuman:

As per your request of sometime back, we are hereby notifying you of a case being set for the Pure Oil Company to create two new gas pools, one in the Wolfcamp formation and the other in the Pennsylvanian formation, for Pure's Red Hills Unit Well No. 1 in Section 32, Township 25 South, Range 33 East, Lea County, New Mexico.

Pure is requesting 640-acre spacing for each of these pools.

The hearing is being set for 9 o'clock a.m., November 24, 1964, Oil Conservation Commission Conference Room, State Land Office Building, Santa Fe, New Mexico.

Very truly yours,

DANIEL S. NUTTER
Chief Engineer

DSN/ir

C
O
P
Y

Jan 3157

Send docket

Memo

From
D. S. NUTTER
CHIEF ENGINEER

Send docket

To Ida -

Jerald Schuman
1109 Petroleum Club Bldg
Tulsa, Oklahoma

would like to receive
notice if Pure Oil Co.
files an application
for spacing for the
Red Hills Unit in
Lea County.

I told him we would do
our best to remember.

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. 3157
Order No. R-2819

APPLICATION OF THE PURE 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 November 24, 1964, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 2nd day of December, 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, The Pure Oil Company, seeks authority to complete its Red Hills Unit Well No. 1, located 330 feet from the South line and 2310 feet from the East line of Section 32, Township 25 South, Range 33 East, NMPM, Lea County, New Mexico, as a dual completion (conventional) to produce gas from the Wolfcamp and Pennsylvanian formations through parallel strings of 2 7/8-inch tubing, with separation of zones by a packer set at approximately 13,730 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.

-2-

CASE No. 3157

Order No. R-2819

IT IS THEREFORE ORDERED:

(1) That the applicant, The Pure Oil Company, is hereby authorized to complete its Red Hills Unit Well No. 1, located 330 feet from the South line and 2310 feet from the East line of Section 32, Township 25 South, Range 33 East, NMPM, Lea County, New Mexico, as a dual completion (conventional) to produce gas from the Wolfcamp and Pennsylvanian formations through parallel strings of 2 7/8-inch tubing, with separation of zones by a packer set at approximately 13,730 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 Annual Shut-in Pressure Test Period for the Pennsylvanian 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

JACK M. CAMPBELL, Chairman

E. S. Walker

E. S. WALKER, Member

A. L. Porter, Jr.

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

csr/

LAW OFFICES
GEORGE H. HUNKER, JR.
418 HINKLE BUILDING
ROSWELL, NEW MEXICO

505 622-3405

Post Office Box 2086

November 17, 1964

Mr. A. L. Porter, Jr.
Secretary and Director
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico

Re: Examiner Hearing, NMOCC, 11-24-64
Case No. 3157, Pure Oil Company
Dual Completion

Dear Mr. Porter:

I would like to enter my appearance in the above styled case for
and on behalf of the following named persons:

Mr. Jerald M. Schuman
Suite 1109 Petroleum Club Building
Tulsa, Oklahoma

Mr. Saul A. Yager
902 Enterprise Building
Tulsa 5, Oklahoma

My clients own mineral interests in certain fee lands in Section 5,
Township 26 South, Range 32 East (and other lands) south of Pure Oil
Company's Red Hills Unit Well No. 1, located 330 feet from the south line
and 2,310 feet from the east line of Section 32, Township 25 South, Range 33
East. My clients would like to have a continuance of the case and as a
ground for the continuance, state:

1. That they were not aware of the Pure Oil Company's application
to dually complete the above described well until Saturday November 14, 1964
at which time, their attorney received a copy of the Commission's docket.

2. That they have not had an opportunity to examine and evaluate
the Pure Oil Company application to dually complete.

3. That the Pennsylvanian formation is an exceedingly thick
formation in which a number of gas wells have been completed and until
they have had an opportunity to examine and evaluate the applicant's
application to dually complete, they cannot properly evaluate whether

Mr. A. L. Porter, Jr.
Page 2

November 17, 1964

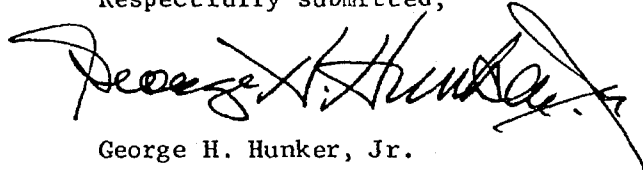
their correlative rights will be adversely affected by the dual completion of the subject well.

4. That they know of no reason why the Pure Oil Company's rights would be prejudiced in any way by the granting of at least a 30-day continuance since there is no gas gathering system at the well and since no Federal Power Commission approval has been given to produce and transport the gas producible from the subject well.

A copy of this letter is being sent to Mr. Richard M. Morris, attorney for Pure Oil Company, in order that he may be advised of our request.

Please let me hear from you as soon as possible with respect to the request for a continuance.

Respectfully submitted,



George H. Hunker, Jr.

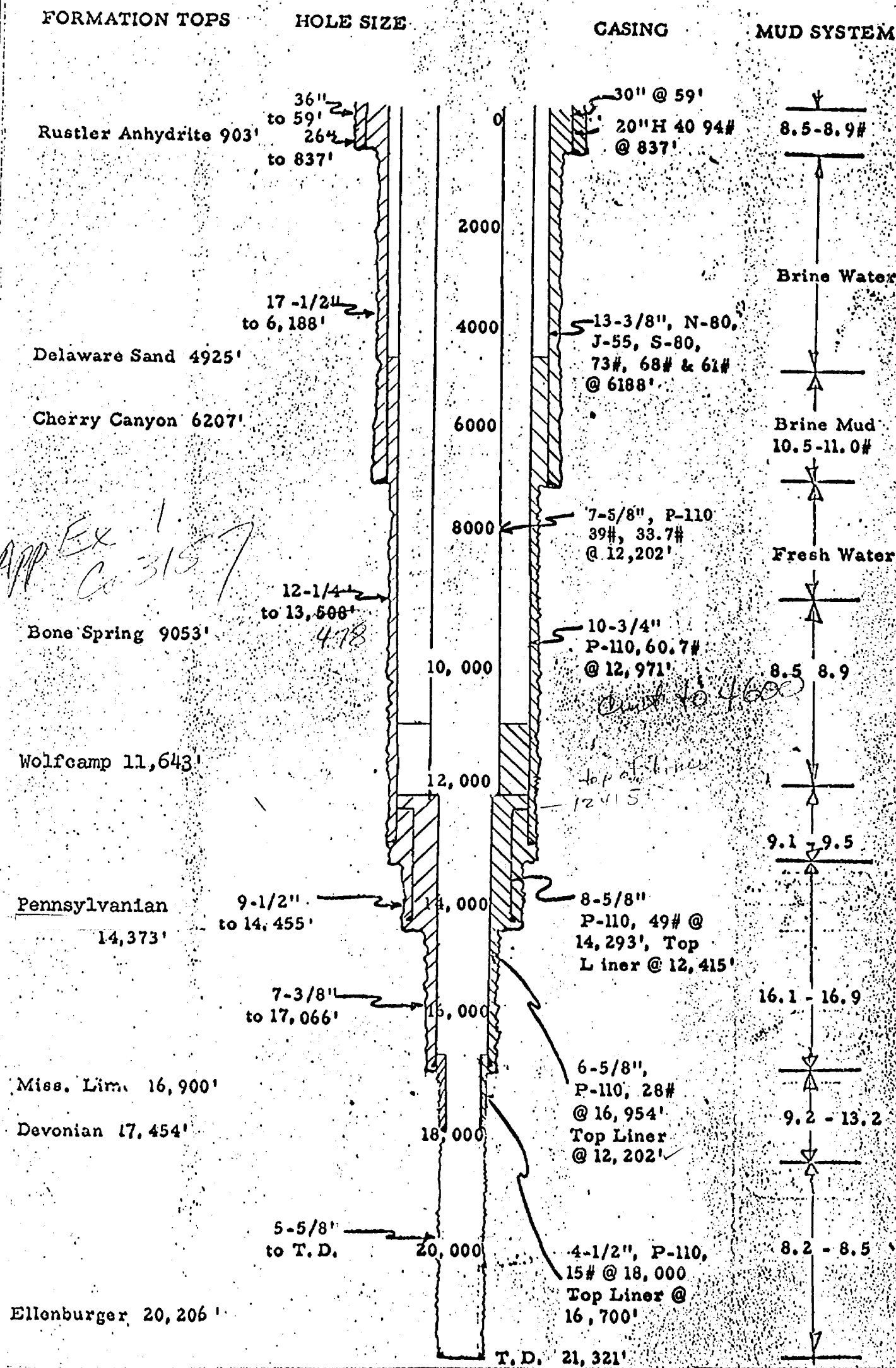
GHH:cd

cc: Mr. Jerald M. Schuman
Suite 1109 Petroleum Club Building
Tulsa, Oklahoma

cc: Mr. Saul A. Yager
902 Enterprise Building
Tulsa 5, Oklahoma

cc: Mr. Richard M. Morris
350 East Palace Ave.
Santa Fe, New Mexico

CASING PROGRAM - MUD SYSTEM
AND FORMATION TOPS



- | DESCRIPTION | DIMENSIONS |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| A. Long String - 2-7/8" 6.5#/ft. P-105 Hydril "CS" Tubing. | A. OD = 3.220"
ID = 2.441" |
| B. Short String - 2-7/8" 6.5#/ft. P-105 Hydril "CS" Tubing. | B. OD = 3.220"
ID = 2.441" |
| C. 7-5/8" 33.7#/ft Brown Oil Tools Type HS-21-2-C Dual Hydraulic Packer with Long String set and either string retrievable. Long String Sub 2-7/8" Hydril "CS" Box Up. Short String Sub 2-3/8" Hydril "CS" Box Up. Long String Bottom Connection 2-7/8" Hydril "CS" Pin Down. Short String Bottom Connection 2-1/16" Hydril "CS" Pin Down. | C. Long String ID = 2.375"
Short String ID = 1.700" |
| D. 2-7/8" Hydril "CS" Box by 2-3/8" Hydril "CS" Pin P-105. | D. OD = 3.220"
ID = 1.995" |
| E. 2-3/8" Otis Type "XA" Shifting Sleeve w/2-3/8" Hydril "CS" Box Up—Pin Down. Shift up to open. | E. OD = 3.094"
ID = 1.906" |
| F. 2-7/8" 6.5#/ft. P-105 Pup Joint - 10' Long. | F. OD = 3.220"
ID = 2.441" |
| G. 2-7/8" Otis Type "X" Landing Nipple w/2-7/8" Hydril "CS" Box Up—Pin Down. | G. OD = 3.220"
ID = 2.313" |
| H. 2-7/8" 6.5#/ft. P-105 Hydril "CS" Tubing. | H. OD = 3.220"
ID = 2.441" |
| I. 2-7/8" Otis Blast Joints w/2-7/8" Hydril "CS" Connections. | I. OD =
ID = 2.441" |
| J. 2-7/8" Otis Type "XA" Shifting Sleeve w/2-7/8" Hydril "CS" Box Up—Pin Down. Shift up to open. | J. OD = 3.750"
ID = 2.343" |
| K. 6-5/8" 28#/ft. Baker Model "D" Packer. | K. Packer Bore = 3.250" |
| L. Baker Locator Sub Assembly with 8' of Seals with 2-7/8" Hydril "CS" Box Up and 2-7/8" S.C. Hydril "CS" Pin Down. | L. Seal Tube ID = 2.375" |
| M. 2-7/8" P-105 Special Clearance Hydril "CS" Pup Joints - 10' Long. | M. OD = 3.155"
ID = 2.441" |
| N. 2-7/8" Otis Type "S-2" Landing Nipple w/2-7/8" Special Clearance Hydril "CS" OD. | N. OD = 3.155"
ID = 2.313" |
| O. 2-7/8" Otis Type "S-3" Landing Nipple w/2-7/8" Special Clearance Hydril "CS" OD. | O. OD = 3.155"
ID = 2.313" |
| P. 2-7/8" N-80 Special Clearance Hydril "CS" Perforated Sub - 10' Long. | P. OD = 3.155"
ID = 2.441" |
| Q. 2-7/8" Otis Type "N" No-Go Landing Nipple w/2-7/8" Special Clearance Hydril "CS" OD. | Q. OD = 3.155"
ID = 2.255" |
| R. 2-7/8" N-80 Special Clearance Hydril "CS" Sub with a Half Muleshoe on Bottom - 15' Long. | R. OD = 3.155"
ID = 2.441" |
| S. 2-1/16" P-105 Hydril "CS" Pup Joint - 10' Long. | S. OD = 2.063"
ID = 1.751" |
| T. 2-1/16" Otis Type "S-2" Landing Nipple w/2-1/16" Hydril "CS" Box Up—Pin Down. | T. OD = 2.063"
ID = 1.625" |
| U. 2-1/16" Otis Type "S-1" Landing Nipple w/2-1/16" Hydril "CS" Box Up—Pin Down. | U. OD = 2.063"
ID = 1.625" |
| V. 2-1/16" P-105 Hydril "CS" Perforated Sub - 10' Long. | V. OD = 2.063"
ID = 1.751" |
| W. 2-1/16" P-105 Otis Type "N" No-Go Landing Nipple w/2-1/16" Hydril "CS" Box Up—Pin Down. | W. OD = 2.063"
ID = 1.536" |
| X. 2-1/16" P-105 Hydril "CS" Sub with a Half Muleshoe on Bottom. | X. OD = 2.063"
ID = 1.751" |

Perforations

Wolfcamp	13,440' to 13,667'
Pennsylvanian	14,607' to 14,864'

RED HILLS UNIT #1

DUAL COMPLETION SCHEMATIC DIAGRAM

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 2
CASE NO. 3459-3157

BHP
9,000

BHP
11400

13,700

Nov 4 PM 2
BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION OF THE PURE OIL COMPANY
FOR APPROVAL OF A DUAL COMPLETION,
RED HILLS UNIT AREA, LEA COUNTY,
NEW MEXICO.

Case No. 3157

APPLICATION

Comes now THE PURE OIL COMPANY, by its attorneys, and applies for an order of the Commission approving the dual completion of the Red Hills Unit Well No. 1 and in support of its application states:

1. The Pure Oil Company is the operator of the Red Hills Unit Area and is the operator of the Red Hills Unit Well No. 1 located 2310 feet from the east line and 330 feet from the south line of Section 32, Township 25 South, Range 33 East, Lea County, New Mexico.

2. The Red Hills Unit Well No. 1 has been tested and found productive of gas in the Wolfcamp and Pennsylvanian formations at approximate depths of 13,500 feet and 14,400 feet respectively.

3. The Pure Oil Company proposes a conventional dual completion of the Red Hills Unit Well No. 1 in the Wolfcamp and Pennsylvanian formations utilizing two strings of 2-7/8 inch tubing installed within 7-5/8 inch and 6-5/8 inch casing. The 7-5/8 inch casing extends from the surface to a depth of 12,204 feet; 6-5/8 inch casing extends from 12,204 feet to approximately 16,200 feet. Separation of the producing

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DATE 11-13-64

formations will be accomplished by means of a dual packer above and a single packer below the Pennsylvanian formation.

4. Approval of this application will be in accordance with good conservation practices and will prevent waste and protect correlative rights.

WHEREFORE, The Pure Oil Company requests that this application be set for hearing before one of the Commission's duly appointed Examiners at the last Examiner Hearing during the month of November 1964, and that the Commission enter its order approving this application.

SETH, MONTGOMERY, FEDERICI & ANDREWS

By

Richard S. Morris

350 East Palace Avenue
Santa Fe, New Mexico

Attorneys for The Pure Oil Company.

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMAS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO



BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
November 24, 1964

EXAMINER HEARING

IN THE MATTER OF:

APPLICATION OF THE PURE OIL COMPANY FOR
A DUAL COMPLETION, LEA COUNTY, NEW MEXICO

Case No. 3157

BEFORE:

DANIEL NUTTER

TRANSCRIPT OF HEARING



MR. NUTTER: We will call Case Number 3157.

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

MR. MORRIS: Richard F. Morris of the firm of Seth, Montgomery, Federici & Andrews, appearing for the applicant, The Pure Oil Company.

MR. NUTTER: Mr. Hunker, would you like to have the record show your appearance, and that of Mr. Russell and Mr. Pray?

MR. HUNKER: Yes, sir.

MR. MORRIS: Mr. Examiner, in order not to have to repeat the information submitted in the previous cases, I move at this time to incorporate into the record of this case, the testimony and exhibits offered in Cases 3158 and 3159.

MR. NUTTER: Is there an objection to the incorporation of testimony relating to the previous cases in the record of this case?

MR. HUNKER: I don't believe I would have any objection.

MR. NUTTER: The record will be so incorporated.

(Mr. John R. Murphey, Jr., having been duly sworn, was examined and testified as follows:)

DIRECT EXAMINATION

BY MR. MORRIS:

Q Mr. Murphey, are you the same Mr. Murphey who testified in Cases Number 3158 and 3159?



A Yes, sir, I am.

Q What was your responsibility, Mr. Murphey, concerning the design of the mechanical installation in the Red Hills Unit Well Number 1?

A I was responsible for the equipment designed in the Red Hills Unit Number 1.

Q And are you completely familiar with the manner in which that well has been completed?

A Yes, sir, I am.

Q Would you refer to what has been marked Exhibit 1 in this case, state what it is, and briefly state what it shows.

A This is a schematic diagram showing the casing as it exists in the well. It shows, reading across the top on the description list--shows formation tops on the extreme left-hand side. The next column is hole size; the next column casing; the next one is mud system and down the center is a schematic diagram of the well as it was drilled. We drilled a 36-inch hole to 59 feet and a 30-inch casing was set at this point, cemented back to surface. We then drilled a 17 $\frac{1}{2}$ -inch hole and drilled down to a depth of 13,475 feet, and we had our initial trouble in this well. After we were able to obtain control of the well we ran the 10-3/4 inch casing as deep as we were able to get it, which was 12,971. After several cement jobs, both from the conventional method around the shoe, squeezing, and

dearnley-meier reporting

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO



PAGE

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by jumping down the annulus we established a solid cement column from the show at 2971 back to approximately 4600 feet. This was determined by temperature survey. We started out from under the 10-3/4 casing with a 9 1/2-inch bit, and drilled from that point, or the old TD of 13,475 feet down to 14,455. Some of these numbers are at variance here--I'm quoting from memory, and we changed the datum point in the middle well--some of these may be 33 feet off; we changed from ground measurement to derick measurement. At this time we were unable to proceed further with drilling operations due to hole conditions we encountered, and we ran a 8-5/8 liner with top at 12,140, bottom at 14,293. During this period, drilling with the mud situation up to 16.8, we came out from under the eight-five casing with a 7-3/8 inch bit, still required to maintain 16-plus mud system, and drilled to 17,066 feet, at which time we set a 6-5/8 inch liner which covered up the eight-five entirely. We hung the six-five inside the 10-3/4, the top liner being 12,202, the bottom being 16,954. From that point we proceeded to drill a 5-5/8 inch hole to our total depth of 21,321. Total time to go from spud to TD was approximately 500 days. The lower zones being barren, we set a 4 1/2-inch liner inside of the six-five liner, with the top of it at 16,700 feet, the bottom being at 18,000, to case off the Devonian formation. After that we came back and tied our six-five liner back to surface with a full string of

7-5/8 casing, so that our present internal casing on the well from the surface down consisted of 7-5/8 inch casing from the surface down to 12,202, at which point it swedged down to 6-5/8, which goes from 12,202 down to 16,700 feet, and from 16,700 to 18,000 we have 4½-inch casings.

Q Referring now to what has been marked Exhibit 2 in this case, would you state what that is and briefly what it shows.

A Exhibit 2 is a schematic diagram of our dual down hole completion equipment, showing the equipment with which we propose to dually complete this well between the Pennsylvanian and the Wolfcamp. One other reference here I should make is that we have bridge plugs set in the 6-5/8 inch casing at approximately 15,600 feet, so that the lower portion of the hole is plugged off at this time internally. Referring again to my dual completion diagram, the schematic diagram shows in the swedge-down portion of the casing some perforations. The upper are indicated to be the Wolfcamp selection perforated in the gross interval, 13,440 to 13,677; the lower perforations indicated at the bottom of the diagram are representative of Pennsylvanian selectively perforated in intervals 14,607 to 14,864. Our basic completion here provides separation of the Wolfcamp and Pennsylvanian zones by a Model D packer, which is shown on the diagram as Number L here, which are the locator subs and seal tubes located in the Baker Model D packer. This packer is located at approximately 13,730 feet. Above this we have a string of 2½-inch tubing in

a Brown dual hydraulic packer, which is represented on the diagram by the letter C. This packer is set by hydraulic pressure --it is a long string set with either string retrievable--once the packer has been set, either string may be independently retrieved. The tubing chains for both sides consist of 2-7/8 inch hydro-tubing, 650-pound P105 grade. We have isolation between our two zones by the Model D. The basic purpose of the Brown packer is to isolate the Wolfcamp zone from our upper annulus and to allow heavy packer flood at this point, and to insure that we don't have formation pressure at the surface on our casing string.

Q In your opinion, is the installation as depicted on Exhibits 1 and 2 feasible, and in accord with good engineering and conservation practices?

A Yes, sir, this is my opinion.

Q In your opinion will this installation afford any opportunity for waste to appear in either one of these two zones?

A No, sir, it will not.

Q Is there any opportunity for correlative rights to be violated by your installation?

A No, sir.

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

A Yes, sir.

MR. MORRIS: I offer Exhibits 1 and 2 in evidence at this time.

MR. NUTTER: Exhibits 1 and 2 are admitted into evidence.

MR. MORRIS: That's all I have of this witness.

CROSS EXAMINATION

BY MR. HUNKER:

Q Was an Eastman deviation test run in connection with this well, or a similar deviation test?

A Yes, sir, there were directional surveys run.

Q Will you be able to furnish the Commission with copies of those deviation surveys?

MR. MORRIS: If I may interrupt, may I ask for clarification of what the rule is requiring submission of tests on wells... If there is more than a five-degree deviation at a given interval these deviation tests are required, otherwise they are not--is that basically correct?

MR. NUTTER: I believe that's basically it.

MR. PRAY: At a 17,000 foot depth he could be half-way down in our section.

MR. HUNKER: I think it's five degrees or 500 feet.

MR. MORRIS: I wish to state--if by the rules we are required to furnish tests to the Commission, I presume we have either already done it or will do it. Otherwise, if the Com-

mission rules don't require it, I don't see that we would be under any obligation to furnish it.

MR. NUTTER: Deviation tests are required to be submitted with the C104, and I presume that has not been filed yet?

MR. MORRIS: No, sir.

MR. NUTTER: You haven't requested an allowable for the well yet, so deviation tests would not be due yet. They must be filed before the well is assigned an allowable, and I believe the rule specifies that if the deviation exceeds a specified amount within a 500-foot interval, a directional survey is to be made. I'm not sure of the rule--I believe it's 111.

MR. MORRIS: I can state that whatever the rule is, Pure will comply with it.

MR. HUNKER: Our clients are concerned that their correlative rights may be adversely affected, and I would like to request the Commission to make an exception to the rule and request that this information may be furnished to it so they can know now whether or not our clients' correlative rights are affected.

MR. MORRIS: If the Examiner please, this is far beyond the call of the hearing for dual completion. If Mr. Hunker's clients wish to call a special hearing to consider an exception to the rule and ask that special surveys be run, we can have a separate case to determine that controversy, but it is certainly

beyond the scope of this hearing, when they are merely speculating that there may be some deviation.

MR. PRAY: Testimony was offered that the correlative rights would not be violated. We believe it is questionable, in view of this unusual location for a well of this depth. We think the only safe thing and the only fair thing, in all justice, is to determine whether or not the well is straight.

MR. MORRIS: Correlative rights, if the Examiner please, comes in issue only in the context of dual completion--no correlative rights are being violated by production of these two zones through the installation as shown; and that is the only context in which correlative rights is in issue.

MR. NUTTER: There is a provision in Rule 111 that the offsetting operator in New Mexico can request a directional survey to be run; and I believe there has been testimony that a directional survey has been run. I don't know if it's a matter for this hearing today or not, but you can request that a directional survey be filed--we will be glad to discuss with you the procedure for doing that.

MR. PRAY: I make the request that that be done, and we will take such steps as may be necessary to make a formal request.

WITNESS: I'd like to state that we do not have a directional survey from top to bottom of this well.



MR. NUTTER: Do you know the extent to which the directional survey was run?

A Offhand I'm not exactly sure of these numbers, but they will be from somewhere around 21,000 back up to 16,954, in that there were no directional surveys run inside the casing. We do have the standard deviation surveys.

MR. NUTTER: But a directional survey was only run in the open hole portion, after you had about 16,000 feet of pipe in there?

A Yes, sir--nearly 17,000.

MR. NUTTER: In coming down the hole I think you skipped one string of pipe there. That would be your 837 feet of 20-inch.

A Excuse me--yes, sir, we do have 20-inch in the hole.

MR. NUTTER: You drilled a 26-inch hole under the 30-inch pipe down to 837, and then ran the 20 to 837?

A Yes.

MR. NUTTER: How about cement on that?

A It was circulated.

MR. NUTTER: You gave the location of the packer as 13,730?

A This is the approximate location. When I had left Midland this packer had not been set; however, it has been at this time, as we are in the process of installing equipment at

this time.

MR. NUTTER: Do you have the bottom hole pressures this packer will be subjected to on both sides?

A Pressure on the Wolfcamp side is approximately 11,400 pounds. The pressure on the Pennsylvanian side is on the order of 9,000.

MR. NUTTER: So you have a differentiation of 2,400 pounds?

A Yes, sir. These packers are built for a 10,000-pound differentiation, and we placed it on them a couple of times, and they will hold.

MR. NUTTER: Are there any further questions of this witness?

CROSS EXAMINATION

BY MR. PRAY:

Q I have one. You testified that the total time from top to total depth was 522 days?

A I said in excess of 500.

Q Do you know what the time was to the Pennsylvanian?

A This was--we started in February of 1963 and we were in the Pennsylvanian last November, so it was about--oh, six months, seven months, to the top of it, and then it took us approximately five months to get through it.

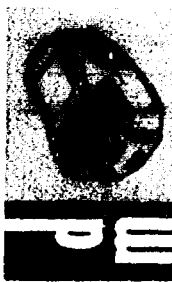
MR. PRAY: No further questions.

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MR. NUTTER: If there are no further questions the witness may be excused. Do you have anything further you wish to offer at this time, Mr. Morris?

MR. MORRIS: That's all at this time.

MR. NUTTER: We have already admitted Exhibits 1 and 2?

MR. MORRIS: Yes, sir.

MR. NUTTER: Does anyone have anything to offer in Case Number 3157? ... For the record, we will reopen Cases Number 3158 and 3159 and announce that those cases will be heard as to the spacing provisions on Wednesday, January 6th at nine A.M. in this same place, and before this examiner or the alternate examiner.

MR. PRAY: At this time I'd like to make the request that we be furnished with copies of the drill stem tests made during drilling of the well--that we be furnished copies of any other sample analyses which we have not been furnished with; any copies of the core analyses; basically anything done by third parties. We don't want to get into their work papers, but we would like to have anything they have had done by contractors such as Halliburton--more or less matters of public record. I'd like to have the Commission direct that they furnish us with this in order that we may properly prepare and be ready at the time of the next hearing.

MR. MORRIS: If the Examiner please, an oral request

of this sort is improper. If Mr. Pray wishes and thinks he has available to him formal procedures for obtaining documentary evidence, I would suggest that he follow those procedures, but that it would be improper at this time and would be beyond the Examiner's authority to direct the production of any documents.

MR. NUTTER: Mr. Pray, it has been customary in New Mexico Commission proceedings not to require proponents or opponents of these various cases to furnish the other party with data that will be presented at the hearing, prior to the time of the hearing. The data that Pure feels will be necessary to sustain their application for 640-acre spacing will be presented at the hearing, and of course will be subject to cross-examination or any other interrogation you may wish to subject it to.

MR. PRAY: With all due respect, sir, it may have been customary within the Commission, but we believe this is a most unusual case, with unusual equities involved, and therefore we would call upon your special powers as an examiner to assist in presenting justice in this matter--that this will be heard before you again, and that we think it would expedite matters greatly if this information were furnished; and we don't believe this is an unusual request to make--that this information be furnished to us.

MR. NUTTER: I agree that it would always be nice to have it before the hearing, but I don't think we have it within

our jurisdiction to request them to do so. We will take Case Number 3157 under advisement, and call Case Number 3160.

* * *

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, Elizabeth K. Hale, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the sworn testimony which appears in the foregoing pages was recorded by me in shorthand; and that such testimony is a true record of the testimony given by said witnesses to the best of my knowledge, skill and ability.

Elizabeth K. Hale

NOTARY PUBLIC

My commission expires:

May 23, 1968.

I do hereby certify that the foregoing is a complete and correct copy of the original the Board of Commissioners of the New Mexico Oil Conservation Commission heard on 11/24/64.

[Signature]
New Mexico Oil Conservation Commission

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