P-W

ARKLA EXPLORATION #88, W.S.I. NMA
SWNE Sec 7-T16N-R23E,Navajo 9-14

County NAVAJO

Area

Lease No.

Well Name ARKLA EXP. CO. #88 W.S.1 NMA

Location ~~SE~~ SW NE Sec 7 (Irreg. Sec.) Twp 16N Range 23E Footage 1636 FNL - 4123 FWL

Elev 5426 Gr 5433 KB Spud Date 7-19-65 Completed Abandon 7-31-65 Total Depth 1325

Contractor

Drilled by Rotary
Cable Tool

Casing Size	Depth	Cement

Production Horizon

Initial Production

REMARKS

Elec Logs GRN-4

Sample Log
Sample Descript.
Sample Set
Core Analysis
DSTs

Applic. to Plug ___ Plugging Record ___ Completion Report ___

Water well accepted by

Bond Co. & No.

Bond Am't $ Cancelled Date Organization Report

Filing Receipt Dated Well Book ___ Plat Book ___

API No. 02-017-00258 Loc. Plat ___ Dedication

Permit Number NONE Date Issued

9-14

WELL NAME: AEC - NMA #88

LOCATION: SEC. 7-16N-23E

ELEVATION:

SPUD JULY 19, 1965
35' 9 5/8" SET @ 45' w/40 sx

0-10'	SURFACE SD-PURP SH.
10-20'	PURPLE SH.
20-30'	SH-PURP-WH.
30-40'	SD-WH-SUBRD-SUB CLEAR ANG-10% SH-PURP-WH.
40-50'	AA.
50-60'	RED-WH-PURP SH-VERIGATED.
60-70'	SH-VERI COLORED-VERIGATED.
70-80'	SAME-BEC MORE RED.
80-90'	AA.
90-00'	SH RED SLTY.
100-10'	SD-CONG WH-INTSTL CLY GLANCONITIC M-CG 90% UNCONSOL, SH-RED MIC CONG-40%.
10-20'	INC IN SAND.
20-30'	SAME W/COLORED CHERT.
30-40'	AA 30% SD-70% CONG SH.
40-50'	AA 20%, AA 80% AA RED & GREEN.
50-60'	10% SD, 90% CONG SH.
60-70'	TRC SD, 100% CONG SH.
70-80'	CONG SD-SH-CHERT COLORED (SH-RED-GREEN).
80-90'	SH-RED-GREEN & 20% CONG SHALE CONG SD 10% W/CHERT.
90-00'	SH BEC MORE CONG.
200-10'	SH-REDDISH BRN CONG 40%-SD WH-GREEN- FMG SUB RD CONG 60%.
10-20'	SD AS ABOVE 80%-SH 20%.
20-30'	RED SHALE 80%-CONG SD AS ABOVE 20%.
30-40'	RED SHALE 90%, CONG SD AS ABOVE 20%.
40-50'	AA 30%, AA 70%.

DO NOT REMOVE FROM FILE

50-60'	SH RED CLYEY 70%-CONG SD AS ABOVE 30%.
60-70'	SH REDDISH BRN-V SDY CONGLOMERATIC.
70-80'	SAME W/GREEN SHALE TRC MAROON & GREEN SH.
80-90'	SH-RED CLYEY, AA.
90-00'	AA, TRC ANHY?
300-10'	SH-RED & GREEN-BEC SILTY.
10-20'	AA.
20-30'	BEC MORE RED SH & SILTY.
30-40'	SH-RED SILTY-TRC GYP.
40-50'	AA INC INGGYP.
50-55'	AA, AA, SD GRAIN M-C 30%.
55-60'	AA.
60-65'	AA.
65-70'	SH-REDDISH BRN-GREEN, VERY GYPY TRC SD GR.
70-75'	AA, 30%-SD RED- V ORB.
75-80'	SHALE BRN SLTY & SD AS ABOVE SCATTERED SD GRAIN & GYP DEC IN GREEN SH, TCS GRY SDY LM.
80-85'	SHALE REDDISH BRN MIC SLT ST, 10% LM.
85-90'	SHALE SDY SLT-RED, SUB ANG CLEAR-SD GRAIN.
90-95'	SLT ST RED-BEC MORE SDY, 10% LM AS ABOVE.
95-00'	AA, 5% LM AS ABOVE.
400-05'	AA.
05-10'	CHANGE TO RED SLTY SD.
10-15'	SAME POSS SD GRAINS COCO.
15-20'	AA, INC.
20-25'	AA, AA.
25-30'	AA.
30-35'	TRC COCONINO.
35-40'	FIRST DEFINATE SAND SAMPLE W/COCONINO CONSOL-GYPY-PYRITIC IN PT.
40-45'	SD AS ABOVE.
45-50'	AA.

50-55'	VERY GYPY.
55-60'	AA.
60-70'	SD-WH MED G-SUB ROUND-ROUND CLEAR SLT SILTY, GYPY.
70-80'	SAME.
80-90'	AA.
90-00'	AA.
500-10'	SAME.
10-20'	AA.
20-30'	SD-BEGINNING TO CLEAR UP.
30-40'	AA.
40-50'	M-C GR.
50-60'	BEC MORE COARSE GRAIN, CAVING INDICATED.
60-70'	AA, AA.
70-80'	AA, AA.
80-90'	AA, AA.
90-00'	AA SD BEC MORE CONSOL, HOLE SLUFFING CONG MATERIAL.
600-10'	AA, AA.
10-20'	AA, AA.
20-30'	SD-CLEANING UP.
30-40'	AA, BEC MORE CONSOLIDATED-V GYPY.
40-50'	AA, HOLE CAVING.
50-60'	CG-CONSOL-UNCONSOL, AA.
60-70'	SAME, CLEANING UP.
70-80'	AA, CAVING.
80-90'	AA.
90-00'	AA, VERY GYPY-APPEARS TO BE FRESH RED SH, 20%.
700-10'	AA.
10-20'	AA.
20-30'	AA, AA.
30-40'	AA, AA, 10% SH REDDISH BRN.

40-50'	AA, AA, 20% SH REDDISH BRN.
50-60'	AA, 10% SH REDDISH BRN.
60-70'	AA, 10% SH REDDISH BRN.
70-80'	BEC CONSOL-VCG-BEC SLT PK VERY GYPY.
80-90'	AA.
90-00'	CONSOL SD-PK-INTSTLCLY.
800-10'	SD-BEC ORANGE CONSOL MG INTSTL CLY-ARG IN PT.
10-20'	SAME-LT ORG IN PT.
20-30'	AA BEC MORE ORG.
30-40'	SAME.
40-50'	SD-WH-ORANGE.
50-60'	SD ORANGE CLUSTERS-RD SUB RD, 10% ARG,(10% WH SD).
60-70'	AA, MG INSTL CLY-30% REDDISH BRN SH.
70-80'	SD-WH F-MG-RD SUB RD, 10% DOLO-CR-VF XYLN, 10% SLT ST-RED SANDY-TRC DOLO SD.
80-90'	SILT ST 60%-RED-SDY-SD-ORG WH-AS ABOVE 40%-TRC DOL AS ABOVE.
90-00'	SLT ST RED SDY-SD RED SLTY 50%-SD WH AS ABOVE PCS GRY DOLO SD.
900-05'	SD-RED ARG 55%, SLT ST RED 30%, 15%-BUFF-GRY DOLO-SDY IN PT.
05-10'	AA 60%, AA 30%, 10% AA.
10-15'	AA 40%, AA 60%, TRC AA.
15-20'	AA, AA, AA.
20-25'	ANHY-GRY-WH.
25-30'	SILT ST-RED 80%-ANHY-20%.
30-35'	AA 90%, AA 10% & GYP.
35-40'	AA 95%, AA 5%.
40-45'	AA 100%, TRC.
45-50'	SAME.
50-55'	SLT ST RED 60%-ANHY 40%.
55-60'	AA 80%, AA 20%.
60-65'	AA 70%, AA 30%.

65-70' AA 20%, AA 80%.

70-75' ANHY-GYP WH, 100% TRC SLT.

75-80' AA, 10% SLT ST RED.

80-85' AA 30% SLT ST RED-FLECKS GREEN 70%.

85-90' AA 10% SH CLYEY AA 90%.

90-95' TRC PINK 40%, AA 60%.

95-00' ANHY WH-90%, SLT ST REDDISH ORG 10%.

CIRC 10 MIN

CORE WS #1 1010-35.1½'

1010-13 SALT WH XYLN ANHY STREAK @ 1010'10"; 13-19 SHALE-70% W/SALT INCL 30%, 1013.6" BIS 1/32", 1017.4" BIS ½"; 19-23 SALT WHITE 80% SHALE RED CLYEY 20%; 23-26 SALT WH W/ORANGE CAST ANHY STRINGER @ 1025.4"; 26-27 SALT WH W/REDDISH ORG IMP; 27-30½ SALT-MILKY WH PURP ANHY STRINGER 28 DOWN @ APPROX 6" INT; 30½-31 SALT HOT STREAK; 31-32.6" SALT WH-PK; 32.6"-35 K_2O ZONE; 35-41 K_2O ZONE BISQUIT @41; 41-47 60% SALT, 40% SHALE; 47-59½ SALT WH-TRC ANHY STRINGERS; 59'6"-8" BISQUIT-HOT; 59'8"-62'6" 70% SALT, 30% SH.

CORE WS #2

1020-23 SALT 70%-SH RED CLYEY 30%; 23-28 SALT WH-ORG-PK CAST SCATT RED & ORG BLEBS; 28-31 SALT WH-MILKY W/SCATTERED PURPLE & GRY ANHY STRINGERS; 31-33 SALT WH MILKY; 33-39 K_2O TYPE ZONE; 39-40 PK SALT; 40-41.3" MILKY WH SALT 41.3" BISQUIT; 41.3"-45.2" SALT 70%-SH-RED 30%.

WS #2 SAMPLES FROM 1045-70

1045-50 SALT 70%-SH-SED-GREEN 30%; 50-55 SALT WH 90%, SH-SED-GREEN 10%; 55-60' SALT 10% TRC ANHY; 60-65 SALT 60% SH-SLTY 40%; 65-70 SALT 50%, SH-SLTY 50%; CIRC SALT 80%, SH SLTY 20%.

STRAIGHT HOLE CORE #1

963-88 REC 11.3" ANHY GRY WH DNS; 988-98 REC 4'3" 3'8" RED SHALE-SLTY W/ANHY INCL. 7" ANHY.

1062-70	SALT WH 90% SLT ST RED 10%
70-80	AA 75% AA 15% ANHY 10%
80-90	AA 80% AA 10% AA
90-00	AA 90% AA PCS GREEN SH 10% TRACE.
1100-10	AA 90%
10-20	AA 70% AA 30%
20-30	AA 60% AA INC IN GREEN SH 30% 10% ANHY.
30-40	AA 60% SLT ST RED 40%.
40-50	AA 70% AA 30% TRC ANHY
50-60	AA 60% AA 40% AA
60-70	AA 80% AA 20%.
70-80	AA 70% AA 30%.
80-90	AA 70% AA 20% ANHY 10%.
90-00	AA 65% AA 20% AA 15%.
1200-10	AA 30% AA 10% AA 60%.
10-20	AA 70% AA 30%.
20-30	AA 60% AA 10% AA 30%
30-40	SALT 80% ANHY 20%.
40-50	SALT WH 90% ANHY 10%.
50-60	AA 80% SLT ST RED 10% ANHY 10%.
60-70	AA 80% ANHY 20%.
70-80	AA 40% SLT ST RED 60%.
80-90	AA 20% AA 70% ANHY 10%.
90-00	AA 10% AA 15% DOL-BRN-DRK BRN VF XYLN 15% ANHY 60%.
1300-10	SD ST GRY GRN 60% SLT ST RED 30% ANHY 10%.
10-20	AA 90% SLT ST RED 10%.
20-25	SLT ST AND SH 40-40 ANHY 20%

COMPLETED DRILLING @ 4:22 PM FRIDAY JULY 30, 1965.

DETAILED CORE DESCRIPTION

WELL NAME: AEC - #88

LOCATION:

ELEVATION:

CORE WS 1

1010-1015.0 (70") 30" SALT-VLT ORNG-ORNG BLEBS-16" SALT 40% SH-1013.5 & 1013.9 VV THIN BISCUIT LIKE PTNGS NOT HOT. 24" SH 20% SALT.

15.9-21.3 (68") 7" SH 20% SALT-35" SALT 30% SH-BISCUIT LIKE PTNGS-1017.4 & 1018 - 7" SALT 20% SH-10" SALT 10%SH-6" SALT 20% SH-3" SALT 30% SH-BISCUIT-LIKE PTNG 1021.3.

21.3-31 (9.9) 16" SALT 40% SH-3" SALT 26% SH-2" VLT ORNG TRS SH, SH IS HOT 1021.3-1022.7½ - 46" SALT VLT ORNG ORNG BLEBS-ANHY? INCLS- 1024.8-& 1025.3-RED KCL ZONE 1025.9-1026.10 TRS GRN SH? 1026.4-46" SALT CLEAR-HOT-ANHY? BANDS-4" SALT-RED & CLEAR KCL-ANHY? INCLS.

31-42.2 (11.7) SALT W/ANHY INCL-14" SALT-KCL-ORNG BLEB-5" SALT VLT ORNG-KCL TR ANHY? 12" SALT-KCL-20% SH 6" SALT 10% SH-4" RED & GRN SH? 30% SALT-5" SALT 20% SH-KCL-7" SALT TRS SH-KCL-13" SALT 20% SH-KCL-30" SALT KCL-HOT RED & CLEAR (1036.6 1039)-1037.5½-1037.8½-3" SALT 20% GRN SH? HOT-¼" THICK BAND DK BURGUNDY, HOT SALT IN MIDDLE OF GRN SH? BREAK. (1039-1040.4 16" SALT-CLEAR GRAN-HOT KCL-ANHY? INCLS-TRS RED KCL. 6" SALT W/FAIR SHOWING RED KCL-ANHY? INCLS-(BISCUIT THIN HOT-1040.11)-7" SALT 30% SH-10" SALT 40% SH BOTTOM OF CORE 1042.3.

42.2-47.8 (68") 44" SH 30% SALT-14" SH 10% SALT RED ' GREEN-10" SALT 30% SH RED & GRN.

47.8-53.5 (70") 7" SALT 30% SH-12" SALT 20% SH-5" SALT 10% SH---17" SALT TRS IMP. VLT AMBER 10" SALT 5% SH 18" SALT VLT ORNG-AMBER TRS IMP. 1" SALT 5% SH.

53.5-59.3 (72") 3" SALT 5% SH-12" SALT TRS IMP. 33" SALT 5% SH- 10" SALT TRS ANHY-5" SALT 10% ANHY INCLS-9" SALT 5% ANHY & SH.

#88
CORE WS 2

9432948.10 (70") 70" RED SH W/GRN SH INCLS & WITHEN ANHY PTNGS.

8.10-955 (70") 27" SH W/ ANHY INCLS-27" ANHY DNS TO SHLY-1" GRN SH 15" RED SH-

55-960.10 (70") 42" SH-4" DNS ANHY-24" SH.

#88
CORE WS 2

1020-25.5 (66") 10" SALT 30" SALT 30% SH-1" SH-4" SALT 10% SH-9" SH 20% SALT-10" SALT 30% SH-4" SALT 20% RED & GRN SH-6" SALT VLT ORNG-ORNG BLEBS 13" SALT 10% SH TR ANHY-9" SALT VLT ORNG-ORNG BLEBS TR ANHY?

25.5-31.2 (68") 18" SALT VLT ORNG SLTTRS OSHGORNG BLEBS TR KCL-1025.7 11" SALT TRS GRN SH? (1026.7-1028-GOOD RED-KCL ZONE) 39" SALT-GOOD KCL-CLOUDY-ZONE?ANHY? BANDS A 1027.8½ A-B 5½"-B-C 4½"-C-D 4"-D-E 7"-E-F1"-F-G 10" G BADLY DISTORTED.

31.2-35.1 (47") 23" 1031.1-1033 V HOT CLEAR GRAN-KCL SALT 20" SALT 20% RED&GRN SH? KCL.-4" SALT 10% SH-KCL.

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CONTINUED FROM #88 WS2

39.2-39.2 (49") 2" SALT HOT 10% SH 9" SALT 20% SH-1036 THIN HOT BISCUIT PTNG. 15" SALT HOT 5% SH? HOT-6" SALT-1037.4-1037.10 V HOT KCL RED & CLEAR - 4" SALT-HOT 10% GRN SH? HOT 12" SALT HOT KCL RED & CLEAR.

39.2-44 (59") 13" SALT LT ORNG GRAN V HOT KCL-CLOUDY & RED 14" SALT CLEAR GRAN HOT KCL 1041-1041.1 V HOT RED-(1+ BIXCUIT-HOT CLEAR 1021.3.)- 1½" SALT 40% SH 4" SALT 30% SH 14" SH 20% SALT - BISCUIT HOT 1043.2 2" SALT 40% SH.

DO NOT REMOVE FROM FILE

DETAILED CORE DESCRIPTION

WELL NAME: AEC #88 NMA

LOCATION:

ELEVATION:

CORE V - 10'.7" OF CORE LOST IN THE FOLLOWING SECTION-MECH. DIFFICULTIES

963-968.6 (5.6) 66" ANHY DNS GRA.

8.6-4.5 (4.6) 54" ANHY DNS GRA.

4.5-11 (5.5) 3" SH 4" ANHY 58" SH W/ANHY INCLS.

11-5.3 (5.9) 17" SH 52" ANHY DNS.

5.3-9.3 (4.1) 49" ANHY DNS T.D. SHOULD BE 1000'.

CORE V

1000-1005.5 (5.5) 32" ANHY DNS 33" SH ANHYDRITIC TO SALTY.

5.5-1.1 (5.8) 13" SH SALTY 5" ANHY SHLY TOP SALT 1006.11'-32" SALT 20% SH 4" SALT 5% SH 5" SALT 10% SH 9" SALT CLEAR TRS IMP.

1.1-6.8 (5.8) 15" SALT CLEAR TRS ORNG BLEBS 7" SALT 5% ORNG BLEBS & GRA ANHY? IMP 5" SH 30% SALT 12" SALT 50% SH 16" SH 30% SALT(BISCUIT HOT 1015.2) 10" SALT 30% SH 3" SH 20% SALT.

6.8-1.8 (5.7) 2" SH 20% SALT 12" SALT 30% SH 21" SH 30% SALT 9" SALT 30% SH- 12" SALT 10% SH 11" SH 30% SALT-(THIN BISCUIT-LIKE PTNGS 1021.4&1-21.9)

1.8-7.1 (5.5) 10" SALT 30% SH 4" SALT 20% RED GRN SH? 10" SALT 5% ORNG BLEBS TRS SH 10" SALT 20% SH - A ANHY? BAND 1027.7 A-B 7", B-C 4½, C-D 4½, D-E 9½, E-F 12½", POORLY DEVELOPED BAND 11" SALT VLT ORNG TRS KCL 13" SALT 10% SH TRS KCL 7" SALT CLEAR KCL CLEAR & RED.

7.1-2.8 (5.6) 30" SALT CLEAR ANHY? BANDS & INCLS KCL 14" SALT VLT ORNG KCL ORNG BLEBS & ANHY - 18" SALT CLEAR KCL ORNG BLEBS 4" SALT KCL CLEAR & RED.

2.8-8.2 (5.8) 28" SALT KCL 20% SH 29" SALT KCL 10% SH 5" SALT KCL CLEAR ' RED 3" GRN SH? HOT 30% SALT 3" SALT KCL CLEAR & RED.

8.2-5.4 (7.2) 10" SALT 5% GRN SH & ANHY? KCL-24" SALT TRS RED SH & ANHY? KCL (BISCUIT HOT 1041.1) 18" SALT 50% SH 11" SH 30% SALT 23" SALT 40% SH.

ARKLA EXPLORATION COMPANY

Drilling Record

WELL NAME: NMA Core Test #88

WELL LOCATION: 1636 FNL-4123 FWL Sec. 7-16N-23E

WELL ELEVATION: 5433 ' KB

CONTRACTOR: Sojourner Drilling Company

SPUD DATE: 7-19-65 5:00 PM

SIZE HOLE DRILLED: 13¾ " to 45 '

TYPE DRILLING FLUID: Flo Sol

SURFACE CASING:
Size 9 5/8 ", Wt. 32.75 #, No. Sacks Cement 40
Cementing Depth: 42 '

SIZE HOLE DRILLED: 8¾ "

TYPE DRILLING FLUID: Flo Sol (A)

INTERMEDIATE CASING:
Size 7 ", Wt. 20 #, No. Sacks Cement 125 (B)
Cementing Depth 923

SIZE HOLE DRILLED OR CORED:
6¼ " from 923 ' to 1325 ' (C)
" from ' to '
" from ' to '
" from ' to '

DRILL STEM TESTS:
None

NO. BITS USED: 2

ELECTRIC LOGS RAN:
Type McCullough Grn from 1325 ' to 700 '
from ' to '

ABANDONMENT PLUGS:
No. Sacks Cement 125 from 1325 ' to 700 '
from ' to '

WAS CASING RECOVERED?
Depth Shot ', ', '
No. Feet Recovered '
No. Feet Not Recovered 923 '

DATE DRILLING RIG RELEASED: 7-31-65 4:00 AM

COMPANY REPRESENTATIVE: James S. Baldry

SPECIAL NOTES: Unusual drilling problems encountered, etc.
(A) Lost considerable mud while drilling.
(B) Temp survey-top cement 480'.
(C) Drilled out hole to 943 and set whipstock #1-Drilled to 1002' pipe tight for core head. Rolled out and milled out tight joint 90'-123'-cored to 1062'. Straightened hole @943 and set whipstock #2 and cored & drilled to 1070'. Straightened hole with small core head and cored & drilled straight hole to 1325.

Arkansas Louisiana Gas Co.
Melbr. Br. Arizona
RECEIVED
AUG 24 1965
GEOLOGICAL
DEPT.

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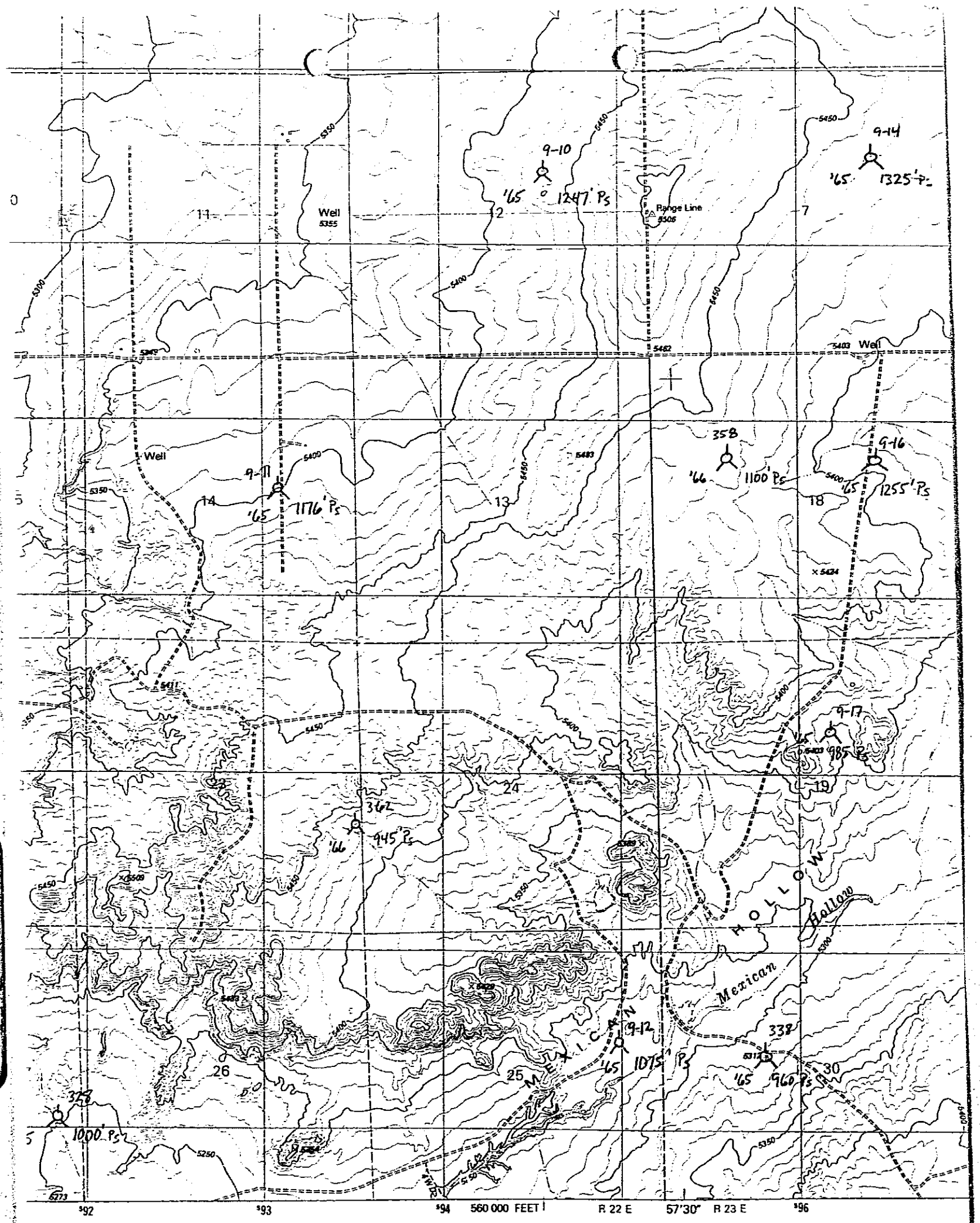

pped, edited, and published by the Geological Survey

SYMBOL OF SERVICE

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SURVEY REPORT

#88

EASTMAN OIL WELL SURVEY COMPANY

DIRECTIONAL DRILLING • TOOLS • INSTRUMENTS • TECHNIQUES

Consult The Yellow Pages For Your Nearest Eastman Office

LONG BEACH • HOUSTON • ODESSA

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EASTMAN
DIRECTIONAL DRILLING INSTRUMENTATION

"Symbol of Service"

REPORT of SUB-SURFACE DIRECTIONAL SURVEY

ARKLA EXPLORATION COMPANY
COMPANY

N. M. A. CORE TEST # 88
WELL NAME

NAVAJO COUNTY, ARIZONA
LOCATION

JOB NUMBER	TYPE OF SURVEY	DATE
WT 76065 & WT-76065A	ORIENTED MULTIPLE SHOT	JULY 24, 1965 & JULY 25, 1965

SURVEY BY
JACK B. JONES & R. B. VICKERS

OFFICE
ODESSA, TEXAS

FORM D-802 R1

RECORD OF SURVEY

EASTMAN — SYMBOL OF SERVICE

JOB NO. WT-76065 DATE July 25, 1965 CHECKED BY

STATION	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	VERTICAL SECTION	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES NORTH	SOUTH	EAST	WEST
					HOLE # 1 (Data from M. S. Survey)					
	923 00	0° 15'	922 96			N 39 E		4 28		0 30
1	943 00	0° 30'	942 96		17	N 33 W		4 14		0 39
2	1030 00	4° 45'	1029 66		7 20	N 03 W		3 05		0 77
3	1062 00	4° 30'	1061 56		2 51	N 03 W		5 56		0 90
					CLOSURE	5.63' North 9° 12' West				
					HOLE # 2					
	923 00	0° 15'	922 96			N 39 E		4 28		0 30
1	943 00	0° 30'	942 96		17	N 33 W		4 14		0 39
2	963 00	0° 30'	962 96		17	N 33 W		4 00		0 48
3	1030 00	3° 30'	1029 84		4 09	N 82 E		3 43	3 57	
4	1070 00	3° 15'	1069 78		2 27	EAST		3 43	5 84	
					CLOSURE	6.77' South 59° 34' East				
					HOLE # 3					
	923 00	0° 15'	922 96			N 39 E		4 28		030
1	943 00	0° 30'	942 96		17	N 33 W		4 14		0 39
2	963 00	0° 30'	962 96		17	N 33 W		4 00		0 48
3	1030 00	0° 15'			29	N 33 E		3 76		0 32
4	1045 00	0° 15'			07	N 32 E		3 70		0 28
					CLOSURE	3.71' South 4° 20' West				

CLOSURE BETWEEN HOLES AT 1030'
Hole # 1 to Hole # 2 - 7.80' S 33° 49' E
Hole # 1 to Hole # 3 - 6.82' S 3° 47' E
Hole # 3 to Hole # 2 - 3.90' N 85° 09' E

CLOSURE BETWEEN HOLES AT TOTAL DEPTH
Hole # 1 to Hole # 2 - 11.24' S 36° 52' E
Hole # 1 to Hole # 3 - 9.28' S 3° 50' E
Hole # 3 to Hole # 2 - 6.13' N 87° 28' E

FORM NO. DM-3C3E

RECORD OF SURVEY

EASTMAN
SYMBOL OF SERVICE

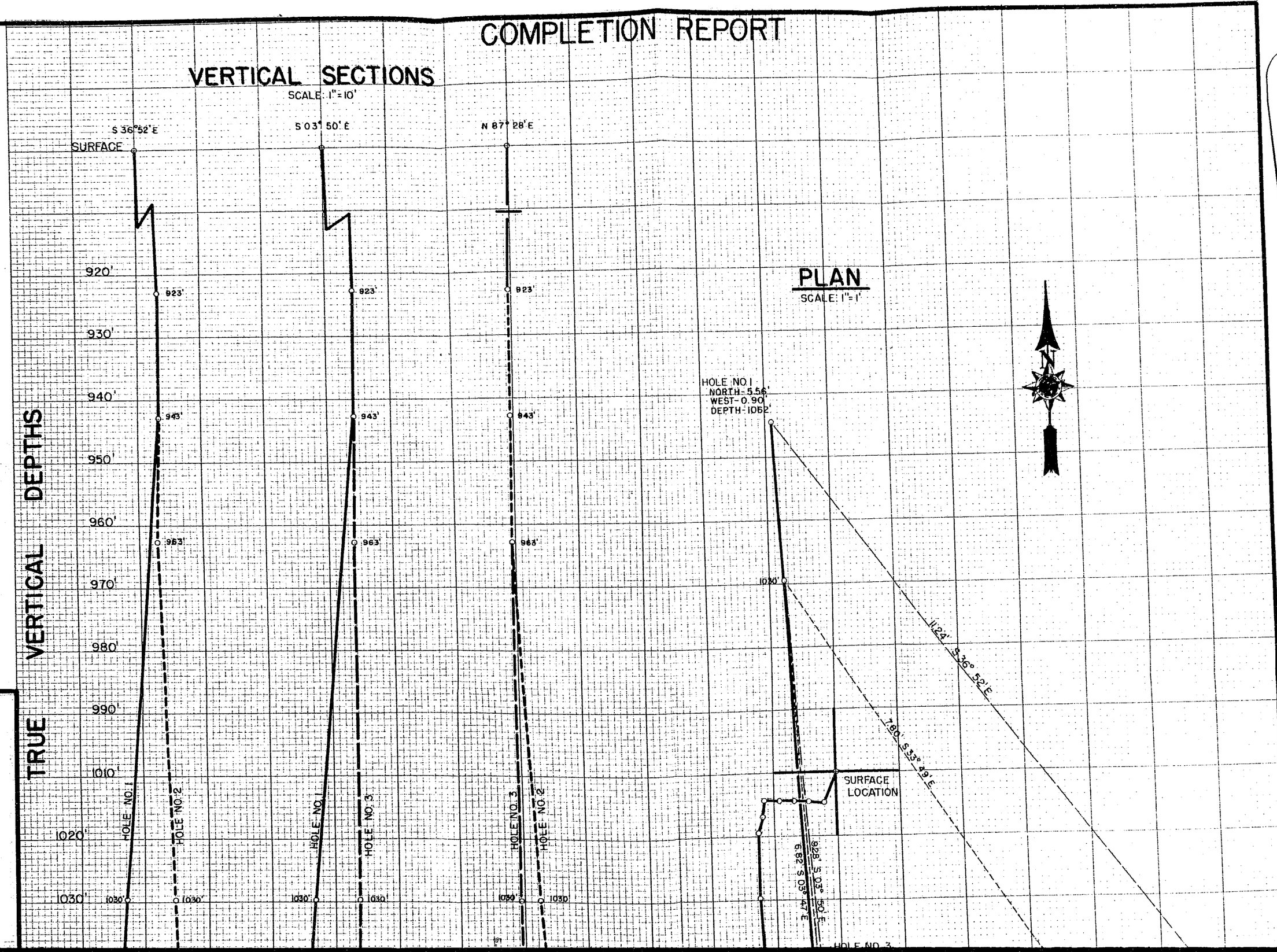
JOB NO. WT-76065A DATE July 24, 1965 CHECKED BY

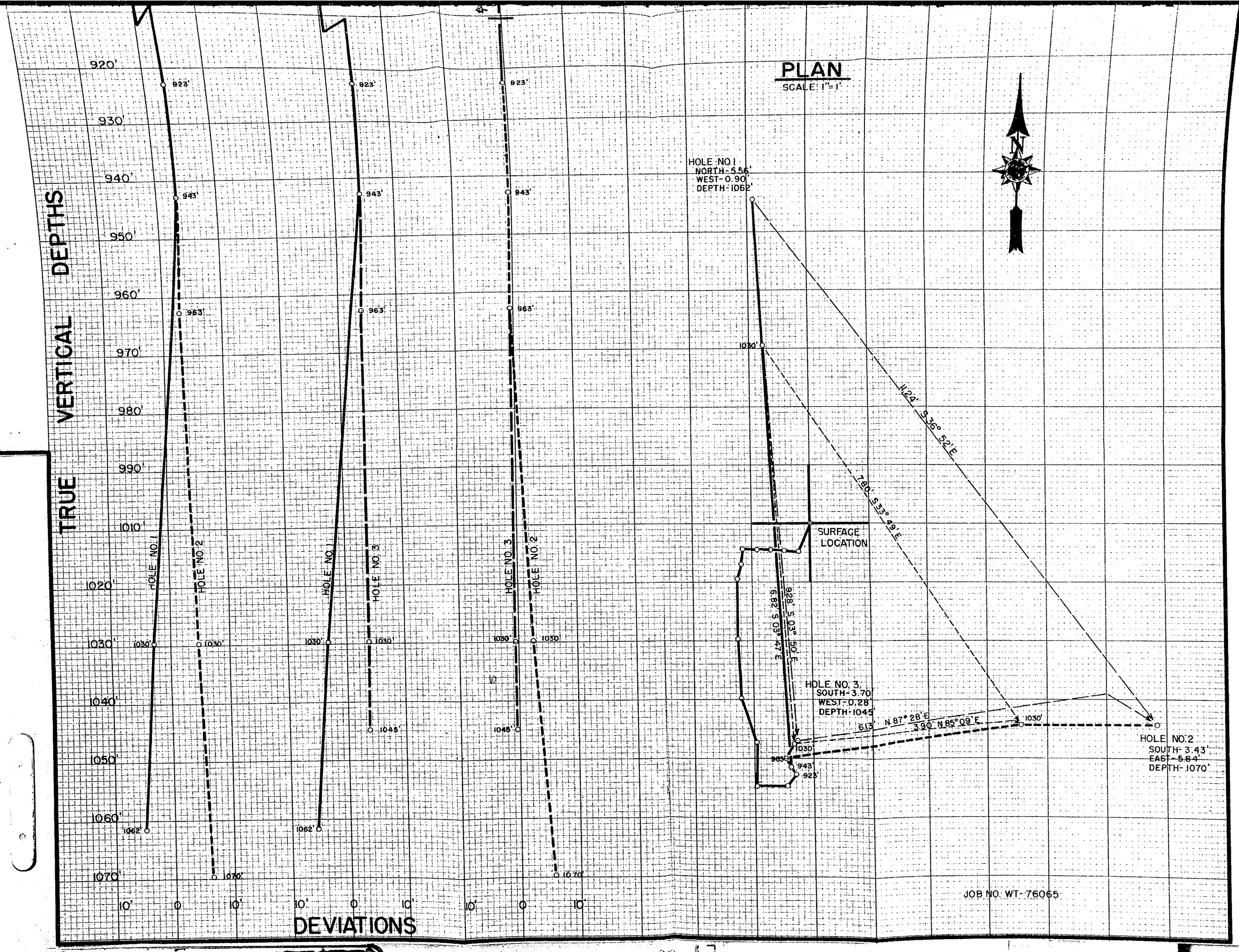
STATION	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	VERTICAL SECTION	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES NORTH	SOUTH	EAST	WEST
1	61 00	0° 30'			53	S 22 W		0 49		0 20
2	116 00	0° 15'			24	N 85 W		0 47		0 44
3	172 00	0° 15'			24	N 87 W		0 46		0 68
4	228 00	0° 15'			24	N 87 W		0 45		0 92
5	283 00	0° 00'	283 00		00	Vertical		0 45		0 92
6	339 00	0° 00'			00	Vertical		0 45		0 92
7	395 00	0° 15'			24	N 87 W		0 44		1 16
8	454 00	0° 15'			26	S 06 W		0 70		1 19
9	513 00	0° 15'			26	S 15 W		0 95		1 26
10	571 00	0° 00'	571 00		00	Vertical		0 95		1 26
11	630 00	1° 00'			1 03	South		1 98		1 26
12	688 00	1° 00'			1 01	S 03 E		2 99		1 21
13	747 00	0° 45'			77	S 19 E		3 72		0 96
14	805 00	0° 45'			76	S 01 W		4 48		0 97
15	863 00	0° 30'			51	EAST		4 48		0 46
16	923 00	0° 15'	922 96		26	N 39 E		4 28		0 30

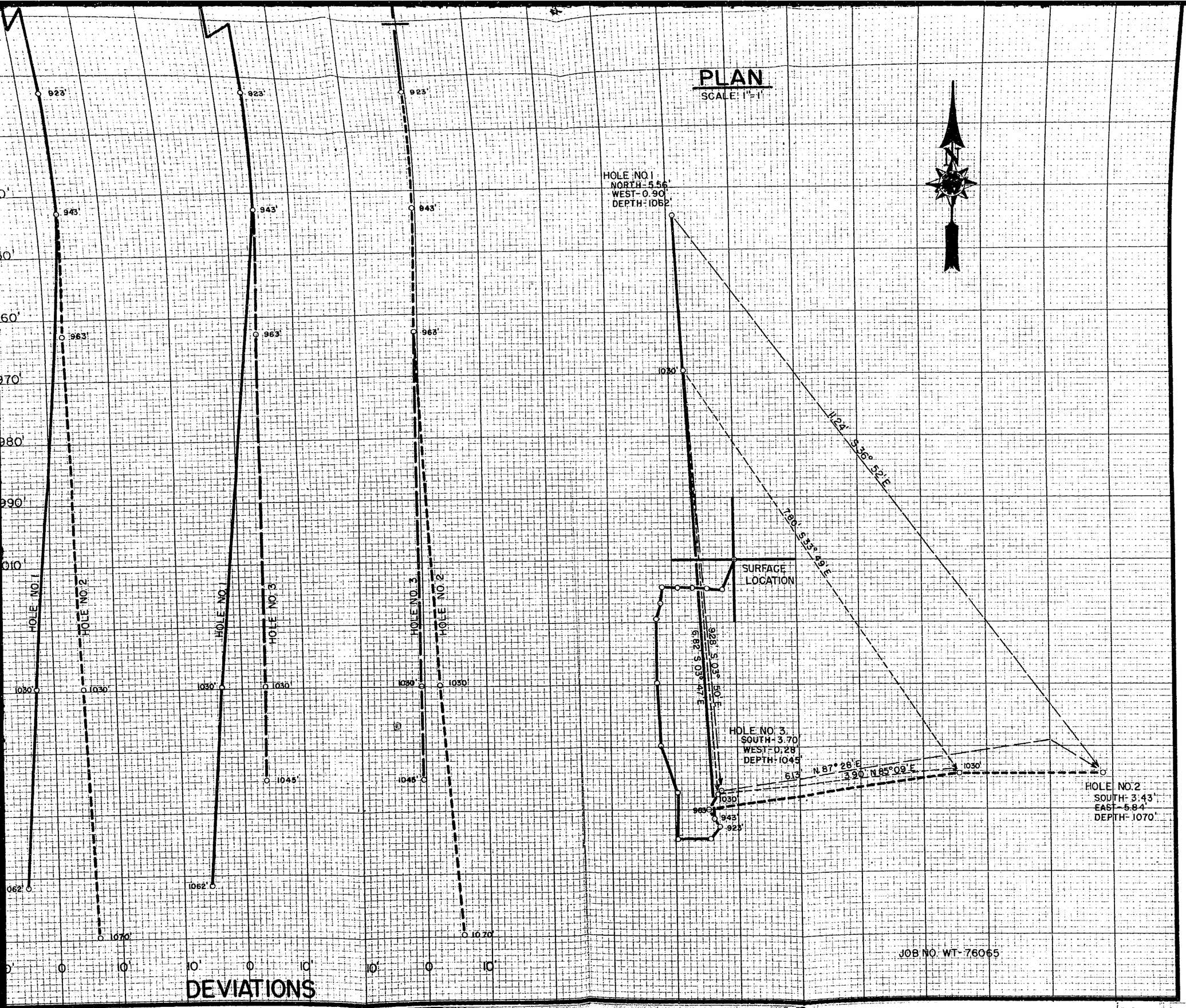
CLOSURE 4.28' SOUTH 4° 00' WEST

FORM NO. D-[illegible]

COMPLETION REPORT




PLAN
SCALE 1"=1'
VERTICAL DEPTHS
TRUE
920'
930'
940'
950'
960'
970'
980'
990'
1010'
1020'
1030'
1040'
1050'
1060'
1070'
923'
943'
963'
1030'
1045'
1062'
1070'
HOLE NO. 1
HOLE NO. 2
HOLE NO. 3
HOLE NO. 1
HOLE NO. 3
HOLE NO. 2
10' 0 10' 10' 0 10' 10' 0 10'
DEVIATIONS
HOLE NO. 1
NORTH-5.56'
WEST-0.90'
DEPTH-1062'
1124' S 36° 52' E
780' S 33° 49' E
SURFACE LOCATION
928' S 03° 50' E
682' S 03° 47' E
HOLE NO. 3
SOUTH-3.70'
WEST-0.28'
DEPTH-1045'
613' N 87° 28' E
390' N 85° 09' E
HOLE NO. 2
SOUTH-3.43'
EAST-5.84'
DEPTH-1070'
JOB NO. WT-76065


PLAN
SCALE: 1"=1'
N
HOLE NO. 1
NORTH-5.56'
WEST-0.90'
DEPTH-1062'
1124' S36° 52' E
780' S33° 49' E
SURFACE LOCATION
928' S 03° 50' E
1,882' S 03° 47' E
HOLE NO. 3
SOUTH-3.70'
WEST-0.28'
DEPTH-1045'
613' N 87° 28' E
390' N 85° 09' E
HOLE NO. 2
SOUTH-3.43'
EAST-5.84'
DEPTH-1070'
923'
943'
963'
1030'
1045'
1062'
1070'
HOLE NO. 1
HOLE NO. 2
HOLE NO. 3
JOB NO. WT-76065
DEVIATIONS