

## N: MEXICO OIL CONSERVATION COMMISSION.

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

|                                                                                                                                                                                                         |               |                                                                                           |                                            |                                                                                   |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------------------------------------------------------------|-------------------|
| OPERATOR<br><b>Southland Royalty Company</b>                                                                                                                                                            |               | Nov 11 11 21 AM '65<br><b>Wilco Bldg. Midland, Texas</b>                                  |                                            |                                                                                   |                   |
| GUYE state                                                                                                                                                                                              |               | WELL NO.<br><b>1</b>                                                                      | FIELD<br><b>Inbe (Penn.)</b>               |                                                                                   |                   |
| UNIT LETTER<br><b>B</b>                                                                                                                                                                                 |               | WELL IS LOCATED <b>660</b> FEET FROM THE <b>North</b> LINE AND <b>1980'</b> FEET FROM THE |                                            |                                                                                   |                   |
| LINE, SECTION<br><b>East 23</b>                                                                                                                                                                         |               | TOWNSHIP<br><b>11-S</b> RANGE<br><b>33-E</b> NMPM.                                        |                                            |                                                                                   |                   |
| CASING AND TUBING DATA                                                                                                                                                                                  |               |                                                                                           |                                            |                                                                                   |                   |
| NAME OF STRING                                                                                                                                                                                          | SIZE          | SETTING DEPTH                                                                             | SACKS CEMENT                               | TOP OF CEMENT                                                                     | TOP DETERMINED BY |
| SURFACE CASING                                                                                                                                                                                          |               |                                                                                           |                                            |                                                                                   |                   |
| INTERMEDIATE                                                                                                                                                                                            | <b>13 3/8</b> | <b>294'</b>                                                                               | <b>300</b>                                 | <b>Surface</b>                                                                    | <b>Calculated</b> |
| LONG STRING                                                                                                                                                                                             |               |                                                                                           |                                            |                                                                                   |                   |
| TUBING                                                                                                                                                                                                  | <b>4 1/2</b>  | <b>5245</b>                                                                               | <b>500</b>                                 | <b>Surface</b>                                                                    | <b>Calculated</b> |
| NAME, MODEL AND DEPTH OF TUBING PACKER                                                                                                                                                                  |               |                                                                                           |                                            |                                                                                   |                   |
| NAME OF PROPOSED INJECTION FORMATION<br><b>San Andres</b>                                                                                                                                               |               |                                                                                           |                                            |                                                                                   |                   |
| IS INJECTION TO BE MADE IN THE FORMATION OR ANNULUS?                                                                                                                                                    |               | PERFORATIONS OR OPEN HOLE?                                                                |                                            | PROPOSED INTERVAL(S) OF INJECTION                                                 |                   |
| <b>San Andres</b>                                                                                                                                                                                       |               | <b>3805</b>                                                                               |                                            | <b>5238</b>                                                                       |                   |
| IS THIS A NEW WELL DRILLED FOR DISPOSAL?                                                                                                                                                                |               | IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?                            |                                            | HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? |                   |
| <b>No</b>                                                                                                                                                                                               |               | <b>Perforations</b>                                                                       |                                            | <b>4000-5200</b>                                                                  |                   |
| LIST ALL SUCH PERFORATED INTERVALS AND SACKS CEMENT USED TO SET OFF OR SQUEEZE EACH                                                                                                                     |               |                                                                                           |                                            | <b>No</b>                                                                         |                   |
| DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA                                                                                                                                                |               | DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA                               |                                            | DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA                           |                   |
| <b>1900</b>                                                                                                                                                                                             |               | <b>None</b>                                                                               |                                            | <b>3775</b>                                                                       |                   |
| ANTICIPATED DAILY MINIMUM INJECTION VOLUME (BBL'S.)                                                                                                                                                     | MAXIMUM       | OPEN OR CLOSED TYPE SYSTEM                                                                | IS INJECTION TO BE BY GRAVITY OR PRESSURE? | APPROX. PRESSURE (PSI)                                                            |                   |
| <b>1000</b>                                                                                                                                                                                             | <b>1300</b>   | <b>Open</b>                                                                               | <b>Pressure</b>                            | <b>1600</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.                                                    |               | WATER TO BE DISPOSED OF                                                                   |                                            | NATURAL WATER IN DISPOSAL ZONE                                                    |                   |
| <b>Yes</b>                                                                                                                                                                                              |               | <b>Yes</b>                                                                                |                                            | <b>Yes</b>                                                                        |                   |
| NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)                                                                                                                                 |               |                                                                                           |                                            |                                                                                   |                   |
| <b>J. D. Guye - Tatum, New Mexico</b>                                                                                                                                                                   |               |                                                                                           |                                            |                                                                                   |                   |
| LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF MILE OF THIS INJECTION WELL                                                                                                                   |               |                                                                                           |                                            |                                                                                   |                   |
| <b>Cabot Corporation - Box 4395 Midland, Texas</b>                                                                                                                                                      |               |                                                                                           |                                            |                                                                                   |                   |
| <b>* water analysis of water to be disposed are attached. Analysis of natural water in disposal zone are not available. Other operators in the area are disposing produced water in this same zone.</b> |               |                                                                                           |                                            |                                                                                   |                   |
| HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?                                                                                                                                     |               | TEACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL                                          |                                            | THE NEW MEXICO STATE ENGINEER                                                     |                   |
| <b>Yes</b>                                                                                                                                                                                              |               | <b>Yes</b>                                                                                |                                            | <b>Yes</b>                                                                        |                   |
| ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)                                                                                                                                   |               | ELECTRICAL LOG                                                                            |                                            | DIAGRAMMATIC SKETCH OF WELL                                                       |                   |
| <b>Yes</b>                                                                                                                                                                                              |               | <b>Yes</b>                                                                                |                                            | <b>Yes</b>                                                                        |                   |

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

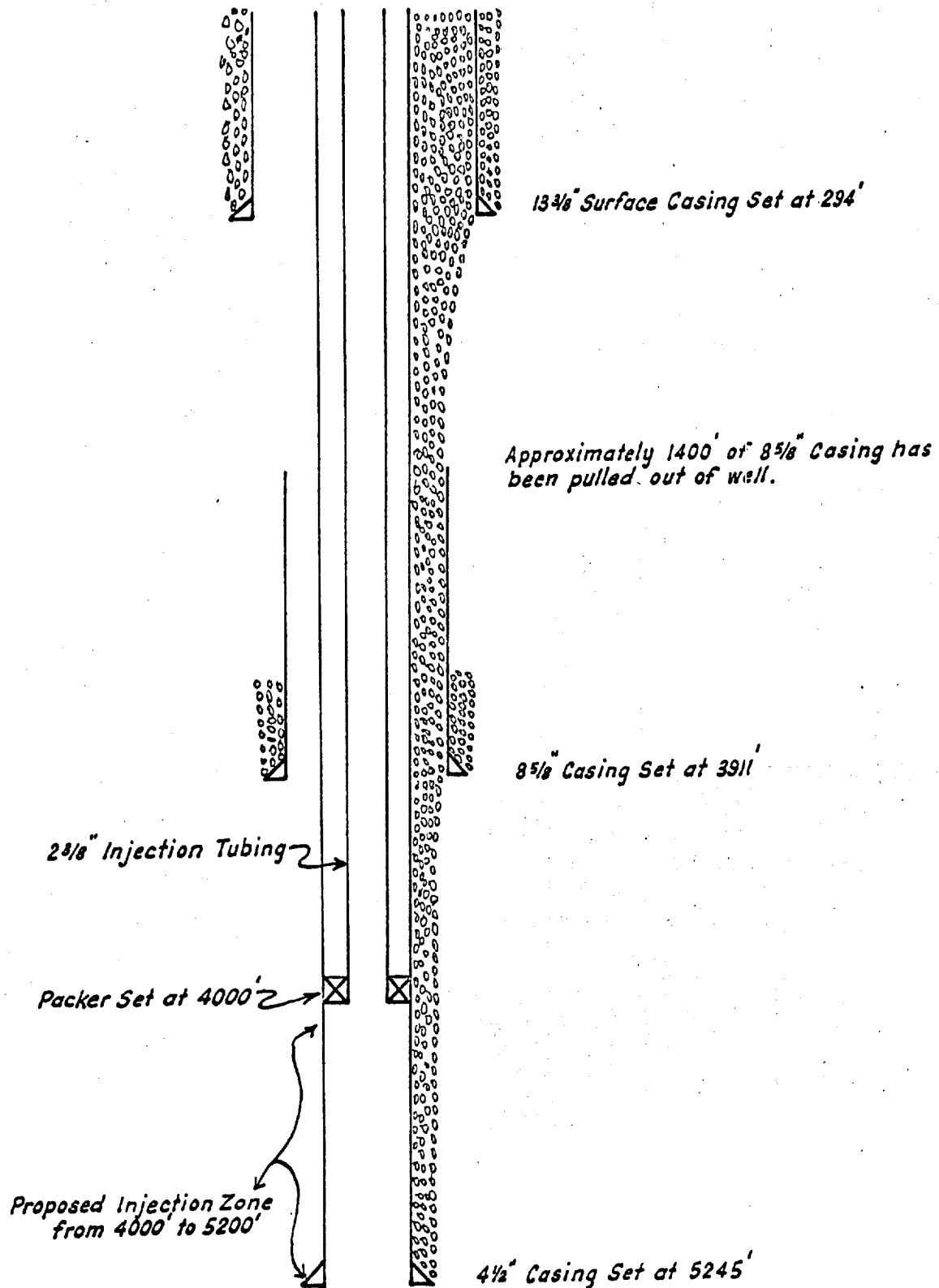
*Allen R. Steinert*  
**Allen R. Steinert****Engineer**

(Title)

**October 18, 1965**

(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.



DIAGRAMMATIC SKETCH  
OF  
PROPOSED INJECTION WELL  
GUYE STATE No. 1

111

ack

File  
Analysis run  
In the  
(Perm) Field

## HALLIBURTON DIVISION LABORATORY

HALLIBURTON COMPANY  
LOVINGTON, NEW MEXICO

No. W1-750-65

LABORATORY REPORT

Date September 21, 1965

To Southland Royalty  
1405 Wilco Building  
Midland, Texas

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Date Received

|                                  |                                  |                       |                        |                       |
|----------------------------------|----------------------------------|-----------------------|------------------------|-----------------------|
| Well & Lease                     | As Marked                        | Depth                 | Formation              |                       |
| Location                         | Field                            | Source                |                        |                       |
|                                  | McKinley Federal<br>Htr. Treater | Farrar #1<br>Htr. Tr. | Farrar A-1<br>Htr. Tr. | J.D. Guze<br>Htr. Tr. |
| Specific gravity<br>60/60 °F     | 1.060                            | 1.058                 | 1.060                  | 1.058                 |
| Color, filtrate                  | Clear                            | Clear                 | Clear                  | Clear                 |
| pH                               | 6.6                              | 6.7                   | 6.6                    | 6.6                   |
| Resistivity<br>@ 82 °F ppm (mpl) | 0.080                            | 0.083                 | 0.084                  | 0.081                 |
| Chlorides, Cl                    | 55,600                           | 54,400                | 54,800                 | 54,400                |
| Sulfates, SO <sup>4</sup>        | 1,800                            | 1,600                 | 1,700                  | 1,500                 |
| Alkalinity, HCO <sup>3</sup>     | 595                              | 330                   | 320                    | 305                   |
| Calcium, Ca                      | 4,880                            | 5,040                 | 5,600                  | 4,800                 |
| Magnesium, Mg                    | 775                              | 485                   | 1,070                  | 970                   |
| Iron, Fe                         | Nil                              | Nil                   | Nil                    | Nil                   |
| Sodium, Na*                      | 29,970                           | 29,280                | 28,970                 | 29,160                |
| Sulfides, H <sup>2</sup> S       | Nil                              | Nil                   | Nil                    | Nil                   |

Remarks

ppm equals Parts per million uncorrected or milligrams per liter  
\* includes Potassium as Na.

Laboratory Analyst  
Brewer

Respectfully submitted

HALLIBURTON COMPANY

By

Rex L. Hammack, Jr., Division Chemist

## NOTICE

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