



SUPERIOR
Hays,
Kansas

COMPENSATED
NEUTRON / DENSITY
PE LOG

Company CAERUS KANSAS, LLC.		Company CAERUS KANSAS, LLC.	
Well MORTIMER #31-32 B		Well MORTIMER #31-32 B	
Field SETTE		Field SETTE	
County BARTON		County BARTON	
State KANSAS		State KANSAS	
Location: 1650' FNL & 1650' FEL		API # : 15-009-25736-0000	
SEC 31 TWP 17S RGE 13W		Other Services DIL/MEL SONIC	
Permanent Datum	GROUND LEVEL	Elevation	1860
Log Measured From	KELLY BUSHING 10' A.G.L.	K.B. 1870	
Drilling Measured From	KELLY BUSHING	D.F. 1868	
		G.L. 1860	
Date	8/19/12		
Run Number	ONE		
Depth Driller	3550		
Depth Logger	3552		
Bottom Logged Interval	3528		
Top Log Interval	2700		
Casing Driller	8 5/8" @ 825		
Casing Logger	825		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5000 PPM	
Density / Viscosity	9.4/44		
pH / Fluid Loss	9.0/9.8		
Source of Sample	FLOWLINE		
Rin @ Meas. Temp	0.80 @ 81F		
Rinf @ Meas. Temp	0.60 @ 81F		
Rinc @ Meas. Temp	0.96 @ 81F		
Source of Rinf / Rinc	MEASURED		
Rin @ BHT	.57 @ 112F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	112F		
Equipment Number	680		
Location	HAYS, KS.		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	JUSTIN CARTER		

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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 (785) 628-6395
DIRECTIONS
HOISINGTON, KS. - W. TO CURVE - FOLLOW CURVE N. 1/4 MILE - W. INTO

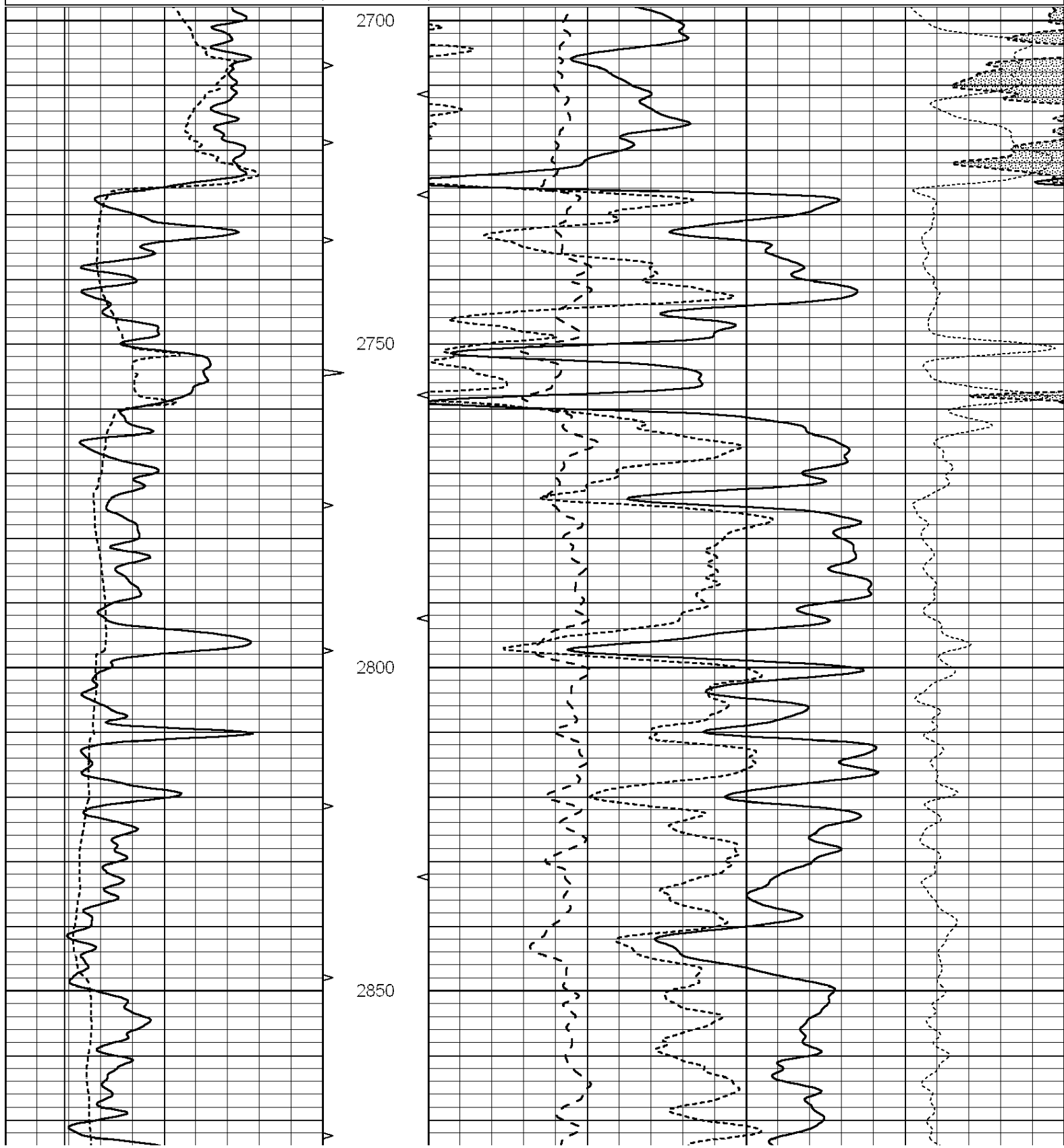


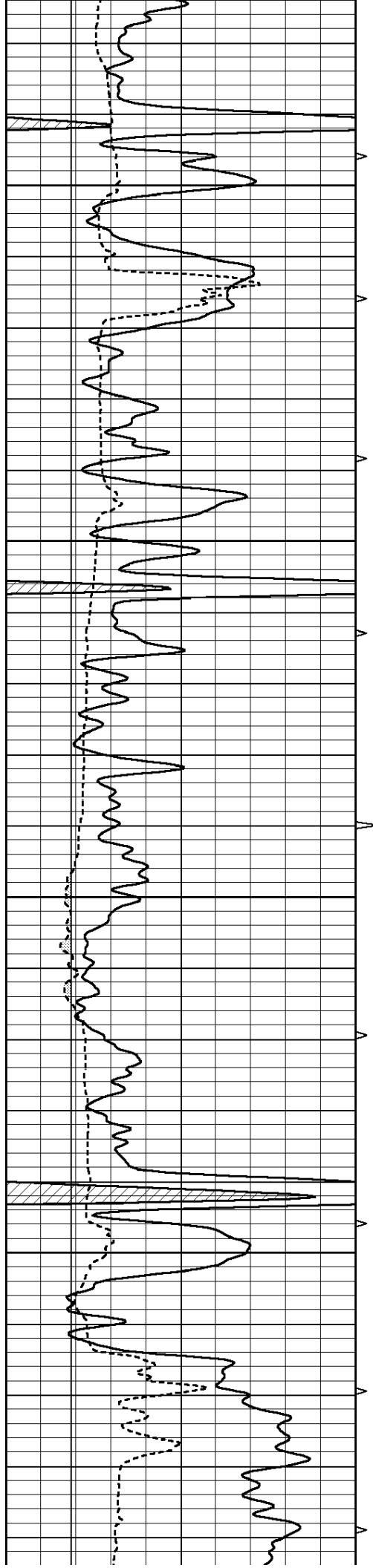
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MAIN SECTION

Database File: 009584ddn.db
Dataset Pathname: pass3.1
Presentation Format: _ldt_neu
Dataset Creation: Sun Aug 19 03:06:19 2012 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
			TBHV	0	PE	10	-0.25	CORRECTION (g/cc)	0.25	
			0 (ft3)	10						



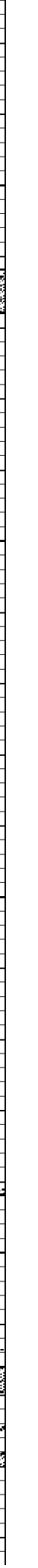
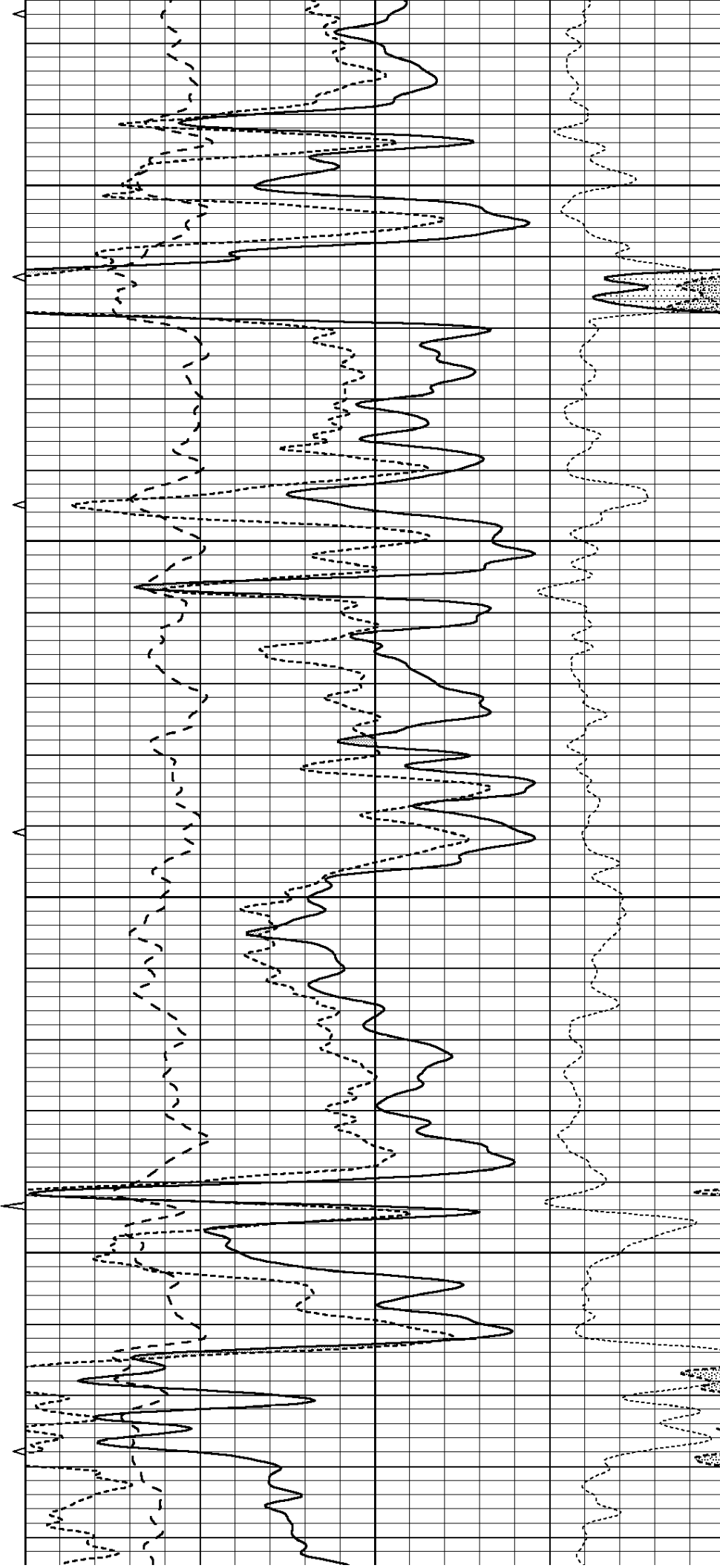


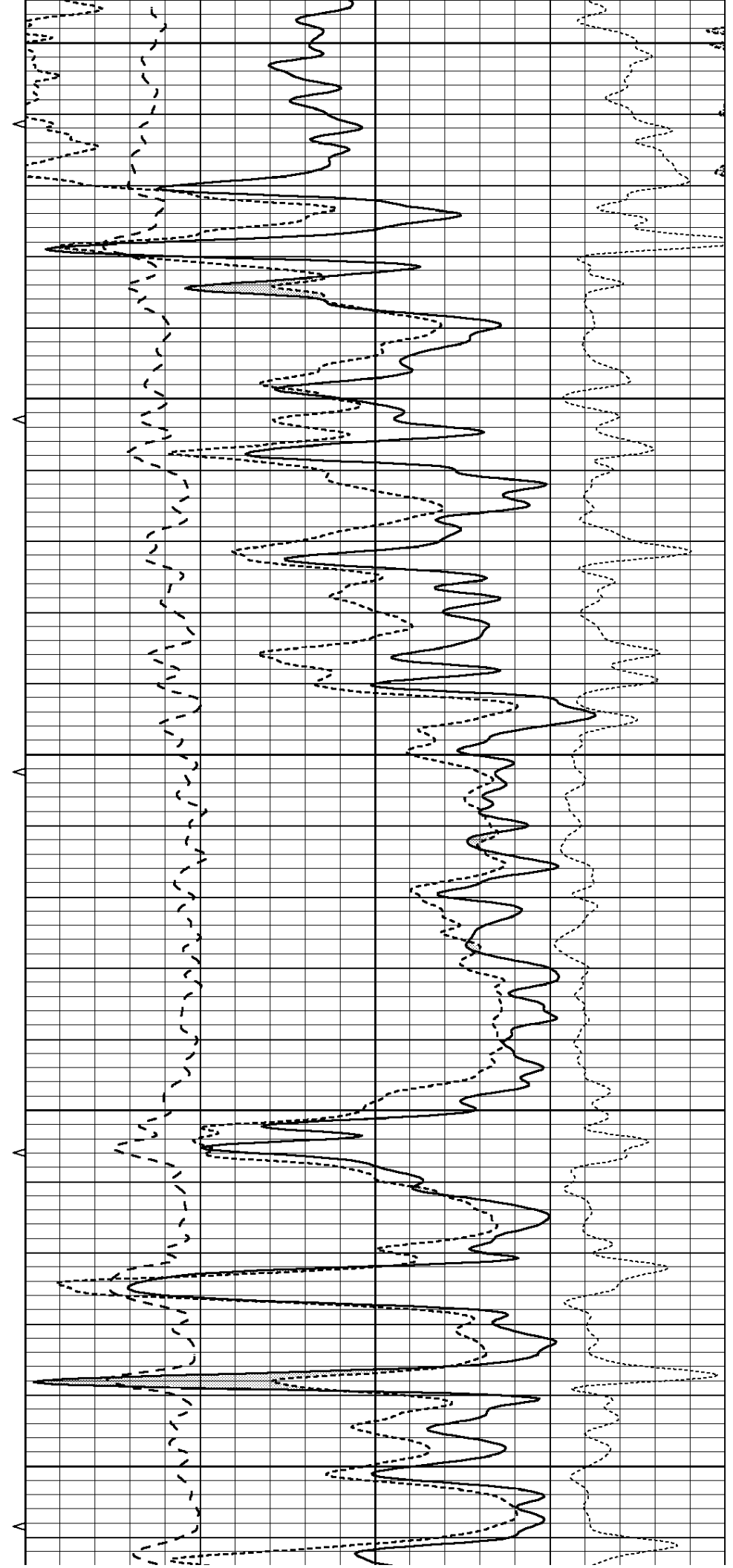
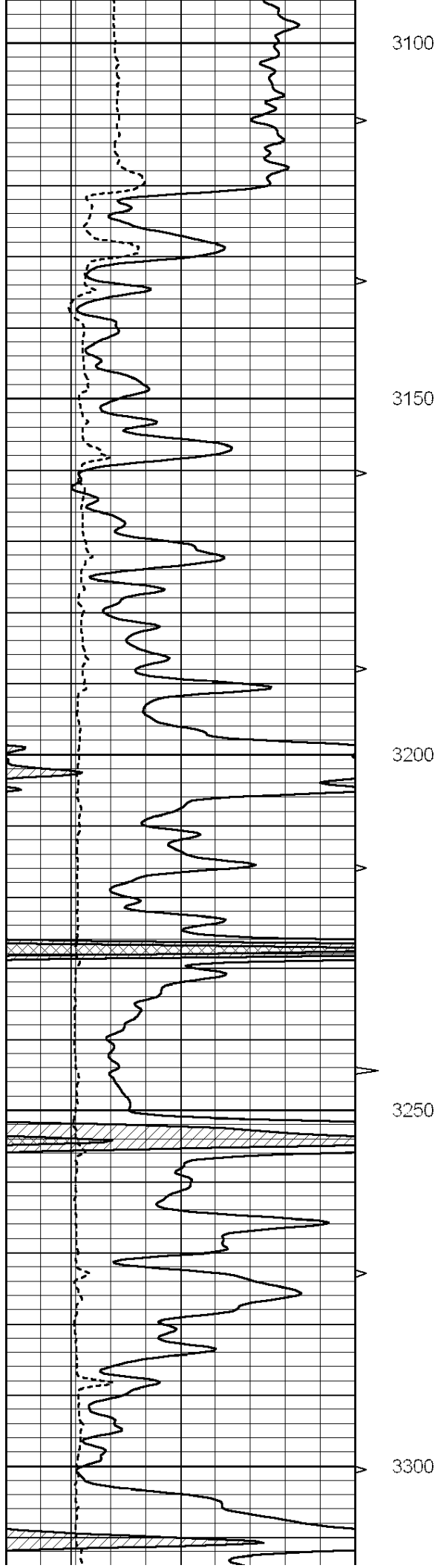
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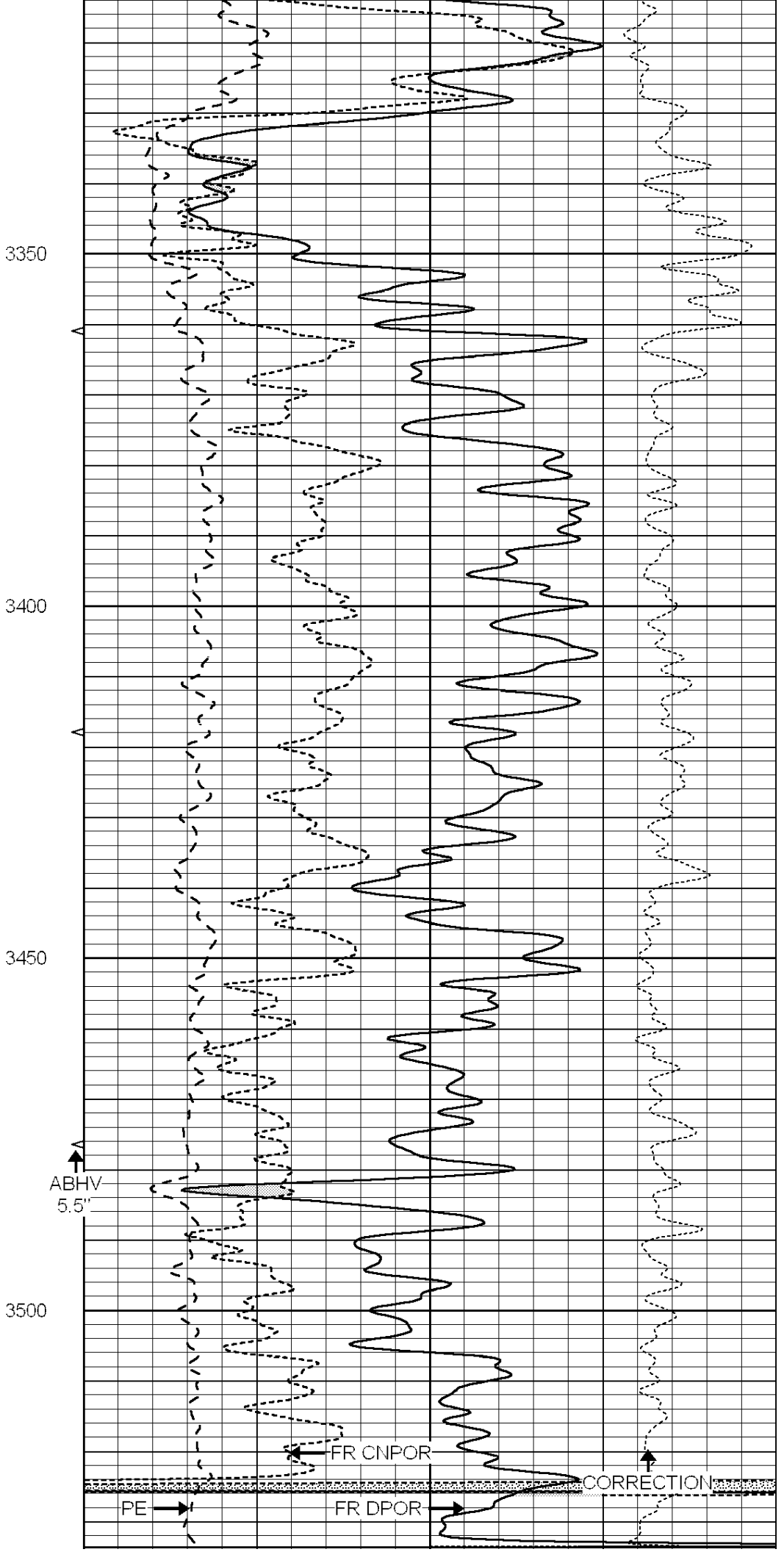
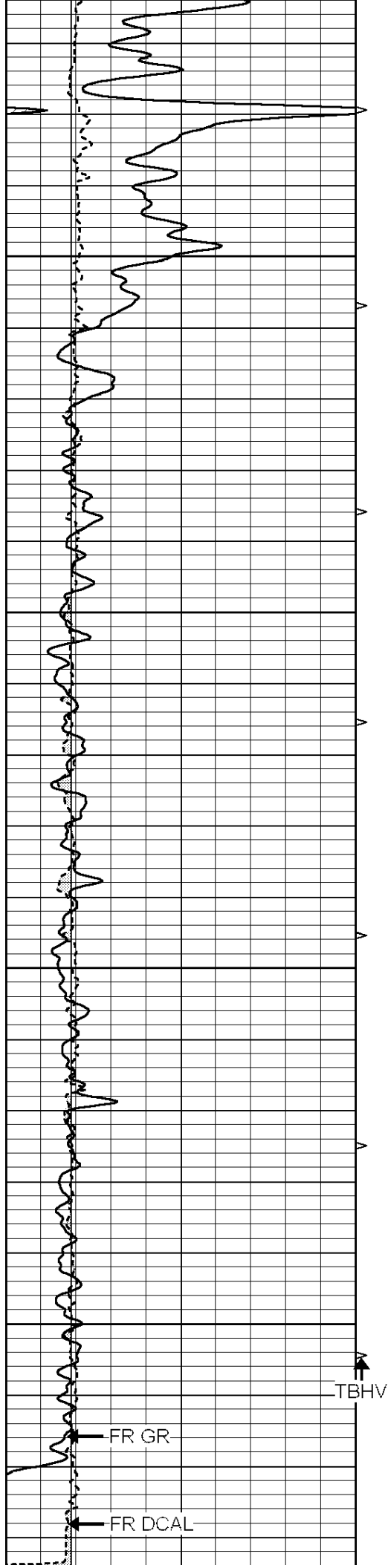
2950

3000

3050







			3550 LTD 3552	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
				TBHV	0	PE		10	-0.25	CORRECTION (g/cc)					0.25		
				0 (ft3)	10												

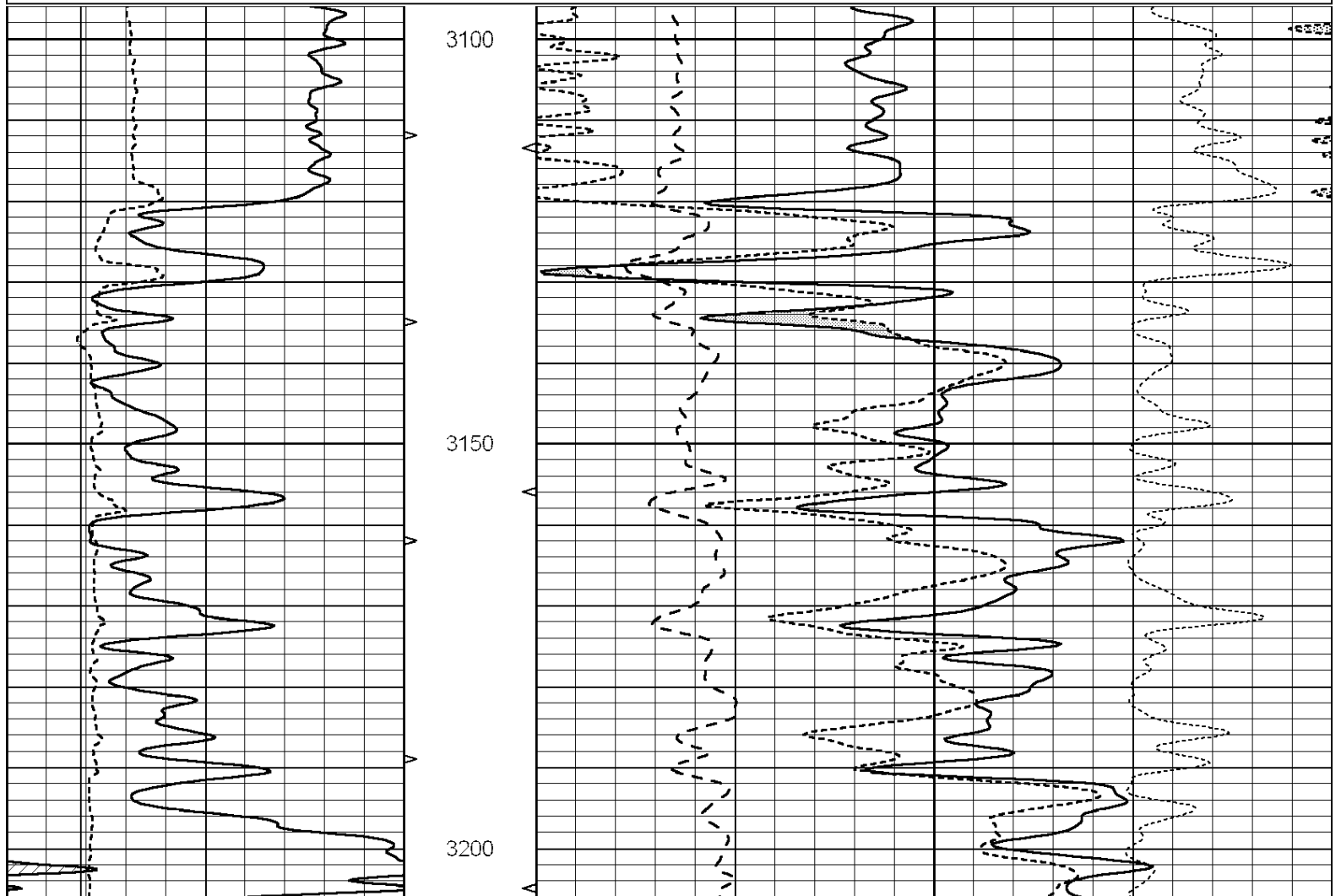


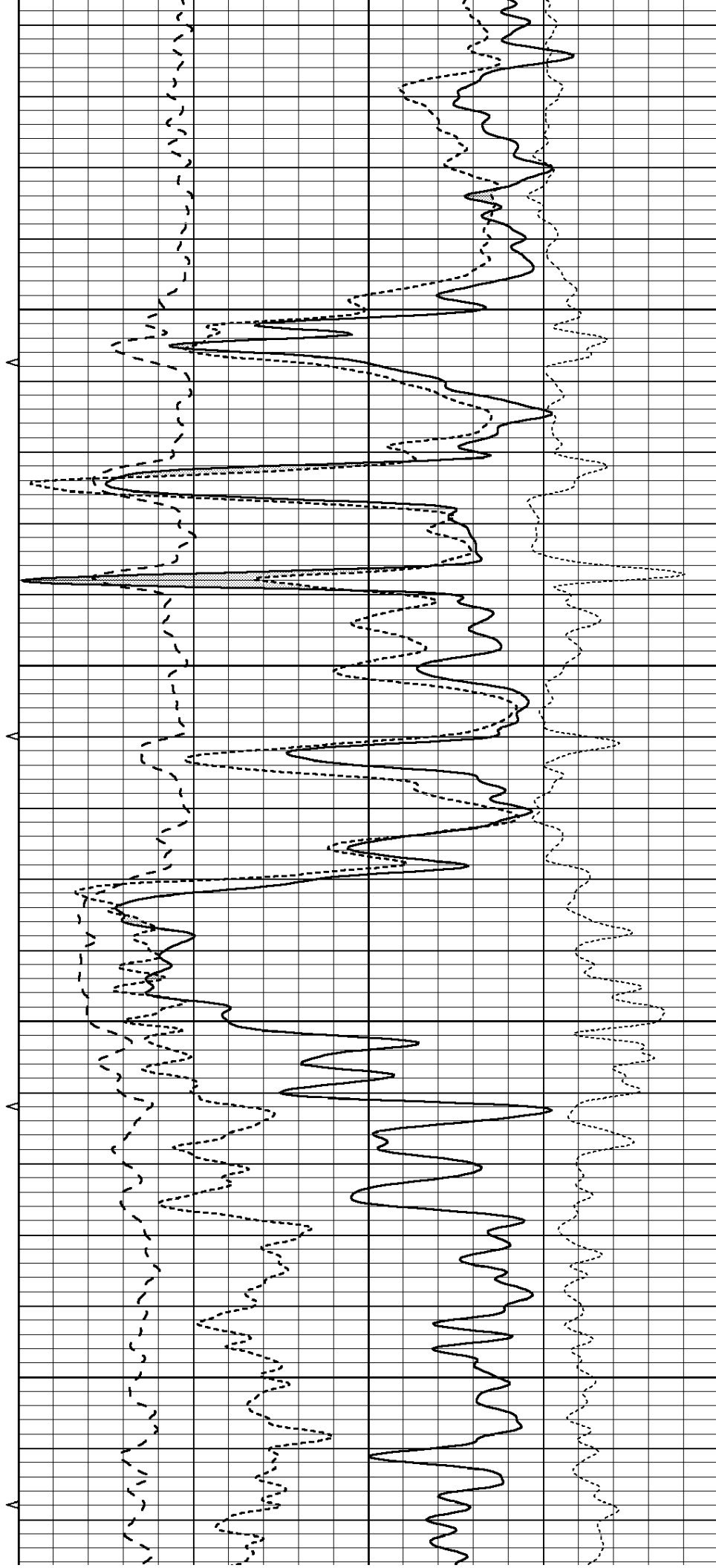
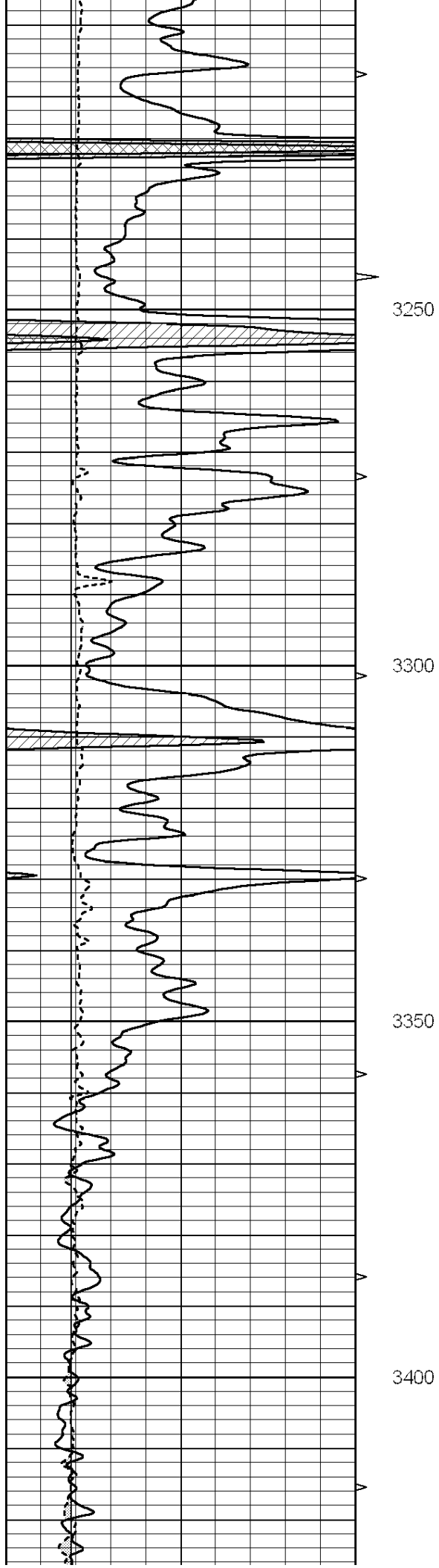
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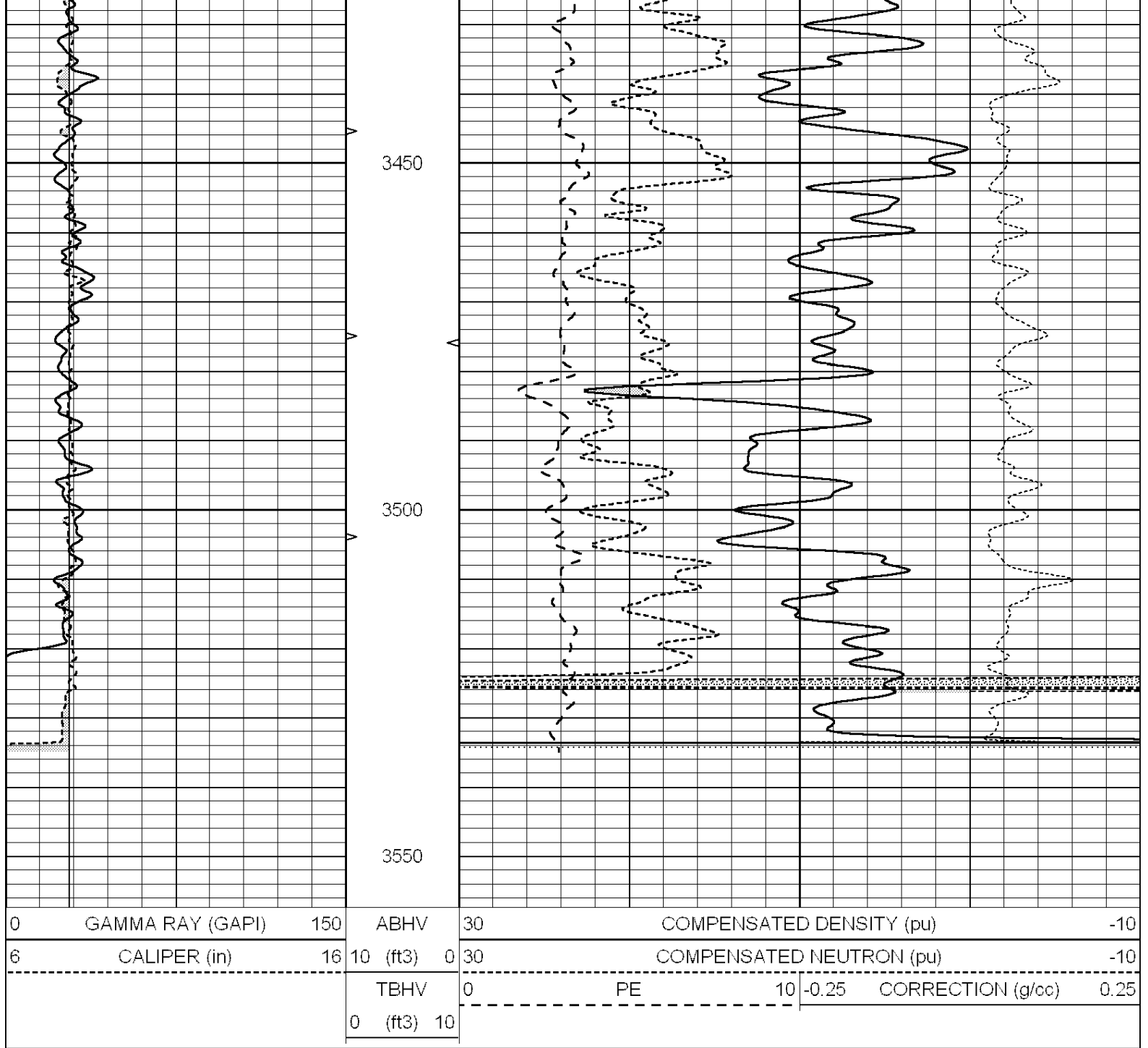
REPEAT SECTION

Database File: 009584ddn.db
Dataset Pathname: pass2.1
Presentation Format: _ldt_neu
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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
			TBHV	0	PE		10	-0.25	CORRECTION (g/cc)	0.25
			0 (ft3)	10						



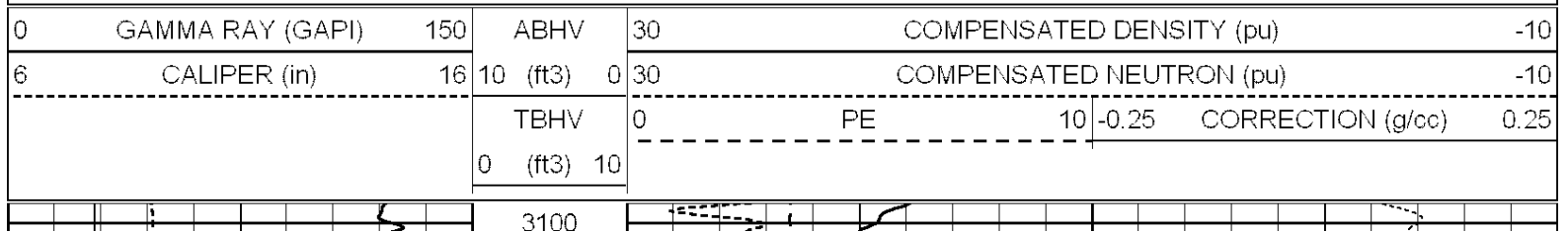


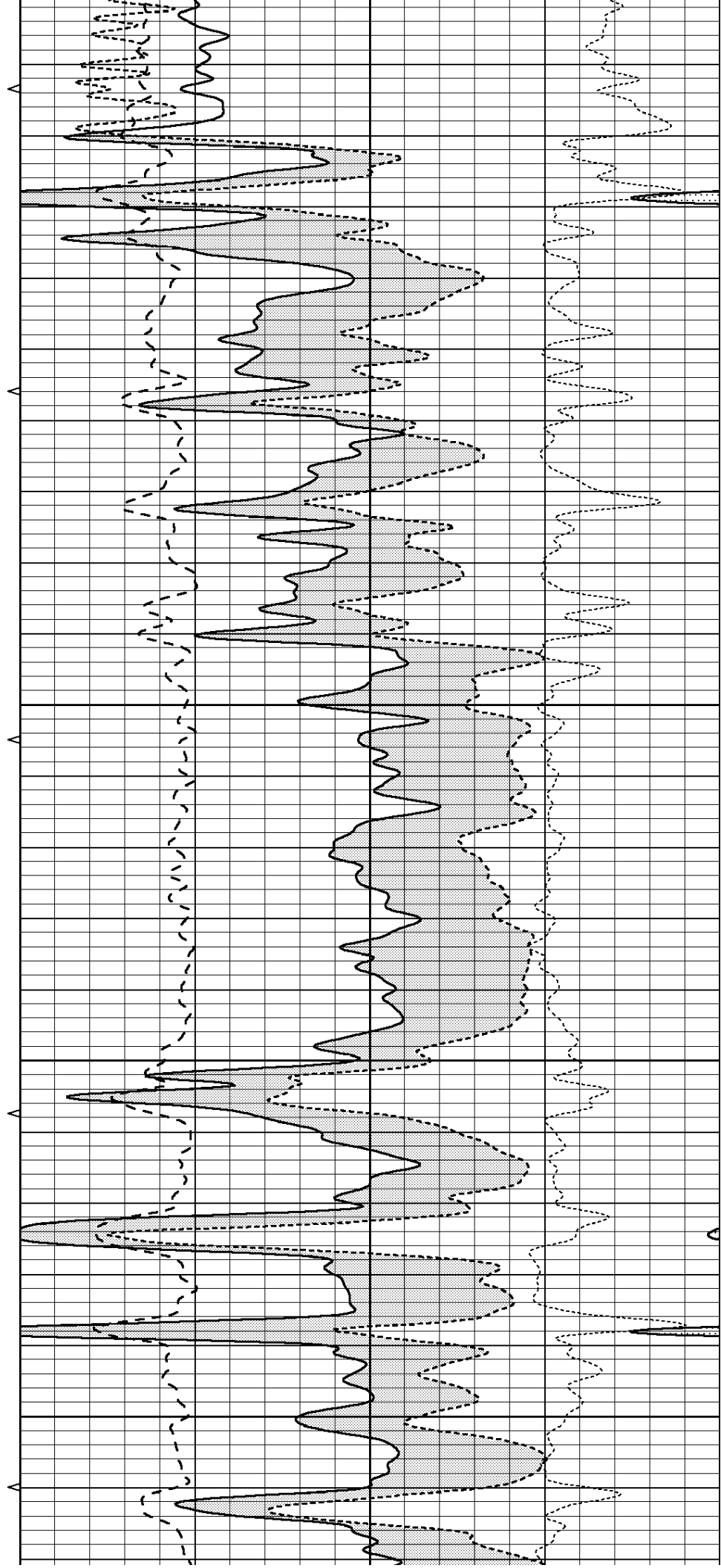
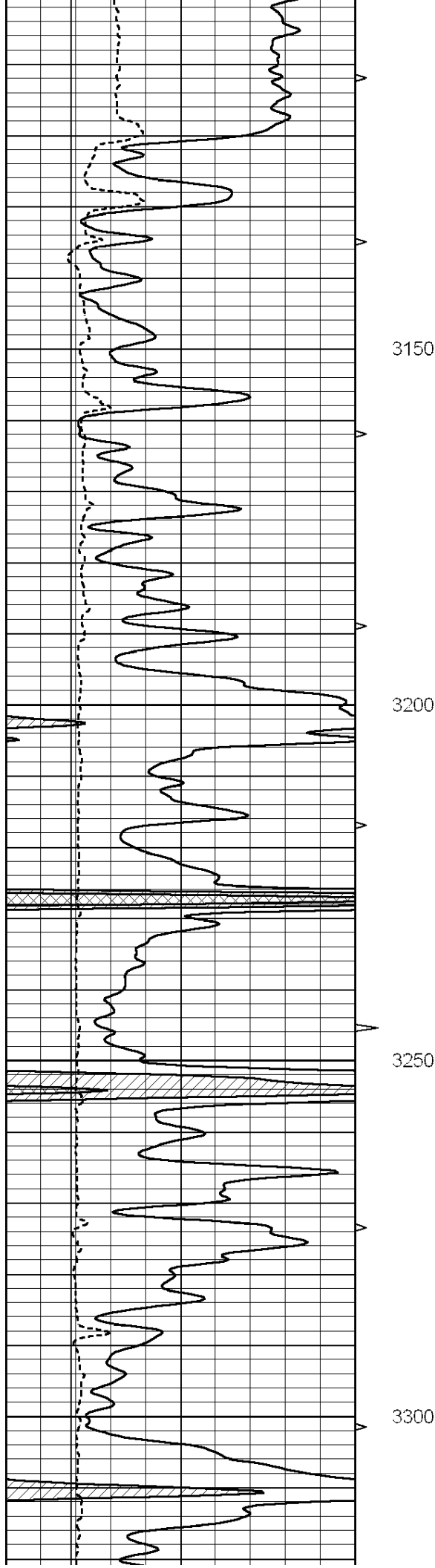


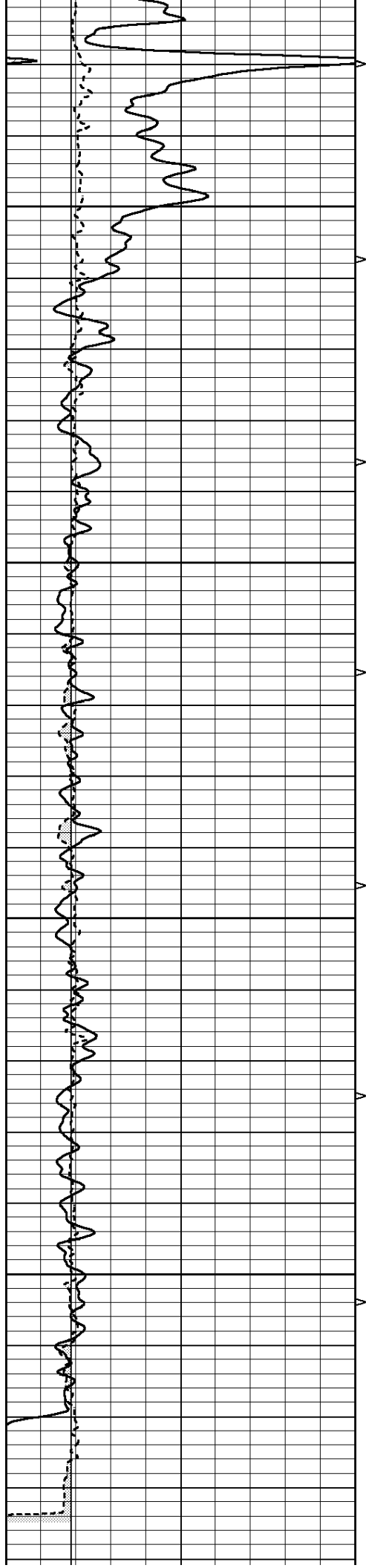
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DOLOMITE MATRIX

Database File: 009584ddn.db
 Dataset Pathname: pass2.4
 Presentation Format: _ldt_neu
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 Charted by: Depth in Feet scaled 1:240





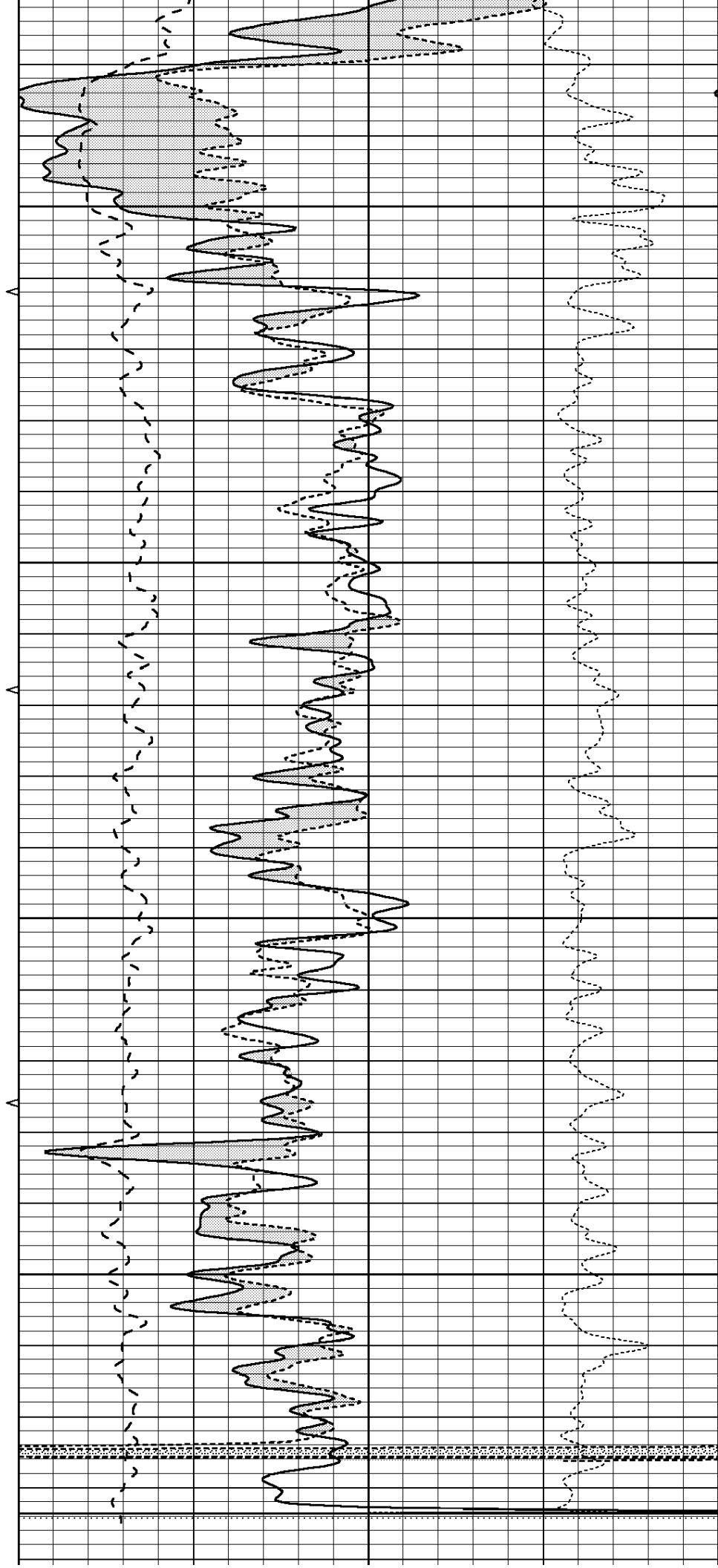


3350

3400

3450

3500



Litho Density Calibration				
	<u>Background</u>	<u>Magnesium</u>	<u>Aluminum</u>	<u>Sandstone</u>

Window 1	2056.0	9796.8	3673.1	10821.3	cps
Window 2	1920.0	8541.1	3303.5	9307.2	cps
Window 3	1563.1	4735.7	2212.8	5017.5	cps
Window 4	466.0	466.1	465.6	471.5	cps
Long Space	0.0	6621.1	1383.5	7387.2	cps
Short Space	2.5	2361.7	1523.2	2534.0	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	
Rib Angle	: 44.4	Rib Slope	: 0.978	Density/Spine Ratio	: 0.541
Spine Angle	: 74.4	Spine Slope	: 3.570	Spine Intercept	: -18.9

Caliper					
Low Ref	Readings	Reference			
High Ref	3.1	8.4			
	4.3	14.3			
	Gain: 4.6		Offset: -7.7		

Compensated Neutron Calibration Report

Serial Number:	6I
Tool Model:	G

CALIBRATION					
Detector	Readings		Target		Normalization
Short Space	1.00	cps	1.00	cps	1.0000
Long Space	1.00	cps	1.00	cps	1.0000

Gamma Ray Calibration Report

Serial Number:	#8	
Tool Model:	OPEN	
Performed:	Mon Jun 13 16:56:43 2011	
Calibrator Value:	150.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	175.0	cps
Sensitivity:	0.8371	GAPI/cps