

Casa No.

862

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Application, Transcript,  
Small Exhibits, Etc.

GEORGE L. REESE, JR.  
DON G. MCCORMICK  
THOMAS E. LUSK  
EUGENE C. PAINE

REESE, MCCORMICK, LUSK AND PAINE

ATTORNEYS AT LAW

BUJAC BUILDING

CARLSBAD, NEW MEXICO

TELEPHONES

5-3144

5-3145

29 July 1955

Case # 862

Oil Conservation Commission  
Santa Fe, New Mexico

(21078)

In Re: Case No. 862

Gentlemen:

Prior to March 16, 1955, Simms and Reese Oil Company filed with your Commission an application requesting certain changes in your Order No. R-111 and in lieu thereof that you except Simms and Reese Oil Company McClay No. 1 well located on NE $\frac{1}{4}$ SE $\frac{1}{4}$  Section 33 and our well No. 2 McClay located on the SE $\frac{1}{4}$ NE $\frac{1}{4}$  Section 33, Township 18 South, Range 30 East, from the casing regulations contained in said order.

The USGS was withholding approval of our completion report on these two wells pending action by your Commission. Under date July 21, 1955, Mr. John A. Frost, District Engineer USGS, advised us that you have issued your Order No. R-646 in Case No. 862 establishing the North Benson-Queen Pool which provides among other things that operations in this area shall comply with the provisions of Commission Order R-111.

We did not receive any notice of Order No. R-646 nor have we received any notice of action which the Commission has taken on our petition to create an exception for the two wells above described. Mr. Frost has now requested that we cement the production strings in both wells to the surface and before complying with this request we should like to have your Commission act upon our petition.

We also noticed in the newspaper that a committee appointed by the Commission is holding a meeting here in Carlsbad today for the purpose of considering possible changes in your Order R-111 and we would like to be advised of possible action which may be taken by the Commission in this regard before we undertake to comply with Mr. Frost's request.

Oil Conservation Commission

-2-

29 July 1955

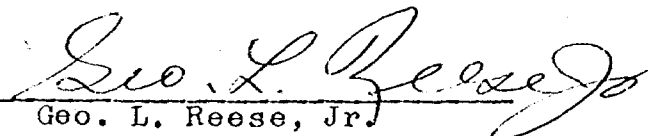
The above described well No. 2 makes no more than 5 barrels of oil per day and it will probably be uneconomical for us to cement the production strings to the surface. If this requirement is not lifted we will probably be forced to plug the well.

The circumstances under which well No. 1 was redrilled and completed are set forth in our petition and we believe we are entitled to the relief prayed therein. Awaiting your advice, we remain

Yours very truly,

SIMMS AND REESE OIL COMPANY

BY

  
Geo. L. Reese, Jr.

GLR:vc

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

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

CASE NO. 862  
Order No. R-646

THE APPLICATION OF THE COMMISSION  
UPON ITS OWN MOTION FOR AN ORDER  
CREATING AND DESIGNATING A NEW POOL  
TO BE KNOWN AS THE NORTH BENSON-  
QUEEN OIL POOL FOR THE PRODUCTION  
OF OIL FROM THE QUEEN FORMATION,  
SUCH POOL TO CONSIST OF THE E/2 OF  
SECTION 33 AND THE W/2 OF SECTION 34,  
TOWNSHIP 18 SOUTH, RANGE 30 EAST,  
NMPM, EDDY COUNTY, NEW MEXICO,  
AND FOR THE ESTABLISHMENT OF RULES  
AND REGULATIONS FOR THE NEW POOL IN  
ACCORDANCE WITH THE PROVISIONS OF  
COMMISSION ORDER R-III.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This matter came on for hearing at 9 o'clock a.m. on March 16, 1955, and was continued until April 20, 1955, at Santa Fe, New Mexico, before the Oil Conservation Commission, hereinafter referred to as the "Commission".

NOW, on this 13<sup>th</sup> day of June, 1955, the Commission, a quorum being present, having considered the record and the testimony adduced and being fully advised in the premises,

FINDS:

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

(2) That Simms and Reese Oil Company did complete the McClay No. 1 Well located 1980 feet FSL and 660 feet FEL of Section 33, Township 18 South, Range 30 East, Eddy County, New Mexico, as the discovery well for a new source of supply in this area.

(3) That said well initially produced oil in commercial quantities from the Queen sand below a depth of 2,844 feet.

(4) That a second well known as Simms and Reese Oil Company McClay No. 2 Well, located 1980 feet FNL and 660 feet FEL of Section 33, Township 18 South, Range 30 East, Eddy County, New Mexico, has been completed in this new source of supply and is producing commercial quantities of oil from the Queen sand in the depth interval 3,036 to 3,061 feet.

(5) That sufficient evidence was presented to the Commission as to the probable areal extent and directional trend of the newly discovered common source of supply to justify the creation of the new pool as contemplated.

(6) That, in conformity with previous practices of the Commission, a pool should be created, defined and classified, and should include such surface acreage as appears to cover the newly discovered common source of supply.

(7) That such a pool should be designated as the North Benson-Queen Pool, should be classified as an oil pool, and described as:

TOWNSHIP 18 SOUTH, RANGE 30 EAST, NMPM

Section 33: E/2

Section 34: W/2

and that such pool as described above should be subject to additions or deletions after notice and hearing as development and further information may direct or indicate.

(8) That said pool is situated within the horizontal limits of the so-called "potash-oil" area and that operations within that area are governed by the provisions of Commission Order R-III entered on November 9, 1951.

(9) That no evidence was entered at said hearing which would indicate that the provisions of Order R-III should be abrogated in establishing rules and regulations for the conduct of drilling and producing operations in this pool.

IT IS THEREFORE ORDERED:

(1) That there is hereby created an oil pool, designated as the North Benson-Queen pool, and described as follows:

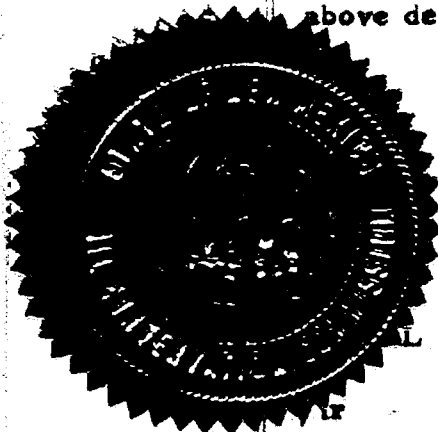
TOWNSHIP 18 SOUTH, RANGE 30 EAST, NMPM

Section 33: E/2

Section 34: W/2

(2) That drilling and production operations in said pool shall comply with the provisions of those rules of the Commission which may be applicable, and that such operations shall further comply with the provisions of Commission Order R-III, as such provisions now dictate, or as such provisions may be modified by future order of the Commission.

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



STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

*John F. Simms*  
JOHN F. SIMMS, Chairman

*E. S. Walker*  
E. S. WALKER, Member

*W. B. Macey*  
W. B. MACEY, Member and Secretary

29 July 1955

Oil Conservation Commission  
Santa Fe, New Mexico

In Re: Case No. 862

Gentlemen:

Prior to March 16, 1955, Simms and Reese Oil Company filed with your Commission an application requesting certain changes in your Order No. R-111 and in lieu thereof that you except Simms and Reese Oil Company McClay No. 1 well located on NE $\frac{1}{4}$ SE $\frac{1}{4}$  Section 33 and our well No. 2 McClay located on the SE $\frac{1}{4}$ NE $\frac{1}{4}$  Section 33, Township 18 South, Range 30 East, from the casing regulations contained in said order.

The USGS was withholding approval of our completion report on these two wells pending action by your Commission. Under date July 21, 1955, Mr. John A. Frost, District Engineer USGS, advised us that you have issued your Order No. R-646 in Case No. 862 establishing the North Benson-Queen Pool which provides among other things that operations in this area shall comply with the provisions of Commission Order R-111.

We did not receive any notice of Order No. R-646 nor have we received any notice of action which the Commission has taken on our petition to create an exception for the two wells above described. Mr. Frost has now requested that we cement the production strings in both wells to the surface and before complying with this request we should like to have your Commission act upon our petition.

We also noticed in the newspaper that a committee appointed by the Commission is holding a meeting here in Carlsbad today for the purpose of considering possible changes in your Order R-111 and we would like to be advised of possible action which may be taken by the Commission in this regard before we undertake to comply with Mr. Frost's request.

The above described well No. 2 makes no more than 5 barrels of oil per day and it will probably be uneconomical for us to cement the production strings to the surface. If this requirement is not lifted we will probably be forced to plug the well.

The circumstances under which well No. 1 was redrilled and completed are set forth in our petition and we believe we are entitled to the relief prayed therein. Awaiting your advice, we remain

Yours very truly,  
SIMMS AND REESE OIL COMPANY

BY

Geo. L. Reese, Jr.

GLR:vc

GEORGE L. REESE, JR.  
DON G. MCCORMICK  
THOMAS E. LUSK  
EUGENE C. PAINE

REESE, MCCORMICK, LUSK AND PAINE  
ATTORNEYS AT LAW  
BUJAC BUILDING  
CARLSBAD, NEW MEXICO  
17 February 1955

TELEPHONES  
5-3144  
5-3145

New Mexico Oil Conservation Commission  
Santa Fe  
New Mexico

Gentlemen:

We herewith hand you Application for the deletion of certain area from your Order No. R-111 in which we also ask in the alternative for an exception of wells known as McClay No. 1 and McClay No. 2 from the requirements of said order.

Copies of the application have this date been mailed to Duval Sulphur & Potash Company, Carlsbad, New Mexico and to Southwest Potash Corporation, Carlsbad, New Mexico. With copies of this letter, we are transmitting copy of the application to the New Mexico Oil Conservation Commission, Artesia, New Mexico; copy to U. S. Geological Survey, Carlsbad, New Mexico; and two copies to Mr. John A. Frost, District Engineer, U.S.G.S., Artesia, New Mexico.

At the informal meeting which you held several months ago in Hobbs, Duval Sulphur & Potash Company was represented and an effort was made, following said meeting, to formulate an agreement with said company. The position of that company appears to be that it will not agree to any changes in your Order No. R-111 but we doubt that that company will desire a formal hearing on the enclosed application. We believe that everyone recognizes the fact that the area described in the application has no present or prospective value for potash production and this should be the determinative fact upon which your action should be based with reference to the application.

Yours sincerely,

SIMMS and REESE OIL COMPANY

BY:

*Geo. L. Reese Jr.*  
Geo. L. Reese, Jr.

GLR:kcp

Copies as listed above.

1                                   BEFORE THE OIL CONSERVATION COMMISSION  
2                                   OF THE STATE OF NEW MEXICO

3   APPLICATION OF SIMMS AND REESE  
4   OIL COMPANY FOR EXCEPTION OF  
5   CERTAIN LANDS AND OIL WELLS  
6   FROM COMMISSION ORDER NO. R-111.

7                                   APPLICATION

8                                   Simms and Reese Oil Company, a partnership, hereinafter  
9   called Applicant, respectfully makes application to the Oil Con-  
10   servation Commission of New Mexico, hereinafter called Commission,  
11   as follows:

12                                  1. Applicant requests the deletion from the provisions  
13   of Commission Order No. R-111 of Section 33 and the  $W\frac{1}{2}$  of Section  
14   34 in Township 18 South, Range 30 East, N.M.P.M.

15                                  2. In the alternative, Applicant requests the Commission  
16   to except from the provisions of said order oil and gas well known  
17   as McClay No. 1, located on the  $NE\frac{1}{4}$  of the  $SE\frac{1}{4}$  of Section 33, Town-  
18   ship 18 South, Range 30 East, N.M.P.M., and oil and gas well known  
19   as McClay No. 2, located upon the  $SE\frac{1}{4}$  of the  $NE\frac{1}{4}$  of said Section  
20   33.

21                                  In support of said application, applicant shows to the  
22   Commission as follows:

23                                  1. Applicant is the owner of an oil and gas operating  
24   agreement granting to it the sole and exclusive right to prospect  
25   for and produce oil and gas on 400 acres of land located in said  
26   Section 33 and the  $W\frac{1}{2}$  of said Section 34 under Federal Oil and Gas  
27   Lease LC-028978(b) from deposits above a depth of 3500 feet from  
28   the surface.

29                                  2. Applicant is the owner of the above described oil  
30   and gas wells and states the following facts with reference there-  
31   to:

32                                   a. McClay No. 1. This well was originally  
drilled in the year 1935 to a reported depth of  
3556 feet and was plugged and abandoned. In the  
year 1954 applicant reentered said well and cleaned  
it out to a total depth of 2903 feet.  $7\frac{1}{2}$  inch  
surface casing was set on top of the salt section  
and water shut-off obtained. The salt section  
was found to be leached out to the extent that  
it would be impracticable to attempt to fill the  
annulus around the production string with cement  
as required by Order No. R-111. 4 inch production  
string was set at 2903 feet and cemented with 100  
sacks. A Gamma Ray - Neutron log was taken, the  
casing was perforated and after sandfrac treat-  
ment the well made a commercial producer on Sep-  
tember 1, 1954. Production has declined to ap-  
proximately 25 barrels of oil per day at the time  
of this application. During the progress of the  
above stated operations, Applicant communicated  
with Southwest Potash Corporation, who at one  
time held a potash prospecting permit covering  
the above described area and ascertained that  
said company had no interest in the area, having  
concluded from core tests that it did not contain



1 potash minerals in commercial workable quantities.  
2 Applicant communicated with Duval Sulphur and Potash  
3 Company and ascertained that this company did not  
4 hold a potash prospecting permit in its name cover-  
5 ing said area, but that some individual in Santa Fe  
6 had a potash prospecting permit which he was hold-  
7 ing for the benefit of said company. Responsible  
8 officials of said last named company stated to Ap-  
9 plicant that the company would not insist upon  
10 compliance with Order No. R-111 as to said well  
11 and applicant is informed that this is the present  
12 position of said company. Mr. C. L. Jones, Geologist,  
13 stationed at Carlsbad with the United States Depart-  
14 ment of the Interior of the Geological Survey, under  
15 date July 29, 1954, advised in writing that he had  
16 examined the radiometric well log above mentioned  
17 and that said log does not show any indications  
18 that the well penetrated a valuable deposit of  
19 potassium minerals, and further that his records  
20 did not indicate that the lands in the vicinity  
21 of said well can be considered as being valuable  
22 for potash.

23 b. The well known as McClay No. 2 was drilled  
24 in the year 1954, completion being made about Decem-  
25 ber 1, 1954. 8 5/8ths inch surface casing was set  
26 on top of the salt and cemented with 80 sacks of  
27 cement, circulative to surface. No showing of oil  
28 or gas was found at any depth above 3,035 feet.  
29 The producing zone in the McClay No. 1 well was  
30 found at 2844 to 2863 feet and this zone was barren  
31 in well No. 2, and No. 2 was drilled to a total  
32 depth of 3,070 feet and 5 1/2 inch casing was set at  
the point and cemented with 100 sacks. The casing  
was perforated from 3,035 and 3,065 feet and after  
sandfrac treatment the well produced at the rate  
of some 40 barrels per day for a short while, but  
rapidly declined and for the past two months has  
been making approximately 5 barrels of oil per day.

3. Sufficient core tests have been made in and around  
said Section 33 and the W<sup>1</sup>/<sub>2</sub> of said Section 34 to demonstrate that  
said area does not contain potash minerals in commercially workable  
quantities so that the purpose and objection of said Order No.  
R-111 will no longer be served by retaining this area within the  
potash area covered by said Order. Section II (2) of said Order  
recognizes the fact that ~~either~~ area embraced in said Order might  
thereafter be deleted from the defined area and no good reason  
exists for retaining the area in question within the purview of  
said Order No. R-111.

4. The nature of the oil deposits in the area in question  
is such that a prudent operator must hesitate to do additional

1 drilling in the event he is required to comply with the casing and  
2 cementing requirements of Order No. R-111. Well No. 2, above men-  
3 tioned, which was an offset to well No. 1, above mentioned, entirely  
4 missed the pay section from which well No. 1 is producing, and the  
5 pay section from which well No. 2 is producing is not such as to  
6 justify further development except upon an exploratory basis.

7           5. Due consideration for the correlative rights of the  
8 oil and gas leaseholders and of those interested in the production  
9 of potassium minerals will disclose that there is no prospect of  
10 the presence of potassium minerals in the area in question in com-  
11 mercially workable quantities, and that no company has any plan or  
12 program for further prospecting for potassium minerals or for min-  
13 ing in said area. Such consideration will further disclose that  
14 oil may be developed in such area in commercial quantities, but  
15 that such development is extremely hazardous due to the spotty  
16 character of the deposits and the uncertainty as to the life of the  
17 wells. In the light of these facts regulations as to casing should  
18 be such as to permit further exploration and development without  
19 requiring an undue waste of casing which will be entailed by en-  
20 forcing the cementing regulations contained in Order No. R-111.

21           6. In the event the area in question is not deleted from  
22 said Order No. R-111, an exception from the provisions of said  
23 Order should be made as to well No. 1 for the reason that said  
24 well was completed in its present condition on the representation  
25 of Duval Sulphur and Potash Company that it would raise no objec-  
26 tion thereto and for the further reason that the amount of cement  
27 required to fill the annulus behind the production string would be  
28 so great as to render the project uneconomical. Well No. 2 should  
29 be excepted from said Order because the small amount of production  
30 obtainable therefrom is insufficient to justify the relatively  
31 large expenditure of money required to fill the annulus behind the  
32 surface string with cement, and because of the fact that said well

1 in all likelihood will have to be plugged and abandoned in a short  
2 while unless the Applicant elects to drill said well to a deeper  
3 depth in the search for additional producing zones.

4 WHEREFORE, APPLICANT PRAYS that said Section 33 and the  
5  $W\frac{1}{2}$  of said Section 34 be deleted from the potash area defined in  
6 Order No. R-111 and in the alternative, that the above described  
7 wells, No. 1 and 2, be excepted from said Order.

8 DATED at Carlsbad, New Mexico, this 17th day of February,  
9 1955.

10 SIMMS AND REESE OIL COMPANY

11 By Geo L. Reese Jr  
12 Partner

13 STATE OF NEW MEXICO)  
14 : ss.  
15 COUNTY OF EDDY)

16 GEO. L. REESE, JR., being first duly sworn on oath, de-  
17 poses and says:

18 That he is one of the general partners of Simms and Reese  
19 Oil Company, a partnership; that he has read the foregoing Applica-  
20 tion and understands the contents thereof, and that the statements  
21 therein contained are correct and true, except such matters as are  
22 stated upon information and belief, and as to the latter he verily  
23 believes the same to be true.

24 Geo L. Reese Jr  
25 SUBSCRIBED AND SWORN to before me this 17th day of Febru-  
26 ary, 1955.

27 Katherine C. Perry  
28 Notary Public

29 My Commission expires:

30 9 October 1955

31

32

BEFORE THE  
**Oil Conservation Commission**  
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE NO. 862

TRANSCRIPT OF PROCEEDINGS

**ADA DEARNLEY AND ASSOCIATES**  
COURT REPORTERS  
ROOMS 105, 106, 107 EL CORTEZ BUILDING  
TELEPHONE 7-9546  
ALBUQUERQUE, NEW MEXICO

BEFORE THE  
OIL CONSERVATION COMMISSION  
STATE OF NEW MEXICO  
Santa Fe, New Mexico  
March 16, 1955

IN THE MATTER OF:

The application of the Oil Conservation Commission upon its own motion for an order creating a new pool in the designated "potash-oil" area and establishing pool rules for same.

Applicant, in the above-styled cause, seeks an order (a) creating the North Benson-Queen Oil Pool in Eddy County, New Mexico, described as follows:

Twp. 18 South, Rge. 30 East  
E/2 Section 33;  
W/2 Section 34

Case No. 862

and such other contiguous lands as may properly be included therein as supported by proper testimony and recommendations adduced at said hearing; and (b) prescribing rules and regulations pertaining to the proposed North Benson-Queen Oil Pool in accordance with the provisions of Order R-111, which pertains to the drilling and completion of oil or gas wells within the so-called "potash-oil" area.

Before: Honorable John F. Simms, E. S. (Johnny) Walker,  
and William B. Macey.

TRANSCRIPT OF HEARING

S. J. STANLEY

having first been duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. KITTS:

Q Will you state your name and position, please?

A S. J. Stanley, engineer for the Oil Conservation Commission.

Q Mr. Stanley, in connection with Case 862, do you have a recommendation you care to make in connection with the pool boundaries, proposed pool boundaries?

ADA DEARNLEY & ASSOCIATES  
STENOGRAPHIC REPORTERS  
ALBUQUERQUE, NEW MEXICO  
TELEPHONE 3-6691

A Yes, sir, in the North Benson-Queen Pool it is recommended that the pool boundaries be as follows: The east half of Section 33, and the west half of Section 34 in Township 18 south, Range 30 east. The reason for that is to create a pool to include Simms and Reese Manning No. 1 in Unit I of Section 33, Township 18 south, Range 30 east, a Queen producer with the top of the perforation at 3,630 feet. Also the McClay No. 2 in Unit H of the same section.

Q Have you prepared an exhibit incorporating your recommendations?

A Yes, sir, I have.

(Marked Commission's Staff Exhibit No. 1 for identification.)

Q That is marked as Exhibit No. 1?

A Yes, sir.

MR. KITTS: We offer Commission's Staff Exhibit 1 in evidence.

MR. MACEY: Without objection it will be received in evidence. Any questions of the witness? If not, the witness may be excused.

(Witness excused.)

In connection with this case, I would like to point out that Order R-111 requires that our Order R-111 which is the rules pertaining to the drilling and completion of wells within the so-called "potash-oil" area of Eddy County and portions of Lea County. I believe the order provides that the Commission shall call a hearing to establish rules for every oil pool that is set up within that described area. If there is anyone who desires to put forth any rules, regulations pertaining to the drilling of these wells, casing programs and so forth, we would be very happy to receive them.

MR. REESE: George Reese, Simms and Reese Oil Company.

Mr. Commissioner, as you know, the present rules call for cementing surface string of pipe on top of the salt and a string through the salt, or in lieu thereof, cementing the production string back up to the bottom of the surface string. In this particular area it is my information that core tests have been drilled through the salt section, disclosing there is an absence of potash salts in commercial quantities. At one time the Southwest Potash Corporation had a Federal permit covering this acreage and did extensive coring as a result of which they surrendered the acreage.

Thereafter Mr. Andrews applied for and obtained a potash prospecting permit which I am advised he holds for the benefit of Duval Potash and Sulphur Company. If my information is correct that these core tests disclose an absence of commercial potash, then it seems to me that the present regulation for exploration wells should be changed as to this field so as to require merely the cementing of a string of pipe on top of the salt so as to insure a water shutoff. Then, if the well proves to be productive, which isn't at all certain in that area, cementing the surface pipe back up through the Yates would afford all of the protection.

MR. MACEY: You mean the production string?

MR. REESE: Yes, sir. Would afford all the protection that the area needs. The discovery well was an old hole drilled first in 1935, I believe. We reentered the old hole and were successful in getting down to the Queen sand where we ran a string of pipe and perforated it and sand-fractured and got a well which made its allowable for some months. It is now down to 30 barrels per day.

We then drilled an offset well to the north, and in that well

4

the sand that produces in the No. 1 well was wholly barren, there wasn't even an odor of petroleum or gas. We drilled on deeper and found a little pay some two hundred feet deeper. But the area spudded and if it is to be developed, it seems to me that the regulations should be made as reasonable as possible so as to permit development.

MR. WEAVER: J. C. Weaver, representing Duval Sulphur and Potash Company. This area in question, principally these two holes that Mr. Reese just mentioned, are quite close to known potash ore bodies. In fact, there is underground workings less than a mile from these holes. Speaking for Duval, I will have to say that we would like the Commission to comply and hold with regulation R-111.

MR. REESE: In answer to what has been said, I take it that the witness refers to Southwest Potash Corporation since it is the only operator in the vicinity of these lands. My firm represents Southwest Potash Corporation. I am not authorized to speak for them in this hearing, but I can say that the local management of that company is not interested in that casing program in that area.

MR. WEAVER: Duval Sulphur and Potash Company have a proven ore body north and east of these two wells in question, and we have that in mind when we request compliance with regulation R-111.

MR. MACEY: How far north and east is it, Mr. Weaver?

MR. WEAVER: The limit of the ore body as we now know it would be about a mile, maybe a little less than a mile from No. 2.

MR. MACEY: Anyone else?

MR. SMITH: J. P. Smith, United States Potash Company.



We are not directly concerned with this particular area. Our nearest leases lie some eight miles to the southeast. However, we are very vitally interested in the protection to the salt section if possible in view of the fact that at some subsequent time there may be oil and gas drilling on lands we presently hold under permit and leases.

MR. MACEY: Anyone else?

MR. PROTTS: D. Protts, Potash Company of America. I concur entirely with what Mr. Smith has said. I am sure that the regulation R-111 have been set down for the protection of both operators of both minerals, you might say. I see no reason why any changes should be made. The precedent problem is uppermost in our mind at this time.

MR. LANE: R. H. Lane, International Minerals Chemical Corporation, Carlsbad. We want to ask the Commission to give full accord to Rule R-111 in all cases.

MR. MACEY: Anyone else? In connection with Case 862, the Commission is going to continue the case until April. They are going to appoint a committee of their own representatives, representative of United States Geological Survey, and request them to sit in on the committee to try and work out an equitable casing program that will not only guarantee protection to the possible potash zones, but also be equitable to the oil operators.

In order to clarify what I said, we are going to request that the United States Geological Survey help us work out some kind of a casing program. I believe most of the land in the area is Federal land.

MR. REESE: All of this particular land described is

Federal land.

MR. SETH: Is that just in regard to this particular area or is this a general application?

MR. MACEY: It is in regard to this particular area. R-111 stands as it is and on any exploratory wells unless we have a hearing to revise Order R-111, it stands as it is. In this particular instance where we are creating a pool, we are required by the provisions of R-111 to set up pool rules. Where they agree or follow Order R-111 is the meat of this case actually is what is involved. Well, also in connection with that, if anyone else has any testimony to add to the Commission's testimony, why we will be glad to have it.

Anyone else have anything further in this case? If not we will continue to the regular April hearing.

C E R T I F I C A T E

I, ADA DEARNLEY, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings in the matter of Case No. 862 was taken by me on March 16, 1955, that the same is a true and correct record to the best of my knowledge, skill and ability.

Ada Dearnley  
Reporter

New Mexico  
OIL CONSERVATION COMMISSION

GOVERNOR JOHN F. SIMMS  
CHAIRMAN  
LAND COMMISSIONER E. S. WALKER  
MEMBER  
STATE GEOLOGIST W. B. MACEY  
SECRETARY & DIRECTOR



P. O. Box 271  
SANTA FE, NEW MEXICO

*Geo. L. Reese, jr.*  
*Simms & Reese Oil Co.*  
*Bugas Bldg*  
*Carlsbad - N. M.*

*Luval Sulphur & Potash Co.*  
*Carlsbad*

*Southwest Potash Corp.*  
*Carlsbad*

*OCC, Artesii*

*{ U.S. G. S., Carlsbad*

*{ Jack Frost, U.S. G. S., Carlsbad*

*{ U.S. G. S., Roswell*

*U. S. Potash Co. (O. Sell)*  
*Carlsbad*

*Potash Co. of America*  
*Carlsbad*

*International Minerals &*  
*Chemical Corp.*  
*Carlsbad*

OK

New Mexico  
OIL CONSERVATION COMMISSION

GOVERNOR JOHN F. SIMMS  
CHAIRMAN  
LAND COMMISSIONER E. S. WALKER  
MEMBER  
STATE GEOLOGIST W. B. MACEY  
SECRETARY & DIRECTOR



P. O. Box 871  
SANTA FE, NEW MEXICO

MEMORANDUM

TO: All operator and individuals interested in the  
"potash-oil" area of Eddy County, N. M.

FROM: W. B. Macey, Secretary-Director

SUBJECT: Case 862 on the Oil Conservation Commission's  
Hearing Docket for March 16, 1955

*the potash - oil area*

We attach a copy of the legal advertisement in Case 862, which will be heard by this Commission at the March 16 hearing. The area involved in creation of the proposed North Benson-Queen Oil Pool is a part of "~~Area B~~" as originally described in Order R-111, which was adopted by this office and by the Commissioner of Public Lands in November 1951.

The case currently before the Commission provides for establishment of the new pool and of pool rules relating to it, all in accordance with provisions of Order R-111.

*Is this about it?  
(note attached list)*

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

MEMORANDUM

To: Mr. Hanson and Mr. Stanley

Subject: Case 862 - North Benson-Queen Pool

You are hereby instructed to make an investigation of the subject matter of the above-captioned case and be prepared to present your findings at the April 20 hearing of the Commission.

Mr. Hanson will act as chairman of the group, and Mr. Stanley will handle any testimony. It is suggested that the chairman contact any interested U.S.G.S. officials, as well as interested oil producers and potash companies to arrange a meeting to discuss the matter, and to acquaint them with your proposed recommendations.

W. B. M.

WBM:nr

March 18, 1955

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Y

Order 862 : New pool -North Byron-Queen

County LOMY Pool NORTH BYRON-QUEEN

TOWNSHIP 18 South, RANGE 30 East, NEW MEXICO PRINCIPAL MERIDIAN

6	5	4	3	2	1
7	8	9	10	11	12
13	17	16	15	14	13
19	20	21	22	23	24
29	28	27	26	25	24
31	32	33	34	35	36

Producing Formation : Queen Depth Range 0-5

Purpose: To create a pool to include Simms and Reese Manning et al #1 in Unit

I of Section 33-18-30, Queen producer t.p. 3630 , also McClay #2 in Unit H

Proposed Boundary: E/2 Sec. 33; W/2 Sec. 34 Colored in Red

BEFORE THE  
OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO  
Can. Draft EXHIBIT No. 1  
CASE 862

*Ed. C. ...*  
RECEIVED  
APR 11 1955

New Mexico  
OIL CONSERVATION COMMISSION



GOVERNOR JOHN F. SIMMS  
CHAIRMAN  
LAND COMMISSIONER E. S. WALKER  
MEMBER  
STATE GEOLOGIST W. B. MACEY  
SECRETARY & DIRECTOR

321 Carper Building  
Artesia, New Mexico

April 5, 1955

TO WHOM IT MAY CONCERN

Under date of March 16, 1955, the New Mexico Oil Conservation Commission under its own motion held a hearing in Santa Fe on Case No. 862, in which it proposed to create the North Benson-Queen Pool, and to promulgate rules and regulations pertaining to the pool in accordance with the provisions of Order R-111, which pertains to the drilling and completion of oil and/or gas wells within the so-called "potash-oil" area.

The proposed pool would include the following acreage in Eddy County, New Mexico:

Twp. 18 South, Rge. 30 East  
E/2 Section 33,  
W/2 Section 34.

After hearing testimony in this matter the Case was then continued until the April 20, 1955, Commission hearing. Following the hearing the Director appointed a committee, with the writer as chairman, and directed me to call a meeting of all interested parties in order to obtain the views of all parties concerned in the possible revision of the present Order R-111, which is now in effect.

The committee has been instructed to make recommendations back to the Commission in regard to the subject, and you are requested to attend and express your views before the committee.

The meeting will be called for 10:00 A.M., April 11, 1955, at the offices of United States Potash Company, 101 North Halagueno, Carlsbad, New Mexico.

Yours very truly,

OIL CONSERVATION COMMISSION

*L. A. Hanson*  
L. A. HANSON

Supervisor, Oil & Gas Inspector

LAH/lh

(See distribution list attached)

COPIES SENT TO:

Duval Sulphur & Potash Co.  
Carlsbad, New Mexico  
Attn.: Mr. G. C. Weaver

International Mineral & Chemical Corp.  
Carlsbad, New Mexico  
Attn.: Mr. R. H. Lane

Kerr-McGee Industries  
Kerr-McGee Building  
Oklahoma City, Oklahoma  
Attn.: Mr. J. C. Finley

Kerr-McGee Industries  
207 West Richardson  
Artesia, New Mexico  
Attn.: Mr. Charles W. Hicks

National Potash Company  
Hobbs, New Mexico  
Attn.: Mr. Ray Jenkins

Potash Company of America  
Carlsbad, New Mexico  
Attn.: Mr. D. E. Protz

Southwest Potash Company  
Carlsbad, New Mexico  
Attn.: Mr. Stewart, Gen. Mgr.

United States Potash Company  
Carlsbad, New Mexico  
Attn.: Mr. J. P. Smith

Mr. R. J. Jones  
P. O. Box 609  
Abilene, Texas

Mr. O. H. Randel  
P. O. Box 88  
Carlsbad, New Mexico

Richardson & Bass  
701 North Canal Street  
Carlsbad, New Mexico  
Attn.: Mr. Floyd Acklin

Roach & Shepard  
707 Catalina Drive  
Artesia, New Mexico

Simms & Reese Oil Company  
Bujac Building  
Carlsbad, New Mexico

Mr. Neil H. Wills  
P. O. Box 529  
Carlsbad, New Mexico

Mr. Harvey E. Yates  
303 Booker Building  
Artesia, New Mexico

Mr. Martin Yates, III  
312 Carper Building  
Artesia, New Mexico

Oil Conservation Commission  
P. O. Box 2045  
Hobbs, New Mexico  
Attn.: Mr. S. J. Stanley, Engineer

U. S. Geological Survey  
P. O. Box 187  
Artesia, New Mexico  
Attn.: Mr. John A. Frost

Mineral Supervisor  
U. S. Geological Survey  
P. O. Box 829  
Carlsbad, New Mexico

Regional Supervisor  
U. S. Geological Survey  
P. O. Box 6721  
Roswell, New Mexico



OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

MEMORANDUM

TO: All Operators and Individuals Interested in the  
"Potash-Oil" Area of Eddy County, N. M.

FROM: W. B. Macey, Secretary-Director

SUBJECT: Case 862 in the Oil Conservation Commission's  
Hearing Docket for March 16, 1955

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We attach a copy of the legal advertisement issued in Case 862, which will be heard by this Commission at the March 16 hearing. The area involved in creation of the proposed North Benson-Queen Oil Pool is a part of the "potash-oil" area as originally described in Order R-111, which was adopted by this office and by the Commissioner of Public Lands in November 1951.

The case currently before the Commission provides for establishment of the new pool and of pool rules relating to it, all in accordance with provisions of Order R-111.

March 2, 1955

(See distribution list attached)

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

Copies sent to:

Geo. L. Reese, Jr.  
Simms and Reese Oil Co.  
Bujac Building  
CARLSBAD, N M

Duval Sulphur and Potash Co.  
CARLSBAD

Southwest Potash Corp.  
CARLSBAD

Oil Conservation Commission  
ARTESIA

U. S. Geological Survey  
CARLSBAD and ARTESIA;  
Attention: Mr. John Frost

U. S. Geological Survey  
ROSWELL

U. S. Potash Company  
CARLSBAD

Potash Company of America  
CARLSBAD

International Minerals & Chemical Corp.  
CARLSBAD

Oil Conservation Commission  
HOBBS

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NOTICE OF PUBLICATION  
STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION  
SANTA FE - NEW MEXICO

The State of New Mexico by its Oil Conservation Commission hereby gives notice pursuant to law and the Rules and Regulations of said Commission promulgated thereunder of the following public hearings to be held at 9 o'clock a.m. on March 16, 1955, at Mabry Hall, State Capitol, Santa Fe, New Mexico.

STATE OF NEW MEXICO TO:

All named parties and persons  
having any right, title, interest  
or claim in the following cases,  
and notice to the public.

CASE 862:

In the matter of the application of the Oil Conservation Commission upon its own motion for an order creating a new pool in the designated "potash-oil" area and establishing pool rules for same.

Applicant, in the above-styled cause, seeks an order  
(a) creating the North Benson-Queen Oil Pool in Eddy County, New Mexico, described as follows:

Twp. 18 South, Rge. 30 East  
E/2 Section 33;  
W/2 Section 34.

and such other contiguous lands as may properly be included therein as supported by proper testimony and recommendations adduced at said hearing; and (b) prescribing rules and regulations pertaining to the proposed North Benson-Queen Oil Pool in accordance with the provisions of Order R-111, which pertains to the drilling and completion of oil or gas wells within the so-called "potash-oil" area.

GIVEN under the seal of the Oil Conservation Commission at Santa Fe, New Mexico, on this 25th day of February, 1955.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

W. B. MACEY  
SECRETARY

S E A L

# Memo

From

Hanson

To

W. B. Macey.

This doesn't mean that  
you have to attend the  
meeting, But thought you  
would like a copy of this  
notice either for the record  
or your file.

BEFORE THE  
**Oil Conservation Commission**  
SANTA FE, NEW MEXICO  
April 20, 1955

IN THE MATTER OF:

CASE NO. 862 Regular Hearing

TRANSCRIPT OF PROCEEDINGS

**ADA DEARNLEY AND ASSOCIATES**  
COURT REPORTERS  
ROOMS 105, 106, 107 EL CORTEZ BUILDING  
TELEPHONE 7-9546  
ALBUQUERQUE, NEW MEXICO

BEFORE THE  
OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
April 20, 1955

IN THE MATTER OF:

Application of the Commission upon its own  
motion for an order (a) creating the North  
Benson-Queen Oil Pool in Eddy County, New  
Mexico, described as follows:

Township 18 South, Range 30 East  
E/2 Section 33; W/2 Section 34

Case No. 862

and (b) prescribing rules and regulations  
pertaining to the proposed pool in accord-  
ance with provisions of Order R-111, which  
pertains to the drilling and completion of  
oil or gas wells within the designated  
"potash - oil" area.

BEFORE:

Mr. E. S. (Johnny) Walker  
Mr. William B. Macey

TRANSCRIPT OF HEARING

MR. MACEY: The next case on the docket is Case 862.

S. J. STANLEY,

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

DIRECT EXAMINATION

By MR. KITTS:

Q Will you state your name and position, please?

A S. J. Stanley, Engineer for the Oil Conservation Commission.

Q Mr. Stanley, since the last meeting of this case when it  
was first heard, you have been appointed to a Committee to study  
further this matter?

A Yes, sir, we have had two meetings in Carlsbad to study this particular problem.

Q Mr. Stanley, in connection with your study, you prepared an exhibit which you wish to comment upon at this time, and introduce?

A Yes, sir, I have prepared one exhibit and also have obtained two exhibits from the United States Geological Survey, which I intend to introduce into the record.

Q This plat on the wall is your Exhibit 1?

A Yes.

Q That was prepared by you?

A Yes, sir, under my direction.

Q Will you proceed with Exhibit 1 and explain what that shows?

A Case 862 deals particularly with Order R-111. The objective of Order R-111, generally referred to as the Potash Order, is as follows: "The objective of these rules and regulations is to prevent waste, protect correlative rights, assure maximum conservation of oil and gas resources of New Mexico and permit the simultaneous economic recovery of potash minerals in the area hereinafter defined."

The potash - oil areas are divided into two parts. Area A includes the various parts in which potash mining operations are in progress, and Area B includes the various parts of which potash mining operations are in progress or in which coring tests indicate potential potash reserves.

Therefore, Exhibit No. 1, marked in red coloration includes the entire area defined in Order R-111 of potential potash recovery determined by actual exploration or core test date. The scale of the map showing the potash area is one inch equal to two miles, and

therefore it can readily be seen that the area so defined is very large in extent, and for the sake of understanding the area itself I would like to point out on Exhibit No. 1 various landmarks. Here is Artesia, New Mexico, here is Carlsbad, New Mexico and here is Hobbs, New Mexico.

Q That shows both area A and B?

A Yes, sir, it incorporates both areas.

In Order R-111 in the problem before the Commission, the rules specifies the casing program of wells drilled to a shallow depth of less than 5,000 feet, and deeper wells drilled to depths of greater than 5,000 feet.

The surface pipe in shallow holes will be landed in the red bed section, and cemented to the surface. The salt string will be set between 100 and 200 feet below the base of the salt and cemented to the surface. The oil string shall be cemented with sufficient cement to protect the oil pay zone. Now, in lieu of ~~offsetting~~ setting a salt string, an operator can pull such string whenever it is landed for water shut-off and then the oil string shall be cemented to surface.

I, at this particular time, would like to read into the record the problem before up pertaining to two wells of Simms and Reese Oil Company, which have been completed within the designated potash area as defined by Order R-111. The Simms and Reese Oil Company's

McClay No. 1, located 1980 from the south and 660 from the east of Section 33, Township 18 South, Range 30 East, perforations are 2,844, that is the top of the perforation. The seven inch casing is set at 763 feet, four and a half inch casing at 2,093 feet cemented with 100 sacks. The top of the anhydrite, by our informa-



tion is 250 feet. The top of the salt is 550 feet, the base of the salt is 1,494 feet and the top of the Queen is 2,810 feet.

The Simms and Reese Oil Company's McClay No. 2, 1980 from the north and 660 from the east of Section 33, Township 18 South, Range 30 East, perforations, 3,036 to 61 feet. That is 3,036 to 3,061 feet. Eight and five inch casing set at 590 feet with 80 sacks. Five and a half inch casing set at 3,064 feet with 30 sacks. The top of the salt in this well is at 560 feet, the base of the salt is at 1,495 feet, and the top of the Yates at 2,626, and the top of the Queen to the producing formation is 2,844 feet.

Q I would like to interrupt for a moment here. You are aware the original applicant in this case, Simms and Reese Oil Company, stated in their application and testified at the last hearing, that they did not believe that in the area concerned, the area of their wells, there was potash salt in commercial quantities. Do you have any information as to that? Did your study go that far?

A I don't know whether there is potash of commercial quantities in that area or not.

Q I see.

A In fact, in reading the Simms and Reese Oil Company, the McClay No. 2 file, I might add this is a Federal well. That on the Federal form of sundry notices and reports on wells, the operator, Simms and Reese Oil Company makes the following statement.

"We will drill to approximately 3,000 feet and set eight and five inch surface casing and cement back to surface. Five and a half inch casing will be set and cemented through the red sand and sand fractured. We will comply with New Mexico Oil Conservation

Commission's Order R-111 on any modification thereto."

Q That was filed, well, before their application for exception to R-111, wasn't it?

A Yes, sir. The point that Simms and Reese Oil Company have argued is that potash is not present in this area. It is evidently uneconomical to produce oil from this area in stripper production with the cost of cementing, without exception of Order R-111. The date of the Order R-111 is July 10, 1951, and since that time 18 wells have been drilled in the potash area. Of the 18 wells that have been drilled, 16 wells have complied with the order and the two wells of Simms and Reese Oil Company seek an exception to this rule in this area where the wells are drilled.

To better acquaint ourselves with the problem of the potash company and the oil companies, two meetings were held in Carlsbad prior to this hearing. Certain topics were discussed and probably should be mentioned and introduced into the record. Area A as defined by this order, is a continuously changing picture. I have what is marked Exhibits No. 2 and 3, showing the irregular pattern of potash occurrences.

Q Were those prepared by you, Mr. Stanley?

A No, sir, these were prepared by the United States Geological Survey, and they show a scale on the exhibit. However, that is considered a trade secret and, therefore, it is not actually defined in any one particular area referred to as actual description referred to as township, range.

Q Are you satisfied with the accuracy of these?

A No, sir, I know nothing about the exhibits. All I want to show is the irregular occurrence of potash in this particular area.

What I would like to show with these two exhibits is the irregular occurrence of the potash area as determined by core drill. The closer spacing of core well holes could even connect the areas shown in Exhibits 2 and 3, and probably actual mining operations could change the entire picture.

Today the potash industry is able to mine ore bodies of the thickness of 18 inches, as we understand, it is possible to mine sylvite, an ore of potash, or sylvanite with a 14 percent content, or manganite with eight percent. In some instances the percentage of ore can be lower. In other words, with ever changing and improving techniques in mining, as is true in the oil business, and especially refining continually changes the commercial extent of the boundaries of the proven potash reserves.

It has been stated by the potash companies that porosity exists in the salt section that is mined. It has been definitely proven in the oil business that the salt section is charged in the Monument and Hobbs Pool and charged with gas. The charging of oil and gas in these pools was probably man made by casing leaks.

The point I am trying to make is that I feel that porosity and permeability exists in the salt section throughout Lea County, that the extent of charging the zone, and that is the salt zone, from one well would depend on the amount of gas present, and, of course, the pressure of that particular gas. Fortunately the wells of Simms and Reese Oil Company, if typical of the area, have low gas-oil ratios and also have very low bottom hole pressures. The potash areas defined is unexplored for all practical purposes, for oil accumulation and, therefore, who can say that high pressure wells with considerable gas volumes will not be obtained at shallow depths.

One interesting point that was mentioned at these meetings was a method of mining ore. This type of mining refers to the removal of pillars, after the conventional mining is completed, these pillars or supports are in an order of 100 foot in diameter. One pillar after another is removed until the earth above it subsides. This subsidence is evident at the surface of the ground. It is also believed that horizontal slippage occurs during the period of subsidence, this would have the tendency to shear off the casing of oil well, regardless of the number of strings of casing run in modern completion practices. The well would never be plugged properly since it could never be reentered. This subsidence would effect both the deep and shallow wells. I can see where possible charging of the mine workings would result.

It has been stated that the recoverable potash, based on potash mines at the present going price, is \$154,000.00 per acre. 90 percent of the domestic potash, or I might say that the domestic potash in excess of 90 percent is mined in this area defined by Order R-111.

In conclusion, I wish to state that I have no recommendations in the case, that the Commission will have to recommend.

Q Mr. Stanley, let me ask you this. You stated that you had no knowledge as to whether in the area in question there was potash salt in commercial quantities or not, is that correct?

A That is right.

Q Assuming that there is potash salt in commercial quantities in that area, would you care to make any comment on the casing program set out in R-111, and the casing program of the Simms-Reese Company, as it would protect any such salt? Do you have any comment on that?

A Could I elaborate on my answer?

Q Certainly.

A I have studied all the wells in the Hobbs Pool from a corrosion standpoint, have inspected every well in that particular pool, and have also inspected all the wells or virtually all the wells in the north half, or half the wells in the Monument Pool. The casing program as defined in Order R-111 is not exactly the casing program that I would recommend in the potash area, provided that there was no horizontal slippage. However, I do not recommend that the casing program be altered as defined in R-111. My theories on casing program in this particular area and from the experience that I have had in observing the corrosion problems in Hobbs and the Monument Pool is as follows: If I intended to write an order to protect any potash area or any mine workings, I would write an order whereby the surface pipe would have to be set at 100 feet or 200 feet below the salt string in this manner.

MR. MACEY: Below the salt string?

A Yes. Not set any surface pipe below the salt section, not set any surface pipe at all, but set it -- Assume that this is the salt section, set it a hundred feet below and cement that particular pipe to surface, then the oil string should be cemented in such a fashion that the cement behind the pipe shall come to a point below the oil section, or below the salt section, excuse me. Therefore, at any time we observe this in the Hobbs and Monument Pool, the potash companies, the oil companies or any individual could go to that particular well in question and observe between the annulus at the surface pipe and oil string whether a leakage occurred at any

particular time during the life of the well.

At the present time, by cementing through the salt section, and we have found this in Hobbs and in Monument, there is no method at the surface of determining whether you have a leak or not. The only method that could determine whether you had a leak or not in any particular well, whereby the oil string is cemented through the salt section, it so run your tubing with a packer in such a fashion that you could observe or record the pressures between the tubing and the oil string.

However, I am not making any recommendations that the casing program be altered in Order R-111.

Q Do you feel that the casing program set forth in R-111, you feel that if that were followed it does afford protection to the potash salt section?

A I think it affords protection by merely running an oil string through the salt section.

Q You feel that the cementing helps appreciably?

A I think it possibly could help, but there would be no known method of ever testing the well, due to the fact that most of the corrosion is due to hydrogen sulphide, as we have observed in the Hobbs Pool, that the corrosion is internal, that it is not external, adjacent to the salt section. That pipe pulled in the Hobbs Pool and in the Monument Pool, adjacent to the salt section showed that it would be in condition A, that is considered in new condition externally, but that the holes were formed from the inside by hydrogen sulphide. I do not feel that a rim of cement around this pipe a fraction of an inch in diameter in some cases would protect

that particular salt or potash section, and it would aggravate the problem if you had considerable bottom hole pressure, or gas pressure. I feel that cement would not be able to hold, say, a thousand pounds pressure as we have in the Hobbs Pool, or the Monument Pool.

MR. KITTS: That is all.

MR. MACEY: Any questions of the witness? Mr. Rhodes?

CROSS EXAMINATION

By MR. RHODES:

Q These discussions with the potash operators, was any mention made of the possibility of bringing water in on the potash by drilling in the area?

A You mean from the surface or from the bottom?

Q Below the line water table.

A They do seek protection by setting the surface pipe to prevent any water to go ahead and flow downward into their mine workings. That is the intent of setting surface pipe.

Q Also, you mentioned the potash operators coming through and pulling pillars and letting the back come in and subside?

A Yes, sir.

Q Do you suppose that the potash operators would be willing to conduct a selective program on pulling these pillars in areas where there are producing wells?

A Well, I don't know anything about the potash people. I feel certainly sure that if I owned the potash mines I wouldn't go ahead and pull the pillars out, especially in the area where a deep well is present. What we usually have, by the drilling of several wells in the area, especially by Sid Richardson, and knowing the pressure

of the Pennsylvanian section, that if a well were drilled to the Pennsylvanian section in any one particular area whereby mine workings were in operation, I feel reasonably sure that no one would dare pull these pillars out.

Q That is exactly my point. I wondered if that was any consideration.

A I think the discrepancy in the order, the most dangerous thing about the entire deal is to go ahead and drill a deep well to the Pennsylvanian and then have subsidence and lateral-horizontal movement. It does not mention the concern about the deep wells themselves. I believe by shearing the casing off in the deep wells is what probably will cause all the trouble.

Q I was just wondering if that was too much of a consideration, if accommodation couldn't be made by which that danger could be alleviated?

A I think that would be the concern of the potash company and the concern of the oil operator in that particular case.

MR. RHODES: That is all.

MR. MACEY: Anyone else?

By MR. LANE:

Q You have a value for the potash in this area. Do you have a value for the oil?

A Yes, we had a value of potash as stated by the potash companies of a recovery of past experience of \$154,000.00 per acre. I seriously doubt that the shallow wells in this area with the exception of the <sup>Gettys</sup> Gaddy Pool, would recover more than 1,500 barrels per acre, or roughly approximately \$4,000.00 per acre.



Q It is our knowledge that the pillars remaining after the first extraction is about 30 or 35 percent, it would be roughly \$50,000.00?

A Yes, sir.

MR. MACEY: Mr. Rhodes?

By MR. RHODES:

Q Do you believe that possibly pulling the pillars in one area would result in horizontal movement in some quite distant area?

A It could possibly affect it. It would have the effect of the earthquake. I understand you can drive over this particular area whereby these mining techniques were followed and see the subsidence on the surface of the ground.

Q I wonder if that is not directly over the particular area where the pillars were pulled?

A Yes, sir. I don't know the extent of the lateral movement.

MR. WEAVER: I can answer that. G. C. Weaver, representing Duval Sulphur and Potash. We have horizontal threats there as well as vertical. Just where it would show up, we can't tell. Assume we are mining at 1,000 feet, I would thoroughly expect to get horizontal displacement a thousand feet from any area we rocked. You can figure on about a 45 degree break there. When we talk about mining an area, when we go in and mine an area, in the first mining in the room and pillar system we extract about, well, from 50 to 75 percent of the potash present, we get subsidence. It is not enough to hinder our mining operations, however, if there are any oil and gas wells within a hundred feet of any one of those pillars, <sup>s</sup> in any one of those pillars 100 feet in diameter, I certainly wouldn't want to be very close to it. It wouldn't take much subsidence to

shear a casing. Suppose the casing was sheared and gas and oil is escaped in the workings, how in the world would you ever replug that well? You have a loss of oil and gas which will never be recovered, and you will never recover the potash.

MR. MACEY: Does anyone have any further questions? Mr. Yates?

By MR. YATES:

Q Harvey Yates. I would like to ask the witness, Mr. Stanley, if, under the circumstances there is any long wall mining, is there any kind of pipe program that you could conceive of that could stand that shearing, so-called?

A No, I can't conceive of the oil industry inventing anything that would stand the shock of any lateral movement.

Q How is the oil industry and potash industry compatible in this area, for instance?

A I don't know.

Q I have a little field out there in the so-called area of the potash company. If you will recall, one potash company said they wanted no wells whatsoever drilled in this area. I would like to know how I am going to protect my leases?

A If I understand, and I believe Mr. Jack Frost with the United States Geological Survey is in the audience. If I understand it correctly from Mr. Frost in conversations that there are particular areas here owned by the government, whereby they do not issue any oil leases for shallow rights. That effective date was probably two or three years ago, I don't know the exact date. They do not issue any oil rights for shallow depths. It is only those that can

drill who had the oil rights prior to that particular date. I wish Mr. Frost would elaborate on that subject.

MR. FROST: Jack Frost, United States Geological Survey. I believe you misunderstood some of our little discussion.

A I am sorry.

MR. FROST: There is a provision in those new leases in the potash area that my office can not approve the drilling of a shallow well without clearing it through Washington in advance.

A I see. May I ask you a question? You can drill anywhere in the defined potash area, an oil well if you do own the oil and gas leases on Federal acreage?

MR. FROST: I think you have something mixed up there. There is no provision that I know of we can't approve the drilling of a well with a valid oil and gas lease, but there would be areas in there where we would have to consult with the potash companies and reach an agreement between the operator and the potash company before I could approve the drilling. Does that clear it up?

A Yes.

MR. MACEY: Does that pertain solely to shallow wells or both?

MR. FROST: No shallow, those from 5,000 feet up. If, on the new leases I would have to clear through Washington.

MR. MACEY: Mr. Yates?

MR. YATES: I would like to ask, under the circumstances, how is a man going to get approval from the potash companies to drill a well. He says that he can't issue a permit to drill a well without approval of the potash company if they don't want any wells drilled in their so-called A or ore body, how is a man going to get

the approval.

A I am sure they have to approve the drilling of the oil well if you conform to Order R-111.

MR. YATES: That suits me.

MR. FROST: This may help clear that up. That oil and gas exploratory test well should not be drilled through any open potash mines or within 1,320 feet thereof, unless agreed to in writing by the potash lessee involved. That is on your R-111, Page 7, Section 3, Exploration of Areas, and this was Area A, a portion of Sub-paragraph A there.

MR. MACEY: Anyone have any further questions of Mr. Stanley? Mr. Stanley, I think we have possibly gotten off the beam here a little bit. I don't think we have done any harm. It appears to me from what you have said, that you are more concerned with the deep drilling than you are with the shallow. Am I right?

A That is correct, if you take into consideration the subsidence and the pressure of the Pennsylvanian Formation.

MR. MACEY: That is all I have.

RE-DIRECT EXAMINATION

By MR. KITTS:

Q Mr. Stanley, leaving the question of subsidence for the moment, you commented on the casing program of R-111. Would you care to make any comment on the casing program of the Reese-Simms Oil Company?

A No, sir, I do not wish to make any comment.

MR. KITTS: That is all.

A Well, I might say that they have not complied with Order

R-111, but they are here to seek an exception.

Q How would you compare the protection afforded by their casing and that afforded by R-111?

A That would be an argument to know whether that core of cement actually protects the salt section on that part of the pipe.

Q That would be the point?

A Yes.

MR. MACEY: Mr. Lane?

RE-CROSS EXAMINATION

By MR. LANE:

Q Things have been said here, how can a potash company agree to a well, when an operator has already been put into intent that he would comply with the regulations and he hasn't? How can we ever agree to it before the well is drilled? We are not getting very much assurance there. He stated that he was going to comply with the regulations.

A You want me to answer that question? I don't know.

MR. MACEY: Anyone else? If not the witness may be excused.

(Witness excused.)

MR. MACEY: Does anyone have anything further in this case? If not we will take the case under advisement.

STATE OF NEW MEXICO )  
: ss.  
COUNTY OF BERNALILLO )

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

IN WITNESS WHEREOF I have affixed my hand and notarial  
seal this 28th day of April, 1955.

Ida Dearnley  
Notary Public, Court Reporter

My Commission Expires:

June 19, 1955



*File*  
*Chas. ...*  
*Carlsbad*

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

P. O. Box 187  
Artesia, New Mexico

January 19, 1955

Simms & Reese Oil Company  
Bujac Building  
Carlsbad, New Mexico

Re: Oil and Gas Lease  
Las Cruces 028978(b)

Gentlemen:

Reference is made to an informal meeting with members of the New Mexico Oil Conservation Commission in Hobbs, New Mexico, sometime ago regarding compliance with the provisions of Order R-111 governing the drilling and casing of wells in "The Potash-Oil Areas".

This office has been informally advised that the Commission has not received any word or plans following the meeting in Hobbs, and since it appears that sufficient time has elapsed in which to formulate an agreement among interested parties for consideration of the Commission you will be allowed thirty days in which to either comply with Order R-111 or prepare and submit to the Commission a request for an exception to the requirements set forth in the Order.

We are withholding approval of Sundry Reports covering work done to date on your wells No. 1 and 2 pending final action of the Commission, or until compliance has been made with Order R-111.

Very truly yours,

(Orig. Sgd.) JOHN A. FROST  
John A. Frost  
District Engineer

JAF:man

Copy to: New Mexico Oil Conservation Commission ✓  
Artesia, New Mexico

U. S. Geological Survey  
Carlsbad, New Mexico

GEORGE L. REESE, JR.  
DON G. MCCORMICK  
THOMAS E. LUSK  
EUGENE C. PAINE

REESE, MCCORMICK, LUSK AND PAINE

ATTORNEYS AT LAW  
BUTLER BUILDING  
CARLSBAD, NEW MEXICO

TELEPHONES  
5-3144  
5-3145

100T

27 September 1954

*File in  
N. Benson  
Queen case*

Mr. William Macey  
State Geologist  
Santa Fe, New Mexico

Dear Mr. Macey:

Some months ago Simms and Reese Oil Company, a partnership of which the writer is one of the partners, reentered a plugged and abandoned well known as the Continental-McClay No. 1, located in the NE $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 33, Township 18 South, Range 30 East, N.M.P.M., and we finally succeeded in cleaning out the old hole to a depth of approximately 3,000 feet. We took a radiometric well log, set and cemented four inch casing with 100 sacks, perforated the section in the Queen sand, locally known as the red sand, from 2844 to 2863 feet in depth and after sandfrac by Dowell, Inc., we have completed what appears to be a good well. Completion date was on or about September 1, and the well is making the current allowable without any difficulty.

The old hole which we reentered had two cement plugs, one at a little below 500 feet and the other around 800 feet and the salt section had apparently been covered with water since the well was drilled in 1936 or 1937.

We talked to Mr. Frost regarding the special regulations applicable to this area and he advised that the State Oil and Gas Conservation Commission would be the final arbitrator insofar as any exceptions could be made in the present regulations. We know that there is a large cavity in the salt section and there is no way to estimate the amount of cement which would be required to cement the 4 $\frac{1}{2}$  inch casing from top to bottom.

We submitted the electric log to Mr. C. L. Jones, Geologist, stationed in Carlsbad, with the U.S.G.S. and under date of July 29, 1954, he advised the Deputy Supervisor at Artesia as follows:

"With reference to the radiometric well log of the Continental McClay well, made by the Lane-Wells Company on July 22, 1954.

"The radiometric well log does not show any indications that the well penetrated a valuable deposit



27 September 1954

of potassium minerals. There are no indications that the lands in the vicinity of this well can be considered as being valuable for potash."

We contacted Mr. Fred Stewart, Manager of Southwest Potash Corporation, whose mine is located some two miles south of the well and Mr. Stewart stated that at one time his company held a prospecting permit covering the  $S\frac{1}{2}$  of Section 33, but that after coring this area the company relinquished the acreage and that it had no interest in the application of the present regulations to oil wells drilled in that area.

We were advised that perhaps Duval Sulphur & Potash Company had some interest in the area and we contacted Mr. Page Morris, who was then local superintendent of that company and who has now been moved to Houston as one of the vice presidents, and Mr. Morris advised that his company had no interest in the area.

We were told that Mr. F. M. Andrews of Santa Fe had filed upon the area and that perhaps he now holds a potash prospecting permit covering it, but we believe that this filing was made for the ultimate benefit of Duval in the event that company should elect to take over the area.

We have made the location for a well in the  $SE\frac{1}{4}$  of the  $NE\frac{1}{4}$  of Section 33 and drilling will start within the next few days. We are advised that Mr. O. H. Randel of this city has made a location in the  $NE\frac{1}{4}$  of the  $SW\frac{1}{4}$  of Section 27, Township 18 South, Range 30 East, and that drilling will start on that well in the near future.

We are not advised as to the presence or absence of potash deposits on any part of the area except the  $S\frac{1}{2}$  of Section 33, but it seems likely that the absence of a valuable deposit in the  $S\frac{1}{2}$  of Section 33 would indicate that there are no valuable deposits north of that area.

I talked to Mr. Randel on the telephone this morning and he stated that he would write you a letter today, requesting a conference as soon as you are in this vicinity, and after talking to him, I decided that it might serve a good purpose to give you as complete a picture of the present situation as I could do by letter.

I do not have a copy of the present drilling regulations and am not familiar with the steps which should be taken to secure an exception of the discovery well from the regulations or with the steps which might possibly be taken to cause

Mr. William Macey

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the deletion of any particular area from the operation of the regulations. Any information which you can give me will be appreciated and since there seems to be considerable development in prospect, it will be to the interest of the oil operators to expedite the lifting of the top to bottom cementing regulation in the event such a course of action is possible.

Yours sincerely,

SIMMS AND REESE OIL COMPANY

By Geo. L. Reese, Jr.  
Geo. L. Reese, Jr.

CC: Mr. O. H. Randel  
Box 88  
Carlsbad, New Mexico

Deputy Supervisor  
Artesia District  
Oil and Gas Branch  
United States Geological Survey  
Artesia, New Mexico

GLR:mjt

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF DEFINING BOUNDARIES  
OF POTENTIAL OIL PRODUCING AREAS IN  
EDDY AND LEA COUNTIES, NEW MEXICO,  
WITHIN WHICH POTASH MINERALS ARE BEING  
PRODUCED OR POTENTIAL POTASH PRODUCING  
LANDS ARE LOCATED,

CASE No. 278  
ORDER No. R-111

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," on June 21, 1951, and for further hearing on July 10, 1951, and the Commission, a quorum being present, having considered the testimony adduced and the exhibits introduced in evidence and arguments presented and being fully advised in the premises,

FINDS, (1) That due notice having been given, according to law, and all interested parties having appeared, the Commission has jurisdiction of this cause, and the subject matter thereof.

(2) That an area defining potential oil and gas reserves within which are proved and potential potash deposits, and the promulgation of rules and regulations for the orderly development of oil and gas resources in such an area known to be productive of potash is within the authority of the Commission for the protection of correlative rights, the promotion of conservation, and the prevention of waste.

IT IS THEREFORE ORDERED:

That this order shall be known as THE RULES AND REGULATIONS GOVERNING THE EXPLORATION AND PRODUCTION OF OIL AND GAS IN CERTAIN AREAS AND SUB-AREAS HEREIN DEFINED AND KNOWN TO CONTAIN PROVED AND SEMI-PROVED POTASH MINERALS IN THE AREA AND SUB-AREAS HEREINAFTER SET OUT.

I  
OBJECTIVE

The objective of these Rules and Regulations is to prevent waste, protect correlative rights, assure maximum conservation of oil and gas resources of New Mexico and permit the simultaneous economic recovery of potash minerals in the area hereinafter defined.

II  
THE POTASH - OIL AREAS

(1) These Rules and Regulations are applicable to oil and gas operations and to exploration for and production of oil and gas in proven or potential Potash-Oil areas herein as "Area A" and "Area B."

(a) The potash-oil area represents the area in various parts of which potash mining operations are now in progress, or in which core tests indicate potential potash reserves are located and is described, as follows:

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T. 19 S, R. 29 E

Sec. 11 - SE/4  
Sec. 12 - S/2  
Sec. 13 and 14 - all  
Sec. 23 - N/2  
Sec. 24 - N/2

T. 20 S, R. 29 E

Sec. 12 - NE/4 SE/4 and S/2 SE/4  
Sec. 13 - NE/4 and S/2  
Sec. 22 to 27, inclusive  
Sec. 34 to 36, inclusive

T. 21 S, R. 29 E

Sec. 1 and 2, all  
Sec. 3 - E/2  
Sec. 10 - E/2  
Sec. 11 to 14, inclusive  
Sec. 15 - E/2  
Sec. 23 - N/2  
Sec. 24 and 25 - all  
Sec. 35 - E/2  
Sec. 36 - all

T. 22 S, R. 29 E

Sec. 1 and 2 - all  
Sec. 3 - S/2  
Sec. 9 - E/2  
Sec. 10 to 16, inclusive  
Sec. 17 - E/2  
Sec. 20 - E/2  
Sec. 21 to 28, inclusive  
Sec. 33 to 36, inclusive

T. 23 S, R. 29 E

Sec. 1 to 3, inclusive  
Sec. 4 - E/2  
Sec. 9 - E/2  
Sec. 10 to 15, inclusive  
Sec. 22 to 27, inclusive  
Sec. 34 to 36, inclusive

T. 18 S, R. 30 E

Sec. 12 - S/2  
Sec. 13 and 14 - all  
Sec. 15 - SE/4  
Sec. 21 - SE/4  
Sec. 22 to 24, inclusive  
Sec. 25 - W/2  
Sec. 26 to 28, inclusive  
Sec. 29 - SE/4  
Sec. 32 - SW/4 and E/2  
Sec. 33 and 34 - all  
Sec. 35 - W/2

T. 19 S. R. 30 E

Sec. 2 to 5, inclusive  
Sec. 6 - SE/4  
Sec. 7 - NE/4 and S/2  
Sec. 8 to 30, inclusive  
Sec. 32 to 36, inclusive

T. 20 S. R. 30 E

Sec. 1 to 36, inclusive

T. 21 S. R. 30 E.

Sec. 1 to 11, inclusive  
Sec. 12 - S/2  
Sec. 13 to 22, inclusive  
Sec. 23, - N/2  
Sec. 24 - N/2  
Sec. 27 to 34, inclusive  
Sec. 35 - S/2

T. 22 S. R. 30 E

Sec. 1 to 24, inclusive  
Sec. 25 - W/2  
Sec. 26 to 35, inclusive  
Sec. 36 - W/2

T. 23 S. R. 30 E

Sec. 1 - S/2  
Sec. 2 to 36, inclusive

T. 24 S. R. 30 E

Sec. 1 - N/2  
Sec. 2 - N/2  
Sec. 3 - N/2

T. 18 S. R. 31 E

Sec. 18 - W/2

T. 19 S. R. 31 E

Sec. 9 and 10 - all  
Sec. 11 - W/2  
Sec. 14 - W/2  
Sec. 15 to 17, inclusive  
Sec. 19 to 22, inclusive  
Sec. 23 - W/2  
Sec. 25 - S/2  
Sec. 26 to 36, inclusive

T. 20 S. R. 31 E

Sec. 1 to 36, inclusive

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T. 21 S. R. 31 E

Sec. 1 - N/2  
Sec. 2 - N/2  
Sec. 4 - W/2  
Sec. 5 and 6 - all  
Sec. 18 - S/2  
Sec. 19 - N/2

T. 22 S. R. 31 E

Sec. 4 to 9, inclusive  
Sec. 17 and 18 - all  
Sec. 19 - N/2

T. 23 S. R. 31 E

Sec. 7 - all  
Sec. 8 - S/2  
Sec. 16 - SW/4  
Sec. 17 to 20, inclusive  
Sec. 21 - W/2  
Sec. 28 to 33, inclusive

T. 24 S. R. 31 E

Sec. 4 to 6, inclusive

T. 19 S. R. 32 E

Sec. 23, S/2  
Sec. 24 to 27, inclusive  
Sec. 28 - S/2  
Sec. 31 - S/2  
Sec. 32 - S/2  
Sec. 33 to 36, inclusive

T. 20 S. R. 32 E

Sec. 1 to 36, inclusive

T. 21 S. R. 32 E

Sec. 1 to 17, inclusive  
Sec. 21 to 27, inclusive  
Sec. 35 and 36 - all

T. 19 S. R. 33 E

Sec. 19 - all  
Sec. 30 and 31 - all

T. 20 S. R. 33 E

Sec. 5 to 9, inclusive  
Sec. 15 to 23, inclusive  
Sec. 25 to 36, inclusive

T. 21 S, R. 33 E  
Sec. 4 to 9, inclusive  
Sec. 16 to 21, inclusive  
Sec. 28 to 33, inclusive

T. 22 S, R. 33 E  
Sec. 4 to 6, inclusive

T. 20 S, R. 34 E  
Sec. 31 - all

(b) Area "A" represents the area in various parts of which potash mining operations are now in progress and is described, as follows:

T. 19 S, R. 30 E  
Sec. 9 - SE/4 NW/4, E/2 SW/4, S/2 NE/4, SE/4  
Sec. 10 - SW/4 NW/4, W/2 SW/4  
Sec. 15 - NW/4 NW/4  
Sec. 16 - N/2 NE/4, NE/4 NW/4  
Sec. 26 - S/2 NW/4, SW/4 NE/4, W/2 SE/4, SW/4  
Sec. 27 - S/2 NE/4, SE/4 NW/4, NE/4 SW/4, S/2 SW/4, SE/4  
Sec. 28 - SE/4 SE/4  
Sec. 33 - SE/4 NW/4, NE/4 NE/4, S/2 NE/4, E/2 SW/4, SE/4  
Sec. 34 - all  
Sec. 35 - NW/4, W/2 NE/4, NW/4 SE/4, N/2 SW/4, SW/4 SW/4

T. 20 S, R. 30 E  
Sec. 2 - W/2 NW/4, NW/4 SW/4  
Sec. 3 - N/2, SW/4, N/2 SE/4, SW/4 SE/4  
Sec. 4 - E/2, SW/4, E/2 NW/4, SW/4 NW/4  
Sec. 5 - SE/4 NE/4, E/2 SE/4, SW/4 SE/4, SE/4 SW/4  
Sec. 7 - SE/4 SE/4  
Sec. 8 - E/2, E/2 NW/4, E/2 SW/4, SW/4 SW/4  
Sec. 9 - N/2, SW/4, N/2 SE/2, SW/4, SE/4  
Sec. 10 - NW/4, W/2 NE/4, NW/4, NW/4 SE/4, N/2 SW/4  
Sec. 16 - N/2 NW/4, NW/4 NE/4  
Sec. 17 - W/2, N/2 NE/4, SW/4 NE/4, W/2 SE/4  
Sec. 18 - E/2 NE/4, E/2 SE/4

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T. 20 S, R. 30 E (con't)

Sec. 19 - NE/4 NE/4  
Sec. 20 - N/2 NW/4, NW/4 NE/4  
Sec. 25 - SW/4 SW/4  
Sec. 26 - SE/4 SW/4, S/2 SE/4  
Sec. 35 - E/2 NW/4, NE/4, N/2 SE/4, NE/4 SW/4  
Sec. 36 - W/2 NW/4, NW/4 SW/4

T. 21 S, R. 29 E

Sec. 1 - SE/4, S/2 NE/4, SE/4 NW/4, NE/4 SW/4, S/2 SW/4  
Sec. 2 - SE/4 SE/4  
Sec. 11 - NE/4 NE/4, S/2 NE/4, SE/4 NW/4, E/2 SW/4, SE/4  
Sec. 12 - all  
Sec. 13 - N/2, SE/4, N/2 SW/4, SE/4 SW/4  
Sec. 14 - E/2 NW/4, NE/4, NE/4 SW/4, N/2 SE/4  
Sec. 24 - NE/4 NW/4, N/2 NE/4  
Sec. 25 - SE/4 SW/4, S/2 SE/4  
Sec. 36 - E/2 NW/4, E/2 SW/4, E/2

T. 22 S, R. 29 E

Sec. 1 - E/2 NW/4, SW/4 NW/4, SW/4, E/2  
Sec. 2 - SE/4 NE/4, E/2 SE/4  
Sec. 11 - E/2 NE/4, NE/4 SE/4  
Sec. 12 N/2, N/2 SW/4, N/2 SE/4

T. 21 S, R. 30 E

Sec. 6 - SW/4 NW/4, W/2 SW/4  
Sec. 7 - NW/4 NW/4, S/2 NW/4, SW/4 NE/4, SW/4, W/2 SE/4  
Sec. 18 - NW/4, W/2 NE/4, N/2 SW/4, SW/4 SW/4, NW/4 SE/4  
Sec. 19 - NW/4 NW/4

T. 21 S, R. 30 E

Sec. 29 - SW/4 SW/4  
Sec. 30 - S/2 SW/4, S/2 SE/4  
Sec. 31 - all  
Sec. 32 - W/2 NW/4, W/2 SW/4

T. 22 S, R. 30 E

Sec. 5 - W/2 NW/4, NW/4 SW/4  
Sec. 6 - N/2, SW/4, N/2 SE/4, SW/4 SE/4  
Sec. 7 - N/2 NW/4, SW/4 NW/4, NW/4 NE/4, NW/4 SW/4

(c) Area "B" is defined as that area in which core tests indicate potential potash reserves and includes the entire potash-oil area as described under "The Potash-Oil Areas" Sec. (1) (a), of this order, except and excluding lands defined and described as area "A" in "The Potash -Oil Areas, "Sec. (1) (b) of this order.

(2) Area "A" and "B" as hereinabove defined may be contracted or expanded by the Commission from time to time as circumstances or conditions may warrant, after due notice and hearing.



III  
EXPLORATION OF AREAS

(1) Area "A"

- (a) Drilling of oil and gas exploratory test wells shall not be permitted in Area "A" except upon leases outstanding as of the effective date of these regulations, provided, that oil and gas exploratory test wells shall not be drilled through any open potash mines or within 1,320 feet thereof unless agreed to in writing by the potash lessee involved.
- (b) Any oil or gas leases hereafter issued for lands within Area "A" shall be subject to these regulations.
- (c) All future drilling of oil and gas exploratory test wells in Area "A" shall be further subject to these rules and regulations.
- (d) Where oil and gas wells are in production in Area "A" no potash mine opening shall be driven to within less than 100 feet of such wells so that protection of both wells and mine can be afforded.
- (e) Proposals to unitize with respect to land within Area "A", as herein defined and described, will be considered on their merits.

(2) Area "B"

- (a) Oil and gas exploratory test wells may be drilled in Area "B" in accordance with these rules and regulations.
- (3) Upon the discovery hereafter of oil and gas in Areas "A" or "B", the Oil Conservation Commission shall promulgate field or pool rules for the affected area after due notice and hearing.
- (4) Nothing herein shall be construed to prevent unitization agreements involving lands in Areas "A" or "B", or both.

IV  
DRILLING AND CASING PROGRAM

- (1) For the purpose of the regulations and the drilling of oil and gas exploratory test wells, shallow and deep zones are defined, as follows:

- (a) The shallow zone shall include all formations above the base of the Delaware sand or above a depth of 5,000 feet, whichever is the lesser.
- (b) The deep zone shall include all formations below the base of the Delaware sand or below a depth of 5,000 feet, whichever is the lesser.

(2) Surface Casing String:

- (a) A surface casing string of new, second-hand, or reconditioned pipe shall be set in the "Red Bed" section of the basal Rustler formation immediately above the salt section, or in the anhydrite at the top of the salt section, as determined necessary by the regulatory representative approving the drilling operations

and shall be cemented with not less than one hundred and fifty percent (150) percent of calculated volume necessary to circulate cement to the ground surface.

- (b) Cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests.
  - (c) Casing and water-shut-off tests shall be made both before and after drilling the plug and below the casing seat as follows:
    - (i) If rotary tools are used, the mud shall be displaced with water and a hydraulic pressure of six hundred (600) pounds per square inch shall be applied. If a drop of one hundred (100) pounds per square inch or more should occur within thirty (30) minutes, corrective measures shall be applied.
    - (ii) If cable tools are used, the mud shall be bailed from the hole, and if the hole does not remain dry for a period of one hour, corrective measures shall be applied.
  - (d) The above requirements for the surface casing string shall be applicable to both the shallow and deep zones.
- (3) Salt Protection String:
- (a) A salt protection string of new, second-hand, or reconditioned pipe shall be set not less than one hundred (100) feet nor more than two hundred (200) feet below the base of the salt section.
  - (b) The salt protection string shall be cemented, as follows:
    - (i) For wells drilled to the shallow zone, the string may be cemented with a nominal volume of cement for testing purposes only. If the exploratory test well is completed as a productive well, the string shall be recemented with sufficient cement to fill the annular space back of the pipe from the top of the first cementing to the surface or to the bottom of the cellar, or may be cut and pulled if the production string is cemented to the surface as provided in sub-section IV (5), (a), (i) below.
    - (ii) For wells drilled to the deep zone, the string must be cemented with sufficient cement to fill the annular space back of the pipe from the casing seat to the surface or to the bottom of the cellar.
  - (c) If the cement fails to reach the surface or the bottom of the cellar, where required, the top of the cement shall be located by a temperature or gamma ray survey and additional cementing shall be done until the cement is brought to the point required.
  - (d) The fluid used to mix with the cement shall be saturated with the salts common to the zones penetrated and with three (3 percent) percent of calcium chloride by weight of cement.
  - (e) Centralizers shall be spaced on at least every one hundred fifty (150) feet of the salt protection string below the surface casing string.

- (f) Cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four hours (24) before drilling the plug or initiating tests.
  - (g) Casing tests shall be made both before and after drilling the plug and below the casing seat, as follows:
    - (i) If rotary tools are used, the mud shall be displaced with water and a hydraulic pressure of one thousand (1000) pounds per square inch shall be applied. If a drop of one hundred (100) pounds per square inch or more should occur within thirty (30) minutes, corrective measures shall be applied.
    - (ii) If cable tools are used, the mud shall be bailed from the hole and if the hole does not remain dry for a period of one hour, corrective measures shall be applied.
  - (h) The above requirements for the salt protection string shall be applicable to both the shallow and deep zones except for sub-section IV (3), (b), (i) and (ii) above.
- (4) Intermediate String:
- (a) In the drilling of oil and gas exploratory test wells to the deep zone, an intermediate string shall be set at sufficient depth to case-off all formations in the shallow zone and shall be cemented with sufficient cement to fill the annular space back of the pipe from the casing seat to the surface or to the bottom of the cellar.
  - (b) Cementing procedures and casing tests for the intermediate string shall be the same as provided under sub-sections IV (3), (c), (f) and (g) for the salt protection string.
- (5) Production String:
- (a) A production string shall be set on top or through the oil or gas pay zone and shall be cemented as follows:
    - (i) For wells drilled to the shallow zone the production string shall be cemented to the surface if the salt protection string was cemented only with a nominal volume for testing purposes, in which case the salt protection string can be cut and pulled before the production string is cemented; provided, that if the salt protection string was cemented to the surface, the production string shall be cemented with a volume adequate to protect the pay zone and the casing above such zone.
    - (ii) For wells drilled to the deep zone, the production string shall be cemented with a volume adequate to protect the pay zone and the casing above such zone; provided, that if no intermediate string shall have been run and cemented to the surface, the production string shall be cemented to the surface.

- (b) Cementing procedures and casing tests for the production string shall be the same as provided under sub-sections IV (3) (c), (f) and (g) for the salt protection string.

V

DRILLING FLUID FOR SALT SECTION

The fluid used while drilling the salt section shall consist of water, to which has been added sufficient salts of a character common to the zone penetrated to completely saturate the mixture. Other admixtures may be added to the fluid by the operator in overcoming any specific problem. This requirement is specifically intended to prevent enlarged drill holes.

VI

PLUGGING AND ABANDONMENT OF WELLS

All wells heretofor and hereafter drilled within Areas "A" and "B" shall be plugged in a manner that will provide a solid cement plug through the salt section and prevent liquids or gases from entering the hole above or below the salt section.

VII

LOCATIONS FOR TEST WELLS

Before drilling for oil or gas on lands in Areas "A" or "B", a map or plat showing the location of the proposed well shall be prepared by the well operator and copy sent by registered mail to the potash lessee involved, if any. Upon proper showing of such notice and if no objection to the location of the proposed well is made by the potash lessee within ten days, a drilling permit may be issued and the work may proceed. If, however, the location of the proposed well is objected to by the potash lessee on the grounds that the location of the well is not in accordance with the foregoing regulations, the potash lessee may file a written objection within ten days for consideration and decision by the Oil Conservation Commission.

VIII

INSPECTION OF DRILLING AND MINING OPERATIONS

A representative of the potash lessee may be present during drilling, cementing, casing, and plugging of all oil or gas wells on his lease to observe conformance with these regulations. Likewise, a representative of the oil and gas lessee may inspect mine workings on his lease to observe conformance with these regulations.

IX

FILING OF WELL AND MINE SURVEYS

Each oil and gas lessee shall furnish not later than January 31st of each year to the Oil Conservation Commission and to the potash lessees involved certified directional surveys from the surface to a point below the lowest known potash-bearing horizon for each oil or gas well drilled in Area "A" during the preceding calendar year. Each potash lessee shall furnish not later than January 31st of each year to the Oil Conservation Commission and to each oil and gas lessee involved, certified plat of survey of the location of open mine workings underlying outstanding oil and gas leases.

X

APPLICABILITY OF STATEWIDE RULES AND REGULATIONS

All general statewide rules and regulations of the Oil Conservation Commission governing the development, operation, and production of oil and gas in the State of New Mexico not inconsistent or in conflict herewith, are hereby adopted and made applicable to the areas described herein.

XI

ADOPTION

The foregoing Rules and Regulations are hereby adopted by the Oil Conservation Commission and adopted, ratified and confirmed by the Commissioner of Public Lands of the State of New Mexico this \_\_\_\_\_ day of November, 1951.

DONE at Santa Fe, New Mexico this 9th day of November, 1951.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

GUY SHEPARD, Member

R. R. SPURRIER, Secretary

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GUY SHEPARD  
Commissioner of Public Lands