Amoco Production Company (USA)

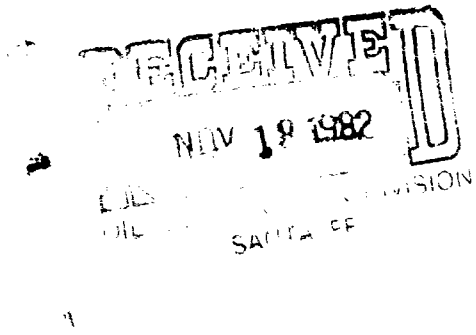
Houston Region–West
500 Jefferson Building
Post Office Box 3092
Houston, Texas 77001

R. G. Smith
Regional Engineering
Manager-West

November 16, 1982

File: JCA-986.51NM-3361

Re: Waiver of Objection
Conversion to Water Injection
Vacuum Grayburg San Andres
Lea County, New Mexico



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

Attention: Mr. Joe D. Ramey

Gentlemen:

Texaco has requested administrative approval for expansion of waterflood operations in the referenced area. This request was made in compliance with the provisions of Order No. R-4442 and R-5530. This expansion will provide for the conversion of the following wells to water injection:

Vacuum Grayburg San Andres Unit Wells No. 18, 61, 62, 63, 65, and 67.

Central Vacuum Unit Wells No. 155, 156, 157, 158, 159, 160, and 161.

Amoco Production Company (USA), as an offset operator, waive objection to these proposed conversion to water injection.

Yours very truly,

R. G. Smith

LWS/lrd

cc: Texaco, U.S.A.
P. O. Box 728
Hobbs, New Mexico 88240

TEXACO
PETROLEUM PRODUCTS

TEXACO
U.S.A.
A DIVISION OF TEXACO INC.
P. O. BOX 728
HOBBS, NEW MEXICO 88240
(505) 393-7191

October 22, 1982

OIL CONSERVATION DIVISION
SANTA FE

CONVERSION TO WATER INJECTION
VACUUM GRAYBURG SAN ANDRES UNIT
WELLS NO. 18, 61, 62, 63, 65, & 67
CENTRAL VACUUM UNIT WELLS NO. 155,
156, 157, 158, 159, 160, & 161
LEA COUNTY, NEW MEXICO

11-17-82 Well #61 to be dropped from application via phone conversation with Frank Gray in Hobbs, also injection pressure limited to 825 psi as Gray says ok
J.R.

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

Attention: Mr. Joe D. Ramey

Gentlemen:

Texaco Inc. respectfully requests Administrative approval for expansion of waterflood injection well pattern, as provided by Order No. R-4442 for the Vacuum Grayburg San Andres Unit and Order No. R-5530 for the Central Vacuum Unit to convert the following wells to water injection service:

Vacuum Grayburg San Andres Unit Wells No. 18, 61, 62, 63, 65, and 67.

Central Vacuum Unit, Wells No. 155, 156, 157, 158, 159, 160, and 161.

The following data are submitted in support of this request:

1.) A Unit Plat is attached reflecting the respective injection wells and their project area.

2.) Attached are Diagrammatic Sketches of the proposed wells, showing injection tubing, packers, and identifying the San Andres perforated injection intervals.

3.) The Ogallala fresh water will be used as the injectant into the Vacuum Grayburg San Andres formation. The Ogallala fresh water has been successfully used as an injectant into the Vacuum Grayburg San Andres pool for over 16 years with no evidence of formation plugging, and therefore is considered to be compatible with the Vacuum Grayburg San Andres formation. A water analysis of the Ogallala fresh water is attached.

4.) The name of the injection formation is Vacuum Grayburg San Andres with average injection to be from 4434' to 4800' on the Vacuum Grayburg San Andres Unit and from 4367' to 4800' on the Central Vacuum Unit. The lithology of this formation is Dolomite and the geological name is the Grayburg San Andres. The average pay thickness is about 400'. The geological name of the underground source of drinking water is the Ogallala at 300' maximum depth. The maximum anticipated injection pressure will be no greater than 0.2 psi per foot to the top of the perforations with a maximum daily volume anticipated at 1500 barrels of water per day per well.

5.) Proposed stimulation will consist of 8000 gallons of 15% acid using ball sealers.

6.) Attached is a Certified copy of Public Notice by newspaper.

7.) Attached is a list of affected Offset Operators and Surface Tenant.

8.) Attached is evidence that notice has been given to those entities in Item 7.

Interested parties must file objections or request for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico, 87501, within fifteen (15) days following newspaper publication.

Your consideration and early approval will be appreciated.

Yours very truly,

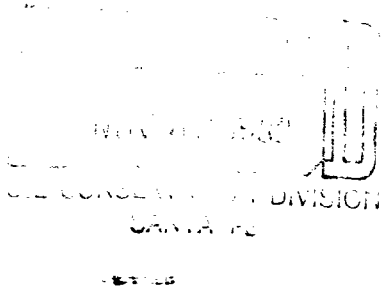
TEXACO INC.
PRODUCING DEPARTMENT-UNITED STATES

J. A. Schaffer
Assistant District Manager

GDD:JEB

Attachments

Copy to: Department of Energy & Minerals
Oil Conservation Division
P. O. Box 1980
Hobbs, New Mexico, 88240



TEXACO

PETROLEUM PRODUCTS

TEXACO
U.S.A.
A DIVISION OF TEXACO INC.
P. O. BOX 728
HOBBS, NEW MEXICO 88240
(505) 393-7191

October 22, 1982

PERMISSION TO INJECT WATER INTO A
RESERVOIR PRODUCTIVE OF OIL OR GAS
VACUUM GRAYBURG SAN ANDRES UNIT
WELLS NO. 18, 61, 62, 63, 65, & 67
CENTRAL VACUUM UNIT WELLS NO. 155,
156, 157, 158, 159, 160, & 161
LEA COUNTY, NEW MEXICO

OFFSET OPERATORS
(Address List Attached)

Gentlemen:

This is to notify you, as Offset Operator, that Texaco is requesting the New Mexico Oil Conservation Division to approve injection of water into the Vacuum Grayburg San Andres formation at a depth of 4583' in the subject wells. The subject leases consist of 4531.84 acres, and are located in Sections, 1, 2, 6, 7, 11, 12, 25, 30, 31, 35, and 36, Townships 17 and 18-South, and Ranges 34 and 35-East, Lea County, New Mexico.

If there are any questions, please do not hesitate to call this office.

Yours very truly,

TEXACO INC.
PRODUCING DEPARTMENT-UNITED STATES

J. A. Schaffer
Assistant District Manager

GDD:JEB

Attachment

TEXACO
PETROLEUM PRODUCTS

TEXACO
U.S.A.
A DIVISION OF TEXACO INC.
P. O. BOX 728
HOBBS, NEW MEXICO 88240
(505) 393-7191

October 22, 1982

PERMISSION TO INJECT WATER INTO A
RESERVOIR PRODUCTIVE OF OIL OR GAS
VACUUM GRAYBURG SAN ANDRES UNIT
WELLS NO. 18, 61, 62, 63, 65, & 67
CENTRAL VACUUM UNIT WELLS NO. 155,
156, 157, 158, 159, 160, & 161
LEA COUNTY, NEW MEXICO

Scharbauer Cattle Company
P. O. Box 1471
Midland, Texas

Gentlemen:

This is to notify you, as Surface Owner, that Texaco is requesting the New Mexico Oil Conservation Division to approve injection of water into the Vacuum Grayburg San Andres formation at a depth of 4583' in the subject wells. The subject leases consist of 4531.84 acres, and are located in Sections 1, 2, 6, 7, 11, 12, 25, 30, 31, 35, and 36, Townships 17 and 18-South, and Ranges 34 and 35-East, Lea County, New Mexico.

As stipulated in the Lease Agreement, only that surface area absolutely required will be used in operating the injection wells. The proposed injection wells are cased and cemented in such a way that all surface and subsurface fresh waters will be protected.

If there are any questions, please do not hesitate to call this office.

Yours very truly,

TEXACO INC.
PRODUCING DEPARTMENT-UNITED STATES

J. A. Schaffer
Assistant District Manager

GDD:JEB

Martin Water Laboratories, Inc

P. O. BOX 1468
MONAHANS, TEXAS 79756
PHONE 943-3234 OR 563-1040

406 W. ILLINOIS
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

LABORATORY NO. 1076119
SAMPLE RECEIVED 10-15-76
RESULTS REPORTED 10-22-76

TO: Area Engineer
P. O. Box 727, Lovington, N. M.

COMPANY Texaco, Inc. LEASE Vacuum Grayburg-San Andres Unit
FIELD OR POOL Vacuum
SECTION ___ BLOCK ___ SURVEY ___ COUNTY Lea STATE N. M.
SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Raw water - taken from water supply well #1. 10-15-76
NO. 2 Raw water - taken from Reda Pump water supply well #2. 10-15-76
NO. 3 Raw water - taken from water supply well #3. 10-15-76
NO. 4 Produced (Glorieta) water - taken from LMN & O heater-treater. 10-15-76

REMARKS: MIXED WATER SYSTEM

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0018	1.0022	1.0006	1.1370
pH When Sampled	7.2	7.1	7.3	7.1
pH When Received	7.3	7.25	7.45	7.3
Bicarbonate as HCO_3	190	190	185	647
Supersaturation as $CaCO_3$	4	0	4	60
Undersaturation as $CaCO_3$	-	-	-	--
Total Hardness as $CaCO_3$	465	555	180	9,200
Calcium as Ca	140	166	58	2,400
Magnesium as Mg	28	34	9	778
Sodium and/or Potassium	73	173	25	84,505
Sulfate as SO_4	26	71	21	3,960
Chloride as Cl	313	497	42	133,516
Iron as Fe	0.30	0.26	0.24	0.04
Barium as Ba	0	0	0	0
Turbidity, Electric	0.0	0.32	0.0	11
Color as Pt	0	0	0	6
Total Solids, Calculated	770	1,131	340	225,806
Temperature °F.	67	72	66	58
Carbon Dioxide, Calculated	20	25	15	85
Dissolved Oxygen, Winkler	2.5	0.0	5.5	0.0
Hydrogen Sulfide	0.0	0.0	0.0	175
Resistivity, ohms/m at 77° F.	7.50	5.50	25.00	0.053
Suspended Oil				221
Filtrable Solids as mg/l	12.6	4.9	2.6	47.1
Volume Filtered, ml	5,850	20,000	20,000	1,000
Results Reported As Milligrams Per Liter				
Additional Determinations And Remarks				

Form No. 3

By ___

TRETOLITE DIVISION
300 Marshall Avenue / Saint Louis, Missouri 63119
(314) [illegible]-3500/TWX 910-760-1660/Telex 44-2417

WATER ANALYSIS REPORT

COMPANY Texaco Incorporated ADDRESS Buckeye, N.M. DATE: 6-6-80

SOURCE Vacuum Grayburg - San Andres WSW #4 DATE SAMPLED 5-20-80 ANALYSIS NO. 591

Analysis		Mg/L	*Meq/L	
1. pH	7.2	Carbon Dioxide (CO_2)	14 ppm	
2. H_2S (Qualitative)	Neg.	Oxygen (O_2)	5.0 ppm	
3. Specific Gravity	1.000	Temperature (F^0)	76^0 — June	
4. Dissolved Solids		673		
5. Suspended Solids				
6. Phenolphthalein Alkalinity ($CaCO_3$)				
7. Methyl Orange Alkalinity ($CaCO_3$)		170		
8. Bicarbonate (HCO_3)	HCO_3	207	÷61 = 3	HCO_3
9. Chlorides (Cl)	Cl	125	÷35.5 = 4	Cl
10. Sulfates (SO_4)	SO_4	150	÷48 = 3	SO_4
11. Calcium (Ca)	Ca	92	÷20 = 5	Ca
12. Magnesium (Mg)	Mg	10	÷12.2 = 1	Mg
13. Total Hardness ($CaCO_3$)		270		
14. Total Iron (Fe)		0.0		
15. Barium (Qualitative)		None Detected		
16. Strontium				

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION

5	Ca ←	→ HCO_3
1	Mg →	→ SO_4
4	Na →	→ Cl

		3
		3
		4

Compound	Equiv. Wt.	X Meq/L =	Mg/L
$Ca(HCO_3)_2$	81.04	3	243
$CaSO_4$	68.07	2	136
$CaCl_2$	55.50		
$Mg(HCO_3)_2$	73.17		
$MgSO_4$	60.19	1	60
$MgCl_2$	47.62		
$NaHCO_3$	84.00		
Na_2SO_4	71.03		
NaCl	58.46	4	234

Saturation Values Distilled Water 20°C

$CaCO_3$	13 Mg/L
$CaSO_4 \cdot 2H_2O$	2,090 Mg/L
$MgCO_3$	103 Mg/L

REMARKS John Caldwell - Bill Jones

Brewer - W. Roberts - Gray - Nix - File

Respectfully submitted
TRETOLITE COMPANY
Terry Jordan

AFFIDAVIT OF PUBLICATION

State of New Mexico,

County of Lea.

I, _____

ROBERT L. SUMMERS

of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not in a supplement thereof for a period

of _____

ONE weeks.

Beginning with the issue dated

OCTOBER 14, 1982

and ending with the issue dated

OCTOBER 14, 1982

Robert L. Summers

Publisher.

Sworn and subscribed to before me this 14TH day of OCTOBER, 1982

_____

Notary Public.

My Commission expires _____

_____, 19____

(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

OFFICIAL SEAL

Signature Jane Paulowsky

JANE PAULOWSKY

NOTARY PUBLIC - NEW MEXICO

NOTARY BOND FILED WITH SECRETARY OF STATE

My Commission Expires 3-24-83

LEGAL NOTICE
October 14, 1982

Notice is hereby given of the application of Texaco Inc., Attention: J.A. Schaffer, Assistant District Manager of Operations, P.O. Box 728, Hobbs, New Mexico, 88240, Telephone (505) 393-7191, to the Oil Conservation Division, New Mexico Energy & Minerals Department, for approval of the following injection well (s) for the purpose of pressure maintenance.

Well (s) No (s).: 155, 156, 157, 158, 159, 160, & 161

Lease/Unit Name: Central Vacuum Unit

Location: Well #155 — Section 25, T-17-S, R-34-E; Well #156 — Section 25, T-17-S, R-34-E; Well #157 — Section 25, T-17-S, R-34-E; Well #158 — Section 36, T-17-S, R-34-E; Well #159 — Section 36, T-17-S, R-34-E; Well #160 — Section 36, T-17-S, R-34-E; Well #161 — Section 36, T-17-S, R-34-E, Lea County, New Mexico.

The injection formation is Grayburg San Andres at a depth of 4800 feet below the surface of the ground. Expected maximum injection rate is 1,000 barrels per day, and expected maximum injection pressure is 900 pounds per square inch. Interested parties must file objections or requests for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico, 87501, within fifteen (15) days of this publication.

AFFIDAVIT OF PUBLICATION

State of New Mexico,

County of Lea.

1, _____

ROBERT L. SUMMERS

of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not in a supplement thereof for a period

of _____

ONE weeks.

Beginning with the issue dated

OCTOBER 14, 1982

and ending with the issue dated

OCTOBER 14, 1982

Robert L. Summers

Publisher.

Sworn and subscribed to before me this 14TH day of OCTOBER, 1982

_____

Notary Public.

My Commission expires_____

_____, 19____

(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

OFFICIAL SEAL

Signature Jane Paulowsky

JANE PAULOWSKY

NOTARY PUBLIC - NEW MEXICO

NOTARY BOND FILED WITH SECRETARY OF STATE

My Commission Expires 3-24-83

LEGAL NOTICE
October 14, 1982

Notice is hereby given of the application of Texaco Inc., Attention: J. A. Schaffer, Assistant District Manager of Operations, P.O. Box 728, Hobbs, New Mexico, 88240, Telephone (505) 393-7191, to the Oil Conservation Division, New Mexico Energy & Minerals Department, for approval of the following injection well(s) for the purpose of pressure maintenance.

Well(s) No(s).: 18, 61, 62, 63, 65, and 67. Lease/Unit Name: Vacuum Grayburg/San Andres Unit

Location: Well #18 — Section 1, T-18-S, R-34-E; Well #61 — Section 2, T-18-S, R-34-E; Well #62 — Section 2, T-18-S, R-34,E; Well #63 — Section 2, T-18-S, R-34,E; Well #65 — Section 35, T-17-S, R-34-E; Well #67 — Section 35, T-17-S, R-34,E, Lea County, New Mexico. The injection formation is Grayburg San Andres at a depth of 4800 feet below the surface of the ground. Expected maximum injection rate is 1,000 barrels per day, and expected maximum injection pressure is 900 pounds per square inch. Interested parties must file objections or requests for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico, 87501, within fifteen (15) days of this publication.

OFFSET OPERATORS
VACUUM GRAYBURG SAN ANDRES UNIT

Amoco Production Company
P. O. Box 1540
Midland, Texas, 79702

Phillips Petroleum Company
4001 Penbrook
Odessa, Texas, 79762

Shell Oil Company
P. O. Box 576
Houston, Texas, 77001

Marathon Oil Company
P. O. Box 552
Midland, Texas, 79702

Exxon Company U.S.A.
P. O. Box 1600
Midland, Texas, 79702

Conoco, Inc.
Five Greenway Plaza East
Houston, Texas, 77001

OFFSET OPERATORS
CENTRAL VACUUM UNIT

ARCO
P. O. Box 1610
Midland, Texas, 79702

Bettis, Boyle, Stovall
P. O. Box 1168
Graham, Texas, 76046

Chevron USA, Inc.
P. O. Box 1660
Midland, Texas, 79702

Conoco, Inc.
Five Greenway Plaza East
Houston, Texas, 77001

Exxon Company U.S.A.
P. O. Box 1600
Midland, Texas, 79702

Getty Oil Company
P. O. Box 1231
Midland, Texas, 79702

Mobil Producing Texas & N.M., Inc.
P. O. Box 1800
Hobbs, New Mexico, 88240

Phillips Petroleum Company
4001 Penbrook
Odessa, Texas, 79762

Shell Oil Company
P. O. Box 576, Woodcreek
Houston, Texas, 77001

SURFACE TENANT

Scharbauer Cattle Company
P. O. Box 1471
Midland, Texas, 79702

DATA FOR WELLS WITHIN 2640'
OF PROPOSED INJECTION WELLS
CENTRAL VACUUM UNIT WELLS
NO. 155, 156, 157, 158, 159,
160, & 161

Well Name & Number	Formation Name	Total Depth	Date Drilled	Current Status
Central Vacuum Unit #11	San Andres	4690	5-21-39	Oil - Active
#12	San Andres	4733	4-05-66	Oil - Active
#13	San Andres	4764	1-13-79	Injection - Active
#14	San Andres	4787	4-30-78	Injection - Active
#20	San Andres	4720	11-14-38	Oil - Active
#21	San Andres	4634	9-10-38	Oil - Active
#22	San Andres	4625	9-30-38	Oil - Active
#23	San Andres	4788	8-17-38	Oil - Active
#24	San Andres	4780	1-28-39	Oil - Active
#25	San Andres	4760	4-25-78	Injection - Active
#26	San Andres	4782	3-17-78	Injection - Active
#27	San Andres	4762	3-17-78	Injection - Active
#28	San Andres	4765	4-14-78	Injection - Active
#35	San Andres	4660	6-03-38	Oil - Active
#36	San Andres	4725	7-21-38	Oil - Active
#37	San Andres	4750	6-29-39	Oil - Active
#38	San Andres	4705	7-16-38	Oil - Active
#39	San Andres	4767	12-23-38	Oil - Active
#40	San Andres	4713	1-29-78	Injection - Active
#41	San Andres	4779	12-25-77	Injection - Active
#42	San Andres	4777	2-08-78	Injection - Active
#53	San Andres	4700	1-03-79	Oil - Active
#54	San Andres	4705	9-08-38	Oil - Active
#55	San Andres	4782	2-18-78	Injection - Active
#68	San Andres	4725	8-03-38	Oil - Active
#69	San Andres	4720	4-18-38	Oil - Active
#70	San Andres	4767	2-12-78	Injection - Active
#71	San Andres	4768	2-22-78	Injection - Active
#79	San Andres	4690	4-23-38	Oil - Active
#80	San Andres	4626	2-26-38	Oil - Active
#81	San Andres	4741	4-05-79	Injection - Active
#91	San Andres	4710	11-02-38	Oil - Active
#92	San Andres	4710	10-04-38	Oil - Active
#140	San Andres	4784	2-07-79	Injection - Active
#141	San Andres	4776	1-18-79	Injection - Active

DATA FOR WELLS WITHIN 2640'
OF PROPOSED INJECTION WELLS
VACUUM GRAYBURG SAN ANDRES UNIT
WELLS NO. 18, 61, 62, 63, 65, & 67

Well Name & Number		Formation Name	Total Depth	Date Drilled	Current Status
Vacuum Grayburg San Andres Unit	#66	San Andres	4675	9-18-38	Oil - Active
	#64	San Andres	4675	4-19-39	Oil - Active
	#51	San Andres	4700	5-29-39	Oil - Active
	#52	San Andres	4696	9-11-39	Oil - Active
	#53	San Andres	4710	11-06-39	Oil - Active
	#54	San Andres	4710	11-16-38	Oil - Active
	#55	San Andres	4710	11-07-39	Oil - Active
	#56	San Andres	4710	4-21-40	Oil - Active
	#60	San Andres	4800	4-13-79	Injection - Active
	#44	San Andres	4788	3-22-73	Injection - Active
	#45	San Andres	4800	4-05-73	Injection - Active
	#46	San Andres	4788	3-07-73	Injection - Active
	#47	San Andres	4788	4-01-73	Injection - Active
	#48	San Andres	4778	2-04-73	Oil - Active
	#36	San Andres	4710	10-26-40	Oil - Active
	#37	San Andres	4710	9-29-40	Oil - Active
	#38	San Andres	4710	8-31-40	Oil - Active
	#39	San Andres	4710	8-04-40	Oil - Active
	#40	San Andres	4710	7-03-40	Oil - Active
	#29	San Andres	4746	12-29-72	Injection - Active
	#30	San Andres	4791	2-06-73	Injection - Active
	#59	San Andres	4800	4-03-79	Injection - Active
West Vacuum Unit	#13	San Andres	4630	11-27-39	Oil - Active
	#20	San Andres	4710	8-22-39	Injection - Active
	#21	San Andres	4785	12-08-38	Oil - Active
	#28	San Andres	4690	7-01-39	Oil - Active
	#29	San Andres	4710	11-20-38	Oil - Active
	#36	San Andres	4685	4-24-39	Injection - Active
	#37	San Andres	4675	2-10-39	Oil - Active
	#45	San Andres	4775	11-11-39	Oil - Active
	#46	San Andres	4773	4-23-39	Oil - Active
	#49	San Andres	4800	9-17-51	Oil - Active
	#50	San Andres	4822	2-13-52	Oil - Active

DATA FOR WELLS WITHIN 2640'
OF PROPOSED INJECTION WELLS
LOCATION: T-17-R-34-E, SECTION 35

Well Name & Number		Formation Name	Total Depth	Date Drilled	Current Status
PHILLIPS OPERATED					
M. E. Hale	#1	San Andres	4500	1-29-38	Oil - Active
	#2	San Andres	4774	12-06-38	Oil - Active
	#3	San Andres	4552	12-25-38	Oil - T.A.
	#4	San Andres	4744	7-08-39	Oil - Active
	#5	San Andres	4699	5-10-39	Oil - Active
	#6	San Andres	4721	1-24-40	Oil - Active
	#8	San Andres	4585	3-11-64	Oil - Active
	#9	San Andres	4654	6-10-64	Oil - Active
	#10	San Andres	6200	12-15-69	Oil - Active
Mable	#1	San Andres	4716	11-26-38	Oil - Active
	#2	San Andres	4600	7-01-39	Oil - Active
	#3	San Andres	4747	4-08-69	Oil - Active
CONOCO OPERATED					
"H"	#1	San Andres	4698	4-15-38	Oil - Active
	#2	San Andres	4744	10-19-38	Oil - Active
	#3	San Andres	4696	12-16-38	Oil - Active
	#4	San Andres	4735	2-01-39	Oil - T.A.
	#5	San Andres	4695	3-16-39	Oil - Active
	#6	San Andres	4745	5-16-39	Oil - Active
	#10	San Andres	4438	1-21-64	Oil - T.A.

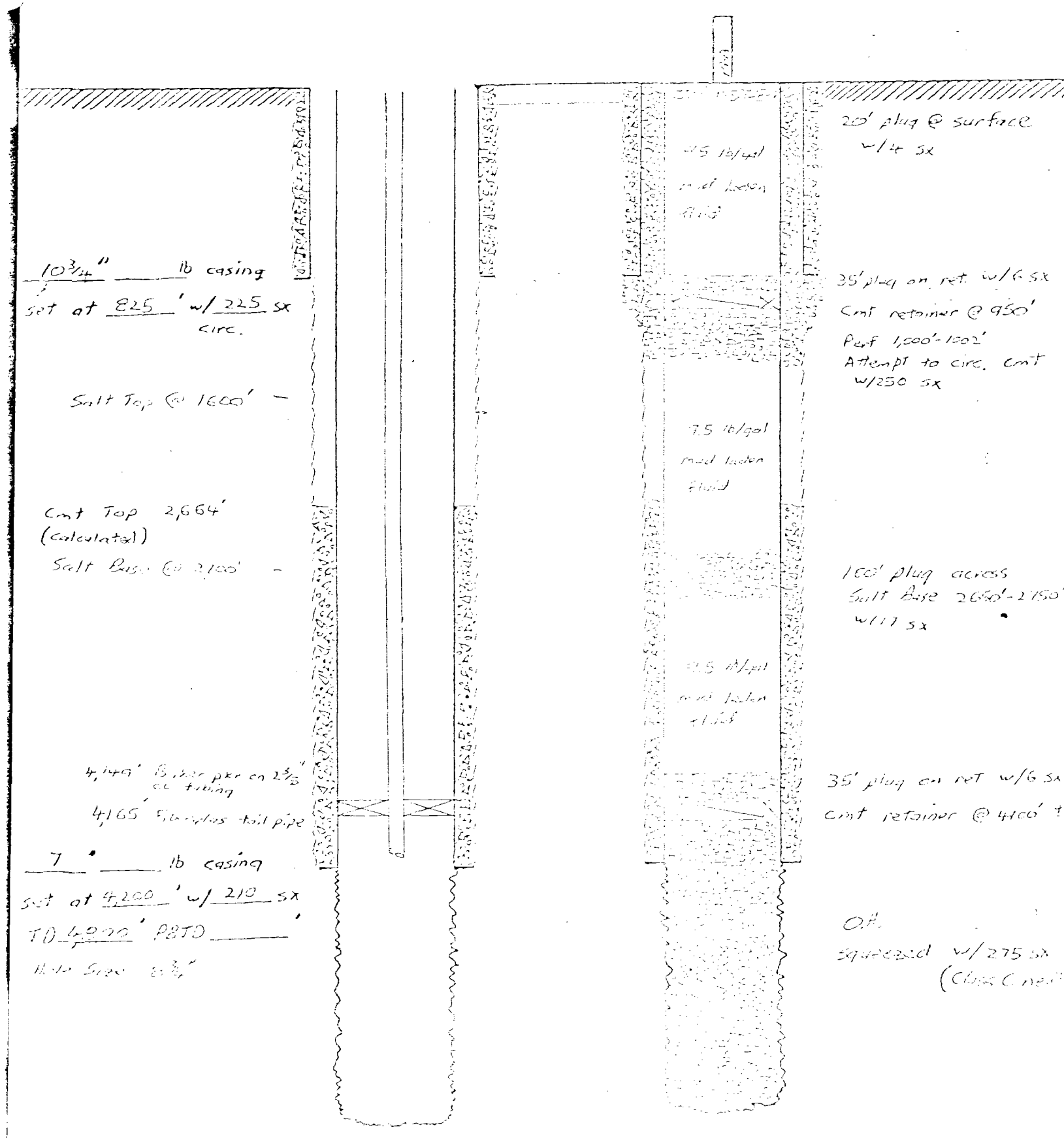
DATA FOR WELLS WITHIN 2640'
OF PROPOSED INJECTION WELLS

Well Name & Number	Formation Name	Total Depth	Date Drilled	Current Status
MOBIL OPERATED				
Bridges State #16*	San Andres	4750	10-27-38	Oil - Active
#17*	San Andres	4890	10-25-38	Injection - P&A
#32*	San Andres	6580	6-16-39	Injection - Active
#36*	San Andres	5000	6-14-71	Oil - Active
#178*	San Andres	4741	2-02-74	Oil - Active
#176*	San Andres	4802	1-01-74	Oil - Active
#105**	San Andres	5958	4-22-65	Injection - Active
#30**	San Andres	6330	5-12-39	Injection - Active
#25**	San Andres	4750	3-01-39	Oil - Active
#33**	San Andres	4776	6-12-39	Oil - Active
#12**	San Andres	4725	8-09-38	Oil - Active
#15**	San Andres	4750	9-07-38	Oil - Active

* Location: T-17, R-34-E, Section 25.

**Location: T-17, R-34-E, Section 26.

Field: Vacuum Glorieta San Andres	Date: 11/3/77	T.D. Date 10/22/77
Lease: Bridges State	Well No. 17	County & State Lea Co., New Mexico
Location: A-25-17S-34E	Completion Date: 10/38	Elev.



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☐ Secondary Recovery ☒ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no

II. Operator: TEXACO Inc.

Address: P. O. Box 728, Hobbs, New Mexico, 88240

Contact party: J. V. Gannon Phone: (505) 393-7191

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? ☒ yes ☐ no
If yes, give the Division order number authorizing the project R-4442 (VGSAU) & R-5530 (CVU).

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected; 1,000 1,500
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure; 900 psi
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: J. A. Schaffer Title Asst. District Manager

Signature: J. A. Schaffer Date: 10-22-82

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. *Vacuum Grayburg San Andres Unit #18 logs were filed February, 1973, and other well's logs will be filed as soon as drilled.

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

(2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;

(3) the formation name and depth with expected maximum injection rates and pressures; and

(4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

INJECTION WELL DATA SHEET

OPERATOR	LEASE			
TEXACO Inc.	Vacuum Grayburg San Andres Unit			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
18	1330' FSL & 1330' FWL	1	18-S	34-E

Schematic

Tabular Data

Surface Casing

Size 8-5/8" Cemented with 210 sx.

TOC Circ. feet determined by Visual

Hole size 11"

Intermediate Casing

Size _____" Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 5-1/2" Cemented with 500 sx.

TOC 2757 feet determined by Calculation

Hole size 7-7/8"

Total depth 4710'

Injection interval

4311 feet to 4735 feet

(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with Plastic coating (material) set in a

Baker Lok-Set Nickel Plated (brand and model) packer at + 4250 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Vacuum Grayburg San Andres

2. Name of Field or Pool (if applicable) Vacuum

3. Is this a new well drilled for injection? [ ] Yes [X] No

If no, for what purpose was the well originally drilled? Oilwell

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) No

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Glorieta - 5815'; Blinebry Marker - 6585', Abo North - 7896'; Wolfcamp - 9260', Pennsylvanian - 10,088'; Devonian - 11,926'

Typical INJECTION WELL DATA SHEET

OPERATOR	LEASE			
TEXACO Inc.	Vacuum Grayburg San Andres Unit			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
63	50' FNL & 2630' FEL	2	18-S	34-E

Schematic

Tabular Data

Surface Casing

Size 16" " Cemented with 500 sx.

TOC Circ. feet determined by Visual

Hole size 20"

1st. Intermediate Casing

Size 11-3/4 " Cemented with 1350 sx.

TOC Circ. feet determined by Visual

Hole size 15"

2nd. Intermediate Casing

Size 8-5/8" " Cemented with 1200 sx.

TOC Circ. feet determined by Visual

Hole size 11"

Injection interval

4380 feet to 4730 feet

(perforated or open-hole, indicate which)

Long String

Size 5-1/2 " Cemented with 1350 sx

TOC Circ. feet determined by Visual

Hole Size 7-7/8"

Total Depth 4800'

Tubing size 2-3/8" lined with Plastic coating (material) set in a

Baker Lok-Set Nickel Plated (brand and model) packer at ± 4340 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Vacuum Grayburg San Andres

2. Name of Field or Pool (if applicable) Vacuum

3. Is this a new well drilled for injection? X Yes / No

If no, for what purpose was the well originally drilled? _____

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) NO

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Glorieta - 5815'; Blinebry Marker - 6585'; Abo North - 7896'; Wolfcamp - 9260'; Pennsylvanian - 10,088'; Devonian - 11,926'.

Typical INJECTION WELL DATA SHEET

OPERATOR	LEASE			
TEXACO Inc.	Central Vacuum Unit			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
158	100' FNL & 150' FWL	36	17-S	34-E

Schematic

Tabular Data

Surface Casing

Size 16 " Cemented with 650 sx.

TOC Circ. feet determined by Visual

Hole size 20"

Intermediate Casing

Size 11-3/4 " Cemented with 1200 sx.

TOC Circ. feet determined by Visual

Hole size 15"

Long string

Size 5-1/2 " Cemented with 1350 sx.

TOC Circ. feet determined by Visual

Hole size 15"

Total depth 4800'

Injection interval

4380 feet to 4730 feet

(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with Plastic coating (material) set in a

Baker Lok-Set Nickel Plated (brand and model) packer at ± 4340 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Vacuum Grayburg San Andres

2. Name of Field or Pool (if applicable) Vacuum

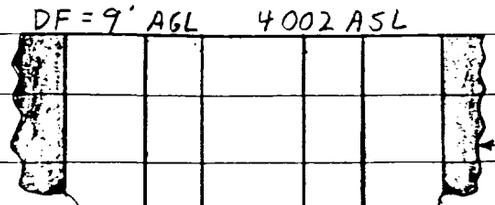
3. Is this a new well drilled for injection? [X] Yes [ ] No

   If no, for what purpose was the well originally drilled? _____

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) No

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Glorieta - 5815'; Blinebry Marker - 6585'; Abo North - 7896'; Wolfcamp - 9260'; Pennsylvanian - 10,088'; Devonian - 11,926'.

VGSAU #18
PROPOSED INJECTION WELL
LEA COUNTY, N.M.
5-12-82



12¼" HOLE - 8⅝"; 20# CASING
SET @ 354'
CEMENT CIRCULATED

2⅜" INT. PLASTIC COATED TUBING
SET IN PACKER
@ APPROX. 4250'.

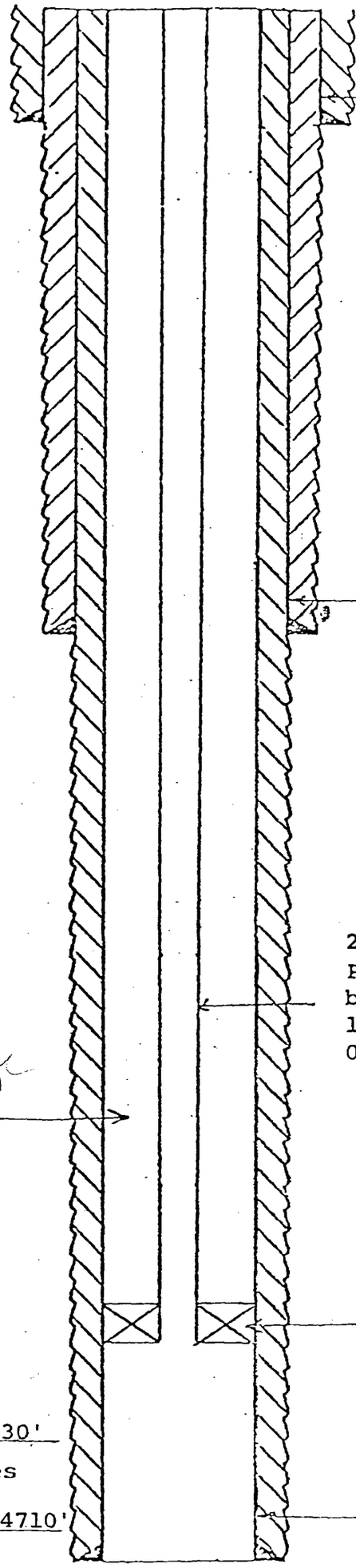
Pressure limiting valve to be installed at surface to limit injection pressure to 0.2 psi per foot of depth.

7⅞" HOLE - 5½"; 14# CASING
SET @ 4800'
CEMENT TOP @ 2757'
(CALC. 60% FILL)

Baker Loc-set
PACKER SET APPROX. 50' ABOVE TOP PERF.

VGSA PERFS
4311' - 4735'

PBTD 4788'
TD 4800'



11-3/4" Csg. set @ 350'
Circulate Cement.

8-5/8" Csg. set @ 1520'
Circulate Cement.

2-3/8" Plastic Coated Tubing.
Pressure limiting valve to be installed at surface to limit injection pressure to 0.2 psi per foot of depth.

2-3/8" x 4-1/2" Annulus to be loaded with inhibited fluid. Valve and pressure gauge to be installed above ground on annulus.

Packer to be set within 50' of top perforation (@ ± 4490')

Est. Top Perforation @ 4530'

Grayburg-San Andres

Est. Base of Perf. Interval 4710'

5-1/2" Csg. set @ 4800'
Circulate Cement

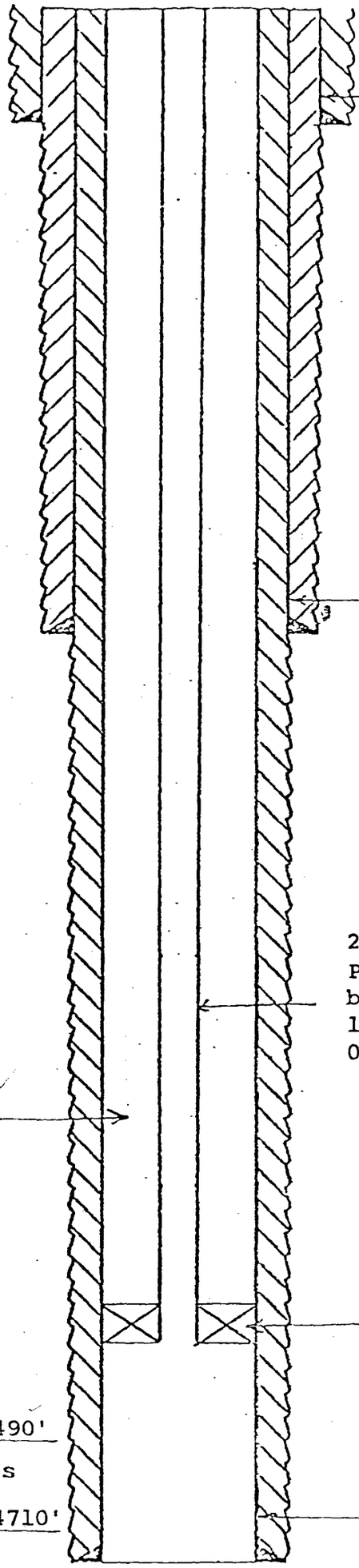
PROPOSED INJECTION WELLS

VACUUM GRAYBURG SAN ANDRES UNIT

WELL NO. 61

VACUUM GRAYBURG-SAN ANDRES FIELD

LEA COUNTY, NEW MEXICO



11-3/4" Csg. set @ 350'
Circulate Cement.

8-5/8" Csg. set @ 1520'
Circulate Cement.

2-3/8" Plastic Coated Tubing.
Pressure limiting valve to be installed at surface to limit injection pressure to 0.2 psi per foot of depth.

2-3/8" x 4-1/2" Annulus to be loaded with inhibited fluid. Valve and pressure gauge to be installed above ground on annulus.

Packer to be set within 50' of top perforation (@ ± 4450')

Est. Top Perforation @ 4490'

Grayburg-San Andres

Est. Base of Perf. Interval 4710'

5-1/2" Csg. set @ 4800'
Circulate Cement

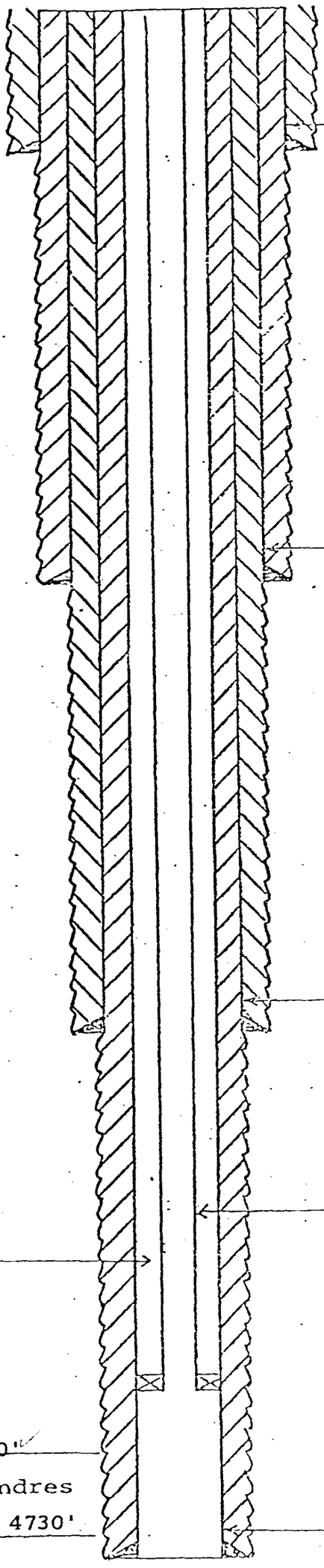
PROPOSED INJECTION WELLS

VACUUM GRAYBURG SAN ANDRES UNIT

WELL NO. 62

VACUUM GRAYBURG-SAN ANDRES FIELD

LEA COUNTY, NEW MEXICO



16" Csg. set @ 350'
Circulate Cement.

11-3/4" Csg. set @1490'
Circulate Cement.

8-5/8"Csg. set @ 2710'
Circulate Cement.

2-3/8" Plastic Coated Tubing. Pressure limiting valve to be installed at surface to limit injection pressure to 0.2 psi per foot of depth.

2-3/8" x 4-1/2" annulus to be loaded with inhibited fluid. Valve and pressure gauge to be installed above ground on annulus.

Packer to be set within 50' of top perforation (± 4340')

Est. Top Perforations @ 4380'

Grayburg-San Andres

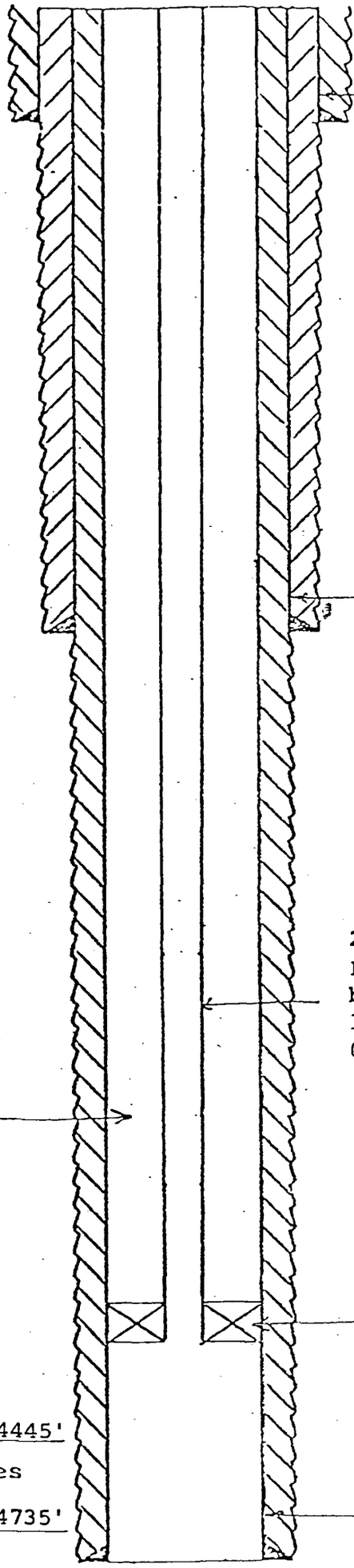
Est. Base of Perf. Interval 4730'

5-1/2"Csg. set @ 480
Circulate Cement.

PROPOSED INJECTION WELLS

VACUUM GRAYBURG SAN ANDRES UNIT
WELL NO. 63

VACUUM GRAYBURG-SAN ANDRES FIELD
LEA COUNTY, NEW MEXICO



11-3/4" Csg. set @ 350'
Circulate Cement.

8-5/8" Csg. set @ 1520'
Circulate Cement.

2-3/8" Plastic Coated Tubing.
Pressure limiting valve to be installed at surface to limit injection pressure to 0.2 psi per foot of depth.

2-3/8" x 4-1/2" Annulus to be loaded with inhibited fluid. Valve and pressure gauge to be installed above ground on annulus.

Packer to be set within 50' of top perforation (@ ± 4405')

Est. Top Perforation @ 4445'

Grayburg-San Andres

Est. Base of Perf. Interval 4735'

5-1/2" Csg. set @ 4800'
Circulate Cement

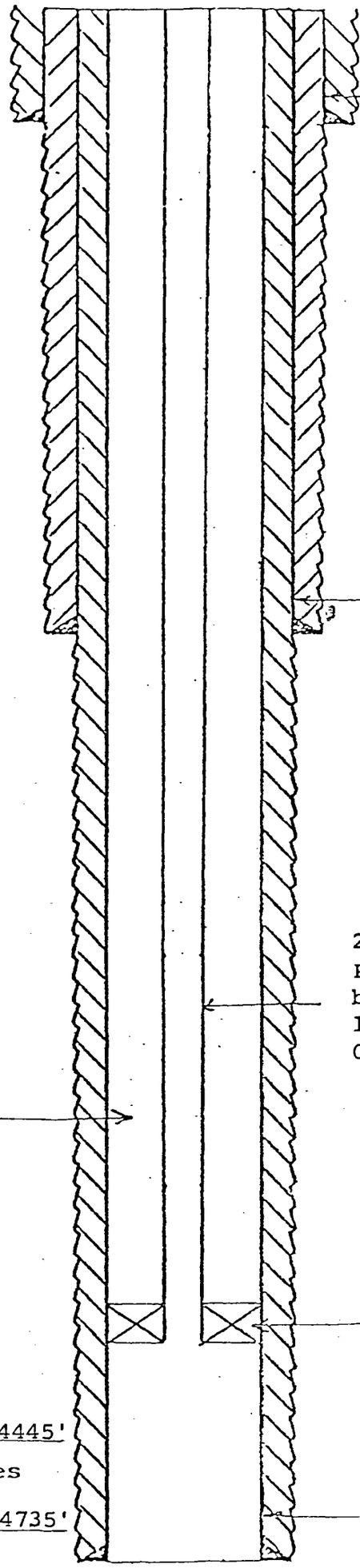
PROPOSED INJECTION WELLS

VACUUM GRAYBURG SAN ANDRES UNIT

WELL NO. 65

VACUUM GRAYBURG-SAN ANDRES FIELD

LEA COUNTY, NEW MEXICO



11-3/4" Csg. set @ 350'
Circulate Cement.

8-5/8" Csg. set @ 1520'
Circulate Cement.

2-3/8" Plastic Coated Tubing.
Pressure limiting valve to
be installed at surface to
limit injection pressure to
0.2 psi per foot of depth.

2-3/8" x 4-1/2" Annulus to
be loaded with inhibited
fluid. Valve and pressure
gauge to be installed above
ground on annulus.

Packer to be set within
50' of top perforation
(@ ± 4405')

Est. Top Perforation @ 4445'

Grayburg-San Andres

Est. Base of Perf. Interval 4735'

5-1/2" Csg. set @ 4800'
Circulate Cement

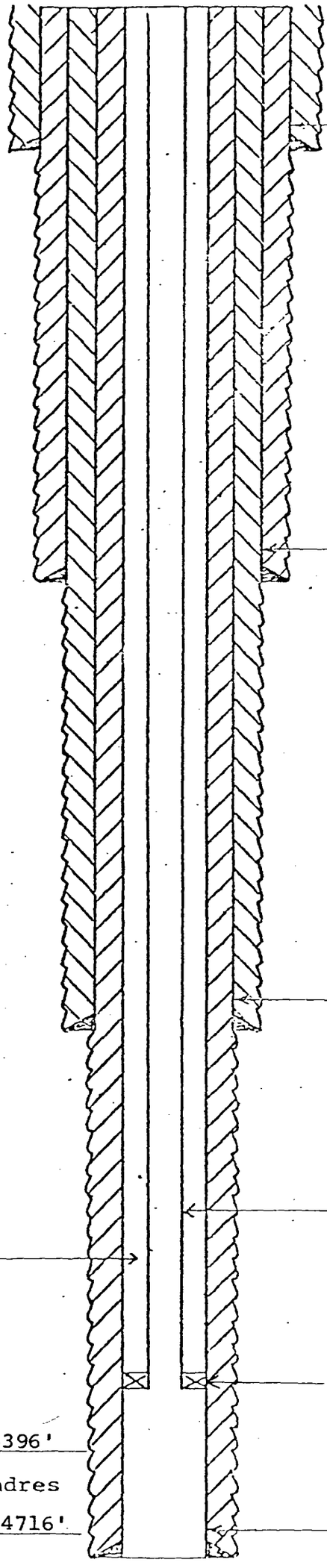
PROPOSED INJECTION WELLS

VACUUM GRAYBURG SAN ANDRES UNIT

WELL NO. 67

VACUUM GRAYBURG-SAN ANDRES FIELD

LEA COUNTY, NEW MEXICO



16" Csg. set @ 350'
Circulate Cement.

11-3/4" Csg. set @ 1530'
Circulate Cement.

8-5/8" Csg. set @ 2675'
Circulate Cement.

2-3/8" Plastic Coated Tubing. Pressure limiting valve to be installed at surface to limit injection pressure to 0.2 psi per foot of depth.

2-3/8" x 4-1/2" Annulus to be loaded with inhibited fluid. Valve and pressure gauge to be installed above ground on annulus.

Packer to be set within 50' of top perforations (± 4356')

Est. Top Perforations @ 4396'

Grayburg-San Andres

Est. Base of Perf. Interval 4716'

5-1/2" Csg. set @ 4800
Circulate Cement.

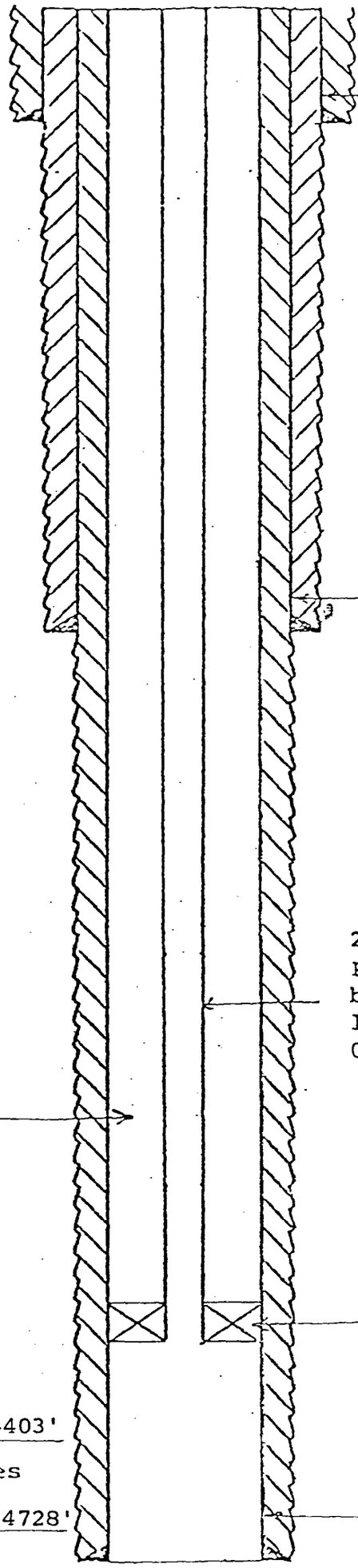
PROPOSED INJECTION WELLS

CENTRAL VACUUM UNIT

WELL NO. 155

VACUUM GRAYBURG-SAN ANDRES FIELD

LEA COUNTY, NEW MEXICO



16" Csg. set @ 350'
Circulate Cement.

11-3/4" Csg. set @ 1570'
Circulate Cement.

2-3/8" Plastic Coated Tubing.
Pressure limiting valve to be installed at surface to limit injection pressure to 0.2 psi per foot of depth.

2-3/8" x 4-1/2" Annulus to be loaded with inhibited fluid. Valve and pressure gauge to be installed above ground on annulus.

Packer to be set within 50' of top perforation (@ ± 4363')

Est. Top Perforation @ 4403'

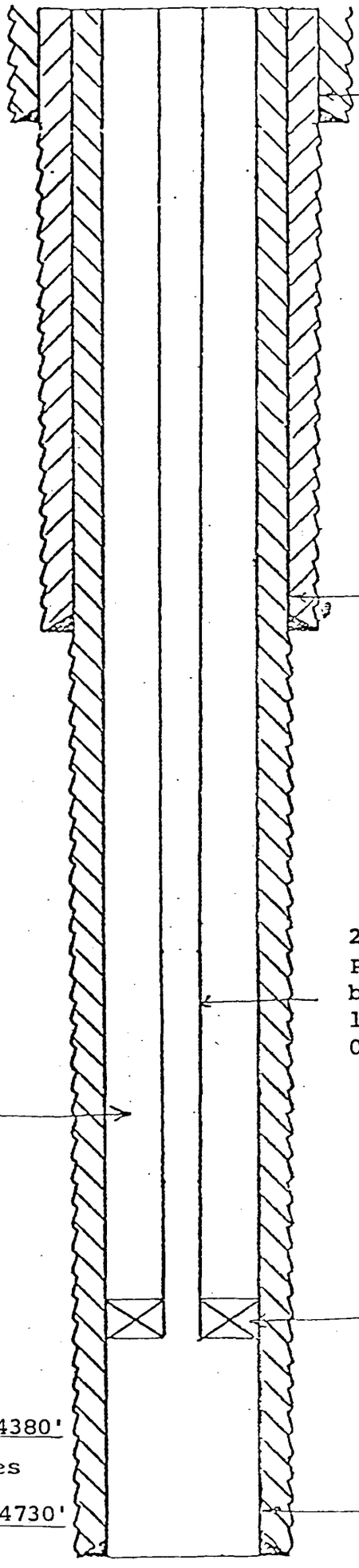
Grayburg-San Andres

Est. Base of Perf. Interval 4728'

5-1/2" Csg. set @ 4800'
Circulate Cement

PROPOSED INJECTION WELLS

CENTRAL VACUUM UNIT
WELL NO. 156
VACUUM GRAYBURG-SAN ANDRES FIELD
LEA COUNTY, NEW MEXICO



16" Csg. set @ 350'
Circulate Cement.

11-3/4" Csg. set @ 1570'
Circulate Cement.

2-3/8" Plastic Coated Tubing.
Pressure limiting valve to be installed at surface to limit injection pressure to 0.2 psi per foot of depth.

2-3/8" x 4-1/2" Annulus to be loaded with inhibited fluid. Valve and pressure gauge to be installed above ground on annulus.

Packer to be set within 50' of top perforation (@ ± 4340')

Est. Top Perforation @ 4380'

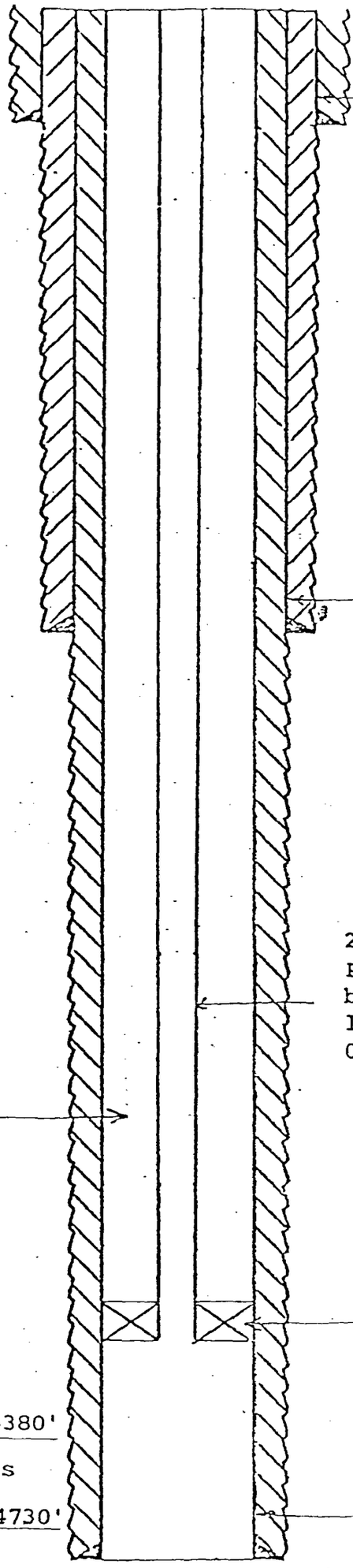
Grayburg--San Andres

Est. Base of Perf. Interval 4730'

5-1/2" Csg. set @ 4800'
Circulate Cement

PROPOSED INJECTION WELLS

CENTRAL VACUUM UNIT
WELL NO. 157
VACUUM GRAYBURG-SAN ANDRES FIELD
LEA COUNTY, NEW MEXICO



16" Csg. set @ 350'
Circulate Cement.

11-3/4" Csg. set @ 1570'
Circulate Cement.

2-3/8" Plastic Coated Tubing.
Pressure limiting valve to be installed at surface to limit injection pressure to 0.2 psi per foot of depth.

2-3/8" x 4-1/2" Annulus to be loaded with inhibited fluid. Valve and pressure gauge to be installed above ground on annulus.

Packer to be set within 50' of top perforation (@ ± 4340')

Est. Top Perforation @ 4380'

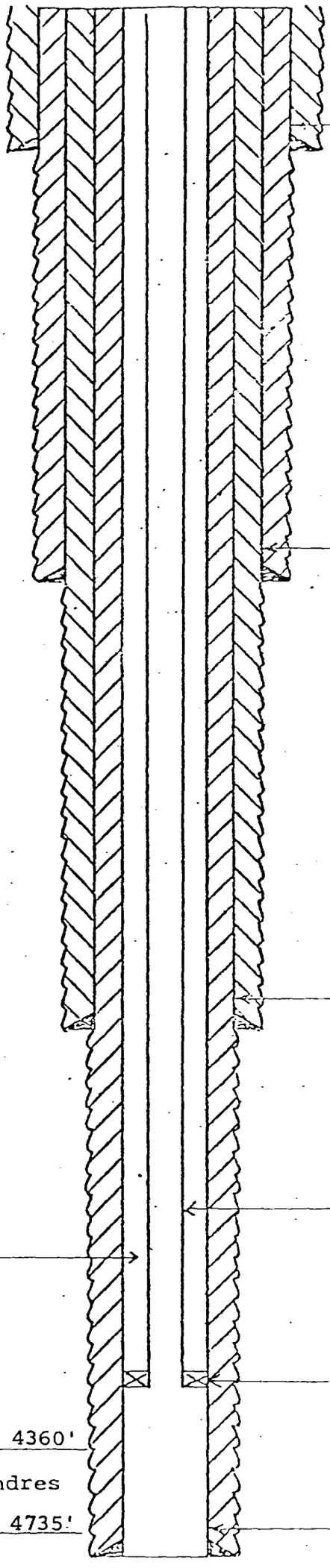
Grayburg-San Andres

Est. Base of Perf. Interval 4730'

5-1/2" Csg. set @ 4800'
Circulate Cement

PROPOSED INJECTION WELLS

CENTRAL VACUUM UNIT
WELL NO. 158
VACUUM GRAYBURG-SAN ANDRES FIELD
LEA COUNTY, NEW MEXICO



16" Csg. set @ 350'
Circulate Cement.

11-3/4" Csg. set @ 1530'
Circulate Cement.

8-5/8" Csg. set @ 2675'
Circulate Cement.

2-3/8" Plastic Coated Tubing. Pressure limiting valve to be installed at surface to limit injection pressure to 0.2 psi per foot of depth.

2-3/8" x 4-1/2" Annulus to be loaded with inhibited fluid. Valve and pressure gauge to be installed above ground on annulus.

Packer to be set within 50' of top perforations (± 4320')

Est. Top Perforations @ 4360'

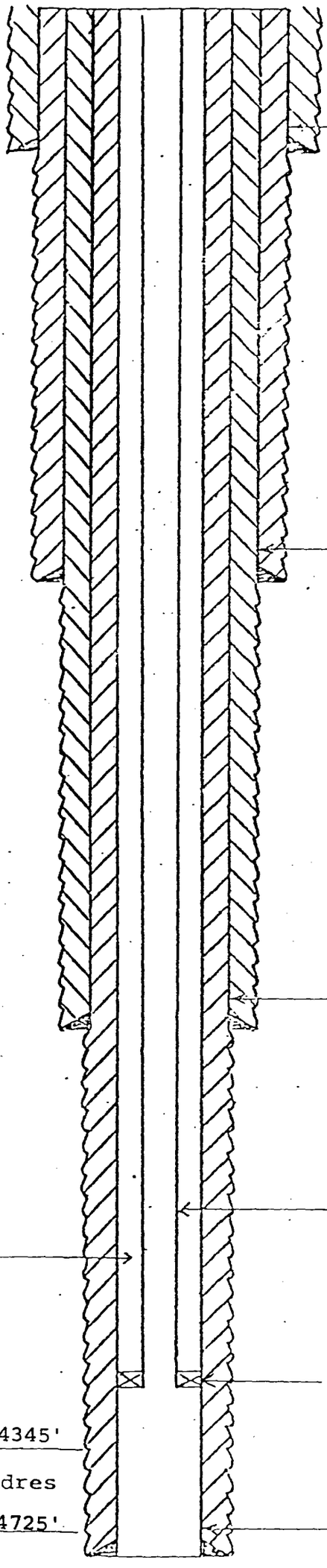
Grayburg-San Andres

Est. Base of Perf. Interval 4735'

5-1/2" Csg. set @ 480
Circulate Cement.

PROPOSED INJECTION WELLS

CENTRAL VACUUM UNIT
WELL NO. 159
VACUUM GRAYBURG-SAN ANDRES FIELD
LEA COUNTY, NEW MEXICO



16" Csg. set @ 350'
Circulate Cement.

11-3/4" Csg. set @ 1530'
Circulate Cement.

8-5/8" Csg. set @ 2675'
Circulate Cement.

2-3/8" Plastic Coated Tubing. Pressure limiting valve to be installed at surface to limit injection pressure to 0.2 psi per foot of depth.

2-3/8" x 4-1/2" Annulus to be loaded with inhibited fluid. Valve and pressure gauge to be installed above ground on annulus.

Packer to be set within 50' of top perforations (± 4305')

Est. Top Perforations @ 4345'

Grayburg-San Andres

Est. Base of Perf. Interval 4725'

5-1/2" Csg. set @ 480(
Circulate Cement.

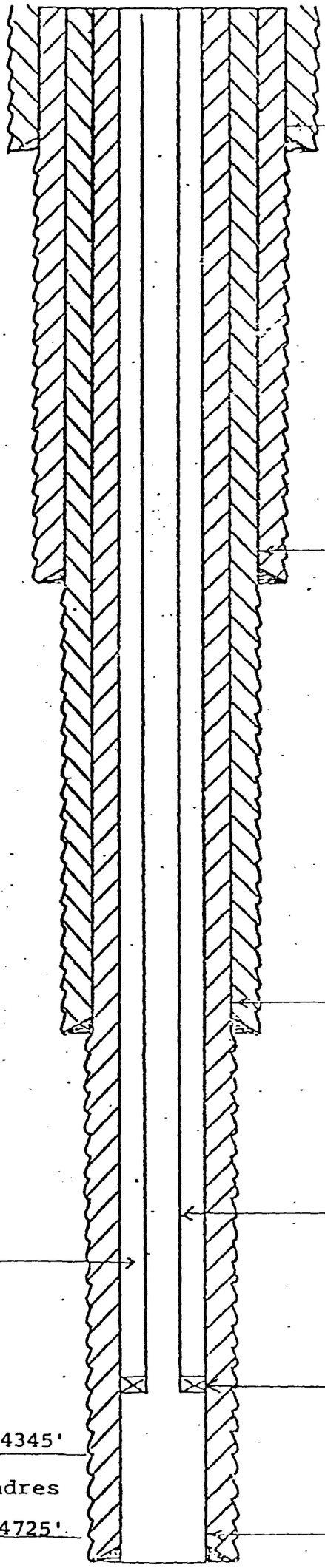
PROPOSED INJECTION WELLS

CENTRAL VACUUM UNIT

WELL NO. 160

VACUUM GRAYBURG-SAN ANDRES FIELD

LEA COUNTY, NEW MEXICO



16" Csg. set @ 350'
Circulate Cement.

11-3/4" Csg. set @ 1530'
Circulate Cement.

8-5/8" Csg. set @ 2675'
Circulate Cement.

2-3/8" Plastic Coated Tubing. Pressure limiting valve to be installed at surface to limit injection pressure to 0.2 psi per foot of depth.

2-3/8" x 4-1/2" Annulus to be loaded with inhibited fluid. Valve and pressure gauge to be installed above ground on annulus.

Packer to be set within 50' of top perforations (± 4305')

Est. Top Perforations @ 4345'

Grayburg-San Andres

Est. Base of Perf. Interval 4725'

5-1/2" Csg. set @ 480
Circulate Cement.

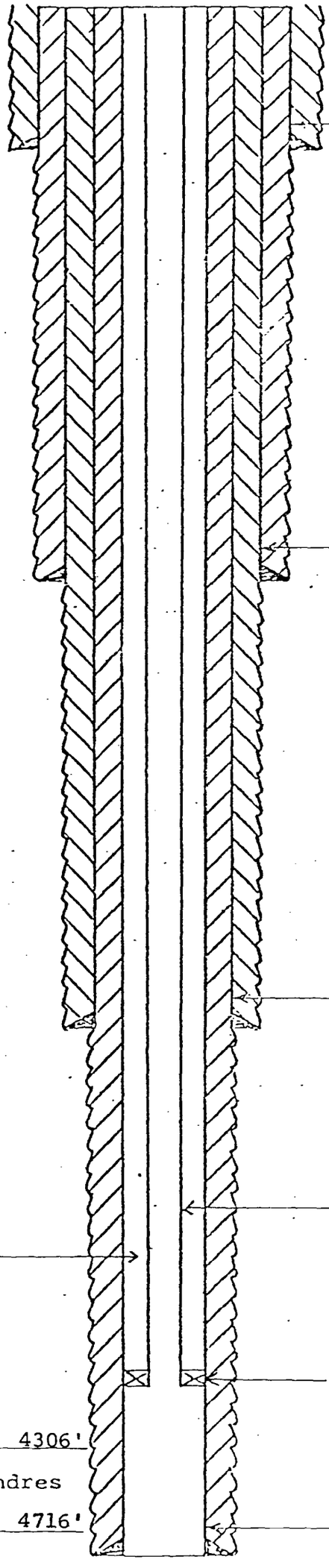
PROPOSED INJECTION WELLS

CENTRAL VACUUM UNIT

WELL NO. 160

VACUUM GRAYBURG-SAN ANDRES FIELD

LEA COUNTY, NEW MEXICO



16" Csg. set @ 350'
Circulate Cement.

11-3/4" Csg. set @ 1530'
Circulate Cement.

8-5/8" Csg. set @ 2675'
Circulate Cement.

2-3/8" Plastic Coated Tubing. Pressure limiting valve to be installed at surface to limit injection pressure to 0.2 psi per foot of depth.

2-3/8" x 4-1/2" Annulus to be loaded with inhibited fluid. Valve and pressure gauge to be installed above ground on annulus.

Packer to be set within 50' of top perforations (± 4266')

Est. Top Perforations @ 4306'

Grayburg-San Andres

Est. Base of Perf. Interval 4716'

5-1/2" Csg. set @ 4800
Circulate Cement.

PROPOSED INJECTION WELLS

CENTRAL VACUUM UNIT
WELL NO. 161
VACUUM GRAYBURG-SAN ANDRES FIELD
LEA COUNTY, NEW MEXICO

● **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
   - ☒ Show to whom and date delivered ..... 60¢
   - ☐ Show to whom, date, and address of delivery.. ___¢
2. ☐ RESTRICTED DELIVERY ___¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $ .60

3. ARTICLE ADDRESSED TO:
Marathon Oil Company
P. O. Box 552
Midland, TX. 79702

4. TYPE OF SERVICE:
☐ REGISTERED ☐ INSURED
☒ CERTIFIED ☐ COD
☐ EXPRESS MAIL

ARTICLE NUMBER: P 267 162 630

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent

5. DATE OF DELIVERY

POSTMARK

6. ADDRESSEE'S ADDRESS (*Only if requested*)

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

PS Form 3811, Dec. 1980

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

● **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
   - ☒ Show to whom and date delivered ..... 60¢
   - ☐ Show to whom, date, and address of delivery.. ___¢
2. ☐ RESTRICTED DELIVERY ___¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $ .60

3. ARTICLE ADDRESSED TO:
Exxon Company U.S.A.
P. O. Box 1600
Midland, Texas, 79702

4. TYPE OF SERVICE:
☐ REGISTERED ☐ INSURED
☒ CERTIFIED ☐ COD
☐ EXPRESS MAIL

ARTICLE NUMBER: P 267 162 629

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent

5. DATE OF DELIVERY

POSTMARK

6. ADDRESSEE'S ADDRESS (*Only if requested*)

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

PS Form 3811, Dec. 1980

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

● **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
   - ☒ Show to whom and date delivered ..... 60¢
   - ☐ Show to whom, date, and address of delivery.. ___¢
2. ☐ RESTRICTED DELIVERY ___¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $ .60

3. ARTICLE ADDRESSED TO:
Shell Oil Company
P. O. Box 576 - Woodcreek
Houston, TX. 77001

4. TYPE OF SERVICE:
☐ REGISTERED ☐ INSURED
☒ CERTIFIED ☐ COD
☐ EXPRESS MAIL

ARTICLE NUMBER: P 267 162 628

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent

5. DATE OF DELIVERY

POSTMARK

6. ADDRESSEE'S ADDRESS (*Only if requested*)

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

PS Form 3811, Dec. 1980

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

● **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
   - ☒ Show to whom and date delivered ..... 60¢
   - ☐ Show to whom, date, and address of delivery.. ___¢
2. ☐ RESTRICTED DELIVERY ___¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $ .60

3. ARTICLE ADDRESSED TO:
Mobil Producing Texas & NM Inc.
P. O. Box 1800
Hobbs, NM, 88240

4. TYPE OF SERVICE:
☐ REGISTERED ☐ INSURED
☒ CERTIFIED ☐ COD
☐ EXPRESS MAIL

ARTICLE NUMBER: P 267 162 627

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent

5. DATE OF DELIVERY

POSTMARK

6. ADDRESSEE'S ADDRESS (*Only if requested*)

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

PS Form 3811, Dec. 1980

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

● **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
   - ☒ Show to whom and date delivered ..... 60¢
   - ☐ Show to whom, date, and address of delivery.. ___¢
2. ☐ RESTRICTED DELIVERY ___¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $ .60

3. ARTICLE ADDRESSED TO:
Conoco, Inc.
Five Greenway Plaza East
Houston, TX. 77001

4. TYPE OF SERVICE:
☐ REGISTERED ☐ INSURED
☒ CERTIFIED ☐ COD
☐ EXPRESS MAIL

ARTICLE NUMBER: P 267 162 635

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent

5. DATE OF DELIVERY — POSTMARK

6. ADDRESSEE'S ADDRESS *(Only if requested)*

7. UNABLE TO DELIVER BECAUSE: — 7a. EMPLOYEE'S INITIALS

PS Form 3811, Dec. 1980

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

● **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
   - ☒ Show to whom and date delivered ..... 60¢
   - ☐ Show to whom, date, and address of delivery.. ___¢
2. ☐ RESTRICTED DELIVERY ___¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $ .60

3. ARTICLE ADDRESSED TO:
Getty Oil Company
P. O. Box 1231
Midland, TX. 79702

4. TYPE OF SERVICE:
☐ REGISTERED ☐ INSURED
☒ CERTIFIED ☐ COD
☐ EXPRESS MAIL

ARTICLE NUMBER: P 267 162 634

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent

5. DATE OF DELIVERY — POSTMARK

6. ADDRESSEE'S ADDRESS *(Only if requested)*

7. UNABLE TO DELIVER BECAUSE: — 7a. EMPLOYEE'S INITIALS

PS Form 3811, Dec. 1980

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

● **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
   - ☒ Show to whom and date delivered ..... 60¢
   - ☐ Show to whom, date, and address of delivery.. ___¢
2. ☐ RESTRICTED DELIVERY ___¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $ .60

3. ARTICLE ADDRESSED TO:
Amoco Production Company
P. O. Box 1540
Midland, TX. 79702

4. TYPE OF SERVICE:
☐ REGISTERED ☐ INSURED
☒ CERTIFIED ☐ COD
☐ EXPRESS MAIL

ARTICLE NUMBER: P 267 162 633

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent

5. DATE OF DELIVERY — POSTMARK

6. ADDRESSEE'S ADDRESS *(Only if requested)*

7. UNABLE TO DELIVER BECAUSE: — 7a. EMPLOYEE'S INITIALS

PS Form 3811, Dec. 1980

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

● **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
   - ☒ Show to whom and date delivered ..... 60¢
   - ☐ Show to whom, date, and address of delivery.. ___¢
2. ☐ RESTRICTED DELIVERY ___¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $ .60

3. ARTICLE ADDRESSED TO:
Phillips Petroleum Company
4001 Penbrook
Odessa, TX. 79762

4. TYPE OF SERVICE:
☐ REGISTERED ☐ INSURED
☒ CERTIFIED ☐ COD
☐ EXPRESS MAIL

ARTICLE NUMBER: P 267 162 632

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent

5. DATE OF DELIVERY — POSTMARK

6. ADDRESSEE'S ADDRESS *(Only if requested)*

7. UNABLE TO DELIVER BECAUSE: — 7a. EMPLOYEE'S INITIALS

● SENDER: Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
- ☒ Show to whom and date delivered ..... 60¢
- ☐ Show to whom, date, and address of delivery.. ___¢
2. ☐ RESTRICTED DELIVERY ___¢
(*The restricted delivery fee is charged in addition to the return receipt fee.*)

TOTAL $.60

3. ARTICLE ADDRESSED TO:
ARCO
P. O. Box 1610
Midland, TX. 79702

4. TYPE OF SERVICE:
☐ REGISTERED ☐ INSURED
☒ CERTIFIED ☐ COD
☐ EXPRESS MAIL

ARTICLE NUMBER: P 267 162 638

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent

5. DATE OF DELIVERY | POSTMARK

6. ADDRESSEE'S ADDRESS (*Only if requested*)

7. UNABLE TO DELIVER BECAUSE: | 7a. EMPLOYEE'S INITIALS

PS Form 3811, Dec. 1980

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

● SENDER: Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
- ☒ Show to whom and date delivered ..... 60¢
- ☐ Show to whom, date, and address of delivery.. ___¢
2. ☐ RESTRICTED DELIVERY ___¢
(*The restricted delivery fee is charged in addition to the return receipt fee.*)

TOTAL $.60

3. ARTICLE ADDRESSED TO:
Scharbauer Cattle Co.
P. O. Box 1471
Midland, Texas 79702

4. TYPE OF SERVICE:
☐ REGISTERED ☐ INSURED
☒ CERTIFIED ☐ COD
☐ EXPRESS MAIL

ARTICLE NUMBER: P 267 162 639

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent

5. DATE OF DELIVERY | POSTMARK

6. ADDRESSEE'S ADDRESS (*Only if requested*)

7. UNABLE TO DELIVER BECAUSE: | 7a. EMPLOYEE'S INITIALS

PS Form 3811, Dec. 1980

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

● SENDER: Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
- ☒ Show to whom and date delivered ..... 60¢
- ☐ Show to whom, date, and address of delivery.. ___¢
2. ☐ RESTRICTED DELIVERY ___¢
(*The restricted delivery fee is charged in addition to the return receipt fee.*)

TOTAL $.60

3. ARTICLE ADDRESSED TO:
Bettis, Boyle, & Stovall
P. O. Box 1168
Graham, TX. 76046

4. TYPE OF SERVICE:
☐ REGISTERED ☐ INSURED
☒ CERTIFIED ☐ COD
☐ EXPRESS MAIL

ARTICLE NUMBER: P 267 162 637

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent

5. DATE OF DELIVERY | POSTMARK

6. ADDRESSEE'S ADDRESS (*Only if requested*)

7. UNABLE TO DELIVER BECAUSE: | 7a. EMPLOYEE'S INITIALS

PS Form 3811, Dec. 1980

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

● SENDER: Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
- ☒ Show to whom and date delivered ..... 60¢
- ☐ Show to whom, date, and address of delivery.. ___¢
2. ☐ RESTRICTED DELIVERY ___¢
(*The restricted delivery fee is charged in addition to the return receipt fee.*)

TOTAL $.60

3. ARTICLE ADDRESSED TO:
Chevron USA, Inc.
P. O. Box 1660
Midland, TX. 79702

4. TYPE OF SERVICE:
☐ REGISTERED ☐ INSURED
☒ CERTIFIED ☐ COD
☐ EXPRESS MAIL

ARTICLE NUMBER: P 267 162 636

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent

5. DATE OF DELIVERY | POSTMARK

6. ADDRESSEE'S ADDRESS (*Only if requested*)

7. UNABLE TO DELIVER BECAUSE: | 7a. EMPLOYEE'S INITIALS

OIL CONSERVATION DIVISION
DISTRICT I

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

DATE November 2, 1982

RE: Proposed MC
Proposed DHC
Proposed NSL
Proposed NSP
Proposed SWD
Proposed WFX
Proposed PMX X

Gentlemen:

I have examined the application for the:

Texaco Inc. Vacuum Grayburg SA Unit & Central Vacuum Unit (for wells see below)
Operator Lease and Well No. Unit, S - T - R

and my recommendations are as follows:

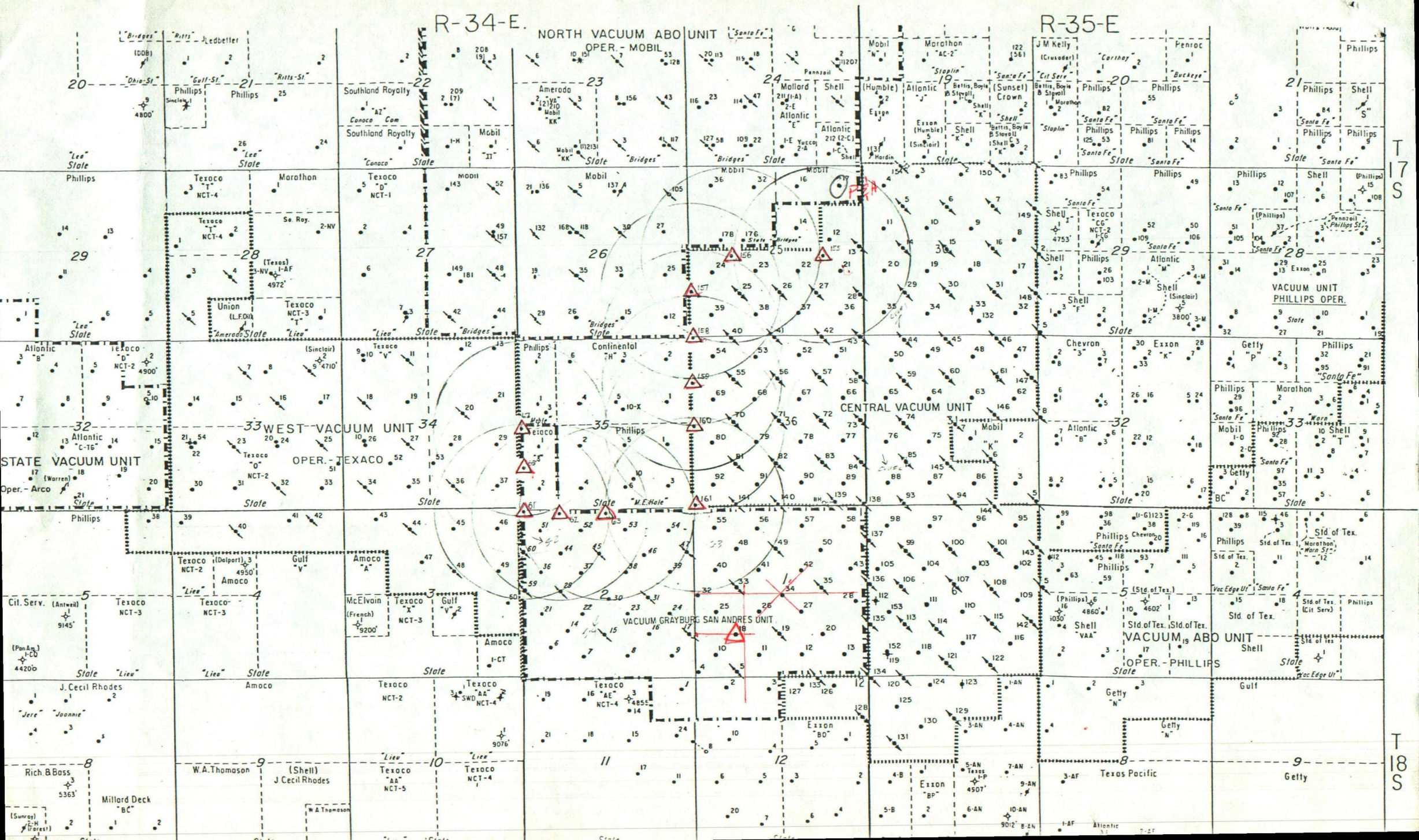
Vacuum Gray., SA Unit #18, 61, 62, 63, 65, & 67

Central Vacuum Unit #155, 156, 157, 158, 159, 160, 161

O.K.-----J.S.

Yours very truly,

/mc


R-34-E.
R-35-E
NORTH VACUUM ABO UNIT
OPER. - MOBIL
T 17 S
T 18 S
STATE VACUUM UNIT
Oper. - Arco
WEST VACUUM UNIT
OPER. - TEXACO
CENTRAL VACUUM UNIT
VACUUM GRAYBURG SAN ANDRES UNIT
VACUUM ABO UNIT
OPER. - PHILLIPS
VACUUM UNIT
PHILLIPS OPER.