Schlumberger

SIMULTANEOUS
COMPENSATED NEUTRON-FORMATION DENSITY

COMPANY ANADARKO PRODUCTION COMPANY & DIAMOND SHAMROCK OIL & GAS
WELL #1 DUDECK "A"
FIELD WILDCAT
COUNTY HOLT
STATE MISSOURI
LOCATION C-NW-SE 1980' FNL 1980' FEL
SEC. 5 TWP 59N RANGE 37W
Other Services: DIL

Permanent Datum: GROUND LEVEL, Elev. 1119
Log Measured from GL, 0 Ft. Above Perm. Datum
Drilling Measured from GL
Elev.: K.B. ----, D.F. ----, G.L. 1119

Date	5-25-76
Run No.	ONE
Depth-Driller	2243
Depth-Logger	2243
Btm. Log Interval	2242
Top Log Interval	172
Casing-Driller	8 5/8 @ 172
Casing-Logger	172
Bit Size	7 7/8
Type Fluid in Hole	FGM
Dens. / Visc.	8.7 / 37
pH / Fluid Loss	9.5 / 8.0 ml
Source of Sample	CIRCULATED
Rm @ Meas. Temp.	2.66 @ 71 °F
Rmf @ Meas. Temp.	2.07 @ 67 °F
Rmc @ Meas. Temp.	1.58 @ 88 °F
Source: Rmf / Rmc	M / M
Rm @ BHT	2.15 @ 88 °F
Circulation Stopped	0720
Logger on Bottom	1115
Max. Rec. Temp.	88 °F
Equip. / Location	7749 / WICHITA
Recorded By	LANGENBUCH
Witnessed By	J. RIGGS, MR. W. RIGGS

The well name, location and borehole reference data were furnished by the customer.

RUN NO.	ONE
Service Order No.	23067
Fluid Level	FULL
Salinity, PPM CL.	400
Speed - F.P.M.	30
EQUIPMENT DATA	
Dens. Panel	EH-1126
Dens. Cart.	EB-1002
Dens. Skid.	D-199
Dens. Sonde	EC-324
Dens. Source	B-3274
Dens. Calibrator	1046
Neut. Panel	A-249
Neut. Cart.	A-248
Neut. Source	A-289
Neut. Calibrator	A-225
GR Cart.	JAA-426
Memorizer Panel	AB-779
Tape Recorder (TTR)	---
Depth Encoder (DRE)	---
Pressure Wheel (CPW)	1730
Centralizers: Type	---
No.	---
S.O. - Inches	---
CALIBRATION DATA	
GR BKG. CPS	105
GR Source CPS	620
GR Sens. - Cal	---
GR T.C. - Cal	6
Short Spacing - Before Log	3616
Long Spacing - Before Log	1548
Short Spacing - After Log	3616
Long Spacing - After Log	1548
P1 - Before Log	485
P4 - Before Log	746
P1 - After Log	485
P4 - After Log	746

Type Log	Depth	Down Hole

REMARKS:

LOGGING DATA

DEPTH Top	DEPTH Bottom	CNP Porosity Scale	CNP Matrix	CNP Auto Corr. or Hole Size Setting	FDC Porosity Scale	FDC Grain Density	FDC Liquid Density	FDC Hole Fluid	FDC Sens. Logged	GR T.C.	GR Zero Div. Left	GR Scale Per 100 Div.
172	2242	30/-10	LS-OH	AUTO CORR	30/-10	2.71	1.0	LIQ.	--	2	0	150

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Clause 4 of our General Terms and Conditions as set out in our current Price Schedule.

CALIPER DIAM. IN INCHES 6 — 16
GAMMA RAY API UNITS 0 — 150; 150 — 300
POROSITY INDEX (%) LIME MATRIX
COMPENSATED FORMATION DENSITY POROSITY 30 20 10 0 -10
COMPENSATED NEUTRON POROSITY 30 20 10 0 -10

COMPENSATED NEUTRON CALIBRATION CODING

1. MECHANICAL ZERO
2. RECORDED SENSITIVITY (THRU MEMORIZER IF USED)

	RATIO	OH POROSITY LS [X]	SS	DOL	CH POROSITY SS	LS
3.	1	1.6	4.9	-0.2	2.4	0.1
4.	2	15.6	19.7	8.1	13.0	9.0
5.	3	30.5	36.0	25.2	29.1	24.1
6.	4	45.4	53.1	47.5	47.4	43.2

7. POROSITY NORMALIZED WITH CNB-A IN PLACE
7A. TOOL IN NCT-B
8. LOG POSITION WITH CNB-A IN PLACE
8A. LOG POSITION WITH TOOL IN NCT-B

OH LS	OH SS	OH DOL	CH SS	CH LS
18	22.2	10.4	15.3	11.2

RATIO (NORMALIZED) = 2.17 / RATIO (NCT-B) RATIO LOG

FORMATION DENSITY COMPENSATED CALIBRATION CODING

1. MECHANICAL ZERO
2. RECORDER SENSITIVITY

PANEL TEST — FDC LIQUID

	POS	ρ	Δρ
3.	# 1	2.92	.00
4.	# 2	2.78	+.14
5.	# 3	2.42	-.10
6.	# 4	2.35	.00
7.	# 5	2.08	.01

8. MECHANICAL ZERO CALIPER
9. 8" RING
10. 12" RING
11. TOOL CALIBRATE #1 SET ρ = 2.50
12. TOOL CALIBRATE #2 SET Δρ = .00
13. LOG POSITION ρ = 2.59, Δρ = .015

GAMMA RAY CALIBRATION CODING

1. MECHANICAL ZERO
2. ELECTRICAL ZERO
3. RECORDER SENSITIVITY
4. MEMORIZER ADJUSTMENT
5. BACKGROUND
6. CALIBRATE - SOURCE IN PLACE

CALIBRATION RECORD

COMPANY ANADARKO PRODUCTION & DIAMOND SHAMROCK
WELL #1 DUDECK "A"
FIELD WILDCAT
COUNTY HOLT STATE MISSOURI
SCHL. FR. 2242
SCHL. TD 2243
DRLR. TD 2243
Elev: KB ----, DF ----, GL 1119