Schlumberger

SIMULTANEOUS
COMPENSATED NEUTRON-FORMATION DENSITY

COMPANY L & B LEASING, INC.
WELL WILBURT RAPP NO. 1
FIELD WILDCAT
COUNTY BATES STATE MISSOURI

LOCATION 434' 29' FSL & 44' 21' FEL
API SERIAL NO.
SEC 2 TWP 38N RANGE 29W

Other Services: DIL, BHC-GR

Permanent Datum: GROUND LEVEL Elev.: 780
Log Measured From G.L. Ft. Above Perm. Datum
Drilling Measured From G.L.
Elev.: K.B. D.F. G.L. 780

Date	1-27-81
Run No.	ONE
Depth-Driller	1768
Depth-Logger	1767
Btm. Log Interval	1766
Top Log Interval	119
Casing-Driller	8 5/8 @ 118
Casing-Logger	119
Bit Size	6 1/4
Type Fluid in Hole	POLYMER
Dens. / Visc.	
pH / Fluid Loss	ml
Source of Sample	CIRCULATED
Rm @ Meas. Temp.	11.0 @ 63 °F
Rmf @ Meas. Temp.	@ °F
Rmc @ Meas. Temp.	@ °F
Source: Rmf / Rmc	
Rm @ BHT	8.55 @ 83 °F
Circulation Stopped (TIME)	2300 1-26
Logger on Bottom (TIME)	0100 1-28
Max. Rec. Temp.	83 °F
Equip. / Location	7936 WICHITA
Recorded By	BEECHER
Witnessed By	O'BRIEN

RECEIVED
AUG 18 1982
MO. OIL & GAS COUNCIL

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

RUN NO.	ONE
Service Order No.	206062
Fluid Level	SURFACE
Salinity, PPM CL.	
Speed - F.P.M.	1800 FPH
EQUIPMENT DATA	
Dens. Panel	EJ-1315
Dens. Cart.	EB-603
Dens. Skid.	D-1192
Dens. Sonde	EC-165
Dens. Source	B-3274
Dens. Calibrator	105-1060
Neut. Panel	AB-1104
Neut. Cart.	A-1486
Neut. Source	F-1492
Neut. Calibrator	AB-1505
GR Cart.	JAA-426
Memorizer Panel	CA-609
Tape Recorder (TTR)	EB-1897
Depth Encoder (DRE)	C-1727
Pressure Wheel (CPW)	H-1936
Centralizers: Type	NONE
CALIBRATION DATA	
GR BKG. CPS	214
GR Source CPS	700
GR Sens. - Cal	165
GR T. C. - Cal	6
CNL Short Spacing - Before Log	2880
CNL Long Spacing - Before Log	1241
CNL Short Spacing - After Log	2880
CNL Long Spacing - After Log	1241
FDC P¹ - Before Log	470.8
FDC P² - Before Log	800.0
FDC P¹ - After Log	
FDC P² - After Log	800.0

Type Log	Depth

REMARKS:
NOTE: ρ_{MA} = 2.75 G/CC (DOLOMITIC LIMESTONE CLIENT'S REQUEST).

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	GR Sens. Logged	GR T.C.	GR Zero Div. Left	GR Scale Per 100 Div.
119	1766	-15/45	LS/CH	AUTO	-15/45	2.75	1.0	LIQ.	150	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 our General Terms and Conditions as set out in our current Price Schedule.

COMPENSATED NEUTRON CALIBRATION CODING

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

PANEL TEST	RATIO	OH POROSITY LS ☒	OH POROSITY SS ☐	DOL ☐	CH POROSITY SS ☐	CH POROSITY 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

	POS	FDC LIQUID F	$\Delta\rho$
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 $\Delta\rho$ = .00
13. LOG POSITION ρ = 2.59, $\Delta\rho$ = .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 L & B LEASING, INC.
WELL WILBURT RAPP NO. 1
FIELD WILDCAT
COUNTY BATES STATE MISSOURI

SCHL. FR 1766
SCHL. TD 1767
DRLR. TD 1768
Elev: KB DF GL 780