



**Weatherford**

ARRAY INDUCTION  
PHOTO DENSITY / NEUTRON  
GAMMA RAY MD LOG

COMPANY SMITH PRODUCTION COMPANY  
WELL BOCAGE LANDS LLC ETAL #1 ST  
FIELD LITTLE CHENIERE  
PROVINCE/COUNTY CAMERON  
COUNTRY/STATE U.S.A./LOUISIANA  
LOCATION X = 1,491,222' Y = 426,189'

SEC 13 TWP 14S RGE 6W Other Services  
API Number 17023231490000 TVD SWC-48  
Permit Number 245864

Permanent Datum GL, Elevation 1 feet  
Log Measured From KB Elevations: KB 18.00  
Drilling Measured From KB DF 17.00  
GL 1.00

Date	13-MAY-2013
Run Number	ONE
Service Order	3535931
Depth Driller	6002.00 feet
Depth Logger	5997.00 feet
First Reading	5997.00 feet
Last Reading	1211.00 feet
Casing Driller	1217.00 feet
Casing Logger	1211.00 feet
Bit Size	7.875 inches
Hole Fluid Type	WATER BASED
Density / Viscosity	9.30 lb/USg 47.00 CP
PH / Fluid Loss	7.80 ml/30Min
Sample Source	PIT
Rm @ Measured Temp	1.65 @ 78.0 ohm-m
Rmf @ Measured Temp	1.24 @ 78.0 ohm-m
Rmc @ Measured Temp	2.06 @ 78.0 ohm-m
Source Rmf / Rmc	CALC
Rm @ BHT	0.94 @139.0 ohm-m
Time Since Circulation	10 HOURS
Max Recorded Temp	139.00 deg F
Equipment / Base	13046 BRSD
Recorded By	M.ROMERO
Witnessed By	H.ANTIE
RIG	GUICHARD 5

### BOREHOLE RECORD

Last Edited: 13-MAY-2013 02:51

Bit Size inches	Depth From feet	Depth To feet
7.875	1217.00	6002.00

### CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	1217.00	24.00

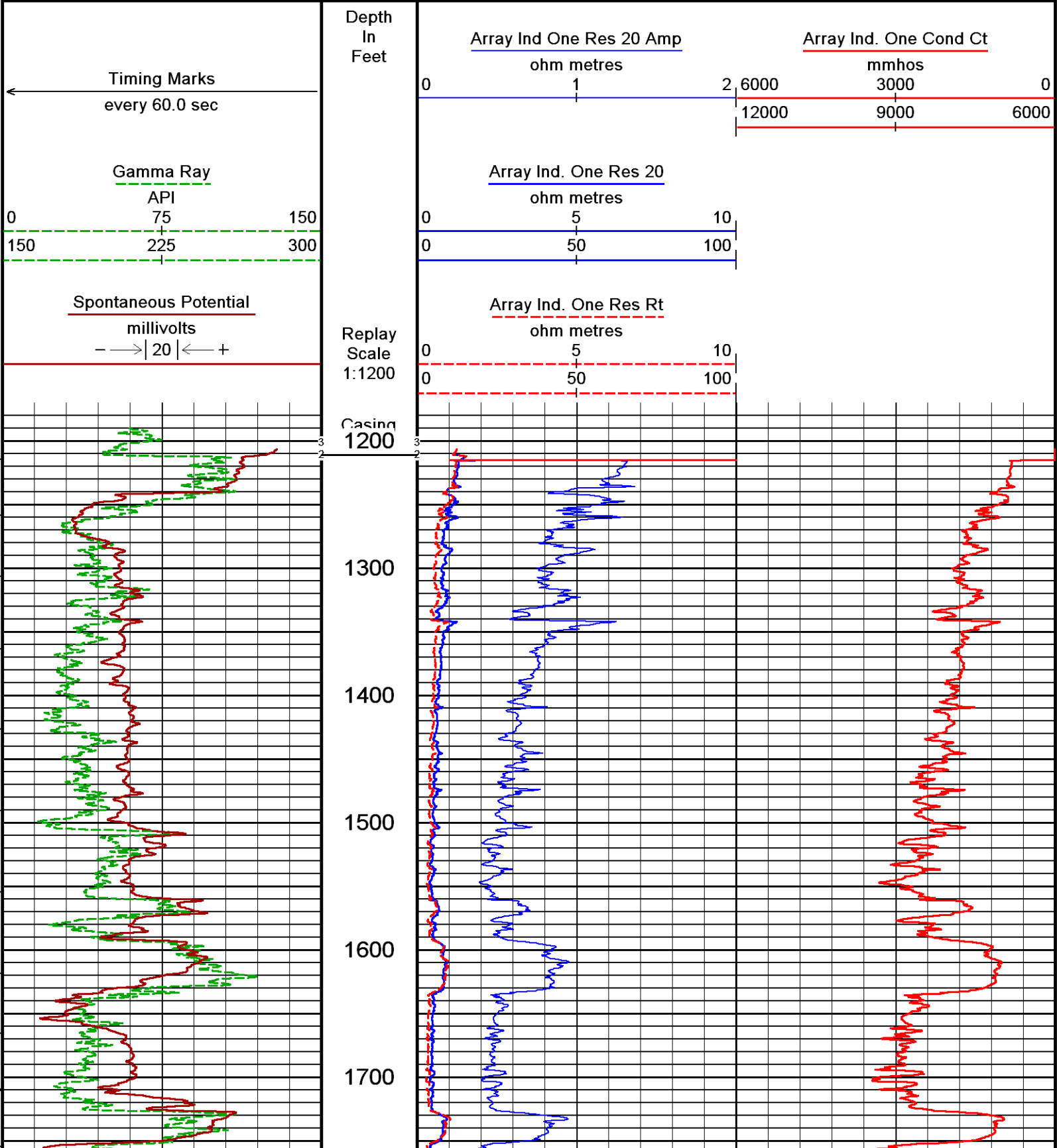
### REMARKS

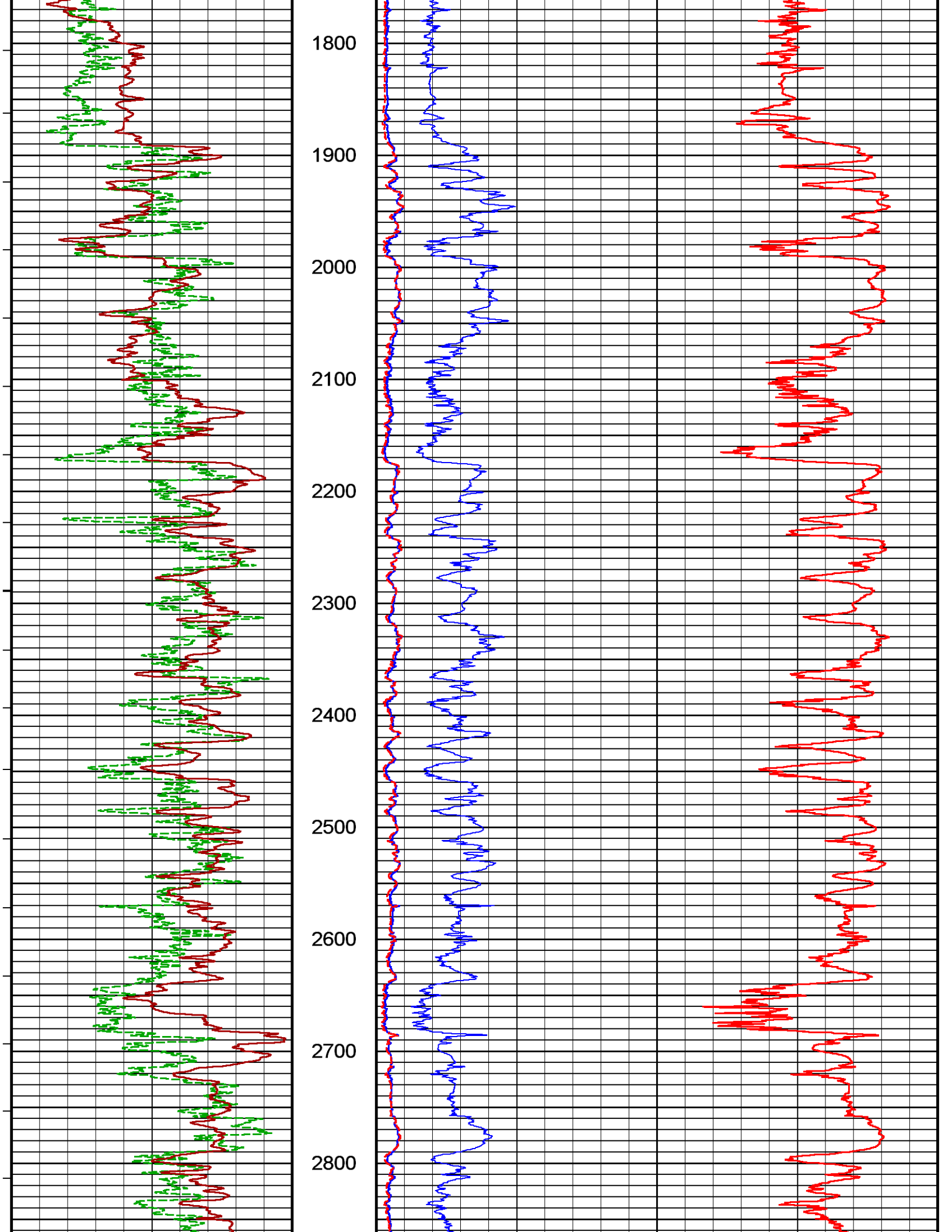
\*\*\*MEASURED DEPTH LOG\*\*\*  
 MAI / MFE / MPD / MDN / MCG / SHA RAN IN COMBINATION S.O. 3535931  
 FINS RAN ON INDUCTION  
 FINS RAN ON MFE  
 DUAL BOWSPRINGS RAN ON NEUTRON  
 STABILIZER RAN ON DENSITY  
 DENSITY MATRIX (2.65g/cc)  
 RWA = A - 0.62 M - 2.15  
 CUSTOMER REQUESTED REPEAT PASS BE PERFORMED BELOW CASING DUE TO HOLE CONDITIONS  
 ANNULAR VOLUME ASSUMES 5.5" PRODUCTION CASING  
 ANNULAR CEMENT VOLUME APPROX 1157 CUBIC FEET  
 CREW: M.ROMERO, C.COSTLEY, J.METTLEN  
 THANK YOU FOR CHOOSING WEATHERFORD WIRELINE!!!

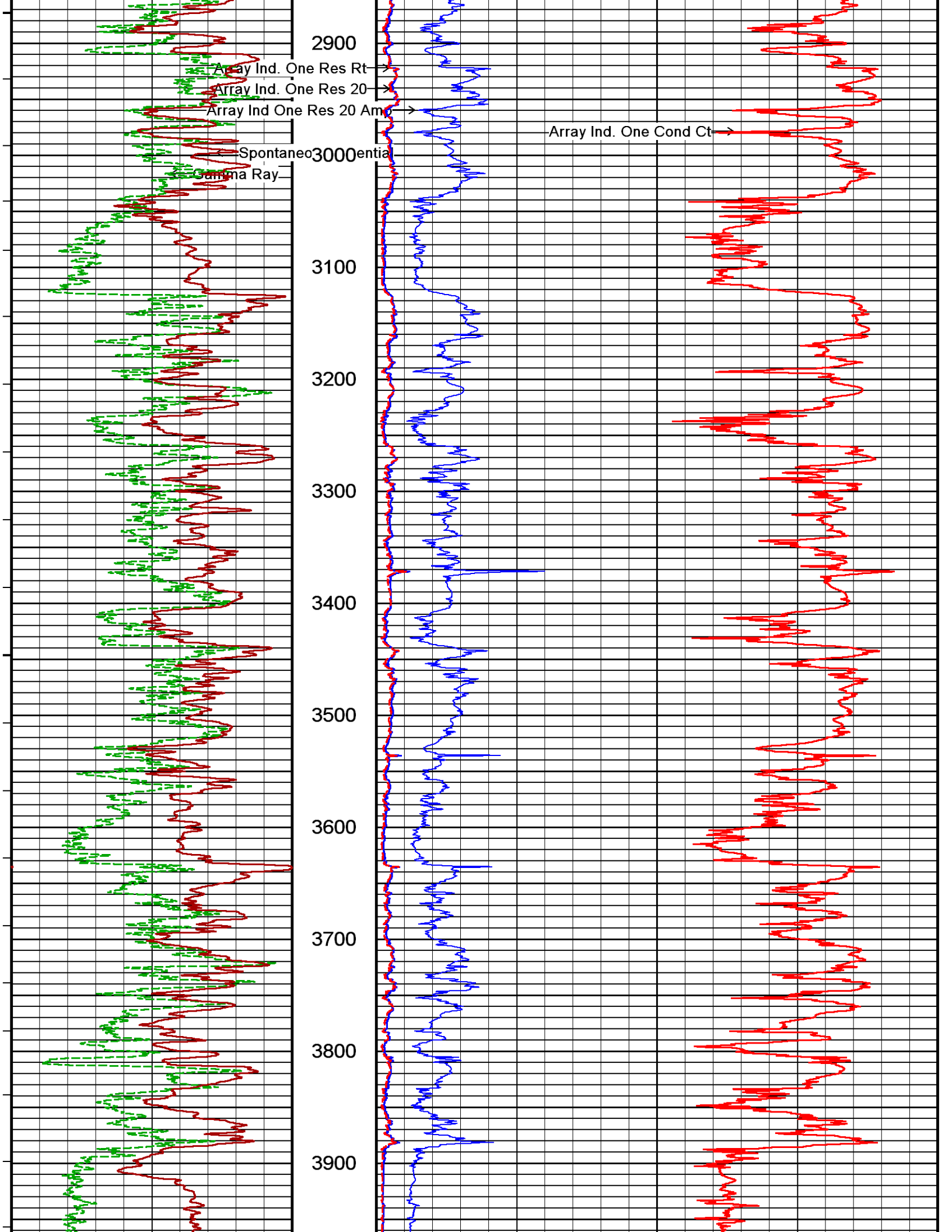
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

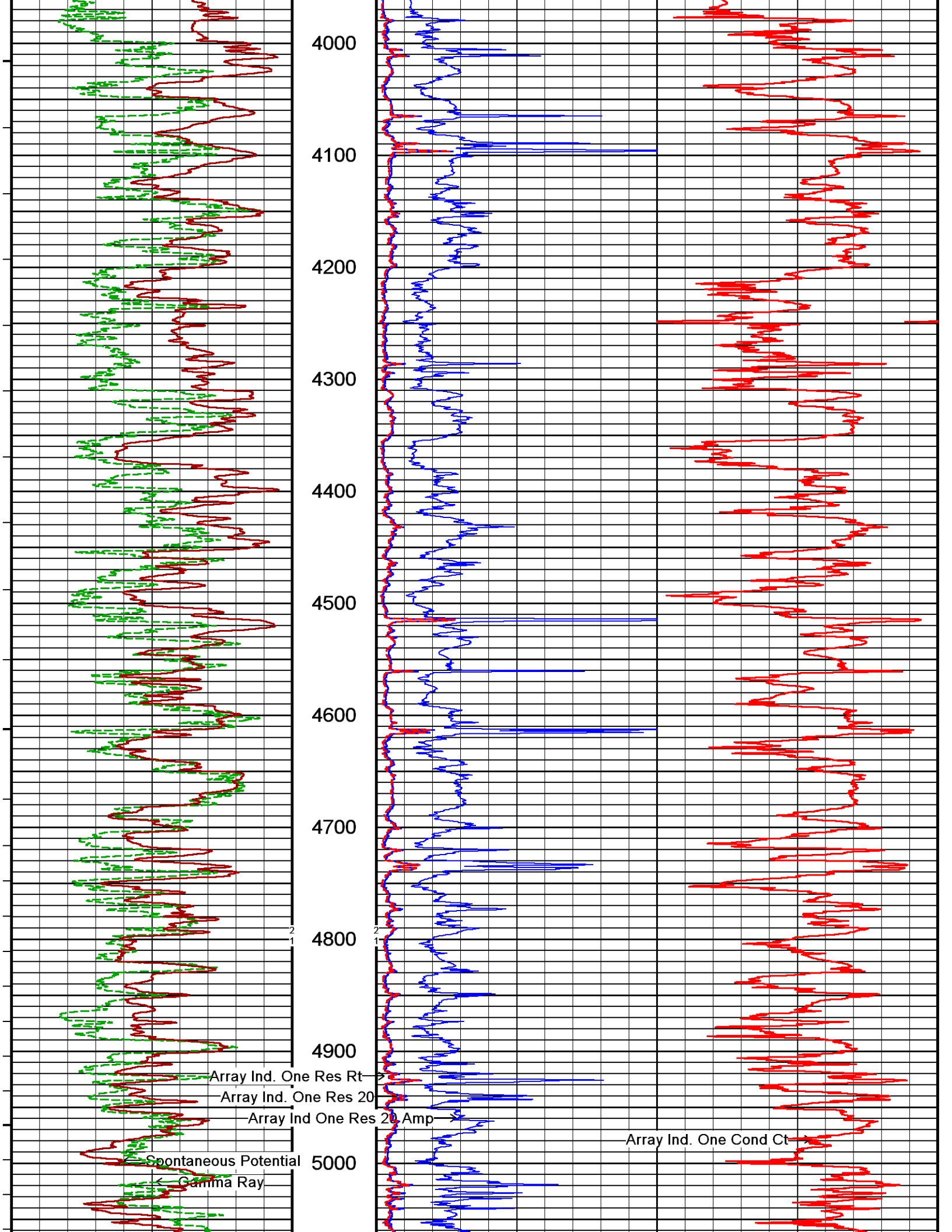
**1" MAIN PASS \*MD\* 1:1200**

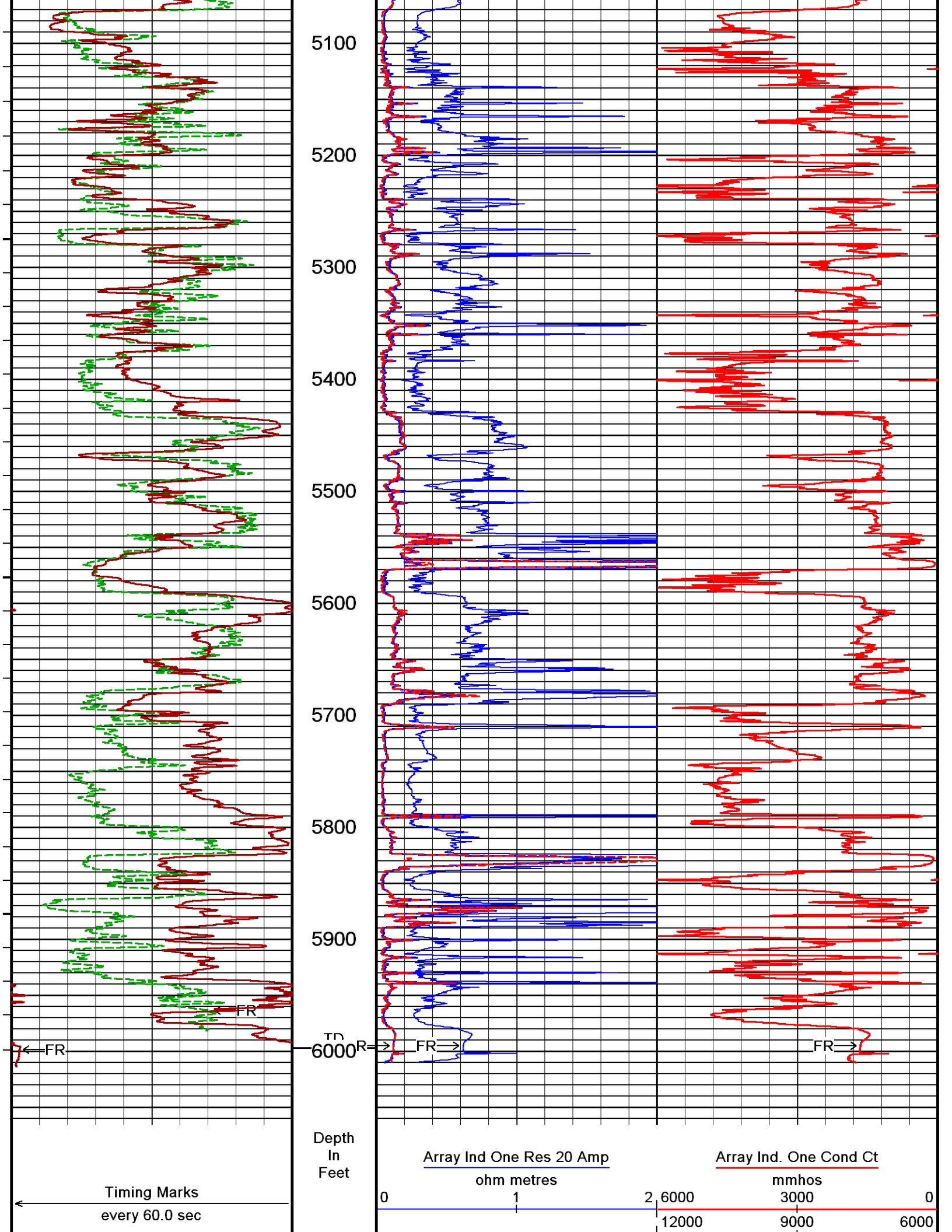
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 Filename: C:\DATA\Smith Production Co\Bocage Lands LLC etal #1\uplog.dta Recorded on 13-MAY-2013 00:32  
 System Versions: Logged with 13.05.9583 Plotted with 13.05.9583

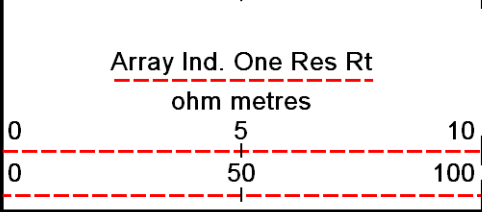
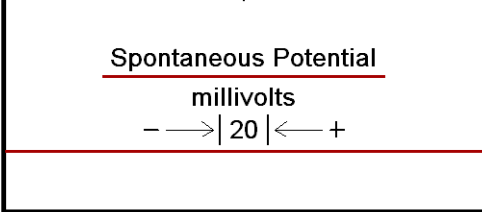
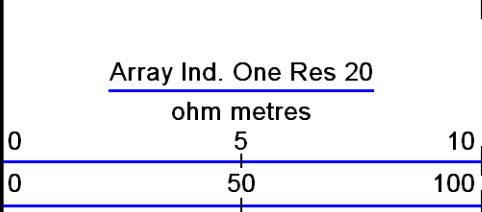
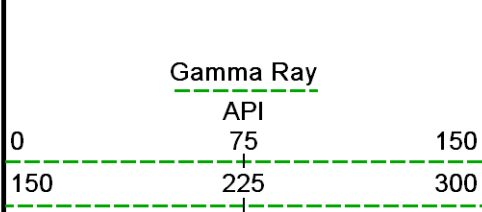












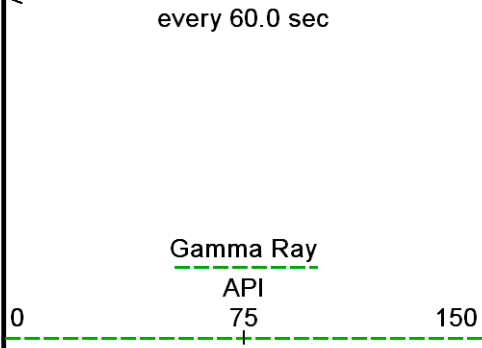
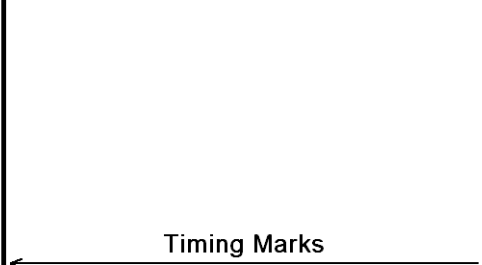
Replay  
Scale  
1:1200

Depth Based Data - Maximum Sampling Increment 10.0cm  
 Filename: C:\DATA\Smith Production Co\Bocage Lands LLC etal #1\uplog.dta  
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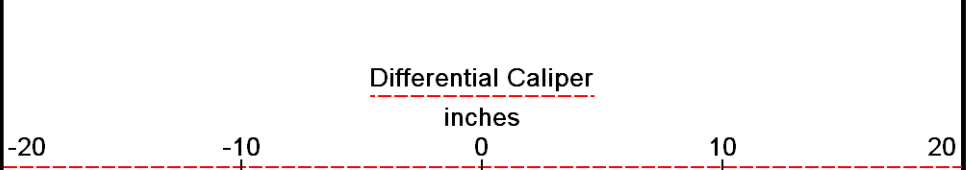
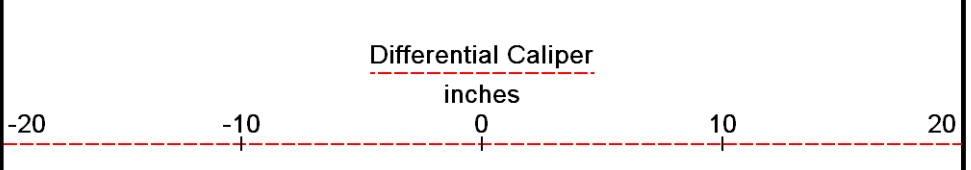
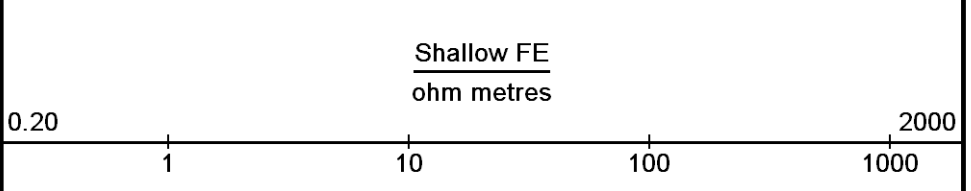
1" MAIN PASS \*MD\* 1:1200

5" MAIN PASS \*MD\* 1:240

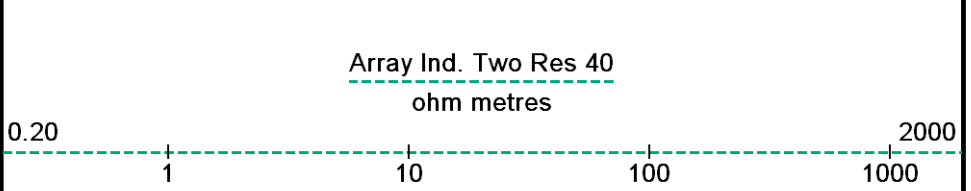
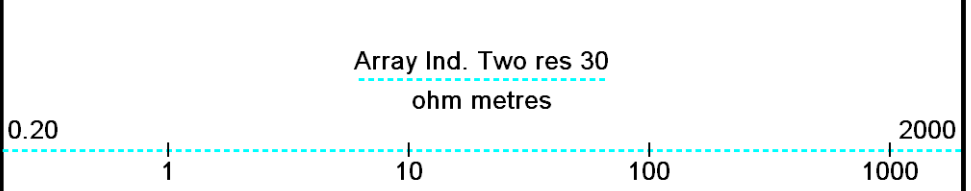
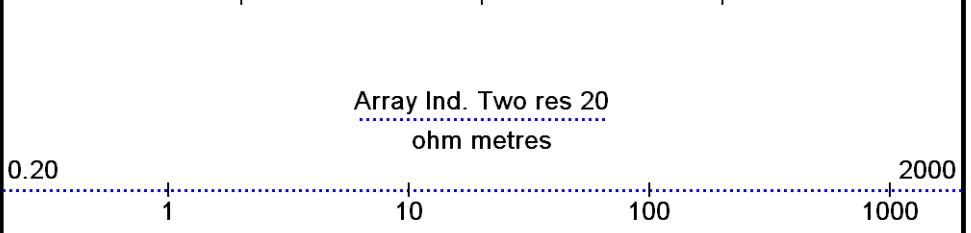
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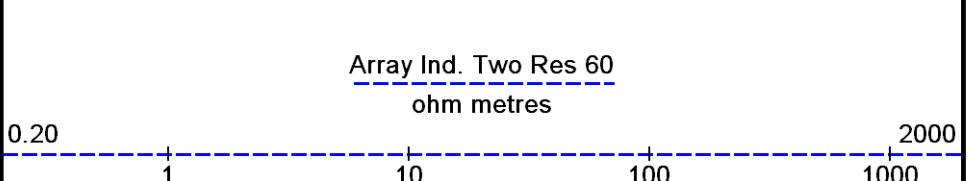
Depth  
In  
Feet



Borehole  
Temp in  
deg F



HVI  
every  
10 cu ft



Density Correction  
grams/cc  
-0.80      -0.30      0.20

Apparent Water Res.  
ohm metres  
0      0.25      0.50  
0      2.50      5

Annular  
Integral  
every  
10 cu ft

Array Ind. Two Res 85  
ohm metres  
0.20      1      10      100      1000      2000

Array Ind. Two Res Rt  
ohm metres  
0.20      1      10      100      1000      2000

DST Uphole Tension  
pounds  
10000      5000      0  
0      -5000      -10000

Sandstone Neutron Por.  
percent  
60      30      0

Sandstone Density Por.  
percent  
60      30      0

Replay  
Scale  
1:240

1188

1200

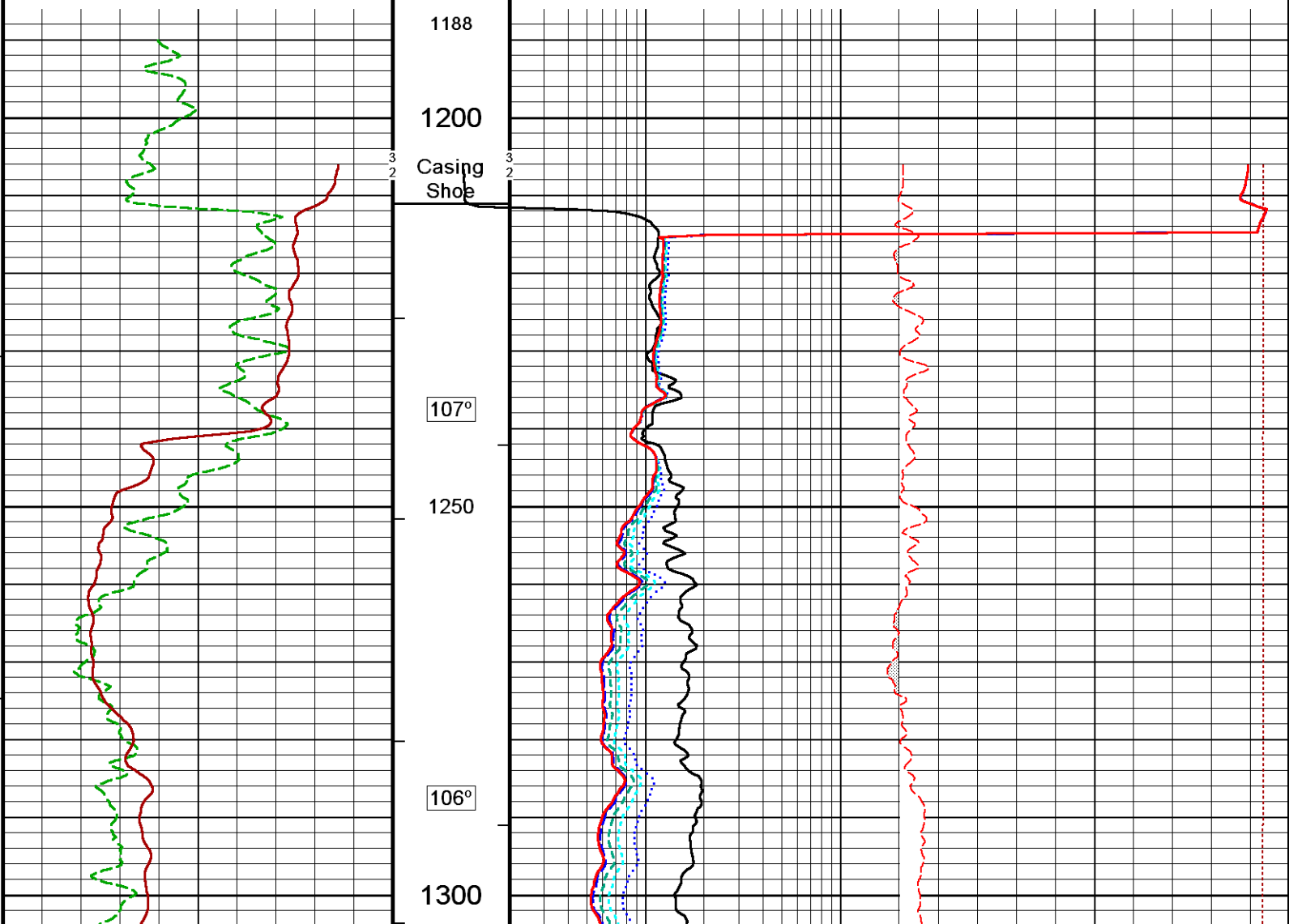
Casing  
Shoe

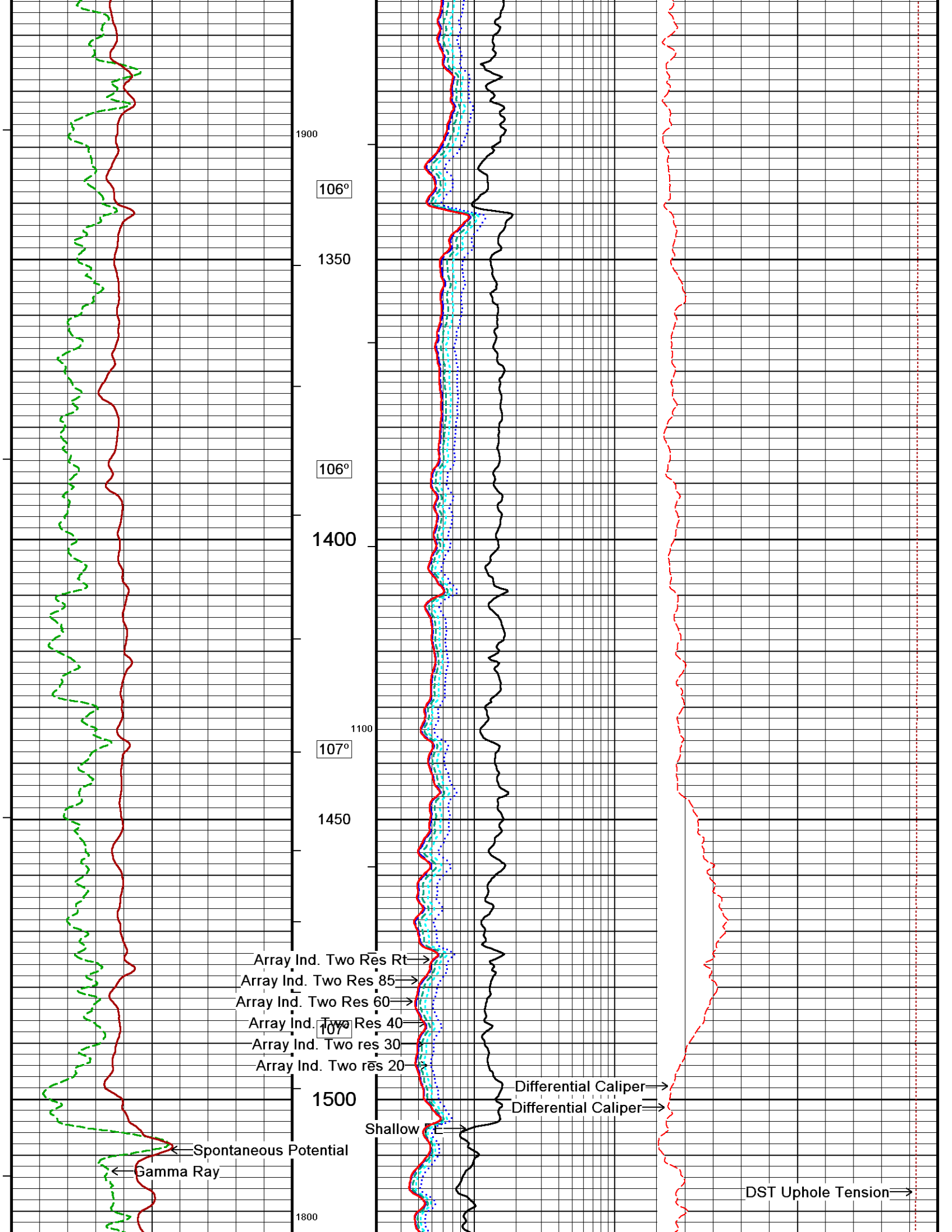
107°

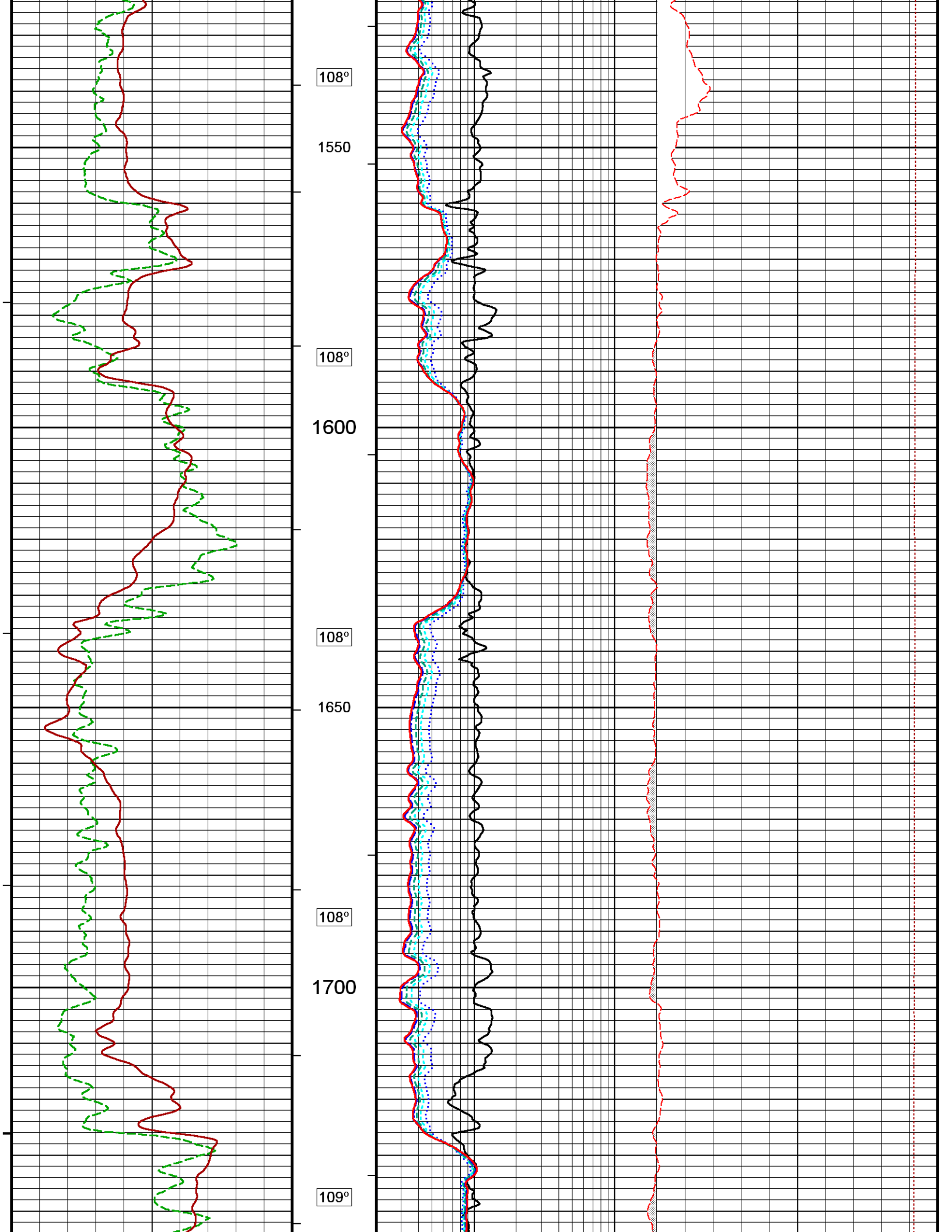
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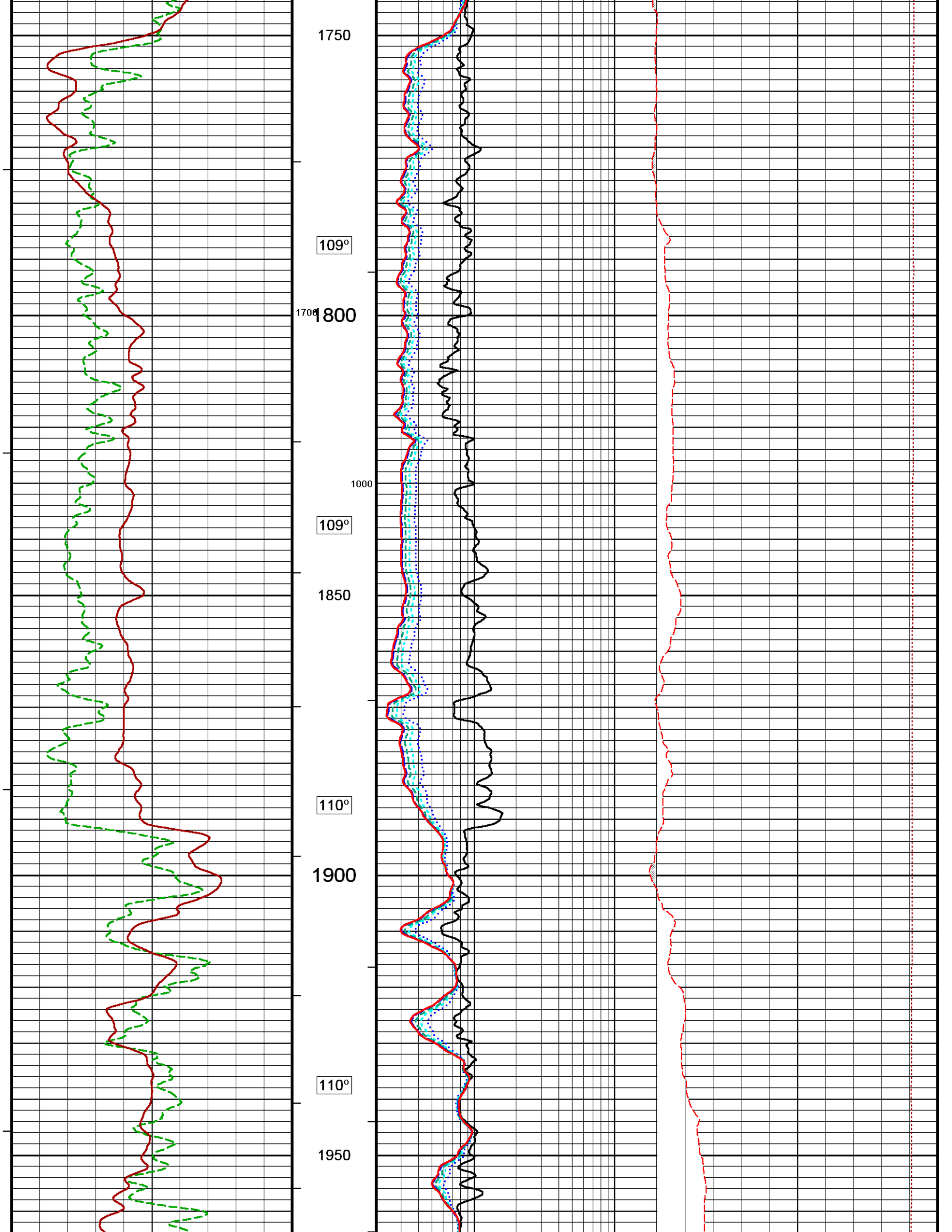
106°

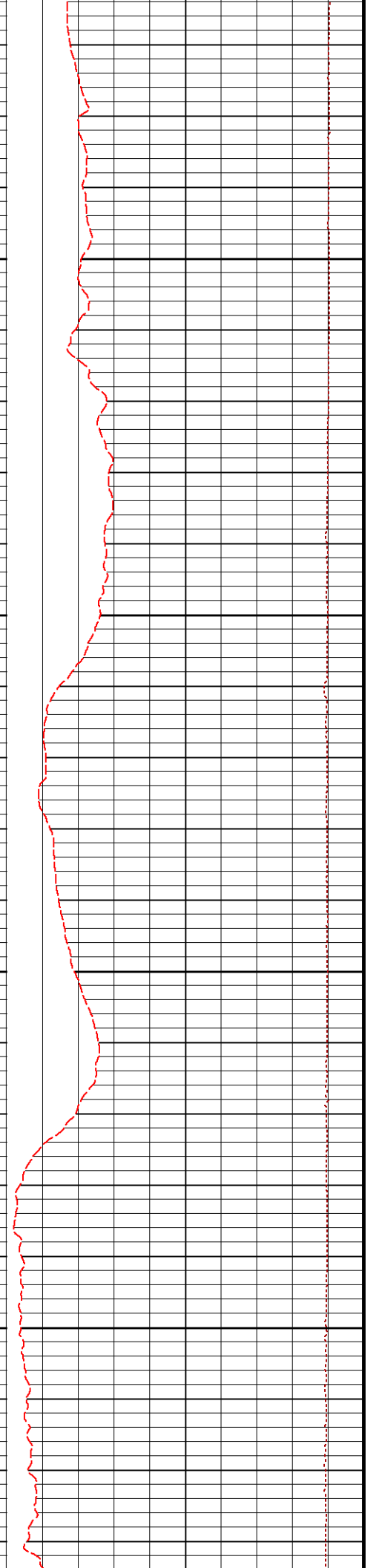
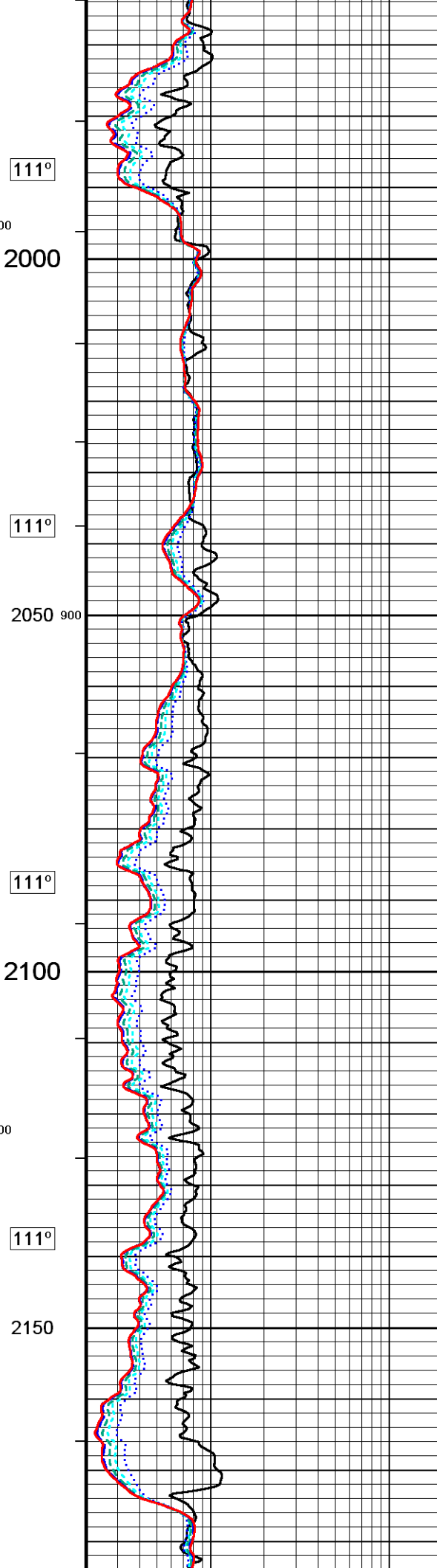
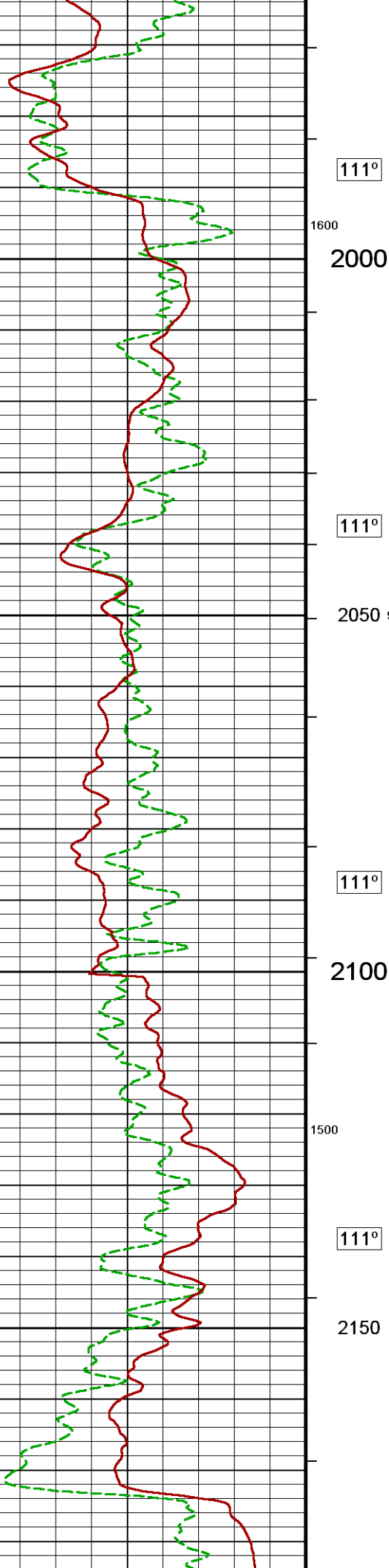
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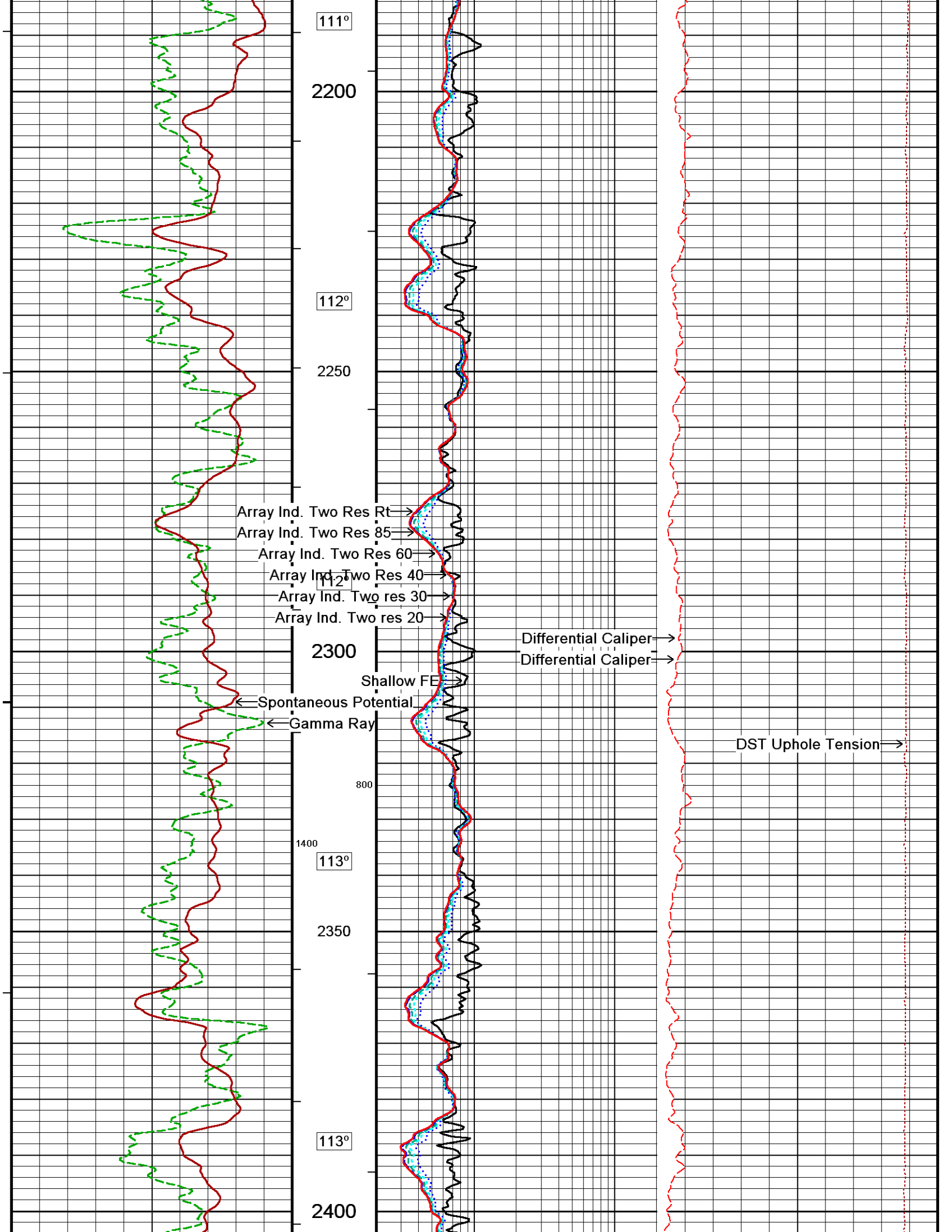


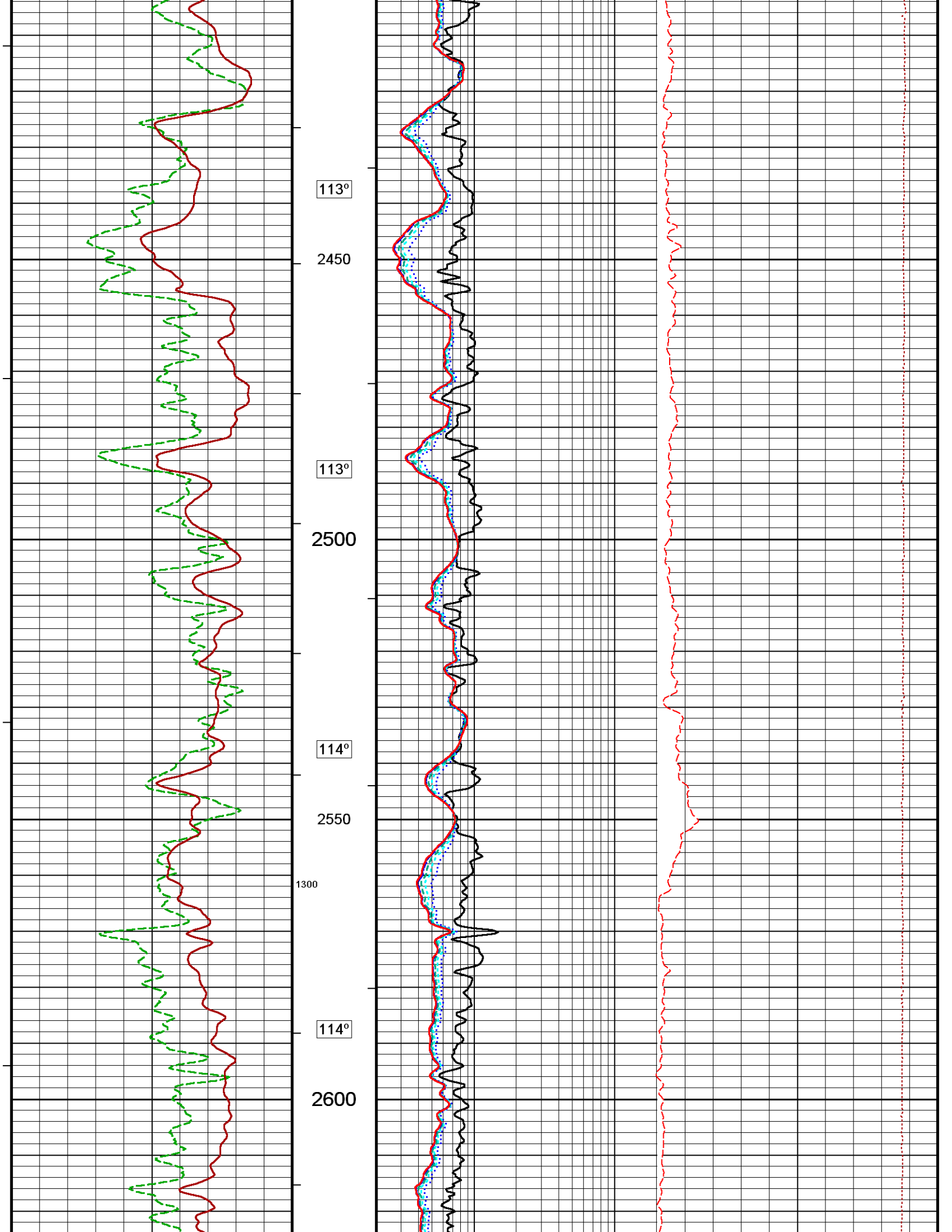


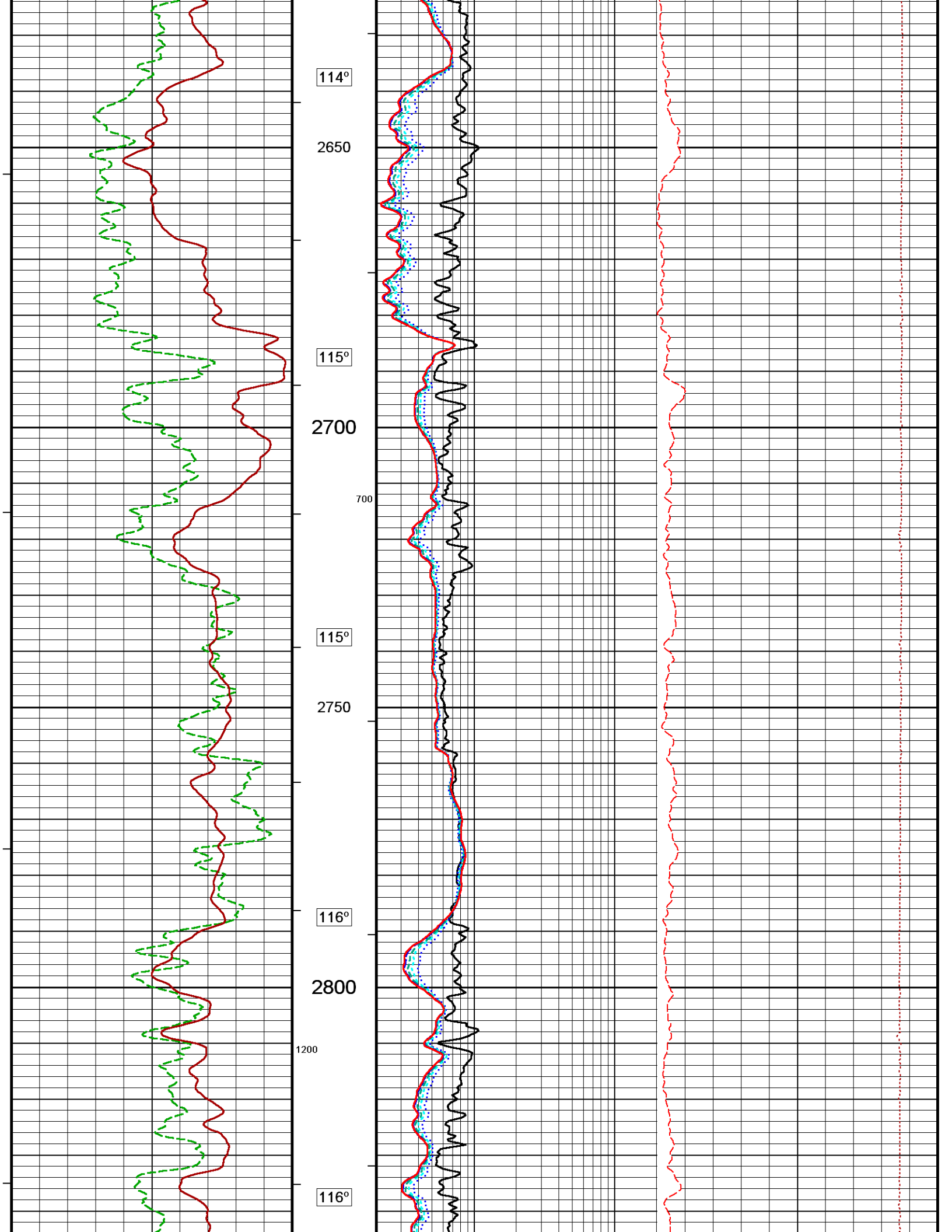


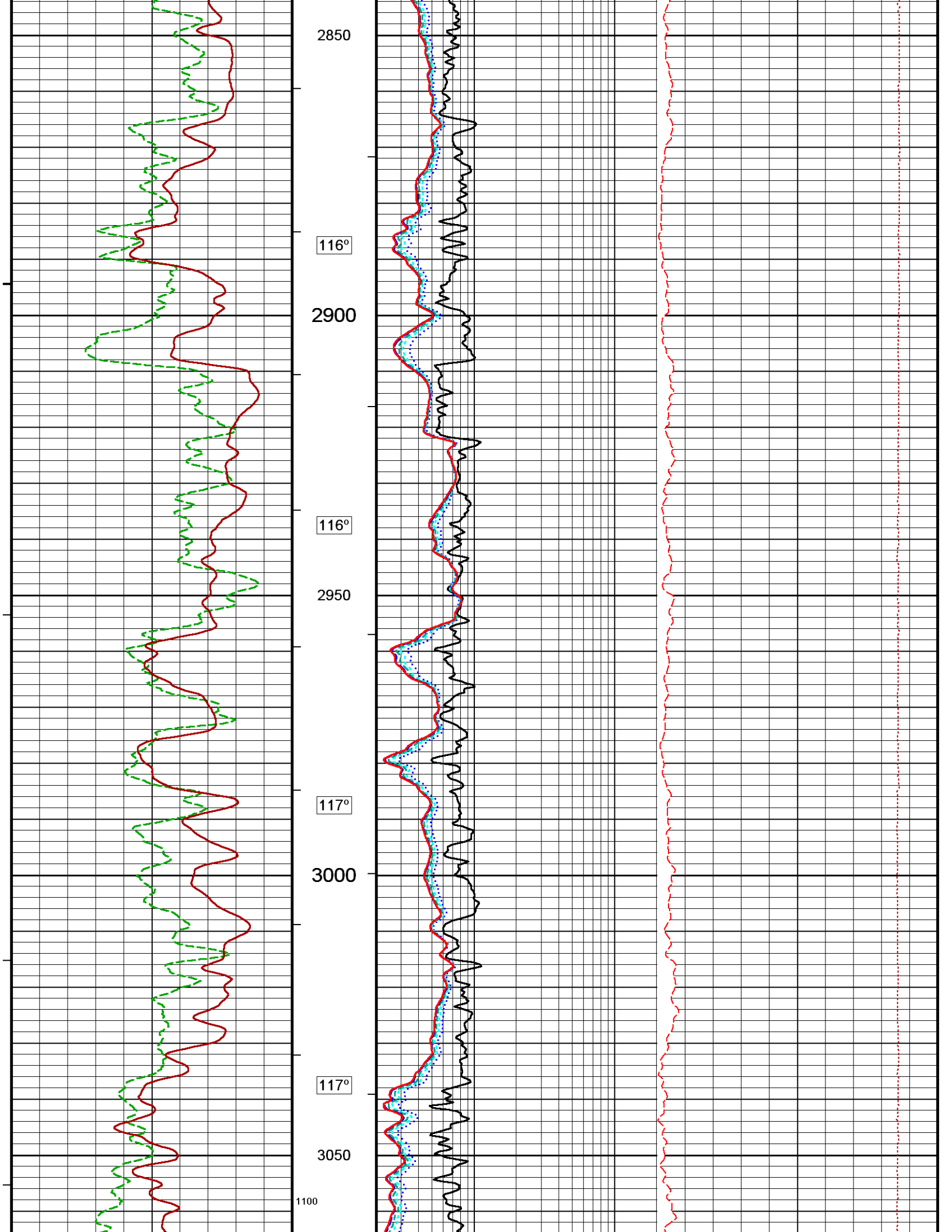


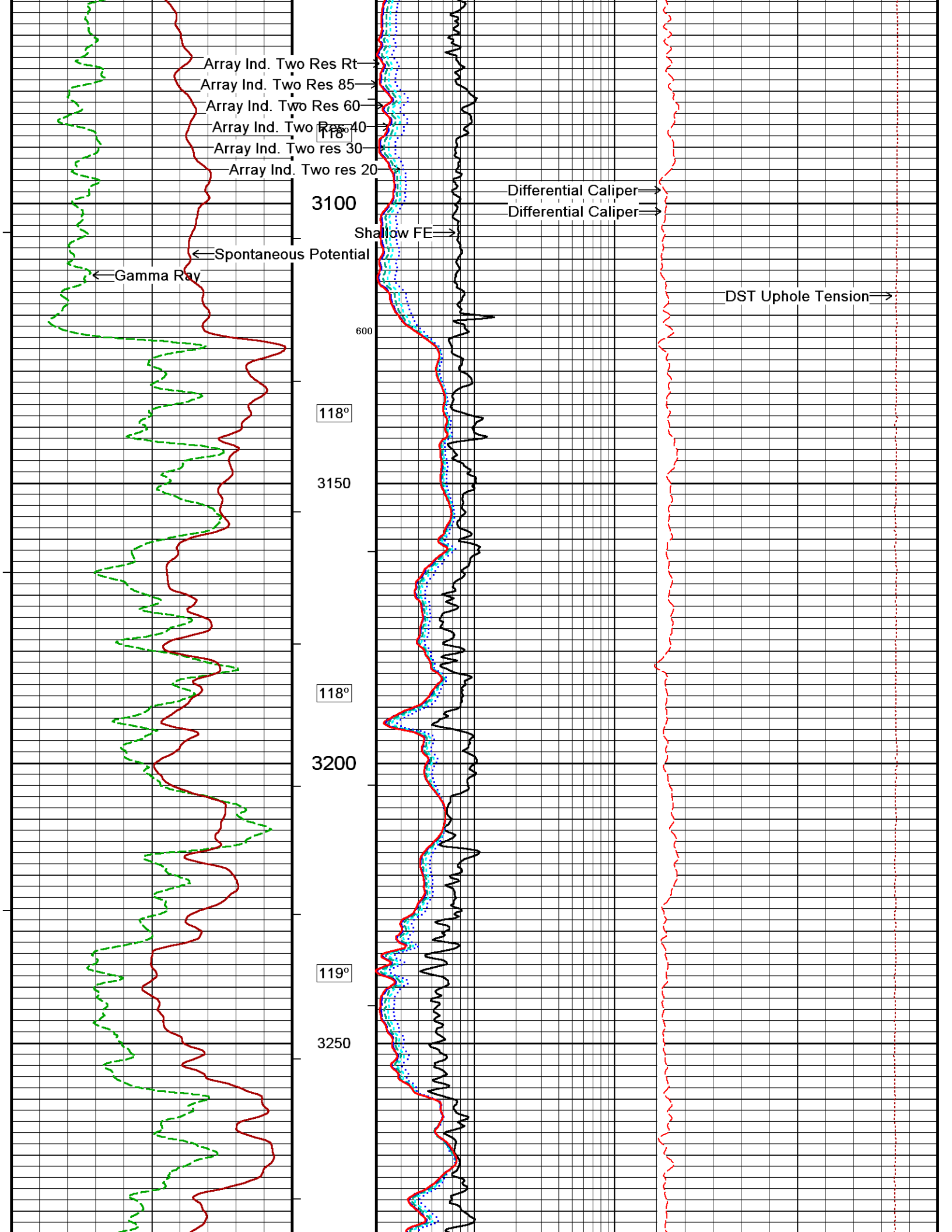


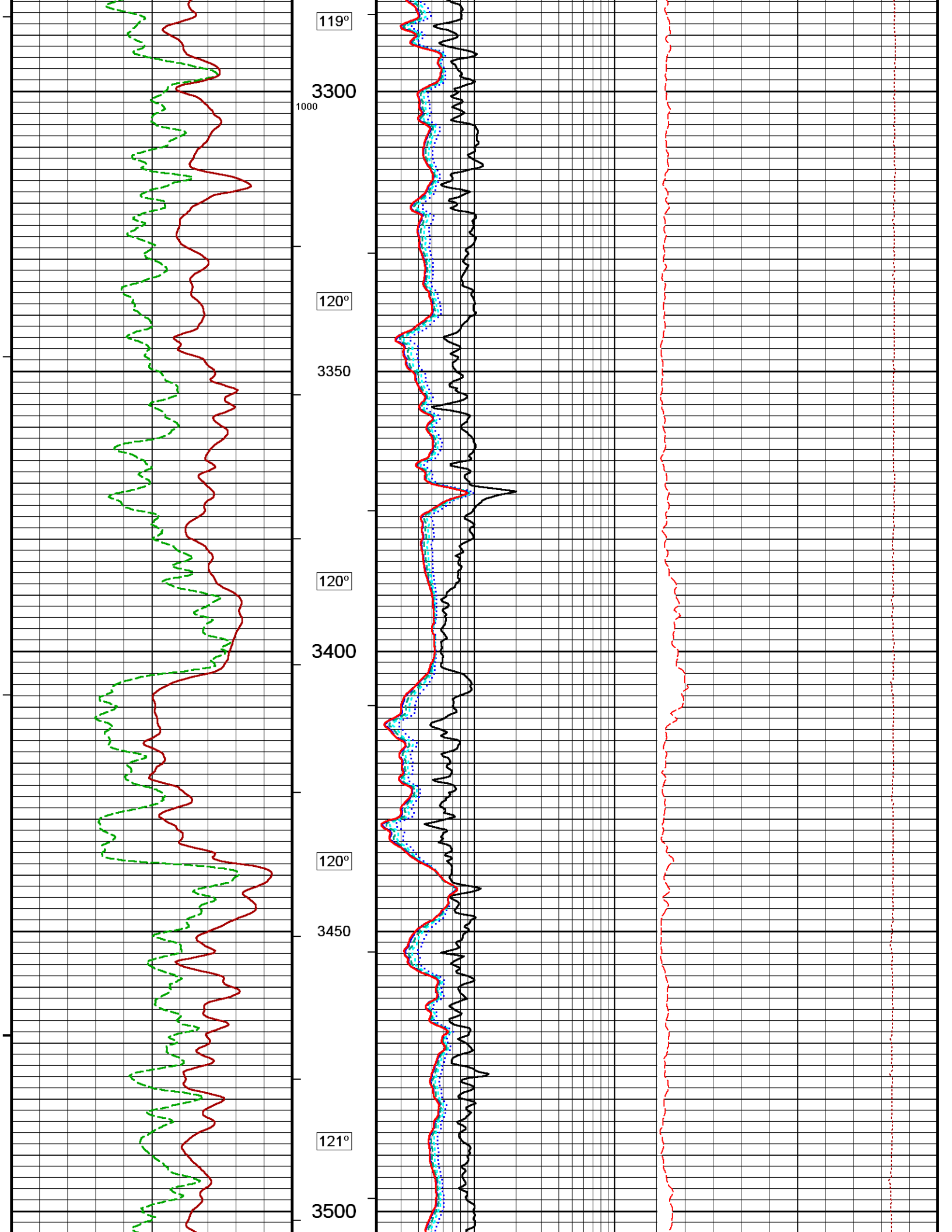


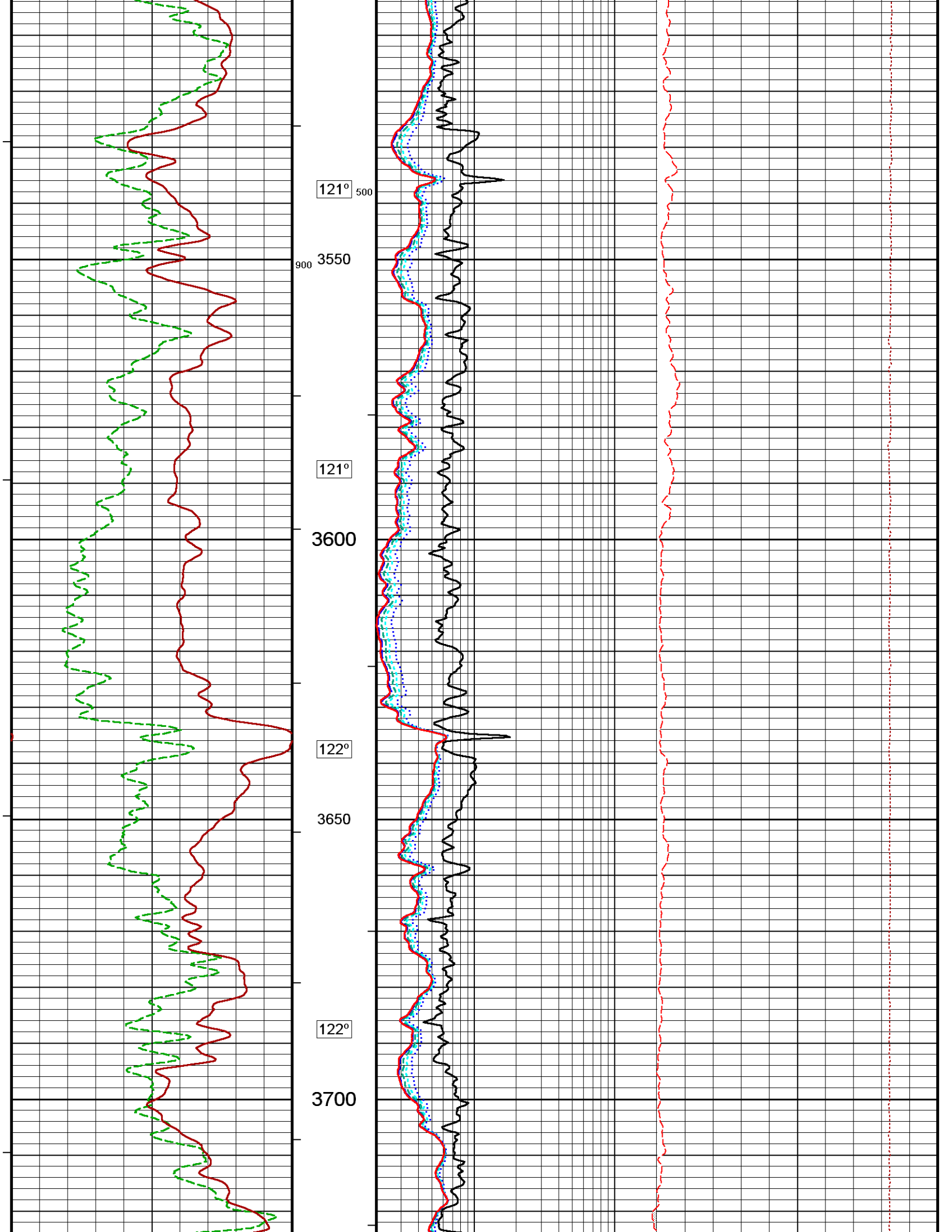


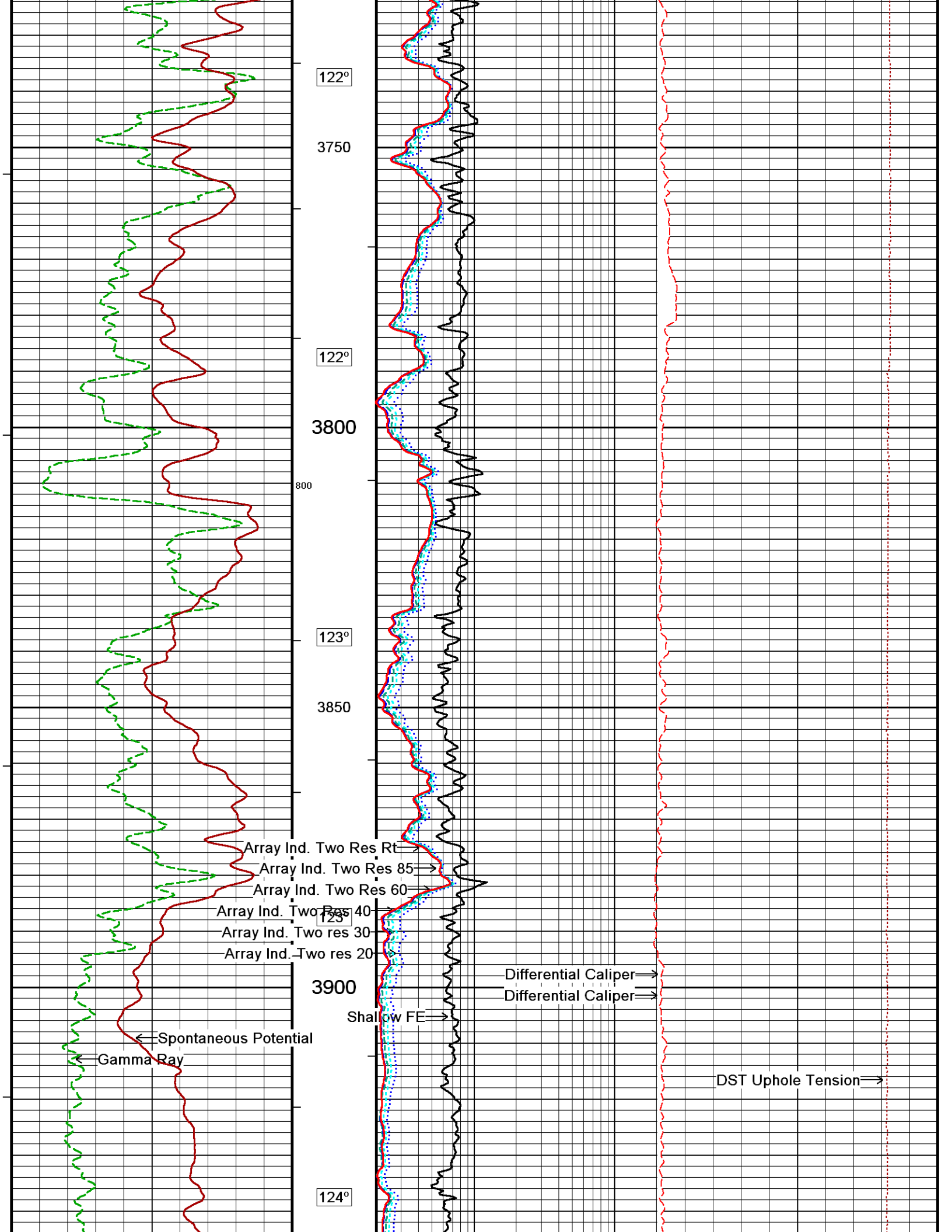


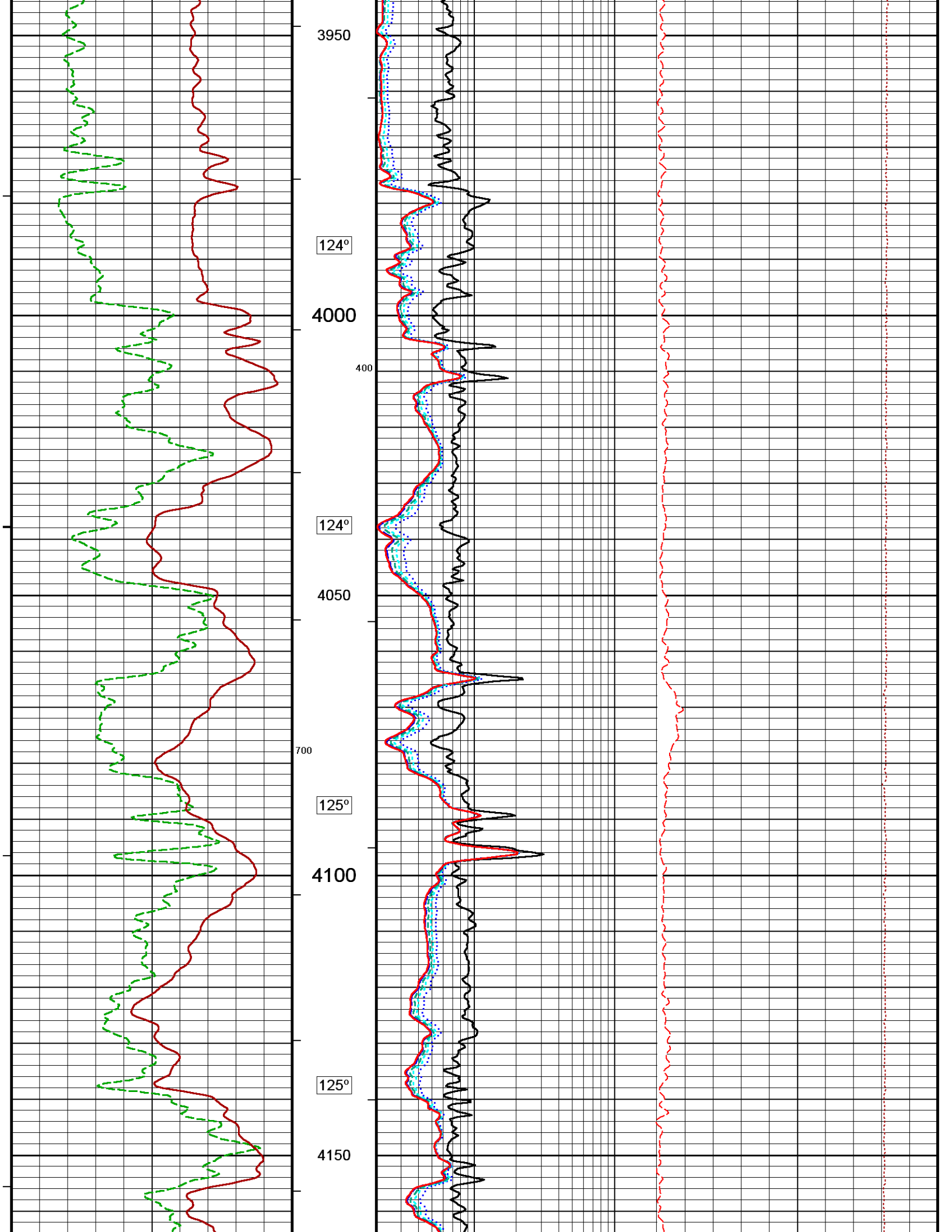


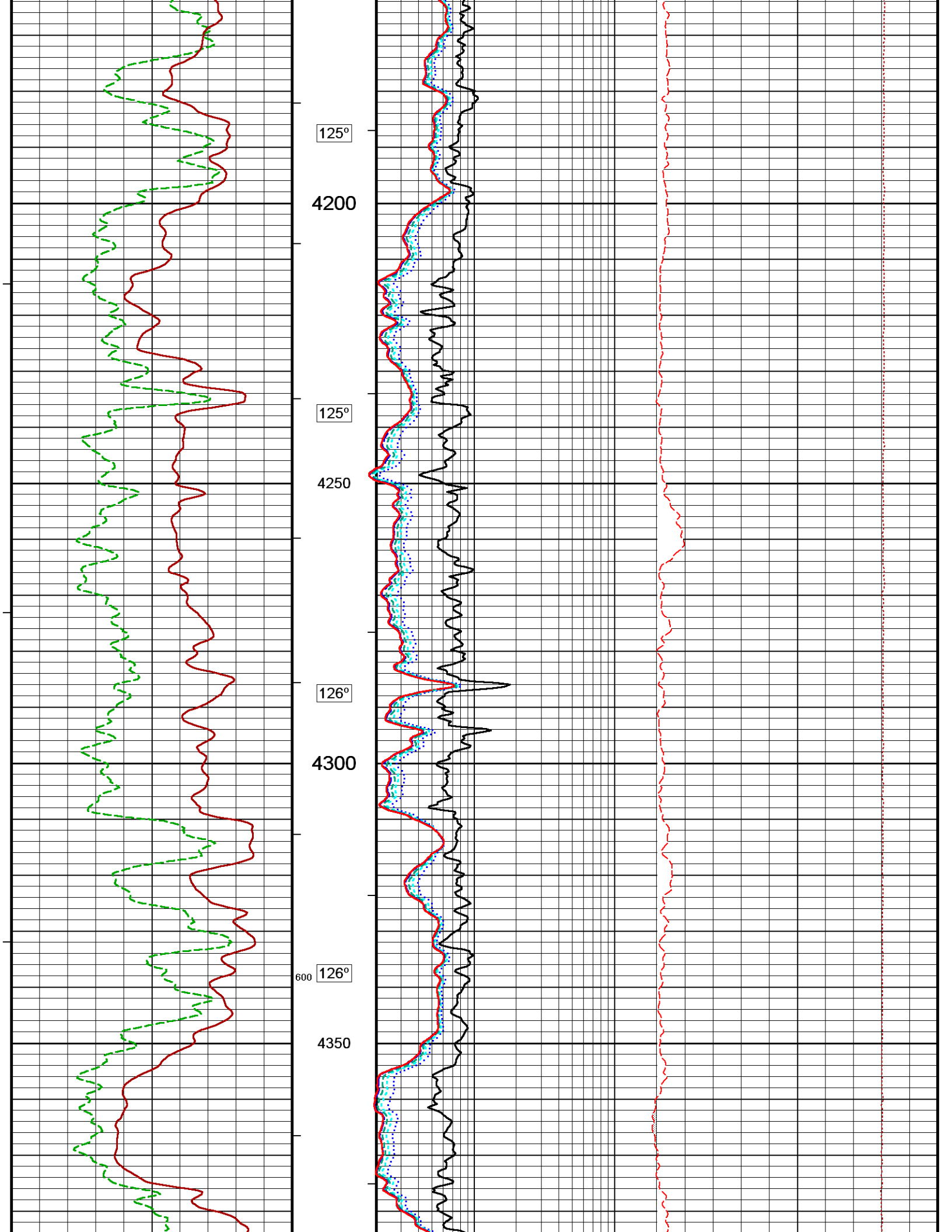


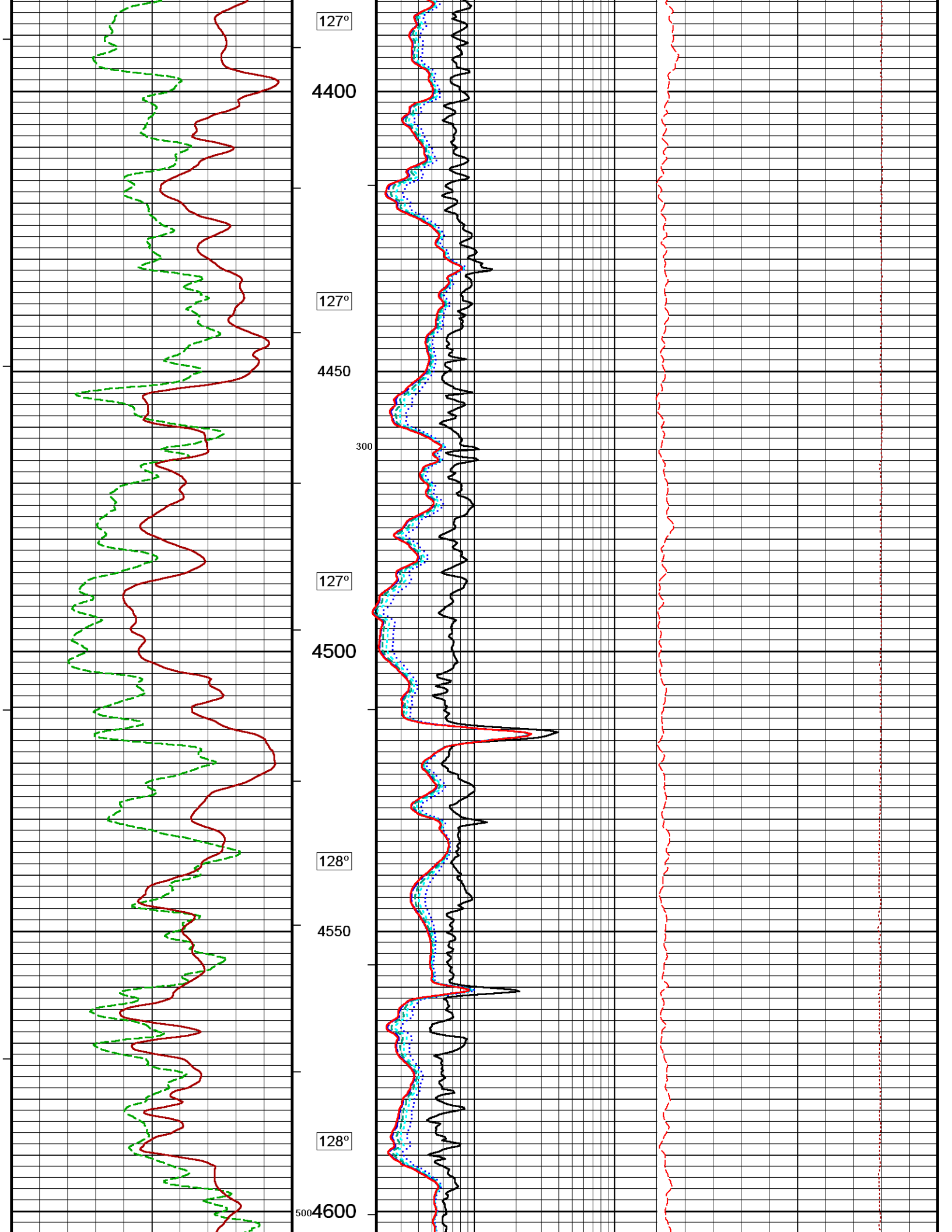


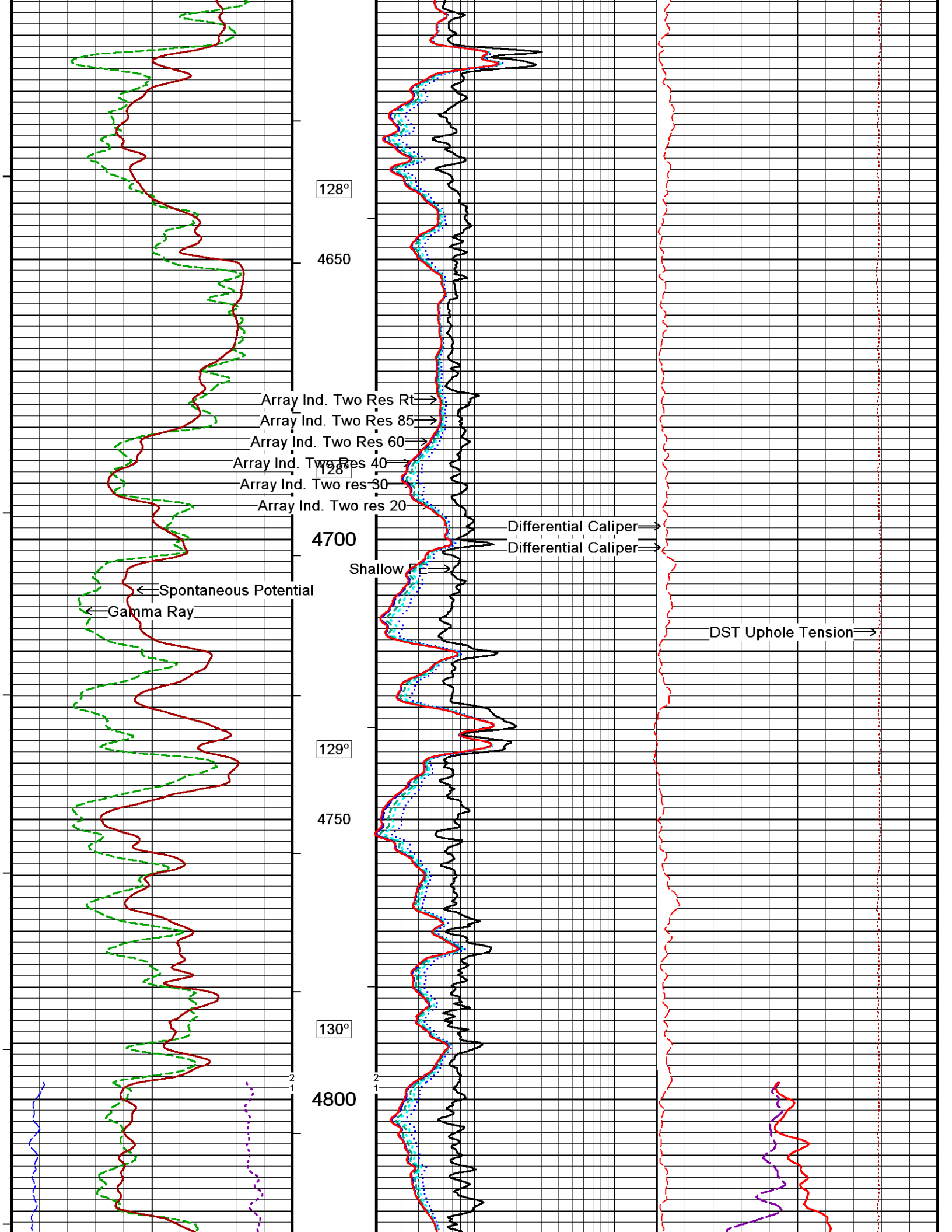


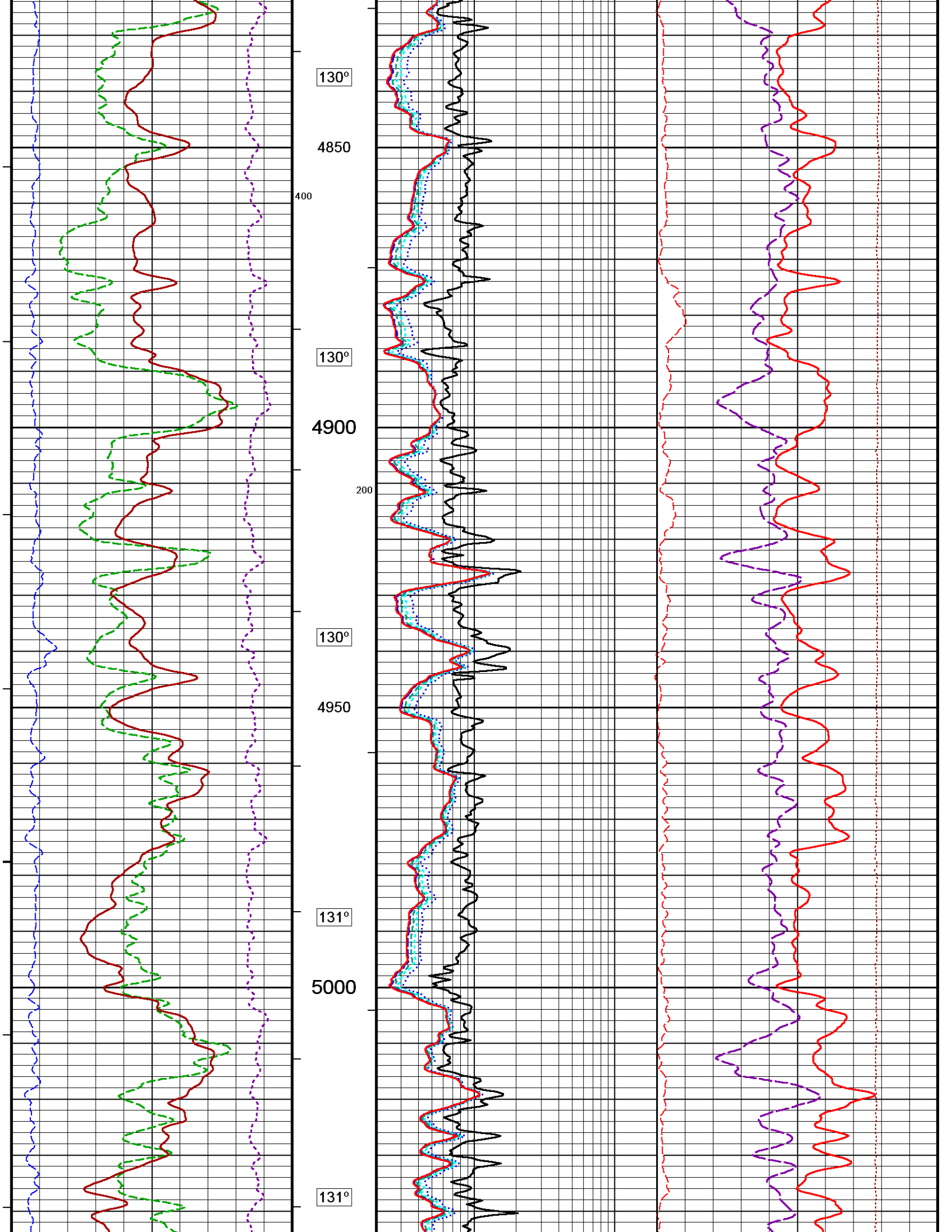


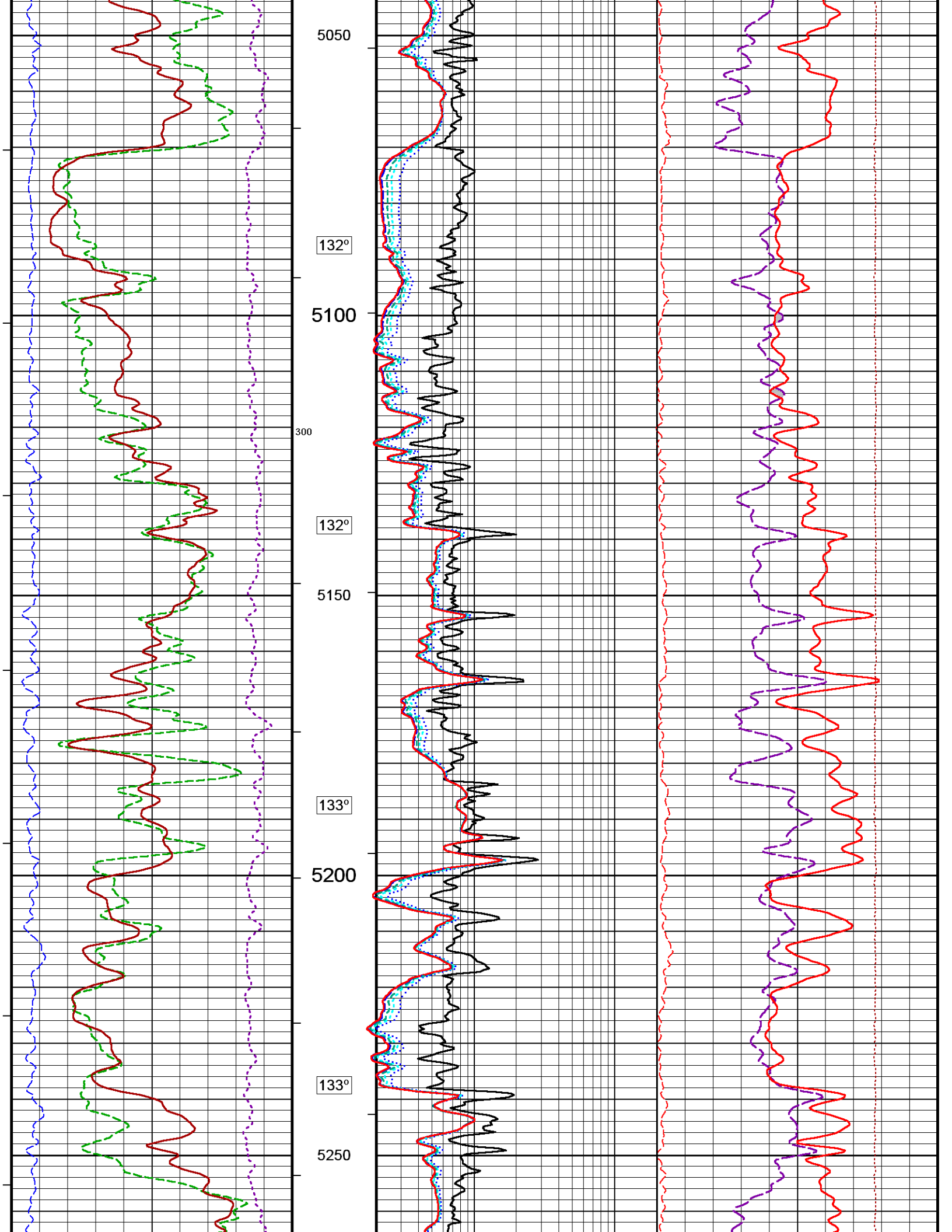


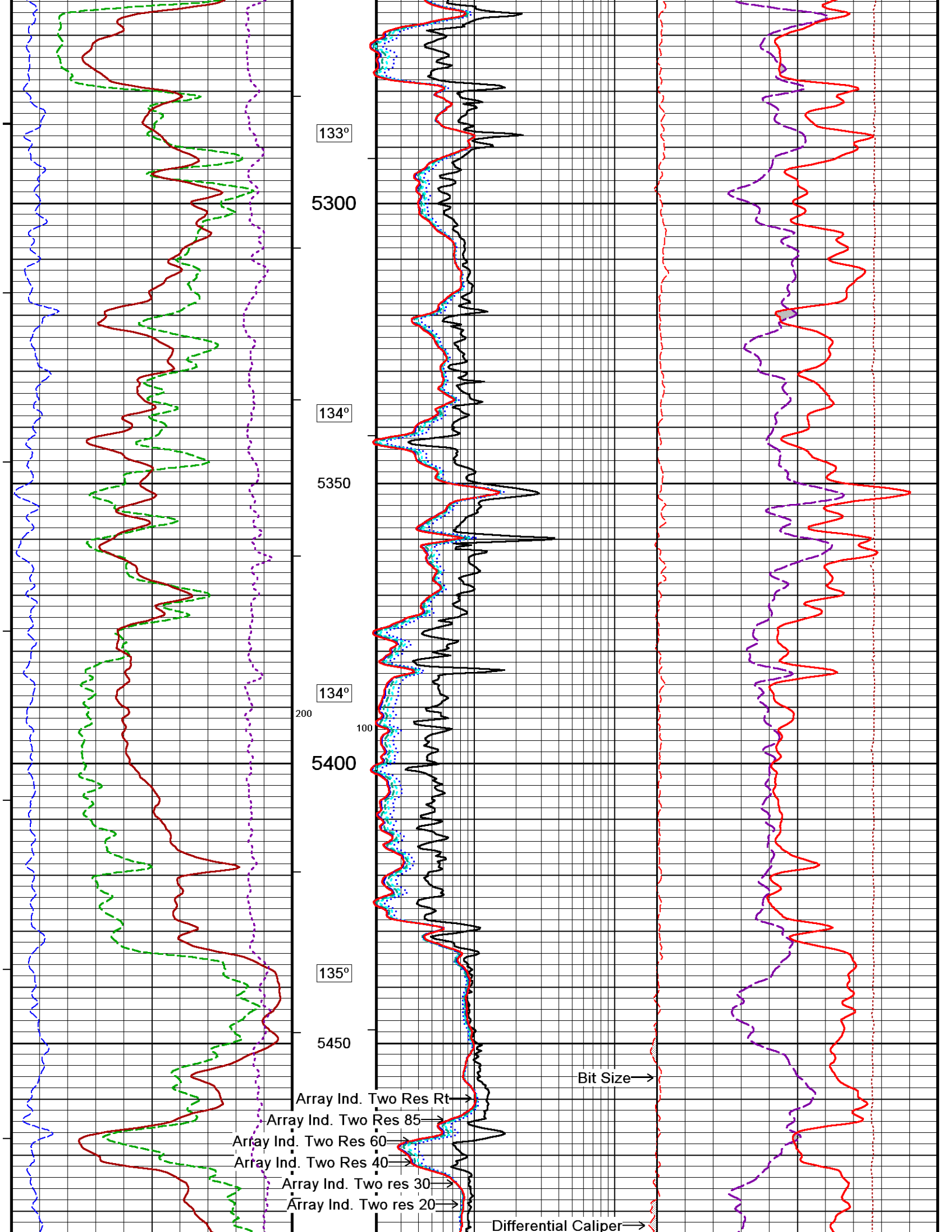


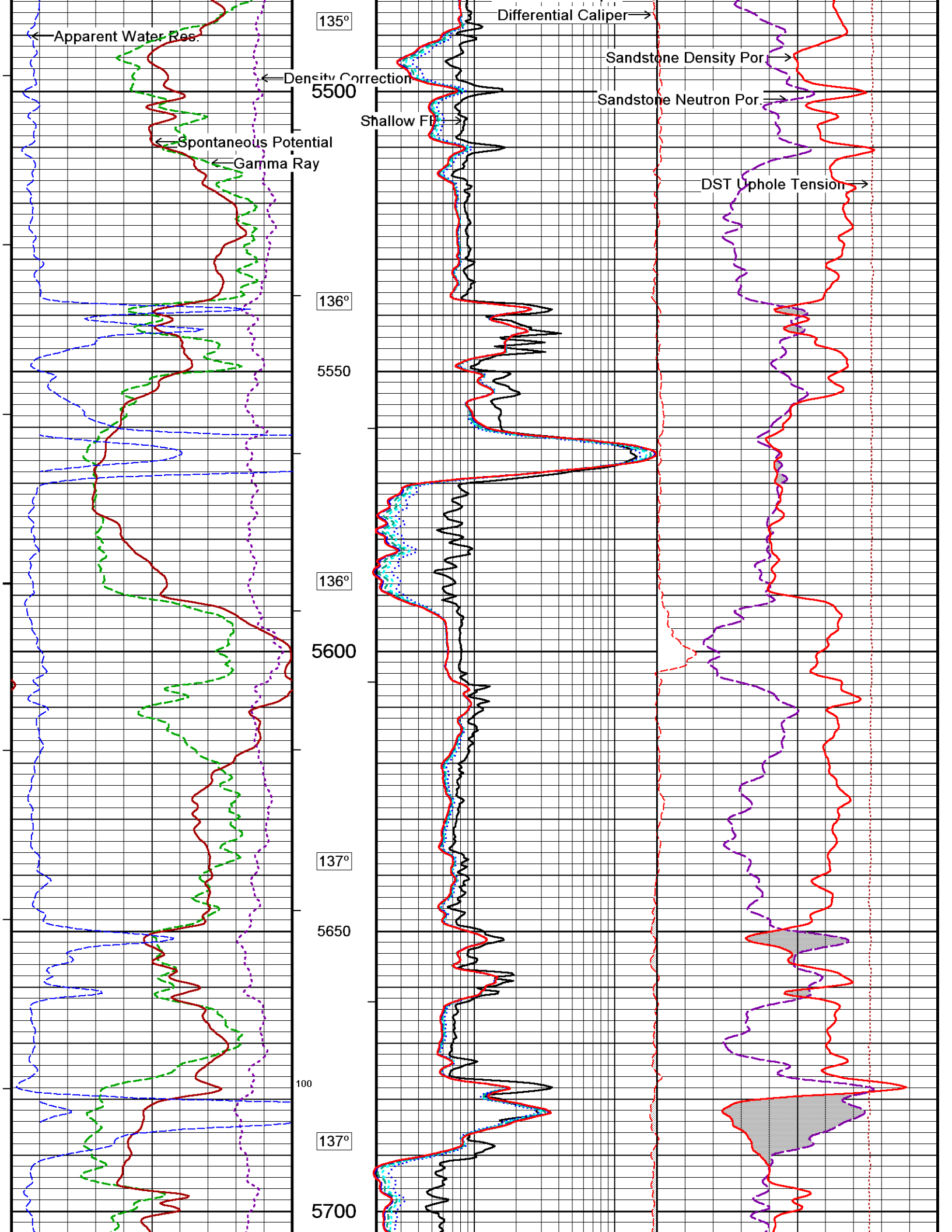


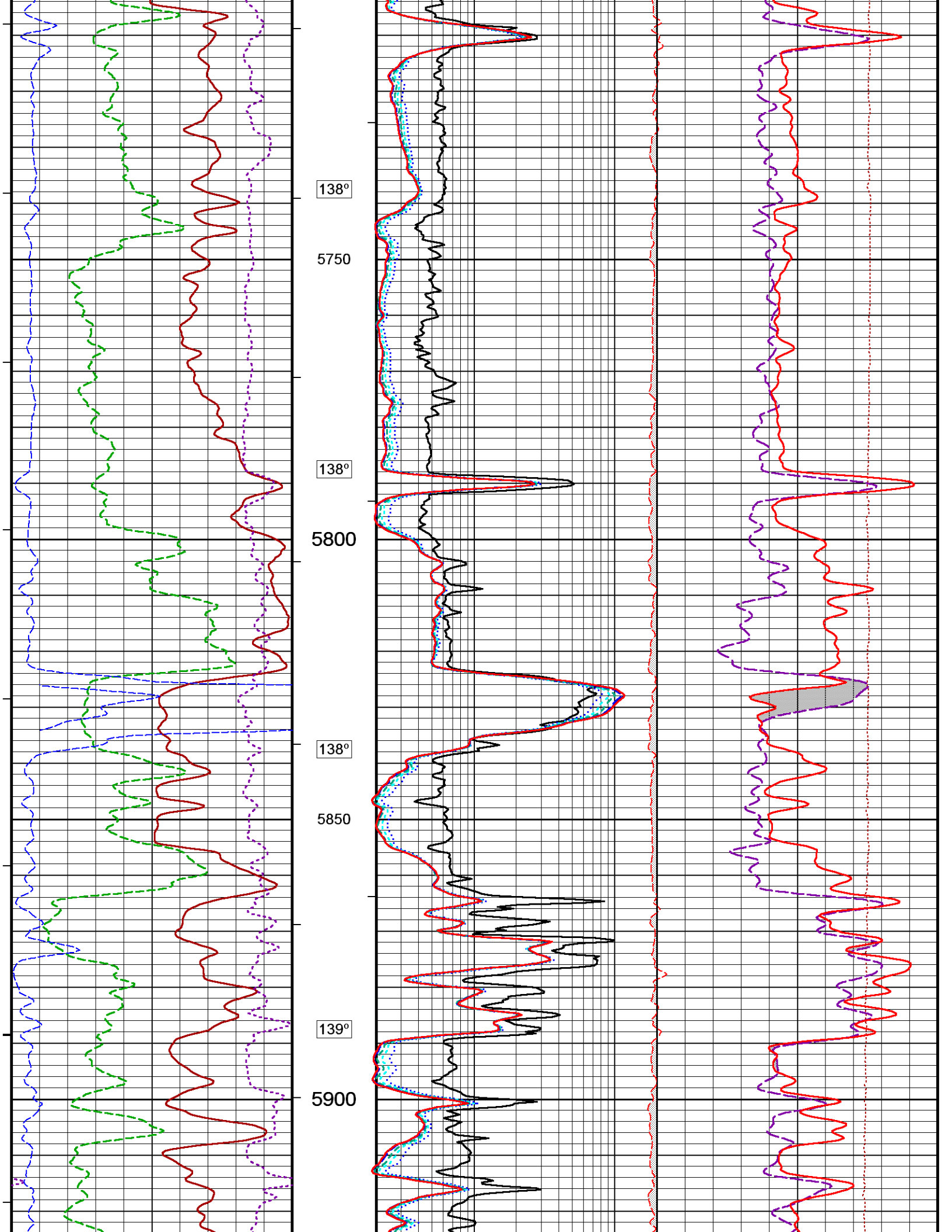


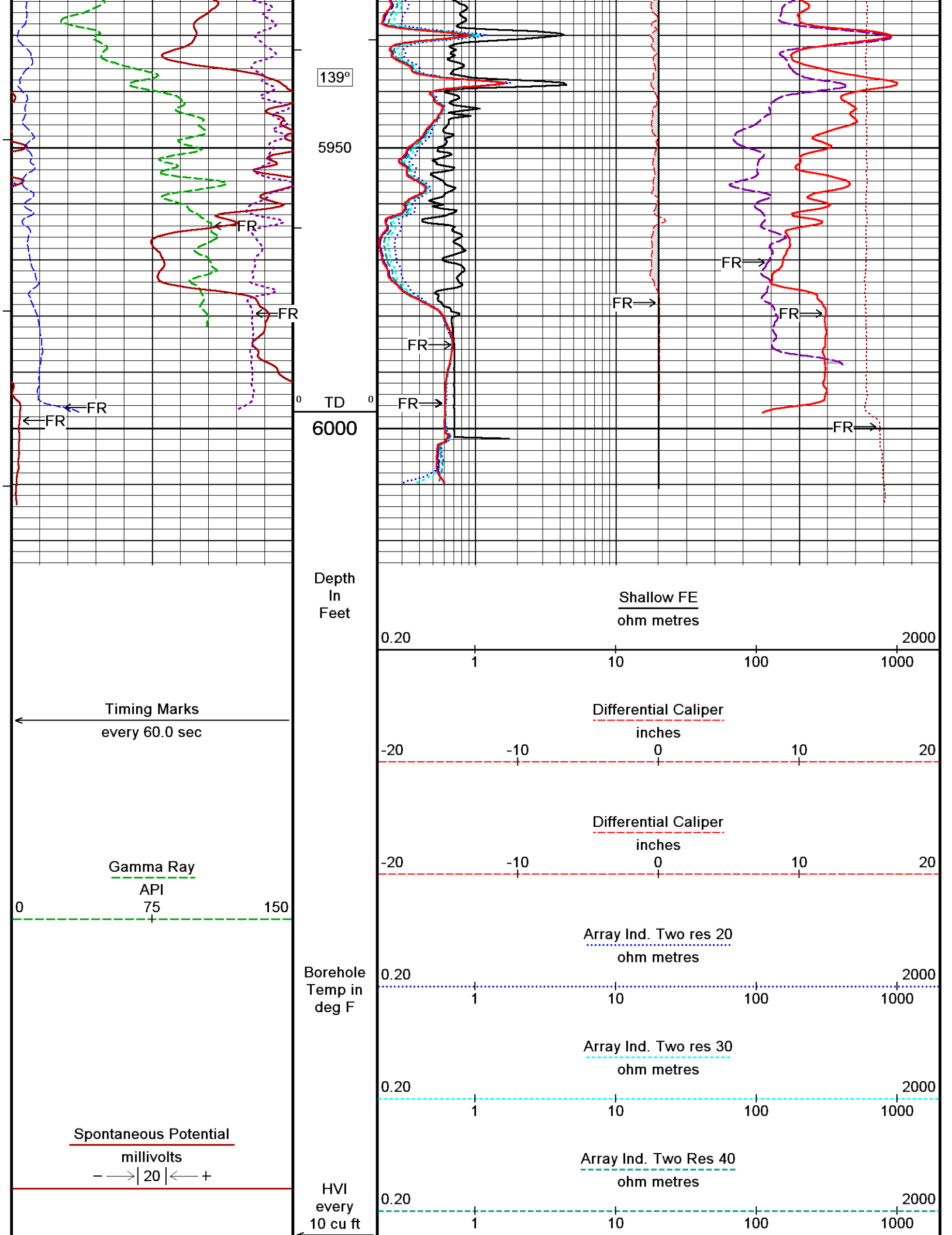


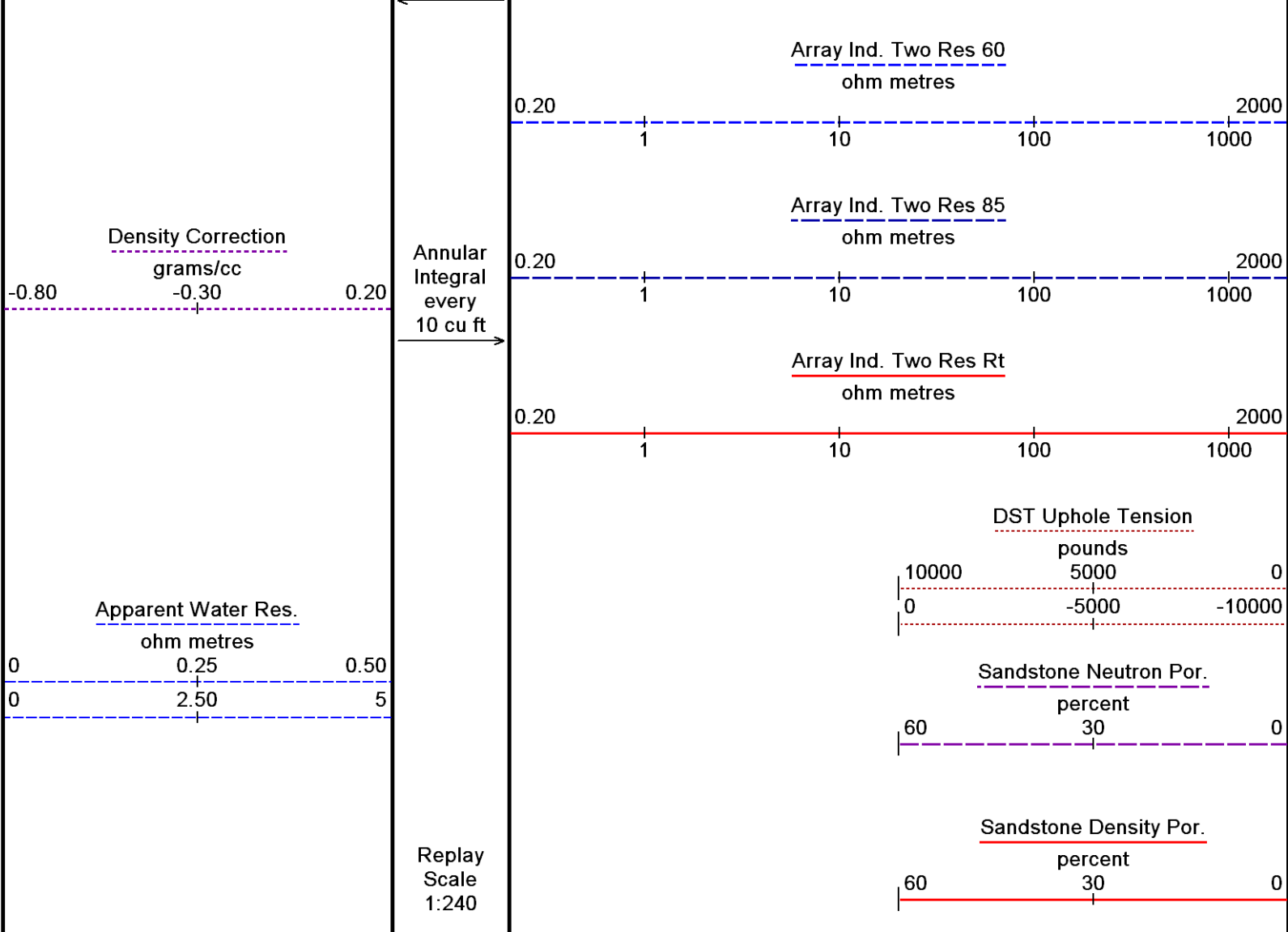






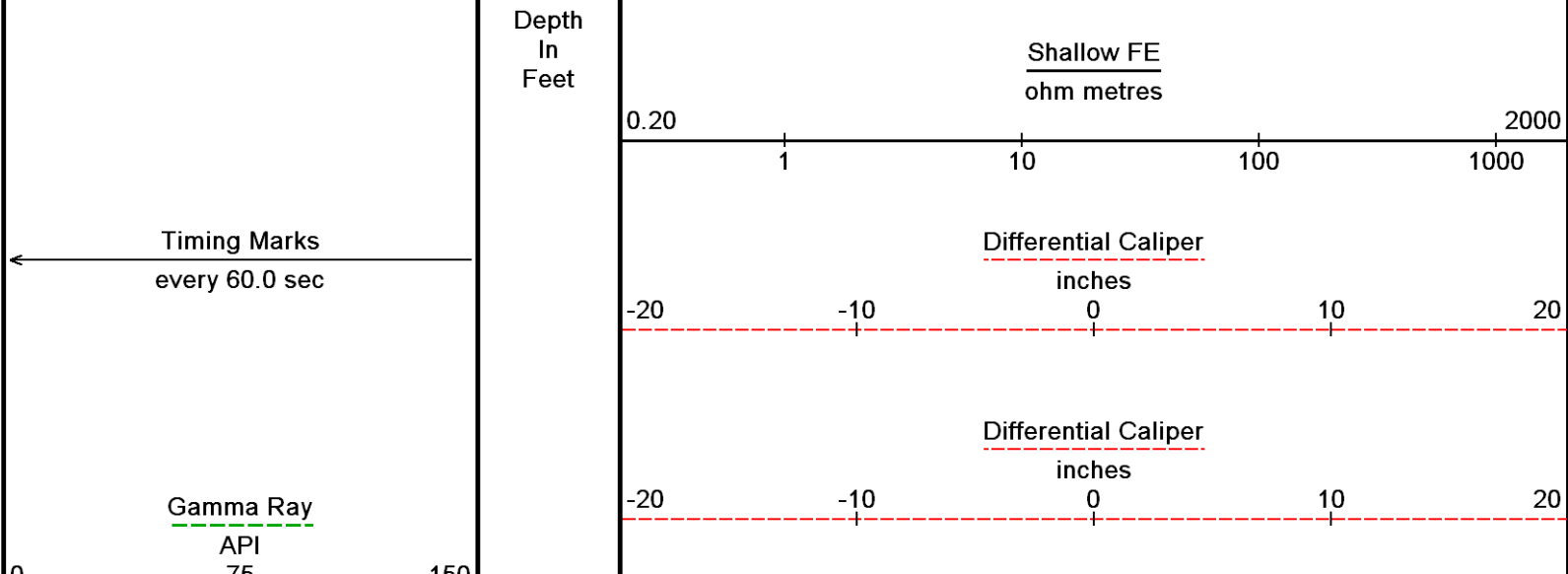


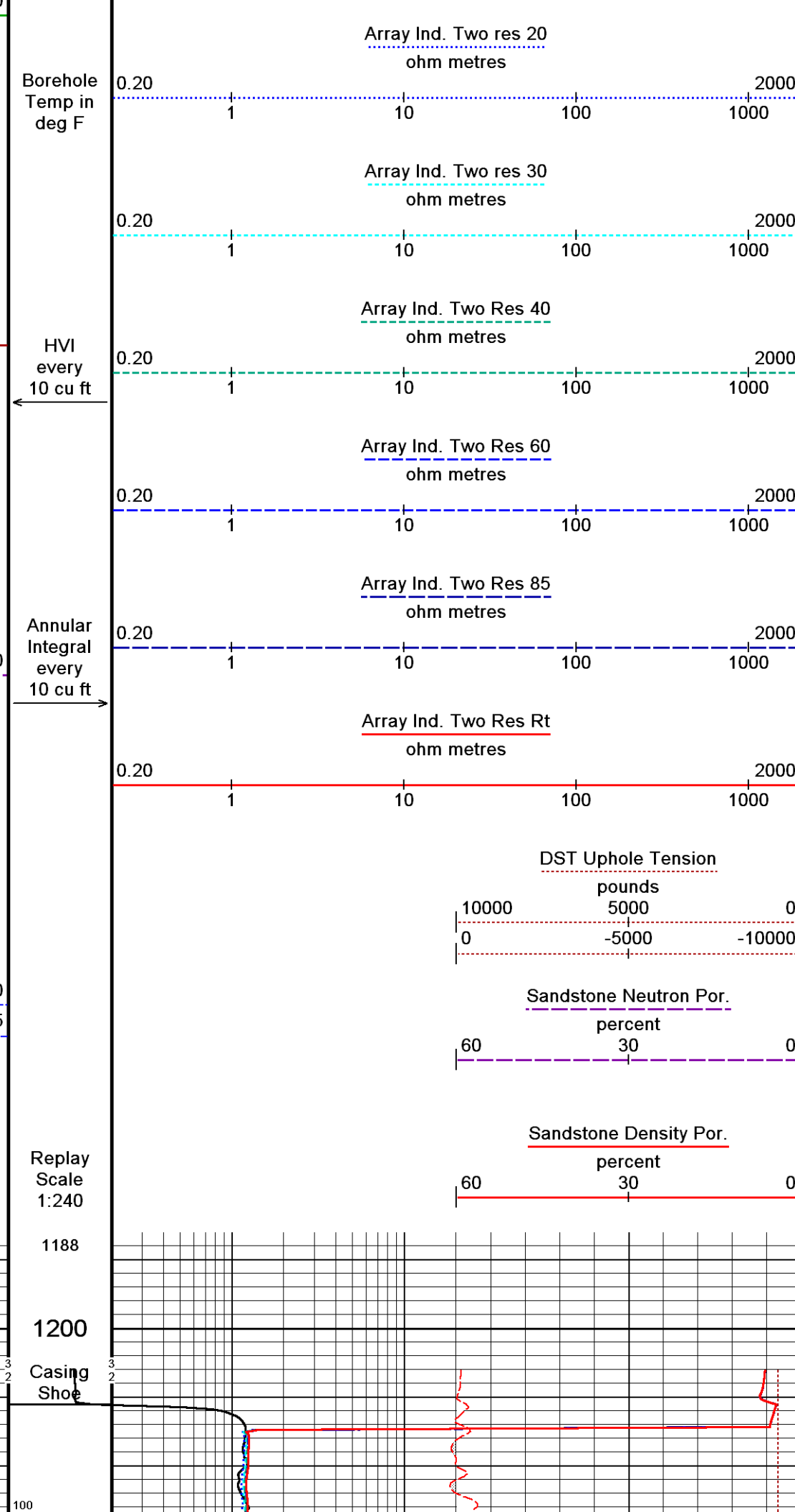
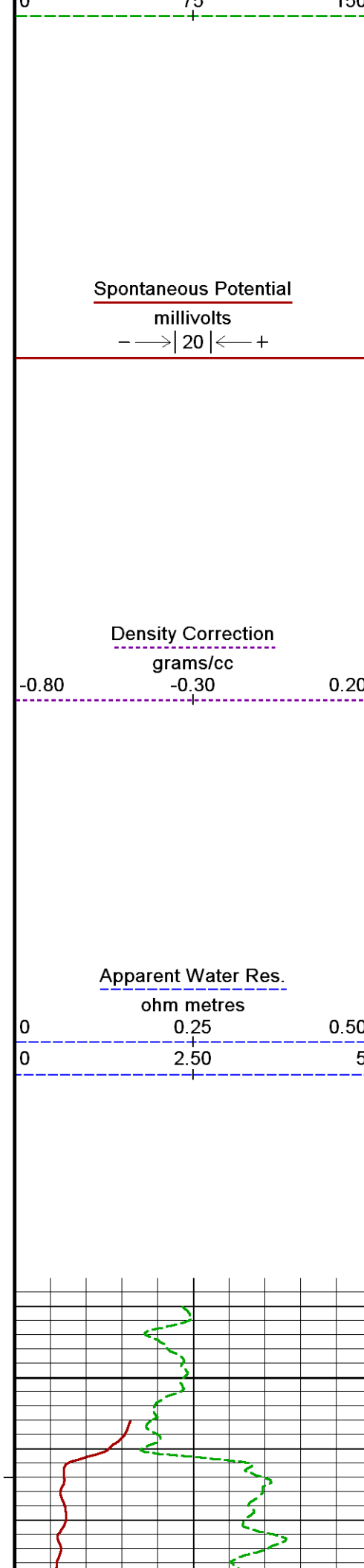


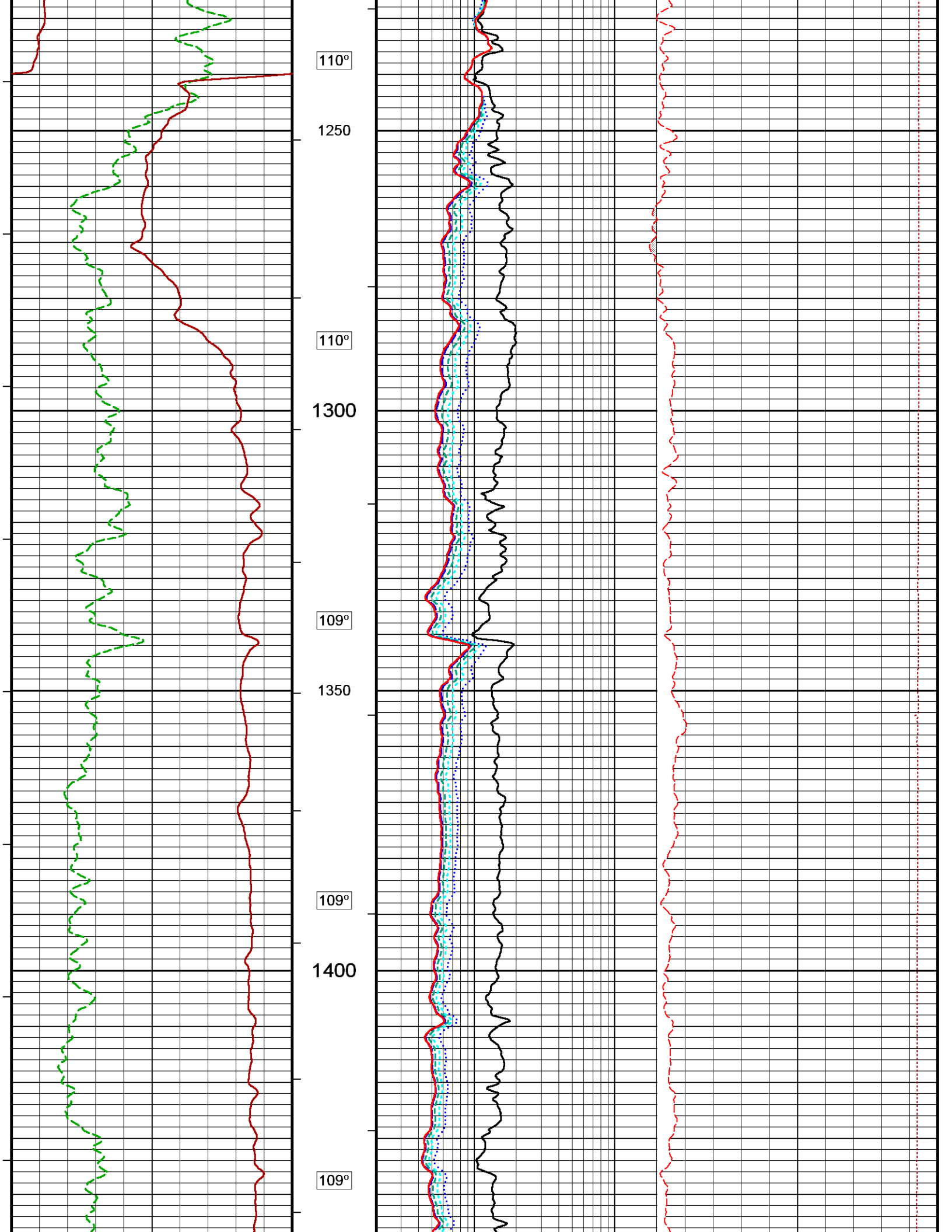


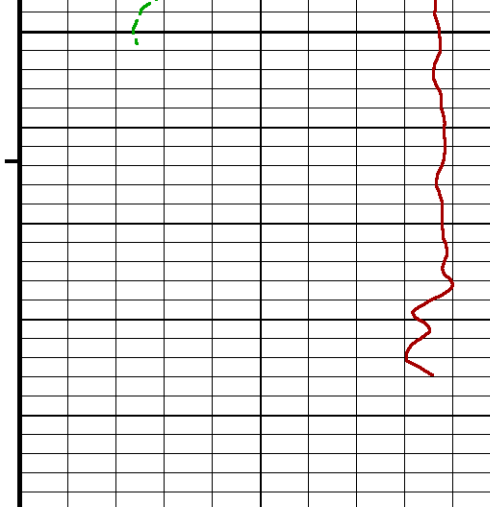
**5" REPEAT PASS \*MD\* 1:240**

Depth Based Data - Maximum Sampling Increment 10.0cm  
 Filename: C:\DATA\Smith Production Co\Bocage Lands LLC etal #1\casingcheck.dta  
 System Versions: Logged with 13.05.9583 Plotted with 13.05.9583  
 Plotted on 13-MAY-2013 03:25  
 Recorded on 12-MAY-2013 23:09

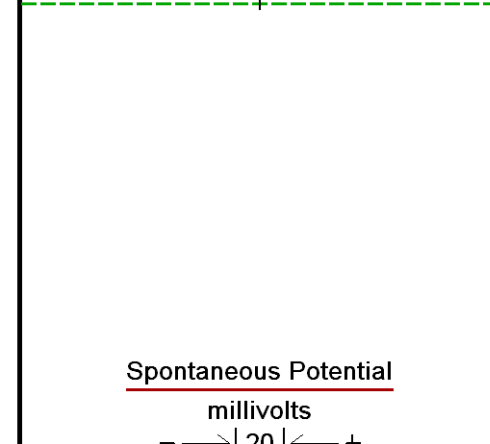
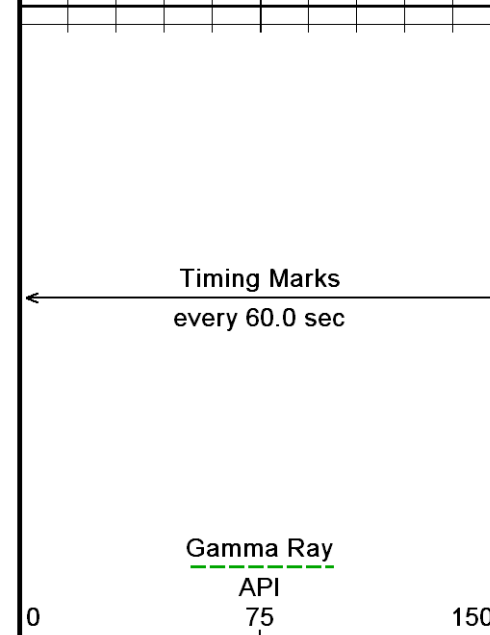
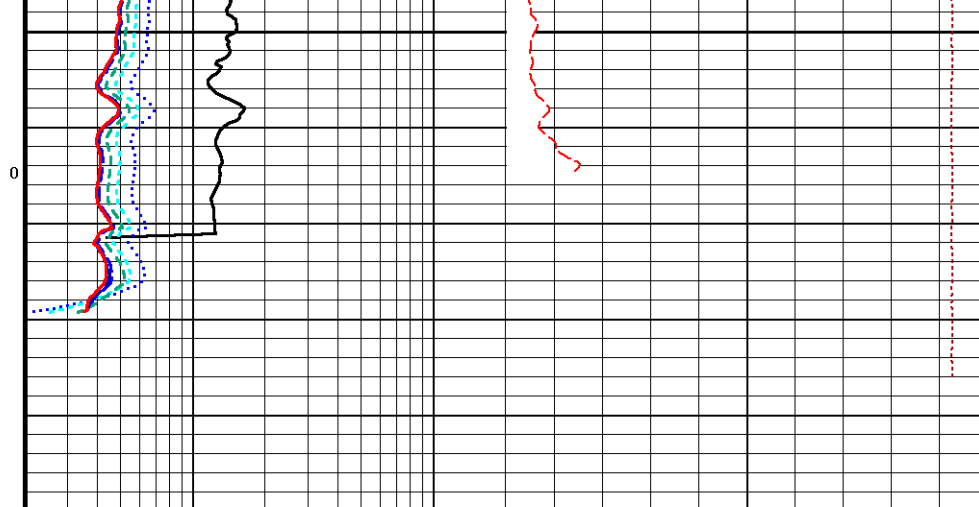




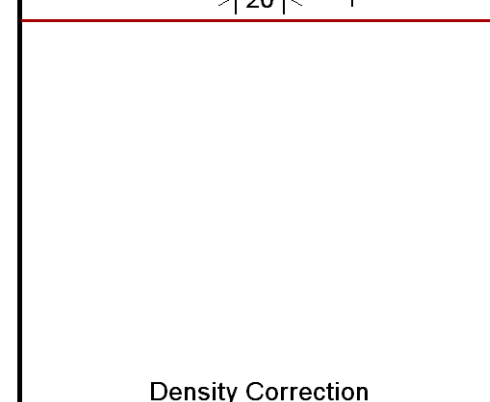
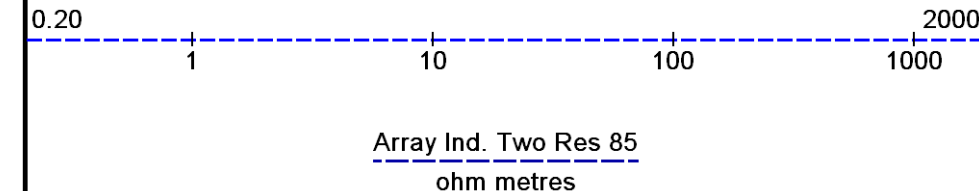
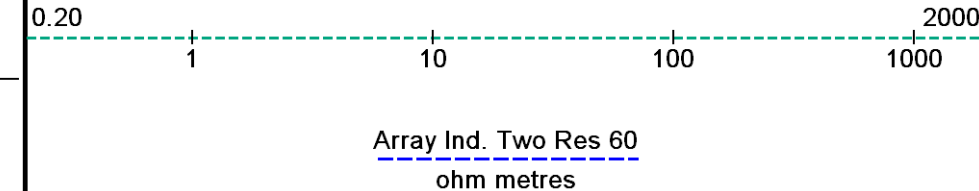
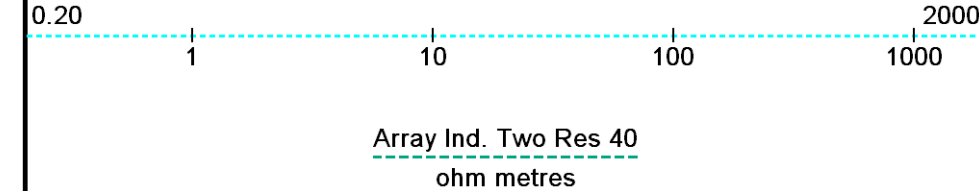
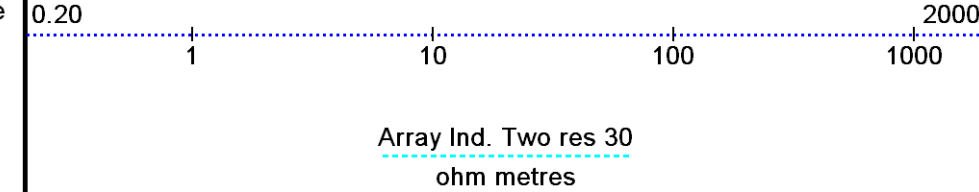
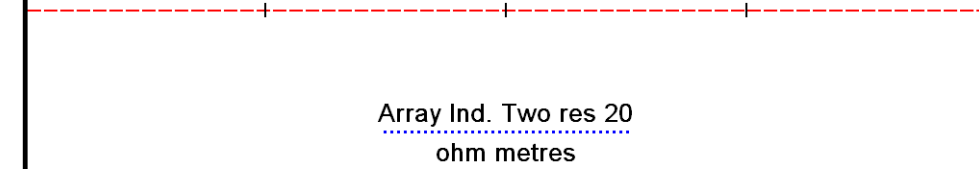
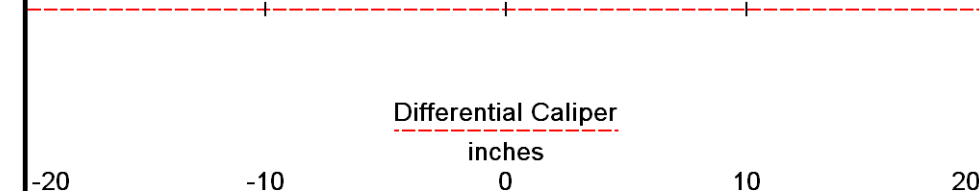
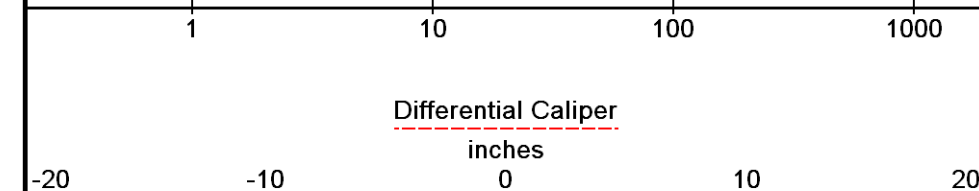
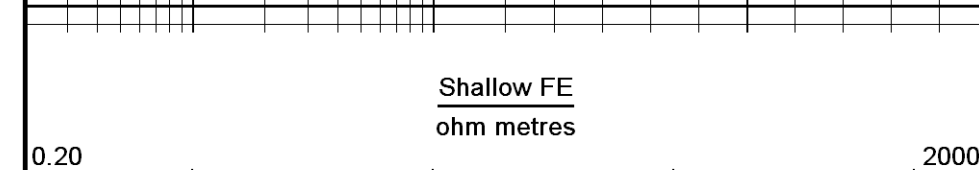




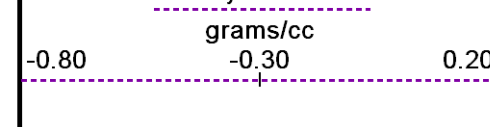
1450  
0  
1500  
Depth In Feet



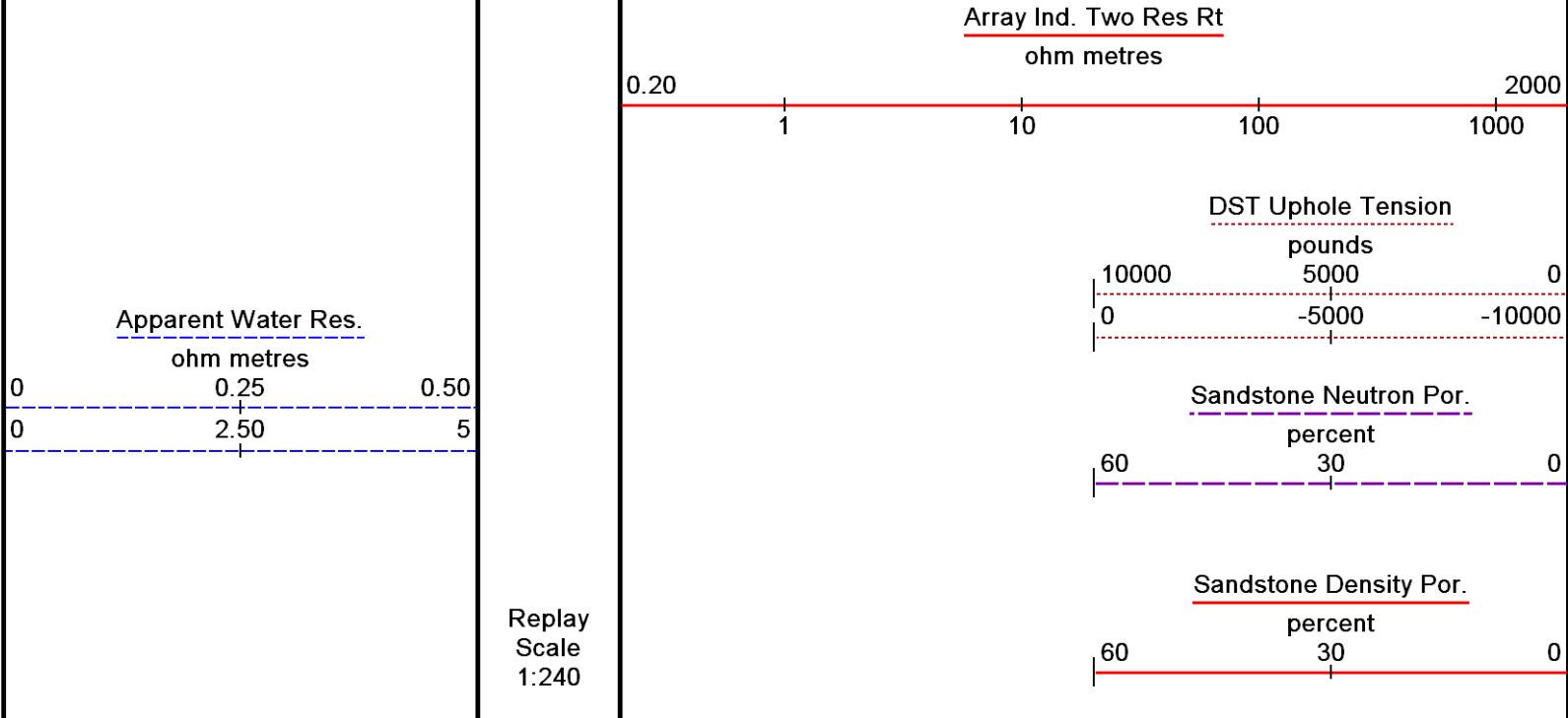
0.20  
1  
10  
100  
1000  
2000



Borehole Temp in deg F  
HVI every 10 cu ft



Annular Integral every 10 cu ft



Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 13-MAY-2013 03:25  
 Filename: C:\DATA\Smith Production Co\Bocage Lands LLC etal #1\casingcheck.dta Recorded on 12-MAY-2013 23:09  
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↑ **5" REPEAT PASS \*MD\* 1:240** ↑

**BEFORE SURVEY CALIBRATION**  
 C:\DATA\Smith Production Co\Bocage Lands LLC etal #1\uplog.dta

General Constants All 000 Last Edited on 12-MAY-2013,22:57

<b>General Parameters</b>		
Mud Resistivity	1.650	ohm-metres
Mud Resistivity Temperature	78.000	degrees F
Water Level	0.000	feet
Borehole Fluid Processing	Wet Hole	
<b>Hole/Annular Volume and Differential Caliper Parameters</b>		
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	
<b>Rwa Parameters</b>		
Porosity used	Base Density Porosity	
Resistivity used	Array Ind. Two Res Rt	
RWA Constant A	0.620	
RWA Constant M	2.150	
SW/APOR Tool Source	0.000	

<b>Gamma Calibration MCG-D.A 233</b>			Field Calibration on 12-MAY-2013,22:00
	Measured	Calibrated (API)	
Background	50	34	
Calibrator (Gross)	1185	798	
Calibrator (Net)	1135	764	

Gamma Constants MCG-D.A 233 Last Edited on 12-MAY-2013,21:59

<b>Gamma Calibrator Number</b>		
Gamma Calibrator Number	GRC-039	
Mud Density	1.12	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl		kppm

K Mud Type	Chloride	
K Mud Concentration	0.00	%

SP Calibration MCG-D.A 233		Field Calibration on 11-MAY-2011,10:36
	Measured	Calibrated (mV)
Reference 1	94.7	91.0
Reference 2	-88.3	-91.0

High Resolution Temperature Calibration MCG-D.A 233		Field Calibration on 16-AUG-2011,21:08
	Measured	Calibrated(Deg F)
Lower	10.00	10.00
Upper	100.00	100.00

High Resolution Temperature Constants MCG-D.A 233		Last Edited on 27-APR-2013,14:39
Pre-filter Length	11	

Neutron Calibration MDN-A.B 155		Base Calibration on 11-MAY-2013 15:39	Field Check on 12-MAY-2013,22:00	
Base Calibration				
	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	2980	92	3714	110
Ratio	32.563		33.764	
Field Calibrator at Base				
			Calibrated (cps)	
			1355	2027
Ratio			0.668	
Field Check				
			Calibrated (cps)	
			1350	2023
Ratio			0.667	

Neutron Constants MDN-A.B 155		Last Edited on 12-MAY-2013,22:01
Neutron Source Id	514	
Neutron Jig Number	5822NE	
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	7.00	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 137		Base Calibration on 11-MAY-2013 17:55	Field Check on 12-MAY-2013,22:01
Base Calibration			
	Measured		Calibrated (ohm-m)
Reference 1	0.0		0.0
Reference 2	979.7		126.8
Base Check			277.0
Field Check			277.2

FE Constants MFE-A.A 137		Last Edited on 12-MAY-2013,22:01
Running Mode	No Sleeve	
MFE K Factor	0.1268	
Caliper Source for FE correction	Density Caliper	
Caliper Value for FE correction	N/A	
Barite Source for FE correction	Temperature Corr	
		inches

Rm Source for T E correction  
 Temp. for Rm Corr. MCG External Temperature  
 Stand-off 0.5 inches

Induction Calibration MAI-B.A 216

Base Calibration on 03-MAR-2012,20:50  
 Field Check on 12-MAY-2013,22:01

Base Calibration

Test Loop Calibration

Channel	Measured		Calibrated (mmho/m)	
	Low	High	Low	High
1	17.0	469.0	9.3	966.2
2	5.7	386.1	7.6	821.4
3	3.7	263.8	5.2	566.0
4	2.8	134.8	2.6	279.2

Array Temperature 75.9 Deg F

Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1			14.4	3883.8
2			30.8	3496.0
3			27.5	3007.4
4			17.6	2066.8
Deep			14.5	1985.9
Medium			41.8	3926.1
Shallow			49.4	5140.8

Array Temperature 92.9 Deg F

Induction Constants MAI-B.A 216

Last Edited on 12-MAY-2013,22:01

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)	0.62	
Cementation Exponent (M)	2.15	
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-B.A 216

Field Calibration on 26-MAR-2012,09:50

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



## DOWNHOLE EQUIPMENT

C:\DATA\Smith Production Co\Bocage Lands LLC etal #1\uplog.dta

MCC-A 11C Tension Cablehead  
 MCC-A 1 LG: 2.40 ft WT: 19.8 lb OD: 2.24 in

11C-11B MTA-K.A Compact Tool Adaptor  
 MTA-K.A 109 LG: 1.53 ft WT: 13.2 lb OD: 2.24 in

Compact Comms Gamma  
 MCG-D.A 233 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Neutron  
 MDN-A.B 155 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

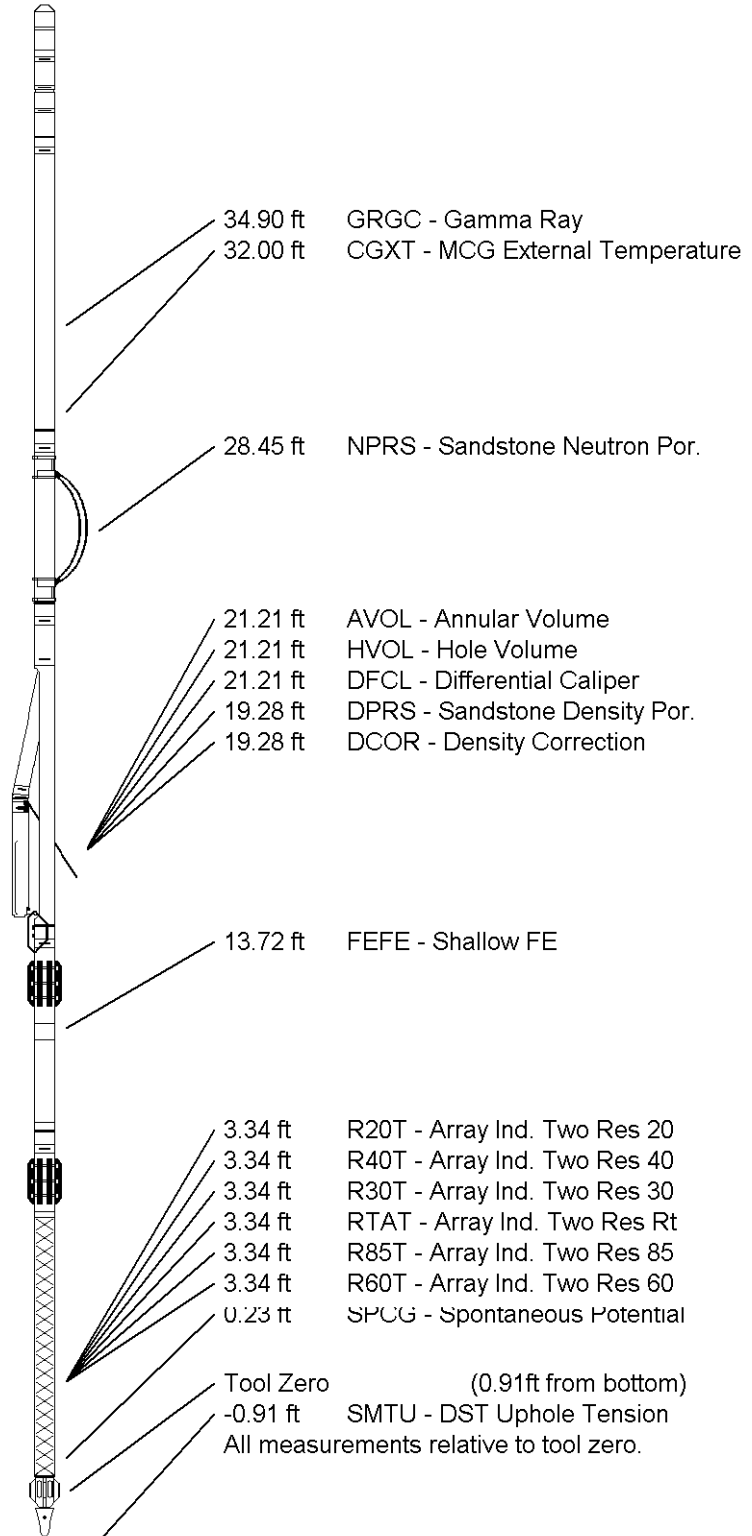
Compact Density/Caliper  
 MPD-B 154 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

Compact Focused Electric  
 MFE-A.A 137 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Induction  
 MAI-B.A 216 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Compact Hole Finder  
 HFS 1 LG: 0.78 ft WT: 2.2 lb OD: 2.24 in

**Total**      Length: 44.89 ft      Weight: 337.3 lb



<b>COMPANY</b>	<b>SMITH PRODUCTION COMPANY</b>
<b>WELL</b>	<b>BOCAGE LANDS LLC ETAL #1 ST</b>
<b>FIELD</b>	<b>LITTLE CHENIERE</b>
<b>PROVINCE/COUNTY</b>	<b>CAMERON</b>
<b>COUNTRY/STATE</b>	<b>U.S.A./LOUISIANA</b>

Elevation Kelly Bushing      18.00      feet	First Reading      5997.00      feet
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Elevation Array Logging  
Elevation Drill Floor 17.00 feet  
Elevation Ground Level 1.00 feet

Depth Logging  
Depth Driller 6002.00 feet  
Depth Logger 5997.00 feet



**Weatherford**<sup>®</sup>

ARRAY INDUCTION  
PHOTO DENSITY / NEUTRON  
GAMMA RAY MD LOG