

CASE 4034: Application of PHILLIPS
for salt water disposal, Lea
County, New Mexico.

Case Number

4034

Application
Transcripts.

Small Exhibits

ETC.



dearnley-meier

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
January 22, 1969

EXAMINER HEARING

IN THE MATTER OF:)

Application of Phillips Petroleum)
Company for salt water disposal,)
Lea County, New Mexico.)

Case No. 4034

BEFORE: Elvis A. Utz, Examiner.

TRANSCRIPT OF HEARING

MR. UTZ: Case 4034.

MR. HATCH: Case 4034, application of Phillips Petroleum Company for salt water disposal, Lea County, New Mexico.

MR. KELLAHIN: May the record show the same appearances, and reflect that the witness has been sworn.

MR. UTZ: Yes.

(Whereupon, Applicant's Exhibits Numbers 1 through 5, inclusive, were marked for identification.)

W. J. MUELLER

called as a witness by the Applicant, having been previously duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A My name is W. J. Mueller.

Q Are you the same Mr. Mueller who testified in Case 4033?

A Yes, sir.

Q Mr. Mueller, are you familiar with the application of Phillips Petroleum Company in Case 4034?

A Yes, sir.

Q Briefly, what is proposed by Phillips in this

application?

A In this application, Phillips proposed to use its temporarily abandoned C. D. Woolworth Well No. 9, located in Unit B of Section 27, 24 South, 36 East, in the Jalmat Yates-Seven Rivers Pool, Lea County, New Mexico, as a disposal well for produced water of the Woolworth Lease.

Q What is the present status of this well?

A This well was shut down in 1963 as uneconomic to operate. At the time it was testing four barrels of oil and 250 barrels of water.

Q Now, referring to what has been marked as Exhibit Number 1, will you identify that exhibit?

A Exhibit Number 1 is a completed New Mexico Oil Conservation Commission form C-108, and refers to our subject well, C. D. Woolworth No. 9, showing its location, Federal designation, casing sizes, sacks of cement. The tops of the cement on this old well that was drilled in 1934 were estimated by me based on the sacks of cement that occur in the record.

Q There are no temperature surveys available?

A No, sir.

Q What volumes of water do you propose to dispose of in this well?

A We anticipate a minimum of 1,500, and a maximum of

3,000.

Q What will be the source of this water?

A The source of this water will be our three producing wells on the C. D. Woolworth Lease at this time.

Q That will be water produced from the same formation in which you propose to dispose of water?

A That is right.

Q Referring to Exhibit Number 2, would you identify that exhibit?

A Exhibit Numer 2 is a diagrammatic sketch of the proposed disposal installation in the C. D. Woolworth No. 9, showing a three and a half-inch tubing to be set in a packer at 3,300 feet, and the perforated intervals from 3,360 to 3,410, 3,450 to 3,470, and the open-hole interval of 3,475 to 3,520. This open-hole interval was squeezed off back in 1944, and we will have to redrill it out.

Q In connection with the completion of this well for water disposal, will you use an internally coated tubing?

A We hope we will not be asked to use an internally coated tubing, because internal corrosion in this area is very slight, and we know of no problem at all with it. The water is not very mineralized. I think it only shows 6,000 to 8,000 parts per million of solids, and thus is relatively fresh, and we would beg the Commission not to request internal coating due

to the marginal status of this lease now.

Q How long have you been operating in this area, Mr. Mueller, or has Phillips been operating?

A Twenty-some-odd years, at least. I do not know if they initially drilled the wells. Yes, they did, they initially drilled the wells.

Q And it was drilled in 1934?

A Right.

Q Have you had any corrosion problems over that period of time?

A No, sir.

Q And you have produced large volumes of water from this well?

A Right.

Q Referring to what has been marked as Exhibit Number 3, would you identify that exhibit?

Getting back to Exhibit Number 2, however, would you fill the casing tubing annulus with an inert fluid?

A Yes, sir.

Q Would you put a pressure gauge at the surface?

A Yes, sir.

Q If there were any leaks in the tubing, it would become readily evident?

A Right.

Q Now, referring to Exhibit Number 3, would you identify that exhibit?

A Exhibit Number 3 is the only log available on the C. D. Woolworth No. 9. It is a sample log from our geological department. It shows the top of the Yates, and color coated on the sample log is blue for dolomite and red for sand.

Q There is no later log available on this well, is there?

A No.

Q Going to Exhibit Number 4, would you identify that?

A Exhibit Number 4 is a water analysis obtained from a mixture of the three producing wells in this lease, the 7, 8, and 14, and it is a water analysis report by Tretolite Company.

Q And that does reflect the salt content that you referred to in your previous testimony?

A Yes, it does show a dissolved solid of 6,280 per million; chloride content of only 2,350.

Q Now, Exhibit Number 5, would you identify that?

A Exhibit Number 5 is a plat of the area contoured on the top of the Yates through our lease. The Phillips Woolworth Lease is outlined in red here, and encompasses parts of Sections

22, 23, 26, and 27 of Township 24 South, 36 East.

Q Now, the blue arrow, is that the subject well?

A The blue arrow is the proposed well to be used for disposal.

Q The wells circled in green, are those all producing from the same formation?

A Yes.

Q They are producing from the Jalmat Yates-Seven Rivers Pool?

A Right.

Q And the arrows, would you explain those?

A The pink arrows here again refer to New Mexico Oil Conservation Commission cases. The R are numbers that have been held here before the Commission on salt water disposal applications for those wells to which the arrows point.

Q It is your understanding that salt water disposal in those wells has been approved by the Commission?

A Yes, sir.

Q Mr. Mueller, in your opinion, will the injection of produced water into the Jalmat Yates-Seven Rivers Pool at the site you propose have any adverse effect on the producing characteristics of this pool?

A No, sir.

Q Would it have any adverse effect on your wells or any offsetting wells?

A The only producing well offsetting this is the north offset, our Woolworth No. 8. The other operators have plugged and abandoned everything else offsetting this. I would anticipate no problem or adverse effect to it.

Q Were Exhibits 1 through 5 prepared by you or someone under your supervision?

A Yes, sir.

MR. KELLAHIN: At this time I offer in evidence Exhibits 1 through 5.

MR. UTZ: Without objection Exhibits 1 through 5 will be entered into the record of this case.

(Whereupon, Applicant's Exhibits Numbers 1 through 5, inclusive, were admitted in evidence.)

MR. KELLAHIN: That completes our presentation.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Mueller, how much oil is this lease producing at this time?

A In November of 1968, it had a total production of 1,060 barrels for the whole month.

Q That is how many wells?

A Three wells.

Q How long do you think this lease will be economic to operate?

A It's been hanging in there at about, let's say 30 to 40 barrels a day for a long time, but this water is going to be our main problem. If we can economically dispose of the water, we will probably maintain the lease, but if the cost of this disposal system gets too high, or our partner objects to it, we will probably have to plug and abandon it. The future of this lease really depends upon obtaining an economical salt water disposal system.

Q What would it cost you to plastic-coat the tubing?

A It is three and a half-inch tubing due to the large volume, and I am not definitely prepared to state exactly the figure there, because I don't know if I can recall one from memory.

Q You don't have any idea what plastic coating costs?

A I am going to state in the neighborhood of 25 cents per foot.

Q I think it's been specified that that is pretty close to being right. So you have 3,300 feet, and a fourth of that would be about \$800 or \$900.

In a few instances where the leases were marginal,

we have approved bare tubing for salt water disposal for a period of one year. That is why I was asking these questions.

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

I N D E X

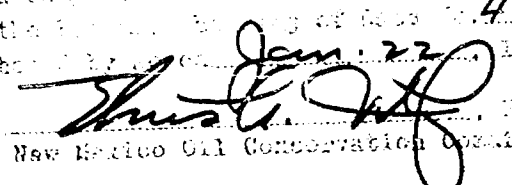
<u>WITNESS</u>	<u>PAGE</u>
W. J. MUELLER	
Direct Examination by Mr. Kellahin	2
Cross Examination by Mr. Utz	8

<u>EXHIBITS</u>	<u>MARKED</u>	<u>OFFERED AND ADMITTED</u>
Applicant's Exhibits Numbers 1 through 5	2	8

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

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


 COURT REPORTER

I do hereby certify that the foregoing is
 a complete record of the proceedings in
 the case of No. 4034,
 held at the hearing on Jan. 22, 1969.

 Secretary
 New Mexico Oil Conservation Commission

GOVERNOR
DAVID F. CARGO
CHAIRMAN

State of New Mexico
Oil Conservation Commission



LAND COMMISSIONER
GUYTON B. HAYS
MEMBER

P. O. BOX 2088
SANTA FE

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

January 24, 1969

Mr. Jason Kellahin
Kellahin & Fox
Attorneys at Law
Post Office Box 1769
Santa Fe, New Mexico

Re: Case No. 4034
Order No. R-3667
Applicant:
Phillips Petroleum Company

Dear Sir:

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

Very truly yours,

A handwritten signature in cursive script, reading "A. L. Porter, Jr.", is written over the typed name.

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Carbon copy of order also sent to:

Holbs 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. 4034
Order No. R-3667

**APPLICATION OF PHILLIPS PETROLEUM
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 January 22, 1969, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 24th day of January, 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, Phillips Petroleum Company, is the owner and operator of the C. D. Woolworth Well No. 9, located in Unit B of Section 27, Township 24 South, Range 36 East, NMPM, Jalmat Yates-Seven Rivers Pool, Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the Yates-Seven Rivers formations, with injection into the perforated and open-hole interval from approximately 3360 feet to 3520 feet.

(4) That the injection should be accomplished through 3 1/2-inch tubing installed in a packer set at approximately 3300 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge should be attached

-2-

CASE No. 4034

Order No. R-3667

to the annulus 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, Phillips Petroleum Company, is hereby authorized to utilize its C. D. Woolworth Well No. 9, located in Unit B of Section 27, Township 24 South, Range 36 East, NMFM, Jalmat Yates-Seven Rivers Pool, Lea County, New Mexico, to dispose of produced salt water into the Yates-Seven Rivers formations, injection to be accomplished through 3 1/2-inch tubing installed in a packer set at approximately 3300 feet, with injection into the perforated and open-hole interval from approximately 3360 feet to 3520 feet;

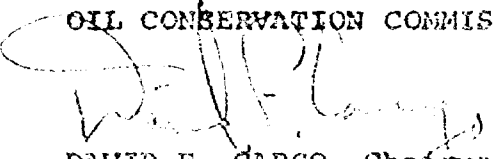
PROVIDED HOWEVER, that the casing-tubing annulus shall be filled with an inert fluid and that a pressure gauge shall be attached to the annulus at the surface in order to determine leakage in the casing, tubing, or packer.

(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. ARMIJO, Member


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


esr

JASON W. KELLAHIN
ROBERT E. FOX

KELLAHIN AND FOX
ATTORNEYS AT LAW
54 1/2 EAST SAN FRANCISCO STREET
POST OFFICE BOX 1769
SANTA FE, NEW MEXICO 87501

TELEPHONE 982-4315
AREA CODE 505

January 24, 1969

Mr. Elvis Utz
Oil Conservation Commission
Post Office Box 2088
Santa Fe, New Mexico

Re: Case No. 4034, Phillips Petroleum Company
Application for SWD Approval

Dear Elvis:

In connection with presentation of the above case on January 22, a question was raised as to the cost of internally coated tubing for the disposal well, which remained unanswered.

Mr. Mueller has advised me that the quoted cost for internally coating 3 1/2" tubing is 45¢ per foot, which would make an additional cost for the 3300 feet of tubing of \$1,485.00.

He also said that a check of the lease records available in his office back to 1953, do not show any replacement of equipment for this well due to internal corrosion.

Yours very truly,


JASON W. KELLAHIN

jwk;peg

cc Wm. Mueller

Case #0039

Heard 1-22-69

Rec. 1-22-69

Grant Phillips permission to
convert their C.D. Woolworth #9
B-27-29536E. Injection to be in
fulmat - Yates - S.R. into ~~open hole~~
perfs from 3360 - 3470 & open hole
3475 - 3520 - thru 3" tubing (unlined)
sender & packer set at 3306 (approx)
The annulus shall be loaded
with inert fluid w/ pressure
gauge at surface.

Thos. W. [Signature]

- CASE 4032: In the matter of the hearing called by the Oil Conservation Commission upon its own motion to consider the establishment of non-standard gas proration units and unorthodox gas well locations, where necessary, in the Aztec and Blanco-Pictured Cliffs Gas Pools in Sections 6, 7, 18, 19, 30, and 31, Townships 29 and 30 North, Ranges 8 and 9 West, San Juan County, New Mexico. Said non-standard units and locations being necessitated by variations in said legal subdivisions of the U. S. Public Land Surveys.
- CASE 4033: Application of Phillips Petroleum 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 Yates-Seven Rivers formations in the perforated interval from 3606 feet to 3740 feet in its Cruces Federal Well No. 5 located in Unit P of Section 26, Township 20 South, Range 34 East, Lynch Yates-Seven Rivers Pool, Lea County, New Mexico.
- CASE 4034: Application of Phillips Petroleum 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 Yates-Seven Rivers formations in the open-hole interval from 3360 feet to 3520 feet in its C. D. Woolworth Well No. 9 located in Unit B of Section 27, Township 24 South, Range 36 East, Jalmat Yates-Seven Rivers Pool, Lea County, New Mexico.
- CASE 4035: Application of Phillips Petroleum Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Grayburg-San Andres formations through its Philmex Well No. 5 located in Unit N of Section 27, Township 17 South, Range 33 East, Maljamar Grayburg-San Andres Pool, Lea County, New Mexico.

DOCKET: EXAMINER HEARING - WEDNESDAY - JANUARY 22, 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:

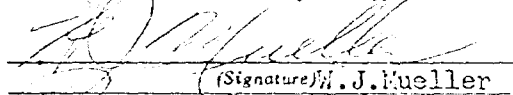
- CASE 4013: (Continued and Readvertised)
Application of Redfern Development Corporation and Wil-Mc Oil Corporation for salt water disposal, Lea County, New Mexico. Applicants, in the above-styled cause, seek authority to dispose of produced salt water into the San Andres formation in the interval from approximately 4042 feet to 4179 feet in the Wil-Mc State K Well No. 1 located in Unit O of Section 11, Township 10 South, Range 32 East, Mescalero-San Andres Pool, Lea County, New Mexico.
- CASE 4029: Application of General American Oil Company for a waterflood expansion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its pilot waterflood project in the Grayburg zone of the San Andres formation in the Grayburg-Jackson Pool, Eddy County, New Mexico, authorized by Order No. R-2324, by the conversion to water injection of 13 additional injection wells located in Township 17 South, Ranges 29 and 30 East, Eddy County, New Mexico.
- CASE 4030: Application of Argus Production 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 formation in the perforated and open-hole interval from approximately 3554 feet to 3775 feet in its J. T. Lynn A-28 Well No. 3, located 2310 feet from the South line and 1650 feet from the East line of Section 28, Township 23 South, Range 36 East, Jalmat Yates-Seven Rivers Pool, Lea County, New Mexico.
- CASE 4031: Application of Texaco 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 Yates-Seven Rivers formations in the open-hole interval from approximately 2964 feet to 3119 feet in its C. W. Shepherd Federal "B" Well No. 5 located in Unit I of Section 1, Township 26 South, Range 36 East, Jalmat Yates-Seven Rivers Pool, Lea County, New Mexico.

NEW MEXICO OIL CONSERVATION COMMISSION

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

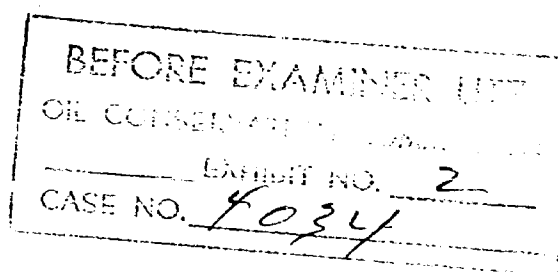
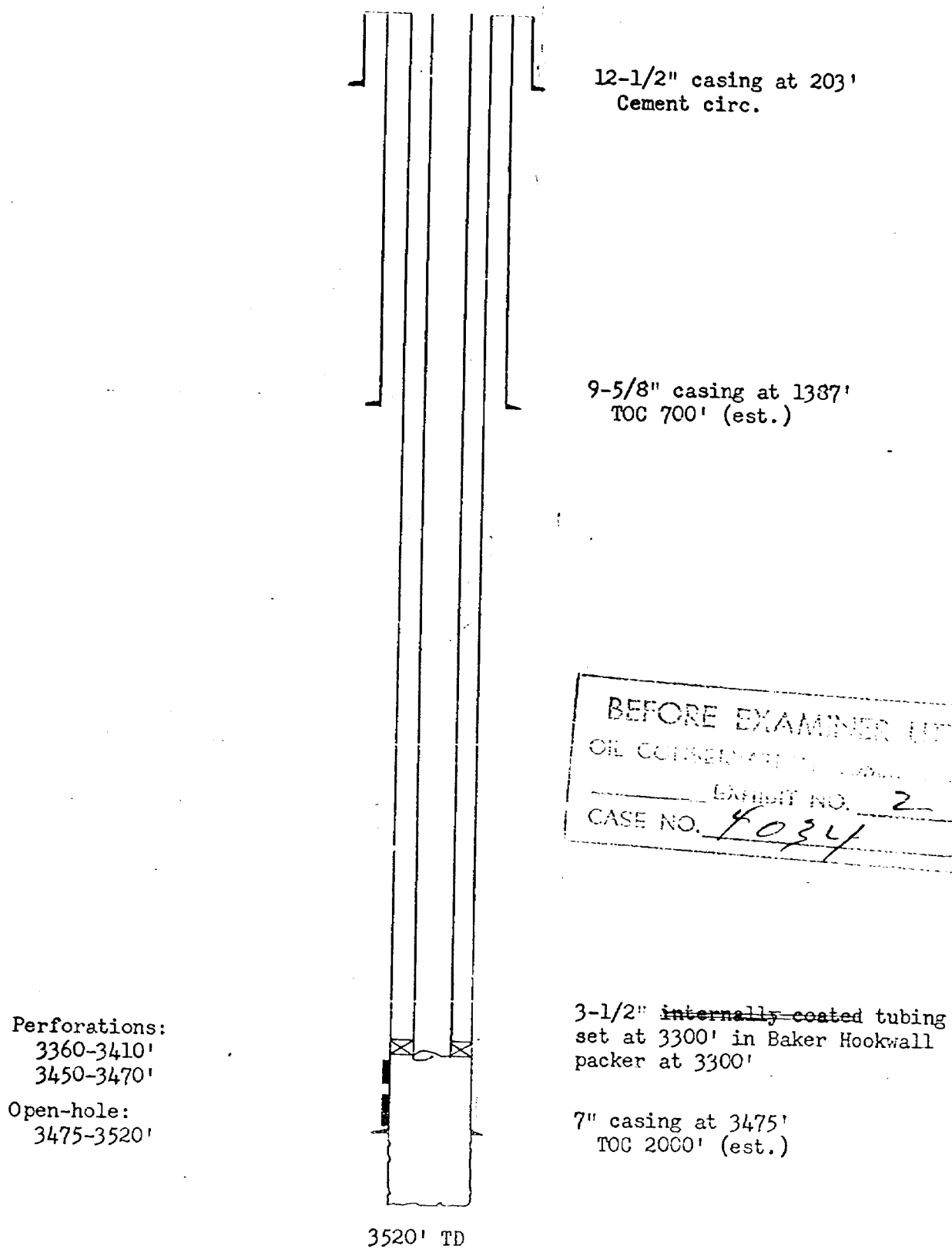
OPERATOR Phillips Petroleum Company		ADDRESS Room B-2, Phillips Bldg., Odessa, Texas 79760				
LEASE NAME C. D. Woolworth	WELL NO. 9	FIELD Jalmat Yates-Seven Rivers	COUNTY Lea			
LOCATION UNIT LETTER <u>B</u> ; WELL IS LOCATED <u>660</u> FEET FROM THE <u>north</u> LINE AND <u>1981</u> FEET FROM THE <u>east</u> LINE, SECTION <u>27</u> TOWNSHIP <u>24-S</u> RANGE <u>36-E</u> NMPM.						
CASING AND TUBING DATA						
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY	
SURFACE CASING	12-1/2"	203'	150	Surface	Estimated	
INTERMEDIATE	9-5/8"	1387'	350	700'	Estimated	
LONG STRING	7"	3475'	400	2000'	Estimated	
TUBING	3-1/2"	3300'	NAME, MODEL AND DEPTH OF TUBING PACKER Baker Hookwall Packer at 3300'			
NAME OF PROPOSED INJECTION FORMATION Yates and Seven Rivers		TOP OF FORMATION 3260'		BOTTOM OF FORMATION 3520'+		
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Tubing		PERFORATIONS OR OPEN HOLES? Both		PROPOSED INTERVAL(S) OF INJECTION 3360-3410' (Perf.) 3475-3520' (OH) 3450-3470' (Perf.)		
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No		IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? Oil (T.A. in August, 1963.)		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? No		
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH None						
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA 100' est.		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA None		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA None		
ANTICIPATED DAILY INJECTION VOLUME (BBLs.)	MINIMUM 1500	MAXIMUM 3000	OPEN OR CLOSED TYPE SYSTEM Closed	IS INJECTION TO BE BY GRAVITY OR PRESSURE? Gravity	APPROX. PRESSURE (PSI) --	
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 --			WATER TO BE DISPOSED OF No	NATURAL WATER IN DISPOSAL ZONE No	ARE WATER ANALYSES ATTACHED? Yes	
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) C. D. Woolworth Estate--Jal, New Mexico						
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL Texas Pacific Oil Company--Box 1069, Hobbs, New Mexico 88240 Mobil Oil Company--Box 1800, Hobbs, New Mexico 88240						
<div style="border: 1px solid black; padding: 5px; transform: rotate(-10deg); display: inline-block;">BEFORE EXAMINER USE OIL CONSERVATION COMMISSION EXHIBIT NO. 4034 FILE NO. 4034</div>						
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?		SURFACE OWNER Yes		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL Yes		THE NEW MEXICO STATE ENGINEER No
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)		PLAY OF AREA Yes		ELECTRICAL LOG Sample Log		DIAGRAMMATIC SKETCH OF WELL Yes

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


(Signature) J. J. MuellerAssociate Reservoir Engineer
(Title)January 14, 1969
(Date)

NOTE: Should waivers from the State Engineer, 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.

PROPOSED INSTALLATION

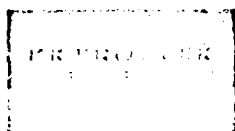


PHILLIPS PETROLEUM COMPANY

G. D. Woolworth No. 9

Unit B-27-24S-36E

Lea County, New Mexico



TRETOLITE DIVISION

369 Marshall Avenue / Saint Louis 19, Missouri /

WATER ANALYSIS REPORT

COMPANY Phillips Pet. Co. ADDRESS Odessa, Texas DATE: 9-22-67
SOURCE Woolworths #7#8#14 Mixed DATE SAMPLED _____ ANALYSIS NO. 1751

Analysis	Mg/L	*Meq/L
1. PH <u>7.6</u>		
2. H ₂ S (Qualitative) <u>Pos.</u>		
3. Specific Gravity <u>1.000</u>		
4. Dissolved Solids <u>6,280</u>		
5. Suspended Solids _____		
6. Phenol Alkalinity (CaCO ₃) _____		
7. M. O. Alkalinity (CaCO ₃) <u>920</u>		
8. Bicarbonate (HCO ₃) <u>1,120</u> ÷ 61 <u>18</u> HCO ₃		
9. Chlorides (Cl) <u>2,350</u> ÷ 35.5 <u>66</u> Cl		
10. Sulfates (SO ₄) <u>674</u> ÷ 48 <u>14</u> SO ₄		
11. Calcium (Ca) <u>320</u> ÷ 20 <u>16</u> Ca		
12. Magnesium (Mg) <u>49</u> ÷ 12.2 <u>4</u> Mg		
13. Total Hardness (CaCO ₃) <u>1,000</u>		
14. Total Iron (Fe) <u>3.0ppm</u>		
15. Barium (Qualitative) _____		
16. _____		

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION

Compound	Equiv. Wt.	X	Meq/L	Mg/L
Ca (HCO ₃) ₂	81.04		18	1,300
Ca SO ₄	68.07			
Ca Cl ₂	55.50			
Mg (HCO ₃) ₂	73.17		2	146
Mg SO ₄	60.19		2	120
Mg Cl ₂	47.62			
Na HCO ₃	84.00			
Na ₂ SO ₄	71.03		12	852
Na Cl	58.46		66	3,860

16

4

78

Ca

Mg

Na

HCO₃

SO₄

Cl

18

14

66

Saturation Values Distilled Water 20°C
Ca CO₃ 13 Mg/L
Ca SO₄ • 2H₂O 2,090 Mg/L
Mg CO₃ 103 Mg/L

REMARKS Al Semmeroth, Bill Jones, L.L. Frantz, Portwood, File, Wersham

BEFORE EXAMINATION

OR CONSTRUCTION

EXAMINER

CASE NO.

Respectfully submitted
TRETOLITE COMPANY

Ray Shaffner

STATE		COMPANY Phillips Petro. Co.	
COUNTY	Lea	FARM	C.D. Woolworth
BLOCK	27	WELL NO.	9
		SURVEY	660' fr N & 1930' fr E
24 1/2		TOTAL DEPTH 3506	
		CONTRACTOR	
		COMMENCED 11-1-34	
		COMPLETED 12-12-34	
		REMARKS	
ALTITUDE 3336'			

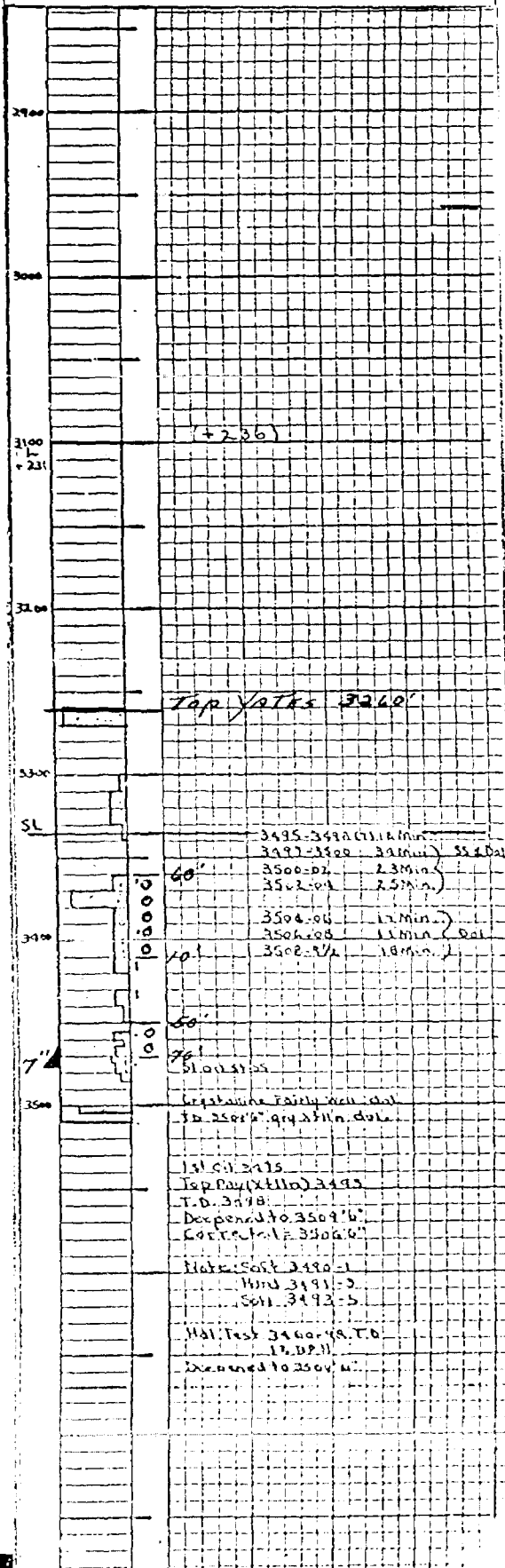
IP SL.6 BEF 11 hr. 10 min. flo test.
4.146 M.G. CASING RECORD 2 1/2" tu

	10" 1388 (c) 350
	8 1/4"
20"	6 1/2" 3475 (c) 400
15 1/4"	5 1/2"
12 1/4" 204	2 1/2" 3500
SHOT	QUARTS BETWEEN

TIME RATE SCALE: 1/10" = MINUTES

FORM 450 - In stock and for sale by Mid-West Ptg. Co., Tulsa

TIME RATE: 1/10" SQUARES



BEFORE THE

OIL CONSERVATION COMMISSION OF NEW MEXICO

APPLICATION OF PHILLIPS PETROLEUM
COMPANY FOR APPROVAL OF SALT WATER
DISPOSAL, JALMAT YATES-SEVEN RIVERS
POOL, LEA COUNTY, NEW MEXICO

Case 4034

A P P L I C A T I O N

Comes now PHILLIPS PETROLEUM COMPANY and applies to the Oil Conservation Commission of New Mexico for authority to dispose of produced water into the Yates-Seven Rivers formation, and in support thereof would show the Commission:

1. Applicant proposes to dispose of produced water in its C.D. Woolworth No. 9 Well, located in Unit B of Section 27, Township 24 South, Range 36 East, in the Jalmat Yates-Seven Rivers Pool, Lea County, New Mexico.

2. Disposal will be in the perforated and open-hole intervals from 3360 to 3520 feet.

3. Injection of water into the disposal well will be through tubing, under a packer.

WHEREFORE, applicant prays that this application be set for hearing before the Commission or the Commission's duly appointed examiner, and that after notice and hearing as required by law, the Commission enter its order approving disposal of produced water as prayed for.

Respectfully submitted,

PHILLIPS PETROLEUM COMPANY

By: Robert W. Kellaborn
Kellaborn & Fox
Post Office Box 1736
Santa Fe, New Mexico

ATTORNEYS FOR APPLICANT

DOCKET MAILED

Date 1-9-69

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. 4034

Order No. R- 3667

APPLICATION OF PHILLIPS PETROLEUM
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 January 22, 1969,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this _____ day of January, 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, Phillips Petroleum Company,
is the owner and operator of the C. D. Woolworth Well No. 9
located in Unit B of Section 27, Township 24 South, Range
36 East, NMPM, Jalmat Yates-Seven Rivers Pool, Lea
County, New Mexico.

(3) That the applicant proposes to utilize said well to
dispose of produced salt water into the Yates-Seven Rivers
formations, with injection into the perforated and open-hole interval
from approximately 3360 feet to 3520 feet.

(4) That the injection should be accomplished through
3 1/2 -inch ~~plastic-lined~~ tubing installed in a packer set at

approximately 3300 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, Phillips Petroleum Company, is hereby authorized to utilize its C. D. Woolworth Well No. 9, located in Unit B of Section 27, Township 24 South, Range 36 East, NMPM, Jalmat Yates-Seven Rivers Pool, Lea County, New Mexico, to dispose of produced salt water into the Yates-Seven Rivers formations, injection to be accomplished through 3 1/2-inch tubing installed in a packer set at approximately 3300 feet, with injection into the ^{*perforated and*} open-hole interval from approximately 3360 feet to 3520 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.

via - Telephone 1-3-69

Phillips Pet. Co. for SW D

"C D" Woolworth #9

B - ~~227~~ 27, 245, 36E

Jalmar - Yates - 7R. Pool

Respa Yates - 7R - open - link

~~3660-35~~ 3360-3520

V Lee - Co.