



Weatherford

ARRAY INDUCTION

LOG

COMPANY	COLEMAN OIL AND GAS		
WELL	LA PLATA 34-7-33 #1		
FIELD	IGNACIO BLANCO		
PROVINCE/COUNTY	LA PLATA		
COUNTRY/STATE	USA / COLORADO		
LOCATION	SHL: 218' FSL & 750' FEL		
SEC 33	TWP 34N	RGE 7W	Other Services
Latitude	37.14081	DUAL SPACED NEUTRON	
Longitude	-107.60764	PHOTO DENSITY	
API Number	05067099160000		
Permanent Datum GL, Elevation	6726 feet		
Log Measured From	KB	Elevations:	feet
Drilling Measured From	KB @16 FT	KB	6742.00
		DF	6742.00
		GL	6726.00
Date	21-MAY-2015		
Run Number	2		
Service Order	8367-119352096		
Depth Driller	3334.00	feet	
Depth Logger	3317.00	feet	
First Reading	3314.00	feet	
Last Reading	508.00	feet	
Casing Driller	525.00	feet	
Casing Logger	523.00	feet	
Bit Size	8.750	inches	
Hole Fluid Type	WBM		
Density / Viscosity	9.90 lb/USg	70.00 SEC/QT	
PH / Fluid Loss	8.00	8.00 ml/30Min	
Sample Source	FLOW LINE		
Rm @ Measured Temp	4.06 @ 77.0	ohm-m	
Rmf @ Measured Temp	3.25 @ 77.0	ohm-m	
Rmc @ Measured Temp	4.87 @ 77.0	ohm-m	
Source Rmf / Rmc	CALC	CALC	
Rm @ BHT	2.68 @118.0	ohm-m	
Time Since Circulation	1 HOUR		
Max Recorded Temp	118.00	deg F	
Equipment / Base	13173	CASPER	
Recorded By	A. A. EASTAUGHFFE	D. E. BEANS	
Witnessed By	J. NICOLETTE		

BOREHOLE RECORD

Last Edited: 20-MAY-2015 21:30

Bit Size inches	Depth From feet	Depth To feet
8.750	535.00	3334.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	9.625	0.00	525.00	36.00

REMARKS

SOFTWARE: 15.01.3109

DEPTH CONTROL: CALIBRATED MEASURE WHEEL METHOD.

RUN 1 IS THE PRIMARY DEPTH REFERENCE. LOG CORRELATED TO RUN 1 (PRECOLLAR) ON 5/18/2015

TOOLS: MAI, MFE, MVC, MPD, MDN, MMR, MCG, SHA RUN IN COMBINATION.

HARDWARE: MAI: 2 x 0.5" STANDOFFS
MFE: 1 X 0.5" STANDOFF
MDN: NO HARDWARE, ECCENTRALIZED BY MMR CALIPER ARM.

ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST.

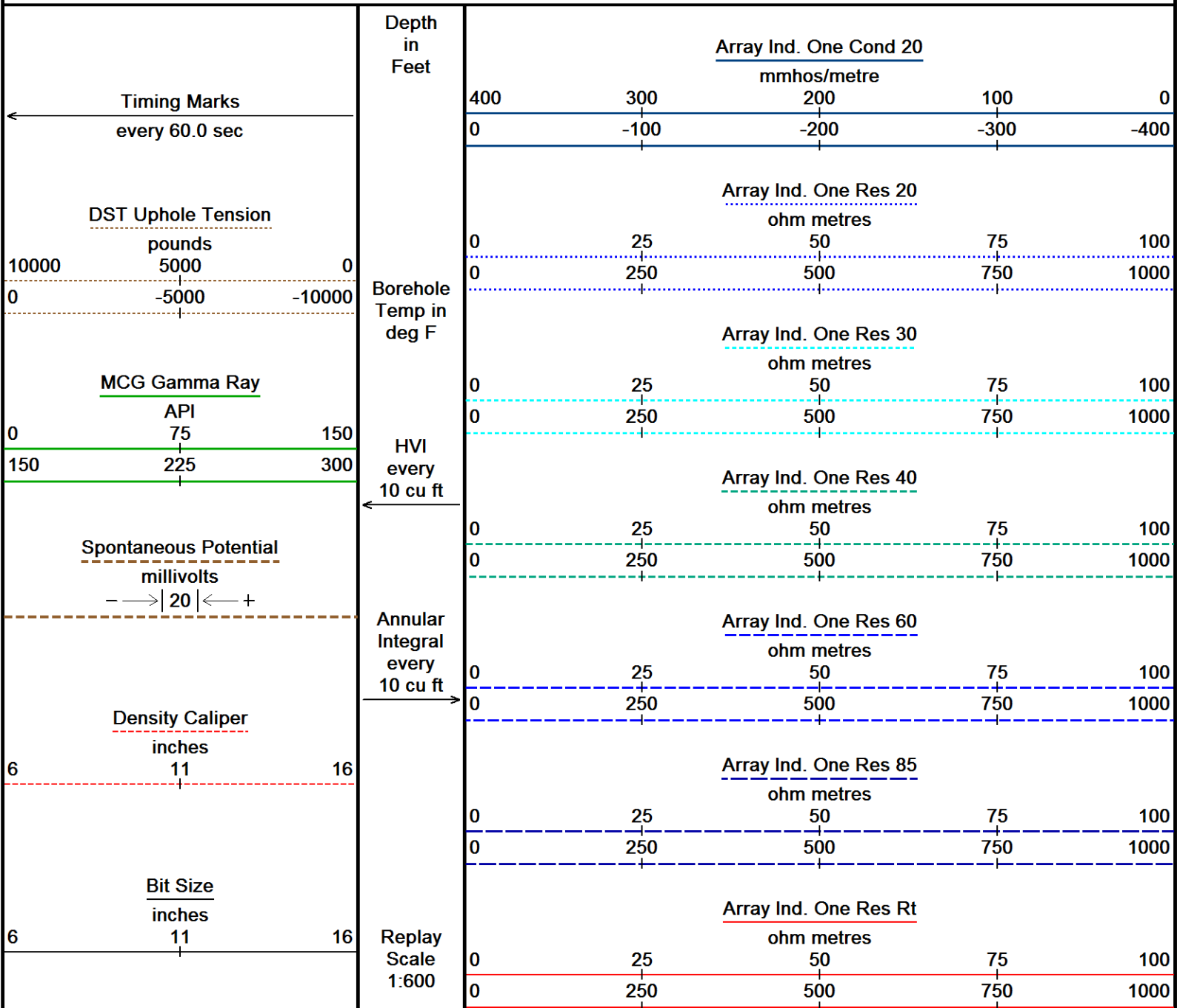
MAXIMUM DEVIATION ADVISED: APPROX 27 DEG.

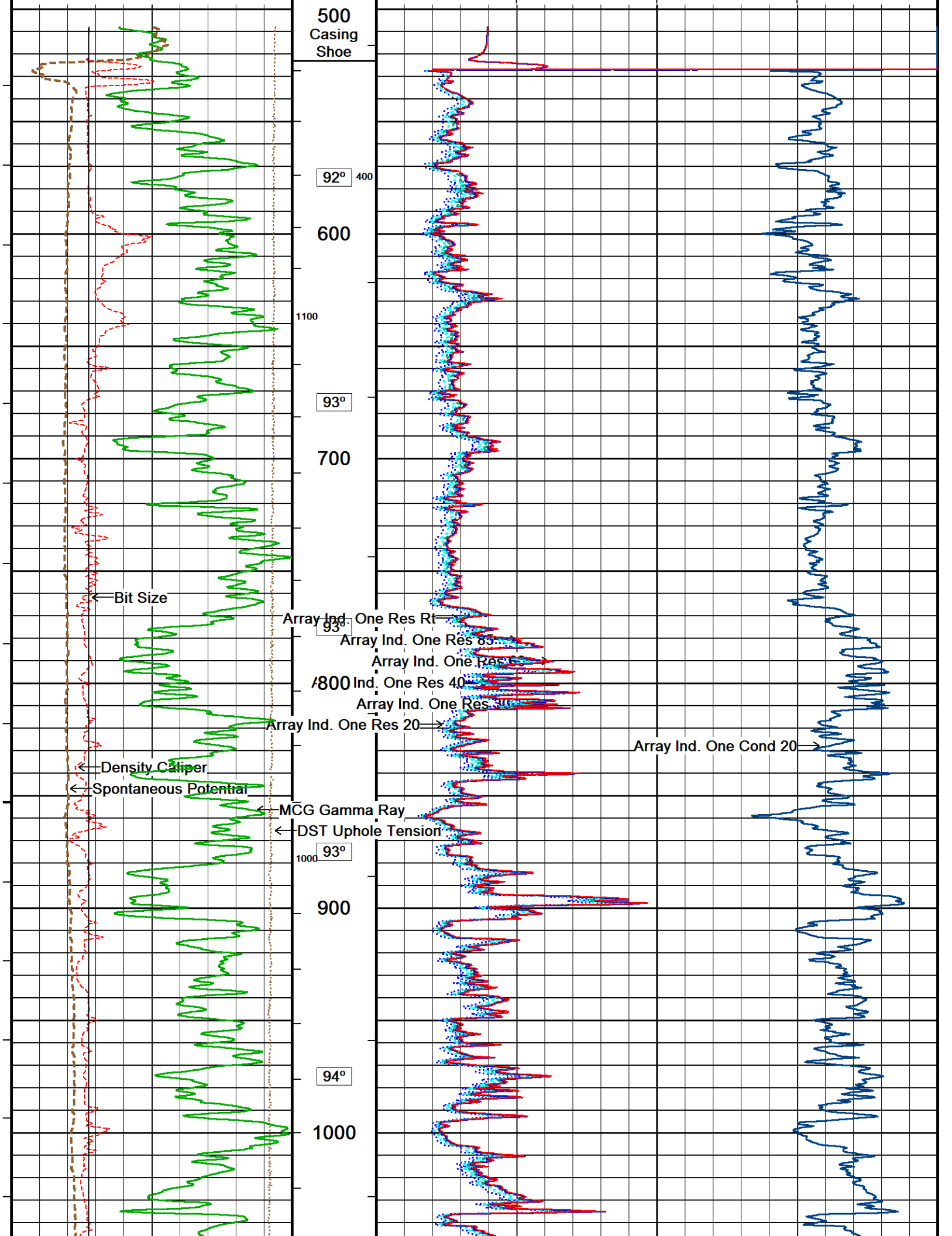
TOTAL HOLE VOLUME FROM T.D. TO CASING SHOE: 1160 CU.FT

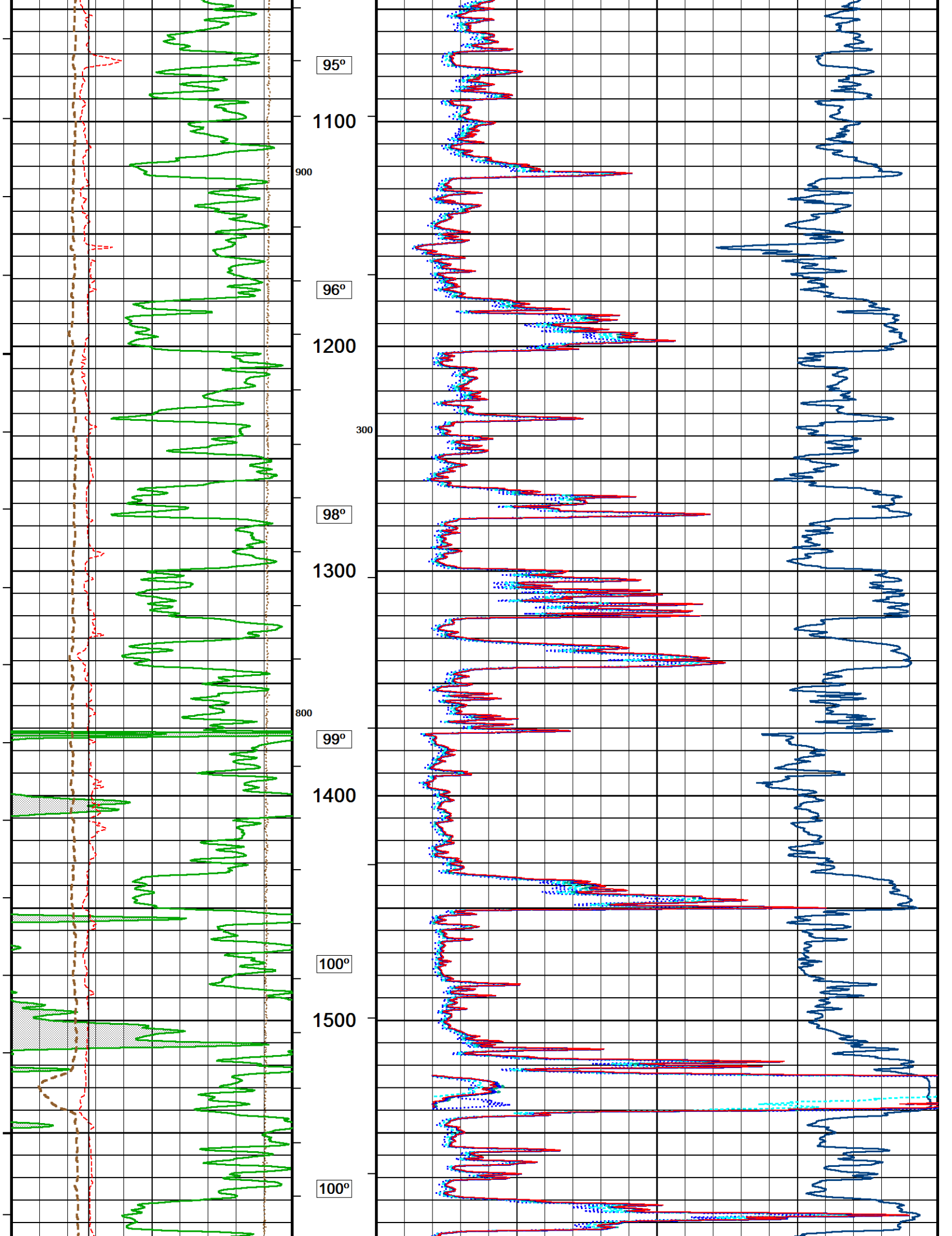
In interpreting, communicating or providing information and/or making recommendations, either written or oral, as to logs or test or other data, type or amount of material, or Work or other service to be furnished, or manner of performance, or in predicting results to be obtained, the Contractor will 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.

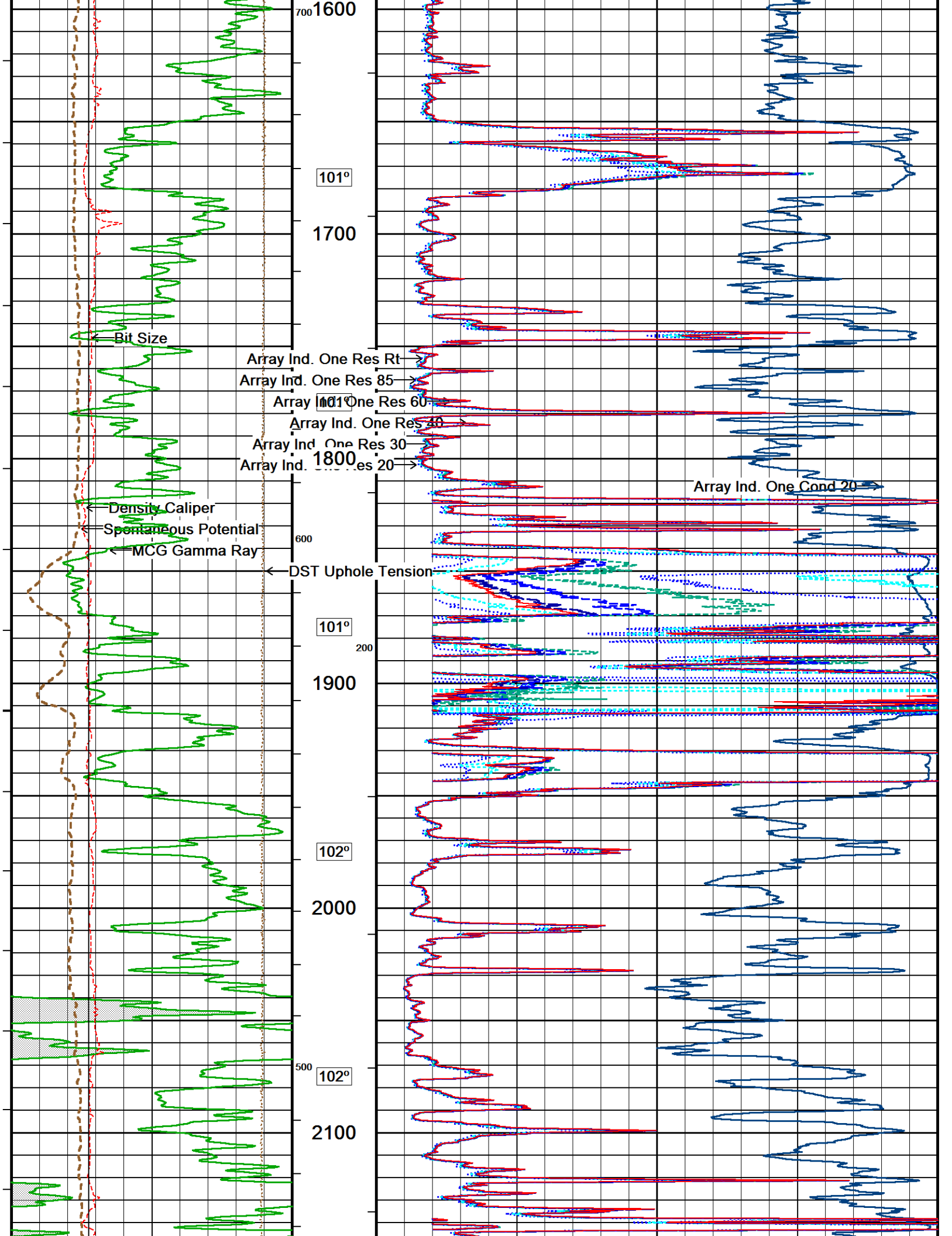
2 INCH MAIN LOG

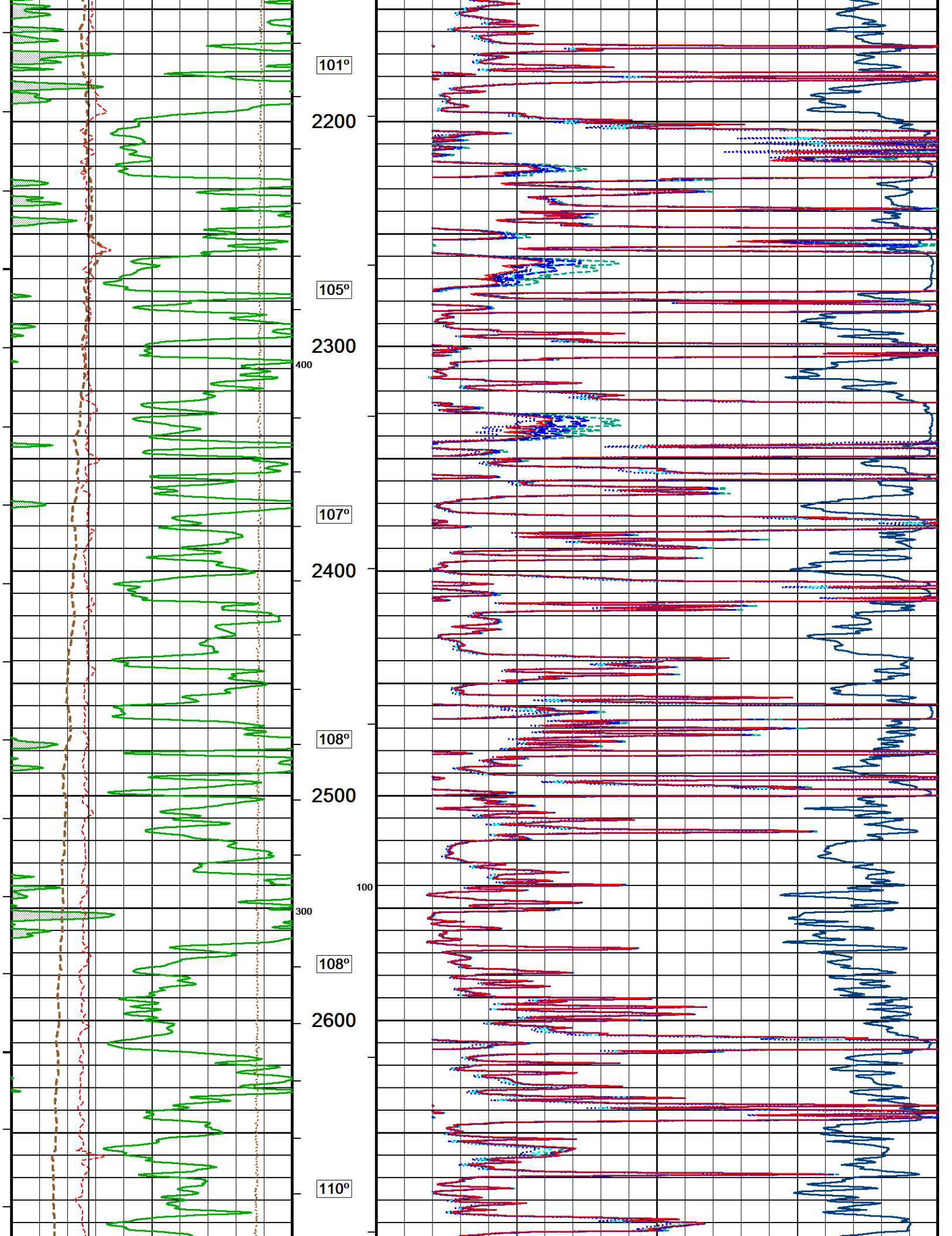
Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 21-MAY-2015 04:20
 Filename: C:\Logs\Coleman Oil and Gas\La Plata 34-7-33 #1\run...La Plata 34-7-33 #1_MAINPASS.dta Recorded on 21-MAY-2015 01:34
 System Versions: Logged with 15.01.3109 Processed with 15.01.3109 Plotted with 15.01.3109

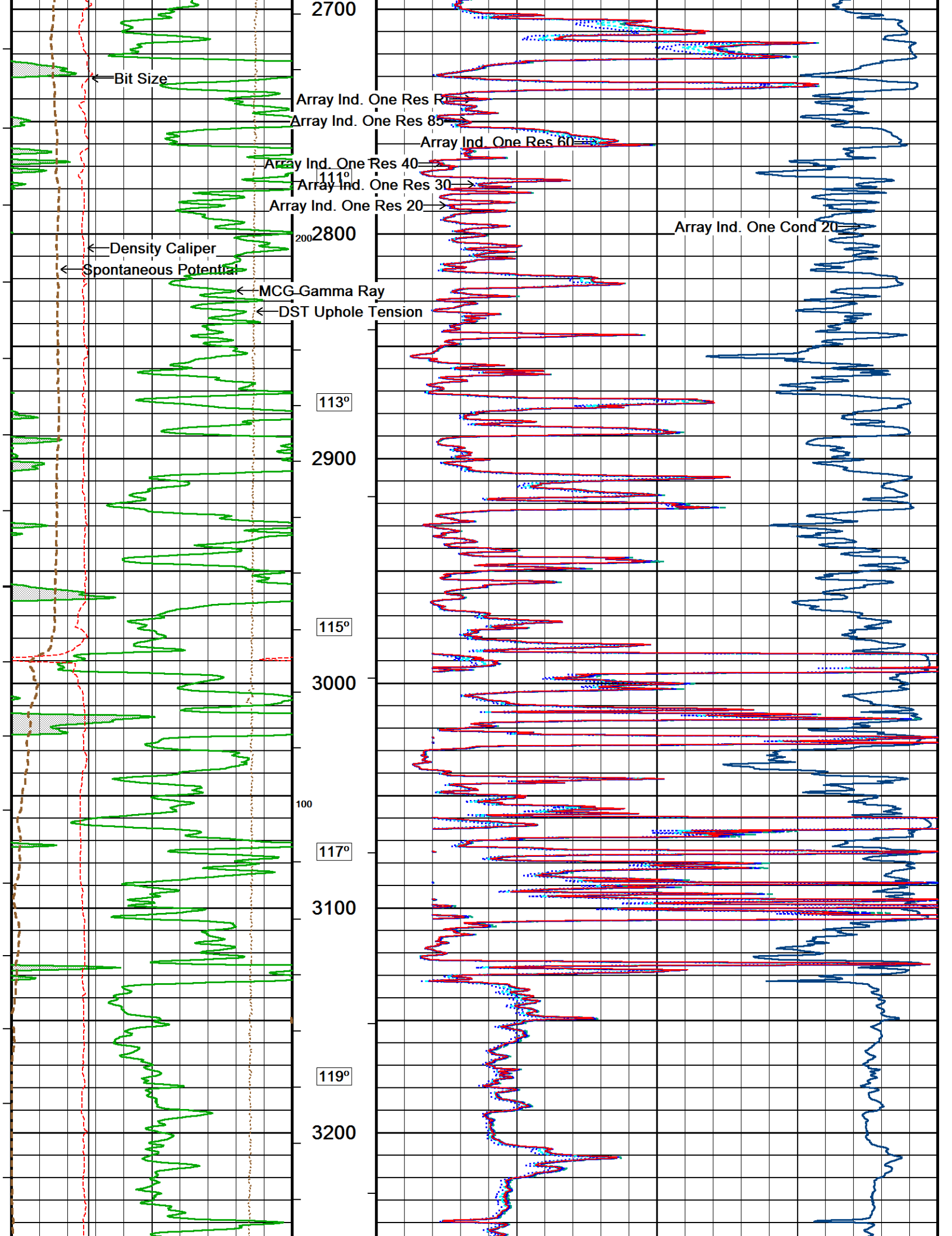


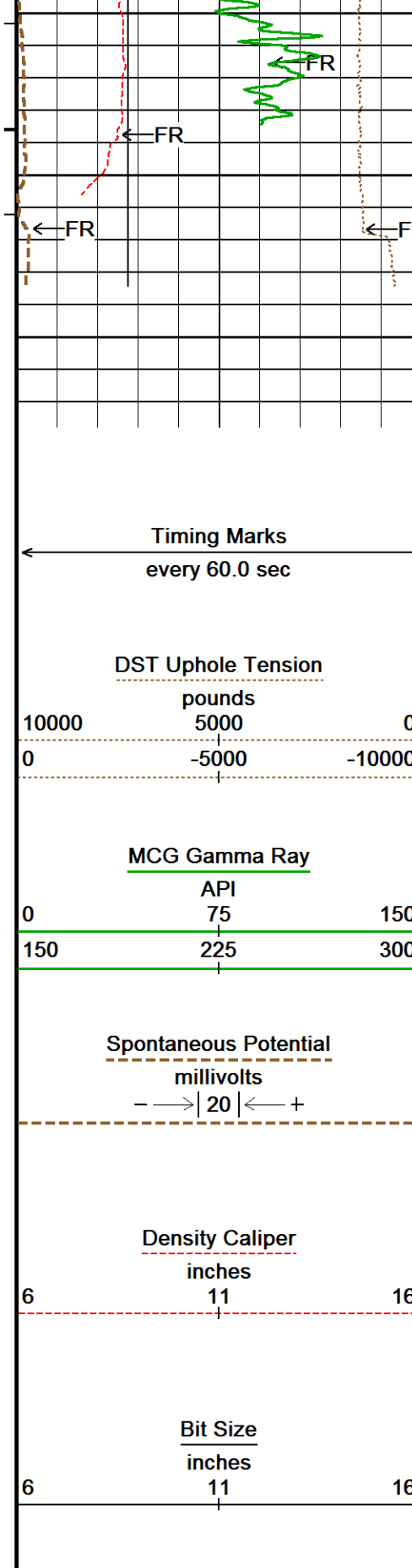




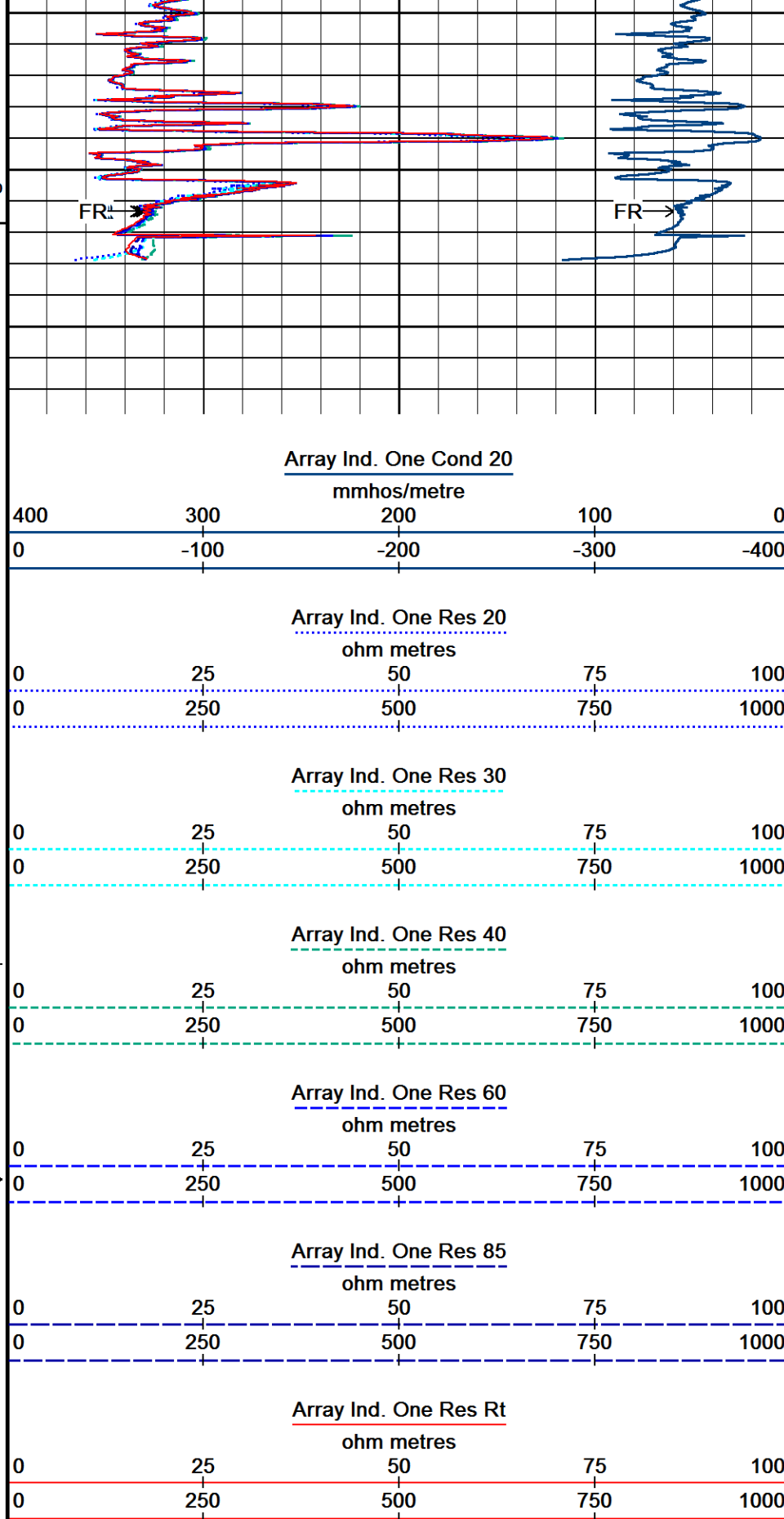








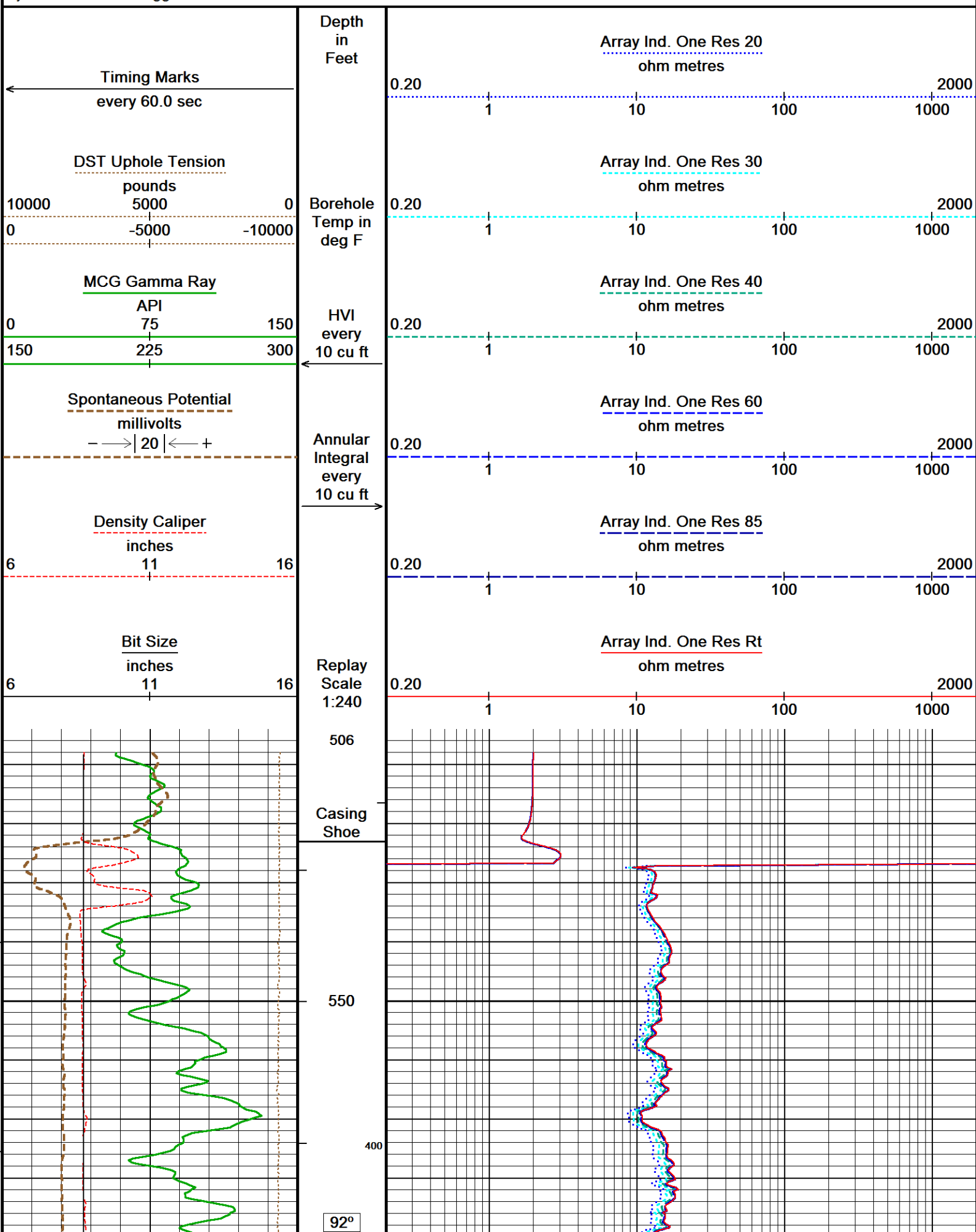
Depth in Feet
 Borehole Temp in deg F
 HVI every 10 cu ft
 Annular Integral every 10 cu ft
 Replay Scale 1:600

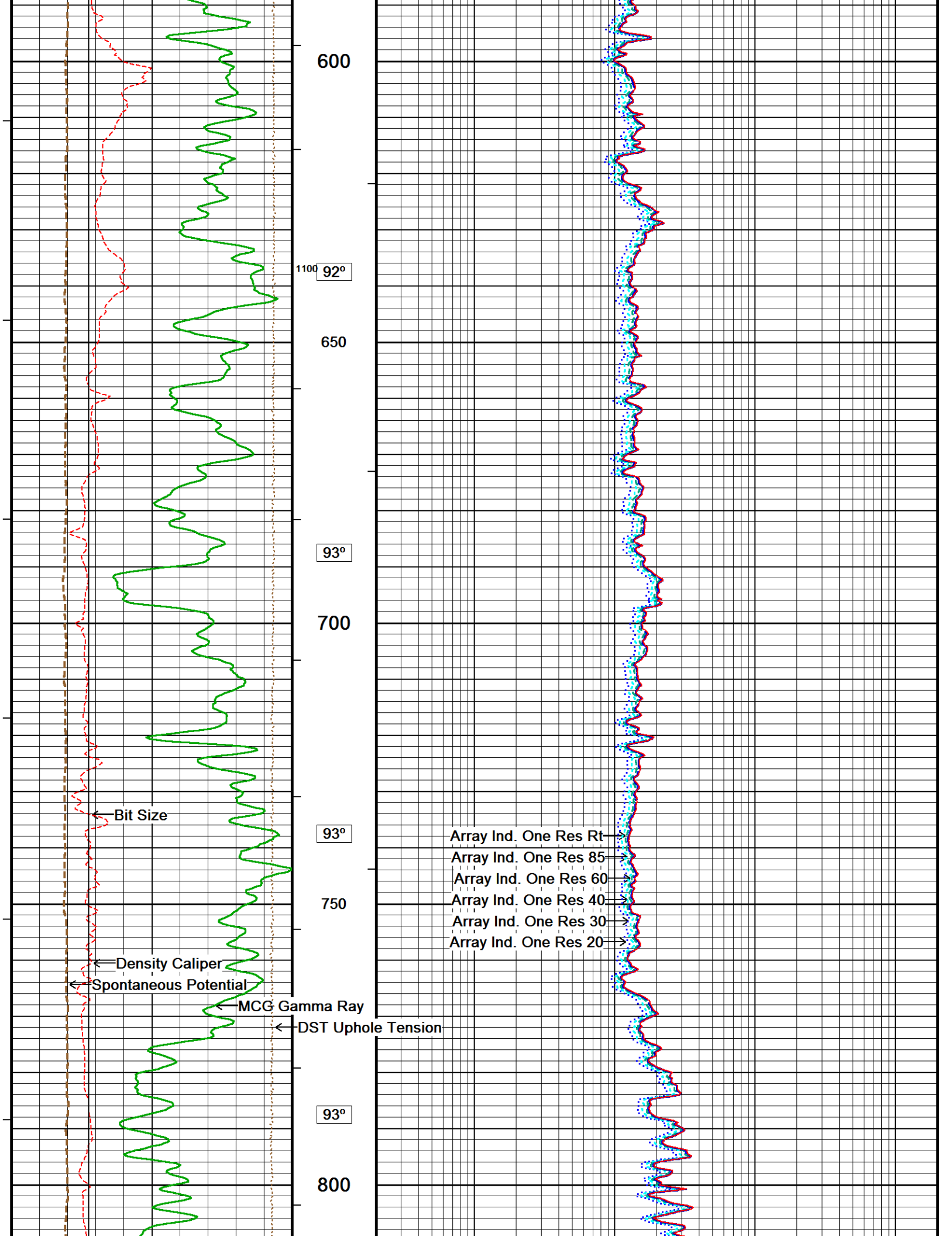


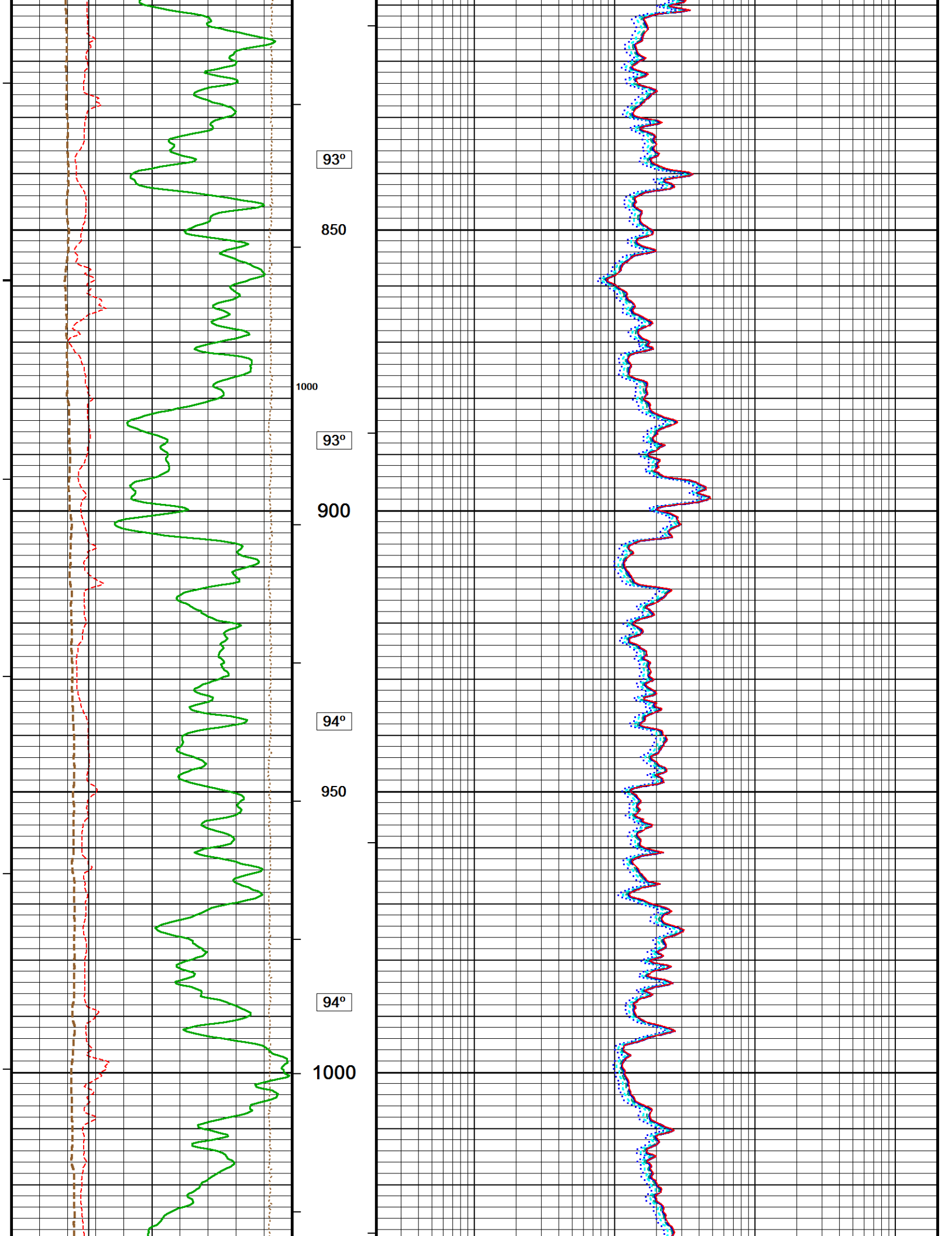
Depth Based Data - Maximum Sampling Increment 10.0cm
 Plotted on 21-MAY-2015 04:20
 Filename: C:\Logs\Coleman Oil and Gas\La Plata 34-7-33 #1\run...La Plata 34-7-33 #1_MAINPASS.dta
 Recorded on 21-MAY-2015 01:34
 System Versions: Logged with 15.01.3109 Processed with 15.01.3109 Plotted with 15.01.3109

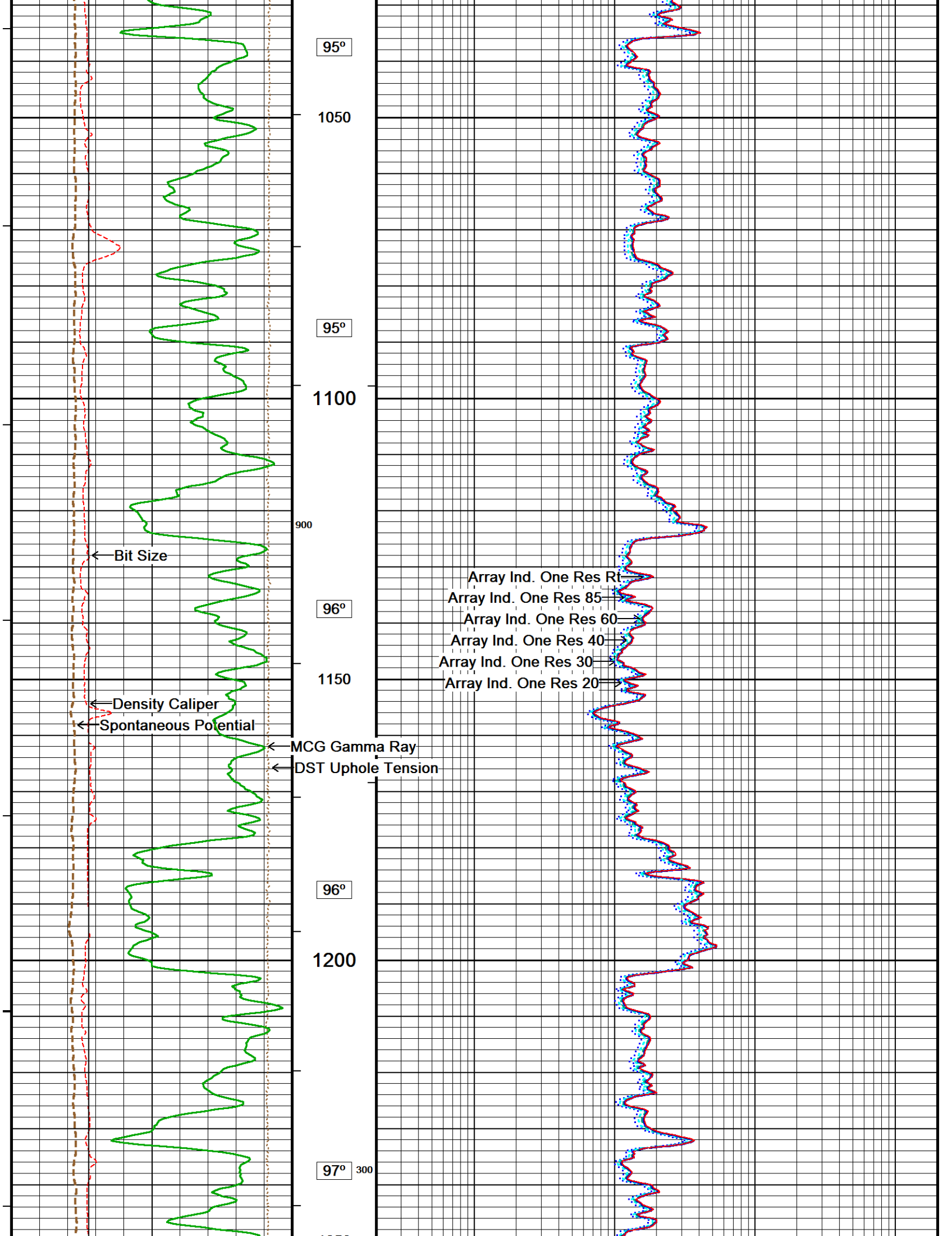
↑ 2 INCH MAIN LOG ↑

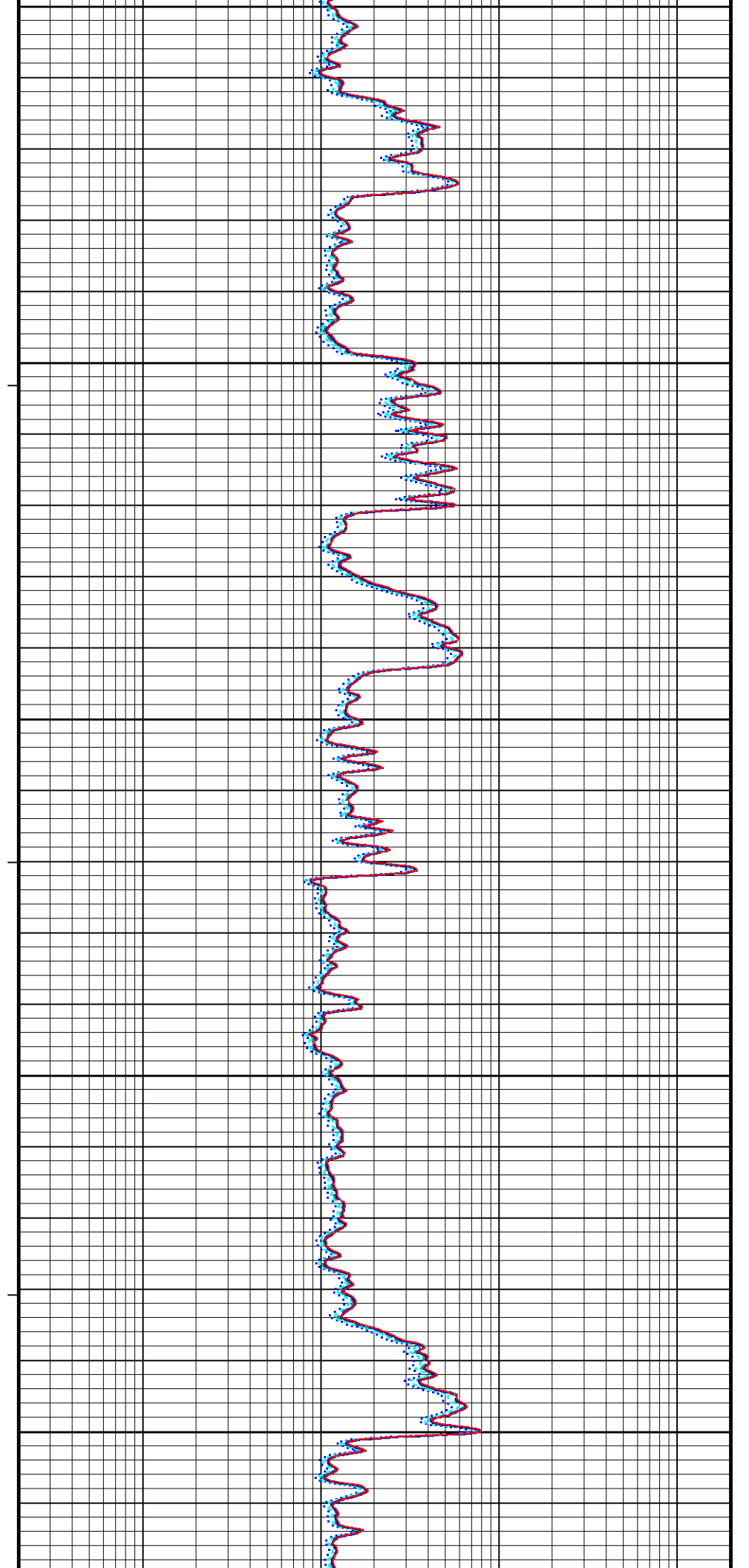
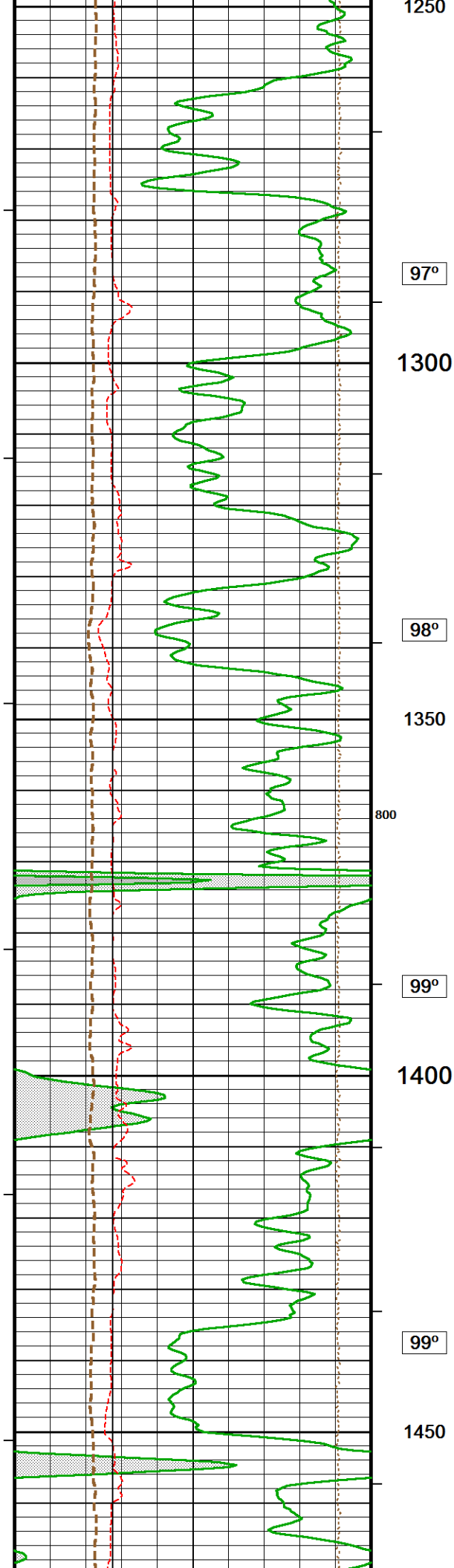
↓ 5 INCH MAIN LOG ↓

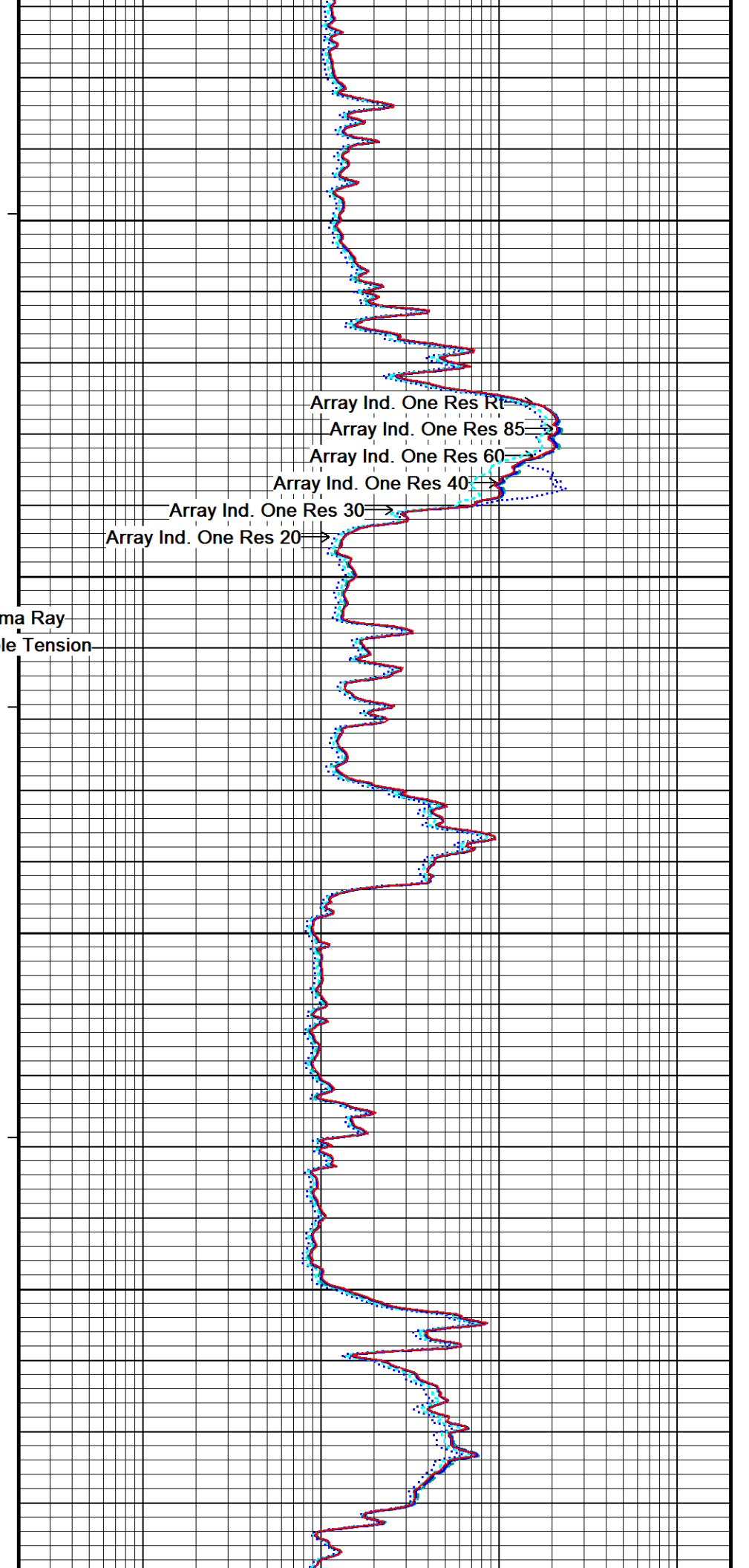
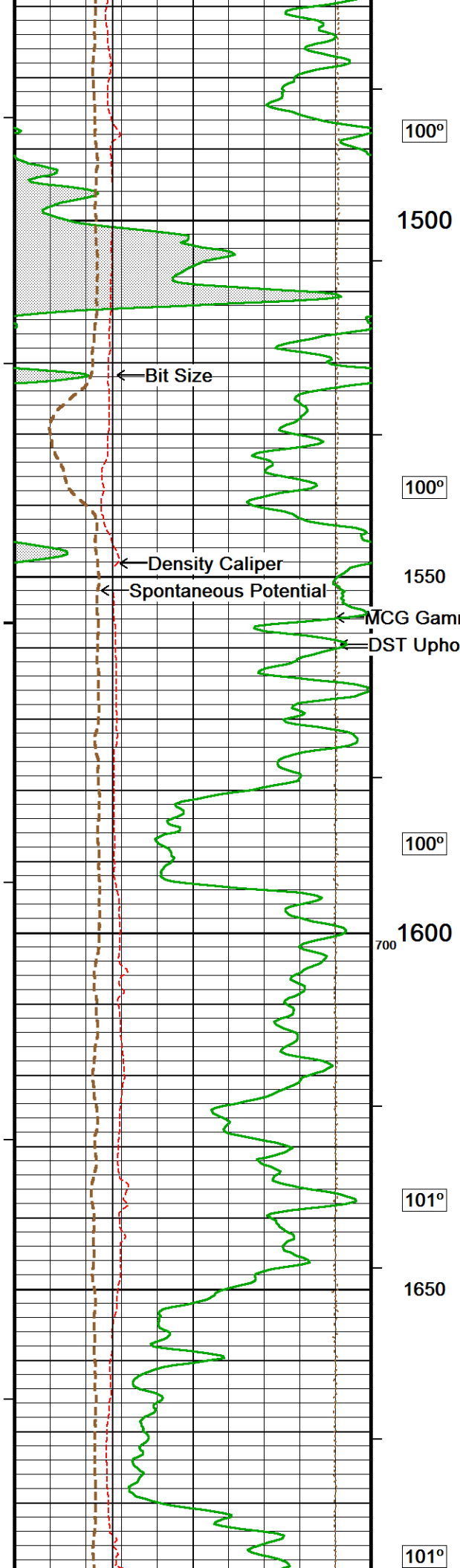


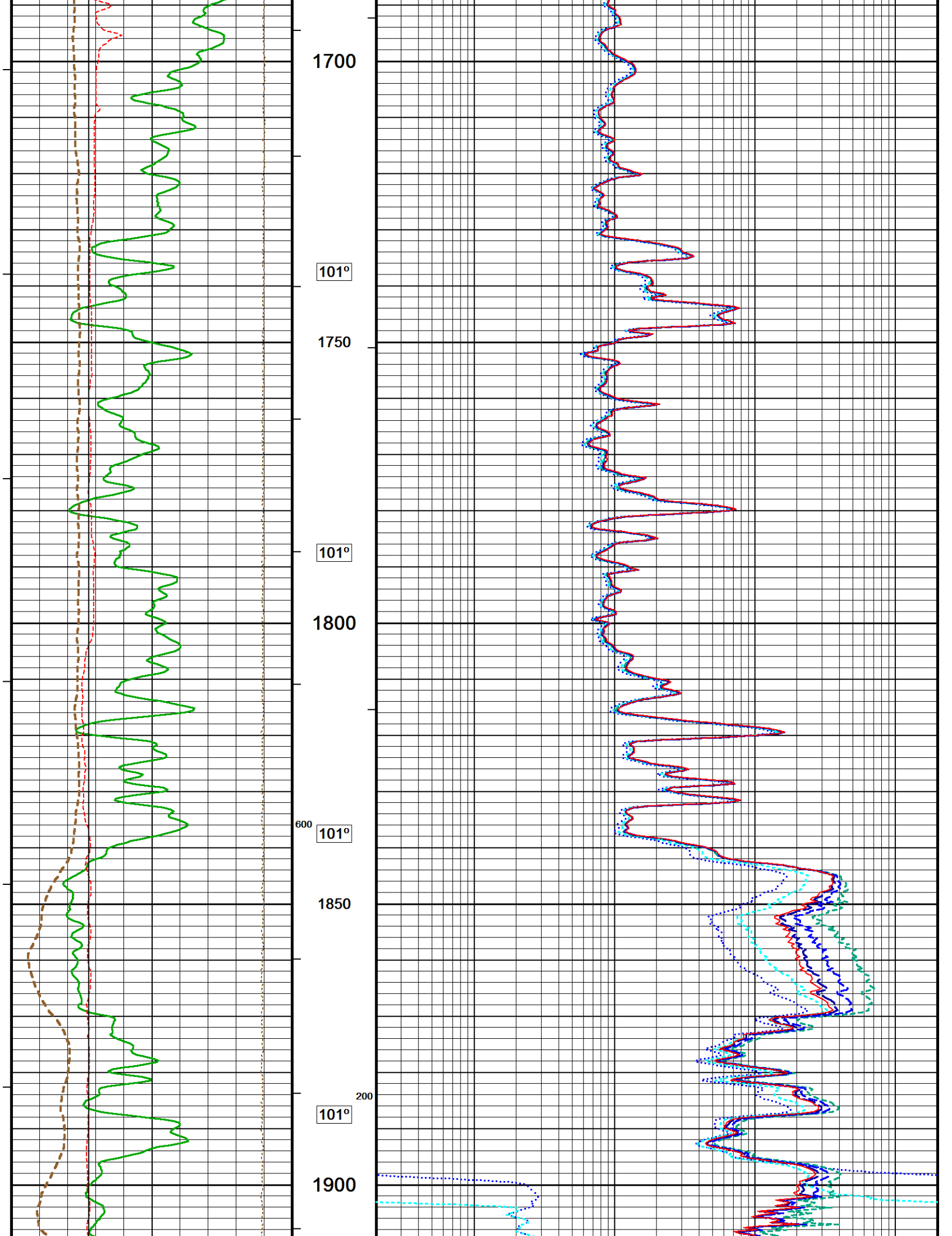


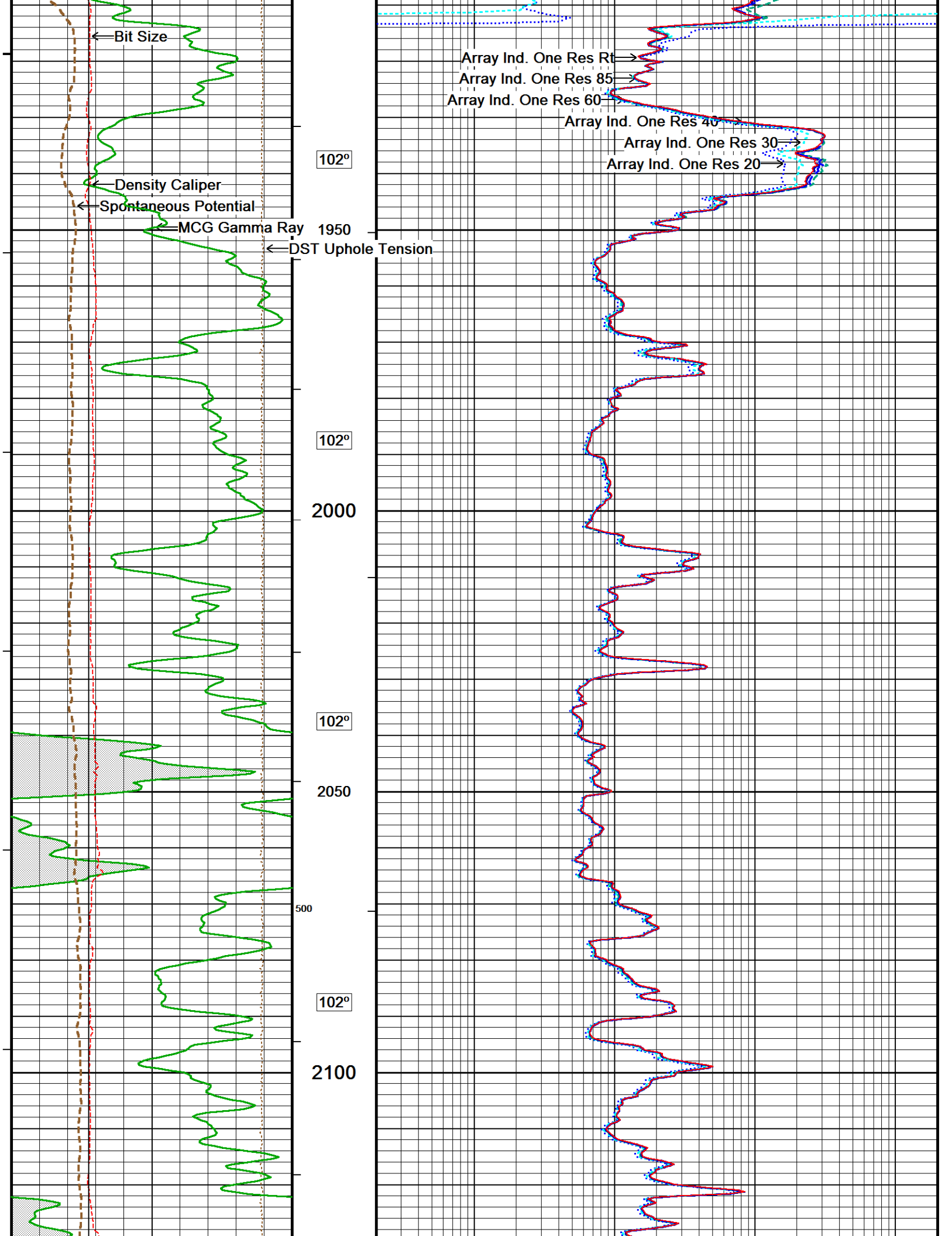


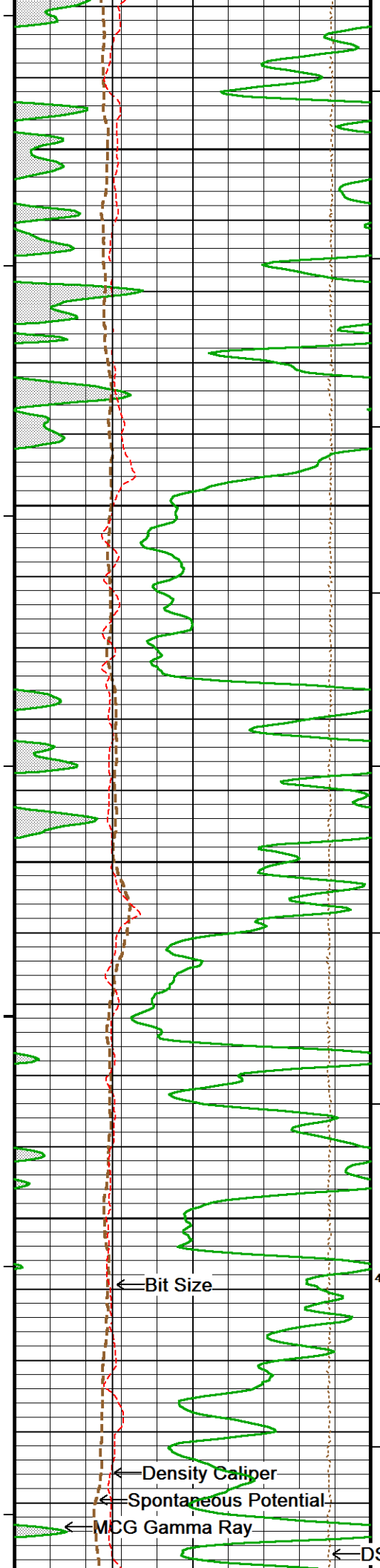




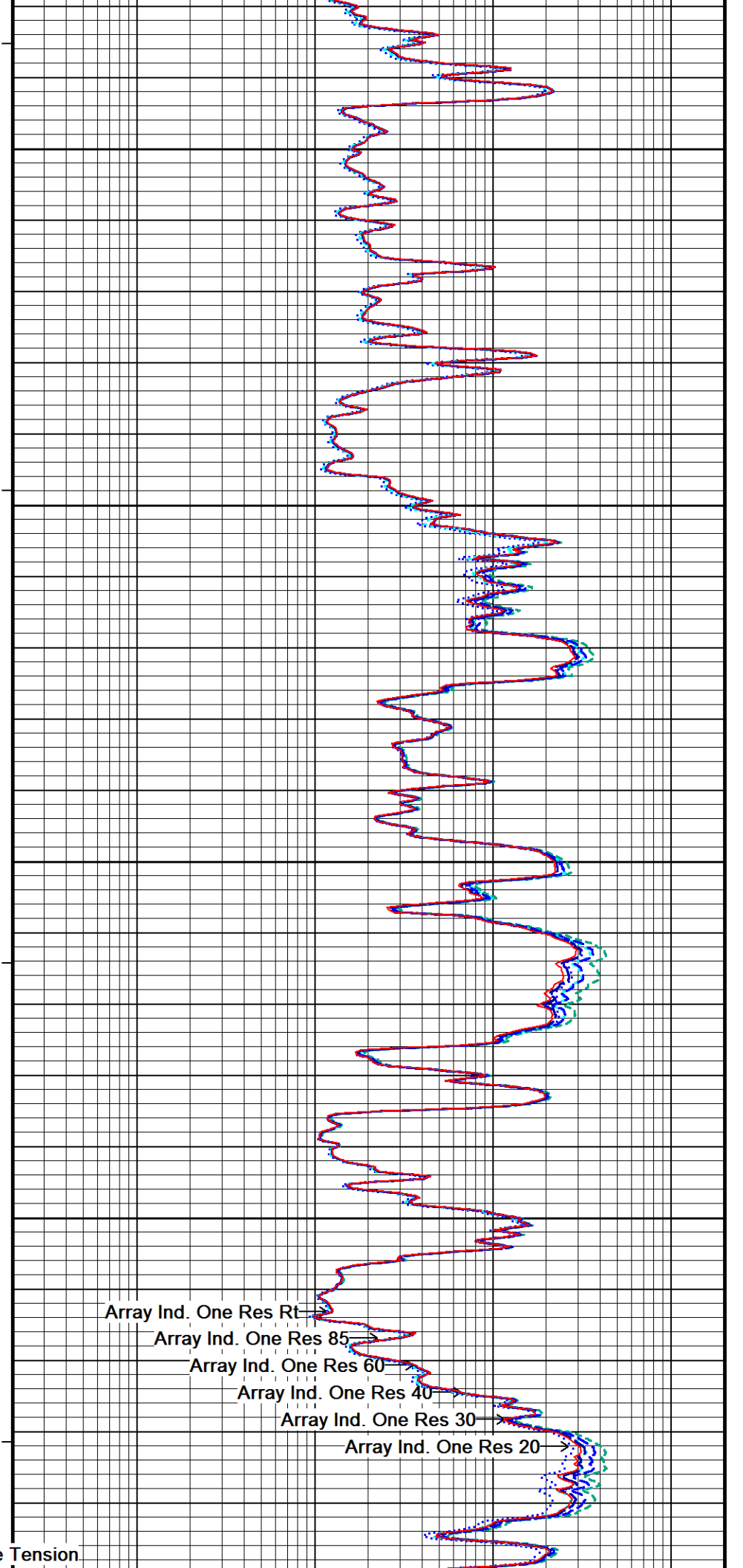






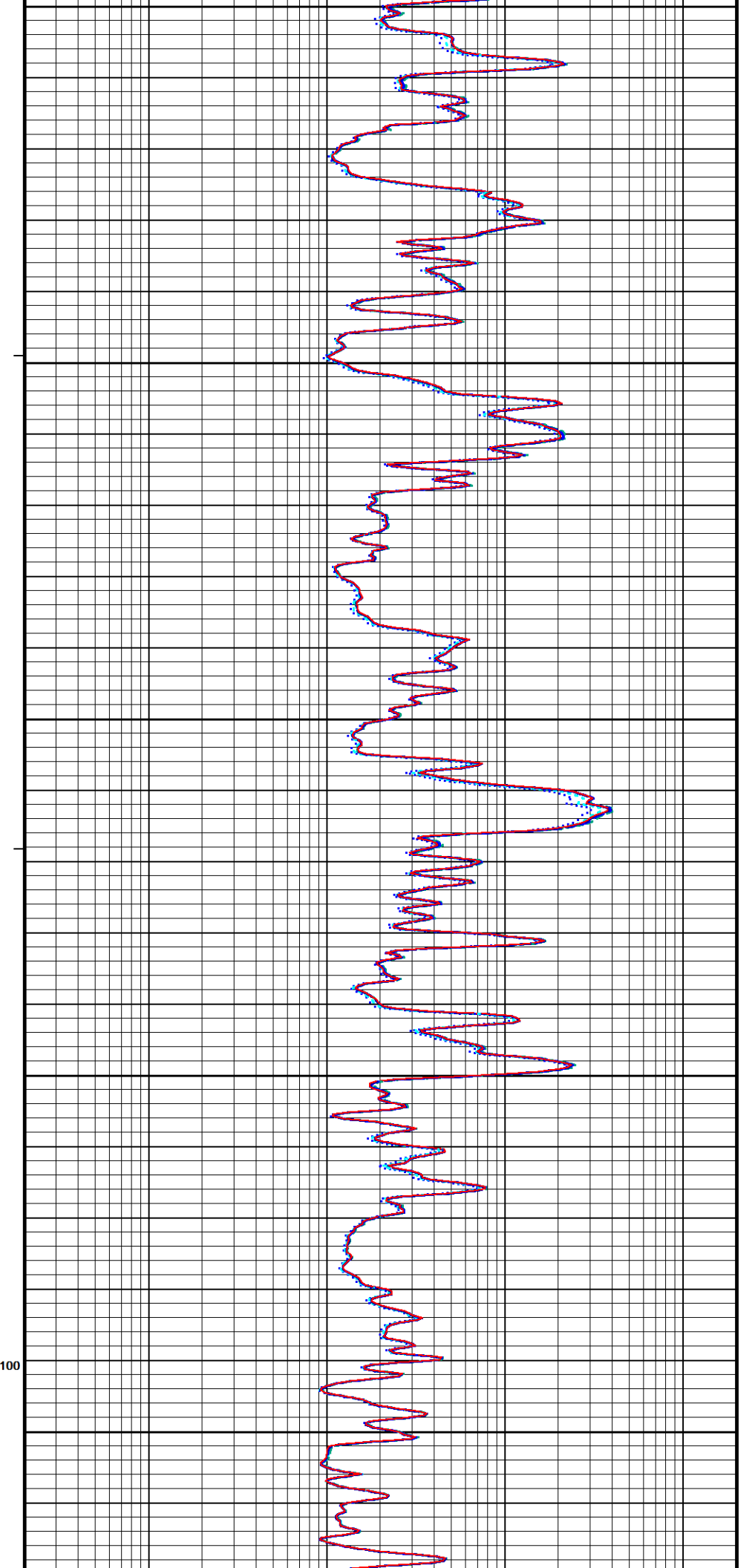
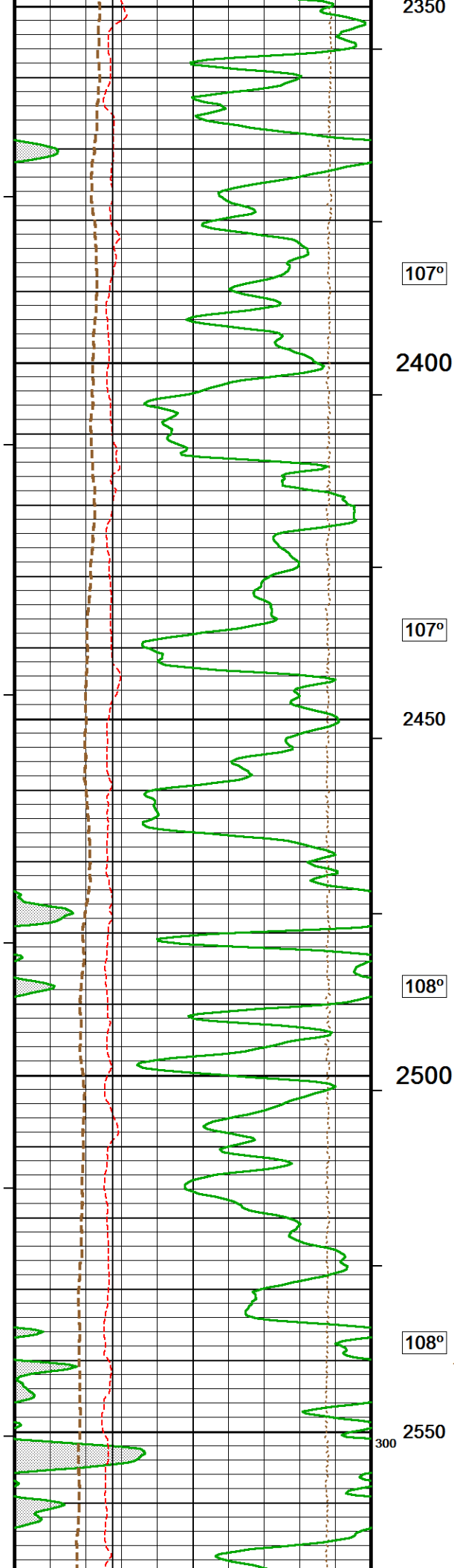


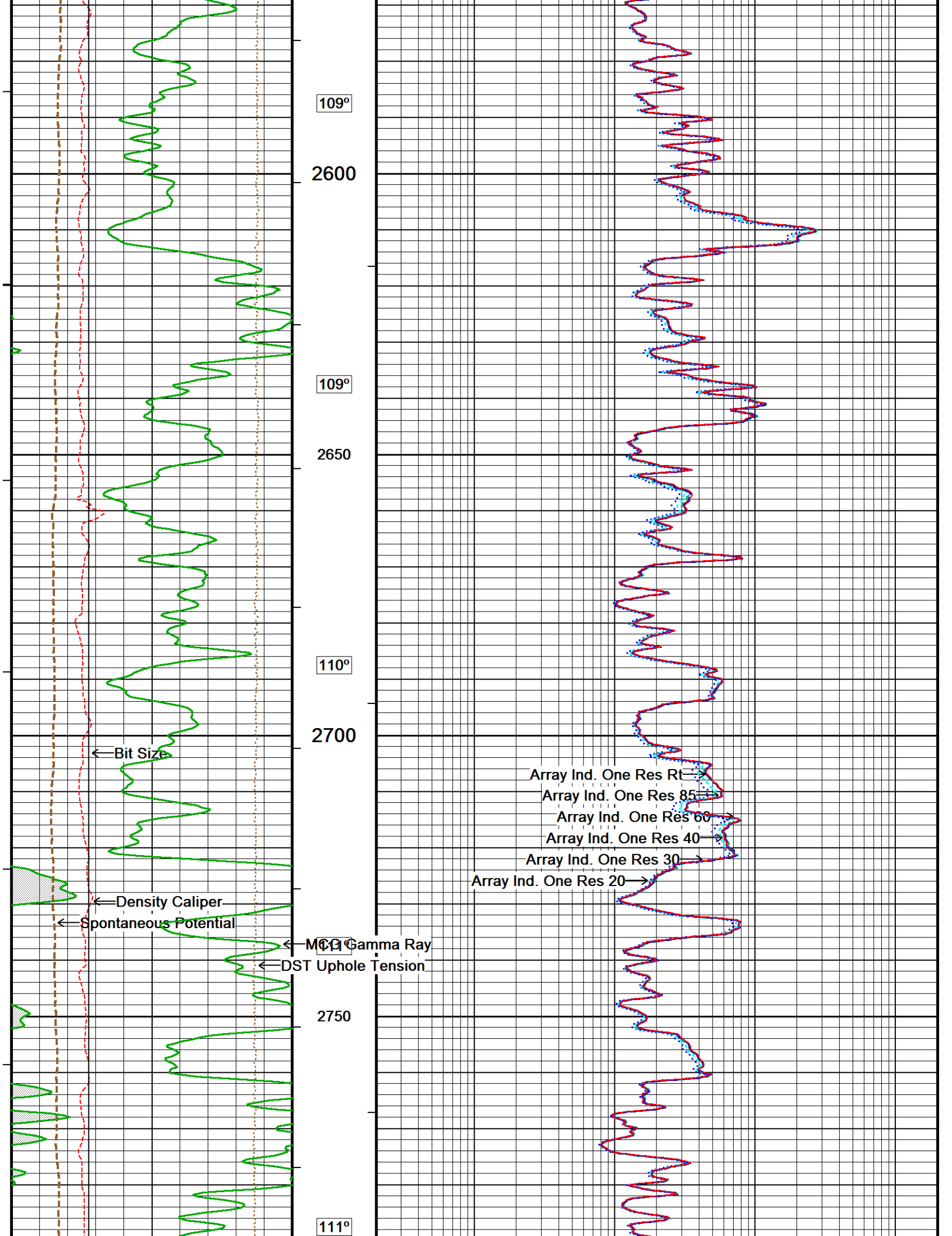
101°
2150
101°
2200
102°
2250
105°
2300
400
106°

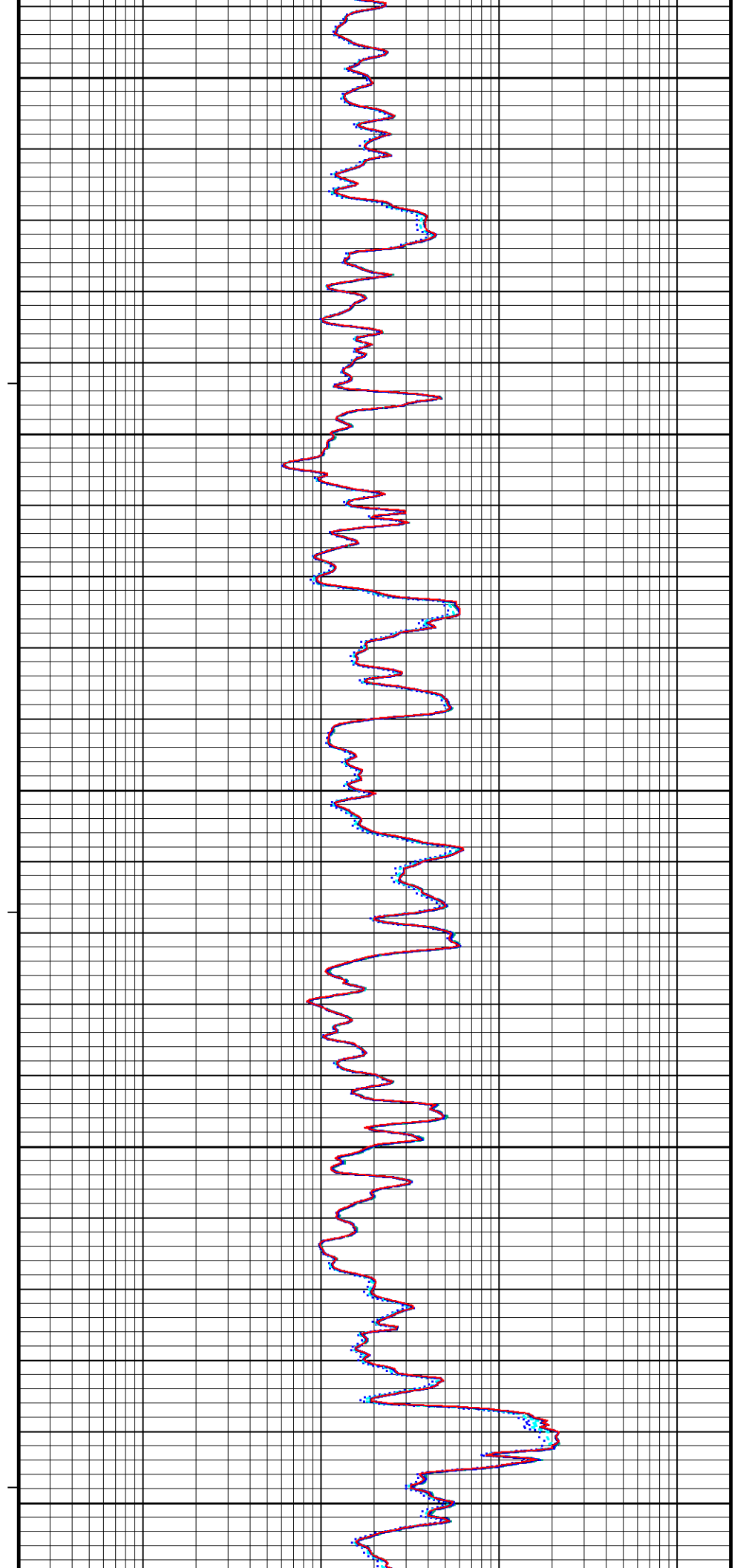
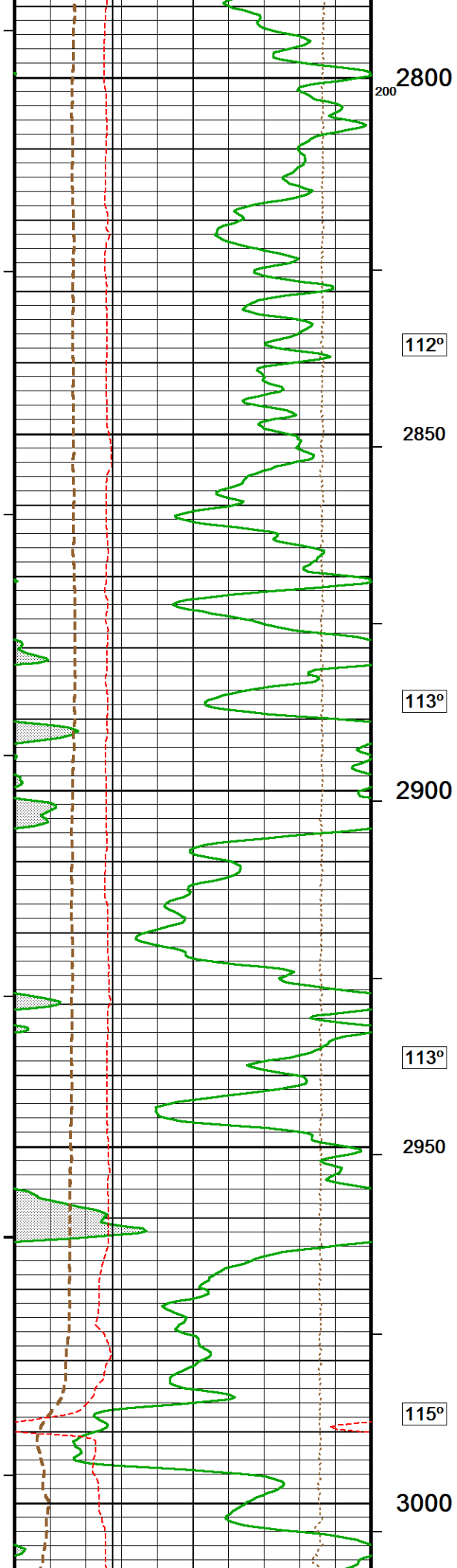


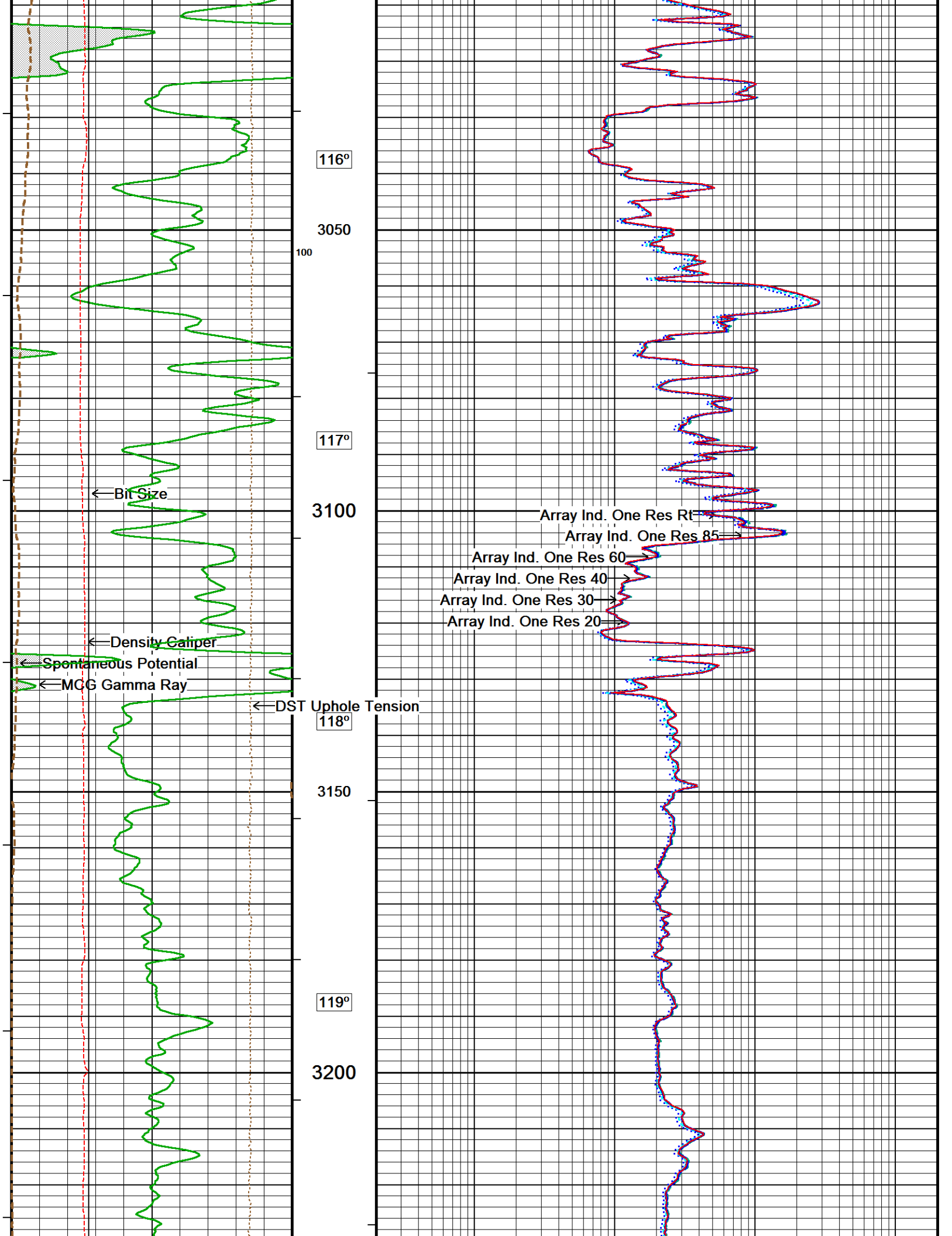
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
Array Ind. One Res 20

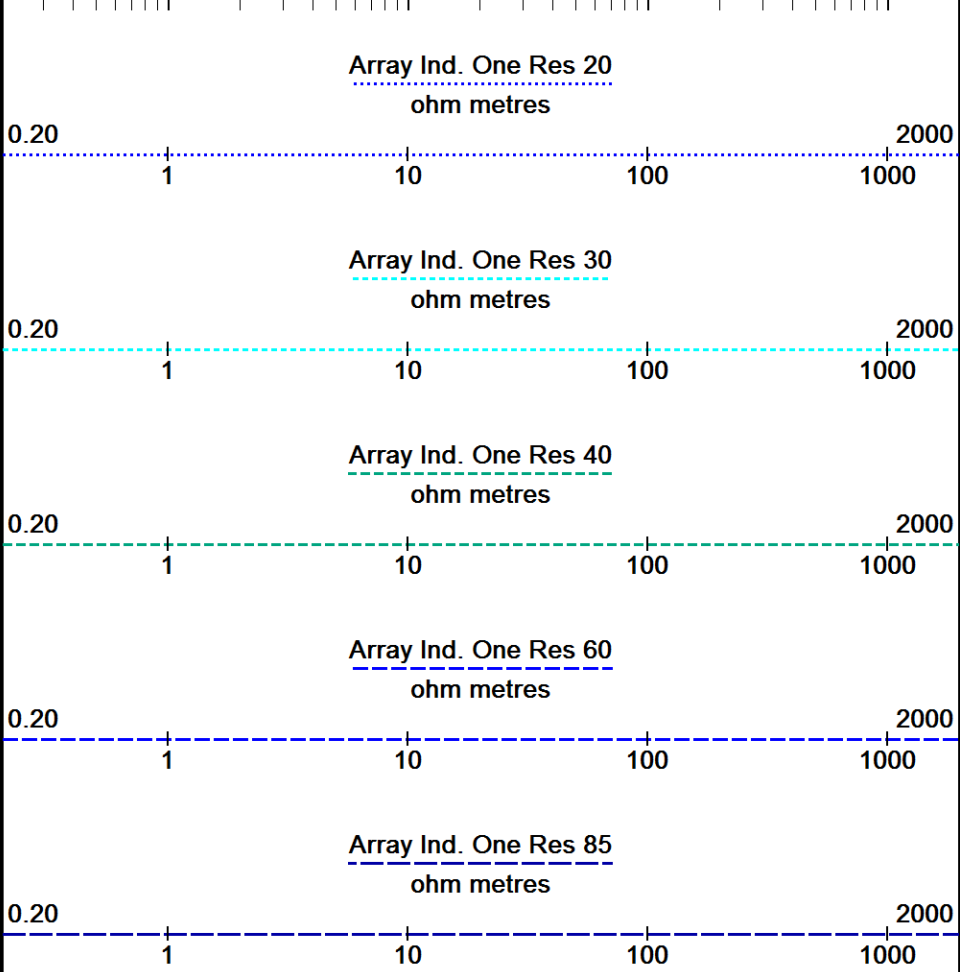
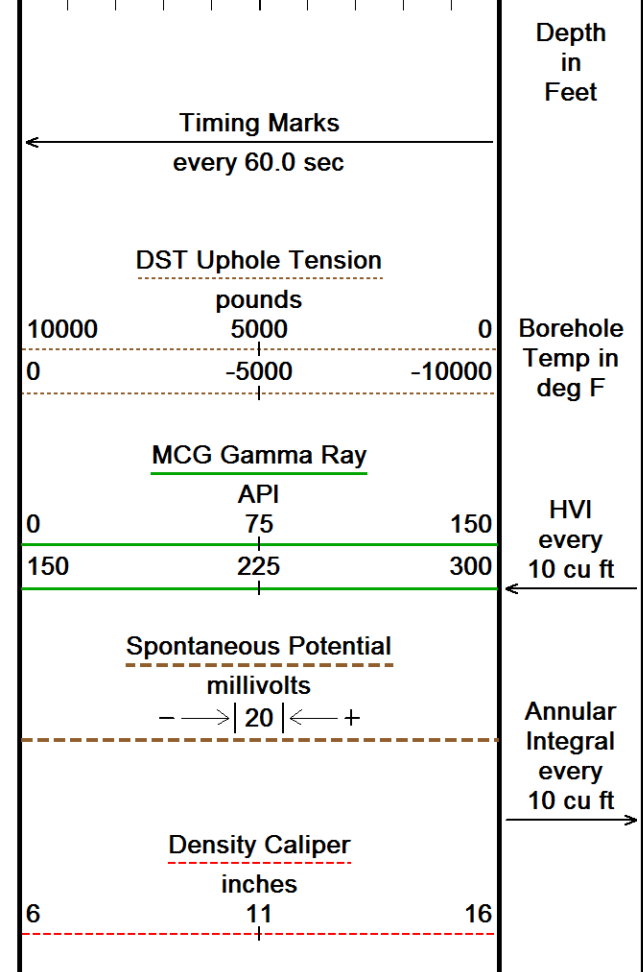
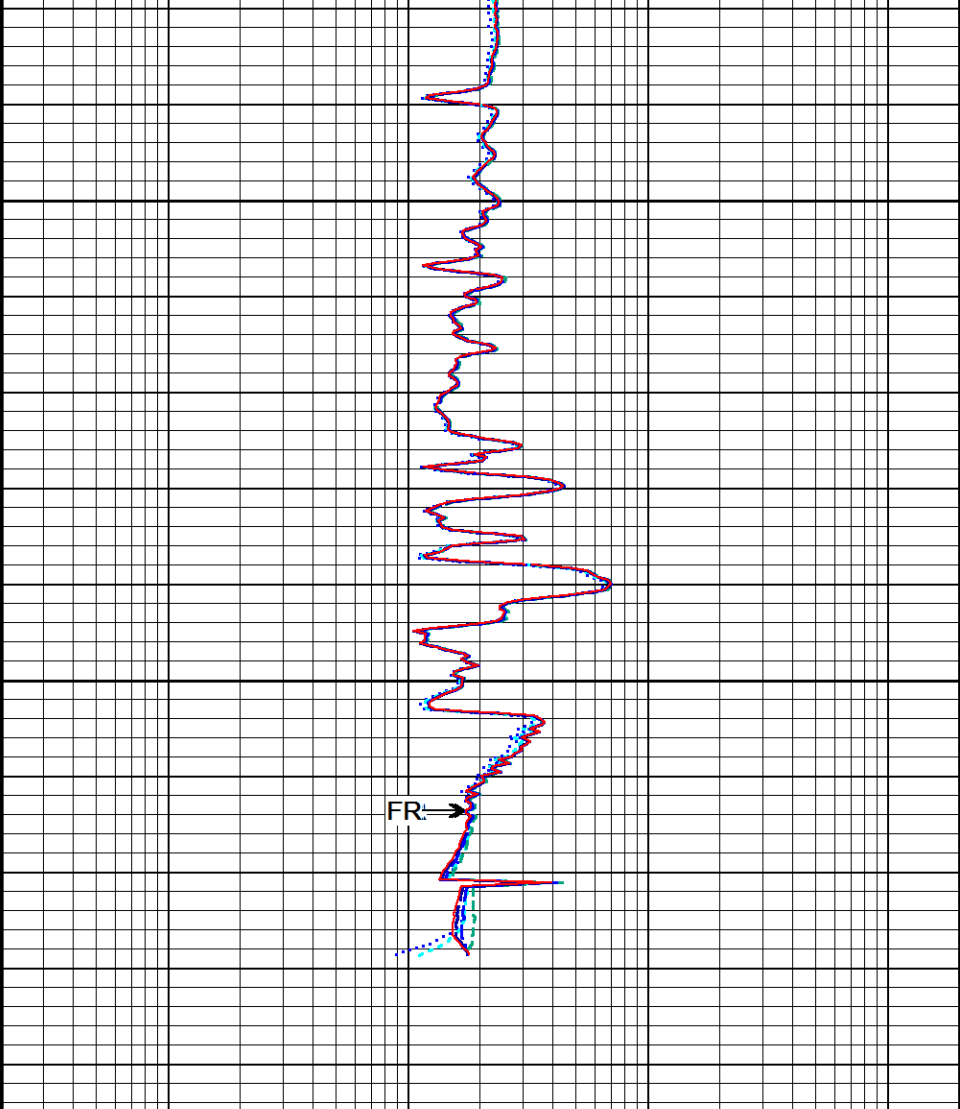
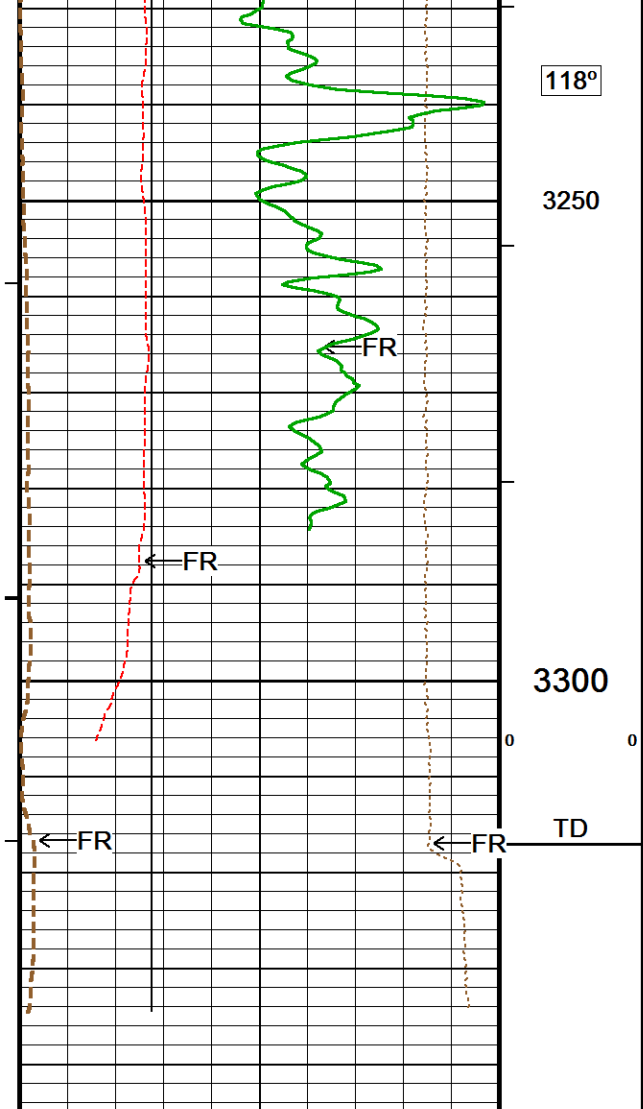
← DST Uphole Tension

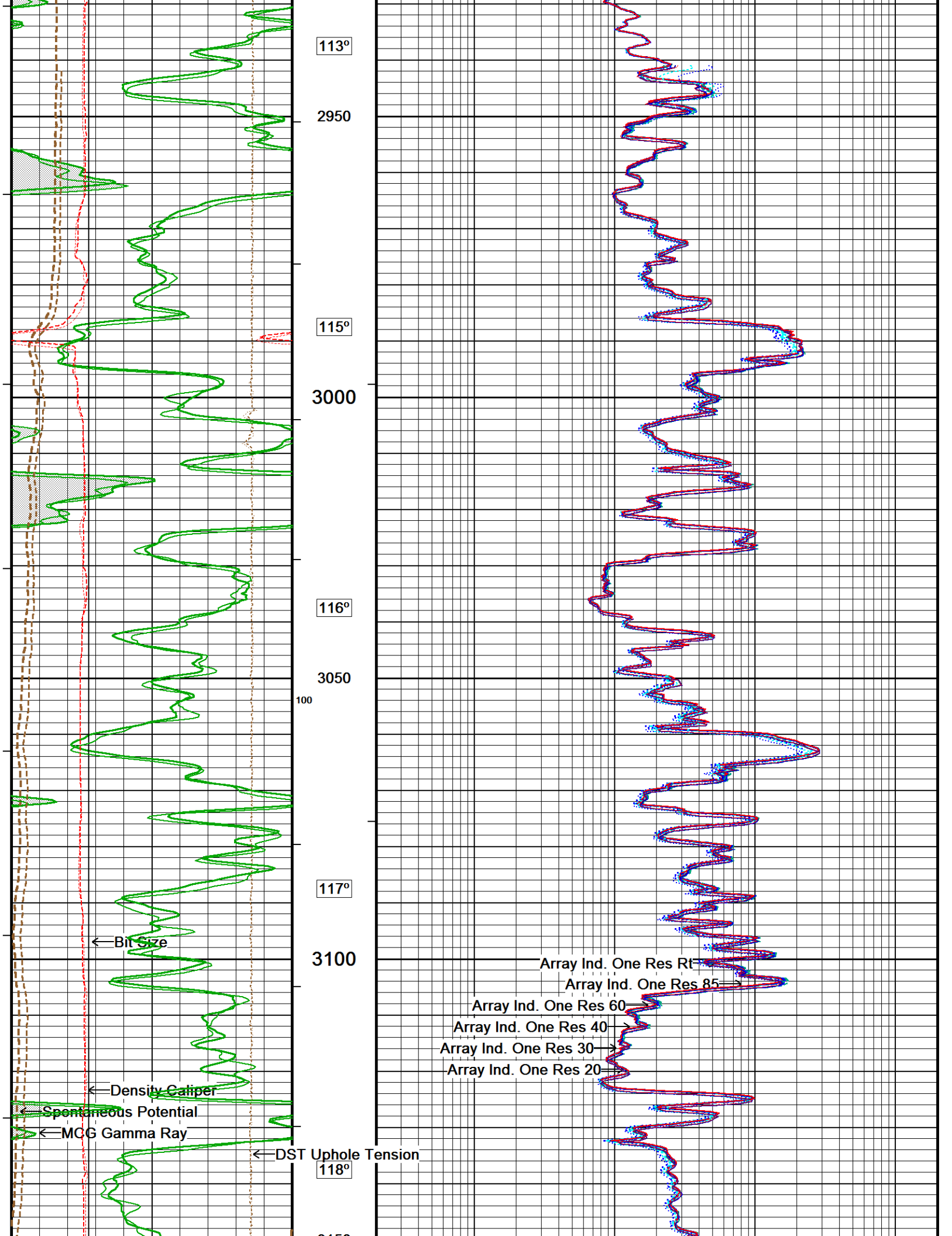


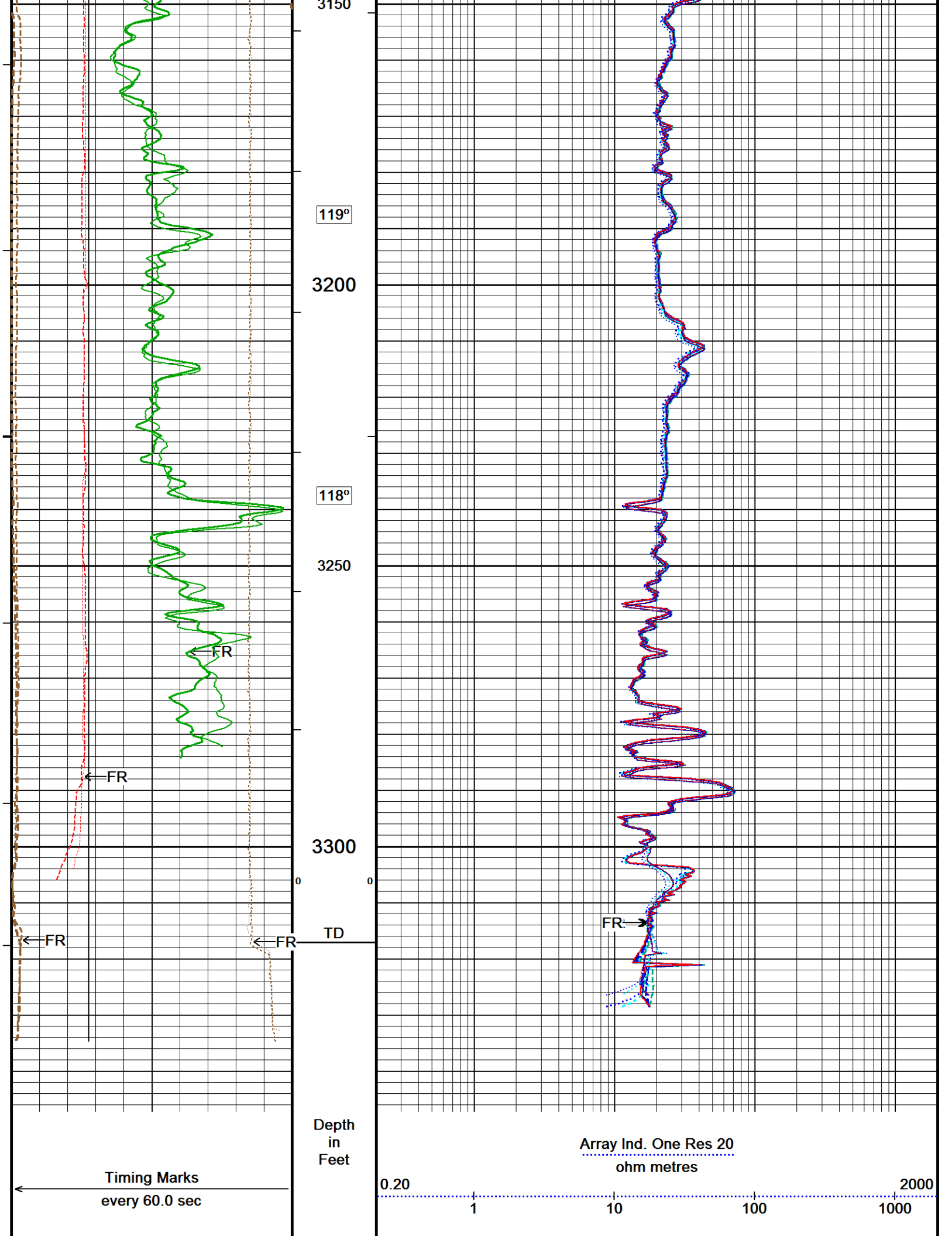


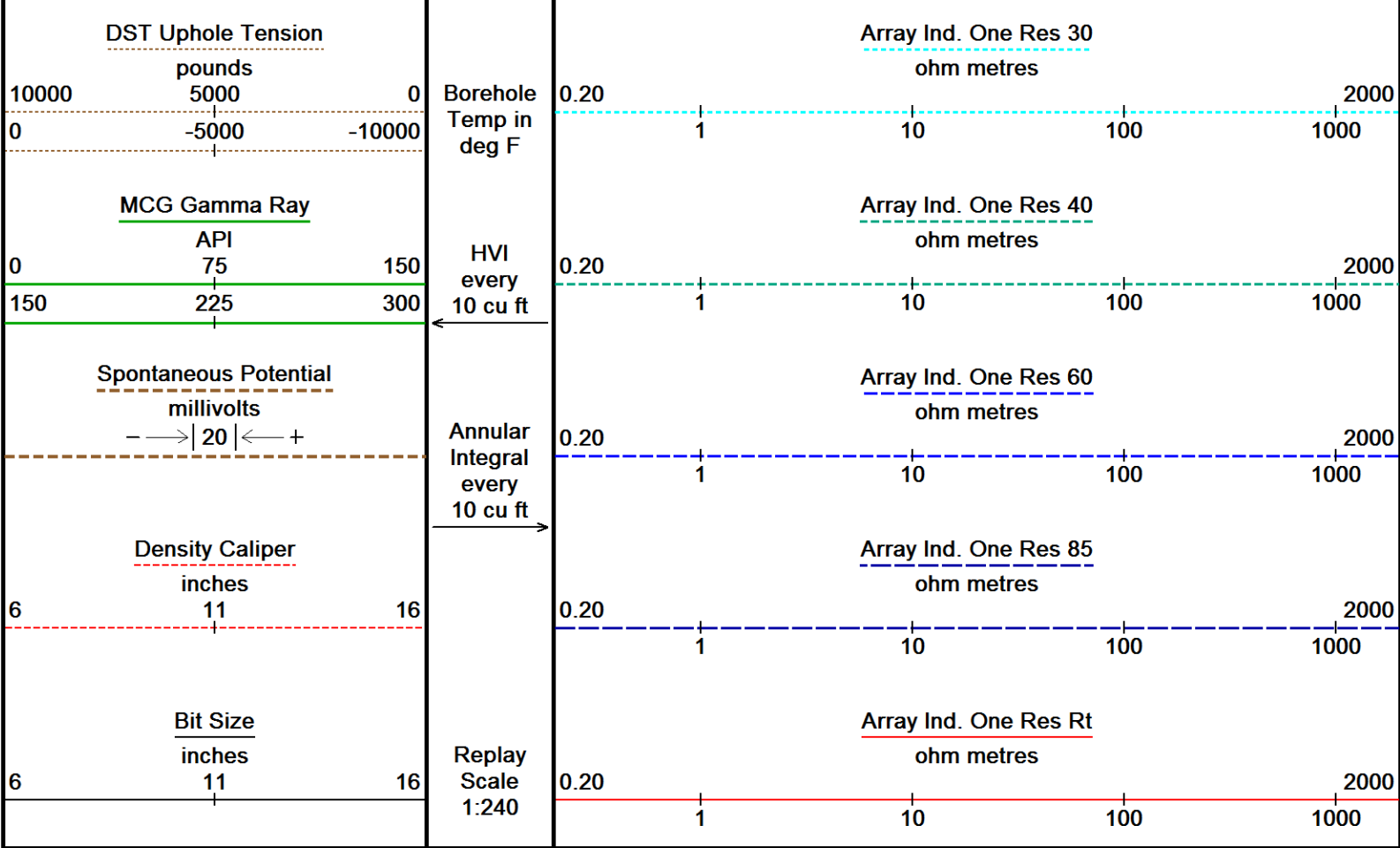












Depth Based Data - Maximum Sampling Increment 10.0cm
 Plotted on 21-MAY-2015 04:20
 Filename: C:\Logs\Coleman Oil and Gas\La Plata 34-7-33 #1\run...\La Plata 34-7-33 #1_MAINPASS.dta
 Recorded on 21-MAY-2015 01:34
 Filename: C:\Logs\Coleman Oil and Gas\La Plata 34-7-33 #1\run_21...\La Plata 34-7-33 #1_REPEAT.dta
 Recorded on 21-MAY-2015 01:15
 System Versions: Logged with 15.01.3109 Processed with 15.01.3109 Plotted with 15.01.3109

↑ **5 INCH MAIN LOG** ↑
5 INCH REPEAT LOG

BEFORE SURVEY CALIBRATION
 C:\Logs\Coleman Oil and Gas\La Plata 34-7-33 #1\run_21\8367-119352096\La Plata 34-7-33 #1_MAINPASS.dta

General Constants All 000 Last Edited on 21-MAY-2015,03:41

General Parameters		
Mud Resistivity	4.060	ohm-metres
Mud Resistivity Temperature	77.000	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	7.000	inches
Caliper for Differential Caliper	Density Caliper	
Rwa Parameters		
Porosity used	Base Density Porosity	
Resistivity used	Array Ind. One Res Rt	
RWA Constant A	0.610	
RWA Constant M	2.150	
SW/APOR Tool Source	0.000	

High Resolution Temperature Calibration MCG-D.K 482 Field Calibration on 03-APR-2014,07:59

	Measured	Calibrated(Deg F)
Lower	10.00	10.00

Upper

100.00

100.00

High Resolution Temperature Constants MCG-D.K 482

Last Edited on 03-APR-2014,07:59

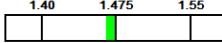
Pre-filter Length 11

Gamma Calibration MCG-D.K 482

Field Calibration on 20-MAY-2015 20:14

	Measured	Calibrated (API)
Background	135	92
Calibrator (Gross)	1471	1004
Calibrator (Net)	1336	912

Gamma Calibration Tolerances MCG-D.K 482

Ratio 1.465  Counts/API

Gamma Constants MCG-D.K 482

Last Edited on 21-MAY-2015,00:43

Gamma Calibrator Number	GRC.C.072	
GRC-M Calibrator Jig in Use?	NO	
Inactive Background Jig in Use?	NO	
Mud Density	1.19	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Potassium Equivalence	Chloride	
K Mud Concentration	0.00	%

Induction Calibration MAI-B.J 374

Base Calibration on 11-MAR-2013,14:44

Field Check on 20-MAY-2015 19:17

Base Calibration

Test Loop Calibration Channel	Measured		Calibrated (mmho/m)	
	Low	High	Low	High
1	16.0	476.0	9.3	966.2
2	5.4	382.2	7.6	821.4
3	3.7	260.5	5.2	566.0
4	1.8	133.4	2.6	279.2

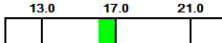
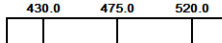
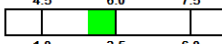
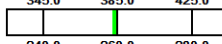
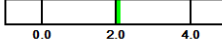
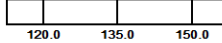
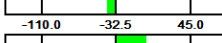
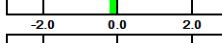
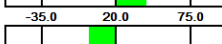
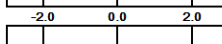
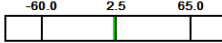
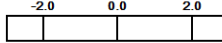
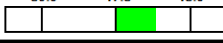
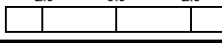

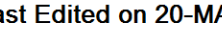
Array Temperature 71.2 Deg F

Test Loop Calibration Verified 12-MAY-2015 09:40

Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1	14.4	3784.2	14.9	3784.5
2	31.4	3500.4	31.4	3499.9
3	27.8	3021.4	27.9	3021.0
4	19.8	2056.6	19.7	2056.5
Deep	16.1	1969.8	16.1	1969.8
Medium	40.6	3986.7	40.5	3985.9
Shallow	48.5	5174.8	48.5	5173.9

Array Temperature 57.4 65.8 Deg F

Induction Calibration Tolerances MAI-B.J 374

Low Conductivity 1	16.0		mmho/m High Conductivity 1	476.0		mmho/m
Low Conductivity 2	5.4		mmho/m High Conductivity 2	382.2		mmho/m
Low Conductivity 3	3.7		mmho/m High Conductivity 3	260.5		mmho/m
Low Conductivity 4	1.8		mmho/m High Conductivity 4	133.4		mmho/m
Background Vx 1	0.0		mmho/m Phase Check Loop 1	0.0		%
Background Vx 2	0.0		mmho/m Phase Check Loop 2	0.0		%
Background Vx 3	0.0		mmho/m Phase Check Loop 3	0.0		%
Background Vx 4	0.0		mmho/m Phase Check Loop 4	0.0		%

Induction Constants MAI-B.J 374

Last Edited on 20-MAY-2015,19:15

Induction Model RtAP-WBM

Borehole Correction Constants		No	
Tool Centred		Density Caliper	
Hole Size Source		N/A	inches
Hole Size Constant Value		Fins	
Stand-off Type		0.50	inches
Stand-off		6.0000	
Number of Fins on Stand-off		60.00	degrees
Stand-off Fin Angle		0.7500	inches
Stand-off Fin Width			
Rm Source	Global Value: Temperature Corrected		
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-C.J 380

Base Calibration on 20-MAY-2015 19:48
Field Calibration on 20-MAY-2015 19:49

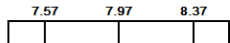
Base Calibration

Reading No	Measured	Calibrator Size (in)
1	14459	3.98
2	22980	5.96
3	31574	7.97
4	39728	9.84
5	48864	11.91
6	N/A	N/A

Field Calibration

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

Caliper Calibration Tolerances MPD-C.J 380

Long Arm Field Cal. 7.97  in

DOWNHOLE EQUIPMENT

C:\Logs\Coleman Oil and Gas\La Plata 34-7-33 #1\run_2\8367-119352096\La Plata 34-7-33 #1_MAINPASS.dta

CBH-C, Cablehead, 11 pin
CBH-C 0 LG: 2.40 ft WT: 24.3 lb OD: 2.244 in

SHA-J.A Compact Swivel Head Adaptor
SHA-J.A 316 LG: 2.30 ft WT: 22.0 lb OD: 2.244 in



51.56 ft GRGC - MCG Gamma Ray

Compact Comms Gamma
MCG-D.K 482 LG: 8.70 ft WT: 63.9 lb OD: 2.244 in

Compact Micro-Resistivity
MMR-B.A 141 LG: 8.59 ft WT: 81.6 lb OD: 3.819 in

Compact Neutron
MDN-B.J 374 LG: 5.04 ft WT: 50.7 lb OD: 2.244 in

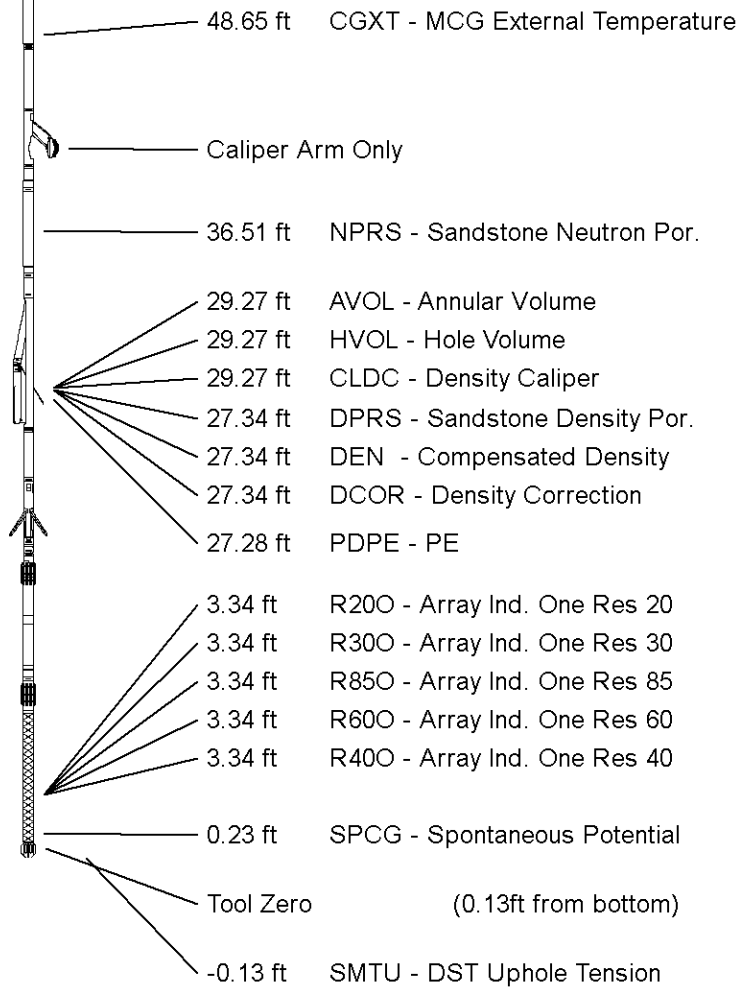
Compact Density/Caliper
MPD-C.J 380 LG: 9.59 ft WT: 90.4 lb OD: 2.449 in

Compact Vee Arm Caliper
MVC-A.A 138 LG: 8.06 ft WT: 61.7 lb OD: 2.244 in

Compact Focussed Electric
MFE-C.A 417 LG: 6.05 ft WT: 48.5 lb OD: 2.244 in

Compact Induction
MAI-B.J 374 LG: 10.81 ft WT: 48.5 lb OD: 2.240 in

Total Length: 61.54 ft Weight: 491.6 lb



All measurements relative to tool zero.

COMPANY	COLEMAN OIL AND GAS
WELL	LA PLATA 34-7-33 #1
FIELD	IGNACIO BLANCO
PROVINCE/COUNTY	LA PLATA
COUNTRY/STATE	USA / COLORADO

Elevation Kelly Bushing	6742.00	feet	First Reading	3314.00	feet
Elevation Drill Floor	6742.00	feet	Depth Driller	3334.00	feet
Elevation Ground Level	6726.00	feet	Depth Logger	3317.00	feet



Weatherford[®]

ARRAY INDUCTION
LOG