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: American Petrofina Co. of Tex.

Address: P. O. Box 2990 Midland, TX 79702

Contact party: J. C. Chapman Phone: (915) 687-0575

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-3456.

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;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
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. C. Chapman Title Asst. Dist. Mgr. of Production

Signature: J. C. Chapman Date: 9-11-84

* 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.

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.

Application to Inject
Horton Federal Lease
Milnesand (San Andres) Field

III. See attached sheets, schematics and tabulation

V. Attached

VI. Well data on surrounding wells included in previous application by Amoco former operator on this project

VII. 1. Average injection rate will be 500 B/D with a maximum of 750 B/D.
2. The system is closed.
3. The proposed average injection pressure is 700 with a maximum of 900 psi.
4. Produced water will be injected.

VIII. Data was presented in original application

IX. No additional stimulation planned

X. Logs attached

XI. Chemical analysis of fresh water from 2 wells attached

XIII. "Proofs of Notice" attached

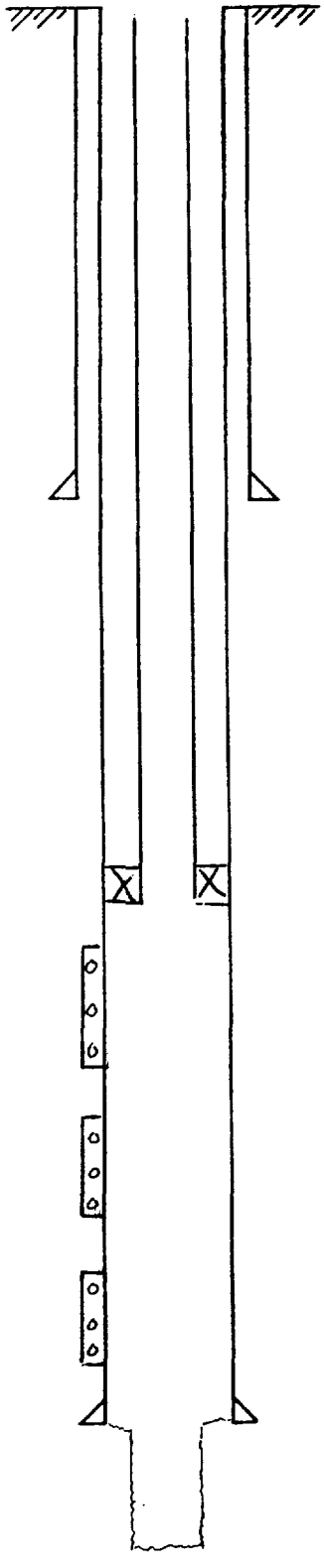
III. Well Data

B. Water will be injected into the San Andres formation in the Milnesand San Andres Field. These five wells were originally drilled as producers. No other oil or gas zones are present either above or below the San Andres. The injection tubing for all injection wells will be plastic lines.

FIELD	OPERATOR	DATE OF WELL STATUS
Milnesand (SA)	APCOT	8-22-84

LEASE NAME	WELL NO.	WELL LOCATION
Horton Federal	2	UNIT LETTER 330 FEET FROM North LINE AND 1650 FEET FROM West LINE.SEC 30 T R

MEASUREMENT DATUM ELEV. 4218 (GL-~~KB~~) TOTAL DEPTH 4737' PBTD None



9-5/8", 32.3 # casing cmt'd @ 408 ft. with 200 sx cmt.
Hole size 12-1/4", Top of cmt. Outside casing @ 0 ft.
How top of cmt determined circulated.

Perforated interval(s) 4625-36'
4645-50', 4662-76', (2spf)

Open Hole interval 4689-4737'
2 3/8", 4.7 # tbg @ 4535 ft. Pkr
@ 4535'

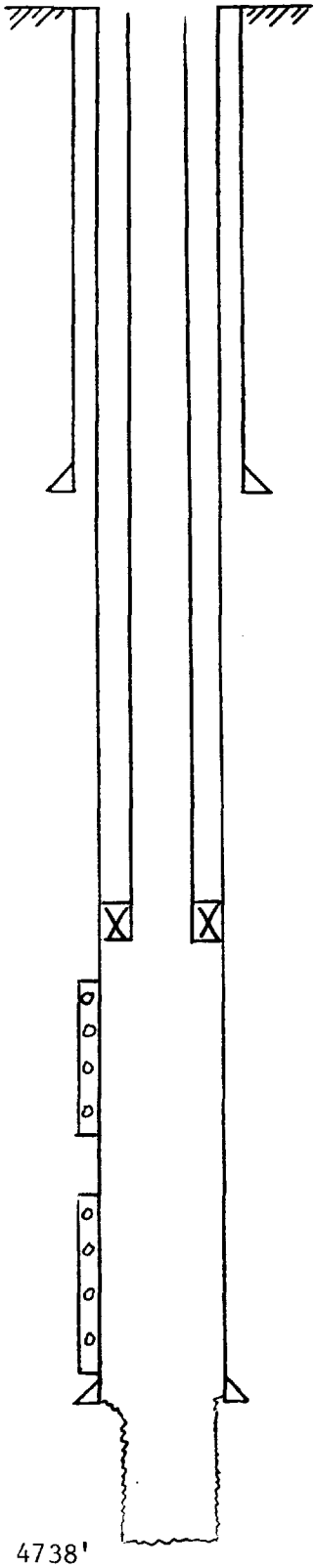
4-1/2", 9.5# casing cmt'd @ 4689 ft with 200 sx cmt.
Hole size 7-7/8". Top of cmt outside casing @ 3811 ft.
How top of cmt determined Calculated.

TD 4737'

FIELD	OPERATOR	DATE OF WELL STATUS
Milnesand (SA)	APCOT	8-22-84

LEASE NAME	WELL NO.	WELL LOCATION
Horton Federal	5	UNIT LETTER 1650 FEET FROM North LINE AND 2244 FEET FROM East LINE. SEC 30 T R

MEASUREMENT DATUM ELEV. 4214 (GL-~~DF~~-~~KB~~) TOTAL DEPTH 4738 PBTD None



8-5/8", 24 # casing cmt'd @ 423 ft. with 200 sx cmt.
Hole size 11, Top of cmt. Outside casing @ 0 ft.
How top of cmt determined circulated.

Perforated interval(s) 4656-74'
4675-85'

Open Hole interval 4685-4738'
2-3/8", 4.7 # tbg @ 4566 ft. Pkr @ 4566'

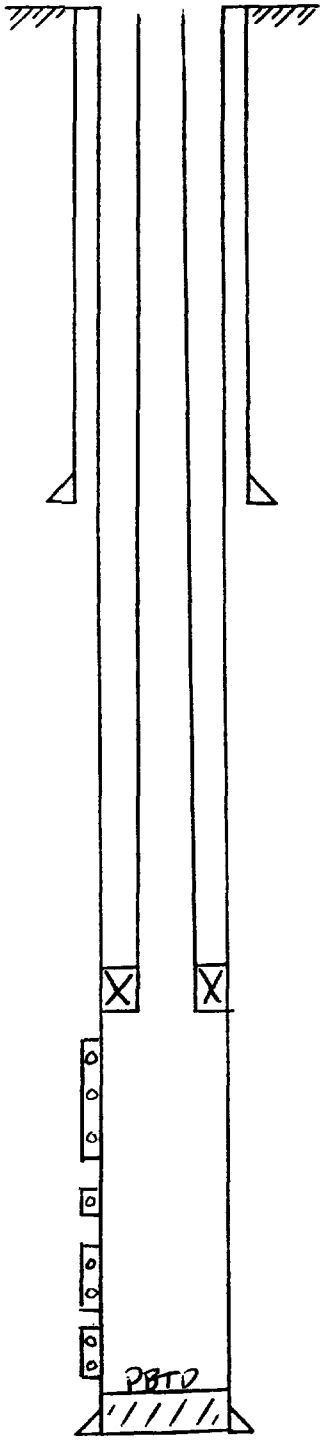
4-1/2", 9.5# casing cmt'd @ 4686 ft with 200 sx cmt.
Hole size 7-7/8". Top of cmt outside casing @ 3808 ft.
How top of cmt determined Calculated.

TD 4738'

FIELD	OPERATOR	DATE OF WELL STATUS
Milnesand (SA)	APCOT	8-22-84

LEASE NAME	WELL NO.	WELL LOCATION
Horton Federal	10	UNIT LETTER 330 FEET FROM North LINE AND 921.3 FEET FROM East LINE.SEC 30 T R

MEASUREMENT DATUM ELEV. 4214' (GL-~~DF KB~~) TOTAL DEPTH 4766' PBTD 4764'



8-5/8", 24 # casing cmt'd @ 405 ft. with 250 sx cmt.
Hole size 12-1/4", Top of cmt. Outside casing @ 0 ft.
How top of cmt determined Circulated.

Perforated interval(s) 4644-84'
4687', 4693-98', 4718-41'

Open Hole interval none
2-3/8", 4.7 # tbg @ 4554 ft. Pkr @ 4554'

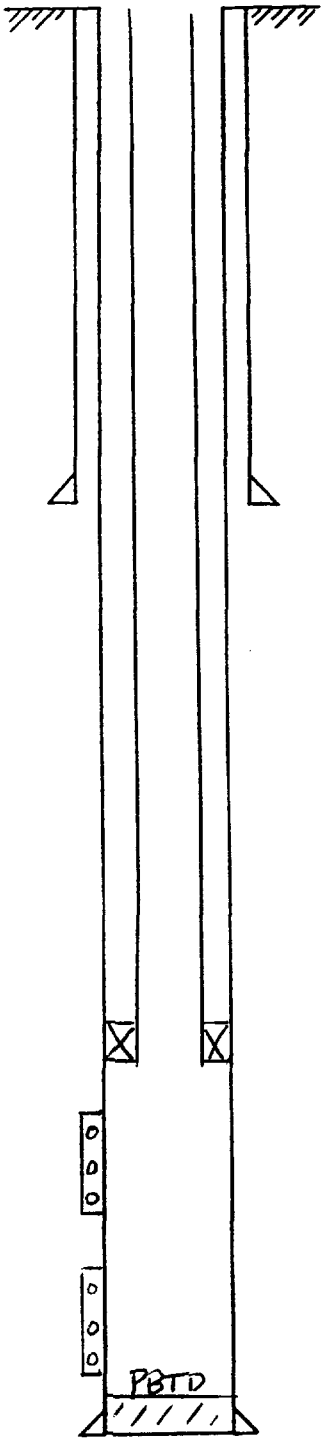
4-1/2", 9.5# casing cmt'd @ 4764' ft with 250 sx cmt.
Hole size 7-7/8". Top of cmt outside casing @ 3667 ft.
How top of cmt determined Calculated.

TD 4766'

FIELD	OPERATOR	DATE OF WELL STATUS
Milnesand (SA)	APCOT	8-22-84

LEASE NAME	WELL NO.	WELL LOCATION
Horton Federal	18	UNIT LETTER 1650.5 FEET FROM North LINE AND 330 FEET FROM West LINE.SEC 29 T R

MEASUREMENT DATUM ELEV. 4207' (GL~~xDF~~KB) TOTAL DEPTH 4770' PBTD 4768'



8-5/8", 24 # casing cmt'd @ 395 ft. with 250 sx cmt.
Hole size 12-1/4", Top of cmt. Outside casing @ 0 ft.
How top of cmt determined Circulated.

Perforated interval(s) 4662-96'
4718-42'

Open Hole interval none
2-3/8", 4.7 # tbg @ 4572 ft. Pkr @ 4572'

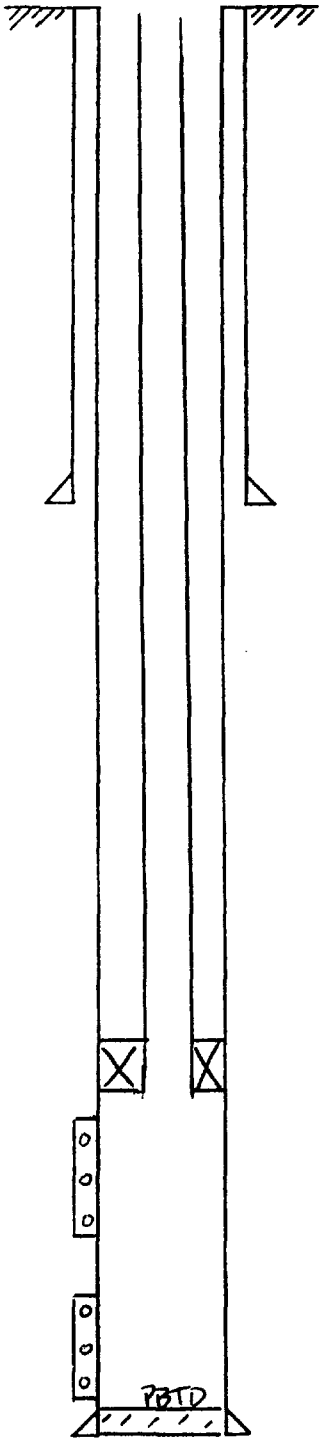
4-1/2", 9.5# casing cmt'd @ 4770 ft with 250 sx cmt.
Hole size 7-7/8" Top of cmt outside casing @ 3672 ft.
How top of cmt determined Calculated.

TD 4770'

FIELD	OPERATOR	DATE OF WELL STATUS
Milnesand (SA)	APCOT	8-22-84

LEASE NAME	WELL NO.	WELL LOCATION
Horton Federal	34	UNIT LETTER 2280 FEET FROM South LINE AND 865 FEET FROM East LINE.SEC 30 T R

MEASUREMENT DATUM ELEV. 4212' (GL-~~DF~~KB) TOTAL DEPTH 4800' PBTD 4775'



8-5/8", 24 # casing cmt'd @ 400 ft. with 250 sx cmt.
Hole size 12-1/4", Top of cmt. Outside casing @ 0 ft.
How top of cmt determined Circulated.

Perforated interval(s) 4670-4706'
4720-48'

Open Hole interval none
2-3/8", 4.7 # tbg @ 4580 ft. Pkr @ 4580'

5-1/2", 15.5# casing cmt'd @ 4800 ft with 1825 sx cmt.
Hole size 7-7/8" Top of cmt outside casing @ 0 ft.
How top of cmt determined Circulated.

TD 4800'

Offset Operators

Union Texas Petroleum
4000 N. Big Spring, Ste 500
Midland, TX 79702

Mobil Producing Texas & New Mexico
Box 633
Midland, TX 79702

Sun Exploration and Production Co.
Box 1861
Midland, TX 79702

Texaco Inc.
Box 3109
Midland, TX 79701

Arco Oil & Gas Company
Box 1610
Midland, TX 79702

R. C. Hanks
Rt. 4 Box 206
Tano Road
Santa Fe, N.M. 87511

T. L. Ingram
Box 1757
Roswell, N. M. 88201

Ronadero
Box 430
Roswell, N. M. 88201

Amoco
Box 68
Hobbs, N. M. 88240

Surface Owners

Vernon B. Rogers
4613 Bermuda
San Angelo, TX 76904

Mac Ainsworth
General Delivery
Milnesand, N. M. 88125

P 592 681 992

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to R.C. Hanks	
Street and No. Rt 4 Box 206 Tano Road	
P.O., State and ZIP Code Santa Fe, N.M. 87511	
Postage	$ .37
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$ 1.12
Postmark or Date 9-5-84	

* U.S.G.P.O. 1983-403-517
PS Form 3800, Feb. 1982

P 592 681 989

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Vernon B. Rogers	
Street and No. 4613 Bermuda	
P.O., State and ZIP Code San Angelo, Tx 76904	
Postage	$ .20
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$ .95
Postmark or Date 8-31-84	

* U.S.G.P.O. 1983-403-517
PS Form 3800, Feb. 1982

P 592 681 985

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Mobil Producing Tx & N.M.	
Street and No. Box 633	
P.O., State and ZIP Code Midland, Tx 79702	
Postage	$ .37
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$ 1.12
Postmark or Date 8 31-84	

* U.S.G.P.O. 1983-403-517
PS Form 3800, Feb. 1982

P 592 681 980

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Amoco	
Street and No. Box 68	
P.O., State and ZIP Code Hobbs, NM 88240	
Postage	$ .37
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$ 1.12
Postmark or Date 8-31-84	

* U.S.G.P.O. 1983-403-517
PS Form 3800, Feb. 1982

P 592 681 987

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

★ U.S.G.P.O. 1983-403-517

Sent to J. L. Ingram	
Street and No. Box 1757	
P.O., State and ZIP Code Roswell, NM 88201	
Postage	$ .37
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$ 1.12
Postmark or Date 8-31-84	

PS Form 3800, Feb. 1982

P 592 681 982

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

★ U.S.G.P.O. 1983-403-517

Sent to Oxo O & D	
Street and No. Box 1610	
P.O., State and ZIP Code Midland 02	
Postage	$ .37
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$ 1.12
Postmark or Date 8-31-84	

PS Form 3800, Feb. 1982

P 592 681 990

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

★ U.S.G.P.O. 1983-403-517

Sent to Mac Ainsworth	
Street and No. General Delivery	
P.O., State and ZIP Code Milnesand, NM 88125	
Postage	$ .20
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$ .95
Postmark or Date 8-31-84	

PS Form 3800, Feb. 1982

P 592 681 984

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Sun Exploration	
Street and No. Box 1861	
P.O., State and ZIP Code Midland, Tx 02	
Postage	$ .37
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$ 1.12
Postmark or Date	8-31-84

PS Form 3800, Feb. 1982 * U.S.G.P.O. 1983-403-517

P 592 681 986

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Union Texas Petro.	
Street and No. 4000 W. Big Spring	
P.O., State and ZIP Code Midland Tx 79702	
Postage	$ .37
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom Date, and Address of Delivery	
TOTAL Postage and Fees	$ 1.12
Postmark or Date	8-31-84

PS Form 3800, Feb. 1982 * U.S.G.P.O. 1983-403-517

P 592 681 981

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Ranadero	
Street and No. Box 430	
P.O., State and ZIP Code Roswell	
Postage	$ .37
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$ 1.12
Postmark or Date	8-31-84

PS Form 3800, Feb. 1982 * U.S.G.P.O. 1983-403-517

P 592 681 983

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Texaco, Inc.	
Street and No. Box 3109	
P.O., State and ZIP Code Midland, Tx 01	
Postage	$ .37
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$ 1.12
Postmark or Date	8-31-84

PS Form 3800, Feb. 1982 * U.S.G.P.O. 1983-403-517

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

WATER ANALYSIS REPORT

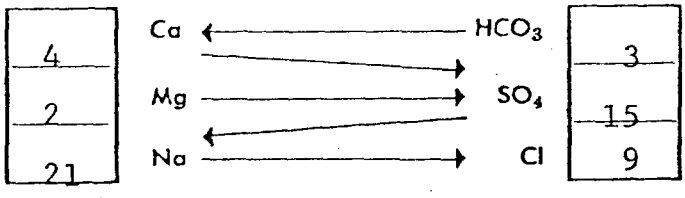
COMPANY American Petrofina ADDRESS Hobbs, NM. DATE: 9-8-84

SOURCE Windmill North East of Inj. Plant DATE SAMPLED 9-8-84 ANALYSIS NO.

Analysis	Mg/L		*Meq/L	
1. pH	7.6			
2. H_2S (Qualitative)	Neg.			
3. Specific Gravity	1.000			
4. Dissolved Solids	1528			
5. Suspended Solids	0			
6. Phenolphthalein Alkalinity ($CaCO_3$)	0			
7. Methyl Orange Alkalinity ($CaCO_3$)	150			
8. Bicarbonate (HCO_3)	HCO_3 183	÷61	3	HCO_3
9. Chlorides (Cl)	Cl 334	÷35.5	9	Cl
10. Sulfates (SO_4)	SO_4 750	÷48	15	SO_4
11. Calcium (Ca)	Ca 80	÷20	4	Ca
12. Magnesium (Mg)	Mg 24	÷12.2	2	Mg
13. Total Hardness ($CaCO_3$)	300			
14. Total Iron (Fe)				
15. Barium (Qualitative)				
16. Strontium				

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



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

Compound	Equiv. Wt.	X Meq/L =	Mg/L
$Ca(HCO_3)_2$	81.04	3	243
$CaSO_4$	68.07	1	68
$CaCl_2$	55.50	0	0
$Mg(HCO_3)_2$	73.17	0	0
$MgSO_4$	60.19	2	120
$MgCl_2$	47.62	12	571
$NaHCO_3$	84.00	0	0
Na_2SO_4	71.03	0	0
NaCl	58.46	9	529

REMARKS

Thank You

Gale Blackwell

Respectfully submitted
TRETOLITE COMPANY

K-23 BF 8-80

PETROLITE CORPORATION

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

WATER ANALYSIS REPORT

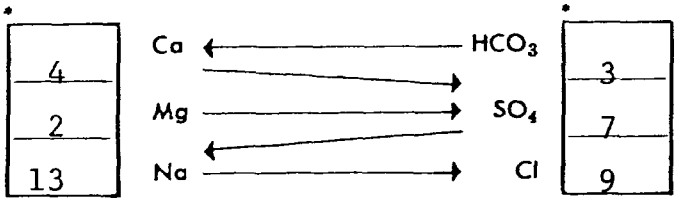
COMPANY American Petrofina ADDRESS Hobbs, NM. DATE: 9-8-84

SOURCE Windmill East of Inj. Plant DATE SAMPLED _____ ANALYSIS NO. _____

Analysis		Mg/L		*Meq/L	
1. pH	7.3				
2. H_2S (Qualitative)	Neg.				
3. Specific Gravity	0.955				
4. Dissolved Solids		955			
5. Suspended Solids		0			
6. Phenolphthalein Alkalinity ($CaCO_3$)		0			
7. Methyl Orange Alkalinity ($CaCO_3$)		140			
8. Bicarbonate (HCO_3)	HCO_3	170	÷61	3	HCO_3
9. Chlorides (Cl)	Cl	312	÷35.5	9	Cl
10. Sulfates (SO_4)	SO_4	350	÷48	7	SO_4
11. Calcium (Ca)	Ca	80	÷20	4	Ca
12. Magnesium (Mg)	Mg	19	÷12.2	2	Mg
13. Total Hardness ($CaCO_3$)		280			
14. Total Iron (Fe)					
15. Barium (Qualitative)					
16. Strontium					

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equiv. Wt.	X	Meq/L	=	Mg/L
$Ca(HCO_3)_2$	81.04		3		243
$CaSO_4$	68.07		1		68
$CaCl_2$	55.50		0		0
$Mg(HCO_3)_2$	73.17		0		0
$MgSO_4$	60.19		2		120
$MgCl_2$	47.62		0		0
$NaHCO_3$	84.00		0		0
Na_2SO_4	71.03		0		0
NaCl	58.46		9		526

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 Thank You

Gale Blackwell

Respectfully submitted
TRETOLITE COMPANY

							SURFACE CASING					PRODUCTION CASING						Tubing		Setting	Packer		Packe
Lease Name	Well NO.	Sec.	Twp.	Range	Footage	Location	Size	Depth	SKS Cmt.	Hole Size	Top Cmt	How Det.	Size	Depth	SKS CMT	Hole Size	Top CMT	How Det	Size	Lining	Depth	Name	Model	Depth
Horton Federal	2	30	8-S	35-E	330 FNL	1650 FWL	9 5/8	408	200	12 1/4	Surf.	Circ.	4 1/2	4689	200	7 7/8	3811	Calc.	2 3/8	Plastic	4535	Watson	J-Lock	4535
	5	30	8-S	35-E	1650 FNL	2244 FEL	8 5/8	423	200	11	Surf,	Circ.	4 1/2	4686	200	7 7/8	3808	Calc.	2 3/8	Plastic	4566	Watson	J-Lock	4566
	10	30	8-S	35-E	330 NFL	921 FEL	8 5/8	405	250	12 1/4	Surf.	Circ.	4 1/2	4764	250	7 7/8	3667	Calc.	2 3/8	Plastic	4554	Watson	J-Lock	4554
	18	29	8-S	35-E	1650 FNL	330 FWL	8 5/8	395	250	12 1/4	Surf.	Circ.	4 1/2	4770	250	7 7/8	3672	Calc.	2 3/8	Plastic	4572	Watson	J-Lock	4572
	34	30	8-S	35-E	228 FSL	865 FEL	8 5/8	400	250	12 1/4	Surf.	Circ.	5 1/2	4800	1825	7 7/8	Surf.	Circ.	2 3/8	Plastic	4580	Watson	J-Lock	4580

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

Operator	Lease	Well No.
AMERICAN PETROFINA OF TEXAS	HORTON FED.	36

Unit Letter	Section	Township	Range	County
B	30	8S	35E	ROOSEVELT

Actual Footage Location of Well:
990 feet from the NORTH line and 1581 feet from the EAST line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
4211.9	San Andres	Milnesand	40 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

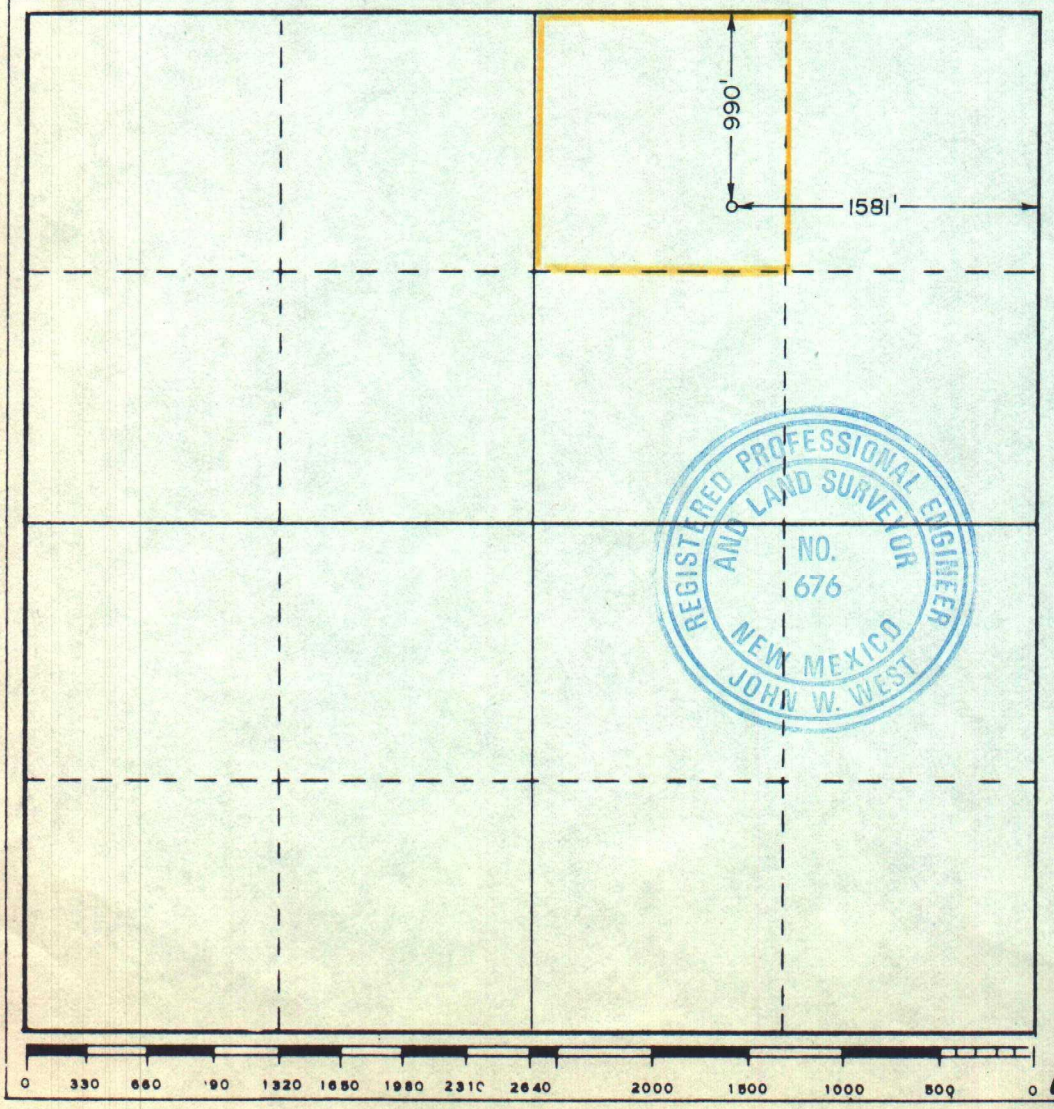
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

J. C. Chapman

Name: J. C. Chapman

Position: Ast. Dist. Prod. Mgr.

Company: American Petrofina Co. of Tx

Date: 8-24-84

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed: 8/14/84

Registered Professional Engineer and/or Land Surveyor

John W. West

Certificate No. JOHN W. WEST, 676
RONALD J. EIDSON, 3239

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

Operator	Lease	Well No.
AMERICAN PETROFINA OF TEXAS	HORTON FED.	37

Unit Letter	Section	Township	Range	County
A	30	8S	35E	ROOSEVELT

Actual Footage Location of Well:
990 feet from the NORTH line and 295 feet from the EAST line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
4208.3	San Andres	Milnesand	40 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

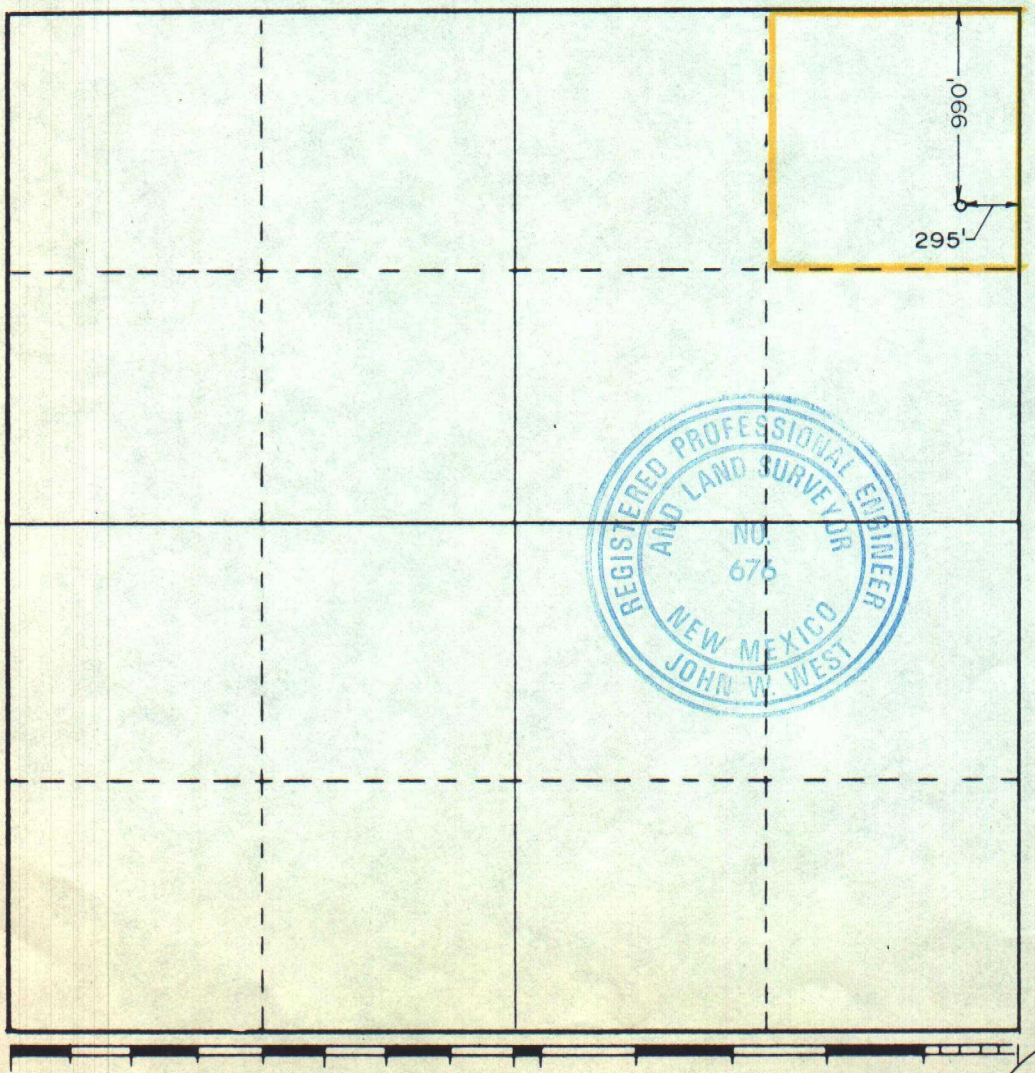
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

J. C. Chapman

Name: J.C. Chapman

Position: Ast. Dist. Prod. Mgr.

Company: American Petrofina Co. of Tx

Date: 8-24-84

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed: 8/14/84

Registered Professional Engineer and/or Land Surveyor

John W West

Certificate No. JOHN W. WEST, 676
RONALD J. EIDSON, 3239

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

Operator	Lease	Well No.
AMERICAN PETROFINA OF TEXAS	HORTON FED.	38

Unit Letter	Section	Township	Range	County
H	30	8 SOUTH	35 EAST	ROOSEVELT

Actual Footage Location of Well:
2305 feet from the NORTH line and 285 feet from the EAST line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
4214.3	San Andres	Milnesand	40 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

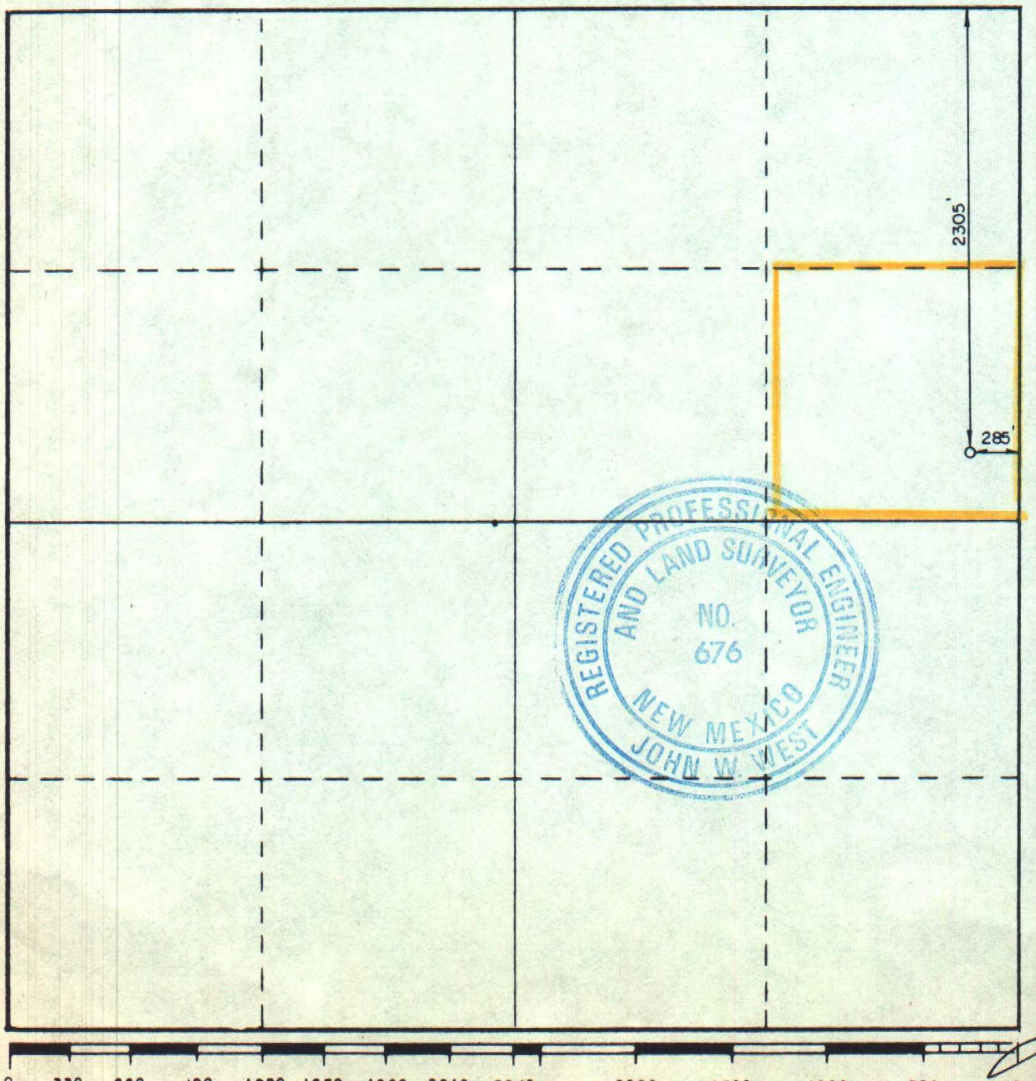
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Name: J C Chapman

Position: Asst. Dist. Mgr. of Production

Company: American Petrofina Co. of Tex

Date: 8-24-84

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed: AUGUST 15, 1984

Registered Professional Engineer and/or Land Surveyor

John W West

Certificate No. JOHN W. WEST, 676
RONALD J. EIDSON, 3239

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

Operator	Lease	Well No.
AMERICAN PETROFINA OF TEXAS	HORTON FEDERAL	39

Unit Letter	Section	Township	Range	County
G	30	8 SOUTH	35 EAST	ROOSEVELT

Actual Footage Location of Well:
2320 feet from the NORTH line and 1550 feet from the EAST line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
4212.6	San Andres	Milnesand	40 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

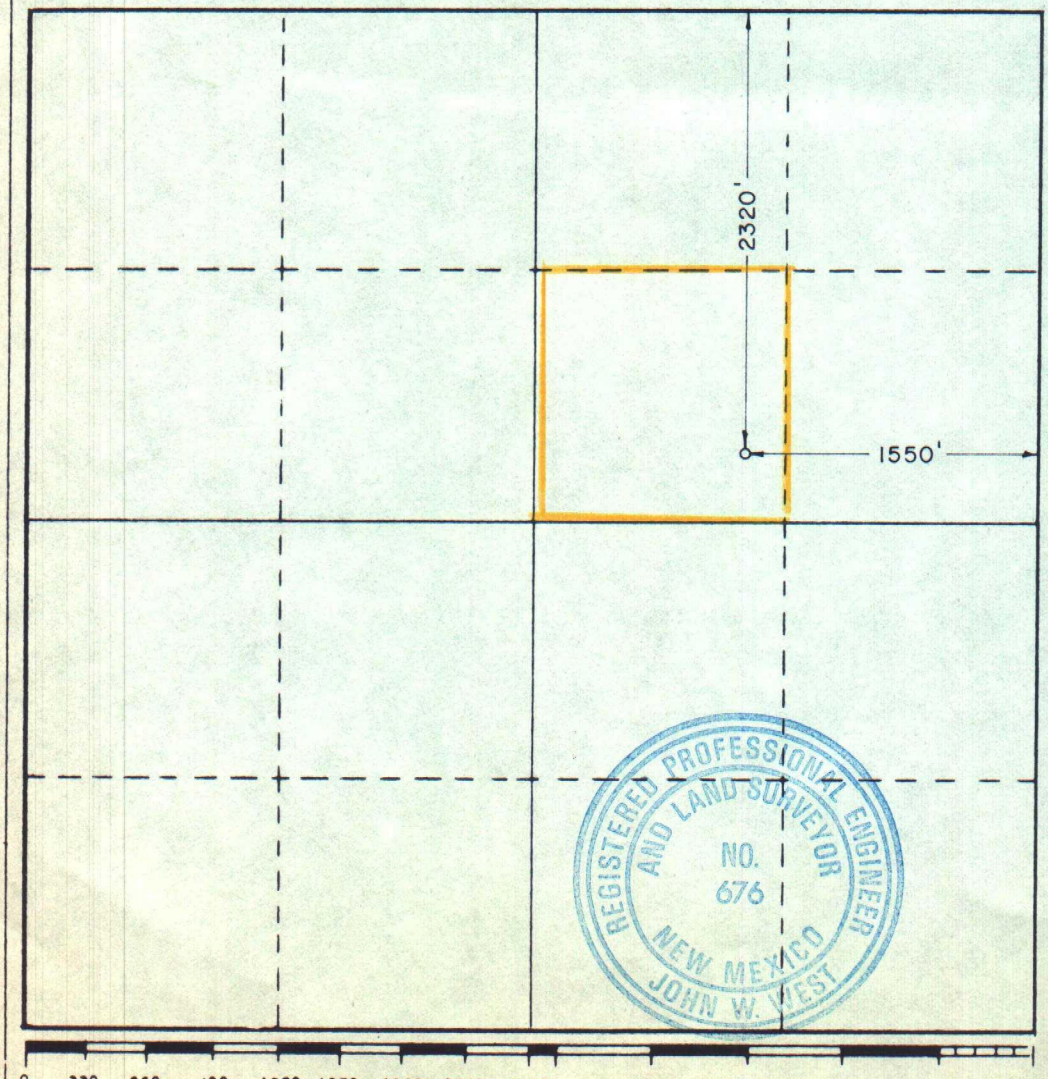
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Name: J C Chapman

Position: Asst. Dist. Mgr. of Production

Company: American Petrofina Co. of Tex

Date: 8-24-84

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
AUGUST 17, 1984

Registered Professional Engineer and/or Land Surveyor

John W West

Certificate No. JOHN W. WEST, 676
RONALD J. EIDSON, 3239

AMERICAN PETROFINA COMPANY OF TEXAS

POST OFFICE BOX 2990 MIDLAND, TEXAS 79702-2990

August 28, 1984

1004 N. BIG SPRING ST.
DINERO PLAZA, SUITE 4
(915) 687-0575

State of New Mexico
Energy and Mineral Department
Oil Conservation Division
Box 2088
Sante Fe, New Mexico

~~NSL-1628~~
WFX-533

Gentlemen:

Re: Conversion of 5 Producing Wells to Injection and 4 Unorthodox Locations
Horton Federal Lease, Milnesand-Horton Waterflood
Roosevelt County, New Mexico

American Petrofina Co. of Texas requests administrative approval to convert our Horton Federal Wells Nos. 2, 5, 10, 18 and 34 to injection in our Milnesand-Horton Waterflood Project. The subject Wells will be converted in order to increase crude recovery and production. Well No. 2 is located 330 FNL and 1650 FWL, Sec. 30, T-8-S, R-35-E; Well No. 5 is located 1650 FNL and 2244 FEL, Sec. 30, T-8-S, R-35-E; Well No. 10 is located 330 FNL, 921.3 FEL, Sec. 30, T-8-S, R-35-E; Well No. 18 is located 1650.5 FNL, 330 FWL, Sec. 29, T-8-S, R-35-E; and Well No. 34 is located 2280 FNL, 865 FEL, Sec. 30, T-8-S, R-35-E.

Administrative approval is also requested to drill 4 producers at unorthodox locations. They are No. 36 located 990 FNL, 1581 FEL, Sec. 30, T-8-S, R-35-E; No. 37 located 990 FNL, 295 FEL, Sec. 30, T-8-S, R-35-E; No. 38 located 2305 FNL, 285 FEL, Sec. 30, T-8-S, R-35-E and No. 39 located 2320 FNL, 1550 FEL, Sec. 30, T-8-S, R-35-E.

These wells are located so as to form an orderly 5-spot flood pattern.

Plats of the new producers are attached along with well bore sketches of the proposed conversion wells, and a map of the over all pattern. Tabulations of wells within 1/2 mile are not included as this information was submitted when the older injection wells were proposed. A map of the ultimate pattern and logs of the conversion wells are also included. Notice to the following list of offset operators has been mailed this date.

Very truly yours,

Ronald E. Smelley
Drilling and Production Manager

JCC:dlh

attachments

AMERICAN PETROFINA COMPANY OF TEXAS

ENGINEERING CHART

SHEET NO. _____ OF _____

FILE _____

DATE 7-24-84

BY _____

Horton Federal Unit #16

Roosevelt County, New Mexico

330' FNL x 330' FEL, Sec. 31 (Unit A, NE/4 NE/4)

KB = 4219'
GL = 4208'

410'

8 5/8" 24# J-55 csg @ 410' (11" hole)
w/ 250 sx cmt circulated

must replug!

No show of O & G Plugged & Abandoned

4700'

4750'

Bridge plugs @ 4700' & 4750'

4 1/2" 9.5# J-55 csg @ 4808' (7 7/8" hole)
w/ 250 sx cmt.

TD 4808'

Perfs (2 spf):

ZONE A: 4765-84'
ZONE B: 4706-12'
ZONE C: 4676-92'

Stimulation (9-15-64):

each zone individually acidized w/ 750 gal

AMERICAN PETROFINA COMPANY OF TEXAS

ENGINEERING CHART

SHEET NO. _____ OF _____

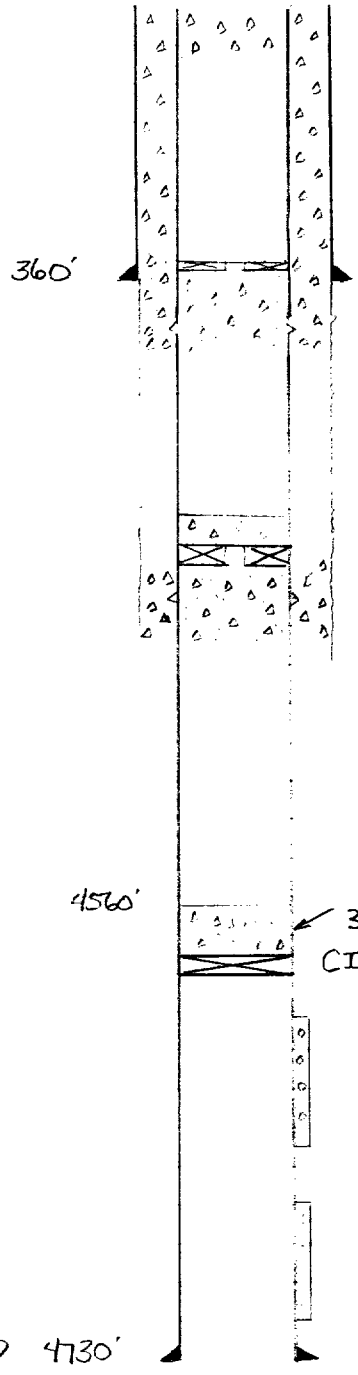
FILE _____

DATE 10-3-84

BY _____

Union Texas Petroleum; Milnesand (SA) Unit

Sec 15, Unit N, T8S, R35E; Roosevelt County, NM



set 50' cement slug @ surface

8 5/8" 24# CSA 360' (12¼" hole)
w/ 225 sx 2% CaCl

Perf @ 420'. Set cmt retainer @ 320'. Circulated cement to surface

Perf @ 2235'. Set cement retainer @ 2135'. Squeezed w/ 30 sx Class "C". Dumped 10' on top retainer

35' cement on top BP
CIBP set @ 4595'

4½" 10.5# CSA 4730' (7⅞" hole)
w/ 200 sx

Perfs:

4646-86'
4702-14'

AMERICAN PETROFINA COMPANY OF TEXAS

ENGINEERING CHART

SHEET NO. _____ OF _____

FILE _____

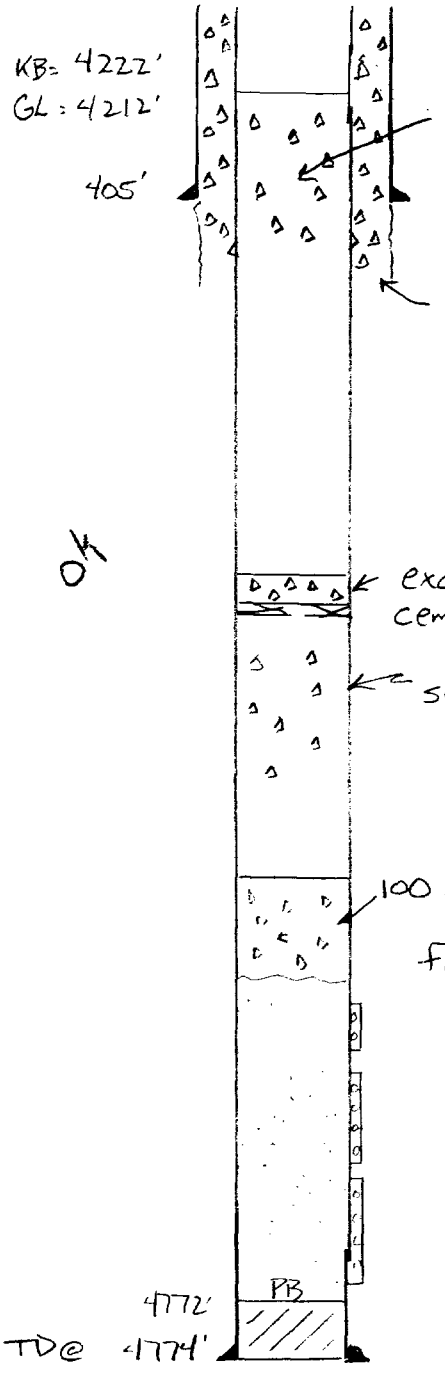
DATE _____

BY _____

Horton Federal #17; Roosevelt Cty, NM

2310' FSL x 929' FEL (Unit I, NE/4, SE/4)

Sec. 30 T-8-S, R-34-E



KB: 4222'
GL: 4212'

405'

4772'
TD @ 4774'

PB

top of class "C" Plug @ ±300'

8 5/8" 24# CSA 405' (11" hole) w/ 250 sx (circulated)

Perf 4½" csg @ 460'. Circulated 150 sx Class "C" bet 4½" & 8⅝" csg.

OK

excess Class C cement retainer @ 2350'

squeezed parted 4½" casing w/ 500 sx class C Neat

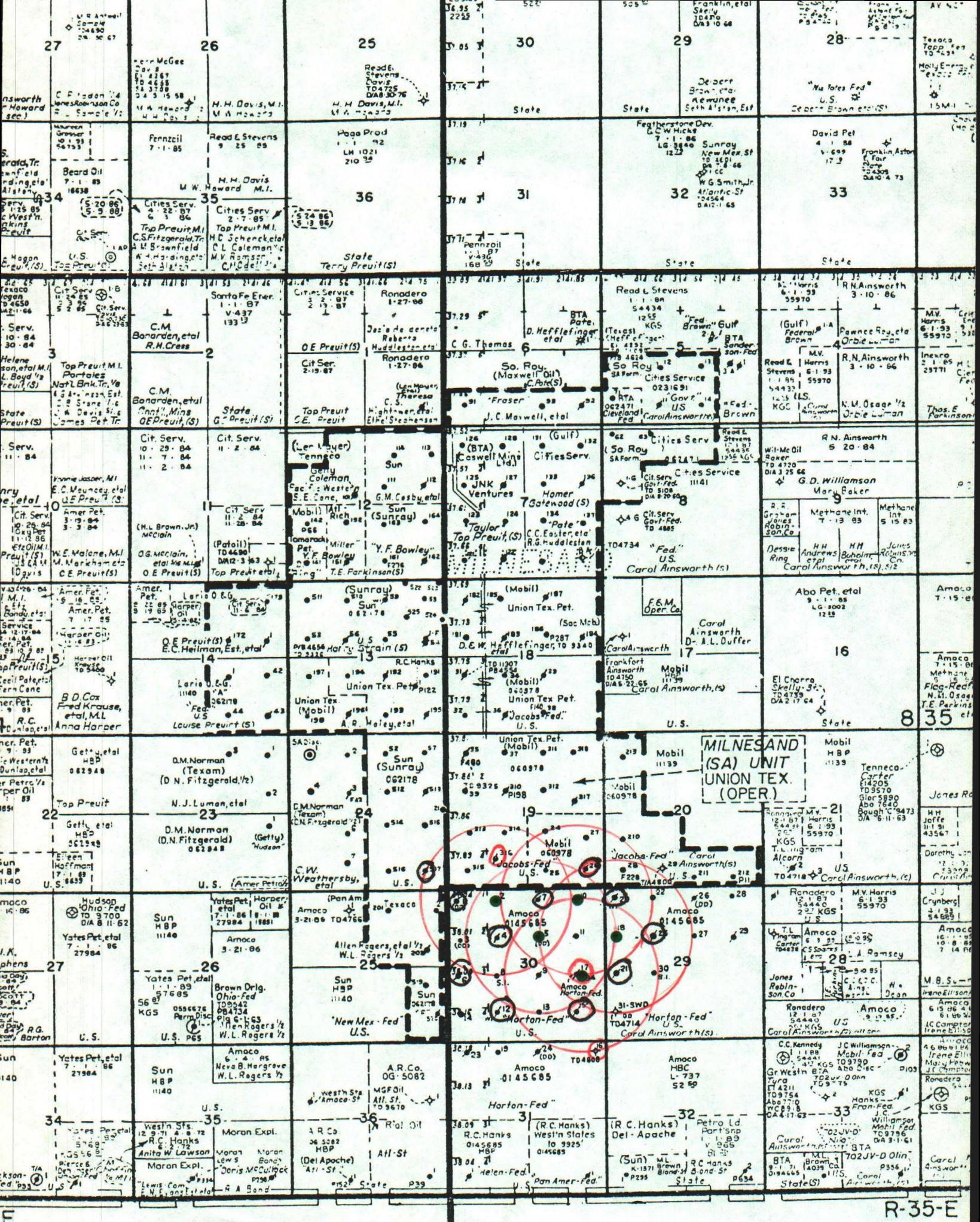
100 sx class "C" Neat

fill @ 4040'

4½" 9.5# J-55 CSA 4774' (7⅞" hole) w/ 250 sx

Perfs:

4664 - 74'
4674 - 84'
4684 - 4700'
4723 - 46'


MILNESAND (SA) UNIT UNION TEX. (OPER)
R-35-E

AMERICAN PETROFINA COMPANY OF TEXAS

POST OFFICE BOX 2990 MIDLAND, TEXAS 79702-2990

1004 N. BIG SPRING ST.
DINERO PLAZA, SUITE 4
(915) 687-0575

October 3, 1984

Energy and Minerals Department
Oil Conservation Division
Box 2088
Santa Fe, New Mexico 87501

WFX-533

Attention: Mr. Gilbert Quintana

Reference: Horton Federal Lease
Milnesand San Andres Field
Roosevelt County, N.M.

Gentlemen:

As requested, we attached herewith, schematics of wells plugged in the area within ½ mile of proposed injection wells Horton Federal No.'s 2, 5, 10, 18 and 34.

Plugged Wells within ½ mile of No. 2	Union Texas Milnesand Unit #316 (See Attached)
Plugged Wells within ½ mile of No. 5	American Petrofina Horton Federal #17 (See Attached)
Plugged Wells within ½ mile of No. 10	American Petrofina Horton Federal #17 (See Attached)
Plugged Wells within ½ mile of No. 18	American Petrofina Horton Federal #17 (See Attached)
Plugged Wells within ½ mile of No. 34	American Petrofina Horton Federal #16 & 17

Please advise if you need any additional information.

Very truly yours,

J. C. Chapman

JCC:ft
Attachments

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

September 19, 1984

TONEY ANAYA
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

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

RE: Proposed:
MC_____
DHC_____
NSL_____
NSP_____
SWD_____
WFX X
PMX_____

Gentlemen:

I have examined the application for the:

American Petrofina Co. of Texas — Milnesand Horton Waterflood project (5 wells)
Operator — Lease & Well No. Unit S-T-R

and my recommendations are as follows:

Need schematic of P/A Wells

Yours very truly,

Jerry Sexton
Supervisor, District 1

/mc

I called Mr. Chapman on Sept. 26, 1984. Wasn't in! Left message with the Secretary

New information arrived OCT. 5, 1984. Looks good!
gpp.

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