

CASE 3716: Application of CARTER  
FOUNDATION PROD. CO. for salt  
water disposal, Lea County, N.M.

Case No.

3716

Application, Transcript,  
Small Exhibits, Etc.

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 31, 1968

Mr. Thomas F. McKenna  
McKenna & Sommer  
Attorneys at Law  
302 East Palace Avenue  
Santa Fe, New Mexico

Re: Case No. 3716  
Order No. R-3372  
Applicant:  
Carter Foundation Prod.

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 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. 3716  
Order No. R-3372

APPLICATION OF CARTER FOUNDATION  
PRODUCTION 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 24, 1968, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 31st day of January, 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, Carter Foundation Production Company, is the owner and operator of the E. C. Hill "E" Federal Well No. 5, located in Unit E of Section 35, Township 23 South, Range 37 East, NMPM, Teague-Ellenburger Pool, Lea County, New Mexico.
- (3) That the applicant proposes to utilize said well to dispose of produced salt water into the Ellenburger formation, with injection into the perforated interval from approximately 9580 feet to 9680 feet.
- (4) That the injection should be accomplished through 2-inch internally plastic-coated tubing installed in a packer set at approximately 9480 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge

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CASE No. 3716  
Order No. R-3372

should be attached to the annulus or the annulus left open at the surface in order to determine leakage in the 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:

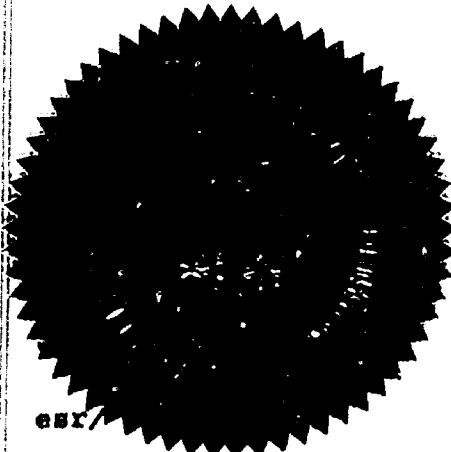
(1) That the applicant, Carter Foundation Production Company, is hereby authorized to utilize its E. C. Hill "E" Federal Well No. 5, located in Unit E of Section 35, Township 23 South, Range 37 East, NMPM, Teague-Ellenburger Pool, Lea County, New Mexico, to dispose of produced salt water into the Ellenburger formation, injection to be accomplished through 2-inch tubing installed in a packer set at approximately 9480 feet, with injection into the perforated interval from approximately 9580 feet to 9680 feet;

PROVIDED HOWEVER, that the tubing shall be internally plastic-coated; 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 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*  
DAVID F. CARGO, Chairman

*Guyton B. Hays*  
GUYTON B. HAYS, Member

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

CASE 3715: Application of Gulf Oil Corporation for an amendment to Order No. R-3345, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3345, which order authorized the Gulf Stuart Langlie Mattix Unit Waterflood Project. Applicant proposes to substitute the Stuart "B" Well No. 2 located in Unit I and the Stuart "C" Well No. 3 located in Unit K as water injection wells in said project in lieu of the Stuart "A" Well No. 1 located in Unit J and the Stuart "D" Well No. 4 located in Unit L, all in Section 10, Township 25 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico.

CASE 3716: Application of Carter Foundation 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 Ellenburger formation through the perforated interval from 9580 to 9680 feet in its E. C. Hill "E" Federal Well No. 5 located in Unit E of Section 35, Township 23 South, Range 37 East, Teague-Ellenburger Pool, Lea County, New Mexico.

CASE 3651 (Reopened):

Application of Tenneco Oil Company for an amendment to Order No. R-3315, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the re-opening of Case No. 3651 and the amendment of Order No. R-3315 entered therein which order promulgated temporary pool rules for the North Morton-Pennsylvanian Pool, Lea County, New Mexico, including the establishment of 80-acre proration units for a period of one year. Applicant now seeks the amendment of said order to provide for 160-acre spacing and proration units on a temporary basis.

CASE 3717: Application of Aztec Oil & Gas Company for a dual completion and salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the authority to dually complete its State "AJ" Well No. 2 located in Unit N of Section 1, Township 18 South, Range 36 East, Arkansas Junction-San Andres Pool, Lea County, New Mexico, in such a manner as to permit the production of oil from the Upper San Andres formation in the interval from 5047 to 5079 feet and to permit the disposal of produced salt water in the Lower San Andres formation in the interval from 5430 to 5462 feet through parallel strings of 2-inch tubing.

CASE 3718: Application of Cabot Corporation for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water in the Wolfcamp, Pennsylvanian, Mississippian, and Devonian formations in the overall interval from 9406 to 12,689 feet in its H. L. Lowe "C" Well No. 1 located in Unit N of Section 26, Township 13 South, Range 37 East, King-Devonian Pool, Lea County, New Mexico.

Docket No. 3-68

DOCKET: EXAMINER HEARING - WEDNESDAY -- JANUARY 24, 1968

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

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

CASE 3704 (Continued from the December 20, 1967, Examiner Hearing)

Application of New Mexico Salt Water Disposal Company, 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 Bough "D" zone of the Pennsylvanian formation in the perforated interval from 9844 to 9875 feet in its Ainsworth Well No. 1 located in Unit H of Section 19, Township 9 South, Range 34 East, Vada-Pennsylvanian Pool, Lea County, New Mexico.

CASE 3711: In the matter of the hearing called by the Oil Conservation Commission upon its own motion to consider the amendment of Rule 509 of the Commission Rules and Regulations and Commission Form C-109 to permit the production of the bonus discovery oil allowable assigned to multiple discovery wells to be produced from any discovery zone in any proportion; and to further amend said rule to permit applications for the bonus discovery allowable to be heard on dockets other than the regular pool nomenclature docket in instances where the applicant will present the evidence.

CASE 3712: In the matter of the hearing called by the Oil Conservation Commission upon its own motion to consider the amendment of Rule 701 of the Commission Rules and Regulations and secondary recovery Orders Nos. R-1244, R-1311, R-1456, R-1470, R-1505, R-2064, R-2178-B, R-2268-A, R-2269, R-2403, R-2541, R-2622, R-2664, R-2700, and R-2795, to delete therefrom all references to the State Engineer or the State Engineer Office.

CASE 3713: In the matter of the hearing called by the Oil Conservation Commission upon its own motion to consider the amendment to Rule 103 of the Commission Rules and Regulations to require that well identification signs for wells drilled hereafter shall designate the location of said wells by quarter-quarter section rather than quarter section as now required.

CASE 3714: Application of Continental Oil Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete its State "O" Well No. 1 located in Unit F of Section 16, Township 17 South, Range 32 East, Lea County, New Mexico, in such a manner as to permit the production of gas from the perforated interval 3140 to 3160 feet, Maljamar-Queen Gas Pool and the injection of water for secondary recovery purposes into the Grayburg-San Andres formations in the interval from 3700 to 4050 feet through parallel strings of 2-inch tubing.

## CLASS OF SERVICE

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# WESTERN UNION

## TELEGRAM

W. P. MARSHALL  
CHAIRMAN OF THE BOARD

R. W. MCFALL  
PRESIDENT

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NEW MEXICO OIL CONSERVATION COMMISSION, ATTN A L  
PORTER JR= STATELAND OFFICE BLDG SANTA FE NMEX

RE EXAMINER HEARING JANUARY 24TH CASE #3716 THIS IS  
TO ADVISE THAT TEXAS PACIFIC OIL COMPANY WAIVES  
OBJECTION TO CARTER FOUNDATION REQUEST TO DISPOSE  
OF PRODUCED WATER INTO THE ELLENBURGER FORMATION IN  
THEIR E. C. HILL #5 SECTION 35 TOWNSHIP 27 SOUTH RANGE  
37 EAST

RON FREELS BY JERRY I. MORITZ

'68 JAN 23 PM 3 42

24TH #3716 E C #5 35 23 37 FREELS MORITZ

WU1201(R2-65)

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

TEXACO  
INC.

PETROLEUM PRODUCTS



DOMESTIC PRODUCING DEPARTMENT  
MIDLAND DIVISION

P. O. BOX 3100  
MIDLAND, TEXAS 79701

January 16, 1968

SALT WATER DISPOSAL  
TEAGUE (ELLENBURGER) POOL  
LEA COUNTY, NEW MEXICO

Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico


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

Gentlemen:

Texaco Inc., as an offset operator, waives objection to the application of Carter Foundation Production Company to dispose of salt water by injecting into a porous formation in their E. C. Hill "E" Federal Well No. 5 in the Teague (Ellenburger) Pool in Lea County, New Mexico.

This waiver applies to the salt water disposal project as submitted by Carter Foundation Production Company's "Application to Dispose of Salt Water By Injection Into A Porous Formation", Form C-108, dated December 29, 1967. The well is located in Unit G, Section 35, T-23-S, R-37-E, Lea County, New Mexico and the injection interval is a portion of the Ellenburger formation from a depth of 9578' to 9734'.

Yours very truly,

  
E. M. ROWSER  
Assistant To  
Division Manager

CLW:jl

cc: Carter Foundation Prod. Co.  
P. O. Box 900  
Kermit, Texas 79745

**CARTER FOUNDATION PRODUCTION COMPANY**

FIELD OFFICE P. O. BOX 900  
KERMIT, TEXAS 79745

AMON G. CARTER JR., PRESIDENT  
WALTER CLAER, VICE PRESIDENT  
KATRINE DEAKINS, SECRETARY-TREASURER

January 2, 1968

ROY E. CARTER,  
FIELD MANAGER

HOME OFFICE ADDRESS  
P. O. BOX 1036  
FORT WORTH, TEXAS

*Case 3716*

MAIN OFFICE

'68 JAN 3 AM 8 31

New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Gentlemen:

The Carter Foundation Production Company requests permission to inject produced salt water into their E. C. Hill Federal "E" #5 well located in Section 35, Township 23-South, Range 37-East, Teague (Ellenburger) Field, Lea County, New Mexico, in an interval from 9580' to 9680'. In conjunction with this application, enclosed in triplicate are the following:

- (1) Form C-108 - Application to Dispose of Salt Water by Injection into a Porous Formation.
- (2) Plat showing the location of the proposed injection well and the location of all other wells within a radius of two miles from proposed injection well.
- (3) Electrical Log of the proposed injection well (one copy to New Mexico Oil Conservation Commission and one copy to State Engineer Office).
- (4) A diagrammatic sketch of the proposed injection well showing all casing strings.
- (5) Copy of waiver letter sent to all offset operators and surface owner.

A copy of this application with all attachments is being mailed to the State Engineer Office, Capitol Building, Santa Fe.

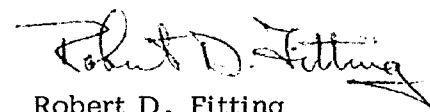
It is our intent to send to the Commission the signed waiver forms as soon as received. No difficulty is anticipated in the return of the

- 2 -

approved waivers as the Carter Foundation Production Company owns the only Ellenburger producing wells in this area. We respectfully request that, if Commission authority permits, we be allowed to perform this waste water disposal with administrative approval and thereby eliminate the necessity of holding a formal Hearing.

Please direct any correspondence regarding this application to the writer at 504 Vaughn Bldg., Midland, Texas 79701.

Yours very truly,

  
Robert D. Fitting

RDF:jd  
Encl -

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

January 3, 1968

*Encl 3916*

C  
O  
P  
Y  
  
Carter Foundation Production Company  
Post Office Box 900  
Kermit, Texas 79745

DOCKET MAILED

Attention: Mr. Robert D. Fitting

Date 1-11-68

Gentlemen:

Reference is made to your letter of January 2, 1968,  
for salt water disposal.

Inasmuch as your application is not eligible for administrative approval, it is being docketed for hearing at 9 a.m., January 24, 1968, at the Oil Conservation Commission Conference Room, State Land Office Building, Santa Fe, New Mexico.

Very truly yours,

DANIEL S. NUTTER  
Chief Engineer

DSN/ir

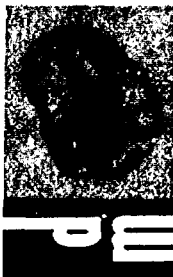
NEW MEXICO OIL CONSERVATION COMMISSION  
APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR <b>Carter Foundation Production Company</b>		ADDRESS <b>P. O. Box 900, Kermit, Texas</b>	
LEASE NAME <b>E. C. Hill "E" Federal</b>	WELL NO. <b>5</b>	FIELD <b>Teague (Ellenburger)</b>	COUNTY <b>Lea</b>
LOCATION UNIT LETTER <b>G</b> ; WELL IS LOCATED <b>1980</b> FEET FROM THE <b>North</b> LINE AND <b>510</b> FEET FROM THE <b>West</b> LINE, SECTION <b>35</b> TOWNSHIP <b>23-S</b> RANGE <b>37-E</b> NMPM.			
CASING AND TUBING DATA			
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT
SURFACE CASING	<b>13-3/8"</b>	<b>316'</b>	<b>300</b>
INTERMEDIATE	<b>9-5/8"</b>	<b>2908'</b>	<b>1500</b>
LONG STRING	<b>7"</b>	<b>9729'</b>	<b>650</b>
TUBING	<b>2-1/2"</b> <b>2"</b>	<b>9480'</b>	NAME, MODEL AND DEPTH OF TUBING PACKER <b>T.I.W. 2" x 2" x 7" Model H.J.D.</b>
NAME OF PROPOSED INJECTION FORMATION <b>Ellenburger</b>		TOP OF FORMATION <b>9578'</b>	BOTTOM OF FORMATION <b>9734' Est.</b>
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? <b>Tubing</b>		PERFORATIONS OR OPEN HOLE? <b>Perforations</b>	PROPOSED INTERVAL(S) OF INJECTION <b>9580'-9680'</b>
IS THIS A NEW WELL DRILLED FOR DISPOSAL? <b>No</b>	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? <b>Oil Well</b>		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? <b>Yes</b>
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH <b>5205'-5460' 1405 sacks in 5 jobs</b>			
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA <b>300'</b>		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA <b>9450'</b>	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA <b>None</b>
ANTICIPATED DAILY INJECTION VOLUME (BBLs.) <b>50</b>	MINIMUM <b>200</b>	MAXIMUM <b>Open</b>	IS INJECTION TO BE BY GRAVITY OR PRESSURE? <b>Gravity</b>
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE - <b>Yes</b>		WATER TO BE DISPOSED OF <b>Yes</b>	NATURAL WATER IN DISPOSAL ZONE <b>Yes</b>
ARE WATER ANALYSES ATTACHED? <b>Yes</b>			
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) <b>Milton Goins - Eunice, New Mexico</b>			
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL <b>Atlantic Richfield Co., Texaco, Inc., Bronco Oil Corporation, John H. Hendrix</b> <b>(None have Ellenburger producing wells)</b>			
MAIN OFFICE OF			
JAN 3 AM 8 31			
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER <b>Yes</b>	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL <b>Yes</b>	THE NEW MEXICO STATE ENGINEER <b>Yes</b>
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	PLAT OF AREA <b>Yes</b>	ELECTRICAL LOG <b>Yes</b>	DIAGRAMMATIC SKETCH OF WELL <b>Yes</b>

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

Robert D. Litting Agent 12-29-67  
(Signature) (Title) (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.



dearnley-meier reporting service, inc.

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 24, 1968

IN THE MATTER OF:

Application of Carter Foundation )  
Production Company for salt water )  
disposal, Lea County, New Mexico )

CASE NO. 3716

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: The next case will be Case 3716.

MR. HATCH: Application of Carter Foundation  
Production Company for salt water disposal, Lea County, New  
Mexico.

MR. McKENNA: Mr. Examiner, my name is Thomas F.  
McKenna, McKenna & Sommers, Santa Fe. We have one witness.

(Witness sworn.)

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

\* \* \* \* \*

V E N     W H I T E, called as a witness, having been  
first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. McKENNA:

Q     Would you state your name and address, Mr. White?

A     My name is Ven White, and I live in Midland,  
Texas. I work for Robert D. Fitting and Associates.

Q     In what capacity do you work for Mr. Fitting?

A     I'm a petroleum engineer.

Q     Have you testified before this Commission?

A     Yes, I have.

Q     Have your qualifications been accepted?

A     Yes.

Q     As a petroleum engineer?

A Yes.

Q Mr. White, are you familiar with the application now being considered by the Commission and if so, can you explain the purpose of it?

A Yes. The application is made for a conversion of a producing well, Ellenburger producing well in Section 35, Township 23 South, Range 37 East, in Lea County, New Mexico. It has been prorated in the Teague-Ellenburger field. The request is that permission be given to dispose of produced water into the Ellenburger formation through coated tubing and under a packer in this particular well. The produced water is from batteries that are under flood at the present time and disposal is required.

Q How is the water being transferred to the proposed injection well?

A It will be transferred through coated lines on the surface and from small individual satellite tanks at our producing capacities.

Q Have you made your arrangements with the land owner?

A Yes, we have.

Q Addressing yourself to what has been marked as Exhibit No. 1, which appears to be a location map, the

injection well is located where, is it the one marked with the black arrow?

Q It's the one marked with the black arrow. It's designated as 5-E. The Hill lease on the deeper horizon has multiple pay zones and the leases have been designated "D" for Devonian and "E" for Ellenburger and "M" for McKee. The well is designated as 5-E on the map.

Q The other two wells marked up to the north and colored in red, they are what, Ellenburger wells?

A They are Ellenburger producing wells.

Q Now, looking at Exhibit No. 2, that is the diagrammatic sketch, would you explain the proposed completion plan for the injection?

A The well was originally perforated from 9580 to 9680, through seven-inch casing. We do propose to run two-inch plastic-coated tubing to 9480 and set it on a packer at that point.

Q Is there anything further you wish to say about the exhibit?

A No.

Q Exhibit No. 3 is what, a contour of the area? Can you explain that to the Examiner?

A This is the top of the Ellenburger structure map

on the Teague-Ellenburger itself. The area is faulted considerably. The Well No. 8 with a subsea depth of 6810 was drilled and found to be dry in the Ellenburger, and on the downthrown side of the fault.

MR. NUTTER: It's some 500 feet lower than the No. 5, then, isn't it?

A Yes, sir. There appears to be separation between the 1-E and the two leases that are indicated as Gulf, the Hill "A" and "B" leases just to the north, northwest. The cross-section, which is the next exhibit, indicates that they are in different fault blocks. Now, the structure map doesn't indicate that to be the case, not necessarily. There have been several interpretations on the area showing the fault blocks existing in a northeast-southwest direction separating these various zones of production. The two, or the four wells on the Gulf Hill lease have been abandoned. They ceased to produce in 1964 and were subsequently plugged and the pipe pulled on them. There are still two wells producing on the Gulf Lamunyon lease in Section 27. From the reports we get from the field, their production has been enhanced since the two wells of Carters were put on Reda Pump in '64. Why, nobody knows.

Q What is the status of the production on the

proposed injection well, E. C. Hill Federal No. 5, is that what it is?

A The well hasn't been produced for about a year. The last production was less than a barrel a day and very little water. The other two Ellenburger wells that we are producing are making an average of about a hundred thirty-five barrels of oil per day and seventeen to eighteen hundred barrels of water per day.

MR. NUTTER: Are you referring to the Ellenburger wells?

THE WITNESS: The Ellenburger wells, yes, sir.

Q (By Mr. McKenna) How much oil are they making?

A About one hundred thirty-five barrels a day.

Q Between the two of them?

A Yes, sir. The purpose for the installation of the Reda Pumps was to obtain a water supply for flooding the McKee Horizon. The fluid level is being drawn down in the Ellenburger and making it difficult to maintain the pumping fluid levels for the Reda Pump that we have in there. We feel that disposal of water into the 5-E should help maintain the pressure in the reservoir somewhat -- the water that we propose to put in it, we have about a half dozen sources of it from different batteries from the same horizons and the water is not compatible. The volume is too small

to economically treat it and put it into our injection system. We propose to dispose of it and try to maintain somewhat the pressure in the Ellenburger.

MR. NUTTER: So in other words, rather than recycling the water in your injection project, you are going to put it back in the Ellenburger, that's your water source?

THE WITNESS: Yes.

MR. NUTTER: You'll be recharging your water source rather than recycling your water in the waterflood?

THE WITNESS: Yes, until such time as we have a volume sufficient to warrant treating it. But the waters are not compatible at all. I didn't bring any analysis with me. If you would like copies of them I'd be glad to forward them.

MR. NUTTER: You don't think you can put the produced water back into the formation from which it came, but it will be all right to put it back into the Ellenburger?

THE WITNESS: We feel that we will get precipitation of free sulphur, calcium and calcium sulphate, gyp and carbonate scales.

MR. NUTTER: If you put it back in the McKee?

THE WITNESS: The McKee is very difficult to get

water in it as it is.

MR. NUTTER: Isn't that the one you are flooding?

THE WITNESS: Yes, we are running thirty-two to thirty-three hundred pounds injection pressure at the present time and our rates are still fairly low. The purpose for using the Ellenburger water was to obtain a brine that won't hydrate the clays in the McKee sand.

MR. NUTTER: Well, this water that will be disposed of into the Ellenburger will be water that's produced from your McKee flood, plus water that's produced from your Devonian wells as well as any excess Ellenburger water that you can't use?

THE WITNESS: Yes, sir. We don't have an excess of Ellenburger water. This does include the Penrose water also. We have a flood unit in operation there, it's called the Blind "K" Unit.

MR. NUTTER: Where are the Penrose wells on this Exhibit, or are they shown?

THE WITNESS: They are on Exhibit 1, Mr. Nutter.

MR. NUTTER: Where are they located?

THE WITNESS: They are the wells with no symbols around them. If you look at the legend there, just the shallow wells are shown, just as a dot. They have no

square, triangle, or anything around them. These multiple pay fields are headaches.

Q (By Mr. McKenna) Mr. White, what effect would the injection, if any, have on the Ellenburgers which adjoin the proposed injection well; would it injure the production of those wells, or be beneficial or what?

A We feel that it could be nothing but beneficial. As I say, the fluid level is dropping in the wells. We have trouble pumping them off; when we do, we tear up a Reda Pump and they are most expensive.

Q How would they be beneficial, do you think they would increase the production, perhaps?

A It should tend to maintain the reservoir pressure to some extent. We don't feel or we don't anticipate any increased oil stimulation from the operation. If we can get the water, we'll be happy;

Q Is there anything further you wish to say about Exhibit 4 which is the cross-section, or do you want to explain that, particularly, to the Commission?

A Well, that, as I indicated before, there are numerous interpretations of the faulting in the particular field. The cross-section on the right-hand side of it is the Hill "1-E" and "2-B", the two Ellenburger wells that are producing at the present time. The "5-E" should be on the

right-hand side of that. But it does indicate that the Gulf Hill No. 2 is in a different fault block from the production that we're getting at the present time. Now, the Hill No. 2 well and the other three wells on Gulf's Hill lease were abandoned in '64. On to the west the Lamunyon No. 11 and 13 are still producing at this time, but they're roughly a mile from the subject well.

Q What is Exhibit 5?

A Those are the waivers from offset operators; we received waivers from all offset operators with the exception of Texas Pacific Oil Company, they indicated yesterday they would send a wire to the Commission giving their approval.

Q Mr. White, is there a waiver from Texas Pacific?

A Yes.

MR. McKENNA: May this be attached to Exhibit No. 5?

MR. NUTTER: Yes.

Q (By Mr. McKenna) So the waiver from Texas Pacific has been received?

A There's no exception there. The waiver was sent to the land owner December 29th; we have not heard from him; however, relations have always been the best with him. He has accepted surface damages for the extension of our lines

to take care of this project.

Q There was submitted with the application, an electric log. Is it your purpose to have an electric log of the proposed injection well?

A It is of the proposed injection.

Q It's your purpose to have it considered by the Commission Examiners as a part of this hearing?

A Yes, please; I neglected to bring an extra copy of it.

MR. NUTTER: This is satisfactory.

Q (By Mr. McKenna) Is there anything further you wish to say as to the exhibits?

A I don't believe so.

MR. McKENNA: Mr. Examiner, before I move the introduction of the exhibits --

Q (By Mr. McKenna) Is it your opinion, well, will there be any injury to correlative rights by virtue of the relief that you are asking for?

A No, sir, not at all.

Q Is it your opinion that your application is in keeping with the principles of conservation and the economics of the oil business?

A Yes.

MR. McKENNA: I have no further questions. I would like to move the admission of Exhibits 1 through 5 as part of the applicant's case and ask that the Commission also consider the electric log which was submitted as a part of the evidence, too, Mr. Examiner.

MR. NUTTER: We will do that, and applicant's Exhibits 1 through 5 are admitted in evidence.

(Whereupon applicant's Exhibits  
1 through 5 admitted in evidence.)

MR. McKENNA: I have no further questions.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. White, now as I understand it, you are flooding the Teague-Simpson or the Teague-McKee, whatever it's called?

A Yes, sir.

Q And that you are using water produced from the Ellenburger for your flood. Is the flood in the McKee a successful flood, have the wells responded to it?

A Yes, sir, they have.

Q So you plan to continue this injection program in the McKee?

A Yes, sir.

Q And in the event that the Ellenburger wells would cease to produce oil, would you continue producing Ellenburger

water for your flood?

A Yes.

Q And you are using high capacity Reda Pump and they are making approximately 135 barrels of oil a day, and I think you said 1300 barrels of water?

A About 1700 barrels of water.

Q Sometimes the fluid level is being dropped in the Ellenburger and sometimes you pump the zone off and damage your pumps?

A Yes, both the producing wells have been acidized repeatedly and we get stimulation for a period of time, but the amount of stimulation is decreasing with time. We pulled in excess of two million barrels from the Ellenburger since we started our injection project.

Q What is the total amount of produced water that you have in these various pools on these leases? In other words, how much will you be putting into the Ellenburger?

A Approximately sixty-five to seventy-five barrels per day; I believe that's right. We do propose to inject all that we have at the present time as long as it isn't feasible to treat the water but it isn't a large volume of water.

Q And it will be water produced from the Simpson flood and from the Penrose Skelly and from the Devonian wells?

A Yes, sir.

Q I note that you plan to install two-inch plastic-coated tubing with a packer. Do you have an objection to the requirement of the Commission that the annulus between the tubing and packer be loaded with an inert fluid?

A No, sir, not at all.

Q And the annulus be left open and have a packer gauge in order to determine packer leaks?

A Yes.

REDIRECT EXAMINATION

BY MR. McKENNA:

Q The exhibits that were entered into evidence were prepared by you or under your direction?

A Yes, they were.

MR. McKENNA: That's all.

MR. NUTTER: If there are no further questions of the witness, he may be excused.

(Witness excused.)

MR. NUTTER: Does anyone have anything they wish to offer in Case 3716? If not, we'll take the case under advisement.

I N D E X

<u>WITNESS</u>	<u>PAGE</u>
<u>VEN WHITE</u>	
Direct Examination by Mr. McKenna	2
Cross Examination by Mr. Nutter	12
Redirect Examination by Mr. McKenna	14

<u>EXHIBITS</u>	<u>MARKED</u>	<u>OFFERED AND ENTERED</u>
Applicant's 1 through 5	2	12

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 and seal this 2nd day of February, 1968.

Ada Dearnley  
 Court Reporter

I do hereby certify that the foregoing is a complete record of the proceedings in the transcript hearing of Case No. 3716 heard by me on 1/24 1968.  
Ada Dearnley  
 New Mexico Oil Conservation Commission

# DIAGRAMMATIC SKETCH SHOWING SWD COMPLETION INSTALLATION

## SURFACE CASING:

Size: 13-3/8" Wt. 48 #/Ft.  
Set at 316 Ft.  
Cement: 300 Sx.  
Top Cement: Circulated Ft.

## INTERMEDIATE CASING:

Size: 9-5/8" Wt. 40 #/Ft.  
Set at 2908 Ft.  
Cement: 1500 Sx.  
Top Cement: Circulated Ft.

## INJECTION STRING:

Size: 2" Wt. 46  
Set at 9480 Ft.

## LONG STRING CASING:

Size: 7" Wt. 32 #/Ft.  
Set at 9729 Ft.  
Cement: 650 Sx.  
Top Cement: 4490 Ft.

## INJECTION ZONE:

PERF. - ~~ON~~ From 9580 To 9680

Packer set at 9480 Ft.

Total Well Depth 9730 Ft.

DATE: 12-29-67

FIELD Teague (Ellenburger)

COUNTY Lea

~~BLAKE DIST~~ New Mexico

OPERATOR Carter Foundation  
Production Co.

C. H. "E" Fed. WEL NO. 5

BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 2  
CASE NO. 776

**CARTER FOUNDATION PRODUCTION COMPANY**

FIELD OFFICE P. O. BOX 900  
KERMIT, TEXAS 79745

AMON G. CARTER JR., PRESIDENT  
WALTER CLAER, VICE PRESIDENT  
KATRINE DEAKINS, SECRETARY-TREASURER

December 29, 1967

ROY E. CARTER,  
FIELD MANAGER

HOMX OFFICE ADDRESS  
P. O. BOX 1036  
FORT WORTH, TEXAS

Atlantic Richfield Company  
Bronco Oil Corporation ✓  
John H. Hendrix  
Hunt Oil Company  
Phillips Petroleum Company  
Texaco, Inc.  
Texas Pacific Oil Company

Gentlemen:

The Carter Foundation Production Company plans to inject produced salt water into their E. C. Hill Federal "E" #5 well located in Section 35, Township 23-South, Range 37-East, Teague (Ellenburger) Field, Lea County, New Mexico, in an interval from 9580' to 9680'.

The purpose of this letter is to request a waiver of objection for the injection of produced salt water. If you agree to this waiver, please sign and return one copy of this letter in the enclosed self-addressed envelope.

Yours very truly,

*Robert D. Fitting*  
Robert D. Fitting

RDF:jd

COMPANY BRONCO OIL CORP  
SIGNATURE *[Signature]*  
DATE 3 Jan 68

BEFORE EXAMINER NUTTER	
OIL CONSERVATION COMMISSION	
EXHIBIT NO.	<u>5</u>
CASE NO.	<u>3716</u>

**CARTER FOUNDATION PRODUCTION COMPANY**

FIELD OFFICE P. O. BOX 900

KERMIT, TEXAS 79745

AMON G. CARTER JR., PRESIDENT  
WALTER CLAER, VICE PRESIDENT  
KATRINE DEAKINS, SECRETARY-TREASURER

December 29, 1967

ROY E. CARTER,  
FIELD MANAGER

HOME OFFICE ADDRESS  
P. O. BOX 1036  
FORT WORTH, TEXAS

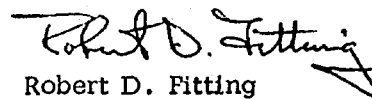
Atlantic Richfield Company  
Bronco Oil Corporation  
John H. Hendrix  
Hunt Oil Company  
Phillips Petroleum Company  
Texaco, Inc.  
Texas Pacific Oil Company

Gentlemen:

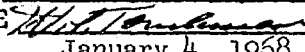
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Robert D. Fitting

RDF:jd

COMPANY ATLANTIC RICHFIELD COMPANY  
SIGNATURE   
DATE January 4, 1968

CARTER FOUNDATION PRODUCTION COMPANY

FIELD OFFICE P. O. BOX 900  
KERMIT, TEXAS 79745

AMON G. CARTER JR., PRESIDENT  
WALTER CLAER, VICE PRESIDENT  
KATRINE DEAKINS, SECRETARY-TREASURER

December 29, 1967

ROY E. CARTER,  
FIELD MANAGER

HOME OFFICE ADDRESS  
P. O. BOX 1036  
FORT WORTH, TEXAS

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John H. Hendrix ✓  
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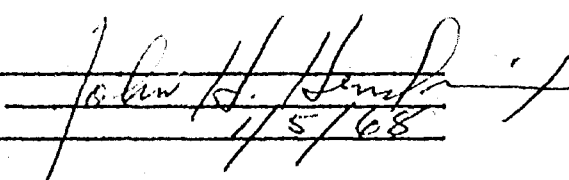
  
Robert D. Fitting

RDF:jd

COMPANY

SIGNATURE

DATE

  
11/5/68

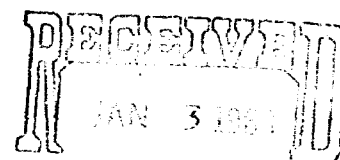
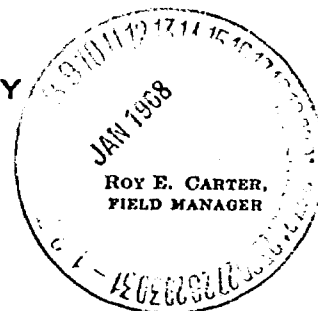
CARTER FOUNDATION PRODUCTION COMPANY

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KERMIT, TEXAS 79745

AMON G. CARTER JR., PRESIDENT  
WALTER CLAPP, VICE PRESIDENT  
KATRINE DEAKINS, SECRETARY-TREASURER

December 29, 1967

HOME OFFICE ADDRESS  
P. O. BOX 1036  
FORT WORTH, TEXAS



HUNT OIL CO.  
MIDLAND, TEXAS

Atlantic Richfield Company  
Bronco Oil Corporation  
John H. Hendrix  
Hunt Oil Company ✓  
Phillips Petroleum Company  
Texaco, Inc.  
Texas Pacific Oil Company

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Yours very truly,

*Robert D. Fitting*  
Robert D. Fitting

RDF:jd

COMPANY

SIGNATURE

DATE

*Hunt Oil Company*  
*Barbara C. Carter*  
*1-12-68*



**PHILLIPS PETROLEUM COMPANY**  
BARTLESVILLE, OKLAHOMA 74003

January 10, 1968

EXPLORATION AND PRODUCTION DEPARTMENT

Teague (Ellenburger) Field -  
Lea County, New Mexico -  
Salt Water Injection

Carter Foundation Production Company  
P. O. Box 900  
Kermit, Texas 79745

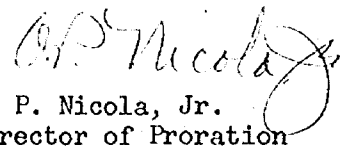
Gentlemen:

This will acknowledge receipt of your letter of December 29, 1967, requesting a waiver of objection covering your application to inject salt water into the E. C. Hill Federal "E" Well No. 5, Sec. 35-23S-27E, Lea County, New Mexico.

In checking the records we find that the Phillips Mattix Lease (w/2 Sec. 2-24S-37E, Lea County) was traded to Skelly Oil Company and that we no longer own any lease adjacent to the above property.

We are therefore, returning your file in order that you may forward the waiver to Skelly Oil Company.

Yours very truly,

  
O. P. Nicola, Jr.  
Director of Proration

JRB?dg  
Attach.

CARTER FOUNDATION PRODUCTION COMPANY

FIELD OFFICE P. O. BOX 900  
KERMIT, TEXAS 79745

AMON G. CARTER JR., PRESIDENT  
WALTER CLAER, VICE PRESIDENT  
KATRINE DEAKINS, SECRETARY-TREASURER

December 29, 1967

ROY E. CARTER,  
FIELD MANAGER

HOME OFFICE ADDRESS  
P. O. BOX 1036  
FORT WORTH, TEXAS

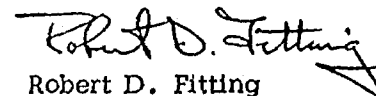
Atlantic Richfield Company  
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John H. Hendrix  
Hunt Oil Company  
~~Phillips-Petroleum Company~~ Skelly Oil Company  
Texaco, Inc.  
Texas Pacific Oil Company

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Yours very truly,

  
Robert D. Fitting

RDF:jd

COMPANY Skelly Oil Co.  
SIGNATURE George W. Selinger  
DATE 1/18/68 Lea County

TEXACO  
INC.

PETROLEUM PRODUCTS

DOMESTIC PRODUCING DEPARTMENT  
MIDLAND DIVISION



P. O. BOX 3109  
MIDLAND, TEXAS

January 16, 1968

SALT WATER DISPOSAL  
TEAGUE (ELLENBURGER) POOL  
LEA COUNTY, NEW MEXICO

Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico


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

Gentlemen:

Texaco Inc., as an offset operator, waives objection to the application of Carter Foundation Production Company to dispose of salt water by injecting into a porous formation in their E. C. Hill "E" Federal Well No. 5 in the Teague (Ellenburger) Pool in Lea County, New Mexico.

This waiver applies to the salt water disposal project as submitted by Carter Foundation Production Company's "Application to Dispose of Salt Water By Injection Into A Porous Formation", Form C-108, dated December 29, 1967. The well is located in Unit G, Section 35, T-23-S, R-37-E, Lea County, New Mexico and the injection interval is a portion of the Ellenburger formation from a depth of 9578' to 9734'.

Yours very truly,

  
E. M. ROWSER  
Assistant To  
Division Manager

CLW:jl

cc: Carter Foundation Prod. Co.  
P. O. Box 900  
Kermit, Texas 79745

**CARTER FOUNDATION PRODUCTION COMPANY**

FIELD OFFICE P. O. BOX 900  
KERMIT, TEXAS 79745

AMON G. CARTER JR., PRESIDENT  
WALTER CLAER, VICE PRESIDENT  
KATRINE DEAKINS, SECRETARY-TREASURER

December 29, 1967

ROY E. CARTER,  
FIELD MANAGER

HOME OFFICE ADDRESS  
P. O. BOX 1036  
FORT WORTH, TEXAS

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Bronco Oil Corporation  
John H. Hendrix  
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Yours very truly,

*Robert D. Fitting*  
Robert D. Fitting

RDF:jd

COMPANY Texas Pacific Oil Company  
SIGNATURE [Signature]  
DATE 1-9-68