



COMPACT TRIPLE COMBO QUICKLOOK LOG

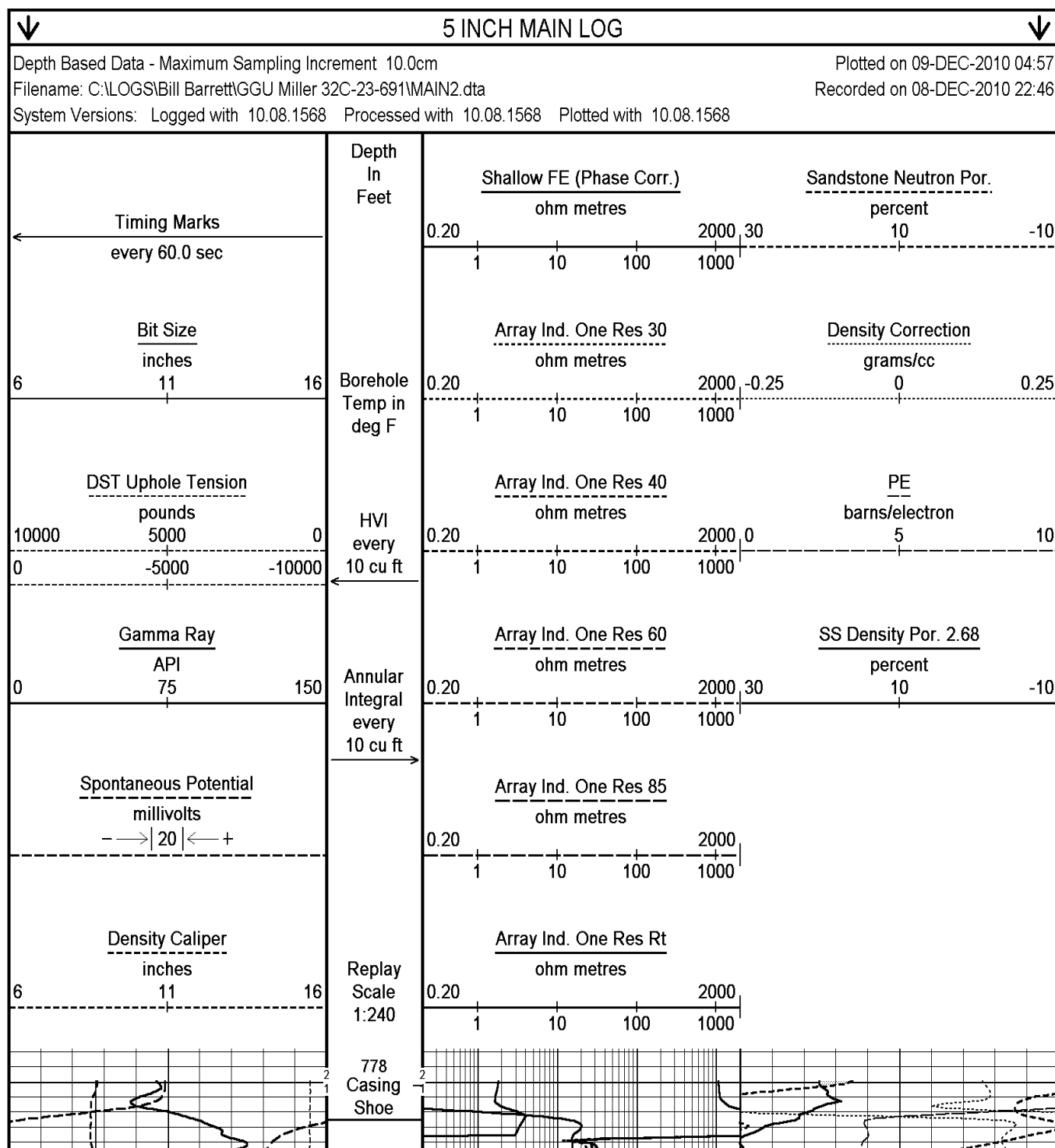
COMPANY			BILL BARRETT CORPORATION		
WELL			GGU MILLER 23C-32-691		
FIELD			GIBSON GULCH		
PROVINCE/COUNTY			GARFIELD		
COUNTRY/STATE			U.S.A. / COLORADO		
LOCATION			SHL: 1256' FSL & 2297' FWL		
			BHL: 2130' FSL & 1990' FWL		
SEC	TWP	RGE	Other Services		
32	6S	91W			
API Number			05-045-19430		
Permit Number					
Permanent Datum G.L., Elevation 6121 feet					
Log Measured From K.B. @ 23 FEET above Permanent Datum					
Drilling Measured From K.B.					
Date	8-DEC-2010		Elevations:		feet
Run Number	ONE				KB 6144.00
Depth Driller	7333.00		feet		DF 6143.00
Depth Logger	7335.00		feet		GL 6121.00
First Reading	7321.00				
Last Reading	785.00				
Casing Driller	781.00		feet		
Casing Logger	785.00		feet		
Bit Size	7.880		inches		
Hole Fluid Type	LSND				
Density / Viscosity	10.60 lb/USg		58.00 CP		
PH / Fluid Loss	9.40		7.20 ml/30Min		
Sample Source	FLOW LINE				
Rm @ Measured Temp	2.45 @ 96.0		ohm-m		
Rmf @ Measured Temp	1.96 @ 96.0		ohm-m		
Rmc @ Measured Temp	2.94 @ 96.0		ohm-m		
Source Rmf / Rmc	CALC		CALC		
Rm @ BHT	1.25 @ 190.0		ohm-m		
Time Since Circulation	6 HOURS				
Max Recorded Temp	190.00		deg F		
Equipment Name	COMPACT				
Equipment / Base	13173		GD JCT		
Recorded By	M.RICHINS				
Witnessed By	C.CROW				

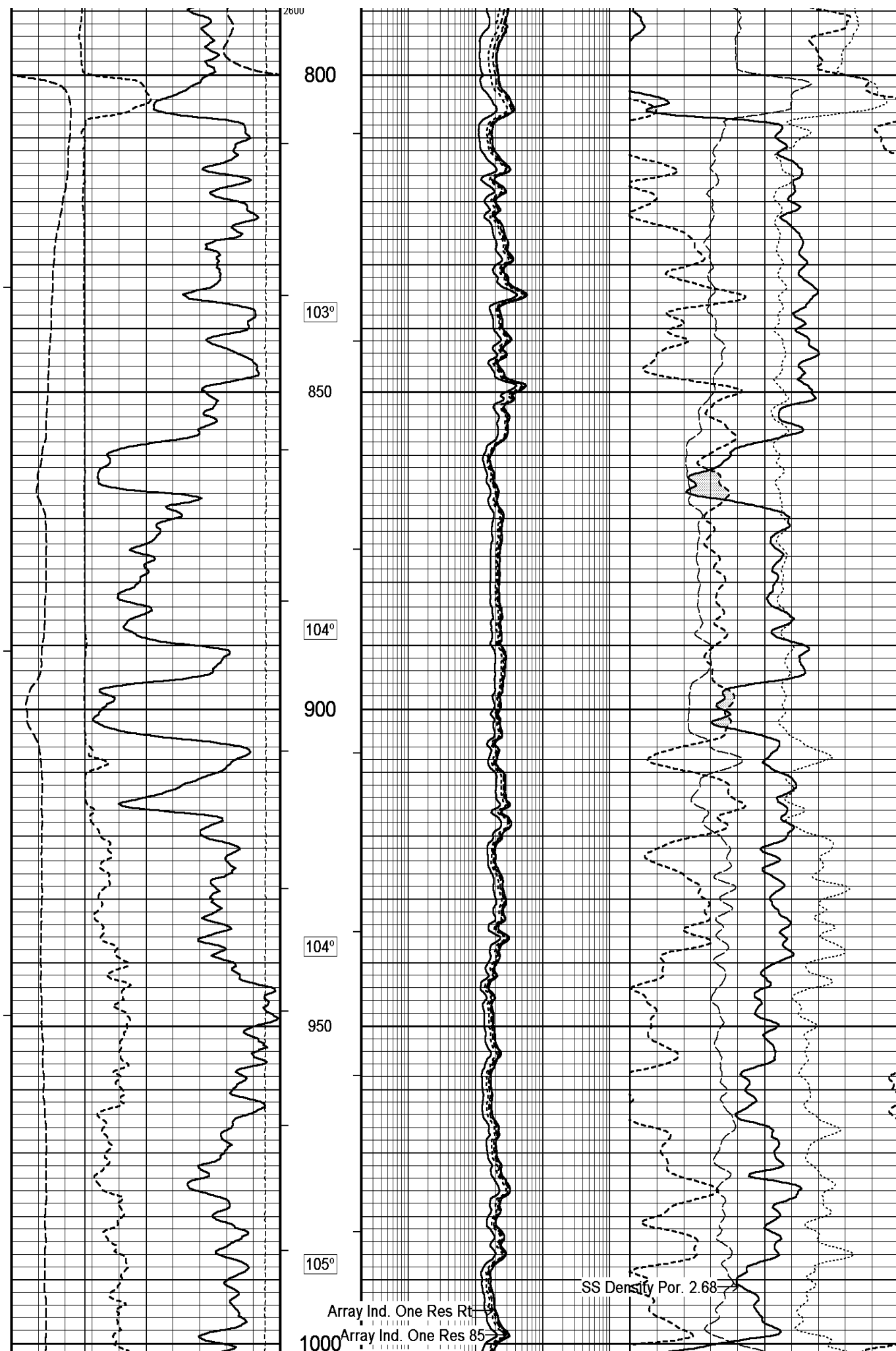
BOREHOLE RECORD			Last Edited: 08-DEC-2010 19:31	
Bit Size inches	Depth From feet	Depth To feet		
8.750	781.00	5521.00		
7.880	5521.00	7325.00		
CASING RECORD				
Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	9.625	0.00	781.00	36.00

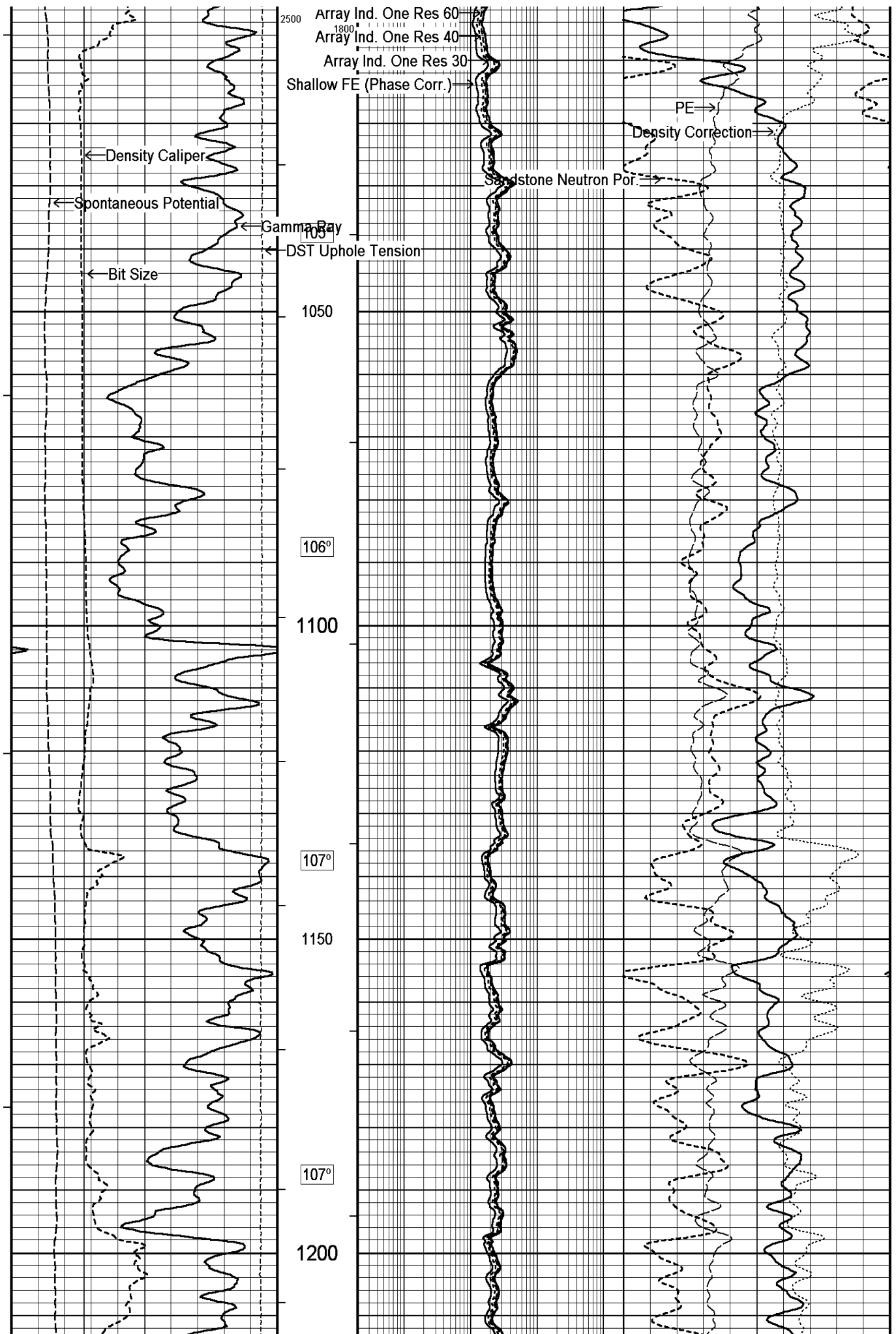
REMARKS	
TOOLS: SHA, MCG, MDN, MPD, SKJ, MFE AND MAI RAN IN COMBINATION.	
HARDWARE: MPD: 8 INCH PROFILE PLATE USED. ONE 0.5 INCH STANDOFFS USED ON INDUCTION. ONE 0.5 INCH STANDOFFS USED ON MFE. DUAL BOWSPRING USED ON NEUTRON.	
2.68 G/CC DENSITY MATRIX USED TO CALCULATE POROSITY.	
ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST.	
TIGHT PULLS, BOREHOLE SIZE, AND RUGOSITY WILL AFFECT REPEATABILITY AND DATA QUALITY.	
CALIPER CHECK IN CASING PRESENTED, REFERENCE I.D. = 8.92" (9 5/8", 36 LB/FT CASING)	
8.75 INCH BIT USED FROM SURFACE CASING TO 5521 FT.	

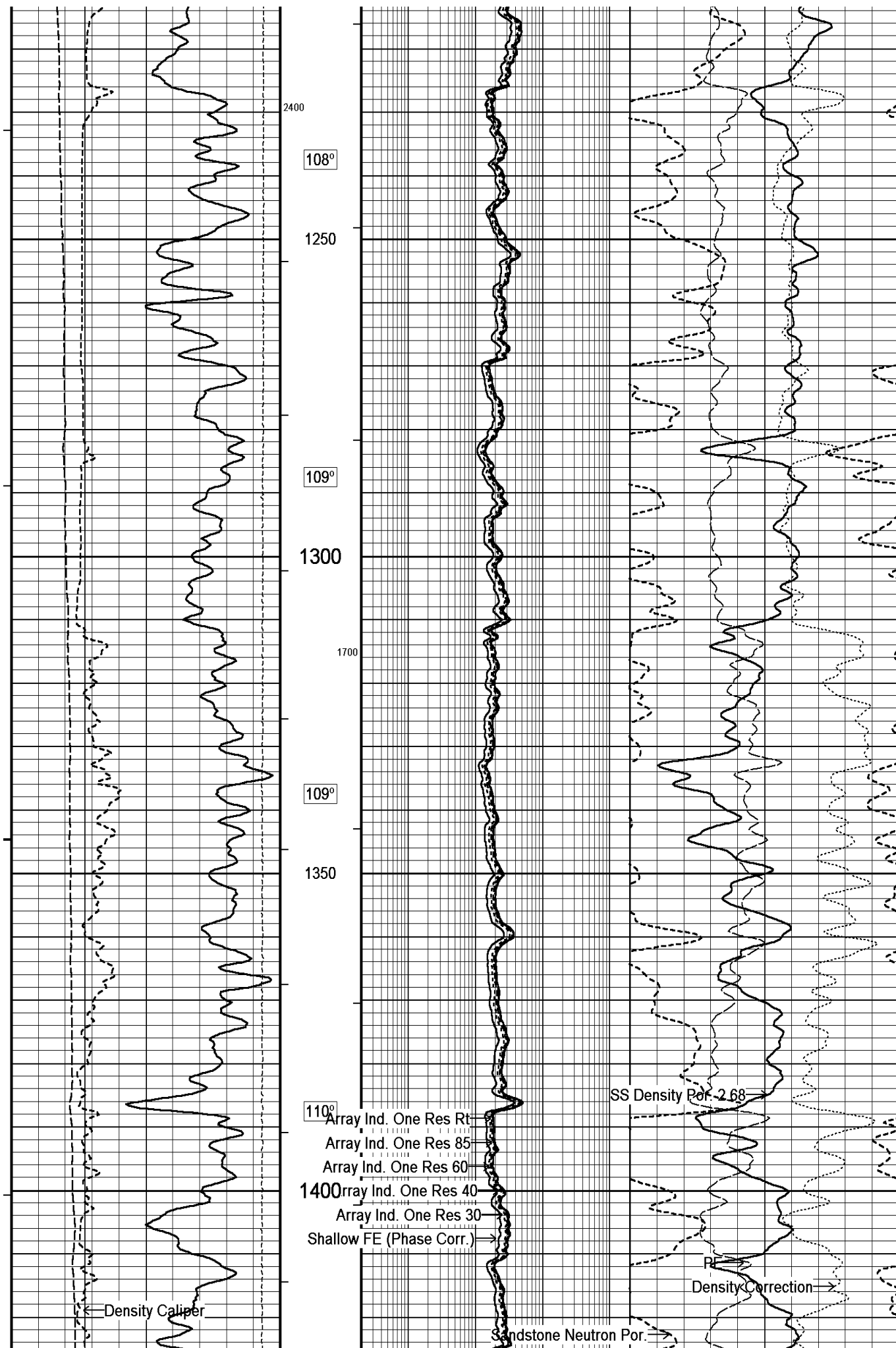
RIG: PATTERSON #307

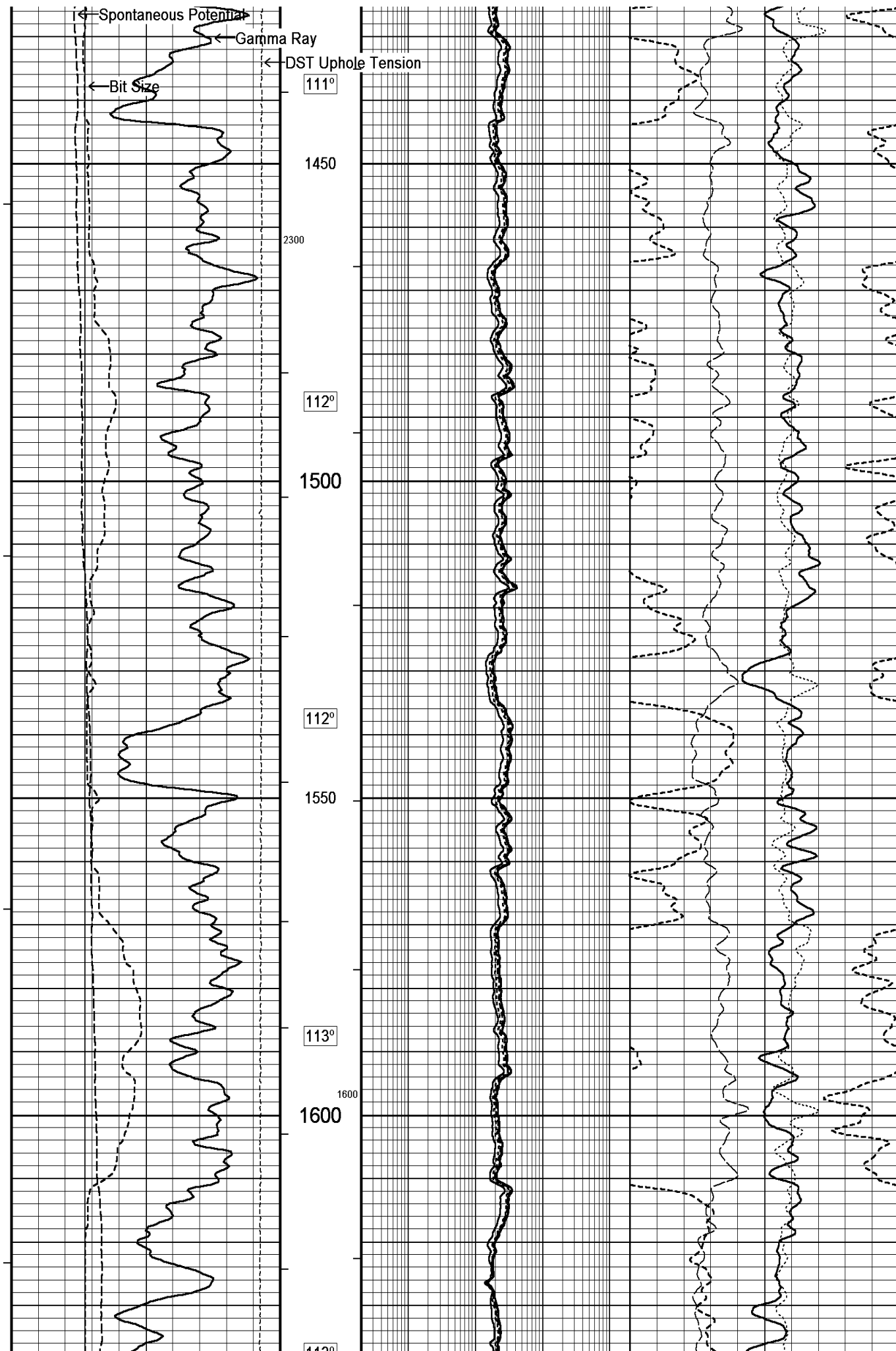
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

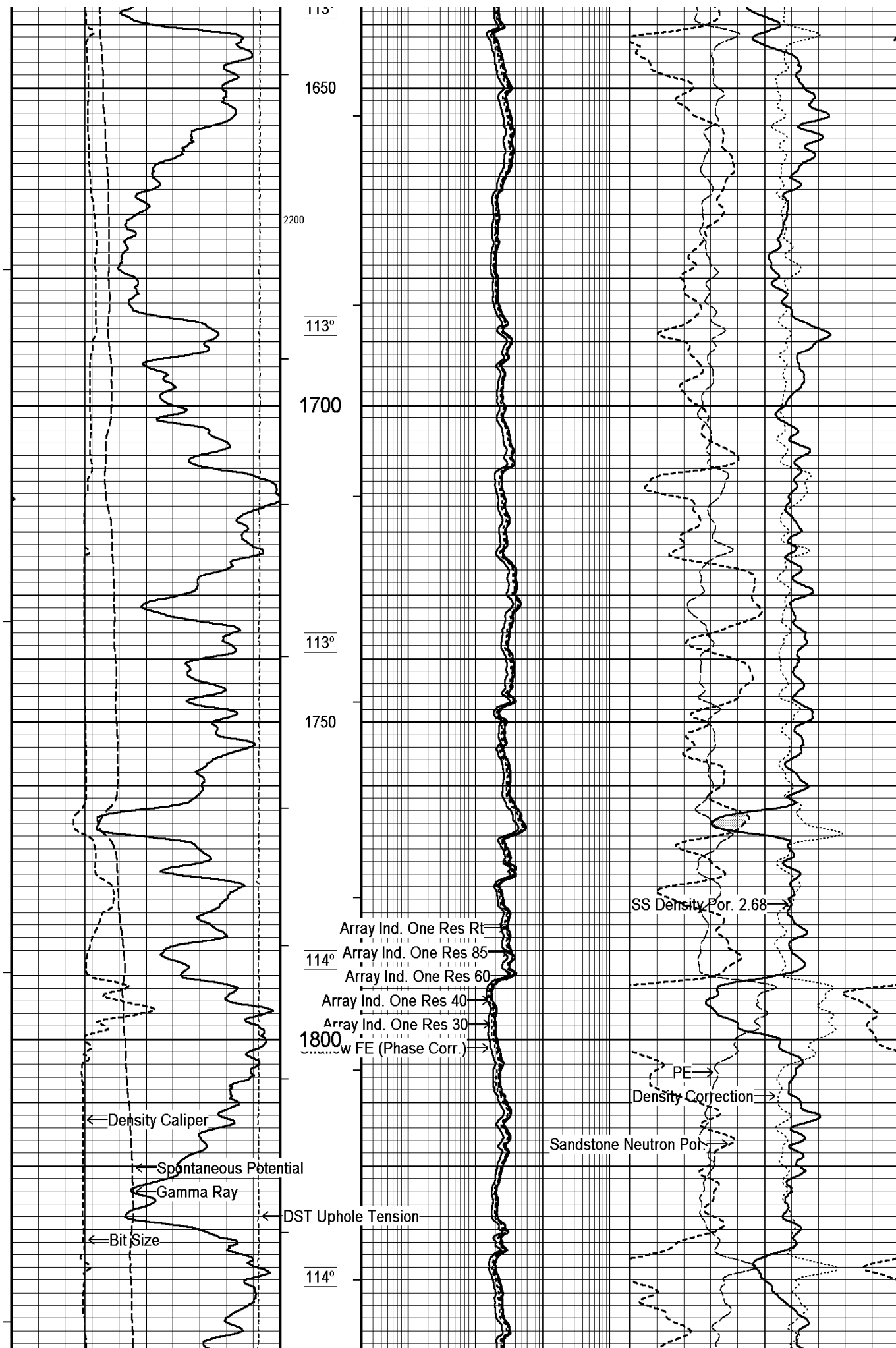


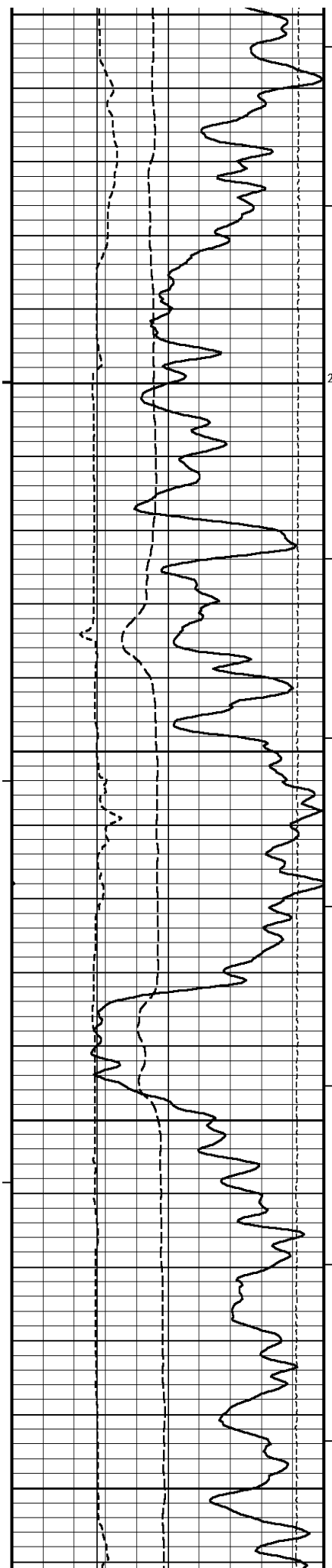












1850

114°

2100
1900
1500

115°

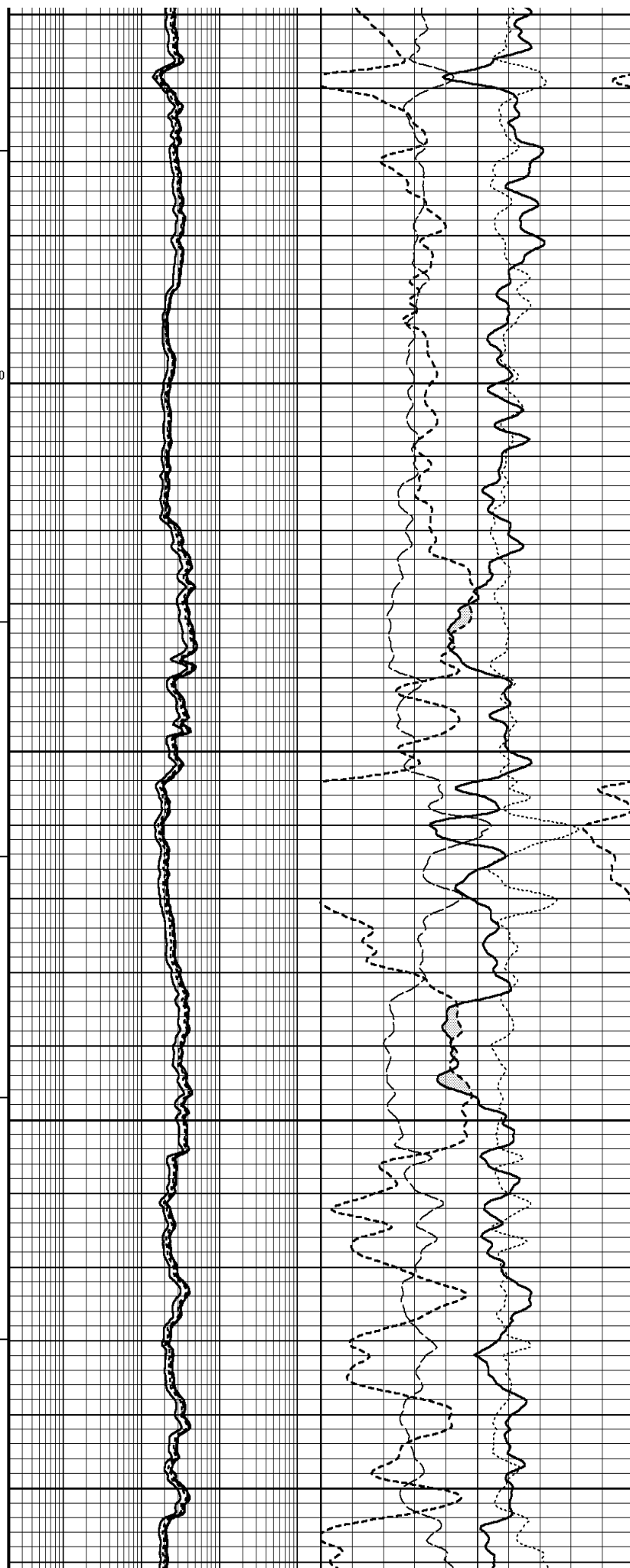
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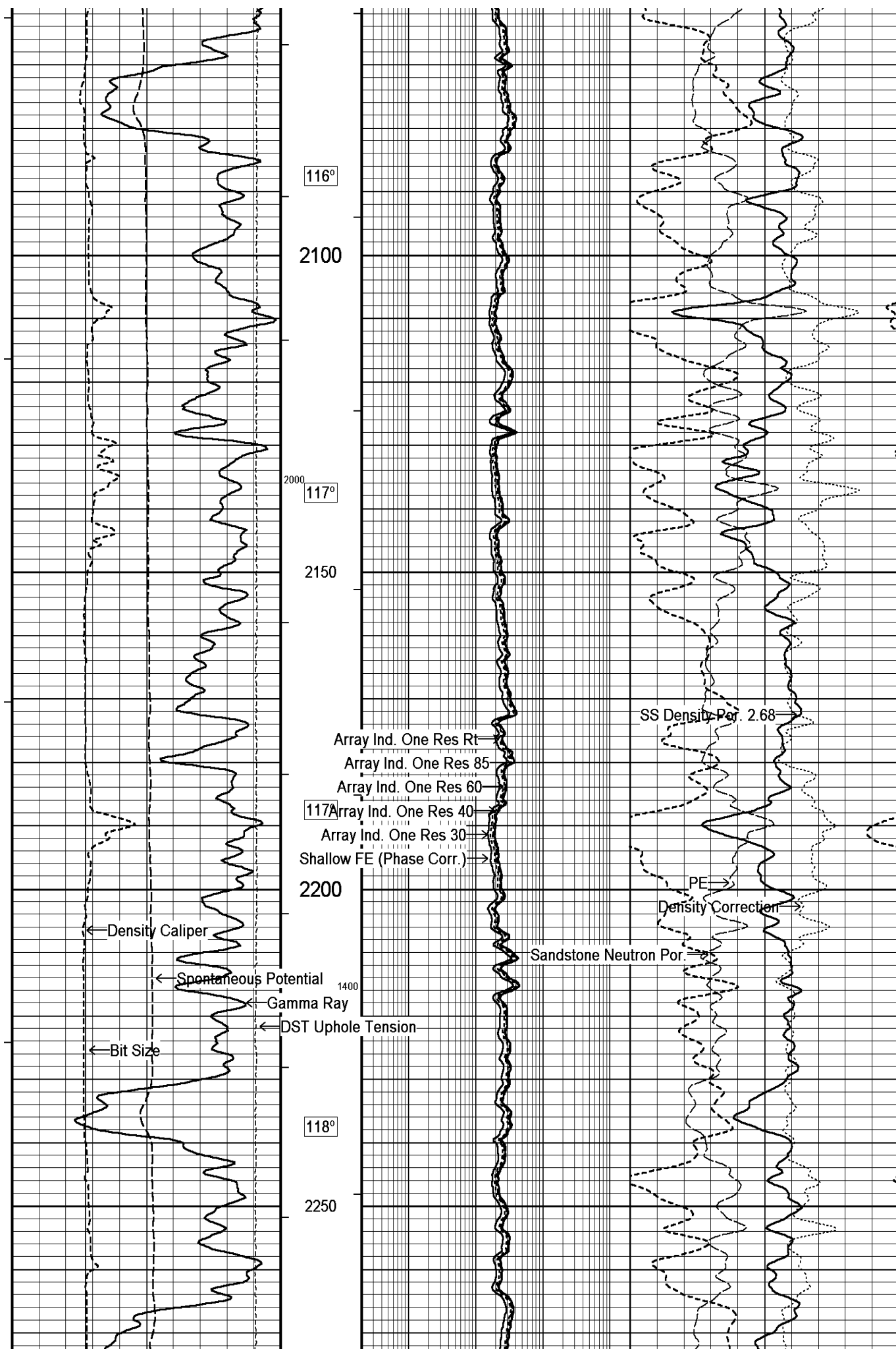
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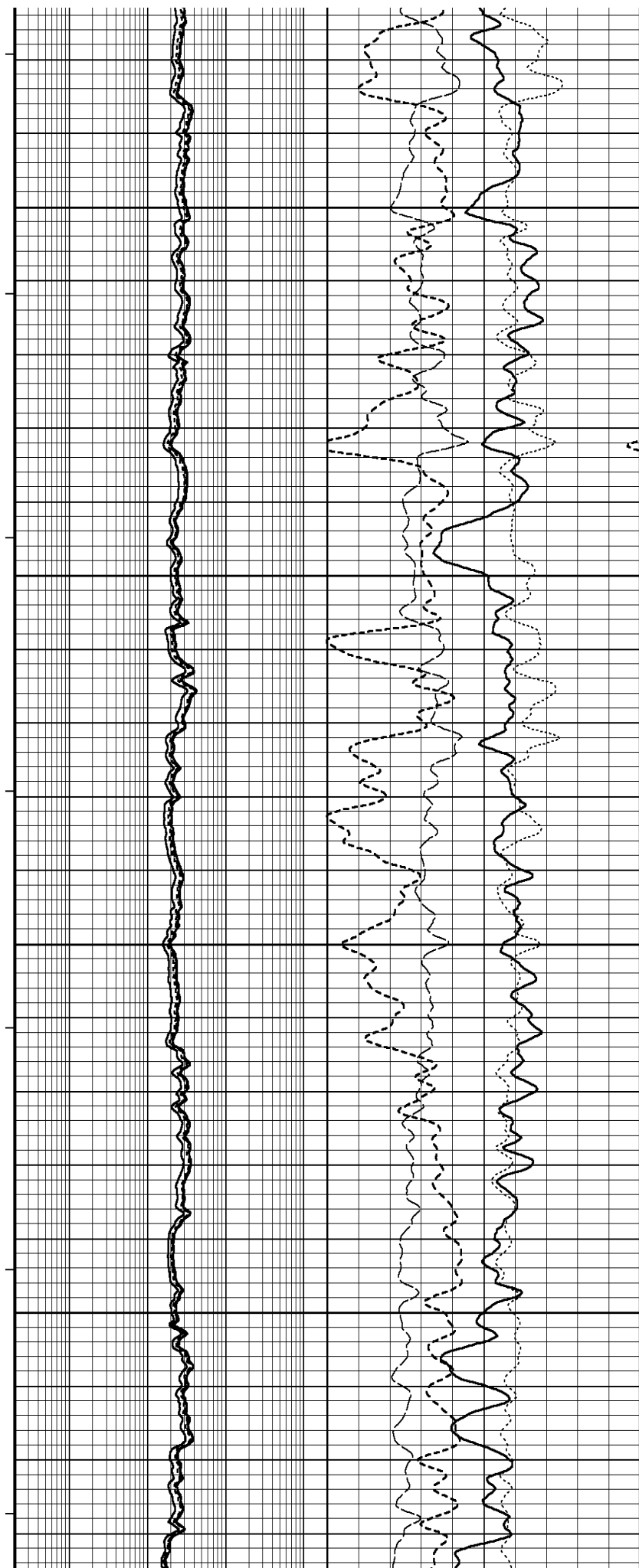
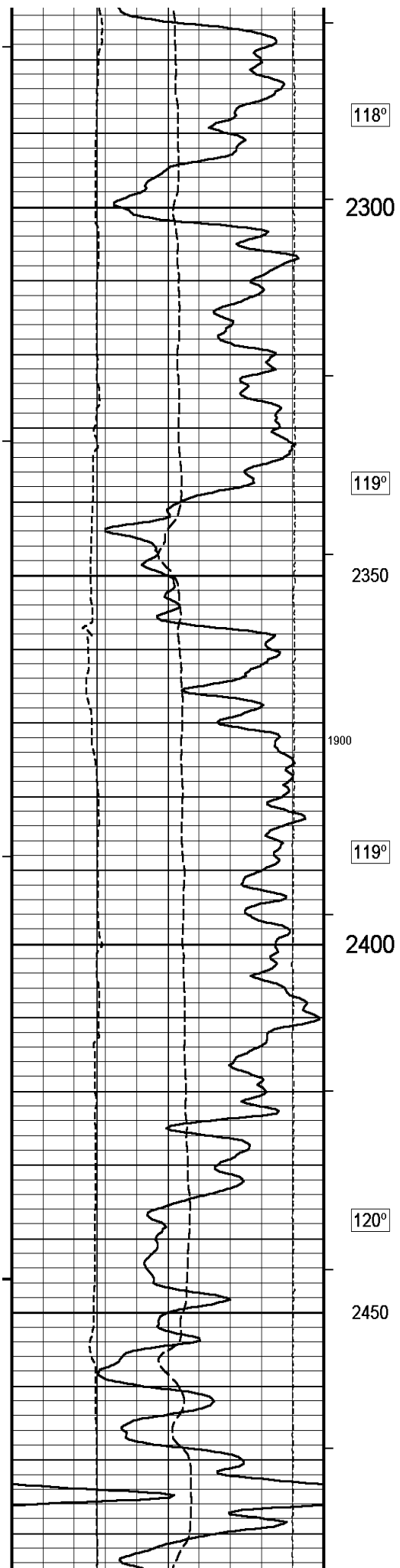
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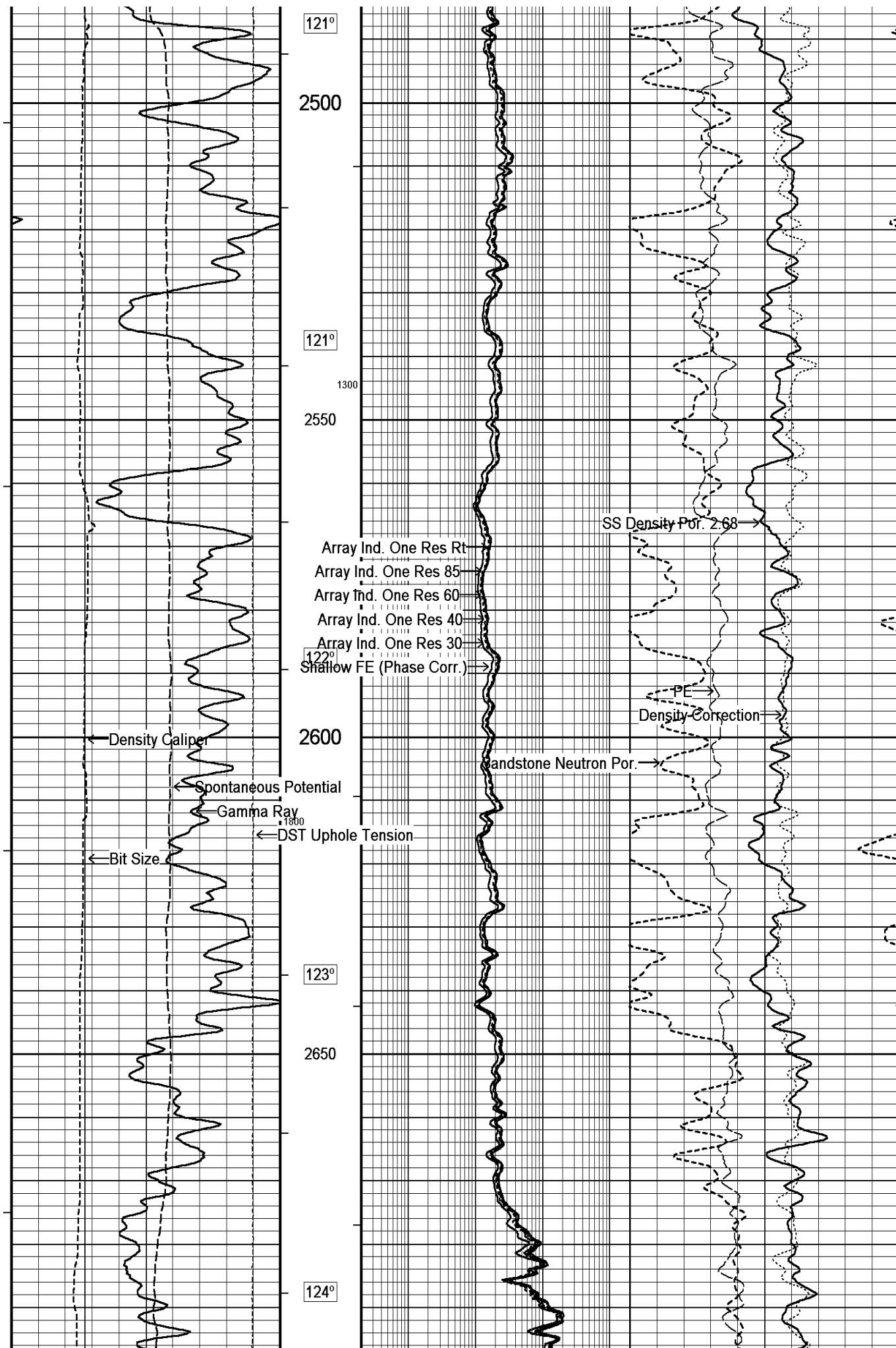
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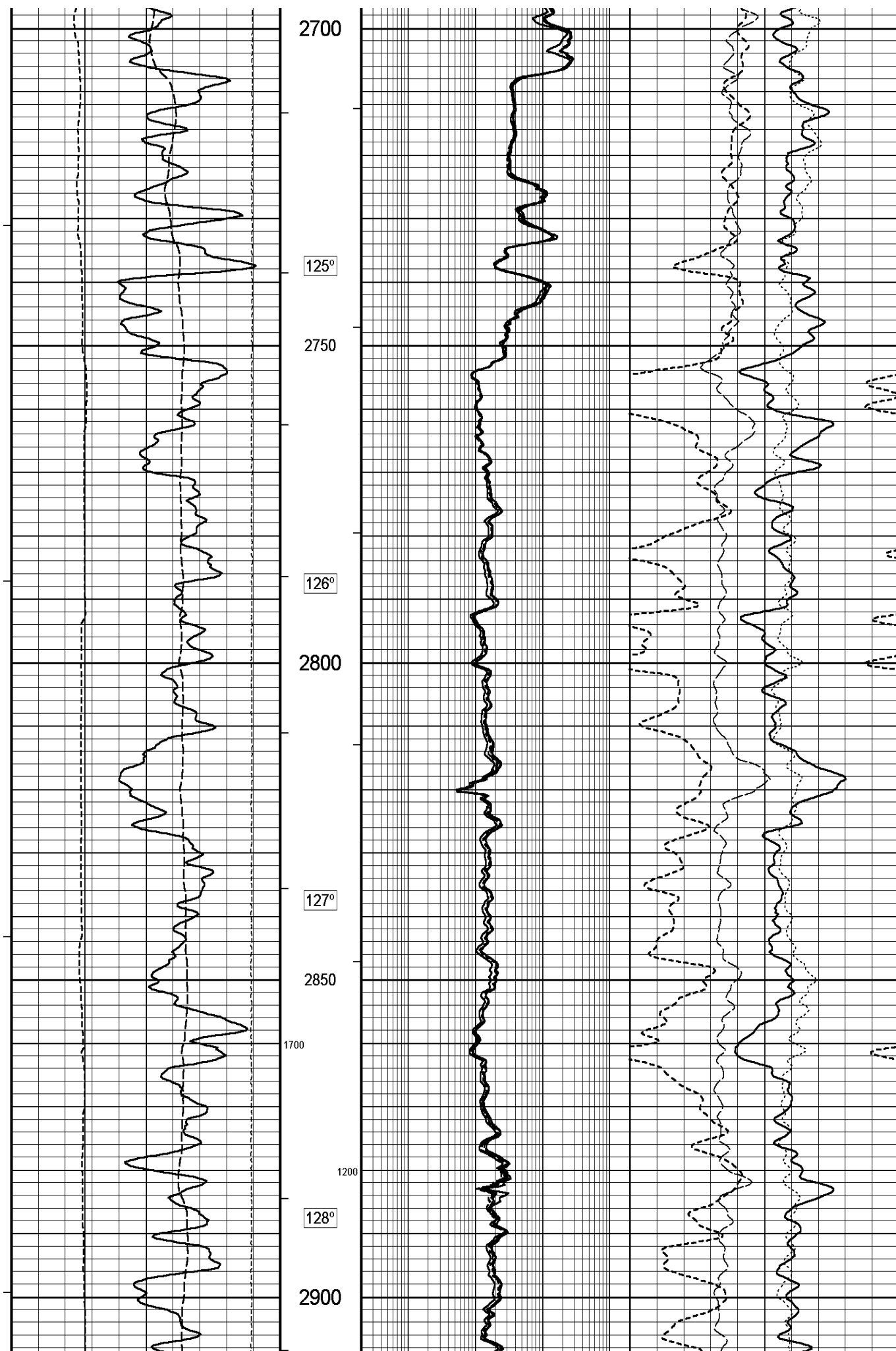
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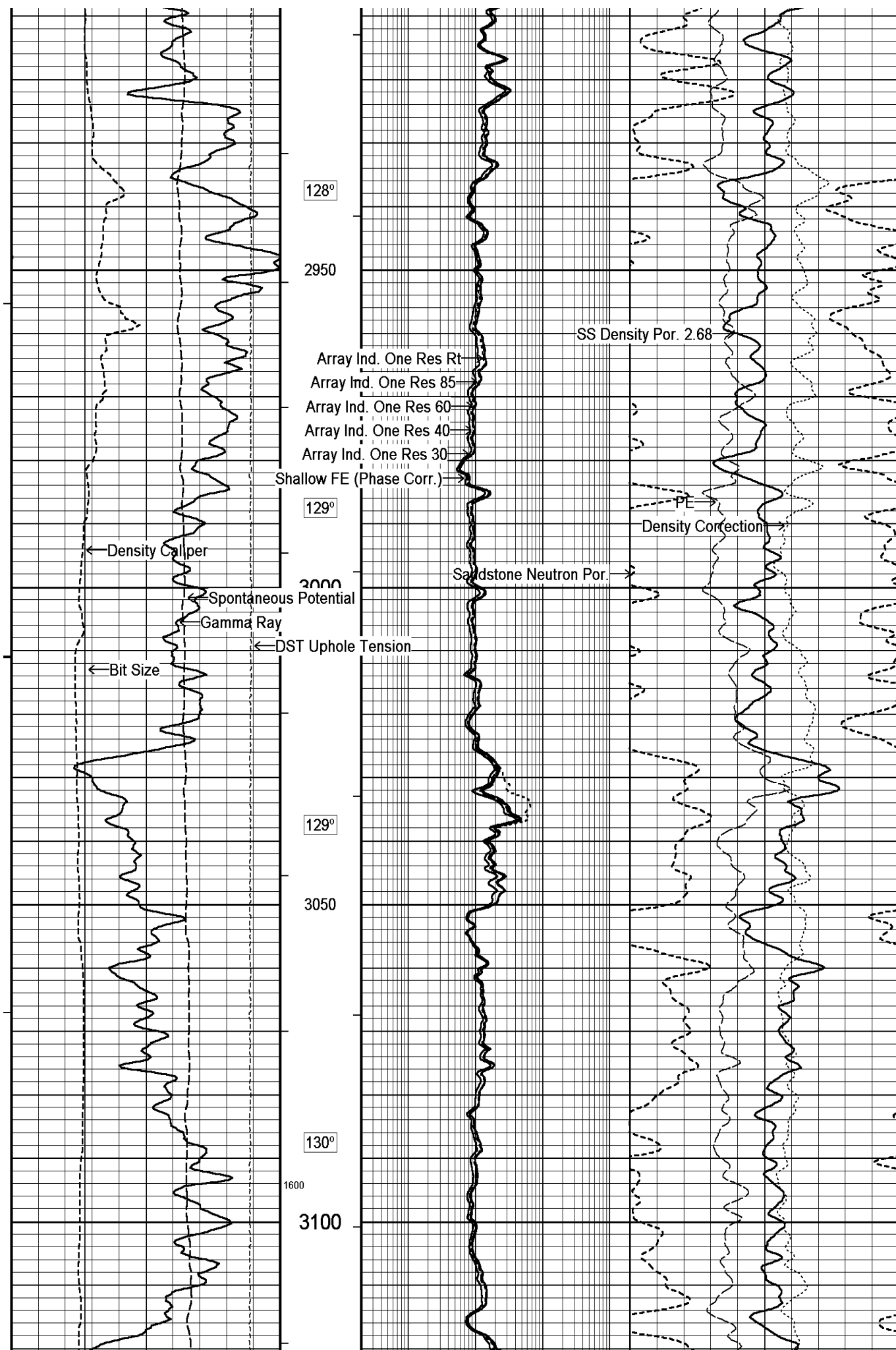


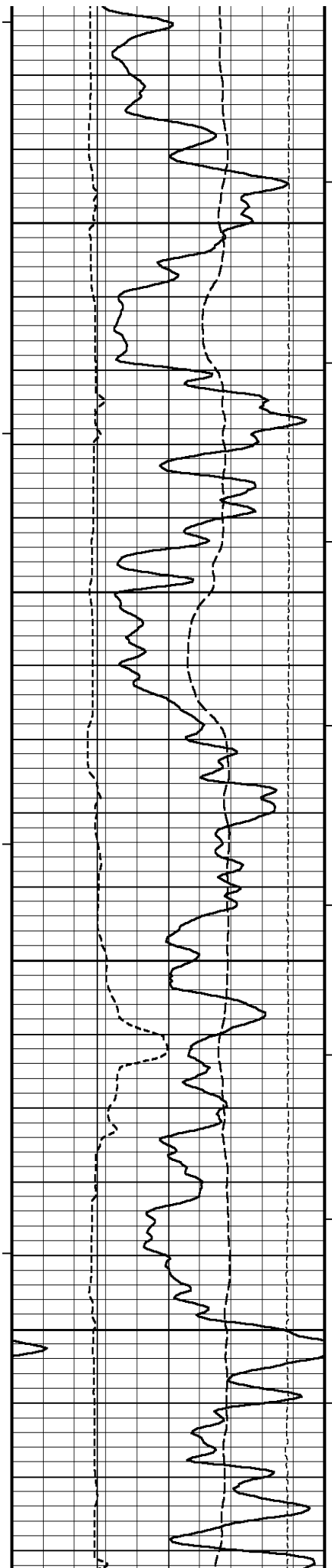












130°

3150

131°

3200

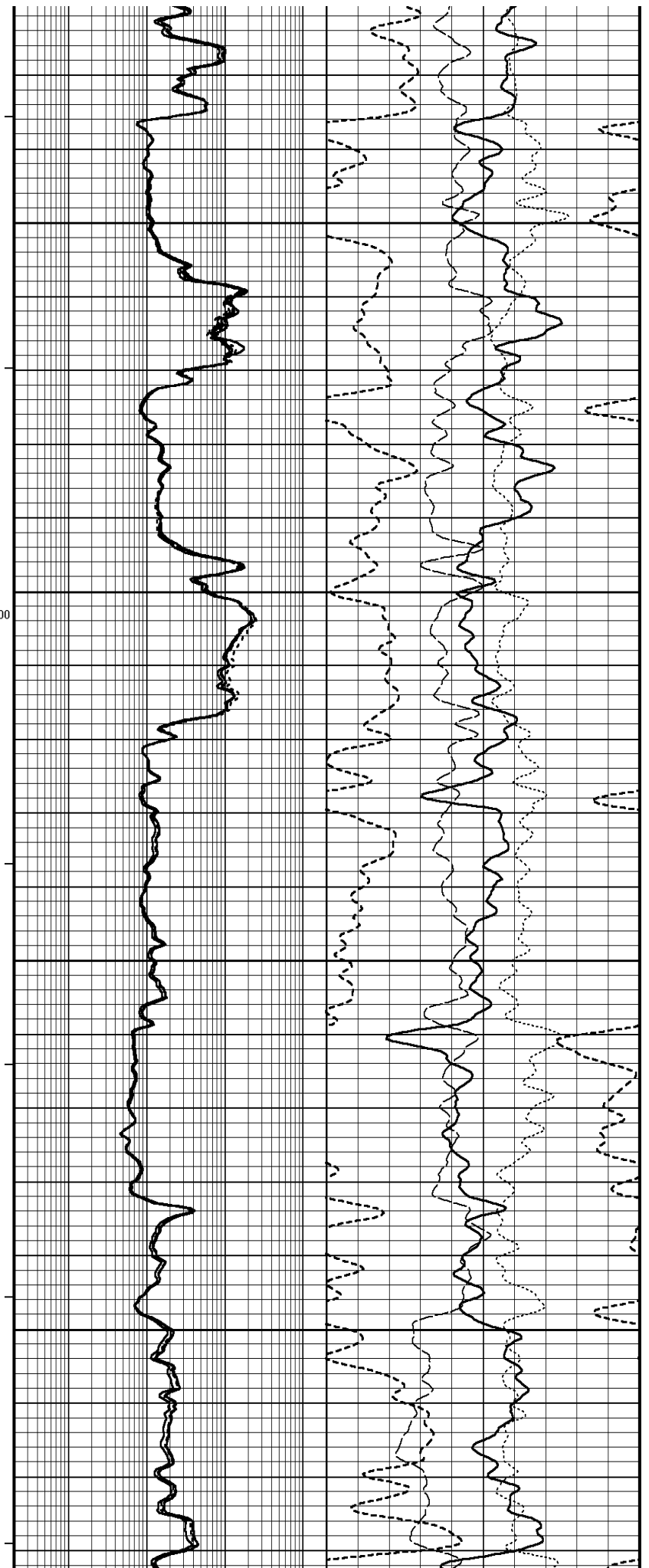
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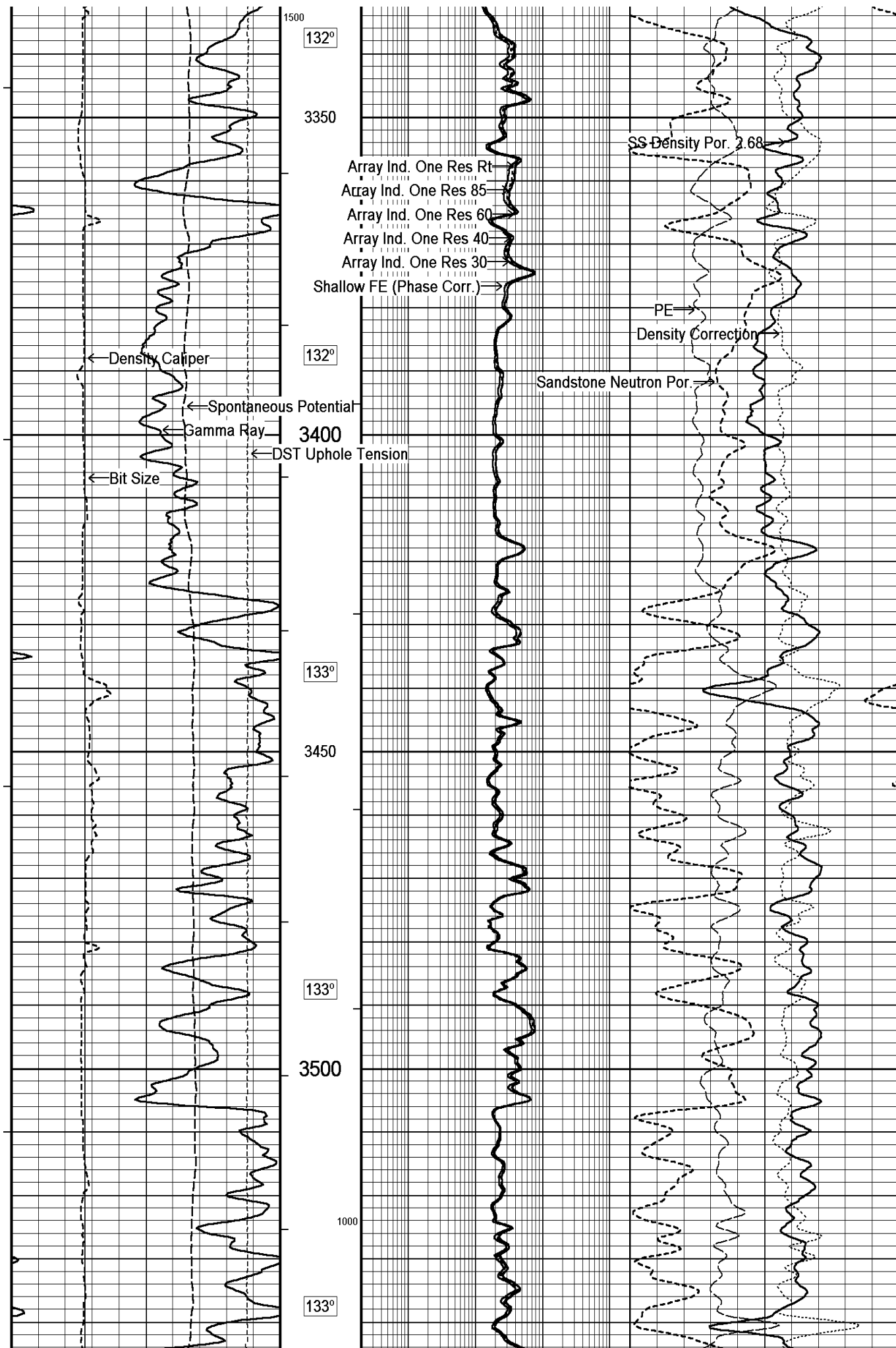
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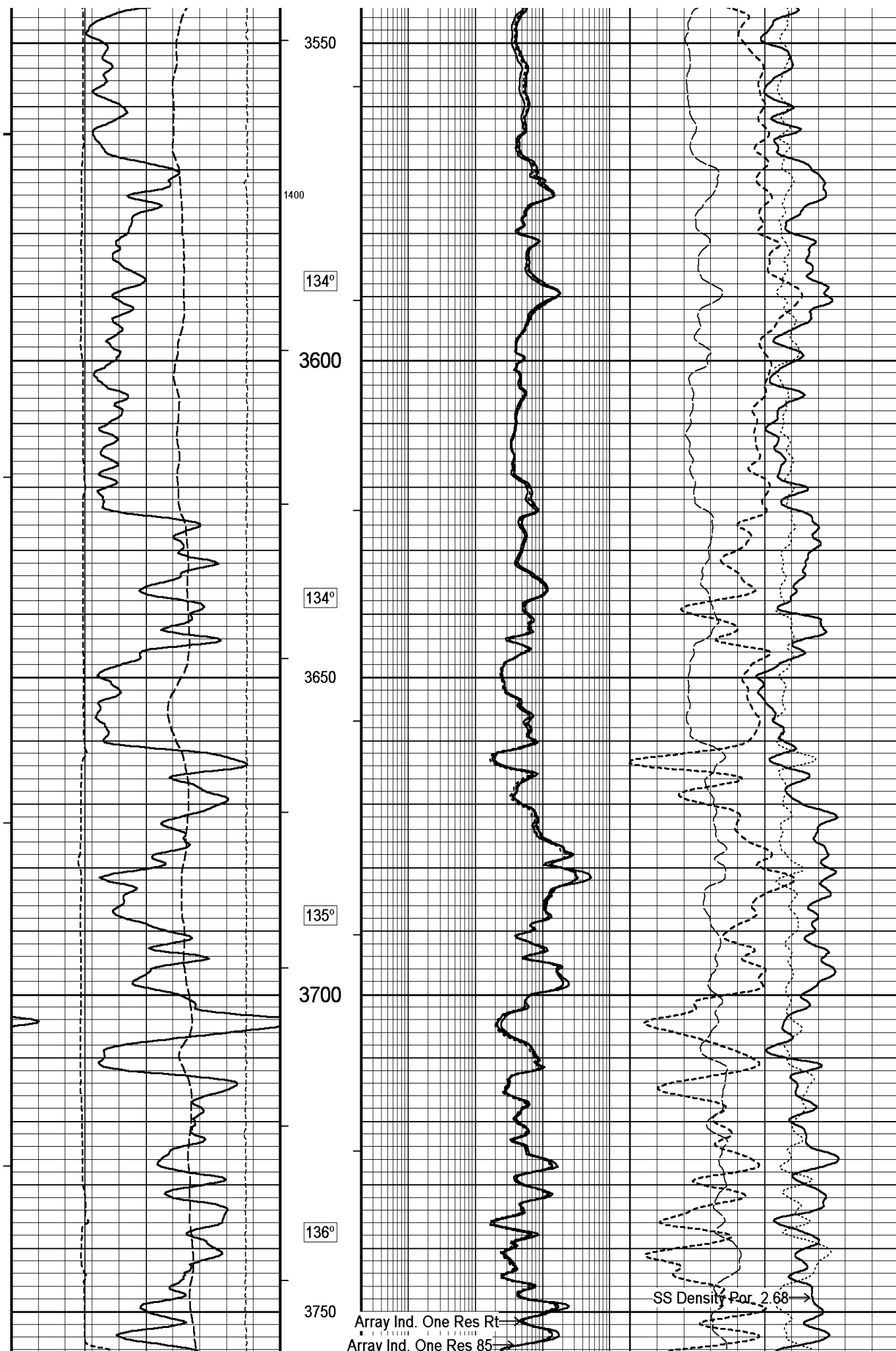
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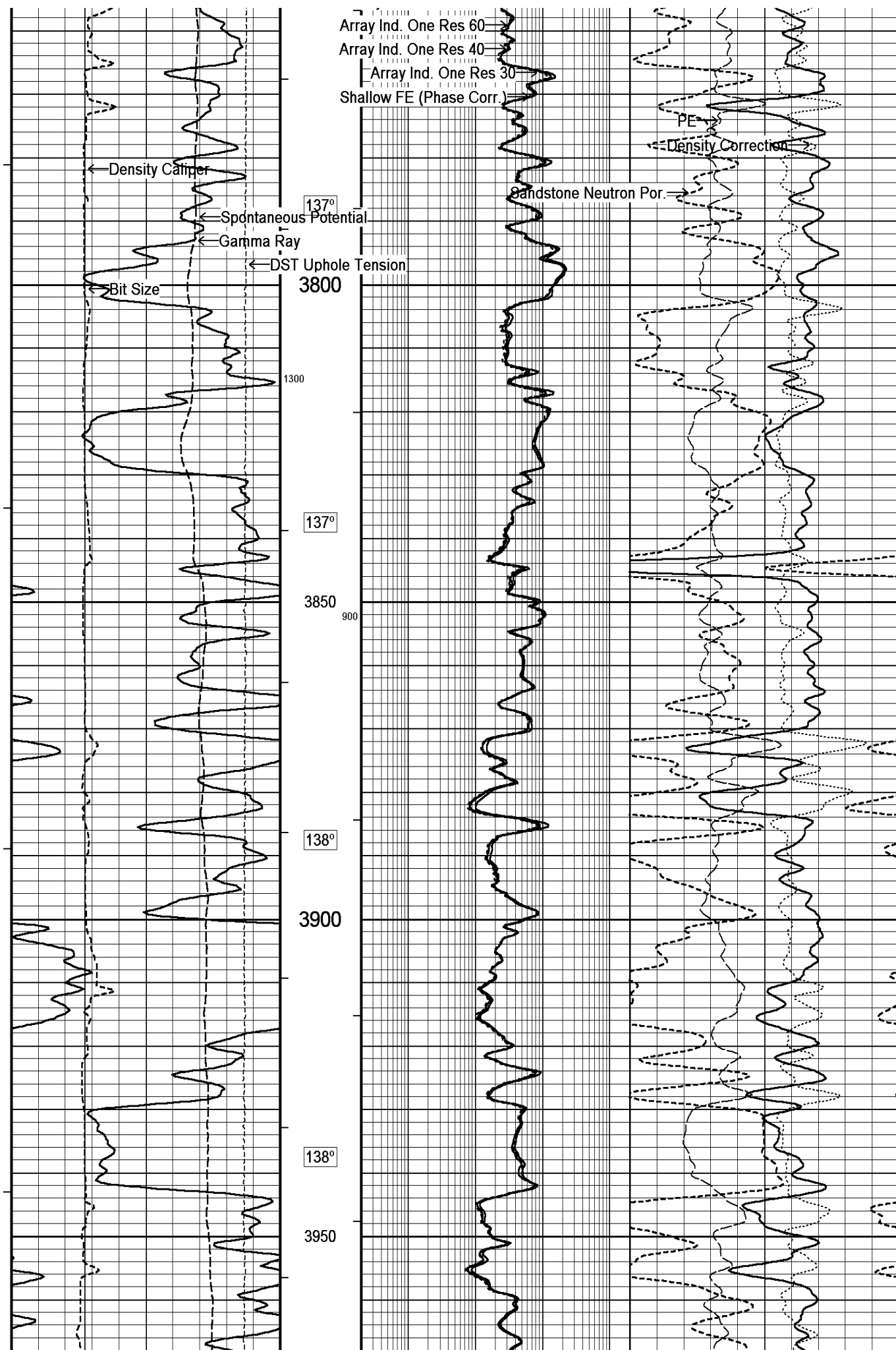
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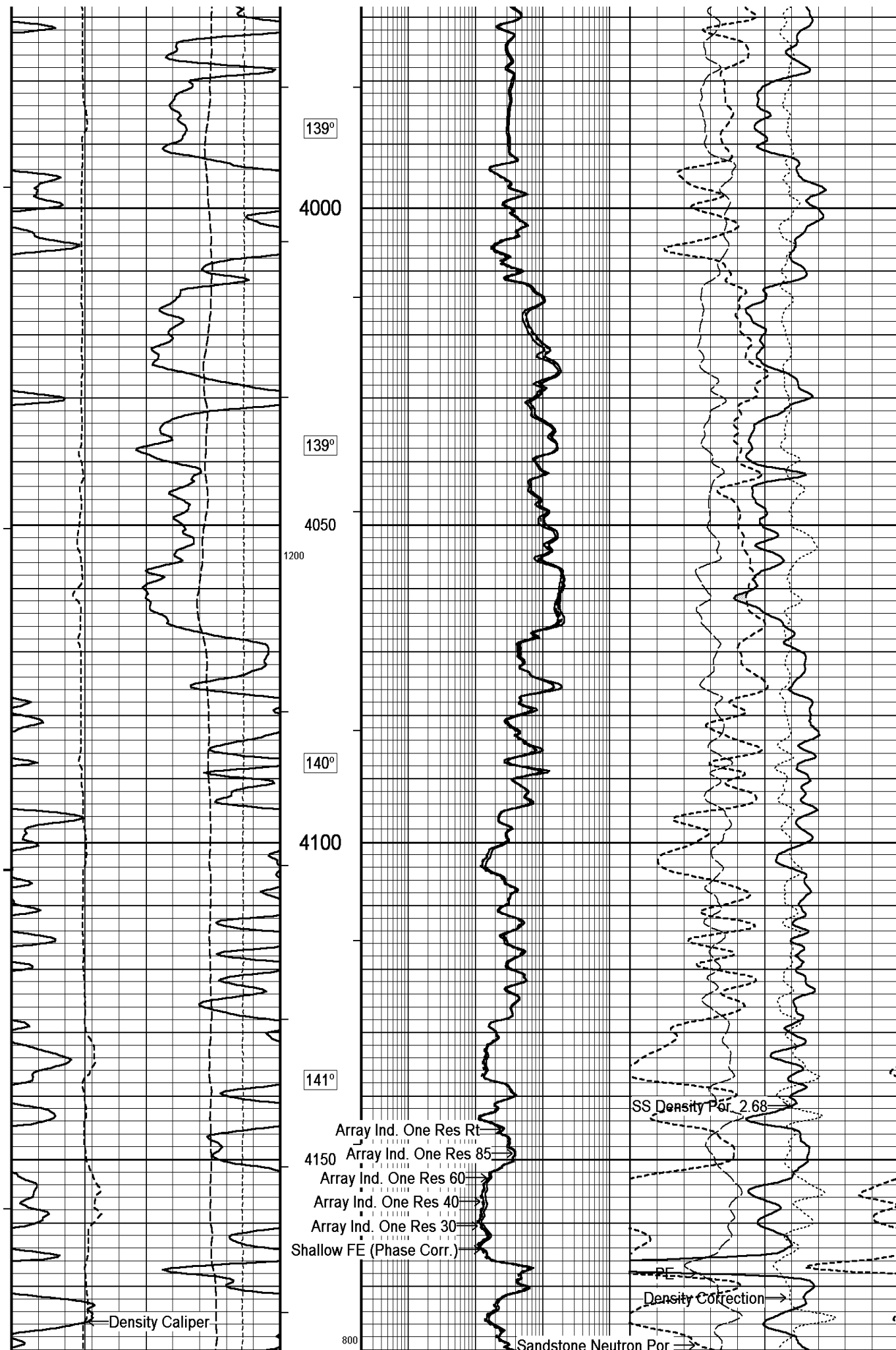
3300

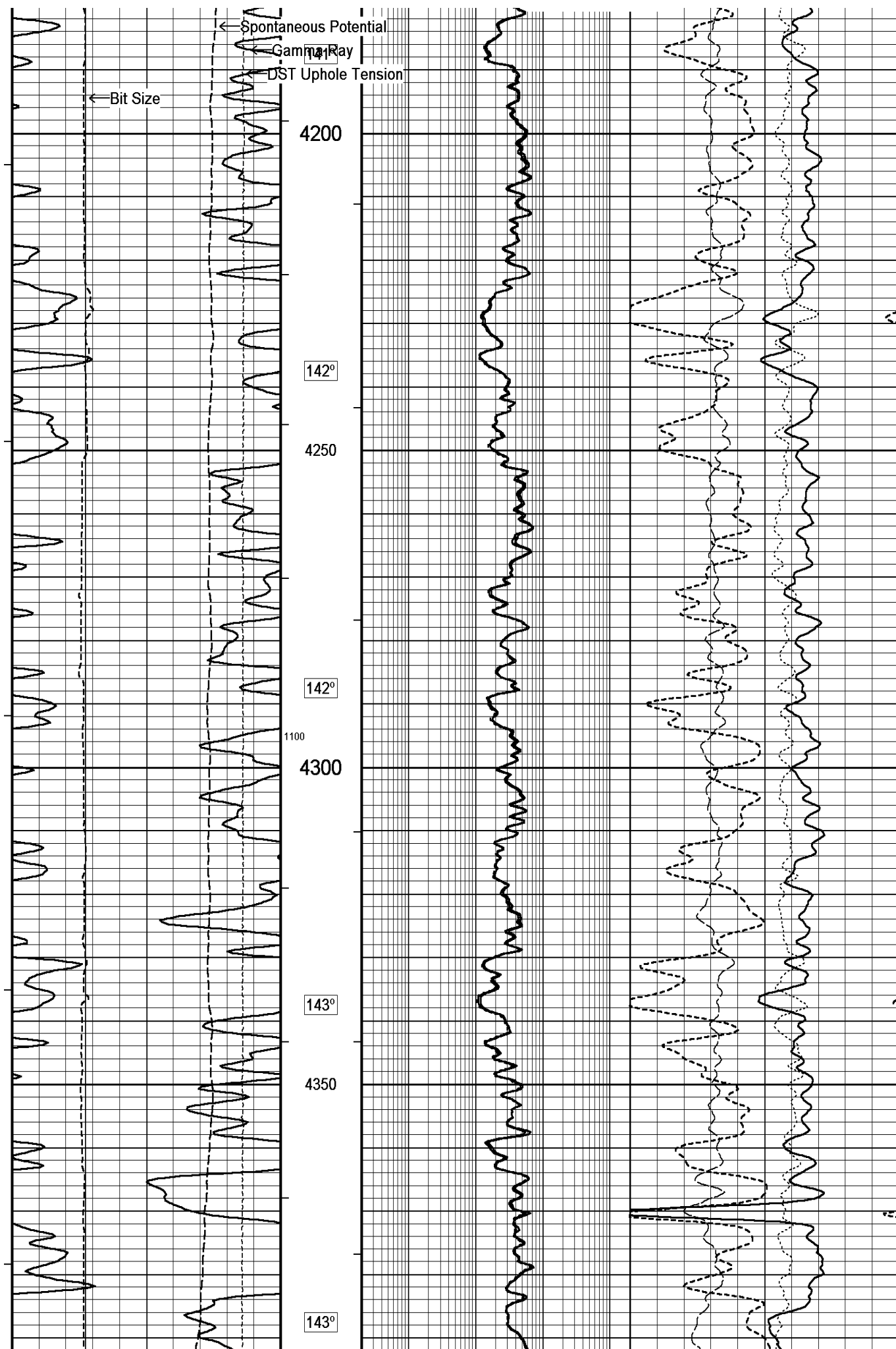


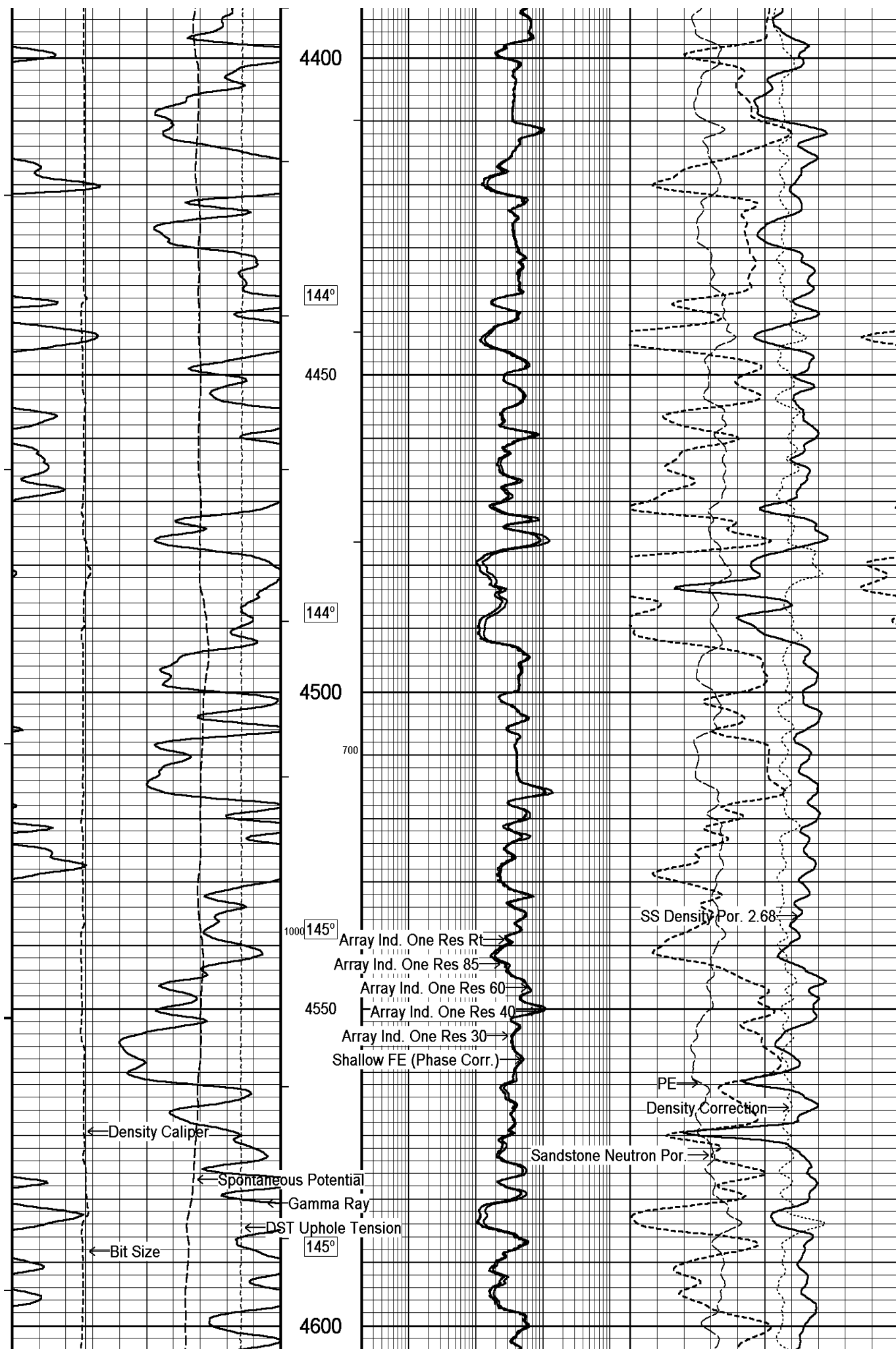


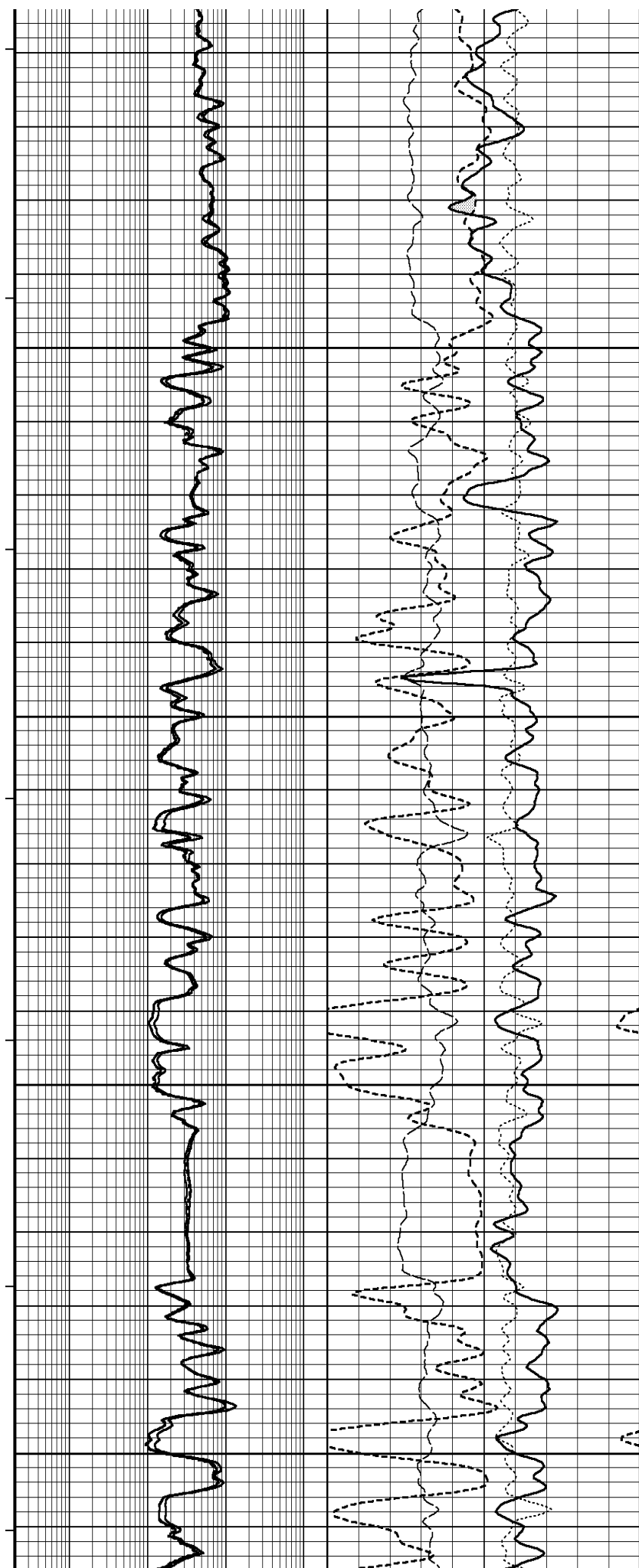
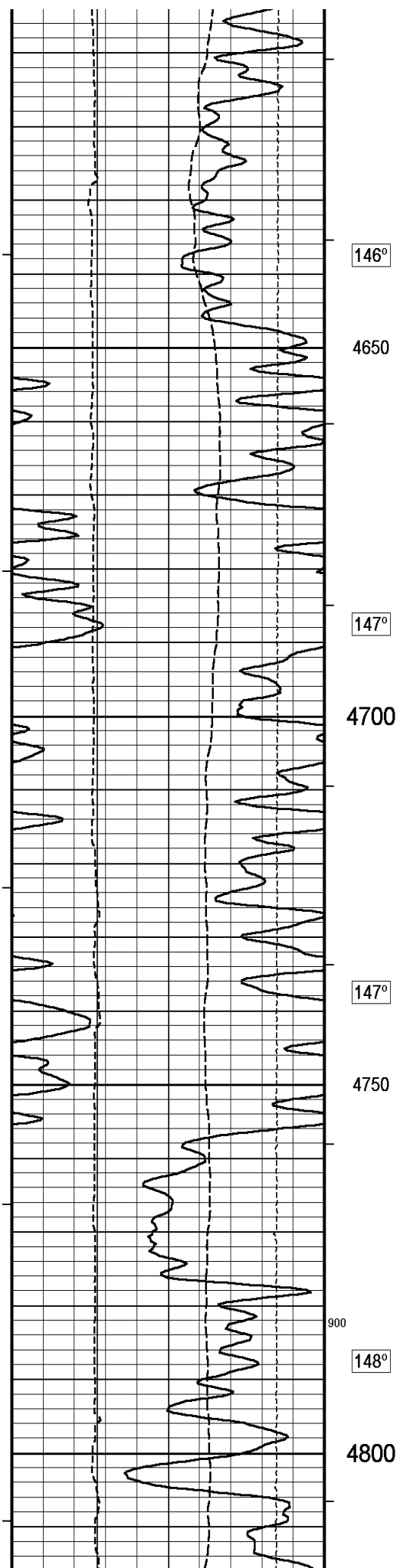


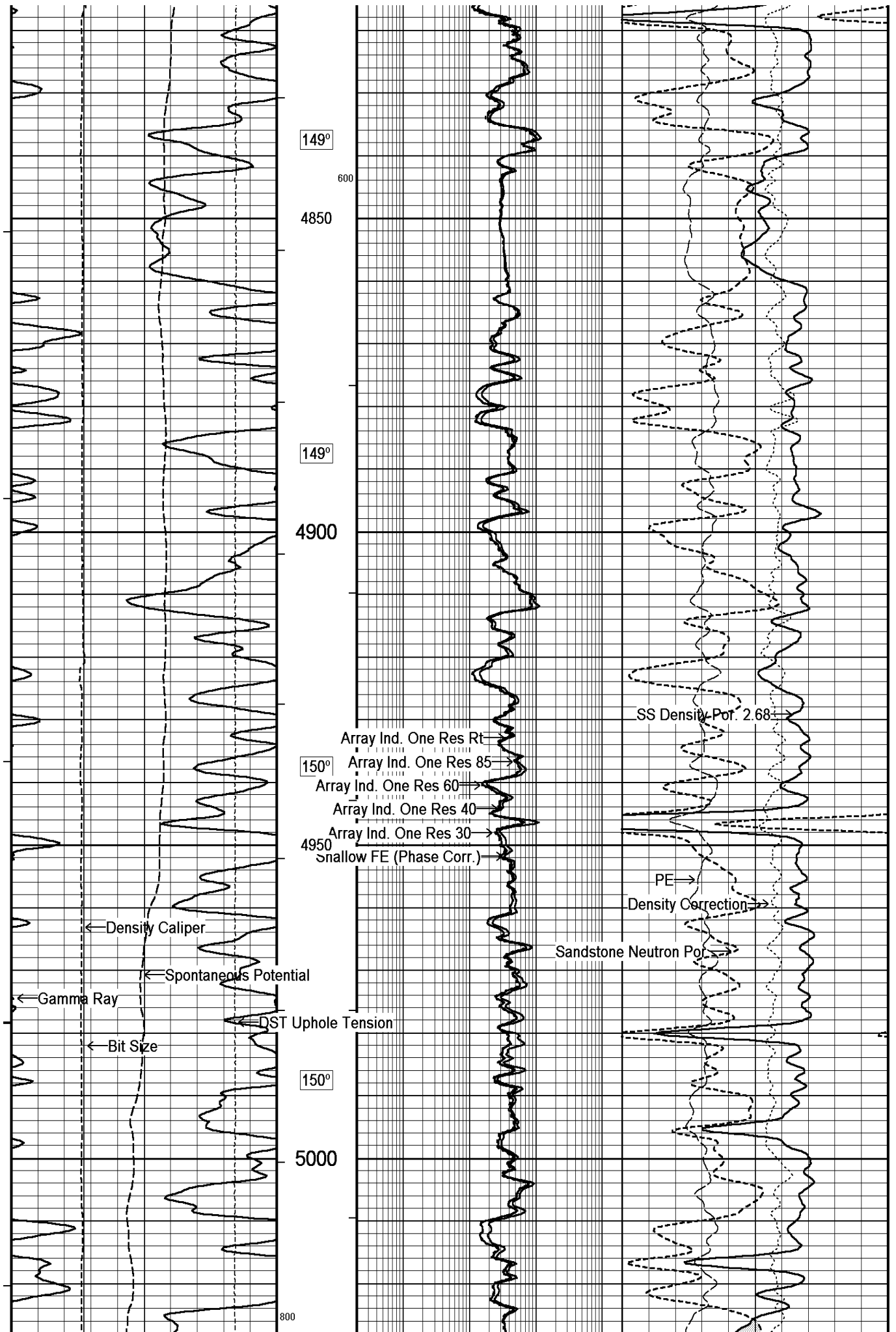


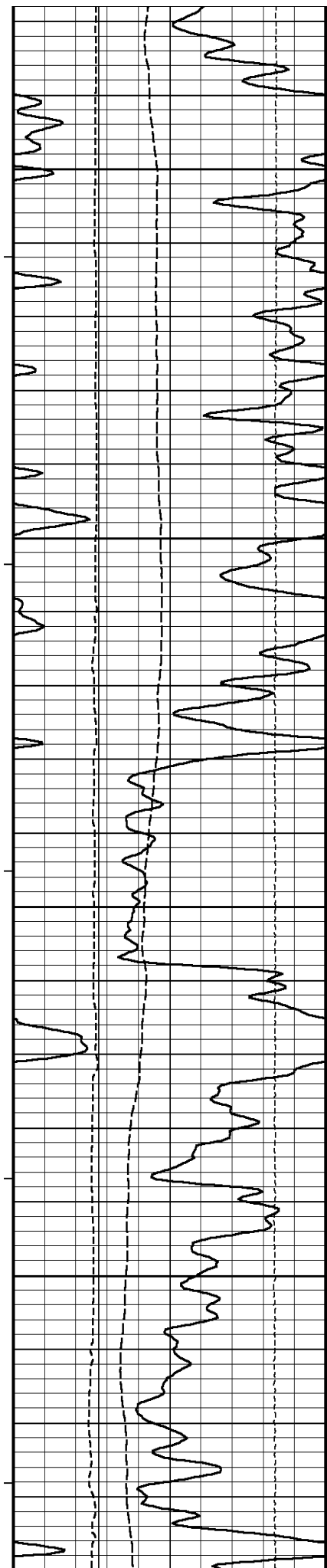












151°

5050

151°

5100

152°

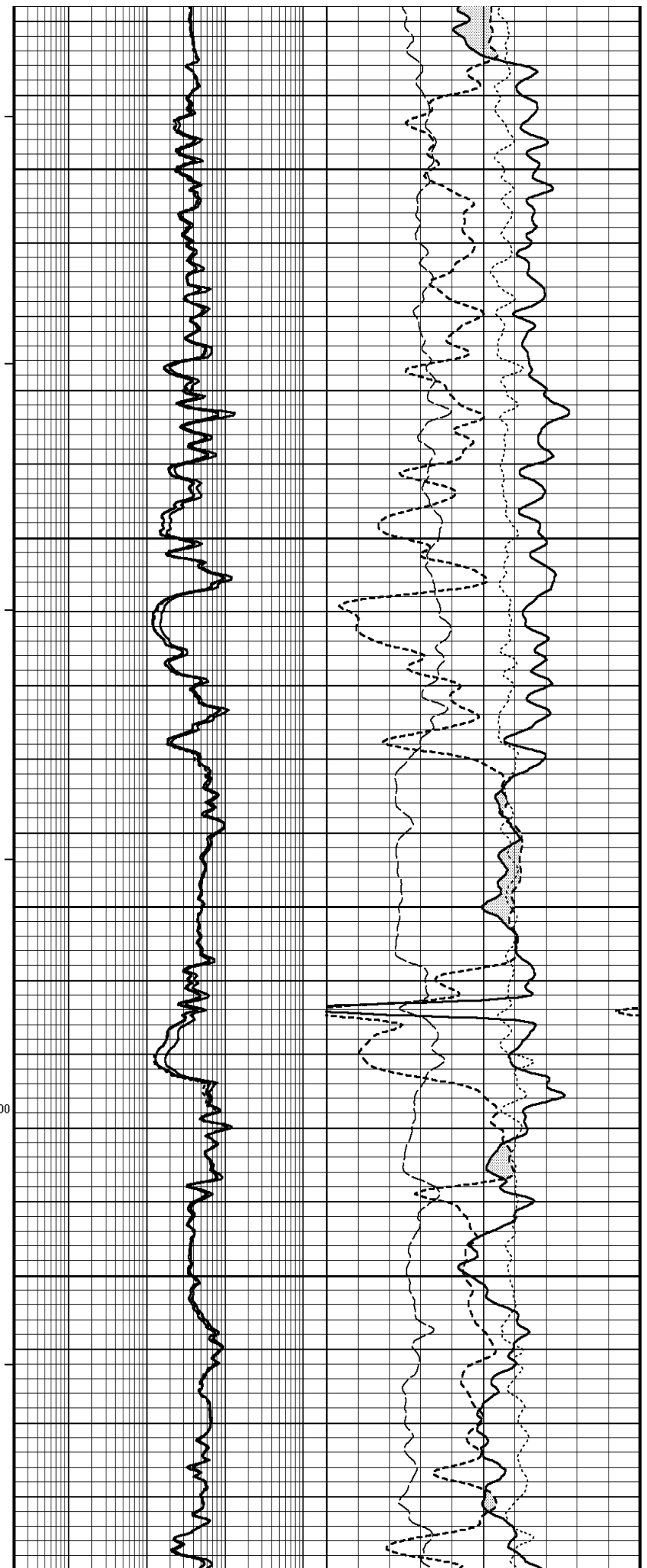
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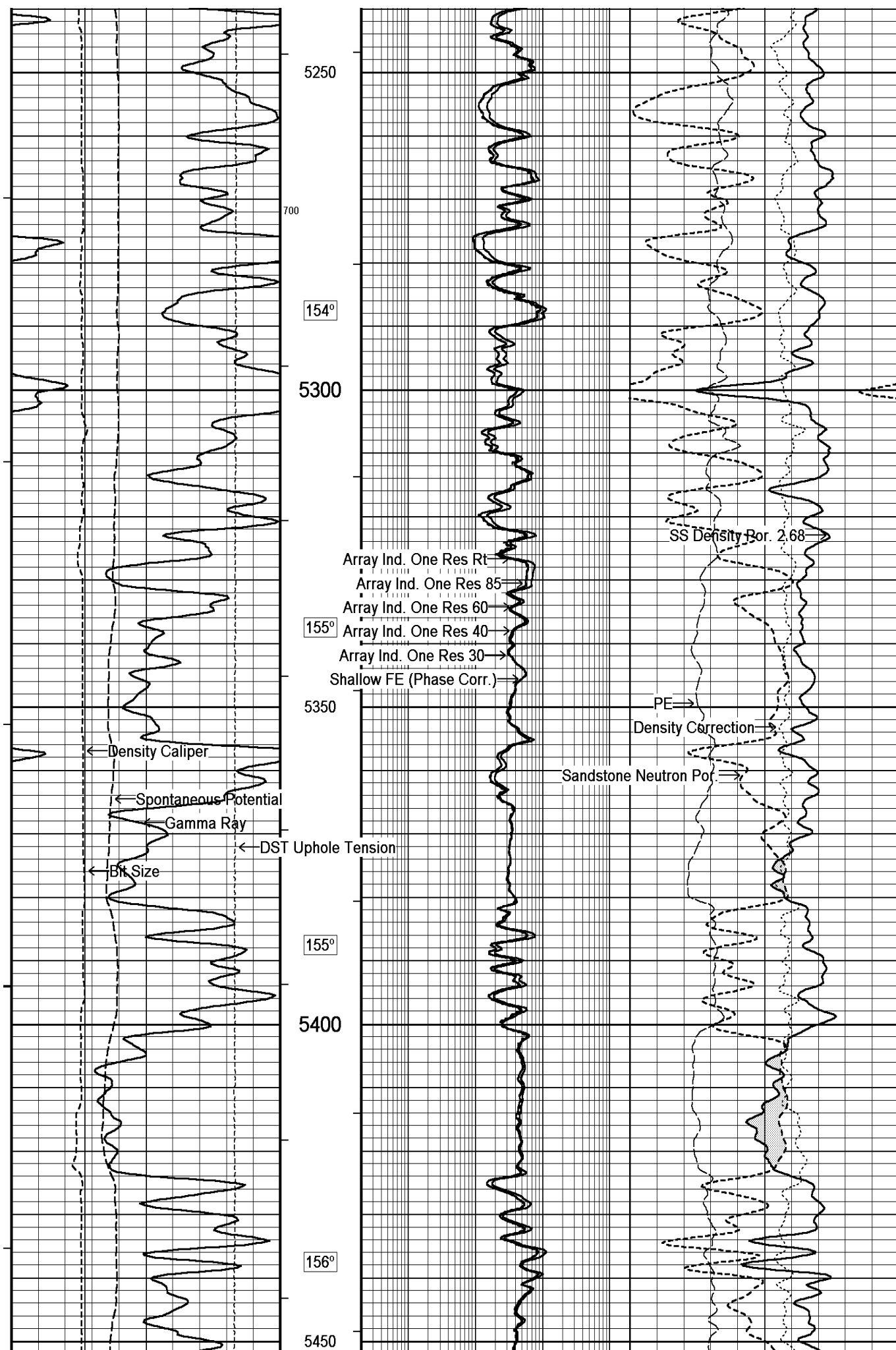
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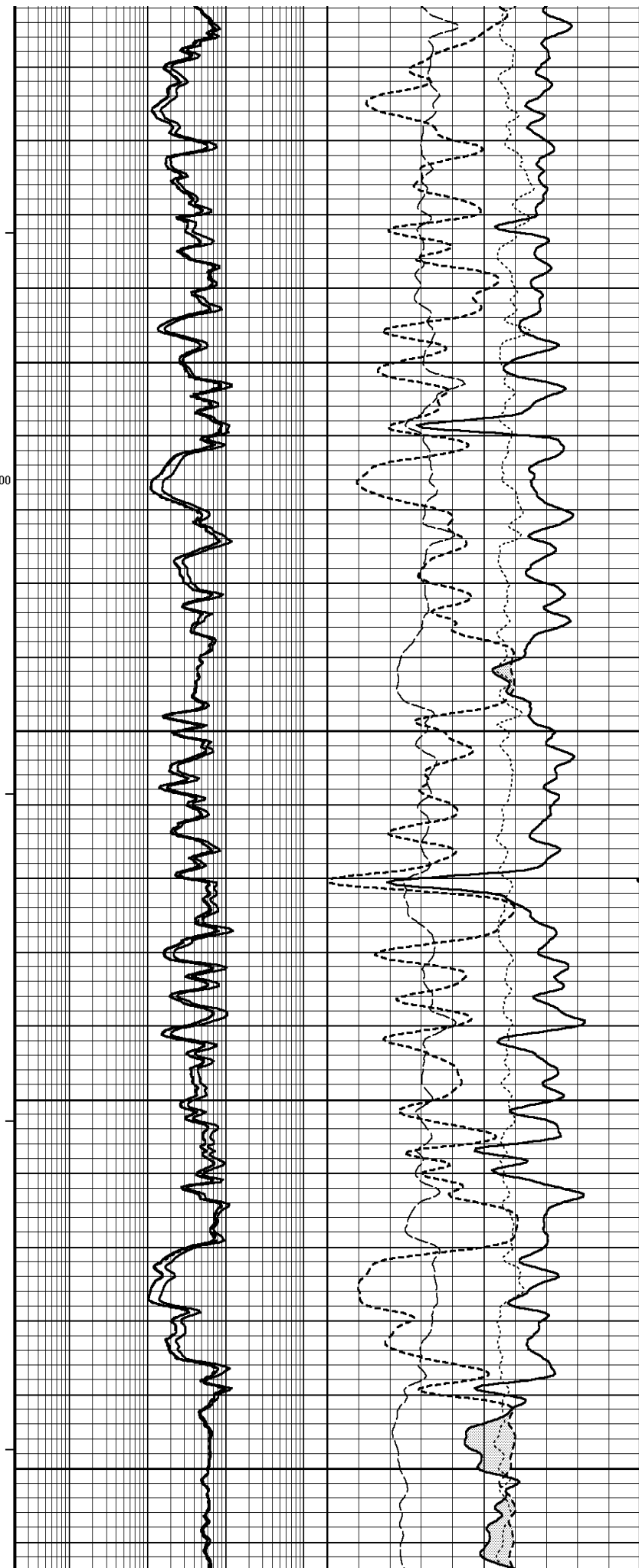
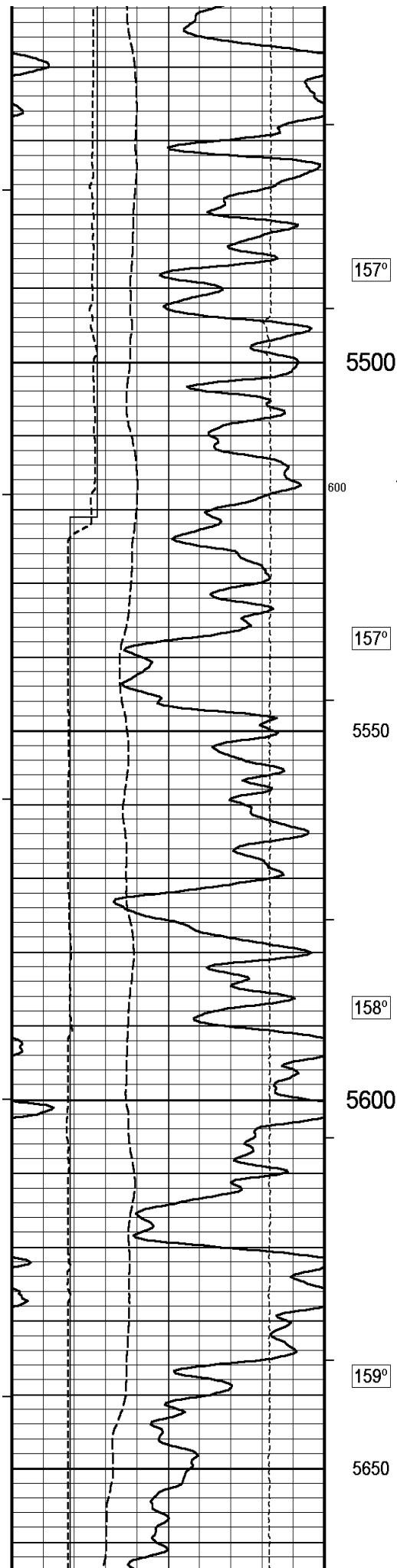
153°

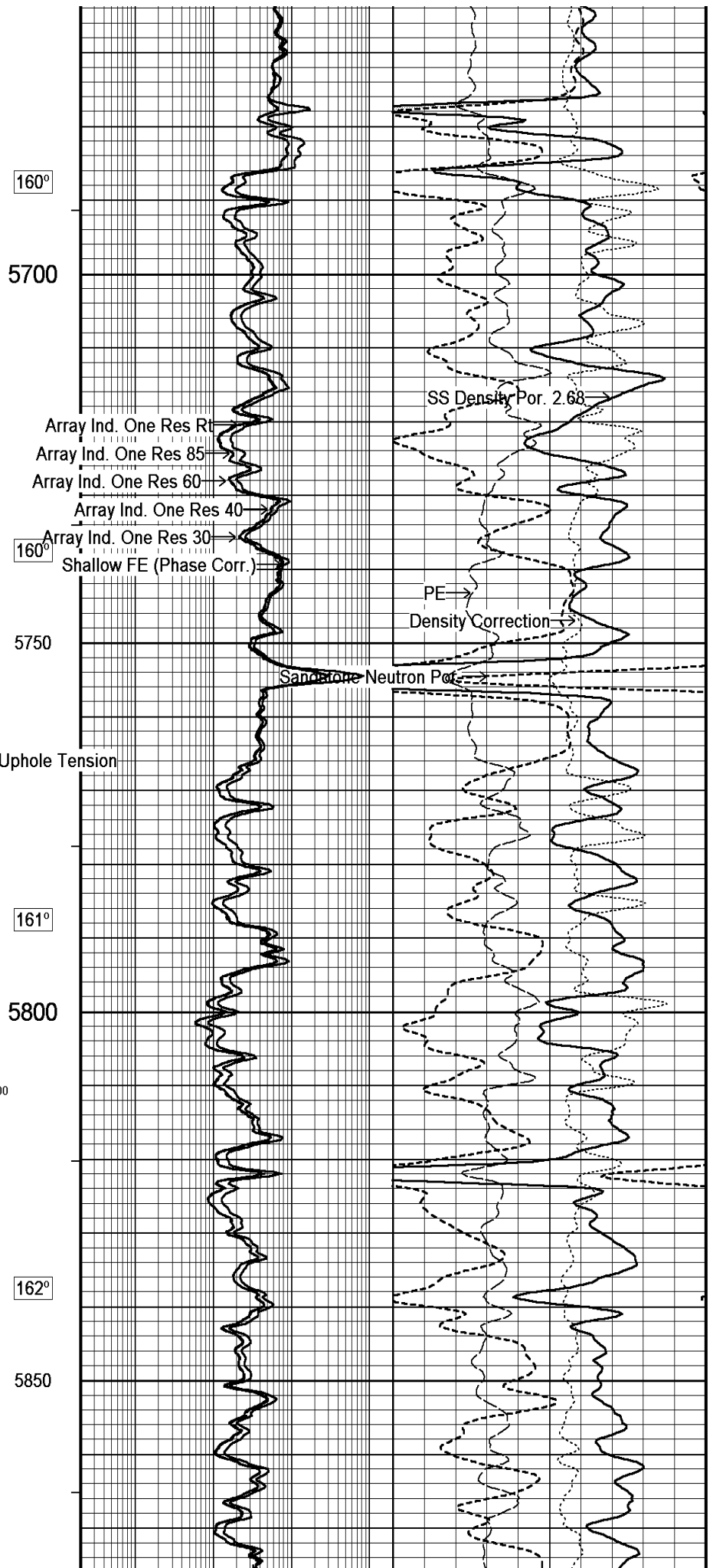
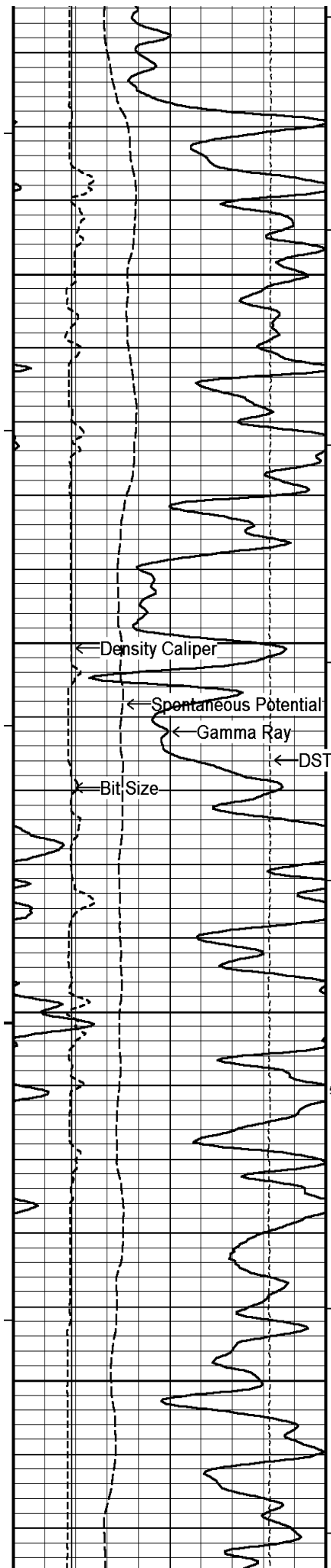
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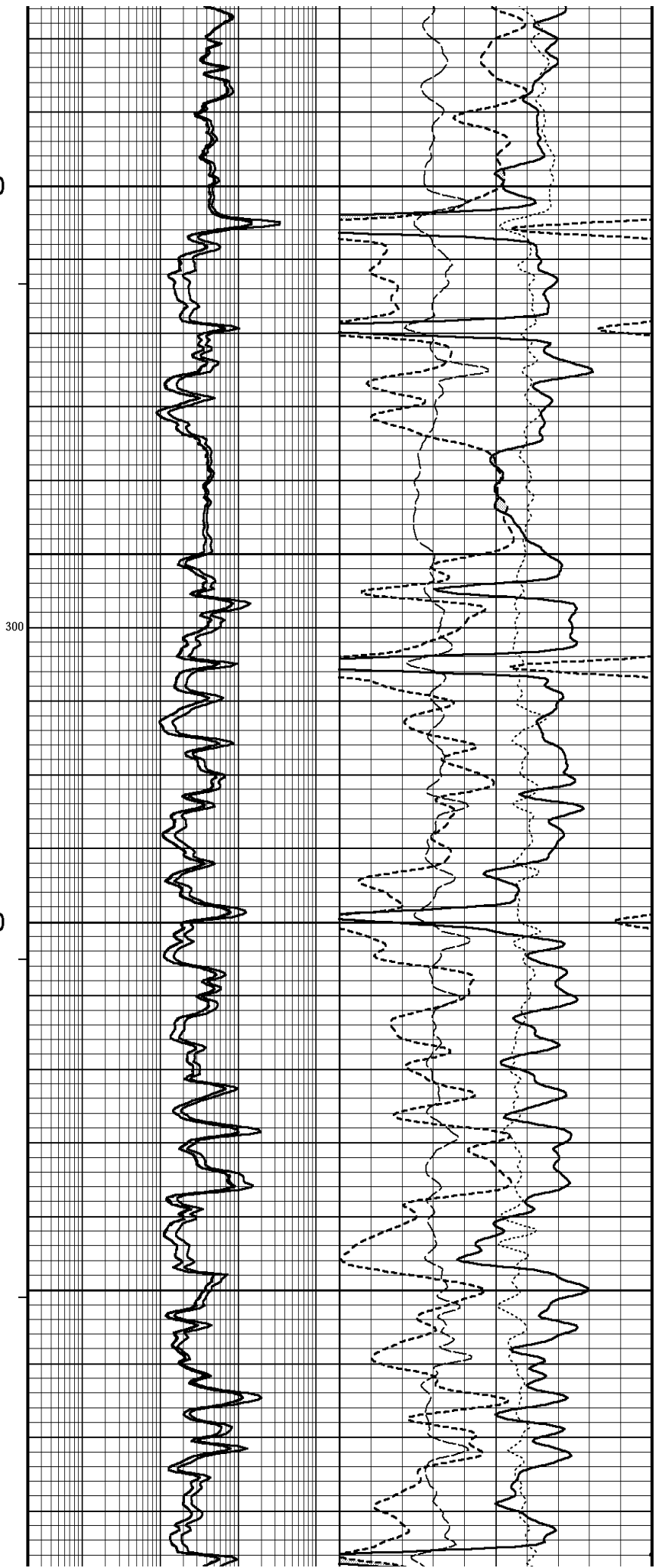
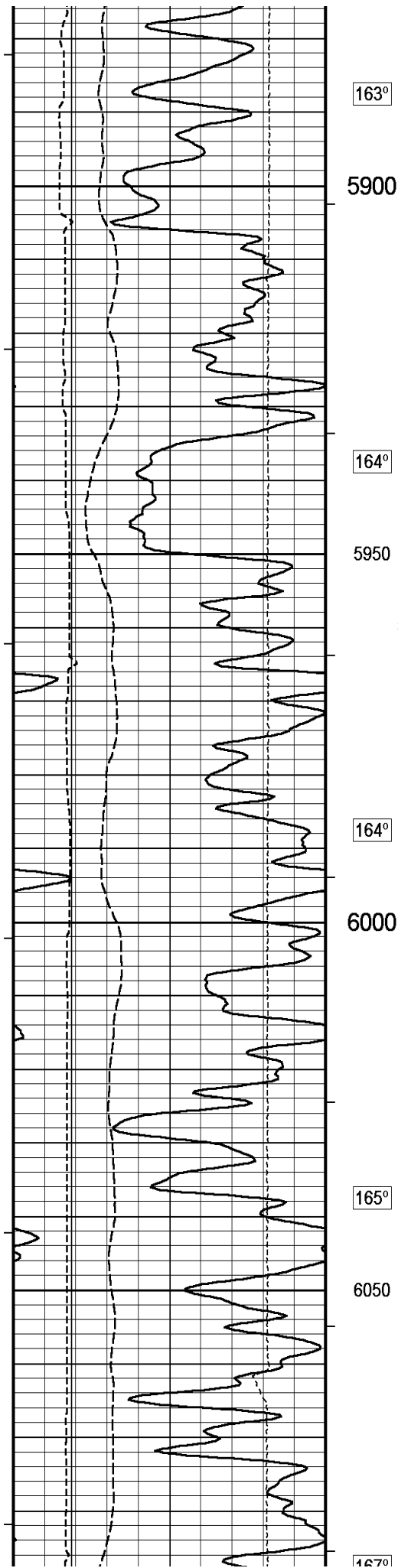
153°

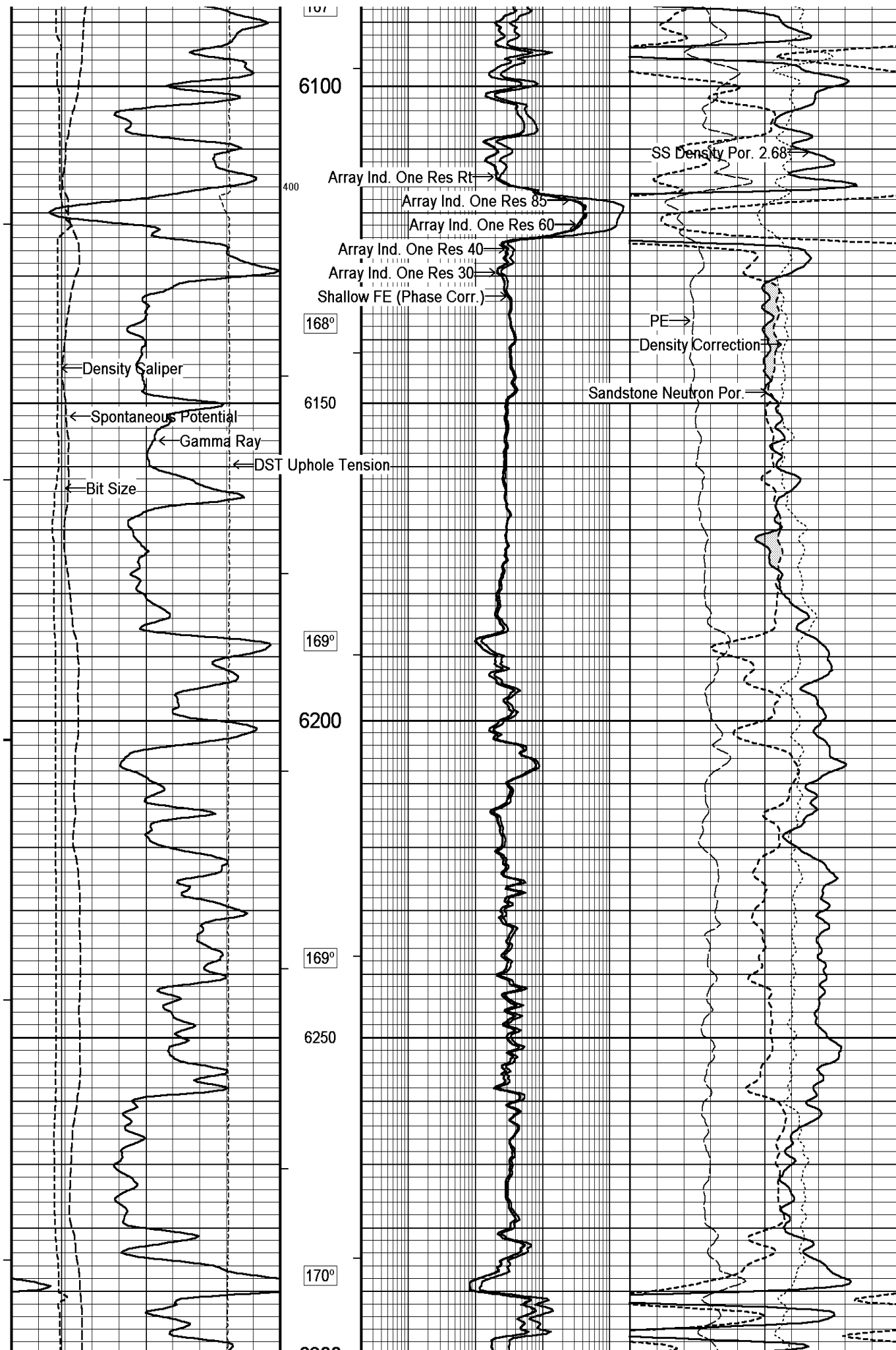


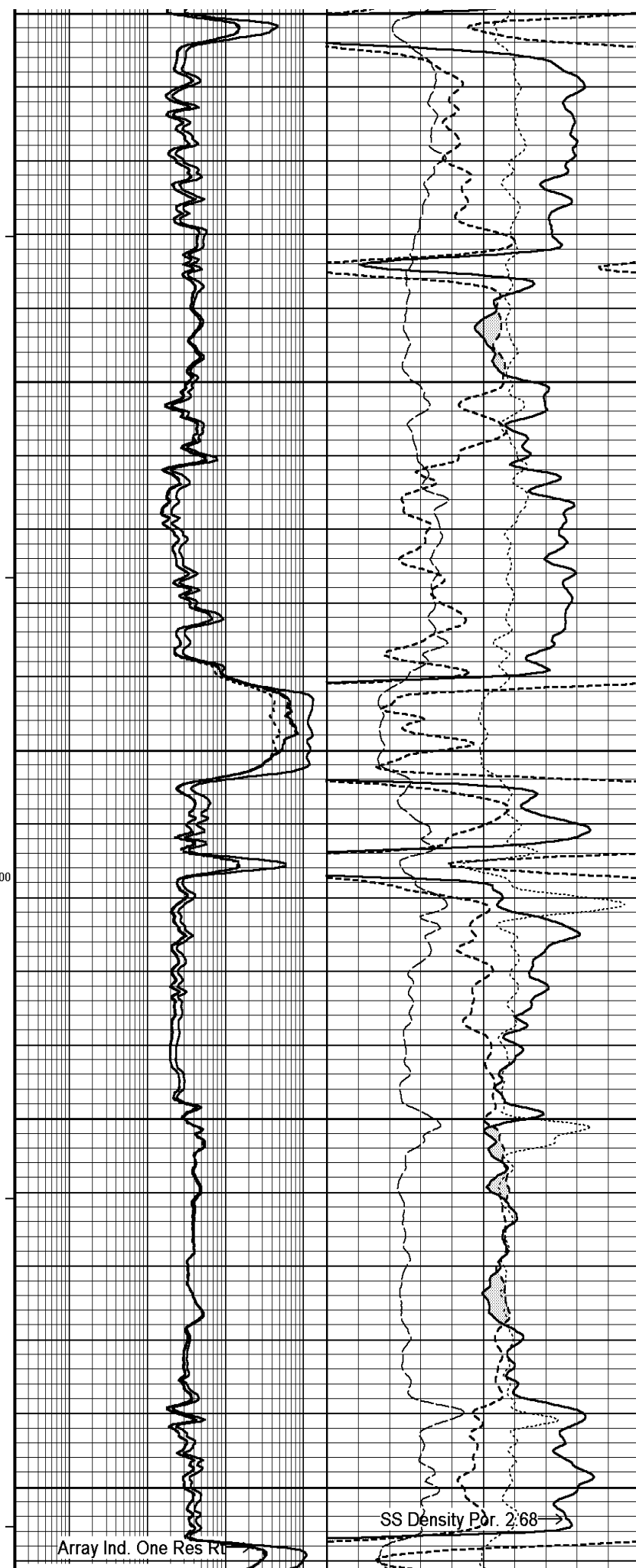
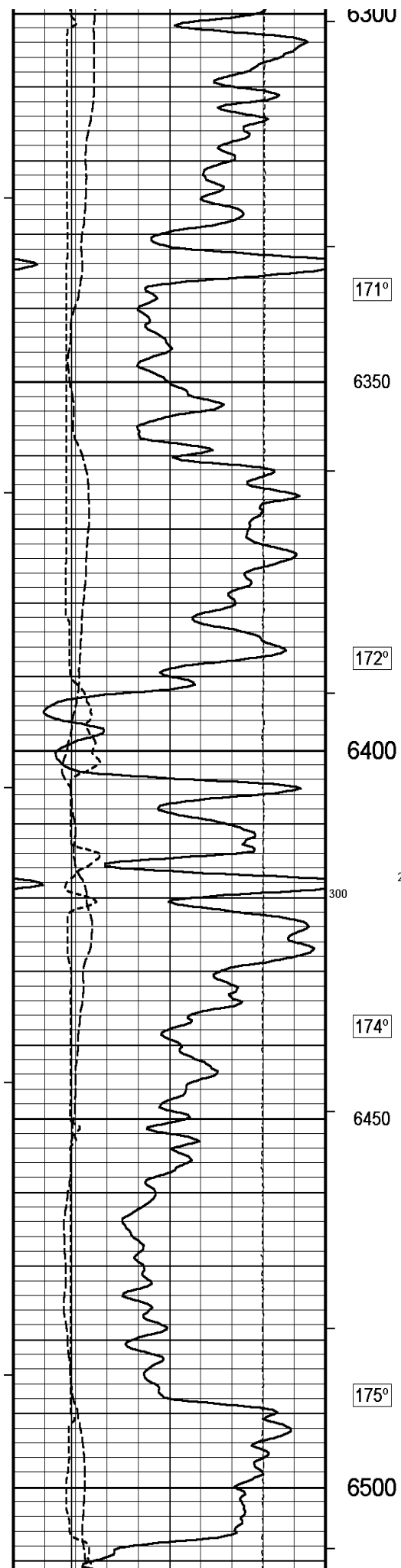




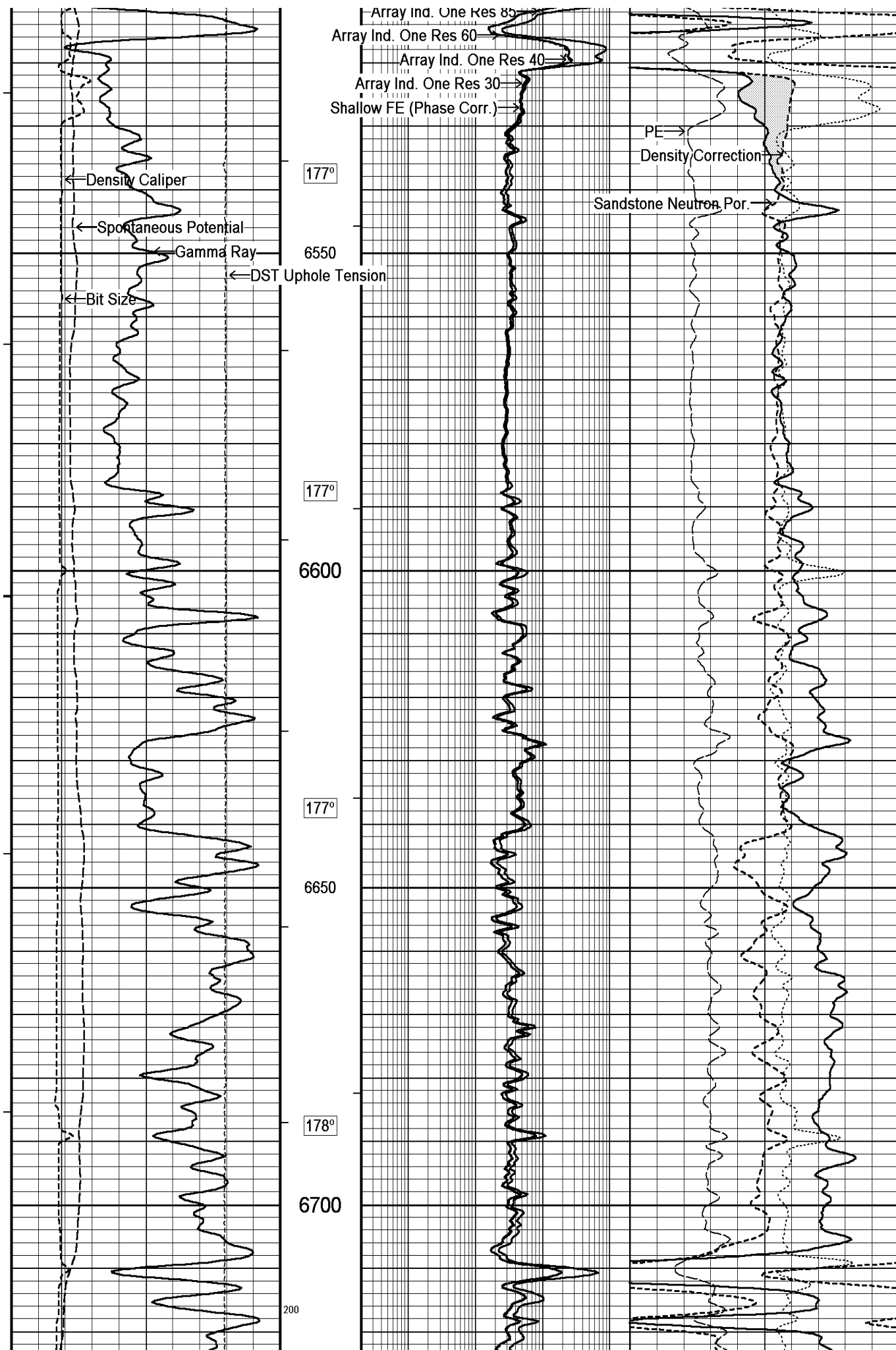


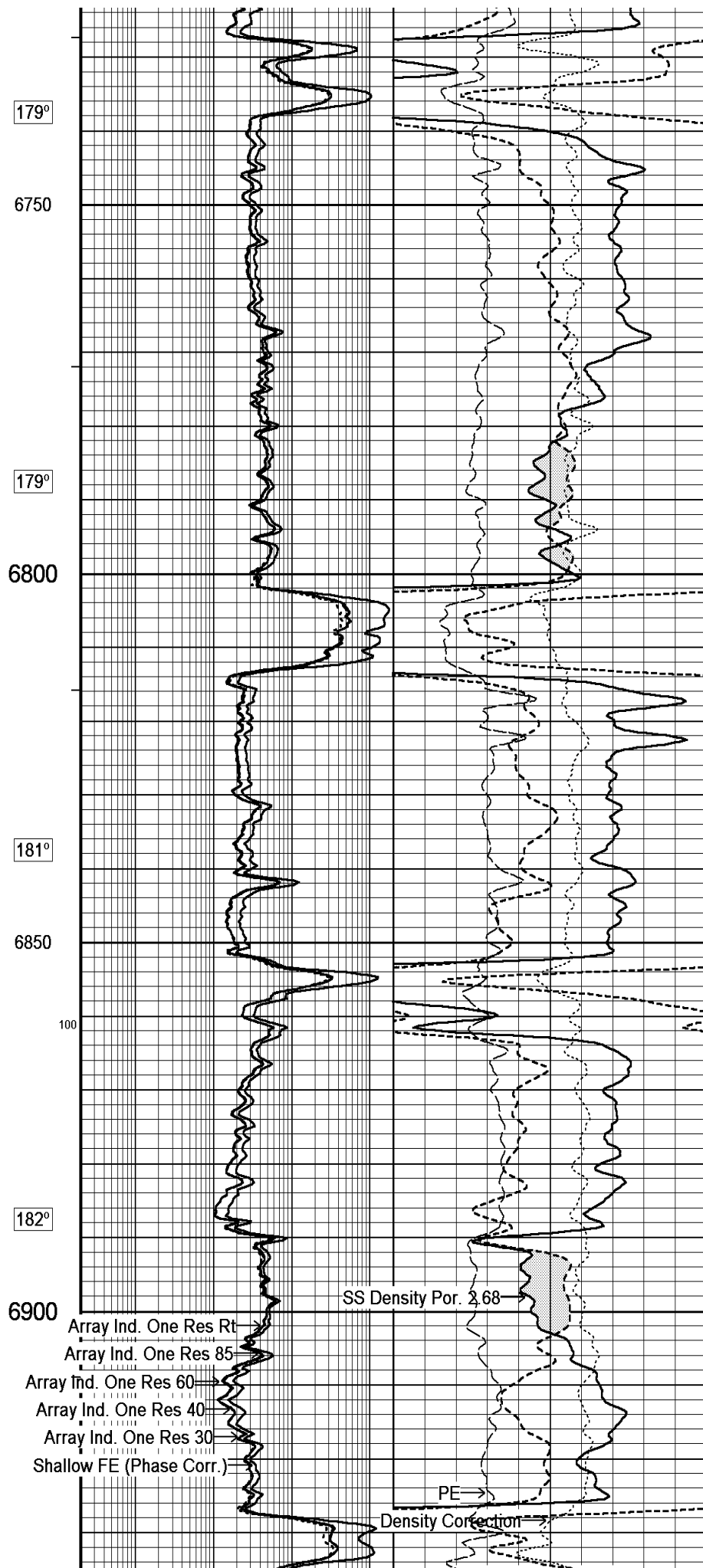
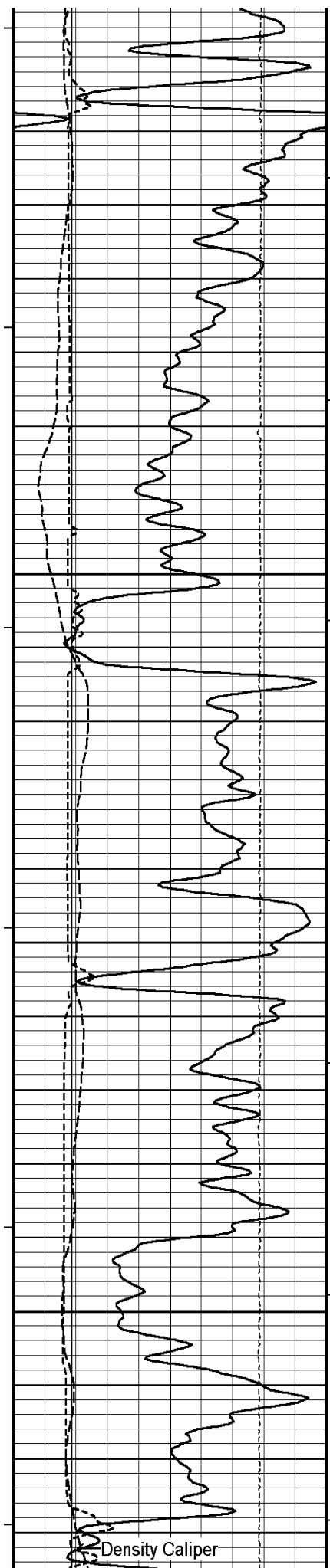


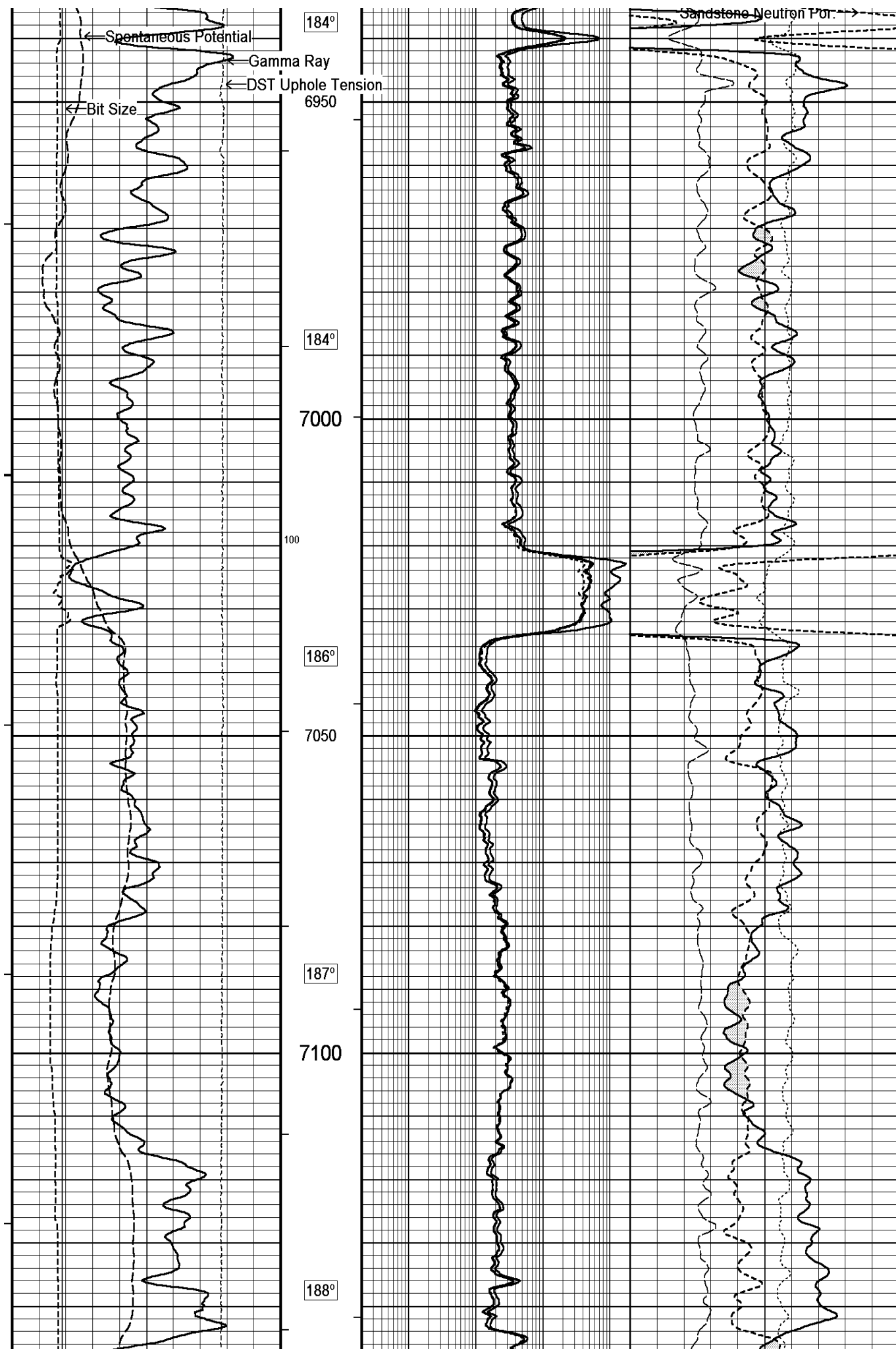


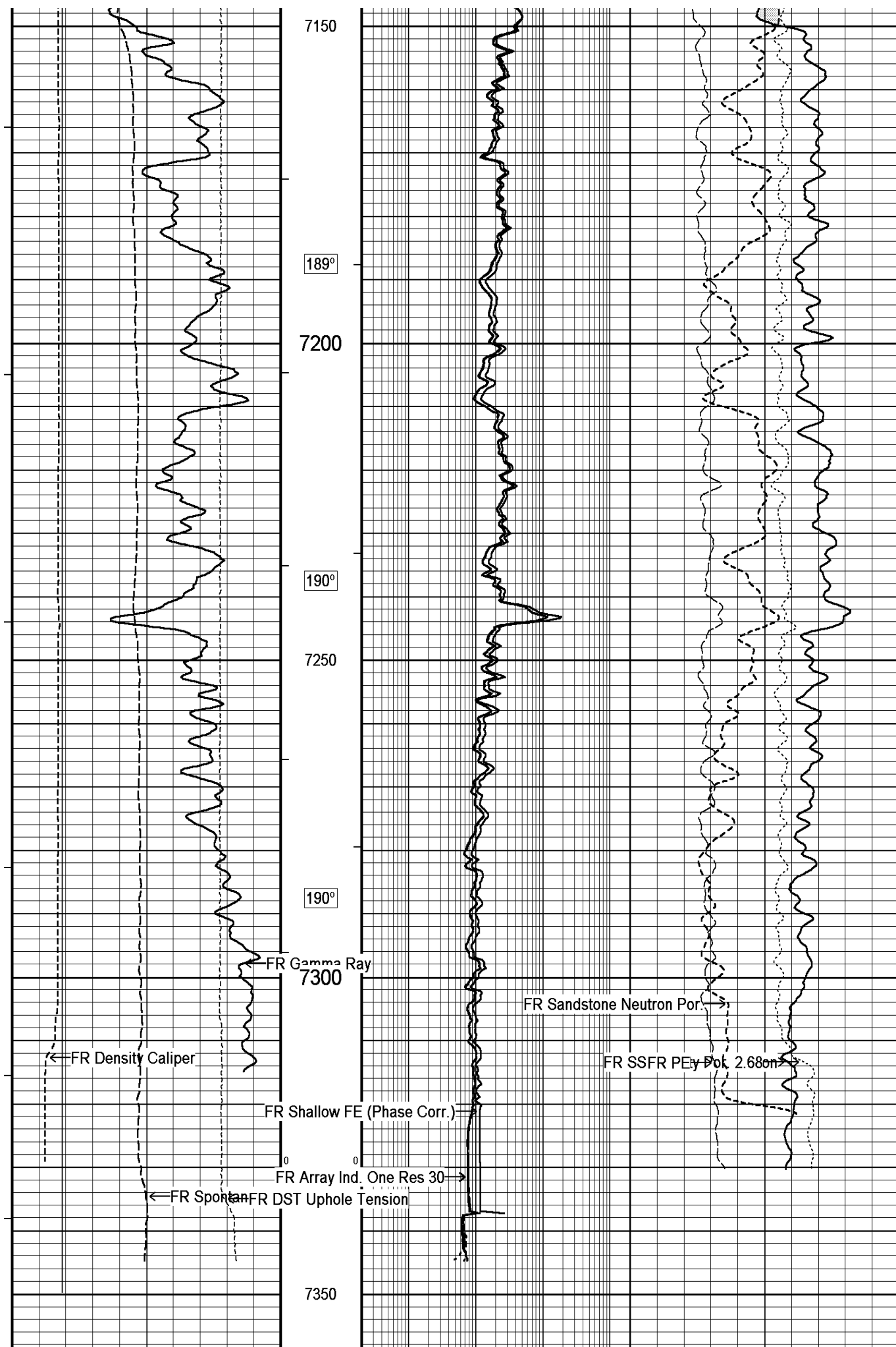


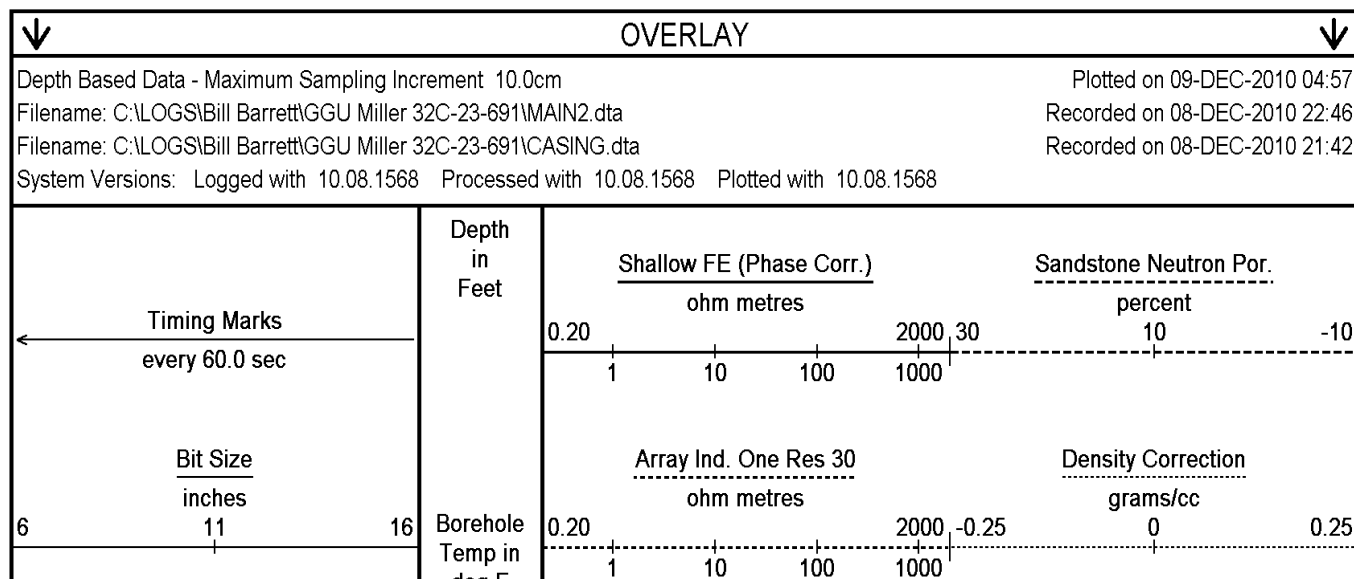
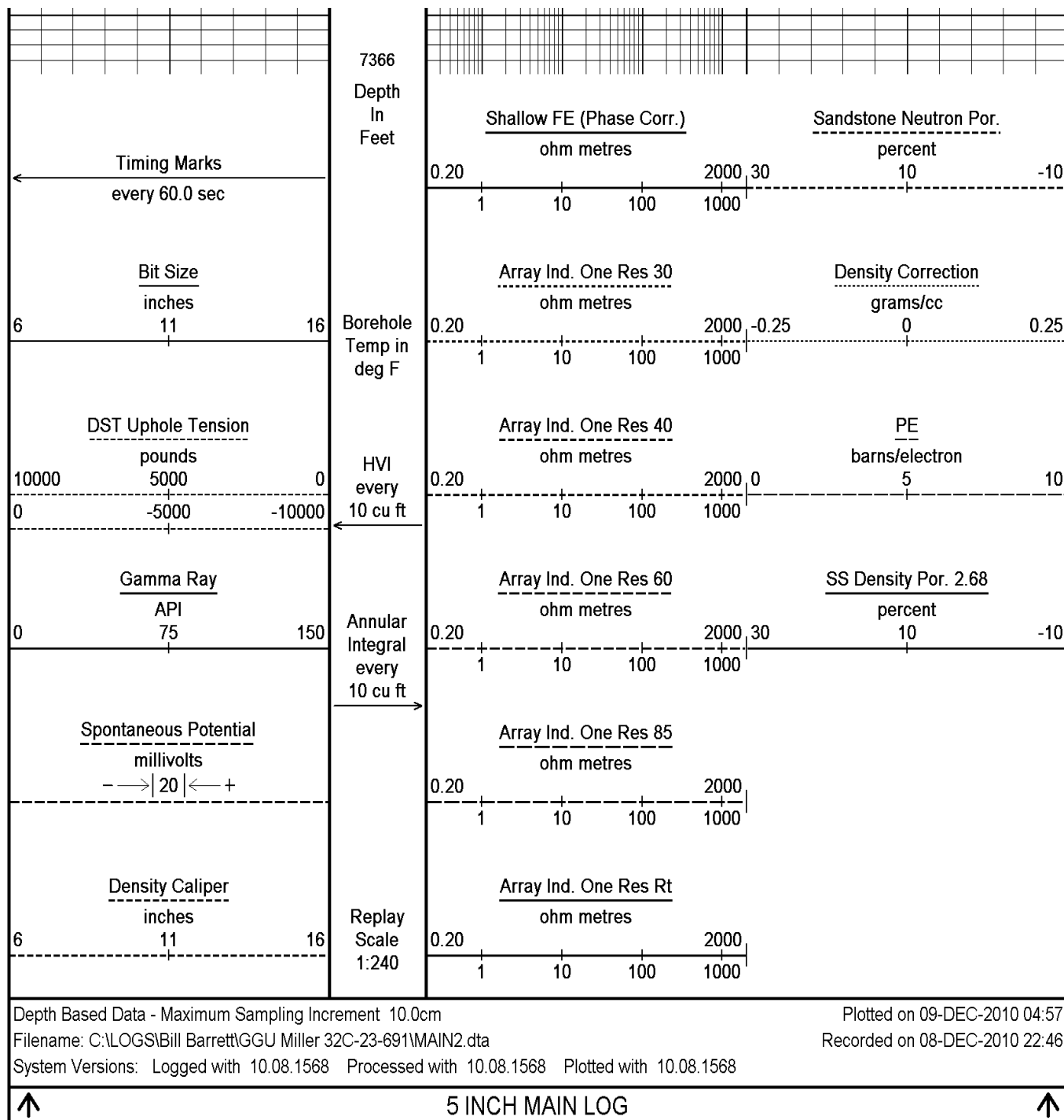
Array Ind. One Res Rt

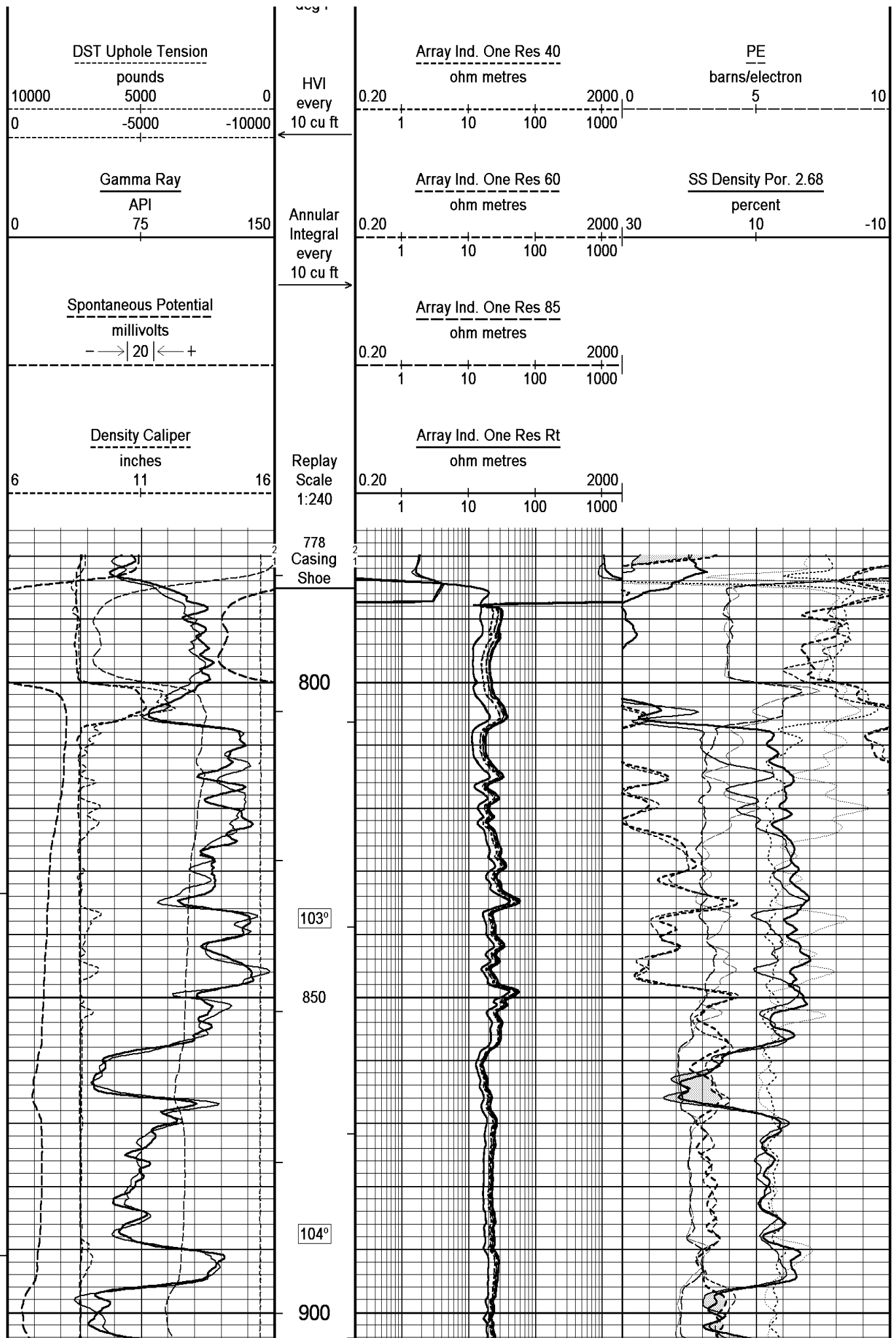


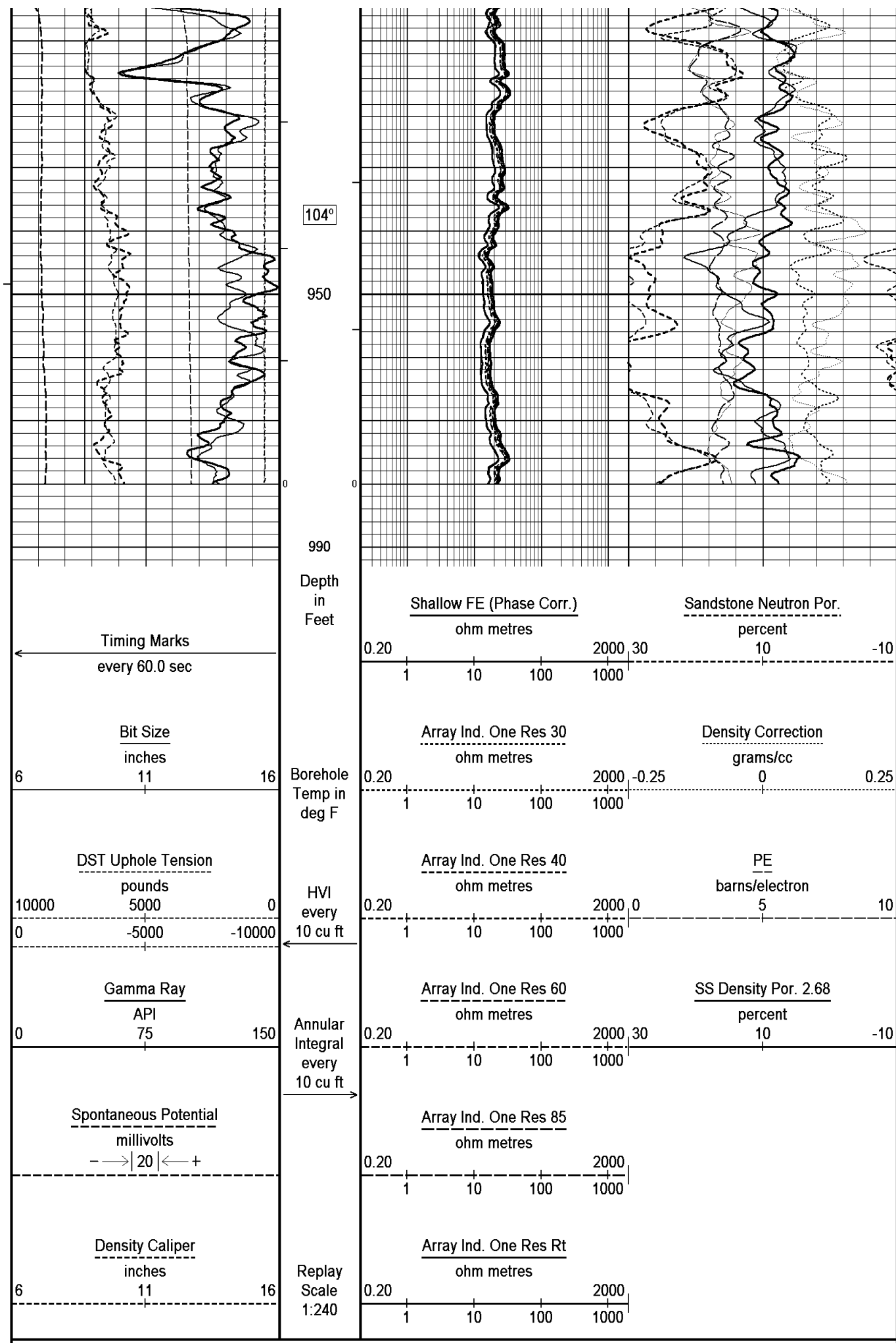












Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 09-DEC-2010 04:58

Filename: C:\LOGS\Bill Barrett\GGU Miller 32C-23-691\MAIN2.dta

Recorded on 08-DEC-2010 22:46

Filename: C:\LOGS\Bill Barrett\GGU Miller 32C-23-691\CASING.dta

Recorded on 08-DEC-2010 21:42

System Versions: Logged with 10.08.1568 Processed with 10.08.1568 Plotted with 10.08.1568



OVERLAY



BEFORE SURVEY CALIBRATION

C:\LOGS\Bill Barrett\GGU Miller 32C-23-691\MAIN2.dta

General Constants All 000

Last Edited on 08-DEC-2010,19:31

General Parameters

Mud Resistivity	2.450	ohm-metres
Mud Resistivity Temperature	96.000	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	None	

Rwa Parameters

Porosity used	Base Density Porosity
Resistivity used	Array Ind. One Res Rt
RWA Constant A	0.610
RWA Constant M	2.150

Down-hole Tension Calibration SMS 000

Field Calibration on 08-DEC-2010 21:25

Reading No	Measured	Calibrated (lbs)
1	10099.40	0.00
2	11155.73	360.00

High Resolution Temperature Calibration MCG 192

Field Calibration on 08-DEC-2010,19:18

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

High Resolution Temperature Constants MCG 192

Last Edited on 08-DEC-2010,19:18

Pre-filter Length	11
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SP Calibration MCG 192

Field Calibration on 08-DEC-2010,19:18

	Measured	Calibrated (mV)
Reference 1	102.5	101.0
Reference 2	-98.8	-101.0

Gamma Calibration MCG 192

Field Calibration on 08-DEC-2010,21:35

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

Gamma Constants MCG 192

Last Edited on 08-DEC-2010,19:18

Gamma Calibrator Number	GRC-072	
Mud Density	1.00	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

Neutron Calibration MDN 160

Base Calibration on 30-NOV-2010,21:21

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3208	98	3714	110
Ratio	32.812		33.764	

Field Calibrator at Base

	Calibrated (cps)
	1323 1983
Ratio	0.667

Field Check

	Calibrated (cps)
	1313 1981
Ratio	0.663

Neutron Constants MDN 160

Last Edited on 08-DEC-2010,19:19

Neutron Source Id	1056	
Neutron Jig Number	5922	
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 085

Base Calibration on 12-NOV-2010 11:03

Field Check on 08-DEC-2010 21:28

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	9.7	1.3
Reference 2	964.3	126.8

Base Check 282.0

Field Check 282.1

FE Constants MFE 085

Last Edited on 08-DEC-2010,19:21

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 213

Field Calibration on 08-DEC-2010,19:21

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

High Resolution Temperature Constants MAI 213

Last Edited on 08-DEC-2010,19:21

Pre-filter Length 11

Induction Calibration MAI 213

Base Calibration on 20-NOV-2010,09:51

Field Check on

Base Calibration		
Test Loop Calibration	Measured	Calibrated (mmho/m)

Channel	Low	High	Low	High
1	16.8	462.4	9.3	966.2
2	6.2	381.7	7.6	821.4
3	3.6	254.8	5.2	566.0
4	2.3	132.3	2.6	279.2
Array Temperature	73.6		Deg F	
Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0
Deep	0.0	0.0	0.0	0.0
Medium	0.0	0.0	0.0	0.0
Shallow	0.0	0.0	0.0	0.0
Array Temperature	0.0		0.0	Deg F

Induction Constants MAI 213			Last Edited on 08-DEC-2010,19:21	
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)	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 167			Base Calibration on 17-NOV-2010 16:07 Field Calibration on 08-DEC-2010,19:20	
Base Calibration				
Reading No	Measured		Calibrator Size (in)	
1	18710		4.00	
2	27104		5.96	
3	35068		7.98	
4	43201		9.86	
5	52390		11.88	

6	N/A	N/A
Field Calibration	Measured Caliper (in) 6.00	Actual Caliper (in) 5.96
Photo Density Calibration MPD 167		Base Calibration on 17-NOV-2010 15:52 Field Check on 08-DEC-2010 21:32
Density Calibration		
Base Calibration	Measured	Calibrated (sdu)
	Near Far	Near Far
Reference 1	48981 19042	53237 19445
Reference 2	22577 3078	25135 2545
Field Check at Base	1182.7 1754.2	
Field Check	1178.9 1761.7	
PE Calibration		
Base Calibration	Measured	Calibrated
	WS WH Ratio	Ratio
Background	214 1054	
Reference 1	14834 48805 0.306	0.320
Reference 2	5846 22443 0.263	0.274
Field Check at Base	214.2 1053.8	
Field Check	213.6 1053.4	
Density Constants MPD 167		Last Edited on 08-DEC-2010,19:20
Density Source Id	P50561B	
Nylon Calibrator Number	532	
Aluminium Calibrator Number	532	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.27	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	

AFTER SURVEY CALIBRATION		
C:\LOGS\Bill Barrett\GGU Miller 32C-23-691\MAIN2.dta		
FE Check MFE 085	Before Survey Check 08-DEC-2010 21:28 After Survey Check on 09-DEC-2010 01:24	
	Before (ohm-m) 282.1	After (ohm-m) 281.7
Induction Check MAI 213	Before Survey Check on	

After Survey Check on 09-DEC-2010 01:23

Channel	Before Survey (mmho/m)		After Survey (mmho/m)	
	Low	High	Low	High
1	0.0	0.0	17.6	3937.4
2	0.0	0.0	32.5	3539.8
3	0.0	0.0	30.8	3113.9
4	0.0	0.0	20.3	2096.7
Deep	0.0	0.0	18.7	2078.4
Medium	0.0	0.0	44.9	4087.3
Shallow	0.0	0.0	48.8	5159.0
Array Temperature		0.0		93.4

Photo Density Check MPD 167

Before Survey Check on 08-DEC-2010 21:32

After Survey Check on 09-DEC-2010 01:28

Density Check

	Near		Far	
	Before	After	Before	After
	1178.9	1176.8	1761.7	1749.9

PE Check

	Before	After
WS	213.6	212.8
WH	1053.4	1047.6

DOWNHOLE EQUIPMENT

C:\LOGS\Bill Barrett\GGU Miller 32C-23-691\MAIN2.dta

MCB-A 11B Tension Cablehead

MCB 1 Length: 2.18 ft Weight: 19.8 lb

SHA-F Compact Swivel Head Adaptor

SHA 82 Length: 2.74 ft Weight: 26.5 lb

Compact Gamma

MCG 192 Length: 8.70 ft Weight: 63.9 lb

Compact Neutron

MDN 160 Length: 5.04 ft Weight: 50.7 lb

Compact Density/Caliper

MPD 167 Length: 9.59 ft Weight: 90.4 lb

SKJ-E.A Compact Knuckle Joint

SKJ 114 Length: 2.17 ft Weight: 24.3 lb

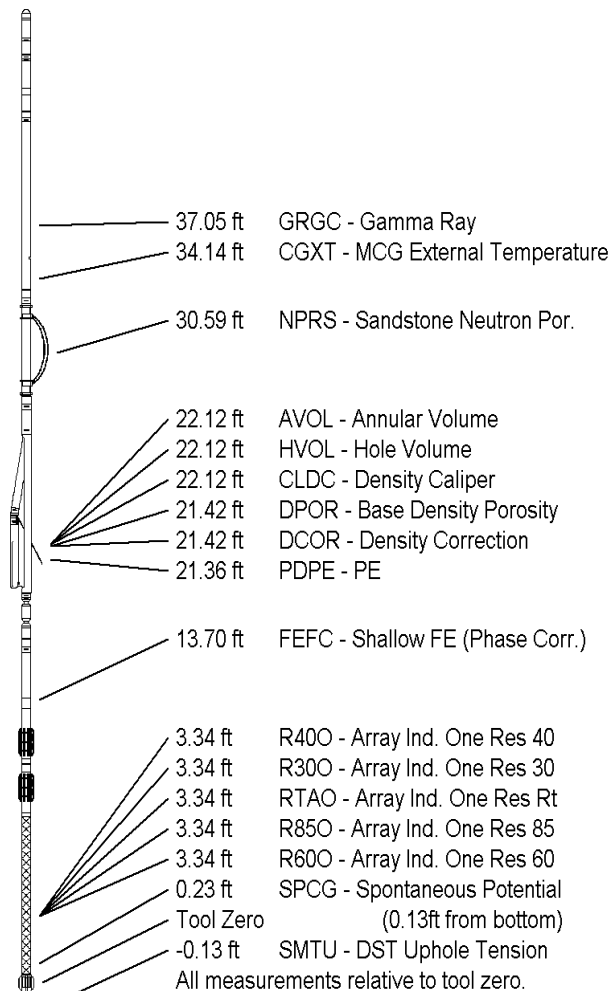
Compact Focussed Electric

MFE 85 Length: 6.03 ft Weight: 48.5 lb

Compact Induction

MAI 213 Length: 10.81 ft Weight: 48.5 lb

Total Length: 47.25 ft Weight: 372.6 lb



COMPANY
WELL

BILL BARRETT CORPORATION
GGU MILLER 23C-32-691

FIELD

PROVINCE/COUNTY

COUNTRY/STATE

GIBSON GULCH

GARFIELD

U.S.A. / COLORADO

Elevation Kelly Bushing	6144.00	feet	First Reading	7321.00	
Elevation Drill Floor	6143.00	feet	Depth Driller	7333.00	feet
Elevation Ground Level	6121.00	feet	Depth Logger	7335.00	feet



COMPACT TRIPLE COMBO
QUICKLOOK
LOG