



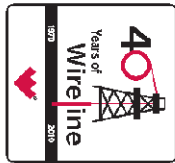
# Weatherford®

## COMPACT TRIPLE COMBO

### QUICKLOOK

### LOG

COMPANY: **BILL BARRETT CORPORATION**  
 WELL: **GGU DALEY 24A-19-691**  
 FIELD: **MAMM CREEK**  
 PROVINCE/COUNTY: **GARFIELD**  
 COUNTRY/STATE: **U.S.A. / COLORADO**  
 LOCATION: **SHL: 252' FSL & 2008' FWL**  
**BHL: 166' FSL & 1982' FWL**



SEC: TWP 6S RGE 91W  
 API Number: 05-045-19584  
 Permit Number: Other Services

Permanent Datum G.L., Elevation 5823 feet  
 Log Measured From K.B. @ 22 FEET above Permanent Datum  
 Drilling Measured From K.B.

Elevations: KB 5845.00  
 DF 5844.00  
 GL 5823.00

Date	24-APR-2011	
Run Number	ONE	
Depth Driller	7279.00	feet
Depth Logger	7281.00	feet
First Reading	7281.00	
Last Reading	808.00	
Casing Driller	805.00	feet
Casing Logger	808.00	feet
Bit Size	7.875	inches
Hole Fluid Type	LSND	
Density / Viscosity	10.80 lb/USg	50.00 CP
PH / Fluid Loss	9.00	6.40 ml/30Min
Sample Source	FLOW LINE	
Rm @ Measured Temp	3.80 @ 52.3	ohm-m
Rmf @ Measured Temp	3.04 @ 52.3	ohm-m
Rmc @ Measured Temp	4.56 @ 52.3	ohm-m
Source Rmf / Rmc	CALC	CALC
Rm @ BHT	1.12 @ 184.0	ohm-m
Time Since Circulation	8 HOURS	
Max Recorded Temp	184.00	deg F
Equipment Name	COMPACT	
Equipment / Base	13037	RK SPR
Recorded By	W. HANKS	
Witnessed By	C. CROW	

## BOREHOLE RECORD

Last Edited: 24-APR-2011 17:36

Bit Size inches	Depth From feet	Depth To feet
8.750	805.00	4434.00
7.875	4434.00	7279.00

## CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	9.625	0.00	805.00	36.00

## REMARKS

SOFTWARE VERSION: WLS 11.02.3186

TOOLS: SHA, MCG, MDN, MPD, SKJ, MFE, AND MAI RAN IN COMBINATION

HARDWARE: MPD: (1) 8 INCH PROFILE PLATE  
 MAI: (2) 1 INCH STANDOFF  
 MFE: (1) 1 INCH STANDOFF  
 MDN: (1) DUAL BOWSPRING

2.68 G/CC DENSITY MATRIX USED TO CALCULATE POROSITY.

ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST.

TIGHT PULLS, BOREHOLE SIZE, AND RUGOSITY WILL AFFECT REPEATABILITY AND DATA QUALITY.

TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 2615 CU.FT.

ANNULAR VOLUME WITH 4.5 INCH PRODUCTION CASING = 1900 CU.FT.

ENGINEER(S): W. HANKS

OPERATOR(S): D. SMITH

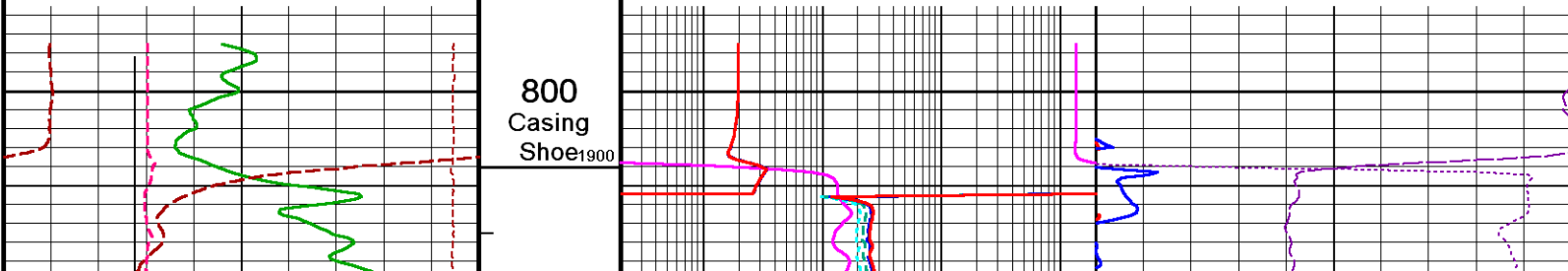
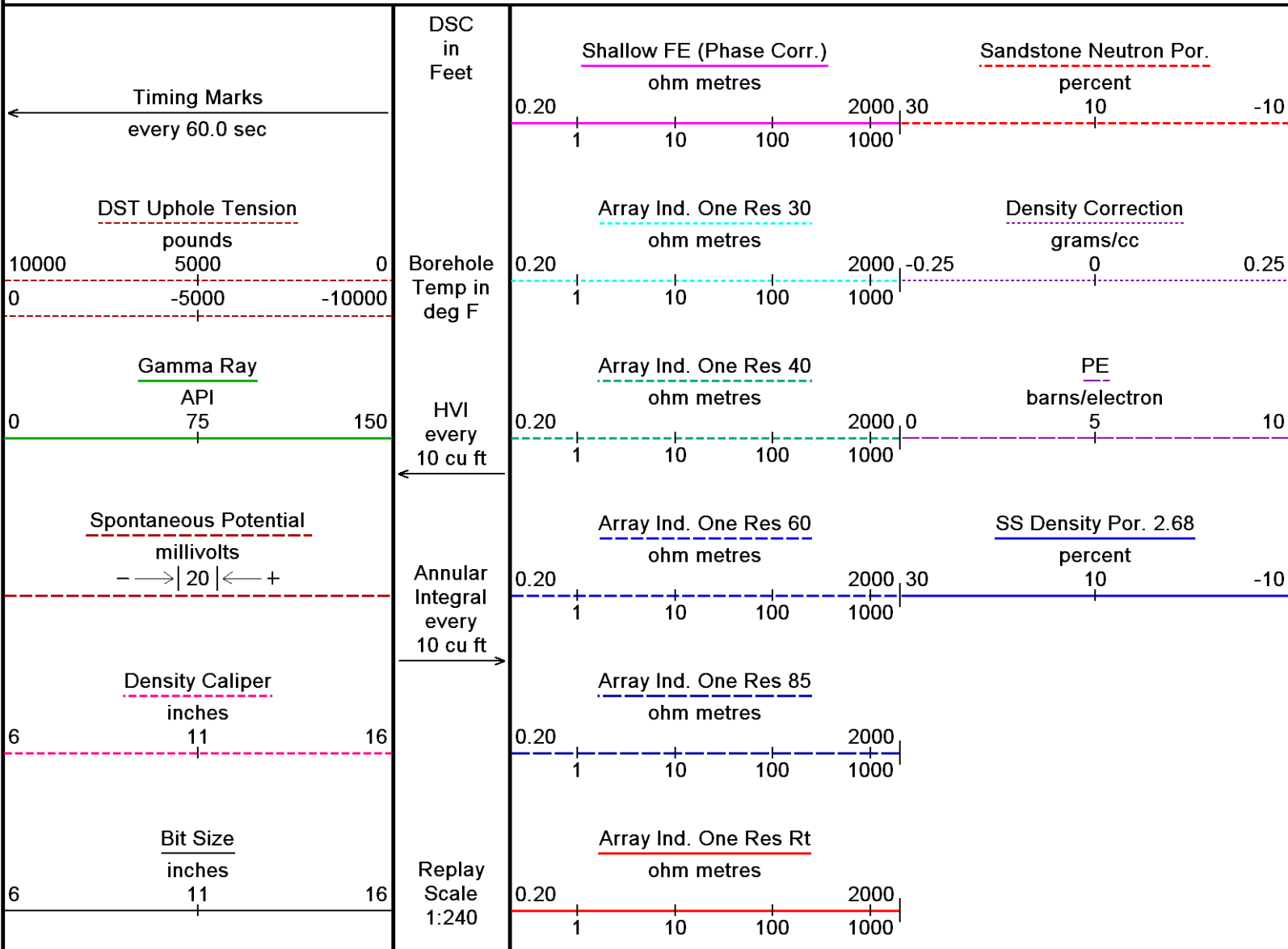
SERVICE ORDER: #3526653

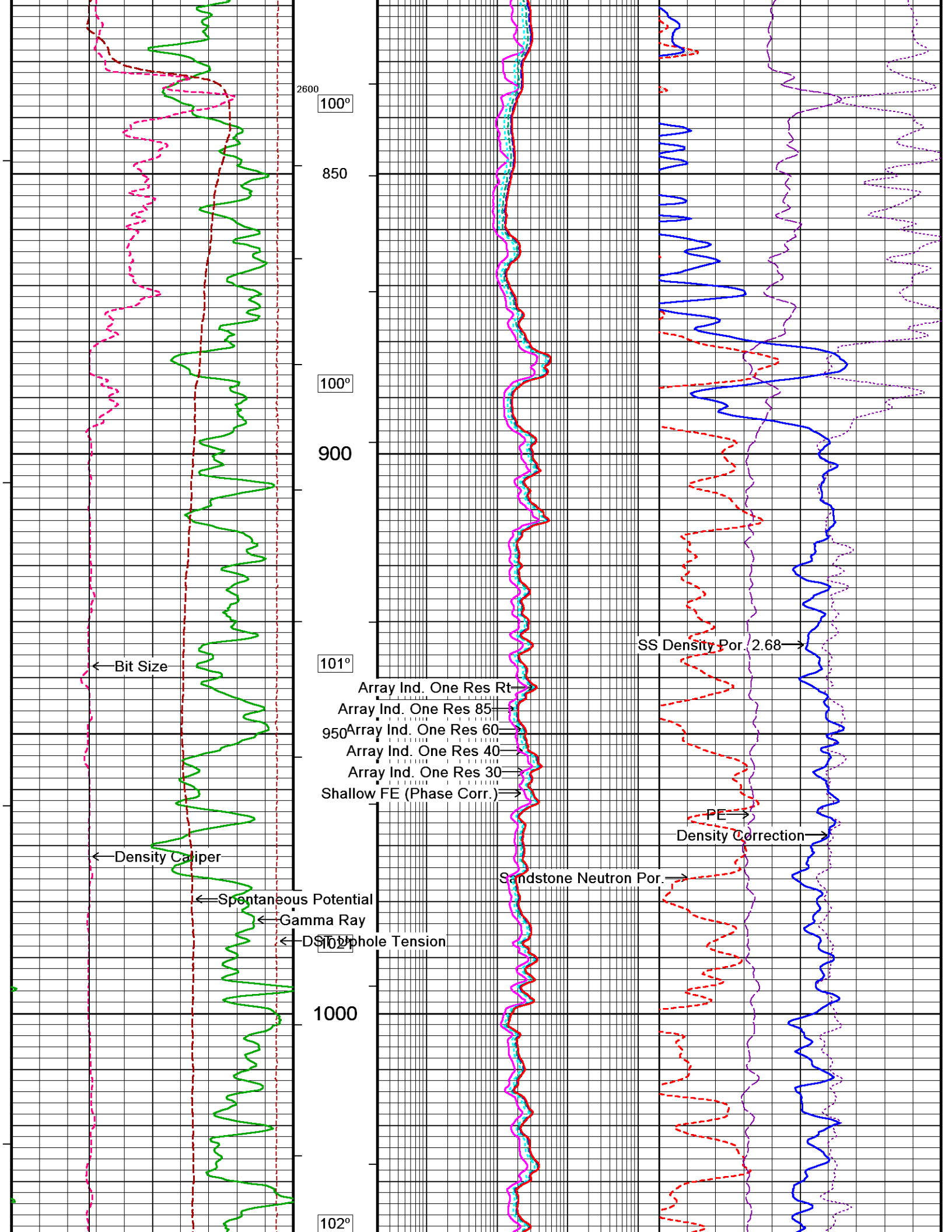
RIG: PATTERSON #307

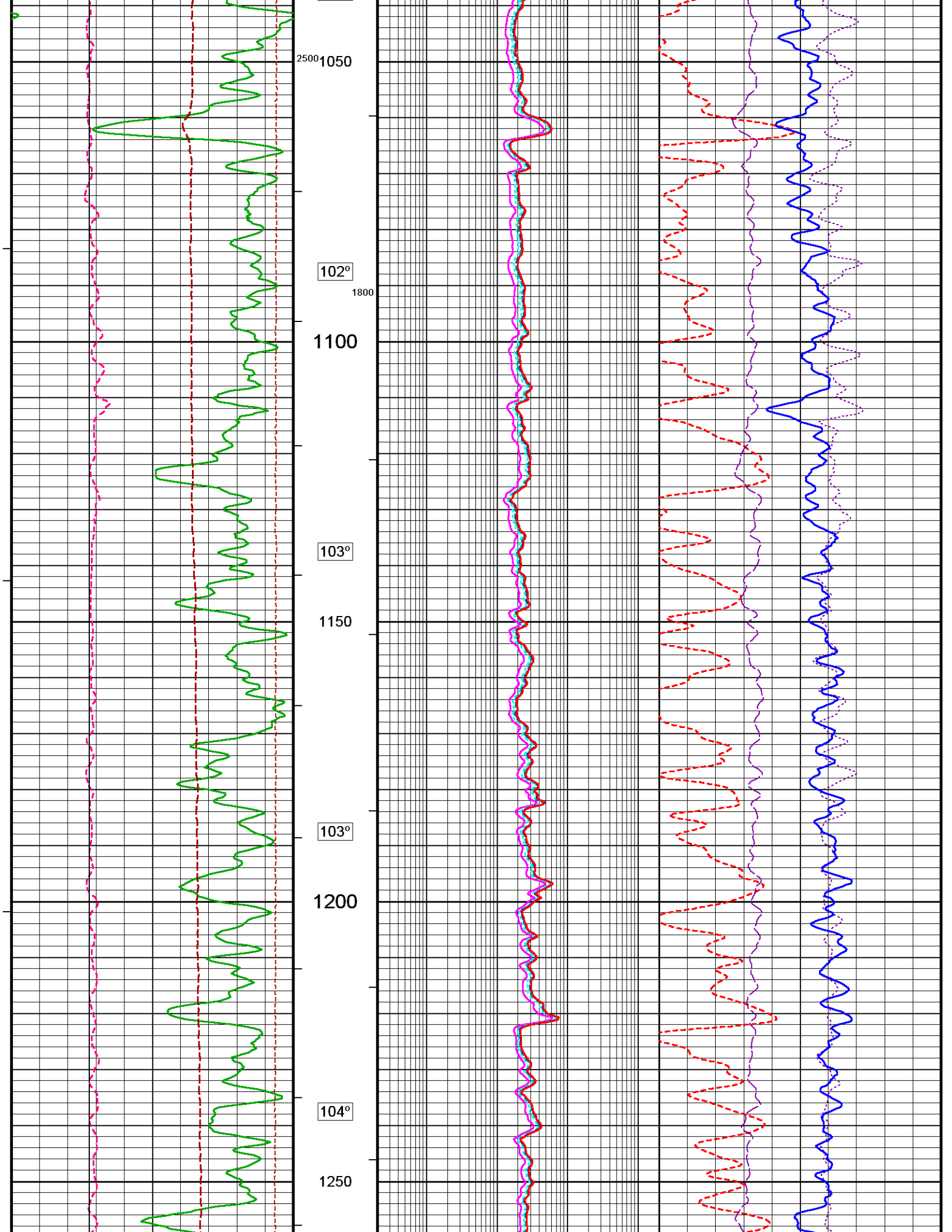
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

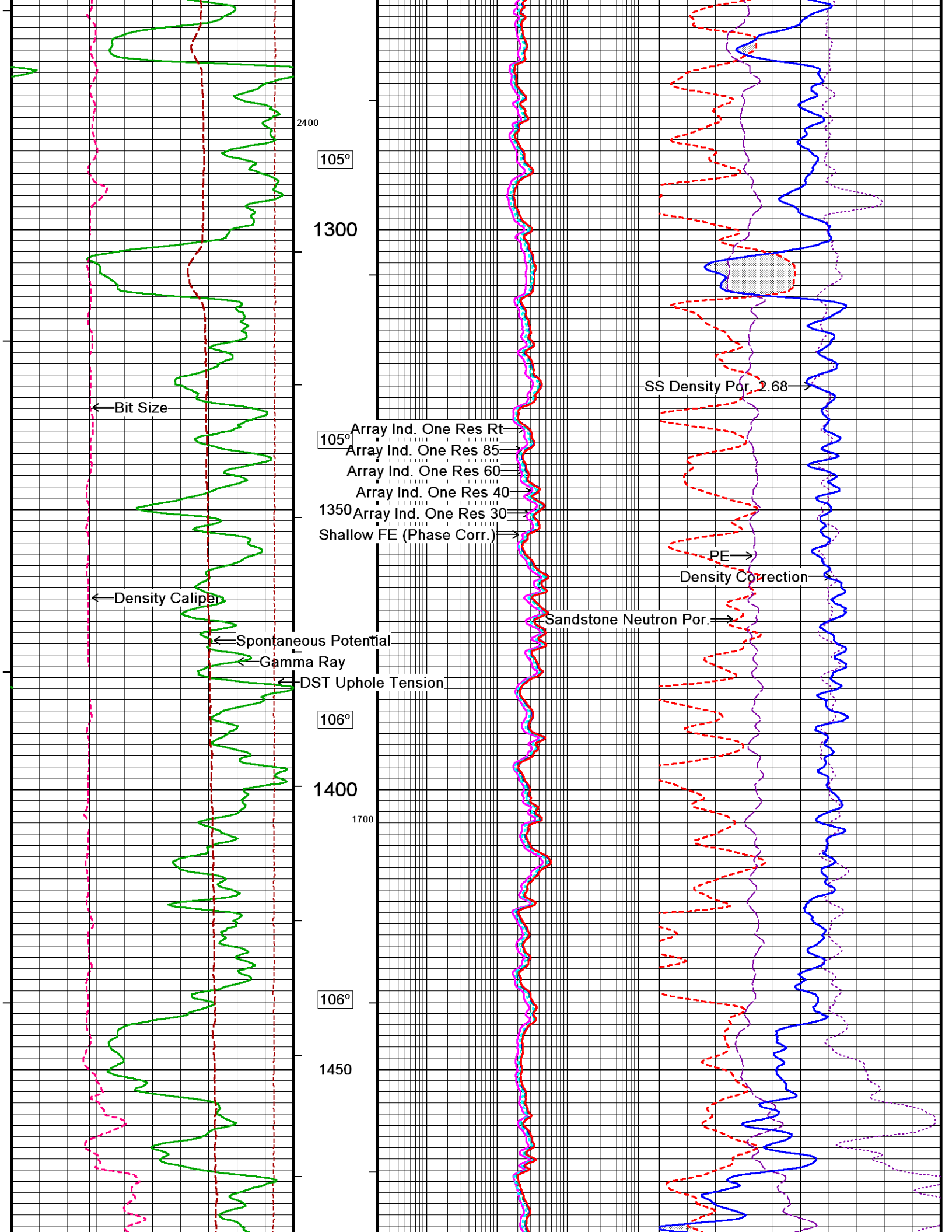
**5 INCH MAIN LOG**

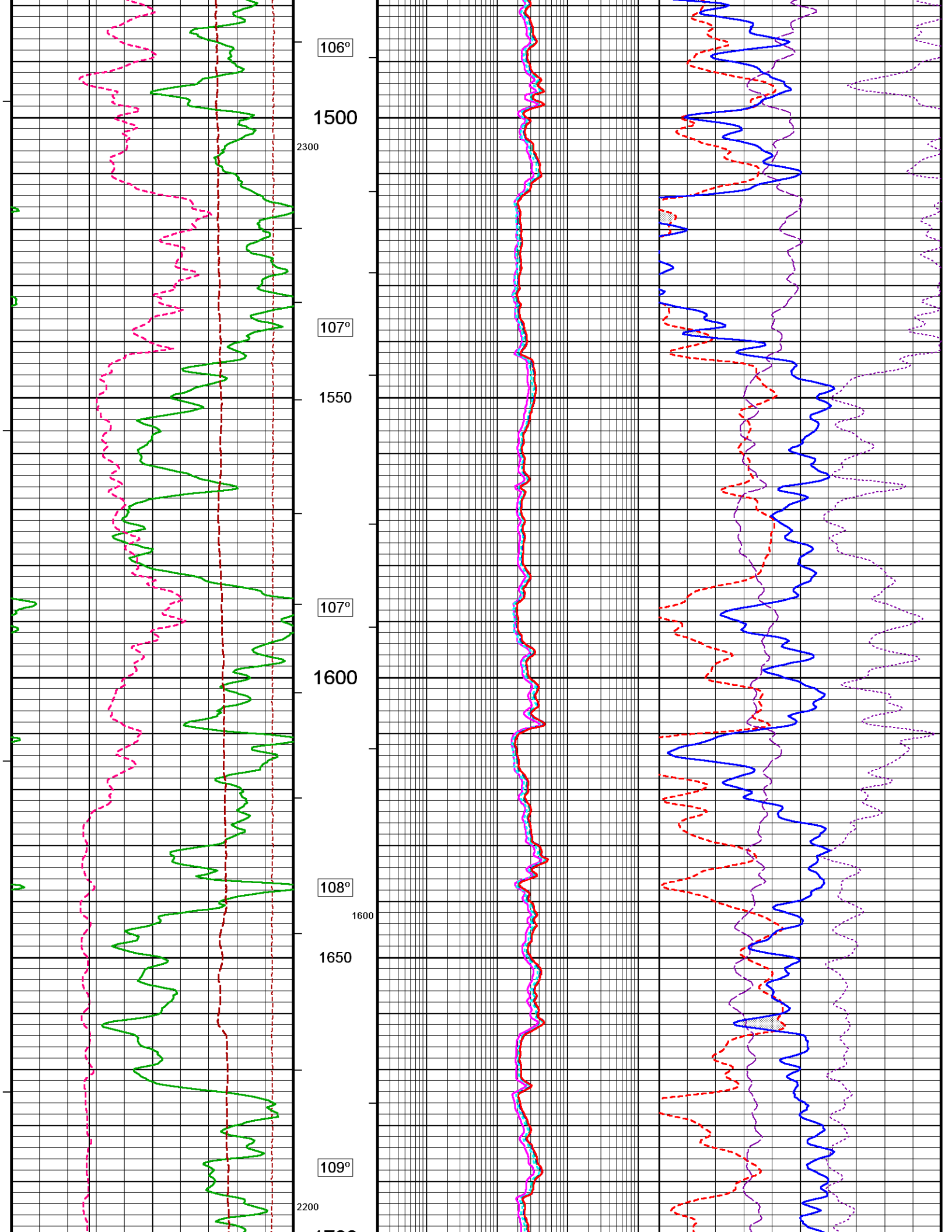
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 System Versions: Logged with 11.02.3186 Processed with 11.02.3186 Plotted with 11.02.2164

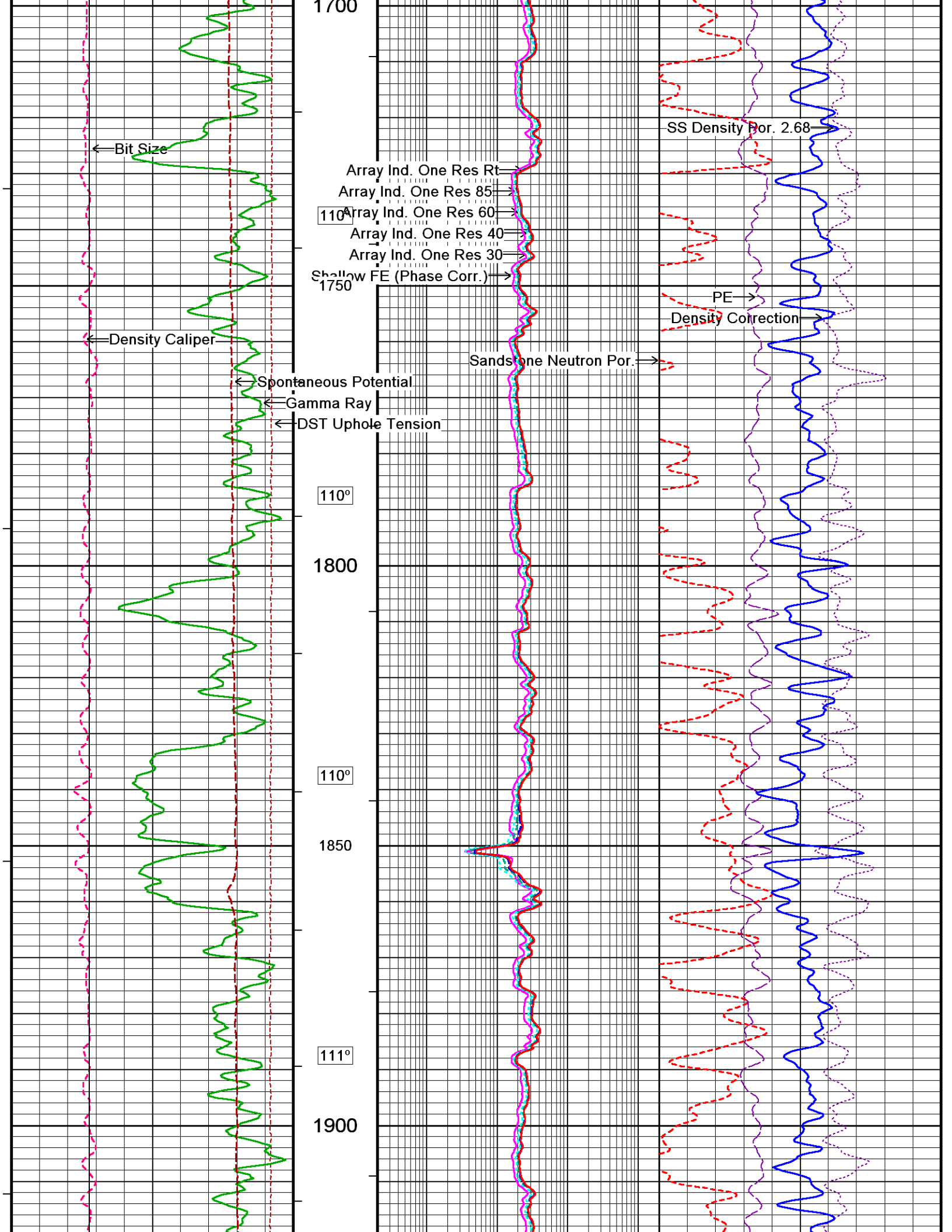


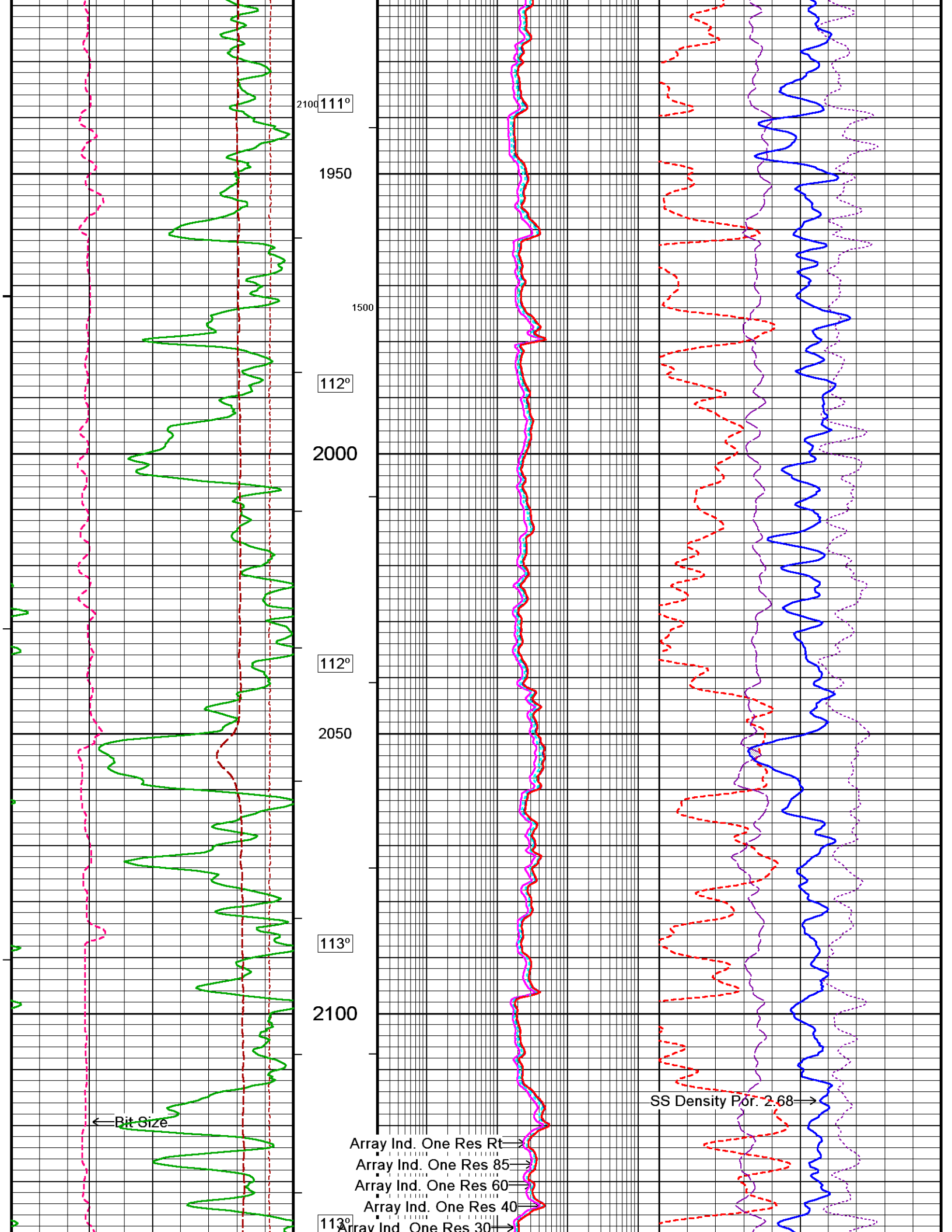


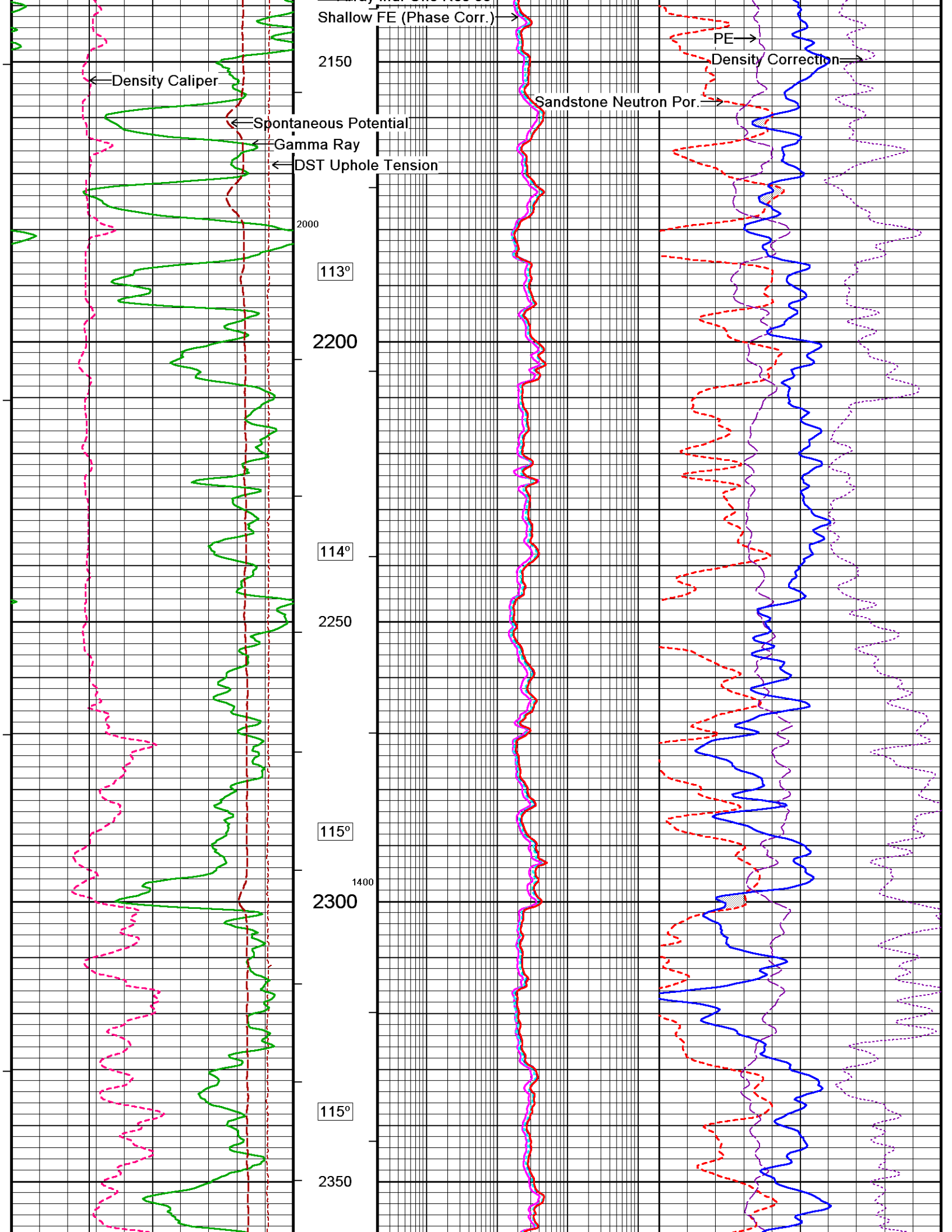


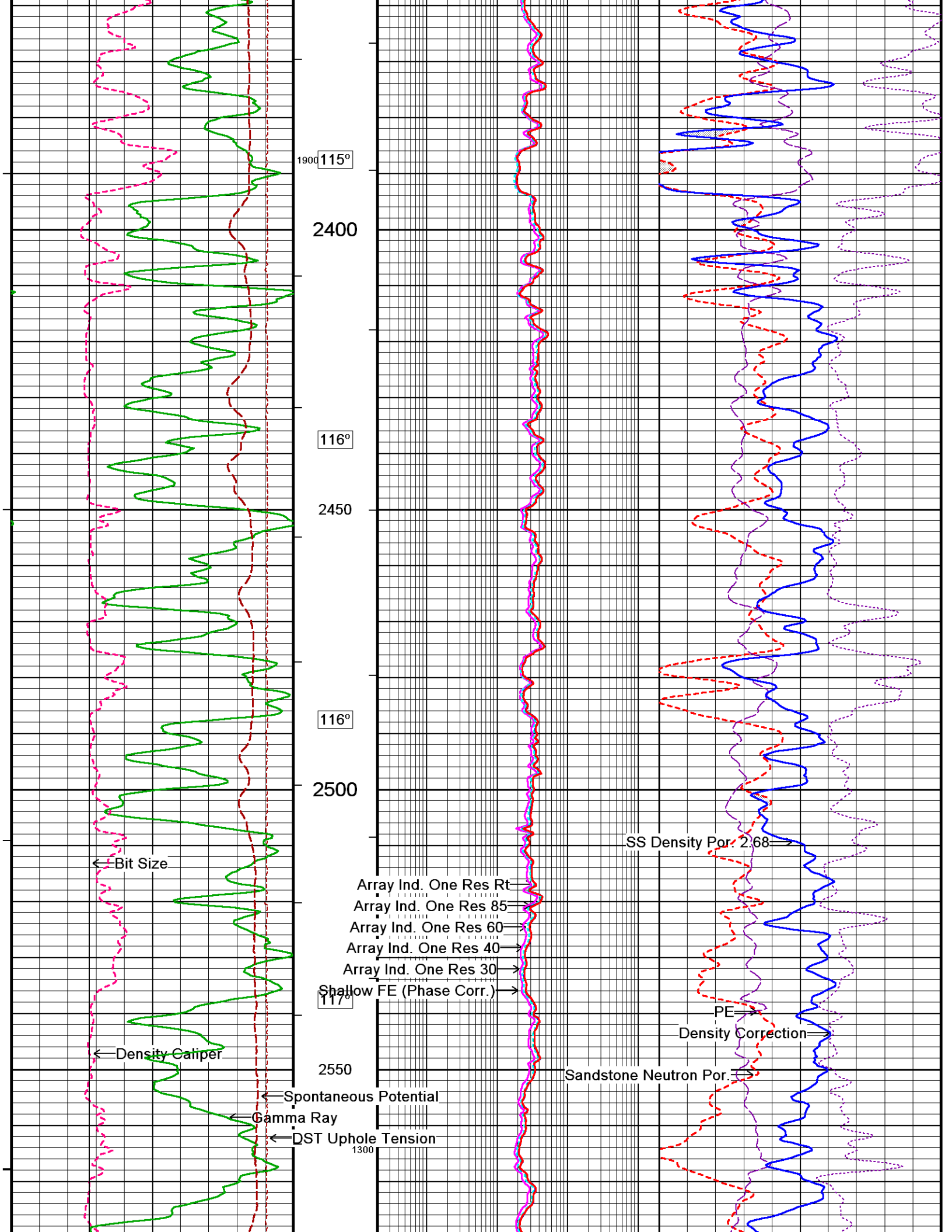


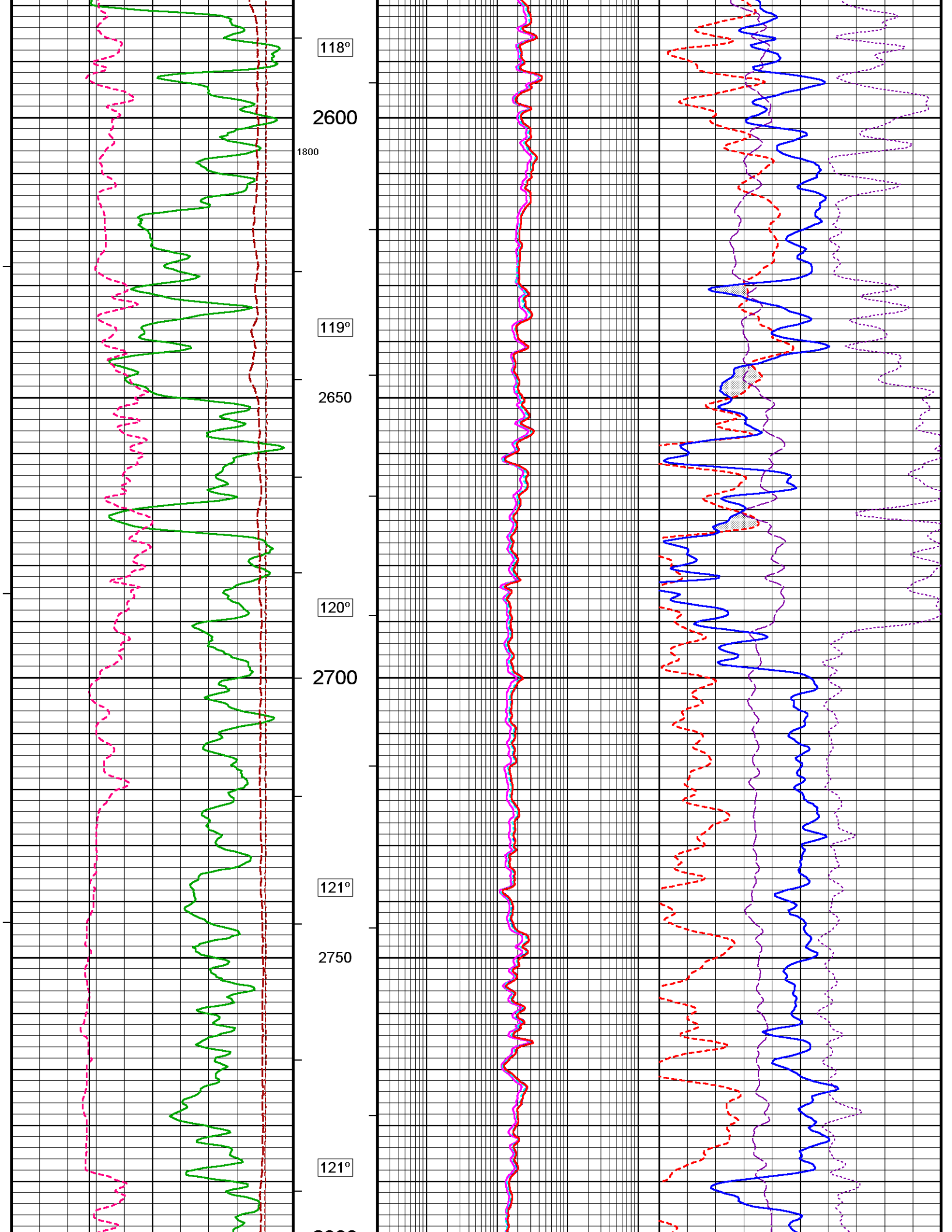


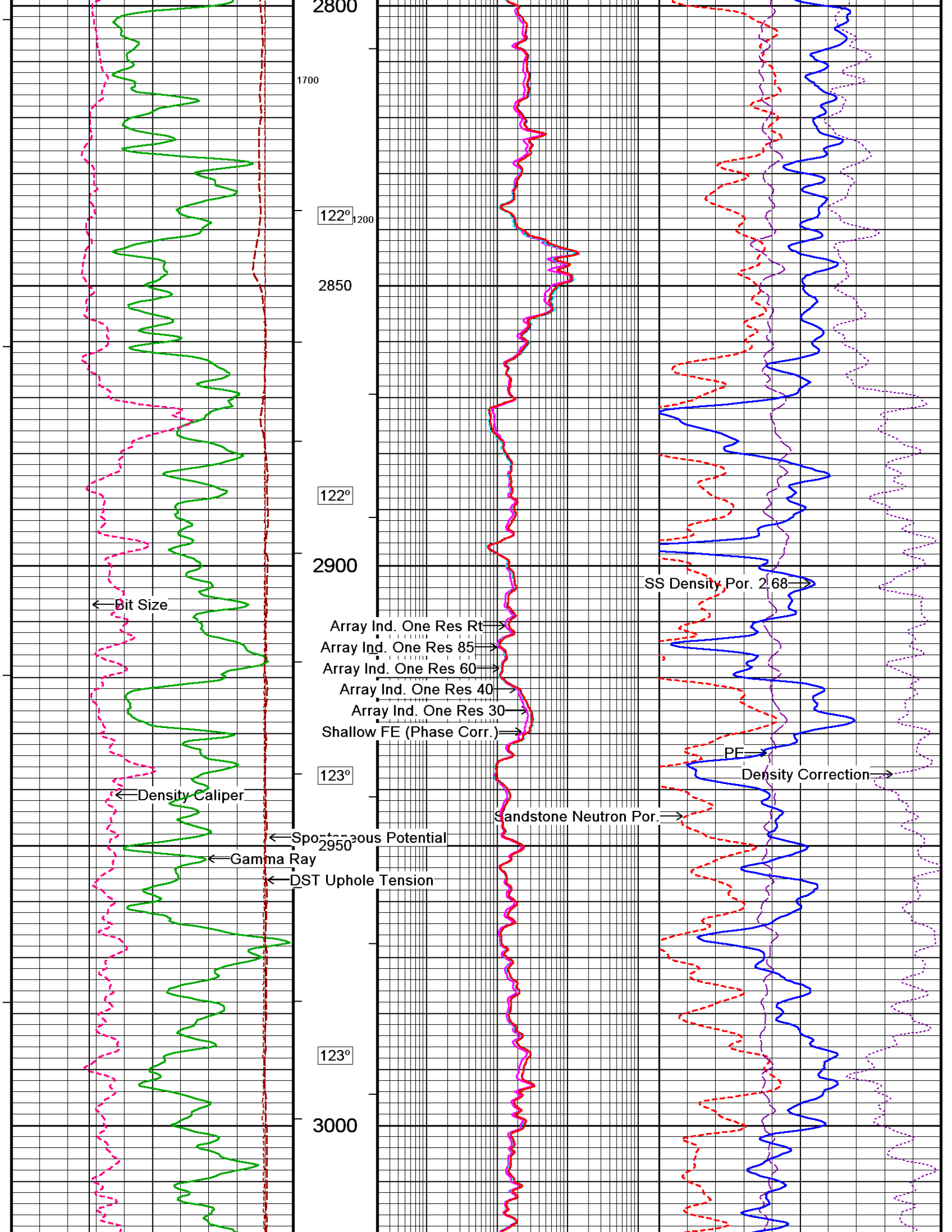


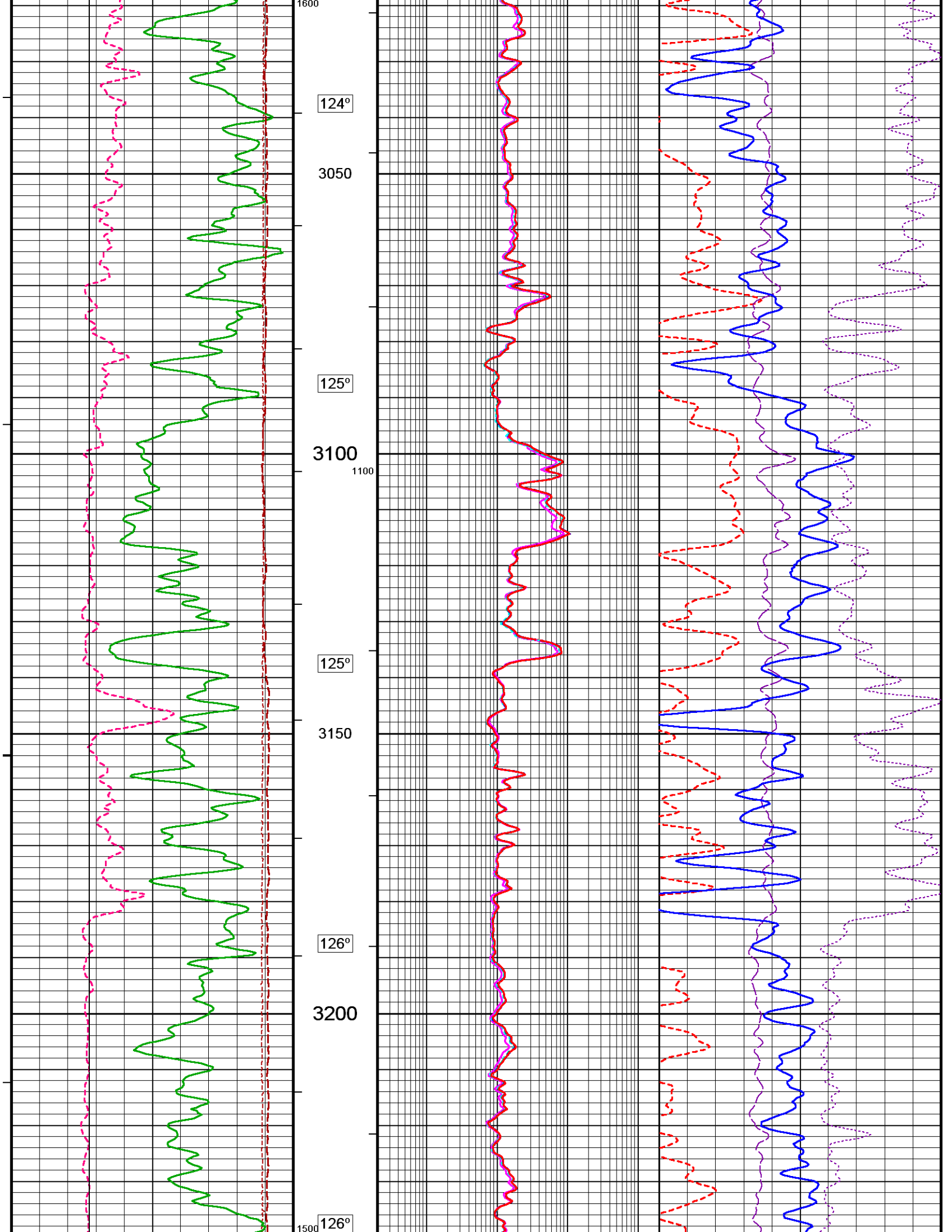


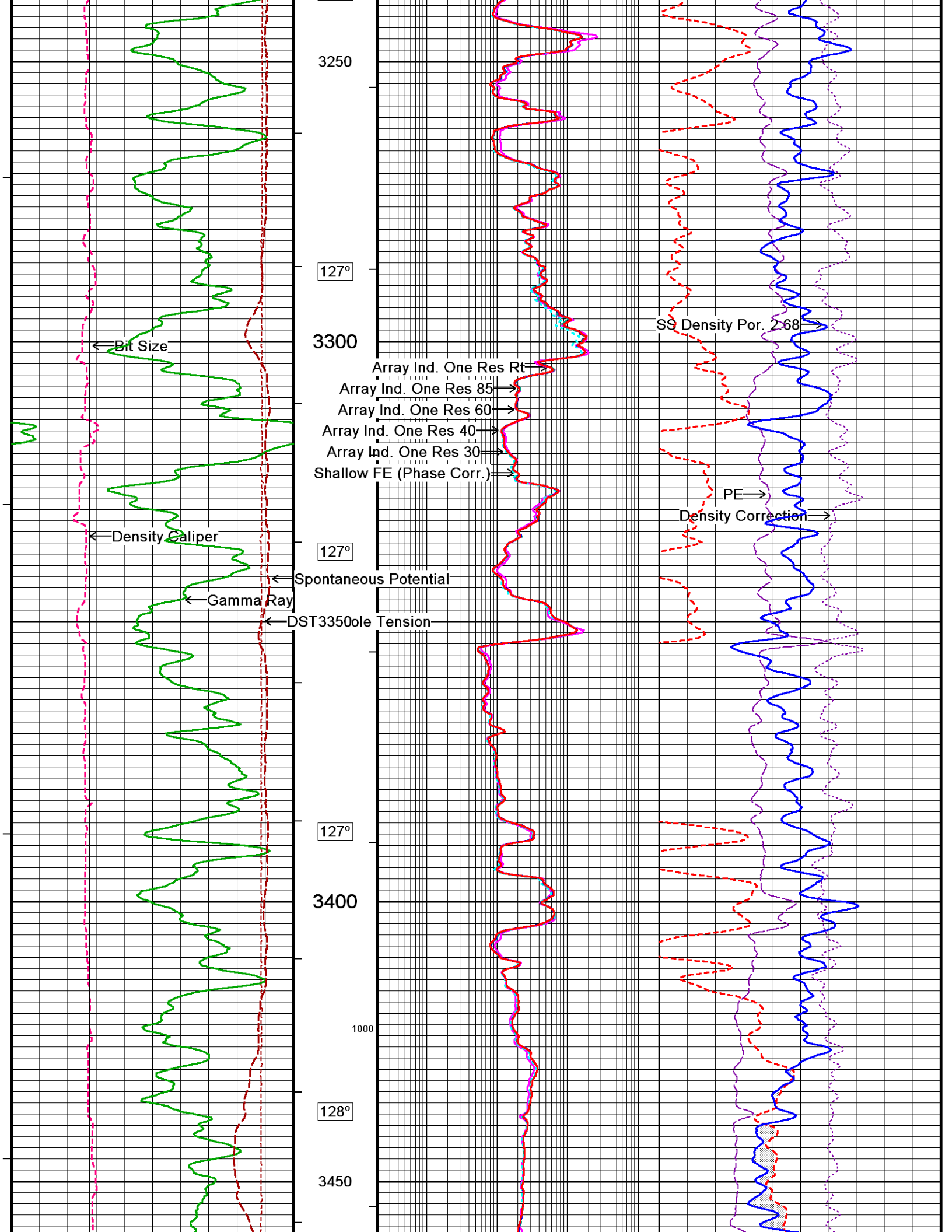


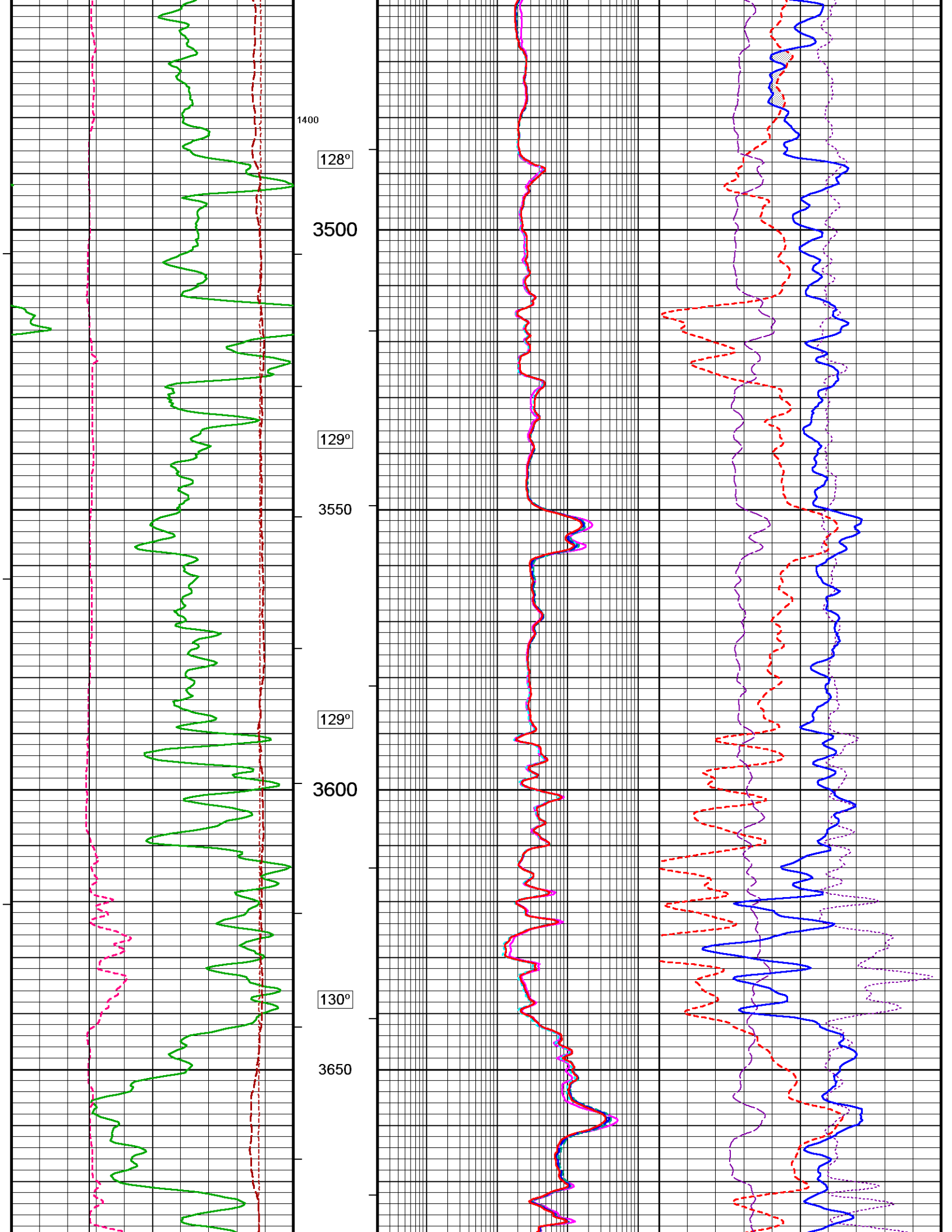


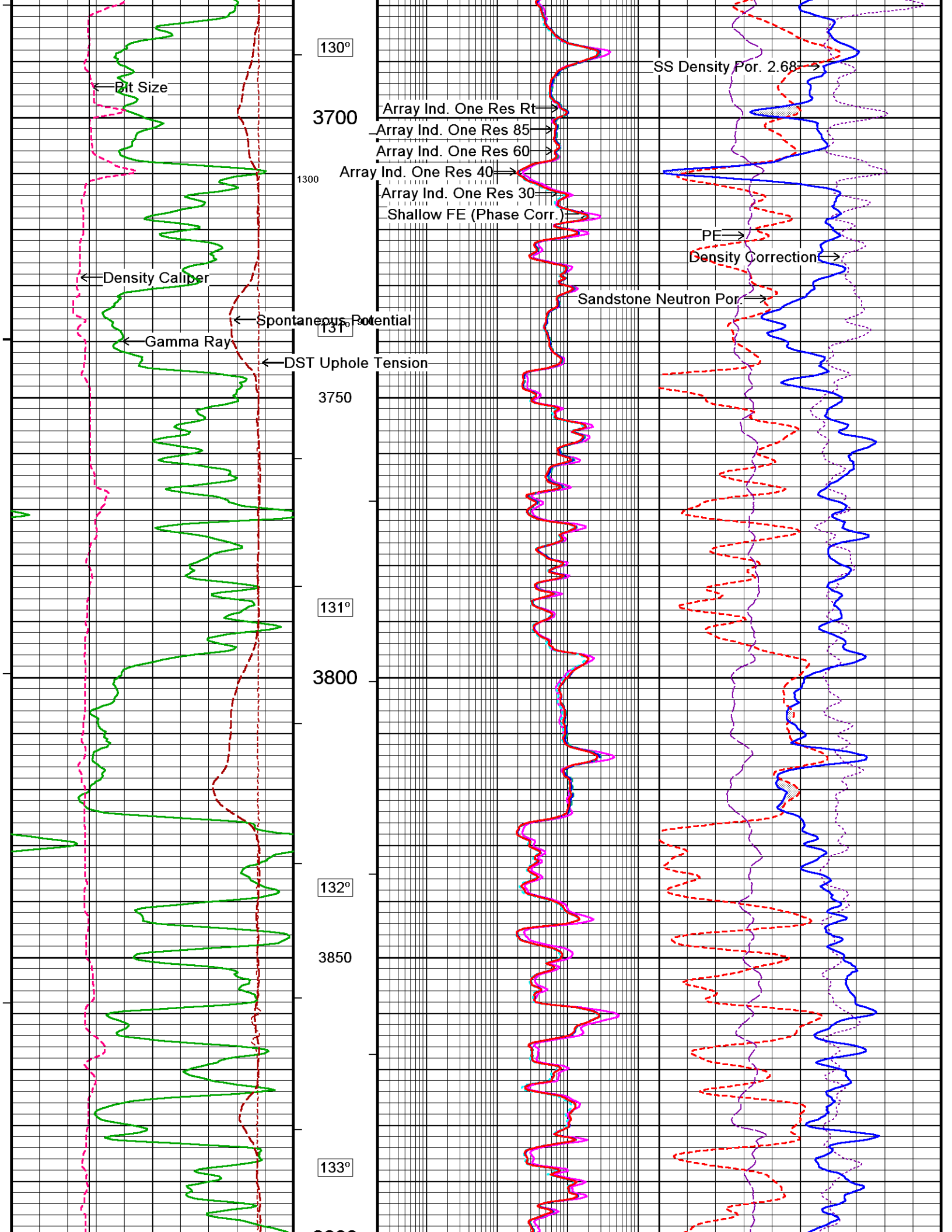


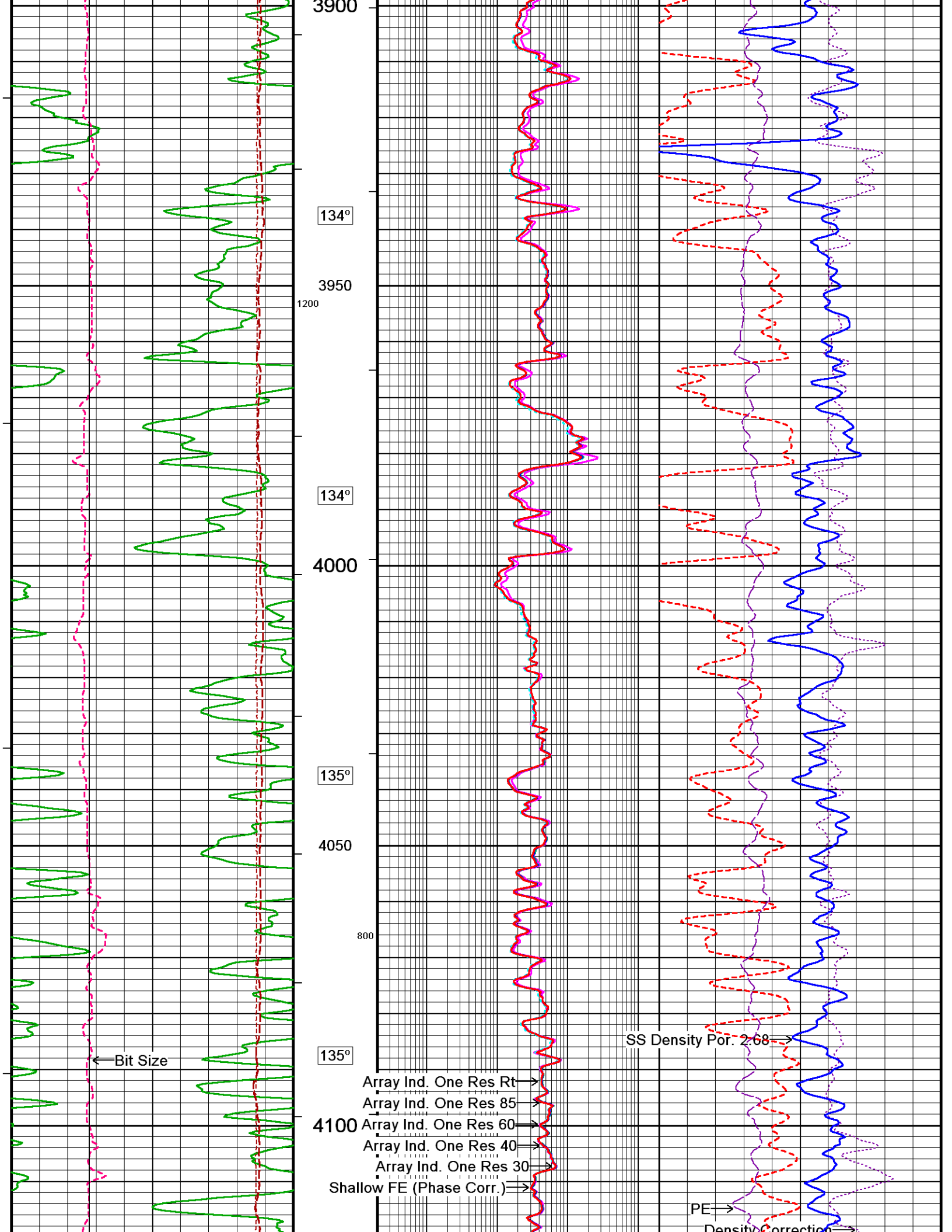


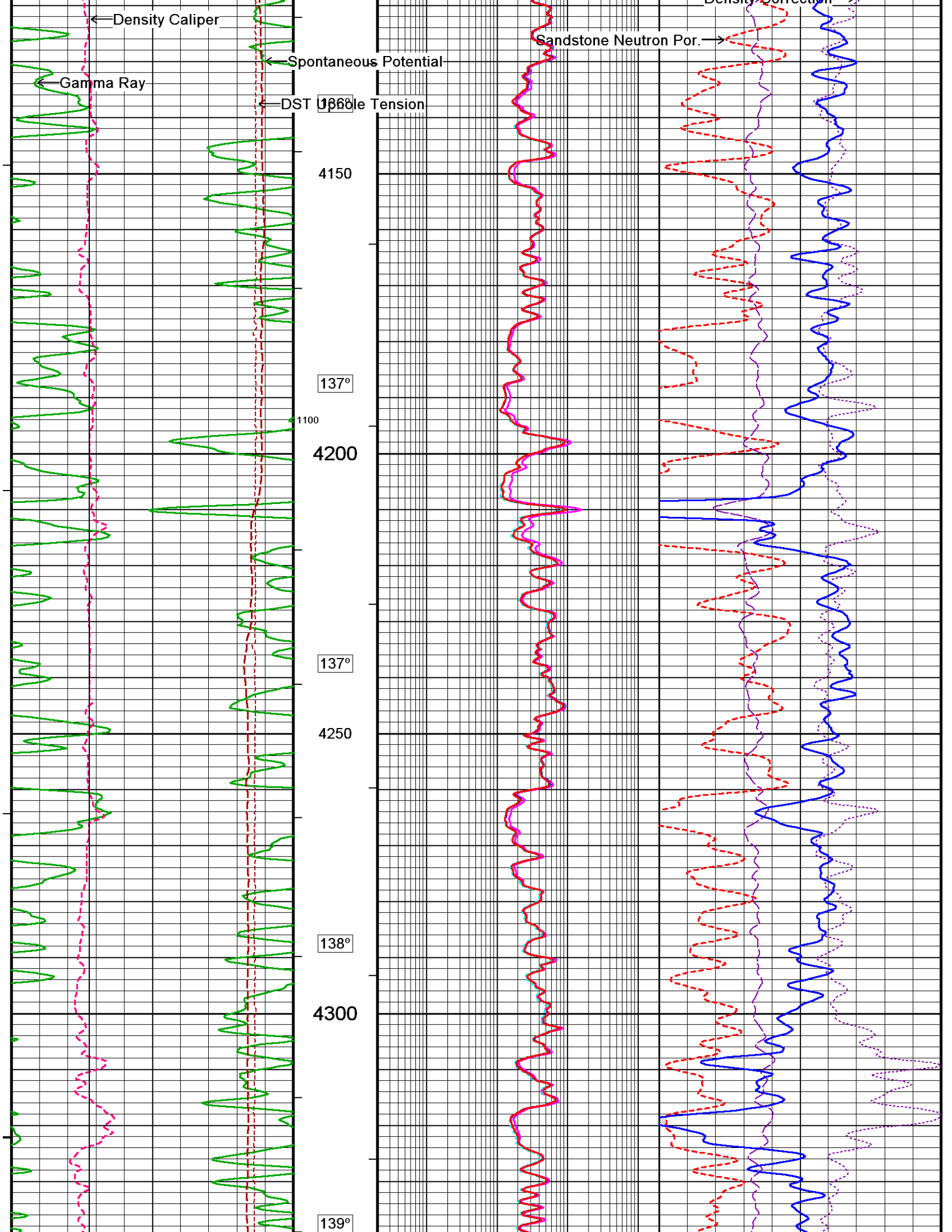


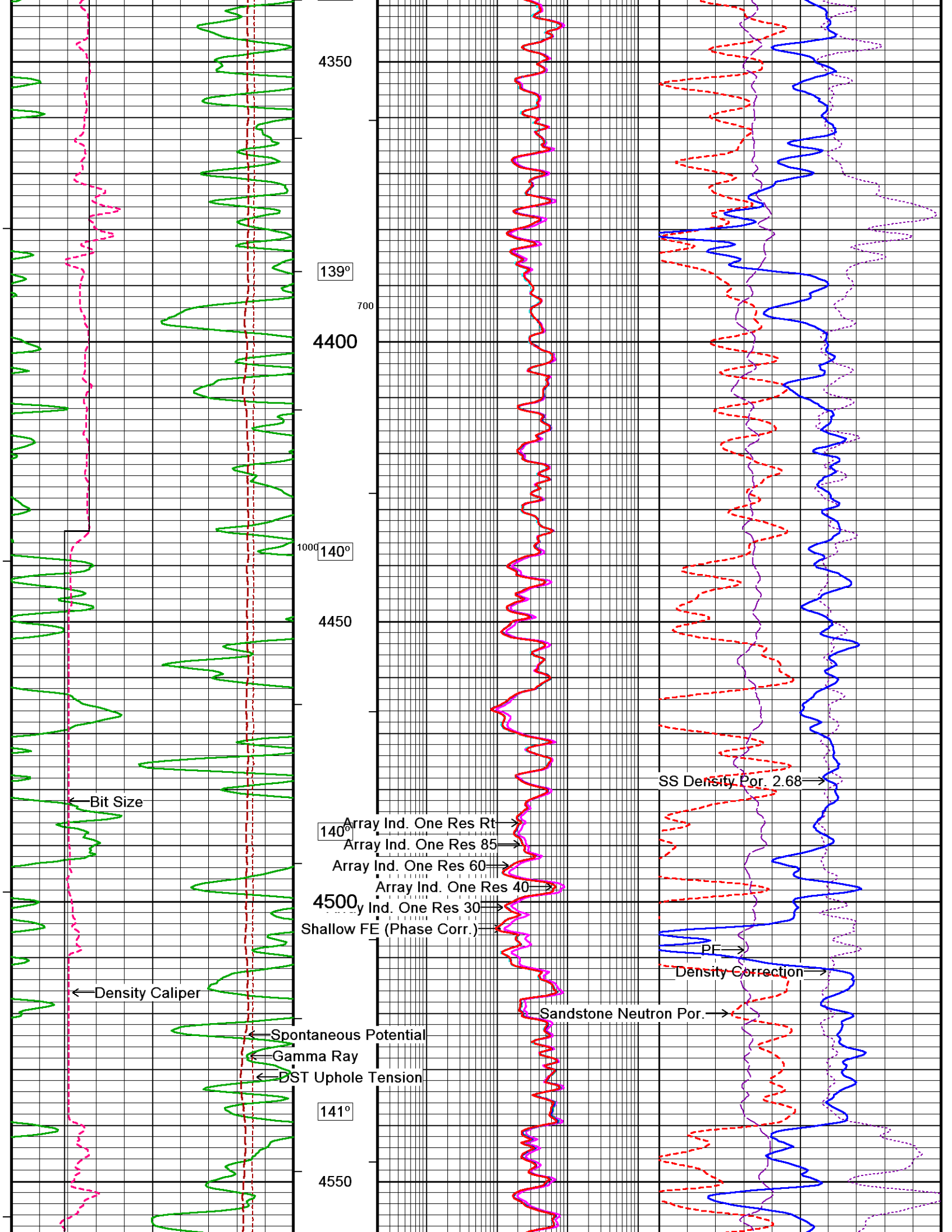


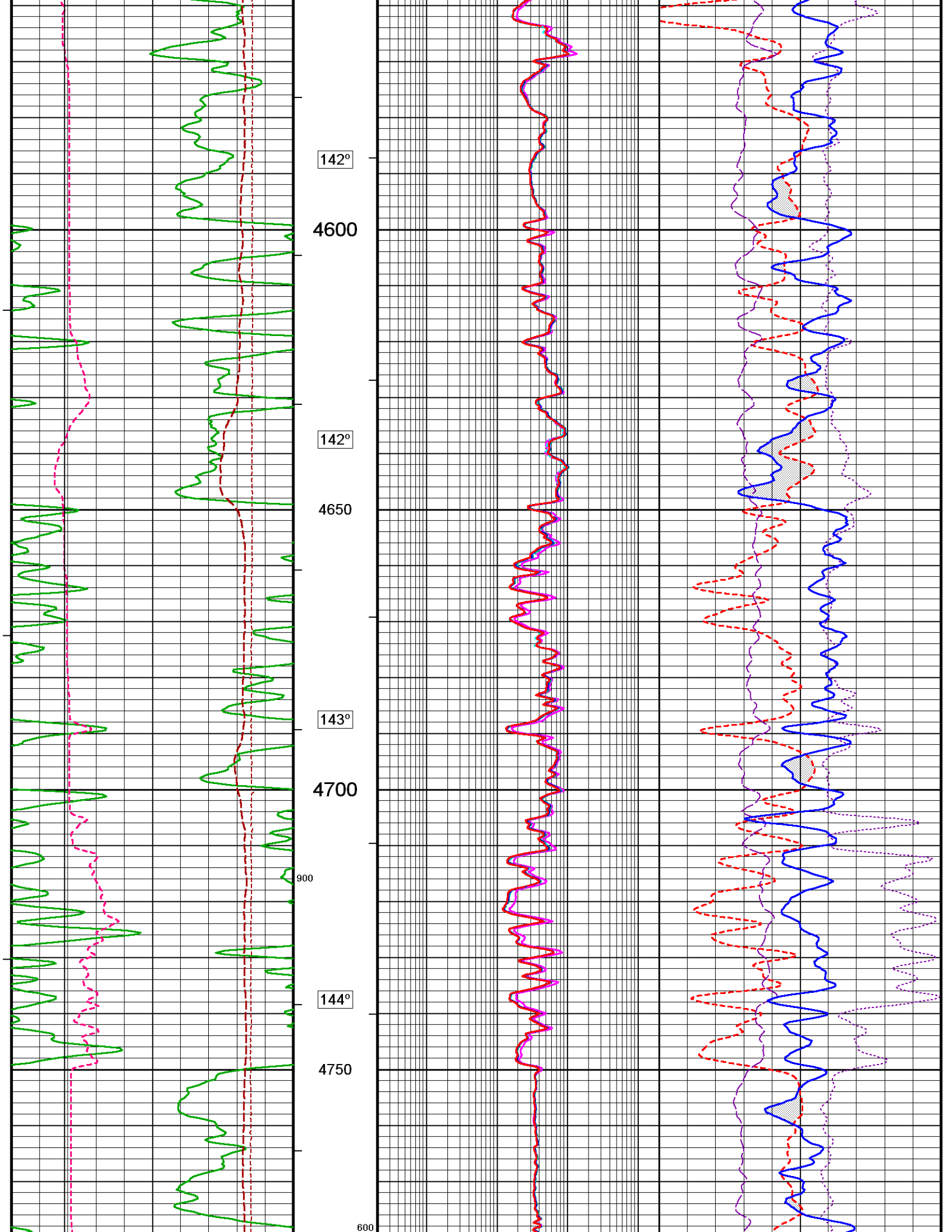


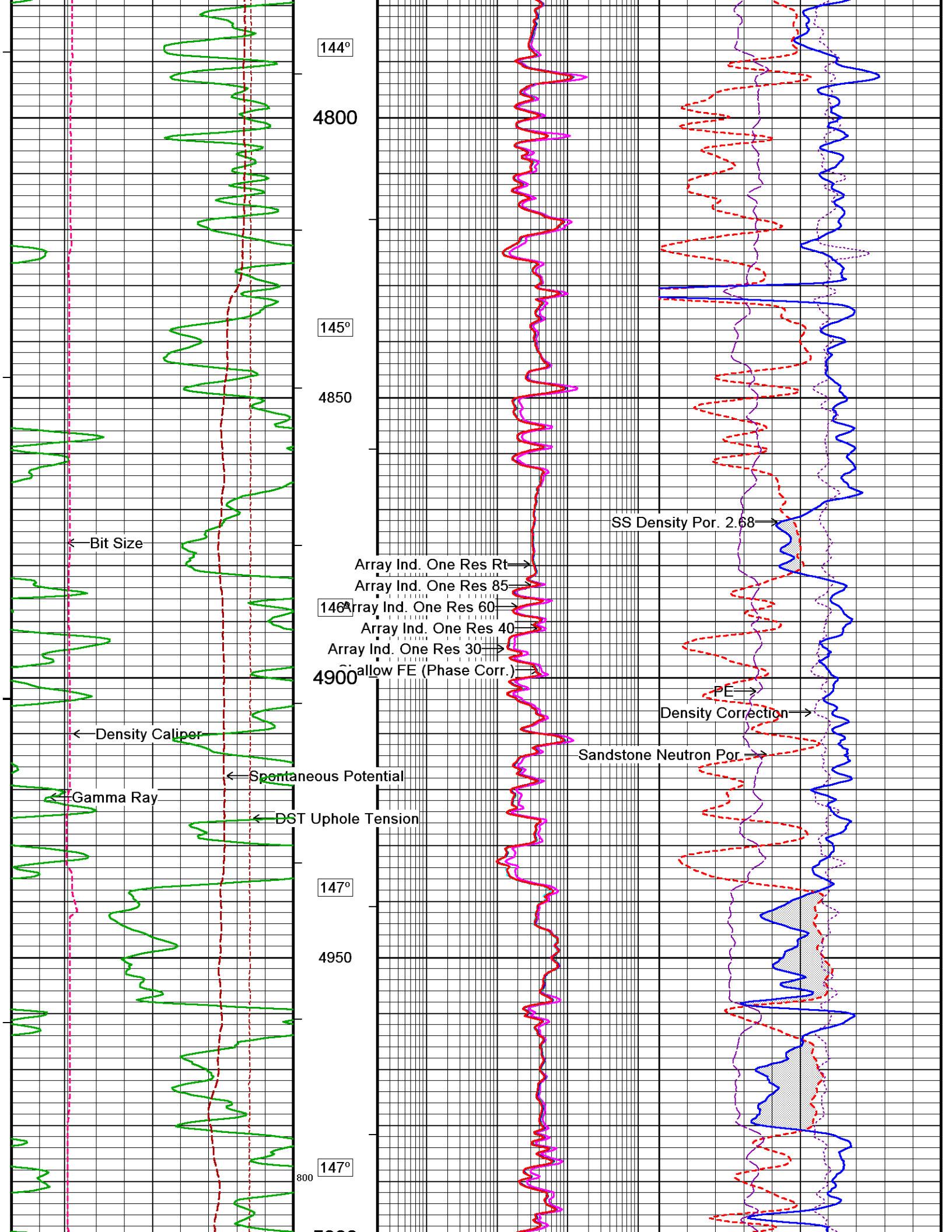












144°

4800

145°

4850

146°

4900

147°

4950

147°

5000

← Bit Size

← Density Caliper

← Gamma Ray

← Spontaneous Potential

← DST Uphole Tension

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 →

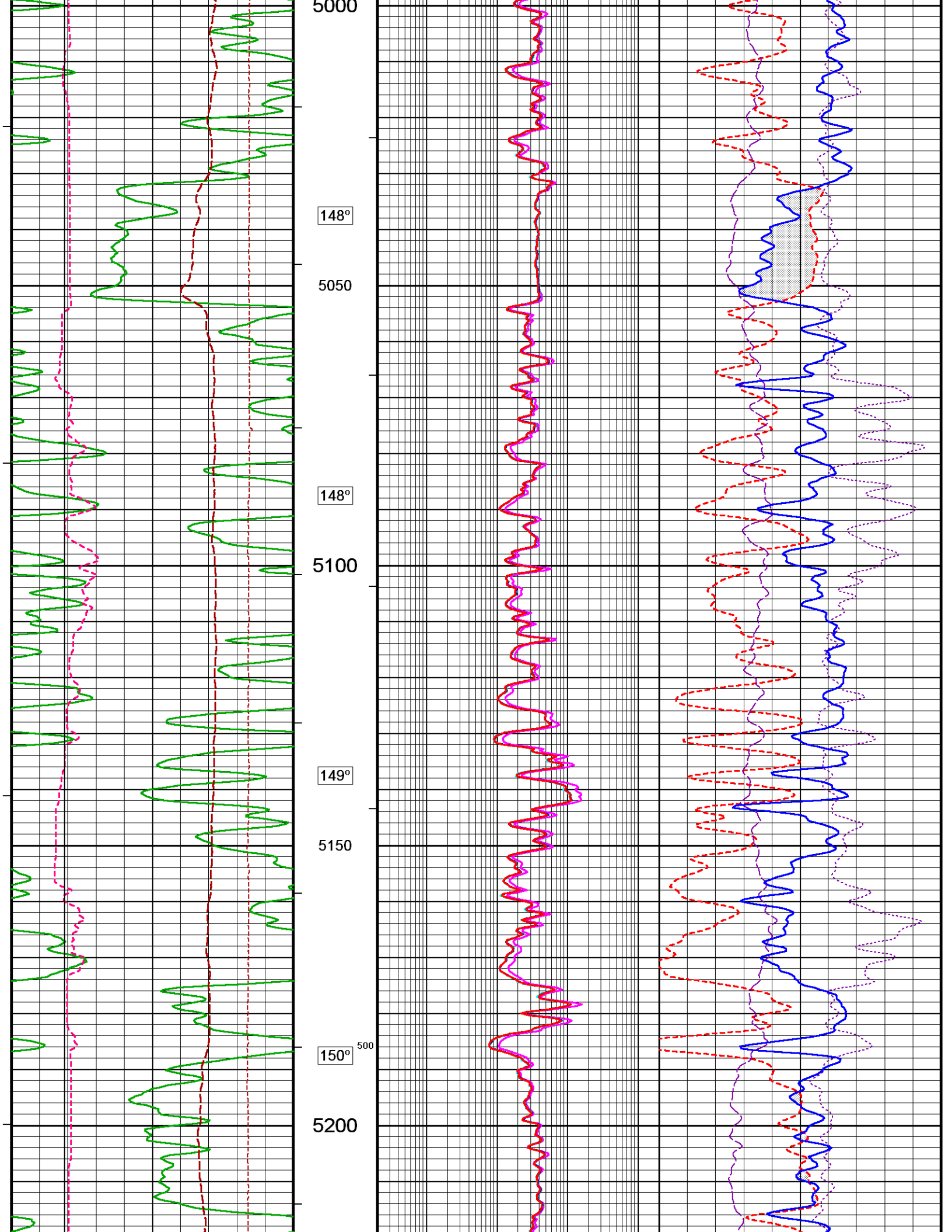
allow FE (Phase Corr.) →

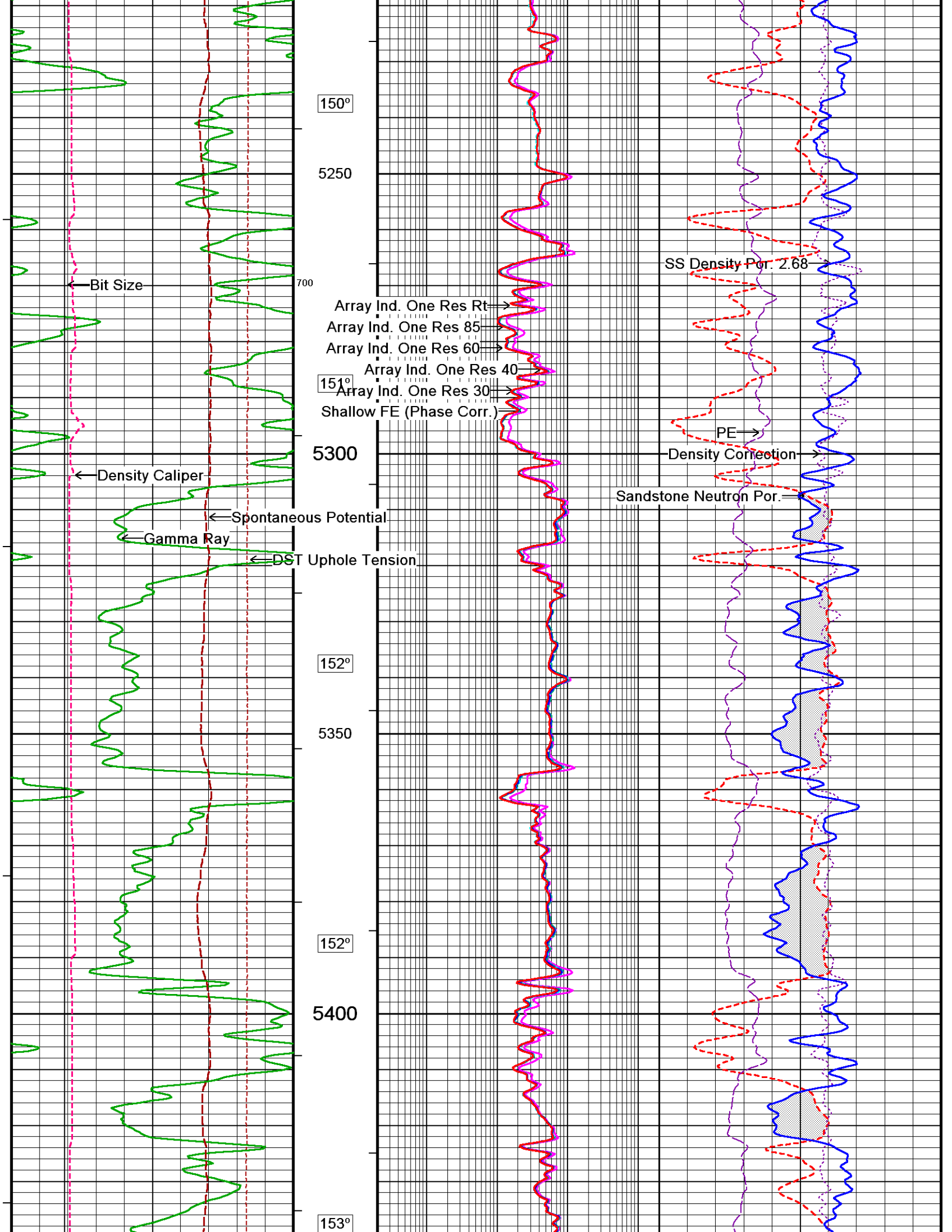
SS Density Por. 2.68 →

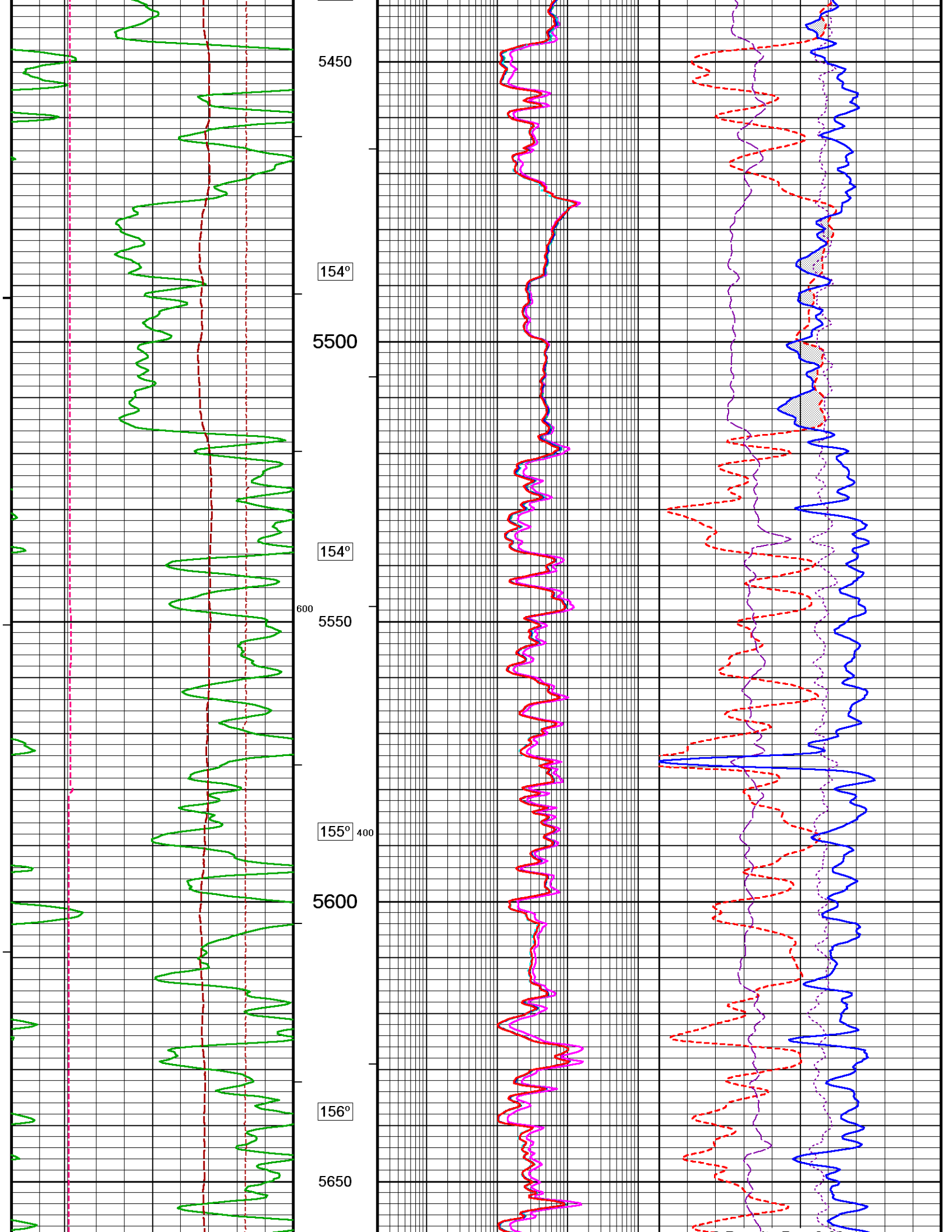
PE →

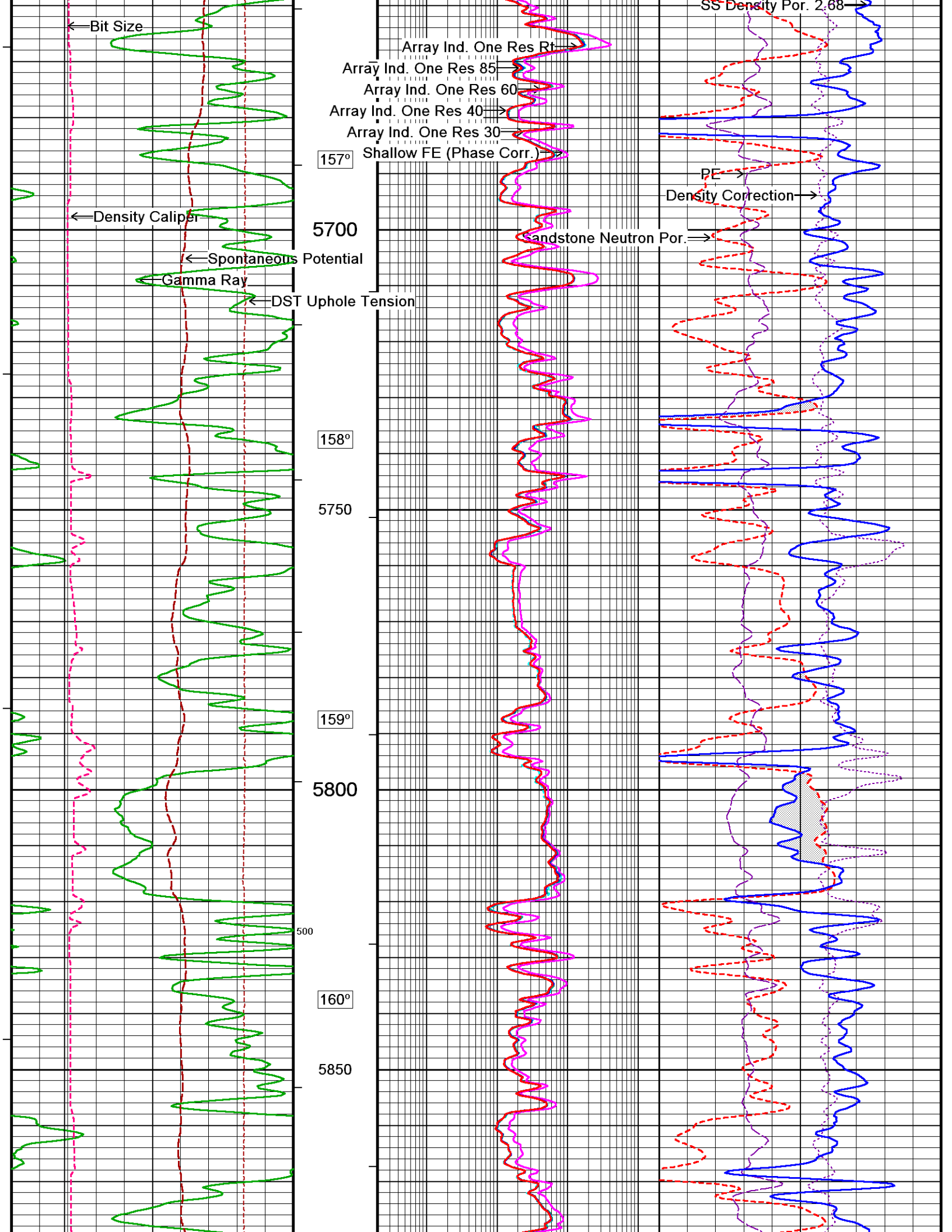
Density Correction →

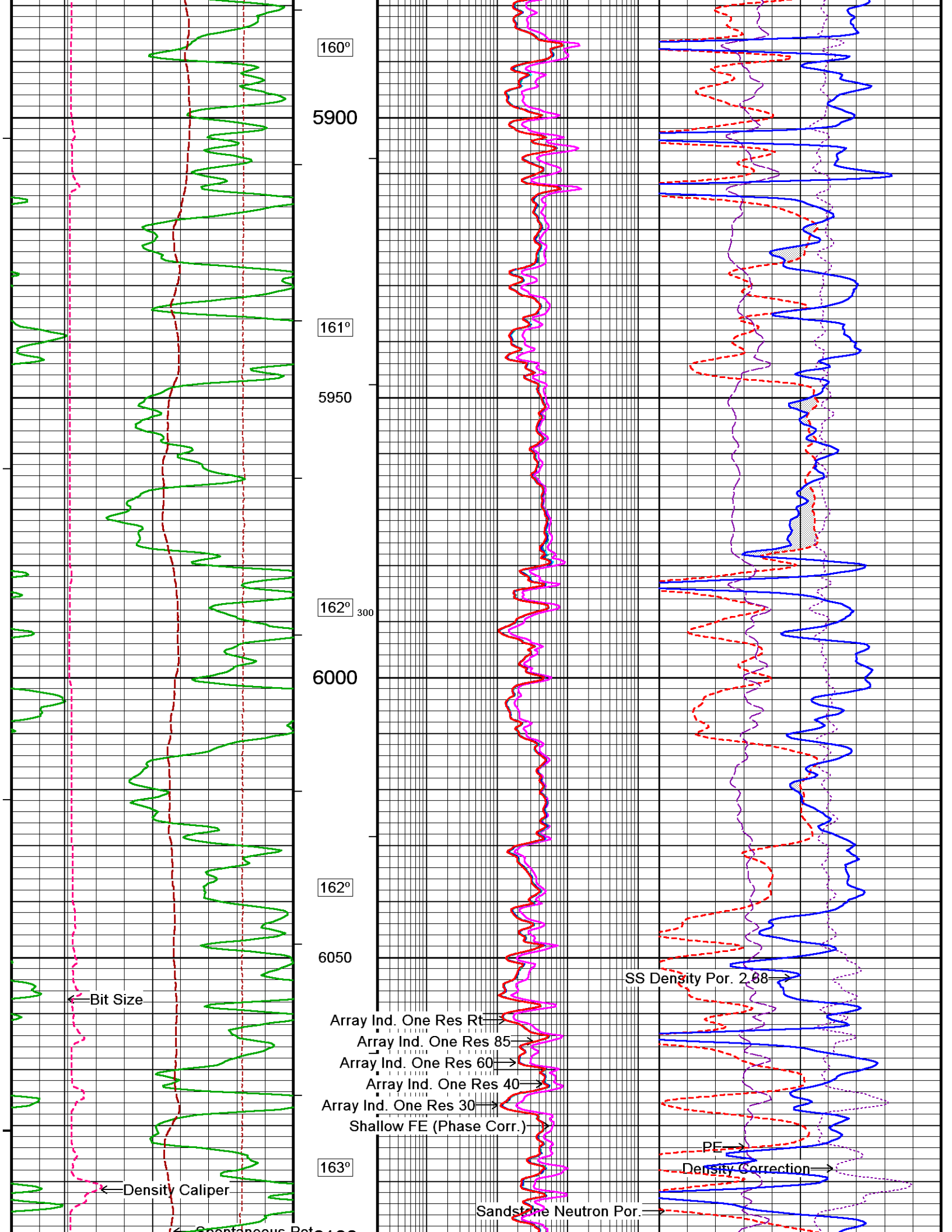
Sandstone Neutron Por →

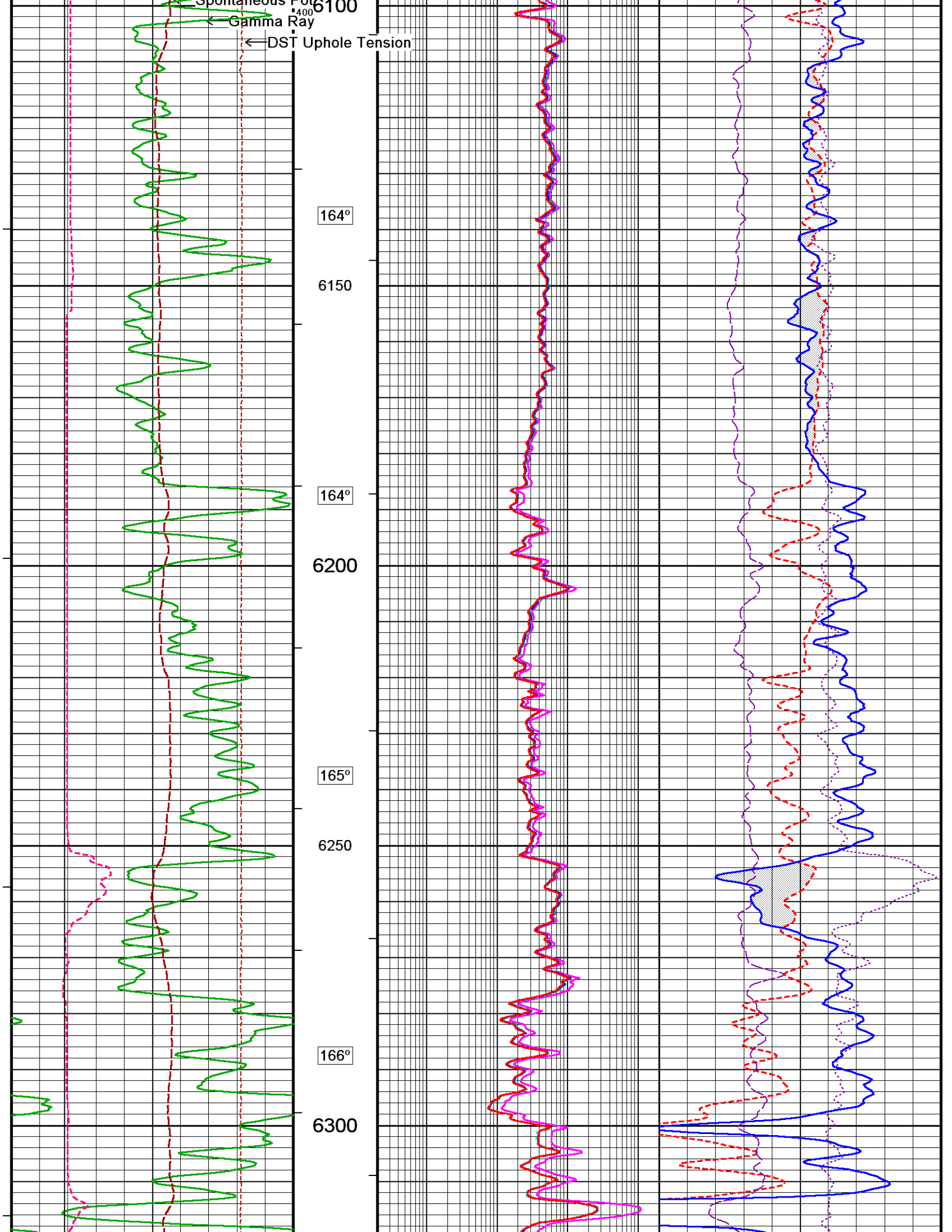


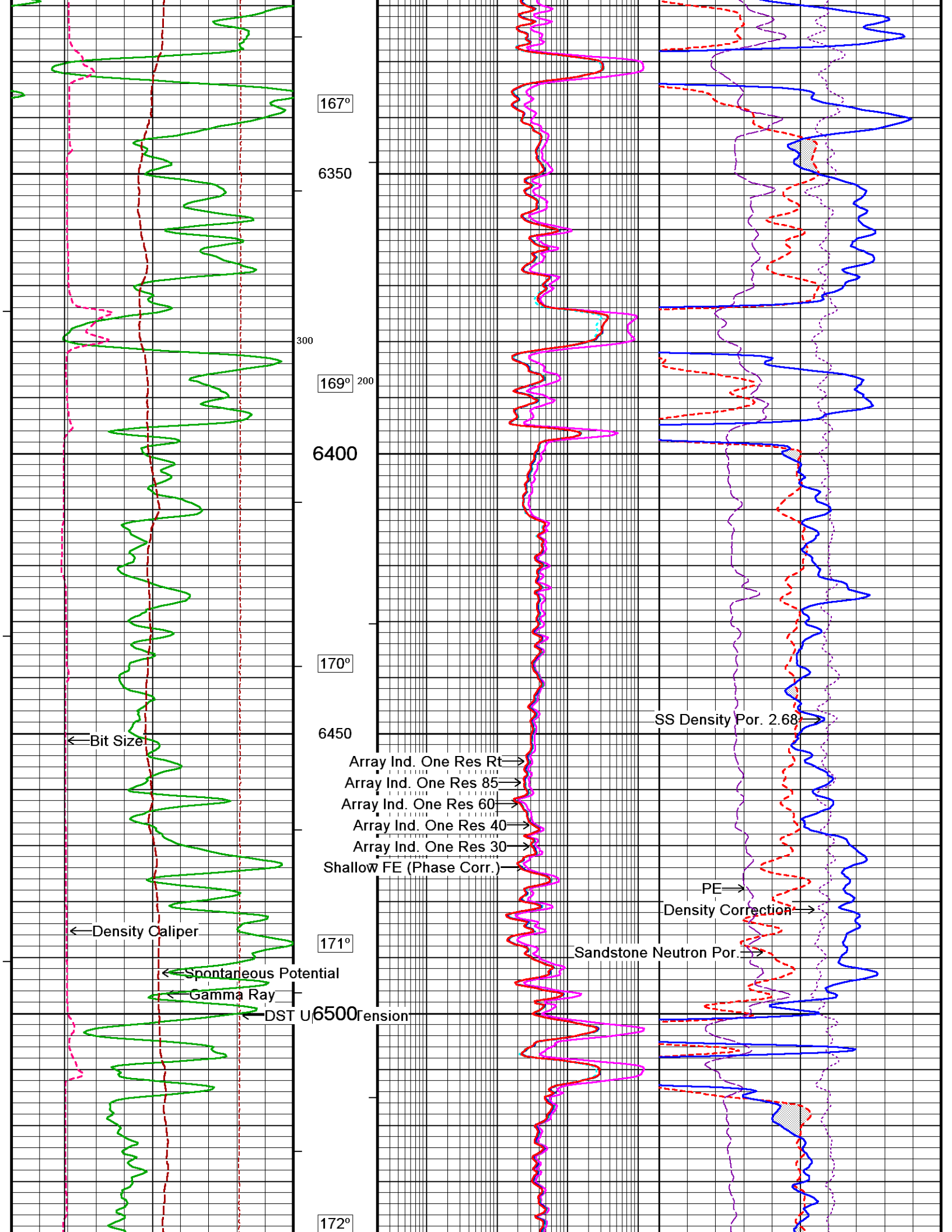


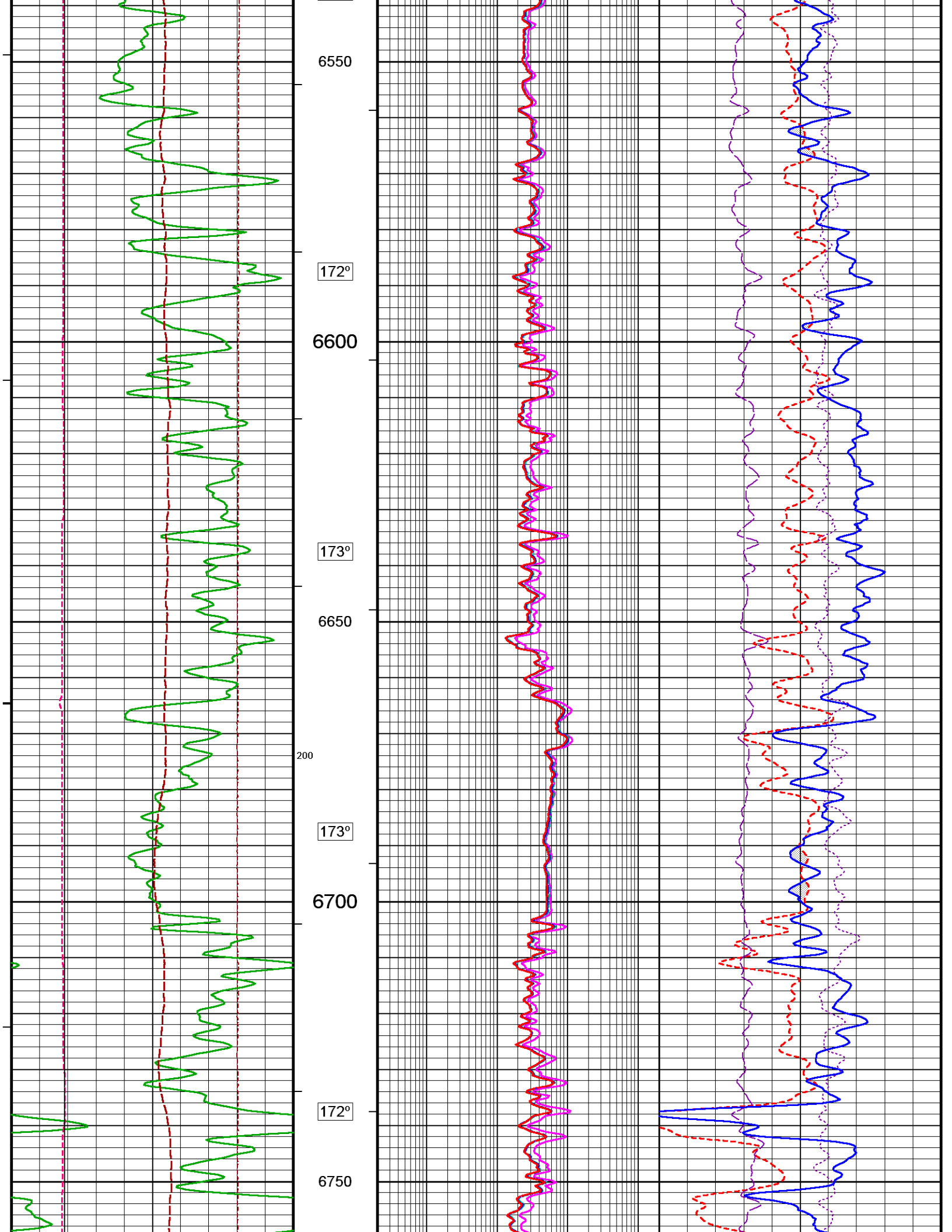


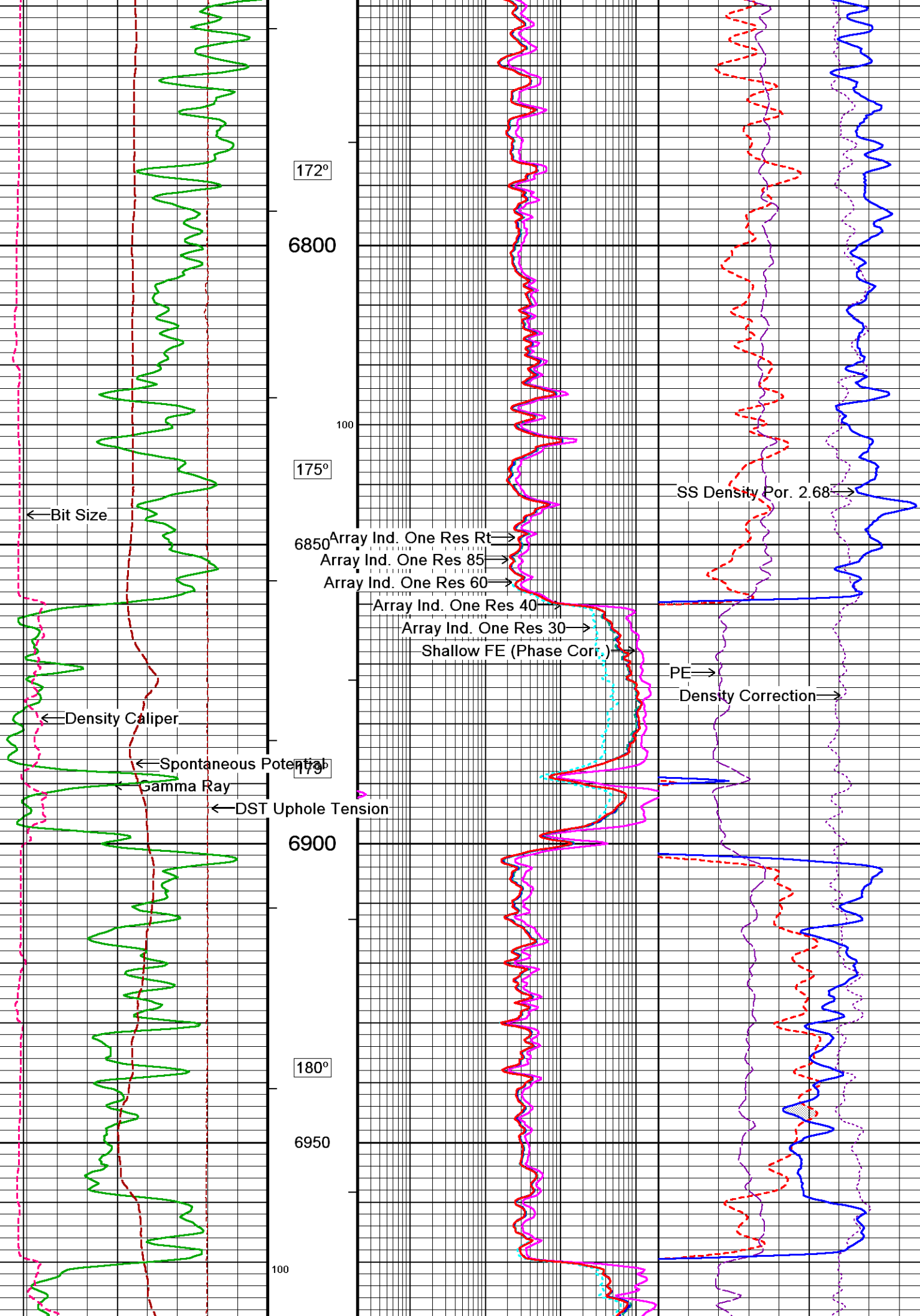


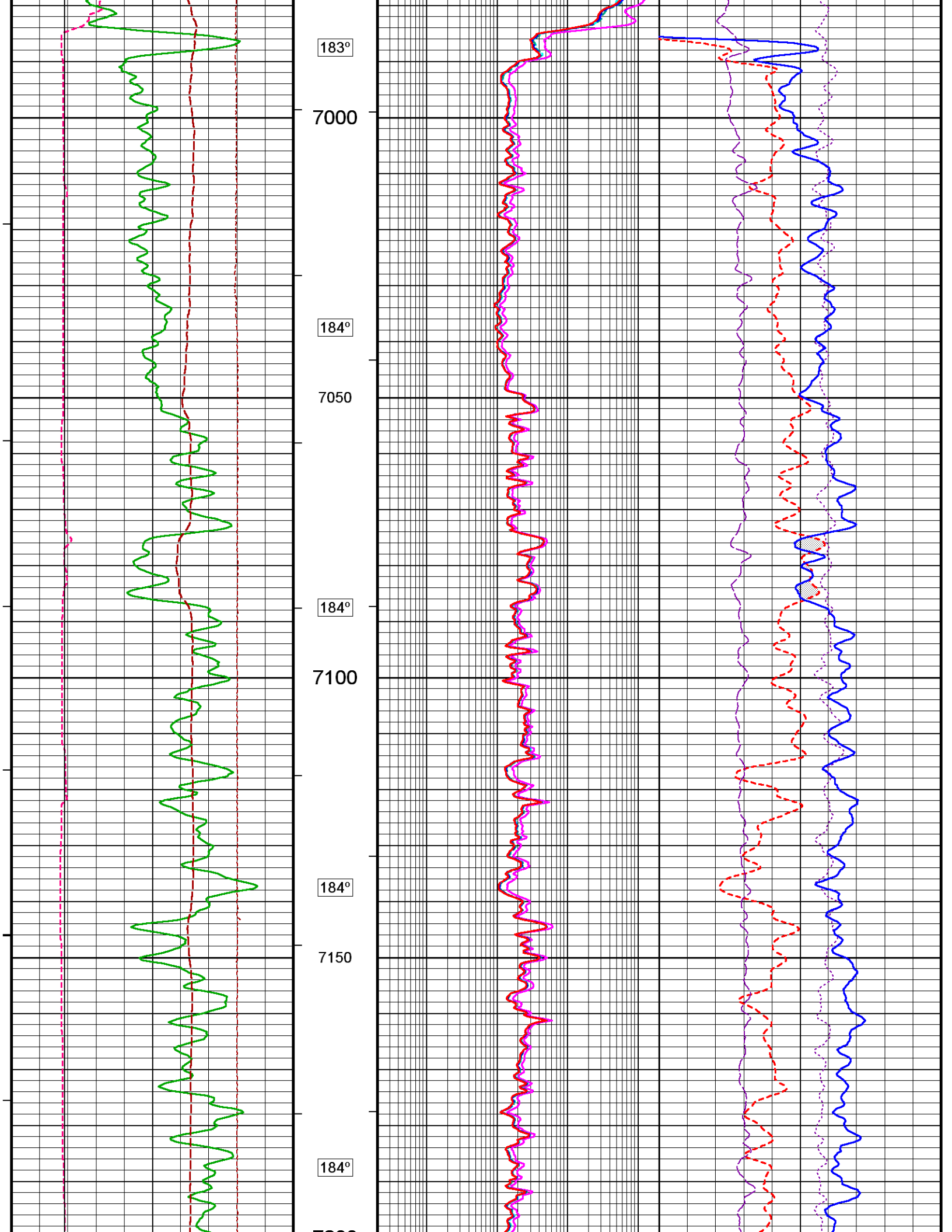


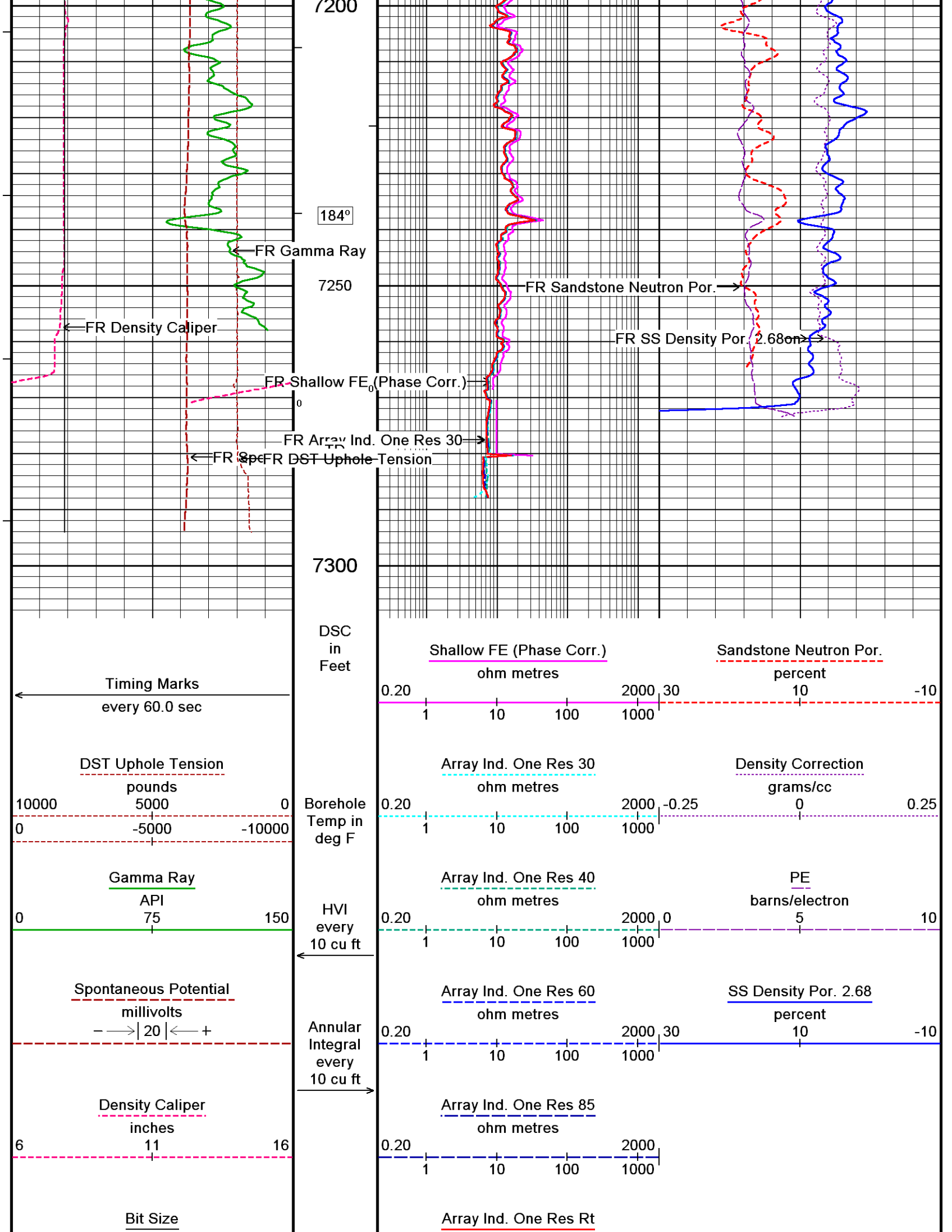


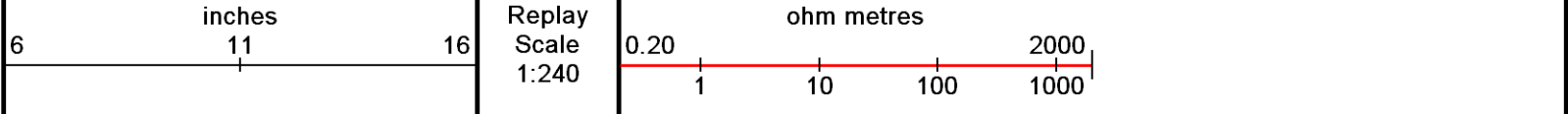










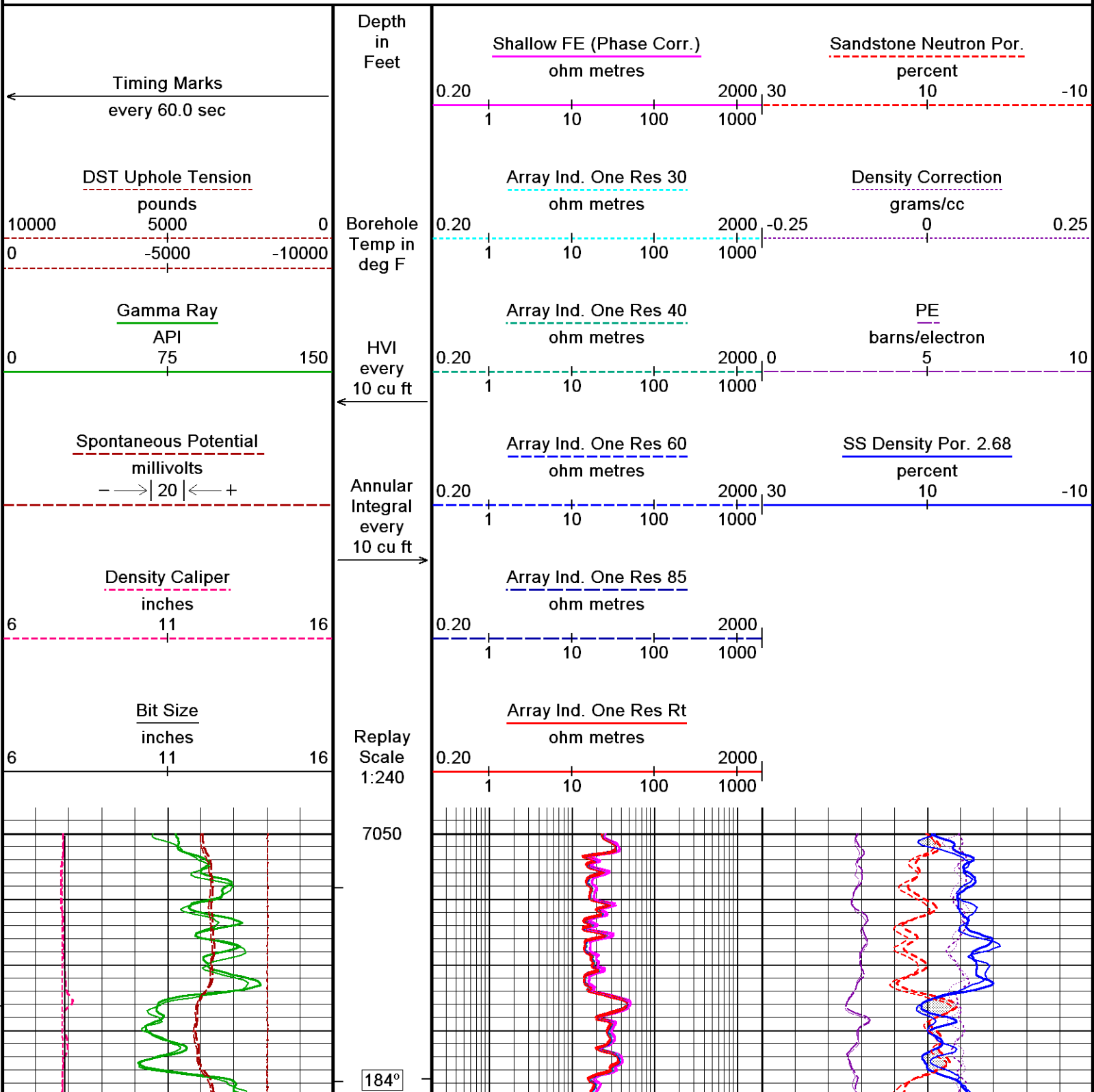


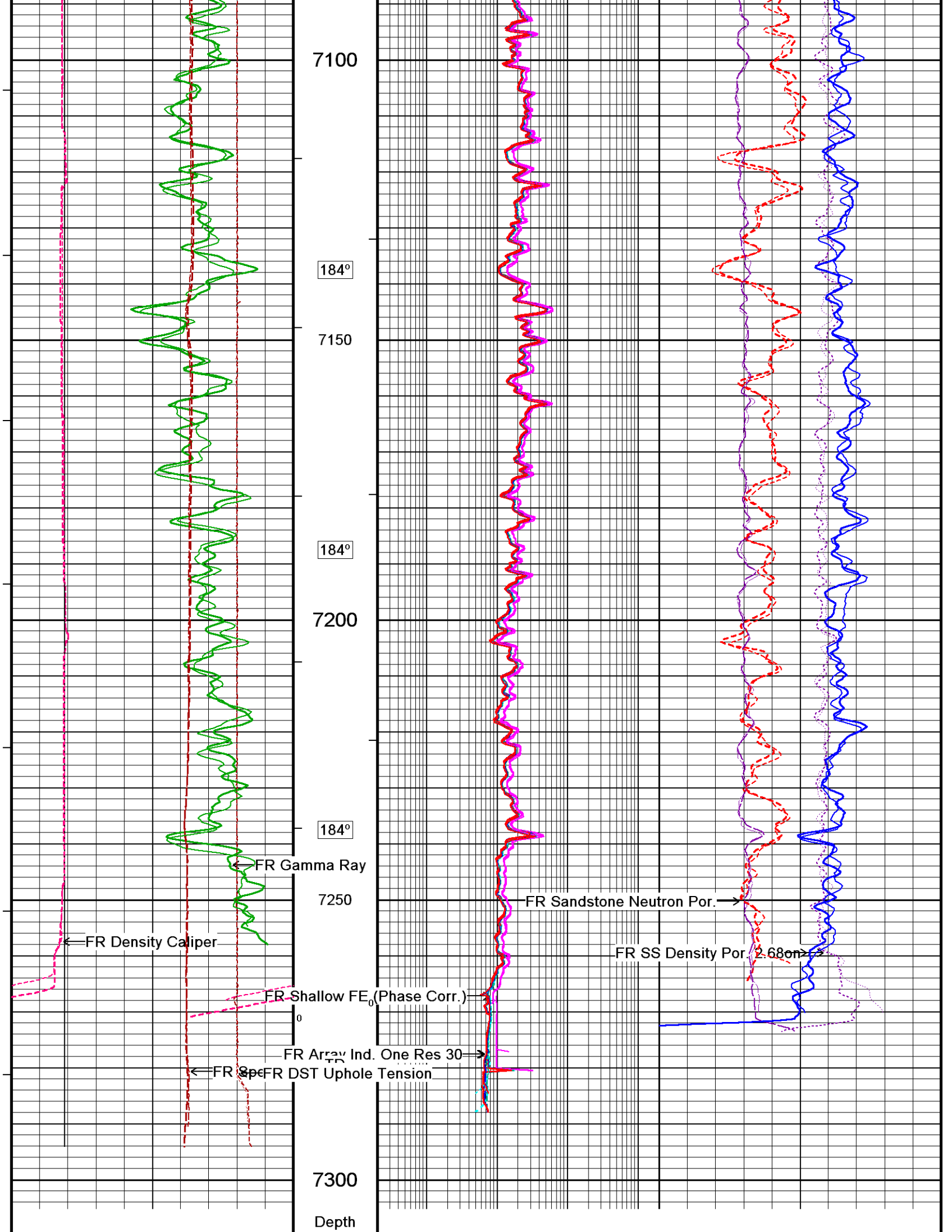
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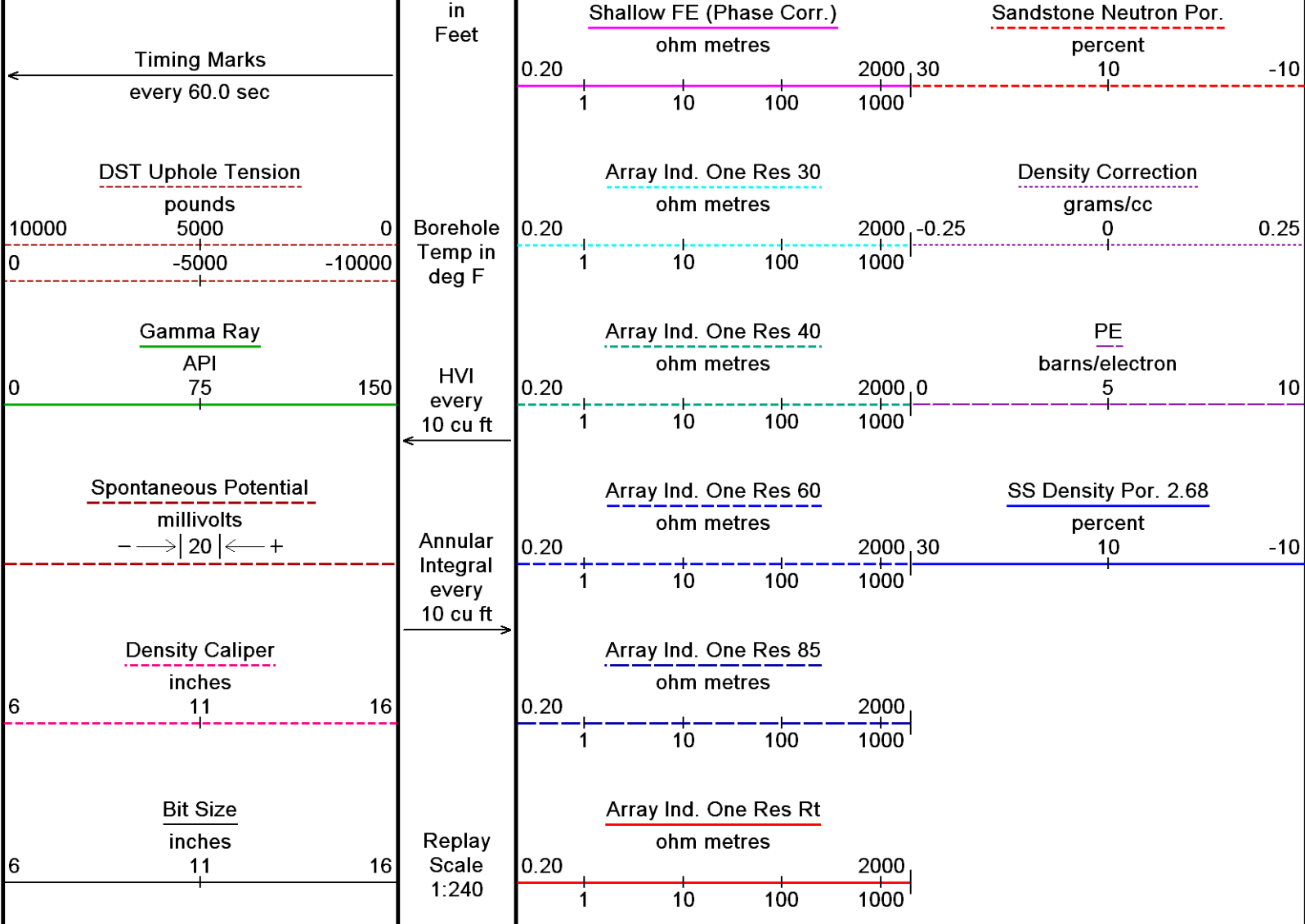
**5 INCH MAIN LOG**

**OVERLAY**

Depth Based Data - Maximum Sampling Increment 10.0cm  
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 Recorded on 24-APR-2011 18:31  
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 Recorded on 24-APR-2011 18:15  
 System Versions: Logged with 11.02.3186 Processed with 11.02.3186 Plotted with 11.02.2164







Depth Based Data - Maximum Sampling Increment 10.0cm  
 Plotted on 25-APR-2011 13:09  
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 Recorded on 24-APR-2011 18:31  
 Filename: C:\DOCUME~1\rodgerbx\LOCALS~1\Temp\Weather...BBC GGU Daley 24A-19-691\_004.dta  
 Recorded on 24-APR-2011 18:15  
 System Versions: Logged with 11.02.3186 Processed with 11.02.3186 Plotted with 11.02.2164

OVERLAY

### BEFORE SURVEY CALIBRATION

C:\DOCUME~1\rodgerbx\LOCALS~1\Temp\Weatherford PreView\0BBC GGU Daley 24A-19-691\_004.dta

General Constants All 000 Last Edited on 24-APR-2011,15:29

<b>General Parameters</b>		
Mud Resistivity	3.800	ohm-metres
Mud Resistivity Temperature	52.700	degrees F
Water Level	0.000	feet
Density/Neutron 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	4.500	inches
Caliper for Differential Caliper	None	
<b>Rwa Parameters</b>		
Porosity used	Base Density Porosity	
Resistivity used	Array Ind. Two Res Rt	
RWA Constant A	0.610	
RWA Constant M	2.150	

Down-hole Tension Calibration SMS 0

Field Calibration on 24-APR-2011 17:07

Reading No	Measured	Calibrated (lbs)
1	14794.83	0.00
2	15756.39	420.00

High Resolution Temperature Calibration MCG-C 145

Field Calibration on 17-NOV-2010,12:09

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

High Resolution Temperature Constants MCG-C 145

Last Edited on 24-NOV-2009,08:49

Pre-filter Length 11

SP Calibration MCG-C 145

Field Calibration on 25-MAR-2011 10:39

	Measured	Calibrated (mV)
Reference 1	103.7	100.1
Reference 2	-96.4	-100.1

Gamma Calibration MCG-C 145

Field Calibration on 22-APR-2011 21:44

	Measured	Calibrated (API)
Background	68	47
Calibrator (Gross)	759	527
Calibrator (Net)	691	480

Gamma Constants MCG-C 145

Last Edited on 23-APR-2011,02:39

Gamma Calibrator Number	GRCC 112	
Mud Density	1.00	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

Micro Normal and Micro Inverse Calibration MDN-B.A 191

Base Calibration on 3-MAY-2007 19:21  
Field Check on

Base Calibration

Channel	Measured		Calibrated (ohm-m)	
	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Micro Normal	8.2	41.0	10.0	50.0
Micro Inverse	8.2	41.2	10.0	50.0

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Micro Normal	0.0	0.0
Micro Inverse	0.0	0.0

Micro Normal and Micro Inverse Constants MDN-B.A 191

Last Edited on 13-FEB-2007,11:14

Pad Type	0
Micro Normal K Factor	1.0000
Micro Inverse K Factor	1.0000
Standoff Offset	N/A inches

Neutron Calibration MDN-B.A 191

Base Calibration on 25-MAR-2011 17:12  
Field Check on 22-APR-2011 21:13

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
Ratio	2849	87	3714	110
	32.715		33.764	

	Calibrated (cps)
Field Calibrator at Base	1625 2417
Ratio	0.672

	Calibrated (cps)
Field Check	1653 2462
Ratio	0.672

Neutron Constants MDN-B.A 191

Last Edited on 24-APR-2011,15:29

Neutron Source Id P44382B

Neutron Source Id	144382B		
Neutron Jig Number	6531NK		
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	None		
Formation Pressure	N/A	kpsi	
Temperature Source	None		
Temperature	N/A	degrees F	
Mud Salinity	0.00	kppm	
Formation Fluid Salinity Source	None		
Formation Fluid Salinity	N/A	kppm	
Barite Mud Correction	Not Applied		

FE Calibration MFE-B.A 220

Base Calibration on 30-MAR-2011 14:59  
Field Check on 22-APR-2011 21:40

Base Calibration			
	Measured	Calibrated (ohm-m)	
Reference 1	0.0	0.0	
Reference 2	969.9	126.8	
Base Check		279.2	
Field Check		279.5	

FE Constants MFE-B.A 220

Last Edited on 24-APR-2011,15:30

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	1.0	inches	

Induction Calibration MAI-B.J 362

Base Calibration on 25-MAR-2011,10:28  
Field Check on 22-APR-2011 21:38

Base Calibration					
Test Loop Calibration		Measured	Calibrated (mmho/m)		
Channel	Low	High	Low	High	
1	16.0	468.7	9.3	966.2	
2	6.2	374.5	7.6	821.4	
3	3.6	258.3	5.2	566.0	
4	1.8	133.1	2.6	279.2	
Array Temperature		74.8	Deg F		
Channel	Base Check (mmho/m)		Field Check (mmho/m)		
	Low	High	Low	High	
1	0.0	0.0	14.5	3874.4	
2	0.0	0.0	30.5	3606.4	
3	0.0	0.0	28.5	3069.7	
4	0.0	0.0	19.8	2079.5	
Deep	0.0	0.0	17.5	1954.4	
Medium	0.0	0.0	41.3	4077.6	
Shallow	0.0	0.0	45.5	5401.6	
Array Temperature		0.0	51.8	Deg F	

Induction Constants MAI-B.J 362

Last Edited on 24-APR-2011,15:30

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	1.00	inches	
Number of Fins on Stand-off	6.0000		
Stand-off Fin Angle	60.00	degrees	

Stand-off Fin Width		0.5000	inches
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	

#### High Resolution Temperature Calibration MAI-B.J 362

Field Calibration on 17-NOV-2010,12:11

	Measured	Calibrated(Deg F)
Lower	10.00	50.00
Upper	100.00	212.00

#### High Resolution Temperature Constants MAI-B.J 362

Last Edited on

Pre-filter Length	11
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#### Caliper Calibration MPD-C.A 215

Base Calibration on 25-MAR-2011 13:44  
Field Calibration on 24-APR-2011 17:26

Base Calibration			
Reading No	Measured	Calibrator Size (in)	
1	15503	3.99	
2	24031	5.96	
3	32776	7.99	
4	40832	9.86	
5	50287	11.93	
6	N/A	N/A	
Field Calibration			
	Measured Caliper (in)	Actual Caliper (in)	
	8.93	8.92	

#### Photo Density Calibration MPD-C.A 215

Base Calibration on 25-MAR-2011 15:30  
Field Check on 22-APR-2011 21:31

Density Calibration				
Base Calibration				
	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	43828	15039	52994	19128
Reference 2	20830	2475	25185	2558
Field Check at Base				
	1314.9	1399.1		
Field Check				
	1309.4	1381.4		

PE Calibration				
Base Calibration				
	WS	Measured		Calibrated
		WH	Ratio	Ratio

	WC	WT	Ratio	Ratio
Background	238	1173		
Reference 1	14612	43655	0.338	0.309
Reference 2	5801	20682	0.285	0.274

Field Check at Base  
237.9 1173.1

Field Check  
236.0 1169.5

Density Constants MPD-C.A 215

Last Edited on 24-APR-2011,15:30

Density Source Id	2859GW	
Nylon Calibrator Number	DNC-E-527	
Aluminium Calibrator Number	DAC-D-527	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.29	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)	
2.68	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:\DOCUME~1\rodergbx\LOCALS~1\Temp\Weatherford PreView0\BBC GGU Daley 24A-19-691\_004.dta

MCB-A.A 11B Tension Cablehead  
MCB-A.A 102 LG: 2.40 ft WT: 19.8 lb OD: 2.24 in

SHA-F Compact Swivel Head Adaptor  
SHA-F 57 LG: 2.74 ft WT: 26.5 lb OD: 2.24 in

Compact Comms Gamma  
MCG-C 145 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Neutron  
MDN-B.A 191 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

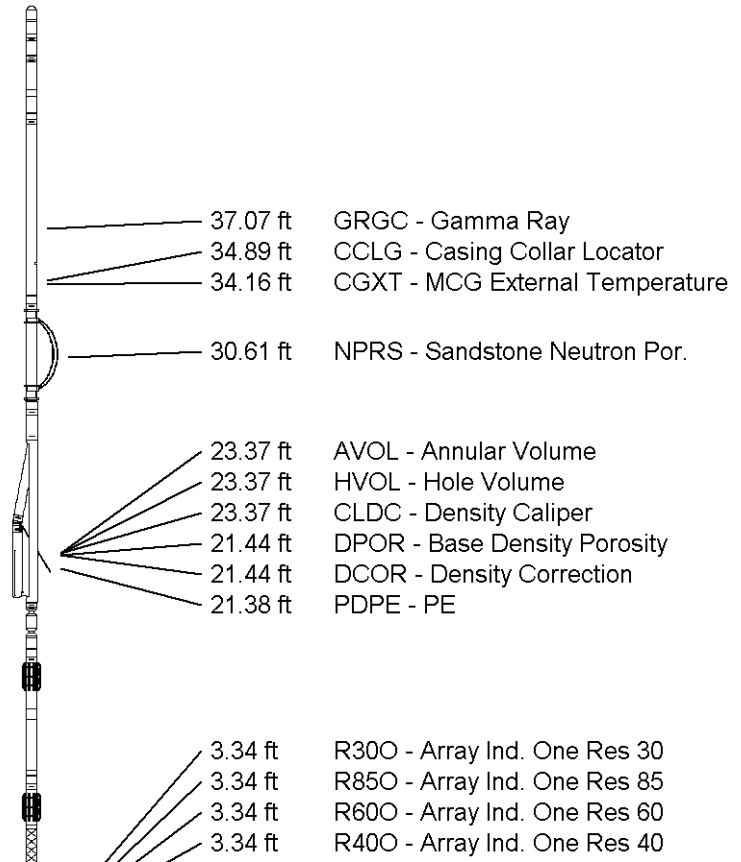
Compact Density/Caliper  
MPD-C.A 215 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

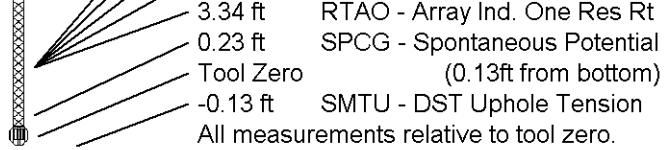
SKJ-D.A Compact Knuckle Joint  
SKJ-D.A 65 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

Compact Focussed Electric  
MFE-B.A 220 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Induction  
MAI-B.J 362 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in


Total Length: 47.49 ft Weight: 372.6 lb





COMPANY BILL BARRETT CORPORATION  
 WELL GGU DALEY 24A-19-691  
 FIELD MAMM CREEK  
 PROVINCE/COUNTY GARFIELD  
 COUNTRY/STATE U.S.A. / COLORADO

Elevation Kelly Bushing	5845.00	feet	First Reading	7281.00	
Elevation Drill Floor	5844.00	feet	Depth Driller	7279.00	feet
Elevation Ground Level	5823.00	feet	Depth Logger	7281.00	feet



COMPACT TRIPLE COMBO  
 QUICKLOOK  
 LOG

