



Weatherford

**CML MESSENGER SHUTTLE
COMPACT PHOTO DENSITY
COMPENSATED NEUTRON LOG**

COMPANY				SANDRIDGE ENERGY			
WELL				JAMES 2922 1-13H			
FIELD				KINGSDOWN			
PROVINCE/COUNTY				FORD			
COUNTRY/STATE				USA / KANSAS			
LOCATION				NE NW NW NW			
				200' FNL & 400' FWL			
SEC	TWP	RGE	Other Services				
13	29S	22W	MAI				
API Number		15-057-20867		CMI			
Permit Number							
Permanent Datum GL, Elevation 2432 feet							
Log Measured From KB							
Drilling Measured From KB @ 23' AGL							
Date	19-JAN-2013						
Run Number	ONE						
Service Order	3539530						
Depth Driller	10210.00			feet			
Depth Logger	10210.00			feet			
First Reading	10133.00			feet			
Last Reading	4250.00			feet			
Casing Driller	5681.00			feet			
Casing Logger	5680.00			inches			
Bit Size	6.125						
Hole Fluid Type	WBM			lb/USg			
Density / Viscosity	9.30 lb/USg		35.00 CP				
PH / Fluid Loss	8.80		8.80				
Sample Source	FLOWLINE						
Rm @ Measured Temp	1.05 @ 74.3		ohm-m				
Rmf @ Measured Temp	0.84 @ 74.3		ohm-m				
Rmc @ Measured Temp	1.26 @ 74.3		ohm-m				
Source Rmf / Rmc	CALC		CALC				
Rm @ BHT	0.61 @ 133.0		ohm-m				
Time Since Circulation	18 HOURS						
Max Recorded Temp	133.00		deg F				
Equipment / Base	18077		OKC				
Recorded By	GUTHMUELLER						
Witnessed By	J BORELL						
AFE# DC 12646							

BOREHOLE RECORD			Last Edited: 19-JAN-2013 14:46
Bit Size inches	Depth From feet	Depth To feet	
12.250	0.00	918.00	
8.750	918.00	5681.00	
6.125	5681.00	10210.00	

CASING RECORD			
Type	Size inches	Depth From feet	Shoe Depth feet
SURF	9.625	0.00	918.00
INTER	7.000	0.00	5681.00

REMARKS
LOGGED WITH WLS 13.04.8492
LOGGED USING MESSENGER SHUTTLE METHOD OF DEPLOYMENT AND MEMORY LOGGING SYSTEM DEPTHS SET BACK TO PIPE STRAP DEPTH AND COMPARED TO MWD DEPTHS
TOOLS RAN: SRT-69,SKJ-472,200V MBS-117,MMSE-157,MTI-076, MGS-142,MCL-063,SKJ-479,SHA-451,MIS-608, MDN-391, MPD-394,MIS-607, SHA-438, SKJ-479,MISD-707,MIM 251, MIE-233,MIS-160,MISB-597 MAI-170 RAN IN COMBINATION
HARDWARE: MAI: MIS-B 0.5" STANDOFF USED ABOVE MAI, 0.5" STAND-OFF RAN BELOW MAI MIE: MISD CENTRALIZERS USED ABOVE AND BELOW IMAGER MDN: MIS-A DOUBLE BOWSPRING USED ABOVE MDN. MPD: 4INCH PROFILE PLATE USED, MIS-A SINGLE BOWSPRING USED BELOW MPD
2.71 G/CC DENSITY MATRIX USED TO CALCULATE POROSITY ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST

ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST
CHLORIDES = 4000 PPM

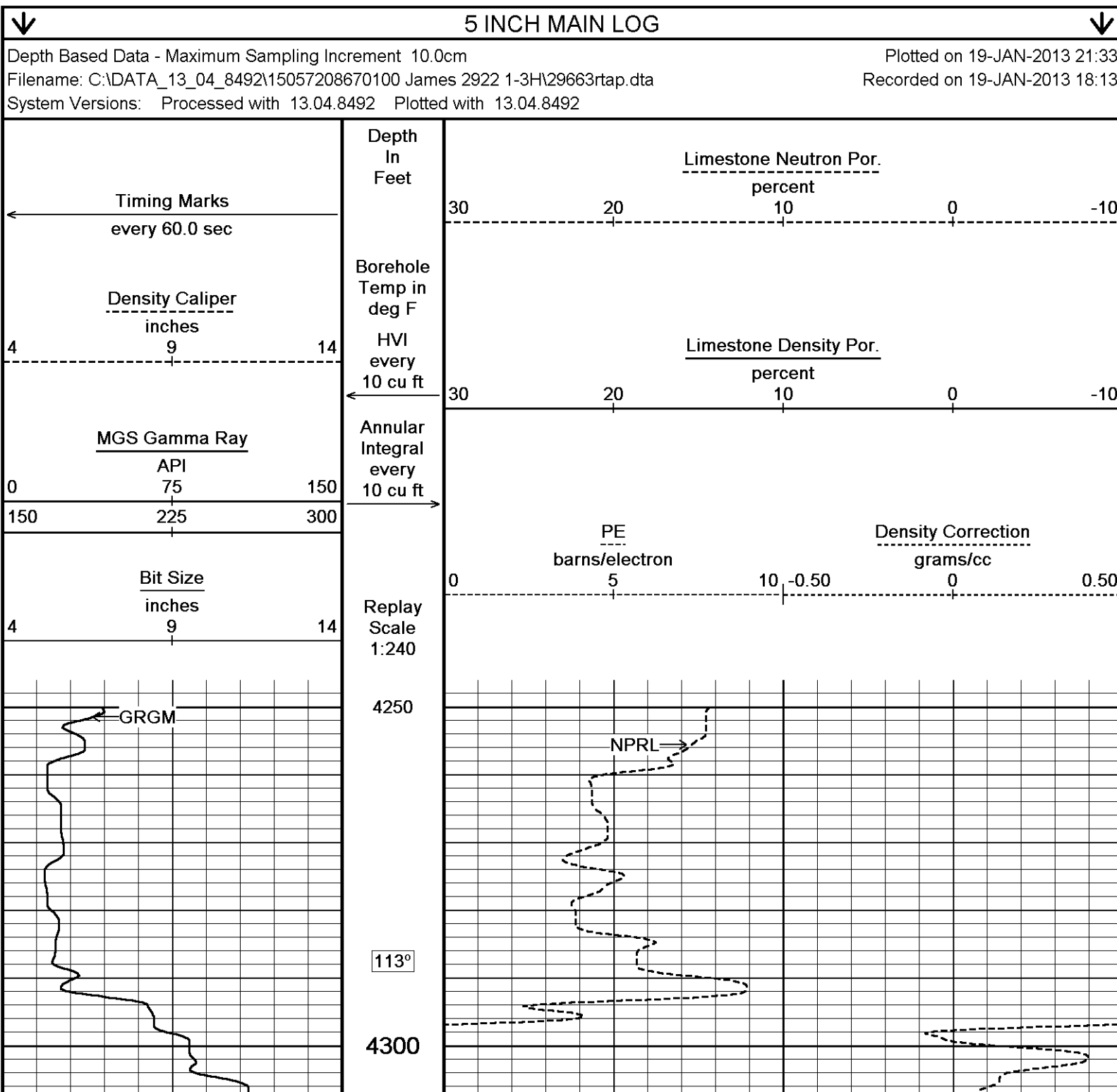
DRILL PIPE DEPTH DURING DEPLOYMENT: 10091
LOGGING TOOL DEPTH AFTER DEPLOYMENT: 10191

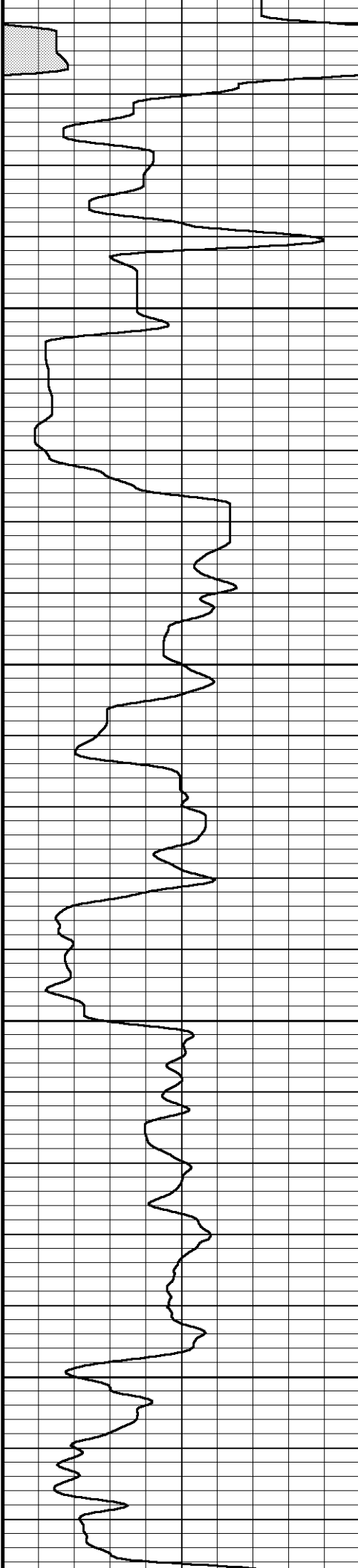
OPERATORS: R ROLLINS, J TURNER

RIG: LARIAT #41

LOG RESPONSES EFFECTED BY HOLE RUGOSITY

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 interpretations, and we shall not, except in the case of gross or wilful 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 in our price schedule.





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4350

114°

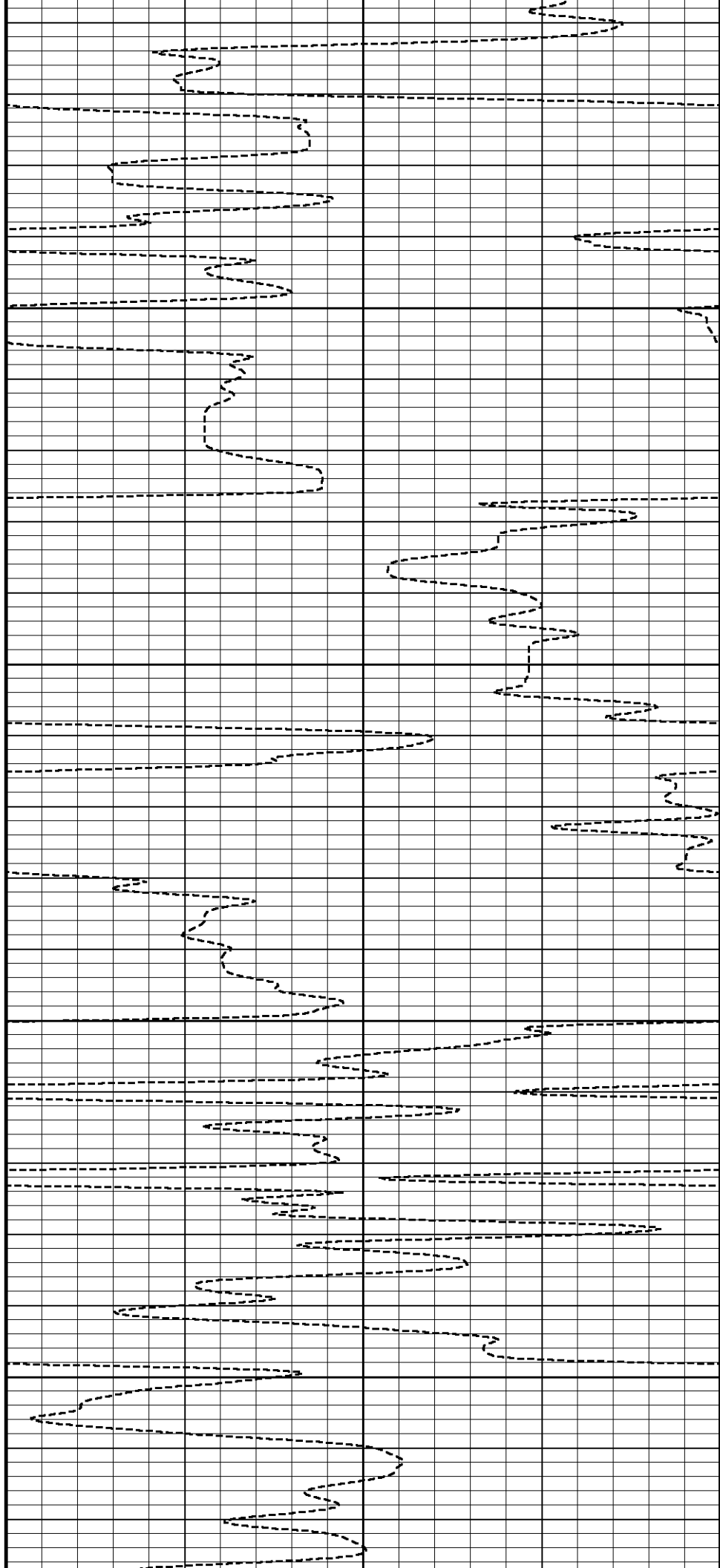
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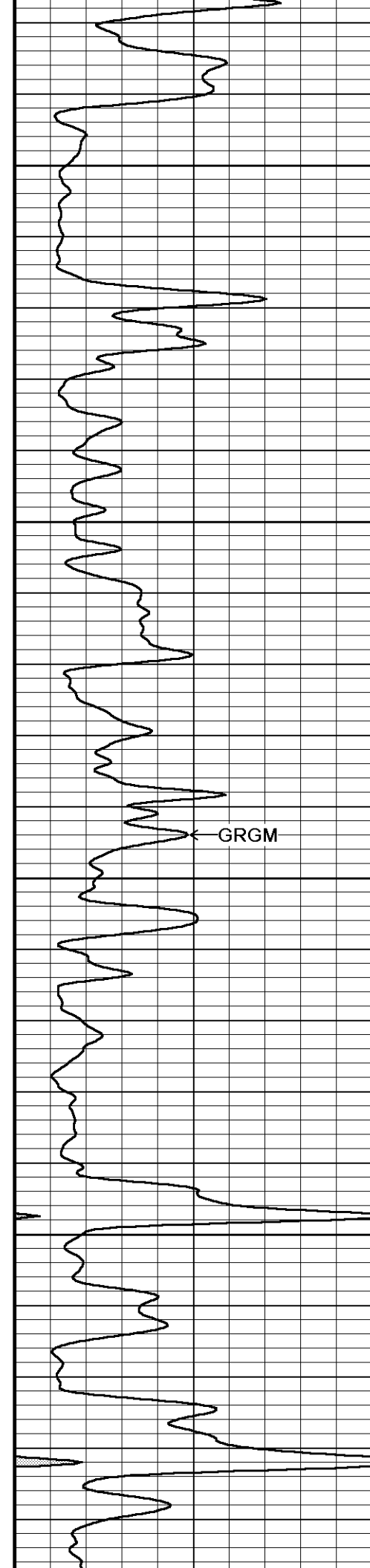
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4450

115°

4500





116°

4550

116°

4600

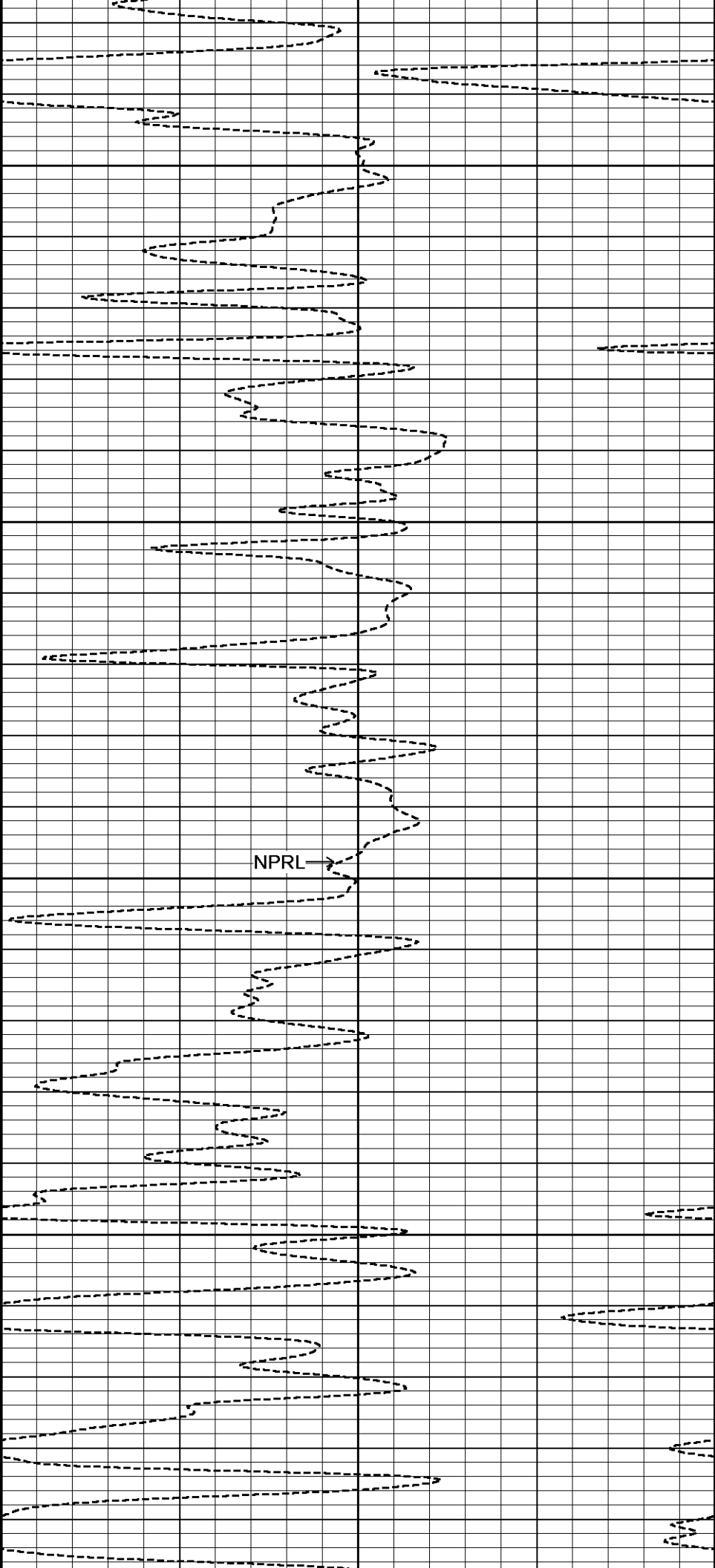
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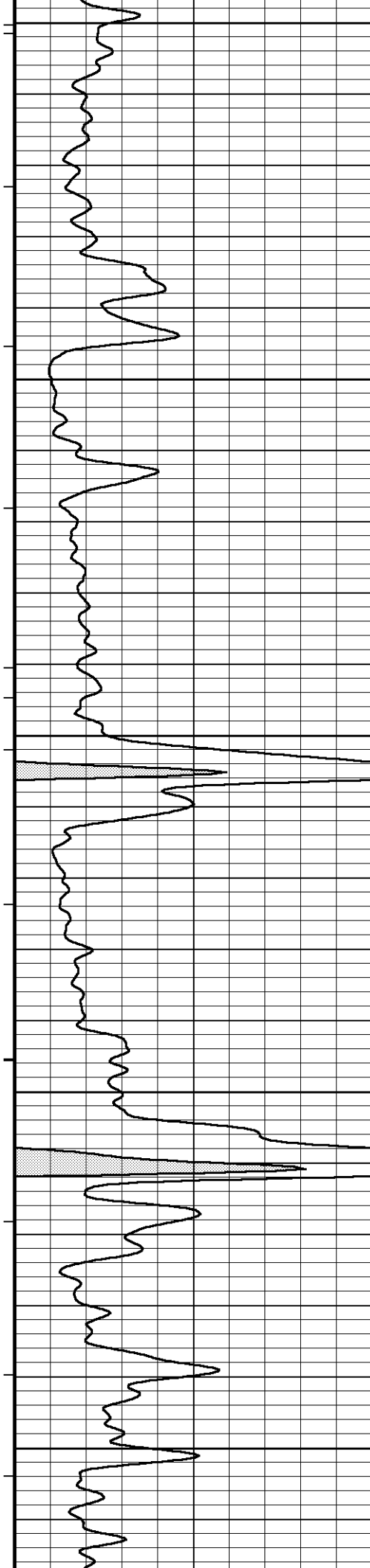
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4700

117°





4750

118°

4800

118°

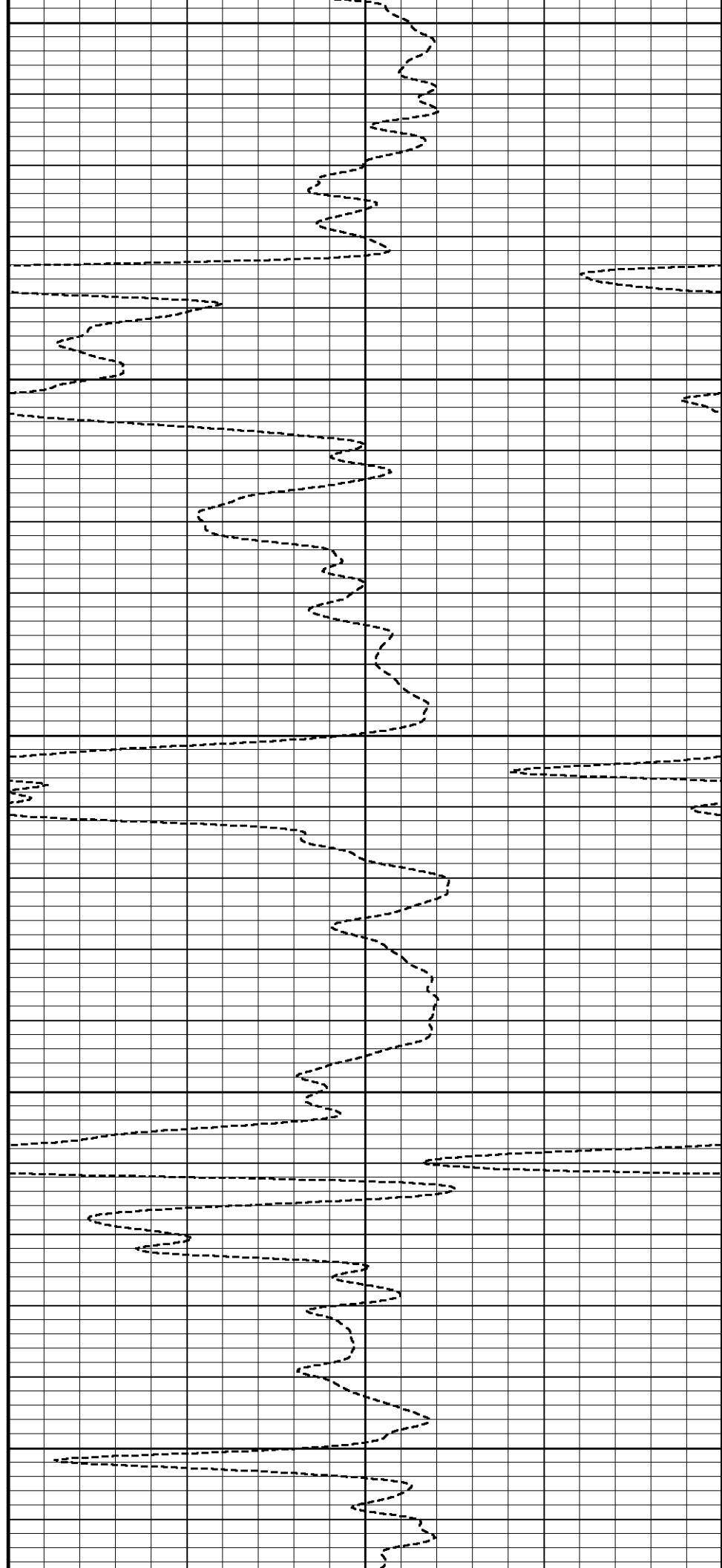
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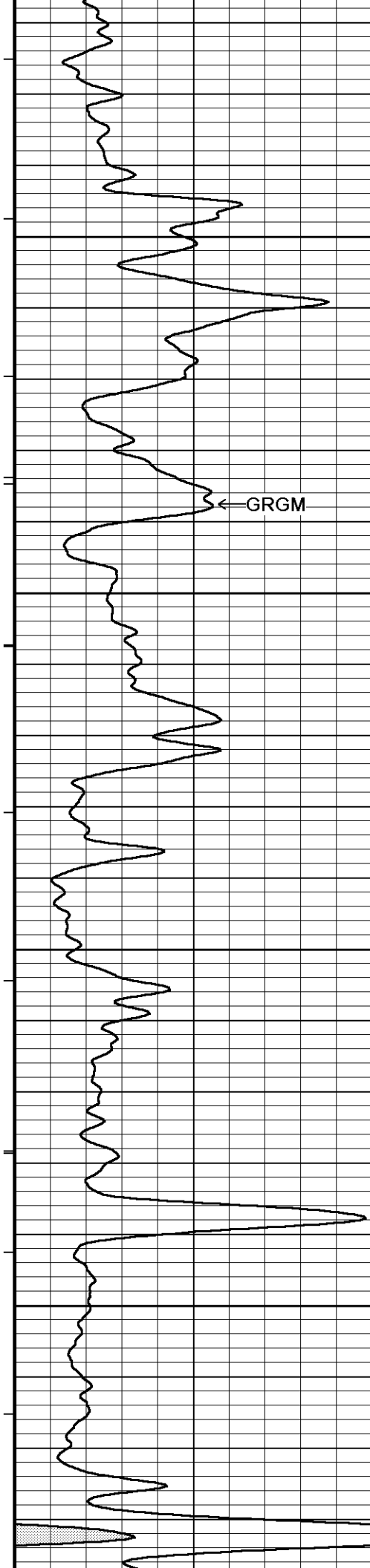
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119°

4950





119°

5000

120°

5050

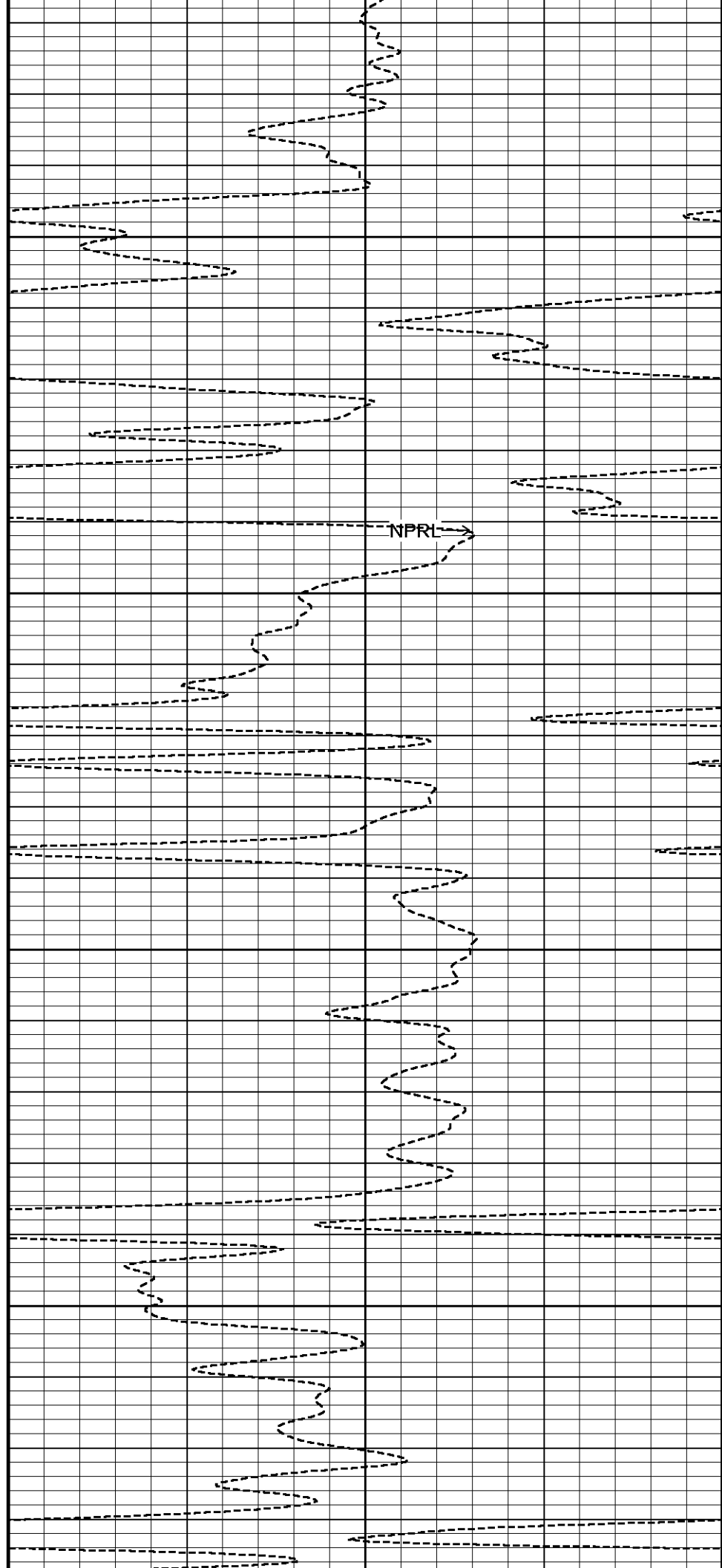
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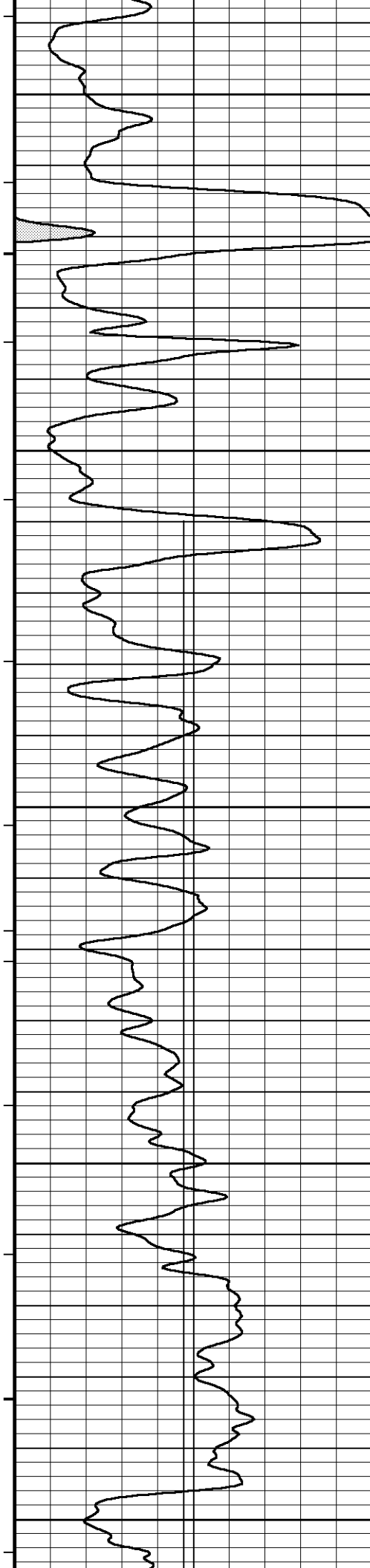
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121°

5150

121°





121°

5200

122°

5250

122°

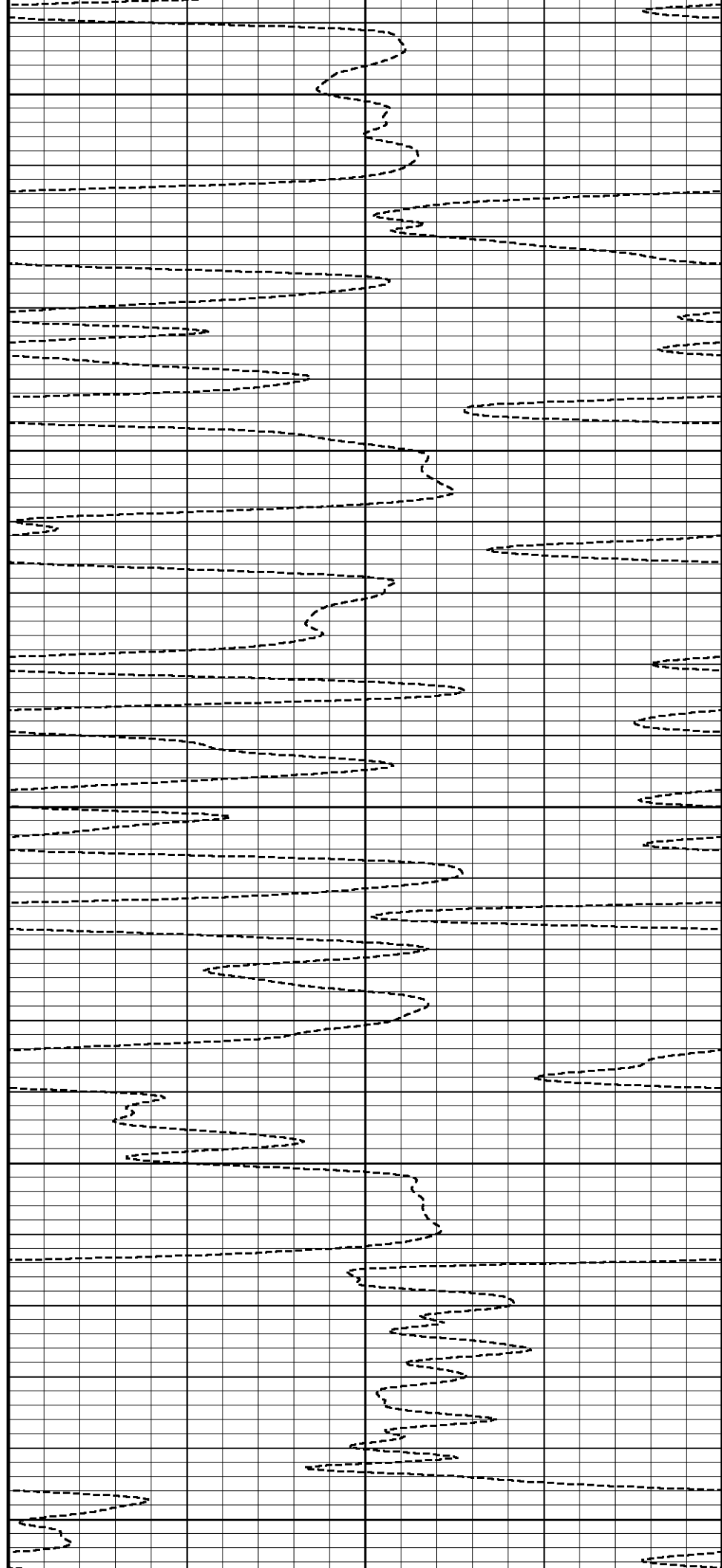
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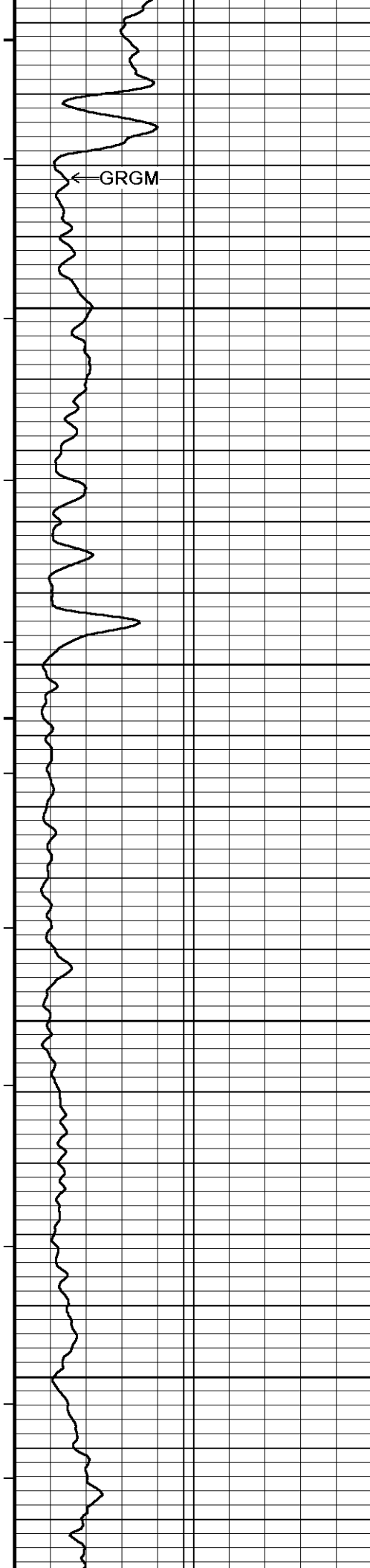
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123°

5400





123°

5450

124°

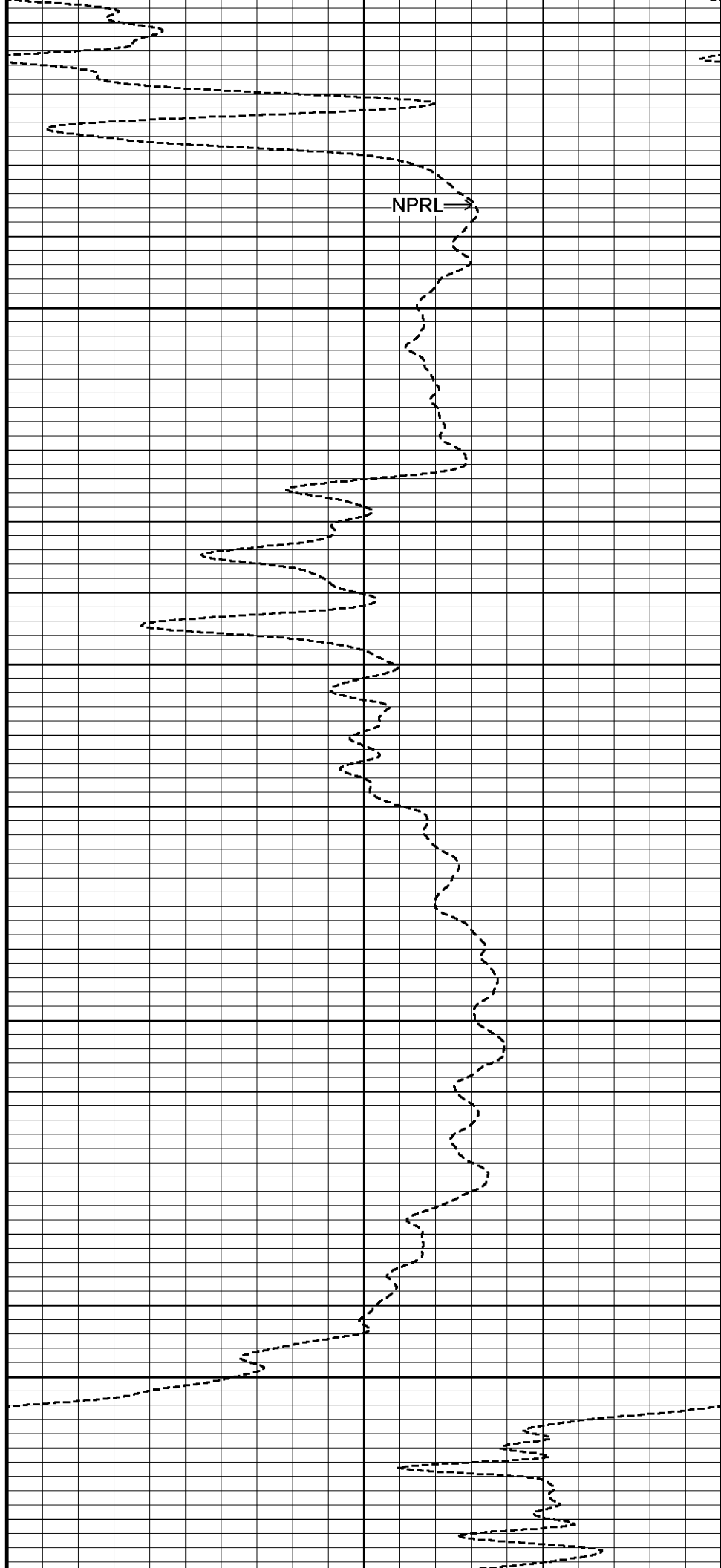
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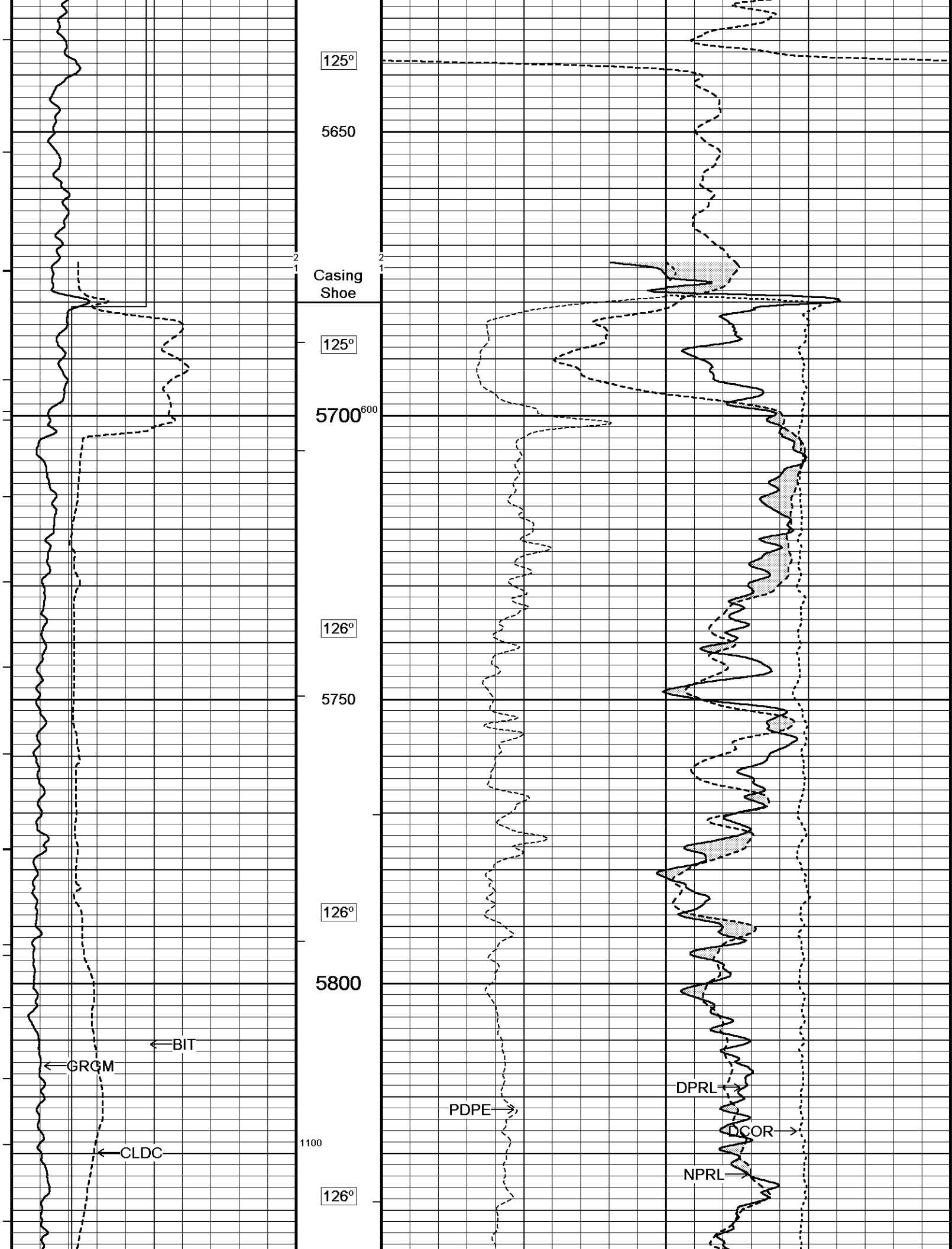
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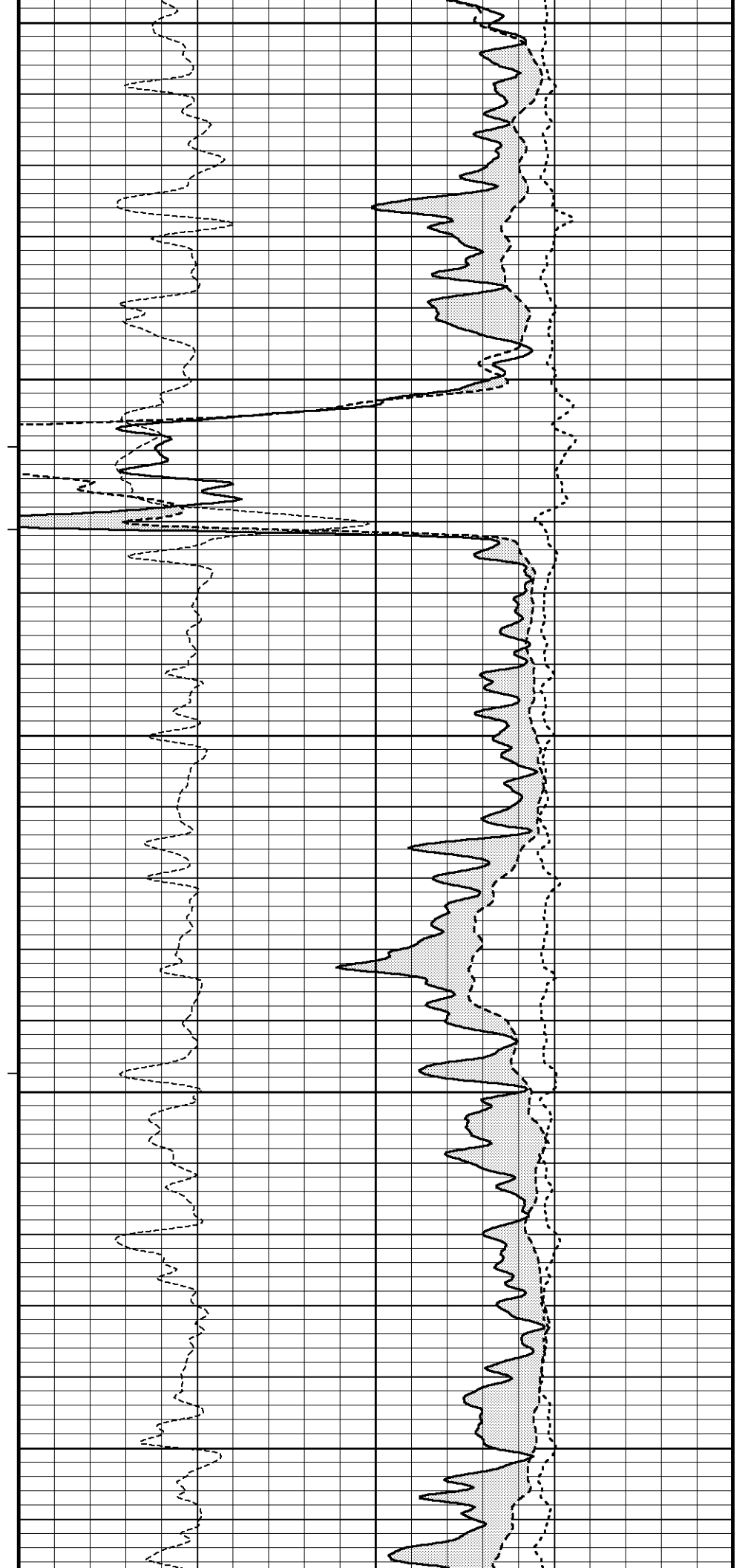
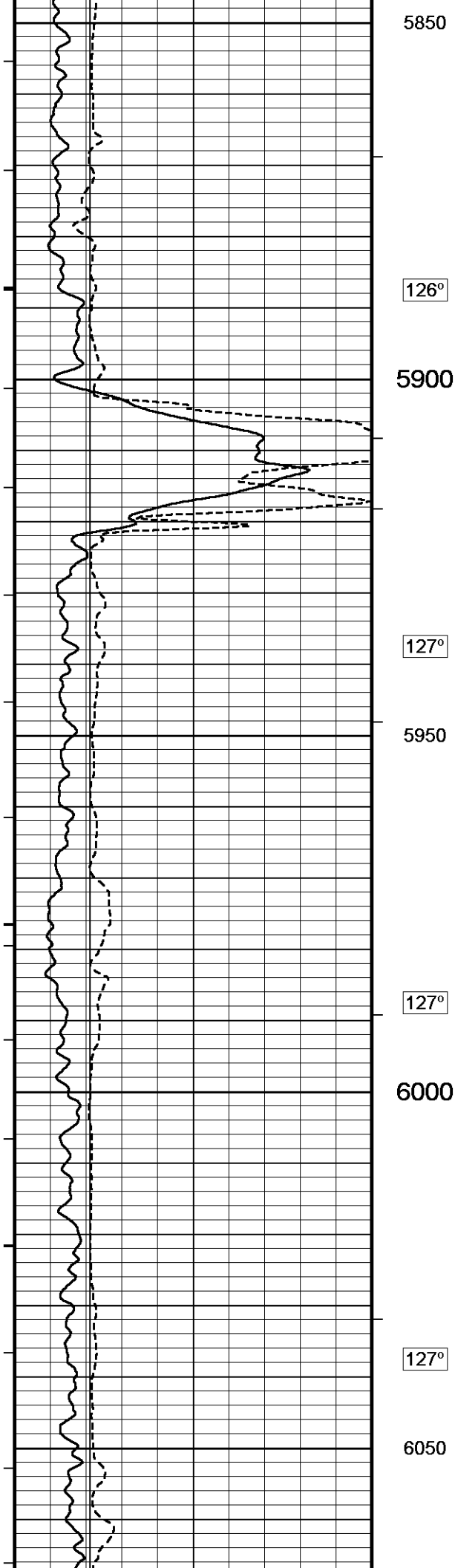
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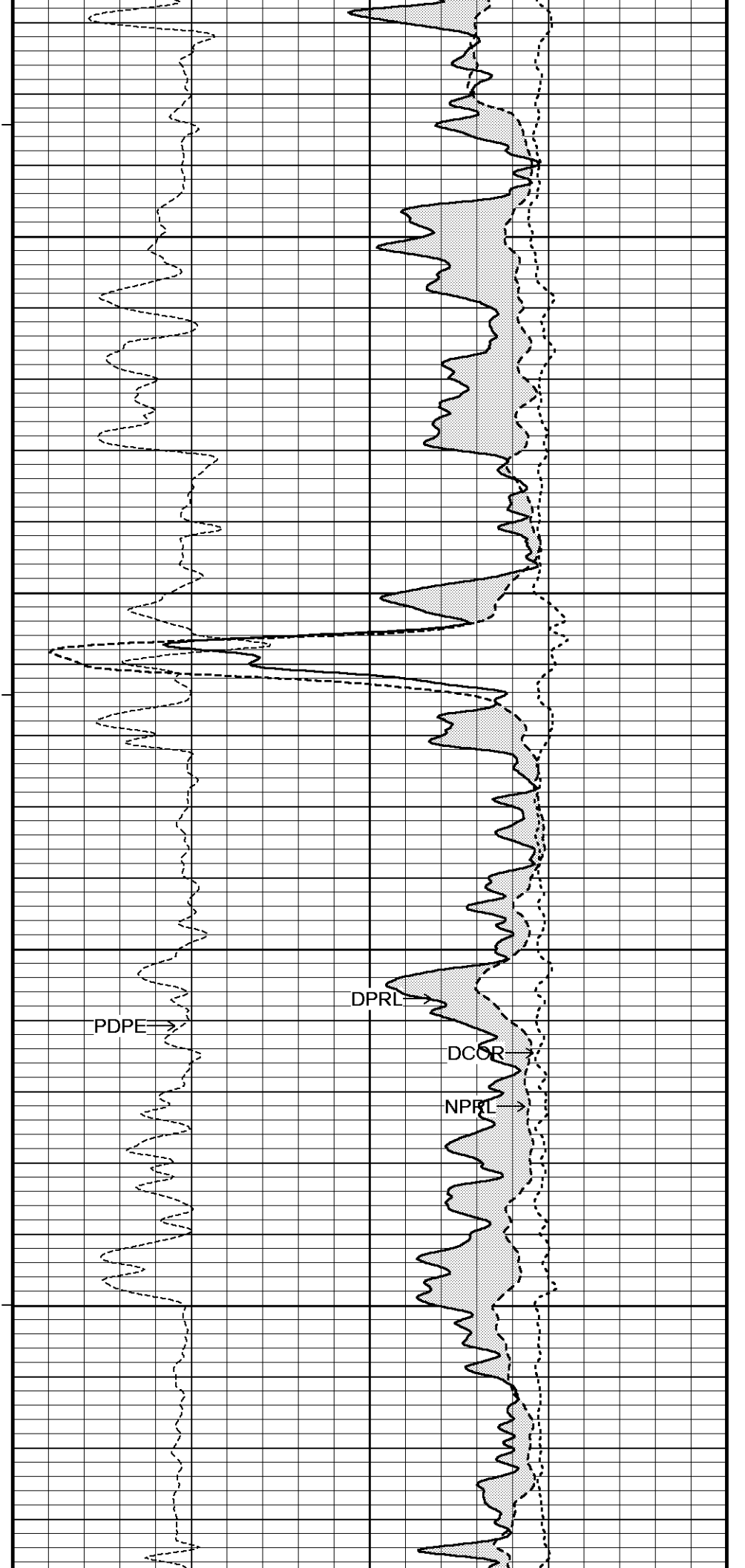
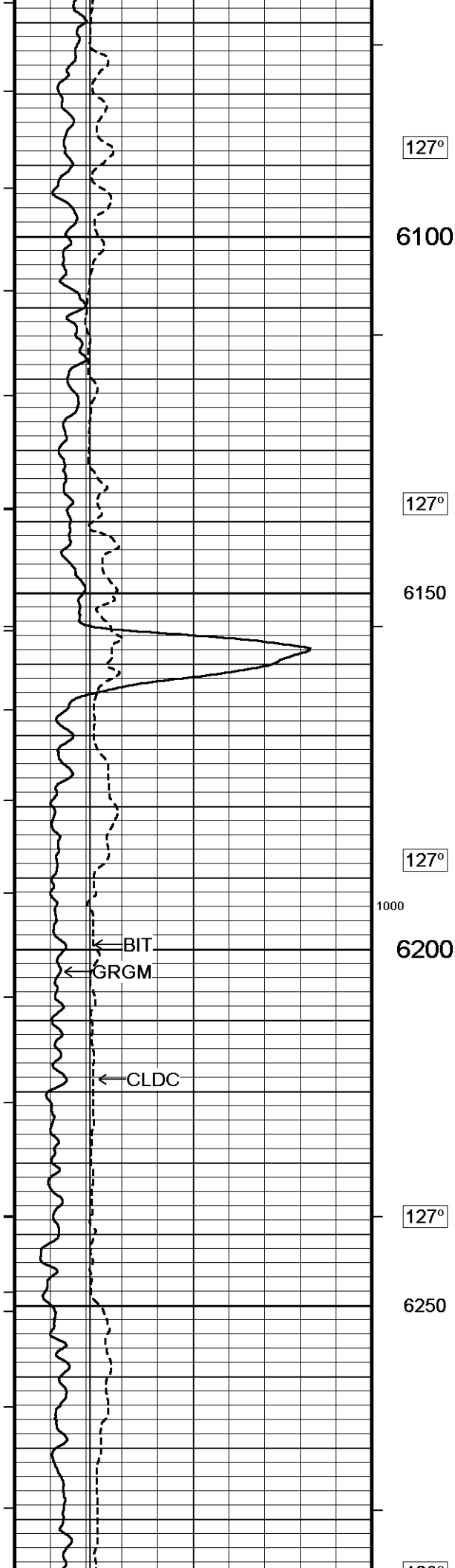
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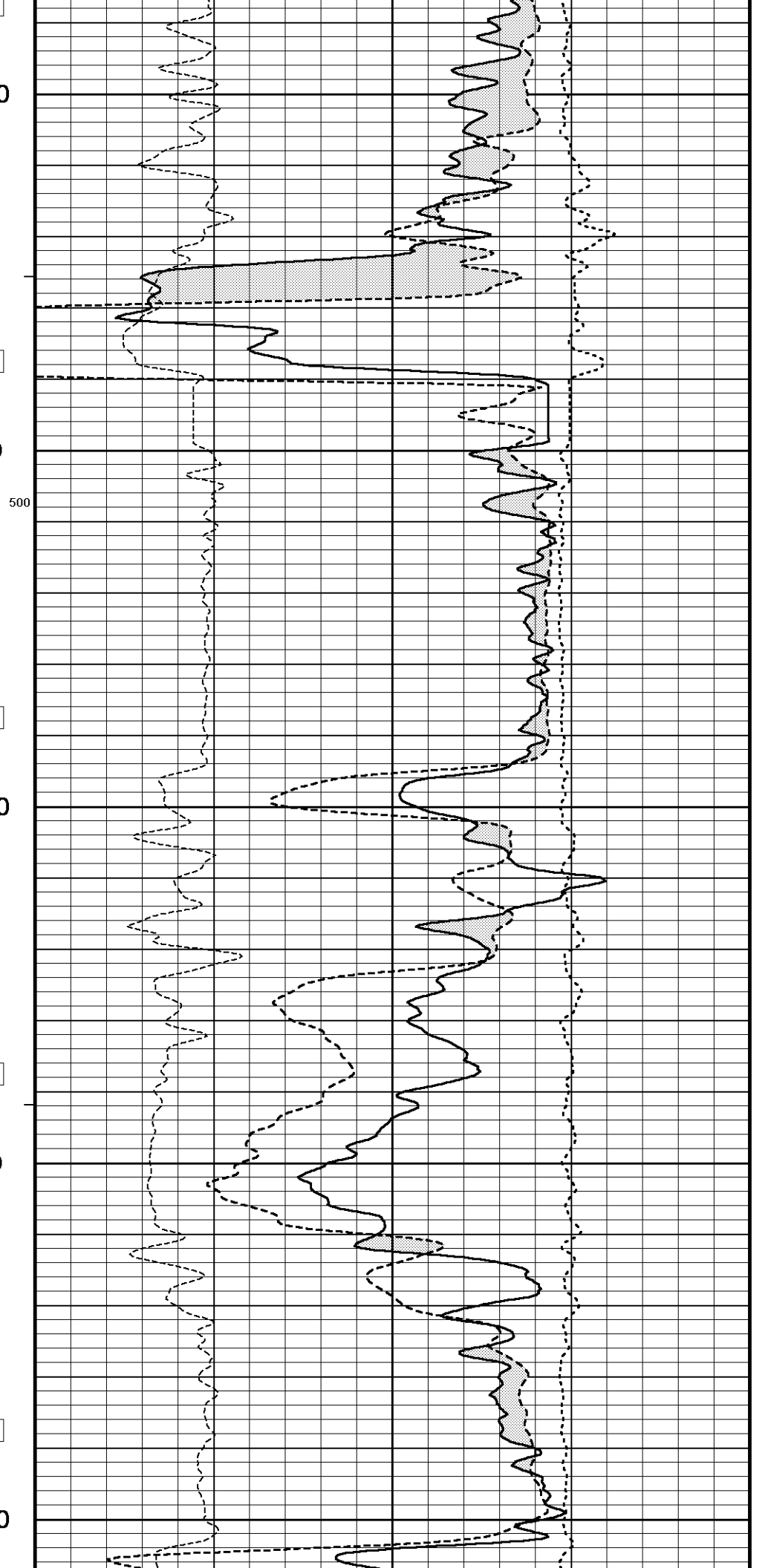
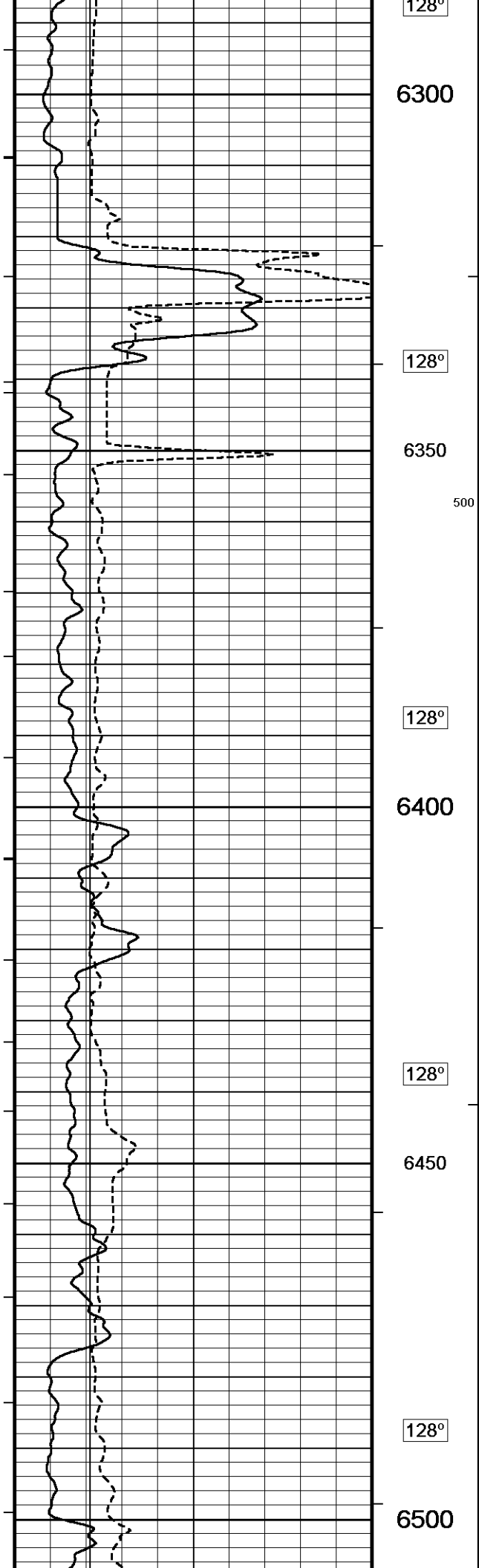
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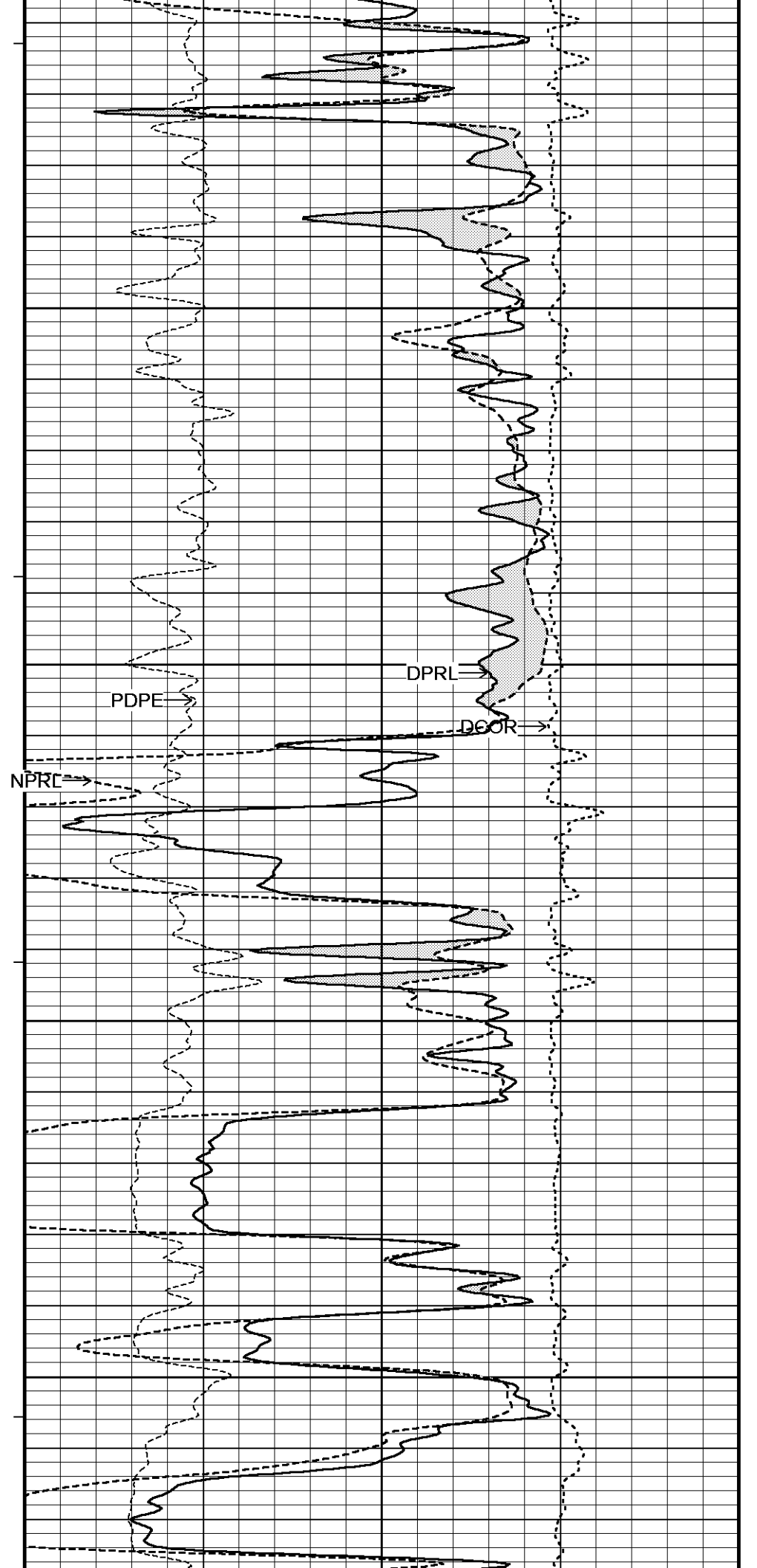
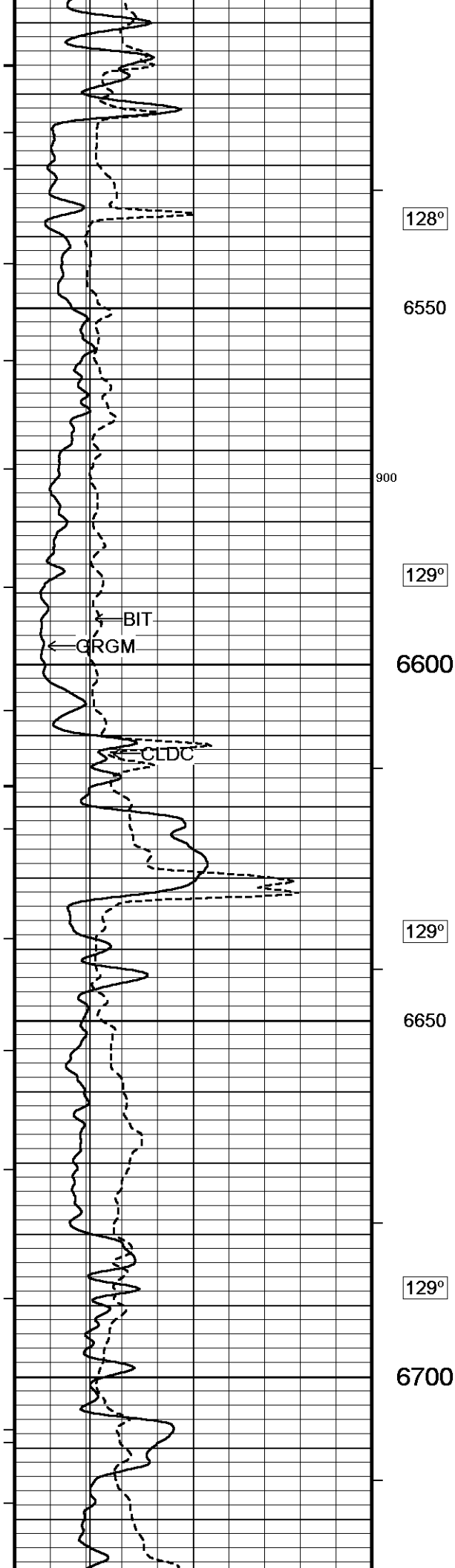


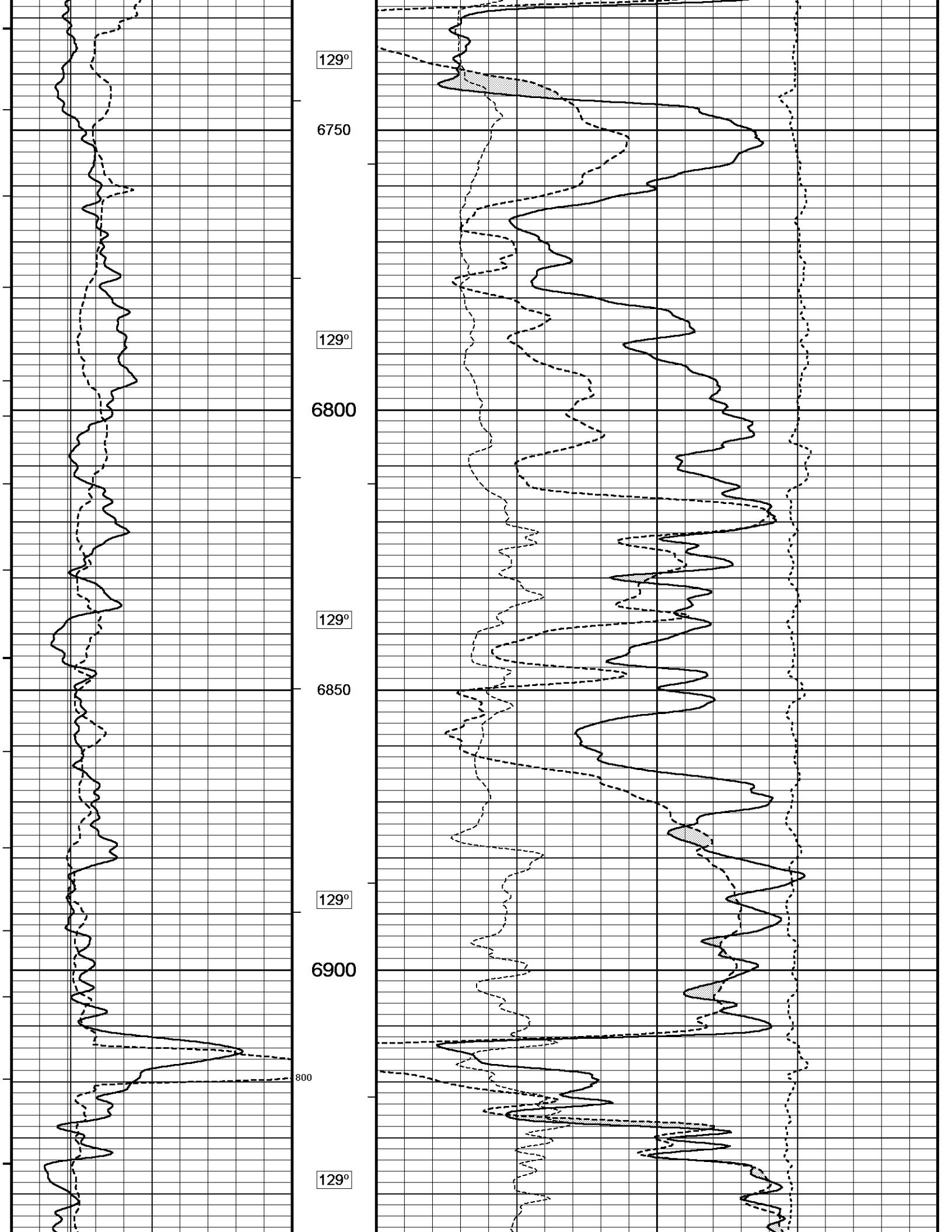


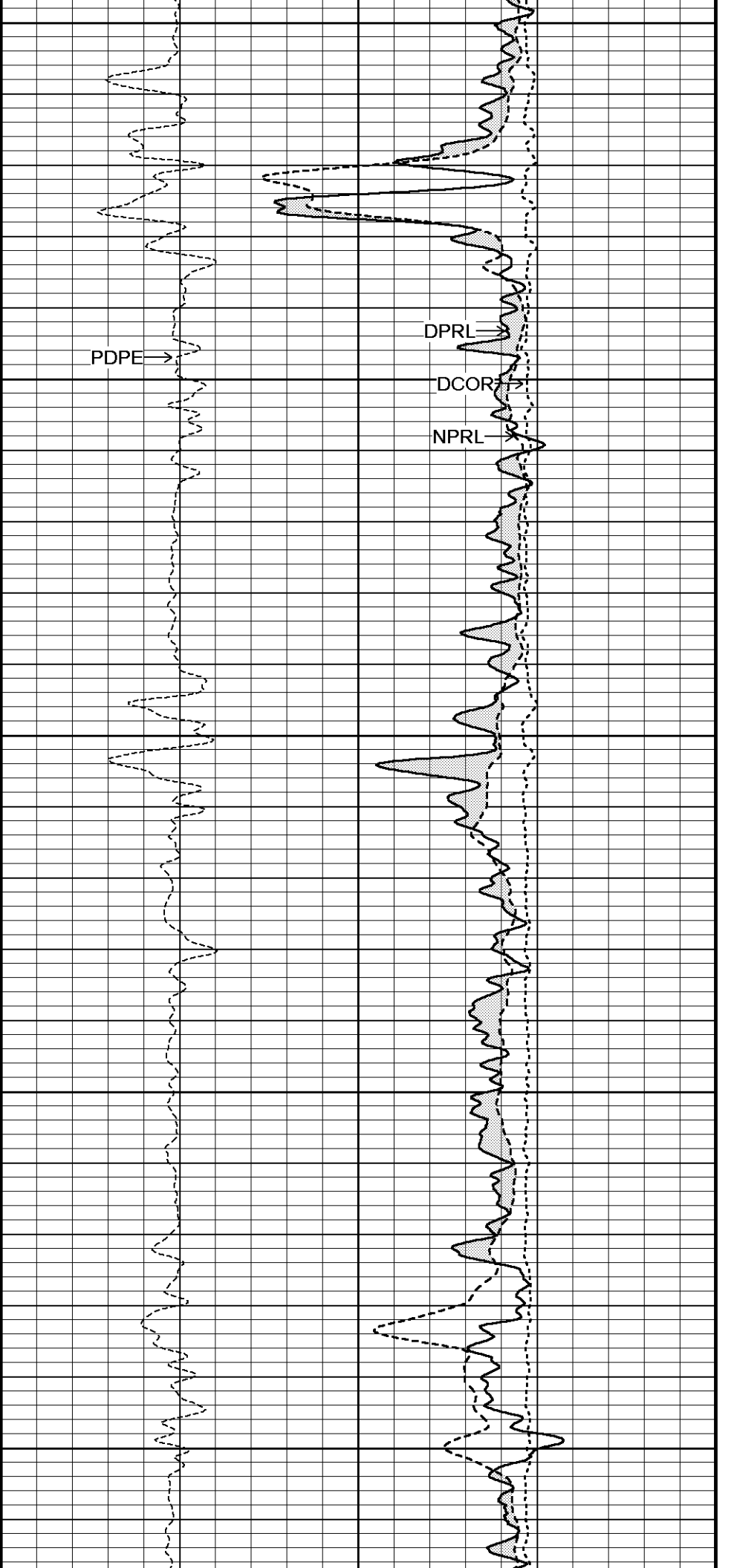
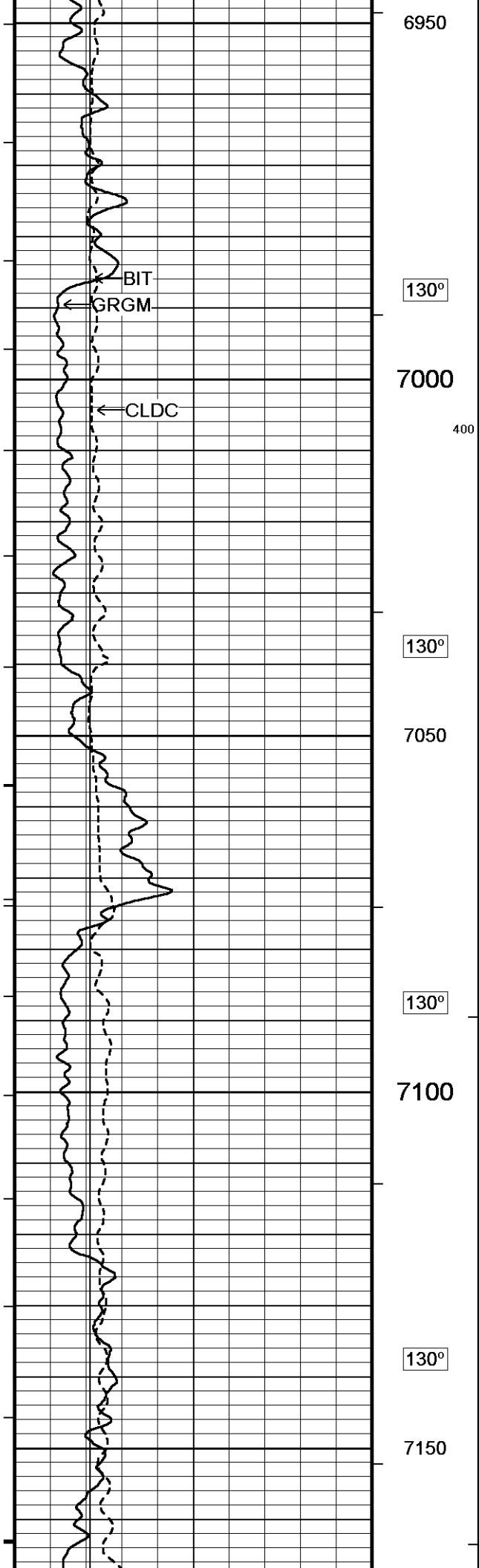


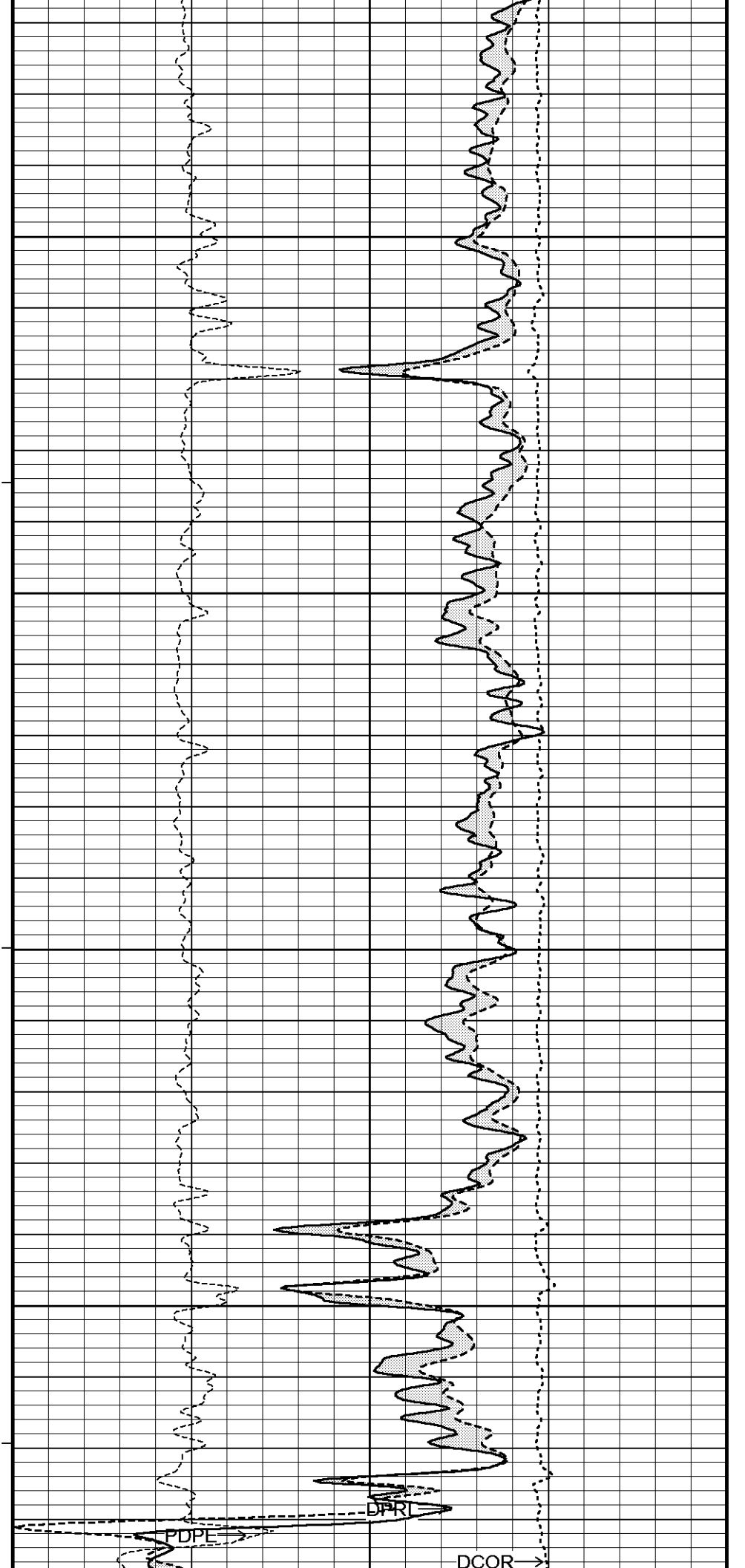
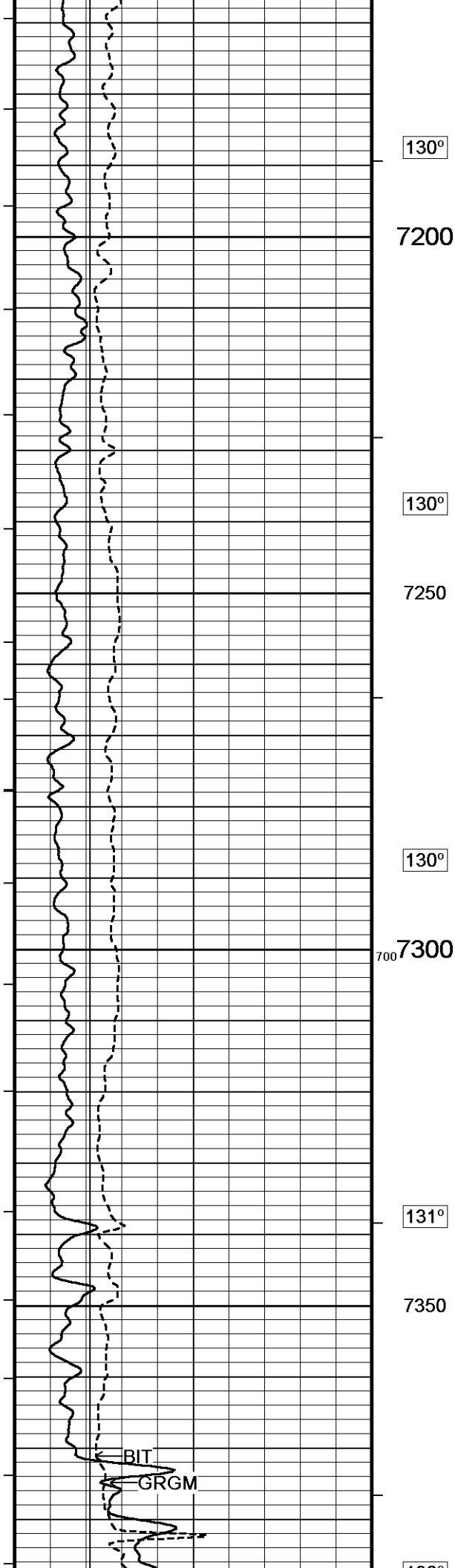


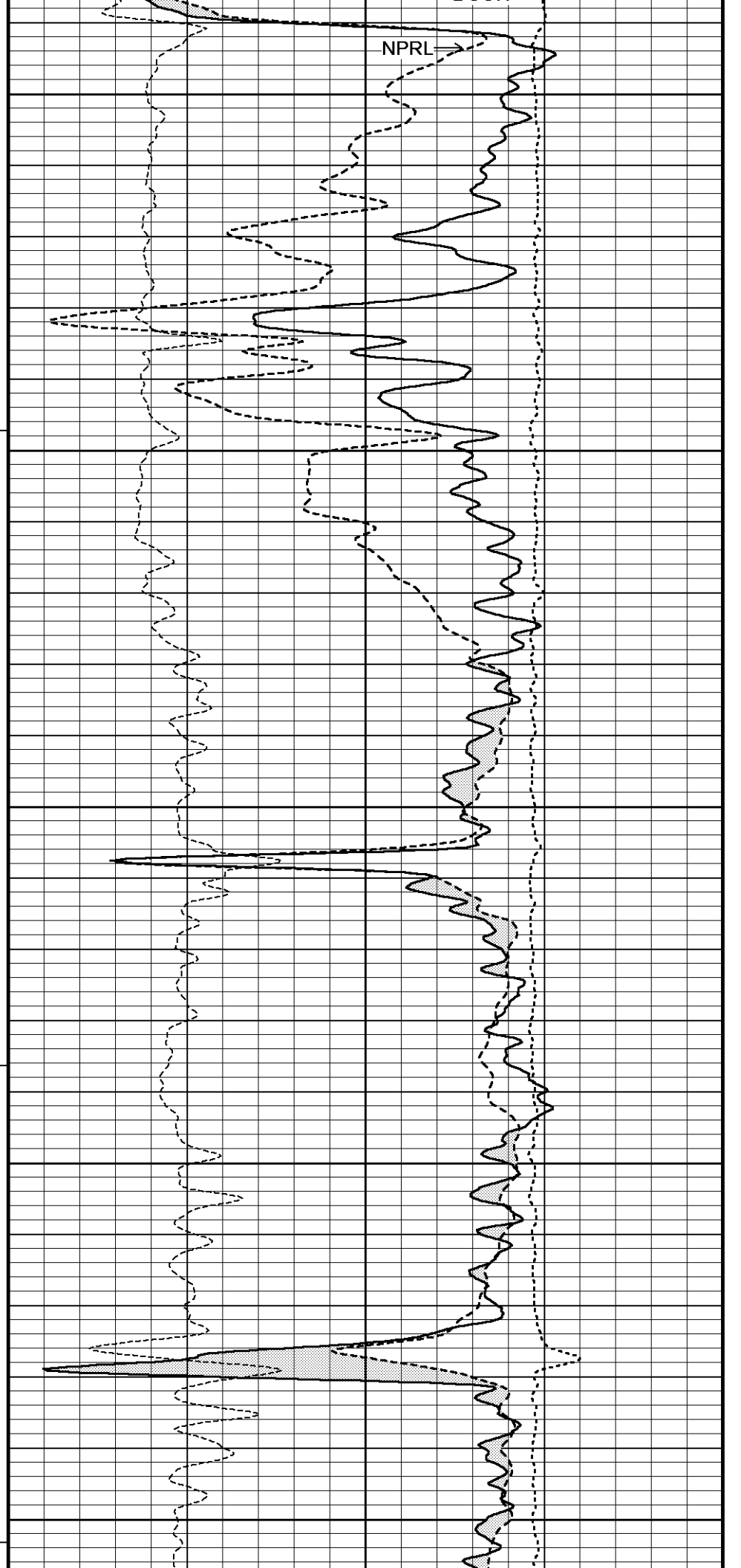
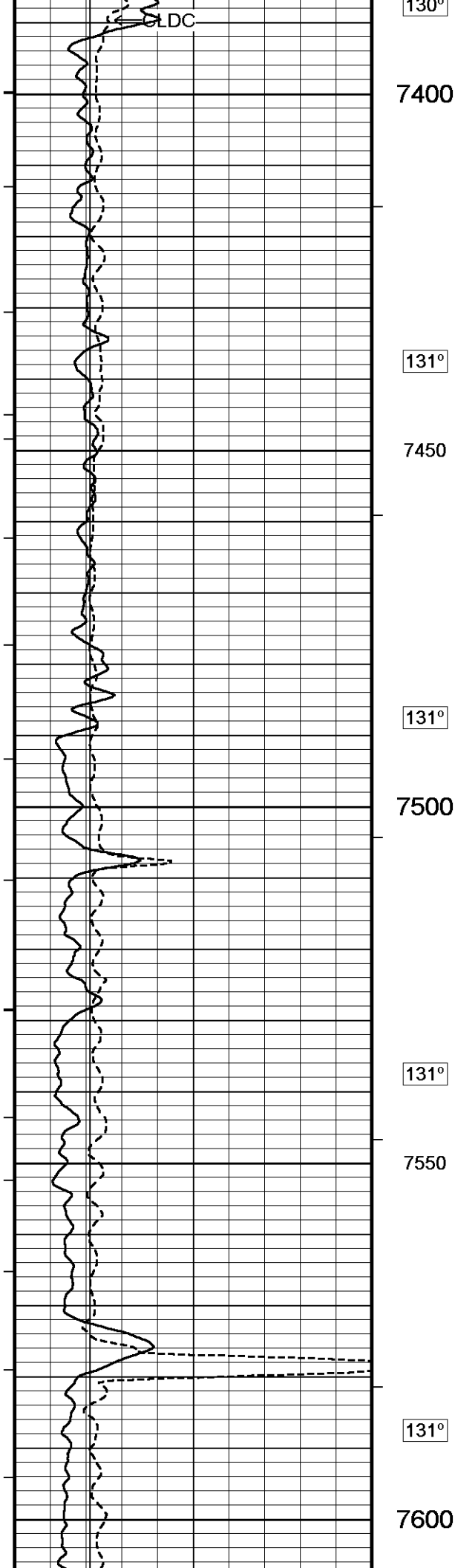


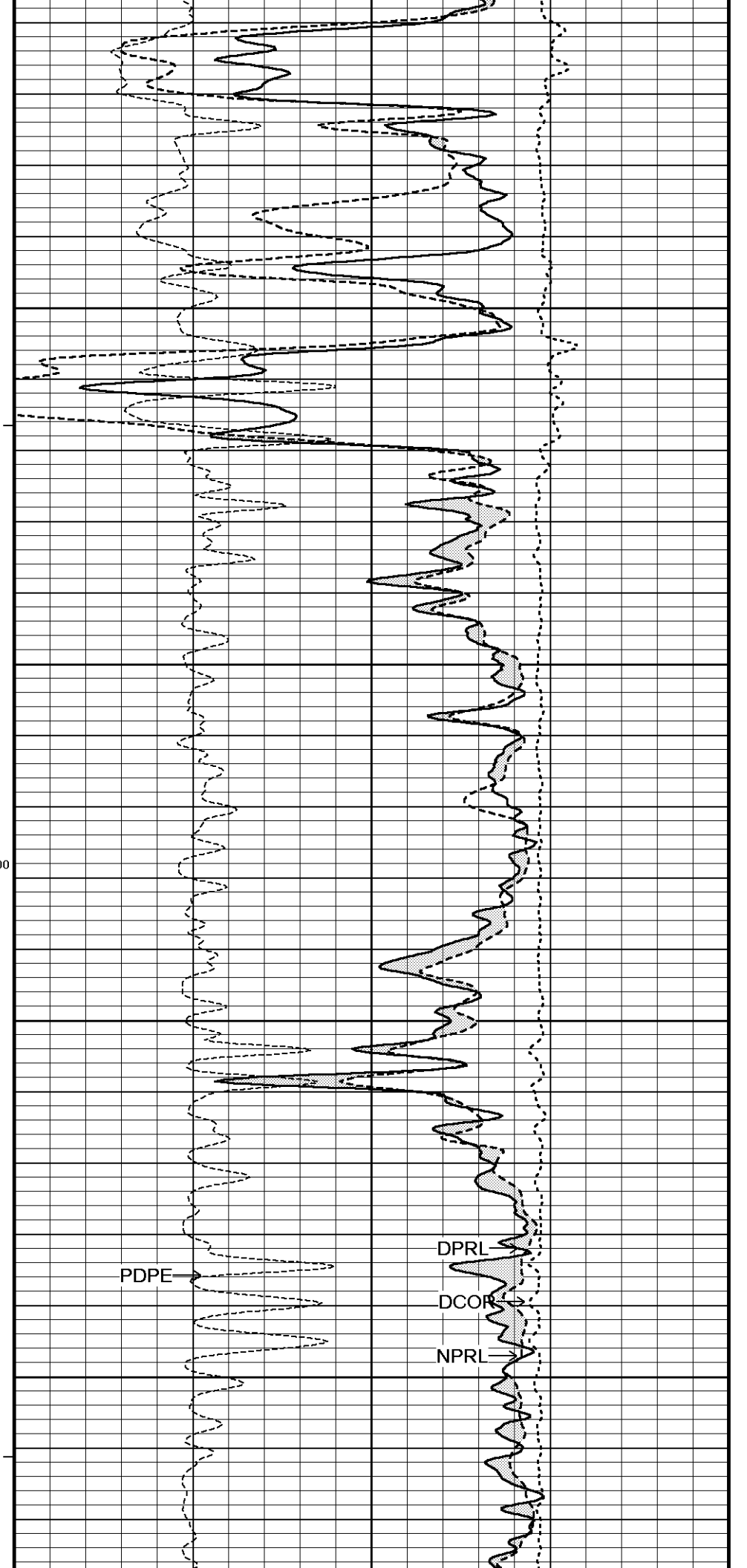
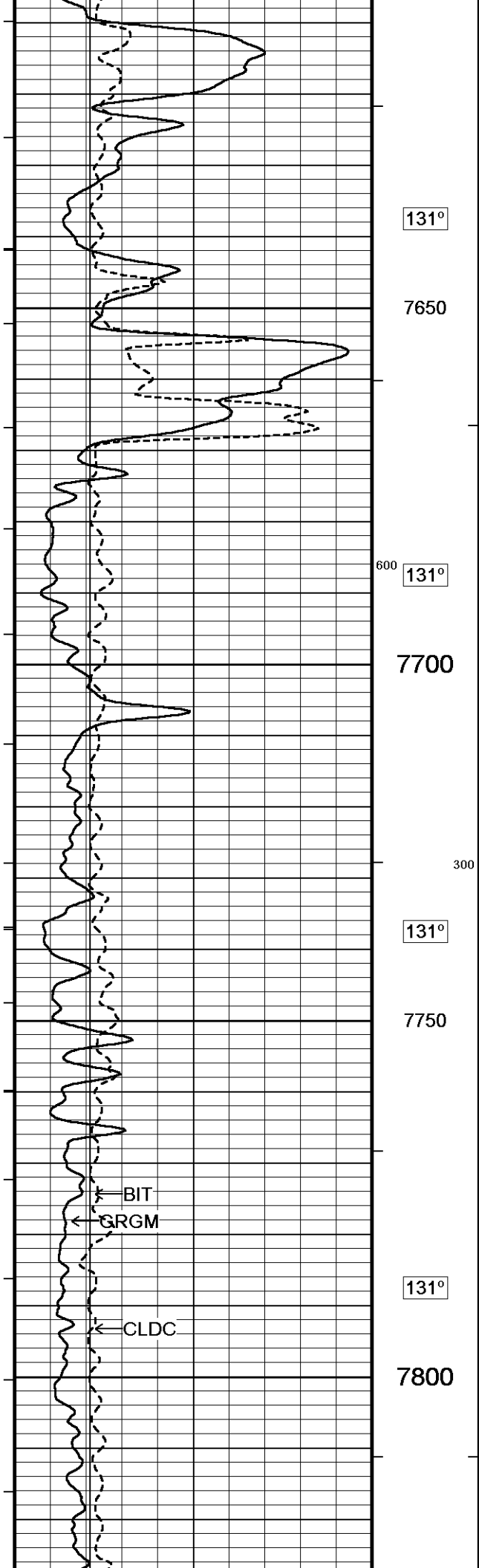


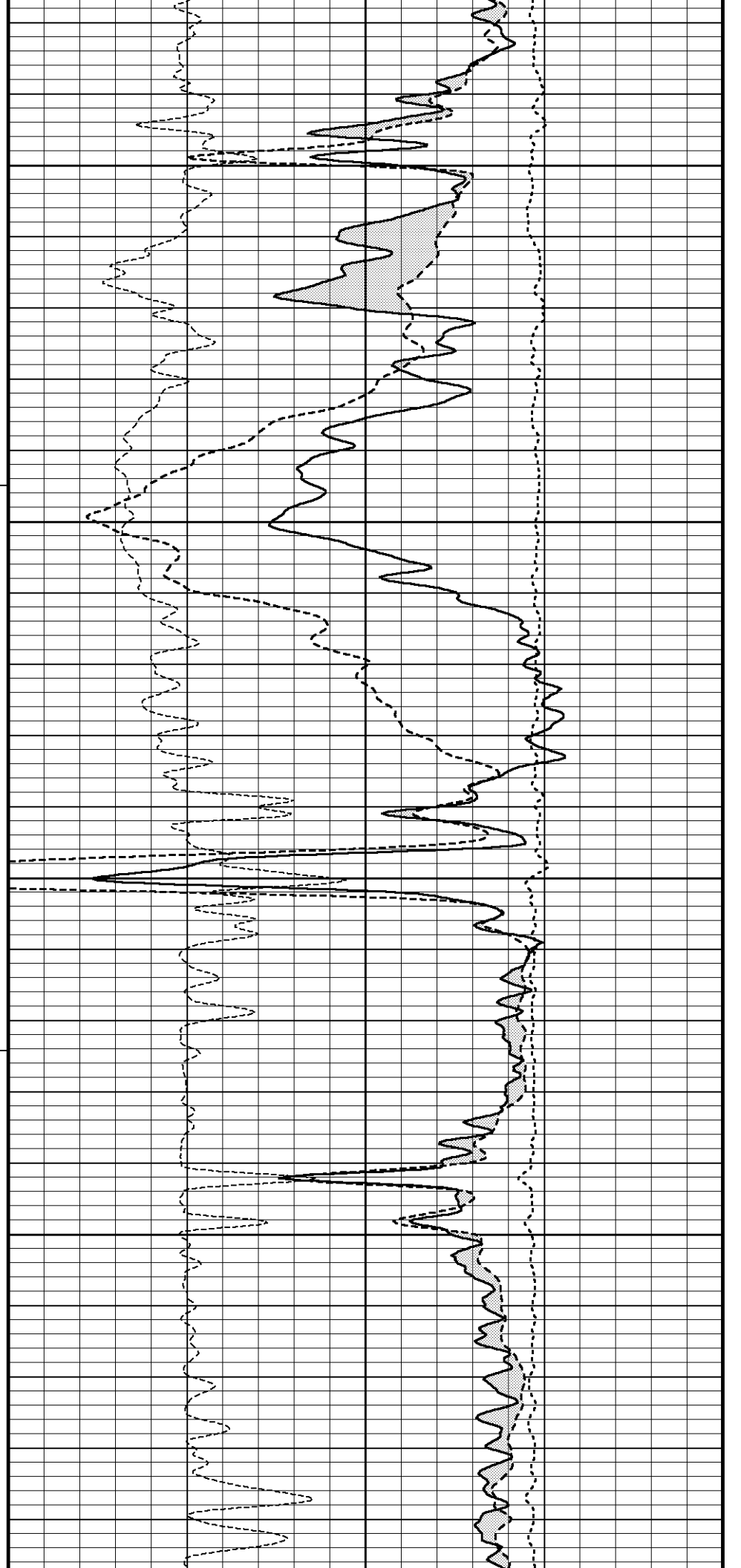
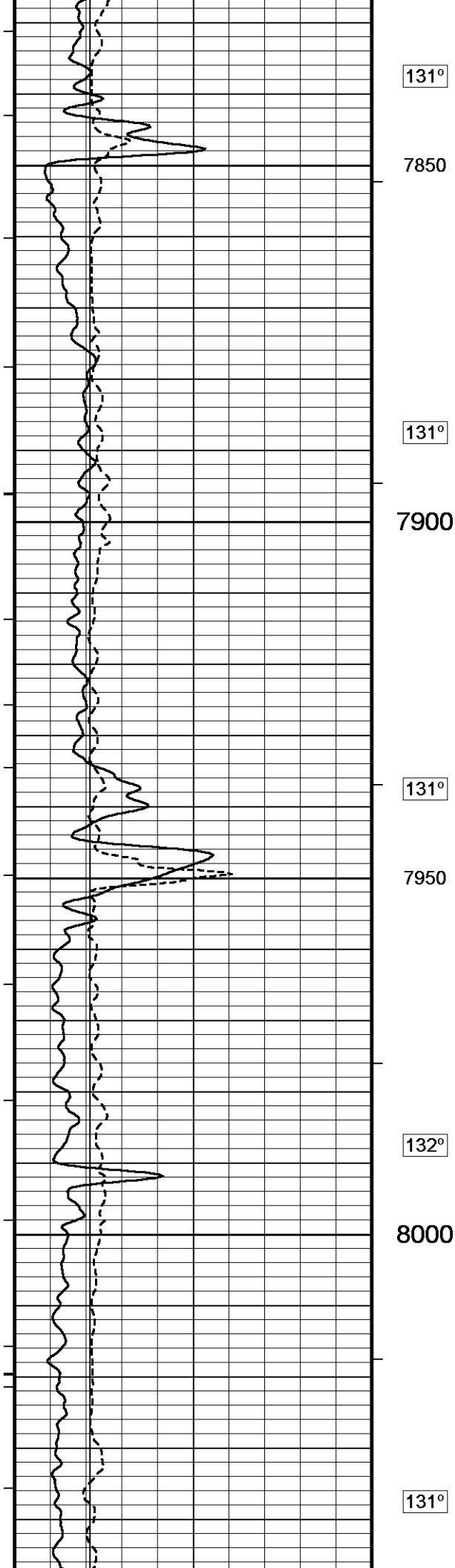


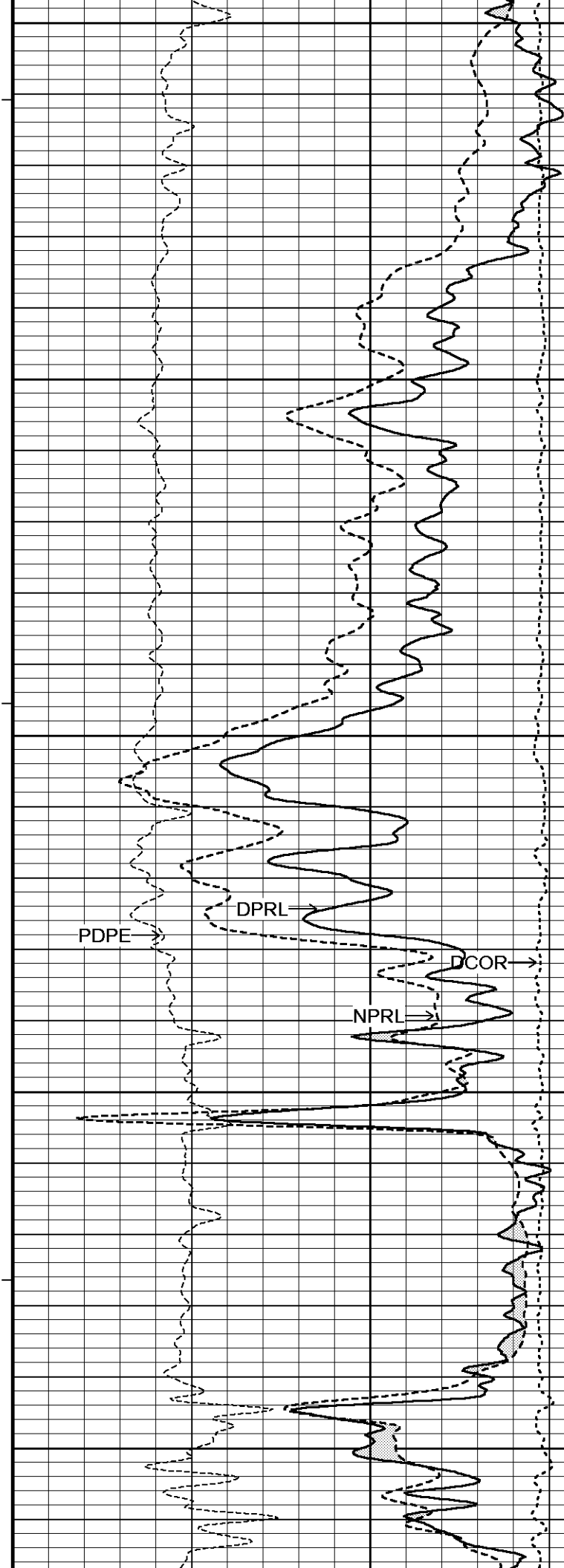
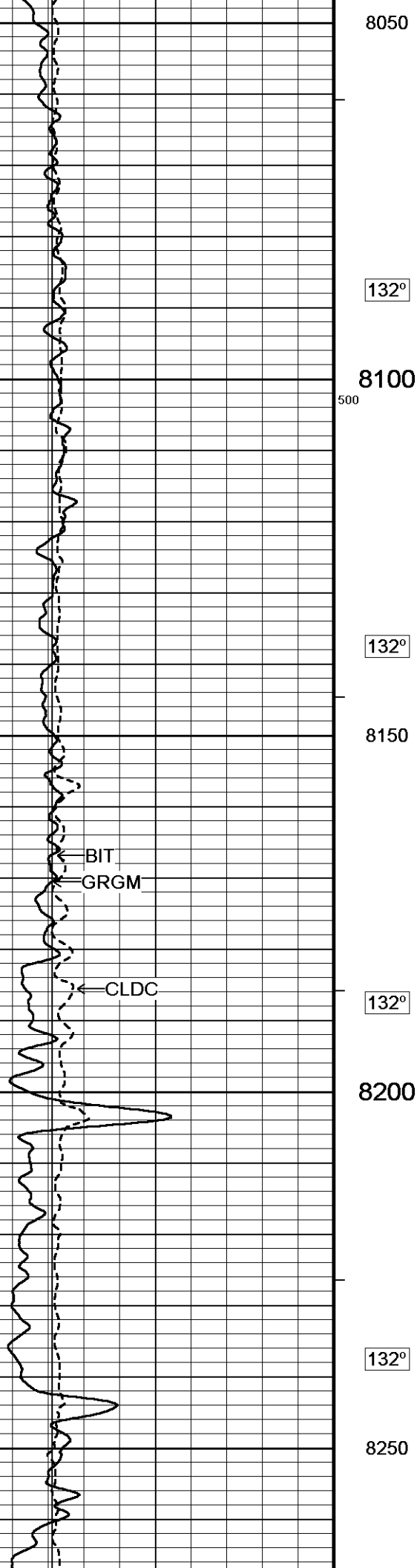


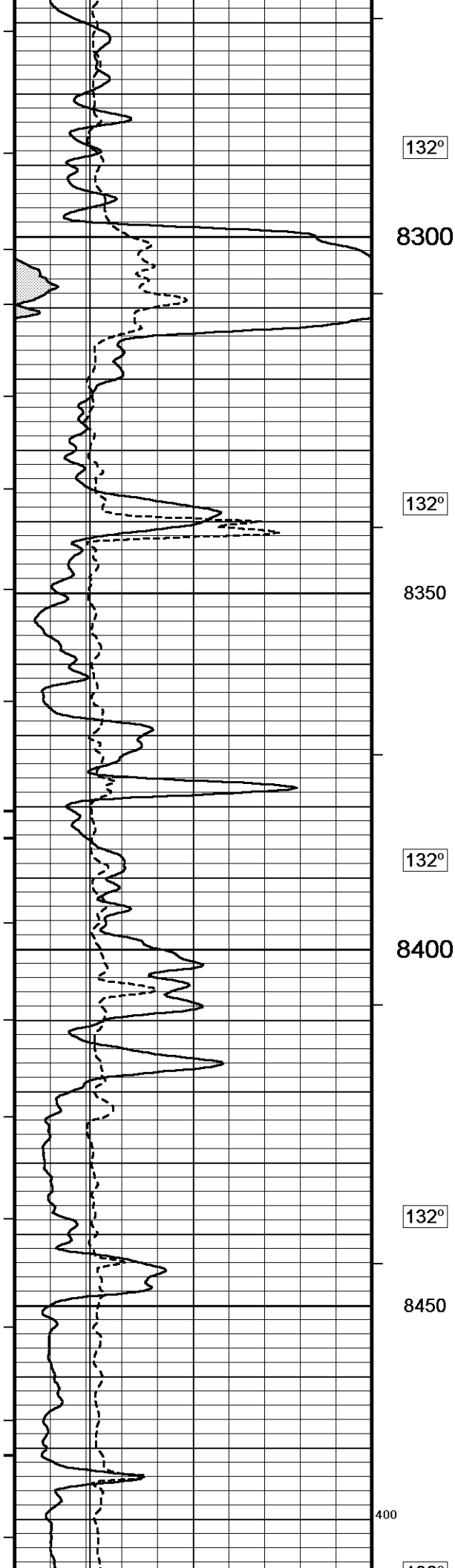




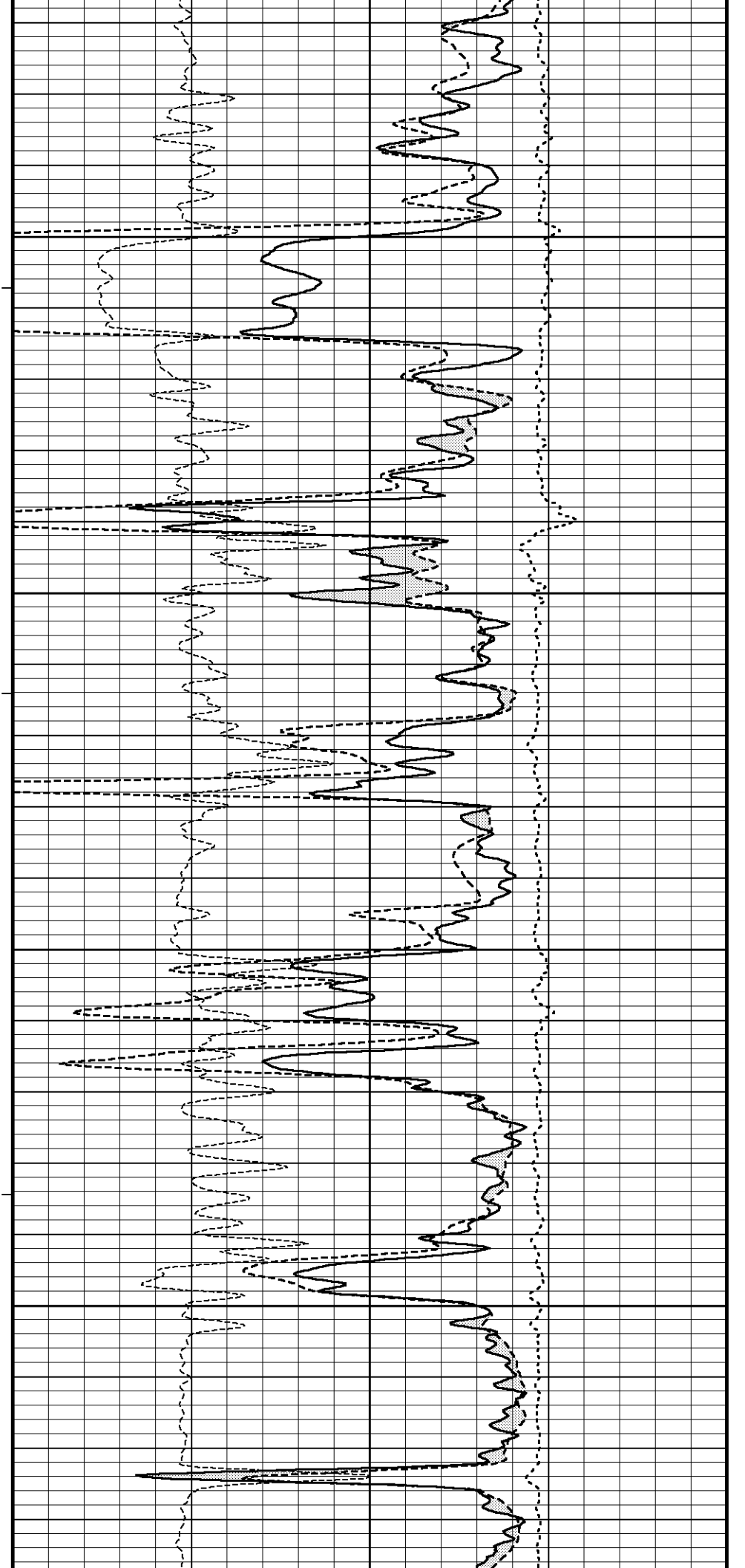


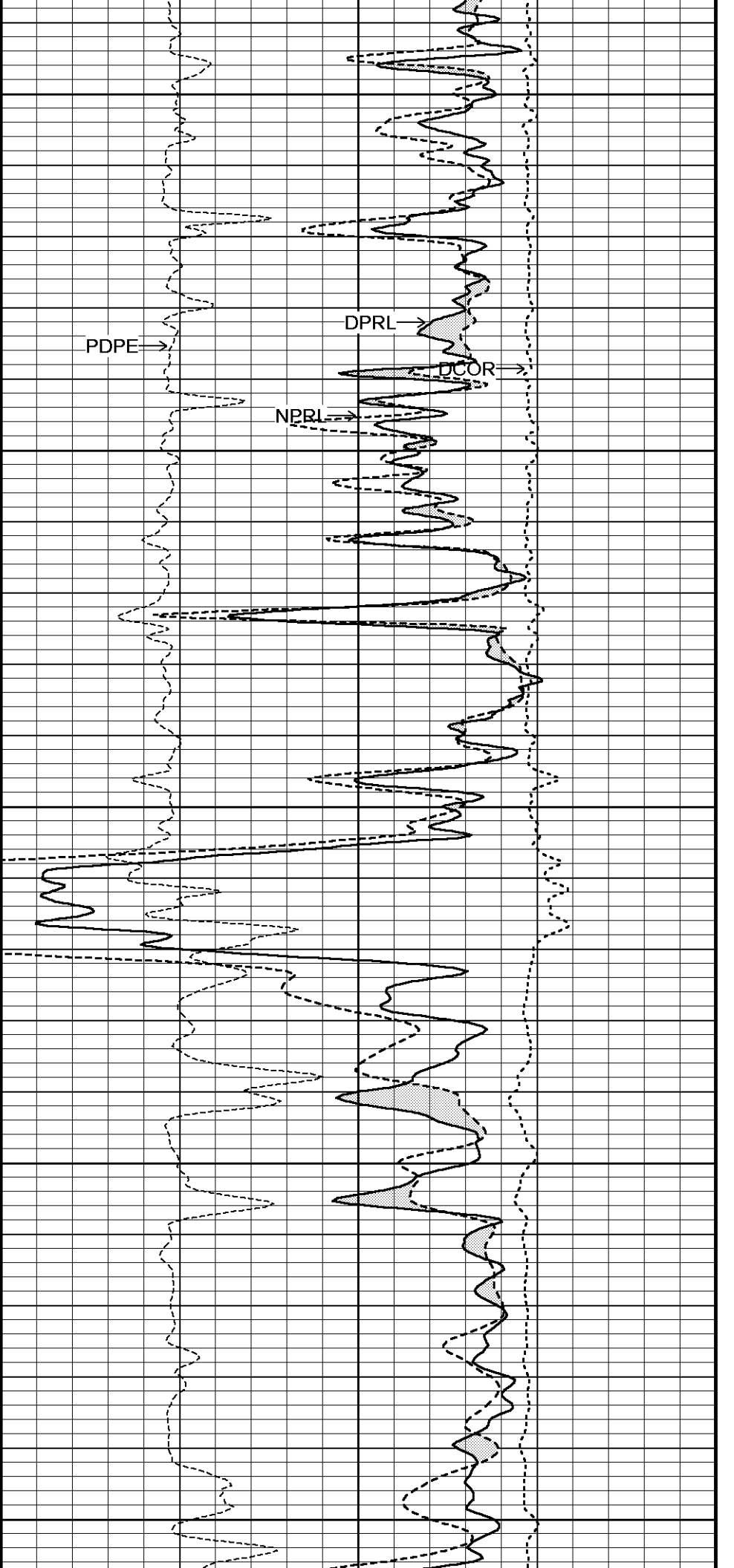
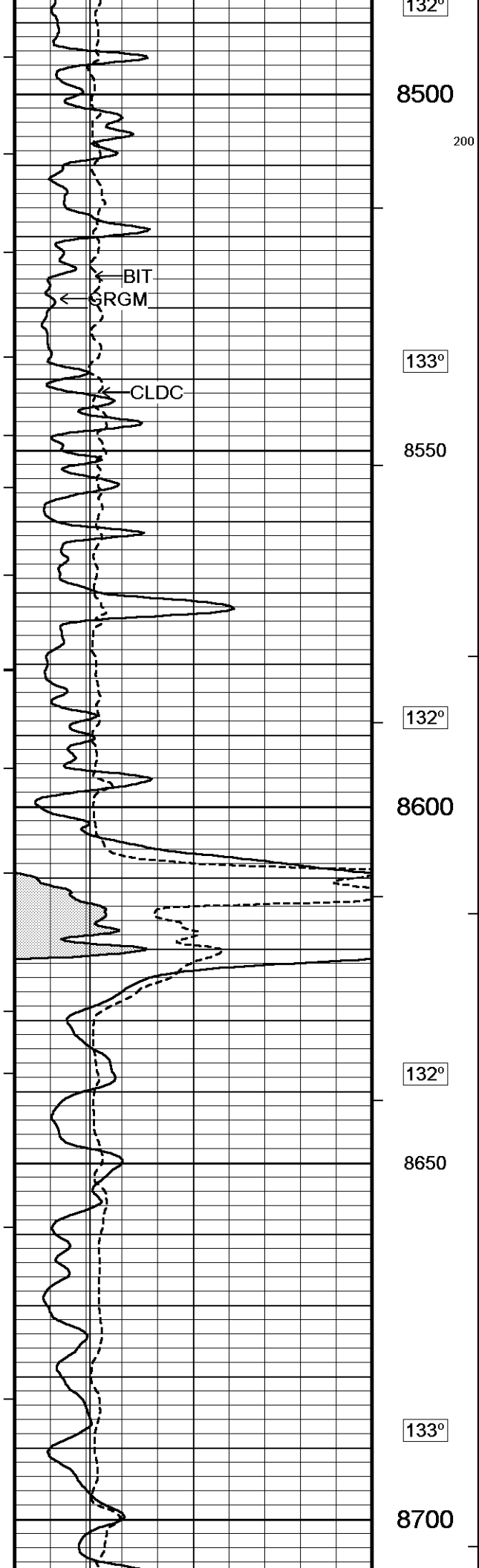


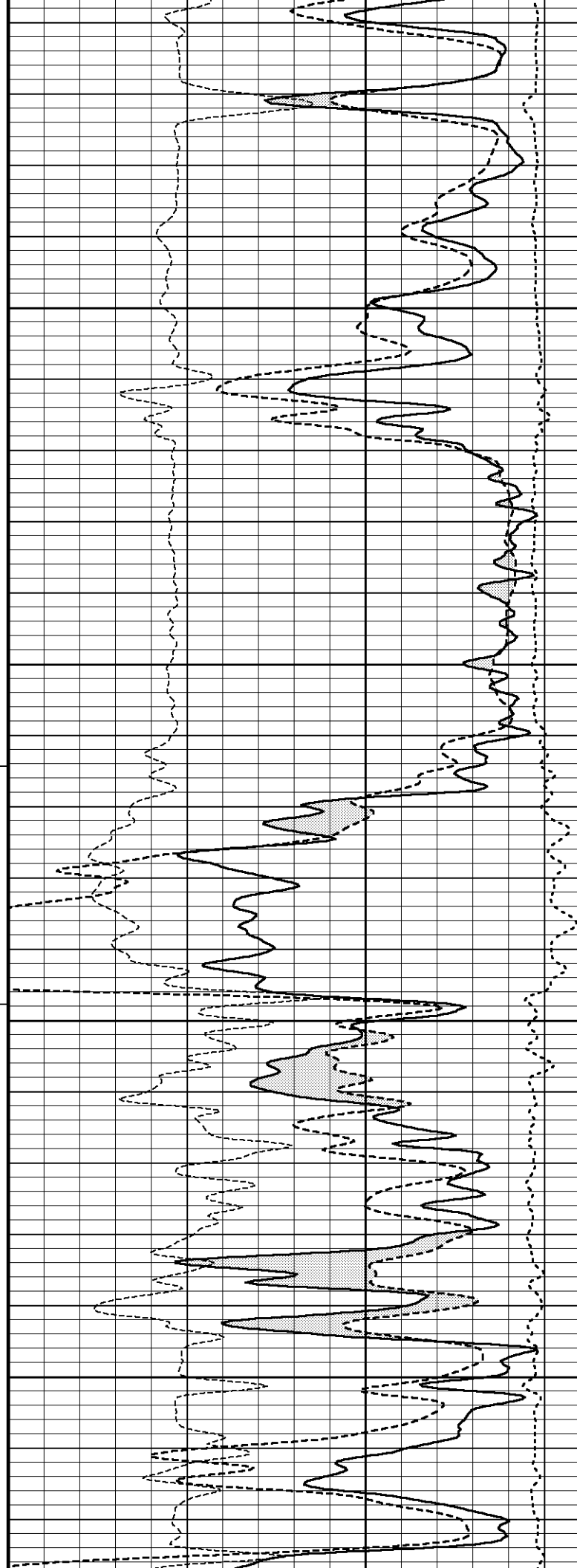
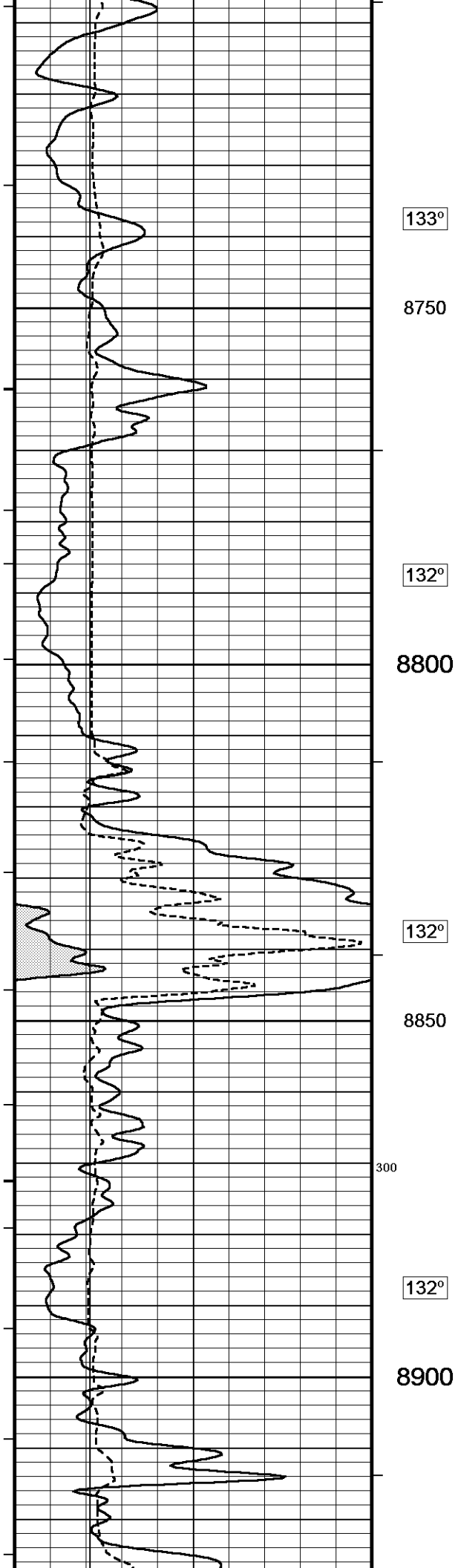


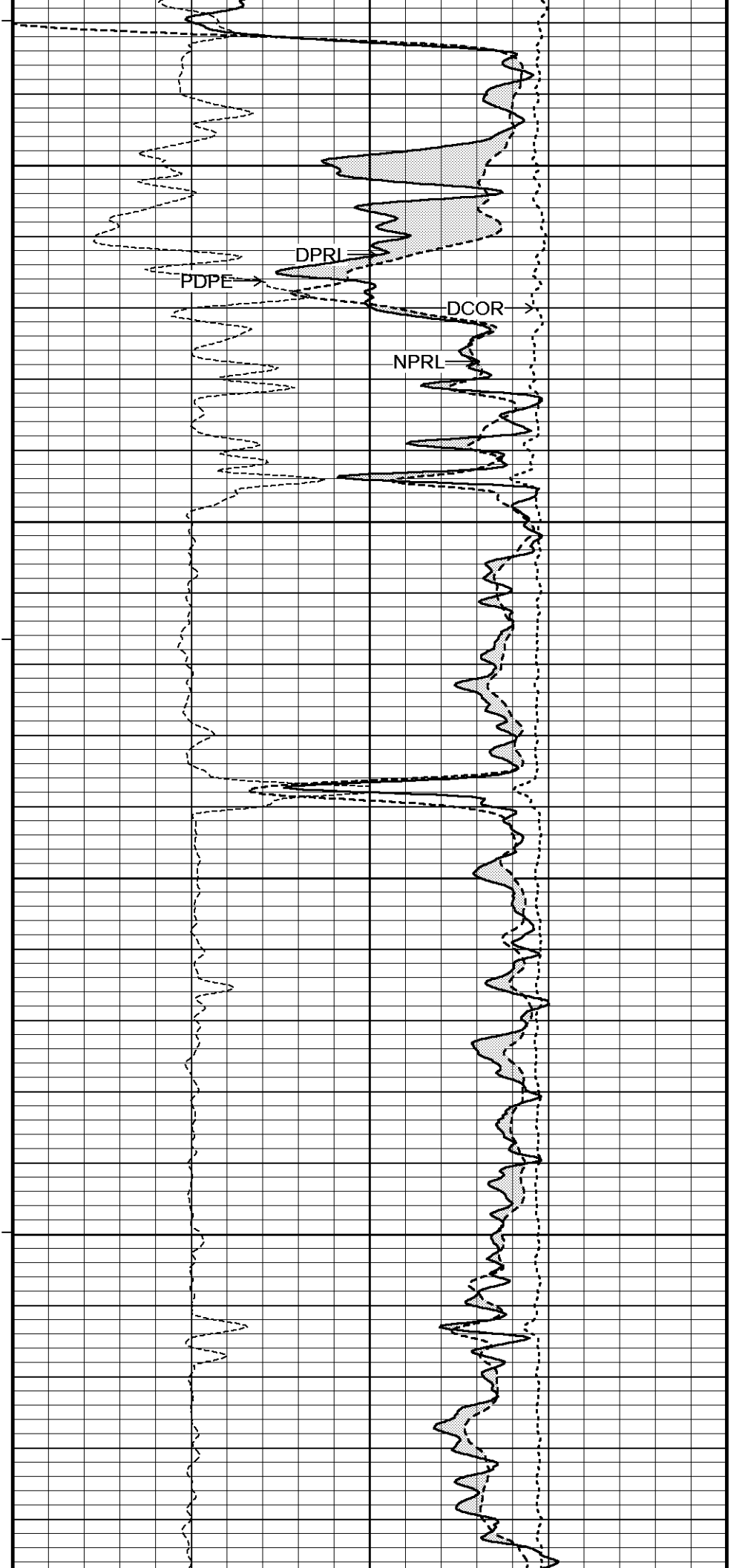
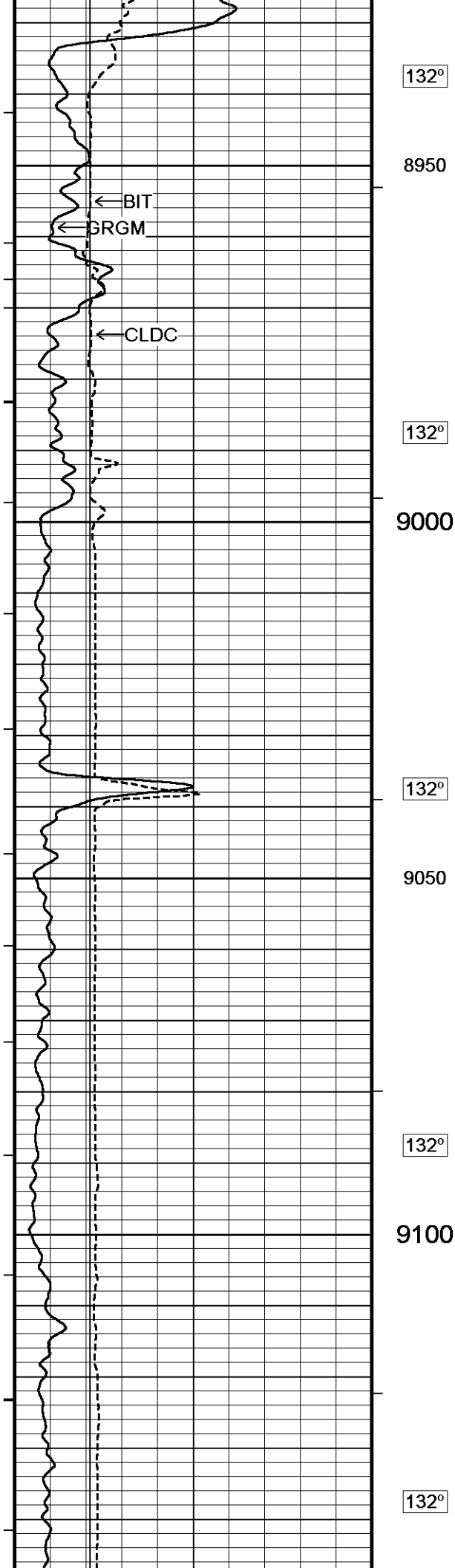


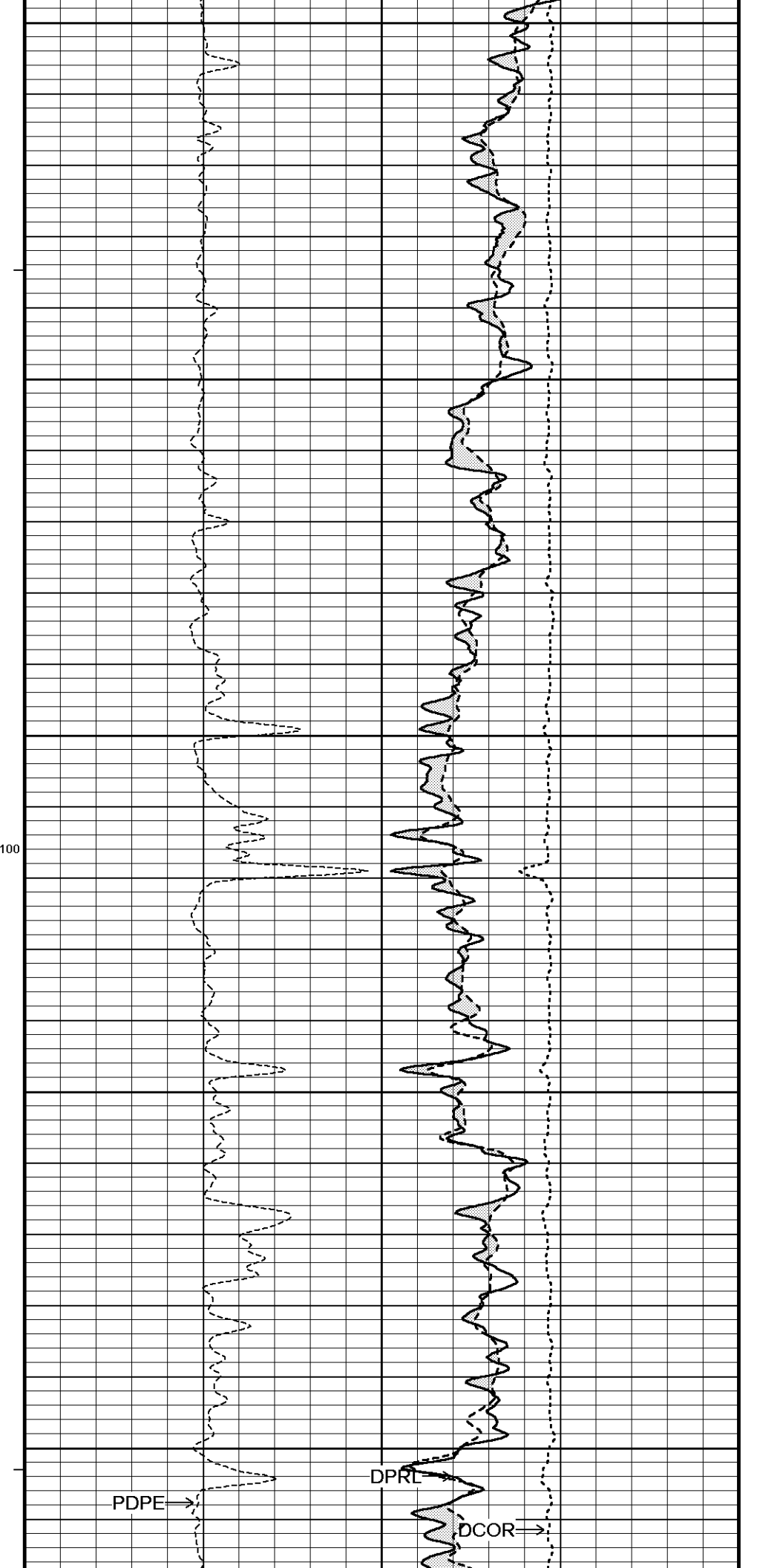
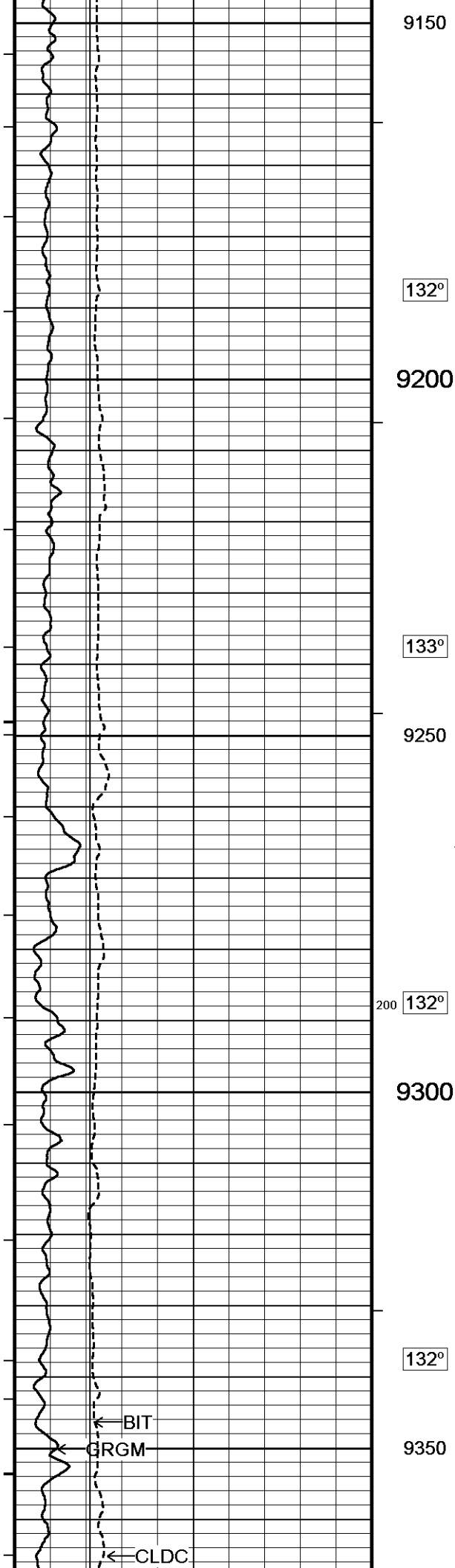
132°
8300
132°
8350
132°
8400
132°
8450
400
132°

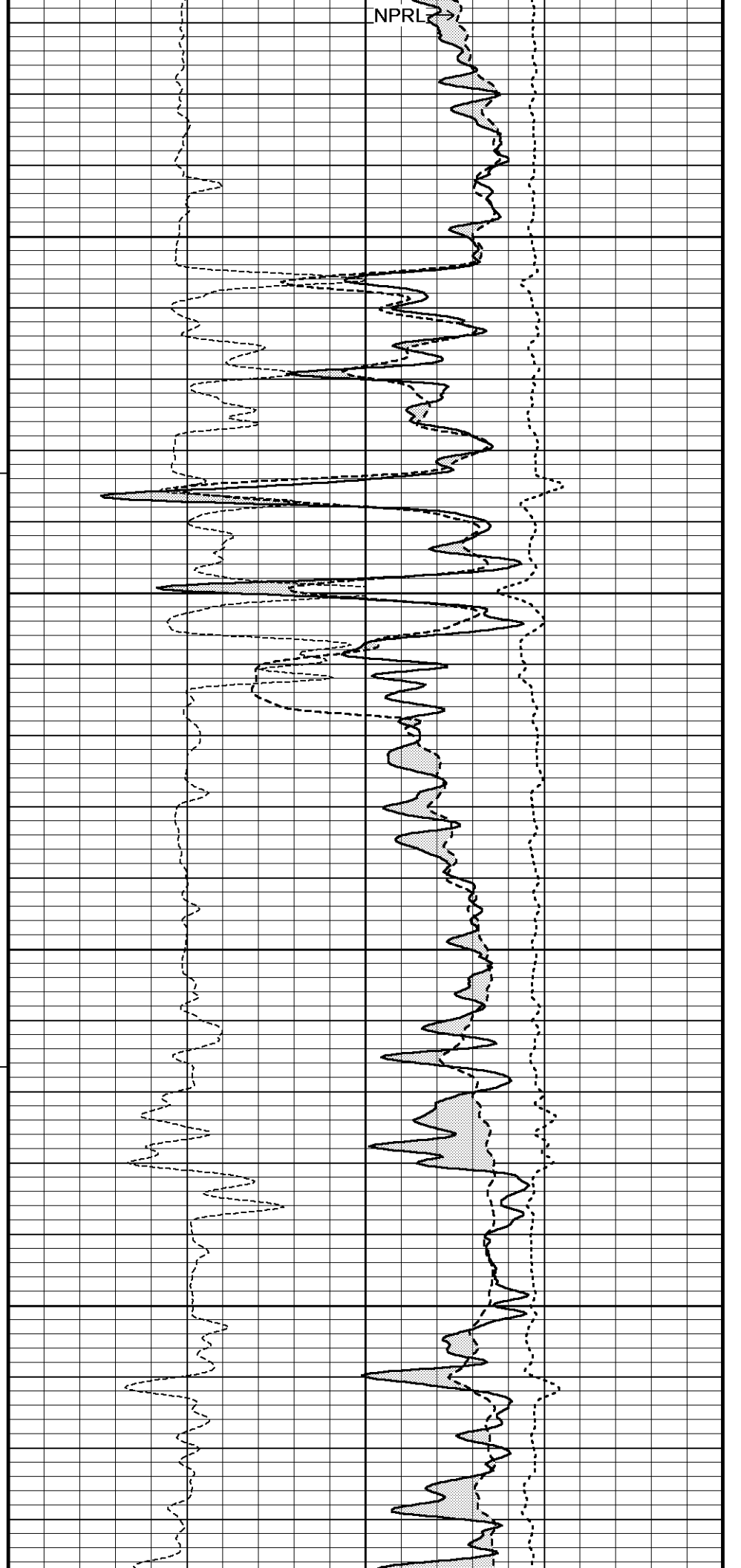
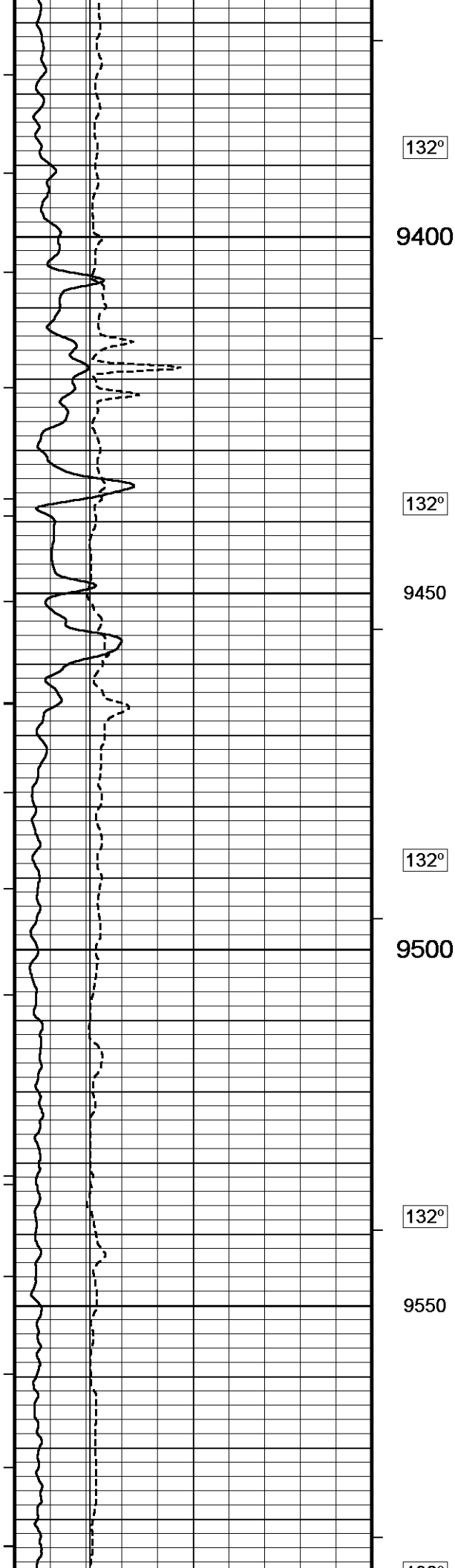


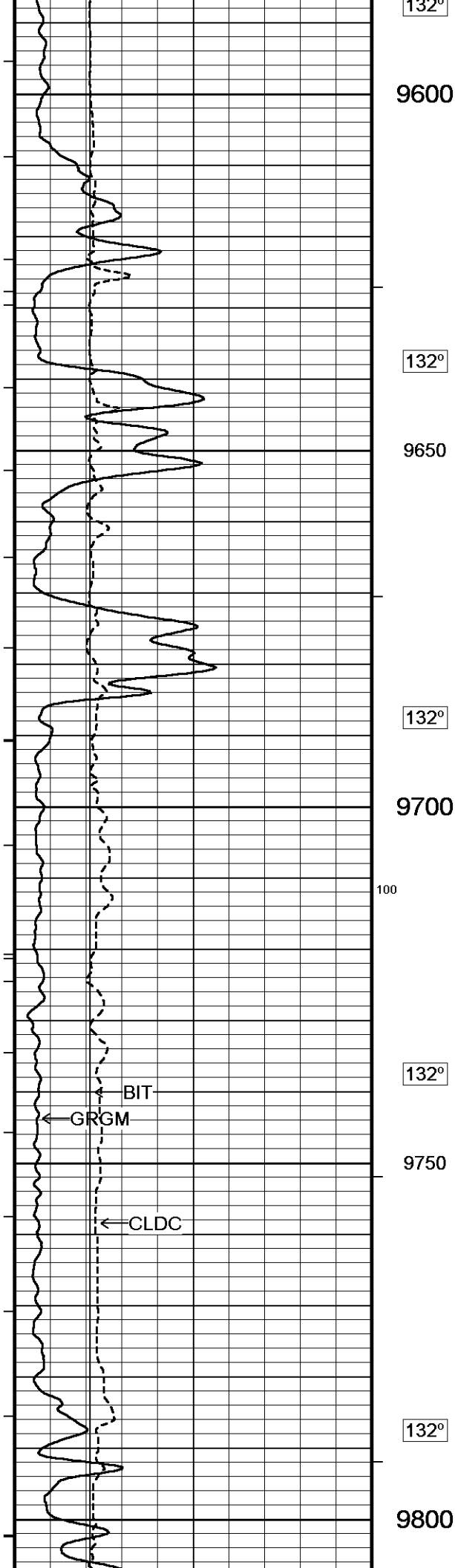












132°

9600

132°

9650

132°

9700

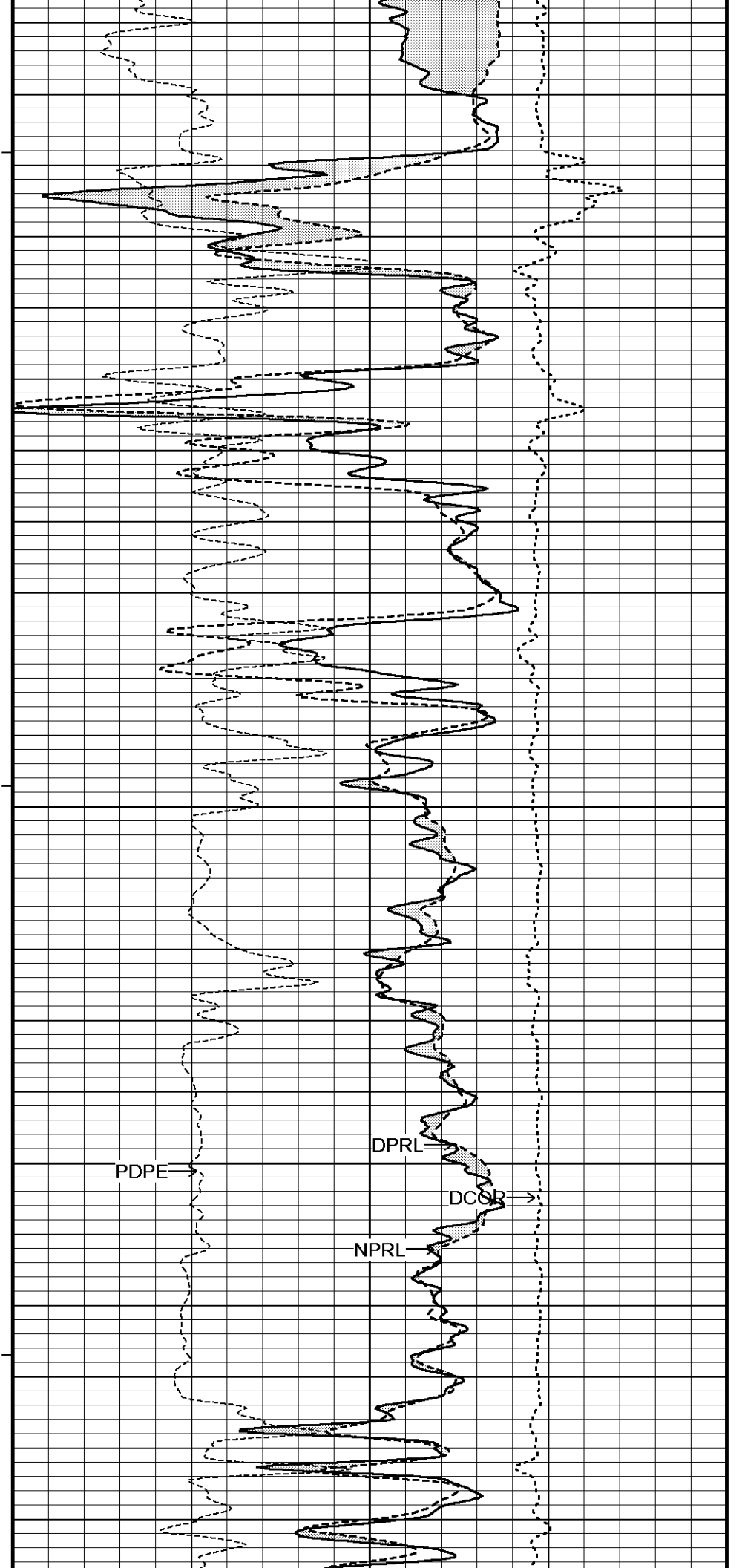
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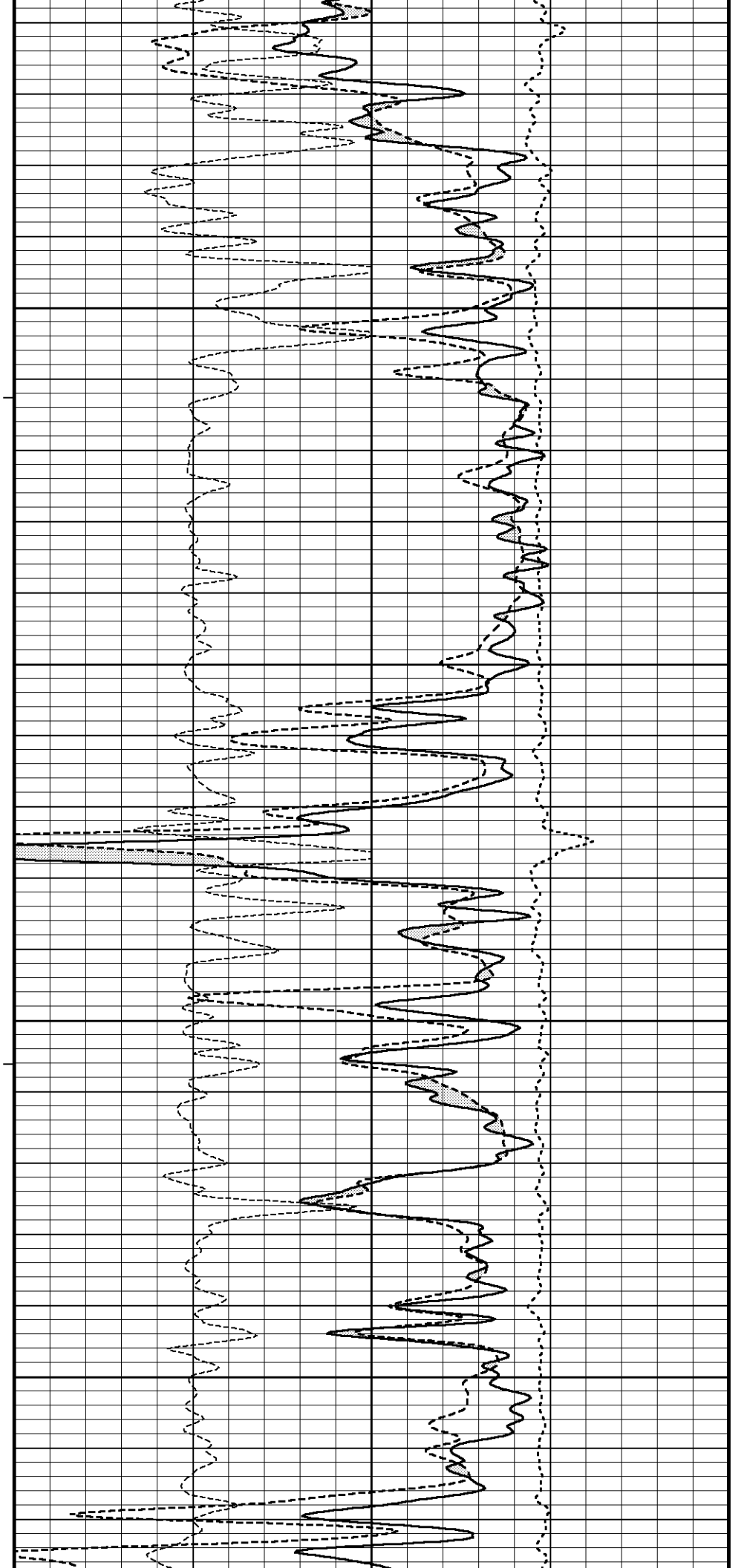
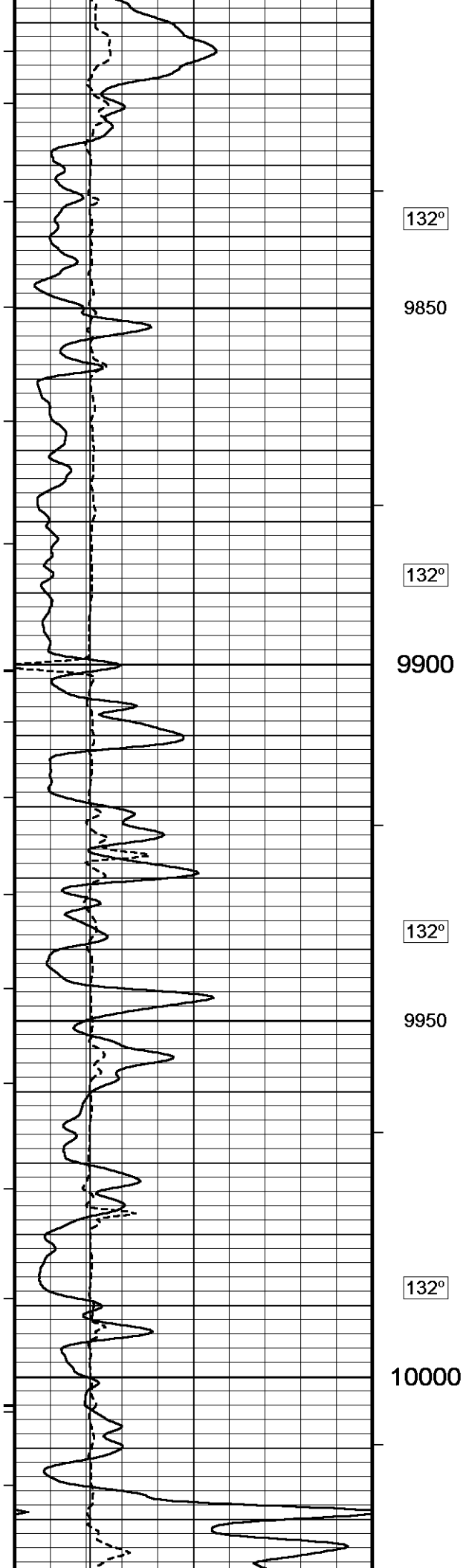
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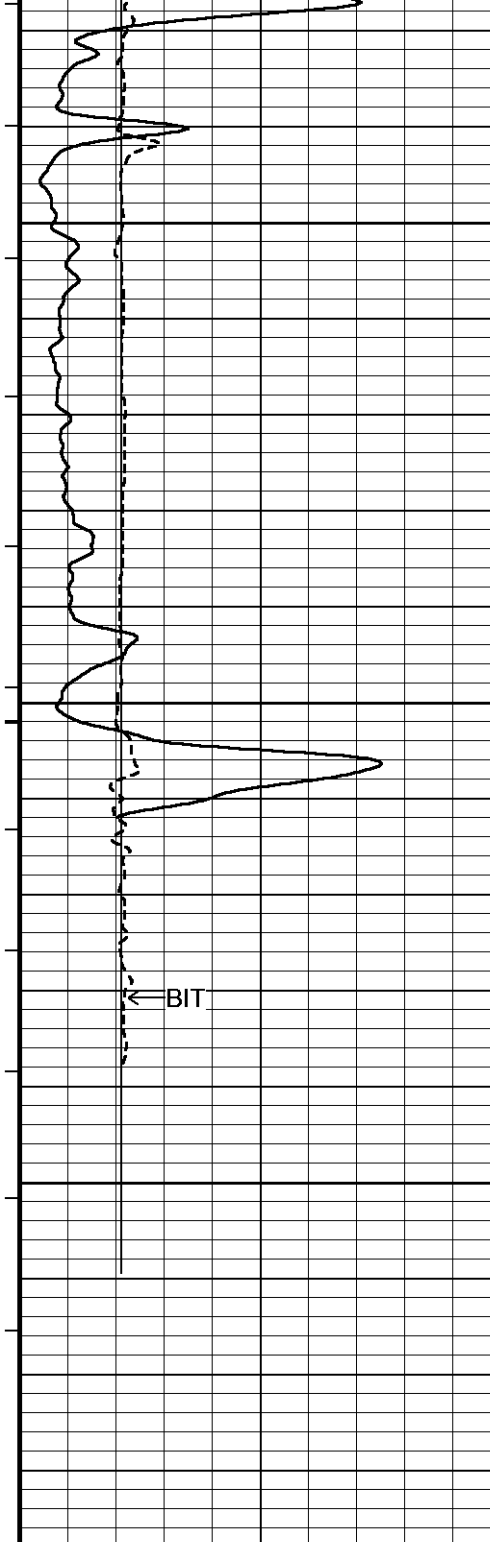
9750

132°

9800







132°

10050

133°

10100

0

10150

10186
Depth
In
Feet

Timing Marks
every 60.0 sec

Density Caliper
inches

4 9 14

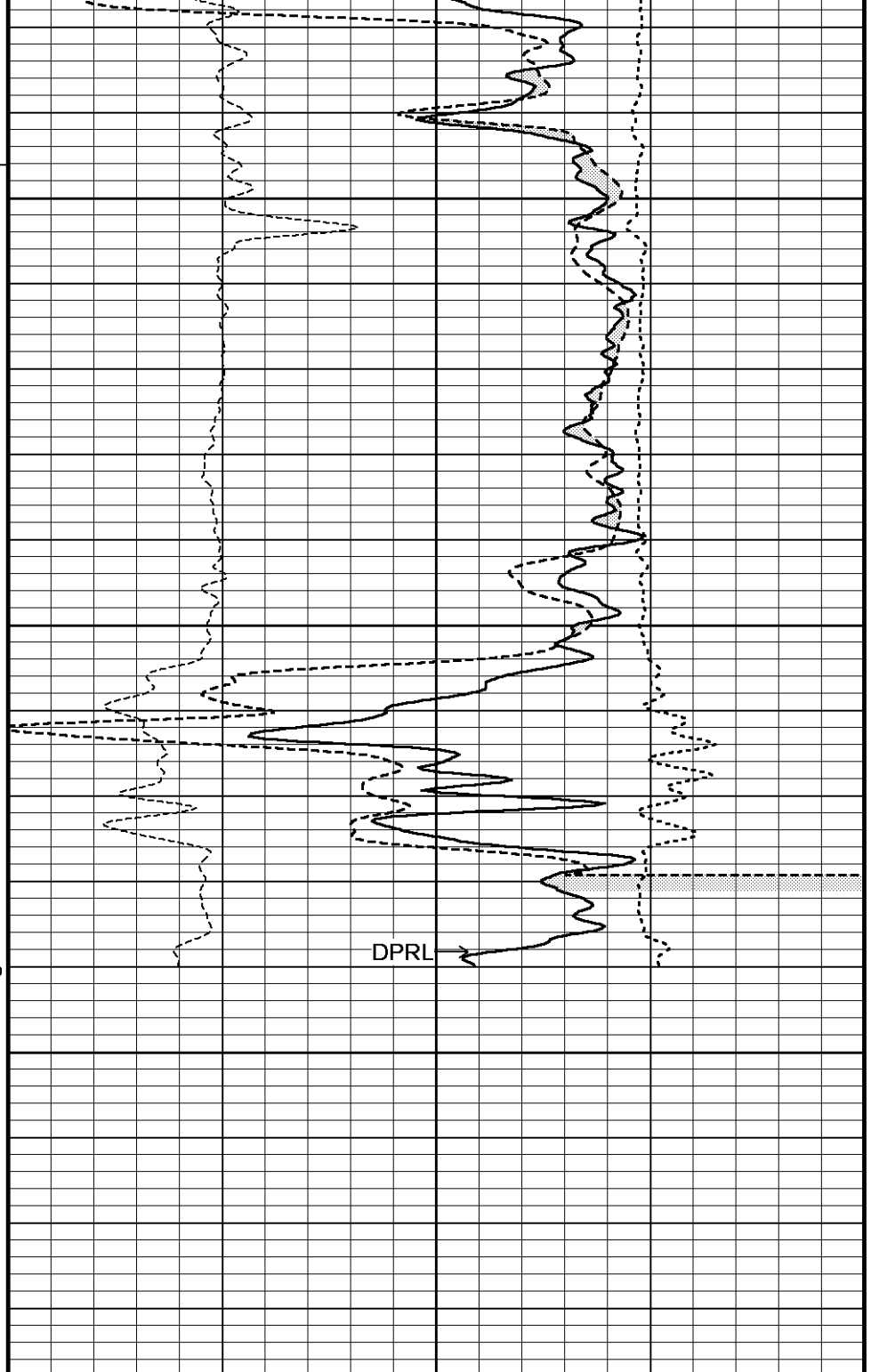
MGS Gamma Ray

API

0 75 150
150 225 300

Borehole
Temp in
deg F
HVI
every
10 cu ft

Annular
Integral
every
10 cu ft



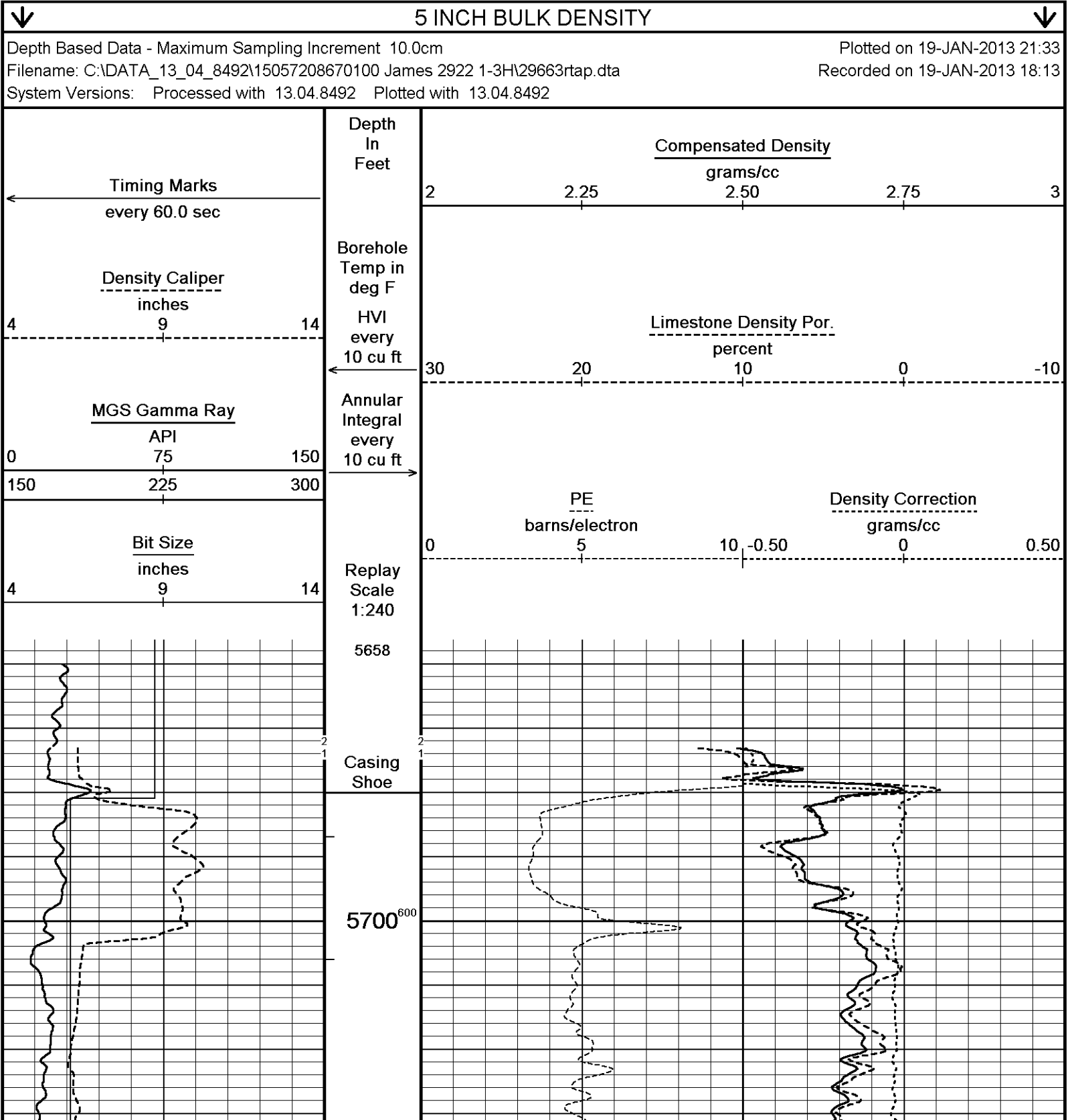
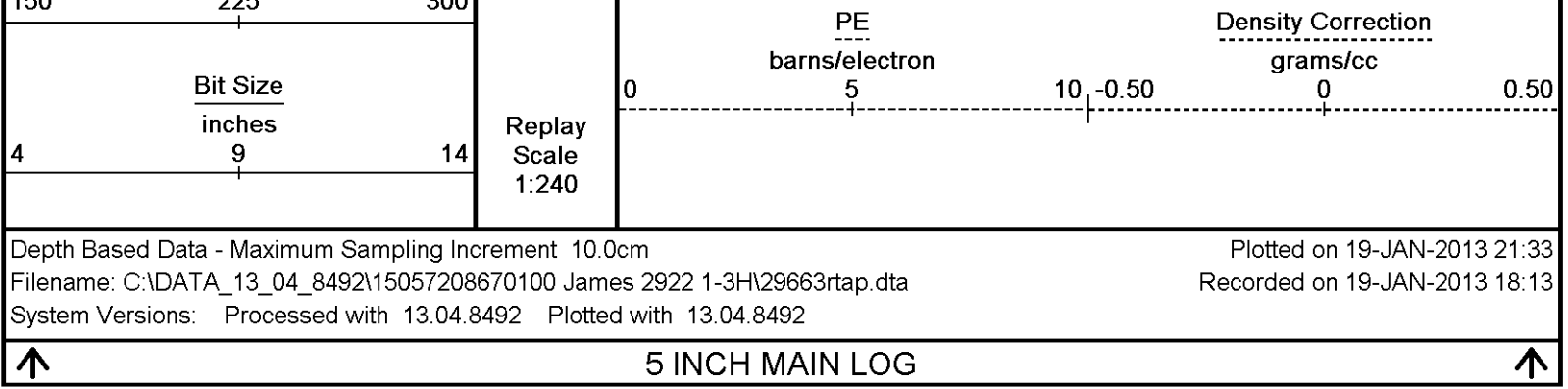
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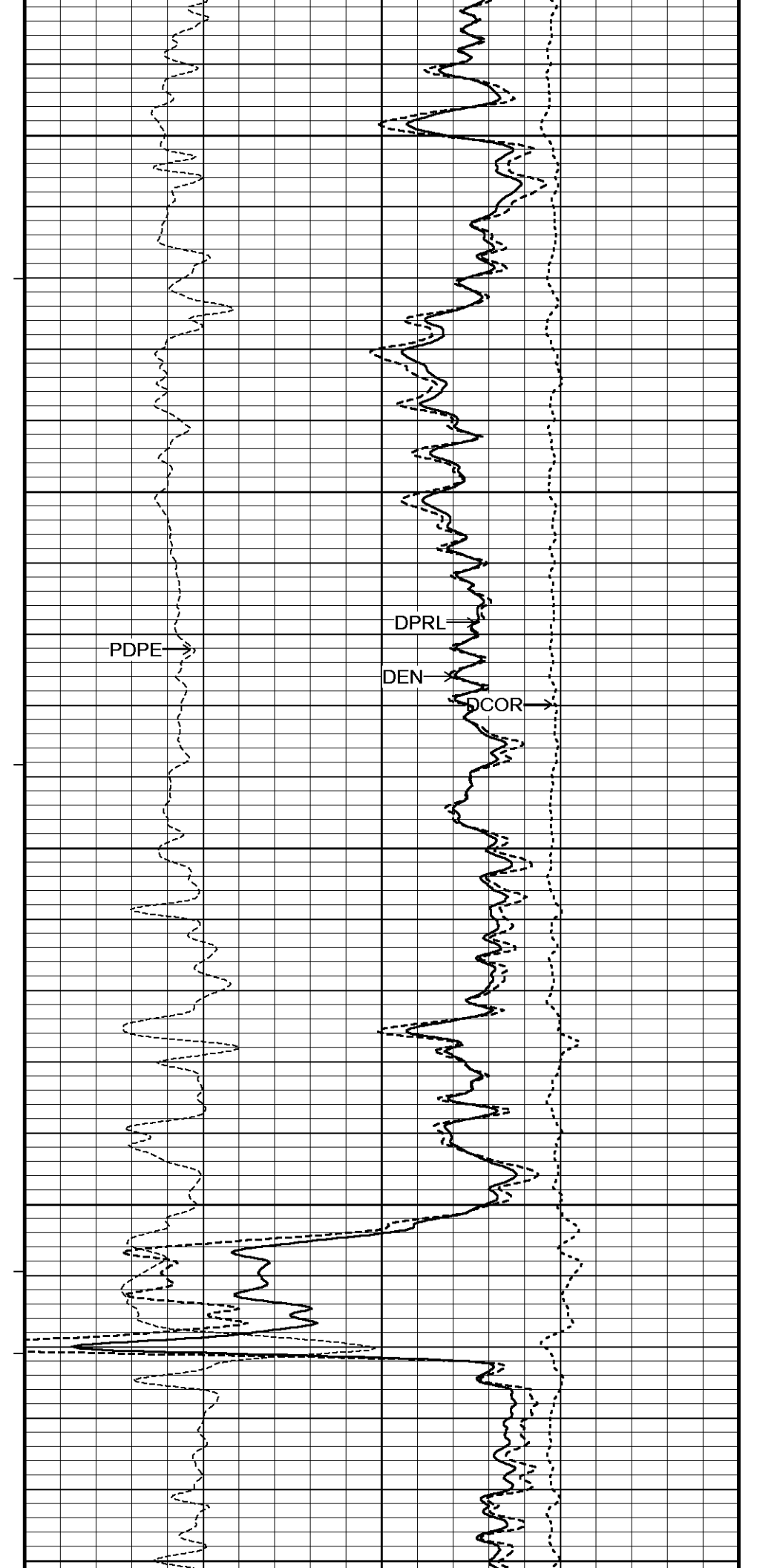
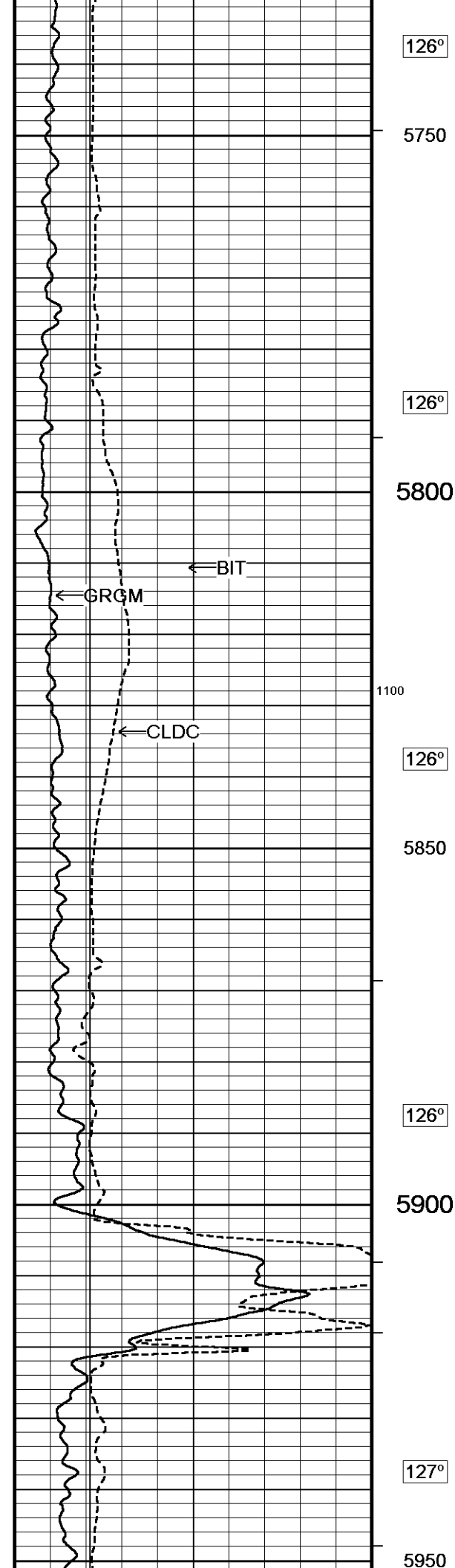
Limestone Neutron Por.
percent

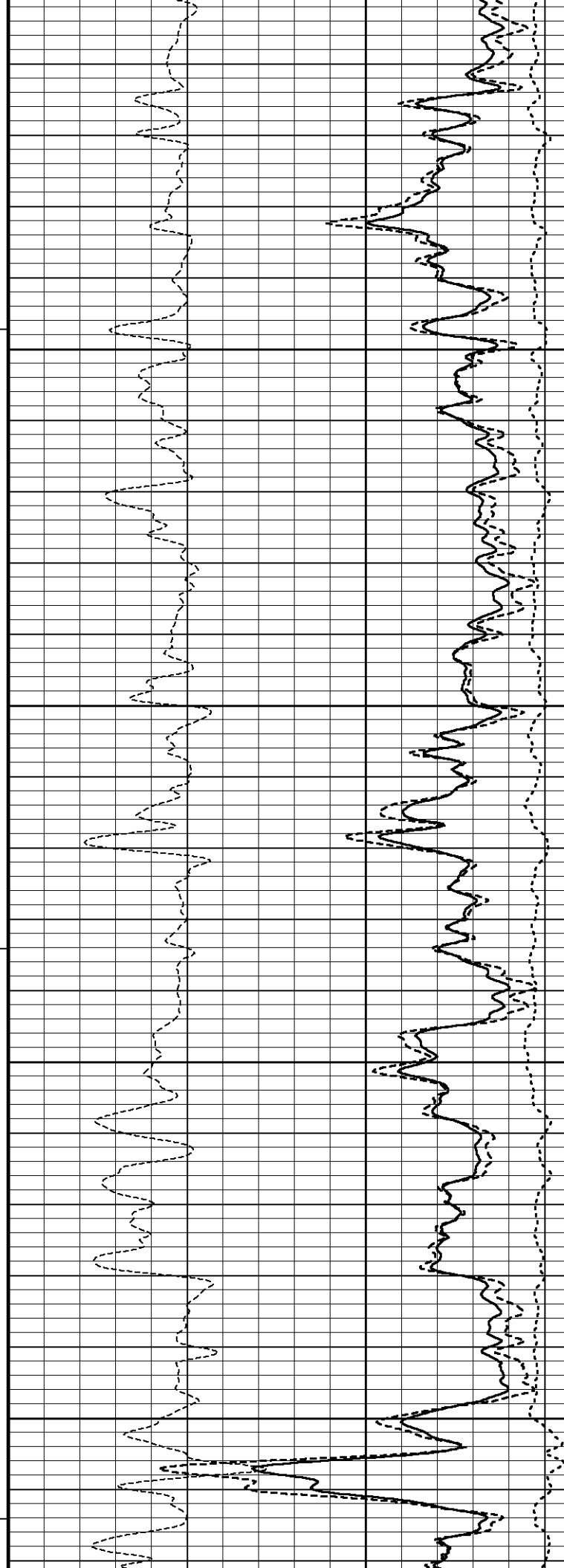
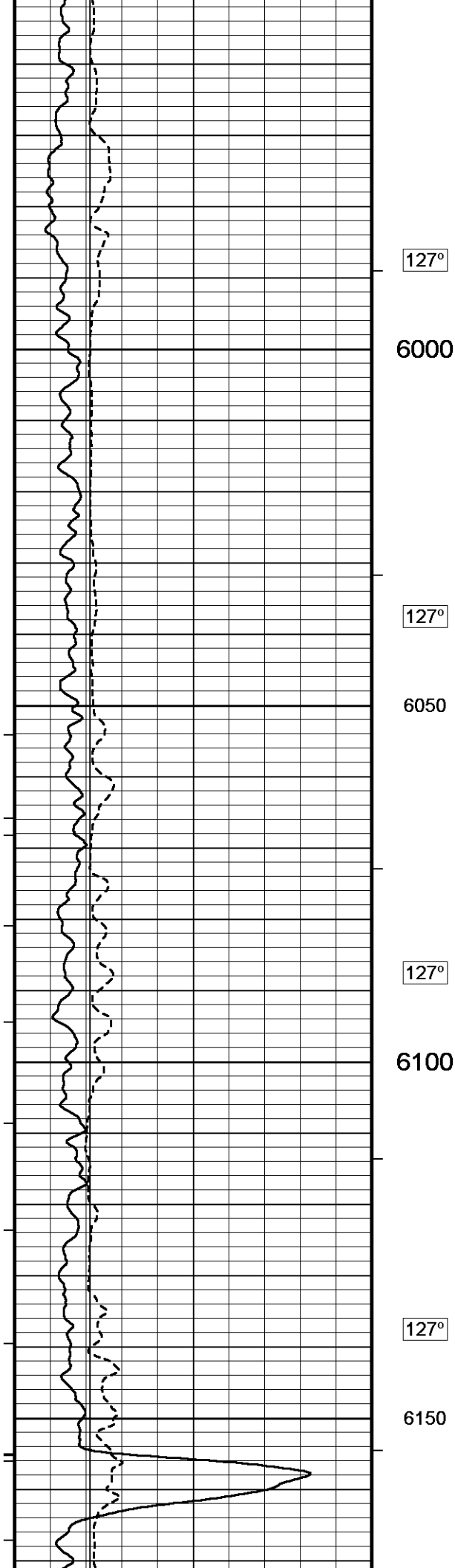
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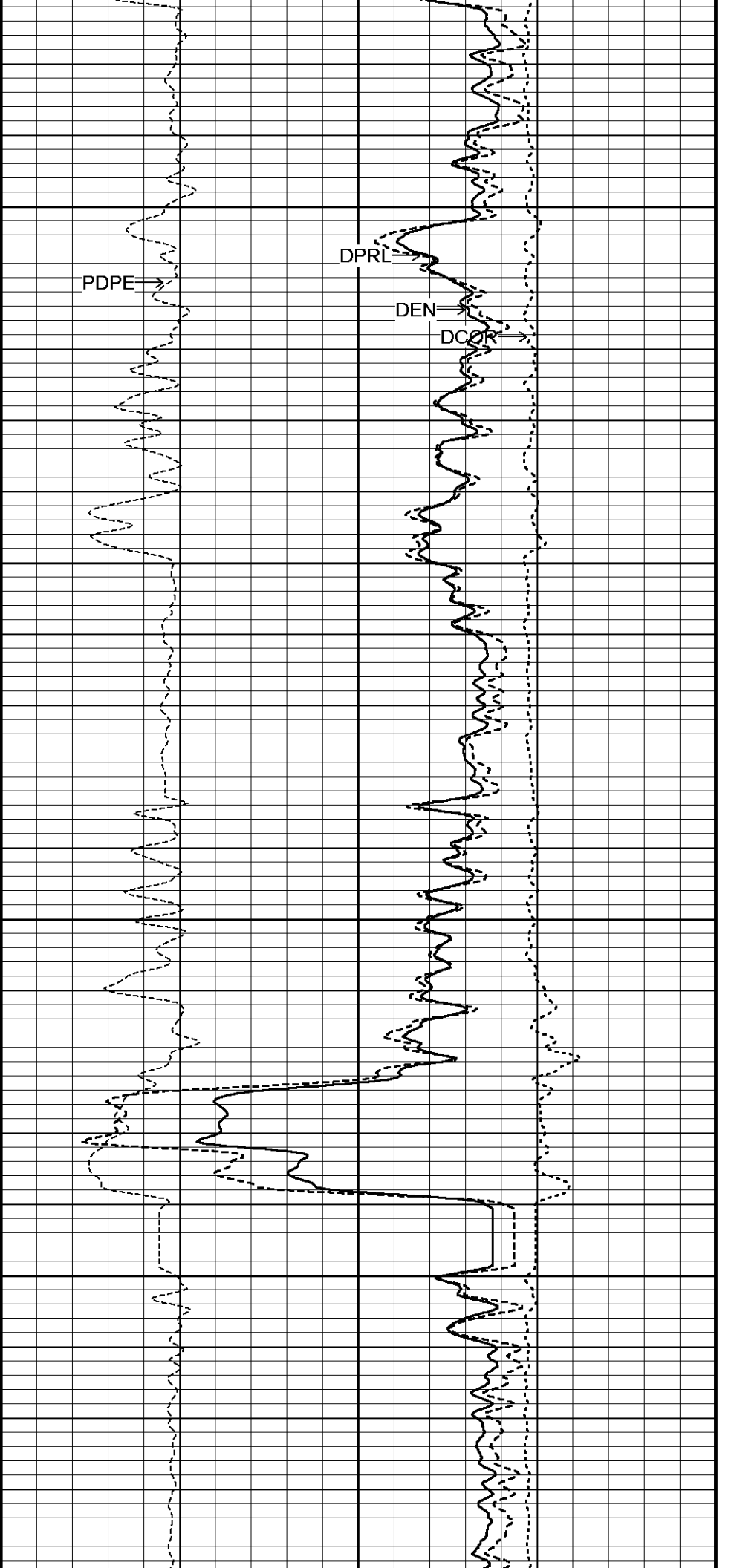
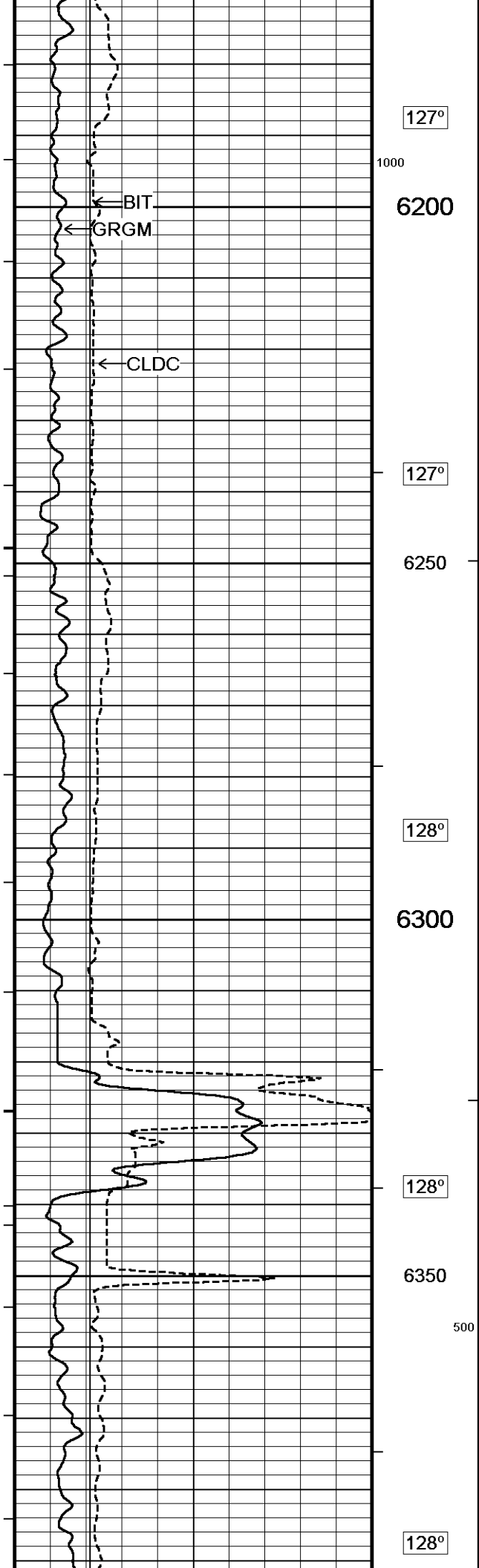
Limestone Density Por.
percent

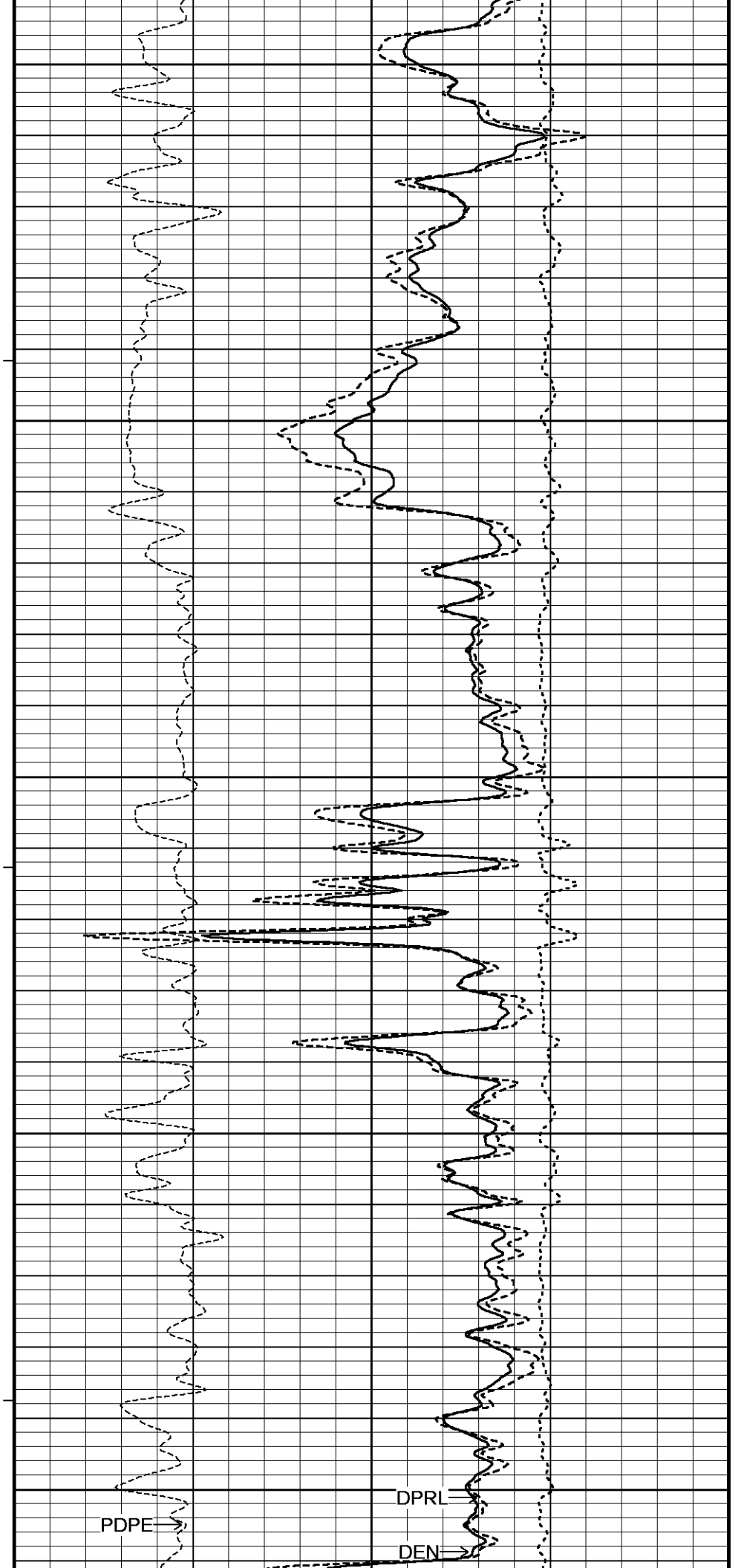
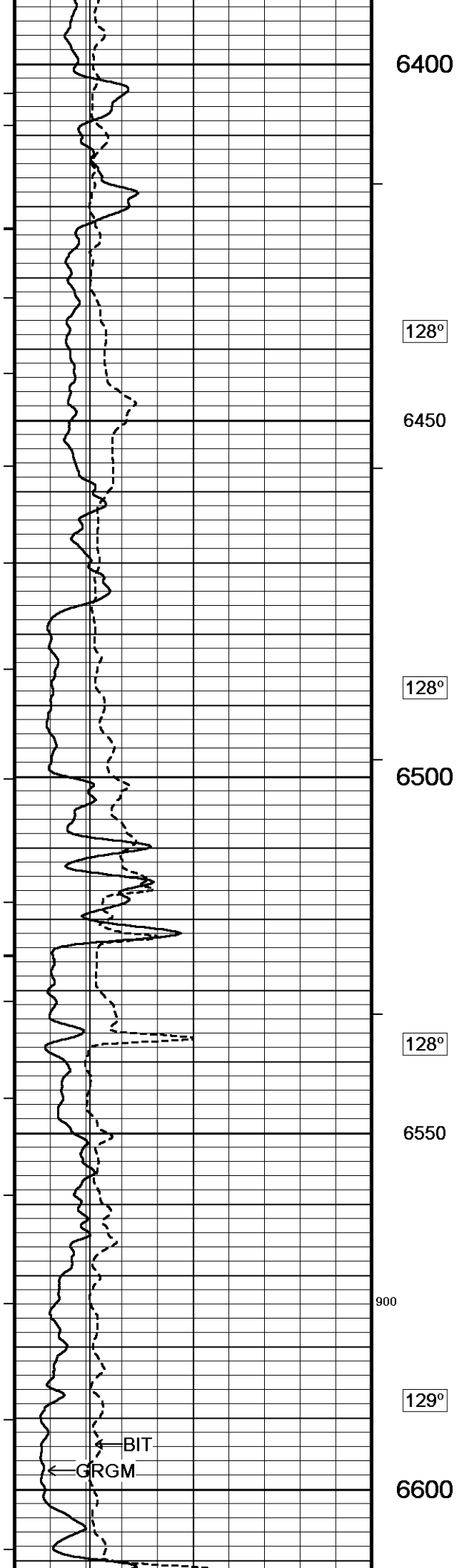
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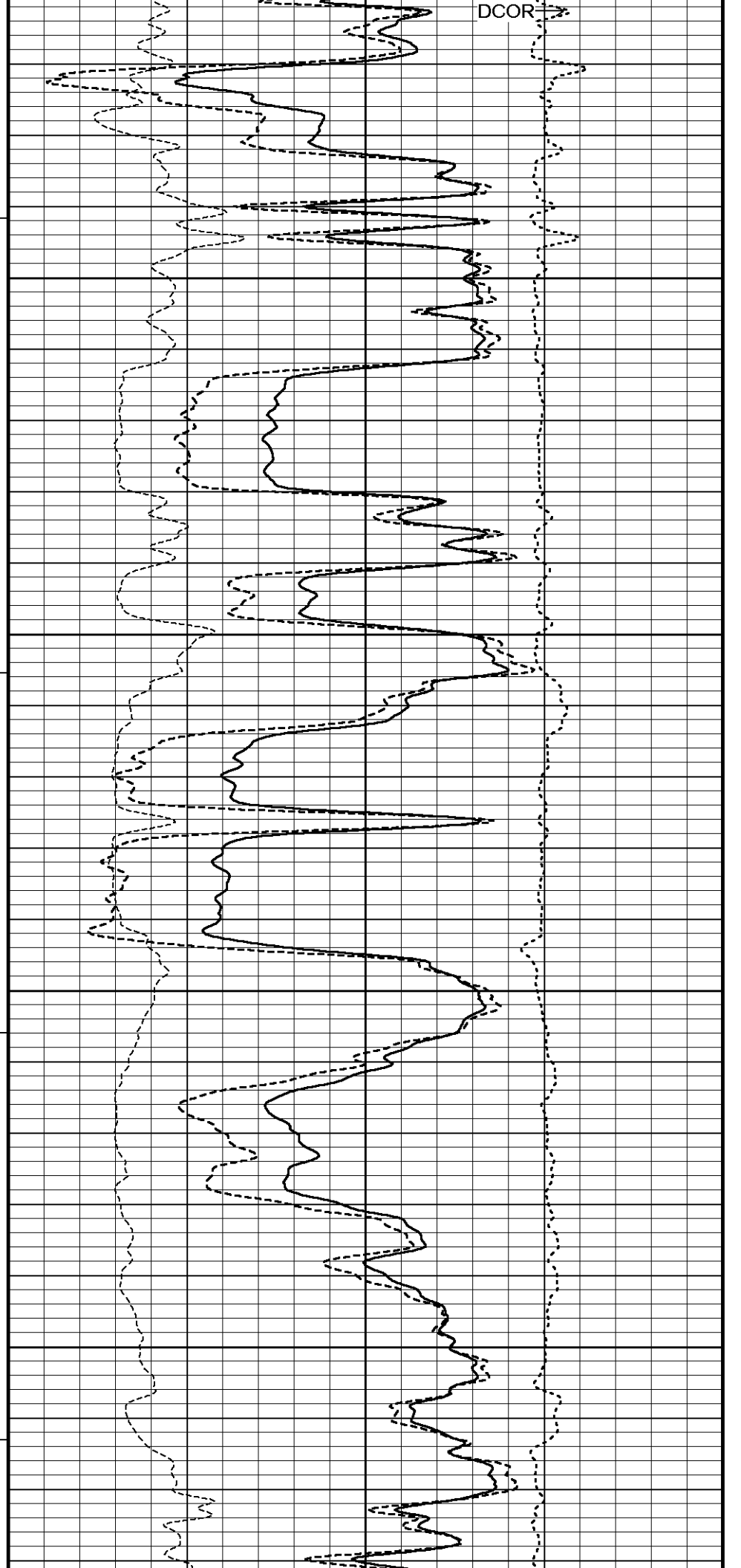
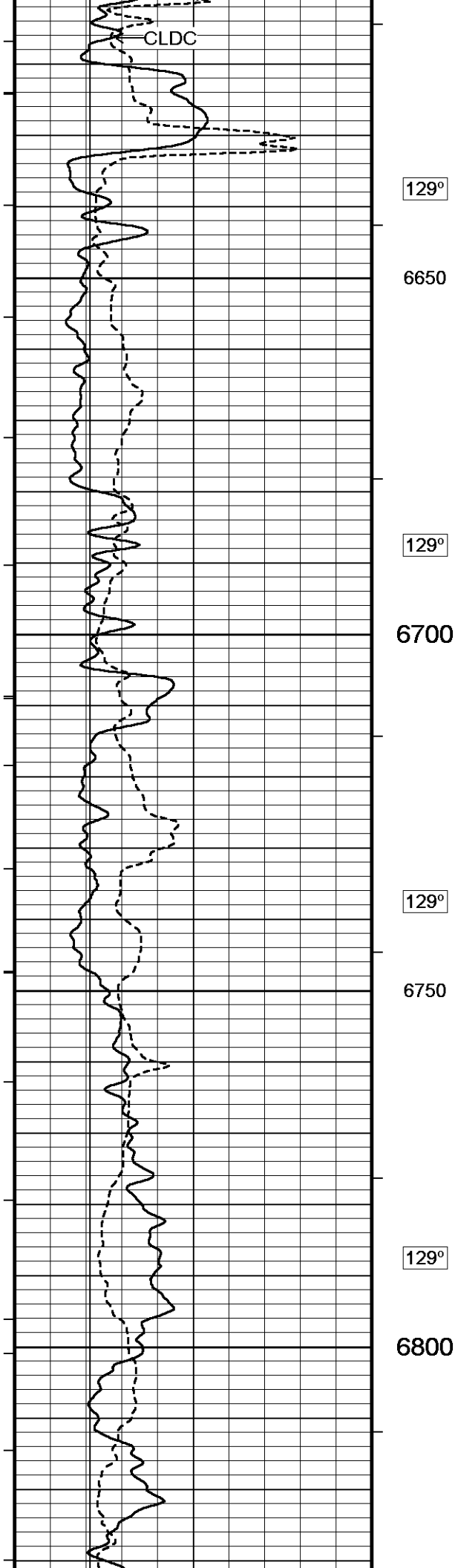


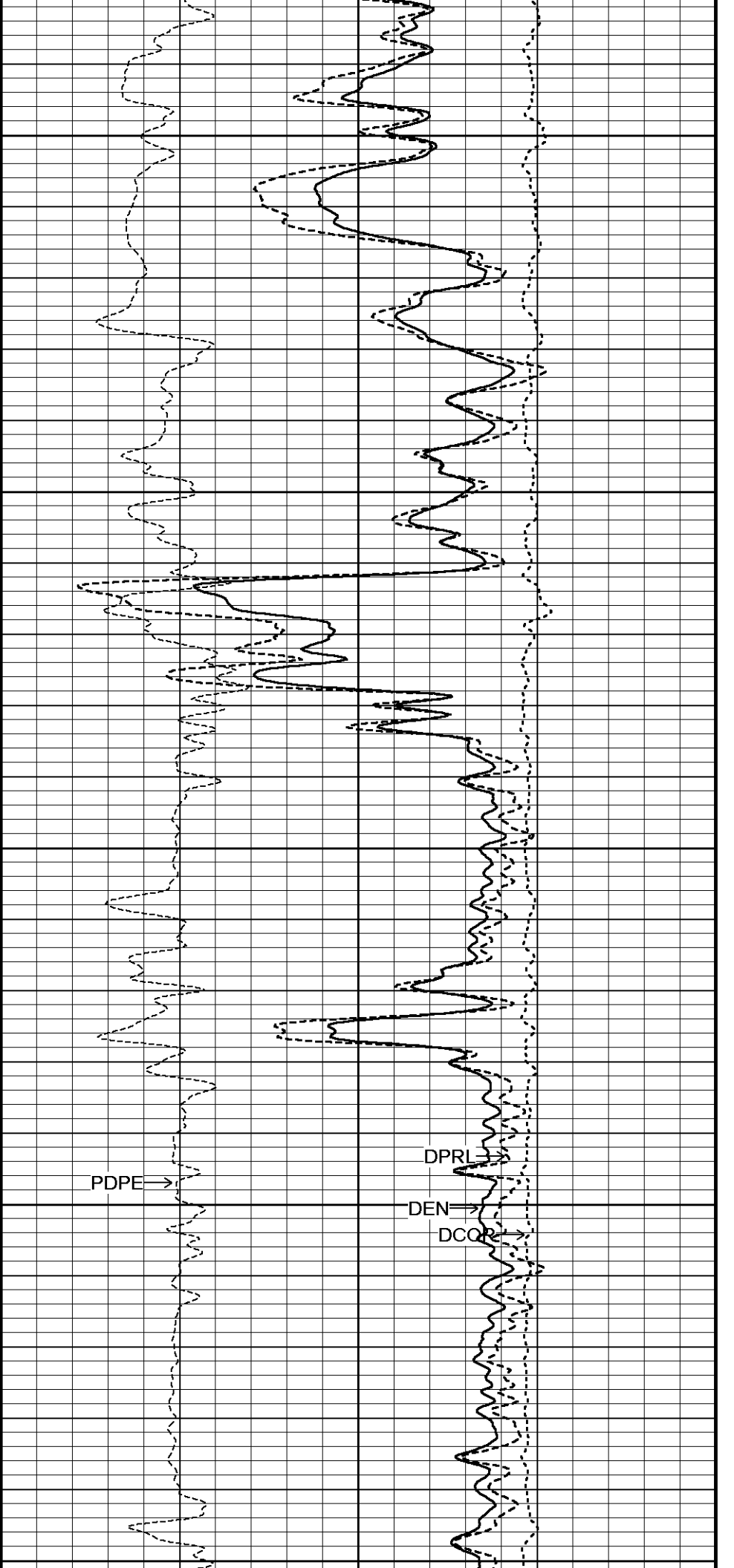
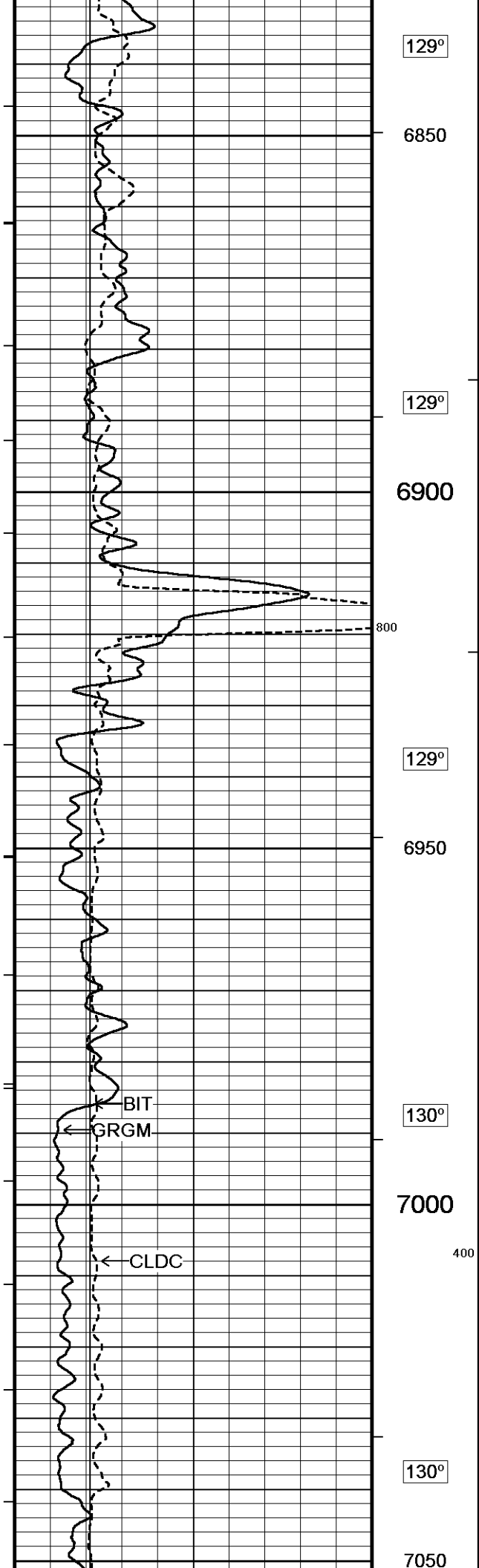


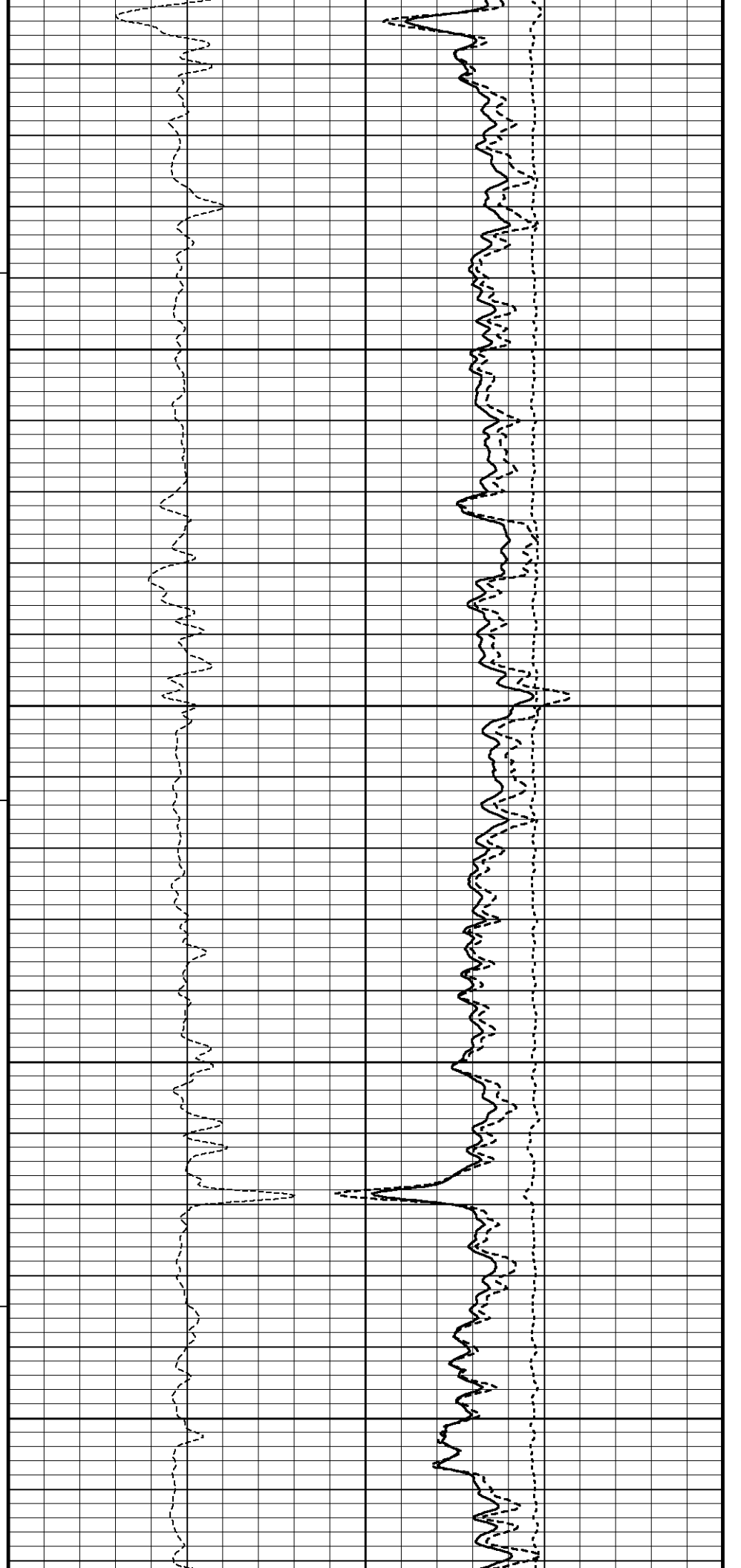
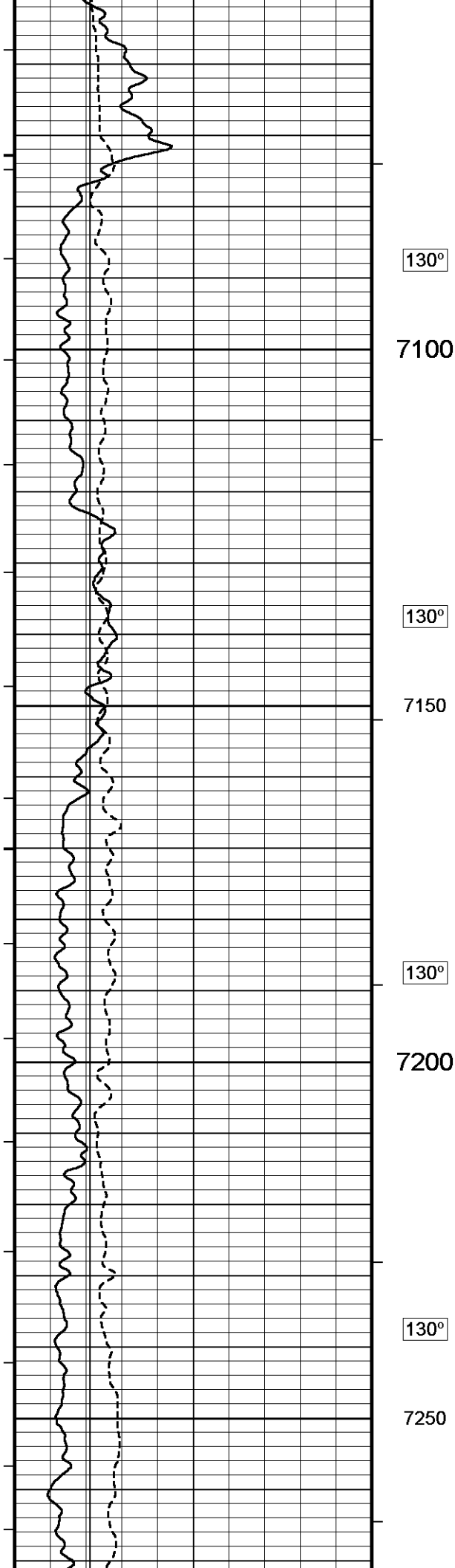


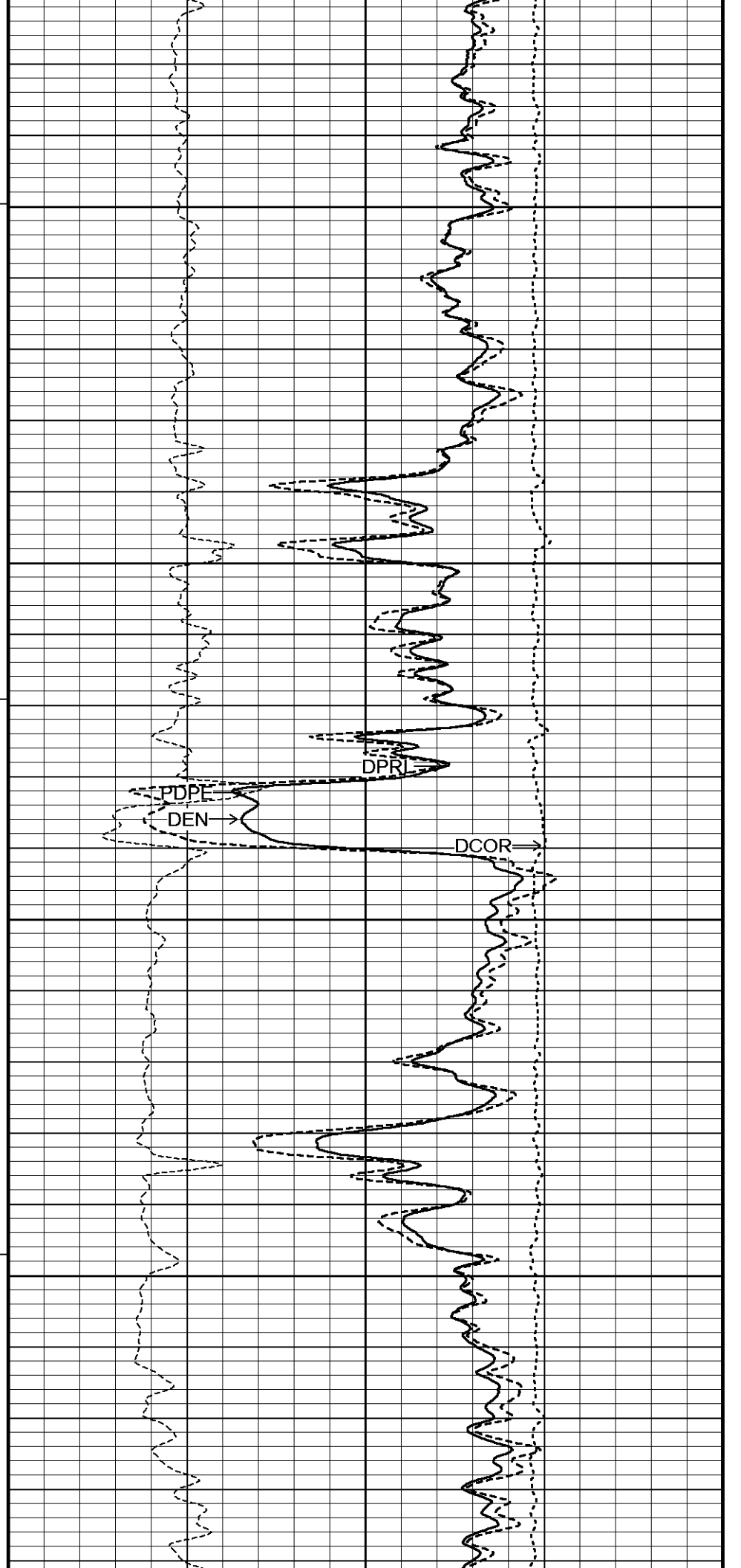
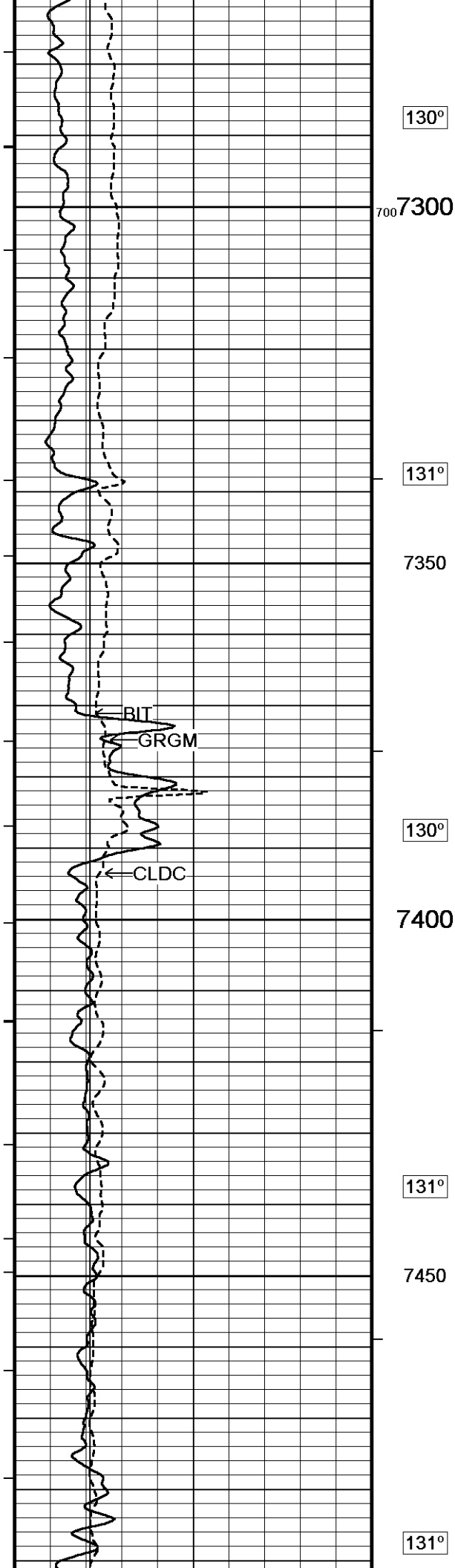


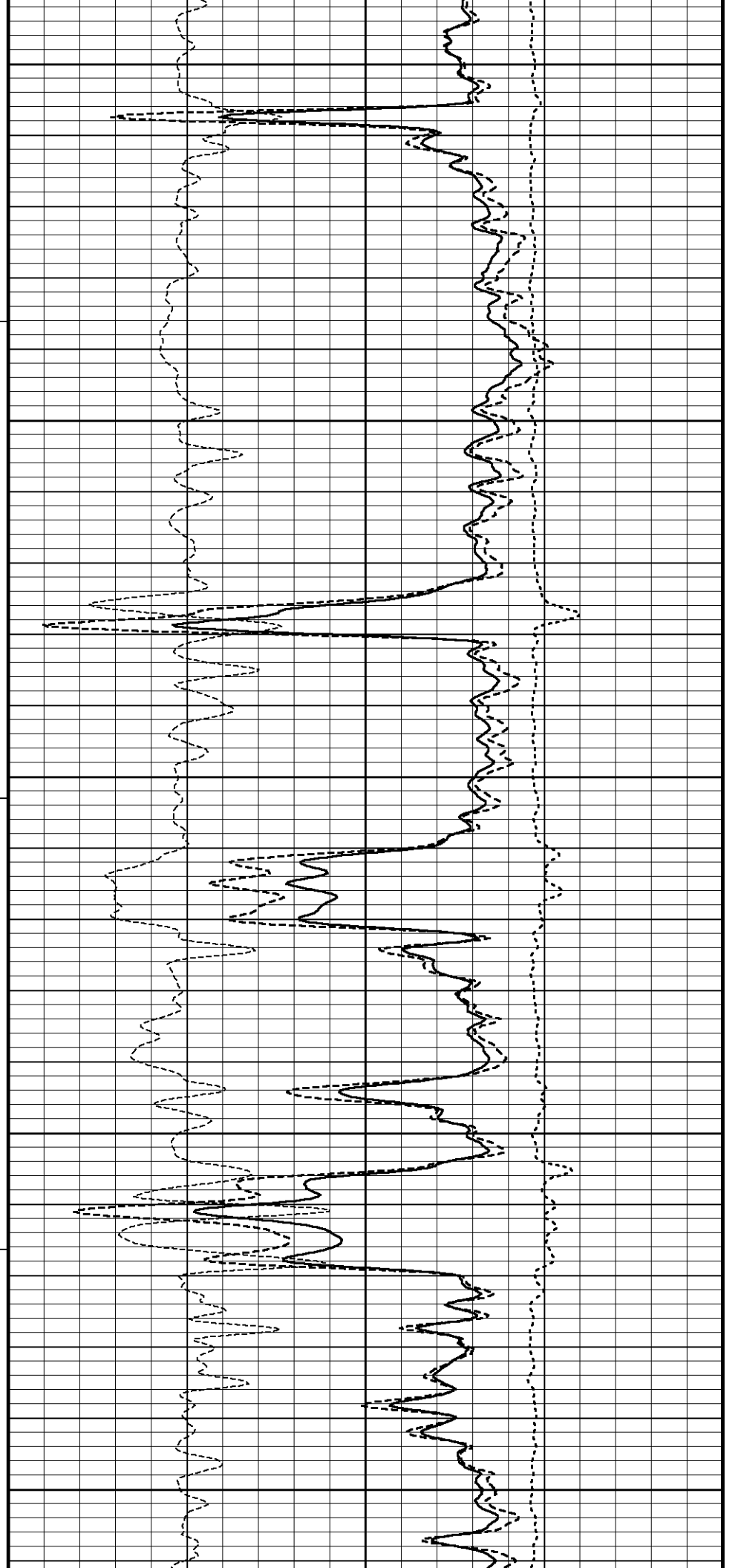
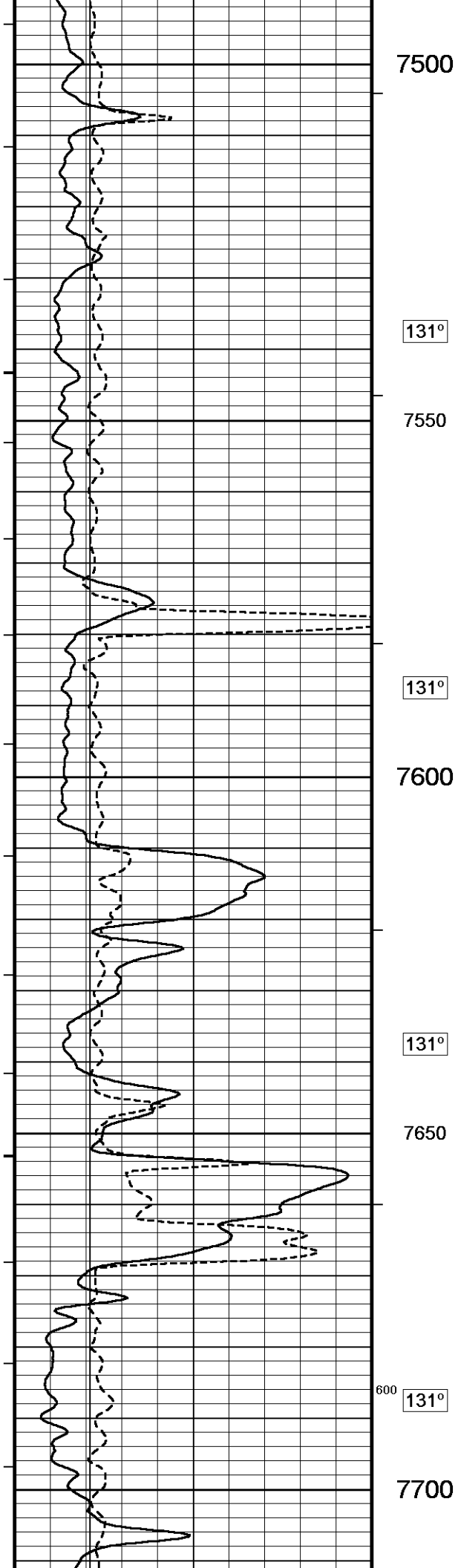


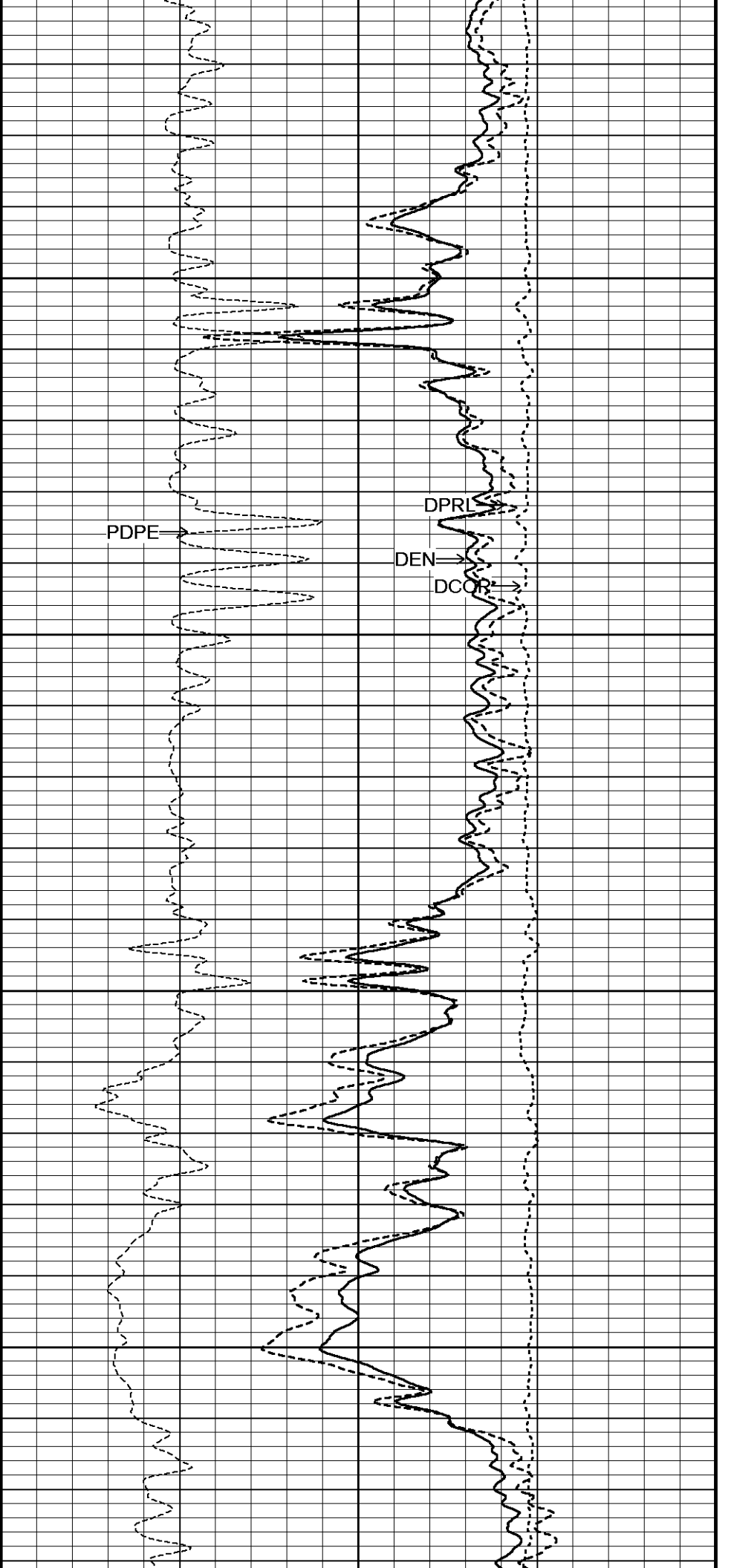
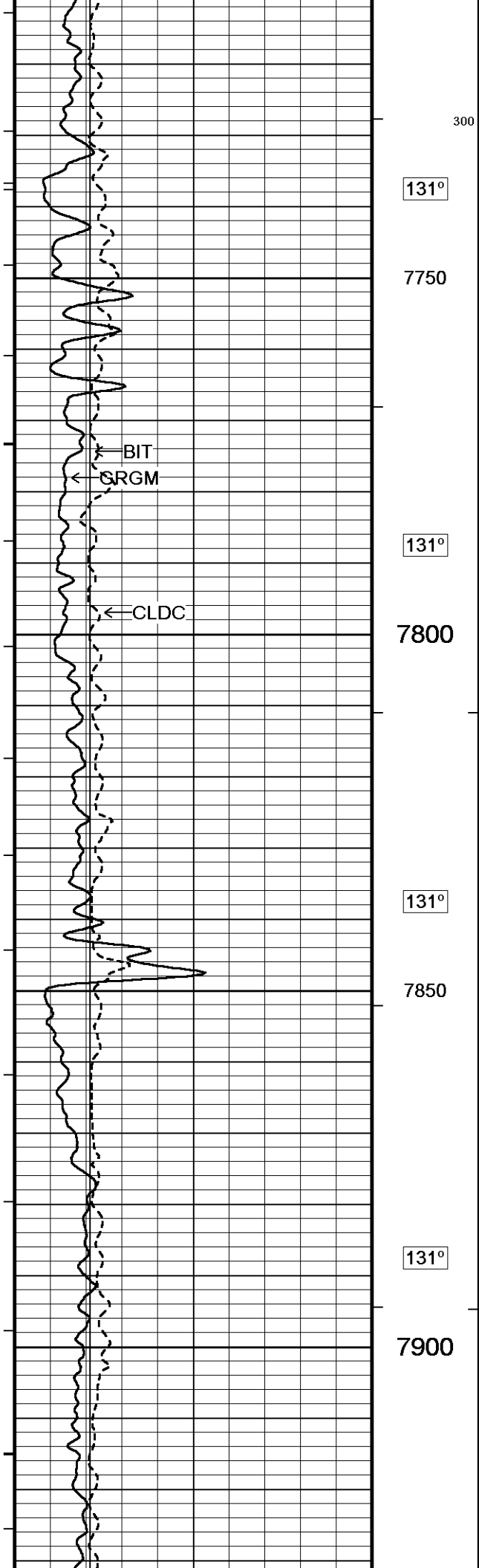


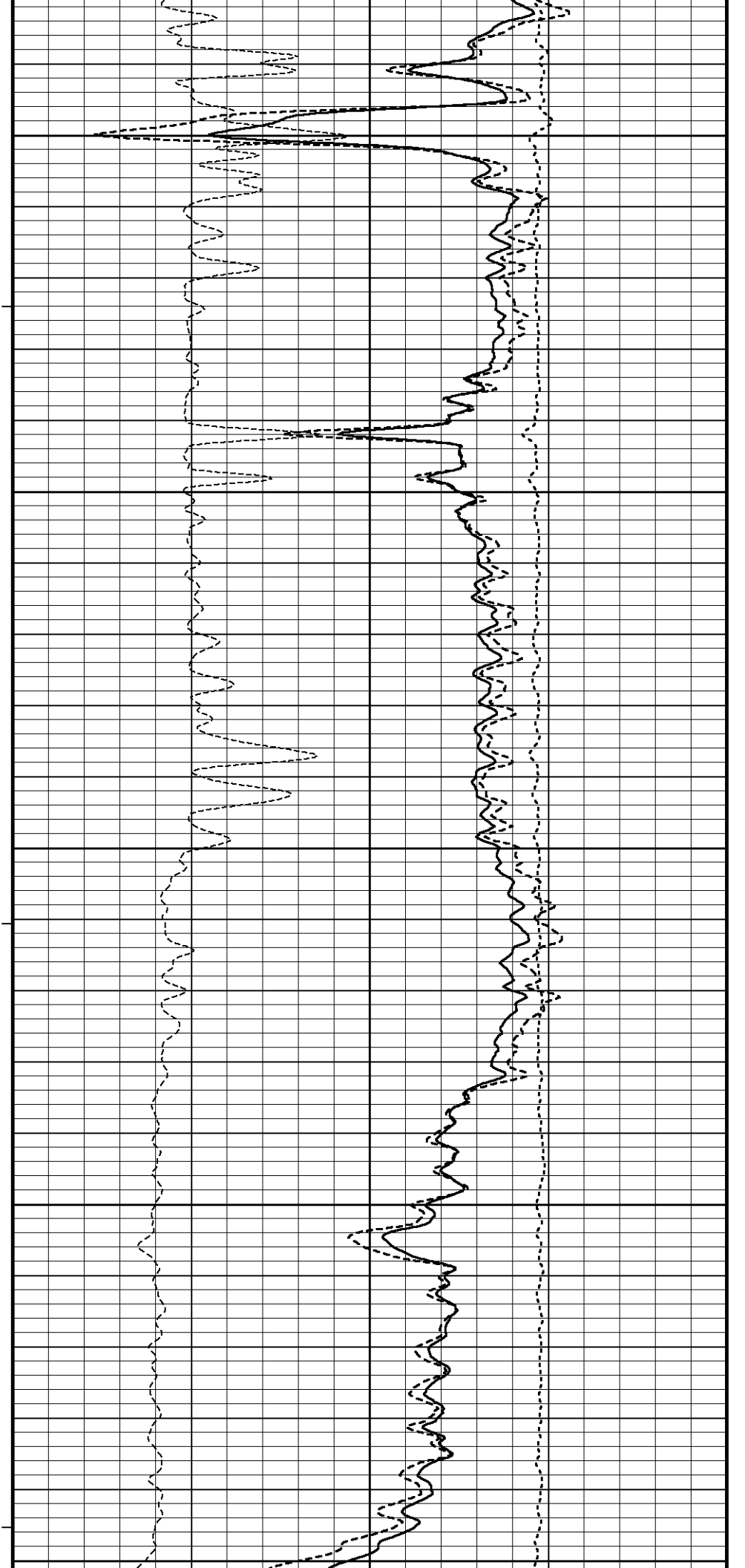
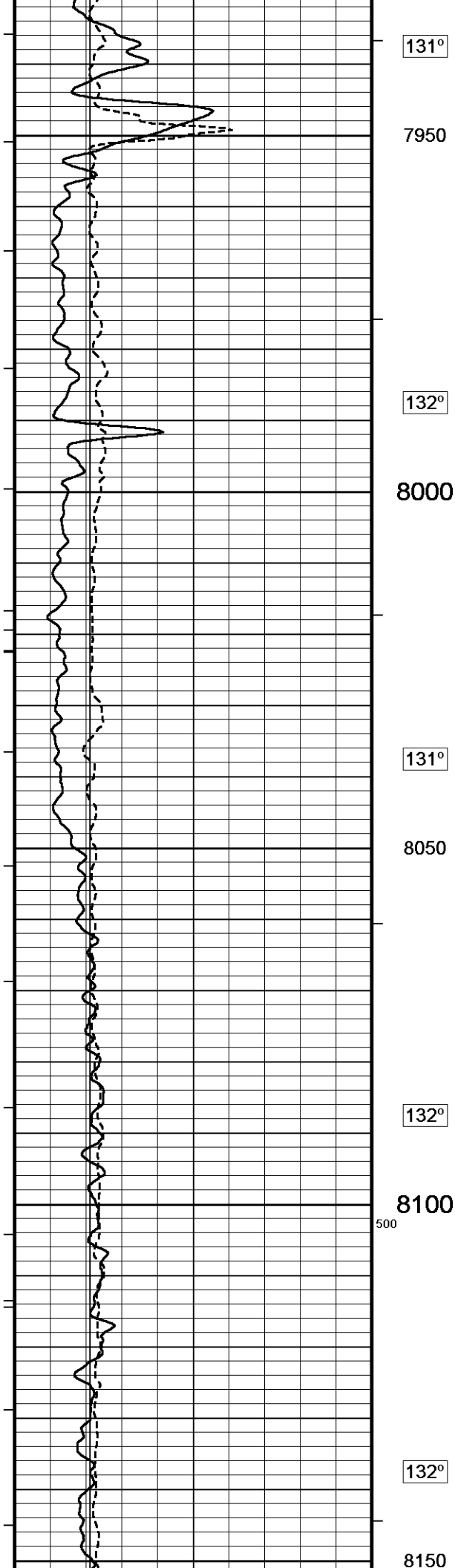


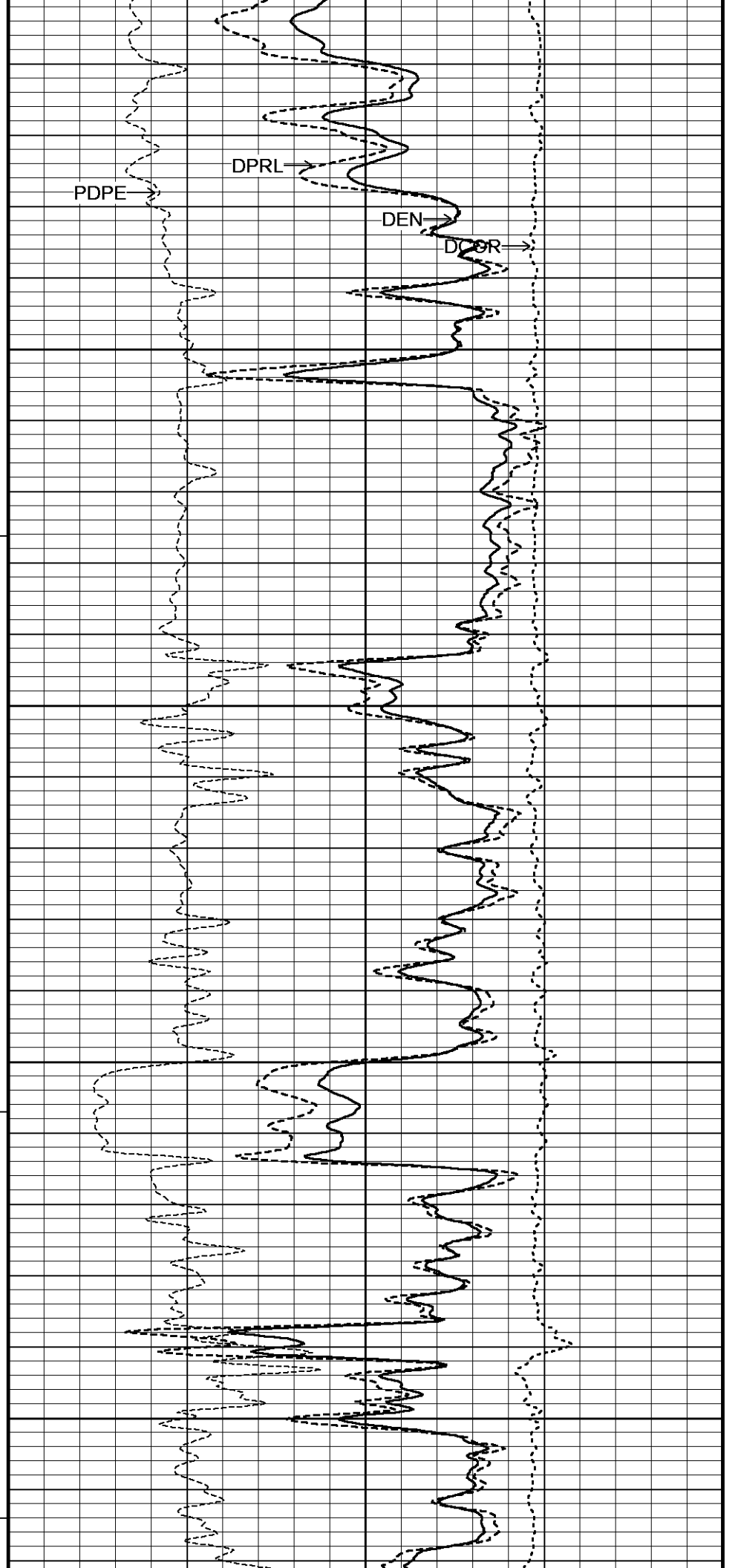
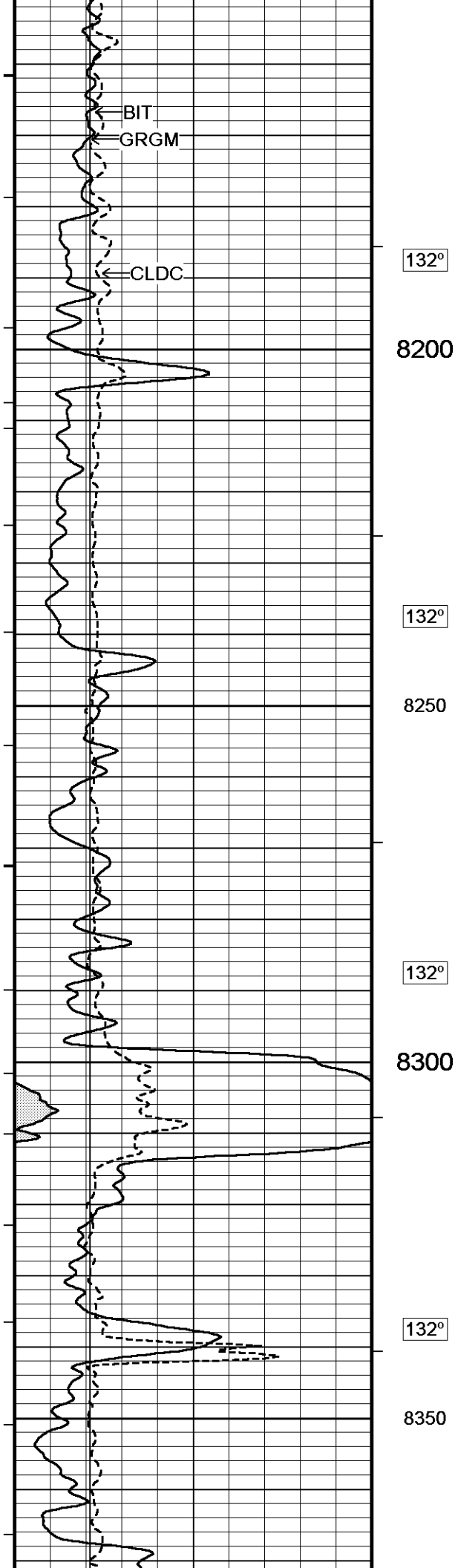


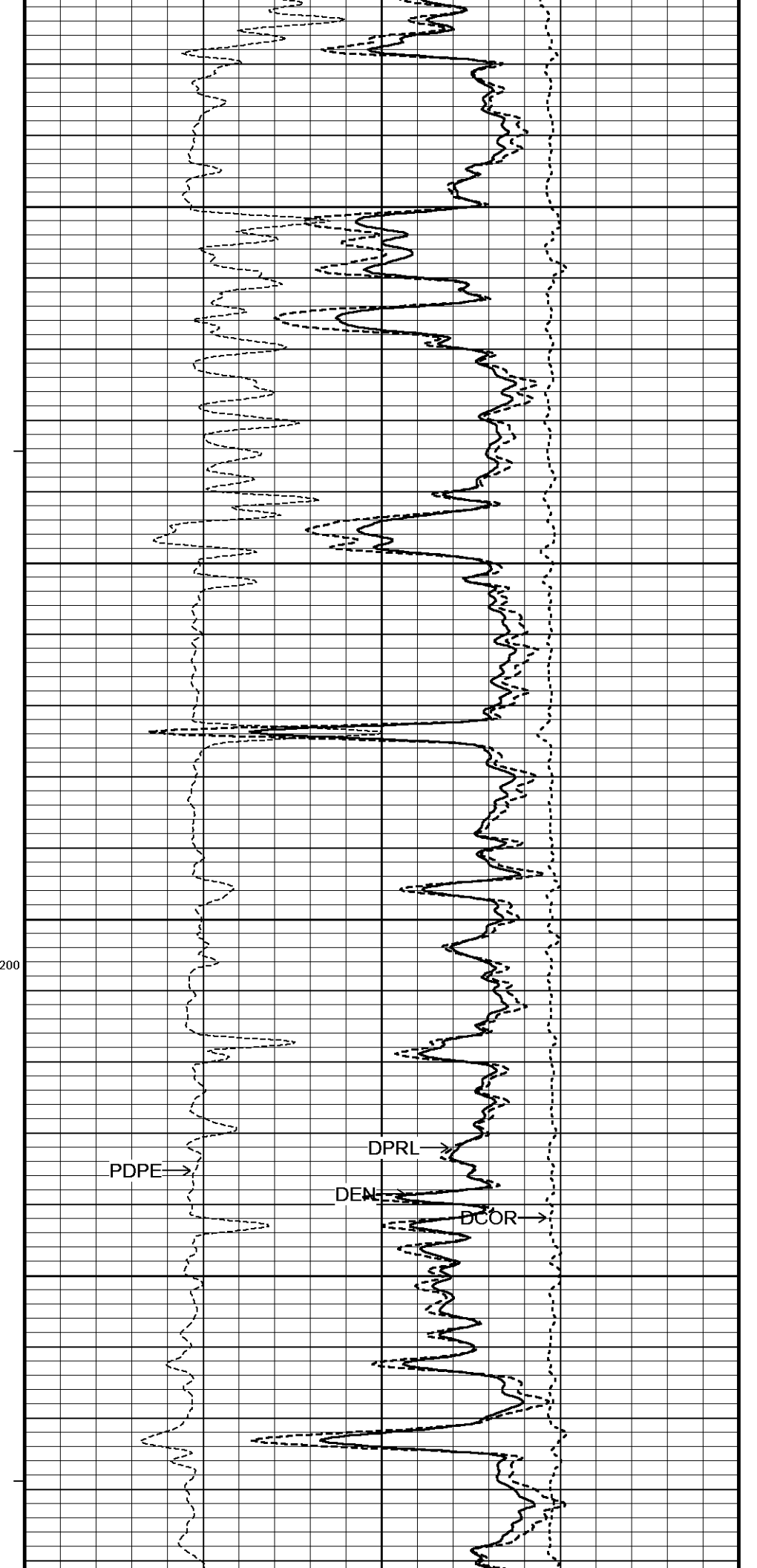
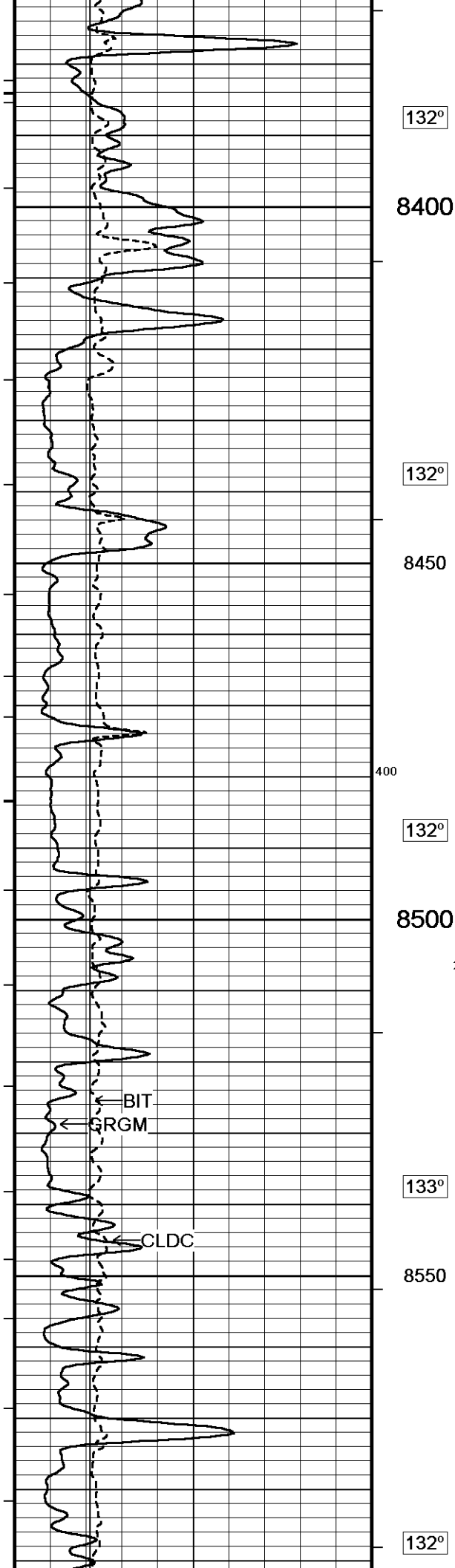


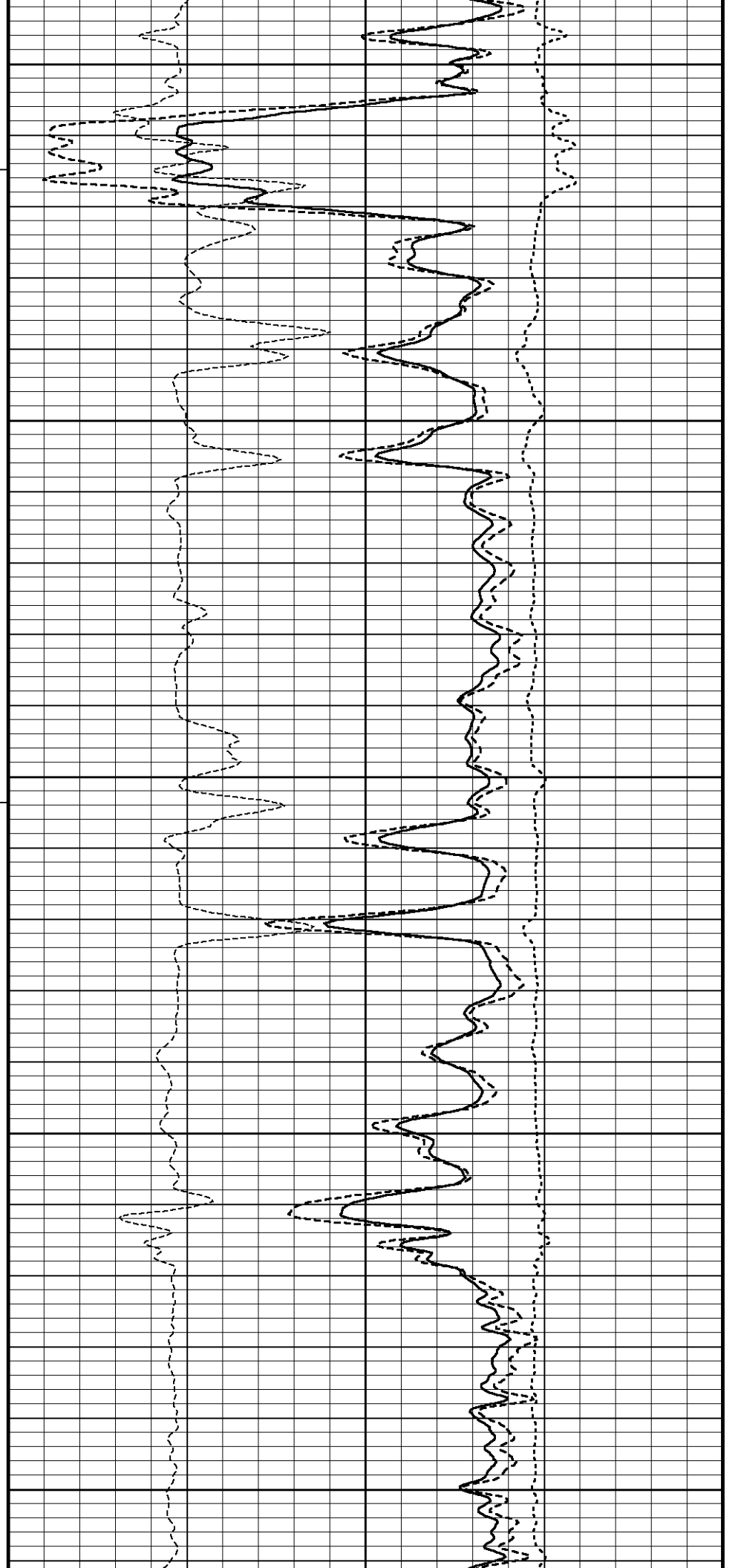
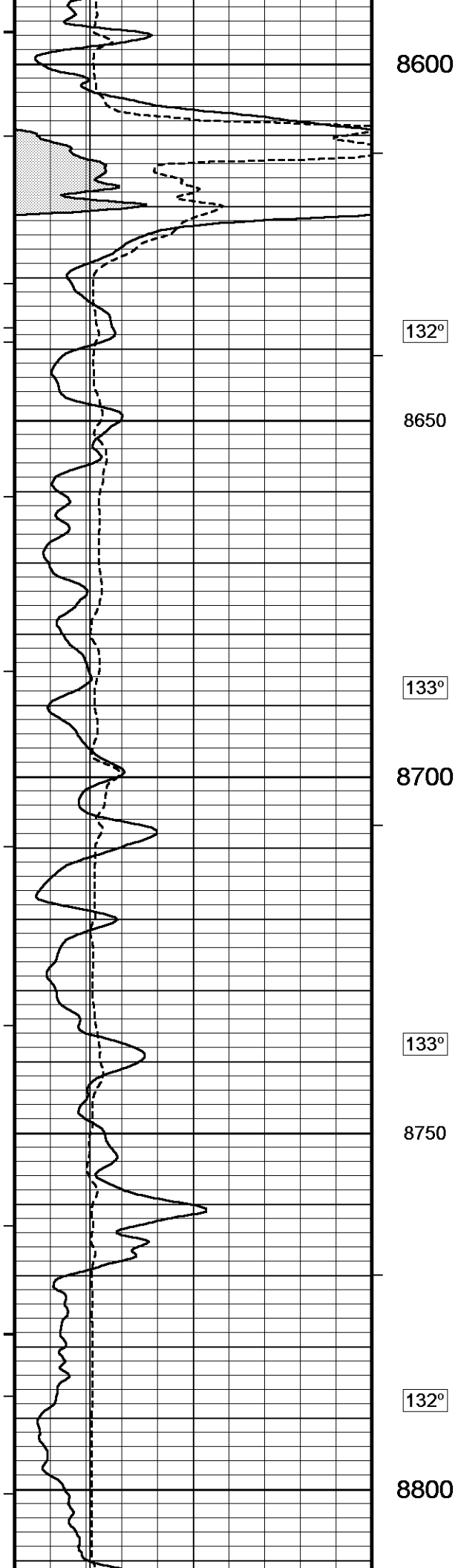


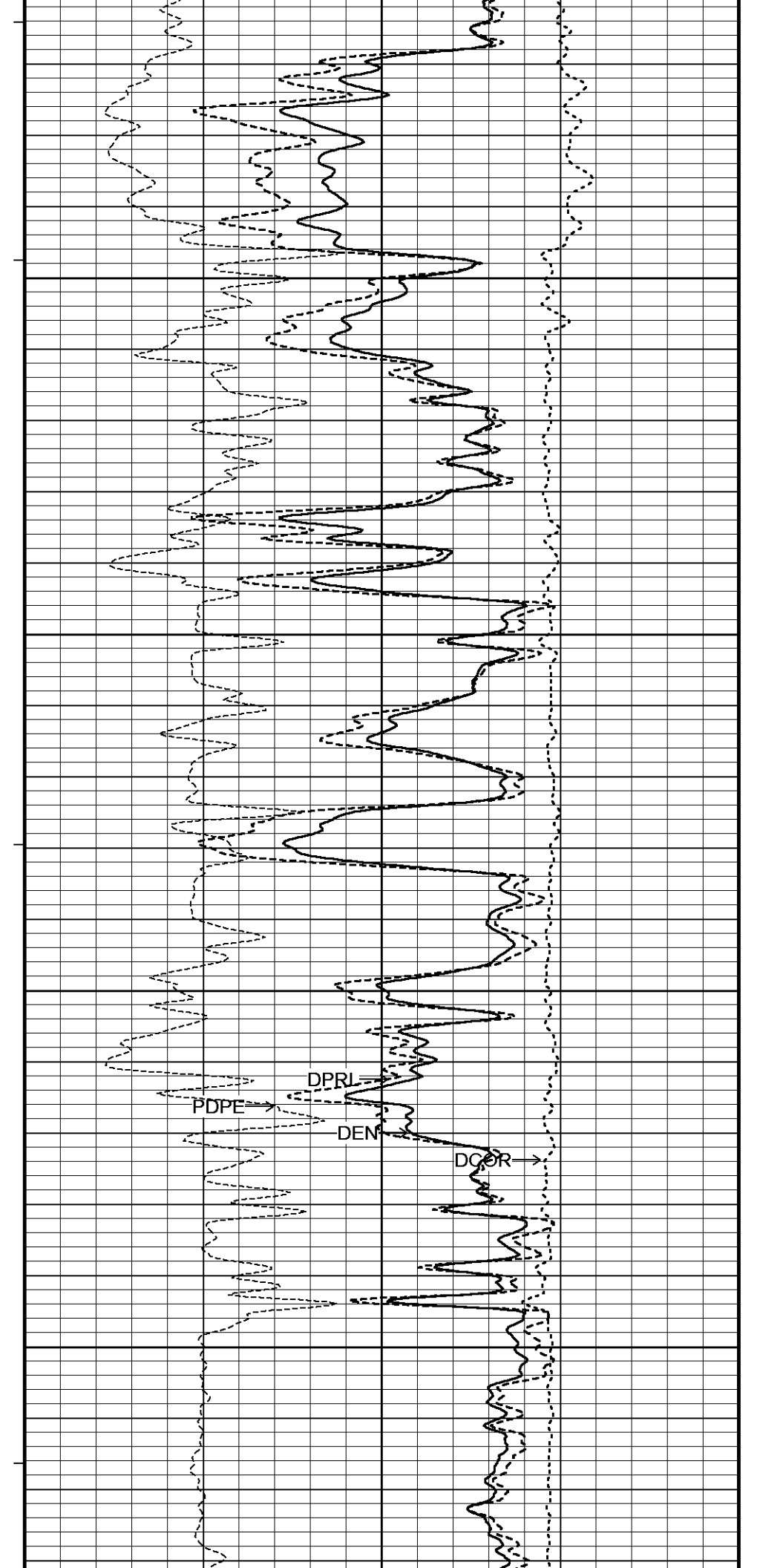
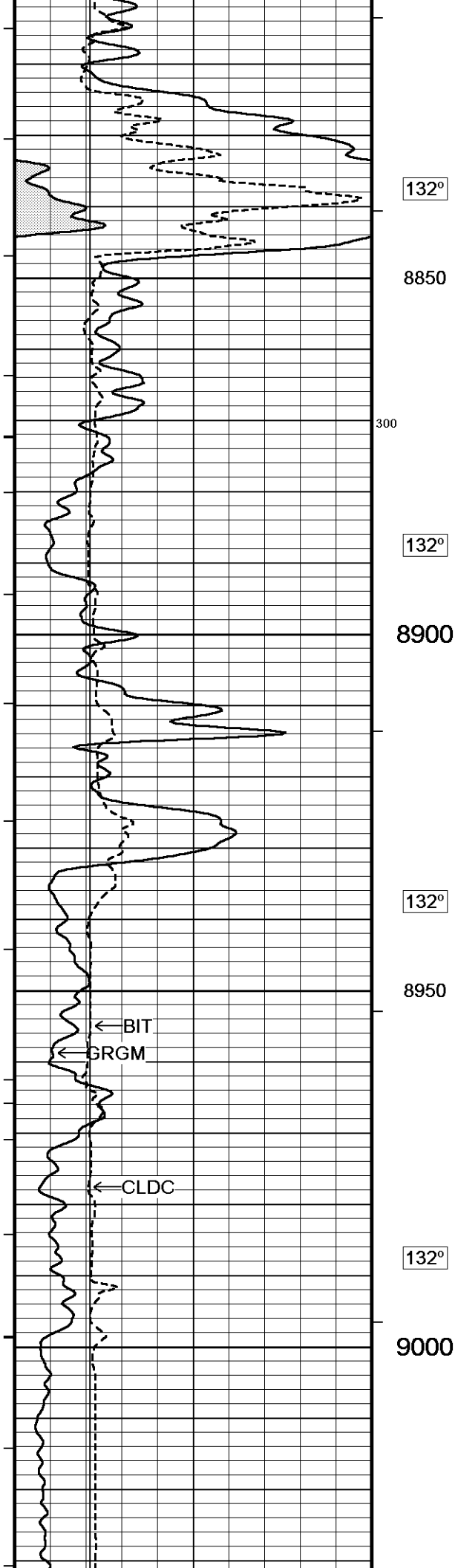


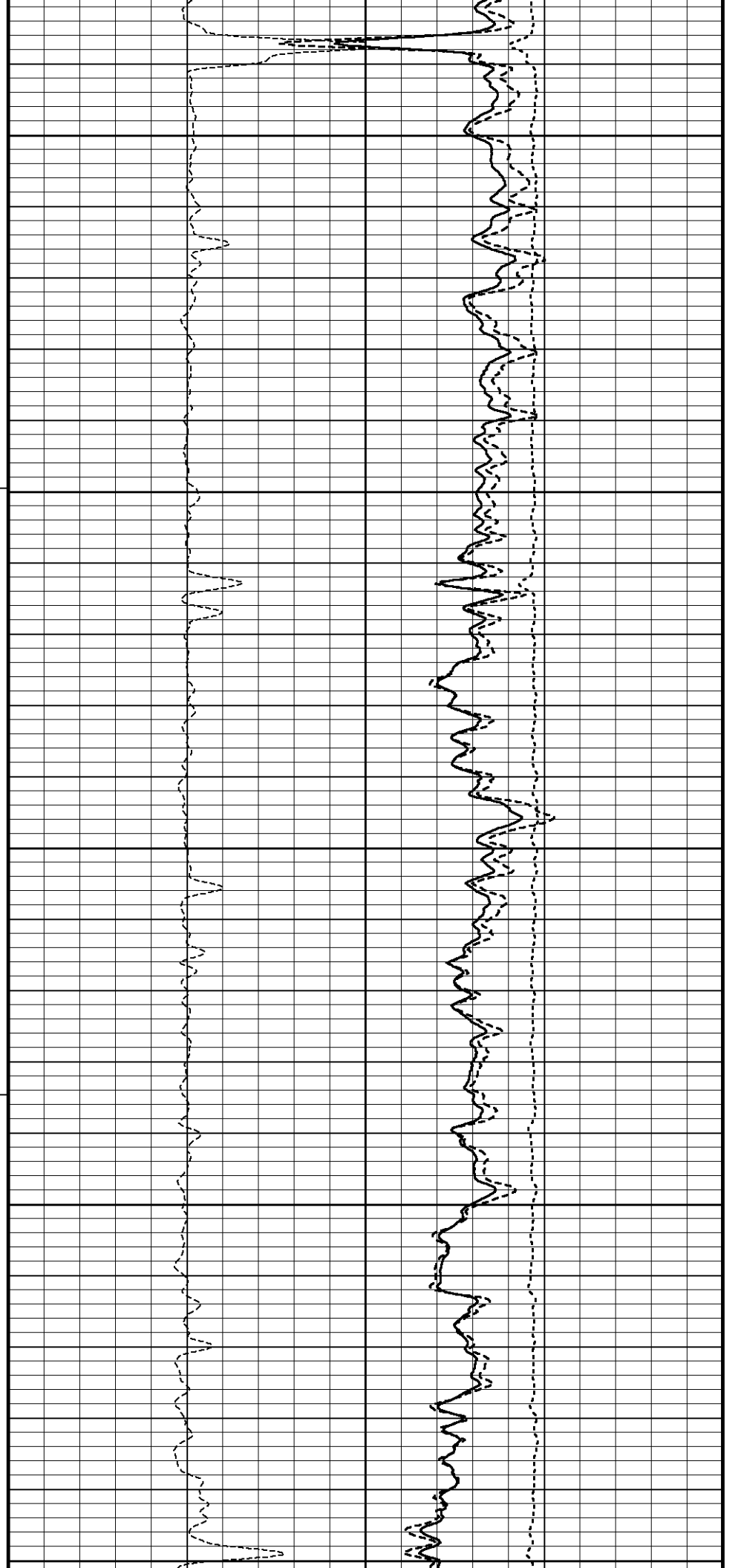
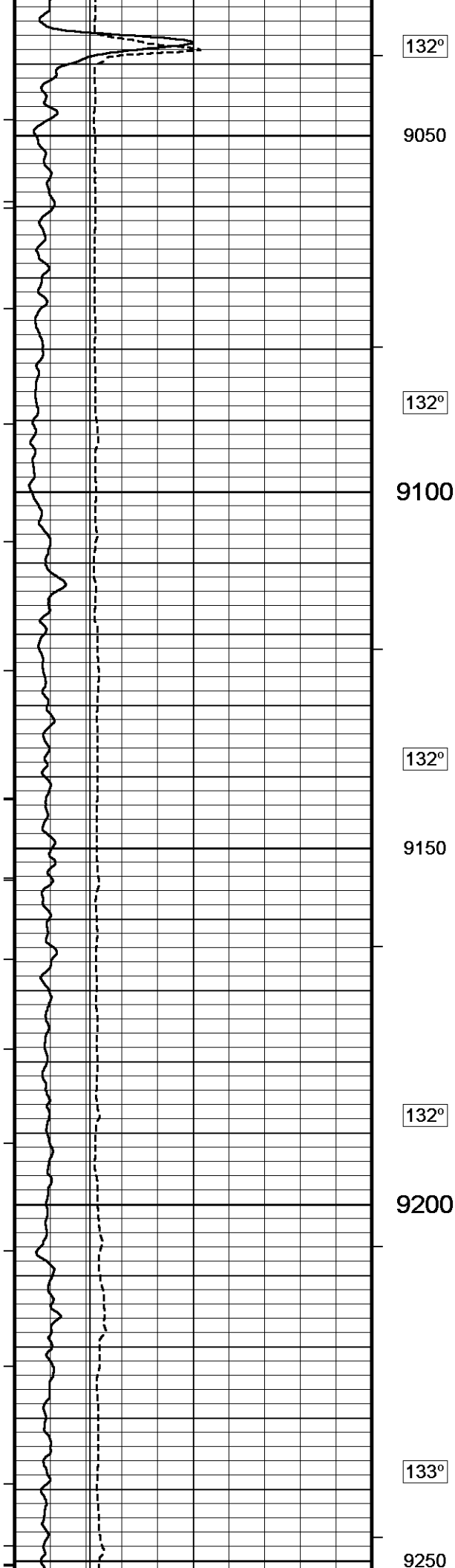


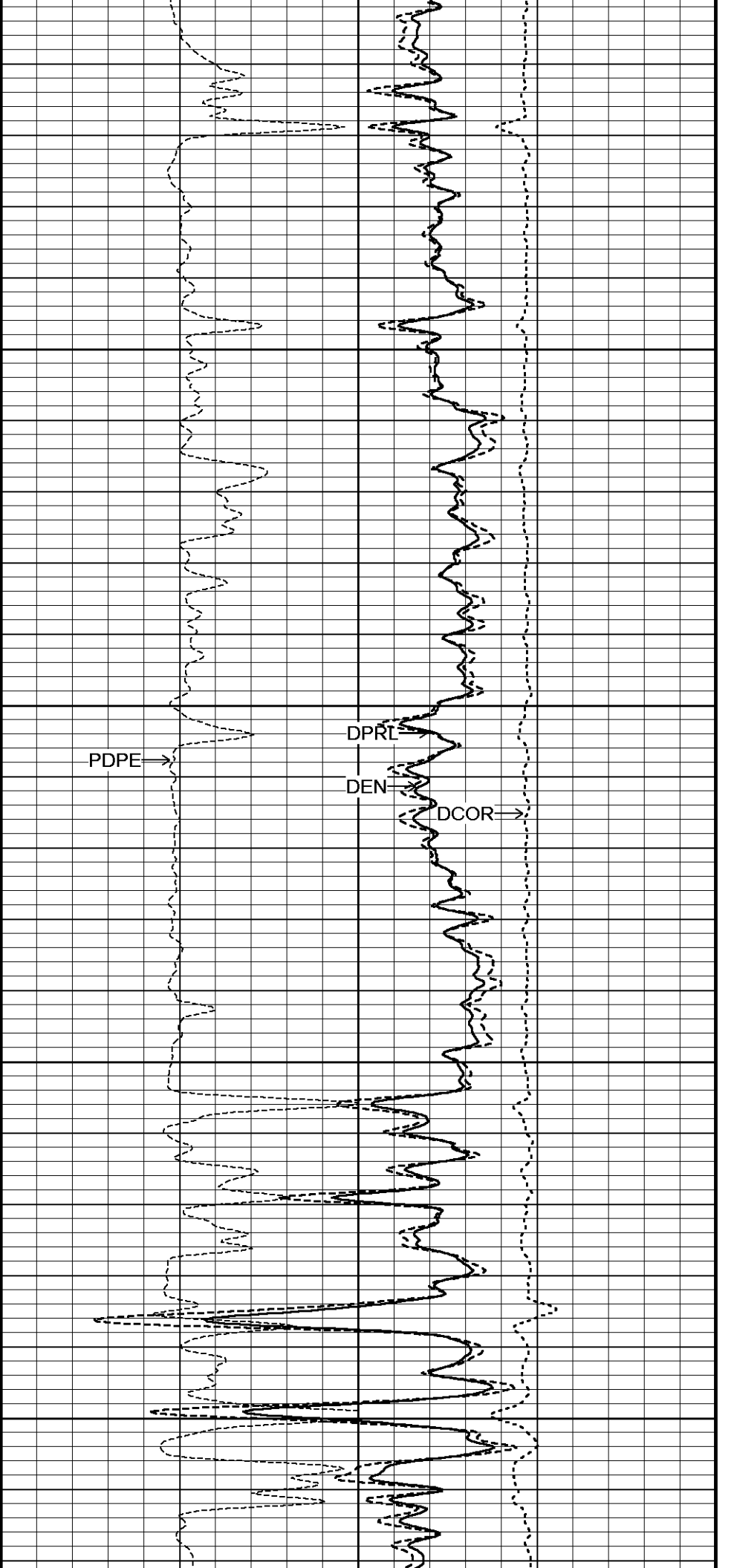
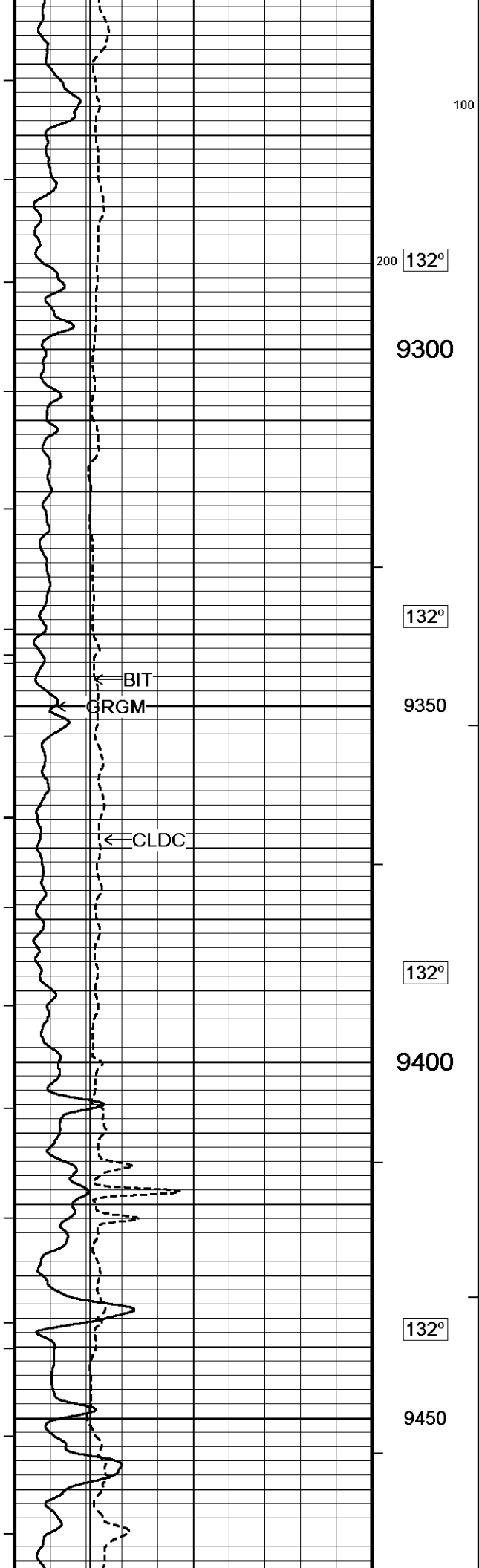


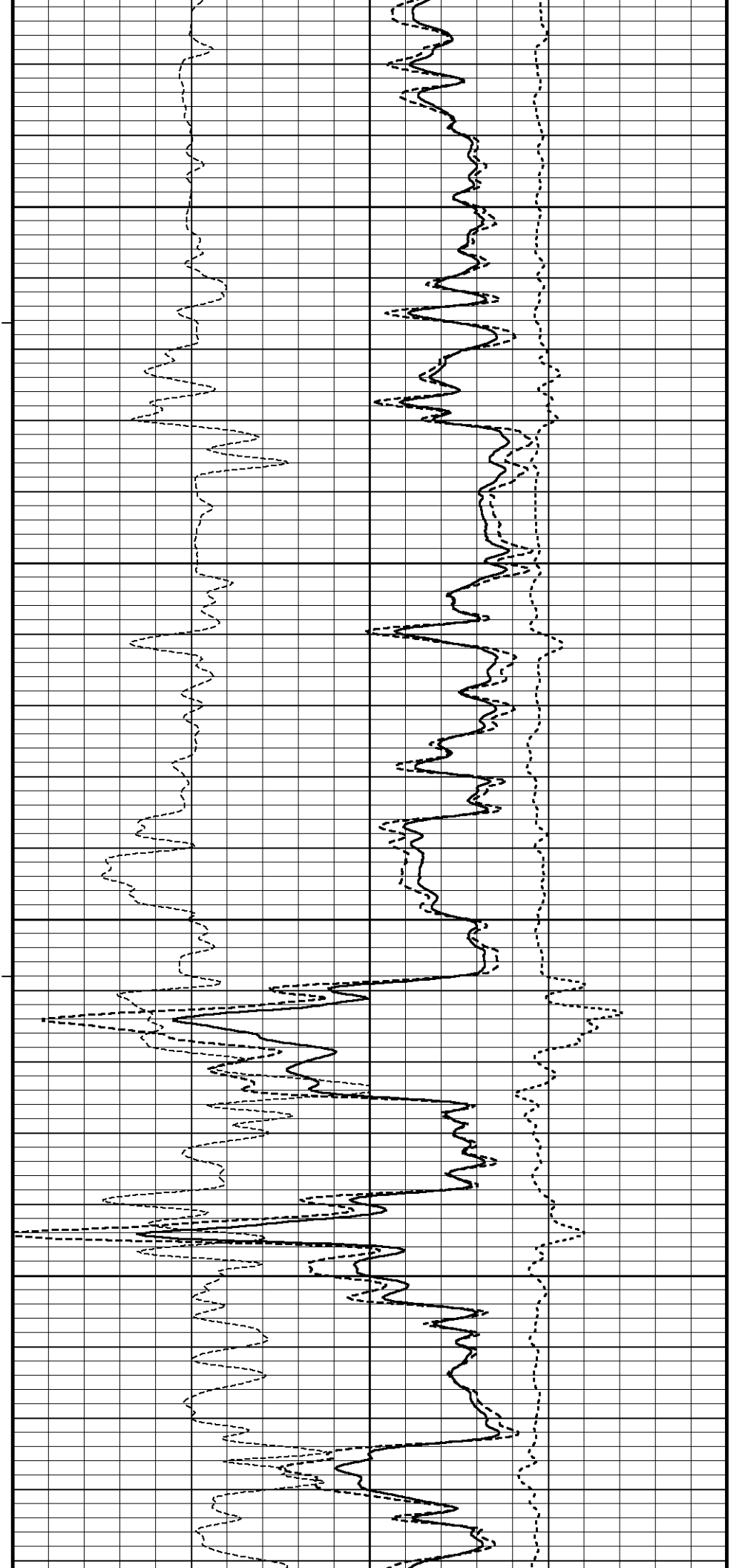
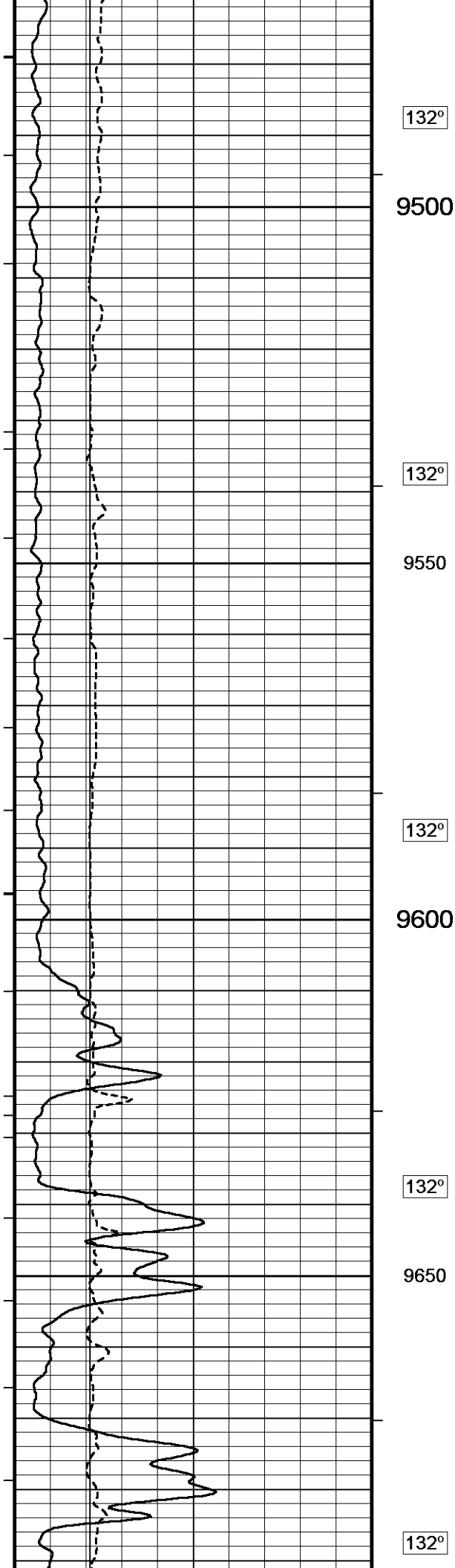


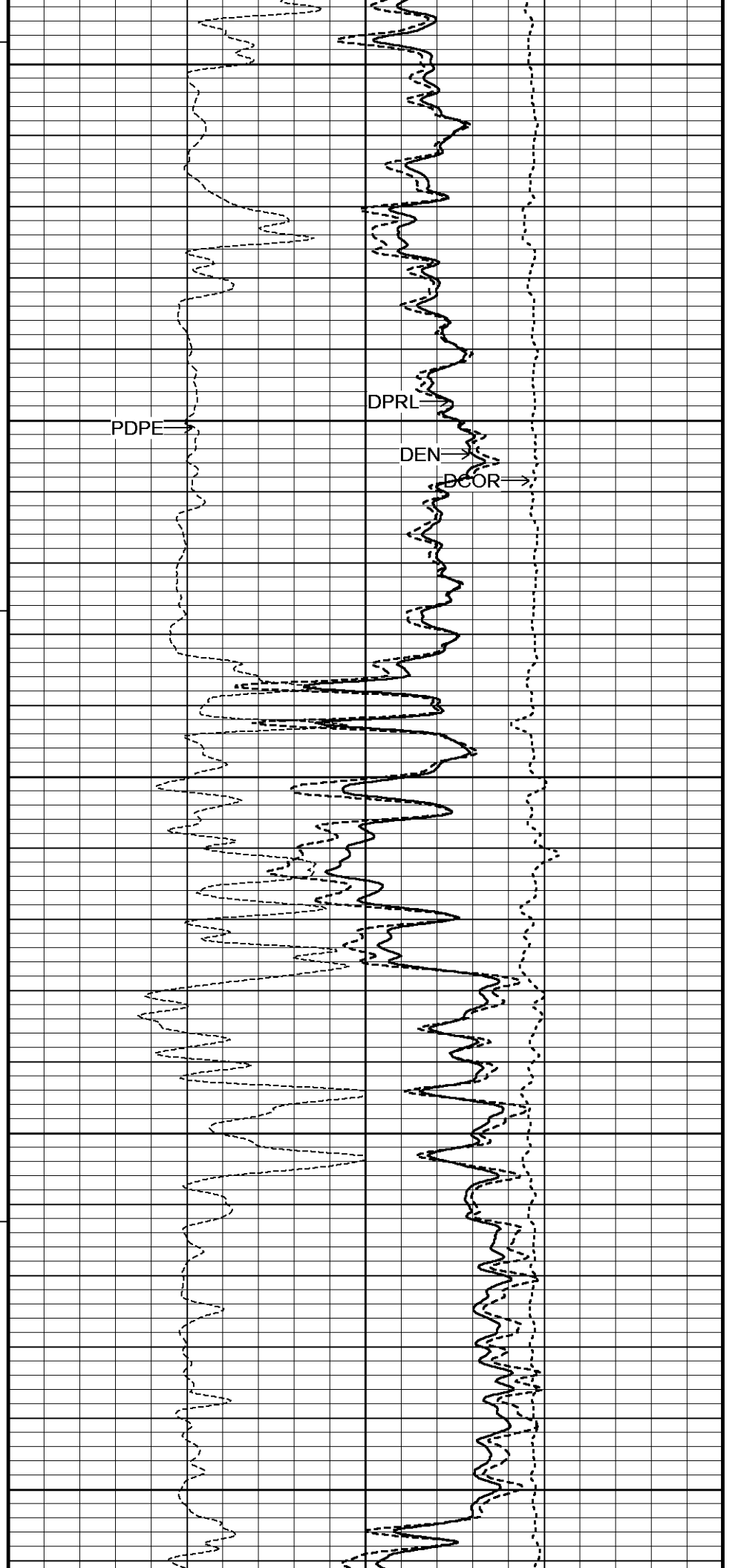
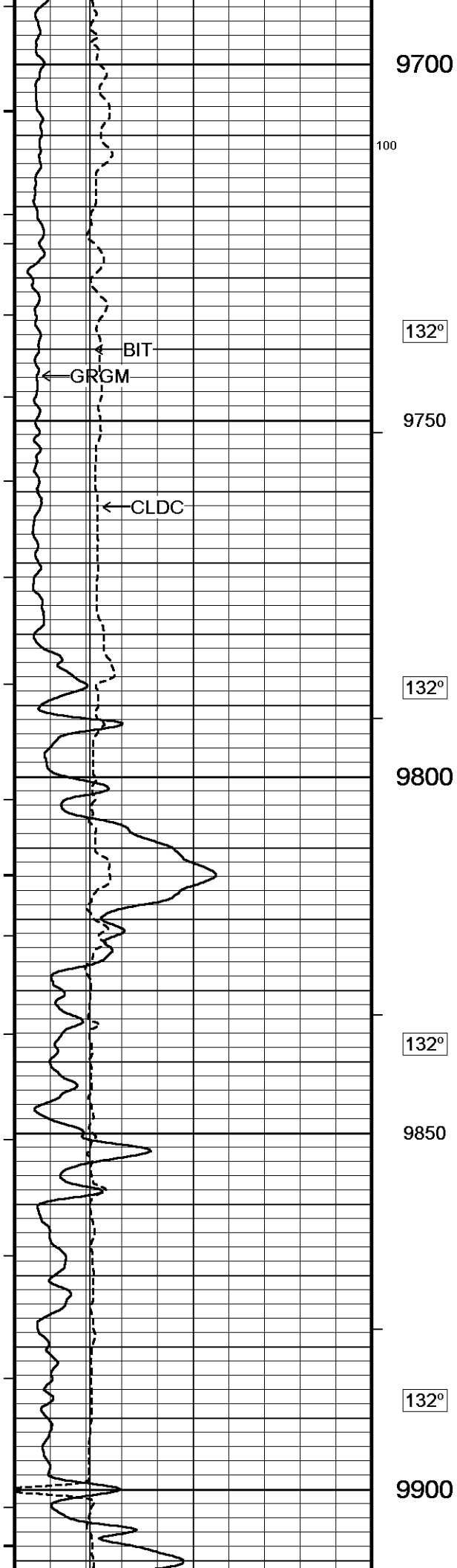


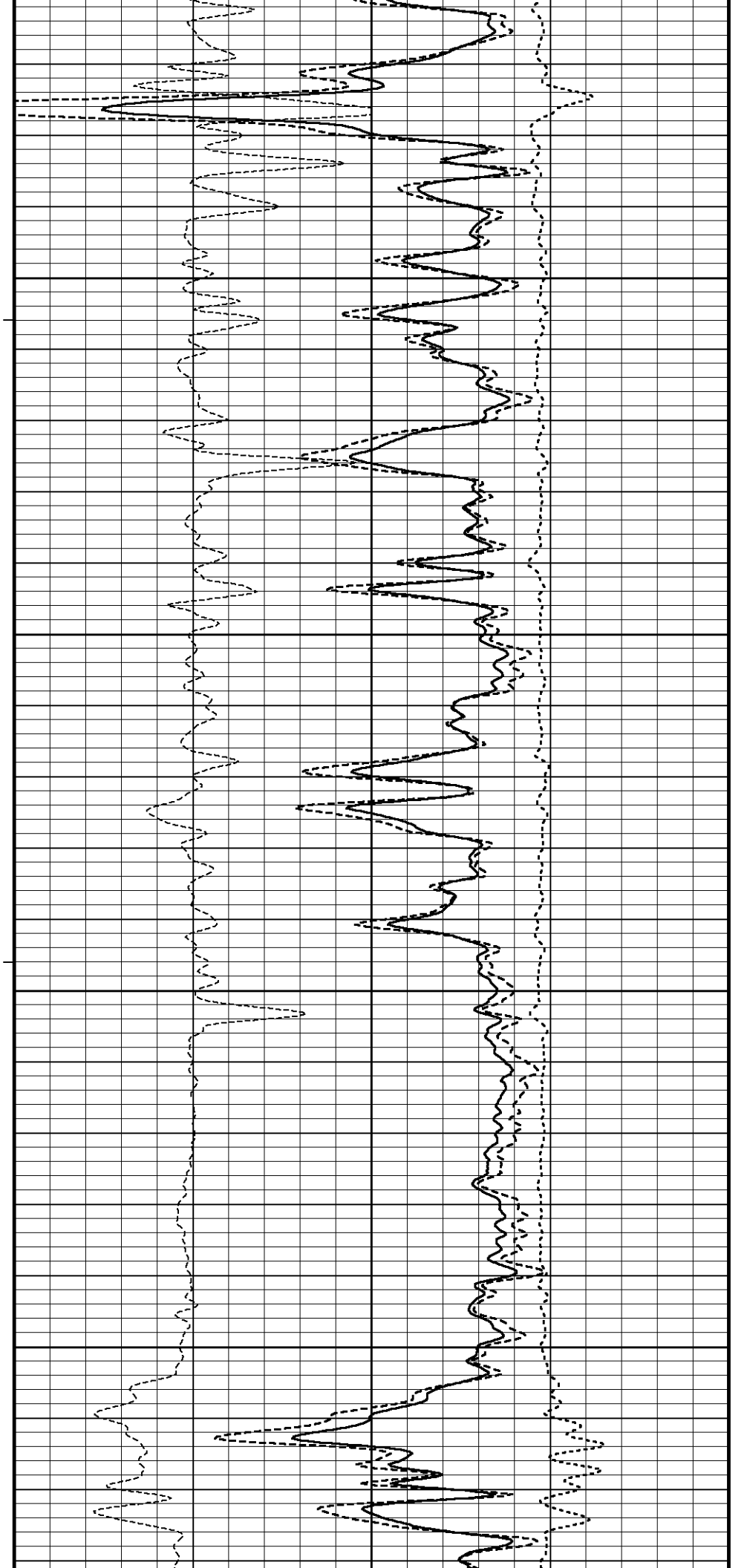
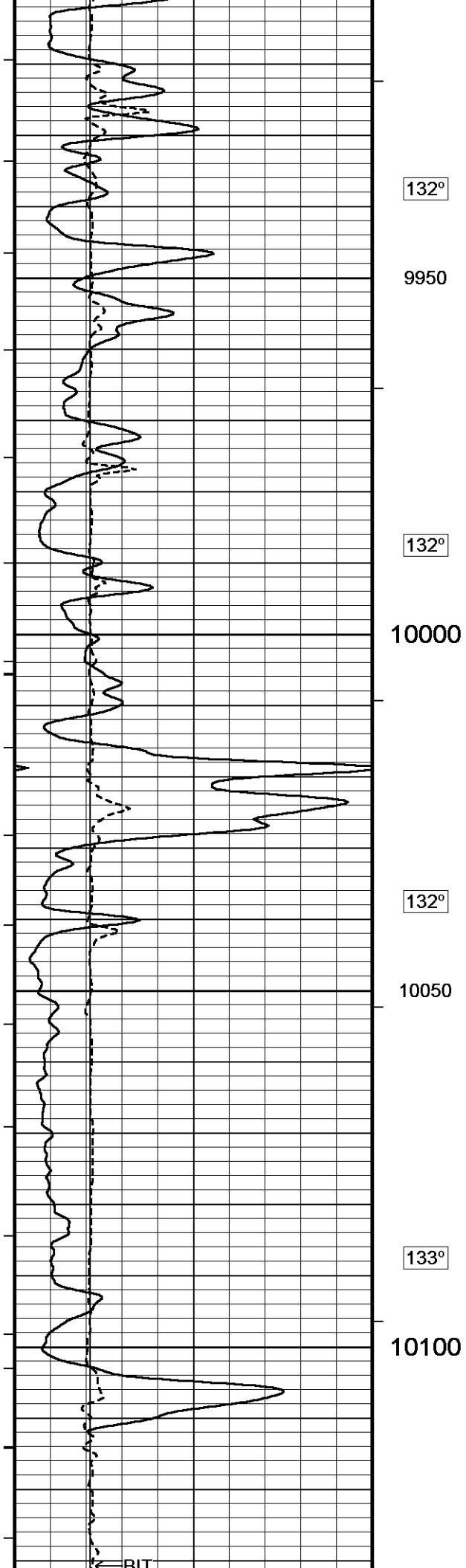


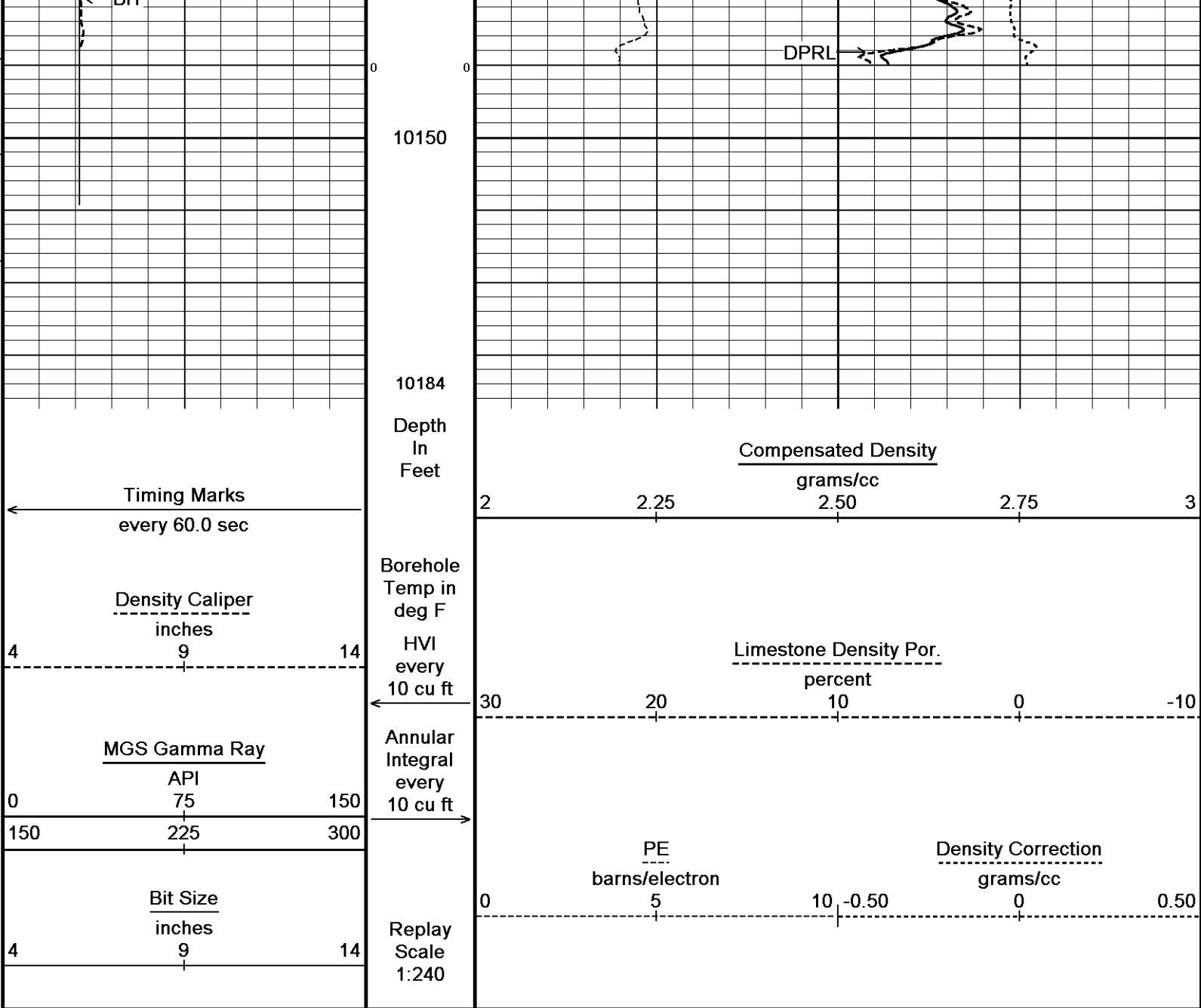












Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\DATA_13_04_8492\15057208670100 James 2922 1-3H\29663rtap.dta
System Versions: Processed with 13.04.8492 Plotted with 13.04.8492

Plotted on 19-JAN-2013 21:33
Recorded on 19-JAN-2013 18:13

5 INCH BULK DENSITY

BEFORE SURVEY CALIBRATION

C:\DATA_13_04_8492\15057208670100 James 2922 1-3H\29663rtap.dta

General Constants All 000			Last Edited on 19-JAN-2013,19:59		
General Parameters					
Mud Resistivity	1.050	ohm-metres			
Mud Resistivity Temperature	74.300	degrees F			
Water Level	0.000	feet			
Borehole Fluid Processing	Wet Hole				
Hole/Annular Volume and Differential Caliper Parameters					
HVOL Method	Single Caliper				
HVOL Caliper 1	Density Caliper				
HVOL Caliper 2	N/A				
Annular Volume Diameter	4.500	inches			
Caliper for Differential Caliper	None				

RWA Parameters	Base Density Porosity
Porosity used	Array Ind. Six Res Rt
Resistivity used	0.610
RWA Constant A	2.150
RWA Constant M	

Strain Gauge Constants MMS-E.B 157

Last Edited on 13-DEC-2012,07:44

Atmospheric Pressure	14.70	psi
Serial Number	260625	
Calibration Date	17-Sep-2010	
Base Check Date		
Dead Weight Serial Number	0	
Dead Weight Gravitational Correction	1.0	
Temperature	75.0	150.0
Pressure psia	250.0	350.0
	degrees F	
	Inc.	Dec.
0.0	0.298	0.299
3000.0	5.475	5.479
6000.0	10.663	10.668
9000.0	15.860	15.867
12000.0	21.070	21.076
15000.0	26.293	26.298

MMS Parameters MMS-E.B 157

Last Edited on 18-JAN-2013 12:58

Logging Parameters		
Firmware Version	2v40	
Caliper Open On	MAI	
Caliper Open Delay		minutes
Caliper Closed On	Unknown	
Caliper Closed Delay	N/A	minutes
Sample Rate	1.00	seconds
Use Deep Sleep	No	
Delay Deep Sleep	N/A	
Deep Sleep Wake Time	N/A	minutes
Deep Sleep Wake on Temperature	N/A	
Deep Sleep Wake Temperature	N/A	degrees C
Deep Sleep Wake on Pressure	N/A	
Deep Sleep Wake Pressure	N/A	psi
MMI Pad Pressure	8.0	

Release Parameters		
Pulse Duration Base Level	10.0	seconds
Pulse Duration Transition Time	60.0	seconds
Pulse Duration Status Pulse From	20.0	seconds
Pulse Duration Caliper Close From	145.0	seconds
Pulse Duration Caliper Open From	150.0	seconds
Pulse Duration Release Pulse From	215.0	seconds
Pulse Duration Release Pulse To	280.0	seconds
Pulse Release Duration	240.0	seconds
Pulse Discriminator Pressure Band	124.0	seconds
Pulse Pressure Discriminator	275.0	seconds
Use Negative Pulsing	No	
Good Status Reply Open Hole	65535.0	seconds
Good Status Reply Cased Hole	20.0	seconds
Bad Status Reply	60.0	seconds
Status Pulse To	80.0	seconds
Caliper Close To		seconds
Caliper Open To	210.0	seconds

Configuration
MMS,MGS,MDN,MPD,MPD,MIM,MIE,MAI

SP Calibration MGS-C.J 142

Field Calibration on 18-JAN-2013,11:54

	Measured	Calibrated (mV)
Reference 1	100.0	100.0
Reference 2	-100.0	-100.0

High Resolution Temperature Calibration MGS-C.J 142

	Measured	Calibrated(Deg F)
Lower	0.00	0.00
Upper	0.00	0.00

High Resolution Temperature Constants MGS-C.J 142

Last Edited on 18-JAN-2013,11:54

Pre-filter Length 11

Gamma Calibration MGS-C.J 142

Field Calibration on 18-JAN-2013 12:14

	Measured	Calibrated (API)
Background	45	32
Calibrator (Gross)	1033	728
Calibrator (Net)	988	696

Gamma Constants MGS-C.J 142

Last Edited on 19-JAN-2013,08:18

Gamma Calibrator Number	036	
Mud Density	1.11	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

Neutron Calibration MDN-B.J 391

Base Calibration on 02-JAN-2013 14:51

Field Check on 18-JAN-2013 12:08

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3090	94	3714	110
Ratio	32.975		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	2305	2968
Ratio	0.777	

Field Check

	Calibrated (cps)	
	2172	3286
Ratio	0.702	

Neutron Constants MDN-B.J 391

Last Edited on 19-JAN-2013,08:18

Neutron Source Id	N1055	
Neutron Jig Number	N639	
Epithermal Neutron	No	
Caliper Source for Processing	Density Caliper	
Stand-off	0.00	inches
Mud Density	1.11	gm/cc
Limestone Sigma	7.10	cu
Sandstone Sigma	4.26	cu
Dolomite Sigma	4.70	cu
Formation Pressure Source	None	
Formation Pressure	N/A	kpsi
Temperature Source	MGS External Temperature	
Temperature	N/A	degrees F
Mud Salinity	4.40	kppm
Salinity Correction	Not Applied	
Formation Fluid Salinity Source	None	
Formation Fluid Salinity	N/A	kppm
Barite Mud Correction	Not Applied	

Accelerometer Parameters MIE-A.J 233

Date Of Last Accelerometer Calibration	11-JUL-2012,16:04		
	X Accelerometer	Y Accelerometer	Z Accelerometer
Slope	-1.103264	-1.116469	-1.106207
Offset	0.010635	0.006475	0.004891

Accelerometer Constants MIE-A.J 233

Last Edited on 22-NOV-2011,16:08

Accelerometer Calibrator Number 000

Accelerometer Temperature Characterisation

X Accelerometer				
Serial Number	1057			
Calibration Date	27-Apr-2011			
	B0	B1	B2	B3
Bias(g)	0.00000e+000	2.82020e-006	-3.02029e-008	1.94332e-010
	SF0	SF1	SF2	SF3
Scale Factor(mA/g)	3.00000e+000	2.77285e-004	1.89104e-007	1.67186e-009
Y Accelerometer				
Serial Number	1073			
Calibration Date	02-May-2011			
	B0	B1	B2	B3
Bias(g)	0.00000e+000	-1.04005e-005	2.19294e-008	-1.31489e-010
	SF0	SF1	SF2	SF3
Scale Factor(mA/g)	3.00000e+000	2.69223e-004	2.39527e-007	9.12553e-010
Z Accelerometer				
Serial Number	977			
Calibration Date	20-Jan-2011			
	B0	B1	B2	B3
Bias(g)	0.00000e+000	1.86594e-005	1.00709e-008	3.83419e-011
	SF0	SF1	SF2	SF3
Scale Factor(mA/g)	3.00000e+000	2.74913e-004	2.75506e-007	1.29284e-009

Magnetometer Parameters MIE-A.J 233				
Date Of Last Magnetometer Calibration	28-NOV-2012,18:05			
	X Magnetometer	Y Magnetometer	Z Magnetometer	
Slope	-1.000000	-1.001739	-0.998267	
Offset	-0.005746	-0.010400	0.000941	

Magnetometer Constants MIE-A.J 233				Last Edited on
Magnetometer Calibrator Number	000			

Caliper Calibration MIE-A.J 233				Base Calibration on 01-NOV-2012 10:00	
				Field Calibration on 18-JAN-2013 11:43	
Base Calibration					
Reading No	Pads 1-5 Meas.	Pads 3-7 Meas.	Calibrator Size (in)		
1	25679	25739	5.96		
2	35915	36008	7.98		
3	46506	46000	9.94		
4	57157	56744	11.90		
5	0	0	0.00		
Reading No	Pad 2 Meas.	Pad 4 Meas.	Pad 6 Meas.	Pad 8 Meas.	Calibrator Size (in)
1	25012	23737	24714	24965	5.96
2	33803	31518	33070	34667	7.98
3	44175	40604	40196	42684	9.94
4	55750	49119	47448	52854	11.90
5	0	0	0	0	0.00
Field Calibration					
	Measured	Measured	Actual		
	Pads 1-5 Caliper(in)	Pads 3-7 Caliper(in)	Caliper(in)		
	7.96	8.48	8.03		
	Measured	Measured	Measured	Measured	Actual
	Pad 2 Caliper(in)	Pad 4 Caliper(in)	Pad 6 Caliper(in)	Pad 8 Caliper(in)	Caliper(in)
	4.12	4.34	4.29	3.89	8.03

Caliper Constants MIE-A.J 233				Last Edited on 01-NOV-2012,09:11
Caliper Difference for BRKT	0.120	inches		

Imager Pad Check MIE-A.J 233				Field Check on
Pad 1	Pad Not Tested	Pad 5	Pad Not Tested	
Pad 2	Pad Not Tested	Pad 6	Pad Not Tested	
Pad 3	Pad Not Tested	Pad 7	Pad Not Tested	
Pad 4	Pad Not Tested	Pad 8	Pad Not Tested	

Compact Micro Imager Constants MIE-A.J 233				Last Edited on 10-MAY-2012,08:37
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Sonde Configuration	Imager Mode			
Arm-Pad Kit	Normal Pads (12.25 in)			
Arm-Pad Kit Serial Number				
Centre Pad 1 Rotational Offset	0.00	degrees		
Image/Borehole Ovality Reference	Azimuth of Pad 1			
Non Active Buttons	Omit			
Search Angle	30.00	degrees		
Correlation Interval	3.28	feet		
Correlation Step	1.64	feet		
Current Offset	0.0000	mAmp		
Squasher Start	N/A	mAmp		
Image Processing	Enabled			
Navigation Constants MIE-A.J 233		Last Edited on 18-JAN-2013,11:46		
Magnetic Declination	5.74	degrees	East	
High Resolution Temperature Calibration MAI-A.A 170		Field Calibration on 14-JAN-2013,12:49		
	Measured	Calibrated(Deg F)		
Lower	0.00	10.00		
Upper	100.00	100.00		
High Resolution Temperature Constants MAI-A.A 170		Last Edited on 14-JAN-2013,12:49		
Pre-filter Length	11			
Induction Calibration MAI-A.A 170		Base Calibration on 02-FEB-2012 17:42 Field Check on 18-JAN-2013 11:30		
Base Calibration				
Test Loop Calibration		Measured	Calibrated (mmho/m)	
Channel	Low	High	Low	High
1	17.7	487.1	9.3	966.2
2	6.2	384.7	7.6	821.4
3	3.7	266.1	5.2	566.0
4	2.2	136.5	2.6	279.2
Array Temperature	72.1	Deg F		
Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1			10.1	3750.9
2			29.6	3529.2
3			27.3	2996.9
4			18.6	2042.5
Deep			15.5	1905.0
Medium			41.1	3981.2
Shallow			45.9	5290.9
Array Temperature			40.8	Deg F
Induction Constants MAI-A.A 170		Last Edited on 19-JAN-2013,19:59		
Induction Model		RtAP-WBM		
Caliper for Borehole Corr.	Density Caliper			
Hole Size for Borehole Correction	N/A	inches		
Tool Centred	No			
Stand-off Type	Fins			
Stand-off	0.50	inches		
Number of Fins on Stand-off	6.0000			
Stand-off Fin Angle	60.00	degrees		
Stand-off Fin Width	0.5000	inches		
Borehole Corr. Rm Source	Temperature Corr			
Temp. for Rm Corr.	MGS External Temperature			
Squasher Start	0.0020	mhos/metre		
Squasher Offset	N/A	mhos/metre		
Borehole Normalisation				
DRM1	0.0000	DRC1	0.0000	
DRM2	0.0000	DRC2	0.0000	
MRM1	0.0000	MRC1	0.0000	
MRM2	0.0000	MRC2	0.0000	
DRM1	0.0000	DRC1	0.0000	

[illegible]

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	16928	4.02
2	25088	6.00
3	33568	8.03
4	41376	10.02
5	50656	12.01
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
5.96	5.96

DOWNHOLE EQUIPMENT

C:\DATA_13_04_8492\15057208670100 James 2922 1-3H\29663rtap.dta

Shuttle Running Tool 3.5")
SRT-A.A 69 LG: 6.62 ft WT: 37.5 lb OD: 2.52 in

SKJ-E.B Compact Knuckle Joint
SKJ-E.B 472 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

Spacer
MLK-A 2 LG: 14.23 ft WT: 30.9 lb OD: 2.24 in

Spacer
MLK-A 3 LG: 14.23 ft WT: 30.9 lb OD: 2.24 in

MBS-G.A 200v Compact Battery Sub
MBS-G.A 117 LG: 17.06 ft WT: 123.5 lb OD: 2.24 in



Compact Memory Sub E.B
MMS-E.B 157 LG: 5.20 ft WT: 37.5 lb OD: 2.24 in

Compact Tool Isolator sub.
MTI-B.A 76 LG: 1.54 ft WT: 13.2 lb OD: 2.24 in

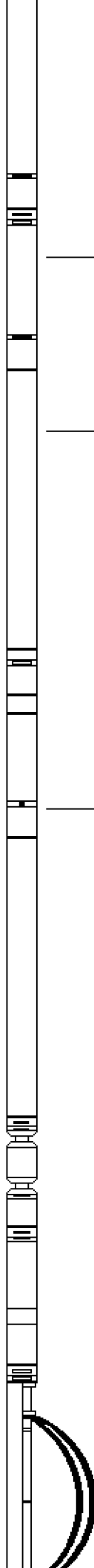
Compact Short Gamma
MGS-C.J 142 LG: 3.41 ft WT: 24.3 lb OD: 2.24 in

Compact Collar Locator
MCL-B.J 63 LG: 3.17 ft WT: 26.5 lb OD: 2.24 in

SKJ-E.B Compact Knuckle Joint
SKJ-E.B 479 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

SHA-J.A Compact Swivel Head Adaptor
SHA-J.A 451 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

MIS-D.B Compact Inline Bowspring sub
MIS-D.B 608 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in



89.57 ft GRGM - MGS Gamma Ray

85.56 ft GCSL - MCL C. Collar Locator

81.59 ft GSXT - MGS External Temperature

Compact Neutron
MDN-B.J 391 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper
MPD-C.J 394 LG: 9.59 ft WT: 90.4 lb OD: 2.24 in

MIS-D.B Compact Inline Bowspring sub
MIS-D.B 607 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

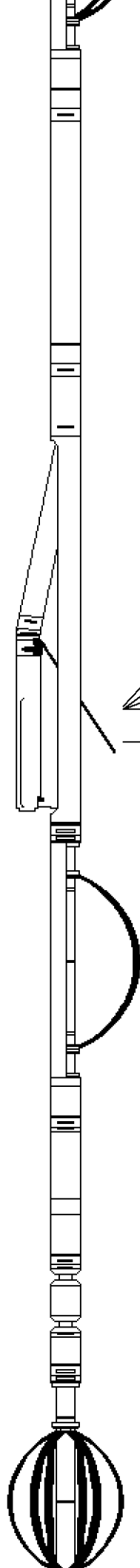
SHA-J.A Compact Swivel Head Adaptor
SHA-J.A 438 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

SKJ-E.B Compact Knuckle Joint
SKJ-E.B 478 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

MIS-D.B Compact Inline Bowspring sub
MIS-D.B 707 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

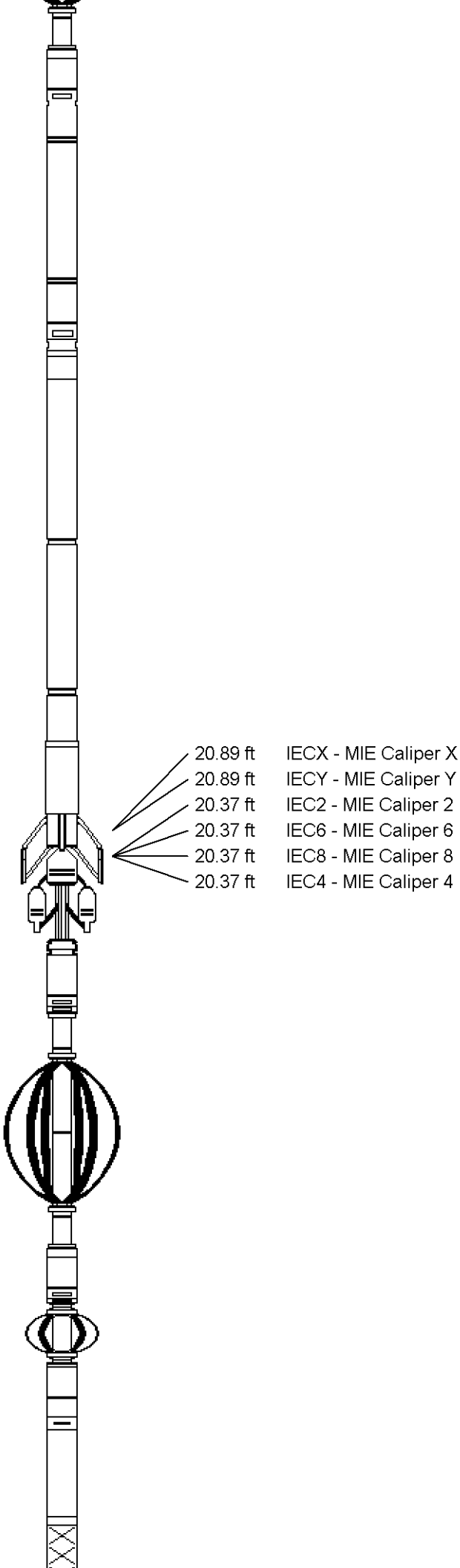
68.70 ft NPRL - Limestone Neutron Por.

60.46 ft CLDC - Density Caliper
58.53 ft DCOR - Density Correction
58.53 ft DEN - Compensated Density
58.53 ft DPRL - Limestone Density Por.
58.47 ft PDPE - PE



Compact MMI Memory Section
MIM-B.A 251 LG: 4.65 ft WT: 26.5 lb OD: 2.24 in

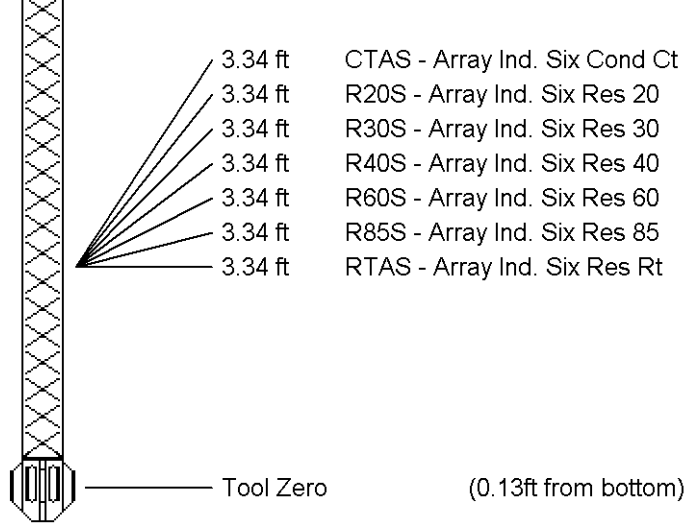
Compact MMI Electrode Section
MIE-A.J 233 LG: 13.96 ft WT: 99.2 lb OD: 4.09 in



MIS-A.A Compact Inline Bowspring sub
MIS-A.A 160 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

MIS-E.B Compact Inline Standoff sub
MIS-E.B 597 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

Compact Induction
MAI-A.A 170 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in



Total Length: 145.53 ft Weight: 903.9 lb

All measurements relative to tool zero.

COMPANY SANDRIDGE ENERGY
WELL JAMES 2922 1-13H
FIELD KINGSDOWN
PROVINCE/COUNTY FORD
COUNTRY/STATE USA / KANSAS

Elevation Kelly Bushing	2455.00	feet	First Reading	10133.00	feet
Elevation Drill Floor	2455.00	feet	Depth Driller	10210.00	feet
Elevation Ground Level	2332.00	feet	Depth Logger	10210.00	feet



Weatherford®

CML MESSENGER SHUTTLE
COMPACT PHOTO DENSITY
COMPENSATED NEUTRON LOG