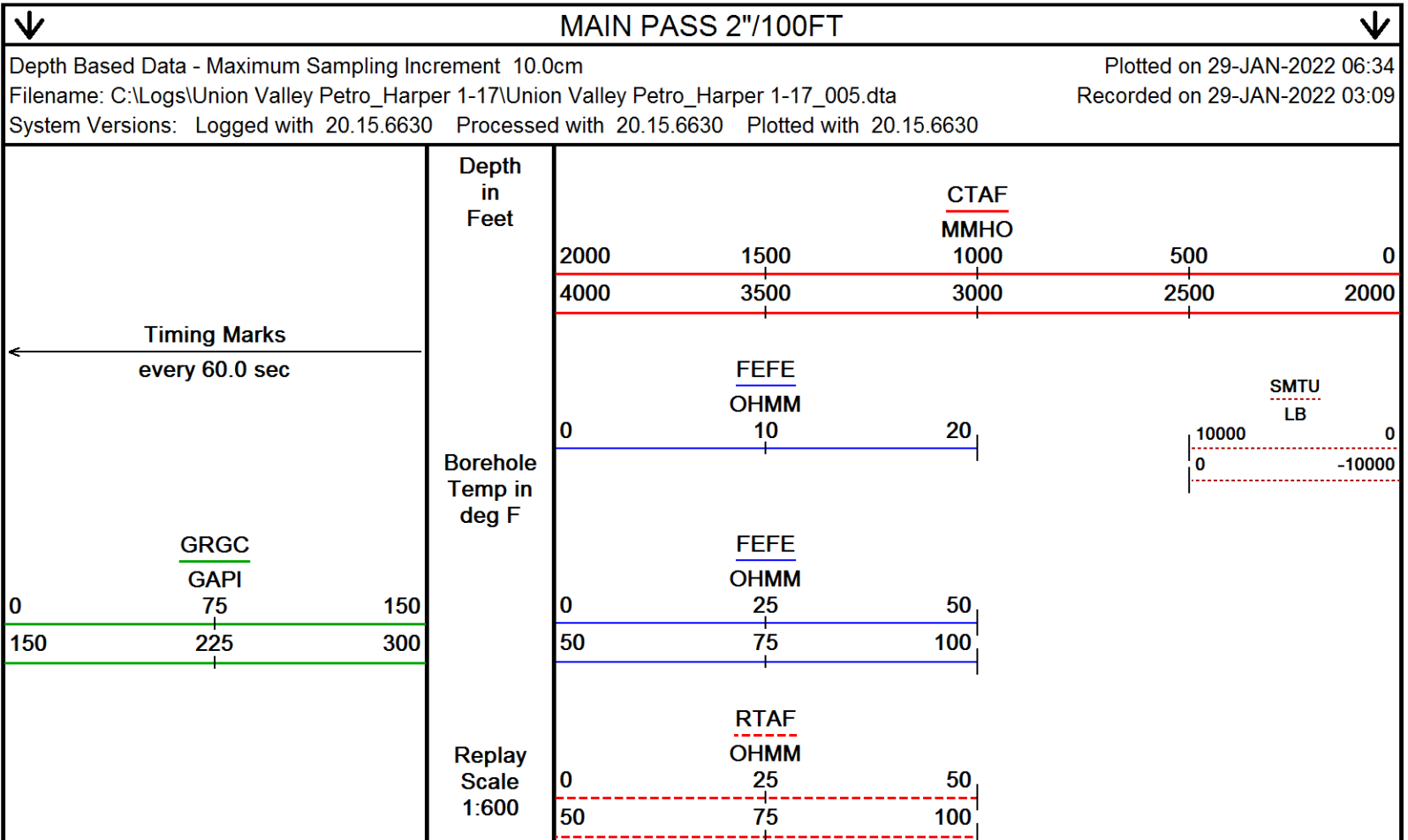


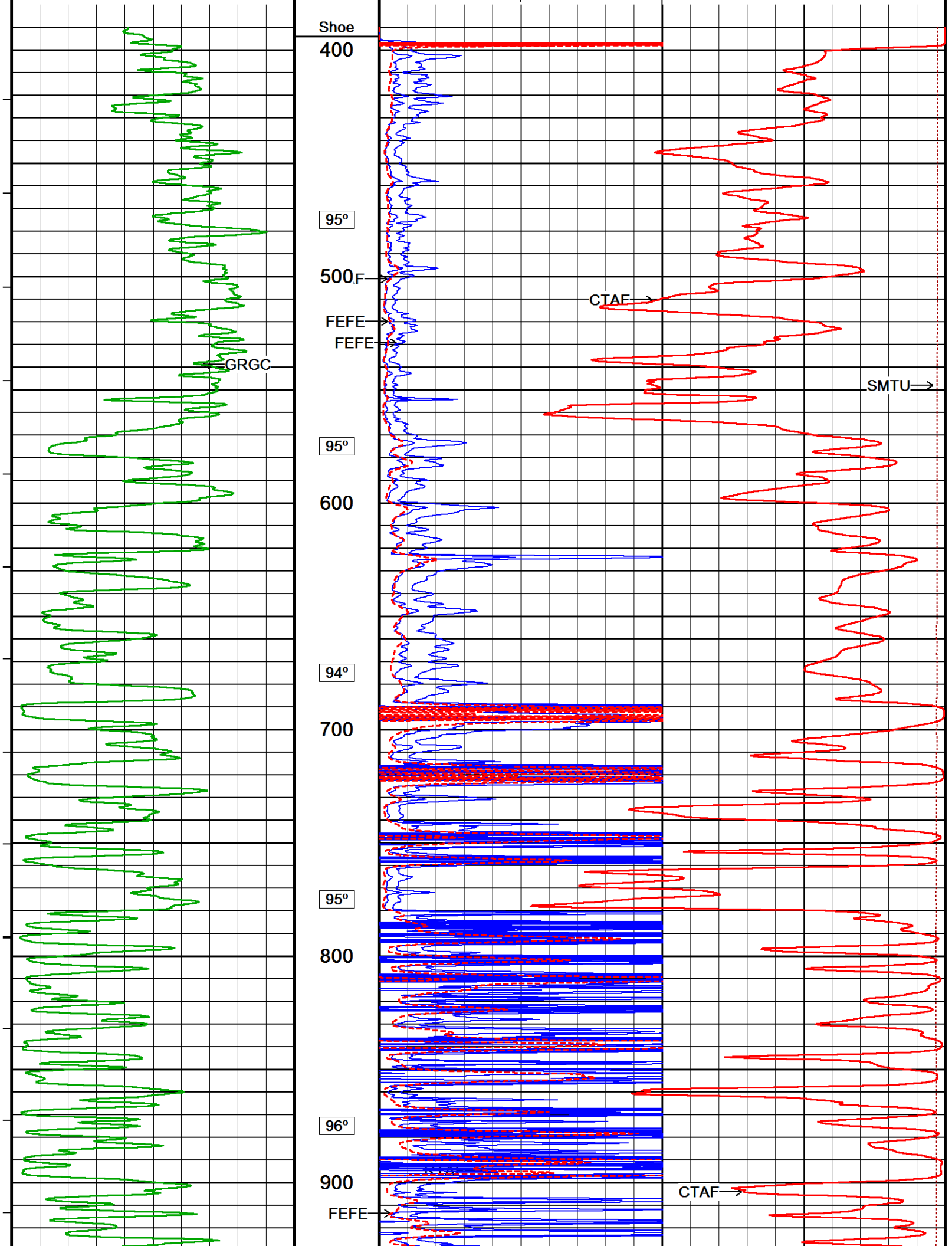
				ARRAY INDUCTION GAMMA RAY				
COMPANY WELL FIELD COUNTY STATE LOCATION				UNION VALLEY PETROLEUM CORP. HARPER 1-17 CALDWELL SUMNER KANSAS 353' FSL & 336' FWL SW/SW				
SEC 17	TWP 35S	RGE 3W	Other Services					
Latitude		Longitude						
API Number		35-191-22839						
Permanent Datum GROUND LEVEL, Elevation 1141 feet				Elevations:				
Log Measured From KB, 13.00 feet above Permanent Datum				KB 1154.00				
Drilling Measured From KB				DF 1153.00				
				GL 1141.00				
Date	29-JAN-2022							
Run Number	ONE							
Service Order	S406-220128-122							
Depth Driller	4975.00			feet				
Depth Logger	4978.00			feet				
First Reading	4977.00			feet				
Last Reading	394.00			feet				
Casing Driller	394.00			feet				
Casing Logger	394.00			feet				
Bit Size	7.875			inches				
Hole Fluid Type	GEL/CHEM							
Density / Viscosity	9.10 lb/USg		52.00 sec/qt					
PH / Fluid Loss	9.50		8.80 ml/30Min					
Sample Source	FLOWLINE							
Rm @ Measured Temp	1.34 @ 65.0		ohm-m					
Rmf @ Measured Temp	0.97 @ 65.0		ohm-m					
Rmc @ Measured Temp	1.63 @ 65.0		ohm-m					
Source Rmf / Rmc	CALC		CALC					
Rm @ BHT	0.69 @125.0		ohm-m					
Time Since Circulation	5 HOURS							
Max Recorded Temp	125.00		deg F					
Equipment / Base	406		ALVAR					
Recorded By	JOHN WELLS							
Witnessed By	DUSTIN JOHNSON							
RIG	DUKE #7							

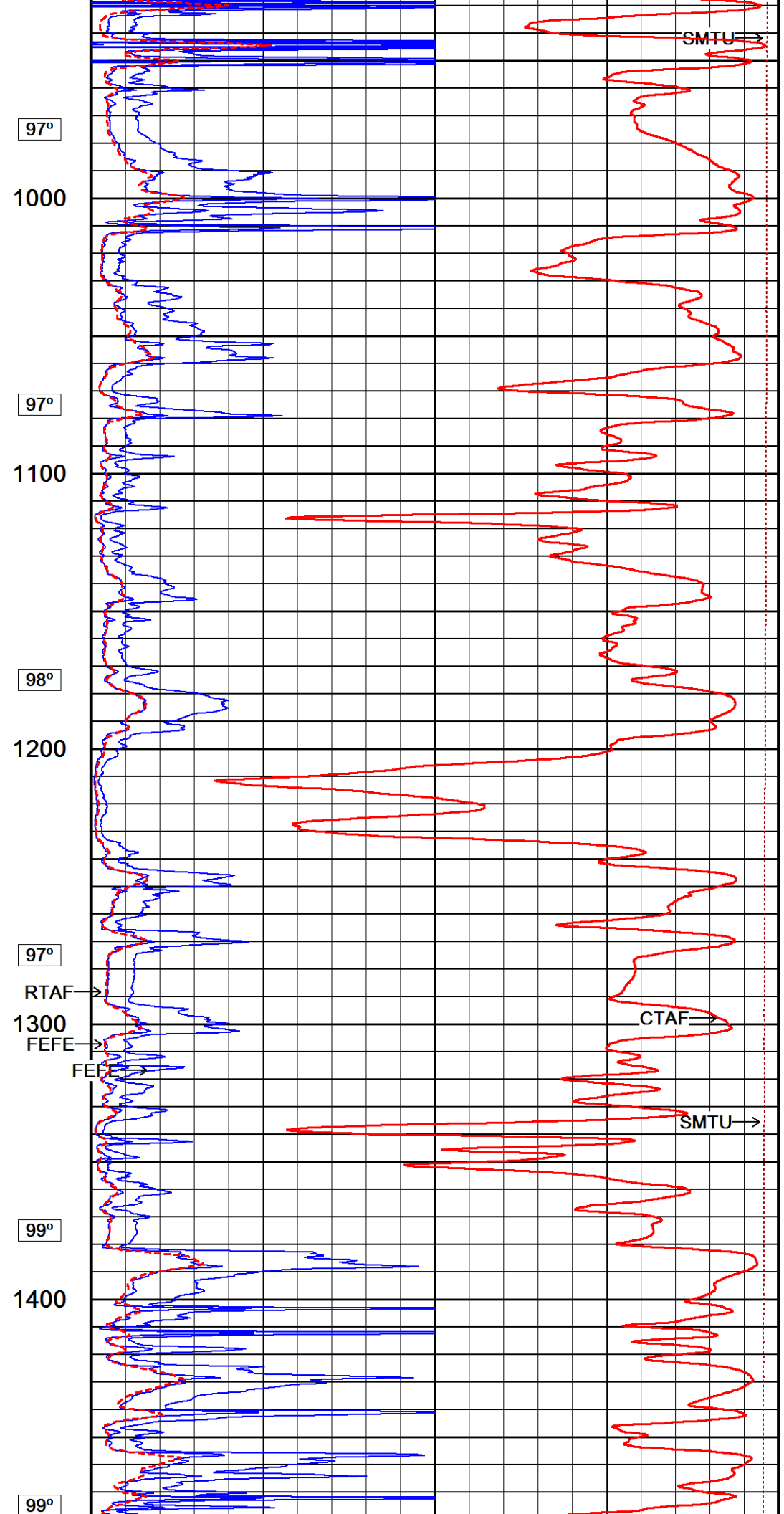
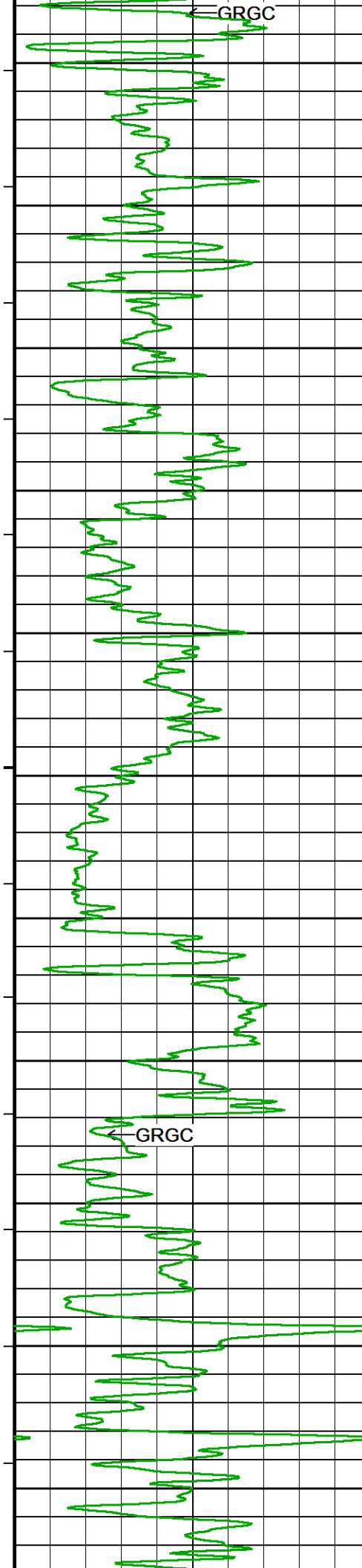
REMARKS
-No SP Presented Due to Electrial Interference. -Logging Software Version 21.15 -Tools Ran:CBH, MTA, SHA, MCG, MML, MDN, MPD, SKJ, MSS, MFE, MAI -Hardware: MDN: Dual Bowspring MAI: 0.5 Inch Standoff Holefinder -2.71 Limestone Matrix Used for Calculating Porosity -Borehole Size and Rugosity Can Affect Log Quality -Scales and Intervals Presented as Per Customer's Request -Hole Volumes Calculated From TD to Surface Casing Shoe Using X.X Production Casing Hole Volume: 1810 Cubic Ft. Annular Volume: 1060 Cubic Ft. -Recon Petrotechnolgy Thanks You for Opportunity to Log This Well. -Any Questions or Comments, Please Call: 1-682-628-4841

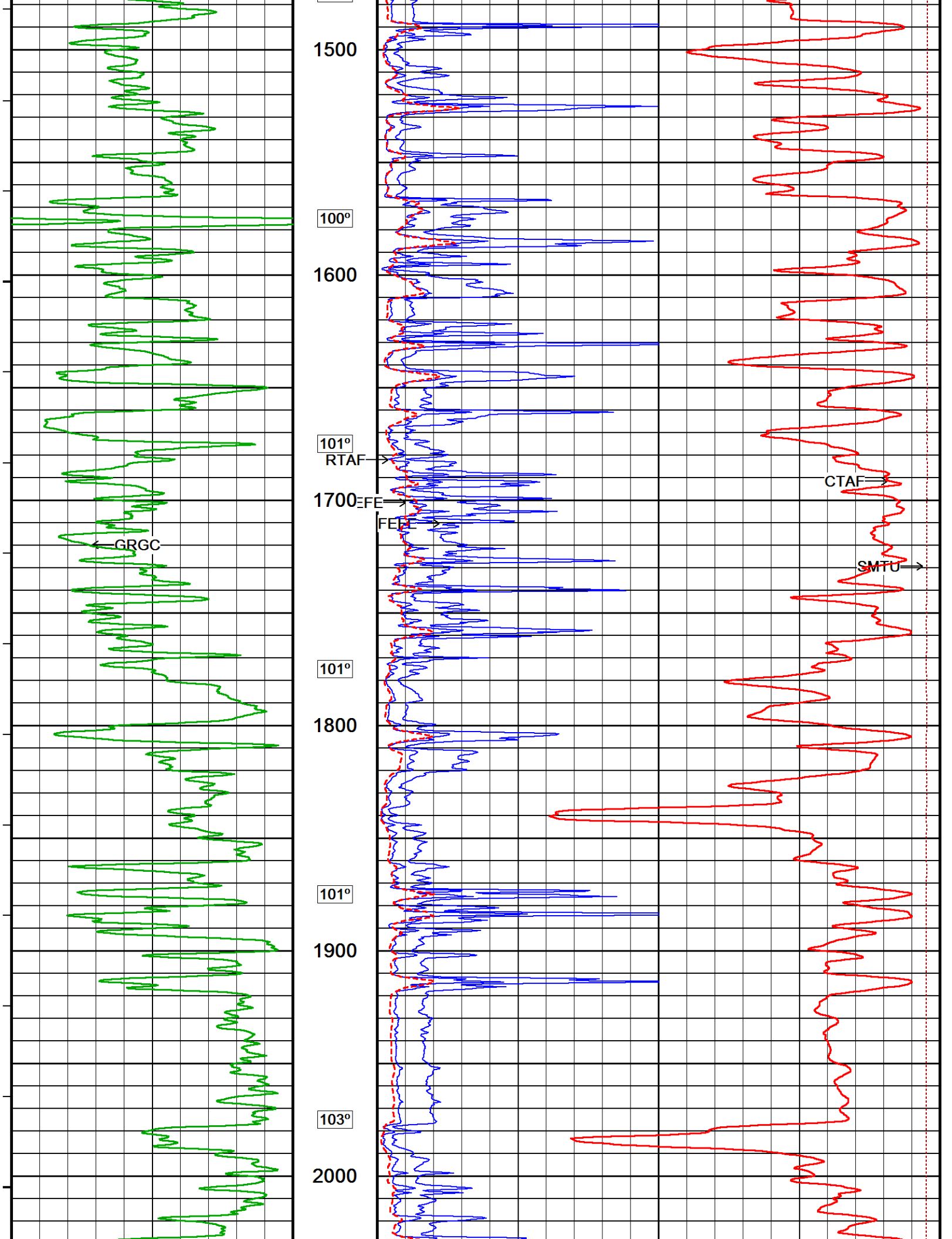
BOREHOLE RECORD					Last Edited: 29-JAN-2022 00:05
Bit Size inches		Depth From feet		Depth To feet	
12.250		0.00		394.00	
7.875		394.00		4975.00	
CASING RECORD					
Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft	
Surface	8.625	0.00	394.00	24.00	

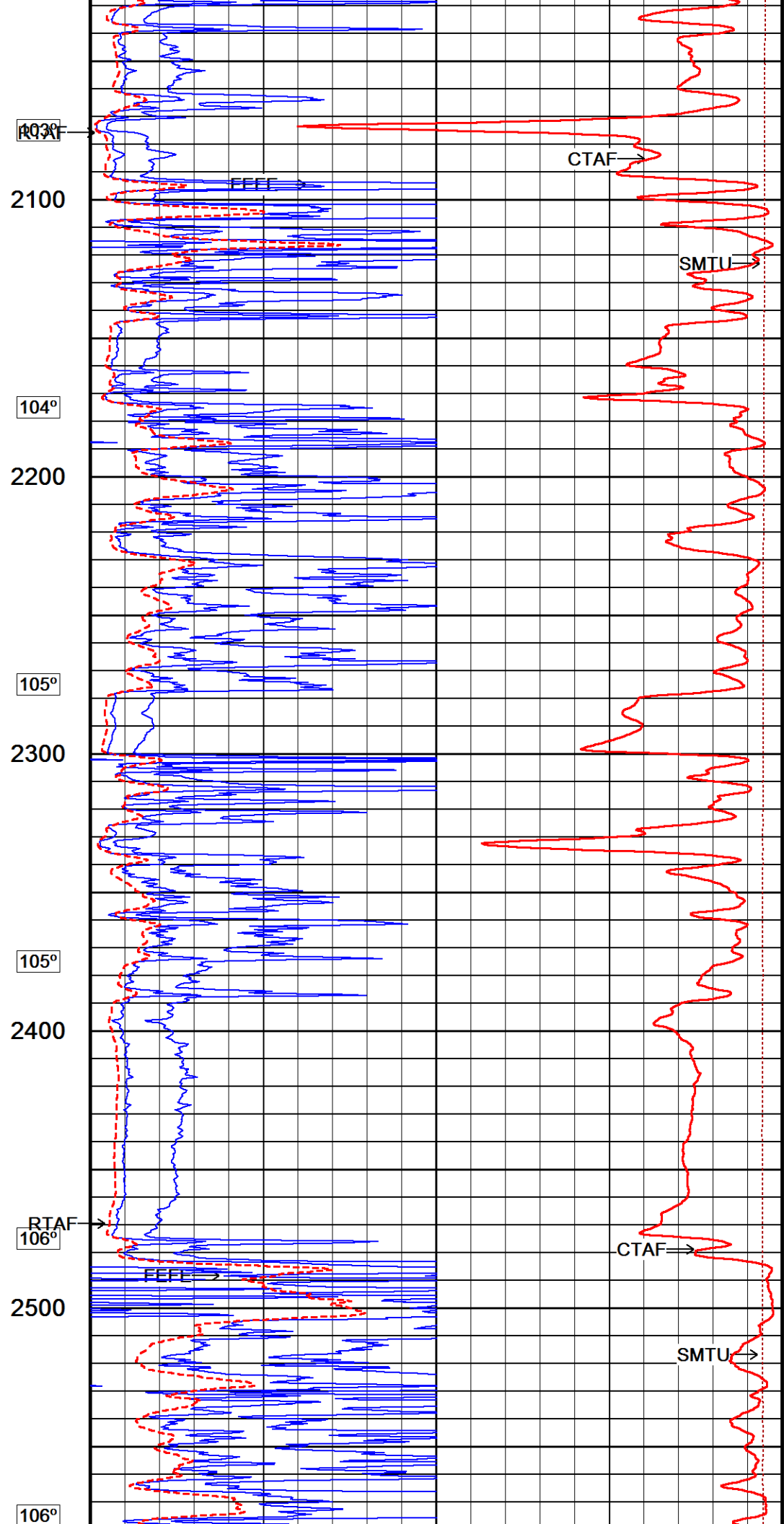
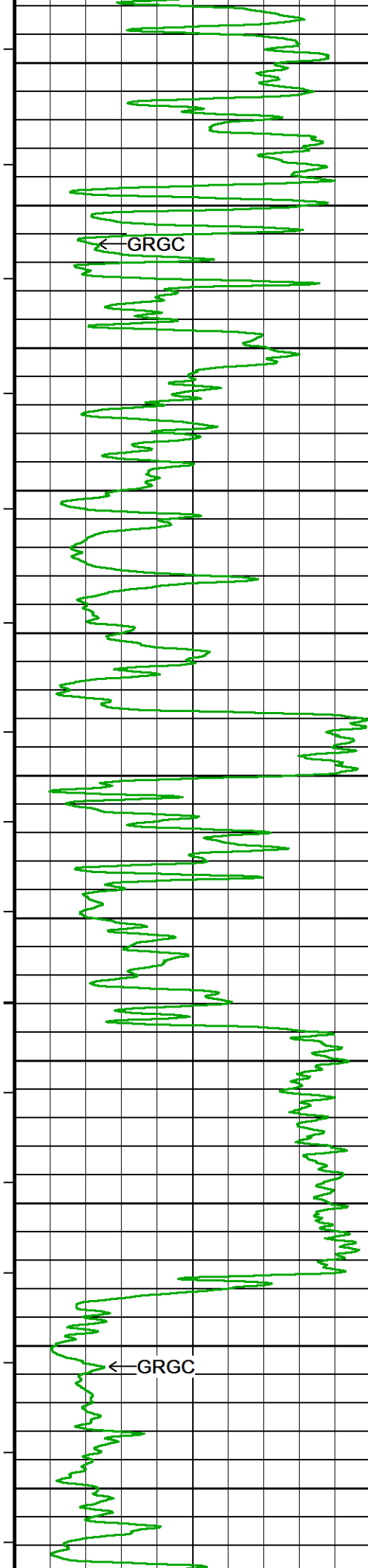
In interpreting, communicating or providing information and/or making recommendations, either written or oral, as to logs or test or other data, type or amount of material, or Work or other service to be furnished, or manner of performance, or in predicting results to be obtained, the Contractor will give the Company the benefit of the Contractor's best judgment based on its experience and will perform all such Work in a good and workmanlike manner. Any interpretation of test or other data, and any recommendation or reservoir description based upon such interpretations, are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and assumptions are not infallible, and with respect to which professional engineers and analysts may differ. ACCORDINGLY ANY INTERPRETATION OR RECOMMENDATION RESULTING FROM THE SERVICES WILL BE AT THE SOLE RISK OF THE COMPANY, AND THE CONTRACTOR CANNOT AND DOES NOT WARRANT THE ACCURACY, CORRECTNESS OR COMPLETENESS OF ANY SUCH INTERPRETATION OR RECOMMENDATION, WHICH INTERPRETATIONS AND RECOMMENDATIONS SHOULD NOT, THEREFORE, UNDER ANY CIRCUMSTANCES BE RELIED UPON AS THE SOLE OR MAIN BASIS FOR ANY DRILLING, COMPLETION, WELL TREATMENT, PRODUCTION OR FINANCIAL DECISION, OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING ACTIVITY, DRILLING RIG OR ITS CREW OR ANY OTHER INDIVIDUAL. THE COMPANY HAS FULL RESPONSIBILITY FOR ALL DECISIONS CONCERNING THE SERVICES.

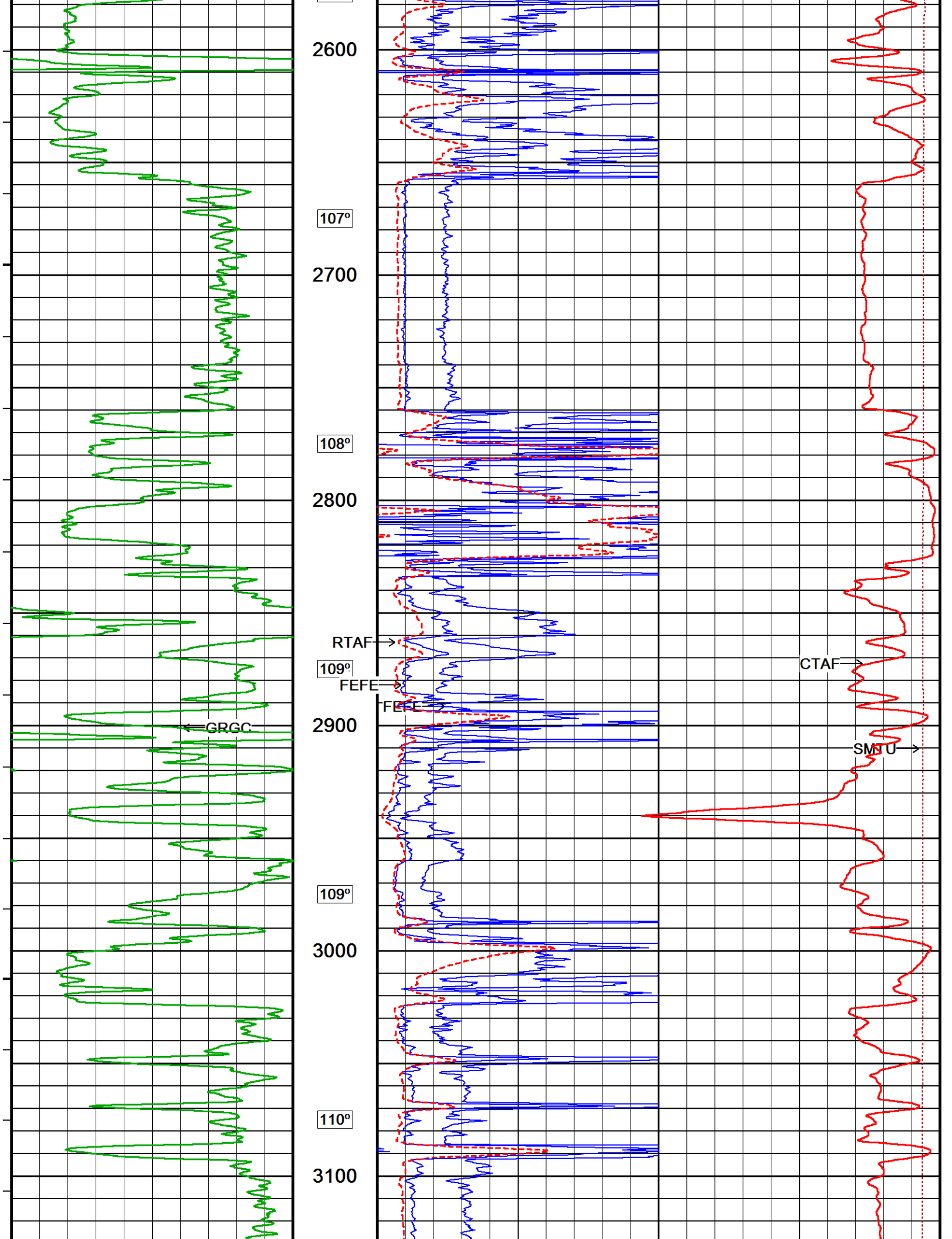


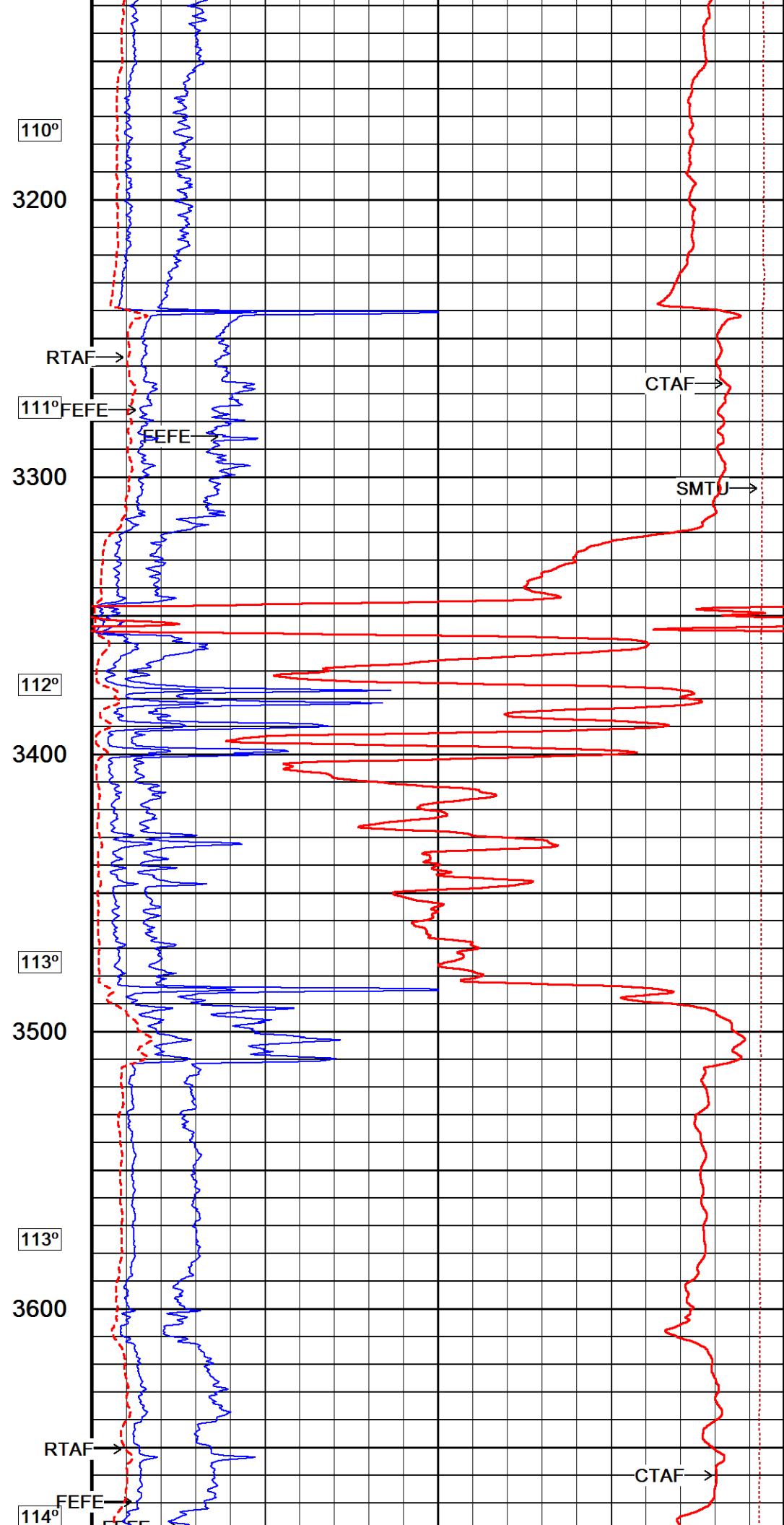
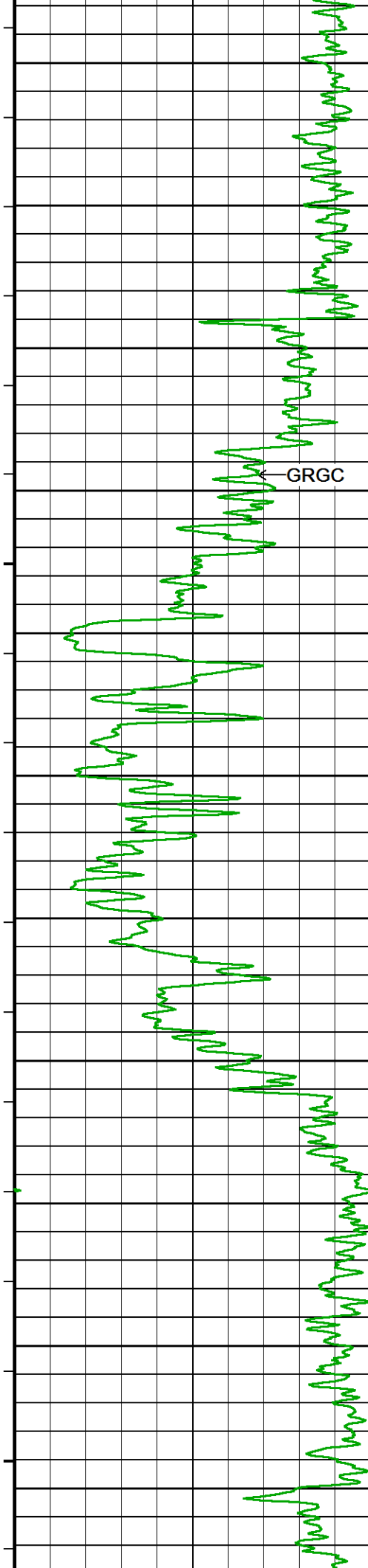


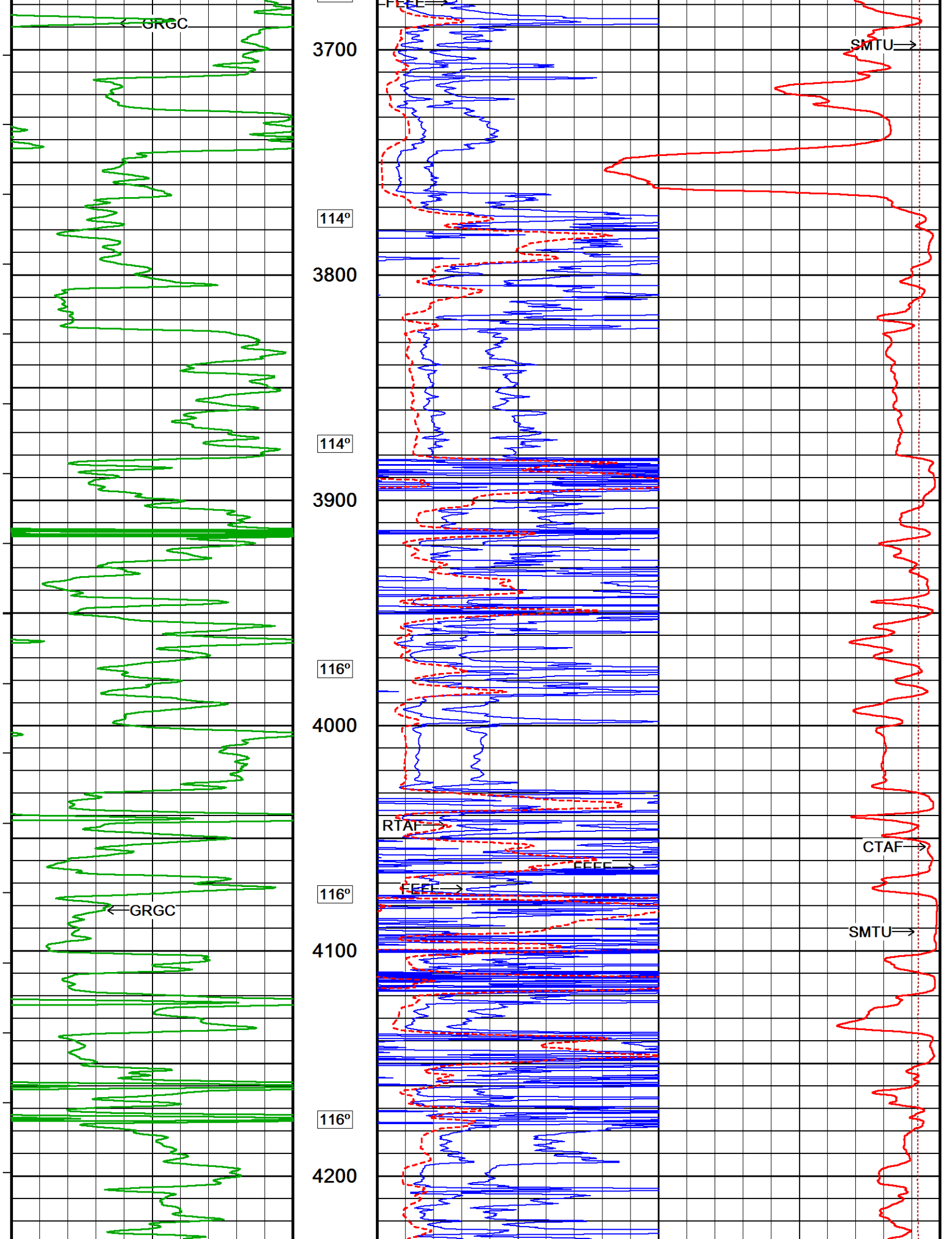


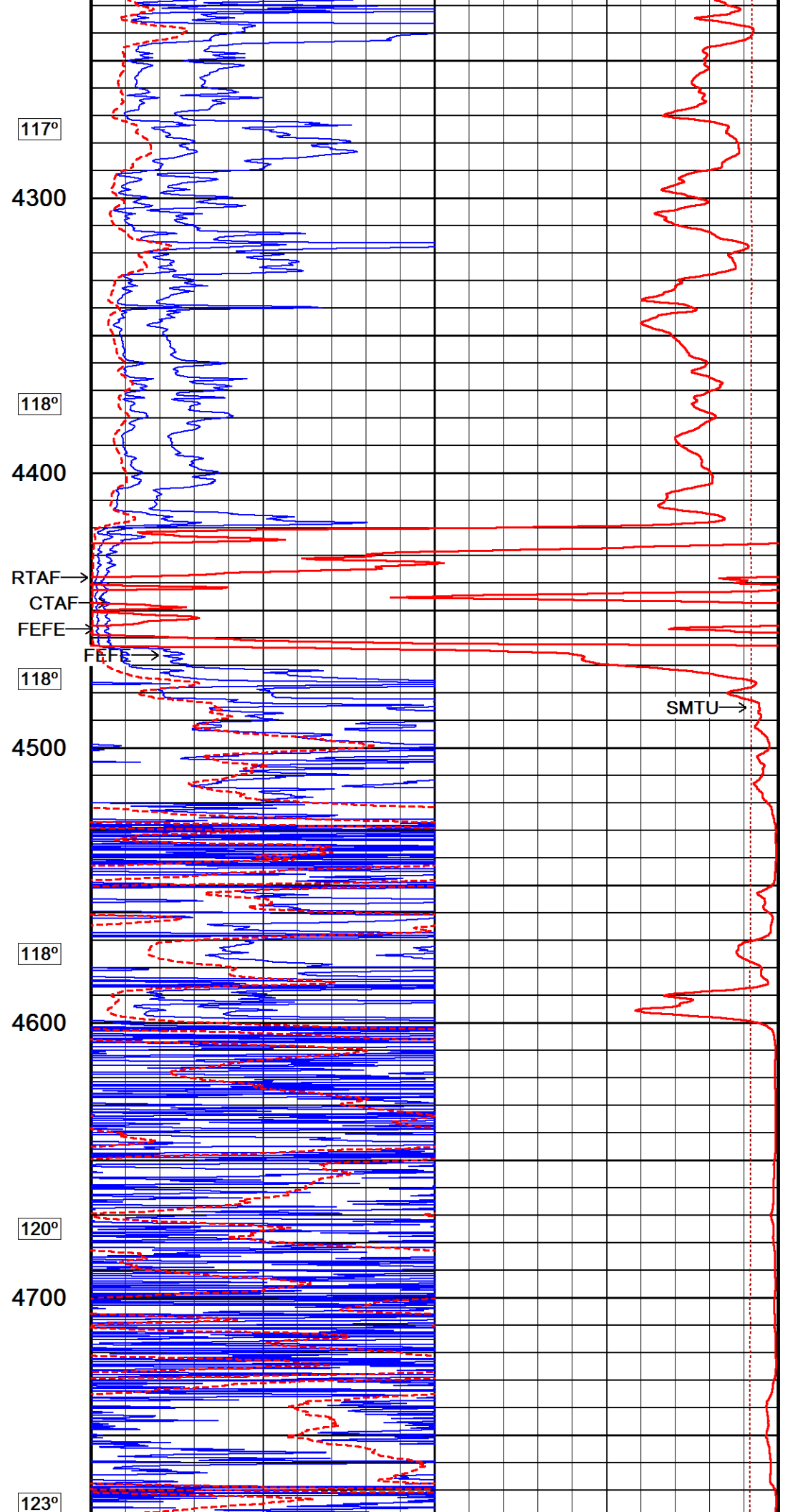
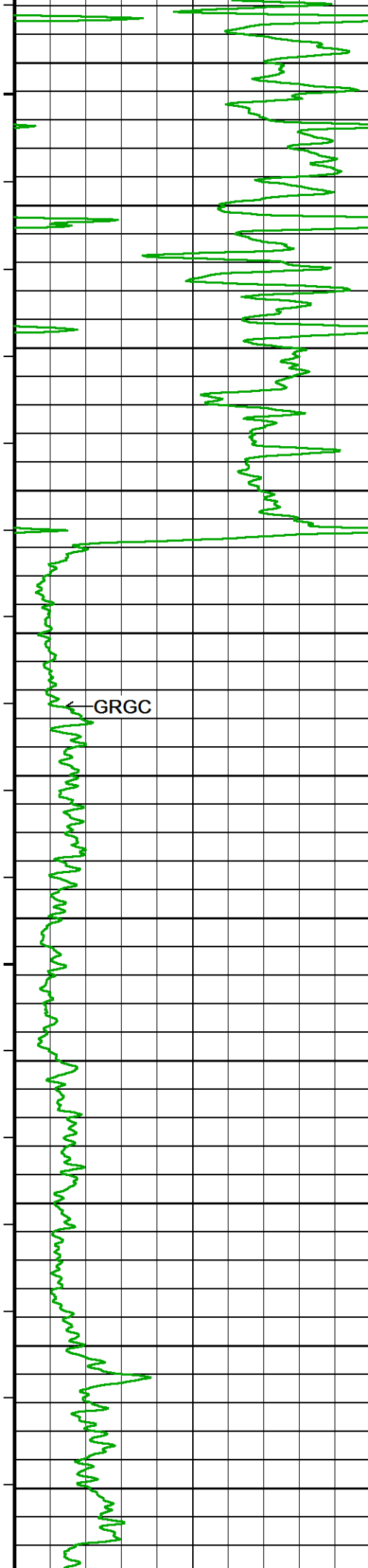


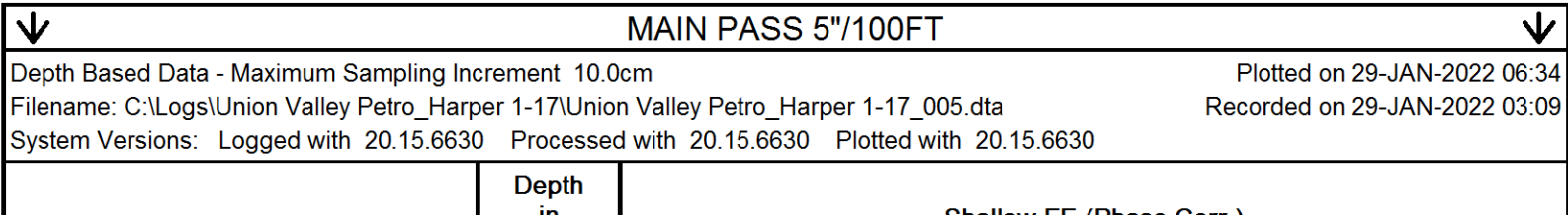
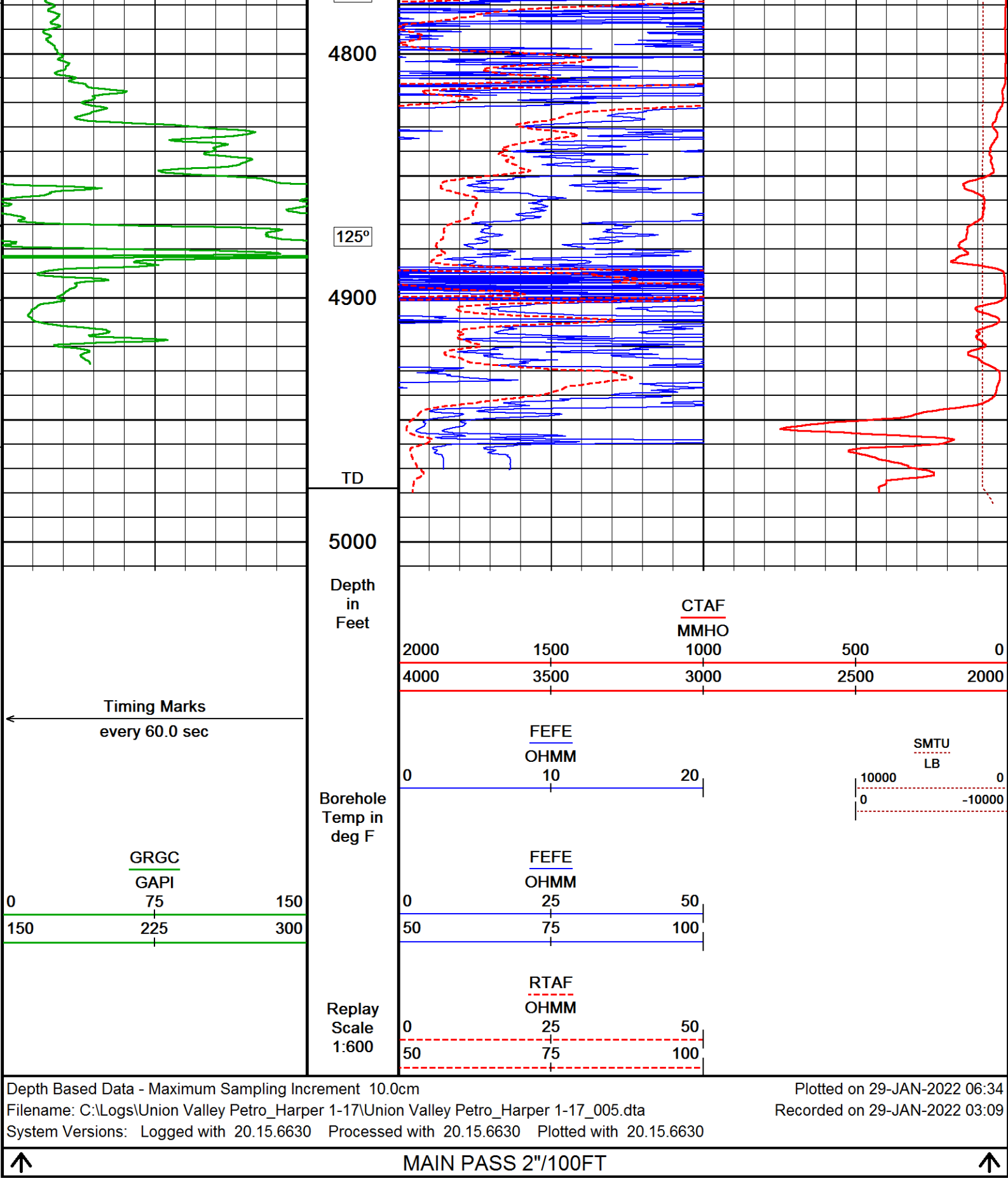


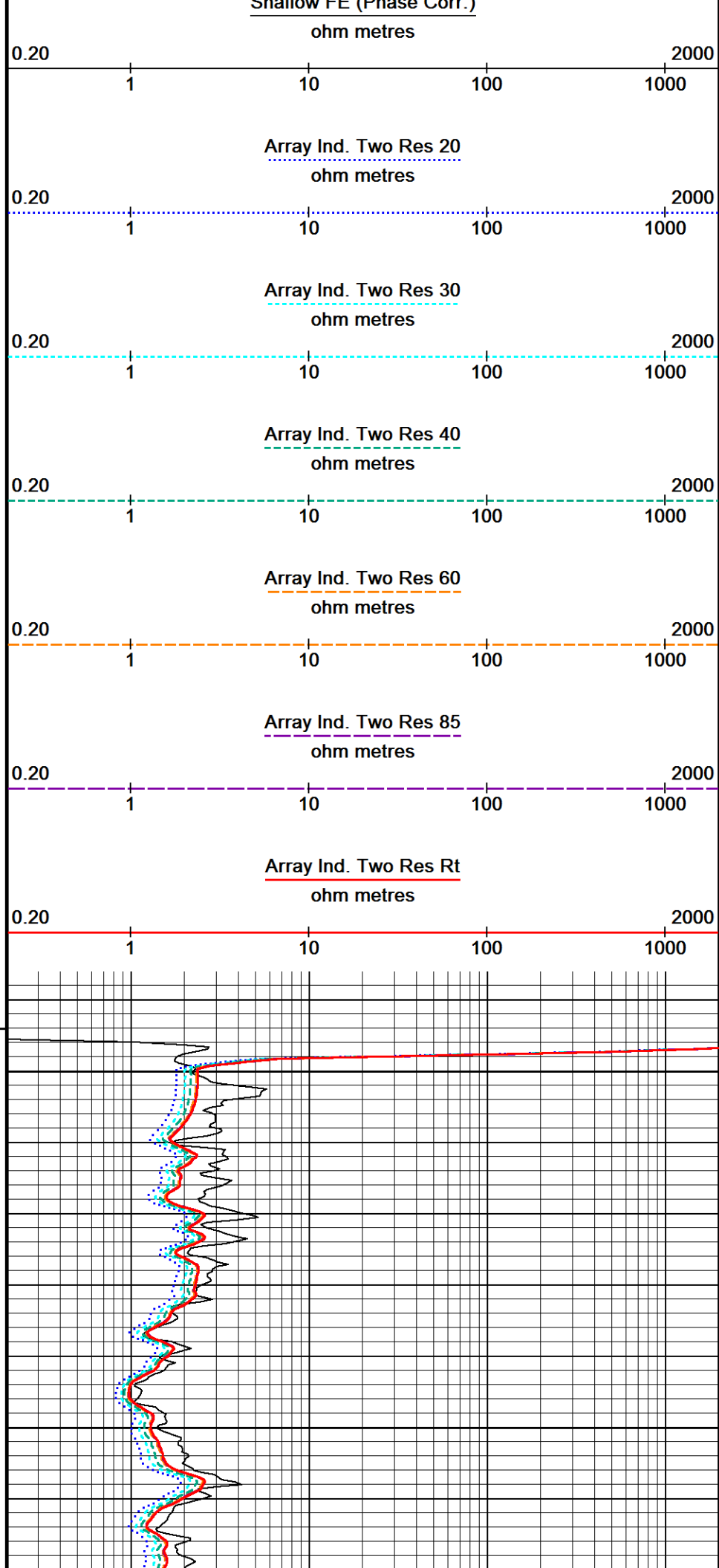
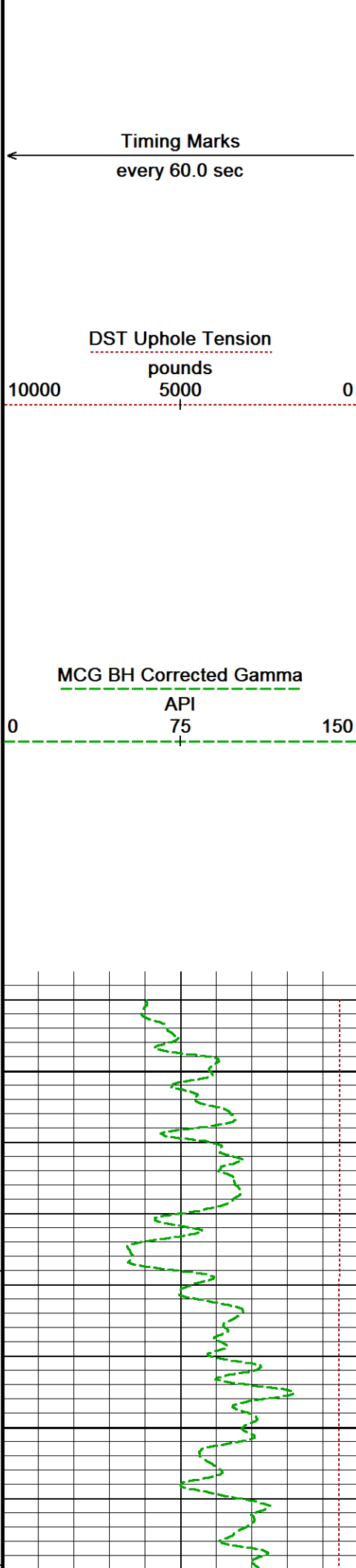


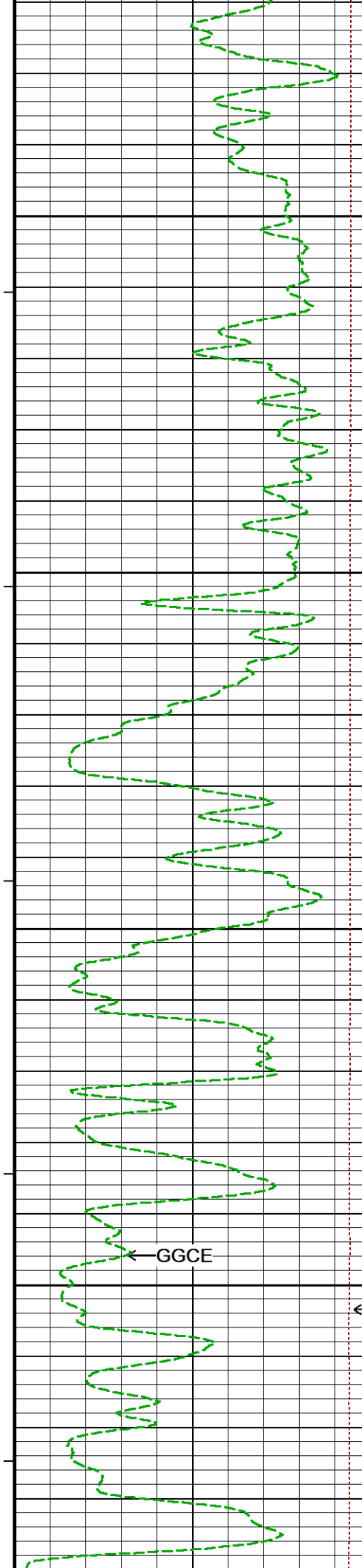












95°

500

95°

550

95°

600

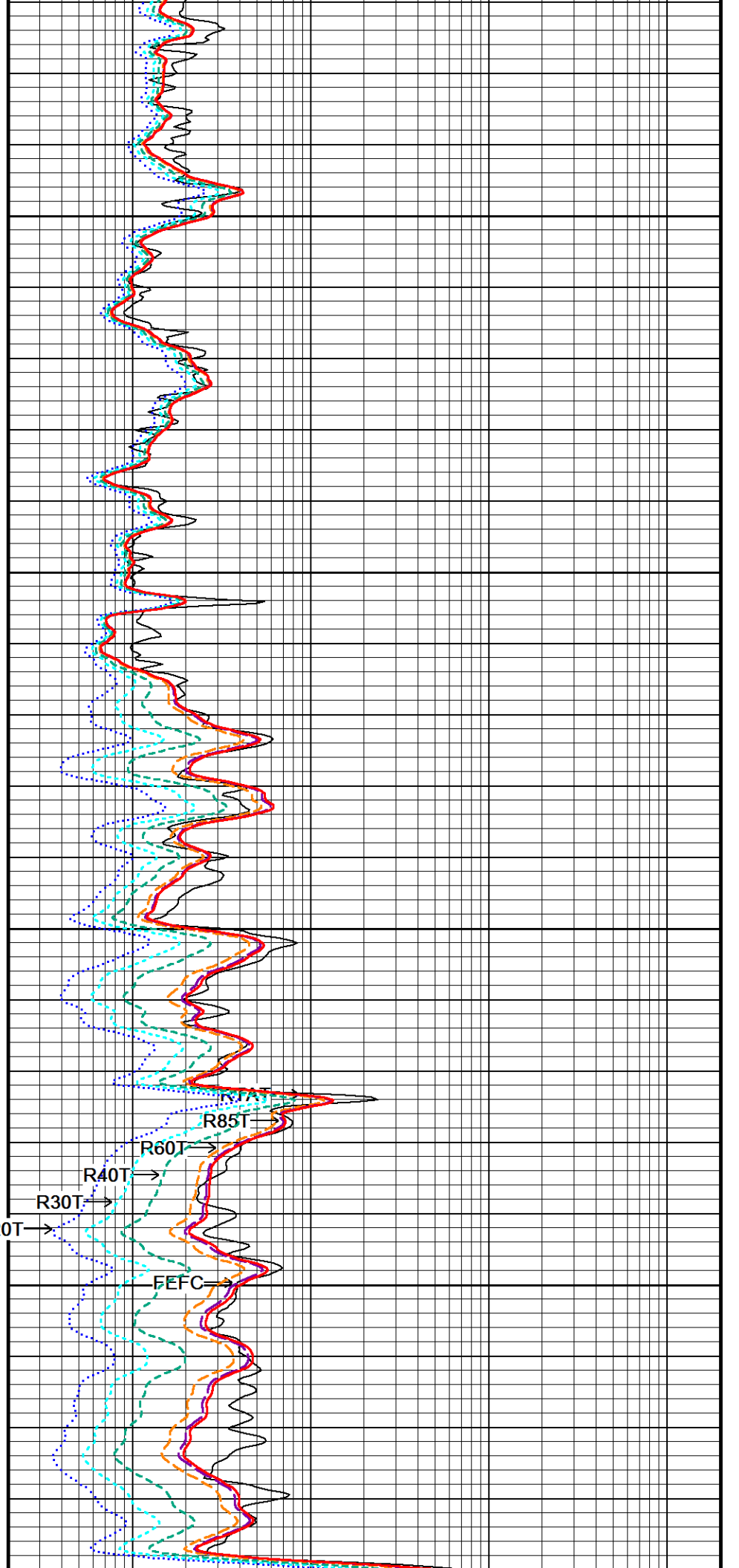
95°

650

95°

← GGCE

← SMTU



R85T →

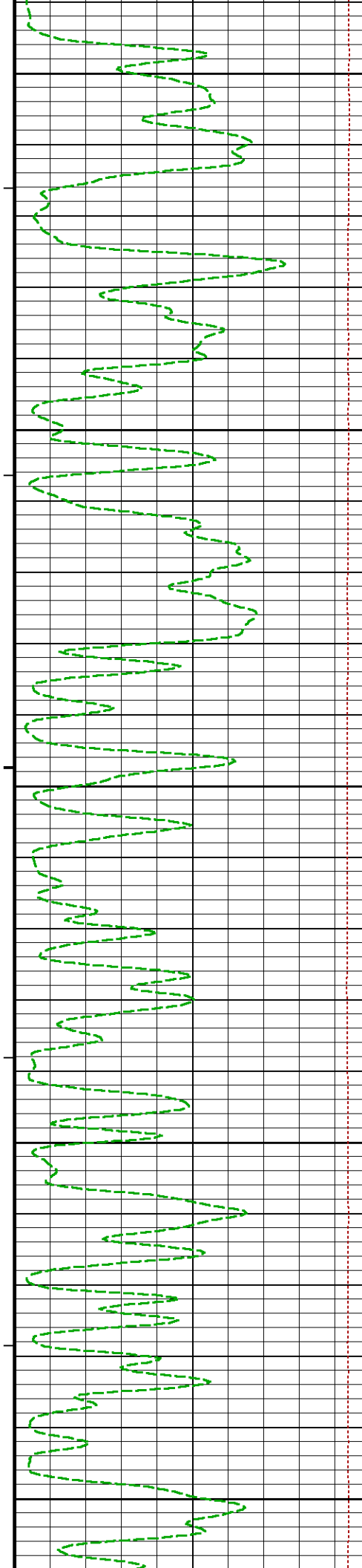
R60T →

R40T →

R30T →

R20T →

FEFC →



700

95°

750

95°

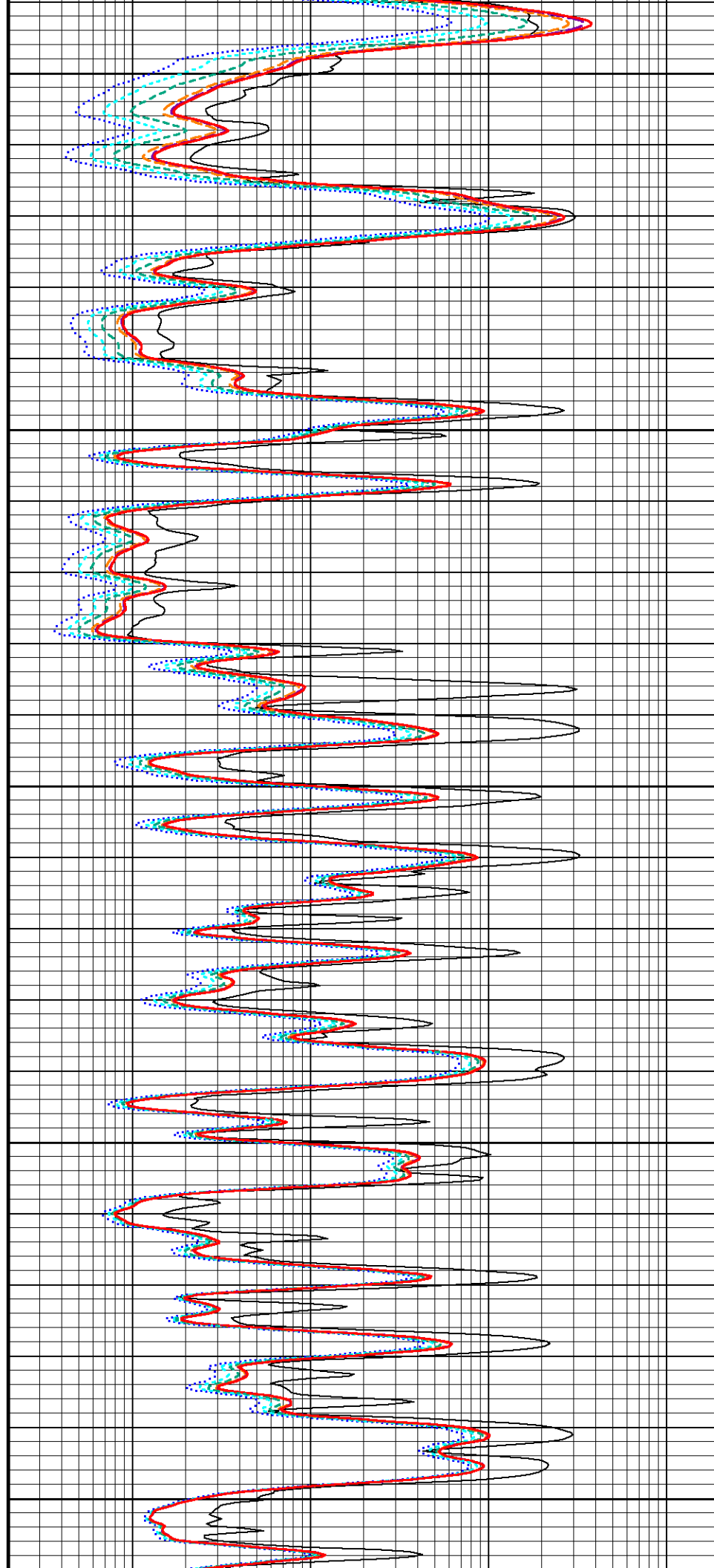
800

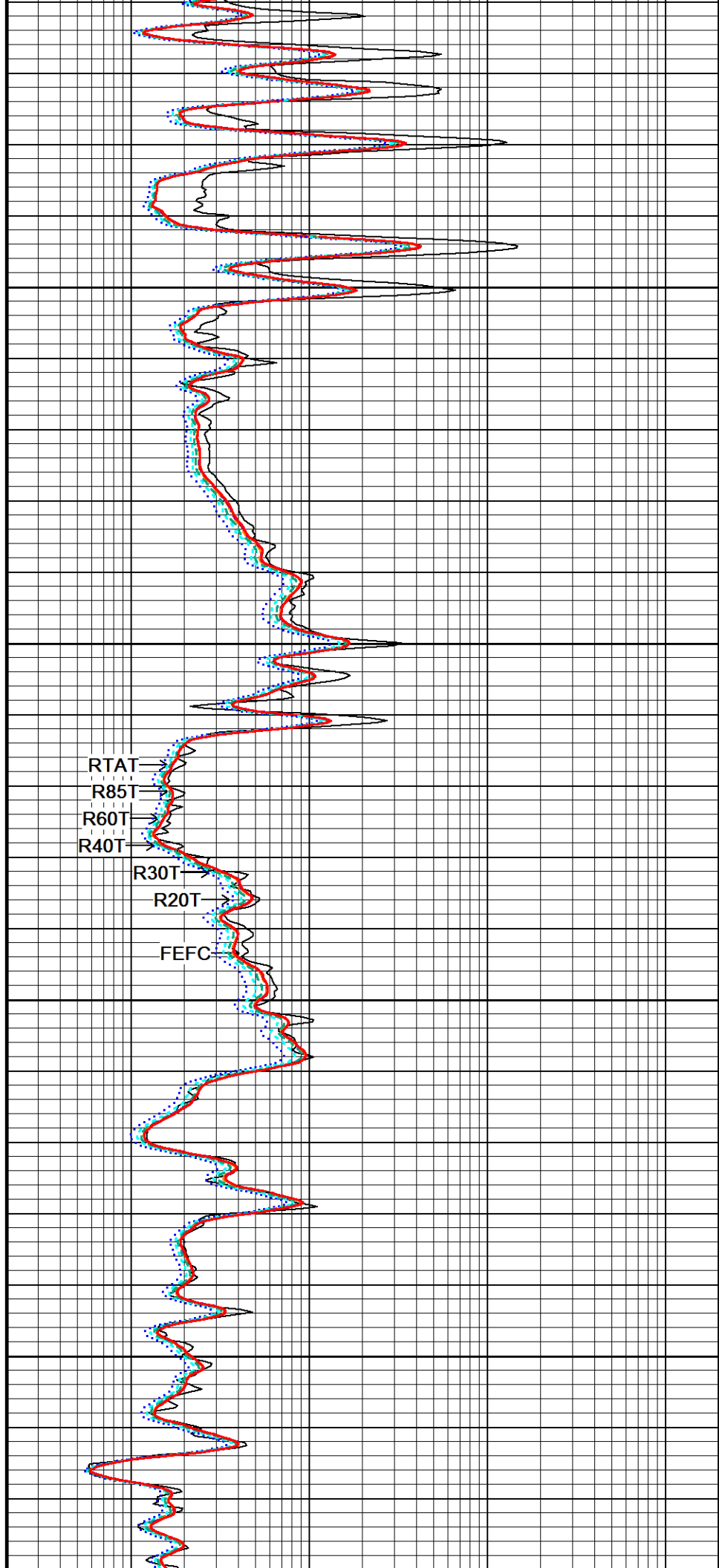
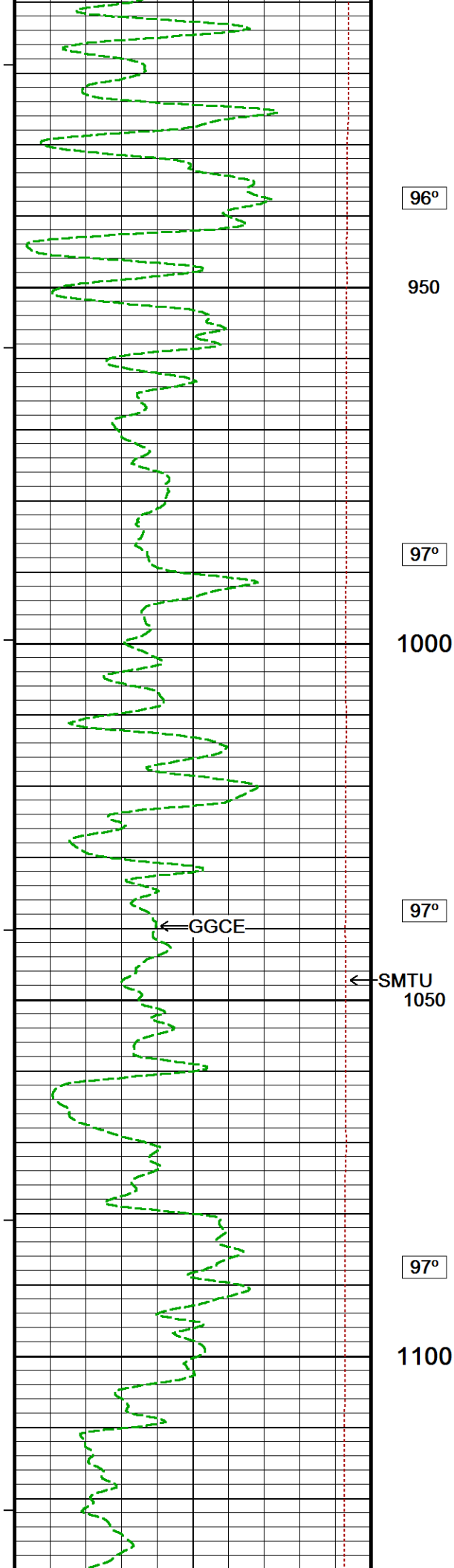
96°

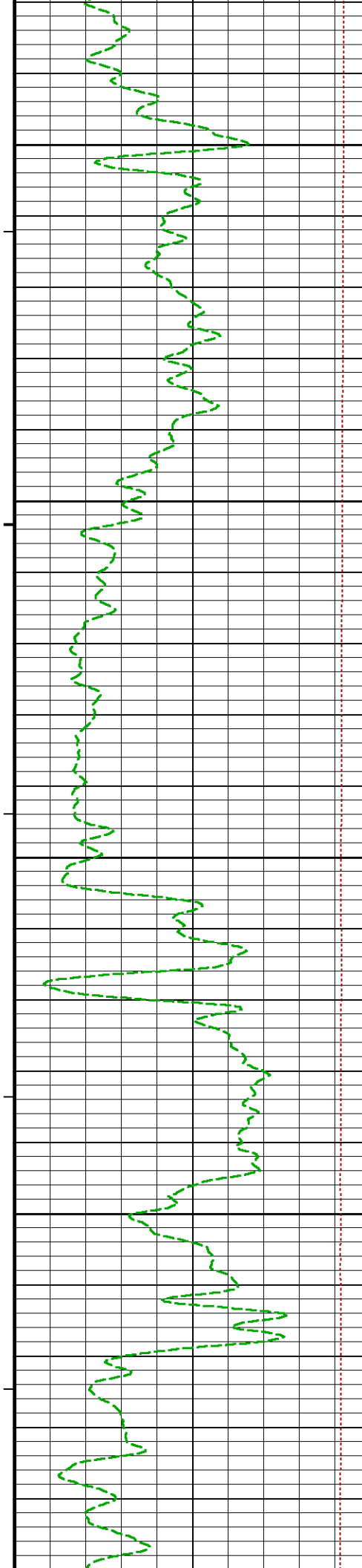
850

96°

900







97°

1150

98°

1200

97°

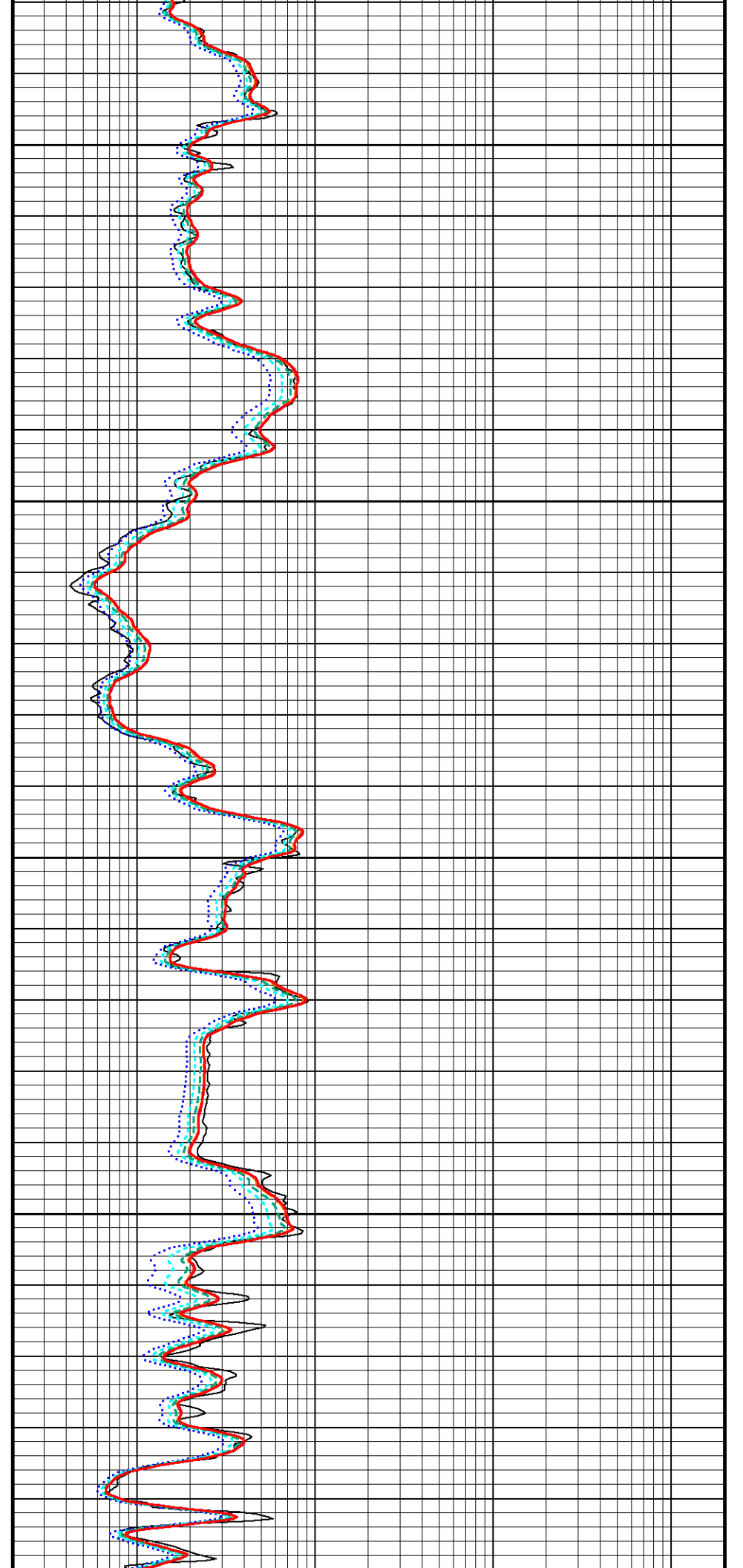
1250

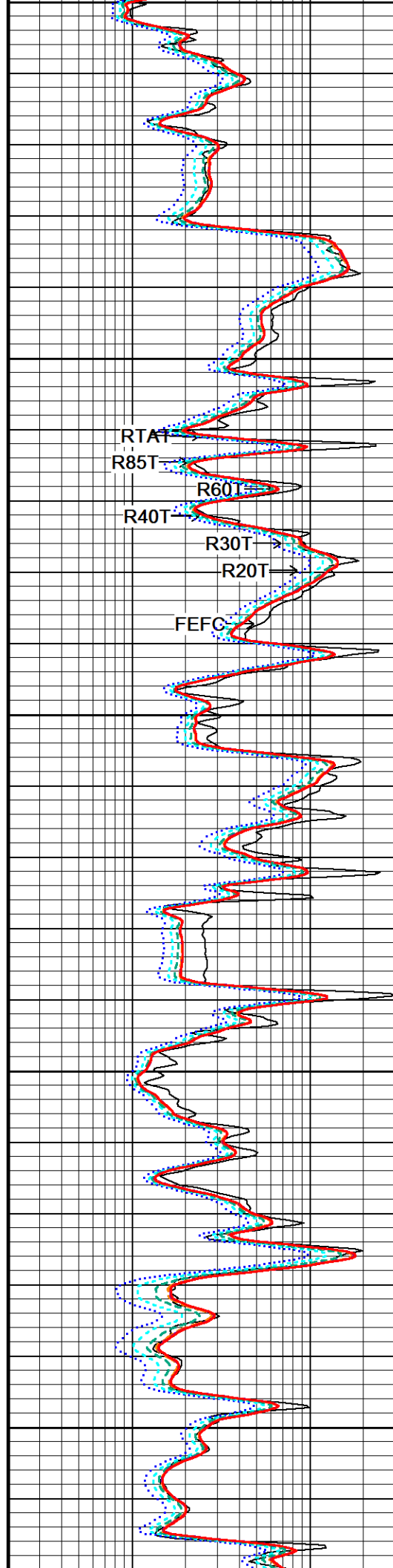
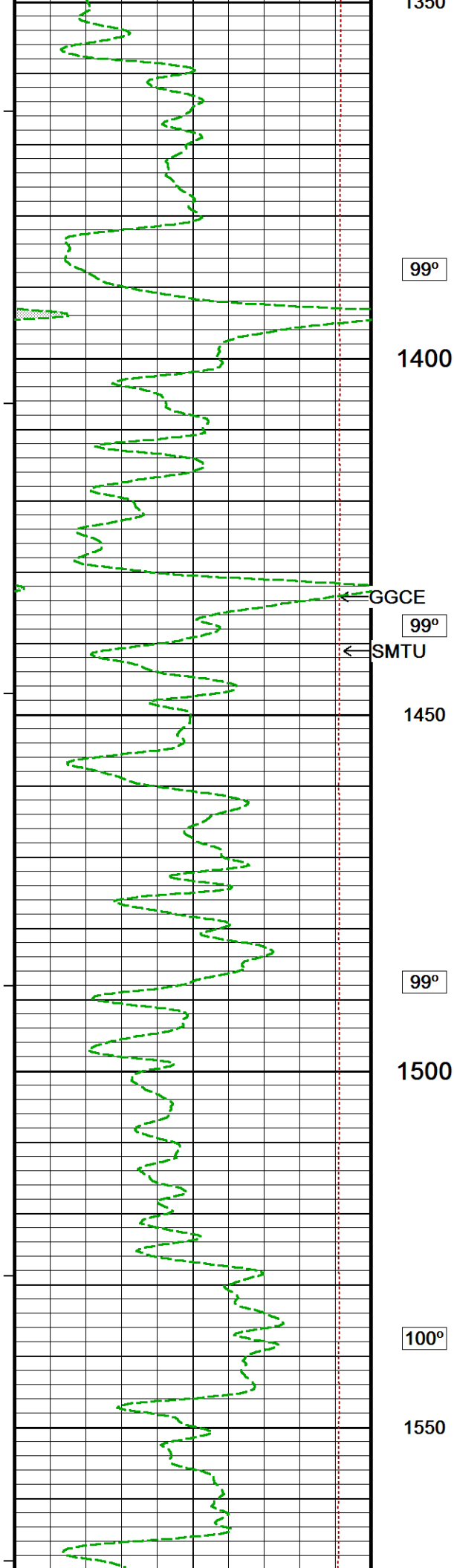
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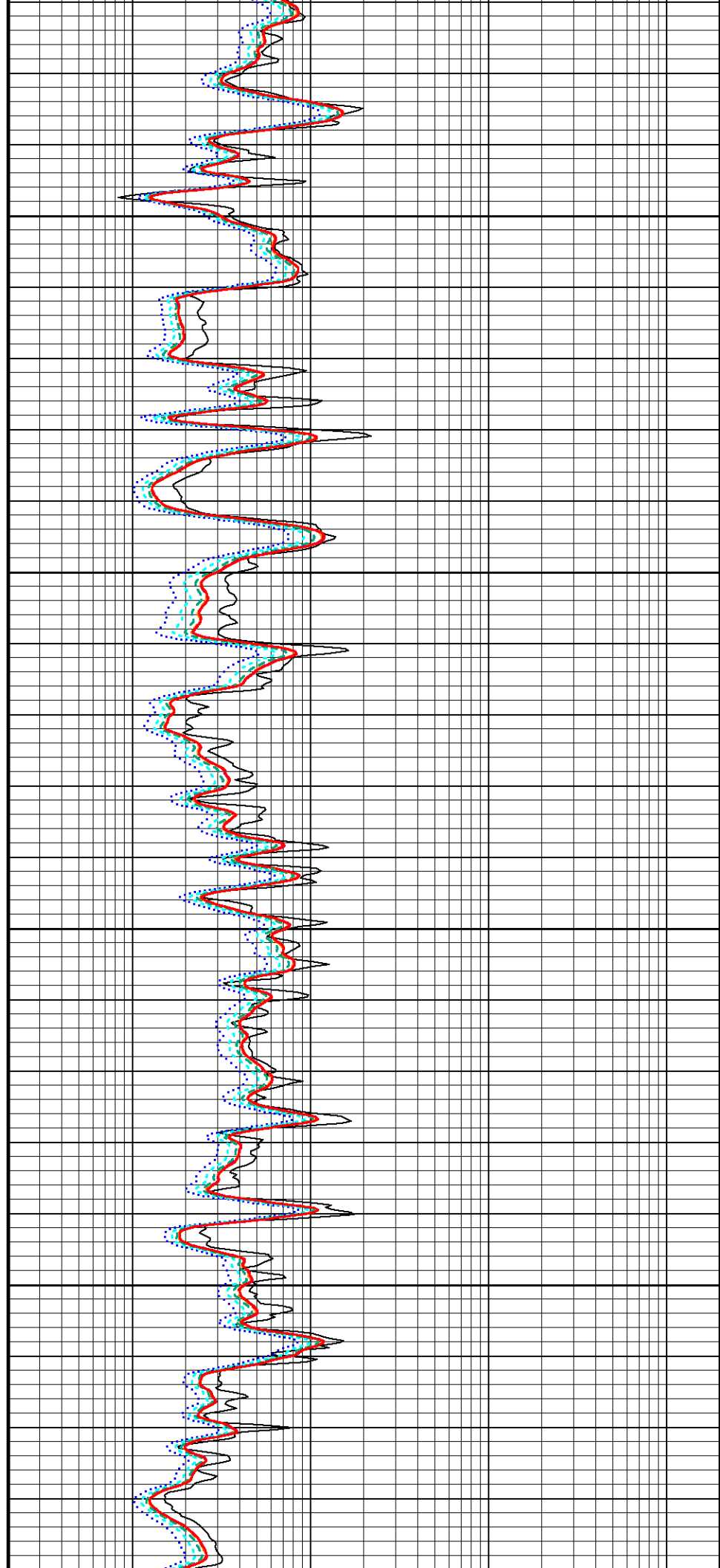
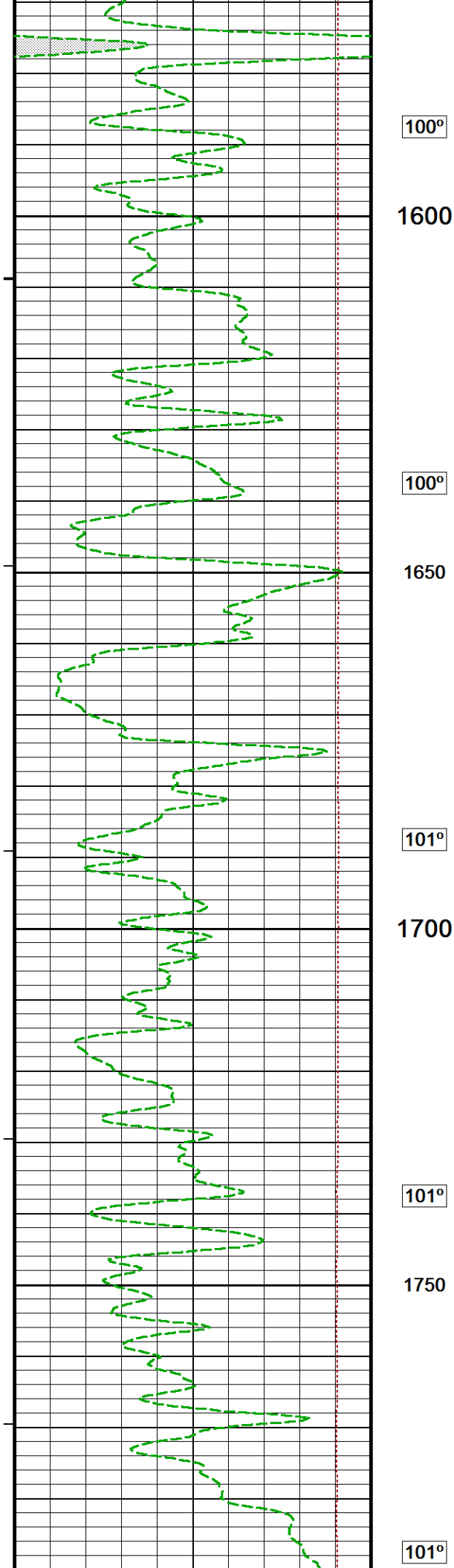
1300

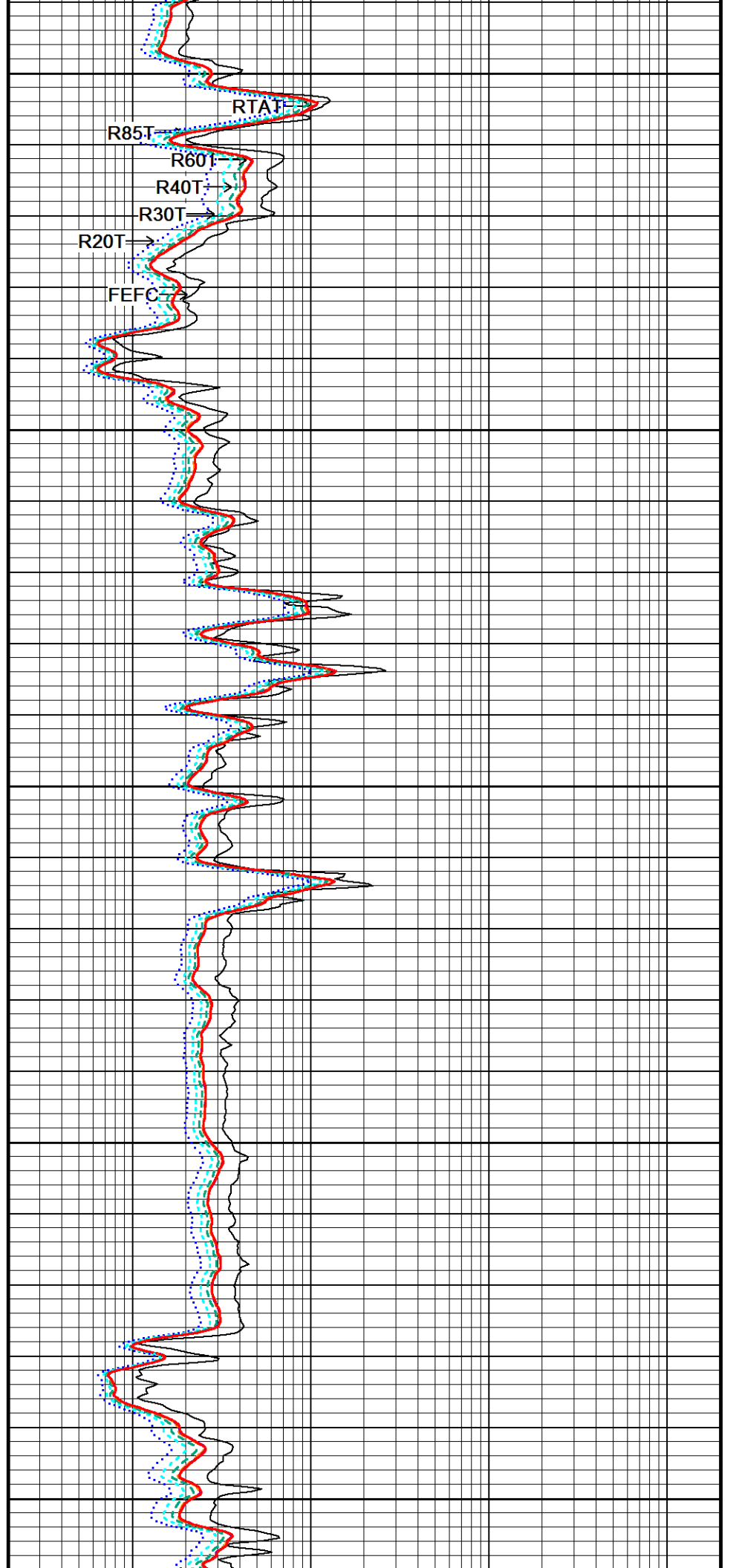
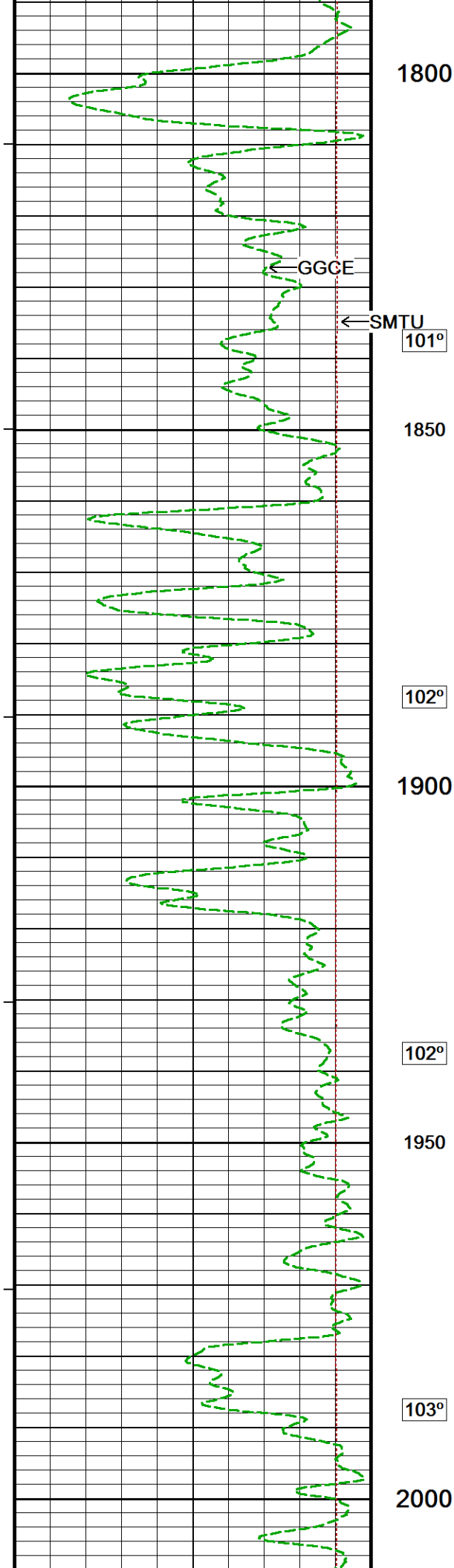
98°

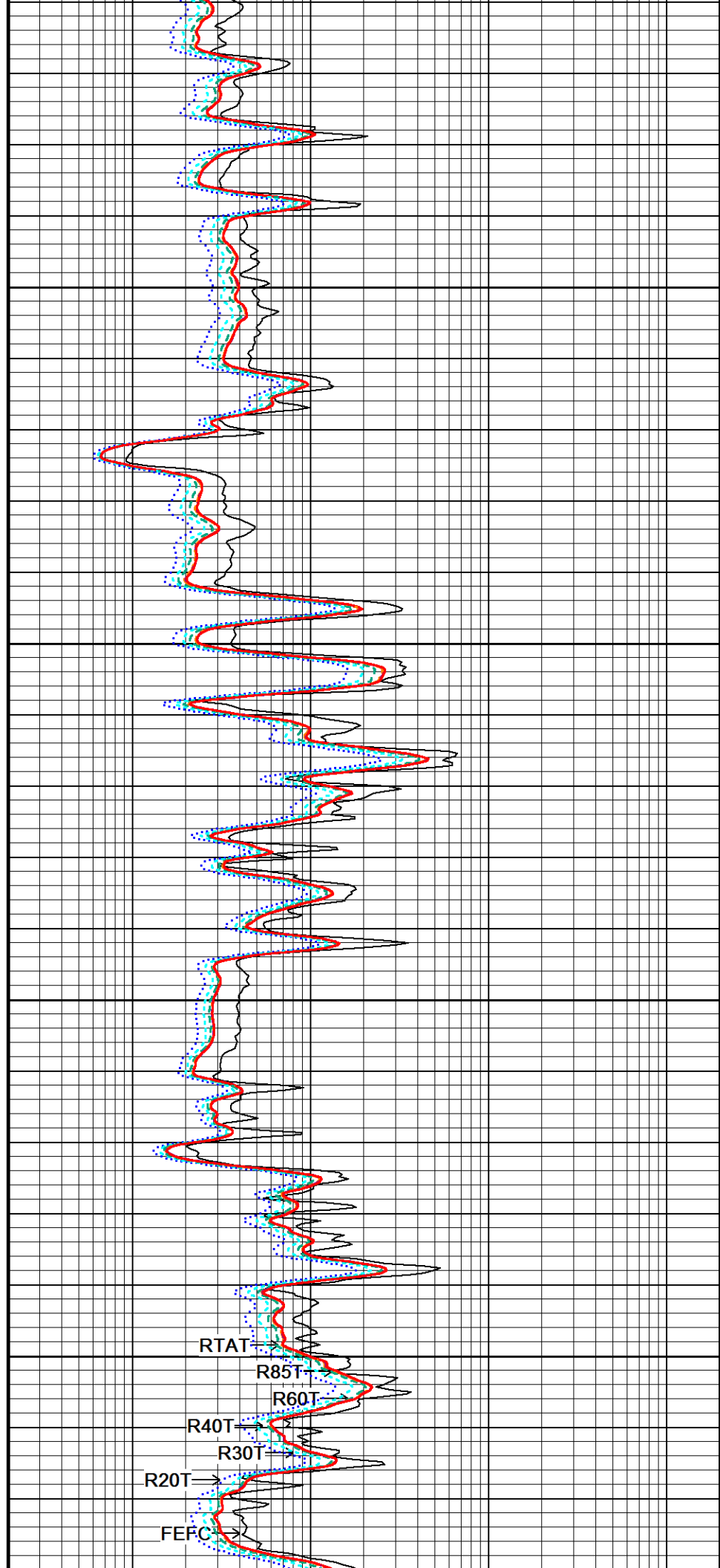
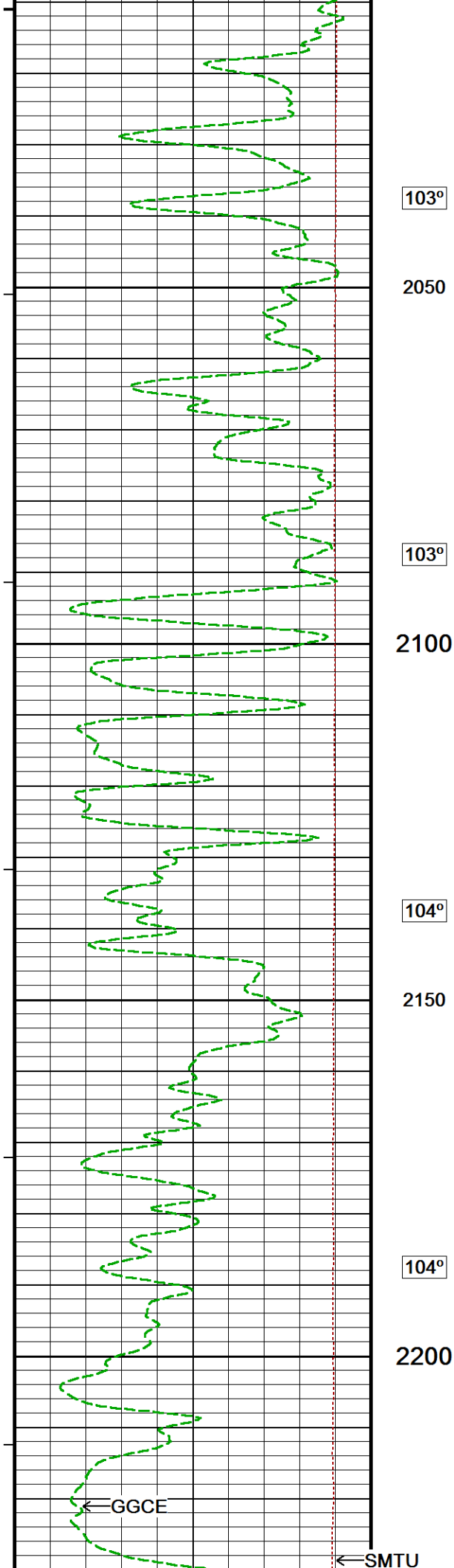
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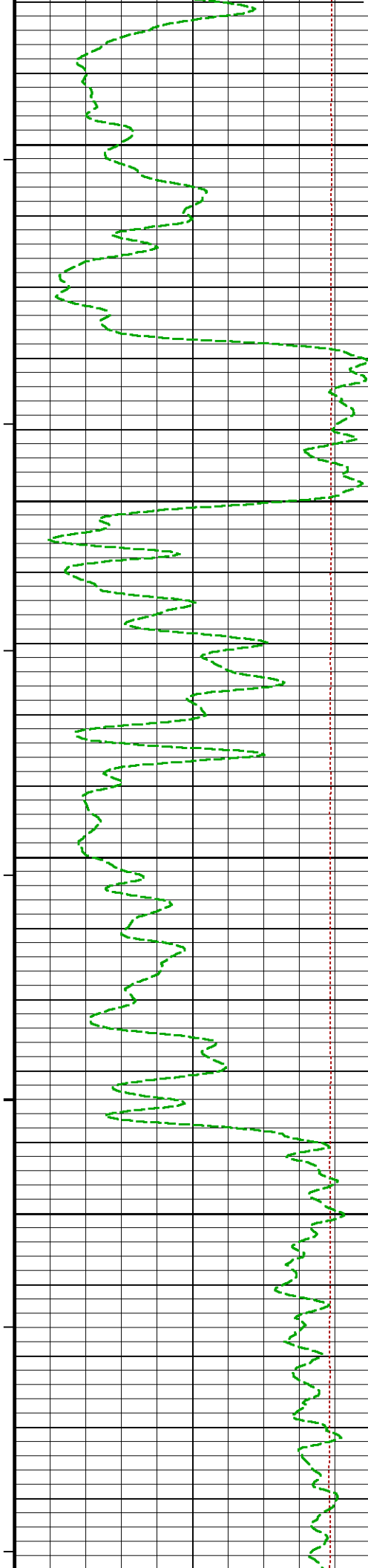












104°

2250

104°

2300

105°

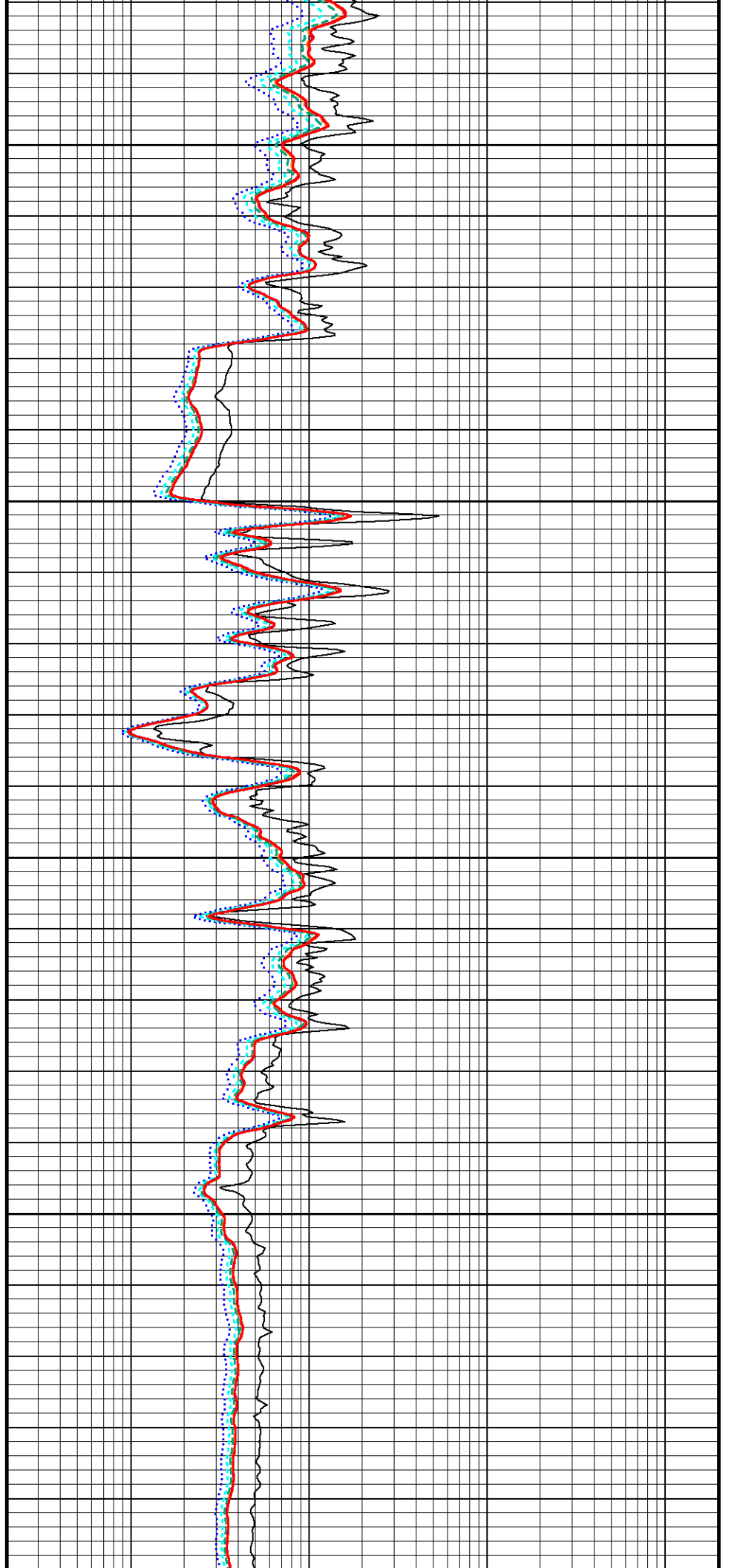
2350

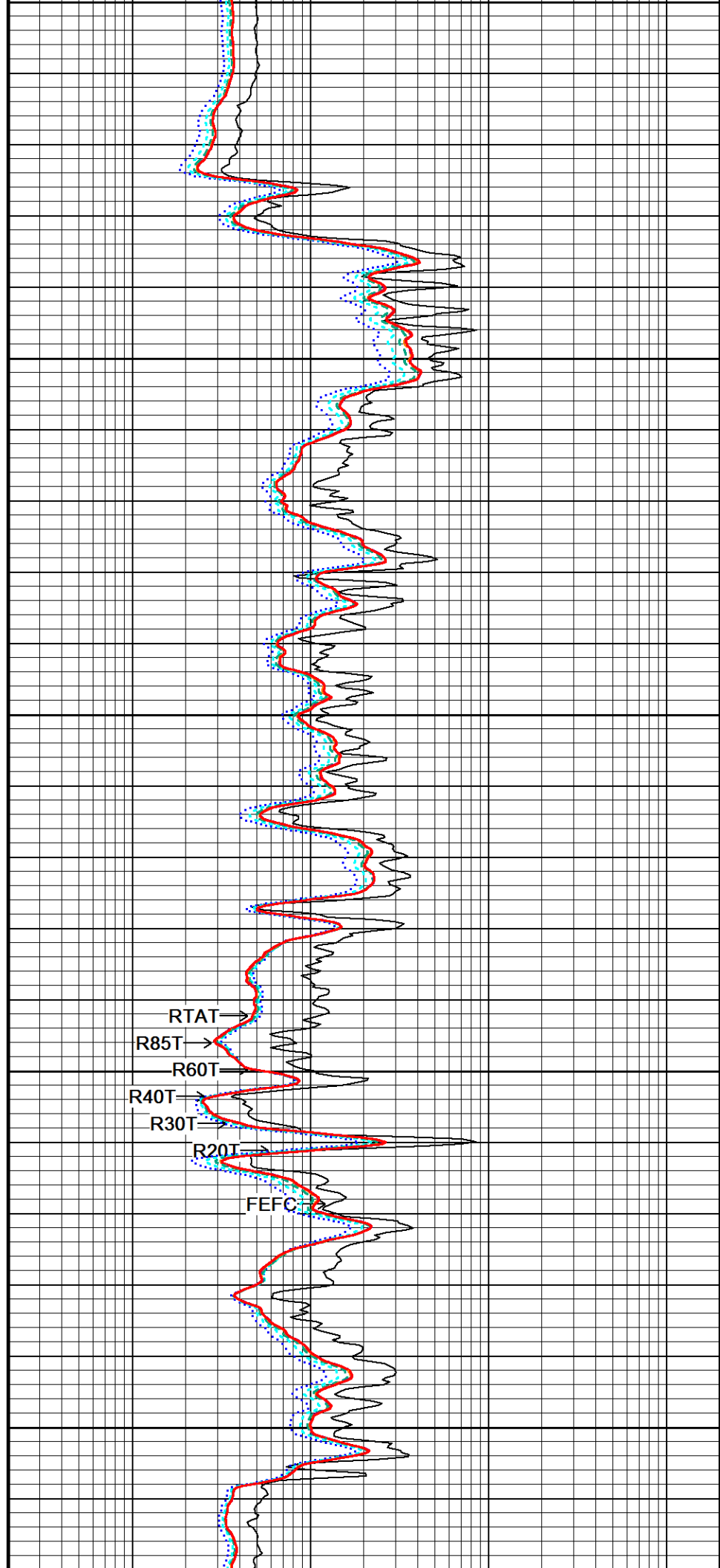
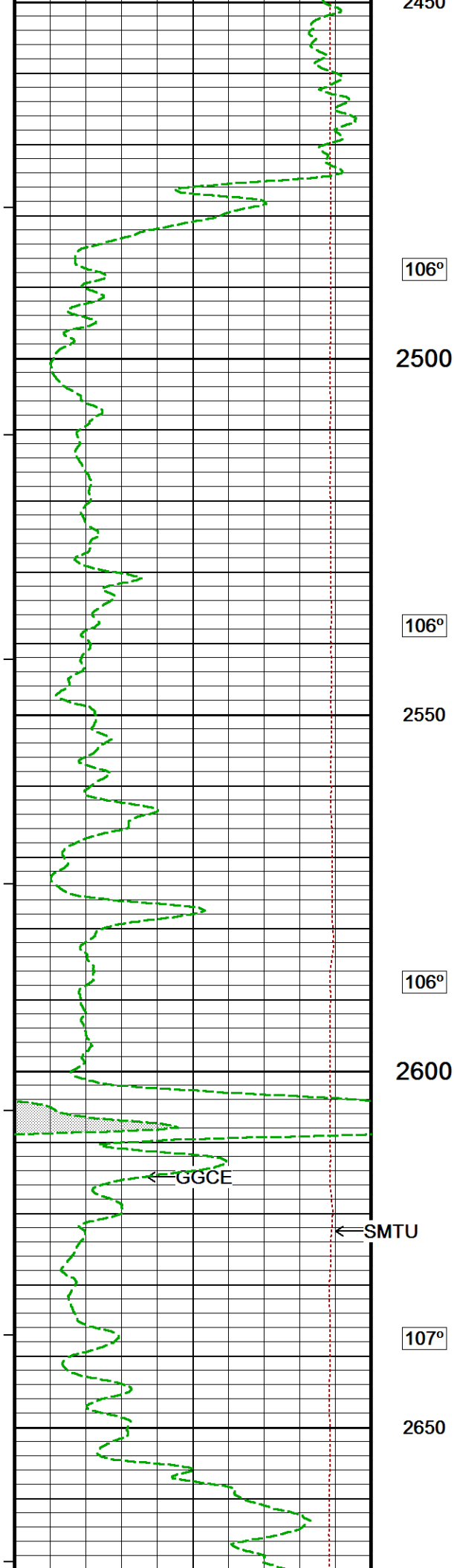
105°

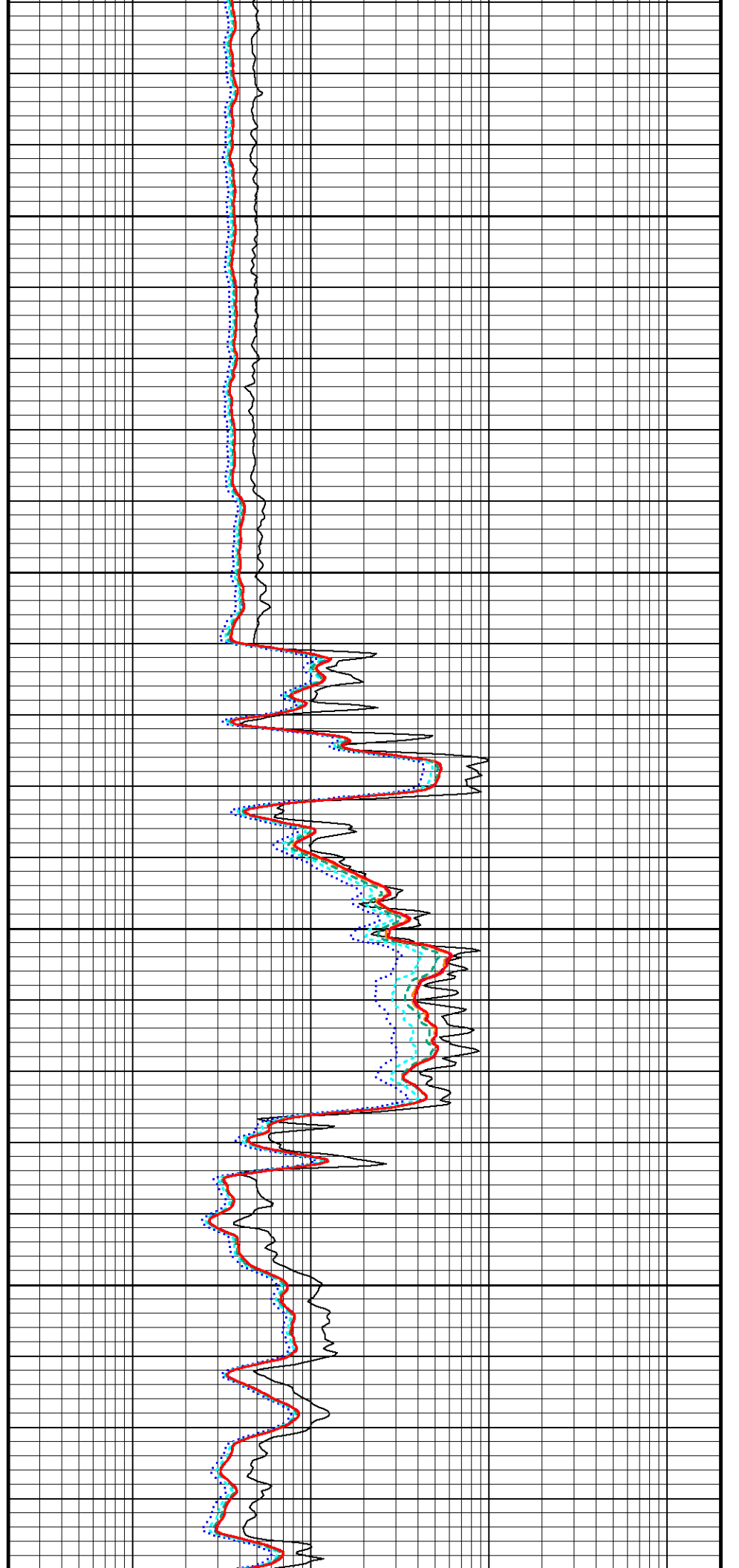
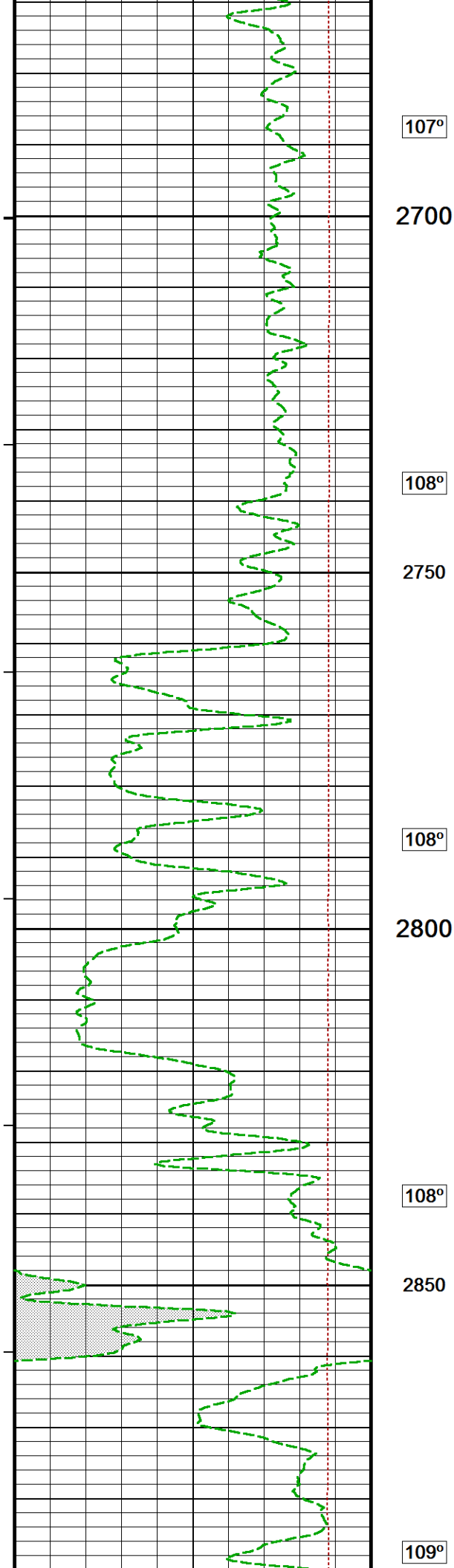
2400

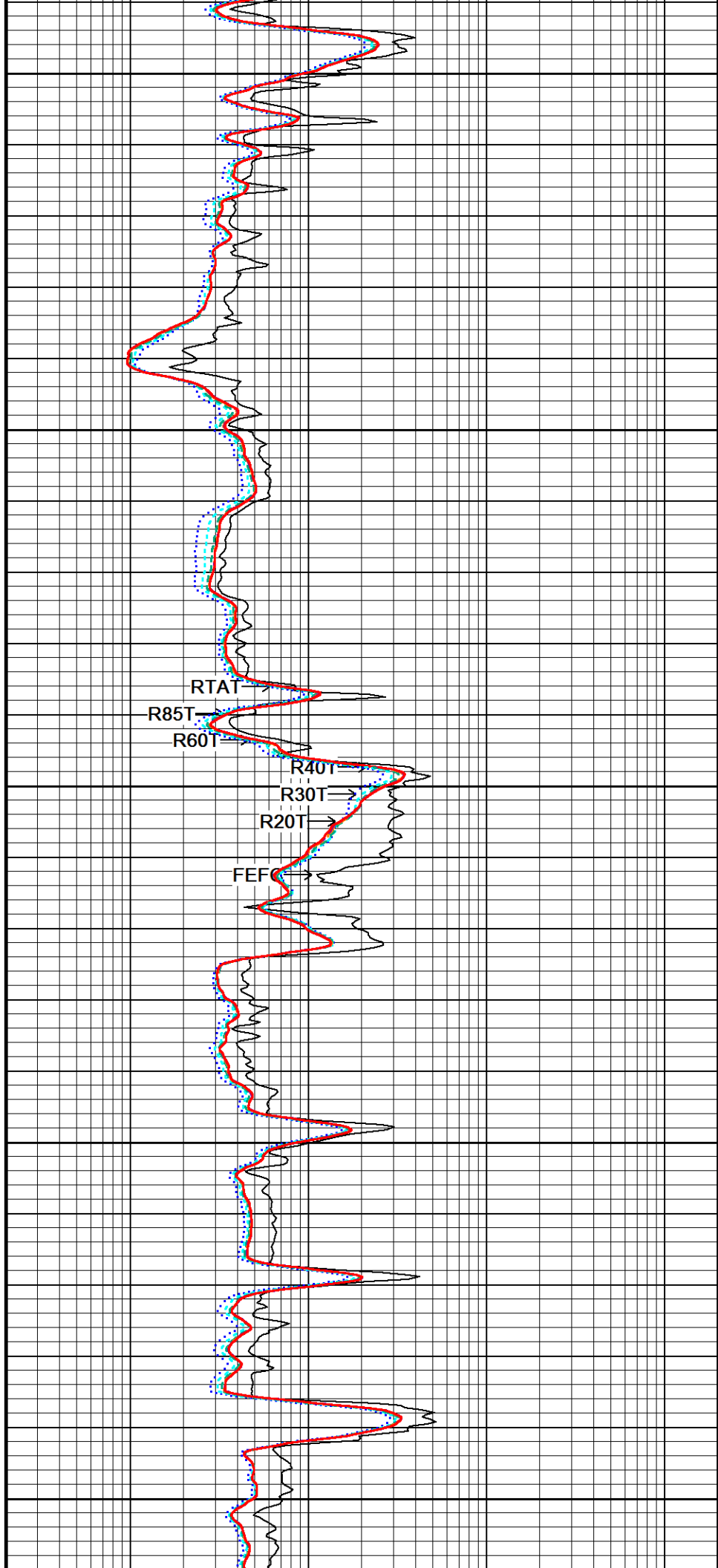
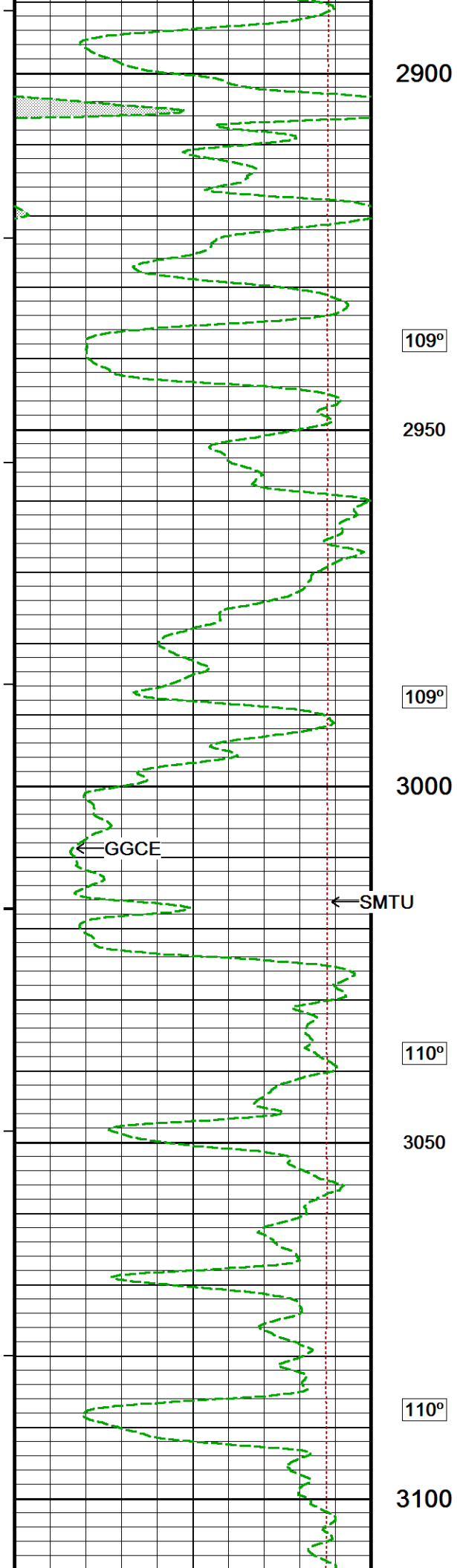
106°

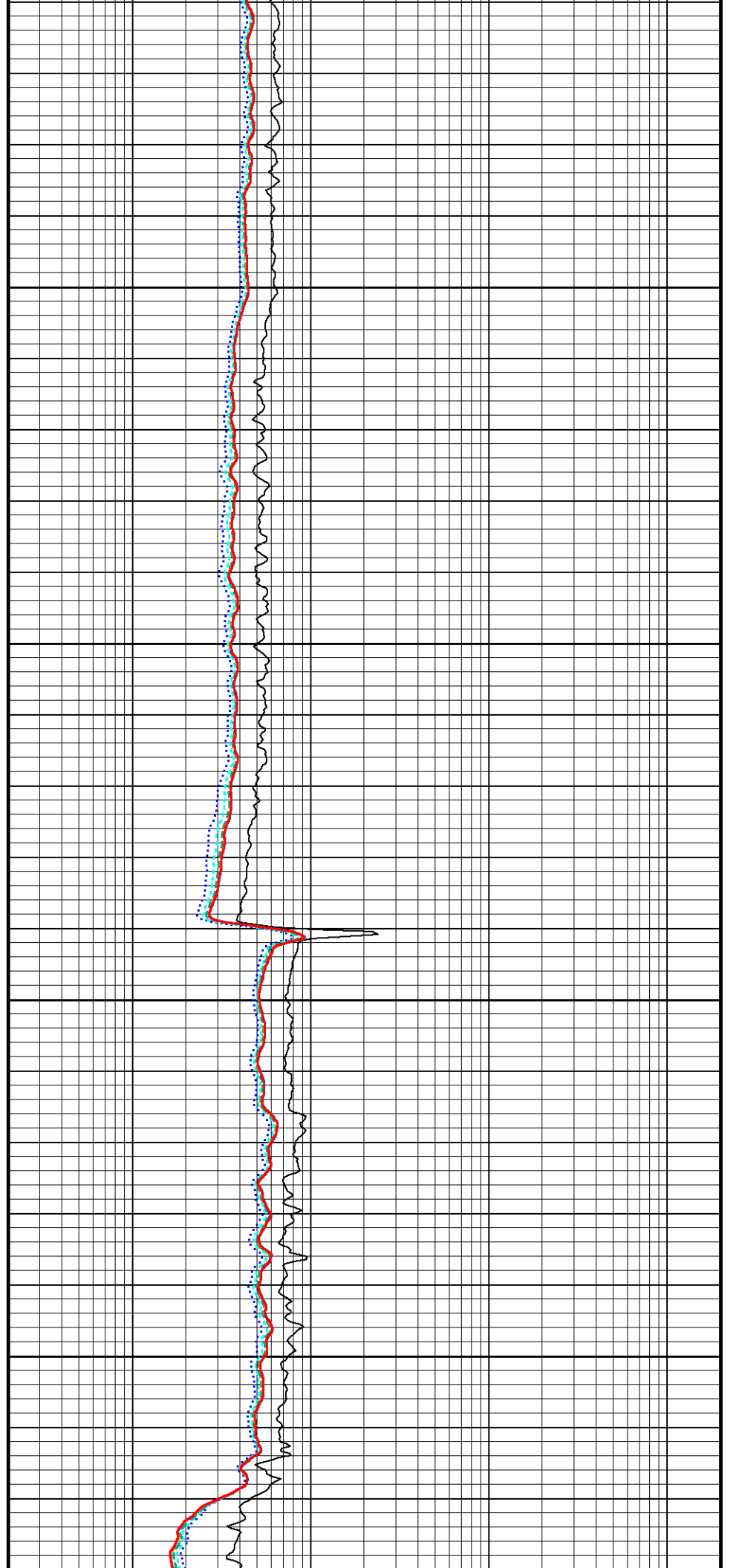
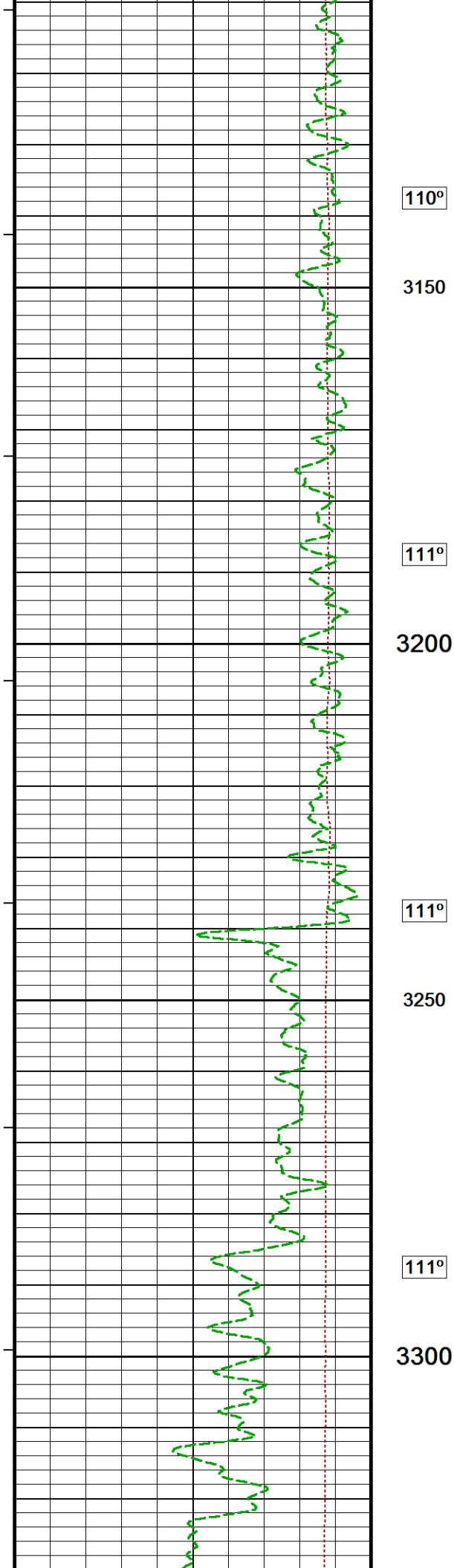
2450

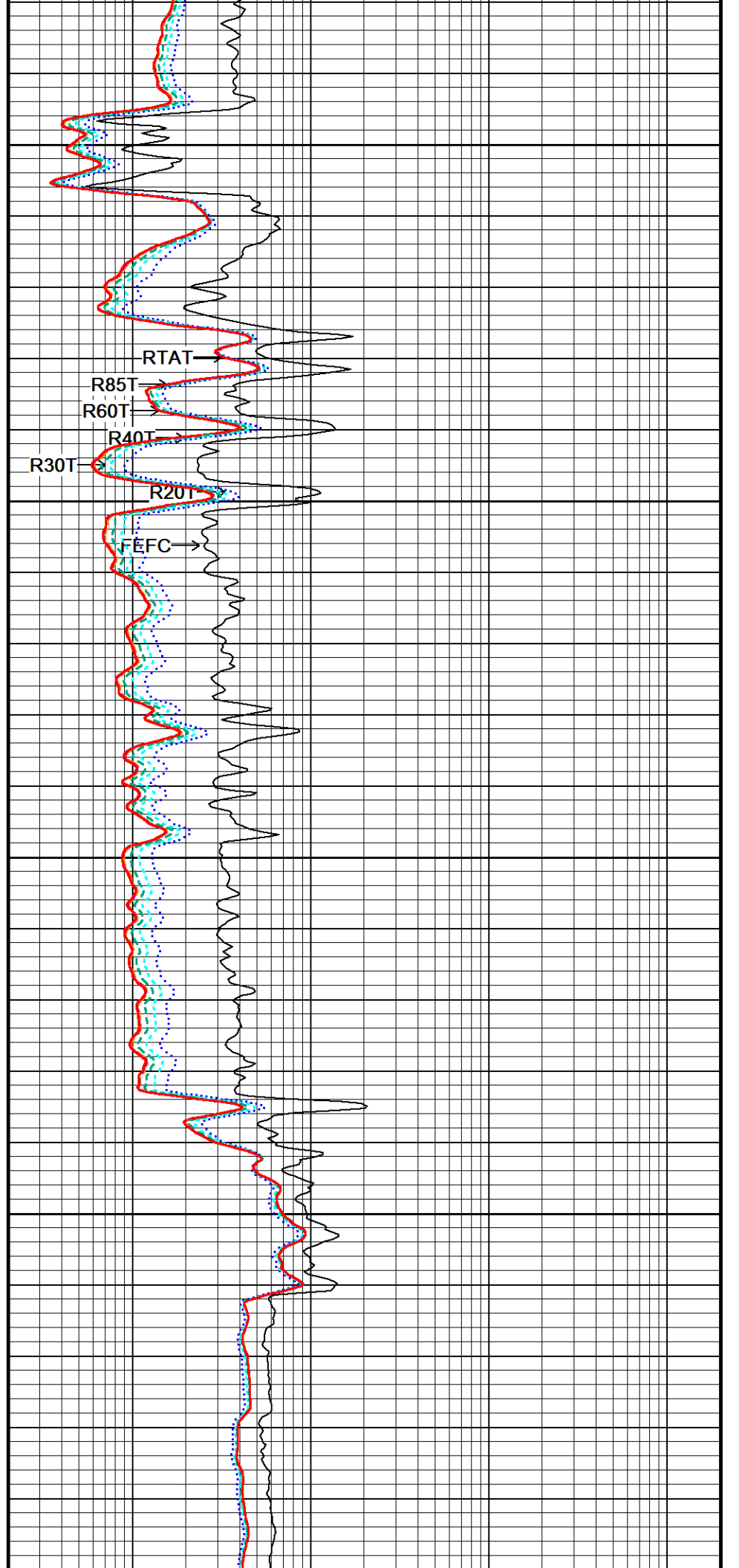
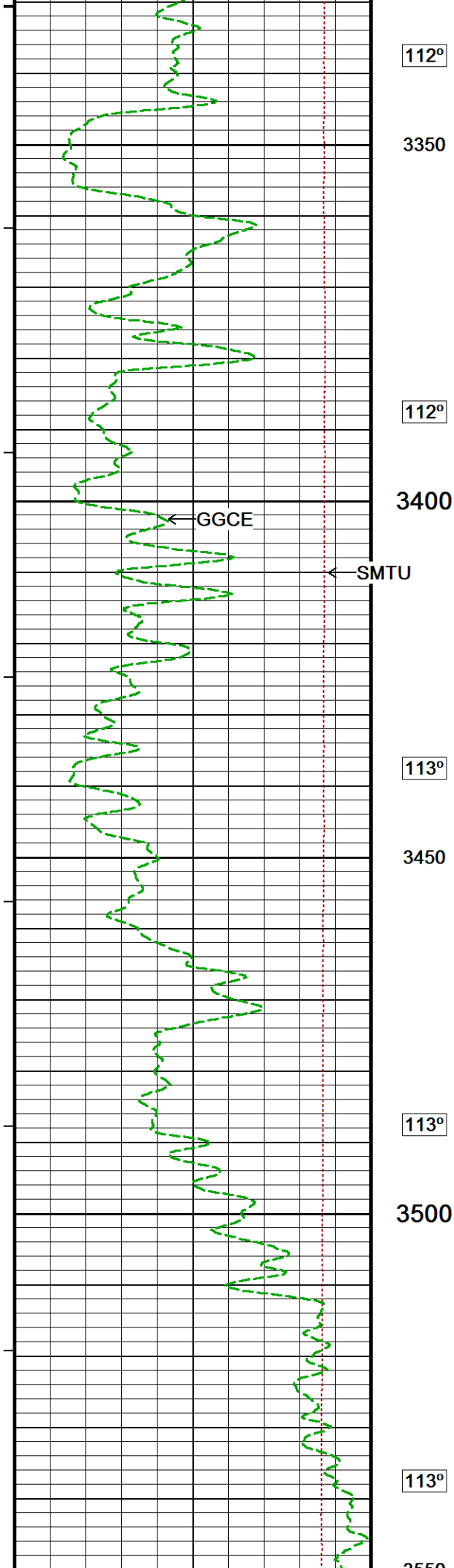


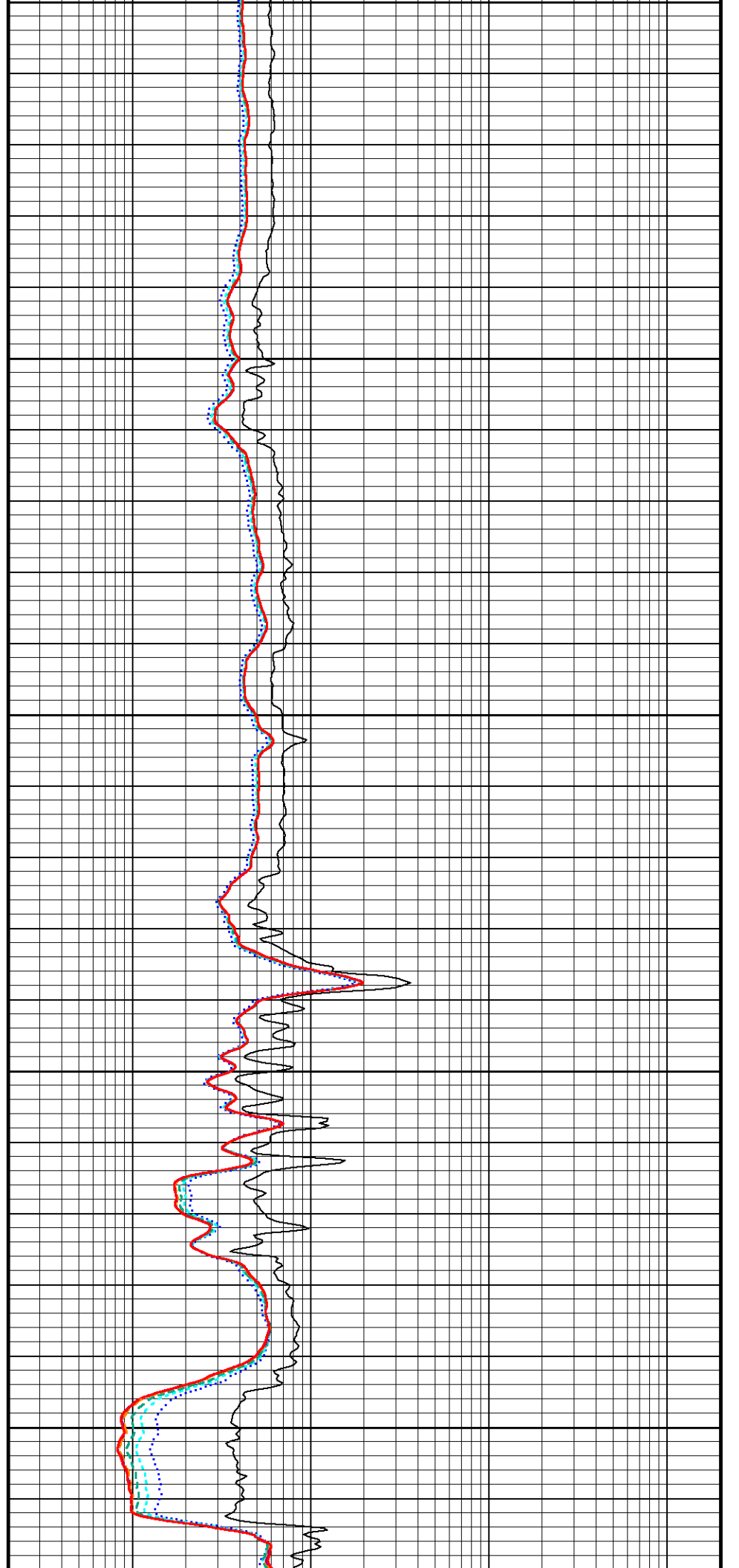
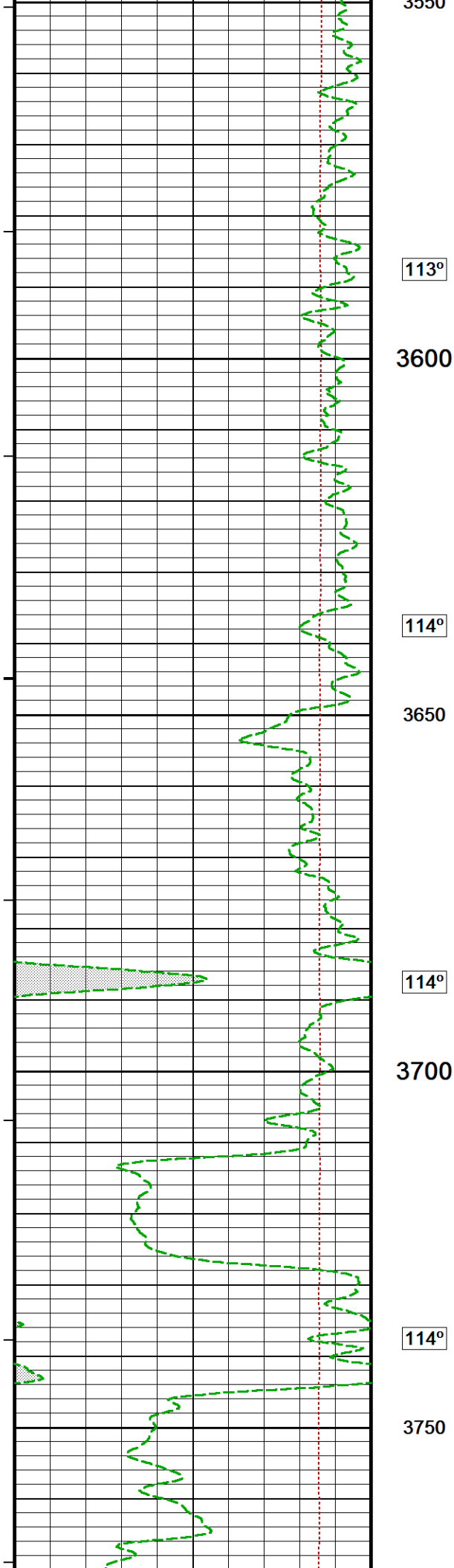


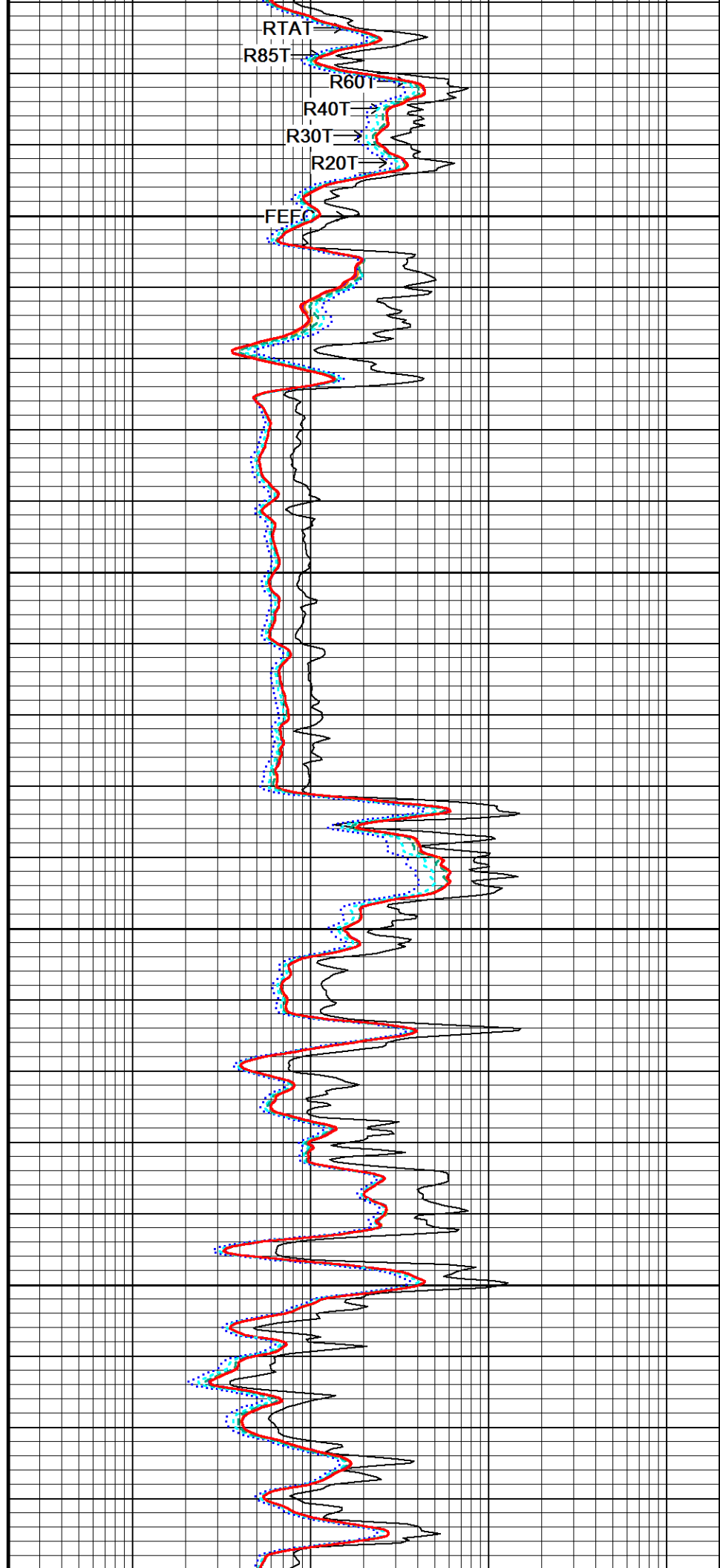
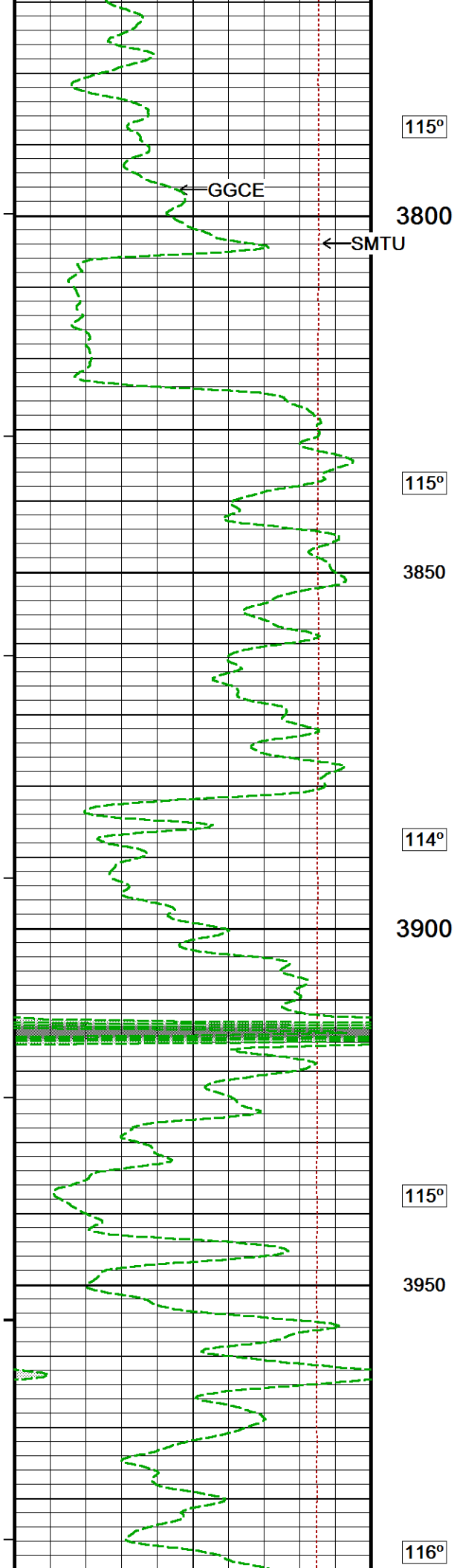


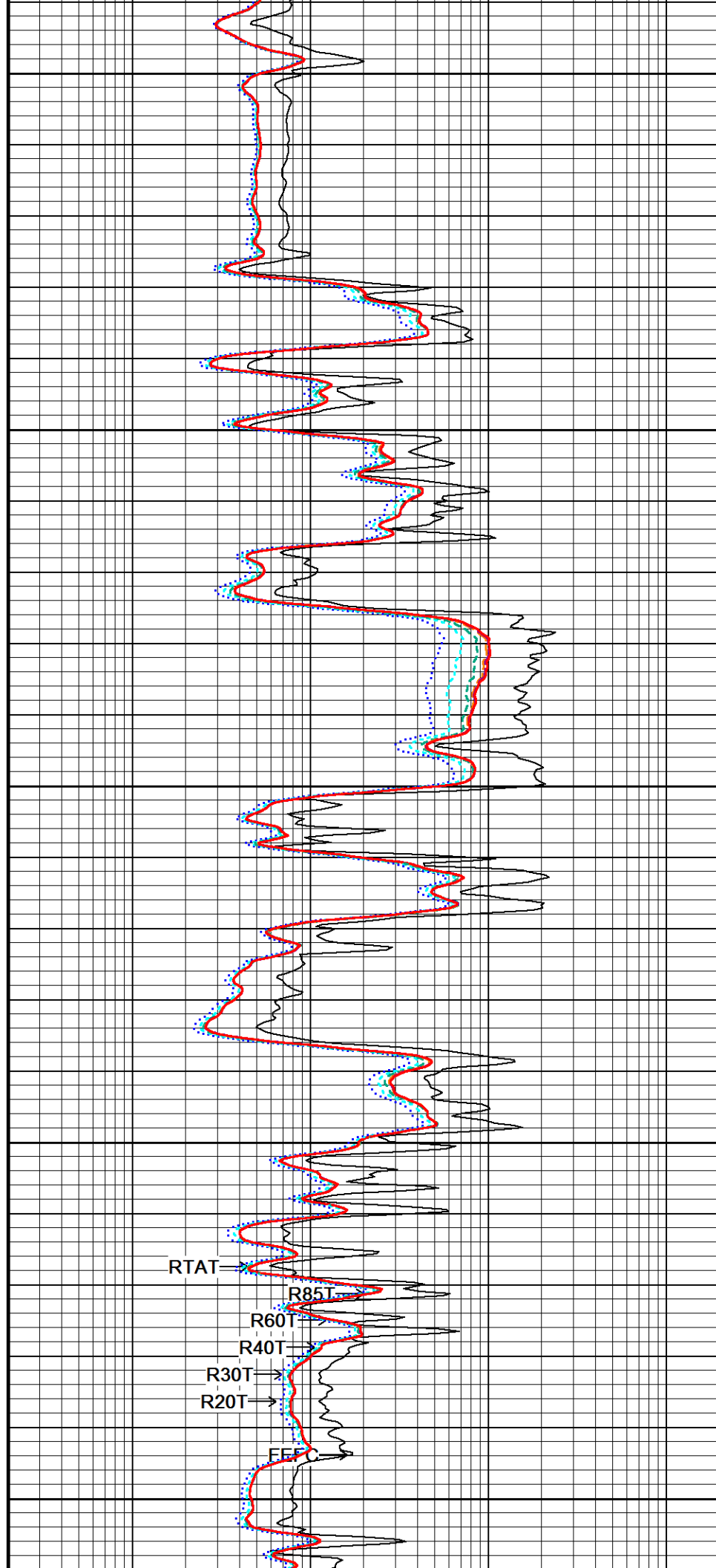
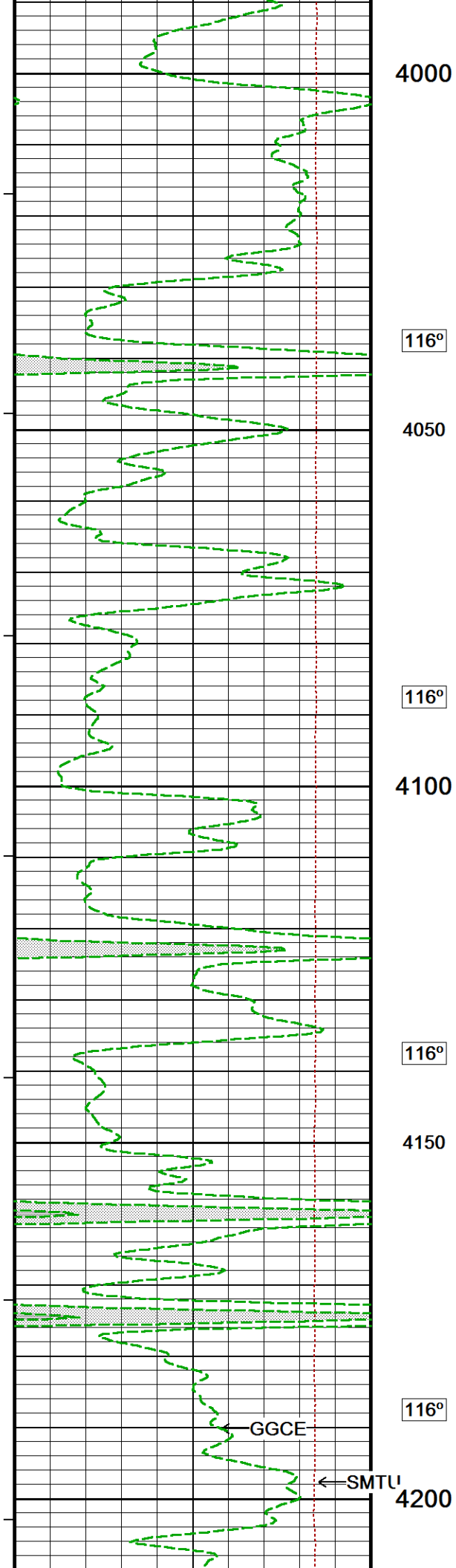


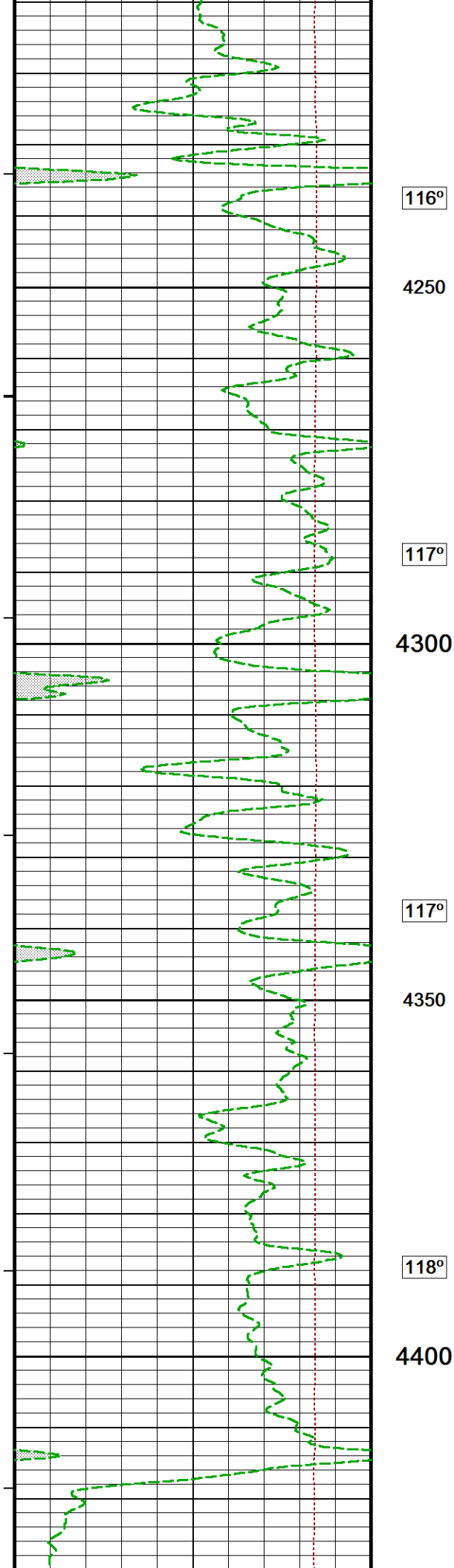












116°

4250

117°

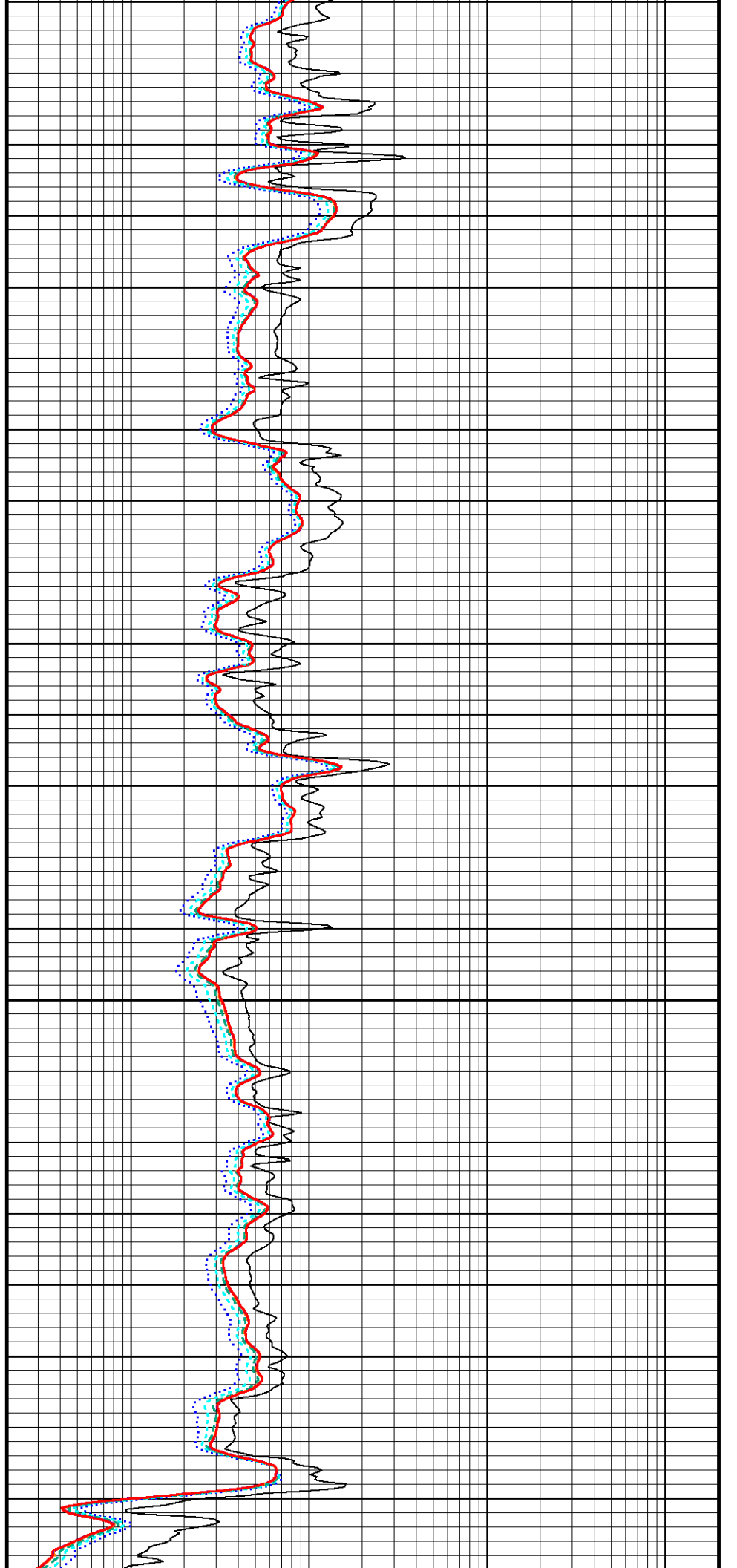
4300

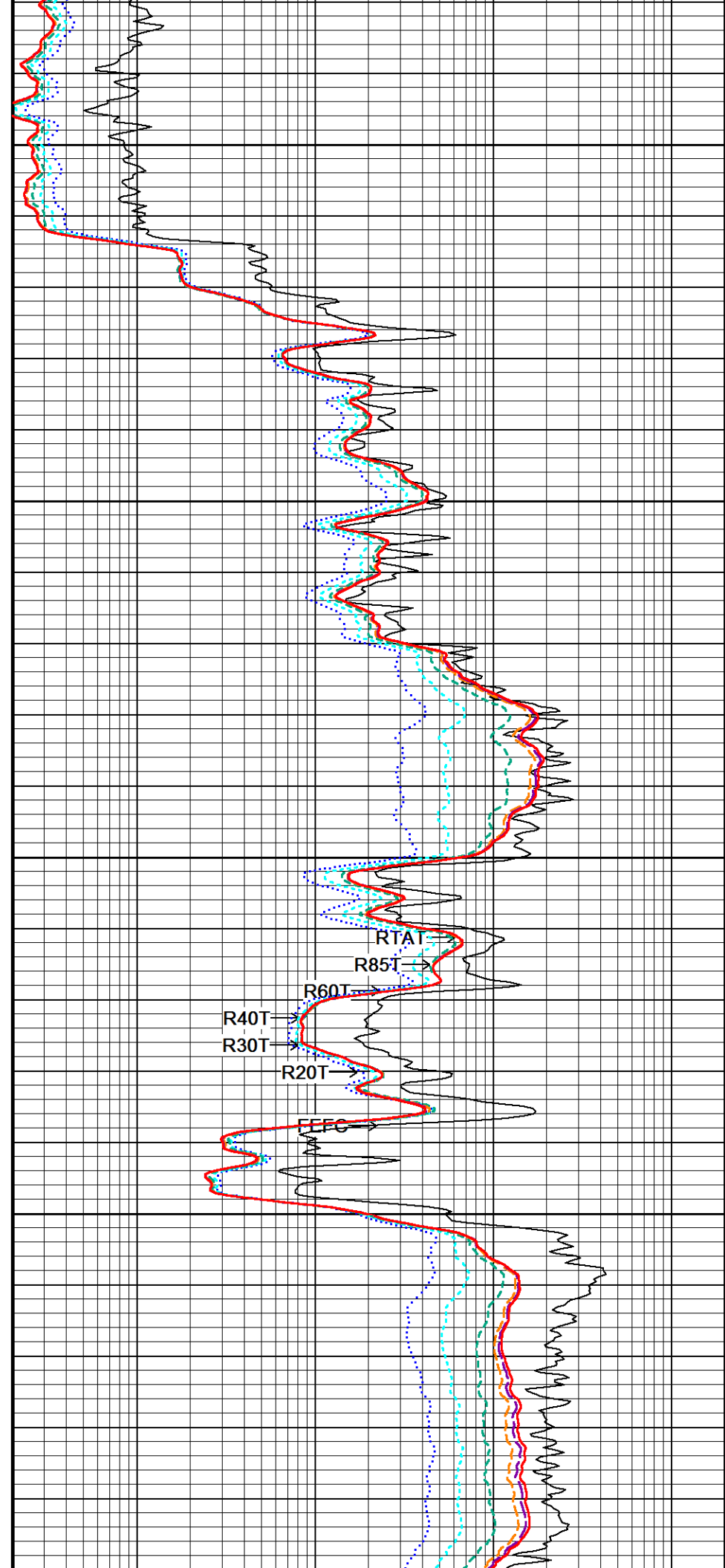
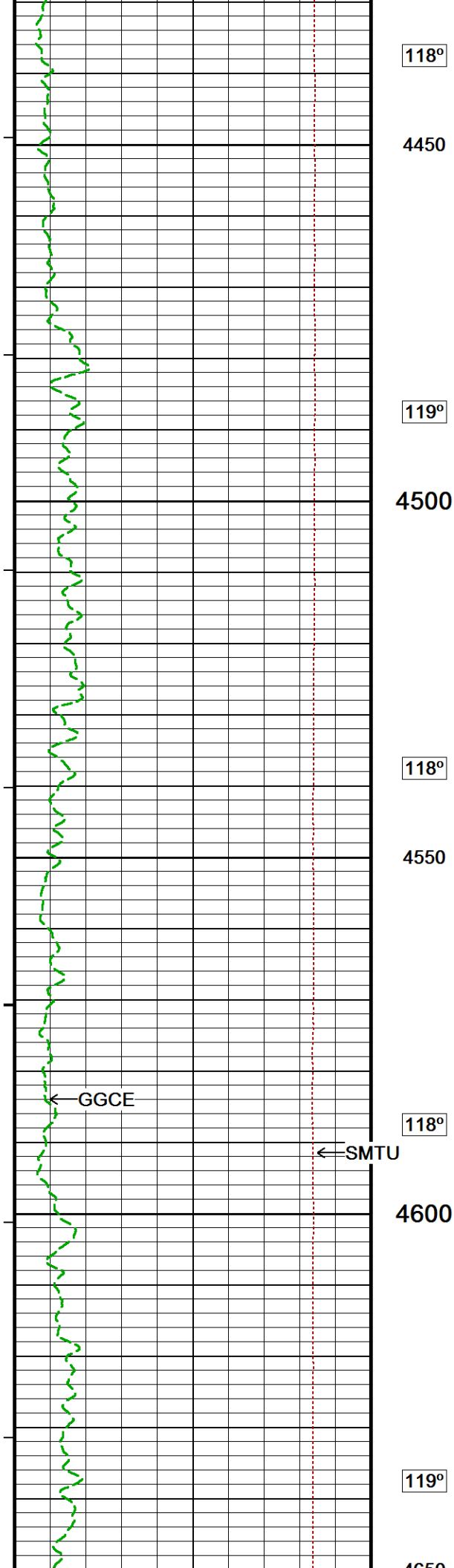
117°

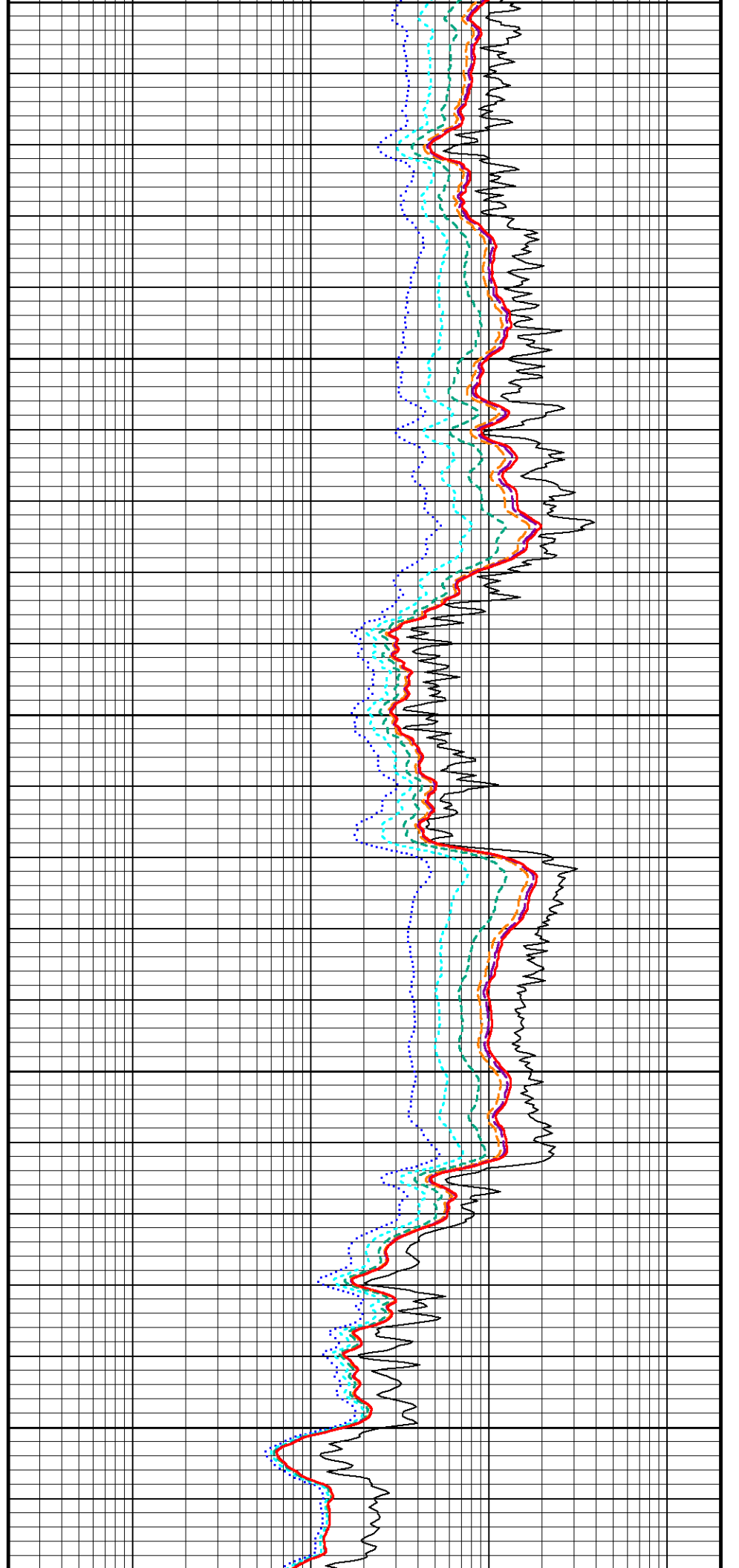
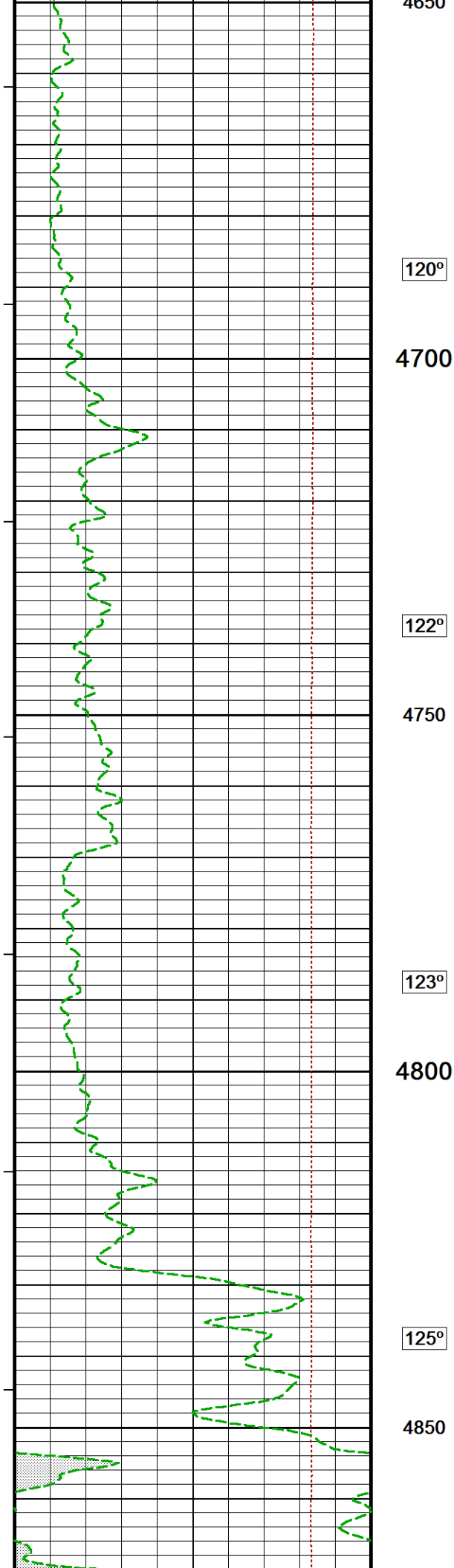
4350

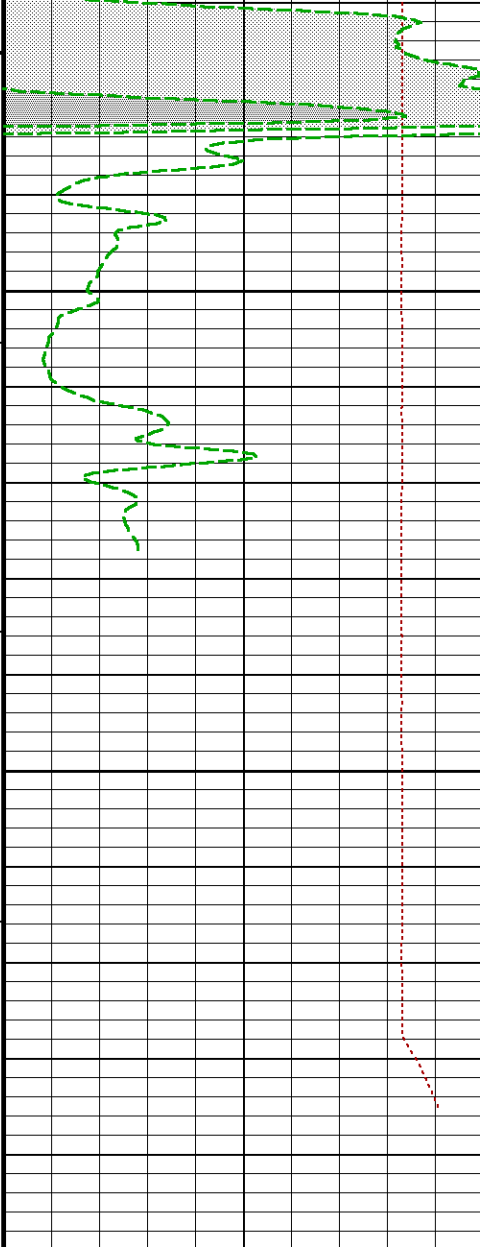
118°

4400









125°

4900

4950

TD

5000

Depth
in
Feet

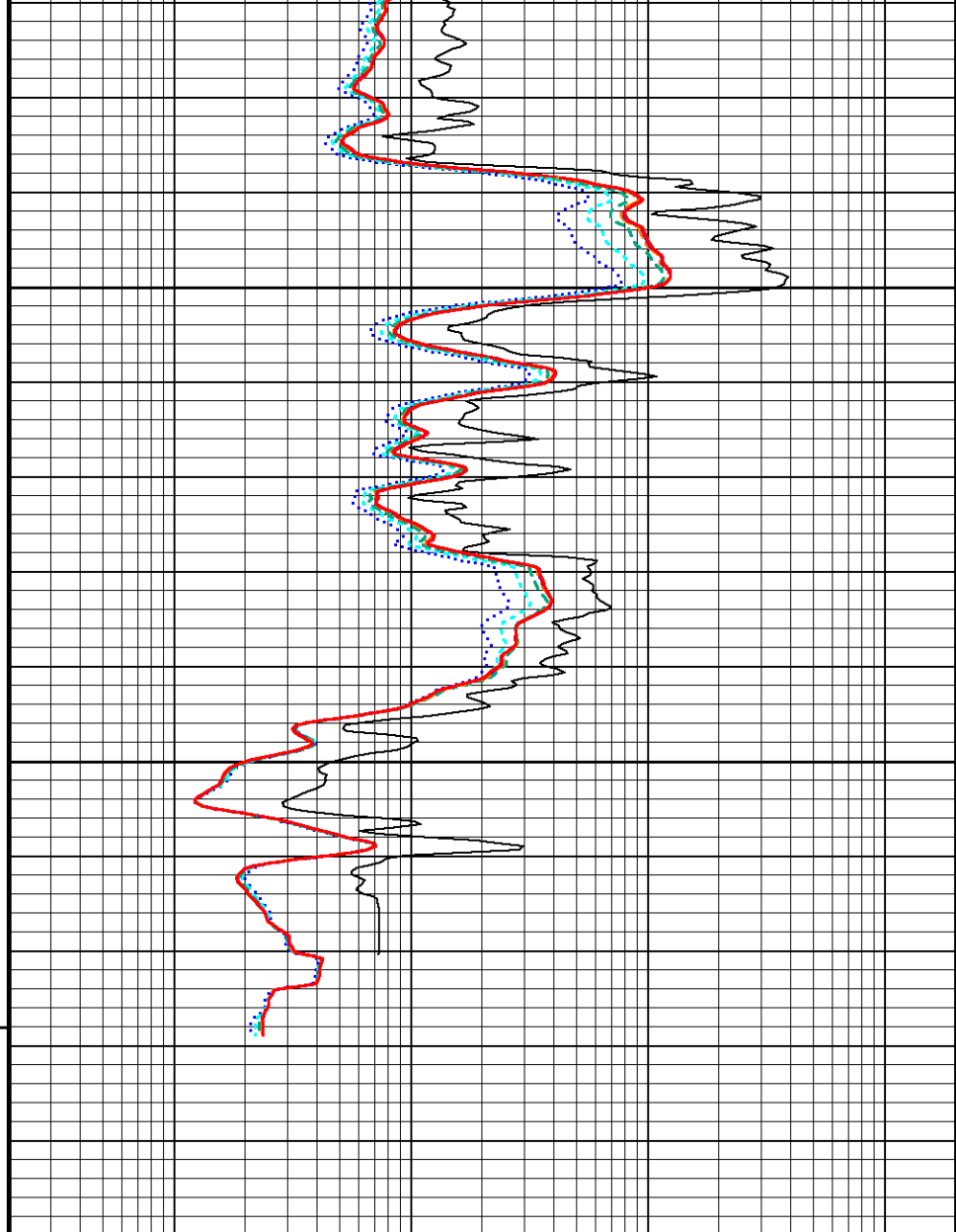
Timing Marks
every 60.0 sec

DST Uphole Tension

pounds

10000 5000 0

Borehole
Temp in
deg F



Shallow FE (Phase Corr.)
ohm metres

0.20 1 10 100 1000 2000

Array Ind. Two Res 20
ohm metres

0.20 1 10 100 1000 2000

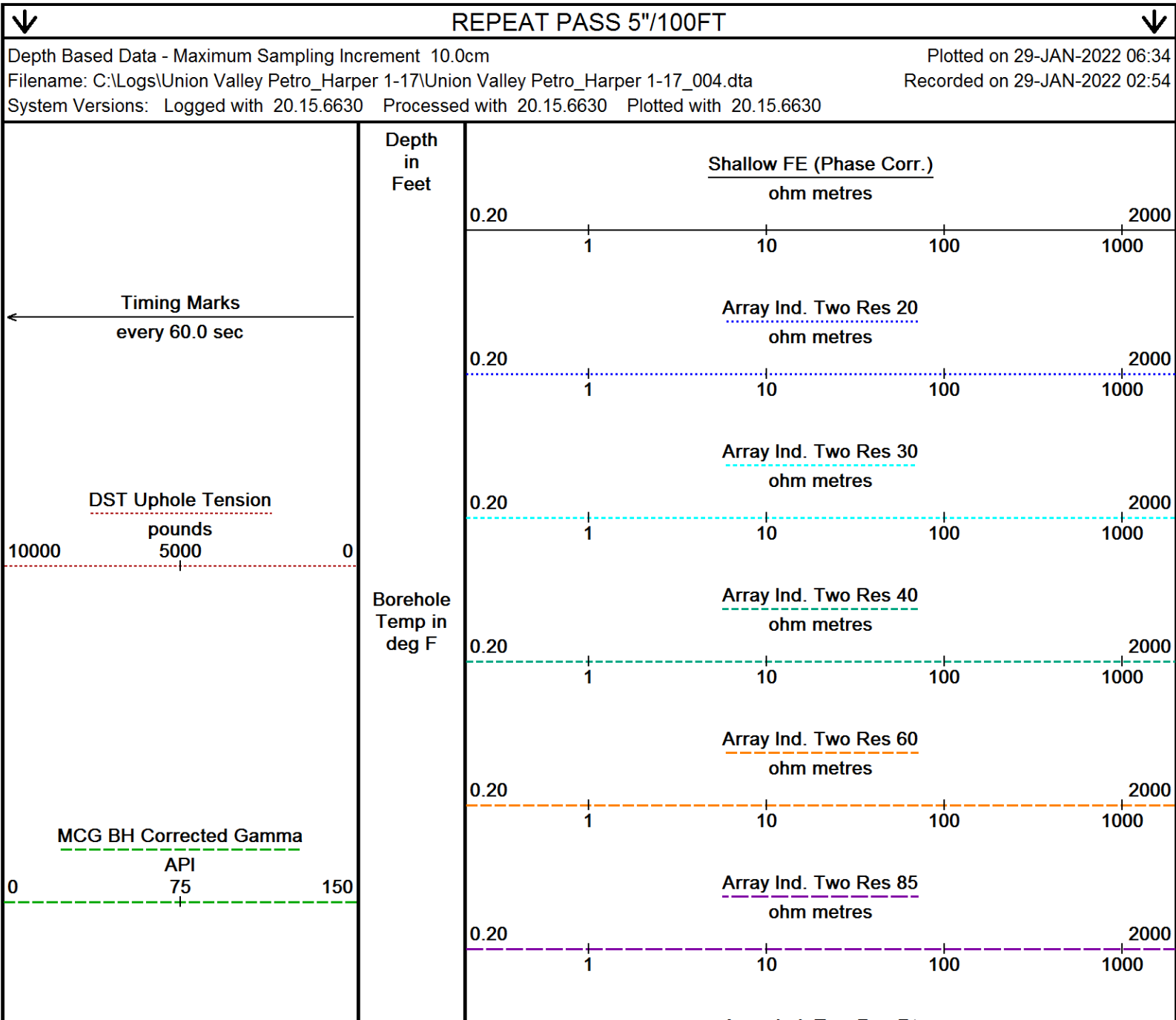
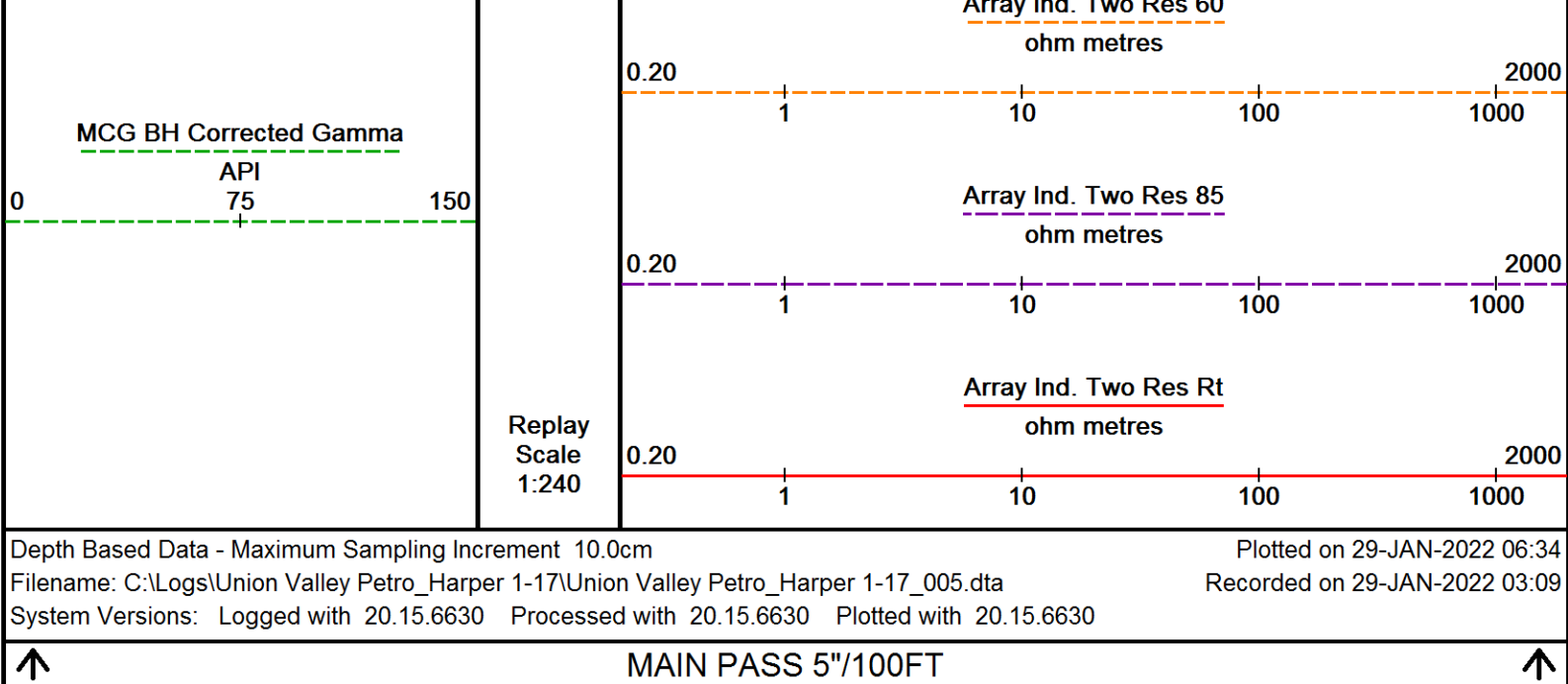
Array Ind. Two Res 30
ohm metres

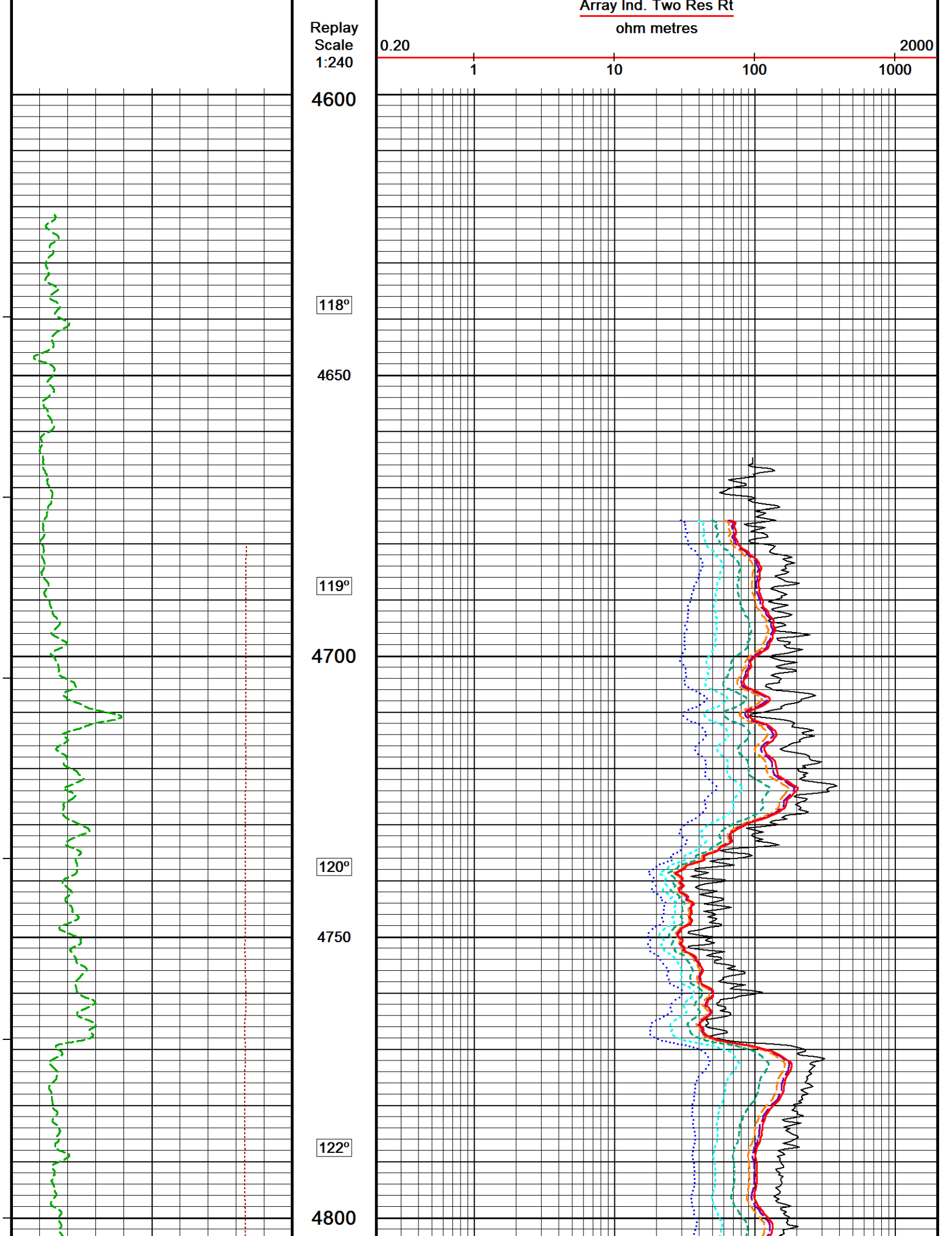
0.20 1 10 100 1000 2000

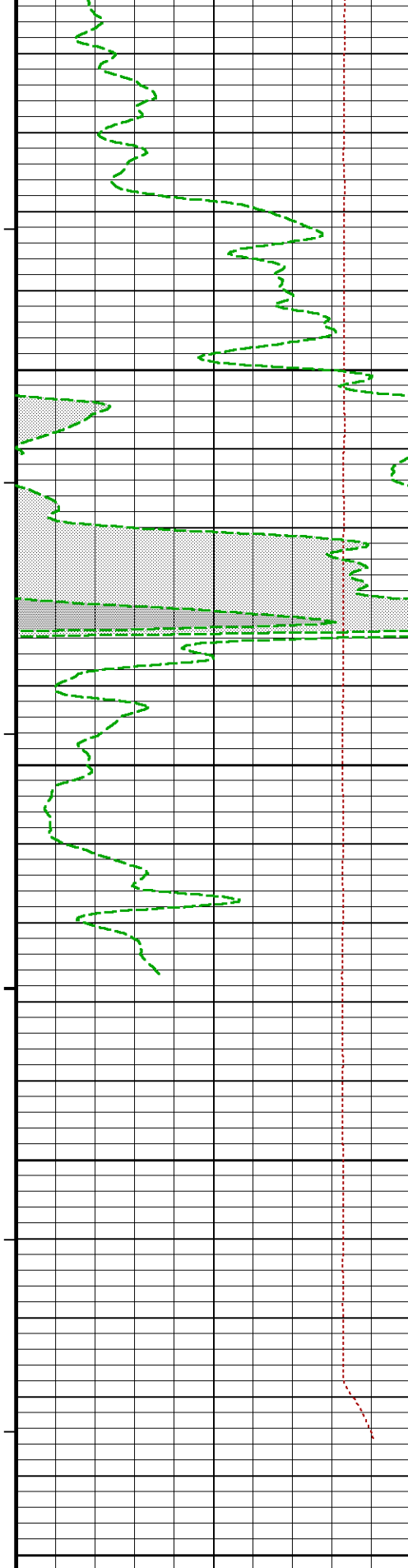
Array Ind. Two Res 40
ohm metres

0.20 1 10 100 1000 2000

Array Ind. Two Res 60







123°

4850

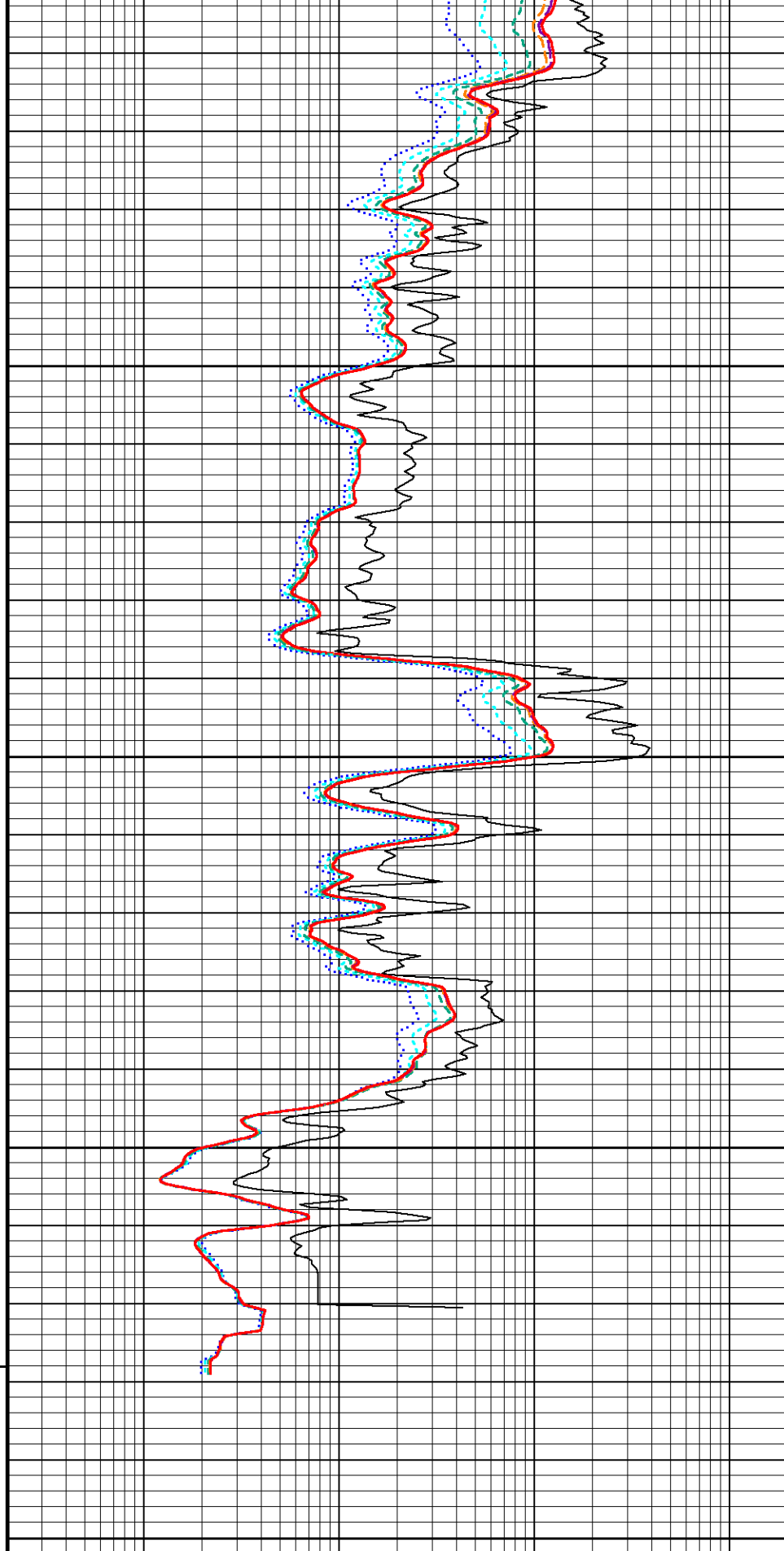
124°

4900

4950

TD

5000
Depth
in
Feet



Shallow FE (Phase Corr.)
ohm metres

0.20

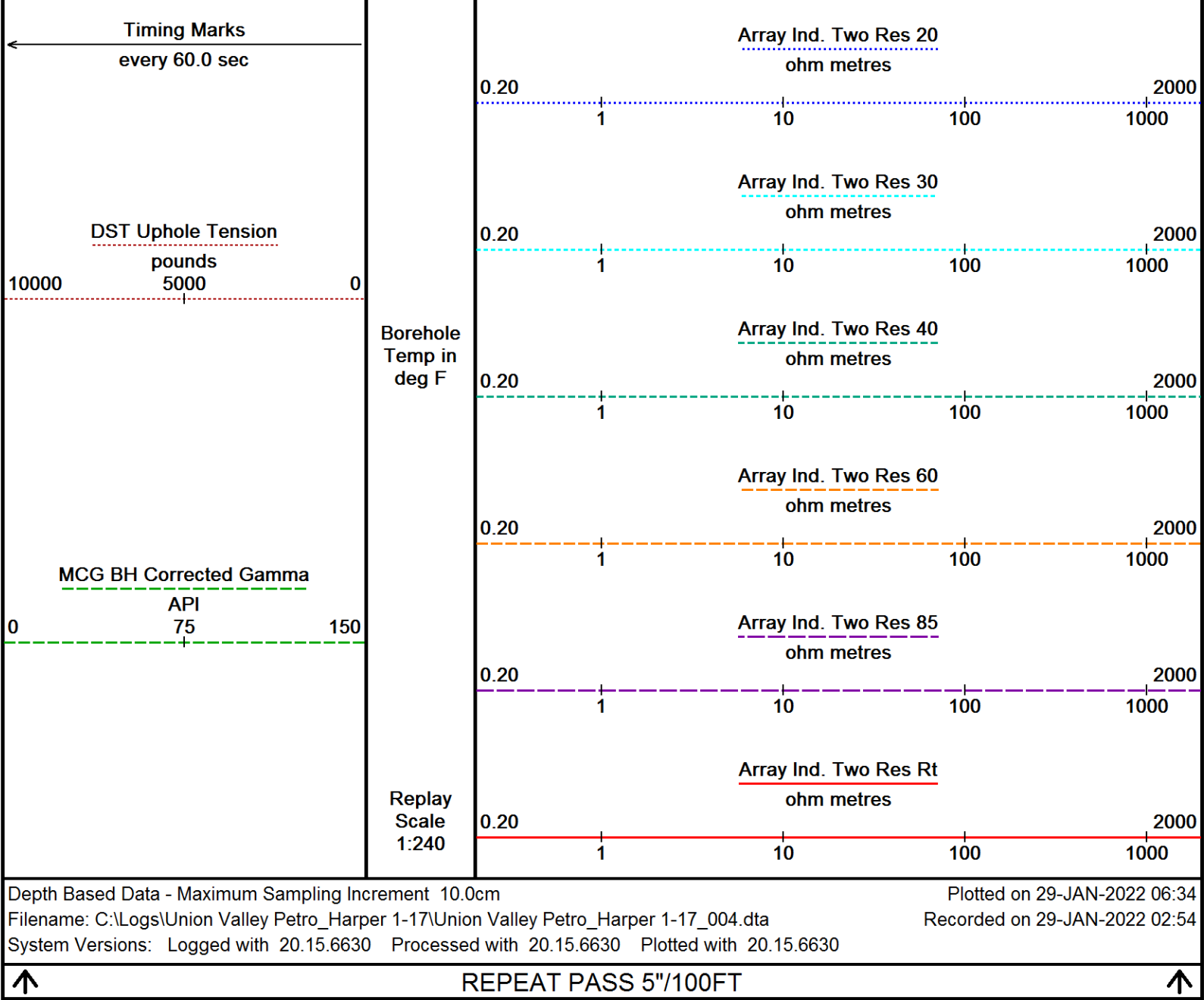
1

10

100

1000

2000



BEFORE SURVEY CALIBRATION		
C:\Logs\Union Valley Petro_Harper 1-17\Union Valley Petro_Harper 1-17_005.dta		
General Constants All 000		Last Edited on 29-JAN-2022,02:51
General Parameters		
Mud Resistivity	1.340	ohm-metres
Mud Resistivity Temperature	65.000	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	None	
Rwa Parameters		
Porosity used	Limestone Density Por.	
Resistivity used	Array Ind. Four Res Rt	
RWA Constant A	0.620	
RWA Constant M	2.150	
SW/APOR Tool Source	0.000	

High Resolution Temperature Calibration MCG-E.A 574			Field Calibration on 21-JAN-2022,22:54		
	Measured	Calibrated(Deg F)			
Lower	0.00	0.00			
Upper	0.00	0.00			
High Resolution Temperature Constants MCG-E.A 574			Last Edited on 29-JAN-2022,00:01		
Pre-filter Length	11				
Gamma Calibration MCG-E.A 574			Field Calibration on 04-JAN-2022 15:47		
	Measured	Calibrated (API)			
Background	68	46			
Calibrator (Gross)	856	580			
Calibrator (Net)	788	534			
Gamma Calibration Tolerances MCG-E.A 574					
Ratio	1.476	1.40 1.475 1.55	Counts/API		
Gamma Constants MCG-E.A 574			Last Edited on 29-JAN-2022,00:01		
Gamma Calibrator Number	GRCC-225				
GRC-M Calibrator Jig in Use?	NO				
Inactive Background Jig in Use?	NO				
Mud Density	1.09	gm/cc			
Caliper Source for Processing	Density Caliper				
Tool Position	Eccentred				
Potassium Equivalence	Chloride				
K Mud Concentration	0.00	%			
FE Calibration MFE-C.A 396			Base Calibration on 13-AUG-2021,18:56		
	Resistor 1 (ohm)	Resistor 2 (ohm)			
	0.0	1000.0			
Base Calibration					
	Measured	Calibrated (ohm-m)			
Reference 1	0.0	0.0			
Reference 2	962.7	126.8			
Base Check			281.6		
Field Check					
FE Calibration Tolerances MFE-C.A 396					
Reference 2	962.7	-3% 980.0 +3%	ohm		
Base Check	281.6	-2% 277.0 +2%	ohm-m		
Field Check	0.0	-2% 281.6 +2%	ohm-m		
FE Constants MFE-C.A 396			Last Edited on 22-JAN-2022,02:02		
Running Mode	No Sleeve				
MFE K Factor	0.1268				
Borehole Correction Constants					
Sonde Position	0.5	inches			
Hole Size Source	Bit Size				
Hole Size Constant Value	2.25	inches			
Rm Source	Global Value: Constant Temperature				
Temp. for Rm Corr.	N/A				
Induction Calibration MAI-C.A 446			Factory Loop Calibration 12-MAR-2012,07:36		
Factory Loop Calibration			Field Check on 01-SEP-2021,18:49		
High Conductivity Reference Resistor	3.3	ohm			
Low Conductivity Reference Resistor	333.3	ohm			
Measured Signal (unitless)	Reference Conductivity (mmho/m)		Calibration		

Array	Low	High	Low	High	Gain	Offset
1 (near)	16.4	445.8	9.3	966.2	0.000	0.0
2	6.0	367.6	7.6	821.4	0.000	0.0
3	3.3	249.2	5.2	566.0	0.000	0.0
4 (far)	1.6	129.1	2.6	279.2	0.000	0.0

Array Temperature 74.1 Deg F

Tool Checks 24-JAN-2022,12:20

Array	Factory Reference (mmho/m)		Before Survey (mmho/m)		
	Low	High	Low	High	
1 (near)	-5.1	2164.2	-4.6	2164.1	
2	13.9	1955.7	14.3	1955.5	
3	14.9	1692.8	15.2	1692.6	
4 (far)	10.5	1141.4	10.8	1141.4	
Array Temperature	103.2		80.9		Deg F

Tool Zero Corrections

Array		
1 (near)	0.0	mmho/m
2	0.0	mmho/m
3	0.0	mmho/m
4 (far)	0.0	mmho/m

Induction Check Tolerances MAI-C.A 446

Low Array 1	-4.6		mmho/m	High Array 1	2164.1		mmho/m
Low Array 2	14.3		mmho/m	High Array 2	1955.5		mmho/m
Low Array 3	15.2		mmho/m	High Array 3	1692.6		mmho/m
Low Array 4	10.8		mmho/m	High Array 4	1141.4		mmho/m

Induction Constants MAI-C.A 446

Last Edited on 29-JAN-2022,02:51

Induction Model RtAP-WBM

Borehole Correction Constants

Tool Centred	No	
Hole Size Source	Density Caliper	
Hole Size Constant Value	N/A	inches
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	0.7500	inches
Rm Source	Global Value: Constant Temperature	
Temp. for Rm Corr.	N/A	
Borehole Correction Method	Default	
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

Symmetrised Receiver Gains

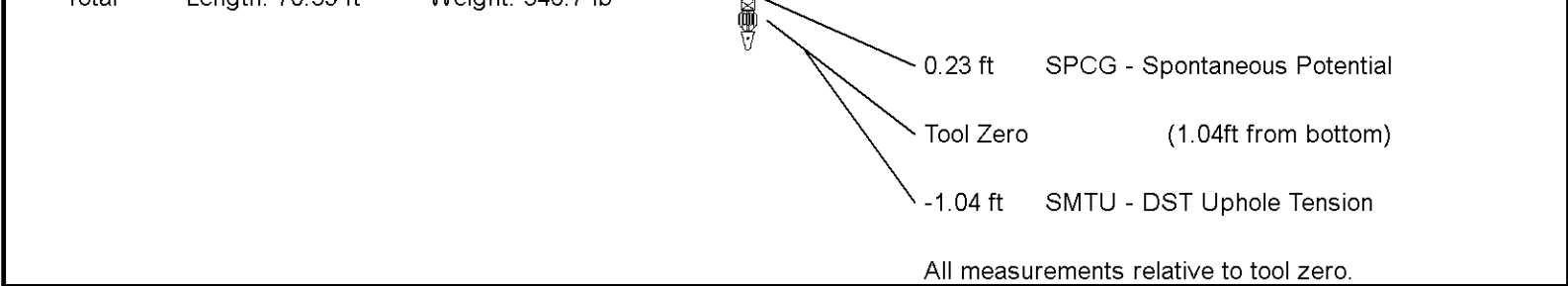
Receiver 1	1.00
Receiver 2	1.00

Receiver 3	1.00	
Receiver 4	1.00	
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	

DOWNHOLE EQUIPMENT

C:\Logs\Union Valley Petro_Harper 1-17\Union Valley Petro_Harper 1-17_005.dta

Cablehead, 11 pin CBH-CA 226 LG: 2.40 ft WT: 24.3 lb OD: 2.244 in		
11C-11B Compact Tool Adaptor MTA-K.B 304 LG: 1.53 ft WT: 13.2 lb OD: 2.240 in		
Compact Swivel Head Adaptor SHA-J.B 574 LG: 2.30 ft WT: 22.0 lb OD: 2.244 in		
Compact Comms Gamma MCG-E.A 574 LG: 8.70 ft WT: 63.9 lb OD: 2.244 in	58.18 ft	GGCE - MCG BH Corrected Gamma
	56.00 ft	CCLG - Casing Collar Locator
	55.28 ft	CGXT - MCG External Temperature
Compact Micro-Resistivity MMR-A 32 LG: 8.59 ft WT: 81.6 lb OD: 4.882 in	47.93 ft	MINV - Micro-inverse
	47.93 ft	MNRL - Micro-normal
Compact Neutron MDN-C.A 462 LG: 5.04 ft WT: 50.7 lb OD: 2.240 in	43.13 ft	NPRL - Limestone Neutron Por.
Compact Density/Caliper MPD-C.J 380 LG: 9.59 ft WT: 90.4 lb OD: 2.449 in	35.89 ft	AVOL - Annular Volume
	35.89 ft	HVOL - Hole Volume
	35.89 ft	CLDC - Density Caliper
	33.96 ft	DPRL - Limestone Density Por.
	33.96 ft	DCOR - Density Correction
Compact Knuckle Joint SKJ-E.B 557 LG: 2.17 ft WT: 24.3 lb OD: 2.244 in	33.90 ft	PDPE - PE
Compact Sonic MSS-C.K 376 LG: 12.52 ft WT: 72.8 lb OD: 2.244 in		
Compact Focussed Electric MFE-C.A 396 LG: 6.05 ft WT: 48.5 lb OD: 2.244 in	19.01 ft	DT35 - 3-5' Compensated Sonic
	19.01 ft	SPRL_W - Wyllie Lmst Sonic Por.
Compact Induction MAI-C.A 446 LG: 10.81 ft WT: 48.5 lb OD: 2.240 in	13.91 ft	FEFC - Shallow FE (Phase Corr.)
	3.34 ft	R40T - Array Ind. Two Res 40
	3.34 ft	R30T - Array Ind. Two Res 30
	3.34 ft	R20T - Array Ind. Two Res 20
	3.34 ft	R60T - Array Ind. Two Res 60
	3.34 ft	RTAT - Array Ind. Two Res Rt
	3.34 ft	R85T - Array Ind. Two Res 85
Pressure Bung + Hole Finder HFS 3 LG: 0.91 ft WT: 6.6 lb OD: 2.240 in		
Total Length: 70.59 ft Weight: 546.7 lb		



COMPANY	UNION VALLEY PETROLEUM CORP.		
WELL	HARPER 1-17		
FIELD	CALDWELL		
PROVINCE/COUNTY	SUMNER		
COUNTRY/STATE	KANSAS		
Elevation Kelly Bushing	1154.00	feet	Last Reading 394.00 feet
Elevation Drill Floor	1153.00	feet	First Reading 4977.00 feet
Elevation Ground Level	1141.00	feet	Depth Driller 4975.00 feet
			Depth Logger 4978.00 feet
RECON ARRAY INDUCTION GAMMA RAY			

