



**Weatherford**

ARRAY INDUCTION / MFE  
PHOTO DENSITY / NEUTRON  
GAMMA RAY \*\*TVD\*\* LOG

COMPANY SMITH PRODUCTION COMPANY  
WELL EDMOND RICHARD #1  
FIELD GRAND CHENIERE  
PROVINCE/COUNTY CAMERON  
COUNTRY/STATE U.S.A / LOUISIANA  
LOCATION N63D 04' 27"W 10,6010.02' FROM NGS MON  
"MARSH" X=1,519,311' Y=394,346'

SEC	TWP	RGE	Other Services
53	15S	5W	SWC
API Number	17023231220000		
Permit Number	244658		
Permanent Datum	G.L., Elevation 3 feet		
Log Measured From	KB		
Drilling Measured From	KB		
Date	03-JULY-2012		
Run Number	ONE		
Depth Driller	11508.00	feet	
Depth Logger	11485.00	feet	
First Reading	11485.00	feet	
Last Reading	3216.00	feet	
Casing Driller	3225.00	feet	
Casing Logger	3216.00	feet	
Bit Size	9.875	inches	
Hole Fluid Type	WATER BASED		
Density / Viscosity	11.00 lb/USg	41.00	
PH / Fluid Loss	11.30	4.40 ml/30Min	
Sample Source	PIT		
Rm @ Measured Temp	0.90 @ 88.0	ohm-m	
Rmf @ Measured Temp	0.68 @ 88.0	ohm-m	
Rmc @ Measured Temp	1.13 @ 88.0	ohm-m	
Source Rmf / Rmc	CALC		
Rm @ BHT	0.39 @ 211.0	ohm-m	
Time Since Circulation	8 HOURS		
Max Recorded Temp	211.00	deg F	
Equipment Name	OPEN HOLE		
Equipment / Base	13028	BRSD	
Recorded By	M.ROMERO		
Witnessed By	G.GRIMMETT		
RIG	CROWN RIG 3		

Elevations:	feet
KB	18.00
DF	17.00
GL	3.00

### BOREHOLE RECORD

Last Edited: 03-JUL-2012 08:40

Bit Size inches	Depth From feet	Depth To feet
9.875	3225.00	11508.00

### CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	10.750	0.00	3225.00	45.50

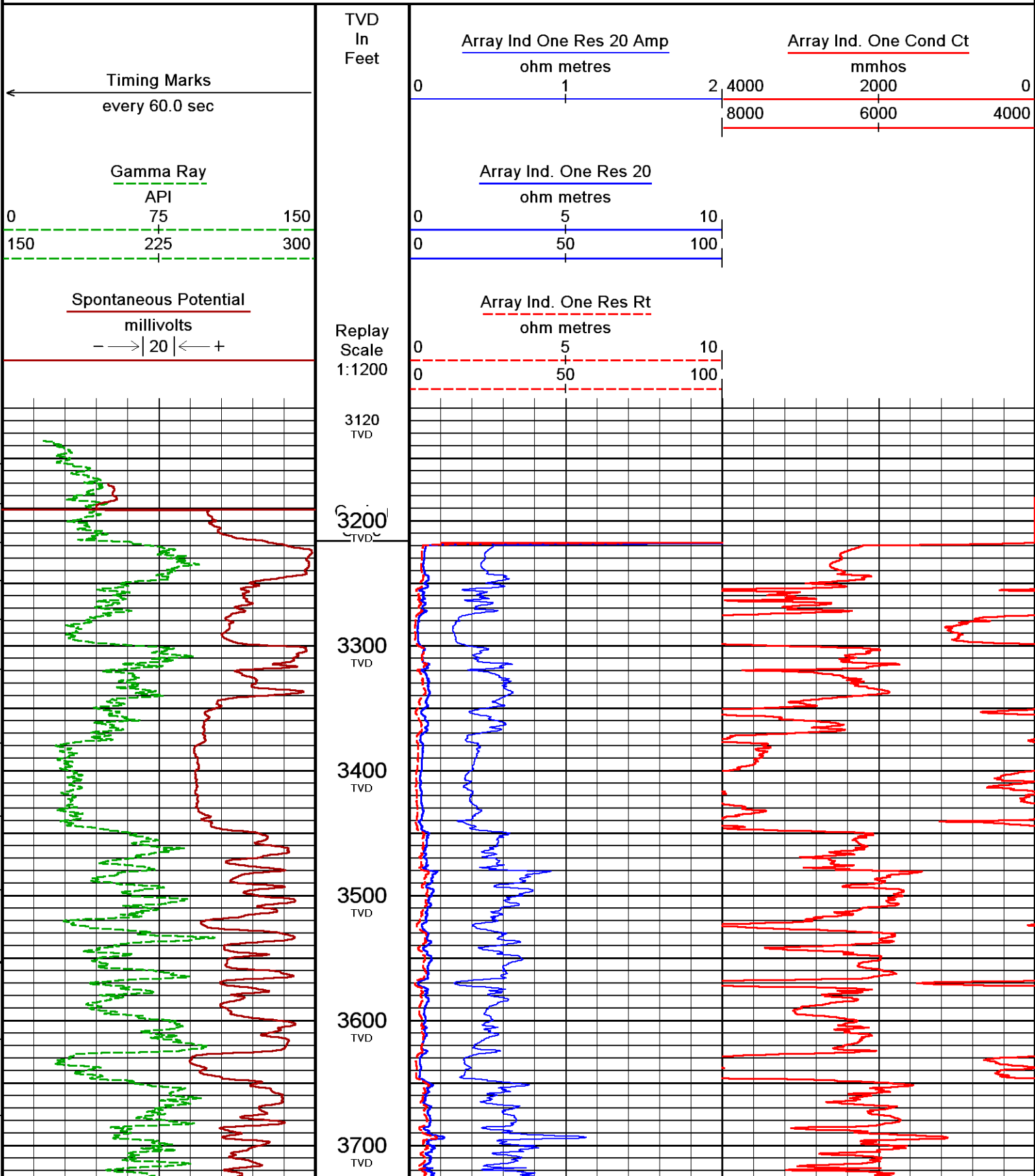
### REMARKS

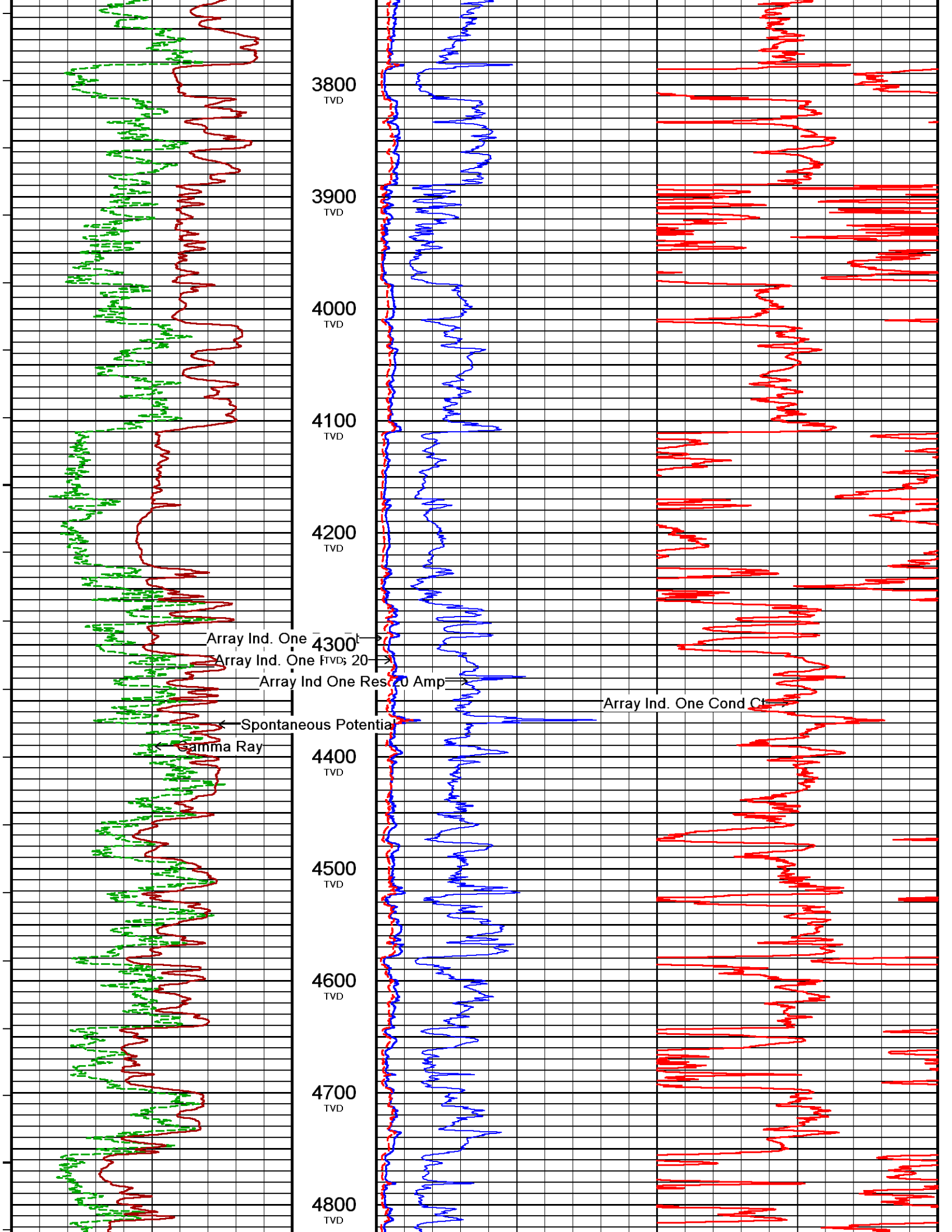
\*\*\*TRUE VERTICAL DEPTH LOG\*\*\*  
 MAI / MFE / MPD / MDN / MCG / SHA RAN IN COMBINATION S.O. 3531063  
 FINS RAN ON INDUCTION AND MFE  
 DUAL BOWSPRINGS RAN ON NEUTRON  
 STABILIZER RAN ON DENSITY  
 DENSITY MATRIX (2.65g/cc)  
 RWA = A - 0.62 M - 2.15  
 CUSTOMER REQUESTED REPEAT BE PERFORMED UNDER CASING SHOE  
 ANNULAR VOLUME ASSUMES 5.5" PRODUCTION CASING  
 CREW: M.ROMERO, C.COSTLEY, R.STANSBURY  
 THANK YOU FOR CHOOSING WEATHERFORD WIRELINE!!!

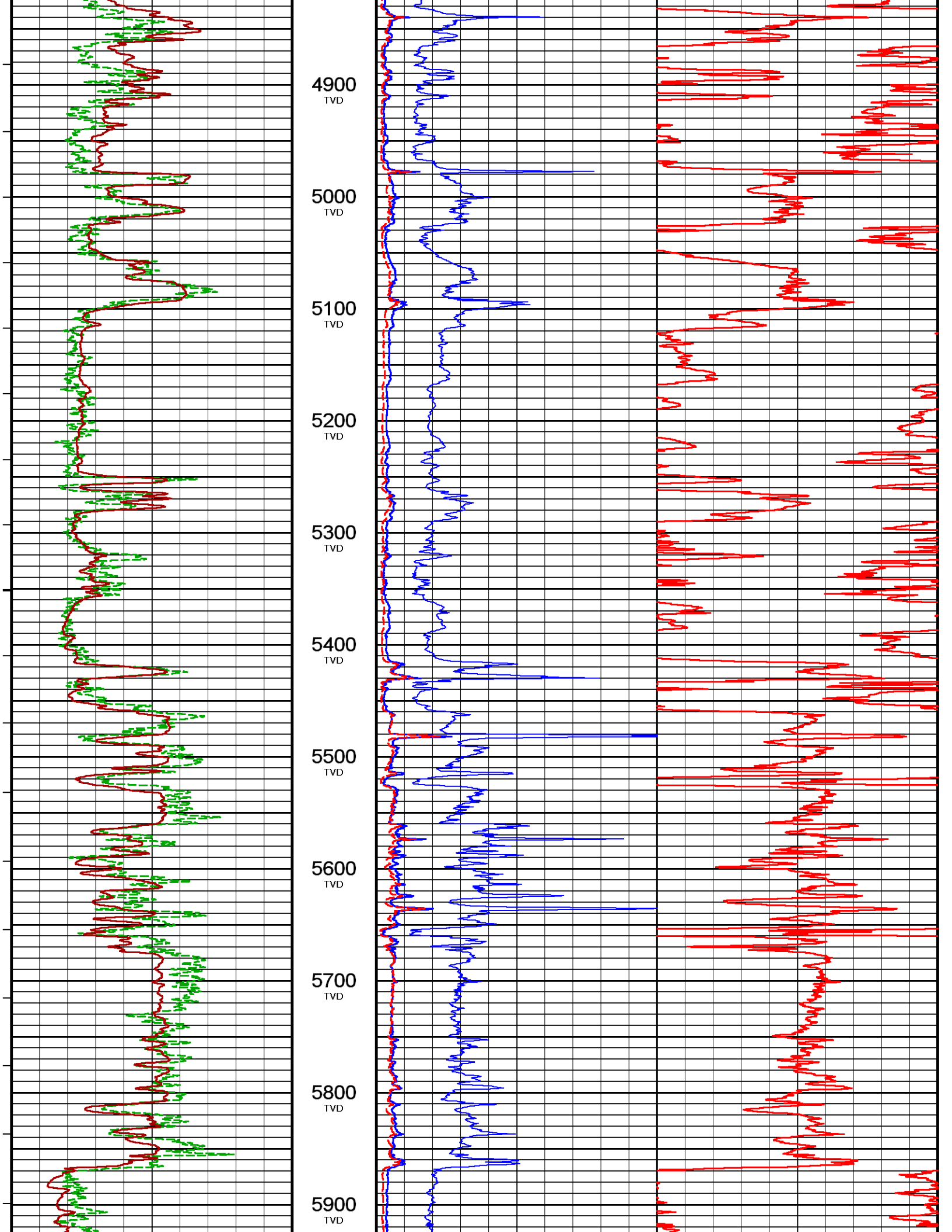
or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.

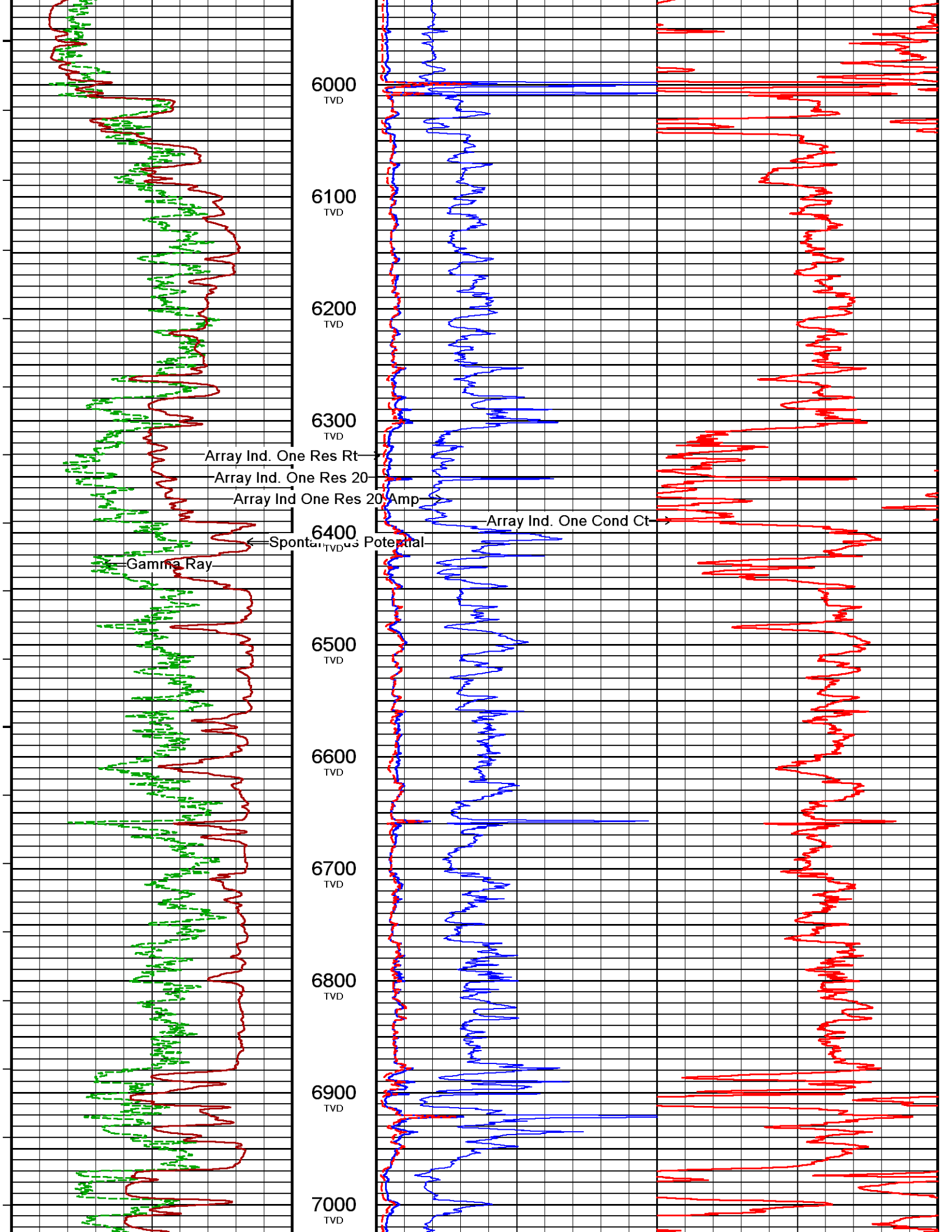
**1" MAIN PASS TVD 1:1200**

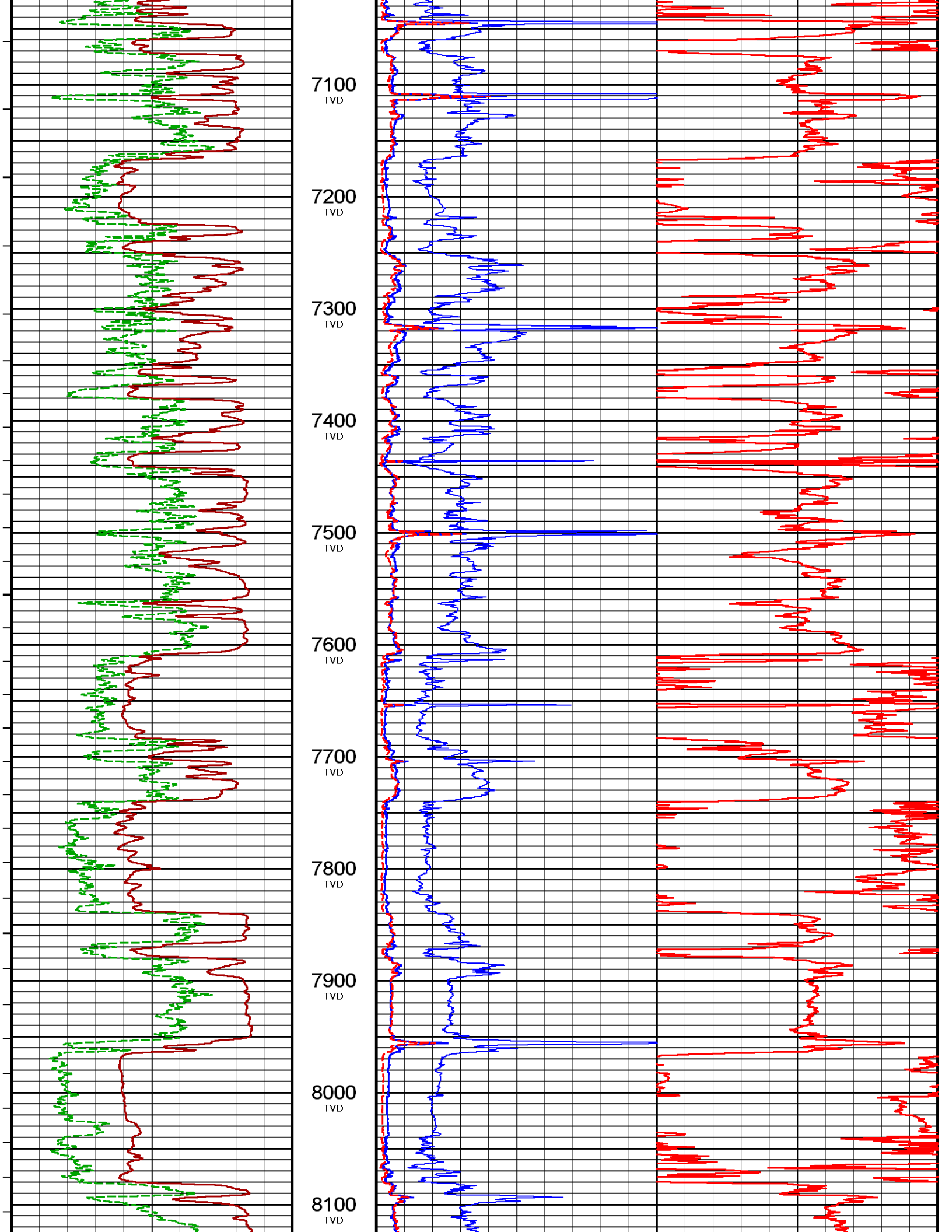
Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 04-JUL-2012 00:20  
 Filename: C:\Data\Smith Production\Edmond Richard #1\uplog2.dta Recorded on 03-JUL-2012 15:11  
 System Versions: Logged with 13.02.6600 Plotted with 13.02.6600

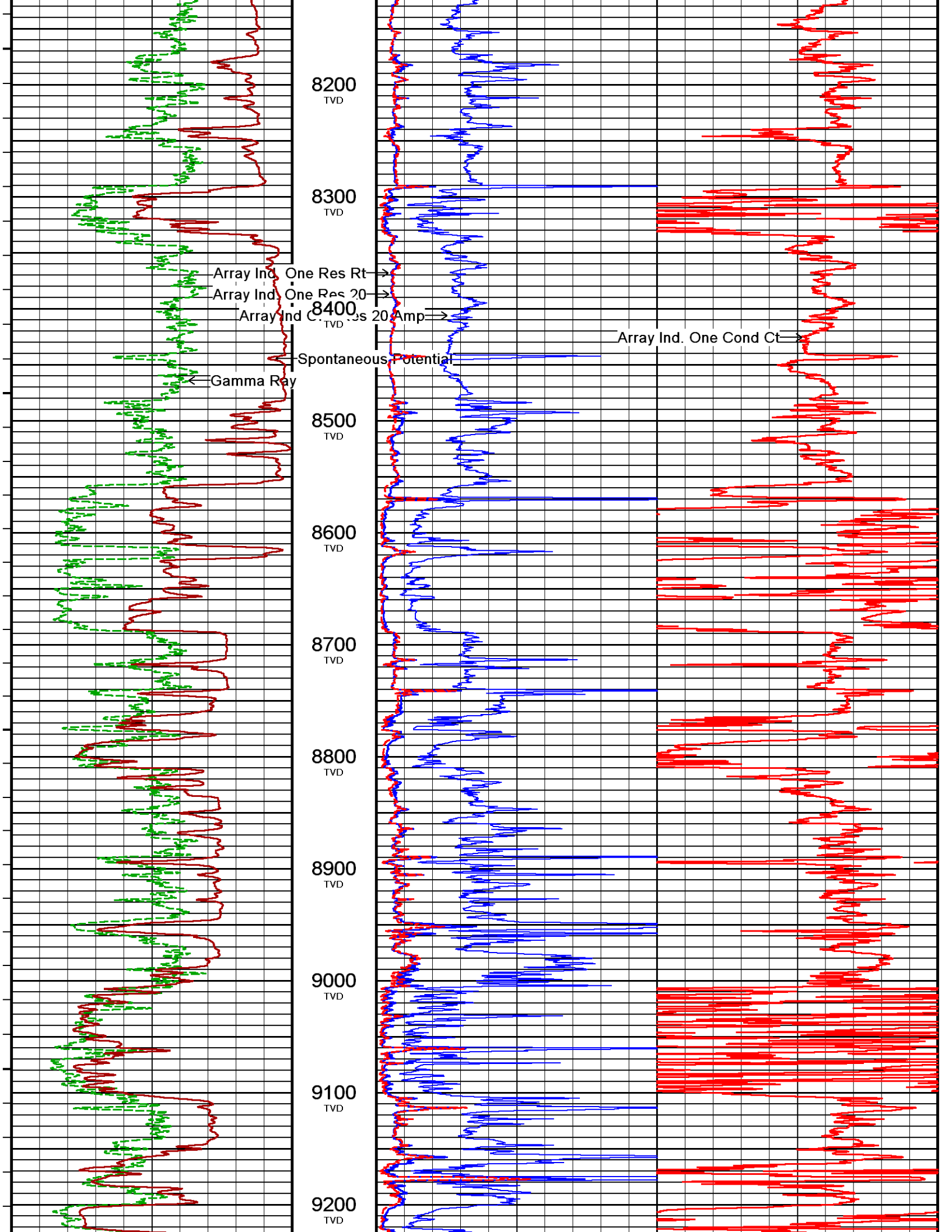


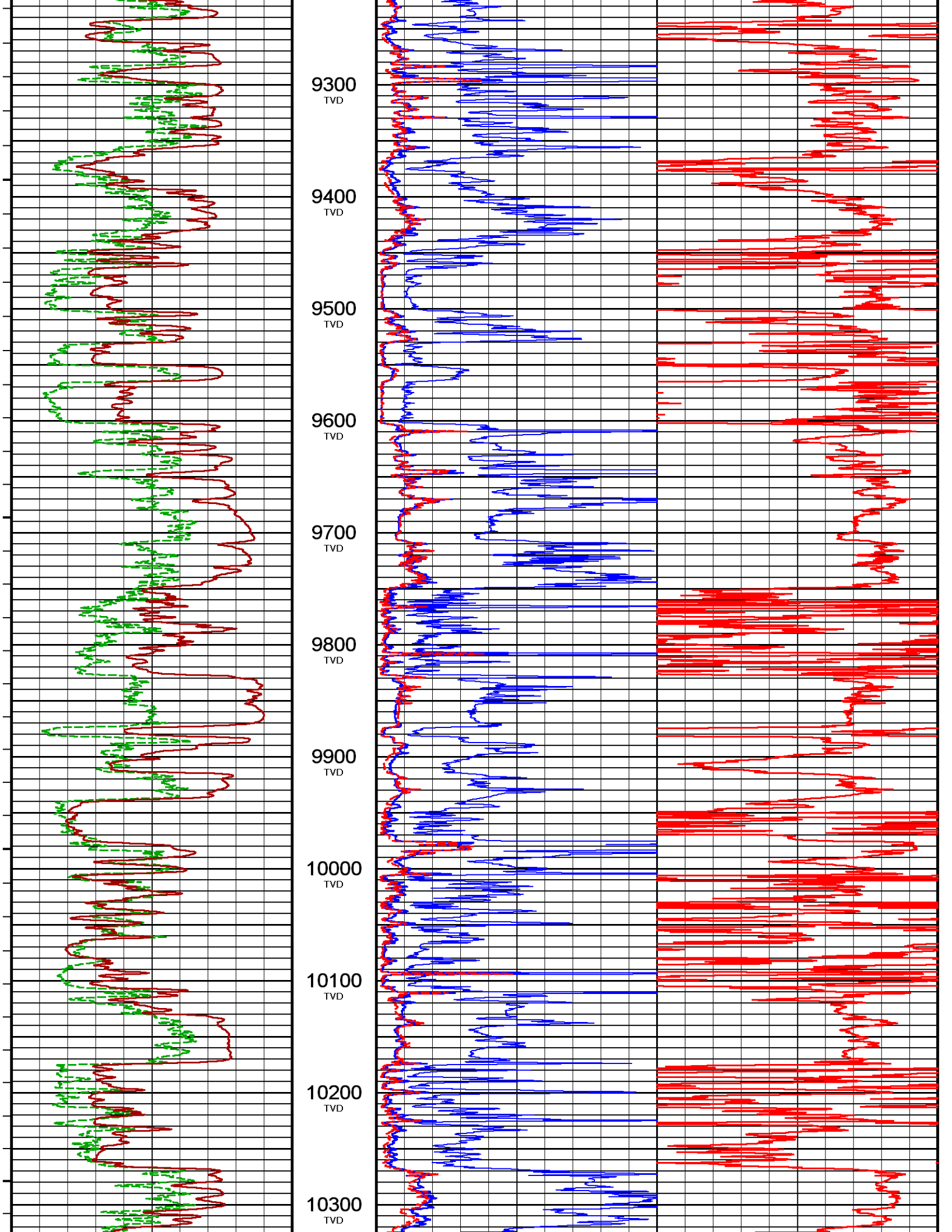


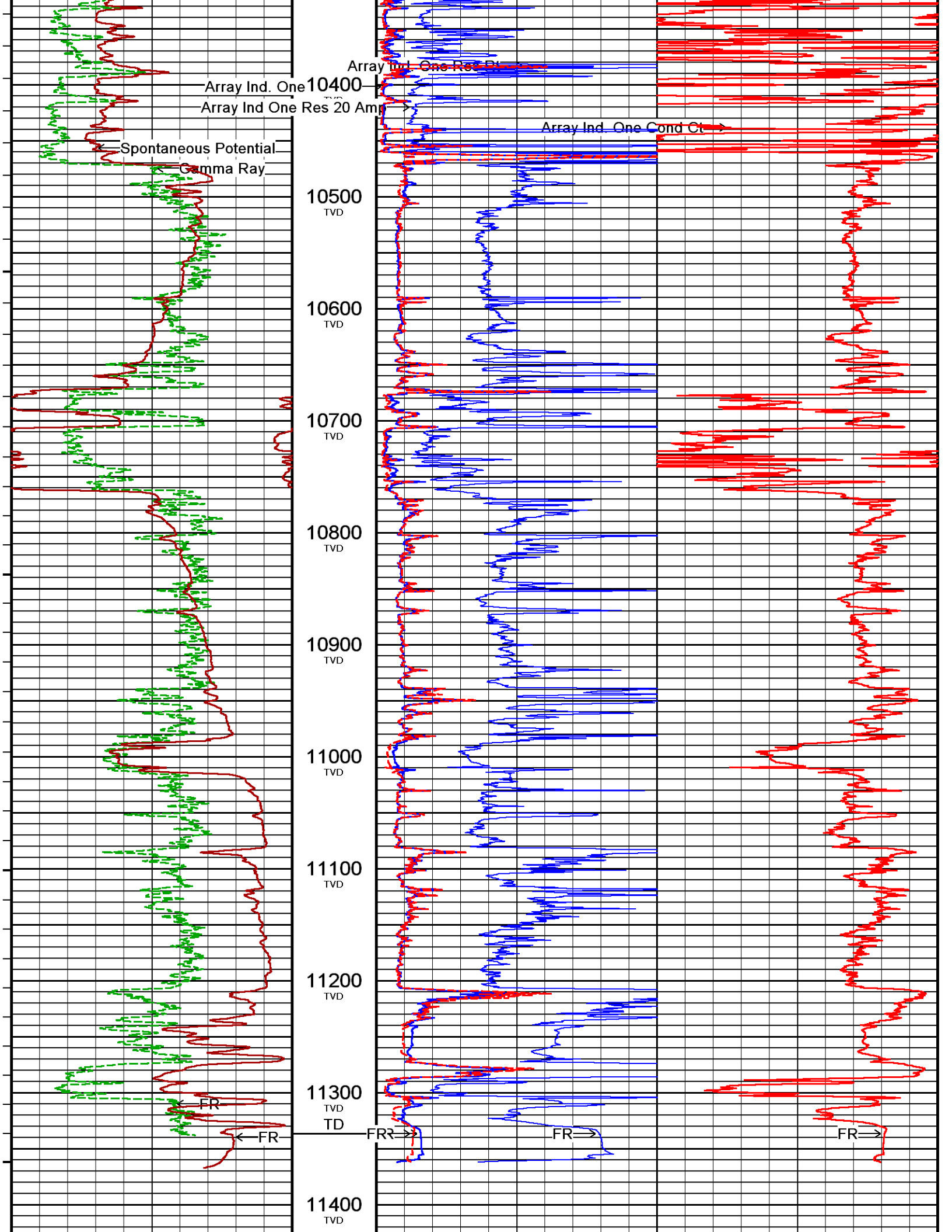


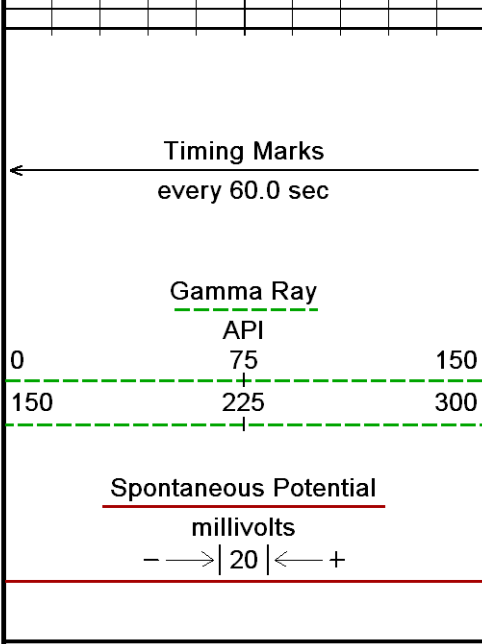






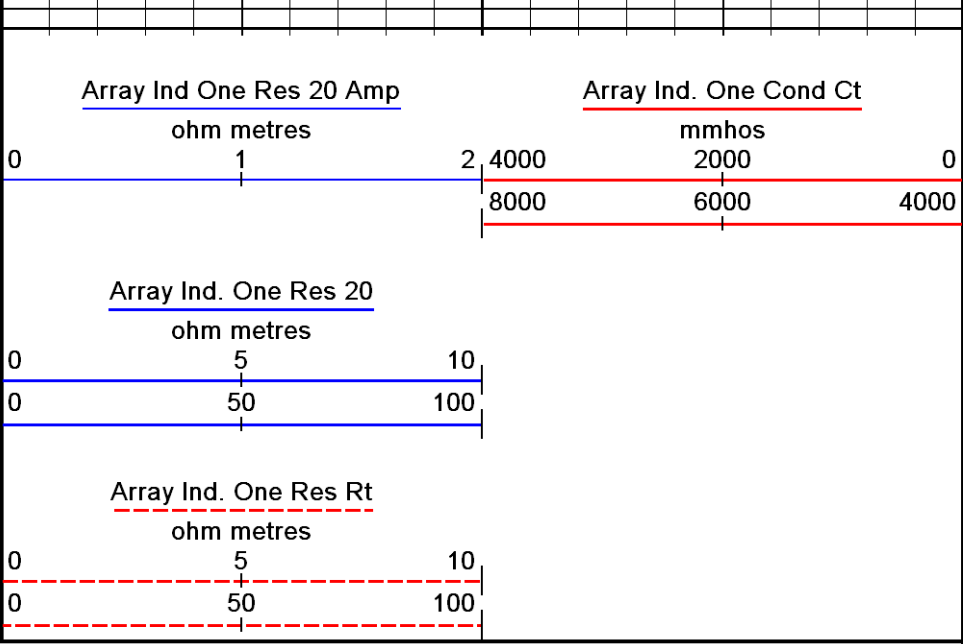






TVD In Feet

Replay Scale 1:1200

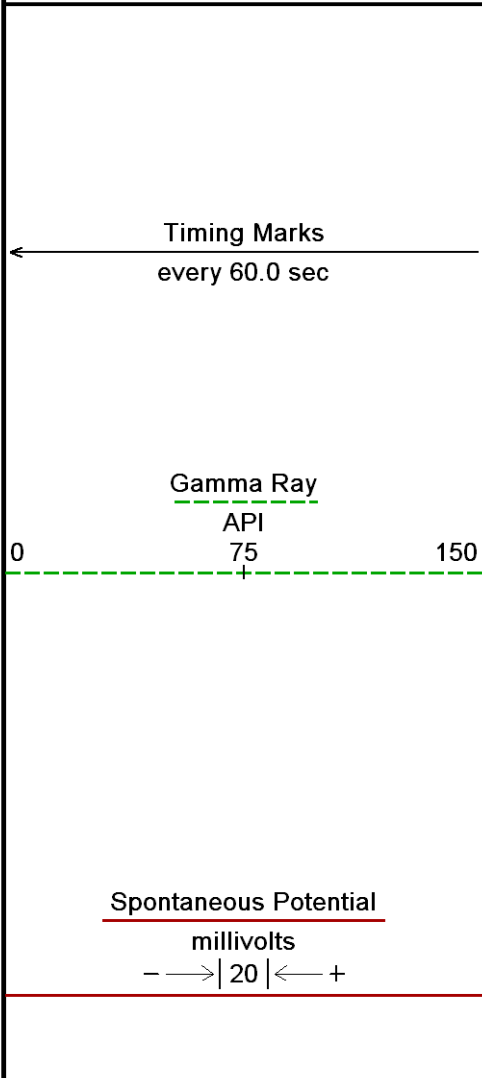


Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 04-JUL-2012 00:20  
 Filename: C:\Data\Smith Production\Edmond Richard #1\uplog2.dta Recorded on 03-JUL-2012 15:11  
 System Versions: Logged with 13.02.6600 Plotted with 13.02.6600

1" MAIN PASS TVD 1:1200

5" MAIN PASS TVD 1:240

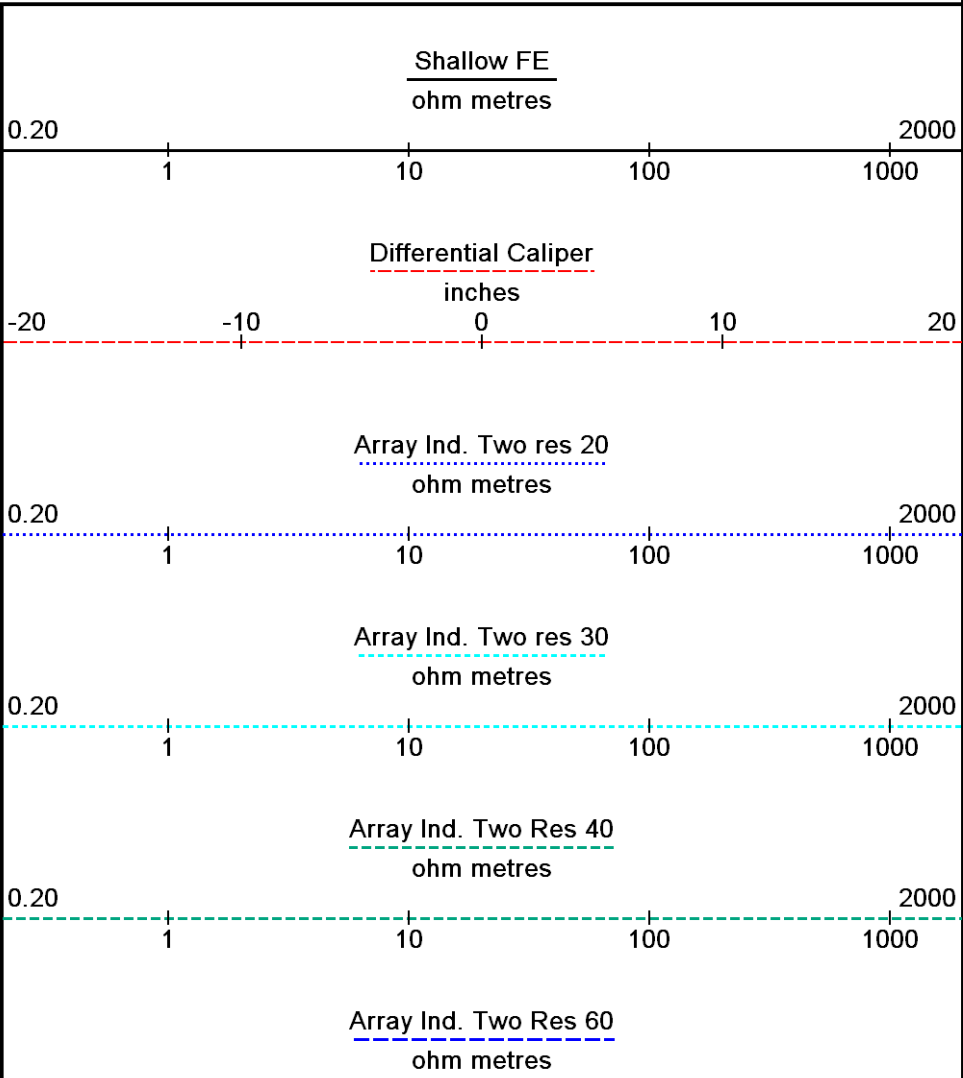
Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 04-JUL-2012 00:20  
 Filename: C:\Data\Smith Production\Edmond Richard #1\uplog2.dta Recorded on 03-JUL-2012 15:11  
 System Versions: Logged with 13.02.6600 Plotted with 13.02.6600

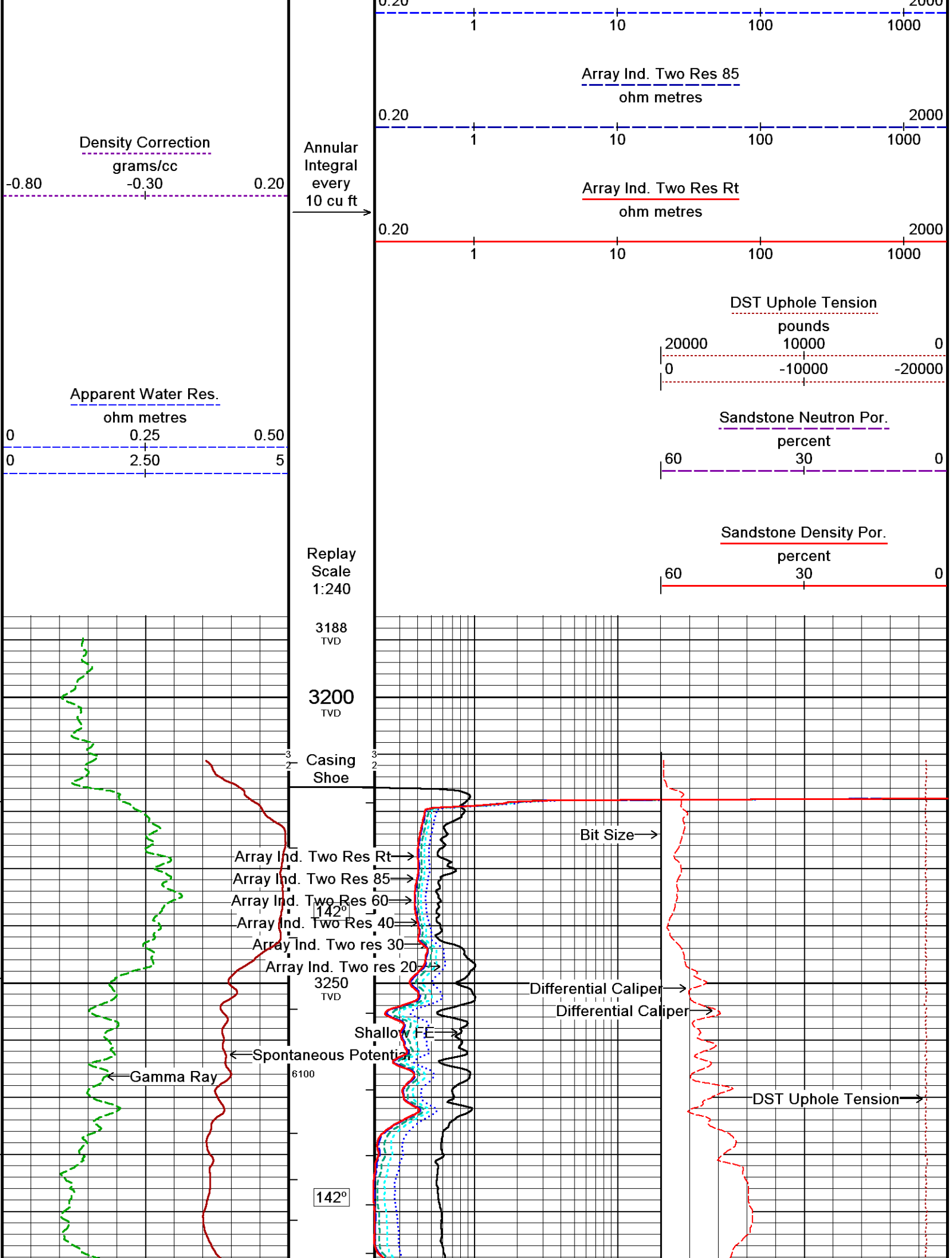


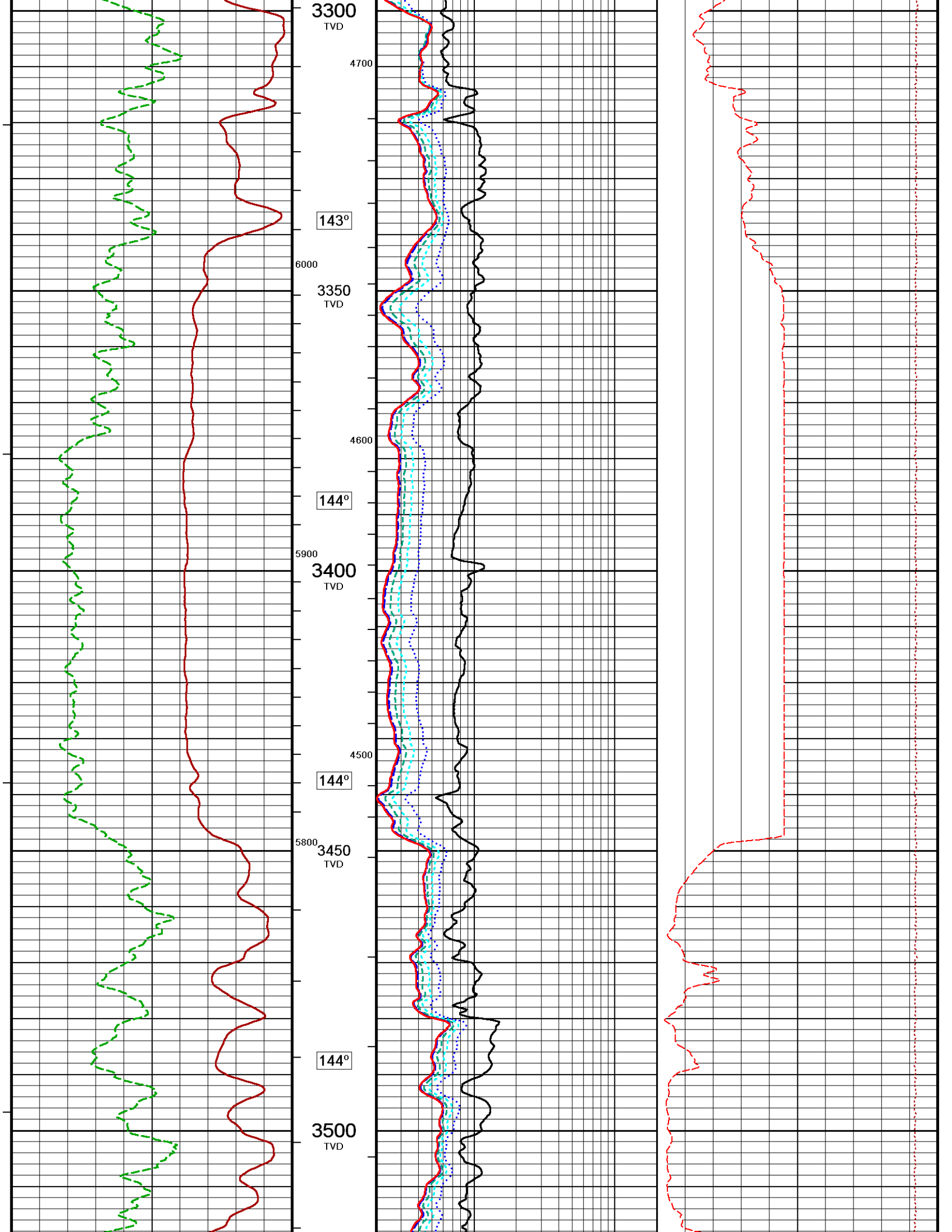
TVD In Feet

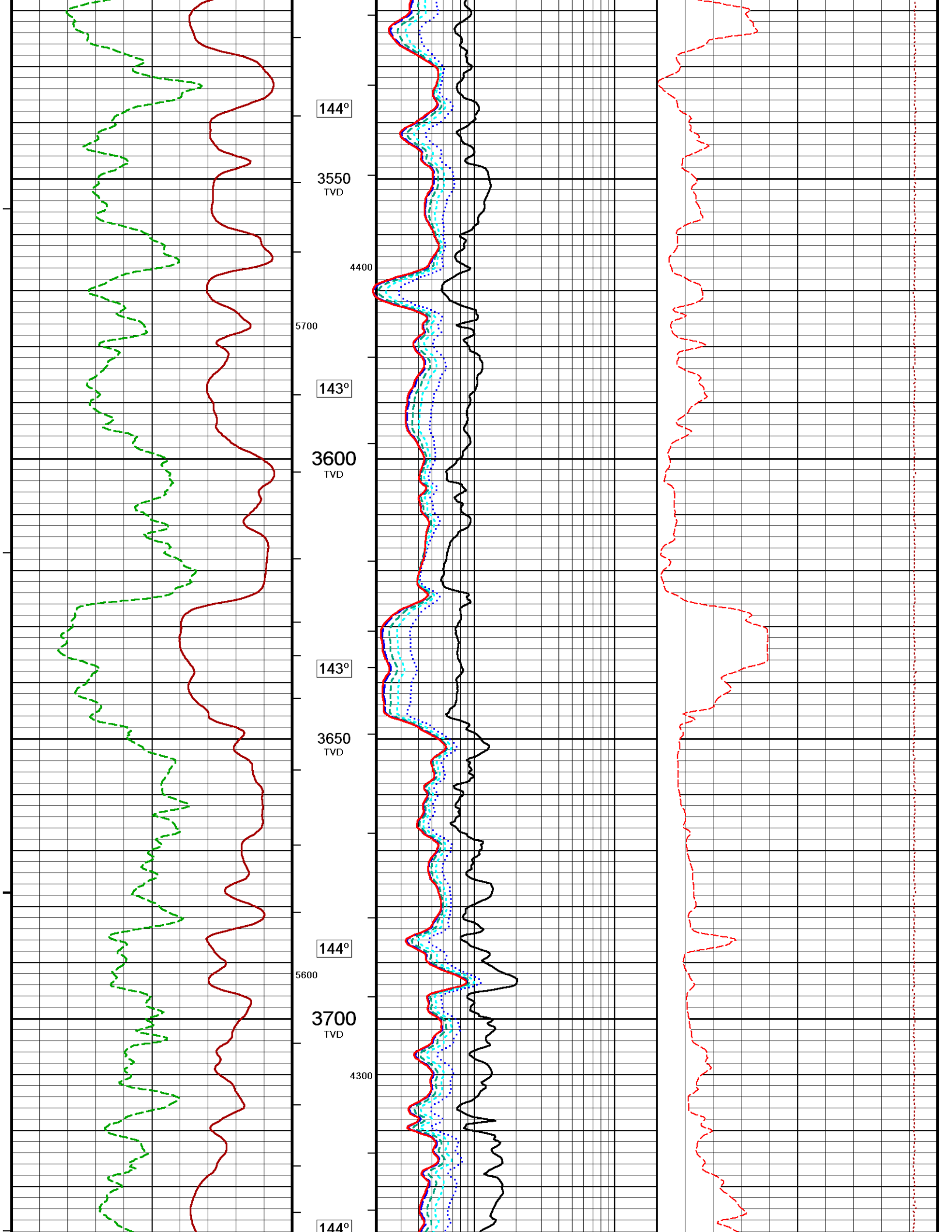
Borehole Temp in deg F

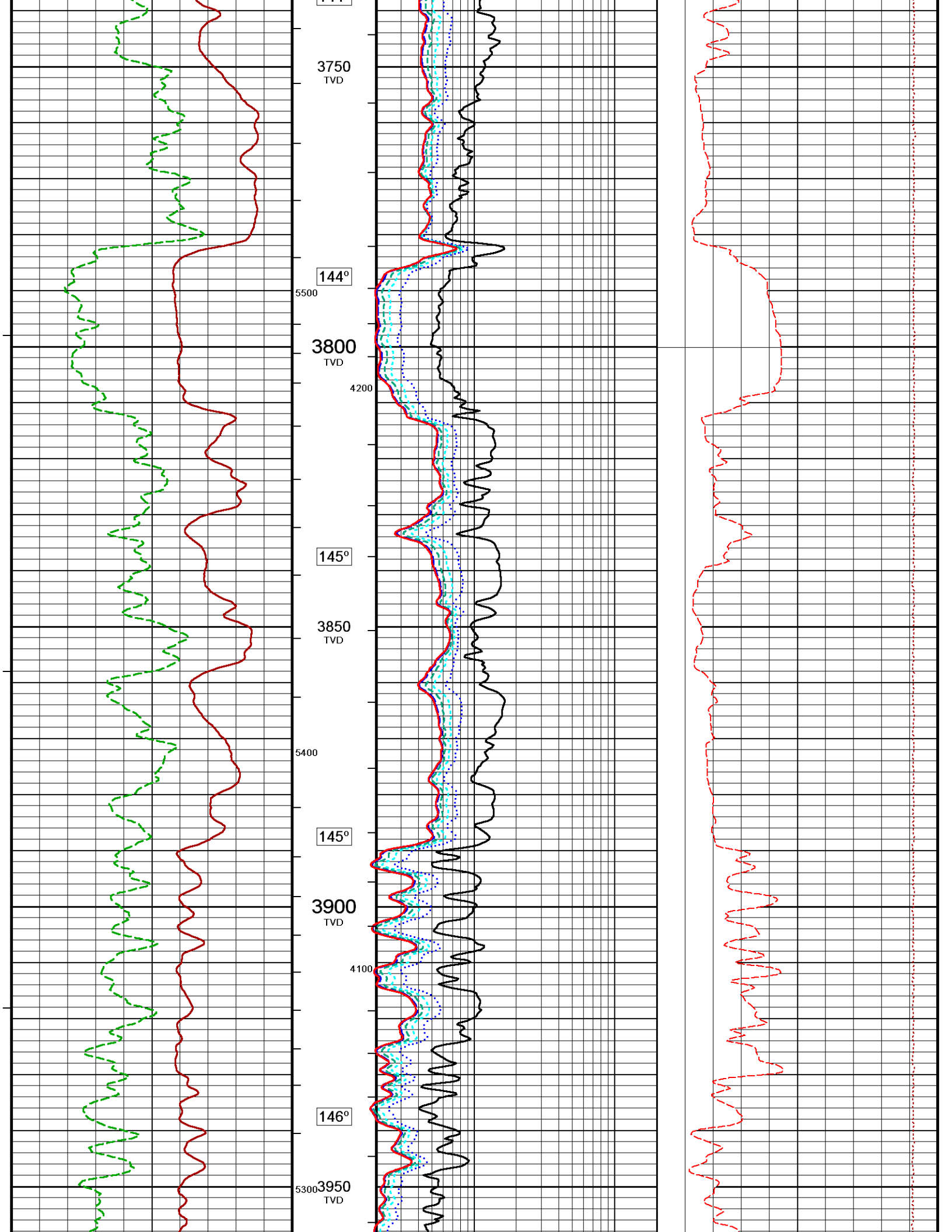
HVI every 10 cu ft

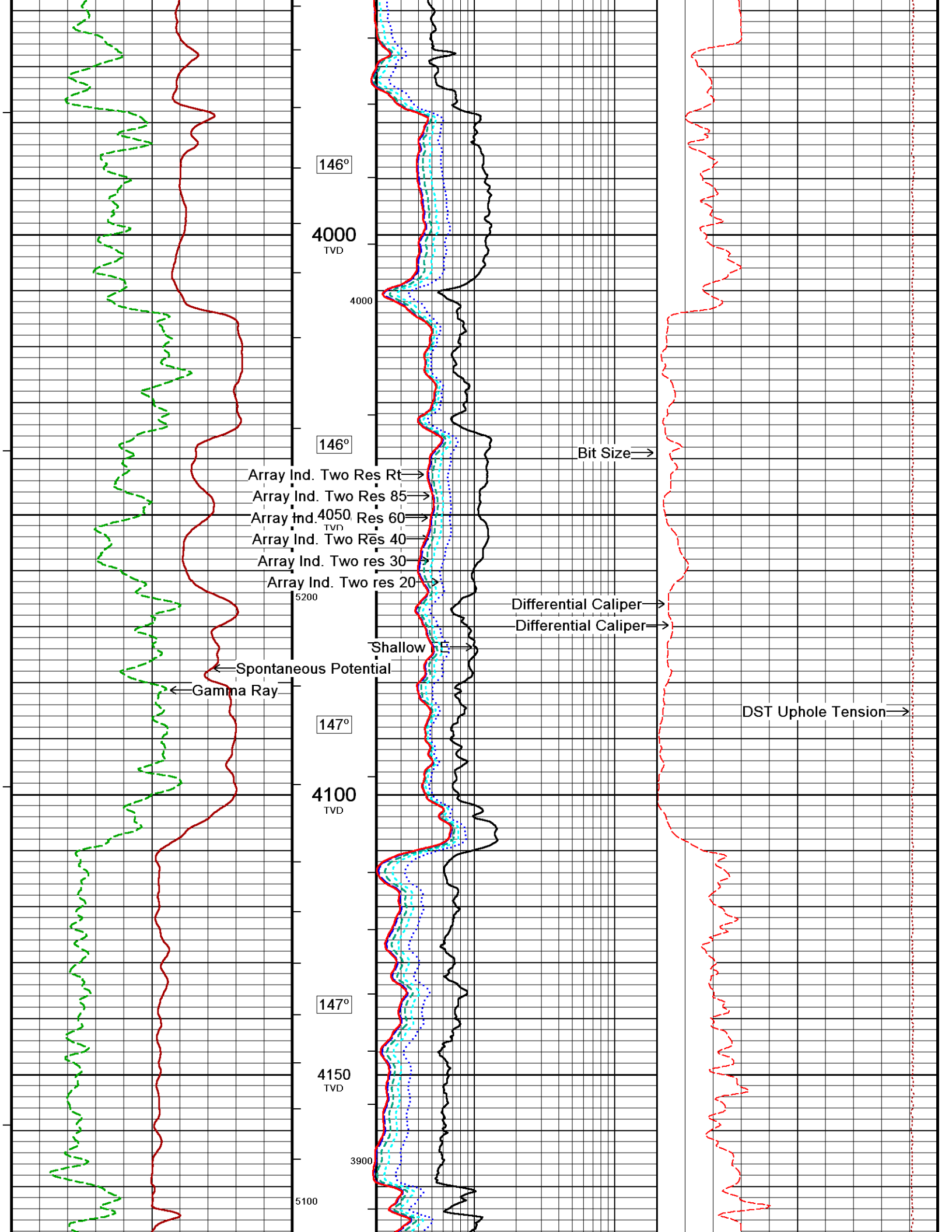


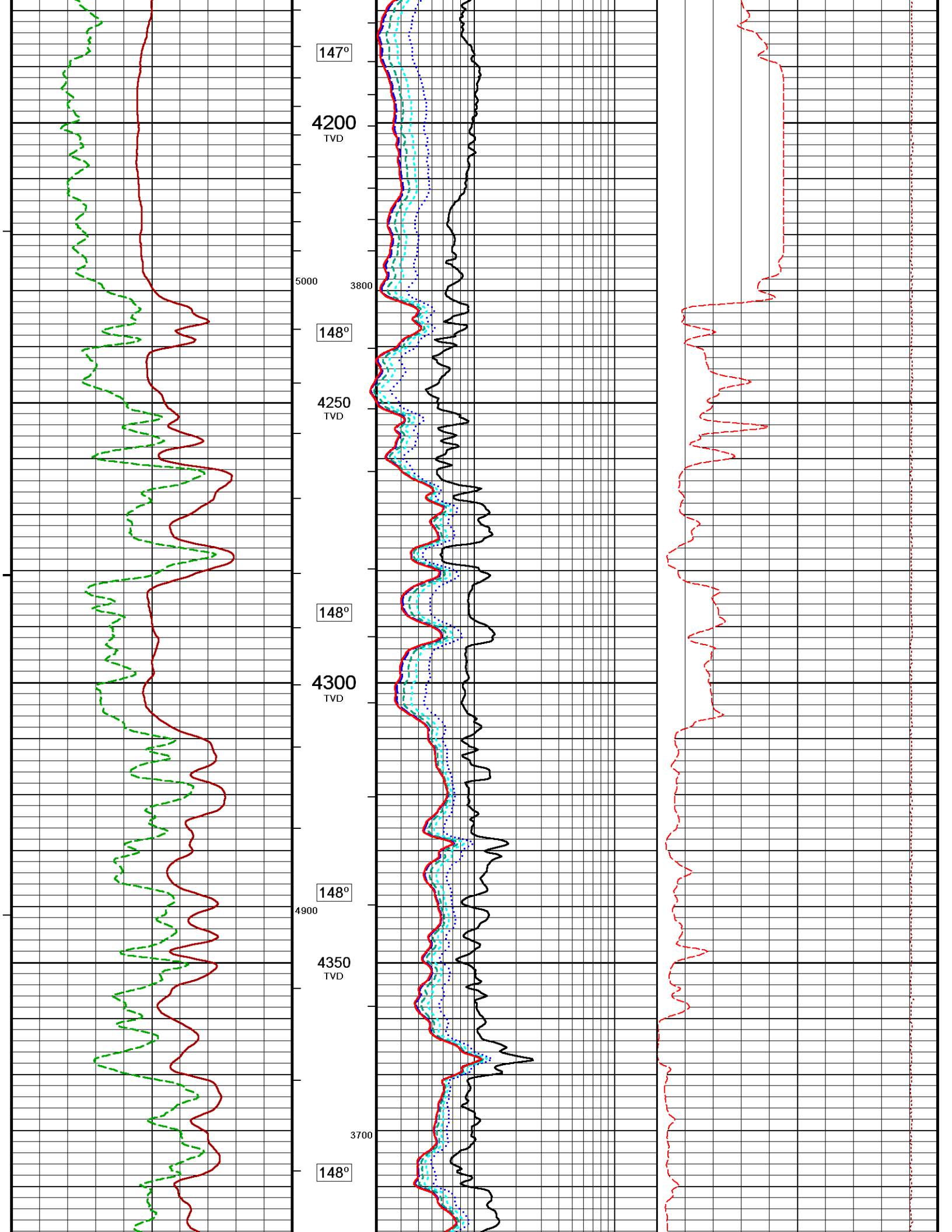


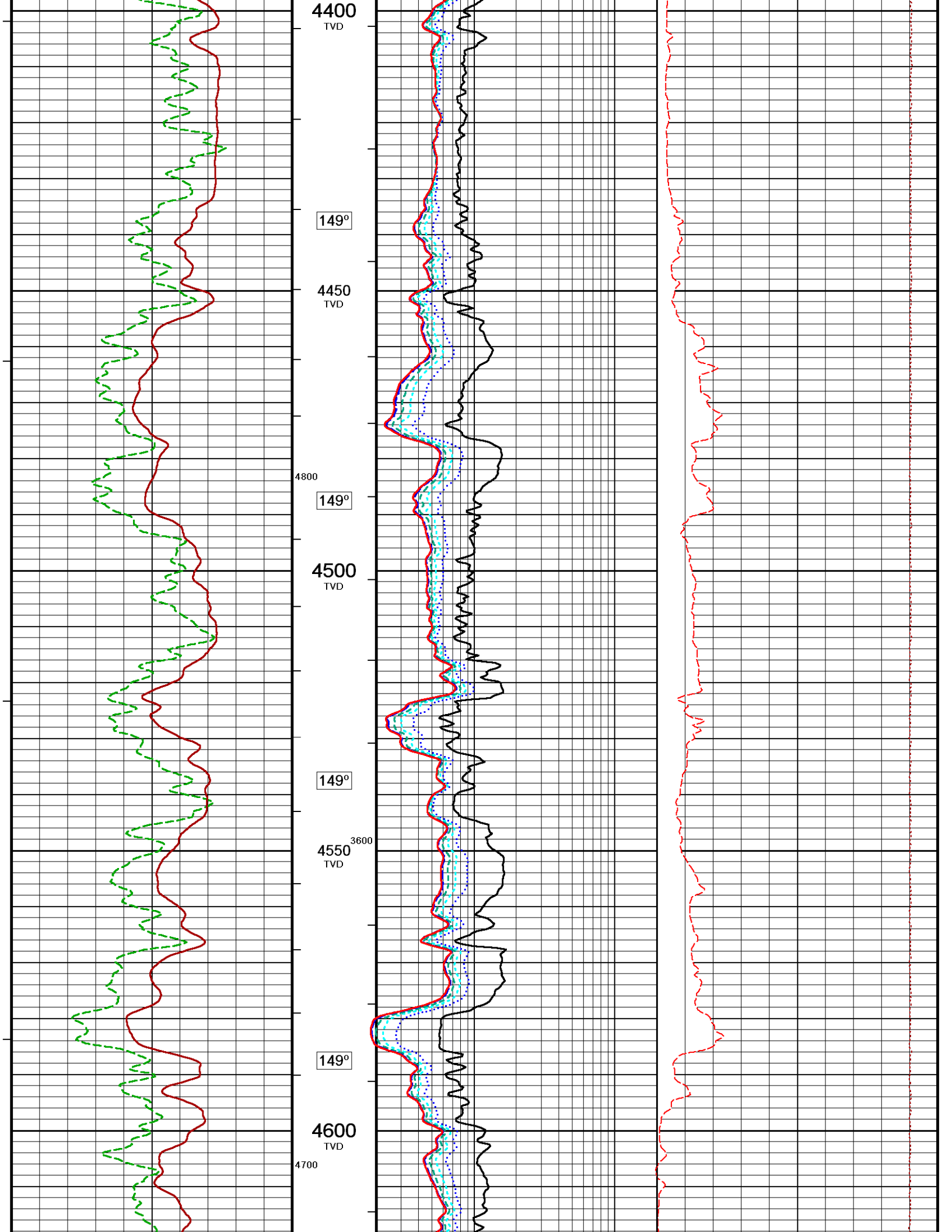


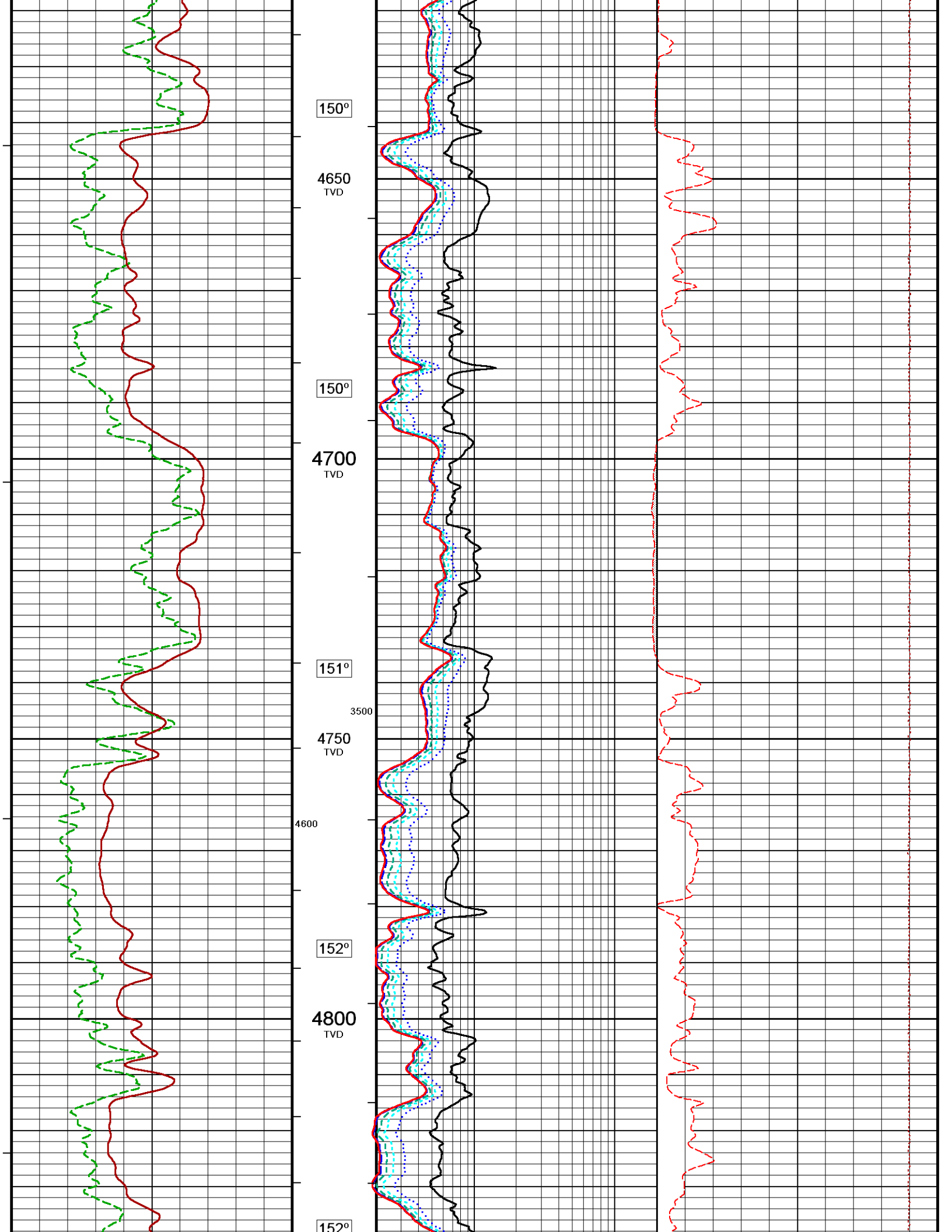


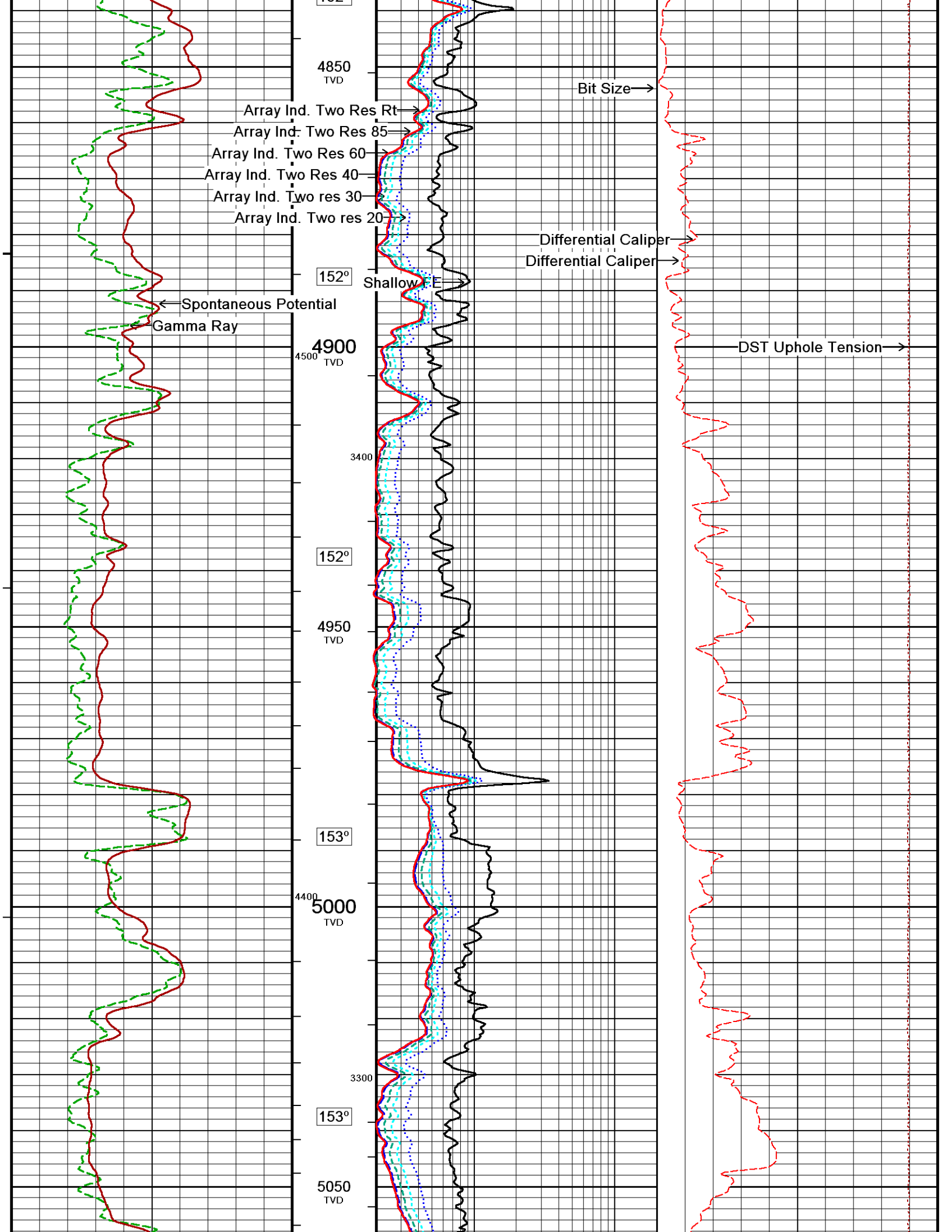


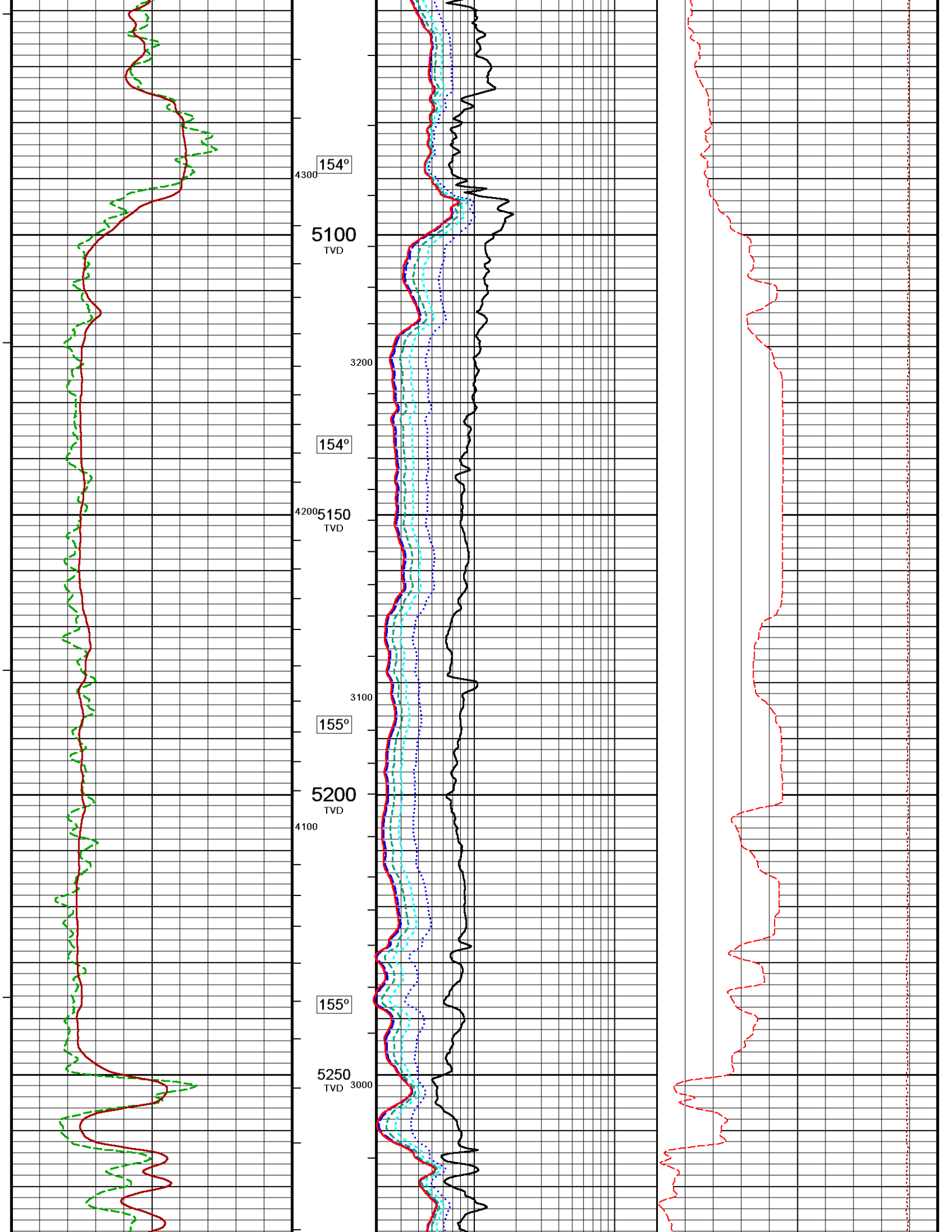


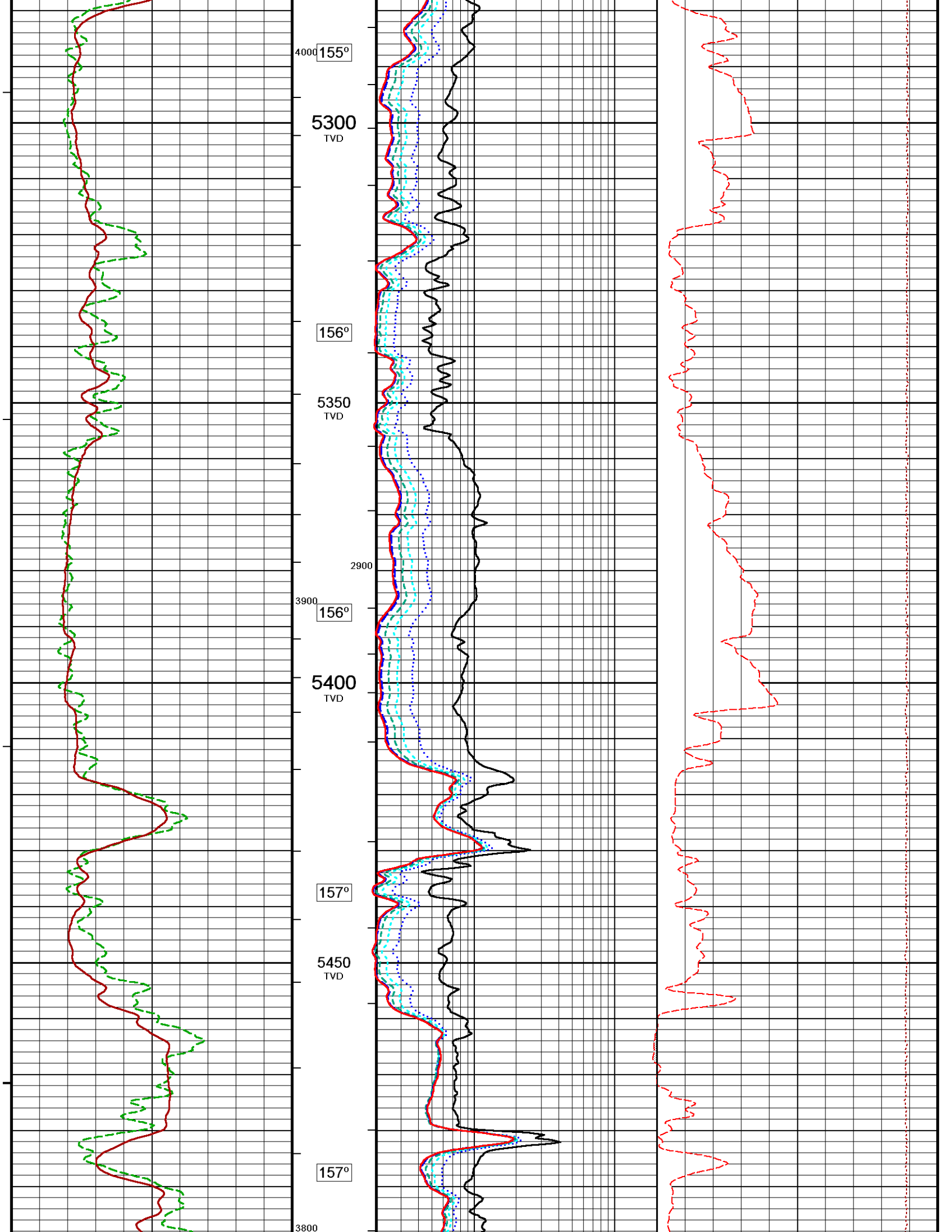


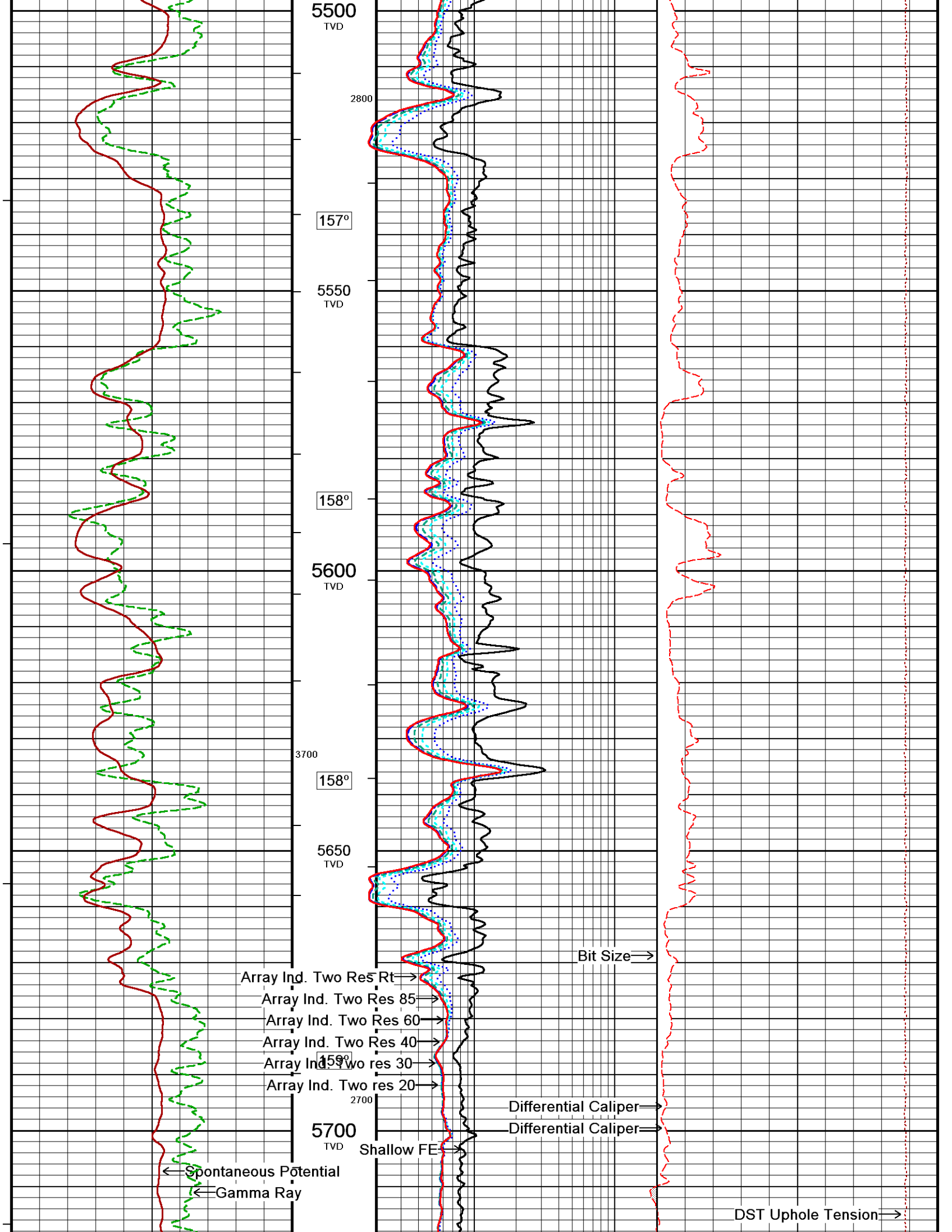


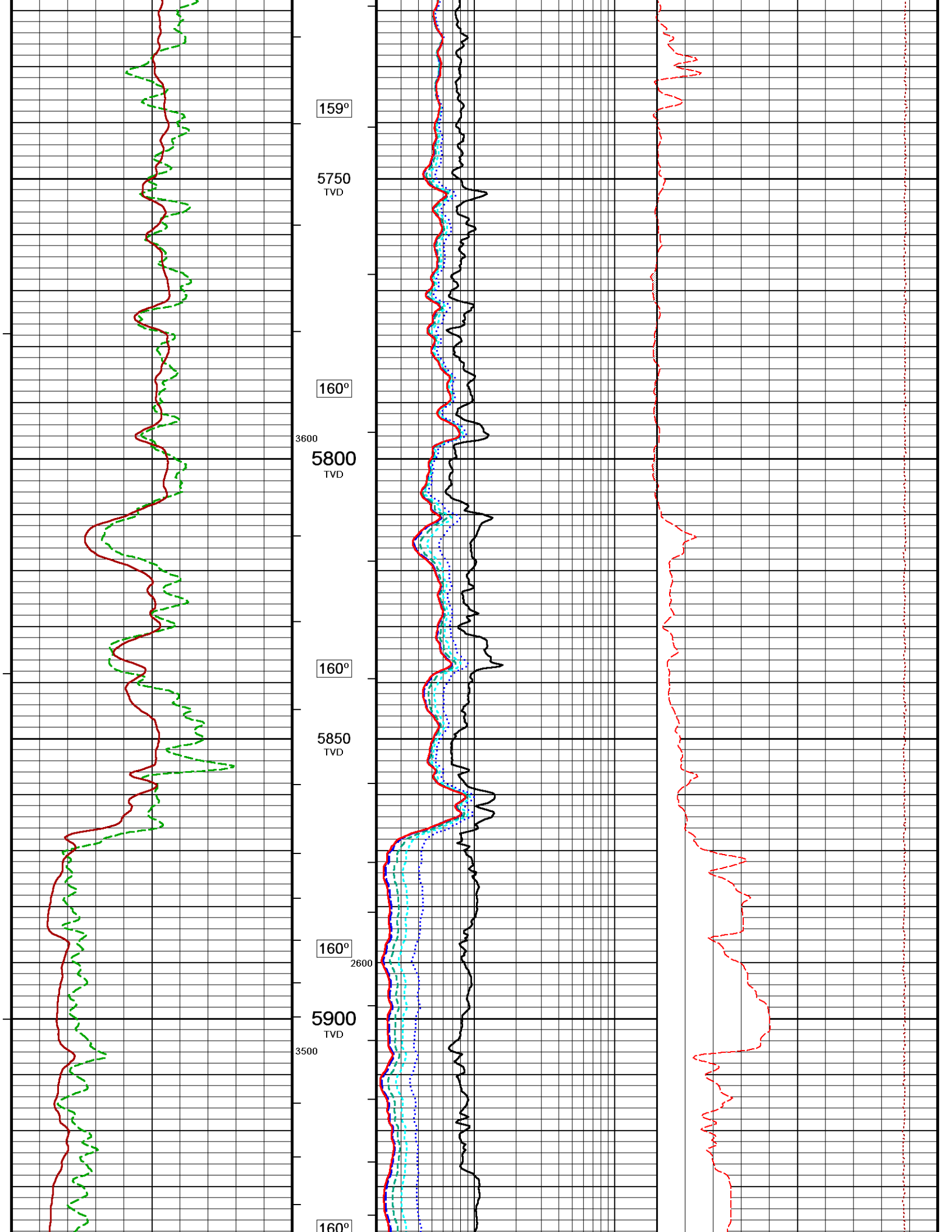


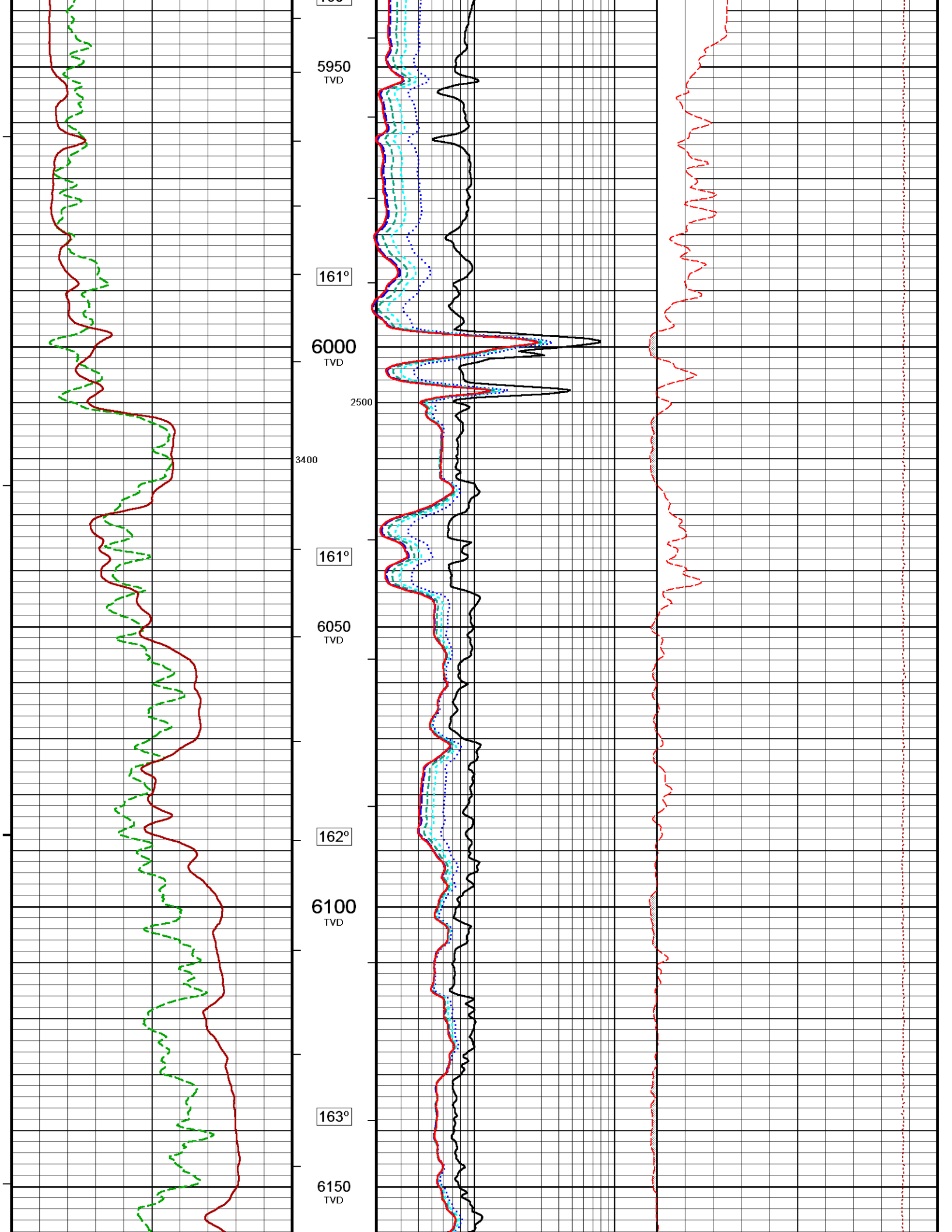


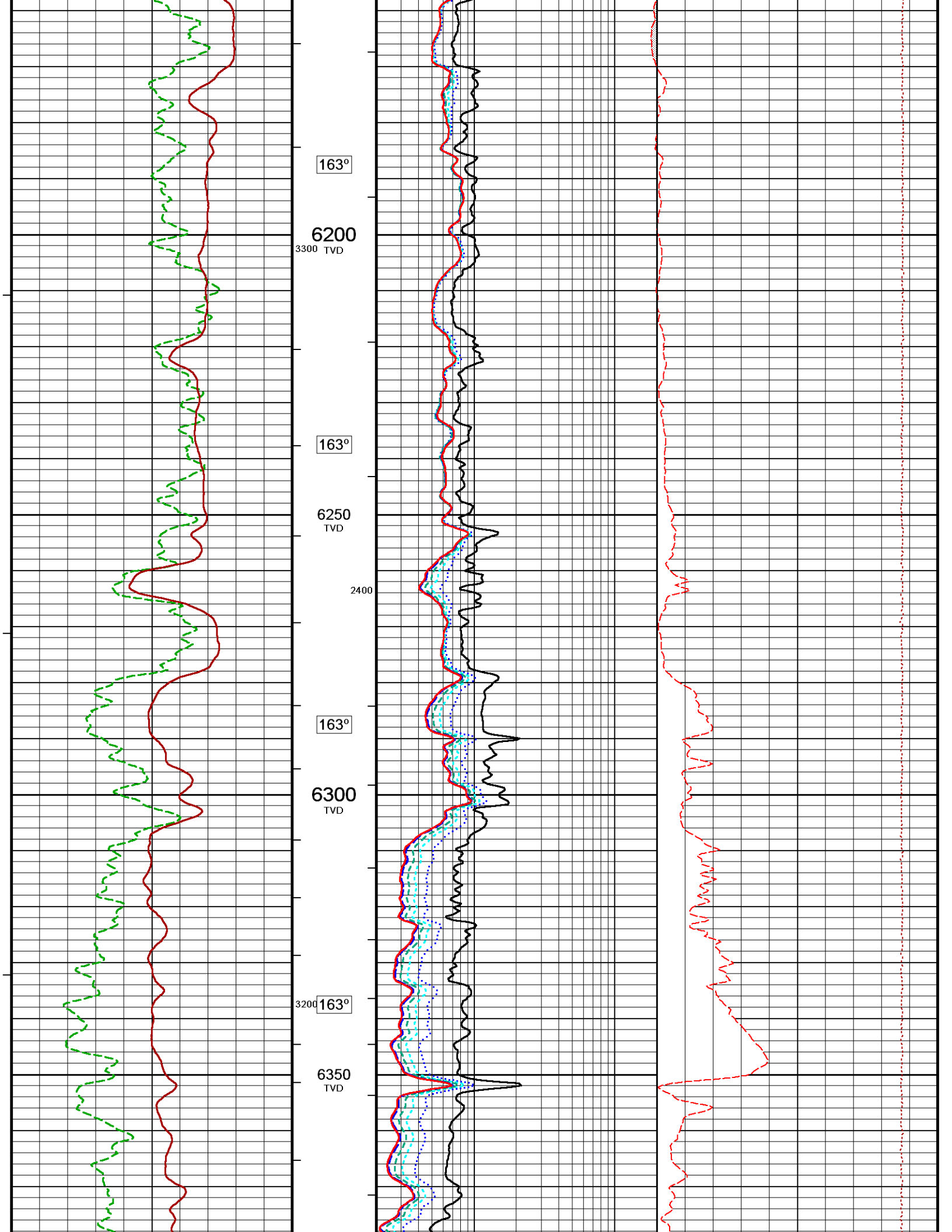


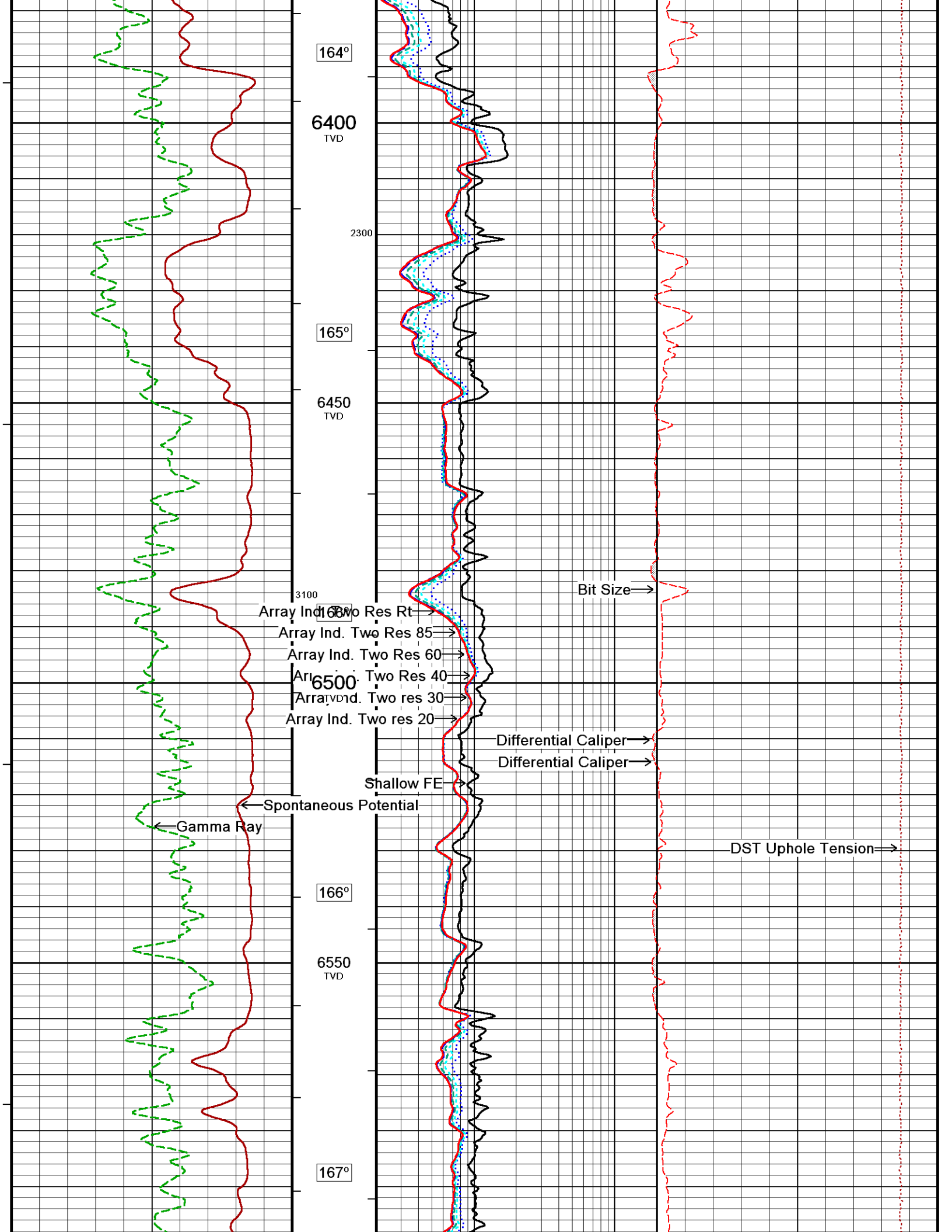


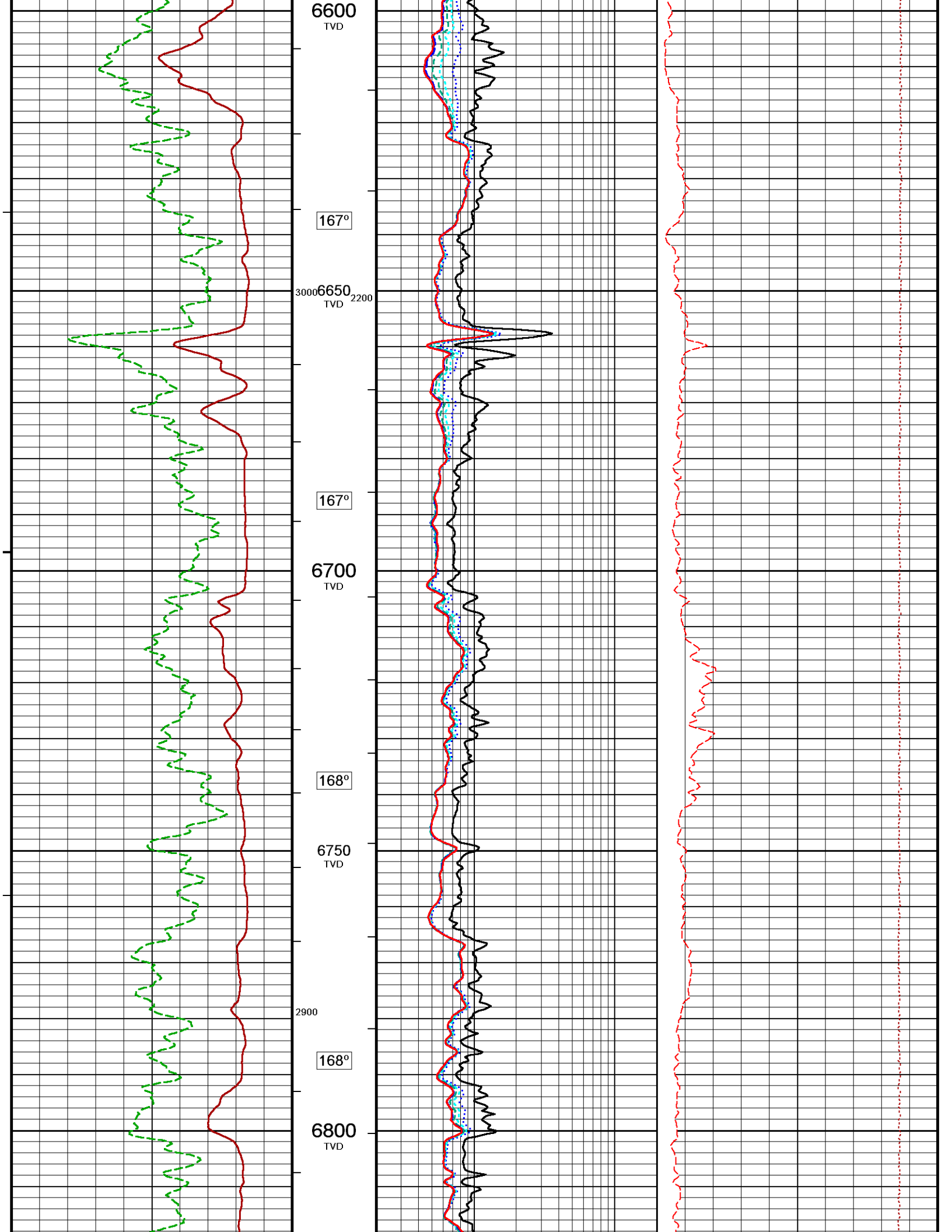


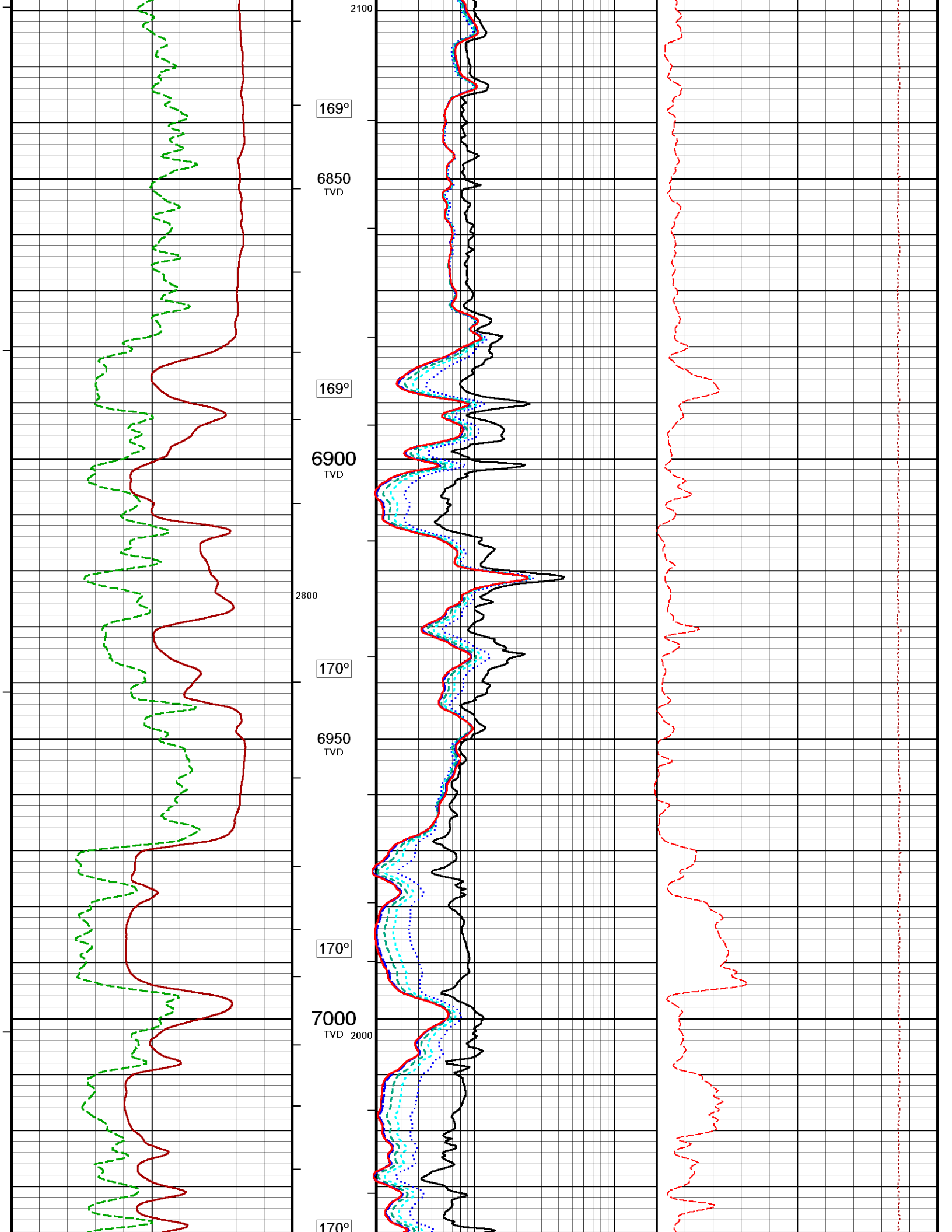


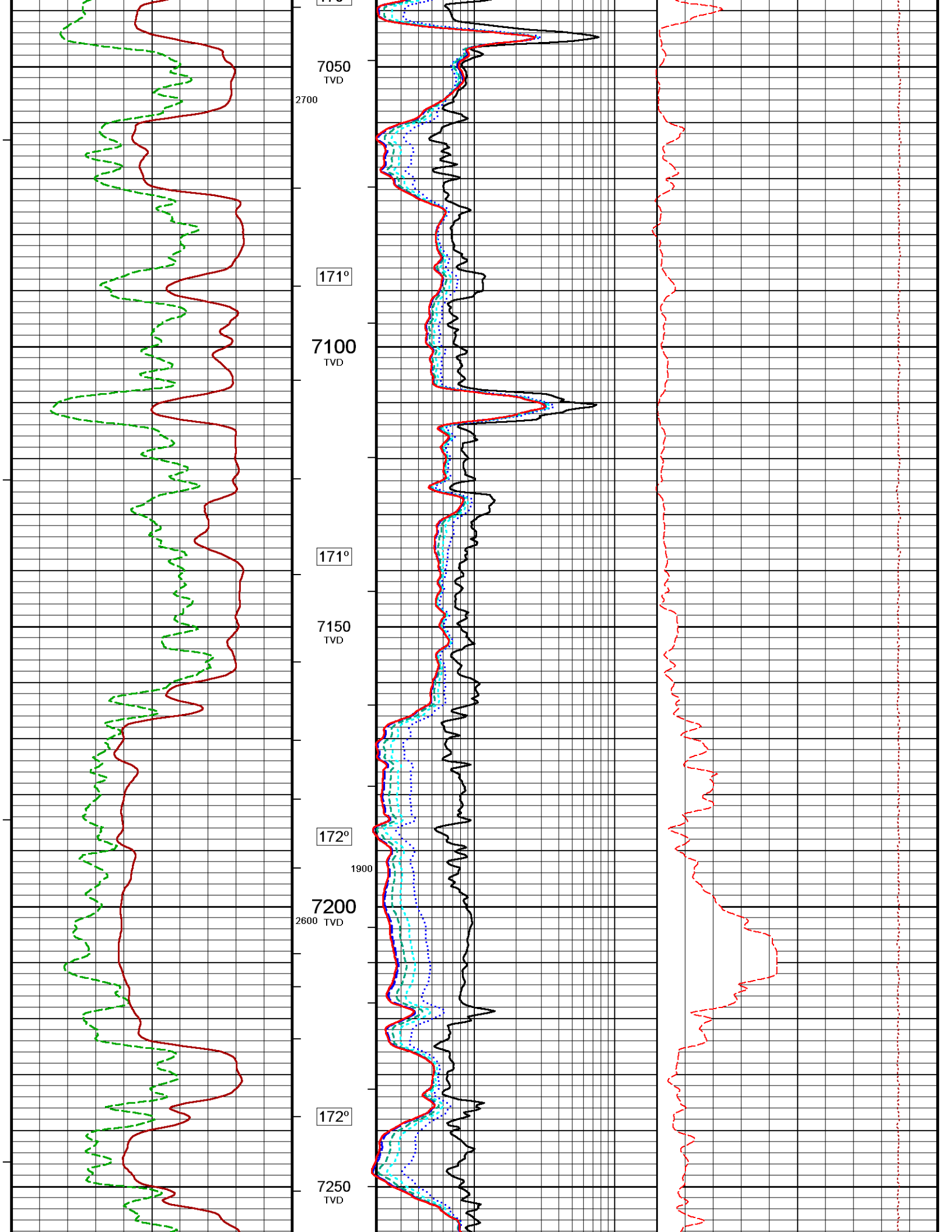


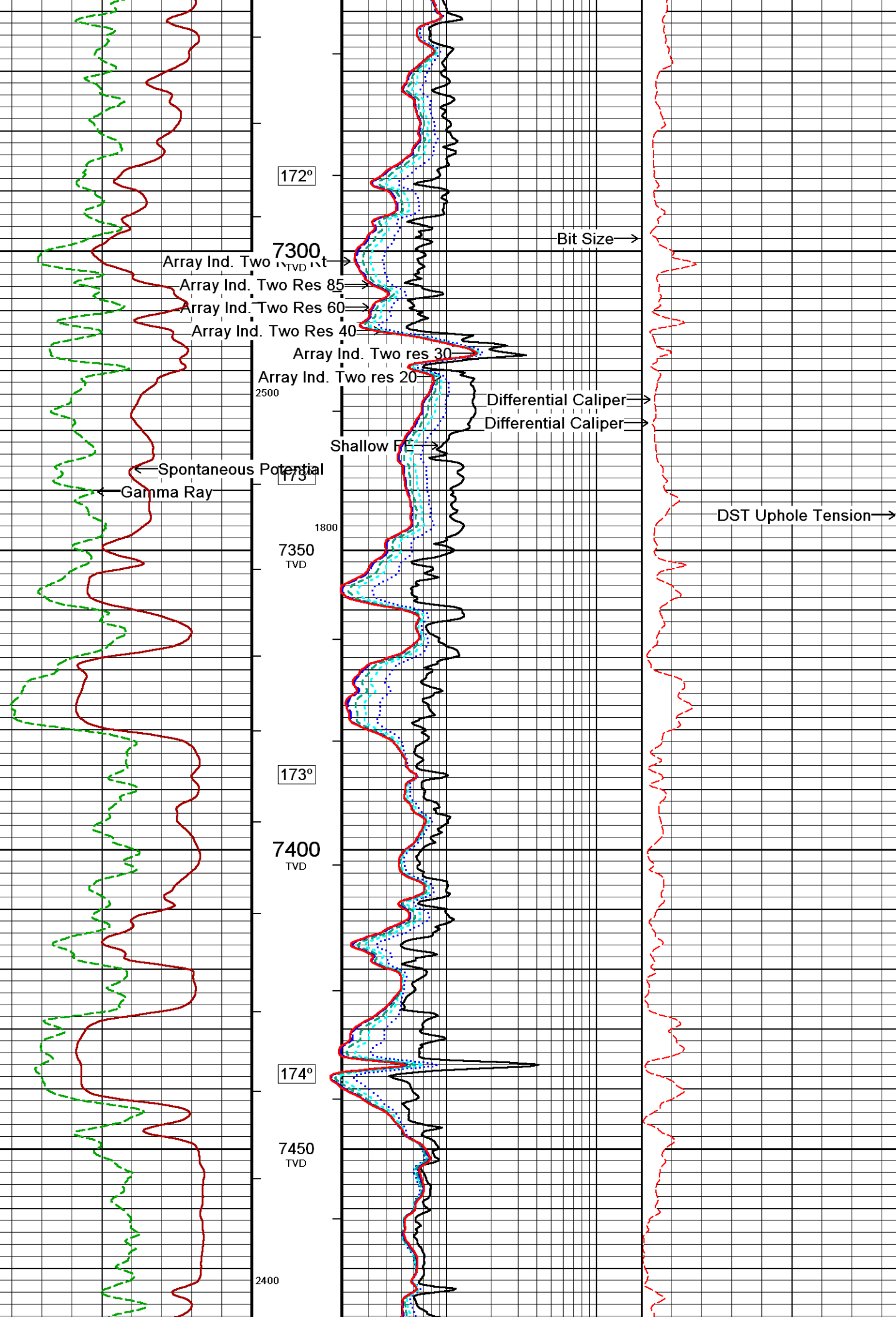


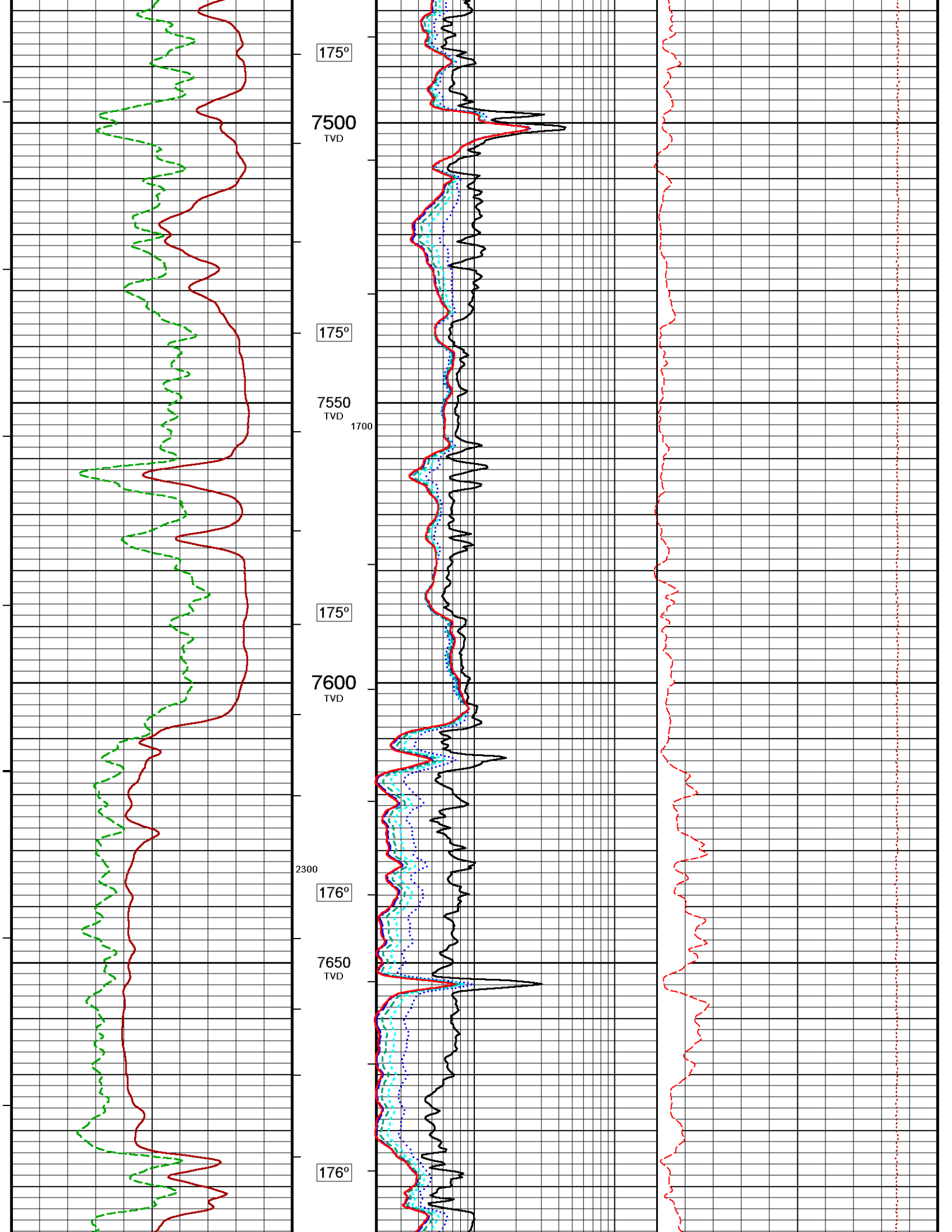


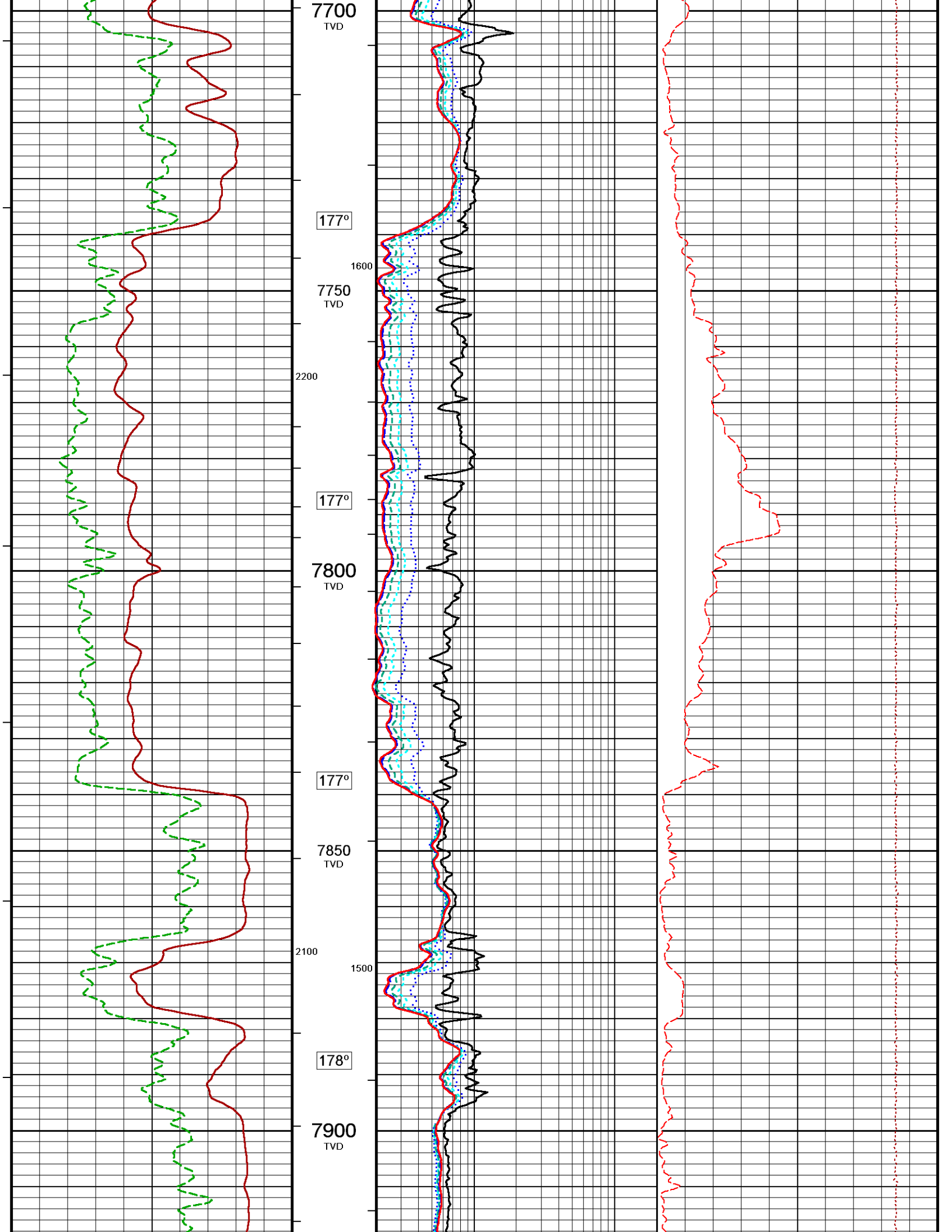


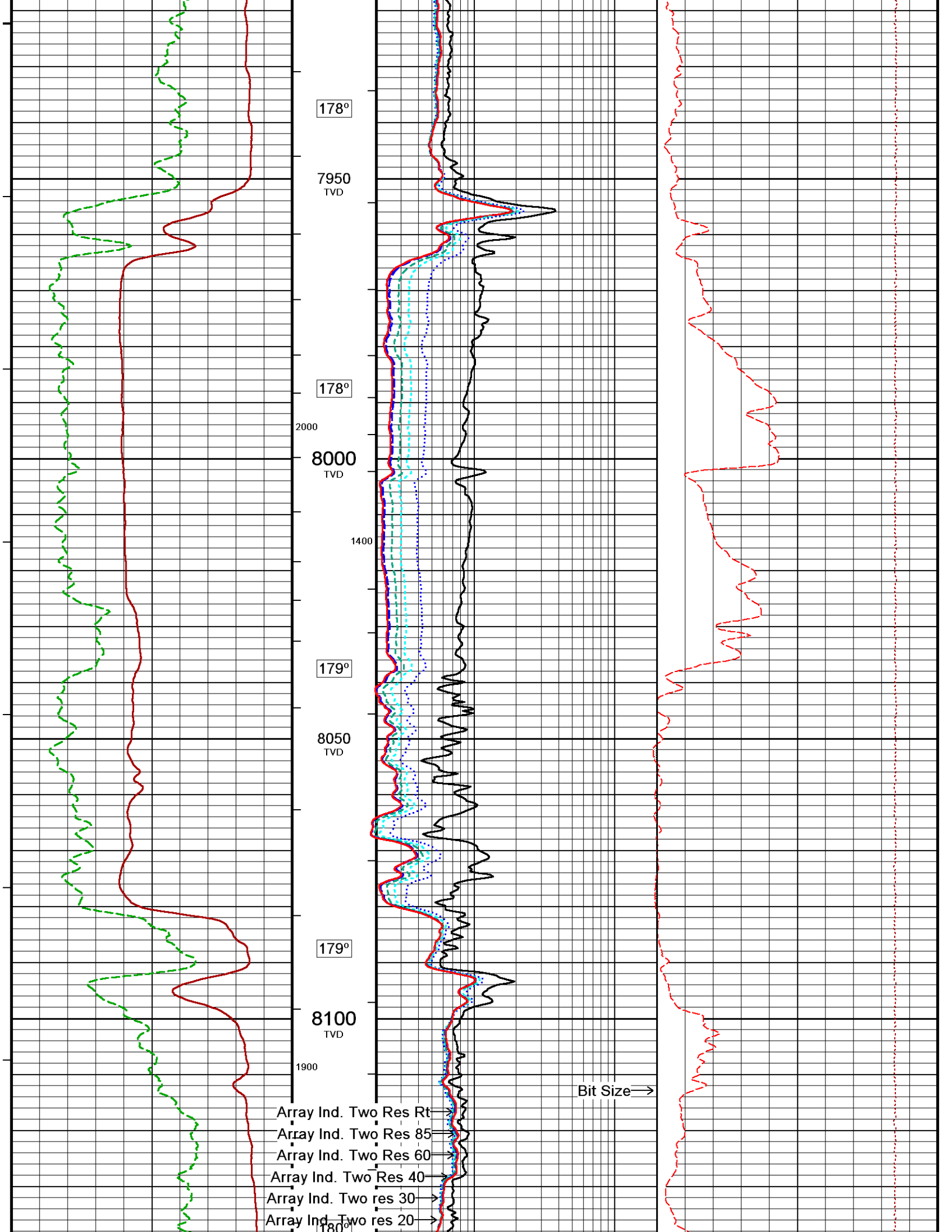


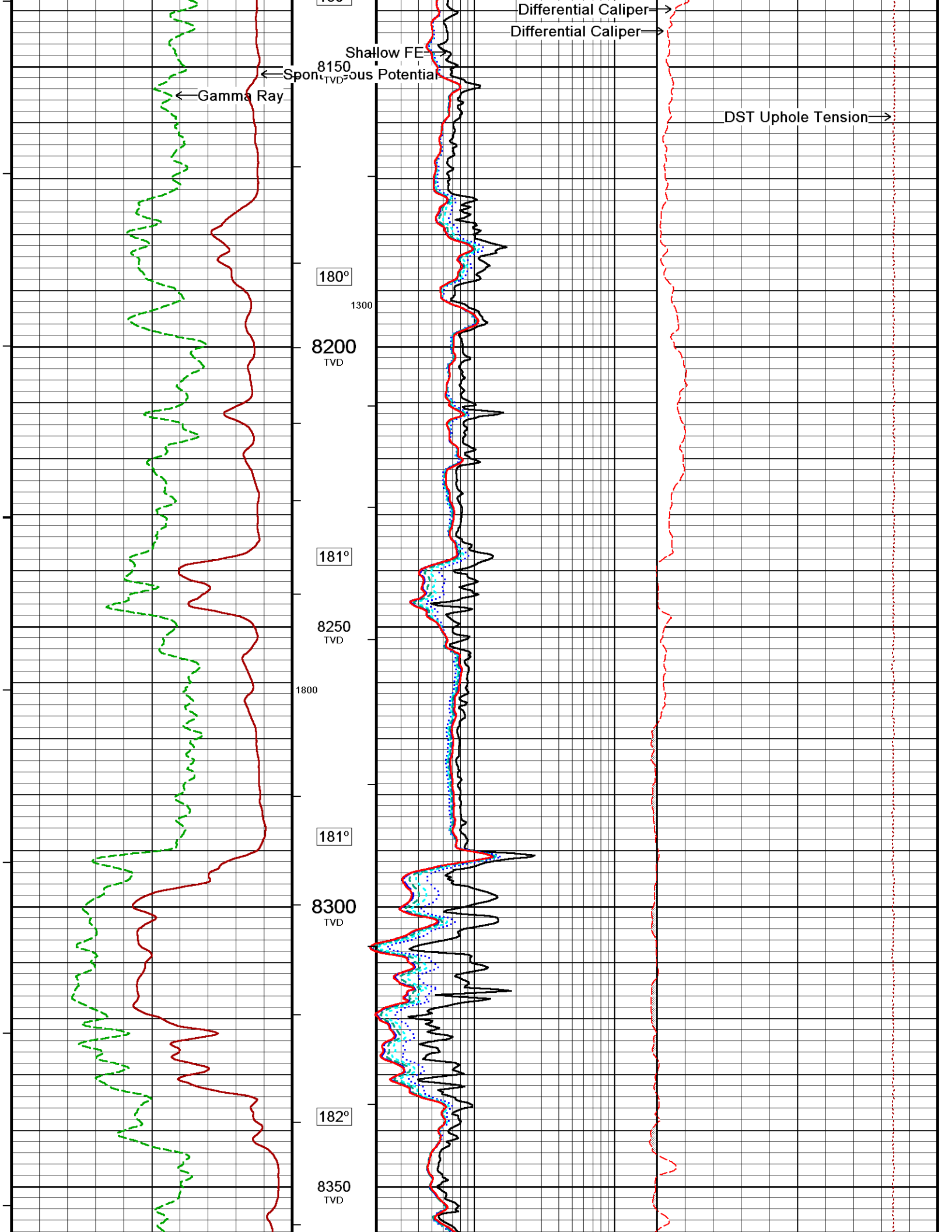




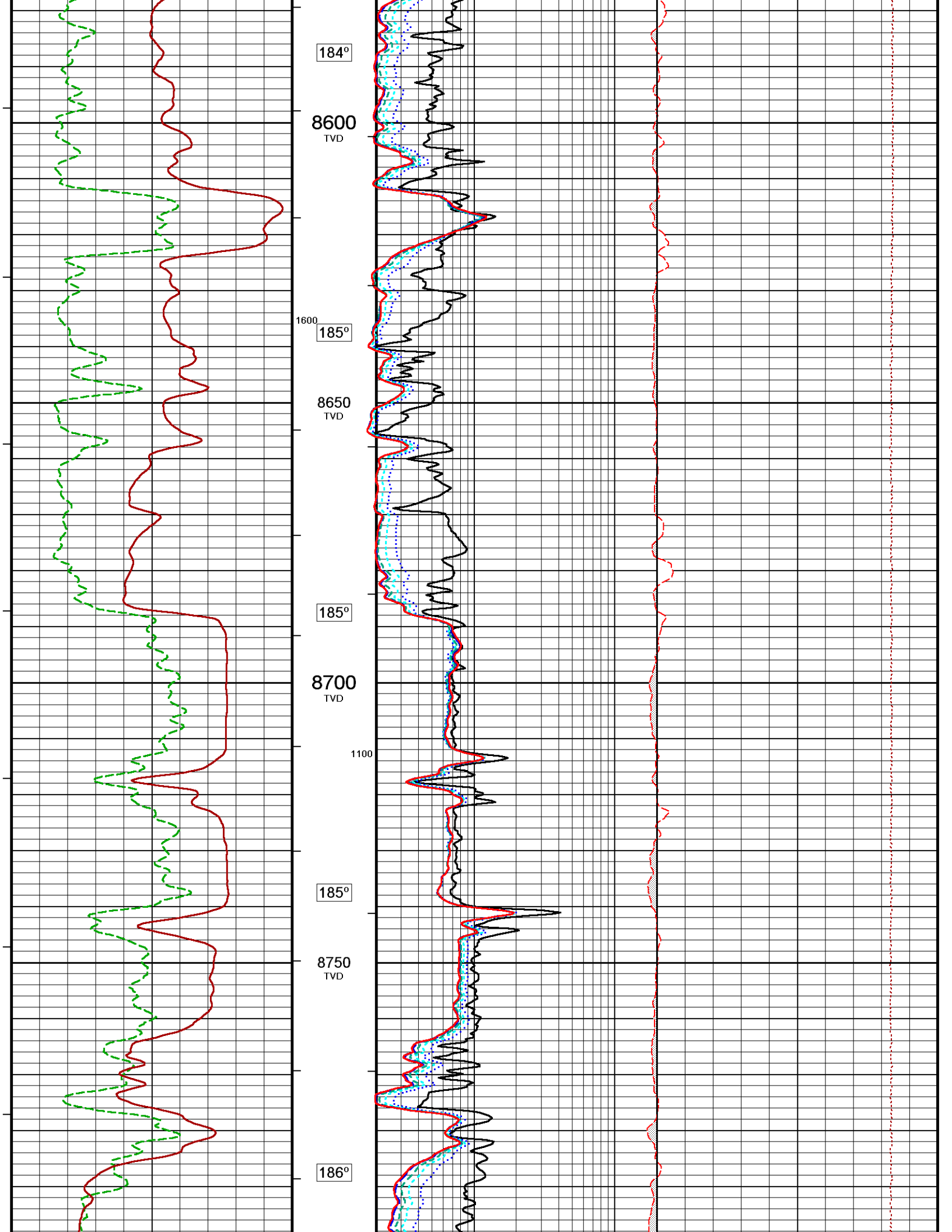


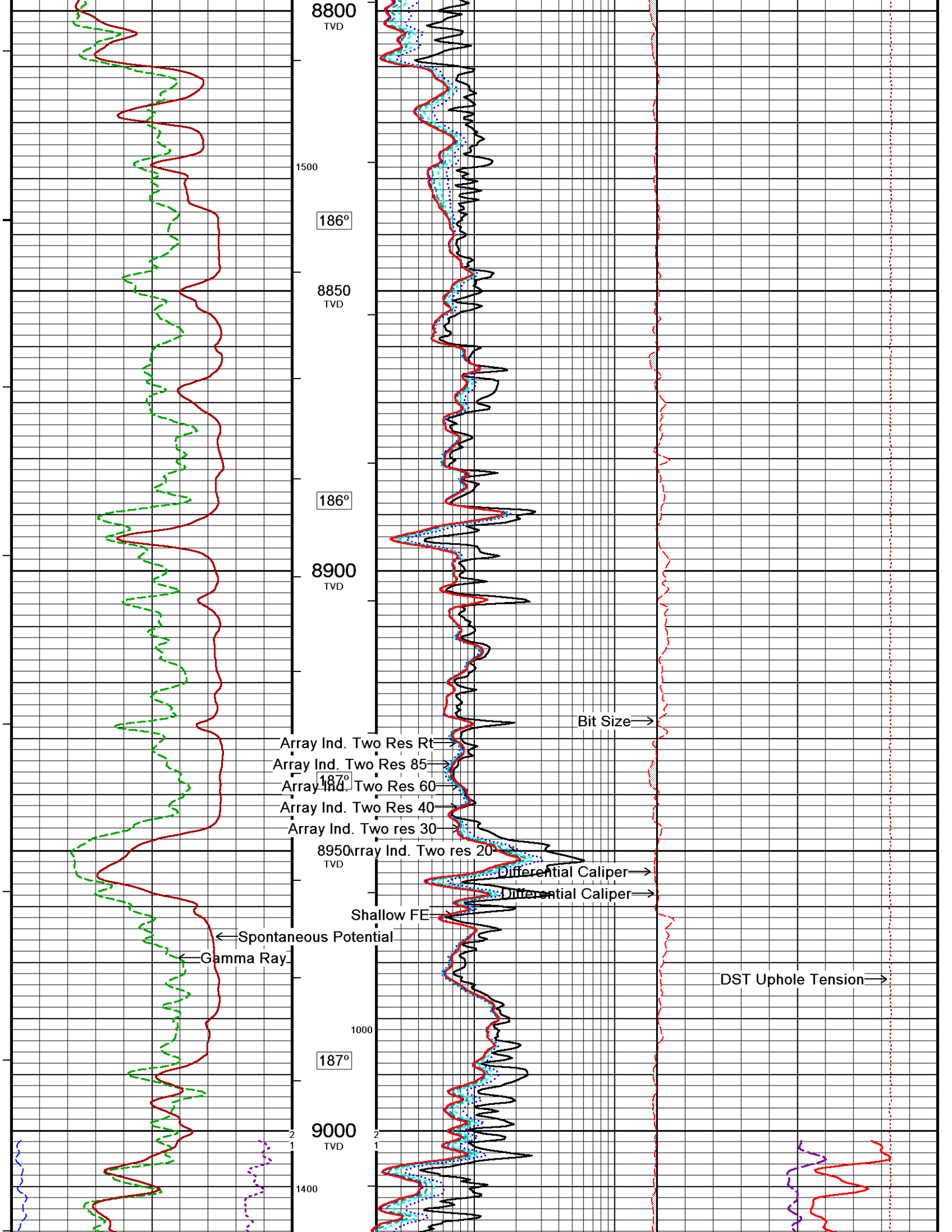


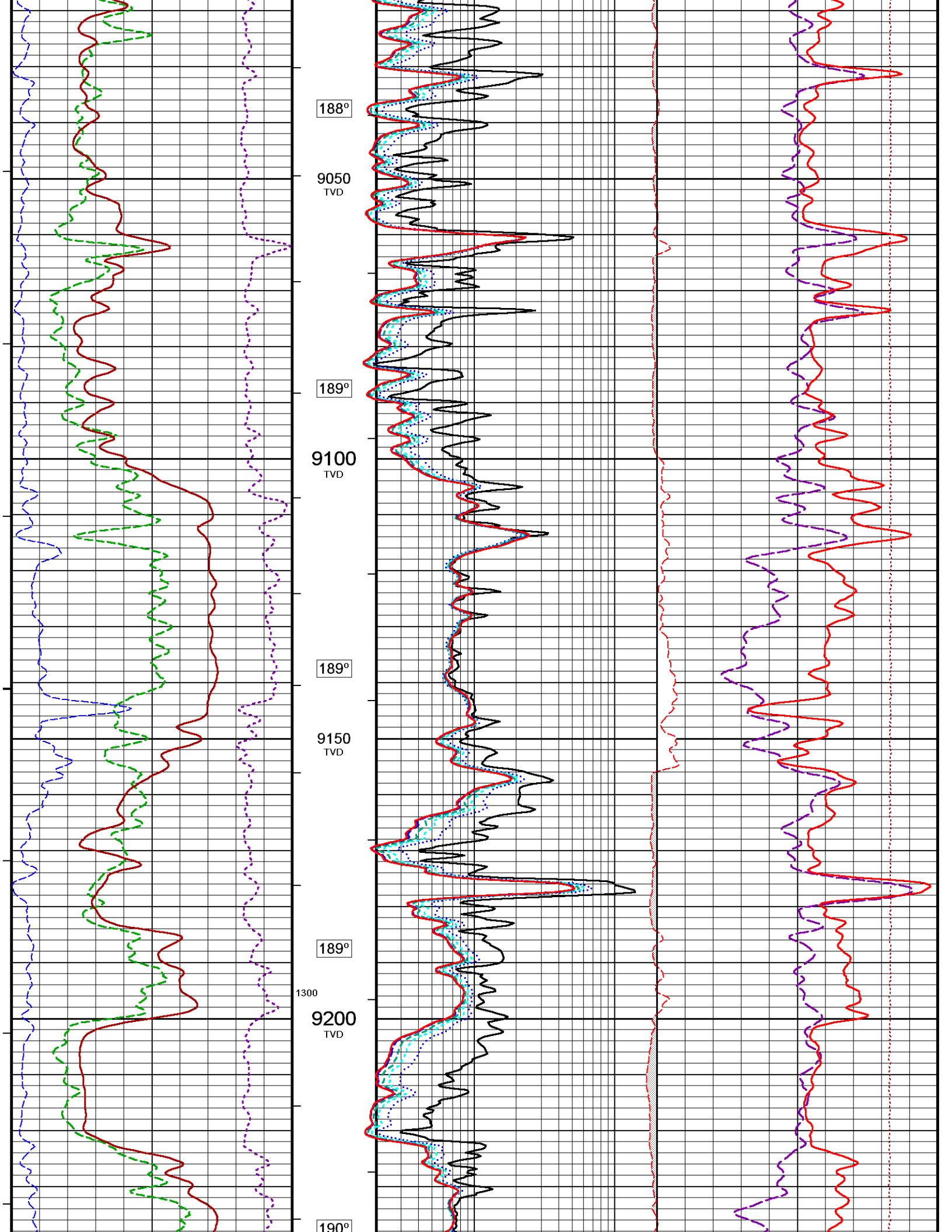


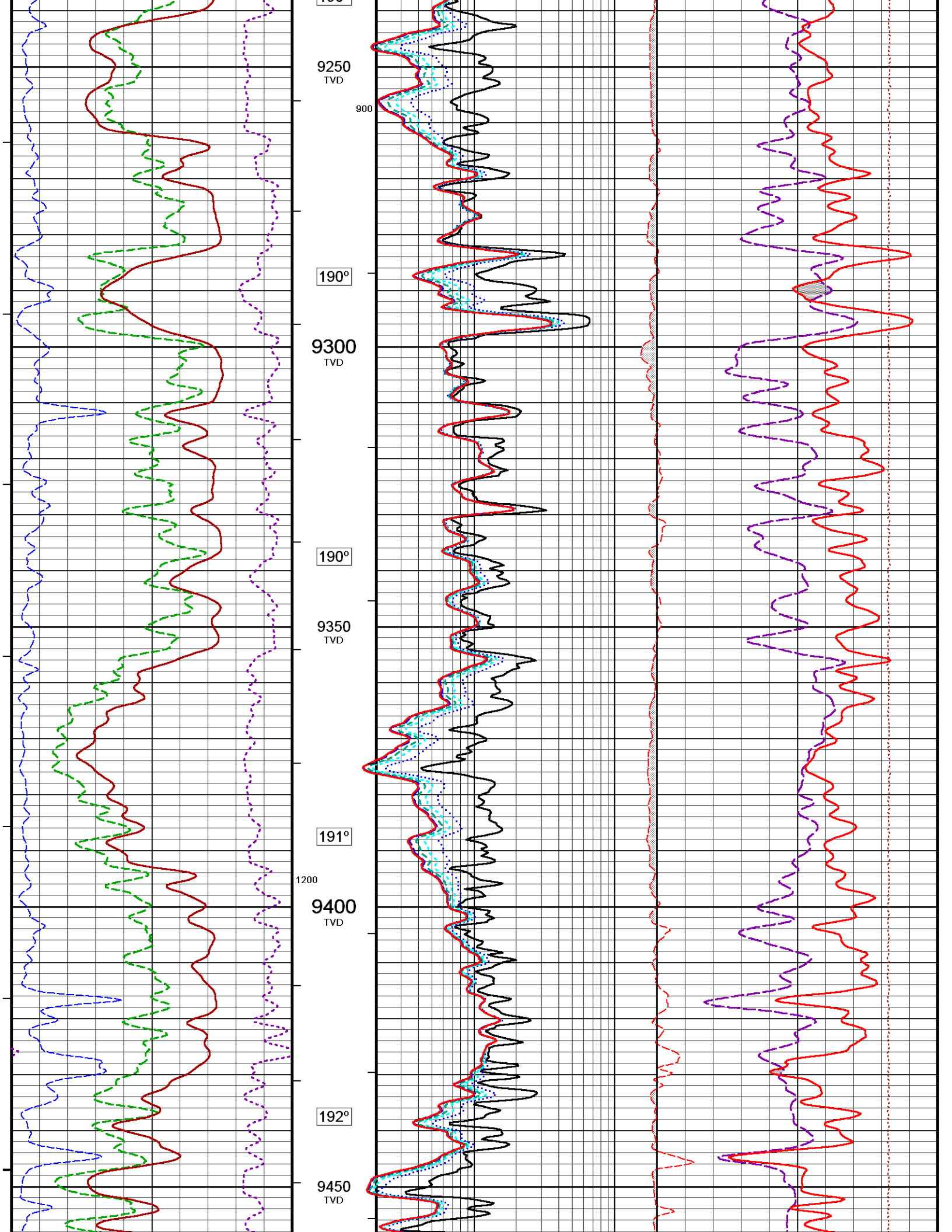


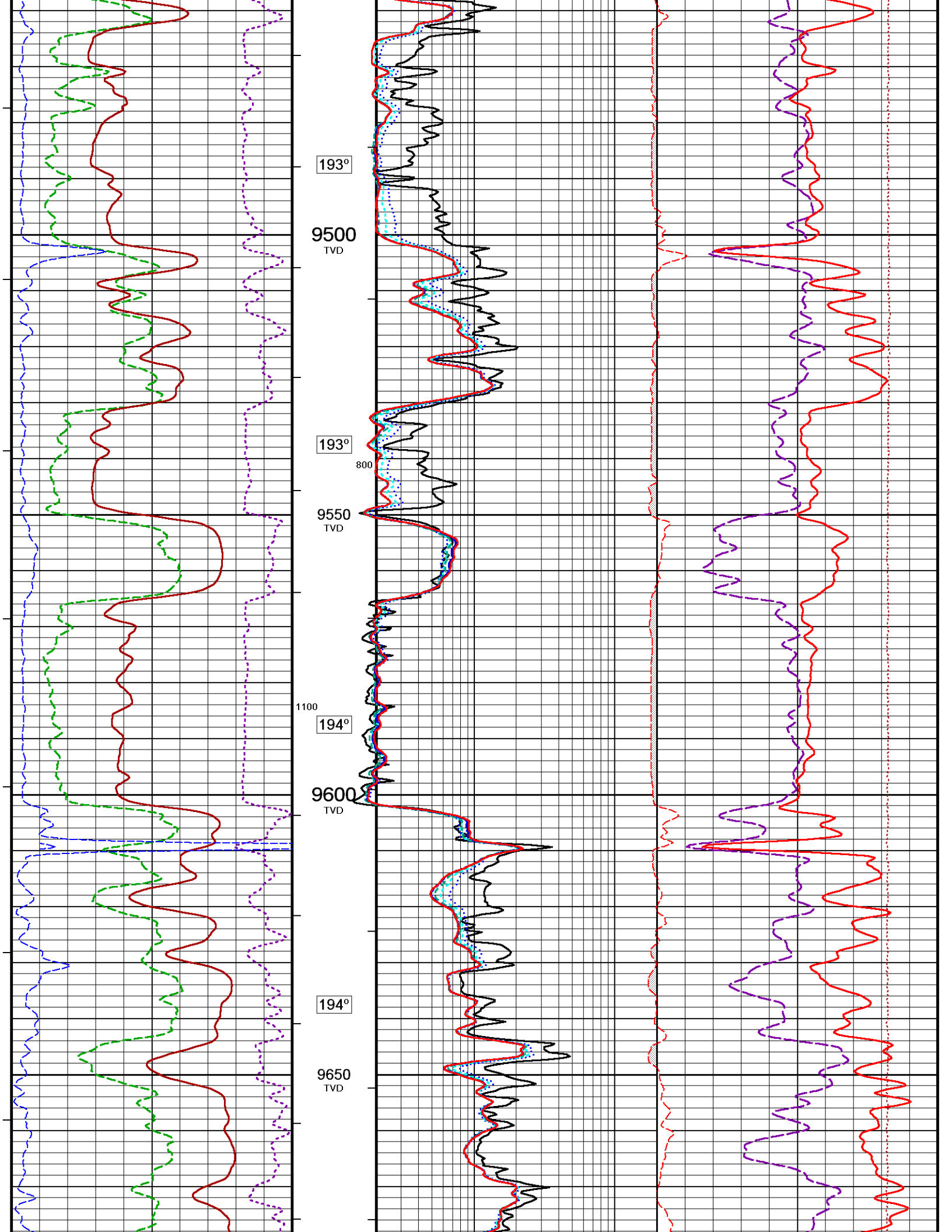


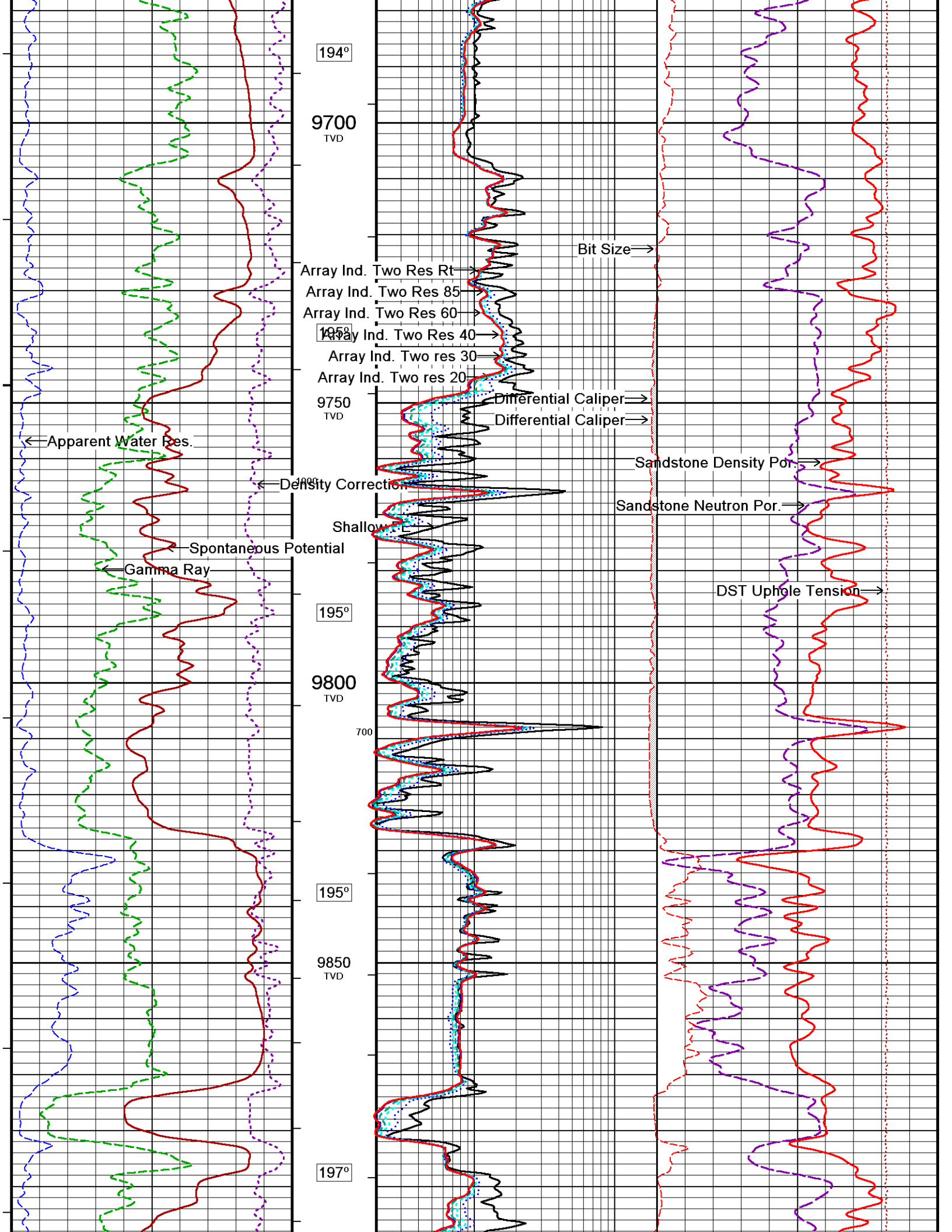


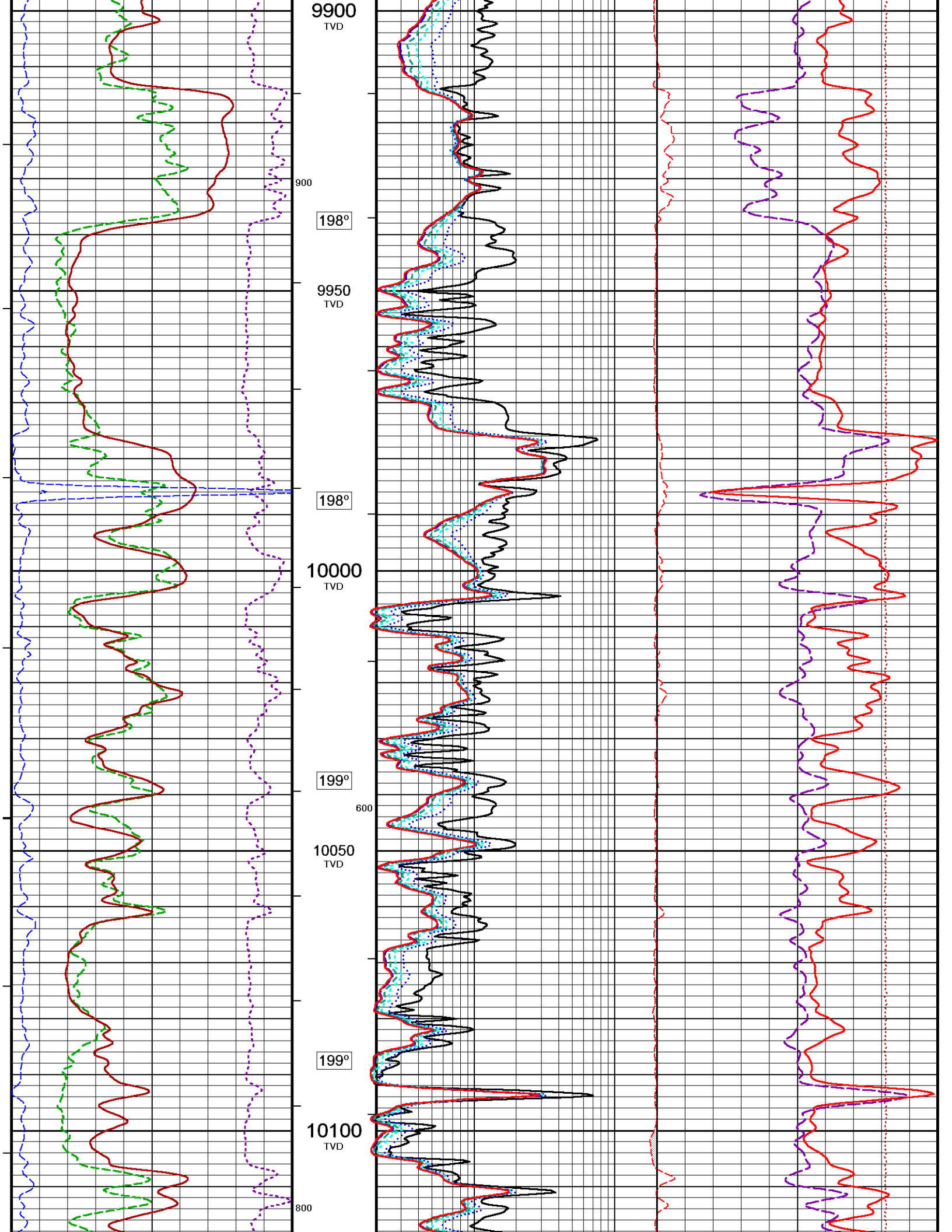


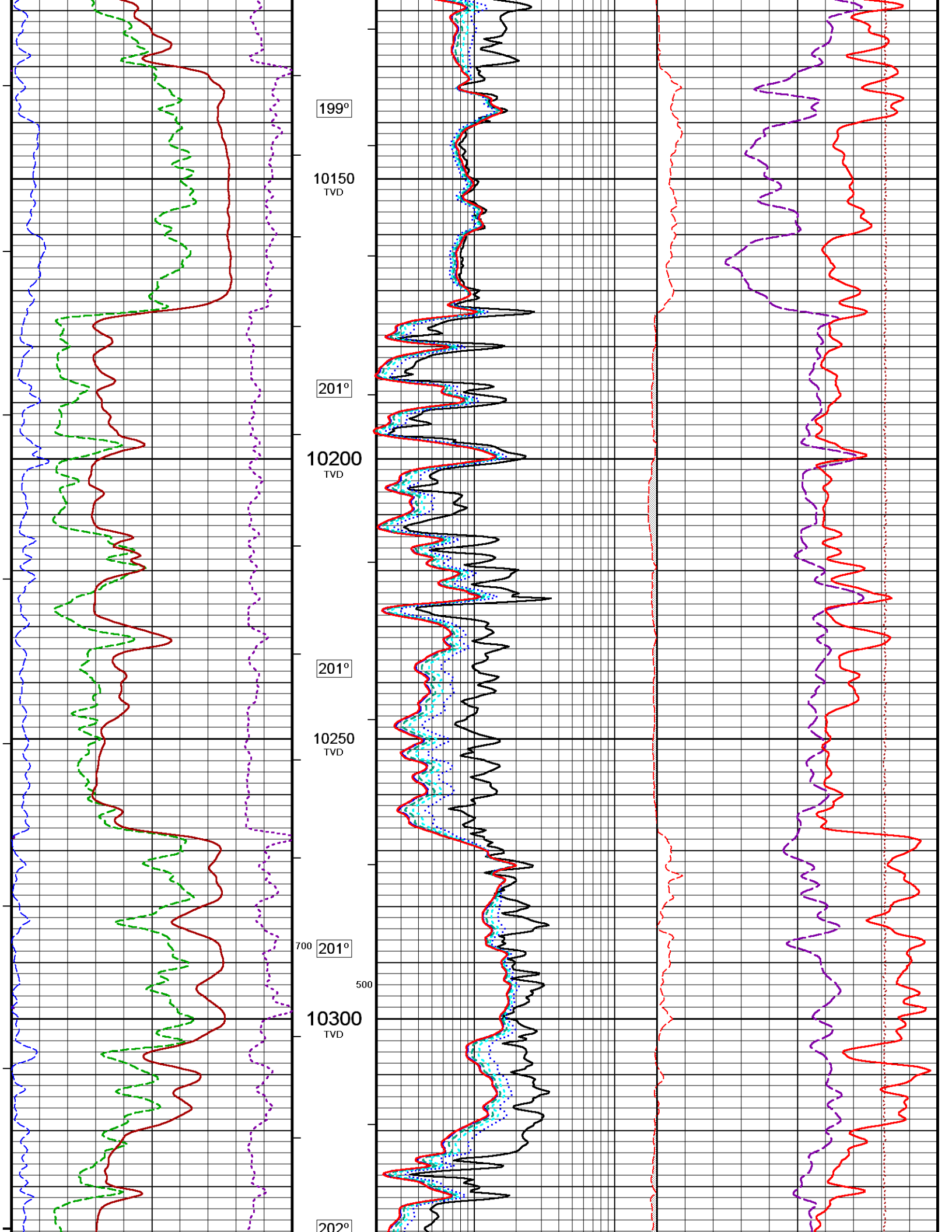


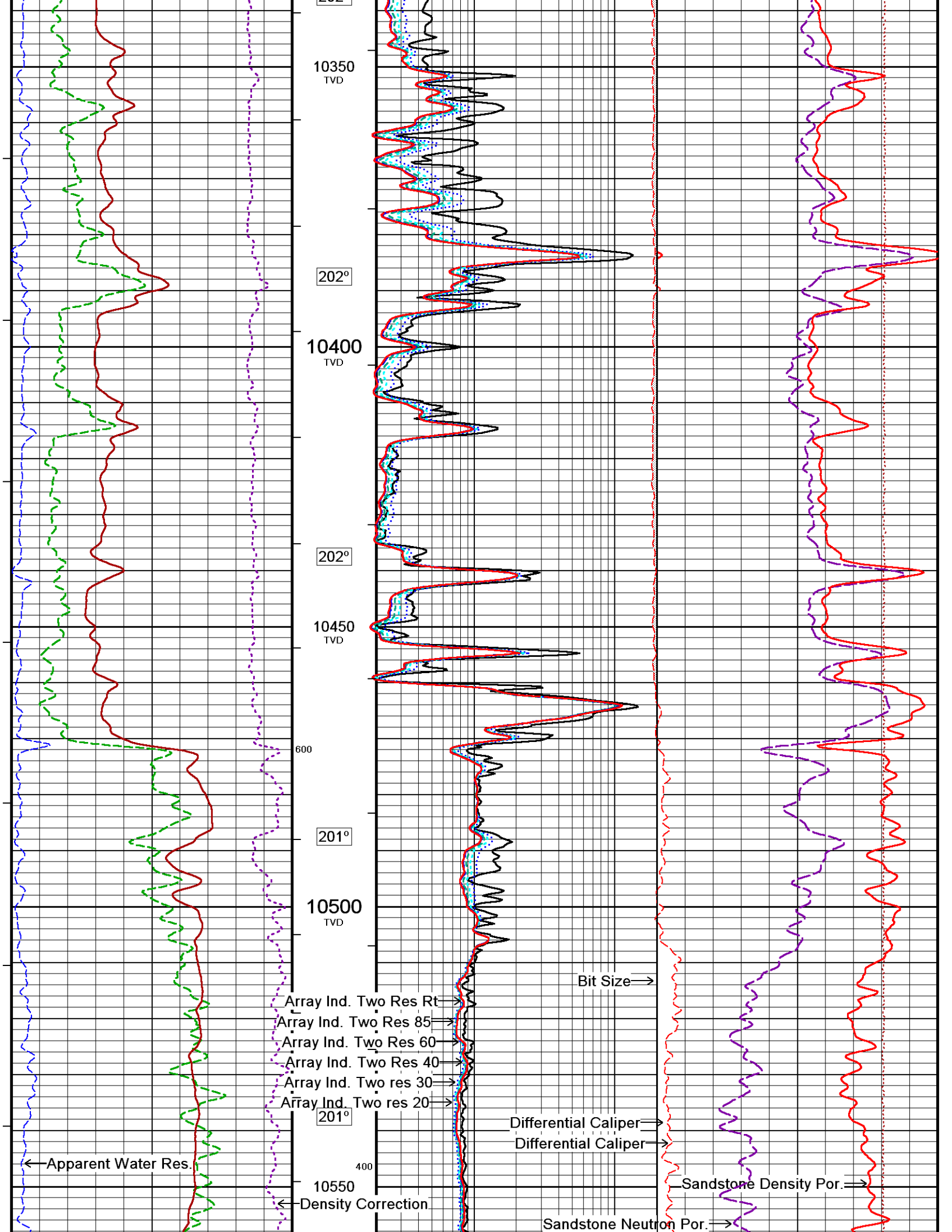


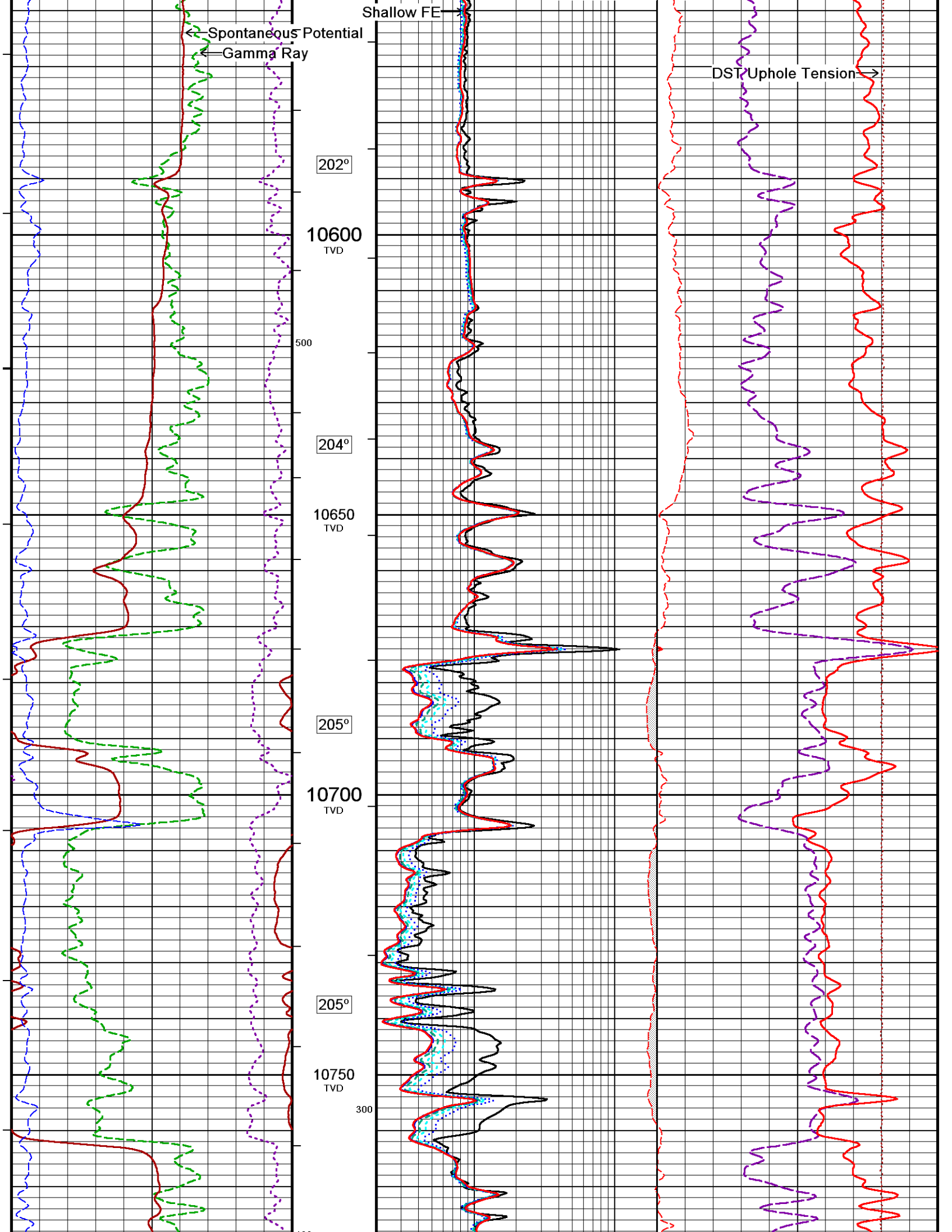


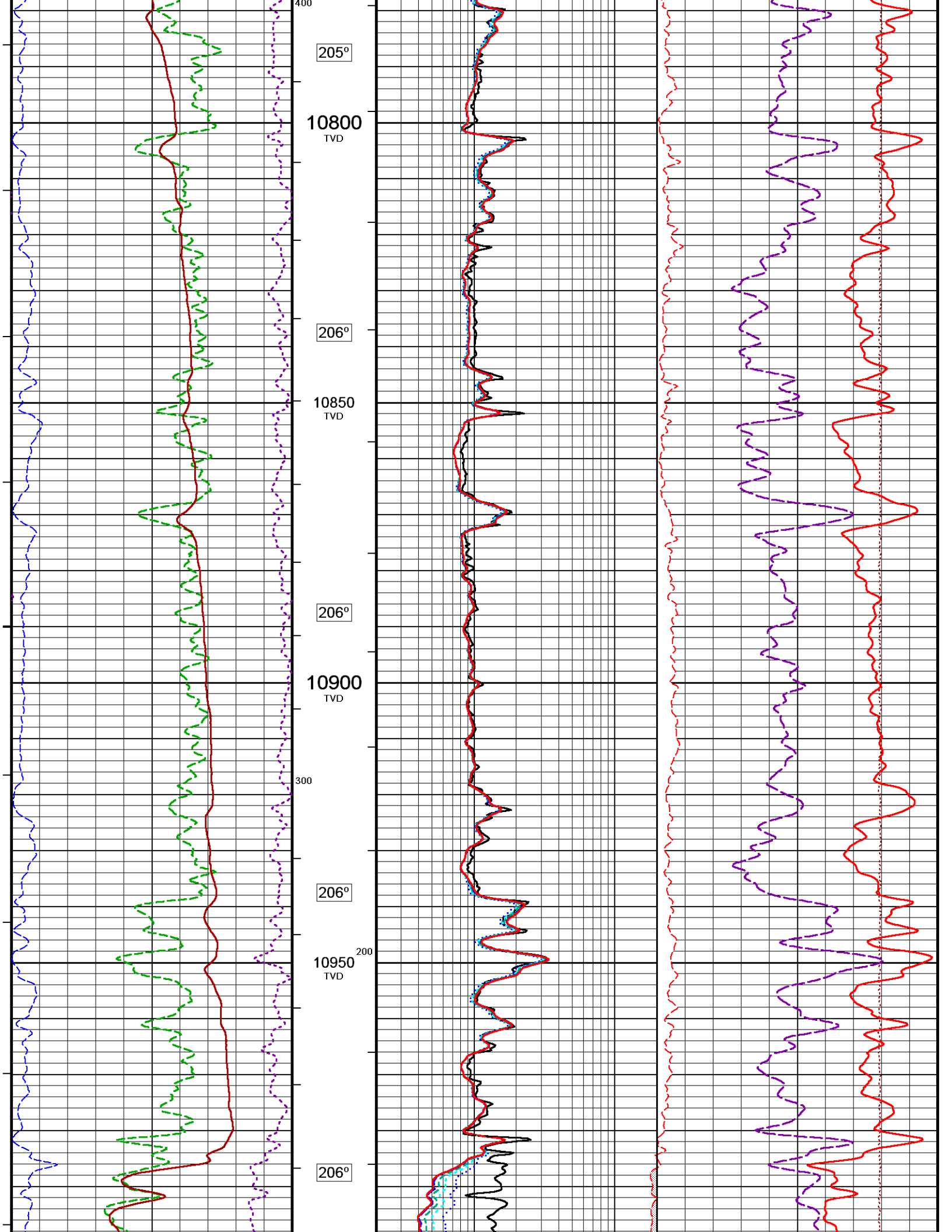


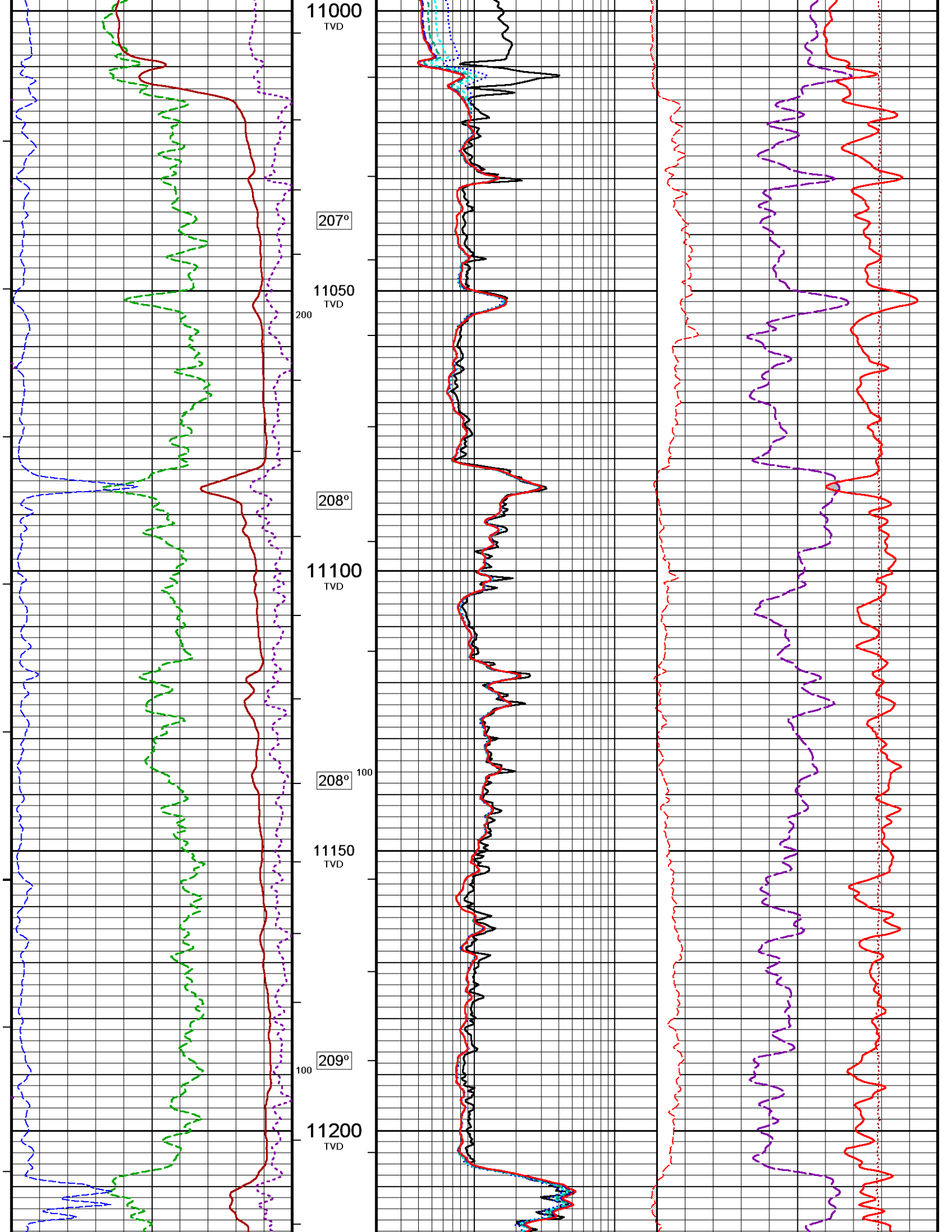


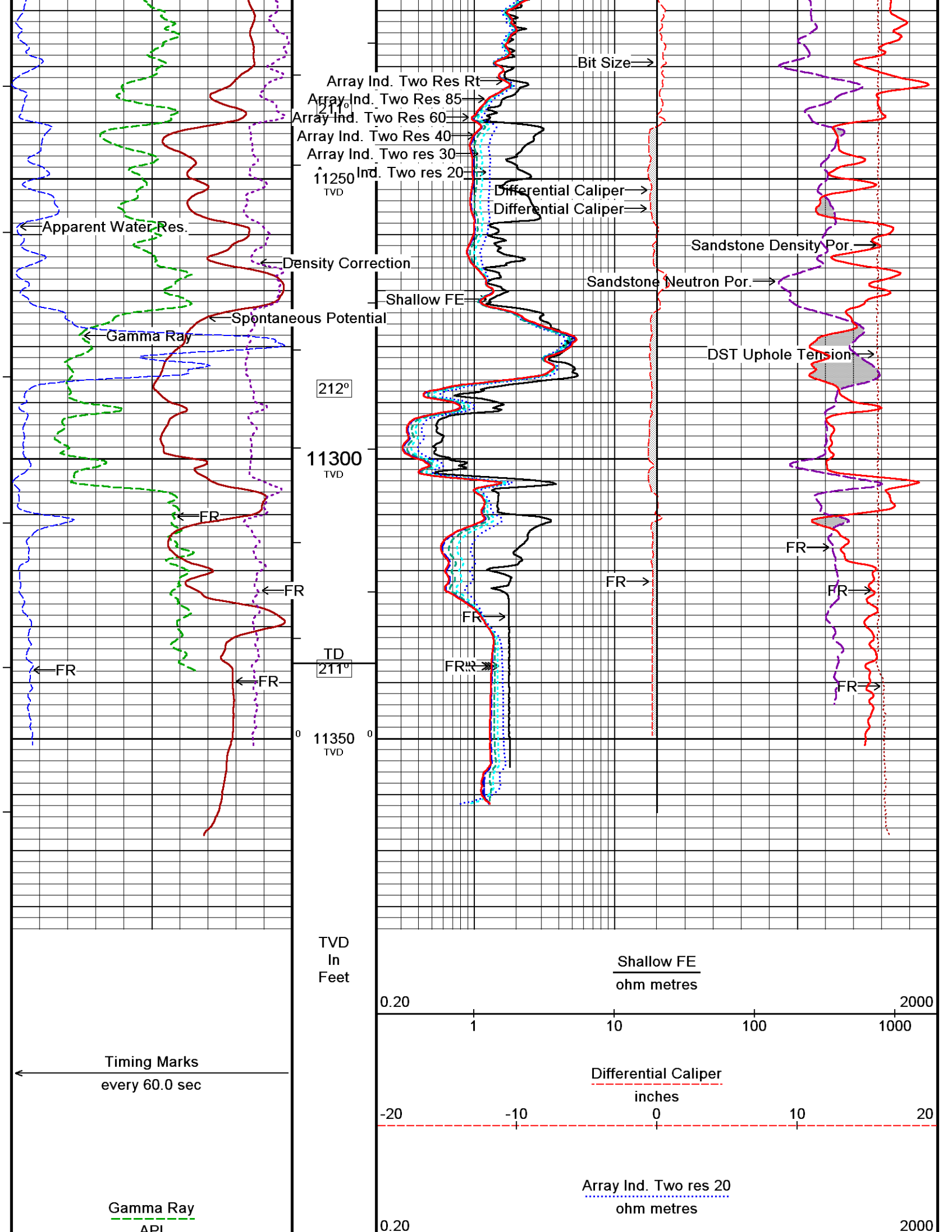


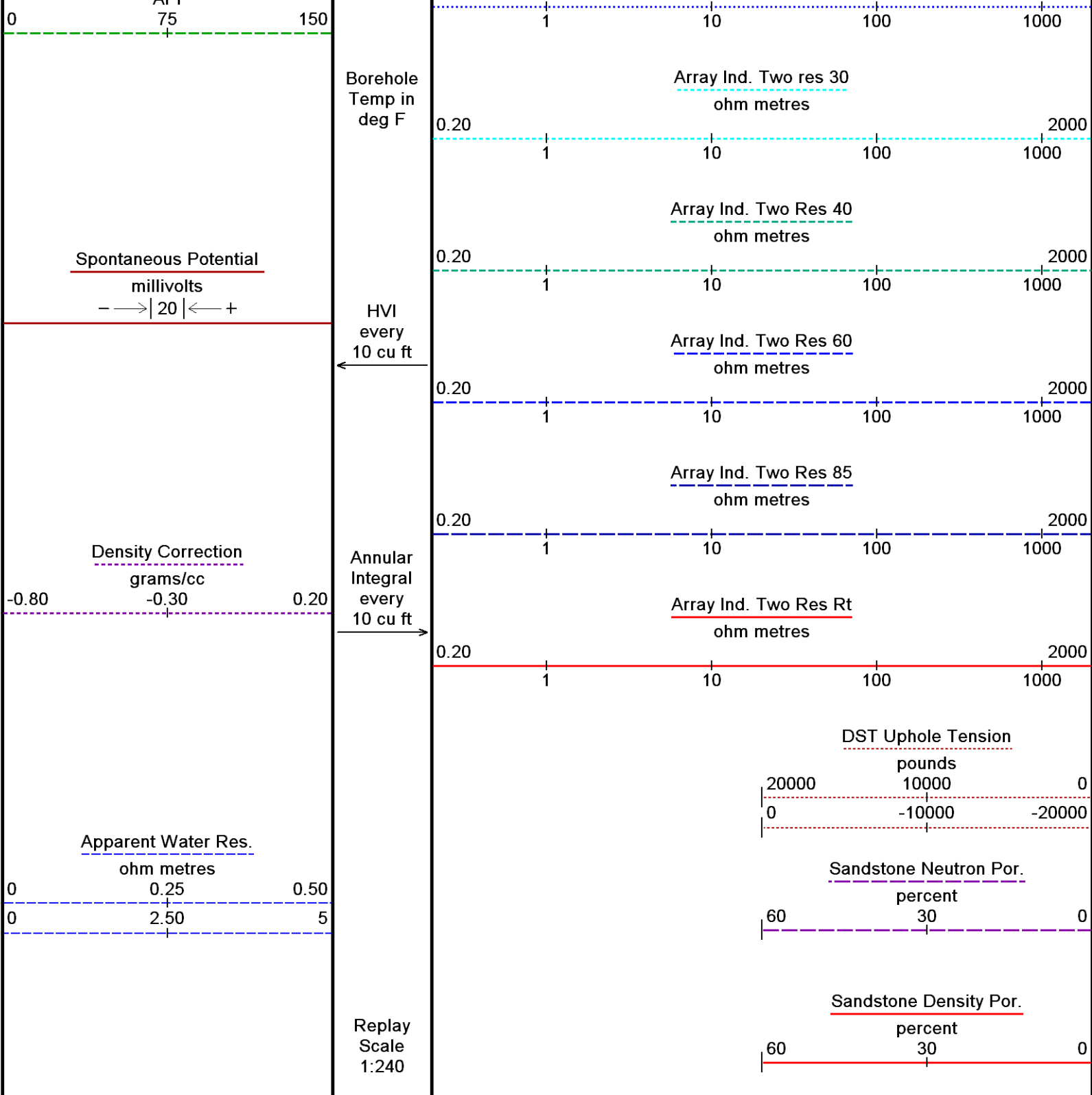












Depth Based Data - Maximum Sampling Increment 10.0cm  
 Filename: C:\Data\Smith Production\Edmond Richard #1\uplog2.dta  
 System Versions: Logged with 13.02.6600 Plotted with 13.02.6600  
 Plotted on 04-JUL-2012 00:20  
 Recorded on 03-JUL-2012 15:11

↑ **5" MAIN PASS TVD 1:240** ↑

↓ **5" REPEAT PASS TVD 1:240** ↓

Depth Based Data - Maximum Sampling Increment 10.0cm  
 Filename: C:\Data\Smith Production\Edmond Richard #1\repeat2.dta  
 System Versions: Logged with 13.02.6600 Plotted with 13.02.6600  
 Plotted on 04-JUL-2012 00:20  
 Recorded on 03-JUL-2012 12:46



Timing Marks  
every 60.0 sec

Gamma Ray  
API  
0 75 150

Spontaneous Potential  
millivolts  
- -> | 20 | <- - +

Density Correction  
grams/cc  
-0.80 -0.30 0.20

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

Borehole  
Temp in  
deg F

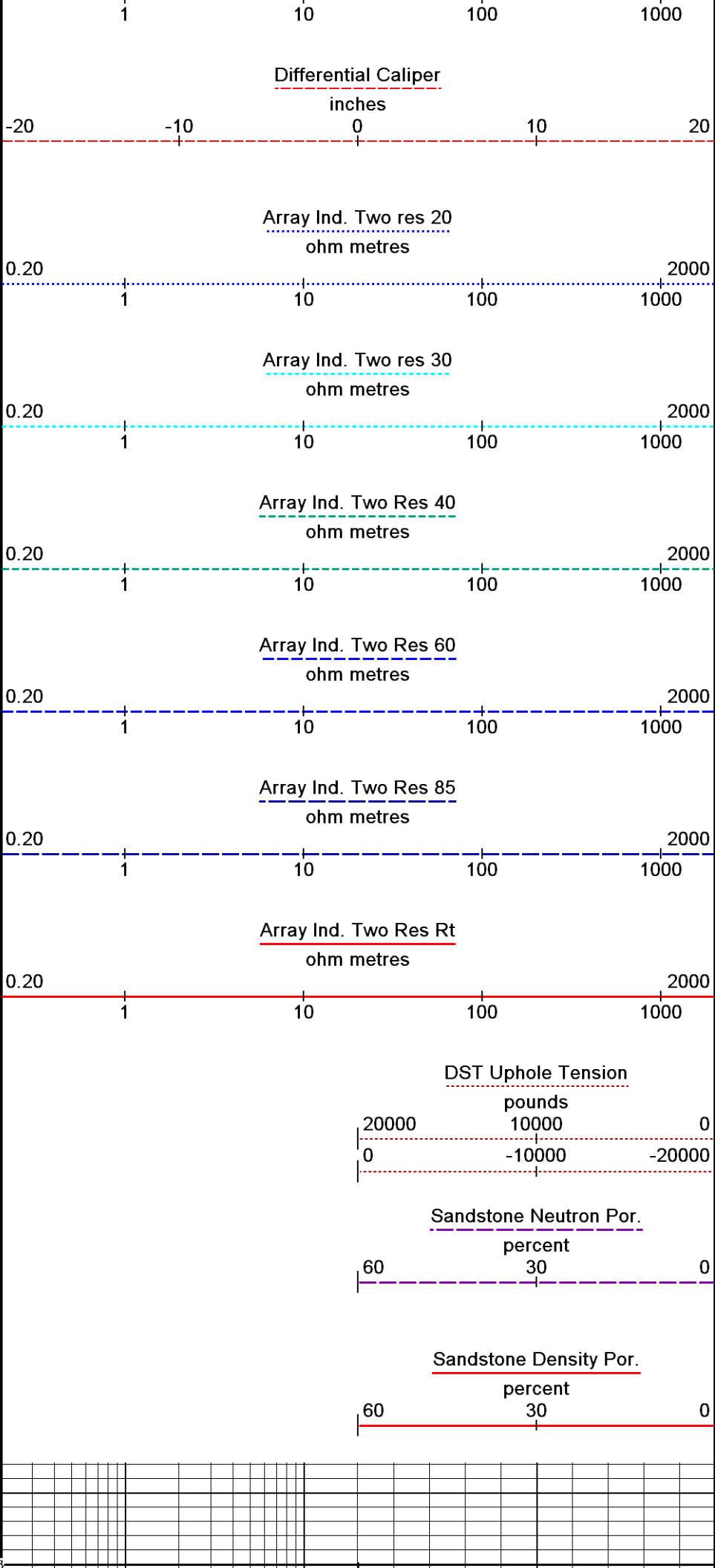
HVI  
every  
10 cu ft

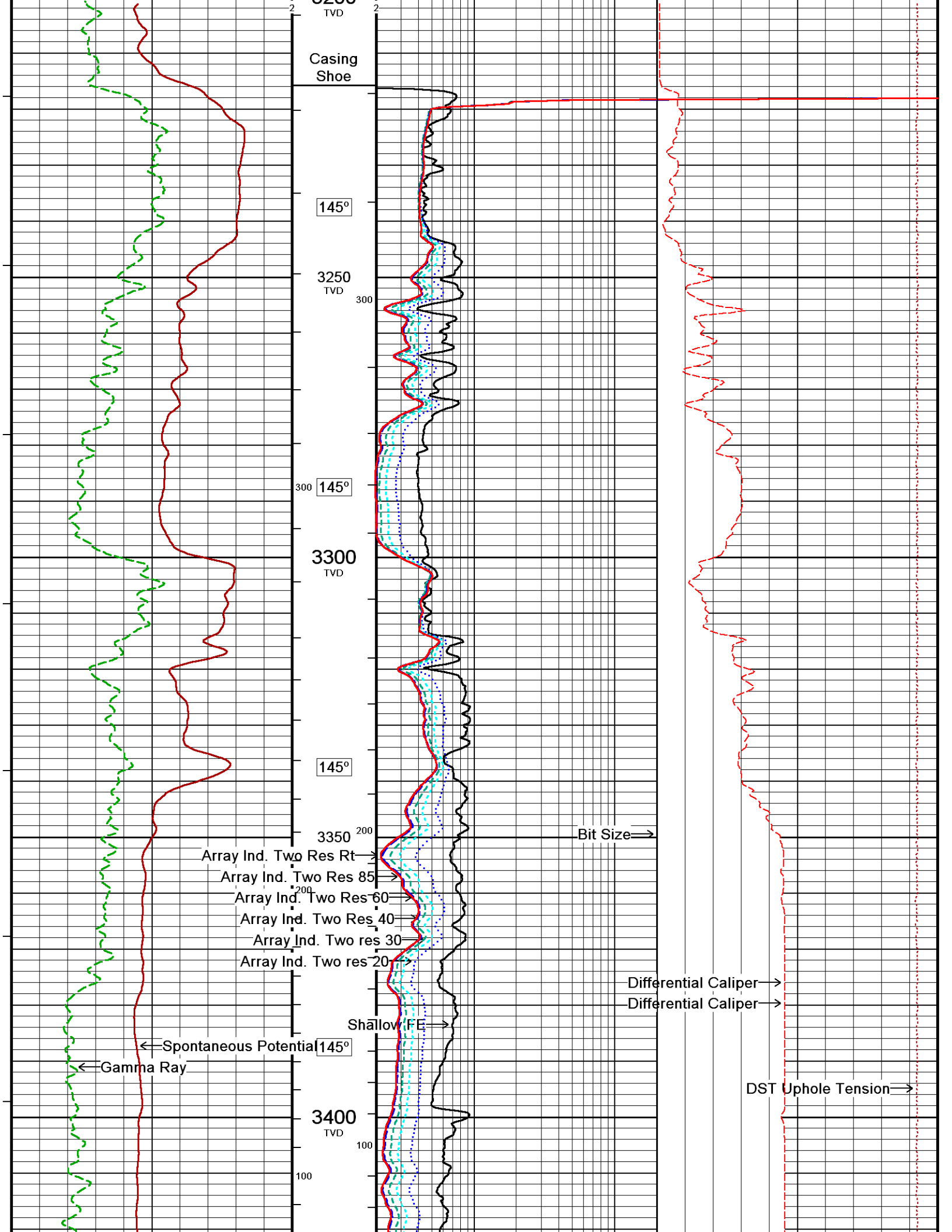
Annular  
Integral  
every  
10 cu ft

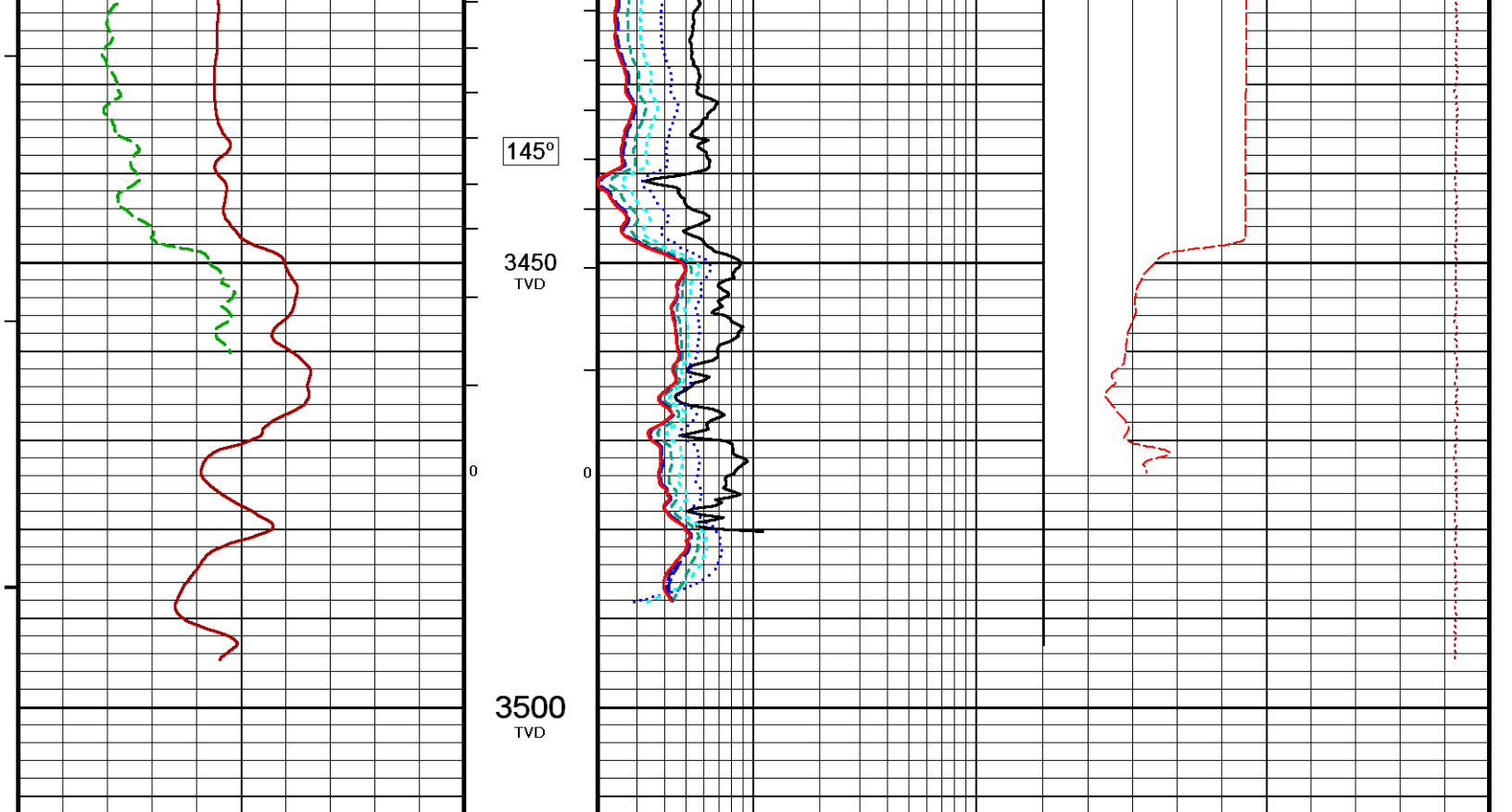
Replay  
Scale  
1:240

3188  
TVD

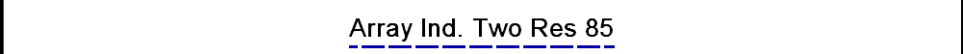
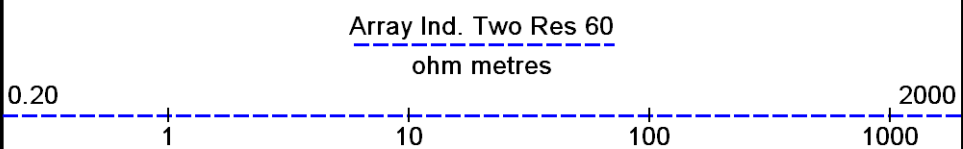
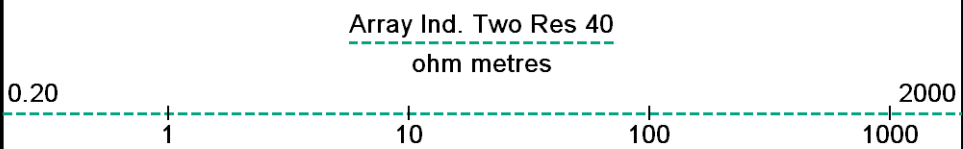
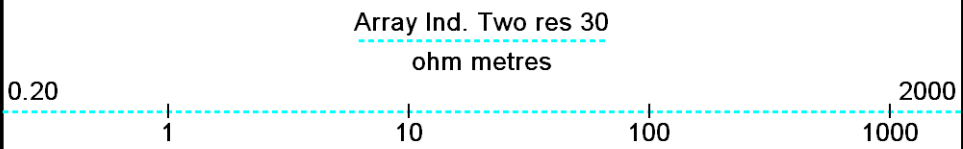
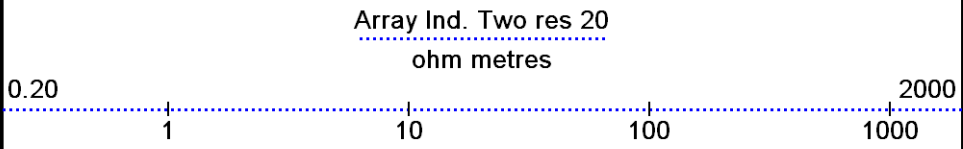
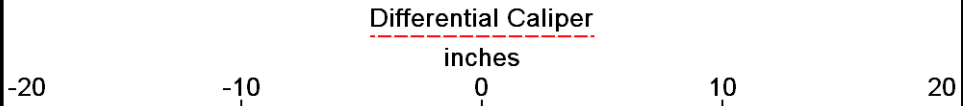
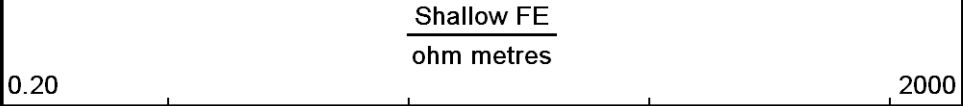
3200







TVD  
In  
Feet



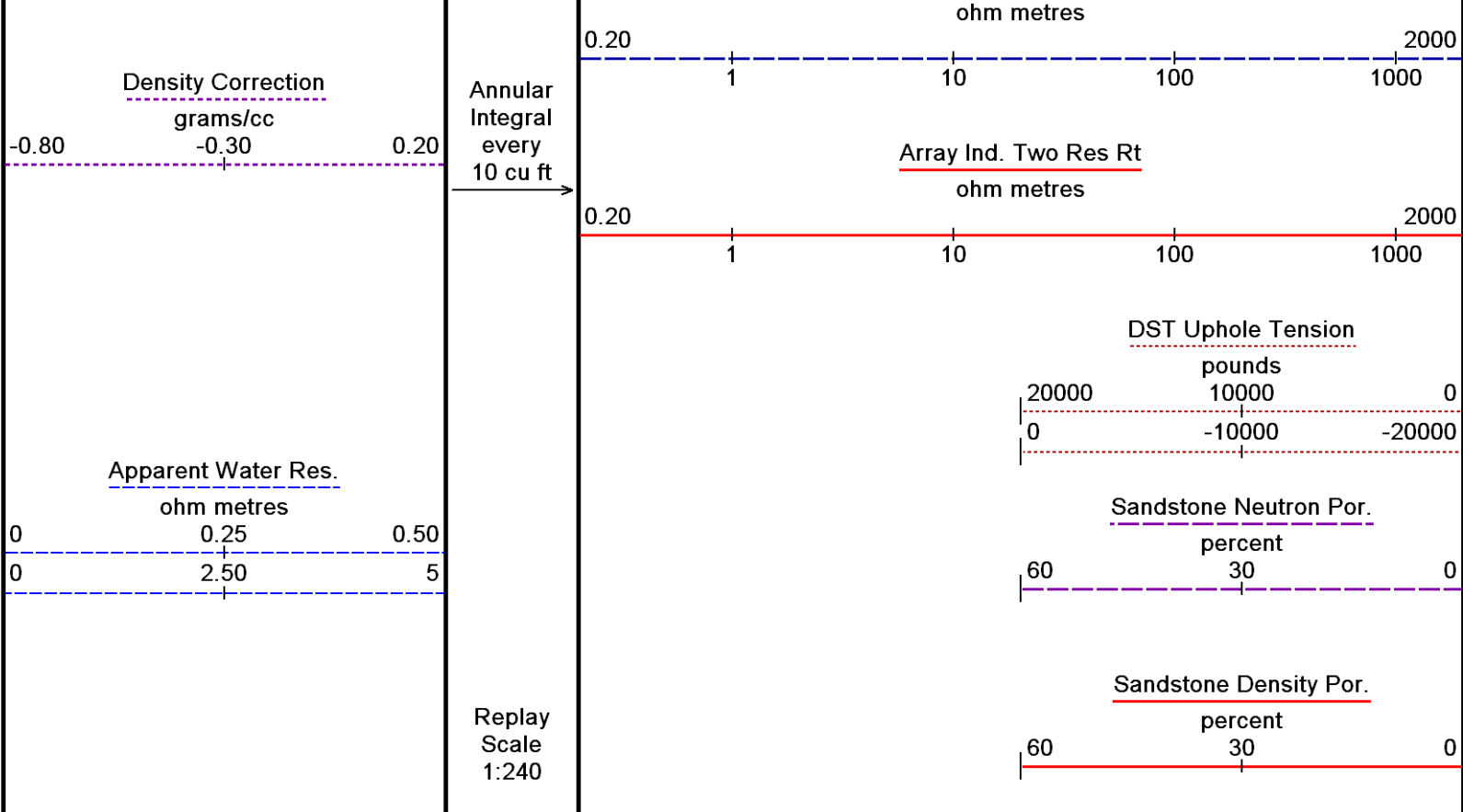
Timing Marks  
every 60.0 sec

Gamma Ray  
API  
75

0 150

Spontaneous Potential  
millivolts  
- -> | 20 | <- +

HVI  
every  
10 cu ft



Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 04-JUL-2012 00:20  
 Filename: C:\Data\Smith Production\Edmond Richard #1\repeat2.dta Recorded on 03-JUL-2012 12:46  
 System Versions: Logged with 13.02.6600 Plotted with 13.02.6600

5" REPEAT PASS TVD 1:240

**TVD TABLE** Last Edited: 03-JUL-2012 09:45

Logged Depth feet	True Depth feet	Logged Depth feet	True Depth feet	Logged Depth feet	True Depth feet
3200.00	3199.73	6100.00	6099.52	8832.00	8830.21
3300.00	3299.73	6200.00	6199.48	9021.00	9018.86
3400.00	3399.73	6300.00	6299.43	9115.00	9112.69
3500.00	3499.73	6400.00	6399.38	9210.00	9207.49
3600.00	3599.73	6500.00	6499.31	9304.00	9301.18
3700.00	3699.72	6600.00	6599.25	9399.00	9395.73
3800.00	3799.72	6700.00	6699.19	9493.00	9489.14
3900.00	3899.72	6800.00	6799.14	9588.00	9583.42
4000.00	3999.72	6900.00	6899.09	9682.00	9676.60
4100.00	4099.72	7000.00	6999.05	9777.00	9770.73
4200.00	4199.72	7100.00	7099.01	9871.00	9863.62
4300.00	4299.72	7200.00	7198.97	9965.00	9955.85
4400.00	4399.72	7300.00	7298.95	10060.00	10048.51
4500.00	4499.72	7400.00	7398.94	10155.00	10141.03
4600.00	4599.72	7500.00	7498.92	10249.00	10232.05
4700.00	4699.71	7600.00	7598.92	10344.00	10323.33
4800.00	4799.71	7700.00	7698.92	10441.00	10416.11
4900.00	4899.69	7800.00	7798.92	10536.00	10506.41
5000.00	4999.67	7900.00	7898.92	10631.00	10595.65
5100.00	5099.66	8000.00	7998.91	10724.00	10681.08
5200.00	5199.65	8026.00	8024.91	10820.00	10766.58
5300.00	5299.64	8072.00	8070.91	10914.00	10848.66
5400.00	5399.63	8167.00	8165.89	11009.00	10930.93
5500.00	5499.62	8262.00	8260.83	11104.00	11012.41
5600.00	5599.61	8357.00	8355.75	11199.00	11093.67
5700.00	5699.61	8452.00	8450.66	11294.00	11174.84
5800.00	5799.60	8547.00	8545.57	11389.00	11255.32
5900.00	5899.58	8642.00	8640.47	11420.00	11281.48

6000.00

5999.55

8737.00

8735.36

11508.00

11355.94

## BEFORE SURVEY CALIBRATION

C:\Data\Smith Production\Edmond Richard #1\uplog2.dta

## General Constants All 000

Last Edited on 03-JUL-2012,09:04

## General Parameters

Mud Resistivity	0.900	ohm-metres
Mud Resistivity Temperature	88.000	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	5.500	inches
Caliper for Differential Caliper	Density Caliper	

## Rwa Parameters

Porosity used	Base Density Porosity
Resistivity used	Array Ind. Two Res Rt
RWA Constant A	0.620
RWA Constant M	2.150

## Gamma Calibration MCG-C 100

Field Calibration on 03-JUL-2012 09:04

	Measured	Calibrated (API)
Background	42	28
Calibrator (Gross)	1177	792
Calibrator (Net)	1135	764

## Gamma Constants MCG-C 100

Last Edited on 03-JUL-2012,08:38

Gamma Calibrator Number	GRC-039	
Mud Density	1.32	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

## SP Calibration MCG-C 100

Field Calibration on 22-FEB-2012,10:45

	Measured	Calibrated (mV)
Reference 1	94.7	91.0
Reference 2	-88.3	-91.0

## High Resolution Temperature Calibration MCG-C 100

Field Calibration on 12-FEB-2012,05:14

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

## High Resolution Temperature Constants MCG-C 100

Last Edited on

Pre-filter Length	11
-------------------	----

## Neutron Calibration MDN-A.B 155

Base Calibration on 12-JUN-2012 11:13

Field Check on 03-JUL-2012 08:57

## Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
Ratio	2974	92	3714	110
	32.446		33.764	

## Field Calibrator at Base

	Calibrated (cps)
Ratio	1334 1980
	0.674

## Field Check

	Calibrated (cps)
Ratio	1315 1995
	0.659

Neutron Constants MDN-A.B 155

Last Edited on 03-JUL-2012,08:52

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	20.00	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 29-MAY-2012 13:51  
Field Check on 03-JUL-2012 08:42

Base Calibration			
	Measured	Calibrated (ohm-m)	
Reference 1	0.0	0.0	
Reference 2	964.4	126.8	
Base Check		281.4	
Field Check		281.4	

FE Constants MFE-A.A 137

Last Edited on 03-JUL-2012,08:41

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

Induction Calibration MAI-A.A 77

Base Calibration on 11-MAY-2011,11:42  
Field Check on 03-JUL-2012 08:45

Base Calibration					
Test Loop Calibration		Measured	Calibrated (mmho/m)		
Channel	Low	High	Low	High	
1	15.7	471.1	9.3	966.2	
2	5.2	374.2	7.6	821.4	
3	2.6	250.7	5.2	566.0	
4	1.1	129.3	2.6	279.2	
Array Temperature		61.2	Deg F		
Channel	Base Check (mmho/m)		Field Check (mmho/m)		
	Low	High	Low	High	
1	0.0	0.0	17.1	3846.4	
2	0.0	0.0	33.0	3596.0	
3	0.0	0.0	31.3	3143.2	
4	0.0	0.0	22.0	2127.1	
Deep	0.0	0.0	20.0	2064.2	
Medium	0.0	0.0	44.6	4159.1	
Shallow	0.0	0.0	48.3	5286.4	
Array Temperature		0.0		82.4	Deg F

Induction Constants MAI-A.A 77

Last Edited on 03-JUL-2012,08:42

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-A.A 77

Field Calibration on 13-OCT-2011 10:30

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

High Resolution Temperature Constants MAI-A.A 77

Last Edited on

Pre-filter Length	11
-------------------	----

Caliper Calibration MPD-B 154

Base Calibration on 17-JUN-2012 05:50

Field Calibration on 26-JUN-2012 18:50

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	10944	4.00
2	17456	5.97
3	23919	7.96
4	30093	9.85
5	37136	11.91
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
9.82	9.85

Photo Density Calibration MPD-B 154

Base Calibration on 29-MAY-2012 13:25

Field Check on 03-JUL-2012 08:51

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	57824	29402	59553	30910
Reference 2	23572	2326	25010	2543

Field Check at Base

774.7	958.2
-------	-------

Field Check

PE Calibration

Base Calibration		Measured	Calibrated	
	WS	WH	Ratio	Ratio
Background	147	675		
Reference 1	23784	57661	0.415	0.371
Reference 2	6626	23462	0.284	0.273
Field Check at Base				
	147.4	674.7		
Field Check				
	147.4	674.5		

Density Constants MPD-B 154

Last Edited on 03-JUL-2012,08:39

Density Source Id	259	
Nylon Calibrator Number	DNC-E662	
Aluminium Calibrator Number	DAC-D687	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.32	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)	
2.65	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	
0.00	0.00	

DOWNHOLE EQUIPMENT

C:\Data\Smith Production\Edmond Richard #1\uplog2.dta

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

11C-11B MTA-A Compact Tool Adaptor  
MTA-A 43 LG: 1.53 ft WT: 13.2 lb OD: 2.24 in

SHA-J.A Compact Swivel Head Adaptor  
SHA-J.A 266 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

Compact Comms Gamma  
MCG-C 100 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: 2.91 in



34.90 ft GRGC - Gamma Ray  
32.00 ft CGAT - MCG External Temperature

28.45 ft NPRS - Sandstone Neutron Por.

21.21 ft AVOL - Annular Volume  
21.21 ft HVOL - Hole Volume

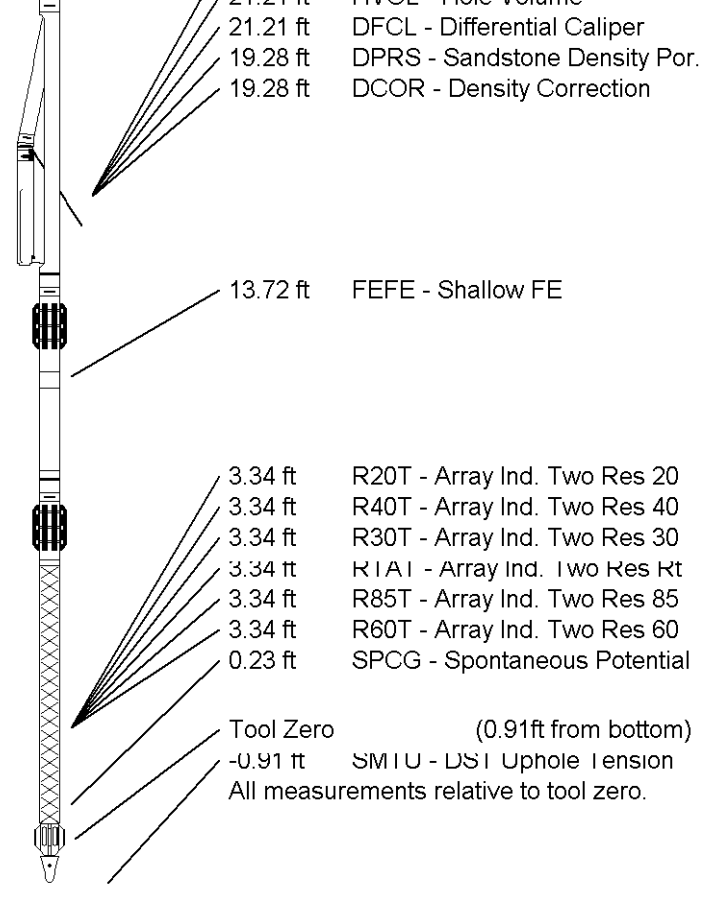
MFE-A.A 137 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

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

Compact Induction  
MAI-A.A 77 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: 47.19 ft Weight: 359.4 lb



COMPANY SMITH PRODUCTION COMPANY  
WELL EDMOND RICHARD #1  
FIELD GRAND CHENIERE  
PROVINCE/COUNTY CAMERON  
COUNTRY/STATE U.S.A / LOUISIANA

Elevation Kelly Bushing	18.00	feet	First Reading	11485.00	feet
Elevation Drill Floor	17.00	feet	Depth Driller	11508.00	feet
Elevation Ground Level	3.00	feet	Depth Logger	11485.00	feet



**Weatherford**<sup>®</sup>

ARRAY INDUCTION / MFE  
PHOTO DENSITY / NEUTRON  
GAMMA RAY \*\*TVD\*\* LOG