P-W

ARKLA EXPLORATION STATE #56, W. S. I.
SW/NE Sec 30-T16N-R24E, Apache 1-15

County APACHE

Area

Lease No.

Well Name ARKLA EXP CO. STATE #56 W.S. 1 from drilling records

Location SW NE Sec 30 Twp 16N Range 24E Footage 3277 FSL - 3277 FWL

Elev 5398 Gr KB Spud Date 8-26-65 Completed Abandon 9-4-65 Total Depth 1420

Contractor Flournoy Drilling Co.

Casing Size	Depth	Cement

Drilled by Rotary
Cable Tool

Production Horizon

Initial Production

REMARKS

Elec Logs GRN-4 and Radioactivity Log Survey report

Applic. to Plug ___ Plugging Record ___ Completion Report ___

Sample Log
Sample Descript.
Sample Set 1477
Core Analysis
DSTs

Water well accepted by

Bond Co. & No.

Bond Am't $ Cancelled Date Organization Report

Filing Receipt Dated Well Book ___ Plat Book ___

API No. 02-001-00071 Loc. Plat ___ Dedication

Permit Number NONE Date Issued

1-15

County APACHE

Area

Lease No.

Well Name ARKLA EXP CO. STATE #56 W.S. 1 from drilling records

Location SW NE Sec 30 Twp 16N Range 24E Footage 3277 FSL - 3277 FWL

Elev 5398 Gr KB Spud Date 8-26-65 Completed Abandon 9-4-65 Total Depth 1420

Contractor Skousen Drilling Co.

Casing Size	Depth	Cement

Drilled by Rotary
Cable Tool

Production Horizon

Initial Production

REMARKS

Elec Logs GRN-4 and Radioactivity Log Survey report

Sample Log
Sample Descript.
Sample Set 1477
Core Analysis
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Applic. to Plug ___ Plugging Record ___ Completion Report ___

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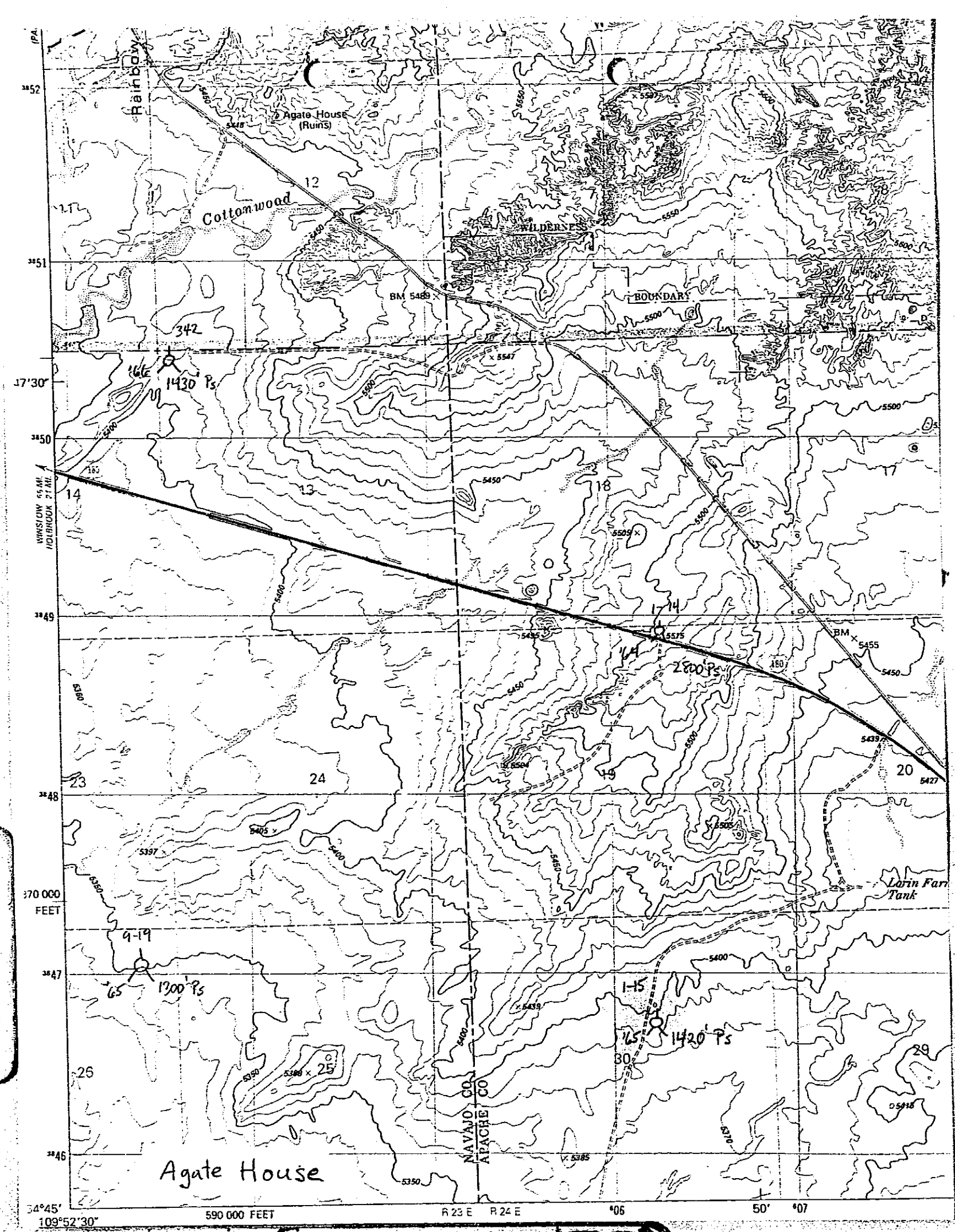
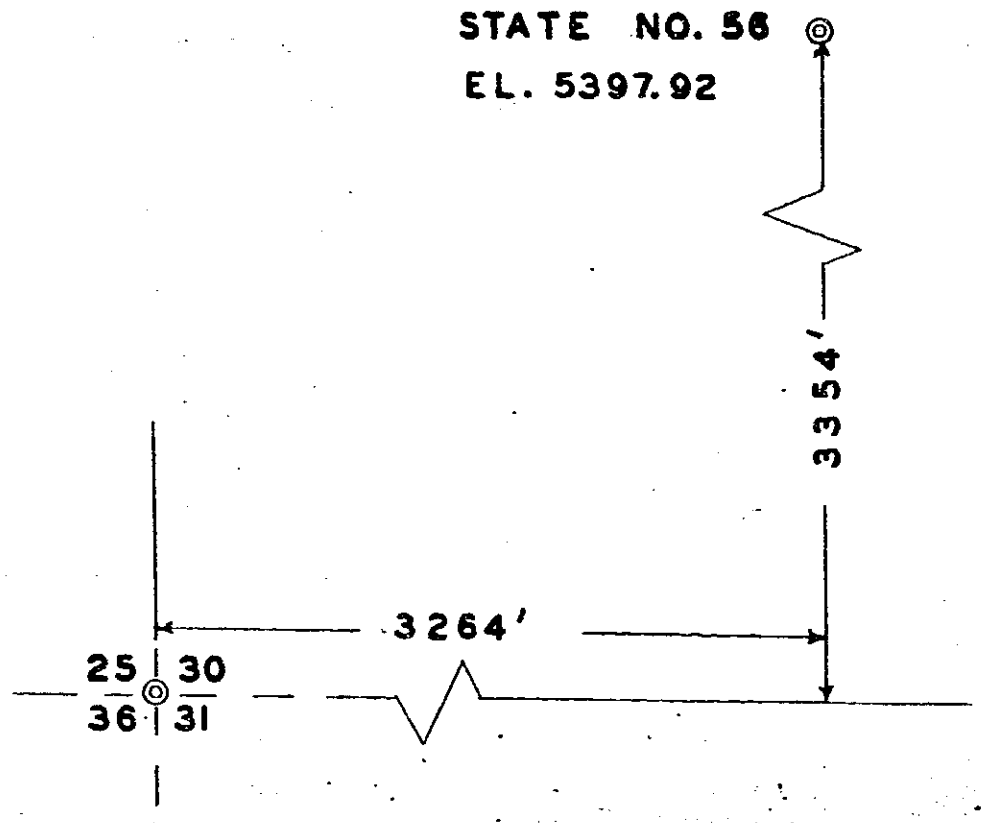
1-15

1-15


Rainbow
Agate House (Ruins)
Cottonwood
WILDERNESS
BOUNDARY
BM 5489
342
1430' Ps
1400' Ps
2800' Ps
1420' Ps
1300' Ps
Agate House
Lorin Farr Tank
WINSLOW 65 MI.
HOLBROOK 71 MI.
NAVAJO CO.
APACHE CO.
12
13
14
18
19
20
23
24
25
26
29
30
3852
3851
3850
3849
3848
3847
3846
17'30"
370 000 FEET
590 000 FEET
R 23 E
R 24 E
34°45'
109°52'30"



differs from drilling record

ARKLA EXPLORATION COMPANY

HOLBROOK AREA PROJECT

STATE NO. 56 DRILL-SITE

SEC. 30, T.16N., R.24E., G.& S.R.B.& M.
APACHE COUNTY ARIZONA
SCALE 1" = 400' SEPT. 4, 1965
SURVEYED BY: HARVEY W. SMITH, E.M.
REGISTERED MINING ENGINEER
U.S. MINERAL SURVEYOR

DO NOT REMOVE FROM FILE

1-15

WELL NAME: AEC - #56 STATE

LOCATION:

ELEVATION:

SPUD - AUGUST 26, 1965 - 9 5/8" @ 47' w/60 sx

0-10'	SH-WH-BLU GRY-TRC RED-SURFACE SD-15%.
10-20'	SAME, SURFACE SD 20%.
20-30'	SH SAME PCS ORG CHERT.
30-40'	SH AS ABOVE.
40-50'	AA, MAROON SH-10%, TRC GYP.
50-60'	SH-BLU GRY WXY, TRC GYP.
60-70'	AA, TRC MAROON SH.
70-80'	SH-BLU GRY.
80-90'	AA, PCS LIGHT GREEN.
90-00'	SAME.
100-10'	SH-MAROON-BLU GRY-LIGHT GRY.
10-20'	SH MAROON SD-GRN-VFG-FG-SUB RD, TRC CHERT.
20-30'	SH-LIGHT BLU GRY-CREAM-SAME LARGE GRAIN SD-POSS CAV.
30-40'	AA, AA, SUB ANG.
40-50'	SH-CREAM-RED-VERIGATED IN PT.
50-60'	SH-REDDISH BRN & CREAM-VERIGATED IN PT.
60-70'	AA VERIGATED.
70-80'	AA SH - APPEAR CONGLOMERATIC.
80-90'	SH-RED-CONG IN PT.
90-00'	RED CONG SH 50%-COND SD-TRC W/GLAVCONITE-MED-CG-PCS PK SD, BLK MIN NODULES SCAT THROUGHOUT.
200-10'	CONG SD-SHY-LARGE GRAIN.
10-20'	SD-CONG-10% SH & SLT ST RED & GREEN 90%.
20-30'	SLT ST & SH LIGHT GREEN - RED.
30-40'	SH RED CLYEY.
40-50'	AA.

DO NOT REMOVE FROM FILE

1-15

50-60'	SAME-CONGLOMERATIC SH IN PT.
60-70'	SLT ST RED-TRC GRN SH-TRC GREEN VFG SD.
70-80'	SAME-SLT INC IN GREEN SH.
80-90'	SLT ST RED-MICA-TRC GREEN SH.
90-00'	SD-CONG-GREEN-BRN-MICA-BLK-F-MG-GLAV.
300-10'	AA.
10-20'	AA, SH RED 20%.
20-30'	SH-RED & GREEN.
30-40'	AA.
40-50'	AA, 90% RED.
50-60'	AA.
60-70'	AA, VERY GYPY.
70-80'	AA, 10% SD GRAINS FG.
80-90'	SH-BRN-RED-SLTY.
90-00'	AA 40% (SD GREEN SHY FG 30%) 50% SH GRN WXY.
400410'	SH-REDDISH ORG W/GREEN SH, GYP 10%.
10-20'	AA, SCATT SD CLUSTERS, GYP SELENITE 30%.
20-30'	AA, AA, 10% LARGE GRAIN FROSTY.
30-40'	AA TRC CONG SD WH W/DRK MINERAL INCL.
40-50'	AA, AA 10%.
50-60'	SH-RED-GREEN-SCATT SAND GRAIN.
60-70'	SAME W/30% DOL-TAN LMY VF XYLN,GYPY.
70-75'	SH-RED-GREEN-TRC COCO TYPE SD.
75-80'	SH-RED-CLYEY.
80-85'	SAME.
85-90'	AA, TRC GREEN SH PCS DOL GRY F XYLN.
90-95'	AA.
95-00'	SWBBEC DEEPER BRN-SD-RED-10%-PCS DOLO AS ABOVE.
500-05'	SH-REDDISH BRN SDY 60%-SD RED-FG SUB RD 40%.
05-10'	AA 20%, AA 80%.

10-15'	SD-REDDISH ORG FG-CLUSTERS 90%-SH RED 10%.
15-20'	SH-REDDISH BRN SDY 80%-SD AS ABOVE, 20% PCS COCO SD:? TRC GRY DOLO.
20-25'	AA 10%, DOL GRY VF XYLN 70%, COCO SD 20%.
25-30'	COCO SD-90%-DOL 10%.
30-35'	AA, GYPY-PYRITIC IN PT.
35-40'	AA COARSE GRAIN.
40-45'	SAME.
45-50'	AA M-CG-BEC UNCONSOLIDATED.
50-60'	SD-MED GRAIN-CLEAR-RD-SUB RD-UNCONSOL.
60-70'	AA, SLT PYRITIC GYPY.
70-80'	SAME LESS PYRITIC.
80-90'	SAME.
90-00'	AA APPEARS SILTY.
600-10'	SAME.
10-20'	AA.
10-20'	AA.
20-30'	AA.
30-40'	AA M-CG.
40-50'	SAME.
50-60'	AA.
60-70'	AA.
70-80'	AA.
80-90'	AA.
90-00'	AA.
700-10'	AA, SLT PK TINT.
10-20'	SD AS ABOVE MOC GRAIN-BLK & GRY SH INCL.
20-30'	SD AS ABOVE TRC SHALE.
30-40'	AA.
40-50'	AA, SCATT SHALE AS ABOVE.
50-60'	AA SLT PK.
60-70'	AA BEC ORG.

70-80'	AA ORG, AA F-G.
80-90'	AA F-M-BEC CONSOL-SHALE INCL-BLK-GRY.
90-00'	AA AA AA RED-GRY GRN.
800-10'	AA ORANGE-WH.
10-20'	AA.
20-30'	SD AA BEC DEEPER ORANGE.
30-40'	AA DEEP ORANGE-50%-COLORED SH.
40-50'	AA AA AA.
50-60'	SD-M-L GRAIN-WH-ORG-SH AS ABOVE.
60-70'	SD-M-C GRAIN ORANGE.
70-80'	AA.
80-90'	SD-M-C AA.
90-00'	SD AS ABOVE-BEC CONSOL-SHALEY.
900-10'	SAME.
10-20'	AA.
20-30'	AA CONSOL.
30-40'	AA ORG & WH AA.
40-50'	SILT ST RED-70%-SD AS ABOVE-20% DOLO LT GRY BUFF VF XYLN 10%.
50-60'	DOL AS ABOVE 50%-SLT ST-50%.
60-65'	AA 10% AA 50%-SD ORG F-MG 40%, TRC GREEN SH.
65-70'	SD WH-F-MG-SD-WH.
70-75'	AA.
75-80'	AA.
80-85'	SD-ORG-ANY.
85-90'	AA 40%-SLT ST RED 40% , DOL-BRN F XYLN-20%.
90-95'	AA AA TRC ANHY?
95-00'	ORG SD AS ABOVE & SLT ST RED-ORG.
1000-05'	AA PCS SELENITE ANHYDRITE.
05-10'	WH GYP-GRY ANHY.

CORRECTION 1010-1014

10½-15'	SH-SILTY RED-80%-ANHY WH-20%.
15-20'	AA 50%, AA 50% TRC PK ANHY-TRC GREEN SHALE.
20-25'	ANHY WH-90%-SH RED-10%.
25-30'	AA 95% DOLOMITIC IN PT-SH-RED 5%.
30-34'	AA 40%, AA 60%.
34-35'	SAME.
35-44'	SALT 100%.
44-45'	SAME.
45-50'	SALT WH CLEAR 70%-SH RED CLYEY 30%.
50-55'	AA 90% AA 10%.
55-60'	AA 55% AA 5% ANHY WH PK-SALT INCL 40%.
60-65'	AA TRC PK 65%, AA 10%, AA AA ORG PK 25%.
65-70'	SALT AS ABOVE 85%, AA 5%, AA 10%.
CIRC 10 MIN	AA 70%, AA 20%, AA 10%.

CORRECTION 70=71

CORE1 1071-1098-REC 26'6½" WS #1

1071-75 SALT WH-60% SH RED INCL 40%; 75-76 SALT WH 40% SH RED INCL 60%; 76-78 AA 70% AA 30%; 78-79 AA 40% AA 60% ¼" ORG SALT FILLED FRAC M-HOT; 79-85 AA 80%, AA 20%; 85-89 AA 90%, AA 10%; 89-89½ SALT 90%-WH CARGE XYLS STRINGERS ANHY; 89½-91 ANHY GRY DNSE W/SCATTERED SALT INCL; 91-93 AA SALT INCL; 93-94'6" SALT PK-WH W/SCATT ANHY INCL; 94'6"-97'6" ANHY GRY DNSE W/SALT INCL.

CORE #2 - 1098-1125 - REC 27'

1098-1102 ANHY AS ABOVE; 02-03 SH-RED CLAYEY W/MINUTE HAIRLINE FRACS FILLED W/SALT; 03-05 SALT WH-80%-SH RED CLYEY 20% ½ INCH FRACS FILLED W/ORG SALT SEMIHOT; 05-07 SALT WH-90%-10% RED SHALE IMP; 07-07½ SALT W/3" ANHY BAND; 07½-13 SALT WH-ORANGE CAST-MILKY IN APPEARANCE 11-13 SCATT ANHY STRINGERS; 13-19 SALT WH-SLIGHT ORANGE CAST TRC IMPURITIES; 19-22 SH RED-W/1 INCH WH SALT SYLVITE? V FRACT UP MIDDLE OF CORE; 22-24 SALT & SHALE INTERMIXED; 24-25 SAME W/HORIZANTAL BISQUIT IN MIDDLE-SEMI-HOT.

CORE #3 - 1125-52 - REC 27'

1125-28 SALT WH-90%-10% SH IMP; 28-30 AA 80% AA 20% AA, 1128½ BISQUIT; 30-32 SALT WH MILKY; 32-37½ SALT WH-W/PINK CAST-SCATT ANHY STRINGERS (JAGGED); 37½-41½ SALT- KCL-10% RED & GREEN CLAY IMP; 41½-43½ SALT MILKY PINK KCL; 43'6"-9" BISQUIT; 43'9"-50 SALT WH-LARGE XYLS-80% FRACS FILLED W/RED CARNALITE, SH GREEN-RED 20%, BISQUIT @48'; 50-52 SALT WH-90% W/10% SH IMP.

CORE #4 - 1152-77 - REC 25'

1152-56 SALT WH CLEAR-SCATTERED REDDISH ORG BLEBS KCL? 56-61 AA AA AA AA ANHY STRINGER; 61-62½ PK SALT W/SCATT ANHY STRINGERS SHALE BISQUIT @ 62½; 62½-67 SALT WH 60%, SHALE RED CLYEY 40%; 67-72'7" SALT WH-CLEAR LARGE XYLS.

WS #2 - 1128-1158 - REC 30'

1128-34 SALT WH-PK CAST-FEW SCATT ANHY STRINGERS; 34-35 SALT WH W/RED CARNALITE INCL; 35-37 SALT WH-MILKY-SCATT SYLVITE BLEBS; 37-39 RED KCL SALT-10% SH INCL RED-GREEN; 39-42 SALT WH-ORANGE MILKY APPEARANCE-WH SYLVITE BLEBS SCATT THROUGHOUT; 42-42'4" BISQUIT SHY ANHY & RED KCL SALT; 42'4"-47 SHALE RED & GREEN 80%-W RED CARNALITE FILLED FRACS; 47-48 SHALE-RED; 48-52 SALT WH-90%-10% SH INCL; 52-55 SALT W/SCATT ORG BLEBS & REDDISH BRN SEMI HOT MATERIAL IN CREVICES; 55-58 SALT WH-PK.

#56V 1054-84 - REC 28' 7½"

1054-54½ ANHY GRY DNSE; 1054½-57-4" SALT WH; 57-4"-6" ANHY STRINGER; 1057-6"-62 SALT WH-90%-SH IMP 10%; 1062-67 SALT WH 100%; 67-82'7½" SALT W -75%-SH REDISH BRN 25%.

V 1128-1158 - REC 30'

1128-30 SALT WH 90% W/ BRN SH INCL 10%; 1130-1132½ SALT WHITE; 1132½-34 SALT WH W/ CARNALITE INCL - (GOOD SCATT ANHY STRINGERS; 1134-36 SALT MILKY WH-35½-36-WH BLEBS, SYLVITE?; 1136-37-7" SALT 80% WH-20% IMP; 1137-7"-39 SALT WH-KCL SYLVITE BLEBS; 1139-41- SALT ORANGE MILKY W/WH BLEBS SCATT THROUGHOUT; 1141-41½ SALT PINK MILKY W/WH BLEBS SCATT THROUGHOUT; 41½-41.8 BISQUIT; 41.8"-47 SH RED-GREEN 80%-20% RED CARNALITE FILLED FRACS; 1147-50 SALT WH-90% W/10% BRN SH IMP; 1150-58 SALT WH-PK-WIDELY SCATT ORG BLEBS TRC ANHY INCL;

58-60' SALT WH.

60-70' SALT WH.

70-80' SALT WH 90% SH RED 10%.

80-90' AA AA

90-00' SALT WH-80%-SH 20%.

1200-10' SALT WH-75% SH RED 25%.

10-20' AA 90% AA 10% TRC ANHY.

20-30' AA 30% AA 70%

30-40' AA 80% AA 20% TRC ANHY.

40-50' AA AA AA AA.

50-60' AA 40% SLT ST PK 60%.

60-70' AA 80% SH RED 10% ANHY 10%.

70-80'	SALT WH 60%-SH RED 40%.
80-90'	SALT 10% SH RED 90%.
90-00'	ANHY WH.
1300-10'	SALT WH-ORG 30% SHALE RED 60% ANHY 10% WH.
10-20'	AA WH 85-SHALE RED 15%.
20-30'	SALT 20% SHALE RED 70% ANHY 10%.
30-40'	AA 80% AA 20%.
40-50'	AA 95% AA 5%.
50-60'	SALT WH 80% SH-RED BRN 10% ANHY WH 10%.
60-70'	SALT WH 80% SH REDDISH BRN. 20%.
70-80'	SLT ST-RED GREEN 90%-SALT WH 10%.
80-90'	ANHY-WH.
90-00'	DOLO-DRK BRN DNSE VF XYLN.
1400-10'	SD ST-GREEN WH.
10-20'	SALT-WH.

CIRC. SALT WH 40% ANHY WH 30% SH-GREEN-RED 30% COMPLETED DRILLING @ 7:10 PM SEPTEMBER 2, 1965.

DETAILED CORE AND FIELD

DESCRIPTION

WELL NAME: # 56 [redacted] STATE

LOCATION;

ELEVATION:

CORE - V -

1126.8-1144.47 ( ) .74 SALT CLEAR 5% SH-.59 SALT LT MLKY-TRS SH - .64 SALT LT MLKY 5% SH-.50 SALT LT MLKY- ANHY INCL 5% SH .75 SALT LT MLKY-SL TRS ORNG MAT. - 1130' DOWN BY STATS - 30-.50 SALT LT MLKY SL TRS ORNG MAT. K1%-.50-31 SALT LT MLKY TRS ORNG. K3.5%-31-.50 SALT TRS RED - CLOUDY SMALL ANHY INCL K9%-.50-32 SALT MLKY-RED & CLOUDY K13.5% 32-.50 SALT MLKY ANHY INCL K15%-.50-33 SALT LT MLKY ANHY INCL-RED & CLOUDY K16.5% 33-.50 SALT MLKY GRAN. NOTRED - CLOUDY K18%-.50-34 SALT MLKY GRAN-ANHY INCL-NO RED-CLOUDY K16.5%-34-.50 SALT MLKY GRAN ANHY INCL CLOUDY K13.5% SALT SHOWS SOME LEACHING BETWEEN 1133-34.5 GRAN SECTION-.50-35 SALT 20% SH RED & CLOUDY K10% 35-.50 SALT 20% SH RED & CLOUDY K8.5%-.50-36 SALT 10% SH? RED & CLOUDY K13.5-35-.50 SALT RED HOT RED & CLOUDY K23.5% .50-37 SALT RED-HOT RED & CLOUDY K35%-37.50 SALT RED-HOT RED & CLOUDY K31%-.50-38 SALT RED TO LT ORNG SMALL ANHY INCLS-GOOD RED & CLOUDY K17.5%-38-.50 SALT LT ORNG INCL WHT SALT ORNG MAT K9%-.50-39 SALT LT ORNG INCLS WHT SALT ORNG MAT K8%-39-.50 SALT LT ORNG INCLS WHT SALT ORNG MAT K7%.50-40 SALT ORNG - ORNG MAT K7.5% END OF STATS-.27 SALT-DK ORNG TRS KCL (K51140.27) 2.50 SALT 50% SH.

3-7-66

DO NOT REMOVE FROM FILE

1-15

DETAILED CORE DESCRIPTION

WELL NAME: AEC - #56 STATE 7

LOCATION:

ELEVATION:

CORE V

1054-1059.33 (5.83) .54 ANHY-GRA DNS-1.33 SALT 30% SH 1.96 SALT 20% SH-ANHY INCLS AND BAND-2' SALT 10% SH.

1059.33-1065.58 (5.82) 2' SALT 10% SH-1.82 SALT LT MLKY TRS SH-2' SALT CLEAR.

1065.58-1071 (5.45) 1.2 SALT CLEAR-.1 ANHY-.2 SALT CLEAR 2.13 SH 30% SALT-1.82 SH 40% SALT.

1071-1076.75 (5.79) 1.9 SALT 40% SH-1.94 SALT 30% SH 1.95 SALT 30% SH-ANHY INCLS.

1076.75-1082.5 (5.54) 1.9 SALT 40% SH-1.72 SALT 30% SH-1.92 SALT 40% SH.

1128-1133.8 (5.56) .72 SALT 5% SH-.58 SALT CLEAR-TRS SH-.65 SALT CLEAR 5% SH-.5 SALT LT MLKY-ORNG BLEBS TRS SH AND ANHY-.53 SALT-LT MLKY-.77 SALT LT MLKY-ORNG BLEBS-.7 SALT VLT MLKY-ORNG BLEBS-TRS ANHY-.5 SALT MLKY-TRS ANHY-RED AND CLOUDY KCL .6 SALT MLKY TRS ANHY-RED AND CLOUDY KCL-TOP PAY 1132.5.

1133.8-1138.9 (5.08) .6 SALTY MLKY-RED AND CLOUDY K^2O-TR ANHY .47 SALT MLKY-GRAN-KCL-SHOWS SOME LEACHING-.78 SALT MLKY-GRAN-KCL-SHOWS SOME LEACHING .43 SALT MLKY-ORNG-GRAN-KCL-TR ANHY AND RED AND GRN SH-1' SALT 30% RED SH-TRS-GRN SH-TR KCL- TRS CHLKY BR PINK MATERIAL .6 SALT 30% RED SH-TR KCL-TRS SHLKY BR PINK MATERIAL-.65 SALT-HOT-RED KCL AND CLOUDY-.55 SALT-HOT-RED AND CLOUDY-VERY LITTLE GRN SH IN SECTION-(ZONE ANHY BANDS-A1130.1-A-B1.88-B-C 1.65-C-D.25).

1138.9-1144.14 (5.30) .35 SALT-HOT-RED AND CLOUDY KCL-TR GRN SH. .81 SALT-ORNG-GRAN-KCL-.55 SALT-ORNG GRAN-INCLS MLKY SALT-KCL-.54 SALT ORNG-GRAN-INCLS MLKY SALT-KCL-.55 SALT DK ORNG-KCL-ORNG SALT SHOWS SOME LEACHING-(BISCUIT-HOT 1141.55) 2.50 SH-30% SALT.

1144.14-1149.6 IN FILE.

1149.6-1154.9 (5.41).8 SALT 20% SH-1.06 SALT-CLEAR-TRS SH-.9SALT LT MLKY-TRS SH-.8 SALT CLEAR-.6 SALT DK MLKY-1.25 SALT CLEAR-VLT ORNG.

DO NOT REMOVE FROM FILE

1-15

DETAILED CORE DESCRIPTION

WELL NAME: AEC - #56 STATE

LOCATION:

ELEVATION:

1138.9-1149.6-10.84	.4 SALT HOT-RED & CLOUDY-TRS GRN & RED SH & ANHY.
	.75 SALT ORNG-TRS KCL-INCLS MLKY SALT.
	.55 SALT ORNG-TRS KCL-INCLS MLKY SALT.
	.55 SALT ORNG-TR KCL-INCLS MLKY SALT.
	.55 SALT DK ORNG TR KCL-(BISCUIT 1141.55) ORNG SALT SECTION SHOWS SOME LEACHING.
	2.55 SALT 30% SH-TRS GRN SH.
	.44 SALT 20% SH-RED & GRN-TR KCL?
	.6 SALT 20% SH-RED & GRN-TR KCL?
	1.6 SH RED-20% SALT TRS GRN SH.
	.9 SALT 30% SH-TRS GRN SH.
	1.95 SALT 10% SH TRS ANHY.

DO NOT REMOVE FROM FILE

CORE TEST NO. # 56	CYCLE #1 TOTAL THICK-NESS	%	CYCLE #2 TOTAL THICK-NESS	%	CYCLE #3 TOTAL THICK-NESS	%	CYCLE #4 TOTAL THICK-NESS	%	CYCLE #5 TOTAL THICK-NESS	%	SALT-1ST DOLO TOTAL THICK-NESS	%	NOTES
INTERVAL													5th Cycle: Salt/clastics: 2.47 Evap/clastics: 3.09 Salt/Evap: 4.00
SANDSTONE													
SILTSTONE-SH									94	24.5	84	23.6	
DOLO & LIME									0	0	0	0	
ANHY									58	15.1	40	11.2	
SALT									232	60.4	232	65.2	
TOTAL=									384	100	356	100	

DO NOT REMOVE FROM FILE

PHONE: 325-9232

641 WEST BROADWAY

FOUR CORNERS SAMPLE CUT ASSOCIATION

P. O. BOX 899
FARMINGTON, NEW MEXICO 87401

December 3, 1968

Hello Jim:

This is a list of the Arizona wells which we have in the cut at present time.

Arkla Core test # 56
No Location

El Paso #1-B La Posa
10-7N-19W
Yuma Co.

Skelly #1 Navajo Q
18-38N-30E
Apache Co

Texaco #1 Navajo BF
26-6N-7W
Apache Co.

Apache #1 Santa Fe Crest
25-20N-27E
Apache Co.

Pennzoil #1 Hopi-11
11-29N-14W
Coconino Co.

Buttes Oil & Gas #1-14 Navajo Tite
14-7N-9W
Apache Co.

Buttes Oil & Gas #1-23 Navajo Tite
23-37N-27E
Apache Co.

The following two wells have been cut or in the process

Buttes Oil & Gas #1-25 Navajo
25-35N-28E
Apache Co.

G.B. Cree #1 Hunt
31-18N-20W
Navajo Co.

RECEIVED
DEC 5 1968
U.S.G.S.
CONSERVATION DIV.

PHONE: 325-9232

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11-29N-14W
Coconino Co.

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14-7N-9W
Apache Co.

Buttes Oil & Gas #1-23 Navajo Tite
23-37N-27E
Apache Co.

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25-35N-28E
Apache Co.

G.B. Cree #1 Hunt
31-18N-20W
Navajo Co.

RECEIVED
DEC 5 1968
OIL & GAS CONSV. COMM.

WKC

ARKLA EXPLORATION COMPANY

Drilling Record

WELL NAME: State Core Test #56

WELL LOCATION: 3277 FSL, 3277 FWL
Sec 30-16N-34E

WELL ELEVATION: 5405 ' KB

CONTRACTOR: Slusarner Drilling Company

SPUD DATE: 8-26-65 4:00 PM

SIZE HOLE DRILLED: 13¾ " to 44 '

TYPE DRILLING FLUID: Gel

SURFACE CASING:
Size 10¾ ", Wt. 32.75 #, No. Sacks Cement 50
Cementing Depth: 42 '

SIZE HOLE DRILLED: 6¾ "

TYPE DRILLING FLUID: Flo Sol (A)

INTERMEDIATE CASING:
Size 7 ", Wt. 20 #, No. Sacks Cement 125
Cementing Depth 1014 '

SIZE HOLE DRILLED OR CORED:
6¾ " from 1014 ' to 1420 '(B)
" from ' to '
" from ' to '
" from ' to '

DRILL STEM TESTS:
None

NO. BITS USED: 5

ELECTRIC LOGS RAN:
Type Sonic Gamma GR from 1420 ' to 0 '
from ' to '

ABANDONMENT PLUGS:
No. Sacks Cement 125 from 1420 ' to 1250 '
from ' to '

WAS CASING RECOVERED?
Depth Shot ', ', '
No. Feet Recovered '
No. Feet Not Recovered 1014 '

DATE DRILLING RIG RELEASED: 9-4-65 8:00 AM

COMPANY REPRESENTATIVE: James S. Baldry

SPECIAL NOTES: Unusual drilling problems encountered, etc.
(A) Lost mud while drilling.

(B) Drilled to 1034 and set Whipstock #1, drilled and cored to 1128. Straightened hole to 1052 and set Whipstock #2 and drilled & cored to 1157
Straightened hole @ 1092 and cored & drilled straight hole to 1420.

DO NOT REMOVE FROM FILE

45

SYMBOL OF SERVICE

SURVEY REPORT

#56

DO NOT REMOVE FROM FILE

EASTMAN OIL WELL SURVEY COMPANY

DIRECTIONAL DRILLING • TOOLS • INSTRUMENTS • TECHNIQUES

Consult The Yellow Pages For Your Nearest Eastman Office

LONG BEACH • HOUSTON • ODESSA

1-15

[redacted]

DIRECTIONAL DRILLING
EASTMAN
INSTRUMENTATION

"Symbol of Service"

REPORT
of
SUB-SURFACE
DIRECTIONAL
SURVEY

ARKLA EXPLORATION COMPANY
COMPANY

STATE CORE TEST WELL NO. 56
WELL NAME

APACHE COUNTY, ARIZONA
LOCATION

JOB NUMBER	TYPE OF SURVEY	DATE
WT-98165 & WT-98165A	ORIENTED MULTIPLE SHOT & SINGLE SHOT	AUGUST 31, 1965

SURVEY BY
R. B. VICKERS

OFFICE
ODESSA, TEXAS

FORM D-302 R1

RECORD OF SURVEY

JOB NO. WT-98165A DATE August 31, 1965 CHECKED BY

STATION	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	VERTICAL SECTION	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES NORTH	SOUTH	EAST	WEST
1	68 00	Vertical								
2	124 00	Vertical								
3	183 00	Vertical								
4	241 00	Vertical								
5	299 00	Vertical								
6	357 00	Vertical								
7	417 00	Vertical								49
8	475 00	Vertical			52	N 70 W	18			98
9	534 00	0° 30'			52	N 70 W	36			1 94
10	593 00	0° 30'			1 01	N 71 W	69			3 18
11	651 00	1° 00'			1 29	N 74 W	1 05			4 25
12	710 00	1° 15'			1 29	N 56 W	1 77			5 22
13	769 00	1° 15'			1 01	N 73 W	2 06			6 64
14	827 00	1° 00'			1 54	S 67 W	1 46			7 67
15	886 00	1° 30'			1 05	S 79 W	1 26			9 55
16	946 00	1° 00'			1 92	S 78 W	86			10 44
17	1034 00	1° 15'			1 47	N 37 W	2 04			12 49
18	1062 00	3° 00'			3 66	N 34 W	5 08			13 78
19	1132 00	3° 00'			2 36	N 33 W	7 06			
20	1177 00	3° 00'	1176 82							
					HOLE NO. 1 SURVEYED WITH STRAIGHT HOLE					
					HOLE NO. 2					
						S 78 W	86			9 55
	1034 00	(Data From M. S. Survey)			44	S 78 W	77			9 98
	1054 00	1° 15'			5 44	N 41 E	4 87			6 41
	1132 00	4° 00'			1 81	N 41 E	6 23			5 22
	1158 00	4° 00'								

FORM NO. [illegible]

RECORD OF SURVEY

JOB NO. WT-98165 DATE August 31, 1965 CHECKED BY

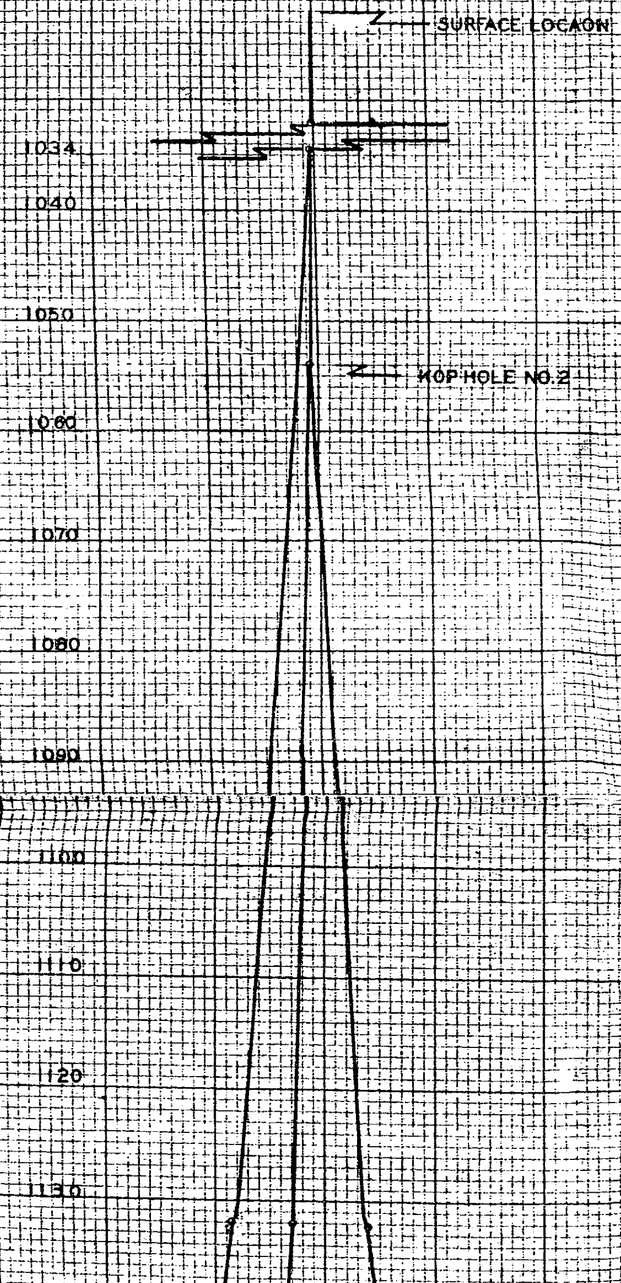
STATION	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	VERTICAL SECTION	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES NORTH	SOUTH	EAST	WEST
					HOLE NO. 3					
	1054 00	(Data From M. S. Survey)			34	S 10 E	77			9 98
	1132 00	0° 15'			11	S 10 E	44			9 92
	1158 00	0° 15'					33			9 90
				CLOSURE M. S. SURVEY @ 1034'			9.59' NORTH	84° 51' WEST		
HOLE NO. 1 - 5.30' NORTH 28° 59' WEST OF HOLE NO. 3 @ 1132'										
HOLE NO. 1 - 7.77' NORTH 29° 59' WEST OF HOLE NO. 3 @ 1177'										
HOLE NO. 1 - 6.08' NORTH 88° 01' WEST OF HOLE NO. 2 @ 1132'										
HOLE NO. 1 - 8.60' NORTH 84° 28' WEST OF HOLE NO. 2 @ 1177'										
HOLE NO. 3 - 5.65' SOUTH 38° 23' WEST OF HOLE NO. 2 @ 1132'										
HOLE NO. 3 - 7.39' SOUTH 36° 59' WEST OF HOLE NO. 2 @ 1158'										

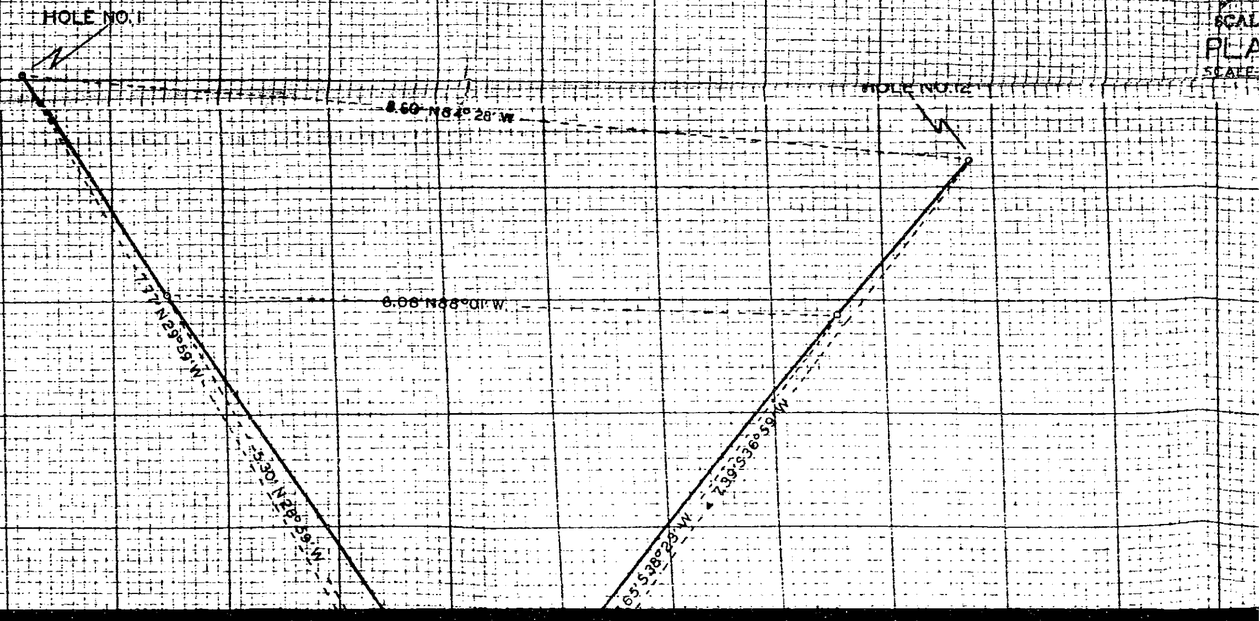
FORM NO. D-3008

ARKLA EXPLORATION
STATE CORE TEST NO.56
APACHE CO. ARIZONA

VERTICAL SECTION

SCALE T.V.D. 1"=10'
SCALE DISPLACEMENT
NONE

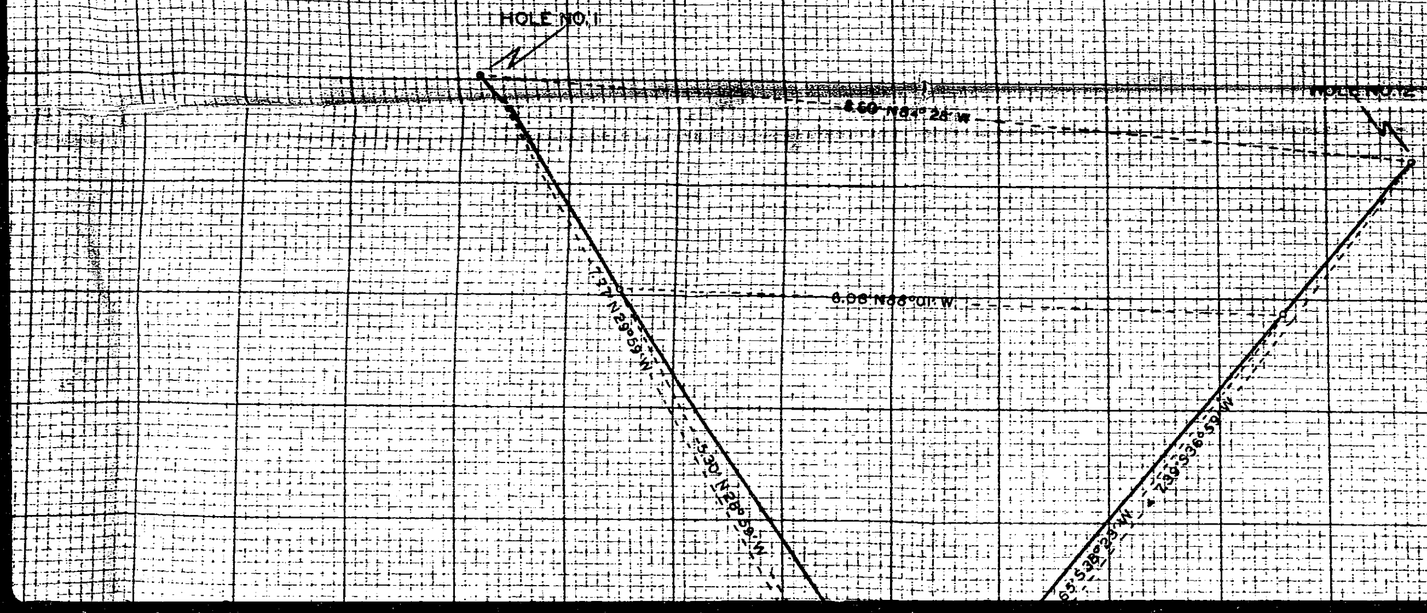




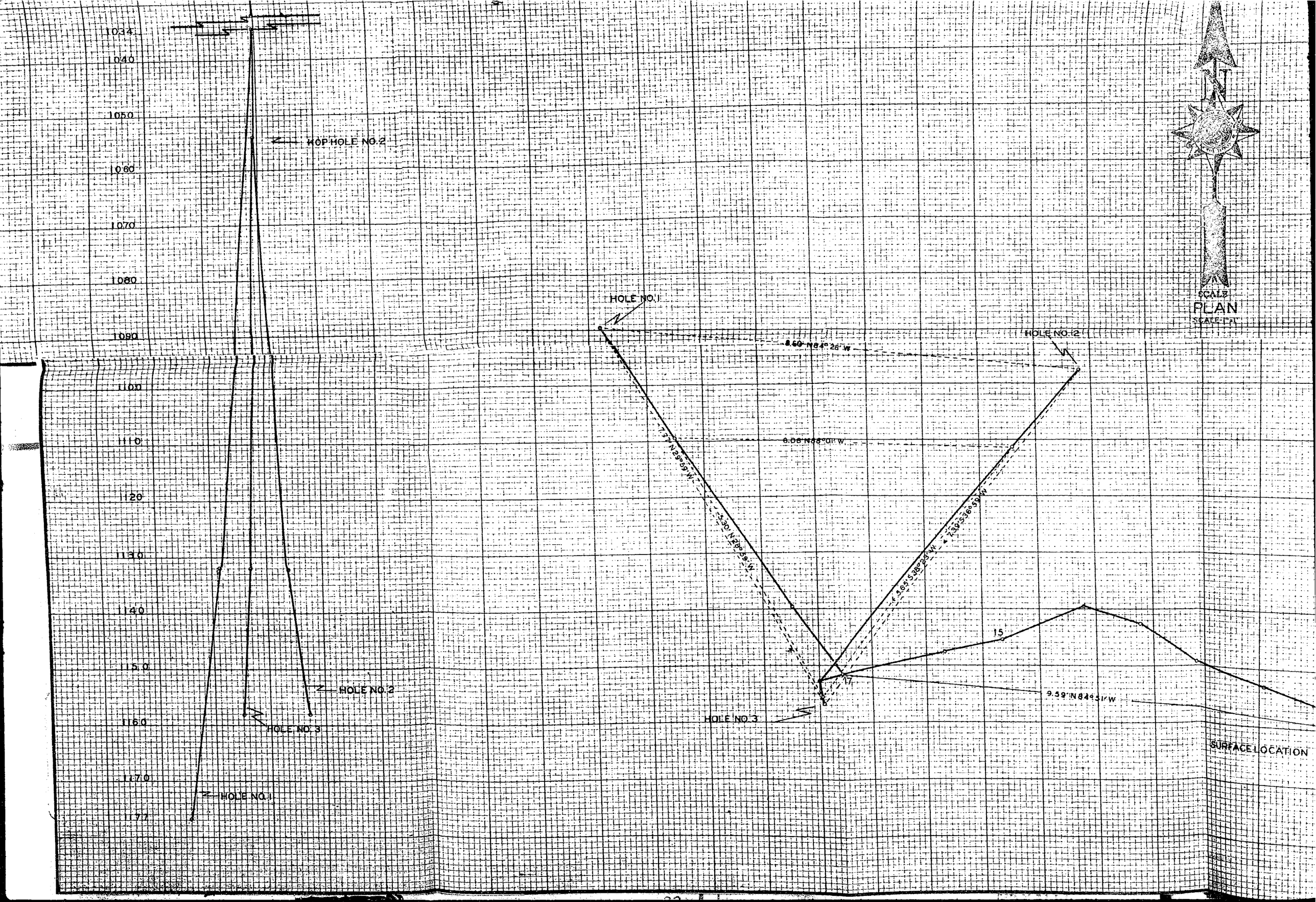
ARKLA EXPLORATION
STATE CORE TEST NO.56
APACHE CO. ARIZONA

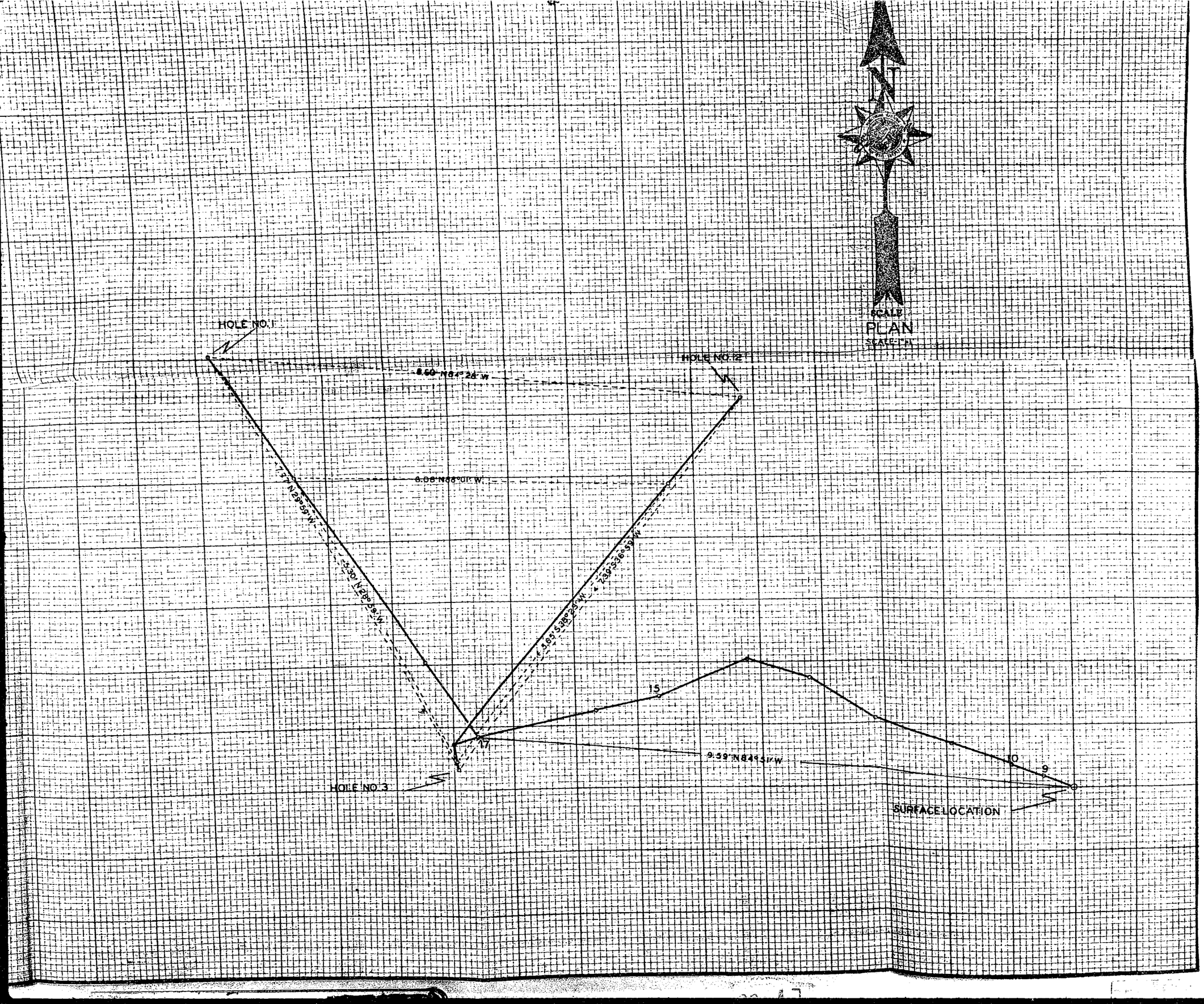
E LOCAON

E NO.2



All
SW/4 Sec. 30-T16N-R24E, Apache Co., Ariz.
.....E #56, W. S. I.


1034
1040
1050
KOP HOLE NO.2
1060
1070
1080
1090
1100
1110
120
1130
1140
1150
HOLE NO.2
1160
HOLE NO.3
1170
HOLE NO.1
1177
HOLE NO.1
8.60' N84°26' W
HOLE NO.2
8.08' N88°01' W
7.97' N29°59' W
5.30' N29°59' W
3.65' S38°23' W
3.39' S36°39' W
15
17
9.59' N84°51' W
HOLE NO.3
SURFACE LOCATION
SCALE
PLAN
SCALE-1"=1'



N
SCALE
PLAN
HOLE NO. 1
HOLE NO. 12
8.60' N84°28' W
8.08' N88°01' W
7.77' N29°59' W
5.30' N28°59' W
5.65' S38°29' W
7.39' S36°59' W
15
17
10
9
9.59' N84°51' W
HOLE NO. 3
SURFACE LOCATION

U.S. BORAX 1 HOLBROOK, APACHE CO
SW/NW Sec 34-T16N-R24E 1-16

P-W

5.

County Apache

Area

Lease No.

Well Name UNITED STATES BORAX 1 HOLBROOK

Location SW/NW Sec 34 Twp 16N Range 24E Footage 1900 FNL 450FWL

Elev 5365-approx KB Spud Date 11/63 Completed Abandon 12/63 Total Depth 1813'

Contractor

Casing Size	Depth	Cement

Drilled by Rotary
Cable Tool

Production Horizon

Initial Production

REMARKS

Elec Logs Gamma Ray Neutron (4)

Applic. to Plug ___ Plugging Record ___ Completion Report ___

Sample Log
Sample Descript.
Sample Set
Core Analysis
DSTs

Water well accepted by

Bond Co. & No.

Bond Am't $ Cancelled Date Organization Report

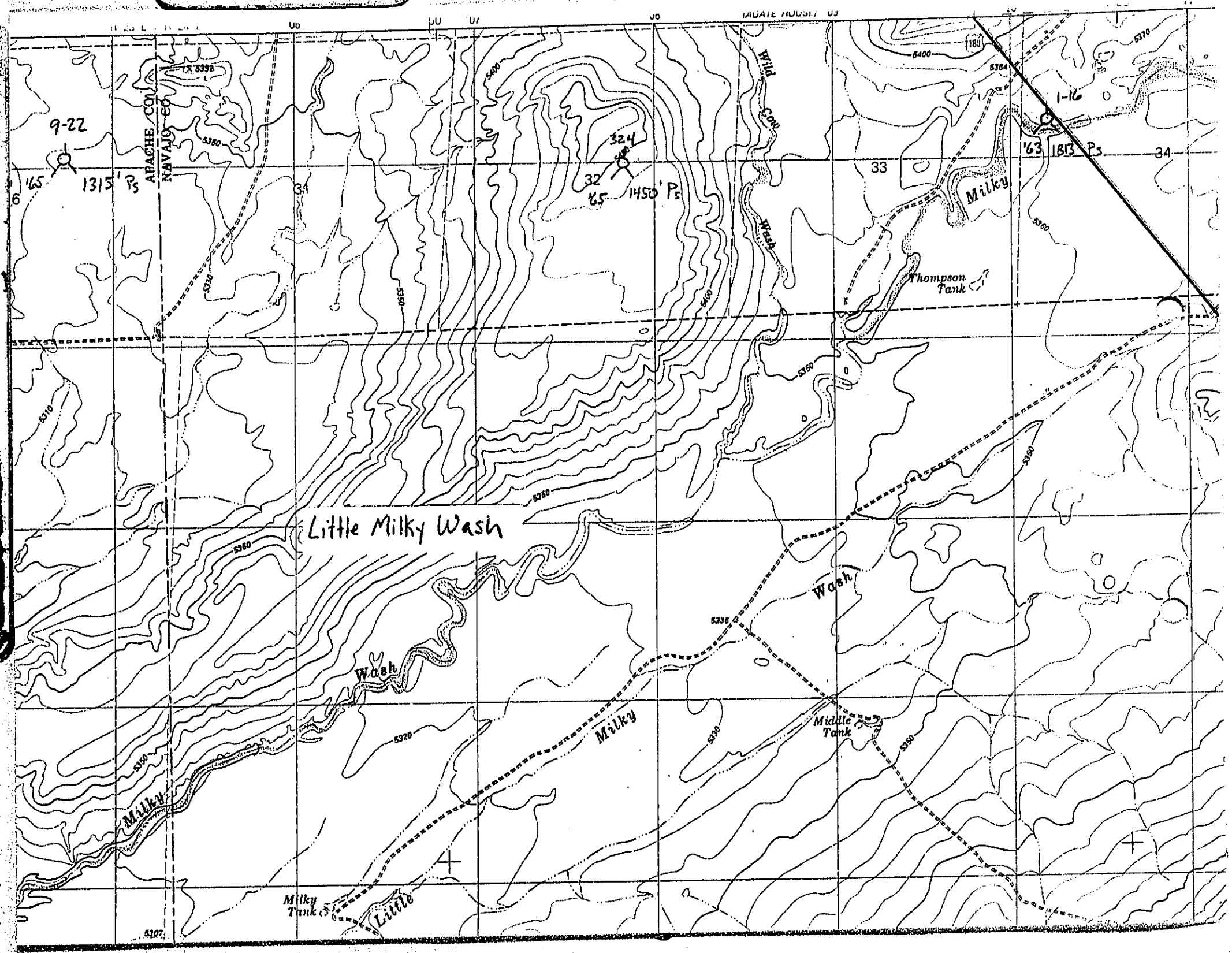
Filing Receipt Dated Well Book ___ Plat Book ___

API No. 02-001-05350 Loc. Plat ___ Dedication

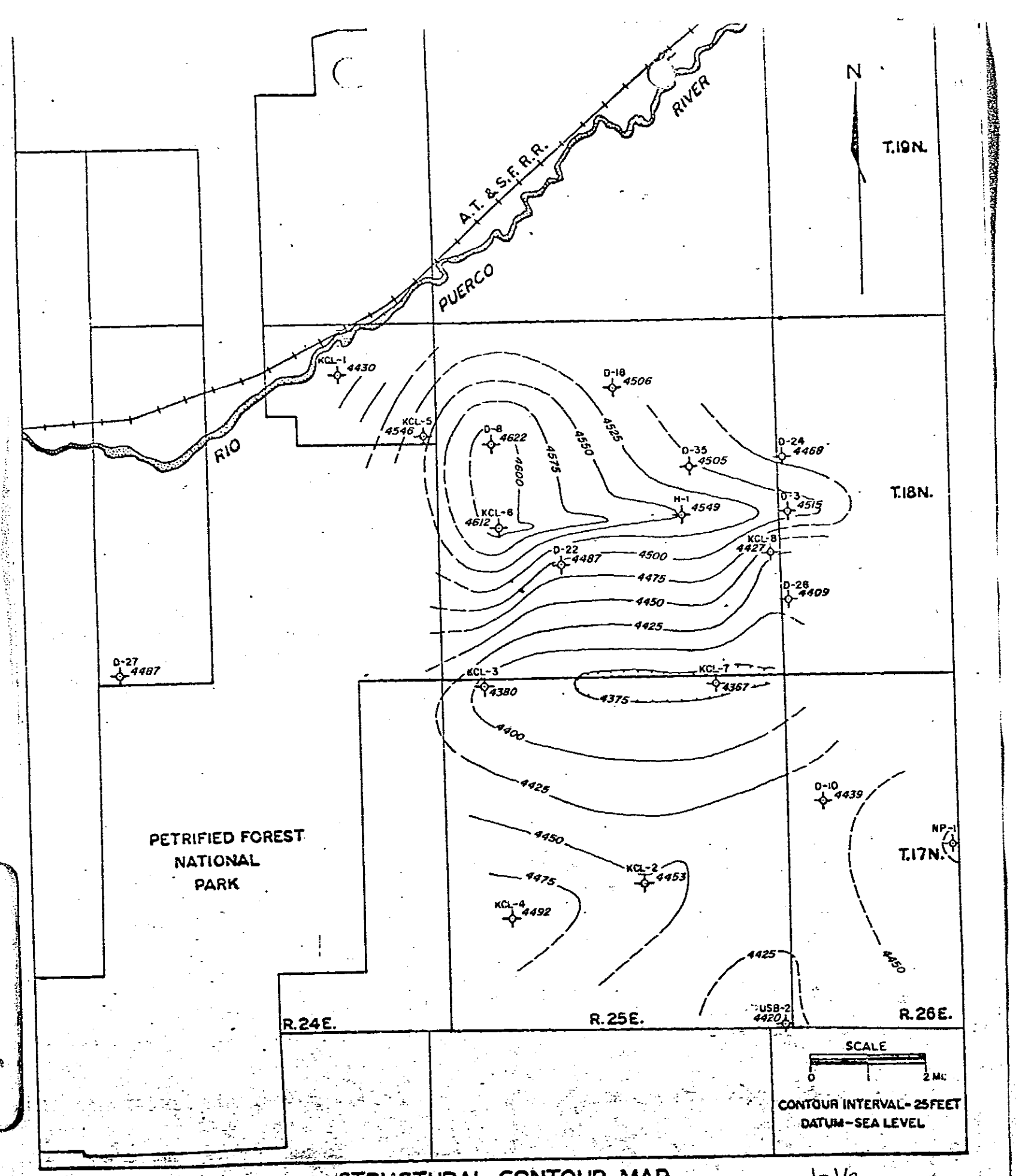
Permit Number — Date Issued 1-16

U.S. Borax - Mineral Tests

WELL	LOCATION	DATE DRILLED	TOTAL DEPTH	GROUND ELEVATION	TOP COCONINO	
Holbrook #1	1900 FNL, 450 FWL Sec. 34-16N-24E Apache Co.	December, 1963	1813	5565 Approx.	496	1-16
Navajo 1-B	SE-SE Sec 36-17N-25E	February, 1964	1308	5600	762	1-27
Navajo #2	2640 FSL, 2626 FEL Sec 22-17N-25E	March, 1964	1430	5710' Approx.	821	1-25



9-22
'65
1315' Ps
ARACHE CO
NAVAJO CO
324
'65
1450' Ps
Wild Cow Wash
1-16
'63
1813 Ps
Milky
Thompson Tank
Little Milky Wash
Wash
Milky
Middle Tank
Milky Tank
Little



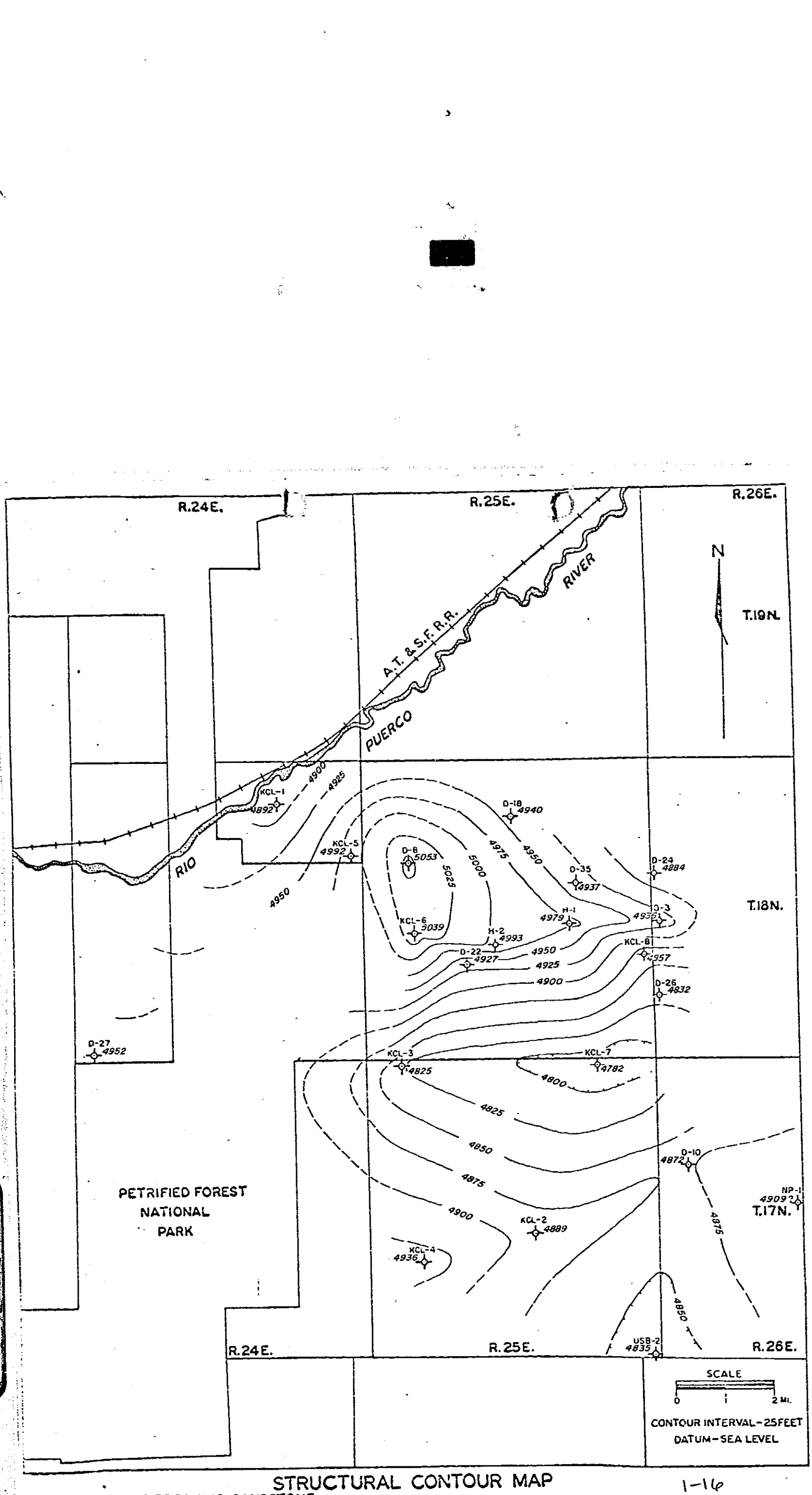
STRUCTURAL CONTOUR MAP

TOP OF ANHYDRITE "B" BED IN SUPAI FORMATION

AUGUST 5, 1964
BY: WAYNE WALLACE

1-16

KERN COUNTY LAND COMPANY
APACHE POTASH PROJECT
APACHE COUNTY, ARIZONA



STRUCTURAL CONTOUR MAP

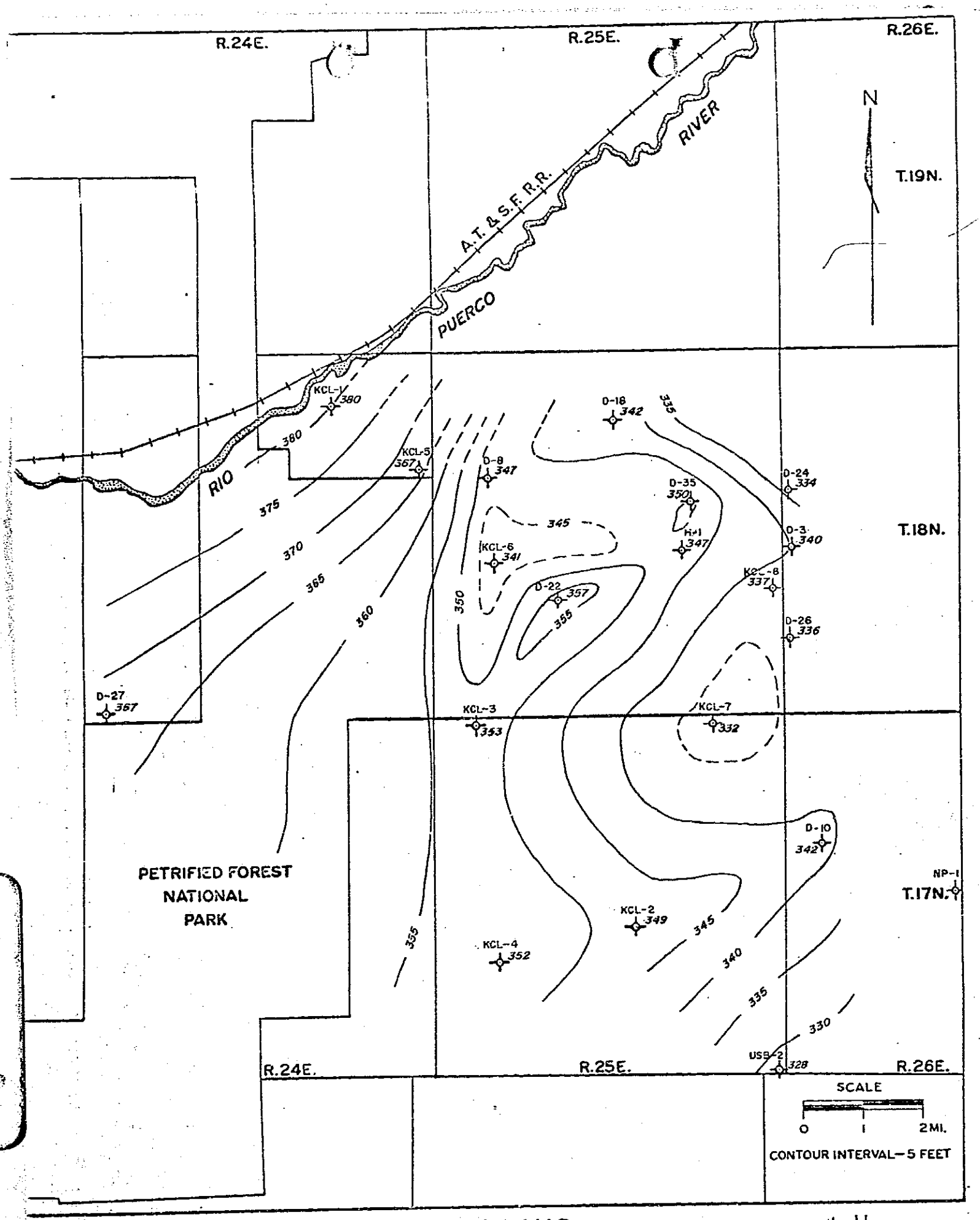
TOP OF COCONINO SANDSTONE

AUGUST 1, 1964

1-16

KERN COUNTY LAND COMPANY

APACHE POTASH PROJECT



ISOPACH MAP

FROM TOP OF COCONINO SANDSTONE TO TOP OF SUPAI FORMATION

JULY 31, 1964
BY: WAYNE WALLACE

1-16

KERN COUNTY LAND COMPANY

APACHE POTASH PROJECT
APACHE COUNTY, ARIZONA

October 22, 1968

Mr. Sidney Spofforth
Middle States Oil Company, Incorporated
Thirty North Lasalle Street
Chicago, Illinois 60602

Dear Mr. Spofforth:

A search of our records indicates that we have had no oil or gas exploration in Apache County as to the locations T12N, R26E; T16N, R24E; or as to T23S, R31E in Cochise County.

Greer Well #1, a dry hole, located in the NE/4 NE/4, Sec. 28, T13N, R27E, Apache County, was drilled to a depth of 498' in May, 1949. Three mineral test wells have been drilled in T16N, R24E, Apache County. Arkla Exploration Company drilled a mineral strat test in Sec. 32 in September, 1965. Potash tests were made in sections 19 and 30 of this same township and range. U. S. Borax drilled a mineral test well, the Holbrook #1, in Sec. 34 to a total depth of 1813'. This well was drilled in December, 1963. The top of the Coconino formation was found at a depth of 496'. The ground elevation at the drill site was 5365', more or less.

This information is all that our records reflect concerning the lands that your letter dated October 4, 1968, received here October 11, 1968, listed.

Yours truly,

James A. Lambert
Administrative Assistant

JAL:jf

Note to file:

We have Auto positives

on these 3 logs—

OCT 22 1965

SAMUEL P. GODDARD
GOVERNOR

LYNN LOCKHART
CHAIRMAN

R. KEITH WALDEN
VICE CHAIRMAN

ORME LEWIS
MEMBER

LUCIEN B. OWENS
MEMBER

GEORGE T. SILER
MEMBER

OFFICE OF

Oil and Gas Conservation Commission

STATE OF ARIZONA

ROOM 202

1624 WEST ADAMS

Phoenix, Arizona 85007

PHONE: 271-5161

JOHN BANNISTER
EXECUTIVE SECRETARY

J. R. SCURLOCK
PETROLEUM GEOLOGIST

October 21, 1965

U.S. Borax & Chemical Corporation
P.O. Box 75128
Stanford Station
Los Angeles, California 90005

Attention: Mr. Siegfried Muessig, Chief Geologist

Gentlemen:

Thank you kindly for the locations on the Holbrook #1 and the Navajo #2 holes. Ground L. 5365' Approx. G.L. 5710' Approx.

Could you also supply us with the elevations on these wells.

Very truly yours,

J.R. Scurlock
Geologist
mr

Utah Oil Report ✓

Tenneco ✓

C T Henderson ✓

S Brown ✓
Wes P. ✓

Shell ✓

Rinehardt ✓

Phillips ✓

Petty ✓

P I ✓

Pan Am ✓

Humble ✓

Continental ✓

Amerada ✓

Stuler ✓

Ark La ✓

Kern Co. ✓

LWaterhouse ✓

B King ✓

Fritz Ryan ✓

Mike ✓

Dave Thomas ✓
Texaco ✓
Superior ✓
National Potash ✓
Duval ✓
USGS ✓
Skelly ✓
Jim Pickett ✓
Kerr McGee ✓
El Paso Nat. Gas ✓
Eastern ✓
Pye ✓
Jimmy Fu.ton
Frank G ✓
Joe B ✓
Richfield ✓
B A ✓

(✓ those names checked — have sent data on Kern Co)

October 21, 1965

U.S. Borax & Chemical Corporation
P.O. Box 75128
Stanford Station
Los Angeles, California 90005

Attention: Mr. Siegfried Muessig, Chief Geologist

Gentlemen:

Thank you kindly for the locations on the Holbrook #1 and the Navajo #2 holes.

Could you also supply us with the elevations on these wells.

Very truly yours,

See original

J.R. Scurlock
Geologist
mr

[redacted] U.S.BORAX

TECHNICAL DEPARTMENT

October 19, 1965

Mr. J. R. Scurlock
Petroleum Geologist
Oil and Gas Conservation Commission
State of Arizona
1624 West Adams
Phoenix, Arizona 85007

Dear Mr. Scurlock:

I am sorry that I did not include the exact location for our Holbrook #1 and Navajo #2 holes. These locations are as follows:

Holbrook #1:	1900' FNL & 450' FWL 34-16-24
Navajo #2:	2640' FSL & 2626' FEL 22-17-25

Thank you very much for the data sheet on the two National Potash wells.

Sincerely yours,

Siegfried Muessig
Chief Geologist

SM:b

RECEIVED
OCT 20 1965
STATE O & G CONS. COMM.

October 5, 1965

U.S. Borax & Chemical Corporation
3075 Wilshire Boulevard
Los Angeles, California

Attention: Mr. Siegfried Muessig

Gentlemen:

Receipt of the gamma ray neutron logs for the holes drilled byou you is acknowledged. Your cooperation is very much appreciated.

Could you please give us the quarter-quarter location and elevation on the Holbrook #1 hole and on the Navajo #2 hole. This type of information is eagerly sought by operators in this area.

Again, we thank you heartily for this data.

Yours very truly,

J.R. Scurlock
Petroleum Geologist
mr

U.S.BORAX
TECHNICAL DEPARTMENT

September 27, 1965
(dictated Sept. 24)

Mr. John Bannister
Executive Secretary
Oil and Gas Conservation Commission
State of Arizona
1624 West Adams
Phoenix, Arizona 85007

Dear Mr. Bannister:

With this letter I am enclosing the gamma ray-neutron logs of the three holes we drilled in the Holbrook area last year. I have not marked formation tops on these logs as I rather suspect your tops, being based on many more drill holes than we have, are probably somewhat different than ours.

I hope that other companies will likewise send you their logs in the near future, and that they will be available to the general public.

Sincerely yours,

Siegfried Muessig
Chief Geologist

SM:b
enc.

RECEIVED SEP 28 1965 STATE O & G CONS. COMM.

RECEIVED SEP 28 1965 STATE O & G CONS. COMM.

UNITED STATES BORAX & CHEMICAL CORPORATION • 3075 WILSHIRE BOULEVARD • LOS ANGELES, CALIFORNIA • 381-5311
MAIL ADDRESS: P.O. BOX 75128, SANFORD STATION, LOS ANGELES, CALIFORNIA 90005

September 8, 1965

U.S. Borax and Chemical Corp.
3075 Wilshire Boulevard
Los Angeles, California 90005

Gentlemen:

Attached please find information recently furnished to us by Duval Corp., covering its drilling of some forty-four holes in search of potash in Apache County.

As you recall, during the summer of 1964 your company was engaged in potash exploration in this area. Inasmuch as these holes penetrated the Shinarump and Coconino formations, both formations being of potential helium value, I spoke to your personnel engaged in this activity, asking that certain information be filed with this Commission. They felt that this could be done.

This letter is to request you to file information along the line of the information furnished by Duval. Duval has further promised that in the near future they will file copies of logs down to the salt so that the information most valuable to this Commission may be made available to the public.

Your cooperation with this endeavor will be greatly appreciated.

Yours very truly,

John Bannister
Executive Secretary
mr