WIRELINE LOGGING SOLUTIONS

ARRAY INDUCTION
SHALLOW FOCUSED
ELECTRIC LOG

COMPANY	NAVEX RESOURCES LLC
WELL	PFAFFLY #1-12
FIELD	NORTH CHEYENNE PROJECT/ PFAFFLY PROSPECT
COUNTY	KIT CARSON
STATE	COLORADO
LOCATION	1602' FSL & 1269' FWL

SEC 12	TWP 11S	RGE 46W	Other Services
Latitude	39.1037632	PHOTO-DENSITY	NEUTRON
Longitude	-102.5167609	COMPENSATED SONIC	MICRO LOG
API Number	05-063-06363		

Permanent Datum GL, Elevation 4466.9 feet
Log Measured From KB, 12.10 feet above Permanent Datum
Drilling Measured From KB

Elevations:	feet
KB	4479.00
DF	4479.00
GL	4466.90

Date	26-MAY-2023			
Run Number	ONE			
Service Order	T1-230526WFT			
Depth Driller	6076.00	feet		
Depth Logger	6082.00	feet		
First Reading	6078.00	feet		
Last Reading	648.00	feet		
Casing Driller	651.00	feet		
Casing Logger	648.00	feet		
Bit Size	7.875	inches		
Hole Fluid Type	WBM			
Density / Viscosity	9.10	lb/USg	63.00 sec/qt	
PH / Fluid Loss	10.00		8.00 ml/30Min	
Sample Source	FLOWLINE			
Rm @ Measured Temp	0.71 @ 86.0	ohm-m		
Rmf @ Measured Temp	0.61 @ 86.0	ohm-m		
Rmc @ Measured Temp	1.01 @ 86.0	ohm-m		
Source Rmf / Rmc	CALC	CALC		
Rm @ BHT	0.36 @154.0	ohm-m		
Time Since Circulation	8 HRS			
Max Recorded Temp	154.00	deg F		
Equipment / Base	10001	OKC		
Recorded By	B. GRAHMANN			
Witnessed By	CRAIG ADAMS			
Rig Name	DUKE #9			

BOREHOLE RECORD

Last Edited: 26-MAY-2023 11:08

Bit Size inches	Depth From feet	Depth To feet
12.250	0.00	651.00
7.875	651.00	6076.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	651.00	36.00

REMARKS

WWLS VERSION 21.11

- TOOLSTRING:
  RUN 1 : MAI, MSS, MFE, SKJ, MVC, MPD, MDN, MMR, MCG, SHA, MTA, CBHC

- HARDWARE USED:
  MAI: 1" STANDOFF
  MFE: 1" STANDOFF
  MSS: 1" STANDOFFS
  MDN: DUAL ECCENTERED BOWSPRING

- 2.71 G/CC DENSITY MATRIX USED TO CALCULATE POROSITY.

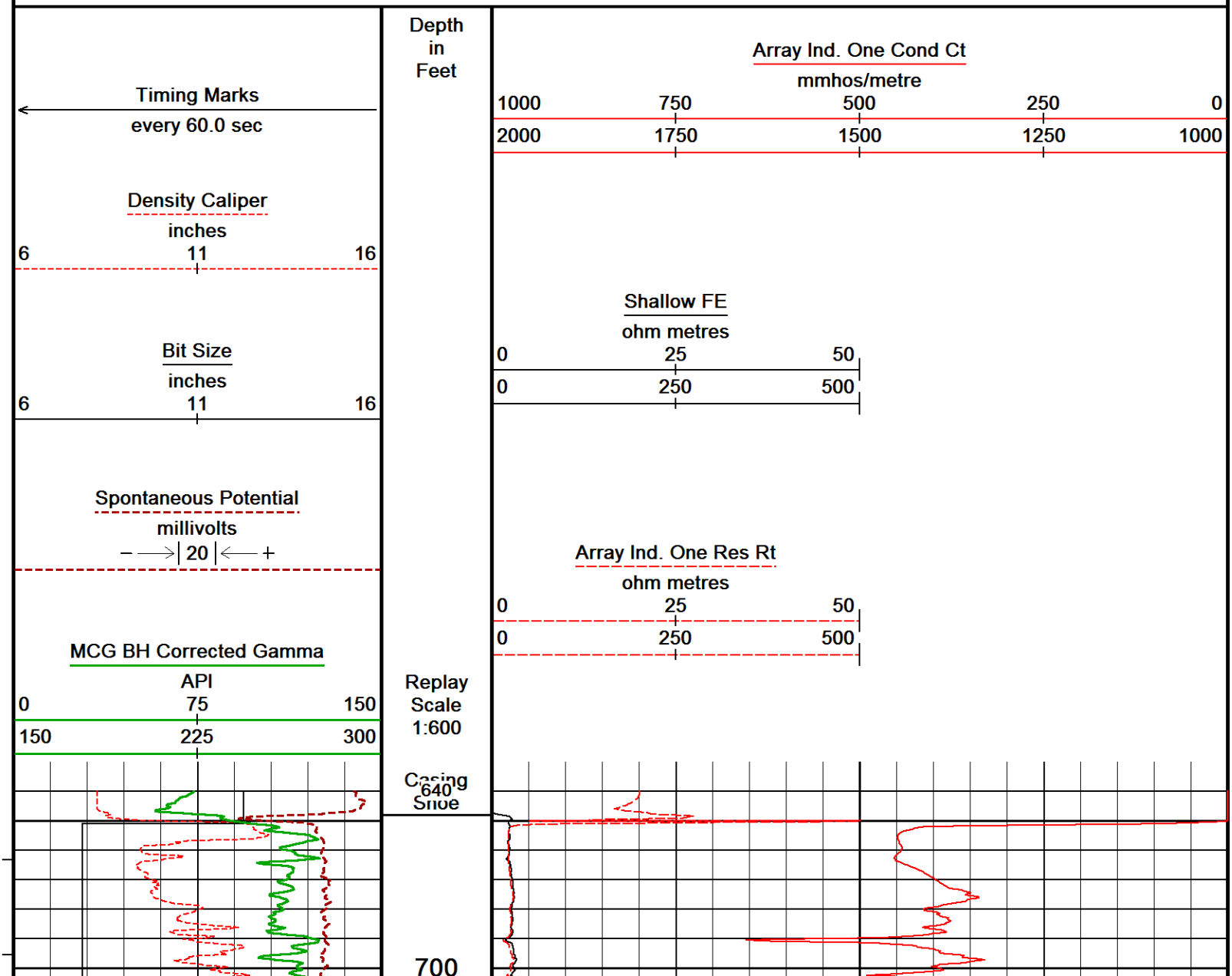
- ANNULAR HOLE VOLUME WITH 5.5 INCH PRODUCTION CASING FROM TD TO SURFACE CASING

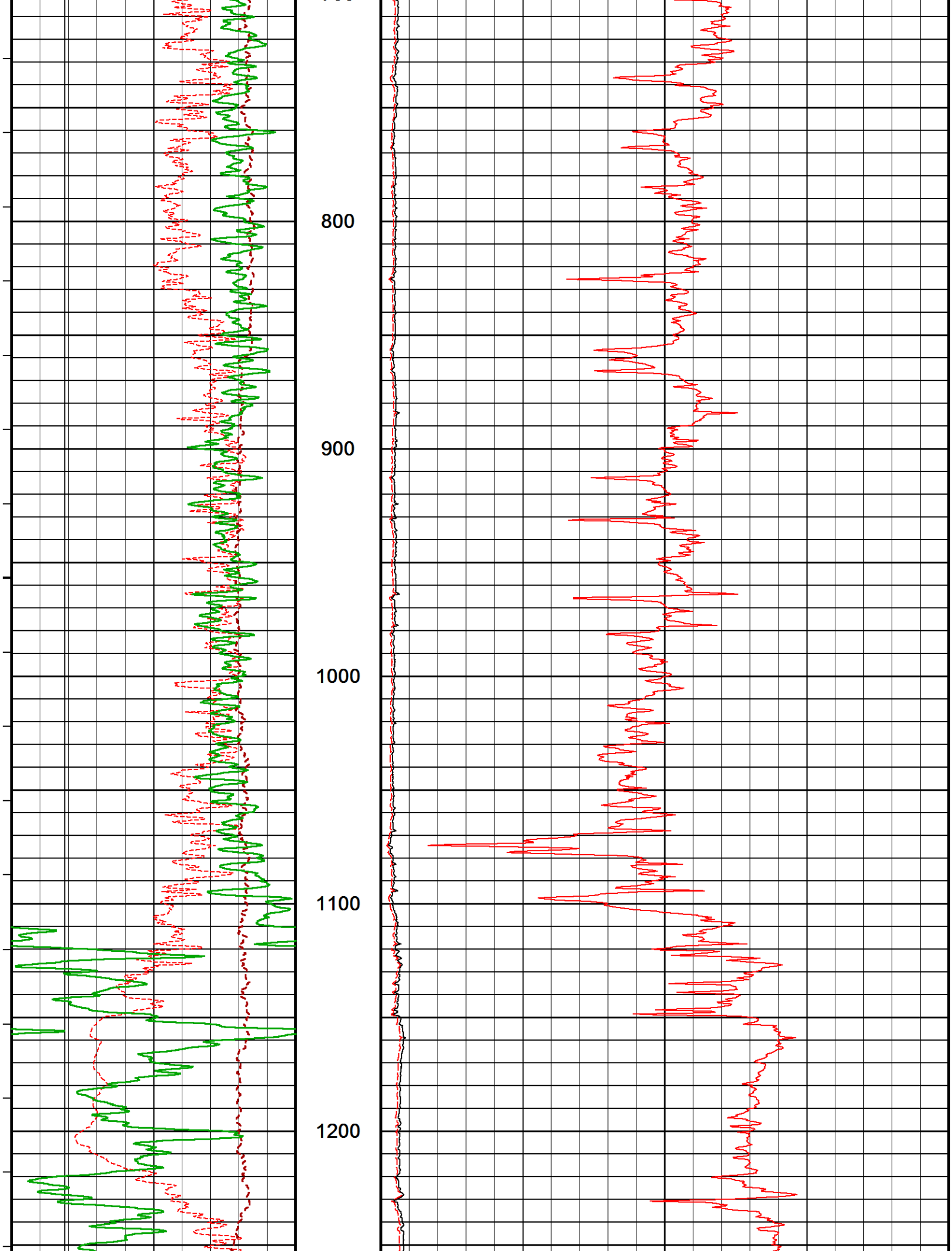
- CREW
J. WILLIS, D. STEELE

2 INCH MAIN PASS

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:_LOGS\Trek Resources\Pfaffly #1-12\MainPass.dta
System Versions: Logged with 21.11.3172 Plotted with 21.11.3172

Plotted on 26-MAY-2023 17:19
Recorded on 26-MAY-2023 13:17

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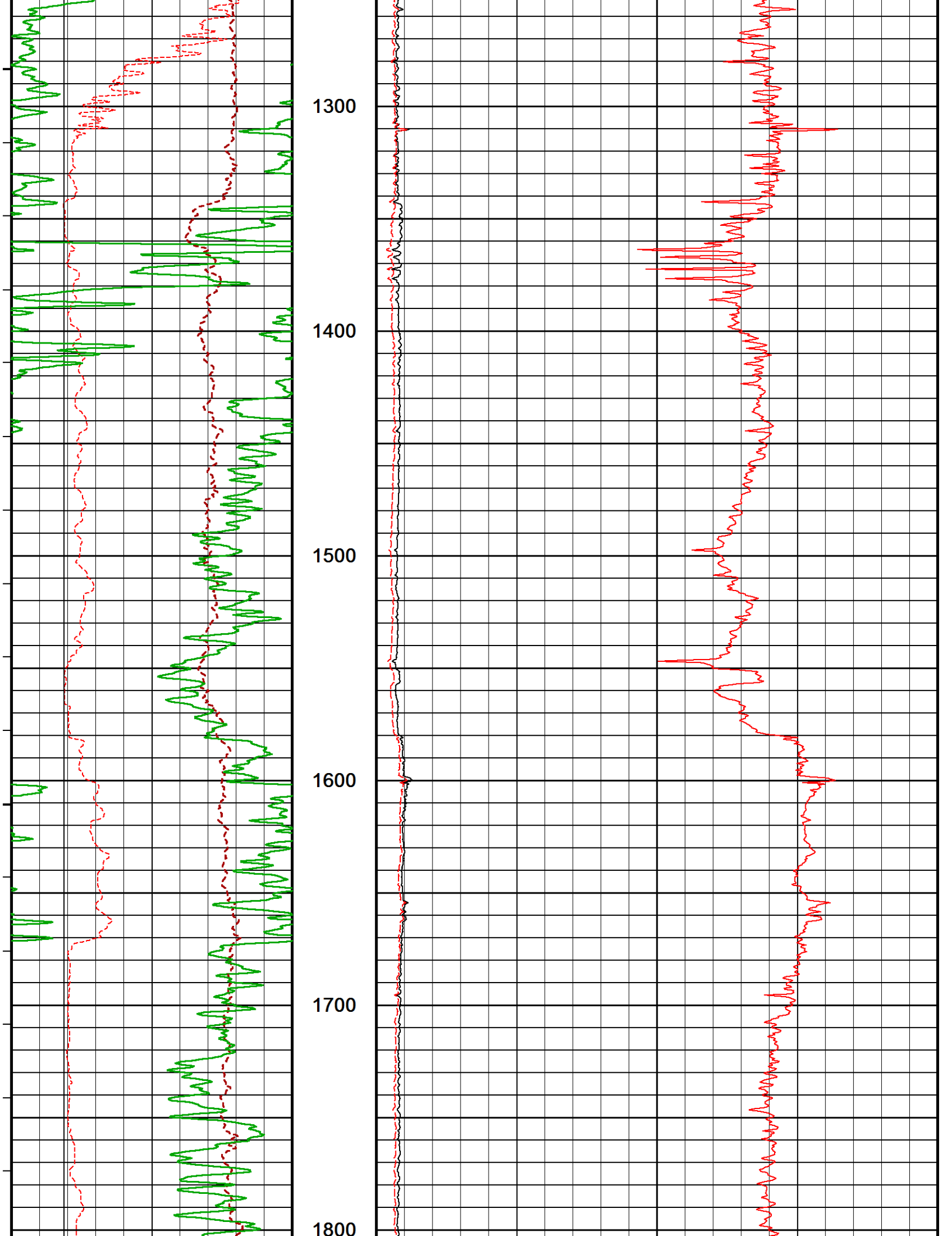
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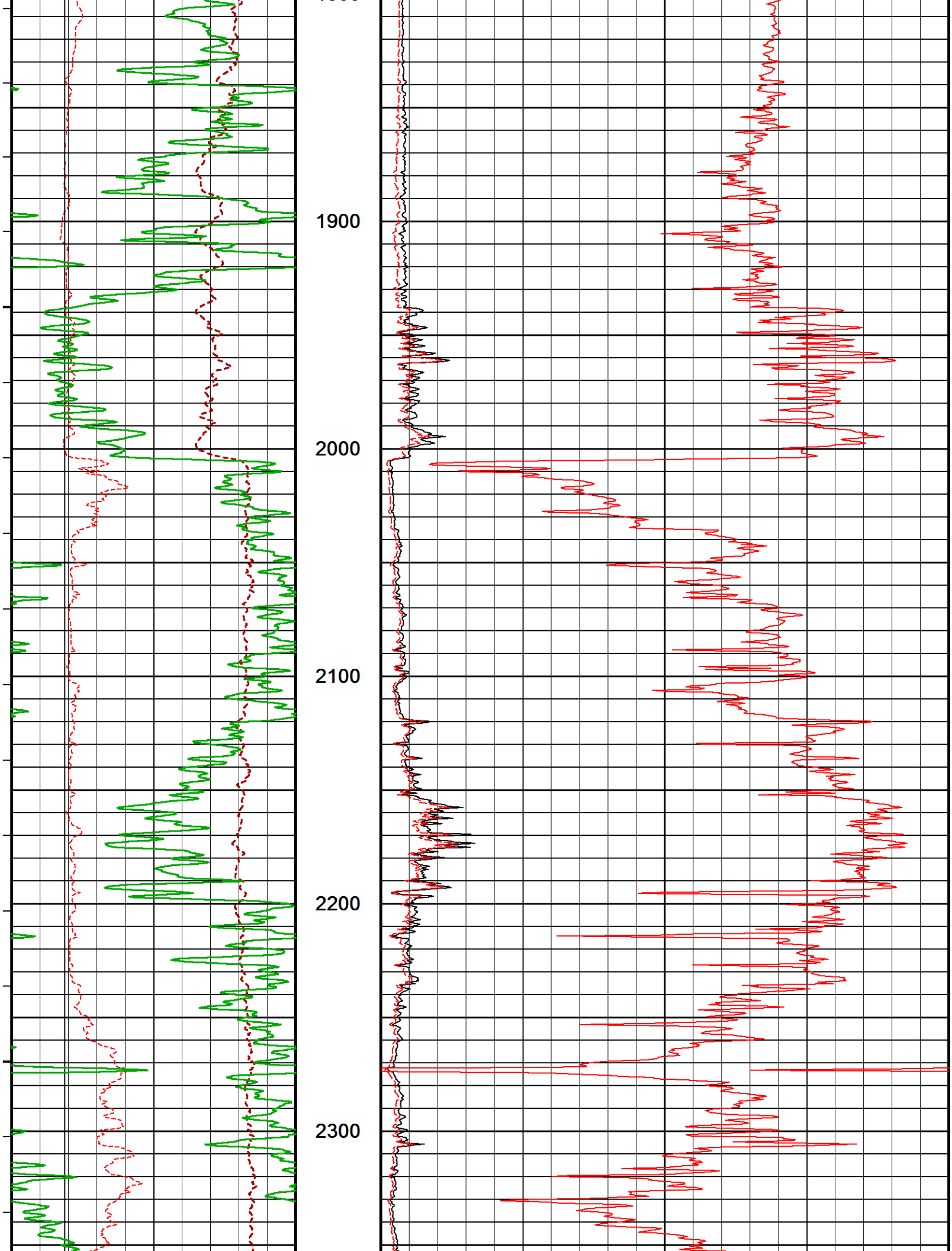
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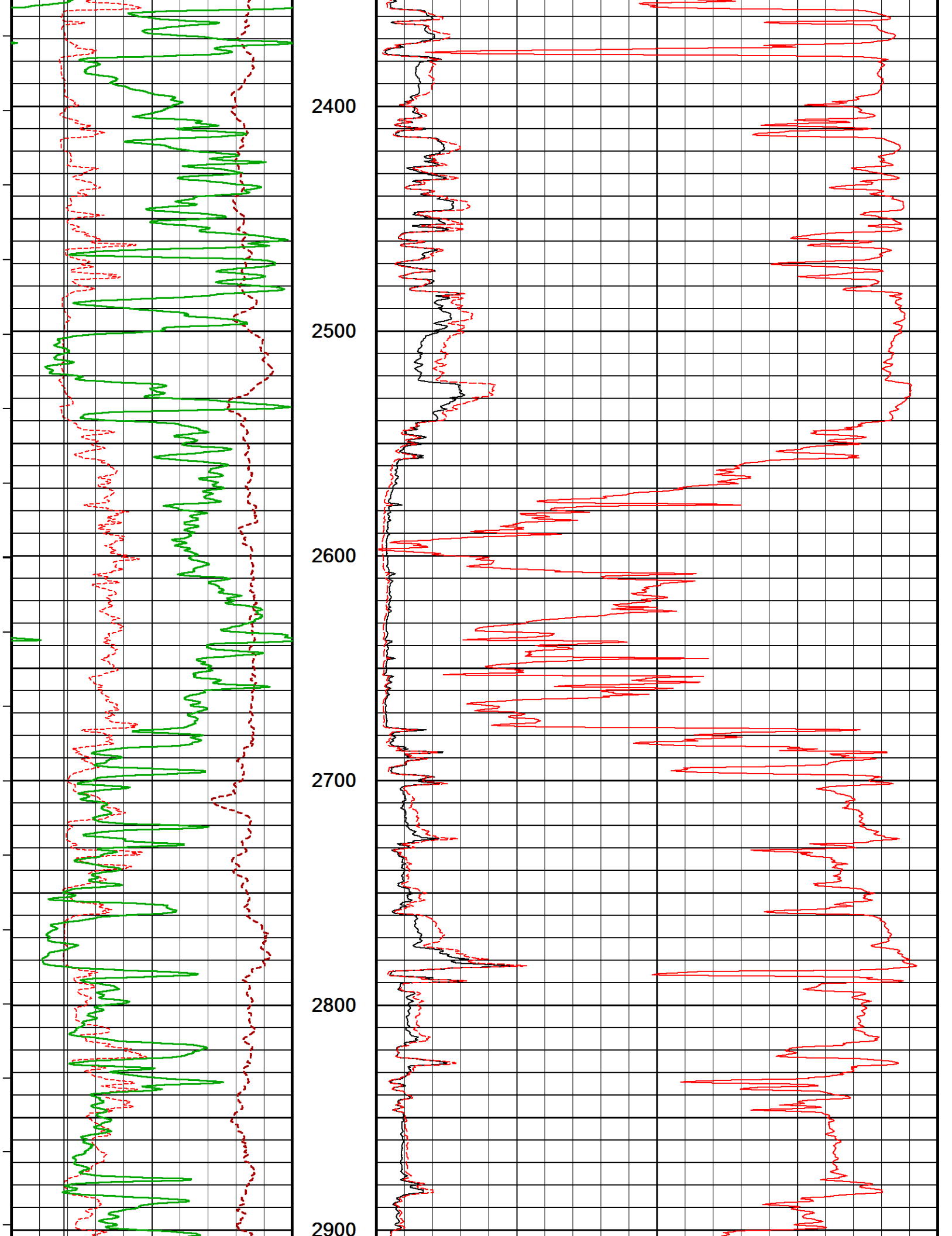
2300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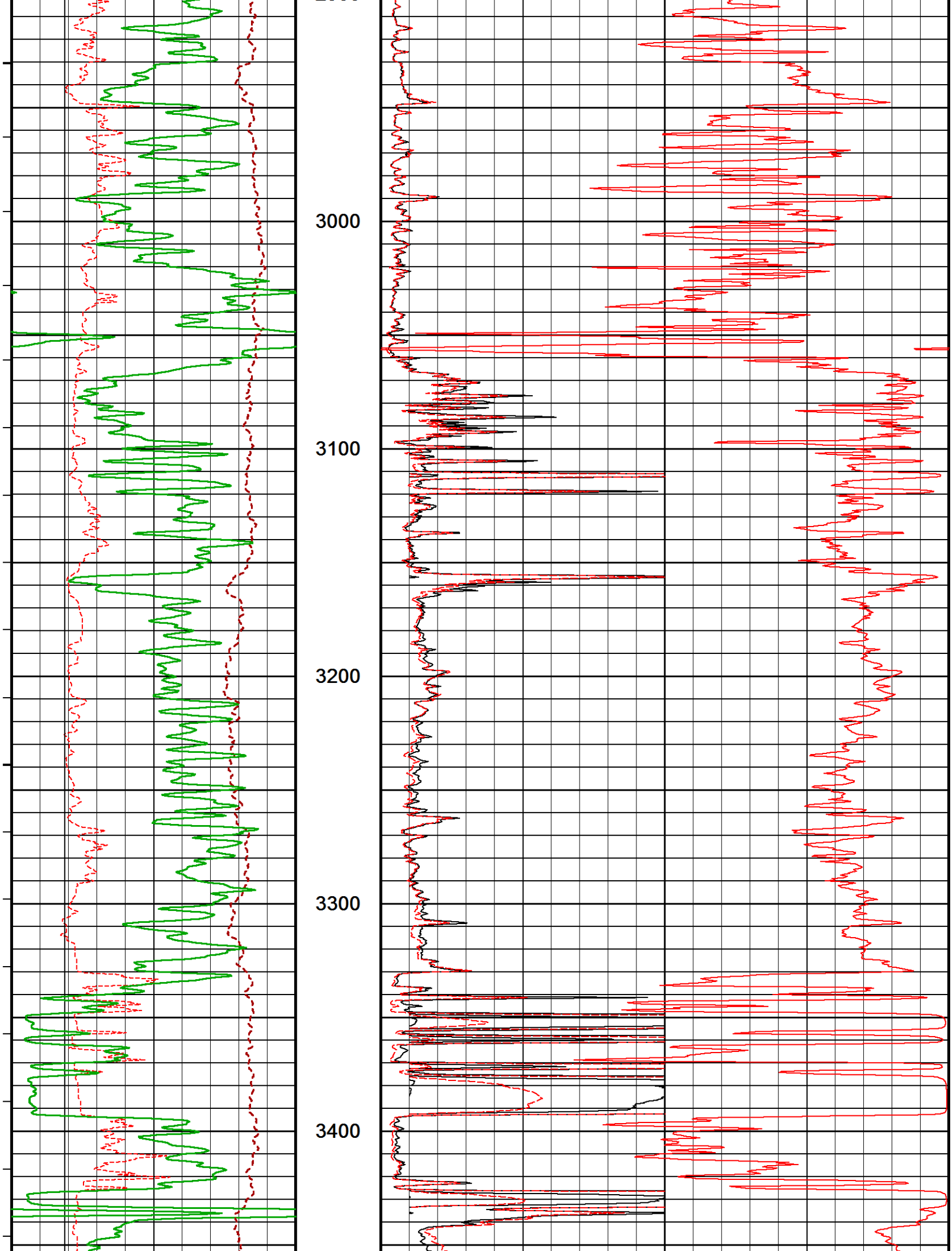
2700
2800
2900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3200
3300
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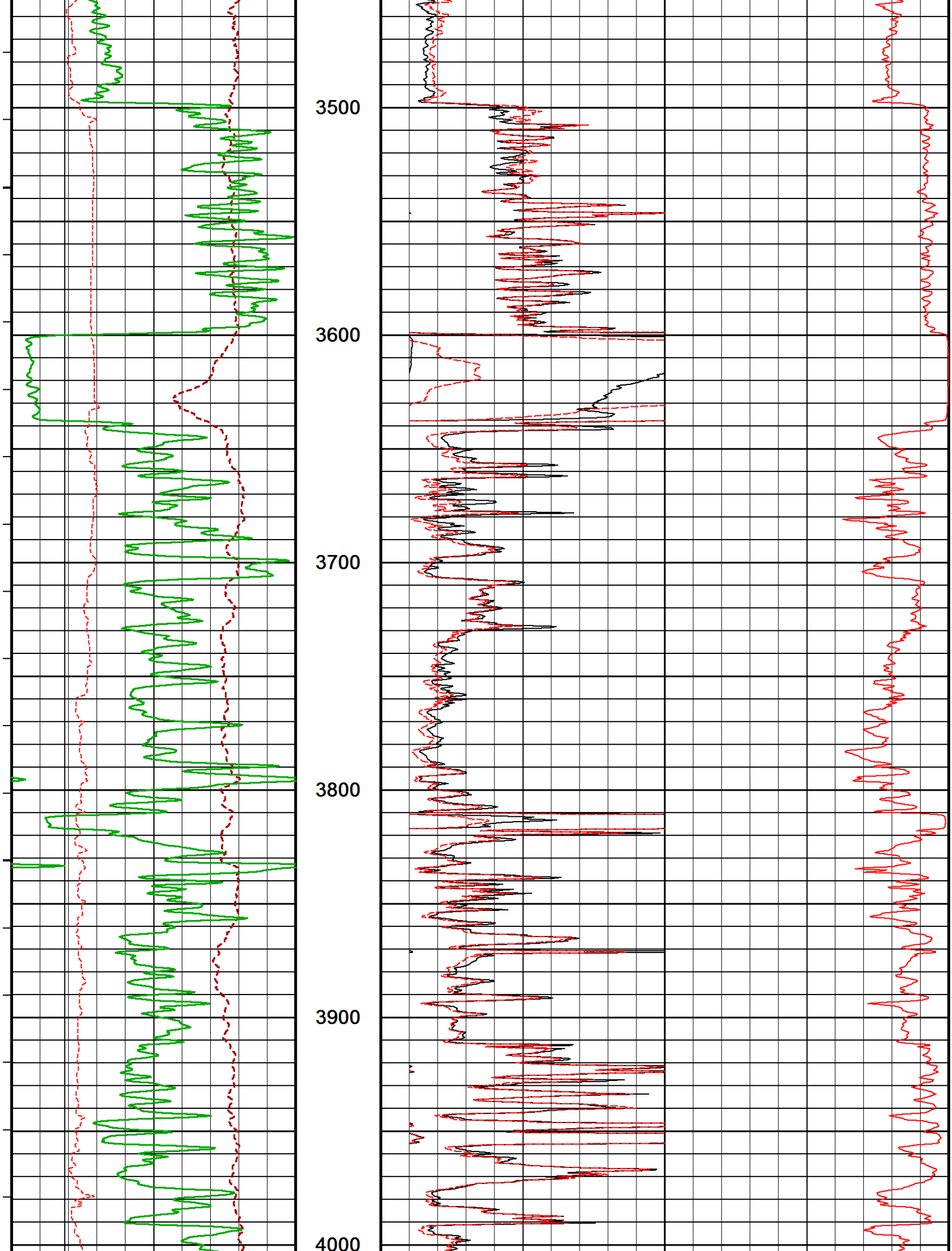
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3800
3900
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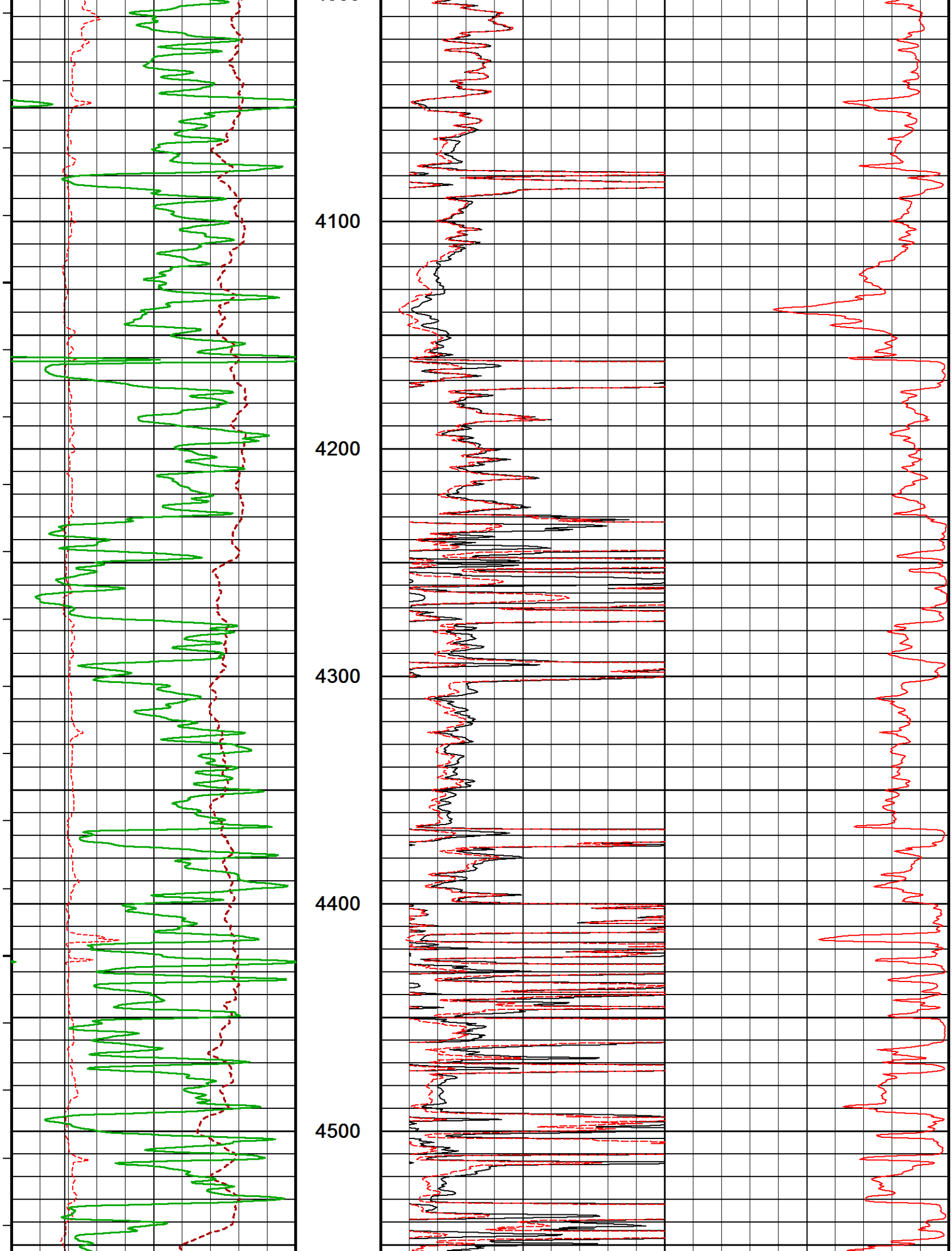
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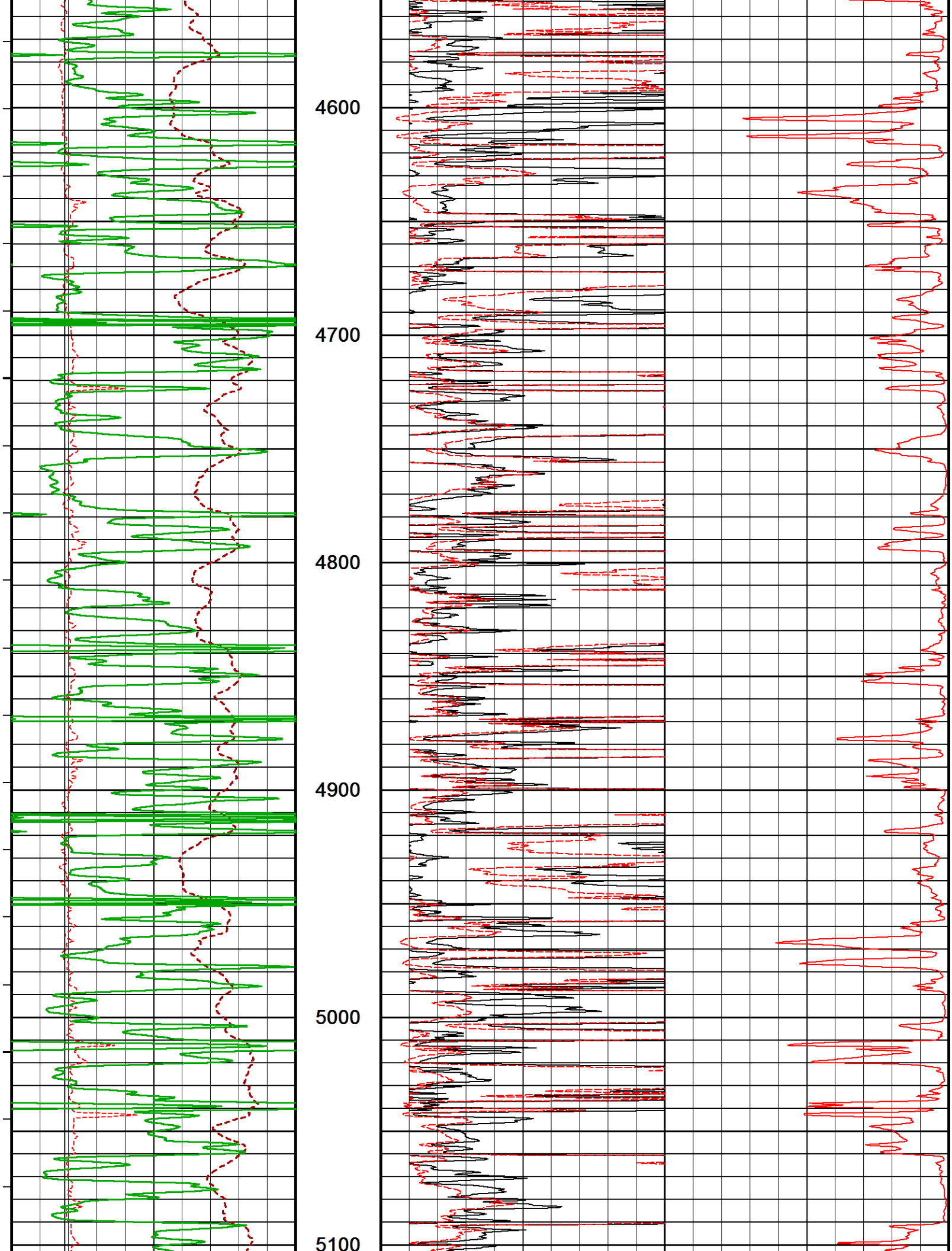
4500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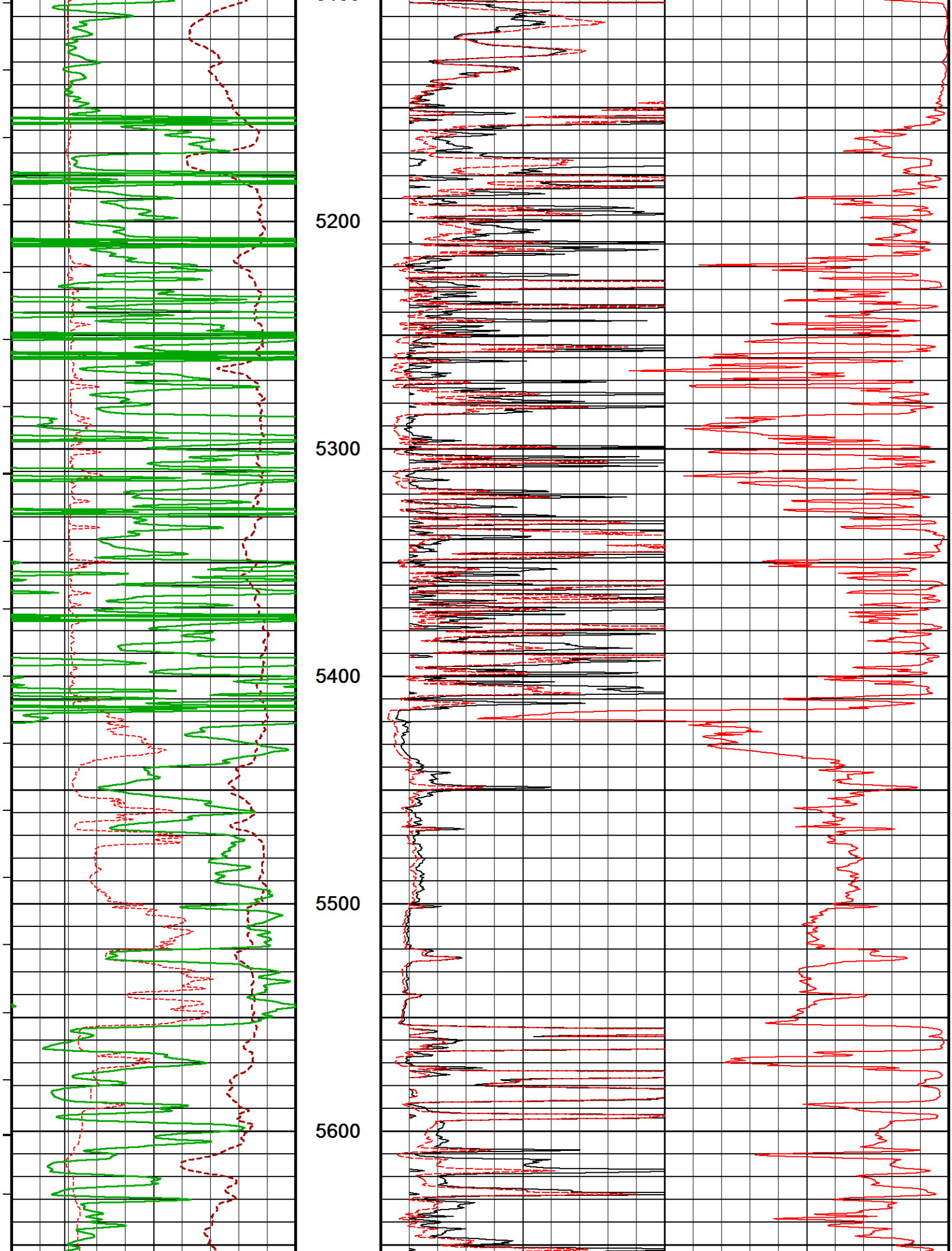
4700
4800
4900
5000
5100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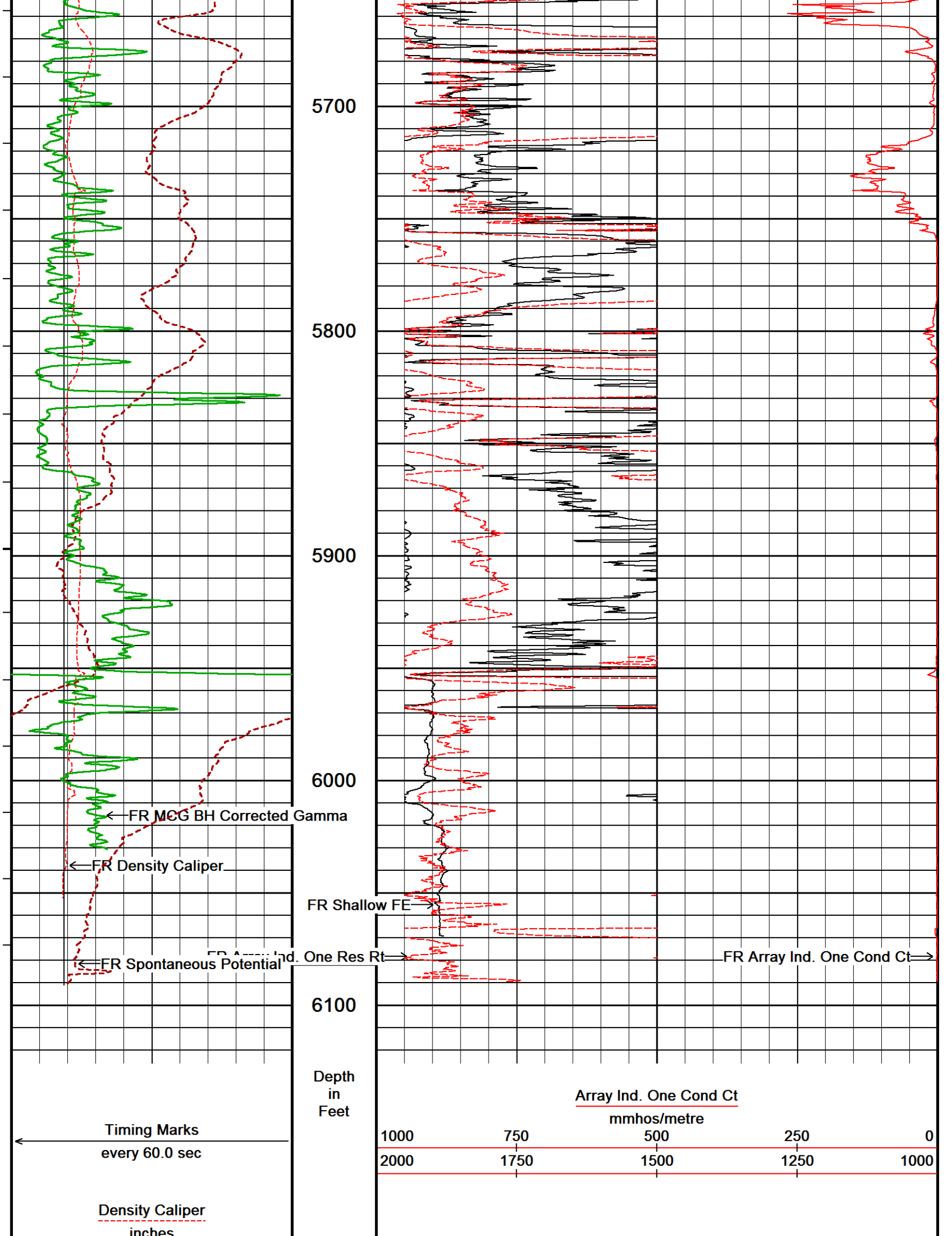
5700
5800
5900
6000
6100
FR MCG BH Corrected Gamma
FR Density Caliper
FR Shallow FE
FR Spontaneous Potential
FR Array Ind. One Res Rt
FR Array Ind. One Cond Ct
Depth
in
Feet
Timing Marks
every 60.0 sec
Density Caliper
inches
Array Ind. One Cond Ct
mmhos/metre
1000
750
500
250
0
2000
1750
1500
1250
1000

6 11 16

Bit Size
inches
6 11 16

Spontaneous Potential
millivolts
– → | 20 | ← +

MCG BH Corrected Gamma
API
0 75 150
150 225 300

Replay Scale 1:600

Shallow FE
ohm metres
0 25 50
0 250 500

Array Ind. One Res Rt
ohm metres
0 25 50
0 250 500

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2 INCH MAIN PASS

5 INCH MAIN PASS

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:_LOGS\Trek Resources\Pfaffly #1-12\MainPass.dta
System Versions: Logged with 21.11.3172 Plotted with 21.11.3172
Plotted on 26-MAY-2023 17:19
Recorded on 26-MAY-2023 13:17

Timing Marks
every 60.0 sec

Spontaneous Potential
millivolts
– → | 20 | ← +

Borehole Corrected Gamma
API
0 100 200

Depth in Feet

Borehole Temp in deg F

Shallow FE
ohm metres
0.20 2000
1 10 100 1000

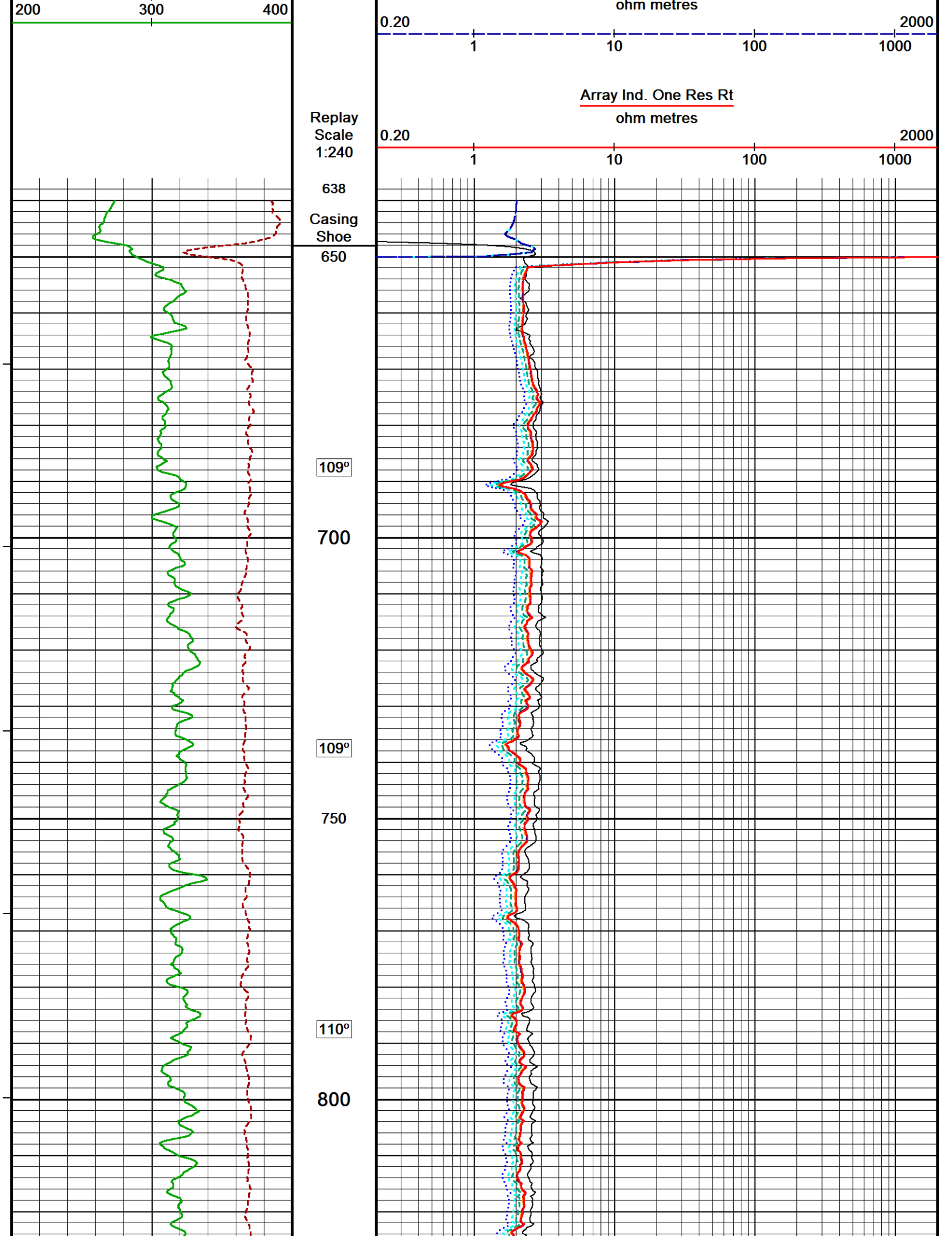
Array Ind. One Res 20
ohm metres
0.20 2000
1 10 100 1000

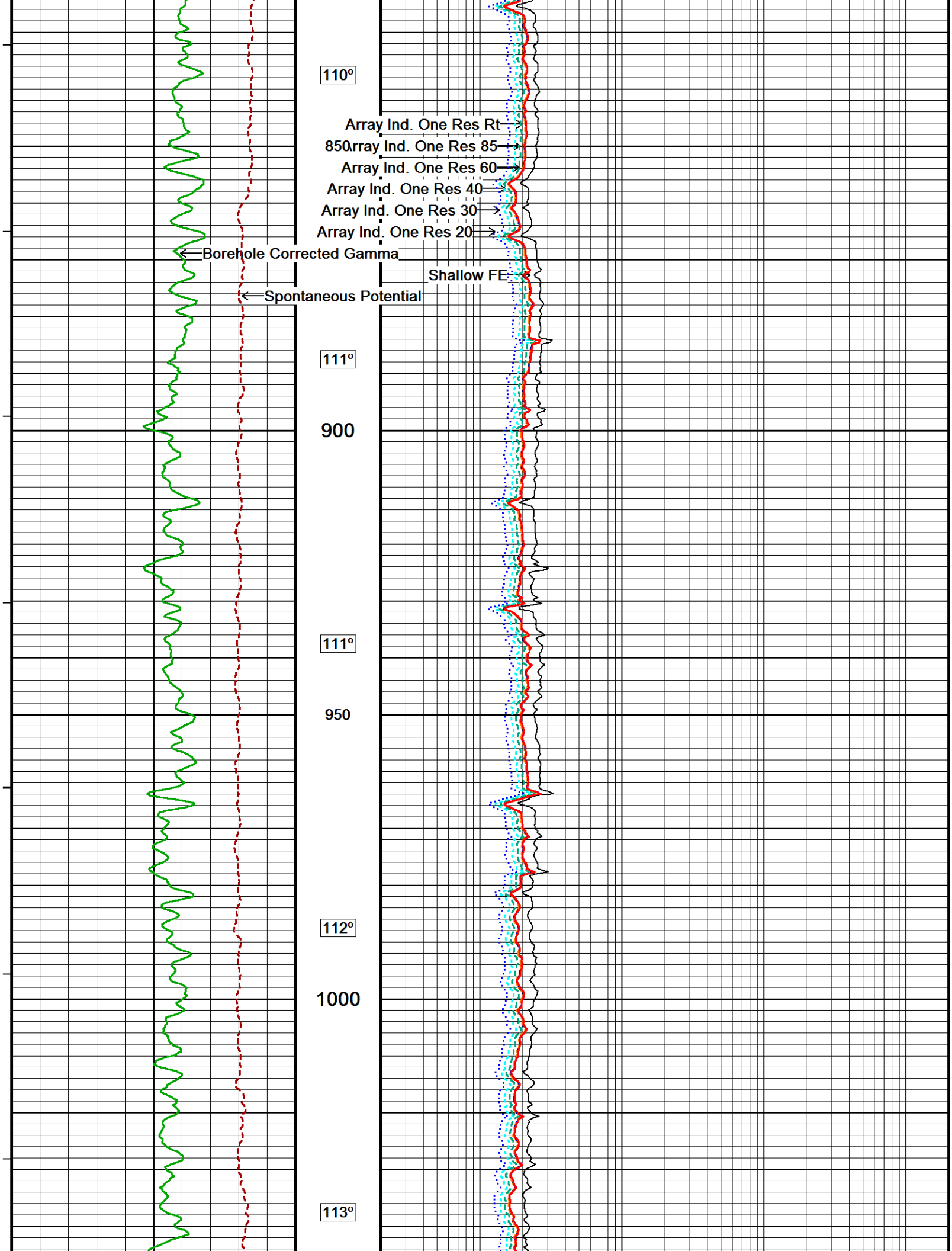
Array Ind. One Res 30
ohm metres
0.20 2000
1 10 100 1000

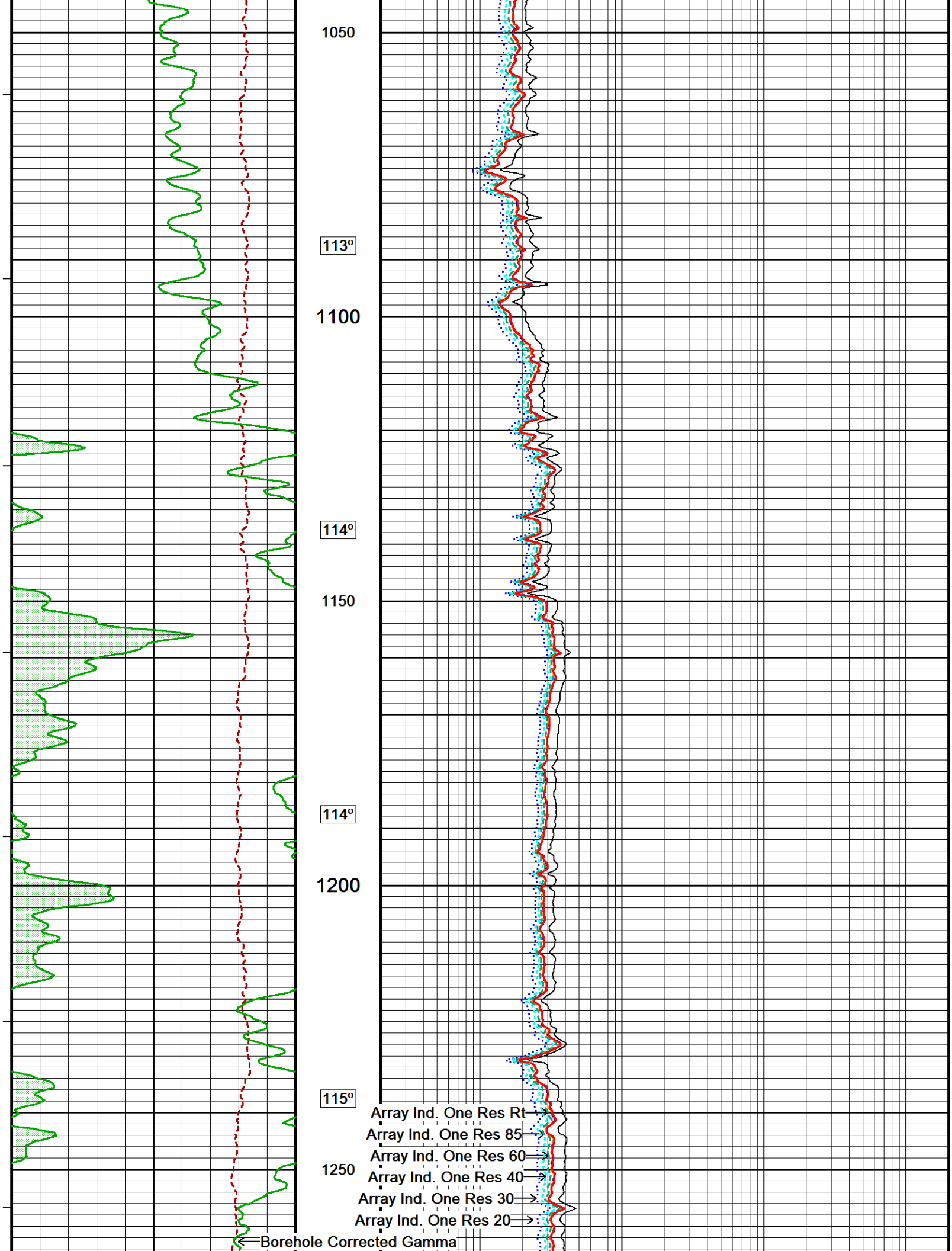
Array Ind. One Res 40
ohm metres
0.20 2000
1 10 100 1000

Array Ind. One Res 60
ohm metres
0.20 2000
1 10 100 1000

Array Ind. One Res 85


200
300
400
ohm metres
0.20
2000
1
10
100
1000
Array Ind. One Res Rt
ohm metres
0.20
2000
1
10
100
1000
Replay
Scale
1:240
638
Casing
Shoe
650
109°
700
109°
750
110°
800


110°
Array Ind. One Res Rt
850rray Ind. One Res 85
Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
Array Ind. One Res 20
Borehole Corrected Gamma
Shallow FE
Spontaneous Potential
111°
900
111°
950
112°
1000
113°


1050
113°
1100
114°
1150
114°
1200
115°
1250
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
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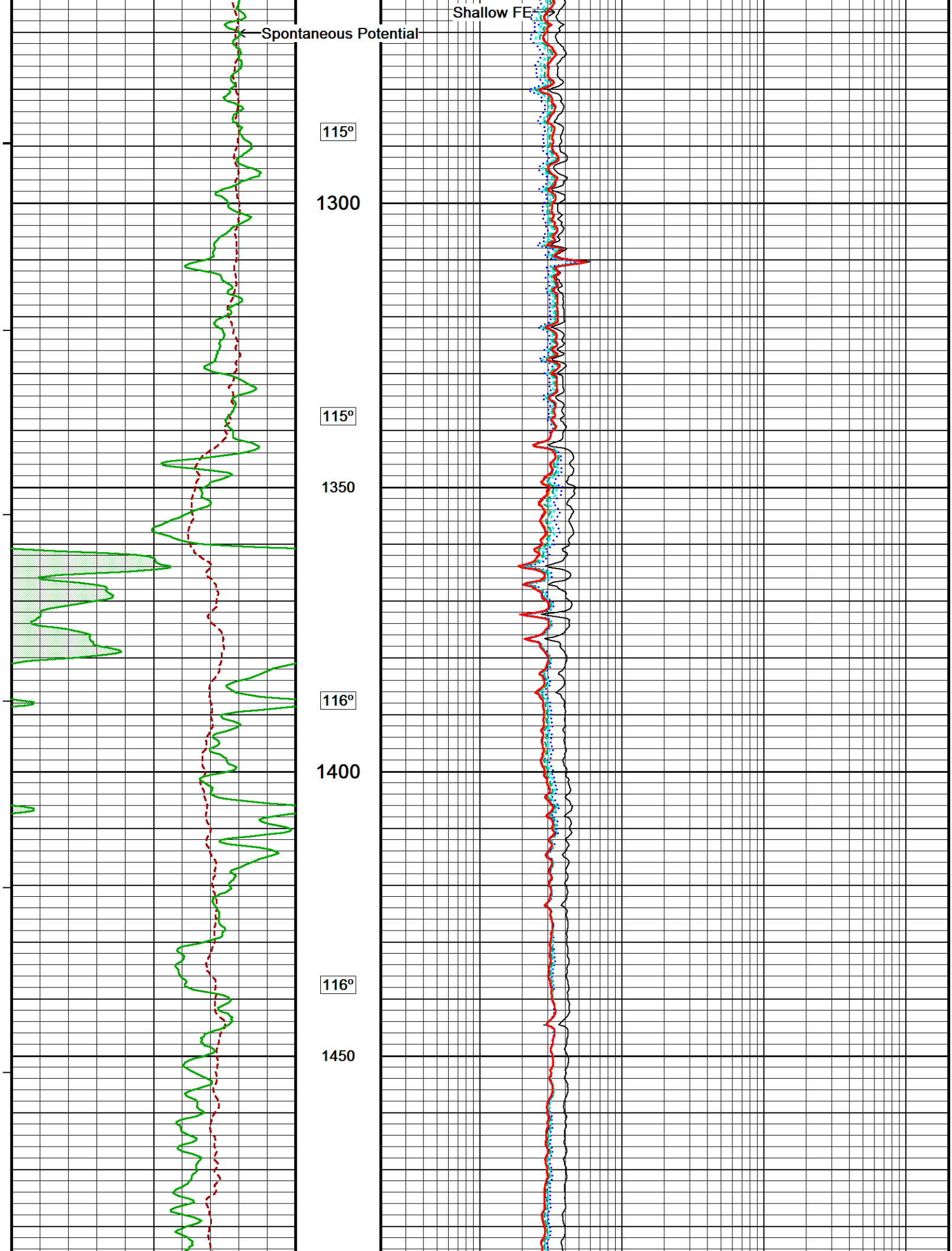
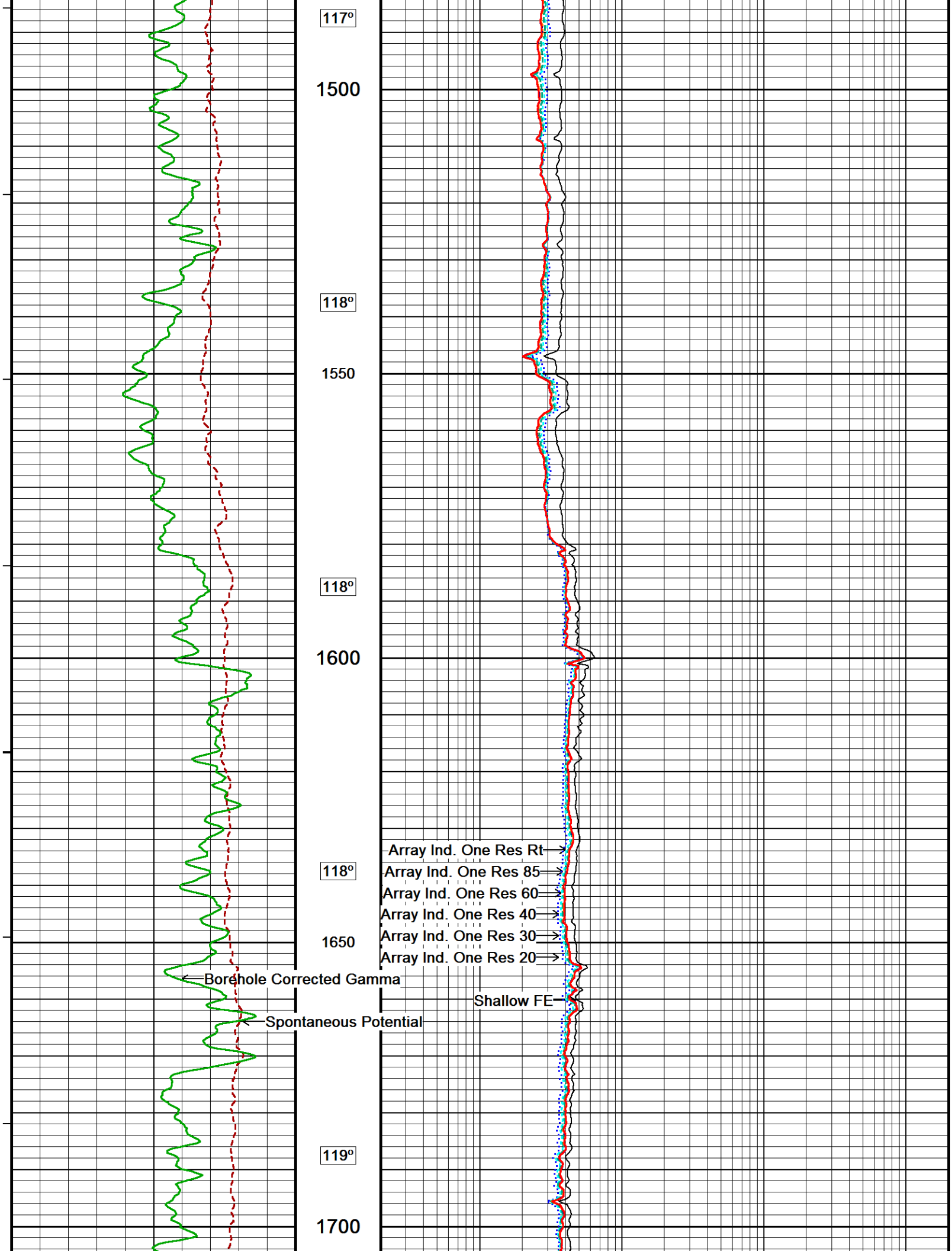
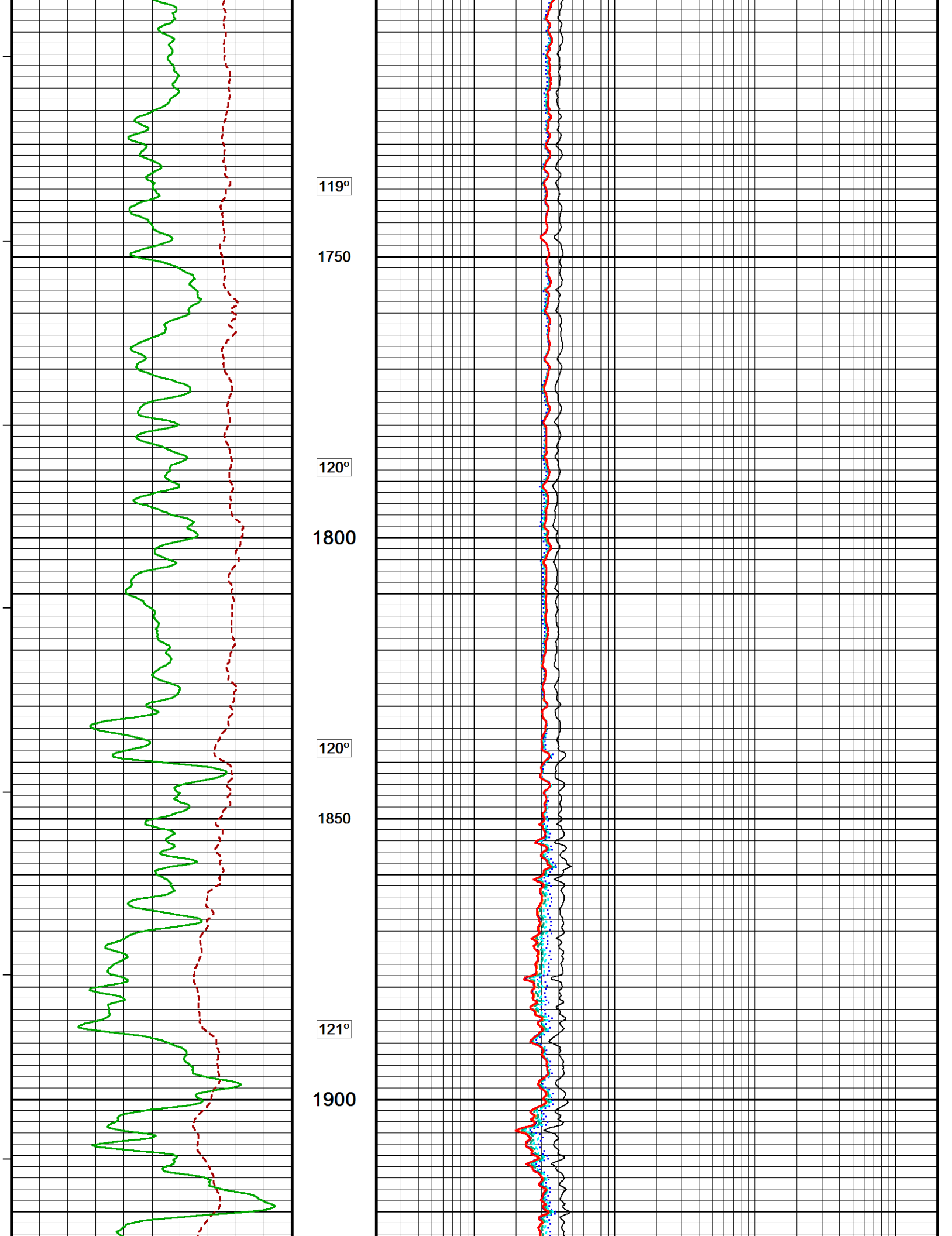
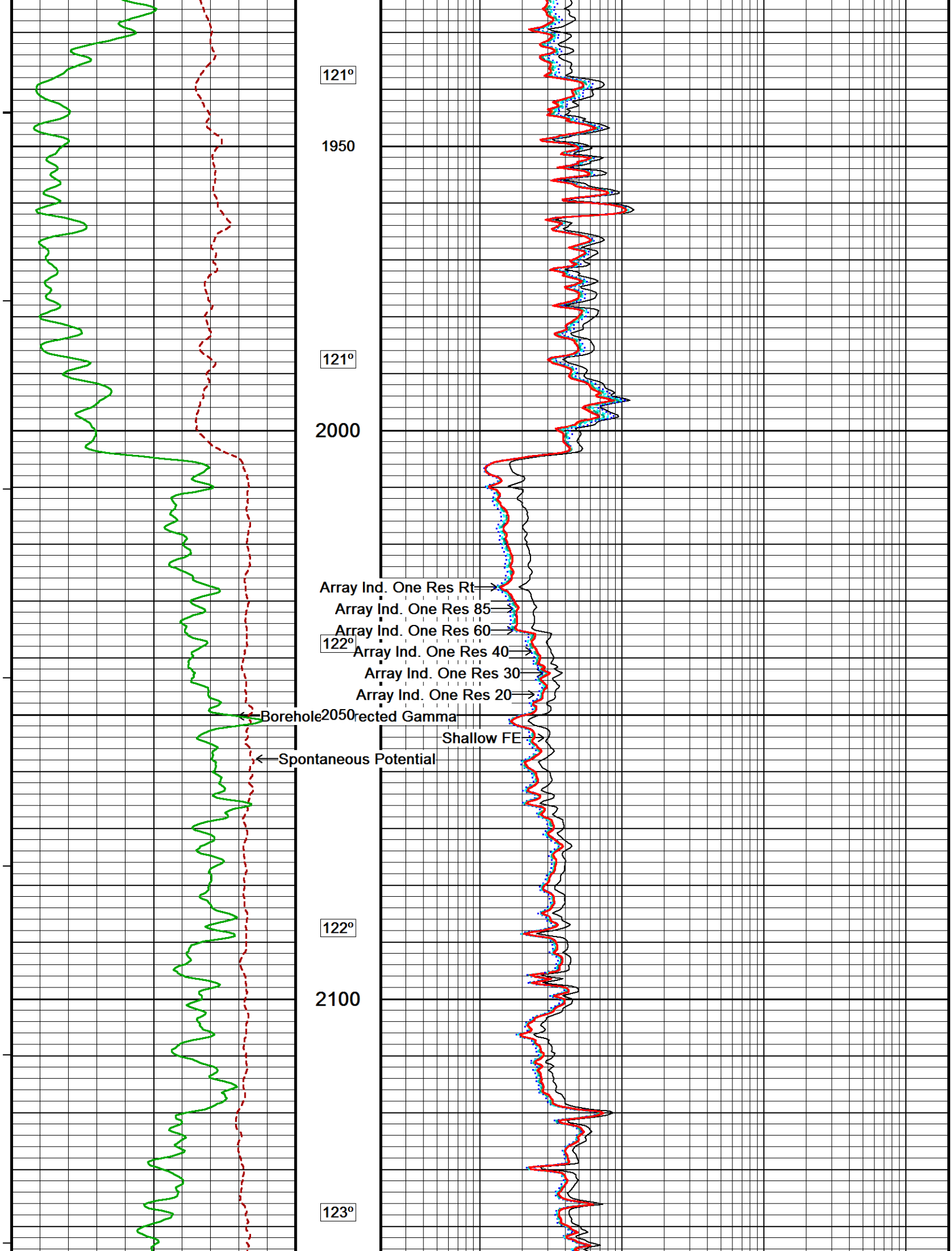
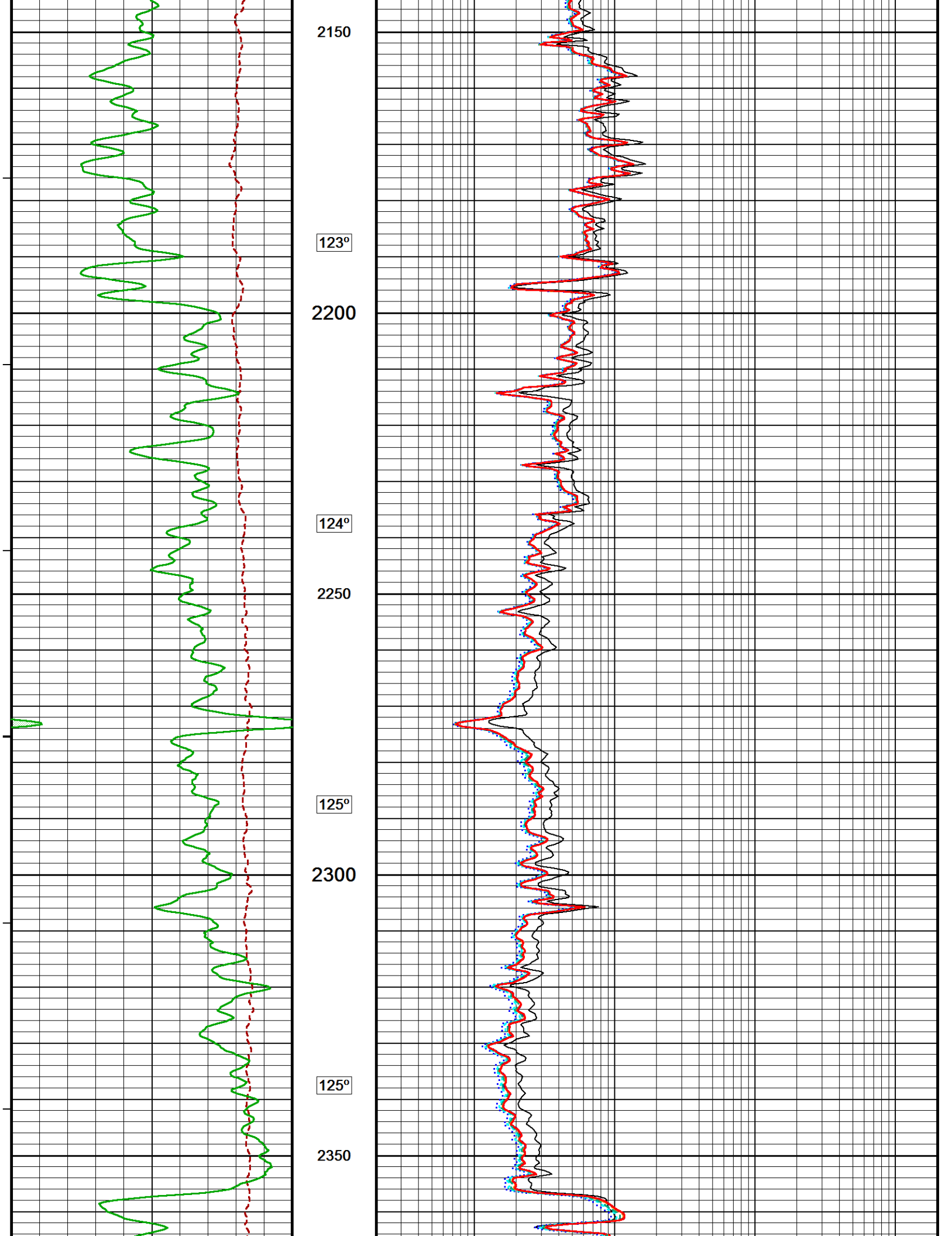
Array Ind. One Res 20
Borehole Corrected Gamma

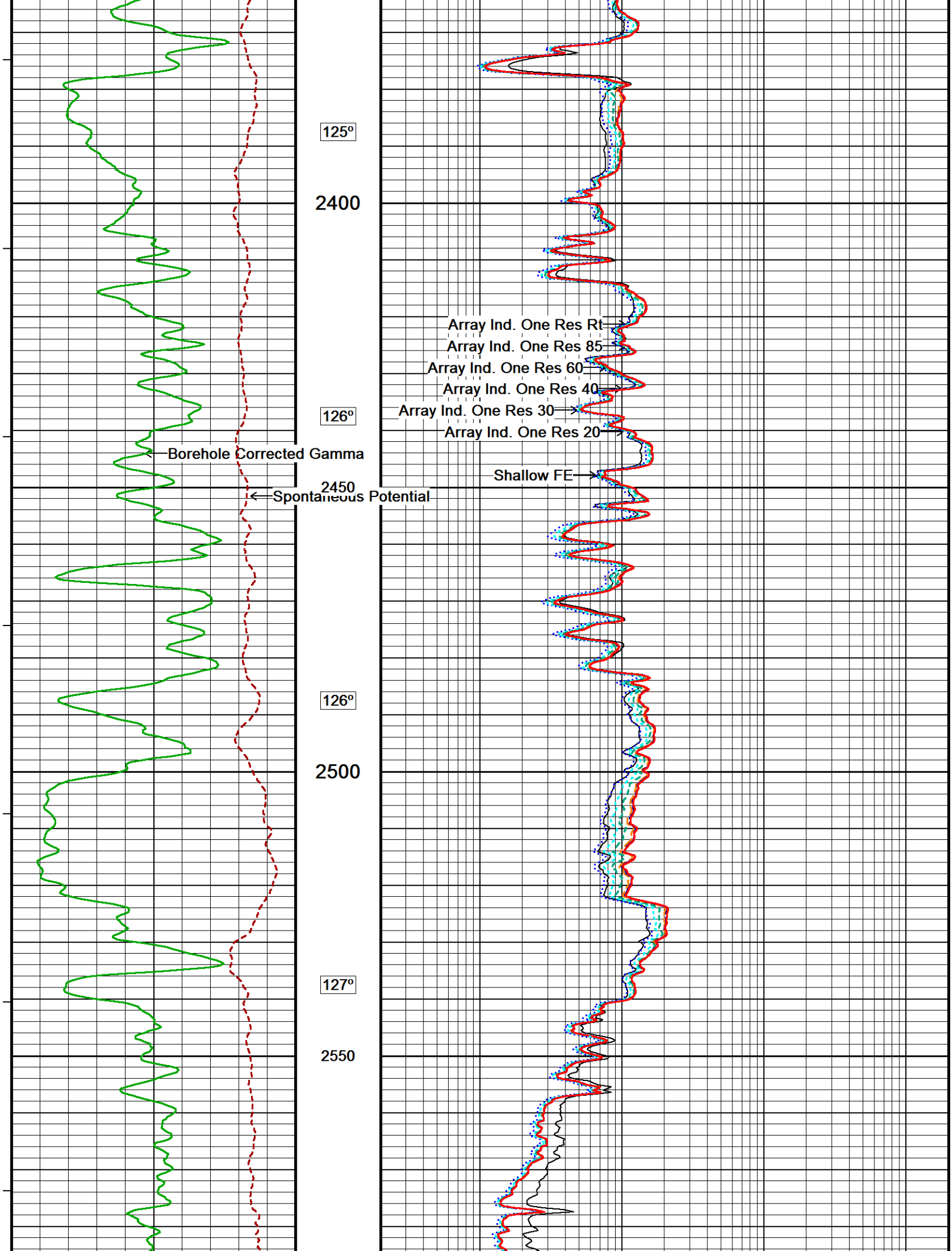

Shallow FE
Spontaneous Potential
115°
1300
115°
1350
116°
1400
116°
1450


117º
1500
118º
1550
118º
1600
118º
1650
119º
1700
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
Array Ind. One Res 20
Borehole Corrected Gamma
Shallow FE
Spontaneous Potential


119°
1750
120°
1800
120°
1850
121°
1900


121°
1950
121°
2000
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
122°
Array Ind. One Res 40
Array Ind. One Res 30
Array Ind. One Res 20
Borehole
2050
rected Gamma
Shallow FE
Spontaneous Potential
122°
2100
123°


2150
123°
2200
124°
2250
125°
2300
125°
2350


125°
2400
126°
2450
126°
2500
127°
2550
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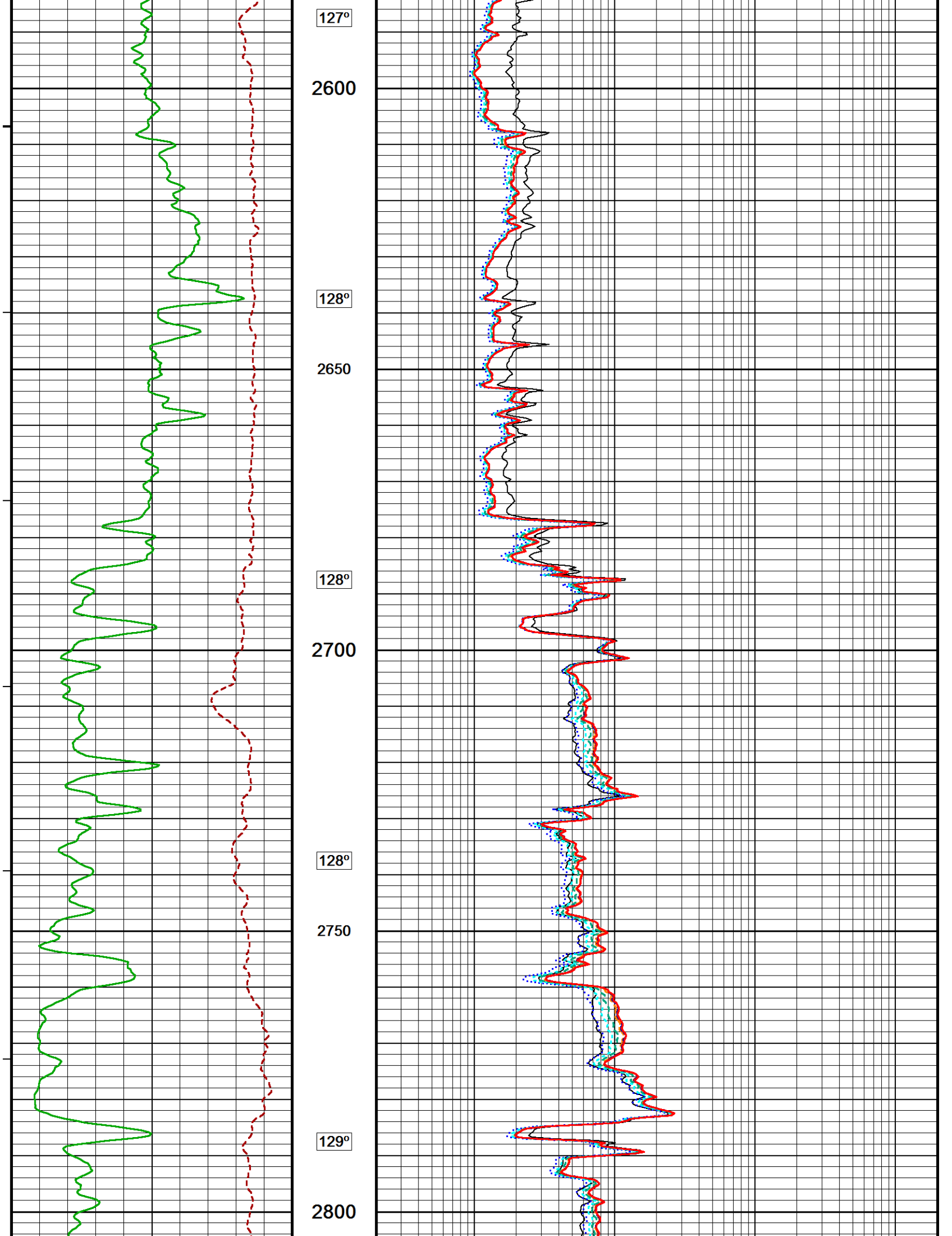
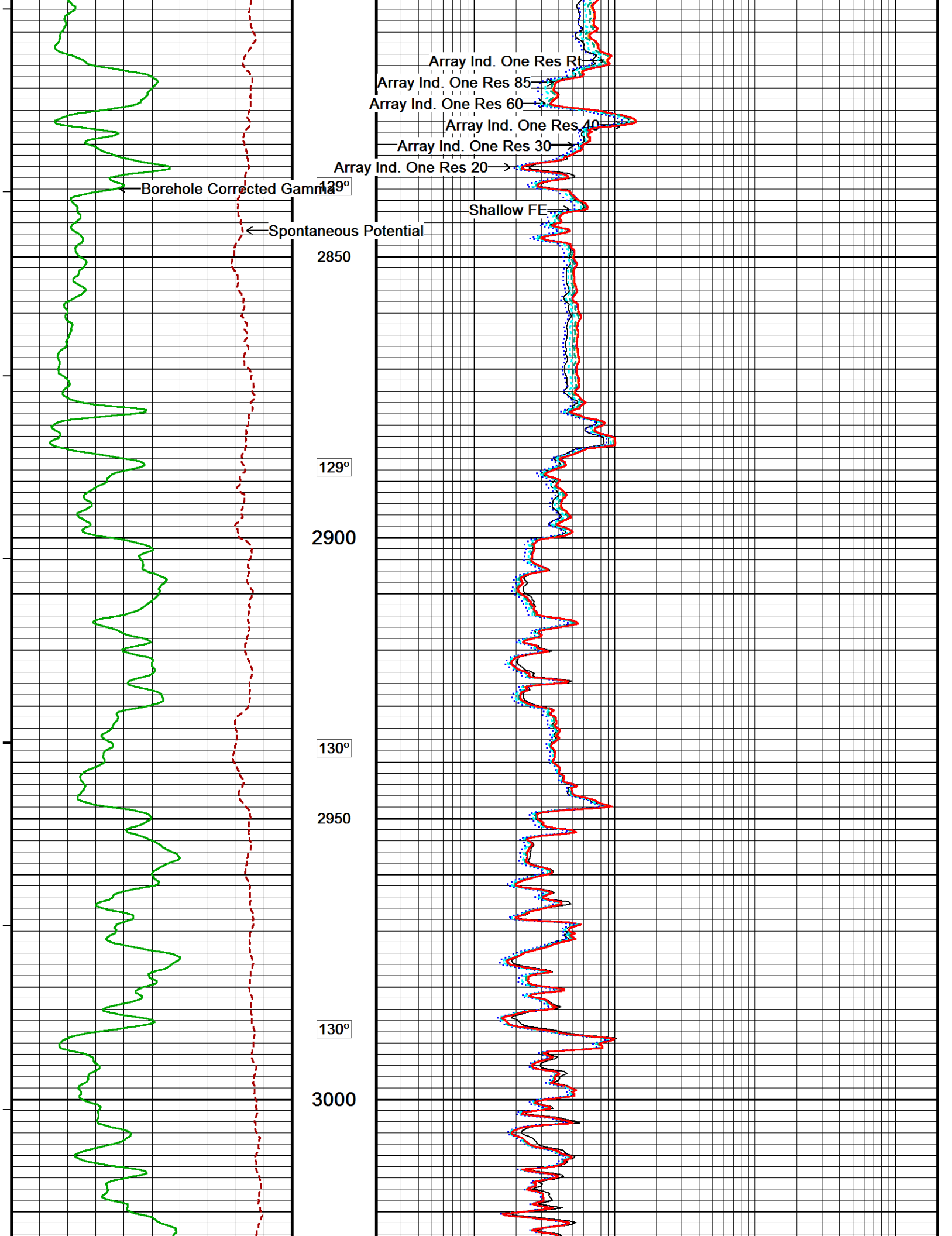
Array Ind. One Res 30
Array Ind. One Res 20
Shallow FE
Borehole Corrected Gamma
Spontaneous Potential


127°
2600
128°
2650
128°
2700
128°
2750
129°
2800


Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
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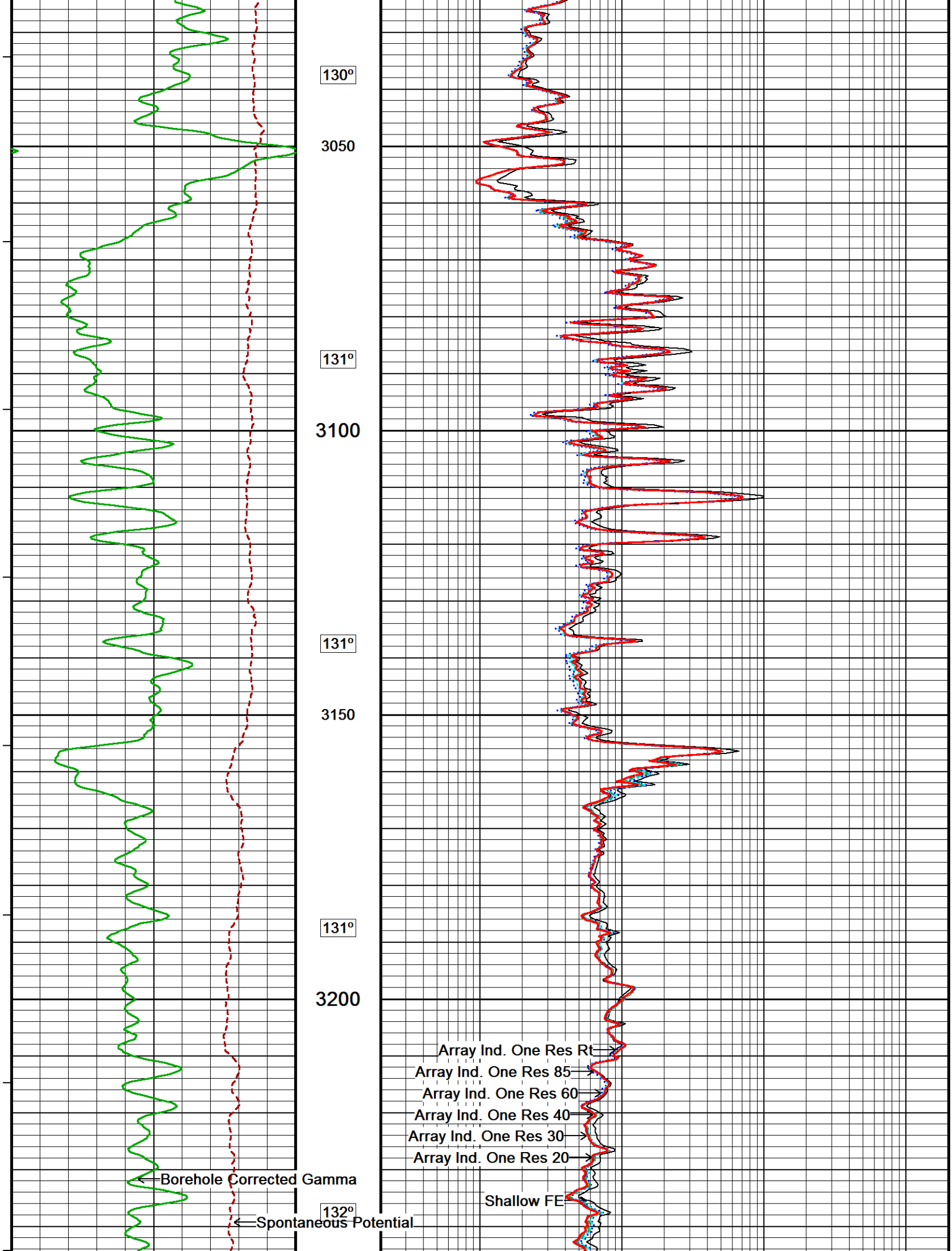
Borehole Corrected Gamma
Spontaneous Potential
Shallow FE
129°
2850
129°
2900
130°
2950
130°
3000


130°
3050
131°
3100
131°
3150
131°
3200
132°
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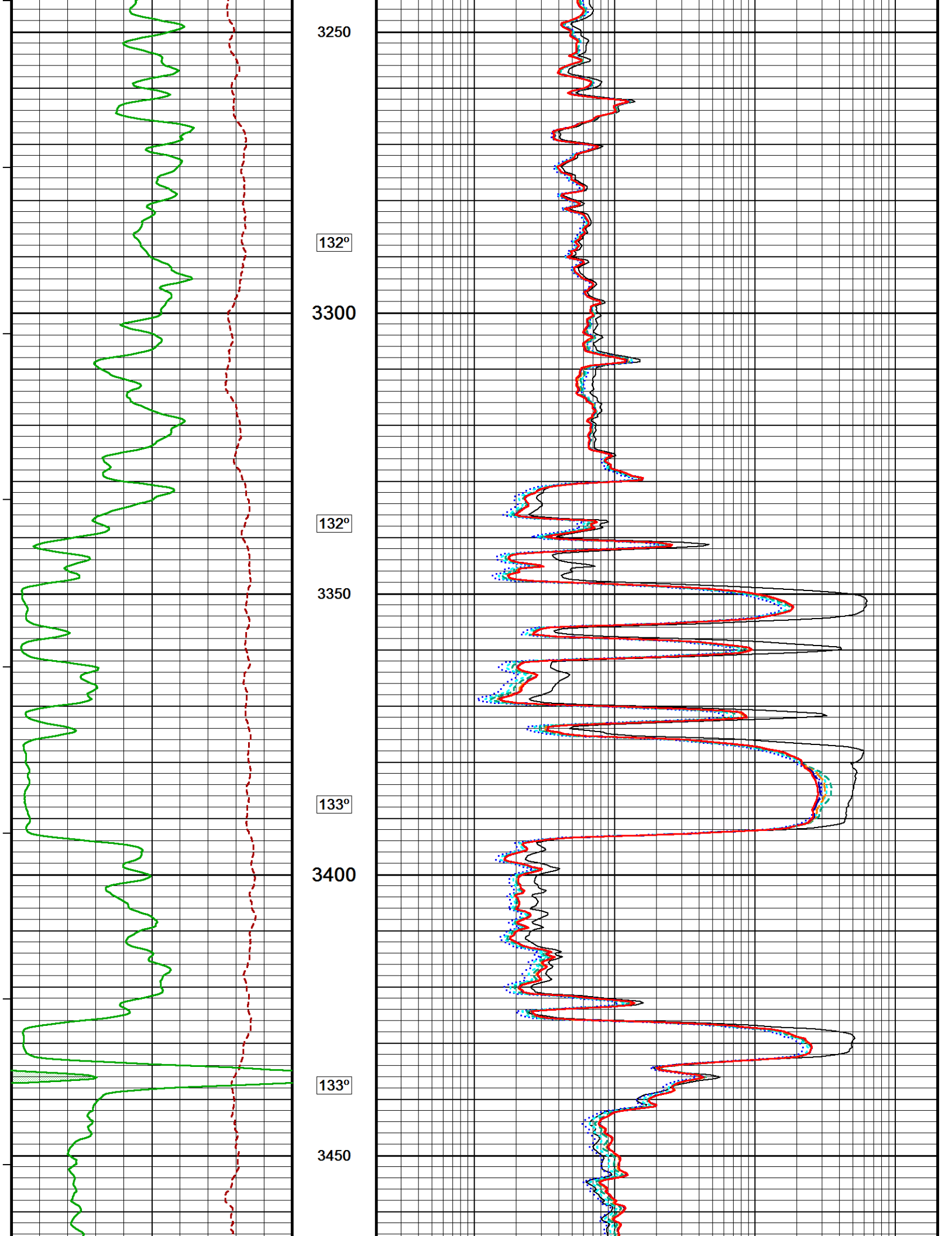
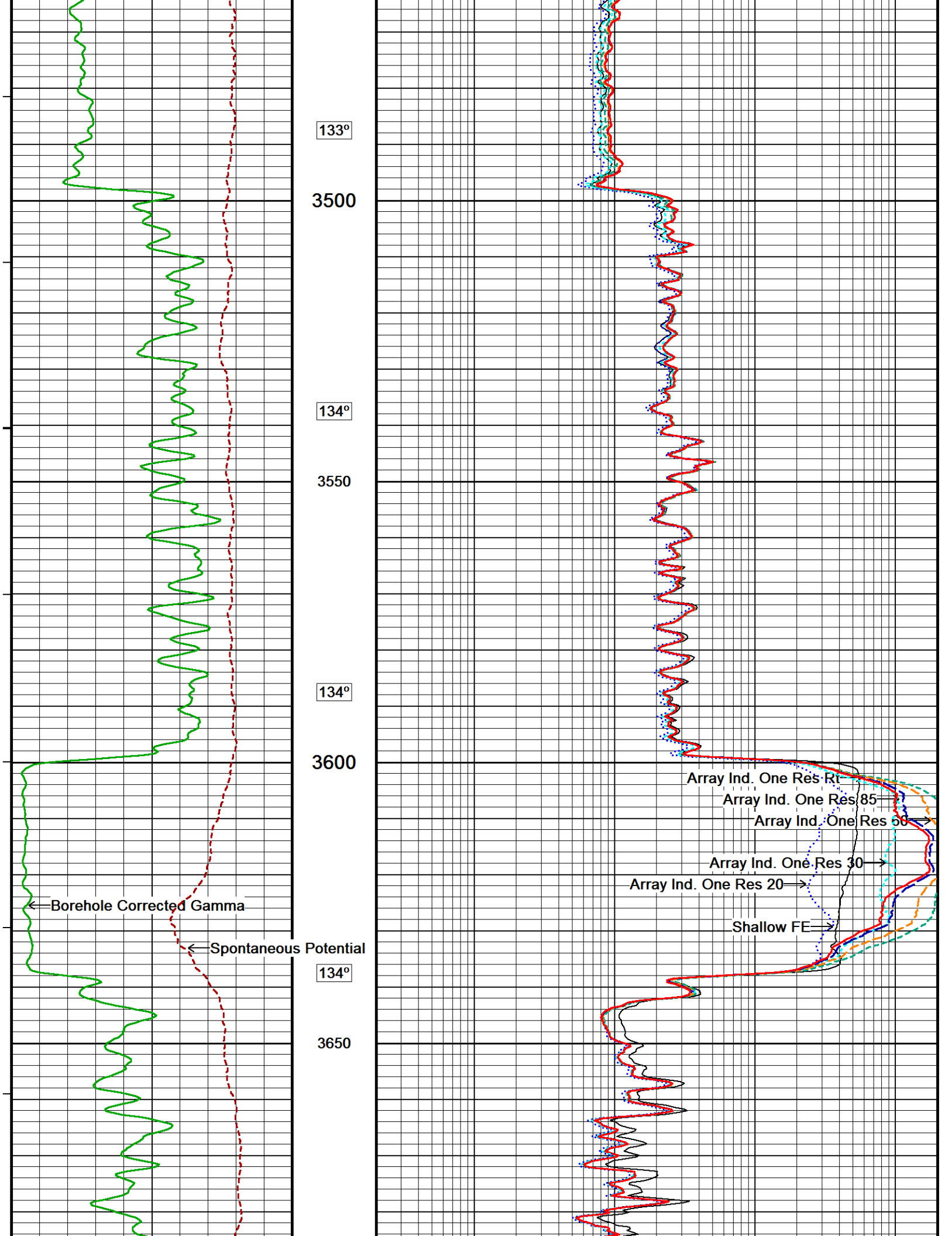
Shallow FE
Borehole Corrected Gamma
Spontaneous Potential


3250
132°
3300
132°
3350
133°
3400
133°
3450


133°
3500
134°
3550
134°
3600
134°
3650
Borehole Corrected Gamma
Spontaneous Potential
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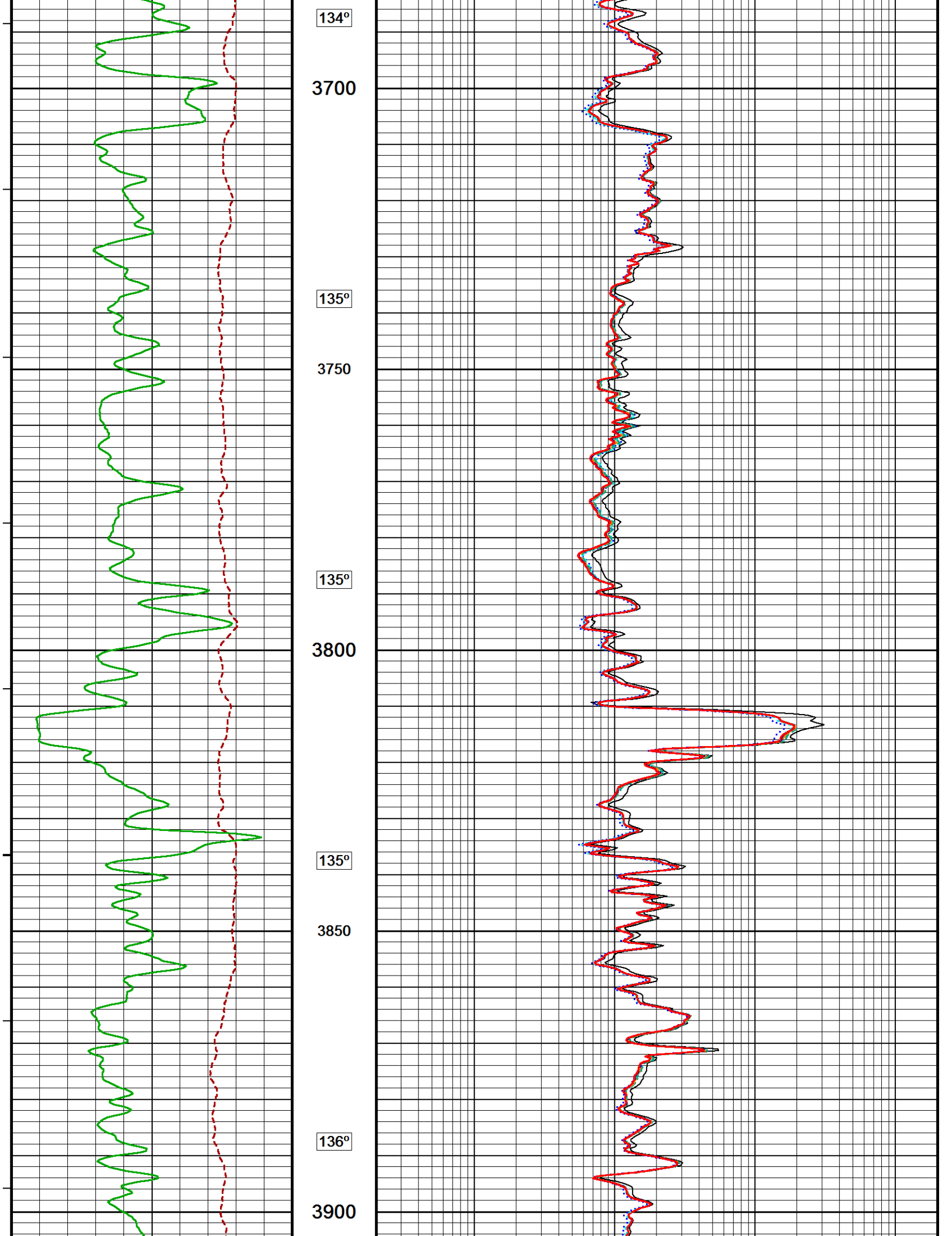
Shallow FE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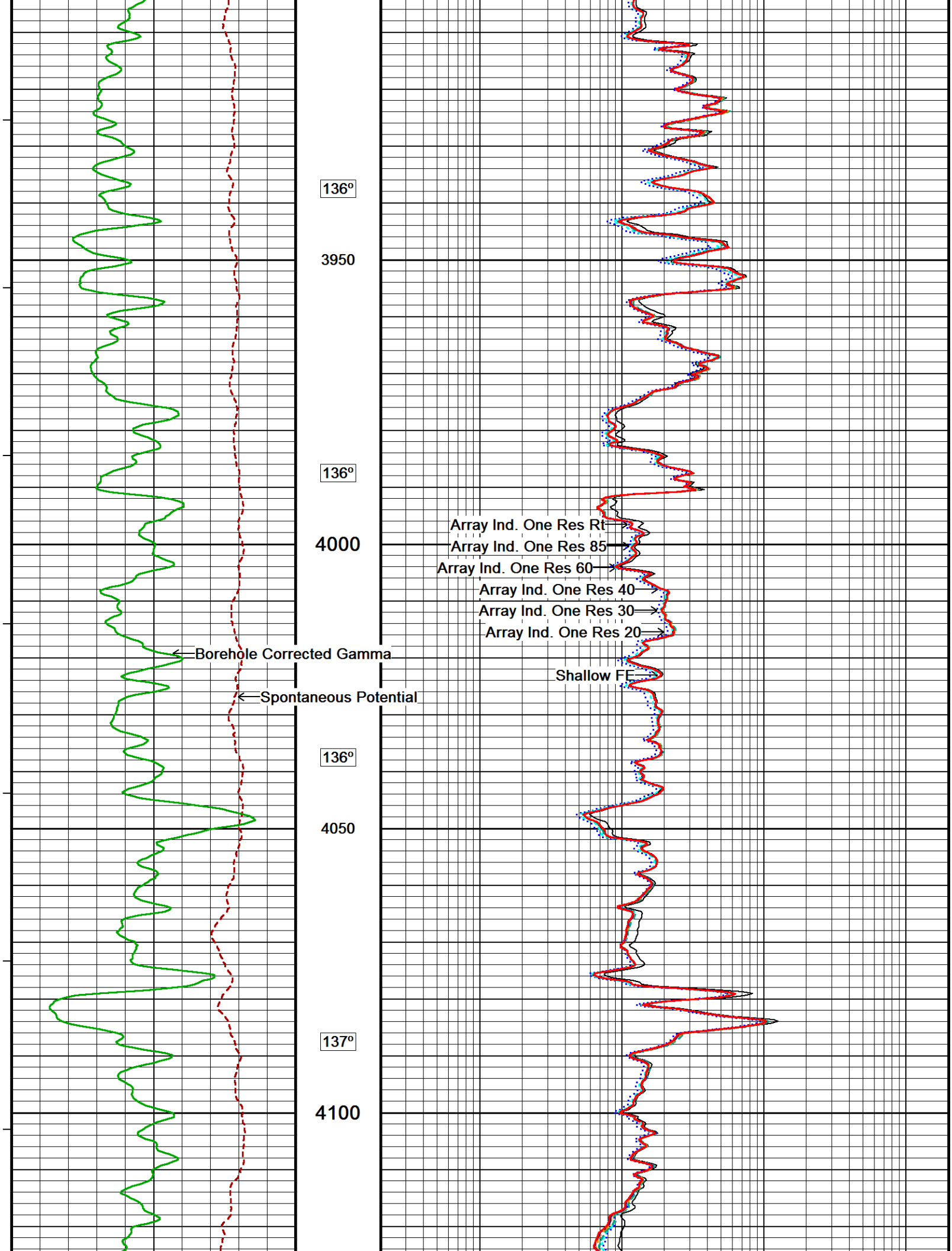
135°
3750
135°
3800
135°
3850
136°
3900


136°
3950
136°
4000
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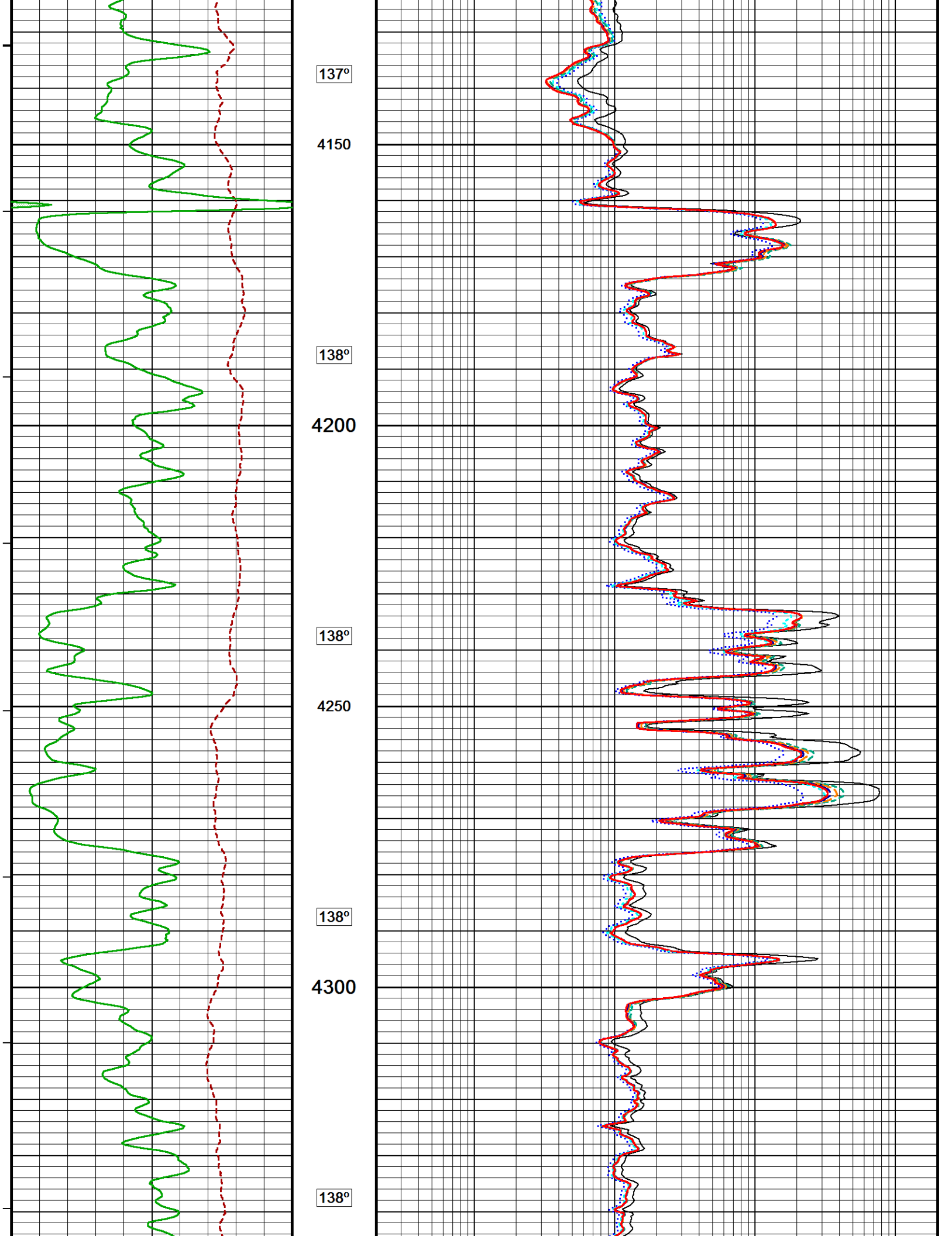
Shallow FE
Borehole Corrected Gamma
Spontaneous Potential
136°
4050
137°
4100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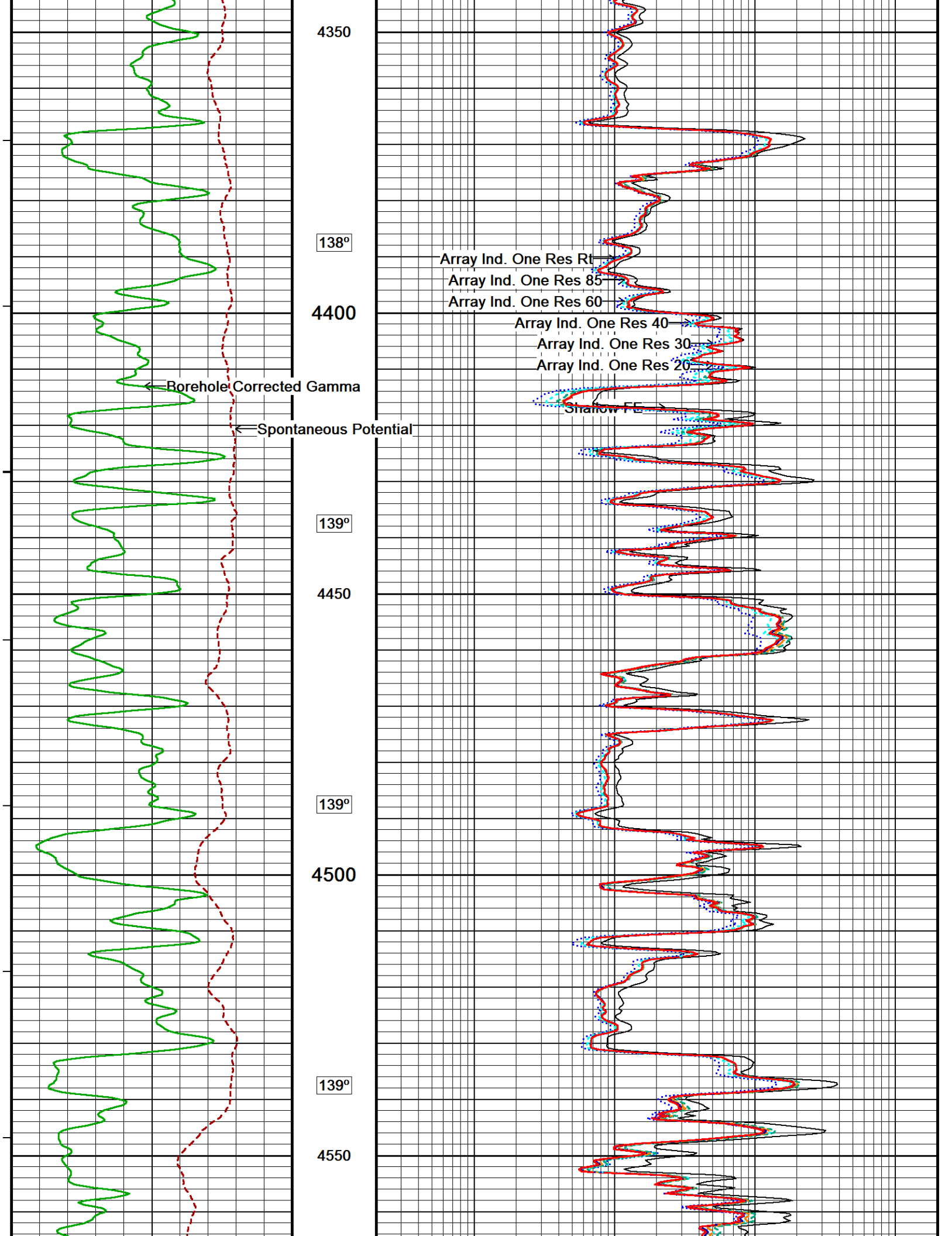
4150
138º
4200
138º
4250
138º
4300
138º


4350
138°
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Array Ind. One Res 85
Array Ind. One Res 60
4400
Array Ind. One Res 40
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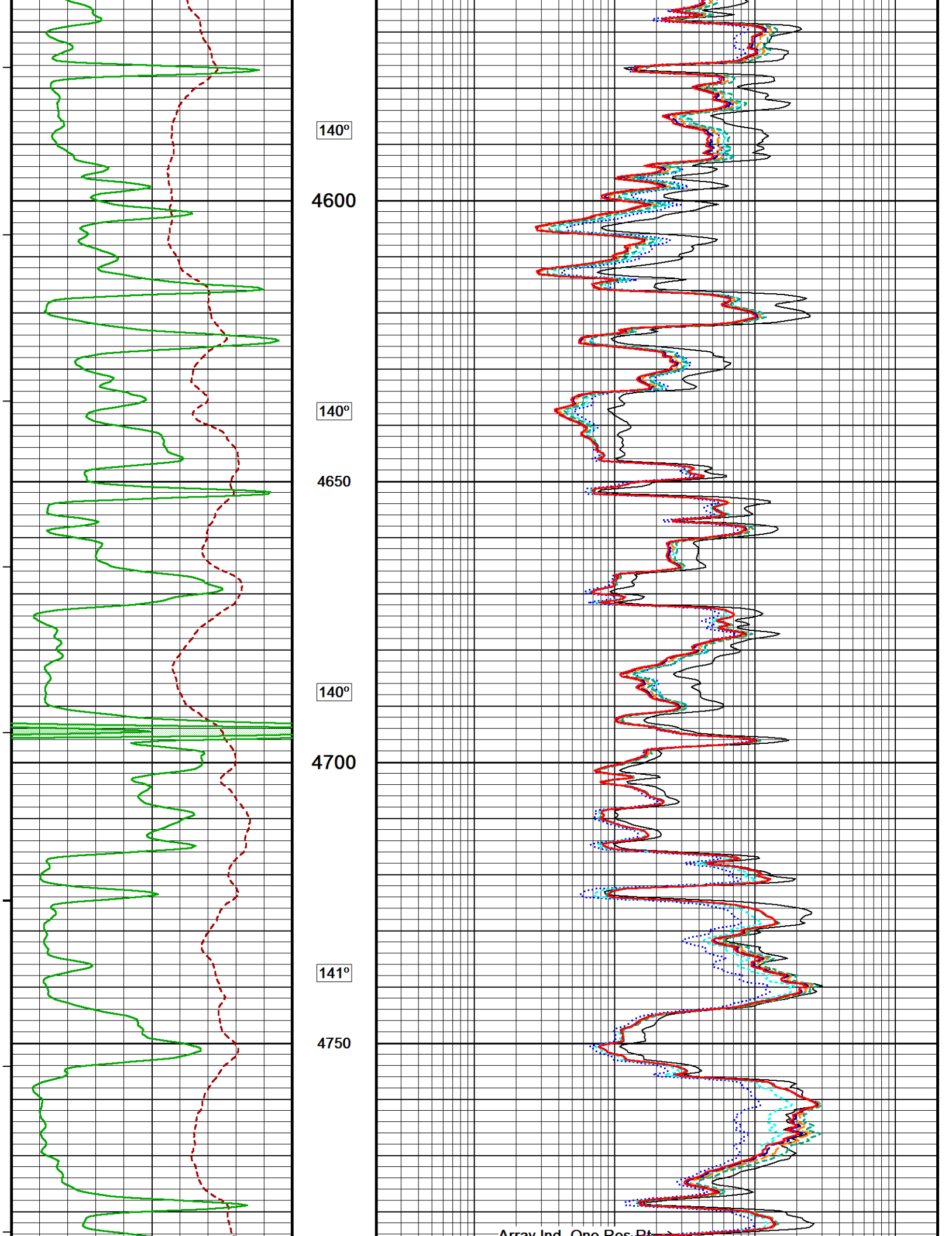
Array Ind. One Res 20
Borehole Corrected Gamma
Spontaneous Potential
139°
4450
139°
4500
139°
4550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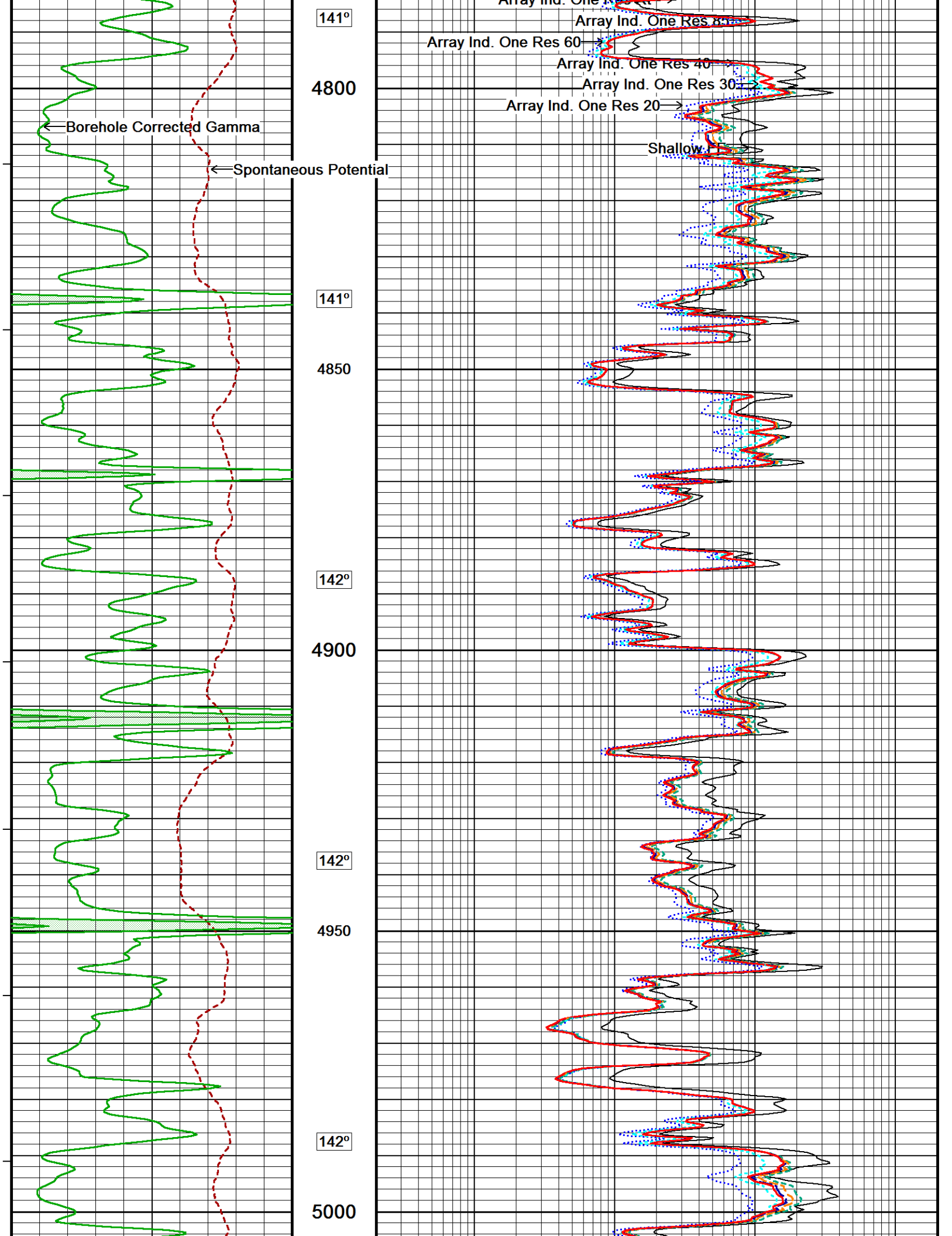
140°
4650
140°
4700
141°
4750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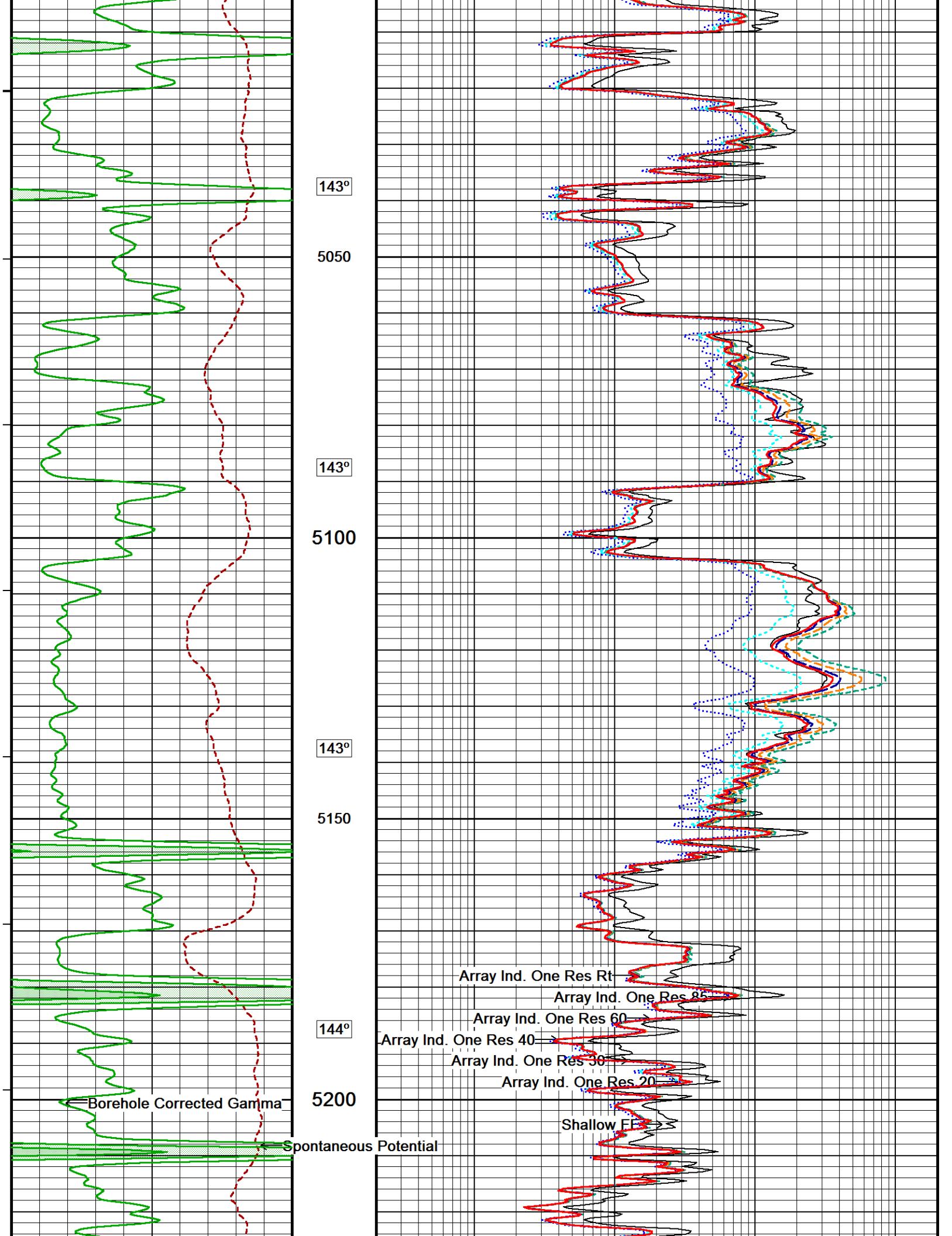
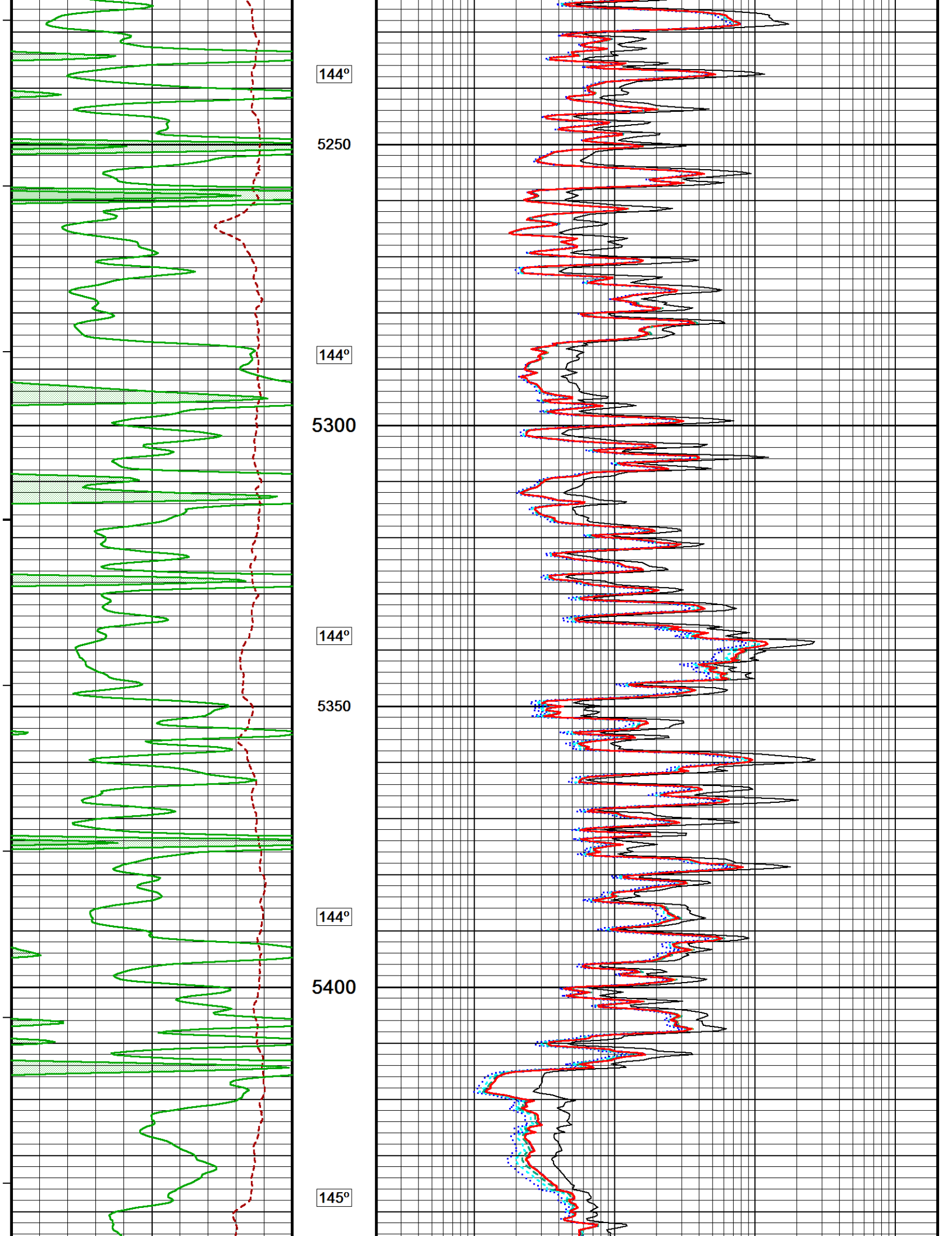
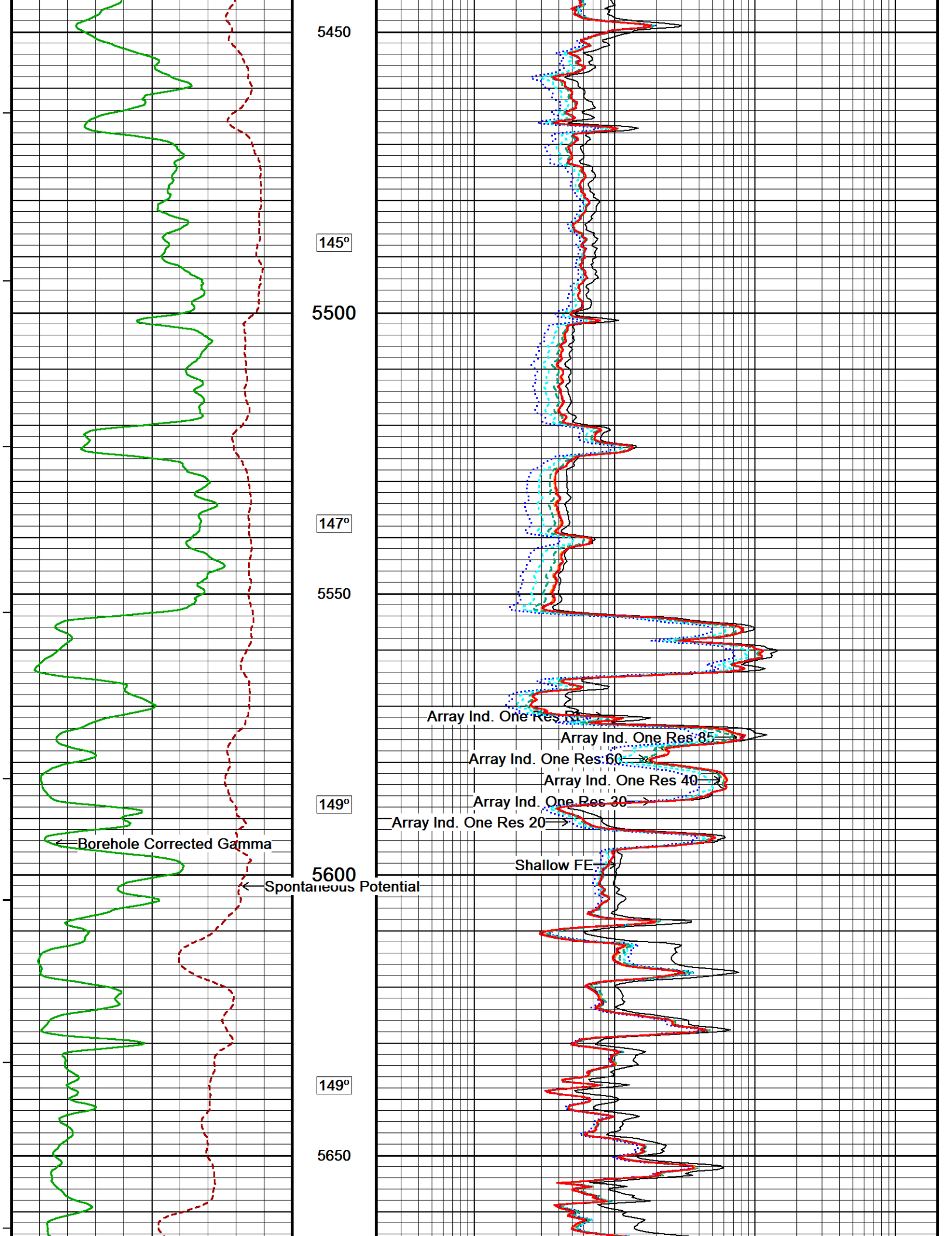
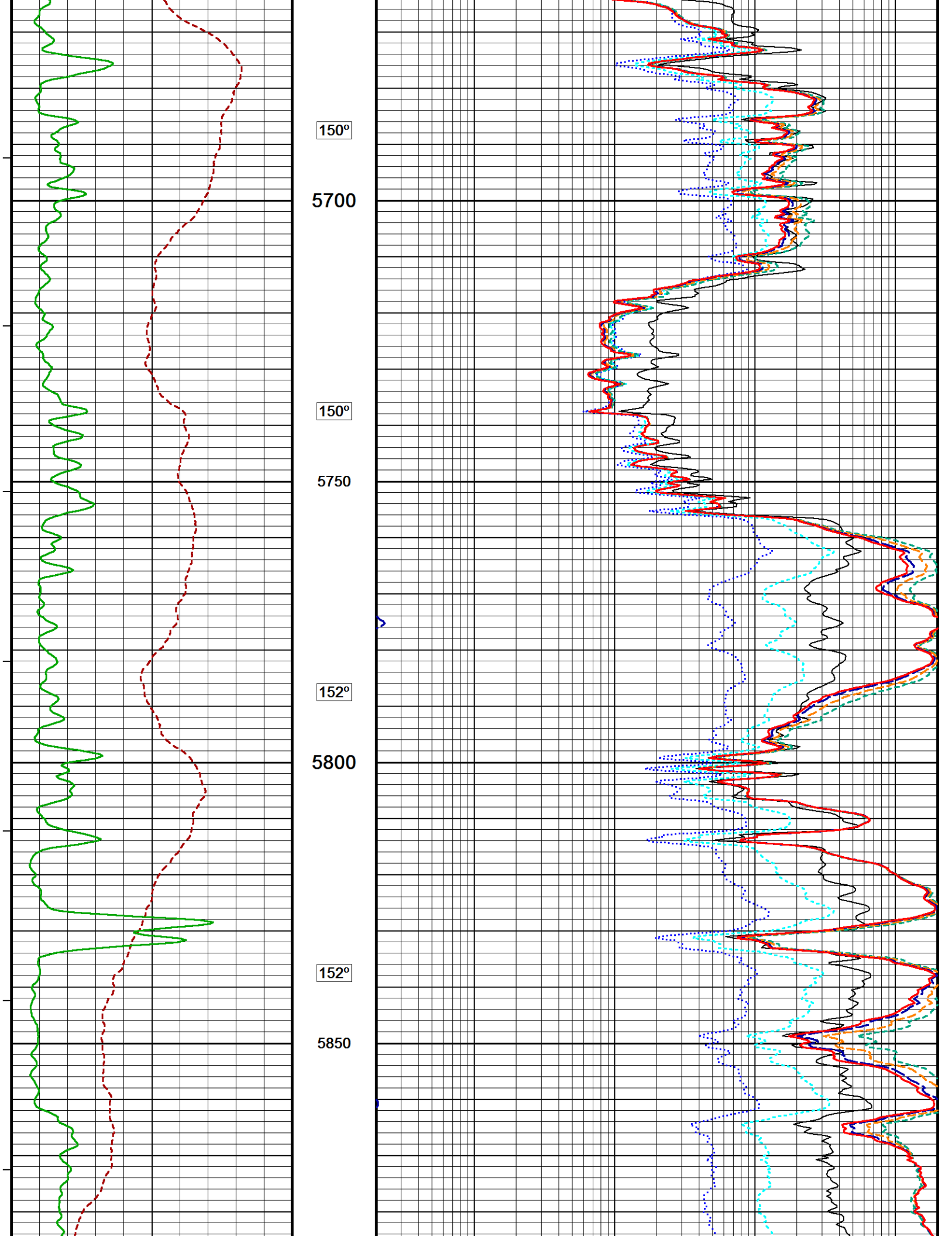
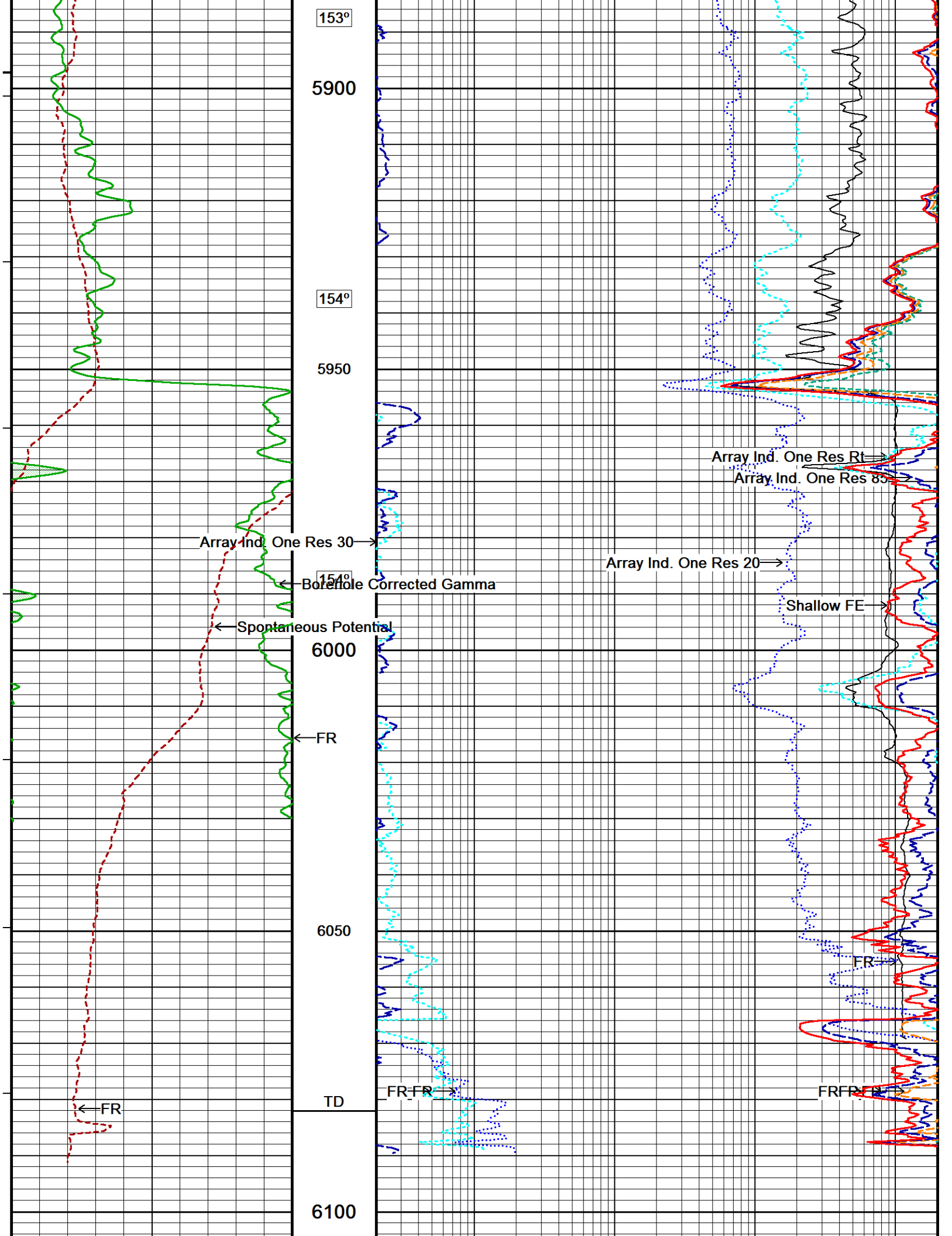
Array Ind. One Res 40
Array Ind. One Res 30
Array Ind. One Res 20
Shallow
Borehole Corrected Gamma
Spontaneous Potential
141°
4800
141°
4850
142°
4900
142°
4950
142°
5000

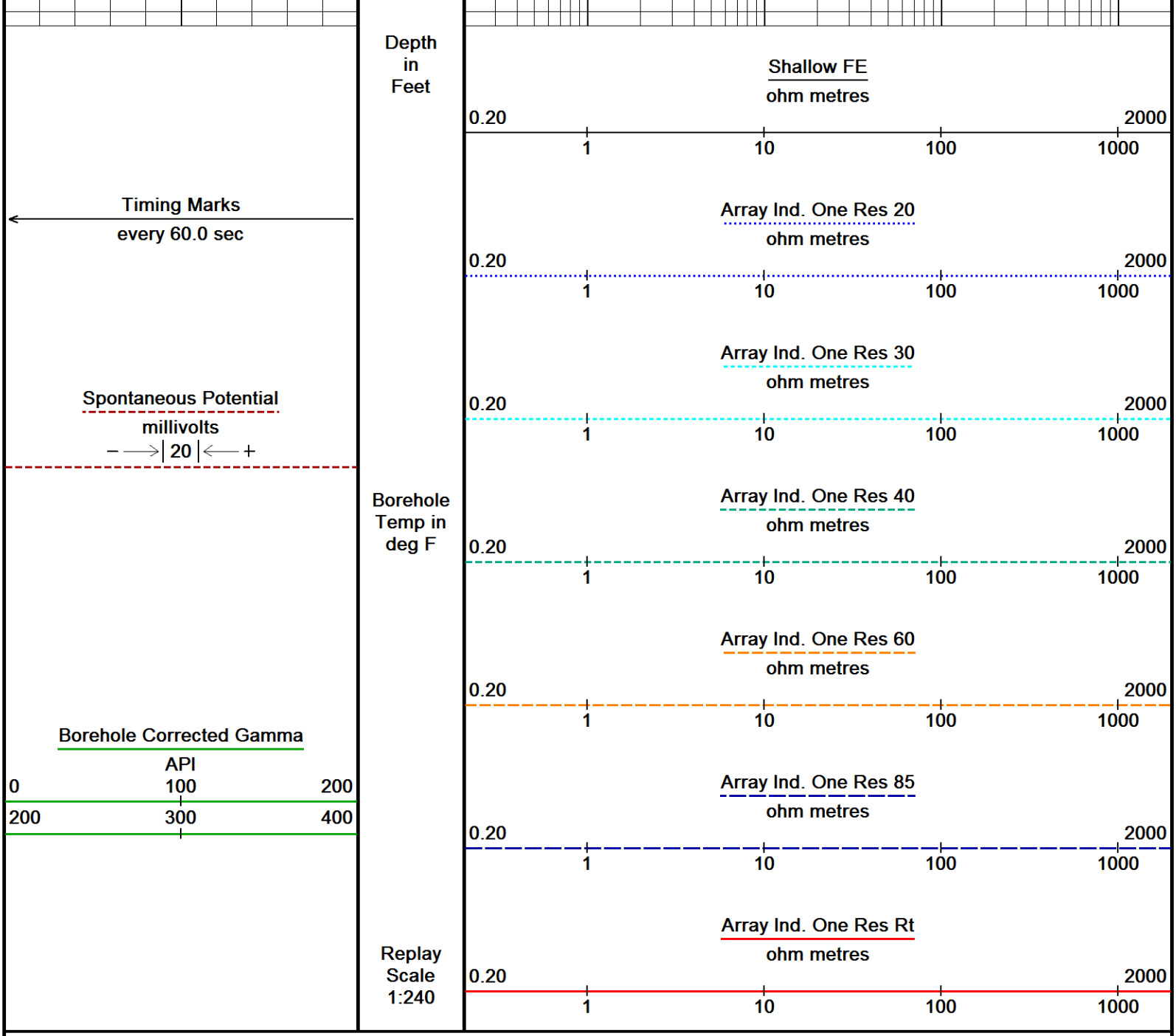

143°
5050
143°
5100
143°
5150
144°
5200
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
Array Ind. One Res 20
Shallow FE
Borehole Corrected Gamma
Spontaneous Potential


144°
5250
144°
5300
144°
5350
144°
5400
145°


5450
145°
5500
147°
5550
149°
5600
149°
5650
Borehole Corrected Gamma
Spontaneous Potential
Array Ind. One Res 85
Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
Array Ind. One Res 20
Shallow FE


150°
5700
150°
5750
152°
5800
152°
5850


153°
5900
154°
5950
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 30
Array Ind. One Res 20
154°
Borehole Corrected Gamma
Shallow FE
Spontaneous Potential
6000
FR
6050
FR
TD
FR FR
FR FR FR
6100

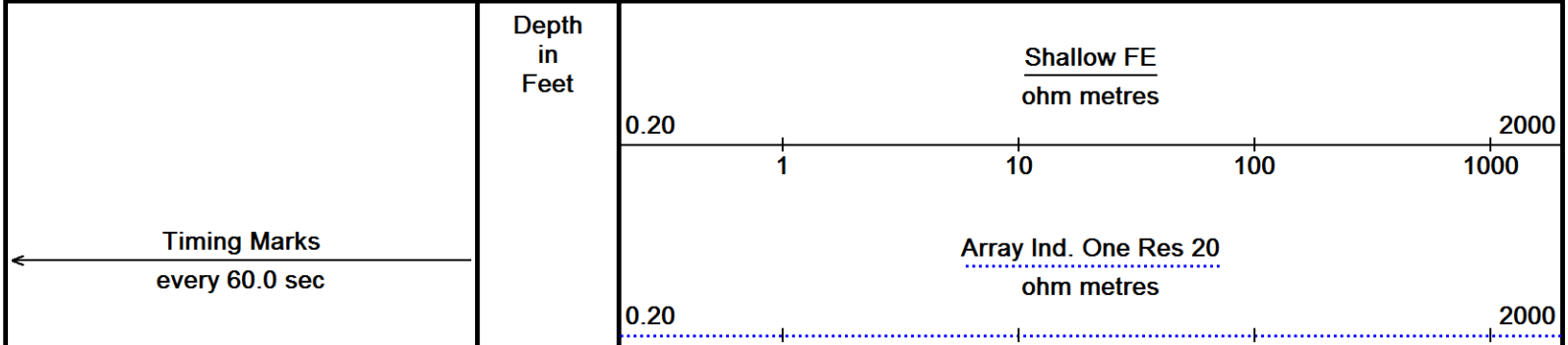


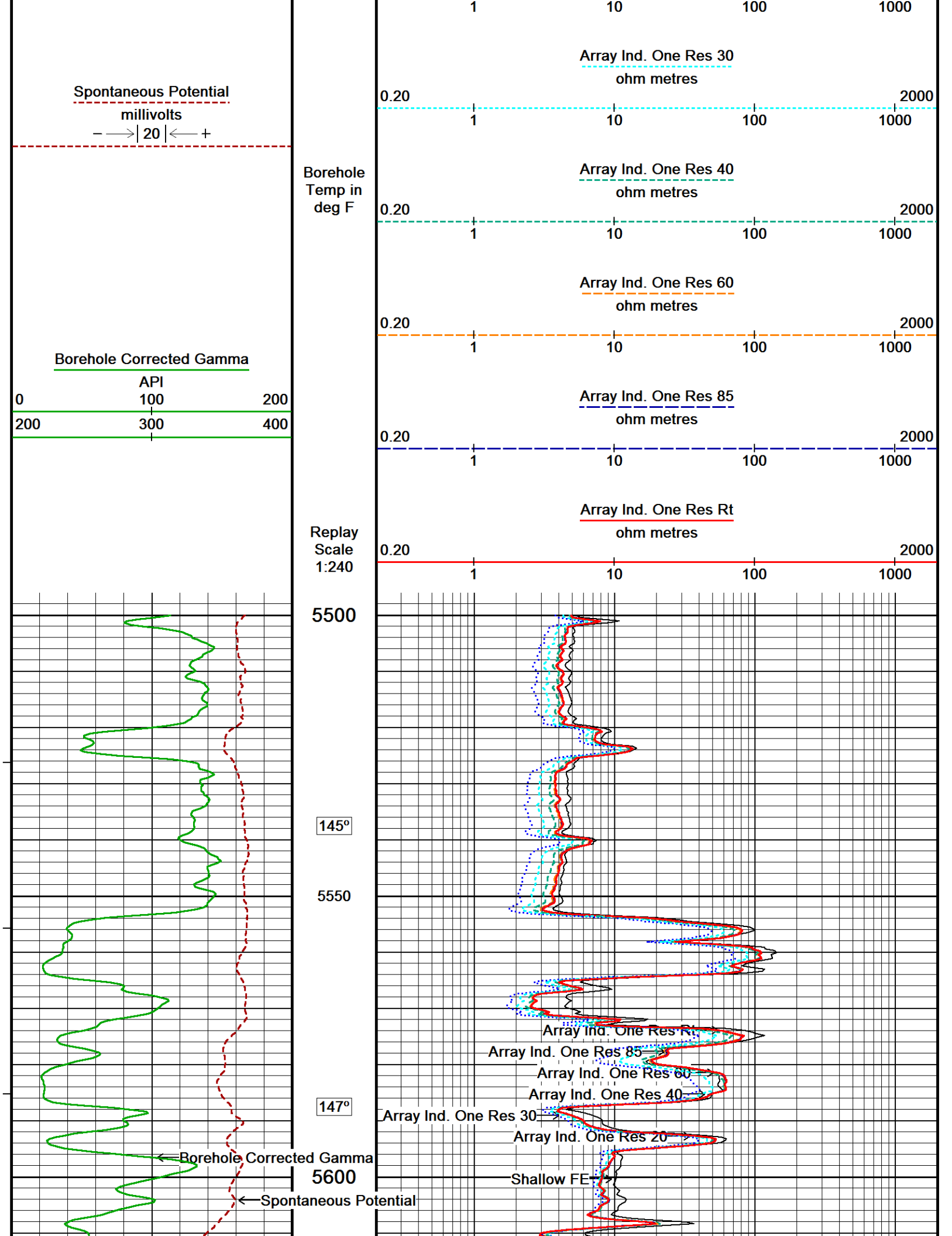
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 26-MAY-2023 17:19
Filename: C:_LOGS\Trek Resources\Pfaffly #1-12\MainPass.dta
Recorded on 26-MAY-2023 13:17
System Versions: Logged with 21.11.3172 Plotted with 21.11.3172

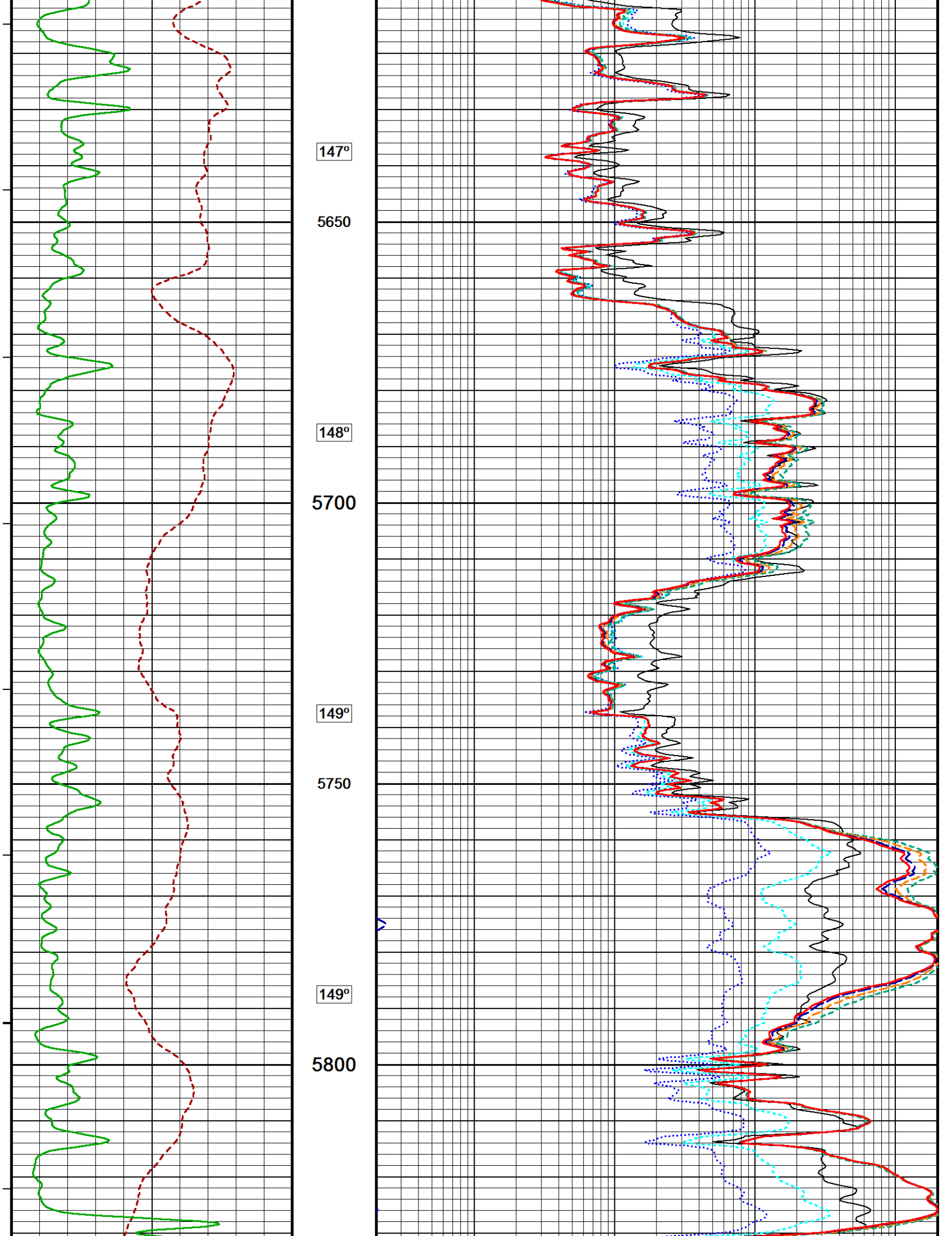
5 INCH MAIN PASS

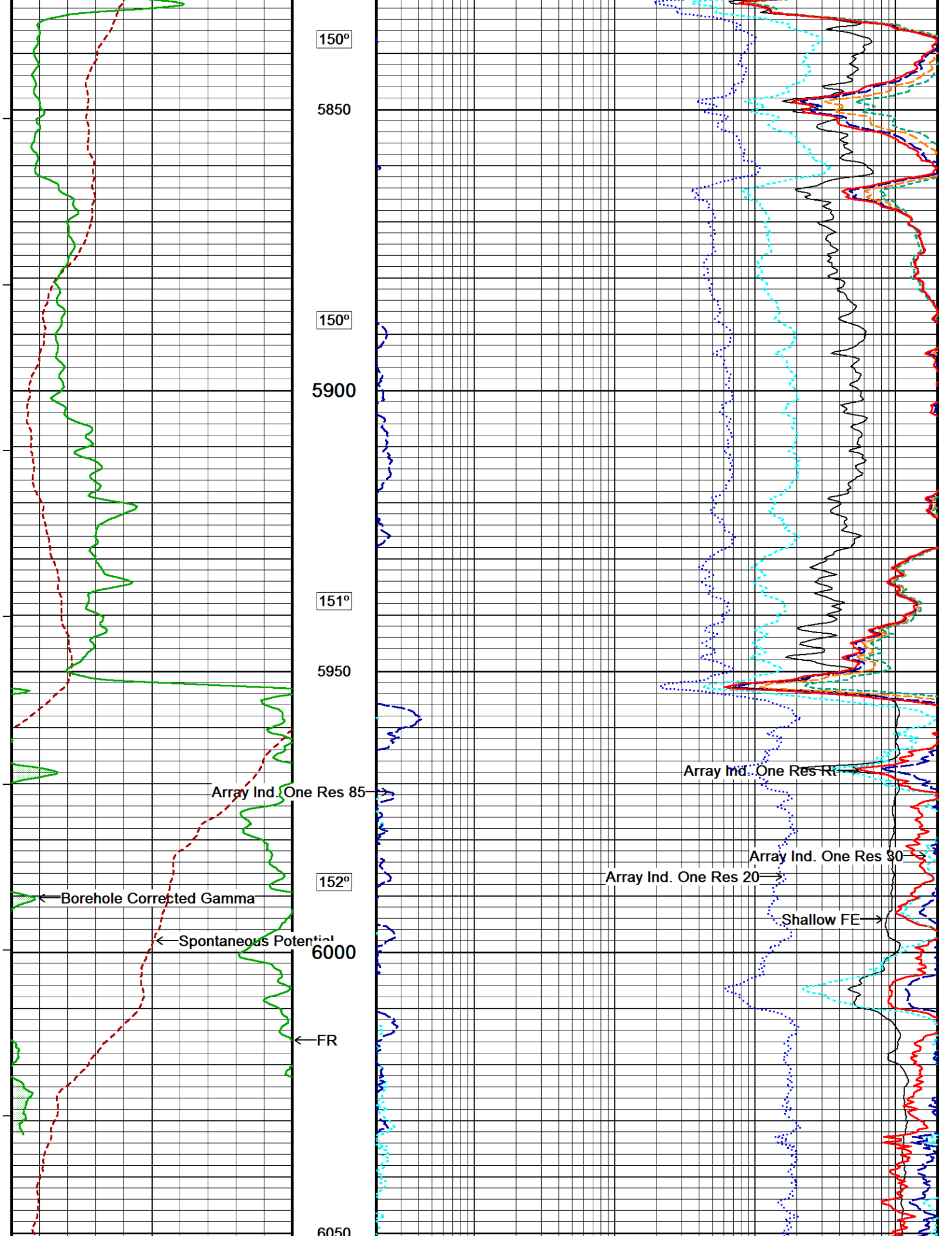
5 INCH REPEAT PASS

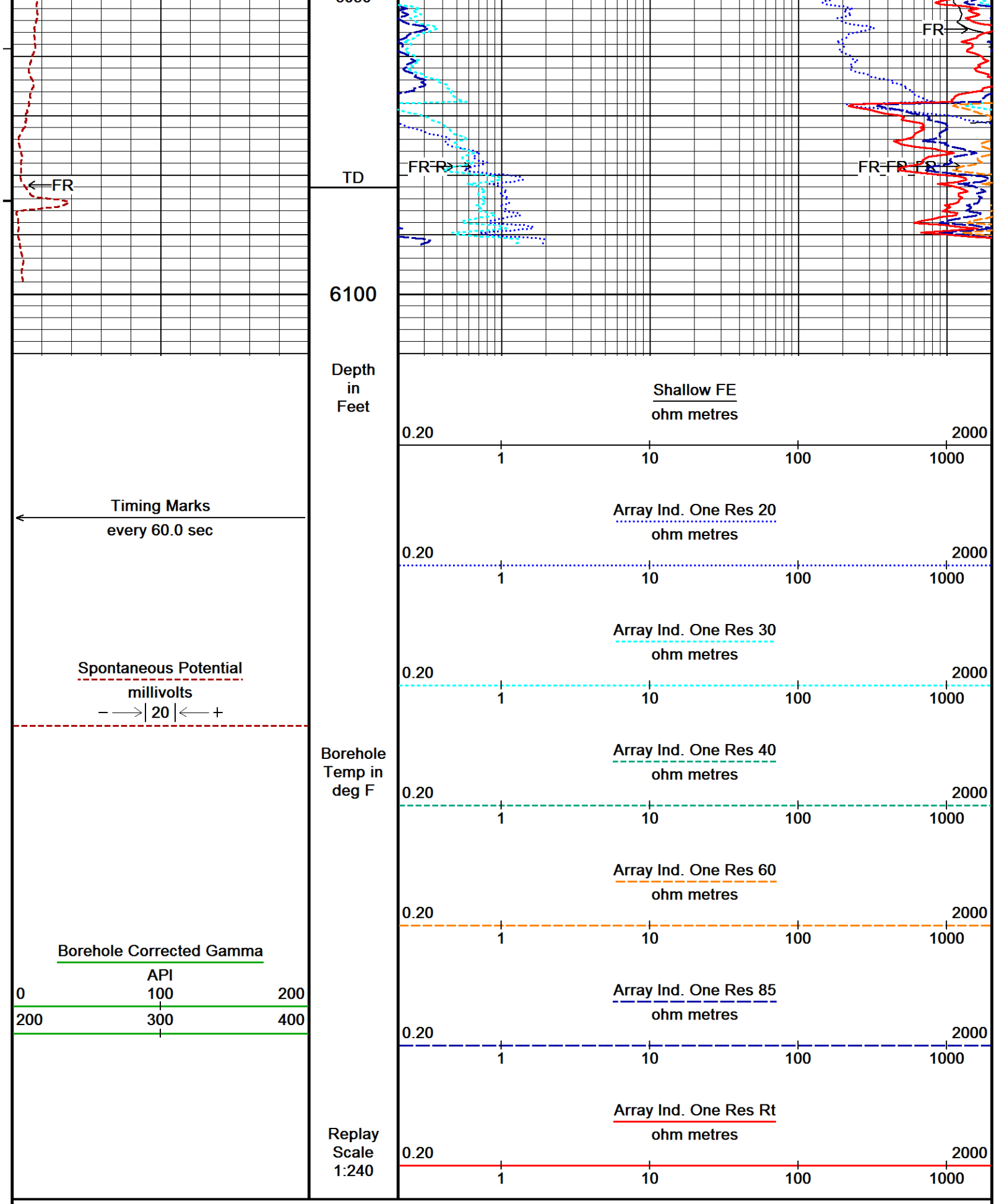
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 26-MAY-2023 17:19
Filename: C:_LOGS\Trek Resources\Pfaffly #1-12\Repeat_Reprocessed.dta
Recorded on 26-MAY-2023 12:08
System Versions: Logged with 20.11.3980 Processed with 21.11.3172 Plotted with 21.11.3172




Spontaneous Potential
millivolts
– 20 +
Borehole Corrected Gamma
API
0 100 200
200 300 400
Borehole Temp in deg F
Array Ind. One Res 30
ohm metres
0.20 2000
1 10 100 1000
Array Ind. One Res 40
ohm metres
0.20 2000
1 10 100 1000
Array Ind. One Res 60
ohm metres
0.20 2000
1 10 100 1000
Array Ind. One Res 85
ohm metres
0.20 2000
1 10 100 1000
Array Ind. One Res Rt
ohm metres
0.20 2000
1 10 100 1000
Replay Scale 1:240
5500
145°
5550
147°
5600
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
Array Ind. One Res 20
Shallow FE
Borehole Corrected Gamma
Spontaneous Potential


147°
5650
148°
5700
149°
5750
149°
5800


150°
5850
150°
5900
151°
5950
Array Ind. One Res 85
Array Ind. One Res Rt
Array Ind. One Res 30
Array Ind. One Res 20
152°
Borehole Corrected Gamma
Shallow FE
Spontaneous Potential
6000
FR
6050



Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 26-MAY-2023 17:19
Filename: C:_LOGS\Trek Resources\Pfaffly #1-12\Repeat_Reprocessed.dta
Recorded on 26-MAY-2023 12:08
System Versions: Logged with 20.11.3980 Processed with 21.11.3172 Plotted with 21.11.3172

5 INCH REPEAT PASS

BEFORE SURVEY CALIBRATION

C:_LOGS\Trek Resources\Pfaffly #1-12\Downlog.dta

General Constants All 000

Last Edited on 26-MAY-2023,10:48

General Parameters		
Mud Resistivity	2.000	ohm-metres
Mud Resistivity Temperature	75.000	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	Sandstone Density Por.	
Resistivity used	Array Ind. One Res Rt	
RWA Constant A	0.650	
RWA Constant M	2.150	
SW/APOR Tool Source	0.000	

Down-hole Tension Calibration SMS 0

Field Calibration on 02-JAN-2023 20:52

Reading No	Measured	Calibrated (lbs)
1	13434.99	100.00
2	14476.43	500.00

Gamma Calibration MCG-E.A 551

Field Calibration on 05-JAN-2023 19:58

	Measured	Calibrated (API)
Background	104	68
Calibrator (Gross)	912	593
Calibrator (Net)	808	525

Gamma Calibration Tolerances MCG-E.A 551

Ratio 1.539 (1.40 | 1.475 | 1.55) Counts/API

Gamma Constants MCG-E.A 551

Last Edited on 26-MAY-2023,10:49

Gamma Calibrator Number	111	
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	%

High Resolution Temperature Constants MCG-E.A 551

Pre-filter Length	11

Micro-Resistivity Caliper Constants MMR-C.A 257

Sonde Configuration	Resistivity Mode

Micro Laterolog Calibration MMR-C.A 257

Base Calibration on 31-MAY-2021 11:30
Field Check on 31-MAY-2021 11:32

	Resistor 1 (ohm)	Resistor 2 (ohm)
	0.0	10000.0

Base Calibration

Measured		Calibrated (ohm-m)	
Ref 1	Ref 2	Ref 1	Ref 2
0.0	9858.5	0.0	128.0

Base Check (ohm-m)	Field Check (ohm-m)
5.2	5.2

Micro Laterolog Calibration Tolerances MMR-C.A 257

Ref 2	9858.5	-3% 9900.00 +3%	ohm
Base Check	5.2	-2% 5.2 +2%	ohm-m
Field Check	5.2	-2% 5.2 +2%	ohm-m

Micro Laterolog Constants MMR-C.A 257

Last Edited on 14-OCT-2020,10:32

Pad Type	6 in Solid Nylon B23059	
Standoff Offset	0.5000	inches
Micro Laterolog K Factor	0.0128	
Micro Laterolog Rm K Factor	N/A	

Mudcake Thickness Correction Constants

Mud Cake Source	Differential Caliper	
Mud Cake Thickness	N/A	inches
Mud Cake Thickness Caliper	MMR Caliper	
Mud Cake Resistivity	0.0470	ohm-m
Mud Cake Resistivity Temp.	72.00	Deg F
Mud Cake Resistivity Source	Temperature Corr	
Temp. for Rmc Corr.	MCG External Temperature	

Micro Normal and Micro Inverse Calibration MMR-C.A 257

Base Calibration on 01-AUG-2022 09:16
Field Check on 01-AUG-2022 09:19

	Resistor 1 (ohm)	Resistor 2 (ohm)
	10.0	50.0

Base Calibration

	Measured		Calibrated (ohm-m)	
Micro Normal	9.9	49.4	5.1100	25.5500
Micro Inverse	9.9	49.4	3.3800	16.9000

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Micro Normal	94.2	94.2
Micro Inverse	62.2	62.2

Micro Normal & Micro Inverse Calibration Tolerance MMR-C.A 257

Micro Normal Res. 1	9.9	-5% 10.0 +5%	ohm	Micro Normal Res. 2	49.4	-5% 50.0 +5% ohm
Micro Inverse Res. 1	9.9	-5% 10.0 +5%	ohm	Micro Inverse Res. 2	49.4	-5% 50.0 +5% ohm
Micro Normal Base Check	94.2	-2% 94.10 +2%	ohm-m			
Micro Inverse Base Check	62.2	-2% 62.22 +2%	ohm-m			
Micro Normal Field Check	94.2	-2% 94.2 +2%	ohm-m			
Micro Inverse Field Check	62.2	-2% 62.2 +2%	ohm-m			

Micro Normal and Micro Inverse Constants MMR-C.A 257

Last Edited on 26-APR-2022,09:39

Pad Type	8-12 in Soft Rubber Inflatable 006-9011-159	
Micro Normal K Factor	0.5110	
Micro Inverse K Factor	0.3380	
Standoff Offset	0.0000	inches

Caliper Calibration MMR-C.A 257

Base Calibration on 01-AUG-2022 09:25
Field Calibration on 01-AUG-2022 09:27

Base Calibration

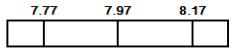
Reading No	Measured	Calibrator Size (in)
1	13492	5.96
2	16878	7.97
3	19935	9.86
4	24282	11.88
5	0	0.00
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.98	7.97

Caliper Calibration Tolerances MMR-C.A 257

Short Arm Field Cal. 7.98 in



Neutron Calibration MDN-C.A 399

Base Calibration on 29-JUL-2022 09:58
Field Check on 29-JUL-2022 10:13

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3211	100	3714	110
Ratio	32.104		33.764	

Field Calibrator at Base

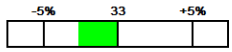
	Calibrated (cps)	
	1897	2833
Ratio	0.670	

Field Check

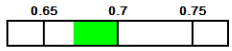
	Calibrated (cps)	
	1941	2836
Ratio	0.685	

Neutron Calibration Tolerances MDN-C.A 399

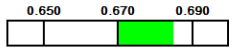
Ratio 32.104



Base Check 0.670



Field Check 0.685



Neutron Constants MDN-C.A 399

Last Edited on 26-MAY-2023,10:50

Neutron Source Id	N-1054	
Neutron Jig Number	NJ5239	
Air Hole Processing	Modified Ratio	
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	None	
Formation Pressure	N/A	kpsi
Temperature Source	None	
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	

Caliper Calibration MVC-A.A 146

Base Calibration on 02-JUN-2022 17:38
Field Calibration on 04-OCT-2021 17:31

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	10520	4.01
2	17524	5.96
3	24857	7.97
4	31500	9.86
5	38770	11.88
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
8.62	7.97

FE Calibration MFE-C.A 399

Base Calibration on 05-AUG-2022 09:34
Field Check on 05-AUG-2022 09:39

Resistor 1 (ohm)	Resistor 2 (ohm)
0.0	1000.0

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	964.9	126.8
Base Check		281.0
Field Check		281.0

FE Calibration Tolerances MFE-C.A 399

Reference 2	964.9	-3% 980.0 +3%	ohm
Base Check	281.0	-2% 277.0 +2%	ohm-m
Field Check	281.0	-2% 281.0 +2%	ohm-m

FE Constants MFE-C.A 399

Last Edited on 26-MAY-2023,10:51

Running Mode	No Sleeve	
MFE K Factor	0.1268	
Borehole Correction Constants		
Sonde Position	1.0	inches
Hole Size Source	Density Caliper	
Hole Size Constant Value	N/A	inches
Rm Source	Global Value: Temperature Corrected	
Temp. for Rm Corr.	MCG External Temperature	

Sonic Constants MSS-D.A 398

Last Edited on 26-MAY-2023,10:51

Maximum Boundary Contrast	70.00	micro-sec/ft
Fluid Transit Time	189.00	micro-sec/ft
Limestone Transit Time	47.60	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 Sonic	
Correction for Sonde Skew	Applied	
Cycle Stretch Algorithm	Applied	
MN3FT	N/A	micro-sec
MX3FT	N/A	micro-sec
Hunt-Raymer Constant	83.13	micro-sec/ft
Sonde Mode	Compensated	
Hole Type	Open Hole	

Sonde Parameters

	Measured	Calibrated
Offset		0.0000
Free Pipe	N/A	N/A

Peak Amplitude Source: N/A

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)	N/A
N/A	N/A	N/A	
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	

Full Waveform Parameters

Use 3' Waveform to derive TR	N/A	
Use 4' Waveform to derive TR	N/A	
Use 5' Waveform to derive TR	N/A	
Use 6' Waveform to derive TR	N/A	
3' Waveform Discriminator Level	N/A	mV
4' Waveform Discriminator Level	N/A	mV
5' Waveform Discriminator Level	N/A	mV
6' Waveform Discriminator Level	N/A	mV
Waveform Discriminator Filter	N/A	
Semblance Window Width	N/A	micro-sec
Semblance Processing Enabled	N/A	
Tracking Boxes Enabled In Processing	N/A	

Induction Calibration MAI-C.A 490

Factory Loop Calibration 17-DEC-2012,20:04
Field Check on 10-MAY-2022 15:43

Factory Loop Calibration

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)	15.2	455.2	9.3	966.2	0.000	0.0
2	5.9	373.9	7.6	821.4	0.000	0.0
3	3.7	251.6	5.2	566.0	0.000	0.0
4 (far)	1.8	128.7	2.6	279.2	0.000	0.0

Array Temperature 75.6 Deg F

Tool Checks 10-MAY-2022 15:40

	Factory Reference (mmho/m)		Before Survey (mmho/m)		
Array	Low	High	Low	High	
1 (near)	-2.2	2114.9	-2.2	2114.9	
2	14.0	1921.9	13.9	1922.0	
3	14.0	1678.9	14.0	1679.0	
4 (far)	10.3	1145.1	10.3	1145.2	
Array Temperature		89.0		89.2	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 490

Low Array 1	-2.2	-3.7 / -2.2 / -0.7	mmho/m	High Array 1	2114.9	-0.5% / 2114.9 / +0.5%	mmho/m
Low Array 2	13.9	12.5 / 14.0 / 15.5	mmho/m	High Array 2	1922.0	-0.5% / 1921.9 / +0.5%	mmho/m
Low Array 3	14.0	12.5 / 14.0 / 15.5	mmho/m	High Array 3	1679.0	-0.5% / 1678.9 / +0.5%	mmho/m
Low Array 4	10.3	8.8 / 10.3 / 11.8	mmho/m	High Array 4	1145.2	-0.5% / 1145.1 / +0.5%	mmho/m

Induction Constants MAI-C.A 490

Last Edited on 26-MAY-2023,10:52

Induction Model	RtAP-NC	
Borehole Correction Constants		
Tool Centred	No	
Hole Size Source	Density Caliper	
Hole Size Constant Value	N/A	inches
Stand-off Type	Fins	
Stand-off	1.00	inches
Number of Fins on Stand-off	6.0000	
Stand-off Fin Angle	60.00	degrees
Stand-off Fin Width	0.5000	inches
Rm Source	Global Value: Temperature Corrected	
Temp. for Rm Corr.	MCG External Temperature	
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	

High Resolution Temperature Calibration MAI-C.A 490

Field Calibration on 17-DEC-2012,07:08

	Measured	Calibrated(Deg C)
Lower	10.00	10.00
Upper	100.00	100.00

High Resolution Temperature Constants MAI-C.A 490

Last Edited on 17-DEC-2012,20:09

Pre-filter Length	11

Caliper Calibration MPD-C.J 438

Base Calibration on 23-NOV-2022 17:09
Field Calibration on 23-NOV-2022 17:11

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	18016	4.01
2	26550	5.96
3	35550	7.97
4	43664	9.86
5	52830	11.88
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.98	7.97

Caliper Calibration Tolerances MPD-C.J 438

		7.57	7.97	8.38	
Long Arm Field Cal.	7.98				in

Photo Density Calibration MPD-C.J 438

Base Calibration on 05-JAN-2023 19:32

Density Calibration

Base Calibration

	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Background	979	1141		
Reference 1	43581	20480	59814	31141
Reference 2	18113	2081	24963	2524

Field Check at Base

	979.0	1140.8

Field Check

PE Calibration

Base Calibration	WS	Measured WH	Ratio	Calibrated Ratio
Background	183	883		
Reference 1	19121	43442	0.445	0.368
Reference 2	5547	18008	0.313	0.273

Field Check at Base

	183.0	883.1

Field Check

Photo Density Calibration Tolerances MPD-C.J 438

Near Density Ratio	2.49	-5% 2.52 +5%	Far Density Ratio	20.57	-5% 21.00 +5%
PE Calibration	0.128	0.089 0.110 0.131			
Near Den. Field Check	0.0	-3% 979.0 +3%	Far Den. Field Check	0.0	-3% 1140.8 +3%
PE WS Field Check	0.0	-6% 183.0 +6%	PE WH Field Check	0.0	-6% 883.1 +6%

Density Constants MPD-C.J 438

Last Edited on 26-MAY-2023,10:51

Density Source Id	H79956B	
Nylon Calibrator Number	DNCE 687	
Aluminium Calibrator Number	DACD 526	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.09	gm/cc
Mud Density Type	Non-Barite	
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	
Precision Enhanced Density Processing	Not Applied	

Matrix Density (gm/cc)	Depth (ft)
2.65	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

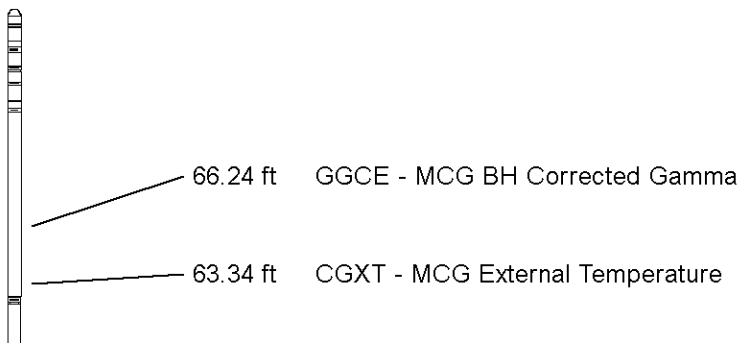
C:_LOGS\Trek Resources\Pfaffly #1-12\MainPass.dta

Cablehead, 11 pin
CBH-CC 348 LG: 2.40 ft WT: 24.3 lb OD: 2.244 in

11C-11B Compact Tool Adaptor
MTA-K.A 189 LG: 1.53 ft WT: 13.2 lb OD: 2.240 in

Compact Comms Gamma
MCG-E.A 551 LG: 8.70 ft WT: 63.9 lb OD: 2.244 in

Compact Micro-Resistivity



MMR-C.A 257 LG: 8.59 ft WT: 81.6 lb OD: 4.882 in

Compact Neutron
MDN-C.A 399 LG: 5.04 ft WT: 50.7 lb OD: 2.244 in

Compact Density/Caliper
MPD-C.J 438 LG: 9.59 ft WT: 90.4 lb OD: 2.449 in

Compact Vee Arm Caliper
MVC-A.A 146 LG: 8.06 ft WT: 61.7 lb OD: 2.244 in

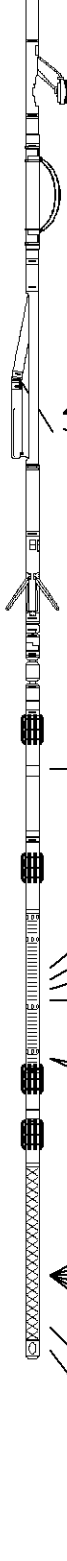
Compact Knuckle Joint
SKJ-E.B 694 LG: 2.17 ft WT: 24.3 lb OD: 2.244 in

Compact Focussed Electric
MFE-C.A 399 LG: 6.05 ft WT: 48.5 lb OD: 2.244 in

Compact Sonic
MSS-C.K 374 LG: 12.52 ft WT: 72.8 lb OD: 2.244 in

Compact Induction
MAI-C.A 490 LG: 10.81 ft WT: 48.5 lb OD: 2.244 in

Total Length: 75.45 ft Weight: 579.8 lb



55.99 ft	MINV - Micro-inverse
55.99 ft	MNRL - Micro-normal
51.19 ft	NPRL - Limestone Neutron Por.
43.95 ft	CLDC - Density Caliper
43.95 ft	AVOL - Annular Volume
43.95 ft	HVOL - Hole Volume
42.02 ft	DPRL - Limestone Density Por.
42.02 ft	DCOR - Density Correction
41.96 ft	PDPE - PE
34.54 ft	VCAD - Vee Arm Caliper A
26.43 ft	FEFE - Shallow FE
16.96 ft	TR11 - 4' Transit Time
16.46 ft	TR21 - 3' Transit Time
15.95 ft	TR12 - 6' Transit Time
15.46 ft	TR22 - 5' Transit Time
12.96 ft	SPRL_W - Wyllie Lmst Sonic Por.
12.96 ft	DT35 - 3-5' Compensated Sonic
3.34 ft	R40O - Array Ind. One Res 40
3.34 ft	R30O - Array Ind. One Res 30
3.34 ft	R20O - Array Ind. One Res 20
3.34 ft	R60O - Array Ind. One Res 60
3.34 ft	RTAO - Array Ind. One Res Rt
3.34 ft	R85O - Array Ind. One Res 85
0.23 ft	SPCG - Spontaneous Potential
Tool Zero	(0.13ft from bottom)

All measurements relative to tool zero.

COMPANY	NAVEX RESOURCES LLC
WELL	PFAFFLY #1-12
FIELD	NORTH CHEYENNE PROJECT/ PFAFFLY PROSPECT
PROVINCE/COUNTY	KIT CARSON
COUNTRY/STATE	COLORADO

Elevation Kelly Bushing	4479.00	feet	Last Reading	648.00	feet
Elevation Drill Floor	4479.00	feet	First Reading	6078.00	feet
Elevation Ground Level	4466.90	feet	Depth Driller	6076.00	feet
			Depth Logger	6082.00	feet

WIRELINE

WIRELINE LOGGING SOLUTIONS

ARRAY INDUCTION SHALLOW FOCUSED ELECTRIC LOG

WIRELINE LOGGING SOLUTIONS — ARRAY INDUCTION SHALLOW FOCUSED ELECTRIC LOG

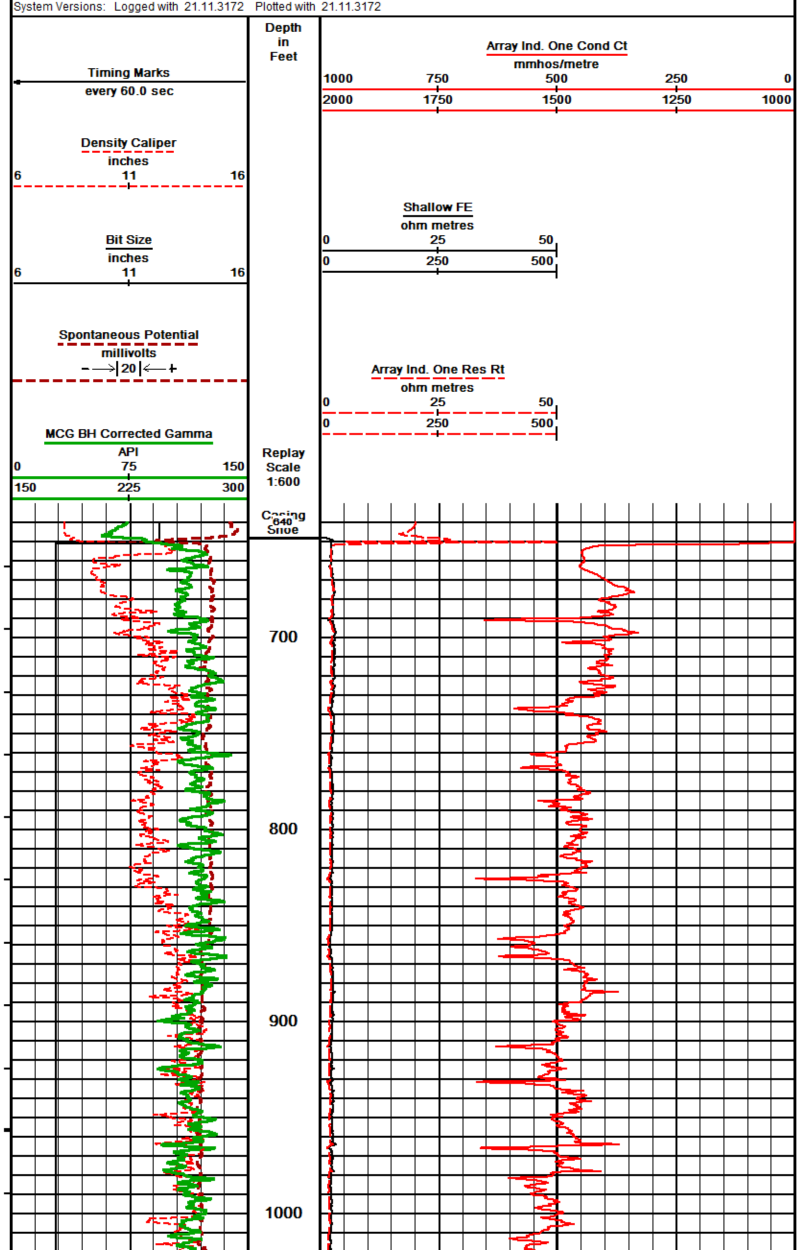
COMPANY	NAVEX RESOURCES LLC		
WELL	PFAFFLY #1-12		
FIELD	NORTH CHEYENNE PROJECT/ PFAFFLY PROSPECT		
COUNTY	KIT CARSON		
STATE	COLORADO		
LOCATION	1602' FSL & 1269' FWL	Other Services	
SEC 12	TWP 11S	RGE 46W	
Latitude	39.103762	PHOTO-DENSITY	NEUTRON
Longitude	-102.516769	COMPENSATED SONIC	MICRO LOG
API Number	05-063-06363		
Permanent Datum GL, Elevation 4466.9 feet		Elevations:	feet
Log Measured From KB, 12.10 feet above Permanent Datum		KB	4479.00
Drilling Measured From KB		DF	4479.00
		GL	4466.90
Date	26-MAY-2023		
Run Number	ONE		
Service Order	T1-230526WFT		
Depth Driller	6076.00	feet	
Depth Logger	6082.00	feet	
First Reading	6078.00	feet	
Last Reading	648.00	feet	
Casing Driller	651.00	feet	
Casing Logger	648.00	feet	
Bit Size	7.875	inches	
Hole Fluid Type	WBM		
Density / Viscosity	9.10 lb/USg	63.00 sec/qt	
PH / Fluid Loss	10.00	8.00 ml/30Min	
Sample Source	FLOWLINE		
Rm @ Measured Temp	0.71 @ 86.0	ohm-m	
Rmf @ Measured Temp	0.61 @ 86.0	ohm-m	
Rmc @ Measured Temp	1.01 @ 86.0	ohm-m	
Source Rmf / Rmc	CALC	CALC	
Rm @ BHT	0.36 @ 154.0	ohm-m	
Time Since Circulation	8 HRS		
Max Recorded Temp	154.00	deg F	
Equipment / Base	10001	OKC	
Recorded By	B. GRAHMANN		
Witnessed By	CRAIG ADAMS		
Rig Name	DUKE #9		

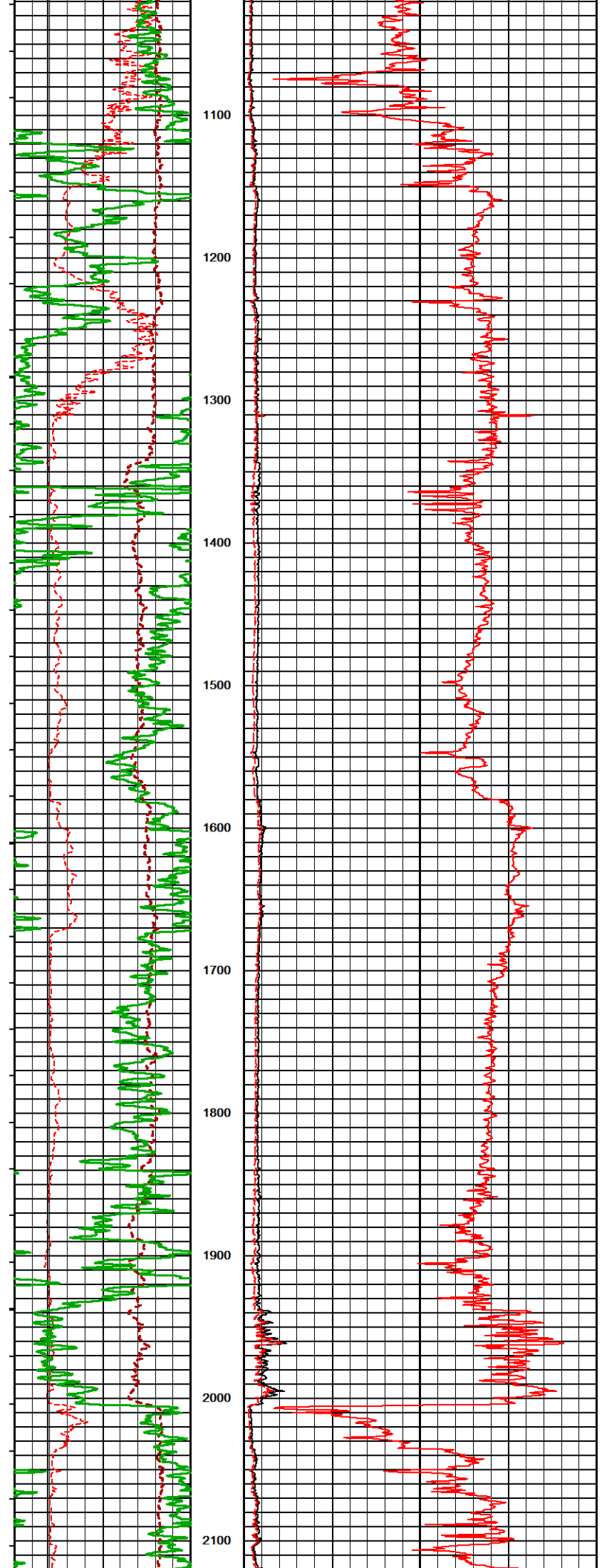
1 INCH MAIN PASS

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 26-MAY-2023 17:19

Filename: C:_LOGS\Trek Resources\Pfaffly #1-12\MainPass.dta — Recorded on 26-MAY-2023 13:17

System Versions: Logged with 21.11.3172 Plotted with 21.11.3172

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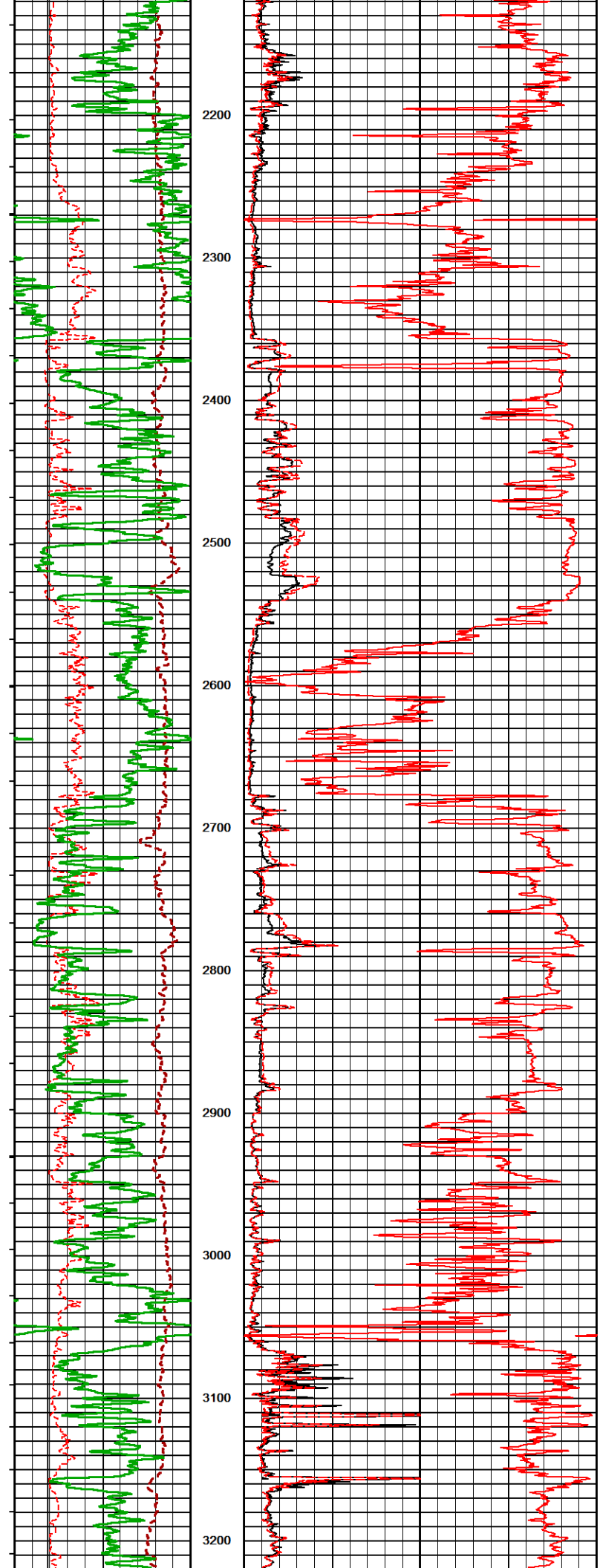
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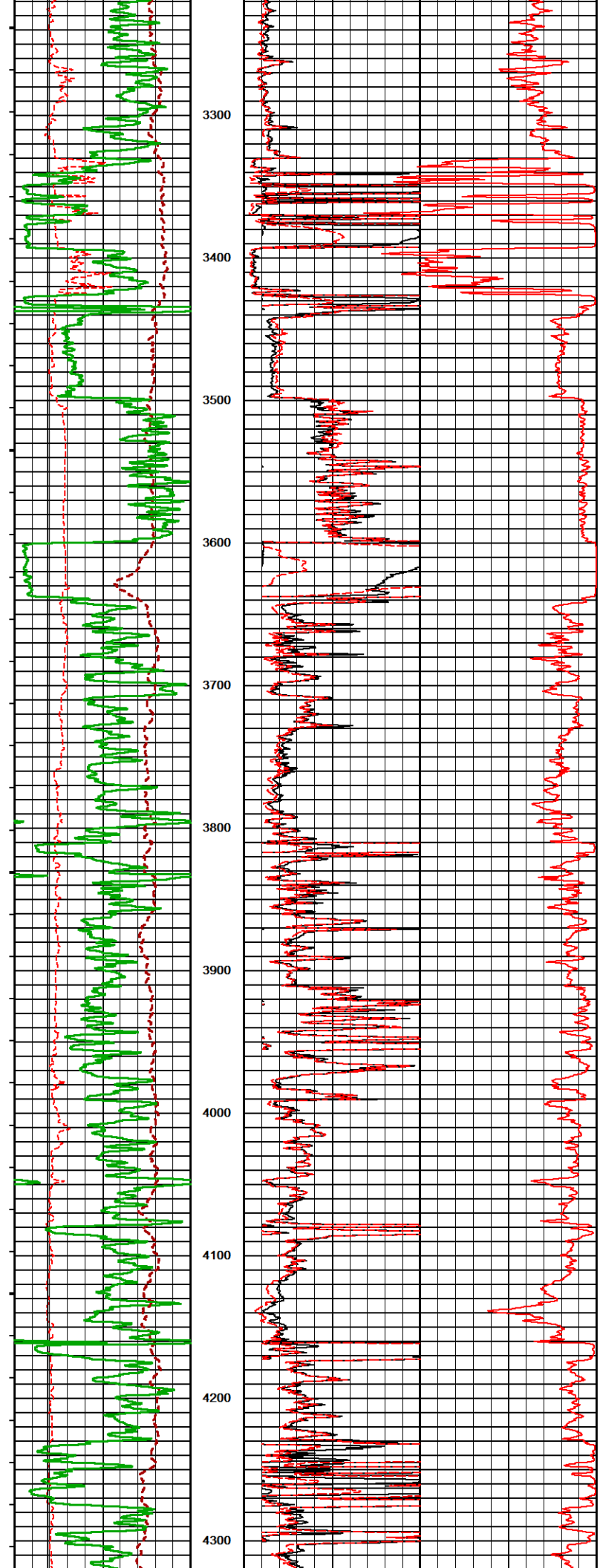
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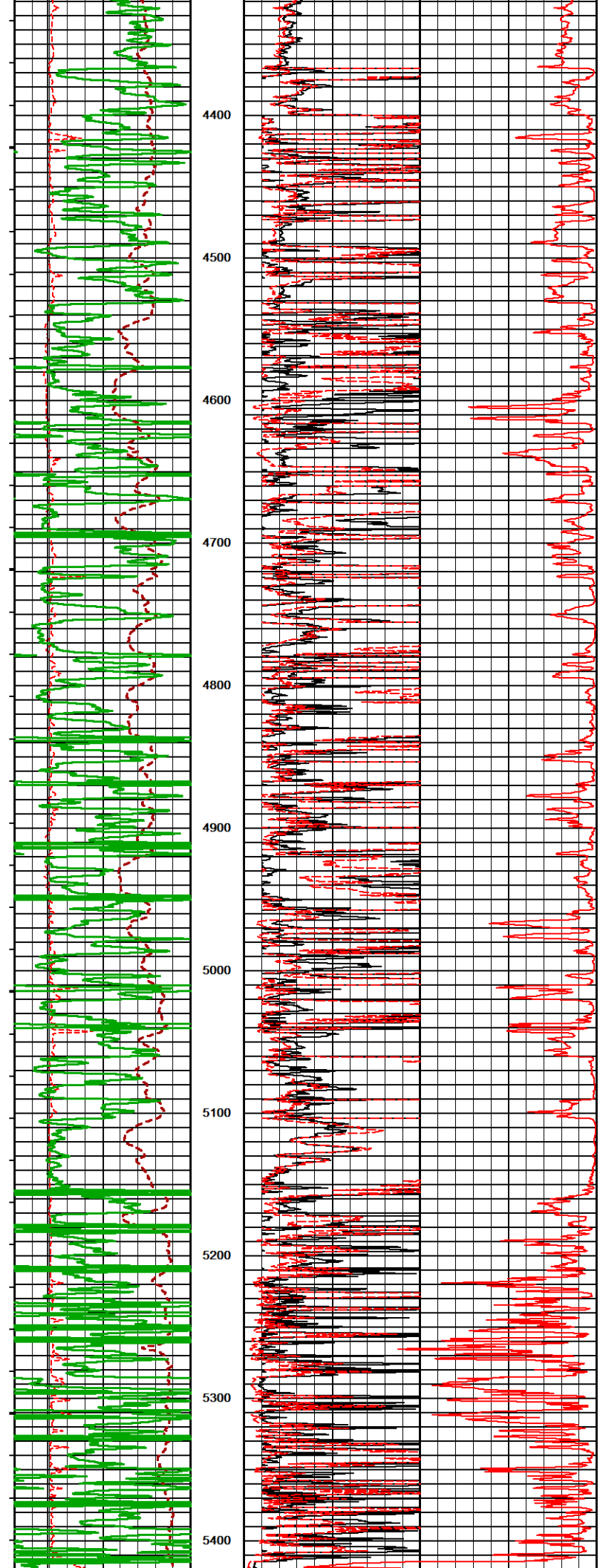
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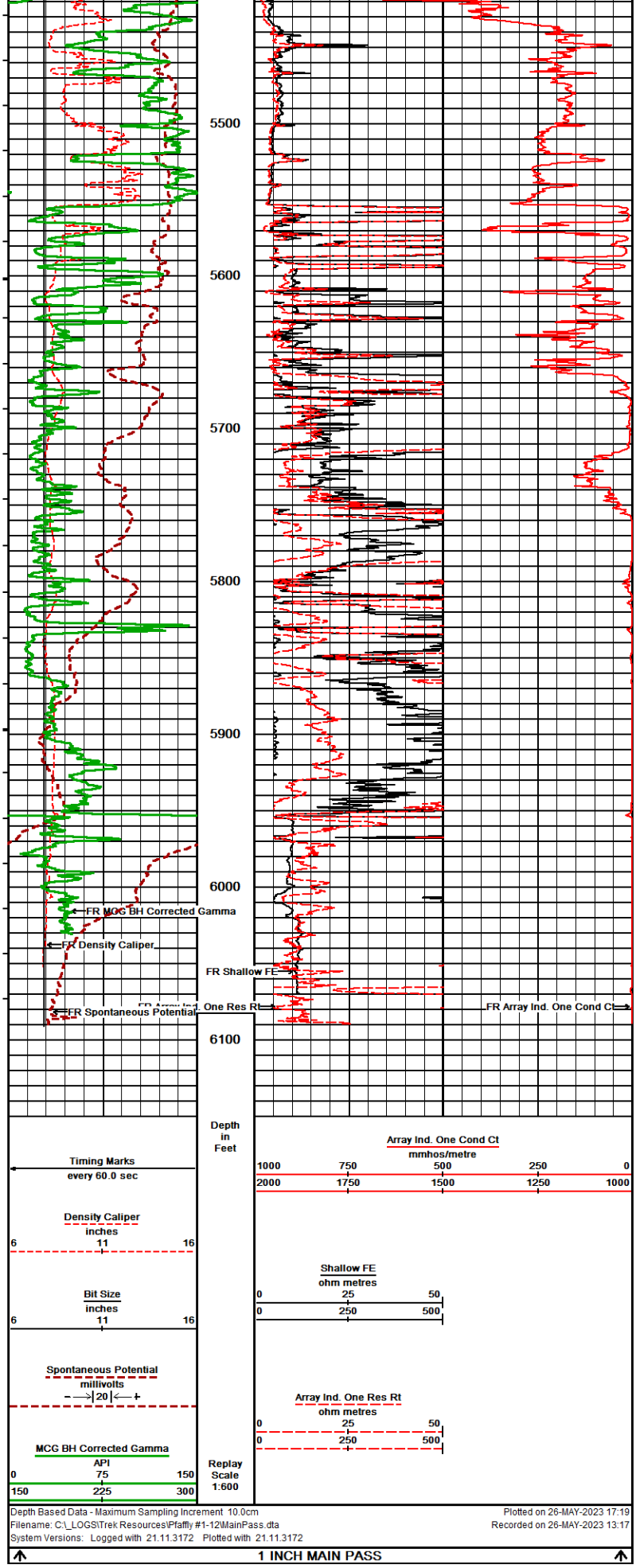

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:_LOGS\Trek Resources\Pfaffly #1-12\MainPass.dta
System Versions: Logged with 21.11.3172 Plotted with 21.11.3172

Plotted on 26-MAY-2023 17:19
Recorded on 26-MAY-2023 13:17

1 INCH MAIN PASS

COMPANY	NAVEX RESOURCES LLC
WELL	PFAFFLY #1-12
FIELD	NORTH CHEYENNE PROJECT/ PFAFFLY PROSPECT
PROVINCE/COUNTY	KIT CARSON
COUNTRY/STATE	COLORADO

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WIRELINE LOGGING SOLUTIONS

ARRAY INDUCTION
SHALLOW FOCUSED
ELECTRIC LOG