



Weatherford

COMPOSITE LOG

COMPANY		TAOS RESOURCES OPERATING COMPANY			
WELL		WEST MADDIX UNIT #24			
FIELD		NORTH MADDIX			
PROVINCE/COUNTY		COWLEY			
COUNTRY/STATE		USA / KANSAS			
LOCATION		165' FNL & 165' FWL C/NW/NW/NW/NW			
SEC 11	TWP 33S	RGE 5E	Other Services		
		37.2000937	CXD		
		96.86000141			
	API Number	15-035-24569			
Permanent Datum GL, Elevation 1276 feet			Elevations:		feet
Log Measured From KB			KB		1286.00
Drilling Measured From KB			DF		1284.00
			GL		1276.00
Date	26-APR-2014				
Run Number	ONE				
Service Order	7452-85713590				
Depth Driller	3700.00	feet			
Depth Logger	3696.00	feet			
First Reading	3693.00	feet			
Last Reading	274.00	feet			
Casing Driller	275.00	feet			
Casing Logger	274.00	feet			
Bit Size	7.875	inches			
Hole Fluid Type	WBM				
Density / Viscosity	9.30 lb/USg	52.00 s/qt			
PH / Fluid Loss	9.00	8.00 ml/30Min			
Sample Source	MUD TANK				
Rm @ Measured Temp	1.80 @ 61.0	ohm-m			
Rmf @ Measured Temp	1.44 @ 61.0	ohm-m			
Rmc @ Measured Temp	2.16 @ 61.0	ohm-m			
Source Rmf / Rmc	CALC	CALC			
Rm @ BHT	1.0 @ 110.0	ohm-m			
Time Since Circulation	FOUR HOURS				
Max Recorded Temp	110.00	deg F			
Equipment / Base	13226	OKC			
Recorded By	NICHOLAS RUPERT				
Witnessed By	STEVE BALL				

BOREHOLE RECORD

Last Edited: 26-APR-2014 10:39

Bit Size inches	Depth From feet	Depth To feet
7.875	275.00	3700.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	275.00	24.00

REMARKS

WLS 13.06.9804

TOOLSTRING: MCG - MBN - SGS - MML - MDN - MPD - MFE - MDM - MRD - MTD - MAI

HARDWARE USED:

MDN: DUAL BOWSPRINGS
MFE: ONE 0.5" STANDOFF
MRD: THREE 1" RUBBER CENTRALIZERS
MTD: TWO 1" RUBBER CENTRALIZERS
ONE CENTRALIZER BASKET
MAI: TWO 0.5" STANDOFFS

LIMESTONE MATRIX USED FOR POROSITY CALCULATIONS, 2.71 G/CC
ALL INTERVALS LOGGED AND PRESENTED PER CLIENT REQUEST.

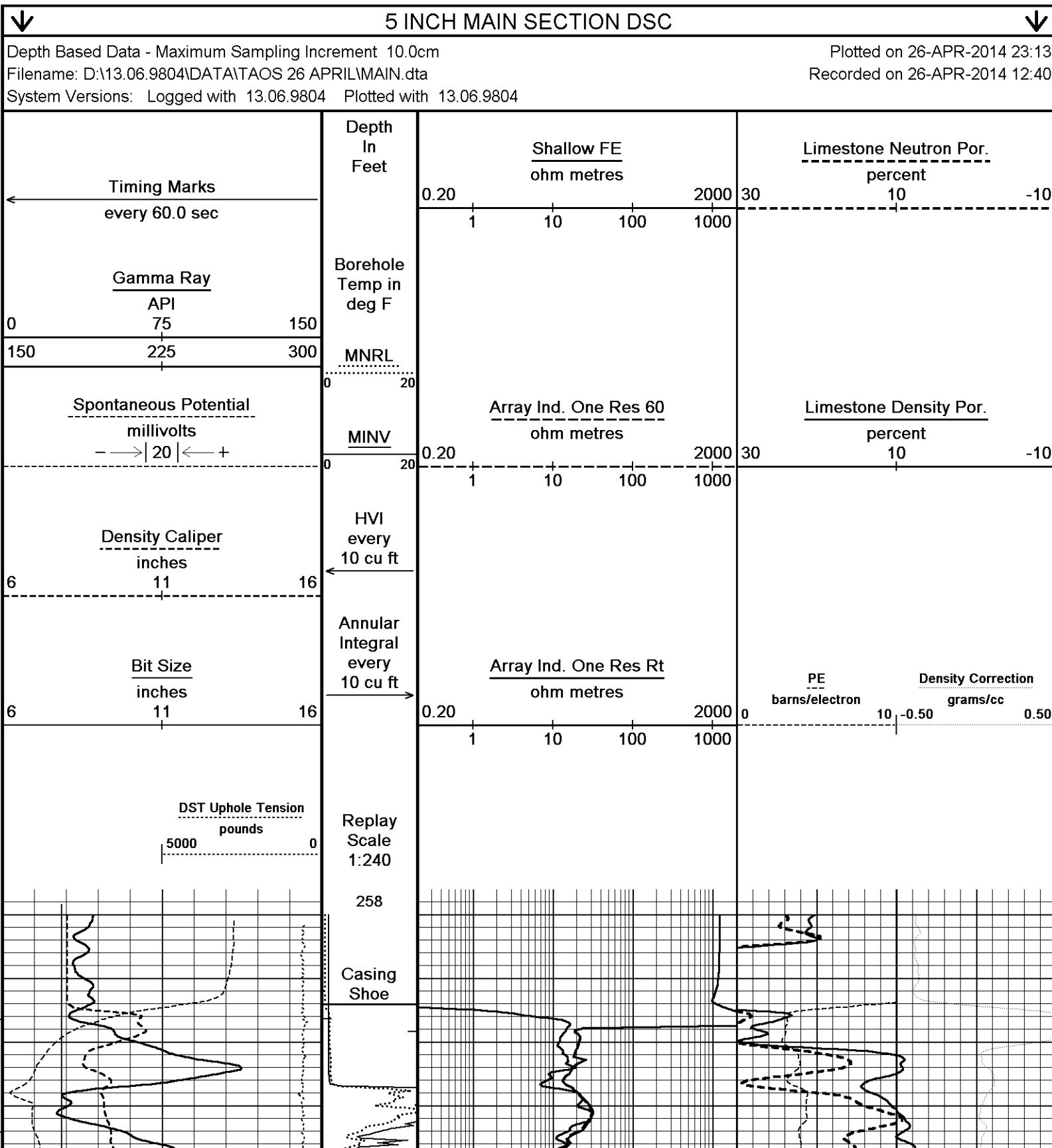
TOTAL HOLE VOLUME FROM TD TO SURFACE CASING: 1320 CU FT.
ANNULAR HOLE VOLUME FROM TD TO SURFACE CASING USING 5.5" PRODUCTION CASING: 760 CU FT.

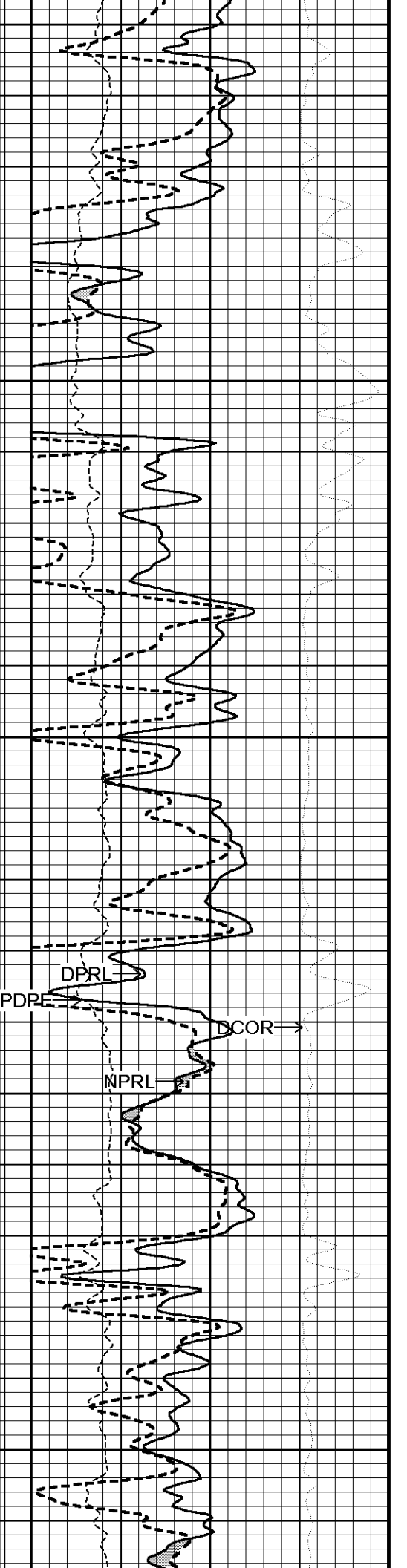
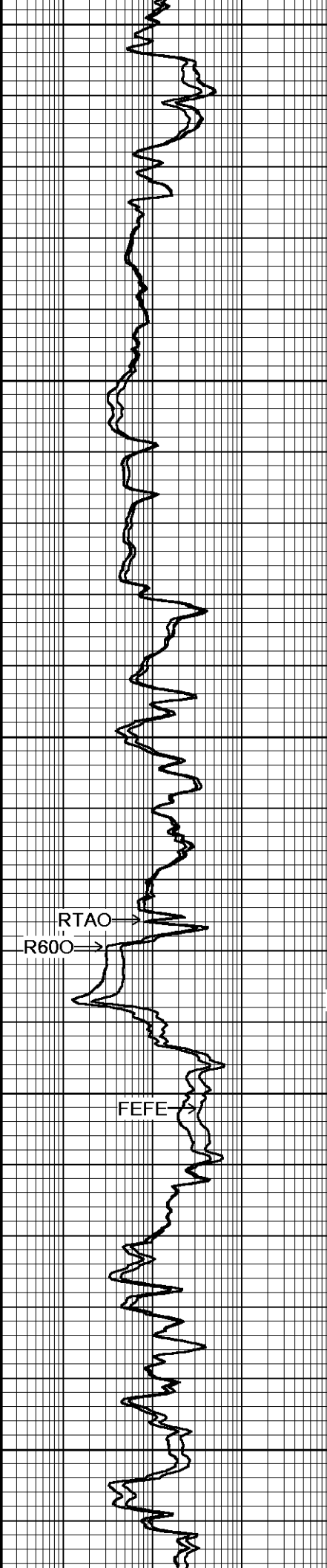
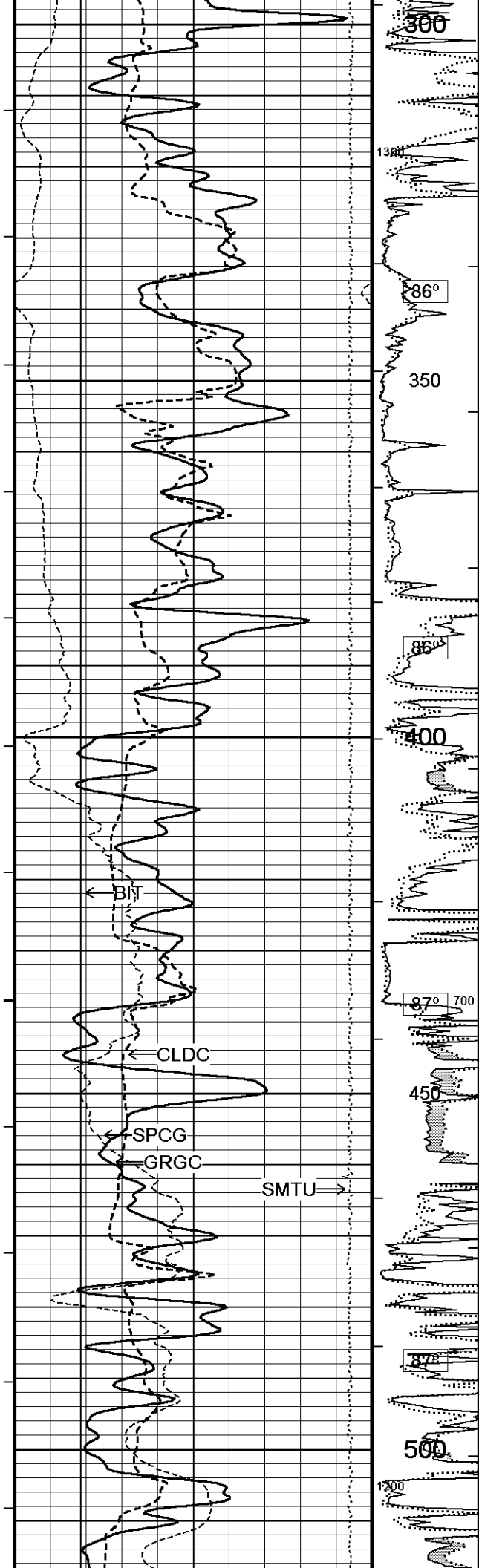
SERVICE ORDER NUMBER: 7452-85713590

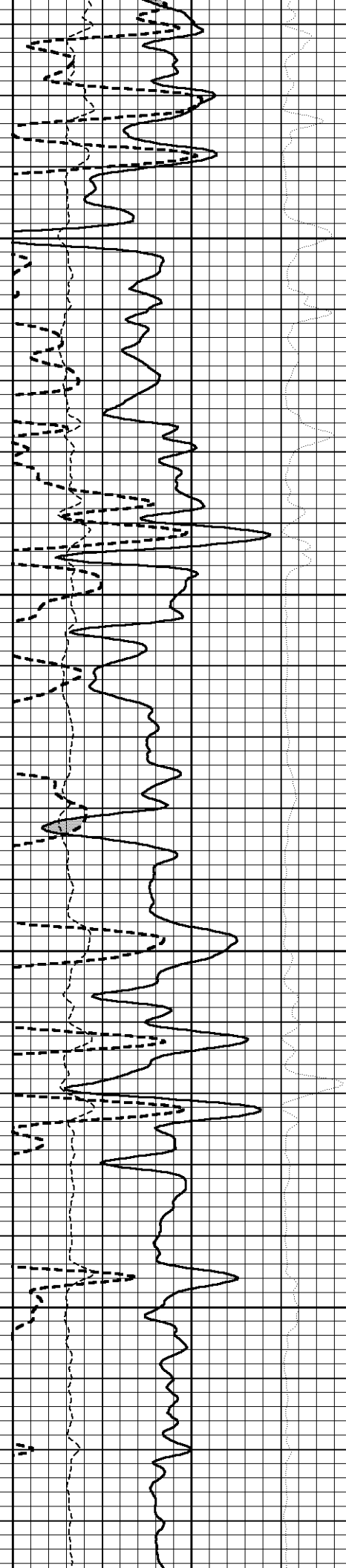
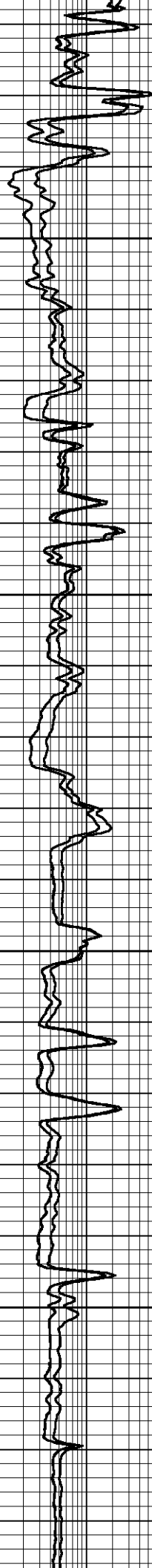
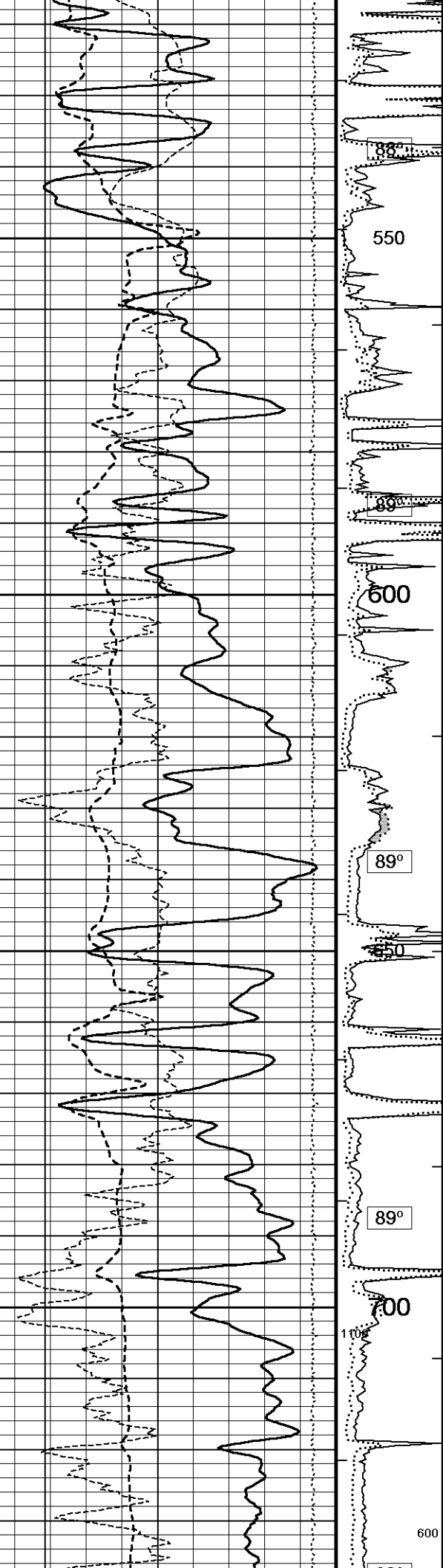
OPERATOR: COREY COUSINS

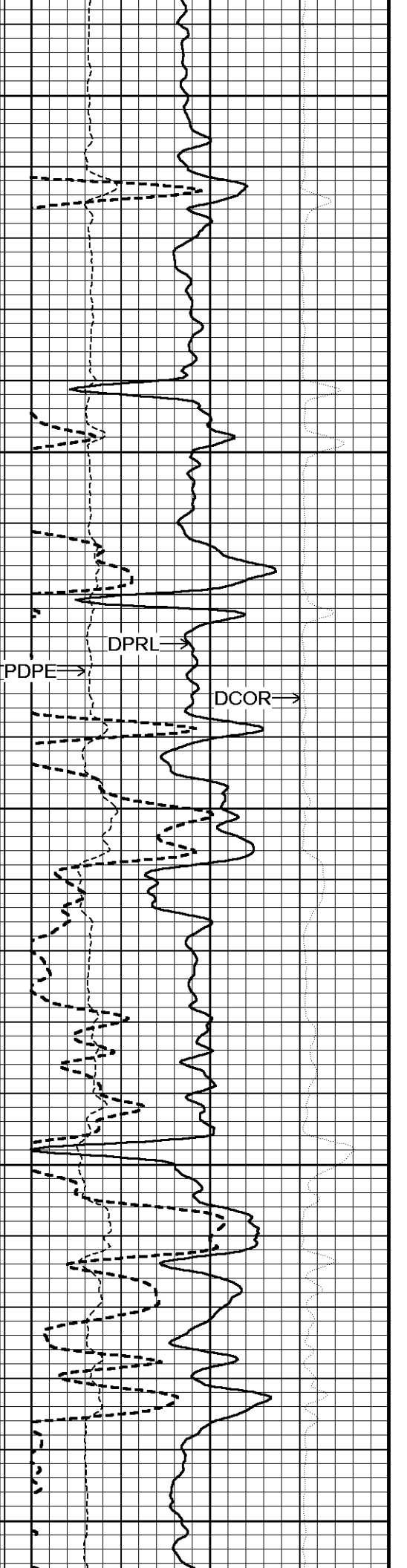
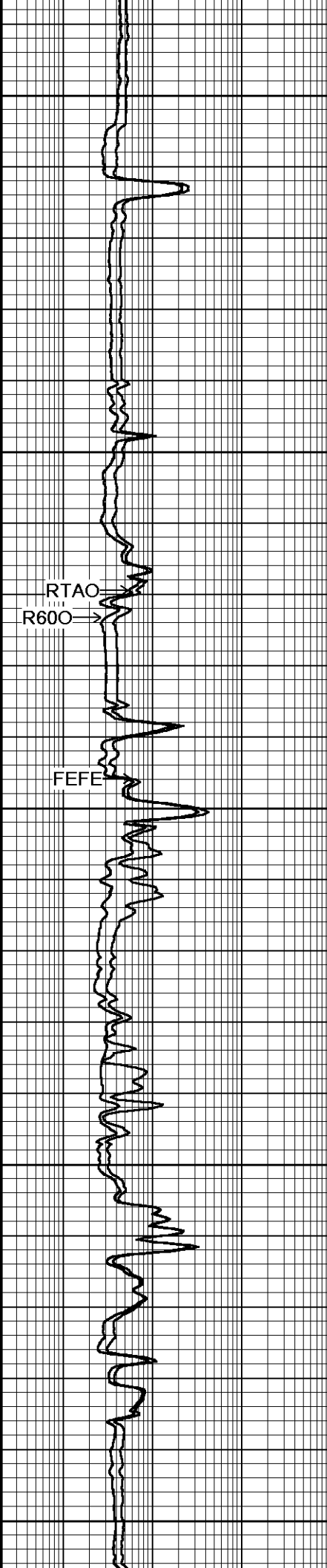
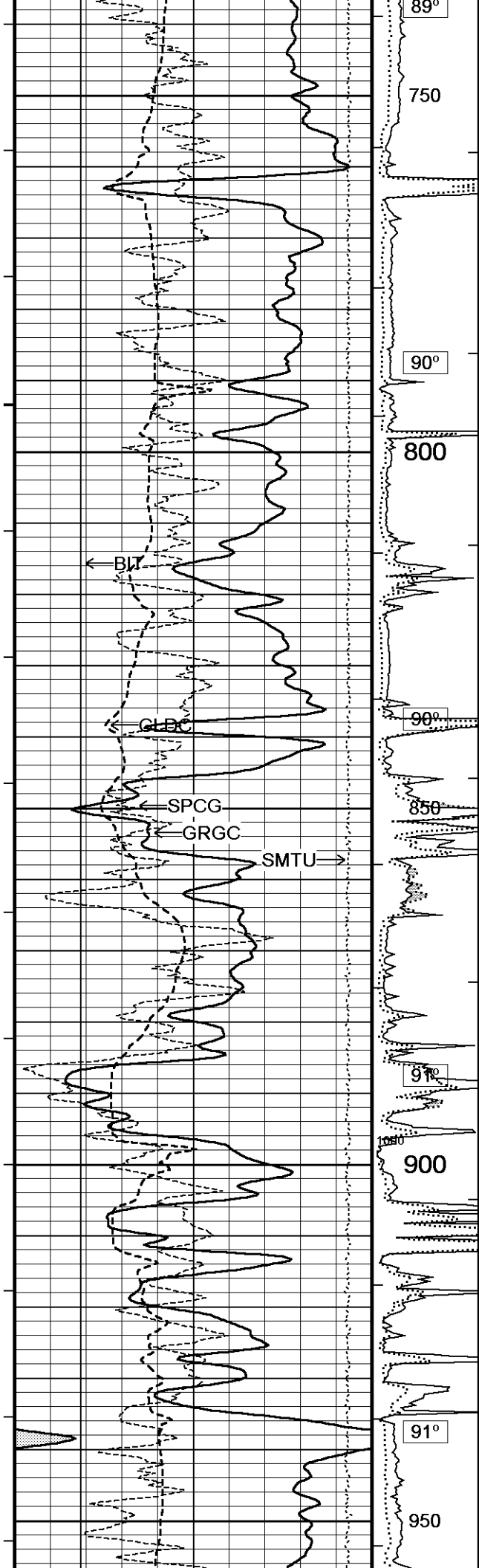
SP AFFECTED BY STRAY VOLTAGE UPHOLE.

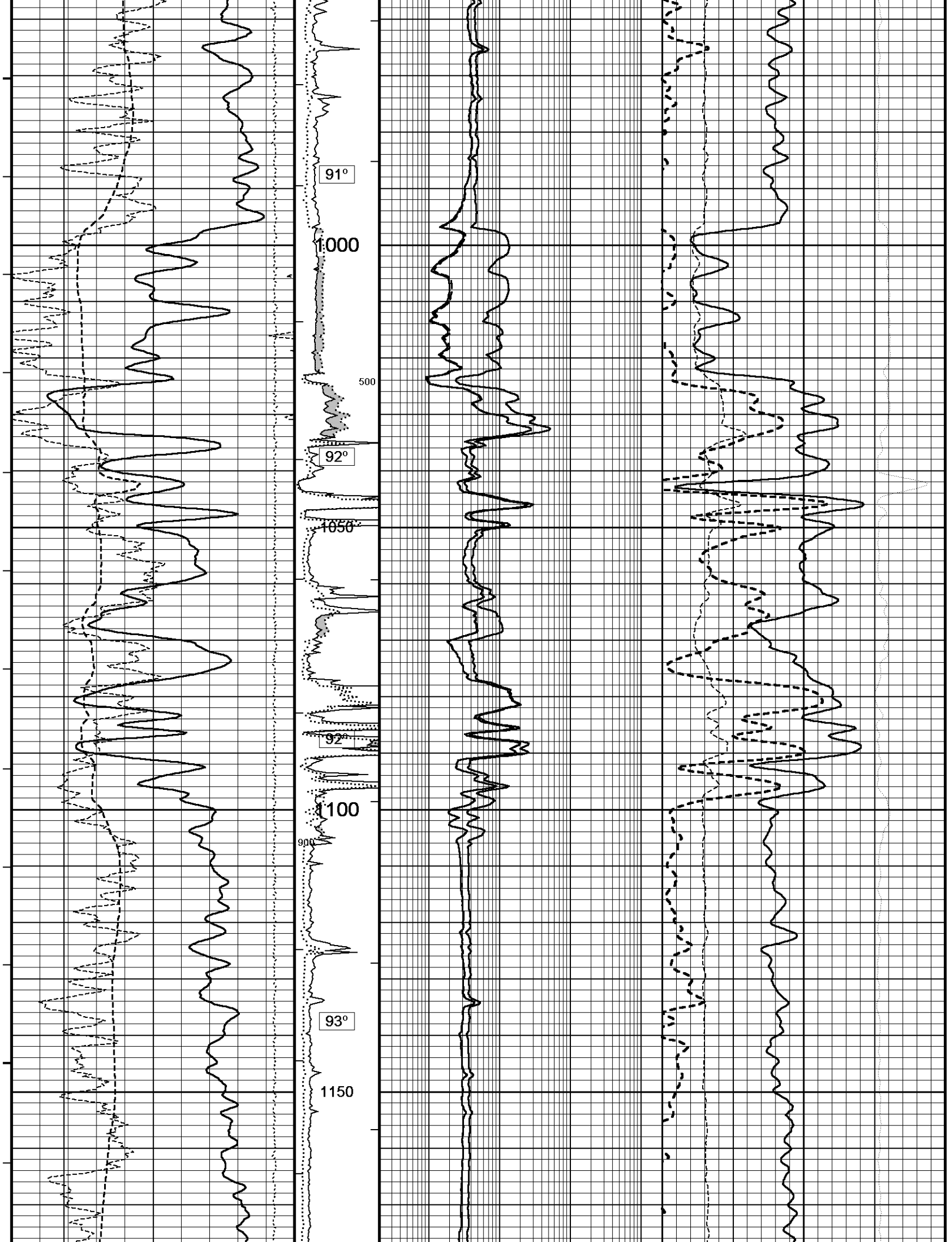
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, 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.

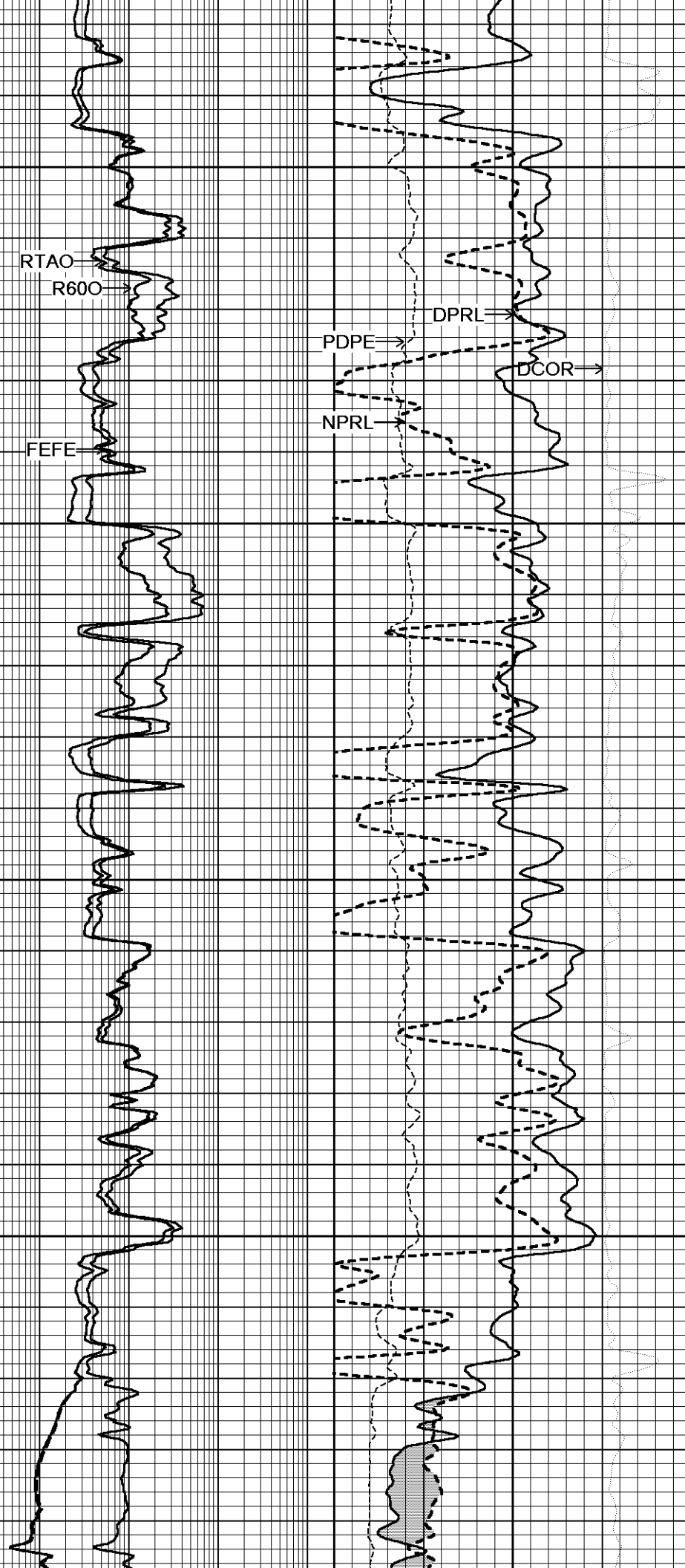
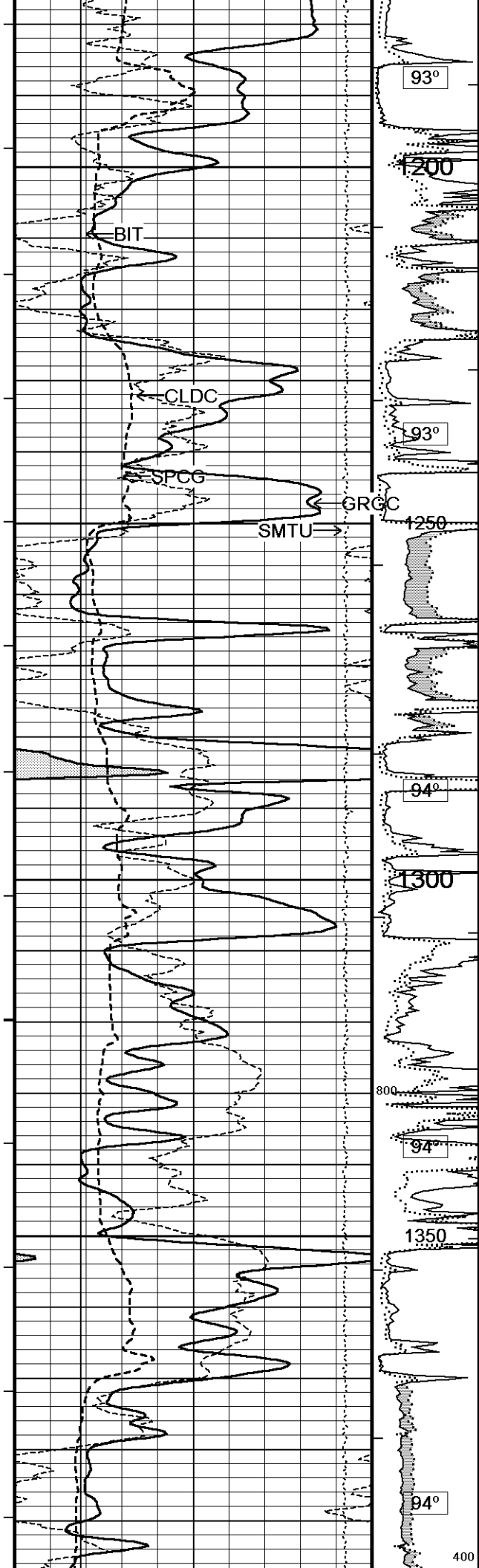


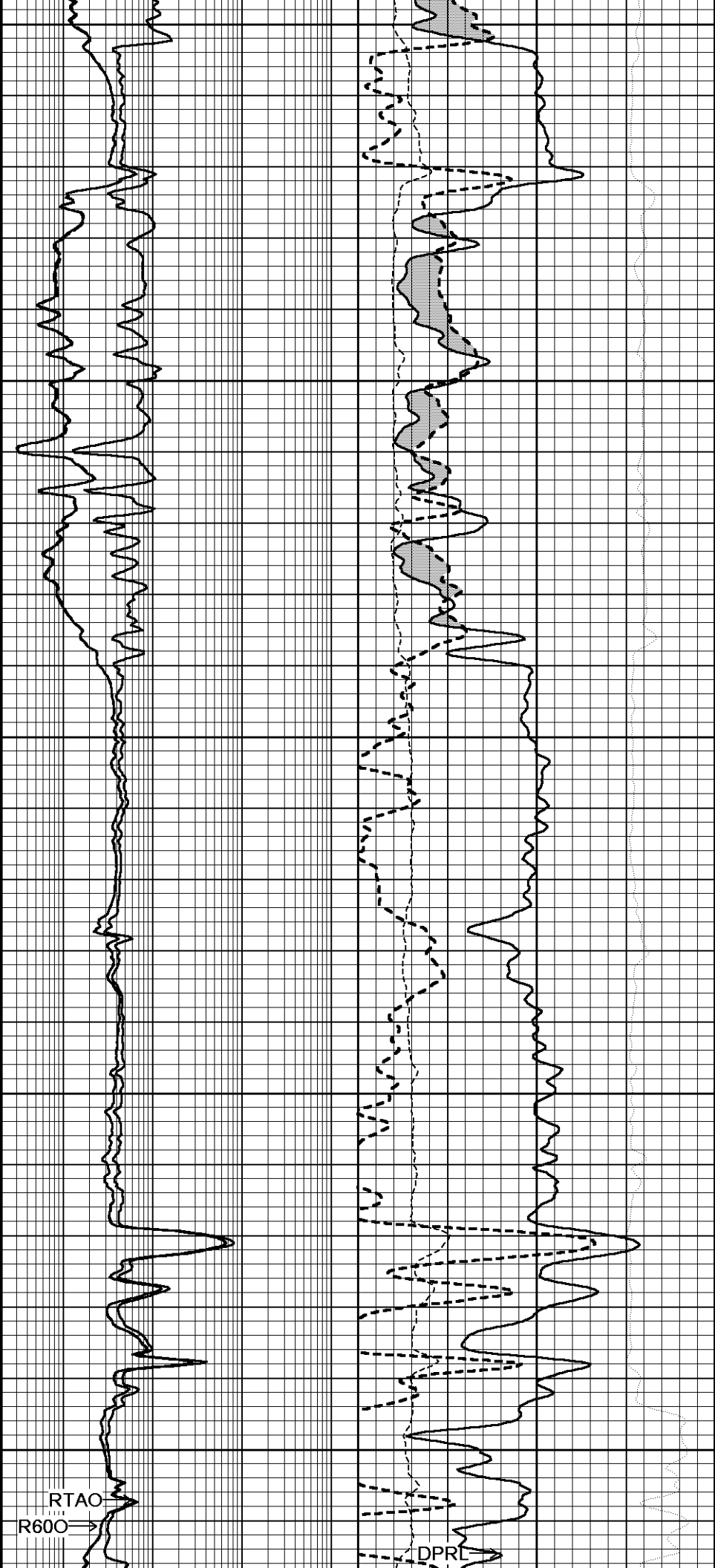
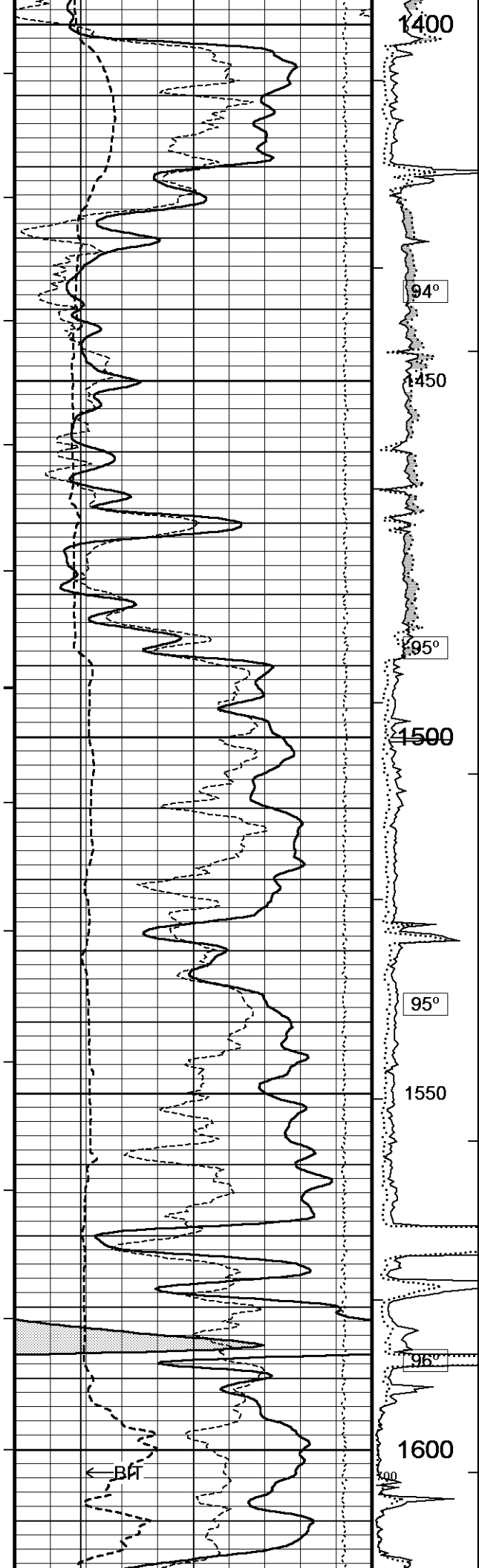


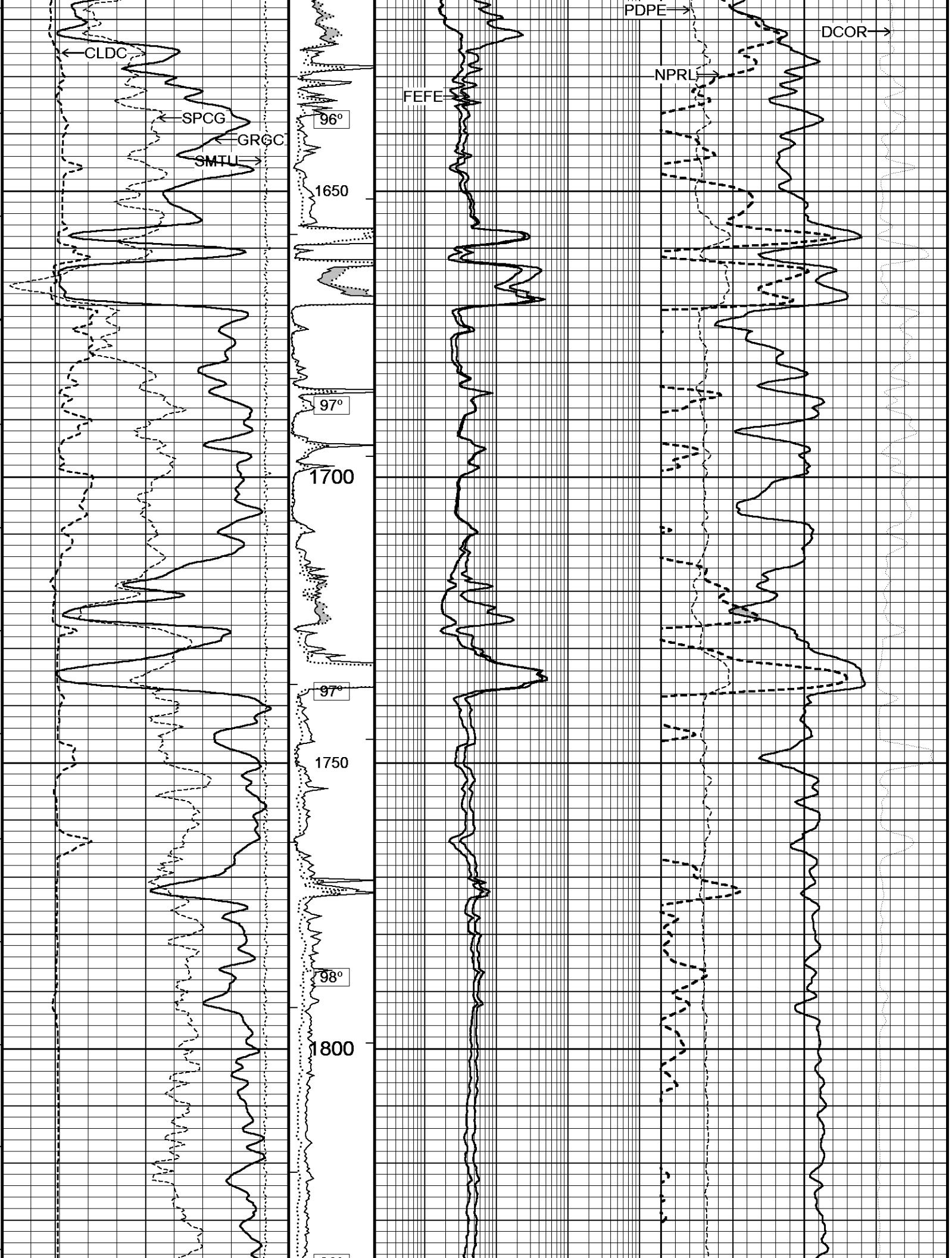


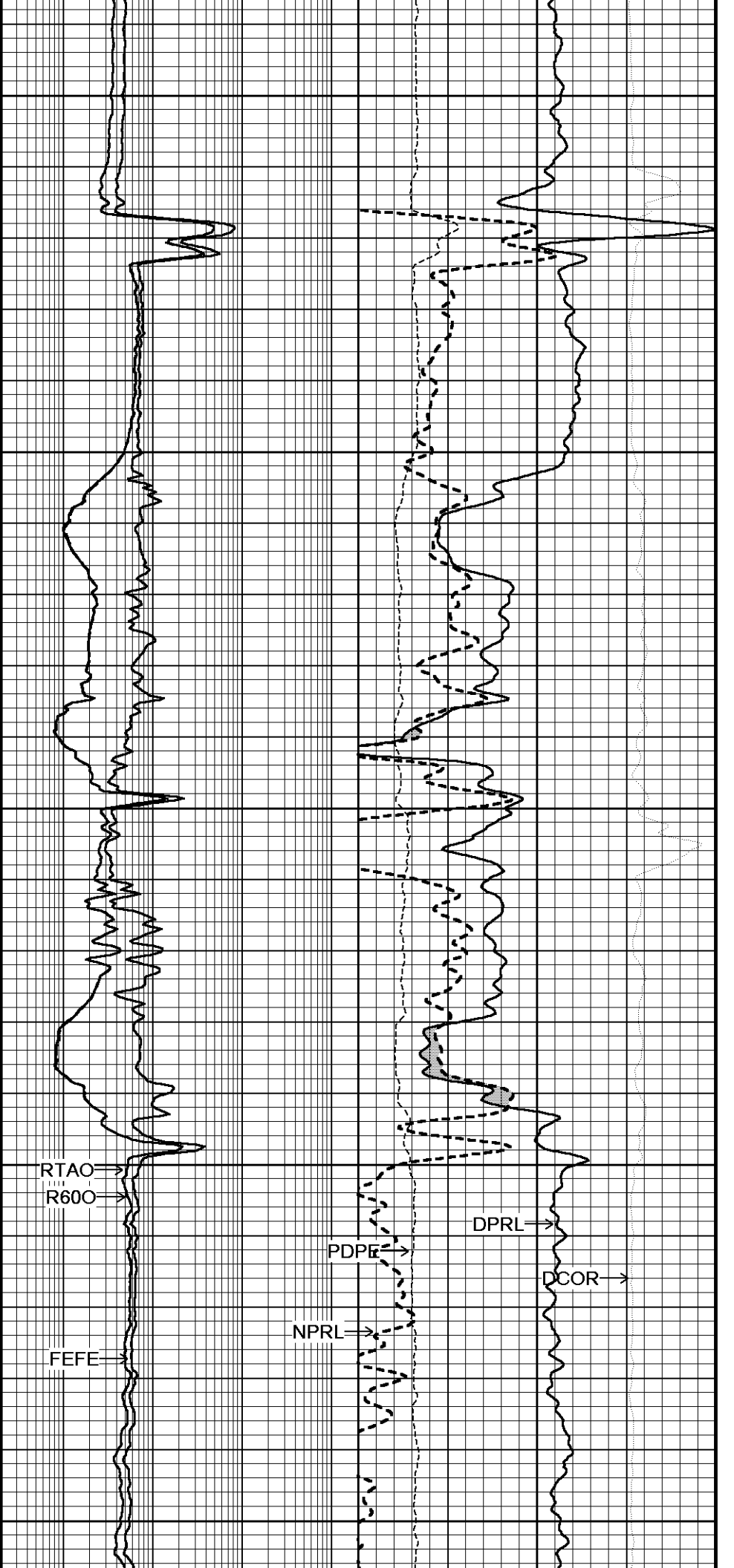
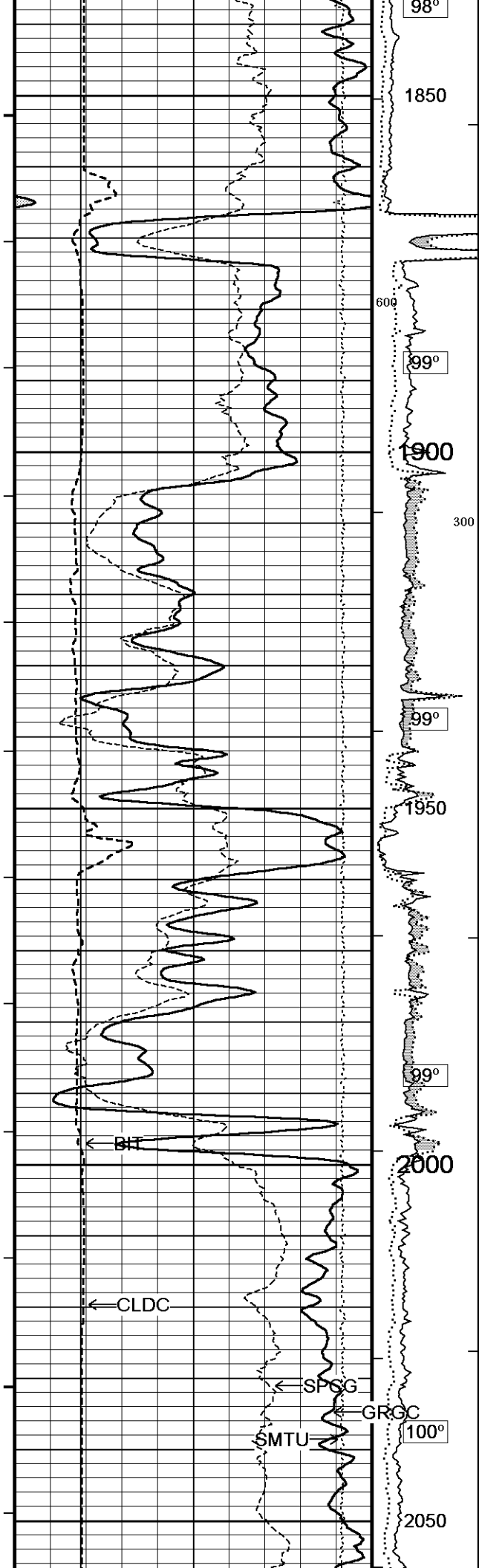


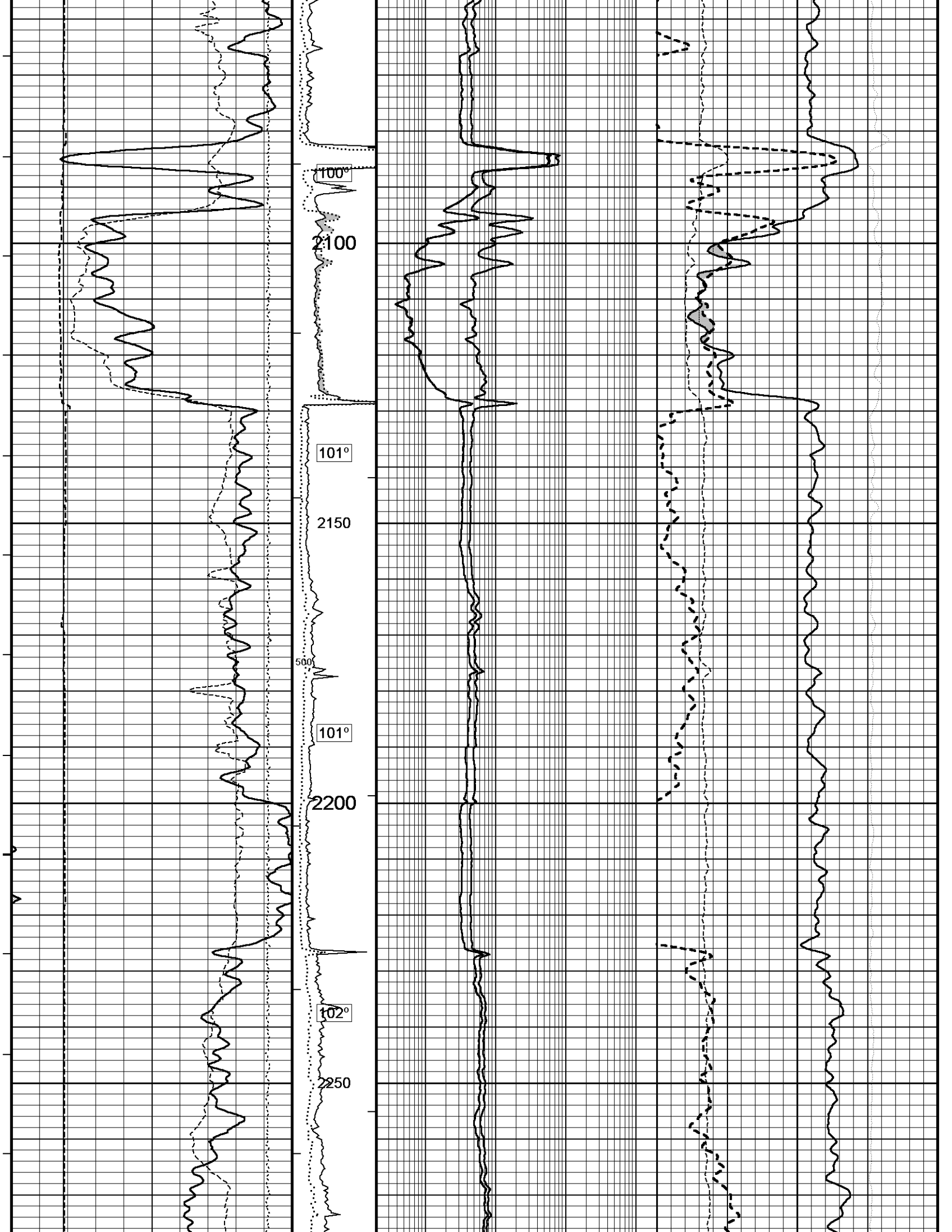


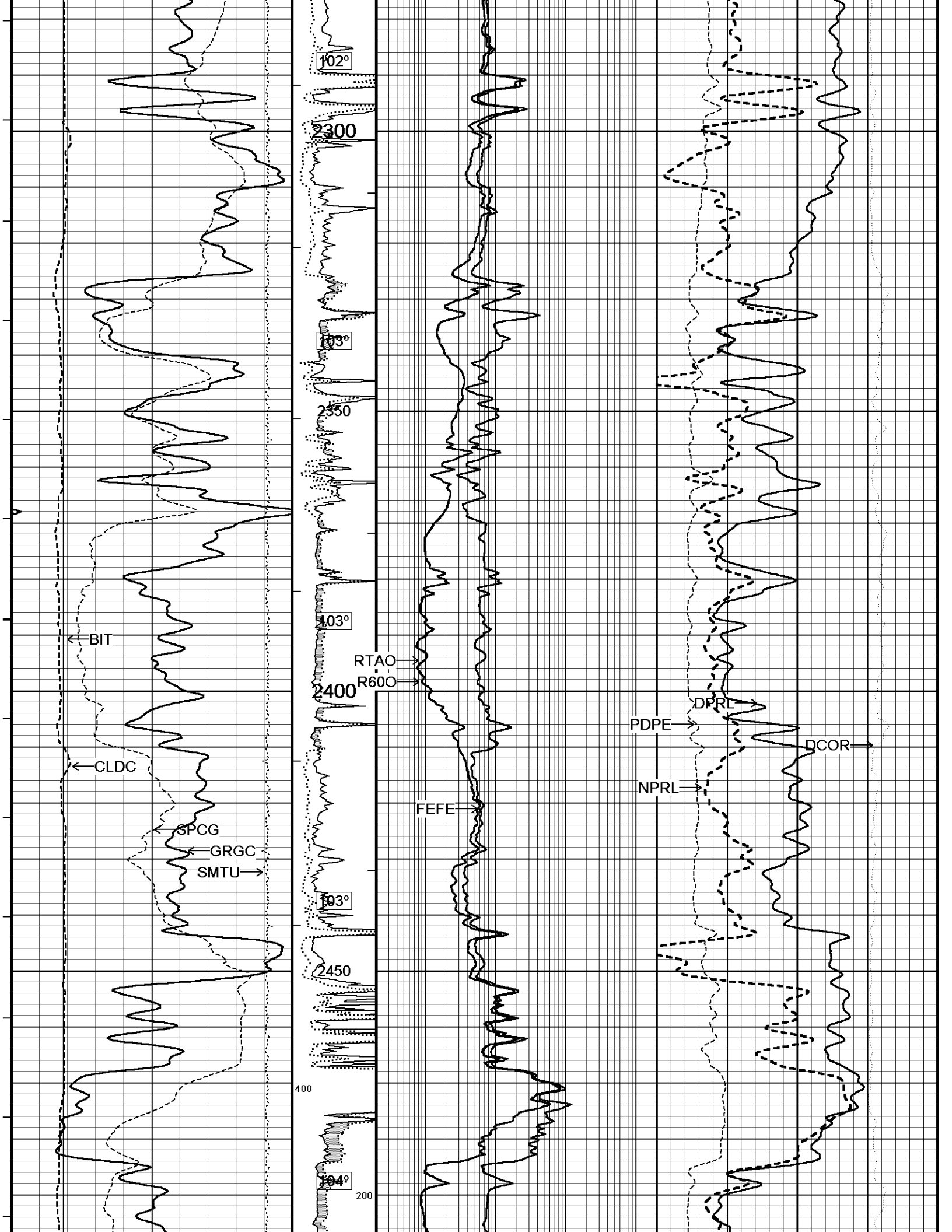


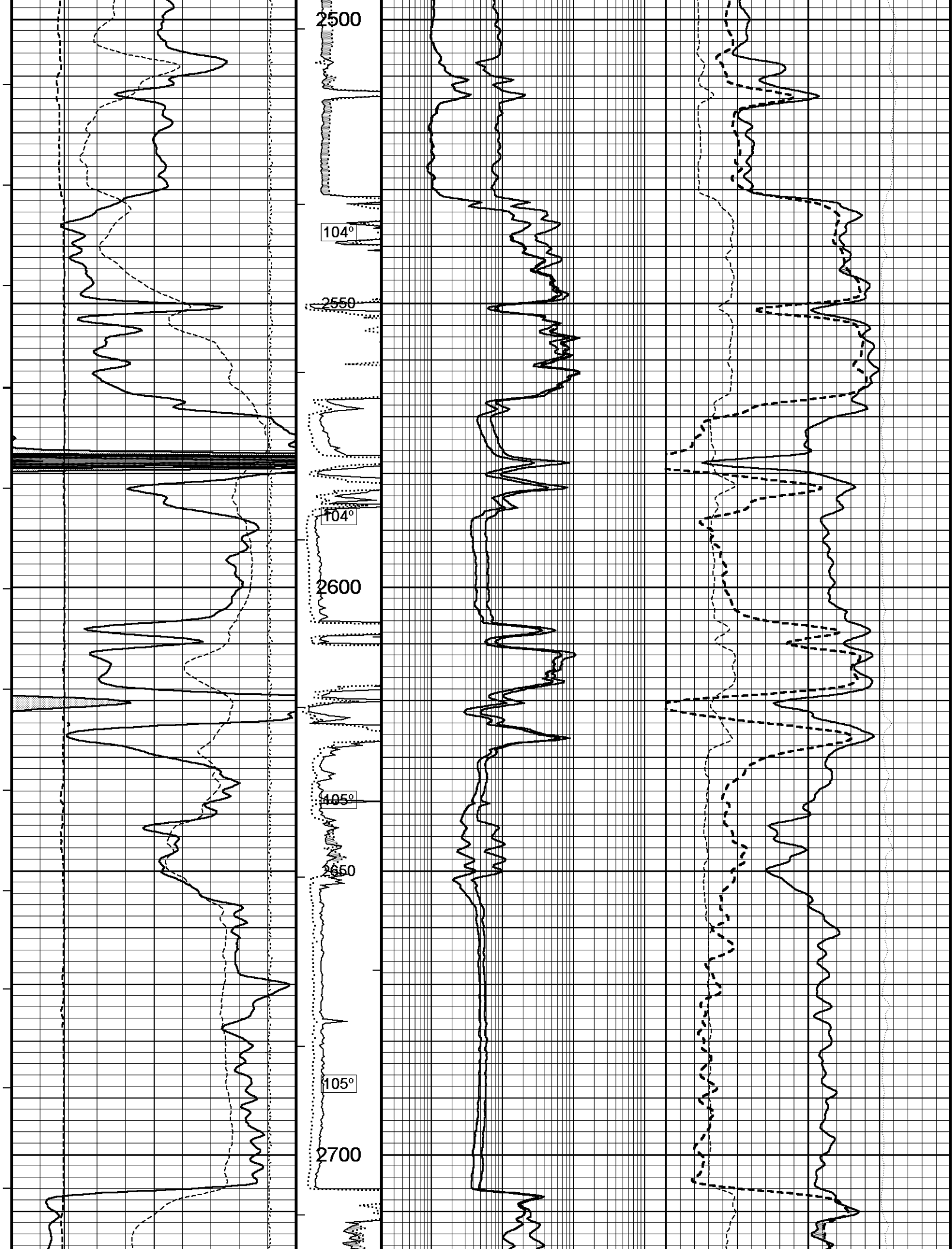


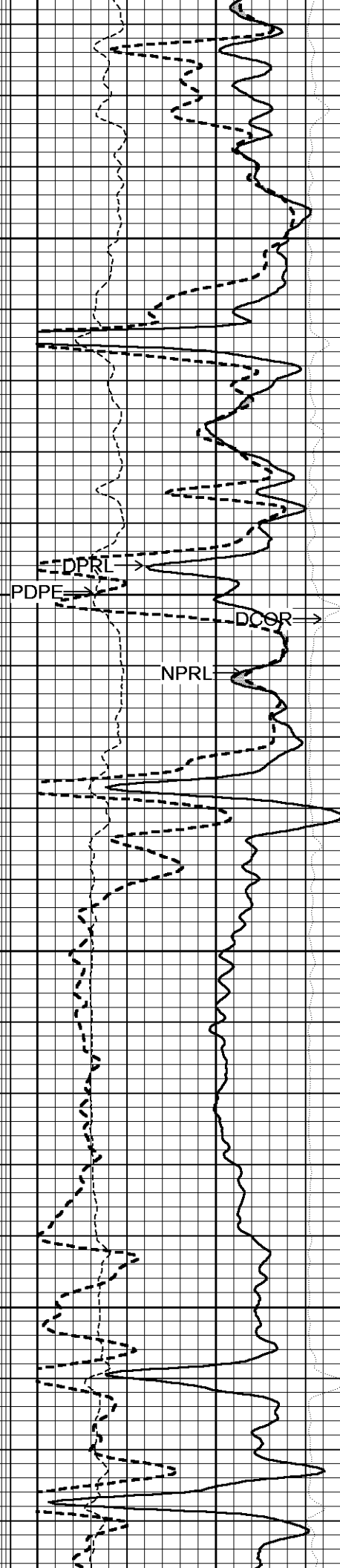
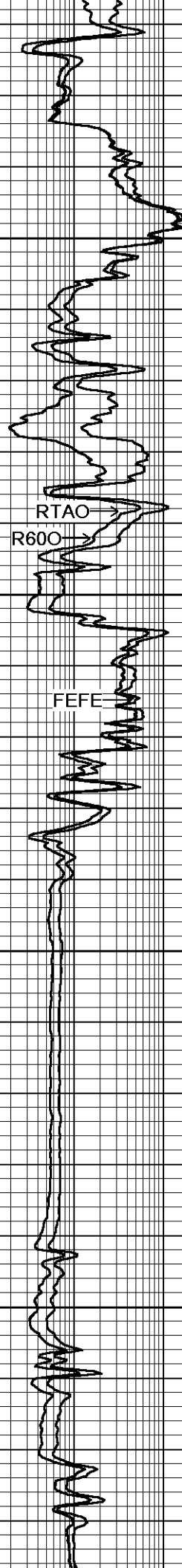
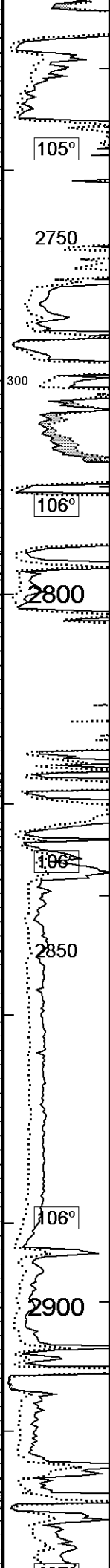
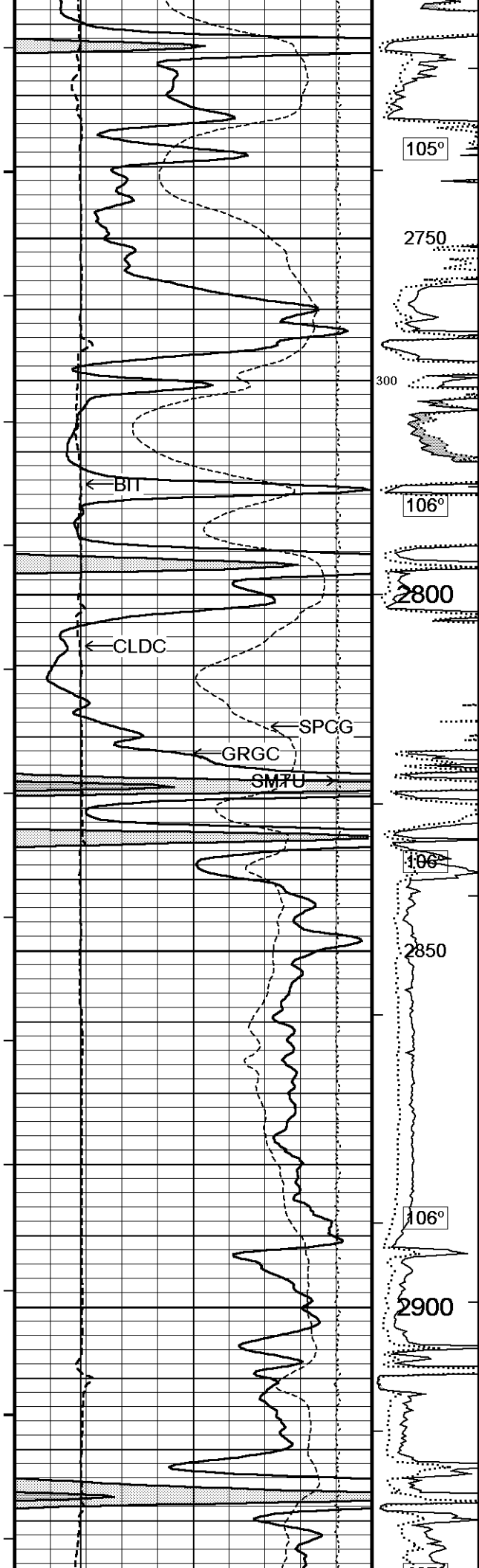


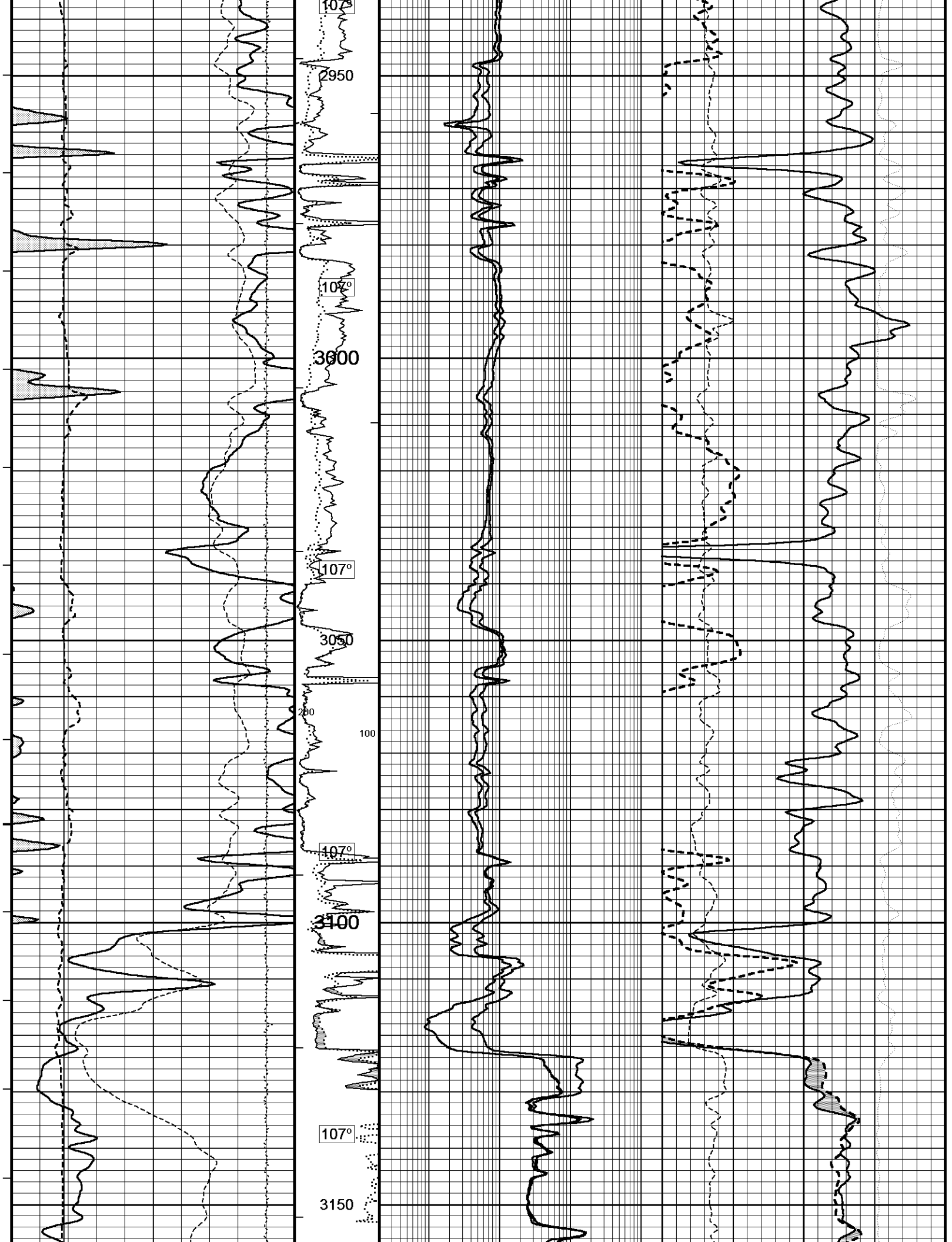


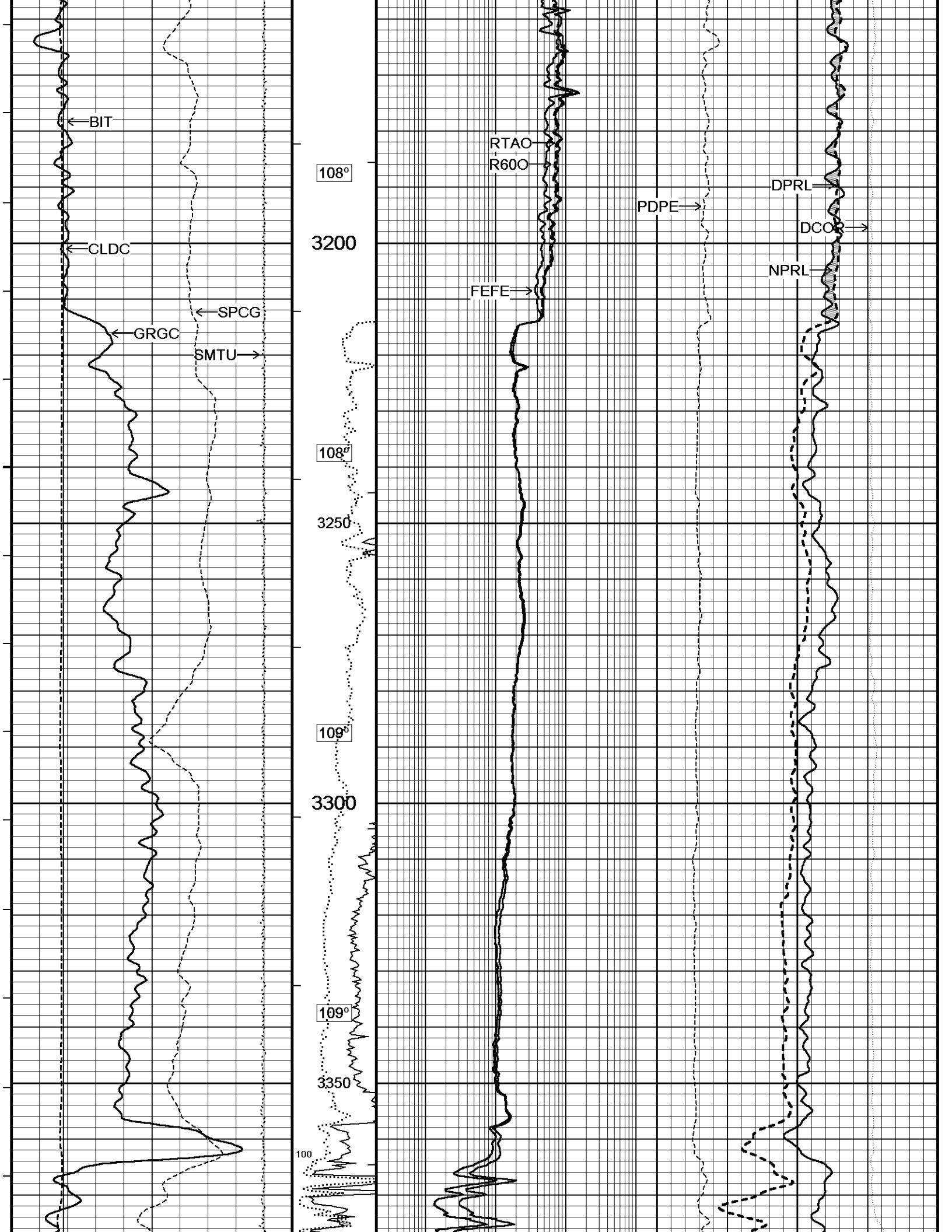


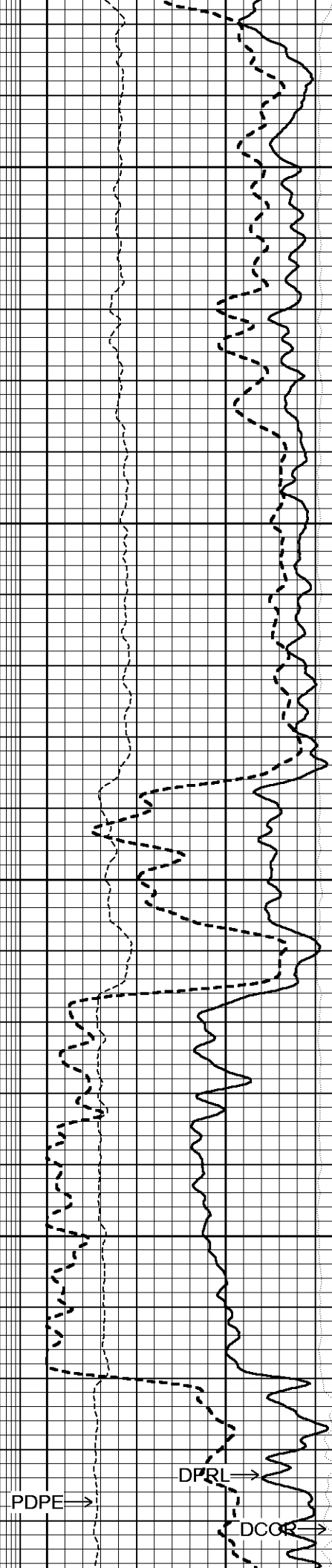
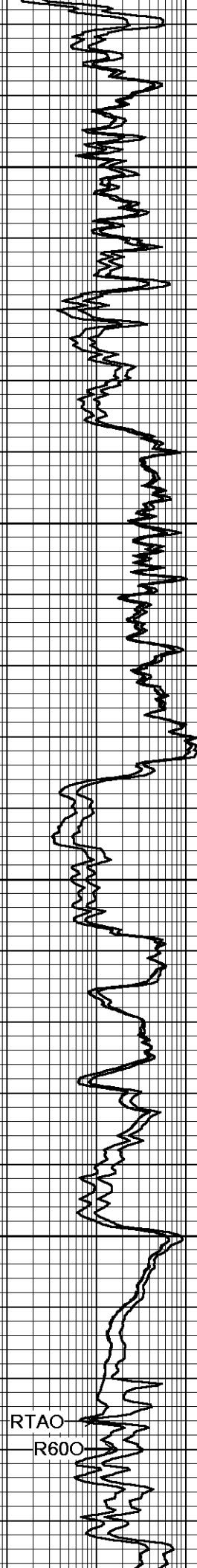
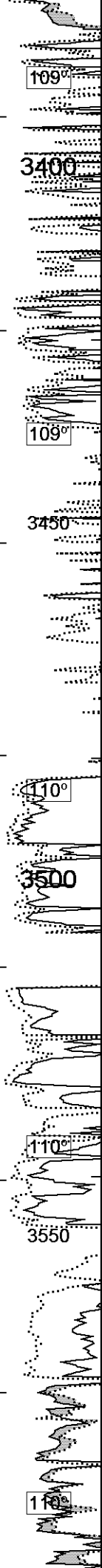
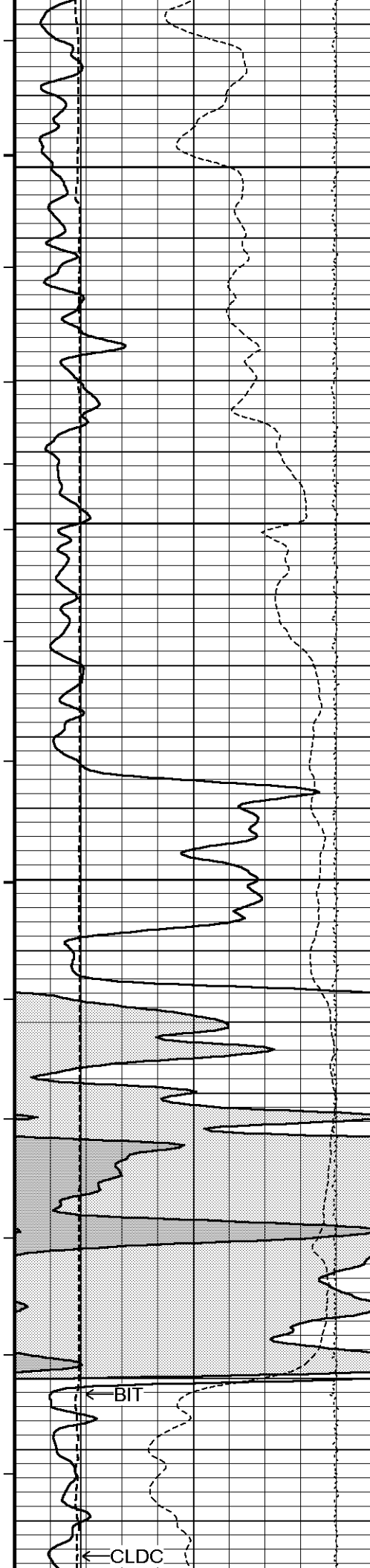


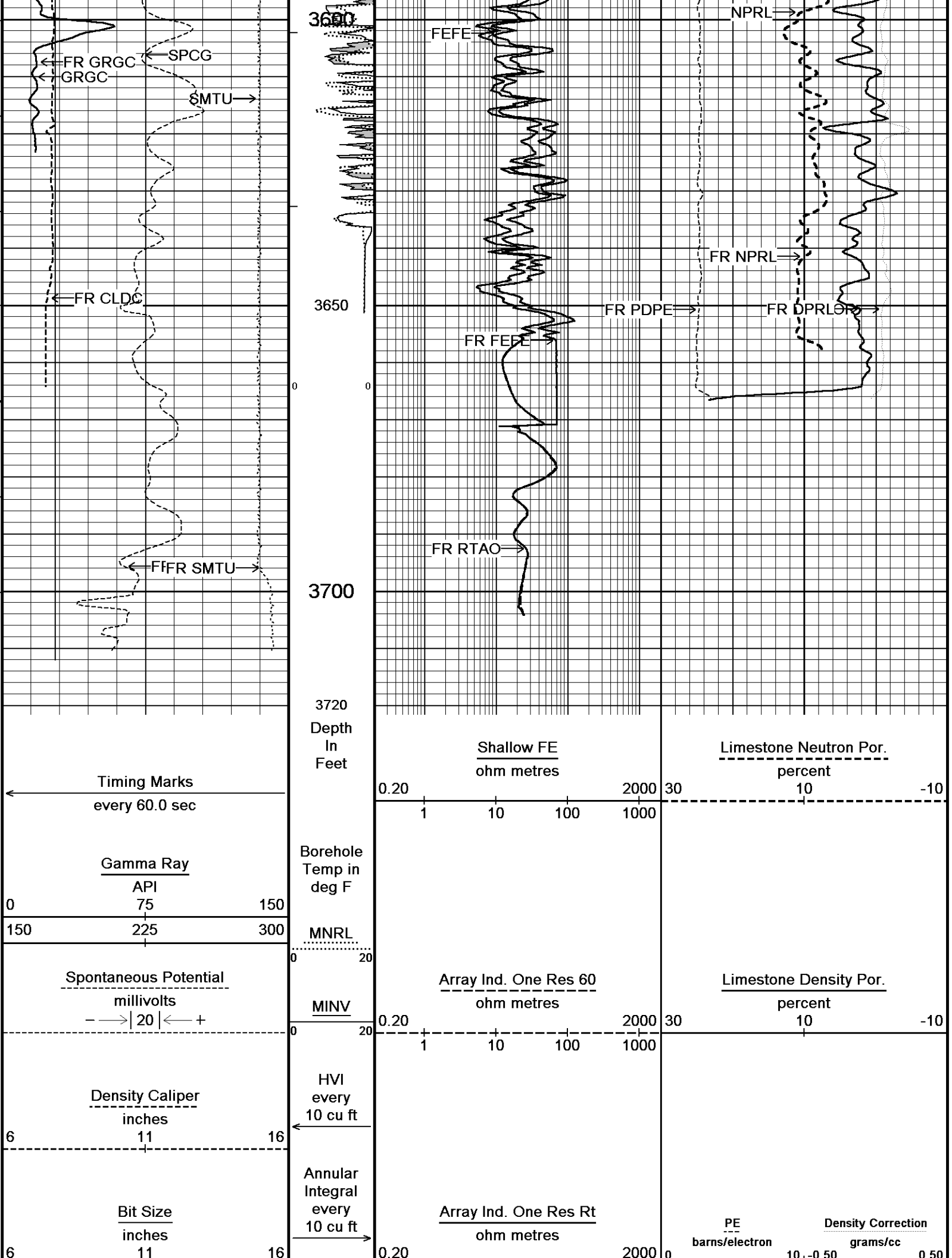


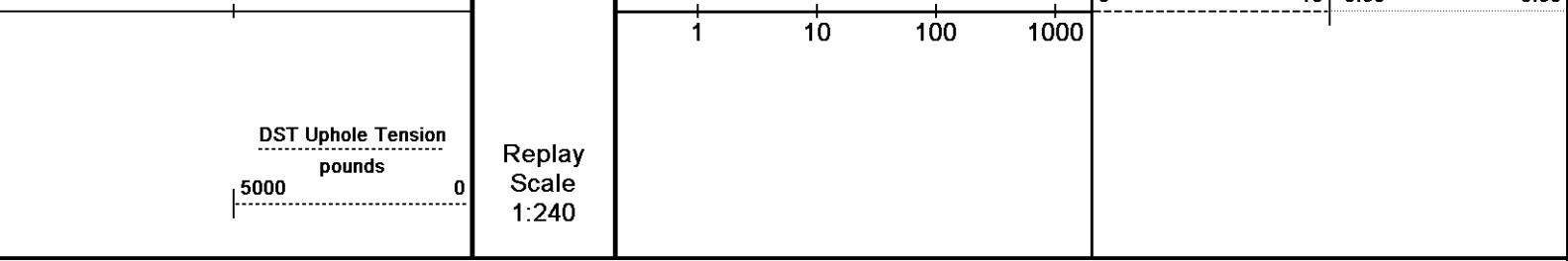










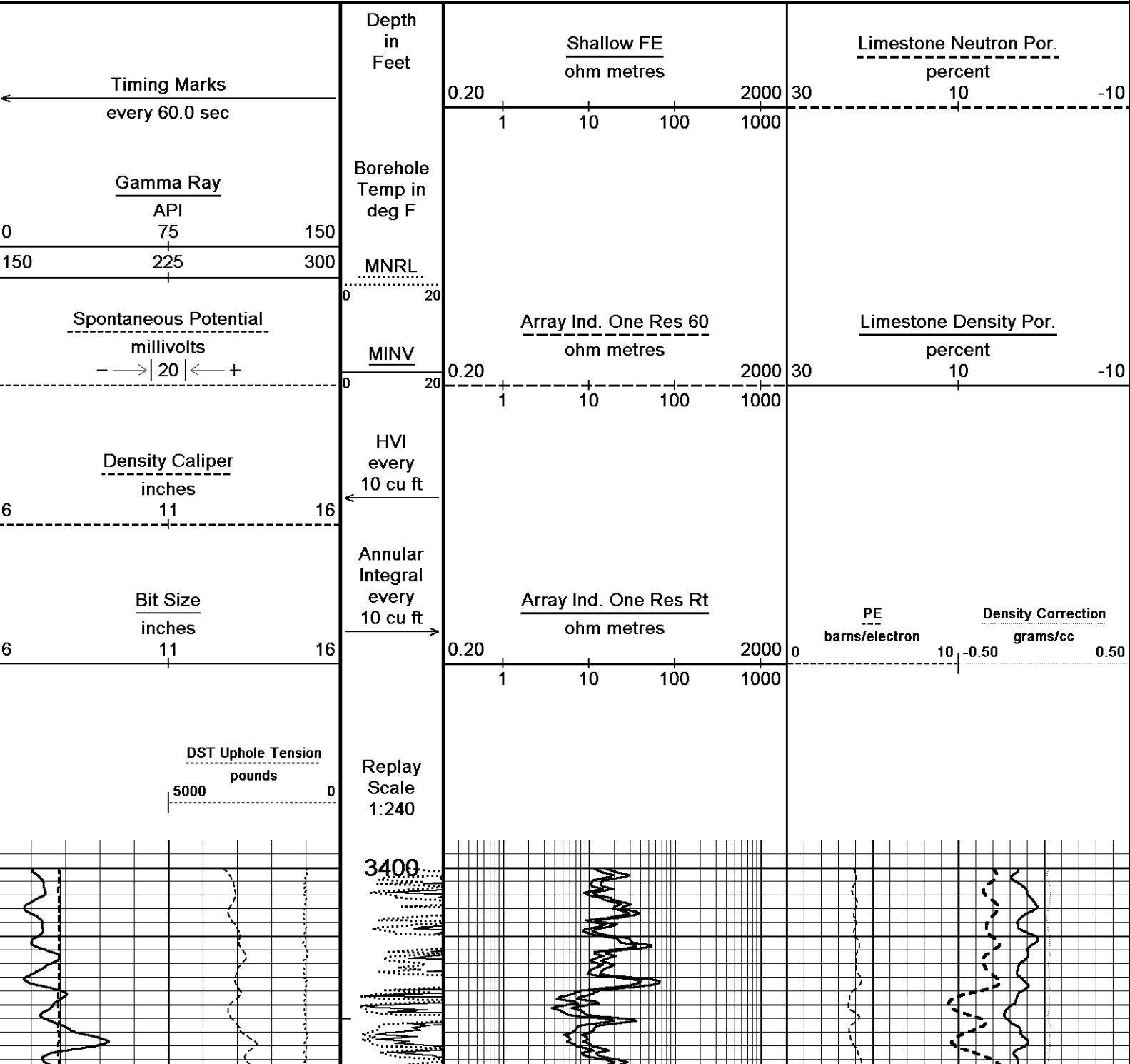


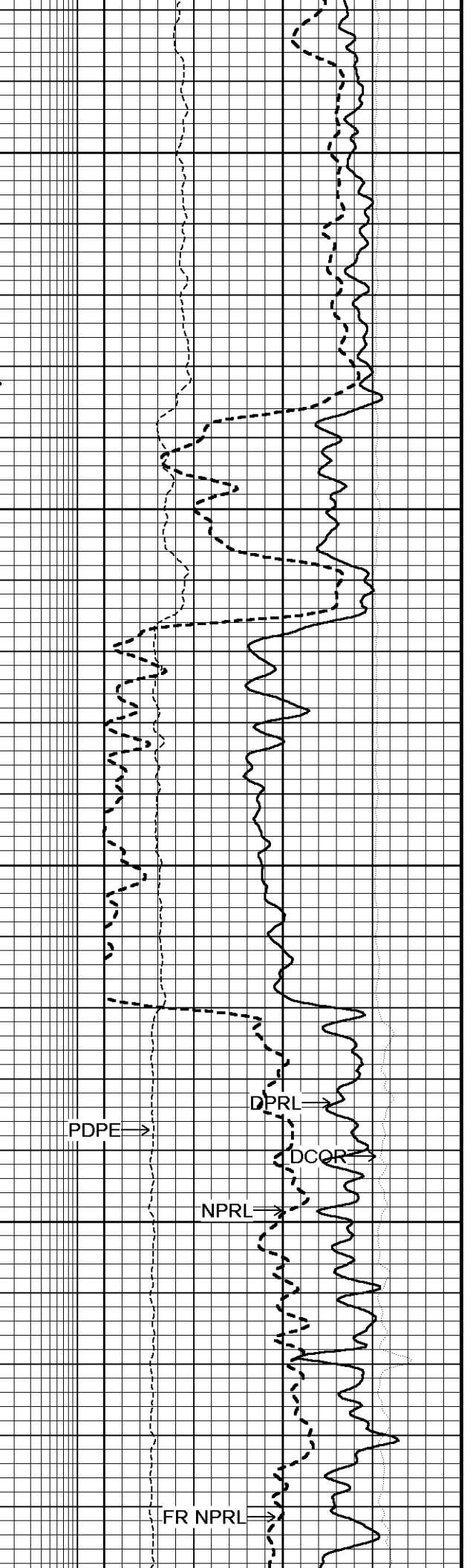
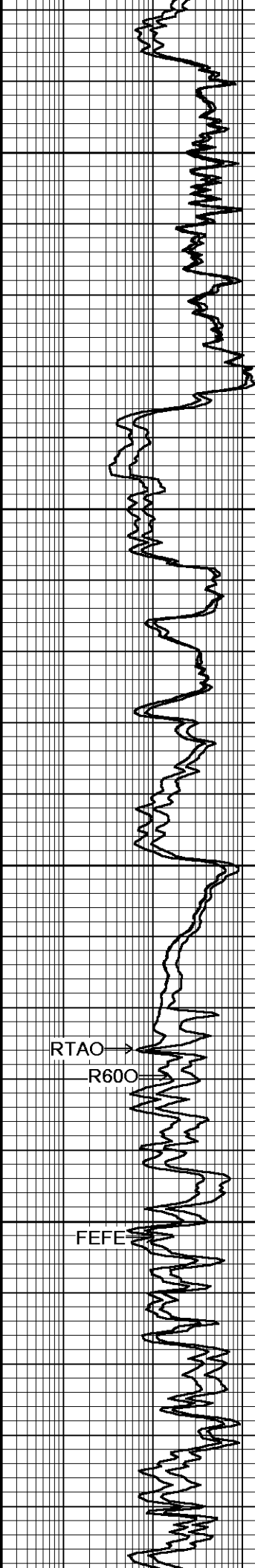
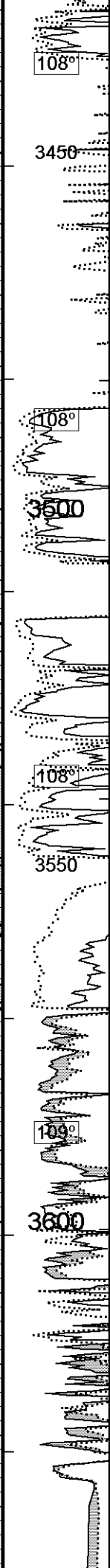
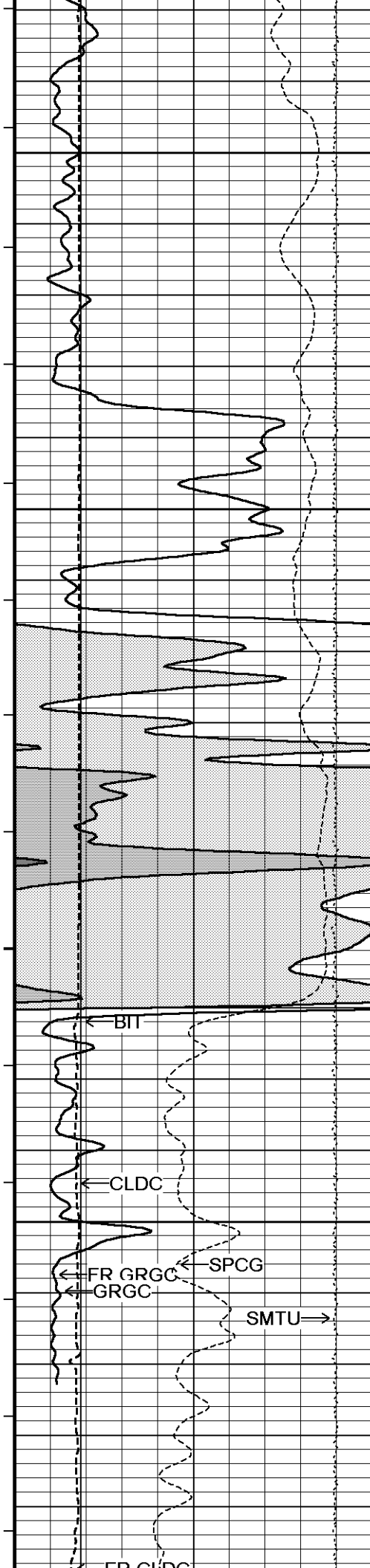
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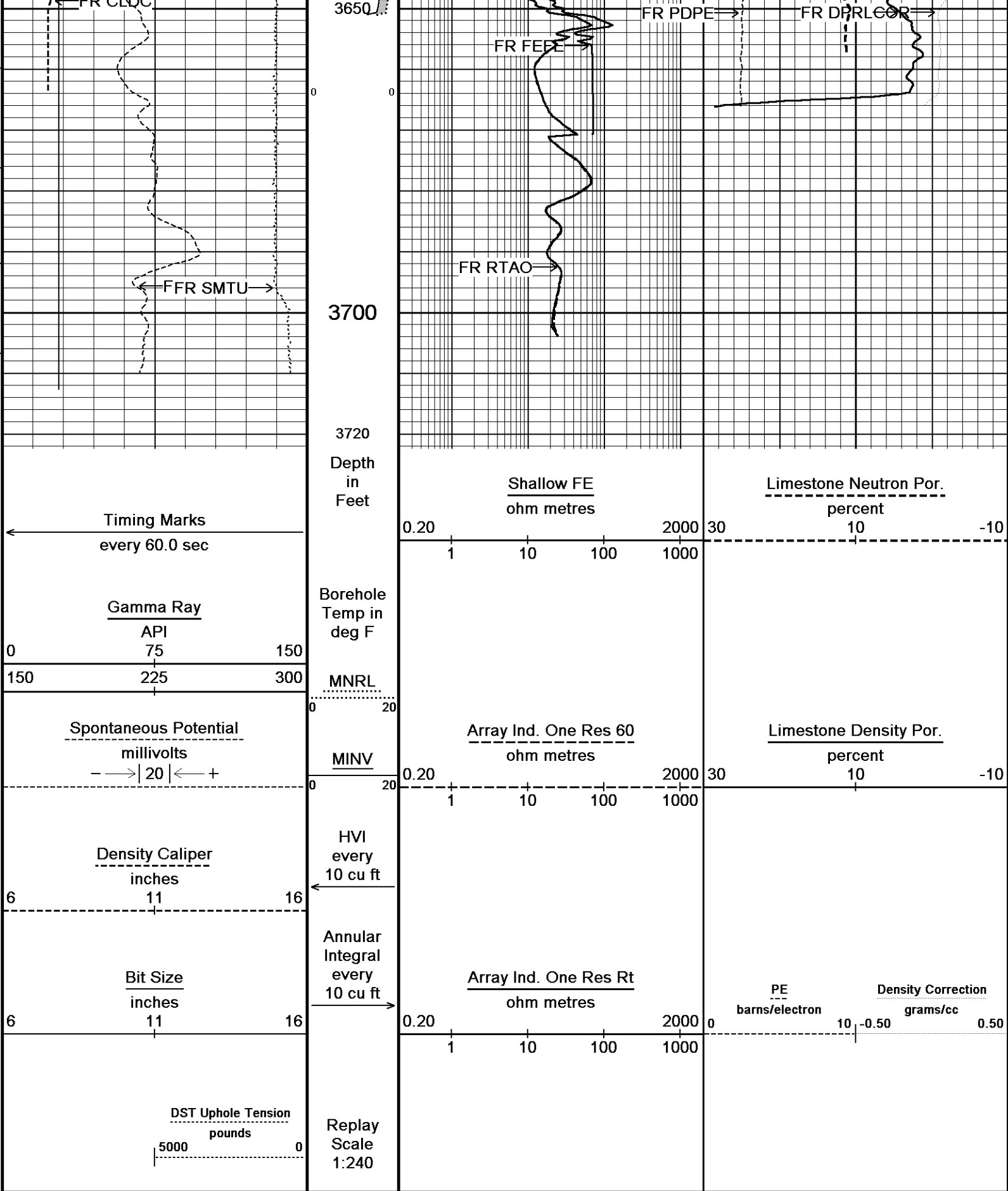
↑	5 INCH MAIN SECTION DSC	↑
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↓	5 INCH REPEAT SECTION 1:240	↓
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Depth Based Data - Maximum Sampling Increment 10.0cm Filename: D:\13.06.9804\DATA\TAOS 26 APRIL\REPEAT.dta System Versions: Logged with 13.06.9804 Plotted with 13.06.9804	Plotted on 26-APR-2014 23:13 Recorded on 26-APR-2014 12:16
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BEFORE SURVEY CALIBRATION

D:\113.06.9804\DATA\TAOS 26 APRIL\TC-ML-CXD-SGS.dta

General Constants All 000

Last Edited on 26-APR-2014,10:37

General Parameters

Mud Resistivity	1.800	ohm-metres
Mud Resistivity Temperature	61.000	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	5.500	inches
Caliper for Differential Caliper	Density Caliper	

Rwa Parameters

Porosity used	Limestone Density Por.
Resistivity used	Array Ind. One Res Rt
RWA Constant A	0.610
RWA Constant M	2.150
SW/APOR Tool Source	0.000

Down-hole Tension Calibration SMS 0

Field Calibration on 04-FEB-2014 00:41

Reading No	Measured	Calibrated (lbs)
1	16028.19	0.00
2	17173.45	360.00

High Resolution Temperature Calibration MCG-D.K 475

Field Calibration on 26-APR-2014,10:32

	Measured	Calibrated(Deg F)
Lower	50.00	50.00
Upper	100.00	100.00

High Resolution Temperature Constants MCG-D.K 475

Last Edited on 26-APR-2014,10:32

Pre-filter Length	11
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SP Calibration MCG-D.K 475

Field Calibration on 26-APR-2014,10:32

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

Gamma Calibration MCG-D.K 475

Field Calibration on 26-APR-2014,10:32

	Measured	Calibrated (API)
Background	36	25
Calibrator (Gross)	1058	721
Calibrator (Net)	1022	696

Gamma Constants MCG-D.K 475

Last Edited on 26-APR-2014,10:32

Gamma Calibrator Number	36	
Mud Density	1.11	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl		kppm
K Mud Type	Chloride	
K Mud Concentration	0.00	%

Accelerometer Constants MBN-C.A 75

Last Edited on

Accelerometer Calibrator Number	000
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Accelerometer Temperature Characterisation

X Accelerometer

Serial Number	0
Calibration Date	01-Jan-1998
	B0
	B1
	B2
	B3
Bias(g)	0.00000e+000
	0.00000e+000
	0.00000e+000
	0.00000e+000

Bias(g)	0.00000e+000	0.00000e+000	0.00000e+000	0.00000e+000
Scale Factor(mA/g)	0.00000e+000	0.00000e+000	0.00000e+000	0.00000e+000
Y Accelerometer				
Serial Number	0			
Calibration Date	01-Jan-1998			
	B0	B1	B2	B3
Bias(g)	0.00000e+000	0.00000e+000	0.00000e+000	0.00000e+000
	SF0	SF1	SF2	SF3
Scale Factor(mA/g)	0.00000e+000	0.00000e+000	0.00000e+000	0.00000e+000
Z Accelerometer				
Serial Number	0			
Calibration Date	01-Jan-1998			
	B0	B1	B2	B3
Bias(g)	0.00000e+000	0.00000e+000	0.00000e+000	0.00000e+000
	SF0	SF1	SF2	SF3
Scale Factor(mA/g)	0.00000e+000	0.00000e+000	0.00000e+000	0.00000e+000

Navigation Constants MBN-C.A 75	Last Edited on 26-APR-2014,10:32			
Magnetic Declination	3.67	degrees	East	

Magnetometer Constants MBN-C.A 75	Last Edited on			
Magnetometer Calibrator Number	000			

Micro Normal and Micro Inverse Calibration MML-A 7	Base Calibration on 12-MAR-2014 13:49 Field Check on 26-APR-2014,10:33			
Base Calibration				
	Measured	Calibrated (ohm-m)		
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Micro Normal	12.1	59.6	5.0	25.0
Micro Inverse	15.6	77.8	5.0	25.0
Channel	Base Check (ohm-m)	Field Check (ohm-m)		
Micro Normal	63.5	63.5		
Micro Inverse	48.6	48.6		

Micro Normal and Micro Inverse Constants MML-A 7	Last Edited on 26-APR-2014,10:33			
Pad Type	8-12 in Soft Rubber Inflatable 006-9011-159			
Micro Normal K Factor	1.0000			
Micro Inverse K Factor	1.0000			
Standoff Offset	N/A	inches		

Caliper Calibration MML-A 7	Base Calibration on 12-MAR-2014 14:05 Field Calibration on 26-APR-2014,10:33			
Base Calibration				
Reading No	Measured	Calibrator Size (in)		
1	14367	5.96		
2	17548	7.97		
3	20740	9.84		
4	24637	11.91		
5	0	0.00		
6	N/A	N/A		
Field Calibration				
	Measured Caliper (in)	Actual Caliper (in)		
	9.81	9.84		

Neutron Calibration MDN-C.A 460	Base Calibration on 17-MAR-2014 12:40 Field Check on 26-APR-2014,10:33			
Base Calibration				
	Measured	Calibrated (cps)		
	Near	Far	Near	Far
	2895	88	3714	110
Ratio	32.768	33.764		
Field Calibrator at Base		Calibrated (cps)		
		2392	3488	
Ratio		0.686		
Field Calibrator		Calibrated (cps)		

Field Check	Calibrated (cps)
	2468 3689
Ratio	0.675

Neutron Constants MDN-C.A 460			Last Edited on 26-APR-2014,10:34		
Neutron Source Id	P14043B				
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	Constant Value				
Temperature	68.00	degrees F			
Mud Salinity	0.00	kppm			
Salinity Correction	Not Applied				
Formation Fluid Salinity Source	Constant Value				
Formation Fluid Salinity	0.00	kppm			
Barite Mud Correction	Not Applied				

FE Calibration MFE-A.A 54			Base Calibration on 08-APR-2014 02:56 Field Check on 26-APR-2014,10:34		
Base Calibration					
	Measured	Calibrated (ohm-m)			
Reference 1	9.9	1.3			
Reference 2	967.8	126.8			
Base Check			282.4		
Field Check			282.5		

FE Constants MFE-A.A 54			Last Edited on 26-APR-2014,10:34		
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.	MCG External Temperature				
Stand-off	0.5	inches			

High Resolution Temperature Calibration MAI-A.A 102			Field Calibration on 26-APR-2014,10:35		
	Measured	Calibrated(Deg F)			
Lower	50.00	50.00			
Upper	100.00	100.00			

High Resolution Temperature Constants MAI-A.A 102			Last Edited on 26-APR-2014,10:35		
Pre-filter Length	11				

Induction Calibration MAI-A.A 102				Base Calibration on 12-APR-2014,21:38	
				Field Check on 26-APR-2014,10:35	
Base Calibration					
Test Loop Calibration		Measured		Calibrated (mmho/m)	
Channel	Low	High		Low	High
1	18.0	481.9		9.3	966.2
2	6.6	378.8		7.6	821.4
3	4.0	256.0		5.2	566.0
4	3.8	134.5		2.6	279.2
Array Temperature		86.5		Deg F	
Channel		Base Check (mmho/m)		Field Check (mmho/m)	
		Low	High	Low	High
1				11.9	3810.2
2				30.2	3605.5
3				28.6	3133.0
4				16.2	2101.6

Deep	14.5	2020.0
Medium	45.4	4179.7
Shallow	48.9	5352.1

Array Temperature	68.0	Deg F
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Induction Constants MAI-A.A 102

Last Edited on 26-APR-2014,10:35

Induction Model	RtAP-WBM		
Caliper for Borehole Corr.	Bit Size		
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.	MCG 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
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	

Caliper Calibration MPD-A.A 11

Base Calibration on 21-APR-2014 10:42
Field Calibration on 26-APR-2014,10:34

Base Calibration		
Reading No	Measured	Calibrator Size (in)
1	19600	3.98
2	29656	5.98
3	39776	7.97
4	49377	9.84
5	60416	11.91
6	N/A	N/A
Field Calibration		
	Measured Caliper (in)	Actual Caliper (in)
	7.96	7.97

Photo Density Calibration MPD-A.A 11

Base Calibration on 21-APR-2014 10:27
Field Check on 26-APR-2014,10:34

Density Calibration				
Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	47839	25404	59869	31110
Reference 2	19923	2423	24557	2522
Field Check at Base				
	1160.9	1245.5		

Field Check

1153.4 1238.0

PE Calibration

Base Calibration

Measured

Calibrated

	WS	WH	Ratio	Ratio
Background	211	1037		
Reference 1	17508	47664	0.371	0.369
Reference 2	5284	19791	0.271	0.271

Field Check at Base

210.6 1037.5

Field Check

208.7 1030.0

Density Constants MPD-A.A 11

Last Edited on 26-APR-2014,10:34

Density Source Id	263	
Nylon Calibrator Number	633	
Aluminium Calibrator Number	633	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.11	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	

Spectral Gamma Calibration SGS-E.J 171

Base Calibration on 06-JUN-2013 15:09

Field Calibration on 26-APR-2014,10:33

Base Calibration

Potassium Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	376.5	33.7	3.4	2.0	3.5
Calibrator (Gross)	210.0	120.1	14.0	1.0	1.7
Calibrator (Net)	-166.5	86.4	10.6	-1.0	-1.8

	K %	U ppm	Th ppm
Concentrations	5.8	0.0	0.0

Uranium Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	376.5	33.7	3.4	2.0	3.5
Calibrator (Gross)	535.3	182.8	16.2	6.0	4.0
Calibrator (Net)	158.8	149.1	12.8	4.0	0.4

	K %	U ppm	Th ppm
Concentrations	0.0	14.8	0.0

Thorium Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	376.5	33.7	3.4	2.0	3.5
Calibrator (Gross)	401.9	137.9	10.7	7.0	13.8
Calibrator (Net)	25.4	104.2	7.4	5.1	10.3

	K %	U ppm	Th ppm
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Concentrations

0.0

0.0

44.3

Mixture Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	376.5	33.7	3.4	2.0	3.5
Calibrator (Gross)	957.5	376.2	36.2	11.7	15.4
Calibrator (Net)	581.0	342.5	32.8	9.7	11.9

Field Calibration

Gamma Ray

	Measured	Calibrated (API)
Background	426	109
Calibrator (Gross)	1402	359
Calibrator (Net)	976	250

Mixture Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	376.5	33.7	3.4	2.0	3.5
Calibrator (Gross)	957.5	376.2	36.2	11.7	15.4
Calibrator (Net)	581.0	342.5	32.8	9.7	11.9

Spectral Gamma Constants SGS-E.J 171

Last Edited on 06-JUN-2013,14:16

Background Calibrator Number	496	
Mixture Calibrator Number	525	
Potassium Calibrator Number	499	
Uranium Calibrator Number	505	
Thorium Calibrator Number	502	
Mud Density	1.16	gm/cc
Caliper Source for Processing	Bit Size	
Tool Position	Eccentred	
Concentration of KCl		kppm
K Mud Type	Chloride	
K Mud Concentration	0.00	%

Dipole Constants and Gains MRD-A.A 127

Logging Mode	Standard	
Semblance Parameters		
Window Start	1.00	milliseconds
Window Width	15	milliseconds

Discriminator Levels

M1C Discriminator	0.1	mV
M2C Discriminator	0.1	mV
M3C Discriminator	0.1	mV
M4C Discriminator	0.1	mV

Monopole Receiver Gains

MR1A	1.000000	MR1B	1.000000	MR1C	1.000000	MR1D	1.000000
MR2A	1.000000	MR2B	1.000000	MR2C	1.000000	MR2D	1.000000
MR3A	1.000000	MR3B	1.000000	MR3C	1.000000	MR3D	1.000000
MR4A	1.000000	MR4B	1.000000	MR4C	1.000000	MR4D	1.000000
MR5A	1.000000	MR5B	1.000000	MR5C	1.000000	MR5D	1.000000
MR6A	1.000000	MR6B	1.000000	MR6C	1.000000	MR6D	1.000000
MR7A	1.000000	MR7B	1.000000	MR7C	1.000000	MR7D	1.000000
MR8A	1.000000	MR8B	1.000000	MR8C	1.000000	MR8D	1.000000

DOWNHOLE EQUIPMENT

D:\13.06.9804\DATA\TAOS 26 APRIL\TC-ML-CXD-SGS.dta

Compact Comms Gamma
MCG-D.K 475 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in



88.39 ft

85.48 ft

GRGC - Gamma Ray

CGXT - MCG External Temperature

Compact Navigation
MBN-C.A 75 LG: 11.81 ft WT: 70.5 lb OD: 2.24 in

Spectral Gamma Ray Sub
SGS-E.J 171 LG: 7.78 ft WT: 105.8 lb OD: 3.54 in

Compact Micro-log
MML-A 7 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

Compact Neutron
MDN-C.A 460 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper
MPD-A.A 11 LG: 9.53 ft WT: 90.4 lb OD: 2.45 in

Compact Focussed Electric
MFE-A.A 54 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

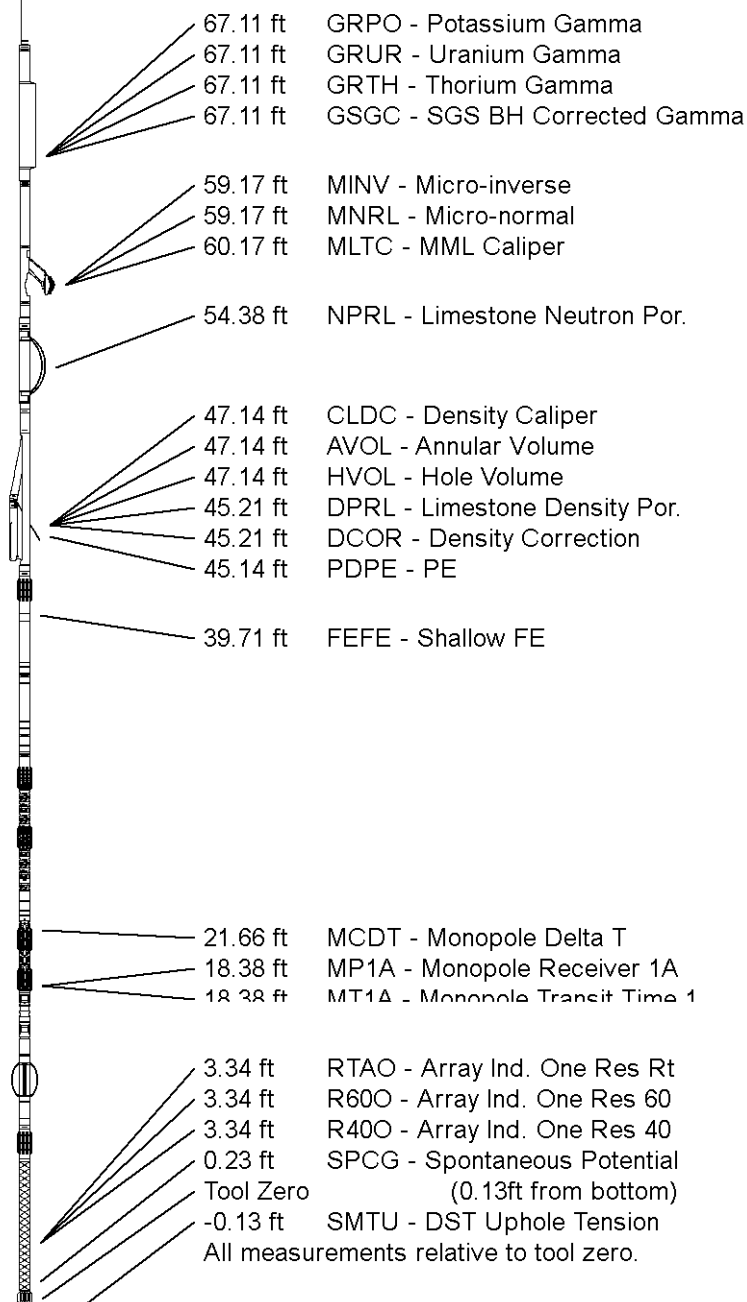
Compact Dipole Memory
MDM-A.A 127 LG: 4.48 ft WT: 39.7 lb OD: 2.24 in

Compact Dipole Receiver
MRD-A.A 127 LG: 8.89 ft WT: 88.2 lb OD: 2.24 in

Compact Dipole Transmitter
MTD-A.A 127 LG: 12.63 ft WT: 110.2 lb OD: 2.24 in

Compact Induction
MAI-A.A 102 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 93.67 ft Weight: 798.1 lb



COMPANY

TAOS RESOURCES OPERATING COMPANY

WELL

WEST MADDIX UNIT #24

FIELD

NORTH MADDIX

PROVINCE/COUNTY

COWLEY

COUNTRY/STATE

USA / KANSAS

Elevation Kelly Bushing	1286.00	feet
Elevation Drill Floor	1284.00	feet
Elevation Ground Level	1276.00	feet

First Reading	3693.00	feet
Depth Driller	3700.00	feet
Depth Logger	3696.00	feet



COMPOSITE LOG

Weatherford®

