

CASE 3402: Application of JERALD M.
SCHUMAN, SAUL A. YAGER & KERMIT OII
CO. for 2 non-standard drlg. units.

ASE No.

3402

Application,

Transcripts,

Mail Exhibits

ETC.

**BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO**

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

**CASE No. 3402
Order No. R-3075**

**APPLICATION OF JERALD M. SCHUBAN,
SAUL A. YAGER AND KERMIT OIL COMPANY
FOR TWO NON-STANDARD DRILLING UNITS,
LEA COUNTY, NEW MEXICO.**

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 18, 1966, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 2nd day of June, 1966, the Commission, a quorum being present, having considered the record, 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(2) That the applicants have requested that their application be withdrawn.

(3) That Case No. 3402 should be dismissed.

IT IS THEREFORE ORDERED:

That Case No. 3402 is hereby dismissed.

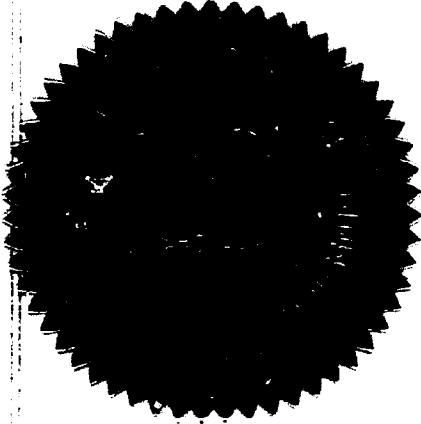
-2-

CASE No. 3402

Order No. R-3075

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

Guyton B. Hays

GUYTON B. HAYS, Member

A. L. Porter, Jr.

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

esr/

DON M. FEDRIC

GEORGE HUNKER, JR.
4 BUILDING
ROSARITO NEW MEXICO

505 622-3403
Post Office Box 2088

MAIN OFFICE

'66 JUN 2 AM 8 34

1, 1966

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. A. L. Porter, Jr.
Secretary-Director

Re: NMOCC Cases 3401 and 3402
Red Hills Area

Gentlemen:

With full authority, consent and agreement, we are writing this letter in behalf of our clients, Gerald M. Schuman, Saul A. Yager and Kermit Oil Company.

The parties we represent have heretofore filed with the Commission three applications for non-standard drilling and spacing units, embracing lands in Section 5, Township 26 South, Range 33 East, and encompassing Pennsylvanian and Wolfcamp formations. The Pennsylvanian non-standard case was given number 3401 and the two applications involving the proposed Wolfcamp units were consolidated under case number 3402. For the purposes of the hearing, these two cases were consolidated and heard on May 19, 1966. The testimony taken by the Commission on May 18, 1966 in connection with Union Oil Company of California's application for special field rules and for 640 acre spacing of the Red Hills-Wolfcamp Gas Pool (Case No. 3158) involving (with other lands) the lands in cases 3401 and 3402 was made a part of the record in the latter cases.

Our clients now desire to formally withdraw their opposition to Union's application for special field rules and for 640 acre Wolfcamp gas well spacing in the Red Hills-Wolfcamp Gas Pool, and such opposition is hereby withdrawn.

Measures have been taken by Union of California to protect the correlative rights of the mineral owners in Section 5, Township 26 South, Range 33 East, and as a result thereof, our clients have asked that the applications 3401 and 3402, filed by them, be withdrawn and that the cases be dismissed and closed.

Respectfully submitted,

George H. Hunker, Jr.

GHH:cd

cc: Mr. Gerald M. Schuman
Mr. Saul A. Yager
Kermit Oil Company
Mr. S. B. Christy, IV
All interested parties named in applications

Docket No. 12-66

DOCKET: REGULAR HEARING - WEDNESDAY - MAY 18, 1966

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

- ALLOWABLE:**
- (1) Consideration of the oil allowable for June, 1966.
 - (2) Consideration of the allowable production of gas for June, 1966, from thirteen prorated pools in Lea, Eddy, and Roosevelt Counties, New Mexico, and also presentation of purchasers nominations for said pools for the six-month period beginning July 1, 1966; consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba and Sandoval Counties, New Mexico, for June, 1966.

CASE 3158: Application of Union Oil Company of California to reopen Case No. 3158, Lea County, New Mexico. Applicant, in the above-styled cause, as successor in interest to The Pure Oil Company, seeks the reopening of Case No. 3158 to consider the establishment of special pool rules for the Red Hills-Wolfcamp Gas Pool, Lea County, New Mexico, including provision for 640-acre drilling units and specified well locations. Applicant further requests an exception to the well location requirements of the requested pool rules for its Red Hills Unit Well No. 1, located in the SW/4 SE/4 of Section 32, Township 25 South, Range 33 East, and stipulates that an exception to the spacing requirements of the proposed special pool rules should be granted to the owners of mineral interest in Section 5, Township 26 South, Range 33 East. Applicant's request for the reopening of Case No. 3158, which was the application of The Pure Oil Company for special rules for said Red Hills-Wolfcamp Gas Pool, is predicated upon alleged new and independent evidence obtained since the original hearing of the case.

CASE 3401: Application of Jerald M. Schuman, Saul A. Yager and Kermit Oil Company for a non-standard drilling unit, Lea County, New Mexico. Applicants, in the above-styled cause, seek approval of a non-standard 280-acre drilling unit comprising the N/2 N/2, SE/4 NE/4, and E/2 SE/4 of Section 5, Township 26 South, Range 33 East, Red Hills-Pennsylvanian Pool, Lea County, New Mexico, to be dedicated to a well to be drilled 660 feet from the North line and 1980 feet from the West line of said Section 5.

CASE 3402: Application of Jerald M. Schuman, Saul A. Yager and Kermit Oil Company for two non-standard drilling units, Lea County, New Mexico. Applicants, in the above-styled cause, seek approval of two non-standard Red Hills-Wolfcamp Gas Pool drilling units described as follows:

- (1) A 120-acre unit comprising the SE/4 NE/4 and E/2 SE/4 of Section 5, Township 26 South, Range 33 East, to be dedicated to a well to be drilled 1980 feet from the South line and 660 feet from the East line of said Section 5;

MAY 18, 1966, REGULAR HEARING

CASE 3402 - Continued:

(2) A 160-acre unit comprising the N/2 N/2 of Section 5, Township 26 South, Range 33 East, to be dedicated to a well to be drilled 660 feet from the North line and 1980 feet from the West line of said Section 5, all of the above being in Lea County, New Mexico.

CASE 3403: Southeastern New Mexico nomenclature case calling for an order for the creation and extension of certain pools in Eddy and Lea Counties, New Mexico:

a) CREATE A new gas pool for Morrow production and designated as the Golden Eagle-Morrow Gas Pool. The discovery well is The Atlantic Refining Company, Pure Federal No. 1, located in Unit K of Section 11, Township 21 South, Range 25 East, NMPM. Said pool described as:

TOWNSHIP 21 SOUTH, RANGE 25 EAST, NMPM
SECTION 11: All

b) CREATE A new gas pool for Morrow production designated as the North McMillan-Morrow Gas Pool. The discovery well is Yates Drilling Company, Pecos River Deep Unit No. 1, located in Unit F of Section 28, Township 19 South, Range 27 East, NMPM. Said pool described as:

TOWNSHIP 19 SOUTH, RANGE 27 EAST, NMPM
SECTION 28: All

c) CREATE A new pool in Eddy County, New Mexico, classified as an oil pool for Wolfcamp production and designated as the Winchester-Wolfcamp Pool. The discovery well is J. C. Williamson, State A No. 1, located in Unit M of Section 36, Township 19 South, Range 28 East, NMPM. Said pool described as:

TOWNSHIP 19 SOUTH, RANGE 28 EAST, NMPM
SECTION 35: S/2 SE/4
SECTION 36: SW/4 SW/4

d) EXTEND the North Bagley-Upper Pennsylvanian Pool to include therein:

TOWNSHIP 11 SOUTH, RANGE 33 EAST, NMPM
SECTION 10: NE/4
SECTION 27: W/2
SECTION 28: S/2

e) EXTEND the Drinkard Pool to include therein:

TOWNSHIP 22 SOUTH, RANGE 38 EAST, NMPM
SECTION 21: W/2 SW/4

f) EXTEND the Lusk-Strawn Pool to include therein:

TOWNSHIP 19 SOUTH, RANGE 31 EAST, NMPM
SECTION 14: NW/4

- 3 -

MAY 18, 1966, REGULAR HEARING

g) EXTEND the Mescalero-San Andres Pool to include therein:

TOWNSHIP 10 SOUTH, RANGE 32 EAST, NMPM
SECTION 10: SE/4

h) EXTEND the Osudo-Morrow Gas Pool to include therein:

TOWNSHIP 21 SOUTH, RANGE 35 EAST, NMPM
SECTION 5: Lots 1 through 8

i) EXTEND the Shugart-Pennsylvanian Gas Pool to include therein:

TOWNSHIP 18 SOUTH, RANGE 31 EAST, NMPM
SECTION 27: NE/4

j) EXTEND the Skaggs-Drinkard Pool to include therein:

TOWNSHIP 20 SOUTH, RANGE 37 EAST, NMPM
SECTION 13: NW/4

k) EXTEND the Square Lake Grayburg-San Andres Pool to include therein:

TOWNSHIP 16 SOUTH, RANGE 31 EAST, NMPM
SECTION 20: S/2 NW/4

120 acre unit
Wolfcamp

11 AM 03 11 66

MAR 13 AM 7 53

BEFORE THE OIL CONSERVATION COMMISSION
OF NEW MEXICO

APPLICATION OF JERALD M. SCHUMAN,)
SAUL A. YAGER and KERMIT OIL)
COMPANY FOR APPROVAL OF A NON-)
STANDARD DRILLING TRACT IN THE WOLF-)
CAMP GAS POOL, LEA COUNTY, NEW)
MEXICO.)

Case No. 3402

A P P L I C A T I O N

Come now Jerald M. Schuman, Saul A. Yager and Kermit Oil Company, hereinafter referred to as Applicant, and applies to the Oil Conservation Commission of New Mexico for approval of a designated non-standard drilling tract, consisting of 120 acres as an exception to the provisions of Rule 104 C II (a) and in support thereof would show:

I.

That Jerald M. Schuman and Saul A. Yager are owners of mineral interests and Kermit Oil Company is the Lessee of Schuman and Yager under the SE $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$ of Section 5, Township 26 South, Range 33 East, N.M.P.M., Lea County, New Mexico.

II.

That on the 7th day of December, 1964, by virtue of Order No. R-2826 the New Mexico Oil Conservation Commission established the Red Hills Wolfcamp Gas Pool covering all of Sections 31, 32 and 33, Township 25 South, Range 33 East, and all of Sections 4, 5 and 6, Township 26 South, Range 33 East, N.M.P.M., Lea County, New Mexico.

III.

Applicant proposes to drill a development well to the Wolfcamp Formation at a location in compliance with Rule 104 C II (a), to-wit: 660 feet from the East line, and 1,980 feet from the South line of Section 5, Township 26 South, Range 33 East, N.M.P.M., and to dedicate the SE $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$ of said Section 5, as described in paragraph I above, which unit would be a

Date 5-5-66
H

120 acre non-standard unit.

IV.

Attached to this application is a plat showing to the best of the applicant's information and belief, the ownership of acreage in the vicinity of applicant's proposed unit.

V.

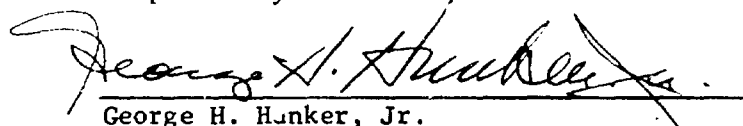
That the creation of the above described non-standard unit does not require a well location exception and does not grant applicant a structural advantage, nor will it adversely affect the correlative rights of any operator or owner in the Wolfcamp common source of supply. Further, the creation of such a unit necessitates that the Commission approve the crossing of a quarter section line within a governmental section by permitting the joinder of the ~~SE 1/4~~ of Section 5 with the contiguous 80 acres lying in the ~~E 1/2~~ of Section 5, so as to form the requested non-standard unit.

VI.

That no operator will be deprived of the opportunity to drill a well on its property as a result of the granting of this application. That the granting of this application will conform the drilling and spacing unit so as to make it coincide with the ownership of the applicant's under the proposed unit and will promote development, prevent waste and will protect the correlative rights of all owners in the Wolfcamp common source of supply.

WHEREFORE, applicant prays that this application be set for hearing before the Commission's duly appointed examiner and that after notice and hearing as required by law, the Commission enter its order approving the non-standard unit prayed for.

Respectfully submitted,



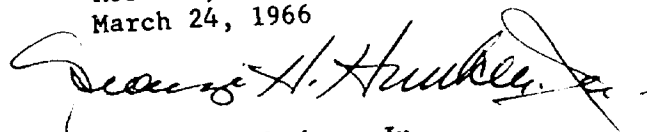
George H. Hunker, Jr.
P. O. Box 2086
Roswell, New Mexico

Attorney for Applicant

It is hereby certified that a copy of the foregoing Application
has been mailed by certified mail to the following named at the addresses
shown:

<u>Name</u>	<u>Address</u>
Union Oil Company of California	Union Building 619 West Texas Street Midland, Texas
Texaco Inc.	P. O. Box 3109 Midland, Texas
Pan American Petroleum Corporation	P. O. Box 1410 Fort Worth, Texas
Continental Oil Company	P. O. Box 431 Midland, Texas
Humble Oil & Refining Company	P. O. Box 3116 Midland, Texas
H. W. Jennings, Inc.	1117 Fort Worth National Bank Bldg. Fort Worth, Texas
S. B. Christy, IV	Hinkle, Bondurant & Christy P. O. Box 10 Roswell, New Mexico Attorneys for Union Oil Company of California - Unit Operator, Red Hills Unit
Guyton B. Hays Commissioner of Public Lands	P. O. Box 1148 Santa Fe, New Mexico
John A. Anderson, Supervisor United States Geological Survey	P. O. Drawer 1857 Roswell, New Mexico

Roswell, New Mexico
March 24, 1966



George H. Hunker, Jr.
P. O. Box 2086
418 Hinkle Building
Roswell, New Mexico

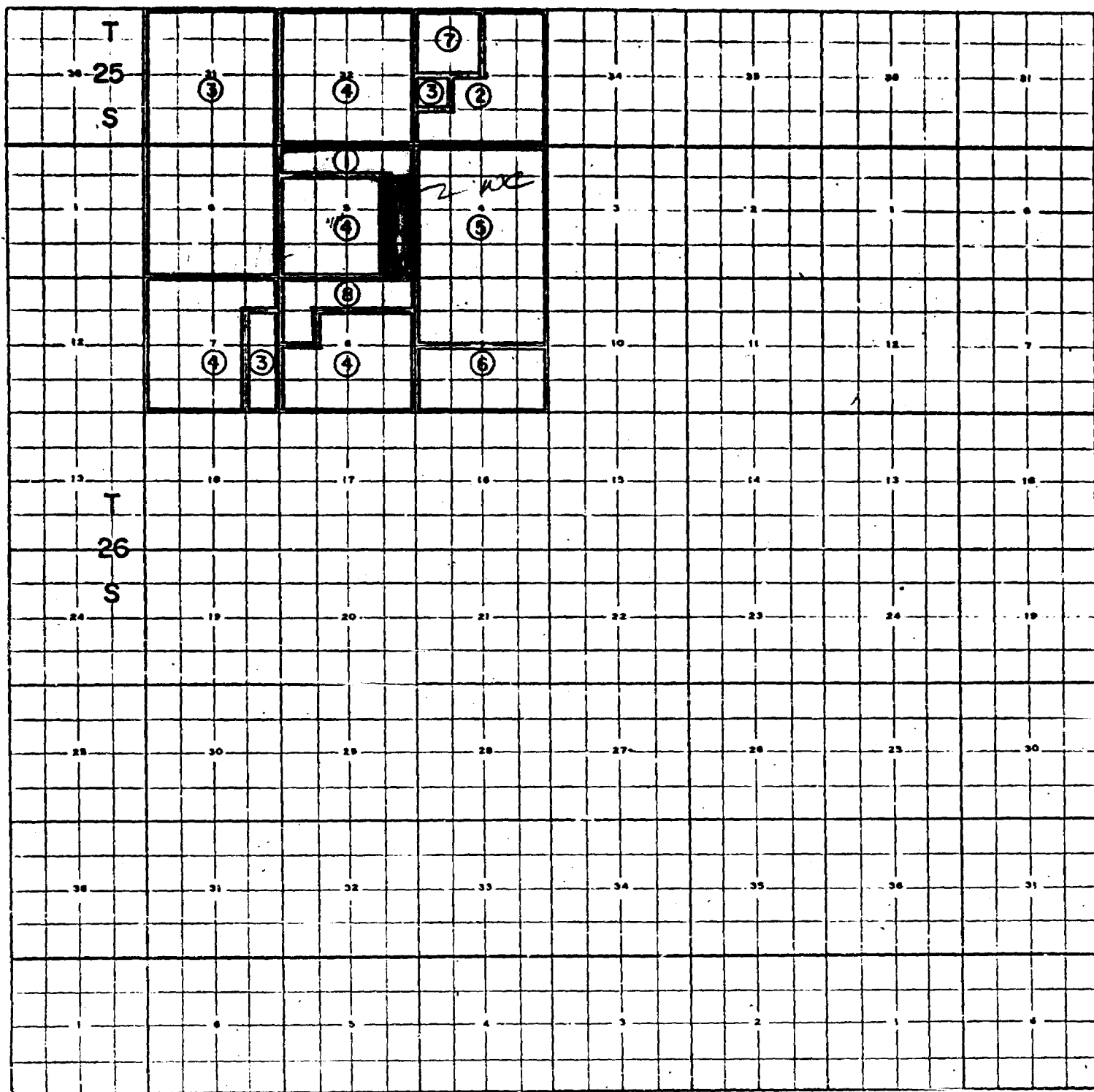
Attorney for Applicant

Case 3402

(SCALE 1 IN. = 1 MI.) ISLAND TOWNSHIP

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RANGE 33 EAST



TOWNSHIP 25, 26 S. RANGE 33 E. COUNTY LEA STATE NEW MEXICO

- ① Schuman, Yager, et al, Kermit Oil Company.
- ② Texaco Inc.
- ③ Union Oil Company of California
- ④ Pan American Petroleum Corporation
- ⑤ Continental Oil Company
- ⑥ Humble Oil & Refining Company
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- ⑧ Schuman, Yager, et al. Union Oil Company and Pan American.

Page 3402

160 acre unit
Wolfcamp

MAR 10 AM 7 55

BEFORE THE OIL CONSERVATION COMMISSION
OF NEW MEXICO

APPLICATION OF JERALD M. SCHUMAN,)
SAUL A. YAGER and KERMIT OIL)
COMPANY FOR APPROVAL OF A NON-)
STANDARD DRILLING TRACT IN THE)
WOLFCAMP GAS POOL, LEA COUNTY,)
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II.

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160 acre non-standard unit.

IV.

Attached to this application is a plat showing to the best of the applicant's information and belief, the ownership of acreage in the vicinity of applicant's proposed unit.

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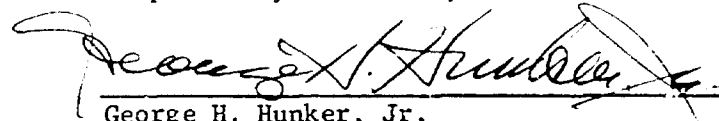
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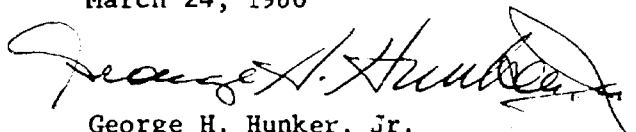

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Guyton B. Hays Commissioner of Public Lands	P. O. Box 1148 Santa Fe, New Mexico
John A. Anderson, Supervisor United States Geological Survey	P. O. Drawer 1857 Roswell, New Mexico

Roswell, New Mexico
March 24, 1966

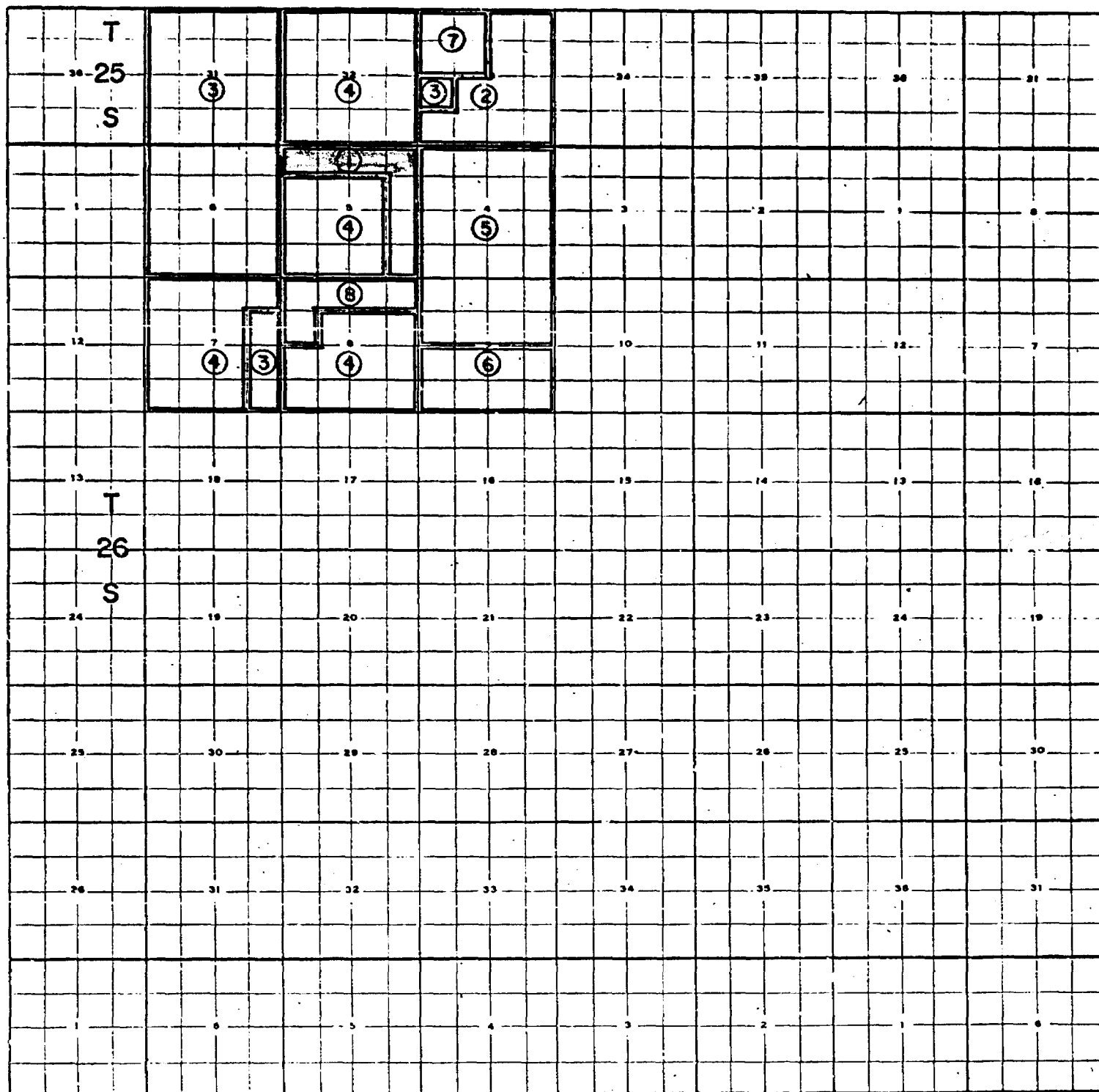

George H. Hunker, Jr.
P. O. Box 2086
418 Hinkle Building
Roswell, New Mexico

Attorney for Applicant

(SCALE 1 IN. = 1 MI.) ISLAND TOWNSHIP

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RANGE 33 EAST



TOWNSHIP 25, 26 S. RANGE 33 E. COUNTY LEA STATE NEW MEXICO

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

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PAGE 1

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
May 18, 1966

REGULAR

HEARING

IN THE MATTER OF:

Application of Jerald M. Schuman, Saul A.
Yager and Kermit Oil Company for a non-standard
drilling unit, Lea County, New Mexico.

Application of Jerald M. Schuman, Saul A.
Yager and Kermit Oil Company for two non-
standard drilling units, Lea County, New
Mexico.

Case No. 3401
3402

BEFORE:

Guyton B. Hays, Land Commissioner
A. L. "Pete" Porter, Secretary-Director

TRANSCRIPT OF HEARING

MR. PORTER: The hearing will come to order, please.
Mr. Hunker, do you want to wait for Mr. Pray?

MR. HUNKER: If it please the Commission, yes, sir.
As a matter of fact, our first witness is Mr. Stapler and
he's on long distance telephone at this time.

MR. PORTER: We'll wait.

(Whereupon, a recess was taken.)

MR. PRAY: Mr. Porter, I believe there's going to
be just a slight delay. If we could have five or ten
minutes more, there's still some discussions.

MR. PORTER: Sure.

(Whereupon, a recess was taken.)

MR. PRAY: Mr. Hays, we're now ready, I believe.

MR. PORTER: The hearing will come to order please.
This morning we have two cases on the docket, Cases 3401 and
3402. Mr. Pray, have you decided whether you will move to
consolidate the two cases?

MR. PRAY: Yes, we will move to consolidate the
two cases.

MR. PORTER: Is there any objection to the
consolidation of the cases for the purpose of the hearing?

MR. HINKLE: No objection.

MR. PORTER: The cases will be consolidated.

MR. PRAY: For the purpose of the record, Donald

E. Pray and George H. Hunker, Jr., appearing for the applicants.

I would like to have the record note the presence of Mr. Howell Rucker, Midland, Texas, attorney for Kermit.

MR. CHRISTY: Clarence Hinkle and Sim Christy of Hinkle, Bondurant & Christy, Roswell, for Union Oil Company of California, and an associate Mr. Robert Humphrey, an attorney of Union, headquartered in Midland.

MR. PORTER: Thank you very much. Mr. Pray.

MR. PRAY: By way of introduction I would like to explain that the purpose of our applications here today is to create under the present and existing spacing rules for the Wolfcamp and Pennsylvanian formations, 160 for the Wolfcamp and 320 for the Pennsylvanian, non-standard units which we have applied for as follows: North half of the North half of Section 5, Township 26 South, Range 33 East, to be a non-standard unit, 160 acres of the Wolfcamp formation; the second non-standard unit of the Wolfcamp formation to be composed of the Southeast of the Northeast of the same Section 5 and the East half Southeast of the same Section 5.

The Pennsylvanian non-standard unit will be composed of 280 acres and would include the North half North half of Section 5, and the Southeast Northeast, and the East half Southeast of Section 5.

MR. PORTER: Mr. Pray, where do you propose to

locate the wells in the various units?

MR. PRAY: The well for the Wolfcamp and Pennsylvanian as specified in the application, will be located in the Northeast Northwest of Section 5, which under the general rules providing for spacing would be an acceptable location. It would be more than 1320 feet from any existing wells and would be at least 660 feet from the side boundaries of the unit.

The second well for the Wolfcamp would be in the Southeast Northeast, which again would be more than 1320 feet from any existing wells. So these would be permitted wells even without these applications. We're not asking for a well location.

MR. HINKLE: Was that Southeast Northeast?

MR. PRAY: Northeast Southeast.

MR. PORTER: Of the second Wolfcamp well?

MR. PRAY: Yes.

MR. PORTER: Then you propose to dual the well?

MR. PRAY: One in the Northeast of the Northwest would be a dual Wolfcamp Pennsylvanian. I would like to call my first witness, Mr. Bill Stapler.

(Witnesses sworn.)

* * * *

B I L L S T A P L E R, a witness, having been first duly

sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. PRAY:

Q Mr. Stapler, will you give your name and your occupation?

A Bill Stapler, Vice President and General Manager of the Kermit Oil Company.

Q Do you have among your other duties, the recommendations for development of properties and valuation of properties?

A That's part of my job, yes.

Q Have you also had experience in estimating well cost?

A Yes, I have.

Q What is that experience?

A I worked for Sharp Drilling Company for 6 years and estimated drilling costs and figured bids, primarily.

Q You are familiar with establishing well cost?

A Yes.

Q Mr. Stapler, you were present for the hearing in the application, 3158, yesterday, and are you familiar with all the testimony which was given at that time?

A Yes.

Q Have you also had an opportunity to view all the

data which you have from the Red Hills Number 1?

A Yes.

Q Have you reached a conclusion based on this data as to whether or not you want to drill the wells which are proposed in this application?

A Yes, we desire to drill the wells as proposed in the application.

Q Why have you caused these three applications for non-standard units to be filed?

A Because of the previous controversy and conflicts in this area I wanted to lay before the Commission our position in Section 5 as to the mineral interest we had under lease and our immediate plans for development of this mineral interest.

Q Would there also be, by the issuance of these non-standard units, would you also avoid possible problems in the allocation of cost because of the varying ownerships in the two formations?

A If we get approval of our non-standard units we will avoid arbitrarily allocating costs between different ownerships for different units.

Q What, approximately, is the difference in ownership if the non-standard units were not developed; can you give us an idea of what would be the result of standard

units in the North half of Section 5?

A A standard unit in the North half of Section 5 would be the Northeast Quarter or the Northwest Quarter. In the Northwest Quarter we have approximately 1/2 the mineral interest under lease; in the Northeast Quarter we have approximately 3/4. If we were to drill a well in either of these quarters as a standard Wolfcamp well and dually completed also in the Pennsylvanian on a 320 acre pattern, which has been set for this area, we would have diversity of ownership in a 320 acre completion.

Q Would there be difficulty in allocating the cost of drilling a well since there is this varying ownership?

A It is my opinion it would be extremely difficult to divide the cost of completion drilling, possible risk of any workovers or treating, and the liability.

Q What are these Wolfcamp units which we have asked for, being the 120 acre Wolfcamp Unit, why have you asked the Commission at this time for this second unit, non-standard unit?

A We feel that there's a lot of information to be gained by the drilling of the first well if it is as good as we hope it is. In the future we hope to drill another well. If it should go the other way we may not drill it, but we feel the Commission should know our position in Section

5, and --

Q Are you aware that because of this non-standard unit containing less than the full 160 acres that the Commission will reduce your allowable in proportion which your acreage bears to the standard unit?

A We understand this.

Q Are you ready to commence drilling as soon as possible?

A Yes, we are.

Q I'd like to ask your opinion as to the cost of drilling a Wolfcamp single completion?

A It is our opinion that a Wolfcamp single completion can be drilled and completed for \$393,782.00. That's the dual --

Q Do you have an opinion as to the cost of drilling and completing a dual Wolfcamp and Pennsylvanian well?

A It is our opinion that this would be \$689,980.00.

MR. PRAY: We ask that these figures be marked Exhibit 1 and move the admission into evidence.

(Whereupon, Applicant's Exhibit Number 1 marked for identification.)

(Whereupon, Applicant's Exhibit Number 1 offered into evidence.)

MR. PORTER: Are there any objections?

MR. CHRISTY: I would like to cross on it.

MR. PORTER: The Commission will withhold the ruling until after cross-examination.

MR. PRAY: No further questions of the witness.

CROSS-EXAMINATION

BY MR. CHRISTY:

Q Mr. Stapler, do you have a contract which requires you to drill a Pennsylvanian well?

A Yes, sir.

Q In this acreage?

A Yes, sir.

Q Can I ask you if that contract provides that if you're unsuccessful in this application that you have the right to meet the terms of your contract on standard well spacing?

A I'd have to ask my counsel to interpret the contract. If you feel that way, why, that's fine.

Q Let me read you -- I'll ask you if this is the part of your contract, "Upon final execution of this agreement, including the disposal of the lease in escrow as herein above provided, lessor agrees to promptly file with the Oil Conservation Commission of the State of New Mexico an application for a non-standard drilling permit and if denied, then an application for a standard drilling permit shall be filed. Lessee agrees to pay all reasonable costs

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incurred in securing such permit provided lessee has given prior approval for such expenditures". Then it goes on, to permit you to drill your Pennsylvanian well in 90 days in a standard or non-standard unit?

A That's a fact.

Q You can use a standard 160 acres, you don't need the terms of the contract, you can use 160 acres under the terms of your contract?

A Yes, sir.

Q Now, sir, I believe that you will agree with me that Union Oil Company owns at least a 1/16 and perhaps an 1/8 working interest in this identical land?

A They own an interest, yes, sir.

Q How do you plan to handle a 1/16 or an 1/8 interest?

A We've asked them to join on a farmout.

Q In which well, to join?

A In the Pennsylvanian dual.

Q Have you ever asked them to join you in the Wolfcamp well down in the Northeast Southeast?

A If you have read the contract you are aware that I have three years to drill the well, and at the time I do, I'll ask.

Q You have no intention of drilling the well; you haven't asked the other co-owners to join you in that well?

A No, sir.

Q And your Wolfcamp rights that you have under your contract in the Southeast Northeast -- beg your pardon, Northeast Southeast 120 acres, that's kind of an option, isn't it, you don't have to drill it?

A Yes, sir.

Q You have to drill it?

A You said it is an option; that's what I said.

Q You have asked Union to join you in the Pennsylvanian test for the 280 acres?

A Yes, sir.

Q Have you asked them to join for the 160 Wolfcamp test?

A Yes, sir.

Q I'll ask you if that's the letter that you wrote: Union Oil Company making this offer you just referred to?

A Yes, sir.

Q Does it mention Wolfcamp in it?

A No, sir, it doesn't.

Q Thank you. Is that the only letter you wrote offering, asking them to join a farmout?

A Yes, it is.

Q Now, sir, have you ever asked the other owners in the Northwest Quarter, that is the South half of the

Northwest Quarter, if they would join with you in a standard 160 acre Wolfcamp test?

A No, sir.

Q Have you ever asked the owners of the West half Southeast Quarter of Section 5 if they would join you in a standard 160 acre Wolfcamp test?

A No, sir.

Q Have you ever asked the owners in the South half South half Section 5, except for the Southeast Northeast, whether they would join you in a standard 320 acre Pennsylvanian test for the North half?

A No, sir.

Q I refer you to your Exhibit 1 and ask you if you prepared these figures?

A I prepared or had them prepared and sat in on the conferences where they were prepared.

Q You are thoroughly familiar with these cost estimates?

A I believe these are fair and reasonable costs.

Q I asked you if you were familiar with the various breakdowns of them?

A Yes, sir.

Q And you know what the amounts are and the number of feet of pipe it takes, for example, to make this amount of

money?

A I don't have these figures with me today.

Q We don't know how many feet of pipe we're talking about for this amount of money and I wondered if you could help us?

A No, sir.

MR. CHRISTY: For what it's worth we will not object to Exhibit 1.

MR. PORTER: The exhibit will be admitted.

(Whereupon, Applicant's Exhibit 1 admitted into evidence.)

MR. PORTER: Are there any further questions?

MR. PRAY: I would like to ask a few questions.

REDIRECT EXAMINATION

BY MR. PRAY:

Q Referring to your letter of May 4th in which you were just interrogated about, the first sentence says, "As you know we have applied for a unit to drill a Pennsylvanian test". Is it common in the industry to refer to a particular well by designating the deepest zone that you plan to test?

A I feel it is.

Q Would that include shallower zones without referring to them?

A It would.

Q Was that your intention in referring to this in this manner?

A Yes.

Q Who owns the working interest in the remainder of Section 5, outside of non-standard for which we have applied, do you know?

A Union Oil of California represents these people as operator of the Red Hills Unit.

Q And have you had any other conversations or correspondence with them concerning development of Section 5, other than the one letter which you wrote?

A We have discussed it orally and they have orally been asked to join us in these tests, and have declined.

MR. PRAY: No further questions.

RECROSS-EXAMINATION

BY MR. CHRISTY:

Q Who did you ask to join you, because as I understood your answer to me, and perhaps I misunderstood you, I asked had you ever asked the owners of the South half Northwest Section 5 to join you in a standard 160 acre Wolfcamp test, and your answer to me was "No". I would like it clarified.

A On the standard unit I have not, on the non-standard I have.

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Q I see, that is what you're saying. Incidentally, who did you ask?

A Harry Kegan.

Q Did you ask Pan American Petroleum Corporation, who owns this acreage?

A No, sir.

MR. PORTER: Any further questions? The witness may be excused. Call your next witness, please.

MR. PRAY: I would like to call Jerald M. Schuman.

* * * *

J E R A L D M. S C H U M A N, a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. PRAY:

Q State your name, please, sir?

A Jerald Schuman.

Q Are you the owner of mineral interests under the North half North half of Section 5, the Southeast Northeast and the East half Southeast of Section 5?

A I own some undivided mineral interests in that tract.

Q Is there another substantial mineral interest owner?

A Yes.

Q Who is that?

A Mr. Saul Yager and his family.

Q Is there a 1/16 or a 1/8 interest owned by you and Mr. Yager?

A We feel that there's a 1/16 owned by other than ourselves.

Q All right, sir. Are you familiar with the applications which have been filed for the non-standard units in this matter?

A I am.

Q Have you ever been informed by either Union Oil Company or the Pure Oil Company that they did not desire to develop Section 5?

A I have.

Q When was this?

A The first occasion was sometime in July of Nineteen Hundred and Sixty-Five, I believe it was July 21st in my office in a conference with a Mr. E. B. White, who was formerly, was with Pure Oil and after the merger -- and Mr. Sabin, and Mr. George Bowen, who represented myself. And at that time I was informed by Mr. White that they could not economically justify a drilling a well on Section 5 and therefore would not drill a well on Section 5.

Q What is the most recent occasion upon which you

have been informed by Union Oil Company that they did not desire to participate in Section 5?

A On, approximately, I believe it was March the 18th in the Federal District Court for the Western District of Oklahoma before the Honorable Steven S. Chandler, a pre-trial hearing was held of which a record was made, and whereby at that meeting Mr. Hank Watson, attorney for Union Oil Company, advised me and advised the judge at this pre-trial hearing, that Union Oil Company wanted no part of my tract of land. They had no interest and didn't want anything to do with Section 5, and they had enough cheese of their own. I think it was March 18th of 1966.

Q How long after this meeting that you had, which Mr. Watson made these statements, did Union file its application for 640-acre spacing?

A As I understnad from the record, it was received, the record, from the Commission yesterday, I believe it was March the 25th or about a week later.

Q So in a week's time they decided they wanted to come in for 640 acres?

A That's correct.

Q What would be the effect of that?

A Well, the effect of that, that -- it would decrease my percentage of participation in any production of a well

drilled on a basis of a 640-acre spacing, as opposed for the existing statewide rules that are on application for non-standard.

Q Mr. Schuman, did, in fact, a representative of the Union Oil Company suggest the non-standard units as a possible procedure to avoid continuing conflicts?

A That is correct.

Q What was the occasion of this?

A Let me back up, first. When Union Oil Company was taking my deposition in another lawsuit of damages against Union for drainage, which was in my office in Tulsa, Oklahoma on about January 13, 1966, at which time Mr. Jack Snodgrass representing Union Oil Company as legal counsel, and Mr. Humphrey of Midland, Texas also representing Union Oil Company, after the depositions were taken, requested that I entertain and agree upon a means of trying to settle our problem, as I had told them I was not interested in settling my problem on my damage in drainage unless I could completely eliminate any further litigation in this Commission. They then suggested that I agree to a farmout of all of their acreage in the North half of Section 5, which I agreed to do as a means of settling all disputes.

After several weeks or a month, they came back and said although they recommended it to management that it would

be impossible to work that out, but they found out too many problems involved in farmouts and have their commitments under the governmental unit and so forth.

At that instant Mr. Jack Snodgrass, by telephone call to Mr. Bowen, Mr. Pray and myself, then suggested that we consider accepting a non-standard whereby we would not have any involvement with Union Oil Company or vice versa, and that we take advantage of all of our ownership and that any problems of allocation of cost or otherwise would be eliminated, and that we could eliminate any further problems here before the Commission.

Upon that proposal, and upon their request that I accept such a proposition, I advised them that that was acceptable, and this was forwarded to them that it was acceptable, which at a later date or even at the time of the pre-trial hearing in Federal Court, after they said they couldn't make a decision or wouldn't and could not affirmatively agree, then upon their original -- upon that suggestion that there was no agreement reached between Union Oil Company and myself.

Q Is it therefore on the basis of avoiding continuing problems in this Commission that you have joined in these applications?

A That is correct.

CROSS-EXAMINATION

BY MR. CHRISTY:

Q Mr. Schuman, you mentioned that you feel that Union owns a 1/16. This is the litigated point, is it not, whether it's a 1/16 or an 1/8?

A No, it's not.

Q It's not a point presently pending in the District Court in Lea County?

A The 1/16 that I'm not questioning is the people that own it by the name of Nappenburger.

Q It is in litigation whether Union owns a 1/16 or an 1/8?

A That's the section that Union top leased on me.

Q I believe you answered my question. You mentioned that Mr. Ed White said that Union was not interested in drilling in Section 5?

A Mr. White, I said, stated that they could not justify economically drilling a well on Section 5.

Q Did they say that in connection with the 160-acre spacing?

A He said it, period.

Q He didn't say it in connection with a 160-acre spacing?

A He did not.

Q Did he say they could do it on 640-acre spacing?

A He did not say that.

Q Did he leave you to believe that?

A He led me to believe there was no value at all in
Section 5.

Q What date was this conference?

A July 21st, Nineteen Hundred and Sixty-Five.

Q I did not get that?

A July 21st, 1965.

Q I believe subsequent to that they have in fact
offered to join in a 640-acre well in Section 5, Union has?

A They proposed for a well to be drilled in Section
5 on a 640-acre spacing, subject to certain other conditions
of approval.

Q I believe your answer is yes?

A That's correct.

MR. PORTER: Anyone else have a question of Mr.
Schuman?

MR. PRAY: No further questions.

MR. PORTER: He may be excused.

MR. PRAY: I would like to call Mr. Henry Keplinger,
please.

MR. PORTER: Take the stand, please, sir.

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HENRY KEPLINGER, a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. PRAY:

Q Would you state your name, please, sir?

A Henry Keplinger.

Q What is your occupation?

A Petroleum engineer.

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

A Yes, sir.

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

MR. PORTER: Yes, sir.

Q (By Mr. Pray) Mr. Keplinger, you were present during the entire hearing yesterday on Case 3158, involving the Wolfcamp formation only?

A Yes, sir.

Q Are you familiar with the data which was presented at that hearing?

A Yes, sir.

Q And have you had an opportunity to examine all the data which was involved by the Red Hills Number 1 well?

A I believe I've seen all the published information.

Q Have you seen all of the logs, seen all the drill stem tests and data which was submitted by Pure Oil Company by occasion of the last hearings?

A Yes, sir.

Q Have you had an opportunity to examine the application for non-standard units filed by Kermit Oil Company, Jerald Schuman and Saul Yager?

A Yes, sir.

Q Do any of these applications necessitate a well location which would not be permitted under the present spacing rules?

A No.

Q Each of the wells as proposed could be drilled under the present rules?

A Under the rules of the Commission.

Q As they now exist?

A Yes, sir.

Q In your opinion, does the formation of any one of these three non-standard units deprive the other owners in Section 5 of their right to fully develop their property?

A No, it does not.

Q Would they still be permitted under the existing rules of the Commission to drill a well in the North half of Section 5 at a legal location without a well exception?

A Yes, sir.

Q Would this well be structurally comparable to the well as proposed in our application?

MR. CHRISTY: Excuse me, are you asking him a geological question, as I understand this?

MR. PRAY: Yes.

MR. CHRISTY: Has the gentleman qualified as a geologist? I was under the impression he was qualified as a reservoir engineer.

MR. PRAY: A petroleum engineer, as I understand it, Mr. Christy, is a mechanical engineer and a reservoir engineer. I'll ask the qualifying questions, if the Commission please.

Q (By Mr. Pray) Do you feel you're qualified to interpret geologic structure?

A Yes, sir, I feel I am. I started in Nineteen Hundred and Twenty-Seven, University of Tulsa, studying geology and I have continued my work in the United States and Germany at the University of Goettinger in 1932 studying physics, related to the exploration and finding of oil reserves.

Q As a regular part of your duties as a consulting engineer do you routinely interpret geological information?

A Yes, sir, I have interpreted from Terri Del Fuego,

which is the southernmost point of the world, to the northernmost part in Canada and Alaska.

MR. PRAY: Are these qualifications acceptable?

MR. PORTER: The Commission considers Mr. Keplinger qualified to answer the question.

Q (By Mr. Pray) Do you recall the question?

A It references to a geological question as to the location of a well which would be drilled in the North half of Section 5 on acreage owned by Union Oil and Associates.

Q Yes.

A And whether that location would be at a point comparable in structural position to the well which Kermit Drilling Company would drill.

Q What is this opinion based on, geologically?

A The best information that I have is a structural map based on seismic data which was furnished my client by the Union Oil Company, and it shows that a location which could be drilled in 5, which would be the North, in the Northeast Quarter, location would actually be the Southwest of the Northeast of Section 5, would have a comparable position as far as the top, the formation shown on this map.

Q All right. In your opinion, in view of all the circumstances involved in these applications, do you believe that non-standard units are desirable?

A Yes. They have a lot of things to say in their favor in this case where you have dual completions, in the allocation of both the initial cost of drilling the well and particularly so at a later date, should there be any mechanical conditions develop in the well where the workover of a well would effect a zone which is already producing. As a case at point, the Pure Oil Company's Well which is now Union's, Section 32, has dual completion; the Pennsylvanian is plugged off.

Now, if that same thing happened on the well which will be drilled by Kermit Drilling Company, if we didn't have these non-standard units there would be considerable controversy in whether to drill a well which was capable of producing several million cubic feet of gas per day, and in fact as of to date I calculate that this offset well has produced \$455,000.00 worth of gas and \$292,000.00 worth of condensate, for a total of approximately \$750,000.00 worth of material, petroleum products which have been sold.

Q Is that gross revenue or working interest income; would you explain that?

A That's working interest. The overall is much greater than that. This is on the basis of a 1/8 royalty.

Q Have you deducted taxes?

A Yes, sir. So that the point I'm making is that if you have an ownership which is split between the two zones, the Wolfcamp, \$13,500; the Pennsylvanian, \$14,500, there would be possibility of damage suits and problems, where if the bottom zone plugged, the owners of the top zone would be very reluctant to give up their current income for a period of time, or maybe a loss of it by plugging the well. The well would have to be drilled with water, and whether or not it would come back and have the same capabilities of producing, I don't know, so I feel that in this particular case it is most important both from the initial cost allocation and from future costs and problems which would arise from recompletions. This gas isn't going to come out of here over night, it's going to take twenty years. So we have many things that come up in the operation of oil wells. We can put them on computers and feel that they will work very satisfactorily and work out for profitability, but when you got down there with your hard hands with the boys in the field producing them, and shale comes in in plugging the well, you have to do something about it and it would cause a lot of trouble allocating what would happen later on if you didn't have this non-standard unit.

Q If, for example, we had a standard unit and it was necessary to force-pool the interests in the standard unit

for a Wolfcamp and Pennsylvanian dual, would not in fact Union Oil Company own a greater interest in the deeper zone than in the shallow zone?

A It would be a difference of interest depending on what part you sent --

Q Suppose the well was drilled in the Northeast 160-acre tract as a Wolfcamp Pennsylvanian Well?

A In the Northeast of Section 5?

Q Just for sake of example.

A Now the Wolfcamp, the Pure Oil Company would own 1/4 of the Wolfcamp, and then it depends which way your unit runs, North and South or East and West, but assume it runs East and West, Pure would own 3/8 and Kermit Drilling Company would own 5/8.

Now, the other way it would be 3/8 and 5/8, it would be the same, it wouldn't make any difference. But there would be difference from 1/4 to 3/8 in the interest owned between different horizons.

Q The deeper zone would have a greater interest in getting in an working it over if something went wrong?

A I would say that would be logical. Of course, at the time it would be depending upon the quality of each horizon. It might be that the Pennsylvanian was producing at a much greater rate, at a greater potential, so you cannot

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make a simple statement. It would depend upon the quality of the well, the quality of the two zones at that time.

Q What was the amount of production which you said this well had made in 17 months?

A I calculated up to the date of the hearing, estimate of 3,000,100,000 plus, cubic feet of gas, and approximately 135,000.

Q And what was the net working interest revenue and taxes?

A Net working interest revenue after taking off a tax of 6.54 percent and a 1/8 royalty amounted to an operating expense of \$7200.00 per year, which is shown in Exhibit 4 of the case of yesterday. The operating expense is three hundred -- it's \$736,000.00.

Q \$736,000.00 net working interest?

A After taking off the operating expense.

Q How does that compare with the cost of drilling a Wolfcamp single completion?

A Well, based on the testimony of Exhibit 1 on the case today, \$373,000.00, which I have used --

Q Excuse me, is that \$393,000.00?

A Let's see, \$393,700, \$393,000.00.

Q Approximately how much profit would there have been made on this well?

A On the basis of a net income of \$736,800.00 and \$393,800.00 the net profit to day from 17 months operation would be \$243,000.00.

Q Approximately how long did it take, or would it have taken, based on this rate of flow for a Wolfcamp single completion, to reach pay-out on an investment of \$393,000.00?

A Pay-out, it would have been probably, first part of November, be about 9 months; and the well had produced up to that time two billion sixty-nine thousand, about two billion sixty-nine million.

Q You say up to November?

A Approximately November, two billion sixty-nine million cubic feet of gas, and --

Q Do you know when the well first began to produce?

A The latter part of December, 1964.

Q Be about 11 months?

A About 9 months, just produced a very little bit in 9 to 10 months, very little in December, it only produced maybe 10 days in December of 1964. So answering your question, the pay-out would have been 9 to 10 months.

Q All right. Do you recall from the testimony yesterday, approximately the amount of reserves that the Gruy Engineers and Associates estimate is recoverable in the Wolfcamp?

A In the Wolfcamp?

Q In the Wolfcamp Pool?

A As recoverable?

Q Yes.

A No.

Q All right. Original gas-in-place?

A There's an Exhibit Number 11A or 11, and the number was one part in the exhibit. It showed page -- or Exhibit NN, reservoir volume placed on gas initially in place, it showed 26.54 billion.

Q And approximately to date how much of that initial gas-in-place has been produced?

A Approximately?

Q Yes. Did you state that your revenue figures were three billion?

A No, no, the recovery is 3.1 to date, based on gas-in-place, which would not be recoverable. As mentioned, the economics are such that you could drill more wells, that would be a 26.54 divided by -- no, 3.1 billion divided by 26.54; approximately 11.7 percent has been recovered.

Q Of the initial gas-in-place?

A Of the initial gas-in-place, that's not -- they wouldn't come up with as great a figure for recoverable gas.

Q In your opinion is there gas in-place in addition to that shown by Gruy engineers?

A Yes, sir. They have only perforated a limited section in this well, but there is additional pay up ther hole, based upon the electric log interpretation and mud log analysis of the drilling cuttings, so that this isn't all the gas that will come from the Wolfcamp; it's not too wide, in my opinion.

Now, we don't have fractures extending up to the top pays which are not perforated. This well on the mud log analysis shows that on June the 14th, June the 14th, 1933 --

Q 1963?

A June the 14, 1963, that this well, according to service information from Rhinehart and others, this well blew out and produced gas from these upper zones. So it's definite knowledge that we have that these upper zones are productive and are not something that just is a figment of the imagination. That we have both tests and interpretations of the electric log, and for a period of some two months, from June the 14th, 1963 to August the 21st, 1963, this well stayed at a constant depth of thirteen thousand four hundred and seven something feet and was out of control, not out of control, but it was impossible to proceed. And these upper pays which Doctor Cavler has pointed out to the Commission and which I have reconfirmed by additional study, both myself and our log analysis department, are pay

sections which will contribute and should be considered in any economic analysis in a well spacing problem where economics must be considered.

Q Then, Mr. Keplinger, is it your opinion that these applications before us today would prevent waste and protect Correlative Rights?

A Especially protect Correlative Rights, and without question it would prevent waste.

Q Would these be economically feasible to drill as we have applied for them for a Wolfcamp and Pennsylvanian dual, and then secondly for a Wolfcamp single completion?

A Well, as just pointed out in 17 months time, the offset well, which in my opinion can be duplicated as far as we're only drilling it a short distance a little over 1320 feet away, the seismograph map which has been furnished us, looks like it should be favorable, structurally, so that in just 17 months this offset well has had a profit of \$243,000.00.

Now, in addition to that, that would be profit, it is still a top producing well, and based upon Mr. Garb's analysis, there's 26.54 billion in the reservoir. This well will produce many more billion cubic feet, so that a single zone completion, with a cost of \$393,600.00, would be most profitable.

But in this particular case the economics are such that that is only one factor. We have the Pennsylvanian, you can make a dual completion of the Pennsylvanian, which would greatly enhance the profit. And based upon the analysis presented in the earlier case, Doctor Cavler and I have gone over the testimony submitted in Pure Oil, Union Oil Exhibit 5, and based upon the indicated reserves there I calculate that the Pennsylvanian would produce, on 320-acre spacing, equivalent to approximately 34.9 billion, I mean 34.9 million cubic feet per acre. And it would be added additional profit for the well drilled at the proposed non-standard unit site.

In this case the Pennsylvanian, on the basis of that recovery factor, would produce some 11 billion cubic feet.

Q You heard Mr. Stapler testify that the second well would be based upon the information gained from drilling of the first proposed well, being the Wolfcamp Pennsylvanian dual. Did you hear him testify to that?

A Yes, sir.

Q In your opinion, is this sound and feasible from good engineering practices?

A Yes, sir, I feel that it would be suicide to jump out and drill this well until you had a second well to be

an expansion of the reservoir. And depending on the results of this well, you could make up your mind, and there may be other wells drilled in the field which will also aid in the knowledge. So I think from a practical standpoint, the Commission must be informed as what they plan to do.

Just like John Anderson pointed out yesterday, the Union Oil Company are making plans to go to the Northwest and drill wells. They had a location in Section 28, Section 27, possibly, and this is the same thing that Mr. Anderson pointed out to the Commission yesterday. He told the Commission what the Union are going to do.

In this particular case the Kermit Oil Company are telling the Commission that they will proceed to the second well after drilling the second well if reservoir conditions are favorable.

Q Is there anything in any of the cases heretofore presented which would indicate if the South half of Section 5 is not underlain by hydrocarbons in the Wolfcamp?

A The determination of the limits of a structure at best, no matter how superior your geological information is, or how superior -- you can hire the best engineers; we have some arguments at times even between engineers, but no matter how superior your engineering or geological information, the exact edge or limits of a reservoir are

speculative without drilling.

Now, in this particular case, to prove up 640-acre spacing and answer your question about the South half of Section 5, would require a well to be drilled to protect the Correlative Rights in a location located in the Southwest of the Southeast of Section 5.

Now, if you put that location on a map, that's one mile South, then it would take away the speculation. But we must deal in facts, and until that well is drilled there is no way from engineering or geological data, to absolutely prove whether there is anything under the South half of Section 5.

Now, we believe that the geological data presented, the expensive, and I mean expensive, shooting which has been done in this area shows that the South half of Section 5 is low. This is a Devonian seismograph map made just recently, February the 7th, 1966, and it was prepared and contoured at hundred foot intervals by a Mr. John E. Clark for Union Oil Company.

Now, I can't speak for Mr. Clark, but this was presented to my client as some evidence. But this drops off, and for that reason I feel without the drill -- a well drilled a mile South, the present well, there is no way to set out a reasonable spacing for this field.

Now, that's from the geological standpoint. Even the best superior geological opinion today, it would be very speculative.

Now, we go to superior engineering data, reservoir data as I express it, and there what are the facts? On the basis of the pressure history by Union Oil Company, which is furnished us, and by pressure data furnished by Forrest Garb at this hearing, we see that in his case he came up with some 26 billion cubic feet of gas-in-place. Now, by taking the experience of Pure Oil Company before they were Union, and they come before this Commission and they had a much lower figure than Doctor Cavler; they left out the upper pays, which he included, but on their own pay section they come up with 30 million cubic feet per acre. And you take 26 billion, the Gruy Company with their representatives, and you divide 26 billion by 30 million per acre and you come up with approximately 900 acres. Now, you draw a 900 acre circle around this well and it doesn't favor, even with superior information it doesn't favor giving any credit to the South half where a well could be drilled in Section 5. And I think we must consider that as the best information available today, so that we cannot in any way include the South half of Section 5 in a reasonable attempt until getting another well in there, or several more wells. So it's very

speculative without the drill.

MR. PRAY: No further questions.

MR. PORTER: I would like to ask one question before you start, Mr. Christy.

CROSS-EXAMINATION

BY MR. PORTER:

Q You gave, if it's not too much trouble to look back, you said this well had produced \$455,000.00 worth of gas. I believe that's the working interest?

A Right.

Q And how much liquids?

A 136,000 barrels.

Q What was the value?

A The value on the basis of sixty-six, \$2.60 a barrel, taking off the trucks and royalty and production taxes, is 2.14 dollars per barrel, and multiply that, it is \$292,000.00.

CROSS-EXAMINATION

BY MR. CHRISTY:

Q First of all, Mr. Keplinger, I apologize on your qualifications. I apparently did not listen close enough yesterday.

A I didn't qualify yesterday as a geologist.

Q This is an application for an unorthodox well location?

A Non-standard.

Q Non-standard?

A I think you term it, isn't that right, non-standard?

Q Thank you for correcting me. Now, as I understand you, or do I understand you, that you are in favor of the non-standard spacing units, based upon the ownership, because of the mathematical problems that would be encountered in a variance of ownership in the Pennsylvanian and Wolfcamp, should they both complete?

A Not entirely mathematical. We can multiply two by two and get four easily, but we have other problems. When you're operating wells as far down as 13,500 and 14,500 anything can happen. So it's the problem of the future which may come in to it; so it's not mathematical, it is practical problems, I would say.

Q Practical problems?

A Based on this particular case, Union Oil Company right now has a problem on their hands which they didn't have in December 1964. This well in the Pennsylvanian produced and it's not producing today. Well, the problem is what to do.

Q Now, do you have any other reason, besides these practical problems you mentioned, why a non-standard unit

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should be granted in the two applications we're here talking about today? We have talked a lot about reservoirs and how much gas-in-place, and so forth, but this hearing, Mr. Keplinger, is in connection with non-standard spacing.

A Yes, sir.

Q What other reasons besides these practical problems you mentioned do you envisage; why should the applications be granted, other than these practical problems?

A I feel that the practical problems are not one, they are numerous.

Q Outside of those, what are they, what else; is it good sound engineering to have spacing of this nature? If one man owned the whole reservoir would it be good sound standard engineering practice to locate the wells and space them in this manner?

A If you had the entire reservoir owned by one man?

Q Right.

A In that particular case you would move off and drill non-standard units to comply to, maybe, geological problems, where you would want to change the spacing.

Q All right. If we have multiple ownership, as a sound engineering venture, as a sound engineering way to develop a field or pool, would you say this is sound engineering, the non-standard sought for, here today?

A Well, based upon the evidence of this case, that the well will drain, I see no problem. The well will drain more than 160 acres, so that if you have a pattern which is not a complete uniform 160 acre spacing, it would be no question that it would be any loss.

Q So it's your opinion as an expert that this is a sound engineering way to develop this field?

A No waste occurring from this method.

Q You think it's a sound proposition to include in a 280-acre proration unit in the Pennsylvanian, the Northwest Northwest and the Southeast Southeast of Section 5, in an "L" shape pattern, that is sound, good engineering, the way to develop the field, is that true, sir?

A Yes, sir, and I can point out -- I brought along a series of exhibits from Canada where they have non-standard units of many many different types. I think that some place in my notes here I could show you some 33 different situations where the best engineers in the United States and Canada have agreed, so it's sound engineering. But the most important -- I say it's no waste, but the most important point is the protection of Correlative Rights. If you take and give -- take the South half of the South half of Section 5 and look at it on your map, and any way without the drill, the South half of the

South half of Section 5, and give it equal credit for the North half of the North half of Section 5, you would -- there would be -- the Commission, I feel, could not protect Correlative Rights because until a well is drilled in the Southwest of the Southeast of Section 5 there's no way, based upon present engineering and geological data. That is a most highly speculative location, so that the non-standard unit is absolutely necessary in this particular case. And there's one method, I mean it's not the only method but it's one method, that the Correlative Rights which must be protected, can be protected under the statutes of the State of New Mexico.

Q Why can't the Correlative Rights better be protected by a standard 160 acres composed of the Southeast Quarter?

A Of the Northwest Quarter, you're talking?

Q No, sir, I said a 160-acre proration unit comprised of the Southeast Quarter of Section 5. You want to define the limits of the field, find out how far it comes down. You say a well in the South half of Section 5 is mandatory to make this determination, and my question is, why can't the Correlative Rights be as well satisfied and served by drilling a standard 160-acre proration unit in the same spacing unit in the Southeast Quarter of Section

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5?

A If a well were drilled today in the Southeast Quarter of Section 5?

Q Of the Wolfcamp?

A From a practical standpoint to the Wolfcamp -- from a practical standpoint based upon superior engineering information, geological information, it would be very speculative, but today we know by drilling an offset at the proposed location to the non-standard unit in the North half of the North half, we have and can tell the Commission that there is an amount of recoverable gas under there which is sure. So I would say that the answer to your question would be that you would just be drilling in an area which I feel is, using the term lightly, "goat pasture", which is not very good, very speculative.

Q This is the "goat pasture" in the Northeast Southeast of Section 5?

A You're asking in the Southeast of Section 5?

Q Yes, sir, but the other Wolfcamp in the application is the Northeast and the Southeast, and this is the "goat pasture" you're speaking of?

A Absolutely, until we get additional drilling.

Q So you are here today advocating the drilling of this wildcat well, or "goat pasture" well on 120-acre

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unorthodox spacing, is that correct, sir?

A That is the plan set out to the Commission, you're correct.

Q Now, sir, there was a lot of testimony and I don't want to belabor the point about this large profit in the Red Hills Unit Number 1 Well --

A Not in that well at all.

Q -- you're using that as an example?

A The Commission has to have basic information to protect the Correlative Rights, and that well is comparable. It's going to be located 660 feet from the line where a well has already produced approximately \$750,000.00 worth of fluid. I didn't say that the profit -- I'm not talking about the Red Hills Well.

Q That's what I wanted to be clear on.

A You misunderstood.

Q I did, okay. Of course, we all know it cost in excess of \$3,000,000.00 to drill that well.

A \$4,000,000.00, it was a very high figure.

Q It was quite expensive, shall we say. In your profit ratio you did not take into consideration overriding because of the present consideration of the Schuman acreage?

A I took what Kermit furnished me.

Q Twelve and a half?

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A The Commission has to have basic information to protect the Correlative Rights, and that well is comparable. It's going to be located 660 feet from the line where a well has already produced approximately \$750,000.00 worth of fluid. I didn't say that the profit -- I'm not talking about the Red Hills Well.

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A I took what Kermit furnished me.

Q Twelve and a half?

A Yes, sir.

Q Is the contract not 25 percent royalty?

A That's correct.

Q You didn't take the figures as Kermit is going to have to drill under?

A No, sir, I took them.

Q I represent to you that it is a 25 percent royalty interest.

A You're correct.

Q Now, in reaching these rather astronomical values, did you take the well at open flow or at an 8 to 1 take, how did you base your pay-out?

A On the basis of the offset well, what it had done for 9 or 10 months.

Q You did not take it on the basis of the testimony in Case 3158, that under the contract it's a 1 to 8,000 ratio in the pay?

A On the pay-out?

Q In an open flow situation?

A No. Based upon what had happened in the offset well, not an open flow.

Q But you did not take it on the 1 to 8,000?

A No, sir, and I took it on the basis of just what had been produced in the offset well.

Q Now, sir, we're trying, of course, all of us, to protect Correlative Rights, avoid waste, avoid drilling of unnecessary wells. I want to ask you if these non-standard units applied for here today, are permitted, what will be the drilling pattern in the Wolfcamp for the balance of Section 5, based on 160's, and my question is really this, perhaps I can shorten it as I plot it out. We have an odd 40 left over, would that be true, on 160-acre standard or non-standard, but because Kermit is applying here today for one of these non-standard units as 120 acres, somewhere we've got to wind up with a 40 left over in the Wolfcamp that will not be developed because it has no place to be dedicated to, is that correct, sir?

A Yes, that would be correct.

Q Does that protect the Correlative Rights of that 40-acre owner?

A I would say that as I look at Union Exhibit Number 1 in Case 3158, that would probably be the Southwest of the Southwest of Section 5, what you're talking about?

Q I don't know which 40. It's bound to be one 40, whatever 40 it is.

A Where you plotted out the wells, I mean you assume that the Kermit well is satisfactory.

Q Let's assume that.

A You would want to drill your next well in Section 5 in the Northeast Quarter, so you drill it in the Southwest of the Northeast.

Q Wherever it may be.

A Equivalent structure position.

Q We dedicate 160 acres to that one. Now, left in Section 5 we have 5 40's. Now, one of those 40's is not going to be dedicated to the Number 4 Well?

A Right.

Q How do we protect the Correlative rights of that 40-acre owner, that's what we're trying to do?

A Well, in spacing, it would require that Union Oil Company would come before the Commission and point out, if the facts proved it both from an engineering and geological fact and information, that this extra acreage was -- was productive and could be drained by this fourth well you're talking about, that it would be given credit in the acreage to the fourth well drilled. For instance, in the Hugerton Field we have a spacing, and through surveying operations we may have an extra hundred acres or so in a section. Why, that extra acreage, if the Commission can have a finding of fact that that acreage come from this case, would be this 40 was productive, and both from engineering and geological information, it could be included in the fourth well. That

is one way to handle it.

You have given me a fast question here. In my experience I know that in Texas and Louisiana we have done this, and Kansas, and in Canada where this same thing comes out. I gave a speech on the units, the formation of units and unitization to all the Canadian accountants some time ago, and there's several ways. I just give you one that you might take back and push it around. It would depend on the engineering and geological data at the time, is the best answer that I could give you.

Q Thank you, sir. And the way I understand it, we've got to come back to the Commission for the Number 3 unorthodox and for the 4. And in the 4 we have to ask for 200 acres, assuming we could prove this, so we're coming back, I understand you. Once you grant this exception in the Wolfcamp for 160 acres composed of the North half North half and once you grant 120 in the Wolfcamp in the Northeast Northeast, we're now forced to compose non-standard units throughout Section 5, and in order to fully develop Section 5 we must have another non-standard for the third well, and a non-standard 200 for the fourth well; I assume the same would be true in the Pennsylvanian where we have a 40 left over?

A Your explanation is the best I can give.

Q Thank you. Tell me, sir, in the well in the Northeast Northwest of Section 5, if we had a radial type of pool, which we never do, of course, but which we have to work from --

A Yes, sir.

Q -- if we had a radial type pool and if we had, as I believe you testified yesterday in Case 3158, and please correct me if I'm wrong, approximately 80 net feet of pay and approximately 10 percent porosity?

A Well, in making the calculations --

Q You used them?

A I didn't use 80 feet, I used Pure's 10 percent and 28 feet. That was a mistake, you didn't understand me.

Q You do agree with the doctor on 80 feet?

A Yes.

Q All right. Take that one, and if you will, please, take 10 percent porosity.

A I didn't use 10 percent, I used 28 feet, where I get the 30,000,000 per acre; that's the things I testified to.

Q Yes, sir, but will you please take 80 feet of pay, will you please take 10 percent porosity?

MR. PRAY: Object. Counsel is misunderstanding that 10 percent porosity does not apply to the 80 feet.

If you recall and look in the record of Cavler's testimony, he reduces the porosity because some of the pay would reduce the porosity which Pure came up with in the exhibit. The witness is explaining that if you use the 80 feet you use a different porosity.

Q (By Mr. Christy) What is the 26 feet, what would you like?

A No. On Page 17 of the former -- Page 17 of the former transcript, 28 feet, that's what I used, and Exhibit 5.

Q What porosity?

A 10 percent.

Q 10 percent. And what water saturation?

A 30 percent.

Q Now, how many billion cubic feet of gas did you find in the Wolfcamp reservoir, based on those figures?

A Just found per acre.

Q Would you please multiply it; didn't you testify 50 billion?

A No, sir, I said you could hairline the curve and take the August 1965 pressure, which is the longest shut in period of 585 hours, which the witness for Union testified was the longest shut in period, so that's the best test. You take that and then another test which was much less, and take those two, you go out to about 50 billion. But I agree with

the Pure's estimate of pressure.

Q I see. And do you think this 50 billion is reasonable?

A It's a possibility, if you slip your curve.

Q So, would the well in the Northeast Northwest then drain the property in the extreme Northeast Northeast?

A Now, you're talking about a well in the Northeast?

Q Northeast of the Northwest, I believe is the well location for the Wolfcamp?

A Yes, sir.

Q It will drain?

A Yes, sir.

Q It will drain the entire 160 acres sought?

A Yes, sir.

Q And it will also drain the South half of the Northwest?

A It would be compensatory drainage. If that well is drilled Union will drill in the North half of Section 5.

Q What assurances have you got that Union will drill?

A Well, we have no assurances anybody will drill. The oil business is a risky business at best, but they keep drilling.

Q Will the well in the Northeast Northwest in the Pennsylvanian drain the Southeast Southeast of Section 5?

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A Southeast Southeast of Section 5?

Q Yes, sir, in the Pennsylvanian.

A Well, based upon the information obtained from the bottom hole pressure tests which have been brought out, I calculated taking my figure of 10 percent from the Pure exhibit of porosity.

Q We're in the Pennsylvanian?

A I know.

Q All right, sir.

A And 40 -- and 28 feet of thickness.

Q In the Pennsylvanian?

A In the Wolfcamp. I'm answering your question. And in taking Mr. Garb's figure of 26.54 billion and dividing 30 into it as I expressed, I felt that the effective drainage area in the Wolfcamp would have covered it's effecting an area of about 900 acres and a well drilled at this point. I assume that the Pennsylvanian should have comparable drainage conditions based upon the limited information we have. It was a good well at the time. There's some excellent drill stem tests, that based upon these highly scientific build up tests, which we have had at this hearing, assuming they apply to the Pennsylvanian, they would drain the Southeast of Section 5.

Q Are they generally the same; they are and they

aren't, aren't they?

A They're comparable, I think, in this particular case; they're limestone.

Q So it's your testimony that the well in the Northeast of the Northwest will effectively and efficiently, or it will drain the section?

A Yes, sir.

Q It will drain the area between the well and the Southeast Southeast, will it or won't it?

A Yes, sir --

Q That's enough, appreciate it.

REDIRECT EXAMINATION

BY MR. PRAY:

Q Mr. Keplinger, would the Union Oil Company have an opportunity to drill a Pennsylvanian well in Section 5 to prevent uncompensated drainage which might occur from the well which we propose?

A They'd have the opportunity.

Q Mr. Keplinger, in your opinion is the well which Union Oil Company and the governmental unit now owns in Section 32, is that drainage substantial quantities of gas at the present time from the applicant's properties in Section 5?

A In my opinion it is.

MR. PRAY: No further questions.

MR. PORTER: If there are no further questions the witness may be excused. Does that conclude your testimony? Mr. Christy, do you have testimony to offer?

MR. CHRISTY: No, sir.

MR. PRAY: If the Commission please, I would like to have them take judicial notice that Order R-2826 is an order establishing Wolfcamp Gas Pools, covering all of Sections 31, 32 and 33, Township 25 South, Range 33 East, and all of Sections 4 and 5, Township 26 South, Range 33 East, New Mexico Prime Meridian, Lea County.

MR. PORTER: This is the order which established the horizontal and vertical limits?

MR. PRAY: Yes, and take notice of this. And also, it's the order established in the Pennsylvanian Pool.

MR. CHRISTY: I have no objection to administrative notice.

MR. PRAY: Thank you, Mr. Christy.

MR. PORTER: The Commission will take administrative notice. All right, Mr. Christy.

MR. CHRISTY: Mr. Porter, in view of the testimony here this morning we would like to ask the Commission to incorporate this record, these records, in the testimony in Case 3158 of the Oil Conservation Commission, otherwise the

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testimony of this case becomes very difficult to understand.

MR. PORTER: Case 3158, being the case we heard yesterday.

MR. PRAY: We would ask, as a counter proposal, that both of these cases be incorporated together and all the testimony in each case be considered together.

MR. CHRISTY: We have no objection.

MR. PORTER: What's your proposal, Mr. Pray?

MR. PRAY: That we just consolidate the testimony from the case today with the case yesterday and have the testimony considered in all the applications.

MR. PORTER: That all the applications and records be considered together?

MR. PRAY: Yes, sir.

MR. PORTER: In its deliberation the Commission will consider the record in both cases together as being consolidated.

MR. CHRISTY: That's all.

MR. PORTER: If there is nothing further, are there any statements at this time?

MR. PRAY: I would like to make a brief statement, if I might, please.

Our applications which we have presented today, have been based on the proposition that they can best avoid

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future practical operational problems; that it had been indicated to us on numerous occasions, the occasion that Union Oil Company did not desire to participate in Section 5; that in fact these non-standard units were suggested to us by a representative of the Union Oil Company, that they would reduce the possibility of future conflicts in the requirement that this Commission continually adjudicate the rights as to the amount of drilling cost appropriate to each formation as to what happens when you have a remedial workover job in one of the formations, how the rights will be adjudicated by the parties.

We have pointed out by our case today, that it does not prohibit the other owners to develop their profits.

We have shown there are no unusual well locations, that all the locations sought would be permitted under the standard rules of this Commission, under the existing spacing.

We have also tried to point out that economics are such that a prudent operator would drill the wells as the applications filed.

It was further pointed out that a prudent operator would defer the drilling of the 120-acre Wolfcamp until such time there was more information. We're not going to

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drill two wells immediately without being able to determine whether or not the information we have at the present time is correct or incorrect, or extending the information.

We want as best as possible to develop more information about this pool and its aerial extent and its volumetric capacity and its pay.

As the Commission has been advised, the gamma ray neutron log is certainly not the most desirable way to pick pay. Certainly, cores are a definite asset, drill stem testing, open hole logs, which was possible on the Red Hills.

The testimony has shown that these applications would protect Correlative Rights and that they would also prevent waste.

The opponents have tried to show that this would result in multiplicity of suits for non-standard units.

The only other owners in Section 5 are represented by the Union Oil Company as operator, that this is one of the boundaries of the governmental units and the only uncommissioned interests are from the applicants seeking non-standard units, and we certainly would not oppose non-standard applications by the Union Oil Company.

We don't think there would be any opposition that they would have legal locations for their wells, and there

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would be no necessity for any opposition to any of these applications. We believe it would be a routine matter.

They say that this would be a terrible way to develop this field, they're trying to make us out as we're forcing them into a most unfavorable position, but I ask you who drilled the Red Hills 30 feet from the North line of Section 5. It is the location of that well which brings us in today to protect our Correlative Rights, to avoid the conflicts we have had for now 18 months concerning this well and the protection of the Correlative Rights of the applicants.

We submit to the Commission that we are sure you're tired of hearing these matters; we're certainly tired of having to continually appear here in order to protect our rights, and we believe that the granting of these applications would eliminate the necessity for a continuation of such adversary proceedings, and thus in the interest of the prevention of waste and protection of Correlative Rights and avoidance of conflicts and applicable problems we ask that the Commission grant our application.

MR. HINKLE: If you consider all the facts and circumstances in this case, I think the Commission can only conclude that Correlative Rights will be violated rather than protected by the granting of these non-standard units.

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Under Section 65-3-14 of the Conservation Act, provides, "The rules, regulations or orders of the Commission shall, so far as it is practicable to do so, afford to the owner of each property in a pool the opportunity to produce his just and equitable share of the oil or gas, or both, in the pool, being an amount, so far as can be practically determined, and so far as such can be practicably obtained without waste, substantially in the proportion that the quantity of the recoverable oil or gas, or both, under such property bears to the total recoverable oil or gas, or both, in the pool, and for this purpose to use his just and equitable share of the reservoir energy".

Now, we believe that the result of the granting of these non-standard units would be to give them an unfair advantage and to violate Correlative Rights in that they would get a much larger share of the gas or recoverable hydrocarbons in the pool than they would be entitled to by virtue of a calculation of the gas-in-place under their particular properties.

This pool is just like a big tub. We have one straw in it, they want to put another straw in it, and we know, and all the evidence shows that one of those straws is going to drain out as much fluid or gas as the other straw. And if

put three straws each will get a third. Then that, if they are permitted to drill a well offsetting this well on a 160-acre non-standard unit, that unit cannot afford, because of the economics involved, to go ahead and develop this on a 160-acre basis.

They're faced with drilling one well, Union is faced with drilling a lot of wells in this whole unit.

The unit itself was designed to protect Correlative Rights. They had an opportunity to join the unit; they refused to do it. If, as I pointed out yesterday, had they joined the unit, Correlative Rights would have been protected in every way and this dispute would not have arisen in any matter.

Their own testimony in this case shows clearly that they think one well will effectively and efficiently drain more than 160 acres. In other words, their own testimony is in support of wider spacing.

Now, in circumstances like this I believe it to be the duty of the Commission to fix the largest spacing that the evidence will justify. That is that one well will effectively and efficiently drain, taking into consideration all the economics in the case. And unless the Commission does that Correlative Rights are certainly going to be violated as they will be in this case. Thank you.

MR. PRAY: If the Commission please, I would like to elaborate a little bit on the doctrine of Correlative Rights as mentioned by Mr. Hinkle. He mentioned the definition contained in the statutes and regulations about what are Correlative Rights, that they are in amount insofar as can be practically determined what one property owner's recoverable reserves bear with the reserves in the entire field. And I submit it is the uncontroverted testimony and evidence of these cases that the South half of Section 5 is not established to be productive, and therefore it has not been established that there are any Correlative Rights in the South half of Section 5, and that our application today we admit that, and say that we are going to defer drilling of the South half of Section 5 as far as the Wolfcamp is concerned, until there is additional information.

He states that because our testimony shows that a well will drain more than 160 acres that this supports larger spacing. I submit to the Commission that you know just because a well drains more it doesn't mean that it will economically drain more than its spacing unit. This is not in itself a case for economics.

You could have one well draining an entire pool covering 30 sections, it's possible but it doesn't mean it will economically drain it. And their own witness testified

to it yesterday.

He falls back on his tub and straw theory saying his Correlative Rights are not going to be protected because we're going to get a straw in the reservoir. I submit that after 18 months of drainage we get a straw in and protect our rights. We're not going to drain an unfair share of our gas; we're going to be on the Pennsylvanian. We'll have a unit 28/320's. We'll have a reduced allowable well there and if a second Wolfcamp is drilled it will have a reduced allowable. All we want is our fair share; we're not asking for anything else.

MR. PORTER: Anything further to be offered in the case?

MR. HILL: I have a telegram received by the Commission, May 17, 1966 from George B. Abel, working interest owner in the Red Hills Area, and Mr. Abel objects to the application of Schuman's applications, Case 3401 and 3402; and there's a letter here from Texaco Incorporated dated May the 16th, 1966 signed by J. H. Markley, Division Manager, in which they oppose the application of Cases 3402 and 3402.

MR. PORTER: Thank you, Mr. Hill. Off the record.

(Whereupon, a discussion was held off the record.)

MR. PRAY: We would ask that if this gentleman has a statement for the record, we ask that he be sworn and

make the statement under oath.

MR. CHRISTY: Mr. Porter, I believe it has been the practice to except the statements.

MR. PRAY: We believe good administrative procedure of the law that everyone have an opportunity to cross-examine on anything that goes into the record.

MR. PORTER: At this time, Mr. Pray, the Commission will continue its long established practice of allowing someone to make a statement of position for his company, so Mr. Lyons will be recognized at this time.

MR. PRAY: We would like to the record to tender our objections of the statement that Mr. Lyons plans to make at this time. We object to their considerations by this Commission.

MR. PORTER: Mr. Lyons.

MR. LYONS: Victor Lyons appearing for Continental Oil Company, and if it would reduce complications I would be glad to tender my statement by letter, if the Commission will receive it.

MR. PORTER: You can make your statement of position by letter. The Commission will put the letter in the file, Mr. Lyons.

MR. LYONS: Whichever the Commission would prefer.

MR. PORTER: Mr. Lyons, I believe the Commission

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would prefer that you submit a letter.

MR. LYONS: Fine, I'll be glad to do so.

MR. PORTER: If there is nothing further to be offered in this case the Commission will take the case under advisement and the hearing is adjourned.

(Whereupon, the hearing was adjourned at 12:30 o'clock A. M.)

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IN WITNESS WHEREOF, I have affixed my hand and
notarial seal this 24th day of May, 1966.

Bobby J. Davis
Notary Public - Court Reporter

My Commission Expires:
March 13, 1969.