Weatherford®

CML IMPULSE SHUTTLE
COMPACT PHOTO DENSITY
DUAL SPACED NEUTRON LOG

COMPANY	SANDRIDGE ENERGY
WELL	ANITA 3420 1-12H
FIELD	ANNA MAE SOUTHWEST
PROVINCE/COUNTY	COMANCHE
COUNTRY/STATE	USA \ KANSAS
LOCATION	N2 N2 NW NE
	200' FNL & 1980' FEL of NE/4

SEC	TWP	RGE	Other Services
12	34S	20W	MAI
			CMI

API Number 15-033-21673
Permit Number

Permanent Datum GL, Elevation 1793 feet
Log Measured From KB
Drilling Measured From KB @ 21' AGL

Elevations:	feet
KB	1814.00
DF	1814.00
GL	1793.00

Date	15-NOV-2012			
Run Number	ONE			
Depth Driller	9576.00	feet		
Depth Logger	9576.00	feet		
First Reading	9518.00	feet		
Last Reading	4880.00	feet		
Casing Driller	5497.00	feet		
Casing Logger	5450.00	feet		
Bit Size	6.125	inches		
Hole Fluid Type	WATER			
Density / Viscosity	8.60 lb/USg	27.00 CP		
PH / Fluid Loss	9.50			
Sample Source	FLOWLINE			
Rm @ Measured Temp	1.10 @ 70.0	ohm-m		
Rmf @ Measured Temp	0.88 @ 70.0	ohm-m		
Rmc @ Measured Temp	1.32 @ 70.0	ohm-m		
Source Rmf / Rmc	CALC	CALC		
Rm @ BHT	0.60 @132.0	ohm-m		
Time Since Circulation	12 HOURS			
Max Recorded Temp	132.00	deg F		
Equipment Name	COMPACT			
Equipment / Base	18077	OKC		
Recorded By	GUTHMUELLER		ALLEN	
Witnessed By	J HILEMAN		K GENTRY	
AFE# DC12332	SO# 3538586			

BOREHOLE RECORD

Last Edited: 15-NOV-2012 17:14

Bit Size inches	Depth From feet	Depth To feet
17.500	0.00	305.00
12.250	305.00	1000.00
8.750	1000.00	5497.00
6.125	5497.00	9576.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
COND	13.375	0.00	305.00	54.00
SURF	9.625	0.00	1000.00	36.00
INTER	7.000	0.00	5497.00	26.00

REMARKS

LOGGED WITH WLS 10.03.7779 SOFTWARE

TOOLS DEPLOYED USING CML IMPULSE METHOD

TOOLS RAN: SMR-167, SER-150,200V MBS-115,MMSE133,MTI-076, MGS-142,MCL-063,SKJ-472,SHA-438,MIS-608, MDN-391, MPD-394,MIS-607, SHA-167, SKJ-479,MISB-5958,MFE-363,MISB-337, MAI-170 RAN IN COMBINATION

HARDWARE: MAI: MIS-B 0.5" STANDOFF USED ABOVE MAI, ISA STAND-OFF RAN BELOW MAI
MFE: MIS-B 0.5" STANDOFF USED ABOVE MFE
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 LOGS WERE SET TO PIPE STRAP AND COMPARED TO MWD LOGS.
FLAT SPOT FROM 5670 - 5736 CAUSEED BY TOTCO ERROR

DRILL PIPE DEPTH DURING DEPLOYMENT: 9456.2
LOGGING TOOL DEPTH AFTER DEPLOYMENT: 9542

OPERATORS: J TURNER, K CHAFFIN
S.O: 3538586
RIG: LARIAT 19

5 INCH MAIN LOG

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\Data\SANDRIDGE FOLDER\SANDRIDGE ANITA 3420 1-12H\33021RTAP.dta
System Versions: Processed with 13.03.7779 Plotted with 13.03.7779

Plotted on 16-NOV-2012 18:24
Recorded on 16-NOV-2012 12:12

Timing Marks
every 60.0 sec

Density Caliper
inches
4 9 14

MGS Gamma Ray
API
0 75 150
150 225 300

Bit Size
inches
4 9 14

Depth In Feet

Borehole Temp in deg F

HVI every 10 cu ft

Annular Integral every 10 cu ft

Replay Scale 1:240

Limestone Neutron Por.
percent
30 20 10 0 -10

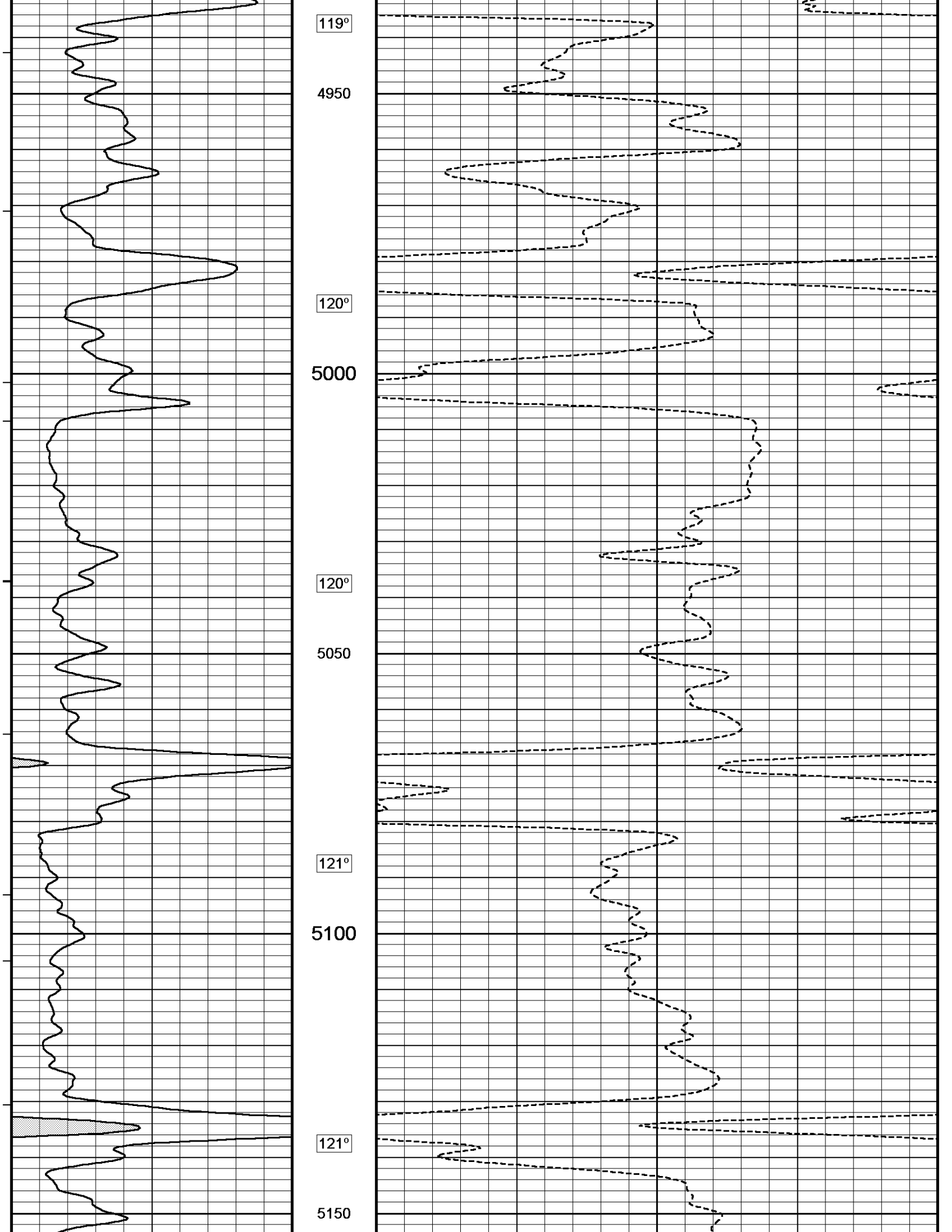
Limestone Density Por.
percent
30 20 10 0 -10

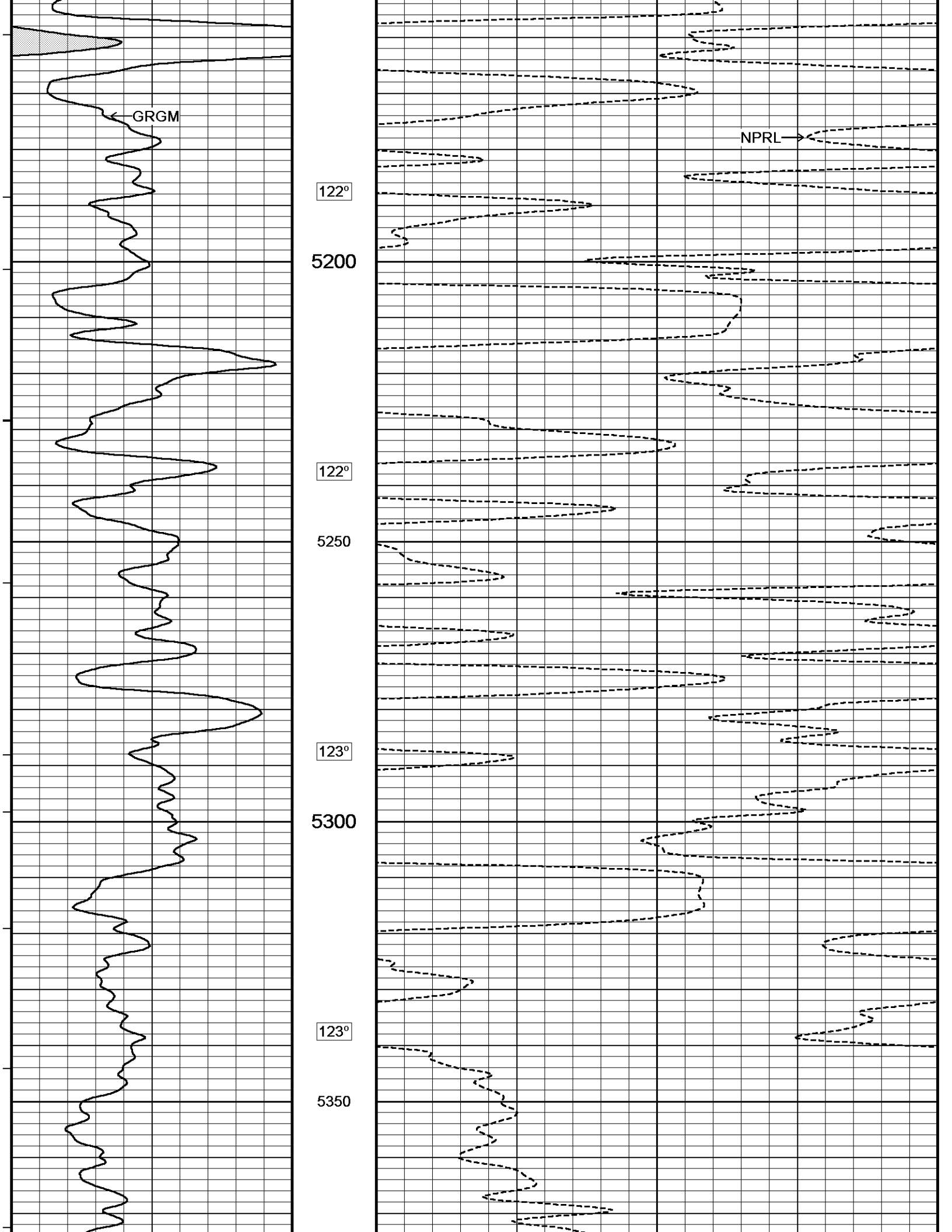
PE
barns/electron
0 5 10

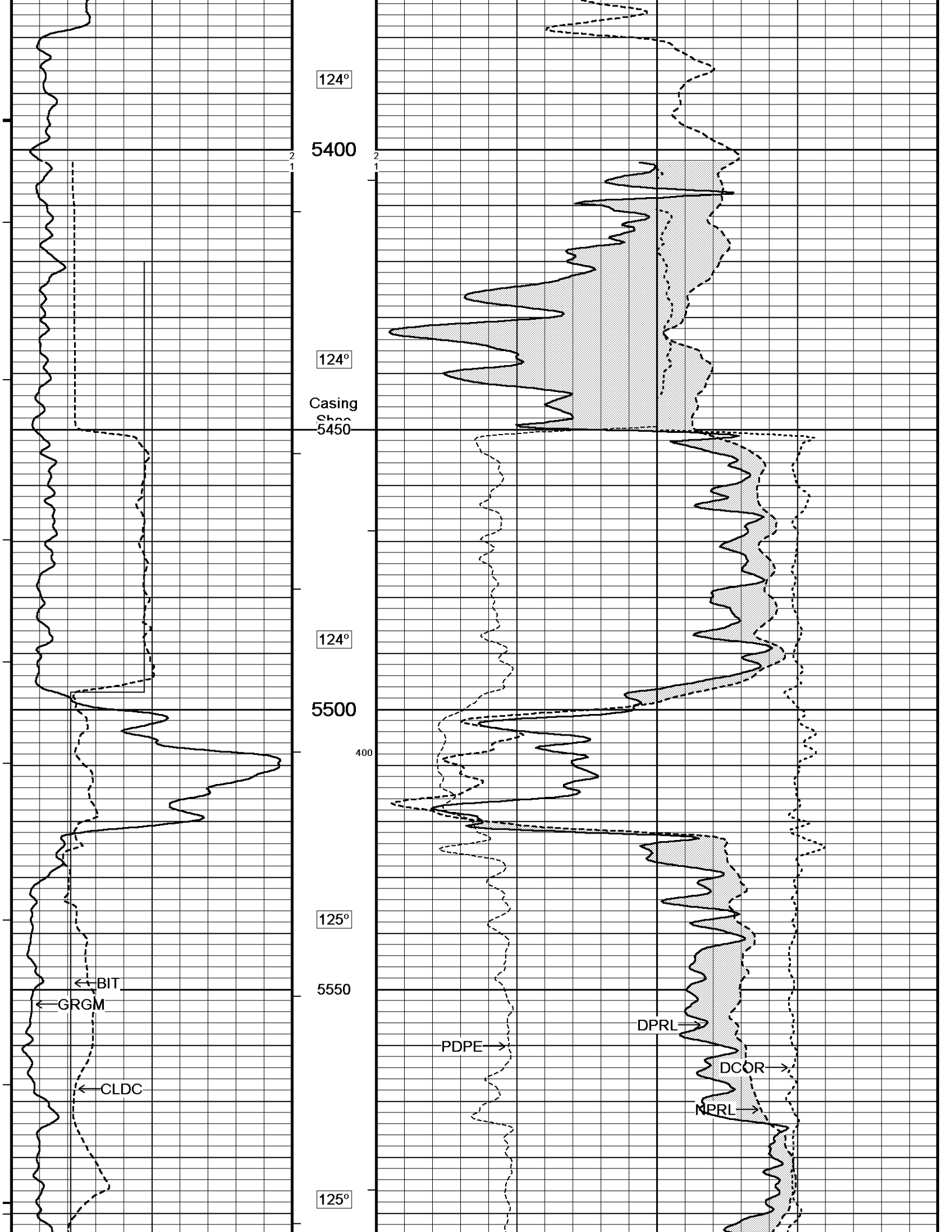
Density Correction
grams/cc
-0.50 0 0.50

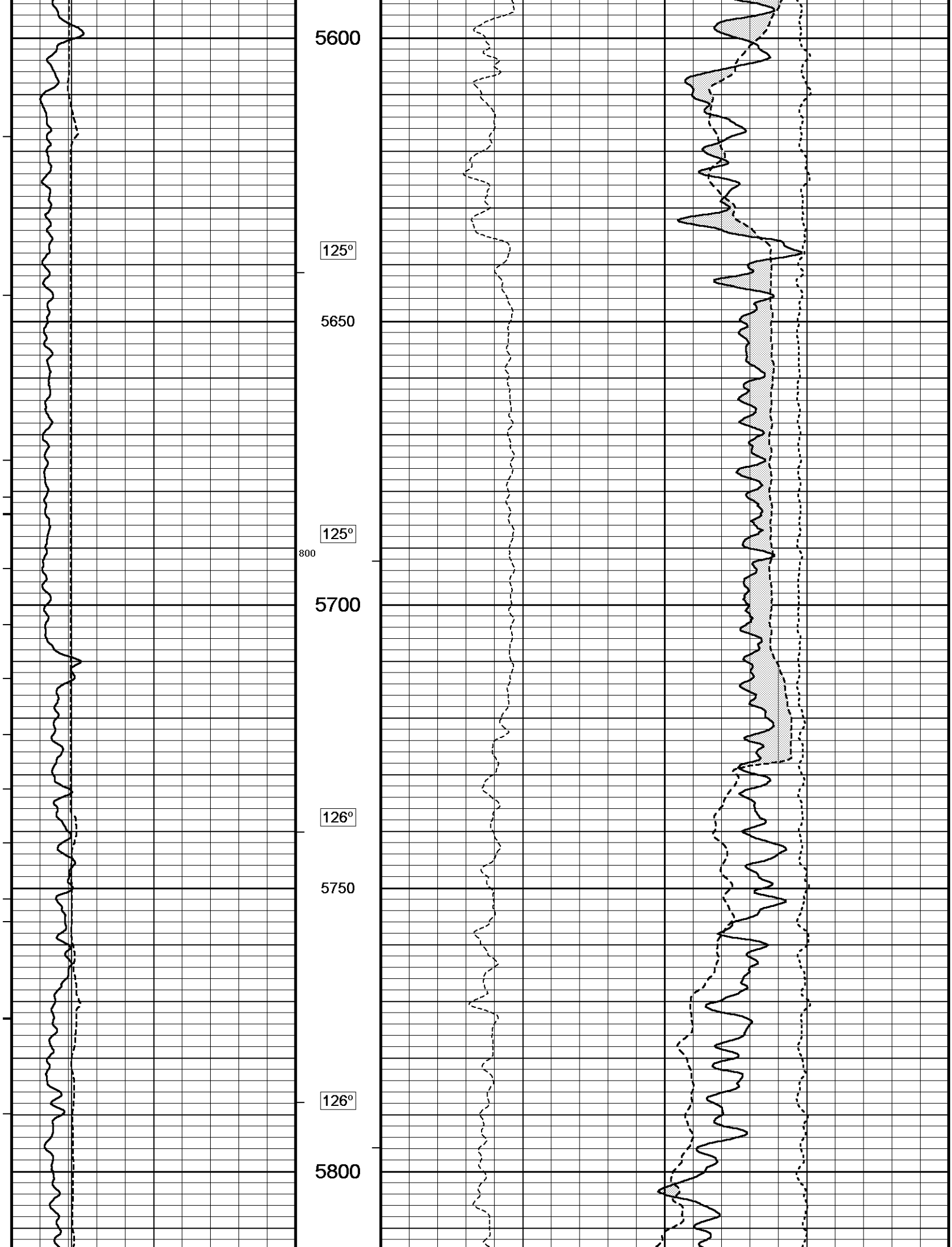
4878

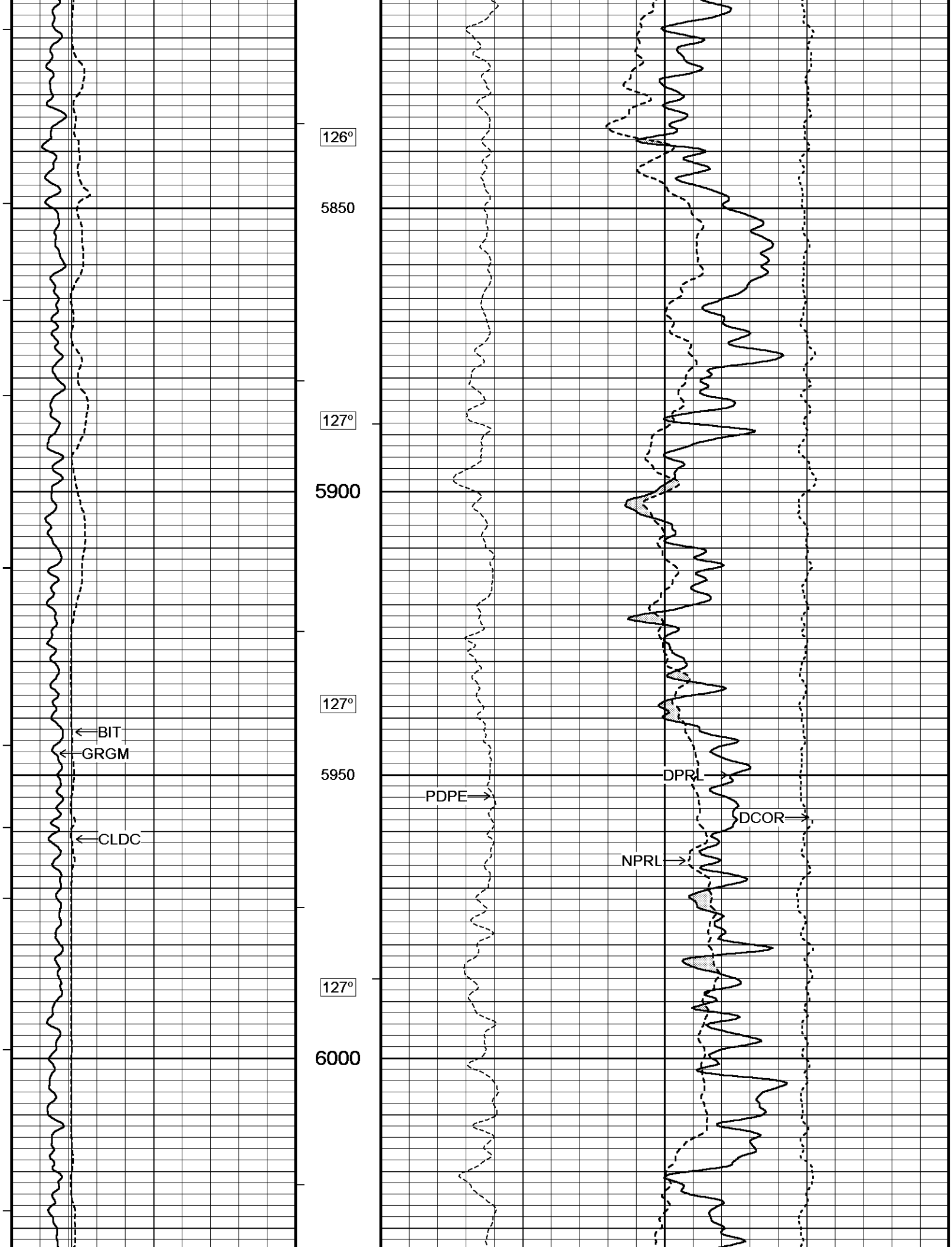
4900

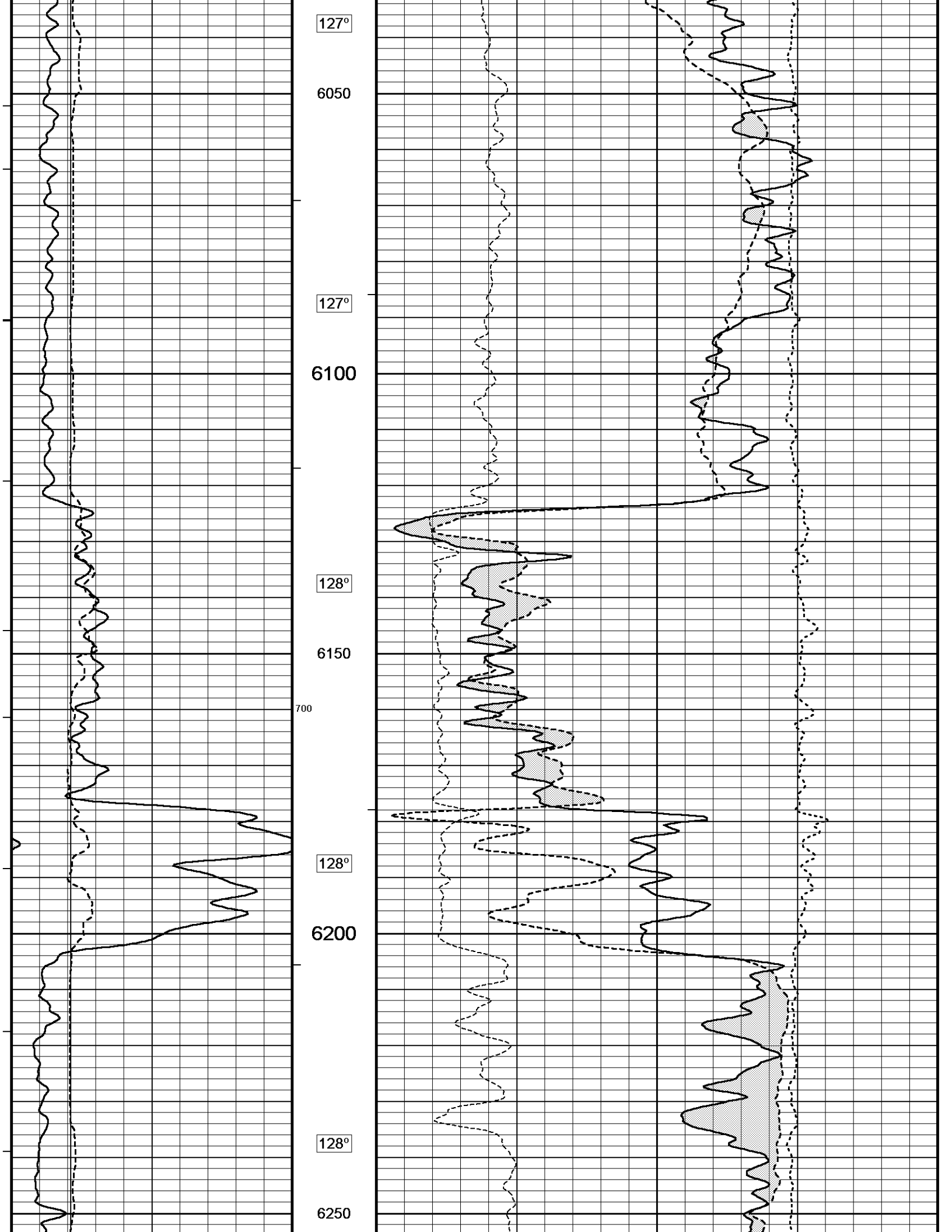

119°
4950
120°
5000
120°
5050
121°
5100
121°
5150

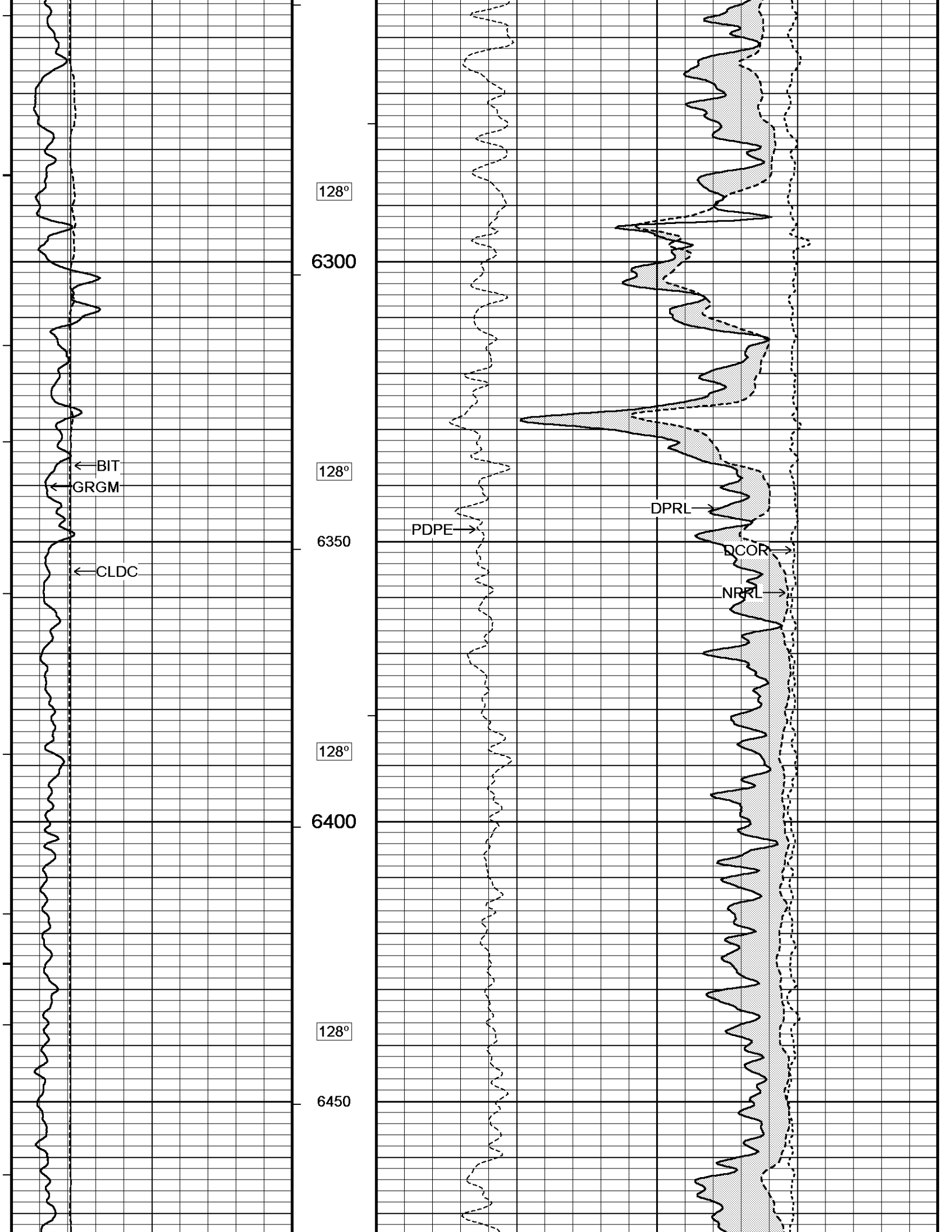

GRGM
NPRL
122°
5200
122°
5250
123°
5300
123°
5350

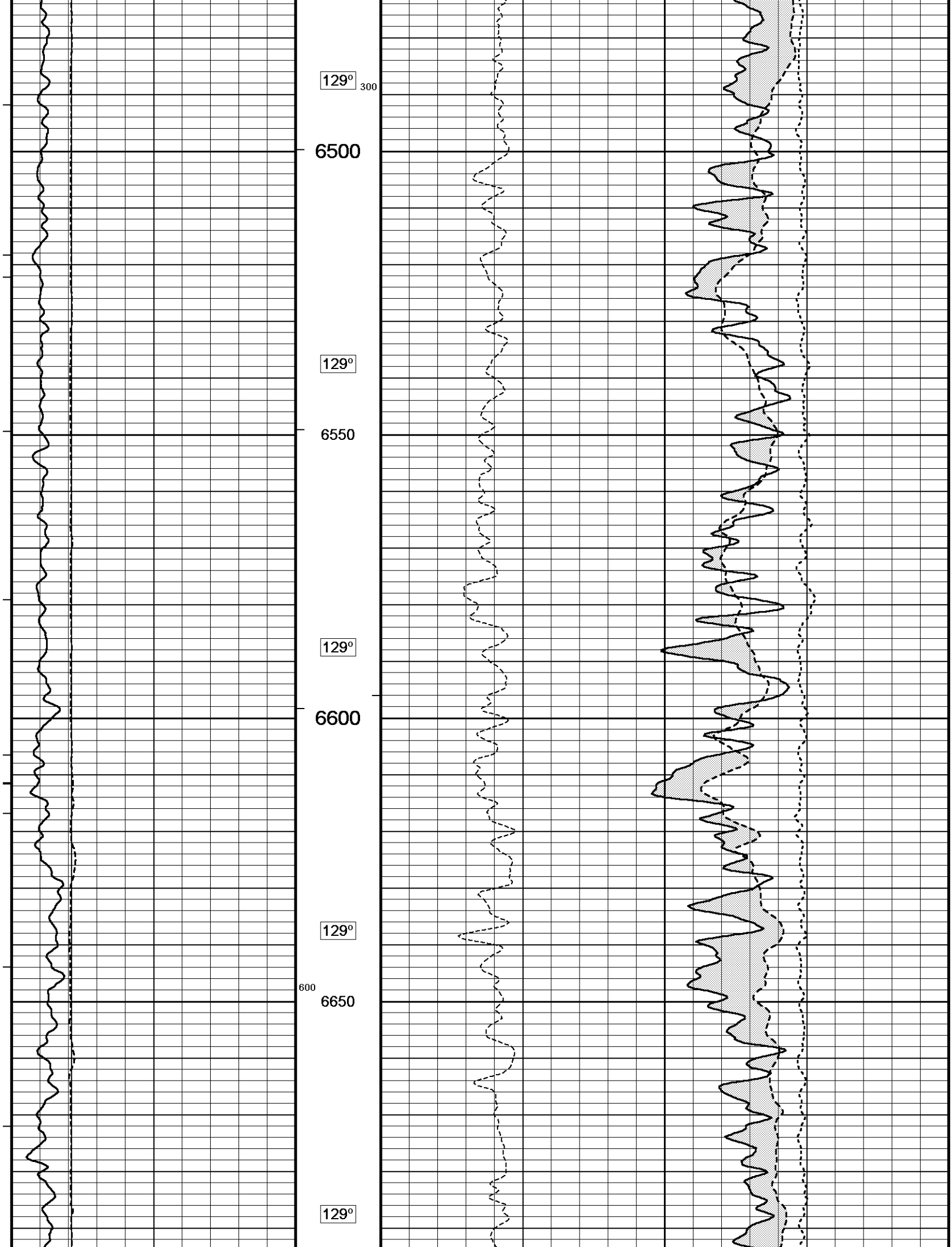

124°
5400
2
1
2
1
124°
Casing
Shoe
5450
124°
5500
400
125°
5550
125°
BIT
GRGM
CLDC
PDPE
DPRL
DCOR
NPRL

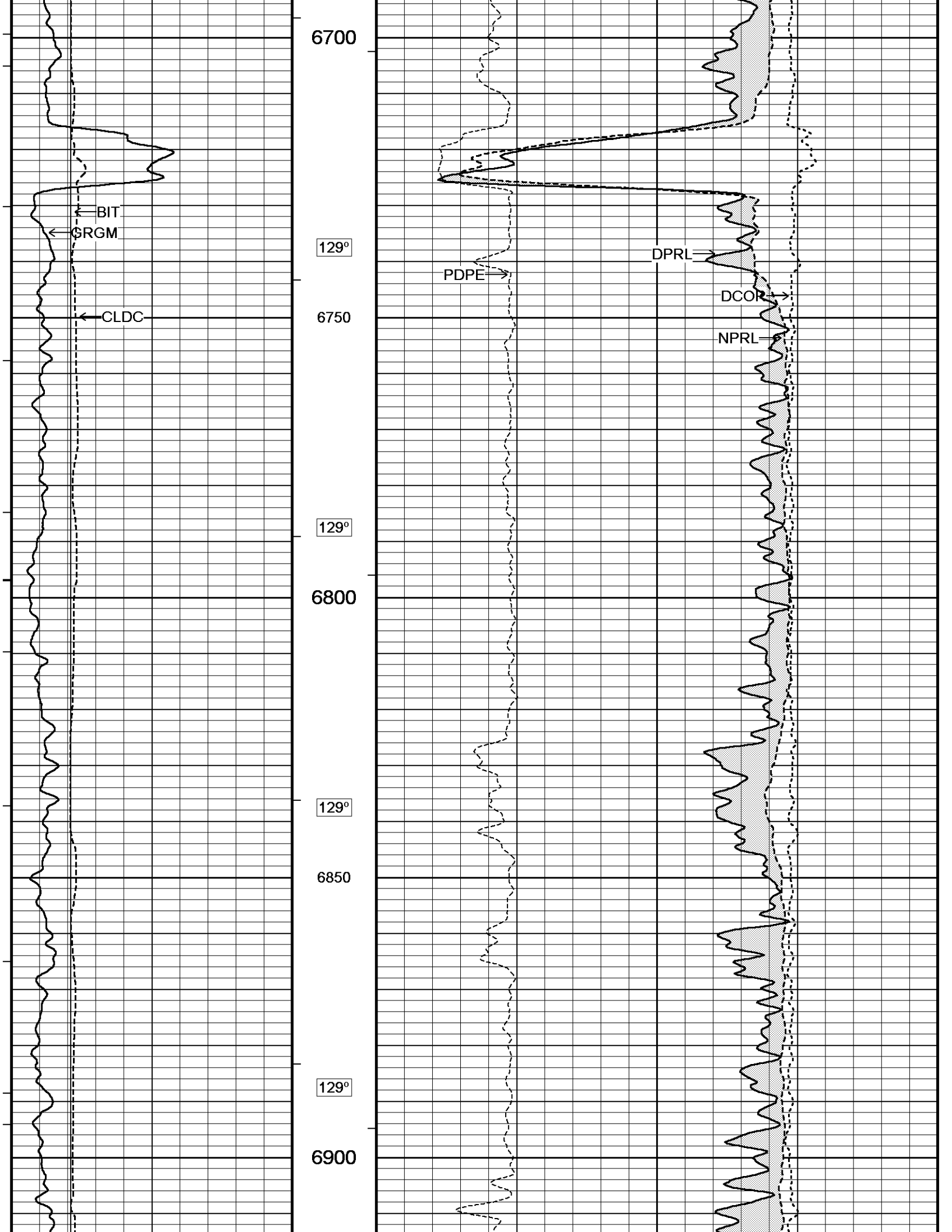

5600
125°
5650
125°
800
5700
126°
5750
126°
5800

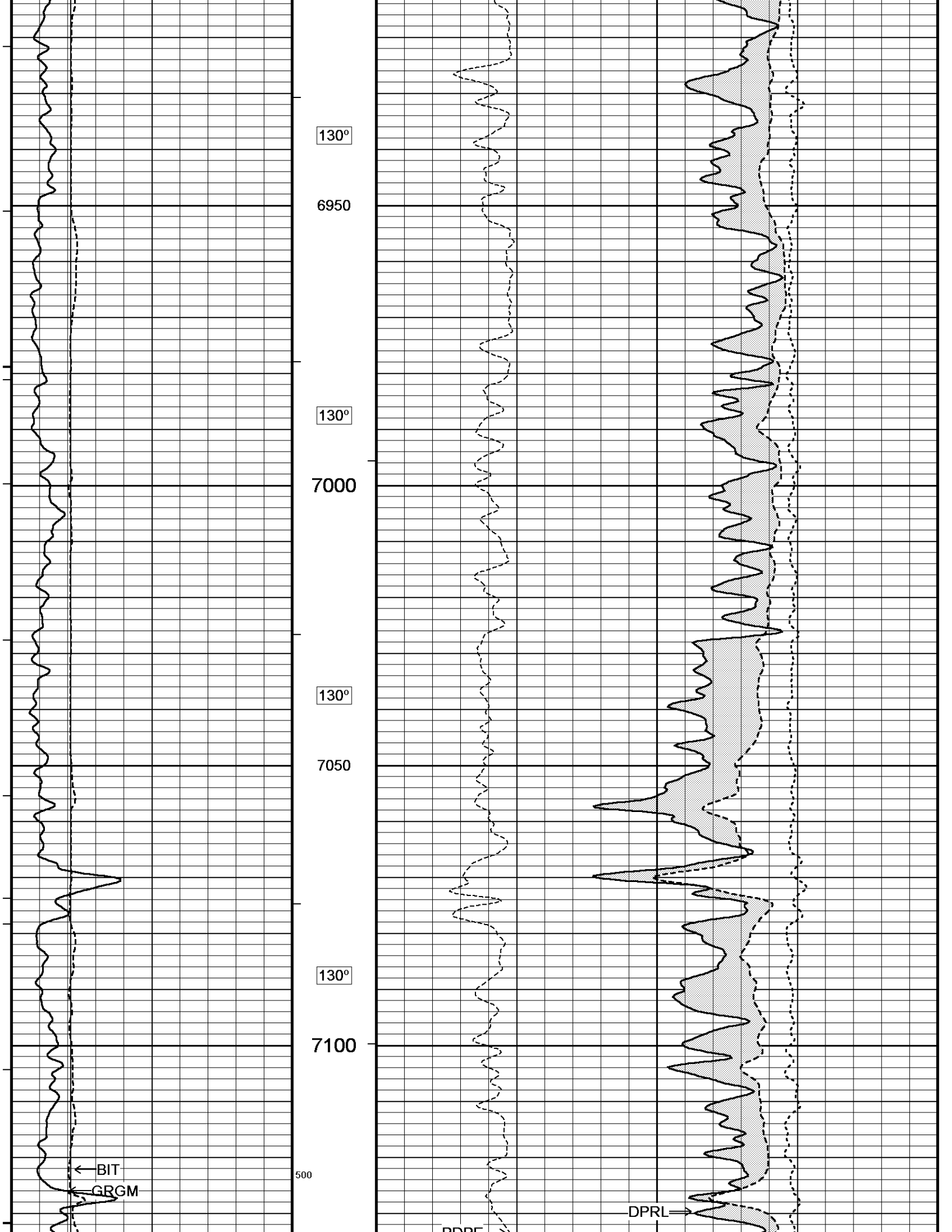

126°
5850
127°
5900
127°
5950
127°
6000
BIT
GRGM
CLDC
PDPE
DPRL
DCOR
NPRL

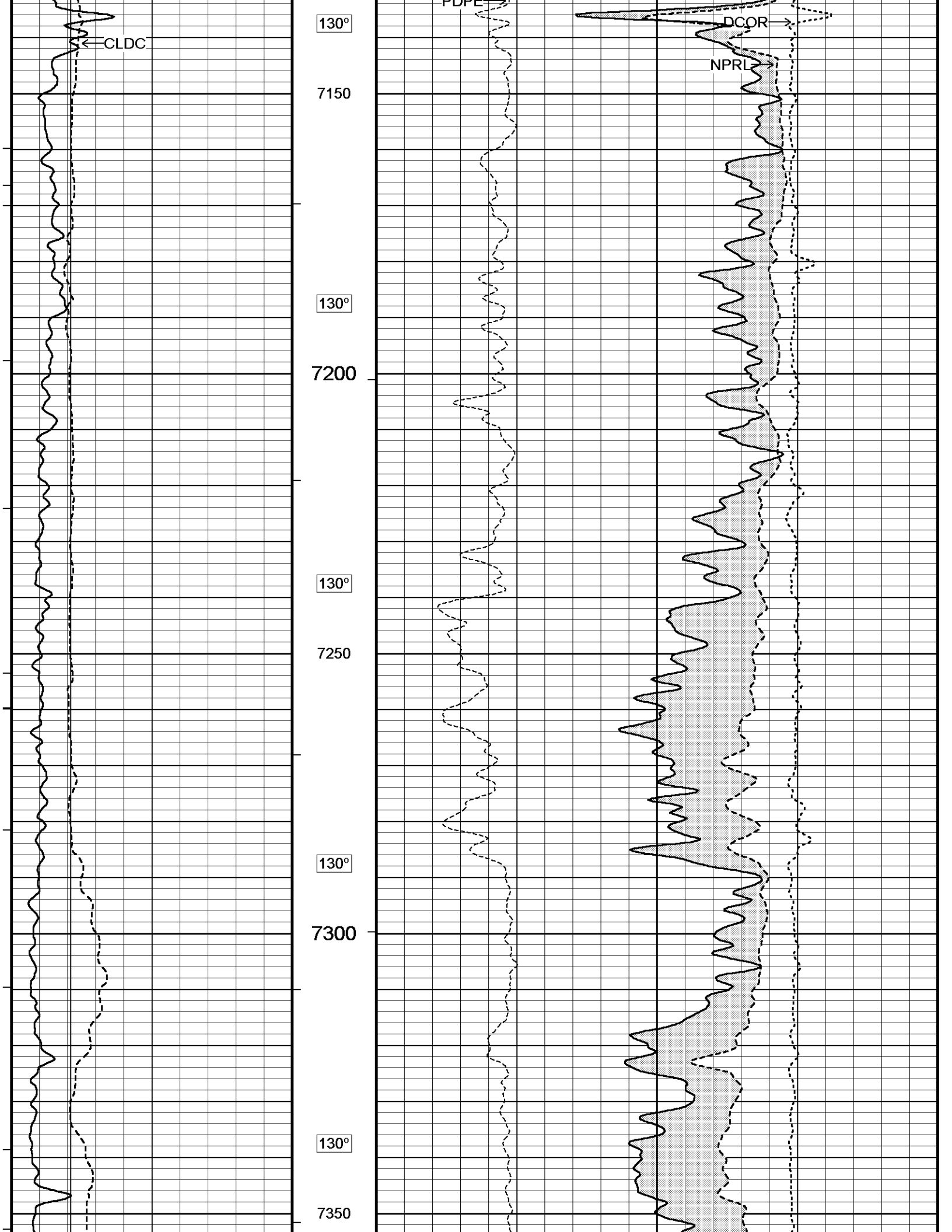

127°
6050
127°
6100
128°
6150
700
128°
6200
128°
6250

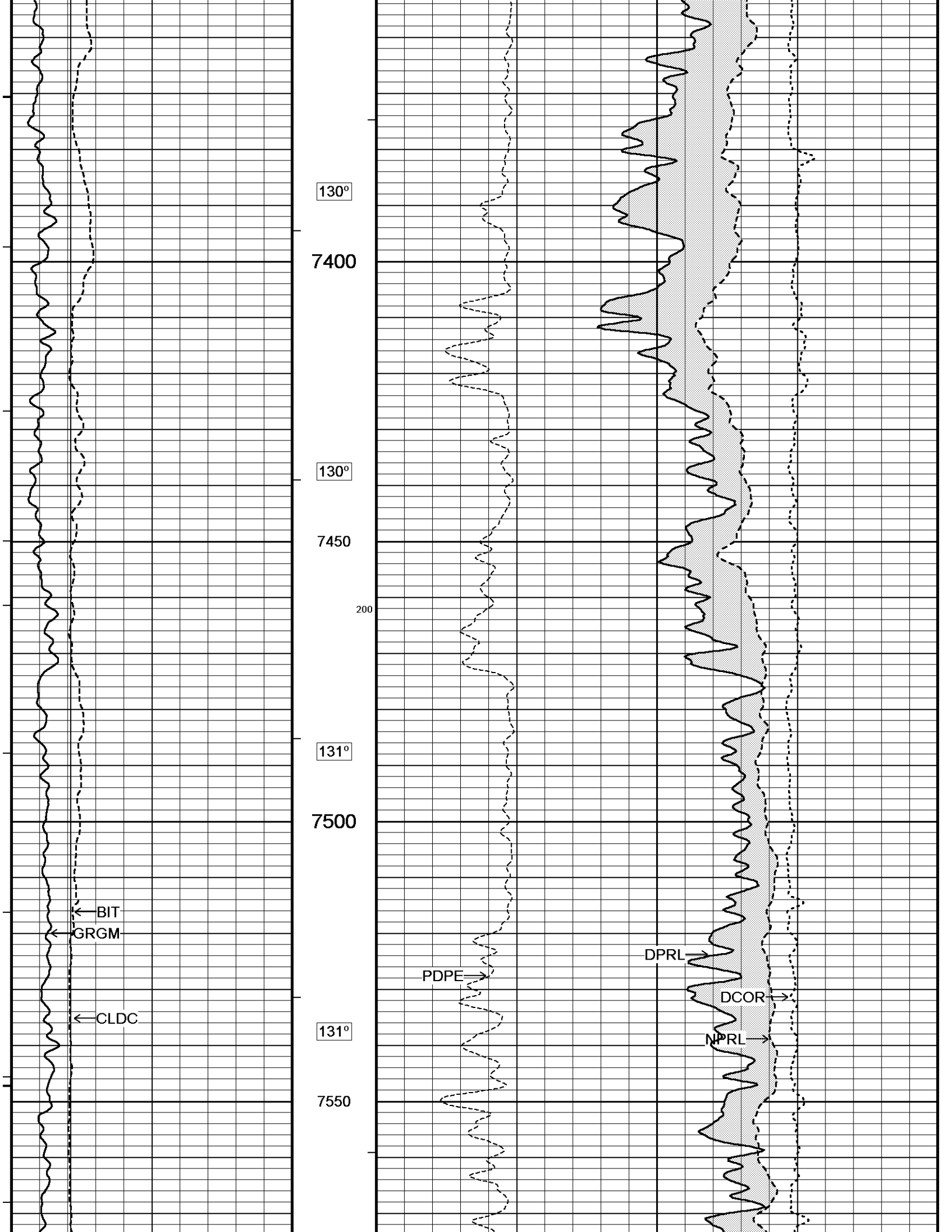

128°
6300
BIT
GRGM
128°
DPRL
PDPE
6350
DCOR
CLDC
NRRL
128°
6400
128°
6450

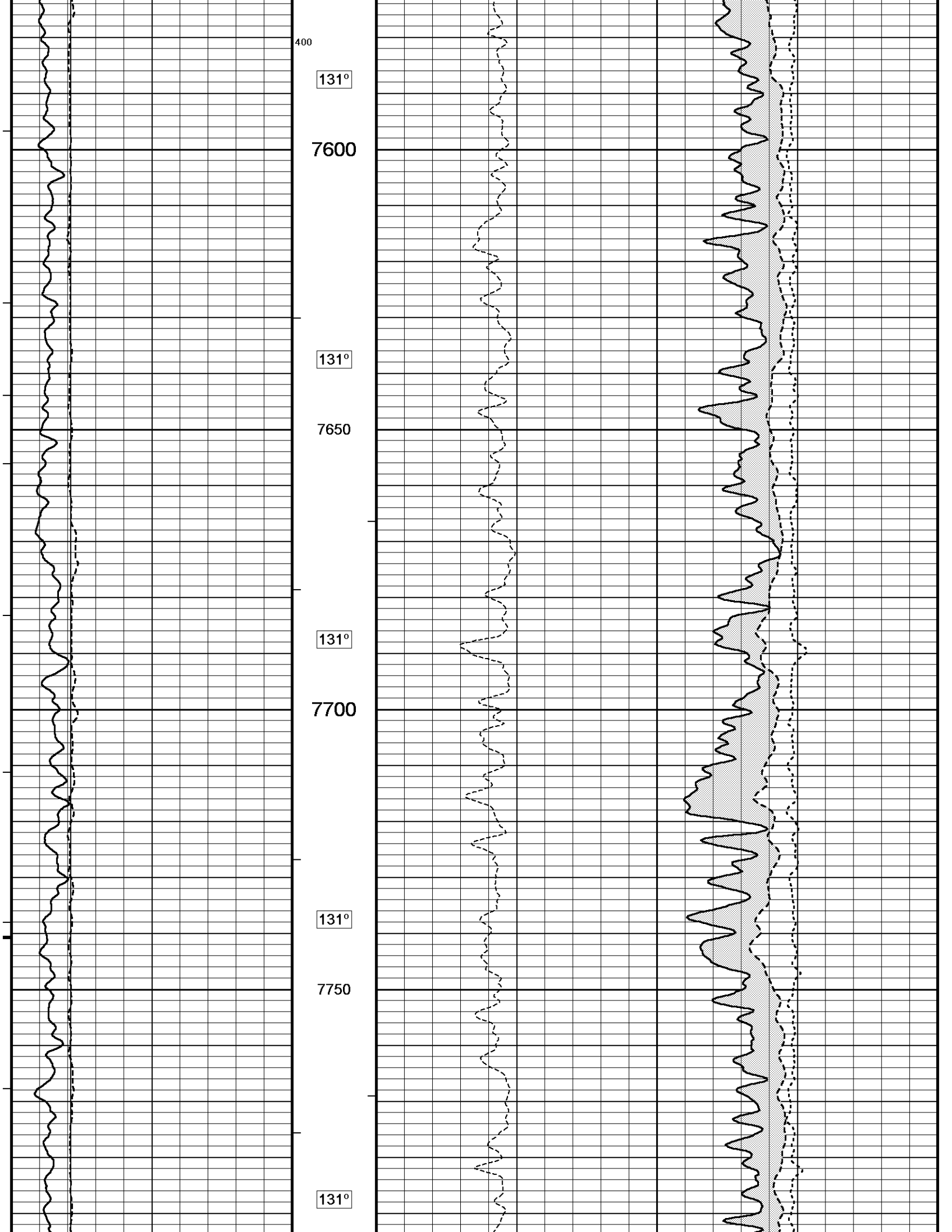

129°
300
6500
129°
6550
129°
6600
129°
600
6650
129°

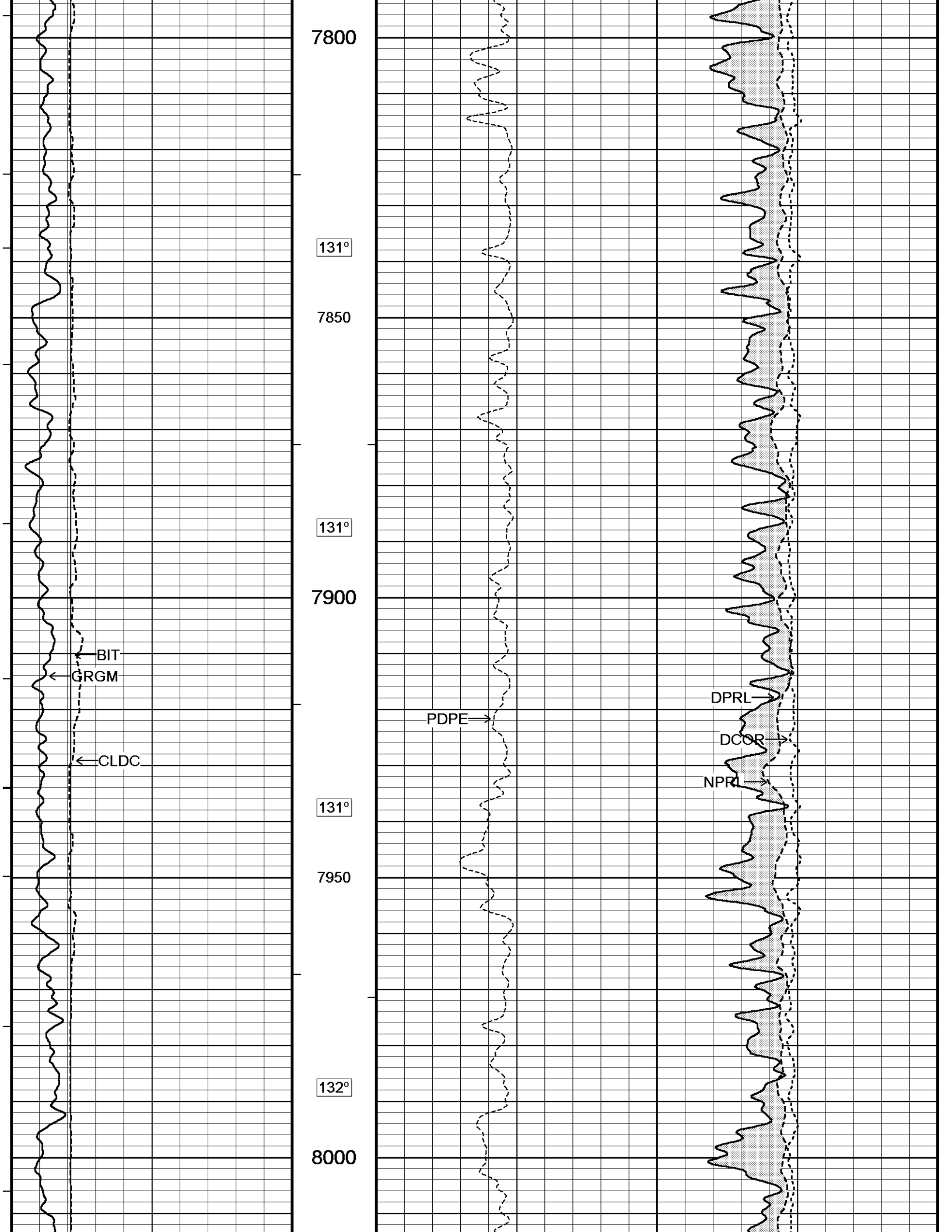

6700
BIT
GRGM
129°
DPRL
PDPE
DCOR
6750
CLDC
NPRL
129°
6800
129°
6850
129°
6900

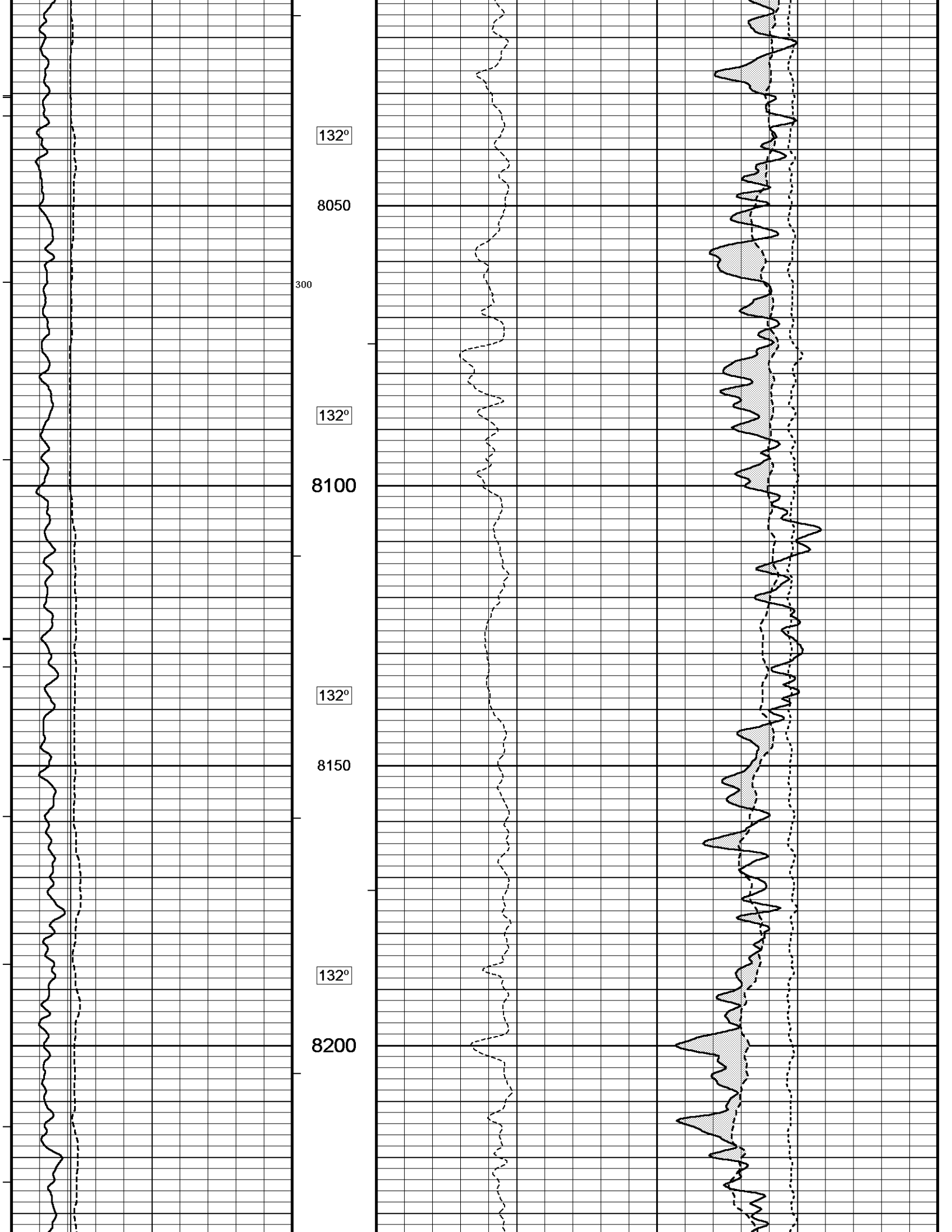

130°
6950
130°
7000
130°
7050
130°
7100
BIT
GRGM
500
DPRL

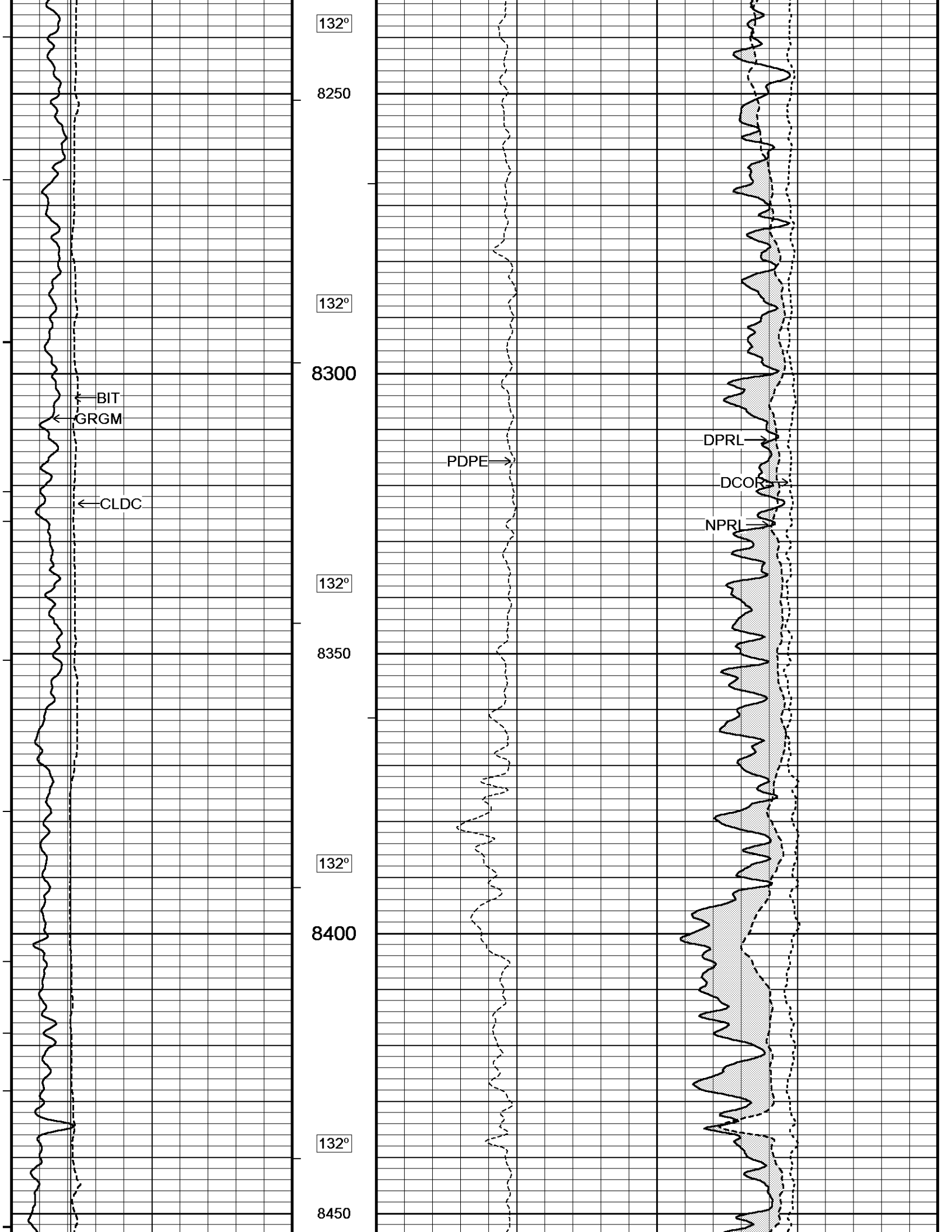

CLDC
PDPE
DCOR
NPRL
130°
7150
130°
7200
130°
7250
130°
7300
130°
7350

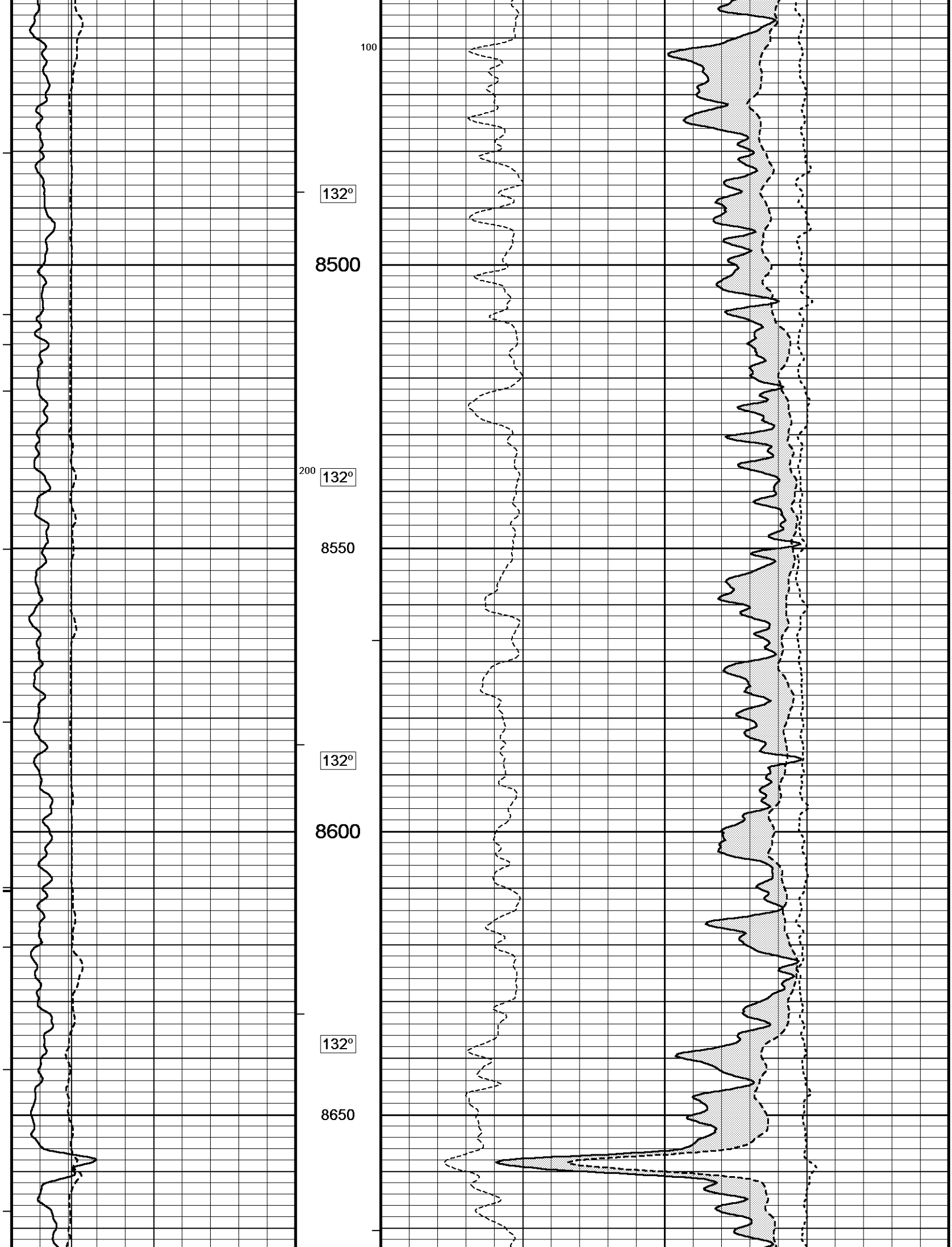

130°
7400
130°
7450
200
131°
7500
131°
7550
BIT
GRGM
CLDC
PDPE
DPRL
DCOR
NPRL

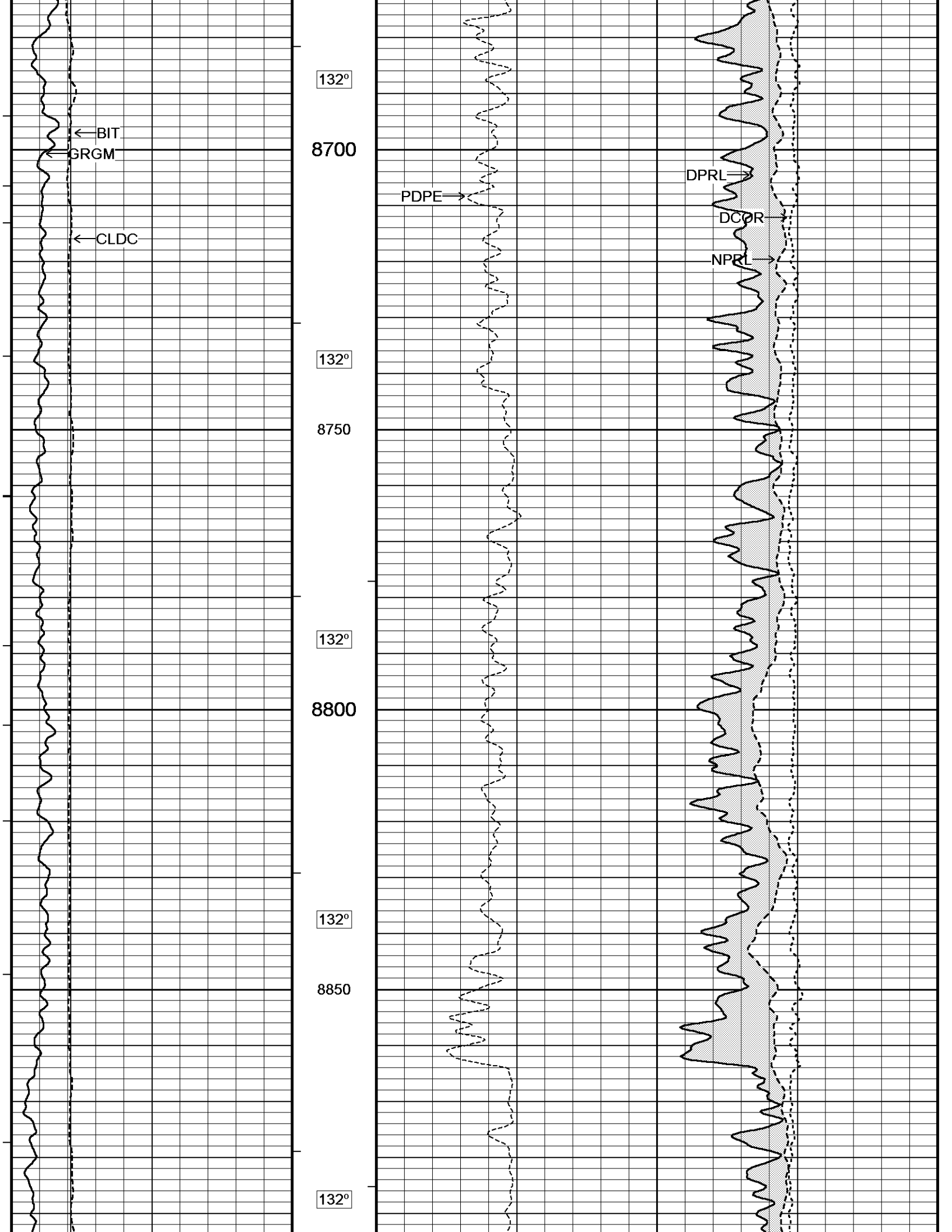

400
131°
7600
131°
7650
131°
7700
131°
7750
131°

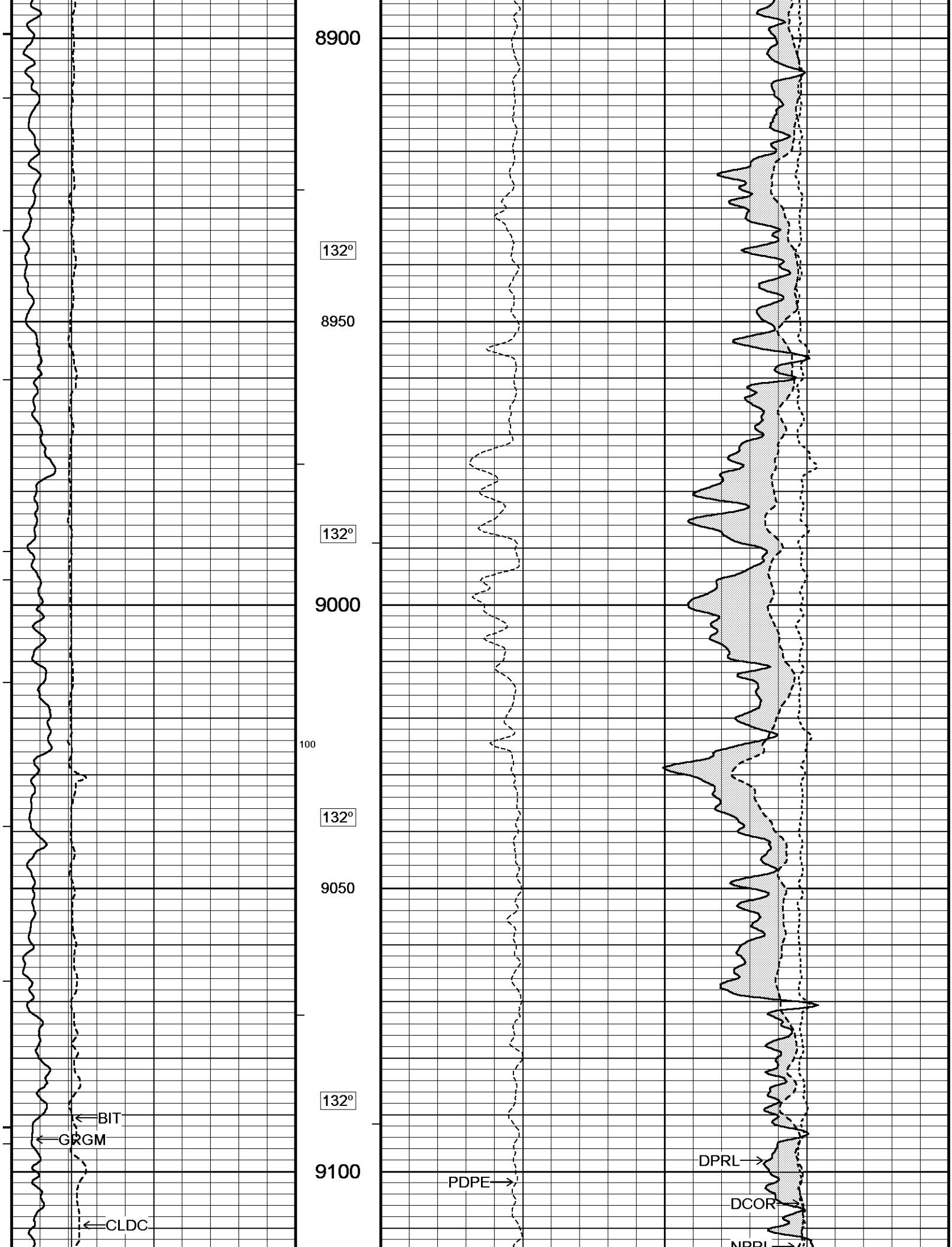

7800
131°
7850
131°
7900
BIT
GRGM
CLDC
PDPE
DPRL
DCOR
NPRL
131°
7950
132°
8000

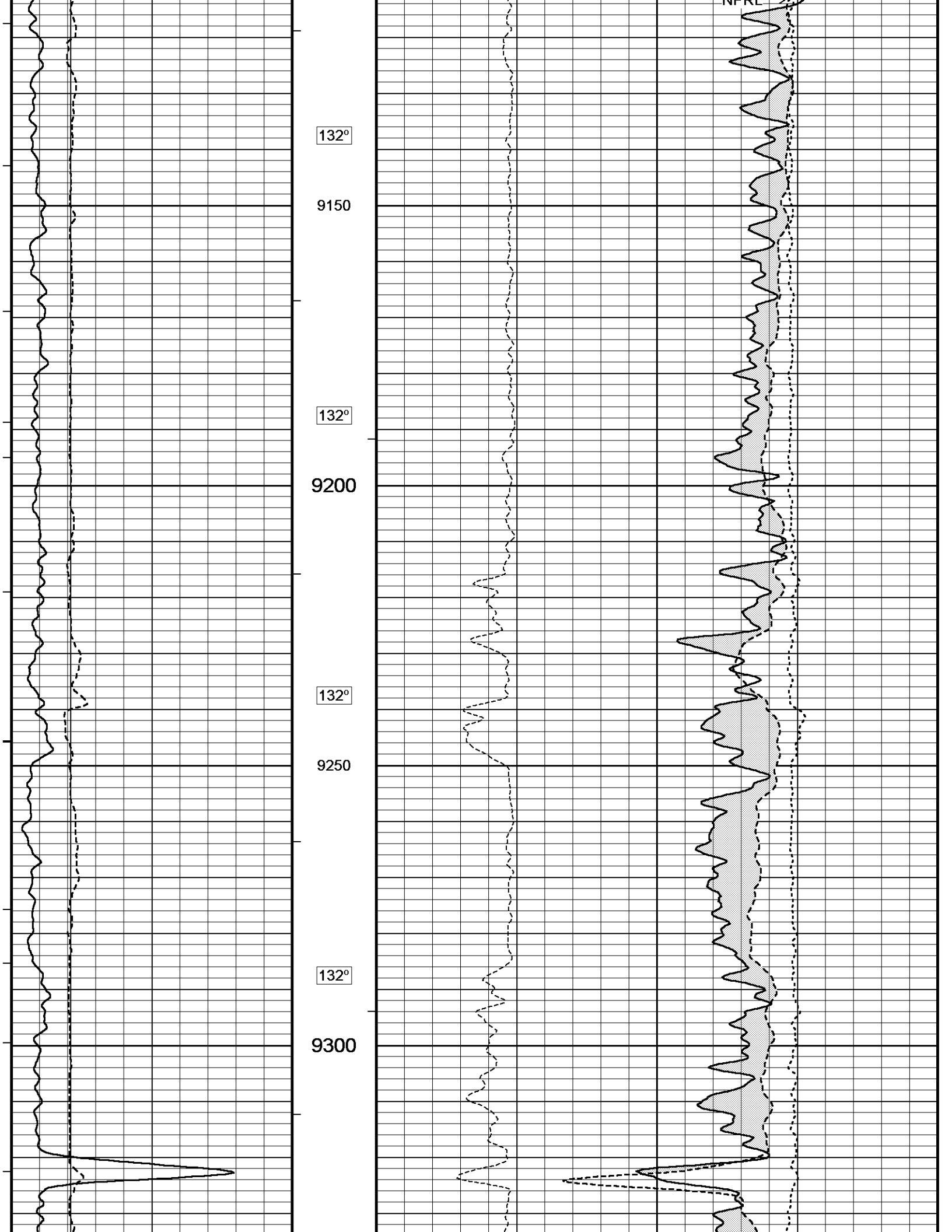

132°
8050
300
132°
8100
132°
8150
132°
8200

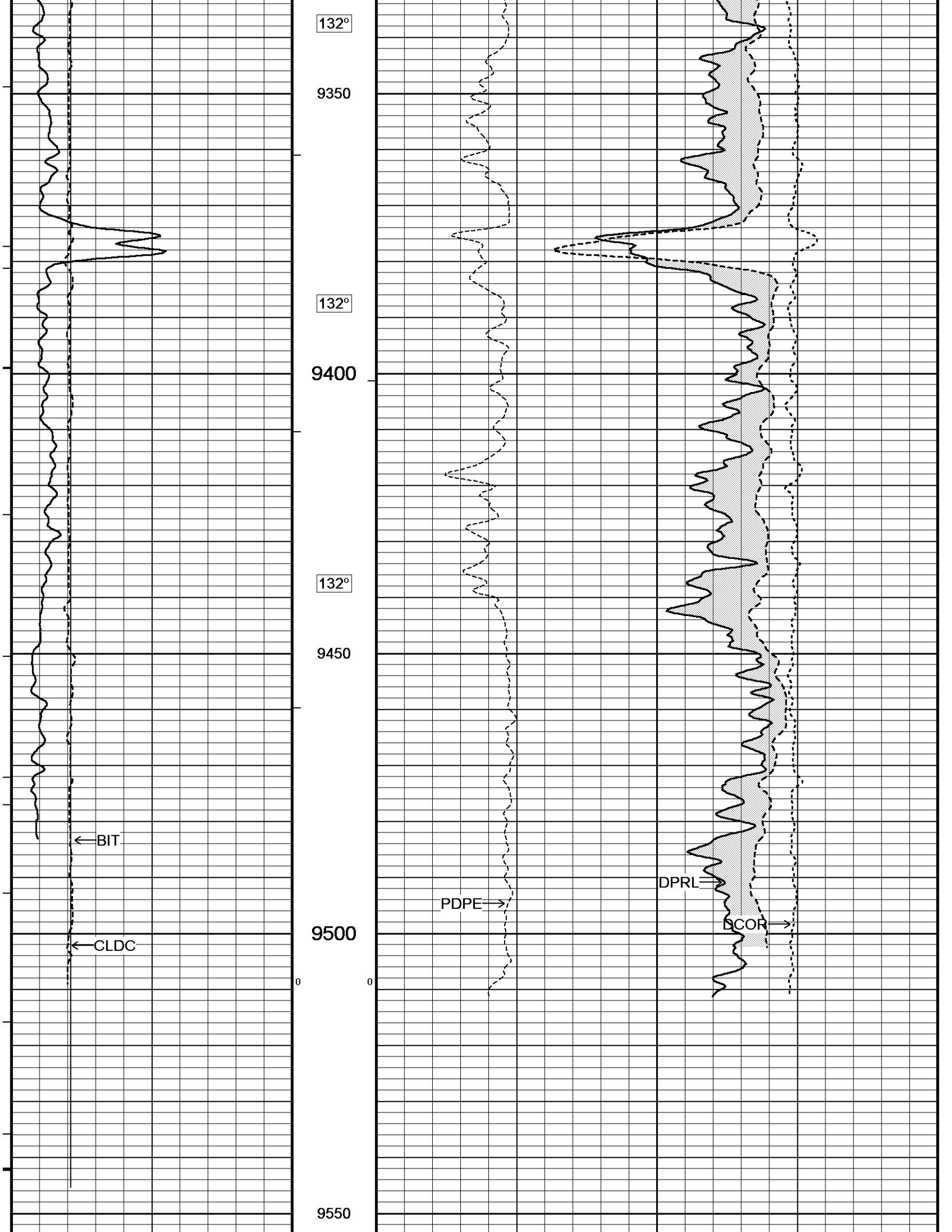

132°
8250
132°
8300
BIT
GRGM
CLDC
PDPE
DPRL
DCOR
NPRL
132°
8350
132°
8400
132°
8450

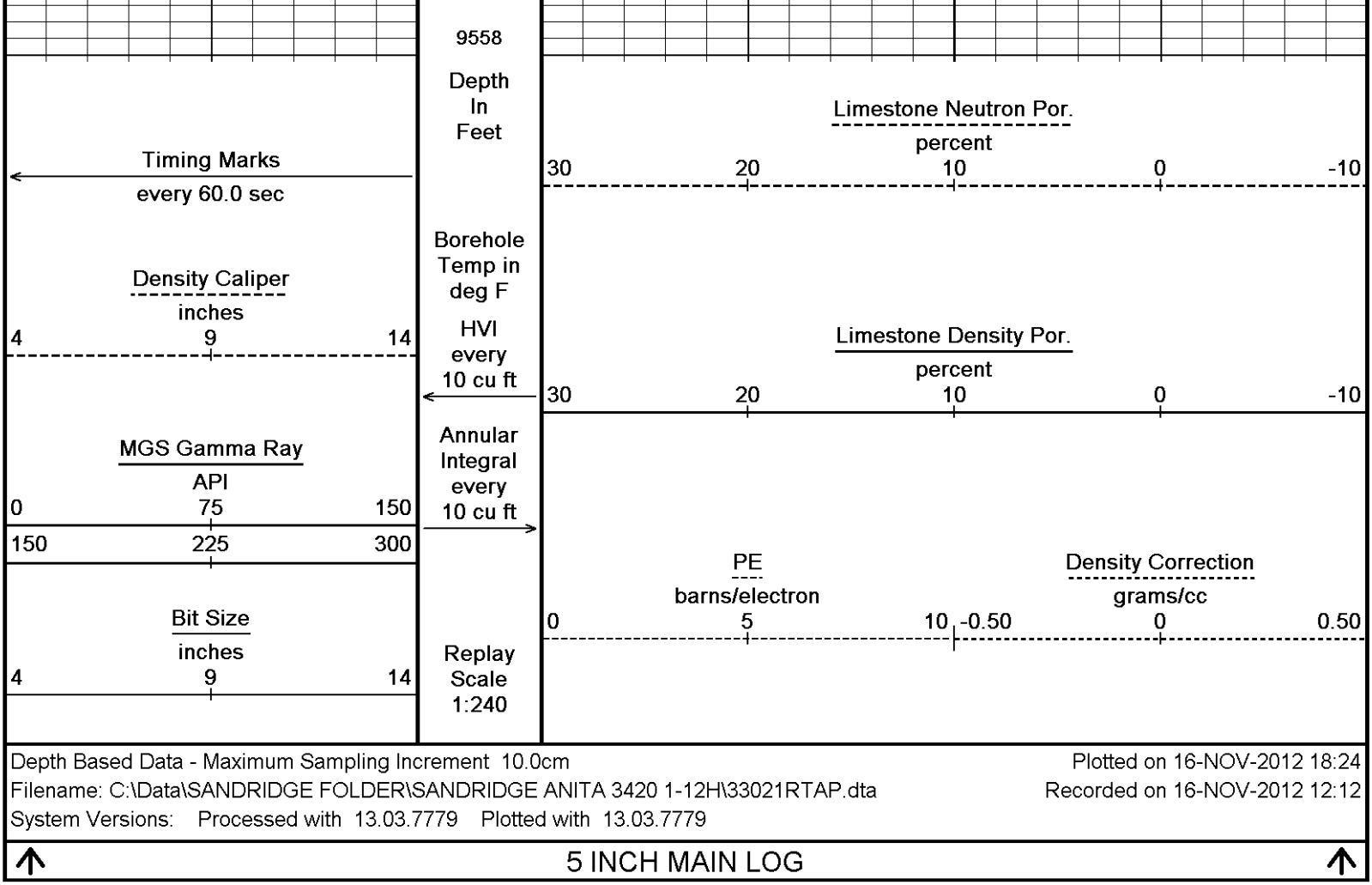

100
132°
8500
200
132°
8550
132°
8600
132°
8650

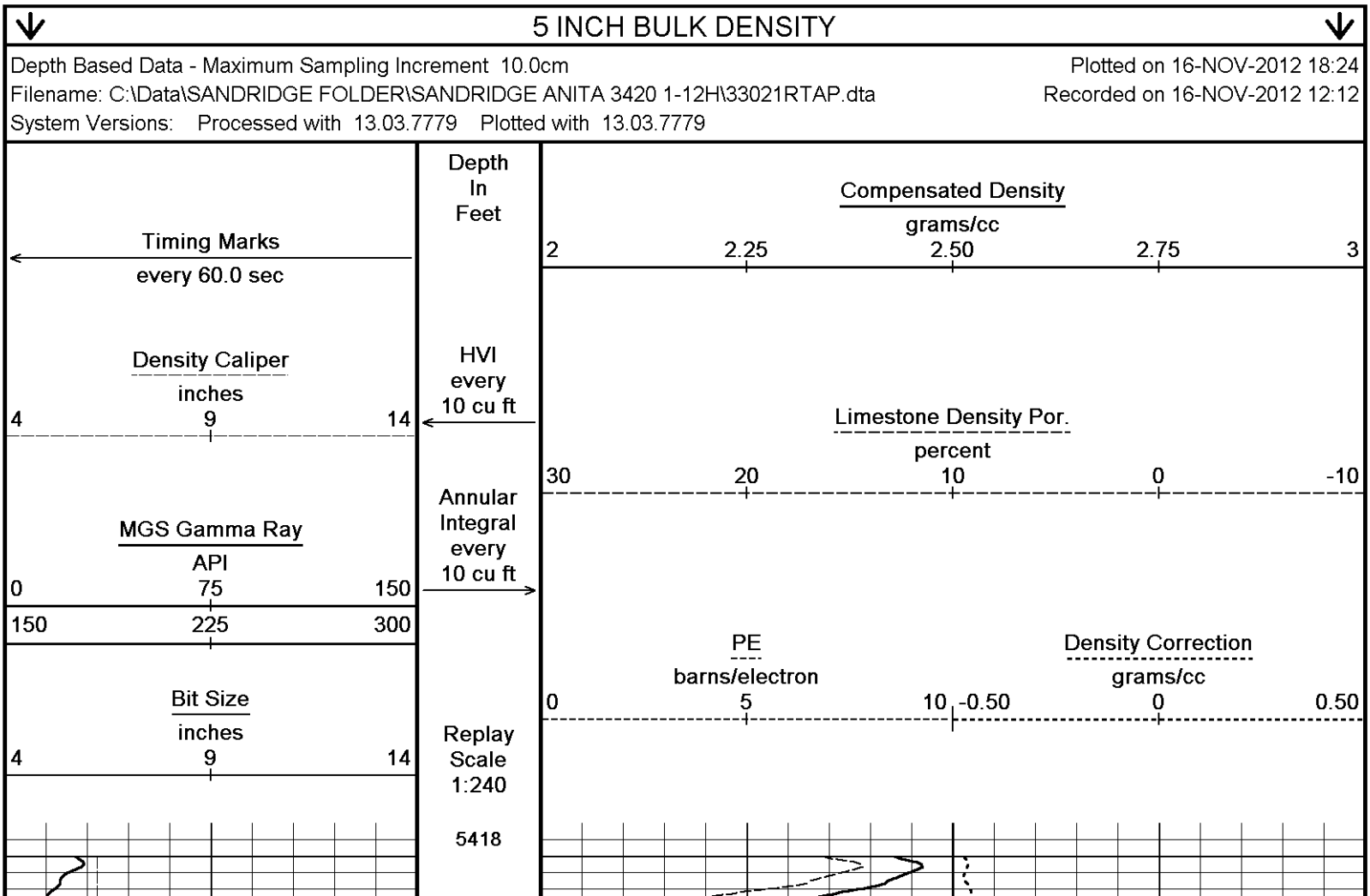

BIT
GRGM
CLDC
132°
8700
PDPE
DPRL
DCOR
NPRL
132°
8750
132°
8800
132°
8850
132°

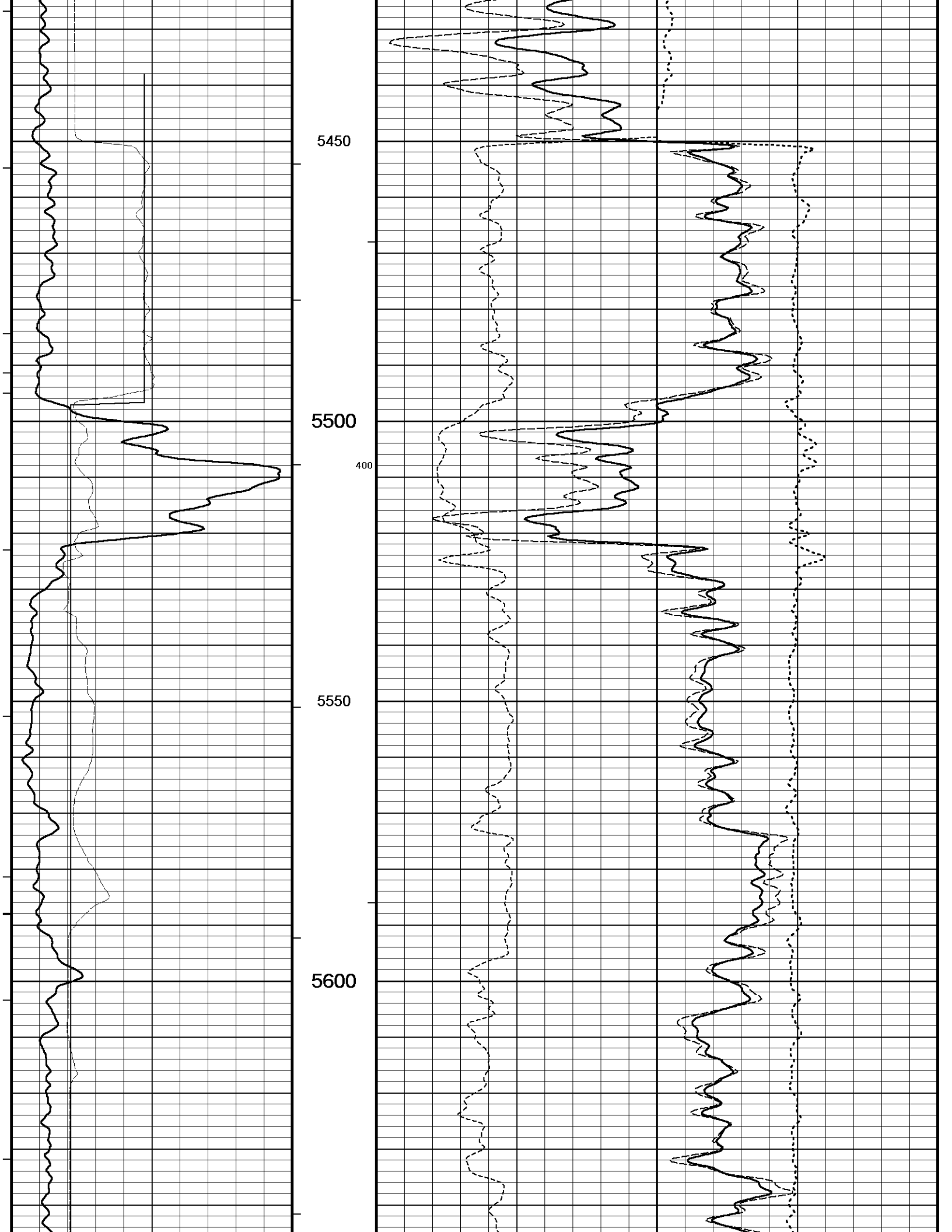

8900
132°
8950
132°
9000
100
132°
9050
132°
9100
BIT
GRGM
CLDC
PDPE
DPRL
DCOR

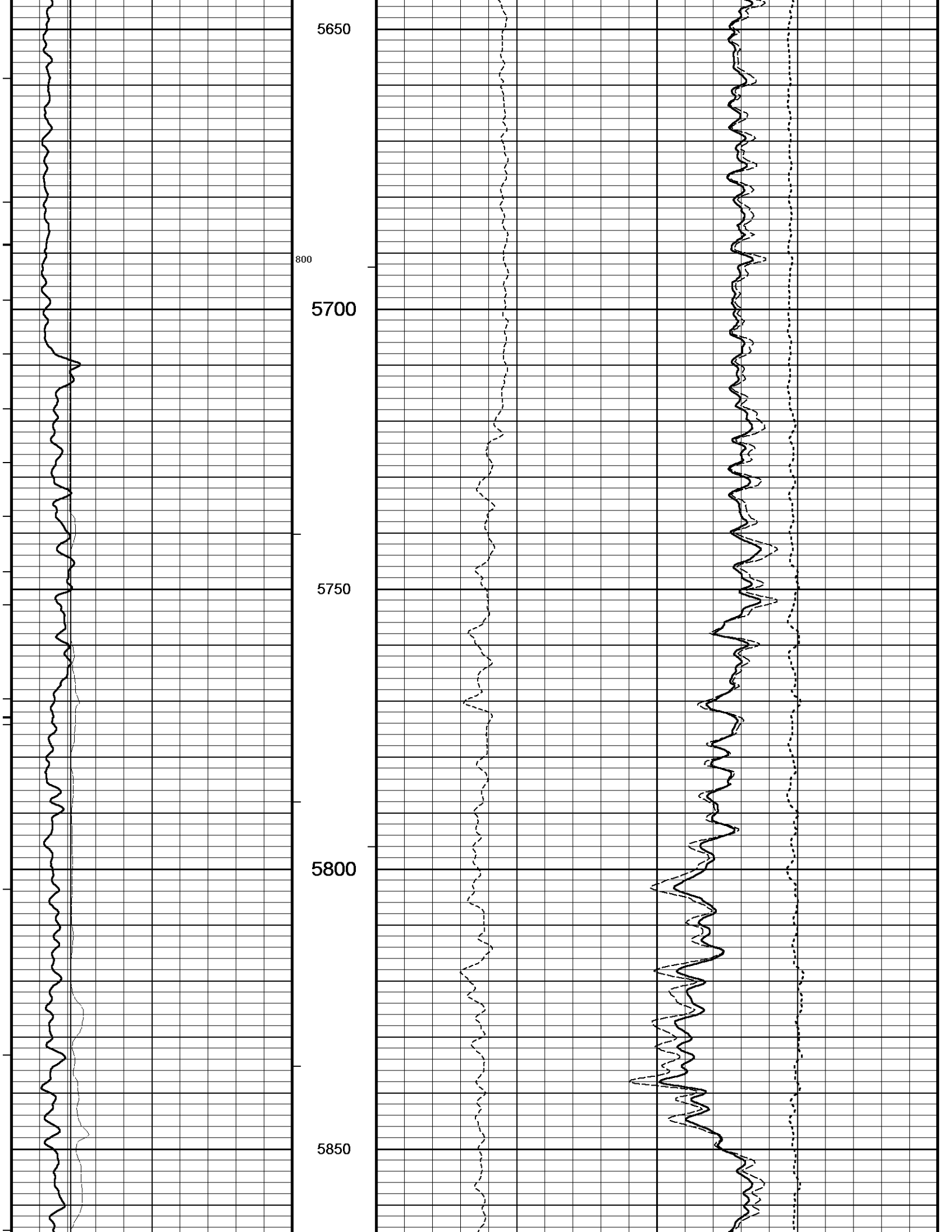

NPRL
132°
9150
132°
9200
132°
9250
132°
9300

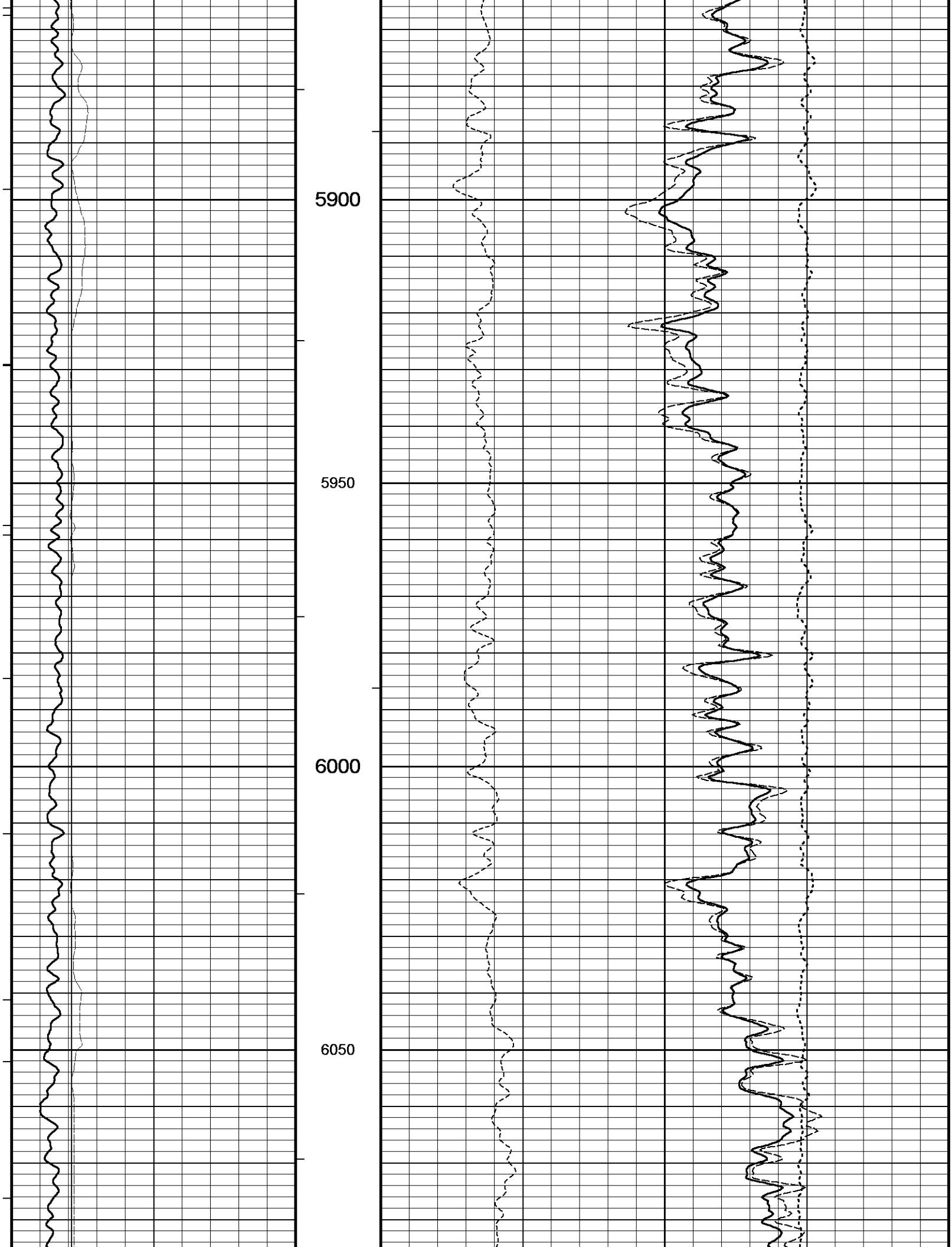

132°
9350
132°
9400
132°
9450
BIT
CLDC
PDPE
DPRL
DCOR
9500
9550
0
0

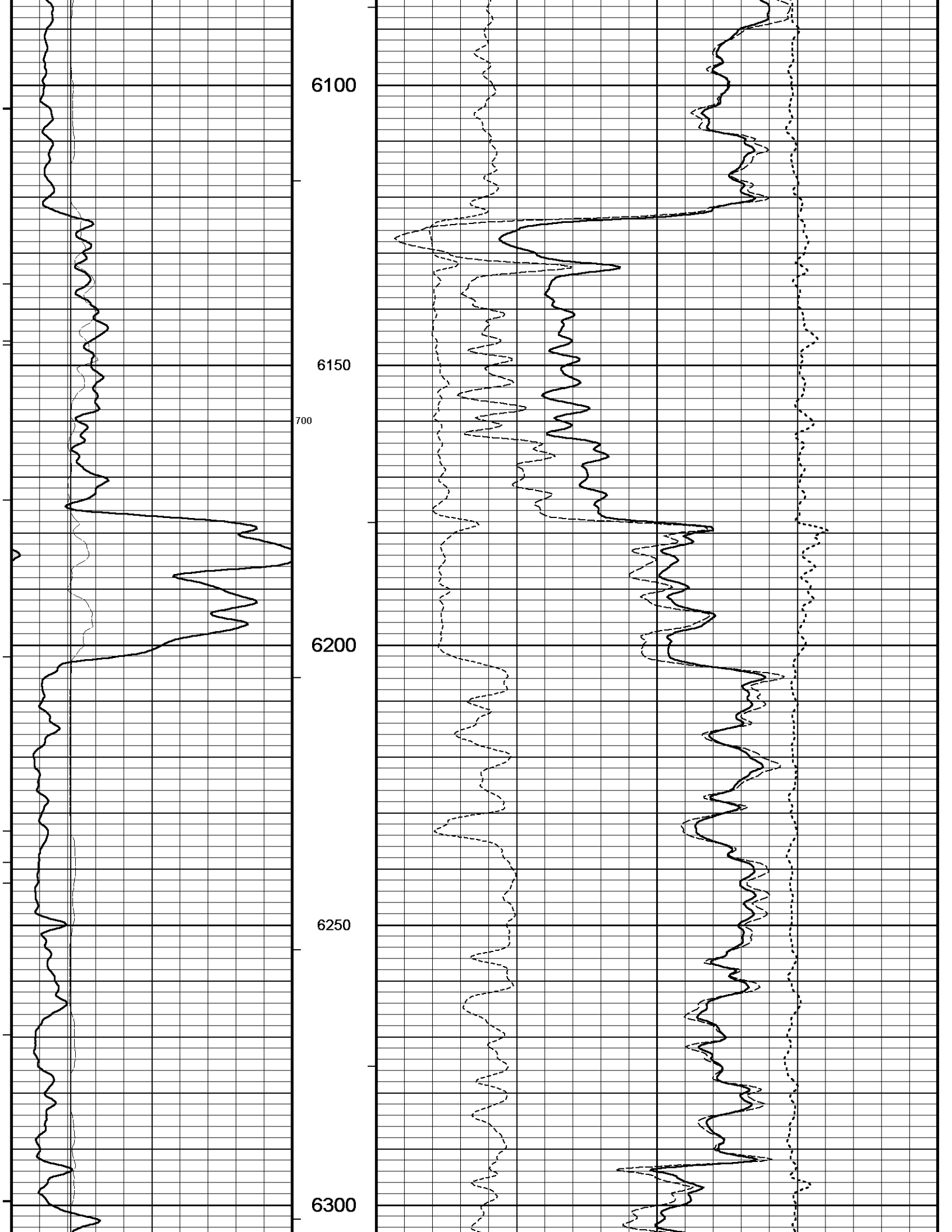

9558
Depth In Feet
Timing Marks
every 60.0 sec
Density Caliper
inches
4 9 14
Borehole Temp in deg F
HVI every 10 cu ft
MGS Gamma Ray
API
0 75 150
150 225 300
Annular Integral every 10 cu ft
Bit Size
inches
4 9 14
Replay Scale 1:240
Limestone Neutron Por.
percent
30 20 10 0 -10
Limestone Density Por.
percent
30 20 10 0 -10
PE
barns/electron
0 5 10
Density Correction
grams/cc
-0.50 0 0.50
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 16-NOV-2012 18:24
Filename: C:\Data\SANDRIDGE FOLDER\SANDRIDGE ANITA 3420 1-12H\33021RTAP.dta
Recorded on 16-NOV-2012 12:12
System Versions: Processed with 13.03.7779 Plotted with 13.03.7779
5 INCH MAIN LOG

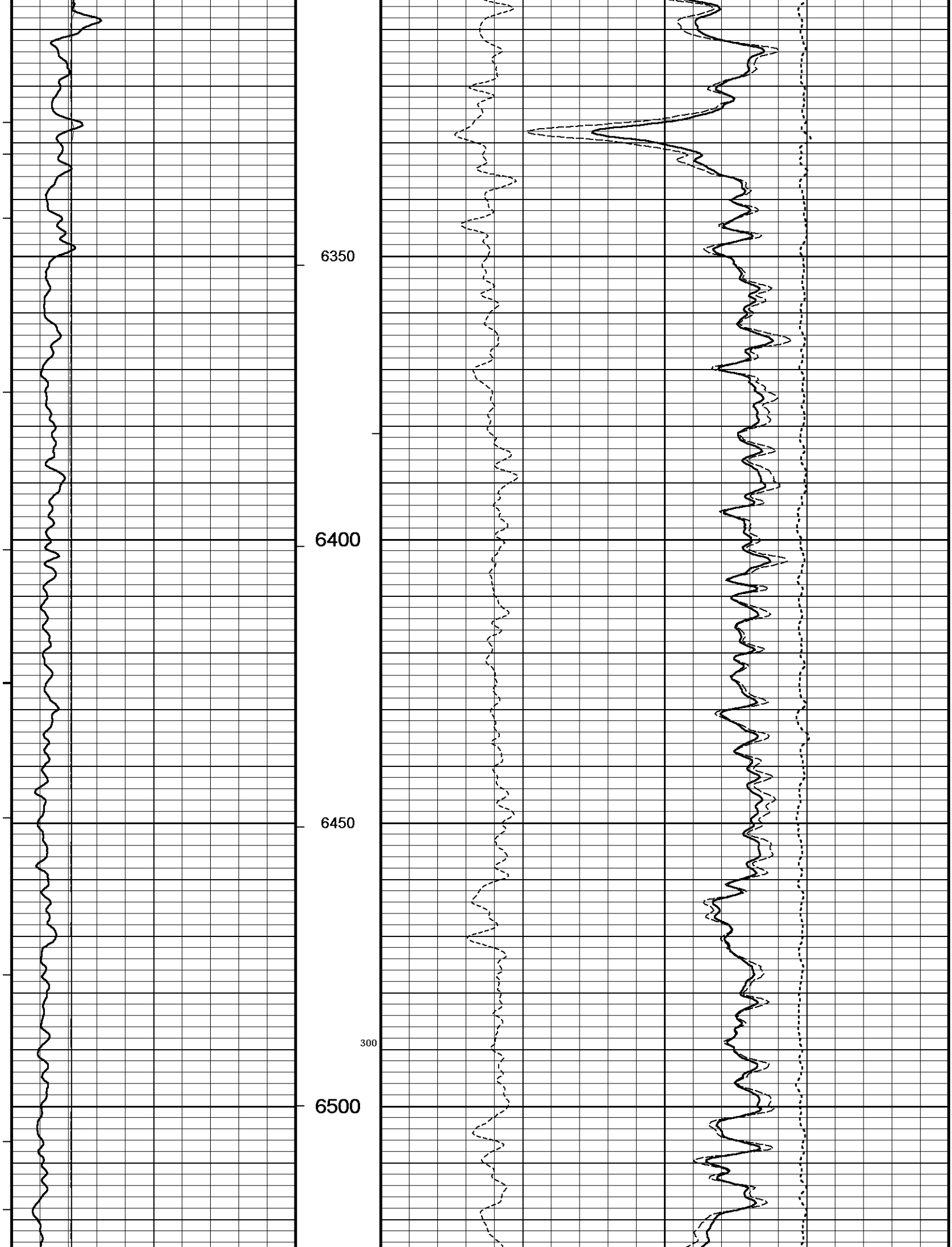

5 INCH BULK DENSITY
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 16-NOV-2012 18:24
Filename: C:\Data\SANDRIDGE FOLDER\SANDRIDGE ANITA 3420 1-12H\33021RTAP.dta
Recorded on 16-NOV-2012 12:12
System Versions: Processed with 13.03.7779 Plotted with 13.03.7779
Depth In Feet
Timing Marks
every 60.0 sec
Density Caliper
inches
4 9 14
HVI every 10 cu ft
MGS Gamma Ray
API
0 75 150
150 225 300
Annular Integral every 10 cu ft
Bit Size
inches
4 9 14
Replay Scale 1:240
Compensated Density
grams/cc
2 2.25 2.50 2.75 3
Limestone Density Por.
percent
30 20 10 0 -10
PE
barns/electron
0 5 10
Density Correction
grams/cc
-0.50 0 0.50
5418

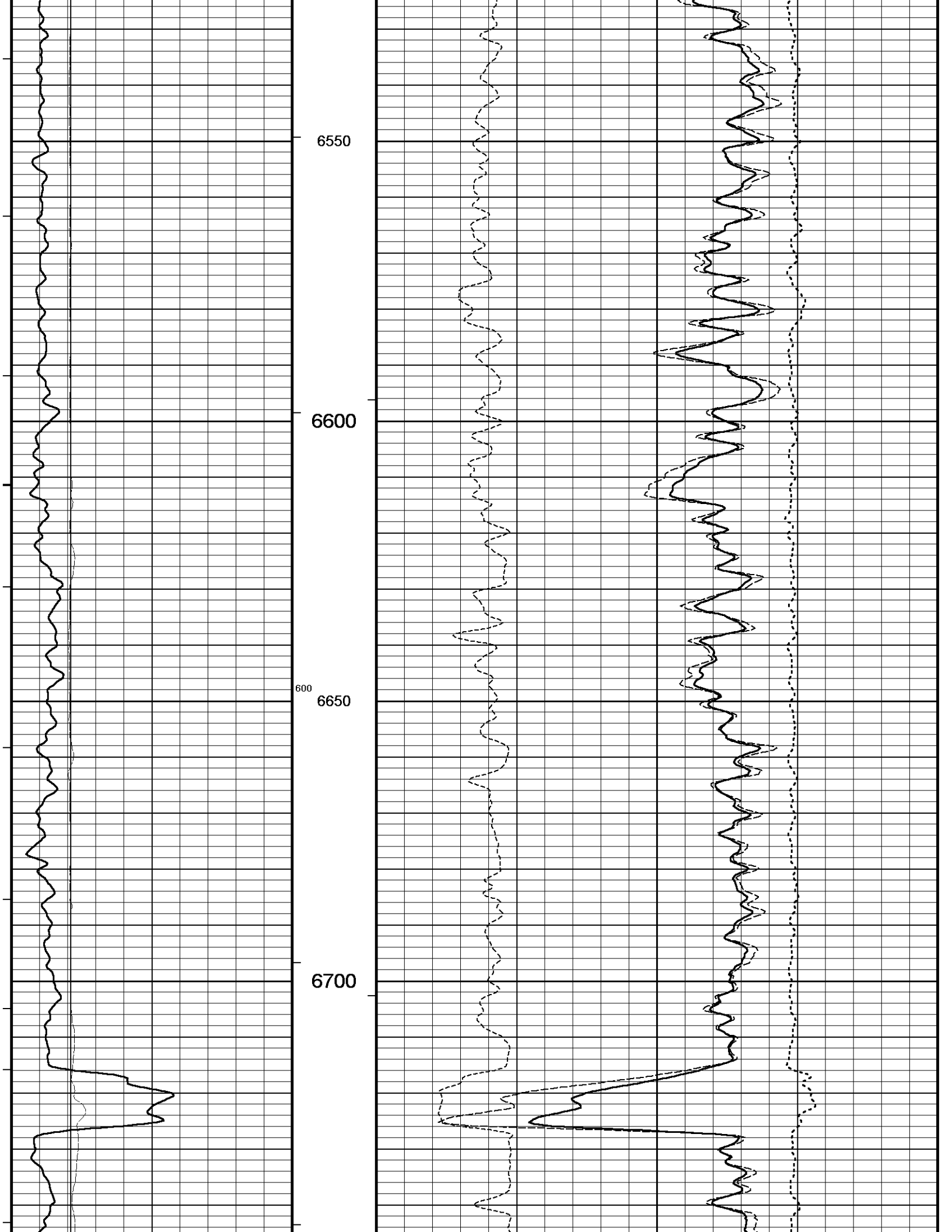

5450
5500
400
5550
5600

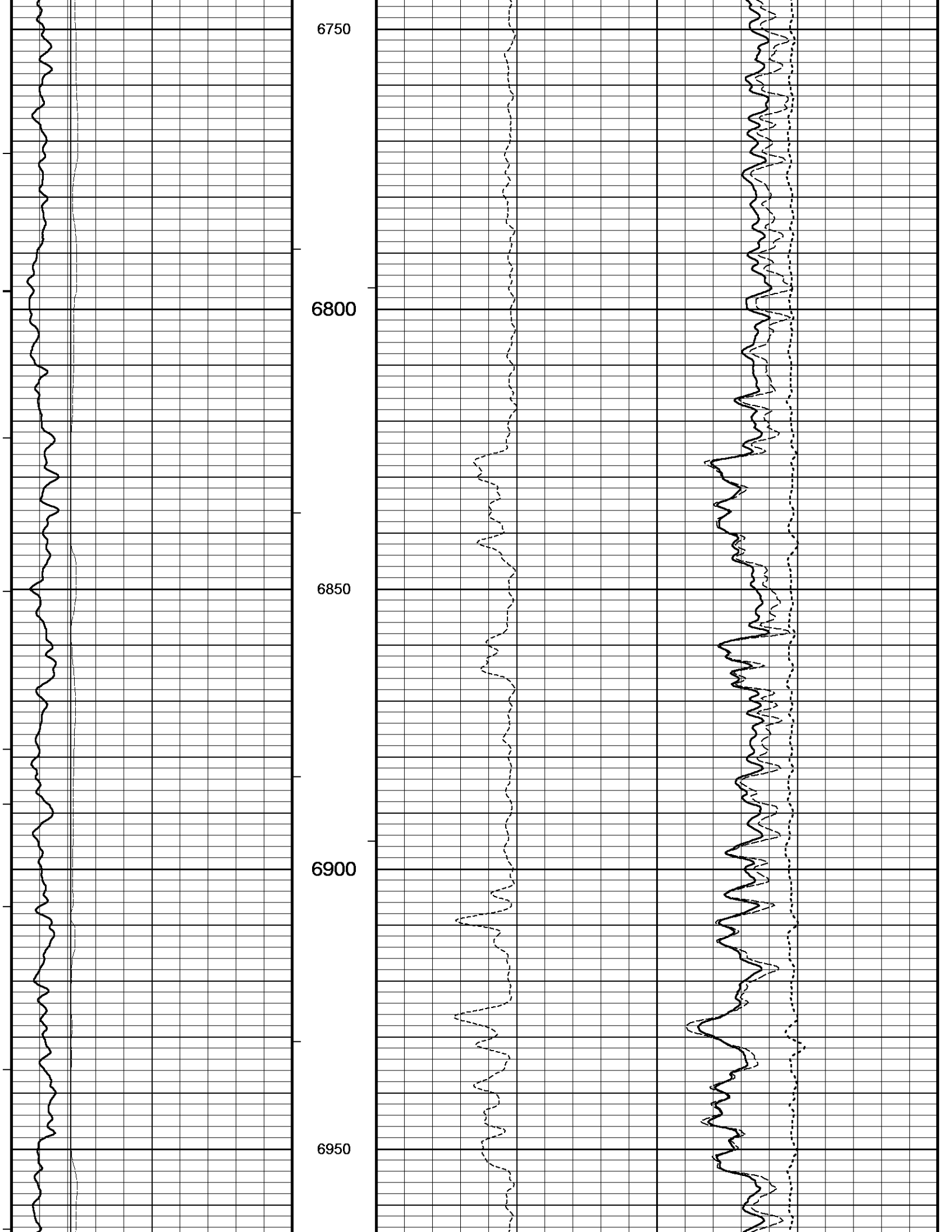

5650
800
5700
5750
5800
5850

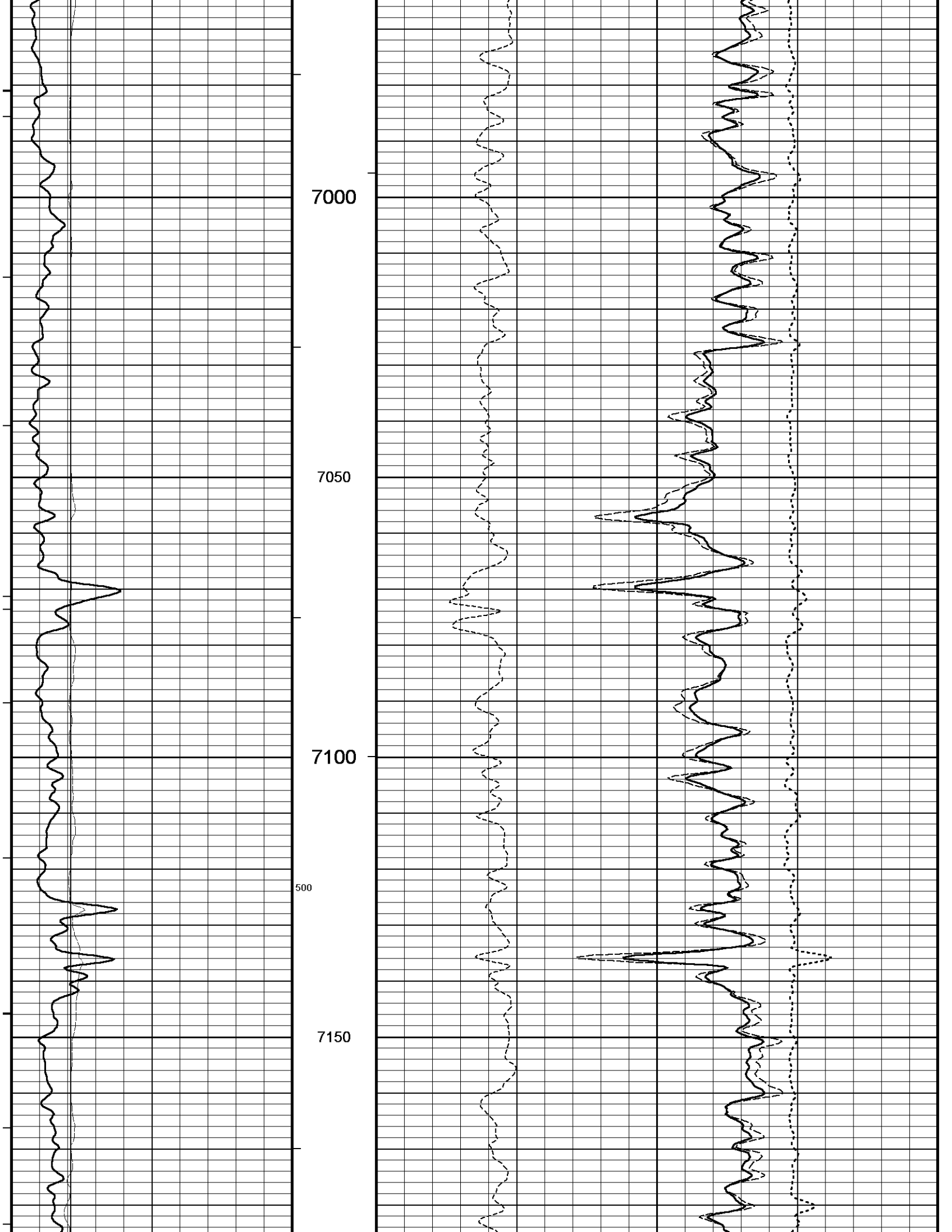

5900
5950
6000
6050

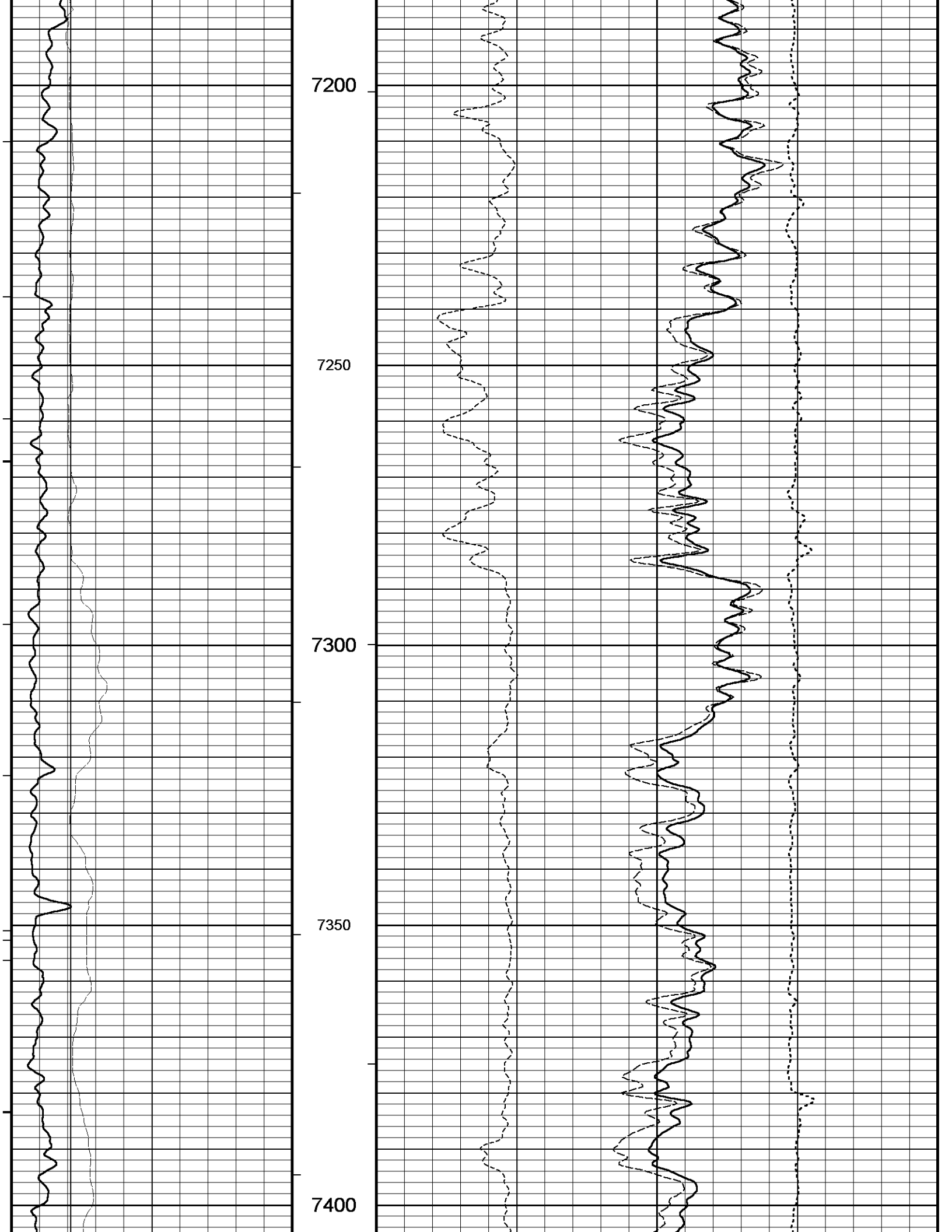

6100
6150
700
6200
6250
6300

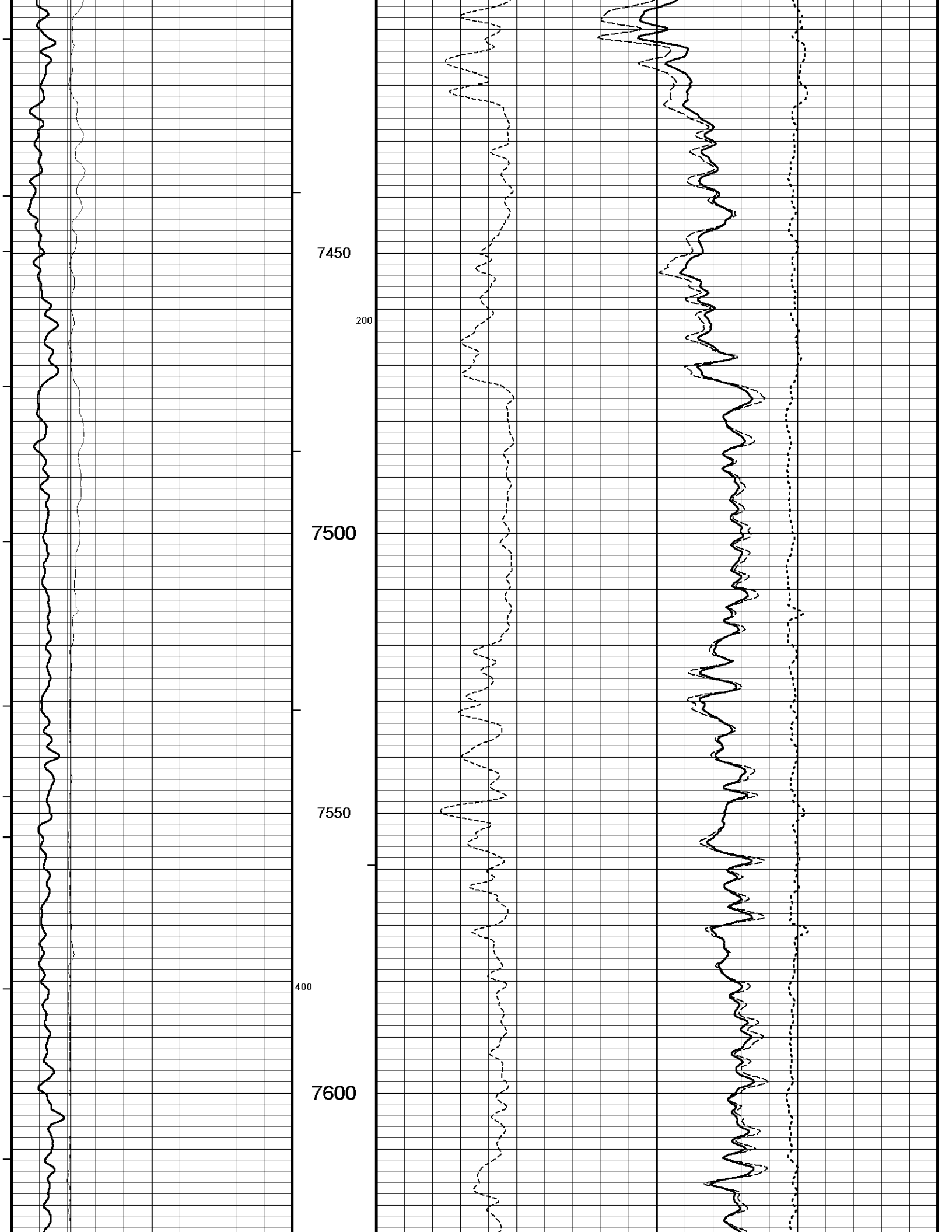

6350
6400
6450
300
6500

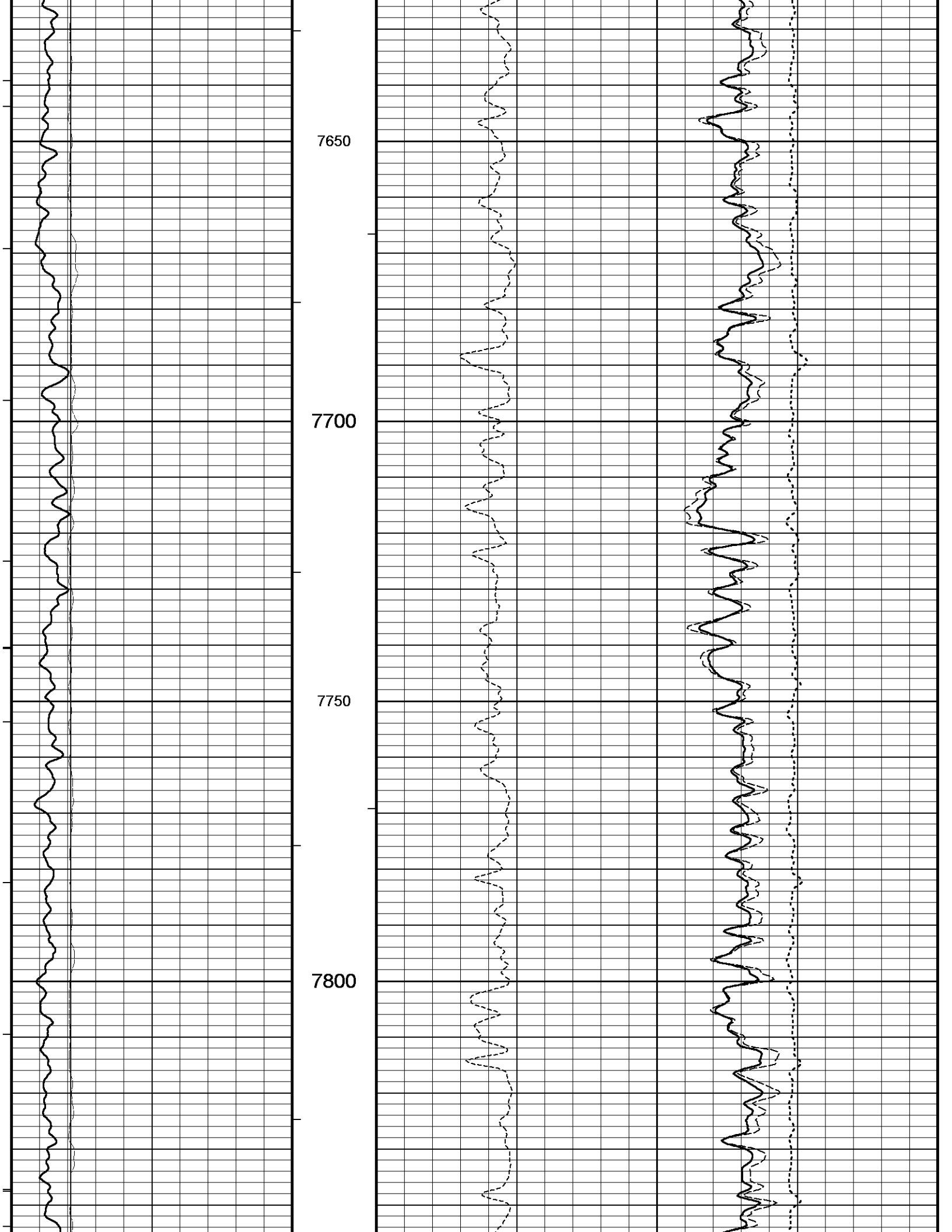

6550
6600
600
6650
6700

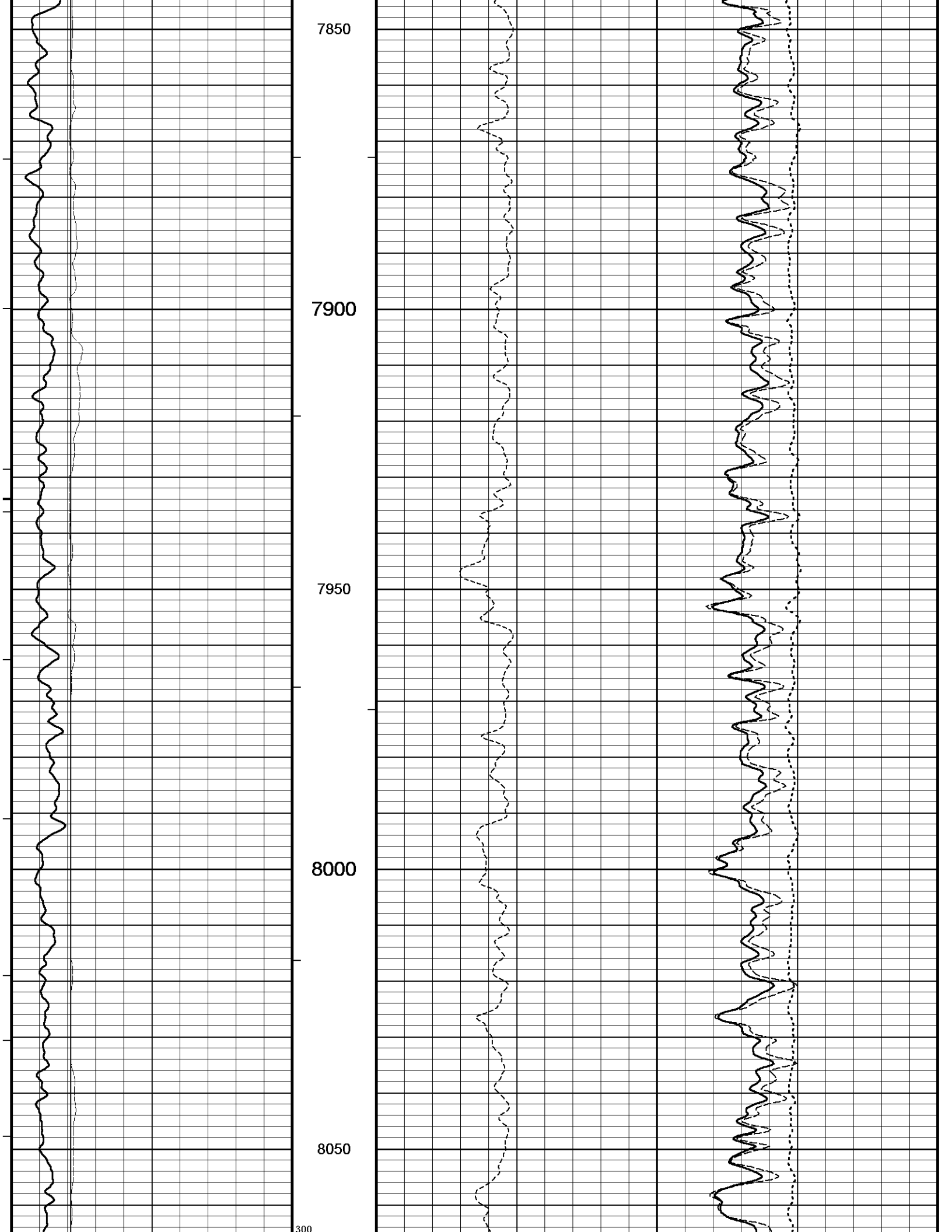

6750
6800
6850
6900
6950

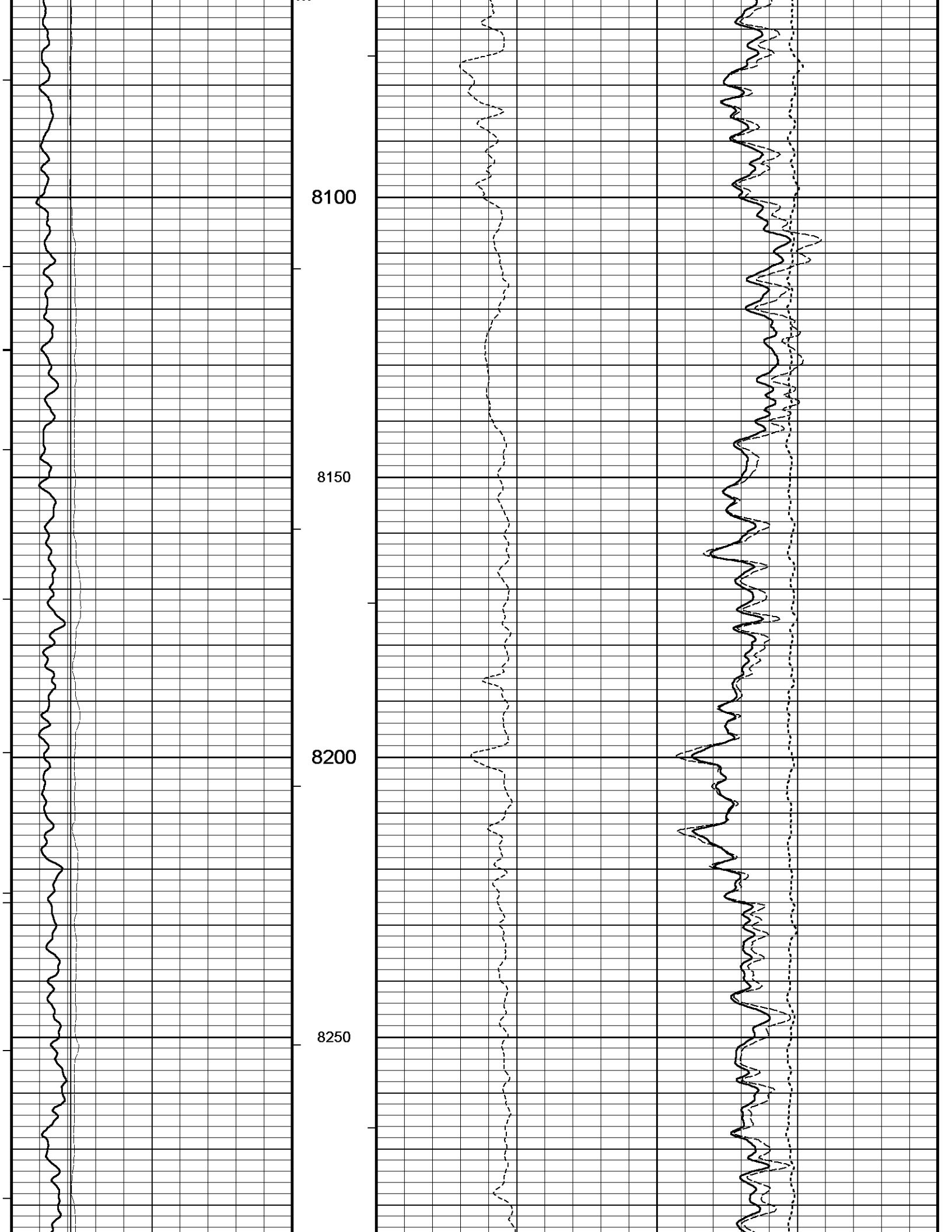

7000
7050
7100
500
7150

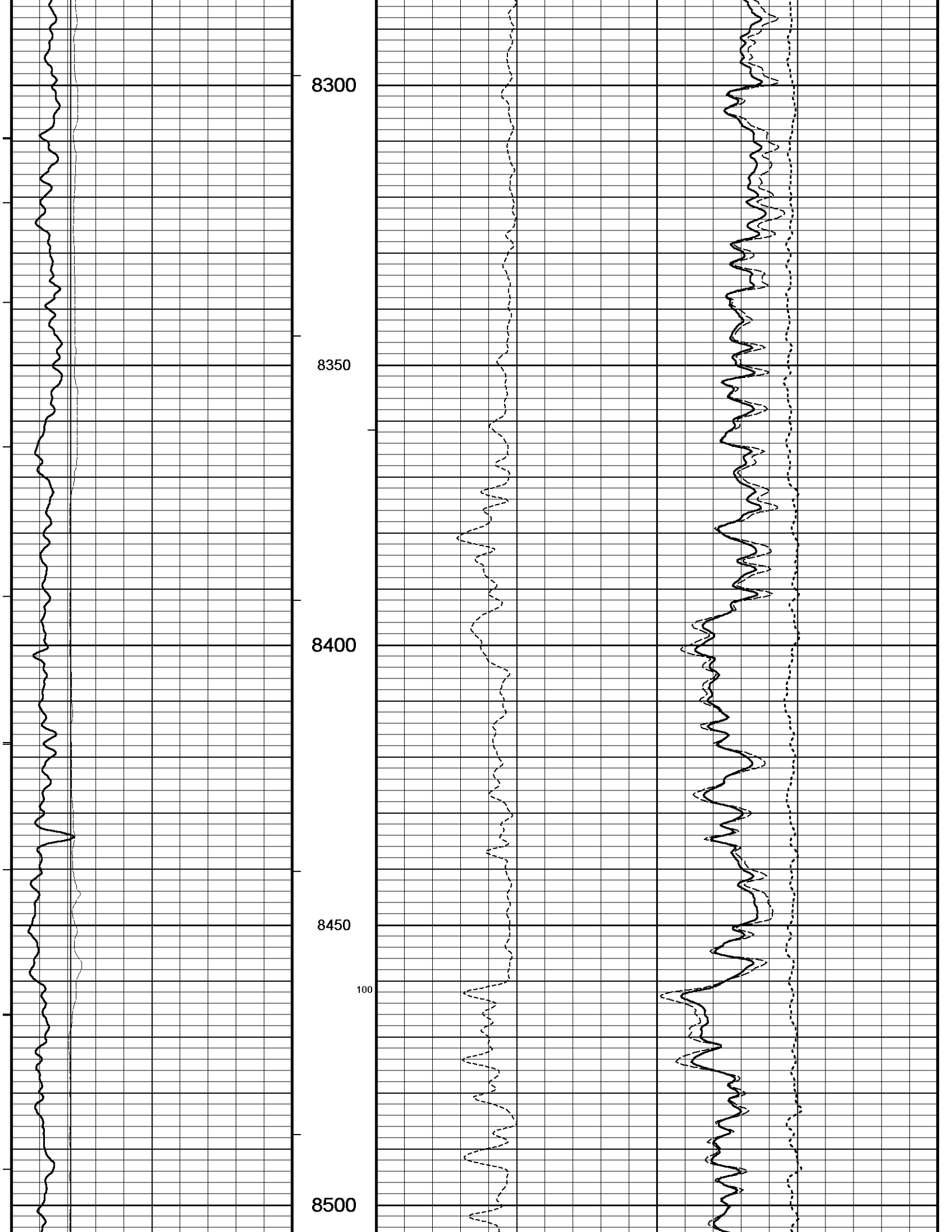

7200
7250
7300
7350
7400

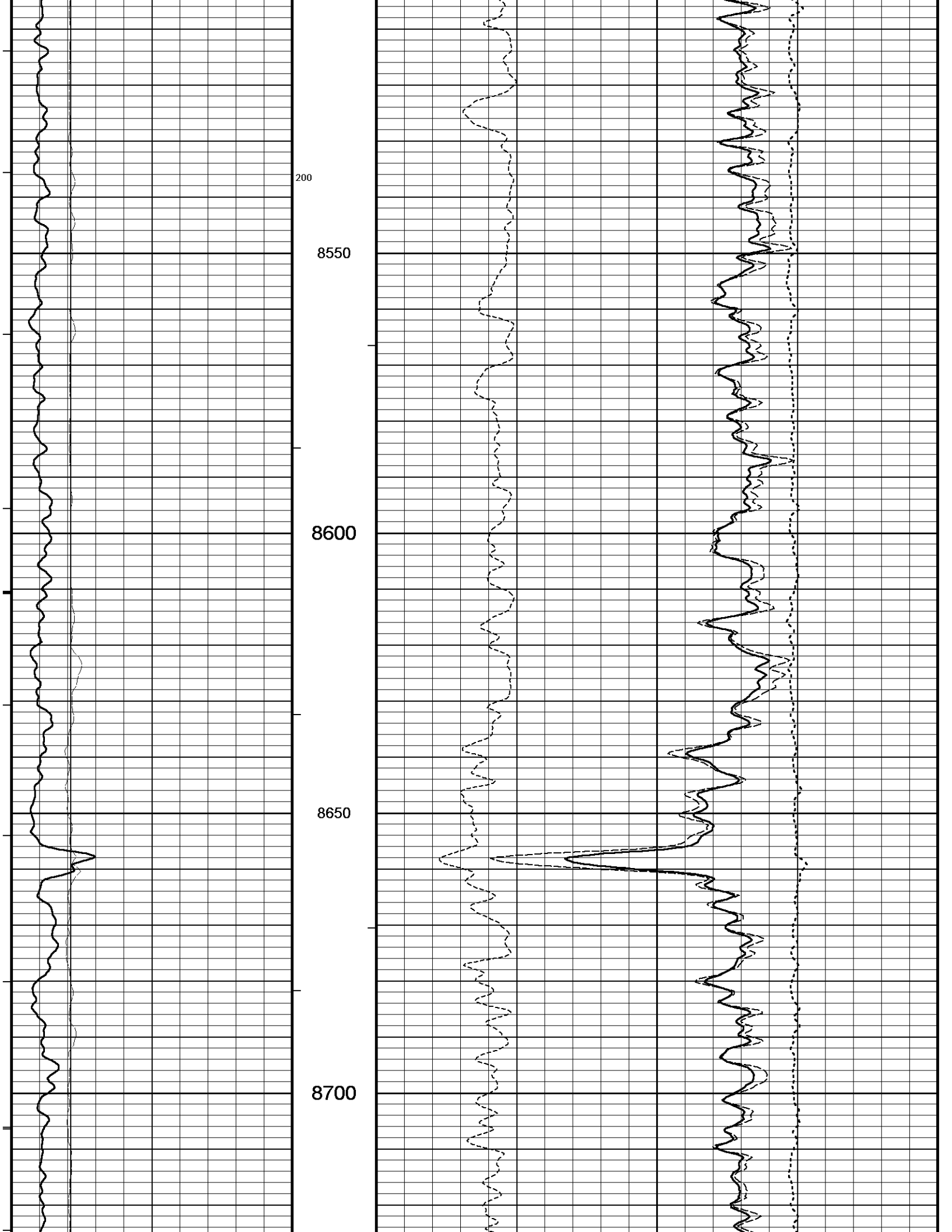

7450
200
7500
7550
400
7600

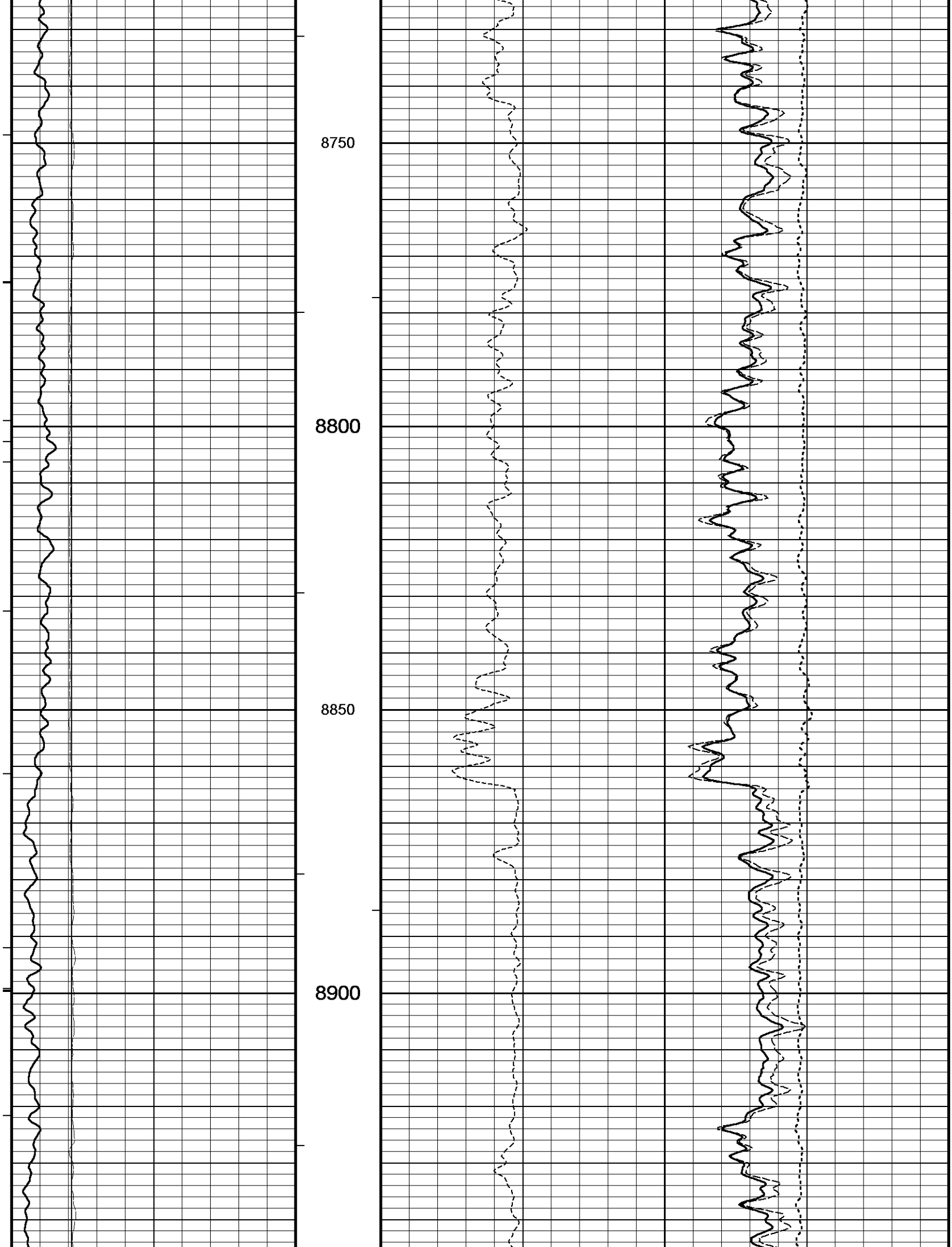

7650
7700
7750
7800

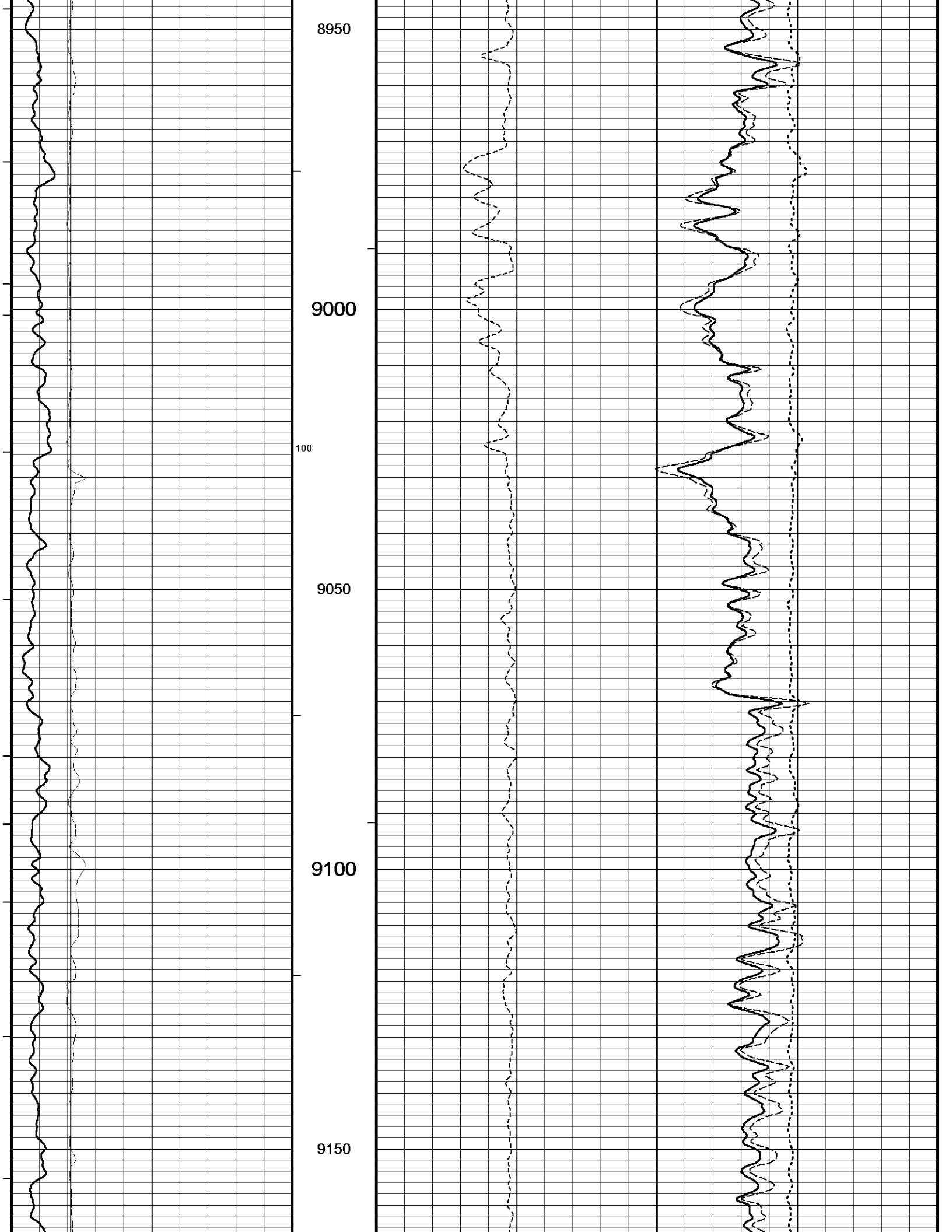

7850
7900
7950
8000
8050
300

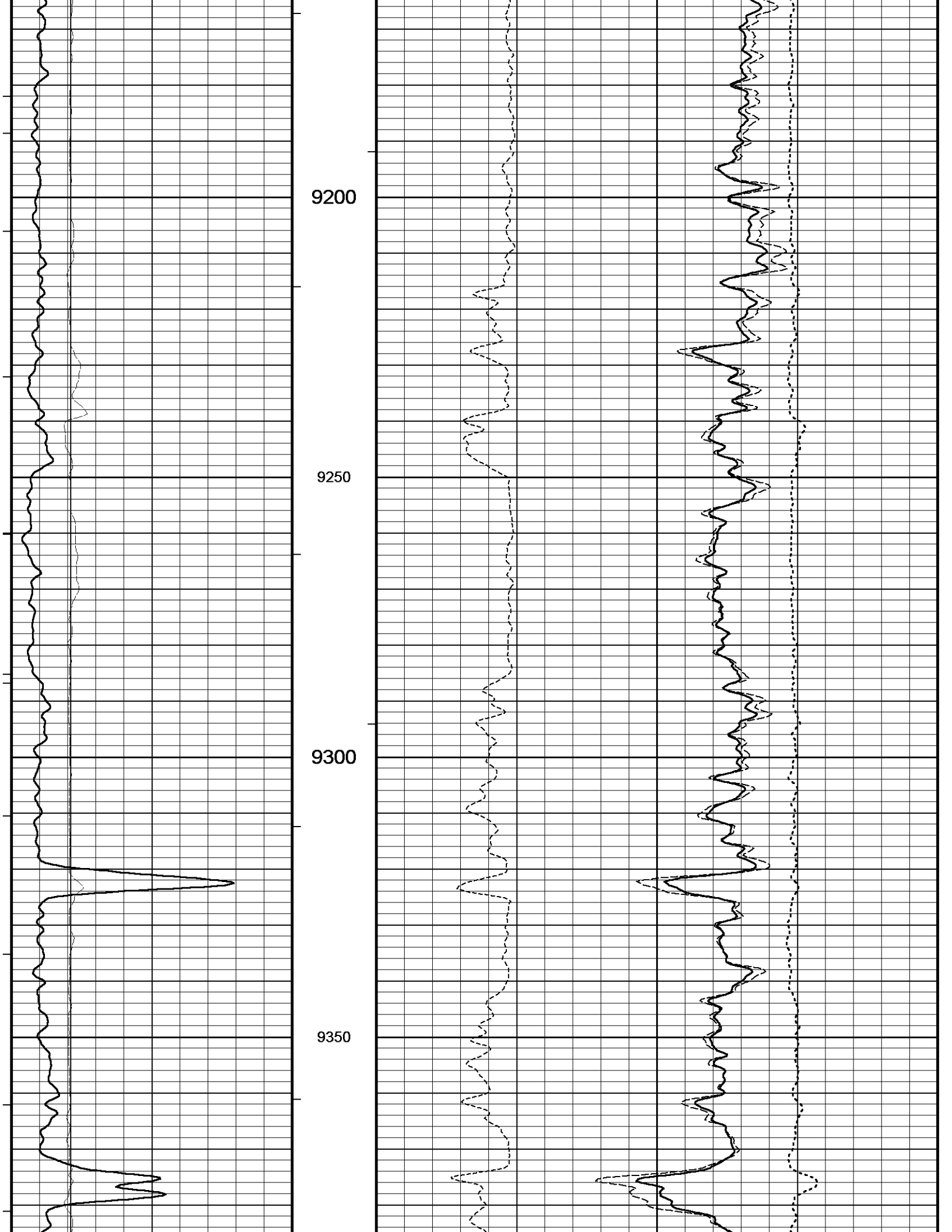

8100
8150
8200
8250

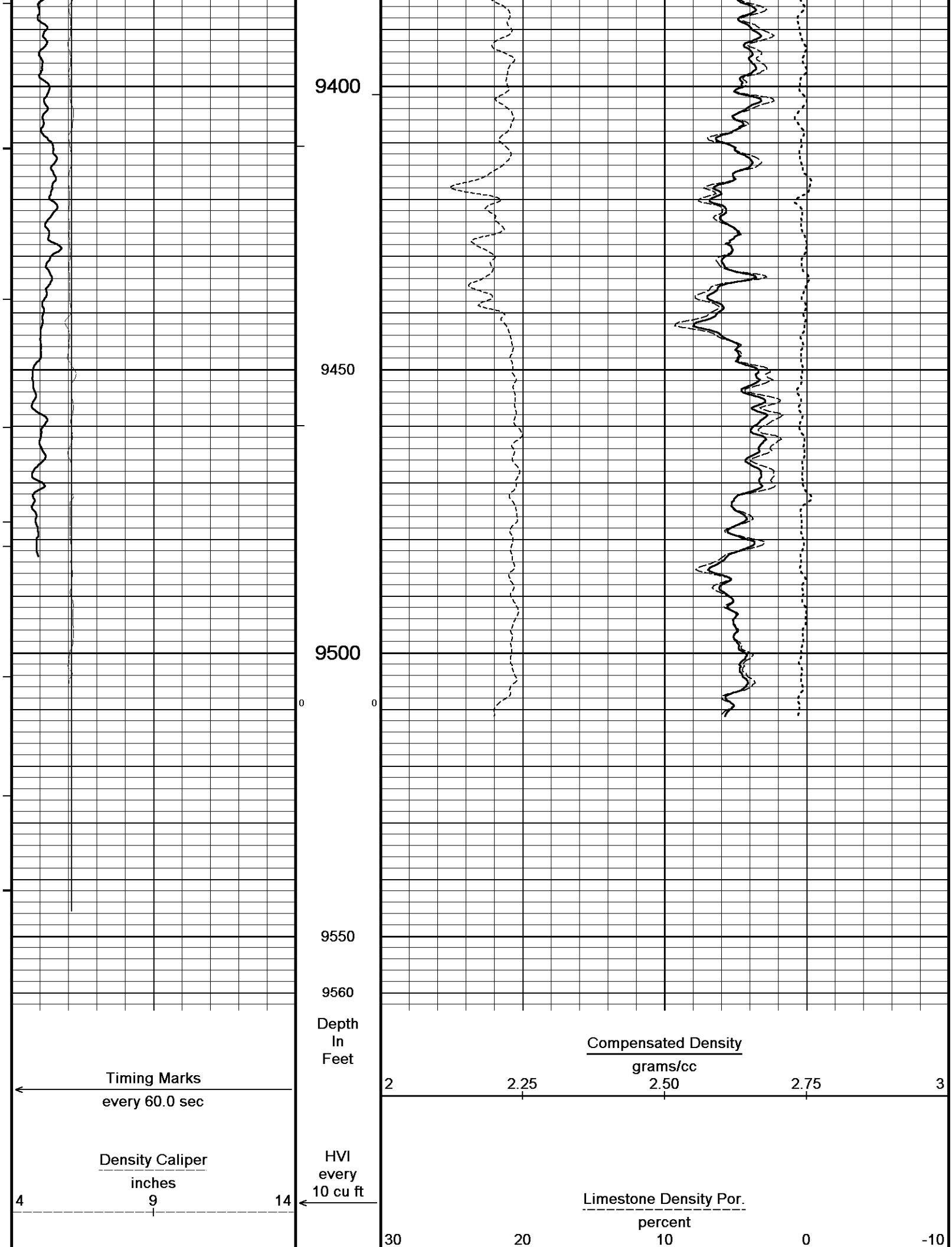

8300
8350
8400
8450
100
8500

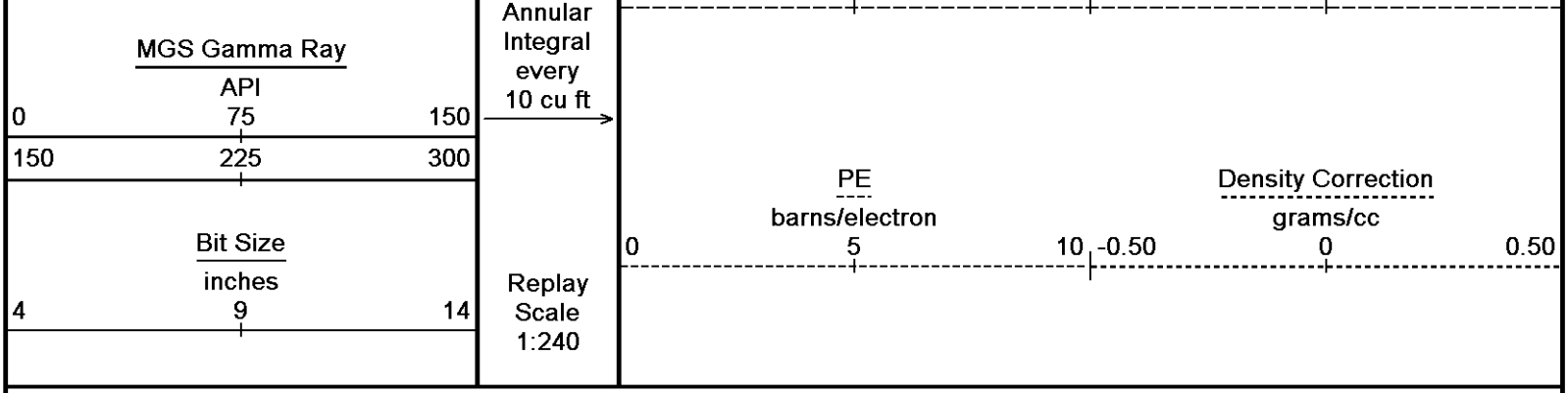

200
8550
8600
8650
8700


8750
8800
8850
8900


8950
9000
100
9050
9100
9150


9200
9250
9300
9350


9400
9450
9500
9550
9560
0
0
Depth
In
Feet
Timing Marks
every 60.0 sec
Density Caliper
inches
4
9
14
HVI
every
10 cu ft
Compensated Density
grams/cc
2
2.25
2.50
2.75
3
Limestone Density Por.
percent
30
20
10
0
-10



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 16-NOV-2012 18:24

Filename: C:\Data\SANDRIDGE FOLDER\SANDRIDGE ANITA 3420 1-12H\33021RTAP.dta — Recorded on 16-NOV-2012 12:12

System Versions: Processed with 13.03.7779 Plotted with 13.03.7779

5 INCH BULK DENSITY

BEFORE SURVEY CALIBRATION

C:\Data\SANDRIDGE FOLDER\SANDRIDGE ANITA 3420 1-12H\33021RTAP.dta

General Constants All 000

Last Edited on 16-NOV-2012,17:59

General Parameters		
Mud Resistivity	1.100	ohm-metres
Mud Resistivity Temperature	70.000	degrees F
Water Level	0.000	feet
Density/Neutron 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	Density Caliper	
Rwa Parameters		
Porosity used	Base Density Porosity	
Resistivity used	Array Ind. One Res Rt	
RWA Constant A	0.610	
RWA Constant M	2.150	

Strain Gauge Constants SER-B.A 150

Last Edited on 10-AUG-2012,12:06

Atmospheric Pressure	14.70 psi
Serial Number	257260
Calibration Date	05-Oct-10
Base Check Date	
Dead Weight Serial Number	0
Dead Weight Gravitational Correction	1.0

Temperature	75.0		150.0		250.0		350.0	degrees F
Pressure psia	Inc.	Dec.	Inc.	Dec.	Inc.	Dec.	Inc.	Dec.
0.0	-0.300	-0.300	-0.284	-0.285	-0.273	-0.274	-0.274	-0.272
3000.0	4.875	4.881	4.896	4.901	4.912	4.917	4.918	4.923
6000.0	10.060	10.072	10.086	10.097	10.109	10.121	10.120	10.133
9000.0	15.258	15.271	15.289	15.302	15.318	15.332	15.335	15.350
12000.0	20.469	20.478	20.506	20.515	20.542	20.552	20.556	20.576
15000.0	25.695		25.738		25.782		25.813	

Strain Gauge Constants MMS-E.B 133

Last Edited on 10-AUG-2012,12:12

Atmospheric Pressure	14.70 psi
Serial Number	241946
Calibration Date	09-JUL-08
Base Check Date	
Dead Weight Serial Number	0
Dead Weight Gravitational Correction	1.0

Temperature	75.0		150.0		250.0		350.0	degrees F
Pressure psia	Inc.	Dec.	Inc.	Dec.	Inc.	Dec.	Inc.	Dec.
0.0	-0.300	-0.300	-0.284	-0.285	-0.273	-0.274	-0.274	-0.272
3000.0	4.875	4.881	4.896	4.901	4.912	4.917	4.918	4.923
6000.0	10.060	10.072	10.086	10.097	10.109	10.121	10.120	10.133
9000.0	15.258	15.271	15.289	15.302	15.318	15.332	15.335	15.350
12000.0	20.469	20.478	20.506	20.515	20.542	20.552	20.556	20.576
15000.0	25.695		25.738		25.782		25.813	

Temperature	75.0		150.0		250.0		350.0 degrees F	
Pressure psia	Inc.	Dec.	Inc.	Dec.	Inc.	Dec.	Inc.	Dec.
0.0	0.069	0.073	0.062	0.063	0.042	0.042	0.021	0.021
3000.0	5.240	5.253	5.235	5.245	5.219	5.228	5.199	5.209
6000.0	10.422	10.442	10.421	10.439	10.408	10.425	10.388	10.406
9000.0	15.616	15.637	15.619	15.638	15.609	15.627	15.593	15.610
12000.0	20.827	20.839	20.834	20.843	20.828	20.838	20.815	20.823
15000.0	26.051		26.060		26.056		26.046	

MMS Parameters MMS-E.B 133

Last Edited on 15-NOV-2012 12:03

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	0.0	

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	96.0	seconds
Pulse Pressure Discriminator	213.0	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

SER,MMS,MGS,MDN,MPD,MPD,MFE,MAI

Gamma Calibration MGS-C.J 142

Field Calibration on 15-NOV-2012 11:05

	Measured	Calibrated (API)
Background	141	104
Calibrator (Gross)	1087	800
Calibrator (Net)	946	696

Gamma Constants MGS-C.J 142

Last Edited on 16-NOV-2012,09:40

Gamma Calibrator Number	036	
Mud Density	1.03	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

SP Calibration MGS-C.J 142

Field Calibration on 12-SEP-2012,21:30

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

High Resolution Temperature Calibration MGS-C.J 142

Field Calibration on 12-SEP-2012,21:30

	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 03-OCT-2012,15:14

Pre-filter Length	11

Neutron Calibration MDN-B.J 391

Base Calibration on 16-OCT-2012 13:23
Field Check on 15-NOV-2012 10:58

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3208	97	3714	110
Ratio	33.073		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	2191	3177
Ratio	0.690	

Field Check

	Calibrated (cps)	
	2240	3336
Ratio		

Neutron Constants MDN-B.J 391

Last Edited on 15-NOV-2012,10:51

Neutron Source Id	N1055	
Neutron Jig Number	N639	
Epithermal Neutron	No	
Caliper Source for Processing	Density Caliper	
Stand-off	0.00	inches
Mud Density	1.00	gm/cc
Limestone Sigma	7.10	cu
Sandstone Sigma	4.26	cu
Dolomite Sigma	4.70	cu
Formation Pressure Source	Constant Value	
Formation Pressure	0.00	kpsi
Temperature Source	MGS External Temperature	
Temperature	N/A	degrees F
Mud Salinity	0.00	kppm
Salinity Correction	Not Applied	
Formation Fluid Salinity Source	None	
Formation Fluid Salinity	N/A	kppm
Barite Mud Correction	Not Applied	

FE Calibration MFE-B.J 363

Base Calibration on 30-OCT-2012 13:30
Field Check on 15-NOV-2012 10:42

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	964.4	126.8
Base Check		281.4
Field Check		281.8

FE Constants MFE-B.J 363

Last Edited on 16-NOV-2012,17:59

Running Mode	No Sleeve	
MFE K Factor	0.1268	
Caliper Source for FE correction	Density Caliper	
Caliper Value for FE correction	N/A	inches
Rm Source for FE correction	Temperature Corr	
Temp. for Rm Corr.	MGS External Temperature	
Stand-off	0.5	inches

Induction Calibration MAI-A.A 170

Base Calibration on 02-FEB-2012 17:42
Field Check on 15-NOV-2012 10:39

Base Calibration

Test Loop Calibration

Channel	Measured Low	Measured High	Calibrated (mmho/m) Low	Calibrated (mmho/m) 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) Low	Base Check (mmho/m) High	Field Check (mmho/m) Low	Field Check (mmho/m) High
1			10.5	3753.5
2			29.4	3530.1
3			27.1	2997.9
4			18.4	2043.1
Deep			15.3	1906.0
Medium			40.7	3982.2
Shallow			45.6	5291.8

Array Temperature 52.3 Deg F

Induction Constants MAI-A.A 170

Last Edited on 16-NOV-2012,17:59

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	0.0060	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
SRM1	0.0000	SRC1	0.0000
SRM2	0.0000	SRC2	0.0000

Calibration Site Corrections

Channel 1	0.00	mmhos/metre
Channel 2	0.00	mmhos/metre
Channel 3	0.00	mmhos/metre
Channel 4	0.00	mmhos/metre

Apparent Porosity and Water Saturation Constants

Archie Constant (A)	1.00	
Cementation Exponent (M)	2.00	
Saturation Exponent (N)	2.00	
Saturation of Water for Apor	100.00	percent
Resistivity of Water for Apor and Sw	0.05	ohm-m
Resistivity of Mud Filtrate for Sw	0.00	ohm-m
Source for Rt	0.00	
Source for Rxo	0.00	

High Resolution Temperature Calibration MAI-A.A 170

Field Calibration on 15-FEB-2012 01:37

	Measured	Calibrated(Deg F)
Lower	1.00	1.00
Upper	100.00	100.00

High Resolution Temperature Constants MAI-A.A 170

Last Edited on

Pre-filter Length	11

Caliper Calibration MPD-C.J 394

Base Calibration on 30-OCT-2012 12:18
Field Calibration on 15-NOV-2012 10:50

Base Calibration

Reading No	Measured	Calibrator Size (in)

1	17118	4.02
2	25406	6.00
3	33827	8.03
4	42304	10.02
5	51184	12.01
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
5.96	6.00

Photo Density Calibration MPD-C.J 394

Base Calibration on 30-OCT-2012 12:42
Field Check on 15-NOV-2012 10:47

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	51787	25714	59869	31110
Reference 2	21380	2493	24557	2522

Field Check at Base

1067.9	1311.0

Field Check

1066.5	1308.1

PE Calibration

Base Calibration	Measured			Calibrated
	WS	WH	Ratio	Ratio
Background	191	948		
Reference 1	21057	51608	0.412	0.369
Reference 2	5950	21256	0.284	0.271

Field Check at Base

191.2	947.9

Field Check

193.3	947.5

Density Constants MPD-C.J 394

Last Edited on 16-NOV-2012,17:59

Density Source Id	236	
Nylon Calibrator Number	633	
Aluminium Calibrator Number	633	
Density Shoe Profile	4 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.03	gm/cc
Mud Density Z/A Multiplier	1.11	
Mud Filtrate Density	1.00	gm/cc
Dry Hole Mud Filtrate Density	1.00	gm/cc
DNCT	0.00	gm/cc
CRCT	0.00	gm/cc
Density Z/A Correction	Hybrid	

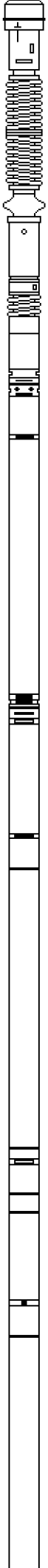
Matrix Density (gm/cc)	Depth (ft)
2.71	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00

DOWNHOLE EQUIPMENT

C:\Data\SANDRIDGE FOLDER\SANDRIDGE ANITA 3420 1-12H\33021RTAP.dta

Shuttle Mechanical Release (SMR A)

Shuttle Mechanical Release (SMR-A)
SMR-A 167 LG: 8.53 ft WT: 77.2 lb OD: 2.52 in



Shuttle Electrical Release
SER-B.A 150 LG: 6.90 ft WT: 50.7 lb OD: 2.24 in

Compact Memory Sub E.B
MMS-E.B 133 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

61.76 ft GRGM - MGS Gamma Ray

59.77 ft GSXT - MGS External Temperature

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

57.75 ft GCSL - MCL C. Collar Locator

SKJ-E.B Compact Knuckle Joint
SKJ-E.B 472 LG: 2.17 ft WT: 24.3 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

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

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

42.89 ft NPRL - Limestone Neutron Por.

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

35.65 ft CLDC - Density Caliper
35.65 ft HVOL - Hole Volume
35.65 ft AVOL - Annular Volume
33.72 ft DCOR - Density Correction
33.72 ft DEN - Compensated Density
33.72 ft DPRL - Limestone Density Por.
33.65 ft PDPE - PE

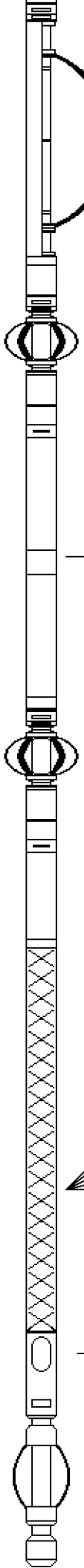
SKJ-E.B Compact Knuckle Joint
SKJ-E.B 479 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

SHA-H Compact Swivel Head Adaptor
SHA-H 167 LG: 2.30 ft WT: 22.0 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

MIS-E.B Compact Inline Standoff sub
MIS-E.B 595 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

Compact Focussed Electric
MFE-B.J 363 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in



15.86 ft FEFE - Shallow FE

MIS-E.A Compact Inline Standoff sub
MIS-E.A 337 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

Compact Induction
MAI-A.A 170 LG: 12.52 ft WT: 48.5 lb OD: 2.24 in

3.34 ft CTAO - Array Ind. One Cond Ct
3.34 ft R40O - Array Ind. One Res 40
3.34 ft R60O - Array Ind. One Res 60
3.34 ft R85O - Array Ind. One Res 85
3.34 ft RTAO - Array Ind. One Res Rt

Tool Zero (1.84ft from bottom)

Total	Length: 86.56 ft	Weight: 657.0 lb	All measurements relative to tool zero.

COMPANY	SANDRIDGE ENERGY
WELL	ANITA 3420 1-12H
FIELD	ANNA MAE SOUTHWEST
PROVINCE/COUNTY	COMANCHE
COUNTRY/STATE	USA \ KANSAS

Elevation Kelly Bushing	1814.00	feet	First Reading	9518.00	feet
Elevation Drill Floor	1814.00	feet	Depth Driller	9576.00	feet
Elevation Ground Level	1793.00	feet	Depth Logger	9576.00	feet

Weatherford®

CML IMPULSE SHUTTLE
COMPACT PHOTO DENSITY
DUAL SPACED NEUTRON LOG