

Case No.

76

Application, Transcript,
Small Exhibits, Etc.

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE NO. 76

ORDER NO. 666

THE APPLICATION OF THE DEKALB AGRICULTURAL
ASSOCIATION, INC. FOR AN ORDER OF APPROVAL
OF THE UNIT AGREEMENT FOR THE DEVELOPMENT
AND OPERATION OF THE BITTER LAKE UNIT AREA
WITHIN T. 10S, RANGES 25 and 26 EAST, N. M.
P. M., CONTAINING 9,032.38 ACRES MORE OR LESS,
CHAVES COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at ten o'clock A. M. June 7, 1946
at Santa Fe, New Mexico before the Oil Conservation Commission of New
Mexico, hereinafter referred to as the "Commission".

NOW, on this 7th day of June, 1946, the Commission having before
it for consideration the testimony adduced at the hearing of said case,
and being fully advised in the premises:

IT IS THEREFORE ORDERED THAT:

The order herein shall be known as the:

"BITTER LAKE UNIT AGREEMENT ORDER"

SECTION 1. (a) The project herein shall be known as the Bitter
Lake Unit Agreement, and shall hereinafter be referred to as the Pro-
ject.

(b) The plan by which the Project shall be operated shall be em-
braced in the form of unit agreement for the development and operation
of the Bitter Lake Unit Area referred to in the petitioner's petition
and filed with said petition and such plan shall be known as the Bitter
Lake Unit Agreement Plan.

SECTION 2. The Bitter Lake Unit Agreement Plan shall be and is
hereby approved.

SECTION 3. (a) The Unit Area shall be:

S $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ Sec. 1; NE $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 2; NE $\frac{1}{4}$ SE $\frac{1}{4}$,
S $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 10; NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ Sec. 11; All Secs. 12, 13
and 14; E $\frac{1}{2}$ Sec. 15; E $\frac{1}{2}$ Sec. 22; All Secs. 23, 24 and 25;
N $\frac{1}{2}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ Sec. 26; NE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 27, T. 10S, R. 25E;
All Secs. 6, 7, 18 and 19; Lots 1, 2, E $\frac{1}{2}$ NW $\frac{1}{4}$ Sec. 30, T.
10S, R. 26E, N.M.P.M., Chaves County, New Mexico, contain-
ing 9,032.38 acres, more or less.

(b) The Unit Area may be enlarged or diminished as provided in
said plan.

SECTION 4. The unit operator shall file with the Commission an
executed original, or executed counterparts thereof, of the Bitter
Lake Unit Agreement not later than 30 days after the effective date
thereof.

SECTION 5. Any party owning rights in the unitized substances who does not commit such rights to said Unit Agreement before the effective date thereof may thereafter become party thereto by subscribing to such Agreement or a counterpart thereof. The Unit Operator shall file with the Commission within 30 days an original of any such counterpart.

SECTION 6. The order herein shall become effective on the first day of the calendar month next following the approval of Commissioner of Public Lands and the Secretary of the Interior and shall terminate ipso facto on the termination of said Unit Agreement. The last Unit Operator shall immediately notify the Commission in writing of such termination.

Done at Santa Fe, New Mexico as of the day and year hereinabove designated.

OIL CONSERVATION COMMISSION

John J. Dempsey, Chairman

John E. Miles
John E. Miles, Member

R. R. Spurrier
R. R. Spurrier, Secretary

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF THE DEKALB AGRICULTURAL ASSOCIATION, INC.
FOR AN ORDER OF APPROVAL OF THE UNIT AGREEMENT FOR THE DEVELOPMENT AND OPER-
ATION OF THE BITTER LAKE UNIT AREA WITHIN T. 10S, RANGES 25 and 26 EAST,
N.M.P.M., CONTAINING 9,032.38 ACRES, MORE OR LESS, CHAVES COUNTY, NEW MEXICO.

Pursuant to notice by the Commission, duly made and published, setting
June 7, 1946 at 10:00 A. M. for hearing in the above-entitled matter,
said hearing was convened on said day at said hour in the Coronada Room at
La Fonda Hotel, Santa Fe, New Mexico, the Commission sitting as follows:

Commissioner of Public Lands John E. Miles, Member
R. R. Spurrier, Secretary
Carl B. Livingston

R E G I S T E R

<u>NAME</u>	<u>COMPANY</u>	<u>ADDRESS</u>
William B. Macey	Oil Conservation Commission	Artesia, N. M.
N. R. Lamb	State Bureau of Mines	Artesia, N. M.
S. W. Ludwick		Roswell, N. M.
Frank D. Gardner	Sinclair Prairie Oil Company	Midland, Texas
R. J. Heard	Grayburg Oil Company	Artesia, N. M.
R. F. Miller	Grayburg Oil Company	Artesia, N. M.
W. F. Patterson		Santa Fe, N. M.
S. P. Hannifin		Roswell, N. M.
Foster Morrell	U. S. Geological Survey	Roswell, N. M.
E. O. Hemenway	A. T. & S. F. Railway Company	Albuquerque, N. M.
E. C. Iden	A. T. & S. F. Railway Company	Albuquerque, N. M.
Marshall Rowley	Carper Drilling Company	Artesia, N. M.
John E. Cochran, Jr.	Maljamar Coop. Rep. Agreement	Artesia, N. M.
William J. Wright	Maljamar Coop. Rep. Agreement	Artesia, N. M.
Charles R. Allen	Continental Oil Company	Ponca City, Okla.
J. O. Seth	Petroleum Prod. Ref. & Pro. Co.	Santa Fe, N. M.
W. R. McBride	Petroleum Prod. Ref. & Pro. Co.	Santa Fe, N. M.
John M. Kelly	Independent Geologist	Roswell, N. M.
Clarence Hinkle	Hervey, Dow and Hinkle	Roswell, N. M.
Roy O. Yarbrough	Oil Conservation Commission	Santa Fe, N. M.
F. W. Hickman	Oil Conservation Commission	Santa Fe, N. M.

Governor Miles:

Gentlemen, the Commission is in session, and the Secretary will proceed
with the order of business.

Mr. Hinkle:

I am Clarence E. Hinkle of Hervey, Dow and Hinkle, representing the
DeKalb Agricultural Association. This is an application by the DeKalb
Agricultural Association for the approval of a unit agreement to be known
as the Bitter Lake Unit Agreement. The proposed unit area covers approxi-
mately 9,032.38 acres situated in Township 10 South, Ranges 25 and 26 East.
All of the lands embraced in the proposed area are lands of the United
States, with the exception of 120 acres in Section 2, Township 10S, Range
25E, which is State land. The agreement has been executed by all of the
owners of the leases and pending applications for leases, except the lands
which are embraced in the so-called Bitter Lake Migratory Wildlife Refuge,
and there is a question whether leases will be issued for those lands.
The area has heretofore been designated by the Director of the U. S. Geol-
ogical Survey upon the application of the several lease owners as suitable
for unitization. Under the terms of the agreement the operator is given
authority to carry on necessary operations to explore and develop the unit
area. The agreement provides for a test well to be drilled to a depth of
6,500 feet, unless gas or oil is found at a lesser depth. The proposed
unit agreement follows substantially the unit agreements which have hereto-
fore been approved by the Commission. That you may have before you the
proposed unit area, here is a plat which has heretofore been filed with you.
I might say that at this time the DeKalb Agricultural Association has al-
ready started a well in Section 13, which is near the center of the proposed

unit area, and at the present time the well is below 3,500 feet. The geological information upon which this unit was formed was done by Mr. John Kelly, and I would like to have him sworn as a witness.

Mr. John M. Kelly, after being first duly sworn, testified as follows:

Mr. Hinkle:

What is your name?

Mr. Kelly:

John M. Kelly.

Mr. Hinkle:

What is your profession?

Mr. Kelly:

I am a graduate engineer and geologist, and registered to practice in New Mexico.

Mr. Hinkle:

How long have you practiced?

Mr. Kelly:

Ten years.

Mr. Hinkle:

You were formerly the State Geologist?

Mr. Kelly:

That is right.

Mr. Hinkle:

You are familiar with the area involved in the proposed Bitter Lake Unit Agreement?

Mr. Kelly:

I am.

Mr. Hinkle:

Have you performed any work in connection with at Agreement?

Mr. Kelly:

Upon information furnished me by Mr. Whelan, who did the magnetometer work, I prepared a contour map of the anticline.

Mr. Hinkle:

I hand you herewith the applicant's Exhibit A, and ask you to state whether that is a duplicate of the map made with the application before the U. S. Geological Survey for the designation of the Unit Area.

Mr. Kelly:

It is.

Mr. Hinkle:

You are familiar with the designation which has been made, and the boundaries as shown by the plat attached to the agreement?

Mr. Kelly:

Yes.

Mr. Hinkle:

State whether in your opinion the area covers all or substantially all of the geological features.

Mr. Kelly:

I believe it covers all of the features as shown by the geological map and the area map.

Mr. Hinkle:

Are you familiar with the agreement?

Mr. Kelly:

Yes.

Mr. Hinkle:

State whether the operations under this agreement would have a tendency to promote the conservation of oil and gas and the prevention of waste.

Mr. Kelly:

I believe it would promote proper development in the area.

Governor Miles:

Anyone else want to be heard in this case? If not, the application is granted.

Mr. Livingston:

The next case is No. 77 in the matter of the application of the Magnolia Petroleum Company for an order of approval of the Unit Agreement for the development and operation of the Black Hills Anticline Unit Area within Townships 17 and 18 South, Ranges 19 and 20 East, N.M.P.M., containing 17,626.62 acres, more or less, Chaves County, New Mexico.

Mr. Hinkle:

I am Clarence E. Hinkle of Hervey, Dow and Hinkle, and am attorney for the applicant, the Magnolia Petroleum Company. This is the application of the Magnolia Petroleum Company for the approval of the proposed Bitter Lake Anticline Unit Agreement. The unit agreement which has been filed with the Commission contains a plat which shows the proposed unit area. The proposed unit area contains approximately 17,626.62 acres. All of the lands are lands of the United States, except certain lands aggregating 2,170.56 acres. The unit agreement has been signed by the owners of oil and gas leases covering all of the lands, except the owners of two leases, which are a very small portion of the total acreage. The area involved in the agreement was approved by the Director of the U. S. Geological Survey and the Secretary of the Interior as one proper for unitization. The agreement designates the Magnolia Petroleum Company as the unit operator, and under the terms of the unit is given power to carry on all work necessary for the exploration of the area. The operators agree to commence a well within six months after the approval, and drill the same to a depth of 7,000 feet, unless gas or oil is found at a lesser depth. The form follows substantially the same form as heretofore approved by this Commission and the Commissioner of Public Lands. Mr. Steve Hannifin, the District Land Man for Magnolia, is here, and I would like to have him testify.

Mr. S. P. Hannifin, after being first duly sworn, testified as follows:

Mr. Hinkle:

Please state your name.

Mr. Hannifin:

S. P. Hannifin.

Mr. Hinkle:

Where do you reside?

Mr. Hannifin:

Roswell, New Mexico.

Mr. Hinkle:

What is your official position?

Mr. Hannifin:

District Land Man for Magnolia Petroleum Company.

Mr. Hinkle:

How long have you been with the Magnolia Petroleum Company?

Mr. Hannifin:

20 years.

Mr. Hinkle:

Are you familiar with the so-called Bitter Lake Anticline Unit Agreement in Chaves County, New Mexico, which is the subject of the proposed unit agreement?

Mr. Hannifin:

Yes, sir.

Mr. Hinkle:

Do you know whether any geological investigation has been made of this area?

Mr. Hannifin:

Several years ago such an investigation was made by J. B. Hedley.

Mr. Hinkle:

Did Mr. Hedley make a report in connection with the report of the designation of this area before the U. S. Geological Survey?

Mr. Hannifin:

He did, yes.

Mr. Hinkle:

I hand you herewith the report of Mr. J. B. Hedley, marked Exhibit A, on the Bitter Lake Anticline, Chaves County, and ask you whether it is a duplicate of the report filed with the application.

Mr. Hannifin:

It is.

Mr. Hinkle:

Does that map show the geological structure involved?

Mr. Hannifin:

Yes.

Mr. Hinkle:

Do you know whether the unit area covers all of the structures, according to the plat?

Mr. Hannifin:

It does.

Mr. Hinkle:

Are you familiar with the terms of the unit agreement?

Mr. Hannifin:

Yes, sir.

Mr. Hinkle:

State whether in your opinion the operations under the proposed unit agreement, if a discovery is made, would tend to promote the conservation of oil and the prevention of waste.

Mr. Hannifin:

I believe it would. Yes, sir.

Governor Miles:

Anyone else want to be heard in this case? The application is granted. Next case.

Mr. Livingston:

The next case is No. 78 in the matter of the application of the Petroleum Products Refining and Producing Company for an order of approval of an irregular oil and gas well location in Section 36, T. 18N, R. 9W, Hospah Field, McKinley County, New Mexico, Well No. 48, to be located in the Southeast-Southwest-Southeast quarter of said section, 1220 feet East of the center section line, 330 feet North of the South line.

Mr. Seth:

My name is J. O. Seth, and I appear for the Petroleum Products Refining and Producing Company. This is an application to drill this well that I marked on this plat. The field and the development began many years ago, and was drilled on a 10-acre spacing. The old wells were not so located as to be in the center of each 10-acre tract. The proposal of this location is to get 660 feet East of the well already drilled. The lease is a State lease, and nobody would be hurt by the location. I would like to have Mr. McBride sworn.

Mr. W. R. McBride, after being first duly sworn, testified as follows:

Mr. Seth:

Your name, please.

Mr. McBride:

W. R. McBride.

Mr. Seth:

You are an officer of the Petroleum Products Refining and Producing Company?

Mr. McBride:

Yes, sir.

Mr. Seth:

What is your position?

Mr. McBride:

Vice-President.

Mr. Seth:

You know the general location of these wells in the Hospah Dome, do you not?

Mr. McBride:

Yes.

Mr. Seth:

That development began many years ago?

Mr. McBride:

I think back in 1928 or 1929.

Mr. Seth:

This application today is to drill the well marked on this plat?

Mr. McBride:

That is well No. 48. The Roman numerals there are the numbers we anticipate drilling, but this is well No. 1 here.

Mr. Seth:

I would like to have this plat marked for attention.

(NOTE: The plat at this point was marked Exhibit A for the record).

Mr. Seth:

The location you seek for this well is merely to keep it at 660 feet?

Mr. McBride:

Yes, and to correct some of the previous locations and in drilling additional wells we can try to keep them all within the proper spacing. They will all be the same distance from each other. We may have to come in and ask for another irregular spacing if it is necessary.

Mr. Seth:

Are all the wells on the same State lease owned by your Company?

Mr. McBride:

Yes, sir.

Mr. Seth:

I believe that is all.

Governor Miles:

Anybody else want to be heard in this case? The application is granted.

Mr. Livingston:

The next case is No. 79. The petitioner, through his attorneys, Kiker and Sanchez, has requested that the hearing date upon this petition be vacated and that said petition be set down for a hearing at some future time, owing to the fact that the petitioner, with other operators in the Fulcher Basin Gas Field, is endeavoring to formulate a spacing plan to present to the Commission.

The next case is No. 80 in the matter of the petition of Operators' Committee under Maljamar Cooperative Repressuring Agreement for amendment to Order No. 485, as amended by Order No. 595 of the Commission, to provide for the running of back allowable from the Maljamar Cooperative Repressuring area.

Mr. Cochran:

My name is John E. Cochran, Jr. I represent Maljamar Cooperative Repressuring Agreement. This is a matter in which the Maljamar Cooperative Repressuring Agreement asks that Order 485, as amended by Order 595 of this Commission to provide for the running of back allowable from the Maljamar Cooperative Repressuring Agreement. Order 485 entered by the Commission in Case 36 on November 14, 1942 was the order which approved the Maljamar Cooperative Repressuring Agreement and approved certain in-put wells and provided for the distribution on allowable on in-put wells to the other wells. Order 595 entered by the Commission on January 8, 1945 amended the original order and set up an allocation production plan for the area. Before that order was entered, and while the study was being made, it was agreed that in the interest of conservation at that time no back allowable would be allowed the area, and there was written on February 11, 1944 a letter by Mr. Kelly, then State Geologist, which provided that no back allowable be run from leases in the Maljamar area. Since that time, however, the allocation plan approved has been so successful that the operators feel that it would not be detrimental to the properties to run some back allowable which occurred for the reasons I will tell you. During November Malco Refineries, Inc., who was a substantial crude buyer from the area had too much crude, and the Malco discontinued purchasing crude oil from a large number of leases in the area, and following that several operators had no pipe line connections, and a substantial back allowable accumulated by reason of having no outlet for the oil. As of June 1 there were approximately 20,000 barrels of back allowable which have not been run from certain leases within the area. This back allowable is in some instances unproduced, and in some cases has been produced and is in storage. All of the operators in the area feel that they should be allowed to run back allowable to the pipe line companies purchasing the oil a back allowable to exceed the rate the Commission allowed the State generally. The operators of leases and wells in this area feel that the way this should be handled would be for individual operators to make application to the Operators' Committee, which is the manager of the Project, and designate the lease and the amount of back allowable that they feel should be run during a current month, which would not exceed the back allowable figure set for other parts of the State by the Commission. This would amount to probably a barrel a day per well, and in some instances three barrels a day per well, and where the oil is in storage a request would be made for permission to run this to the pipe line company, not to exceed ten barrels per day. After the applications have been made to the Operators' Committee by the operators, the operators feel that the Chairman of the Operators' Committee of the Maljamar Cooperative Repressuring Agreement should petition the Commission, or its deputies, administratively for authority to run back allowable during the current month. The reason for suggesting the matter be handled thus is when an operator makes application for back allowable the Operators' Committee will have an opportunity to study the request, and if it is in the interest of conservation the Chairman of the Operators' Committee would file the application with the Commission or its deputy. Due to the fact that the back allowable had its origin about the first of December, the Maljamar Repressuring Agreement asked that the Commission permit it to follow this procedure in requesting authority to run back allowable starting December 1, 1945. Mr. William J. Wright, Engineer for the Maljamar Cooperative Repressuring Agreement is here, and if the members of the Commission would care to ask him any questions he may be sworn. Do you have any questions you want to ask him?

Governor Miles:

Yes, will you bring him forward?

Mr. William J. Wright, after being first duly sworn, testified as follows:

Mr. Cochran:

Will you state your name?

Mr. Wright:

William J. Wright.

Mr. Cochran:

Where do you live?

Mr. Wright:

Maljanar.

Mr. Cochran:

What is your occupation?

Mr. Wright:

Project engineer for the Maljanar Cooperative Repressuring Agreement.

Mr. Spurrier:

Mr. Wright, give us an approximation of what percent of the production of any one well would this additional production be; that is, what the back allowable would constitute.

Mr. Wright:

From a daily run it should not exceed 15% of daily allowable, which would be from 1 to 3 barrels per day.

Mr. Cochran:

Mr. Wright, in your opinion, if the method of making up back allowable, as is hereby outlined, is followed, would that constitute underground waste?

Mr. Wright:

Definitely not.

Mr. Livingston:

Back to what period of time is it desired that back allowable be permitted to run?

Mr. Wright:

December 1, 1945.

Governor Miles:

Anyone else want to be heard in this case? If not, the application is granted.

Mr. Livingston:

The next case is 81 in the matter of the petition of the Grayburg Oil Company of New Mexico, Operator of Grayburg Cooperative and Unit Agreement, for an order for transfer of allowable from in-put wells to other wells of same basic leases in the unit area of Grayburg Cooperative and Unit Agreement, Eddy County, New Mexico.

Mr. Miller:

I am Raymond Miller of the Grayburg Oil Company, Artesia. The Grayburg Oil Company is the operator of a unit agreement located on Government lands. In connection with this unit cooperative agreement we are operating a repressuring plant. The last several months we have converted two top allowable wells to in-put wells situated in the NW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 26, Township 17, Range 29, the well known as Grayburg-Keeley 9-B. The other well, Western Production Company-Keeley 12-C, is located in SW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 25, Township 17, Range 29. These wells were top allowable wells at the time they were put on as in-put wells, and since then we have been losing that allowable, and we request this allowable be transferred to other wells situated on the same basic leases. The Keeley B basic lease covers the S $\frac{1}{2}$ SW $\frac{1}{4}$ Section 24, N $\frac{1}{2}$ NW $\frac{1}{4}$ Section 25, E $\frac{1}{2}$ Section 26, Township 17, Range 29E. The Western-Keeley C lease covers the N $\frac{1}{2}$ SW $\frac{1}{4}$ and the NW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 13, S $\frac{1}{2}$ SE $\frac{1}{4}$ Section 24, all of Section 25, except the N $\frac{1}{2}$ NW $\frac{1}{4}$ and the W $\frac{1}{2}$ of Section 26, all in Township S, Range 39E. Mr. R. J. Heard, Vice-President of the Grayburg Oil Company, is present, and I would like to have him heard.

Mr. R. J. Heard, after being first duly sworn, testified as follows:

Mr. Miller:

Your name is --

Mr. Heard:

R. J. Heard.

Mr. Miller:

Where do you reside?

Mr. Heard:

Artesia.

Mr. Miller:

Your position with the Crayburg Oil Company?

Mr. Heard:

Vice-President.

Mr. Miller:

Mr. Heard, you have been in charge of the drilling and production of these subject wells?

Mr. Heard:

Yes.

Mr. Miller:

Do you know that these wells are capable of producing top unit allowable at the time they were converted to injection wells?

Mr. Heard?

Yes.

Mr. Miller:

In your opinion, if the wells were reconverted to producing wells at this time, would they produce top unit allowable?

Mr. Heard:

Yes.

Mr. Miller:

Do you think this unit allowable could be produced from other wells on this same basic lease without waste?

Mr. Heard?

Yes.

Mr. Miller:

Is there any question you want to ask Mr. Heard?

Mr. Spurrier:

Approximately how many wells do you intend to allocate this in-put production to, Mr. Heard?

Mr. Heard:

Approximately 17 wells on one basic lease, and I think around 12 or 14

on the othe

Mr. Spurrier:

Then that would be about 2 or 3 barrels per day per well, would it not?

Mr. Heard?

Yes, sir.

Mr. Spurrier:

This would be something less than 10% of each well's production?

Mr. Heard:

Yes, sir.

Mr. Miller:

We are requesting the Commission to make up back allowables on these wells, beginning May 1, 1946; that is, on these two subject in-put wells. We are also requesting the Commission to reserve jurisdiction in this case, that they may act administratively in the case of corrections, etc.

Mr. Spurrier:

You mean by that you contemplate drilling more in-put wells?

Mr. Miller:

Yes, that is right. There are more wells being drilled at the present time on these leases, and it is our intention to convert those to in-put wells.

Governor Miles:

Anyone else want to be heard in this case? If not, the petition is granted.

Mr. Livingston:

The next case is No. 82 in the matter of the application of I. K. Westbrook for an order of approval of an irregular oil and gas well location in SW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 22, T. 20N, Range 11W, N.M.P.M., McKinley County, New Mexico for I. K. Westbrook-Santa Fe Pacific Railroad Company Well No. 1, which location is 1594 feet South of the North line and 2411 feet West of the East line of said section. This well started off as a water well, and seems to be ending up as an oil well.

Mr. Iden:

My name is E. C. Iden, and I would like to have Mr. I. K. Westbrook and Mr. E. O. Hemenway sworn.

Mr. E. O. Hemenway, after being first duly sworn, testified as follows:

Mr. Iden:

Your name is E. O. Hemenway?

Mr. Hemenway:

Yes.

Mr. Iden:

You are connected with the Santa Fe Pacific Railroad Company?

Mr. Hemenway:

I am Land Commissioner at Albuquerque.

Mr. Iden:

You are familiar with this application of I. K. Westbrook?

Mr. Hemenway:

Yes.

Mr. Iden:

The Santa Fe Pacific Railroad Company is the owner of the land on which this well is located?

Mr. Hemenway:

Yes.

Mr. Iden:

State to the Commission Mr. Westbrook's activities with reference to this land, particularly with reference to grazing leases prior to the time he acquired the oil lease.

Mr. Hemenway:

Mr. Westbrook is a livestock operator in this part of McKinley County, and in connection with his livestock operations entered into a contract with a driller to drill him a deep water well, and when he got down a certain distance there was some showing of oil, and he immediately stopped his work on his water well and felt that there might be some advantage in attempting to get an oil well out of this prospect.

Mr. Iden:

You are familiar with the location of the well?

Mr. Hemenway:

It is in Section 22, Township 20 North, Range 11 West. It is in the SW $\frac{1}{4}$ of the NE $\frac{1}{4}$.

Mr. Iden:

I believe as shown by the petition, it is 274 feet South of the quarter section line 40-acre subdivision line. Is that correct?

Mr. Hemenway:

That is about it. I think it is 274 feet South of the quarter line and 229 feet East of the West line of that 40-acre tract.

Mr. Iden:

Stated in another way, it is 1594 feet South of the North line and 2411 feet West of the East line?

Mr. Hemenway:

Yes, sir.

Mr. Iden:

Did the grazing lease Mr. Westbrook had prior to an oil showing in the water well embrace other lands than this?

Mr. Hemenway:

Yes, as I recall, it took in all oil holdings in that township.

Mr. Iden:

He still has the grazing lease?

Mr. Hemenway:

He has a purchase contract for the purchase of the surface rights.

Mr. Iden:

After the showing you gave him an oil and gas lease on certain lands for the purpose of protecting him in drilling the well, further with the hope that he might get oil or gas?

Mr. Hemenway:

Yes.

Mr. Iden:

It covers 160 acres surrounding this prospect?

Mr. Hemenway:

Yes.

Mr. Iden:

Does your company own all of the acreage adjacent to this particular acreage?

Mr. Hemenway:

We own immediately adjacent. Section 16 cornering to the Northwest is a school section. We own the others in the immediate vicinity.

Mr. Iden:

Generally speaking, how far is this from any other producing oil and gas well?

Mr. Hemenway:

Approximately 15 or 18 miles Northwest of any present production.

Mr. Iden:

Do you know the depth of the water well?

Mr. Hemenway:

Approximately 1100 feet.

Mr. Iden:

Do you know of any possible objection in permitting this well to be drilled in this location?

Mr. Hemenway:

No.

Mr. Iden:

I think that is all.

Governor Miles:

What is the approximate distance from this well to the corner of the school section you speak of?

Mr. Hemenway:

About 2900 feet approximately to the Southeast corner of the school section.

Mr. Iden:

Mr. Westbrook, will you take the stand?

Mr. Westbrook, after being first duly sworn, testified as follows:

Mr. Iden:

Your name is I. K. Westbrook?

Mr. Westbrook:

Yes, sir.

Mr. Iden:

You are the petitioner in this matter?

Mr. Westbrook:

Yes, sir.

Mr. Iden:

Where do you live?

Mr. Westbrook:

Crownpoint.

Mr. Iden:

How long have you lived there?

Mr. Westbrook:

29 years.

Mr. Iden:

Are you a rancher in that community?

Mr. Westbrook:

Yes, sir, I have been a rancher there 29 years.

Mr. Iden:

You have heard Mr. Hemenway's testimony. Was it correct in all respects?

Mr. Westbrook:

Yes, sir.

Mr. Iden:

You might desire to continue the drilling of this well with the hope of getting oil and gas?

Mr. Westbrook:

Yes, I would like to prospect for it.

Mr. Iden:

It was begun as a water well?

Mr. Westbrook:

Absolutely. Near the center of this township.

Mr. Iden:

At what depth did you encounter this oil and gas showing?

Mr. Westbrox :

1092 feet.

Mr. Iden:

Is that where the well stands today?

Mr. Westbrook:

Yes, sir. There is quite a bit of oil comes off the water when you draw it.

Mr. Iden:

So far as you know, would it make a commercial well at this time?

Mr. Westbrook:

I do not know. There is quite a little showing, and the driller states it may be a commercial well.

Mr. Iden:

I believe that is all, unless the Commission has some questions.

Mr. Spurrier:

One question, Mr. Westbrook. You have a lease. Now do you have a plugging bond?

Mr. Westbrook:

The bond is accompanying my petition here.

Mr. Livingston:

Mr. Westbrook has on file a \$2500 corporate surety bond to go to a depth not to exceed 1500 feet, but the bond has not been accepted until the Commission grants its order.

Mr. Iden:

Based on that showing, we ask that the petition be granted.

Governor Miles:

Anyone else want to be heard on this case? If not, the application is granted. Meeting dismissed.

I certify that the above is a transcript of the proceedings in this matter as taken from my shorthand notes.

Mary E. Martin

Mary E. Martin, Stenographer

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF THE DEKALB AGRICULTURAL ASSOCIATION, INC.
FOR AN ORDER OF APPROVAL OF THE UNIT AGREEMENT FOR THE DEVELOPMENT AND OPER-
ATION OF THE BITTER LAKE UNIT AREA WITHIN T. 10S, RANGES 25 and 26 EAST,
N.M.P.M., CONTAINING 9,032.38 ACRES, MORE OR LESS, CHAVES COUNTY, NEW MEXICO.

Pursuant to notice by the Commission, duly made and published, setting
June 7, 1946 at 10:00 A. M. for hearing in the above-entitled matter,
said hearing was convened on said day at said hour in the Coronada Room at
La Fonda Hotel, Santa Fe, New Mexico, the Commission sitting as follows:

Commissioner of Public Lands John E. Miles, Member
R. R. Spurrier, Secretary
Carl R. Livingston

R E G I S T E R

<u>NAME</u>	<u>COMPANY</u>	<u>ADDRESS</u>
William B. Macey	Oil Conservation Commission	Artesia, N. M.
N. R. Lamb	State Bureau of Mines	Artesia, N. M.
S. W. Ludwick		Roswell, N. M.
Frank D. Gardner	Sinclair Prairie Oil Company	Midland, Texas
R. J. Heard	Grayburg Oil Company	Artesia, N. M.
R. F. Miller	Grayburg Oil Company	Artesia, N. M.
W. F. Patterson		Santa Fe, N. M.
S. P. Hannifin		Roswell, N. M.
Foster Morrell	U. S. Geological Survey	Roswell, N. M.
E. O. Hemmway	A. T. & S. F. Railway Company	Albuquerque, N. M.
E. C. Iden	A. T. & S. F. Railway Company	Albuquerque, N. M.
Marshall Rowley	Carper Drilling Company	Artesia, N. M.
John E. Cochran, Jr.	Maljamar Coop. Rep. Agreement	Artesia, N. M.
William J. Wright	Maljamar Coop. Rep. Agreement	Artesia, N. M.
Charles R. Allen	Continental Oil Company	Ponca City, Okla.
J. O. Seth	Petroleum Prod. Ref. & Pro. Co.	Santa Fe, N. M.
W. R. McBride	Petroleum Prod. Ref. & Pro. Co.	Santa Fe, N. M.
John M. Kelly	Independent Geologist	Roswell, N. M.
Clarence Hinkle	Harvey, Dow and Hinkle	Roswell, N. M.
Roy O. Yarbrough	Oil Conservation Commission	Santa Fe, N. M.
F. W. Hickman	Oil Conservation Commission	Santa Fe, N. M.

Governor Miles:

Gentlemen, the Commission is in session, and the Secretary will proceed
with the order of business.

Mr. Hinkle:

I am Clarence E. Hinkle of Harvey, Dow and Hinkle, representing the
DeKalb Agricultural Association. This is an application by the DeKalb
Agricultural Association for the approval of a unit agreement to be known
as the Bitter Lake Unit Agreement. The proposed unit area covers approxi-
mately 9,032.38 acres situated in Township 10 South, Ranges 25 and 26 East.
All of the lands embraced in the proposed area are lands of the United
States, with the exception of 120 acres in Section 2, Township 10S, Range
25E, which is State land. The agreement has been executed by all of the
owners of the leases and pending applications for leases, except the lands
which are embraced in the so-called Bitter Lake Migratory Wildlife Refuge,
and there is a question whether leases will be issued for those lands.
The area has heretofore been designated by the Director of the U. S. Geol-
ogical Survey upon the application of the several lease owners as suitable
for unitization. Under the terms of the agreement the operator is given
authority to carry on necessary operations to explore and develop the unit
area. The agreement provides for a test well to be drilled to a depth of
6,500 feet, unless gas or oil is found at a lesser depth. The proposed
unit agreement follows substantially the unit agreements which have hereto-
fore been approved by the Commission. That you may have before you the
proposed unit area, here is a plat which has heretofore been filed with you.
I might say that at this time the DeKalb Agricultural Association has al-
ready started a well in Section 13, which is near the center of the proposed

unit area, and at the present time the well is below 3,500 feet. The geological information upon which this unit was formed was done by Mr. John Kelly, and I would like to have him sworn as a witness.

Mr. John M. Kelly, after being first duly sworn, testified as follows:

Mr. Hinkle:

What is your name?

Mr. Kelly:

John M. Kelly.

Mr. Hinkle:

What is your profession?

Mr. Kelly:

I am a graduate engineer and geologist, and registered to practice in New Mexico.

Mr. Hinkle:

How long have you practiced?

Mr. Kelly:

Ten years.

Mr. Hinkle:

Were you formerly the State Geologist?

Mr. Kelly:

That is right.

Mr. Hinkle:

You are familiar with the area involved in the proposed Bitter Lake Unit Agreement?

Mr. Kelly:

I am.

Mr. Hinkle:

Have you performed any work in connection with that Agreement?

Mr. Kelly:

Upon information furnished me by Mr. Whelan, who did the magnetometer work, I prepared a contour map of the anticline.

Mr. Hinkle:

I hand you herewith the applicant's Exhibit A, and ask you to state whether that is a duplicate of the map made with the application before the U. S. Geological Survey for the designation of the Unit Area.

Mr. Kelly:

It is.

Mr. Hinkle:

You are familiar with the designation which has been made, and the boundaries as shown by the plat attached to the agreement?

Mr. Kelly:

Yes.

Mr. Hinkle:

State whether in your opinion the area covers all or substantially all of the geological features.

Mr. Kelly:

I believe it covers all of the features as shown by the geological map and the area map.

Mr. Hinkle:

Are you familiar with the agreement?

Mr. Kelly:

Yes.

Mr. Hinkle:

State whether the operations under this agreement would have a tendency to promote the conservation of oil and gas and the prevention of waste.

Mr. Kelly:

I believe it would promote proper development in the area.

Governor Miles:

Anyone else want to be heard in this case? If not, the application is granted.

Mr. Livingston:

The next case is No. 77 in the matter of the application of the Magnolia Petroleum Company for an order of approval of the Unit Agreement for the development and operation of the Black Hills Anticline Unit Area within Townships 17 and 18 South, Ranges 19 and 20 East, N.M.P.M., containing 17,626.62 acres, more or less, Chaves County, New Mexico.

Mr. Hinkle:

I am Clarence E. Hinkle of Harvey, Dow and Hinkle, and am attorney for the applicant, the Magnolia Petroleum Company. This is the application of the Magnolia Petroleum Company for the approval of the proposed Bitter Lake Anticline Unit Agreement. The unit agreement which has been filed with the Commission contains a plat which shows the proposed unit area. The proposed unit area contains approximately 17,626.62 acres. All of the lands are lands of the United States, except certain lands aggregating 2,170.56 acres. The unit agreement has been signed by the owners of oil and gas leases covering all of the lands, except the owners of two leases, which are a very small portion of the total acreage. The area involved in the agreement was approved by the Director of the U. S. Geological Survey and the Secretary of the Interior as one proper for unitization. The agreement designates the Magnolia Petroleum Company as the unit operator, and under the terms of the unit is given power to carry on all work necessary for the exploration of the area. The operators agree to commence a well within six months after the approval, and drill the same to a depth of 7,000 feet, unless gas or oil is found at a lesser depth. The form follows substantially the same form as heretofore approved by this Commission and the Commissioner of Public Lands. Mr. Steve Hannifin, the District Land Man for Magnolia, is here, and I would like to have him testify.

Mr. S. P. Hannifin, after being first duly sworn, testified as follows:

Mr. Hinkle:

Please state your name.

Mr. Hannifin:

S. P. Hannifin.

Mr. Hinkle:

Where do you reside?

Mr. Hannifin:

Roswell, New Mexico.

Mr. Hinkle:

What is your official position?

Mr. Hannifin:

District Land Man for Magnolia Petroleum Company.

Mr. Hinkle:

How long have you been with the Magnolia Petroleum Company?

Mr. Hannifin:

20 years.

Mr. Hinkle:

Are you familiar with the so-called Bitter Lake Anticline Unit Agreement in Chaves County, New Mexico, which is the subject of the proposed unit agreement?

Mr. Hannifin:

Yes, sir.

Mr. Hinkle:

Do you know whether any geological investigation has been made of this area?

Mr. Hannifin:

Several years ago such an investigation was made by J. B. Hedley.

Mr. Hinkle:

Did Mr. Hedley make a report in connection with the report of the designation of this area before the U. S. Geological Survey?

Mr. Hannifin:

He did, yes.

Mr. Hinkle:

I hand you herewith the report of Mr. J. B. Hedley, marked Exhibit A, on the Bitter Lake Anticline, Chaves County, and ask you whether it is a duplicate of the report filed with the application.

Mr. Hannifin:

It is.

Mr. Hinkle:

Does that map show the geological structure involved?

Mr. Hannifin:

Yes.

Mr. Hinkle:

Do you know whether the unit area covers all of the structures, according to the plat?

Mr. Hannifin:

It does.

Mr. Hinkle:

Are you familiar with the terms of the unit agreement?

Mr. Hannifin:

Yes, sir.

Mr. Kinkle:

State whether in your opinion the operations under the proposed unit agreement, if a discovery is made, would tend to promote the conservation of oil and the prevention of waste.

Mr. Hannifin:

I believe it would. Yes, sir.

Governor Miles:

Anyone else want to be heard in this case? The application is granted. Next case.

Mr. Livingston:

The next case is No. 78 in the matter of the application of the Petroleum Products Refining and Producing Company for an order of approval of an irregular oil and gas well location in Section 36, T. 18N, R. 9W, Hospah Field, McKinley County, New Mexico, Well No. 48, to be located in the South-east-Southwest-Southeast quarter of said section, 1220 feet East of the center section line, 330 feet North of the South line.

Mr. Seth:

My name is J. O. Seth, and I appear for the Petroleum Products Refining and Producing Company. This is an application to drill this well that I marked on this plat. The field and the development began many years ago, and was drilled on a 10-acre spacing. The old wells were not so located as to be in the center of each 10-acre tract. The proposal of this location is to get 660 feet East of the well already drilled. The lease is a State lease, and nobody would be hurt by this location. I would like to have Mr. McBride sworn.

Mr. W. R. McBride, after being first duly sworn, testified as follows:

Mr. Seth:

Your name, please.

Mr. McBride:

W. R. McBride.

Mr. Seth:

You are an officer of the Petroleum Products Refining and Producing Company?

Mr. McBride:

Yes, sir.

Mr. Seth:

What is your position?

Mr. McBride:

Vice-President.

Mr. Seth:

You know the general location of these wells in the Hospah Dome, do you not?

Mr. McBride:

Yes.

Mr. Seth:

That development began many years ago?

Mr. McBride:

I think back in 1928 or 1929.

Mr. Seth:

This application today is to drill the well marked on this plat?

Mr. McBride:

That is well No. 48. The Roman numerals there are the numbers we anticipate drilling, but this is well No. 1 here.

Mr. Seth:

I would like to have this plat marked for attention.

(NOTE: The plat at this point was marked Exhibit A for the record).

Mr. Seth:

The location you seek for this well is merely to keep it at 660 feet?

Mr. McBride:

Yes, and to correct some of the previous locations and in drilling additional wells we can try to keep them all within the proper spacing. They will all be the same distance from each other. We may have to come in and ask for another irregular spacing if it is necessary.

Mr. Seth:

Are all the wells on the same State lease owned by your Company?

Mr. McBride:

Yes, sir.

Mr. Seth:

I believe that is all.

Governor Miles:

Anybody else want to be heard in this case? The application is granted.

Mr. Livingston:

The next case is No. 79. The petitioner, through his attorneys, Kiker and Sanchez, has requested that the hearing date upon this petition be vacated and that said petition be set down for a hearing at some future time, owing to the fact that the petitioner, with other operators in the Fulcher Basin Gas Field, is endeavoring to formulate a spacing plan to present to the Commission.

The next case is No. 80 in the matter of the petition of Operators' Committee under Maljamar Cooperative Repressuring Agreement for amendment to Order No. 435, as amended by Order No. 595 of the Commission, to provide for the running of back allowable from the Maljamar Cooperative Repressuring area.

Mr. Cochran:

My name is John E. Cochran, Jr. I represent Maljamar Cooperative Repressuring Agreement. This is a matter in which the Maljamar Cooperative Repressuring Agreement asks that Order 485, as amended by Order 595 of this Commission to provide for the running of back allowable from the Maljamar Cooperative Repressuring Agreement. Order 485 entered by the Commission in Case 36 on November 14, 1942 was the order which approved the Maljamar Cooperative Repressuring Agreement and approved certain in-put wells and provided for the distribution on allowable on in-put wells to the other wells. Order 595 entered by the Commission on January 8, 1945 amended the original order and set up an allocation production plan for the area. Before that order was entered, and while the study was being made, it was agreed that in the interest of conservation at that time no back allowable would be allowed the area, and there was written on February 11, 1944 a letter by Mr. Kelly, then State Geologist, which provided that no back allowable be run from leases in the Maljamar area. Since that time, however, the allocation plan approved has been so successful that the operators feel that it would not be detrimental to the properties to run some back allowable which occurred for the reasons I will tell you. During November Malco Refineries, Inc., who was a substantial crude buyer from the area had too much crude, and the Malco discontinued purchasing crude oil from a large number of leases in the area, and following that several operators had no pipe line connections, and a substantial back allowable accumulated by reason of having no outlet for the oil. As of June 1 there were approximately 20,000 barrels of back allowable which have not been run from certain leases within the area. This back allowable is in some instances unproduced, and in some cases has been produced and is in storage. All of the operators in the area feel that they should be allowed to run currently to the pipe line companies purchasing the oil a back allowable at a rate not to exceed the rate the Commission allowed the State generally. All operators of leases and wells in this area feel that the way this should be handled would be for individual operators to make application to the Operators' Committee, which is the manager of the Project, and designate the lease and the amount of back allowable that they feel should be run during a current month, which would not exceed the back allowable figure set for other parts of the State by the Commission. This would amount to probably a barrel a day per well, and in some instances three barrels a day per well, and where the oil is in storage a request would be made for permission to run this to the pipe line company, not to exceed ten barrels per day. After the applications have been made to the Operators' Committee by the operators, the operators feel that the Chairman of the Operators' Committee of the Maljamar Cooperative Repressuring Agreement should petition the Commission, or its deputies, administratively for authority to run back allowable during the current month. The reason for suggesting the matter be handled thus is when an operator makes application for back allowable the Operators' Committee will have an opportunity to study the request, and if it is in the interest of conservation the Chairman of the Operators' Committee would file the application with the Commission or its deputy. Due to the fact that the back allowable had its origin about the first of December, the Maljamar Repressuring Agreement asked that the Commission permit it to follow this procedure in requesting authority to run back allowable starting December 1, 1945. Mr. William J. Wright, Engineer for the Maljamar Cooperative Repressuring Agreement is here, and if the members of the Commission would care to ask him any questions he may be sworn. Do you have any questions you want to ask him?

Governor Miles:

Yes, will you bring him forward?

Mr. William J. Wright, after being first duly sworn, testified as follows:

Mr. Cochran:

Will you state your name?

Mr. Wright:

William J. Wright.

Mr. Cochran:

Where do you live?

Mr. Wright:

Maljamar.

Mr. Cochran:

What is your occupation?

Mr. Wright:

Project engineer for the Maljamar Cooperative Reprocessing Agreement.

Mr. Spurrier:

Mr. Wright, give us an approximation of what percent of the production off any one well would this additional production be; that is, what the back allowable would constitute.

Mr. Wright:

From a daily run it should not exceed 15% of daily allowable, which would be from 1 to 3 barrels per day.

Mr. Cochran:

Mr. Wright, in your opinion, if the method of making up back allowable, as is hereby outlined, is followed, would that constitute underground waste?

Mr. Wright:

Definitely not.

Mr. Livingston:

Back to what period of time is it desired that back allowable be permitted to run?

Mr. Wright:

December 1, 1945.

Governor Miles:

Anyone else want to be heard in this case? If not, the application is granted.

Mr. Livingston:

The next case is 81 in the matter of the petition of the Grayburg Oil Company of New Mexico, Operator of Grayburg Cooperative and Unit Agreement, for an order for transfer of allowable from in-put wells to other wells of same basic leases in the unit area of Grayburg Cooperative and Unit Agreement, Eddy County, New Mexico.

Mr. Miller:

I am Raymond Miller of the Grayburg Oil Company, Artesia. The Grayburg Oil Company is the operator of a unit agreement located on Government lands. In connection with this unit cooperative agreement we are operating a reprocessing plant. The last several months we have converted two top allowable wells to in-put wells situated in the NW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 26, Township 17, Range 29, the well known as Grayburg-Keeley 9-B. The other well, Western Production Company-Keeley 12-C, is located in SW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 25, Township 17, Range 29. Those wells were top allowable wells at the time they were put on as in-put wells, and since then we have been losing that allowable, and we request this allowable be transferred to other wells situated on the same basic leases. The Keeley B basic lease covers the SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 24, NE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 25, E $\frac{1}{2}$ Section 26, Township 17, Range 29E. The Western-Keeley C lease covers the NE $\frac{1}{4}$ NE $\frac{1}{4}$ and the NW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 13, SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 24, all of Section 25, except the NE $\frac{1}{4}$ NE $\frac{1}{4}$ and the W $\frac{1}{2}$ of Section 26, all in Township 17, Range 29E. Mr. R. J. Heard, Vice-President of the Grayburg Oil Company, is present, and I would like to have him heard.

Mr. R. J. Heard, after being first duly sworn, testified as follows:

Mr. Miller:

Your name is —

Mr. Heard:

R. J. Heard.

Mr. Miller:

Where do you reside?

Mr. Heard:

Artesia.

Mr. Miller:

Your position with the Grayburg Oil Company?

Mr. Heard:

Vice-President.

Mr. Miller:

Mr. Heard, you have been in charge of the drilling and production of these subject wells?

Mr. Heard:

Yes.

Mr. Miller:

Do you know that these wells are capable of producing top unit allowable at the time they were converted to injection wells?

Mr. Heard:

Yes.

Mr. Miller:

In your opinion, if the wells were reconverted to producing wells at this time, would they produce top unit allowable?

Mr. Heard:

Yes.

Mr. Miller:

Do you think this unit allowable could be produced from other wells on this same basic lease without waste?

Mr. Heard:

Yes.

Mr. Miller:

Is there any question you want to ask Mr. Heard?

Mr. Spurrier:

Approximately how many wells do you intend to allocate this in-pat production to, Mr. Heard?

Mr. Heard:

Approximately 17 wells on one basic lease, and I think around 12 or 14

on the other.

Mr. Spurrier:

Then that would be about 2 or 3 barrels per day per well, would it not?

Mr. Heard?

Yes, sir.

Mr. Spurrier:

This would be something less than 10% of each well's production?

Mr. Heard:

Yes, sir.

Mr. Miller:

We are requesting the Commission to make up back allowables on these wells, beginning May 1, 1946; that is, on these two subject in-put wells. We are also requesting the Commission to reserve jurisdiction in this case, that they may act administratively in the case of corrections, etc.

Mr. Spurrier:

You mean by that you contemplate drilling more in-put wells?

Mr. Miller:

Yes, that is right. There are more wells being drilled at the present time on these leases, and it is our intention to convert these to in-put wells.

Governor Miles:

Anyone else want to be heard in this case? If not, the petition is granted.

Mr. Livingston:

The next case is No. 82 in the matter of the application of I. K. Westbrook for an order of approval of an irregular oil and gas well location in SW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 22, T. 20N, Range 11W, N.M.P., McKinley County, New Mexico for I. K. Westbrook-Santa Fe Pacific Railroad Company Well No. 1, which location is 1594 feet South of the North line and 21 feet West of the East line of said section. This well started as a water well, and seems to be ending up as an oil well.

Mr. Iden:

My name is E. C. Iden, and I would like to hear Mr. I. K. Westbrook and Mr. E. O. Hemenway sworn.

Mr. E. O. Hemenway, after being first duly sworn testified as follows:

Mr. Iden:

Your name is E. O. Hemenway?

Mr. Hemenway:

Yes.

Mr. Iden:

You are connected with the Santa Fe Pacific Railroad Company?

Mr. Hemenway:

I am Land Commissioner at Albuquerque.

Mr. Iden:

You are familiar with this application of I. K. Westbrook?

Mr. Hemenway:

Yes.

Mr. Iden:

The Santa Fe Pacific Railroad Company is the owner of the land on which this well is located?

Mr. Hemenway:

Yes.

Mr. Iden:

State to the Commission Mr. Westbrook's activities with reference to this land, particularly with reference to grazing leases prior to the time he acquired the oil lease.

Mr. Hemenway:

Mr. Westbrook is a livestock operator in this part of McKinley County, and in connection with his livestock operations entered into a contract with a driller to drill him a deep water well, and when he got down a certain distance there was some showing of oil, and he immediately stopped his work on his water well and felt that there might be some advantage in attempting to get an oil well out of this prospect.

Mr. Iden:

You are familiar with the location of the well?

Mr. Hemenway:

It is in Section 22, Township 20 North, Range 11 West. It is in the SW $\frac{1}{4}$ of the NE $\frac{1}{4}$.

Mr. Iden:

I believe as shown by the petition, it is 274 feet South of the quarter section line 40-acre subdivision line. Is that correct?

Mr. Hemenway:

That is about it. I think it is 274 feet South of the quarter line and 229 feet East of the West line of that 40-acre tract.

Mr. Iden:

Stated in another way, it is 1594 feet South of the North line and 2411 feet West of the East line?

Mr. Hemenway:

Yes, sir.

Mr. Iden:

Did the grazing lease Mr. Westbrook had prior to an oil showing in the water well embrace other lands than this?

Mr. Hemenway:

Yes, as I recall, it took in all oil holdings in that township.

Mr. Iden:

He still has the grazing lease?

Mr. Hemenway:

He has a purchase contract for the purchase of the surface rights.

Mr. Idem:

After the showing you gave him an oil and gas lease on certain lands for the purpose of protecting him in drilling the well, further with the hope that he might get oil or gas?

Mr. Hemenway:

Yes.

Mr. Idem:

It covers 160 acres surrounding this prospect?

Mr. Hemenway:

Yes.

Mr. Idem:

Does your company own all of the acreage adjacent to this particular acreage?

Mr. Hemenway:

We own immediately adjacent. Section 16 cornering to the Northwest is a school section. We own the others in the immediate vicinity.

Mr. Idem:

Generally speaking, how far is this from any other producing oil and gas well?

Mr. Hemenway:

Approximately 15 or 18 miles Northwest of any present production.

Mr. Idem:

Do you know the depth of the water well?

Mr. Hemenway:

Approximately 1100 feet.

Mr. Idem:

Do you know of any possible objection in permitting this well to be drilled in this location?

Mr. Hemenway:

No.

Mr. Idem:

I think that is all.

Governor Miles:

What is the approximate distance from this well to the corner of the school section you speak of?

Mr. Hemenway:

About 2900 feet approximately to the Southeast corner of the school section.

Mr. Idem:

Mr. Westbrook, will you take the stand?

Mr. Westbrook, after being first duly sworn, testified as follows:

Mr. Idem:

Your name is I. K. Westbrook?

Mr. Westbrook:

Yes, sir.

Mr. Idem:

You are the petitioner in this matter?

Mr. Westbrook:

Yes, sir.

Mr. Idem:

Where do you live?

Mr. Westbrook:

Crownpoint.

Mr. Idem:

How long have you lived there?

Mr. Westbrook:

29 years.

Mr. Idem:

You are a rancher in that community?

Mr. Westbrook:

Yes, sir, I have been a rancher there 29 years.

Mr. Idem:

You have heard Mr. Hemerway's testimony. Was it correct in all respects?

Mr. Westbrook:

Yes, sir.

Mr. Idem:

You might desire to continue the drilling of this well with the hope of getting oil and gas?

Mr. Westbrook:

Yes, I would like to prospect for it.

Mr. Idem:

It was begun as a water well?

Mr. Westbrook:

Absolutely. Near the center of this township.

Mr. Idem:

At what depth did you encounter this oil and gas showing?

Mr. Westbrook:

1092 feet.

Mr. Idem:

Is that where the well stands today?

Mr. Westbrook:

Yes, sir. There is quite a bit of oil comes off the water when you draw it.

Mr. Idem:

So far as you know, would it make a commercial well at this time?

Mr. Westbrook:

I do not know. There is quite a little showing, and the driller states it may be a commercial well.

Mr. Idem:

I believe that is all, unless the Commission has some questions.

Mr. Spurr:

One question, Mr. Westbrook. You have a lease. Now do you have a plugging bond?

Mr. Westbrook:

The bond is accompanying my petition here.

Mr. Livingston:

Mr. Westbrook has on file a \$2500 corporate surety bond to go to a depth not to exceed 1500 feet, but the bond has not been accepted until the Commission grants its order.

Mr. Idem:

Based on that showing, we ask that the petition be granted.

Governor Miles:

Anyone else want to be heard on this case? If not, the application is granted. Meeting dismissed.

I certify that the above is a transcript of the proceedings in this matter as taken from my shorthand notes.

Mary E. Martin

Mary E. Martin, Stenographer

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN WITNESS WHEREOF THE APPLICATION OF THE DEKALB AGRICULTURAL ASSOCIATION, INC. FOR AN ORDER OF APPROVAL OF THE UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE BITTER LAKE UNIT AREA WITHIN T. 103, RANGES 25 and 26 EAST, N.M.P.M., CONTAINING 9,032.38 ACRES, MORE OR LESS, CHAVES COUNTY, NEW MEXICO.

Pursuant to notice by the Commission, duly made and published, setting June 7, 1946 at 10:00 o'clock A. M. for hearing in the above-entitled matter, said hearing was convened on said day at said hour in the Coronada Room at La Florida Hotel, Santa Fe, New Mexico, the Commission sitting as follows:

Commissioner of Public Lands, John E. Miles, Member
R. R. Spurrier, Secretary
Carl E. Livingston

R E G I S T E R

<u>NAME</u>	<u>COMPANY</u>	<u>ADDRESS</u>
William B. Macey	Oil Conservation Commission	Artesia, N. M.
M. R. Lutz	State Bureau of Mines	Artesia, N. M.
S. H. Ludwick		Roswell, N. M.
Frank D. Gardner	Sinclair Prairie Oil Company	Midland, Texas
R. J. Heard	Grayburg Oil Company	Artesia, N. M.
R. F. Miller	Grayburg Oil Company	Artesia, N. M.
W. F. Patterson		Santa Fe, N. M.
S. P. Hamiffin		Roswell, N. M.
Foster Merrill	U. S. Geological Survey	Roswell, N. M.
E. G. Hornsby	A. T. & S. F. Railway Co.	Albuquerque, N. M.
E. C. Ide	A. T. & S. F. Railway Co.	Albuquerque, N. M.
Marshall Rowley	Carper Drilling Company	Artesia, N. M.
John E. Cochran, Jr.	Maljamar Coop. Rep. Agreement	Artesia, N. M.
William J. Wright	Maljamar Coop. Rep. Agreement	Artesia, N. M.
Charles R. Allen	Continental Oil Company	Ponca City, Okla.
J. O. Seth	Petroleum Prod. Ref. & Pro. Co.	Santa Fe, N. M.
V. R. McBride	Petroleum Prod. Ref. & Pro. Co.	Santa Fe, N. M.
John M. Kelly	Independent Geologist	Roswell, N. M.
Clarence Hinkle	Harvey, Dow and Hinkle	Roswell, N. M.
Roy O. Yarbrough	Oil Conservation Commission	Hobbs, N. M.
F. W. Mickman	Oil Conservation Commission	Santa Fe, N. M.

Governor Miles:

Gentlemen, the Commission is in session, and the Secretary will proceed with the order of business.

Mr. Hinkle:

I am Clarence E. Hinkle of Harvey, Dow and Hinkle, representing the DeKalb Agricultural Association. This is an application by the DeKalb Agricultural Association for the approval of a unit agreement to be known as the Bitter Lake Unit Agreement. The proposed unit area covers approximately 9,032.38 acres situated in Township 10 South, Ranges 25 and 26 East. All of the lands embraced in the proposed area are lands of the United States, with the exception of 120 acres in Section 2, Township 103, Range 25E, which is State land. The agreement has been executed by all of the owners of the leases and pending applications for leases, except the lands which are embraced in the so-called Bitter Lake Migratory Wildlife Refuge, and there is a question whether leases will be issued for those lands. The area has heretofore been designated by the Director of the U. S. Geological Survey upon the application of the several lease owners as suitable for unitization. Under the terms of the agreement the operator is given authority to carry on necessary operations to explore and develop the unit area. The agreement provides for a test well to be drilled to a depth of 6,500 feet, unless gas or oil is found at a lesser depth. The proposed unit agreement follows substantially the unit agreements which have heretofore been approved by the Commission. That you may have before you the proposed unit area, here is a plat which has heretofore been filed with you. I might say that at this time the DeKalb Agricultural Association has already started a well in Section 13, which is near the center of the proposed

unit area, and at the present time the well is below 3,500 feet. The geological information upon which this unit was formed was done by Mr. John Kelly, and I would like to have him sworn as a witness.

Mr. John M. Kelly, after being first duly sworn, testified as follows:

Mr. Hinkle:

What is your name?

Mr. Kelly:

John M. Kelly.

Mr. Hinkle:

What is your profession?

Mr. Kelly:

I am a graduate engineer and geologist, and registered to practice in New Mexico.

Mr. Hinkle:

How long have you practiced?

Mr. Kelly:

Ten years.

Mr. Hinkle:

You were formerly the State Geologist?

Mr. Kelly:

That is right.

Mr. Hinkle:

Are you familiar with the area involved in the proposed Bitter Lake Unit Agreement?

Mr. Kelly:

I am.

Mr. Hinkle:

Have you performed any work in connection with that Agreement?

Mr. Kelly:

Upon information furnished me by Mr. Whelan, who did the magnetometer work, I prepared a contour map of the anticline.

Mr. Hinkle:

I hand you herewith the applicant's Exhibit A, and ask you to state whether that is a duplicate of the map made with the application before the U. S. Geological Survey for designation of the Unit Area.

Mr. Kelly:

It is.

Mr. Hinkle:

You are familiar with the designation which has been made, and the boundaries as shown by the plat attached to the agreement?

Mr. Kelly:

Yes.

Mr. Hinkle:

State whether in your opinion the area covers all or substantially all of the geological features.

Mr. Kelly:

I believe it covers all of the features as shown by the geological map and the area map.

Mr. Hinkle:

Are you familiar with the agreement?

Mr. Kelly:

Yes.

Mr. Hinkle:

State whether the operations under this agreement would have a tendency to promote the conservation of oil and gas and the prevention of waste.

Mr. Kelly:

I believe it would promote proper development in the area.

Governor Miles:

Anyone else want to be heard in this case? If not, the application is granted.

Mr. Livingston:

The next case is No. 77 in the matter of the application of the Magnolia Petroleum Company for an order of approval of the Unit Agreement for the development and operation of the Black Hills Anticline Unit Area within Townships 17 and 18 South, Ranges 19 and 20 East, N.M.P.M., containing 17,626.62 acres, more or less, Chaves County, New Mexico.

Mr. Hinkle:

*Shoreland
Black Hills
Anticline Unit
Agreement*

I am Clarence E. Hinkle of Hervey, Dow and Hinkle, and an attorney for the applicant, the Magnolia Petroleum Company. This is the application of the Magnolia Petroleum Company for the approval of the proposed Bitter Lake Anticline Unit Agreement. The unit agreement which has been filed with the Commission contains a plat which shows the proposed unit area. The proposed unit area contains approximately 17,626.62 acres. All of the lands are lands of the United States, except certain lands aggregating 2,170.56 acres. The unit agreement has been signed by the owners of oil and gas leases covering all of the lands, except the owners of two leases, which are a very small portion of the total acreage. The area involved in the agreement was approved by the Director of the U. S. Geological Survey and the Secretary of the Interior as one proper for unitization. The agreement designates the Magnolia Petroleum Company as the unit operator, and under the terms of the unit is given power to carry on all work necessary for the exploration of the area. The operators agree to commence a well within six months after the approval, and drill the same to a depth of 7,000 feet, unless gas or oil is found at a lesser depth. The form follows substantially the same form as heretofore approved by this Commission, and the Commissioner of Public Lands. Mr. Steve Hannifin, the District Land Man for Magnolia is here, and I would like to have him testify.

Mr. S. P. Hannifin, after being first duly sworn, testified as follows:

Mr. Hinkle:

Please state your name.

Mr. Hannifin:

S. P. Hannifin.

where do you reside?

Mr. Hannifin:

Roswell, New Mexico.

Mr. Hinkle:

What is your official position?

Mr. Hannifin:

District Land Man for Magnolia Petroleum Company.

Mr. Hinkle:

How long have you been with the Magnolia Petroleum Company?

Mr. Hannifin:

20 years.

Mr. Hinkle:

Are you familiar with the so-called Bitter Lake Anticline Unit Agreement in Chaves County, New Mexico, which is the subject of the proposed unit agreement?

Mr. Hannifin:

Yes, sir.

Mr. Hinkle:

Do you know whether any geological investigation has been made of this area?

Mr. Hannifin:

Several years ago such an investigation was made by J. B. Hedley.

Mr. Hinkle:

Did Mr. Hedley make a report in connection with the report of the designation of this area before the U. S. Geological Survey?

Mr. Hannifin:

He did, yes.

Mr. Hinkle:

I hand you herewith the report of Mr. J. B. Hedley, marked Exhibit A, on the Bitter Lake Anticline, Chaves County, and ask you whether it is a duplicate of the report filed with the application.

Mr. Hannifin:

It is.

Mr. Hinkle:

Does that map show the geological structure involved?

Mr. Hannifin:

Yes.

Mr. Hinkle:

Do you know whether the unit area covers all of the structures, according to the plat?

Mr. Hannifin:

It does.

Mr. Hinkle:

Are you familiar with the terms of the unit agreement?

Mr. Hannifin:

Yes, sir.

Mr. Hinkle:

State whether in your opinion the operations under the proposed unit agreement, if a discovery is made, would tend to promote the conservation of oil and the prevention of waste.

Mr. Hannifin:

I believe it would. Yes, sir.

Governor Miles:

Anyone else want to be heard in this case? The application is granted. Next case.

Mr. Livingston:

The next case is No. 78 in the matter of the application of the Petroleum Products Refining and Producing Company for an order of approval of an irregular oil and gas well location in Section 36, T. 18N, R. 9W, Hespah Field, McKinley County, New Mexico, Well No. 48, to be located in the Southeast-Southwest-Southeast quarter of said section, 1220 feet East of the center section line, 330 feet North of the South line.

Mr. Seth:

My name is J. O. Seth, and I appear for the Petroleum Products Refining and Producing Company. This is an application to drill this well that I marked on this plat. The field and the development began many years ago, and was drilled on a 10-acre spacing. The old wells were not so located as to be in the center of each 10-acre tract. The proposal of this location is to get 660 feet East of the well already drilled. The lease is a State lease, and nobody would be hurt by the location. I would like to have Mr. McBride sworn.

Mr. W. R. McBride, after being first duly sworn, testified as follows:

Mr. Seth:

Your name, please.

Mr. McBride:

W. R. McBride.

Mr. Seth:

You are an officer of the Petroleum Products Refining and Producing Company?

Mr. McBride:

Yes, sir.

Mr. Seth:

What is your position?

Mr. McBride:

Vice-President.

Mr. Seth:

You know the general location of these wells in the Hespah Dome, do you not?

Mr. McBride:

Yes.

Mr. Seth:

That development began many years ago?

Mr. McBride:

I think back in 1928 or 1929.

Mr. Seth:

This application today is to drill the well marked on this plat?

Mr. McBride:

That is well No. 48. The Roman numerals are the numbers we anticipate drilling, but this is well No. 1 here.

Mr. Seth:

I would like to have this plat marked for attention.

(NOTE: The plat at this point was marked Exhibit A for the record).

Mr. Seth:

The location you seek for this well is merely to keep it at 660 feet?

Mr. McBride:

Yes, and to correct some of the previous locations and in drilling additional wells we can try to keep them all within the proper spacing. They will all be the same distance from each other. We may have to come in and ask for another irregular spacing if it is necessary.

Mr. Seth:

Are all the wells on the same State lease owned by your company?

Mr. McBride:

Yes, sir.

Mr. Seth:

I believe that is all.

Governor Hilsa:

Anybody else want to be heard in this case? The application is granted.

Mr. Livingston:

The next case is No. 79. The petitioner, through his attorneys, Kiker and Sachse, has requested that the hearing date upon this petition be vacated and that said petition be set down for a hearing at some future time, owing to the fact that the petitioner, with other operators in the Fulcher Basin Gas Field are endeavoring to formulate a spacing plan to present to the Commission.

The next case is No. 80 in the matter of the petition of Operators' Committee under Maljamar Cooperative Repressuring Agreement for amendment to Order No. 485, as amended by Order No. 595 of the Commission, to provide for the running of back allowable from the Maljamar Cooperative Repressuring area.

Mr. Cochran:

My name is John E. Cochran, Jr. I represent Maljamar Cooperative Repressuring Agreement. This is a matter in which the Maljamar Cooperative Repressuring Agreement asks that Order 485, as amended by Order 595 of this Commission to provide for the running of back allowable from the Maljamar Cooperative Repressuring Agreement. Order 485 entered by the Commission in Case 36 on November 14, 1942 was the order which approved the Maljamar Cooperative Repressuring Agreement and approved certain in-put wells and provided for the distribution on allowable on in-put wells to other wells. Order 595 entered by the Commission on January 8, 1945 amended the original order and set up an allocation production plan for the area. Before that order was entered, and while the study was being made, it was agreed that in the interest of conservation at that time no back allowable would be allowed the area, and there was written on February 11, 1944 a letter by Mr. Kelly, then State Geologist, which provided that no back allowable be run from leases in the Maljamar area. Since that time, however, the allocation plan approved has been so successful that the operators feel that it would not be detrimental to the properties to run some back allowable which occurred for the reasons I will tell you. During November Malco Refineries, Inc., who was a substantial crude buyer from the area had too much crude, and the Malco discontinued purchasing crude oil from a large number of leases in the area, and following that several operators had no pipe line connections, and a substantial back allowable accumulated by reason of having no outlet for the oil. As of June 1 there were approximately 20,000 barrels of back allowable which have not been run from certain leases within the area. This back allowable is in some instances unproduced, and in some cases has been produced and is in storage. All of the operators in the area feel that they should be allowed to run currently to the pipe line companies purchasing the oil a back allowable at a rate not to exceed the rate the Commission allowed the State generally. All operators of leases and wells in this area feel that the way this should be handled would be for individual operators to make application to the Operators' Committee, which is the manager of the Project, and designate the lease and the amount of back allowable that they feel should be run during a current month, which would not exceed the back allowable figure set for other parts of the State by the Commission. This would amount to probably a barrel a day per well, and in some instances three barrels a day per well, and where the oil is in storage a request would be made for permission to run this to the pipe line company, not to exceed ten barrels per day. After the applications have been made to the Operators' Committee by the operators, the operators feel that the Chairman of the Operators' Committee of the Maljamar Cooperative Repressuring Agreement should petition the Commission, or its deputies, administratively for authority to run back allowable during the current month. The reason for suggesting the matter be handled thus is when an operator makes application for back allowable the Operators' Committee will have an opportunity to study the request, and if it is in the interest of conservation the Chairman of the Operators' Committee would file the application with the Commission or its deputy. Due to the fact that the back allowable had its origin about the first of December, the Maljamar Repressuring Agreement asked that the Commission permit it to follow this procedure in requesting authority to run back allowable starting December 1, 1945. Mr. William J. Wright, Engineer for the Maljamar Cooperative Repressuring Agreement is here, and if the members of the Commission would care to ask him any questions he may be sworn. Do you have any questions you want to ask him?

Governor Miles:

Yes, will you bring him forward?

Mr. William J. Wright, after being first duly sworn, testified as follows:

Mr. Cochran:

Will you state your name?

Mr. Wright:

William J. Wright.

Mr. Cochran:

Where do you live?

Mr. Wright:

Maljamar.

Mr. Cochran:

What is your occupation?

Mr. Wright:

Project engineer for the Maljamar Cooperative Repressuring Agreement.

Mr. Spurrier:

Mr. Wright, give us an approximation of what percent of the production of any one well would this additional production be; that is, what the back allowable would constitute.

Mr. Wright:

From a daily run it should not exceed 15% of daily allowable, which would be from 1 to 3 barrels per day.

Mr. Cochran:

Mr. Wright, in your opinion, if the method of making up back allowable, as is hereby outlined, is followed, would that constitute underground waste?

Mr. Wright:

Definitely not.

Mr. Livingston:

Back to what period of time is it desired that back allowable be permitted to run?

Mr. Wright:

December 1, 1945.

Governor Niles:

Anyone else want to be heard in this case? If not, the application is granted.

Mr. Livingston:

The next case is 81 in the matter of the petition of the Grayburg Oil Company of New Mexico, Operator of Grayburg Cooperative and Unit Agreement, for an order for transfer of allowable from in-put wells to other wells of same basic leases in the unit area of Grayburg Cooperative and Unit Agreement, Eddy County, New Mexico.

Mr. Miller:

I am Raymond Miller of the Grayburg Oil Company, Artesia. The Grayburg Oil Company is the operator of a unit agreement located on Government lands. In connection with this unit cooperative agreement we are operating a repressuring plant. The last several months we have converted two top allowable wells to in-put wells situated in the NW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 26, Township 17, Range 29, the well known as Grayburg-Keeley 9-B. The other well, Western Production Company-Keeley 12-C, is located in SW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 25, Township 17, Range 29. These wells were top allowable wells at the time they were put on as in-put wells, and since then we have been losing that allowable, and we request this allowable be transferred to other wells situated on the same basic leases. The Keeley B basic lease covers the S $\frac{1}{4}$ SW $\frac{1}{4}$ Section 24, N $\frac{1}{4}$ NE $\frac{1}{4}$ Section 25, E $\frac{1}{4}$ Section 26, Township 17S, Range 29E. The Western-Keeley C lease covers the N $\frac{1}{4}$ SW $\frac{1}{4}$ and the NW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 13, S $\frac{1}{4}$ SE $\frac{1}{4}$ Section 24, all of Section 25, except the N $\frac{1}{4}$ NE $\frac{1}{4}$ and the W $\frac{1}{4}$ of Section 26, all in Township 8, Range 29E. Mr. R. J. Heard, Vice-President of the Grayburg Oil Company is present, and I would like to have him heard.

Mr. R. J. Heard, after being first duly sworn, testified as follows:

Mr. Killen:

Your name is --

Mr. Heard:

R. J. Heard.

Mr. Miller:

Where do you reside?

Mr. Heard:

Artesia.

Mr. Miller:

Your position with the Grayburg Oil Company?

Mr. Heard:

Vice-President.

Mr. Miller:

Mr. Heard, you have been in charge of the drilling and production of these subject wells?

Mr. Heard:

Yes.

Mr. Miller:

Do you know that these wells are capable of producing top unit allowable at the time they were converted to injection wells?

Mr. Heard:

Yes.

Mr. Miller:

In your opinion, if the wells were reconverted to producing wells at this time, would they produce top unit allowable?

Mr. Heard:

Yes.

Mr. Miller:

Do you think this unit allowable could be produced from other wells on this same basic lease without waste?

Mr. Heard:

Yes.

Mr. Miller:

Is there any question you want to ask Mr. Heard?

Mr. Spurrer:

Approximately how many wells do you intend to allocate this in-put production to, Mr. Heard?

Mr. Heard:

Approximately 17 wells on one basic lease, and I think around 12 or 14

on the other.

Mr. Spurrier:

Then that would be about 2 or 3 barrels per day per well, would it not?

Mr. Heard:

Yes, sir.

Mr. Spurrier:

This would be something less than 10% of each well's production?

Mr. Heard:

Yes, sir.

Mr. Miller:

We are requesting the Commission to make up back allowables on these wells, beginning May 1, 1946; that is, on these two subject in-put wells. We are also requesting the Commission to reserve jurisdiction in this case, that they may act administratively in the case of corrections, etc.

Mr. Spurrier:

You mean by that you contemplate drilling more in-put wells?

Mr. Miller:

Yes, that is right. There are more wells being drilled at the present time on these leases, and it is our intention to convert those to in-put wells.

Governor Miles:

Any one else want to be heard in this case? If not, the petition is granted.

Mr. Livingston:

The next case is No. 82 in the matter of the application of I. K. Westbrook for an order of approval of an irregular oil and gas well location in SW¹/₄ Section 22, T. 20N, Range 11W, N.M.P.M., McKinley County, New Mexico for I. K. Westbrook-Santa Fe Pacific Railroad Company Well No. 1, which location is 1594 feet South of the North line and 2411 feet West of the East line of said section. This well started off as a water well, and seems to be ending up as an oil well.

Mr. Iden:

My name is E. C. Iden. I would like to have Mr. I. K. Westbrook and Mr. E. O. Hemenway sworn.

Mr. E. O. Hemenway, after being first duly sworn, testified as follows:

Mr. Iden:

Your name is E. O. Hemenway?

Mr. Hemenway:

Yes.

Mr. Iden:

You are connected with the Santa Fe Pacific Railroad Company?

Mr. Hemenway:

I am Land Commissioner at Albuquerque.

Mr. Idem:

You are familiar with this application of I. K. Westbrook?

Mr. Hemenway:

Yes.

Mr. Idem:

The Santa Fe Pacific Railroad Company is the owner of the land on which this well is located?

Mr. Hemenway:

Yes.

Mr. Idem:

State to the Commission Mr. Westbrook's activities with reference to this land, particularly with reference to grazing leases prior to the time he acquired the oil lease.

Mr. Hemenway:

Mr. Westbrook is a livestock operator in this part of McKinley County, and in connection with his livestock operations entered into a contract with a driller to drill him a deep water well, and when he got down a certain distance there was some showing of oil, and he immediately stopped his work on his water well and felt that there might be some advantage in attempting to get an oil well out of this prospect.

Mr. Idem:

You are familiar with the location of the well?

Mr. Hemenway:

It is in Section 22, Township 20 North, Range 11 West. It is in the SW $\frac{1}{4}$ of the NE $\frac{1}{4}$.

Mr. Idem:

I believe as shown by the petition, it is 274 feet South of the quarter section line 40-acre subdivision line. Is that correct?

Mr. Hemenway:

That is about it. I think it is 274 feet South of the quarter line and 229 feet East of the West line of that 40-acre tract.

Mr. Idem:

Stated in another way, it is 1594 feet South of the North line and 2411 feet West of the East line?

Mr. Hemenway:

Yes, sir.

Mr. Idem:

Did the grazing lease Mr. Westbrook has prior to an oil showing in the water well embrace other lands than this?

Mr. Hemenway:

Yes, as I recall, it took in all oil holdings in that township.

Mr. Idem:

He still has the grazing lease?

Mr. Hemenway:

He has a purchase contract for the purchase of the surface rights.

Mr. Idem:

After the showing you gave him an oil and gas lease on certain lands for the purpose of protecting him in drilling the well, further with the hope that he might get oil or gas?

Mr. Hemenway:

Yes.

Mr. Idem:

It covers 160 acres surrounding this prospect?

Mr. Hemenway:

Yes.

Mr. Idem:

Does your company own all of the acreage adjacent to this particular acreage?

Mr. Hemenway:

We own immediately adjacent. Section 16 cornering to the Northwest is a school section. We own the others in the immediate vicinity.

Mr. Idem:

Generally speaking, how far is this from any other producing oil and gas well?

Mr. Hemenway:

Approximately 15 or 18 miles Northwest of any present production.

Mr. Idem:

Do you know the depth of the water well?

Mr. Hemenway:

Approximately 1100 feet.

Mr. Idem:

Do you know of any possible objection in permitting this well to be drilled on this location?

Mr. Hemenway:

No.

Mr. Idem:

I think that is all.

Governor Miles:

What is the approximate distance from this well to the corner of the school section you speak of?

Mr. Hemenway:

About 2900 feet approximately to the Southeast corner of the school section.

Mr. Idem:

Mr. Westbrook, will you take the stand?

Mr. Westbrook, after being first duly sworn, testified as follows:

Mr. Idem:

Your name is I. K. Westbrook?

Mr. Westbrook:

Yes, sir.

Mr. Idem:

You are the petitioner in this matter?

Mr. Westbrook:

Yes, sir.

Mr. Idem:

Where do you live?

Mr. Westbrook:

Crownpoint.

Mr. Idem:

How long have you lived there?

Mr. Westbrook:

29 years.

Mr. Idem:

You are a rancher in that community?

Mr. Westbrook:

Yes, sir, I have been a rancher there 29 years.

Mr. Idem:

You have heard Mr. Hemenway's testimony. Was it correct in all respects?

Mr. Westbrook:

Yes, sir.

Mr. Idem:

You might desire to continue the drilling of this well with the hope of getting oil and gas?

Mr. Westbrook:

Yes. I would like to prospect for it.

Mr. Idem:

It was begun as a water well?

Mr. Westbrook:

Absolutely. Near the center of this township.

Mr. Idem:

At what depth did you encounter this oil and gas showing?

Mr. Westbrook:

1092 feet.

Mr. Iden:

Is that where the well stands today?

Mr. Westbrook:

Yes, sir. There is quite a bit of oil comes off of the water when you draw it.

Mr. Iden:

So far as you know, would it make a commercial well at this time?

Mr. Westbrook:

I do not know. There is quite a little showing, and the driller states it may be a commercial well.

Mr. Iden:

I believe that is all, unless the Commission has some questions.

Mr. Spurrier:

One question, Mr. Westbrook. You have a lease. How do you have a plugging bond?

Mr. Westbrook:

The bond is accompanying my petition here.

Mr. Livingston:

Mr. Westbrook has on file a \$2500 corporate surety bond to go to a depth not to exceed 1500 feet, but the bond has not been accepted until the Commission grants its order.

Mr. Iden:

Based on that showing, we ask that the petition be granted.

Governor Miles:

Any one else want to be heard in this case. If not, the application is granted. Meeting dismissed.

I certify that the above is a transcript of the proceedings in this matter as taken from my shorthand notes.

Mary E. Martin
Mary E. Martin, Stenographer

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF THE DEKALB AGRICULTURAL ASSOCIATION, INC.
FOR AN ORDER OF APPROVAL OF THE UNIT AGREEMENT FOR THE DEVELOPMENT AND OPER-
ATION OF THE BITTER LAKE UNIT AREA WITHIN T. 10S, RANGES 25 and 26 EAST,
N.M.P.M., CONTAINING 9,032.38 ACRES, MORE OR LESS, CHAVES COUNTY, NEW MEXICO.

Pursuant to notice by the Commission, duly made and published, setting
June 7, 1946 at 10:00 o'clock A. M. for hearing in the above-entitled matter,
said hearing was convened on said day at said hour in the Coronada Room at La
Fonda Hotel, Santa Fe, New Mexico, the Commission sitting as follows:

Commissioner of Public Lands, John E. Miles, Member
R. R. Spurrier, Secretary
Carl B. Livingston

R E G I S T E R

<u>NAME</u>	<u>COMPANY</u>	<u>ADDRESS</u>
William B. Macey	Oil Conservation Commission	Artesia, N. M.
N. R. Lamb	State Bureau of Mines	Artesia, N. M.
S. W. Ludwick		Roswell, N. M.
Frank D. Gardner	Sinclair Prairie Oil Company	Midland, Texas
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Charles R. Allen	Continental Oil Company	Ponca City, Okla.
J. O. Seth	Petroleum Prod. Ref. & Pro. Co.	Santa Fe, N. M.
W. R. McBride	Petroleum Prod. Ref. & Pro. Co.	Santa Fe, N. M.
John M. Kelly	Independent Geologist	Roswell, N. M.
Clarence Hinkle	Hervey, Dow and Hinkle	Roswell, N. M.
Roy O. Yarbrough	Oil Conservation Commission	Hobbs, N. M.
F. W. Hickman	Oil Conservation Commission	Santa Fe, N. M.

Governor Miles:

Gentlemen, the Commission is in session, and the Secretary will proceed
with the order of business.

Mr. Hinkle:

I am Clarence E. Hinkle of Hervey, Dow and Hinkle, representing the
DeKalb Agricultural Association. This is an application by the DeKalb
Agricultural Association for the approval of a unit agreement to be known
as the Bitter Lake Unit Agreement. The proposed unit area covers approxi-
mately 9,032.38 acres situated in Township 10 South, Ranges 25 and 26 East.
All of the lands embraced in the proposed area are lands of the United
States, with the exception of 120 acres in Section 2, Township 10S, Range
25E, which is State land. The agreement has been executed by all of the
owners of the leases and pending applications for leases, except the lands
which are embraced in the so-called Bitter Lake Migratory Wildlife Refuge,
and there is a question whether leases will be issued for those lands.
The area has heretofore been designated by the Director of the U. S. Geol-
ogical Survey upon the application of the several lease owners as suitable
for unitization. Under the terms of the agreement the operator is given
authority to carry on necessary operations to explore and develop the unit
area. The agreement provides for a test well to be drilled to a depth of
6,500 feet, unless gas or oil is found at a lesser depth. The proposed
unit agreement follows substantially the unit agreements which have hereto-
fore been approved by the Commission. That you may have before you the
proposed unit area, here is a plat which has heretofore been filed with you.
I might say that at this time the DeKalb Agricultural Association has al-
ready started a well in Section 13, which is near the center of the proposed

unit area, and the present time the well is 1700 to 3,500 feet. The geological information upon which this unit was formed was done by Mr. John Kelly, and I would like to have him sworn as a witness.

Mr. John M. Kelly, after being first duly sworn, testified as follows:

Mr. Hinkle:

What is your name?

Mr. Kelly:

John M. Kelly.

Mr. Hinkle:

What is your profession?

Mr. Kelly:

I am a graduate engineer and geologist, and registered to practice in New Mexico.

Mr. Hinkle:

How long have you practiced?

Mr. Kelly:

Ten years.

Mr. Hinkle:

You were formerly the State Geologist?

Mr. Kelly:

That is right.

Mr. Hinkle:

Are you familiar with the area involved in the proposed Bitter Lake Unit Agreement?

Mr. Kelly:

I am.

Mr. Hinkle:

Have you performed any work in connection with that Agreement?

Mr. Kelly:

Upon information furnished me by Mr. Whelan, who did the magnetometer work, I prepared a contour map of the anticline.

Mr. Hinkle:

I hand you herewith the applicant's Exhibit A, and ask you to state whether that is a duplicate of the map made with the application before the U. S. Geological Survey for designation of the Unit Area.

Mr. Kelly:

It is.

Mr. Hinkle:

You are familiar with the designation which has been made, and the boundaries as shown by the plat attached to the agreement?

Mr. Kelly:

Yes.

Mr. Hinkle:

State whether in your opinion the area covers all or substantially all of the geological features.

Mr. Kelly:

I believe it covers all of the features as shown by the geological map and the area map.

Mr. Hinkle:

Are you familiar with the agreement?

Mr. Kelly:

Yes.

Mr. Hinkle:

State whether the operations under this agreement would have a tendency to promote the conservation of oil and gas and the prevention of waste.

Mr. Kelly:

I believe it would promote proper development in the area.

Governor Miles:

Anyone else want to be heard in this case? If not, the application is granted.

Mr. Livingston:

The next case is No. 77 in the matter of the application of the Magnolia Petroleum Company for an order of approval of the Unit Agreement for the development and operation of the Black Hills Anticline Unit Area within Townships 17 and 18 South, Ranges 19 and 20 East, N.M.P.M., containing 17,626.62 acres, more or less, Chaves County, New Mexico.

Mr. Hinkle:

I am Clarence E. Hinkle of Hervey, Dow and Hinkle, and an attorney for the applicant, the Magnolia Petroleum Company. This is the application of the Magnolia Petroleum Company for the approval of the proposed Bitter Lake Anticline Unit Agreement. The unit agreement which has been filed with the Commission contains a plat which shows the proposed unit area. The proposed unit area contains approximately 17,626.62 acres. All of the lands are lands of the United States, except certain lands aggregating 2,170.56 acres. The unit agreement has been signed by the owners of oil and gas leases covering all of the lands, except the owners of two leases, which are a very small portion of the total acreage. The area involved in the agreement was approved by the Director of the U. S. Geological Survey and the Secretary of the Interior as one proper for unitization. The agreement designates the Magnolia Petroleum Company as the unit operator, and under the terms of the unit is given power to carry on all work necessary for the exploration of the area. The operators agree to commence a well within six months after the approval, and drill the same to a depth of 7,000 feet, unless gas or oil is found at a lesser depth. The form follows substantially the same form as heretofore approved by this Commission, and the Commissioner of Public Lands. Mr. Steve Hannifin, the District Land Man for Magnolia is here, and I would like to have him testify.

Mr. S. P. Hannifin, after being first duly sworn, testified as follows:

Mr. Hinkle:

Please state your name.

Mr. Hannifin:

S. P. Hannifin.

Mr. Hinkle:

Where do you reside?

Mr. Hannifin:

Roswell, New Mexico.

Mr. Hinkle:

What is your official position?

Mr. Hannifin:

District Land Man for Magnolia Petroleum Company.

Mr. Hinkle:

How long have you been with the Magnolia Petroleum Company?

Mr. Hannifin:

20 years.

Mr. Hinkle:

Are you familiar with the so-called Bitter Lake Anticline Unit Agreement in Chaves County, New Mexico, which is the subject of the proposed unit agreement?

Mr. Hannifin:

Yes, sir.

Mr. Hinkle:

Do you know whether any geological investigation has been made of this area?

Mr. Hannifin:

Several years ago such an investigation was made by J. B. Hedley.

Mr. Hinkle:

Did Mr. Hedley make a report in connection with the report of the designation of this area before the U. S. Geological Survey?

Mr. Hannifin:

He did, yes.

Mr. Hinkle:

I hand you herewith the report of Mr. J. B. Hedley, marked Exhibit A, on the Bitter Lake Anticline, Chaves County, and ask you whether it is a duplicate of the report filed with the application.

Mr. Hannifin:

It is.

Mr. Hinkle:

Does that map show the geological structure involved?

Mr. Hannifin:

Yes.

Mr. Hinkle:

Do you know whether the unit area covers all of the structures, according to the plat?

Mr. Hannifin:

It does.

Mr. Hinkle:

Are you familiar with the terms of the unit agreement?

Mr. Hammifin:

Yes, sir.

Mr. Hinkle:

State whether in your opinion the operations under the proposed unit agreement, if a discovery is made, would tend to promote the conservation of oil and the prevention of waste.

Mr. Hammifin:

I believe it would. Yes, sir.

Governor Miles:

Anyone else want to be heard in this case? The application is granted. Next case.

Mr. Livingston:

The next case is No. 70 in the matter of the application of the Petroleum Products Refining and Producing Company for an order of approval of an irregular oil and gas well location in Section 36, T. 18N, R. 9W, Hespah Field, McKinley County, New Mexico, Well No. 48, to be located in the Southeast-Southwest-Southeast quarter of said section, 1220 feet East of the center section line, 330 feet North of the South line.

Mr. Seth:

My name is J. O. Seth, and I appear for the Petroleum Products Refining and Producing Company. This is an application to drill this well that I marked on this plat. The field and the development began many years ago, and was drilled on a 10-acre spacing. The old wells were not so located as to be in the center of each 10-acre tract. The proposal of this location is to get 66 feet East of the well already drilled. The lease is a State lease, and nobody would be hurt by the location. I would like to have Mr. McBride sworn.

Mr. W. R. McBride, after being first duly sworn, testified as follows:

Mr. Seth:

Your name, please.

Mr. McBride:

W. R. McBride.

Mr. Seth:

You are an officer of the Petroleum Products Refining and Producing Company?

Mr. McBride:

Yes, sir.

Mr. Seth:

What is your position?

Mr. McBride:

Vice-President.

Mr. Seth:

You know the general location of these wells in the Hespah Dome, do you not?

Mr. McBride:

Yes.

Mr. Seth:

That development began many years ago?

Mr. McBride:

I think back in 1928 or 1929.

Mr. Seth:

This application today is to drill the well marked on this plat?

Mr. McBride:

That is well No. 48. The Roman numerals are the numbers we anticipate drilling, but this is well No. 1 here.

Mr. Seth:

I would like to have this plat marked for attention.

(NOTE: The plat at this point was marked Exhibit A for the record).

Mr. Seth:

The location you seek for this well is merely to keep it at 660 feet?

Mr. McBride:

Yes, and to correct some of the previous locations and in drilling additional wells we can try to keep them all within the proper spacing. They will all be the same distance from each other. We may have to come in and ask for another irregular spacing if it is necessary.

Mr. Seth:

Are all the wells on the same State lease owned by your Company?

Mr. McBride:

Yes, sir.

Mr. Seth:

I believe that is all.

Governor Miles:

Anybody else want to be heard in this case? The application is granted.

Mr. Livingston:

The next case is No. 79. The petitioner, through his attorneys, Kiker and Sacher, has requested that the hearing date upon this petition be vacated and that said petition be set down for a hearing at some future time, owing to the fact that the petitioner, with other operators in the Fulcher Basin Gas Field are endeavoring to formulate a spacing plan to present to the Commission.

The next case is No. 80 in the matter of the petition of Operators' Committee under Maljamar Cooperative Repressuring Agreement for amendment to Order No. 485, as amended by Order No. 595 of the Commission, to provide for the running of back allowable from the Maljamar Cooperative Repressuring area.

Mr. Cochran:

My name is John E. Cochran, Jr. I represent Maljamar Cooperative Repressuring Agreement. This is a matter in which the Maljamar Cooperative Repressuring Agreement asks that Order 485, as amended by Order 595 of this Commission to provide for the running of back allowable from the Maljamar Cooperative Repressuring Agreement. Order 485 entered by the Commission in Case 36 on November 14, 1942 was the order which approved the Maljamar Cooperative Repressuring Agreement and approved certain in-put wells and provided for the distribution on allowable on in-put wells to other wells. Order 595 entered by the Commission on January 8, 1945 amended the original order and set up an allocation production plan for the area. Before that order was entered, and while the study was being made, it was agreed that in the interest of conservation at that time no back allowable would be allowed the area, and there was written on February 11, 1944 a letter by Mr. Kelly, then State Geologist, which provided that no back allowable be run from leases in the Maljamar area. Since that time, however, the allocation plan approved has been so successful that the operators feel that it would not be detrimental to the properties to run some back allowable which occurred for the reasons I will tell you. During November Malco Refineries, Inc., who was a substantial crude buyer from the area had too much crude, and the Malco discontinued purchasing crude oil from a large number of leases in the area, and following that several operators had no pipe line connections, and a substantial back allowable accumulated by reason of having no outlet for the oil. As of June 1 there were approximately 20,000 barrels of back allowable which have not been run from certain leases within the area. This back allowable is in some instances unproduced, and in some cases has been produced and is in storage. All of the operators in the area feel that they should be allowed to run currently to the pipe line companies purchasing the oil a back allowable at a rate not to exceed the rate the Commission allowed the State generally. All operators of leases and wells in this area feel that the way this should be handled would be for individual operators to make application to the Operators' Committee, which is the manager of the Project, or designate the lease and the amount of back allowable that they feel should be run during a current month, which would not exceed the back allowable figure set for other parts of the State by the Commission. This would amount to probably a barrel a day per well, and in some instances three barrels a day per well, and where the oil is in storage a request would be made for permission to run this to the pipe line company, not to exceed ten barrels per day. After the applications have been made to the Operators' Committee by the operators, the operators feel that the Chairman of the Operators' Committee of the Maljamar Cooperative Repressuring Agreement should petition the Commission, or its deputies, administratively for authority to run back allowable during the current month. The reason for suggesting the matter be handled thus is when an operator makes application for back allowable the Operators' Committee will have an opportunity to study the request, and if it is in the interest of conservation the Chairman of the Operators' Committee would file the application with the Commission or its deputy. Due to the fact that the back allowable had its origin about the first of December, the Maljamar Repressuring Agreement asked that the Commission permit it to follow this procedure in requesting authority to run back allowable starting December 1, 1945. Mr. William J. Wright, Engineer for the Maljamar Cooperative Repressuring Agreement is here, and if the members of the Commission would care to ask him any questions he may be sworn. Do you have any questions you want to ask him?

Governor Miles:

Yes, will you bring him forward?

Mr. William J. Wright, after being first duly sworn, testified as follows:

Mr. Cochran:

Will you state your name?

Mr. Wright:

William J. Wright.

Mr. Cochran:

Where do you live?

Mr. Wright:

Maljamar.

Mr. Cochran:

What is your occupation?

Mr. Wright:

Project engineer for the Maljamar Cooperative Repressuring Agreement.

Mr. Spurrier:

Mr. Wright, give us an approximation of what percent of the production of any one well would this additional production be; that is, what the back allowable would constitute.

Mr. Wright:

From a daily run it should not exceed 15% of daily allowable, which would be from 1 to 3 barrels per day.

Mr. Cochran:

Mr. Wright, in your opinion, if the method of making up back allowable, as is hereby outlined, is followed, would that constitute underground waste?

Mr. Wright:

Definitely not.

Mr. Livingston:

Back to what period of time is it desired that back allowable be permitted to run?

Mr. Wright:

December 1, 1945.

Governor Miles:

Anyone else want to be heard in this case? If not, the application is granted.

Mr. Livingston:

The next case is 81 in the matter of the petition of the Grayburg Oil Company of New Mexico, Operator of Grayburg Cooperative and Unit Agreement, for an order for transfer of allowable from in-put wells to other wells of same basic leases in the unit area of Grayburg Cooperative and Unit Agreement, Eddy County, New Mexico.

Mr. Miller:

I am Raymond Miller of the Grayburg Oil Company, Artesia. The Grayburg Oil Company is the operator of a unit agreement located on Government lands. In connection with this unit cooperative agreement we are operating a repressuring plant. The last several months we have converted two top allowable wells to in-put wells situated in the NW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 26, Township 17, Range 29, the well known as Grayburg-Keeley 9-B. The other well, Western Production Company-Keeley 12-C, is located in SW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 25, Township 17, Range 29. These wells were top allowable wells at the time they were put on as in-put wells, and since then we have been losing that allowable, and we request this allowables be transferred to other wells situated on the same basic leases. The Keeley B basic lease covers the S $\frac{1}{2}$ SW $\frac{1}{4}$ Section 24, N $\frac{1}{2}$ NW $\frac{1}{4}$ Section 25, E $\frac{1}{2}$ Section 26, Township 17S, Range 29E. The Western-Keeley C lease covers the N $\frac{1}{2}$ SW $\frac{1}{4}$ and the NW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 13, S $\frac{1}{2}$ SE $\frac{1}{4}$ Section 24, all of Section 25, except the N $\frac{1}{2}$ NW $\frac{1}{4}$ and the W $\frac{1}{2}$ of Section 26, all in Township S, Range 29E. Mr. R. J. Heard, Vice-President of the Grayburg Oil Company is present, and I would like to have him heard.

Mr. R. J. Heard, after being first duly sworn, testified as follows:

Mr. Miller:

Your name is --

Mr. Heard:

R. J. Heard.

Mr. Miller:

Where do you reside?

Mr. Heard:

Artesia.

Mr. Miller:

Your position with the Grayburg Oil Company?

Mr. Heard:

Vice-President.

Mr. Miller:

Mr. Heard, you have been in charge of the drilling and production of these subject wells?

Mr. Heard:

Yes.

Mr. Miller:

Do you know that these wells are capable of producing top unit allowable at the time they were converted to injection wells?

Mr. Heard:

Yes.

Mr. Miller:

In your opinion, if the wells were reconverted to producing wells at this time, would they produce top unit allowable?

Mr. Heard:

Yes.

Mr. Miller:

Do you think this unit allowable could be produced from other wells on this same basic lease without waste?

Mr. Heard:

Yes.

Mr. Miller:

Is there any question you want to ask Mr. Heard?

Mr. Spurrier:

Approximately how many wells do you intend to allocate this in-pit production to, Mr. Heard?

Mr. Heard:

Approximately 17 wells on one basic lease, and I think around 12 or 14

on the other.

Mr. Spurrier:

Then that would be about 2 or 3 barrels per day per well, would it not?

Mr. Heard:

Yes, sir.

Mr. Spurrier:

This would be something less than 10% of each well's production?

Mr. Heard:

Yes, sir.

Mr. Miller:

We are requesting the Commission to make up back allowances on these wells, beginning May 1, 1946; that is, on these two subject in-put wells. We are also requesting the Commission to reserve jurisdiction in this case, that they may act administratively in the case of corrections, etc.

Mr. Spurrier:

You mean by that you contemplate drilling more in-put wells?

Mr. Miller:

Yes, that is right. There are more wells being drilled at the present time on these leases, and it is our intention to convert those to in-put wells.

Governor Miles:

Any one else want to be heard in this case? If not, the petition is granted.

Mr. Livingston:

The next case is No. 82 in the matter of the application of I. K. Westbrook for an order of approval of an irregular oil and gas well location in SW¹/₄NE¹/₄ Section 22, T. 20N, Range 11W, N.M.P.M., McKinley County, New Mexico for I. K. Westbrook-Santa Fe Pacific Railroad Company Well No. 1, which location is 1594 feet South of the North line and 2411 feet West of the East line of said section. This well started off as a water well, and seems to be ending up as an oil well.

Mr. Iden:

My name is E. O. Iden. I would like to have Mr. I. K. Westbrook and Mr. E. O. Hemenway sworn.

Mr. E. O. Hemenway, after being first duly sworn, testified as follows:

Mr. Iden:

Your name is E. O. Hemenway?

Mr. Hemenway:

Yes.

Mr. Iden:

You are connected with the Santa Fe Pacific Railroad Company?

Mr. Hemenway:

I am Land Commissioner at Albuquerque.

Mr. Idem:

You are familiar with this application of I. K. Westbrook?

Mr. Hemenway:

Yes.

Mr. Idem:

The Santa Fe Pacific Railroad Company is the owner of the land on which this well is located?

Mr. Hemenway:

Yes.

Mr. Idem:

State to the Commission Mr. Westbrook's activities with reference to this land, particularly with reference to grazing leases prior to the time he acquired the oil lease.

Mr. Hemenway:

Mr. Westbrook is a livestock operator in this part of McKinley County, and in connection with his livestock operations entered into a contract with a driller to drill him a deep water well, and when he got down a certain distance there was some showing of oil, and he immediately stopped his work on his water well and felt that there might be some advantage in attempting to get an oil well out of this prospect.

Mr. Idem:

You are familiar with the location of the well?

Mr. Hemenway:

It is in Section 22, Township 20 North, Range 11 West. It is in the SW $\frac{1}{4}$ of the NE $\frac{1}{4}$.

Mr. Idem:

I believe as shown by the petition, it is 274 feet South of the quarter section line 40-acre subdivision line. Is that correct?

Mr. Hemenway:

That is about it. I think it is 274 feet South of the quarter line and 229 feet East of the West line of that 40-acre tract.

Mr. Idem:

Stated in another way, it is 1594 feet South of the North line and 2411 feet West of the East line?

Mr. Hemenway:

Yes, sir.

Mr. Idem:

Did the grazing lease Mr. Westbrook had prior to an oil showing in the water well embrace other lands than this?

Mr. Hemenway:

Yes, as I recall, it took in all oil holdings in that township.

Mr. Idem:

He still has the grazing lease?

Mr. Hemenway:

He has a purchase contract for the purchase of the surface rights.

Mr. Iden:

After the showing you gave him an oil and gas lease on certain lands for the purpose of protecting him in drilling the well, further with the hope that he might get oil or gas?

Mr. Hemenway:

Yes.

Mr. Iden:

It covers 160 acres surrounding this prospect?

Mr. Hemenway:

Yes.

Mr. Iden:

Does your company own all of the acreage adjacent to this particular acreage?

Mr. Hemenway:

We own immediately adjacent. Section 16 cornering to the Northwest is a school section. We own the others in the immediate vicinity.

Mr. Iden:

Generally speaking, how far is this from any other producing oil and gas well?

Mr. Hemenway:

Approximately 15 or 18 miles Northwest of any present production.

Mr. Iden:

Do you know the depth of the water well?

Mr. Hemenway:

Approximately 1100 feet.

Mr. Iden:

Do you know of any possible objection in permitting this well to be drilled on this location?

Mr. Hemenway:

No.

Mr. Iden:

I think that is all.

Governor Miles:

What is the approximate distance from this well to the corner of the school section you speak of?

Mr. Hemenway:

About 2900 feet approximately to the Southeast corner of the school section.

Mr. Idem:

Mr. Westbrook, will you take the stand?

Mr. Westbrook, after being first duly sworn, testified as follows:

Mr. Idem:

Your name is I. K. Westbrook?

Mr. Westbrook:

Yes, sir.

Mr. Idem:

You are the petitioner in this matter?

Mr. Westbrook:

Yes, sir.

Mr. Idem:

Where do you live?

Mr. Westbrook:

Crownpoint.

Mr. Idem:

How long have you lived there?

Mr. Westbrook:

29 years.

Mr. Idem:

You are a rancher in that community?

Mr. Westbrook:

Yes, sir, I have been a rancher there 29 years.

Mr. Idem:

You have heard Mr. Hemenway's testimony. Was it correct in all respects?

Mr. Westbrook:

Yes, sir.

Mr. Idem:

You might desire to continue the drilling of this well with the hope of getting oil and gas?

Mr. Westbrook:

Yes. I would like to prospect for it.

Mr. Idem:

It was begun as a water well?

Mr. Westbrook:

Absolutely. Near the center of this township.

Mr. Idem:

At what depth did you encounter this oil and gas showing?

Mr. Westbrook:

1092 feet.

Mr. Iden:

Is that where the well stands today?

Mr. Westbrook?

Yes, sir. There is quite a bit of oil comes off of the water when you draw it.

Mr. Iden:

So far as you know, would it make a commercial well at this time?

Mr. Westbrook:

I do not know. There is quite a little showing, and the driller states it may be a commercial well.

Mr. Iden:

I believe that is all, unless the Commission has some questions.

Mr. Spurrier:

One question, Mr. Westbrook. You have a lease. Now do you have a plugging bond?

Mr. Westbrook:

The bond is accompanying my petition here.

Mr. Livingston:

Mr. Westbrook has on file a \$2500 corporate surety bond to go to a depth not to exceed 1500 feet, but the bond has not been accepted until the Commission grants its order.

Mr. Iden:

Based on that showing, we ask that the petition be granted.

Governor Miles:

Any one else want to be heard in this case. If not, the application is granted. Meeting dismissed.

I certify that the above is a transcript of the proceedings in this matter as taken from my shorthand notes.

Mary E. Martin

Mary E. Martin, Stenographer

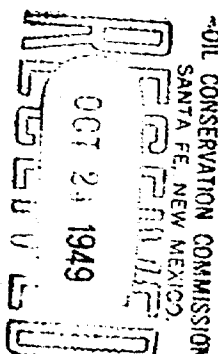
CARBON

LAW OFFICES

HERVEY, DOW & HINKLE

ROSWELL, NEW MEXICO

October 21, 1949



STATE LAND OFFICE
SANTA FE, NEW MEXICO

J. M. HERVEY
MIRIAM M. DOW
CLARENCE E. HINKLE
W. E. BONDURANT, JR.
GEORGE H. HUNKER, JR.

MARCH 2, 1950

Mr. Guy Shepard
Commissioner of Public Lands
State Land Office
Santa Fe, New Mexico

Dear Mr. Shepard:

We enclose herewith for your files an approved copy of the agreement dissolving the Bitter Lake Unit Agreement, which was approved by the Director of U.S.G.S. on October 12, 1949. You previously approved the dissolution on March 2, 1949.

Yours very truly,

HERVEY, DOW & HINKLE

BY

A handwritten signature in dark ink, appearing to read "Clarence E. Hinkle".

CTH:rh
Enc.

cc: New Mexico Oil Conservation Commission
Santa Fe, New Mexico

HERVEY, DOW & HINKLE
ROSWELL, NEW MEXICO

Attention of Mr. Bondurant

Re: Dissolution - Bitter Lake Unit Agreement, Santa Fe, New Mexico.

Conclusion:

Enclosed are several executed copies of consent of dissolution of the unit agreement set out in the caption hereon.

This office has heretofore requested for the files a copy of the planning order, which we have not yet received within the very short period.

Very truly yours,

A handwritten signature in dark ink, appearing to read "Guy Shepard".

Commissioner of Public Lands

LAW OFFICES
HERVEY, DOW & HINKLE
ROSWELL, NEW MEXICO

G. H. HERVEY
HIRSH M. DOW
CLARENCE E. HINKLE
W. E. BONDURANT, JR.

May 22, 1946

GEORGE H. HUNKER, JR.

Mr. Carl B. Livingston
Oil Conservation Commission
Santa Fe
New Mexico

Dear Mr. Livingston:

This will acknowledge receipt of your letter of May 20th advising that cases No. 76 and 77, being the applications of DeKalb Agricultural Association, Inc., and Magnolia Petroleum Corporation for approval of the Bitter Lake Unit Agreement and Black Hills Anticline Unit agreement, respectively, have been set for hearing at Santa Fe, on June 7, 1946, at 10 A.M.

The writer expects to be present at the hearing.

Yours very truly,

HERVEY, DOW & HINKLE

By 

CEH/mds

NOTICE OF PUBLICATION
STATE OF NEW MEXICO
Oil Conservation Commission
 The Oil Conservation Commission, as provided by law, hereby gives notice of the following hearing to be held at Santa Fe, New Mexico at 10:00 A. M., June 7, 1946:

Case 76
 In the matter of the application of the DeKalb Agricultural Association, Inc. for an order of approval of the Unit Agreement for the development and operation of the Bitter Lake Unit Area within T. 10S, Range 25 and 26 East, N.M.P.M. containing 9,032.38 acres, more or less, Chaves County, New Mexico.

Case 77
 In the matter of the application of the Magnolia Petroleum Company for an order of approval of the Unit Agreement for the development and operation of the Black Hills Anticline Unit Area within Townships 17 and 18 South, Ranges 19 and 20 East, N.M.P.M. containing 17,628.62 acres, more or less, Chaves County, New Mexico.

Case 78
 In the matter of the application of the Petroleum Products Refining and Producing Company for an order of approval of an irregular oil and gas well

location in Section 36, T. 18N, R. 9W, Hesperia Field, McKinley County, New Mexico, Well No. 48 to be located in the Southeast-Southwest-Southeast quarter of said section, 1220 feet East of the center section line, 330 feet North of the South line.

Case 79
 In the matter of the application of the Southern Union Production Company for an order providing for 160-acre spacing for gas wells in the Fulcher Basin Field, consisting of Sections 34 and 35, T. 30N, R. 12W, Sections 1, 2, 3, E½ 10, 11, 12 and 13, T. 29N, R. 12W, Sections 7, 17, 18, 19, 20 and 21, T. 29N, R. 11W, N.M.P.M., San Juan County, New Mexico.

Case 80
 In the matter of the petition of Operators' Committee under Maljamar Cooperative Repressuring Agreement for amendment to Order No. 485, as amended by Order No. 595 of the Commission, to provide for the running of back allowable from the Maljamar Cooperative Repressuring Area.

Case 81
 In the matter of the petition of the Grayburg Oil Company of New Mexico Operator of Grayburg Cooperative and Unit Agreement for an order for transfer of allowable from in-put wells to other wells of same basic leases in the unit area of Grayburg Cooperative and Unit Agreement, Eddy County, New Mexico.

Given under the seal of said Commission at Santa Fe, New Mexico on May 20, 1946.

OIL CONSERVATION COMMISSION
 By: R. R. SPURRIER,
 Secretary.

(SEAL)
 Pub. May 21, 1946.

By.....

Affidavit of Publication

State of New Mexico, }
 County of Santa Fe } ss.

I, C. B. Floyd, being first duly sworn, declare and say that I am the (Business Manager) (~~Editor~~) of the Santa Fe New Mexican, a daily newspaper, published in the English Language, and having a general circulation in the City and County of Santa Fe, State of New Mexico, and being a newspaper duly qualified to publish legal notices and advertisements under the provisions of Chapter 167 of the Session Laws of 1937; that the publication, a copy which is hereto attached, was published in said paper on ~~the 21st day of May~~ for one time ~~consecutive weeks~~ ~~and on the same day of each week in~~ the regular issue of the paper during the time of publication, and that the notice was published in the newspaper proper, and not in any supplement, ~~on each week~~ for one time ~~weeks~~ ~~consecutive weeks~~ publication being on the 21st day of May, 1946, and ~~in the~~ ~~same~~ ~~issue~~ ~~of~~ ~~the~~ ~~paper~~ ~~on~~ ~~the~~ ~~21st~~ ~~day~~ ~~of~~ ~~May~~, 1946, that payment for said advertisement has been (duly made), or (assessed as court costs); that the undersigned has personal knowledge of the matters and things set forth in this affidavit.

C. B. Floyd
 Manager

Subscribed and sworn to before me this 21st day of May, A.D., 1946.

Anna K. Ormsbee
 Notar, Public

My Commission expires

June 14, 1949

LEA COUNTY OPERATORS COMMITTEE

DRAWER I

HOBBS, NEW MEXICO

May 23, 1946

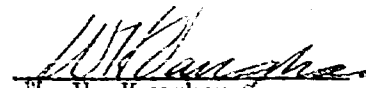
Mr. Carl B. Livingston
Oil Conservation Commission
Santa Fe, New Mexico

Dear Carl:

This is to acknowledge receipt of notice of
publication for cases #76-77-78-79-80 & 81.

This will be published in the Hobbs Daily
News Sun, as of today.

Yours truly,


W. H. Vaughan

WHV:gi

NOTICE OF PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

The Oil Conservation Commission, as provided by law, hereby gives notice of the following hearing to be held at Santa Fe, New Mexico at 10:00 A. M., June 7, 1946:

Case 76.

In the matter of the application of the DeKalb Agricultural Association, Inc. for an order of approval of the Unit Agreement for the development and operation of the Bitter Lake Unit Area within T. 10S, Ranges 25 and 26 East, N.M.P.M. containing 9,032.38 acres, more or less, Chaves County, New Mexico.

Case 77.

In the matter of the application of the Magnolia Petroleum Company for an order of approval of the Unit Agreement for the development and operation of the Black Hills Anticline Unit Area within Townships 17 and 18 South, Ranges 19 and 20 East, N.M.P.M. containing 17,626.62 acres, more or less, Chaves County, New Mexico.

Case 78.

In the matter of the application of the Petroleum Products Refining and Producing Company for an order of approval of an irregular oil and gas well location in Section 36, T. 18N, R. 9W, Hospah Field, McKinley County, New Mexico, Well No. 48 to be located in the Southeast-Southwest-Southeast quarter of said section, 1220 feet East of the center section line, 330 feet North of the South line.

Case 79.

In the matter of the application of the Southern Union Production Company for an order providing for 160-acre spacing for gas wells in the Fulcher Basin Field, consisting of Sections 34 and 35, T. 30N, R. 12W, Sections 1, 2, 3, E $\frac{1}{2}$ 10, 11, 12 and 13, T. 29N, R. 12W, Sections 7, 17, 18, 19, 20 and 21, T. 29N, R. 11W, N.M.P.M., San Juan County, New Mexico

Case 80.

In the matter of the petition of Operators' Committee under Maljamar Cooperative Repressuring Agreement for amendment to Order No. 485, as amended by Order No. 595 of the Commission, to provide for the running of back allowable from the Maljamar Cooperative Repressuring Area.

Case 81.

In the matter of the petition of the Grayburg Oil Company of New Mexico Operator of Grayburg Cooperative and Unit Agreement for an order for transfer of allowable from in-put wells to other wells of same basic leases in the unit area of Grayburg Cooperative and Unit Agreement, Addy County, New Mexico.

Given under the seal of said Commission at Santa Fe, New Mexico on May 20, 1946.

OIL CONSERVATION COMMISSION

By:

R. R. Spurrier

R. R. Spurrier, Secretary

STATE BUREAU OF MINES & MINERAL RESOURCES

Box 871

Santa Fe, New Mexico

JOHN M. KELLY
DIRECTOR

May 20, 1946

Honorable Clarence E. Hinkle
Hervey, Dow and Hinkle
Roswell, New Mexico

Dear Clarence:

Re: Case No. 76, Application of DeKalb Agricultural Association, Inc. for an order of approval for development and operation of Bitter Lake Unit Area.

Re: Case No. 77, Application of Magnolia Petroleum Corporation for an order of approval for development and operation of Black Hills Anticline Unit Area.

The above-captioned cases have been set for hearing at Santa Fe, New Mexico on June 7, 1946 at 10:00 A. M.

Will you please acknowledge receipt of this notice?

With kindest personal regards.

Yours very truly,

Chief Clerk and Legal Adviser

rem

C
O
P
Y

NOTICE OF PUBLICATION
STATE OF NEW MEXICO
Oil Conservation Commission
The Oil Conservation Commission, as provided by law, hereby gives notice of the following hearing to be held at Santa Fe, New Mexico at 10:00 A. M., June 7, 1946:

Case 76
In the matter of the application of the DeKalb Agricultural Association, Inc. for an order of approval of the Unit Agreement for the development and operation of the Bitler Lake Unit Area within T. 108, Range 25 and 26 East, N.M.P.M. containing 9,032.38 acres, more or less, Chaves County, New Mexico.

Case 77
In the matter of the application of the Magnolia Petroleum Company for an order of approval of the Unit Agreement for the development and operation of the Black Hill Anticline Unit Area within Townships 17 and 18 South, Ranges 18 and 20 East, N.M.P.M. containing 17,626.62 acres, more or less, Chaves County, New Mexico.

Case 78
In the matter of the application of the Petroleum Products Refining and Producing Company for an order of approval of an irregular oil and gas well

location in Section 35, T. 18N, R. 9W, Hespah Field, McKinley County, New Mexico, Well No. 48 to be located in the Southeast-Southwest-Southeast quarter of said section, 1220 feet East of the center section line, 330 feet North of the South line.

Case 79
In the matter of the application of the Southern Union Production Company for an order providing for 180-acre spacing for gas wells in the Fulcher Basin Field, consisting of Sections 34 and 35, T. 20N, R. 12W, Sections 1, 2, 3, 4, 10, 11, 12 and 13, T. 29N, R. 12W, Sections 7, 17, 18, 19, 20 and 21, T. 29N, R. 11W, N.M.P.M., San Juan County, New Mexico.

Case 80
In the matter of the petition of Operators' Committee under Maljamar Cooperative Repressuring Agreement for amendment to Order No. 483, as amended by Order No. 595 of the Commission, to provide for the running of back allowable from the Maljamar Cooperative Repressuring Area.

Case 81
In the matter of the petition of the Grayburg Oil Company of New Mexico Operator of Grayburg Cooperative and Unit Agreement for an order for transfer of allowable from in-put wells to other wells of same base leases in the unit area of Grayburg Cooperative and Unit Agreement, Eddy County, New Mexico.

Given under the seal of said Commission at Santa Fe, New Mexico on May 20, 1946.

OIL CONSERVATION COMMISSION
By: R. R. SPURRIER,
Secretary.

(SEAL)
Pub. May 21, 1946.

Affidavit of Publication

State of New Mexico, } ss.
County of Santa Fe

I, C. B. Floyd, being first duly sworn, declare and say that I am the (Business Manager) (~~Editor~~) of the Santa Fe New Mexican, a daily newspaper, published in the English Language, and having a general circulation in the City and County of Santa Fe, State of New Mexico, and being a newspaper duly qualified to publish legal notices and advertisements under the provisions of Chapter 167 of the Session Laws of 1937; that the publication, a copy which is hereto attached, was published in said paper ~~once each week~~ for one time ~~consecutive weeks~~ ~~and on the same day of each week~~ in the regular issue of the paper during the time of publication, and that the notice was published in the newspaper proper, and not in any supplement, ~~once each week~~ for one time ~~weeks~~ ~~consecutive~~ ~~in the first~~ publication being on the 21st day of May, 1946, and that the publication ~~was made~~ ~~in~~ ~~the~~ ~~city~~ ~~of~~ ~~Santa~~ ~~Fe~~ ~~New~~ ~~Mexico~~; that payment for said advertisement has been (duly made), or (assessed as court costs); that the undersigned has personal knowledge of the matters and things set forth in this affidavit.

BILL

me at \$ 6.08

times, \$

Tax \$

\$ 6.08

C. B. Floyd Manager

Subscribed and sworn to before me this 21st

day of May, A.D., 1946

Anna K. Arnsperger
Notary Public

My Commission expires

June 14, 1949

By _____

AFFIDAVIT OF PUBLICATION

County of Chaves }
State of New Mexico, }

I, Thomas G. Summers
Publisher

Of the Roswell Daily Record, a daily newspaper published at Roswell, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not in a supplement there-

of for a period of _____

One weeks,

beginning with the issue dated _____

22 May, 19 46

and ending with the issue dated _____

22 May, 19 46

Thomas G. Summers
Publisher.

Sworn and subscribed to before me

this 27 day of _____

May, 19 46

Maria H. Summers
Notary Public.

My commission expires _____

Mar 9, 19 48
(Seal)

Run May 22

NOTICE OF PUBLICATION
State of New Mexico

Oil Conservation Commission
The Oil Conservation Commission, as provided by law, hereby gives notice of the following hearing to be held at Santa Fe, New Mexico at 10:00 a. m., June 7, 1946:

CASE 76.

In the matter of the application of the DeKalb Agricultural Association, Inc., for an order of approval of the Unit Agreement for the development and operation of the Bitter Lake Unit Area within T. 10S, Ranges 25 and 26 East, N.M.P.M. containing 9,032.38 acres, more or less, Chaves County, New Mexico.

CASE 77.

In the matter of the application of the Magnolia Petroleum Company for an order of approval of the Unit Agreement for the development and operation of the Black Hills Anticline Unit Area within Townships 17 and 18 South, Ranges 19 and 20 East, N. M. P. M. containing 17,626.62 acres, more or less, Chaves County, New Mexico.

Given under the seal of said Commission at Santa Fe, New Mexico, on May 20, 1946.

Oil Conservation Commission
By: R. R. Spurrier, Secretary.
(Seal)

STATE BUREAU OF MINES & MINERAL RESOURCES

Box 871

Santa Fe, New Mexico

JOHN M. KELLY
DIRECTOR

AIR MAIL - SPECIAL DELIVERY

May 20, 1946

The Roswell Daily Record
Roswell, New Mexico

Gentlemen:

Re: Notice of Publication - Case Nos. 76 and 77.

Please publish the enclosed notice once, immediately. Please proof-read the notice carefully and send a copy of the paper carrying such notice.

UPON COMPLETION OF THE PUBLICATION, PLEASE SEND PUBLISHER'S AFFIDAVIT.

For payment please submit statement in duplicate, accompanied by voucher executed in duplicate. The vouchers must be signed by a notary in the space provided on the back of the voucher. The necessary blanks are enclosed.

Very truly yours,

Chief Clerk and Legal Adviser

Encl
mem

C
O
P
Y

12
MAIL OFFICE 000

NOV 25 AM 10:25

CONTINENTAL OIL COMPANY

FAIR BUILDING

FORT WORTH 2, TEXAS

November 22, 1957

H. L. JOHNSTON
REGIONAL MANAGER OF PRODUCTION
SOUTHWESTERN REGION

file
card 76

Commissioner of Public Lands
State of New Mexico
Santa Fe, New Mexico

Oil Conservation Commission
State of New Mexico
Santa Fe, New Mexico

Gentlemen:

Enclosed for your file is one copy each of two letters which indicate approval by the United States Geological Survey of the Bell Lake Unit Plan of Development for 1958 and the Initial Participating Area for the Devonian Formation.

Very truly yours,

H. L. Johnston

HLJ-MP
Encs

Continental Oil Company
1210 Post Building
Houston, Texas

November 19, 1935

Director of the Geological Survey
Washington, D. C.
Dear Sir: Please find enclosed for the
Geological Survey the following unit:


Enclosed are two copies of the
report. It is assumed that you will
be able to find the information
contained in the report.

Very truly,
[Signature]
John H. Brown

Enclosure 2

CORRECTION

The preceding
documents were incorrectly
filmed. They are refilmed
following this target.

HAD HAND IN WAY 

12-83

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D.C.

NOV 19 1957

Continental Oil Company
1710 Fair Building
New York, New York

Gentlemen:

On November 19, effective as of April 26, 1955, Acting Director of the Geological Survey, Arthur A. Baker, approved your application dated October 29 for the 5,747.56-acre initial participating area under the Bell Lake unit agreement, Lea County, New Mexico, No. 14-08-001-1066.

Enclosed are two copies of the approved application for your records. It is assumed that you will furnish the State of New Mexico or any other interested principal with whatever evidence of this approval is deemed appropriate.

Very truly yours,


For the Director

Enclosures 2

RECEIVED	
H. L. JOHNSON	
NOV 15 1957	
Mr. Tolson	
Mr. E. A. Tamm	
Mr. Clegg	
Mr. Glavin	
Mr. Ladd	
Mr. Nichols	
Mr. Rosen	
Mr. Tracy	
Mr. Harbo	
Mr. Mohr	
Mr. Winterrowd	
Tele. Room	
Mr. Holloman	
Miss Gandy	
Nov 15 1957	

Post Office Building
Post Office 2, Reno

Attention: Mr. Hugh Robinson

Gentlemen:

Your plan of ~~Acres~~ ~~14-00-001-1066~~ for the period ending December 31, 1958, for the Ball Lake, ~~14-00-001-1066~~, Las Alamos County, New Mexico, was approved on this date. ~~14-00-001-1066~~ plan was approved by the New Mexico Oil Conservation Commission and the Commissioner of Public Land, State of New Mexico, on October 30, 1957.

Three approved copies of the plan are returned herewith.

Very truly yours,


H. L. Johnson
Supervisor

100-14-67 "A"

A REPORT
ON
THE BITTER LAKE UNIT AREA
CHAVES COUNTY, NEW MEXICO
BY
JOHN M. KELLY
CONSULTING GEOLOGIST

ROSWELL, NEW MEXICO
JANUARY 31, 1946

THE BITTER LAKE UNIT AREA
CHAVES COUNTY, NEW MEXICO

Scope of Report:

The purpose of this report is to describe the structural conditions found in the above mentioned unit area, to be accompanied by a map showing the details of structure as found by magnetometric surveys.

Discovery:

The anticline, which is embraced in the Bitter Lake Unit Area, was discovered by the magnetometer, on a reconnaissance survey conducted by M. Whelan of Artesia, New Mexico. After the reconnaissance discovery the structure was thoroughly mapped in detail, the work consuming several weeks time during 1945.

Location:

The Bitter Lake Unit Area is located in central Chaves County, New Mexico. Approximately eight miles east of Roswell, in Township 10 South, Ranges 25 and 26 East, N.M.P.M.

Topography:

The chief physiographic feature of the area is the irregular bluff that borders the Pecos River on the east and rises 200 to 300 feet above the former flood plain.

The Bitter Lakes Unit Area borders the Pecos River on the east and is, for the greater part, on the top of this bluff. The altitude of the flood area on the Pecos is about 3500 feet rising to 3750 feet on top of the bluff.

A graded main highway from Roswell to Tatum borders the structure on the south and all supplies and equipment can be transported to the area by means of this highway. Two ranch roads running north and south traverse the Unit Area and these roads are serviceable in any weather.

Stratigraphy:

Chalk Bluff Formation

The outcropping rocks are of Permian origin and have been classified by Lang as belonging to the Chalk Bluffs formation. This formation consists of redbeds, salt, gypsum, and anhydrite, it is approximately 1000 feet thick as is shown by the log of the New State Petroleum Company's well in Section 27, 2-10-S., R-26-E.

Chupadero Formation:

San Andres Limestone Member is from 1200 to 1300 feet thick and is composed almost entirely of limestone, dolomitic limestone and dolomite. The upper part of the formation is largely thin bedded and light gray in color. Much of it is dolomitic and large parts of both the limestone and dolomitic limestone are argillaceous and very fine grained. The lower part consists of dark gray, thick bedded, massive limestone much of which is coarse grained.

The Glorietta Sandstone member is immediately below the San Andres and is the dividing formation between it and the Yaso formation below. This bed is between about 50 and 100 feet thick and consists of cream colored sandstone, with coarse white quartz grains.

Yaso Formation:

The Yaso formation, consisting largely of gypsum and red beds with interbedded shale and sands, is approximately 1200 feet in thickness.

Abo Formation:

Below the Yaso is the Abo formation, consisting of red sands, arkosic material, red shales, and some interbedded limestone, it is approximately 1000 feet thick.

Hueco Formation:

This formation consists of gray granular and medium crystalline gray limestones, in part cherty. In the DeKalb White #1 Section 35, T-10-S, R-28-E crinoidal fragments are abundant, fusulines are present. This section is approximately 300 feet in thickness and is the basal Permian member.

Pre-Permian Formation:

Immediately underlying the Hueco is the Magdalena of the Pennsylvanian period and estimated to be 600 feet thick. This formation consists of dark petroli ferous limestones and several interbedded sands. Below the Pennsylvanian it is estimated that there is 300 to 400 feet of Becha formation, of Devonian age. This formation consists of chert and siliceous limestones and dolomite.

The Richfield Coll #1 Section 18, T-11-S, R-27-E, drilled through the Devonian and encountered igneous material at a depth of 6618 feet.

The above described section at the Bitter Lake Unit Area shows a total of 6000 feet to be drilled to thoroughly test the petroleum possibilities of the sedimentary section which lies above the igneous formation, encountered in Richfield #1 Coll 1 and due to regional dip, will be encountered at a lesser depth on the Bitter Lake Unit Area.

Structure:

The structure is that of an anticline, located north and west of a fissure fault in Township 10 South, Ranges 25 and 26 East. The fault, is no doubt, a small displacement in line with the 7-0 fault; a prominent feature extending several miles in a northeasterly direction from Township 17 South, Range 19 East. The Shaffer well, drilled in Section 30, T-10-S, R-26-E, encountered considerable salt water in the Olarietta Sandstone, 2045 feet while the New State well, in Section 37, T-10-S, R-26-E, and only $3\frac{1}{2}$ miles east of the Shaffer Well, was said not to have encountered any water in the Olarietta Sandstone at 223 feet. Presumably there is a fault between the wells, which seals off the salt water encountered in the Shaffer Well. The magnetometer work in the area bears out this contention.

The anticlinal axis of the structure extends from Section 25, T-10-S, R-25-E to Section 12, T-10-S, R-25-E. The apex of the anticline appears to be located between Sections 12 and 13, T-10-S, R-25-E.

The structural dips are rather regular, with a flattening to the northeast. The extent of structural closure is not determinable, but correlative magnetometer readings to a zero gamma datum plane shows that the minimum magnetic closure is over plus 75 gamma points; or from plus 100 gammas datum to plus 170 gammas datum.

The study of the attached map contoured on magnetic readings given a much better conception of the structure.

Conclusion

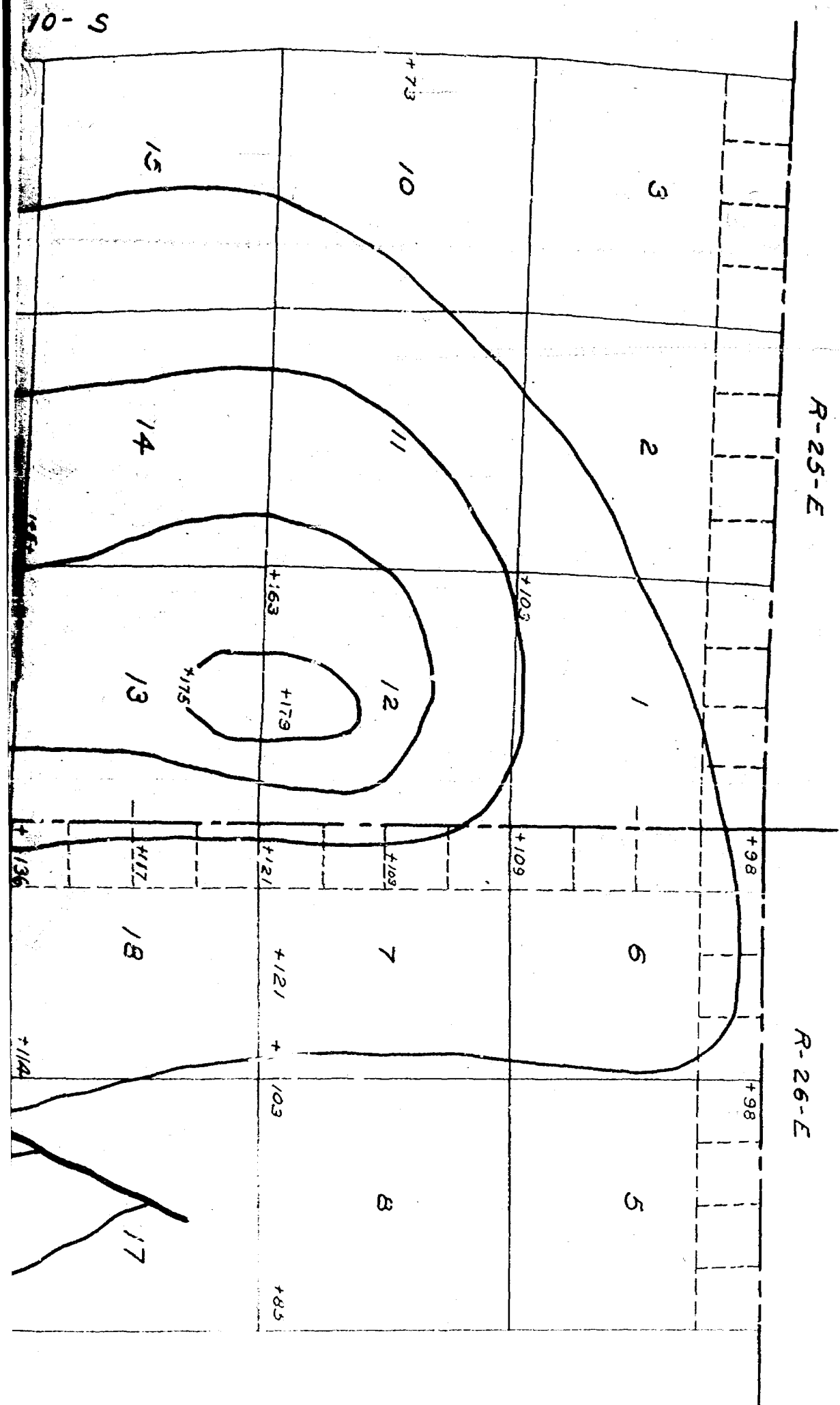
The Bitter Lake Unit Area, being a structural feature, in the Permian sedimentary basin, mapped on magnetic surveys, is deserving of a test for its oil and gas possibilities.

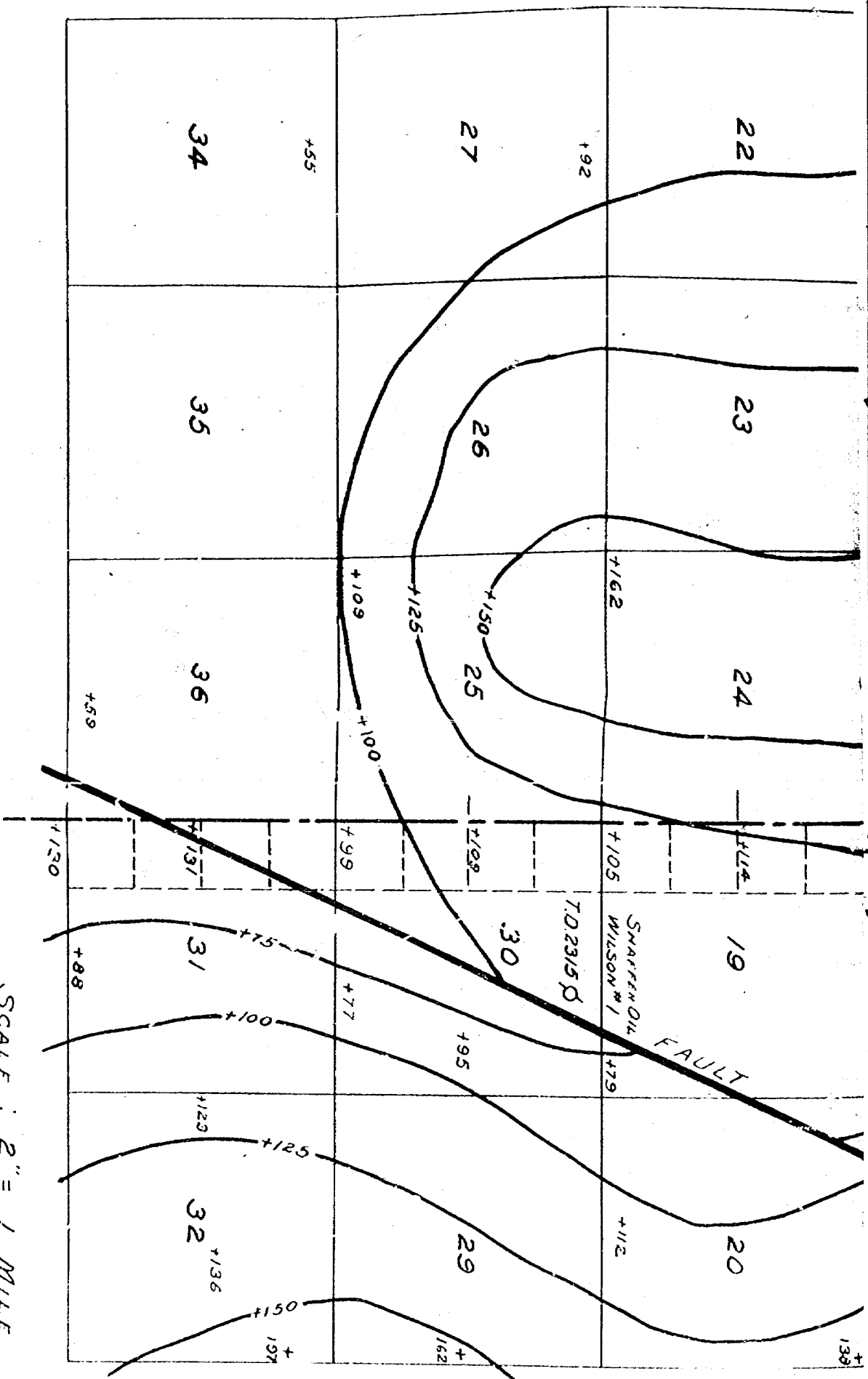
Commercial production may be encountered in one or several zones in the Permian, Pennsylvanian or Devonian formations. These formations are at present producing in southeastern New Mexico or West Texas. However, a well should be drilled to the igneous formation which should be encountered at a depth of 6000 feet or less, to adequately test these zones.

Respectfully submitted,


John M. Kelly
Consulting Geologist

BITTER LAKE UNIT AREA
MAGNETIC CONTOUR MAP





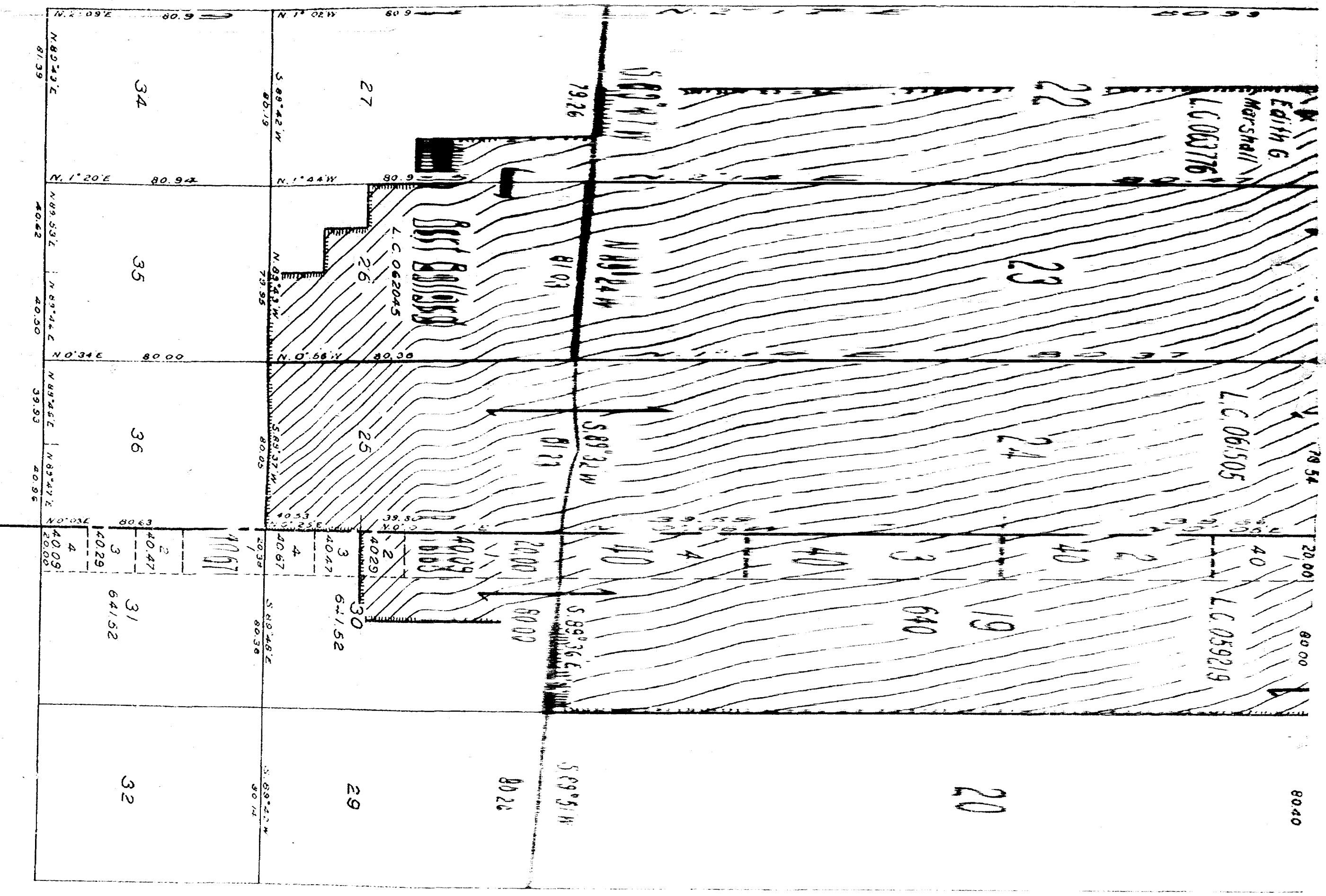
LEGEND

CONTOURS ON + GAMMA DATUM PLANE
STATIONS IN + GAMMAS

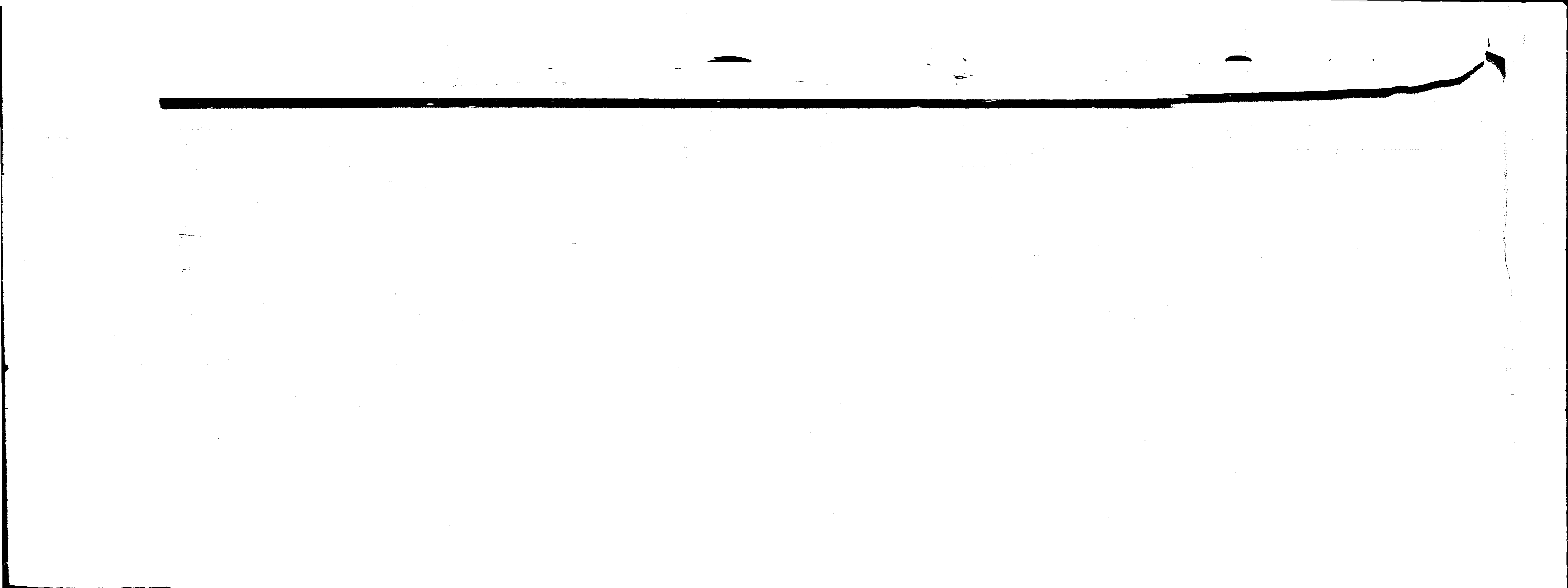
MAGNETOMETER SURVEY BY MARK WHELAN
CONTOURED BY JOHN M. KELLY
DRAFTING BY JAMES ASSOCIATED ENGINEERING CO.

1





DRAFTING BY
JAMES ASSOCIATED ENGINEERING CO.



J. M. HERVEY
HIRAM M. DOW
CLARENCE E. HINKLE
W. E. BONDURANT, JR.

GEORGE H. HUNKER, JR.

LAW OFFICES
HERVEY, DOW & HINKLE
ROSWELL, NEW MEXICO

July 2, 1946

Case 76

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

Attention: Carl Livingston

RE: Bitter Lake Unit Agreement

Gentlemen:

We hand you herewith approved copy of the Unit Agreement for the development and operation of the Bitter Lake Unit Agreement. You will recall that this agreement was approved by the Conservation Commission and by the Commissioner of Public Lands on June 7. This agreement was approved by the Secretary of the Interior on June 25, 1946, and became effective on July 1, 1946.

Yours very truly

HERVEY, DOW & HINKLE

BY *[Signature]*

CEH:S
Encl.

U. S. GEOLOGICAL SURVEY
RECEIVED
JUN 10 1946
ROSWELL, NEW MEXICO

UNIT AGREEMENT

FOR THE DEVELOPMENT AND OPERATION OF THE BITTER LAKE UNIT AREA

CHAVES COUNTY

STATE OF NEW MEXICO

I. Sec. No. 441

This agreement, entered into, as of the 18 day of May, 1946, by and between the parties subscribing or consenting hereto, hereinafter called the parties hereto,

W-I-T-N-E-S-S-E-T-H:

WHEREAS, the parties hereto are the owners of operating, royalty, or other oil or gas interests in the unit area subject to this agreement;

WHEREAS, it is the purpose of the parties hereto to conserve natural resources, prevent avoidable waste, and secure other benefits obtainable through development and operation of the unit area subject to this agreement under and pursuant to the provisions of sections 17, 27, and 32 of the Act of Congress approved February 25, 1920, entitled "An Act to promote the mining of coal, phosphate, oil, oil shale, gas and sodium on the public domain, "41 Stat. 443, 448, 450, as amended or supplemented by the acts of March 4, 1931, 46 Stat. 1523, and August 21, 1935, 49 Stat. 676; 30 U.S.C. 226, 184 and 189;

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by an Act of the Legislature (Chap. 88, Laws 1943) to consent to or approve this agreement on behalf of the state of New Mexico, insofar as it covers and includes lands and mineral interests of the State of New Mexico; and

WHEREAS, the Oil Conservation Commission of the State of New Mexico is authorized by an Act of the Legislature (Chap. 72, Laws 1935) to approve this agreement and the conservation provisions hereof;

NOW, THEREFORE, for and in consideration of the premises and the promises hereinafter contained, the parties hereto agree as follows:

ENABLING ACT 1. The Act of February 25, 1920, supra,
 AND
REGULATIONS as amended, and all pertinent regulations heretofore and all pertinent and reasonable regulations hereafter issued thereunder, and not inconsistent with the provisions hereof, including operating regulations, are accepted and made a part of this agreement. Likewise, the Act of the Legislature of the State of New Mexico (Chap. 88, Laws 1943) and the Act of the Legislature of the State of New Mexico (Chap. 72, Laws 1935) and all pertinent regulations issued under said acts are hereby accepted and made part of this agreement.

DEFINITIONS 2. For all purposes of this agreement,
 certain terms used herein are defined
as follows:

(a) "Secretary" shall mean the Secretary of the Interior of the United States and those persons or agencies duly authorized to act for and in his behalf.

(b) "Supervisor" shall mean the Oil and Gas Supervisor of the United States Geological Survey and those persons or agencies duly authorized to act for and in his behalf.

(c) "Commissioner" shall mean the Commissioner of Public Lands of the State of New Mexico.

(d) "Commission" shall mean the Oil Conservation Commission of the State of New Mexico and those persons duly authorized to act for and in its behalf.

UNIT AREA 3. The following described lands are hereby designated and recognized as constituting the unit area:

S $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ Sec. 1; NE $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 2; NE $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 10; NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ Sec. 11; All Secs. 12, 13 and 14; E $\frac{1}{2}$ Sec. 15; E $\frac{1}{2}$ Sec. 22; All Secs. 23, 24 and 25; N $\frac{1}{2}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ Sec. 26; NE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 27, T. 10 S., R. 25 E. All Secs. 6, 7, 18 and 19; Lots 1, 2, E $\frac{1}{2}$ NW $\frac{1}{4}$ Sec. 30, T. 10 S., R. 26 E., N.M.P.M., Chaves County, New Mexico, containing 9,032.38 acres, more or less.

The above described unit area includes certain lands included within the Bitter Lake Migratory Wildfowl Refuge and it is hereby agreed that if such land is committed hereto no wells shall be drilled on said land except with the consent in writing of the head of the Agency having jurisdiction over said Refuge.

The Unit Operator, with the consent of a majority in interest of the Working Interest Owners and subject to the approval of the Secretary, the Commissioner and the Commission, may enlarge the unit area to include other lands believed to be commercially productive of the unitized substances, or shall, subject to approval of the Secretary, the Commissioner and the Commission, diminish the unit area to exclude lands not in any participating area hereunder believed to be barren of the unitized substances.

Exhibit "A" attached hereto is a map on which is outlined the herein established Unit Area, together with the ownership of the land and leases in said area. Exhibit "B" attached hereto is a schedule showing the nature and extent of ownership of oil and gas rights in all land in the Unit Area to which this unit agreement will become applicable by signature hereto, or to a counterpart hereof by the owners of such rights, and land so committed to this agreement is hereinafter referred to as "unitized lands" or "land subject to this agreement". Said exhibits shall be revised by the Unit Operator whenever any change in the Unit Area or ownership of rights render such change necessary, and the revised exhibits shall be filed with the Supervisor.

UNITIZED
SUBSTANCES

4. All oil, gas, natural gasoline, and associated fluid hydrocarbons producible from land subject to this agreement, in any and all sands or horizons, are unitized under the terms of this agreement and hereinafter are called "unitized substances".

UNIT OPERATOR 5. DeKalb Agricultural Association, Inc., with offices at DeKalb, Illinois, is hereby designated as Unit Operator and by signature hereto commits to this agreement all interests in unitized substances vested in it as set forth in the schedule attached hereto marked Exhibit B and agrees and consents to accept the duties and obligations of Unit Operator to conduct and manage the operation of said unit area for the discovery and development of unitized substances as herein provided. Herein whenever reference is made to the Unit Operator, such reference is understood to mean the unit Operator acting in that capacity and not as an owner of interests in unitized substances, and whenever reference is made to an owner of unitized substances, such a reference shall be understood to include any interests in unitized substances owned by the Unit Operator.

The Unit Operator shall have the right to resign at any time provided that any well drilled hereunder is placed in a satisfactory condition for suspension, or is satisfactorily abandoned under the Federal Oil and Gas Operating Regulations, if on Federal land, and under the laws of the State of New Mexico, and the rules and regulations of the Commission, if on state or patented land, but no Unit Operator shall so be relieved from the duties and obligations of Unit Operator for a period of three(3) months after notice of intention to relinquish such duties and obligations has been served by him on all other parties hereto and the Secretary and the Commissioner, unless a new Unit Operator shall have been selected and approved and shall have taken over and assumed the

duties and obligations of the Unit Operator prior to the date on which relinquishment by or removal of Unit Operator becomes effective. The parties hereto or a duly qualified new Unit Operator shall have an option to purchase at its then depreciated market value all or any part of the equipment, material, and appurtenances in or upon the land subject to this agreement, owned and used by the retiring Unit Operator, in its capacity as such operator, or make other arrangements satisfactory to the retiring Unit Operator for the use thereof. Any equipment, material, and appurtenances not so purchased or arranged for as to the use thereof within said time limit and not necessary for the preservation of wells may be removed by the retiring Unit Operator at any time within six (6) months after his relinquishment or removal becomes effective, but if not so removed shall become the joint property of the owners of working interest rights in land then subject to this agreement. The termination of any rights as Unit Operator under this agreement shall not of itself terminate any right, title, or interest which the Unit Operator may then have in the unitized substances, but the Unit Operator shall have the right and option in connection with its resignation to reassign or retransfer to its several predecessors in interest all of its interest in the lands and leases severally acquired from them, together with its working interest in the unitized substances, and upon such delivery be discharged from any future liability as a working interest owner hereunder; said reassignments to be effective as to said transferee thereupon, subject, however, to the approval of the Secretary as to transfers of interest in lands of the United States and subject, however, to the approval of the Commissioner as to interests in lands of the State of New Mexico.

SUCCESSOR
UNIT
OPERATOR

6. Whenever the Unit Operator shall discontinue or relinquish his rights as Unit Operator or shall fail to fulfill his duties and obligations as Unit Operator under this agreement, the owners of the unitized working interests in the participating area on an acreage basis, or the owners of working interests according to their total acreage interest in the unit area until a participating area shall have been established, shall select a new Unit Operator. A majority vote of the working interests so qualified to vote shall be required to select a new Unit Operator; provided that if the majority of the working interests rights which are at any time qualified to vote in selecting a new Unit Operator are owned by one party to this agreement then a vote of at least two owners of working interests qualified to vote shall be required to select a new operator. Such selections shall not become effective until (a) a Unit Operator so selected shall agree and consent in writing to accept the duties and responsibilities of Unit Operator, and (b) the selection shall have been approved by the Secretary and the Commissioner. In the absence of the selection of an acceptable Unit Operator by the working interest owners within six (6) months after notice by Unit Operator of intention to relinquish its rights as Unit Operator, this Unit Agreement shall automatically terminate.

The Unit Operator shall be subject to removal by the Working Interest Owners in the same manner as herein provided for the selection of a new Unit Operator.

RIGHTS AND
OBLIGATIONS
OF
UNIT OPERATOR

7. Except as hereinafter specified, the exclusive right, privilege and duty of exercising any and all rights of the parties

signatory hereto which are necessary or convenient for prospecting for, producing, storing, and disposing of the unitized substances are hereby vested in the Unit Operator and shall be exercised by said Unit Operator as provided in this agreement. Acceptable evidence of title to said rights shall be deposited with said Unit Operator and, together with this agreement, shall constitute and define said Unit Operator's rights, privileges, and obligations in the premises; provided, that nothing herein shall be construed to transfer title to any land, or to any operating agreement or leases, it being understood that under and pursuant to this agreement the Unit Operator, in its capacity as Unit Operator shall exercise the rights of possession and use vested in the parties hereto only and exclusively for the purposes herein specified. The Unit Operator shall pay all costs and expenses of operations with respect to the unitized land, and no part thereof shall be charged to the royalty owners. The matter of allocation and handling such costs and expenses is left to private arrangement between the Unit Operator and the other working interest owners. The Unit Operator shall render to the owners of unitized interests entitled thereto an account of the operations on unitized lands during the previous calendar month, shall pay in value or deliver to each party entitled thereto a proportionate and allocated share of the products produced hereunder, and account for all costs and benefits of operations under this agreement in conformity with operating agreements, leases or other independent contracts between the Unit Operator and the parties hereto either collectively or independently.

The development and operation of land subject to this agreement under the terms hereof shall be deemed full performance by Unit Operator of all obligations for such development and operation with respect to each and every part or separately owned tract subject to this agreement, regardless of whether there is any development of any particular part or tract of the unit area, notwithstanding anything to the contrary in any lease, operating agreement or other contract by and between the parties hereto, or any of them.

DRILLING
TO
DISCOVERY

8. Within six (6) months from the effective date of this agreement, Unit Operator shall begin to drill an adequate test well at a location upon the Unit Area to be approved by the Supervisor, if such location is upon lands of the United States, and if upon State lands or patented lands, such location shall be approved by the Commission, and having commenced such operations shall thereafter continue drilling diligently to a depth not less than 6500 feet unless oil or gas which can be produced in paying quantities is encountered in said well at a lesser depth or unless, at a lesser depth, an igneous or metamorphic formation or some other condition or formation is encountered which would render further drilling inadvisable or impracticable. If said first well, drilled as aforesaid, fails to encounter the unitized substances, Unit Operator or his successor shall thereupon commence within six (6) months after the completion of the former well, and drill, one at a time, additional wells until a productive well is

completed to the satisfaction of the Supervisor and Commissioner, or until it is reasonably proved that the unitized land is incapable of producing the unitized substances; provided that the Secretary and Commissioner may grant extension of time for the commencement of any such well; and provided further that nothing herein contained shall preclude any Operator from effectively re-signing as provided in Section 5 hereof before any obligation to commence a second or subsequent well accrues hereunder, and be relieved of the obligation to commence such well. Upon failure to comply with the drilling requirements of this section the Secretary may, after reasonable notice, declare this unit agreement terminated.

PLAN OF FURTHER
DEVELOPMENT AND
OPERATION

9. Within sixty (60) days from completion of a well capable of producing the unitized substances as aforesaid, Unit Operator shall submit for the approval of the Supervisor, the Commissioner, and the Commission an acceptable plan of development for the Unit Area, which plan or a subsequent modification thereof, when so approved shall constitute the further drilling and operating obligations of Unit Operator. Reasonable diligence shall be exercised by the Unit Operator in complying with the drilling and producing obligations of the approved plan of development and said plan shall, subject to like approval be modified or supplemented in whole or in part from time to time as may be required to meet changed conditions or to protect the interests of all parties to this agreement and the further obligations of the Unit Operator shall be conformed thereto; provided that in no event shall the operator under any such plan, or otherwise, be under any obligation to drill any well to any formation that does not afford a fair possibility for encountering the unitized substances in paying quantities. Well drilling operations including well completions, producing practices and well abandonments, shall be in accordance with the Plan of Development and Operation. All operations thereunder shall be subject to the approval of the Supervisor as to wells on federal land and by the Commission for wells on state and private land.

During any period when it shall appear that an acceptable plan of development cannot be adopted because of the inability of the Supervisor, the Commissioner and the Commission to agree upon the terms thereof, the Unit Operator may, in accordance with the applicable regulations referred to in Section 1 hereof, proceed with reasonable diligence to drill other wells to determine the limits of production and to develop the productive portion of the unit area, and may and shall operate all productive wells in conformity with good operating practices, and the conservation principles of this agreement.

PARTICIPATION
AFTER
DISCOVERY

10. Upon completion of a productive well as aforesaid, Unit Operator shall submit for the approval of the Secretary, the Commissioner and the Commission a schedule of lands based on subdivisions of the public land survey, including all subdivisions one-half or more of the acreage of which is then regarded as reasonably proved to be productive of unitized substances in paying quantities; all land in said schedule, when approved, to constitute a participating area effective as of the date of first production. Said schedule shall set forth the percentage acreage interest of each owner of rights in the participating area thereby established. Such percentage acreage interest shall govern the allocation of production from and after the date the participating area becomes effective. With the approval of the Secretary, Commissioner and the Commission, a separate participating area may be established for any separate deposit of unitized substances or for any group of such deposits. The participating area or areas so established shall be enlarged

from time to time in like manner and subject to like approval whenever such action appears proper as a result of further drilling operations to include additional land then regarded as reasonably proved to be productive in paying quantities, and a new schedule of percentage acreage interests conformable thereto shall thereupon be fixed. The effective date of any such enlargement shall be the first of the month next following the month in which the well is completed which demonstrates the propriety of the enlargement, and any unitized substances theretofore produced from such well shall be allocated to the lease on which the well is drilled. A well shall be deemed completed when equipped and successfully tested for production, all of which shall be done diligently. No land once included in a participating area shall be excluded from such participating area on account of depletion of the unitized substances therefrom, or for any cause save loss of title. It is the intent of this Section that a participating area shall at all times represent as nearly as possible the area known or reasonably estimated to be productive in paying quantities; but, regardless of any increase in the participating area, nothing herein contained shall be construed as requiring any retroactive apportionment of any sums accrued or paid for production obtained prior to the effective date of increase of the participating area.

Until a participating area or areas has or have been established as herein-provided, or in the absence of agreement at any time between the Unit Operator, the Secretary, the Commissioner, and the Commission as to the proper boundaries of a participating area, the portion of all payments affected by such absence of agreement, except the royalties due the United States and the State of New Mexico, may be impounded in a mutually acceptable bank.

ALLOCATION OF
PRODUCTION --
ROYALTIES

11. Except as provided in Section 12, all unitized substances produced under this agreement, except any part thereof used for production and development purposes thereunder, or unavoidably lost, shall be deemed to be produced equally on an acreage basis from the several tracts of land of the participating area, and for the purpose of determining any benefits that accrue on an acreage basis as a result of operations under this agreement, each such tract shall have allocated to it such percentage of said production as its area bears to the said participating area. Unitized substances produced from any participating area and used in conformity with good operating practice under an approved plan of operation for repressuring or cycling in any participating area shall be free from any royalty charge. If Unit Operator introduces gas obtained from sources other than the unitized substances into any participating area hereunder for use in repressuring, stimulation of production or increasing ultimate recovery in conformity with a plan first approved by the Supervisor, the Commissioner and the Commission, a like amount of gas, with due allowance for loss or shrinkage thereof from any cause, may be drawn from the formation into which the gas was introduced, royalty free as to dry gas but not as to the products extracted therefrom, provided that such withdrawal shall be at such time as may be provided in the plan of operation or as may otherwise be consented to by the Supervisor, the Commissioner and the Commission, as conforming to good petroleum engineering practice, and provided further that such right of withdrawal shall terminate on the termination of the unit.

Except as otherwise herein provided, royalties shall be paid or delivered as provided by existing leases or contracts,

at the lease or contract rate upon the unitized substances allocated to the lease or tract. Settlement shall be made on or before the 20th day of each month for the unitized substances produced during the preceding calendar month. Such royalties shall be paid by the party operating the wells, but nothing herein shall operate to relieve the lessees, or any of them, of their obligation to pay rentals and royalties under the terms of their respective leases.

The right is hereby secured to the United States and the State of New Mexico under existing or future laws and regulations to elect to take their respective royalty shares in kind or value.

DEVELOPMENT OR OPERATION ON NON-PARTICIPATING LAND 12. Any party hereto other than Unit Operator owning or controlling a majority of the working interest rights in any unitized tract included in the non-participating area having thereon a regular well location in accordance with a well-spacing pattern established under an approved plan of development and operation may drill a well at such location at his own expense, unless within 90 days of receipt of notice from said party of his intention to drill the well Unit Operator elects and commences to drill such well in like manner as other wells are drilled by Unit Operator under this agreement.

If such well is not drilled by Unit Operator and results in production such that the land upon which it is situated may properly be included in a participating area, the party paying the cost of drilling such well shall be reimbursed one hundred fifty percent (150%) of the average cost of drilling similar producing wells in the unitized area, and the well

shall be operated pursuant to the terms of this agreement all as though the well had been drilled by the Unit Operator.

If any well drilled by Unit Operator or by an owner of working interest rights as provided in this section obtains production insufficient to justify inclusion in a participating area of the land on which said well is situated, said owner of working interests at his election, within 30 days of determination of such insufficiency, shall be wholly responsible for and may operate and produce the well at his sole expense and for his sole benefit. If such well was drilled by Unit Operator, said owner of working interests shall pay the Unit Operator a fair salvage-value price for the casing and other equipment left in the well.

Wells drilled at the sole expense of any party other than Unit Operator or produced at his sole expense and for his sole benefit shall be subject to the drilling and producing requirements of this agreement the same as though drilled or produced by Unit Operator; and royalties in amount or value of production from any such well as well as rental charges, if any, shall be paid as specified in the lease affected, unless otherwise authorized in writing by the lessor.

RENTAL AND
ROYALTY
PAYMENTS

13. The Unit Operator, on behalf of the respective lessees, shall pay, or at the election of the Secretary of the Interior as to Federal leases and at the election of the Commissioner as to State leases shall deliver in kind, all royalties and shall pay all rentals due the United States and the State of New Mexico respectively, on account of operations by Unit Operator on unitized land and shall distribute the cost

thereof to the appropriate parties conformably with their respective rental and royalty obligations; provided, that nothing herein contained shall operate to relieve the lessees, or any of them, of their obligation to pay rentals and royalties under the terms of their respective leases.

On request of any party, Unit Operator at its election shall pay other royalties on his behalf in accordance with a schedule furnished by him and charge the cost thereof to his account; provided, that Unit Operator shall incur thereby no responsibility to any royalty owner, but such responsibility shall be and remain an obligation of the parties requesting payment thereof.

GOVERNMENT
ROYALTIES
AND RENTALS

14. Royalty due the United States on account of unitized Federal land shall be computed as provided in the operating regulations and paid as to all unitized substances on the basis of the amounts thereof allocated to such land as provided herein at the rates specified in the respective Federal leases; provided, that, for leases on which the royalty rate depends on the daily average production per well, said average production for any participating area shall be determined in accordance with the operating regulations as though all the unitized land within the same participating area were a single consolidated lease, and provided that during the period of the national emergency declared by the President May 27, 1941, Proclamation No. 2487, 55 Stat. 1647, upon a determination by the Secretary of the Interior that a new oil or gas field or deposit has been discovered by virtue of a well or wells drilled under this agreement, the royalty on production from such new field or

deposit allocated to Federal land subject to this agreement at the time of such discovery shall, during the 10-year period following the date of such discovery, be paid in value or delivered in kind at a flat rate of $12\frac{1}{2}$ per centum unless a lower rate is prescribed in the lease.

Rental for land of the United States subject to this agreement at the rates specified in the respective Federal leases shall be paid, suspended, or reduced as determined by the Secretary of the Interior, pursuant to applicable law and regulations.

CONSERVATION 15. Operations and production of unitized substances shall be conducted so as to provide for the most economical and efficient recovery of said substances to the end that maximum yield may be obtained without waste, as defined by or pursuant to State or Federal law or regulation; and shall be limited to such production as can be put to beneficial use with adequate realization of fuel and other values.

DRAINAGE 16. Unit Operator shall take appropriate and adequate measures to prevent drainage of unitized substances from unitized land by wells on land not subject to this agreement, or, with the approval of the Secretary as to federal interests and of the Commissioner as to state interests, and at the election of the Unit Operator as to private interests, pay a fair and reasonable compensatory royalty, as determined by the Supervisor as to federal interests, and the Commissioner as to state interests subject to this agreement and by agreement between the Unit Operator and royalty owners, as to private interests.

LEASES AND CON-
TRACTS CONFORMED
TO AGREEMENT

17. The parties hereto or consenting hereto holding interests in leases embracing unitized land of the United States or of the State of New Mexico consent that the Secretary and Commissioner, respectively, may, and said Secretary and Commissioner, by their approval of this agreement, do hereby establish, alter, change or revoke the drilling, producing, and royalty requirements of such leases and the regulations in respect thereto, to conform said requirements to the provisions of this agreement, but otherwise the terms and conditions of said leases shall remain in full force and effect.

Owners and lessors of privately owned lands or of interests therein, including royalty interests, and including their heirs, executors, administrators, successors and assigns, by subscribing or consenting to this agreement, in person or by attorney in fact, do hereby severally agree that the respective leases covering their several lands or interests therein, may be and remain in force and effect for the respective primary terms therein stated, and so long thereafter as oil or gas may be produced therefrom in quantities sufficient to justify the cost of production; and also in the event that any of the land embraced in any such lease is during the primary term of such lease included within a participating area duly selected and approved under this unit plan of development, so that each owner becomes entitled to a share in the proceeds of production from the participating area, payable at the respective lease rates on the production allocated on an acreage basis to the portion of the lease within the participating area, then each such lease is hereby extended, without

further delay rental obligation, as to the land embraced therein which is so included in such participating area, for the full term of this unit plan as herein stated.

The Secretary, Commissioner and, except as otherwise provided in the preceding paragraph of this Section, all parties hereto further determine, agree and consent that during the effective life of this agreement, drilling and producing operations performed by the Unit Operator upon any unitized land will be accepted and deemed to be operations under and for the benefit of all unitized leases subject hereto; that no such lease shall be deemed to expire by reason of failure to produce wells situated on land therein embraced; that if a discovery of a valuable deposit of unitized substances is made anywhere on the unitized land, each such lease in effect on or after the date of such discovery shall be deemed to continue in force and effect as to land in the unit area, as long as unitized substances are produced anywhere on unitized land in paying quantity; that prior to such discovery of unitized substances anywhere on unitized land, the expiration date of each unitized lease embracing lands of the United States shall be the date prescribed in such lease subject to such preferential right to a new lease as may be authorized by law; and the suspension of all operations and production on the unitized land pursuant to direction or consent of said Secretary and Commissioner shall be deemed to constitute such suspension pursuant to such direction or consent with respect to each such lease, and that no lease shall expire on account of such suspension, as to land in the unit area.

The parties hereto or consenting hereto, holding interests in leases subject to this agreement embracing

lands other than those of the United States or of the State of New Mexico or holding interests in any other agreements that involve oil and gas rights in lands in the Unit Area, consent and agree, to the extent of their respective interests, that all such leases and agreements shall conform to the provisions of this agreement.

COVENANTS
RUN
WITH LAND

18. The covenants herein shall be construed to be covenants running with the land to the extent of the interests of the parties hereto until this agreement terminates, and any grant, transfer or conveyance of interest in land or leases subject hereto shall be and hereby is conditioned upon the assumption of all privileges and obligations hereunder by the grantee, transferee, or other successor in interest and as to federal land, shall be subject to approval by the Secretary, and as to lands of the State of New Mexico, shall be subject to the approval of the Commissioner. No transfer of any interest in and to any of the unitized lands or affecting the production therefrom shall be binding upon the Unit Operator until the first day of the next calendar month after the Unit Operator has been furnished with an original, photostatic or certified copy of the instrument of transfer.

EFFECTIVE
DATE
AND TERM

19. This agreement shall become effective on the first day of the calendar month next following approval by the Secretary of the Interior and the Commissioner, provided however that nothing herein shall be construed to waive or limit the right of the Commission to approve this agreement pursuant to applicable state law. Except as otherwise provided as to private leases by the second paragraph of Section 17 hereof, this agreement shall terminate on December 31, 1949, unless (1) such date of

expiration is extended by the Secretary and the Commissioner; or (2) a valuable discovery of unitized substances has been made on unitized land, in which case the agreement shall remain in effect as long as unitized substances can be produced from the unitized land in paying quantities; or (3) it is reasonably determined prior to the expiration of the fixed term or any extension thereof that the unitized land is incapable of commercial production of unitized substances, and, after notice of intention to terminate the agreement on such ground is given by Unit Operator to all parties in interest at their last known address the agreement is terminated with the approval of the Secretary of the Interior and the Commissioner; or (4) it is terminated as provided in sections 6 or 8 hereof. This agreement may be terminated at any time by consent of the owners of not less than 75 per centum, on an acreage basis, of working interests signatory hereto with the approval of the Secretary and the Commissioner.

RATE OF PROSPECT-
ING, DEVELOPMENT,
AND PRODUCTION

20. All production and the disposal thereof, shall be in conformity with allocations, allotments and quotas made or fixed by the Commission under any State Statute; provided however that the Secretary is vested with authority pursuant to the amendatory acts of Congress of March 4, 1931, and August 21, 1935, supra, to alter or modify from time to time in his discretion the rate of prospecting and development, and, within the limits made or fixed by the Commission to modify the quantity and rate of production under this agreement, such authority being hereby limited to alteration or modification in the public interest, the purpose thereof

and the public interest to be served thereby to be stated in the order of alteration or modification; provided further that no such alteration or modification shall be effective as to any lands of the State of New Mexico as to the rate of prospecting and development in the absence of the specific written approval thereof by the Commissioner and as to any lands of the State of New Mexico or privately owned lands subject to this agreement as to the quantity and rate of production in the absence of specific written approval thereof by the Commission.

UNAVOIDABLE
DELAY

21. All obligations under this agreement requiring Unit Operator to commence or continue drilling or to operate on or produce oil or gas from any of the lands covered by this agreement shall be suspended while, but only as long as, the Unit Operator is prevented from complying with such obligations, in whole or in part, by strikes, lockouts, acts of God, Federal, State or municipal law or agencies, unavoidable accidents, uncontrollable delays in transportation, inability to obtain necessary materials in open market, or other matters beyond the reasonable control of the Unit Operator whether similar to the matters herein enumerated or not.

CONFLICT
OF
SUPERVISION

22. Neither the Unit Operator nor the working Interest Owners nor any of them shall be subject to any forfeiture, termination or expiration of any rights hereunder or under any leases or contracts subject hereto, or to any penalty or liability for delay or failure in whole or in part to comply therewith to the extent that said Unit Operator, Working Interest Owners or any of them are hindered, delayed, or prevented from complying therewith

by reason of failure of Unit Operator to obtain the joint consent of the representatives of the United States and the representatives of the State of New Mexico in and about any matter or thing concerning which it is required herein that such joint consent be obtained. The parties hereto and consenting hereto, including the Commission, agree that all powers and authority vested in the Commission in and by any provisions of this contract are vested in the Commission and shall be exercised by it pursuant to the provisions of the laws of the State of New Mexico and subject in any case to appeal or judicial review as may now or hereafter be provided by the laws of the State of New Mexico.

NON-DISCRIMINATION

23. The Unit Operator expressly agrees that in any and all operations conducted hereunder, it shall not discriminate against any employee or applicant for employment because of race, creed, color, or national origin and shall require an identical provision to be included in all subcontracts.

SUBSEQUENT JOINDER

24. Any person owning rights in the unitized substances within the unit area who does not commit such rights hereto prior to the effective date hereof, may thereafter become parties hereto by subscribing this agreement, and if such parties are working interest owners they shall also subscribe the operating contract and comply with all terms and conditions therein set forth.

COMMITMENT OF
STATE LANDS

25. This agreement provides for approval hereof by the Commissioner and the Commission, and in addition contains provisions authorizing the Commissioner and the Commission to exercise certain functions. It is hereby understood and agreed that, in view of the small percentage of State lands in the unit area which may be committed hereto, the Commissioner and Commission will exercise none of the functions prescribed in this agreement, except as to operations on State lands, until such time as said State lands, or a portion thereof, are included in an approved participating area.

In the event the Commissioner or Commission should not approve this agreement it shall nevertheless be effective upon approval by the Secretary of the Interior and thereupon all of the provisions of this agreement pertaining to the functions of the Commissioner or Commission shall be of no effect.

COUNTERPARTS

26. This agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document.

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed and have set opposite their respective names the date of execution.

5/18/46
Date

5/18/46
Date

5/18/46
Date

5/18/46
Date

5/18/46
Date

5/18/46
Date

Date

Date

Date

Date

Date

5/27/46
Date

L. T. Lewis

Nellie D. Lewis

Thomas T. Sanders Jr

Dora Sanders

Bert Ballard

Bess V. Ballard

Edith T. Marshall

Sam Marshall

Mary E. Helmig

Phil Helmig

Johnny H. Dradick

Paul A. Mattick

DEKALB AGRICULTURAL ASSOCIATION, INC.,

BY W. J. Hyde Pres

ATTEST: John H. Roberts
Secretary

APPROVAL - CERTIFICATION - DETERMINATION

Pursuant to the Statutory authority in the Secretary of the Interior, under the act approved March 4, 1931, 46 Stat. 1523, and the act approved August 21, 1935, 49 Stat. 674, amending the act approved February 25, 1920, 41 Stat. 437; 30 U.S.C. 226, 184 and 189, in order to secure the proper protection of the public interest, I hereby take the following action this 25th day of June, 1946.

- A. Approve the attached agreement for the development and operation of the Bitter Lake Unit Area.
- B. Determine and certify that the plan of development and operation contemplated in said agreement is for the purpose of more properly conserving oil or gas resources of said unit area and is necessary or advisable in the public interest.
- C. Certify that each and every lease heretofore or hereafter issued for lands of the United States subject to, or which may hereafter become subject to, said agreement shall be excepted in determining holdings or control under the provisions of any section of the Act of Congress approved February 25, 1920, and amendments thereto.

Acting

Arce L. Chapman
Secretary of the Interior

STATE OF NEW MEXICO)
COUNTY OF CHAVES)

On this 18 day of May 1946 before me personally appeared L.T. Lewis and wife Nellie T. Lewis, Thomas T. Sanders, Jr., and wife Dora Sanders to me known to be the person s described in and who executed the foregoing instrument, and acknowledged that t he y executed the same as their free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate above written.

My commission expires

October 3, 1949

L. A. Brown
Notary Public

STATE OF NEW MEXICO)
COUNTY OF CHAVES)

On this 18 day of May 1946 before me personally appeared Bonnie H. Matlock and husband Bruce K. Matlock to me known to be the person s described in and who executed the foregoing instrument, and acknowledged that t hey executed the same as their free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate above written.

My commission expires:

October 3, 1949

L. A. Brown
Notary Public

STATE OF NEW MEXICO)
COUNTY OF CHAVES)

On this 18 day of May 1946 before me personally appeared Edith G. Marshall and husband Sam Marshall to me known to be the person s described in and who executed the foregoing instrument, and acknowledged that t he y executed the same as their free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate above written.

My commission expires:

October 3, 1949

L. A. Brown
Notary Public

STATE OF NEW MEXICO)
COUNTY OF CHAVEZ)

On this 10 day of May, 1948, before me personally appeared ~~Bert Ballard and wife, Rose V. Ballard~~ to me known to be the person described in and who executed the foregoing instrument, and acknowledged that ~~he~~ executed the same as ~~their~~ free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate above written.

My commission expires
October 3, 1949

Lois Brown
Notary Public

STATE OF NEW MEXICO)
COUNTY OF CHAVEZ)

On this 10 day of May, 1948, before me personally appeared ~~Mary E. Kelnig and husband Phil Kelnig~~ to me known to be the person described in and who executed the foregoing instrument, and acknowledged that ~~he~~ executed the same as ~~their~~ free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate above written.

My commission expires:
October 3, 1949

Lois Brown
Notary Public

STATE OF _____)
COUNTY OF _____)

On this _____ day of _____, 194____, before me personally appeared _____ to me known to be the person described in and who executed the foregoing instrument, and acknowledged that _____ he _____ executed the same as _____ free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate above written.

My commission expires:

Notary Public

STATE OF ILLINOIS)
COUNTY OF De Kalb) ss

On this 27 day of May, 1946, before me personally appeared H. S. Hyde to me personally known, who, being by me duly sworn did say that he is the President of DeKalb Agricultural Association, Inc., and that the seal affixed to said instrument is the corporate seal of said corporation and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said H. S. Hyde, acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate above written.

Dorothy Farrell
Notary Public

My Commission Expires:

July 17, 1948

EXHIBIT "B"

Bitter Lake Unit Agreement
Chaves County, New Mexico

Schedule Showing the Nature and Extent of Ownership
of Oil and Gas Rights in All Lands in the Unit Area

FEDERAL LANDS

<u>OWNERSHIP OIL AND GAS LEASES OR APPLICATIONS</u>	<u>NO. OF ACRES</u>	<u>LAS CRUCES SERIAL NUMBER</u>
<u>Bonnie H. Matlock</u>	2440	063769
S $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ Sec. 1; E $\frac{1}{2}$ Sec. 11; W $\frac{1}{2}$ Sec. 12; W $\frac{1}{2}$ NW $\frac{1}{4}$ Sec. 13; N $\frac{1}{2}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ N $\frac{1}{2}$, S $\frac{1}{2}$ Sec. 14; E $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 15; All Sec. 23, T. 10 S., R. 25 E.		
<u>Mary E. Helmig</u>	360	064148
NE $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$ Sec. 11; SW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 10; NE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 14; SE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 15, T. 10 S., R. 25 E.		
<u>Nellie T. Lewis</u>	1760	061505
E $\frac{1}{2}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ Sec. 13; All Secs. 24 and 25, T. 10 S., R. 25 E.		
<u>Edith G. Marshall</u>	360	063776
SW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 15; E $\frac{1}{2}$ Sec. 22, T. 10 S., R. 25 E.		
<u>Bert Ballard</u>	560	062045
N $\frac{1}{2}$, SE $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 26; NE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 27, T. 10 S., R. 25 E.		
<u>Thomas T. Sanders, Jr.</u>	1673.20	061479
All Secs. 6 and 7, T. 10S., R. 26E; E $\frac{1}{2}$ Sec. 12, N $\frac{1}{2}$ NE $\frac{1}{4}$ Sec. 13, T. 10S, R. 25E.		
<u>L. T. Lewis</u>	1439.18	059219
All Secs. 18 and 19; NW $\frac{1}{4}$ Sec. 30, T. 10 S., R. 26 E.		
<u>Bitter Lake Migratory Wildfowl Refuge (Unleased)</u>	320	
E $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 10; SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 11; NW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 14; N $\frac{1}{2}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 15, T. 10S., R. 25E.		

STATE LANDS

<u>OWNERSHIP</u> <u>OIL AND GAS LEASES</u>	<u>NO. OF</u> <u>ACRES</u>	<u>SERIAL</u> <u>NUMBER</u>
DeKalb Agricultural Association, Inc. NE $\frac{1}{4}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 2, T. 10 S., R. 25 E.	80	E-353
DeKalb Agricultural Association, Inc. SE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 2, T. 10 S., R. 25 E.	40	B-3063
TOTAL	9,032.38 acres	

CERTIFICATE OF APPROVAL

STATE OF NEW MEXICO

The undersigned, having this day examined an agreement for the co-operative or unit operation and development of a prospective oil or gas field or area, which agreement is entitled "Unit Agreement for the Development and Operation of the Bitter Lake Unit Area, Chaves County, State of New Mexico," entered into between DeKalb Agricultural Association, Inc., Operator, and likewise subscribed by numerous Working Interest Owners and Royalty Owners, to which agreement this certificate is attached; and

WHEREAS, upon examination thereof, the Commissioner finds:

a. That such agreement will tend to promote the conservation of oil and gas and the better utilization of reservoir energy in said field;

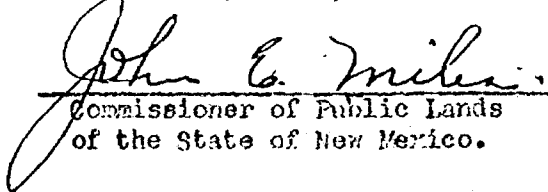
b. That under the operations proposed, the State will receive its fair share of the recoverable oil or gas in place under its lands in the area affected;

c. That the agreement is in other respects for the best interest of the State;

d. That the agreement provides for the unit operation of the field, for the allocation of production, and the sharing of proceeds from a part of the area covered by the agreement on an acreage basis as specified in the agreement.

NOW, THEREFORE, by virtue of the authority conferred upon me by Chapter 88 of the Laws of the State of New Mexico, 1943, approved April 14, 1943, I, the undersigned, Commissioner of Public Lands of the State of New Mexico, for the purpose of more properly conserving the oil and gas resources of the State, do hereby consent to and approve the said agreement, as to the lands of the State of New Mexico included in said Bitter Lake Unit Area Agreement, and subject to all the provisions of the aforesaid Chapter 88 of the Laws of the State of New Mexico, 1943.

Executed this 7th day of June, A. D., 1946.



Commissioner of Public Lands
of the State of New Mexico.

IN THE MATTER OF THE ESTATE OF
THE OIL COMPANY OF AMERICA
STATE OF NEW YORK FOR THE PURPOSE OF
CONSIDERING

THE APPLICATION OF THE ESTATE OF AMERICA
ASSOCIATION, INC. FOR AN ORDER OF
THE COURT AUTHORIZING THE
AND COMMISSIONER OF THE STATE OF NEW YORK
WILLIAM T. JENKINS TO AND BY THE
P. M., COMMISSIONER OF THE STATE OF NEW YORK
CHIEF CLERK, NEW YORK.

IN THE COMMISSIONER

This case was heard on the 1st day of
at Santa Fe, New Mexico, and the
Hearings, respectively.

For, on the 1st day of
it was found that the
and being the

IN THE MATTER OF THE ESTATE OF AMERICA

ASSOCIATION, INC.

For, on the 1st day of
it was found that the
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IN THE MATTER OF THE ESTATE OF AMERICA

ASSOCIATION, INC.

For, on the 1st day of
it was found that the
and being the



J. M. HERVEY
HIRAM M. DOW
CLARENCE E. HINKLE

W. E. BONDURANT, JR.

LAW OFFICES
HERVEY, DOW & HINKLE
ROSWELL, NEW MEXICO

May 9, 1946

Mr. Carl Livingston
New Mexico Oil Conservation Commission
Santa Fe
New Mexico

Re: Bitter Lake Unit Agreement
Chavez County, New Mexico

Dear Mr. Livingston:

In accordance with our letter of April 29, 1946,
we enclose herewith three executed copies of the Applica-
tion for Approval of the Bitter Lake Unit Agreement.

Yours very truly,

HERVEY, DOW & HINKLE

By Clarence E. Hinkle
mdc

CEH/mds
Encs.

NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

APPLICATION FOR APPROVAL OF BITTER LAKE
UNIT AGREEMENT, CHAVES COUNTY, NEW MEXICO.

New Mexico Oil Conservation Commission
Santa Fe
New Mexico

Comes the undersigned, the DeKalb Agricultural Association, Inc., and files herewith three copies of a proposed unit agreement for the development and operation of the Bitter Lake Unit Area, Chaves County, New Mexico, and hereby makes application for the approval of said agreement by the New Mexico Oil Conservation Commission and in support thereof, shows:

1. That the unit area designated in said agreement covers 9,032.38 acres situated in Township 10 South, Ranges 25 and 26 East, N.M.P.M., Chaves County, New Mexico. All of the lands embraced in said unit area are lands of the United States, except the $E\frac{1}{2}SE\frac{1}{4}$, $SW\frac{1}{4}SE\frac{1}{4}$ Sec. 2, T 10 S., R 25 E., N.M.P.M., which are lands of the State of New Mexico.

That said agreement has been executed by the owners of oil and gas leases and pending applications therefor embracing all of the land within said unit area except the $E\frac{1}{2}SE\frac{1}{4}$ Sec. 10; $SW\frac{1}{2}SW\frac{1}{4}$ Sec. 11; $NW\frac{1}{4}NW\frac{1}{4}$ Sec. 14; $N\frac{1}{2}NE\frac{1}{4}$, $SW\frac{1}{4}NE\frac{1}{4}$, $NW\frac{1}{4}SE\frac{1}{4}$ Sec. 15, T 10 S., R 25 E., N.M.P.M., which said lands are within the Bitter Lakes Migratory Wildfowl Refuge.

2. That the area designated in said unit agreement has heretofore been designated by the Director of the United States Geological Survey as one suitable and proper for unitization, and all of the lands embraced therein are believed to be situated on the same geological structure.

3. That the undersigned is designated as Unit Operator in said agreement and the unit operator is given authority under the terms of said agreement to carry on operations necessary for the exploration and development of the unit area for oil and gas subject to the regulations of the Secretary of the Interior and the Commissioner of Public Lands of the State of New Mexico and the New Mexico Oil Conservation Commission and that under the terms thereof a test well for oil or gas is to be drilled upon some part of the unit area to a depth of 6,500 feet, unless oil or gas is found at a lesser depth, or unless at a lesser depth, an igneous or metamorphic formation or some other condition or formation is encountered which would render further drilling inadvisable or impracticable.

4. That said proposed unit agreement follows substantially the same form as unit agreements heretofore approved by the Oil Conservation Commission, the Commissioner of Public Lands of the State of New Mexico and the Secretary of the Interior, and it is believed that operations to be carried on under the terms thereof will promote the economical and efficient recovery of oil and gas to the end that the maximum yield may be obtained from the field or area in oil or gas should be discovered in paying quantities, and the production is to be limited to such production as may be put to beneficial use with adequate realization of fuel and other values, and it is further believed that such agreement will be in the interest of conservation of oil and gas and the prevention of waste as contemplated by the oil conservation statutes of the State of New Mexico.

5. That upon an order being entered by the New Mexico Oil Conservation Commission approving said unit agreement and after the approval thereof by the Commissioner of Public Lands of the State of New Mexico and the Secretary of the Interior

of the United States, an approved copy of said agreement will be filed with the New Mexico Oil Conservation Commission.

WHEREFORE, the undersigned applicant respectfully requests that a public hearing be held on the matter of the approval of said unit agreement as provided by the statutes of the State of New Mexico and the regulations of the New Mexico Oil Conservation Commission, and that upon said hearing said unit agreement be approved by the New Mexico Oil Conservation Commission.

Respectfully submitted,

DEKALB AGRICULTURAL ASSOCIATION, INC.,

By

C. J. H. P. M.

ATTEST:

John H. Roberts
Secretary

UNIT AGREEMENT

FOR THE DEVELOPMENT AND OPERATION OF THE BITTER LAKE UNIT AREA

CHAVES COUNTY

STATE OF NEW MEXICO

I. Sec. No. _____

This agreement, entered into, as of the 18 day of May, 1946, by and between the parties subscribing or consenting hereto, hereinafter called the parties hereto,

W-I-T-N-E-S-S-E-T-H:

WHEREAS, the parties hereto are the owners of operating, royalty, or other oil or gas interests in the unit area subject to this agreement;

WHEREAS, it is the purpose of the parties hereto to conserve natural resources, prevent avoidable waste, and secure other benefits obtainable through development and operation of the unit area subject to this agreement under and pursuant to the provisions of sections 17, 27, and 32 of the Act of Congress approved February 25, 1920, entitled "An Act to promote the mining of coal, phosphate, oil, oil shale, gas and sodium on the public domain, "41 Stat. 443, 448, 450, as amended or supplemented by the acts of March 4, 1931, 46 Stat. 1523, and August 21, 1935, 49 Stat. 676; 30 U.S. 226, 184 and 189;

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by an Act of the Legislature (Chap. 88, Laws 1943) to consent to or approve this agreement on behalf of the state of New Mexico, insofar as it covers and includes lands and mineral interests of the State of New Mexico; and

WHEREAS, the Oil Conservation Commission of the State of New Mexico is authorized by an Act of the Legislature (Chap. 72, Laws 1935) to approve this agreement and the conservation provisions hereof;

NOW, THEREFORE, for and in consideration of the premises and the promises hereinafter contained, the parties hereto agree as follows:

ENABLING ACT 1. The Act of February 25, 1920, supra,
 AND
 REGULATIONS as amended, and all pertinent regulations heretofore and all pertinent and reasonable regulations hereafter issued thereunder, and not inconsistent with the provisions hereof, including operating regulations, are accepted and made a part of this agreement. Likewise, the Act of the Legislature of the State of New Mexico (Shap. 88, Laws 1943) and the Act of the Legislature of the State of New Mexico (Chap. 72, Laws 1935) and all pertinent regulations issued under said acts are hereby accepted and made part of this agreement.

DEFINITIONS 2. For all purposes of this agreement, certain terms used herein are defined as follows:

(a) "Secretary" shall mean the Secretary of the Interior of the United States and those persons or agencies duly authorized to act for and in his behalf.

(b) "Supervisor" shall mean the Oil and Gas Supervisor of the United States Geological Survey and those persons or agencies duly authorized to act for and in his behalf.

(c) "Commissioner" shall mean the Commissioner of Public Lands of the State of New Mexico.

(d) "Commission" shall mean the Oil Conservation Commission of the State of New Mexico and those persons duly authorized to act for and in its behalf.

UNIT AREA

3. The following described lands are hereby designated and recognized as constituting the unit area:

S $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ Sec. 1; NE $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 2; NE $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 10; NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ Sec. 11; All Secs. 12, 13 and 14; E $\frac{1}{2}$ Sec. 15; E $\frac{1}{2}$ Sec. 22; All Secs. 23, 24 and 25; N $\frac{1}{2}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ Sec. 26; NE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 27, T. 10 S., R. 25 E. All Secs. 6, 7, 18 and 19; Lots 1, 2, E $\frac{1}{2}$ NW $\frac{1}{4}$ Sec. 30, T. 10 S., R. 26 E., N.M.P.M., Chaves County, New Mexico, containing 9,032.38 acres, more or less.

The above described unit area includes certain lands included within the Bitter Lake Migratory Wildfowl Refuge and it is hereby agreed that if such land is committed hereto no wells shall be drilled on said land except with the consent in writing of the head of the Agency having jurisdiction over said Refuge.

The Unit Operator, with the consent of a majority in interest of the Working Interest Owners, and subject to the approval of the Secretary, the Commissioner and the Commission, may enlarge the unit area to include other lands believed to be commercially productive of the unitized substances, or shall, subject to approval of the Secretary, the Commissioner and the Commission, diminish the unit area to exclude lands not in any participating area hereunder believed to be barren of the unitized substances.

Exhibit "A" attached hereto is a map on which is outlined the herein established Unit Area, together with the ownership of the land and leases in said Area. Exhibit "B" attached hereto is a schedule showing the nature and extent of ownership of oil and gas rights in all land in the Unit Area to which this unit agreement will become applicable by signature hereto, or to a counterpart hereof by the owners of such rights, and land so committed to this agreement is hereinafter referred to as "unitized lands" or "land subject to this agreement". Said exhibits shall be revised by the Unit Operator whenever any change in the Unit Area or ownership of rights render such change necessary, and the revised exhibits shall be filed with the Supervisor.

UNITIZED
SUBSTANCES

4. All oil, gas, natural gasoline, and associated fluid hydrocarbons producible from land subject to this agreement, in any and all sands or horizons, are unitized under the terms of this agreement and hereinafter are called "unitized substances".

UNIT OPERATOR 5. Dekalb Agricultural Association, Inc., with offices at Dekalb, Illinois, is hereby designated as Unit Operator and by signature hereto commits to this agreement all interests in unitized substances vested in it as set forth in the schedule attached hereto marked Exhibit B and agrees and consents to accept the duties and obligations of Unit Operator to conduct and manage the operation of said unit area for the discovery and development of unitized substances as herein provided. Herein whenever reference is made to the Unit Operator, such reference is understood to mean the unit Operator acting in that capacity and not as an owner of interests in unitized substances, and whenever reference is made to an owner of unitized substances, such a reference shall be understood to include any interests in unitized substances owned by the Unit Operator.

The Unit Operator shall have the right to resign at any time provided that any well drilled hereunder is placed in a satisfactory condition for suspension, or is satisfactorily abandoned under the Federal Oil and Gas Operating Regulations, if on Federal land, and under the laws of the State of New Mexico, and the rules and regulations of the Commission, if on state or patented land, but no Unit Operator shall so be relieved from the duties and obligations of Unit Operator for a period of three(3) months after notice of intention to relinquish such duties and obligations has been served by him on all other parties hereto and the Secretary and the Commissioner, unless a new Unit Operator shall have been selected and approved and shall have taken over and assumed the

duties and obligations of the Unit Operator prior to the date on which relinquishment by or removal of Unit Operator becomes effective. The parties hereto or a duly qualified new Unit Operator shall have an option to purchase at its then depreciation market value all or any part of the equipment, material, and appurtenances in or upon the land subject to this agreement owned and used by the retiring Unit Operator, in its capacity as such operator, or make other arrangements satisfactory to the retiring Unit Operator for the use thereof. Any equipment, material, and appurtenances not so purchased or arranged for as to the use thereof within said time limit and not necessary for the preservation of wells may be removed by the retiring Unit Operator at any time within six (6) months after his relinquishment or removal becomes effective, but if not so removed shall become the joint property of the owners of the interest rights in land then subject to this agreement. The termination of any rights as Unit Operator under this agreement shall not of itself terminate any right, title, or interest which the Unit Operator may then have in the unitized substances but the Unit Operator shall have the right and option in connection with its resignation to reassign or retransfer to several predecessors in interest all of its interest in the lands and leases severally acquired from them, together with its working interest in the unitized substances, and upon delivery be discharged from any future liability as a working interest owner hereunder; said reassignments to be effective as to said transferee thereupon, subject, however, to the approval of the Secretary as to transfers of interest in the United States and subject, however, to the approval of the Commissioner as to interests in lands of the State of Mexico.

signatory hereto which are necessary or convenient for prospecting for, producing, storing, and disposing of the unitized substances are hereby vested in the Unit Operator and shall be exercised by said Unit Operator as provided in this agreement. Acceptable evidence of title to said rights shall be deposited with said Unit Operator and, together with this agreement, shall constitute and define said Unit Operator's rights, privileges, and obligations in the premises; provided, that nothing herein shall be construed to transfer title to any land, or to any operating agreement or leases, it being understood that under and pursuant to this agreement the Unit Operator, in its capacity as Unit Operator shall exercise the rights of possession and use vested in the parties hereto only and exclusively for the purposes herein specified. The Unit Operator shall pay all costs and expenses of operations with respect to the unitized land, and no part thereof shall be charged to the royalty owners. The matter of allocation and handling such costs and expenses is left to private arrangement between the Unit Operator and the other working interest owners. The Unit Operator shall render to the owners of unitized interests entitled thereto an account of the operations on unitized lands during the previous calendar month, shall pay in value or deliver to each party entitled thereto a proportionate and allocated share of the products produced hereunder, and account for all costs and benefits of operations under this agreement in conformity with operating agreements, leases or other independent contracts between the Unit Operator and the parties hereto either collectively or independently.

The development and operation of land subject to this agreement under the terms hereof shall be deemed full performance by Unit Operator of all obligations for such development and operation with respect to each and every part or separately owned tract subject to this agreement, regardless of whether there is any development of any particular part or tract of the unit area, notwithstanding anything to the contrary in any lease, operating agreement or other contract by and between the parties hereto, or any of them.

DRILLING
TO
DISCOVERY

8. Within six (6) months from the effective date of this agreement, Unit Operator shall begin to drill an adequate test well at a location upon the Unit Area to be approved by the Supervisor, if such location is upon lands of the United States, and if upon State lands or patented lands, such location shall be approved by the Commission, and having commenced such operations shall thereafter continue drilling diligently to a depth not less than 6500 feet unless oil or gas which can be produced in paying quantities is encountered in said well at a lesser depth or unless, at a lesser depth an igneous or metamorphic formation or some other condition formation is encountered which would render further drilling advisable or impracticable. If said first well, drilled as aforesaid, fails to encounter the unitized substances, Unit Operator or his successor shall thereupon commence within six (6) months after the completion of the former well, and drill one at a time, additional wells until a productive well is

completed to the satisfaction of the Supervisor and Commissioner, or until it is reasonably proved that the unitized land is incapable of producing the unitized substances; provided that the Secretary and Commissioner may grant extension of time for the commencement of any such well; and provided further that nothing herein contained shall preclude any Operator from effectively resigning as provided in Section 5 hereof before any obligation to commence a second or subsequent well accrues hereunder, and be relieved of the obligation to commence such well. Upon failure to comply with the drilling requirements of this section the Secretary may, after reasonable notice, declare this unit agreement terminated.

PLAN OF FURTHER DEVELOPMENT AND OPERATION 9. Within sixty (60) days from completion of a well capable of producing the unitized substances as aforesaid, Unit Operator shall submit for the approval of the Supervisor, the Commissioner, and the Commission an acceptable plan of development for the Unit Area, which plan or a subsequent modification thereof, when so approved shall constitute the further drilling and operating obligations of Unit Operator. Reasonable diligence shall be exercised by the Unit Operator in complying with the drilling and producing obligations of the approved plan of development and said plan shall, subject to like approval be modified or supplemented in whole or in part from time to time as may be required to meet changed conditions or to protect the interests of all parties to this agreement and the further obligations of the Unit Operator shall be conformed thereto; provided that in no event shall the operator under any such plan, or otherwise, be under any obligation to drill any well to any formation that does not afford a fair possibility for encountering the unitized substances in paying quantities. Well drilling operations including well completions, producing practices and well abandonments, shall be in accordance with the Plan of Development and Operation. All operations thereunder shall be subject to the approval of the Supervisor as to wells on federal land and by the Commission for wells on state and private land.

During any period when it shall appear that an acceptable plan of development cannot be adopted because of the inability of the Supervisor, the Commissioner and the Commission to agree upon the terms thereof, the Unit Operator may, in accordance with the applicable regulations referred to in Section 1 hereof, proceed with reasonable diligence to drill other wells to determine the limits of production to develop the productive portion of the unit area, and shall operate all productive wells in conformity with good operating practices, and the conservation principles of this agreement.

PARTICIPATION AFTER DISCOVERY 10. Upon completion of a productive well as aforesaid, Unit Operator shall submit for the approval of the Secretary, the Commissioner and the Commission a schedule of lands based on subdivisions of the public land survey, including all subdivided one-half or more of the acreage of which is then regarded reasonably proved to be productive of unitized substances in paying quantities; all land in said schedule, when approved to constitute a participating area effective as of the date of first production. Said schedule shall set forth the percentage acreage interest of each owner of rights in the participating area thereby established. Such percentage agreement shall govern the allocation of production from and after the participating area becomes effective. With the approval of the Secretary, Commissioner and the Commission, a separate participating area may be established for any separate deposit of unitized substances or for any group of such deposits participating area or areas so established shall be enlarged.

from time to time in like manner and subject to like approval whenever such action appears proper as a result of further drilling operations to include additional land then regarded as reasonably proved to be productive in paying quantities, and a new schedule of percentage acreage interests conformable thereto shall thereupon be fixed. The effective date of any such enlargement shall be the first of

the month next following the month in which the well is completed which demonstrates the propriety of the enlargement,

and any unitized substances theretofore produced from such well shall be allocated to the lease on which the well is drilled. A well shall be deemed completed when equipped and successfully tested for production, all of which shall be done diligently. No land once included in a participating area shall be excluded from such participating area on account of depletion of the unitized substances therefrom, or for any cause save loss of title. It is the intent of this Section that a participating area shall at all times represent as nearly as possible the area known or reasonably estimated to be productive in paying quantities; but, regardless of any increase in the participating area, nothing herein contained shall be construed as requiring any retroactive apportionment of any sums accrued or paid for production obtained prior to the effective date of increase of the participating area.

Until a participating area or areas has or have been established as herein-provided, or in the absence of agreement at any time between the Unit Operator, the Secretary, the Commissioner, and the Commission as to the proper boundaries of a participating area, the portion of all payments affected by such absence of agreement, except the royalties due the United States and the State of New Mexico, may be impounded in a mutually acceptable bank.

ALLOCATION OF 11. Except as provided in Section 12, a PRODUCTION --
ROYALTIES unitized substances produced under

agreement, except any part thereof used for production a development purposes thereunder, or unavoidably lost, shall be deemed to be produced equally on an acreage basis from several tracts of land of the participating area, and for

purpose of determining any benefits that accrue on an acreage basis as a result of operations under this agreement, each

tract shall have allocated to it such percentage of said as its area bears to the said participating area. Unitized substances produced from any participating area and used in conformity with good operating practice under an approved plan of operation for repressuring or cycling in any participating area shall be free from any royalty charge. If Unit Operator produces gas obtained from sources other than the unitized substances into any participating area hereunder for use in repressuring stimulation of production or increasing ultimate recovery conformity with a plan first approved by the Supervisor, Commissioner and the Commission, a like amount of gas, with allowance for loss or shrinkage thereof from any cause, may be drawn from the formation into which the gas was introduced royalty free as to dry gas but not as to the products extracted therefrom, provided that such withdrawal shall be at such rate as may be provided in the plan of operation or as may otherwise be consented to by the Supervisor, the Commissioner and the Commission, as conforming to good petroleum engineering practice and provided further that such right of withdrawal shall terminate on the termination of the unit.

Except as otherwise herein provided, royalties shall be paid or delivered as provided by existing leases or contracts

at the lease or contract rate upon the unitized substances allocated to the lease or tract. Settlement shall be made on or before the 20th day of each month for the unitized substances produced during the preceding calendar month. Such royalties shall be paid by the party operating the wells, but nothing herein shall operate to relieve the lessees, or any of them, of their obligation to pay rentals and royalties under the terms of their respective leases.

The right is hereby secured to the United States and the State of New Mexico under existing or future laws and regulations to elect to take their respective royalty shares in kind or value.

DEVELOPMENT 12. Any party hereto other than Unit OR OPERATION OR NON-PARTICIPATING LAND Operator owning or controlling a majority of the working interest rights in

any unitized tract included in the non-participating area having thereon a regular well location in accordance with a well-spacing pattern established under an approved plan of development and operation may drill a well at such location at his own expense, unless within 90 days of receipt of notice from said party of his intention to drill the well Unit Operator elects and commences to drill such well in like manner as other wells are drilled by Unit Operator under this agreement.

If such well is not drilled by Unit Operator and results

in production such that the land upon which it is situated may properly be included in a participating area, the party paying the cost of drilling such well shall be reimbursed one hundred fifty percent (150%) of the average cost of drilling similar producing wells in the unitized area, and the well

shall be operated pursuant to the terms of this agreement all as though the well had been drilled by the Unit Operator. If any well drilled by Unit Operator or by an owner of working interest rights as provided in this section obtains production insufficient to justify inclusion in a participating area of the land on which said well is situated, said owner of working interests at his election, within 30 days of determination of such insufficiency, shall be wholly responsible for and may operate and produce the well at his sole expense and for his sole benefit. If such well was drilled by Unit Operator, said owner of working interests shall pay the Unit Operator a fair salvage-value price for the casing and other equipment left in the well.

Wells drilled at the sole expense of any party other than Unit Operator or produced at his sole expense and for his sole benefit shall be subject to the drilling and producing requirements of this agreement the same as though drilled or produced by Unit Operator; and royalties in amount or value of production from any such well as well as rental charges, if any, shall be paid as specified in the lease affected, unless otherwise authorized in writing by the lessor.

RENTAL AND 13. The Unit Operator, on behalf of the ROYALTY PAYMENTS respective lessees, shall pay, or at

the election of the Secretary of the Interior as to Federal leases and at the election of the Commissioner as to State leases shall deliver in kind, all royalties and shall pay all rentals due the United States and the State of New Mexico respectively, on account of operations by Unit Operator on unitized land and shall distribute the cost

thereof to the appropriate parties conformably with their respective rental and royalty obligations; provided, that nothing herein contained shall operate to relieve the lessees, or any of them, of their obligation to pay rentals and royalties under the terms of their respective leases.

On request of any party, Unit Operator at its election shall pay other royalties on his behalf in accordance with a schedule furnished by him and charge the cost thereof to his account; provided, that Unit Operator shall incur thereby no responsibility to any royalty owner, but such responsibility shall be and remain an obligation of the parties requesting payment thereof.

GOVERNMENT
ROYALTIES
AND RENTALS 14. Royalty due the United States on account of unitized Federal land shall be computed

as provided in the operating regulations and paid as to all unitized substances on the basis of the amounts thereof allocated to such land as provided herein at the rates specified in the respective Federal leases; provided, that, for leases on which the royalty rate depends on the daily average production per well, said average production for any participating area shall be determined in accordance with the operating regulations as though all the unitized land within the same participating area were a single consolidated lease, and provided that during the period of the national emergency declared by the President May 27, 1941, Proclamation No. 2487, 55 Stat. 1647, upon a determination by the Secretary of the

Interior that a new oil or gas field or deposit has been discovered by virtue of a well or wells drilled under this agreement, the royalty on production from such new field or

deposit allocated to Federal land subject to this agreement at the time of such discovery shall, during the 10-year period following the date of such discovery, be paid value or delivered in kind at a flat rate of 12½ per cent unless a lower rate is prescribed in the lease.

Rental for land of the United States subject to agreement at the rates specified in the respective Federal leases shall be paid, suspended, or reduced as determined by the Secretary of the Interior, pursuant to applicable law and regulations.

CONSERVATION 15. Operations and production of unitized substances shall be conducted so

as to provide for the most economical and efficient recovery of said substances to the end that maximum yield may be obtained without waste, as defined by or pursuant to State or Federal law or regulation; and shall be limited to production as can be put to beneficial use with adequate realization of fuel and other values.

DRAINAGE 16. Unit Operator shall take appropriate measures to prevent drainage of unitized substances from unitized land by wells on land not subject to this agreement, or, with the approval of the Secretary of the Interior, and of the Commissioner as to State interests, and at the election of the Unit Operator private interests, pay a fair and reasonable compensation, royalty, as determined by the Supervisor as to Federal interests, and the Commissioner as to State interests, subject to this agreement and by agreement between the Unit Operator and royalty owners, as to private interests.

LEASES AND COM-
TRACTS CONFORMED
TO AGREEMENT

17. The parties hereto do consent-
ing hereto holding interests in
leases embracing untitled land of the United States or of
the State of New Mexico consent that the Secretary and
Commissioner, respectively, may, and said Secretary and
Commissioner, by their approval of this agreement, do
hereby establish, alter, change or revoke the drilling,
producing, and royalty requirements of such leases and the
regulations in respect thereto, to conform said requirements
to the provisions of this agreement, but otherwise the terms
and conditions of said leases shall remain in full force and
effect.

Owners and lessors of privately owned lands or of
interests therein, including royalty interests, and includ-
ing their heirs, executors, administrators, successors and
assigns, by subscribing or consenting to this agreement in
person or by attorney in fact, do hereby severally agree that
the respective leases covering their several lands or interests
therein, may be and remain in force and effect for the respective
primary terms therein stated, and so long thereafter as oil
or gas may be produced therefrom in quantities sufficient to
justify the cost of production; and also in the event that any
of the land embraced in any such lease is during the primary
term of such lease included within a participating area duly
selected and approved under this unit plan of development, so
that each owner becomes entitled to a share in the proceeds
of production from the participating area, payable at the
respective lease rates on the production allocated on an
acreage basis to the portion of the lease within the partici-
pating area, then each such lease is hereby extended, without

further delay rental obligation, as to the land embraced
therein which is so included in such participating
for the full term of this unit plan as herein stated.
The Secretary, Commissioner and, except as otherwise
provided in the preceding paragraph of this Section
parties hereto further determine, agree and consent
during the effective life of this agreement, drilling
producing operations performed by the Unit Operator
any untitled land will be accepted and deemed to be
tions under and for the benefit of all untitled leases
hereto; that no such lease shall be deemed to expire
of failure to produce wells situated on land there-
that if a discovery of a valuable deposit of un-
ces is made anywhere on the untitled land, each sus-
effect on or after the date of such discovery shall
to continue in force and effect as to land in the
long as untitled substances are produced anywhere
land in paying quantity; that prior to such discov-
untitled substances anywhere on untitled land, the
date of each untitled lease embracing lands of the
States shall be the date prescribed in such lease
such preferential right to a new lease as may be
by law; and the suspension of all operations and pro-
on the untitled land pursuant to direction or consen-
said Secretary and Commissioner shall be deemed to
such suspension pursuant to such direction or consen-
respect to each such lease, and that no lease shall
on account of such suspension, as to land in the
The parties hereto or consenting hereto, hold
interests in leases subject to this agreement embr-

lands other than those of the United States or of the State of New Mexico or holding interests in any other agreements that involve oil and gas rights in lands in the Unit Area, consent and agree, to the extent of their respective interests, that all such leases and agreements shall conform to the provisions of this agreement.

COVENANTS
RUN
WITH LAND

18. The covenants herein shall be construed to be covenants running with the land to the extent of the interests of the parties hereto until this agreement terminates, and any Grant, transfer or conveyance of interest in land or leases subject hereto shall be and hereby is conditioned upon the assumption of all privileges and obligations hereunder by the Grantee, transferee, or other successor in interest and as to federal land, shall be subject to approval by the Secretary, and as to lands of the State of New Mexico, shall be subject to the approval of the Commissioner. No transfer of any interest in and to any of the unitized lands or affecting the production therefrom shall be binding upon the Unit Operator until the first day of the next calendar month after the Unit Operator has been furnished with an original, photostatic or certified copy of the instrument of transfer.

EFFECTIVE
DATE
AND TERM

19. This agreement shall become effective on the first day of the calendar month next following approval by the Secretary of the Interior and the Commissioner, provided however that nothing herein shall be construed to waive or limit the right of the Commission to approve this agreement pursuant to applicable state law. Except as otherwise provided as to private leases by the second paragraph of Section 17 hereof, this agreement shall terminate on December 31, 1949, unless (1) such date of

expiration is extended by the Secretary and the Commissioner (2) a valuable discovery of unitized substances been made on unitized land, in which case the agreement remain in effect as long as unitized substances can be produced from the unitized land in paying quantities; or (3) reasonably determined prior to the expiration of the term or any extension thereof that the unitized land is capable of commercial production of unitized substances after notice of intention to terminate the agreement is given by Unit Operator to all parties in their last known address the agreement is terminated by approval of the Secretary of the Interior and the Commissioner (4) it is terminated as provided in sections 6 and 7 of this agreement may be terminated at any time by the owners of not less than 75 per centum, on an acreage basis, of the working interests signatory hereto with the approval of the Secretary and the Commissioner.

RATE OF PROSPECTING, DEVELOPMENT, AND PRODUCTION

30. All production and the distribution thereof, shall be in accordance with allocations, allotments and quotas made or fixed by the Commission under any State Statute; provided however that the Secretary is vested with authority pursuant to the amendatory acts of Congress of March 4, 1931, and August 21, 1938, supra, to alter or modify from time to time in his discretion the rate of prospecting and development, and, within the limits made or fixed by the Commission, to modify the quantity and rate of production under this agreement, such authority being hereby limited to a modification in the public interest, the purpose of

and the public interest to be served thereby to be stated in the order of alteration or modification; provided further that no such alteration or modification shall be effective as to any lands of the State of New Mexico as to the rate of prospecting and development in the absence of the specific written approval thereof by the Commissioner and as to any lands of the State of New Mexico or privately owned lands subject to this agreement as to the quantity and rate of production in the absence of specific written approval thereof by the Commission.

UNAVOIDABLE
DELAY

21. All obligations under this agreement requiring Unit Operator to commence or con-

tinue drilling or to operate on or produce oil or gas from any of the lands covered by this agreement shall be suspended while, but only as long as, the Unit Operator is prevented from complying with such obligations, in whole or in part, by strikes, lockouts, acts of God, Federal, State or municipal law or agencies, unavoidable accidents, uncontrollable delays in transportation, inability to obtain necessary materials in open market, or other matters beyond the reasonable control of the Unit Operator whether similar to the matters herein enumerated or not.

CONFLICT
OF

22. Neither the Unit Operator nor the work-

SUPERVISION

ing Interest Owners nor any of them shall

be subject to any forfeiture, termination or expiration of any rights hereunder or under any leases or contracts subject hereto, or to any penalty or liability for delay or failure in whole or in part to comply therewith to the extent that said Unit Operator, Working Interest Owners or any of them are hindered, delayed, or prevented from complying therewith

by reason of failure of Unit Operator to obtain the joint consent of the representatives of the United States and the representatives of the State of New Mexico in and on any matter or thing concerning which it is required heret that such joint consent be obtained. The parties hereto and consenting hereto, including the Commission, agree that all powers and authority vested in the Commission and by any provisions of this contract are vested in the Commission and shall be exercised by it pursuant to the provisions of the laws of the State of New Mexico and subject in any case to appeal or judicial review as may now or hereafter be provided by the law of the State of New Mexico.

NON-

23. The Unit Operator expressly agrees

DISCRIMINATION

that in any and all operations con-

ducted hereunder, it shall not discriminate against any employee or applicant for employment because of race, creed, color, or national origin and shall require an identical provision to be included in all subcontracts.

SUBSEQUENT
JOINER

24. Any person owning rights in the un-

utilized substances within the unit area who does not commit such rights hereto prior to the effective date hereof, may thereafter become parties hereby subscribing this agreement, and if such parties are ing interest owners they shall also subscribe the operating contract and comply with all terms and conditions thereof set forth.

COMMITMENT OF
STATE LANDS

25. This agreement provides for approval hereof by the Commissioner

and the Commission, and in addition contains provisions authorizing the Commissioner and the Commission to exercise certain functions. It is hereby understood and agreed that, in view of the small percentage of State lands in the unit area which may be committed hereto, the Commissioner and Commission will exercise none of the functions prescribed in this agreement, except as to operations on State lands, until such time as said State lands, or a portion thereof, are included in an approved participating area.

In the event the Commissioner or Commission should not approve this agreement it shall nevertheless be effective upon approval by the Secretary of the Interior and thereupon all of the provisions of this agreement pertaining to the functions of the Commissioner or Commission shall be of no effect.

COUNTERPARTS 26. This agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document.

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed and have set opposite their respective names the date of execution.

Date

Date

Date

Date

Date

Date

Date

Date

Date

Date

Date

Date

**Bitter Lake Unit Agreement
Chaves County, New Mexico**

APPROVAL - CERTIFICATION - DETERMINATION

Pursuant to the Statutory authority in the Secretary of the Interior, under the act approved March 4, 1931, 46 Stat. 1523, and the act approved August 21, 1935, 49 Stat. 674, amending the act approved February 25, 1920, 41 Stat. 437; 30 U.S.C. 226, 184 and 189, in order to secure the proper protection of the public interest, I hereby take the following action this _____ day of _____, 1946.

A. Approve the attached agreement for the development and operation of the Bitter Lake Unit Area.

B. Determine and certify that the plan of development and operation contemplated in said agreement is for the purpose of more properly conserving oil or gas resources of said unit area and is necessary or advisable in the public interest.

C. Certify that each and every lease heretofore or hereafter issued for lands of the United States subject to, or which may hereafter become subject to, said agreement shall be excepted in determining holdings or control under the provisions of any section of the Act of Congress approved February 25, 1920, and amendments thereto.

**Schedule Showing the Nature and Extent of Ownership
of Oil and Gas Rights in All Lands in the Unit Area**

OWNERSHIP OIL AND GAS LEASES OR APPLICATIONS	FEDERAL LANDS	NO. OF ACRES	LAS CRUCES SERIAL NUMBER
Bonnie H. Matlock		2440	063769
S $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ Sec. 1; E $\frac{1}{2}$ Sec. 11; W $\frac{1}{2}$ Sec. 12; W $\frac{1}{2}$ NW $\frac{1}{4}$ Sec. 13; N $\frac{1}{2}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ N $\frac{1}{2}$, S $\frac{1}{2}$ Sec. 14; E $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 15; All Sec. 23, T. 10 S., R. 25 E.			
Mary E. Helmig		360	064148
NE $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$, T. 10 S., R. 25 E. SW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 10; NE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 14; SE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 15, T. 10 S., R. 25 E.			
Nellie T. Lewis		1760	061505
E $\frac{1}{2}$ NW $\frac{1}{4}$, S $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ Sec. 13; All Secs. 24 and 25, T. 10 S., R. 25 E.			
Edith G. Marshall		360	063776
SW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 15; E $\frac{1}{2}$ Sec. 23, T. 10 S., R. 25 E.			
Bert Ballard		560	062045
N $\frac{1}{2}$, SE $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 26; NE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 27, T. 10 S., R. 25 E.			
Thomas T. Sanders, Jr.		1673.20	061479
All Secs. 6 and 7, T. 10S., R. 26E; E $\frac{1}{2}$ Sec. 12, W $\frac{1}{2}$ NE $\frac{1}{4}$ Sec. 13, T. 10S., R. 25E.			
L. T. Lewis		1439.18	059219
All Secs. 18 and 19; NW $\frac{1}{4}$ Sec. 30, T. 10 S., R. 26 E.			
Bitter Lake Migratory Wildfowl Refuge (Unleased)		320	
E $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 10; SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 11; NW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 14; N $\frac{1}{2}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 15, T. 10S., R. 25E.			

Secretary of the Interior

STATE LANDS

OWNERSHIP
OIL AND GAS LEASES

NO. OF
ACRES

SERIAL
NUMBER

DeKalb Agricultural Association, Inc. 80 E-353
NE $\frac{1}{4}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 2, T. 10 S.,
R. 25 E.

DeKalb Agricultural Association, Inc. 40 B-3063
SE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 2, T. 10 S., R. 25 E.

TOTAL 9,032.38 acres

LAW OFFICES

HERVEY, DOW & HINKLE

ROSWELL, NEW MEXICO

J. M. HERVEY
HIRAM M. DOW
CLARENCE E. HINKLE
W. E. BONDURANT, JR.

GEORGE H. HUNKER, JR.

April 29, 1946

Mr. Carl Livingston
New Mexico Oil Conservation Commission
Santa Fe, New Mexico.

Re: Bitter Lake Unit Agreement
Chaves County, New Mexico.

Dear Mr. Livingston:

I enclose for your information copy of application, the original of which will be forwarded to you next week for approval of the Bitter Lake Unit Area, Chaves County, N.M.

We also enclose three copies of the unit agreement which are the copies referred to in the application. The original of the application has been forwarded to the office of the DeKalb Agricultural Association, Inc., in DeKalb, Illinois for execution and will be transmitted to you as soon as received.

The object of sending you a copy at this time before filing the original agreement, is that I have been informed that it is likely that there will be a hearing held upon another unit agreement in Chaves County proposed by the Richfield Oil Corporation to be known as the Comanche area unit agreement, the latter part of May, and we are extremely anxious to have this hearing held at the same time. However, if I am not correct in that application has not been made for a hearing to be held in May, we would still like to have the hearing at that time, as it is necessary that the unit agreement be approved as quickly as possible on account of drilling operations.

I would appreciate your advising me as to this situation at your earliest convenience.

With kindest regards, we are

Yours very truly,

HERVEY, DOW & HINKLE

NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

APPLICATION FOR APPROVAL OF BITTER LAKE
UNIT AGREEMENT, CHAVES COUNTY, NEW MEXICO.

New Mexico Oil Conservation Commission
Santa Fe
New Mexico

Comes the undersigned, the DeKalb Agricultural Association, Inc., and files herewith three copies of a proposed unit agreement for the development and operation of the Bitter Lake Unit Area, Chaves County, New Mexico, and hereby makes application for the approval of said agreement by the New Mexico Oil Conservation Commission and in support thereof, shows:

1. That the unit area designated in said agreement covers 9,032.38 acres situated in Township 10 South, Ranges 25 and 26 East, N.M.P.M., Chaves County, New Mexico. All of the lands embraced in said unit area are lands of the United States, except the E½SE¼, SW¼SE¼ Sec. 2, T 10 S., R 25 E., N.M.P.M., which are lands of the State of New Mexico.

That said agreement has been executed by the owners of oil and gas leases and pending applications therefor embracing all of the land within said unit area except the E½SE¼ Sec. 10; SW¼SW¼ Sec. 11; NW¼NW¼ Sec. 14; N½NE¼, SW¼NE¼, NW¼SE¼ Sec. 16, T 10 S., R 25 E., N.M.P.M., which said lands are within the Bitter Lakes Migratory Wildfowl Refuge.

2. That the area designated in said unit agreement has heretofore been designated by the Director of the United States Geological Survey as one suitable and proper for unitization, and all of the lands embraced therein are believed to be situated on the same geological structure.

3. That the undersigned is designated as Unit in said agreement and the unit operator is given authority in said agreement to carry on operations on the terms of said agreement to carry on operations on the exploration and development of the unit area for subject to the regulations of the Secretary of the Interior the Commissioner of Public Lands of the State of New Mexico Oil Conservation Commission and that the terms thereof a test well for oil or gas is to be drilled some part of the unit area to a depth of 6,500 feet, or gas is found at a lesser depth, or unless at a lesser igneous or metamorphic formation or some other conformation is encountered which would render further drilling inadvisable or impracticable.

4. That said proposed unit agreement follows the same form as unit agreements heretofore approved Conservation Commission, the Commissioner of Public Lands of the State of New Mexico and the Secretary of the Interior believed that operations to be carried on under the terms will promote the economical and efficient recovery of oil to the end that the maximum yield may be obtained from or area if oil or gas should be discovered in paying and the production is to be limited to such production put to beneficial use with adequate realization of its values, and it is further believed that such agreement the interest of conservation of oil and gas and the waste as contemplated by the oil conservation statutes State of New Mexico.

5. That upon an order being entered by the New Mexico Oil Conservation Commission approving said unit agreement after the approval thereof by the Commissioner of Public Lands of the State of New Mexico and the Secretary of the

of the United States, an approved copy of said agreement will be filed with the New Mexico Oil Conservation Commission.

WHEREFORE, the undersigned applicant respectfully requests that a public hearing be held on the matter of the approval of said unit agreement as provided by the statutes of the State of New Mexico and the regulations of the New Mexico Oil Conservation Commission, and that upon said hearing said unit agreement be approved by the New Mexico Oil Conservation Commission.

Respectfully submitted,

DEKALB AGRICULTURAL ASSOCIATION, INC.,

By _____

ATTEST:

Secretary