SWD - 127

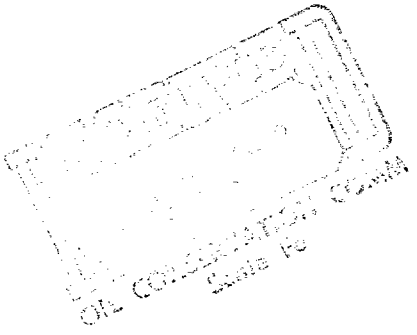
FREEPORT

FREEPORT OIL COMPANY • COMMERCE BUILDING, NEW ORLEANS

A DIVISION OF FREEPORT MINERALS COMPANY

July 21, 1972

ADDRESS CORRESPONDENCE P.O. BOX 52349
NEW ORLEANS, LA. 70152



Mr. A. L. Porter, Jr., Secretary-Director
New Mexico Oil Conservation Commission
P.O. Box 2088
Santa Fe, New Mexico 87501

Dear Mr. Porter:

RE: STATE OF NEW MEXICO NO. 1
WEST GARRETT (DEVONIAN) FIELD
SEC. 32, T-16-S, R-38-E
LEA COUNTY, NEW MEXICO

We hereby submit the enclosed material as application for disposal of salt water produced from the West Garrett (Devonian) Field into the referenced well. Specifically we are enclosing the following:

3 copies of a plat with 2 miles + radius around well,

1 copy of Gamma Ray-Sonic Log of well from surface to total depth,

3 copies of a Diagrammatic Sketch of the proposed injection well,

3 copies of Form C-108, Application to Dispose of Salt Water by Injection into a Porous Formation,

3 copies of a Laboratory Water Analysis of the water to be disposed of,

3 copies of Summary of Drill Stem Tests.

The referenced well was permitted as a Devonian test for oil with a proposed total depth of 13,200 feet. However, the well was running structurally low and was abandoned October 5, 1970 in the Mississippian at a total depth of 12,350 feet. The diagrammatic sketch of the well indicates several cement plugs below the 8 5/8" casing which

were set at the time of abandonment. The surface plugs and the plug at the 8 5/8" casing base are not shown since they will be removed to prepare the well for injection. It is our intention to check for injection into the San Andres formation. If the San Andres will accept water, all plugs shown on the sketch will be left in place. If not, our request is to drill out the top three plugs on the sketch to allow for salt water disposal into the Wolfcamp formation. The enclosed summary of drill stem tests shows that two intervals of porosity in the Wolfcamp were tested and both tests produced salt water.

As shown on the plat, the only oil or gas production in this area from formations which this well penetrates is from the Garrett (Drinkard) Field approximately two miles northeast of the proposed injection well. Our correlation to the Drinkard formation is marked on the Gamma Ray-Sonic Log with no apparent porosity in the interval.

Form C-103 with a detailed description of the proposed operation along with a copy of the disposal application is being mailed to your District I office in Hobbs.

We have attempted to demonstrate that our proposal to dispose of salt water in the referenced well will be into a formation older than Triassic which is non-productive of oil or gas within a radius of two miles and that both the water to be disposed of and the water occurring naturally within the disposal formation is mineralized to such a degree as to be unfit for domestic, stock, irrigation or other general uses. It is, therefore, respectfully requested that administrative approval be granted for our application to dispose of salt water into the above referenced well.

Very truly yours,

William J. Furr

William J. Furr
Ass't Supt. Drilling & Production

WJF/bmc
Enc.

Form C-108
Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION

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

OPERATOR		ADDRESS	
FREEPORT OIL COMPANY		P.O. BOX 52349, NEW ORLEANS, LOUISIANA 70152	
LEASE NAME	**WELL NO.**	**FIELD**	**COUNTY**
STATE OF NEW MEXICO	1	WEST GARRETT (DEVONIAN)	LEA

LOCATION

UNIT LETTER M ; WELL IS LOCATED 990 FEET FROM THE SOUTH LINE AND 660 FEET FROM THE WEST LINE, SECTION 32 TOWNSHIP 16S RANGE 38E NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	13 3/8	403	400	SURFACE	CEMENT RETURNS
INTERMEDIATE	8 5/8	5200	500	3500	CALCULATED
LONG STRING					
TUBING	2 3/8	5150	NAME, MODEL AND DEPTH OF TUBING PACKER: GUIBERSON MODEL AF PACKER AT 5150 FEET		

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION (San Andres)	BOTTOM OF FORMATION (Wolfcamp)
SAN ANDRES - WOLFCAMP	5162	10,860

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
TUBING	OPEN HOLE	5820-10,488

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?
NO	OIL	NO

LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH

-

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
300	NONE	DEVONIAN - 12,553

ANTICIPATED DAILY INJECTION VOLUME (BBLS.) MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
450	2000	CLOSED	PRESSURE	200

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	ARE WATER ANALYSES ATTACHED?
YES	YES	YES

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)

STATE LAND - MATTIE PRICE - TATUM, NEW MEXICO IS SURFACE LESSEE

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (½) MILE OF THIS INJECTION WELL

AMERADA HESS CORP. - DRAWER 817 SEMINOLE, TEXAS 79360

BUFFALO RESOURCES CORP. - 512 MIDLAND SAVINGS BLDG. - MIDLAND, TEXAS 79701

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? SURFACE ~~OWNER~~ Lessee	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	THE NEW MEXICO STATE ENGINEER
YES	YES	YES

ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B) PLAT OF AREA	ELECTRICAL LOG	DIAGRAMMATIC SKETCH OF WELL
YES	YES	YES

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

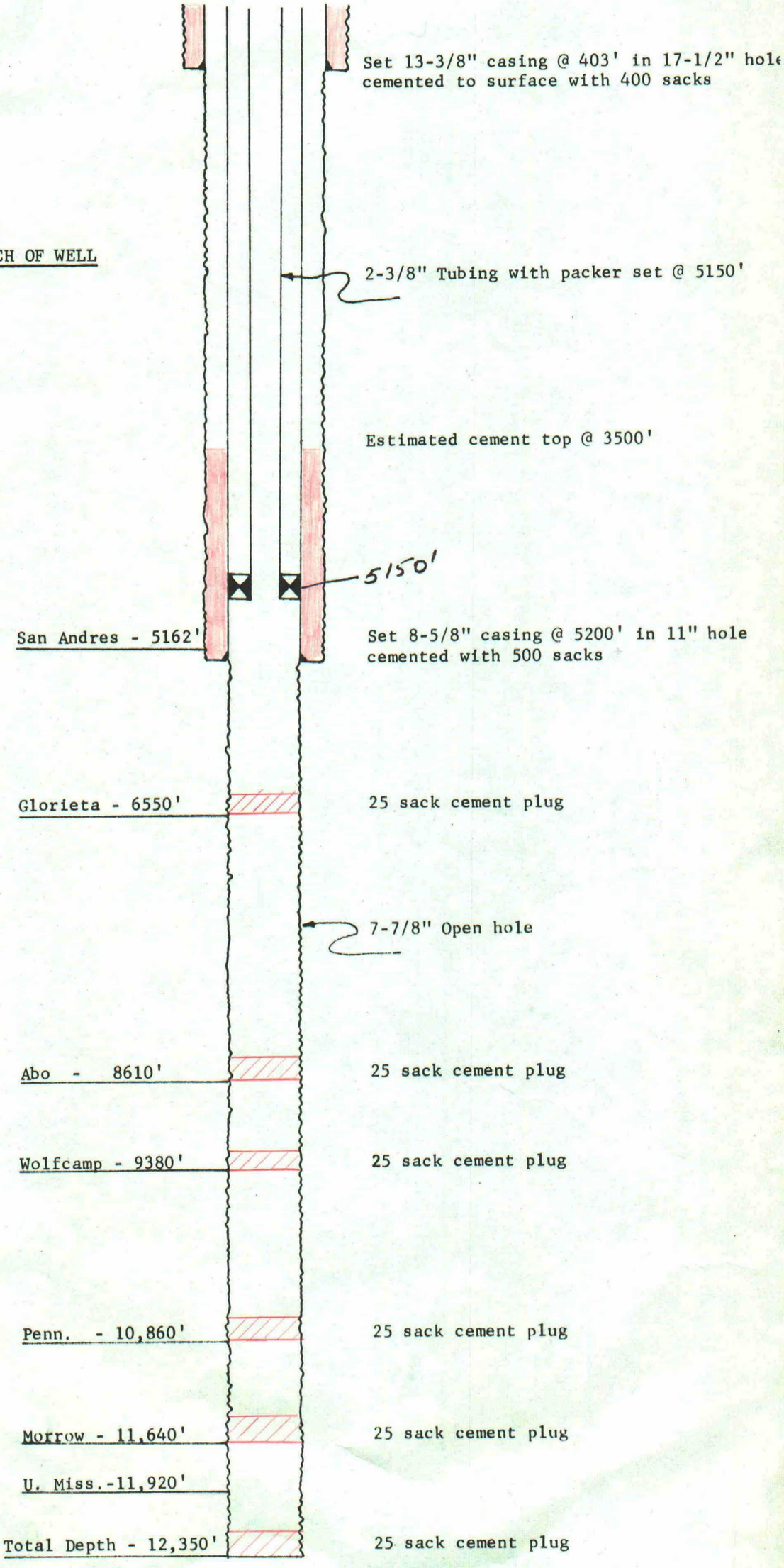
William J. Furr William J. Furr — Ass't Supt. Drilling & Production — 7/21/72

(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.

FREEPORT OIL COMPANY
STATE OF NEW MEXICO NO. 1 SWD
WEST GARRETT (DEVONIAN) FIELD
LEA COUNTY, NEW MEXICO

DIAGRAMMATIC SKETCH OF WELL



1342-A

HALLIBURTON DIVISION LABORATORY
HALLIBURTON COMPANY
LOVINGTON, NEW MEXICO

LABORATORY WATER ANALYSIS

No. W1-172-71

To Freeport Oil Company

Date 3/24/71

Box 52349

New Orleans, La. 70116

Attn: Mr. Bill Furr

Submitted by Mope Brewer

Date Rec. 3/24/71

Well No. Mattie Price # 3 Depth 12,900 Formation Devonian

County Lea Field West Garrett Source Well Head

Resistivity	.152 @ 67 F			
Specific Gravity	1.030			
pH	6.3			
Calcium (Ca)	2,800			*MPL
Magnesium (Mg)	780			
Chlorides (Cl)	25,500			
Sulfates (SO_4)	1,500			
Bicarbonates (HCO_3)	488			
Soluble Iron (Fe)	Nil			

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Robert Lansford

cc:

HALLIBURTON COMPANY

By Robert Lansford
CHEMIST

NOTICE

SUMMARY OF DRILL STEM TESTS

Freeport Oil Company
State of New Mexico No. 1
West Garrett (Devonian) Field
Sec. 32, T-16-S, R-38-E
Lea County, New Mexico

Drill Stem Test No. 1

9365' to 9392'
September 11, 1970

10 Min. Preflow: 123-793#. Strong blow. No gas to surface.
60 Min. ISIP: 3442#
60 Min. Final Flow: 816-2738#. Strong blow. Open on 1/4" choke to pit. Began to decrease toward end of test.
120 Min. FSIP: 3440#
IH/FH: 4214/4227#
Temperature: 145°F
Recovery: 180' drilling fluid, res. - .15 at 80°F, chlorides 12,000 ppm
6020' salty sulphur water, res. - .15 at 80°F, chlorides 27,000 ppm.
MFE Chamber: .1 cubic feet gas at 50 psi
2460 cc salt sulphur water, res. - .15 at 76PF, chlorides 27,000 ppm.

Drill Stem Test No. 2

9700-9853'
September 15, 1970

10 Min. Preflow: 1954-3206#. Strong blow, put on 1/4" choke. No gas to surface.
60 Min. ISIP: 3655#
54 Min. Final Flow: 3330-3657#. Strong blow decreasing to 0 in 44 minutes.
90 Min. FSIP: 3660#
IH/FH: 4332/4337#
Temperature: 148°
Recovery: 367' of drilling fluid
7700' salty sulphur water
MFE Chamber: 0.2 cubic feet gas at 25#
2540 cc salty sulphur water, res. - 18 at 71°, chlorides 19,000 ppm

LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE