

CASE 4191: Application of GULF
OIL CORP. FOR SALT WATER DIS-
POSAL, ROOSEVELT COUNTY, N.M.

Case Number.

4191

Application

Transcripts.

Small Exhibits

ETC.

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

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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
August 27, 1969

IN THE MATTER OF:

Application of Gulf Oil
Corporation for salt water
disposal, Roosevelt County,
New Mexico

Case No. 4191

BEFORE: Elvis A. Utz
Examiner

TRANSCRIPT OF HEARING

MR. UTZ: The meeting will come to order. Does anyone present have any dismissals or continuances?

In view of the number of cases on the docket, I feel quite certain that we will not get any further than Case 4200 before lunch. I will be very surprised to get that far. If there is anyone here who has cases having numbers after 4200, you can feel free to do whatever you want to do. You are perfectly welcome to stay, but I am sure we won't get through.

Case 4191.

MR. HATCH: Application of Gulf Oil Corporation for salt water disposal, Roosevelt County, New Mexico.

MR. KASTLER: If the Examiner please, I am Bill Kastler, appearing on behalf of Gulf Oil Corporation and our witness this morning will be John H. Hoover.

MR. UTZ: Any other appearances?

MR. KELLAHIN: If the Examiner please, Jason Kellahin, Kellahin & Fox, Santa Fe, appearing on behalf of Franklin, Aston & Fair.

(Witness sworn.)

(Whereupon, Exhibits 1, 2 and 3 marked for identification.)

J O H N H. H O O V E R, a witness, called by the Applicant, having been first duly sworn, was examined

and testified as follows:

DIRECT EXAMINATION

BY MR. KASTLER:

Q For the record, will you please state your name, your position, where you reside and by whom you are employed and in what capacity?

A John Hoover. I work for Gulf Oil Corporation, Roswell, New Mexico, and am District Production Engineer.

Q Have you previously qualified as an expert witness to give testimony before the New Mexico Oil Commission?

A Yes, sir.

Q Mr. Hoover, what is Gulf seeking in this application?

A We are asking for authority to dispose of produced salt water into the San Andres formation in our Roosevelt "AN" State Well No. 3 in the Todd Lower San Andres Pool, Roosevelt County, New Mexico.

The water to be disposed of is produced from our Wells No. 1 and No. 2 on this lease. We are producing approximately 3 barrels of water per day at this time. However, we expect that the water will increase. We would like to have approval for the salt water disposal now for the well, the disposal well, now. According to the Rules for salt water disposal, we can produce up to 4 barrels

of water per day without putting it underground.

Q Will you please explain what is shown on Exhibit No. 1?

A Yes. Exhibit No. 1 is a lease plat showing the Roosevelt "AN" State Lease outlined in red. It is described as the east half of Section 32, Township 7 South, Range 36 East, Roosevelt County, New Mexico.

The proposed injection well is circled and colored in green. It is located 2180 feet from the south line and 1980 feet from the east line of this Section 32.

On this plat, all of the wells that are shown are producing wells in the Todd Lower San Andres Oil Pool. The only exception is the well in the northeast quarter of the southwest quarter of Section 36 and it's shown by an open circle with two cross lines on it, that that is a gas well in the Todd Upper San Andres Gas Pool.

Q Is the Roosevelt "AN" State Well No. 3 a producing well in the Todd Lower San Andres Oil Pool?

A It was drilled and cased to be a producer. However, the productive interval was low and produced a hundred per cent water. Well No. 3 is a hundred and two feet low to the Franklin Aston Cook, State No. 1 which is in the northwest quarter, southwest quarter of Section 32 and it is 96 feet low to our Roosevelt "AN" State Well No. 2 in

the southwest quarter northeast quarter.

Q What is shown on Exhibit No. 2?

A Exhibit No. 2 is a schematic diagram of the proposed injection well and we have 8 and 5/8ths inch casing set up 360 feet and the cement was circulated. We have 4 and 1/2 inch O. D. casing set at 4,425 feet, the cement is circulated. The well was drilled to the total depth of 4,445 feet and is plugged back to 4,420 feet. The perforations are from 4,408 feet to 4,410 feet and from 4,413 to 4,415 feet. We will have a Geiberson type A.F. Tension type retrievable packer set at approximately 4300 feet. We will have 2 and 3/8ths inch O. D. tubing which will be plastic coated internally. It will be set in the packer at 4300 feet and we will fill the tubing casing annulus with an inhibited fluid.

Q What is shown on Exhibit No. 3?

A Exhibit No. 3 is a log of the Roosevelt "AN" State Well No. 3. On this log, we have shown the top of the Rustler of 2130 feet, the top of the Yates at 2480 and the top of the San Andres at 3600 feet, and we show the "pie" zone which is a marker within the San Andres formation, shown at 4,146 feet. Again the perforations are shown 4408 feet to 10 feet, and 4413 feet to 15 feet; total depth 4,445 feet,

plugged back to 4,420 feet.

Q Mr. Hoover, if and when there is water to be disposed of, what pressure would be required, in your opinion?

A We expect initially that the water would be disposed of by gravity. The ultimate disposal pressure would depend on the maximum water that would be produced eventually.

Q Are there any other salt water disposal wells in this field?

A Yes. Franklin Aston and Fair's Mark Federal No. 5 is in the southwest quarter southeast quarter of Section 25, Township 7 South, Range 35 East. It is on the left-hand side of the plat No. 1, is a salt water disposal well. It is our understanding that they are injecting in an interval from 4,315 to 4,340 feet; the top of this injection interval is a minus 152 feet sub-sea. The top of the injection interval in our Roosevelt "AN" State No. 3 is 4408 feet, or a minus 279 feet sub-sea. Therefore, our injection interval is 127 feet lower sub-sea, than their injection interval, or in other words, they are injecting 127 feet higher than we would be.

Q Do you know if the Franklin Aston & Fair salt water disposal well serves more than one lease?

A Yes, it does. They are not only injecting water

from several of their own leases, but are also injecting water for other operators. I don't have any information on their daily injection volume, but it is considerably greater than the volume that we would have, and also I would like to point out here, again, that they are injecting a large, larger volume, higher sub-sea than our proposed injection.

MR. UTZ: That was their No. 5?

THE WITNESS: That was their No. 5, yes, sir.

Q Would Gulf's disposal well affect the offsetting producing wells in your opinion?

A In my opinion, it would not, since our Roosevelt "AN" State No. 3 is structurally low and the producing interval is a hundred per cent under water. The nearest producing well is our own Roosevelt "AN" State Well No. 2 which is 1320 feet to the north. This well is the best well in the field and we are not concerned about affecting it. The nearest offset operator well is 2640 feet to the west.

Q Twice as far away?

A Yes, sir.

Q Does the offset well produce water at this time?

A Yes, they do. Our Well No. 2 produced approximately

a barrel and a half of water per day. Franklin Aston and Fair's Cook State No. 1, which is in the northwest quarter southwest quarter of Section 32, produced approximately 69 barrels of water per day. I obtained that figure from the New Mexico Oil and Gas Engineering Committee Report for May.

Their Atlantic State No. 1, which is in the northwest quarter southeast quarter of Section 31, produces 12 barrels of water per day and their Well No. 2 in the northeast quarter southeast quarter of Section 31 produces 58 barrels of water per day.

Q Do you have anything further to add in this case?

A No, sir.

Q Were the offset operators all furnished a copy of your application for this hearing?

A Yes, they were.

Q Were Exhibits 1, 2 and 3 prepared by you or at your direction and under your supervision?

A Yes, they were.

MR. KASTLER: This concludes our case on Direct Examination, Mr. Utz, and I would like at this time to move that Exhibits 1, 2 and 3 be admitted into evidence.

MR. UTZ: Without objection, Exhibits 1, 2 and 3 will be entered into the record of this case.

(Whereupon, Applicant's Exhibits Nos. 1, 2 and 3 offered and admitted in evidence.)

MR. UTZ: Any questions?

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Hoover, you do have a structure map of this portion of the pool available, do you?

A I don't have one, no, sir, with me. I can get one. We are to the -- generally the structure -- in other words, this is all low to the southeast, all these wells are getting lower as it goes up to the northwest, so our well No. 3 is on the southeast edge of the field, and low, under water. There's no other production southeast, or southeast of it.

Q Contours go around from the northeast to southwest?

A Let's see, I'm trying to -- yes, sir, they would, that's right, northeast to southwest. They close, of course, they circle all around to the northwest.

Q I think you said that your No. 2 well was producing a barrel and a half per day. How about the No. 1?

A It is producing about the same thing; between the two of them, we are producing three barrels of water per day. We're allowed a barrel of water per day per

per developed 40 and we are on 80-acre spacing, so we have four forty-acre developed tracts, so we can go up to 4 barrels of water per day and then we have to put it underground.

Q Do you intend to use this well or any other wells other than the two on the "AN" lease?

A You mean to use this salt water disposal well for us?

Q Yes.

A No plans except for our own lease.

Q How about the wells in this pool, the later portion of their productivity, do they start producing substantial amounts of water as pressure goes down?

A The water, the water goes up; however, it is my understanding that in some areas of the San Andres might have water draw, but in this particular area we don't think this is a water drive. There is a lot of water in the San Andres and as the pressure goes down, I guess the water cones, but the water does increase.

Q How much oil are these two wells producing?

A Our wells?

Q Yes, sir.

A They average, No. 1 well about 122 barrels of oil per day and No. 2 about 126 barrels of oil per day, their

top allowable. I have the production figures on offset wells, if it would be of interest.

Q I am just trying to arrive at an estimate on how much water you think that 1 and 2 will eventually produce and have to dispose of.

A It would be hard to say, but --

Q On the other wells, as well --

A -- Franklin Aston and Fair's Cook State to the west, from the best information I could get by taking the monthly production off of the May Oil and Gas Engineering Committee Report and assuming it produced 31 days, it produced 34 barrels of oil per day, average, and 69 barrels of water. Their Atlantic Smith State No. 2, which is to the West, it produces to the west of their No. 1, it produces 58 barrels of water per day. Going to the north, in Section 32, their Gates State Wells 1 and 2, the No. 1 well produces 110 barrels of oil, no water; the No. 2, 48 barrels of oil, no water. So it will be hard to estimate what we might go to. We might go to between 60 and a hundred barrels, based on what the offsets are doing now.

Q Well, it is reasonable to assume before it is all over, you will be injecting probably 200 barrels a day, is that correct?

A Could be.

Q Now, you said you were going to put inhibited fluid in the annulus. What are you going to do about the surface of the annulus, put a gauge on it and leave it open, or what?

A We probably will leave it open, we either will have a check of one or two ways. Either it will be left open or there will be a pressure gauge on it. I suspect it will probably left open so that we can watch the water level.

Q Now, how about the tubing, is it plastic-coated?

A It will be plastic-coated internally. My exhibit did not show just this plastic-coated, but I wanted to point that out. It is internally, not externally, just internally.

Q So the zone you are going to inject into, would you say it is the Lower part of the San Andres?

A As I understand, in this particular area, there is an "A", "B" and "C" zone. The production in this area is the "B" Zone; the "C" Zone is not productive, it is lower, so probably this is about the middle, this "B" zone, but this is the productive interval for the other well.

Q You consider this the "B" Zone?

A Yes, the "B" Zone.

MR. UTZ: Any other questions?

MR. KELLAHIN: May I ask a couple?

CROSS EXAMINATION

BY MR. KELLAHIN:

Q Mr. Hoover, you mentioned three zones. As I understand your testimony, the structure is higher to the northwest?

A Yes, sir.

Q That would put the Mark Federal injection well operated by Franklin Aston and Fair at a higher structural position, would it not?

A No, sir, it is lower, sub-sea.

Q Lower, sub-sea?

A Yes, sir, they are in the "C" zone.

Q They are injecting into the "C" zone?

A The upper part of the "C" zone, as I understand, but the way this formation is, they are actually higher sub-sea, being the "C" zone than we are down here in the "B" zone.

Q Is there any kind of separation between the "B" Zone and the "C" Zone?

A There is a thin anhydrite stringer, I believe, but it may not be a ceiling because this San Andres is fractured.

MR. KELLAHIN: That's all, thank you.

MR. UTZ: Any further questions? Witness may be excused.

(Witness excused.)

MR. UTZ: Any statements?

MR. KELLAHIN: If the Examiner please, Franklin Aston and Fair, as the witness has testified, owns the Cook lease which offsets the Gulf lease to the west, and this well is producing from the same formation as the Zone into which Gulf seeks to inject waters for disposal purposes.

The Franklin Aston and Fair well is located 660 feet from the west line and 2180 feet from the south line of the section, and is producing from what has been denominated the "B" Zone of the smaller section of the San Andres. The Commission well files will show that the perforations in the Franklin Aston and Fair well are between 4300 and 4344 feet, which, contrary to the testimony, makes a difference of some 64 feet, rather than 103 as stated. However, I think the significant fact is that the injection of disposal waters as proposed here by Gulf is into the producing zone and not into the "C" Zone which is below an anhydrite stringer.

Franklin Aston and Fair are presently operating the salt water disposal system in this area and they are disposing of their water and they have lines laid in the

vicinity of the Gulf lease. As the witness has testified, the disposal interval in the Mark Federal Well is the "C" Zone and while it may be a difference sub-sea, it is a different formation or a different section of the San Andres in a non-producing section, as the witness has testified. Franklin Aston and Fair have offered to make this disposal system available to Gulf and we again make that offer here today. If Gulf is permitted to dispose of waters in the interval from 4408 to 4415, there is a strong possibility that they will water out or otherwise damage the Franklin Aston and Fair Well on the offsetting lease, and we object to the application.

MR. KASTLER: I would simply like to point out, Mr. Utz, that our proposed Well No. 3 is yet 102 feet lower than the Franklin Aston and Fair's Cook State No. 1, sub-sea it's lower; that when this Well No. 3 was completed quite recently, it was completed a hundred per cent under water and we simply don't concur, agree with Mr. Kellahin or Franklin Aston and Fair that damage to the reservoir would in any way occur with the volumes of water we are anticipating handling in this well.

MR. UTL: I would like to call the witness again.

CROSS EXAMINATION

BY MR. UTZ:

Q Your attorney has stated that the volumes of water you would now put in this well would not damage any of the production of offset production. What would be your opinion, if you would put 200 barrels a day in it?

A No, sir, I don't think it would.

Q You are putting it in the same section as the production is from. If you were to waterflood this field, as an engineer, would you inject water here?

A Yes, sir.

MR. UTZ: Any other questions? You may be excused.

(Witness excused.)

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

I N D E X

<u>WITNESS</u>	<u>PAGE</u>
<u>JOHN H. HOOVER</u>	
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<u>EXHIBITS</u>	<u>MARKED</u>	<u>OFFERED AND ADMITTED</u>
Applicant's 1, 2, 3	2	9

Maime Flores
Court Reporter

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 4181
heard by me on 9-30-69.
Examiner
New Mexico Oil Conservation Commission



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

September 8, 1969

Mr. Bill Kastler
Gulf Oil Corporation
Post Office Box 1938
Roswell, New Mexico 88201

Re: Case No. 4191
Order No. R-3829
Applicant:
Gulf Oil Corporation

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 Mr. Jason Kellahin

Mr. D. E. Gray - 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. 4191
Order No. R-3829

APPLICATION OF GULF OIL CORPORATION
FOR SALT WATER DISPOSAL, ROOSEVELT
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 27, 1969,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 8th day of September, 1969, 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, Gulf Oil Corporation, is the owner
and operator of the Roosevelt "AN" State Well No. 3, located in
the NW/4 SE/4 of Section 32, Township 7 South, Range 36 East,
HMPM, adjacent to the Todd-Lower San Andres Pool, Roosevelt
County, New Mexico.

(3) That the applicant proposes to utilize said well to
dispose of produced salt water into the San Andres formation,
with injection into the perforated interval from approximately
4408 feet to 4415 feet.

(4) That the injection should be accomplished through
2 3/8-inch plastic-lined tubing installed in a packer set at
approximately 4300 feet; that the casing-tubing annulus should
be filled with an inert fluid; and that a pressure gauge should

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CASE No. 4191
Order No. R-3829

be attached to the annulus or the annulus left open at the surface in order to determine leakage in the casing, tubing, or packer.

(5) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Gulf Oil Corporation, is hereby authorized to utilize its Roosevelt "AN" State Well No. 3, located in the NW/4 SE/4 of Section 32, Township 7 South, Range 36 East, NMPM, adjacent to the Todd-Lower San Andres Pool, Roosevelt County, New Mexico, to dispose of produced salt water into the San Andres formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 4300 feet, with injection into the perforated interval from approximately 4408 feet to 4415 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus or the annulus left open at the surface in order to determine leakage in the casing, tubing, or packer.

(2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

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

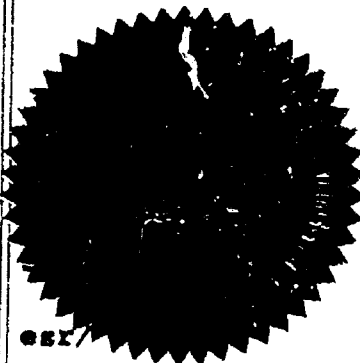
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


DAVID F. CARGO, Chairman


ALEX J. ARMILLO, Member


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



419/
Herald Aug 27-69
Rec. 9-8-69

Grant Gulf permission to
inject SW into the B zone
of the San Andreas and
follows:

The well is their Roosevelt (AN)
H. #3, J - 32-75-36 E.
Injection to be thru 2 3/8 Int. Plug
coated tubing under a packer
into above mentioned zone ~~from~~
thru pipe from 4405 to 4415.
Annulus to be filled w/ inhibited
fluid.

At the Present there is only
3-4 bbls of ~~the~~ water could
eventually go to 200 B.U.P.D.

Thirdly ~~the~~
This may well stimulate
production in the area as
in a water flood. since ~~it~~
~~is~~ injection is down struct-
ure.

— R.A.

CASE 4194 - Continued from Page 1 -

seeks authority to inject gas through two additional wells located in Unit L of Section 34, Township 17 South, Range 35 East and Unit B of Section 4, Township 18 South, Range 35 East and to expand said project area to include the SE/4 NE/4 of Section 33 and the NW/4, N/2 SE/4, and SW/4 SE/4 of Section 34 Township 17 South, Range 35 East. Applicant further seeks authority to dually complete all gas injection wells in the project in such a manner as to permit the production of oil from the lower section of the Abo Reef through tubing and the injection of gas into the upper section of the Abo Reef through the casing-tubing annulus.

CASE 4195: Application of Continental Oil Company for eight non-standard gas proration units and a non-standard gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the rededication of acreage to establish the eight following non-standard gas proration units in Township 20 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico:

A 120-acre non-standard unit comprising the SE/4 NE/4 and E/2 SE/4 of Section 14, to be dedicated to the "SEMU" Well No. 46, located in Unit D of said Section 14;

A 240-acre non-standard unit comprising the NE/4 and E/2 SE/4 of Section 26, to be dedicated to the "SEMU" Well No. 64, located in Unit G of said Section 26;

A 560-acre non-standard unit comprising the W/2 and W/2 SE/4 of Section 26 and the E/2 E/2 of Section 27, to be dedicated to the "SEMU" Well No. 65, located in Unit L of said Section 26;

A 640-acre non-standard unit comprising the W/2 and the W/2 E/2 of Section 14 and E/2 E/2 of Section 15, to be dedicated to the "SEMU" Well No. 66, located in Unit L of said Section 14;

DOCKET No. 24-69

DOCKET: EXAMINER HEARING - WEDNESDAY - AUGUST 27, 1969

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 4191: Application of Gulf Oil Corporation for salt water disposal, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the perforated interval from approximately 4408 feet to 4415 feet in its Roosevelt "AN" State Well No. 3 located in the NW/4 SE/4 of Section 32, Township 7 South, Range 36 East, adjacent to the Todd-Lower San Andres Pool, Roosevelt County, New Mexico.
- CASE 4192: Application of Southwest Production Corporation for an unorthodox gas well location, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill its Buffalo Valley "Com" Well No. 2 at an unorthodox location 1650 feet from the North line and 990 feet from the East line of Section 35, Township 14 South, Range 27 East, Buffalo Valley-Pennsylvanian Gas Pool, Chaves County, New Mexico, in exception to the provisions of Rule 2 of the special rules for said pool.
- CASE 4193: Application of Humble Oil & Refining Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Bowers "A" Federal Com 33 Well No. 33 located in Unit D of Section 29, Township 18 South, Range 36 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Hobbs (Grayburg-San Andres) Pool and the Hobbs-Blinberry Pool through parallel strings of tubing.
- CASE 4194: Application of Phillips Petroleum Company for an amendment of Order No. R-3181 and dual completions, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3181, which order established special rules regulating the operation of the Phillips Petroleum Company Vacuum Abo Pressure Maintenance Project, Vacuum-Abo Reef Pool, Lea County, New Mexico. Applicant

CASE 4197 - Continued from Page 3 -

Applicant now seeks authority to locate said well at an unorthodox location 1980 feet from the North line and 1450 feet from the West line of said Section 35 in the Forest (San Andres) Pool.

CASE 4198: Application of Continental Oil Company for amendment of Order No. R-3487, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3487 which authorized the applicant to utilize its Eaves "A" Well No. 10, located in Unit P of Section 19, Township 26 South, Range 37 East, Scarborough Yates-Seven Rivers Pool, to dispose of salt water into the Seven Rivers formation in the interval from 3208 feet to 3255 feet. Applicant now seeks authority to inject produced salt water into the Yates and Seven Rivers formations in the perforated and open-hole interval from approximately 3107 feet to 3410 feet in said well and the reclassification of said salt water disposal well to a pressure maintenance injection well.

CASE 4199: Application of Burleson & Huff for compulsory pooling and a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Jalmat Gas Pool underlying the SE/4 of Section 28, Township 25 South, Range 37 East, Lea County, New Mexico. Said 160-acre non-standard gas proration unit to be dedicated to the Burleson & Huff "Cook" Well No. 2, a recompleted well, located 660 feet from the South and East lines of said Section 28. Also to be considered will be the costs of drilling and/or recompleting 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 4200: Application of Burleson & Huff for compulsory pooling and a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Jalmat Gas Pool underlying the NE/4 of Section 29, Township 25 South, Range 37 East, Lea County, New Mexico. Said 160-acre non-standard gas proration unit to be dedicated to a well,

CASE 4195 - Continued from Page 2 -

A 320-acre non-standard unit comprising the SE/4, S/2 NE/4, and E/2 SW/4 of Section 24, to be dedicated to the "SEMU" Well No. 67, located in Unit K of said Section 24;

A 640-acre non-standard unit comprising the E/2 and E/2 W/2 of Section 23 and W/2 W/2 of Section 24, to be dedicated to the "SEMU" Well No. 68, located in Unit J of said Section 23;

An 80-acre non-standard unit comprising the E/2 NW/4 of Section 24, to be dedicated to the "SEMU" Well No. 69, located in Unit F of said Section 24;

A 320-acre non-standard unit comprising the E/2 E/2 of Section 22 and the W/2 W/2 of Section 23, to be dedicated to the "SEMU" Well No. 90, to be completed at a non-standard location 660 feet from the South and East lines of said Section 22.

CASE 4196: Application of Continental Oil Company for a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the consolidation of three existing non-standard gas proration units into one 360-acre non-standard unit comprising the W/2 and the NW/4 NE/4 of Section 18, Township 23 South, Range 37 East, Jalmat Gas Pool, Lea County, New Mexico, to be dedicated to its Stevens "B" Wells Nos. 15 and 16, located in Units F and K, respectively, of said Section 18. Applicant further seeks authority to produce the allowable assigned to said unit from either of the aforesaid wells in any proportion.

CASE 4197: Application of Continental Oil Company for an amendment to Order No. R-3755, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3755 which authorized, among other things, the drilling of a water injection well in the Forest Donahue Waterflood Project area at a location 1980 feet from the North line and 1650 feet from the West line of Section 35, Township 16 South, Range 29 East, Eddy County, New Mexico.

CASE 4204 - Continued from Page 5 -

and unorthodox locations in Sections 3 and 4, Township 25 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico. Applicant further seeks a procedure whereby additional injection wells at orthodox and unorthodox locations may be approved for said project administratively.

CASE 4205: Application of Tesoro Petroleum Corporation for four unorthodox injection well locations and amendment of Order No. R-2807, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks authority to inject water into the Hospah Upper Sand Oil Pool in its Hospah Unit Waterflood Project Area through four additional injection wells at unorthodox locations in Section 36, Township 18 North, Range 9 West, McKinley County, New Mexico, said wells to be located as follows:

Well No. 62 located 1900 feet from the South line and 1140 feet from the West line;

Well No. 63 located 1980 feet from the North line and 2310 feet from the West line;

A well to be drilled 1430 feet from the South line and 2625 feet from the East line;

A well to be drilled 30 feet from the South line and 2350 feet from the East line.

Applicant further seeks the amendment of Order No. R-2807, which order authorized the aforesaid waterflood project, to establish a procedure whereby additional injection wells at unorthodox locations, as may be necessary to complete an efficient injection pattern, may be approved administratively.

CASE 4206: Application of Shell Oil Company for an unorthodox oil well location and amendment to Order No. R-2538, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a producing oil well at an unorthodox location 1315 feet from the North line and 2625 feet from the West line of Section 34, Township 19

CASE 4200 - Continued from Page 4 -

to be recompleted, located 660 feet from the East line and 1930 feet from the North line of said Section 29. Also to be considered will be the costs of drilling and/or recompleting 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 4201: Application of Mobil Oil Corporation for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Langlie Mattix Queen Unit Area comprising 1120 acres, more or less, of federal and fee lands in Sections 10, 11, 14, 15, 22, and 23, Langlie-Mattix Pool, Lea County, New Mexico.

CASE 4202: Application of Mobil Oil Corporation for a waterflood project and unorthodox injection well locations, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its Langlie-Mattix Queen Unit Area by the injection of water into the Queen sand through 17 wells at orthodox and unorthodox locations in Sections 10, 11, 14, 15, 22, and 23, Township 25 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico. Applicant further seeks a procedure whereby additional injection wells at orthodox and unorthodox locations may be approved for said project administratively.

CASE 4203: Application of Mobil Oil Corporation for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Humphrey Queen Unit Area comprising 761 acres, more or less, of federal and fee lands in Sections 3 and 4, Township 25 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico.

CASE 4204: Application of Mobil Oil Corporation for a waterflood project and unorthodox injection well locations, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its Humphrey Queen Unit Area by the injection of water into the Queen sand through 11 wells at orthodox

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EXAMINER HEARING - August 27, 1969

DOCKET No. 24-69

CASE 4208 - Continued from Page 7 -

several waterflood projects by the injection of water into the Seven Rivers formation through his Mary Lou Well No. 1 located in Unit H of Section 29 and his Caroline Well No. 4 located in Unit E of Section 28, both in Township 19 South, Range 28 East, East Millman-Seven Rivers Pool, Eddy County, New Mexico.

CASE 4209: Application of Harvey E. Yates Company of Artesia for several pressure maintenance projects, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute several pressure maintenance projects by the injection of water into the Seven Rivers and Queen formations, McMillan (Seven Rivers-Queen) Pool, Eddy County, New Mexico, through the following-described wells in Township 20 South, Range 27 East:

Page & Yates Well No. 8 - Unit M - Section 5
Page & Yates Well No. 6 - Unit I - Section 6
Page & Yates Well No. 7 - Unit J - Section 6
Lillie Yates Well No. 2 - Unit B - Section 7

CASE 4206 - Continued from Page 6 -

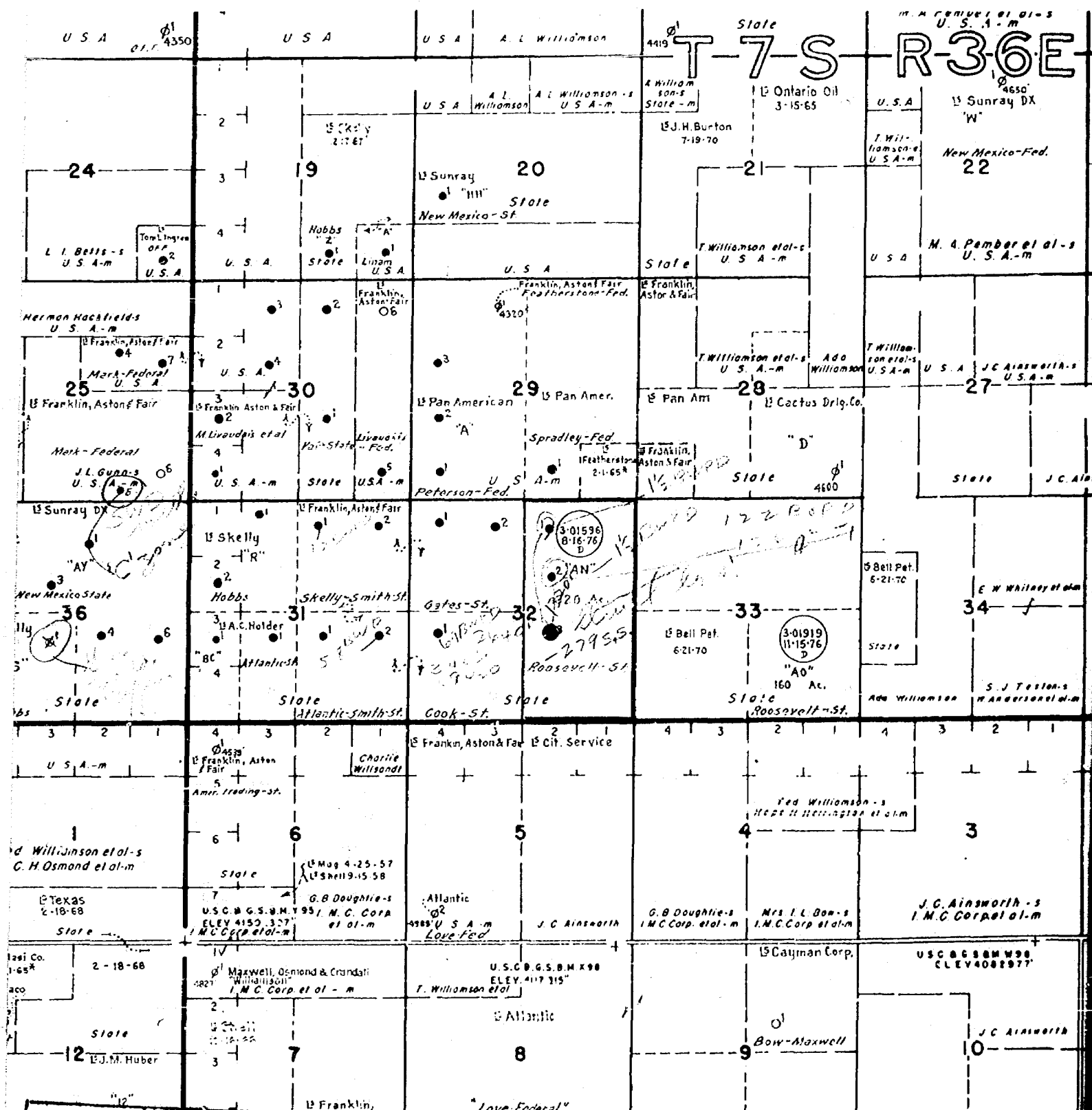
South, Range 35 East, as an infill well in its East Pearl-Queen Unit Waterflood Project area, East Pearl-Queen Pool, Lea County, New Mexico. Applicant further seeks the amendment of Order No. R-2538, which order authorized the aforesaid waterflood project, to establish a procedure whereby additional producing wells at unorthodox infill locations in the aforesaid project area, as may be necessary to complete an efficient producing pattern, may be approved administratively.

CASE 4207: Application of C. W. Trainer and DEL-LEA, Inc., for an unorthodox gas well location, Lea County, New Mexico. Applicants, in the above-styled cause, seek an exception to Rule 104 C II to permit the drilling of a well at an unorthodox gas well location 330 feet from the North line and 660 feet from the West line of Section 35, Township 12 South, Range 34 East, West Ranger Lake-Devonian Gas Pool, Lea County, New Mexico. The N/2 of said Section 35 to be dedicated to the well.

CASE 4186: (Readadvertised)

Application of Tenneco Oil Company for compulsory pooling and an unorthodox gas well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Basin-Dakota Gas Pool underlying the North half of Section 11, Township 29 North, Range 13 West, San Juan County, New Mexico. Said acreage to be dedicated to a well to be drilled at an unorthodox gas well location 2250 feet from the North line and 600 feet from the East line of said Section 11. Also to be considered will be the costs 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. In the absence of a valid objection an order will be issued upon the record entered in the subject case August 6, 1969.

CASE 4208: Application of John A. Yates of Artesia for several waterflood projects, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute



BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 1
CASE NO. 4191

LEASE PLAT
GULF OIL CORPORATION
ROOSEVELT "AN" STATE LEASE
ROOSEVELT COUNTY, NEW MEXICO

- LEGEND
- PERTINENT LEASE
 - PERTINENT WELL

CASE NO. 4191
EXHIBIT NO. 1
AUGUST 27, 1969

8-5/8" O.D. Csg. Set @ 360'
Cement Circulated

2-3/8" O.D. Plastic Coated
Tubing Set @ 4,300'

Tubing-Casing Annulus
Filled with Inhibited Fluid

Guiberson Type AF Tension Type
Retrievable Packer Set @ 4,300'

Perforations
4,408' - 4,410"
4,413' - 4,415"

4-1/2" O.D. Csg. Set @ 4,425'
Cement Circulated

T.D. 4,445'
P.B. 4,420'

SCHEMATIC DIAGRAM
GULF OIL CORPORATION
ROOSEVELT "AN" STATE WELL NO. 3
SALT WATER DISPOSAL
NW/4 SE/4 SECTION 32 - T.7S - R.36E
ROOSEVELT COUNTY, NEW MEXICO

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 2
CASE NO. 4191

CASE NO. 4191
EXHIBIT NO. 2
AUGUST 27, 1969

AM 8 18
JUL 31 1969

Gulf Oil Company - U.S.

EXPLORATION AND PRODUCTION DEPARTMENT
ROSWELL DISTRICT

T. W. Kidd
DISTRICT MANAGER
M. I. Taylor
DISTRICT PRODUCTION
MANAGER
P. E. Wyche
DISTRICT EXPLORATION
MANAGER
H. A. Rankin
DISTRICT SERVICES MANAGER

P. O. Drawer 1938
Roswell, New Mexico 88201

July 31, 1969

Case 4191

Handwritten signature

Oil Conservation Commission
State of New Mexico
Post Office Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. A. L. Porter, Jr.

Re: Application of Gulf Oil Corporation for
Salt Water Disposal, Todd Lower San Andres
Pool, Roosevelt County, New Mexico

Gentlemen:

Gulf Oil Corporation respectfully requests an examiner hearing to consider its application for approval to dispose of salt water in the Roosevelt "AN" State Well No. 3 located 2180 feet from the south line and 1980 feet from the east line of Section 32, T-7-S, R-36-E, Roosevelt County, New Mexico.

The water to be disposed of is produced from the Todd Lower San Andres Pool wells on applicant's Roosevelt "AN" State Lease. The attached plat shows this lease outlined in red, and Well No. 3 circled and colored in green. It is proposed to inject the produced water in the interval 4408'-4410', and 4413'-4415' as shown on the attached schematic diagram of the well.

Copy of this application has been furnished to offset operators.

Respectfully submitted,

GULF OIL CORPORATION

M. I. Taylor

M. I. Taylor

Attachments
JHH:sz



A DIVISION OF GULF OIL CORPORATION

DOCKET MARKED

Date 8-15-69

Oil Conservation Commission

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July 31, 1969

cc: New Mexico Oil Conservation Commission
Post Office Box 1080
Hobbs, New Mexico 88240

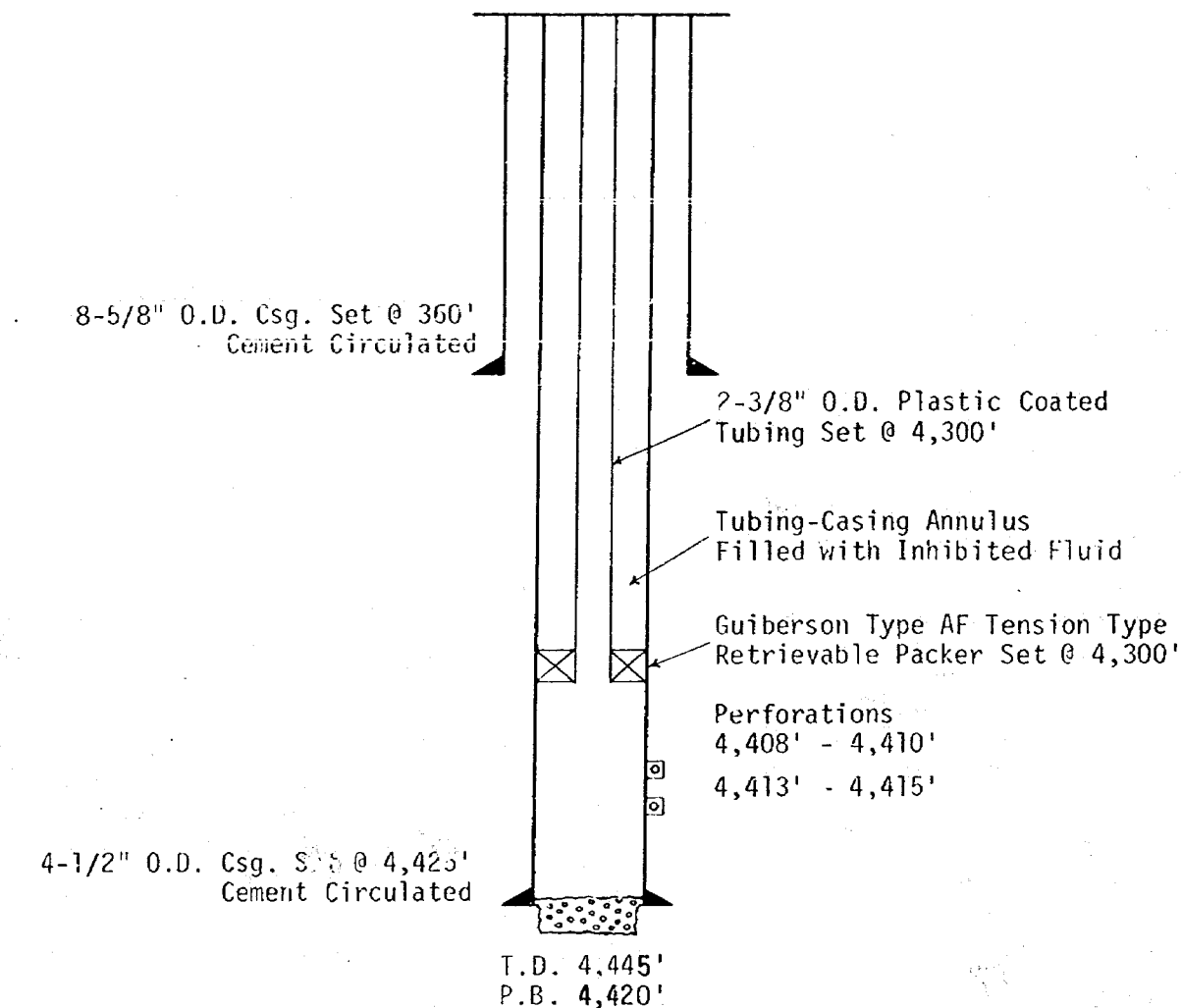
Frankin, Aston & Fair, Inc.
Post Office Box 1090
Roswell, New Mexico 88201

Cities Service Oil Company
Post Office Box 69
Hobbs, New Mexico 88240

Pan American Petroleum Corporation
Post Office Box 68
Hobbs, New Mexico 88240

Bell Petroleum Company
Post Office Box 1538
Midland, Texas 79701

Olon F. Featherstone
236 Petroleum Building
Roswell, New Mexico 88201



SCHEMATIC DIAGRAM
GULF OIL CORPORATION
ROOSEVELT "AN" STATE WELL NO. 3
SALT WATER DISPOSAL
NW/4 SE/4 SECTION 32 - T.7S - R.36E
ROOSEVELT COUNTY, NEW MEXICO

Case 4191

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. 4191

Order No. R- 3829

APPLICATION OF GULF OIL CORPORATION
FOR SALT WATER DISPOSAL, ROOSEVELT
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 27, 1969,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz

NOW, on this Sept day of 1969, 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, Gulf Oil Corporation,
is the owner and operator of the Roosevelt "AN" State Well No. 3,
the NW/4 SE/4
located in Unkxxx of Section 32, Township 7 South, Range
adjacent to the
36 East, NMPM, Todd-Lower San Andres Pool, Roosevelt
County, New Mexico.

(3) That the applicant proposes to utilize said well to
dispose of produced salt water into the San Andres
formation, with injection into the perforated interval
from approximately 4408 feet to 4415 feet.

(4) That the injection should be accomplished through
2 3/8-inch plastic-lined tubing installed in a packer set at

approximately 4300 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge should be attached to the annulus or the annulus left open at the surface in order to determine leakage in the casing, tubing, or packer.

(5) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Gulf Oil Corporation, is hereby authorized to utilize its Roosevelt "AN" State Well No. 3, the NW/4 SE/4 located in ~~XXXXXXX~~ of Section 32, Township 7 South, Range 36 East, NMPM, Todd-Lower San Andres Pool, Roosevelt County, New Mexico, to dispose of produced salt water into the San Andres formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 4300 feet, with injection into the perforated interval from approximately 4408 feet to 4415 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus or the annulus left open at the surface in order to determine leakage in the casing, tubing, or packer.

(2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(3) 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.