COMPENSATED DENSITY / NEUTRON PE LOG

Company	MULL DRILLING COMPANY, INC.
Well	#1-3 REDDING
Field	WILDCAT
County	WICHITA
State	KANSAS

Company MULL DRILLING COMPANY, INC.
Well #1-3 REDDING
Field WILDCAT
County WICHITA State KANSAS
Location: API # : 15-203-20325-0000
914' FNL & 1942' FEL
NW - SE - NW - NE
SEC 3 TWP 16S RGE 37W

Other Services
DIL/MEL
SONIC

Permanent Datum	GROUND LEVEL	Elevation 3354	Elevation
Log Measured From	KELLY BUSHING 12' A.G.L.		K.B. 3366
Drilling Measured From	KELLY BUSHING		D.F. 3364 G.L. 3354

Date	11/22/17		
Run Number	ONE		
Depth Driller	4980		
Depth Logger	4978		
Bottom Logged Interval	4954		
Top Log Interval	3700		
Casing Driller	9 5/8"@238'		
Casing Logger	238		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 6,000 PPM	
Density / Viscosity	9.4/60		
pH / Fluid Loss	11.0/8.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.600@80F		
Rmf @ Meas. Temp	.450@80F		
Rmc @ Meas. Temp	.720@80F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.384@125F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	5:00 A.M.		
Maximum Recorded Temperature	125F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	KEVIN KESSLER		

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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 interpretation, 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 set out in our current Price Schedule.

Comments

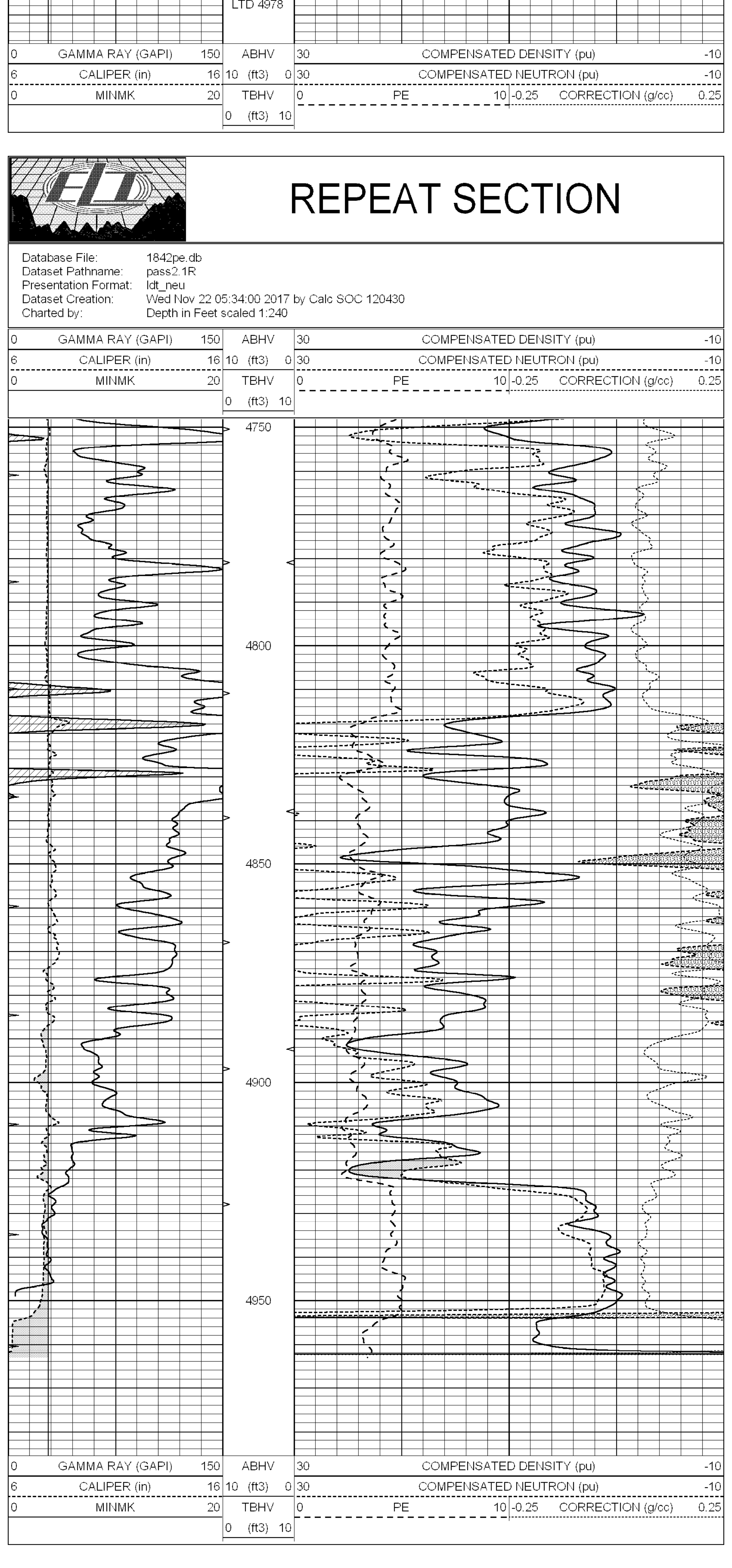
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS
LEOTI, KS., 15N. ON HWY 25 TO "RD. A" OR "ADOBE", 1 1/4W., S. INTO

MAIN SECTION

Database File: 1842pe.db
Dataset Pathname: pass3.7
Presentation Format: ldt_neu
Dataset Creation: Wed Nov 22 06:42:25 2017
Charted by: Depth in Feet scaled 1:240

REPEAT SECTION

Database File: 1842pe.db
Dataset Pathname: pass2.1R
Presentation Format: ldt_neu
Dataset Creation: Wed Nov 22 05:34:00 2017 by Calc SOC 120430
Charted by: Depth in Feet scaled 1:240



Calibration Report

Database File: 1598ddn.db
Dataset Pathname: pass4
Dataset Creation: Wed Aug 30 02:13:00 2017 by Log SOC 120430

Dual Induction Calibration Report

Serial-Model: PROBE7-DILG
Surface Cal Performed: Wed Aug 30 00:06:33 2017
Downhole Cal Performed: Mon Jul 28 12:02:56 2008
After Survey Verification Performed: Mon Jul 28 12:02:56 2008

Surface Calibration

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	620.000	0.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	675.000	-44.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256
Medium	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	1.000	0.000
LL3		7.500	V		1400.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		4000.000	mmho-m		

After Survey Verification

	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
LL3		1.000	Ohm-m		1.000	Ohm-m		
		0.000	Ohm-m		0.000	Ohm-m		
		1.000	mmho-m		1.000	mmho-m		

Litho Density Calibration Report

Serial: 002 Model: PRB

Master Calibration — Performed Mon Aug 21 11:27:42 2017

	Background	Magnesium	Aluminum	Sandstone	
Window 1	837.1	10632.5	2945.1	12110.1	cps
Window 2	772.0	9117.4	2570.1	10197.3	cps
Window 3	631.7	4669.0	1481.9	5042.9	cps
Window 4	187.0	187.5	185.9	189.9	cps
Long Space	0.0	8345.4	1798.1	9425.3	cps
Short Space	1.1	1927.9	1285.9	2050.2	cps
Rho		1.7100	2.5960	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	

Rib Angle : 45.2 Rib Slope : 1.008 Density/Spine Ratio : 0.558
Spine Angle : 75.2 Spine Slope : 3.790 Spine Intercept : -19.6

Before Survey Verification — Performed Wed Dec 31 18:00:00 1969

Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

After Survey Verification — Performed Wed Dec 31 18:00:00 1969

Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

Compensated Neutron Calibration Report

Serial Number: 070808
Tool Model: Probe

PRE-SURVEY VERIFICATION

Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu

POST-SURVEY VERIFICATION

Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu

Gamma Ray Calibration Report

Serial Number: 070558
Tool Model: OPEN_GR
Performed: Wed May 31 00:09:32 2017

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.2800 GAPI/cps