

Case. Number.

4435

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Application,  
Transcripts.

Sm all Exhibts.

ETC.

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

209 SIMMS BLDG. P.O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO



BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
September 30, 1970

EXAMINER HEARING

-----  
IN THE MATTER OF: )

Application of Blackrock Oil )  
Company for a dual completion )  
and salt water disposal, Lea )  
County, New Mexico. )  
-----

Case No. 4435

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

I N D E X

Page

O. DOYLE BUTLER

Testimony by the Witness

3

E X H I B I T S

Offered and

Marked

Admitted

Applicant's Exhibits Nos. 1 thru 6

3

8

MR. NUTTER: We will call the next Case, No. 4435.

MR. HATCH: Case No. 4435. Application of Blackrock Oil Company for a dual completion and salt water disposal, Lea County, New Mexico.

(Witness sworn.)

O. DOYLE BUTLER

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

THE WITNESS: I am O. Doyle Butler, Midland, Texas, President of Blackrock Oil Company. I have 6 Exhibits to tender.

(Whereupon, Applicant's Exhibits Nos. 1 thru 6, were marked for identification.)

THE WITNESS: The Exhibits submitted with this Application are: No. 1, C-107 Application for Multiple Completion. No. 2, Revised C-108, Application for Disposal of Salt Water. No. 3, Diagrammatic Sketch of Dual Completion. No. 4, Area plat. No. 5, Diagrammatic Sketch of Salt Water Injection Equipment. No. 6, Electric Log of Interval.

With regard to this Application, a maximum operating pressure of 1900 P.S.I. was determined based on the down-hole equipment. This is a correction to the pressure noted on the original C-108 that was submitted. This pressure was calculated as follows: Since no temperature

survey was run on this well, the data from the east offset was used. In the east offset,  $4\frac{1}{2}$  inch casing was set at 9905 feet in a 7 and  $7/8$  inch hole and cemented with 375 sacks of in-core 50-50 pause, 2 percent gell. A temperature survey indicated the top was cemented 8100 feet. This was 1805 feet of fill or 4.8 feet per sack of cement.

The subject well, Mobil-Atlantic Federal No. 1 set  $4\frac{1}{2}$  inch casing at 9905 feet in a 7 and  $7/8$  inch hole and was cemented with 220 sacks of 50-50 pause, 2 percent gell. Using the 4.8 feet per sack fill value, this would be 1056 feet of fill or a cement top of 8849 feet. This is also a correction to the calculated value noted on the original Form C-108 that was submitted.

During the primary cementing on this well, approximately 100 barrels of fresh water was pumped ahead of the cement for well-bore filter cake removal. Assuming that the disposed water will be injected into the zone at 4980 feet, the external hydrostatic pressure on the  $4\frac{1}{2}$  inch casing at the top of the cement would consist of zero to 4980 feet, pressure exerted by Pennsylvanian Formation water, and from 4980 to 8849 feet, fresh water that was pumped ahead of this cement. This is 4980 times .34, times 1.075, specific gravity, Pennsylvanian water equals 2323 P.S.I. plus 8849 feet, minus 4980 feet times

434 is equal to 1679 P.S.I. This total is 4002 P.S.I.

The external flap is a  $4\frac{1}{2}$  inch 11-6 N-80 Casing at 5930 P.S.I. resulting in the maximum operating pressure of 1900 P.S.I. This, of course, assumes the casing is completely dry internally.

A second precautionary measure, if you will refer to Exhibit 5, is a pressure release return line. This line is to be used anytime the well is being worked on while the packer is unseated. The return line is open which allows the well to back-flow into the salt water receiving tank.

On August 26, 1970, with the permission of the New Mexico Oil Conservation Commission District Supervisor, injection tests were run by the  $4\frac{1}{2}$  inch by 8 and  $5/8$  inch casing annulus. The initial rate was 2.5 barrels per minute or 3600 barrels per day at 1600 P.S.I. 500 gallons of non-emulsion acid was pumped and the rate after acidizing was 2.8 barrels per minute or 4032 barrels per day at 1200 P.S.I.

Apparently the Mobil-Atlantic Federal No. 1 produces 200 barrels of oil and 40 barrels of water daily. And the Mobil-Atlantic Federal No. 2 produces 400 barrels of oil and 20 barrels of water daily. Therefore, our daily injection of salt water is estimated to be 60 barrels

of water per day. At this rate, the injection pressure should remain below 1200 P.S.I.

Also, a closed system will be utilized for injection and, in addition, an inhibitor will also be injected with the salt water.

It should be noted that there is a San Andres Salt Water Disposal Well located in Unit "I" Section 10, Township 9 South, Range 36 East. This well has a surface injection pressure of between 2200 and 2400 P.S.I., however, this well is injecting salt water into an open-hole section that is only 300 feet below the 8 and 5/8 inch casing shoe, and it is probably not injecting into this zone noted on our log between 4960 to 5000 feet which is approximately 800 feet below the 8 and 5/8 inch casing shoe.

The anticipated zone of injection is the Lower San Andres as noted on the log from 4960 to 5000 which has 100 percent water saturation in a very high porosity.

In conclusion, it is believed a disposal as outlined will be safe and will not in any way endanger or interfere with production from the subject or surrounding wells.

MR. NUTTER: What did you say the production is, Mr. Butler, on that No. 1 well?

THE WITNESS: The No. 1 is producing 200 barrels of oil and 40 barrels of water.

MR. NUTTER: And the other one is making 400 barrels of oil and 20 of water?

THE WITNESS: Right. The other one is still flowing. The No. 1 well went on pump last month.

MR. NUTTER: What formations have any porosity that would be open here?

THE WITNESS: The only possibility would be the Abo and we drill-stem tested this in the well to the east, and I don't think it would be open because it is about 9000 feet and I believe our cement would cover it.

MR. NUTTER: What would be exposed here in this open-hole interval from 4,53 to 9205? We must put something in the Order, see, because they are exposed and they could take water.

THE WITNESS: San Andres, Glorieta, Clear Fork. I believe that would be -- well, your Wolfcamp -- you are getting right down close to the Abo now, but the Abo is covered with cement. We also drill-stem tested the Abo in the east well and got no recovery whatsoever.

MR. NUTTER: So the only thing would be the San Andres and the Glorieta?

THE WITNESS: Yes, I am relatively sure.



MR. NUTTER: And that is where the water will go?

THE WITNESS: Right.

MR. NUTTER: Are there any other questions of  
this witness?

He may be excused.

(Witness dismissed.)

MR. NUTTER: Do you have anything further,  
Mr. Butler?

THE WITNESS: No, sir.

MR. NUTTER: Does anyone have anything they  
wish to offer in Case No. 4435?

We will take the case under advisement.

MR. NUTTER: Do you want to offer your Exhibits?

THE WITNESS: Yes.

MR. NUTTER: Applicant's Exhibits Nos. 1 through  
6 will be admitted in evidence.

(Whereupon, Applicant's Exhibits  
Nos. 1 thru 6 were offered and  
admitted in evidence. )

MR. NUTTER: We will take the case under  
advisement.

The Hearing is adjourned.

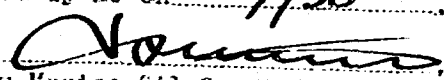
(Whereupon, the Hearing was adjourned at  
approximately 5:31 P.M.)

STATE OF NEW MEXICO )  
COUNTY OF SANTA FE ) SS.

I, RICHARD L. NYE, Court Reporter, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

  
RICHARD L. NYE, Court Reporter

My commission expires April 8, 1971.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 4435, heard by me on 9/30, 1970.  
  
Examiner  
New Mexico Oil Conservation Commission

# Blackrock Oil Company

1000 V & J TOWER - MIDLAND, TEXAS 79701 - 915 683-5691

O. DOYLE BUTLER  
President

PEGGY L. HOLDEN  
Office Manager

April 22, 1971

71 APR 23 AM 8 04

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION  
P. O. Box 2088  
Santa Fe, New Mexico 87501

File  
↓  
Re: Case No. 4435  
Order No. R-4039

Gentlemen:

In accordance with provision of Order No. R-4039, the attached  
corrosive return report is submitted.

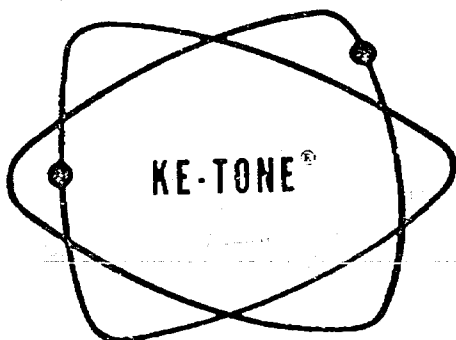
Yours very truly,

BLACKROCK OIL COMPANY

*O. Doyle Butler*  
O. Doyle Butler

ODB:jh

Attachment



TELEPHONE: HOBBS 393-7751  
Area Code 505

UNITED CHEMICAL CORPORATION  
OF NEW MEXICO

601 NORTH LEECH

HOBBS, NEW MEXICO 88240

P. O. BOX 1499

April 20, 1971

Blackrock Oil Company  
V & J Tower  
Midland, Texas 79701

Attention: Mr. Doyle Butler

Dear Mr. Butler:

A coupon was removed from the Mobil Atlantic Federal #1 on April 8, 1971. The corrosion rate on this coupon was 0.001 MPY. The coupon had been exposed for 112 days.

The corrosion coupon indicates excellent corrosion protection in this system. The coupon is enclosed for your inspection.

Yours very truly,

UNITED CHEMICAL CORP. of N.M.

Wayne Roberts  
Manager of Technical Services

WR/lr

cc: Mr. Alvin Watson

////// *Makes Water Work* //////////////////////////////////////



## OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

P. O. BOX 2088 - SANTA FE

87501

GOVERNOR  
DAVID F. CARGO  
CHAIRMAN

LAND COMMISSIONER  
ALEX J. ARMIJO  
MEMBER

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

October 6, 1970

Mr. Doyle Butler, President  
Blackrock Oil Company  
1000 V & J Tower  
Midland, Texas 79701

Re: Case No. 4435  
Order No. R-4039  
Applicant:  
Blackrock Oil Company

Dear Sir:

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

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x

Artesia OCC

Aztec OCC

Other State Engineer Office

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

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

CASE No. 4435  
Order No. R-4039

APPLICATION OF BLACKROCK OIL COMPANY  
FOR A DUAL COMPLETION AND SALT WATER  
DISPOSAL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on September 30, 1970, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 6th day of October, 1970, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Blackrock Oil Company, seeks authority to complete its Mobil Atlantic Well No. 1, located in Unit D of Section 10, Township 9 South, Range 36 East, NMPM, Lea County, New Mexico, as a dual completion to produce oil from the Allison-Pennsylvanian Pool through 2 3/8-inch tubing and to dispose of produced salt water down the annulus between the 8 5/8-inch intermediate casing string and the 4 1/2-inch production casing string into the San Andres formation in the open-hole interval from 4300 feet to 5045 feet and possibly other formations between the 8 5/8-inch casing shoe at 4153 feet and the top of the cement at 9205 feet.

(3) That the produced salt water should be continuously treated prior to injection to prevent casing corrosion and that coupon corrosion tests should be conducted continuously on said well and the results thereof filed quarterly with the Commission until further notice from the Secretary-Director of the Commission.

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CASE No. 4435

Order No. R-4039

(4) That approval of the dual completion and salt water disposal as set out above will prevent the drilling of unnecessary wells, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Blackrock Oil Company, is hereby authorized to complete its Mobil Atlantic Well No. 1, located in Unit D of Section 10, Township 9 South, Range 36 East, NMPM, Lea County, New Mexico, as a dual completion to produce oil from the Allison-Pennsylvanian Pool through 2 3/8-inch tubing and to dispose of produced salt water down the annulus between the 8 5/8-inch intermediate casing string and the 4 1/2-inch production casing string into the San Andres formation in the open-hole interval from 4300 feet to 5045 feet and possibly other formations between the 8 5/8-inch casing shoe at 4153 feet and the top of the cement at 9205 feet;

PROVIDED HOWEVER, that the produced salt water shall be continuously treated prior to injection and coupon corrosion tests shall be conducted continuously on said well and the results thereof filed quarterly with the Commission until further notice from the Secretary-Director of the Commission;

PROVIDED FURTHER, that the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

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

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



STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

DAVID F. CARGO, Chairman

ALEX J. ARMIJO, Member

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

Docket No. 22-70

DOCKET: EXAMINER HEARING - WEDNESDAY - SEPTEMBER 30, 1970

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

The following cases will be heard before Elvis A. Utz, Examiner, or Daniel S. Nutter, Alternate Examiner:

CASE 4416: (Continued from the September 16, 1970, Examiner Hearing)

Application of Robert L. Parker Trust for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a cooperative waterflood project in the Langlie Mattix Pool on its George L. Erwin Lease by the injection of water through its Erwin Well No. 2 located in Unit L of Section 35, Township 24 South, Range 37 East, Lea County, New Mexico.

CASE 4422: (Continued from the September 2, 1970, Examiner Hearing)

Application of Atlantic Richfield Company for amendment of Order No. R-3588, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3588, which order authorized the disposal of produced salt water into the Yates and Seven Rivers formation in the perforated and open-hole interval from 3110 feet to 3300 feet in the Sinclair ARC Federal Well No. 1 located in Unit O of Section 9, Township 20 South, Range 33 East, West Teas Pool, Lea County, New Mexico. Applicant now seeks authority to dispose into said zones in the interval from 3010 feet to 3300 feet.

CASE 4222: (Reopened)

In the matter of Case 4222 being reopened pursuant to the provisions of Order No. R-3850, which order established 80-acre spacing units for the West Sawyer-San Andres Pool, Lea County, New Mexico, for a period of one year. All interested parties may appear and show cause why said pool should not be developed on 40-acre spacing units and present evidence as to whether or not the subject pool is in fact an associated reservoir.

CASE 4429: Application of Union Texas Petroleum Corporation for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Langlie-Jal Unit Area comprising 3,748 acres, more or less, of federal, state, and fee lands in Townships 24 and 25 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico.

CASE 4430: Application of Union Texas Petroleum Corporation of a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its Langlie-Jal Unit by the injection of water into the Seven Rivers and Queen formations through 46 wells in Townships 24 and 25 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico.



(Reopened)

CASE 4173: In the matter of Case 4173 being reopened pursuant to the provisions of Order No. R-3811-A, which order extended 80-acre spacing units and a limiting gas-oil ratio of 4000 cubic feet of gas per barrel of oil for the Hobbs-Drinkard Pool, Lea County, New Mexico, for a period of 90 days. All interested parties may appear and show cause why said pool should not be developed on 40-acre spacing, why the limiting gas-oil ratio should not revert to 2000 to one, and/or why all casing-head gas produced by wells in the pool should not be reinjected.

CASE 4420: (Continued and Readvertised)

Application of Xplor Company for the creation of a new gas pool and special rules therefor, a dual completion, and authority to commingle, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Pennsylvanian gas pool for its Cleveland Well No. 1 located in Unit G of Section 23, Township 12 South, Range 32 East, Lea County, New Mexico, and for the promulgation of special rules therefor, including a provision for 160-acre spacing units. In the alternative, applicant seeks approval of a non-standard 160-acre gas proration unit comprising the NE/4 of said Section 23 to be dedicated to said well. Applicant also seeks authority to dually complete said well in such a manner as to produce oil from the East Caprock-Devonian Pool and gas from said Pennsylvanian formation and to commingle on the surface the liquids from said zones.

CASE 4431: Application of William A. and Edward R. Hudson for unorthodox well locations and a dual completion, Lea County, New Mexico. Applicants, in the above-styled cause, seek authority to drill a well at an unorthodox location (off pattern) 660 feet from the South line and 1980 feet from the West line of Section 15, Township 17 South, Range 32 East, Lea County, New Mexico, for the production of oil from the Baish-Wolfcamp and Maljamar-Abo Pools and to dually complete said well in the subject pools.

CASE 4432: Application of MWJ production Company for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the rules governing the Baum-Upper Pennsylvanian Pool to permit the drilling of an oil well at an unorthodox location 2310 feet from the South line and 990 feet from the West line of Section 5, Township 14 South, Range 33 East, Lea County, New Mexico.

CASE 4433: In the matter of the hearing called by the Oil Conservation Commission upon its own motion to permit Allied Chemical Corporation to appear and show cause why said corporation should be permitted to institute its proposed waterflood project in its Milnesand (San Andres) Unit Area, Milnesand-San Andres Pool, Roosevelt County, New Mexico, by the injection of fresh water; said corporation testified in the hearing that authorized said waterflood project that produced salt water be used for waterflooding purposes.

Examiner Hearing - September 30, 1970

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Docket No. 22-70

CASE 4423: (Continued from the September 2, 1970, Examiner Hearing)

Application of Union Oil Company of California for compulsory pooling, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests down to and including the San Andres formation underlying the N/2 NE/4 of Section 20, Township 8 South, Range 38 East, Bluitt-San Andres Associated Pool, Roosevelt County, New Mexico. Said acreage to be dedicated to a well to be drilled at an orthodox location in the NW/4 NE/4 of said Section 20. Also to be considered will be the cost of drilling said well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges for supervision of said well.

CASE 4434: Application of Union Oil Company of California for the creation of a new gas pool and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new gas pool for its Pipeline Federal Well No. 1 located in Section 4, Township 19 South, Range 34 East, Lea County, New Mexico. Applicant further seeks the promulgation of special rules therefor, including a provision for 640-acre spacing and proration units and fixed well location requirements.

← CASE 4435: Application of Blackrock Oil Company for a dual completion and salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete its Mobil Atlantic Well No. 1 located in Unit D of Section 10, Township 9 South, Range 36 East, Lea County, New Mexico, in such a manner as to produce oil from the Pennsylvanian formation through tubing and to dispose of produced salt water into the San Andres formation from 4300 feet to 5045 feet and possibly other formations between the 8 5/8-inch casing shoe at 4153 feet and the top of the cement at 9205.

OIL CONSERVATION COMMISSION  
I DISTRICT

70 SEP 25 AM 8 27

Case 4435

OIL CONSERVATION COMMISSION  
BOX 871  
SANTA FE, NEW MEXICO

DATE Sept. 22, 1970

Re: Proposed NSP \_\_\_\_\_  
Proposed Triple \_\_\_\_\_  
Proposed NSL \_\_\_\_\_  
Proposed NFO \_\_\_\_\_  
Proposed DC X \_\_\_\_\_

Gentlemen:

I have examined the application dated 9/11/70

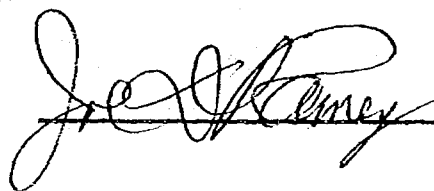
for the Blackrock Oil Co. Mobil Atlantic Federal #1-D 10-9-36  
Operator Lease and Well No. S-T-R

and my recommendations are as follows:

O.K.---J.D.R.

O.K.---J.W.R.

Yours very truly,



NEW MEXICO OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO  
APPLICATION FOR MULTIPLE COMPLETION

Form C-107  
5-1-61

Operator <b>Blackrock Oil Company</b>		County <b>Lea</b>	Date <b>September 9, 1970</b>
Address <b>1000 V &amp; J Tower, Midland, Texas 79701</b>		Lease <b>Mobil Atlantic Fed.</b>	Well No. <b>1</b>
Location of Well <b>D</b>	Section <b>10</b>	Township <b>9-S</b>	Range <b>36-E</b>

1. Has the New Mexico Oil Conservation Commission heretofore authorized the multiple completion of a well in these same pools or in the same zones within one mile of the subject well? YES \_\_\_\_\_ NO X
2. If answer is yes, identify one such instance: Order No. \_\_\_\_\_; Operator Lease, and Well No.: \_\_\_\_\_

3. The following facts are submitted:	Upper Zone	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	<b>San Andres</b>		<b>Pennsylvanian</b>
b. Top and Bottom of Pay Section (Perforations)	<b>4300-5045 Open hole</b>		<b>9837-9861 Perforations</b>
c. Type of production (Oil or Gas)	<b>Salt Water Disposal</b>		<b>Oil</b>
d. Method of Production (Flowing or Artificial Lift)	<b>Injection Pump</b>		<b>Hydraulic Pumping</b>

4. The following are attached. (Please check YES or NO)

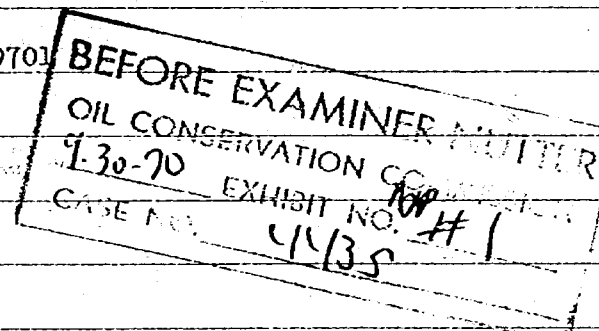
Yes	No	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	a. Diagrammatic Sketch of the Multiple Completion, showing all casing strings, including diameters and setting depths, centralizers and/or turbolizers and location thereof, quantities used and top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	c. Waivers consenting to such multiple completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.*
<input checked="" type="checkbox"/>	<input type="checkbox"/>	d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed it shall be submitted as provided by Rule 112-A.)

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

**Mobil Oil Corporation, Box 633, Midland, Texas 79701**

**Tenneco Oil Company, Wilco Building, Midland, Texas 79701**

**BTA Oil Producers, 104 S. Pecos, Midland, Texas 79701**



6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES X NO \_\_\_\_\_. If answer is yes, give date of such notification September 9, 1970.

CERTIFICATE: I, the undersigned, state that I am the President of the Blackrock Oil Company (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

*[Signature]*

Signature

O. D. Butler

\*Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.

NOTE: If the proposed multiple completion will result in an unorthodox well location and/or a non-standard perforation unit in one or more of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

NEW MEXICO OIL CONSERVATION COMMISSION  
APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

REVISED

OPERATOR <b>Blackrock Oil Company</b>		ADDRESS <b>1000 V &amp; J Tower, Midland, Texas 79701</b>	
LEASE NAME <b>Mobil Atlantic Fed.</b>	WELL NO. <b>1</b>	FIELD <b>Allison Penn.</b>	COUNTY <b>Lea</b>
LOCATION UNIT LETTER <b>D</b> ; WELL IS LOCATED <b>660</b> FEET FROM THE <b>North</b> LINE AND <b>660</b> FEET FROM THE LINE, SECTION <b>10</b> TOWNSHIP <b>0-S</b> RANGE <b>36-E</b> NMPM.			
CASING AND TUBING DATA			
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT
SURFACE CASING	<b>13 3/8</b>	<b>402</b>	<b>400</b>
INTERMEDIATE	<b>8 5/8</b>	<b>4153</b>	<b>350</b>
LONG STRING	<b>4 1/2</b>	<b>9905</b>	<b>220</b>
TUBING	<b>2 3/8</b>	<b>9860</b>	NAME, MODEL AND DEPTH OF TUBING PACKER <b>Baker Model "R" @ 9860'</b>
NAME OF PROPOSED INJECTION FORMATION <b>San Andres</b>		TOP OF FORMATION <b>4300'</b>	BOTTOM OF FORMATION <b>5045'</b>
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? <b>4 1/2" x 8 5/8" casing annulus</b>		PERFORATIONS OR OPEN HOLE? <b>Open hole</b>	PROPOSED INTERVAL(S) OF INJECTION <b>4300 - 5045</b>
IS THIS A NEW WELL DRILLED FOR DISPOSAL? <b>No</b>	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? <b>Oil Production (Penn. Formation)</b>		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? <b>Yes</b>
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH <b>Penn. 9837-9861, 220 sacks cement behind pipe</b>			
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA <b>355</b>		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA <b>None</b>	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA <b>9837</b>
ANTICIPATED DAILY INJECTION VOLUME (BBL'S.) <b>150</b>	MINIMUM <b>600</b>	MAXIMUM <b>600</b>	OPEN OR CLOSED TYPE SYSTEM <b>Closed</b>
IS INJECTION TO BE BY GRAVITY OR PRESSURE? <b>Pressure</b>		APPROX. PRESSURE (PSI) <b>1900 (Max.)</b>	
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE <b>Yes</b>		NATURAL WATER IN DISPOSAL ZONE <b>Yes</b>	
ARE WATER ANALYSES ATTACHED? <b>No</b>			
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) <b>Allied Farms Development Co., Inc., Box 1238, Levelland, Texas 79336</b>			
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL <b>Mobil Oil Corporation, Box 633, Midland, Texas 79701</b> <b>Tenneco Oil Company, Wilco Building, Midland, Texas 79701</b> <b>BTA Oil Producers, 104 S. Pecos, Midland, Texas 79701</b>			
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>BEFORE EXAMINER NUTTER</b>  OIL CONSERVATION COMMISSION  9-30-70  CASE NO. 1435 </div>			
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? <b>Yes</b>	SURFACE OWNER <b>Yes</b>		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL <b>Yes</b>
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B) <b>Yes</b>	PLAT OF AREA <b>Yes</b>	ELECTRICAL LOG <b>Yes</b>	DIAGRAMMATIC SKETCH OF WELL <b>Yes</b>

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

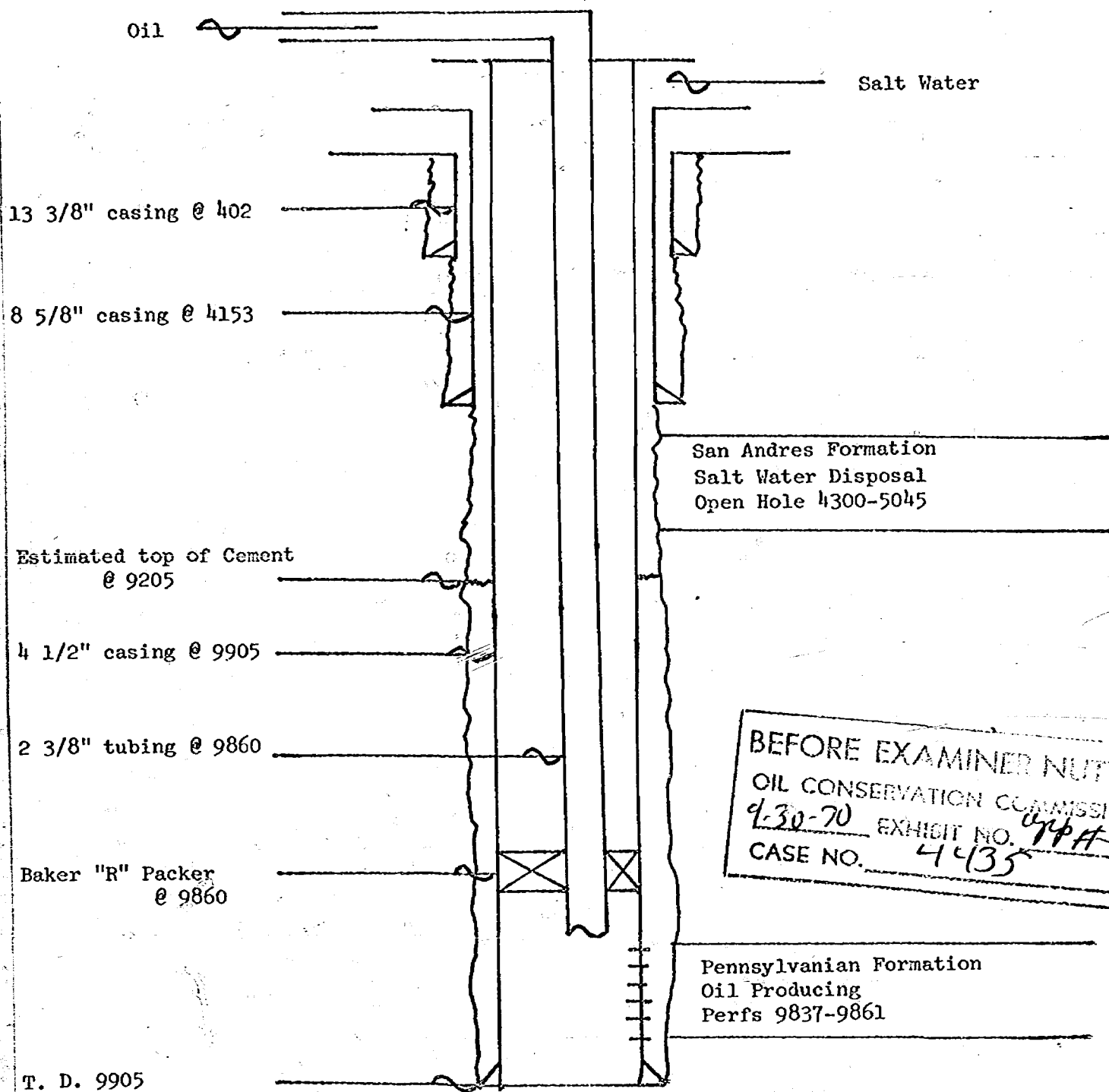
  
(Signature)

**President**  
(Title)

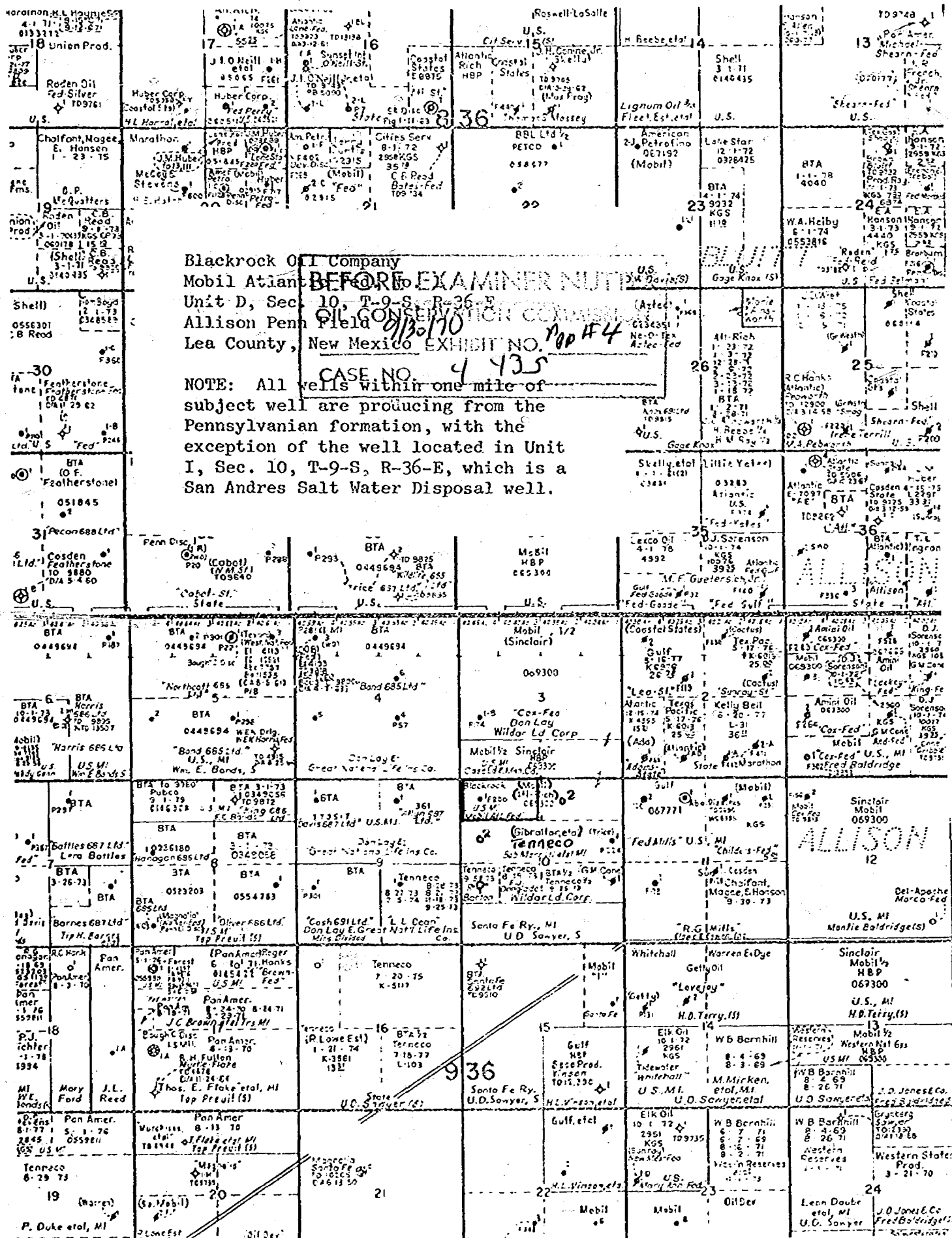
**September 28, 1970**  
(Date)

NOTE: Should waivers from the surface owner and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

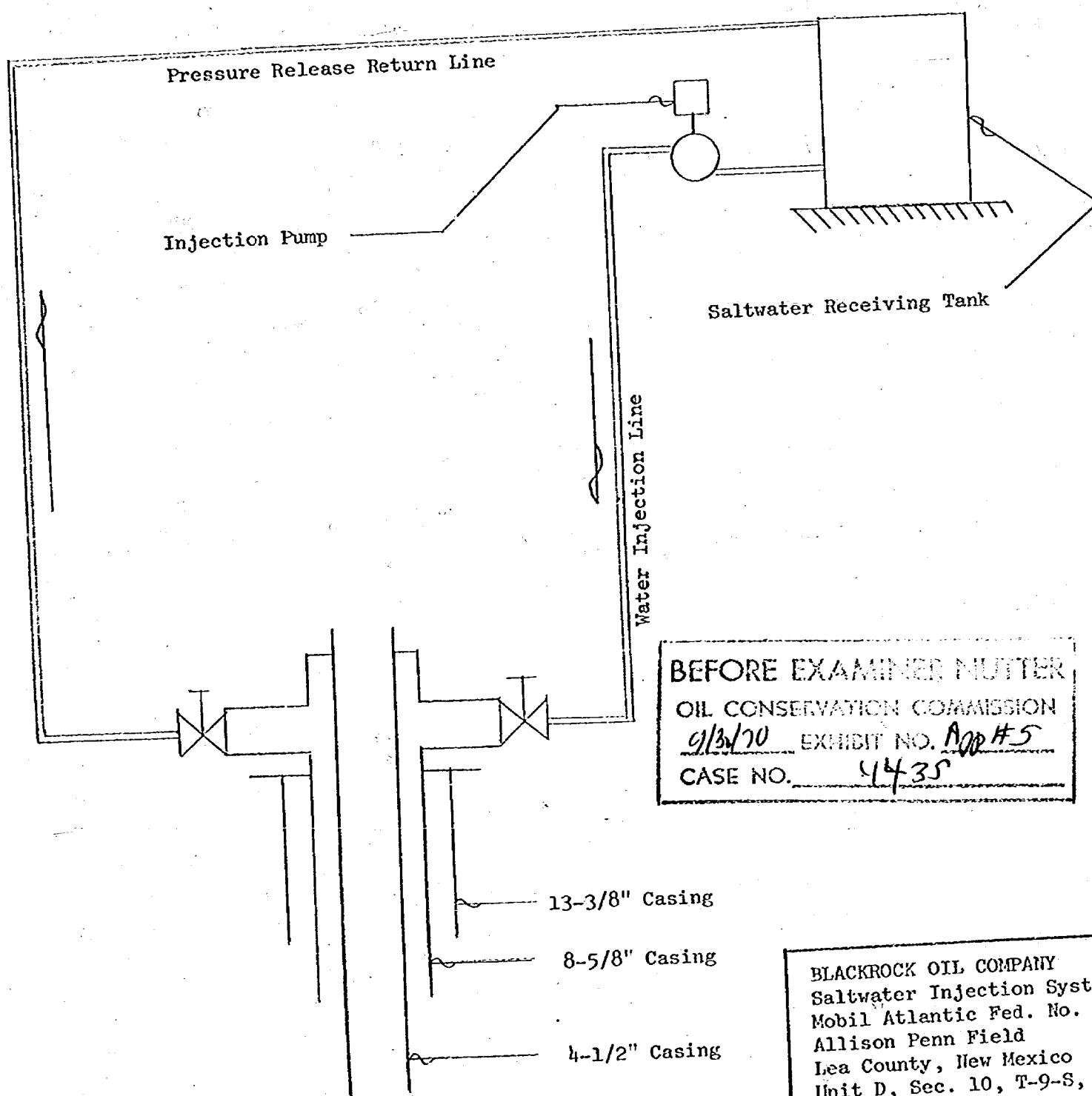
DIAGRAMATIC SKETCH



Blackrock Oil Company  
Proposed Dual Completion  
Mobil Atlantic Fed. No. 1  
Allison Penn Field  
Lea County, New Mexico  
Unit D, Sec. 10, T-9-S, R-36-E



DIAGRAMATIC SKETCH  
SALT WATER INJECTION SYSTEM



BEFORE EXAMINER MUTTER  
OIL CONSERVATION COMMISSION  
9/3/70 EXHIBIT NO. APP #5  
CASE NO. 4435

BLACKROCK OIL COMPANY  
Saltwater Injection System  
Mobil Atlantic Fed. No. 1  
Allison Penn Field  
Lea County, New Mexico  
Unit D, Sec. 10, T-9-S, R-36-E



O. DOYLE BUTLER

Consulting Petroleum Engineer

1000 V&J TOWER

MIDLAND, TEXAS 79701

BLACKROCK OIL COMPANY

Property Management

AREA CODE 915

PHONE 683-5691

September 10, 1970

SEP 11 8 17  
1970

Case 4435

Mr. A. L. Porter  
Secretary-Director  
New Mexico Oil Conservation Commission  
Box 2088  
Santa Fe, New Mexico 87501

RE: Administrative Approval for  
Multiple Completion and Salt  
Water Disposal  
Blackrock Oil Company  
Mobil Atlantic Fed. No. 1  
Allison Penn Field  
Lea County, New Mexico

Dear Sir,

In accordance with Rule 112-A (IV) and by the provision of Rule 112-A (II)(a), being the Paul DeCleva, Bagley State No. 1, Unit D, Section 34, T-11-S, R-33-E, it is respectfully requested that administrative approval for Multiple Completion be granted for the above noted well.

Also in accordance with Rule 701-C it is requested that administrative approval be granted for an exception to Rule 701-A for Salt Water Disposal.

Attached are Forms C-107, C-108, Diagramatic Sketch of Multiple Completion, Plat and Electric log. Copies of this letter and attachments are being mailed this date to all offset operators and the surface owner or lessee. Should any further information be required, please advise.

Yours very truly,

BLACKROCK OIL COMPANY

  
O. Doyle Butler

ODB:ph

CC: NMOCC - Hobbs

USGS - Hobbs (2)

BOOKET MAILED

Date 9-18-70

NEW MEXICO OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO  
APPLICATION FOR MULTIPLE COMPLETION

Form C-107  
5-1-61

11 AM 8 17  
SEP 11

Case 4435

Operator <b>Blackrock Oil Company</b>		County <b>Lea</b>		Date <b>September 9, 1970</b>
Address <b>1000 V &amp; J Tower, Midland, Texas 79701</b>		Lease <b>Mobil Atlantic Fed.</b>		Well No. <b>1</b>
Location of Well <b>D</b>	Unit <b>10</b>	Section <b>9-S</b>	Range <b>36-E</b>	

1. Has the New Mexico Oil Conservation Commission heretofore authorized the multiple completion of a well in these same pools or in the same zones within one mile of the subject well? YES \_\_\_\_\_ NO X

2. If answer is yes, identify one such instance: Order No. \_\_\_\_\_ ; Operator Lease, and Well No.: \_\_\_\_\_

3. The following facts are submitted:	Upper Zone	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	<b>San Andres</b>		<b>Pennsylvanian</b>
b. Top and Bottom of Pay Section (Perforations)	<b>4300-5045 Open hole</b>		<b>9837-9861 Perforations</b>
c. Type of production (Oil or Gas)	<b>Salt Water Disposal</b>		<b>Oil</b>
d. Method of Production (Flowing or Artificial Life)	<b>Injection Pump</b>		<b>Hydraulic Pumping</b>

4. The following are attached: (Please check YES or NO)

- |                                     |                                     |   |
|-------------------------------------|-------------------------------------|---|
| Yes                                 | No                                  |   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | a. Diagrammatic Sketch of the Multiple Completion, showing all casing strings, including diameters and setting depths, centralizers and/or turbolizers and location thereof, quantities used and top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | c. Waivers consenting to such multiple completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.*  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed it shall be submitted as provided by Rule 112-A.)   |

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

**Mobil Oil Corporation, Box 633, Midland, Texas 79701**

**Tenneco Oil Company, Wilco Building, Midland, Texas 79701**

**BTA Oil Producers, 104 S. Pecos, Midland, Texas 79701**

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES X NO \_\_\_\_\_. If answer is yes, give date of such notification **September 9, 1970**.

CERTIFICATE: I, the undersigned, state that I am the **President** of the **Blackrock Oil Company** (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.



Signature

**O. D. Butler**

\*Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.

NOTE: If the proposed multiple completion will result in an unorthodox well location and/or a non-standard proration unit in one or more of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

Form C-108  
Revised 3-1-68

Case 4435

NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR <b>Blackrock Oil Company</b>		ADDRESS <b>1000 V &amp; J Tower, Midland Texas 79701</b>	
LEASE NAME <b>Mobil Atlantic Fed.</b>	WELL NO. <b>1</b>	FIELD <b>Allison Penn.</b>	COUNTY <b>Lea</b>
LOCATION UNIT LETTER <b>D</b> ; WELL IS LOCATED <b>660</b> FEET FROM THE <b>North</b> LINE AND <b>660</b> FEET FROM THE <b>West</b> LINE, SECTION <b>10</b> TOWNSHIP <b>9-S</b> RANGE <b>36-E</b> NMPM.			

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	13 3/8	402	400	Circulated	Observed
INTERMEDIATE	8 5/8	4153	350	2281	Calculated
LONG STRING	4 1/2	9905	220	9205	Calculated
TUBING	2 3/8	9860	NAME, MODEL AND DEPTH OF TUBING PACKER <b>Baker Model "R" @ 9860'</b>		
NAME OF PROPOSED INJECTION FORMATION <b>San Andres</b>		TOP OF FORMATION <b>4300'</b>		BOTTOM OF FORMATION <b>5045'</b>	
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? <b>4 1/2" x 8 5/8" casing annulus</b>		PERFORATIONS OR OPEN HOLE? <b>Open hole</b>		PROPOSED INTERVAL(S) OF INJECTION <b>4300 - 5045</b>	
IS THIS A NEW WELL DRILLED FOR DISPOSAL? <b>No</b>		IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? <b>Oil Production (Penn. Formation)</b>		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? <b>Yes</b>	
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH: <b>Penn. 9837-9861, 220 sacks cement behind pipe</b>					
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA <b>355</b>		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA <b>None</b>		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA <b>9837</b>	
ANTICIPATED DAILY INJECTION VOLUME (BBLS.) <b>150</b>	MINIMUM <b>150</b>	MAXIMUM <b>600</b>	OPEN OR CLOSED TYPE SYSTEM <b>Closed</b>	IS INJECTION TO BE BY GRAVITY OR PRESSURE? <b>Pressure</b>	APPROX. PRESSURE (PSI) <b>2100 (Max.)</b>
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE - <b>Yes</b>		WATER TO BE DISPOSED OF <b>Yes</b>		NATURAL WATER IN DISPOSAL ZONE <b>Yes</b>	ARE WATER ANALYSES ATTACHED? <b>No</b>
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) <b>Allied Farms Development Co., Inc., Box 1238, Levelland, Texas 79336</b>					
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL <b>Mobil Oil Corporation, Box 633, Midland, Texas 79701</b> <b>Tenneco Oil Company, Wilco Building, Midland, Texas 79701</b> <b>BTA Oil Producers, 104 S. Pecos, Midland, Texas 79701</b>					
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?		SURFACE OWNER <b>Yes</b>		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL <b>Yes</b>	
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)		PLAY OF AREA <b>Yes</b>		ELECTRICAL LOG <b>Yes</b>	DIAGRAMMATIC SKETCH OF WELL <b>Yes</b>

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

*OPRuth*  
(Signature)

President  
(Title)

September 9, 1970  
(Date)

NOTE: Should waivers from the surface owner and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

DIAGRAMATIC SKETCH

Case 4435

17  
AM  
SEP 70

Salt Water

13 3/8" casing @ 402

8 5/8" casing @ 4153

Estimated top of Cement  
@ 9205

4 1/2" casing @ 9905

2 3/8" tubing @ 9860

Baker "R" Packer  
@ 9860

San Andres Formation  
Salt Water Disposal  
Open Hole 4300-5045

Pennsylvanian Formation  
Oil Producing  
Perfs 9837-9861

T. D. 9905

Blackrock Oil Company  
Proposed Dual Completion  
Mobil Atlantic Fed. No. 1  
Allison Penn Field  
Lea County, New Mexico  
Unit D, Sec. 10, T-9-S, R-36-E

Blackrock Oil Company  
Mobil Atlantic Fed. No. 1  
Unit D, Sec. 10, T-9-S, R-36-E  
Allison Penn Field  
Lea County, New Mexico

(NOTE: All wells within one mile of  
subject well are producing from the  
Pennsylvanian formation, with the  
exception of the well located in Unit  
I, Sec. 10, T-9-S, R-36-E, which is a  
San Andres Salt Water Disposal well.)

DRAFT

GMH/esr

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

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

CASE No. 4435

Order No. R- 4039

APPLICATION OF BLACKROCK OIL COMPANY  
FOR A DUAL COMPLETION AND SALT WATER  
DISPOSAL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on September 30, 1970,  
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this \_\_\_\_\_ day of October, 1970, the Commission, a  
quorum being present, having considered the testimony, the record,  
and the recommendations of the Examiner, and being fully advised  
in the premises,

FINDS:

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

(2) That the applicant, Blackrock Oil Company, seeks author-  
ity to complete its Mobil Atlantic Well No. 1, located in Unit D  
of Section 10, Township 9 South, Range 36 East, NMPM, Lea County,  
New Mexico, as a dual completion to produce oil from the <sup>allison</sup> Pennsylv-  
anian <sup>Pool</sup> ~~formation~~ through 2 3/8-inch tubing and to dispose of  
produced salt water down the annulus between the 8 5/8-inch  
intermediate casing string and the 4 1/2-inch production  
casing string into the San Andres <sup>allison</sup> ~~formation~~ in the open-hole  
interval from 4300 feet to 5045 feet and possibly other formations  
between the 8 5/8-inch casing shoe at 4153 feet and the top of  
the cement at 9205 feet.

*the produced salt water should be continuously treated prior to injection to prevent casing corrosion and*

(3) That coupon corrosion tests should be conducted continuously on said well and the results thereof filed quarterly with the Commission until further notice from the Secretary-Director of the Commission.

(4) That approval of the dual completion and salt water disposal as set out above will prevent the drilling of unnecessary wells, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Blackrock Oil Company, is hereby authorized to complete its Mobil Atlantic Well No 1, located in Unit D of Section 10, Township 9 South, Range 36 East, NMPM, Lea County, New Mexico, as a dual completion to produce oil from the *allison - Pool* Pennsylvanian formation through *2 7/8* -inch tubing and to dispose of produced salt water down the annulus between the *8 5/8* -inch intermediate casing string and the *4 1/2* -inch *Albion* production casing string into the San Andres formation in the open-hole interval from 4300 feet to 5045 feet and possibly other formations between the 8 5/8-inch casing shoe at 4153 feet and the top of the cement at 9205 feet;

*the produced salt water should be continuously treated prior to injection and*

PROVIDED HOWEVER, that coupon corrosion tests shall be conducted continuously on said well and the results thereof filed quarterly with the Commission until further notice from the Secretary-Director of the Commission;

PROVIDED FURTHER, that the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

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

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