



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

COMPENSATED DENSITY / NEUTRON LOG

Company		DOWNING - NELSON OIL COMPANY, INC.	
Well		GEORGINE STAAB #1-19	
Field		WILDCAT	
County		ELLIS	
State		KANSAS	
Location:		API # : 15-051-26525-0000 2005' FSL & 2280' FWL SW - NE - NE - SW	
Permanent Datum		GROUND LEVEL	
Log Measured From		KELLY BUSHING 8' A.G.L.	
Drilling Measured From		KELLY BUSHING	
SEC 19 TWP 14S RGE 18W		Elevation	
		K.B. 2112	
		D.F. 2110	
		G.L. 2104	
Date	5/28/13		
Run Number	ONE		
Depth Driller	3830		
Depth Logger	3834		
Bottom Logged Interval	3810		
Top Log Interval	3000		
Casing Driller	8 5/8" @ 638'		
Casing Logger	637		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5,000 PPM	
Density / Viscosity	9.0/52		
pH / Fluid Loss	10.0/9.6		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.500 @ 90F		
Rmf @ Meas. Temp	.375 @ 90F		
Rmc @ Meas. Temp	.600 @ 90F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	.391 @ 115F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	10:45 A.M.		
Maximum Recorded Temperature	115F		
Equipment Number	4854		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	MARC DOWNING		

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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
 HAYS, KS., 3S. ON EXPERIMENTATION RD. TO "MUNJOR RD.", 1 1/2W., N. INTO



NABORS

**COMPLETION
& PRODUCTION**

MAIN SECTION

Database File:

010914ddn.db

Dataset Pathname:

pass3.9

Presentation Format:

den_neu

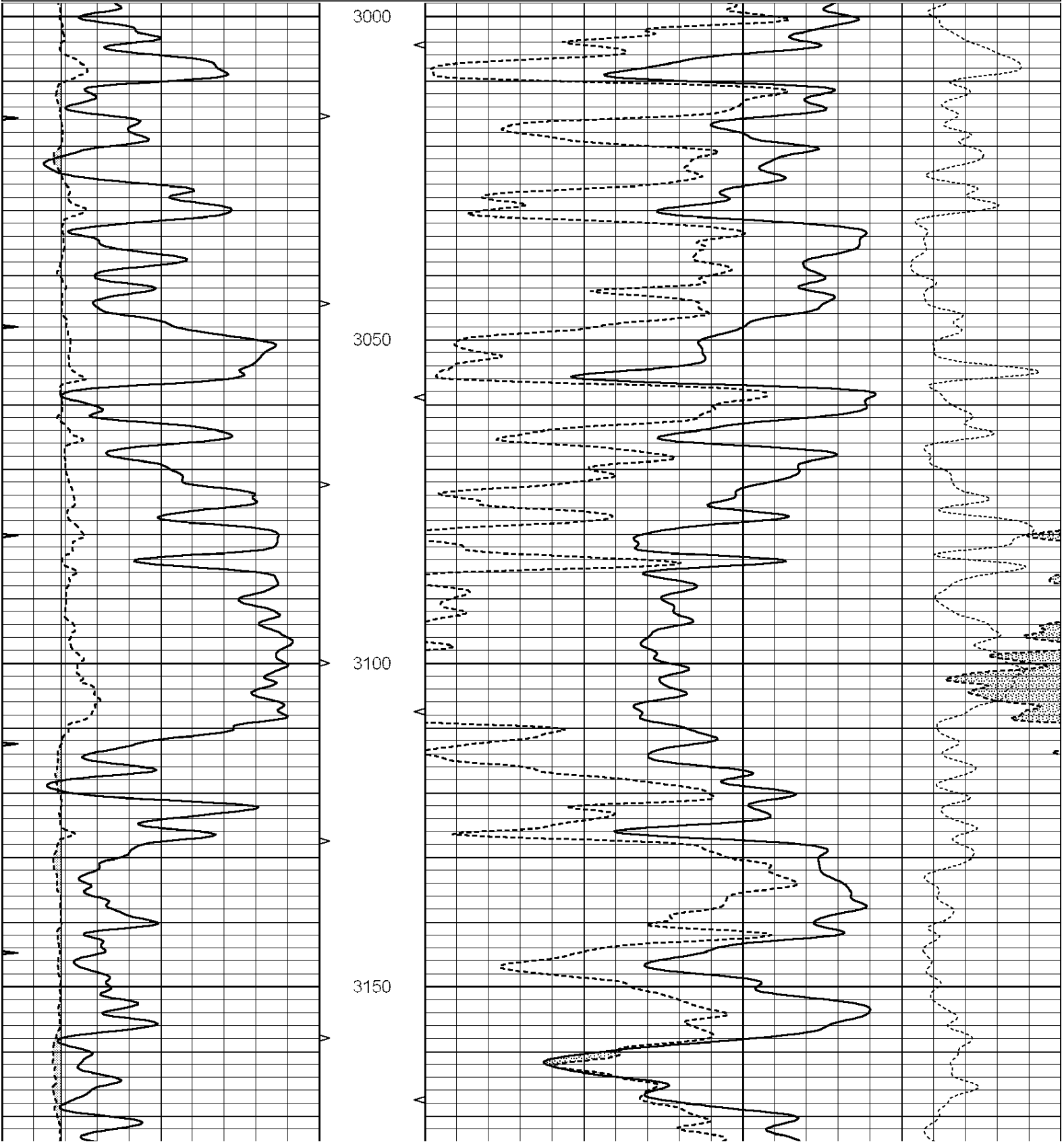
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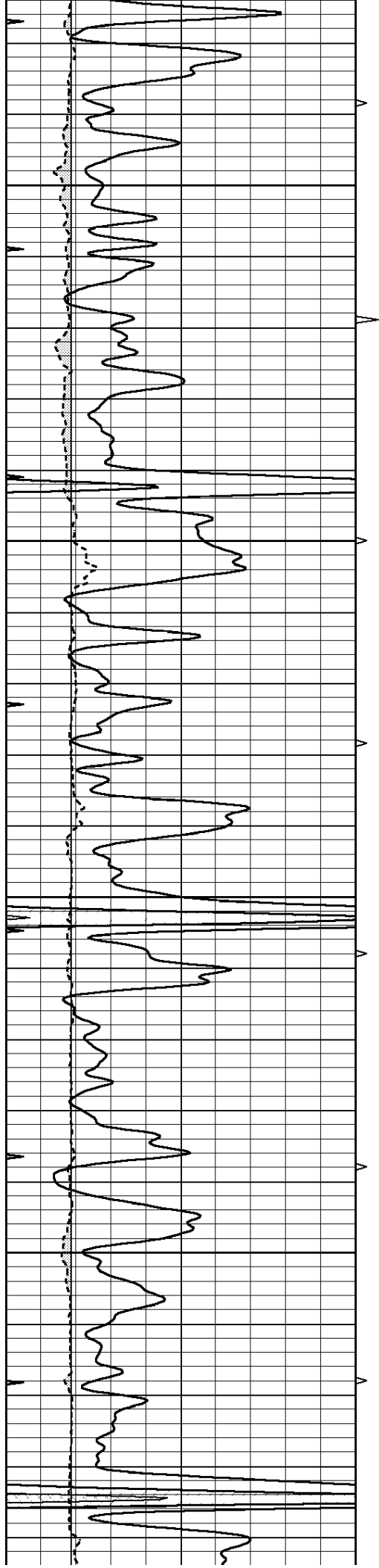
Tue May 28 11:57:14 2013

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		



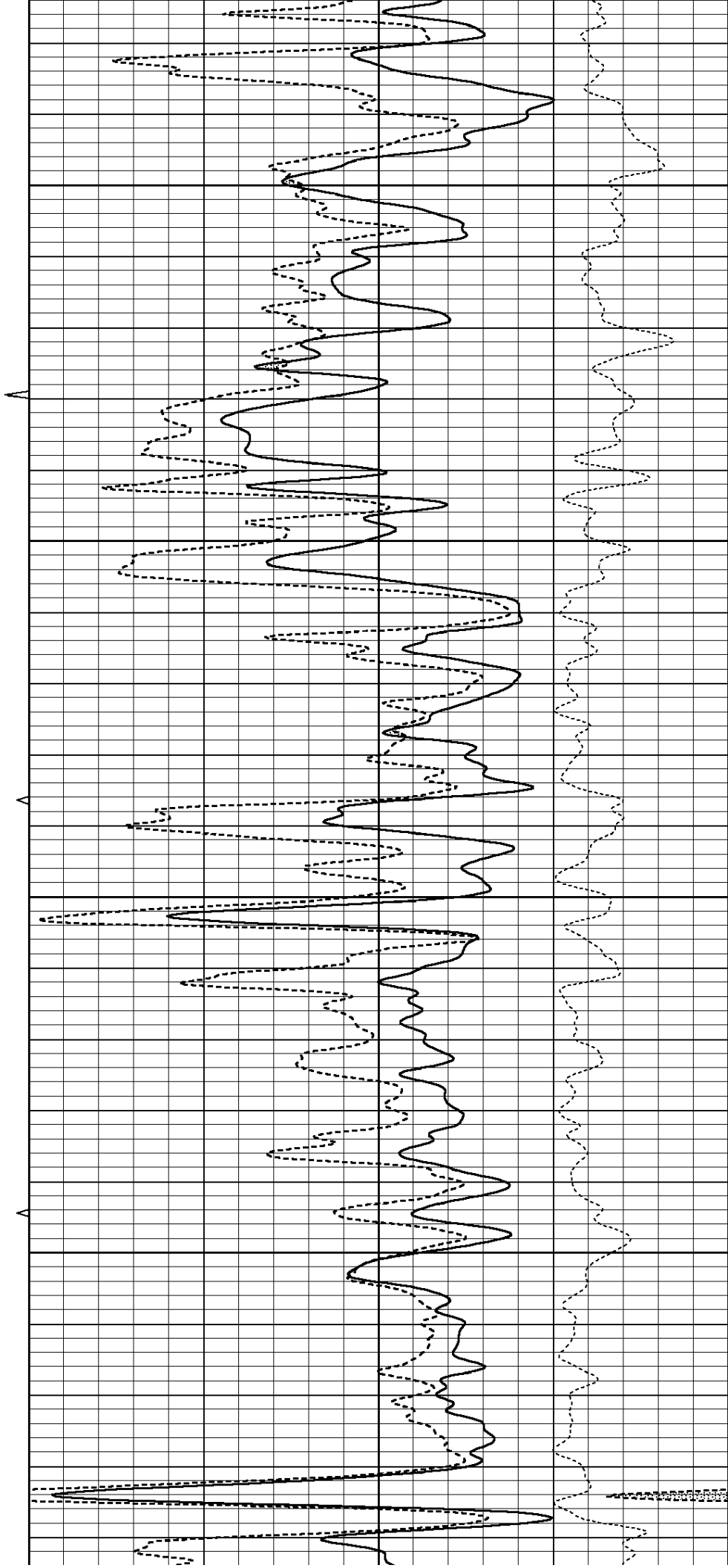


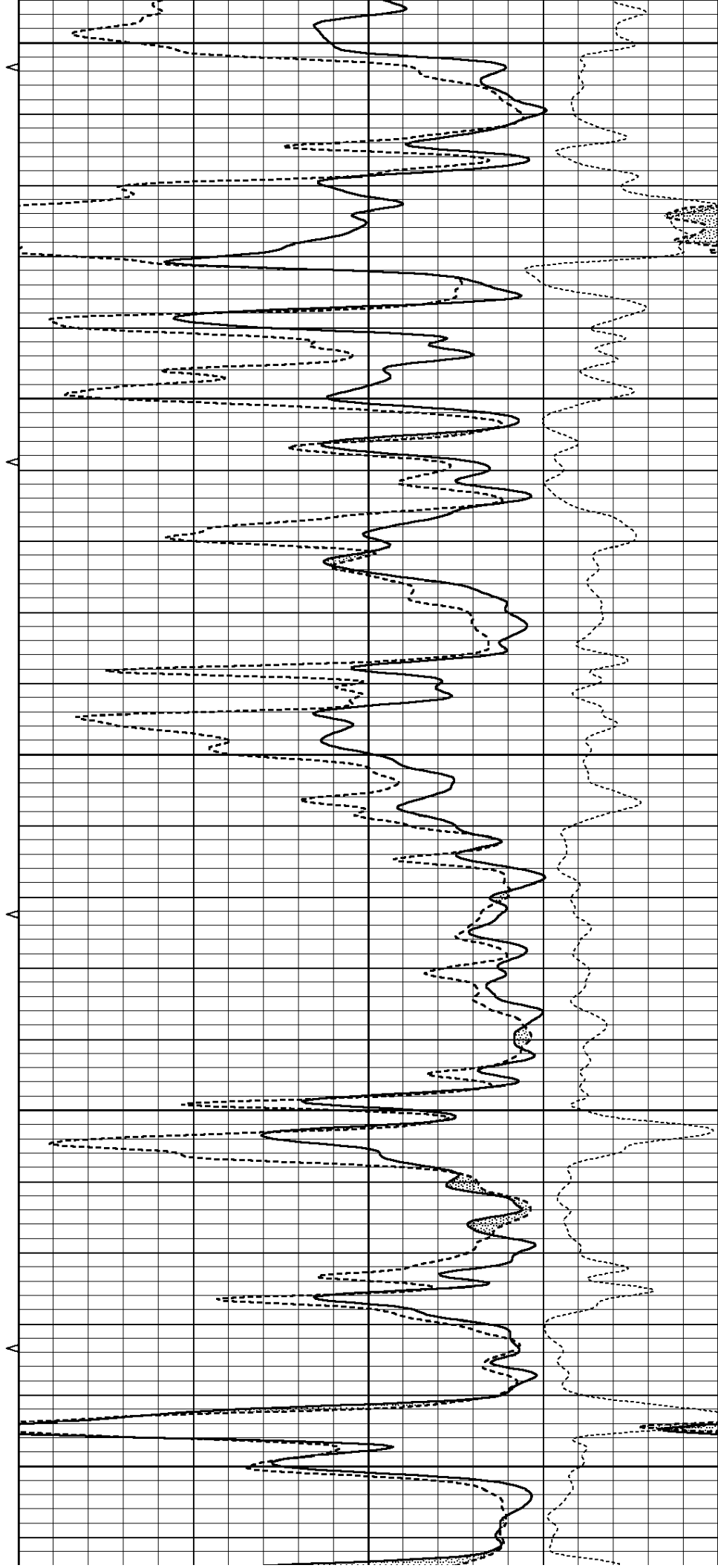
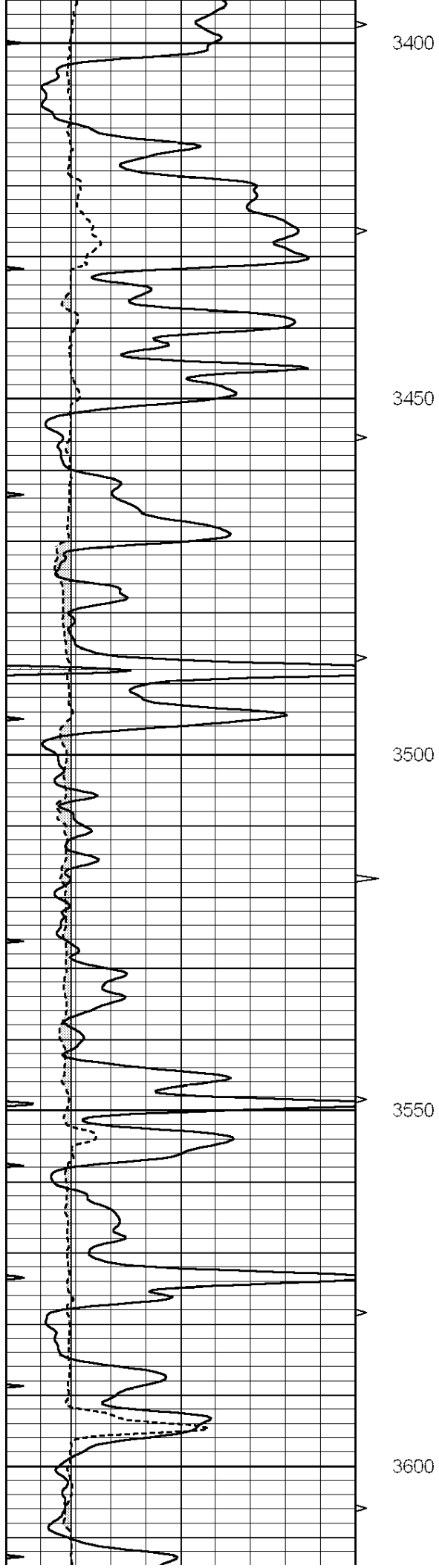
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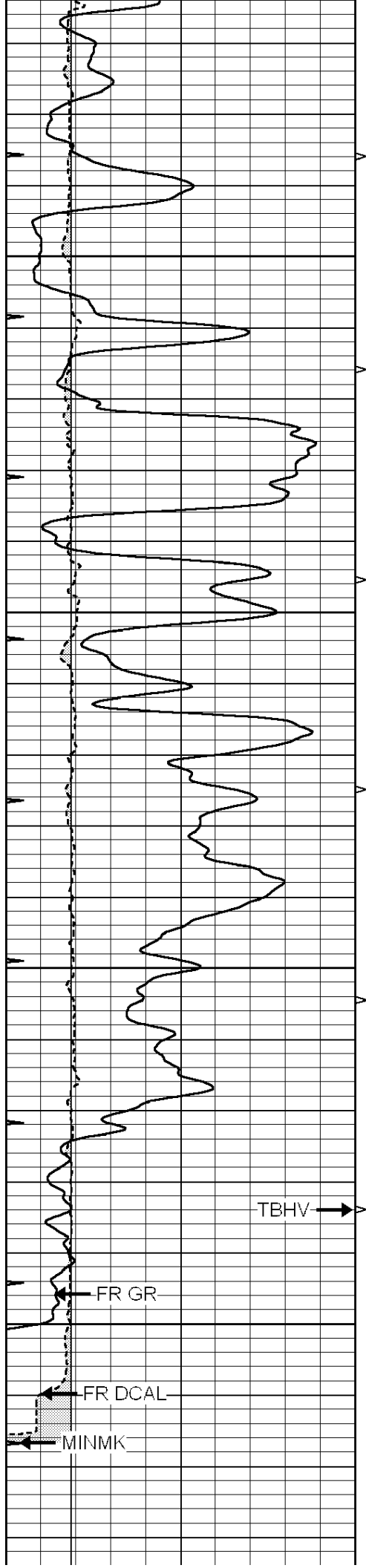
3250

3300

3350







3650

3700

3750

5.5" ABHV

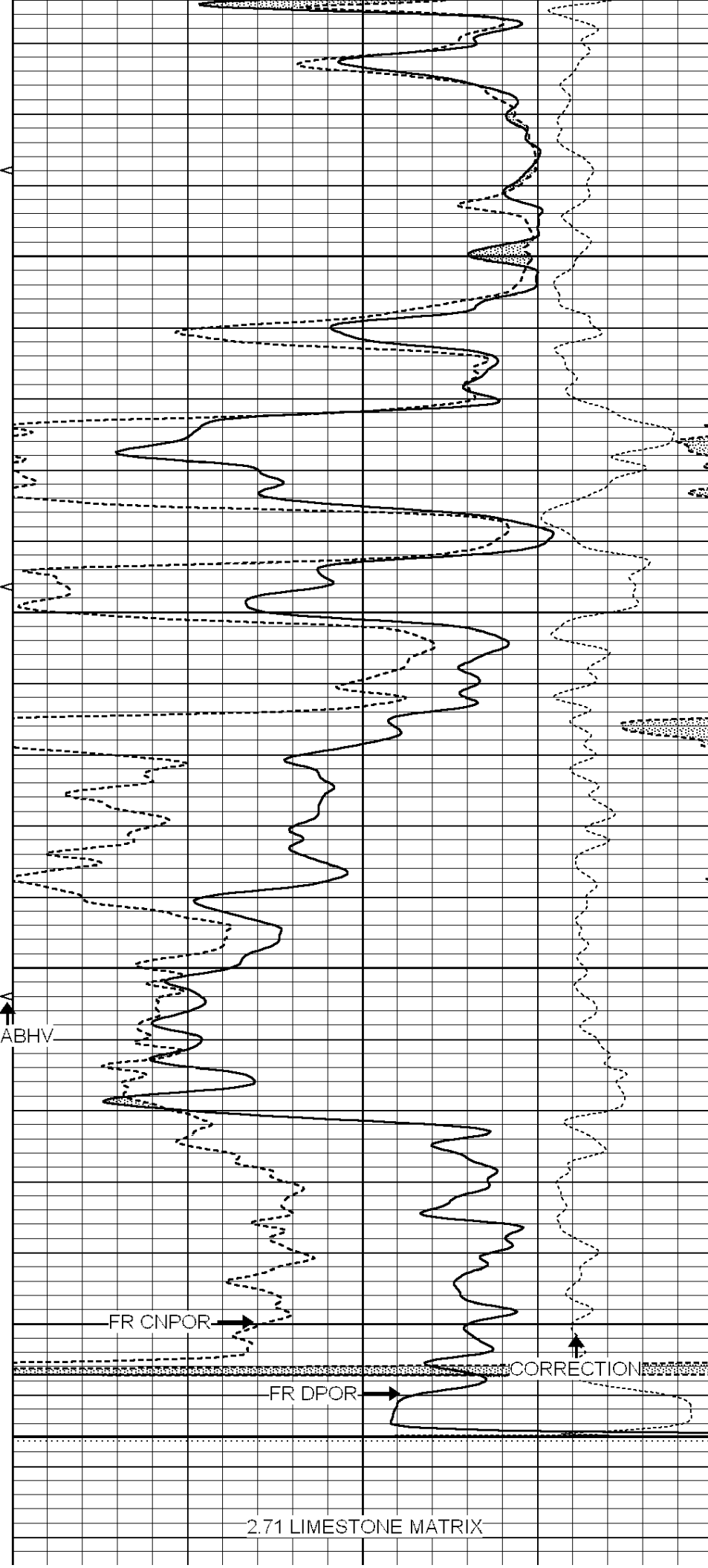
3800

FR GR

FR DCAL

MINMK

TBHV



FR CNPOR

FR DPOR

CORRECTION

2.71 LIMESTONE MATRIX

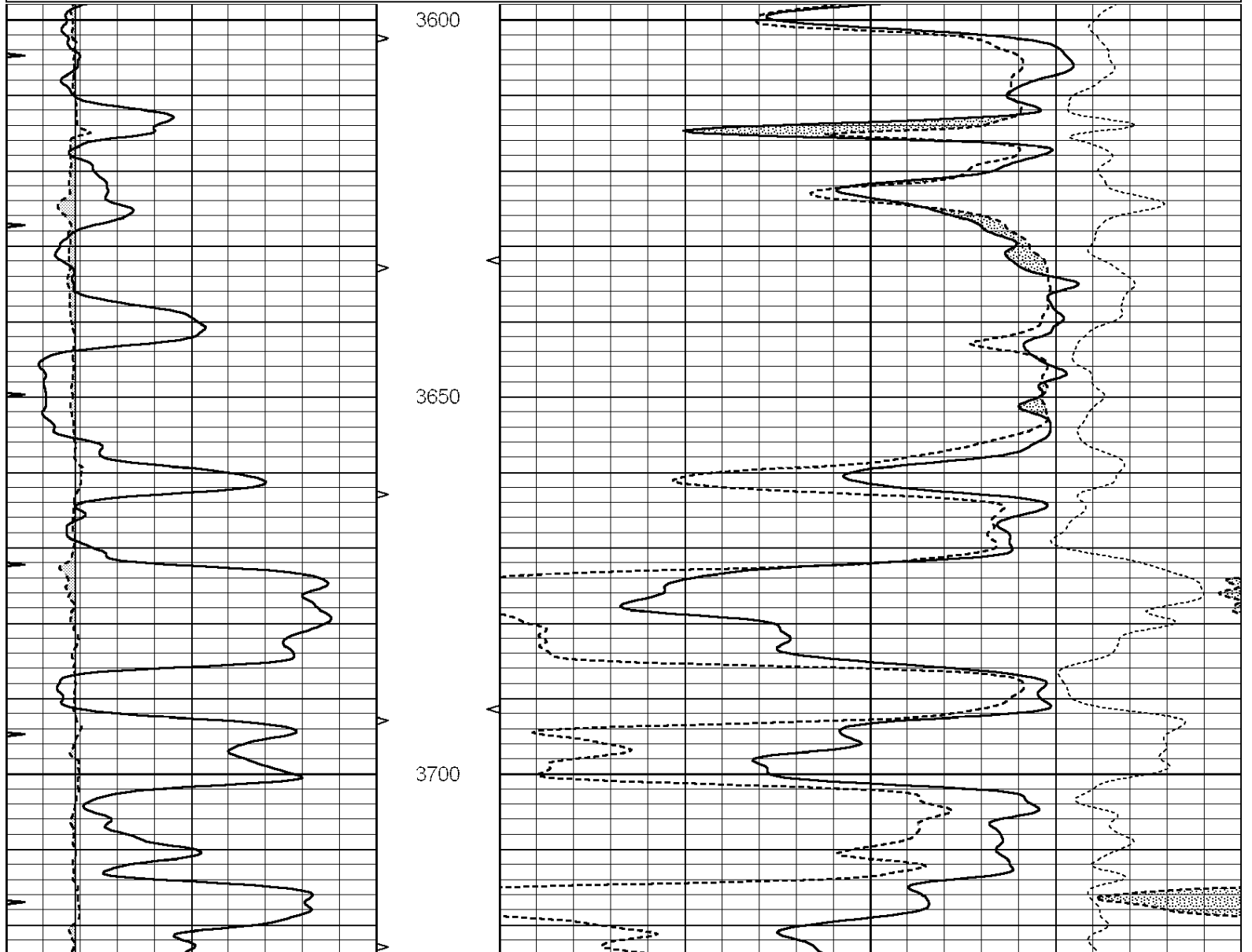


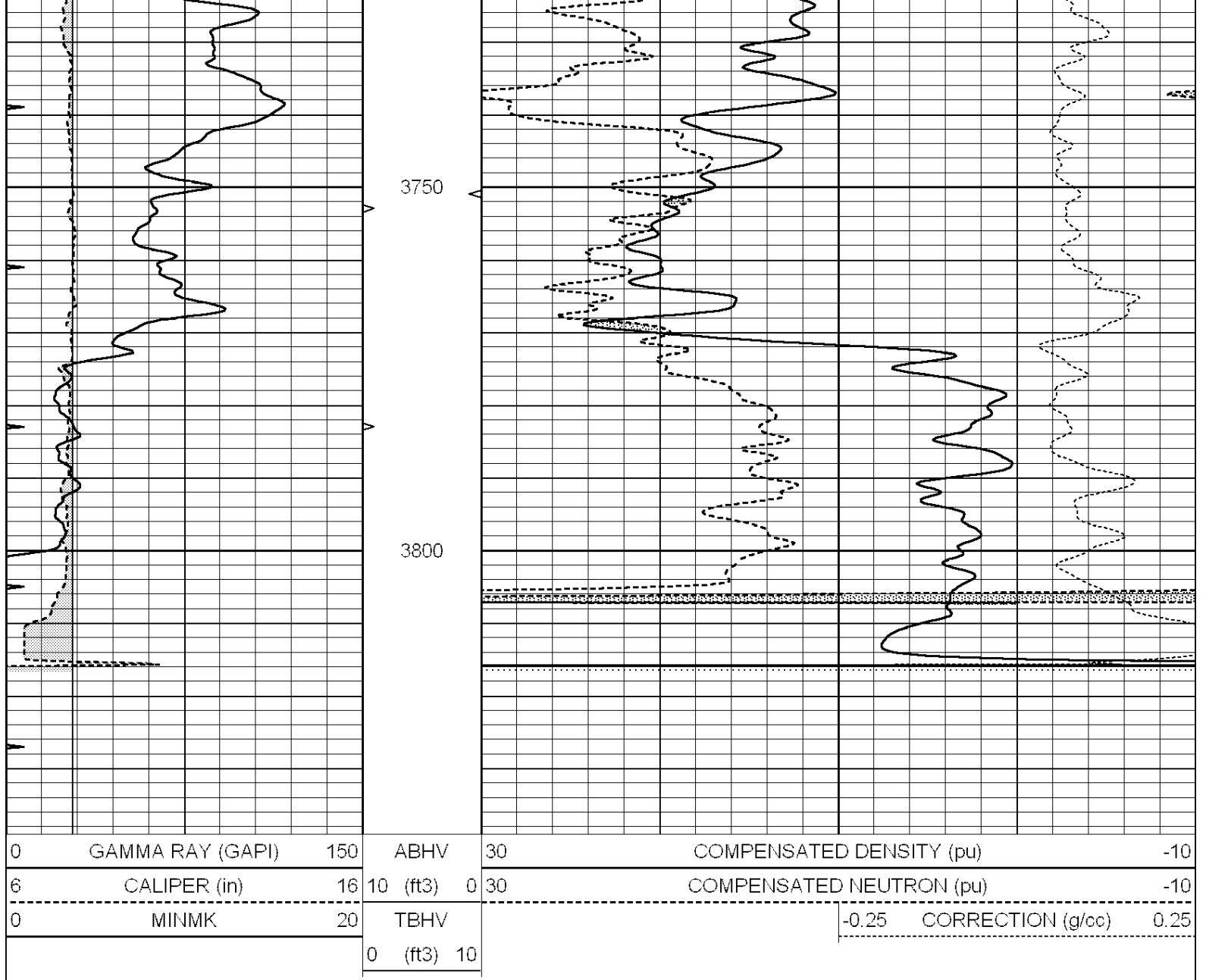
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REPEAT SECTION

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			





Calibration Report

Database File: 010914ddn.db
Dataset Pathname: pass3.9
Dataset Creation: Tue May 28 11:57:14 2013

Dual Induction Calibration Report

Serial-Model: PROBE9-DILG
Surface Cal Performed: Mon May 20 12:15:25 2013
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	621.923	-7.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	640.000	-13.000
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: 001			Model: PRB					

Master Calibration			Performed Tue May 28 08:54:22 2013					
	Background	Magnesium	Aluminum	Sandstone				
Window 1	1890.3	12786.5	4236.7	13497.2				cps
Window 2	1764.1	11051.7	3765.5	11456.4				cps
Window 3	1442.8	5894.4	2376.2	5911.4				cps
Window 4	428.0	428.9	420.8	426.5				cps
Long Space	0.0	9287.6	2001.3	9692.3				cps
Short Space	3.2	3351.1	2186.8	3398.0				cps
Rho		1.7100	2.5900	1.3800				g/cc
Pe		0.0000	2.5700	1.5500				
Rib Angle	: 44.5	Rib Slope	: 0.981	Density/Spine Ratio			: 0.552	
Spine Angle	: 74.5	Spine Slope	: 3.596	Spine Intercept			: -20.1	

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				

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:	070559	
Tool Model:	OPEN_GR	
Performed:	Mon Apr 15 10:30:52 2013	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.3500	GAPI/cps