

KAN AMERICAN TEL.

FEDERAL "A" NO. 2

Unit "G", Sec. 14, T9S, R35E

Exhibit XVII

10 sx. plug - surface

10³/₄" @ 440' w/ 500 sxs.

TOL 4157'

20 sx. plug

7⁵/₈" @ 4267' w/ 1700 sxs.

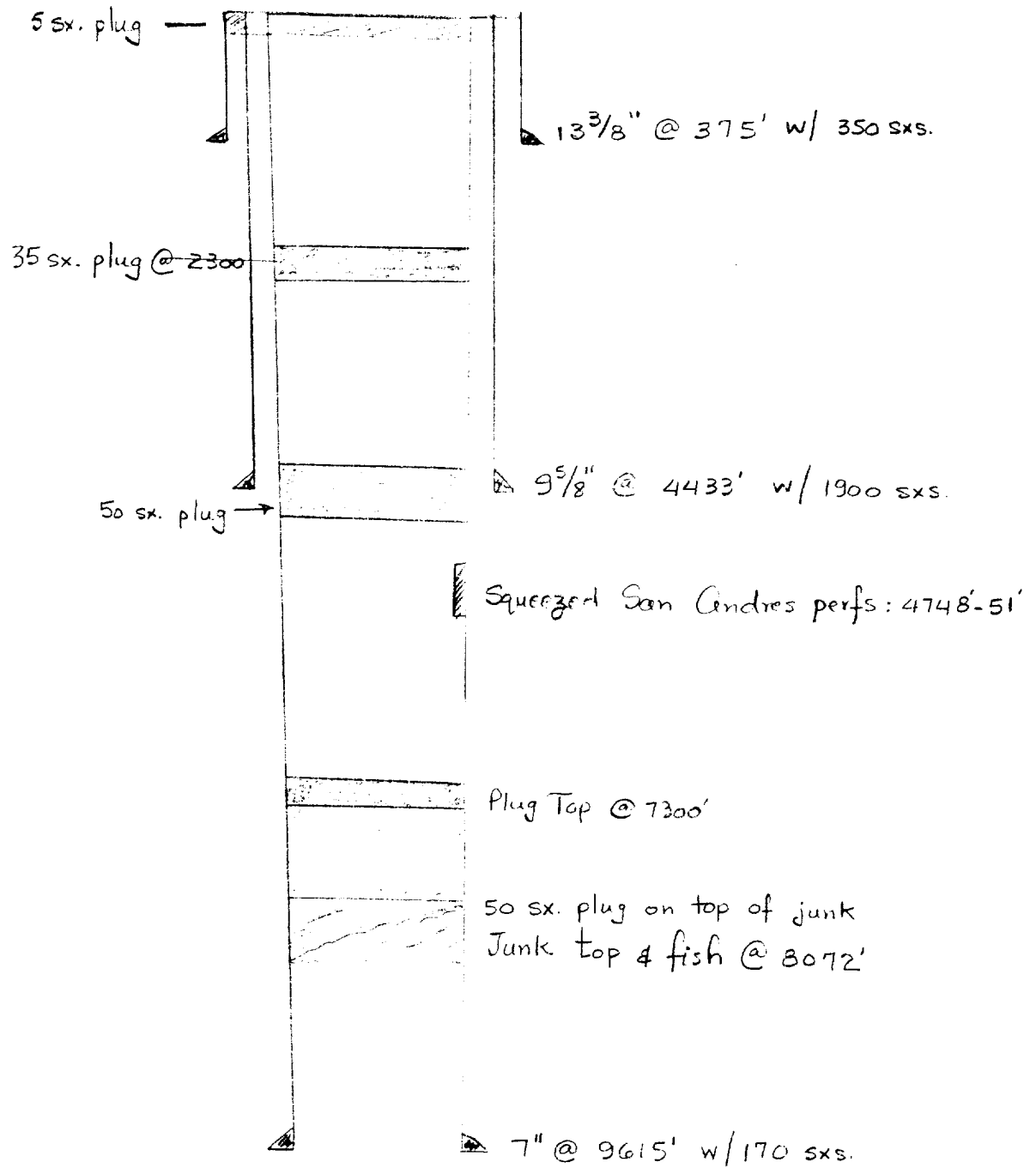
Cement plug 4830-4600'

4810'-20' Squeezed SA perfs

Bough 'C' perfs: 9563'-? - Squeezed

5¹/₂" Liner @ 9570' w/ 1450 sxs.

OH TD 9639'



4748'-51'

8072'

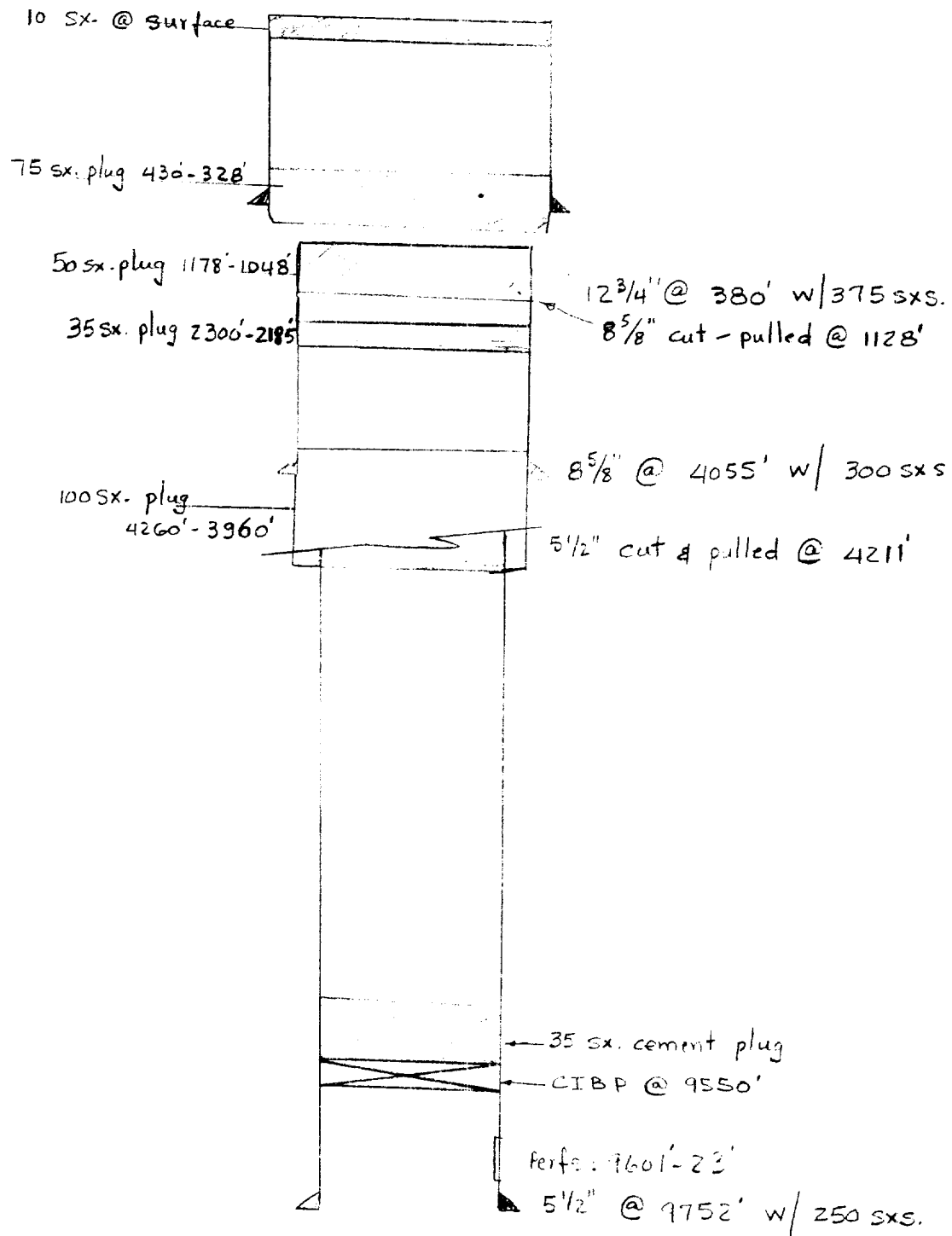
7300'
7072' 10'

LYTON ENTERPRISES

BETENBOUGH NO 4

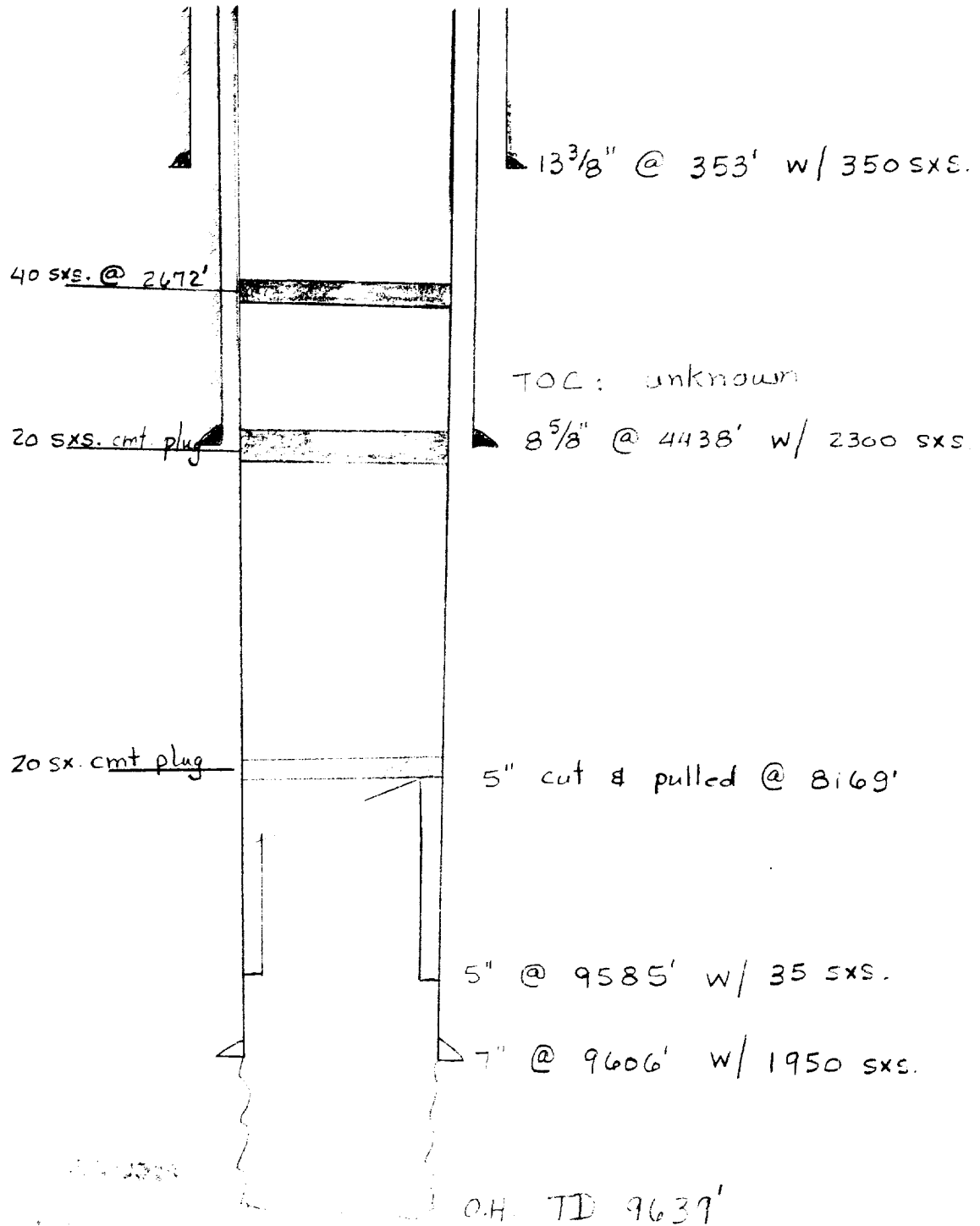
Exhibit XV

UNIT H, SEC. 14, T9S, R35E



LOQUINA OIL CORP.
DETENBOUGH No. 2
UNIT N, SEC. 12, T9S, R35E

Exhibit XIV

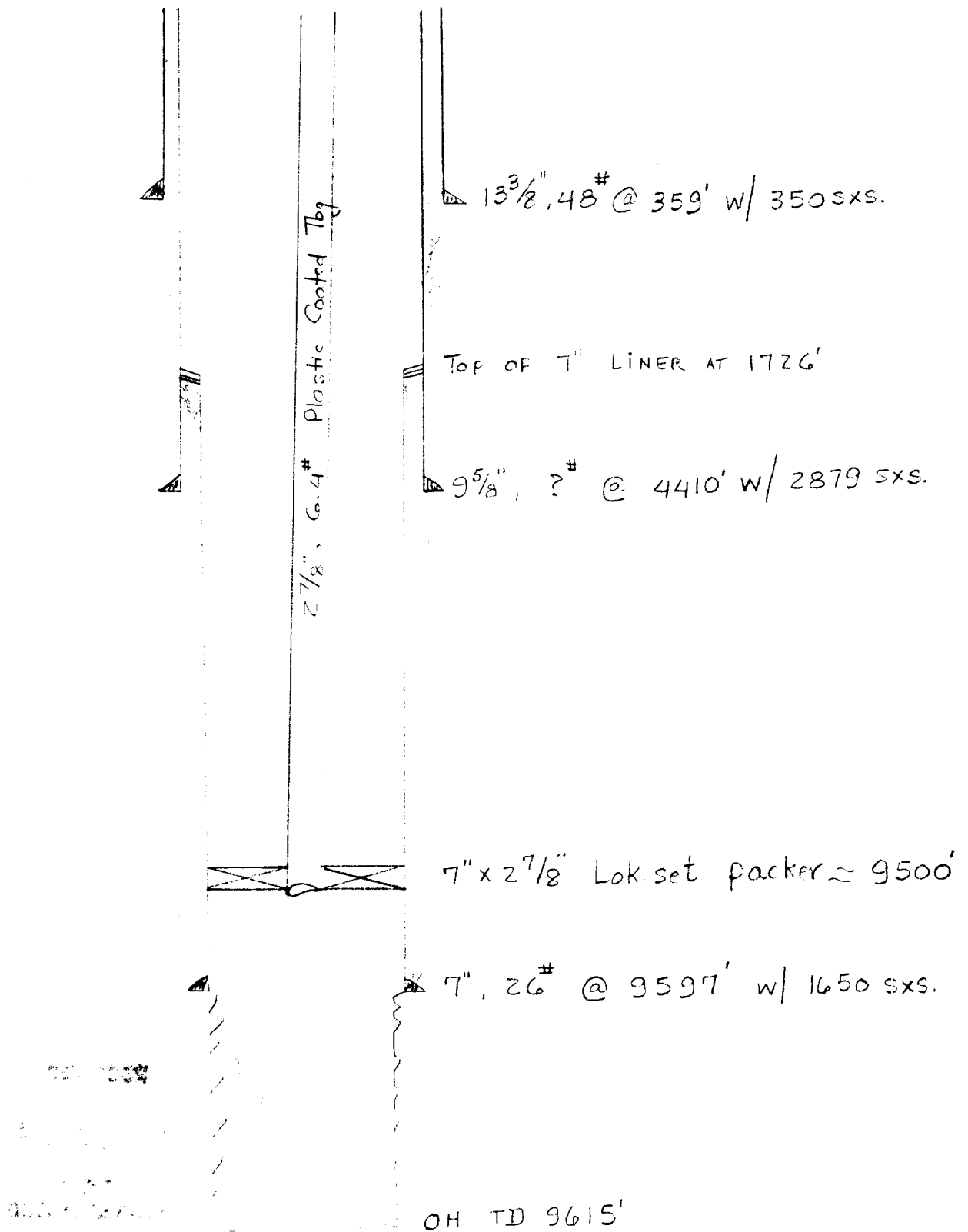


APOLLO ENERGY, INC.

FEDERAL 'A' 13 NO. 1

Exhibit XIII

PROPOSED DISPOSAL WELL
UNIT C, SEC. 13, T9S, R35E



APOLLO ENERGY, INC.

Exhibit XII

NOTICE

Pursuant to Section XIV of Form C-108.

Apollo Energy, Inc. has mailed copies of the application to the following:

Surface Owner: Milton Bonds
P. O. Box 963
Crossroads, New Mexico 88114

Off-set Operators within one-half mile:

Layton Enterprises
3103 - 79th Street
Lubbock, Texas 79423

M & G Oil Inc.
P. O. Box 957
Crossroads, New Mexico 88114

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JUL 18 1984

O.C.D.
HOBBS OFFICE

APOLLO ENERGY, INC.

Exhibit XI

Federal "A" 13 - Well No. 1
Salt Water Disposal
Unit "C", Sec. 13, T9S, R35E
Lea County, New Mexico

Affirmative Statement

As required by item XII of Form C-108. Apollo Energy, Inc. has 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.

Exhibit X

Analysis of produced water from Bough "C" (Penn) formation
Section 11, Township 9 South, Range 35 East.

mg/liter

Chloride	36000 - 25000
Calcium	2500
Magnesium	200 - 500
Sodium	20000
Bicarbonate	370 - 400
Sulfate	1100 - 1500
pH	6.2 - 6.4

CATION SAMPLED: Division Houston
erator (Plant) Amoco Production Company
te (Province) New Mexico
p. 9S Rng. 35E Sec. 13

District _____ Area Hobbs
Well No. 7 Lease Federal "A"
County (Parish) Lea
Quarter (Lsd.) _____ Other (Meridian) _____
Wildcat () Field Well (X) Field name Bough Devonian
Date 8-1-72 Sample collected by Al Klaar
Interval name _____

Sample collected from Wellhead
Interval sampled _____ to _____
every _____

n 97 transmitted by V. E. Staley

Date August 4, 1972 Authorized by _____

ORGANIC CONSTITUENTS in mg/l

	<u>BOTTOM</u>	<u>MIDDLE</u>	<u>TOP</u>	<u>MUD</u>	
ene					
ne					
ases					

DESCRIPTION OF SAMPLE

able used for detailed analyses _____
received _____
ition as received _____

nded solids _____
m sediment _____
r fluorescence _____

QUALITY OF SAMPLE

	<u>BOTTOM</u>	<u>MIDDLE</u>	<u>TOP</u>
de			
g/1:			

MENTS:

CONVENTIONAL MAJOR ION ANALYSIS

		Major Ions mg/l	% of Total Major Ions	Reaction Value meq/l	% of Total Reaction Value
CATIONS	Sodium Na ⁺	18,446	33.58	802.38	42.67
	Calcium Ca ⁺⁺	2,120	3.86	105.79	5.63
	Magnesium Mg ⁺⁺	390	.71	32.06	1.70
	Potassium K ⁺				
ANIONS	Chloride Cl ⁻	31,900	58.07	899.58	47.84
	Bicarbonate HCO ₃ ⁻	576	1.05	9.45	.50
	Sulfate SO ₄ ⁻⁻	1,500	2.73	31.20	1.66
	Carbonate CO ₃ ⁻⁻	0	0	0	0
	TOTAL	54,932			

Total solids by evaporation	56.020	mg/l
NaCl resistivity equivalent (Dunlap)	54.046	mg/l
Resistivity .128	ohm-meters at	77 °F
pH 7.1	Specific gravity 1.039	at 74 °F
Ryznar stability index (2pHs-pH)		at °F

OTHER IONS AND DISSOLVED SOLIDS

[illegible]

REMARKS AND CONCLUSIONS:

H₂S content is 24 ppm. Dissolved iron content is 1 ppm.

T. C. Borland
W. L. Adams
V. E. Staley
G. W. Schmidt

Analyst: James J. Elliott
J. J. Elliott

Date 8-18-72

Water charts on back of

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JUL 18 1984

O.C.D.
HOBBS OFFICE

LABORATORY WATER ANALYSIS

No. W1-259-71

To Amoco Production Company

Date 5/18/71

Box 68

Hobbs, New Mexico 88240

Attn: Mr. Jim York

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by _____ Date Rec 5/14/71

Well No. As Marked Depth Formation Bough Devonian

County _____ Field _____ Source _____ Well Head _____

FEDERAL "A" # 4

FEDERAL "A" # 5

Resistivity100 @ 76 F118 @ 76 F

Specific Gravity 1.046 1.040

pH 6.7 6.5

Calcium (Ca) 3,000 2,500 *A1D

Magnesium (Mg) 990 1,200

Chlorides (Cl)	41,500	38,500
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Sulfates (SO ₄)	1,800	1,400
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Bicarbonates (HCO_3)	<u>360</u>	488
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Soluble Iron (Fe)	20	Nil
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Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Robert Lansford

CC:

HALLIBURTON COMPANY

By

HEMIS

NOTICE

This report is limited to the described sample tested. Any user of this report agrees that Halliburton shall not be liable for any loss or damage, whether it be to act or omission, resulting from such report or its use.

APOLLO ENERGY, INC.

Exhibit VI

Geological Data on Injection Zone

Pool: Bough - Permo Pennsylvanian

Formation: Bough "C"

Geological Name: Bough "C"

Thicknees: 44 feet (average)

Depth: 9615 feet

Injection Interval: 9597' - 9615' (open hole)

APOLLO ENERGY, INC.

Exhibit VII

Data on Proposed Operation

Federal "A" 13 No. 1 - SWD

1. Proposed average and maximum daily rate and volume of fluids to be injected:

Average daily rate of 1200 b/d
Maximum daily rate of 3000 b/d

2. System is closed.

3. Proposed average and maximum injection pressures:

Average injection pressure: 250 psig
Maximum injection pressure: 800 psig

4. (a) Source of injection fluid: Producing leases on the same section.

(b) Analysis of formation fluid:

- (i) Bough "C" formation (attached)
(ii) Devonian formation (attached)

5. Zone of disposal is productive of oil and gas within one mile of the proposed disposal well.

Tabulation of data on all wells of public record as required by
Paragraph VI of C-108 continued.

Apollo Energy, Inc.	Federal A No. 7	Unit K, Sec. 13, T9S, R35E Drilled December, 1971 Csg: 11 3/4" @ 459' w/ 575 sxs 8 5/8" @ 4502' w/1250 sxs 5 1/2 @ 11966' w/300 sxs Tbg: 2 3/8 @ 11958' Well currently producing. Perfs: 11956' - 64'
Apollo Energy, Inc.	Hood Federal No. 2	Unit E, Sec. 13, T9S, R35E Drilled December, 1965 Csg: 13 3/8" @ 452' w/450 sxs 8 5/8" @ 4874 w/2200 sxs 5 1/2" @ 11955' w/1150 sxs Tbg: 2 3/8", N-80 @ 4582' Perfs: 11863' - 72' 11880' - 98' Currently producing.

Exhibit IV

Tabulation of data on all wells of public record as required by
Paragraph VI of C-108 continued.

Coquina Oil Corporation	Federal "13" No. 1	Unit D, Sec. 14, T9S, R35E Drilled January, 1950 Csg: 13 3/8" @ 375' w/350 sxs 9 5/8" @ 4433' w/1900 sxs 7" @ 9615' w/170 sxs Old SA squeezed perfs: 4748'- 51' Penn Perfs: 9585' - 9605' Fish & Junk @ 8072' 50 sx plug on top of fish Top of plug @ 7300' 50 sx plug @ 4600' 35 sx plug @ 2300' 5 sx plug @ Surface Plugged and abandoned July, 1977
Mangolia Petroleum Corp.	Mathew Fed. No. 2	Unit A, Sec. 13, T9S, R35E Drilled January, 1951 Have been unable to get details on this plugged well to date.
Pan American	Federal A No. 2	Unit G, Sec. 13, T9S, R35E Drilled January, 1959 Csg: 10 3/4" @ 440' w/500 sxs 7 5/8" @ 4267' w/1700 sxs Liner 5 1/2" @ 9570' w/1450 sxs Perfs: 9563' - 70' (squeezed) Perfs: 4810' - 20' (gas) Plugged and abandoned March, 1967: 20 sxs cement 4830'- 4600' 20 sxs cement 4205'- 4105' 10 sxs cement @ Surface.
Apollo Energy, Inc.	Federal A No. 5	Unit N, Sec. 13, T9S, R35E Drilled July, 1963 Csg: 13 3/8" @ 460' w/475 sxs 9 5/8" @ 4902' w/1925 sxs 5 1/2" @ 12018' w/250 sxs Dev. Perfs: 12002' - 12' Currently being used as injection well - packer @ 11900'.
Apollo Energy, Inc.	Federal A No. 4	Unit L, Sec. 13, T9S, R35E Drilled May, 1965 Csg. 13 3/8" @ 449' w/475 sxs 9 5/8" @ 4950' w/2450 sxs 7" @ 11940 w/1300 sxs Perfs: 9550' - 60' Squeezed BP @ 11936' - Perfs: 11916' - 23'; 11928' - 35' Currently SI because of high water production.

Exhibit III

Tabulation of data on all wells of public record as required by
Paragraph VI of C-108.

Apollo Energy, Inc.	Betenbough No. 5	Unit Letter L, Sec. 12, T9S, R35E Drilled October, 1983 Csg: 13 3/8" @ 355' w/350 sxs 8 5/8" @ 4100' w/300 sxs 5 1/2" @ 9739' w/450 sxs Tbg: 2 3/8" @ 9720' Perfs: 9691' 9715' - Producing
Apollo Energy, Inc.	Betenbough No. 2	Unit Letter M, Sec. 12, T9S, R35E Originally drilled by Mangolia, May, 1949. P & A'd 1956. Re- entered and completed as San Andres. Csg: 13 3/8" @ 354' w/375 sxs 8 5/8" @ 6200' w/4500 sxs 7" @ 9641' w/775 sxs ODT: 11569', OPBTD: 9641' Tbg: 2 3/8" @ 4750' Perfs: 9596' - 9616 (squeezed) Perfs: 4748' - 50' T/A
Coquina Oil Corp.	Betenbough No. 2	Unit Letter N, Sec. 12, T9S, R35E Drilled January, 1950 Csg: 13 3/8" @ 353' w/350 sxs 8 5/8" @ 4438' w/2300 sxs 7" @ 9606 w/1950 sxs 5" @ 9585' w/35 sxs OH: 9609' - 9639' Pulled 8169' of 5" Cement plugs: 20 sxs @ 8169' 20 sxs @ 4438' 40 sxs @ 2672' 35 sxs @ 366' 10 sxs @ Surface Plugged and abandoned May, 1977.
Layton Enterprises	Betenbough B No. 4	Unit H, Sec. 14, T9S, R35E Drilled March, 1976 Csg: 12 3/4" @ 380' w/375 sxs 8 5/8" @ 4055' w/300 sxs 5 1/2" @ 9752' w/250 sxs Perfs: 9601'-23' CIBP: @9550' w/35 sxs Cut and pulled 5 1/2" @ 4211' 100 sx plug 4260' - 3960' 35 sx plug 2300' - 2185' Cut and pulled 8 5/8" @ 1128' 50 sx plug 1178' - 1048' 75 sx plug 430' - 328' 10 sx @ Surface Plugged and abandoned September, 1980.

