

**Weatherford****COMPOSITE
LOG**

COMPANY	TAOS RESOURCES OPERATING COMPANY			
WELL	ZONE #1			
FIELD	MADDIX NORTH			
PROVINCE/COUNTY	COWLEY			
COUNTRY/STATE	U.S.A / KANSAS			
LOCATION	2250' FSL & 495' FEL SW-NE-NE-SE			
SEC 35	TWP 32S	RGE 5E	Other Services	
			MAI/MFE	SGS
			MML	
			MSS	
API Number	15-035-24584			
Permanent Datum GL, Elevation 1285 feet				
Log Measured From KB				Elevations: KB 1295.00 DF 1294.00 GL 1285.00
Drilling Measured From KB				
Date	6-JUN-2014			
Run Number	ONE			
Service Order	5820-89477138			
Depth Driller	3574.00			feet
Depth Logger	3570.00			feet
First Reading	3567.00			feet
Last Reading	251.00			feet
Casing Driller	251.00			feet
Casing Logger	250.00			feet
Bit Size	7.875			inches
Hole Fluid Type	WBM			
Density / Viscosity	9.40 lb/USg			50.00 sec/qt
PH / Fluid Loss	9.50			7.20 ml/30Min
Sample Source	MUD TANK			
Rm @ Measured Temp	1.60 @ 93.0			ohm-m
Rmf @ Measured Temp	1.28 @ 93.0			ohm-m
Rmc @ Measured Temp	1.92 @ 93.0			ohm-m
Source Rmf / Rmc	CALC	CALC		
Rm @ BHT	1.25 @120.0			ohm-m
Time Since Circulation	4 HOURS			
Max Recorded Temp	120.00			deg F
Equipment / Base	13026			OKC
Recorded By	L.HEATON			
Witnessed By	MARYAM NASIZADEH			
SALES	B. CONCHEWSKI			

BOREHOLE RECORD

Last Edited: 08-JUN-2014 21:24

Bit Size inches	Depth From feet	Depth To feet
7.875	251.00	3574.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	251.00	36.00

REMARKS

TOOLS RAN: MCG, SGS, MMR, MDN, MPD, MFE, MSS, MAI RAN IN COMBINATION

HARDWARE:

MAI: TWO 0.5 INCH STANDOFFS USED.

MFE: ONE 0.5 INCH STANDOFF USED.

MDN: DUAL NEUTRON BOW SPRINGS USED.

MPD: 8 INCH PROFILE PLATE USED.

MSS: THREE 0.5 INCH STANDOFFS USED.

2.71 G/CC DENSITY MATRIX USED TO CALCULATE POROSITY.

ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST.

TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 1250 CU.FT.

ANNULAR HOLE VOLUME WITH 5.5 INCH PRODUCTION CASING FROM TD TO SURFACE CASING = 700 CU.FT.

FIELD TICKET NUMBER: 5820-89477138

RIG: MAVERICK #3

OPERATOR(S): JEFF HILL

HOLE WASHOUTS AND RUGOSITY WILL AFFECT LOG QUALITY AND REPEATABILITY.

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.

↓

5 INCH MAIN LOG 1:240

↓

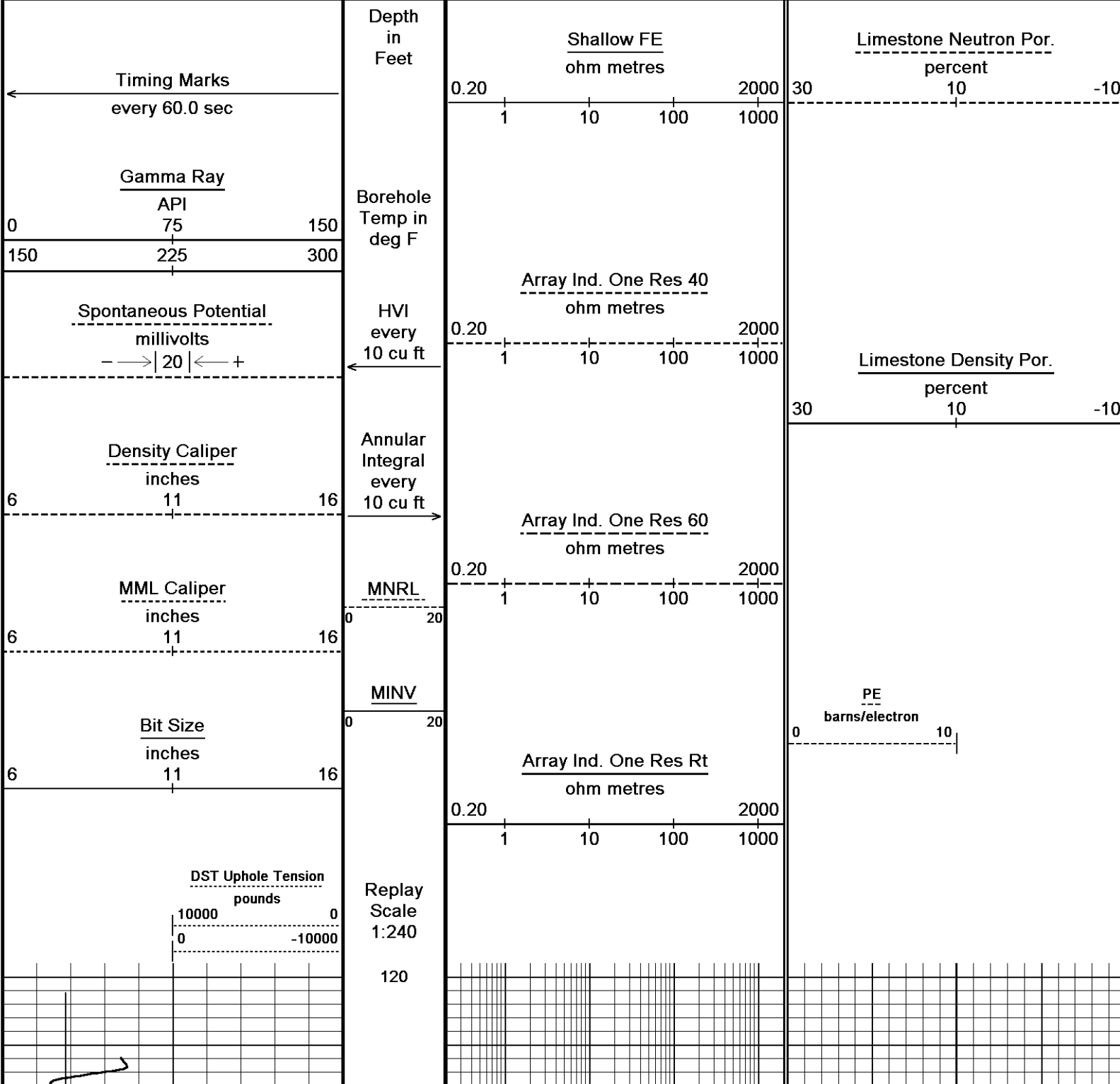
Plotted on 09-JUN-2014 01:28

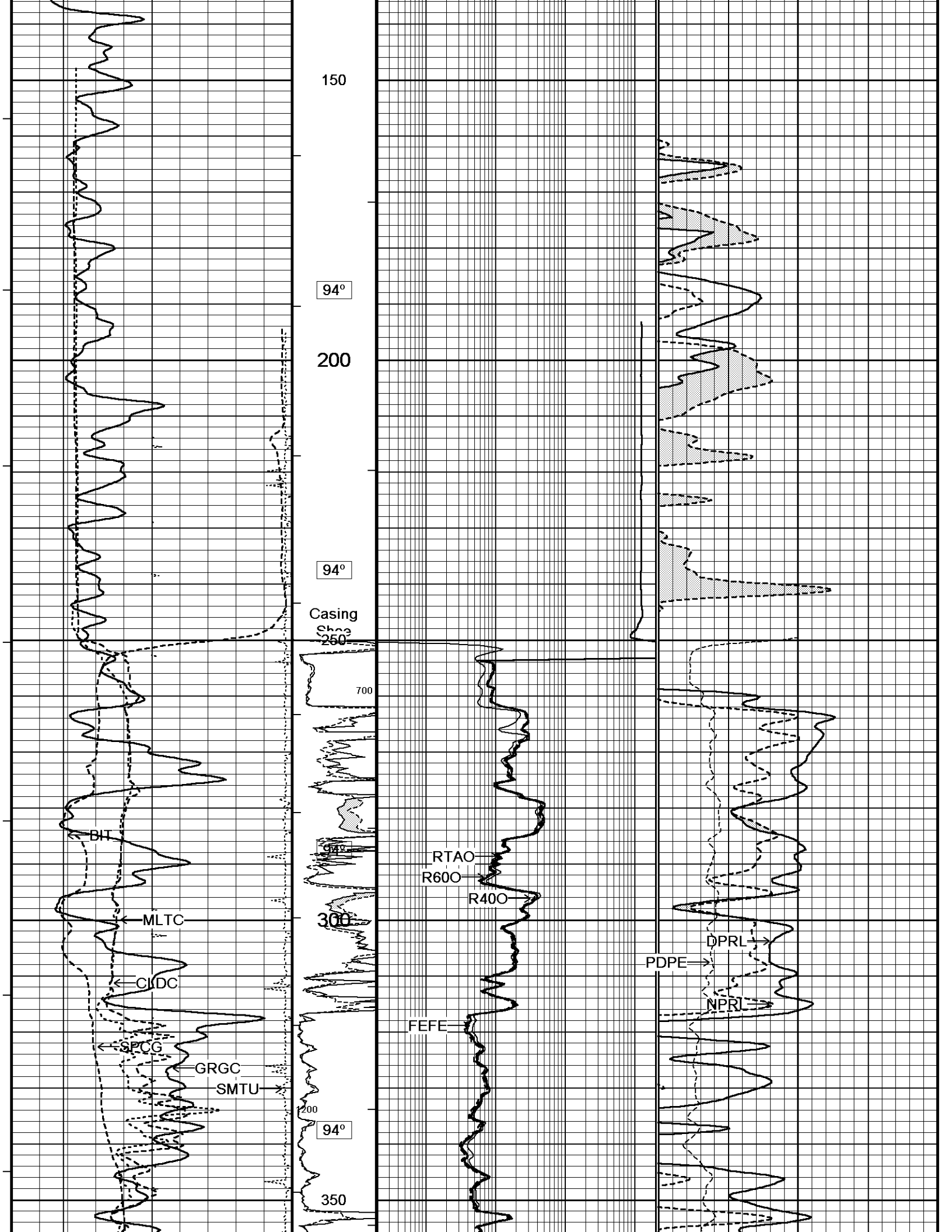
Recorded on 08-JUN-2014 23:04

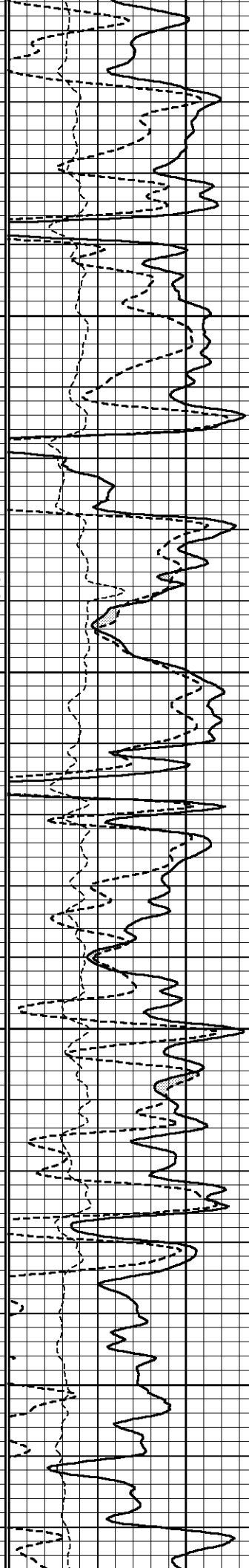
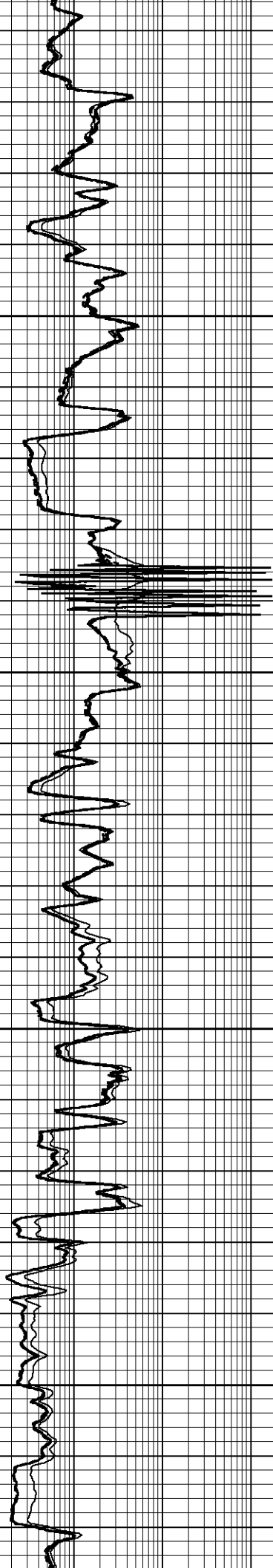
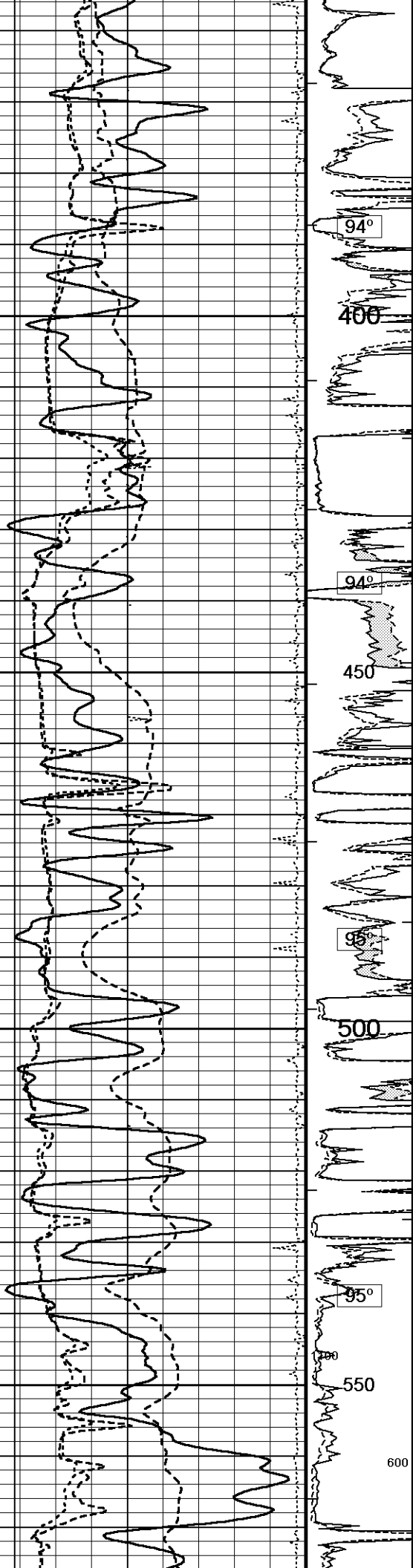
Depth Based Data - Maximum Sampling Increment 10.0cm

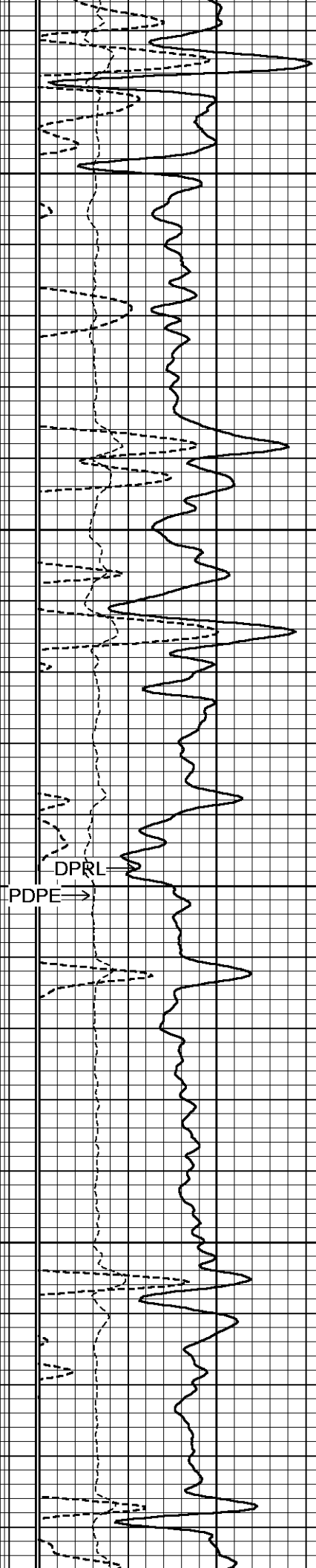
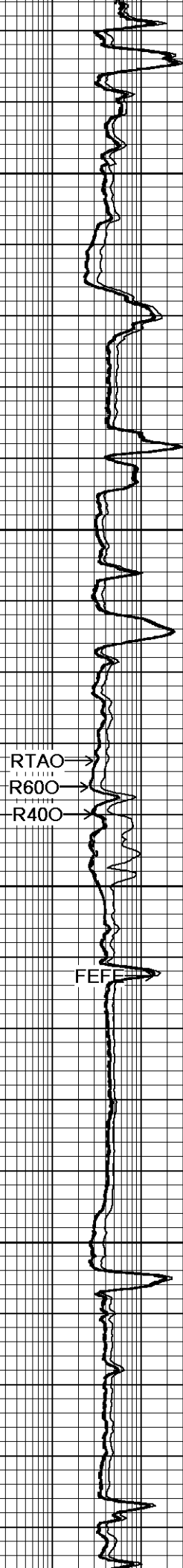
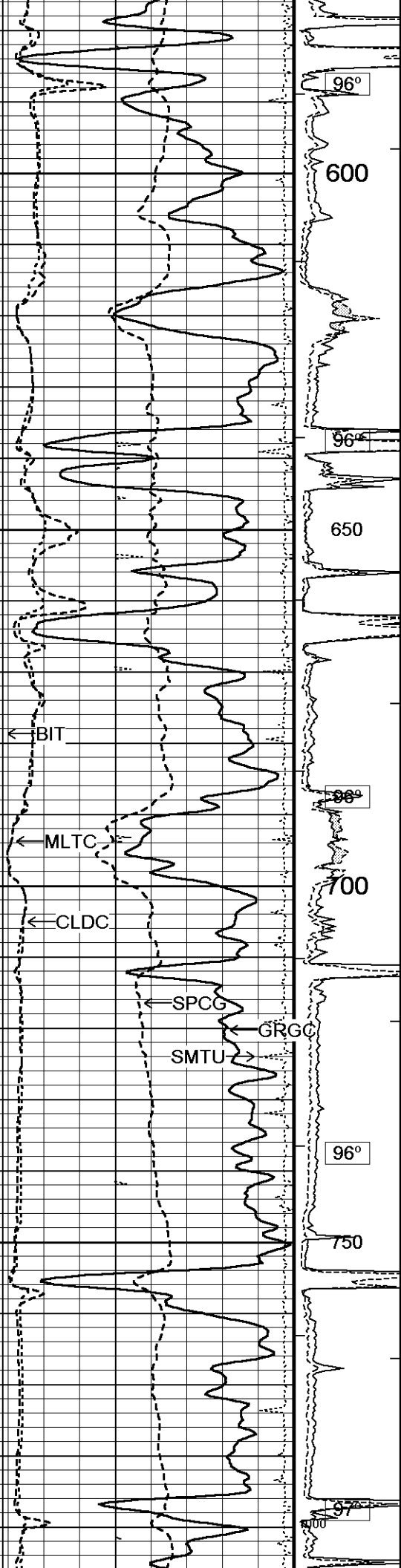
Filename: D:\13.06.9804\DATA\TAOS (ZONIE #1)\DATA_002.dta

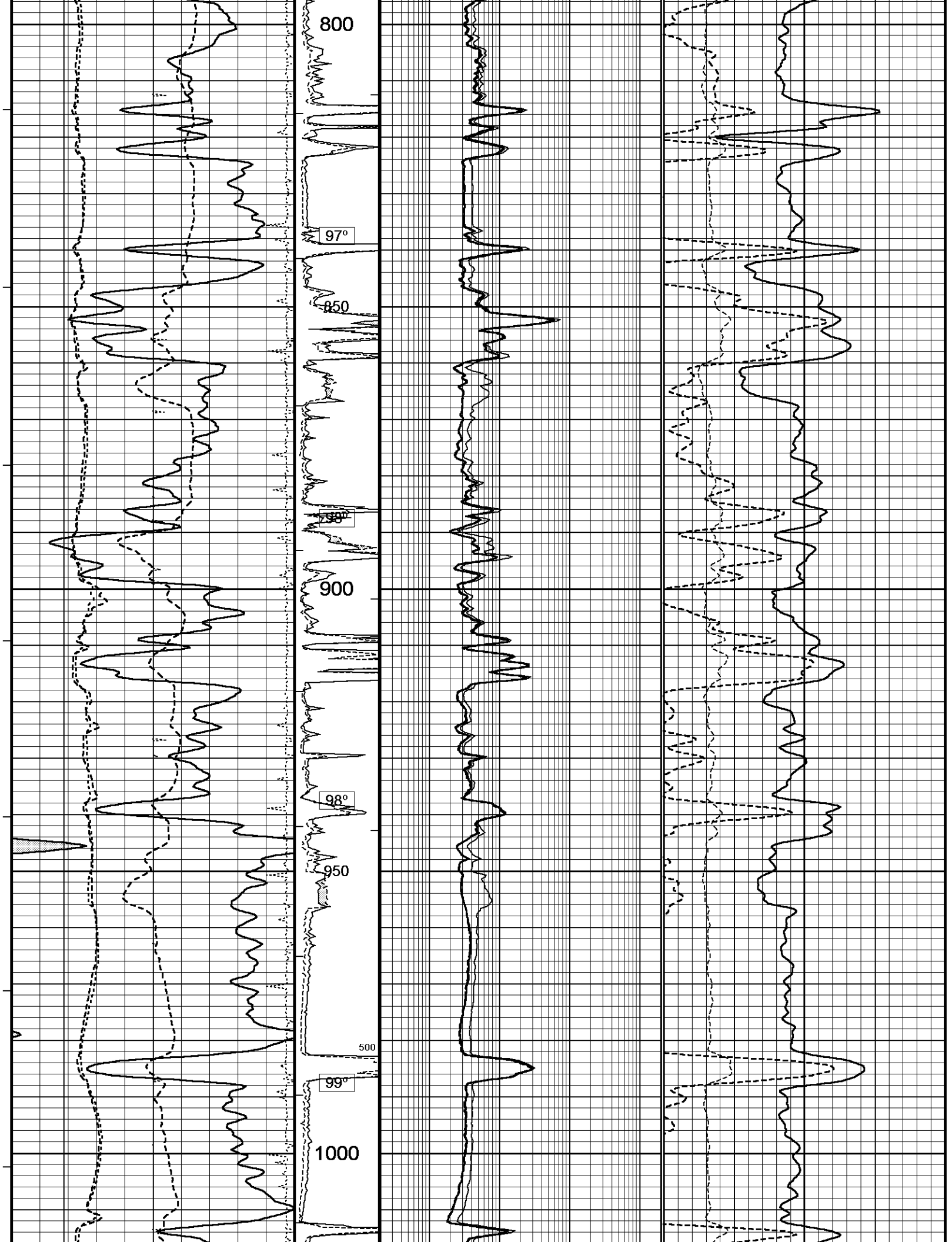
System Versions: Logged with 13.06.9804 Plotted with 13.06.9804

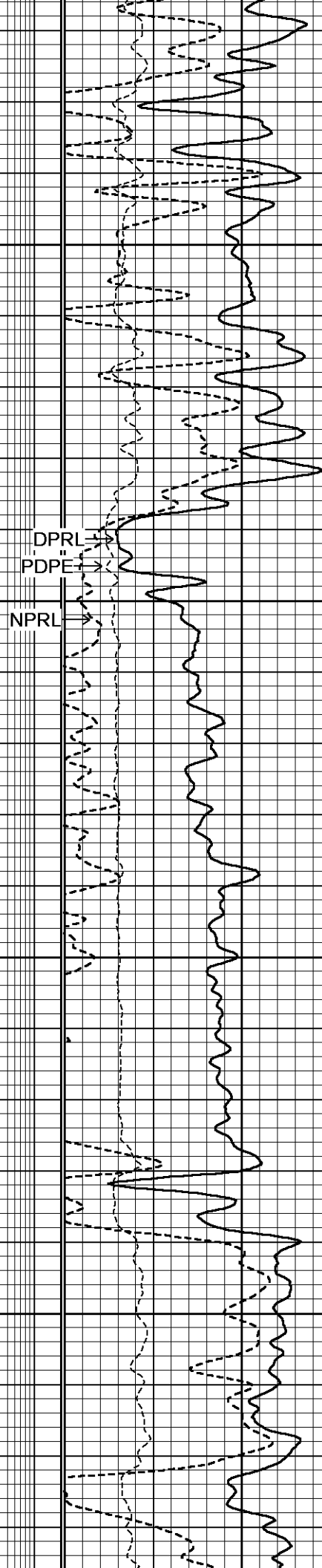
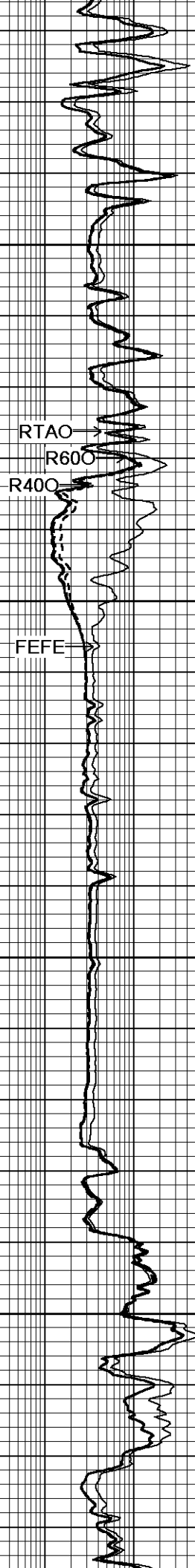
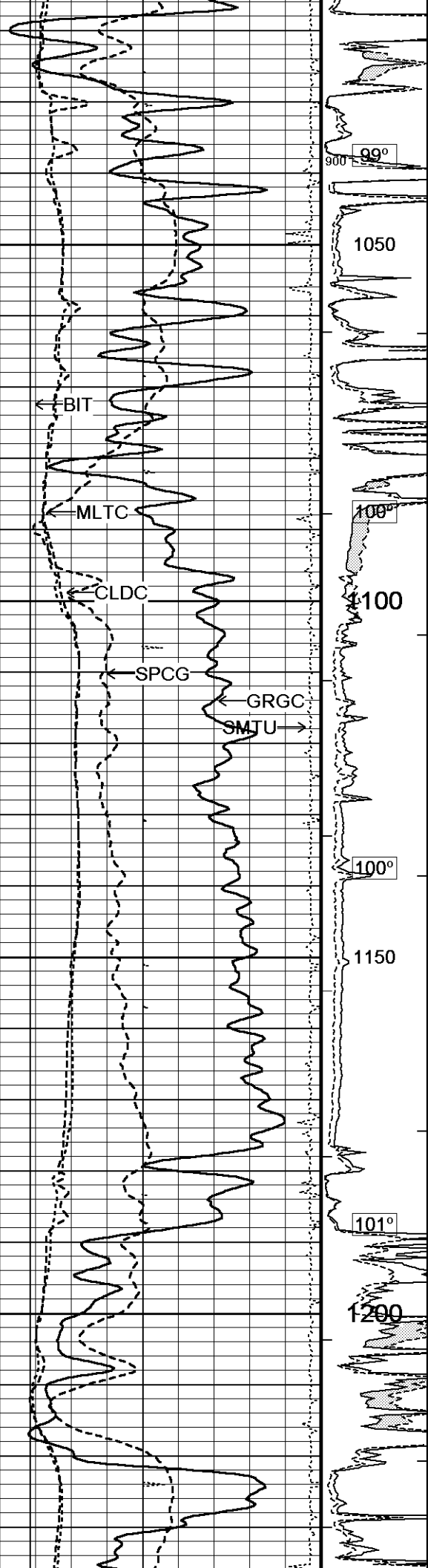


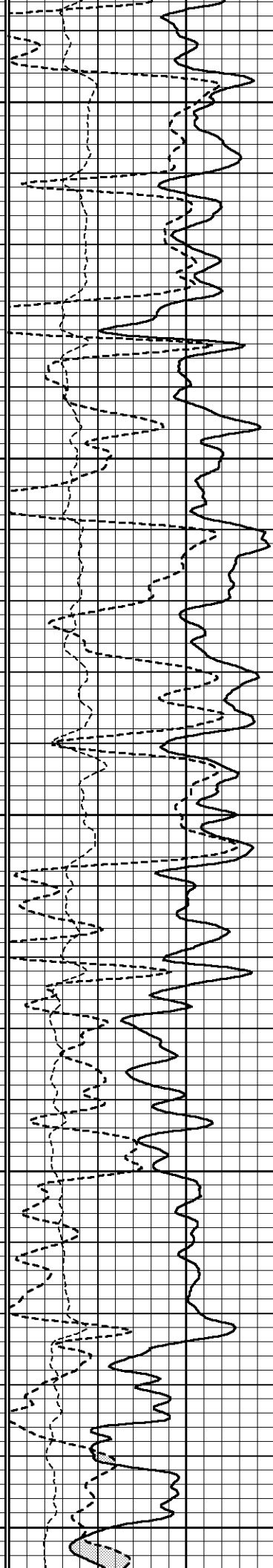
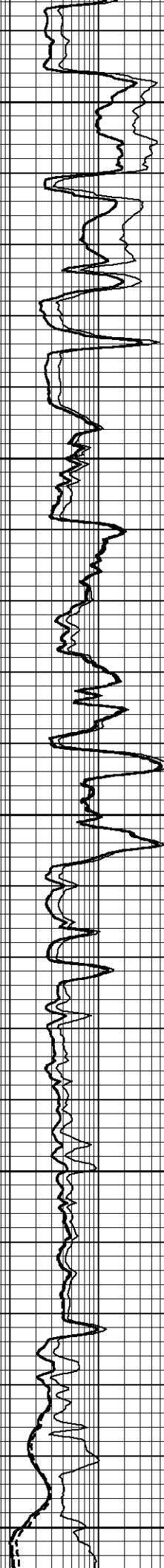
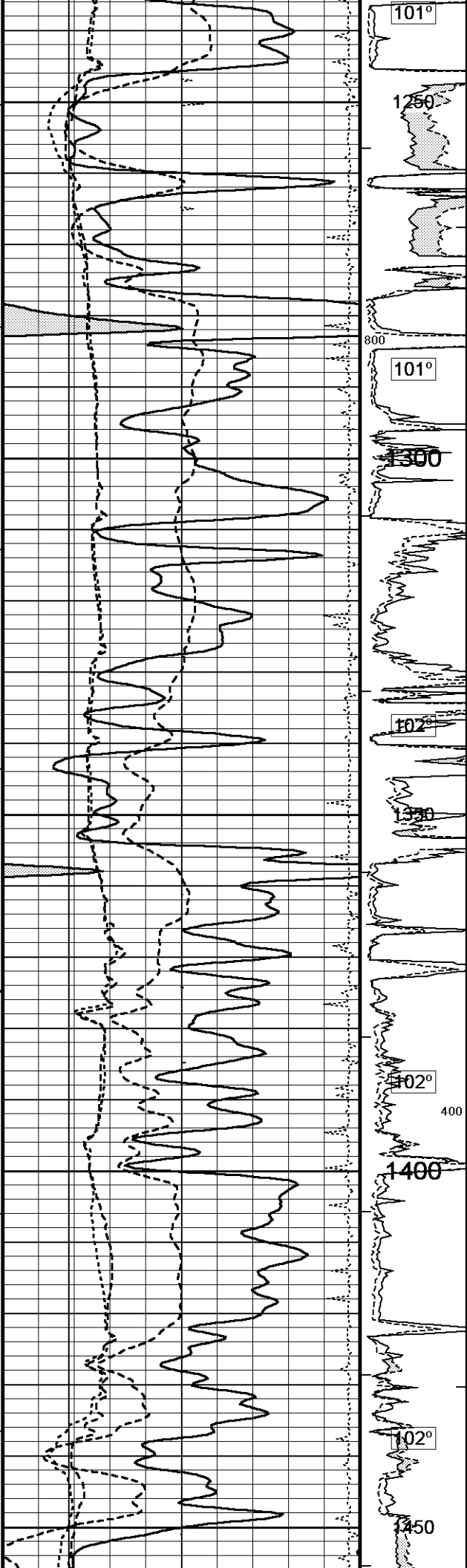


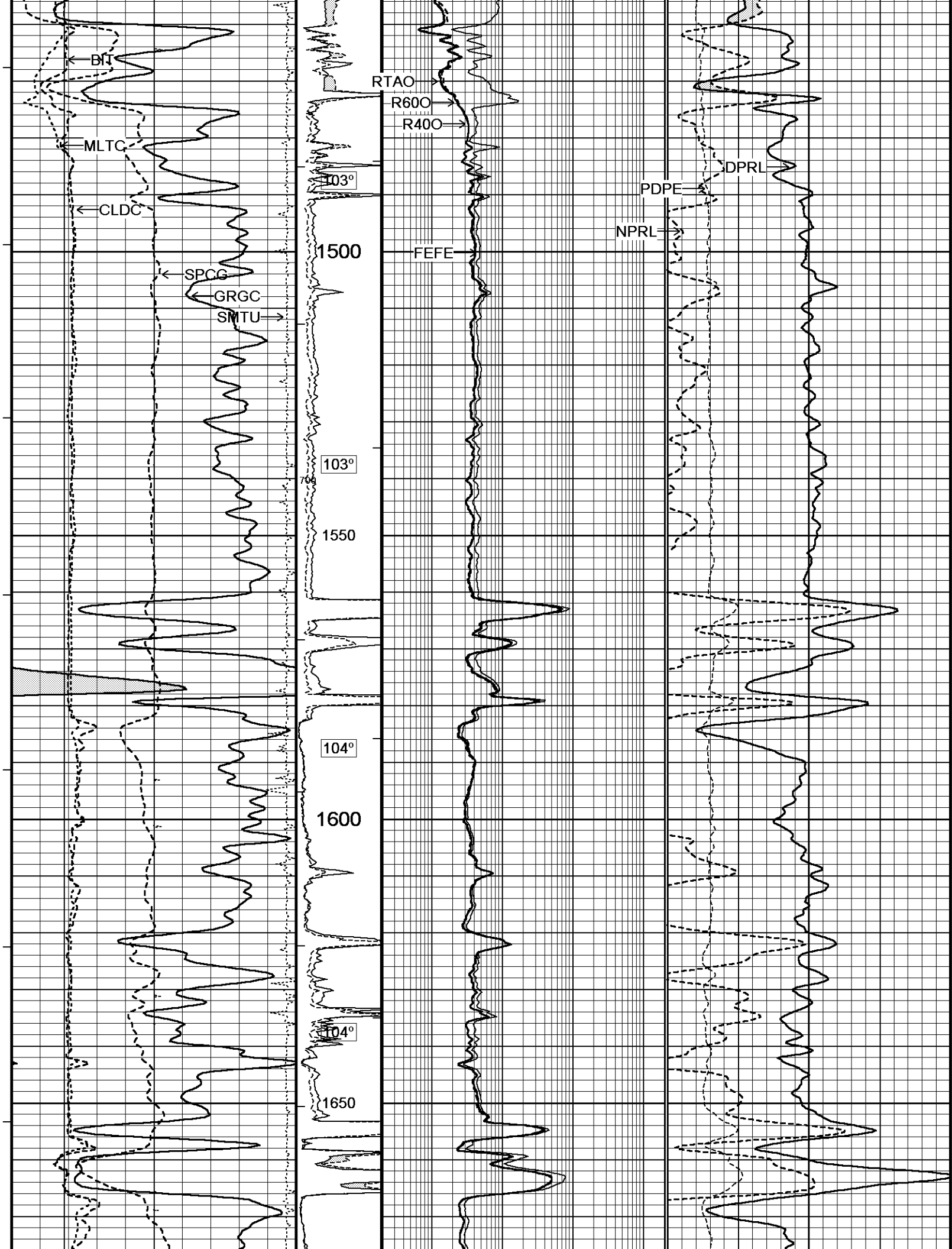


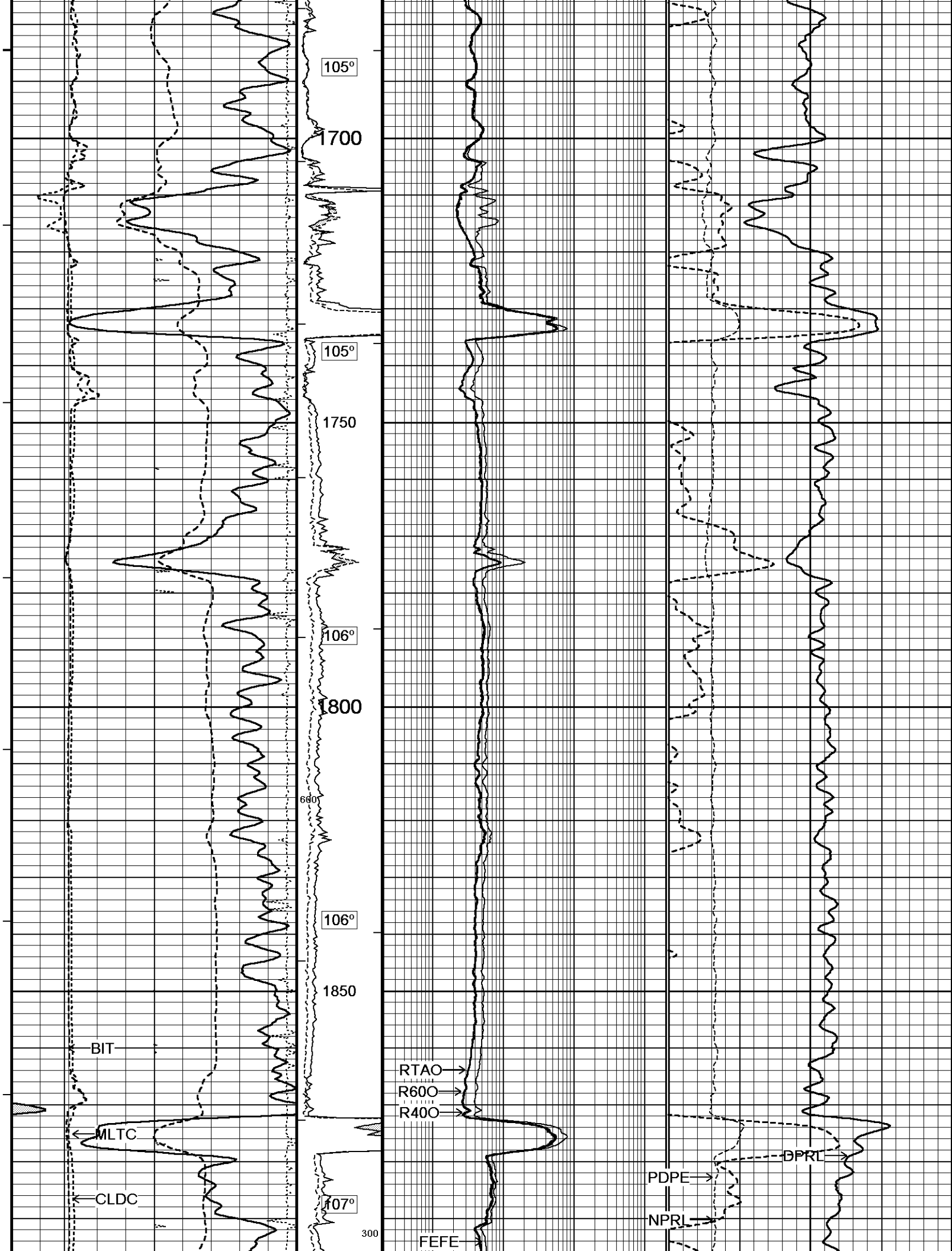


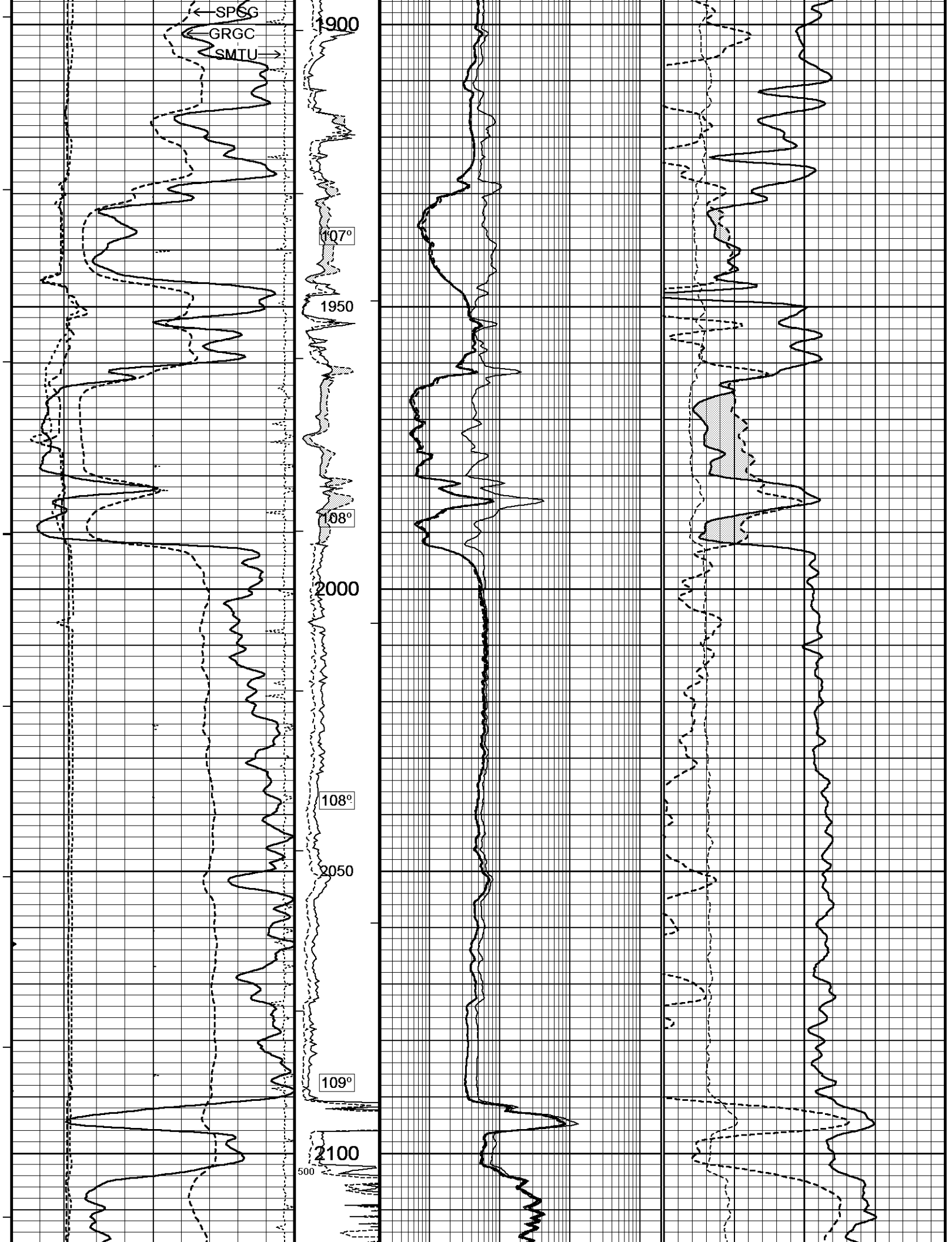


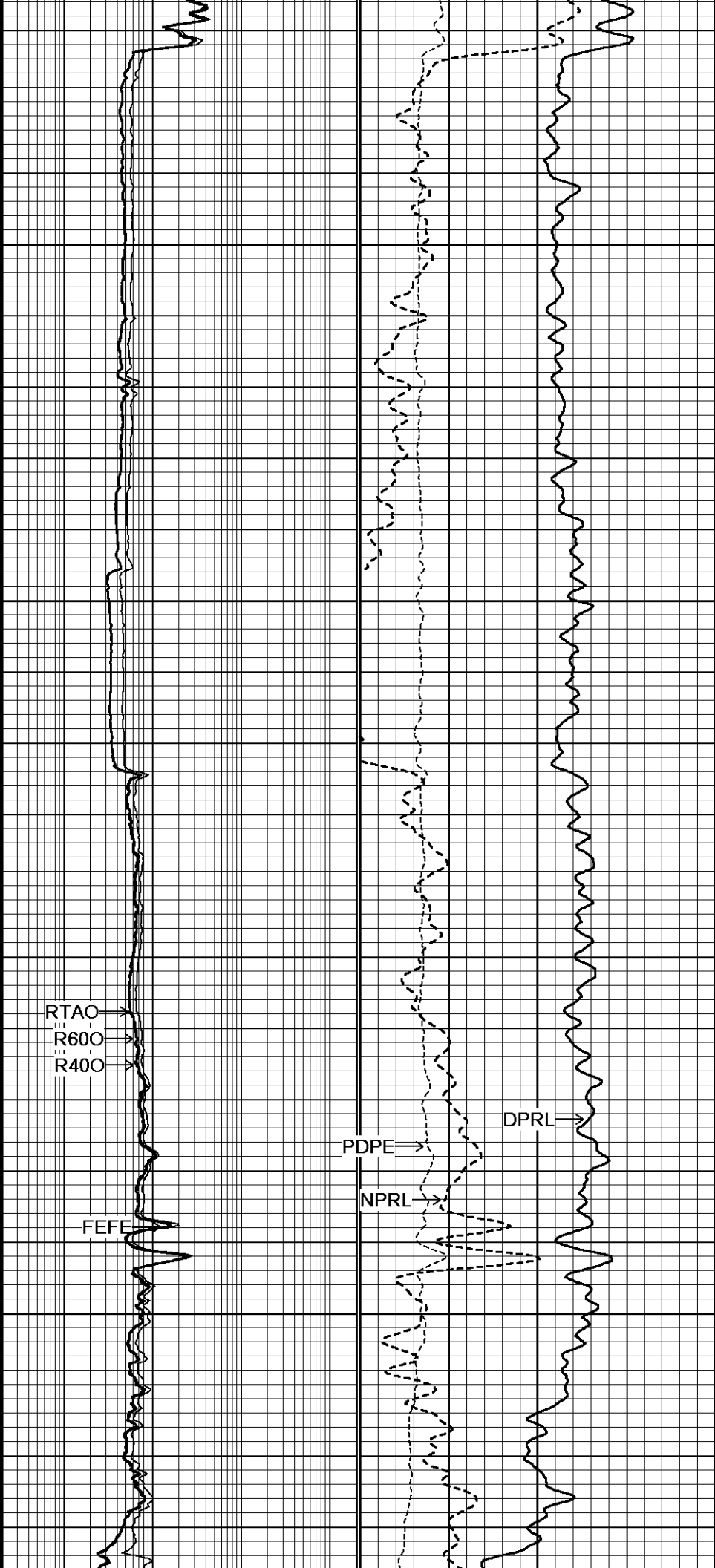
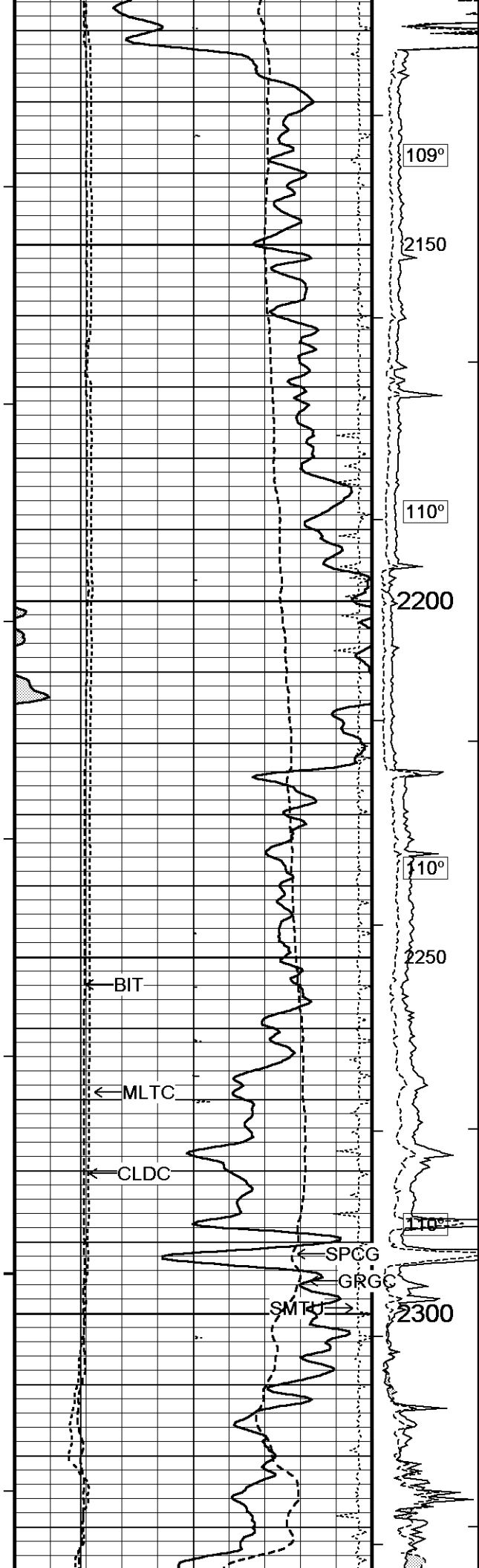


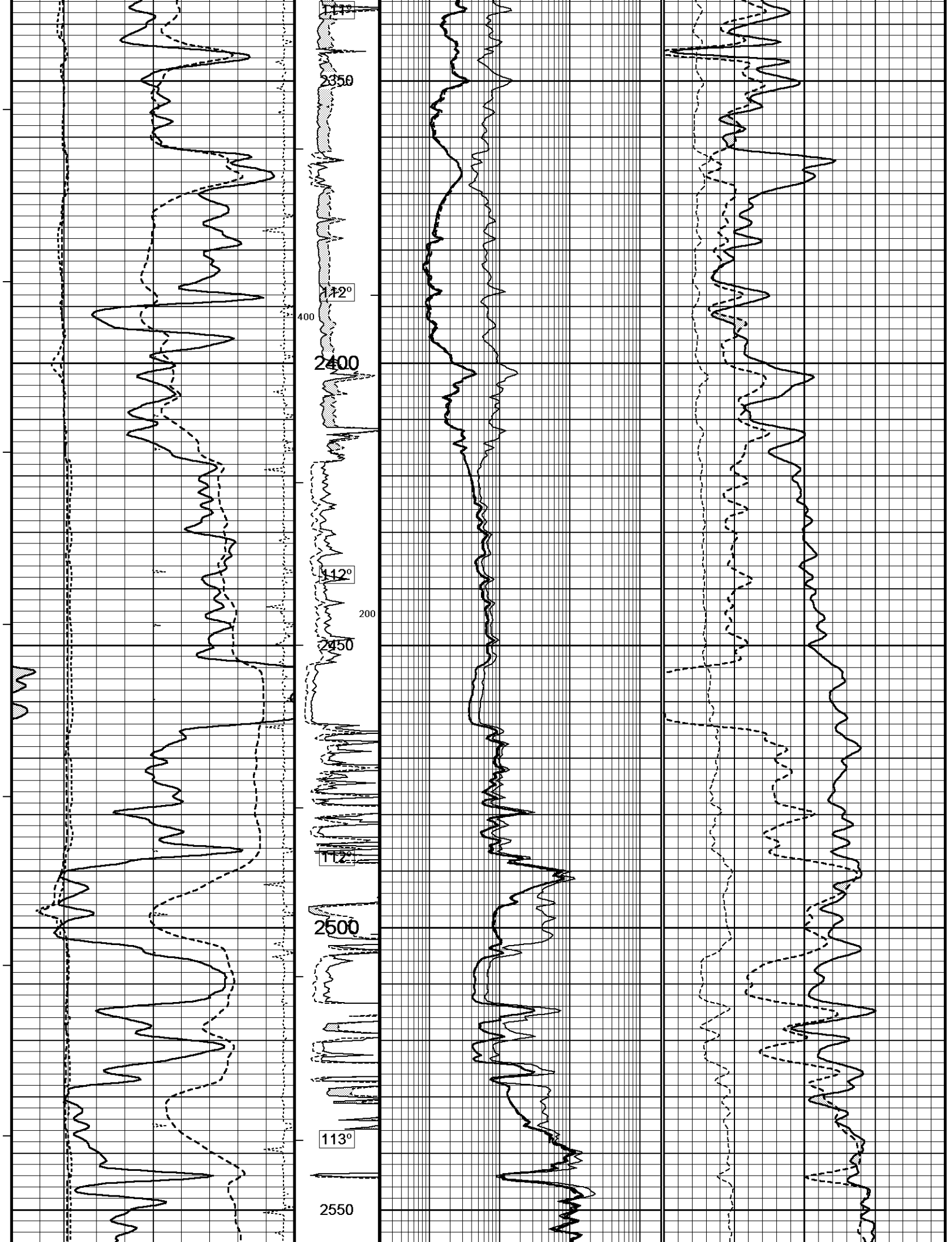


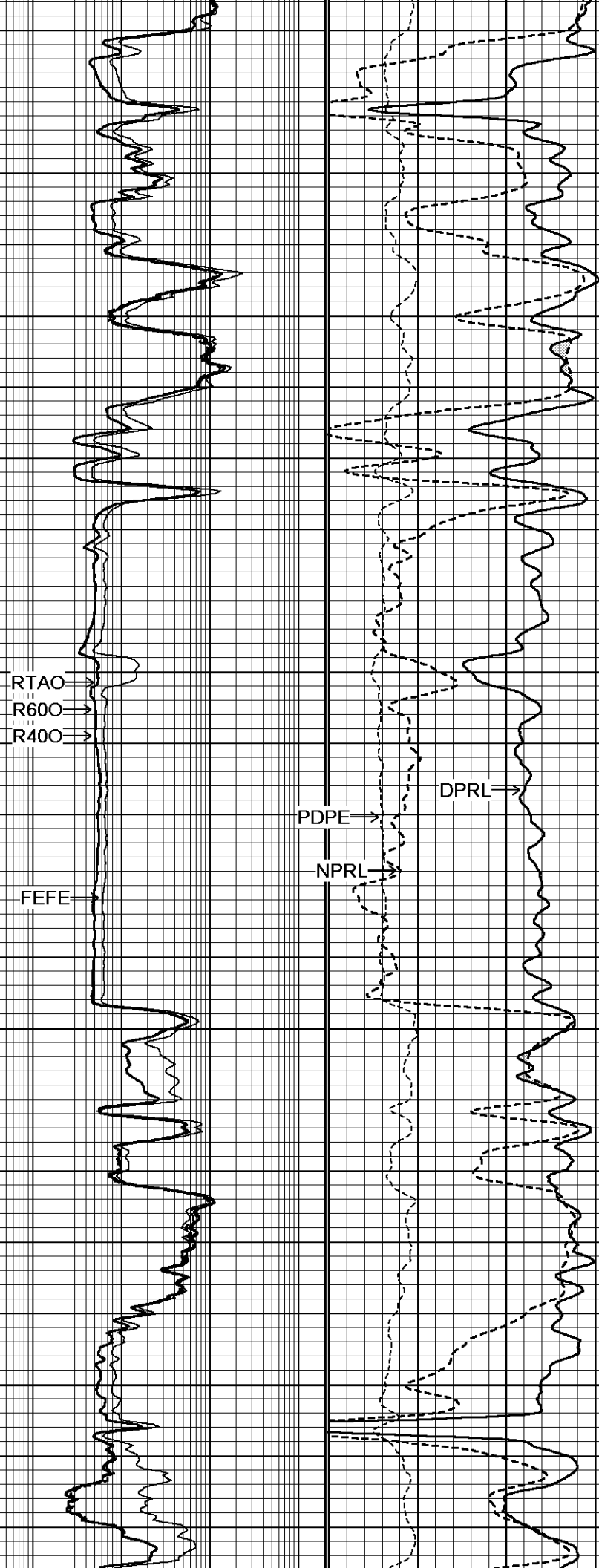
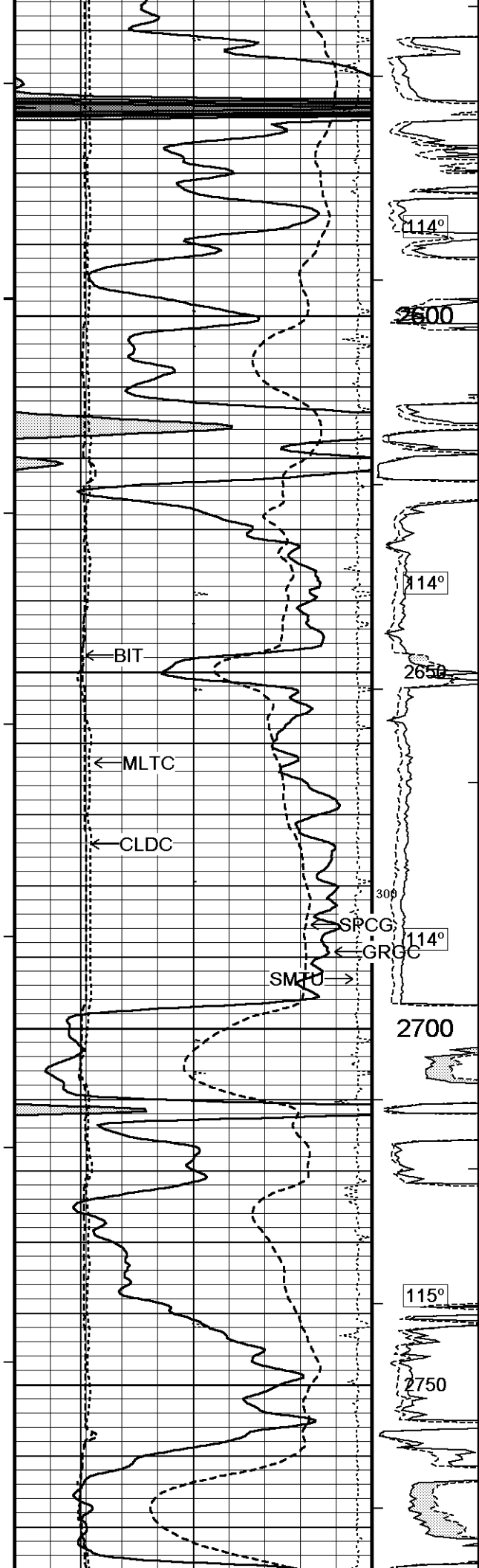


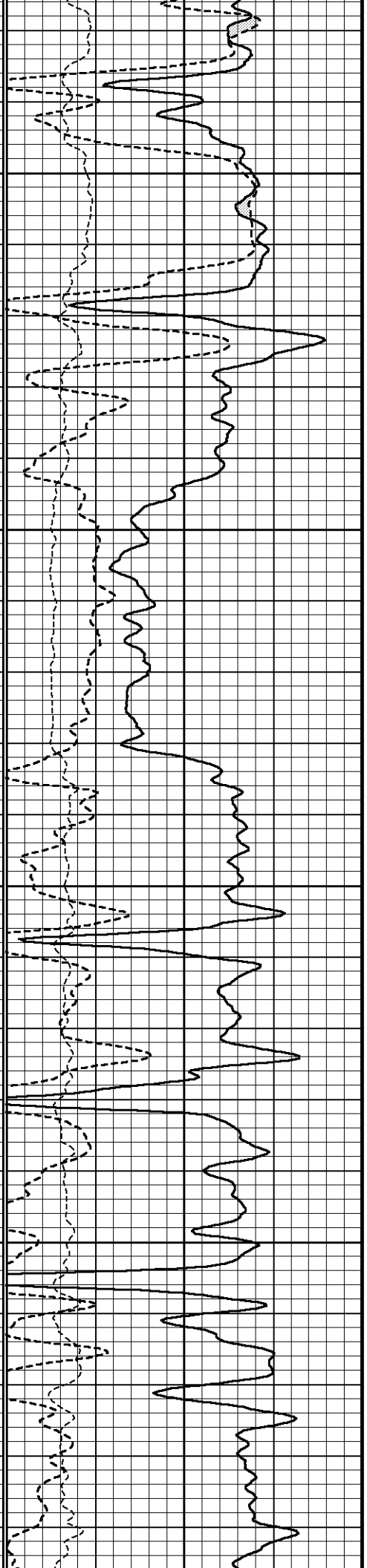
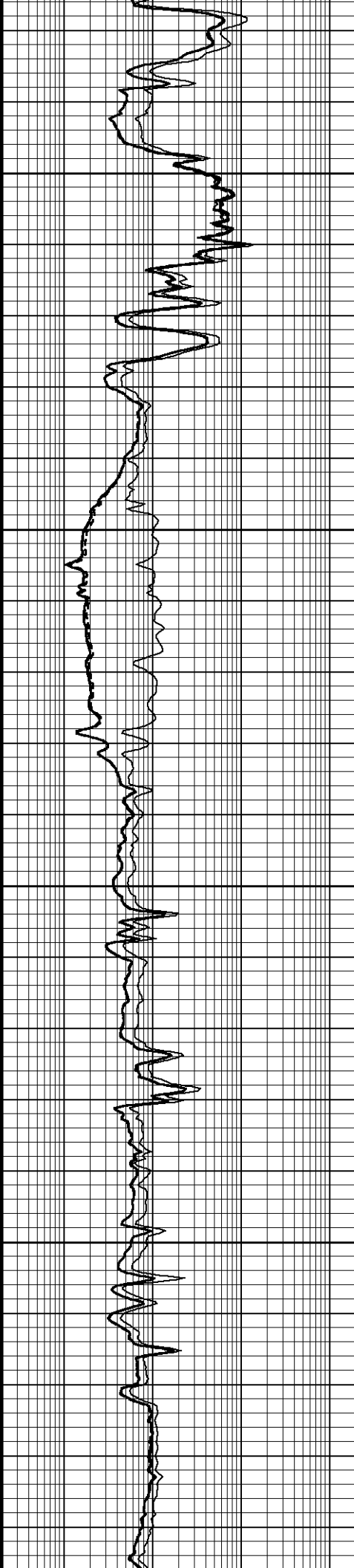
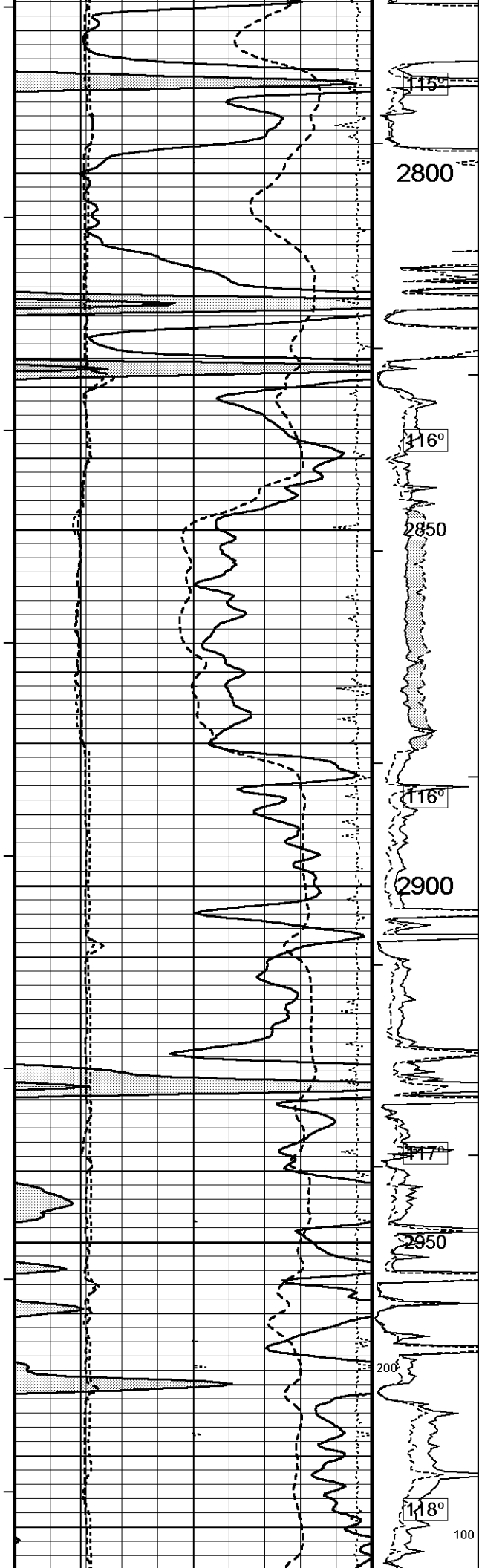


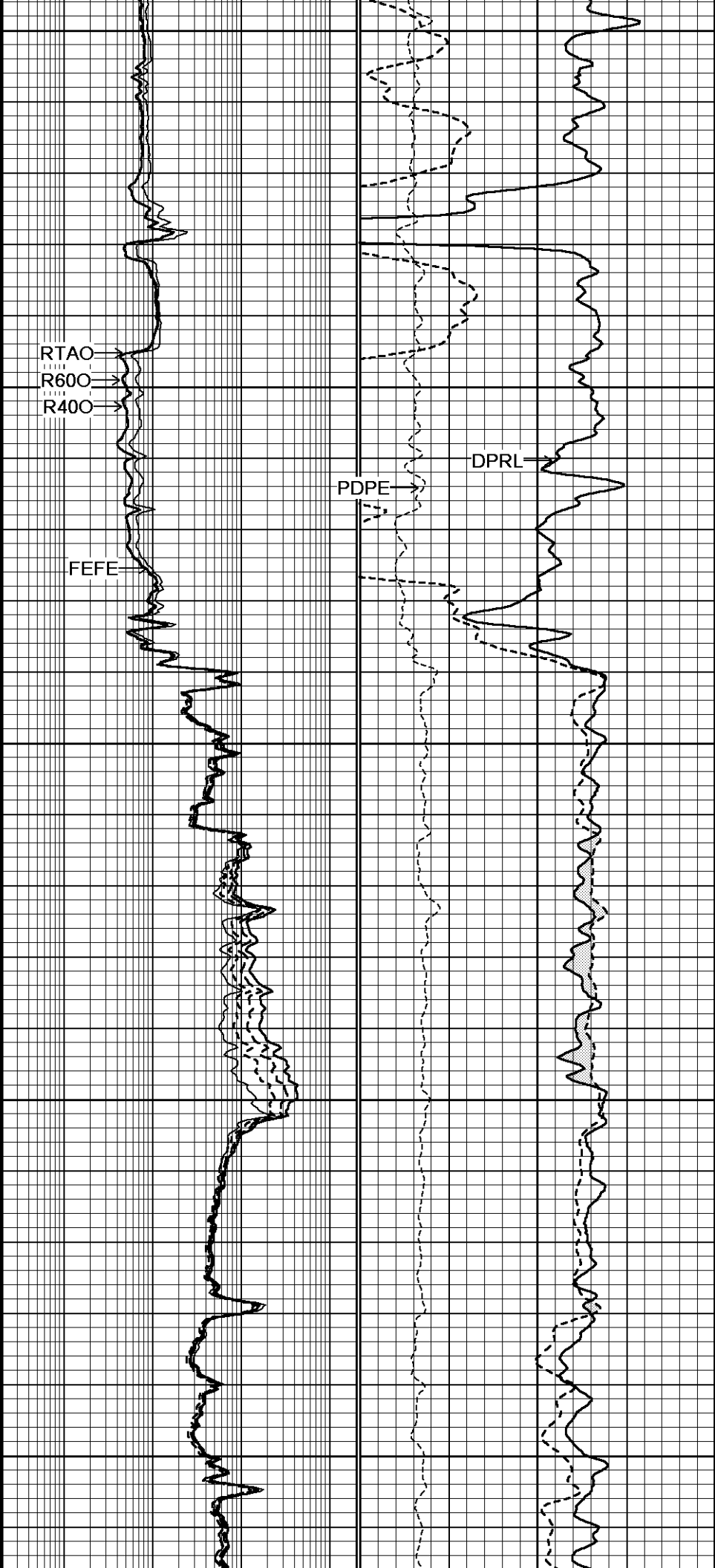
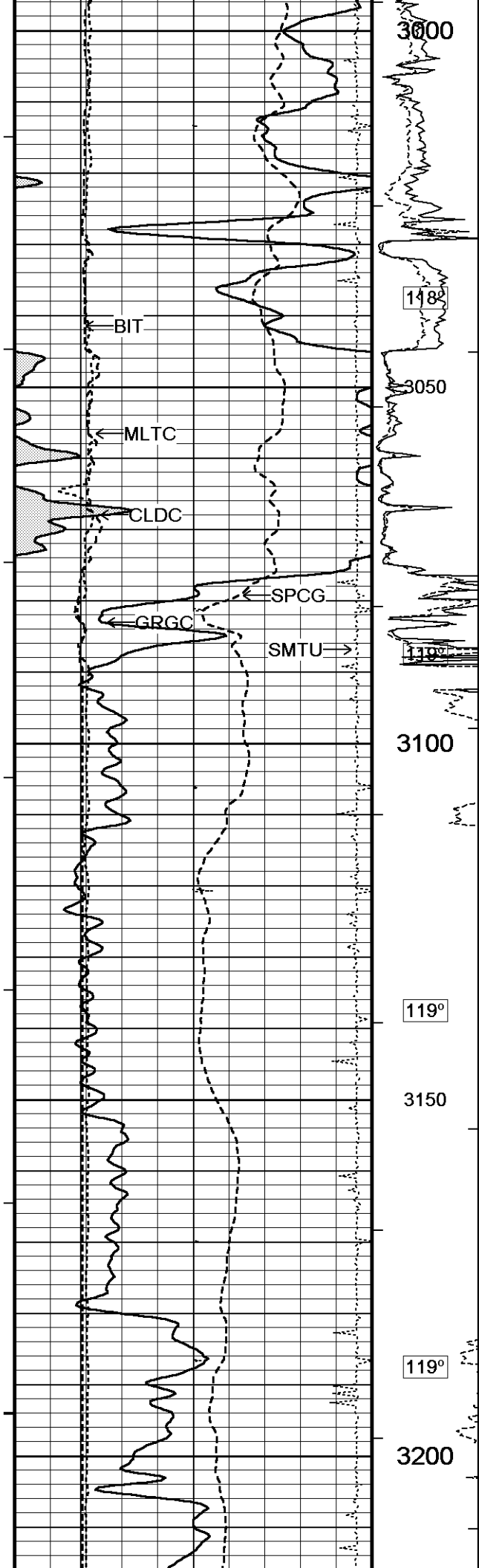


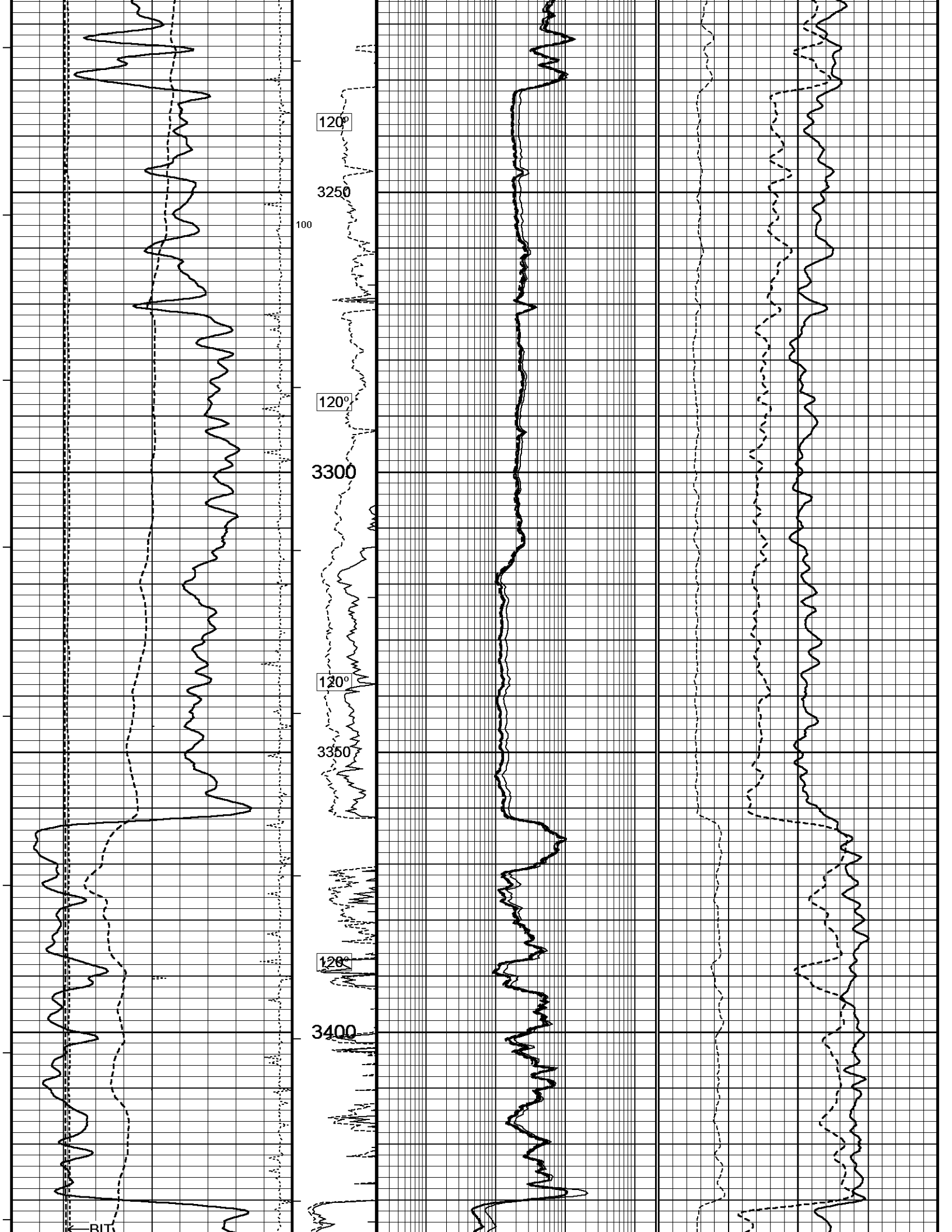


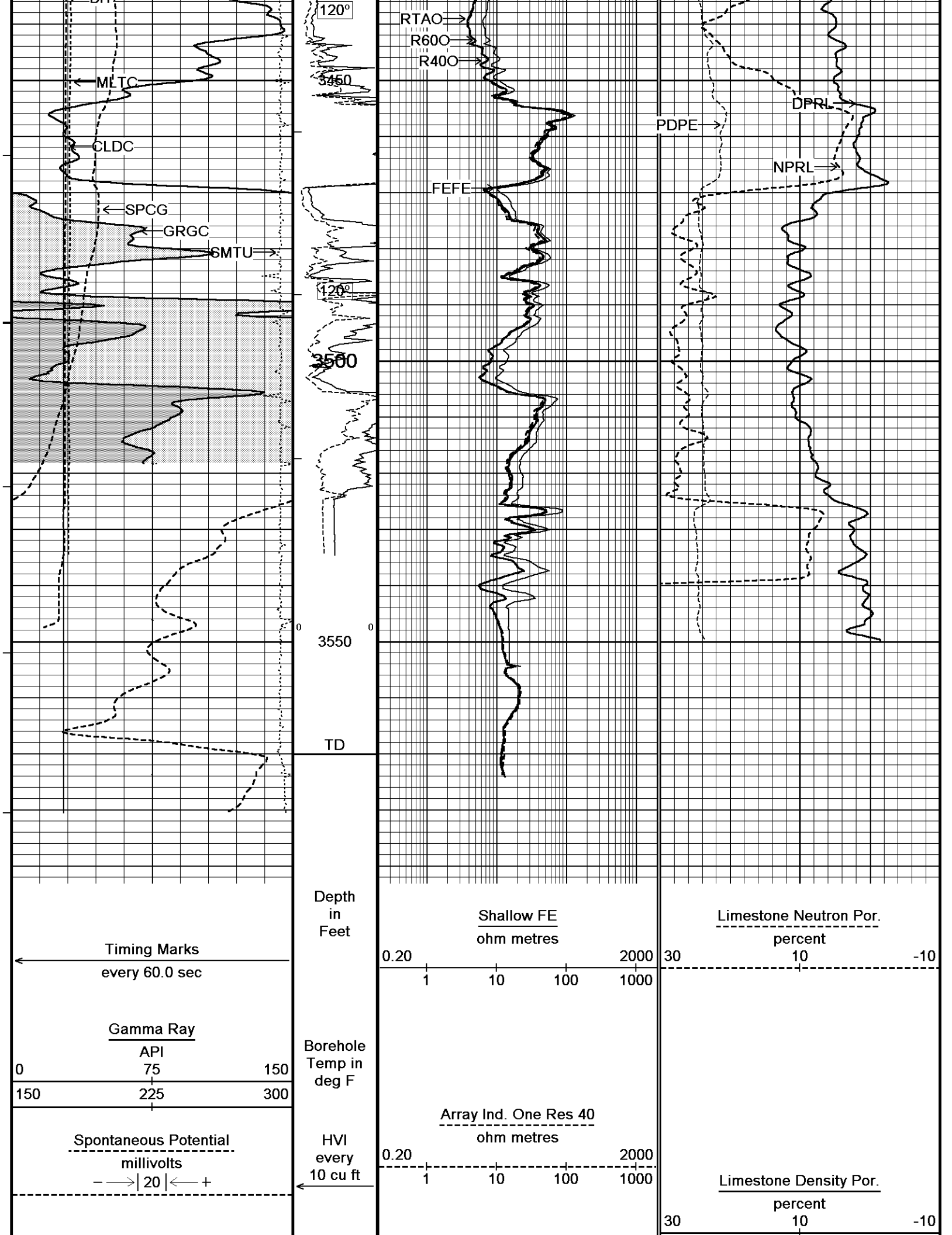


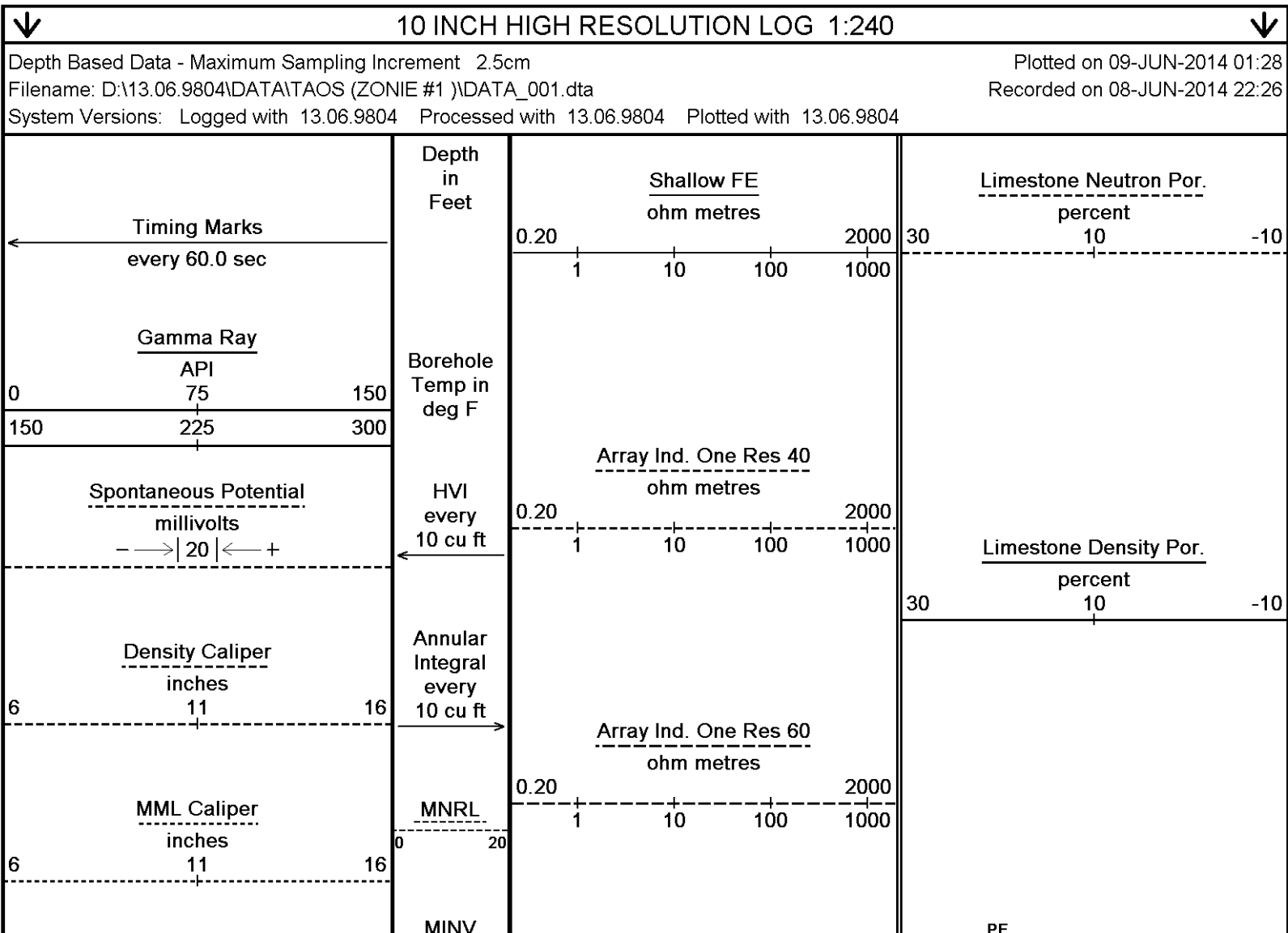
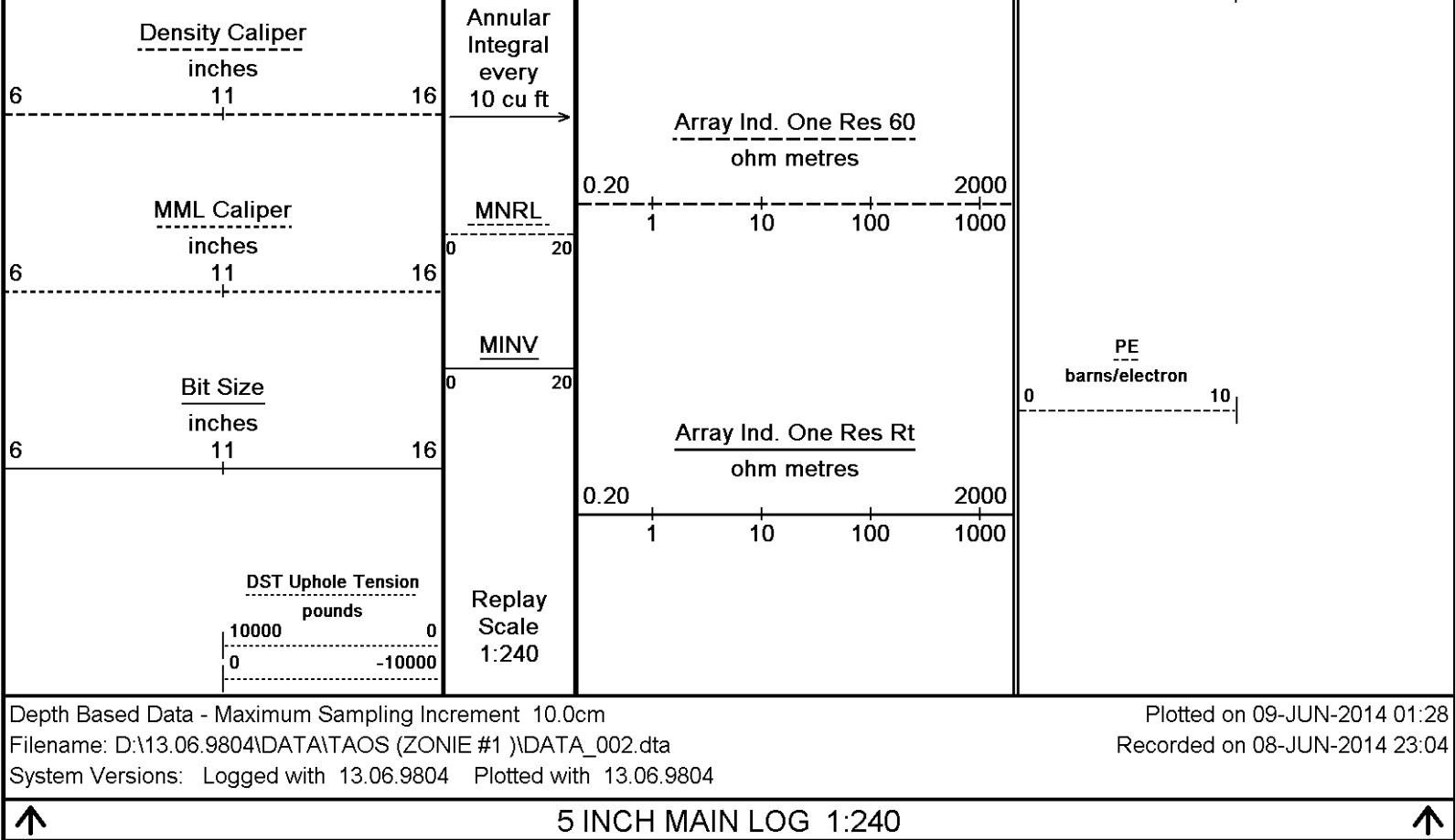












Bit Size
inches

6 11 16

DST Uphole Tension
pounds

10000 0
0 -10000

Replay
Scale
1:240

Array Ind. One Res Rt
ohm metres

0.20 2000
1 10 100 1000

barns/electron

0 10

← BIT

← ORGC

3026

3050

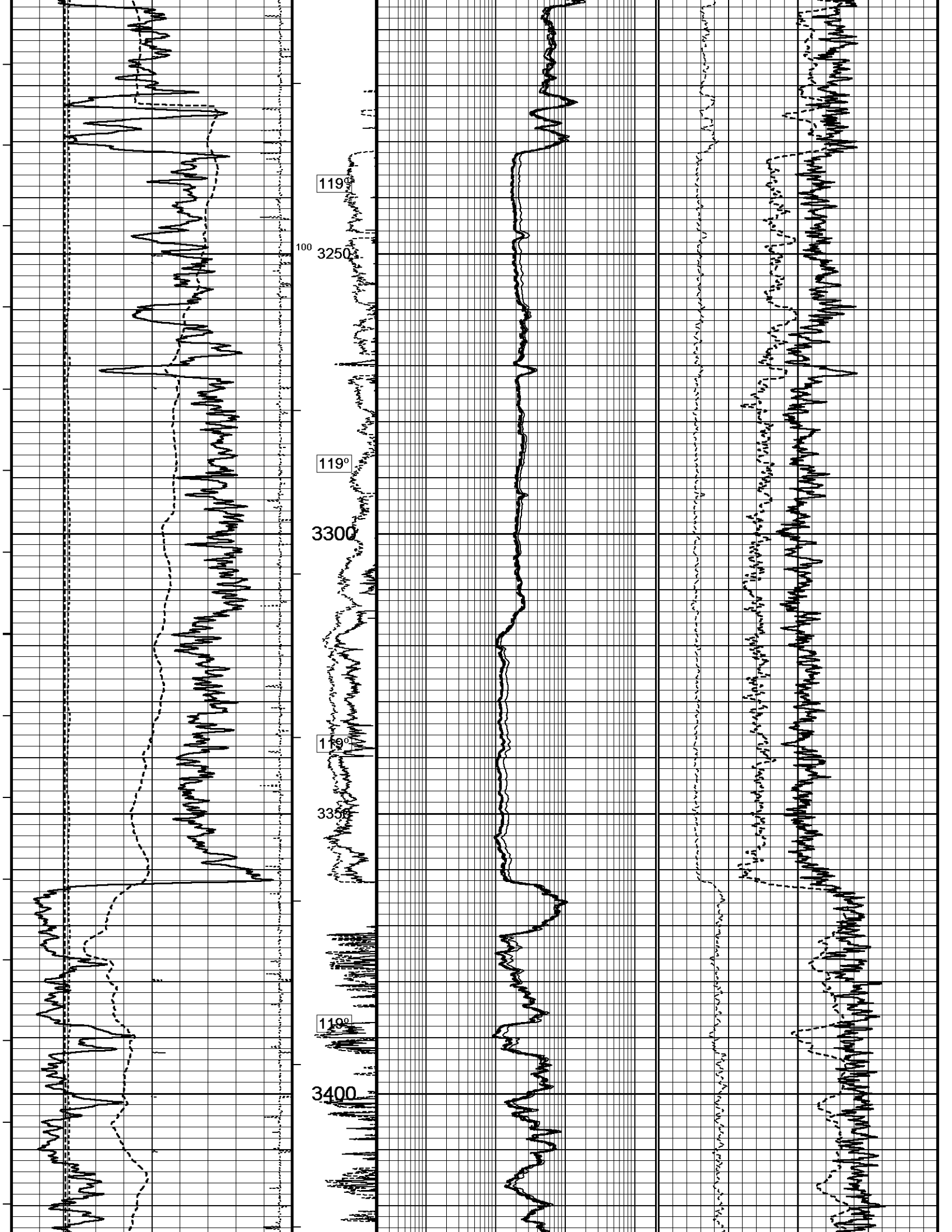
3100

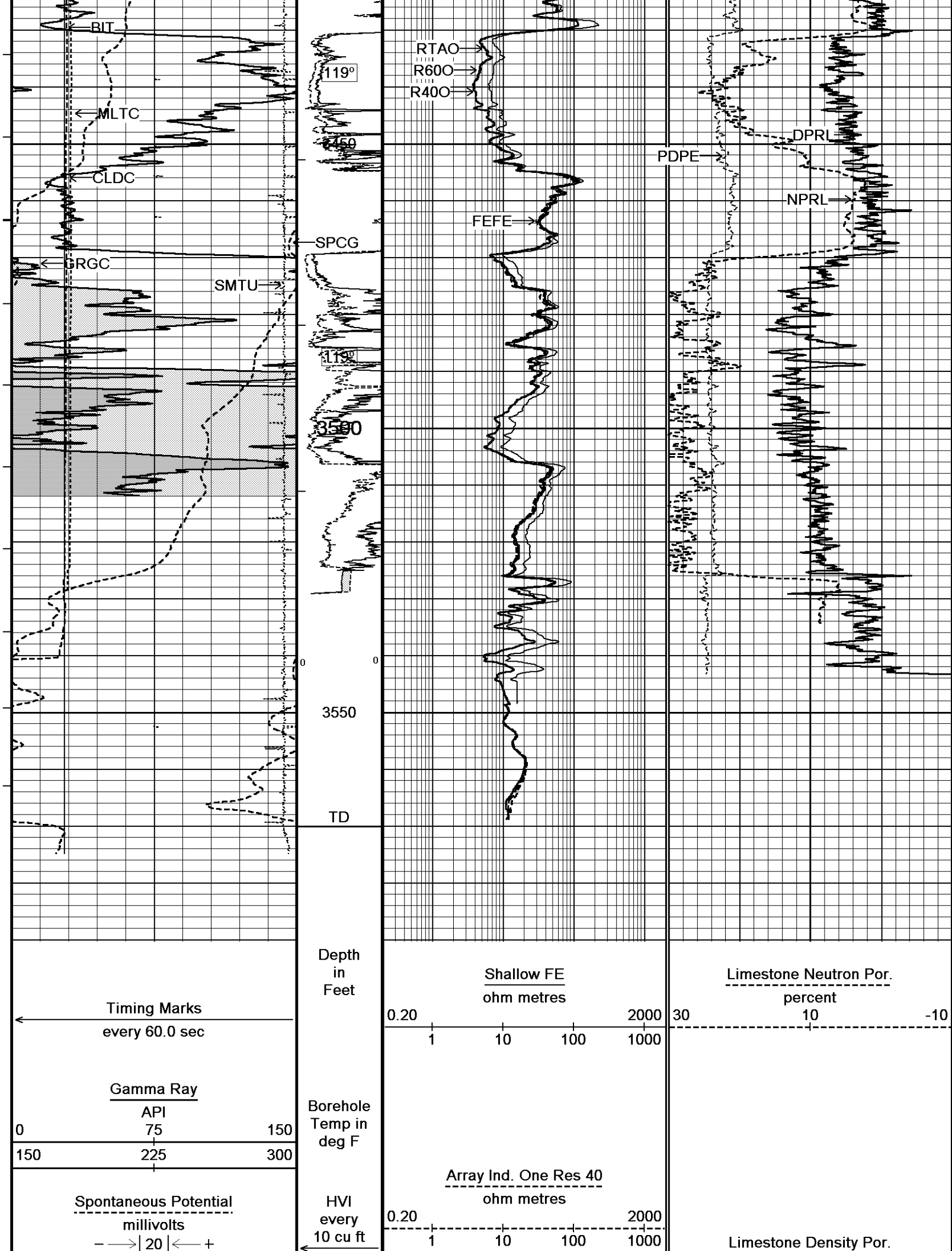
118°

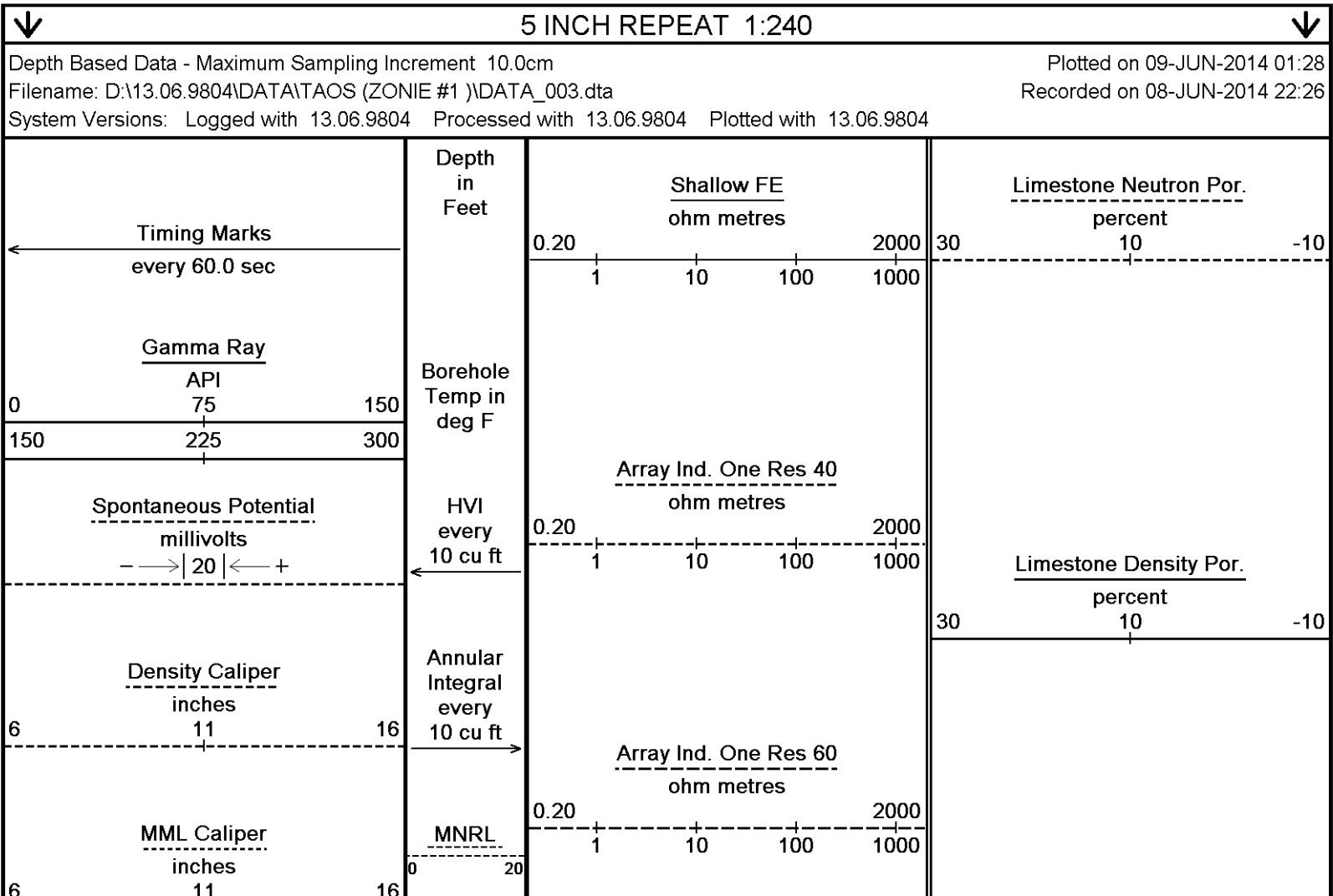
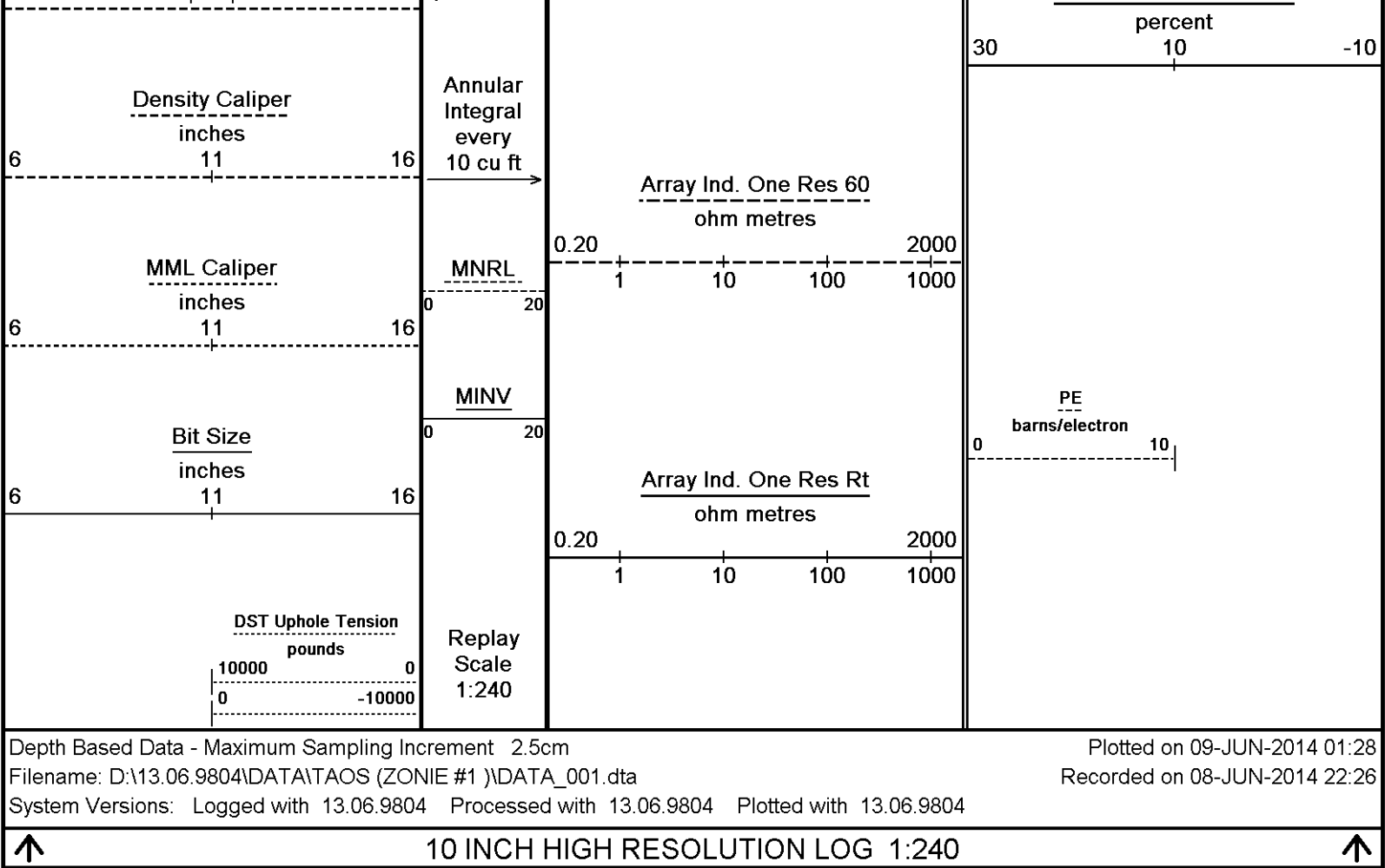
3150

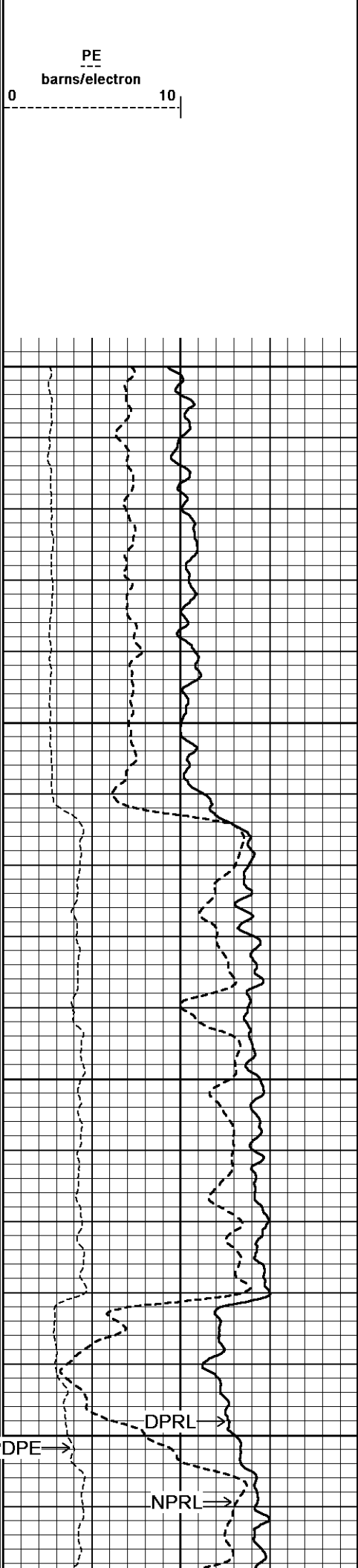
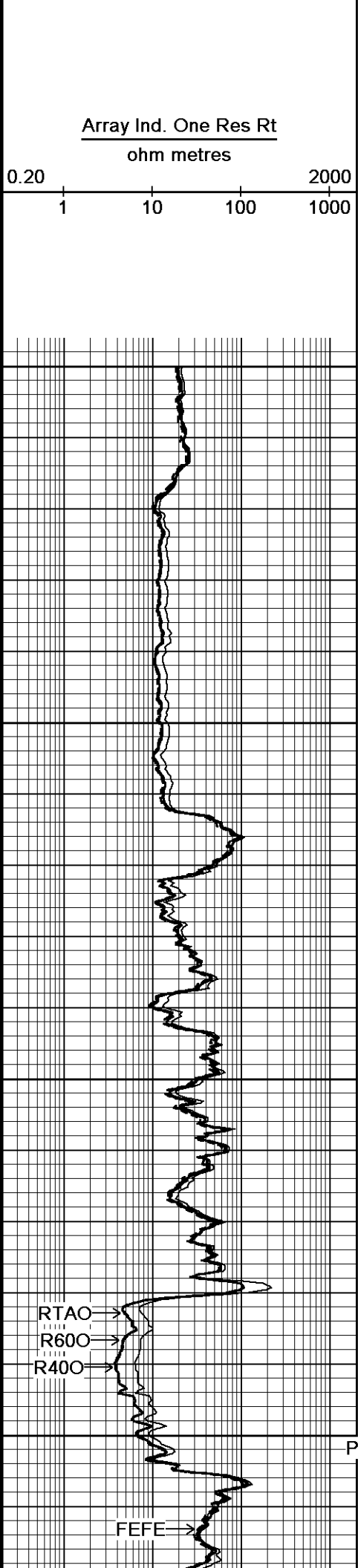
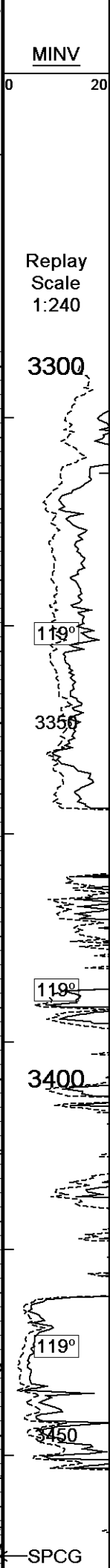
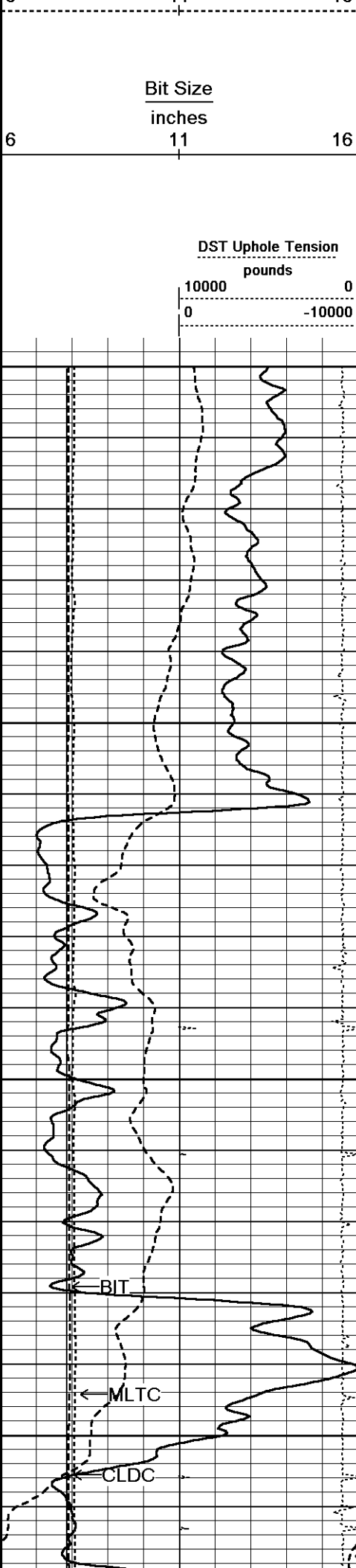
119°

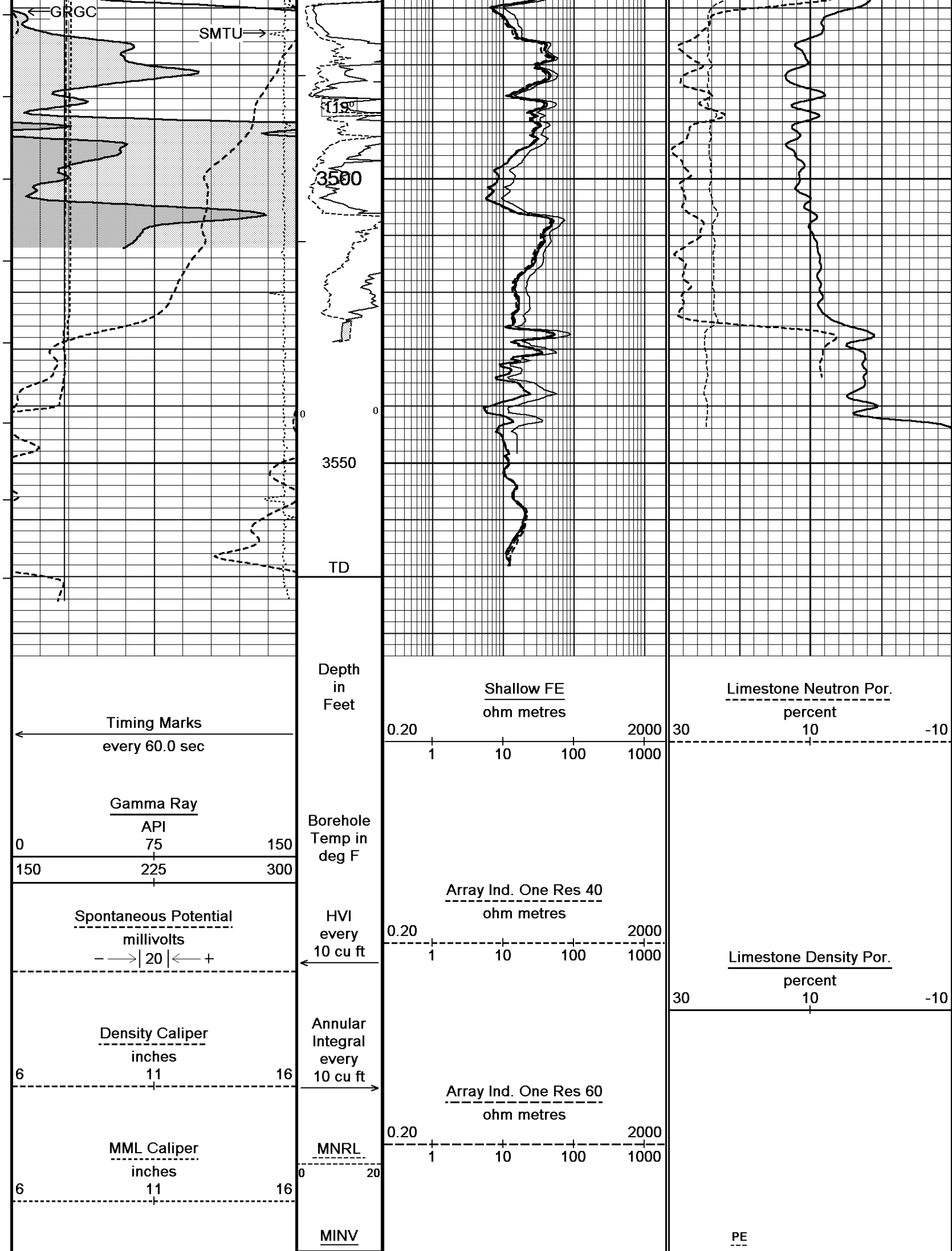
3200

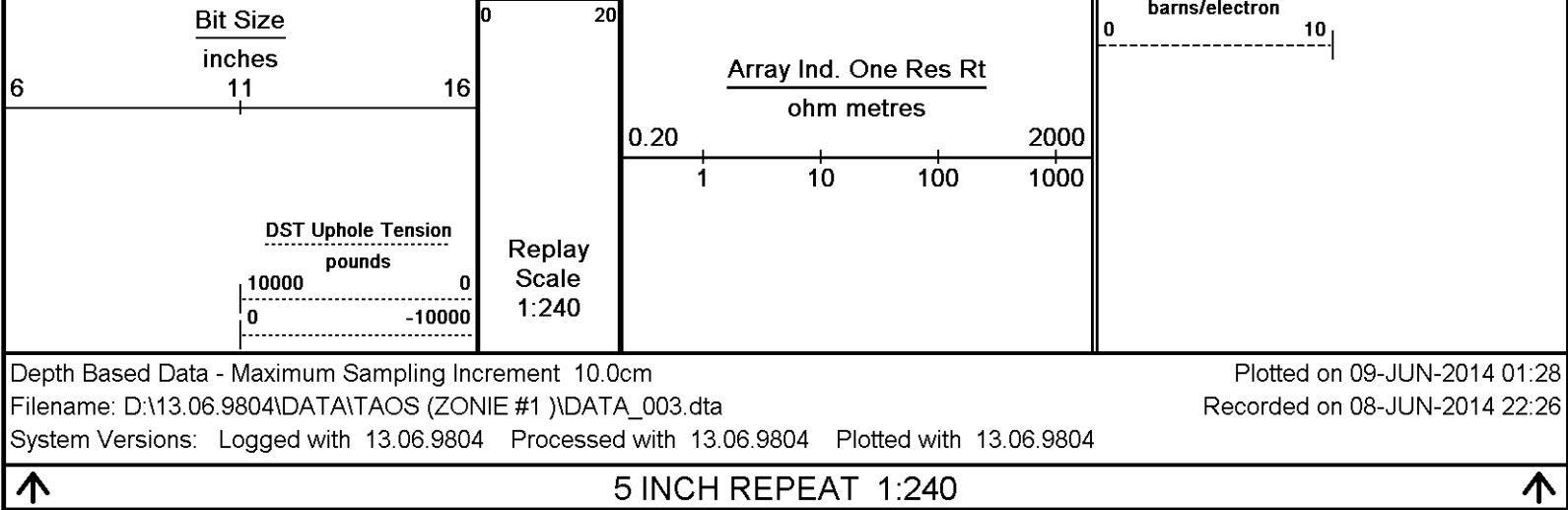












BEFORE SURVEY CALIBRATION

D:\13.06.9804\DATA\TAOS (ZONIE #1)\DATA_003.dta

General Constants All 000			Last Edited on 08-JUN-2014,21:25
General Parameters			
Mud Resistivity	1.700	ohm-metres	
Mud Resistivity Temperature	93.000	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 11-MAY-2014 05:04
Reading No	Measured	Calibrated (lbs)	
1	14333.61	0.00	
2	14375.40	302.00	

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		

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 08-JUN-2014,17:28
	Measured	Calibrated (API)	
Background	36	25	
Calibrator (Gross)	1058	721	
Calibrator (Net)	1022	696	

Gamma Calibrator Number	36	
Mud Density	1.13	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl		kppm
K Mud Type	Chloride	
K Mud Concentration	0.00	%

Micro Normal and Micro Inverse Calibration MML-A 7

Base Calibration on 12-MAR-2014 13:49

Field Check on 08-JUN-2014 17:17

Base Calibration

Channel	Measured		Calibrated (ohm-m)	
	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 08-JUN-2014,17:14

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 12-MAY-2014 09:00

Field Check on 08-JUN-2014,17:28

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3014	93	3714	110
Ratio	32.513		33.764	

Field Calibrator at Base

		Calibrated (cps)
		2359
		3502
Ratio		0.674

Field Check

		Calibrated (cps)
		2350
		3509
Ratio		0.670

Neutron Constants MDN-C.A 460

Last Edited on 08-JUN-2014,17:27

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 12-MAY-2014 09:34 Field Check on 08-JUN-2014 17:24	
Base Calibration			
	Measured	Calibrated (ohm-m)	
Reference 1	9.8	1.3	
Reference 2	967.7	126.8	
Base Check		282.4	
Field Check		282.5	

FE Constants MFE-A.A 54		Last Edited on 08-JUN-2014,17:22	
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	

Sonic Constants MSS-C.K 336		Last Edited on	
Maximum Boundary Contrast	100.00	micro-sec/ft	
Fluid Transit Time	189.00	micro-sec/ft	
Limestone Transit Time	47.50	micro-sec/ft	
Sandstone Transit Time	55.50	micro-sec/ft	
Dolomite Transit Time	43.50	micro-sec/ft	
Sonic used for Porosities	3-5' Compensated		
Correction for Sonde Skew	Applied		
Cycle Stretch Algorithm	Applied		
MN3FT	0.00	micro-sec	
MX3FT	1500.00	micro-sec	
Hunt-Raymer Constant	83.13	micro-sec/ft	
Sonde Mode	Compensated		
Hole Type	Open Hole		

Sonde Parameters

	Measured	Calibrated
Offset	0.0000	0.0000
Free Pipe	0.0000	

Peak Amplitude Source

Waveform	Start Time (micro-sec)	Width (micro-sec)	Pre Gain	Start Gain	Discriminator (mV)
3'	N/A	N/A	N/A	N/A	N/A
4'	N/A	N/A	N/A	N/A	N/A
5'	N/A	N/A	N/A	N/A	N/A
6'	N/A	N/A	N/A	N/A	N/A

Processed Fixed Gate Parameters

Waveform Used For Processing	N/A			
Start Time (micro-sec)	End Time (micro-sec)	Discriminator (mV)	Depth (m)	
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	0.00	
0.00	0.00	0.00	0.00	

Full Waveform Parameters

Use 3' Waveform to derive TR	No
------------------------------	----

Use 4' Waveform to derive TR	No		
Use 5' Waveform to derive TR	No		
Use 6' Waveform to derive TR	No		
3' Waveform Discriminator Level	0.30	mV	
4' Waveform Discriminator Level	0.30	mV	
5' Waveform Discriminator Level	0.15	mV	
6' Waveform Discriminator Level	0.15	mV	
3' Waveform Filter			
4' Waveform Filter			
5' Waveform Filter			
6' Waveform Filter			
Semblance Level	0.50		
Semblance Window Width	120.00	micro-sec	
Sonic 1 Despiker	100.00	micro-sec/ft	
Sonic 2 Despiker	100.00	micro-sec/ft	

High Resolution Temperature Calibration MAI-A.A 102			Field Calibration on 09-APR-2014,22:06
	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 09-APR-2014,22:16
Pre-filter Length	11	

Induction Calibration MAI-A.A 102				Base Calibration on 18-MAR-2014,09:37	
				Field Check on 08-JUN-2014 17:27	
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			12.3	3810.2	
2			30.1	3604.5	
3			28.5	3132.2	
4			16.1	2100.6	
Deep			14.5	2019.3	
Medium			45.1	4178.8	
Shallow			48.7	5350.8	
Array Temperature			80.0	Deg F	

Induction Constants MAI-A.A 102			Last Edited on 08-JUN-2014,17:25
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.	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 11-MAY-2014 00:45
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)	
	7.89	7.97	

Photo Density Calibration MPD-A.A 11

Base Calibration on 21-APR-2014 10:27
Field Check on 08-JUN-2014 17:22

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					
		1151.5	1244.1		
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					
		210.2	1029.9		

Density Constants MPD-A.A 11			Last Edited on 08-JUN-2014,21:22		
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	1.13	gm/cc			
Mud Density Z/A Multiplier	1.11				
Mud Filtrate Density	1.02				

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 131

Base Calibration on 11-SEP-2013 10:27

Field Calibration on 11-SEP-2013 10:00

Base Calibration

Potassium Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	77.6	27.1	3.1	0.9	1.5
Calibrator (Gross)	202.6	110.6	26.3	0.8	1.4
Calibrator (Net)	125.0	83.5	23.2	-0.1	-0.0

	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	77.6	27.1	3.1	0.9	1.5
Calibrator (Gross)	526.2	185.8	15.9	10.3	4.7
Calibrator (Net)	448.5	158.7	12.8	9.3	3.2

	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	77.6	27.1	3.1	0.9	1.5
Calibrator (Gross)	394.6	144.2	11.6	6.3	15.8
Calibrator (Net)	316.9	117.1	8.5	5.4	14.4

	K %	U ppm	Th ppm
Concentrations	0.0	0.0	44.3

Mixture Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	77.6	27.1	3.1	0.9	1.5
Calibrator (Gross)	937.8	380.4	48.6	15.2	18.3
Calibrator (Net)	860.2	353.3	45.5	14.3	16.9

Field Calibration

Gamma Ray

	Measured	Calibrated (API)
Background	115	22
Calibrator (Gross)	1406	272
Calibrator (Net)	1290	250

Mixture Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	77.6	27.1	3.1	0.9	1.5
Calibrator (Gross)	937.8	380.4	48.6	15.2	18.3
Calibrator (Net)	860.2	353.3	45.5	14.3	16.9

Spectral Gamma Constants SGS-E.J 131

Last Edited on 08-JUN-2014,21:22

Background Calibrator Number	496
Mixture Calibrator Number	525
Potassium Calibrator Number	499
Uranium Calibrator Number	505
Thorium Calibrator Number	502

Mud Density	1.13	gm/cc
Caliper Source for Processing	Bit Size	
Tool Position	Centred	
Concentration of KCl		kppm
K Mud Type	Chloride	
K Mud Concentration	0.00	%

DOWNHOLE EQUIPMENT

D:\13.06.9804\DATA\TAOS (ZONIE #1)\DATA_003.dta

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

Spectral Gamma Ray Sub
SGS-E.J 131 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

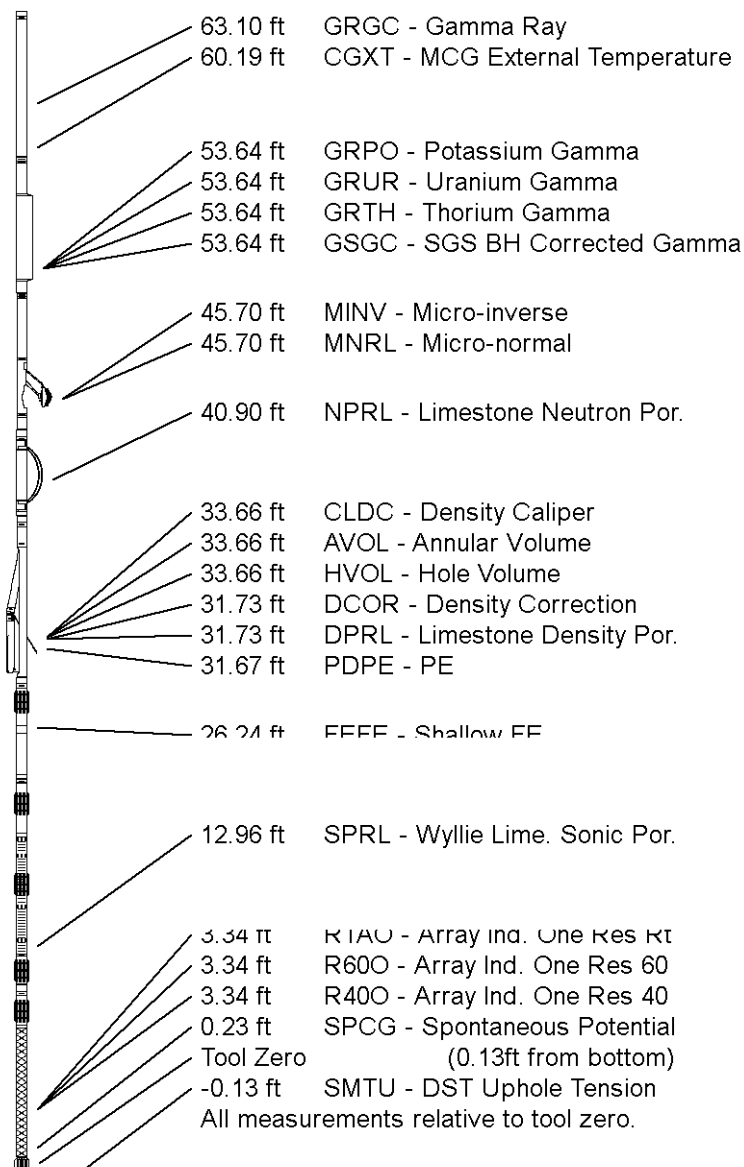
Compact Density/Caliper
MPD-A.A 11 LG: 9.53 ft WT: 90.4 lb OD: 2.45 in

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

Compact Sonic
MSS-C.K 336 LG: 12.52 ft WT: 72.8 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: 68.39 ft Weight: 562.2 lb



COMPANY

TAOS RESOURCES OPERATING COMPANY

WELL

ZONIE #1

FIELD

MADDIX NORTH

PROVINCE/COUNTY

COWLEY

COUNTRY/STATE

U.S.A / KANSAS

Elevation Kelly Bushing 1295.00 feet

Elevation Drill Floor 1294.00 feet

Elevation Ground Level 1285.00 feet

First Reading 3567.00 feet

Depth Driller 3574.00 feet

Depth Logger 3570.00 feet



COMPOSITE

