Weatherford®

ARRAY INDUCTION SHALLOW FOCUSED ELECTRIC LOG

COMPANY	O'BRIEN ENERGY RESOURCES CORP.
WELL	HULL #2-11
FIELD	ADAMS RANCH
PROVINCE/COUNTY	MEADE
COUNTRY/STATE	U.S.A. / KANSAS
LOCATION	660' FNL & 1650' FEL

40 Years of Wireline 1979 2019

SEC	TWP	RGE	Other Services
11	34S	30W	MPD/MDN MML

API Number 15-119-21280
Permit Number

Permanent Datum G.L., Elevation 2668 feet
Log Measured From K.B. @ 12 FEET above Permanent Datum
Drilling Measured From K.B.

Elevations:	feet
KB	2680.00
DF	2678.00
GL	2668.00

Date	13-FEB-2011			
Run Number	ONE			
Depth Driller	6387.00	feet		
Depth Logger	6383.00	feet		
First Reading	6380.00	feet		
Last Reading	1489.00	feet		
Casing Driller	1489.00	feet		
Casing Logger	1489.00	feet		
Bit Size	7.875	inches		
Hole Fluid Type	CHEMICAL			
Density / Viscosity	9.20 lb/USg		62.00 CP	
PH / Fluid Loss	10.50		5.80 ml/30Min	
Sample Source	FLOWLINE			
Rm @ Measured Temp	1.05 @ 73.0	ohm-m		
Rmf @ Measured Temp	0.84 @ 73.0	ohm-m		
Rmc @ Measured Temp	1.26 @ 73.0	ohm-m		
Source Rmf / Rmc	CALC		CALC	
Rm @ BHT	0.65 @118.0	ohm-m		
Time Since Circulation	5 HOURS			
Max Recorded Temp	118.00	deg F		
Equipment Name	COMPACT			
Equipment / Base	13057		LIB	
Recorded By	L. SCOTT			
Witnessed By	ROGER PEARSON		PETER DEBENHAM	
S.O.# / JOB#	3529057		LB11-028	

BOREHOLE RECORD

Last Edited: 13-FEB-2011 20:38

Bit Size inches	Depth From feet	Depth To feet
7.875	1489.00	6383.00

CASING RECORD

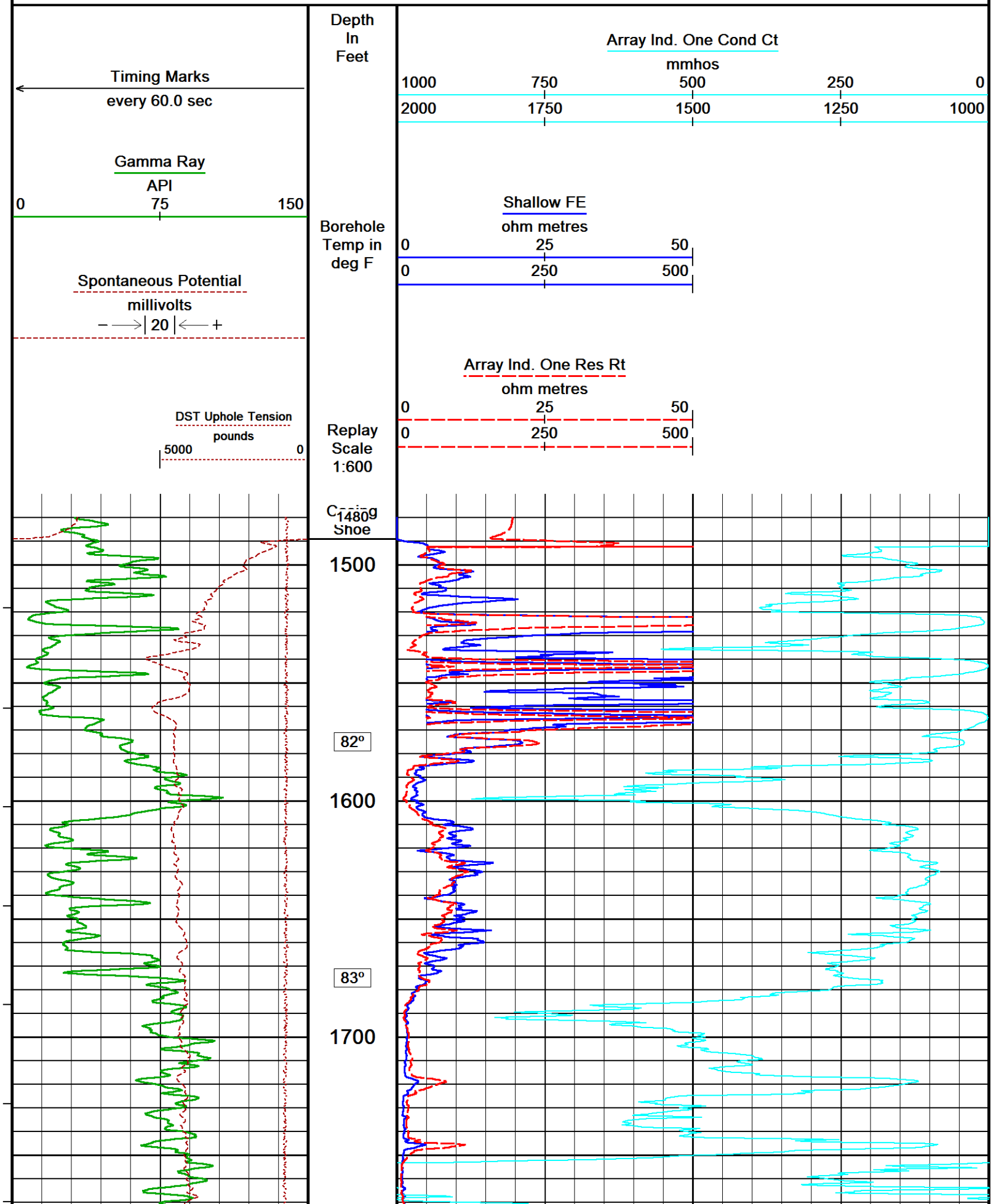
Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	1489.00	24.00

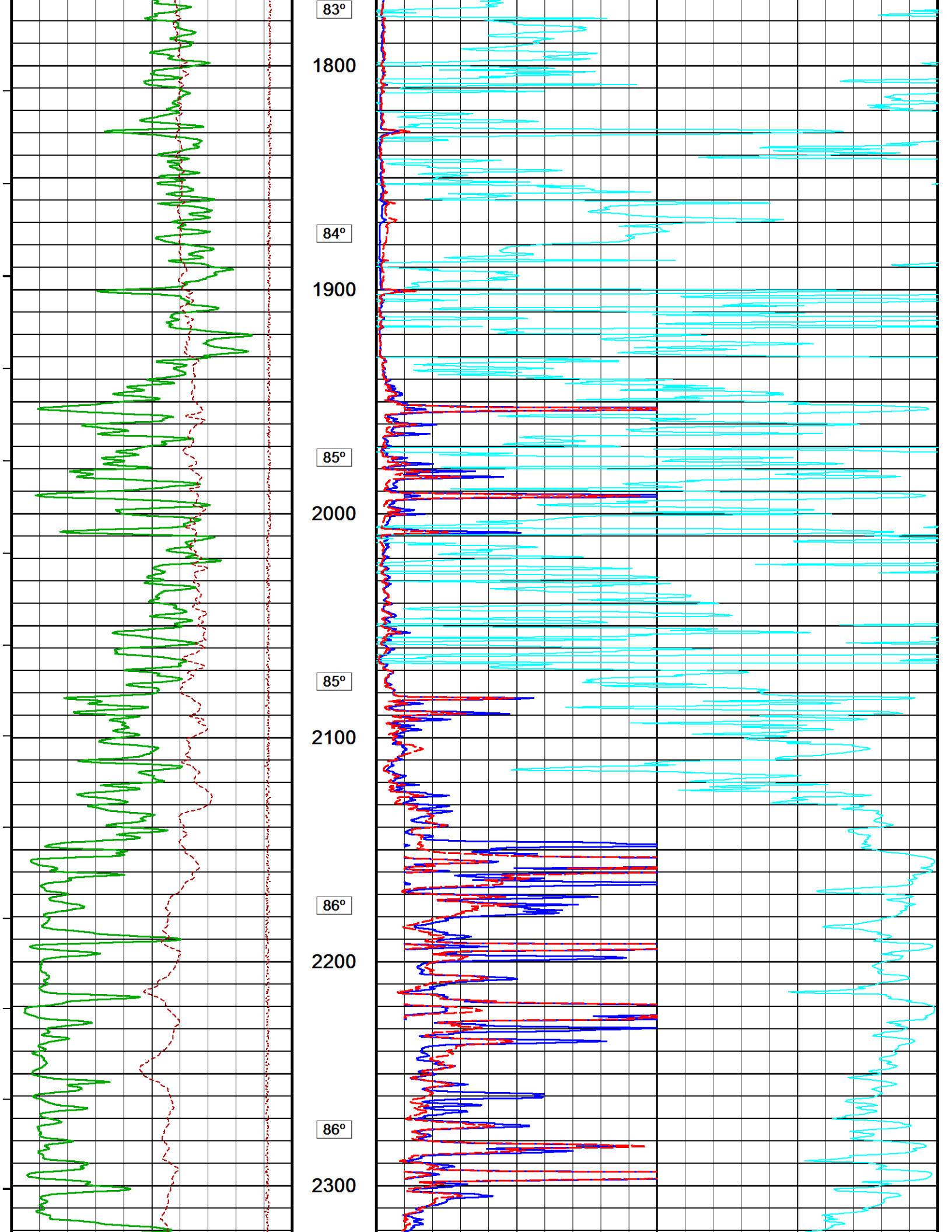
REMARKS

Tools Used: MCG, MML, MDN, MPD, SKJ, MFE, MAI
Hardware: MPD: 8 inch profile plate. MAI and MFE: 0.5 Inch standoffs used. MDN: Dual Bowspring used.
2.71 G/CC Limestone density matrix used to calculate porosity.
Borehole rugosity, tight pulls, and washouts will affect data quality.
All intervals logged and scaled per customer's request.
Annular volume with 4.5 inch production casing= 821 cu. ft.
Service order #3529057
Rig: Duke #6
Engineer: L. Scott
Operator(s): J. LaPoint, N. Adame

2 INCH MAIN PASS

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 08-MAR-2011 15:39
Filename: C:\Users\Joe\AppData\Local\Temp\Weatherford PreView\0\O'BRIEN HULL #2-11_006.dta
Recorded on 13-FEB-2011 18:15
System Versions: Logged with 11.03.2789 Processed with 11.03.2789 Plotted with 11.02.2164

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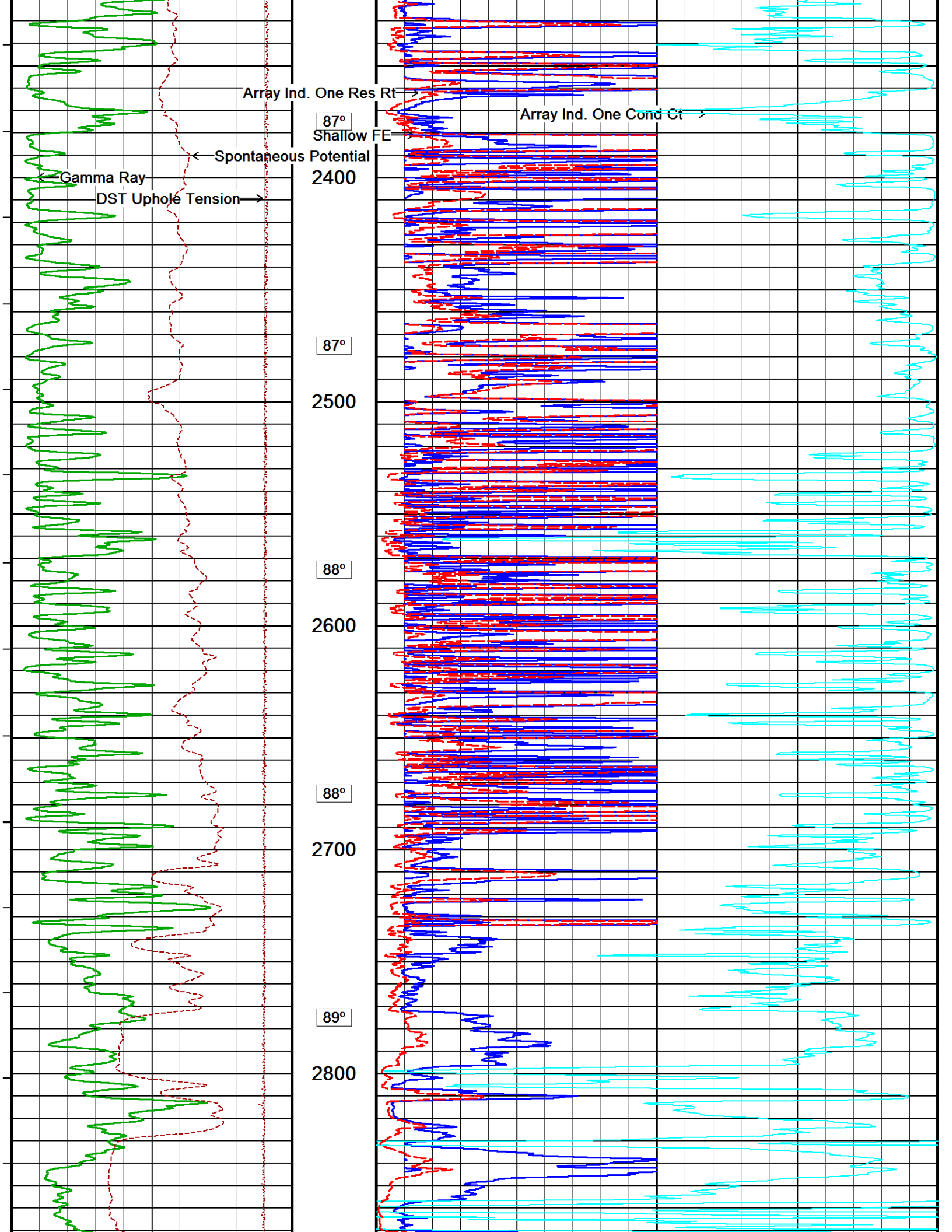
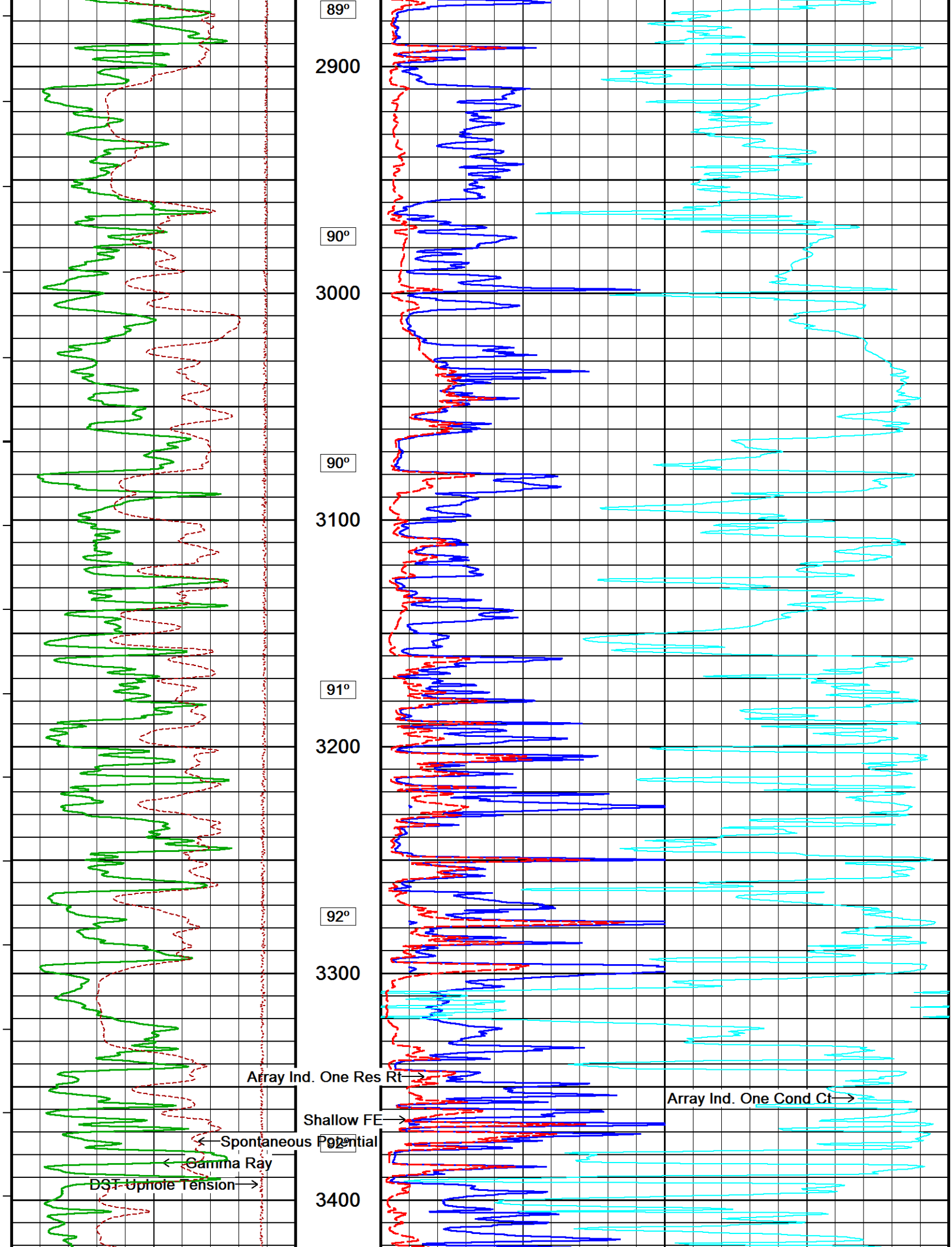
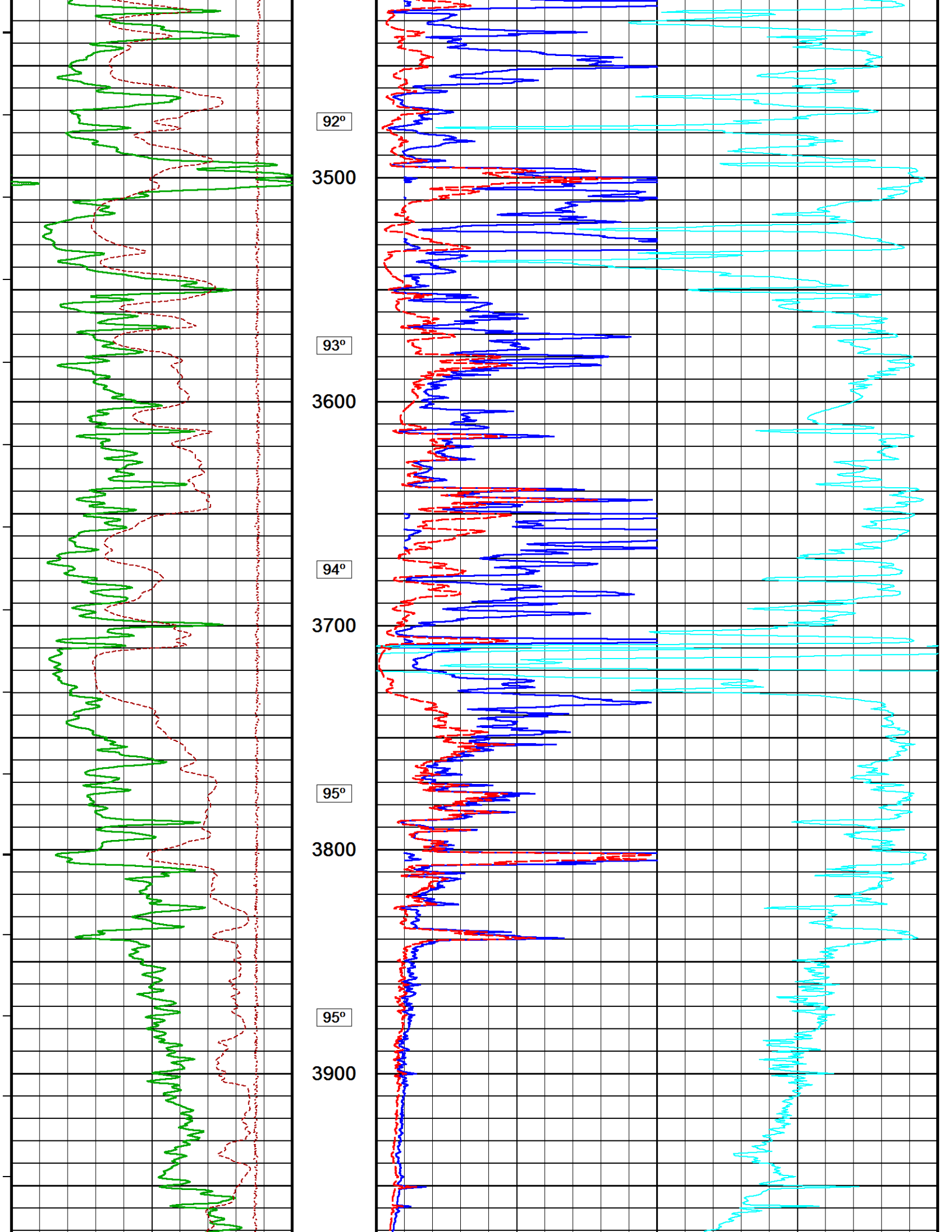
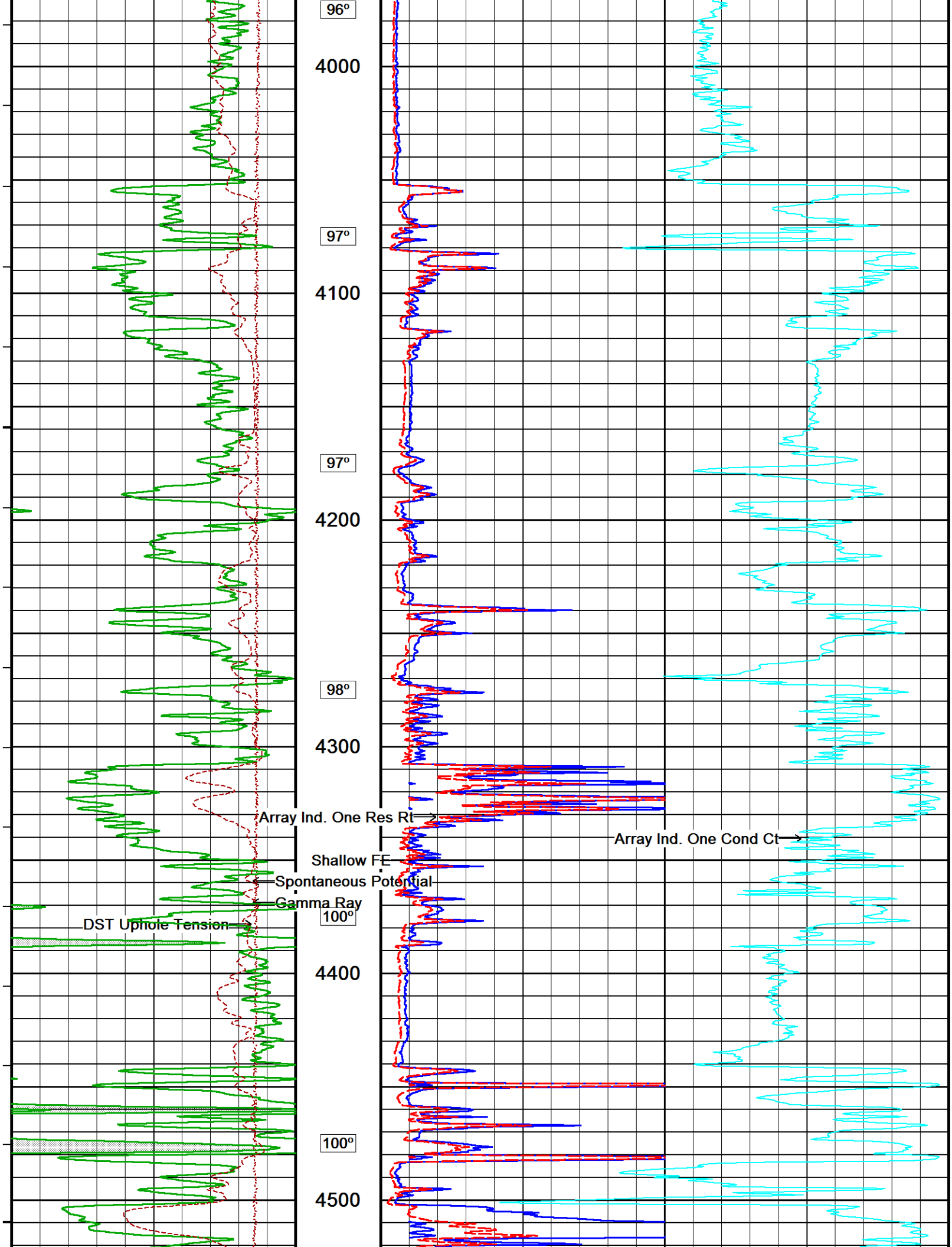
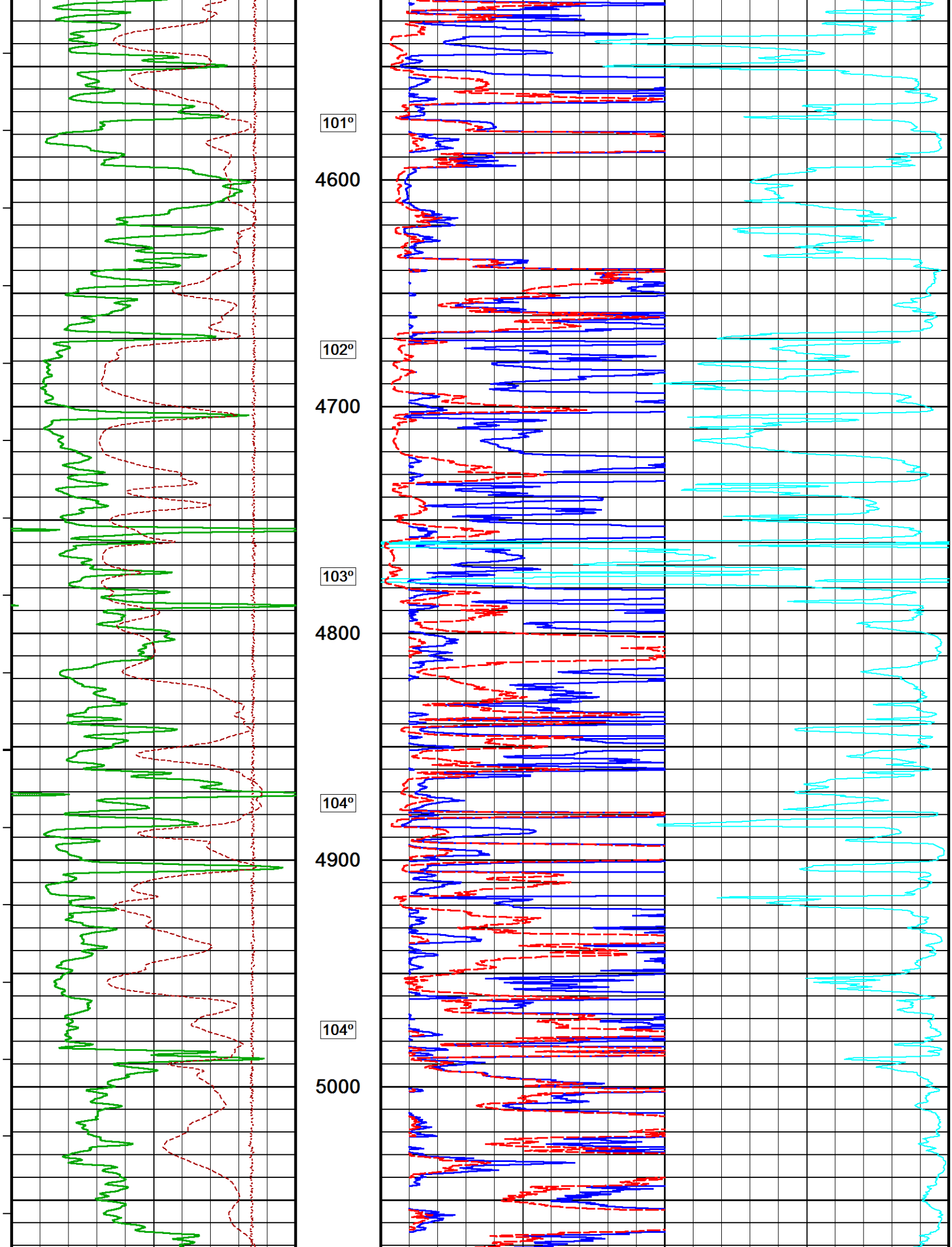
1800
84°
1900
85°
2000
85°
2100
86°
2200
86°
2300

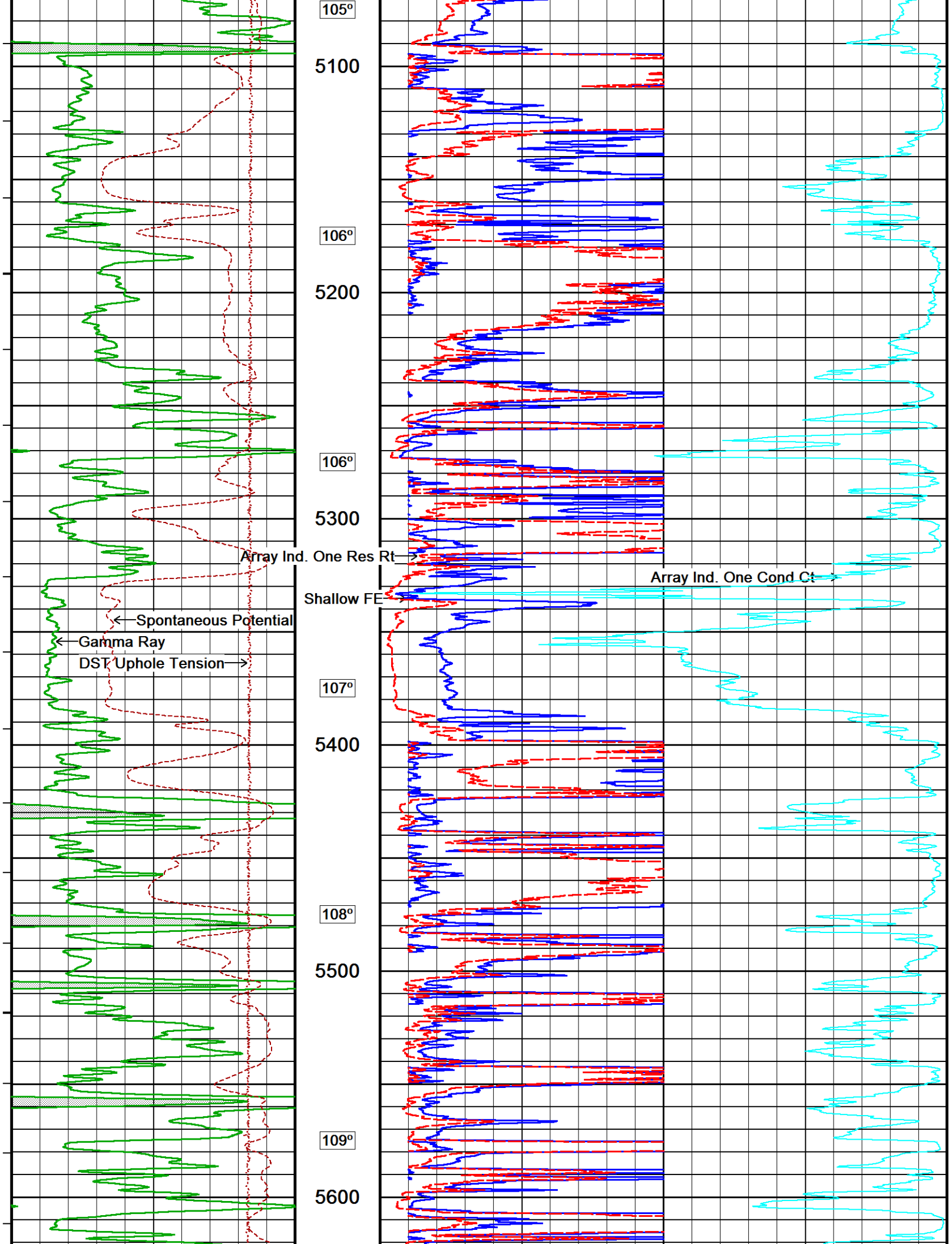

Array Ind. One Res Rt
Array Ind. One Cond Ct
87°
Shallow FE
Spontaneous Potential
Gamma Ray
DST Uphole Tension
2400
87°
2500
88°
2600
88°
2700
89°
2800

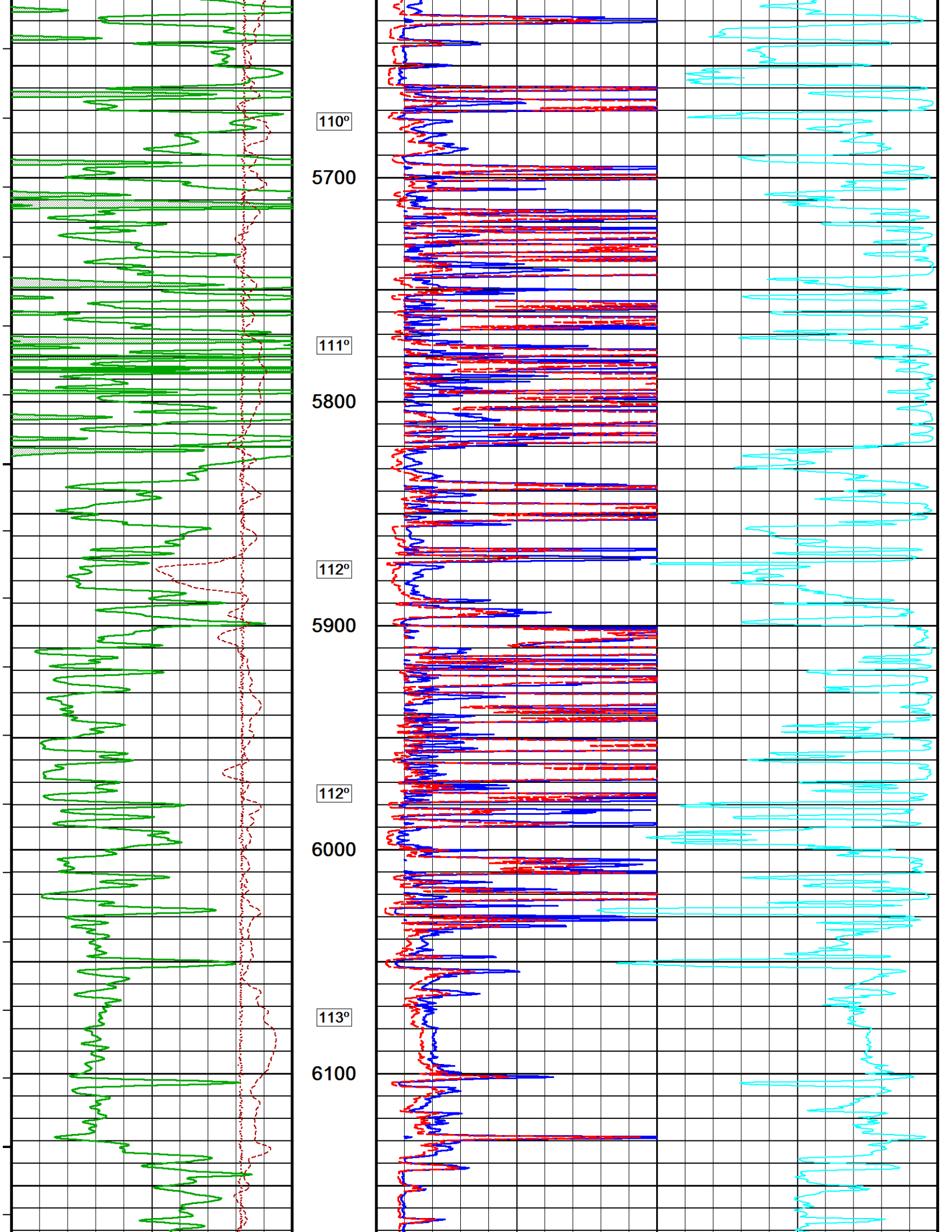

89°
2900
90°
3000
90°
3100
91°
3200
92°
3300
92°
3400
Array Ind. One Res Rt
Shallow FE
Spontaneous Potential
Gamma Ray
DST Uphole Tension
Array Ind. One Cond Ct

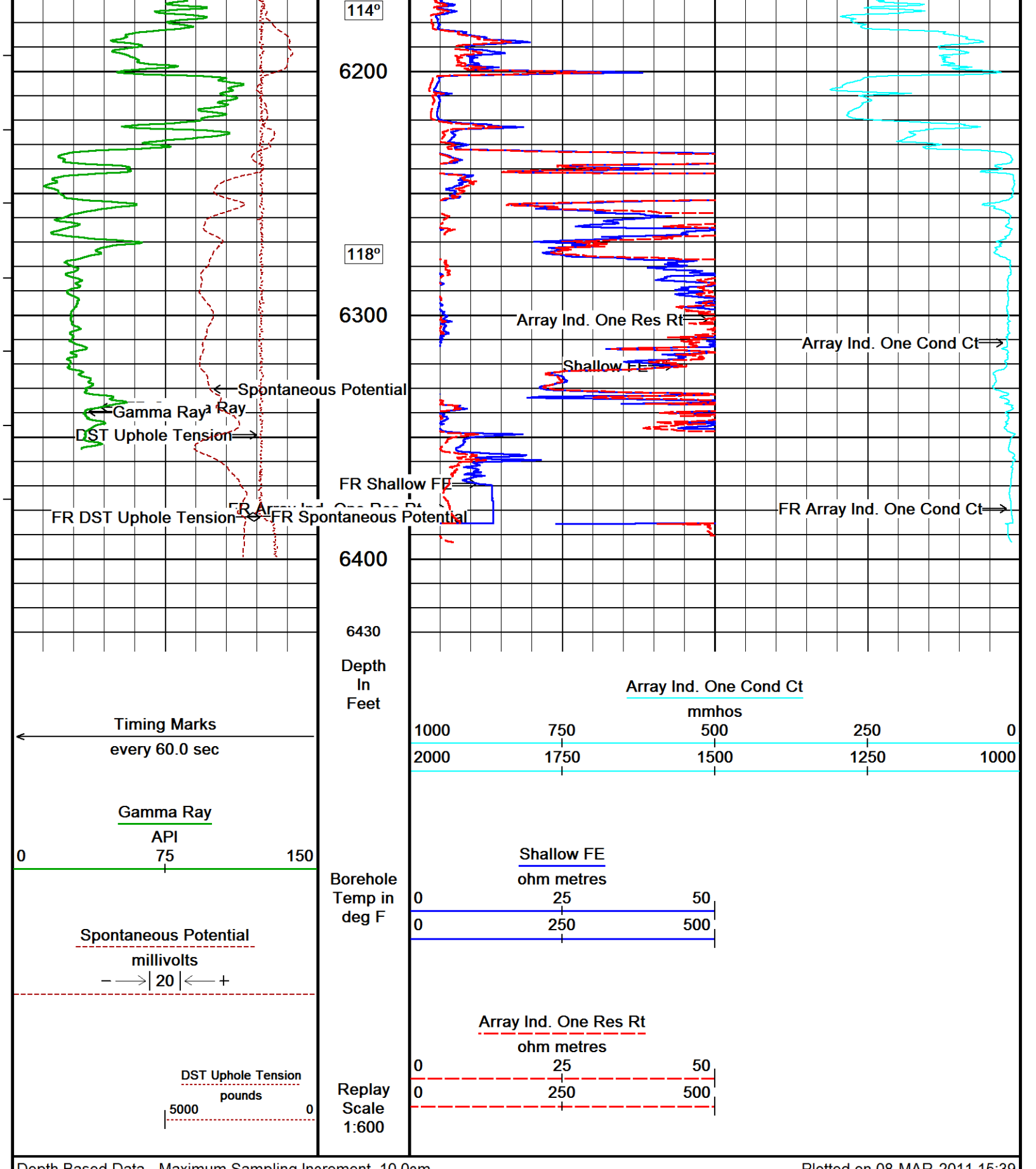

92º
3500
93º
3600
94º
3700
95º
3800
95º
3900


96°
4000
97°
4100
97°
4200
98°
4300
Array Ind. One Res Rt
Array Ind. One Cond Ct
Shallow FE
Spontaneous Potential
Gamma Ray
100°
DST Uphole Tension
4400
100°
4500


101°
4600
102°
4700
103°
4800
104°
4900
104°
5000


105°
5100
106°
5200
106°
5300
Array Ind. One Res Rt
Array Ind. One Cond Ct
Shallow FE
Spontaneous Potential
Gamma Ray
DST Uphole Tension
107°
5400
108°
5500
109°
5600


110°
5700
111°
5800
112°
5900
112°
6000
113°
6100



Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 08-MAR-2011 15:39
Filename: C:\Users\Joe\AppData\Local\Temp\Weatherford PreView\0\O'BRIEN HULL #2-11_006.dta
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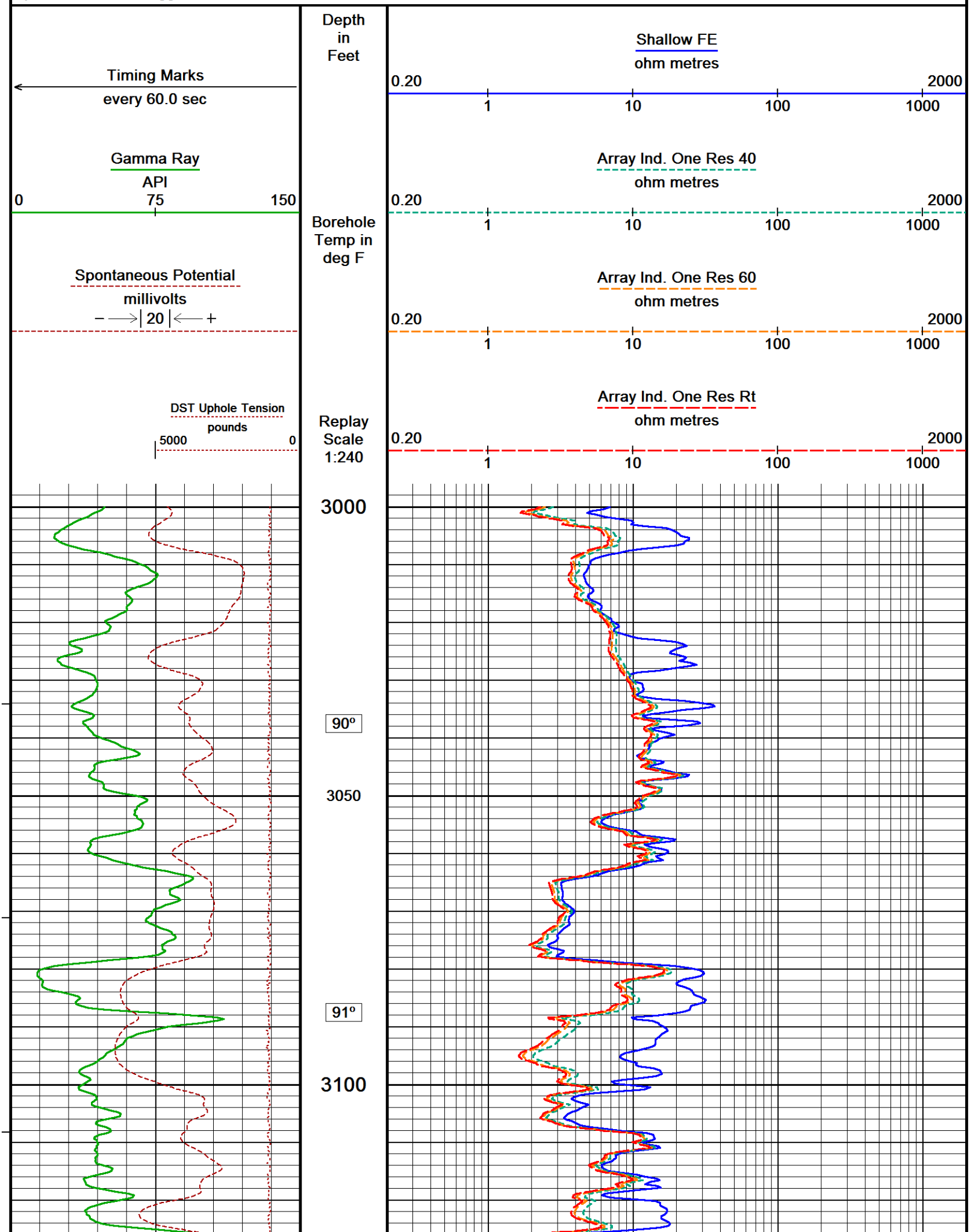
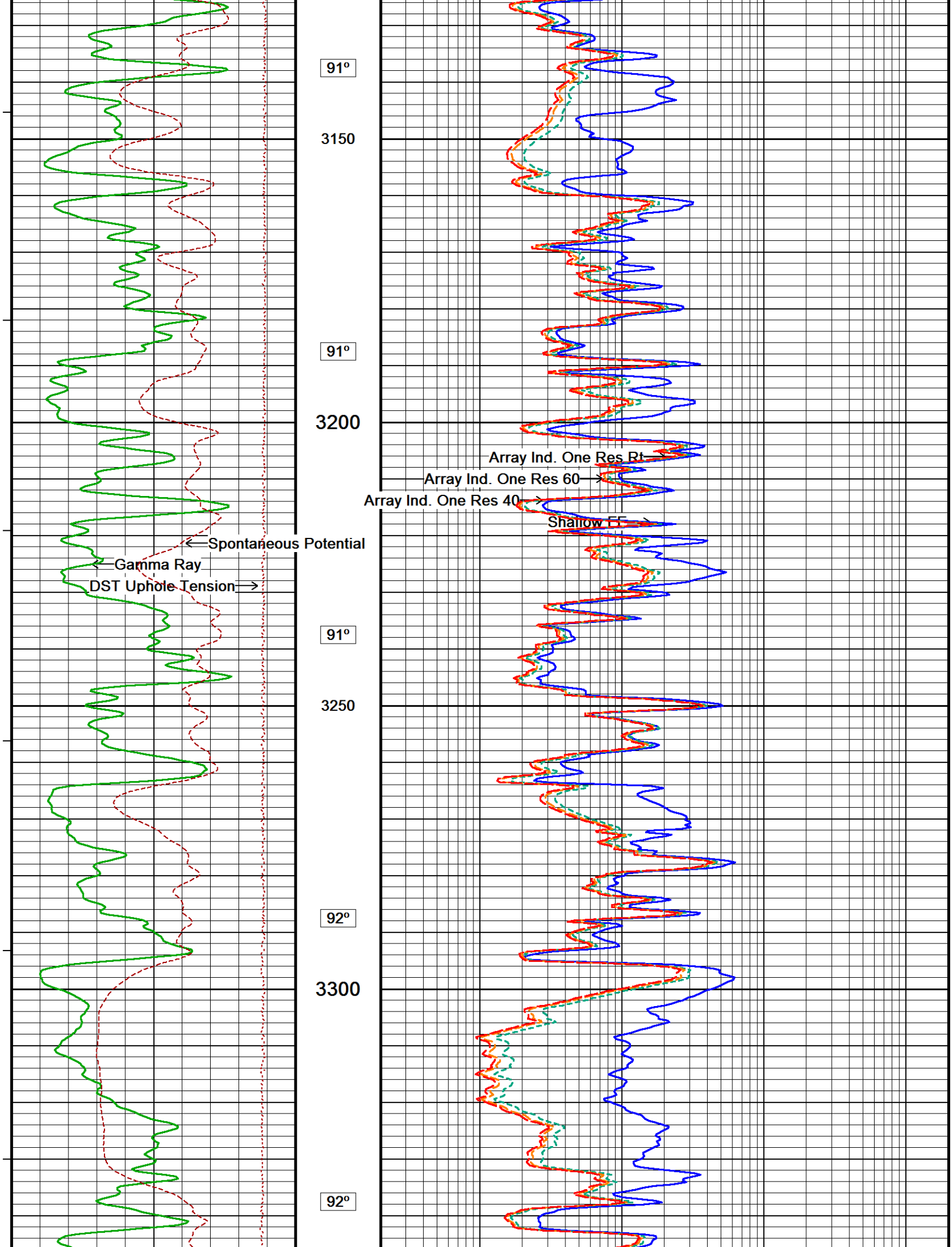
2 INCH MAIN PASS

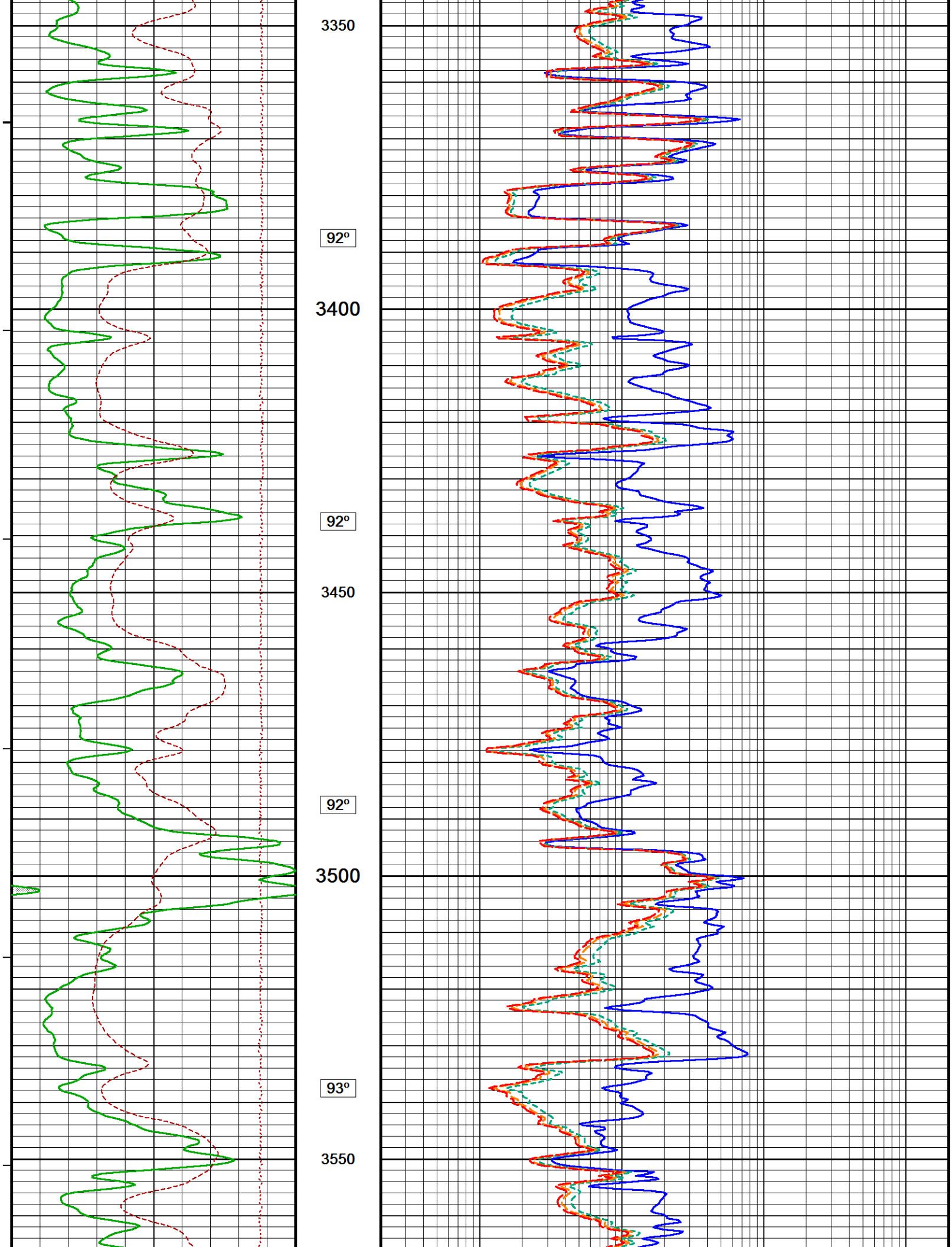
5 INCH MAIN PASS

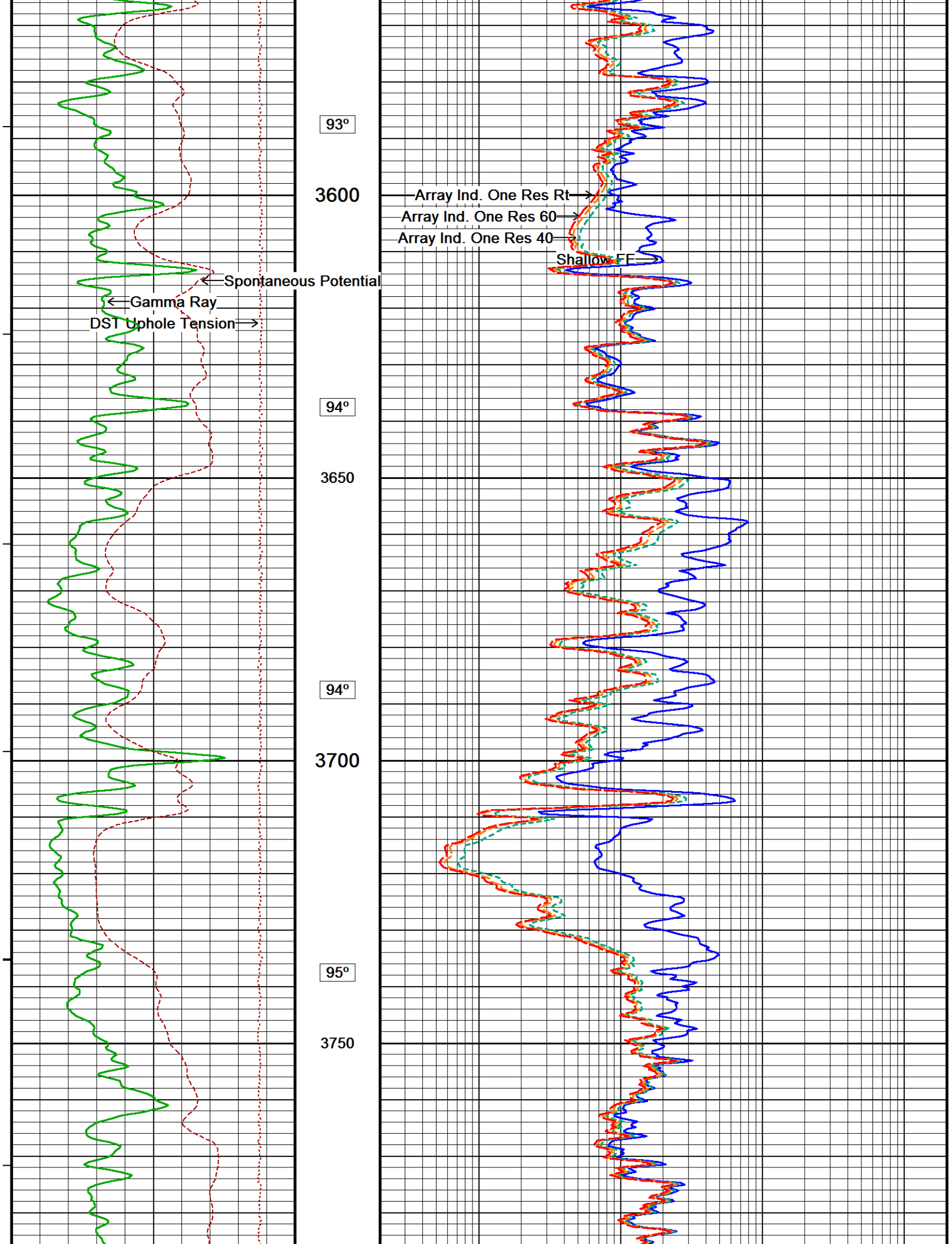
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 08-MAR-2011 15:39

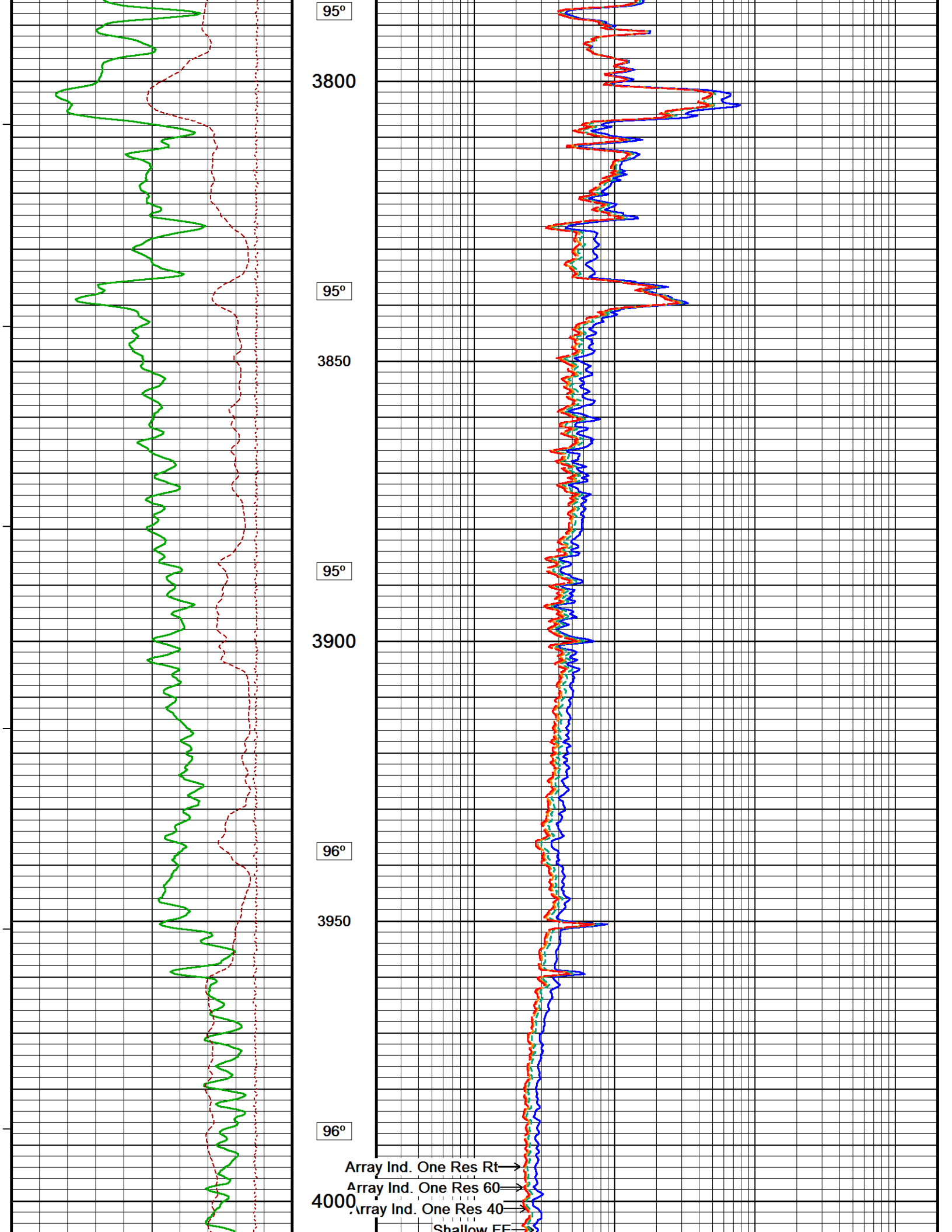
Filename: C:\Users\Joe\AppData\Local\Temp\Weatherford PreView\0\O'BRIEN HULL #2-11_006.dta Recorded on 13-FEB-2011 18:15
System Versions: Logged with 11.03.2789 Processed with 11.03.2789 Plotted with 11.02.2164

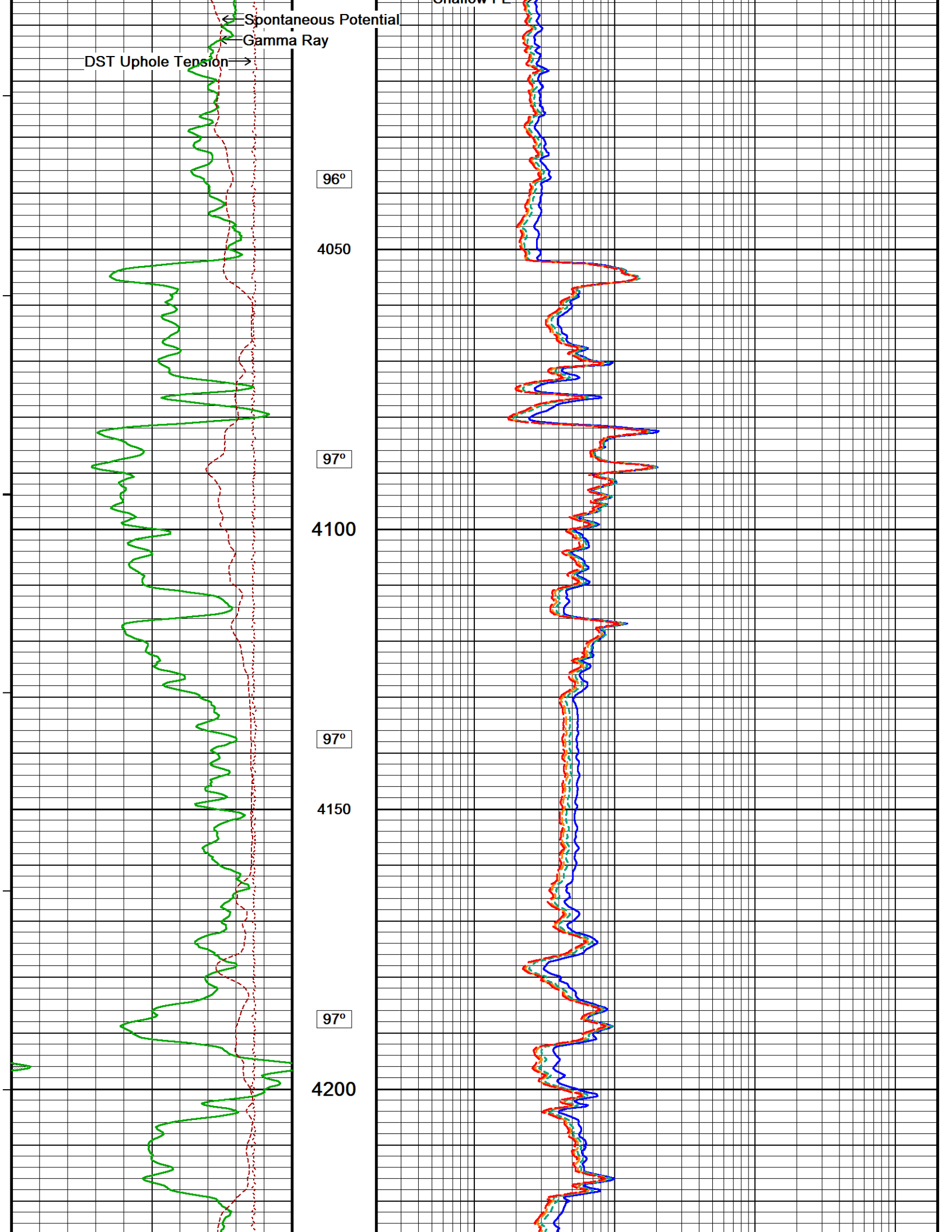


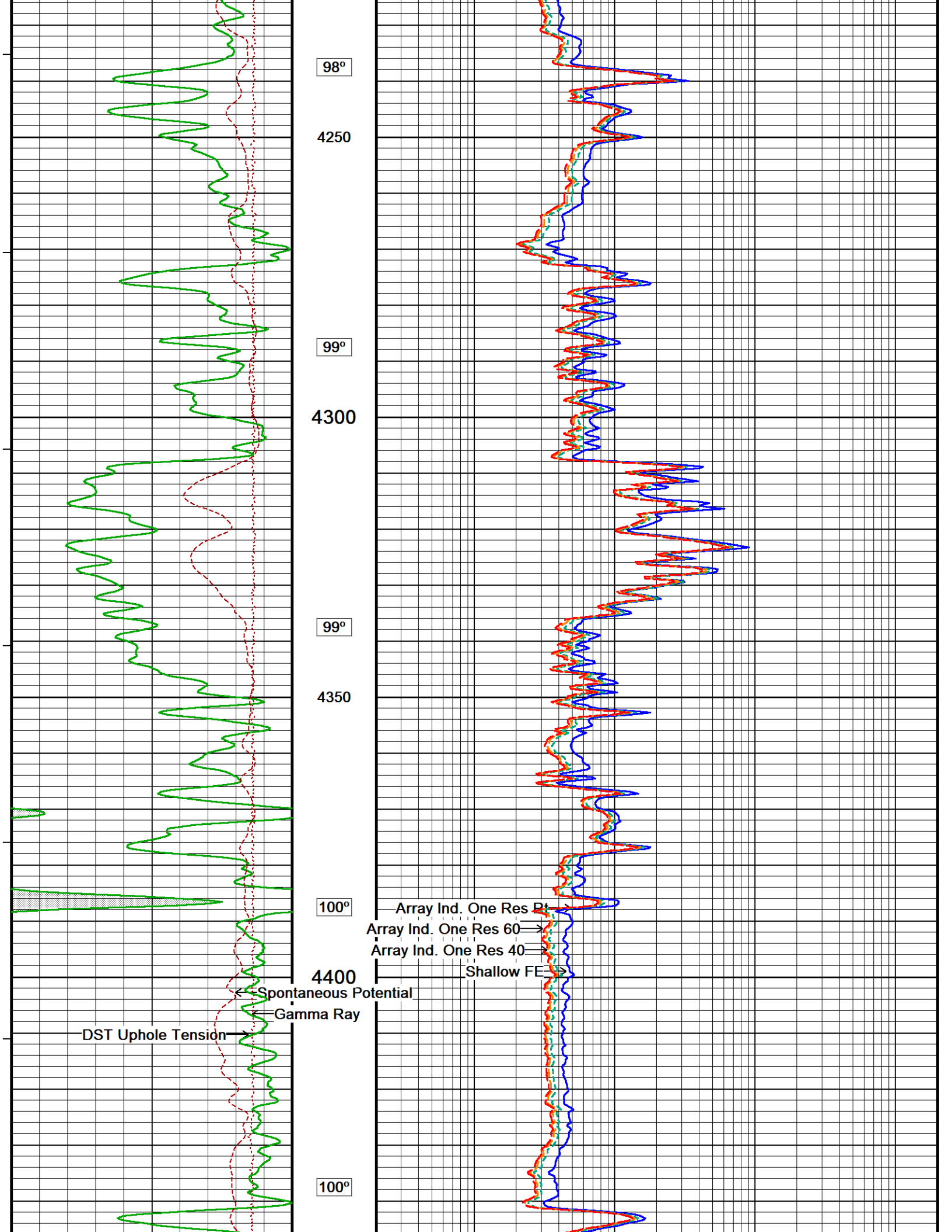

91º
3150
91º
3200
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FF
Spontaneous Potential
Gamma Ray
DST Uphole Tension
91º
3250
92º
3300
92º

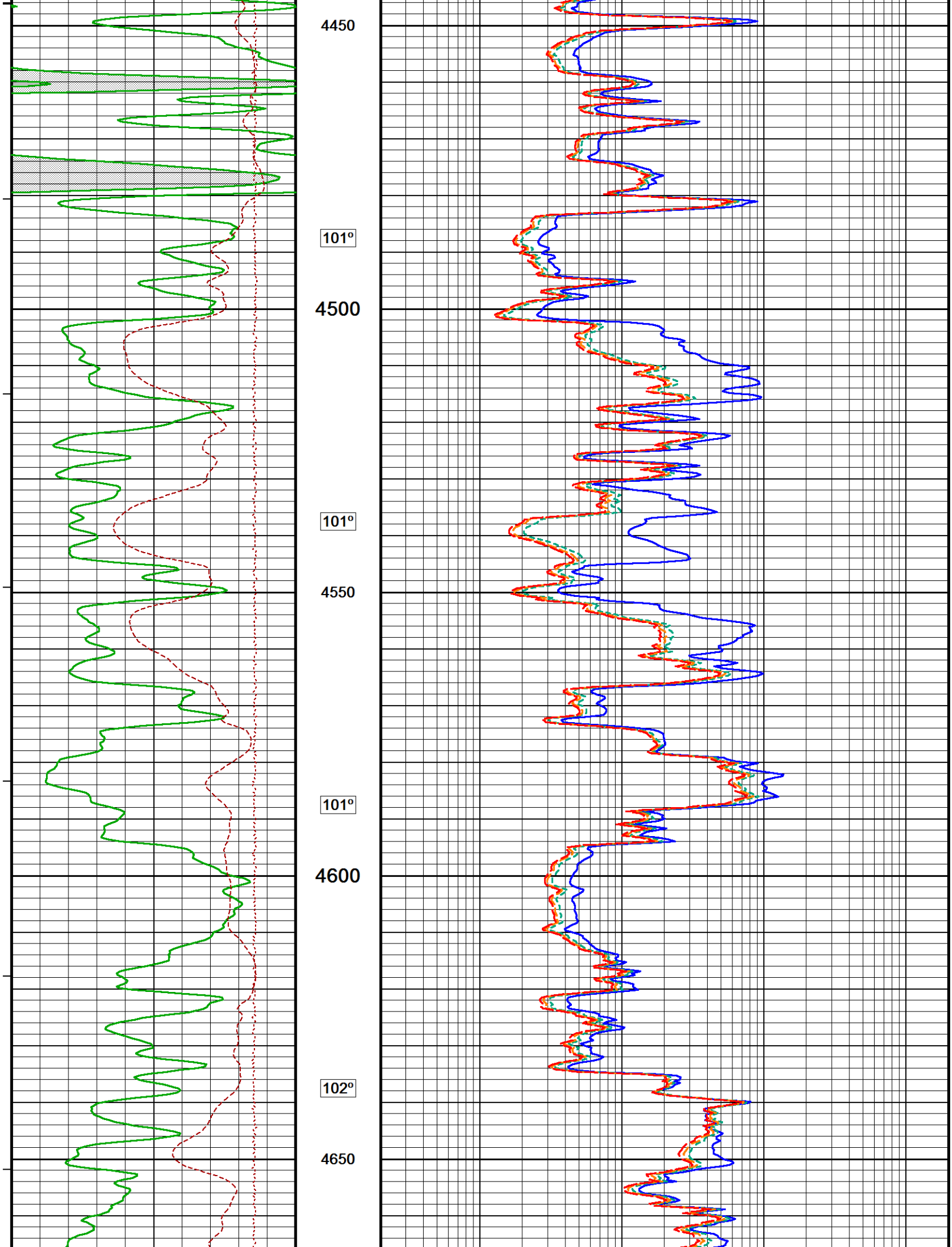

3350
92°
3400
92°
3450
92°
3500
93°
3550

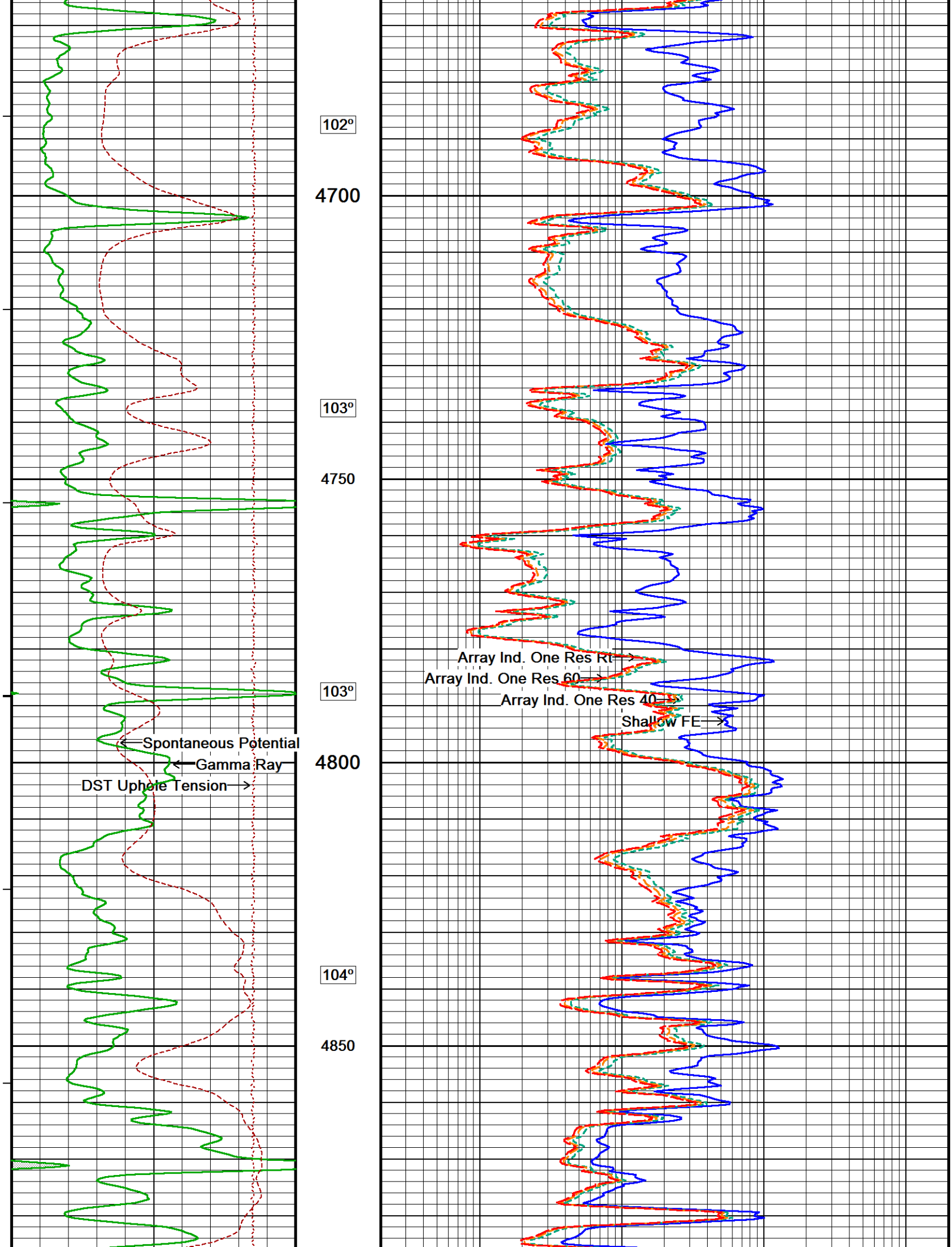

93º
3600
94º
3650
94º
3700
95º
3750
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FE
Spontaneous Potential
Gamma Ray
DST Uphole Tension

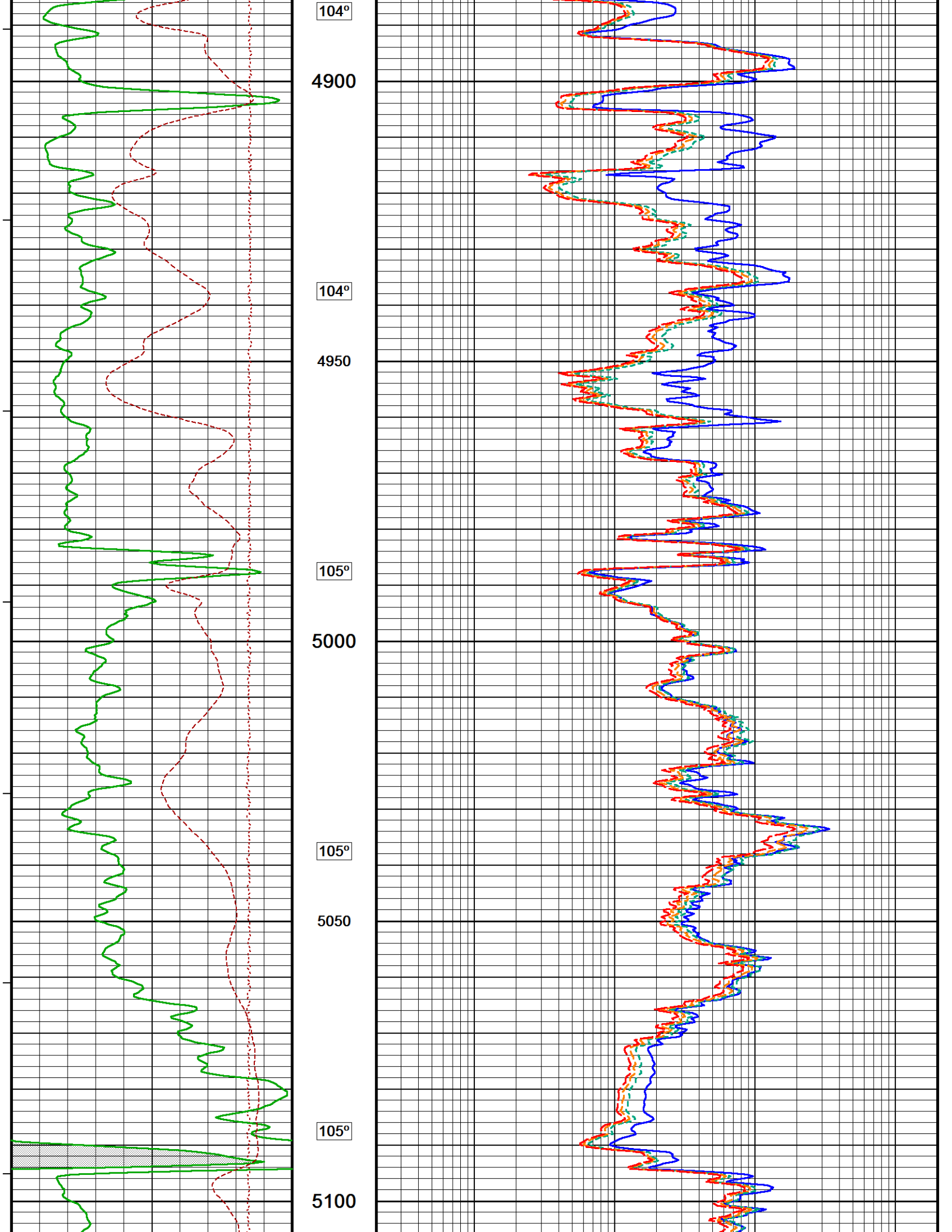

95°
3800
95°
3850
95°
3900
96°
3950
96°
4000
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FF

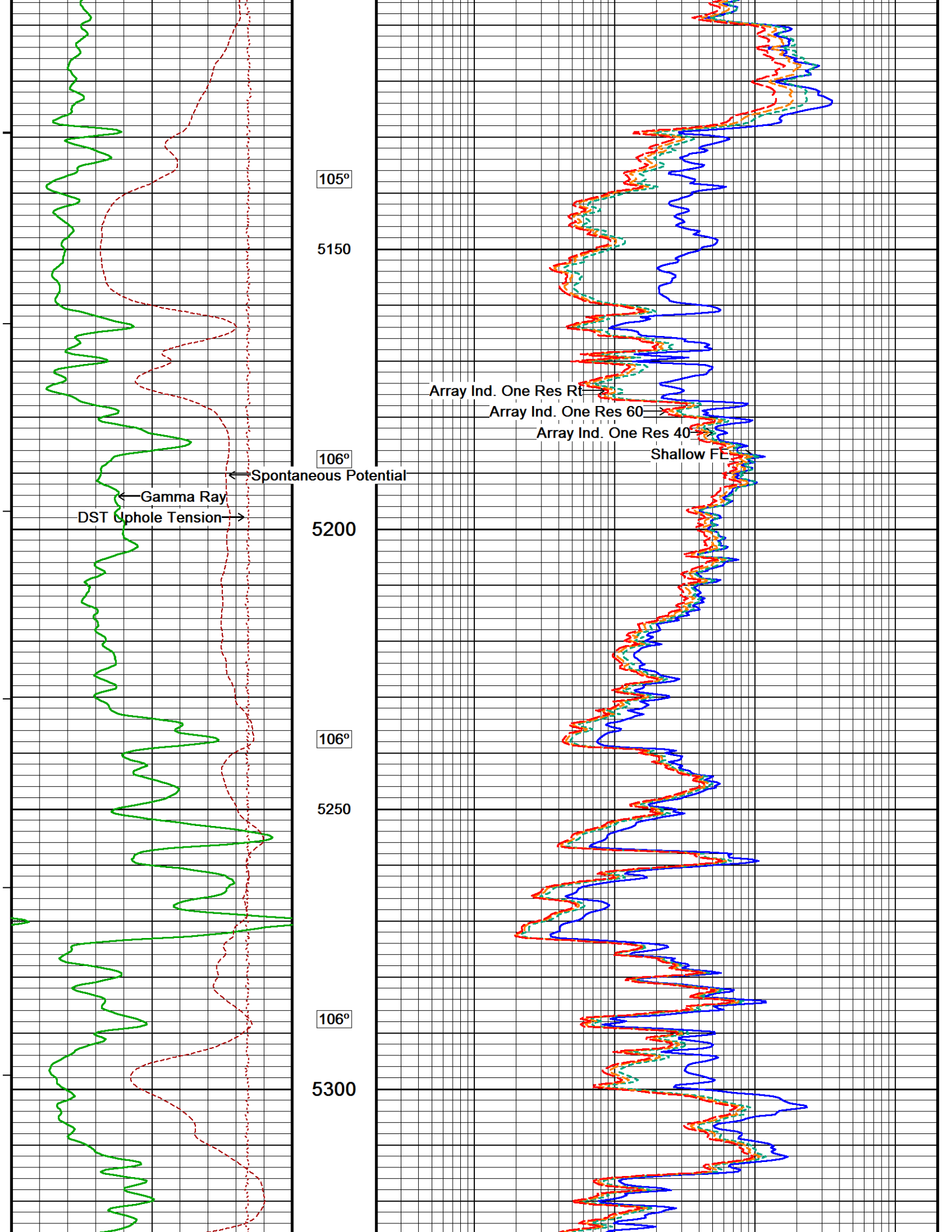

Spontaneous Potential
Gamma Ray
DST Uphole Tension
96°
4050
97°
4100
97°
4150
97°
4200

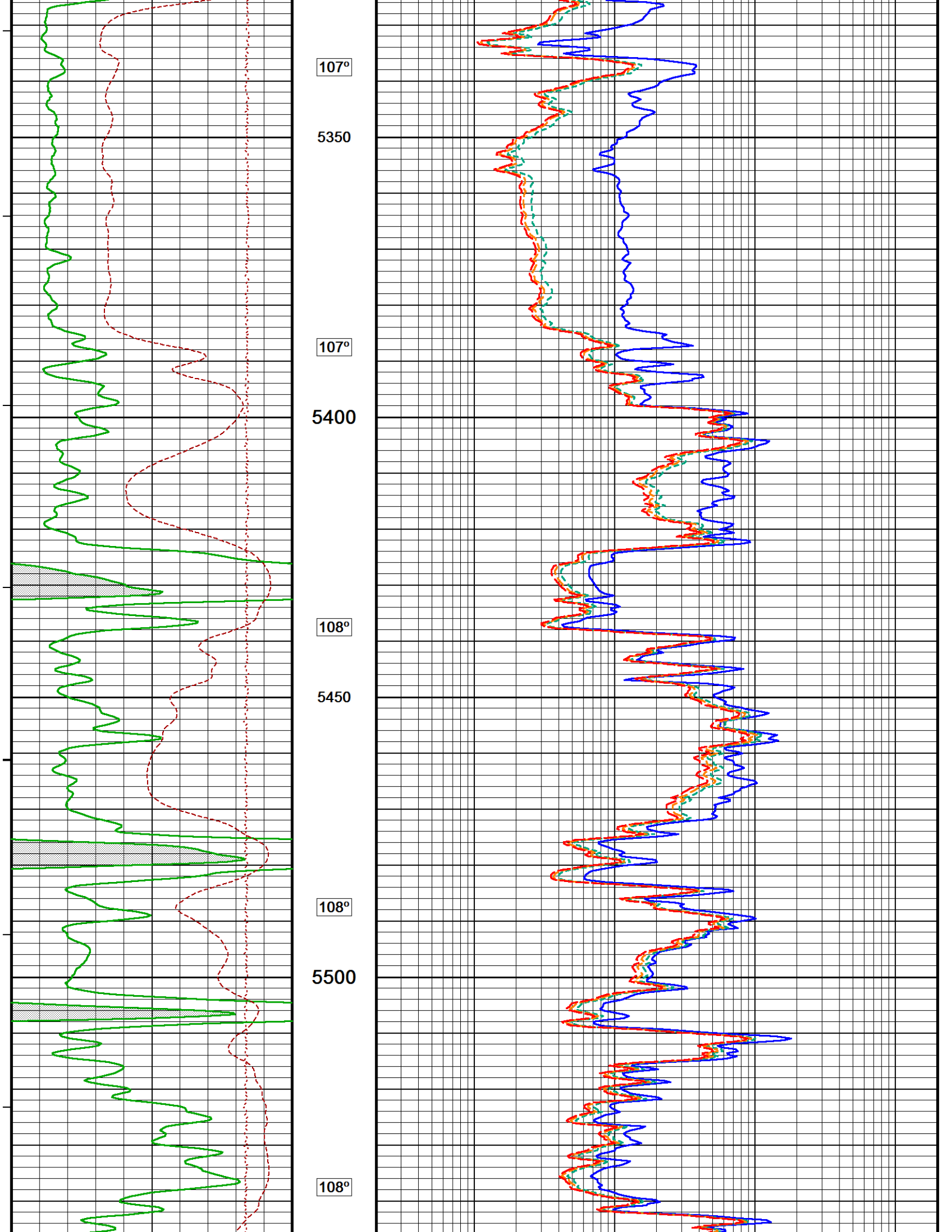

98°
4250
99°
4300
99°
4350
100°
4400
100°
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FE
Spontaneous Potential
Gamma Ray
DST Uphole Tension

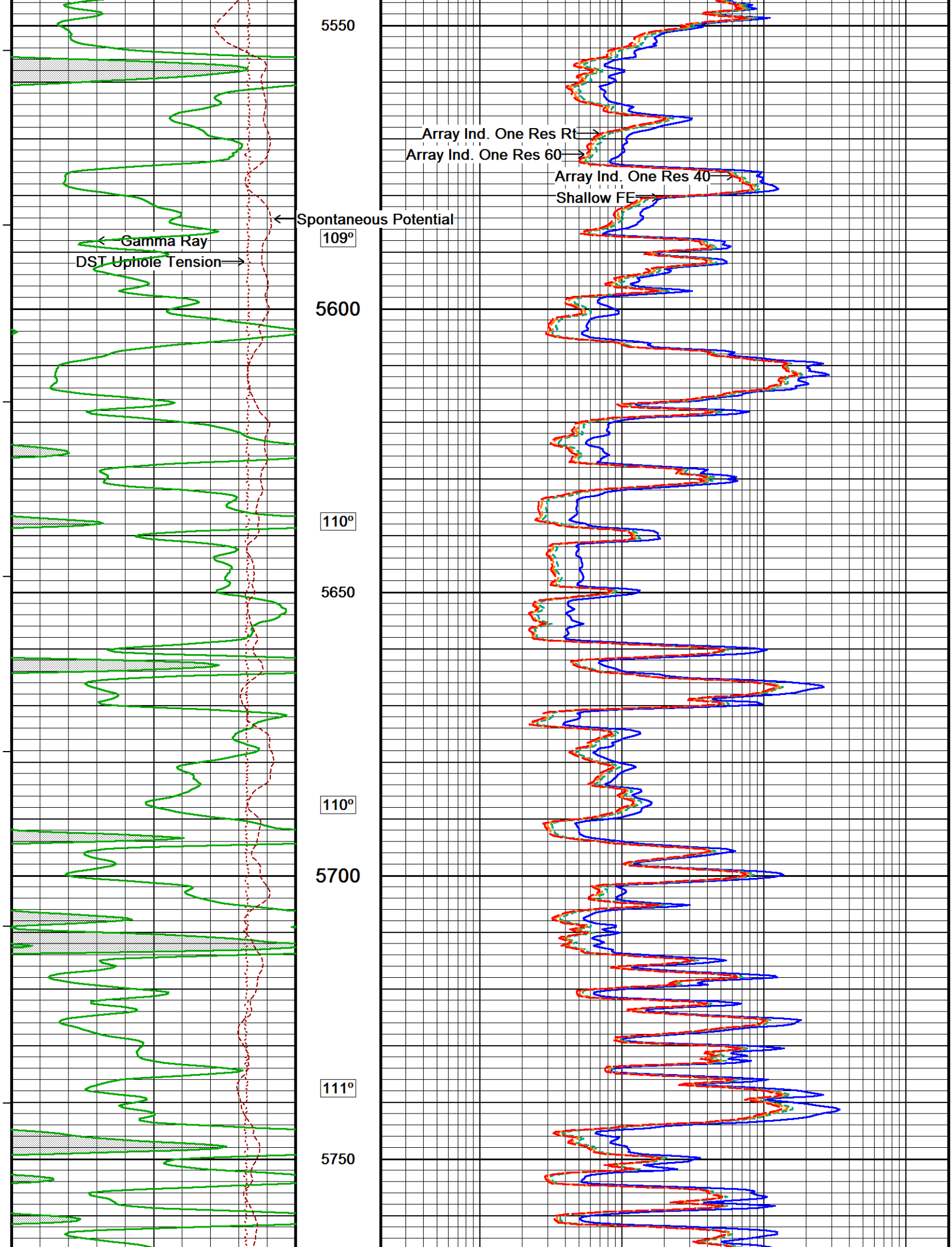

4450
101°
4500
101°
4550
101°
4600
102°
4650

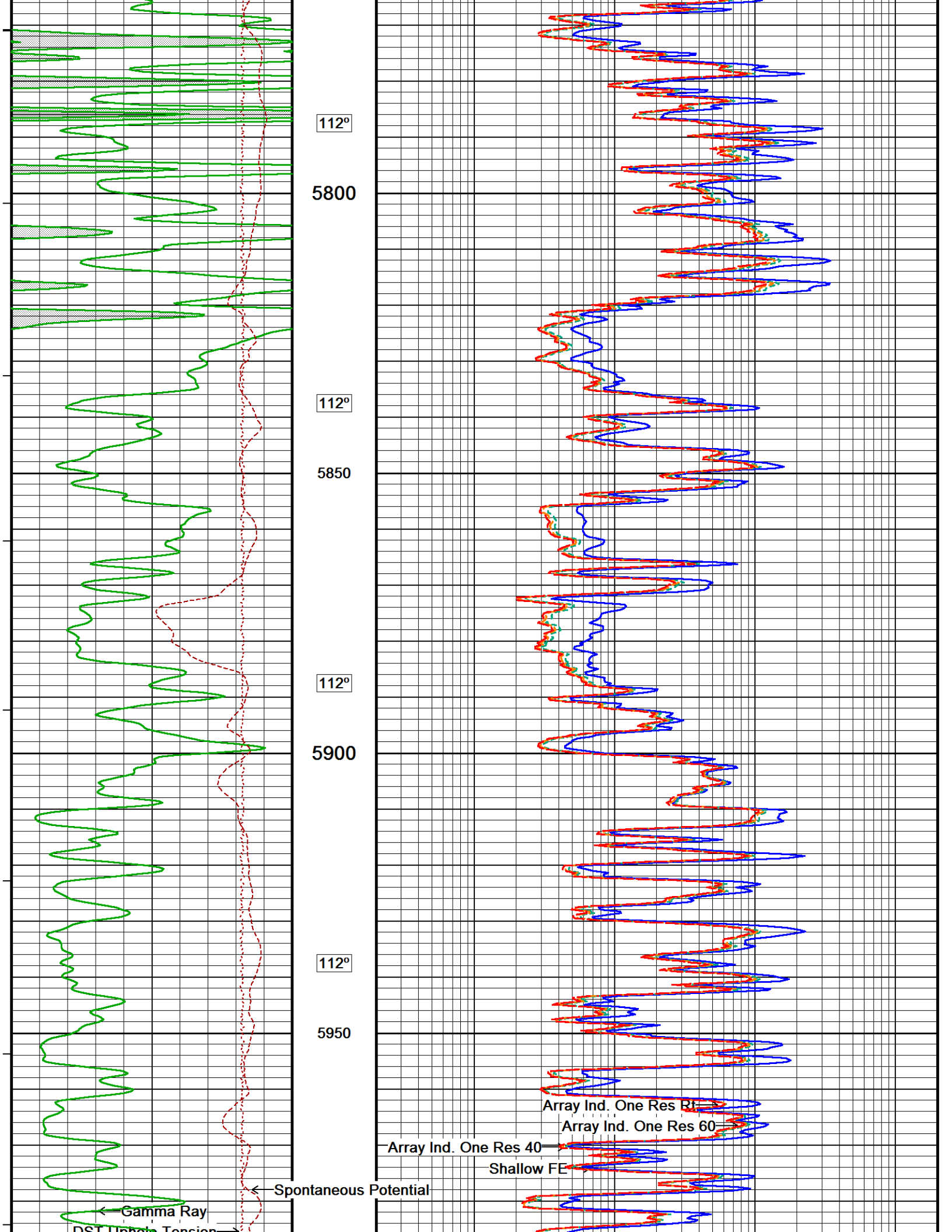

102°
4700
103°
4750
103°
4800
104°
4850
Spontaneous Potential
Gamma Ray
DST Uphole Tension
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FE

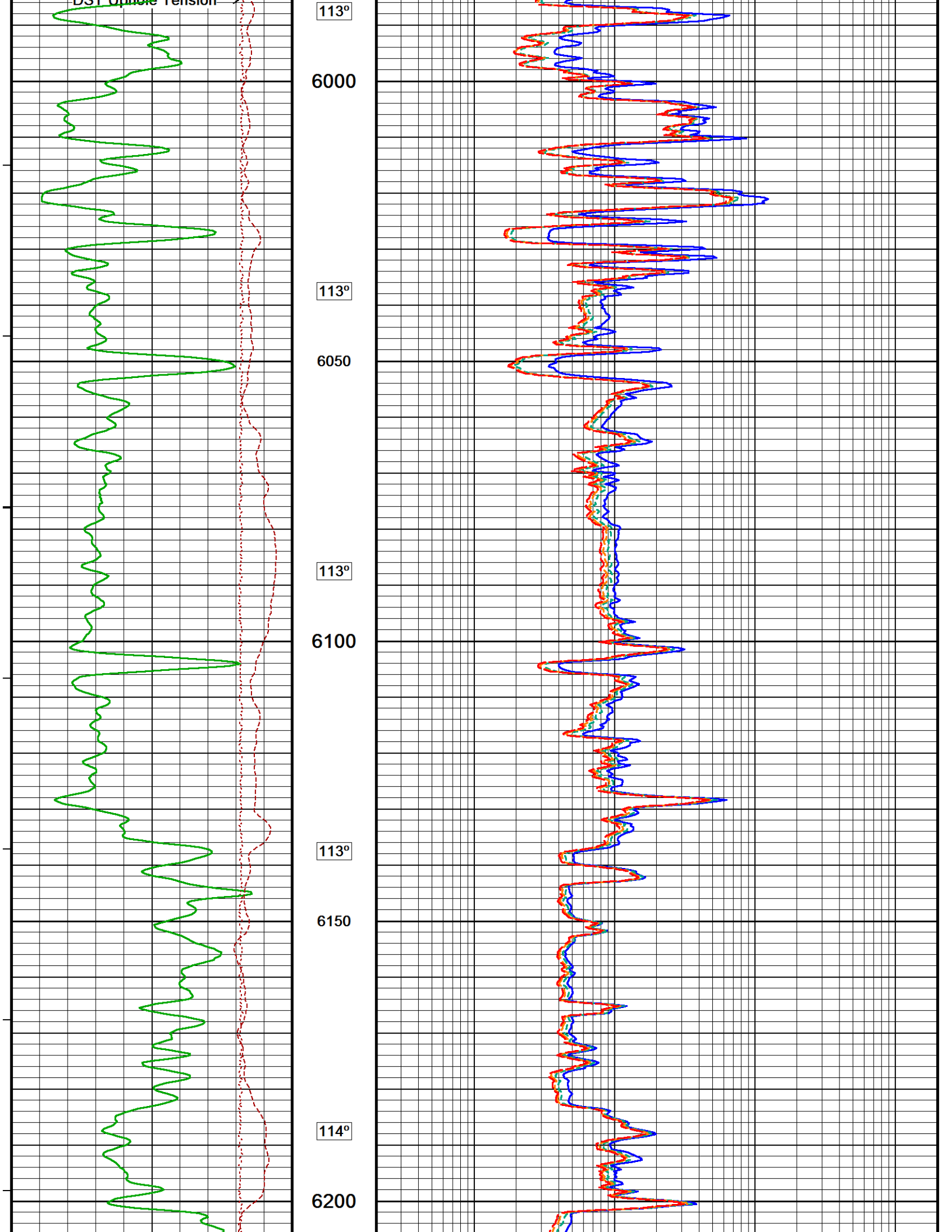

104°
4900
104°
4950
105°
5000
105°
5050
105°
5100

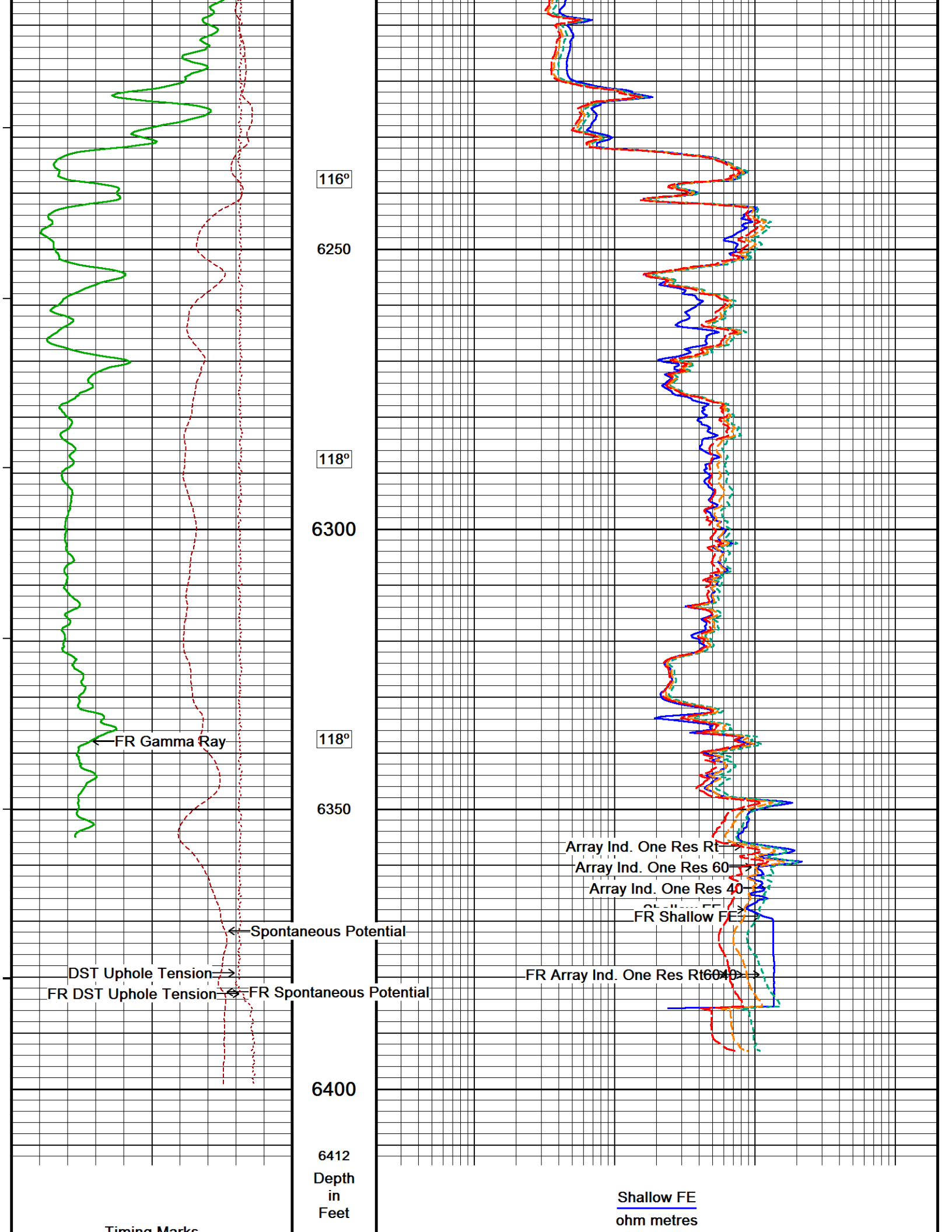

105°
5150
106°
5200
106°
5250
106°
5300
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FE
Spontaneous Potential
Gamma Ray
DST Uphole Tension


107°
5350
107°
5400
108°
5450
108°
5500
108°


5550
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FE
Spontaneous Potential
109°
Gamma Ray
DST Uphole Tension
5600
110°
5650
110°
5700
111°
5750


112°
5800
112°
5850
112°
5900
112°
5950
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FE
Spontaneous Potential
Gamma Ray


DST Uphole Tension
113°
6000
113°
6050
113°
6100
113°
6150
114°
6200


116°
6250
118°
6300
118°
6350
6400
6412
Depth
in
Feet
FR Gamma Ray
Spontaneous Potential
DST Uphole Tension
FR DST Uphole Tension
FR Spontaneous Potential
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
FR Shallow FE
FR Array Ind. One Res Rt
Shallow FE
ohm metres
Timing Marks

Timing Marks
every 60.0 sec

Gamma Ray
API
0 75 150

Spontaneous Potential
millivolts
– → | 20 | ← +

DST Uphole Tension
pounds
5000 0

Borehole Temp in deg F

Replay Scale 1:240

0.20 1 10 100 2000

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

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

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

Depth Based Data - Maximum Sampling Increment 10.0cm
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5 INCH MAIN PASS

5 INCH REPEAT PASS

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 08-MAR-2011 15:39
Filename: C:\Users\Joe\AppData\Local\Temp\Weatherford PreView\0\O'BRIEN HULL #2-11_001.dta
Recorded on 13-FEB-2011 16:44
System Versions: Logged with 11.03.2789 Plotted with 11.02.2164

Timing Marks
every 60.0 sec

Gamma Ray
API
0 75 150

Spontaneous Potential
millivolts
– → | 20 | ← +

DST Uphole Tension
pounds
5000 0

Depth in Feet

Borehole Temp in deg F

Replay Scale 1:240

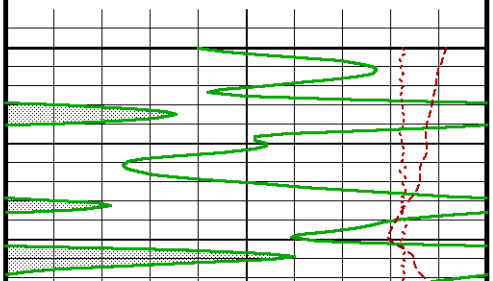
5800

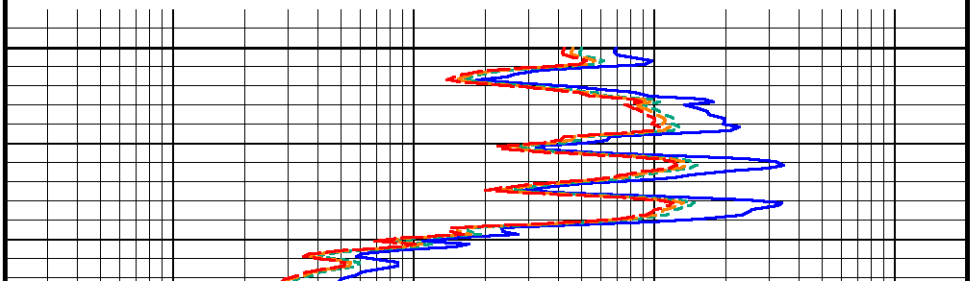
Shallow FE
ohm metres
0.20 1 10 100 2000

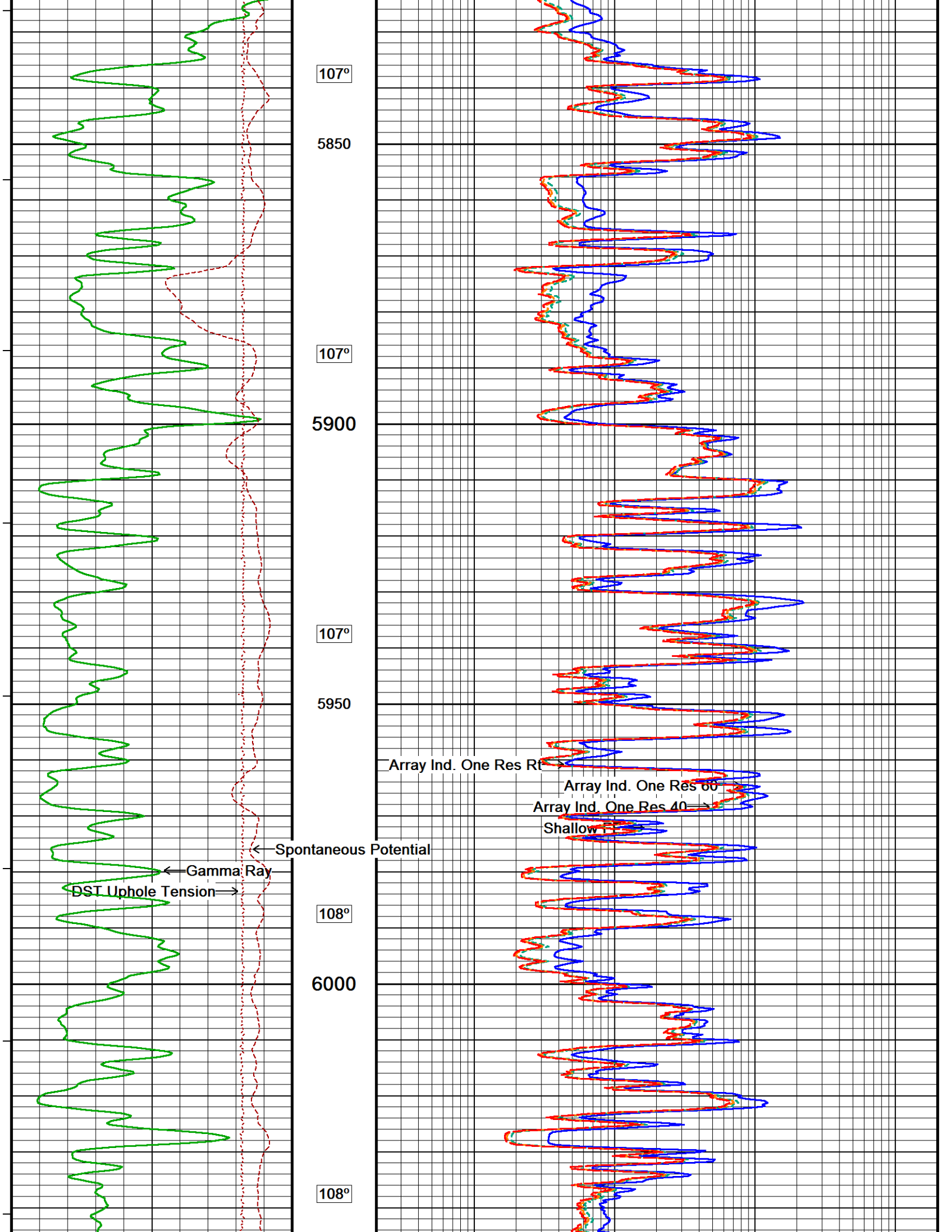
Array Ind. One Res 40
ohm metres
0.20 1 10 100 2000

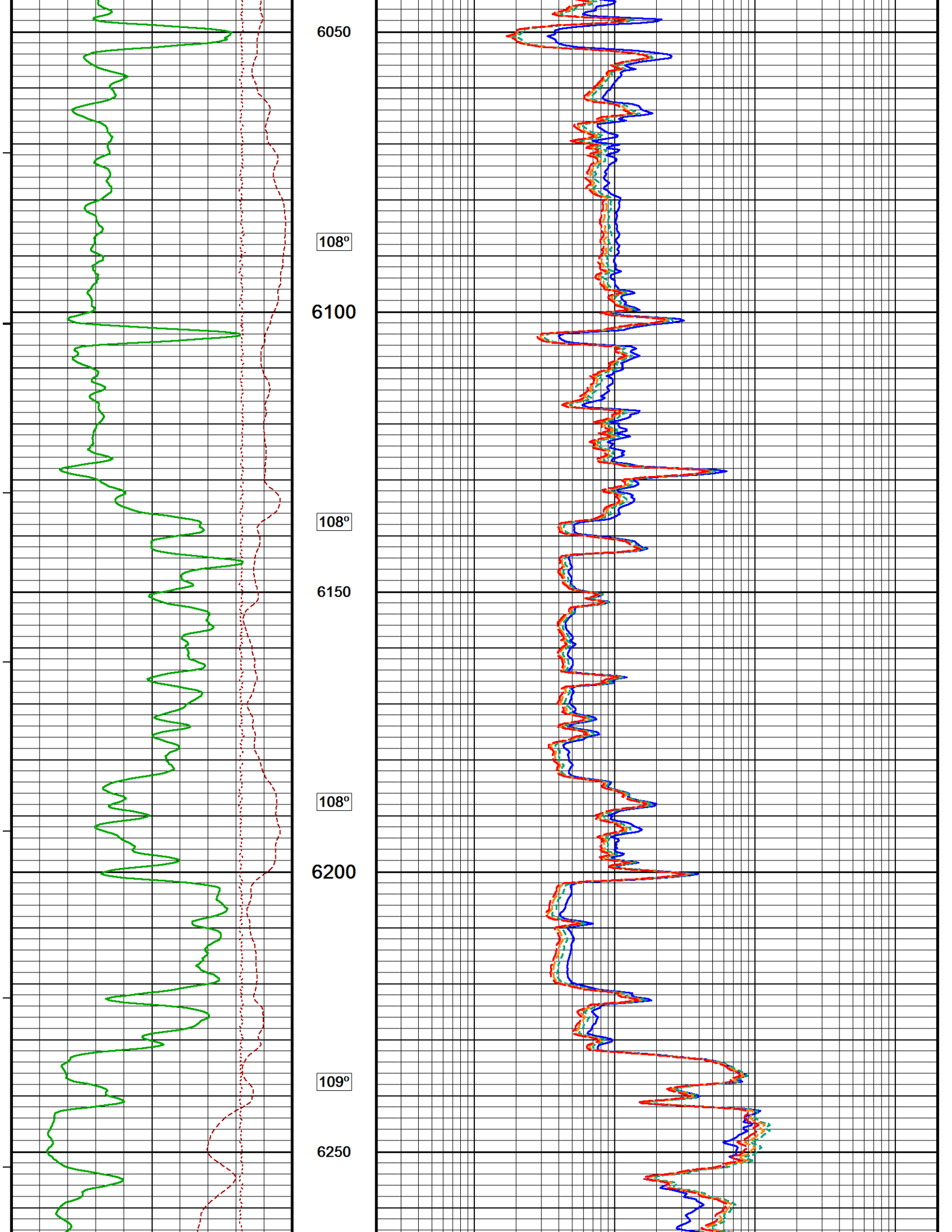
Array Ind. One Res 60
ohm metres
0.20 1 10 100 2000

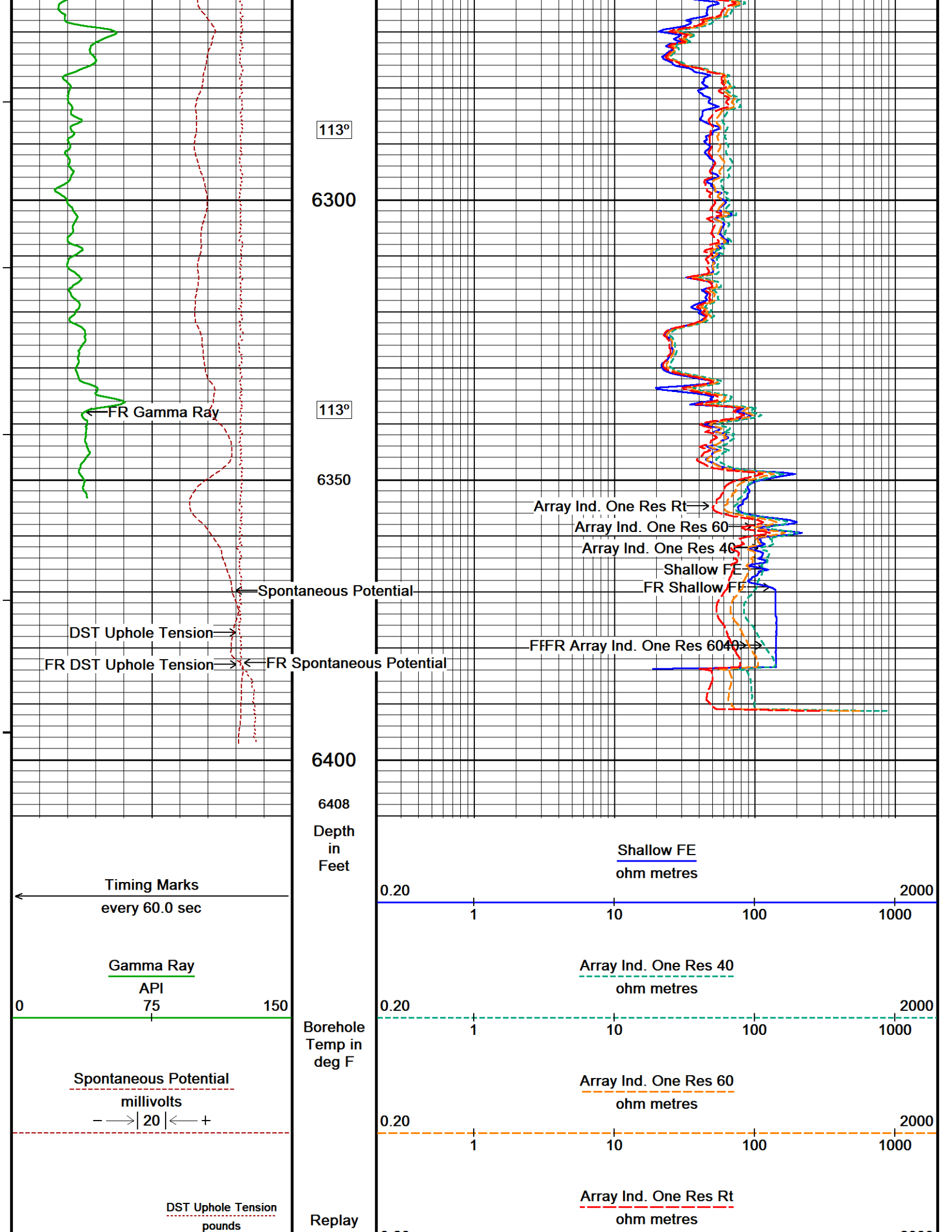
Array Ind. One Res Rt
ohm metres
0.20 1 10 100 2000

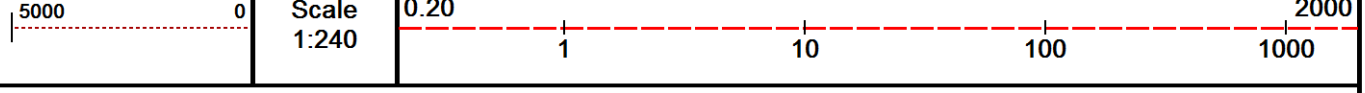





107°
5850
107°
5900
107°
5950
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow
Spontaneous Potential
Gamma Ray
DST Uphole Tension
108°
6000
108°


6050
108°
6100
108°
6150
108°
6200
109°
6250


113°
6300
113°
FR Gamma Ray
6350
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FE
FR Shallow FE
Spontaneous Potential
DST Uphole Tension
FFFR Array Ind. One Res 6040
FR DST Uphole Tension
FR Spontaneous Potential
6400
6408
Depth in Feet
Timing Marks
every 60.0 sec
Gamma Ray
API
0
75
150
Spontaneous Potential
millivolts
20
DST Uphole Tension
pounds
Borehole Temp in deg F
Replay
Shallow FE
ohm metres
0.20
2000
1
10
100
1000
Array Ind. One Res 40
ohm metres
Array Ind. One Res 60
ohm metres
Array Ind. One Res Rt
ohm metres



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 08-MAR-2011 15:39
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5 INCH REPEAT PASS

BEFORE SURVEY CALIBRATION

C:\Users\Joe\AppData\Local\Temp\Weatherford PreView\0\O'BRIEN HULL #2-11.dta

General Constants All 000

Last Edited on 13-FEB-2011,14:20

General Parameters		
Mud Resistivity	1.050	ohm-metres
Mud Resistivity Temperature	73.000	degrees F
Water Level	0.000	feet
Density/Neutron 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	4.500	inches
Caliper for Differential Caliper	Density Caliper	
Rwa Parameters		
Porosity used	Limestone Density Por.	
Resistivity used	Array Ind. One Res Rt	
RWA Constant A	1.000	
RWA Constant M	2.000	

High Resolution Temperature Calibration MCG-C 84

Field Calibration on 24-JUN-2010,13:02

	Measured	Calibrated(Deg F)
Lower	50.00	50.00
Upper	75.00	75.00

High Resolution Temperature Constants MCG-C 84

Last Edited on

Pre-filter Length	11

SP Calibration MCG-C 84

Field Calibration on 28-DEC-2010 11:28

	Measured	Calibrated (mV)
Reference 1	100.3	100.0
Reference 2	-99.7	-100.0

Gamma Calibration MCG-C 84

Field Calibration on 13-FEB-2011 11:17

	Measured	Calibrated (API)
Background	66	45
Calibrator (Gross)	1136	770
Calibrator (Net)	1070	725

Gamma Constants MCG-C 84

Last Edited on 13-FEB-2011,14:21

Gamma Calibrator Number	grc38	
Mud Density	1.10	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

Micro Normal and Micro Inverse Calibration MML-A 9

Base Calibration on 17-JAN-2011 13:45
Field Check on 13-FEB-2011 10:58

Base Calibration

	Measured		Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Micro Normal	12.1	59.8	2.6	12.8
Micro Inverse	15.6	78.1	1.7	8.4

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Micro Normal	32.4	32.4
Micro Inverse	16.4	16.4

Micro Normal and Micro Inverse Constants MML-A 9

Last Edited on 13-FEB-2011,10:57

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	N/A	inches

Caliper Calibration MML-A 9

Base Calibration on 17-JAN-2011 13:36
Field Calibration on 13-FEB-2011 11:05

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	14751	5.96
2	18323	7.98
3	21735	9.95
4	25522	11.91
5	0	0.00
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
6.06	5.98

Neutron Calibration MDN-A.B 65

Base Calibration on 17-JAN-2011 15:12
Field Check on 13-FEB-2011 11:12

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3079	97	3714	110
Ratio	31.797		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	1654	2338
Ratio	0.708	

Field Check

	Calibrated (cps)	
	1657	2354
Ratio	0.704	

Neutron Constants MDN-A.B 65

Last Edited on 13-FEB-2011,14:21

Neutron Source Id	757	
Neutron Jig Number	5824NE	
Epithermal Neutron	No	
Caliper Source for Processing	Density Caliper	
Stand-off	0.00	inches
Mud Density	1.10	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	MCG External Temperature	
Temperature	N/A	degrees F
Mud Salinity	0.00	kppm
Formation Fluid Salinity Source	Constant Value	
Formation Fluid Salinity	0.00	kppm
Barite Mud Correction	Not Applied	

FE Calibration MFE-A.A 55

Base Calibration on 17-JAN-2011 13:58
Field Check on 13-FEB-2011 10:56

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	954.8	126.8
Base Check		281.8
Field Check		281.4

FE Constants MFE-A.A 55

Last Edited on 13-FEB-2011,14:21

Running Mode	No Sleeve	
MFE K Factor	0.1268	
Caliper Source for FE correction	Density Caliper	
Caliper Value for FE correction	N/A	inches
Rm Source for FE correction	Temperature Corr	
Temp. for Rm Corr.	MCG External Temperature	
Stand-off	0.5	inches

High Resolution Temperature Calibration MAI-A.A 178

Field Calibration on 28-MAR-2010,00:50

	Measured	Calibrated(Deg F)
Lower	1.00	33.80
Upper	11.00	51.80

High Resolution Temperature Constants MAI-A.A 178

Last Edited on

Pre-filter Length	11

Induction Calibration MAI-A.A 178

Base Calibration on 17-JAN-2011,15:37
Field Check on 13-FEB-2011 10:54

Base Calibration

Test Loop Calibration

Channel	Measured Low	Measured High	Calibrated (mmho/m) Low	Calibrated (mmho/m) High
1	17.6	484.7	9.3	966.2
2	6.2	391.4	7.6	821.4
3	4.0	264.5	5.2	566.0
4	2.3	135.1	2.6	279.2

Array Temperature	77.0	Deg F

Channel	Base Check (mmho/m) Low	Base Check (mmho/m) High	Field Check (mmho/m) Low	Field Check (mmho/m) High
1	0.0	0.0	11.9	3762.7
2	0.0	0.0	29.6	3466.5
3	0.0	0.0	27.1	3015.0
4	0.0	0.0	18.7	2063.8
Deep	0.0	0.0	15.7	1995.9
Medium	0.0	0.0	40.2	3957.5
Shallow	0.0	0.0	45.5	5080.8
Array Temperature	0.0		67.5	Deg F

Induction Constants MAI-A.A 178

Last Edited on 13-FEB-2011,14:22

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	8.0000	
Stand-off Fin Angle	45.00	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-B 65

Base Calibration on 17-JAN-2011 14:40
Field Calibration on 13-FEB-2011 10:57

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	12872	4.01
2	21339	5.96
3	30048	7.98
4	38622	9.95
5	47408	11.91
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
5.96	5.98

Photo Density Calibration MPD-B 65

Base Calibration on 17-JAN-2011 14:55
Field Check on 13-FEB-2011 11:04

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	50201	24995	59556	30836
Reference 2	20201	1952	24941	2541

Field Check at Base

645.0	771.4

Field Check

643.2	771.8

PE Calibration

Base Calibration	Measured			Calibrated
	WS	WH	Ratio	Ratio
Background	117	570		
Reference 1	19746	50081	0.396	0.371
Reference 2	5656	20120	0.283	0.272

Field Check at Base

117.0	570.5

Field Check

117.2	568.8

Density Constants MPD-B 65

Last Edited on 13-FEB-2011,14:21

Density Source Id	254	
Nylon Calibrator Number	dnce695	
Aluminium Calibrator Number	dacd698	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.10	gm/cc
Mud Density Z/A Multiplier	1.11	
Mud Filtrate Density	1.00	gm/cc
Dry Hole Mud Filtrate Density	1.00	gm/cc
DNCT	0.00	gm/cc
CRCT	0.00	gm/cc
Density Z/A Correction	Hybrid	

Matrix Density (gm/cc)	Depth (ft)
2.71	

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

DOWNHOLE EQUIPMENT

C:\Users\Joe\AppData\Local\Temp\Weatherford PreView\0\O'BRIEN HULL #2-11.dta

Compact Comms Gamma
MCG-C 84 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Micro-log
MML-A 9 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

Compact Neutron
MDN-A.B 65 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper
MPD-B 65 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

SKJ-D.A Compact Knuckle Joint
SKJ-D.A 37 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

Compact Focussed Electric
MFE-A.A 55 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Induction
MAI-A.A 178 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 50.32 ft Weight: 407.9 lb

45.04 ft	GRGC - Gamma Ray
42.13 ft	CGXT - MCG External Temperature
35.41 ft	MINV - Micro-inverse
35.41 ft	MNRL - Micro-normal
36.40 ft	MLTC - MML Caliper
30.61 ft	NPRL - Limestone Neutron Por.
23.37 ft	CLDC - Density Caliper
21.44 ft	DPRL - Limestone Density Por.
21.44 ft	DEN - Compensated Density
21.44 ft	DCOR - Density Correction
21.38 ft	PDPE - PE
13.72 ft	FEFE - Shallow FE
3.34 ft	R40O - Array Ind. One Res 40
3.34 ft	RTAO - Array Ind. One Res Rt
3.34 ft	R60O - Array Ind. One Res 60
0.23 ft	SPCG - Spontaneous Potential
Tool Zero	(0.13ft from bottom)
-0.13 ft	SMTU - DST Uphole Tension

All measurements relative to tool zero.

COMPANY	O'BRIEN ENERGY RESOURCES CORP.
WELL	HULL #2-11
FIELD	ADAMS RANCH
PROVINCE/COUNTY	MEADE
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	2680.00	feet	First Reading	6380.00	feet
Elevation Drill Floor	2678.00	feet	Depth Driller	6387.00	feet
Elevation Ground Level	2668.00	feet	Depth Logger	6383.00	feet

ARRAY INDUCTION

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SHALLOW FOCUSED ELECTRIC LOG

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SHALLOW FOCUSED
ELECTRIC LOG

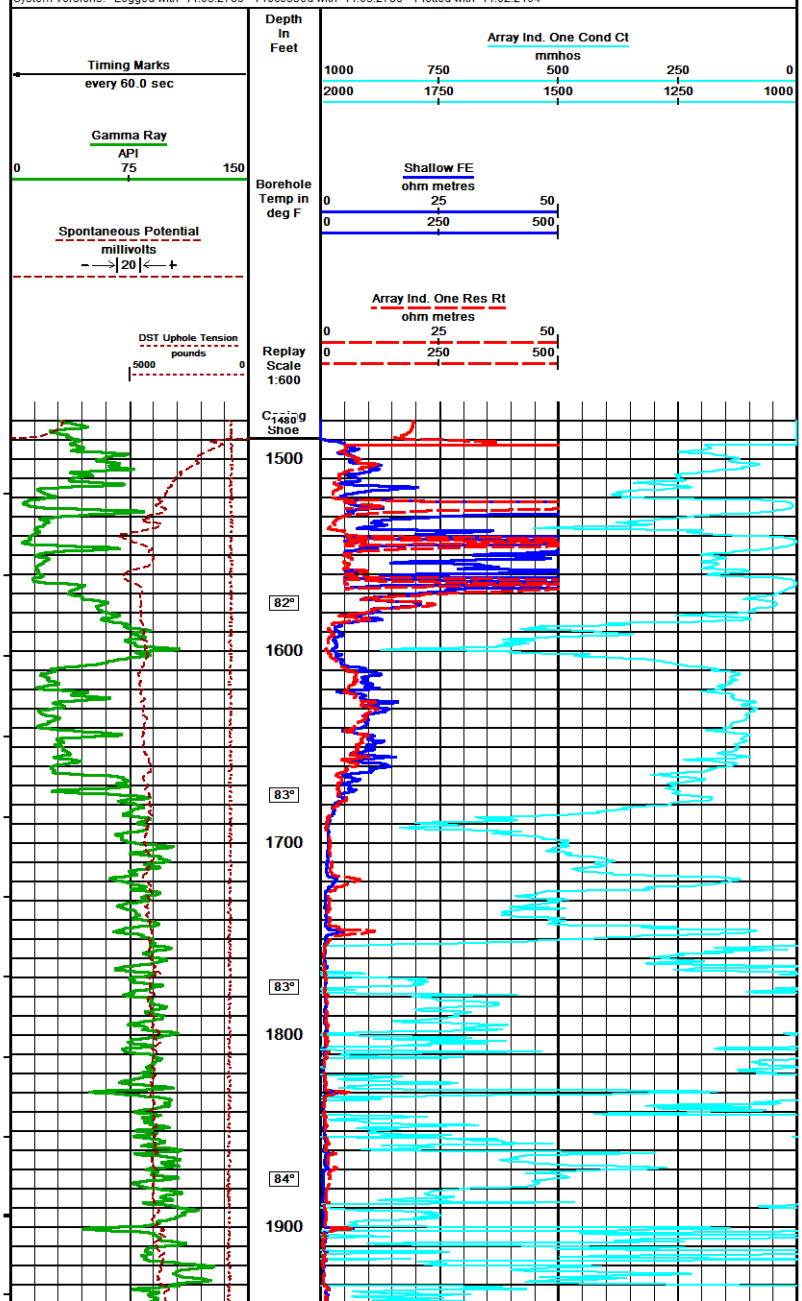
COMPANY	O'BRIEN ENERGY RESOURCES CORP.
WELL	HULL #2-11
FIELD	ADAMS RANCH
PROVINCE/COUNTY	MEADE
COUNTRY/STATE	U.S.A. / KANSAS
LOCATION	660' FNL & 1650' FEL
SEC 11 / TWP 34S / RGE 30W	Other Services: MPD/MDN
API Number	15-119-21280
Permit Number	
Permanent Datum G.L. Elevation 2668 feet	MML
Log Measured From K.B. @ 12 FEET above Permanent Datum	Elevations: KB 2680.00 feet
Drilling Measured From K.B.	DF 2678.00
	GL 2668.00

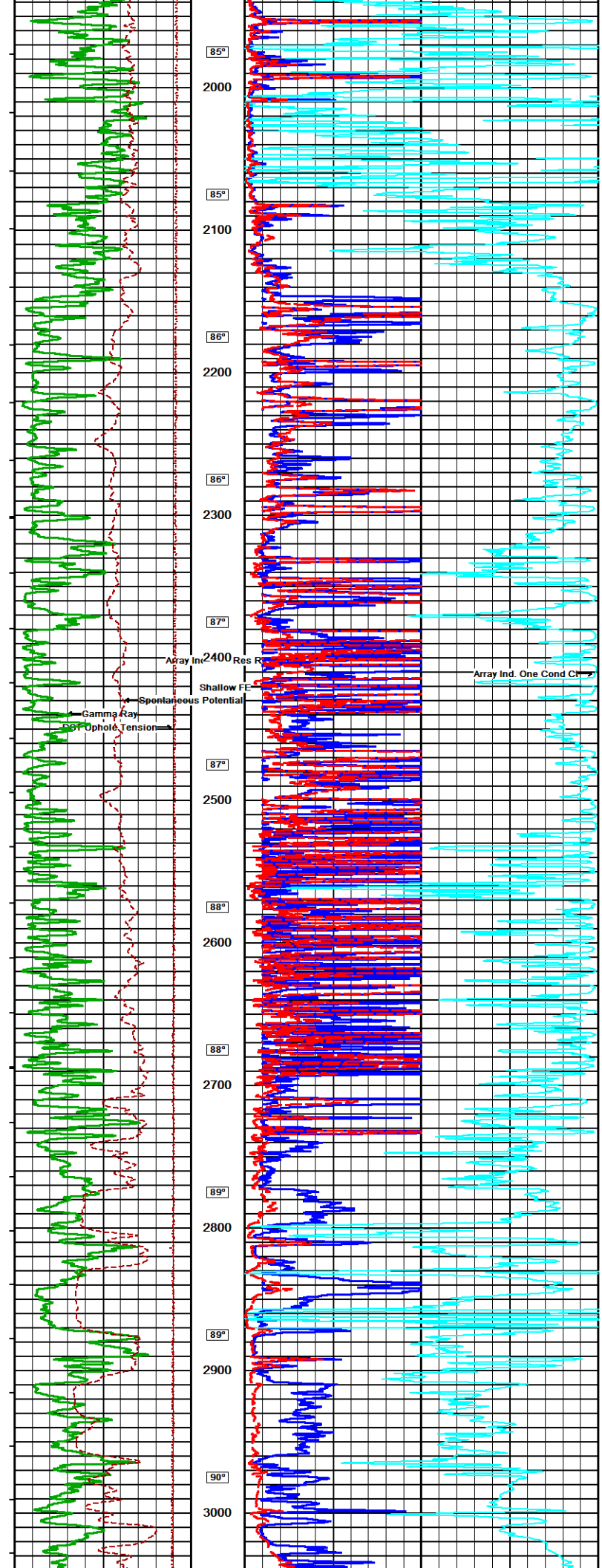
Date		13-FEB-2011	
Run Number		ONE	
Depth Driller		6387.00 feet	
Depth Logger		6383.00 feet	
First Reading		6380.00 feet	
Last Reading		1489.00 feet	
Casing Driller		1489.00 feet	
Casing Logger		1489.00 feet	
Bit Size		7.875 inches	
Hole Fluid Type		CHEMICAL	
Density / Viscosity		9.20 lbUSg 62.00 CP	
PH / Fluid Loss		10.50 5.80 ml/30Min	
Sample Source		FLOWLINE	
Rm @ Measured Temp		1.05 @ 73.0 ohm-m	
Rmf @ Measured Temp		0.84 @ 73.0 ohm-m	
Rmc @ Measured Temp		1.26 @ 73.0 ohm-m	
Source Rmf / Rmc		CALC CALC	
Rm @ BHT		0.55 @ 118.0 ohm-m	
Time Since Circulation		5 HOURS	
Max Recorded Temp		118.00 deg F	
Equipment Name		COMPACT	
Equipment / Base		LIB	
Recorded By		L. SCOTT	
Witnessed By		ROGER PEARSON	PETER DEBENHAM
S.O.# / JOB#		3529057	LB11-028

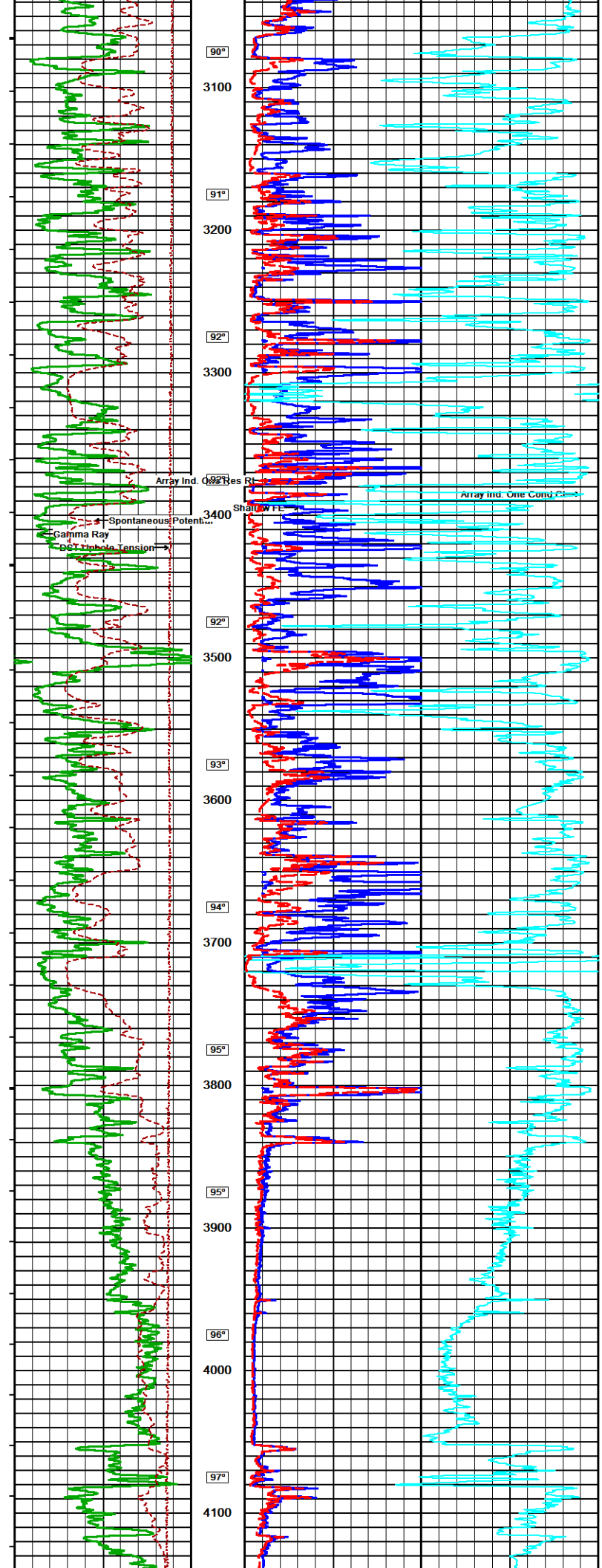
2 INCH MAIN PASS

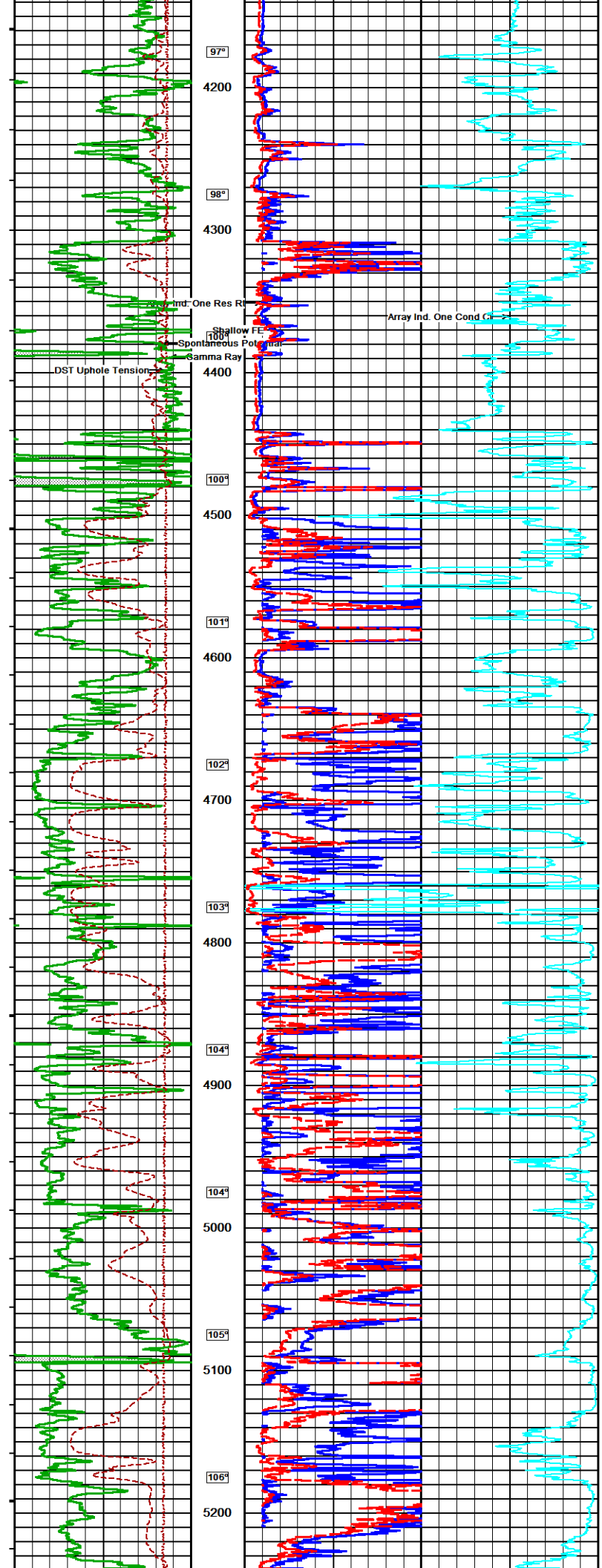
Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\Users\Joe\AppData\Local\Temp\Weatherford PreView\0\O'BRIEN HULL #2-11_006.dta
System Versions: Logged with 11.03.2789 Processed with 11.03.2789 Plotted with 11.02.2164

Plotted on 08-MAR-2011 15:39
Recorded on 13-FEB-2011 18:15




85°
2000
85°
2100
86°
2200
86°
2300
87°
2400
Array Ind
Res R
Shallow FE
Spontaneous Potential
Gamma Ray
DST Uphole Tension
Array Ind. One Cond Cl
87°
2500
88°
2600
88°
2700
89°
2800
89°
2900
90°
3000


90°
3100
91°
3200
92°
3300
Array Ind. One Res Rt
Array Ind. One Cond Ct
Shallow Ft
3400
Spontaneous Potenti...
Gamma Ray
DST Tiphole Tension
92°
3500
93°
3600
94°
3700
95°
3800
95°
3900
96°
4000
97°
4100


97°
4200
98°
4300
Array Ind. One Res Rt
Array Ind. One Cond Cv
Shallow FE
100°
Spontaneous Potential
Gamma Ray
DST Uphole Tension
4400
100°
4500
101°
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102°
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105°
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106°
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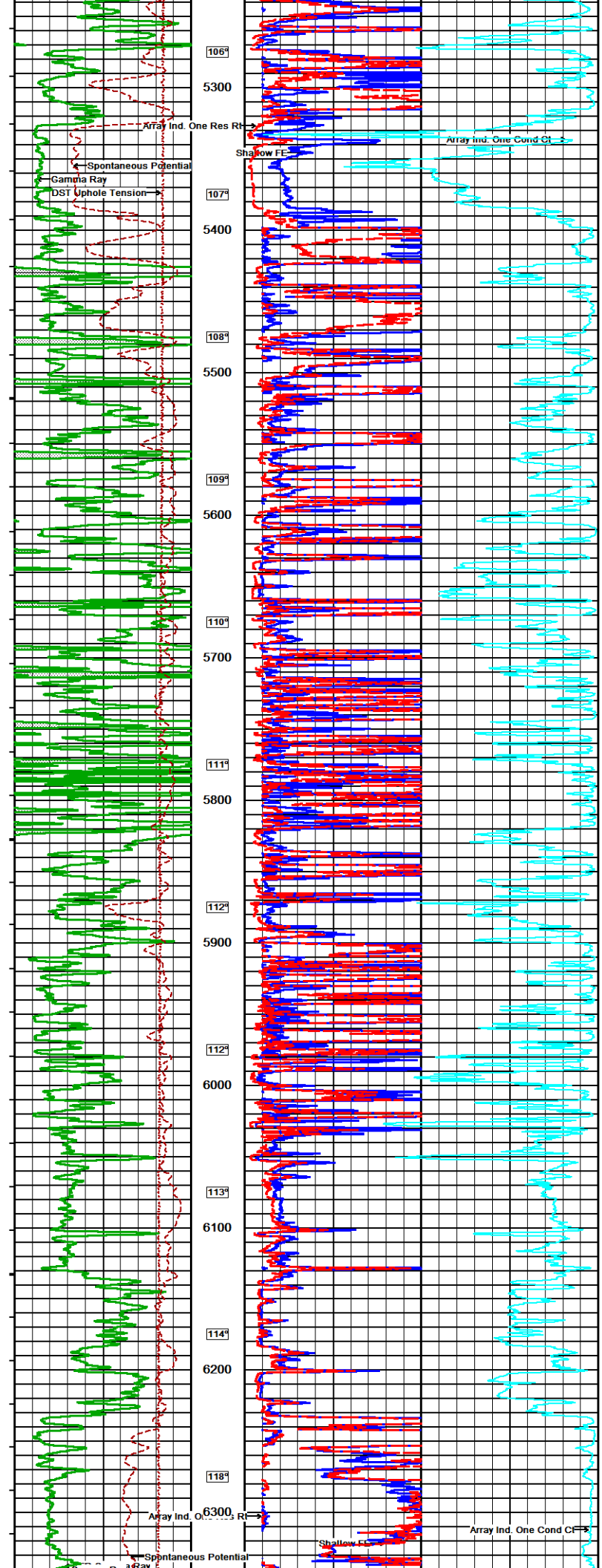
106
5300
Array Ind. One Res Rt
Shallow FE
Array Ind. One Cond Ct
Spontaneous Potential
Gamma Ray
DST Uphole Tension
107
5400
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5600
110
5700
111
5800
112
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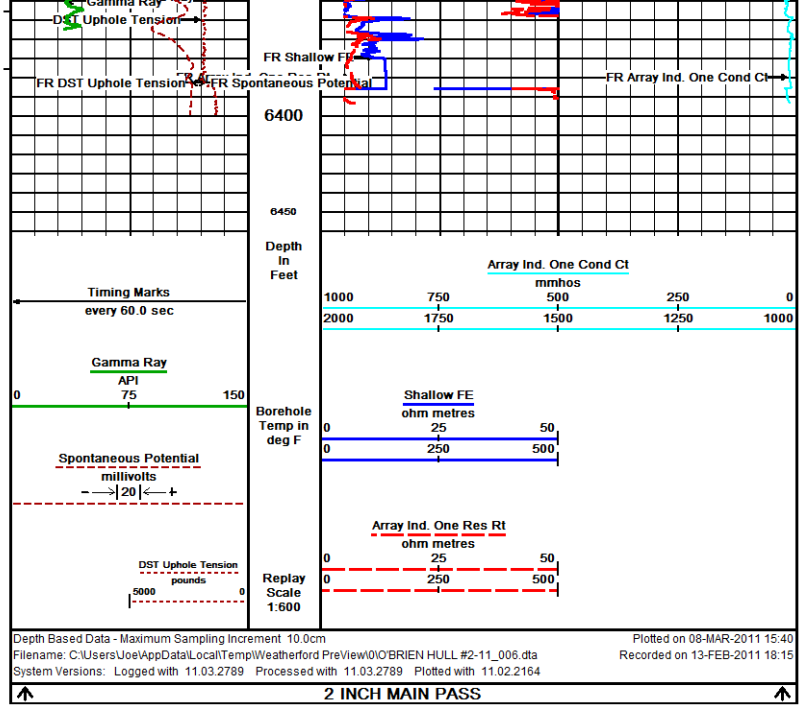
112
6000
113
6100
114
6200
118
6300
Array Ind. One Cond Ct
Shallow FE
Spontaneous Potential



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 08-MAR-2011 15:40
Filename: C:\Users\Joe\AppData\Local\Temp\Weatherford PreView\0\O'BRIEN HULL #2-11_006.dta — Recorded on 13-FEB-2011 18:15
System Versions: Logged with 11.03.2789 Processed with 11.03.2789 Plotted with 11.02.2164

2 INCH MAIN PASS

COMPANY	O'BRIEN ENERGY RESOURCES CORP.
WELL	HULL #2-11
FIELD	ADAMS RANCH
PROVINCE/COUNTY	MEADE
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	2680.00	feet	First Reading	6380.00	feet
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ELECTRIC LOG

40 Years of Wireline