NM-d

ARKLA EXPLORATION NMA CORE TEST NO. 68
Navajo Co. se/nw Sec 19-T16N-R23E 9-17

County Navajo

Area

Lease No.

Well Name ARKLA EXPLORATION COMPANY NMA CORE TEST #68

Location ~~SE/NW~~ Sec 19 Twp 16N Range 23E Footage 1709 FNL - 3171 FWL

Elev 5361 Gr 5361 KB Spud Date 8-9-65 Completed Abandon 8-17-65 Total Depth 985'

Contractor Sojourner Drilling Company

Casing Size	Depth	Cement

Drilled by Rotary
Cable Tool

Production Horizon

Initial Production

REMARKS

Elec Logs Gamma Ray-Neutron-1

Applic. to Plug ___ Plugging Record ___ Completion Report ___

Sample Log
Sample Descript.
Sample Set
Core Analysis
DSTs

Water well accepted by

Bond Co. & No.

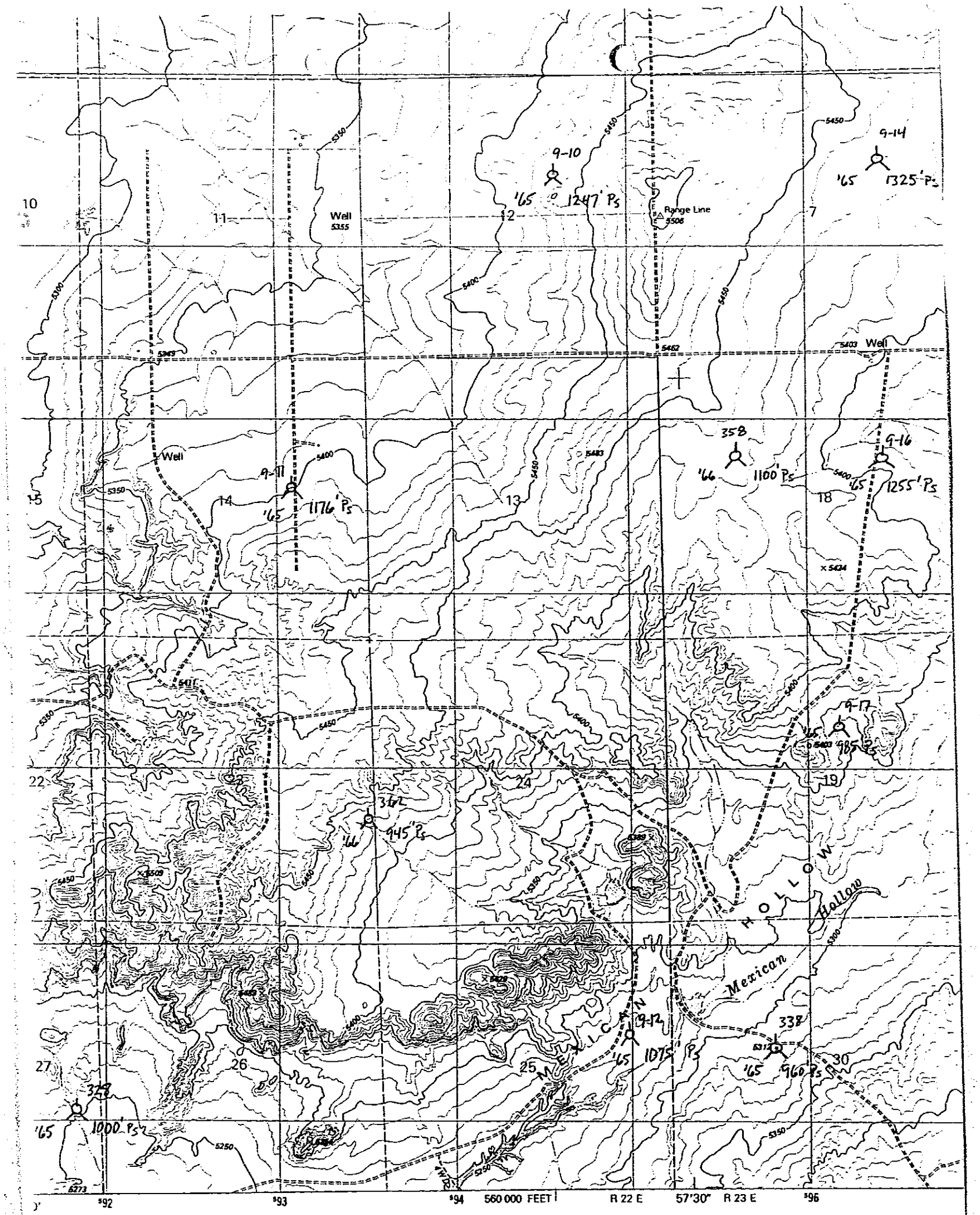
Bond Am't $ Cancelled Date Organization Report

Filing Receipt Dated Well Book ___ Plat Book ___

API No. 02-017-00261 Loc. Plat ___ Dedication

Permit Number Date Issued

9-17



apped, edited, and published by the Geological Survey

DETAILED CORE DESCRIPTION

WELL NAME: AEC - NMA #68

LOCATION:

ELEVATION:

874-879.5-5.5 BISQUIT-LIKE PTNGS-V THIN-V SL HOT-875.2-876.2-876.11-877.1- 14" SALT 30% SH-25" SH 30% SALT, 4" SALT 30% SH-5" SALT 40% SH-12" SALT 20% SH-5" SH 30% SALT.

879.5-884.2-4.8 (BISQUIT-LIKE PTNGS½" THICK-VSL HOT-879.5-V THIN PTNG 879.9) 13" SALT 50% SH-8" SALT 30% SH-4"SALT 20% SH-15" SALT VLT ORNG TRS ANHY? ORNG BLEBS-16" SALT CLEAR KCL RED & CLOUDY-ORNG BLEBS; ZONE OF ANHY? BANDS-A882.9-A-B 5½"-B-C24"-C-D 4½"-D-E 14½"-E-F-6 "-F-G 8"-G-H 5" H-I 3" -----TOP KCL ZONE 882.9.

884.2-888.8-4.7 13" SALT TRS ANHY? TR GRN SH? - KCL - RED & CLOUDY- 8" SALT VLT ORNG TRS ANHY? & SH-KCL-15" SALT-CLEAR-TRS KCL & ANHY? 7" SALT 5% ANHY? 12" SALT VLT ORNG KCL & ANHY?

888.8-892.2-3.7 1" ANHY? 3" SALT KCL-RED-TRS SH- 2" SALT 30% RED & GRN SH-7" SALT-KCL RED & TRS SH-4" SALT 30% SH-3" SH 20% SALT-7" SALT 40% RED & GRN SH KCL-8" SALT 30% RED & GRN SH, TRS KCL-8" SALT 20% SH RED & GRN TR KCL-RED & GRN SHLS? FROM 888.8-892.2 ARE CARRING KCL.

892.2-897.8-5.8 3" SALT 20% SH-7" SALT CLEAR-KCL RED - 14" SALT CLOUDY-TRS KCL TRS RED (2" BISQUIT-HOT-894.3-¼" THICK PTNG OF TURQUOISE BLUE SH? HOT IN BISQUIT) 12" SALT 40% SH- 20" SH 30% SALT- 10" SALT 40% SH-

897.8-903.4-5.9 22" SH 30% SALT; 4" SALT 20% SH-9" SALT 10% SH TRS GRN SH?-4" SALT VLT ORNG-5% SH-TRS GRN SH?-12" SALT 10% SH-TRS ANHY?-18" SALT VLT ORNG & CLEAR-LGE XLS-5% SH-ORNG BLEBS-TRS ANHY?

903.4-909-5.8 10" SALT 5% SH-TRS ANHY?-ORNG BLEBS-58" SALT VLT ORNG & CLEAR-VSL TRS KCL-RED ORNG BLEBS-2% ORNG MATERIAL.

909-914.3-5.3 28" SALT VLT ORNG-ORNG BLEBS-TRS SH & ANHY-11" SALT 10% SH & ORNG MATERIAL-3" ANHY? 30% SALT- (2" BISQUIT-HOT-912.5)-19" SH 30% SALT.

914.3-919.7-5.5 16" SALT 40% SH- 19" SH-20% SALT-8" SALT 20% SH-9" SALT 10% RED & GRN SH TR ANHY? 3" SALT 15% SH.

919.7-925.4-5.7 22" SALT CLEAR 5% SH INCLS-30" SALT CLEAR 10% SH-15" SALT CLEAR-TRS SH.

ZONE OF ANHY BANDS-POORLY DEVELOPED-A882.10", A-B 5"-B-C 24"-C-D 4½"-D-E 14"-E-F 6½"-F-G 5"-G-H 3½"-H-I 4½"-J-K 3"-K-L 1½".

DO NOT REMOVE FROM FILE

DETAILED CORE DESCRIPTION

WELL NAME: # 68 NMA

LOCATION:

ELEVATION:

CORE - V -

874-879.45 (5.46) 1.10 SALT 30% SH 2.20 SH 30% SALT 1.73 SALT 30% SH .43 SH 20% SALT.

879.45-4.2 (4.53) .63 SALT 30% SH .42 SH 20% SALT (TOP K ZONE 880.5) .50 SALT 10% SH .22 SALT 5% SH .59 SALT VLT ORNG TRS SH .16 SALT VLT MLKY TRS SH .35 SALT VLT MLKU TRS SH .61 SALT VLT ORNG TRS ORNG MAT. ANHY INCLS .31 SALT VLT ORNG TRS ORNG MAT .53 SALT LT MLKY TRS CLOUDY - RED? .21 SALT LT MLKY TRS RED.

4.2-9.5 (5.51) .44 SALT LT MLKY SL TRS RED & CLOUDY .56 SALT GOOD RED TRS CLOUDY .93 SALT GOOD RED TRS CLOUDY 1.05 SALT LT MLKY TRS CLOUDY & RED ANHY INCLS .80 SALT LT ORNG TRS RED & CLOUDY ANHY INCL. .66 SALT LT ORNG ANHY INCLS FAIR RED TRS CLOUDY .26 SALT HOT RED ANHY INCL .42 SALT 10% SH TRS GRN SH TRS KCL .17 SALT TR SH GOOD RED.

9.5-2.9 (4.47) .60 SALT HOT RED TRS CLOUDY 5% SH .34 SALT 40% SH TRS GRN SH TRS KCL .08 SALT HOT RED TRS CLOUDY - .60 SALT 30% SH TRS KCL - .44 SALT 30% SH TRS RED .30 SALT 30% SH TRS KCL .31 SALT TRS SH FAIR RED TRS CLOUDY .20 SALT 20% SH TRS KCL .60 SALT LT ORNG FAIR RED SL SHOW CLOUDY - .31 SALT LT ORNG LT MLKY TR RED .55 SALT LT ORNG LT MLKY TR RED & CLOUDY .14 SALT MLKY GRAN.

2.9-8.5 (3.84) .24 SALT ORNG TRS RED (K5 893.14 - .10 THICK) 1.0 SALT 30% SH 1.66 SH 20% SALT .84 SALT 50% SH.

2-17-66

10 Mar copies made

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WELL NAME: AEC - NMA #68

LOCATION:

ELEVATION:

SPUD AUGUST 9, 1965
9 5/8 @ 72 w/35 sx

0-10'	SH-RED-BRK RED CONG IN PT, (50% SOME GREEN) SD-PEBBLE SIZE SUB RD-CLEAR-FROSTED 50%.
10-20'	AA, AA, SOME CLUSTERS TRC COLORED CHERT.
20-30'	SLT ST CONG RED-MICA 90%-CONG SD 10%.
30-40'	SH-RED CLYEY GREEN IN PT, TRC COLORED SD & CHERT.
40-50'	RED ARG SD 50%, SH RED 50%, AA.
50-60'	SH-RED-BRN-AREN SH-RED.
60-70'	SH RED 50%-ARG SD RED-GREEN 50%.
70-80'	SD-CONG-F MG MICA.
80-90'	SD & SH-BRN RED & GREEN.
90-00'	AA, AA.
100-10'	SAME-PCS VFG GREEN SD.
10-20'	AA, GYP-WH SOFT 10%.
20-30'	AA SH BEC OSNG, AA 20%.
30-40'	AA 90% RED, AA BEC PK 30% TRC CONG SD.
40-50'	AA 50%, AA, AA 20%.
50-60'	SH-RED RUSTY-MICA 90% GREEN SH-MICA 10%, TRC ANHY.
60-70'	AA.
70-80'	SD RED-F-MG-RD-SUB RED-MICA-CONG, UNCONSOL.
80-90'	AA, AA.
90-00'	SAME-SD RED & WH.
200-10'	SH RED-CG SD-20%, GYP-10%.
10-20'	AA & GREEN, ~~GURG~~ 30%.
20-30'	AA, AA.
30-40'	SH RED CLYEY 90%, 10% PCS TAN LS.
40-50'	SAME.

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50-60'	SH-REDDISH BRN, 50%-SD RED-F-MG INTSTL CLY 50%-PCS LM GRY -TAN F XYLN.
60-70'	TRC DOL-GRY-VF XYLN EARTHY-SD-RED-F MG-INTSTL CLY-70%-SH RED 30%.
70-80'	TRC COCO SD-DOL-GRY EARTHY-MICA-30%-SD-RED-F-MG-INTSTL CLY-70%.
80-90'	COCO SD.
90-00'	SD-WH-RD-SUB RD CLEAR F-MG-PYRITIC.
300-05'	SD-WH-R-SR-FMG CLEAR UNCOL.
05-10'	AA.
10-20'	AA.
20-30'	AA.
30-40'	AA.
40-50'	M GRAIN.
50-60'	BEC MORE COARSE GRAINED.
60-70'	SD AS ABOVE COARSE GRAIN.
70-80'	SAME PYRITIC.
80-90'	AA, MORE CONSOL.
90-00'	SD LARGE GRAIN.
400-10'	AA, GYPY-PYRITIC.
10-20'	AA.
20-30'	AA BEC MORE WH.
30-40'	AA SPECKS OF RED SH THROUGHOUT.
40-50'	AA, AA.
50-60'	AA, AA.
60-70'	AA, AA.
70-80'	AA, AA.
80-90'	AA, AA.
90-00'	SD-MED.GRAIN.
500-10'	SD-M-LG.
10-20'	AA F-M.
20-30'	AA M-L.
30-40'	AA LG, 10%-RED-GREEN SH.

40-50'	AA.
50-60'	AA CG SD.
60-70'	SAME.
70-80'	AA.
80-90'	SD-M-CG-CONSOL-PINK (10%-SH-RED-GREEN).
90-00'	SD-CONG TYPE-60%-SH-RED 40%-TRC GREEN SH.
600-10'	AA ORG 50%, AA 50%.
10-20'	SD-CG-ORG FAIR CONSOL, AA 20%.
20-30'	SD-ORG-CG.
30-40'	AA.
40-50'	SD ORG F-MG ORG BEC UNCONSOL.
50-60'	SAND SAME BEC ARG.
60-70'	AA 10%.
70-80'	VCG AA 20%.
80-90'	AA 10%.
90-00'	AA 40% SH-RED.
700-10'	SD-LT ORG-WH-CG.
10-20'	AA 10% SH-RED.
20-30'	SD-ARG-SLTY-INESTL CLY.
30-39'	SBCORGRWHARGG-CONSOL ARG IN PT, TRC GRY VFXYN DOL.
39-50'	BEC MORE ARG.
40-45'	SD-WH-F-M CONSOL, 30%-SH-RED SLTY 70%.
45-50'	AA 20%, AA & SHY SD, 80% PCS BRN F MG F XYLN DOL.
50-55'	SH & SD-RED-(SDY SH-ARG SD) 80% SLTY SH AA.
55-60'	NO SAMPLES.
60-65'	AA, 757 LOST CIRCULATION.

CORE 765-74 REC 5'

765-66 SLT ST RED W/MICA FLECKS ARENACEOUS FLECK OF GREEN SLT ST; 66-67 SAME-BEC MORE SHY; 67-68 SH-GRY GRN-DOLOMITIC-MICA FLECKS SLT FRAC; 68-69 SAME;W/RED SLT ST INCL, VUG HOLE; 69-70 SLT ST-SDY RED.

No Samples to 807
Core 807-15 rec; 3" anhy gry dnse
Drill to 831
Set pipe 7" 829.

831-35'	50% anhy & gyp wh@50% slt st & sh-red.
Circ @838	Slt st & sh red-90% (10% green) anhy-gyp 10%.
35-40'	Aa 20%, anhy-gyp 80%.
40-45'	Aa & green 90%, aa 10%.
Circ 46	Sh red clyey-100%.
45-50'	Same-trc green sh.
50-55'	Aa 70%-anhy-wh-30%.
Circ 56	Anhy.
56-60'	Anhy wh.
60-65'	Aa wh-pk.
65-70'	Anh 10%, sh red 70%, salt 20%.
Circ 72	
872-74'	Blow out @ 895½.

Core 874-926

874-75 salt wh-w/10% imp; 75-77 salt wh 60% sh red 40%-bisquit @ 876.2"; 77-79 salt wh 90%-sh red 10%; 79-79'6" salt 40%-sh-red 60% vert fracs filled w/salt; 79'6"--7" bisquit; 79'7"-80 salt 40%, sh-red 60%; 80-84 salt wh-pk; 84-87 salt wh w/orange blebs-886'9" Horizontal gry cly anhy streak; 87-89 same bec mlky in app-w/ scattered gry cly streaks; 89-92 ave potash app w/20-30% sh red; 92-94'4" salt milky w/scatt org blebs; 94'4"-6" Bisquet; 94'6"-95'4" salt 60% wh red 40%; 95'4"-6" bisquit; 95'6"-900 sh-70% red-salt wh inc 30%; 900-02 salt wh-80%-sh red 20%; 02-05 aa, 90%-10% imp; 05-12 salt wh w/pkish cast widely scatt org blebs; 12-12'6" salt & anhy; 12'6"-8" bisquit; 12'8"-17 salt 70%-sh red 30%; 17-26 salt 90%-10% imp.

926-30'	Salt 70%-sh 30%.
30-40'	Aa 60%, aa 40% trc anhy.
40-50'	Aa 70%, aa 30%.
50-60'	Aa 80%, aa 10%, 10% anhy.
60-70'	Aa 70%, aa 20%, 10% aa.
70-80'	Lost smblowtout.

Blow out @ 985.

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ARKLA EXPLORATION COMPANY

Drilling Record

WELL NAME: NMA Core Test #68

WELL LOCATION: 1709 FNL-3171 FWL Sec. 19-16N-23E

WELL ELEVATION: 5361 ' KB

CONTRACTOR: Sojourner Drilling Company

SPUD DATE: 8-9-65 6:00 PM

SIZE HOLE DRILLED: 13¾ " to 25 '

TYPE DRILLING FLUID: Flo Sol

SURFACE CASING:
Size 9 5/8 ", Wt. 32.75 #, No. Sacks Cement 60
Cementing Depth: 72 '

SIZE HOLE DRILLED: 8¾ "

TYPE DRILLING FLUID: Flo-Sol (A)

INTERMEDIATE CASING:
Size 7 ", Wt. 20 #, No. Sacks Cement 25 (B)
Cementing Depth 829

SIZE HOLE DRILLED OR CORED:
6¼ " from 831 ' to 985 ' (C)
" from ' to '
" from ' to '
" from ' to '

DRILL STEM TESTS:
NONE

NO. BITS USED: 3

ELECTRIC LOGS RAN:
Type McCullogh Grn from 831 ' to 0 '
from ' to '

ABANDONMENT PLUGS:
No. Sacks Cement 25 from 985 ' to 735 '
from ' to '

WAS CASING RECOVERED?
Depth Shot ', ', '
No. Feet Recovered '
No. Feet Not Recovered 829 '

DATE DRILLING RIG RELEASED: 8-17-65 1:00 PM

COMPANY REPRESENTATIVE: James S. Baldry

SPECIAL NOTES: Unusual drilling problems encountered, etc.
(A) Lost circulation @ 330 and lost mud while drilling to 752 lost circulation @752 and unable to regain circulation-dry drilled to 831 and set 7" casing.
(B) Ran 25 sacks pearlite in cement temp survey top cement @730'.
(C) Drilled hole to 846 ran directional survey unable to set whipstock due to bad caving hole, drilled to 874 and put on core bbl and cored to 934. Drilled to 985. Hole blew out @896 and @970, lost all deisel both times, unable to get hole to stand up and losing deisel during all drilling operations-plugged hole @985

Arkansas Louisiana Gas Co.
Holbrook, Arizona
RECEIVED
AUG 24 1965
GEOLOGICAL

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