



**COMPLETION  
& PRODUCTION  
SERVICES CO.**

**COMPENSATED  
DENSITY / NEUTRON  
LOG**

Company MAI OIL OPERATIONS, INC.  
Well T & P MILLER #1  
Field HAMPTON NORTHEAST  
County RUSH  
State KANSAS

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County RUSH State KANSAS

Location: API # : 15-165-22063-0000  
2300' FNL & 480' FWL  
NE - SW - SW - NW  
SEC 31 TWP 16S RGE 19W  
Permanent Datum GROUND LEVEL Elevation 2074  
Log Measured From KELLY BUSHING 8' A.G.L.  
Drilling Measured From KELLY BUSHING  
Other Services DIL/MEL  
Elevation K.B. 2082  
D.F. 2080  
G.L. 2074

Date	4/21/14		
Run Number	ONE		
Depth Driller	3899		
Depth Logger	3900		
Bottom Logged Interval	3876		
Top Log Interval	3100		
Casing Driller	8 5/8" @ 1103'		
Casing Logger	1103		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 1,500 PPM	
Density / Viscosity	8.9/60		
pH / Fluid Loss	10.0/5.8		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.500 @ 90F		
Rmf @ Meas. Temp	.375 @ 90F		
Rmc @ Meas. Temp	.500 @ 90F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	.391 @ 115F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	9:00 A.M.		
Maximum Recorded Temperature	115F		
Equipment Number	4854		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	JIM MUSGROVE		

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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**

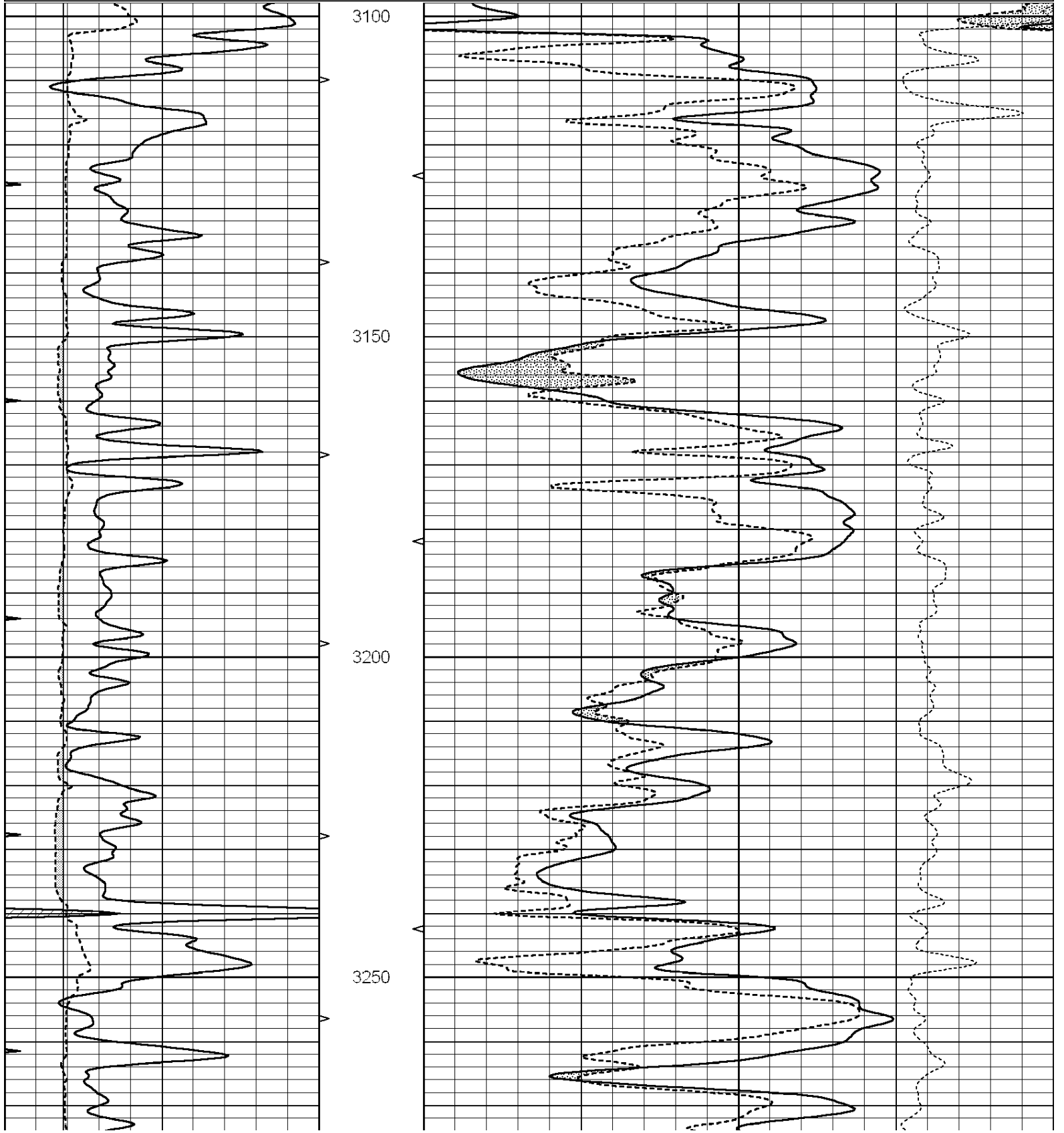
THANK YOU FOR USING "NABORS" HAYS, KANSAS (785) 628-6395  
DIRECTIONS  
LIEBENTHAL, KS., S. TO BLKTOP, 9W. TO (CEMETARY), 1 1/2S., E. INTO

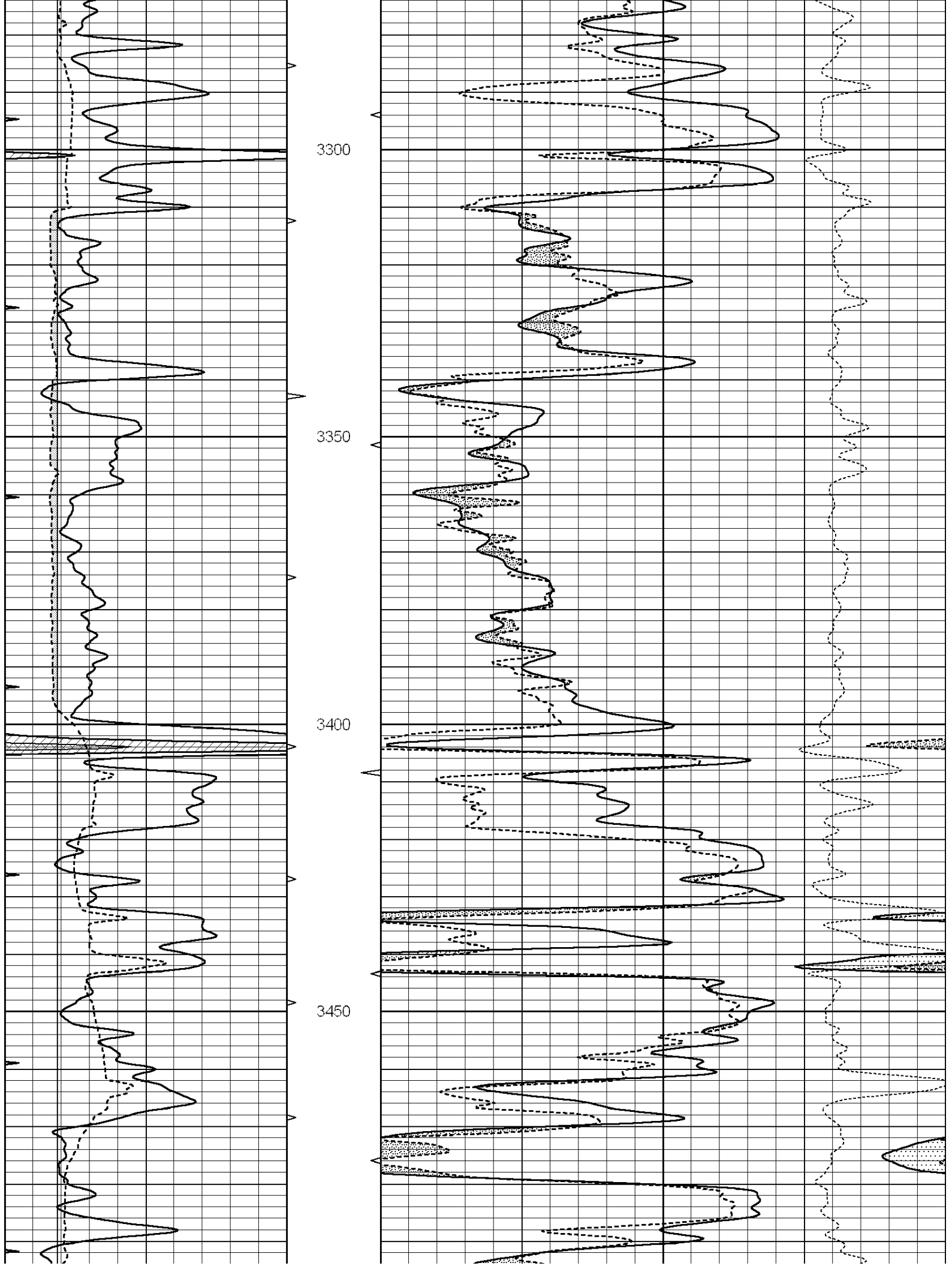


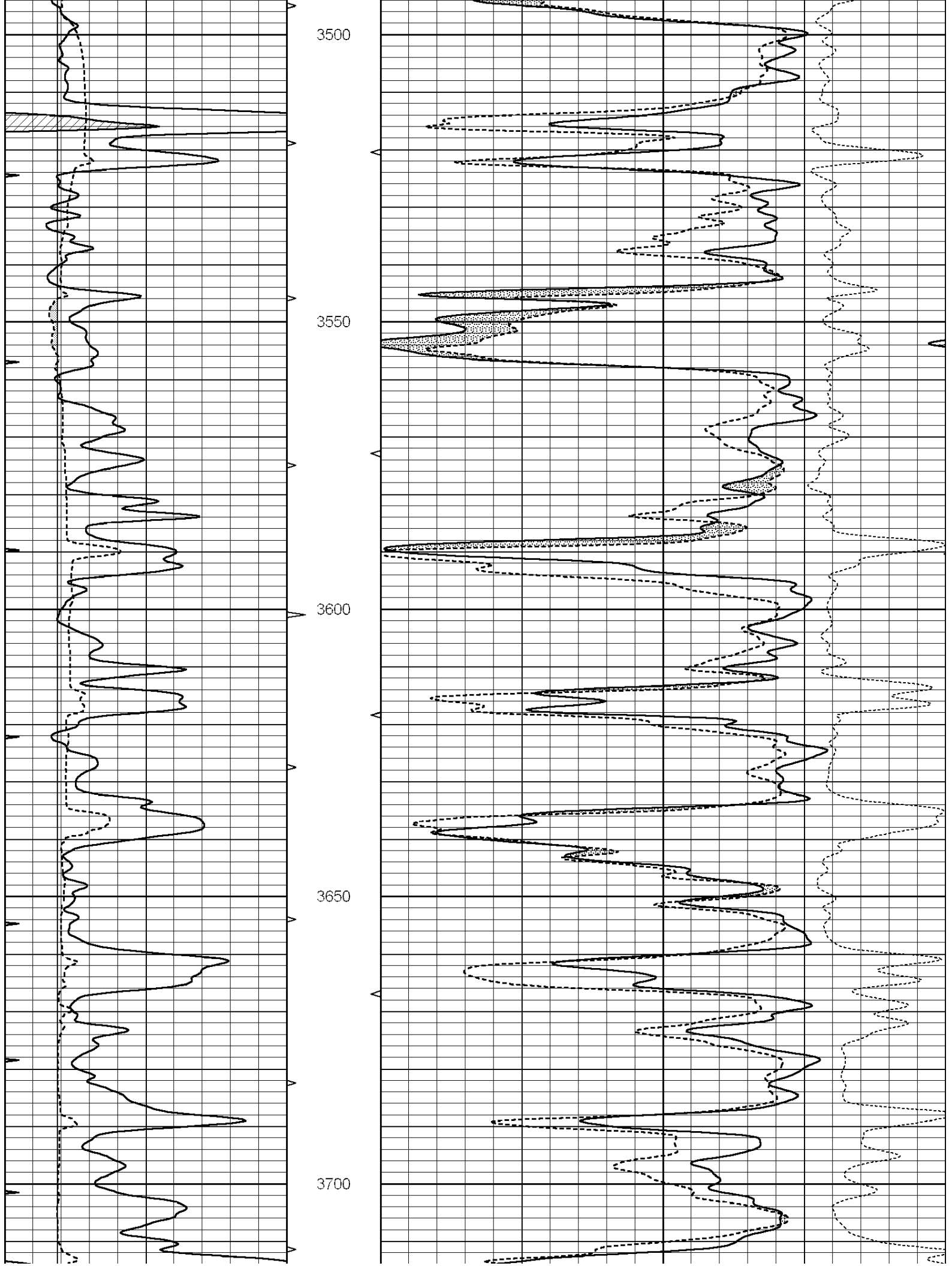
**MAIN SECTION**

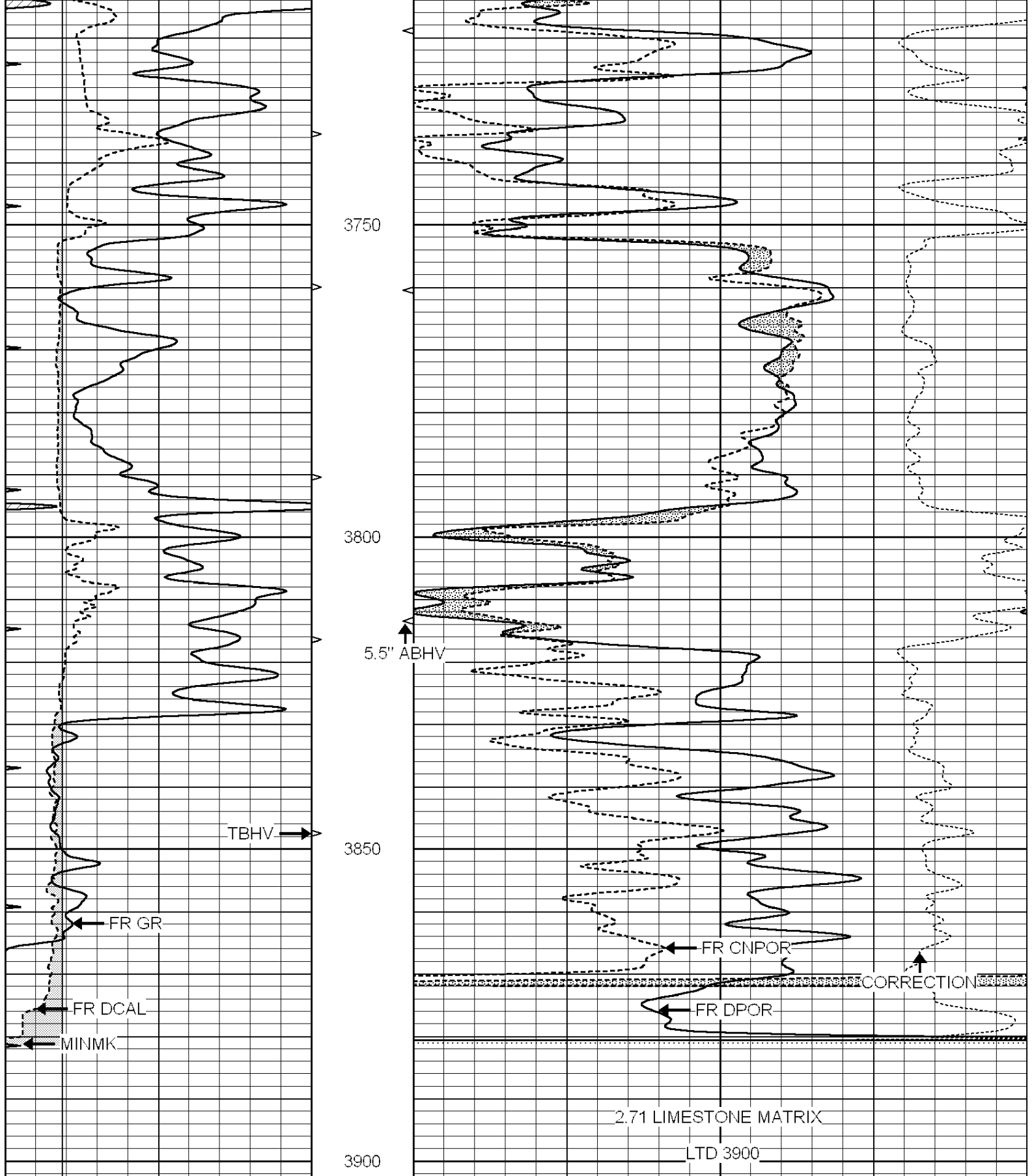
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 Dataset Pathname: pass3.4  
 Presentation Format: den\_neu  
 Dataset Creation: Mon Apr 21 10:23:03 2014 by Calc SOC 120430  
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		









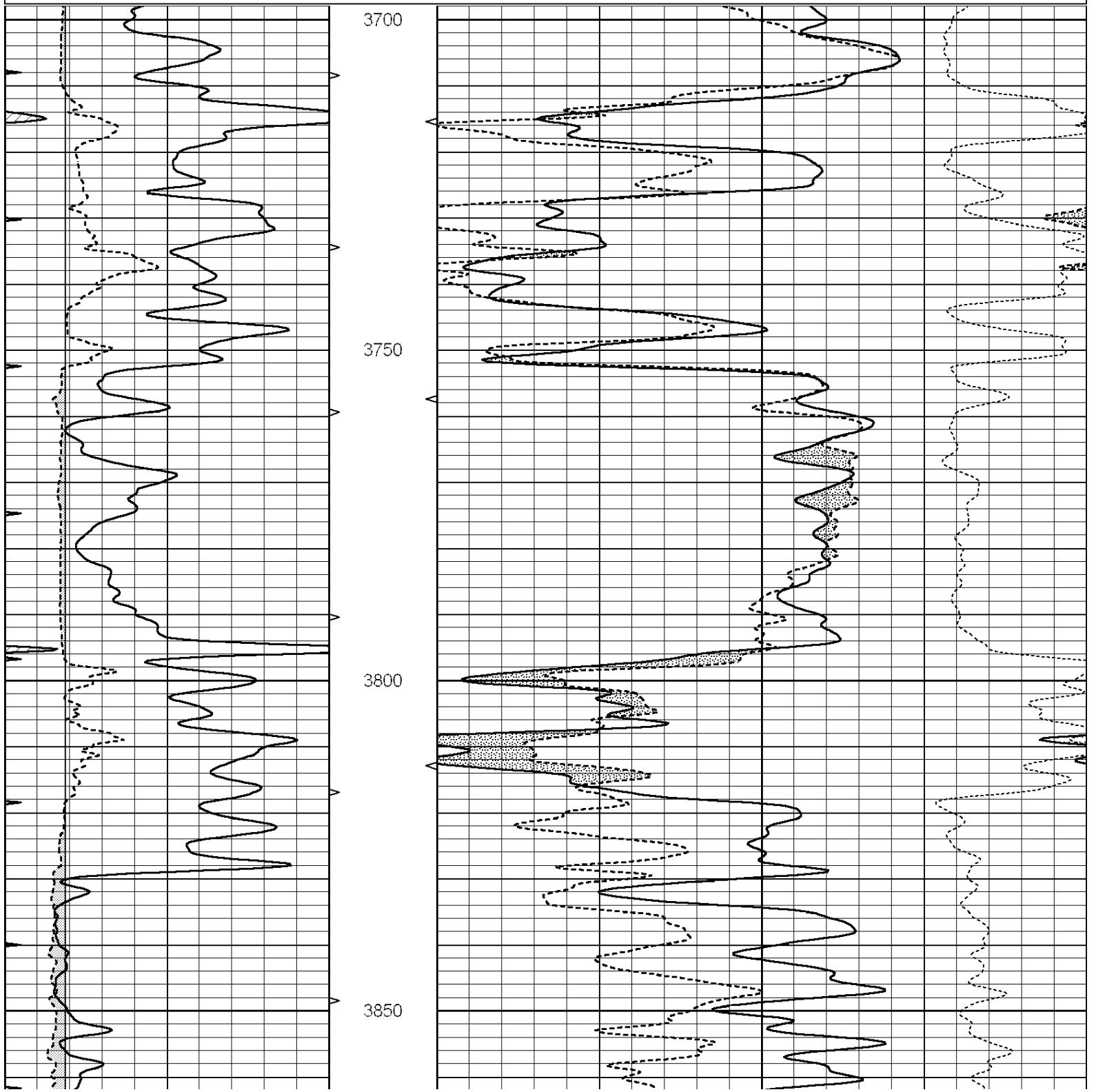
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6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25	CORRECTION (g/cc) 0.25
			0 (ft3)	10		

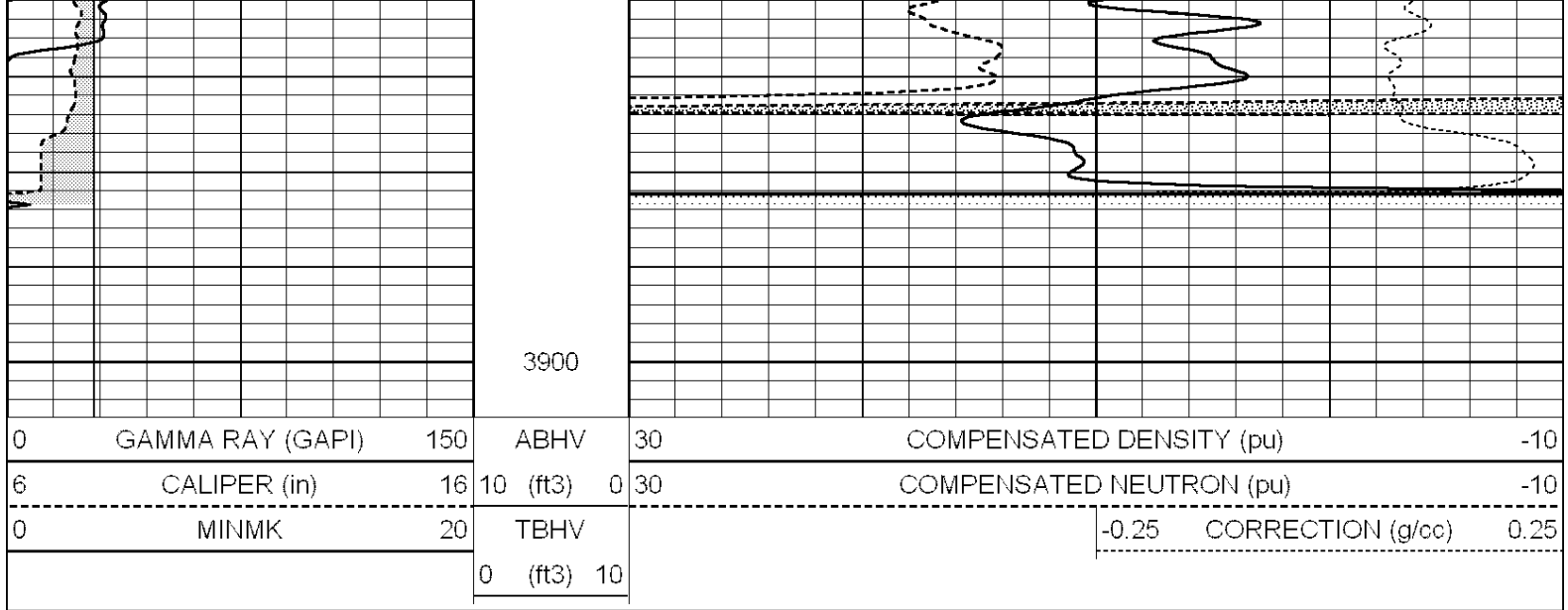
# REPEAT SECTION

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Database File: 23813ddn.db  
 Dataset Pathname: pass2.9  
 Presentation Format: den\_neu  
 Dataset Creation: Mon Apr 21 10:33:12 2014 by Calc SOC 120430  
 Charted by: Depth in Feet scaled 1:240

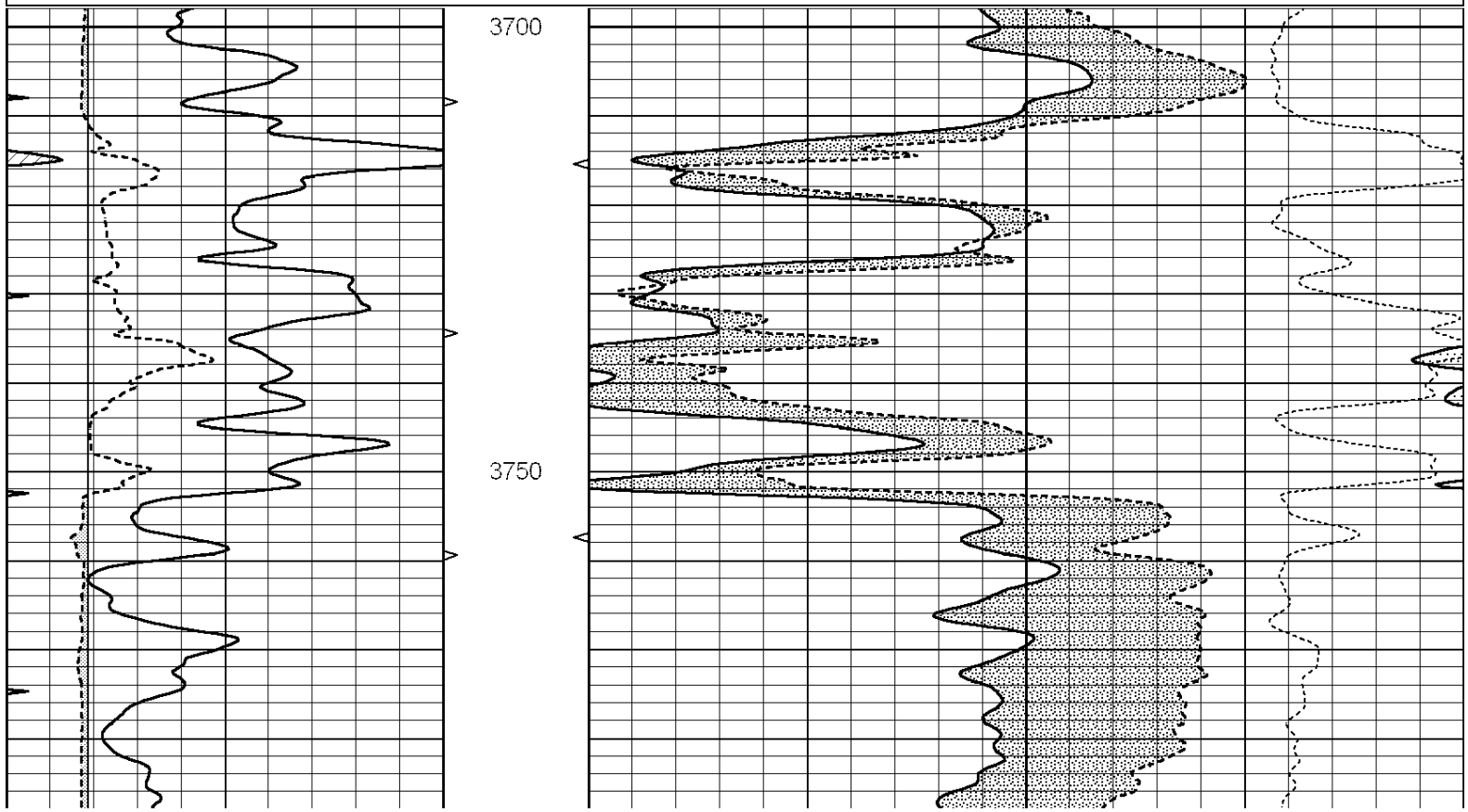
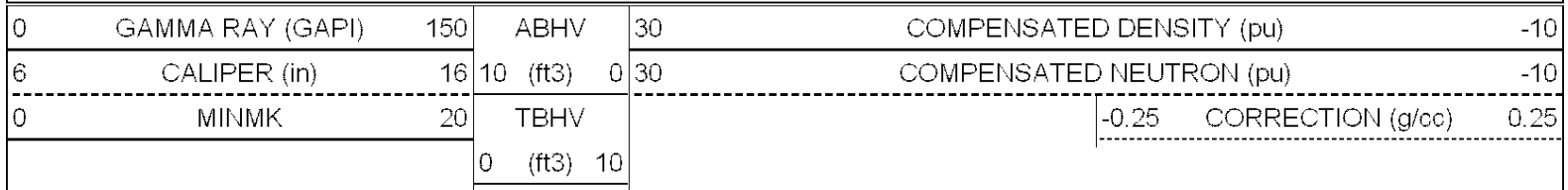
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		

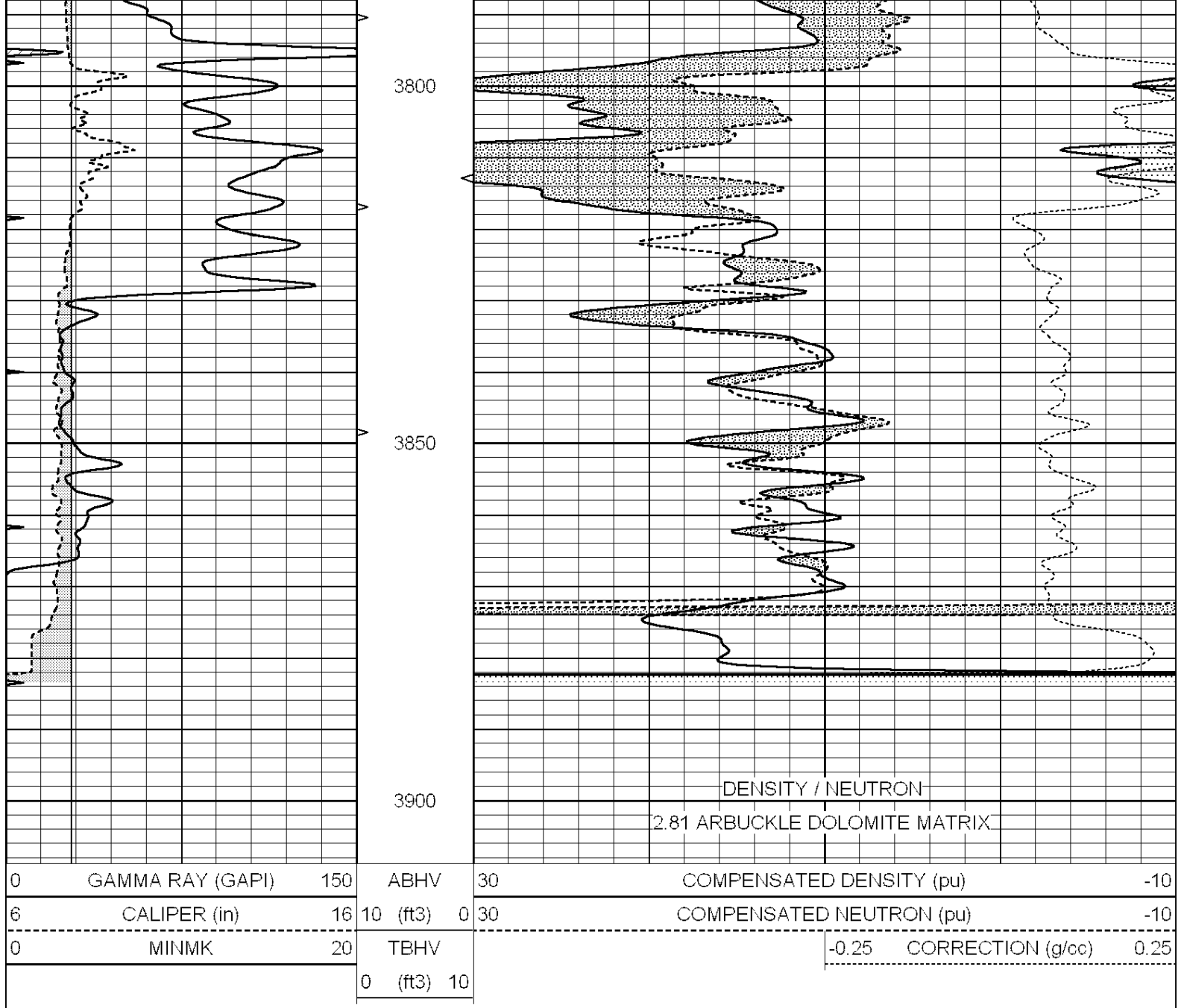




# DOLOMITE MATRIX

Database File: 23813ddn.db  
 Dataset Pathname: pass2.7  
 Presentation Format: den\_neu  
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 Charted by: Depth in Feet scaled 1:240





### Calibration Report

Database File: 23813ddn.db  
 Dataset Pathname: pass3.4  
 Dataset Creation: Mon Apr 21 10:23:03 2014 by Calc SOC 120430

### Dual Induction Calibration Report

Serial-Model: PROBE9-DILG  
 Surface Cal Performed: Wed Apr 09 15:27:42 2014  
 Downhole Cal Performed: Mon Jul 28 12:02:56 2008  
 After Survey Verification Performed: Mon Jul 28 12:02:56 2008

#### Surface Calibration

Loop:	Readings				References		Results	
	Air	Loop			Air	Loop	m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	650.000	-15.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	660.000	-23.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256

Deep	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102
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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: 003N      Model: PRB

Master Calibration								
Performed Tue Sep 08 14:14:44 2009								
	Background		Magnesium	Aluminum		Sandstone		
Window 1	2042.6		12312.8	4225.8		13758.4		cps
Window 2	1855.8		10134.7	3624.2		11113.1		cps
Window 3	1639.4		6760.2	2716.3		7260.3		cps
Window 4	466.4		469.2	466.1		476.5		cps
Long Space	0.0		8278.9	1768.4		9257.4		cps
Short Space	2.2		2377.3	1544.1		2574.2		cps
Rho			1.7100	2.5900		1.3800		g/cc
Pe			0.0000	2.5700		1.5500		
Rib Angle	: 44.4		Rib Slope	: 0.979		Density/Spine Ratio		: 0.549
Spine Angle	: 74.4		Spine Slope	: 3.577		Spine Intercept		: -18.8

Before Survey Verification								
Performed Wed Dec 31 18:00:00 1969								
	Background		Magnesium	Aluminum		Sandstone		
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								
	Background		Magnesium	Aluminum		Sandstone		
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		

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: Mon Mar 24 01:53:40 2014

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
Calibrator Reading: 1.0 cps

Sensitivity: 0.3000 GAPI/cps