



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

BRUCE KING  
GOVERNOR  
LARRY KEHOE  
SECRETARY

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87501  
(505) 827-2434

Stallworth Oil & Gas, Inc.  
P. O. Box 479  
Dallas, Texas

Re: Administrative Order WFX No. 490

Gentlemen:

Enclosed herewith please find Administrative Order No. 490 for the following described well:

Etz Well No. 2 located 660' FSL and  
1980' FEL in Section 25, Township  
16 South, Range 30 East, Eddy County,  
New Mexico.

Very truly yours,

JOE D. RAMEY  
Division Director

JDR/OS/og

cc: Oil Conservation Division  
Drawer DD  
Artesia, New Mexico

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

OPERATOR Stallworth Oil & Gas, Inc.		ADDRESS P.O. Box 479, Dallas, Texas 75221	
LEASE NAME Etz	WELL NO. 2	FIELD Square Lake-Grayburg-San Andres	COUNTY Eddy
LOCATION UNIT LETTER <u>0</u> ; WELL IS LOCATED <u>660</u> FEET FROM THE <u>south</u> LINE AND <u>1980</u> FEET FROM THE <u>east</u> LINE, SECTION <u>25</u> TOWNSHIP <u>16 S</u> RANGE <u>30E</u> NMPM.			

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	8-1/4"	503'	50	360'	Calculated Est.
INTERMEDIATE Recovered 2300'	7"	2,405'	50 (Squeeze)	2,300'	Casing pulled from hole
LONG STRING	5-1/2"	2,925'	100	2,430'	Calculated Est.
TUBING	2-3/8"	2,900	NAME, MODEL AND DEPTH OF TUBING PACKER Baker Model A-3, set at 2900'		

NAME OF PROPOSED INJECTION FORMATION Grayburg and San Andres		TOP OF FORMATION 2771'	BOTTOM OF FORMATION Below 3200' TD.
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Tubing		PERFORATIONS OR OPEN HOLES? open hole	PROPOSED INTERVAL(S) OF INJECTION 2990-3000'; 3035-3040'; 3065-75'; 3155-80'
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? Oil Well		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 N.A.					
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA No fresh water detected		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 Unknown	
ANTICIPATED DAILY INJECTION VOLUME (BBL.)	MINIMUM 150	MAXIMUM 300	OPEN OR CLOSED TYPE SYSTEM Closed	IS INJECTION TO BE BY GRAVITY OR PRESSURE? Pressure	APPROX. PRESSURE (PSI) 1500
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 Yes	NATURAL WATER IN DISPOSAL ZONE Yes	ARE WATER ANALYSES ATTACHED? Yes

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) None--Federal Land (LC-029424)	
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL	
Anadarko Production Company, Box 1330, Houston, TX 77001	
Arwood Ltd., P.O. Box 64548, Dallas, TX 75206	
Newmont Oil Company, 600 Jefferson, 9th Floor, Houston, TX 77002	
Texaco, Inc., Box 3109, Midland, TX 79701	

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER Yes--USGS	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL Yes
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)?	PLAT OF AREA Yes	ELECTRICAL LOG None Available
		DIAGRAMMATIC SKETCH OF WELL Yes

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

*Murray E. Helmers*  
(Signature)

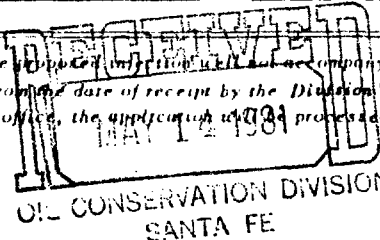
Executive Vice President

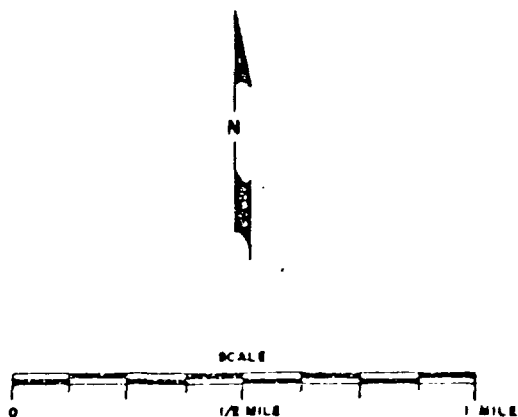
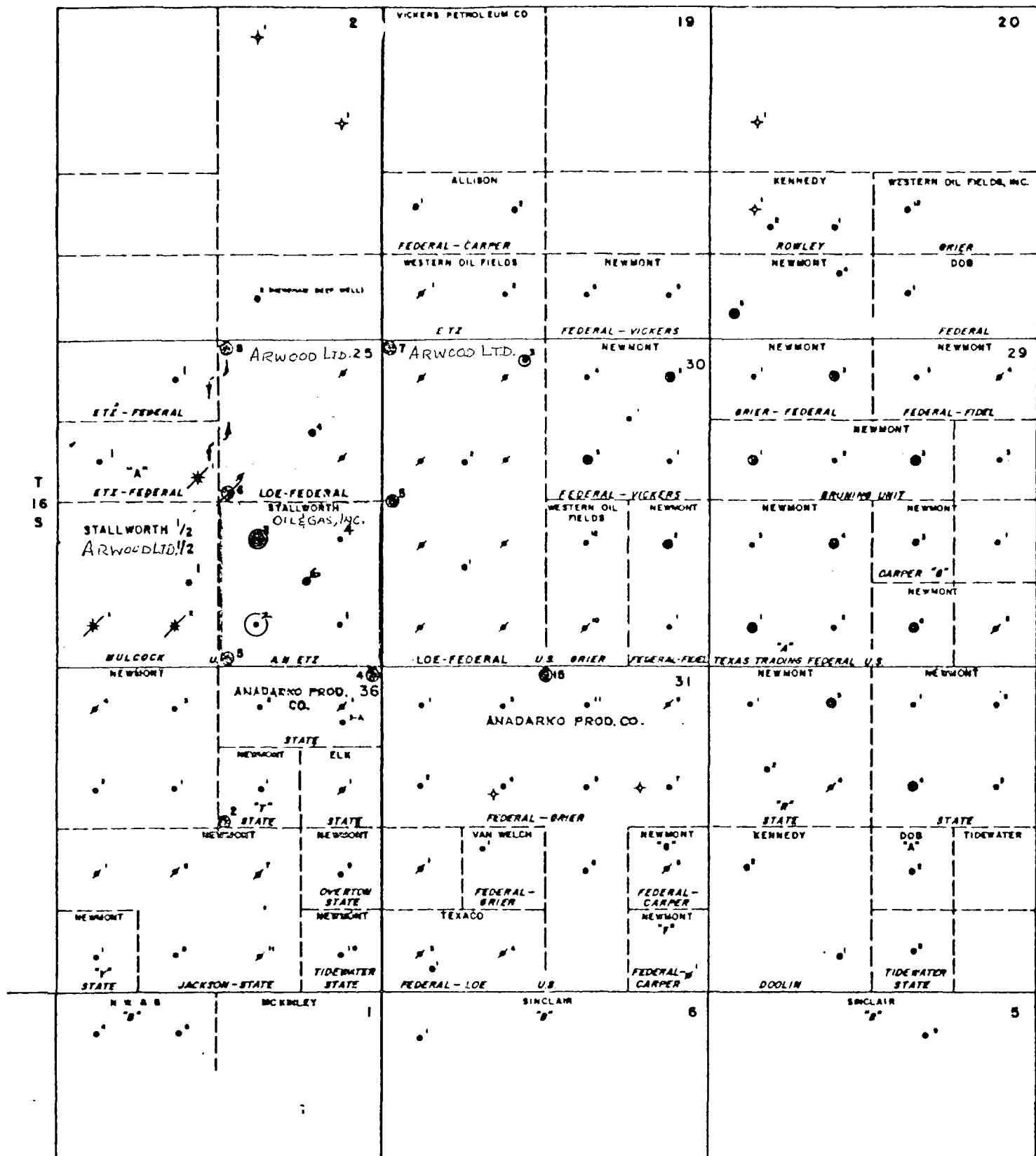
5/6/81

(Title)

(Date)

NOTE: Should answers from the surface owner and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Division will hold the application for a period of 15 days from the date of receipt by the Division'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.





#### LEGEND:

- PRODUCING OIL WELL
- ✱ ABANDONED OIL WELL
- ✱ DRY HOLE
- ✱ GAS WELL
- ✱ ABANDONED GAS WELL

- ⊙ WATER INJECTION WELL
- ⊙ LOCATION-INJECTION
- LOCATION-PRODUCTION

Stallworth Oil & Gas, Inc  
 SQUARE LAKE FIELD  
 EDDY COUNTY, NEW MEXICO



TRETOLITE VISION

369 Marshall Avenue / Saint Louis, Missouri 63119  
(314) WO 1-3500/TWX 910-760-1660/Telex 44-2417

*Fig 3a*

## WATER ANALYSIS REPORT

COMPANY Stallworth Oil & Gas Company ADDRESS Loco Hills, N.M. DATE 11-19-76

SOURCE Sample @ Arwoods Tank DATE SAMPLED 10-18-76 ANALYSIS NO. 12558  
Analysis Mg/L \*Meq/L

1. PH	<u>6.5</u>		
2. H <sub>2</sub> S (Qualitative)	<u>pos.</u>		
3. Specific Gravity	<u>1.060</u>		
4. Dissolved Solids		<u>98,952</u>	
5. Suspended Solids			
6. Phenolphthalein Alkalinity (CaCO <sub>3</sub> )			
7. Methyl Orange Alkalinity (CaCO <sub>3</sub> )		<u>350</u>	
8. Bicarbonate (HCO <sub>3</sub> )		<u>427</u> ÷ 61	<u>7.0</u> HCO <sub>3</sub>
9. Chlorides (Cl)		<u>58,000</u> ÷ 35.5	<u>1,634</u> Cl
10. Sulfates (SO <sub>4</sub> )		<u>3,300</u> ÷ 48	<u>69</u> SO <sub>4</sub>
11. Calcium (Ca)		<u>4,400</u> ÷ 20	<u>220</u> Ca
12. Magnesium (Mg)		<u>1,652</u> ÷ 12.2	<u>135</u> Mg
13. Total Hardness (CaCO <sub>3</sub> )		<u>17,800</u>	
14. Total Iron (Fe)		<u>1.0 ppm</u>	
15. Barium (Qualitative)			
16.			

\*Milli equivalents per liter

RECEIVED

NOV 28 1976

### PROBABLE MINERAL COMPOSITION

220	Ca	←	HCO <sub>3</sub>	7.0
135	Mg	←	SO <sub>4</sub>	69
1355	Na	←	Cl	1634

Saturation Values Distilled Water 20°C  
Ca CO<sub>3</sub> 13 Mg/L  
Ca SO<sub>4</sub> • 2H<sub>2</sub>O 2,090 Mg/L  
Mg CO<sub>3</sub> 103 Mg/L

Compound	Equiv. Wt.	X	Meq/L	=	Mg/L
Ca (HCO <sub>3</sub> ) <sub>2</sub>	81.04		7.0		567
Ca SO <sub>4</sub>	68.07		69		4,699
Ca Cl <sub>2</sub>	55.50		144		7,992
Mg (HCO <sub>3</sub> ) <sub>2</sub>	73.17				
Mg SO <sub>4</sub>	60.19				
Mg Cl <sub>2</sub>	47.62		135		6,426
Na HCO <sub>3</sub>	84.00				
Na <sub>2</sub> SO <sub>4</sub>	71.03				
Na Cl	58.46		1,355		79,268

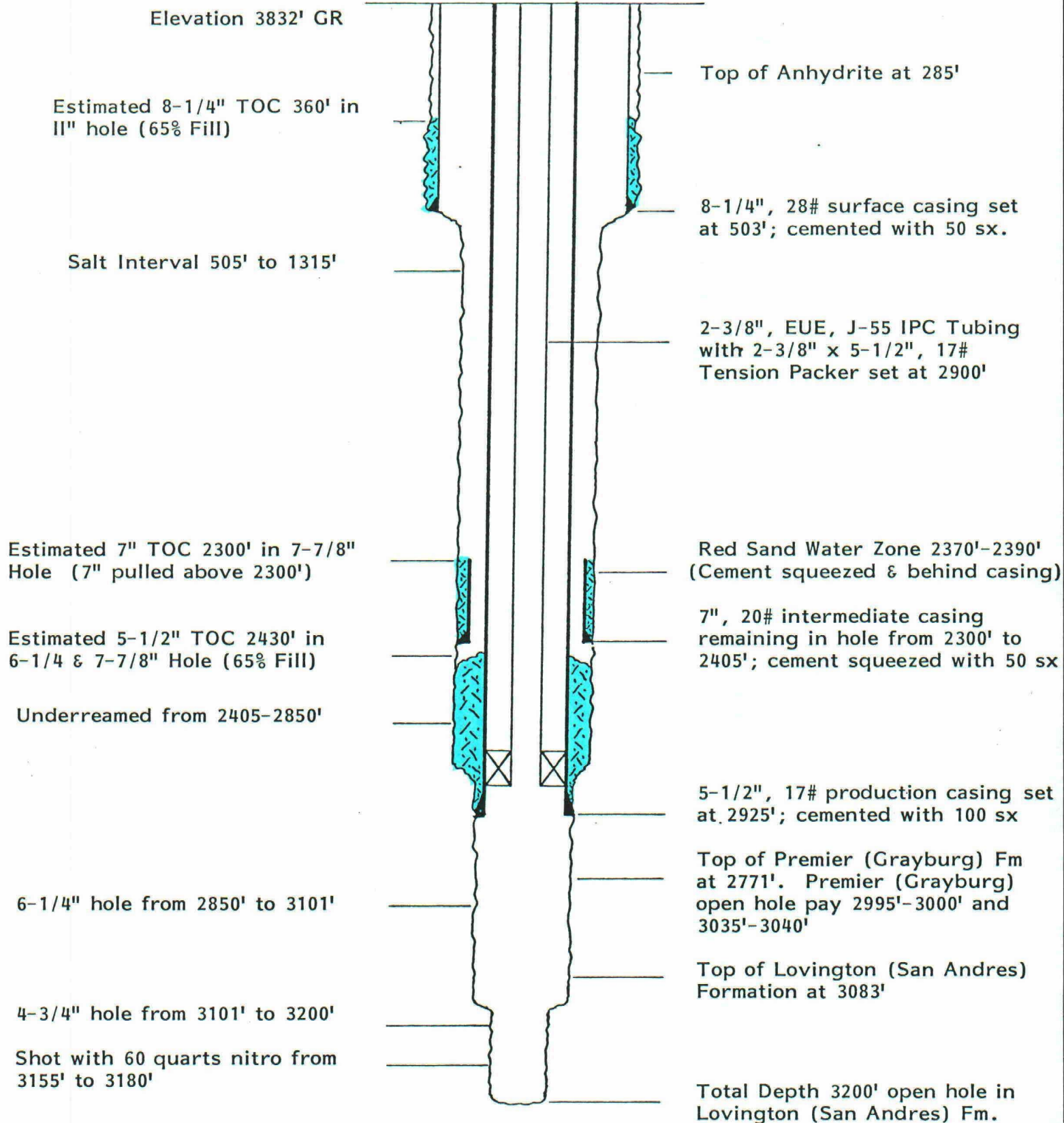
REMARKS ✓  
Helmers - Hope  
Saltzman - Roberts - Nix - file

Respectfully submitted  
TRETOLITE COMPANY

Ray Schaffner

STALLWORTH OIL & GAS, INC.  
ETZ NO. 2 WELL  
Location O, 660' FSL & 1980' FEL  
Section 25, T16S, R30E  
Eddy County, New Mexico

Federal Lease LC-029424  
Square Lake Grayburg - San Andres Field



W A I V E R

State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
P.O. Box 2088  
Santa Fe, New Mexico 87501

RE: Exception to Statewide Rule  
701-B  
Stallworth Oil & Gas, Inc.  
Etz No. 2 Well  
Unit O, 25-T16S-R30E  
Federal Lease LC-029424  
Square Lake (Grayburg-San  
Andres) Field  
Eddy County, New Mexico

Gentlemen:

The undersigned has been furnished a copy of the Stallworth Oil & Gas, Inc.'s application to convert the captioned well to water injection status. Please be informed that we as an offset operator to this property have no objection to this procedure.

Yours truly,

Company\_\_\_\_\_

Representative\_\_\_\_\_

Signature\_\_\_\_\_

Title\_\_\_\_\_

Date\_\_\_\_\_

Stallworth Oil & Gas, Inc.

May 7, 1981

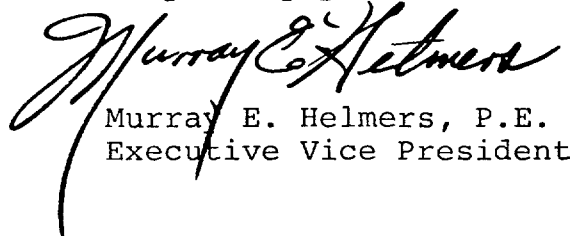
Arwood, Ltd.  
P.O. 64548  
Dallas, TX 75206

Gentlemen:

Attached is a copy of our application to the Oil Conservation Division, Energy and Minerals Department, State of New Mexico, requesting administrative approval provided by Rule 701-B to convert our No. 2 Etz well from producing to injection status.

If you find no objection to this procedure, please sign two copies of the attached waiver letter and forward one to the State of New Mexico and return the other for our files. Stamped self-addressed envelopes are enclosed for your convenience.

Very truly yours,



Murray E. Helmers, P.E.  
Executive Vice President

dw

Enclosures

May 7, 1981

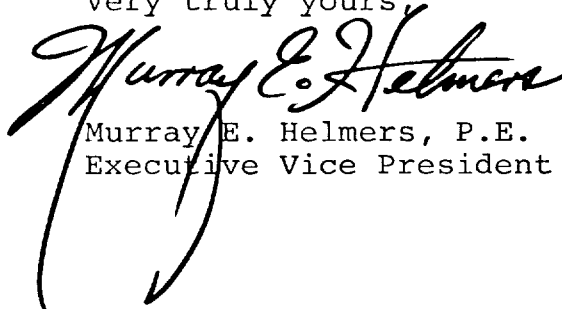
Newmont Oil Company  
600 Jefferson  
Ninth Floor  
Houston, TX 77002

Gentlemen:

Attached is a copy of our application to the Oil Conservation Division, Energy and Minerals Department, State of New Mexico, requesting administrative approval provided by Rule 701-B to convert our No. 2 Etz well from producing to injection status.

If you find no objection to this procedure, please sign two copies of the attached waiver letter and forward one to the State of New Mexico and return the other for our files. Stamped self-addressed envelopes are enclosed for your convenience.

Very truly yours,

A handwritten signature in black ink, reading "Murray E. Helmers". The signature is stylized with a large, sweeping initial "M" and a long, curved flourish extending from the bottom of the name.

Murray E. Helmers, P.E.  
Executive Vice President

dw

Enclosures



Stallworth Oil & Gas, Inc.

May 7, 1981

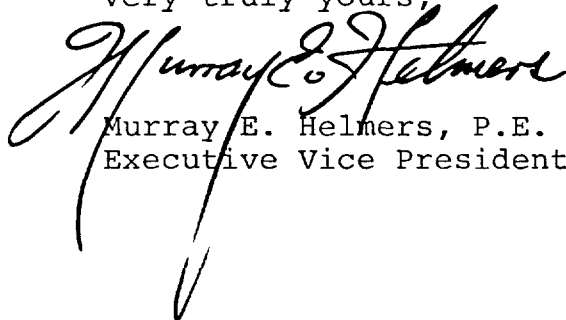
Texaco, Inc.  
Box 3109  
Midland, TX 79701

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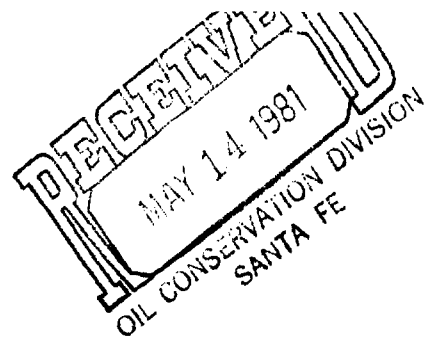
A handwritten signature in cursive script, reading "Murray E. Helmers". The signature is written in dark ink and is positioned above the printed name and title.

Murray E. Helmers, P.E.  
Executive Vice President

dw

Enclosures

W A I V E R



State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
P.O. Box 2088  
Santa Fe, New Mexico 87501

RE: Exception to Statewide Rule  
701-B  
Stallworth Oil & Gas, Inc.  
Etz No. 2 Well  
Unit O, 25-T16S-R30E  
Federal Lease LC-029424  
Square Lake (Grayburg-San  
Andres) Field  
Eddy County, New Mexico

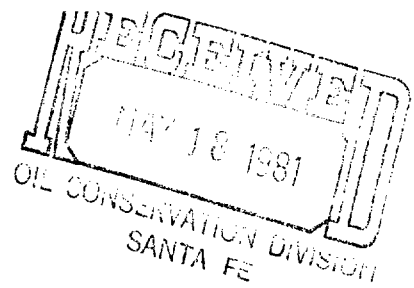
Gentlemen:

The undersigned has been furnished a copy of the Stallworth Oil & Gas, Inc.'s application to convert the captioned well to water injection status. Please be informed that we as an offset operator to this property have no objection to this procedure.

Yours truly,

Company Arwood Ltd.  
Representative Frazier Arwood  
Signature Frazier Arwood  
Title General Partner  
Date 5-11-81

W A I V E R



State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
P.O. Box 2088  
Santa Fe, New Mexico 87501

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Stallworth Oil & Gas, Inc.  
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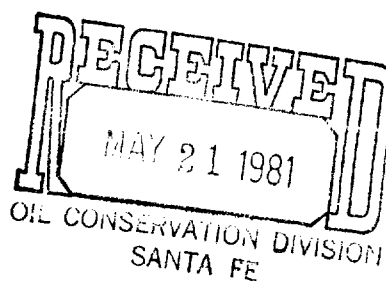
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Yours truly,

Company NEWMONT OIL COMPANY  
Representative Alvin V. White  
Signature Alvin V. White  
Title Vice President Production  
Date May 15, 1981

W A I V E R



State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
P.O. Box 2088  
Santa Fe, New Mexico 87501

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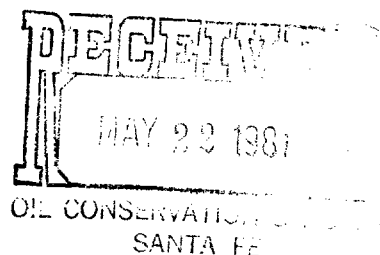
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Yours truly,

Company TEXACO INC.  
Representative Dale Holloman  
Signature *Dale Holloman*  
Title Asst. Petr. Engr. Mgr.  
Date May 18, 1981

W A I V E R



State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
P.O. Box 2088  
Santa Fe, New Mexico 87501

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Stallworth Oil & Gas, Inc.  
Etz No. 2 Well  
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Yours truly,

Company ANADARKO Production Co  
Representative \_\_\_\_\_  
Signature [Signature]  
Title Division Operations MGR.  
Date 5/19/81