

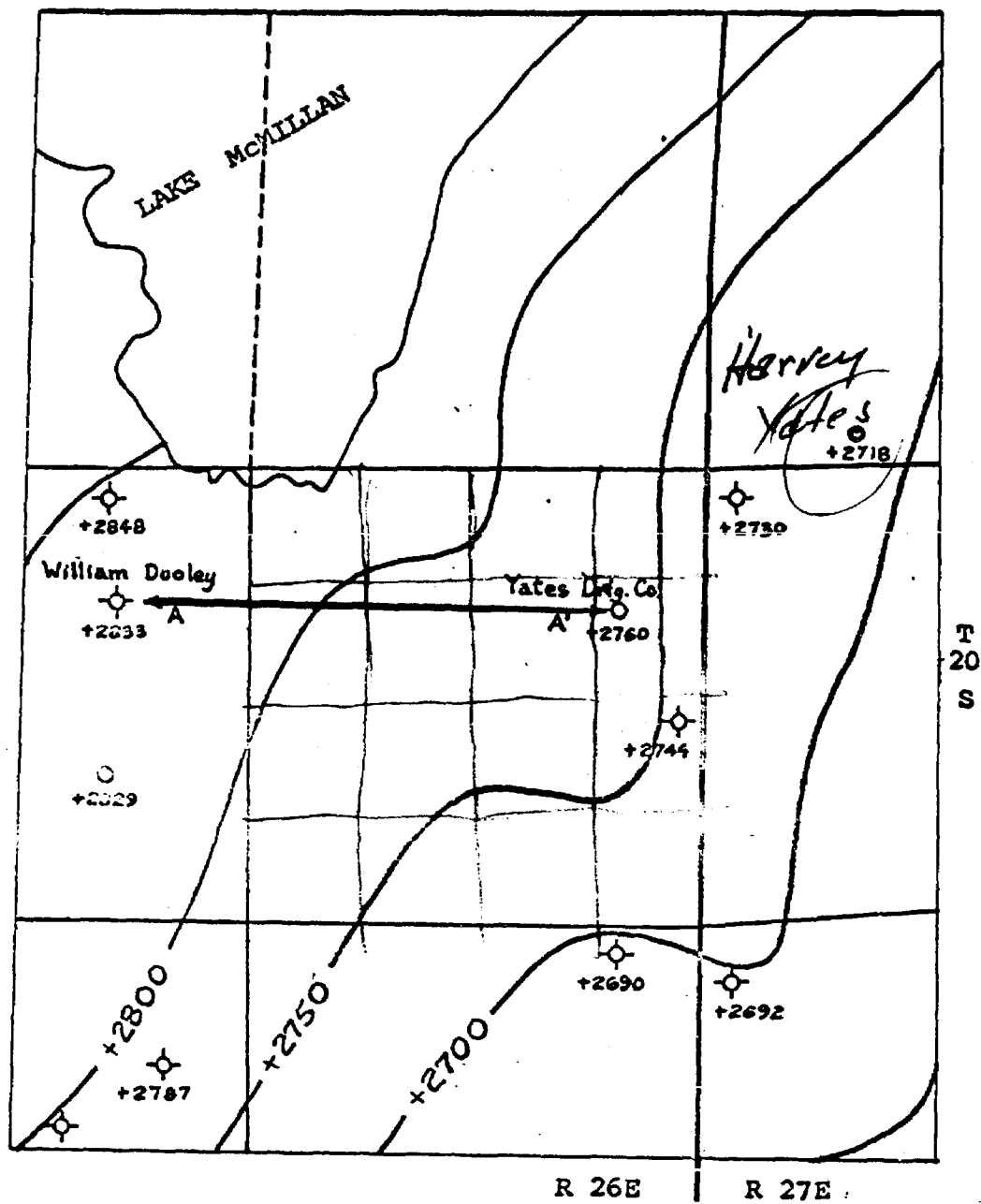
CASE 2890: Application of S. P. 10
YATES FOR UNORTHODOX LOCATION,
EDDY COUNTY, NEW MEXICO

1952/10.

2890

edition, Transcript,

and Exhibits, Etc.



STRUCTURE CONTOURS ON TOP OF QUEEN FORMATION

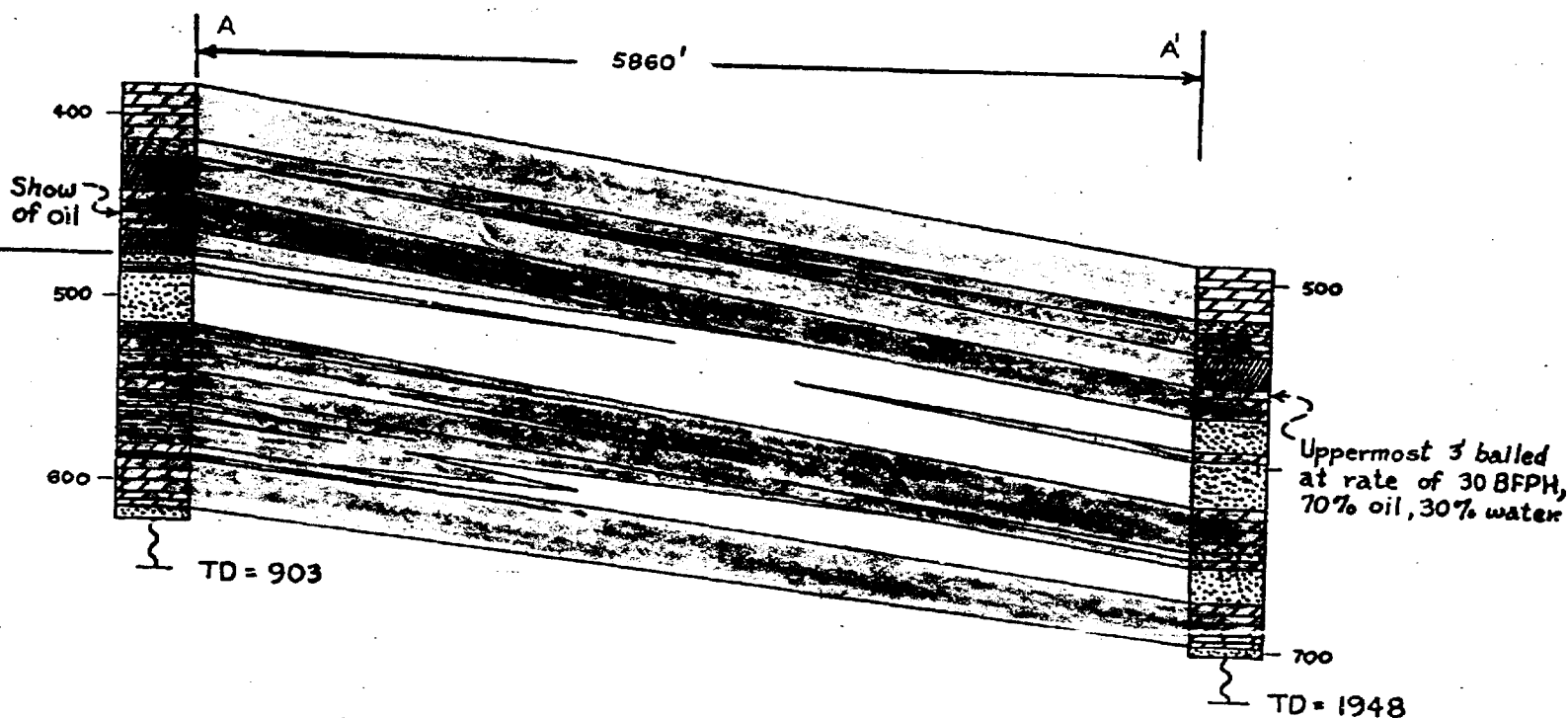
BEFORE EXAMINER UTZ	
CL CONSERVATION OF MINERALS	
EXHIBIT	2848
CASE NO.	2848

SEVEN RIVERS FM.

QUEEN FM.

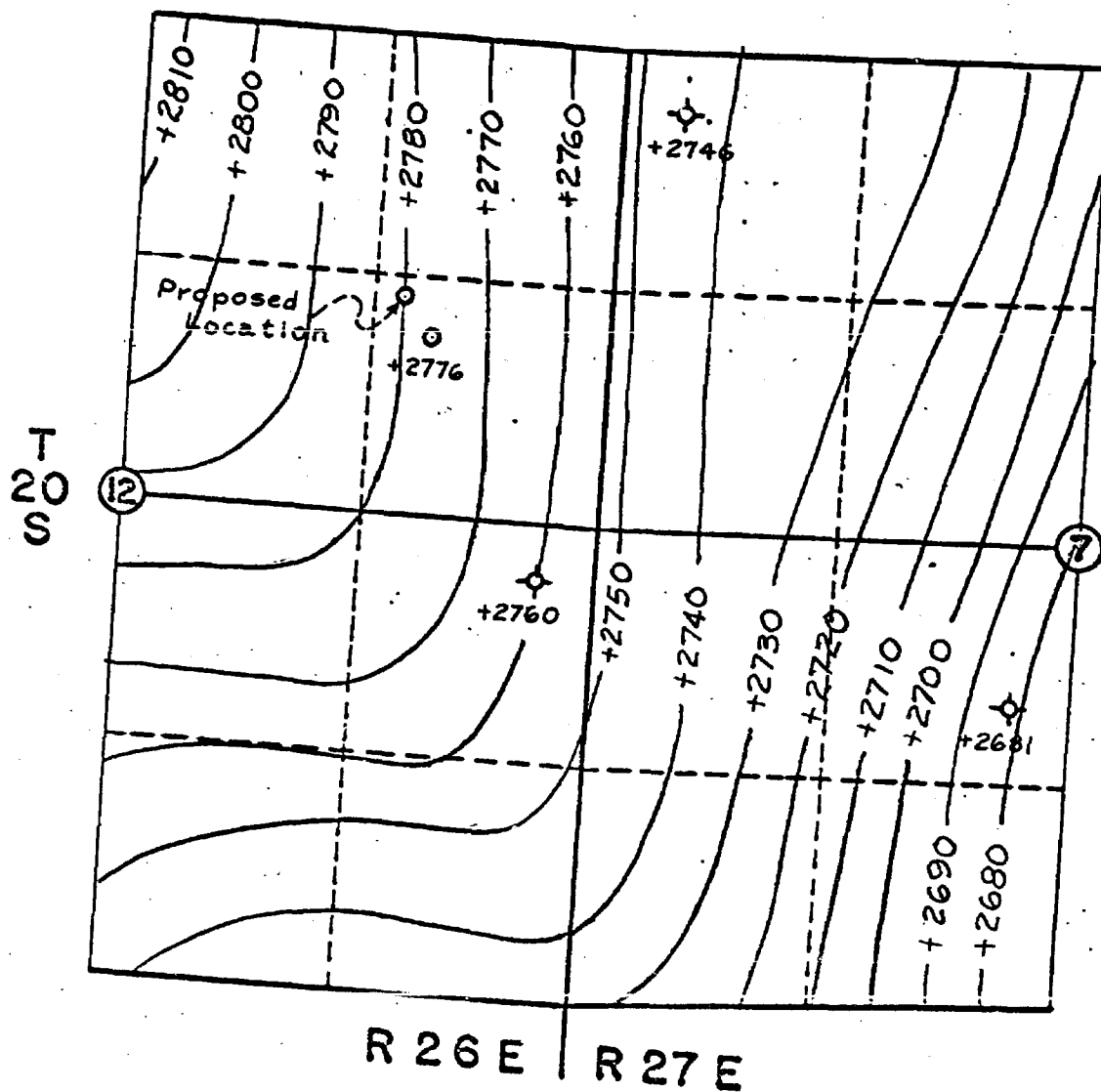
WILLIAM DOOLEY
NO. 1 HATCHETT
Sec. 11-20S-26E
1570/FNL 1570/FEL
Eddy Co., New Mexico
DFE 3312

YATES DRILLING CO.
PECOS RIVER DEEP UNIT NO. 2
Sec. 12-20S-26E
1650/FNL 990/FEL
Eddy Co., New Mexico
DFE 3333



WEST - EAST STRATIGRAPHIC CROSS SECTION

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



STRUCTURE CONTOURS ON TOP OF BASAL
SEVEN RIVERS DOLOMITE OR ITS EQUIVALENT

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 3
CASE NO. 2890

DRAFT

JMD/esr

September 6, 1963

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE No. 2890

Order No. R-2567

APPLICATION OF S. P. YATES
FOR AN UNORTHODOX LOCATION,
EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on September 4, 1963, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this day of September, 1963, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, S. P. Yates, seeks authority to drill and complete an oil well in the Seven Rivers formation at an unorthodox location 1435 feet from the North line and 1155 feet from the East line of Section 12, Township 20 South, Range 26 East, NMPM, Eddy County, New Mexico.

(3) That the ~~E/2~~ ^{W/2} SE/4 NE/4 of Section 12, Township 20 South, Range 26 East, NMPM, Eddy County, New Mexico, can reasonably be presumed to be productive of oil from the Seven Rivers formation; that the ~~E/2~~ SE/4 NE/4 of said Section 12 cannot reasonably be presumed to be productive of oil from the Seven Rivers formation; and that approval of the subject application will impair

correlative rights if more than a 20-acre allowable is assigned to the subject well.

(4) That in order to prevent waste and protect correlative rights, the proposed non-standard location should be approved, provided the applicant dedicates only the $\frac{1}{2}$ SE/4 NE/4 of Section 12, Township 20 South, Range 26 East, NMPM, Eddy County, New Mexico, to the subject well.

IT IS THEREFORE ORDERED:

(1) That the applicant, S. P. Yates, is hereby authorized to drill and complete an oil well in the Seven Rivers formation at a non-standard location 1435 feet from the North line and 1155 feet from the East line of Section 12, Township 20 South, Range 26 East, NMPM, Eddy County, New Mexico; provided, however, that only the $\frac{1}{2}$ SE/4 NE/4 of said Section 12 shall be dedicated to the subject well and said well shall receive an acreage factor for allowable purposes of 0.50.

(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.

(4) That if the subject well is allowed to produce more than one half the normal unit allowable from the proposed location it will in all probability drain oil from the offsetting acreage to the north and west, thereby impairing correlative rights.

For 9-4-63
Case _____

Application of S. P. Yates for an
unorthodox location, Eddy Co., N.M.

Applicant, in the above styled case,
seeks authority to drill ^{and complete} a well in
~~the~~ the Arroyo River formation at
an unorthodox location 1435 feet
from the North line and 1155 feet
from the East line of Section 12,
Twp. 20 S, Rge 26 E, Eddy Co,
N.M.

Jerry Loece to DSN by phone 8-8-63
written app will follow.

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF
S. P. YATES FOR AN UNORTHODOX WILDCAT
WELL LOCATION, EDDY COUNTY, NEW MEXICO.

:
:
: NO. 2890
:
:

COMES S. P. YATES, by his attorneys, Losee and Stewart,
and states:

1. That S. P. Yates is the operator of the United
States Oil and Gas Lease covering the following lands in
Eddy County, New Mexico:

Township 20 South, Range 26 East, N.M.P.M.

Section 12: SE/4 NE/4

ONLY FROM THE SURFACE DOWN TO THE
TOP OF THE SAN ANDRES FORMATION.

2. That Yates Drilling Company has drilled the Pecos
River Deep Unit No. 2 Well at a surface location 330 feet
from the North and West lines of the above described 40-acre
tract and although several feet of possibly oil productive
dolomite was encountered in the Seven Rivers horizon, it
would be impracticable to complete the well because sizable
quantities of water were found in the hole immediately be-
low the proposed producing horizon.

3. That Applicant has reason to believe that all or
part of the SE/4 NE/4 of said Section 12 is productive from
the Seven Rivers horizon.

4. That Applicant proposes to drill a new wildcat well
at an unorthodox location 115 feet from the North line and

165 feet from the West line of the SE/4 NE/4 said Section 12.

5. That there is no production of oil or gas from the Seven Rivers horizon in the near vicinity of the 40-acre tract covered by this application. There is attached hereto and by reference made a part hereof, a plat showing the unorthodox location of the proposed well and the names of the operators or lessees offsetting the proposed location.

6. That the approval of this unorthodox wildcat location as an exception to Rule 104(b) of the New Mexico Oil Conservation Commission will prevent waste and will be in the interest of conservation.

WHEREFORE, Applicant prays the orders of the Commission as follows:


1. That this matter be set for hearing before an examiner duly appointed by the Commission and that due notice be given thereof as required by law.

2. That after hearing, an order be entered authorizing the Applicant to drill the wildcat well at the above specified unorthodox location.

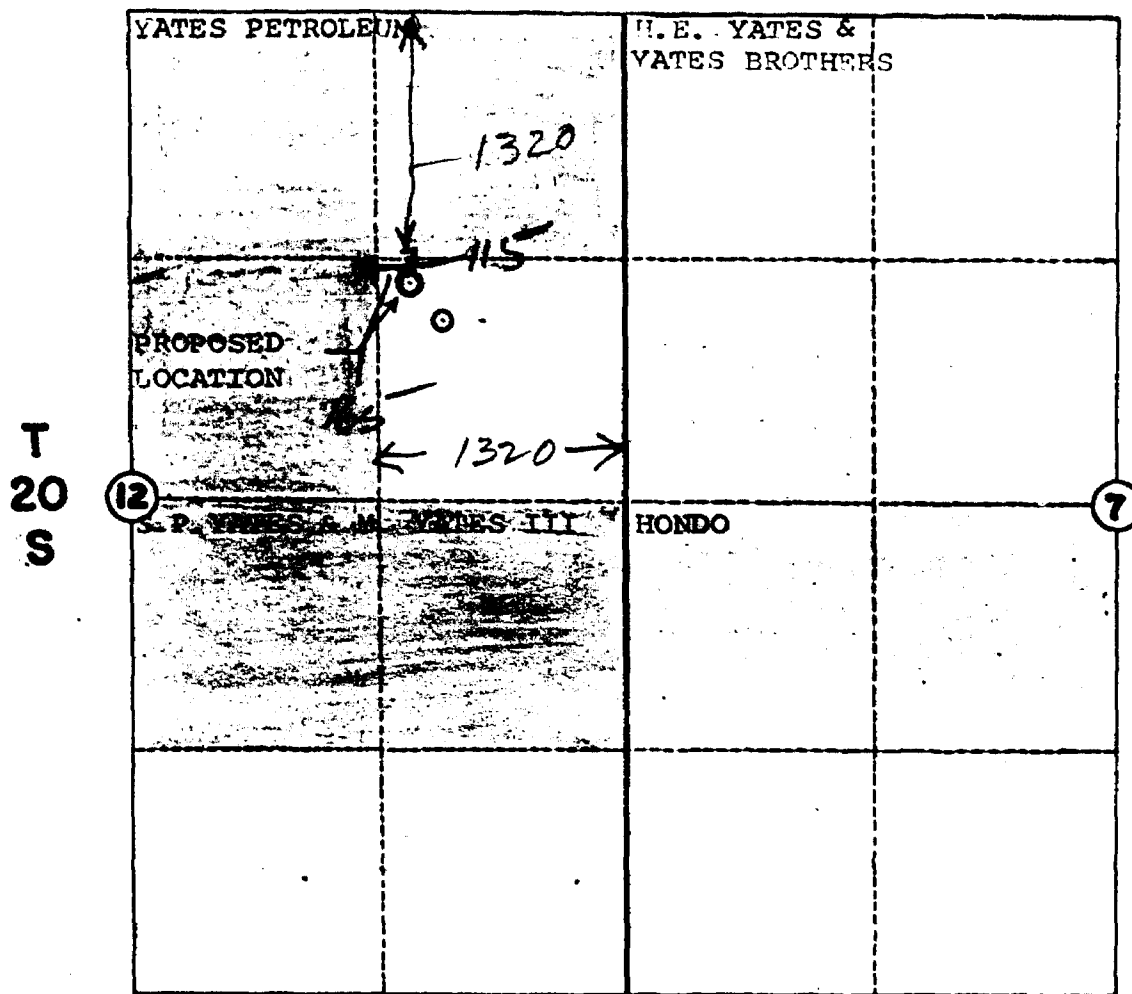
3. And for such other relief as may be just in the premises.

S. P. YATES

By



A. J. Losee of
LOSEE AND STEWART
Attorneys at Law
P. O. Drawer 239
Artesia, New Mexico



R 26 E R 27 E

1320
 165

 1155'
 FEL

1320
 115

 1435'
 FNL

S. P. YATES
OIL OPERATOR AND PRODUCER
309 CARPER BUILDING
ARTESIA, NEW MEXICO

16 August 1963

BEFORE EXAMINER UTZ	
OIL CONSERVATION COMMISSION	EXHIBIT 4
CASE NO.	2890

Enclosed herewith you will please find a copy of my application for an unorthodox wildcat well location upon the SE/4 NE/4 Section 12, Township 20 South, Range 26 East, N.M.P.M., Eddy County, New Mexico. In this application, I request permission from the Oil Conservation Commission of New Mexico to drill a wildcat well at an unorthodox location 115 feet from the North line and 165 feet from the West line of the above described 40-acre tract.

You are one of the co-owners of Federal Oil and Gas Lease LC 049945(a) insofar as it covers the N/2 NE/4, SW/4 NE/4 of said Section 12 and this is the acreage that will be crowded by my unorthodox well location. It is hoped that my proposed wildcat well will discover production in the Seven Rivers horizon and as a result, enhance the possibility of your offsetting acreage producing oil in the same formation.

If you have no objection to this application and to the release of any damages occasioned thereby, please sign one copy of this letter in the space provided below and return it to me for presentation to the Commission and for my files.

Very truly yours,


S. P. Yates

The undersigned hereby consents to the pending application before the Oil Conservation Commission of the State of New Mexico of S. P. Yates for an unorthodox wildcat well location, Eddy County, New Mexico and hereby requests that there be no reduction in the allowable for Mr. Yates' well.

In consideration of the possible discovery of a new field by the drilling of said wildcat well, the undersigned for himself, his heirs, successors and assigns, does hereby release and discharge S. P. Yates and the other co-owners of the SE/4 NE/4 Section 12, Township 20 South, Range 26 East, their heirs, successors and assigns, from any and all present and future claims and damages by reason of the drilling, producing and operating said wildcat well at an unorthodox location.

DATED this 27th day of August, 1963.

WITNESS:

YATES PETROLEUM CORPORATION
BY: Martin Yates III, V.P.

Case # 2890

Leard 9-4-63

Rec. 9-4-63.

1. Hunt S. P. Yates an unorthodox location 1435'N + 1155'E sec 12-20-26E. for a Seven River location.
2. Since it was admitted that the Pecos Dep unit # 2 was not common in the Seven River I believe we should not allow more than 20 ft allowable for the well. It is only 570' deep.

3. Please rush this so the well can be drilled before Sept. 30.

Thurs 9/4/63

A. J. LOSEE
EDWARD B. STEWART

LAW OFFICES
LOSEE AND STEWART
CARPER BUILDING - P. O. DRAWER 239
ARTESIA, NEW MEXICO

4422870
SHERWOOD 6-3508

14 August 1963

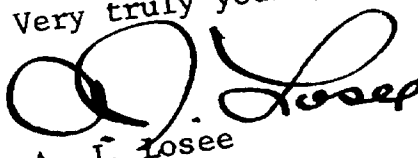
Mr. Daniel S. Nutter, Chief Engineer
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Re: Application of S. P. Yates for an
unorthodox wildcat location, Eddy
County, New Mexico.

Dear Mr. Nutter:

In accordance with our telephone conversation of last
Friday, I enclose triplicate copies of the subject
Application duly signed by the writer on behalf of
S. P. Yates. I understand that this Application will
probably be heard on September 4, 1963.

Thank you in advance for your attention to this matter.

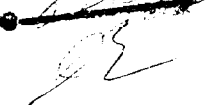
Very truly yours,

A. J. Losee

AJL/bk

Enclosures

cc Mr. S. P. Yates
309 Carper Building
Artesia, New Mexico

DOCKET MAILED

Date 8-23-63


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. 2890
Order No. R-2567

APPLICATION OF S. P. YATES
FOR AN UNORTHODOX LOCATION,
EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on September 4, 1963, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 17th day of September, 1963, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, S. P. Yates, seeks authority to drill and complete an oil well in the Seven Rivers formation at an unorthodox location 1435 feet from the North line and 1155 feet from the East line of Section 12, Township 20 South, Range 26 East, NMPM, Eddy County, New Mexico.

(3) That the W/2 SE/4 NE/4 of Section 12, Township 20 South, Range 26 East, NMPM, Eddy County, New Mexico, can reasonably be presumed to be productive of oil from the Seven Rivers formation; that the E/2 SE/4 NE/4 of said Section 12 cannot reasonably be presumed to be productive of oil from the Seven Rivers formation; and that approval of the subject application will impair correlative rights if more than a 20-acre allowable is assigned to the subject well.

(4) That if the subject well is allowed to produce more than one half the normal unit allowable from the proposed location it will in all probability drain oil from the offsetting acreage to the north and west, thereby impairing correlative rights.

-2-

CASE No. 2890
Order No. R-2567

(5) That in order to prevent waste and protect correlative rights, the proposed non-standard location should be approved, provided the applicant dedicates only the W/2 SE/4 NE/4 of Section 12, Township 20 South, Range 26 East, NMPM, Eddy County, New Mexico, to the subject well.


IT IS THEREFORE ORDERED:

(1) That the applicant, S. P. Yates, is hereby authorized to drill and complete an oil well in the Seven Rivers formation at a non-standard location 1435 feet from the North line and 1155 feet from the East line of Section 12, Township 20 South, Range 26 East, NMPM, Eddy County, New Mexico; provided, however, that only the W/2 SE/4 NE/4 of said Section 12 shall be dedicated to the subject well and said well shall receive an acreage factor for allowable purposes of 0.50.

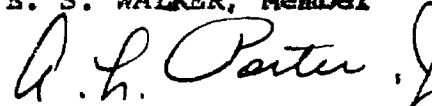
(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

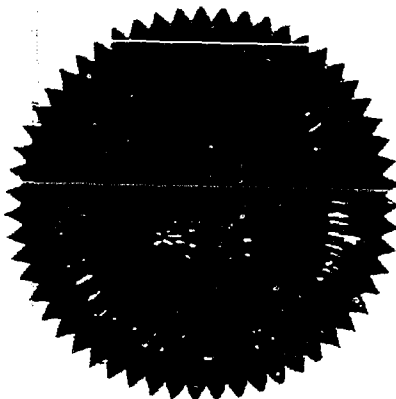
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


JACK M. CAMPBELL, Chairman


E. S. WALKER, Member


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



esr/

GOVERNOR
JACK M. CAMPBELL
CHAIRMAN

State of New Mexico
Oil Conservation Commission



P. O. BOX 871
SANTA FE

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

LAND COMMISSIONER
E. S. JOHNNY WALKER
MEMBER

September 17, 1963

Mr. A. J. Losee
Losee and Stewart
Attorneys at Law
Post Office Drawer 239
Artesia, New Mexico

Re: Case No. 2890
Order No. R-2567
Applicant:
S. P. Yates

Dear Sir:

Enclosed herewith are two copies of the above-referenced
Commission order recently entered in the subject case.

Very truly yours,

A. L. Porter, Jr.

A. L. PORTER, Jr.
Secretary-Director

ix/

Carbon copy of order also sent to:

Hobbs OCC x

Artesia OCC x

Astec OCC

OTHER

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

EXAMINER HEARING

IN THE MATTER OF:

Application of S. P. Yates for an unorthodox location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill and complete an oil well in the Seven Rivers formation at an unorthodox location 1435 feet from the North line and 1155 feet from the East line of Section 12, Township 20 South, Range 26 East, Eddy County, New Mexico.

Case No. 2890

BEFORE: Elvis A. Utz, Examiner.

TRANSCRIPT OF HEARING

September 4, 1963.

DEARNLEY-MEIER REPORTING SERVICE, Inc.

ALBUQUERQUE, N. M.
PHONE 243-6591

SANTA FE, N. M.
PHONE 983-3971

FARMINGTON, N. M.
PHONE 325-1182

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691

MR. UTZ: Case 2890.

MR. DURRETT: Application of S. P. Yates for an unorthodox location, Eddy County, New Mexico.

MR. LOSEE: A. J. Losee, Losee and Stewart, Artesia, New Mexico. I'm appearing on behalf of the Applicant, S. P. Yates, and I have one witness, Mr. Dick Norman.

(Witness sworn.)

(Whereupon, Applicant's Exhibits 1, 2 & 3 were marked for identification.)

MR. UTZ: Are there other appearances in this case?

You may proceed.

RICHARD C. NORMAN

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

DIRECT EXAMINATION

BY MR. LOSEE:

Q Would you state your name, residence and occupation?

A My name is Richard C. Norman, and I am from Artesia, New Mexico, 2206 Clayton Avenue, residence. I'm employed as a petroleum geologist by Yates Brothers of Artesia.

Q You have not previously testified before this Commission, have you?

A No, sir.



Q Would you give a brief resume of your education and background?

A Yes, sir. In 1948 I began my college career at the University of Tulsa and was awarded a Bachelor of Geology four years later in June, 1952. Following graduation I went to work for Gulf Oil Corporation and worked for that organization for a little over ten years. In September, 1962 I became employed by the Yates Brothers, Artesia, New Mexico, where I'm employed as a petroleum geologist, primarily as an exploration geologist.

Q During the period of time you were with Gulf, which you state was ten years, what was your capacity with the company?

A My experience ran through surface geologic mapping, stratigraphic studies primarily on a regional scale, well siting and hydronamic analyses. This is all related to petroleum exploration.

Q You were a petroleum geologist for that company?

A That is correct.

MR. LOSEE: Are Mr. Norman's qualifications acceptable, Mr. Examiner?

MR. UTZ: Yes, sir, they are.

Q Would you explain to the Examiner briefly the position of Mr. Yates in connection with this application for his unorthodox location?



A We propose to drill a 600-foot basal Seven Rivers test which would be a northwest offset on the same 40 that Pecos River Deep Unit No. 2 is located in Section 12 of 20 South, 26 East, Eddy County, New Mexico. This unorthodox location will be located 1435 feet from the North line and 1155 feet from the East.

During the drilling of the Pecos River Deep Unit No. 2 we got an extremely good show in the basal Seven Rivers dolomite. The free oil show with quite a bit of water. It is our contention that this particular well can not be completed as a commercial well and we'd like to gain some structure on the same lease to get away from the water.

Q Where was your show of oil in this well?

A Our show of oil came in at 571 feet in the Pecos River No. 2 Unit.

Q That well, the Pecos River No. 2 well was located at a regular location 330 feet out of the northwest corner of that 40-acre tract?

A That is correct.

Q And you propose to, by this application, to request permission to move it to within 165 feet from the East line of the 40 and 115 feet from the North line of the 40?

A It would be from the West line.

Q Or from the West line?



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PHONE 243-6691

A Yes.

Q What kind of an oil and gas lease is this 40-acre tract?

A This is a Federal lease, it's 05110 numbered, and this 40-acre tract is held by S. P. Yates and Gulf Oil Corporation and R. W. Fair together. Along with this is an additional segregated part which is much larger. It is noteworthy that this lease will expire this month, September 30, 1963, if we do not have production on the lease, and if we do not have the determination that the Pecos River No. 1 within the Pecos River Deep Unit is commercial.

Q Actually, if you get a determination that the Pecos River Deep Unit Well No. 1 is commercial, such a determination by the United States Geological Survey, that would extend the term of this lease, would it not?

A Yes, sir.

Q But in the absence of such a determination this lease, this 40 and its segregated portion will expire in the absence of production or drilling activity?

A That is correct.

Q In connection with the application as an exhibit there was attached a plat showing the location of the offset acreage. Would you refer to that plat and for the record state who are the



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PHONE 243-6691

offset operators to this 40-acre tract?

A All right. The offset acreage to the west and to the north, which is the critical acreage affecting this particular unorthodox location proposal, is held or is under the operator Yates Petroleum Corporation.

Q The Yates Petroleum Corporation, it is the operator of the lease covering the 120 acres diagonally and directly offsetting this unorthodox location?

A Yes, it is.

Q Is that also a Federal oil and gas lease?

A That is a Federal lease.

Q So the royalty owner is the same under that offset tract as it is under this 40?

A Yes, sir.

Q Now, to the south, the direct offset to the south, who owns or operates that oil and gas lease?

A S. P. Yates operates two-thirds of it along with Martin Yates who controls the other third of that Federal lease

Q Then to the east of your acreage, directly offsetting it, who is that operator?

A That is held by Harvey Yates, three-quarters per cent, and Yates Brothers, one-quarter per cent or one-quarter, excuse me.



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PHONE 243-6691

Q Is this well, or proposed location, more than a mile from any producing pool? Are there any wells producing within a mile of this?

A Yes, there is a well producing within a mile.

Q From the Seven Rivers?

A Yes, sir. I can show you on the exhibit.

Q What location is the well?

A If you'll look at Exhibit No. 1, it's --

MR. UTZ: Which is Exhibit No. 1?

A Exhibit 1 is the structure.

MR. LOSEE: Structure on the Queen.

A The structure contour map on top of the Queen formation. I just realized the section numbers are not on the particular map. If you'll look up in the northwest corner there, that is Section 6. If you will please mark that I would appreciate the correction.

MR. UTZ: Which section is Section 6 again?

A It's in the southernmost well in Section 6 at the northwest corner of that map.

MR. LOSEE: Northeast corner.

A Northeast corner. You see a lone producer there, and this particular well has a very minor amount of oil production in the very basal part, bottom part of the Seven Rivers. However,



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PHONE 243-6691

I do not believe that this is equivalent to the pay zone we are talking about today.

Q Who operates this well up here in this corner?

A That is operated by Harvey Yates.

Q Would you please explain to the Examiner the history of the drilling of this Pecos River No. 2 well at the orthodox location within that 40?

A On May 29, 1963 the Pecos River Deep Unit No. 2 was spudded, the location being 990 feet from the East line, 1650 feet from the North line in Section 12, 20 South, 26 East. The purpose of this test was to test the uppermost San Andres dolomite pay which we believe to harbor a possible stratigraphic trap where the location was chosen.

This location is also on a southeast plunging nose, it plunges into the Delaware Basin, and this we believe would be a very good stratigraphic trap possibility. The well was carried to a position below the Lovington sand to a total depth of 1928 feet.

We have several oil and gas shows in the Seven Rivers and the Queen and the Grayburg, but the only one that was really commercial was found in the basal, what I term the basal Seven Rivers dolomite. This dolomite is approximately 16 feet thick and was a very secrosit type dolomite, and had vuggy to intermittent



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PHONE 325-1182

SANTA FE, N. M.
PHONE 993-3971

ALBUQUERQUE, N. M.
PHONE 243-6691

porosity of very good nature. It was gray on the top and graded down to a honey-colored dolomite. It had good fluorescent and staining of the top part and the log interpretations showed that the uppermost four feet at least has 70% oil saturation, 30% water.

The thing that impresses me mostly is that it had 32% porosity and based on the log interpretation. This dolomite was topped at 571 feet and the driller, this was a cable tool hole, by the way, the driller penetrated about three feet before he realized the oil was coming into the hole. He shut the drilling operations down and called me out to the well and we ran some bail tests, and bail tests from the bottom. We were able to recover fluid at the rate of 30 barrels per hour. This was approximately 70% oil and 30% water.

Well, we decided to carry it on down another three feet, so we drilled an additional three foot and made another bail test from the bottom and this test was about the same rate as before. However, in this case we had 90% water and about 10% oil.

Q Refer to what has been marked as Exhibit No. 1. Explain what that represents.

A This is a structure contour map with 50-foot contour interval and is contoured on top of the Queen formation. The reason I wanted to show this is that it does show the regional



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PHONE 325-1182SANTA FE, N. M.
PHONE 983-3971ALBUQUERQUE, N. M.
PHONE 243-6691

structure, general structural attitude as the southeast dip into the Delaware Basin. As you see, there in the center of the map is the southeast plunging nose, and unfortunately the section numbers are not listed here on the map, but you'll see a line of section there, A to A¹ in the center of the map, and I have a cross section between those two wells. The one on the left is the William Dooley No. 1 Hatchet, and the one to the right, A¹, is Yates Drilling Company No. 2 Pecos River Deep Unit.

Q On what basis was this Queen contoured?

A This structure contour map represents both an integration of subsurface data or well data and surface data. We had a detailed photo geologic project done in the area which led in part to the picking of the location of the Pecos River Deep Unit No. 2.

Q Please refer to what has been marked Exhibit 2, which is your cross section. Explain what it portrays.

A This west-east stratigraphic cross section covers a portion of the two wells I've already talked about as indicated on the top part of the profile, the William Dooley No. 1 Hatchet and the Yates Drilling Company Pecos River Deep Unit. What I wanted to show was the general correlations on the area. You can see the Queen formation to the left there. It shows it on top of the sandstone, the yellow. I might explain the colors. The



colors, the blue represents dolomite. The red is red sand or silt zone, and the rose color is anhydrite. The gray color represents gray shale.

To the left or west would be considered as generally a shelf-type depositional area, whereas to the right or to the east toward the Basin it would be a basinal facies, and this area of interplay there are a lot of possibilities for stratigraphic traps of the permeability barrier type, and that is probably what we're dealing with here, in the case of the Seven Rivers dolomite.

If you look on the right-hand side of this cross section, the columnar section of the Yates Drilling Company No. 2 Unit, you see where I have an arrow pointing, says the uppermost three-foot bail that rated 30 barrels of fluid per hour. This dolomite, there is a 16-foot dolomite that we were discussing here today, as a potential pay in the area.

If you trace that unit as I have correlated it updip or to the left there, or to the other well, you'll notice that I have a show of oil there in that dolomite, and it is my belief, our belief that there could be a pretty good size oil patch in the area between the two wells, because they are actually a little over a mile apart.

Q Please refer to what has been marked as Exhibit 3, which is your structure contour D, or its equivalent, on the Seven

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Rivers dolomite and explain that exhibit.

Q This is contoured on the basal Seven Rivers dolomite, as I pointed out on the cross section, or its equivalent or the dolomite and its equivalent. This contour map is based on subsurface information or well data and surface information, namely the geologic map work we had done in there.

I would like to mention the fact that we have put quite a bit of trust on the surface geology in the area for subsurface structure, and wells that have been drilled subsequent to the Pecos River No. 2 have borne this nose out very well, and we believe very strongly that we can rely on surface geology. The proposed location, I don't have it shown here. It's on a very minor nose offshoot, plunging to the southeast to the larger nose you see on the map. This is based on surface check that I made myself in the field, and this is the reason for this particular location.

We believe that anything that we can do to gain structural advantage would get us farther and farther away from the water problems that we would have trying to complete the Pecos River No. 2 well.

Q Why did you recommend to S. P. Yates a drilling of a well at this location?

A The thing that would bother me about completing the



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No. 2 well is that we have already encountered the oil-water contact in that well and we have a relatively thin oil pay and it's quite probable that we would not be able to get a commercial completion from that well. It's my belief that that particular lease, if it were completed in the Pecos River, in the basal Seven Rivers at the Pecos River No. 2, would not get its fair share of the oil for the lease as well as it possibly could leave some oil in the ground due to high rates of water coming into the production.

Q Would it be possible to complete the well by plugging off the water in this Pecos River No. 2?

A In my opinion I don't believe we could make a commercial well out of it. We could not completely shut off the water in the Pecos River No. 2, and this is why we have chosen to go updip to get away from the water.

Q What do you think would happen if you tried to get it by shutting off the water with cement?

A Well, the first place I think we would get a very high water cut and possibly coning out of a lot of the oil that would be in the reservoir and not actually getting all the oil that's available down there. The operator himself would not get the production, all the production that is due them, and there may be a waste of oil down there.



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Q By moving to this unorthodox location, in your opinion how much higher, if any, structurally will the pay be located?

A I believe we can get approximately four foot higher, which could give us an eight foot oil column in the unorthodox location. Our intention would be to barely drill into this dolomite pay, maybe penetrate it a foot or two foot with a rotary and shut operations down there, and by this means go ahead and complete the well, and by this means we can get water-free oil production.

It is also my opinion that we will get a well that would have a fairly high capacity, judging from the capacity of that unit shown in the Pecos River No. 2 well.

Q By capacity, you mean by virtue?

A Production rate.

Q Production rate and by the dolomite encountered?

A Yes, sir.

Q In your opinion would the drilling of this well at this proposed unorthodox location prevent waste of oil and protect correlative rights of the lease owners within this 40-acre tract?

A Yes, sir, I believe the drilling of this well will do this.

Q Based upon your studies of the area, what, in your opinion what portion of this 40-acre tract in question do you



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think might be productive of oil from the Seven Rivers?

A I believe it's possible to get 15 to 20 acres of production in this 40-acre tract.

Q Earlier you testified that Yates Petroleum Corporation had the acreage that you were crowding. Have you contacted those people with respect to this application?

A Yes. They have been contacted and we have signature here advising us that we can go ahead and crowd this particular lease with the unorthodox location.

Q I hand you this letter that is dated August 16, 1963 which has been executed by Yates Petroleum Corporation by Martin Yates III, Vice President, and ask if you will read into the record their consent?

A "The undersigned hereby consents to the pending application by the Oil Conservation Commission of the State of New Mexico of S. P. Yates for an unorthodox wildcat well location, Eddy County, New Mexico, and hereby asks that there will be no reduction in the allowable from Mr. Yates' well."

Q Is there a similar letter signed by Yates Brothers, who is also an offset operator?

A Yes, sir.

Q Is there a similar letter signed by Martin Yates the Third, who is also an offset operator?



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A Yes, sir.

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

A Yes, they were.

MR. LOSEE: I move the introduction of Exhibits 1 through 3.

MR. UTZ: Exhibits 1 through 3 will be entered into the record of this case.

(Whereupon, Applicant's Exhibits 1 through 3 were marked, offered and admitted in evidence.)

MR. LOSEE: I also ask that these letters with the consents of the offset operator be marked as Exhibit 4 and made a part of the record.

(Whereupon, Applicant's Exhibit No. 4 was marked for identification.)

MR. UTZ: You did offer Exhibit 4?

MR. LOSEE: Yes.

MR. UTZ: Exhibit 4 will be entered into the record.

(Whereupon, Applicant's Exhibit No. 4 was offered and admitted in evidence.)

MR. UTZ: Does that conclude your case, Mr. Lossee?

MR. LOSEE: Yes.



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CROSS EXAMINATION

BY MR. UTZ:

Q In the event you get production in this unorthodox location, how many acres do you feel should be dedicated to the well?

A I think anywhere from 15 to 20 acres should be dedicated.

Q You would be satisfied with a 15 or 20-acre allowable?

A Yes, sir, 20.

Q I said 15 or 20.

MR. UTZ: Any other questions of the witness?

MR. DURRETT: Yes, sir, I have a question.

BY MR. DURRETT:

Q Mr. Norman, refer to your Exhibit 1, will you please, the structure contour on top of the Queen?

A Yes, sir.

Q We've marked Section 6 in the upper right-hand corner, the northeast corner. Proceeding directly west from there, the next section, is that Section 12, Township 20 South, Range 26 East?

A That would be Section 1 there.

MR. UTZ: Section 12.

A Section 12 is where we were discussing where the location is.



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Q The location is directly south. What I'm talking about, the section I'm talking about now is directly west of what we would call Section 6?

A Yes, sir.

Q That is Section 1, right?

A That is correct.

Q Then directly south of Section 1 is Section 12?

A Yes.

Q That is the area in question?

A I would appreciate it if you would allow me to mark the section numbers on there.

Q I think that will clear it up. I thought you were drilling in the middle of Lake McMillan there for a while.

A We would like to.

MR. UTZ: Any other questions?

A Would you allow me to mark the section numbers on here?

MR. UTZ: We've marked them on these two. I think that will be satisfactory.

MR. LOSEE: I would like to make a short statement, if I may.

MR. UTZ: You may proceed.

MR. LOSEE: I don't want to disagree with my witness with respect to this allowable question. His testimony on what



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is productive is 15 or 20 acres. His employer feels like that if his allowable is actually less than one-half of the unit allowable, it probably would not be economically feasible to drill the well. I think the offset operators who are crowded and who have consented without any reduction are anxious from their standpoint to have this wildcat drilled even though there is no penalty to it by reason of its unorthodox location. I think that's all I have.

MR. UTZ: In other words, your client wants dry acreage dedicated to a well?

MR. LOSEE: Well, no. He would like dry acreage, but I point out this 20-acre kind of limitation.

MR. UTZ: Is this kind of a discovery allowable?

MR. LOSEE: Well, we were talking about Texas earlier, so that's maybe what it ought to be. I've about explained it.

MR. UTZ: Any other statements in this case? The witness may be excused.

(Witness excused.)

MR. UTZ: The case will be taken under advisement.



STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) SS

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

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 10th day of September, 1963.

Ada Dearnley
Notary Public-Court Reporter

My commission expires:

June 19, 1967.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner's hearing of Case No. 2890, heard by me on *September 4*, 1963.
[Signature]
Notary Public-Court Reporter
New Mexico Oil Conservation Commission

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