CASE 7186: SUN TEXAS COMPANY FOR SALT WATER DISPOSAL, LEA COUNTY, NEW MEXICO

Case No.

7186

Application

Transcripts

Small Exhibits

ETC

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 7186
Order No. R-6646

APPLICATION OF SUN TEXAS COMPANY
FOR SALT WATER DISPOSAL, LEA
COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on March 11, 1981, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 7th day of April, 1981, the Division Director, 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 Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Sun Texas Company, is the owner and operator of the State C Account 1 Well No. 3, located in Unit L of Section 2, Township 12 South, Range 33 East, NMPM, Bagley Field, Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the Devonian formation, with injection into the open hole interval from approximately 11,034 feet to 11,370 feet.

(4) That the injection should be accomplished through 3 1/2-inch plastic lined tubing installed in a packer set at approximately 10,900 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge or approved leak detection device should be attached to the annulus in order to determine leakage in the casing, tubing, or packer.

(5) That if injection is at a pressure above hydrostatic pressure the injection well or system should be equipped with a pressure limiting switch or device which will limit the wellhead pressure on the injection well to no more than 2200 psi.

(6) That the Director of the Division should be authorized to administratively approve an increase in the injection pressure upon a proper showing by the operator that such higher pressure will not result in migration of the injected waters from the Devonian formation.

(7) That the operator should notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(8) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

(9) 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, Sun Texas Company, is hereby authorized to utilize its State C Account 1 Well No. 3, located in Unit L of Section 2, Township 12 South, Range 33 East, NMPM, Bagley Siluro-Devonian Pool, Lea County, New Mexico, to dispose of produced salt water into the Devonian formation, injection to be accomplished through 3 1/2-inch tubing installed in a packer set at approximately 10,900 feet, with injection into the open hole interval from approximately 11,034 feet to 11,370 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 shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

(2) That if injection is at a pressure above hydrostatic pressure, the injection well or system shall be equipped with a pressure limiting switch or device which will limit the wellhead pressure on the injection well to no more than 2200 psi.

(3) That the Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Devonian formation.

(4) That the operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(5) That the operator shall immediately notify the supervisor of the Division's Hobbs district office of the failure of the tubing, casing, or packer, in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

(6) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Division Rules and Regulations.

(7) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
Director

S E A L

fd/

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

April 9, 1981

Re: CASE NO. 7186
ORDER NO. R-6646

Applicant:

Sun Texas Company

Mr. William F. Carr
Campbell, Byrd & Black
Attorneys at Law
Post Office Box 2208
Santa Fe, New Mexico

Dear Sir:

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

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCD ____x____
Artesia OCD ____x____
Aztec OCD _____

Other _____

Sun Texas Company

REGIONAL OFFICE
MIDLAND, TEXAS 79701

P. O. BOX 4067
1509 WEST WALL STREET

TEL. 915-684-5584
TWX. 910-895-5324

March 6, 1981

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

Attention: Mr. Joe D. Ramey
Director

Re: Salt Water Disposal
Lea County, New Mexico
For Sun Texas Company

Dear Mr. Ramey:

Enclosed are two (2) revised copies of the N.M.O.C.C. Form C-108 which supercede any previously submitted forms. The revisions include squeezing off the open perforations and setting the packer at 10,900'.

Yours very truly,

SUN TEXAS COMPANY

R. J. Womack
Midland Regional Manager

RJW/SJG/pls

Form C-108
Revised 1-1-68

RECEIVED
MAR 12 1981
OIL CONSERVATION DIVISION
SANTA FE

NEW MEXICO OIL CONSERVATION COMMISSION

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

OPERATOR	ADDRESS
SUN TEXAS COMPANY	BOX 4067, MIDLAND, TEXAS 79704

LEASE NAME	WELL NO.	FIELD	COUNTY
STATE "C" A/C-1	3	BAGLEY (SILURO-DEVONIAN)	LEA

LOCATION

UNIT LETTER L ; WELL IS LOCATED 1980 FEET FROM THE SOUTH LINE AND 660 FEET FROM THE WEST LINE, SECTION 2 TOWNSHIP 12-S RANGE 33-E NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	13-3/8"	324'	350	Circ'd	
INTERMEDIATE	9 5/8"	3,894'	2,700	Circ'd	
LONG STRING	5 1/2"	11,034'	3,000	Circ'd	
TUBING	3 1/2"	10,900'	NAME, MODEL AND DEPTH OF TUBING PACKER: GUIBERSON UNIPACKER -V @ 10,900'		

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
DEVONIAN	10,846	NOT PENETRATED

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
TUBING	OPEN HOLE	11,034' - 11,370'

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	SILURO-DEVONIAN PRODUCING WELL	NO

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

10,907-994' - sqz'd w/50 sxs, 10,856-90' - open, will be sqz'd prior to injection

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
150' (est'd)	Penn (Collier) - 9,950'	NONE

ANTICIPATED DAILY INJECTION VOLUME (BBLS.) MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
6,400	8,000	Closed	Gravity	

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)

LESSEE: Marsha Hilburn Mathers, P. O. Box 303, Caprock, New Mexico 88213

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

Amerada Hess, P. O. Box 840, Seminole, Texas 79360

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? SURFACE OWNER	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL
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	

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

R. J. O'Neal (Signature) — Regional Operations Superintendent (Title) — 3-6-81 (Date)

NOTE: Should waivers 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 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.

1

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-108
Revised 3-1-68

RECEIVED
MAR 12 1981
OIL CONSERVATION DIVISION
SANTA FE

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

OPERATOR		ADDRESS	
SUN TEXAS COMPANY		BOX 4067, MIDLAND, TEXAS 79704	
LEASE NAME	**WELL NO.**	**FIELD**	**COUNTY**
STATE "C" A/C-1	3	BAGLEY (SILURO-DEVONIAN)	LEA

LOCATION

UNIT LETTER L ; WELL IS LOCATED 1980 FEET FROM THE SOUTH LINE AND 660 FEET FROM THE West LINE, SECTION 2 TOWNSHIP 12-S RANGE 33-E NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	13-3/8"	324'	350	Circ'd	
INTERMEDIATE	9 5/8"	3,894'	2,700	Circ'd	
LONG STRING	5 1/2"	11,034'	3,000	Circ'd	
TUBING	3 1/2"	10,900'	NAME, MODEL AND DEPTH OF TUBING PACKER: GUIBERSON UNIPACKER -V @ 10,900'		

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
DEVONIAN	10,846	NOT PENETRATED

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
TUBING	OPEN HOLE	11,034' - 11,370'

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	SILURO-DEVONIAN PRODUCING WELL	NO

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

10,907-994' - sqz'd w/50 sxs, 10,856-90' - open, will be sqz'd prior to injection

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
150' (est'd)	Penn (Collier) - 9,950'	NONE

ANTICIPATED DAILY INJECTION VOLUME (BBLS.) MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
6,400	8,000	Closed	Gravity	

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

LESSEE: Marsha Hilburn Mathers, P. O. Box 303, Caprock, New Mexico 88213

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

Amerada Hess, P. O. Box 840, Seminole, Texas 79360

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? SURFACE OWNER	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL
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	

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

R. J. O'Neal (Signature) — Regional Operations Superintendent (Title) — 3-6-81 (Date)

NOTE: Should waivers 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 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.

Elevation: 4254' DF
Datum: Zero @ DF - 12' AGL

State C... 12 1 No. 3
1980' FSL & 660' FWL
Sect. 2, T-12-S, R-33-E
Bagley (Devonian) Field
Lea County, New Mexico

13 3/8" 48# H-40 @ 324'
Cmt'd w/ 350 SX - Circ'd

9 5/8" 36# J-55 @ 3894'
Cmt'd w/ 2700 SX - Circ'd

PROPOSED
S.W.D.W.
CONVERSION

Perf'd 4SPF @ 9950'
Circ'd Cmt w/ 2800 SX

9950'

OTOC @ 9980' after 200 SX
(Temp. Surv.)

3 1/2" tubing w/ Pkr
@ 10,900'

Perf'ns 10856-60 (2SPF)
SWB'D DRY

10856'

Perf'ns 10860-90 (1SPF)

10,890'

Perf'ns 10856-90 to be
Sqz'd

10907'

Perf'ns 10907-94' (510 JShots)
Sqz'd w/ 50 SX

10,994'

5 1/2" 17# N-80 @ 11,034'
Cmt'd w/ 200 SX
Dr'l'd FC & Shoe to 11,033'

INJECTION ZONE

DRILL-OUT T.O.
TD @ ~11,210'

Elevation: 4254' DF
Datum: Zero @ DF 12' AGL

State C Tr 1 No. 3
1980' FSL & 660' FWL
Sect. 2, T. 12-S, R 33-E
Bagley (Devonian) Field
Lea County, New Mexico

13 3/8" 48# H-40 @ 324'
Cmt'd w/ 350 sx - Circ'd

9 5/8" 36# J-55 @ 3894'
Cmt'd w/ 2700 sx - Circ'd

PROPOSED
S.W.D.W.
CONVERSION

Perf'd 4 SPF @ 9950'
Circ'd Cmt w/ 2800 sx

9950'

OTOC @ 9980' after 200 sx
(Temp. Surv.)

3 1/2" tubing w/ Pkr
@ 10,900'

Perf'ns 10856-60 (2 SPF)
SWB'D DRY

10856'

Perf'ns 10860-90 (1 SPF)

10,890'

Perf'ns 10856-90 to be
Sqz'd

10907'

Perf'ns 10907-94' (510 Jshots)
Sqz'd w/ 50 sx

10,994'

5 1/2" 17# N-80 @ 11,034'
Cmt'd w/ 200 sx.
Dr'l'd FC & Shoe to 11,033'

INJECTION ZONE

DRILL-OUT T.O
T.D. @ ~11,370'

Sun Texas Company

REGIONAL OFFICE
MIDLAND, TEXAS 79701

P. O. BOX 4067
1509 WEST WALL STREET

TEL 915-684-5584
TWX. 910-895-5324

March 2, 1981

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

Attention: Mr. Joe D. Ramey
Director

RE: Salt Water Disposal
Lea County, New Mexico
For Sun Texas Company

Dear Mr. Ramey:

Enclosed is the N.M.O.C.C. Form C-108, Lease Water Analyses, location plat, and wellbore sketches as required by the Commission.

Very truly yours,

SUN TEXAS COMPANY

M L Schroeder

Melvin L. Schroeder
Regional Engineer

SJG:lw

Enclosure

Form C-108
Revised 7-1-65

RECEIVED
MAR 10 1981
OIL CONSERVATION DIVISION
SANTA FE

NEW MEXICO OIL CONSERVATION COMMISSION

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

OPERATOR	ADDRESS
SUN TEXAS COMPANY	BOX 4067, MIDLAND, TEXAS 79704

LEASE NAME	WELL NO.	FIELD	COUNTY
STATE "C" a/c - 1	3	BAGLEY (SILURO-DEVONIAN)	LEA

LOCATION

UNIT LETTER L ; WELL IS LOCATED 1980 FEET FROM THE SOUTH LINE AND 660 FEET FROM THE WEST LINE, SECTION 2 TOWNSHIP 12-S RANGE 33- E NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	13-3/8"	324'	350	Circ'd	
INTERMEDIATE	9-5/8"	3894'	2700	Circ'd	
LONG STRING	5½"	11,034'	3000	Circ'd	
TUBING	3½"	10,780'	NAME, MODEL AND DEPTH OF TUBING PACKER: GUIBERSON UNIPACKER - VI @ 10,780'		

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
DEVONIAN	10,846'	NOT PENETRATED

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
TUBING	PERF & OPEN HOLE	10,846' - 11,370'

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	SILURO - DEVONIAN PRODUCING WELL	NO

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

10,907-994' - sqz'd w/50 sxs, 10,856-60' - Swb'd dry; 10,860-90' - open

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
150' (est'd)	Penn (Collier) - 9,950'	None

ANTICIPATED DAILY INJECTION VOLUME (BBLS.)	MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
	6,400	8,000	closed	gravity	

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)

LESSEE: Marsha Hilburn Mathers, P. O. Box 303, Caprock, New Mexico 88213

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

Amerada Hess, P. O. Box 840, Seminole, Texas 79360

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	
	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.

L. A. Wright (Signature) — Regional Operations Supt. (Title) — 2-24-81 (Date)

NOTE: Should waivers 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 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.

HALLIBURTON DIVISION LABORATORY
HALLIBURTON SERVICES
MIDLAND DIVISION
HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W81-171

To Sun-Texas Oil Company

Box 4067

Midland, Texas:

ATTN: Scott Glaser

Date 2-25-81

Submitted by _____ Date Rec. 2-24-81

Well No. As Marked Depth _____ Formation Siluro-Devonian

County Lea Field Bagley Source _____

	State "C" a/c #1	State "D" a/c #1	
Resistivity	0.153 @ 74°F.	0.153 @ 74°F.	
Specific Gravity	1.035	1.035	
pH	6.1	6.0	
Calcium (Ca)	2,250	2,350	*MPL
Magnesium (Mg)	90	60	
Chlorides (Cl)	26,000	26,500	
Sulfates (SO_4)	2,300	2,400	
Bicarbonates (HCO_3)	580	570	
Soluble Iron (Fe)	Nil	Nil	

Remarks:

*Milligrams per liter

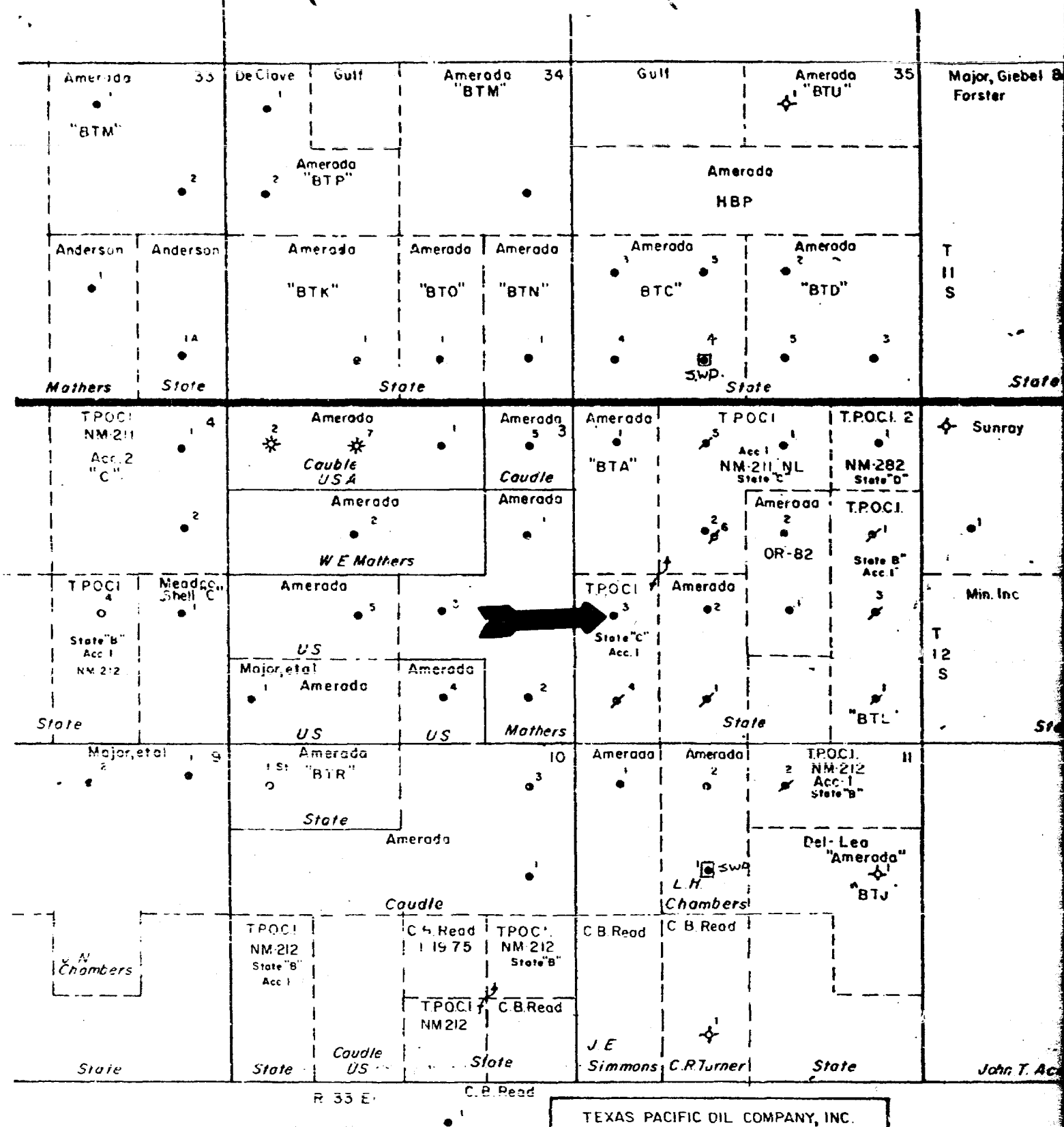
Respectfully submitted,

Analyst: Brewer

HALLIBURTON COMPANY

cc: Elmer Teel, Sun-Texas Oil Co.,
Box 1255, Eunice, N.M.

By W. L. Brewer
CHEMIST



ARROW - S.W.D.W. CONVERSION

TEXAS PACIFIC OIL COMPANY, INC.
BAGLEY POOL AREA
Lea County New Mexico

T-11 & 12-S - R-33-E

C.I. 5'
Scale: 1" = 2000'

Date 5-5-71
By T.P.F.

Elevation: 4254 DF
Datum: Zero @ DF - 12' AGL

State C [illegible] No. 3
1980' FSL & 660' FWL
Sect. 2, T-12-S, R-33-E
Bagley (Devonian) Field
Lea County, New Mexico

13 3/8" 48# H-40 @ 324'
Cmt'd w/ 350 sx - Circ'd

9 5/8" 36# J-55 @ 3894'
Cmt'd w/ 2700 sx - Circ'd

Present
Wellbore
3-1-81

9950'
2 3/8" tubing w/Pkr
& Hyd. Pump @ 10,780'
10856'
10,890'
Cmt Ret'r @ 10,900'
10901'
10,994'
OPBTD @ 11025'
(CIBP @ 11026' w/1 cmt)

Perf'd 4SPF @ 9950'
Circ'd Cmt w/ 2800 sx

OTOC @ 9980' after 200sx
(Temp. Surv.)

Perf'ns 10856-60 (2SPF)
swz'd DRY

Perf'ns 10860-90 (1SPF)

Perf'ns 10907-94' (510 JShots)
Sqz'd w/ 50 sx

5 1/2" 17# N-80 @ 11,034'
Cmt'd w/ 200 sx
Drl'd TC & Shoe to 11,033'

Elevation: 4254' DF
Datum: Zero @ DF - 12' AGL

State C
1980' FSL & 660' FWL
Sect. 2, T-12-S, R-33-E
Bagley (Devonian) Field
Lea County, New Mexico

13 3/8" 48# H-40 @ 324'
Cmt'd w/ 350 sx - Circ'd

9 5/8" 36# J-55 @ 3894'
Cmt'd w/ 2700 sx - Circ'd

PROPOSED
S.W.D.W.
CONVERSION

Perf'd 4 SPF @ 9950'
Circ'd Cmt w/ 2800 sx

9950'

3 1/2" tubing w/ Pkr
@ 10,750'

OTOC @ 9980' after 200 sx
(Temp. Surv.)

Perfins 10856-60 (2 SPF)
SWB'D DRY

10,856'

Perf'ns 10,860-70 (1 SPF)

10,890'

10907'

Perf'ns 10907-94' (510 J Shots)
Sqz'd w/ 50 sx

10,994'

5 1/2" 17# N-80 @ 11,034'
Cmt'd w/ 200 sx.
Dr'l'd FC & Shoe to 11,033'

DRILL-OUT TO
TD @ ~11,370'

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
11 March 1981

EXAMINER HEARING

IN THE MATTER OF:

Application of Sun Texas Company for salt water disposal, Lea County, New Mexico.

CASE 7186

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant: William F. Carr, Esq.
CAMPBELL, BYRD, & BLACK
Jefferson Place
Santa Fe, New Mexico 87501

I N D E X

E X H I B I T S

MR. STAMETS: We'll call next Case 7186.

MR. PADILLA: Application of Sun Texas Company for salt water disposal, Lea County, New Mexico.

MR. CARR: May it please the Examiner, my name is William F. Carr, with the law firm of Campbell, Byrd, and Black, and I'm appearing on behalf of the applicant, Sun Texas Company, and I have one witness.

(Witness sworn.)

SCOTT J. GLASER

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. CARR:

Q. Will you state your name and place of residence?

A. My name is Scott J. Glaser, Midland, Texas.

Q. Mr. Glaser, by whom are you employed and in what capacity?

A. I'm employed by Sun Texas Company as an engineer.

Q. Have you previously testified before this Commission and had your credentials accepted and made a matter of record?

A. No, sir.

Q. Will you briefly summarize for the Examiner your educational background and your work experience?

A. My educational background consists of a Bachelor's of Science at Purdue University, mechanical engineering, and one year of graduate school, majoring in geology.

I'm a member of two professional societies, the Society of Automotive Engineers, and a junior member of the SPE.

Summer employment while going through college, for three summers I worked as a project engineer in the textile industry, and I have had approximately one year experience in the oil field, six months working as an engineer for The Seismograph Service Corporation, geophysical survey company, and approximately six months with Sun Texas Company as a development engineer.

Q. Are you familiar with the application filed in this case?

A. Yes.

Q. Are you familiar with the subject well?

A. Yes, sir.

MR. CARR: Are the witness' qualifications acceptable?

MR. STAMETS: They are.

Q. Mr. Glaser, will you briefly state what Sun Texas Company seeks with this application?

A. Sun Texas Company seeks approval to convert the presently TA'd State C Account No. 1 Well No. 3 to salt water disposal service. It is located in Unit L of Section 2, Township 12 South, Range 33 in the Bagley-Siluro-Devonian Pool.

Q. Have you prepared certain exhibits for introduction in this case?

A. Yes, sir.

Q. Will you please refer to what has been marked for identification as Sun Exhibit Number One and explain to the Examiner what it is and what it shows?

A. Sun Exhibit Number One is the NMOCC Form C-108, Application to Dispose Salt Water by Injection, for the proposed well, to conversion salt water disposal service.

The proposed injection -- the proposed formation for injection is the Devonian. The top of the Devonian is at 10,146 feet. The bottom of the interval is

not penetrated.

We plan to inject through open hole. The proposed interval of injection will be from 11,034 feet to 11,370 feet. As such, the well consists of squeezed perfs and open perfs. The squeezed perfs are noted. The open perfs are 10,856 feet through 90 feet, and they will be squeezed prior to injection.

I would like to interject that this is a revision to what we originally applied for. We plan only to inject into the open hole.

Q. When was this well drilled?

A. This well was drilled in April of 1950 and it was TA'd in November, 1970, as uneconomical to produce.

Q. Will you now refer to Exhibit Number Two and review this for the Examiner?

A. Yes, sir. Exhibit Number Two is a plat of the area noting the wells within a two mile radius of the proposed salt water disposal conversion.

I direct your attention to the three shaded blue boxes. The central shaded blue box is the proposed salt water disposal well, located in Unit L of Section 2, the Sun Texas Company No. 3.

The upper shaded box is the present salt water disposal well for the area, and it is the Amerada BTC

Salt Water Disposal No. 4.

The lower shaded blue box consists of the P&A'd salt water disposal wells that have been used in the past. They consist of two Amerada wells, Chambers No. 1 and 2, and the Sun Texas Company State B Account No. 1 Well No. 2.

The color coding transparent dots over the wells denote the formations from which the wells have been producing. I direct your attention to the lower lefthand corner. The red overlays denote the Devonian; the Orange, the Bagley-Penn, and so on.

Q. This exhibit also shows the lease ownership in the area.

A. Yes, sir. The yellow shaded areas are the areas owned by Sun Texas Company. I'll further emphasize that all the shaded colorings you've seen on this map corresponds to the Sun Texas Company code. Amerada wells and other companys are denoted by the superscripts over these.

Q. Some of the acreage is not only shaded in yellow but has a red line around it, and I believe some of the tracts are also shaded in green. This shading does not have any bearing on this application here today.

A. No, sir. The outline red denotes area that has been farmed out by Sun Texas and I believe the

lightly shaded green is area under consideration for farmout.

Q. Will you now refer to what has been marked for identification as Sun Exhibit Number Two-A and explain to the Examiner what this shows?

A. Exhibit Two-A is a tabular form of the producing formations of the wells -- for the wells within the two-mile radius of the proposed conversion. It denotes the well name and number, the operator, its unit and section, township range, and the formation, and its current status.

Q. Will you now refer to Sun Exhibit Number Three?

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The perforations from 10,856 to 10,890 feet are perforations that are currently open but will be squeezed prior to injection.

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feet, and will have to be drilled out to 11,370 feet.

Q. If the application is approved, in your opinion will the proposed injection pose a threat of contamination either gas, oil, or water, in the area?

A. No, the proposed completion will not -- will pose no threat to these zones.

MR. STAMETS: While we're right there, could I ask a question?

A. Yes, sir.

MR. STAMETS: Do you have some perforations at 9950?

A. Yes, sir. Those are perforations which allowed us to cement the upper portion of the 5-1/2 casing string, I should have explained that. When we --

MR. STAMETS: So those are effectively sealed.

A. Yes, sir.

Q. What is the source of the water you propose to inject in the subject well?

A. Referring to Exhibit Two, the plat of the area, the source of the water, the wells which will be, water will be disposed of, is located in Section 2, Unit A, which is the Sun Texas State D Account 1 Well No. 1; in Section -- excuse me, in Unit B, Sun Texas State C Account 1

Well No. 1; and in Section F, the Sun Texas State C Account No. 1 Well No. 2. These three wells will be -- will have their produced water disposed of.

Q. What have you been doing with the water that has been produced by these wells?

A. Previously we have disposed of them in the Amerada No. 4 Salt Water Disposal Well, located in Section 5, Unit N.

Q. What are you presently doing with the water?

A. Presently there is no water to be dealt with, as the -- these three wells are shut in while Amerada undergoes repairs on their presently -- on their Amerada Disposal Well No. 4. This is causing us to forego 205 barrels a day of oil production.

Q. How quickly could you be prepared to inject water in the subject well?

A. Pending the Commission's approval, we could in a realistic timeframe of four weeks.

Q. What volumes do you anticipate injecting?

A. We anticipate injecting 6580 barrels per day.

Q. Do you plan to inject under pressure or by gravity?

A. By gravity, sir.

Q. If an order was entered by this Commission which imposed a pressure limitation of 0.2 of a pound per foot of depth to the top of the injection interval, would that pose any problem whatsoever for Sun in its plans for this well?

A. It would not impose any problem. It would be adequate.

Q. Will you now refer to what has been marked for identification as Sun Exhibit Number Four?

A. Could I interject at this point here, before we go to Exhibit Four? I left out something which was important, talking about the Amerada No. 4 Well.

I'd like to elaborate. The reason that it is shutin at this time is that they have extensive casing repairs due to the corrosive waters of the salt water that they've been disposing of previously, and the repairs require running a liner in the bottom portion of the well.

Amerada has informed us that this will restrict their injection capacibilities. Previously it was approximately 11,000 barrels of water per day, and they're estimating that the -- it will be capable of only, maybe, 7000 to 8000 barrels of water per day.

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Q Will you now proceed to Exhibit Number Four?

A Yes, sir. Exhibit Number Four is a water analysis of the wells which we seek to inject -- disposed water we seek to dispose of.

Q Are there wells within a 1/2 mile radius of the proposed injection well which penetrate the injection zone?

A Yes.

Q Will you now refer to Sun Exhibit Number Five and explain to Mr. Stamets what this shows?

A Yes, sir. Exhibit Number Five is a tabular listing of the wells within 1/2 mile of the proposed injection well that penetrate the zone of interest.

The table consists of the well name and legal location, the casing and set depths, the sacks of cement used to set each casing string, the cement tops, the TD of each well, the subsea depth of each TD, the producing interval, the lowermost subsea producing interval, and the plugback TD, and the subsea plugback TD.

Q And this table is submitted to comply with the requirements of the Commission's Memorandum 3-77, is

that correct?

A. That is correct, yes, sir.

It is worth noting that the two wells which we're concerned of within the 1/2 mile radius of this area are the Amerada BTI No. 1 and the Amerada State BTA No. 1. They are currently Devonian producers. I have calculated the lowermost subsea producing interval at -6537 and -6520 for the wells, respectively.

I would like to note in the underlying lower righthand corner, that Sun Texas plans to inject at -6780 to -7116 in order to avoid flooding out their wells. This is the main reason we revised our C-108 and decided to inject into the open hole.

Q. Will you now refer to what has been marked for identification as Sun Texas --

MR. STAMETS: Could I ask a couple questions while we're right here?

There are other wells within a half a mile --

A. Yes, sir.

Q. -- of the proposed well, but I would assume, since they are not on this list, that they were not drilled deep enough to penetrate the injection horizon.

A. Correct, sir. I used a cutoff of -6610

as an approximate top of the Devonian to use -- get these wells that fall in that area.

MR. STAMETS: And then you've calculated some of these cement tops, I see, where they've got a little asterisk beside them.

A. Yes, sir, and the asterisk denotes an assumption of 30 to 40 percent cement loss to the formation or some other effects for the area. I did not really have access to any logs that might give me a more definite area, for the Amerada wells particularly.

MR. STAMETS: Is this 30 to 40 percent loss an appropriate factor in this area?

A. For this area from prior Sun Texas wells, yes, sir.

MR. STAMETS: And then a number of the wells, like the second well on the list, show a definite figure. Is that from temperature survey or where did that figure come from?

A. That was reported, I believe, by one of the Commission forms. I don't recall right offhand, sir.

MR. STAMETS: Okay. Thank you.

Q. Will you now refer to Exhibit Number Six and explain to the Examiner what this is and what it shows?

A. Exhibit Number Six represents the

schematics of all the plugged and abandoned wells within 1/2 mile radius of this -- of our proposed injection well. I'd like to say, in terms of brevity, unless the Examiner would like me to go into more detail, that all these wells were plugged and abandoned in accordance with the NMOCC rules and were approved as such.

I would also like to point out there seems to be an inconsistency with the number of P&A'd wells I show on Exhibit Five with that on Exhibit Six. I show four P&A'd wells on Exhibit Six and only three in Exhibit Five. The reason being, is one of the wells in Exhibit Six, specifically the Amerada Bagley Disposal No. 2, the last schematic of Exhibit Six, lies just outside of the 1/2 mile radius, and so I do not include it in Exhibit Five.

Q. Have you checked the Oil Conservation Division files on each of the plugged and abandoned wells?

A. Yes, sir.

Q. Does Exhibit Six conform with the data reported to the Commission?

A. Yes.

Q. Will you now refer to Exhibit Number Seven and explain to the Examiner what this is and your purpose in offering it in this case?

A. Exhibit Seven -- Exhibit Number Seven

is a spontaneous potential and resistivity log of the proposed injection well. Its purpose is merely to show the interval in question, its top, which is located at 10,846 feet.

Q. Now will you refer to Sun Exhibit Number Eight and review this for Mr. Stamets?

A. Exhibit Number Eight is the Sun Texas Company's interpretation of the top of the Devonian in the Bagley Pool area. I would like you to note the structural position of the existing salt water disposal well, Amerada's No. 4. It is located high on the structure at approximately -6400 feet on the Isopach.

I'd like to note that the proposed salt water disposal well is located 200 feet lower, approximately, at roughly -6600 feet, as far as structure.

The previously approved salt water disposal wells, which are now P&A'd further south, are located in a comparable position.

Q. Mr. Glaser, are you aware of similar applications having been granted for salt water disposal in the same general area and in this pool?

A. Yes, sir, specifically the Amerada Salt Water Disposal No. 4, which we've been referring to throughout this case; the Amerada Hess Corporation Chambers No. 1 and No. 2, which are noted on Exhibit Two and the

structure map as currently P&A'd salt water disposal wells; as well as Sun Texas Company's State B Account No. 1 Well No. 2, which is also a P&A'd salt water disposal well.

MR. CARR: Mr. Examiner, the order numbers on each of those, if you'd like them, Sun Texas Order No. is R-4718, which was approved February 13, 1974; the two Amerada injection wells, the Chambers was approved by Order R-3377, February 12th, 1968; and the Bagley Salt Water Disposal Well was Order No. R-3339, approved November the 9th, 1967.

Q. Mr. Glaser, in your opinion will granting this application be in the best interest of conservation, the prevention of waste, and the protection of correlative rights?

A. Yes, sir.

Q. Were Exhibits One through Eight prepared by you or under your direction and supervision?

A. Yes.

MR. CARR: At this time, Mr. Examiner, we would offer into evidence Sun Texas Company EXhibits One through Eight.

MR. STAMETS: These exhibits will be admitted.

MR. CARR: I have nothing further of

this witness on direct.

CROSS EXAMINATION

BY MR. STAMETS:

Q. Mr. Glaser.

A. Yes, sir.

Q. Exhibit Number Six --

A. Yes, sir.

Q. -- the page that represents the Amerada Mathers "WE" No. 1 Well.

A. Yes, sir.

Q. That well shows a bottom plug in the casing. Do you know the size of that or is that the bottom plug that was in there from the original cementing operation?

A. At the casing shoe, sir?

Q. Yes.

A. I am relatively confident it is the original plug that was placed.

Q. Do you have any idea how much cement that represents?

A. No, sir.

Q. Perhaps it's ascertainable from the Division records with any luck.

Is the injection interval in your well

below the casing point in this well?

A. The Mathers, sir?

Q. Yes.

A. I would have to calculate it, sir. It is definitely lower than the Amerada salt water disposal No. 4, which is currently producing.

I could sumit that data at a later time.

Q. Okay, that would be -- I would appreciate that. I'm trying to make certain that this well is not going to be conduit for the movement of fluids and it seems like it shouldn't be --

A. Yes, sir.

Q. -- with that bottom plug in there and then the cement retainers.

Do you know if there was any cement put on top of those retainers?

A. No, sir. Well, excuse me.

Q. There's so much information on there it is hard to discern.

A. I can give that to you, sir.

Q. All right, that's the only well on there that I'm concerned about. If you could add a little bit of information to the record subsequent to the hearing, I will appreciate it.

A. Uh-huh.

Q. Will the tubing that you use in this well be a lined tubing?

A. Yes, sir, very definitely.

Q. And you will be loading the annulus?

A. Yes, sir.

Q. Okay. One of the requirements which we will probably have to adopt as a result of the Federal Underground Injection Control program, is the test of the annular space in a well such as this upon setting the tubing and packer. If that is required, --

A. Excuse me, tests, I don't follow you.

Q. Okay, pressure test.

A. Oh, okay.

Q. To insure that before injection starts that everything is -- has integrity, that there are no leaks in the casing tubing or packer, and what they propose was some sort of a pressure test that could be run once everything is installed. Could that be done on this well?

A. Oh, yeah, we're very agreeable. Are you referring to, perhaps, loading the back side with a lighter hydrostatic fluid, for example, oil, and setting a pressure gauge at the surface on the annulus, so that if a packer failure ever did occur we'd see a sensible pressure

rise at the surface?

Q. Something like that.

A. Similar to that.

Q. Of course if you're on a vacuum it might be the opposite thing.

A. True.

Q. Or we might be in a situation where periodically we would want to come out there and run a pressure test on the backside.

A. Uh-huh.

Q. And the idea is that you would have essentially an original guideline that says, yes, at least at one time this thing was solid.

A. Okay.

Q. What type of -- how much pressure would you think would be appropriate on the backside of this system to assure that we did have integrity?

A. Oh --

Q. Without unseating the packer?

A. Well, the packer we are planning on using is a Gyverson (sic) UniPac Five, and it has an unloading valve in it, such that when the tubing rate is relieved, the annulus and the tubing pressures are equalized so you don't overload the packer or the tubing string. As a design number,

I don't have one right now at this time. It was designed with a salt water solution --

Q Let's throw that in with the additional information --

A Okay.

Q -- on this other well, as to what pressure you believe would be appropriate for that test.

A Okay.

MR. STAMETS: Any other questions for this witness? He may be excused.

Anything further in this case?

The case will be taken under advisement.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd C.S.R.

I do hereby certify that the foregoing is
a co[illegible] proceedings in
the [illegible] No. 7186
heard[illegible] on 3-11 19 81.
Richard L. Stamets Examiner
Oil Conservation Division

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
11 March 1981

EXAMINER HEARING

IN THE MATTER OF:

Application of Sun Texas Company for salt water disposal, Lea County, New Mexico.

CASE 7186

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant: William F. Carr, Esq.
CAMPBELL, BYRD, & BLACK
Jefferson Place
Santa Fe, New Mexico 87501

I N D E X

E X H I B I T S

MR. STAMETS: We'll call next Case 7186.

MR. PADILLA: Application of Sun Texas Company for salt water disposal, Lea County, New Mexico.

MR. CARR: May it please the Examiner, my name is William F. Carr, with the law firm of Campbell, Byrd, and Black, and I'm appearing on behalf of the applicant, Sun Texas Company, and I have one witness.

(Witness sworn.)

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BY MR. CARR:

Q. Will you state your name and place of residence?

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Q. Mr. Glaser, by whom are you employed and in what capacity?

A. I'm employed by Sun Texas Company as an engineer.

Q. Have you previously testified before this Commission and had your credentials accepted and made a matter of record?

A. No, sir.

Q. Will you briefly summarize for the Examiner your educational background and your work experience?

A. My educational background consists of a Bachelor's of Science at Purdue University, mechanical engineering, and one year of graduate school, majoring in geology.

I'm a member of two professional societies, the Society of Automotive Engineers, and a junior member of the SPE.

Summer employment while going through college, for three summers I worked as a project engineer in the textile industry, and I have had approximately one year experience in the oil field, six months working as an engineer for The Seismograph Service Corporation, geophysical survey company, and approximately six months with Sun Texas Company as a development engineer.

Q. Are you familiar with the application filed in this case?

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Q. Are you familiar with the subject well?

A. Yes, sir.

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Q. -- of the proposed well, but I would assume, since they are not on this list, that they were not drilled deep enough to penetrate the injection horizon.

A. Correct, sir. I used a cutoff of -6610

as an approximate top of the Devonian to use -- get these wells that fall in that area.

MR. STAMETS: And then you've calculated some of these cement tops, I see, where they've got a little asterisk beside them.

A. Yes, sir, and the asterisk denotes an assumption of 30 to 40 percent cement loss to the formation or some other effects for the area. I did not really have access to any logs that might give me a more definite area, for the Amerada wells particularly.

MR. STAMETS: Is this 30 to 40 percent loss an appropriate factor in this area?

A. For this area from prior Sun Texas wells, yes, sir.

MR. STAMETS: And then a number of the wells, like the second well on the list, show a definite figure. Is that from temperature survey or where did that figure come from?

A. That was reported I believe, by one of the Commission forms. I don't recall right offhand, sir.

MR. STAMETS: Okay. Thank you.

Q. Will you now refer to Exhibit Number Six and explain to the Examiner what this is and what it shows?

A. Exhibit Number Six represents the

schematics of all the plugged and abandoned wells within 1/2 mile radius of this -- of our proposed injection well. I'd like to say, in terms of brevity, unless the Examiner would like me to go into more detail, that all these wells were plugged and abandoned in accordance with the NMOCC rules and were approved as such.

I would also like to point out there seems to be an inconsistency with the number of P&A'd wells I show on Exhibit Five with that on Exhibit Six. I show four P&A'd wells on Exhibit Six and only three in Exhibit Five. The reason being, is one of the wells in Exhibit Six, specifically the Amerada Bagley Disposal No. 2, the last schematic of Exhibit Six, lies just outside of the 1/2 mile radius, and so I do not include it in Exhibit Five.

Q. Have you checked the Oil Conservation Division files on each of the plugged and abandoned wells?

A. Yes, sir.

Q. Does Exhibit Six conform with the data reported to the Commission?

A. Yes.

Q. Will you now refer to Exhibit Number Seven and explain to the Examiner what this is and your purpose in offering it in this case?

A. Exhibit Seven -- Exhibit Number Seven

is a spontaneous potential and resistivity log of the proposed injection well. Its purpose is merely to show the interval in question its top, which is located at 10 846 feet.

Q. Now will you refer to Sun Exhibit Number Eight and review this for Mr. Stamets?

A. Exhibit Number Eight is the Sun Texas Company's interpretation of the top of the Devonian in the Bagley Pool area. I would like you to note the structural position of the existing salt water disposal well, Amerada's No. 4. It is located high on the structure at approximately -6400 feet on the Isopach.

I'd like to note that the proposed salt water disposal well is located 200 feet lower approximately, at roughly 6600 feet, as far as structure.

The previously approved salt water disposal wells, which are now P&A'd further south, are located in a comparable position.

Q. Mr. Glaser, are you aware of similar applications having been granted for salt water disposal in the same general area and in this pool?

A. Yes sir, specifically the Amerada Salt Water Disposal No. 4, which we've been referring to throughout this case; the Amerada Hess Corporation Chambers No. 1 and No. 2, which are noted on Exhibit Two and the

structure map as currently P&A'd salt water disposal wells; as well as Sun Texas Company's State B Account No. 1 Well No. 2, which is also a P&A'd salt water disposal well.

MR. CARR: Mr. Examiner, the order numbers on each of those, if you'd like them, Sun Texas Order No. is R-4718, which was approved February 13, 1974; the two Amerada injection wells, the Chambers was approved by Order R-3377, February 12th, 1968; and the Bagley Salt Water Disposal Well was Order No. R-3339, approved November the 9th, 1967.

Q. Mr. Glaser, in your opinion will granting this application be in the best interest of conservation, the prevention of waste, and the protection of correlative rights?

A. Yes, sir.

Q. Were Exhibits One through Eight prepared by you or under your direction and supervision?

A. Yes.

MR. CARR: At this time, Mr. Examiner, we would offer into evidence Sun Texas Company EXhibits One through Eight.

MR. STAMETS: These exhibits will be admitted.

MR. CARR: I have nothing further of

this witness on direct.

CROSS EXAMINATION

BY MR. STAMETS:

Q. Mr. Glaser.

A. Yes, sir.

Q. Exhibit Number Six --

A. Yes, sir.

Q. -- the page that represents the Amerada Mathers "WE" No. 1 Well.

A. Yes, sir.

Q. That well shows a bottom plug in the casing. Do you know the size of that or is that the bottom plug that was in there from the original cementing operation?

A. At the casing shoe, sir?

Q. Yes.

A. I am relatively confident it is the original plug that was placed.

Q. Do you have any idea how much cement that represents?

A. No, sir.

Q. Perhaps it's ascertainable from the Division records with any luck.

Is the injection interval in your well

below the casing point in this well?

A. The Mathers, sir?

Q. Yes.

A. I would have to calculate it, sir. It is definitely lower than the Amerada salt water disposal No. 4, which is currently producing.

I could sumit that data at a later time.

Q. Okay, that would be -- I would appreciate that. I'm trying to make certain that this well is not going to be conduit for the movement of fluids and it seems like it shouldn't be --

A. Yes, sir.

Q. -- with that bottom plug in there and then the cement retainers.

Do you know if there was any cement put on top of those retainers?

A. No, sir. Well, excuse me.

Q. There's so much information on there it is hard to discern.

A. I can give that to you, sir.

Q. All right, that's the only well on there that I'm concerned about. If you could add a little bit of information to the record subsequent to the hearing, I will appreciate it.

A. Uh-huh.

Q. Will the tubing that you use in this well be a lined tubing?

A. Yes, sir, very definitely.

Q. And you will be loading the annulus?

A. Yes, sir.

Q. Okay. One of the requirements which we will probably have to adopt as a result of the Federal Underground Injection Control program, is the test of the annular space in a well such as this upon setting the tubing and packer. If that is required, --

A. Excuse me, tests, I don't follow you.

Q. Okay, pressure test.

A. Oh, okay.

Q. To insure that before injection starts that everything is -- has integrity, that there are no leaks in the casing tubing or packer, and what they propose was some sort of a pressure test that could be run once everything is installed. Could that be done on this well?

A. Oh, yeah, we're very agreeable. Are you referring to, perhaps, loading the back side with a lighter hydrostatic fluid, for example, oil, and setting a pressure gauge at the surface on the annulus, so that if a packer failure ever did occur we'd see a sensible pressure

rise at the surface?

Q. Something like that.

A. Similar to that.

Q. Of course if you're on a vacuum it might be the opposite thing.

A. True.

Q. Or we might be in a situation where periodically we would want to come out there and run a pressure test on the backside.

A. Uh-huh.

Q. And the idea is that you would have essentially an original guideline that says, yes, at least at one time this thing was solid.

A. Okay.

Q. What type of -- how much pressure would you think would be appropriate on the backside of this system to assure that we did have integrity?

A. Oh --

Q. Without unseating the packer?

A. Well, the packer we are planning on using is a Gyverson (sic) UniPac Five, and it has an unloading valve in it, such that when the tubing rate is relieved, the annulus and the tubing pressures are equalized so you don't overload the packer or the tubing string. As a design number,

I don't have one right now at this time. It was designed with a salt water solution --

Q. Let's throw that in with the additional information --

A. Okay.

Q. -- on this other well, as to what pressure you believe would be appropriate for that test.

A. Okay.

MR. STAMETS: Any other questions for this witness? He may be excused.

Anything further in this case?

The case will be taken under advisement.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. ____, heard by me on _____ 19____.

_____, Examiner
Oil Conservation Division

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

EXHIBIT 1

Form C-108
Revised 3-1-68

NEW MEXICO OIL CONSERVATION COMMISSION

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

OPERATOR: SUN TEXAS COMPANY	ADDRESS: BOX 4067, MIDLAND, TEXAS 79704
LEASE NAME: STATE "C" A/C-1	WELL NO.: 3
FIELD: BAGLEY (SILURO-DEVONIAN)	COUNTY: LEA

LOCATION: UNIT LETTER L ; WELL IS LOCATED 1980 FEET FROM THE SOUTH LINE AND 660 FEET FROM THE LINE, SECTION 2 TOWNSHIP 12-S RANGE 33-E NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	13-3/8"	324'	350	Circ'd	
INTERMEDIATE	9 5/8"	3,894'	2,700	Circ'd	
LONG STRING	5 1/2"	11,034'	3,000	Circ'd	
TUBING	3 1/2"	10,900'	NAME, MODEL AND DEPTH OF TUBING PACKER: GUIBERSON UNIPACKER -V @ 10,900'		

NAME OF PROPOSED INJECTION FORMATION: DEVONIAN	TOP OF FORMATION: 10,846	BOTTOM OF FORMATION: NOT PENETRATED
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? TUBING	PERFORATIONS OR OPEN HOLE? OPEN HOLE	PROPOSED INTERVAL(S) OF INJECTION: 11,034' - 11,370'
IS THIS A NEW WELL DRILLED FOR DISPOSAL? NO	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? SILURO-DEVONIAN PRODUCING 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: 10,907-994' - sqz'd w/50 sxs, 10,856-90' - open, will be sqz'd prior to injection

DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA: 150' (est'd)	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA: Penn (Collier) - 9,950'	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA: NONE

ANTICIPATED DAILY INJECTION VOLUME (BBLS.)	MINIMUM: 6,400	MAXIMUM: 8,000	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: 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): LESSEE: Marsha Hilburn Mathers, P. O. Box 303, Caprock, New Mexico 88213

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (½) MILE OF THIS INJECTION WELL: Amerada Hess, P. O. Box 840, Seminole, Texas 79360

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

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

R. J. O'Neal (Signature) — Regional Operations Superintendent (Title) — 3-6-81 (Date)

NOTE: Should waivers 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 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.

EXHIBIT 2A

EXHIBIT 2

PRODUCING FORMATIONS FOR WELLS
WITHIN TWO MILE RADIUS OF PROPOSED
S.W.D.W. - STATE "C" A/C-1 NO. 3

WELL NAME & NUMBER	OPERATOR	UNIT	SEC.	TWP - R	FORMATION	STATUS	
State "D" A/C-1 No. 1	S.T.C.	A	2	12S - 33E	Devonian	11	
State "C" A/C-1 No. 1	S.T.C.	B	2		Devonian	11	
State "C" A/C-1 No. 5	S.T.C.	C	2		Penn (Oil)	PA	
Amerada BTI No. 1	A.H.C.	D	2		Devonian	11	
State "C" A/C-1 No. 2	S.T.C.	F	2		Devonian	11	
State "C" A/C-1 No. 6	S.T.C.	F	2		Penn (Oil)	TA	
Amerada BTA No. 2	A.H.C.	G	2		Penn (Oil)	PA	
State "B" A/C-1 No. 1	S.T.C.	H	2		Devonian	TA	
State "B" A/C-1 No. 3	S.T.C.	I	2		Devonian	TA	
Amerada BTA No. 1	A.H.C.	J	2		Devonian	11	
Amerada BTI No. 2	A.H.C.	K	2		Penn (Oil)	PA	
State "C" A/C-1 No. 3	S.T.C.	L	2		Devonian	TA	Proposed S.W.D.W.
State "C" A/C-1 No. 4	S.T.C.	M	2		Penn (Oil)	11	
Amerada BTD No. 1	A.H.C.	N	2		Devonian	PA	
Amerada BTD No. 4	A.H.C.	N	2		Penn (Oil)	PA	
State BTL No. 1	S.T.C.	P	2		Devonian	PA	
Amerada Caudle No. 5	A.H.C.	A	3		Devonian	PA	
Amerada Mathers No. 1	A.H.C.	B	3		Penn (Oil)	11	
Amerada Caudle No. 7	A.H.C.	C	3		Penn (Gas)	11	
Amerada Caudle No. 2	A.H.C.	D	3		Penn (Gas)	11	
Amerada Mathers No. 2A	A.H.C.	F	3		Penn (Oil)	11	
Amerada-Fed. No. 1	A.H.C.	H	3		Devonian	PA	
Amerada Mathers No. 3	A.H.C.	J	3		Penn (Oil)	PA	
Amerada Caudle No. 6	A.H.C.	K	3		Penn (Oil)	11	
Amerada-Fed. No. 1	MGF, et al	M	3		Penn (Oil)	11	
Amerada Caudle No. 4	A.H.C.	O	3		Penn (Oil)	11	
Amerada-Fed. No. 2	A.H.C.	P	3		Penn (Oil)	11	
Shell-Spear No. 1	MGF, et al	B	1		Penn (Oil)	Dry Hole	
Sunray MC No. 1	Sunray	D	1		Devonian	Dry Hole	
Sunray MC No. 1	Sunray	E	1		Penn (Oil)	PA	
State "C" A/C-2 No. 1	S.T.C.	A	4		Penn (Oil)	11	
State AO No. 1	S.T.C.	C	4		Penn (Oil)	11	

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
Santa Fe 2A
Case No. 7186
Submitted by GLASER
Hearing Date 3/11/81

EXHIBIT 2

PRODUCING FORMATION FOR WELLS
WITHIN TWO MILE RADIUS OF PROPOSED
S.W.D.W. - STATE "C" A/C-1 NO. 3

WELL NAME & NUMBER	OPERATOR	UNIT	SEC.	TWP - R	FORMATION	STATUS
State "C" A/C-1 No. 2	S.T.C.	H	4	12S - 33E	Penn (Oil)	11
Cox Shell-St. No. 1-C	J. L. Cox	I	4		Penn (Oil)	PA
State "B" A/C-1 No. 4	S.T.C.	J	4		Penn (Oil)	11
Shell-St. No. 1	J. L. Cox	K	4		Penn (Oil)	Dry Hole
Shell-St. No. 1-AX	J. L. Cox	L	4		Penn (Oil)	PA
Shell-St. No. 1-G	J. L. Cox	N	4		Penn (Oil)	11
Huber No. 1	MGF, et al	A	9		Penn (Oil)	11
Huber No. 2	MGF, et al	B	9		Penn (Oil)	11
Huber No. 1-A	MGF, et al	C	9		Penn (Oil)	11
Stan No. 1-A	MGF Oil	I	9		Penn (Oil)	11
Stan No. 1-B	MGF, et al	J	9		Penn (Oil)	11
Amerada Caudle No. 3	A.H.C.	A	10		Penn (Oil)	PA
Amerada BTR No. 1	A.H.C.	D	10		Penn (Oil)	11
Caudle No. 1	Kern Oil	F	10		Penn (Oil)	11
Amerada Caudle Penn No. 1	A.H.C.	H	10		Devonian	P&A'd
State BTA No. 1	Stevens Oil	J	10		Penn (Oil)	PA
State "B" A/C-1 No. 5	S.T.C.	L	10		Penn (Oil)	11
State "B" A/c-1 No. 2	S.T.C.	B	11		Devonian	PA
Amerada Chambers No. 2	A.H.C.	C	11		Penn (Oil)	PA S.W.D.W.
Amerada BTA No. 1	A.H.C.	D	11		Penn (Oil)	PA
Simmons BTA No. 1	Simmons	E	11		Penn (Oil)	PA
Amerada Chambers No. 3	A.H.C.	F	11		Devonian	P&A'd S.W.D.W.
Amerada State No. 1	A.H.C.	H	11		Devonian	Dry Hole
Amerada Turner No. 1	A.H.C.	N	11		Devonian	Dry Hole
Read State No. 1	J. L. Cox	B	15		Penn (Oil)	PA
Humble State No. 1	J. L. Cox	D	15		Penn (Oil)	PA
Viking State No. 1	J. L. Cox	A	16		Penn (Oil)	PA
H. C. Hood No. 1	Kenyan Corp.	M	26	11S - 33E	Penn (Oil)	PA
Amerada Warren St. No. 1	A.H.C.	M	27		Penn (Oil)	11
Gulf St. No. 1	Belco	O	27		Penn (Oil)	11
Goodrich AHC-St. No. 2	Goodrich	G	33		Penn (Oil)	11

EXHIBIT 2

PRODUCING FORMATION FOR WELLS
WITHIN TWO MILE RADIUS OF PROPOSED
S.W.D.W. - STATE "C" A/C-1 NO. 3

WELL NAME & NUMBER	OPERATOR	UNIT	SEC.	TWP - R	FORMATION	STATUS
Goodrich AHC BTM No. 2	Goodrich	H	33	11S - 33E	Penn (Oil)	11
Goodrich Mathers No. 1	Anderson Oil	J	33		Penn (Oil)	PA
Mathers No. 2	S.T.C.	N	33		Penn (Oil)	11
Mathers No. 2	Goodrich	O	33		Penn (Oil)	11
State BTQ No. 1	Kerr Oil	P	33		Penn (Oil)	11
AHC State No. 1	Belco	B	34		Penn (Oil)	11
Bagley State No. 1	Belco	D	34		Penn (Oil)	11
AHC St. -BTP No. 1	A.H.C.	E	34		Penn (Oil)	PA
Baily St. No . 1	Belco	F	34		Penn (Oil)	11
AHC State No. 1	Kerr Oil	G	34		Devonian	11
AHC St. - BTM No. 1	Kerr Oil	H	34		Devonian	PA
Hess St. No. 1	A.H.C.	L	34		Penn-Wolfcamp	11
AHC St. - BTK No. 1	A.H.C.	N	34		Penn (Oil)	PA
AHC St. BTC - No. 1	A.H.C.	O	34		Penn (Oil)	PA
AHC St. - BTN - No. 1	A.H.C.	P	35		Devonian	11
State BTC No. 2	A.H.C.	B	35		Devonian	Dry Hole
Gulf State No. 1	Gulf	D	35		Penn (Oil)	PA
Amerada St. HBP No. 1	A.H.C.	F	35		Penn (Oil)	Dry Hole
AHC St. BTC No. 3	A.H.C.	J	35		Devonian	11
AHC St. BTC No. 5	A.H.C.	K	35		Penn (Oil)	PA
AHC St. BTD No. 2	A.H.C.	L	35		Devonian	11
AHC St. BTC No. 4	A.H.C.	M	35		Penn (Oil)	PA
AHC St. BTC No. 1	A.H.C.	N	35		Devonian	Current S.W.D.W.
AHC St. BTD No. 5	A.H.C.	O	35		Penn (Oil)	PA
AHC St. BTD No. 1-A	A.H.C.	P	35		Penn (Oil)	11
AHC St. BTD No. 3	A.H.C.	P	35		Devonian	PA
State PRB No. 1	MGF	J	36		Penn (Oil)	PA

Elevation: 4254 DF
Datum: Zero @ DF - 12' AGL

State C NC 1 No. 3
1980' FSL & 660' FWL
Sect. 2, T-12-S, R-33-E
Bagley (Devonian) Field
Lea County, New Mexico

13 3/8" 48# H-40 @ 324'
Cmt'd w/ 350 sx - Circ'd

EXHIBIT 3

9 5/8" 36# J-55 @ 3894'
Cmt'd w/ 2700 sx - Circ'd

PROPOSED
S.W.D.W.
CONVERSION

2 7/8" tbg

3 1/2" tubing w/ Pkr @ 10,900'

9950'

Perf'd 4 SPF @ 9950'
Circ'd Cmt w/ 2800 sx

OTOC @ 9980' after 200 sx
(Temp. Surv.)

10856'

Will squeeze

Perf'ns 10856-60 (2 SPF)
SWB'D DRY

10,890'

Perf'ns 10860-90 (1 SPF)
Perf'ns 10856-90 to be Sqz'd

10907'

Perf'ns 10907-94' (510 JShots)
Sqz'd w/ 50 sx

10,994'

5 1/2" 17# N-80 @ 11034'
Cmt'd w/ 200 sx
Drl'd FC & Shoe to 11,033'

INJECTION ZONE

DRILL-OUT T.O.

TD @ ~11,370'

EXHIBIT 4

HALLIBURTON DIVISION LABORATORY
HALLIBURTON SERVICES
MIDLAND DIVISION
HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W81-171

To Sun-Texas Oil Company

Box 4067

Midland, Texas

ATTN: Scott Glaser

Date 2-25-81

Submitted by _____ Date Rec. 2-24-81

Well No. As Marked Depth _____ Formation Siluro-Devonian

County Lea Field Bagley Source _____

	State "C" a/c #1	State "D" a/c #1	
Resistivity	0.153 @ 74°F.	0.153 @ 74°F.	
Specific Gravity	1.035	1.035	
pH	6.1	6.0	
Calcium (Ca)	2,250	2,350	*MPL
Magnesium (Mg)	90	60	
Chlorides (Cl)	26,000	26,500	
Sulfates (SO_4)	2,300	2,400	
Bicarbonates (HCO_3)	580	570	
Soluble Iron (Fe)	Nil	Nil	

Remarks:

*Milligrams per liter

Respectfully submitted

Analyst: Brewer

HALLIBURTON COMPANY

cc: Elmer Teel, Sun-Texas Oil Co.,
Box 1255, Eunice, N.M.

By W. L. Brewer
CHEMIST

EXHIBIT 5

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
SUN TEXAS EXHIBIT NO. 5
CASE NO. 7186
Submitted by GLASER
Hearing Date 3/11/81

EXHIBIT 5
WELLS WITHIN ONE HALF MILES OF
STATE "C" A/C-1 NO. 3
THAT PENETRATE ZONE OF INTEREST

Well Name & Number	Casing/Set/Depth	Sx-Cmt	Cmt Tops	TD	Subsea	Producing Interval	Lowermost Subsea Producing Interval	PBTD	SS PBTD
Amerada BTI No. 1 660' FNL & 660' FWL Sec. 2-12S-33E	13-3/8" @ 297' 8-5/8" @ 3833' 5-1/2" @ 10,922'	w/225 sx w/1500 sx w/600 sx	6200'*	10,960	-6705	DEVONIAN (10,808-824') (10,842,875')	-6537	10,883	-6630
Amerada Mathers No. 1 1980' FNL & 662' FEL Sec. 3-12S-33E	13-3/8" @ 307' 8-5/8" @ 3863' 5-1/2" @ 10,934'	w/225 sx w/150 sx w/550 sx	7497'	10,964	-6709'	PENN (PA)			
STC State "C" A/C-1 No. 4 660' FSL & 660' FWL Sec. 2-12S-33E	13-3/8" @ 327 8-5/8" @ 3888' 7" @ 11,018	w/350 sx w/2800 sx w/1500 sx	31' 4710'	11,019	-6764	PENN (9370-9454') TA			
Amerada No. 1 BTD State 660' FSL & 1980' FWL Sec. 2-12S-33E	13-31/8" @ 300' 8-5/8" @ 3880' 5-1/2" @ 10,980'	w/225 sx w/1500 sx w/600 sx	6200'*	10,995'	-6740'	PENN PA			
AHC State BTA No. 1 1980' FSL & 1980' FEL Sec. 2-12S-33E	13-3/8" @ 287' 8-5/8" @ 3929' 5-1/2" @ 11,200'	w/225 sx w/1500 sx w/200 sx	8900'*	11,766'	-7511	DEVONIAN (10,752-775')	-6520	10,800	-6545
STC State "C" A/C-1 No. 2 1980' FN & WL Sec. 2-12S-33E	12-1/2" @ 303' 9-5/8" @ 3897' 7" @ 10,778' 4-1/2" @ 10,531-10,946'	Circ. Cmt. w/2800 sx w/1100 sx w/40 sx	Surface 6220' 10,535'	10,948'	6693	DEVONIAN (10,760-10,834')			
AHC State Simmons No. 1 660' FN & WL Sec. 11-12S-33E	13-3/8" @ 305' 8-7/8" @ 3866' 5-1/2" @ 9450'	w/225 sx w/1450 sx w/600 sx	4700'*	11,046'	-6791	PENN PA	STC - SWD interval @ -6780 to -7116		

below prod interval

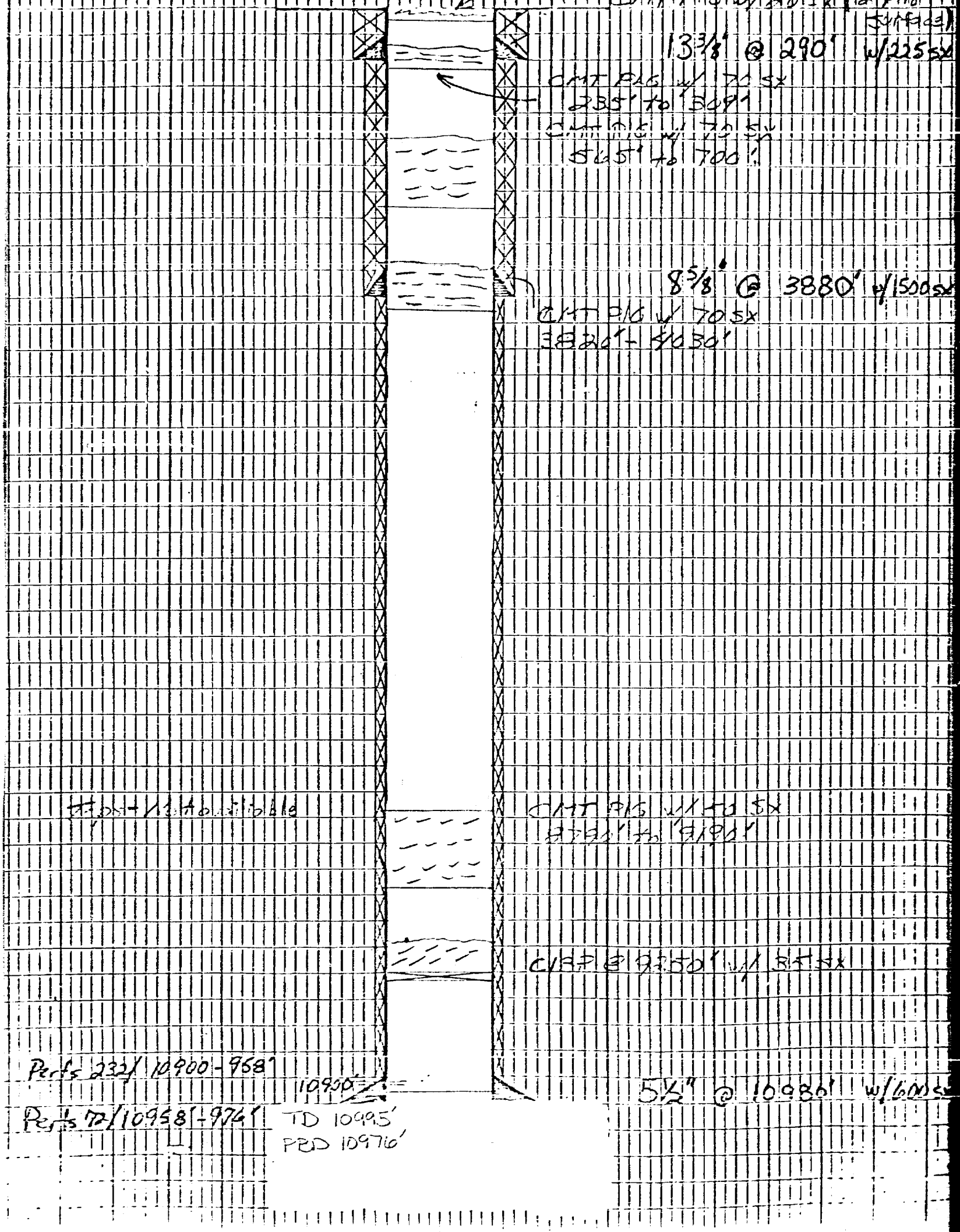
*Calculate Cmt Tops - Assume 30-40% Loss

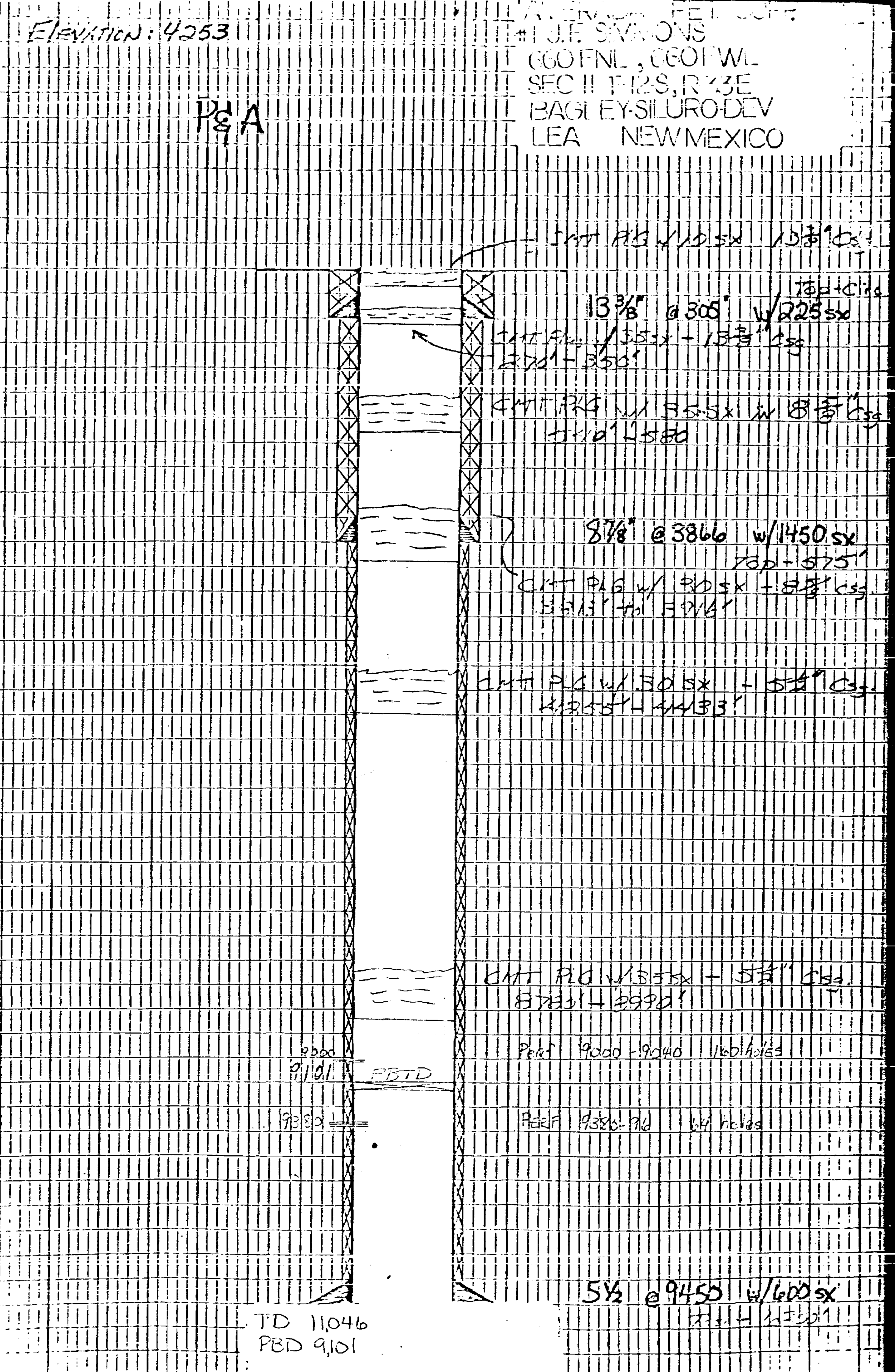
EXHIBIT 6

PHA

ELEVATION: 4250' DF

1 STATE BTD
660 FSL 1980 FWL
SEC-2, T12-S, R 33-E
BAGLEY DEVONIAN
LEA, NEW MEXICO



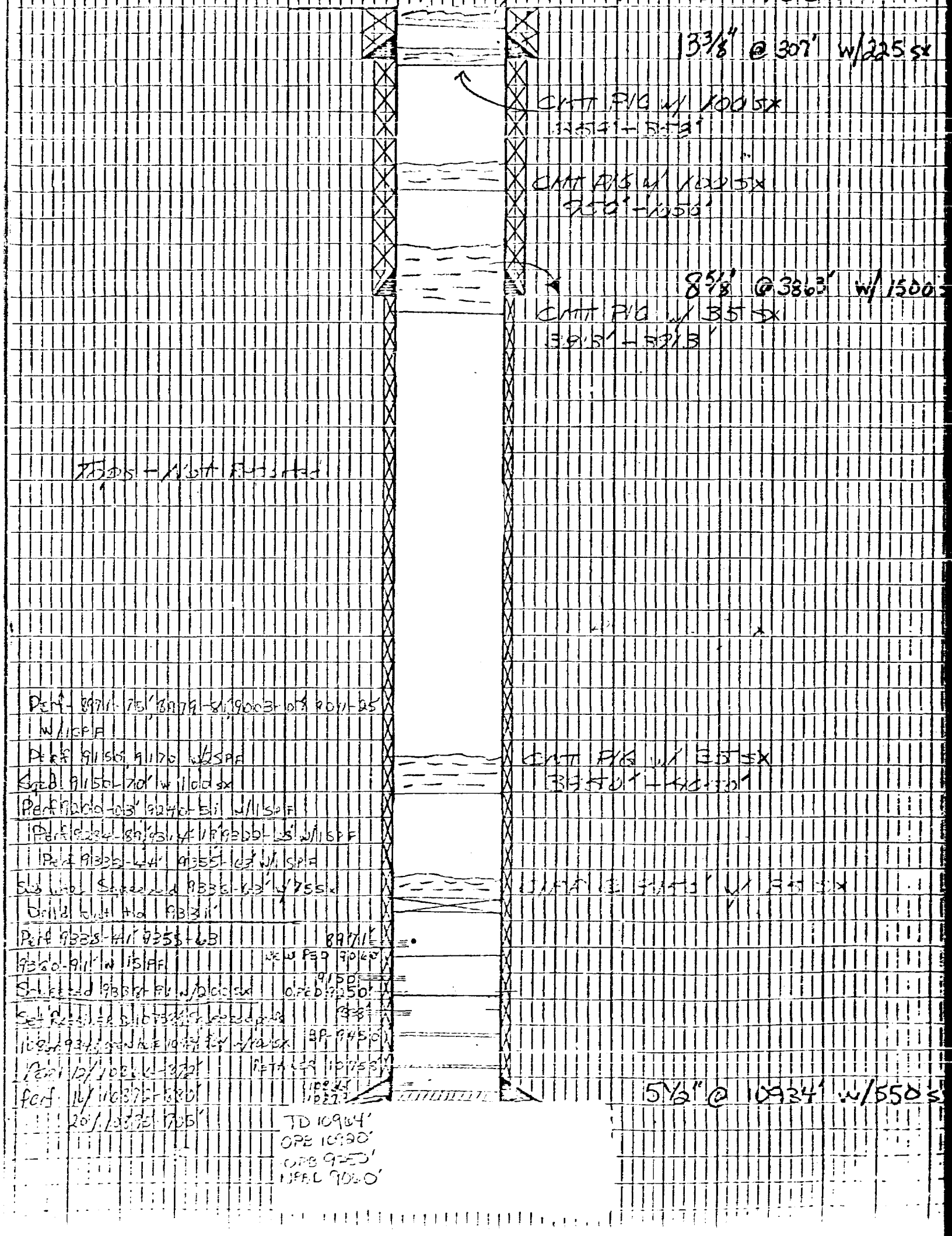


ELEVATION: 4253
#1 J.F. SIMMONS
660 FNL, 660 FWL
SEC 11 T12S, R33E
BAGLEY-SILURO-DEV
LEA NEW MEXICO
P&A
13 3/8" @ 305' w/225 sx
8 5/8" @ 3866 w/1450 sx
Perf 9000-9040 160 holes
9,101
PBTD
5 1/2 @ 9450 w/600 sx
TD 11,046
PBD 9,101

ELEVATION: 4254' DF

P&A

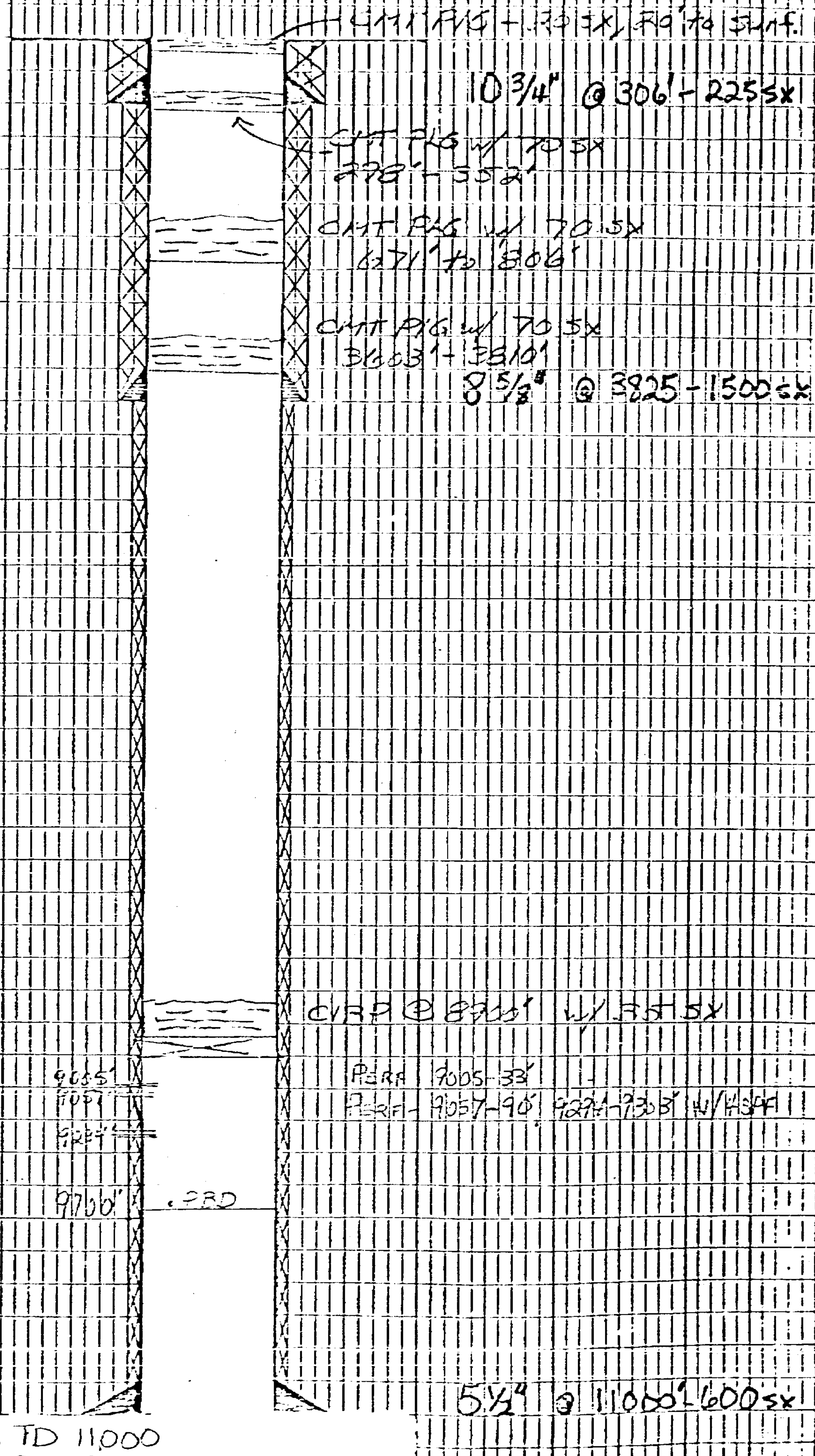
AMERADA PETROLEUM
#1 MATHERS, W.E.
1980' FNL, 662' FEL
SEC. 3, T-12-S, R-33-E
BAGLEY PENN
LEA, NEW MEXICO



Elevation: 4299 DF

P & A

AMERADA [illegible]
WD-2 BAGLEY [illegible]
660' FNL, 1980' FWL
SEC. 11 T12 S, R-33-E
BAGLEY
LEA NEW MEXICO



TD 11,000
PBD 9,700

SunTexas Company

REGIONAL OFFICE
MIDLAND, TEXAS 79701

P O BOX 4067
1509 WEST WALL STREET

TEL. 915-684-5584
TWX. 910-895-5924

March 13, 1981

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

Attention: Mr. Richard L. Stamets

Re: Application to Convert State "C"
A/C-1 Well No. 3 to Salt Water
Disposal Service
Bagley Siluro Devonian Pool
Lea County, New Mexico

Gentlemen:

In support of our case No. 7186 (Docket No. 8-81), the following is additional information requested by the commission.

A Guiberson Uni-5-nickle plated packer with the following specifications will be used in the proposed disposal well.

Maximum Differential Pressure (anticipate Δp = 1500 to 2000 PSI)	6000 PSI
Manderal Burst Pressures	
Tbg-Csg	9500 PSI
Csg-Tbg	8150 PSI
Tensile Load Strength-80%ult	102,500#

The injection interval of the proposed disposal well is 70' lower than the T.D. of the A. H. C. Mathers No. 1.

	SubSea Depth
A.H.C. W.E. Mathers No. 1	-6710' (T.D.)
STC State "C" A/C-1 No. 3	-6780' to -7116' (Inj. Int.)

As required by the Commission, the annulus will be loaded with corrosion resistant fluid and a pressure gauge installed on the wellhead to monitor any pressure changes.

Attached are three (3) copies of a revised wellbore sketch of the AHC Mathers No. 1 showing the cemented intervals in the lower wellbore.

If we can furnish any additional information in this matter, please advise.

Thank you for your consideration.

Yours very truly,

SUN TEXAS COMPANY

M. L. Schroeder
Midland Regional Engineer

SJG:cs:lw

Attachments

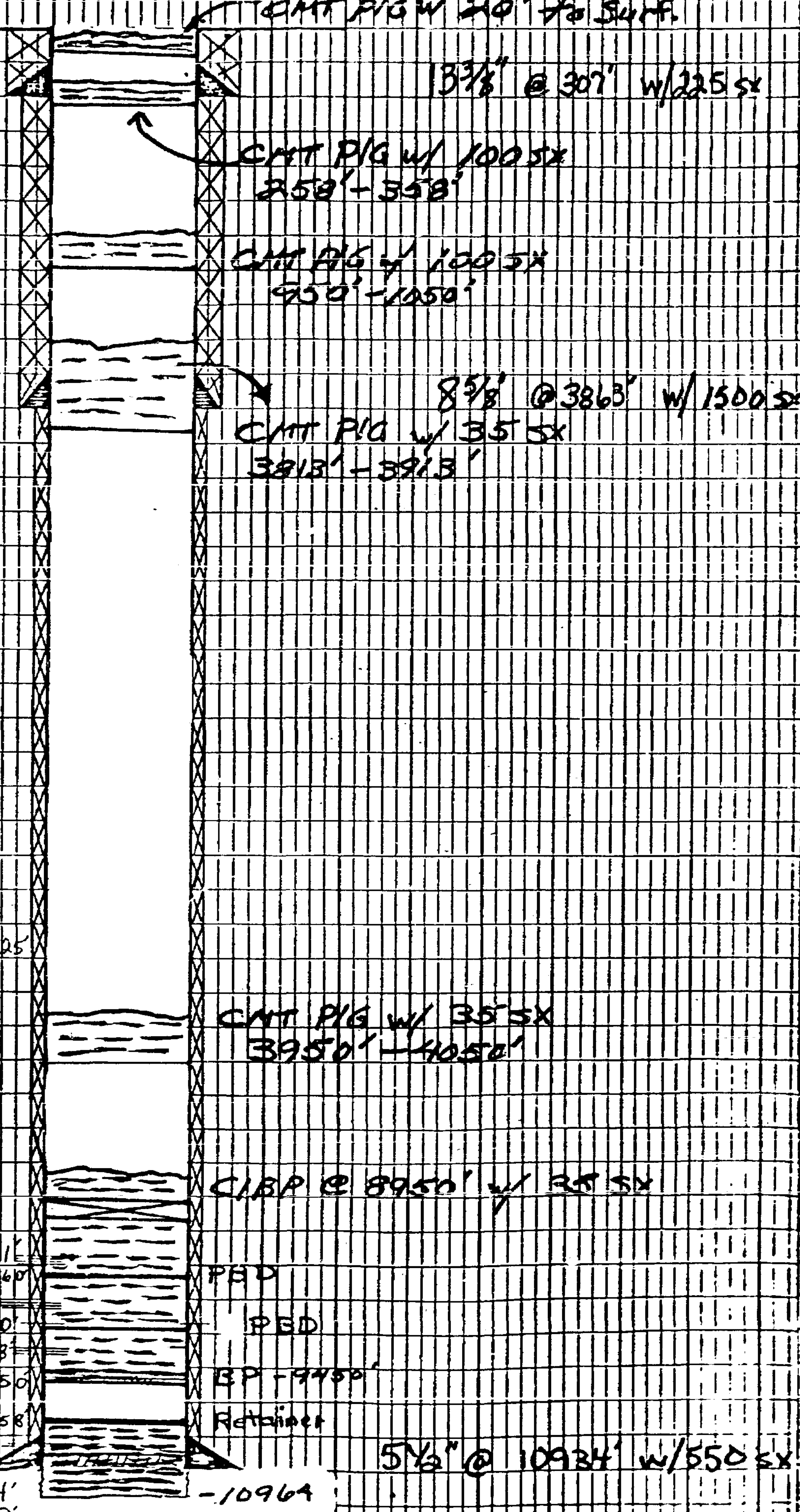
ELEVATION: 4254' DF

P&A

AMERADA PET CORP
#1 MATHERS, W.E. 7
1980' FNL, 662' FEL
SEC. 3, T-12-S, R-33-E
BAGLEY PENN
LEA, NEW MEXICO

Tops – Not Reported

Perf – 8971-75', 8979-81', 9003-07' 9011-25'
w/1SPF
Perf 9150, 9170 w/2SPF
Sqzd 9150-70' w 100 sx
Perf 9200-03' 9240-51 w/1SPF
Perf 9284-89', 9314-17', 9322-28' w/1SPF
Perf 9338-44' 9355-63' w/1SPF
... w/ Squeezed 9338-63' w/75sx
Drilled out to 9331'
Perf 9338-44' 9355-63
... 9060-91' w 1SPF
Squeezed 9338-94' w/200sx
... Retainer @ 10758' Squeezed perfs
... 9341 open hole 10934-964 w/100sx
... 12/ 10863-872'
... 16/ 10872-880'
20/ 10885-905'

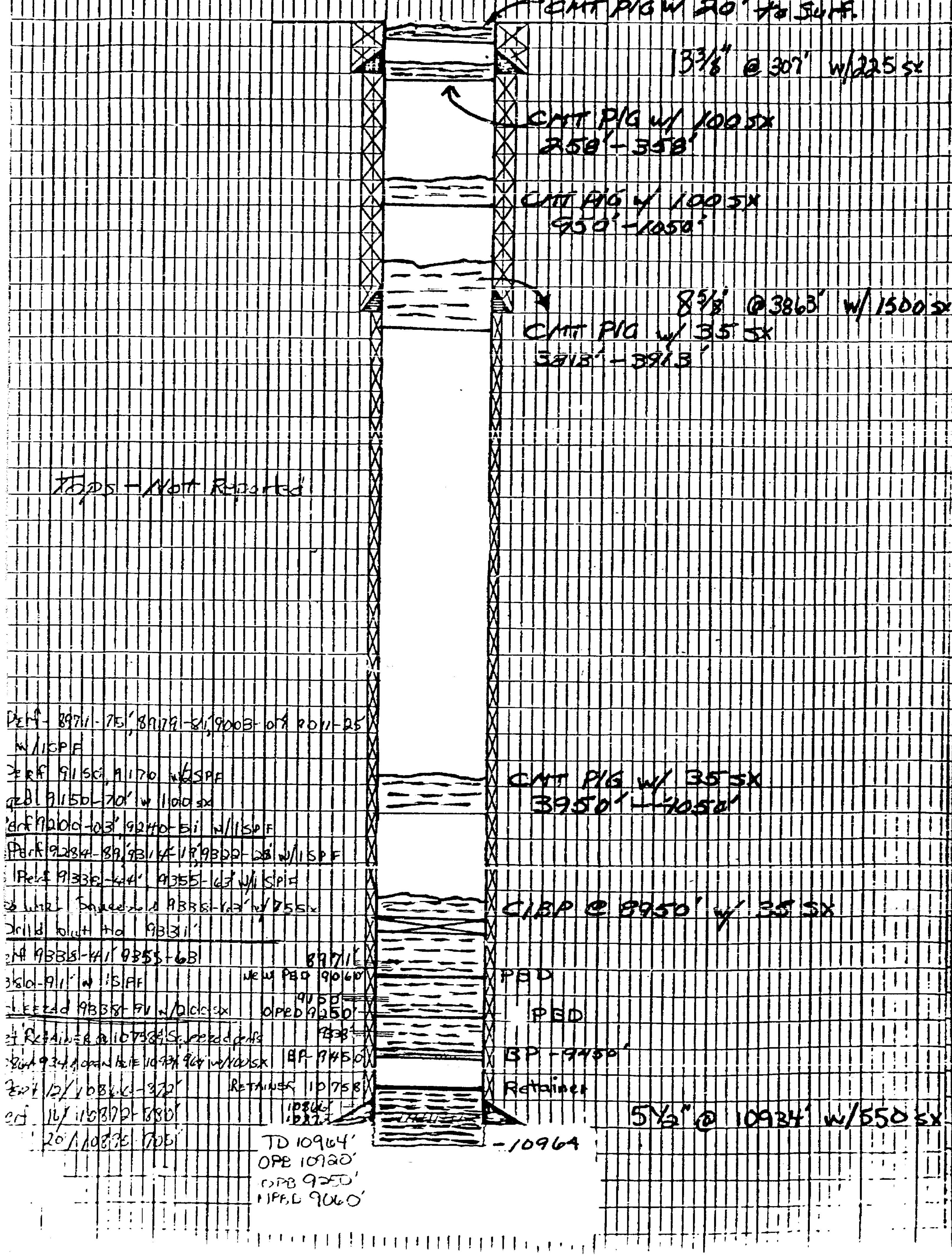


TD 10964'
OPB 10920'
OPB 9250'
NPBD 9060'

ELEVATION: 4254' DF

AMERADA PETROLEUM
#1 MATHERS, W.E.
1980' FNL, 662' FEL
SEC.3, T-12-S, R-33-E
BAGLEY PENN
LEA, NEW MEXICO

P&A



Elevation 4354' DF

P&A

AMERADA PET CORP
#1 MATHERS, W.E.
1980' FNL, 662' FEL
SEC. 3, T-12-S, R-33-E
BAGLEY PENN
LEA, NEW MEXICO

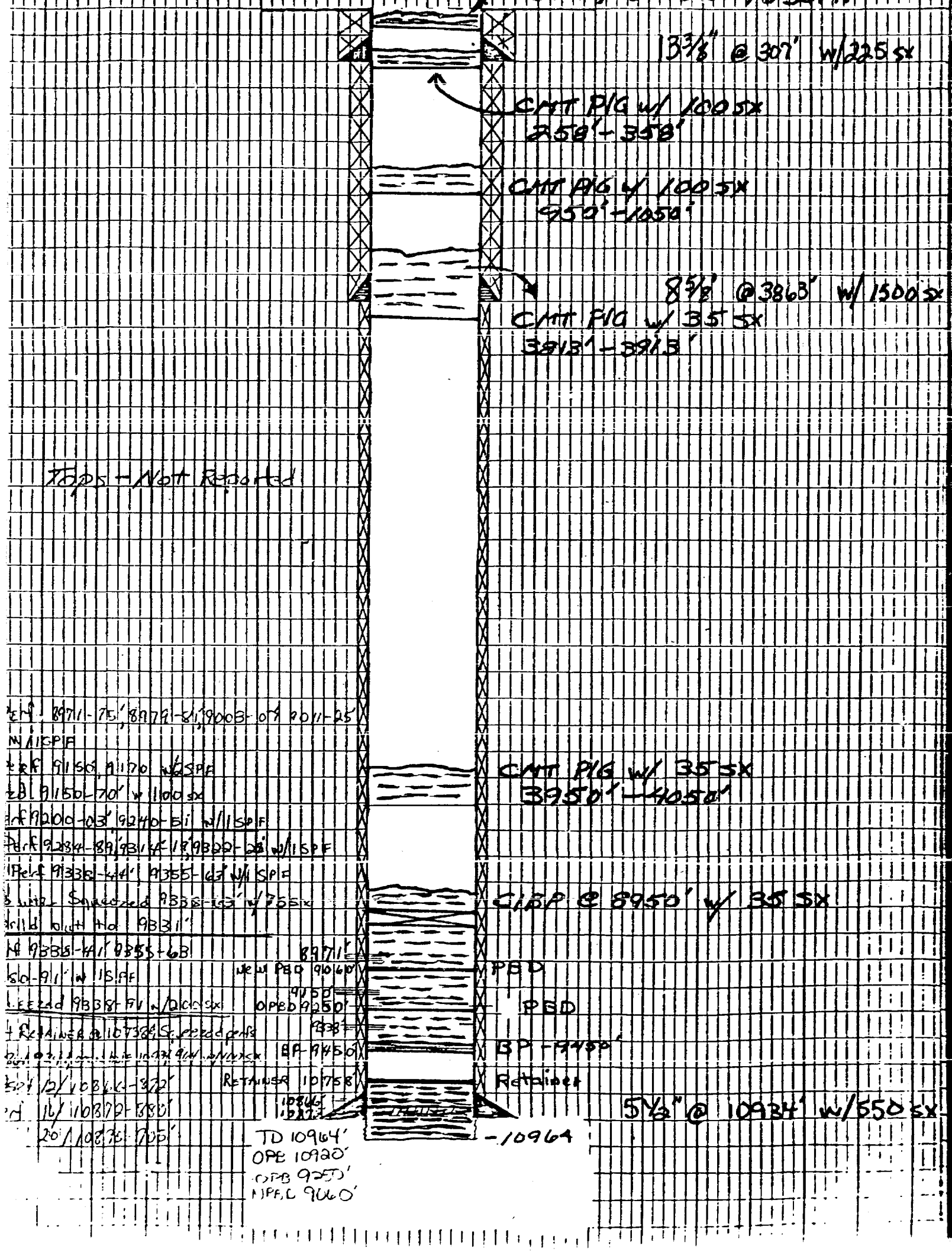


EXHIBIT 1

Form C-108
Revised 3-1-68

NEW MEXICO OIL CONSERVATION COMMISSION

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

OPERATOR: SUN TEXAS COMPANY		ADDRESS: BOX 4067, MIDLAND, TEXAS 79704	
LEASE NAME: STATE "C" A/C-1	WELL NO.: 3	FIELD: BAGLEY (SILURO-DEVONIAN)	COUNTY: LEA

LOCATION: UNIT LETTER L; WELL IS LOCATED 1980 FEET FROM THE SOUTH LINE AND 660 FEET FROM THE LINE, SECTION 2 TOWNSHIP 12-S RANGE 33-E NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	13-3/8"	324'	350	Circ'd	
INTERMEDIATE	9 5/8"	3,894'	2,700	Circ'd	
LONG STRING	5 1/2"	11,034'	3,000	Circ'd	
TUBING	3 1/2"	10,900'	NAME, MODEL AND DEPTH OF TUBING PACKER: GUIBERSON UNIPACKER -V @ 10,900'		

NAME OF PROPOSED INJECTION FORMATION: DEVONIAN	TOP OF FORMATION: 10,846	BOTTOM OF FORMATION: NOT PENETRATED

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? TUBING	PERFORATIONS OR OPEN HOLE? OPEN HOLE	PROPOSED INTERVAL(S) OF INJECTION: 11,034' - 11,370'

IS THIS A NEW WELL DRILLED FOR DISPOSAL? NO	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? SILURO-DEVONIAN PRODUCING 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: 10,907-994' - sqz'd w/50 sxs, 10,856-90' - open, will be sqz'd prior to injection

DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA: 150' (est'd)	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA: Penn (Collier) - 9,950'	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA: NONE

ANTICIPATED DAILY INJECTION VOLUME (BBLS.)	MINIMUM: 6,400	MAXIMUM: 8,000	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: 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): LESSEE: Marsha Hilburn Mathers, P. O. Box 303, Caprock, New Mexico 88213

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (½) MILE OF THIS INJECTION WELL: Amerada Hess, P. O. Box 840, Seminole, Texas 79360

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

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

R. J. O'Neal (Signature) — Regional Operations Superintendent (Title) — 3-6-81 (Date)

NOTE: Should waivers 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 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.

1

EXHIBIT 2A

EXHIBIT 2

PRODUCING FORMATIONS FOR WELLS
WITHIN TWO MILE RADIUS OF PROPOSED
S.W.D.W. - STATE "C" A/C-1 NO. 3

WELL NAME & NUMBER	OPERATOR	UNIT	SEC.	TWP - R	FORMATION	STATUS
State "D" A/C-1 No. 1	S.T.C.	A	2	12S - 33E	Devonian	11
State "C" A/C-1 No. 1	S.T.C.	B	2		Devonian	11
State "C" A/C-1 No. 5	S.T.C.	C	2		Penn (Oil)	PA
Amerada BTI No. 1	A.H.C.	D	2		Devonian	11
State "C" A/C-1 No. 2	S.T.C.	F	2		Devonian	11
State "C" A/C-1 No. 6	S.T.C.	F	2		Penn (Oil)	TA
Amerada BTA No. 2	A.H.C.	G	2		Penn (Oil)	PA
State "B" A/C-1 No. 1	S.T.C.	H	2		Devonian	TA
State "B" A/C-1 No. 3	S.T.C.	I	2		Devonian	TA
Amerada BTA No. 1	A.H.C.	J	2		Devonian	11
Amerada BTI No. 2	A.H.C.	K	2		Penn (Oil)	PA
State "C" A/C-1 No. 3	S.T.C.	L	2		Devonian	TA Proposed S.W.D.W.
State "C" A/C-1 No. 4	S.T.C.	M	2		Penn (Oil)	11
Amerada BTD No. 1	A.H.C.	N	2		Devonian	PA
Amerada BTD No. 4	A.H.C.	N	2		Penn (Oil)	PA
State BTL No. 1	S.T.C.	P	2		Devonian	PA
Amerada Caudle No. 5	A.H.C.	A	3		Devonian	PA
Amerada Mathers No. 1	A.H.C.	B	3		Penn (Oil)	11
Amerada Caudle No. 7	A.H.C.	C	3		Penn (Gas)	11
Amerada Caudle No. 2	A.H.C.	D	3		Penn (Gas)	11
Amerada Mathers No. 2A	A.H.C.	F	3		Penn (Oil)	11
Amerada-Fed. No. 1	A.H.C.	H	3		Devonian	PA
Amerada Mathers No. 3	A.H.C.	J	3		Penn (Oil)	PA
Amerada Caudle No. 6	A.H.C.	K	3		Penn (Oil)	11
Amerada-Fed. No. 1	MGF, et al	M	3		Penn (Oil)	11
Amerada Caudle No. 4	A.H.C.	O	3		Penn (Oil)	11
Amerada-Fed. No. 2	A.H.C.	P	3		Penn (Oil)	11
Shell-Spear No. 1	MGF, et al	B	1		Penn (Oil)	Dry Hole
Sunray MC No. 1	Sunray	D	1		Penn (Oil)	Dry Hole
Sunray MC No. 1	Sunray	E	1		Devonian	PA
State "C" A/C-2 No. 1	S.T.C.	A	4		Penn (Oil)	11
State AO No. 1	S.T.C.	C	4		Penn (Oil)	11

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
SOUTHERN EXHIBIT NO. 2A
CASE NO. 7184
Submitted by Glasgo
Hearing Date 3/11/81

EXHIBIT 2

PRODUCING FORMATION FOR WELLS
WITHIN TWO MILE RADIUS OF PROPOSED
S.W.D.W. - STATE "C" A/C-1 NO. 3

WELL NAME & NUMBER	OPERATOR	UNIT	SEC.	TWP - R	FORMATION	STATUS
State "C" A/C-1 No. 2	S.T.C.	H	4	12S - 33E	Penn (Oil)	Ll
Cox Shell-St. No. 1-C	J. L. Cox	I	4		Penn (Oil)	PA
State "B" A/C-1 No. 4	S.T.C.	J	4		Penn (Oil)	Ll
Shell-St. No. 1	J. L. Cox	K	4		Penn (Oil)	Dry Hole
Shell-St. No. 1-AX	J. L. Cox	L	4		Penn (Oil)	PA
Shell-St. No. 1-G	J. L. Cox	N	4		Penn (Oil)	Ll
Huber No. 1	MGF, et al	A	9		Penn (Oil)	Ll
Huber No. 2	MGF, et al	B	9		Penn (Oil)	Ll
Huber No. 1-A	MGF, et al	C	9		Penn (Oil)	Ll
Stan No. 1-A	MGF Oil	I	9		Penn (Oil)	Ll
Stan No. 1-B	MGF, et al	J	9		Penn (Oil)	Ll
Amerada Caudle No. 3	A.H.C.	A	10		Penn (Oil)	PA
Amerada BTR No. 1	A.H.C.	D	10		Penn (Oil)	Ll
Caudle No. 1	Kern Oil	F	10		Penn (Oil)	Ll
Amerada Caudle Penn No. 1	A.H.C.	H	10		Devonian	P&A'd
State BTA No. 1	Stevens Oil	J	10		Penn (Oil)	PA
State "B" A/C-1 No. 5	S.T.C.	L	10		Penn (Oil)	Ll
State "B" A/c-1 No. 2	S.T.C.	B	11		Devonian	PA
Amerada Chambers No. 2	A.H.C.	C	11		Penn (Oil)	PA S.W.D.W.
Amerada BTA No. 1	A.H.C.	D	11		Penn (Oil)	PA
Simmons BTA No. 1	Simmons	E	11		Penn (Oil)	PA
Amerada Chambers No. 3	A.H.C.	F	11		Devonian	P&A'd S.W.D.W.
Amerada State No. 1	A.H.C.	H	11		Devonian	Dry Hole
Amerada Turner No. 1	A.H.C.	N	11		Devonian	Dry Hole
Read State No. 1	J. L. Cox	B	15		Penn (Oil)	PA
Humble State No. 1	J. L. Cox	D	15		Penn (Oil)	PA
Viking State No. 1	J. L. Cox	A	16		Penn (Oil)	PA
H. C. Hood No. 1	Kenyan Corp.	M	26	11S - 33E	Penn (Oil)	PA
Amerada Warren St. No. 1	A.H.C.	M	27		Penn (Oil)	Ll
Gulf St. No. 1	Belco	O	27		Penn (Oil)	Ll
Goodrich AHC-St. No. 2	Goodrich	G	33		Penn (Oil)	Ll

EXHIBIT 2

PRODUCING FORMATION FOR WELLS
WITHIN TWO MILE RADIUS OF PROPOSED
S.W.D.W. - STATE "C" A/C-1 NO. 3

WELL NAME & NUMBER	OPERATOR	UNIT	SEC.	TWP - R	FORMATION	STATUS
Goodrich AHC BTM No. 2	Goodrich	H	33	11S - 33E	Penn (Oil)	11
Goodrich Mathers No. 1	Anderson Oil	J	33		Penn (Oil)	PA
Mathers No. 2	S.T.C.	N	33		Penn (Oil)	11
Mathers No. 2	Goodrich	O	33		Penn (Oil)	11
State BTQ No. 1	Kern Oil	P	33		Penn (Oil)	11
AHC State No. 1	Belco	B	34		Penn (Oil)	11
Bagley State No. 1	Belco	D	34		Penn (Oil)	11
AHC St. -BTP No. 1	A.H.C.	E	34		Penn (Oil)	PA
Baily St. No . 1	Belco	F	34		Penn (Oil)	11
AHC State No. 1	Kern Oil	G	34		Devonian	11
AHC St. - BTM No. 1	Kern Oil	H	34		Devonian	PA
Hess St. No. 1	A.H.C.	L	34		Penn-Wolfcamp	11
AHC St. - BTK No. 1	A.H.C.	N	34		Penn (Oil)	PA
AHC St. BTO - No. 1	A.H.C.	O	34		Penn (Oil)	PA
AHC St. - BTN - No. 1	A.H.C.	P	35		Devonian	11
State BTC No. 2	A.H.C.	B	35		Devonian	Dry Hole
Gulf State No. 1	Gulf	D	35		Penn (Oil)	PA
Amerada St. HBP No. 1	A.H.C.	F	35		Penn (Oil)	Dry Hole
AHC St. BTC No. 3	A.H.C.	J	35		Devonian	11
AHC St. BTC No. 5	A.H.C.	K	35		Penn (Oil)	PA
AHC St. BTD No. 2	A.H.C.	L	35		Devonian	11
AHC St. BTC No. 4	A.H.C.	M	35		Penn (Oil)	PA
AHC St. BTC No. 1	A.H.C.	N	35		Devonian	Current S.W.D.W.
AHC St. BTD No. 5	A.H.C.	O	35		Penn (Oil)	PA
AHC St. BTD No. 1-A	A.H.C.	P	35		Penn (Oil)	11
AHC St. BTD No. 3	A.H.C.	P	35		Devonian	PA
State PRB No. 1	MGF	J	36		Penn (Oil)	PA

Elevation: 4254' DF
Datum: Zero @ DF 12' AGL

State C NC 1 No. 3
1980' FSL & 660' FWL
Sect. 2, T-12-S, R-33-E
Bagley (Devonian) Field
Lea County, New Mexico

13 3/8" 48# H-40 @ 324'
Cmt'd w/ 350 SX - Circ'd

EXHIBIT 3

9 5/8" 36# J-55 @ 3894'
Cmt'd w/ 2700 SX - Circ'd

PROPOSED
S.W.D.W.
CONVERSION

Perf'd 4SPF @ 9950'
Circ'd Cmt w/ 2800 sx

9950'

OTOC @ 9980' after 200sx
(Temp. Surv.)

3 1/2" tubing w/ Pkr
@ 10,900'

Perf'ns 10856-60 (2SPF)
SWB'D DRY

10856'

Perf'ns 10860-90 (1SPF)

10,890'

Perf'ns 10856-90 to be
Sqz'd

10907'

Perf'ns 10907-94' (510 JShots)
Sqz'd w/ 50 sx

10,994'

5 1/2" 17# N-80 @ 11034'
Cmt'd w/ 200 sx.
Drl'd FC & Shoe to 11,033'

INJECTION ZONE

DRILL-OUT TO
TD @ ~11,370'

1142 A **EXHIBIT 4**

HALLIBURTON DIVISION LABORATORY
HALLIBURTON SERVICES
MIDLAND DIVISION
HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS No. W81-171

To Sun-Texas Oil Company

Box 4067

Midland, Texas

ATTN: Scott Glaser

Date 2-25-81

Submitted by Date Rec. 2-24-81

Well No. As Marked Depth Formation Siluro-Devonian

County Lea Field Bagley Source

	State "C" a/c #1	State "D" a/c #1	
Resistivity	0.153 @ 74°F.	0.153 @ 74°F.	
Specific Gravity	1.035	1.035	
pH	6.1	6.0	
Calcium (Ca)	2,250	2,350	*MPL
Magnesium (Mg)	90	60	
Chlorides (Cl)	26,000	26,500	
Sulfates (SO_4)	2,300	2,400	
Bicarbonates (HCO_3)	580	570	
Soluble Iron (Fe)	Nil	Nil	

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Brewer

HALLIBURTON COMPANY

By W. L. Brewer
CHEMIST

cc: Elmer Teel, Sun-Texas Oil Co.,
Box 1255, Eunice, N.M.

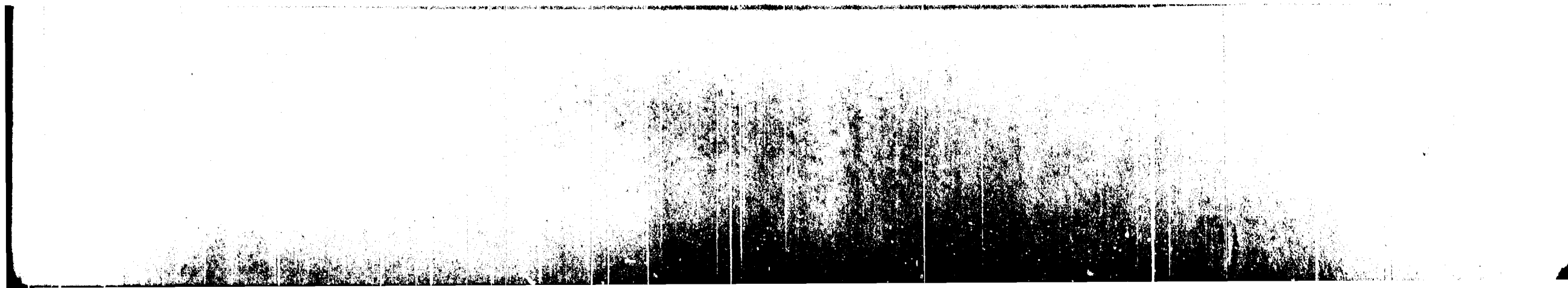
EXHIBIT 5

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
SUN TEXAS EXHIBIT NO. 5
CASE NO. 7186
Submitted by GLASER
Hearing Date 3/14/91

EXHIBIT 5
WELLS WITHIN ONE HALF MILES OF
STATE "C" A/C-1 NO. 3
THAT PENETRATE ZONE OF INTEREST

Well Name & Number	Casing/Set/Depth	Sx-Cmt	Cmt Tops	TD	Subsea	Producing Interval	Lowermost Subsea Producing Interval	PBTD	SS PBTD
Amerada BTI No. 1 660' FNL & 660' FWL Sec. 2-12S-33E	13-3/8" @ 297' 8-5/8" @ 3833' 5-1/2" @ 10,922'	w/225 sx w/1500 sx w/600 sx	6200'*	10,960	-6705	DEVONIAN (10,808-824') (10,842,875')	-6537	10,833	-6630
Amerada Mathers No. 1 1980' FNL & 662' FEL Sec. 3-12S-33E	13-3/8" @ 307' 8-5/8" @ 3863' 5-1/2" @ 10,934'	w/225 sx w/150 sx w/550 sx	7497'	10,964	-6709'	PENN (PA)			
STC State "C" A/C-1 No. 4 660' FSL & 660' FWL Sec. 2-12S-33E	13-3/8" @ 327 8-5/8" @ 3888' 7" @ 11,018	w/350 sx w/2800 sx w/1500 sx	31' 4710'	11,019	-6764	PENN (9370-9454') TA			
Amerada No. 1 BTD State 660' FSL & 1980' FWL Sec. 2-12S-33E	13-31/8" @ 300' 8-5/8" @ 3880' 5-1/2" @ 10,980'	w/225 sx w/1500 sx w/600 sx	6200'*	10,995'	-6740'	PENN PA			
AHC State BTA No. 1 1980' FSL & 1980' FEL Sec. 2-12S-33E	13-3/8" @ 287' 8-5/8" @ 3929' 5-1/2" @ 11,200'	w/225 sx w/1500 sx w/200 sx	8900'*	11,766'	-7511	DEVONIAN (10,752-775')	-6520	10,800	-6545
STC State "C" A/C-1 No. 2 1980' FN & WL Sec. 2-12S-33E	12-1/2" @ 303' 9-5/8" @ 3897' 7" @ 10,778' 4-1/2" @ 10,531-10,946'	Circ. Cmt. w/2800 sx w/1100 sx w/40 sx	Surface 6220' 10,535'	10,948'	6693	DEVONIAN (10,760-10,834')			
AHC State Simmons No. 1 660' FN & WL Sec. 11-12S-33E	13-3/8" @ 305' 8-7/8" @ 3866' 5-1/2" @ 9450'	w/225 sx w/1450 sx w/600 sx	4700'*	11,046'	-6791	PENN PA	STC - SWD interval @ -6780 to -7116		

*Calculate Cmt Tops -- Assume 30-40% Loss

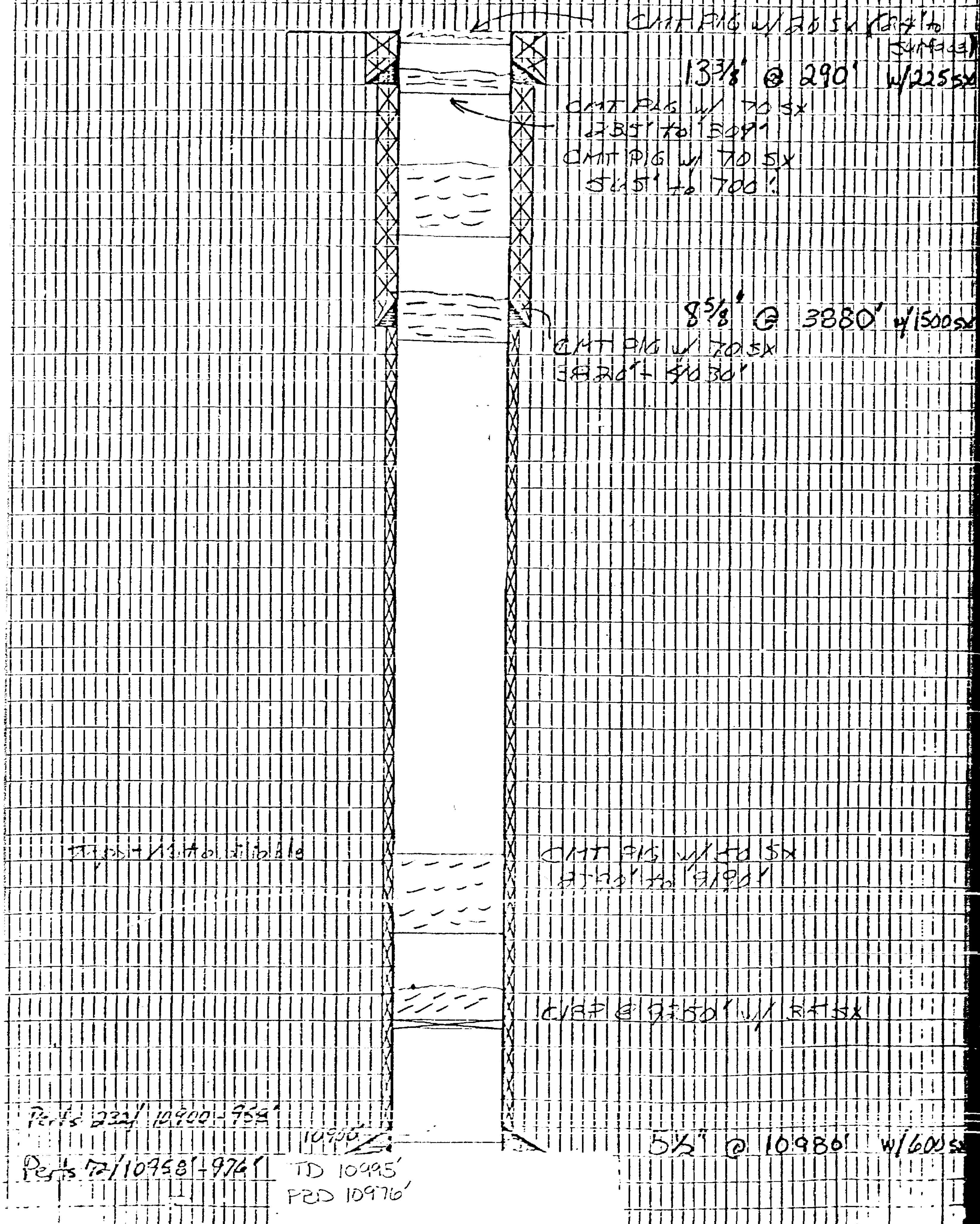


ELEVATION: 4256' DF

EXHIBIT 6

P&A

1 STATE BTC
660' FSL 1980' FWL
SEC-2, T-12-S, R-33-E
BAGLEY DEVONIAN
LEA, NEW MEXICO



ELEVATION: 4253

P&A

#1 J.F. SIMMONS
660 FNL, 660 FWL
SEC 11 T-12-S, R-33-E
BAGLEY-SILURO-DEV
LEA NEW MEXICO

13 3/8" @ 308' w/ 225 sx

8 7/8" @ 3866 w/ 1450 sx

5 1/2 @ 9450 w/ 600 sx

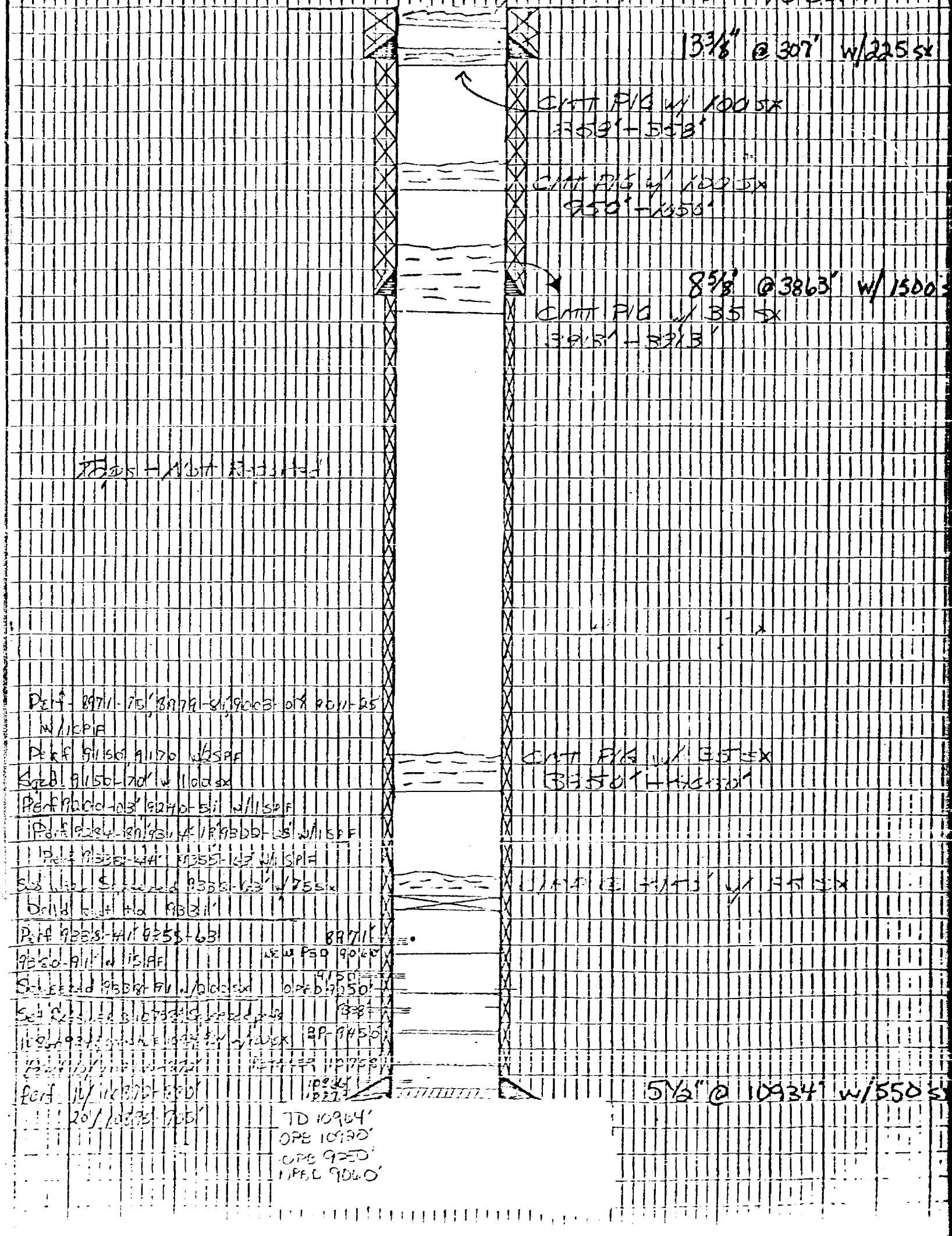
PBTD

TD 11,046
PBD 9,101

ELEVATION 4254' DF

P&A

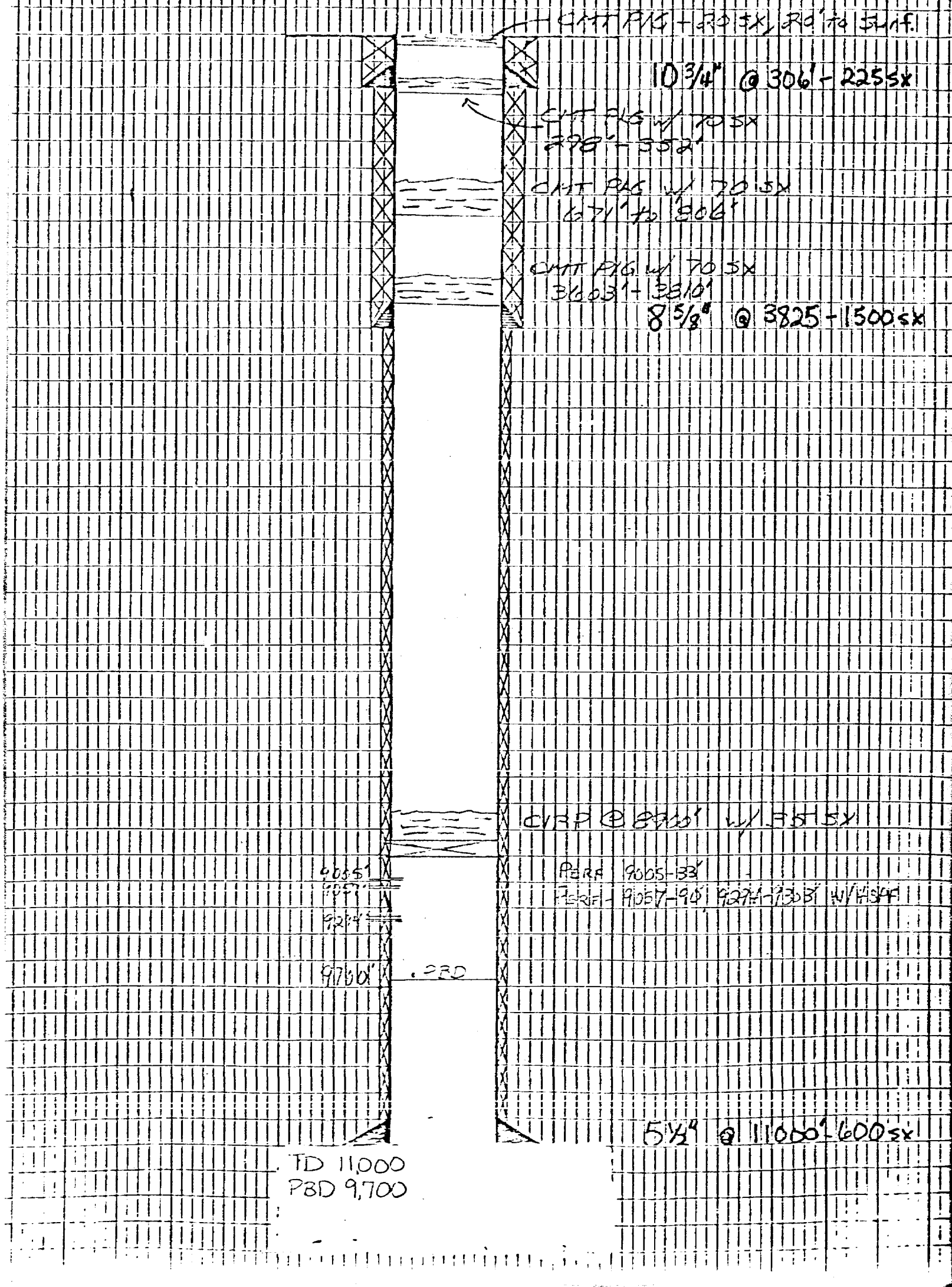
AMERADA PETROLEUM
MATHERS, W.E. /
1980' FNL, 662' FEL
SEC. 3, T-12-S, R-33-E
BAGLEY PENN
LEA, NEW MEXICO



ELEVATION: 4249 DF

P&A

WD-2 BAGLEY
660 FNL, 1980 FWL
SEC. 11 T-12-S, R-33-E
BAGLEY
LEA NEW MEXICO



CASE 7163: Application of El Paso Exploration Company for downhole commingling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Blanco Mesaverde and Basin-Dakota production in the wellbore of its Turner Hughes Well No. 17 located in Unit H of Section 10, Township 27 North, Range 9 West.

CASE 7161: (Continued from February 25, 1981, Examiner Hearing)

Application of John Yuronka for four compulsory poolings, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Langlie Mattix Pool underlying the four 40-acre proration units comprising the SW/4 of Section 31, Township 22 South, Range 37 East, to be dedicated to wells to be drilled at standard locations thereon. Also to be considered will be the cost of drilling and completing said wells and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designacion of applicant as operator of the wells, and a charge for risk involved in drilling said wells.

CASE 7164: (Continued from February 25, 1981, Examiner Hearing)

Application of ARCO Oil and Gas Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Devonian and Ellenburger formations, Custer Field, underlying the N/2 of Section 6, Township 25 South, Range 37 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and chargee for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7165: (Continued from February 25, 1981, Examiner Hearing)

Application of ARCO Oil and Gas Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Langley-Ellenburger Pool underlying the N/2 of Section 33, Township 22 South, Range 36 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7175: (Continued from February 25, 1981, Examiner Hearing)

Application of Conoco Inc. for compulsory pooling and a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp-Ellenburger formations underlying the S/2 of Section 19, Township 25 South, Range 37 East, to be dedicated to a well to be drilled at a standard location and dually completed in the Devonian and Ellenburger formations. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7186: Application of Sun Texas 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 Devonian formation in the interval from 10,856 feet to 11,370 feet in its State C Account 1 Well No. 3 in Unit L of Section 2, Township 12 South, Range 33 East, Bagley Siluro-Devonian Pool.

CASE 7187: Application of Blackwood & Nichols Co., Ltd. for four non-standard proration units, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval of the following four Fruitland and Pictured Cliffs non-standard gas proration units: a 185.68-acre unit comprising the SW/4 of Section 1, Township 31 North, Range 7 West; a 181.4-acre unit comprising the SE/4 of said Section 1; a 176.68-acre unit comprising the SW/4 of Section 6, Township 31 North, Range 6 West; and a 175.21-acre unit comprising the SE/4 of said Section 6. All units are to be dedicated to wells drilled at standard locations thereon.

CASE 7188: Application of Blackwood & Nichols Co., Ltd. for directional drilling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to directionally drill its Northeast Blanco Unit Well No. 26-A, the surface location of which is 1160 feet from the North line and 60 feet from the West line of Section 8, Township 30 North, Range 7 West, and directionally drill said well in such a manner as to bottom it in the Mesaverde formation within 100 feet of a point 1190 feet from the North line and 790 feet from the West line of said Section 8, the W/2 of the section to be dedicated to the well; applicant further seeks authority to drill its Northeast Blanco Unit Well No. 32-A, the surface location of which is 1450 feet from the North line and 990 feet from the East line of Section 7, Township 30 North, Range 7 West, and directionally drill said well in such a manner as to bottom it in the Mesaverde formation within 100 feet of a point 1850 feet from the South line and 990 feet from the East line of said Section 7, the E/2 of the section to be dedicated to the well.

CAMPBELL, BYRD & BLACK, P.A.
LAWYERS

JACK M. CAMPBELL
HARL D. BYRD
BRUCE D. BLACK
MICHAEL B. CAMPBELL
WILLIAM F. CARR
BRADFORD C. BERGE
WILLIAM G. WARDLE

JEFFERSON PLACE
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POST OFFICE BOX 2208
SANTA FE, NEW MEXICO 87501
TELEPHONE: (505) 988-4421
TELECOPIER: (505) 983-6043

February 20, 1981

Case 7186

Mr. Joe D. Ramey
Director
Oil Conservation Division
New Mexico Department of
Energy and Minerals
Post Office Box 2088
Santa Fe, New Mexico 87501

Re: Application of Sun Texas Company for
Salt Water Disposal, Lea County, New Mexico

Dear Mr. Ramey:

Enclosed in triplicate is the application of Sun Texas Company in the above-referenced matter.

The applicant requests that this matter be included on the docket for the examiner hearing scheduled to be held on March 11, 1981.

Very truly yours,

William F. Carr

WFC:lr

Enclosures

cc: Mr. Mel Schroeder

BEFORE THE

OIL CONSERVATION DIVISION

NEW MEXICO DEPARTMENT OF ENERGY AND MINERALS

IN THE MATTER OF THE APPLICATION
OF SUN TEXAS COMPANY FOR SALT
WATER DISPOSAL, LEA COUNTY,
NEW MEXICO.

Case 7186

APPLICATION

Comes now SUN TEXAS COMPANY, by and through its undersigned attorneys and hereby applies to the Oil Conservation Division for approval of a salt water disposal well and in support thereof would show:

1. That applicant seeks authority to utilize its State C Account 1 Well No. 3 located 1980 feet from the South line and 660 feet from the West line of Section 2, Township 12 South, Range 33 East, N.M.P.M., Bagley Surlo Devonian Field, Lea County, New Mexico, to dispose of produced salt water into the Devonian formation through perforations and the open hole from 10,856 feet to 11,370 feet.

2. That the State C Account 1 Well No. 3 is currently abandoned.

3. That other wells in the pool are currently being used for salt water disposal.

4. That although there is production within a two mile radius of the subject well, the well can be converted and salt water injected so as not to impair correlative rights or to cause waste.

WHEREFORE, Applicant respectfully requests that this matter be set for hearing before one of the Division's duly appointed examiners on March 11, 1981 and, that after notice and hearing as required by law, the Division enter its order approving the application.

Respectfully submitted,

CAMPBELL, BYRD AND BLACK, P.A.

By _____
William F. Carr
Post Office Box 2208
Santa Fe, New Mexico 87501
Attorneys for Applicant

BEFORE THE

OIL CONSERVATION DIVISION

NEW MEXICO DEPARTMENT OF ENERGY AND MINERALS.

IN THE MATTER OF THE APPLICATION
OF SUN TEXAS COMPANY FOR SALT
WATER DISPOSAL, LEA COUNTY,
NEW MEXICO.

Case 7186

APPLICATION

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1. That applicant seeks authority to utilize its State C Account 1 Well No. 3 located 1980 feet from the South line and 660 feet from the West line of Section 2, Township 12 South, Range 33 East, N.M.P.M., Bagley Surlo Devonian Field, Lea County, New Mexico, to dispose of produced salt water into the Devonian formation through perforations and the open hole from 10,856 feet to 11,370 feet.

2. That the State C Account 1 Well No. 3 is currently abandoned.

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WHEREFORE, Applicant respectfully requests that this matter be set for hearing before one of the Division's duly appointed examiners on March 11, 1981 and, that after notice and hearing as required by law, the Division enter its order approving the application.

Respectfully submitted,

CAMPBELL, BYRD AND BLACK, P.A.

By _____
William F. Carr
Post Office Box 2208
Santa Fe, New Mexico 87501
Attorneys for Applicant

BEFORE THE

OIL CONSERVATION DIVISION

NEW MEXICO DEPARTMENT OF ENERGY AND MINERALS

IN THE MATTER OF THE APPLICATION OF SUN TEXAS COMPANY FOR SALT WATER DISPOSAL, LEA COUNTY, NEW MEXICO.

Case 7186

APPLICATION

Comes now SUN TEXAS COMPANY, by and through its undersigned attorneys and hereby applies to the Oil Conservation Division for approval of a salt water disposal well and in support thereof would show:

1. That applicant seeks authority to utilize its State C Account 1 Well No. 3 located 1980 feet from the South line and 660 feet from the West line of Section 2, Township 12 South, Range 33 East, N.M.P.M., Bagley Surlo Devonian Field, Lea County, New Mexico, to dispose of produced salt water into the Devonian formation through perforations and the open hole from 10,856 feet to 11,370 feet.

2. That the State C Account 1 Well No. 3 is currently abandoned.

3. That other wells in the pool are currently being used for salt water disposal.

4. That although there is production within a two mile radius of the subject well, the well can be converted and salt water injected so as not to impair correlative rights or to cause waste.

WHEREFORE, Applicant respectfully requests that this matter be set for hearing before one of the Division's duly appointed examiners on March 11, 1981 and, that after notice and hearing as required by law, the Division enter its order approving the application.

Respectfully submitted,

CAMPBELL, BYRD AND BLACK, P.A.

By _____
William F. Carr
Post Office Box 2208
Santa Fe, New Mexico 87501
Attorneys for Applicant

ROUCH

dr/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 7186

Order No. R-6646

APPLICATION OF SUN TEXAS COMPANY
FOR SALT WATER DISPOSAL, LEA COUNTY,
NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on March 11, 19 81, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this _____ day of March, 19 81, the Division Director, having considered the testimony, the record, and the recomendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Sun Texas Company, is the owner and operator of the State C Account 1 Well No. 3, located in Unit I of Section 2, Township 12 South, Range 33 East, NMPM, Bagley Field, Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the Devonian formation, with injection into the open hole interval from approximately ~~10,850~~ 11,034 feet to 11,370 feet.

(4) That the injection should be accomplished through 3 1/2 -inch plastic lined tubing installed in a packer set at approximately 10900 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge or approved leak detection device should be attached to the annulus in order

to determine leakage in the casing, tubing, or packer.

(5) That the injection well or system should be equipped with a ~~pop-off valve~~ pressure limiting switch or device or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 2200 psi. (if injection is at a pressure above hydrostatic pressure)

(6) That the Director of the Division should be authorized to administratively approve an increase in the injection pressure upon a proper showing by the operator that such higher pressure will not result in migration of the injected waters from the Devonian formation.

(7) That the operator should notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(8) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

(9) 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, Sun Texas Company, is hereby authorized to utilize its State C Account 1 Well No. 3, located in Unit L of Section 2, Township 12 South, Range 33 East, NMPM, Bagley Siluro-Devonian Pool, Lea County, New Mexico, to dispose of produced salt water into the Devonian formation, injection to be accomplished through 3 1/2-inch tubing installed in a packer set at approximately 10 900 feet, with injection into the Open hole interval from approximately ~~10,856~~ 11 034 feet to 11,370 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 shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

(2) That if injection is at a pressure above hydrostatic pressure, the injection well or system shall be equipped with a ~~pop-off valve or acceptable substitute~~ pressure limiting switch or device which will limit the wellhead pressure on the injection well to no more than 2700 psi.

(3) That the Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Devonian formation.

(4) That the operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(5) That the operator shall immediately notify the supervisor of the Division's Hobbs district office of the failure of the tubing, casing, or packer, in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

(6) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Division Rules and Regulations.

(7) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

Memo

From

FLORENE DAVIDSON
ADMINISTRATIVE SECRETARY

To Called in by Bill Carr
2/20/81

Sun Texas Company
Salt Water Disposal
Lea County
Devonian formation
thru perf. & open hole interval
10,856' to 11,370'
State C Acct #3-L
2-12S-33E

OIL CONSERVATION COMMISSION-SANTA FE