

CASE 1225: Moab Drig. Co. & Utex Exploration
application for order authorizing pilot
waterflood project in High Lonesome Pool,
Eddy County, N. M.

Case No.

1225

Application, Transcript,
Small Exhibits, Etc.

JACK M. CAMPBELL
JOHN F. RUSSELL

COMM. OFFICE 002

NOV 27 1957

LAW OFFICES OF
CAMPBELL & RUSSELL
J. P. WHITE BUILDING
ROSWELL, NEW MEXICO
22 November 1957

TELEPHONES
MAIN 2-4641
MAIN 2-4642

Re: Application of Moab Drilling
Company and Utex Explorations
Co., Inc. for Emergency Order

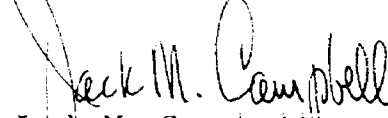
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Gentlemen:

Please consider that the Application sent to you November 21st for an emergency Order authorizing transfer of allowable was made on behalf of Moab Drilling Company and Utex Explorations Co., Inc., and both should be considered applicants for the emergency Order.

Very truly yours,

CAMPBELL & RUSSELL


Jack M. Campbell

JMC:bb

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER CONCERNING THE
TRANSFER OF ALLOWABLES FOR
CERTAIN WELLS IN THE HIGH
LONESOME POOL IN EDDY COUNTY,
NEW MEXICO.

EMERGENCY ORDER NO. E-5

NOW, on this 25th day of November, 1957, the New Mexico Oil Conservation Commission, a quorum being present, having considered the application of Moab Drilling Company and Utex Exploration Company, Inc., and being fully advised in the premises,

FINDS:

(1) That Moab Drilling Company was authorized by Order No. R-975, dated April 12, 1957, to institute a pilot water flood project in Sections 15 and 16 of Township 16 South, Range 29 East, NMPM, High Lonesome Pool, Eddy County, New Mexico.

(2) That the aforementioned pilot water flood project has caused an increase in the producing capacity of the Utex Exploration Company, Inc., Donahue No. 2-K Well, located in the NE/4 SW/4 of said Section 15, to the extent that said well is now capable of producing in excess of the daily top unit allowable.

(3) That there is a possibility that waste will occur if the production from the said Donahue No. 2-K Well, is curtailed.

(4) That Utex Exploration Company, Inc., is also the owner and operator of another producing well on the same basic lease, known as the Donahue No. 3-N Well, located in the SE/4 SW/4 of said Section 15.

(5) That Utex Exploration Company, Inc., proposes that both of the aforementioned wells be granted a top unit allowable and that the allowable for the said Donahue No. 3-N Well, be temporarily transferred to the said Donahue No. 2-K Well.

(6) That an emergency exists which requires the promulgation of an order without notice and hearing to eliminate the possibility of waste occurring as a result of a curtailment of the production from the said Donahue No. 2-K Well.

IT IS THEREFORE ORDERED:

(1) That the Utex Exploration Company, Inc., Donahue No. 2-K Well, located in the NE/4 SW/4 of Section 15 and the Utex Exploration Company, Inc., Donahue No. 3-N Well, located in the SE/4 SW/4 of Section 15, all in Township 16 South, Range 29 East, NMPM, High Lonesome Pool, Eddy County, New Mexico, be granted a top unit allowable during the effective period of this order.

-2-

Emergency Order No. E-5

(2) That Utex Exploration Company, Inc., be and the same is hereby authorized to transfer any or all of the allowable assigned to the said Donahue No. 3-N Well to the said Donahue No. 2-K Well.


PROVIDED HOWEVER, That the sum of the daily production from both of said wells shall not exceed two top unit allowables plus the tolerance authorized by Rule 302 I of the Commission Rules and Regulations.

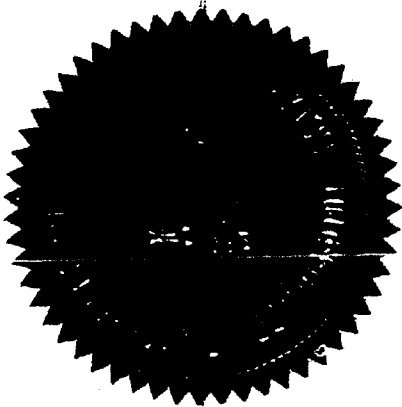
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


EDWIN L. MECHEM, Chairman


MURRAY E. MORGAN, Member


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



ir/

BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF MOAB)
DRILLING COMPANY AND UTEX EXPLORATION CO.,)
INC. FOR AUTHORITY TO PRODUCE AT CAPACITY)
CERTAIN WELLS IN AN APPROVED PILOT WATER)
FLOOD PROJECT IN SECTIONS 15 AND 16, TOWN-) NO.
SHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M.,)
HIGH LONESOME POOL, EDDY COUNTY, NEW MEXICO.)

APPLICATION

Come now Applicants, Moab Drilling Company and Utex Exploration Co., Inc., by their attorneys, and state:

1. Applicants are owners and operators of wells situated in the pilot water flood area in Sections 15 and 16, Township 16 South, Range 29 East, N.M.P.M., High Lonesome Pool, Eddy County, New Mexico.

2. The said pilot water flood project was approved by Commission Order No. R-975 on April 12, 1957.

3. The project, operating under said Order, has progressed to the extent that certain wells are being stimulated by water injection to the extent that their producing capacity has, or will in the near future, be in excess of the top unit allowable for the High Lonesome Pool.

4. Permission is requested to produce these wells at capacity inasmuch as production from this water flood project cannot be curtailed without causing a reduction in the ultimate recovery of oil.

WHEREFORE, Applicants request that the following described wells be granted an allowable equal to their capacity to produce, to-wit:

S. T. R.

Moab Drilling Company Davis Federal 2-E 15-16S-29E

Moab Drilling Company Davis Federal 3-D 15-16S-29E

		<u>S. T. R.</u>
Moab Drilling Company	Davis Federal 5-F	15-16S-29E
Moab Drilling Company	Davis Federal 6-C	15-16S-29E
Moab Drilling Company	Skelly-State 10-L	15-16S-29E
Utex Exploration Co., Inc.	Donahue 2-K	15-16S-29E
Moab Drilling Company	Skelly-State 6-G	16-16S-29E
Moab Drilling Company	Skelly-State 7-H	16-16S-29E
Moab Drilling Company	Skelly-State 8-A	16-16S-29E
Moab Drilling Company	Skelly-State 9-I	16-16S-29E
Moab Drilling Company	State 1-J	16-16S-29E

There is attached hereto a plat showing the location of wells for which a capacity allowable is requested, said plat being marked "Exhibit 1".

It is requested that this matter be set down before an Examiner for the Commission at the earliest possible date and that notice of said hearing be furnished by the Commission as required by law.

Respectfully submitted,

MOAB DRILLING COMPANY and
UTEX EXPLORATION CO., INC.

By: Jack M. Campbell
Jack M. Campbell
For: CAMPBELL & RUSSELL
P. O. Box 721
Roswell, New Mexico

JACK M. CAMPBELL
JOHN F. RUSSELL

LAW OFFICES OF
CAMPBELL & RUSSELL
J. P. WHITE BUILDING
ROSWELL, NEW MEXICO

20 November 1957

TELEPHONES
MAIN 2-4641
MAIN 2-4642

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

Gentlemen:

On April 12, 1957, you issued Order No. R-975 authorizing a pilot water flood project in Sections 15 and 16 of Township 16 South, Range 29 East, N.M.P.M., High Lonesome Pool, Eddy County, New Mexico. This Order contained no reference to allowable production from the project.

One of the wells in the project, being the Donahue No. 2-K Well, is situated in the NE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 15, Township 16 South, Range 29 East. This well is the closest well to any water in-put well. The well is now showing considerable stimulation and a present single unit allowable will restrict the proper production of this well and result in loss of ultimate recovery. For this reason, we are hereby requesting the issuance of a temporary emergency Order by the Commission permitting the transfer of a top unit allowable from the Donahue No. 3-N Well situated in the SE $\frac{1}{4}$ SW $\frac{1}{4}$ of the said Section 15 to the Donahue No. 2-K Well unit and the assignment of a top allowable to the Donahue No. 2-K Well. This will result in a 74-barrel allowable for the balance of this month, which should be adequate to properly produce this well.

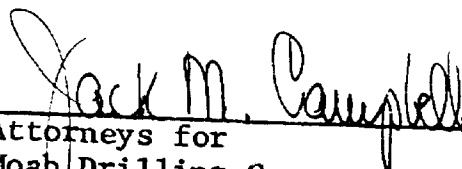
We realize that the Order can be effective only for a period of 15 days and we therefore request that the matter be set down for an Examiner hearing on December 6th in Santa Fe, or at such other time or place that the Commission may see fit, within the 15-day emergency period.

You are advised that we are this week filing an application to the Commission for an Examiner hearing on capacity allowables for the producing wells in this project. In view of the fact that in-put wells have been drilled as a part of the project, it is not felt that a project allowable, based only upon the producing wells, would be adequate.

Very truly yours,

CAMPBELL & RUSSELL

By:


Attorneys for
Moab Drilling Company

JMC:bb
Enclosures

cc: P. M. Bridges

JACK M. CAMPBELL
JOHN F. RUSSELL

LAW OFFICES OF
CAMPBELL & RUSSELL
J. P. WHITE BUILDING
ROSWELL, NEW MEXICO

21 November 1957

TELEPHONES
MAIN 2-4641
MAIN 2-4642

Re: In the Matter of the Appli-
cation of Moab Drilling Com-
pany and Utex Exploration Co.,
Inc. for Authority to Produce
at Capacity Certain Wells in
an Approved Pilot Water Flood
Project in Sections 15 and 16,
Twp. 16S, R-29-E, High Lonesome
Pool, Eddy County, New Mexico

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

Gentlemen:

Enclosed please find original and two copies of an Application rela-
tive to Order No. R-975.

I would appreciate it if we could get this set down at an early date
inasmuch as it is difficult to predict what may be required by way
of allowables to most efficiently operate this small water flood
project.

Very truly yours,

CAMPBELL & RUSSELL


Jack M. Campbell

JMC:bb
Enclosures
cc: Mr.P.M.Bridges

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

November 27, 1957

C
O
P
Y

Mr. Jack Campbell
Campbell & Russell
P.O. Box 721
Roswell, New Mexico

Dear Sir:

On behalf of your client, Moab Drilling Company and Utex
Exploration Company, Inc., we enclose two copies of Emergency
Order No. E-5 issued November 26, 1957, by the Oil Conservation
Commission.

Very truly yours,

A. L. Borten, Jr.
Secretary - Director

cc
Encls.

APPLICATION NO. _____ PERMIT NO. WPP-22

OFFICE OF THE COMMISSIONER OF
PUBLIC LANDS

Santa Fe, New Mexico

PERMIT TO PROSPECT FOR WATER CASE _____

(Sections 132 to 136 Code of 1929)

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT No. _____

KNOW ALL MEN BY THESE PRESENTS, That the State of New Mexico,
by MURRAY E. MORGAN, its Commissioner of Public Lands,
in consideration of the filing of an application for a water prospecting permit
by THE UTEX EXPLORATION COMPANY, INC. of P.O. BOX 628, ABILENE, TEXAS,
and of the payment of the sum of TWENTY FIVE Dollars
(\$ 25.00), has granted and does hereby grant a permit to the said
UTEX EXPLORATION COMPANY, INC of the exclusive right for Ninety (90) Days
or until May 27th, 1957
from date hereof to prospect for water, but for no other purpose, on the
following described land to-wit:

<u>Subdivision</u>	<u>Sec.</u>	<u>Twp.</u>	<u>Rge.</u>
SE $\frac{1}{4}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$	15	16S	29E
All	16	"	"
SW$\frac{1}{4}$	18	"	"
SW$\frac{1}{4}$ (Lots 1, 2, 3, 4.), S $\frac{1}{2}$ SE $\frac{1}{4}$	19	"	"
SW $\frac{1}{4}$ SW $\frac{1}{4}$	20	"	"
S $\frac{1}{2}$ NE $\frac{1}{4}$	21	"	"
NE $\frac{1}{4}$ NW $\frac{1}{4}$	22	"	"

This permit is granted subject to any prior, valid and existing rights and upon the following terms and conditions which are hereby imposed upon the permittee__ and assented to by said permittee__ upon the acceptance hereof

1. The prospector__ will be required at the termination of this permit to make a written statement to the State Land Commissioner, setting forth in his own natural way and language such information and knowledge as he may have acquired or disclosed in the prospecting work upon this land, relating to the possible existence of any water thereon.

2. The prospector__ will also be required to fully protect the rights of all agricultural and grazing leases which may have been heretofore granted, as to the damage to any crop, and by erecting and keeping closed gates in all fences which may be opened and enclosing or keeping covered all shafts, holes or open cuts for the protection of stock grazing upon such premises.

On or before the termination of the 90 day prospecting privilege granted as above stated, the said prospector__ may make an application for a lease upon the land on which he actually performed prospecting development which shows indications of water of sufficient value to warrant the undertaking of further development. Upon failure of the prospector__ to make such application for a water lease within the time hereinbefore specified, this permit shall be automatically forfeited and become null and void.

3. The State of New Mexico expressly reserves the right to lease, sell or otherwise dispose of the surface of the said lands and to grant rights of way and easements upon, across and through the same for any and all lawful purposes.

4. The permittee__ shall use the right of way and easements for the purpose of prospecting and access to the said lands for the purpose of prospecting and shall not use the same for any other purpose and shall keep the same in good and convenient condition for the purpose of prospecting.

5. The Commissioner of Public Lands expressly reserves the right and authority to cancel this permit for failure of the permittee ___ to comply with any of the conditions hereof after thirty day's notice in writing, specifying the reason for such cancellation.

6. Upon discovery of commercially valuable water on the said lands and full compliance of the terms and conditions of this permit the permittee ___ shall upon proper application file therefor during the life of the permit be entitled to a water lease covering the said lands as provided by statute.

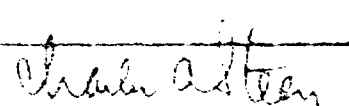
DATED this 27th day of February 1937.

STATE OF NEW MEXICO


Commissioner of Public Lands

The Utex Exploration Company, hereby agree to the conditions as set forth in the a Corporation of the State of Utah

above permit, and herewith return to you the original and one copy duly signed.

 President
Prospector _____

Utex Exploration Company, Inc.

PETROLEUM DIVISION
ROOM 25, BACON BUILDING
P. O. BOX 628
ABILENE, TEXAS

T. R. HAVINS, JR.
MGR. LAND AND PRODUCTION DEPARTMENTS

CHARLES A. STEEN
PRESIDENT
CHIEF GEOLOGIST

J. C. ASHBY
GENERAL MANAGER

March 1, 1957

Mr. R. E. Canfield
Acting Oil & Gas Supervisor
United States Geological Survey
P. O. Box 6721
Roswell, New Mexico

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
CASE NO. 177-2

Dear Sir:

Several days ago Mr. Archie M. Pasin, our engineer in Artesia, was in your office to discuss a proposed pilot water flood project contemplated by Mcab Drilling Company in the High Lonesome Field, Eddy County, New Mexico.

This letter is written to bring you up to date on plans for the proposal.

enclosed please find the following:

1. Copy of letter dated February 21, 1957, to New Mexico Oil Conservation Commission requesting that a hearing be set on the pilot flood.
2. Copy of letter dated February 22, 1957, to New Mexico Oil Conservation Commission regarding the application for hearing.

It is noted that the Bureau of State Lands was involved in the pilot flood, as well as the Bureau of Mineral Lands.

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It is noted that the Bureau of State Lands was involved in the pilot flood, as well as the Bureau of Mineral Lands.

I have not been notified officially as yet, but it is my understanding that the hearing before the Oil Conservation Commission will likely be held in Santa Fe on March 21, 1937.

In connection with the amended application referred to above, please be advised that the locations of the proposed injection wells were changed at the suggestion of your office and the Oil Conservation Commission.

If there is any other information that I can supply you in this connection, please feel free to call on either me or Mr. Speir in Artesia.

If you have no objection to our proceeding with our plans as outlined in this letter and the two letters enclosed, I will appreciate your writing me to that effect. In case you do have any objections, I would appreciate knowing of them in order that we may do whatever is necessary to eliminate the causes.

Yours very truly,

A. S. Havins Jr.

A. S. Havins, Jr.
Corleab Drilling Company

Trues

Encls.

cc: A. H. Speir
Box 1263
Artesia, New Mexico

Mr. A. L. Brown, Jr.
New Mexico Oil Conservation Commission
2200 Alamy Hall
Santa Fe, N. M.

Mr. J. H. Brown
Box 1263
Artesia, New Mexico

Mr. J. H. Brown
Box 1263
Artesia, New Mexico



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

P. O. Box 187
Artesia, New Mexico

IN REPLY REFER TO

March 12, 1957

Utex Exploration Company
P. O. Box 628
Abilene, Texas

Re: Proposed Water Flood Project
Lease LC 068677, et al

Attention: Mr. T. R. Havins, Jr.

Gentlemen:

This will acknowledge receipt of your letter of March 5, via our Roswell office, advising of your plans to water flood your property, located on both State and Federal lands, in the High Lonesome Field, Eddy County, New Mexico.

The proposed water flood has been discussed informally on several occasions with your Mr. Speir in Artesia, New Mexico, and he has kept this office informed of your plans.

It is the policy to approve such plans subject to formal approval of the New Mexico Oil Conservation Commission, which you are now in the process of obtaining. Following formal approval by the Commission, it will then be necessary to furnish a Sunray Notice for approval of this office, stating therein that you wish to operate a pilot flood project to determine whether or not water flooding may be feasible. It will also be necessary to furnish Notices of Intention to Drill water input wells for those wells falling on Federal leases. However, the Department assumes no jurisdiction on those wells that may be drilled for a source of water for use in flooding operations.

Very truly yours,

John A. Frost
District Engineer

JAF:mm

Copy to: U. S. Geological Survey
Box 6721
Roswell, New Mexico

New Mexico Oil Conservation Commission
321 Carper Building
Artesia, New Mexico

Mr. Archie Speir
Artesia, New Mexico

PRODUCTION DATA
PILOT WATERFLOOD
HIGH LONESOME POOL
EDDY COUNTY, NEW MEXICO
FOR
MOAB DRILLING COMPANY
AND
UTEX EXPLORATION, INC.
1957

Lease and Well No.	Estimated Production - Barrels Per Day						November
	June	July	August	Sept.	Oct.	Nov.	Well Tests
<u>Moab Drilling Company</u>							
<u>Skelly-State</u>							
6	8.6	12.6	11.3 (Trace)*	9.0 (Trace)*	5.8	7.7	9.7 (11-20)
7	9.5	6.3	18.2	5.6	16.1	10.9	13.8 (11-18)
8	2.6	2.1	5.8 (Trace)*	3.4 (1.0)*	2.3	6.6	8.3 (11-17)
9	3.7	3.2	4.4	3.4 (3.2)*	1.2 (12.2)*	4.3 (1.4)*	5.5 (11-24)
10	8.9	10.6	12.8	11.2	11.4	8.6	11.1 (11-25)
<u>State</u>							
1	0.9	1.0	2.6	2.6	2.5	1.8	No Test

*-Water Production.

BEFORE THE
 OIL COMMISSION
 STATE OF NEW MEXICO
 In and for the County of Eddy
 I, John H. Smith, Clerk of the
 said County, do hereby certify that
 the foregoing is a true and correct
 copy of the production data as
 filed in my office.

Given under my hand and
 the seal of said County at
 Alamogordo, New Mexico, this
 11th day of November, 1957.

By John H. Smith, Clerk

Production Data, Pilot Waterflood, High Lonesome Pool - Continued

Lease and Well No.	Estimated Production - Barrels Per Day						November Well Tests
	June	July	August	Sept.	Oct.	Nov.	
<u>Moab Drilling Company</u>							
<u>Davis-Federal</u>							
2	13.6	15.9	9.9 (9.4)*	2.7 (1.1)*	15.2	14.4	12.5 (11-15)
3	13.6	15.9	16.0	16.8	15.2	11.5	9.7 (11-19)
5	25.2	36.6	17.3 (0.9)*	17.4 (0.4)*	39.2	38.5	44.2 (11-26)
6	12.3	9.8	12.6	11.2	9.7	12.5	11.1 (11-17)
<u>Utah Exploration, Inc.</u>							
<u>Donohue-Federal</u>							
2	8.1	13.5	11.9	15.9	26.2	40.8	56.7 (11-25)
Total	107.0	127.5	122.8 (10.3)*	99.2 (5.7)*	144.8 (12.2)*	157.6 (1.4)*	182.6

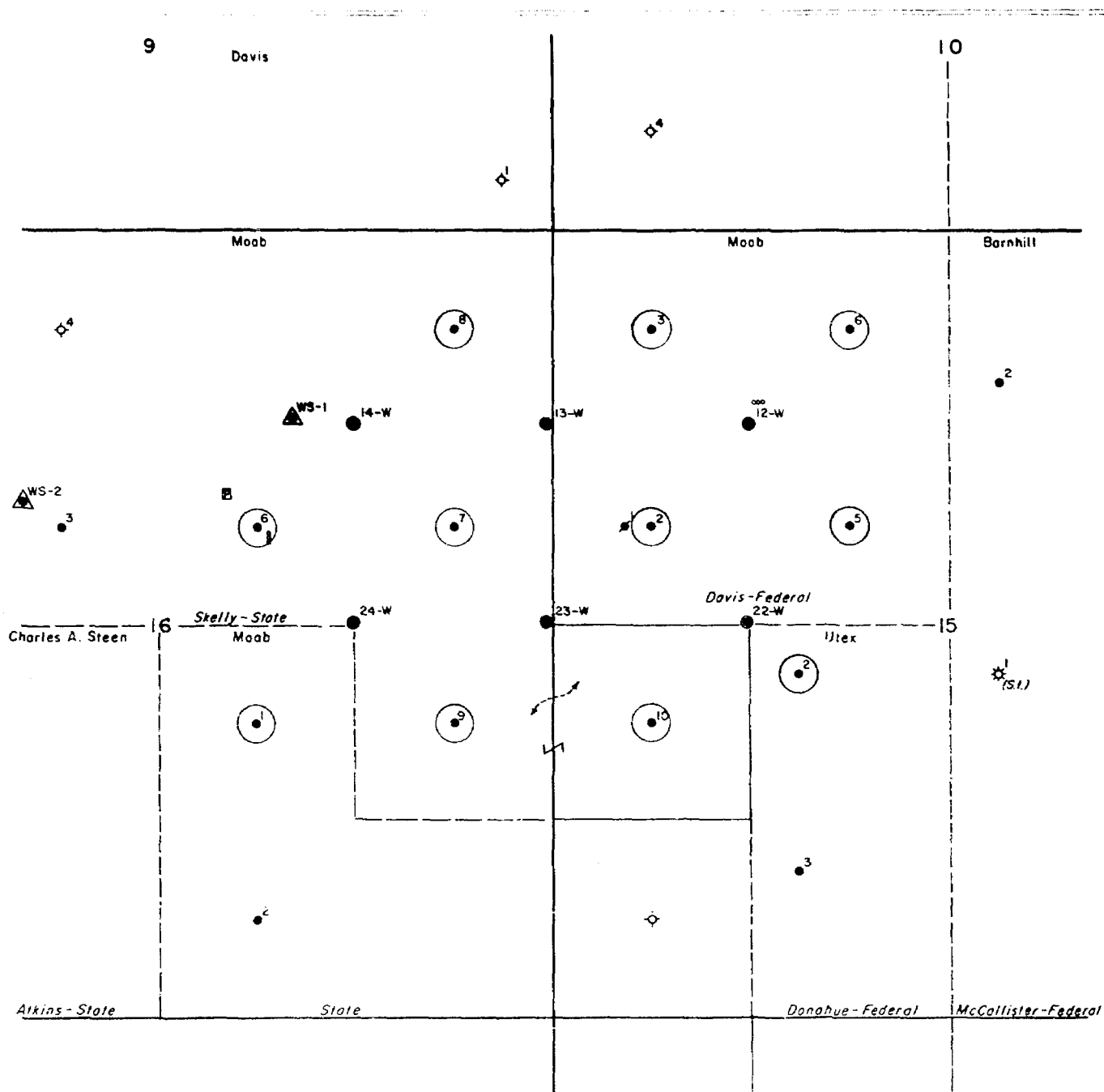
* Under Production.

WATER INJECTION DATA
PILOT WATERFLOOD
HIGH LONESOME POOL
EDDY COUNTY, NEW MEXICO
FOR
MOAB DRILLING COMPANY
AND
UTEX EXPLORATION, INC.
1957

Lease and Well No.	Water Injection - Barrels Per Month						Cumulative to 12-1-57
	June	July	August	Sept.	Oct.	Nov.	
<u>Moab Drilling Company</u>							
<u>Davis-Federal</u>							
12-W	755	2,382	1,647	661	1,660	4,076	11,181
22-W	-	863	2,415	2,280	3,709	4,681	13,948
 <u>Skelly-State</u>							
13-W	713	2,231	3,180	391	1,037	1,045	8,597
14-W	1,078	2,459	2,636	1,935	2,035	1,146	11,289
23-W	44	978	2,821	2,258	2,814	1,623	10,538
24-W	<u>63</u>	<u>1,312</u>	<u>2,283</u>	<u>2,102</u>	<u>1,428</u>	<u>503</u>	<u>7,691</u>
Total	2,653	10,225	14,982	9,627	12,683	13,074	63,244
 Average Barrels Per Day							
	332	409	484	321	409	436	
Cumulative	2,653	12,878	27,860	37,487	50,170	63,244	

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
Exhibit No. 2-1
CRS. 12-2-57

Rogers Engineering
1001 E. 1st St.
Albuquerque, N.M.



HIGH LONESOME POOL Eddy County, New Mexico

- Producing Well Location
- Producing Well
- ⊙ Injection Well Location
- Injection Well
- ◆ Converted Producer to Injection Well
- ◇ Gas Well
- ◇ Dry Hole
- Abandoned Producing Well
- Abandoned Injection Well
- ◇ Abandoned Gas Well
- Water Supply Well
- ⊙ Water Plant
- Tank Battery

0 500 1000
Scale in Feet

BEFORE THE
OIL AND GAS COMMISSION
STATE OF NEW MEXICO
APPROPRIATE No. 3-6
CASE 1-2-5-57

Revised 8-5-57

Reserve Engineering
and Surveying

Utex Exploration Company, Inc.

PETROLEUM DIVISION
ROOM 25, BACON BUILDING
P. O. BOX 628
ABILENE, TEXAS

T. R. HAVINS, JR.
MGR. LAND AND PRODUCTION DEPARTMENTS

CHARLES A. STEEN
PRESIDENT
CHIEF GEOLOGIST

J. C. ASHBY
GENERAL MANAGER

February 27, 1957

Mr. Paul L. Davis
225 First National Bank Building
Midland, Texas

Oil Co. DEPT. OF
L. & P.
CASE

Dear Mr. Davis:

This is to inform you that Moab Drilling Company is planning to install a pilot water flood project in the High Lonesome Field, Eddy County, New Mexico.

Enclosed find a plat showing the area to be affected.

A Hearing has been requested before the New Mexico Oil Conservation Commission, but no date has been set at this time.

We plan to inject some 150 barrels of water per day into each of the six wells shown on the plat.

It is expected that recovery of oil from a water flood will materially increase the total recovery of the oil from the field.

Our present plans do not call for any unitization. We plan to space the injection wells in such a manner that it will not be necessary.

At this time we plan to flood only the 60 acres shaded on the plat. Should this pilot operation be successful it is expected that a larger area will be flooded.

If this plan meets with your approval, I will appreciate it if you will sign two copies of this letter in the space provided below, and return them to this office.

Yours very truly,

T. R. Havins, Jr.

T. R. Havins, Jr.
For Moab Drilling Company

THH:ms

March 5th, 1957.

The undersigned waives any objection to the above described pilot water flood program.

Paul L. Davis
Paul L. Davis

Utex Exploration Company, Inc.

PETROLEUM DIVISION
ROOM 23, BACON BUILDING
P. O. BOX 628
ABILENE, TEXAS

T. R. HAVINS, JR.
MGR. LAND AND PRODUCTION DEPARTMENTS

CHARLES A. STEEN
PRESIDENT
CHIEF GEOLOGIST

J. C. ASHBY
GENERAL MANAGER

February 27, 1957

Mrs. Hazel Greene
Box 271
Midland, Texas

Dear Mrs. Greene:

This is to inform you that Noth Drilling Company is planning to install a pilot water flood project in the High Lonesome Field, Eddy County, New Mexico.

Enclosed find a plat showing the area to be affected.

A hearing has been requested before the New Mexico Oil Conservation Commission, but no date has been set at this time.

We plan to inject some 150 barrels of water per day into each of the six wells shown on the plat.

It is expected that recovery of oil from a water flood will materially increase the total recovery of the oil from the field.

Our present plans do not call for any mitigation. We plan to space the injection wells in such a manner that it will not be necessary.

At this time we plan to flood only the 32 acres shown on the plat. Should this pilot operation be successful it is expected that a larger area will be flooded.

In this connection with your approval, I will appreciate it if you will sign the bottom of this letter in the space provided below and return it to this office.

Very truly,
T. R. Havins, Jr.

T. R. Havins, Jr.

J. C. Ashby
General Manager

cc: 10

and *4* 3022

The enclosed plat shows the location of the wells shown on the plat and the flood project.

Hazel Greene
Hazel Greene

PETROLEUM DIVISION
ROOM 25, BACON BUILDING
P O BOX 626
ABILENE, TEXAS

T. R. HAVINS, JR.
MGR. LAND AND PRODUCTION DEPARTMENTS

CHARLES A. STEEN
PRESIDENT
CHIEF GEOLOGIST

J. C. ASHBY
GENERAL MANAGER

February 21, 1957

Mrs. Clara Winifred Butcher
1702 ...
Midland, Texas

Dear Mrs. Butcher:

This is to inform you that Hoab Drilling Company is planning to install a pilot water flood project in the High Lonesome Field, Eddy County, New Mexico.

Enclosed find a plat showing the area to be affected.

A hearing has been requested before the New Mexico Oil Conservation Commission, but no date has been set at this time.

He plan to inject some 150 barrels of water per day into each of the six wells shown on the plat.

It is expected that recovery of oil from a water flood will materially increase the total recovery of the oil from the field.

Our present plans do not call for any unitization. We plan to space the injection wells in such a manner that it will not be necessary.

At this time we plan to

At this time we plan to flood only the 80 acres shaded on the plat. Should this pilot operation be successful it is expected that a larger area will be flooded.

If this plan meets with your approval, I will appreciate it if you will sign two copies of this letter in the space provided below and return them to this office.

Yours very truly,

TRHawkins J.

T. B. Hawkins, Jr.
 Treasurer, California Company

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

1954 4 1954

ALL undersigned nation are oblig'd to the above described and I solemn
 swear

Clara Phinizy Butcher
Clara Phinizy Butcher

Utex Exploration Company, Inc.

PETROLEUM DIVISION
ROOM 25, BACON BUILDING
P. O. BOX 628
ABILENE, TEXAS

T. R. HAVINS, JR.
MGR. LAND AND PRODUCTION DEPARTMENTS

CHARLES A. STEEN
PRESIDENT
CHIEF GEOLOGIST

J. C. ASHBY
GENERAL MANAGER

February 27, 1957

Mr. Myles A. Colligan
106 East Pecan Street
Midland, Texas

Dear Mr. Colligan:

This is to inform you that Moab Drilling Company is planning to install a pilot water flood project in the High Lonesome Field, Eddy County, New Mexico.

Enclosed find a plat showing the area to be affected.

A hearing has been requested before the New Mexico Oil Conservation Commission, but no date has been set at this time.

We plan to inject some 150 barrels of water per day into each of the six wells shown on the plat.

It is expected that recovery of oil from a water flood will materially increase the total recovery of the oil from the field.

Our present plans do not call for any unitization. We plan to space the injection wells in such a manner that it will not be necessary.

At this time we plan to flood only the 80 acres shaded on the plat. Should this pilot operation be successful it is expected that a larger area will be flooded.

If this plan meets with your approval, I will appreciate it if you will sign two copies of this letter in the space provided below, and return them to this office.

Yours very truly,

T. R. Havins, Jr.

T. R. Havins, Jr.
for Moab Drilling Company

TRH:s

March 4th, 1957.

The undersigned waives any objection to the above described pilot water flood program.

Myles A. Colligan
Myles A. Colligan

Utex Exploration Company, Inc.

PETROLEUM DIVISION
ROOM 25, SACON BUILDING
P. O. BOX 528
ABILENE, TEXAS

T. R. HAVINS, JR.
MGR. LAND AND PRODUCTION DEPARTMENTS

CHARLES A. STEEN
PRESIDENT
CHIEF GEOLOGIST

J. C. ASHBY
GENERAL MANAGER

February 27, 1957

Mr. Claude G. Hall
Box 2841
Midland, Texas

Dear Claude,

This is to inform you that Moab Drilling Company is planning to install a pilot water flood project in the High Lonesome Field, Eddy County, New Mexico.

Enclosed find a plat showing the area to be affected.

A hearing has been requested before the New Mexico Oil Conservation Commission, but no date has been set at this time.

We plan to inject some 150 barrels of water per day into each of the six wells shown on the plat.

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If this plan meets with your approval, I will appreciate it if you will sign two copies of this letter in the space provided below, and return them to this office.

Yours very truly,

T. R. Havins, Jr.

T. R. Havins, Jr.
For Moab Drilling Company

March 2, 1957.

The undersigned waives any objection to the above described pilot water flood program.

Claude G. Hall
Claude G. Hall

City of Albuquerque, New Mexico
Department of Public Works
Department of Public Works

TRANSCRIPT OF PROCEEDINGS
Case No. 1229

DEANLEY J. MEYER & ASSOCIATES
INCORPORATED
GENERAL LAW REPORTERS
ALBUQUERQUE, NEW MEXICO
3-6691 5-9546

NEW MEXICO OIL CONSERVATION COMMISSION

Oil Conservation Commission OfficeSanta Fe, NEW MEXICOREGISTER

HEARING DATE Examiner

December 6, 1957

TIME: 9:00 a.m.

NAME:	REPRESENTING:	LOCATION:
Jack M. Campbell	Campbell & Russell	Roswell N.M.
P. M. Bridger	Russell Engineering	Abilene, Tex.
Julian C. Ashby	Under Exploration Co.	Abilene, Tex.
Nancy Royal	M. Stetson Fitzgerald	
Frank E. Ashby	State Engr	Santa Fe

Application of:

Application of New Orleans Company
and West Texas Oil Company, Inc.
for an order authorizing capacity
production for the pilot water flood
project in the High Lonesome Pool,
Eddy County, New Mexico.

Case No.
122

REPORT:

Mr. H. B. Porter, Jr., Engineer.

TRANSCRIPT OF HEARING

Mr. Porter: The hearing will come to order, please.

Case 1340 was called for hearing originally on November 20 before
Mr. Elvis Jtz, at that time counsel for the Applicant moved for a
continuance until the next examiner hearing, the case was continued
by Mr. Jtz. In the meantime I have a letter from Mr. J. L. Christak,
of Denver, New and Alaska, counsel for the Applicant, requesting
that this case be continued to December 23rd at 10 o'clock. There is
no objection, the case will be continued to that date.

It will come on at 10 o'clock.

Mr. Porter: Case 122. Now the New Orleans Company,
Inc. for an order authorizing capacity production for the pilot
water flood project in the High Lonesome Pool, Eddy County, New Mexico.

Mexico.

MR. CAMPBELL: Mr. Examiner, I'm Jack M. Campbell. Campbell & Russell, Roswell, New Mexico, appearing on behalf of the applicants, Moab Drilling Company and Utex Exploration Company, Inc. This case, as the Examiner is aware, was originally heard some months ago and a pilot program was authorized by you, Commission Order R-975, dated April 12, 1957. The project has reached a stage where some relief is needed in connection with restriction or production, and on application the Commission on November 25, 1957, issued its emergency order E-5, authorizing the transfer of allowable from Donohue No. 3N Well to Donohue No. 2K Well. This order, of course, will expire by reason of the Statutes fifteen days after its issuance, and this hearing was requested for the purpose of obtaining a permanent order in so far as this area is concerned.

The application sets out the wells for which this authority is sought, and these are all of the wells which are offsetting directly or diagonally any of the water input wells authorized by the original order.

I have one witness here, Mr. P. M. Bridges, who should be sworn.

MR. PORTER: Will your witness stand and be sworn, please?
(Witness sworn.)

MR. PORTER: Just a moment, Jack, since the witness will

have to be a full time job, and I can't do it all right
to let him set over here at the end of the table and let you set
over here?

Mr. CARROLL: Surely.

K. L. 11037

a witness, of lawful age, having been first duly sworn on oath,
testified as follows:

DIRECTOR, FBI

FRY MR. CAMPBELL:

Q Will you state your name, please?

A. I. L. Bridges.

Q And where do you live, Dr. Bridges?

A. Abilene, Texas.

6. What is your profession?

1. Consulting Petroleum Engineer with Russell Engineering
of Ardmore, Texas.

Los, 1970.

1990

MR. CAMPBELL:

CAMPBELL:

RECEIVED 19 FEBRUARY 1963

that the Examiner in the interest of saving time consider the testimony in evidence offered in the original case 1225, of which this analysis which I am handing you is a part and is an exhibit in that original case.

Q Mr. Bridges, since the pilot water flood program was started in the High Lonesome Field has your organization observed and determined the results of the program to date?

A Yes, we have.

Q I hand you what has been identified as first, as applicant's Exhibit No. 3A and ask you if you will please state what that is?

A Exhibit 3A is a map of the area of the High Lonesome Pool in which the pilot water flood project is located. It shows the location of the injection wells as well as the location of the wells which we are requesting capacity allowables for.

Q Those wells for which you are seeking capacity allowables are circled with a large circle?

A Yes, they are.

Q And are those wells wells which are offsetting the red diagonally, the water input wells?

A Yes, they are.

Q Now, I refer you to what has been identified as applicant's Exhibit No. 1A and ask you to state what that is and describe to the Examiner what it reflects?

A Exhibit 1A is the results of well tests that have been

taken on the wells in the vicinity of the pilot project area since the inception of water injection. And it, we have in addition to the estimates of producing rates which have been turned into the Commission, we also have some late well tests in November, which were taken during the last part of November to show as nearly as possible the current status of the wells in the area.

Q Does that exhibit indicate that, that there had been some of the producing wells which have shown some stimulation by virtue of the water injection?

A Yes, it does. The most pronounced effect has been the Utex Exploration, Inc. Donohue-Federal No. 2.

Q Where is that situated referring then to Exhibit 3A?

A It is a southeast offset to injection well Davis-Federal 22-W, it's the closest producer to any injection well in the field.

Q What has been the result with regard to that particular well?

A Well, we anticipated that we would, should start expecting some response from this well after injections of about 5,000 barrels of water into 22-W. If I could refer to Exhibit 2A?

Q I will ask you to refer to what has been identified as Exhibit 2A and state what it is at this time.

A It is a record of volumes of water injected into all of the six injection wells in the pilot project area.

Q Did you or your company compile this data on Exhibit 1A.

and Exhibit 2A?

Q We did from records supplied to us by Moab Drilling Company and Utex.

Q Referring to those exhibits go ahead with your explanation.

A As I stated we had anticipated that upon injection of about 5,000 barrels of water into 22-W that we should start to expect some increase from the Donohue-Federal No 2. It will be noted from Exhibit 2A, 5,000 barrels of water has been injected into 22-W by the end of September. And referring back to Exhibit 1A it will be noted that in the month of October, Davis, excuse me, Donohue-Federal No 2 did start to show an increase. Latest well test on this well, taken on the 25th of November, show it was capable of producing at the present time approximately 57 barrels of oil which is an increase of about 40 barrels above what it was capable of producing prior to the start of water injection.

Q Mr. Bridges, if the other wells in the area respond accordingly with the injection of that equivalent amount of water and considering their distance from the water input wells, do you anticipate that in the near future there may be some increase above the normal unit allowable in some of the other producing wells.

A Yes, we do.

Q Have there been any other wells to date which have responded to the extent where they are either in excess of or approaching excess of normal unit allowable?

A The Davis-Federal No. 5 Well test on the 26th of November was capable of producing approximately 44 barrels of oil, which is slightly in excess of the unit allowable.

Q Now, is it correct that in this particular project you have actually drilled all of the water input wells?

A Yes, we have.

Q You have not used existing wells?

A No.

Q So what type of flood do you have with regard to spacing and units?

A We have had forty acre five spots.

Q Will you state what you have found with regard to the possible rate of water injection in this pilot program since you have instituted it?

A Our original application stated that we anticipated being able to inject approximately a hundred and fifty barrels of water at a surface pressure of approximately fifteen hundred pounds. At the present time we are unable to apply a surface pressure in excess of a thousand to eleven hundred pounds without causing fracturing of the formation and water break through at the producing wells, so our injection rate at the present time is something a little bit less than a hundred barrels per day per well.

Q That is the maximum rate of injection that you have been able to obtain before break through, is that correct?

A That is correct.

Q And you have actually had some experience in connection with determining that rate relative to the break through point, have you not?

A That is correct. You will note on Exhibit in some of these wells made water, particularly Skelly-State 1 during the month of October, and Davis-Federal 2 during the month of August and a little bit in September, and this was caused by exceeding the breakdown pressure in these wells.

Q And based upon that fact of a relatively slow injection rate have you made any general calculations to estimate the possible peak production from these wells in the pilot area?

A Yes, we have. We anticipate that the peak production from the wells in the pilot area will probably not be in excess of three to three hundred fifty barrels a day.

Q And yes --

A Based on our present calculations on an average of about a hundred barrels a day.

Q And this is based on the fact that the injection rate is slow and the pressure is not high, is that correct?

A Yes, that is correct.

Q And if the injection rate were increased would the production be increased?

plans with regard to the possible future development of this area beyond the pilot water flood area that you are now operating?

A Yes, we have. These plans, of course, are still very tentative, we are awaiting further data from the pilot area, itself. If it continues to respond as favorably as it has up to the present time we will probably be ready to go ahead with expansion of the flood to encompass the eastern area of the field sometime around the middle of next year.

Q How much of an increase in the size of the area will that involve and the number of wells, can you give us an idea on that?

A Actually involve the drilling of a good many more injection wells but it will be enclosing the five spots on the wells presently outside the pilot flood area and involve, ultimately thirteen producing wells.

Q What with regard to the western portion of the area?

A The western or older portion of the High Lonesome Pool has been developed on a somewhat erratic spacing, it is our present intention to go into the western area and redrill it completely, both producing and injection wells. We anticipate if, that the western area will probably encompass about seventeen producing wells.

Q That development beyond the pilot stage and then the development between the eastern portion and the western portion will be of necessity then in stages of development?

A. It is correct.

Q. Have you any estimates at all that you would give to the Examiner with regard to the possible ultimate peak production from the pool if assuming you decide to put it all under water flood at some time?

A. We anticipate a peak production in the neighborhood of a thousand barrels per day.

Q. What was the production at the time you started, approximately?

A. It was approximately a hundred well as of September, 1957, which was the month prior to the month when we got any response from any of our producing wells, the production from the field averaged about a hundred and fifty barrels a day.

Q. Now, in the light of the fact in order to accomplish that, you have to drill a number of producing wells as well as injection wells and operate in stages of development, would that peak production come at one time or would it be in a period of peaks and particular areas in the field?

A. Well, of course, we will have a different peak at the field peak in a different stage. However, with the injection of water that will have no effect on the production from any of our producing wells.

Q. Would you be able to estimate what your present rate of production is and what rate of injection is contemplated?

A. Yes.

as to approximately what the maximum production might be from any producing well in this particular field in the light of your relatively low rate of injection?

A I doubt that any particular well in the field will exceed a hundred barrels a day at peak. I think that the average peak on these wells is probably going to be placed in the neighborhood of fifty or sixty.

Q Mr. Bridges, you testified, did you not, in connection with the application of Grayridge Corporation of capacity water flood in the Caprock Queen Pool in New Mexico?

A Yes, I did.

Q At that time did you express an opinion as to whether you felt that restricted production in the project of this type would result in physical waste?

A I made a statement to that effect, yes, sir.

Q What is your opinion with regard to this particular project here, what is your opinion relative to the possibility of waste in the event there is a restriction in production permitted from these wells?

A Well, I feel that any curtailment of rates will cause a loss of ultimate recovery in the project.

MR. CAMPBELL: I would like at this time to request that the Examiner consider the testimony in evidence which is a part of the records of the Commission in the case of Grayridge Corporation, Case No. 1324.

MR. CAMPBELL: I have no further questions of this witness.

MR. PORTER: That portion of the testimony in the case to which you refer that has pertinence to this case will be considered. Anyone have a question of the witness? Mr. Nutter.

BY MR. NUTTER:

Q Mr. Bridges, I think you stated that the western part of this field would involve another seventeen wells which would be included in the water flood, the ultimate development of the flood, is that correct?

A That is correct. We expect ultimately to have approximately thirty producing wells in the field.

Q Now, what did you mean when you said that, now you said that the production during the month of September, 1957, was approximately a hundred fifty barrels a day?

A That is right.

Q That's from all thirty of the wells in the pool?

A No, that's from the twenty-two wells presently producing from the field. However, we expect to plug out some of the present producers and redrill in the western part.

Q New producing wells would be drilled?

A In that western portion of the field.

Q I see. And you would have thirty producing wells when the field is completely developed on water flood?

A Yes.

Q You estimate the peak production would be a thousand barrels a day at that time?

A We expect it will be some place in that neighborhood, yes, sir.

Q That would be a sustained peak, there would be wells that would have passed their zenith and declined and other wells just approaching their peak, but the average peak production would be a thousand barrels a day?

A Yes.

Q So the increase has gone from a hundred fifty to a thousand barrels a day sustained production while the water flood is in its stage of completion but before the depletion has set in?

A That is correct.

Q How long do you estimate that thousand barrels a day would last?

A We are not in a position yet to make an estimate on that, Mr. Nutter. We hope to be able to by the time that we get the other six months and we get some more additional layout of the pilot project area.

Q I note from Exhibits 1A and 2A that Skelly-State Wells No. 6 and 8 showed a trace of water during the months of August and September, as well as the Davis-Federal Wells No. 2 and 5 showed a trace of water in August and September on the well tests that were

taken in November which are also shown on these exhibits, no water is indicated as being produced. Was any water produced on those tests?

A I believe that Skelly-State 9 is still producing a trace of water. The rest of the wells are not producing any water at the present time.

Q The wells that previously showed a trace are not producing water and the well that produced considerable percentage of the total production is now producing at the rate of just a trace?

A That is correct.

Q Do you attribute that decline in water production, particularly in the Skelly-State No 9, to the decrease in the amount of water injected--

A Well, it's --

Q --in the two adjoining water injection wells?

A It's attributable to the well head injection pressure apparently caused a fracturing of the formation.

Q Do you think that fracturing resulted in any permanent damage---

A No, sir.

Q --to the water flood?

A When we backed off on our injection pressure the water production in fact stopped, and there was no effect on the oil production at all.

~~Q So that this, the high injection rates and high injection~~

DEARNLEY, MEIER & ASSOCIATES

ATTORNEYS AT LAW
GENERAL LAW OFFICE
ALBUQUERQUE, NEW MEXICO
213-2211

pressure which were used at the beginning on the wells, but which have been reduced have not resulted in any damage to the --

A No, sir.

Q -- any permanent damage to the water flood?

A No.

Q Will the increase of the production rate from a hundred fifty barrels a day to a sustained rate of a thousand barrels a day have, in your opinion, any adverse effect upon the demand for oil from the State of New Mexico or the demand for oil from primary recovery projects?

A No.

MR. NUTTER: That's all.

MR. PORTER: Anyone else have a question? Mr. Campbell.

REDIRECT EXAMINATION

BY MR. CAMPBELL:

Q I want to clear up one matter if I may.

MR. PORTER: All right.

Q Mr. Bridges, when you refer to high injection rates or low injection rates do you refer to them in relation to the break down point in any particular reservoir? In other words, do you when you say a rate of injection, high rate, do you mean the rate, the maximum rate short of the break down?

A Yes, I do.

Q In a particular reservoir?

A Particular reservoir.

DEARNLEY, MEIER & ASSOCIATES

ATTORNEYS AT LAW
SAN ANTONIO, TEXAS

MR. CAMPBELL: That's all.

BY MR. NUTTER:

Q In other words, Mr. Bridges, a high injection rate in one reservoir may not be a high injection rate in another?

A That is correct. It would depend on characteristics of the reservoir.

Q If you get break down and break through that is a high injection rate, is it not?

A Yes.

BY MR. COOLEY:

Q Mr. Bridges, are you familiar with the ownership of the operating rights in the High Lonesome Pool?

A Yes, I believe I am.

Q Can you tell me what other companies other than the two applicants in this case own operating rights in that pool?

A I believe that this matter was gone into at the original hearing for application of the pilot project. The three companies which are presently operating in the High Lonesome Pool, Charles A. Steen and Associates, Moab Drilling Company and Utex Exploration Company are, as was brought out in the testimony by one of Utex officials at the previous hearing, are inter-related companies having to a large extent common ownership. Actually the only outside operator in the field at the present time in the area which we are considering is Barnhill, who is presently producing one well on the eastern

side of the field and has one shut in gas well.

MR. PORTER: Then I take it, Mr. Bridges, that the well that is shown as belonging to Garr Oil Company is outside the area---

A Yes, sir.

MR. PORTER: --that we are talking about, and would not be affected by this project?

A No.

BY MR. COOLEY:

Q Would the Garr Well be affected by either of the proposed extensions to the present pilot area to which you refer in your direct testimony?

A No, it would not. The western area of the field which I have referred to encompasses Sections 17 and 20. It's the south half of 17 and the north half of 20.

Q And what, did you more specifically explain what you meant by the eastern portion of the field?

A The eastern portion of the field would include Sections 5 and 6.

Q Entire sections?

A Well, actually it will be the western half of Sections, I'm sorry, 15 and 16. It would be the western half of Section 15 and practically all of Section 16.

Q And that's Township 16 South, Range 29 East?

A Yes.

Q The western half of 15 is already in the field?

A Well, that is right, but there would be additional injection wells to be drilled in there.

Q But the present general area then is what you referred to as the eastern portion of the field?

A That is correct.

Q MR. COOLEY: I see. Thank you.

MR. CAMPBELL: I'm sure the Chairman is aware that any extensions will have to be on a new hearing so that anybody who may be affected as the project is enlarged, if it is, will have an opportunity to be heard.

MR. PORTER: But your present application applies to the area as outlined in order A-975?

A That is correct.

MR. CHAMBERLAIN: It applies to the well specified in the application.

MR. PORTER: And the area covered by the application is all covered by A-975.

MR. CHAMBERLAIN: The area covered by the application is 29 East.

MR. PORTER: And the area covered by the application is 29 East.

MR. CHAMBERLAIN: The area covered by the application is 29 East.

MR. PORTER: The area covered by the application is 29 East.

Q Mr. Bridges, I would like to clear up this thousand barrels per day peak. If all the wells or all the pool is flooded, I believe that's what you said, if the entire pool is put under water flood you feel that the combined production at any given time would not exceed one thousand barrels per day?

A Well, of course, that is necessarily at this time a pretty rough estimate for two reasons. First of all, we really haven't got sufficient data from the pilot project area yet to be able to make accurate predictions of just what we can expect and the peak production rate will depend also on the speed with which the rest of the field is developed for water flood; if our plans are not changed from what they are at the present time.

We, as I stated, do not expect a great expansion of the field, of the project, probably before the end of the year and we anticipate at that time that we will complete the development of the eastern half and then following that will go into the western half of the project. But it is hard to say at this just how long, over how long a period of time that development be spread out. And that will, of course, control, be a controlling factor on the peak completion rate from the field.

Q And assuming, Mr. Bridges, that curtailment of production from any well under flood would cause waste, you still may control the total production from a pilot water flood project or water flood project in any given pool by controlling the rate of development,

can you not?

A Within limits.

Q Now, would you please explain that answer?

A Well, taking the average case, it wouldn't be possible. We could not recommend this pilot project be produced for the next five years without drilling the injection wells to enclose the five spots offsetting the pilot project because to do so would cause flooding out of the producing wells from one side only. And so the amount that you can stage your development is dependent in part upon the rate of water injection you are using. At a slow injection rate you anticipate a flood which will take our present estimates of the flood life here, some place in the order of ten to twelve years-- and so we would not-- at the maximum injection rates that we can sustain in the field--so we would not flood out these producing wells as quickly as you would in a field where it was necessary to go to higher injection rates and a shorter life.

Q And assuming that this pool is developed or flooded over a period of from ten to twelve years it could be accomplished in such a manner that the peaks in productions for the various areas could be staged where they would not coincide, is that not true? You have now a pilot area involving I believe it's eleven, isn't it, producing wells?

A Yes.

Q The development of this field could be so staged as that

so as to prevent the peak production which will come from these eleven wells from coinciding with the peak production from say the western half of the field which you say your company anticipates developing at some later date.

A That is a hard question to answer because we do not know yet how long the peak production from these wells is going to last. One of the unknown factors in this flood and the reason that we recommend and that Moab Drilling Company installed this pilot that this has an erratic permeability distribution which would lead to early, fairly high water cuts. Now, if that occurs then the peak in these may be low and long drawn out. On the other hand if we get, if this erratic permeability distribution that we have in the field does not give us early high water cuts it may be that our estimate of the life of the project is too conservative, the life will be something shorter than the ten to twelve years we are anticipating. So I can't say now whether it would be possible to stage the development so the peak would not, one portion of the field would be on the decline before the other portion reached it's peak.

C In the event of the eventuality that you did have these early water cuts, the peaks would not be nearly so high on these wells?

A Well, our estimates of peak take that into account, our anticipated early high water cuts. It is possible the life of the field, if these early high water cuts do not develop, this peak

would be, as I said it is a rough estimate, as high as possibly 1500 barrels a day rather than a 1,000.

Q Well, in pools generally which are water flooded where you do not have this erratic effect of permeability, it is the nature of water flood to peak rather early in the life of the flood, is it not, and decline steadily thereafter?

A Yes, it is.

Q And that peak is not of very long duration?

A That is correct.

MR. COOLEY: That's all the questions I have.

RE-DIRECT EXAMINATION

BY MR. CAMPBELL:

Q It is true, is it not, as a general proposition subject to the limitations you indicated and possible economic limitations, that the stage to the development or rate of development can be a factor in controlling the peak production situations in a particular are, can it not?

A It can be providing proper engineering consideration is taken of the reservoir factors.

Q Yes, I understand within the limitations that you referred to that is a factor that can have some bearing upon that particular phase of secondary recovery, can it not?

A That is correct.

MR. PORTER: Are there any further questions? Mr. Irby.

MR. PORTER: Is there anything in the record that states the zone of injection?

MR. CAMPBELL: I'm sure there is in the original record.

A: We are injecting into the Queen sand.

MR. GOSLEY: In order A-115, the original order, water project authorizing water injection in the Queen sand underlying Sections 15 and 16.

MR. PORTER: Anyone else have a question. The witness may be excused, Mr. Campbell.

(Witness excused.)

MR. CAMPBELL: I would like to offer in evidence applicants Exhibits 1A and 2A and 3A.

MR. PORTER: Without objection they will be admitted.

MR. PORTER: Mr. Campbell, I believe you said this is the only witness you have.

MR. CAMPBELL: Yes, sir.

MR. PORTER: Are there any more witnesses to present in this case? Any further statements? All right, now I will take the case under advisement and will announce the result.

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) ss

I, MARILYN MURPHY, County Clerk in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached transcript of hearing before the New Mexico Oil Conservation Commission was reported to me in shorthand and reduced to typewritten transcript by me and/or under my personal supervision; that same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal, this, the 26 day of December, 1957, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Marilyn Murphy
COUNTY CLERK

My Commission expires:

April , 1960.

Dec. 6

1225
57

MOAB 48-A 1225

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Arlington, Texas

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Date 6-6-58

CASE 1225

Hearing Date 5-28-58

My recommendations for an order in the above numbered cases are as follows:

Approve as requested.

1. The Utex - Donahue - Del # 3 ^{NWSESW 15-165-29E} the well they wish to convert to ~~an~~ injection well.

This will provide a back-up well for the Utex - Donahue - Del # 2 ^{NWNESEW 15-165-29E} and the Moat Drilling Co - Shelly Lt. # 10, Center ^{NW SW 15-165-29E}.

2. The Utex # 2 ~~has~~ began to produce H₂O & waste may occur if the well is not backed-up with a H₂O injection well.

3. Use Ambassador No. 1 order as a guide.

Ernest H. [Signature]

Staff Member

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE NO. 1225
Order No. R-975-A

APPLICATION OF MOAB DRILLING COMPANY
AND UTEX EXPLORATION COMPANY, INC.,
FOR AUTHORITY TO PRODUCE AT CAPACITY
CERTAIN WELLS IN AN APPROVED PILOT
WATER FLOOD PROJECT IN SECTIONS 15 AND
16, TOWNSHIP 16 SOUTH, RANGE 29 EAST,
NMPM, HIGH LONESOME POOL, EDDY COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on December 6, 1957, at Santa Fe, New Mexico, before A. L. Porter, Jr., Examiner duly appointed by the New Mexico Oil Conservation Commission, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 6th day of December, 1957, the Commission, a quorum being present, having considered the application, the evidence adduced and the recommendations of the Examiner, A. L. Porter, Jr., 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 Moab Drilling Company was authorized by Order No. R-975, dated April 12, 1957, to institute a pilot water flood project in Sections 15 and 16, Township 16 South, Range 29 East, NMPM, High Lonesome Pool, Eddy County, New Mexico.

(3) That the aforementioned pilot water flood project has caused an increase in the producing capacity of certain of the wells in said pilot area to the extent that they are now capable of producing in excess of the top unit allowable for the High Lonesome Pool.

(4) That permission is sought to produce the hereinafter described wells in the aforementioned pilot area at capacity, on the grounds that the production from said wells cannot be curtailed without causing a reduction in the ultimate recovery of oil, to-wit:

-2-
Case No. 1225
Order No. R-975-A

		Unit	Letter S. T. R.
Moab Drilling Company	Davis Federal No. 2 Well	E	15-16S-29E
Moab Drilling Company	Davis Federal No. 3 Well	D	15-16S-29E
Moab Drilling Company	Davis Federal No. 5 Well	F	15-16S-29E
Moab Drilling Company	Davis Federal No. 6 Well	C	15-16S-29E
Moab Drilling Company	Skelly-State No. 10 Well	L	15-16S-29E
Utex Exploration Co., Inc.	Donahue No. 2 Well	K	15-16S-29E
Moab Drilling Company	Skelly-State No. 6 Well	G	16-16S-29E
Moab Drilling Company	Skelly-State No. 7 Well	H	16-16S-29E
Moab Drilling Company	Skelly-State No. 8 Well	A	16-16S-29E
Moab Drilling Company	Skelly-State No. 9 Well	I	16-16S-29E
Moab Drilling Company	State No. 1 Well	J	16-16S-29E

(5) That the preponderance of the evidence presented in this case indicates that waste would occur if the production from the above-described wells were restricted.

(6) That said wells should be permitted to produce at capacity.

IT IS THEREFORE ORDERED:

(1) That the following described wells be granted an allowable equal to their capacity to produce, to-wit:

		Unit	Letter S. T. P.
Moab Drilling Company	Davis Federal No. 2 Well	E	15-16S-29E
Moab Drilling Company	Davis Federal No. 3 Well	D	15-16S-29E
Moab Drilling Company	Davis Federal No. 5 Well	F	15-16S-29E
Moab Drilling Company	Davis Federal No. 6 Well	C	15-16S-29E
Moab Drilling Company	Skelly-State No. 10 Well	L	15-16S-29E
Utex Exploration Co., Inc.	Donahue No. 2 Well	K	15-16S-29E
Moab Drilling Company	Skelly-State No. 6 Well	G	16-16S-29E
Moab Drilling Company	Skelly-State No. 7 Well	H	16-16S-29E
Moab Drilling Company	Skelly-State No. 8 Well	A	16-16S-29E
Moab Drilling Company	Skelly-State No. 9 Well	I	16-16S-29E
Moab Drilling Company	State No. 1 Well	J	16-16S-29E

(2) That this order shall become effective at 7 o'clock a.m., Mountain Standard Time, on December 9, 1957.

(3) That the Commission hereby retains jurisdiction in this cause to amend or revoke all or any part of this order, and further, to enter any additional order or orders deemed necessary.

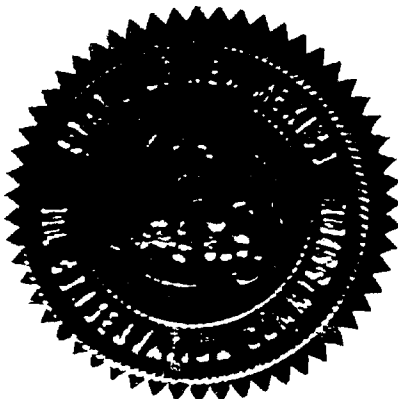
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

E. L. McChes
EDWIN L. MCCHES, Chairman

M. H. Morgan
MURRAY H. MORGAN, Member

A. L. Norr
A. L. NORR, Jr., Member & Secretary



Utex Exploration Company, Inc.

PETROLEUM DIVISION
ROOM 25, BACON BUILDING
P. O. BOX 628
ABILENE, TEXAS

T. R. HAVINS, JR.
MGR. LAND AND PRODUCTION DEPARTMENTS

CHARLES A. STEEN
PRESIDENT
CHIEF GEOLOGIST

J. C. ASHBY
GENERAL MANAGER

April 23, 1953

U. S. Geological Surveys
P. O. Box 6721
Roswell, New Mexico

In Re: High Lonesome Pool Waterflood.

Gentlemen:

This Company along with Moab Drilling Company is conducting a pilot waterflood project in the High Lonesome Pool, Eddy County, New Mexico, as per the enclosed plat. Our engineers feel that we need to have another injection well in the vicinity of the Southeast corner of the Northwest quarter of the Southwest quarter (SE/Cor of the NW of the SW) of Section 15, Township 16 South, Range 29 East.

Our No. 3 Donohue Federal is a marginal producer of oil, consequently we are desirous of using this well as an injection well rather than going to the added expense of drilling an injection well only a short distance away. Our engineers feel that injecting water in the No. 3 Donohue Federal should materially increase the overall recovery from our No. 2 Donohue. This well in recent months has had a considerable increase in oil production since it is near our No. 22-4 water injection well, which has an excellent sand section.

No. 4 Donohue-Federal was recently drilled, but up to this point we have not been able to make a producing well of it. At this time we are waiting on orders from management on this well.

We would like to point out that Moab Drilling Company No. 10 Skelly State is on a forty-acre (40) tract owned by the State of New Mexico. It is possible, of course, that by injecting water into No. 3 Donohue-Federal some water might be pushed from the Donohue lease toward the Skelly State No. 10 well; however, it is the thinking of our engineers that oil will also be pushed in the direction of the No. 2 Donohue Federal well, and that the ultimate end will be a larger recovery from the No. 2 Donohue than will be possible without this injection.

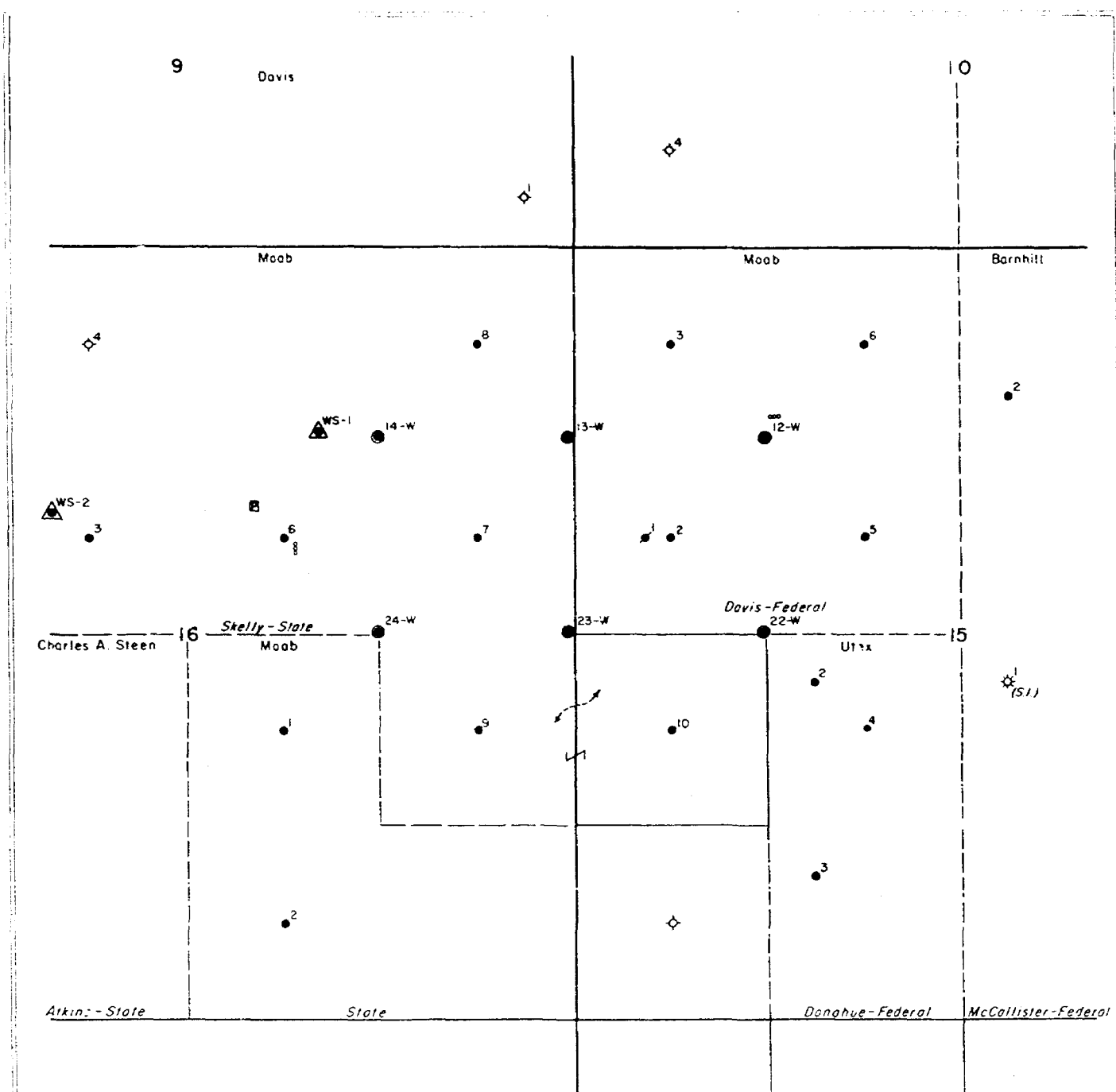
With your agreement in this matter we plan to go to the New Mexico Oil Conservation Commission for permission to inject water in our No. 3 Donohue Federal.

Yours very truly,

UTEX EXPLORATION COMPANY

T. R. Havins, Jr.

TTH/TH
CC: New Mexico Oil Conservation Commission,



HIGH LONESOME POOL Eddy County, New Mexico

- Producing Well Location
- Producing Well
- ⊙ Injection Well Location
- Injection Well
- ⬢ Converted Producer to Injection Well
- ⊠ Gas Well
- ◇ Dry Hole
- ⬢ Abandoned Producing Well
- ⊙ Abandoned Injection Well
- ⊠ Abandoned Gas Well
- ⬢ Water Supply Well
- ⊠ Water Plant
- ⊠ Tank Battery

0 500 1000
Scale in Feet

Revised 8-5-57

Revised 8-5-57

DOCKET EXAMINER HEARING MAY 28 1958

Oil Conservation Commission 9 a m. Mabry Hall State Capitol Santa Fe

The following cases will be heard before Elvis A. Utz, Examiner:

- CASE 1225: Application of Moab Drilling Company and Utex Exploration Company for an order amending Order No. R-975. Applicant, in the above-styled cause, seeks an order amending Order No. R-975 to permit the conversion to a water injection well of the Utex Exploration Company Donohue-Federal No. 3 Well, located in the SE/4 SW/4 of Section 15, Township 16 South, Range 29 East, Eddy County, New Mexico.
- CASE 1446: Application of The Texas Company for approval of a unit agreement. Applicant, in the above-styled cause, seeks an order approving its Cotton Draw Unit embracing 35,144 acres, more or less, of Federal, State of New Mexico, and patented lands, located in Township 24 South, Ranges 31 and 32 East; Township 25 South, Ranges 31 and 32 East, in Eddy and Lea Counties, New Mexico.
- CASE 1447: Application of The Texas Company for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order establishing a 320-acre non-standard gas proration unit in the Eumont Gas Pool comprising the E/2 of Section 11, Township 20 South, Range 37 East, Lea County, New Mexico, said unit to be dedicated to the applicant's C. H. Weir "B" Well No. 3, located 330 feet from the North line and 660 feet from the East line of said Section 11.
- CASE 1448: Application of Ambassador Oil Corporation for approval of a unit agreement. Applicant, in the above-styled cause, seeks an order approving its North Caprock Queen Unit No. 2 embracing 1808 acres more or less, of State of New Mexico lands located in Township 13 South, Ranges 31 and 32 East, in Chaves and Lea Counties, New Mexico.
- CASE 1449: Application of Graridge Corporation for an exception to Rule 309 of the Commission Rules and Regulations. Applicant, in the above-styled cause, seeks an order permitting the consolidation of tank batteries to receive the production from more than sixteen wells in the North Caprock Queen Unit No. 1 in Chaves and Lea Counties, New Mexico, which was established by Order No. R-1145. The applicant further seeks permission to install automatic custody transfer equipment on the above-referenced Unit.
- CASE 1450: Application of Neville G. Penrose, Inc. for approval of a unit agreement. Applicant, in the above-styled cause, seeks an order approving its November State Unit comprising 913 acres, more or less, of State of New Mexico and patented lands, located in Township 10 South, Range 37 and 38 East, and Township 11 South, Range 38 East, Lea County, New Mexico.

- CASE 1451: Application of Amerada Petroleum Corporation for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order establishing a 280-acre non-standard gas proration unit in the Justis Gas Pool consisting of the W/2 SW/4 Section 24, NW/4 and SW/4 NE/4 of Section 25, all in Township 25 South, Range 37 East, Lea County, New Mexico, said unit to be dedicated to the applicant's proposed well to be drilled in the NE/4 NW/4 of said Section 25.
- CASE 1452: Application of Amerada Petroleum Corporation for the dual completion of a producing oil well to permit the disposal of salt water therein. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its H. C. Posey "A" No. 4 Well, located in the NW/4 NE/4 of Section 14, Township 12 South, Range 32 East, Lea County, New Mexico, in such a manner as to permit the production of oil through the tubing from the Pennsylvanian formation adjacent to the East Caprock-Pennsylvanian Pool, and to permit the disposal of salt water through the casing tubing annulus into the Devonian formation between 11,205 feet and 11,370 feet.
- CASE 1453: Application of Magnolia Petroleum Company for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Stephens Estate No. 1 Well, located in the NW/4 SW/4 of Section 24, Township 21 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Terry-Blinebry Pool and Wantz-Abo Pool.
- CASE 1454: Application of Gulf Oil Corporation for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Learcy McBuffington No. 4 Well, located 660 feet from the South line and 1980 feet from the West line of Section 13, Township 25 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from an undesignated Blinebry oil pool and oil from the Justis-Ellenburger Pool through parallel strings of tubing.
- CASE 1455: Application of Gulf Oil Corporation for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Learcy McBuffington Well No. 5, located 1650 feet from the South line and 1980 feet from the East line of Section 13, Township 25 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from an undesignated Blinebry oil pool and oil from the Justis-Ellenburger pool through parallel strings of tubing.

- CASE 1456: Application of Gulf Oil Corporation for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Learcy McBuffington Well No. 6, located 330 feet from the South line and 1980 feet from the East line of Section 13 Township 25 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from an undesignated Blinebry oil pool and oil from the McKee formation adjacent to the Justis-McKee Pool, through parallel strings of tubing.
- CASE 1457: Application of Sinclair Oil & Gas Company for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its State Lea Well No. 1, located 660 feet from the South and West lines of Section 24, Township 16 South, Range 33 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Kemnitz-Wolfcamp Pool and from the Pennsylvanian formation adjacent to the Kemnitz-Pennsylvanian Pool through parallel strings of tubing.
- CASE 1458: Application of Albert Gackle for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order establishing a 320-acre non-standard gas proration unit in the Jalmat Gas Pool consisting of the S/2 of Section 23, Township 23 South, Range 36 East, Lea County, New Mexico, said unit to be dedicated to the applicant's Sinclair State No. 1 Well, located 1650 feet from the South line and 990 feet from the East line of said Section 23.
- CASE 1459: Application of Continental Oil Company for a dual completion and non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Farney A-17 Well No 3, located in Section 17, Township 23 South, Range 36 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Lower Yates formation of the Jalmat Gas Pool and gas from the Upper Yates formation of the Jalmat Gas Pool through the tubing and casing-tubing annulus respectively. The applicant further seeks the establishment of a 160-acre non-standard gas proration unit in the Jalmat Gas Pool comprising the NW/4 of said Section 17, to be dedicated to the said Farney A-17 Well No. 3.
- CASE 1460: Application of Phillips Petroleum Company for an oil-oil dual completion and for permission to commingle production from two separate pools. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its New Mex "A" Well No. 1 located 1983 feet from the South line and 2313 feet from the West line of Section 25 Township 16 South Range 33 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Kemnitz-Wolfcamp Pool and oil from an undesignated Pennsylvanian pool through parallel strings of tubing. The applicant also proposes to produce the Wolfcamp and Pennsylvanian production from said well into common storage.

- CASE 1461: Application of A. A. Greer, et al., for an exception to the acreage factors established by Order No. R-565-C for certain wells in San Juan County, New Mexico. Applicant, in the above-styled cause, seek an order granting an exception to the acreage factors provided in the Special Rules and Regulations for the Aztec-Pictured Cliffs Gas Pool and Fulcher Kutz-Pictured Cliffs Gas Pool, as set forth in Order No. R-565-C, for one well in the Aztec-Pictured Cliffs Gas Pool and eight wells in the Fulcher Kutz-Pictured Cliffs Gas Pool which were drilled on 40-acre spacing prior to the establishment of 160-acre spacing in the aforementioned pools.
- CASE 1462: Application of El Paso Natural Gas Company for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order establishing a 335-acre, more or less, non-standard gas proration unit in the Blanco Mesaverde Gas Pool consisting of the SW/4 of Section 7 and the W/2 of Section 18, all in Township 30 North, Range 8 West, San Juan County, New Mexico, said unit to be dedicated to the applicant's Howell No. 4-C Well, located 933 feet from the South line and 931 feet from the West line of said Section 18.
- CASE 1463: Application of Pan American Petroleum Corporation for an oil-gas dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its O. H. Randel "A" No. 1 Well, located 1650 feet from the South line and 990 feet from the West line of Section 9, Township 26 North, Range 11 West, San Juan County, New Mexico, in such a manner as to permit the production of oil from an undesignated Gallup oil pool and gas from an undesignated Dakota gas pool through parallel strings of tubing.

Utex Exploration Company

PETROLEUM DIVISION
ROOM 25, BACON BUILDING
P. O. BOX 628
ABILENE, TEXAS

T. R. HAVINS, JR.
MGR. LAND AND PRODUCTION DEPARTMENTS

CHARLES A. STEEN
PRESIDENT
CHIEF GEOLOGIST

J. C. ASHBY
GENERAL MANAGER

April 23, 1958

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

In Re: Pilot Waterflood Project,
High Lonesome Pool,
Sections 16 & 15,
T16S, R29E, Eddy County,
New Mexico.

Gentlemen:

Moab Drilling Company and Utex Exploration Company are now operating properties in a pilot waterflood in the above described areas as approved in Case No. 1225 by Order No. R-975.

Our engineers feel that this pilot flood area should include a water injection well in the vicinity of the Southeast corner of the Northwest quarter of the Southwest quarter (SE/Cor of the NW $\frac{1}{4}$ of the SW $\frac{1}{4}$) of Section 15. At this time we have a producing well, Utex No. 3 Donchue-Federal, in this vicinity, being located 330 feet from the north and west lines of the Southeast quarter of the Southwest quarter (SE $\frac{1}{4}$ SW $\frac{1}{4}$) of Section 15.

We would like permission to utilize this well as an injection well, since its production at this time is approximately one-half to one barrel per day. We feel that utilizing this well would save a considerable amount of money and would materially contribute to the overall recovery of oil from this flood.

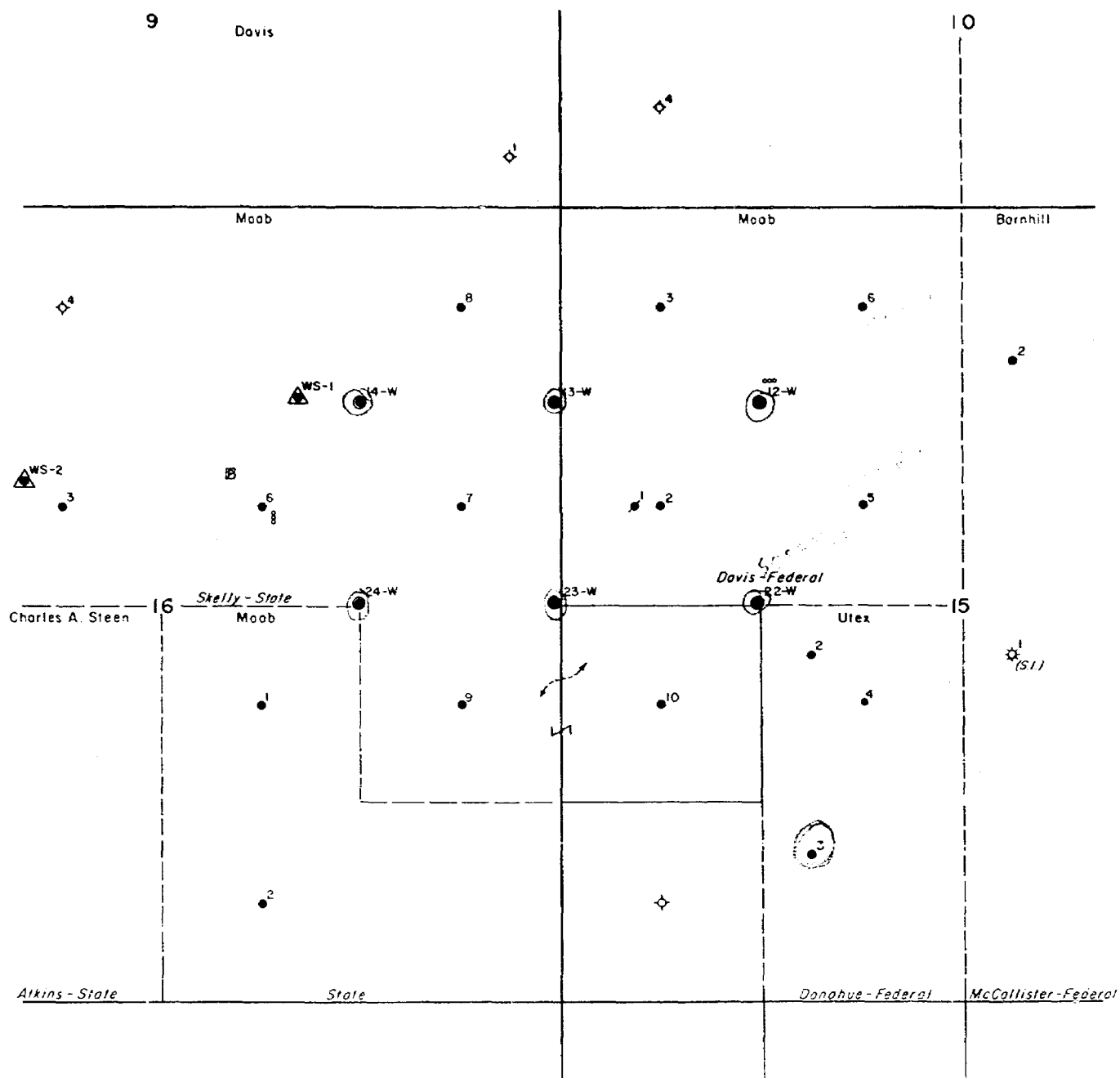
If it is necessary for a hearing to be conducted on this matter, we will appreciate your setting a hearing at your earliest convenience either before an examiner or before the full commission, whichever you prefer. Should you need any additional information in this matter please feel free to call on us.

Yours very truly,

UTEX EXPLORATION COMPANY

T. R. Havins, Jr.
T. R. Havins, Jr.

TTH/m
ENC.



HIGH LONESOME POOL

Eddy County, New Mexico



- | | |
|--|----------------------------|
| ○ Producing Well Location | ● Abandoned Producing Well |
| ● Producing Well | ● Abandoned Injection Well |
| ○ Injection Well Location | ● Abandoned Gas Well |
| ● Injection Well | ● Water Supply Well |
| ● Converted Producer to Injection Well | ● Water Plant |
| ● Gas Well | ● Tank Battery |
| ● Dry Hole | |

0 500 1000
Scale in Feet

Revised 8-5-57

Revised 8-5-57

GRAND JURY
OIL CONSERVATION COMMISSION
STATE OF NEW MEXICO
May 11, 1961

CASE NO. 1225

DEARNLEY - MEIER & ASSOCIATES
INCORPORATED
GENERAL LAW REPORTERS
ALBUQUERQUE, NEW MEXICO
3-6691 3-9546

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
MAY 22, 1937

IN THE MATTER OF:

CASE NO. 1224: Application of Roach Drilling Company
and Utex Exploration Company for an
order amending order No. 8-975. Ap-
plicant, in the above-styled cause,
seeks an order amending Order No. 8-975
to permit the conversion to a water
injection well of the Utex Exploration
Company Donohue-Federal No. 3 Well,
located in the SW/4 SW/4 of Section
15, Township 16 South, Range 29 East,
Seddy County, New Mexico.

BEFORE:

Elvis A. Utz, Examiner.

TRANSCRIPT OF PROCEEDINGS

MR. UTZ: The hearing will come to order, please. The
first case on the docket will be Case 1224.

MR. PARRIS: Application of Roach Drilling Company and Utex
Exploration Company for an order amending order No. 8-975.

MR. O'NEILL: Mr. Chairman, I am Frank A. O'Neall, de p-
toll C. Russell, Roswell, New Mexico, representing one of the ap-
plicants. I have one motion, Mr. Chairman, to be heard.

(Motion denied)

MR. UTZ: The hearing will now proceed. The next case on the
docket is Case 1224, Roach Drilling Company and Utex Exploration
Company.

WITNESSES:
ROACH DRILLING COMPANY
UTEX EXPLORATION COMPANY
DONOHUE-FEDERAL NO. 3 WELL
SANTA FE, NEW MEXICO

A. A. Speir.

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

DIRECT EXAMINATION.

BY MR. CHAFFIN:

Q Will you state your name, please?

A Archie Speir.

Q Where do you live, Mr. Speir?

A Artesia, New Mexico.

Q By whom are you employed?

A Utex Exploration Company.

Q How long have you been employed by that company?

A Two years.

Q Will you give the Examiner a brief summary of your professional and educational background, please?

A I am a graduate of Ohio University, 1949, petroleum engineering. Worked three years for a drilling contractor, two years for Magnolia Petroleum Company, one year for H. L. Brown as a petroleum engineer, and two years with Utex.

Q What is your present job with Utex?

A It is production engineer.

Q Are you acquainted with the High-Linesome water flood project operated by Utex?

A Yes, sir, I am.

Subscribed and sworn to before me this _____ day of _____, 19____.

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Q Do you have some current information, Mr. Speir, on the water injection and oil production from wells that are involved in that particular project?

A Yes, sir, we do.

Q I hand you what has been identified as Moab's Exhibit No. 1 in this case, and ask you to state what that is, please.

MR. UTZ: The witness' qualifications are acceptable.

Q Will you state what that is, please?

A Table 1, the barrels injected into six pilot injection wells in the High-Lonesome Field, with cumulative injection of each well.

Q Does that carry the water injection per well through the month of April, including the month of April?

A Yes. The cumulative figure shows the April injection.

Q I hand you what has been identified as Moab's Exhibit No. 2, and ask you to state what that is, please.

A Table No. 2 is a production history of Davis-Federal lease. This is a complete production history from the initial completions of these wells through April, 1958. Two wells on the lease, No. 2 and the No. 3 Well.

Q Is that the lease which is affected by this particular application?

A Yes, sir, it is.

Q I now hand you what has been identified as Moab's Exhibit No. 3, and ask you to state what that is, please.

A Table No. 3 is a production history of some Drilling Company Bondine-Sheridan lease for the last twelve months showing the monthly production and the total production for the twelve-month period.

Q Now, I hand you what has been identified as Moab's Exhibit No. 4 and ask you to state what that is, please.

A Table No. 4 is the production history of Moab Drilling Company Skelley State lease that includes the six wells involved in the pilot -- excuse me, -- the five wells in the pilot flood area, showing the monthly production for the last twelve months with the total production through that period of time.

Q Do Exhibits 1, 2, 3 and 4 reflect the entire information on the water injection and the oil production on all of the leases that are involved in the **High-Lonesome water flood project?**

A Yes, sir, it does.

Q Now, are you acquainted with the application that has been filed for an amendment to the basic order in this water flood project?

A Yes, sir.

Q Mr. Speir, I hand you what has been identified as Moab's Exhibit No. 5, and ask you please to state what that is?

A Exhibit No. 5 is a plan of the field that encompasses the pilot flood area, and on this there are two outstanding recommendations including three wells that are circled in blue that have received a kick or an increase in production due to the water flood.

The one well that is circled in red is the well that is proposed to be converted from a producing to an injection well.

Q Now, that well that is circled in red, which I believe is your Donohue-Federal No. 3, what has been the recent oil production history of that well as reflected in the exhibits that we have previously offered here?

Mr. UTZ: Mr. Campbell, do you have another set of exhibits that Mr. Nutter could have?

A The production history on Utex Exploration Donohue-Federal No. 3 Well has always been a marginal producing well, and in the past few months it has not been productive at all.

Q Has an effort been made in the past to improve the production from that well?

A Yes, sir.

Q Primary production?

A Yes, sir. There was a large number -- quite a bit of open hole below the pay zone that has been water flooded. This hole was plugged back, and this well was refraced in order to stimulate production.

Q Now, why is it, Mr. Utz, that you contemplate an injection well, water injection well at that particular location?

A We have had a considerable amount of water injected into the No. 2 Well, and we intend to -- we are trying to shut up the No. 2 Well to prevent any further migration of the oil east into No. 1 Well.

Q. Are you in charge of the operation of this project for your company?

A. Yes, sir, I am.

Q. Is it your opinion that it is necessary to inject water at that location in order to increase the ultimate recovery of oil in regard to the secondary recovery program?

A. Yes, sir, we do. We feel like there is between ten and fifteen thousand barrels of oil -- secondary recovery oil, that we will be able to recover by the injection of water into the No. 3 Well.

Q. Now, that well is situated on a Federal lease, is it not?

A. Yes, sir, it is.

Q. Have you discussed this matter with the United States Geological Survey?

A. Yes, sir, I have.

Q. I hand you what has been identified as Hoab's Exhibit No. 6, and ask you to state what that is, please?

A. Exhibit No. 6 is a letter we received of Wtux Exploration received from the United States Geological Survey stating that they do not object to converting the No. 3 Well to a water injection well.

Q. Have you considered the effect of the lease in the S. 1/4 of the S. 1/4 of Section 1, which extends this proposed injection well to the west?

A. Yes, sir, we have.

Q I hand you what has been identified as Moab's Exhibit No. 7, and ask you to state what that is, please?

A Exhibit No. 7 is a letter from Mr. John L. Teig, the owner of said unit, said acreage, stating that he does not object to converting said well into an injection well.

Q Now, Mr. Speir, have you notified the owners of overriding royalty or oil payment under the Federal lease of this application?

A Yes, sir, we have.

Q I hand you what has been identified as Moab's Exhibit 8 and ask you to state what that is?

A Exhibit No. 8 is a letter to Mr. Edward C. Donohue, the overriding royalty owner, of the Donohue-Federal acreage on which the proposed injection well is located.

Q That is, in fact, an oil payment rather than an overriding royalty, is it not, Mr. Speir?

A Yes, sir, it is.

Q Was that a letter of that type sent to all of the owners of record of overriding or oil payment under the Donohue-Federal lease?

A Yes, sir, to all known existing overriding royalty owners.

Q Was that letter sent to Mr. Donohue, certified?

A Yes, sir, it was a certified letter.

Q I hand you what has been identified as Moab's Exhibit No. 9, and ask you to state what that is?

A This is a Return Receipt for the certified mail that was mailed to Mr. Donohue.

Q Now, are there any other overriding royalty owners on that tract, to your knowledge?

A Yes.

Q I hand you what has been identified as Noab's Exhibit 8-B, and ask you to state what that is, please?

A Exhibit 8-B is a Return Receipt from Mrs. George Amolin, owner of overriding royalty under the Donohue lease.

MR. CAMPBELL: Now, Mr. Examiner, for the record, we also notified all overriding royalty owners under the State lease, Skelley State lease to the west, and we have here -- and I would like to offer in evidence Return Receipts from Skelley Oil Company, Art B. Gibson, B. B. Smithing, as applicants, Exhibits 8-C, D and E. I would also -- this should be Noab's Exhibits 8-C, D and E. I would also like to offer in evidence a letter dated May 23, 1953 from B. B. Smithing owner of overriding royalty under the Skelley State lease waiving any objection to this application. And I would like for the record to show that the applicant states that these overriding royalty owners' names are shown, which are offered in evidence are the only overriding royalty owners of record under the Skelley State lease except employees of the applicant and one overriding royalty under that particular lease name.

I believe that's all I have of this witness at this time.

MR. CTF: Any questions of the witness?

Q. Mr. Speir, your Donohue-Federal No. 2 did experience an increase in production after the injection of water was started, did it not?

Q And since then, the production has declined?

Q What is the reason that it has declined, on account of
 ter breaking through?

Q What is the present percentage of oil and water being produced?

Will the no. 4 still show substantial net increase in production?

1. The first part of the paper is devoted to the study of the asymptotic behavior of the solutions of the system (1) as $\epsilon \rightarrow 0$. It is shown that the solutions of the system (1) converge to the solutions of the system (2) as $\epsilon \rightarrow 0$.

something we are looking for. We are not exactly anticipating a
certain production rate, but only a longer producing life.

Q Do you have any plans to converting the Well No. 4 to
production?

A No, sir.

MR. COFFIN: I believe that's all.

MR. COFFIN: Any other questions of the witness?

QUESTIONS BY MR. UTZ:

Q Mr. Speir, I didn't quite follow whether or not you had
received a reply from the royalty interest or other interests in the
west half of the southeast quarter of Section 15.

A That is the Burnhill-McCallister lease?

Q Yes, sir.

A We have written them, we have not received an answer from
them.

Q You haven't received a return registered receipt?

A Not at the time we left the office on our way here. We
should be right over there by now.

MR. COFFIN: Does Moub own any of the northeast quarter of
Section 15?

A No, sir, don't. The east half of Section 15 is owned
by William Burnhill, the McCallister Federal lease, with the ex-
ception of a small area back on the east side.

Q Do you have any plans to back up Wells 5 and 6?

A Yes, sir.

Q Where would you drill the injection wells?

A From the original plan of the unit, it is shown that an injection well will be, or, is to be drilled at the location of the corner of the unit that all of our other pilot injection wells are drilled.

Q It would be in the northwest quarter of --

A Yes, sir. I think those are ten feet north and ten feet west of the corner of each unit.

Q And you have not received any response from Well No. 10 as yet, Donohue-Federal No. 10?

A The Skelley State --

Q That's the Skelley State, okay?

A -- No. 10, no, sir, we haven't.

MR. UTZ: Are there any other questions of the witness? If not, the witness may be excused.

MR. CAMPBELL: May I do this first, please? I neglected to ask you if, to your knowledge, Exhibits A, B and C were prepared from the production records of your company?

A Yes, sir, they were.

MR. CAMPBELL: I would like to see the evidence applicable to Exhibit A, B and C, and I thought, well, was there the unit designation is there.

A Yes: It shows exactly the location of the well, and I thought, well, was there the unit designation is there.

MR. CAMPBELL: All right, thank you, Mr. Skelley.

MR. UTZ: The witness may be excused.

(If under advisement)

Mr. GTH: Are there any other statements in this case?
If not, the case will be taken under advisement.

I, J. A. TROTHLO, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in stenotype and reduced to typewritten transcript by me and/or under my personal supervision, and that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my hand and seal, this, the 12th day of June
1938, in the City of Albuquerque, County of Sernalillo, State of
New Mexico.

David A. Chrysler
Notary Public

My commission expires:
October 3, 1960.

May 28 1225
Harst. W.

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

June 23, 1958

C
O
P
Y

Mr. Jack Campbell
Campbell & Russell
P.O. Box 721
Roswell, New Mexico

Dear Mr. Campbell:

On behalf of your clients, Moab Drilling Company and Utex Exploration Company, we enclose two copies of Order R-975-A issued June 18, 1958, by the Oil Conservation Commission in Case 1225, which was heard on May 28th at Santa Fe before an examiner.

Very truly yours,

A. L. Porter, Jr.
Secretary - Director

bp
Encls.

Utex Exploration Company

PETROLEUM DIVISION
ROOM 25, BACON BUILDING
P. O. BOX 628
ABILENE, TEXAS

CHARLES A. STEEN
PRESIDENT
CHIEF GEOLOGIST

T. R. HAVINS, JR.
MGR. LAND AND PRODUCTION DEPARTMENTS

J. C. ASHBY
GENERAL MANAGER

Exam hearing

August 25, 1958

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

In Re: Pilot Waterflood Project,
High Lonesome Pool,
Sections 15 & 16, T16S, R29E,
Eddy County, New Mexico.

Gentlemen:

Moab Drilling Company is now operating properties in a pilot waterflood in the above described areas, as approved in Case 1225, by Orders R-975 and R-975-B.

Our engineers feel that this pilot waterflood area should include a water injection well in the vicinity of the southwest corner of the Northeast quarter Northwest quarter (SW/corner NE/4 NW/4) Section 15, T16S, R29E. This thinking is primarily based on the fact that the Moab Drilling Company No. 5 Davis Federal located in the center of the Southeast quarter Northwest quarter (SE/4 NW/4) Section 15, has had considerable increase in production since the pilot waterflood has been in operation. It is felt that this well should be backed up with another water injection well.

It is our plan, if this application is approved, to drill our No. 11-W Davis Federal injection well at a point 1310' from the north line and 2630' from the west line of Section 15.

If it is necessary for a hearing to be conducted on this matter, we shall appreciate your setting a hearing at your earliest convenience either before an examiner in Santa Fe or Hobbs, or before a full commission, whichever you prefer.

Should you need any additional information in this matter, please feel free to call on us.

Yours very truly,

T. R. Havins, Jr.
T. R. Havins, Jr., For
MOAB DRILLING COMPANY

TRM/1h

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

17

IN THE MATTER OF:

CASE 1225

TRANSCRIPT OF HEARING

OCTOBER 2, 1953

DEARNLEY - MEIER & ASSOCIATES
GENERAL LAW REPORTERS
ALBUQUERQUE NEW MEXICO
Phone CHapel 3-6691

2

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

IN THE MATTER OF: :

CASE 1225 Application of Moab Drilling Company for authority to :
expand its water flood project in the High Lonesome :
Pool, Eddy County, New Mexico, and for approval of cer- :
tain unorthodox well locations therein. Applicant, in :
the above-styled cause, seeks an order authorizing the :
expansion of its water flood project in the High Lone- :
some Pool, Eddy County, New Mexico, to include its Davis- :
Federal Well No. 11-W, a proposed water injection well :
to be drilled on an unorthodox location 1310 feet from :
the North line and 2630 feet from the West line of :
Section 15, Township 16 South, Range 29 East. Applicant :
further seeks an administrative procedure for the fut- :
ure expansion of said water flood project to include :
the following proposed water injection wells to be :
drilled on unorthodox locations: :

Davis-Federal No. 1-W; 10 feet from the North line and :
2630 feet from the West line of Section 15. :

Davis-Federal No. 2-W; 10 feet from the North line and :
1310 feet from the West line of Section 15. :

Skelly-State No. 15-W; 1310 feet from the North line :
and 2630 feet from the West line of Section 16. :

Skelly-State No. 25-W; 2630 feet from the North line :
and 2630 feet from the West line of Section 16. :

All in Township 16 South, Range 29 East. :

BEFORE:

Mr. Elvis A. Utz, Examiner.

TRANSCRIPT OF PROCEEDINGS

MR. UTZ: Next case on the docket will be Case 1225.

MR. PARKS: Case 1225. Application of Moab Drilling
Company for authority to expand its water flood project in the High
Lonesome Pool, Eddy County, New Mexico, and for approval of certain
unorthodox well locations therein.

MR. UTZ: Are there any objections to the case in this
case?

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MR. CAMPBELL: Mr. Examiner, I am Jack A. Campbell of Campbell & Russell, Roswell, New Mexico, appearing on behalf of the applicant. I have one witness to be sworn.

MR. UTZ: Is there any other appearance to be made in this case? If not, you may proceed, Mr. Campbell.

(Witness sworn)

ARCHIE SPEIR,
called as a witness, having been first duly sworn on oath, testified as follows:

DIRECT EXAMINATION

BY MR. CAMPBELL:

Q Will you state your name, please?

A Archie Speir.

Q Where do you live, Mr. Speir?

A Artesia, New Mexico.

Q By whom are you employed?

A Utey Exploration Company.

Q Speak up a little louder, please. In what capacity?

A Production engineer.

Q Have you testified previously before this Commission or its examiners?

A Yes, sir.

Q Have you testified before the Commission or its examiners previously in connection with the matter, which is the High Lonesome water flood project?

A Yes, sir.

Q When was this project commenced, Mr. Spahr?

A We actually started injection in May, 1957.

Q I am going to hand you what has been identified as Applicant's Exhibit No. 1-A, Moab's Exhibit No. 1-A, in this case and ask you to state what that is, please?

A This is a plat of the High Lonesome Field, including the pilot water flood area. The wells circled, colored in red, are the ones that have shown an increase in oil production since the start of the water injection. The wells circled in yellow -- colored in yellow, are the proposed injection wells covered by this application.

Q Now, I hand you what has been identified as Moab's Exhibit No. 2-A, and ask you to please state what that is?

A These are tabulations of water injected in our injection wells, and monthly production, and totals of production from our producing wells in the pilot water flood area.

Q Now, referring to Exhibit 2, which contains Table Roman numeral I through table V, will you briefly state to the Examiner what those various Tables reflect, first, referring to Table I, what does that show?

A Table I is the barrels of water injected through our injection wells during the month of August, and the cumulative water injected into each of these respective wells.

Q What is total water through August?

A 17,116 barrels.

Q And what does that average for August, what does the injection pressure average?

A Average injection pressure is 1,028 pounds. The August total production was 14,131 barrels.

Q Now, do the remaining Tables, II through V, show the oil and water production from the wells in the pilot area by leases?

A Yes, sir, they do. They show it by wells.

Q I note on Table Roman numeral II the Davis-Federal lease Well No. 2 appears to be the only one of all of the wells in the area which has shown any substantial increase in oil production, is that right?

A May I correct you that it is Well No. 5.

Q Well No. 5, Davis Well No. 5. Is that the only one that has shown a substantial increase?

A Yes, it is.

Q What is the present producing rate of that particular well?

A Present rate during the month of August was 2,662 barrels with a hundred and fifty barrels of water.

Q So it is producing something less than 100 barrels per day at the present time, is that correct?

A Yes.

Q Have there been any wells in the area that have peaked out and then declined since the flood went into operation?

A Yes. That is covered in Roman numeral No. V, which is Utex Exploration's Roman numeral No. 4; 1,226 barrels during the month of November, 1957. It declined in the month of August, 1958 to ten barrels of oil, and 1510 barrels of water.

Q Now, the well that we refer to as the Davis Well No. 5, is it maintaining a fairly level rate of production since it attained the 2,400 barrels a month in April of 1958?

A Yes, sir, it has.

Q Now, what is it, Mr. Speir, that you are seeking from the Commission in this particular application? What do you want to do?

A We are seeking approval to drill the unorthodox well designated as the Davis-Federal No. 11-W.

Q Is the location of that proposed injection well shown on Exhibit 1-A?

A Yes, it is.

Q Is that Well to be situated on the quarter section line of Section 15?

A Yes, sir, it is. It is on a lease boundary line on the corner of the "C" unit, southeast corner of the "C" unit.

Q Now, Mr. Speir, why is it that you are seeking immediate approval of that injection well?

A Well, for two reasons. We need to back up our Davis-Federal No. 5 due to its increase in production, and to protect all respective owners as to their cooperative rights under the two

leases, the Davis-Federal and McCallister-Federal.

Q The McCallister-Federal lease is not a part of this project, is it?

A No, it is not.

Q Are the owners of the McCallister-Federal lease aware of your application in this case?

A Yes, sir, they are. They have been notified.

Q Have you received replies from them?

A We have received waivers. They do not object to this application.

Q I hand you what has been identified as Moab's Exhibit 3-A, and ask you to state what that is, please?

A This is a letter written by Moab Drilling Company to Mrs. Blanche McCallister asking for a waiver on this application, and has been signed by Mrs. McCallister and returned to us.

Q The signature indicates that they waive any objection to the plan of action set out in your letter. Is that correct?

A Yes, sir. "The undersigned waives any and all objections to the drilling of these wells."

Q Now, I hand you what has been identified as Moab's Exhibit 4-A, and ask you to state what that is, please?

A This is an identical letter to Mrs. Blanche McCallister written to Mr. William Bernhill, who is the operator of the McCallister-Federal lease. He also waives any objections to the above described plan of action of the drilling of the Davis-Federal

Well.

Q Now, with regard to the other proposed injection wells, 1-W, 2-W, 15-W, and 26-W, what is the situation with regard to those wells? Do you need immediate approval of those?

A No, sir, we do not. We are asking that, for administrative approval subject to the Oil Commission, and we feel that it is necessary to be drilled.

Q Is the administrative approval, which has heretofore been adopted by the Commission relative to the addition of injection wells, satisfactory to you?

A Yes, it is.

Q You understand that by that you are required to satisfy the Commission that the offset wells have sustained substantial increase in production due to water flooding before you can obtain a permit for the new injection well?

A Yes, sir, that is our understanding, and when these other wells show substantial increase in production, then we will ask for permission to drill the remaining injection wells.

Q Now, in this particular project, you are drilling new wells for injection wells, are you not?

A Yes, sir, that is right.

Q What is the approximate cost of the drilling of an injection well in this area, Mr. Seely?

A Approximately, it is about \$20,000.00.

Q Now, if you drill this well 11-W as an injection well,

and still get complete that immediately?

A. Occasionally, there are oil cones, and the core analysis on the pay zone we get through cement to the surface, perforate through the pay zone in the field. Ordinarily, we have to frac or hydraulic the well before we can start injection. However, some of the wells will take a small amount of water prior to frac. We have one well -- we might state the R2-W is our best injection well where we can put the highest rate of water through, that it has never been fraced.

Q. Do you believe, Mr. Speir, that if you are permitted to utilize this location for drilling Well 11-W as a water injection well, that it will increase the ultimate recovery of oil in this project?

A. Yes, I do.

Q. Do you believe that by drilling that well and injecting water, you will protect the rights of the owners of your property and the adjacent property under the McCallister-Federal lease?

A. Yes, sir, we do.

MR. CAMPBELL: I believe that's all at this time, Mr. Examiner. I would like to offer in evidence Hoab's Exhibits 1-A through 4-A inclusive.

MR. UTZ: Is there objection to the offering of Exhibits 1-A through 4-A inclusive? If no, they will be accepted. Are there any questions of the witness?

MR. CAMPBELL: Mr. Examiner, I might make one observation

10

or request. I am not quite clear on what is required for approval of locations for water injection wells. I know of no rule that sets up location requirements for water injection wells as distinguished from potential oil or gas wells, but whatever is required, we include in this application, of course, this request, whatever authority is necessary to drill these water injection wells at the location shown on Exhibit No. 1.

MR. COOLEY: Well, Mr. Campbell, in that regard, Rule 701 requires that permission be obtained before any well may be utilized as an injection well; water or any other foreign matter that might be injected into the reservoir, and the approval of the well as an injection well would carry approval of the location. It would be taken into consideration in approving it.

MR. UTZ: Any questions of the witness?

MR. COOLEY: I have one question.

MR. UTZ: Go ahead.

CROSS EXAMINATION

BY MR. COOLEY:

Q Mr. Speir, I notice in your direct testimony you testified that it has been your practice in this particular project to fracture your injection wells to increase the permeability, I suppose. Could you tell me what your experience has been with using fracturing of different sorts with injection wells, especially with regard to the possibility of channeling?

A Well, in that respect, we try to hold our volume of fluid

treatment as low as possible to eliminate the possibility of a fracture, or an extensive fracture. I might state in the history of these wells that the three approved on the original oiler flood would not take any water, or I would say, less than three barrels per day rate previous to fracturing. In order to inject any water at all, that would make the flood economical. It was necessary to frac regardless of the danger we might have in channeling across. We do not feel like the fracture treatment at all has channeled or fractured water to the production well. We have experienced water in wells, but we do not feel that the total blame is to the fracture treatment.

Q Your indication was that it was not exactly the same type of fracture that you would use if you intended to use a completed well?

A It is identical.

Q It is identical?

A Yes. The volumes were about the same. However, we do treat the producing wells with small volume on the field.

Q And you feel fracturing in this particular area is a calculated risk the operators must take in order to get any water in the formation?

A Yes, it is necessary to fracture in order to inject, regardless of the evils.

MR. COOLEY: That's all the questions I have.

MR. UTZ: Does anyone else have a question of the witness?

QUESTIONS BY MR. STAMETS:

Q Mr. Speir, do you have an opinion on why the No. 2 Well kicks out at a comparatively lower well than the No. 5 Well now producing?

A Yes. It has a smaller oil reserve in the No. 5. That is a very thin pay section. You are referring to the Olex Bonshue-Federal No. 2?

Q Yes, sir, that's the one.

A We have a small reserve, and it didn't take long for that to develop.

MR. STAMETS: That's all the questions I have.

QUESTIONS BY MR. UTZ:

Q Mr. Speir, on your Exhibit No. 2-A, does that Exhibit show the total production for the month of August if you were to total the figures as shown on the oil production Tables of this Exhibit? In other words, does this show all the wells in the pilot water flood area?

A Yes, sir. There are eleven wells encompassed in the area, and they are all included in Exhibit 2-A.

Q You don't know offhand what that production figure was, do you?

A Not exactly. In the neighborhood of 5,000 barrels.

Q It is all on this exhibit?

A Yes, sir.

MR. UTZ: Does anyone else have a question of the witness?

If not, the witness may be excused.

MR. CAMPBELL: That's all we have.

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

C E R T I F I C A T E

STATE OF NEW MEXICO)
 : ss
COUNTY OF BERNALILLO)

I, J. A. TRUJILLO, notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in stenotype and reduced to typewritten transcript by me and/or under my personal supervision, and that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal, this, the 9th day of October
1958, in the City of Albuquerque, County of Bernalillo, State of
New Mexico.

J. G. Ingella
Notary Public

My Commission Expires:
October 5, 1960

10-2
1825
58
H. A. W.

Table 1

	<u>Barrels In April</u>	<u>Cumulative Injection</u>
<u>Davis Federal Lease</u>		
12-W	1,905	23,348
22-W	3,432	33,916
<u>Skelly State Lease</u>		
13-W	1,892	17,018
14-W	1,190	17,496
23-W	1,473	18,351
24-W	<u>1,833</u>	<u>15,557</u>
Total	<u>11,725</u>	<u>125,686</u>

UNITED STATES OF AMERICA
OIL COMMISSION
Moab
CASE NO. 1225

Table 2

PRODUCTION HISTORY UTEX DONOHUE-FEDERAL LEASE

<u>Month</u>	<u>Well No. 2</u>	<u>Well No. 3</u>
<u>1956</u> , January	567	
February	1,134	
March	558	
April	783	228
May	485	485
June	579	579
July	680	680
August	480	480
September	512	511
October	524	524
November	366	366
December	297	297
<u>1957</u> , January	163	162
February	428	428
March	282	280
April	201	223
May	234	234
June	244	244
July	420	16
August	378	15
September	476	23
October	311	30
November	1,226	22
December	1,173	87
<u>1958</u> , January	480	0
February	208	0
March	202	0
April	169	
Total	<u>14,067</u>	<u>6,291</u>

MOAB

CASE 1223

TABLE I
WATER INJECTION

	<u>Barrels In</u> <u>August</u>	<u>Cumulative</u> <u>Injection</u>
<u>Davis-Federal Lease</u>		
12-W	2,036	31,043
22-W	2,432	45,354
<u>Skelly-State Lease</u>		
13-W	1,173	22,053
14-W	1,088	21,679
23-W	1,131	22,673
24-W	1,743	20,457
<u>Donohue-Federal Lease</u>		
3	<u>4,478</u>	<u>15,757</u>
	<u>14,131</u>	<u>179,016</u>

Average injection pressure for August

1028 p.s.i.

DEFORE EXAMINER UTZ
CH. CO. JURYATION & JAHESION
7/1/10 EXHIBIT NO. 2-17
CASE NO. 1225

TABLE II

Production History - Moab Drilling Company Davis-Federal Lease

(Since Start of Water Injection)

		<u>Well No. 2</u>		<u>Well No. 3</u>		<u>Well No. 5</u>		<u>Well No. 6</u>	
		<u>Oil</u>	<u>Water</u>	<u>Oil</u>	<u>Water</u>	<u>Oil</u>	<u>Water</u>	<u>Oil</u>	<u>Water</u>
1957	May	621		425		992		351	
	June	409		409		759		370	
	July	492		492		1132		303	
	August	306	291	497		537	26	392	
	September	82	32	505		521	13	337	
	October	471		471		1214		301	
	November	432		345		1155		375	
	December	519		287		1142		402	
1958	January	516		393		1372		393	
	February	545		293		1624		341	
	March	632		394		1872		406	
	April	540	51	300	26	2400		435	
	May	570		320		2301		474	
	June	507	17	368	18	2774	94	440	
	July	763	7	514		2543	77	343	
	August	917	22	438	5	2662	150	303	
	Totals	8262	420	6451	40	25519	360	5066	~0~

TABLE III

Production History - Moab Drilling Company Skelly-State Lease
(Since Start of Water Injection)

		<u>Well No. 6</u>		<u>Well No. 7</u>		<u>Well No. 8</u>		<u>Well No. 9</u>		<u>Well No. 10</u>	
		<u>Oil</u>	<u>Water</u>	<u>Oil</u>	<u>Water</u>	<u>Oil</u>	<u>Water</u>	<u>Oil</u>	<u>Water</u>	<u>Oil</u>	<u>Water</u>
1957	May	120		120		121		258		431	
	June	257		289		79		112		267	
	July	390		195		65		100		328	
	August	352	5	566		179	5	138		396	
	September	270	Tr	168		102	29	102	97	335	
	October	179		499		72		37		355	
	November	231		327		198		129	192	264	
	December	166		387		185		72	188	355	
1958	January	120		471		156		40	247	374	
	February	74		480		74		14	262	221	
	March	71		385		175			235	245	
	April	79	52	410	106	275	76			275	
	May	81	68	424	82	302	71		340	294	
	June	294	20	418	20	546	32		309	293	
	July	332	3	333	3	363	4	9	196	296	
	August	440	16	344	12	337	4	25	568	265	
	Totals	3456	164	5816	223	3239	221	1036	3374	4994	-0-

TABLE IV

Production History - Moab Drilling Company Moab-State Lease
(Since Start of Water Injection)

		<u>Well No. 1</u>	
		<u>Oil</u>	<u>Water</u>
1957	May	26	
	June	28	
	July	53	
	August	82	
	September	78	
	October	78	
	November	55	
	December	53	
1958	January	62	
	February	64	
	March	29	123
	April	0	287
	May	0	98
	June	42	32
	July	49	51
	August	<u>57</u>	<u>29</u>
Totals		<u>756</u>	<u>675</u>

TABLE V

Production History - Utex Exploration Company Donohue-Federal Lease

(Since Start of Water Injection)

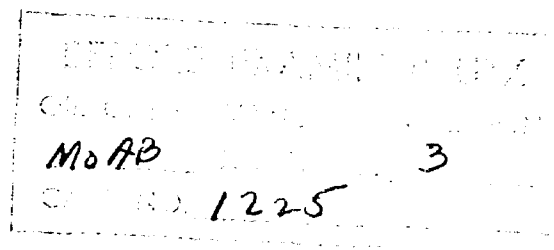
		<u>Well No. 2</u>	
		<u>Oil</u>	<u>Water</u>
1957	May	234	
	June	244	
	July	420	
	August	378	
	September	478	
	October	811	
	November	1226	
	December	1178	76
1958	January	480	215
	February	208	77
	March	202	170
	April	169	133
	May	153	122
	June	167	132
	July	88	614
	August	<u>10</u>	<u>1510</u>
Totals		<u>6391</u>	<u>3049</u>

Table 3

PRODUCTION HISTORY MOAB DRILLING CO. DAVIS-FEDERAL LEASE
(Since Start On Water Injection)

<u>Month</u>	<u>Well No. 2</u>	<u>Well No. 3</u>	<u>Well No. 5</u>	<u>Well No. 6</u>
<u>1957</u> , May	621	425	992	351
June	409	409	759	370
July	492	492	1,132	303
August	306	497	537	392
September	82	505	521	337
October	471	471	1,214	301
November	432	345	1,155	375
December	519	287	1,142	402
<u>1958</u> , January	516	393	1,372	393
February	545	293	1,624	341
March	632	394	1,872	406
April	<u>540</u>	<u>300</u>	<u>2,400</u>	<u>434</u>
Total for past 12 Months	<u>5,565</u>	<u>4,811</u>	<u>14,720</u>	<u>4,405</u>

Grand Total for 12 Months - 22,501



Utex Exploration Company

PETROLEUM DIVISION
ROOM 23, BACON BUILDING
P. O. BOX 628
ABILENE, TEXAS

T. R. HAVINS, JR.
MGR. LAND AND PRODUCTION DEPARTMENTS

CHARLES A. STEEN
PRESIDENT
CHIEF GEOLOGIST

J. C. ASHBY
GENERAL MANAGER

CERTIFIED MAIL

August 29, 1958
BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
NO 912 EXHIBIT NO. *3-17*
CASE NO. *1225*

Miss Blanche McCallister
Roswell, New Mexico

Dear Madam:

Moab Drilling Company has made application to the New Mexico Oil Conservation Commission for permission to drill No. 11-W Davis-Federal as an injection well in connection with the pilot waterflood operations now being carried on in the High Lonesome Pool in Sections 15 and 16, T16S, R29E, Eddy County, New Mexico.

Our proposed location will be 1310 feet from the North line and 2630 feet from the West line of Section 15. This location will be southwest of the William Barnhill, et al No. 2 McCallister-Federal in the North-west quarter of the Northeast quarter (NW $\frac{1}{4}$ NE $\frac{1}{4}$) Section 15. This well is being drilled to pick up our No. 5 Davis-Federal, which has responded to the waterflood operation.

I might point out that it is probable that the injection of water in this location will help the No. 2 McCallister well.

It is my understanding that a hearing will be held on this matter in the near future.

If you have no objection to our drilling and injecting water into the proposed No. 11-W, would you be so kind as to sign and return four copies of this letter.

Yours very truly,

T. R. Havins, Jr.
T. R. Havins, Jr., For
MOAB DRILLING COMPANY

TRH/fh

September *9th*, 1958.

The undersigned waives any objection to the above described plan to drill the No. 11-W Davis-Federal at the location described above and the use of this well as a wtr. injection well.

Blanche McCallister
Blanche McCallister

Table 4

PRODUCTION HISTORY MOAB DRILLING CO. SKELLY-STATE LEASE
(Since Start Of Water Injection)

<u>Month</u>	<u>Well No. 6</u>	<u>Well No. 7</u>	<u>Well No. 8</u>	<u>Well No. 9</u>	<u>Well No. 10</u>
1957, May	120	120	121	258	431
June	257	289	79	112	267
July	390	195	65	100	328
August	352	566	179	138	396
September	270	168	102	102	335
October	179	499	72	37	355
November	231	327	198	129	264
December	166	387	185	72	355
1958, January	120	471	156	40	374
February	74	460	74	14	221
March	71	385	175	0	245
April	79	410	275	0	275
	<u>2,302</u>	<u>4,297</u>	<u>1,681</u>	<u>1,002</u>	<u>3,846</u>

Grand Total For 12 Months - 13,135

RECEIVED
 OF RECORD
 M. A. B. ... 4
 NO. 1225

Utex Exploration Company

PETROLEUM DIVISION
ROOM 25, BACON BUILDING
P. O. BOX 628
ABILENE, TEXAS

CHARLES A. STEEN
PRESIDENT
CHIEF GEOLOGIST

T. R. HAVINS, JR.
MGR. LAND AND PRODUCTION DEPARTMENTS

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
NO 9 B EXHIBIT NO. 4-A
CASE NO. 1225

J. C. ASHBY
GENERAL MANAGER

CERTIFIED MAIL

August 29, 1953

Mr. William Barnhill
Box 848
Roswell, New Mexico

Dear Mr. Barnhill:

Moab Drilling Company has made application to the New Mexico Oil Conservation Commission for permission to drill No. 11-W Davis-Federal as an injection well in connection with the pilot waterflood operations now being carried on in the High Lonesome Pool in Sections 15 and 16, T16S, R29E, Eddy County, New Mexico.

Our proposed location will be 1310 feet from the North line and 2630 feet from the West line of Section 15. This location will be southwest of the William Barnhill, et al No. 2 McCallister-Federal in the Northwest quarter of the Northeast quarter (NE 1/4) Section 15. This well is being drilled to pick up our No. 5 Davis-Federal, which has responded to the waterflood operation.

I might point out that it is probable that the injection of water in this location will help your No. 2 well.

It is my understanding that a hearing will be held on this matter in the near future.

If you have no objection to our drilling and injecting water into the proposed No. 11-W, would you be so kind as to sign and return four copies of this letter.

Yours very truly,

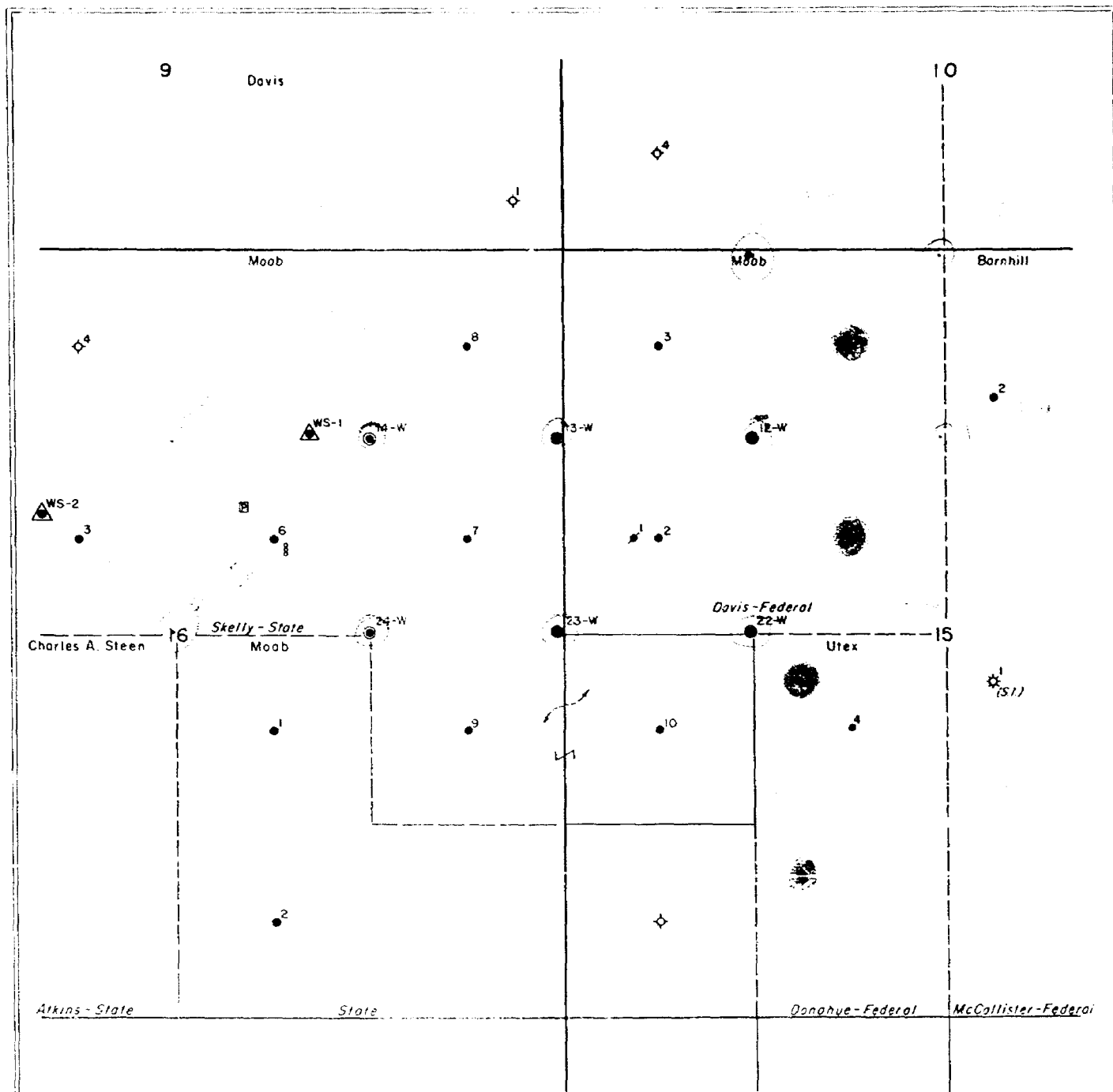
T. R. Havins, Jr., For
MOAB DRILLING COMPANY

TTH/Ph

September 9th, 1953.

The undersigned waives any objection to the above described plan of action in drilling No. 11-W Davis-Federal at the location described above and the use of this well as a water injection well.

William Barnhill
William Barnhill



HIGH LONESOME POOL
Eddy County, New Mexico

- | | |
|--|----------------------------|
| ○ Producing Well Location | ● Abandoned Producing Well |
| ● Producing Well | ▲ Abandoned Injection Well |
| ○ Injection Well Location | ✱ Abandoned Gas Well |
| ● Injection Well | ▲ Water Supply Well |
| ● Converted Producer to Injection Well | ☐ Water Plant |
| ✱ Gas Well | ☐ Tank Battery |
| ◇ Dry Hole | |

Scale in Feet
0 500 1000

BEFORE EXAMINATION OF CONVEYANCE
Moab EXHIBIT NO. 5
CASE NO. 1225

FIGURE 1
Revised 8-5-57

Revised 8-5-57



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

P. O. Box 187
Artesia, New Mexico

IN REPLY REFER TO:

May 12, 1958

Utex Exploration Company
P. O. Box 528
Abilene, Texas

Re: Water Flood Project
High Lonesome Pool

Attention: Mr. T. R. Havins, Jr.

Gentlemen:

This will acknowledge receipt of your letters of April 23, and May 6, 1958, one via our Roswell office and the other to this office, reporting progress on the water flood project in the High Lonesome Pool, Eddy County, New Mexico.

You also advise that your engineers have recommended another injection well in the vicinity of the southeast corner of the northwest quarter of the southwest quarter of section 15, T. 16 S., R. 29 E., N.M.P.M., and that your well No. 3 Donohue, a marginal producer, could be used for an injection well near the above corner.

Your proposal to use well No. 3-Donohue, SE $\frac{1}{4}$ SW $\frac{1}{4}$ of section 15, T. 16 S., R. 29 E., was informally discussed at a conference in Roswell office May 6th. Subsequent to that conference you have furnished us with the production record of well No. 3 Donohue from July 1, 1957, through March 1958. No objection is offered to using said well for a water injection well provided you comply with applicable rules and regulations of the New Mexico Oil Conservation Commission governing water flooding and furnish this office a sundry notice of intention, on form 9-331a, to convert said well No. 3 Donohue to water injection well.

Very truly yours,

John A. Frost
John A. Frost
District Engineer

JAF:mm

Copy to: New Mexico Oil Conservation Commission
323 Carper Building
Artesia, New Mexico

U. S. Geological Survey
Box 6721
Roswell, New Mexico

BEFORE THE
OIL CONSERVATION COMMISSION
No. 7-B EXHIBIT 6
CASE NO. 1225

RECEIVED	APR 23 1958
FILED	
MoAB	
CASE NO.	12257

April 23, 1958

Mr. John H. Trigg
P. O. Box 5629
Roswell, New Mexico

In Re: High Lonesome Pool Waterflood.

Dear Mr. Trigg:

It is our understanding that you are the owner of a forty (40) acre Federal Lease in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 15, Township 16 South, Range 29 East, Eddy County, New Mexico, which is a south offset to Moab Drilling Company No. 10 Skelly State and a west offset to Utex Exploration Company and Standard Uranium Corporation No. 3 Donohue Federal.

As you probably know we are conducting a Pilot waterflood in the High Lonesome Pool in this area. Enclosed is a plat of the area which shows our producing and injection wells. Our engineers feel that we need another injection well in the vicinity of the southeast corner of the Northwest quarter of the Southwest quarter (SE/Cor NW/4 SW/4) of Section 15. Rather than go to the expense of drilling an injection well we propose to inject water into our No. 3 Donohue Federal which is in that vicinity.

If you have no objection to our injecting water in this well, would you be so kind as to sign three copies of this letter and return them to us?

Yours very truly,

UTEX EXPLORATION COMPANY

T. R. Havins, Jr.
T. R. Havins, Jr.

TRHJr/fh
ENC.

May
April 21, 1958.

The undersigned waives any objection to the above described plan of action in injecting water into the Utex Exploration Company and Standard Uranium Corp. No. 3 Donohue-Federal well, SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 15, T-16S, R29E, Eddy County, New Mexico, in connection with waterflooding operations in the High Lonesome Pool.

John H. Trigg
John H. Trigg

Utex Exploration Company

PETROLEUM DIVISION
ROOM 25, BACON BUILDING
P. O. BOX 628
ABILENE, TEXAS

T. R. HAVINS, JR.
MGR. LAND AND PRODUCTION DEPARTMENTS

CHARLES A. STEEN
PRESIDENT
CHIEF GEOLOGIST

J. C. ASHBY
GENERAL MANAGER

AIR MAIL - CERTIFIED

May 22, 1958

Mr. Edward C. Donohue
Box 1567
El Paso, Texas

Dear Mr. Donohue:

This letter is to notify you that we have applied to the Oil Conservation Commission of New Mexico for application to convert the Utex Exploration Company No. 3 Donohue-Federal well, located in SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 15, T16S, R29E, Eddy County, New Mexico, to a water injection well in connection with our pilot waterflood operation.

Please be advised that this application has been set for hearing as Case No. 1225 to be heard at 9:00 a.m. May 28, 1958, in Mabry Hall, State Capitol, Santa Fe, New Mexico, before Examiner Elvis A. Utz.

This letter is written to notify you of this hearing in case you care to make an appearance.

Yours very truly,

UTEX EXPLORATION COMPANY

T. R. Havins, Jr.

TRH/fh

RECEIVED	17
CH. 1	
10 MB	8
CASE NO. 1225	

BLAIR SMITH, PRES.

MU 4-8801
MU 4-8080

B. B. Smith, Inc.
DRILLING CONTRACTORS
AND
OIL OPERATORS
P. O. BOX 5103
Midland, Texas

MAY 23, 1958

UTEX EXPLORATION COMPANY, INC.
P. O. BOX 268
ABILENE, TEXAS

ATTN: MR. T. R. HAVINS, JR.

RE: SE/4, SW/4: SEC. 15
T-16-SOUTH, RANGE
29-E: EDDY CO.
NEW MEXICO

GENTLEMEN:

BY THIS LETTER B. B. SMITH, INC. WAIVES ANY OBJEC-
TION TO YOUR USING YOUR NUMBER 13 DONAHUE FEDERAL
WELL, LOCATED ON THE ABOVE CAPTIONED ACREAGE, AS A
WATER INJECTION WELL IN YOUR WATER FLOOD PROJECT.

VERY TRULY YOURS,

B. B. SMITH, INC.

Cameron O'Donnell
CAMERON O'DONNELL

CO'D: BJS

MAY 23 1958	
CH. 100	8
M. A. P.	
CASE NO.	1225

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. 1225
Order No. R-975-C

APPLICATION OF MOAB DRILLING COMPANY
FOR PERMISSION TO EXPAND AN EXISTING
WATER FLOOD PROJECT IN THE HIGH LONE-
SOME POOL, EDDY COUNTY, NEW MEXICO,
BY THE DRILLING OF A WATER INJECTION
WELL ON AN UNORTHODOX LOCATION AND FOR
THE ESTABLISHMENT OF A PROCEDURE WHEREBY
FOUR ADDITIONAL INJECTION WELLS MAY BE
DRILLED ON UNORTHODOX LOCATIONS AFTER
ADMINISTRATIVE APPROVAL.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on
October 2, 1958, 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 25th day of October, 1958, 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 Commission by Order No. R-975 authorized
the applicant, Moab Drilling Company, to institute a pilot water
flood project in the High Lonesome Pool, Eddy County, New Mexico,
and that expansion of said project was authorized by Order No.
R-975-B.

(3) That the applicant seeks an order authorizing it to
expand the above-mentioned pilot water flood project by drilling
a water injection well 1310 feet from the North line and 2630 feet
from the West line of Section 15, Township 16 South, Range 29 East,
NMPM, Eddy County, New Mexico, said well to be known as the Davis-
Federal Well No. 11-W.

-2-

Case No. 1225

Order No. R-975-C

(4) That it is in the best interest of conservation to permit the drilling of said Davis-Federal Well No. 11-W as a water injection well.

(5) That the applicant further proposes that it be authorized to drill the following-described water injection wells on unorthodox locations in said project without notice and hearing, subject to administrative approval by the Commission:

Davis-Federal Well No. 1-W; 10 feet from the North line and 2630 feet from the West line of Section 15.

Davis-Federal Well No. 2-W; 10 feet from the North line and 1310 feet from the West line of Section 15.

Skelly-State Well No. 15-W; 1310 feet from the North line and 2630 feet from the West line of Section 16.

Skelly-State Well No. 25-W; 2630 feet from the North line and 2630 feet from the West line of Section 16,

all in Township 16 South, Range 29 East, NMPM, Eddy County, New Mexico.

(6) That administrative approval for the drilling of any of the water injection wells described in Finding No. (5) should be granted only when it is established to the satisfaction of the Secretary-Director that a producing well offsetting the proposed location of the water injection well has experienced a substantial response to the water flood project.

IT IS THEREFORE ORDERED:

(1) That Moab Drilling Company be and the same is hereby authorized to drill the Davis-Federal Well No. 11-W as a water injection well to be located 1310 feet from the North line and 2630 feet from the West line of Section 15, Township 16 South, Range 29 East, NMPM, Eddy County, New Mexico.

(2) That Moab Drilling Company be and the same is hereby authorized to drill the following-described water injection wells on unorthodox locations subject to administrative approval by the Commission:

Davis-Federal Well No. 1-W; 10 feet from the North line and 2630 feet from the West line of Section 15.

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Case No. 1225
Order No. R-975-C

Davis-Federal Well No. 2-W; 10 feet from the North line and 1310 feet from the West line of Section 15.

Skelly-State Well No. 15-W; 1310 feet from the North line and 2630 feet from the West line of Section 16.

Skelly-State Well No. 25-W; 2630 feet from the North line and 2630 feet from the West line of Section 16,

all in Township 16 South, Range 29 East, NMPM, Eddy County, New Mexico.

PROVIDED HOWEVER, That administrative approval for the drilling of any of the above-described water injection wells shall be granted only when it is established to the satisfaction of the Secretary-Director that a producing well offsetting the proposed location of the water injection well has experienced a substantial response to the water flood project.

PROVIDED FURTHER, That to obtain administrative approval for the drilling of a water injection well, applicant shall submit to the Commission in triplicate a request for such administrative approval, setting forth therein all the facts pertinent to the need for expansion of the water flood, and attaching thereto Commission Form C-116, showing production tests of the affected well or wells both before and after stimulation by water flood. Applicant shall also attach plats of the water flood project area and immediate surrounding area, indicating thereon the owner of each lease and the location of all water injection wells and producing wells, and shall submit evidence that a copy of the application to expand the water flood project area has been sent to each operator offsetting the proposed expansion.

The Secretary-Director of the Commission may, if in his opinion there is need for the expansion of the water flood project area, authorize said expansion without notice and hearing, provided no offset operator objects to said expansion within fifteen (15) days. The Secretary-Director may grant immediate approval of the

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Case No. 1225
Order No. R-975-C

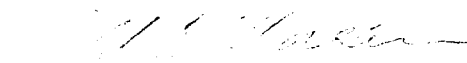
expansion upon receipt of waivers of objection from all operators offsetting the proposed expansion.

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

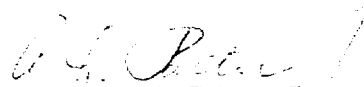
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



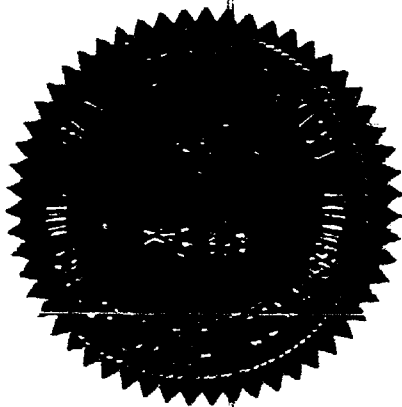
EDWIN L. MECHEM, Chairman



MURRAY E. MORGAN, Member



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



ir/

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

October 28, 1958

C
O
P
Y

Mr. Jack Campbell
Campbell & Russell
P.O. Box 721
Roswell, New Mexico

Dear Mr. Campbell:

On behalf of your clients, we enclose two copies of each of the following orders issued by the Oil Conservation Commission on October 25, 1958:

Order R-975-C in Case 1225
Order R-1267 in Case 1511

These cases were both heard on October 2nd before an examiner at Santa Fe.

Very truly yours,

A. L. Porter, Jr.
Secretary - Director

b3
Encls.

1922

W. H. Steen
8-2-58

Utex Exploration Company
HEAD OFFICE 600 PETROLEUM DIVISION
ROOM 25, BACON BUILDING
P. O. BOX 626
DALLAS, TEXAS

T. R. HAVINS, JR.
MGR. LAND AND PRODUCTION DEPARTMENTS

CHARLES A. STEEN
PRESIDENT
CHIEF GEOLOGIST

J. C. ASHBY
GENERAL MANAGER

September 4, 1958

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

In Re: Pilot Waterflood Project,
High Lanesome Pool,
Sections 15 & 16, T16S, R29E,
Eddy County, New Mexico.

Attention: Mr. Daniel S. Mutter:

Gentlemen:

This letter refers to our telephone conversation of recent date, as well as to my letter to the Commission of August 25, 1958, requesting a hearing on our proposed water injection well No. 11-W.

As per your suggestion this letter is being written to amend our request of August 25, to include several other proposed injection wells. All of these are unorthodox locations.

As I mentioned in our telephone conversation, we do not plan to drill all of these locations in the immediate future, but would like to have No. 11-W approved now, and the others set up where we may obtain administrative approval for drilling them as the need arises.

It was my understanding in our telephone conversation that this hearing will probably be set for Tuesday or Wednesday, October 2 or 3, 1958. A hearing at that time will be entirely satisfactory to us.

The locations which we propose to drill as injection wells are as follows:

- | | |
|-------------------------|---|
| No. 11-W Davis-Federal, | 1310 feet from the north line and 2630 feet from the west line of section 15, |
| No. 12-W Davis-Federal, | 10 feet from the north line and 2630 feet from the west line of section 15, |
| No. 13-W Davis-Federal, | 10 feet from the north line and 1310 feet from the west line of section 15, |
| No. 14-W Skelly-State, | 1310 feet from the north line and 2630 feet from the west line of section 16, |
| No. 15-W Skelly-State, | 2630 feet from the north line and 2630 feet from the west line of section 16. |

Very truly,

T. R. Havins, Jr.
T. R. Havins, Jr.,
UTEX EXPLORATION COMPANY

10-19-58
10-19-58

New Mexico Oil Conservation Commission
September 4, 1958
Page 2.

CCs: Mr. A. M. Speir
Mr. Jack Campbell
U.S.G.S., Artesia, Att: Mr. John A. Frost
Mr. William Barnhill (Certified)
Mrs. Blanche McCallister (Certified)

BOARDS AND 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. 1225
Order No. R-975

APPLICATION OF MOAB DRILLING COMPANY
FOR AUTHORIZATION TO INSTITUTE A
PILOT WATER FLOOD PROJECT THROUGH
6 WELLS IN SECTIONS 15 AND 16 OF
TOWNSHIP 16 SOUTH, RANGE 29 EAST, NMPM,
HIGH LONESOME POOL, EDDY COUNTY, NEW
MEXICO, AND FURTHER FOR APPROVAL OF
UNORTHODOX LOCATIONS FOR THE INJECTION
WELLS.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 10 o'clock a.m. on March 20, 1957, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the New Mexico Oil Conservation Commission, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 12th day of April, 1957, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner Daniel S. Nutter, 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 case and the subject matter thereof.
- (2) That the applicant, Moab Drilling Company, proposes to institute a pilot water flood project in the Queen Sand underlying certain of its leases in the High Lonesome Pool, Eddy County, New Mexico.
- (3) That the applicant proposes to accomplish the said water flooding operation by means of water injection through its Davis Federal Wells Nos. 12 and 22 located in Section 15, Township 16 South, Range 29 East, and its Skelly-State Wells Nos. 13, 14, 23, and 24, located in Section 16, Township 16 South, Range 29 East, NMPM, Eddy County, New Mexico.
- (4) That the proposed program for secondary recovery will promote conservation and tend to prevent waste through the production of oil which might not otherwise be recovered.
- (5) That the progress of the program should be reported periodically to the Commission.

(6) That the unorthodox location of the applicant's aforementioned injection wells should be approved in order to facilitate the operation of the project.

IT IS THEREFORE ORDERED:

1. That the application of Moab Drilling Company for permission to institute a pilot water flood project in the Queen sand underlying Sections 15 and 16, Township 16 South, Range 29 East, NMPM, High Lonesome Pool, Eddy County, New Mexico, be and the same is hereby granted.

2. That the following Moab Drilling Company wells be and the same are hereby approved as unorthodox locations and water injection wells:

No. 12-W Davis Federal	1310 feet from the North line and 1310 feet from the West line of Section 15.
No. 22-W Davis Federal	2630 feet from the North line and 1310 feet from the West line of Section 15.
No. 13-W Skelly-State	1310 feet from the North line and 10 feet from the East line of Section 16.
No. 14-W Skelly-State	1310 feet from the North line and 1330 feet from the East line of Section 16.
No. 23-W Skelly-State	2630 feet from the North line and 10 feet from the East line of Section 16.
No. 24-W Skelly-State	2630 feet from the North line and 1330 feet from the East line of Section 16,

all in Township 16 South, Range 29 East, NMPM, Eddy County, New Mexico.

3. That monthly progress reports on the subject water flood project be submitted to the Commission in accordance with Rule 1119 of the Commission Rules and Regulations.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

EDWIN L. ARCHER, Chairman

MURRAY E. MORGAN, Member

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



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. 1225
Order No. R-975-B

APPLICATION OF MOAB DRILLING COMPANY
AND UTEX EXPLORATION COMPANY FOR AN
ORDER AMENDING ORDER NO. R-975 TO
PERMIT THE CONVERSION OF AN ADDITIONAL
WATER INJECTION WELL IN ITS PILOT WATER
FLOOD PROJECT IN THE HIGH LONESOME POOL,
EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This case came on for hearing at 9 o'clock a.m. on May 28, 1958, 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 18th day of June, 1958, 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 Moab Drilling Company was authorized by Commission Order No. R-975, dated April 12, 1957, to institute a pilot water flood project in Sections 15 and 16 of Township 16 South, Range 29 East, NNPM, in the High Lonesome Pool, Eddy County, New Mexico, utilizing six water injection wells.

(3) That Utex Exploration Company now proposes to convert to water injection its Donohue-Federal No. 3 Well located 990 feet from the South line and 1650 feet from the West line of said Section 15.

(4) That it is necessary to convert the said Donohue-Federal No. 3 Well to water injection inasmuch as the Donohue-Federal No. 2 Well in the NE/4 SW/4 of said Section 15 has begun to produce water and that further delay of the conversion of the said Donohue-Federal No. 3 Well would result in waste.

-2-

Case No. 1225

Order No. R-975-B

(5) That the subject application should be approved.

IT IS THEREFORE ORDERED:

That the application of Moab Drilling Company and Utex Exploration Company for permission to convert to a water injection well the Utex Exploration Company Donohue-Federal No. 3 Well, located 990 feet from the South line and 1650 feet from the West line of Section 15, Township 16 South, Range 29 East, NMPN, in the High Lonesome Pool, Eddy County, New Mexico, be and the same is hereby approved.

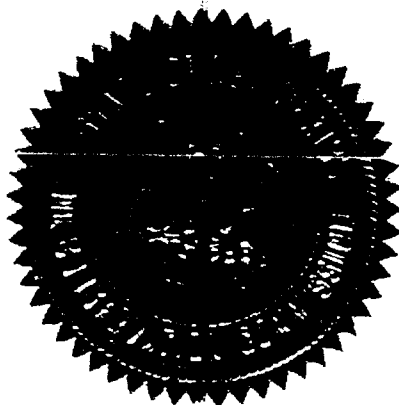
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


EDWIN L. MECHEM, Chairman


MURRAY E. MORGAN, Member


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



ir/

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Date 10-6-58

CASE NO. 1225

HEARING DATE 10-2-58

My recommendations for an order in the above numbered case (A) are as follows:

- as follows:
1. Grant authority to drill ^{water} injection well known as Moab - Davis Federal - #11-W 1310/N, 2630/W sec. 15-16S-29E.
 2. Need of this well ~~is~~ a back-up well is proven by the increased production of the Moab - Davis Federal #5, SWNW 15-16S-29E.
 3. Grant authority to request administrative approval ~~for~~ as needed for the following ~~circumstances~~ injection well locations:
Moab - Davis Federal #1-W, 10/N, 2630/W line sec. 15
" " " " #2-W, 10/N, 1310/W " " 15
" " " " #15-W, 1310/N, 2630/W " " 16
" " Skelly State #25-W, 2630/N, 2630/W " " 16
all in T16S-R.29E. NMPM.

Elizabeth M. Wy
Staff Member

DOCKET. EXAMINER HEARING OCTOBER 2, 1958

Oil Conservation Commission 9 a.m. Mabry Hall, State Capitol, Santa Fe

The following cases will be heard before Elvis A. Utz, Examiner:

CASE 1225: Application of Moab Drilling Company for authority to expand its water flood project in the High Lonesome Pool Eddy County, New Mexico, and for approval of certain unorthodox well locations therein. Applicant, in the above-styled cause, seeks an order authorizing the expansion of its water flood project in the High Lonesome Pool, Eddy County, New Mexico, to include its Davis-Federal Well No. 11-W, a proposed water injection well to be drilled on an unorthodox location 1310 feet from the North line and 2630 feet from the West line of Section 15, Township 16 South Range 29 East. Applicant further seeks an administrative procedure for the future expansion of said water flood project to include the following proposed water injection wells to be drilled on unorthodox locations.

Davis-Federal No. 1-W, 10 feet from the North line and 2630 feet from the West line of Section 15.

Davis-Federal No. 2-W; 10 feet from the North line and 1310 feet from the West line of Section 15.

Skelly-State No. 15-W; 1310 feet from the North line and 2630 feet from the West line of Section 16.

Skelly-State No. 25-W; 2630 feet from the North line and 2630 feet from the West line of Section 16.

All in Township 16 South, Range 29 East.

CASE 1511: Application of Newmont Oil Corporation for an order authorizing a pilot water flood project. Applicant, in the above-styled cause, seeks an order authorizing it to institute a pilot water flood project in the Loco Hills Pool in Eddy County, New Mexico. Applicant proposes to inject water into the Grayburg formation through one well in Section 1, Township 18 South, Range 29 East, and through five wells in Section 6, Township 18 South, Range 30 East, all in Eddy County, New Mexico.

CASE 1512: Application of Humble Oil & Refining Company for approval of a unit agreement. Applicant in the above-styled cause, seeks an order approving its Bandana Point Unit Agreement embracing approximately 14,293 acres of Federal, state and fee acreage in Township 22 South, Range 23 East, and Township 23 South, Ranges 23 East and 24 East all in Eddy County, New Mexico.

CASE 1513: Application of Drilling and Exploration Company, Inc. for an exception to the casing requirements for the potash-oil area in Lea and Eddy Counties, New Mexico. Applicant, in the above-styled cause, seeks an order authorizing an exception to the shallow-zone casing requirements for the potash-oil

CASE 1513 continued

area as set forth in Order No. R-111-A for its Ballard No. 1 Well located 1980 feet from the North and West lines of Section 27, Township 20 South, Range 34 East, Lea County, New Mexico. Applicant proposes to drill with cable tools to an approximate depth of 3,700 feet adjacent to the Lynch Pool. Applicant proposes to use the following casing program in lieu of the program prescribed for cable tool holes by Order R-111-A:

- (1) 13 3/8 inch casing to be cemented at approximately 70 feet.
- (2) 10 3/4 inch casing to be landed at approximately 700 feet.
- (3) 8 5/8 inch casing to be landed at approximately 1250 feet.
- (4) 5 1/2 inch casing to be cemented at the top of the producing formation with 50 sacks cement for testing purposes.
- (5) 10 3/4 inch casing and 8 5/8 inch casing to be pulled.
- (6) In the event commercial production is obtained, 5 1/2 inch casing to be perforated and cement circulated to surface.

CASE 1514: Application of Continental Oil Company for approval of a unit agreement. Applicant, in the above-styled cause, seeks an order approving its Tonto Deep Unit Agreement embracing 2,000 acres, more or less, of Federal and state lands in Township 18 South, Range 34 East, Lea County, New Mexico.

CASE 1515: Application of Continental Oil Company for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order establishing a 320-acre non-standard gas proration unit in the Jalmat Gas Pool consisting of the S/2 Section 22, Township 22 South, Range 36 East, Lea County, New Mexico, said unit to be dedicated to the applicant's Meyer B-22 Well No. 1 located 1650 feet from the South line and 990 feet from the East line of said Section 22.

CASE 1516: Application of El Paso Natural Gas Company for two non-standard gas proration units and for the approval of one unorthodox gas well location. Applicant, in the above-styled cause, seeks an order establishing a 120-acre non-standard gas proration unit in the Jalmat Gas Pool consisting of the N/2 SW/4 and the SW/4 SW/4 of Section 4, Township 25 South, Range 37 East, said unit to be dedicated to the applicant's Wells Federal No. 3 Well located 1980 feet from the South and West lines of said Section 4. Applicant further seeks the establishment of a 200-acre non-standard gas proration unit in the Jalmat Gas Pool consisting of the SE/4

CASE 1516 continued

SW/4 of Section 4 and the NW/4 of Section 9, Township 25 South, Range 37 East, Lea County, New Mexico, said unit to be dedicated to the applicant's Wells Federal No. 11 Well located 430 feet from the South line and 2317 feet from the West line of said Section 4. Applicant further seeks approval of the unorthodox gas well location of the said Wells Federal No. 11 Well.

CASE 1517: Application of Amerada Petroleum Corporation for a dual completion. Applicant in the above-styled cause, seeks an order authorizing the dual completion of its State BT "M" Well No. 2, located in the SE/4 NE/4 of Section 33, Township 11 South, Range 33 East, Lea County, New Mexico, in such a manner as to permit the production of gas from the upper Pennsylvanian formation adjacent to the Bagley-Upper Pennsylvanian Gas Pool, and the production of oil from the lower Pennsylvanian formation adjacent to the Bagley-Lower Pennsylvanian Gas Pool through the casing-tubing annulus and the tubing respectively.

CASE 1518: Application of Magnolia Petroleum Company for permission to commingle production from two separate oil pools. Applicant, in the above-styled cause, seeks an order authorizing it to commingle the production from the Wantz-Abo (oil) Pool and Terry-Blinbry Oil Pool on its Stephens Estate Lease comprising the SW/4 of Section 24, Township 21 South Range 37 East, Lea County, New Mexico.

CASE 1519: Application of Sunray Mid-Continent Oil Company and British American Oil Producing Company for an order authorizing a secondary recovery project. Applicants in the above-styled cause seek an order authorizing a secondary recovery project in the Bisti-Lower Gallup Oil Pool in San Juan County, New Mexico. Applicants propose to inject liquefied petroleum gas and dry gas into the Gallup formation through the British American Marye Well No. 2 located in the NE/4 NE/4 of Section 12, Township 25 North, Range 13 West, and the Sunray Mid-Continent Federal "C" Well No. 20 located in the SW/4 NW/4 of Section 7 Township 25 North Range 12 West, all in San Juan County, New Mexico.

CASE 1520: Application of Phillips Petroleum Company for permission to commingle oil produced from two separate pools. Applicant, in the above-styled cause, seeks an order authorizing it to commingle the oil produced on its Santa Fe Lease from the Yates formation adjacent to the Vacuum Yates Pool with the oil produced from the Vacuum (San Andres) Pool in four separate existing tack batteries located in Sections 26, 27, 28, and 33 Township 17 South, Range 35 East, Lea County, New Mexico.

CASE 1521: Application of Humble Oil and Refining Company for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its New Mexico State "V" Well No. 1, located 660 feet from the South and West lines of Section 10, Township 21 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Blinebry Oil Pool and the Drinkard Pool through parallel strings of $1\frac{1}{2}$ inch tubing.

NEW MEXICO OIL

APPLICATION

PILOT WING

HIGH LOW

EDDY C

RUSSELL ENGINEERING
PETROLEUM CONSULTANTS
CORE ANALYSTS
 101 PETROLEUM BUILDING
ABILENE, TEXAS

JAMES E. RUSSELL
~~P. M. BRIDGES~~
~~C. B. EDINGTON~~
 A. L. JENKE
 V. B. OGDEN
 R. O. PRENTICE

March 15, 1957

New Mexico Oil Conservation Commission
 Capitol Building
 Santa Fe, New Mexico

BEFORE THE
 OIL CONSERVATION COMMISSION
 SANTA FE, NEW MEXICO
 EXHIBIT No. 1
 CASE 1225

Gentlemen:

In reference to Case 1225, covering application of Moab Drilling Company for an order authorizing a pilot project in the High Lonesome Pool, Eddy County, New Mexico, and approval for the drilling of several un-orthodox locations for water injection wells, the following data are submitted.

Figure 1 is hereby submitted showing a map of the High Lonesome Pool. This map shows all of the present producing wells in this pool. The hachured area shows that portion of the field in which the proposed pilot water flood project will be located. Also shown on this figure is the location of the water supply well and the proposed injection wells.

The High Lonesome Pool is producing from the Queen Sand at an approximate depth of 1850 feet. None of the injection wells have been drilled as yet; however, a log of one of the pilot project producing wells, the Moab Drilling Company, Davis Federal No. 2 is attached. It is expected that the logs of the injection wells will be similar to this log. It is proposed to set 350 feet of 8 5/8" surface casing and run 4 1/2" - 9.5 pound continuous weld casing for the injection string. Cement will be circulated to the surface on the surface string and into the surface string on the injection string. The casing will be tested in the conventional manner.

A water supply well has been drilled 1700 feet from the east line and 1200 feet from the north line of Section 16, Township 16 South, Range 29 East, as shown on Figure 1. Water was encountered at 310 feet and is estimated to be producing at a rate of about 1500 barrels per day.

I. Reservoir and Fluid Characteristics.

The proposed pilot water flood project is located in the High Lonesome Pool, Eddy County, New Mexico. To the present time approximately 1,460 acres have been proven by development. The producing formation is the Queen Sand.

Figure 2 is a structure map on top of the Queen Sand. The reservoir is a monoclinal structure. Limits of the Field are defined by lack of porosity development rather than by structure. During the primary production phase, the reservoir has been producing under a dissolved gas drive. The original reservoir pressure is estimated at 690 psi. There is no evidence of a gas cap at the present time.

The proposed pilot water flood area encompasses 80 acres. Average depth to the top of the pay in the pilot flood area will be 1900 feet. Estimated average thickness of the sand in this area is 13.7 feet. From core analysis data the average porosity is estimated to be 11.7 percent and the average horizontal permeability is 23 millidarcys. Connate water saturation is estimated at 28 percent of the pore space. The produced oil is 34° API gravity and has a viscosity of 5.3 centipoises at 100 psi reservoir pressure.

II. Primary Production History and Present Status.

The first well in this field was completed on December 12, 1939. Figure 3 shows the composite production history of the High Lonesome Pool. Cumulative production as of February 1, 1957 has been 170,860 barrels of oil or 3,136 barrels per well for the 21 producing wells completed as of that date. The Field is in a stage of settled production with average producing rates at the present time at approximately 10 barrels per well per day.

There will be two producing wells in the project area. These wells will be Moab Drilling Company - Skelly State Lease Well No. 7 and Moab Drilling Company - Davis Federal Lease Well No. 2. At the present time these two wells are producing at an average rate of approximately 15

barrels per well per day. Cumulative production from the pilot project area has been approximately 25,000 barrels. The estimated oil saturation in the project area is approximately 66 percent.

There has been no gas repressuring in the High Lonesome Pool.

III. Injection Data.

The injection water will be secured from a sand at an approximate depth of 300 feet. The water from this sand is brackish and will be handled in a closed system. It is anticipated that the injected water will be filtered and treated with a bactericide and corrosion inhibitor.

The project area will be on a 40 acre five-spot pattern with approximately 1,320 feet between injection wells. It is estimated that the initial injection pressure will be 1,500 psi. At this injection pressure the injection rate will be approximately 150 barrels per well per day. All of the injection wells will be new wells and there will be no new oil wells drilled in the pilot area.

IV. Results Expected.

It is anticipated that at abandonment the project area will have produced approximately 300,000 barrels of oil as a direct result of water injection. The original oil in place in the project area is estimated at 1,345,000 barrels.

Handwritten notes:
2800000
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di

Attached hereto is other pertinent information regarding the High Lonesome Pool in general and the pilot water flood project area in particular.

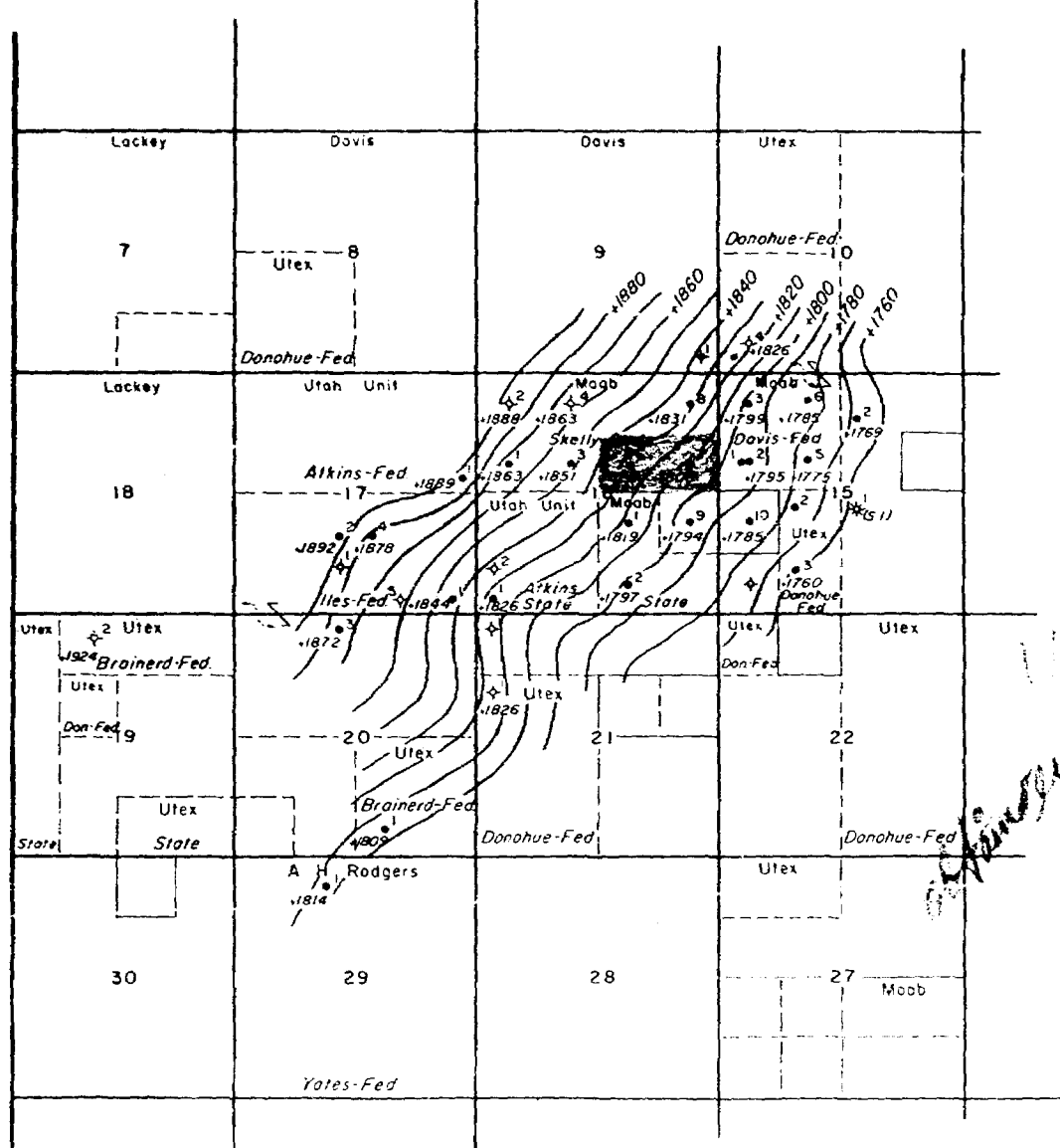
Very truly yours,

RUSSELL ENGINEERING

A handwritten signature in dark ink, appearing to read "P. M. Bridges", with a stylized, cursive flourish extending from the end.

P. M. Bridges

PMB:sc

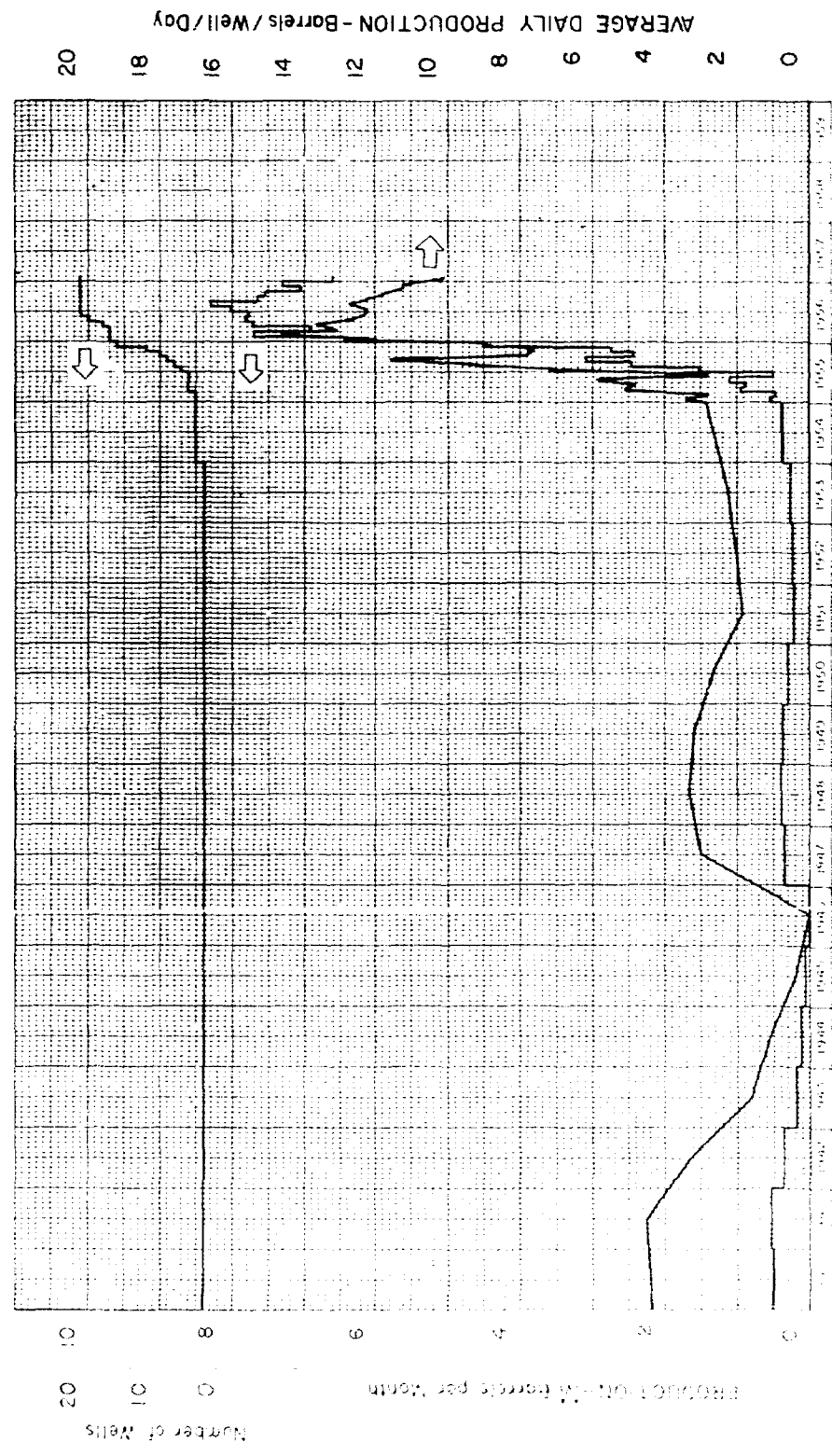


HIGH LONESOME POOL
Eddy County, New Mexico

STRUCTURE MAP
on Top of
QUEEN SAND
Contour Interval = 10 Feet

Fig. 2

February, 1957



PRODUCTION HISTORY

HIGH LONESOME POOL
Eddy County, New Mexico

Fig. 3

February, 1957

Before me
OIL CONSERVATION BOARD
Santa Fe, New Mexico
Date-March 20, 1967

IN THE MATTER OF:

CASE NO. 1995

APPROVED AND FORWARDED:

DEARNLEY - MEIER & ASSOCIATES
INCORPORATED
GENERAL LAW REPORTERS
ALBUQUERQUE - SANTA FE
3-6691 2-2211

DEARLEY, MEIER & ASSOCIATES
OIL AND GAS DIVISION
Santa Fe, New Mexico
March 20, 1957

IN RE: HATTER CO:

Application of Hatter Drilling Company for
an order authorizing a pilot waterflood project
in the High Lonesome Pool, Eddy County, New
Mexico, in exception to Rule 701 of the New
Mexico Oil Conservation Commission Statewide
Rules and Regulations, and further, approval
for the drilling of several unorthodox locations
for injection wells in said pool. Applicant,
in the above-styled cause, seeks an order
authorizing a pilot waterflood project in the
Queen formation of the High Lonesome Pool,
said project to be effected by means of water
injection through the drilling of approximately
six wells in Sections 15 and 16, Township 16
South, Range 22 East, Eddy County, New Mexico.
Applicant also seeks Commission approval for the
drilling of these six unorthodox locations to
serve as the water injection wells in the High
Lonesome Pool.

Case 1225

REPORT: Mr. Daniel S. Hatter, Examiner.

TRANSCRIPT OF PROCEEDINGS

Mr. Hatter: This is a case on the order will be Case
No. 1225.

Mr. Hatter: This is in the application of Hatter
Drilling Company, for an order authorizing a pilot waterflood
project in the High Lonesome Pool, Eddy County, New Mexico, in
exception to Rule 701 of the New Mexico Oil Conservation Commission
Statewide Rules and Regulations, and further, approval for the
drilling of several unorthodox locations for water injection wells

DEARNLEY, MEIER & ASSOCIATES
INCORPORATED
GENERAL LAW REPORTERS
ALBUQUERQUE - SANTA FE
3-5591 2-2211

in said case.

Q. Now, Mr. Examiner, I am appearing on behalf of the applicant. I am Donivan Stephenson, of the firm of Sykes and Stephenson, Box 669, Santa Fe, New Mexico. This docket number relates to a flood project depending on the action of the Commission, and experience with the pilot flood project. The existing flood may be as high as 100 feet, but this relates only to the pilot flood. Also by way of preliminary matter, I notice on our docket sheet that it mentions that this application is in exception to Rule 701. I believe that application will show that the Commission's Rule 701 has been complied with. We are not asking any exception there.

I would like to call as my first witness Mr. T. R. Davins.

Q. Now, Mr. Davins, this Mr. Stephenson. This water injection is prohibited by Rule 701, except after notice of hearing, and that's the reason it is so advertised. You did comply with the subsequent provisions of it in your application but it, nevertheless, provides a means to permit water injection.

Mr. Davins: One question. I think also that you mentioned that it is only for the pilot water flood. However, the case was advertised and we will also cover the location of certain wells or monitoring locations.

Q. Now, Mr. Davins, what is covered, Mr. Stephenson, with respect to injection rules.

T. R. Davins: Yes, Mr. Examiner.

Q. Now, Mr. Davins, what is covered, Mr. Stephenson, with respect to

follows:

DIRECT EXAMINATION

BY MR. SPENDERSON:

Q Would you state your full name, please.

A P. R. Havins, Jr.

Q Where do you reside, Mr. Havins?

A Abilene, Texas.

Q By whom are you employed?

A Utex Exploration Company.

Q In what capacity?

A I'm the manager of the Land and Production Department.

Q You appear on behalf of the applicant, Moab Drilling Company?

A Yes, sir.

Q What is the Moab Drilling Company?

A Moab Drilling Company is a proprietorship owned by Charles A. Stein of Moab, Utah.

Q And what is the relationship, if any, between Moab Drilling Company and Utex Exploration Company, Inc.?

A Utex Exploration Company is a Corporation of which Mr. Stein is the president and chief stockholder.

Q Does Utex Exploration Company render geological and services to the applicant with this pilot flood project?

A Yes, we have.

Q Mr. Havins, said application form number 10, 1007 has been twice submitted, has it not?

A Yes, sir.

Q On February 20, 1967 and on March 10, 1967?

A Yes, sir.

Q And that is with respect to the locations of the proposed injection wells.

A That is correct.

Q At whose request were those amendments made?

A After our first application of February 21 was made, we talked to the USGS people in Roswell and also to Mr. Jenkins, both representatives of those agencies, and they suggested that we amend our application to show the proposed injection wells not to be exactly on the lease lines, but rather to be a few feet off the lease lines in order that they may be assigned to a forty acre operation unit.

Q With respect to the eighty acres described in your application as being within the pilot-- proposed pilot flood project, who are the owners of the leases on those two areas?

A Mosb Drilling Company owns the leases on both of them.

Q Now referring, Mr. Davins, to the exhibits attached to your application relating to lease owners in the area of the proposed pilot flood area, have you received waivers or approval of this docket number from vendors of those lease owners? And thereof?

A Yes, we have. The proposed pilot flood has been discussed with a number of these lease owners and we have waivers for covering the surface in Section 3 and Section 10 which is owned by Paul Davis and the members of his family, and we have waivers from Mr. Davis and his associates.

Q I will need your name and title before I can enter this on the docket with our records and our exhibits. Is this correct?

One and ask you if there are the values to which we refer?

(Marked for Identification Joseph's
Exhibit Number One.)

A The first three are the ones to which I referred. The other two are letters from Mr. Mills Colligan and Mr. Claude Hall who have, as I understand it, some interest in some of the adjacent acreage and also have some overriding royalty interest.

Q Also, I notice on your list there, with reference to certain of these surrounding areas, Utex Exploration Company is listed as owner. You say you are employed by Utex?

A That is correct.

Q And are authorized to speak for them?

A Yes, I'm authorized to speak for Utex Exploration Company and am a partner in a lease in Section 10 and Standard Uranium Corporation.

Q And I take it that neither of those entities has any objection?

A No objection, no, sir.

Q I also notice that Mr. Charles A. Stein is listed as an adjoining or nearby lease holder.

A That is correct.

Q Are you authorized to speak for him or what?

A I am.

Q And he does not have any objection to that?

A No, no objection.

Q Now, you said in your testimony that the proposed collection of

is correct, sir.

Q I will ask you certain documents which I will ask to be marked as Exhibit Number Two and put it into a letter to the USGS relating to this application, and apply it to your application?

A Yes the first letter is a letter to the acting oil and gas supervisor at Roswell in which I set out in detail, and in which I enclosed copies of our applications to the New Mexico Oil Conservation Commission. I outlined in this letter what we had in mind, and the manner in which we were proceeding, and asked the supervisor to notify us if they had any objections to the manner in which we were proceeding, and attached to this letter is a reply to my letter signed by John A. Frost, District Engineer for the USGS in Artesia, in which he states that-- better just leave that stand.

Q I will ask that the documents to which the witness has referred be marked as Applicant's Exhibit Two. Now you have specified in your application, have you not, that you have developed a water source for this flooding?

(Marked for Identification Hoob's Exhibit Number Two.)

A That is correct.

Q And that is on State property, is it not?

A That is on State property.

Q Is that water source at the place specified in your application? Or when, the application arrived, stated the location, of course.

A Yes, it was.

Q Now inasmuch as a portion of this water will be used to flood a Federal lease, have you obtained a water appropriating permit?

A Yes, we have.

Q I hand you what I will ask to be marked as Applicant's Exhibit Number Three, and ask you if that is a photographic copy of the water appropriating permit?

A It is.

(Marked for identification as Exhibit Number Three.)

Q Subsequent to the issuance of this permit you developed your water source?

A That is correct.

Q Now, I notice that that is made out to Otex Exploration Company. Will all the rights obtained by that permit be made available to the applicant?

A They will.

Q Is it your intention to make application for a water lease to the State Land Commissioners as soon as it may be conveniently done?

A It is our intention.

Q Mr. Nevins, you have signed the application and all amendments thereto on behalf of the applicant, Tebb Drilling Company. Are the statements contained in your application and all amendments thereto true and correct to the best of your knowledge and belief?

A Yes, are.

Q In the event this application is approved by the Commission, will you diligently comply with all statutes of the State of New Mexico and all laws and regulations of the New Mexico Oil Conservation Commission relating to your actions under the project?

A. Yes, sir.: That completes my examination of this witness, Mr. Examiner.

Mr. GIBSON: Does any one have any questions of the witness? Mr. Hanlin.

OneSo: www.oneso.com

BY MR. TANKIN:

Q Warren Mankin of the Oil Conservation Commission. Do you have any kind of geological report or report showing the structure of the Queen Formation in this area?

A Yes, we do. I believe that testimony will be the technical testimony and will be covered by another witness.

Q. Oh, there is another witness?

4 Yes, we have another expert witness who is going to cover that.

Mr. JANKIN: Will this witness be concerned only with application of lead?

Mr. SPILGSON: Primarily land.

14. Allen: as to the question of location, that will be covered by someone else.

Q. And what is it? By the amount, you.

14. NOTE: Post mortem box location will be covered by
this case witness?

7. 2018. 6. 19.

41. Question: Is that all you have, or...?

3. 10. 1994

1999-2000, 2001-2002, 2003-2004, 2005-2006, 2007-2008, 2009-2010, 2011-2012, 2013-2014, 2015-2016, 2017-2018, 2019-2020, 2021-2022, 2023-2024, 2025-2026, 2027-2028, 2029-2030, 2031-2032, 2033-2034, 2035-2036, 2037-2038, 2039-2040, 2041-2042, 2043-2044, 2045-2046, 2047-2048, 2049-2050, 2051-2052, 2053-2054, 2055-2056, 2057-2058, 2059-2060, 2061-2062, 2063-2064, 2065-2066, 2067-2068, 2069-2070, 2071-2072, 2073-2074, 2075-2076, 2077-2078, 2079-2080, 2081-2082, 2083-2084, 2085-2086, 2087-2088, 2089-2090, 2091-2092, 2093-2094, 2095-2096, 2097-2098, 2099-2100, 2101-2102, 2103-2104, 2105-2106, 2107-2108, 2109-2110, 2111-2112, 2113-2114, 2115-2116, 2117-2118, 2119-2120, 2121-2122, 2123-2124, 2125-2126, 2127-2128, 2129-2130, 2131-2132, 2133-2134, 2135-2136, 2137-2138, 2139-2140, 2141-2142, 2143-2144, 2145-2146, 2147-2148, 2149-2150, 2151-2152, 2153-2154, 2155-2156, 2157-2158, 2159-2160, 2161-2162, 2163-2164, 2165-2166, 2167-2168, 2169-2170, 2171-2172, 2173-2174, 2175-2176, 2177-2178, 2179-2180, 2181-2182, 2183-2184, 2185-2186, 2187-2188, 2189-2190, 2191-2192, 2193-2194, 2195-2196, 2197-2198, 2199-2200, 2201-2202, 2203-2204, 2205-2206, 2207-2208, 2209-2210, 2211-2212, 2213-2214, 2215-2216, 2217-2218, 2219-2220, 2221-2222, 2223-2224, 2225-2226, 2227-2228, 2229-2230, 2231-2232, 2233-2234, 2235-2236, 2237-2238, 2239-2240, 2241-2242, 2243-2244, 2245-2246, 2247-2248, 2249-2250, 2251-2252, 2253-2254, 2255-2256, 2257-2258, 2259-2260, 2261-2262, 2263-2264, 2265-2266, 2267-2268, 2269-2270, 2271-2272, 2273-2274, 2275-2276, 2277-2278, 2279-2280, 2281-2282, 2283-2284, 2285-2286, 2287-2288, 2289-2290, 2291-2292, 2293-2294, 2295-2296, 2297-2298, 2299-2300, 2301-2302, 2303-2304, 2305-2306, 2307-2308, 2309-2310, 2311-2312, 2313-2314, 2315-2316, 2317-2318, 2319-2320, 2321-2322, 2323-2324, 2325-2326, 2327-2328, 2329-2330, 2331-2332, 2333-2334, 2335-2336, 2337-2338, 2339-2340, 2341-2342, 2343-2344, 2345-2346, 2347-2348, 2349-2350, 2351-2352, 2353-2354, 2355-2356, 2357-2358, 2359-2360, 2361-2362, 2363-2364, 2365-2366, 2367-2368, 2369-2370, 2371-2372, 2373-2374, 2375-2376, 2377-2378, 2379-2380, 2381-2382, 2383-2384, 2385-2386, 2387-2388, 2389-2390, 2391-2392, 2393-2394, 2395-2396, 2397-2398, 2399-2400, 2401-2402, 2403-2404, 2405-2406, 2407-2408, 2409-2410, 2411-2412, 2413-2414, 2415-2416, 2417-2418, 2419-2420, 2421-2422, 2423-2424, 2425-2426, 2427-2428, 2429-2430, 2431-2432, 2433-2434, 2435-2436, 2437-2438, 2439-2440, 2441-2442, 2443-2444, 2445-2446, 2447-2448, 2449-2450, 2451-2452, 2453-2454, 2455-2456, 2457-2458, 2459-2460, 2461-2462, 2463-2464, 2465-2466, 2467-2468, 2469-2470, 2471-2472, 2473-2474, 2475-2476, 2477-2478, 2479-2480, 2481-2482, 2483-2484, 2485-2486, 2487-2488, 2489-2490, 2491-2492, 2493-2494, 2495-2496, 2497-2498, 2499-2500, 2501-2502, 2503-2504, 2505-2506, 2507-2508, 2509-2510, 2511-2512, 2513-2514, 2515-2516, 2517-2518, 2519-2520, 2521-2522, 2523-2524, 2525-2526, 2527-2528, 2529-2530, 2531-2532, 2533-2534, 2535-2536, 2537-2538, 2539-2540, 2541-2542, 2543-2544, 2545-2546, 2547-2548, 2549-2550, 2551-2552, 2553-2554, 2555-2556, 2557-2558, 2559-2560, 2561-2562, 2563-2564, 2565-2566, 2567-2568, 2569-2570, 2571-2572, 2573-2574, 2575-2576, 2577-2578, 2579-2580, 2581-2582, 2583-2584, 2585-2586, 2587-2588, 2589-2590, 2591-2592, 2593-2594, 2595-2596, 2597-2598, 2599-2600, 2601-2602, 2603-2604, 2605-2606, 2607-2608, 2609-2610, 2611-2612, 2613-2614, 2615-2616, 2617-2618, 2619-2620, 2621-2622, 2623-2624, 2625-2626, 2627-2628, 2629-2630, 2631-2632, 2633-2634, 2635-2636, 2637-2638, 2639-2640, 2641-2642, 2643-2644, 2645-2646, 2647-2648, 2649-2650, 2651-2652, 2653-2654, 2655-2656, 2657-2658, 2659-2660, 2661-2662, 2663-2664, 2665-2666, 2667-2668, 2669-2670, 2671-2672, 2673-2674, 2675-2676, 2677-2678, 2679-2680, 2681-2682, 2683-2684, 2685-2686, 2687-2688, 2689-2690, 2691-2692, 2693-2694, 2695-2696, 2697-2698, 2699-2700, 2701-2702, 2703-2704, 2705-2706, 2707-2708, 2709-2710, 2711-2712, 2713-2714, 2715-2716, 2717-2718, 2719-2720, 2721-2722, 2723-2724, 2725-2726, 2727-2728, 2729-2730, 2731-2732, 2733-2734, 2735-2736, 2737-2738, 2739-2740, 2741-2742, 27

noted that one of the unorthodox locations falls on another state lease, other than what is being claimed, is that your intention? I'm speaking now of the Skelly state. You speak of it as number 24 Skelly State. However, I believe the location does not place it on the Skelly State lease, it is on the State lease rather than the Skelly State lease.

A I don't think so, Mr. Mankin.

Q Well I have your last amendment dated March 14, which states that the Number 24 Skelly shall be located 2650 from the north line and 1500 from the east line of Section 16, which would put it on, which would move the location southwest of the location that was proposed on the original application which would put it on State lease rather than the Skelly State lease. I wonder if you were aware of that?

A No, I was not. That wasn't our intentions, I believe.

Q The application says 2650 from the north line, that is an error?

A That is an error, and it should be from the south line of that section. I believe that's what.

Q. Q. A. Q. Could you like to take certain that that is the case and amend?

A. A. Q. A. Q. Could I make inquiry of my expert on that and depending on the answer I will ask you to amend that.

Q. A. Q. A. Q. Could I make inquiry of my expert on that and depending on the answer I will ask you to amend that.

(Discussion off the record)

Q. A. Q. A. Q. Could I make inquiry of my expert on that and depending on the answer I will ask you to amend that.

A That is correct, yes, sir.

Q. HARKIN: Mr. Davis, your general application is correct as stated as to location and the place to which it is located?

A It is correct, yes, sir.

Q. HARKIN: I have nothing further.

BY MR. HARKIN:

Q. Mr. Davis, I would like to have something clarified, please. These various waivers that you submitted, could you tell me which acreage they cover in particular?

A I believe I can, sir.

Q. Now the waiver from Mr. Paul Davis, which acreage does he have?

A He owns all of Section 9.

Q. Now is he the working interest owner?

A He is the working interest owner, yes, sir. Mrs. Green and Mrs. Butcher own that acreage together. You have waivers from all three of them. He owns the working interest in the southwest quarter of Section 10 with the exception of the southwest forty acres of that quarter section.

Q. And who owns the southeast quarter of Section 10?

A Tom William Green.

Q. Now what are, Mr. William Green's acreage does he own?

A Mr. William Green is co-owner with the Davis and Green and the Davis, Green and Green and Mr. Davis. I am positive of no ownership of any lands in the acreage that are described in these now.

Q And you speak for Utex as well as for Hoab, is that correct, sir?

A That is correct.

Q And you are waiving any objections from Utex for the lease in the East Half of the Southwest Quarter of Section 15?

A That is correct, yes, sir. Part eighty acres is owned by Utex Exploration Company and Standard Petroleum Corporation. I'm authorized to speak for the both of them.

Q Then you mentioned Mr. Stein had an adjoining lease somewhere?

A He owns the Southwest Quarter of Section 16 on the plat, that is shown on that unit. That is, Mr. Stein is the recorded owner of that lease and I'm authorized to waive any objections in his behalf.

Q The owns the East Half of-- or the West Half of the Southwest Quarter, is that part of the Hoab lease?

A Of 16?

Q Yes, sir.

A Hoab Drilling Company owns the Northwest Quarter of the Southwest Quarter of Section 16. John Philp owns the Southwest Quarter of the Southwest Quarter of Section 16. There is a dry hole shown in that part, acres.

Q Mr. Philp: Thank you. Does any one else have any objections at the present? No, thank you.

Q Mr. Levin:

Q Mr. Levin, have you had any objection from the people you contacted surrounding this unit?

A No have not an objection from any one.

Q. Now, to its formation? Every one that you have contacted has agreed to waive any objections?

A. Some of the people have not been approached with that in mind because there are some of these operators with whom I have not had any recent contact. My statement was that I have not had any objections from any one. I can't tell you that everybody has approved it because I have not talked to Mr. Trigg, nor have I talked to Mr. Barhill.

Q. Mr. Barhill owns the East half of Section 15?

A. With the exception of forty acres, which is out out there, sir, as shown on our plat.

Q. Mr. GOLLER: I believe that's all, thank you.

Q. Mr. GOLLER: If there are no further questions of the witness you may be excused.

Q. Mr. GOLLER: Did you have a question, Mr. Irby?

Mr. Irby: No, my question was asked, thank you.

(Witness excused.)

P. M. S A I D G A S

Called as a witness, having first duly sworn, testified as follows:

DAVID L. GOLLER

Q. Mr. GOLLER:

Could you state your full name, please?

A. D. L. Goller.

Q. And where do you reside, Mr. Goller?

A. Dallas, Texas.

Q. And what work are you associated?

A Russell Engineering.

Q Of Abilene, Texas?

A Of Abilene, Texas.

Q And what is your profession?

A Petroleum Engineer.

Q Where did you obtain your education, professional education, Mr. Bridges?

A I received a Bachelor of Science from Lamar Institute of Technology, in 1943 in engineering.

Q Since 1943 what business have you been in?

A I have been engaged continuously in the Petroleum industry since that time.

Q How long have you been with Russell Engineering?

A For the past three years.

Q In what capacity?

A As a Petroleum Engineer.

Q Are you licensed to practice as such in any state?

A I'm a registered professional engineer in the state of Texas.

Q Is that specifically with reference to petroleum engineering?

A Petroleum engineering and natural gas engineering.

Q And do you have certification pending in New Mexico for that certification?

A Yes, sir, I do.

Q I just wish to submit the qualifications of the witness.

A Yes, sir, they are acceptable.

Q Mr. Delaney, have you made engineering studies of this pilot flooding application which is now under consideration?

A Yes, sir, we have. We have been working on this field and particular-- This field in general and this project in particular for approximately the last eighteen months.

Q Have you, Mr. Bridges, prepared a report of your findings, conclusions, recommendations and suggestions in the course of procedure for this pilot flood now under consideration?

A Yes, sir, we have.

Q I will hand you a document which I will ask to have marked as Applicant's Exhibit Number Four. A Yes, sir.

(Marked for identification Moab's Exhibit Number Four.)

Q And ask you if that is, ask you if that is the report to which you referred? A It is.

MR. BRIDGES: Mr. Examiner, we have several copies of this. I intended to give you these copies.

Q Was that report prepared under your supervision and control and based upon your studies of this particular pilot flood project?

A Yes, sir, it was.

Q Are the statements therein contained, true and correct to the best of your knowledge and belief? A They are.

Q And the opinions therein stated are opinions which you hold, based upon your experience and professional qualifications?

A That is correct.

Q Mr. Delaney, Mr. Delaney has testified that you have

developed a water source at a point specified in the application. In your opinion, is that water source sufficient to carry out this pilot flooding project?

A We anticipate initially to inject a volume of about nine hundred barrels a day into the six proposed injection wells. Tests have been run on the water source wells indicated. The wells have a capacity in the neighborhood of fifteen hundred barrels a day, which will be well in excess of the requirement for the flood project.

Q Have you, Mr. Bridges, conducted any tests on this water as to its mineral contents and suitability for this operation?

A We have. The testing, which was done in our laboratory, indicates that this water source is a saturated salt solution containing approximately two hundred and eighty thousand parts per million total solids.

Q Were those tests conducted under your supervision and control?

A Yes, were.

Q With reference to the location of the six proposed injection wells, would you please advise for the Examiner the considerations which you took into account in determining the locations which have been specified in the application.

A We made a study of this field to determine what, in our opinion, would be the most suitable pattern of injection wells. As a result of this study, we determined that a pattern, or so-called five-spot type of flood would be the most suitable to high permeability and injectivity wells will surround each producer

and push the oil into the producing wells. Injection wells have been located as close to the lease line as we were able to do so, to prevent the migration of oil across lease lines. This will not make necessary unit stations of this property, since all of the oil, which is on a lease, will be recovered on that lease.

I noticed in your report on page 3, paragraph 4 that you make certain estimates with respect to the amount of oil which will be recoverable as a result of this project. Would you state those amounts and explain to the examiner whether or not, in your opinion, that will be recoverable, and whether or not that amount would be recoverable if this approval were not obtained.

A We anticipate that as a direct result of water injection into the pilot flood area an additional three hundred thousand barrels of oil will be recovered from those acres, which would not be recovered under continued primary operations.

Q Would you explain a little more fully the break-down on that two hundred and eighty thousand parts per million of total solids in the water test.

A That water sample well was completed approximately three weeks ago. We got an initial sample in our laboratory, which gave us some preliminary tests on it, and indicated the water to be considerably saltier than we had anticipated it to be from test results. We have since had more complete analysis of that water and will wish time to have analyzed the water sample that we had obtained initially and to compare it. We have had subsequent tests on that well over the past week-end and those results substantiate the first one, and show that the amount of solids

the complete analysis, which will be furnished to your office when it is available, but we do not as yet have a complete break-down on those total solids. The total solids will be determined by chloride determination and geoelectric means. The chloride determination was one hundred seventy thousand parts per million.

Mr. AGNEW: That concludes my examination of the witness, Mr. Examiner.

MR. HUFFAR: Any one have a question? Mr. Rankin.

CROSS EXAMINATION

BY Mr. RANKIN:

Q Mr. Bridges, I note from your structure map in your report that this is a very general dipping structure in the localized area. What is the general regional picture, is it there is no closure in the area at all?

A No, sir, there is not. We feel that they are individual. This is a stratigraphic trap with the up dip limit of the pool being a porosity pinch out.

Q Porosity pinch out? A Yes, sir.

Q Generally, referring to section four of your report, you anticipate that at abandonment it will have produced three hundred thousand barrels of oil is that from the two wells that is within the eighty acres of the project? A That is correct.

Q However, there is wells around this area, oil wells surrounding this eighty acre project, how many are there in that area hundred thousand. A That is correct.

Q In your original oil is about one million three hundred and twenty thousand barrels, is that from the two wells only?

A That is from the already acres only.

Q Which is the Federal, Moab Drilling Company Federal Davis Number Two, and Moab Drilling Company Skelly Number Seven?

A That is correct.

Q Will not the offset wells to this five spot program, such as the Moab Drilling Company's Skelly State Number Six, Eight, Nine and Ten, and Moab Drilling Company's Federal Davis Number Three and Ute Federal Number Two all obtain some beneficial effect from this flood?

A It might be in line to give a little background on how we anticipate proceeding on this pilot flood project. There are several questions which we would like to obtain quantitative answers to before we proceed into a full field flood. That is the reason for the proposed pilot project. We expect that results from this pilot project will be obtained probably within a year's time. That quantity of oil which we have stated we expect to recover from the pilot project, will be recovered after a period probably of around fifteen years. We anticipate that should the result of this pilot project be favorable, the total field flood will then be initiated, although there will be some partial response to offsetting wells to the pilot project, well to the time that the full-field job is initiated, but will be to a minor extent probably.

Q How indicated that it will be approximately a year before you will be able to obtain beneficial results from the flood?

A No, we want within a year to have enough results from the

flood to be able to evaluate it.

Q Well then, in a period of less than a year you would expect to have some results which will either prove or disprove the project.

A We hope to, yes, sir.

Q Do you feel that you have-- what portions of fill-up do you expect to have before you get any beneficial results?

A The preliminary production from this field has been exceptionally low, so that the fill-up volume is relatively small. These wells in this particular area have all been drilled within the last two years, and we expect to reach fill-up in this area in a period of probably of about six months.

Q The two producing wells within this water flood area, approximately how much pay sections do you have in those wells? That is, net pay?

A It is approximately twenty-five feet, and those two wells, as best we can estimate, produced accumulative production of about twenty-five thousand barrels.

Q The injection wells, in what section of the Green Formation do you anticipate completing those?

A They will be completed in the entire pay section.

Q The entire pay section will be open hole?

A That is a point we have not been completely satisfied yet. We anticipate-- on where injection wells are drilled and completed, our present problem will be working with the injection rates, and we anticipate to see all the effects of water flood evaluation to see where we have in the most the production.

this twenty-five feet that you speak of, is it fairly clean sand or is it such that you might have to selectively inject into the formation?

A. I am not anticipating any selective injections, no, sir, it is twenty-five foot section and probably about thirty-five or forty foot cross section. The remainder of it being low-porosity sand with occasionally anhydride streamers. Incidentally, there is no water in the Green Sand in this area.

Q. At the end of this pilot flood, if it is successful, what plans would you have at that time for additional water or additional development? Do you have anything that you could present at this time?

A. Well, there, in addition to evaluating the injectivity of the sand during the course of pilot project, we will also be evaluating the productivity of our water source. We know that water from wells has been drilled in the area; that this water sand is quite extensive throughout this area, and we will probably have enough information at that time to make a pretty good estimate of how much additional water supply, water we will need.

Q. So your present plans would be that you would develop further the shallow source the water?

A. That is correct.

Q. Is the project you have described to consist

A. That is correct.

Q. No water source has not been drilled in the area of the State Engineers Office has it?

Q No, sir, it was not.

Q Source of the high content of the salt?

A Well this is outside any water-- any of the water basins, and I'm sure from the salinity, just we got on this test, that they will probably not want to include it in one. We are not limited in any way by the State Engineers Office to the use of this water at the present time.

Mr. HAHAIN: I believe that's all.

BY MR. HOFFER:

Q Is the water compatible with the reservoir, or will it have to be treated?

A We do not believe that any treatment of the water from a compatible standpoint will be necessary. We do intend to treat it for control of corrosion and also for control of bacteria.

Mr. Hoffer: Does any one else have any further questions of the witness?

BY Mr. COMLEY:

Q Mr. Bridges, would the injection into each of the six wells be approximately equalized?

A Yes, sir, it would be.

Q Could you estimate for us, Mr. Bridges, what the radius area affected in front of the well would be? And the radius of the affected area would be?

A That depends on how large you see injection is made for it. To maintain the opportunity to offset the whole area of the reservoir of injection water.

Q How many six well at

Q Now, for a well. Take a particular well and inject one sixth of nine hundred barrels per day into it, could you estimate for me what the radial effect would be.

A I would guess-- I have not made figures, I have not made calculations along those lines, but I would guess by the time we have evaluated the pilot project, which we are anticipating will be approximately a year's time, injecting at the rate of one hundred fifty barrels a day, that we probably will have not swept out more than about six per cent of the total area within the reservoirs. That is based on our anticipated life of fourteen years.

Q You misunderstand my question, Mr. Bridges. I'm trying to determine how many feet from the injection well.

A Well if you will pardon me for a minute while I get out my slide rule I can give you a number. Approximately one hundred and fifty feet.

Q By any stretch of the imagination it couldn't reach thirteen hundred and ten feet? It couldn't effect a well thirteen hundred and ten feet away, or a lease?

A No, we don't believe it will.

MR. HULL: I think what Mr. Coolidge is driving at, Mr. Bridges, is the possibility of a lease area which you have not secured a waiver of objection as to which both the State and the Federal Government does not control, any of these leases that would be under Federal Government control would not be affected by this pilot project. Before the time that you had a chance to evaluate the floor and see what whether you want to expand it or not.

A: I would like to point out that this was one of the considerations. In the location of this pilot project, you will notice that it is completely surrounded by producing well in the acreage involved, Moab and Utex and so on, and it is probably pretty much of a practical impossibility that any effect would not be noted on it. I assume that you are speaking of this acreage in Section 15. It is practically impossible that any of that, any well on that acreage would be effected prior to noticing an effect on our offsetting wells, which is an operated by Moab or Utex, so that if for any reason, any peculiar reservoir characteristics which we do not foresee at this time, if the water should start to channel we will be able to catch it, catch that effect on our producing wells prior to the time that it may affect any offsetting acreage.

MR. COOLIDGE: You mean that the Moab Number Five and Six and the Utex Number Two would detect any effect to the east, any influence to the east before it could reach the Jarhill acreage?

A: That is correct.

MR. COOLIDGE: I believe that's all.

MR. JARHILL: Any further questions of the witness?

MR. JARHILL:

A: Mr. Jarhill, to go further in fact, you indicated that there would be no effect. Did you not say that there would be, not be any detrimental effect? In other words, there is likely to be beneficial effect and not detrimental effect due to this flood in this production.

A: Yes, that is correct.

17
Mr. GIBSON: It is also stated by some kind of nature, channelling occurred that they would notice it in their own wells before the other fellow felt it.

Mr. LAWRENCE: But likewise, from a structural standpoint, it isn't likely that there wouldn't be any detrimental effect to the lease on the southeast in this short period of time, is that not true?

A That's true.

Mr. HENDERSON: Any one else have any questions of Mr. Bridges?

Mr. STEPHENSON: One more question. Mr. Bridges, based upon all the information available to you and your professional opinion, in your opinion, are these six injection wells, at the location described in the application, located at such points as to constitute the most practical method of flooding this field, this oilfield, and also to effect note a maximum recovery?

A Yes, sir, they are.

Mr. STEPHENSON: I believe that's all.

Mr. HENDERSON: If there are no further questions of the witness, you may be excused.

(Witness excused.)

Mr. STEPHENSON: Mr. Henderson, in your affidavit you present that the various exhibits which you have had marked, which I believe constitute application for the lease, inclusive be certified that the record was certified-- the record was certified and sealed as a part of the record in this case.

Mr. HENDERSON: I am not sure, I believe to the introduction of those exhibits, are they to be taken into account, Mr. Henderson?

will be admitted.

Mr. STEPHENSON: Mr. Coolley, I am going to say that the application should be accepted and that the recovery of this reserve, which would otherwise be lost, is in the best interest to the State of New Mexico. I shall undertake to comply with all the statutes, rules, and regulations of the Oil Conservation Commission.

Mr. STEPHENSON: Thank you. Now, are we going any further in this case?

Mr. COOLEY: I take it, Mr. Stephenson, that the basis for your application for the six unorthodox locations is that these locations will best facilitate the introduction of water into the reservoir, and for the pilotflood?

Mr. STEPHENSON: Mr. Cooley, not being an expert I would say generally that our primary contention in that behalf is that the locations, as specified in the application as amended, are the most practical, based upon the expert testimony, and will result in the greatest recovery of otherwise unrecoverable reserves, and further I should like to invite your attention to the testimony to the effect that there will be no lateral movement of oil across lease lines so far as we can determine, and that is one of the considerations for such a location.

Mr. COOLEY: Thank you.

Mr. STEPHENSON: Now, if there is nothing further in this case, we will take the case under advisement and proceed to the next hearing.

STATE OF NEW MEXICO)
COUNTY OF SANTIAGO)

I, J. A. Trujillo, 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 28th day of March, 1957.

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner's Hearing of Case No. 1225
held by me on March 20, 1957.

Samuel A. Austin
Commissioner
New Mexico Oil Conservation Commission

J. A. Trujillo
Court Reporter

APPROVED AND FORWARDED:

Notary Public

Ute Exploration Company

PETROLEUM DIVISION
ROOM 29, BACON BUILDING
P. O. BOX 628
ABILENE, TEXAS

T. R. HAVINS, JR.
MOAB LAND AND PRODUCTION DEPARTMENTS

CHARLES A. STEEN
PRESIDENT
CHIEF GEOLOGIST

J. C. ASHBY
GENERAL MANAGER

February 28, 1957

New Mexico Oil Conservation Commission
125 Mabry Hall
Capitol Building
Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr.

Gentlemen:

This letter amends our application of February 21, 1957 for a hearing on a pilot waterflood project in the High Lonesome Pool, T. 16 S., R. 29 E., Eddy County, New Mexico.

In addition to approval of the matters included in the February 21st application, approval is asked for the following unorthodox locations, each of which will be used as a water injection well:

No. 12^{1/2}-W Davis Federal, 1310 feet from N. & W. lines Sec. 15.

No. 22^{1/2}-W Davis-Federal, 2630 feet from N. and 1310 feet from W. lines Sec. 15.

No. 13^{1/2}-W Skelly-State, 1310 feet from N. and 10 feet from E. lines Sec. 16.

No. 14^{1/2}-W Skelly-State, 1310 feet from N. and ~~2650~~¹²³⁸ feet from E. lines Sec. 16.

No. 23^{1/2}-W Skelly-State, 2630 feet from N. and 10 feet from E. lines Sec. 16.

No. 24^{1/2}-W Skelly-State, 2630 feet from N. and ~~2650~~¹²³⁸ feet from E. lines Sec. 16.

Please set all of these matters for hearing at your earliest convenience. A hearing before an examiner will be acceptable with us.

Yours very truly,

Thomas R. Havins, Jr.
Thomas R. Havins, Jr.
for Moab Drilling Co.

Utex Exploration Company

PETROLEUM DIVISION
ROOM 28, BACON BUILDING
P. O. BOX 628
ABILENE, TEXAS

T. R. HAVINS, JR.
MGR. LAND AND PRODUCTION DEPARTMENTS

CHARLES A. STEEN
PRESIDENT
CHIEF GEOLOGIST

J. C. ASHBY
GENERAL MANAGER

February 21, 1957

New Mexico Oil Conservation Commission
125 Mabry Hall
Capitol Building
Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr.

Gentlemen:

Application is hereby made for permission to inaugurate a pilot water flood on 80 acres in the High Lonesome Field, Township 16 South, Range 29 East, Eddy County, New Mexico.

A plat is attached showing the proposed injection wells and producing wells. Our plans call for using our No. 7 Skelly-State and our No. 2 Davis-Federal wells as producing wells. The six injection wells have not been drilled. In this connection please be advised that No. 1 Davis-Federal will not be involved, since it is producing from the Seven Rivers formation. Names and addresses of nearby lease owners are attached to plat.

Production to be flooded is in the Queen Sand, which occurs at 1885 feet in No. 7 Skelly-State and at 1900 feet in No. 2 Davis-Federal.

Copies of Gamma Ray-Neutron logs of the two producing wells are enclosed. Logs of the injection wells will be furnished as they are drilled.

In our injection wells, our plans call for setting 8 5/8" surface casing to a depth of 350 feet approximately, with cement being circulated to surface. We plan to run 4 1/2" 2.5 pound continuous weld casing through the sand, with cement to be circulated to the surface. Casing will be tested in conventional manner. Injection will be through perforations.

It is contemplated that approximately 150 barrels of salt water per day will be injected into each input well.

We have recently developed a water source at a point 1700 feet from the east line and 1200 feet from the north line of Section 16, Township 16 South, Range 29 East. Water was encountered at 310 feet, and is estimated at 1500 barrels per day. Further testing is planned. Samples are now in process of being tested for salinity.

New Mexico Oil Conservation Commission

February 21, 1957

Page 2

Operator for the project is Moab Drilling Company, of Moab, Utah. Correspondence should be sent to Moab Drilling Company, c/o Utex Exploration Company, Box 608, Abilene, Texas.

It is requested that a hearing be set on this proposed pilot flood at your earliest convenience. A hearing in either Santa Fe or Hobbs will be convenient with us.

If there is other information you need in this matter, please feel free to call on us.

Yours very truly,

T. R. Havins, Jr.

T. R. Havins, Jr.
For Moab Drilling Company

TRHms

Encls.

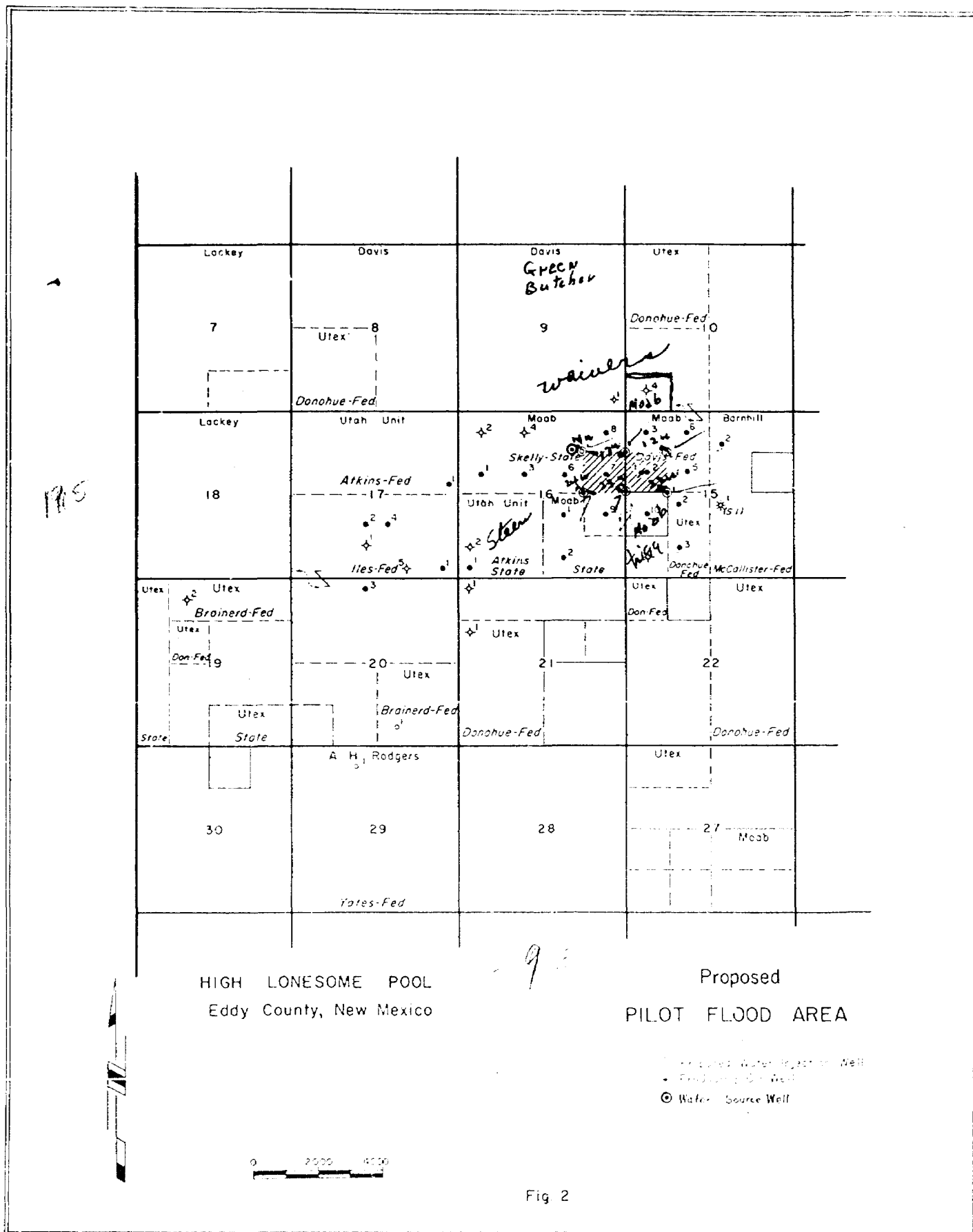
cc: Messrs. Charles A. Steen
Moab Drilling Company
Moab, Utah

A. M. Speir
Box 1268
Artesia, New Mexico

Dorran Stephenson
Box 662
Santa Fe, New Mexico

State Engineer of New Mexico
Attention: Mr. Frank Arby
State of New Mexico
Box 791
Santa Fe, New Mexico

Commissioner of Public Lands
Attention: Mr. J. L. Jander
Box 791
Santa Fe, New Mexico



LEASE OWNERS IN AREA OF PROPOSED PILOT FLOOD AREA:

- Section 9 - Paul Davis, 225 First National Bank Building,
Midland, Texas.
- Section 10, SW¹SW⁴ - Moab Drilling Company, Box 628,
Abilene, Texas.
- Section 10, NE¹SW⁴ and E¹SW⁴ - Paul Davis, 225 First National
Bank Building, Midland, Texas.
- Section 10, SW⁴ - Collier Drilling Company, Box 798, Artesia,
New Mexico.
- Section 16, E¹ - William Barnhill, Moab, Utah.
- Section 10, E¹SW⁴ - Utex Exploration Company, Box 628, Abilene,
Texas, and Standard Uranium Corporation,
Moab, Utah (Utex is operator).
- Section 10, SW¹SW⁴ - John H. Trigg, Roswell, New Mexico.
- Section 10, NE¹SW⁴, and NW⁴ - Moab Drilling Company, Box 628,
Abilene, Texas.
- Section 16, NE¹ and SW⁴ - Moab Drilling Company, Box 628,
Abilene, Texas.
- Section 16, SW⁴ - Charles A. Steen (Utah Unit), Box 628,
Abilene, Texas.

*april
file*

1225

HARRY L. BIGBEE
DONNAN STEPHENSON

TELEPHONE 3 6333

ASSOCIATE
MATIAS A. ZAMORA

ATTORNEYS AT LAW
BOKUM BUILDING
142 WEST PALACE AVENUE
P. O. BOX 689
SANTA FE, NEW MEXICO

ASSOCIATE IN ALBUQUERQUE, NEW MEXICO
QUINCY D. ADAMS

March 20, 1957

Chairman
Oil Conservation Commission
125 Mabry Hall
Capitol Building
Santa Fe, New Mexico

Re: Application of Moab Drilling Company for a Pilot Water
Flood Project in the High Lonesome Pool, Eddy County,
New Mexico
New Mexico Oil Conservation Commission Docket No. 1225.

Dear Sir:

The above matter came on for hearing at Santa Fe at ten o'clock, A. M., on March 20, 1957, before Daniel S. Nutter, Examiner. There were no protests encountered with respect to any phase of the application.

Reference to your files will show that the application in the above matter was originally dated February 21, 1957, that said application was thereafter amended on February 28, 1957, and again on March 13, 1957. These amendments related to the proposed location of injection wells. The application as amended, together with the record in the above case, shows that it is the intention to drill six of such wells, four of which will be situated upon a state lease described therein.

The applicant within the next two or three days expects to have a rig available for the purpose of drilling these injection wells. It is proposed to first drill wells on the state lease. We hereby make request for permission to commence the drilling of injection wells, pending and subject to the entry of an order on the above docket number and also of course subject to prior filing of notices of intention to drill in your Artesia office with respect to such of said injection wells as fall within your jurisdiction. These notices will be expeditiously filed by Mr. A. M. Speir of Artesia.

Very truly yours,

Donnan Stephenson
Donnan Stephenson

DS:ik

cc - Utex Exploration Company, Inc.
P. O. Box 628, Abilene, Texas
Attention: Mr. T. R. Havins, Jr.
cc - Utex Exploration Company, Inc.
P. O. Box 1268, Artesia, New Mexico
Attention: Mr. A. M. Speir

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

April 15, 1957

C
O
P
Y

Mr. Donnan Stephenson
Bigbee & Stephenson
P.O. Box 669
Santa Fe, New Mexico

Dear Sir:

On behalf of your client, Moab Drilling Company, we enclose two copies of Order R-975 issued April 12, 1957, by the Oil Conservation Commission in Case 1225, which was heard on March 20th.

Very truly yours,

A. L. Porter, Jr.
Secretary - Director

bp
Encls.

Utex Exploration Company

PETROLEUM DIVISION
ROOM 28, SACON BUILDING
P. O. BOX 428
ABILENE, TEXAS

Case # 1225

T. R. HAVINS, JR.
MGR. LAND AND PRODUCTION DEPARTMENTS

CHARLES A. STEEN
PRESIDENT
CHIEF GEOLOGIST

J. C. ASHBY
GENERAL MANAGER

March 14, 1957

New Mexico Oil Conservation Commission
125 Mabry Hall
Capitol Building
Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr.

Gentlemen:

This letter amends our application of February 21, 1957,
and our application for amendment of February 23, 1957, Case No.
1225, concerning a pilot water flood in the High Lonesome Pool,
Eddy County, New Mexico.

We desire to change the locations of two of the proposed
water injection wells. New locations we desire are:

No. 14-W Skelly-State, 1310 feet from north line and
1330 feet from east line of Section 16.

No. 24-W Skelly-State, 2630 feet from north line and
1330 feet from east line of Section 16.

Yours very truly,

T. R. Havins, Jr.

T. R. Havins, Jr.
Texaco Drilling Company

cc: Mr. Leroy Stephenson, Box 440, Santa Fe, New Mexico
Mr. Charles A. Steen, Texaco Drilling Company, P.O. Box 428, Abilene, Texas
Mr. J. C. Ashby, Box 1225, Abilene, Texas
State Engineer of New Mexico, Box 771, Santa Fe, New Mexico
Attention: Mr. Frank King
Commissioner of Public Lands, Box 771, Santa Fe, New Mexico
Attention: Mr. J. C. Jordan

DOCKET: EXAMINER HEARING MARCH 20, 1957

Oil Conservation Commission 10:00 a.m., Mabry Hall, State Capitol, Santa Fe

The following cases will be heard before Daniel S. Nutter, Examiner:

CASE 1224: Application of Wilshire Oil Company of Texas for approval of its proposed Seven Rivers Hills Unit Agreement located in Eddy County, New Mexico, in accordance with Rule 507 of the New Mexico Oil Conservation Commission Statewide Rules and Regulations. Applicant, in the above-styled cause, seeks an order granting approval of its Seven Rivers Hills Unit Agreement embracing 10,995.88 acres, more or less, of federal and state lands situated in all or portions of Sections 19, 20, 21, 22, 27, 28, 29, 30, 31, 32 and 33, Township 20 South, Range 26 East, and all or portions of Sections 3, 4, 5, 6, 7, 8, 9 and 18, Township 21 South, Range 25 East, all in Eddy County, New Mexico.

CASE 1225: Application of Moab Drilling Company for an order authorizing a pilot waterflood project in the High Lonesome Pool, Eddy County, New Mexico, in exception to Rule 701 of the New Mexico Oil Conservation Commission Statewide Rules and Regulations, and further, approval for the drilling of several unorthodox locations for water injection wells in said pool. Applicant, in the above-styled cause, seeks an order authorizing a pilot waterflood project in the Queen formation of the High Lonesome Pool, said project to be effected by means of water injection through the drilling of approximately six wells in Sections 15 and 16, Township 16 South, Range 29 East, Eddy County, New Mexico. Applicant also seeks Commission approval for the drilling of these six unorthodox locations to serve as the water injection wells in the High Lonesome Pool.

CASE 1226: Application of Magnolia Petroleum Company for permission to move distillate off the lease before being measured, to produce more than eight wells into a single tank battery and for permission to commingle distillate from the Blanco Mesaverde Gas Pool and an undesignated Pictured Cliffs Gas Area in Rio Arriba County, New Mexico, in exception to Rules 303, 304 and 309 of the New Mexico Oil Conservation Commission Rules and Regulations. Applicant, in the above-styled cause, seeks an order to move and commingle the distillate produced from the Pictured Cliffs and Mesaverde formations from its Cheney-Federal lease covering SE/4, SE/4 NE/4, and E/2 SW/4 Section 4, E/2 and SW/4 Section 8, W/2 and W/2 E/2 Section 9, and All Sections 16 and 17, Township 26 North, Range 2 West, to a separate tank battery on its

-2-

Docket No. 9-57

CASE 1226: Jicarilla "H" Lease in the SE/4 of Section 2, Township 26
Continued North, Range 3 West; applicant further desires to move the
distillate produced from the Pictured Cliffs and Mesaverde
formations from its Jicarilla "D" Lease covering All Sections
13, 14, 23, and 24, Township 26 North, Range 3 West, to its
Jicarilla "H" Lease, covering All Sections 1, 2, 11, and 12,
Township 26 North, Range 3 West, and to commingle the pro-
duction from the said two leases in a common tank battery in
the SE/4 of Section 2, Township 26 North, Range 3 West; Appli-
cant further desires to move distillate produced from the
Pictured Cliffs and Mesaverde formations from its Jicarilla
"E" Lease, covering All Sections 11, 12, 13, 14, and the S/2
of Section 15, Township 27 North, Range 3 West, and its
Jicarilla "F" Lease, covering All Sections 22, 23, 24, and 27,
Township 27 North, Range 3 West, to its Jicarilla "G" Lease
covering All Sections 25, 26, 35, and 36, Township 27 North,
Range 3 West, and to commingle the production from the said
three leases in a common tank battery in the SE/4 Section 26,
Township 27 North, Range 3 West, all in the Blanco Mesaverde
Gas Pool and an undesignated Pictured Cliffs Gas Area, Rio
Arriba County, New Mexico.

ir/

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Date 3/27/57

CASE 1225

Hearing Date 3/20/57

My recommendations for an order in the above numbered cases are as follows:

Enter an order approving the pilot water flood proposed by Moca Dril Co in this case. Also approve the unorthodox locations for 6 spot injection wells. The project as proposed will cause no violation of correlative nor waste, and will in fact result in the recovery of considerable oil which will not otherwise be recovered. (Applicant's engineering report, Exhibit 4, states that upon abandonment of the project, 300,000 barrels of oil will have been recovered as the direct result of water injection.)

The area is not in a declared water basin so presumably the use of water from wells will cause no damage to water ~~reserves~~ ^{reserves} in the area. It is reported that the injection water is of brackish nature.

Van Miller
Staff Member
Examiner

DSN

*In Examiner
Recommendation*

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Date ~~3/25/57~~

CASE 1225

Hearing Date 10am on 3/27/57 @ S.F.
before DSN

My recommendations for an order in the above numbered cases are as follows:

OK to write order of approval of plot
water flood & 6 unorthodox
locations.

Have report monthly on flood.

W. J. M. M. M.
Staff Member

1225

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

March 5, 1957

Mr. Frank E. Irby
State Engineer Office
P.O. Box 1079
Santa Fe, New Mexico

Dear Mr. Irby:

The application of Utex Exploration Company (Moab Drilling Company) has been assigned Case No. 1225 and will be heard on March 20, 1957, at 10:00 a.m. in Mabry Hall by Daniel S. Nutter, Examiner.

Very truly yours,

A. L. Porter, Jr.
Secretary - Director

bp

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STATE OF NEW MEXICO
STATE ENGINEER OFFICE
SANTA FE

S. E. REYNOLDS
STATE ENGINEER

ADDRESS CORRESPONDENCE TO:
P. O. BOX 1079
SANTA FE, N. M.

February 25, 1957

Oil Conservation Commission
State Capitol
Santa Fe, N. M.

Attn. Mr. Porter

Dear Mr. Porter:

Would appreciate your notifying this office what date,
time and place hearing will be held on the application
of Utex Exploration Company for its flood program in the
High Lonesome Pool.

Very truly yours,

S. E. Reynolds
State Engineer

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

FEI/ma

Utex Exploration Company, Inc.

PETROLEUM DIVISION
ROOM 25, BACON BUILDING
P. O. BOX 628
ABILENE, TEXAS

Case # 1225

T. R. HAVINS, JR.
MGR. LAND AND PRODUCTION DEPARTMENTS

CHARLES A. STEEN
PRESIDENT
CHIEF GEOLOGIST

J. C. ASHBY
GENERAL MANAGER

Mr. W. B. Confield
Acting Oil & Gas Supervisor
United States Geological Survey
P. O. Box 6721
Roswell, New Mexico

Dear Sir:

Several days ago Mr. Archie H. Goeir, our engineer in Artesia, was in your office to discuss a proposed pilot water flood project contemplated by Neab Drilling Company in the High Pecos Field, Eddy County, New Mexico.

This letter is written to bring you up to date on plans for the proposal.

Enclosed please find the following:

1. Copy of letter dated February 21, 1957, to New Mexico Oil Conservation Commission requesting that a hearing be set on the pilot flood.
2. Copy of letter dated February 26, 1957, to New Mexico Oil Conservation Commission regarding the application for hearing.

Please note that 40 acres of State land are involved in the pilot flood, as well as 40 acres of Federal land.

The present water source well is on State land. However, we anticipate needing a larger amount of water than our existing flood is capable of. It is our understanding that under the new Federal law, Section 20, we may produce water from any well on the 40 acres of Federal land.

It is our understanding that the new law will apply only under Section 20, Federal Oil and Gas Act, Section 20, and Federal Land Rules, 43 CFR 15.1, which states that these lands are owned by the United States, and are to be managed by the Neab Drilling Company.

We are not sure of the exact details of the new law, but we are sure that it will allow us to produce water from the 40 acres of Federal land.

W. A. L. Canfield

March 1, 1957

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I have not been notified officially as yet, but it is my understanding that the hearing before the Oil Conservation Commission will likely be held in Santa Fe on March 21, 1957.

In connection with the amended application referred to above, please be advised that the locations of the proposed injection wells were changed at the suggestion of your office and the Oil Conservation Commission.

If there is any other information that I can supply you in this connection, please feel free to call on either me or Mr. Speir in Artesia.

If you have no objection to our proceeding with our plans as outlined in this letter and the two letters enclosed, I will appreciate your writing me to that effect. In case you do have any objections, I would appreciate knowing of them in order that we may do whatever is necessary to eliminate the causes.

Yours very truly,

E. R. Havins, Jr.

E. R. Havins, Jr.
For Herb Drilling Company

THms

Encls.

cc: A. R. Speir
Box 1268
Artesia, New Mexico

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