

CASE 3915: Application of TEXAS  
PACIFIC OIL CO. FOR SALT WATER  
DISPOSAL, LEA COUNTY, N. MEX.

Case Number

3915

Application  
Transcripts.

Small Exhibits

ETC.



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

1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
November 7, 1968

IN THE MATTER OF:

Application of Texas Pacific Oil  
Company for salt water disposal,  
Lea County, New Mexico

Case No. 3915

BEFORE: ELVIS A. UTZ

TRANSCRIPT OF HEARING

MR. UTZ: Case 3915.

MR. HATCH: Application of Texas Pacific Oil  
Company for salt water disposal, Lea County, New Mexico.

MR. RUSSELL: John F. Russell, Roswell, appearing  
on behalf of the applicant. I have one witness, Mr. Freels,  
who testified in the prior case.

MR. UTZ: Any other appearances? You may proceed.

MR. RUSSELL: I don't need to have him sworn again?

MR. UTZ: No, let the record show that this is  
the same Mr. Freels who was sworn in the previous case.

(Applicant's Exhibits 1 through  
4 marked for identification.)

\* \* \* \* \*

R O N F R E E L S, called as a witness, having  
been previously duly sworn, was examined and testified as  
follows:

DIRECT EXAMINATION

BY MR. RUSSELL:

Q Mr. Freels, are you acquainted with the application  
in Case 3915?

A Yes, I am.

Q Have you prepared exhibits in connection with  
that case?

A Yes, sir, I have.

Q Will you briefly advise the Examiner what you seek by the application and what your exhibits reflect?

A Texas Pacific Oil Company seeks authority to dispose of produced salt water into the Pennsylvanian Formation in the perforated interval from approximately 9570 feet to 9972 feet in its State "AH" Well No. 2 located in Unit N of Section 14, Township 12 South, Range 34 East, Ranger Lake Field, Lea County, New Mexico.

Q Starting with your Exhibit 1, just go through all of them.

A Exhibit 1 is a plat of the area of the injection well, State "AH" No. 2 is shown as a green triangle near the center of the map. I'll give you the footage location on that well. The well is located 660 feet from the south line and 1980 feet from the west line of Section 14, Township 12 South, Range 34 East, Ranger Lake Penn Pool, Lea County, New Mexico. This map also shows all of the producing wells within the two-mile vicinity and the zones from which they are producing. Our application is to dispose of only the water produced from our State "AH" No. 1 into this well which is currently producing approximately 600 barrels of water per day and we expect a maximum rate of 700 barrels per day.

Q Is that under pressure?

A We anticipate injecting this on a vacuum. I will elaborate a little bit more on Exhibit No. 2.

Exhibit No. 2 is a schematic of the proposed injection well. The schematic shows that 13 and 3/8ths-inch surface casing is set at 365 feet, cemented to the surface. The 8 and 5/8ths-inch casing intermediate string is set at 4,165 feet. The top of the cement is at 2025 feet. The 4 and 1/2-inch production string was set at 10,342 feet and the top of the cement in that is 7,585 feet. This well presently has a bridge plug set at 9650 feet. We plan to knock this bridge plug out and go in and inject water into the perforations in the interval of 9,835 to 9,972 feet.

This is the zone from which the water is being produced in our State "AH" No. 1. We are faced with a possible problem in this region. We anticipate that this well will take all the water on a vacuum into this zone; however, should it not, the well that we're disposing the water from is so near its economic limit that we could not justify the expense of having to put equipment on the well to inject the water under pressure and so at that time we would like to come back and ask for permission to dispose of water above the top of the cement and below the intermediate string within the interval of the San Andres and Glorieta

and we would accomplish this. This would be in addition to what goes down the casing.

We would accomplish this through either of two methods, either of which would be basically the same, either by injecting down the annulus between the 8 and 5/8ths-inch casing and 4 and 1/2 or by perforating a few holes opposite zones in this region and going just down the casing string and letting it go into those intervals. We are saving that project as a last resort and we would make, I believe, an administrative request for this area. This zone is not being produced, but we wanted to get the information into the record at this time.

Another thing about this proposal that we want to point out is that, if you will note, that we have not set up any tubing string to be run in this well. The well that we're going to be disposing water from has an estimated life of approximately 1 year. This well is a new well, the casing in this well is in good condition. We propose to treat the water, inhibit the water that we're going to inject down this well and maintain a coupon at the surface to monitor the effectiveness of our treatment of the water and of course we would be pleased to submit any reports that you would like to have on this coupon. We feel that because of the short life of the project and of course, the economics

involved with the well, we could not justify even a string of tubing run into this well.

Exhibit No. 3 is a log of the State "AH" No. 2. This is a log of a portion of the well, we have shown on this log the interval in which we propose to initially inject in the casing which is the perforated intervals in the casing. This is into the Bough zone, which is the producing zone in this region. For your information, we have also marked down at the bottom, the top of the Penn Pay and the Ranger Lake Penn. We are not going to inject into that zone.

Exhibit No. 4 is a water analysis of the water from the "AH" 1, which we'll be injecting. This water has chlorides of 56,000 and since this is water that is going back into the zone from which it has come, we do not anticipate any compatibility problems.

Q What well is it that you are going to get the produced water from?

A The water will be from Texas Pacific State "AH" Well No. 1 which is located in the southeast quarter of the northwest quarter of Section 14.

Q How much oil is that producing at this time?

A That well is making approximately 30 barrels of oil per day and about 600 barrels of water. I may even have a



very current test on that; no, I don't have it here.

Q Were Exhibits 1 through 4 prepared by you or under your supervision and direction?

A They were.

MR. RUSSELL: Mr. Examiner, I move the introduction of Applicant's Exhibits 1 through 4.

MR. UTZ: Without objection, Exhibits 1 through 4 will be entered into the record of this case.

(Whereupon, Applicant's Exhibits 1 through 4 offered and admitted in evidence.)

Q (By Mr. Russell) Mr. Freels, in your opinion, the granting of this application will prevent the premature abandonment of the producing well from which the water will be coming, is that correct?

A Yes, it will.

MR. RUSSELL: I have no further questions of the witness.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Freels, in your opinion, I believe you stated that the No. 1 well only had a life approximately of one more year?

A Yes, sir, we have made predictions on the well and

it appears it has approximately one year life remaining at the end of this year. We have about 1.3 years from now, but it will be about one year from the time this No Pit Order goes into effect.

Q You will definitely not use this well for any other disposal except from the "AH" 1?

A We had approached other people in the area hopefully; if they would like to use the well, but they were basically in the same position we were and I think they're just going to shut their wells in. It will be strictly from our own well. This is the only alternative we have found to produce our well.

Q The reason I ask is that we know the tubing situation here.

A Yes.

Q This casing is how old?

A This is a relatively new well, not more than a year or so old. This is new casing. We had in mind one possibility. We thought it might help us monitor this thing and this is dependent upon whether we can fill the annulus at this time between the 8 and 5/8ths and the 4 and 1/2-inch casing. If we can fill the annulus and maintain it full, then this will give us a monitor on the condition of our casing also, and we would very definitely do this. Now,

there is a possibility that the annulus won't hold, won't maintain a head of fluid and of course, if that be the case, it would almost be impossible to monitor it from that approach. This would be the thing that would be the better approach, to monitor the annulus from the 8 and 5/8ths and 13 and 3/8ths-inch casing. We intend to do this, but we are uncertain exactly whether they are going to hold water or not. We feel that with the short life of this project and the fact that we are going to inhibit our water, we don't feel there should be any problems with casing corrosion.

Q If this approval was made only for the life of the "AH" No. 1, would it be satisfactory?

A That would be very satisfactory because we have nothing else to do at that time but to plug and abandon.

Q In regard to these perforations at 9570 and 72, are they going to be closed off?

A No, we have even tried to put water away in these as recently as last week. We hoped we could put water here. We loaded the casing and it wouldn't even take water, they are squeezed off. We tested it and it swabbed dry so this is not any real surprise to us. We are not planning on doing anything.

Q This will be by gravity?

A Gravity, it will have to be, otherwise we are through.

MR. UTZ: Any other questions of the witness?  
He may be excused.

(Witness excused.)

MR. UTZ: Any statements? We will take the case under advisement.

I N D E X

WITNESS		PAGE
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STATE OF NEW MEXICO )  
 ) ss  
 COUNTY OF BERNALILLO )

I, ADA DEARNLEY, Court Reporter in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me, and that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my hand this 21st day of November, 1968.

*Ada Dearnley*  
 Ada Dearnley

I do hereby certify that the foregoing is a complete record of the hearing of the Executive Hearing of the New Mexico Oil Conservation Commission held by me on 11-2-68 3965  
*Charles W. [Signature]*  
 New Mexico Oil Conservation Commission

GOVERNOR  
DAVID F. CARGO  
CHAIRMAN

State of New Mexico  
**Oil Conservation Commission**



LAND COMMISSIONER  
GUYTON B. HAYS  
MEMBER

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

P. O. BOX 2088  
SANTA FE

November 19, 1968

Mr. John Russell  
Attorney at Law  
Post Office Drawer 640  
Roswell, New Mexico 88201

Re: Case No. 3915  
Order No. R-3563  
Applicant:  
TEXAS PACIFIC OIL CO.

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

Carbon 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. 3915  
Order No. R-3563

APPLICATION OF TEXAS PACIFIC OIL  
COMPANY FOR 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 November 7, 1968, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 19th day of November, 1968, 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, Texas Pacific Oil Company, is the owner and operator of the State "AH" Well No. 2, located in Unit N of Section 14, Township 12 South, Range 34 East, NMPM, Ranger Lake Field, Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the Pennsylvanian formation, with injection into the perforated interval from approximately 9570 feet to 9972 feet.

(4) That the applicant proposes to inject down the 4 1/2-inch casing in the subject well and to continuously treat the produced water prior to injection to prevent corrosion.

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CASE No. 3915

Order No. R-3563

(5) That the annulus between said 4 1/2-inch casing and the 8 5/8-inch intermediate casing should be loaded with an inert fluid and should be continuously monitored to detect casing leakage.

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

(7) That the authority for use of the subject well for salt water disposal purposes as described above should be limited to a period of one year.

(8) 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, Texas Pacific Oil Company, is hereby authorized to utilize its State "AH" Well No. 2, located in Unit N of Section 14, Township 12 South, Range 34 East, NMPM, Ranger Lake Field, Lea County, New Mexico, to dispose of produced salt water into the Pennsylvanian formation, injection to be accomplished through 4 1/2-inch casing, and into the perforated interval from approximately 9570 feet to 9972 feet;

PROVIDED HOWEVER, that the produced salt water shall be continuously treated prior to injection to prevent casing corrosion; that the annulus between said 4 1/2-inch casing and the 8 5/8-inch intermediate casing shall be loaded with an inert fluid and shall be continuously monitored to detect casing leakage; and that coupon corrosion tests shall be continuously conducted 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 authority for use of the subject well for salt water disposal purposes as described above shall be limited to a period of one year from the date of first disposal in said well.



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CASE No. 3915  
Order No. R-3563

(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.

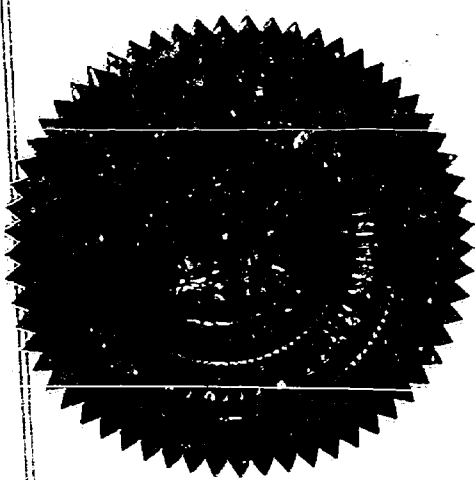
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

  
DAVID F. CARGO, Chairman

  
GUYTON B. HAYS, Member

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



esr/

3915

Heard 11-7-68

Rec. 11-8-68

1. Grant D & P Oil Co. permission to  
convert ~~this~~ St. 'A-M' #2. N-14-12-34  
Z. Ranger Lake - Penn pool to an  
SW D well. Injection shall be  
thru the 4 1/2" casing + into the  
Pennsylvanian fm. thru joints  
from 2835 to 2972. Injected water  
shall be treated + coupon surveys  
shall be made continuously.

This approval shall hold for the  
life of operators St. 'A-M' well #1  
which is estimated to be 1 year.

Operator will try to monitor  
the 8 7/8 x 13 7/8 annulus by injecting  
inert fluid. ~~to~~ This should  
protect fresh waters above 2025  
ft.

Thos H. [Signature]

Docket No. 32-68

DOCKET: EXAMINER HEARING - THURSDAY - NOVEMBER 7, 1968

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 3910: (Continued from the October 23, 1968 Examiner Hearing)

Application of Atlantic Richfield Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Bough "C" zone of the Pennsylvanian formation underlying the SW/4 of Section 17, Township 10 South, Range 34 East, Vada-Pennsylvanian Pool, Lea County, New Mexico. Said acreage to be dedicated to a well located in the NE/4 SW/4 of said Section 17.

CASE 3911: (Continued from the October 23, 1968 Examiner Hearing)

Application of Atlantic Richfield Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Bough "C" zone of the Pennsylvanian formation underlying the SE/4 of Section 8, Township 10 South, Range 34 East, Vada-Pennsylvanian Pool, Lea County, New Mexico. Said acreage to be dedicated to a well located in the NW/4 SE/4 of said Section 8. In the alternative applicant seeks approval of a non-standard oil proration unit comprising the E/2 SE/4 of said Section 8 and the W/2 SW/4 of Section 9, said Township and Range, said unit to be dedicated to a well to be drilled in the NE/4 SE/4 of said Section 8.

CASE 3894: (Continued and Readvertised)

Application of Signal Oil and Gas Company for a non-standard oil proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a non-standard oil proration unit comprising the W/2 NE/4 and the N/2 SE/4 of Section 17, Township 10 South, Range 34 East, Vada-Pennsylvanian Pool, Lea County, New Mexico, said unit to be dedicated to its State AP Well No. 1 located 1980 feet from the South line and 660 feet from the East line of said Section 17.

In the alternative, applicant seeks approval of an 80-acre non-standard oil proration unit comprising the N/2 SE/4 of

(Case 3894 continued)

said Section 17 and the assignment of approximately 79% of a standard 160-acre unit allowable for said pool to said 80-acre unit.

CASE 3918: Application of R. R. Morrison for three non-standard proration units, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of three non-standard 80-acre oil proration units in Township 10 South, Range 34 East, Vada-Pennsylvanian Pool, described as follows:

Unit No. 1 comprising the E/2 SW/4 of Section 17, dedicated to applicant's State "17" Well No. 1 located in Unit K of said Section 17;

Unit No. 2 comprising the E/2 NE/4 of Section 17, dedicated to applicant's Atlantic "A" State Well No. 1 located in Unit A of said Section 17;

Unit No. 3 comprising the W/2 SE/4 of Section 8, dedicated to applicant's State "B" Well No. 1 located in Unit J of said Section 8.

Applicant further seeks the assignment of approximately 79% of a standard 160-acre unit allowable for said pool to each of the aforesaid 80-acre units.

CASE 3919: Application of Sunray DX Oil Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Bough "C" zone of the Pennsylvanian formation underlying the SE/4 of Section 17, Township 10 South, Range 34 East, Vada-Pennsylvanian Pool, Lea County, New Mexico. Said acreage to be dedicated to Signal Oil Company's State AP Well No. 1 located in Unit I of said Section 17. In the alternative applicant seeks approval of a non-standard proration unit comprising the S/2 SE/4 of said Section 17 and the N/2 NE/4 of Section 20, said Township and Range, said unit to be dedicated to applicant's New Mexico "AW" Well No. 1 located in the NE/4 NE/4 of said Section 20.

CASE 3912: Application of American Petrofina Company of Texas 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, Glorieta, and Abo formations in the open-hole interval from approximately 4211 feet to 8690 feet in its Federal "C" Well No. 2 located in

(Case 3912 continued)

Unit E of Section 21, Township 8 South, Range 36 East, South Prairie-Cisco Pool, Roosevelt County, New Mexico.

- CASE 3913: Application of Pan American Petroleum Corporation for salt water disposal, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Pennsylvanian "D" formation in the perforated interval from 6267 feet to 6286 feet in its Navajo Tribal "U" Well No. 1 located in Unit L of Section 21, Township 26 North, Range 18 West, Tocito Dome-Pennsylvanian "D" Pool, San Juan County, New Mexico. Applicant further seeks an administrative procedure whereby other wells in said pool may be approved for disposal purposes, if completed in a manner similar to the subject well, without the requirement of notice and hearing.
- CASE 3914: Application of Texas Pacific Oil Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Seven Rivers and Queen formations in the open-hole interval from approximately 3721 feet to 3995 feet in its State "A" a/c-2 Well No. 6 located in Unit B of Section 7, Township 22 South, Range 36 East, South Eunice Pool, Lea County, New Mexico.
- CASE 3915: Application of Texas Pacific Oil Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Pennsylvanian formation in the perforated interval from approximately 9570 feet to 9972 feet in its State "AH" Well No. 2 located in Unit N of Section 14, Township 12 South, Range 34 East, Ranger Lake Field, Lea County, New Mexico.
- CASE 3916: Application of Texas Pacific Oil Company for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Abo formation in the perforated interval from approximately 6686 feet to 6830 in its Woolley Federal No. 1 located in Unit M of Section 21, Township 17 South, Range 30 East, Loco Hills-Abo Pool, Eddy County, New Mexico.
- CASE 3917: Application of Agua, Inc., for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres and other formations in the interval from approximately 4530 feet to 6375 feet in its Corbin SWD Well No. G-31 located in the SW/4 NE/4 of Section 31, Township 17 South, Range 33 East, Corbin Field, Lea County, New Mexico.

November 7, 1968, Examiner Hearing

Docket No. 32-68

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- CASE 3920: Application of Kern County Land Company 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 4158 feet to 4233 feet in its Federal 23 Well No. 11 located in Unit F of Section 23, Township 7 South, Range 33 East, Chaveroo-San Andres Pool, Roosevelt County, New Mexico.
- CASE 3921: Application of Kern County Land Company 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 4165 feet to 4291 feet in its Federal 21 Well No. 3 located in Unit O of Section 21, Township 7 South, Range 33 East, Chaveroo-San Andres Pool, Roosevelt County, New Mexico.
- CASE 3922: Application of Tenneco Oil Company 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 4214 feet to 4344 feet in its State "V" Well No. 3 located in Unit K of Section 30, Township 7 South, Range 34 East, Chaveroo-San Andres Pool, Roosevelt County, New Mexico.
- CASE 3923: Application of Tenneco Oil Company for salt water injection, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to inject produced salt water into the Wolfcamp formation in the perforated interval from approximately 10642 feet to 10699 feet in its Kemnitz-Wolfcamp Unit Well No. 7 located in Unit O of Section 19, Township 16 South, Range 34 East, Kemnitz-Wolfcamp Pool, Lea County, New Mexico.

WELL NO. \_\_\_\_\_

COMPANY TEXAS PACIFIC OIL COMPANY

WELL STATE "AH" NO. 2

FIELD RANGER LAKE

COUNTY LEA STATE NEW MEXICO

LOCATION 660' FSL & 1960' FNL

SEC 14 TWP 12-S RGE 34-E

Permanent Datum GROUND LEVEL Elev. 4154

Log Measured from X. B. 12. Ft. Above Permanent Datum

Drilling Measured from K. B.

Date 12/11/66

Run No. ONE

Depth-Driller 10,345

Depth-Logger 10,348

Bottom Logged Interval 10,340

Top Logged Interval 8,578

Casing-Driller 7 7/8"

Casing-Logger 7 7/8"

Bit Size 7 7/8"

Type Fluid in Hole CHEMICALS

Density and Viscosity 10.8 40

pH of Fluid Loss 17

Source of Sample 18 @ 60'

Temp. 14 @ 60'

19 @ 60'

Source of Ref and 084 @ 130'

Time Since C 130'

Max. Rec. Temp. 130'

Equip. No. and Loc. 554 THOBBS

Recorded By CONIETZ

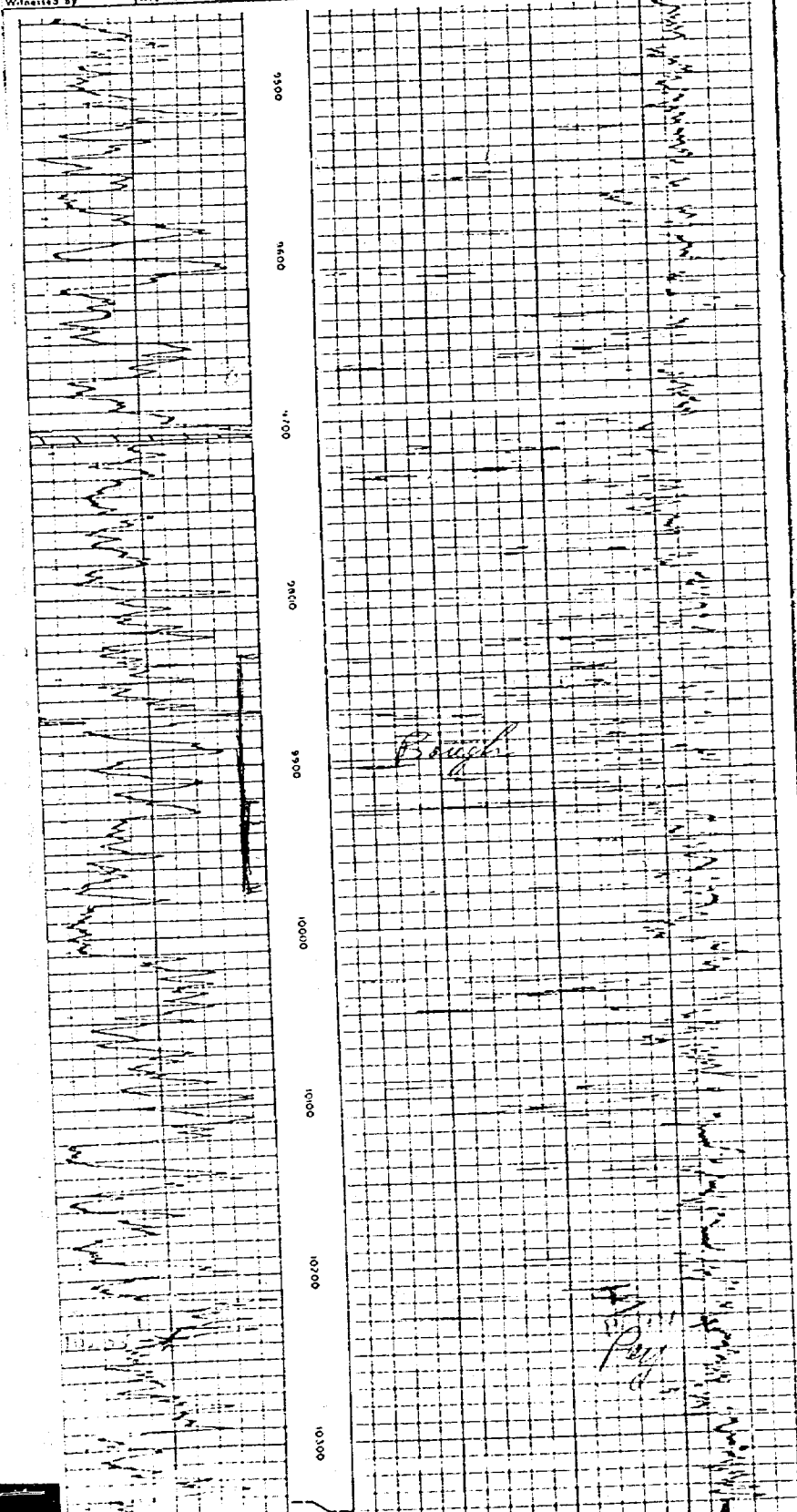
Witnessed By HR. TILLEY

BEFORE EXAMINER UTZ

OIL CONSERVATION COMMISSION

EXHIBIT NO. 3

CASE NO. 3915



HALLIBURTON DIVISION LABORATORY  
HALLIBURTON COMPANY  
MIDLAND DIVISION

## LABORATORY WATER ANALYSIS

No. WI-369-68To Texas Pacific Oil CompanyDate October 9, 1968Box 1069Hobbs, New Mexico 88240

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by \_\_\_\_\_

Date Rec. 10-5-68Well No. St. "AB" #1

Depth \_\_\_\_\_

Formation Penn

County \_\_\_\_\_

Field Ranger Lake

Source \_\_\_\_\_

Resistivity \_\_\_\_\_

.088 @ 86 F

Specific Gravity \_\_\_\_\_

1.033

pH \_\_\_\_\_

7.3

Calcium (Ca) \_\_\_\_\_

3,900

\*MPL

Magnesium (Mg) \_\_\_\_\_

600

Chlorides (Cl) \_\_\_\_\_

56,000Sulfates (SO<sub>4</sub>) \_\_\_\_\_430Bicarbonates (HCO<sub>3</sub>) \_\_\_\_\_245

Soluble Iron (Fe) \_\_\_\_\_

Nil

Remarks: \_\_\_\_\_

BEFORE EXAMINER UTZ  
OIL CONSERVATION COMMISSION

Open EXHIBIT NO. 4  
CASE NO. 3915

\*Milligrams per liter

Respectfully submitted,

Analyst: Frank Whitfield

HALLIBURTON COMPANY

cc: \_\_\_\_\_

By \_\_\_\_\_

DIVISION CHEMIST

## NOTICE

This report is limited to the described sample tested. Any user of this report agrees that Halliburton shall not be liable for any loss or damage, whether it be to act or omission, resulting from such report or its use.



BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF )  
TEXAS PACIFIC OIL COMPANY FOR AN )  
ORDER AUTHORIZING THE DISPOSAL OF )  
SALT WATER PRODUCED FROM THE DEVONIAN )  
AND PENNSYLVANIAN FORMATIONS OF THE )  
RANGER LAKE FIELD, LEA COUNTY, NEW )  
MEXICO, BY INJECTION INTO THE PENNSYL- )  
VANIAN FORMATION IN THE PERFORATED )  
INTERVALS FROM APPROXIMATELY 9,570 )  
FEET TO 9,572 FEET, AND 9,835 FEET TO )  
9,972 FEET IN ITS STATE "AH" NO. 2 )  
WELL, LOCATED IN UNIT "N" OF SECTION )  
14, TOWNSHIP 12 SOUTH, RANGE 34 EAST, )  
LEA COUNTY, NEW MEXICO. )

No. 3915

APPLICATION

COMES NOW Texas Pacific Oil Company, a Division of Joseph E. Seagram & Sons, Inc., by its Attorney, John F. Russell, and states:

1. Applicant proposes to commence the disposal of salt water produced from the Devonian and Pennsylvanian Formations in the Ranger Lake Field, Lea County, New Mexico, by injection into the Pennsylvanian Formation in the perforated intervals from approximately 9,570 feet to 9,572 feet and 9,835 feet to 9,972 feet in its State "AH" No. 2 Well, located in Unit "N" of Section 14, Township 12 South, Range 34 East, Lea County, New Mexico.
2. The water being disposed of is not suitable for domestic or agricultural purposes and the disposal of said water, as proposed, will not impair production of oil, gas or fresh water from the reservoir nor will it impair correlative rights.
3. Applicant attaches hereto as Exhibit "1" a plat showing the location of the proposed injection well and all wells within two miles of said proposed injection well and the names of the lessees.

FILED  
10-25-68  
Date

4. Applicant attaches hereto as Exhibit "2" a diagramatic sketch showing the manner of completing the proposed injection well.

5. Applicant attaches hereto as Exhibit "3" a graph showing the production history of the aforesaid well.

6. Applicant will present at the time of the hearing the well log of the proposed injection well.

WHEREFORE, Applicant requests that the Commission set this matter down for hearing before its Examiner, publish notice as required by law and after hearing issue its order authorizing the disposal of salt water as aforesaid.

Respectfully submitted,

TEXAS PACIFIC OIL COMPANY, A  
Division of  
Joseph E. Seagram & Sons, Inc.

By John F. Russell  
John F. Russell  
P. O. Drawer 640  
Roswell, New Mexico 88201

Applicant's Attorney

DATED:

DRAFT

DSN/esr  
10-8-68

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. 3915

Order No. R-3563

APPLICATION OF TEXAS PACIFIC OIL  
COMPANY FOR 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 November 7, 1968,  
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this        day of November, 1968, 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, Texas Pacific Oil Company, is the  
owner and operator of the State "AH" Well No. 2, located in Unit  
N of Section 14, Township 12 South, Range 34 East, NMPM, Ranger  
Lake Field, Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to  
dispose of produced salt water into the Pennsylvanian formation,  
with injection into the perforated interval from approximately  
9570 feet to 9972 feet.

(4) That the applicant proposes to inject down the 4 1/2-  
inch casing in the subject well and to continuously treat the  
the produced water prior to injection to prevent corrosion.

Case no. 3915  
Exhibit II

(5) That the annulus between said 4 1/2-inch casing and the 8 5/8-inch intermediate casing should be loaded with an inert fluid and should be continuously monitored to detect casing leakage.

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

(7) That the authority for use of the subject well for salt water disposal purposes as described above should be limited to a period of one year.

(8) 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, Texas Pacific Oil Company, is hereby authorized to utilize its State "AH" Well No. 2, located in Unit N of Section 14, Township 12 South, Range 34 East, NMPM, Ranger Lake Field, Lea County, New Mexico, to dispose of produced salt water into the Pennsylvanian formation, injection to be accomplished through 4 1/2-inch casing, and into the perforated interval from approximately 9570 feet to 9972 feet;

PROVIDED HOWEVER, that the produced salt water shall be continuously treated prior to injection to prevent casing corrosion; that the annulus between said 4 1/2-inch casing and the 8 5/8-inch intermediate casing shall be loaded with an inert fluid and shall be continuously monitored to detect casing leakage; and that coupon corrosion tests shall be continuously conducted 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 authority for use of the subject well for salt water disposal purposes as described above shall be limited to a period of one year from the date of first disposal in said well.

(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.