



SUPERIOR
Hays,
Kansas

COMPENSATED
DENSITY / NEUTRON
LOG

Company	DOWNING - NELSON OIL CO. INC.		
Well	ALMA HERL #1-13		
Field	GATSCHET SOUTHEAST		
County	ELLIS		
State	KANSAS		
Company	DOWNING - NELSON OIL COMPANY, INC.		
Well	ALMA HERL #1-13		
Field	GATSCHET SOUTHEAST		
County	ELLIS		
State	KANSAS		
Location:	API # : 15-051-26133-0000		Other Services
	1180' FSL & 1520' FEL		DIL/MEL
	NE - NE - SW - SE		
	SEC 13 TWP 13S RGE 19W		
Permanent Datum	GROUND LEVEL		Elevation
Log Measured From	KELLY BUSHING 8' A.G.L.		K.B. 2062
Drilling Measured From	KELLY BUSHING		D.F. 2060
			G.L. 2054
Date	4/27/11		
Run Number	ONE		
Depth Driller	3753		
Depth Logger	3754		
Bottom Logged Interval	3730		
Top Log Interval	2900		
Casing Driller	8 5/8"@224'		
Casing Logger	224		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD		CHLORIDES 11,000PPM
Density / Viscosity	9.2/68		
pH / Fluid Loss	9.0/8.8		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.400@75F		
Rmf @ Meas. Temp	.300@75F		
Rmc @ Meas. Temp	.480@75F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	.263@114F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	11:45 A.M.		
Maximum Recorded Temperature	114F		
Equipment Number	0836		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	AL DOWNING		
	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 SUPERIOR WELL SERVICE HAYS, KANSAS (785) 628-6395
DIRECTIONS HAYS, KS. (ELLIS COUNTY FAIRGROUNDS) 1/2 MILE W. OF 220 AVE., 1/2N. INTO

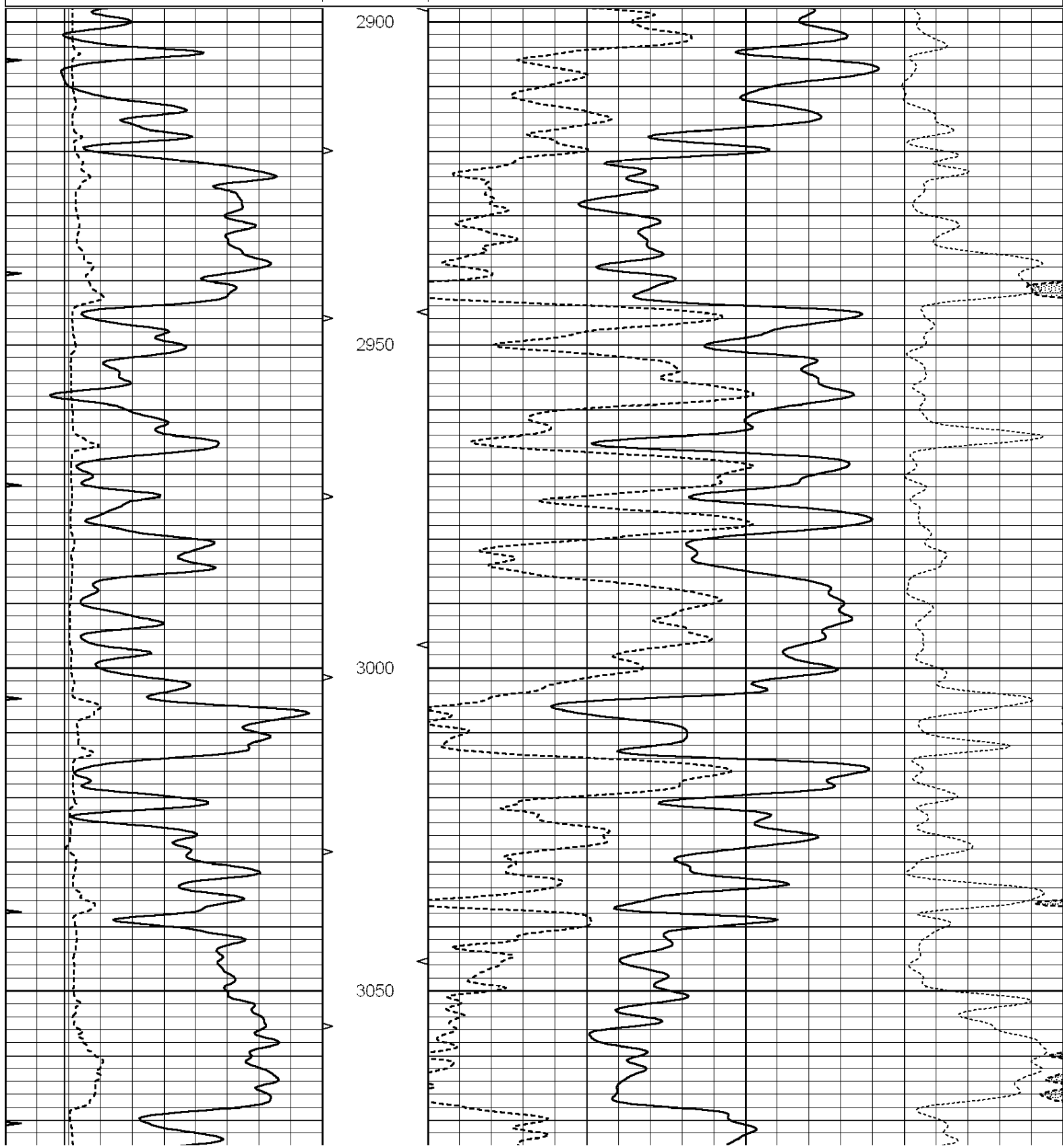


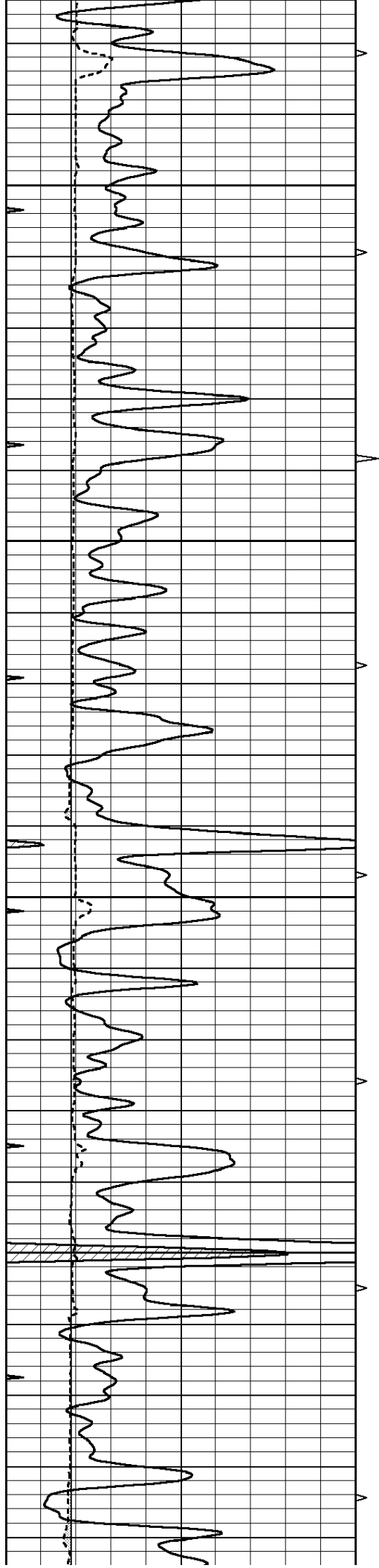
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MAIN SECTION

Database File: 006818ddn.db
 Dataset Pathname: pass3.2
 Presentation Format: den_neu
 Dataset Creation: Wed Apr 27 12:33:00 2011 by Calc Open-Cased 090629
 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		



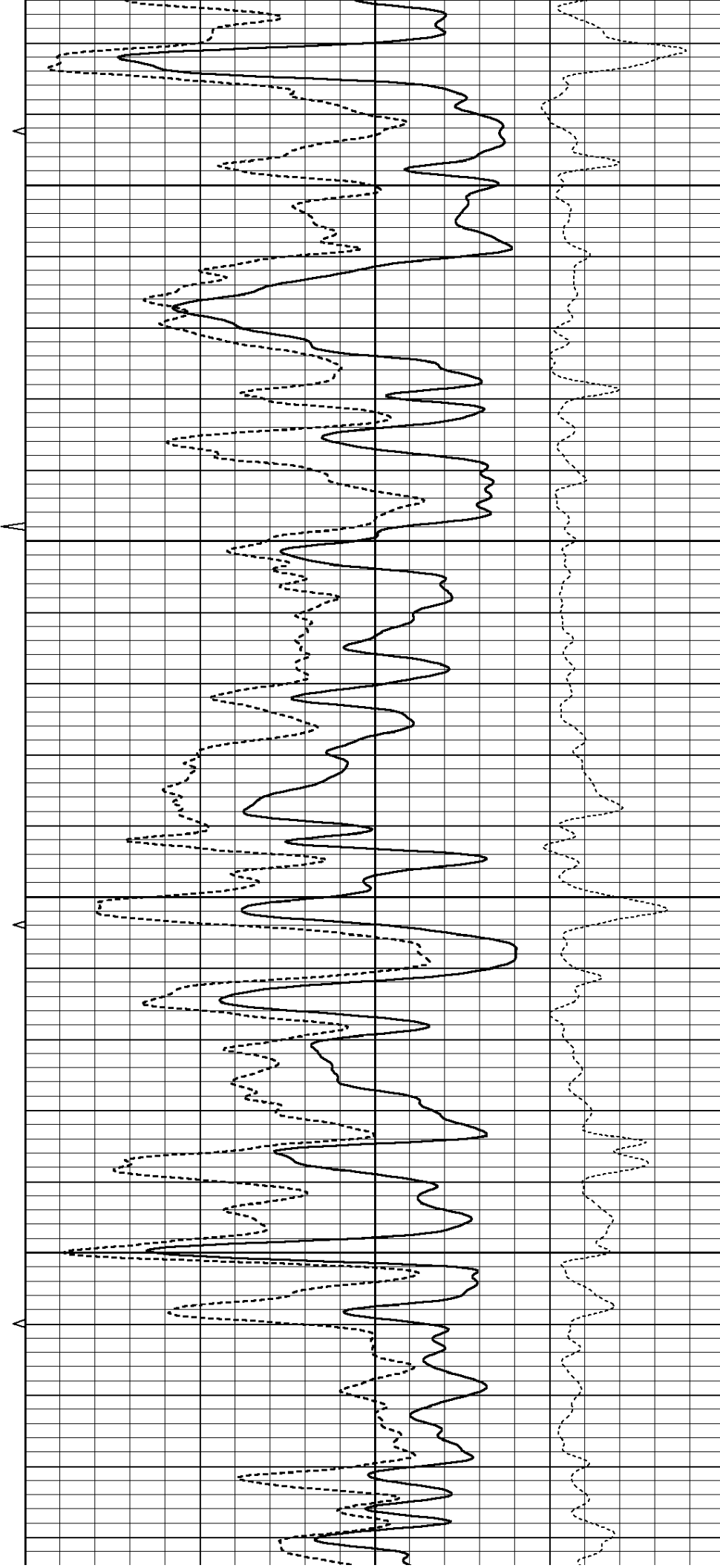


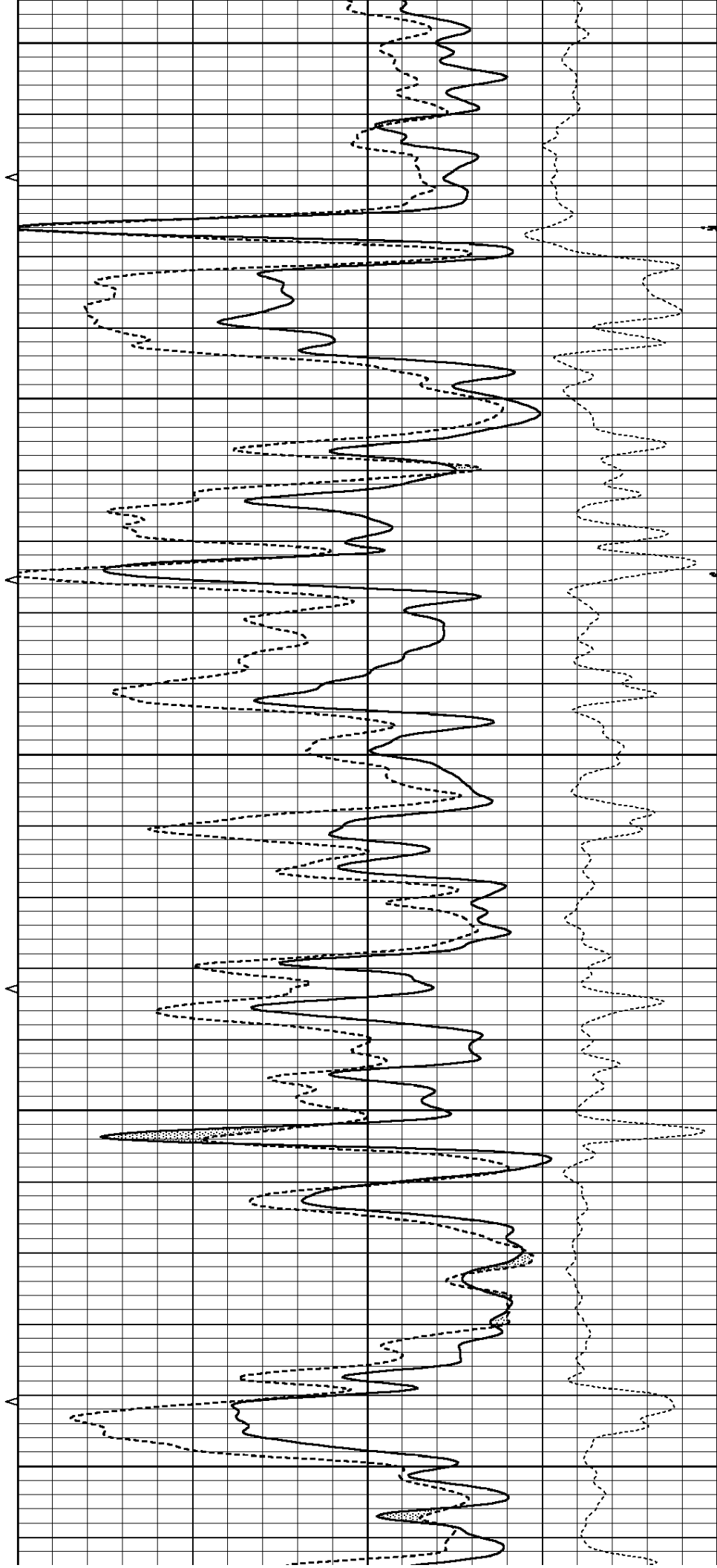
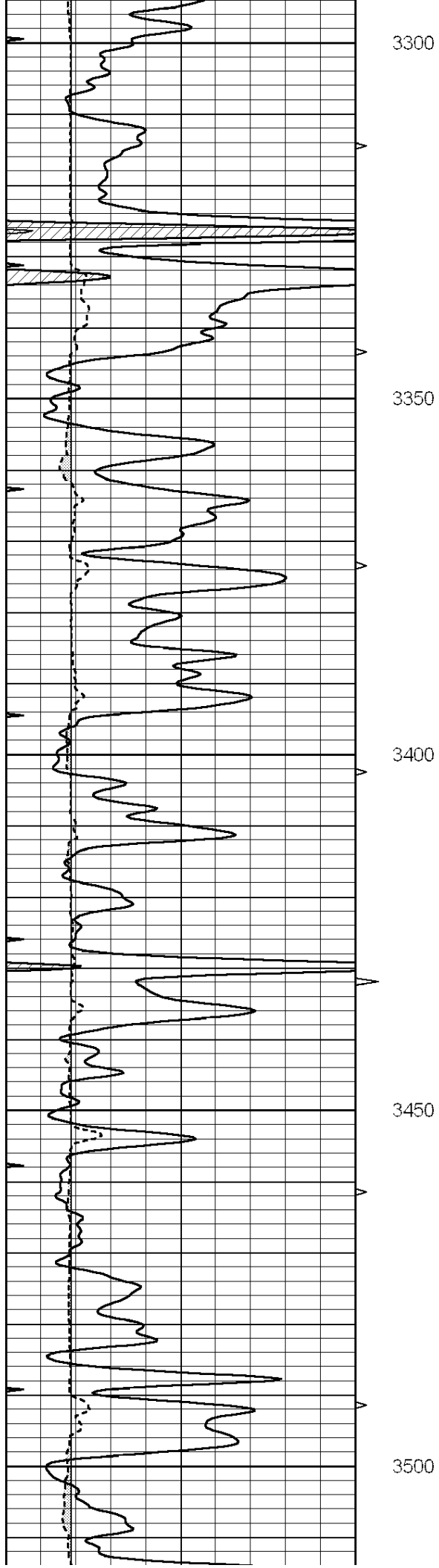
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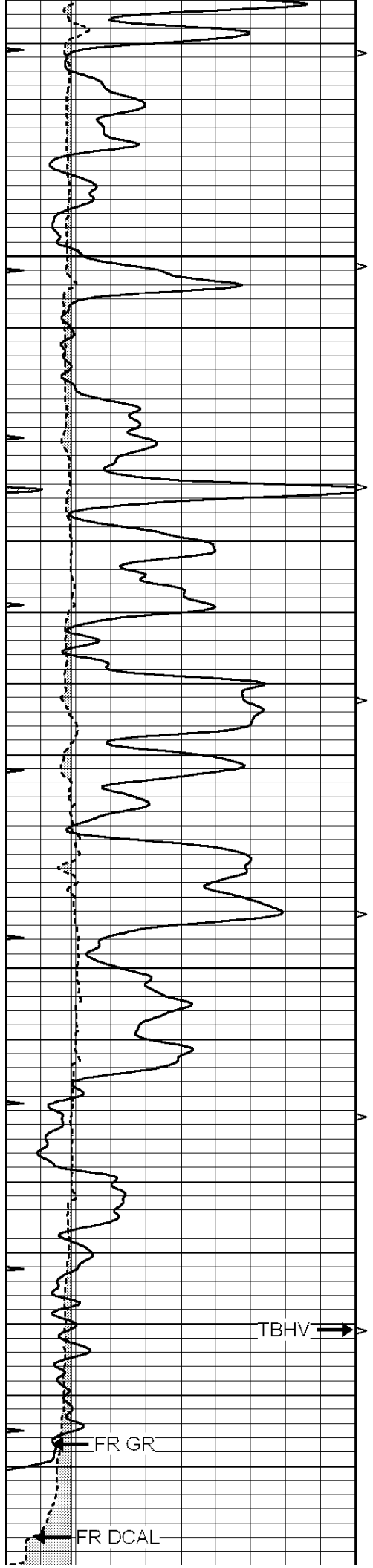
3150

3200

3250







3550

3600

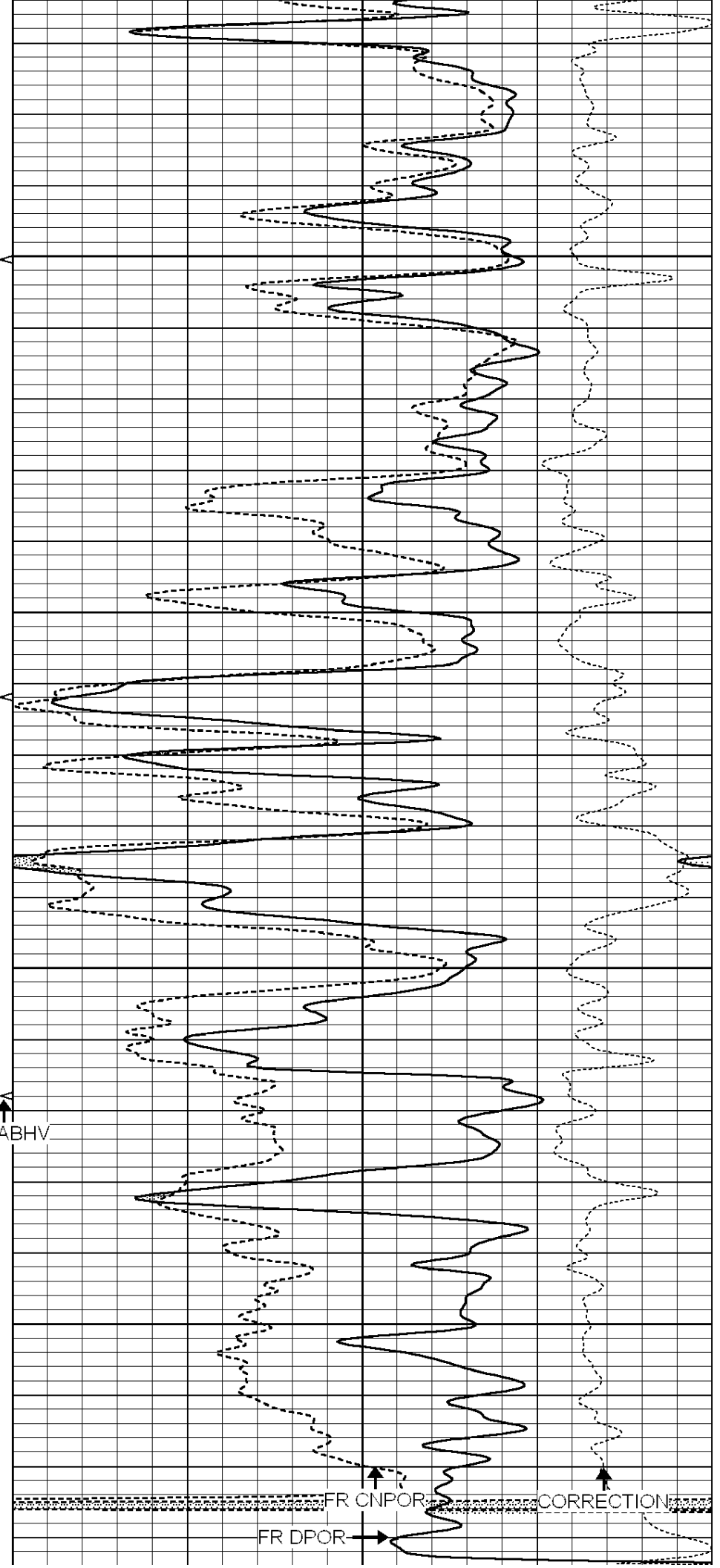
3650

5.5" ABHV

3700

FR GR

FR DCAL



FR CNPOR

FR DPOR

CORRECTION

← MINMK								
			3750 LTD 3754			2.71 LIMESTONE MATRIX		
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				

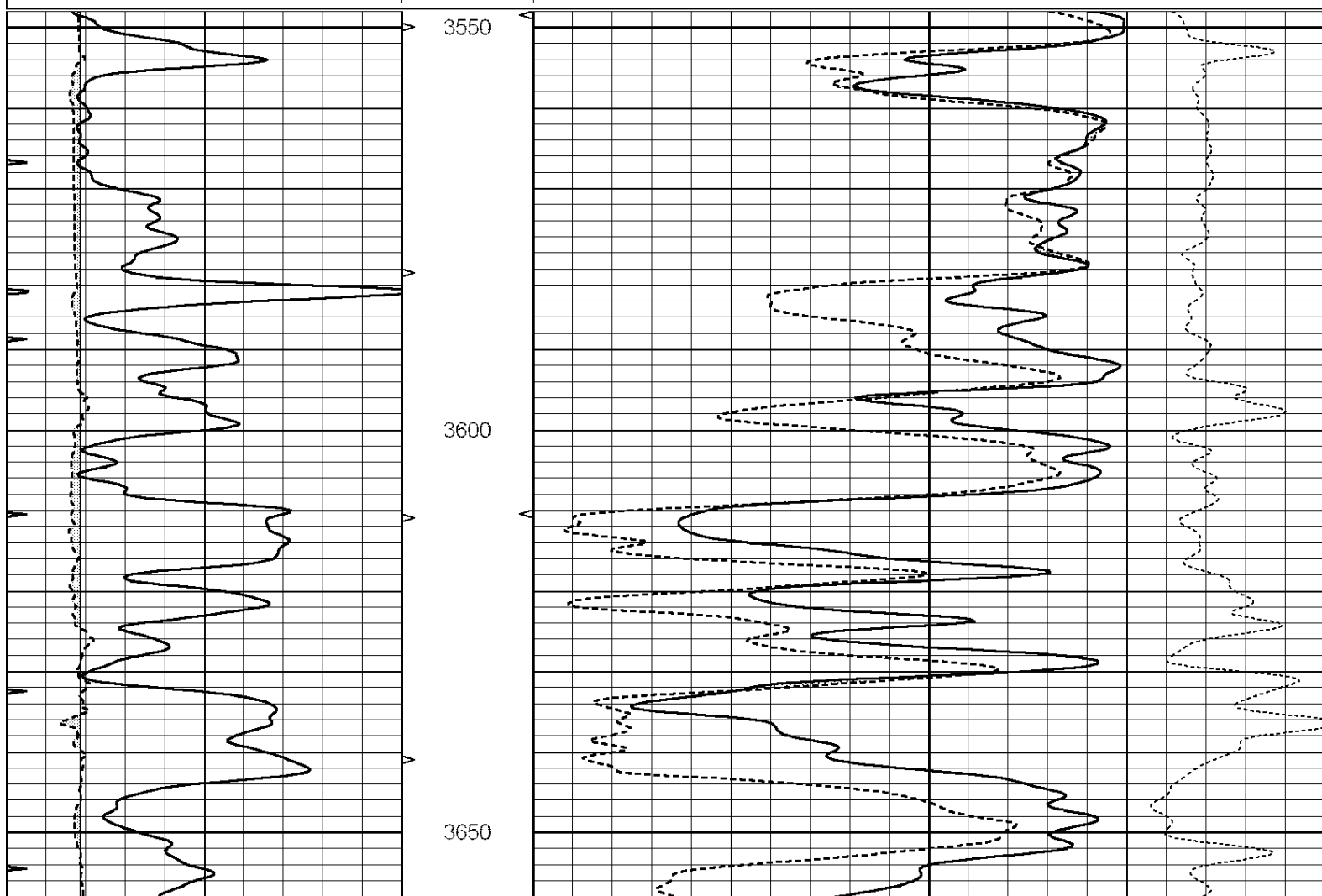


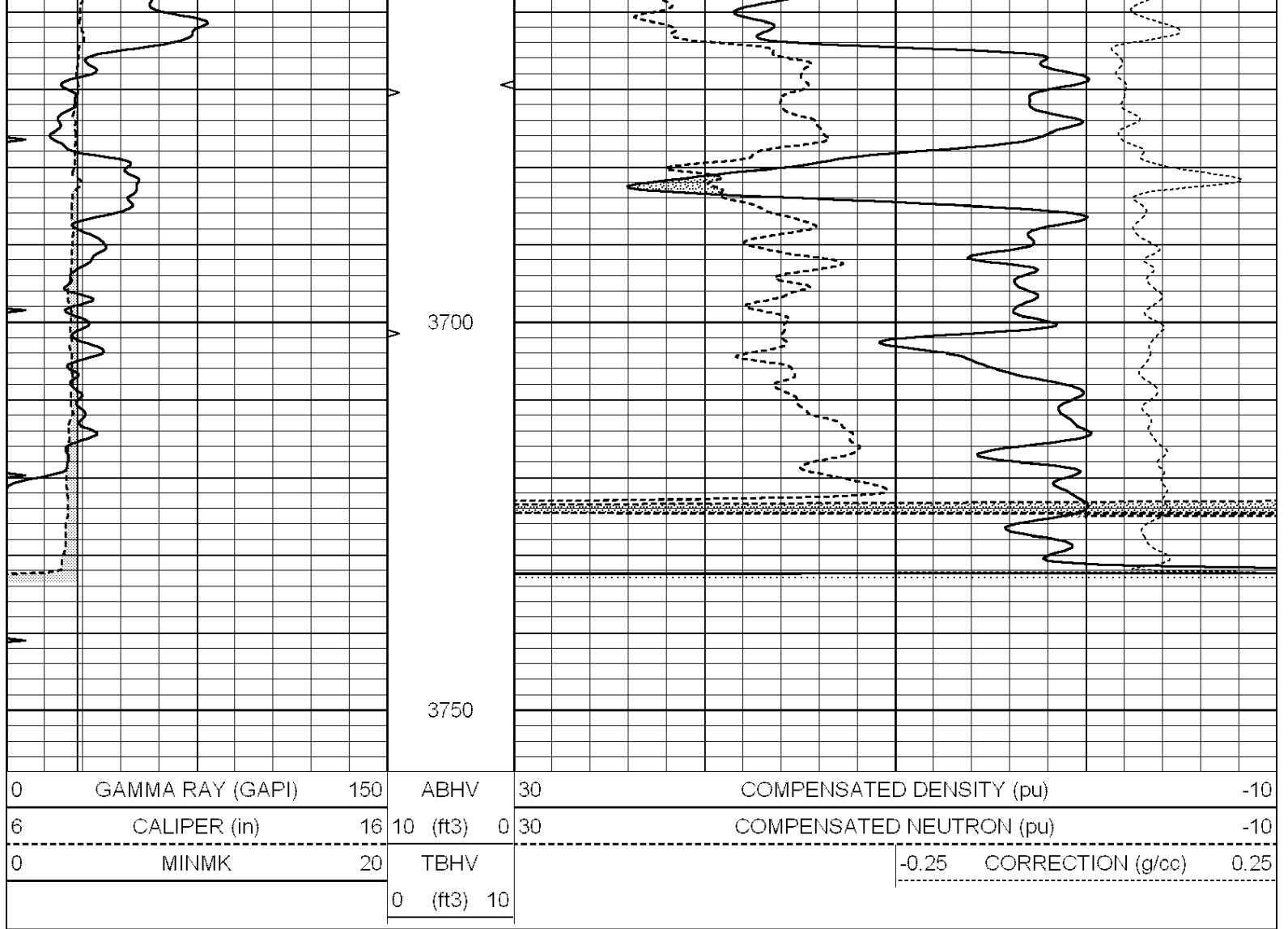
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REPEAT SECTION

Database File: 006818ddn.db
Dataset Pathname: pass2.5
Presentation Format: den_neu
Dataset Creation: Wed Apr 27 12:11:14 2011
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				

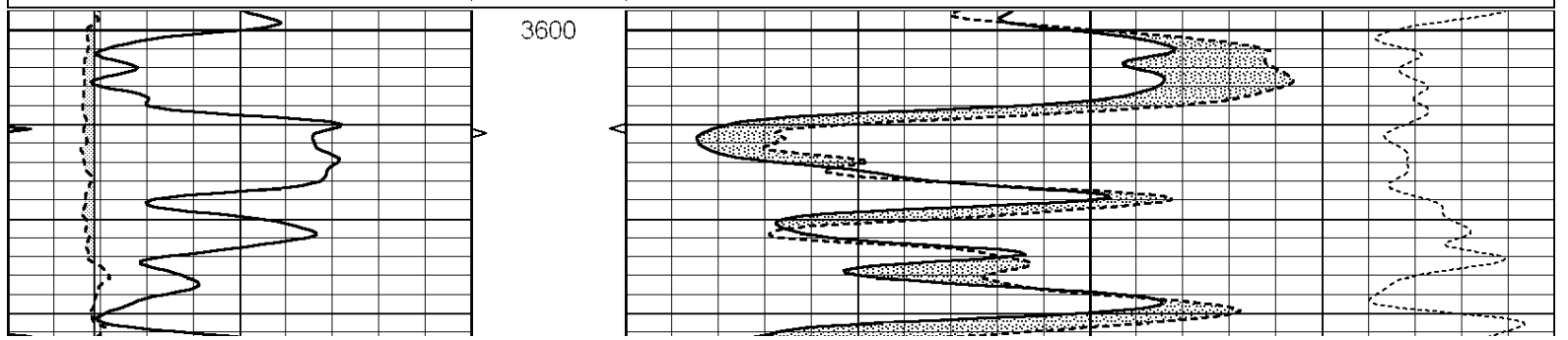
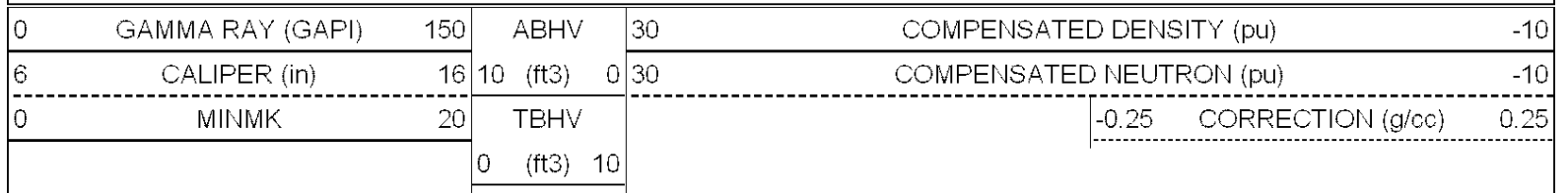


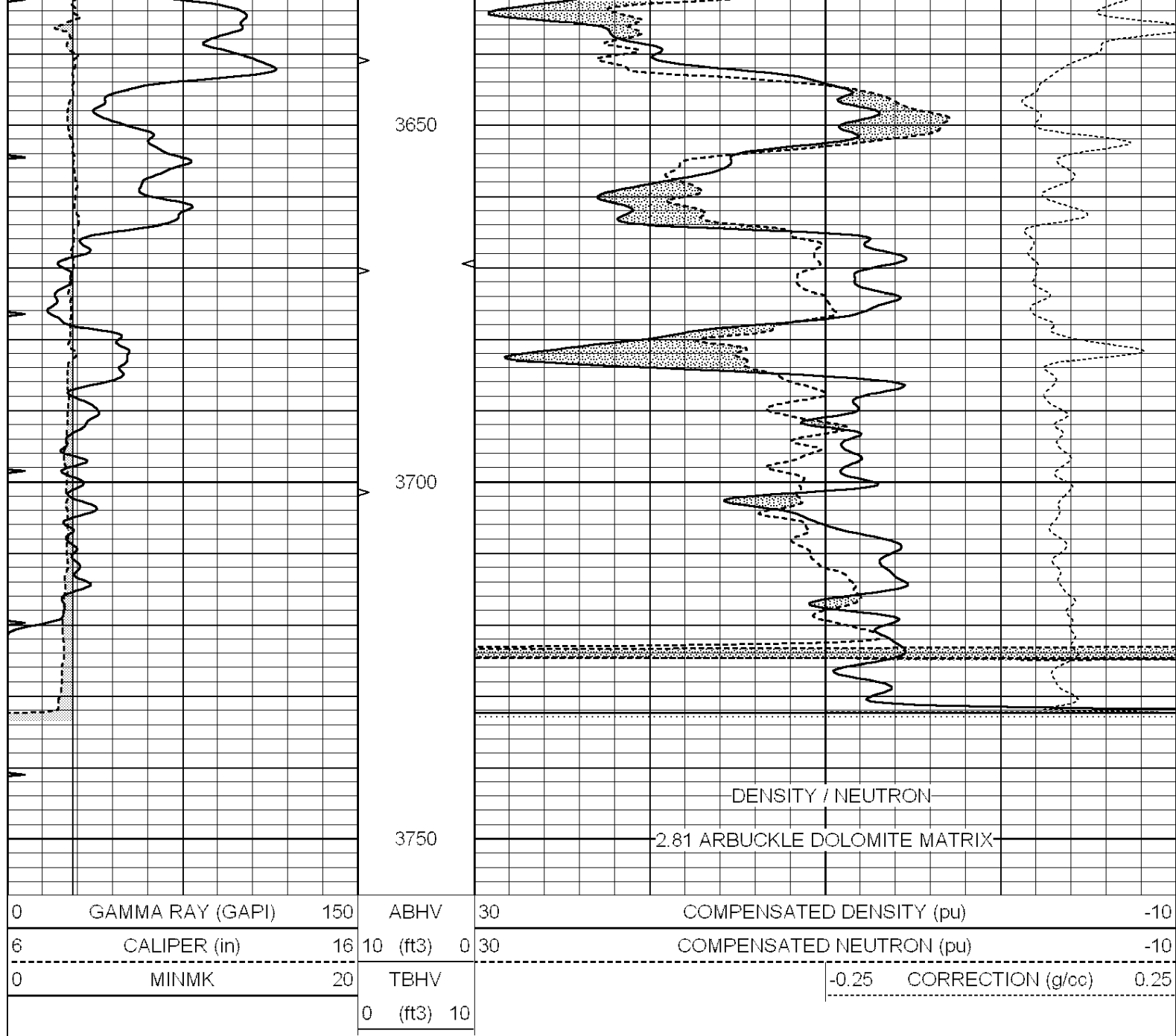


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DOLOMITE MATRIX

Database File: 006818ddn.db
 Dataset Pathname: pass2.7
 Presentation Format: den_neu
 Dataset Creation: Wed Apr 27 12:14:37 2011
 Charted by: Depth in Feet scaled 1:240





Calibration Report

Database File: 006818ddn.db
 Dataset Pathname: pass3.2
 Dataset Creation: Wed Apr 27 12:33:00 2011 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model:
 Performed:

DIL3-GEAR
 Sat Apr 23 10:25:26 2011

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	640.000	-1.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	700.000	-14.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.645	V	0.000	400.000	mmho/m	622.059	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	631.393	-4.555

Litho Density Calibration Report
Serial: 003N Model: PRB
Performed Tue Sep 08 14:14:44 2009

Litho Density Calibration

	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			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

Caliper

	Readings	Reference	
Low Ref	2.1	7.2	
High Ref	4.4	14.0	
	Gain: 2.9		Offset: 1.1

Compensated Neutron Calibration Report

Serial Number: NEU_3I
Tool Model: G

CALIBRATION

Detector	Readings	Target	Normalization
Short Space	997.00 cps	1000.00 cps	1.0000
Long Space	986.00 cps	1000.00 cps	1.0000

Gamma Ray Calibration Report

Serial Number:	GR3
Tool Model:	OPEN
Performed:	Wed Apr 27 11:40:32 2011
Calibrator Value:	200.0 GAPI
Background Reading:	3.0 cps
Calibrator Reading:	186.0 cps
Sensitivity:	0.7000 GAPI/cps