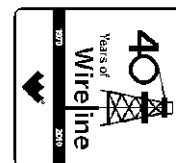




Weatherford

**COMPACT TRIPLE COMBO
QUICKLOOK
LOG**



COMPANY **BILL BARRETT CORPORATION**

WELL **GGU DALEY 31A-30-691**

FIELD **GIBSON GULCH**

PROVINCE/COUNTY **GARFIELD**

COUNTRY/STATE **U.S.A. / COLORADO**

LOCATION **SHL: 236' FSL & 2019' FWL**

SEC **TWP** **RGE** **Other Services**

19 **6S** **91W**

API Number **05-045-19579**

Permit Number

Permanent Datum G.L., Elevation 5824 feet
Log Measured From K.B. @ 23 FEET above Permanent Datum
Drilling Measured From K.B.

Date **14-APR-2011** Elevations: **KB** **5847.00**
DF **5847.00**
GL **5824.00**

Run Number **ONE**

Depth Driller **7775.00** feet

Depth Logger **7777.00** feet

First Reading **7774.00**

Last Reading **847.00**

Casing Driller **847.00** feet

Casing Logger **847.00** feet

Bit Size **7.880** inches

Hole Fluid Type **LSND**

Density / Viscosity **10.70 lb/USg** **52.00 CP**

PH / Fluid Loss **8.50** **7.20 ml/30Min**

Sample Source **FLOW LINE**

Rm @ Measured Temp **2.60 @ 89.0** ohm-m

Rmf @ Measured Temp **2.06 @ 89.0** ohm-m

Rmc @ Measured Temp **3.12 @ 89.0** ohm-m

Source Rmf / Rmc **CALC** **CALC**

Rm @ BHT **1.27 @ 185.0** ohm-m

Time Since Circulation **5 HOURS**

Max Recorded Temp **185.00** deg F

Equipment Name **COMPACT**

Equipment / Base **13173** **GD JCT**

Recorded By **M.RICHINS**

Witnessed By **C.CROW**

BOREHOLE RECORD

Last Edited: 14-APR-2011 13:53

Bit Size inches	Depth From feet	Depth To feet
8.750	847.00	5492.00
7.880	5492.00	7775.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	9.625	0.00	847.00	36.00

REMARKS

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

HARDWARE: MPD: 8 INCH PROFILE PLATE USED.
TWO 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.

VARIATION IN REPEAT SECTION DUE TO RUGOSE HOLE CONDITIONS. REPEATED 3 TIMES WITH NO CHANGE IN TOOL RESPONSE.

UNDERGAUGE SECTION AT 3150 FEET RESULT OF LOG SPLICE ATTEMPT. TOOLS BRIDGED UPON DESCENT, AND LOGS CONTINUED FROM BRIDGED POINT

CONTINUED FROM DRIBBLEY CONT.

CALIPER CHECK IN CASING PRESENTED, REFERENCE I.D. = 8.92" (9 5/8", 36 LB/FT CASING)

8.75 INCH BIT CHANGE AT 5492 FT.

TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 3080 CU.FT.

ANNULAR VOLUME WITH 4.5 INCH PRODUCTION CASING = 2320 CU.FT.

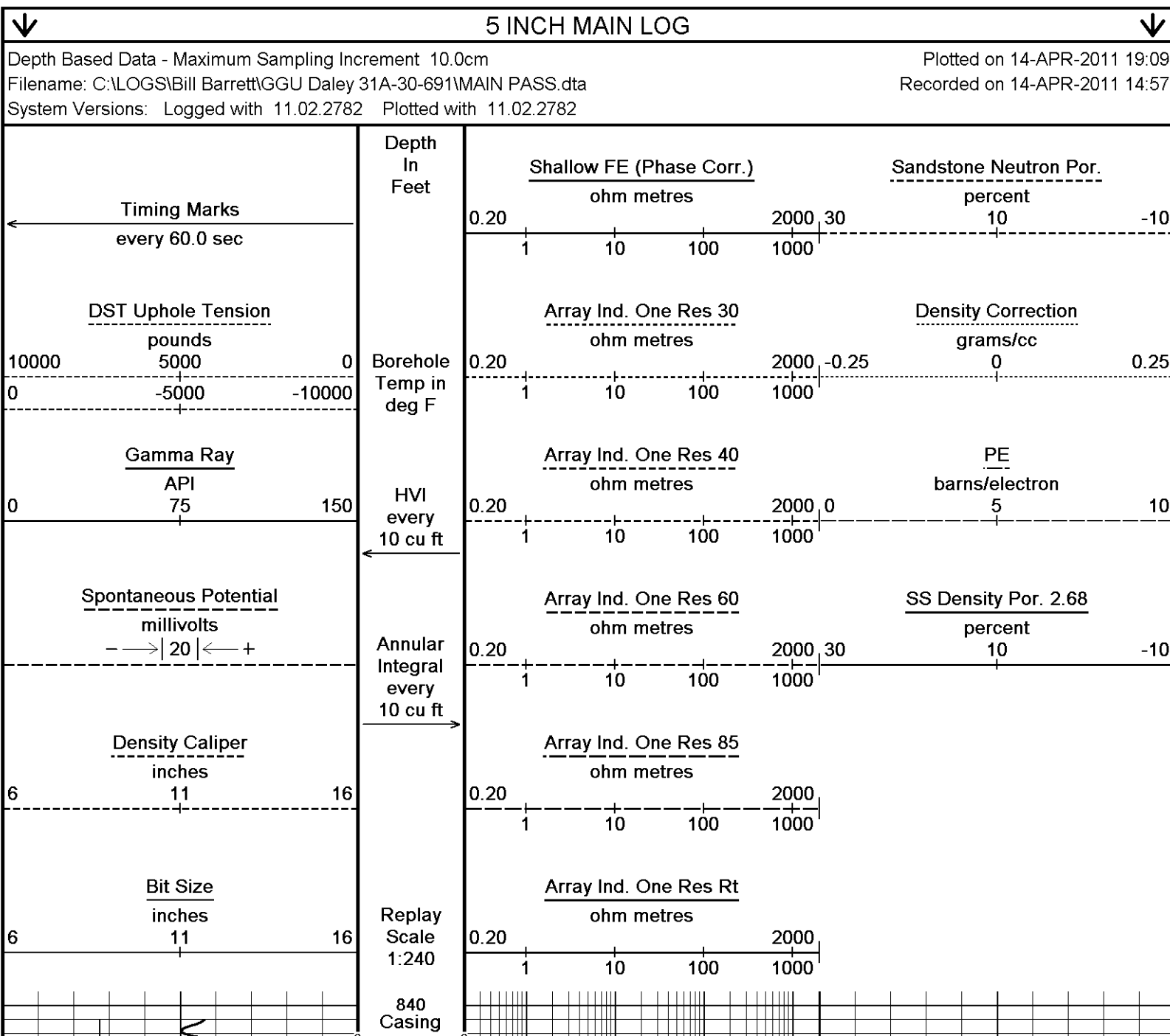
ENGINEER(S): M.RICHINS, O. GOYZUETA(JFE), F. MRABET (JFE)

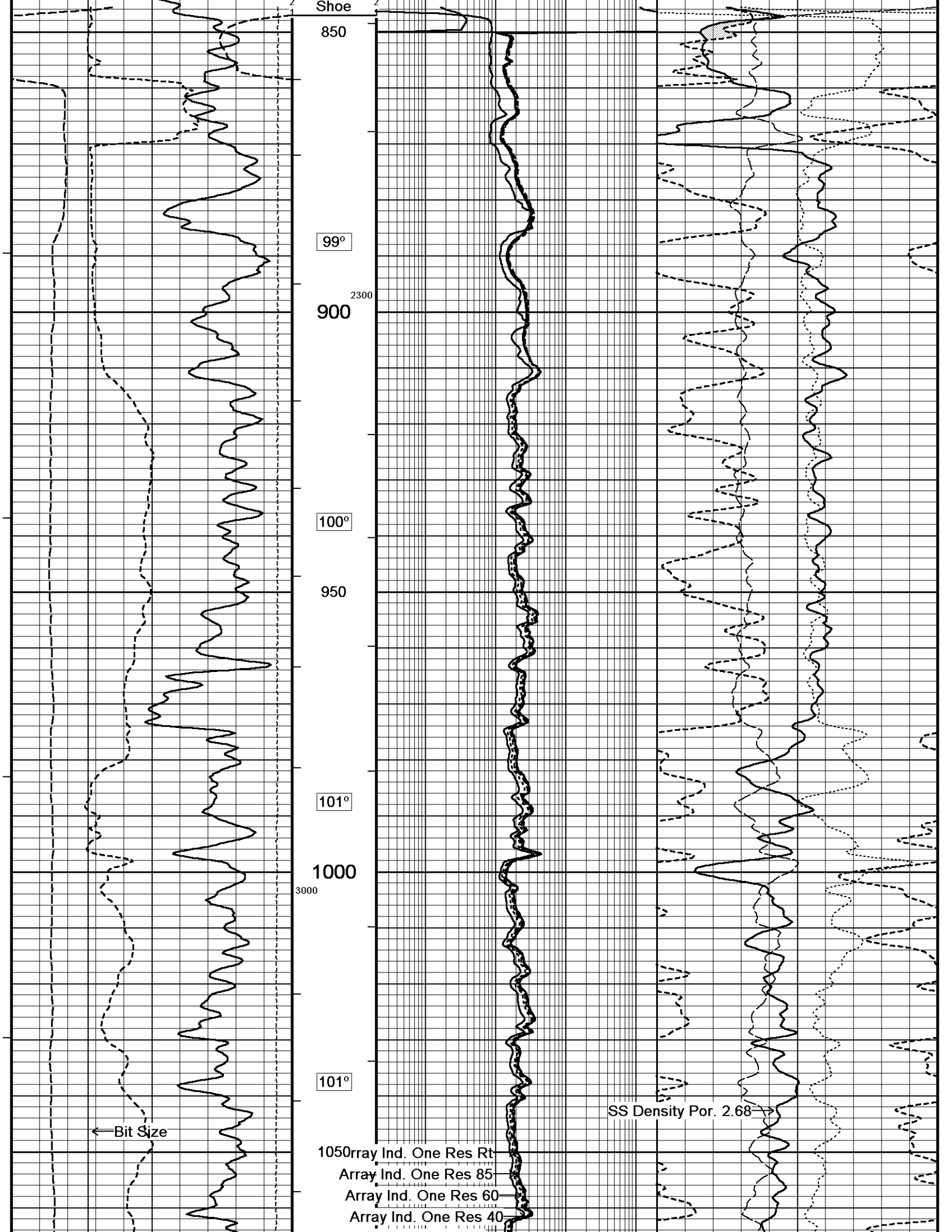
OPERATOR(S): D. DALEY

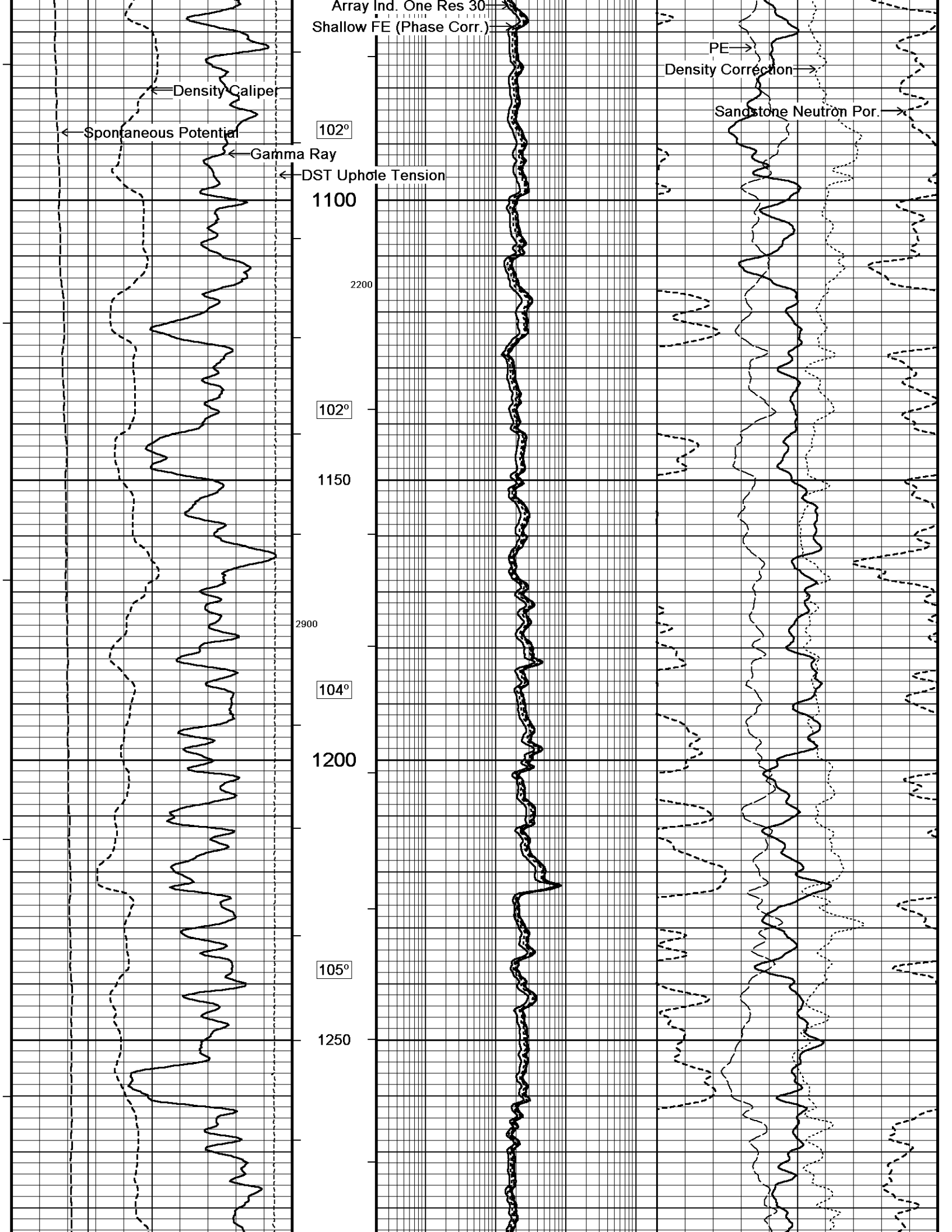
SERVICE ORDER: # 3524863

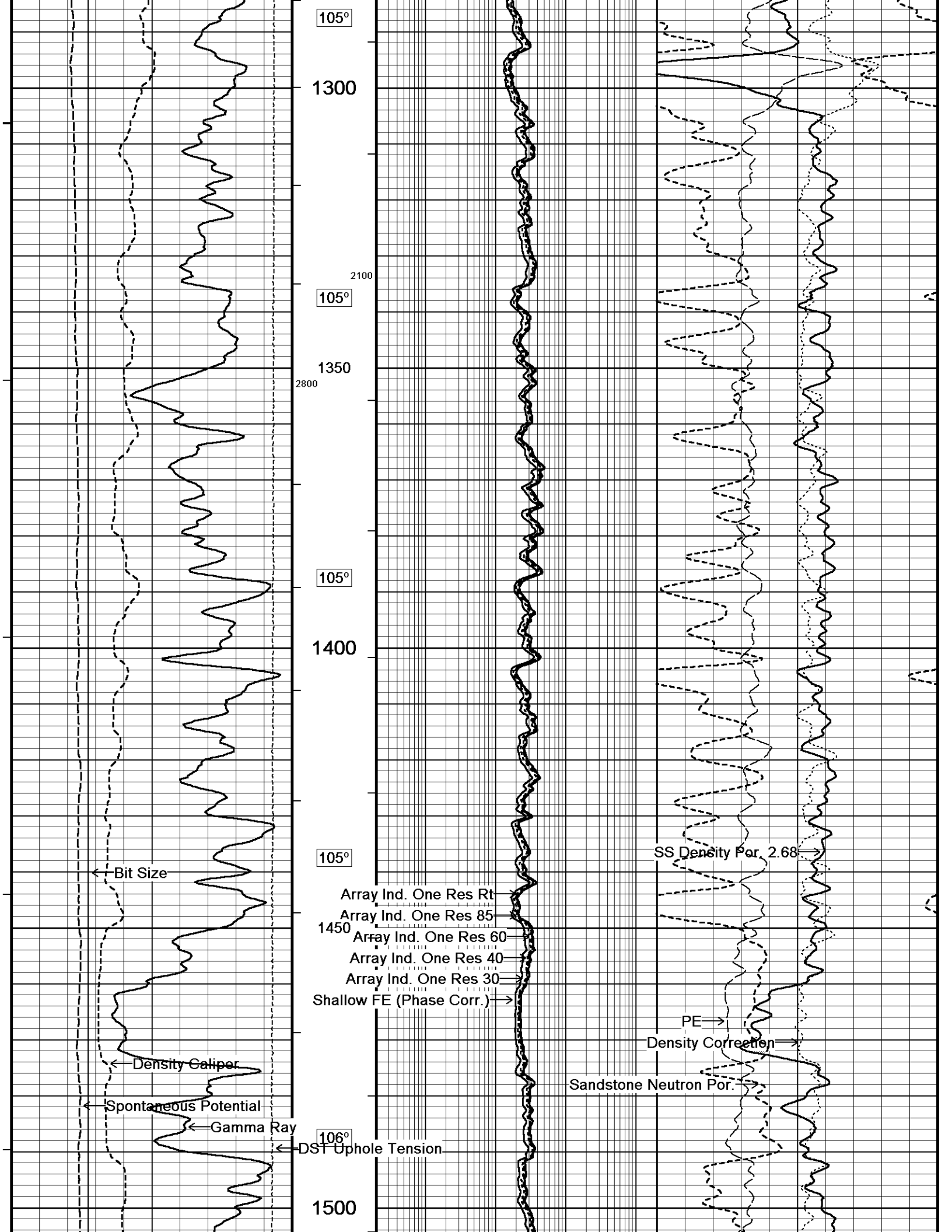
RIG: PATTERSON #307

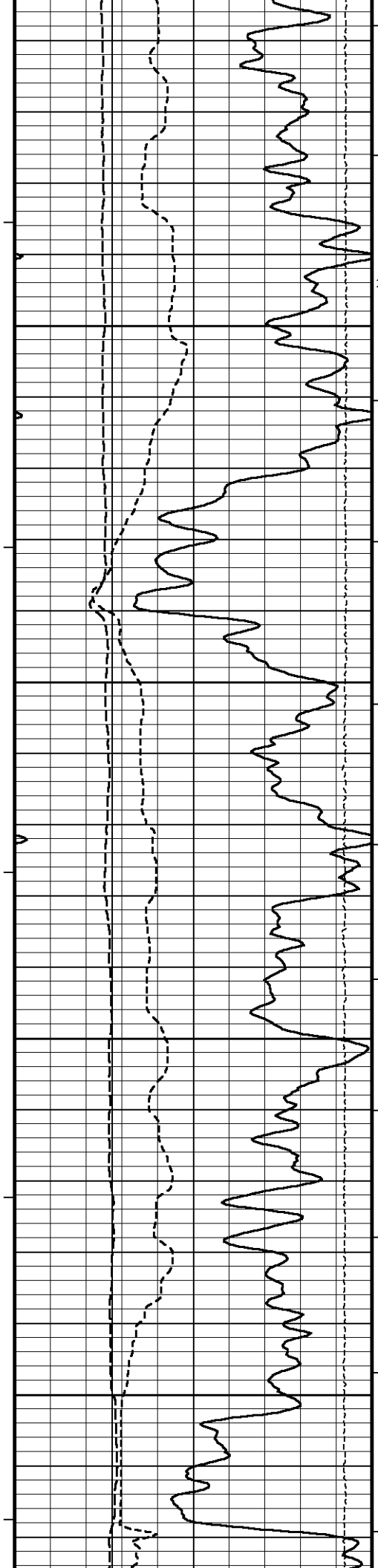
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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











106°

1550

2000

106°

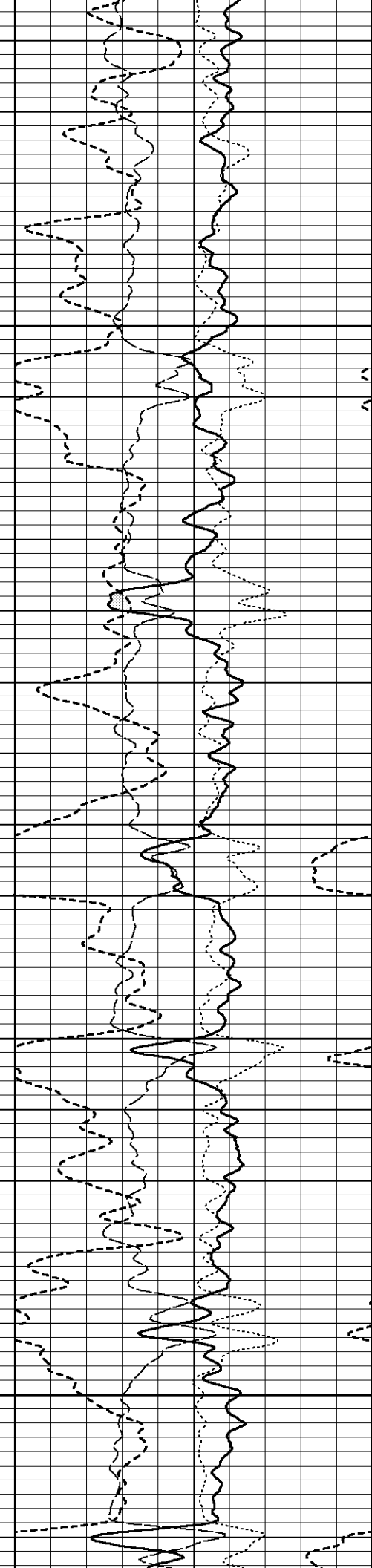
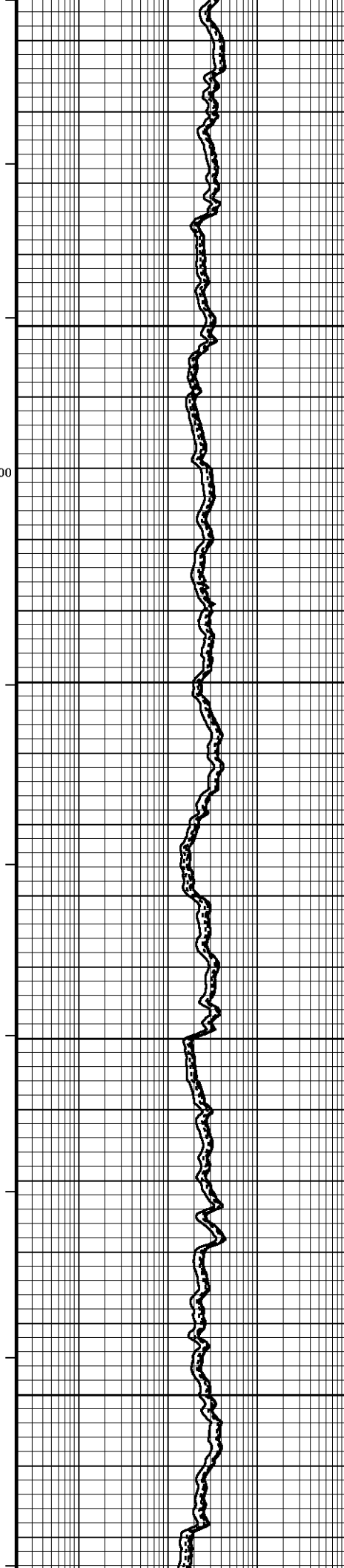
1600

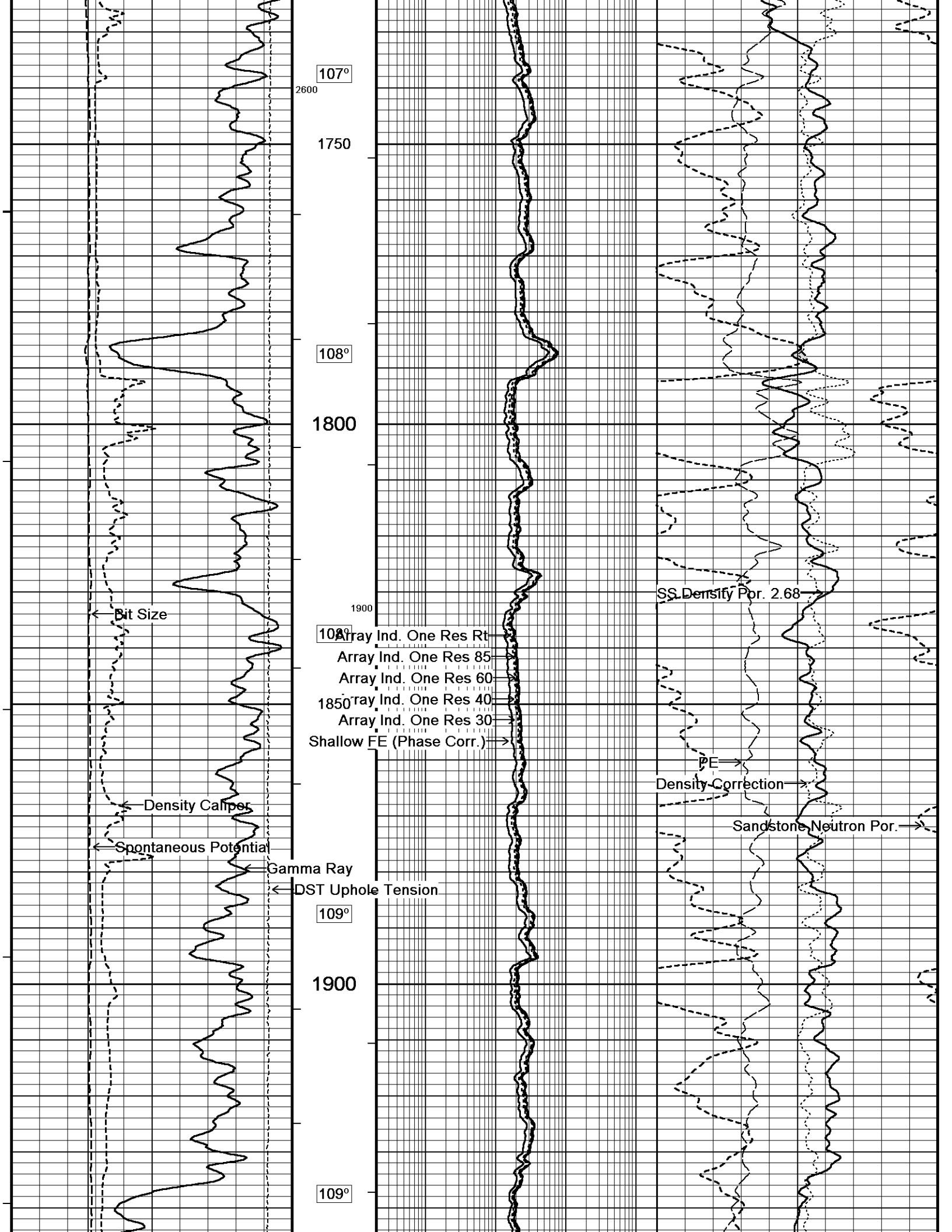
107°

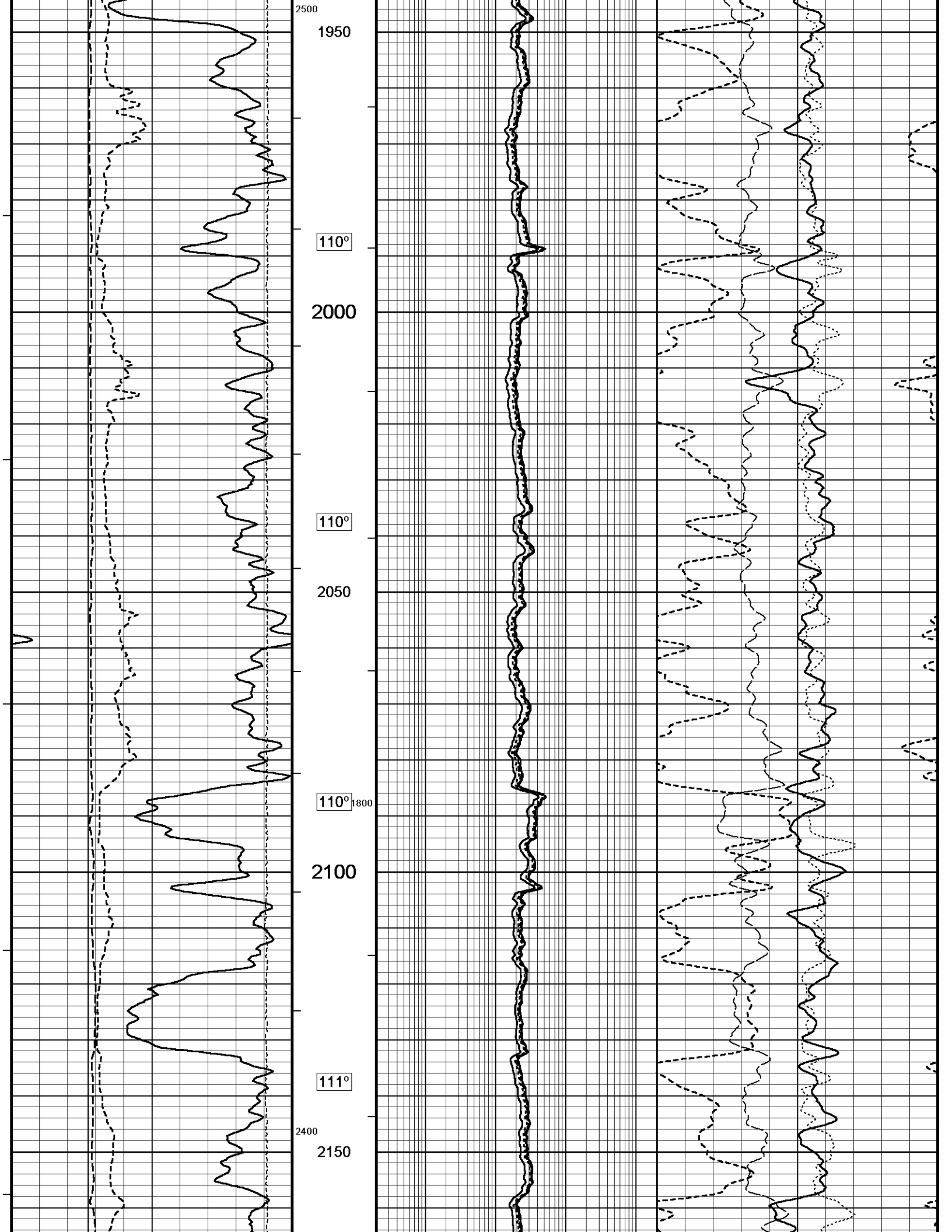
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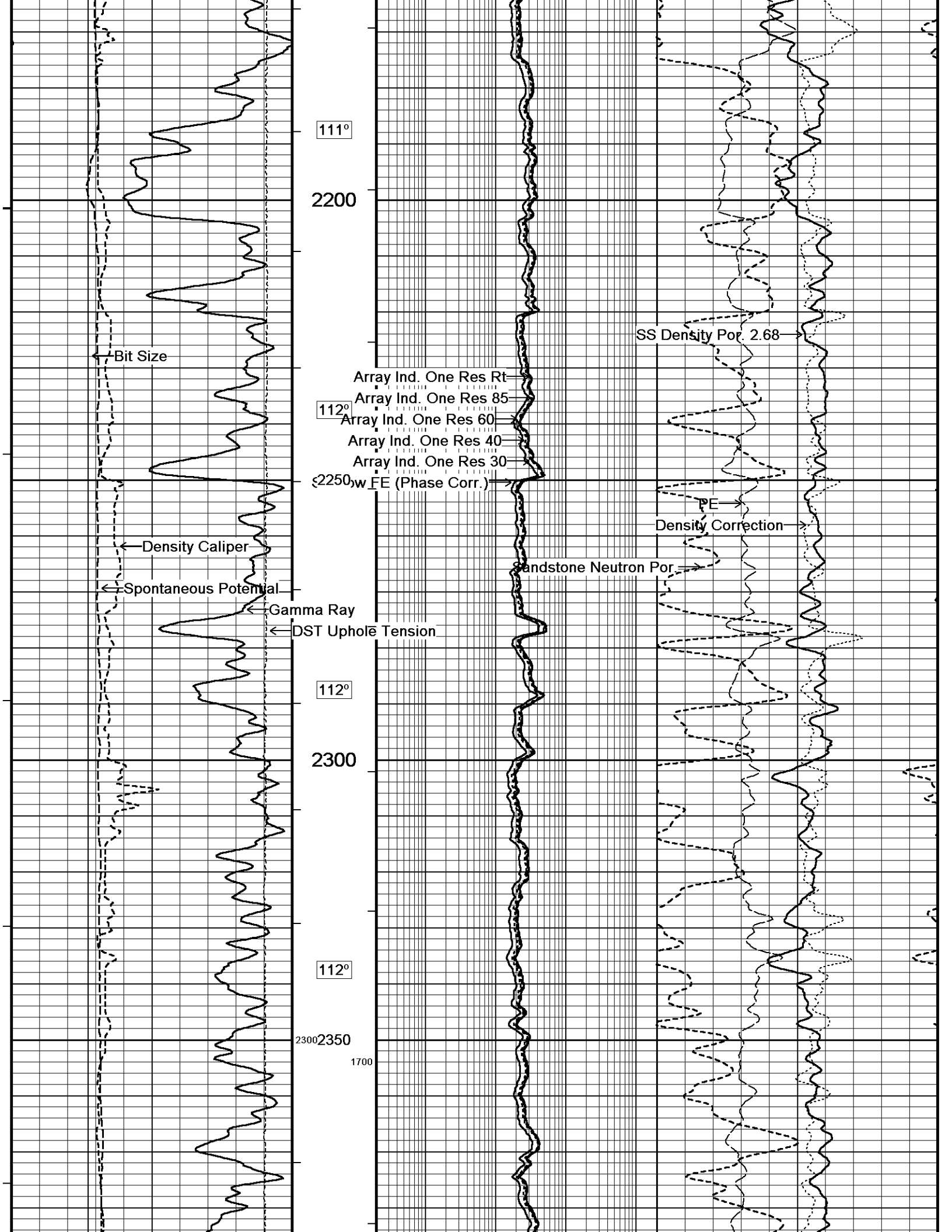
107°

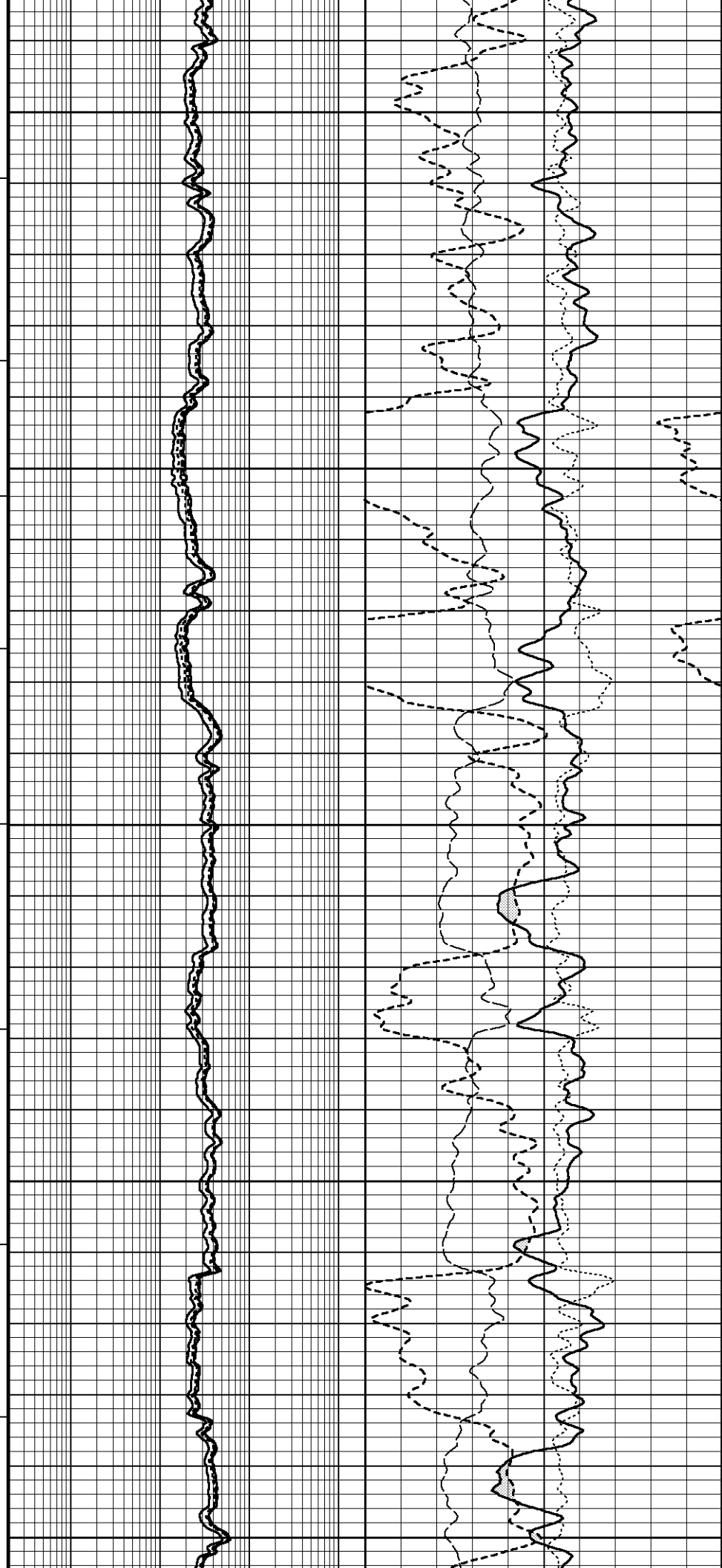
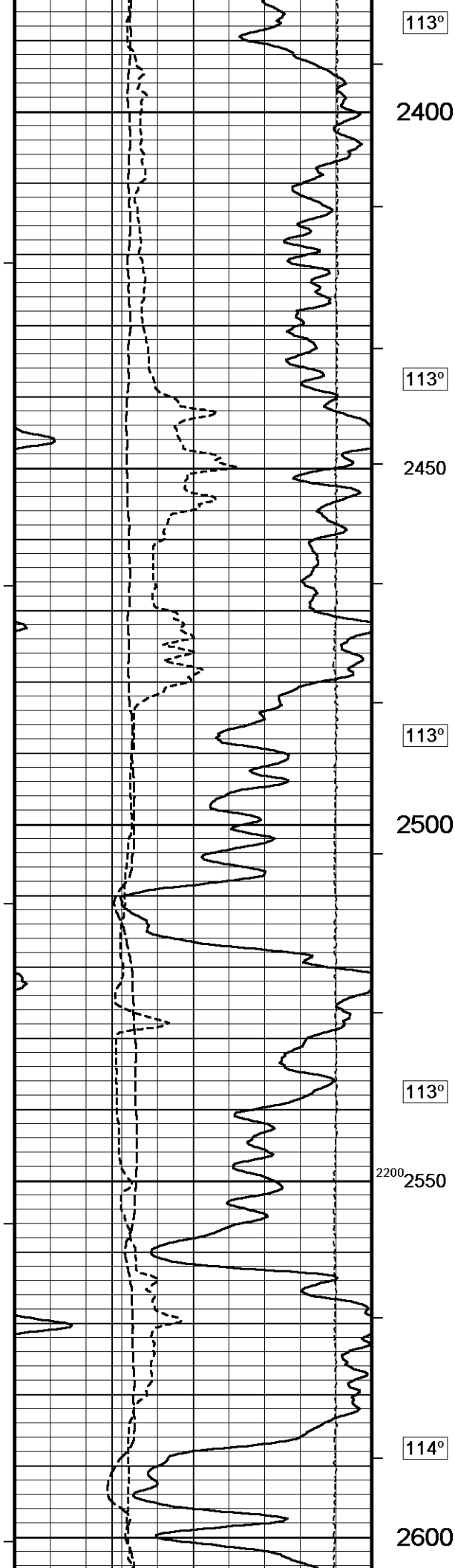
1700

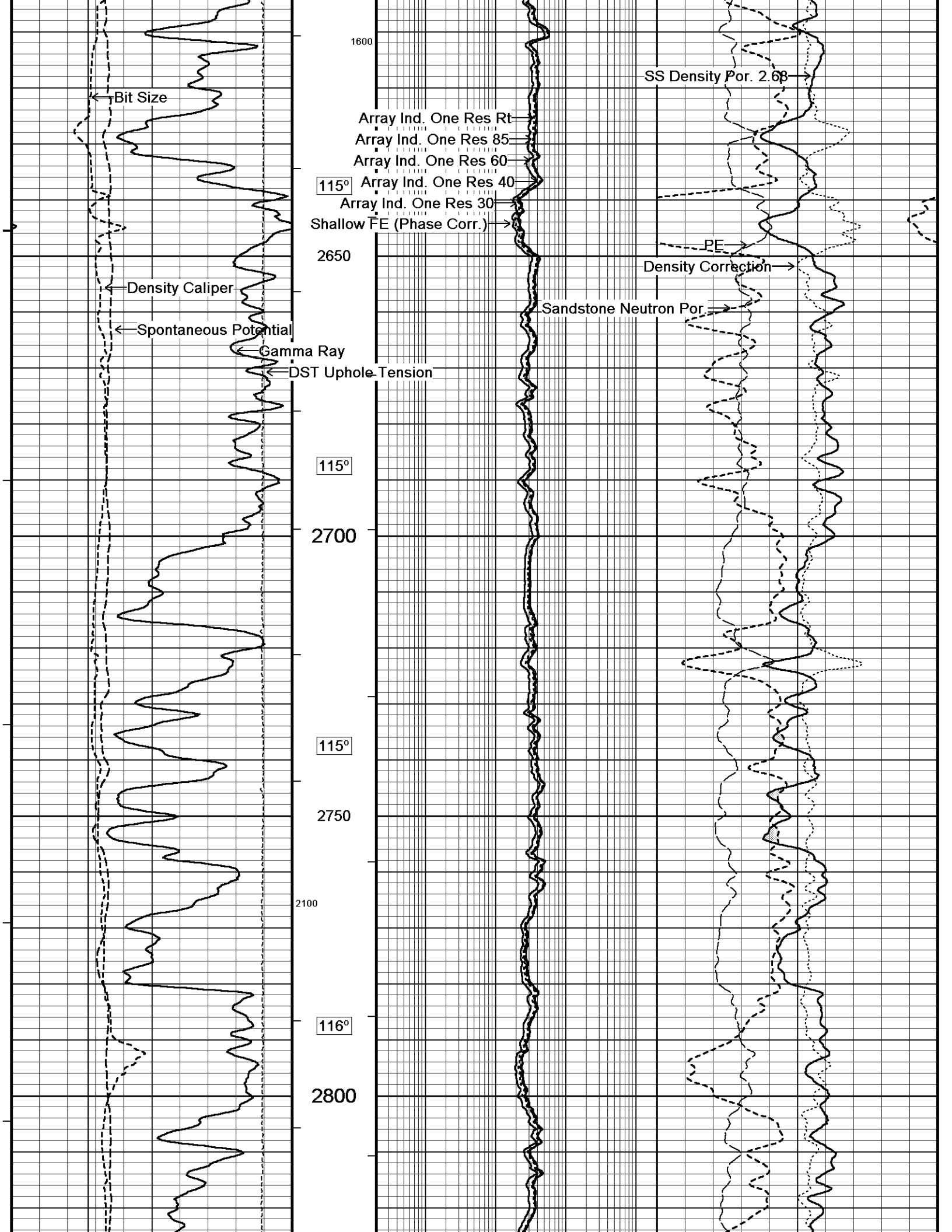


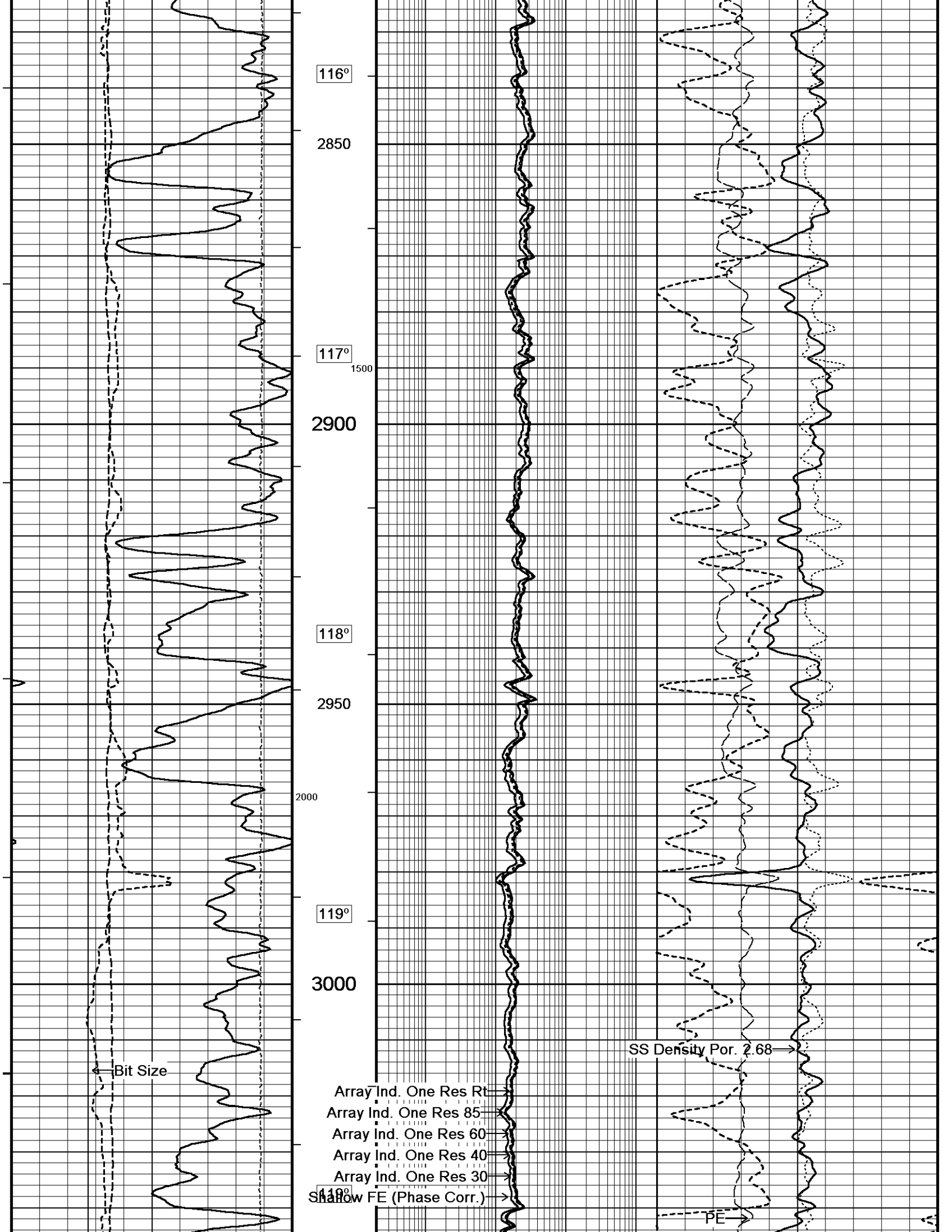


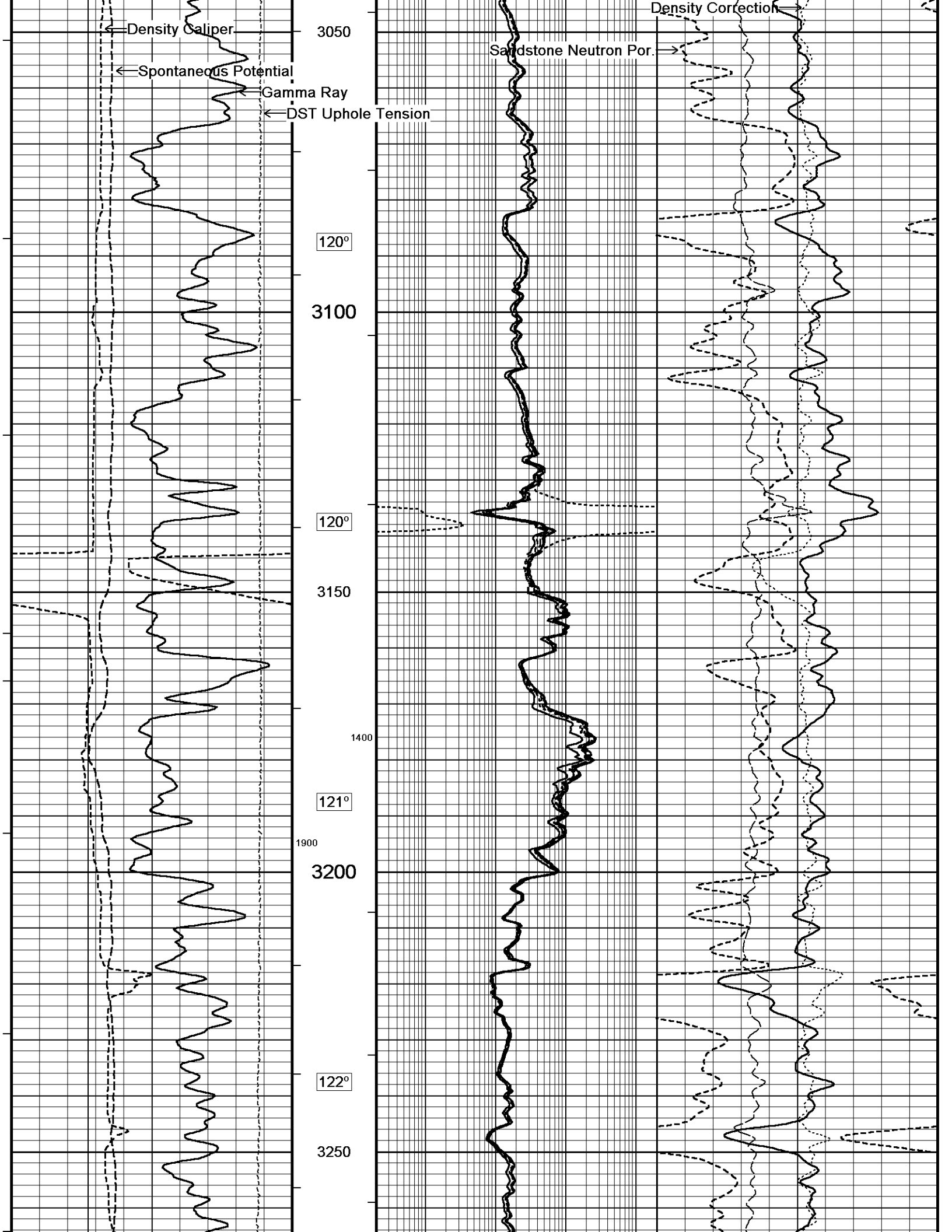


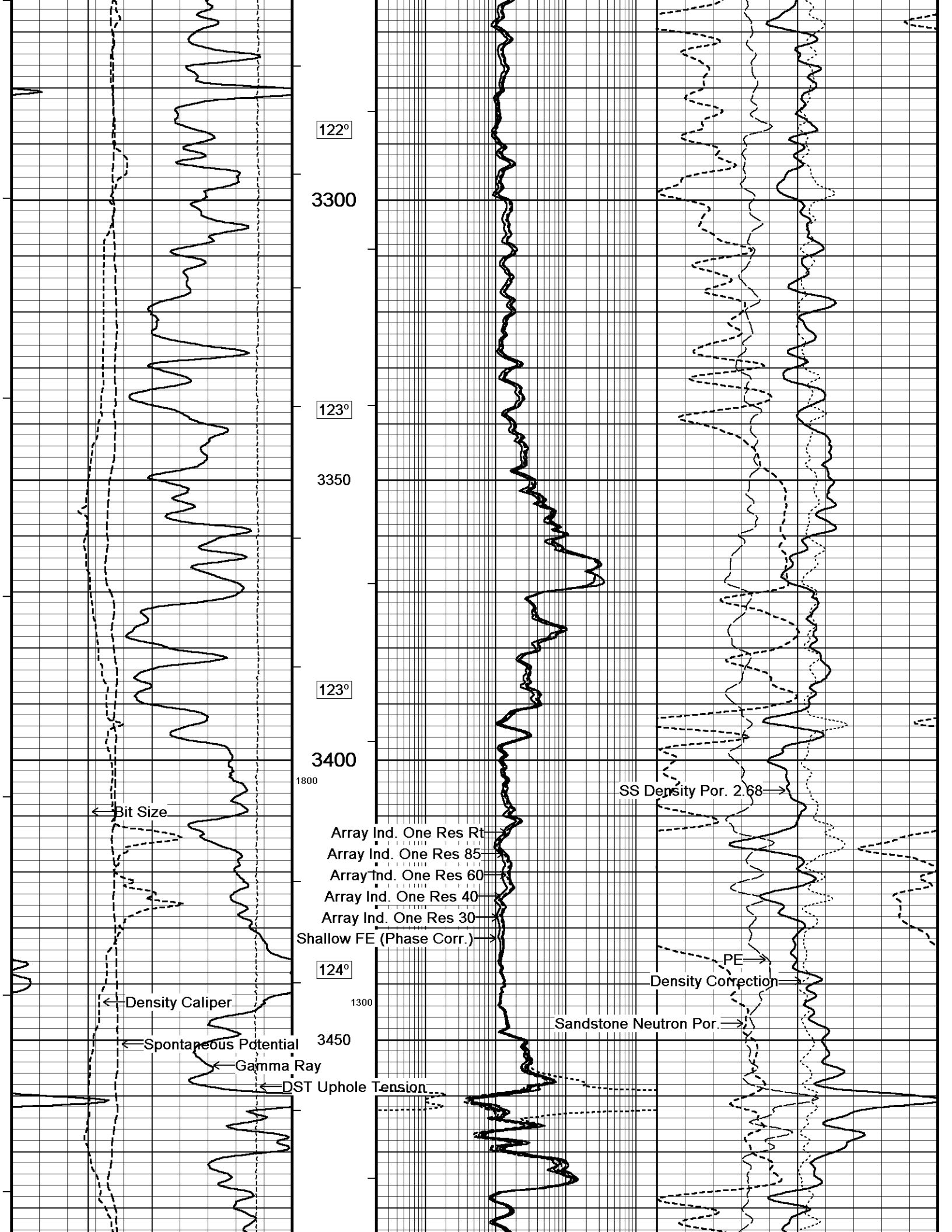


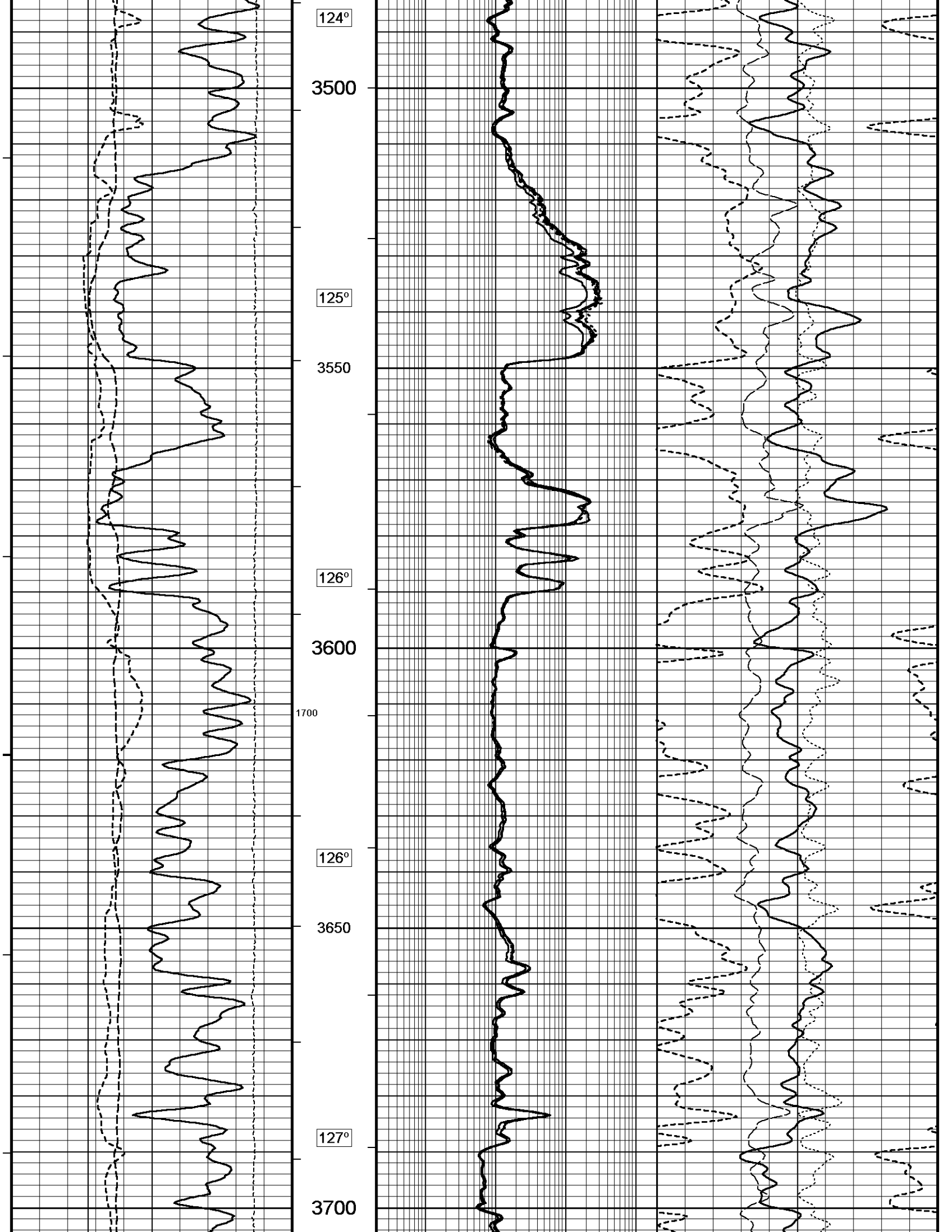


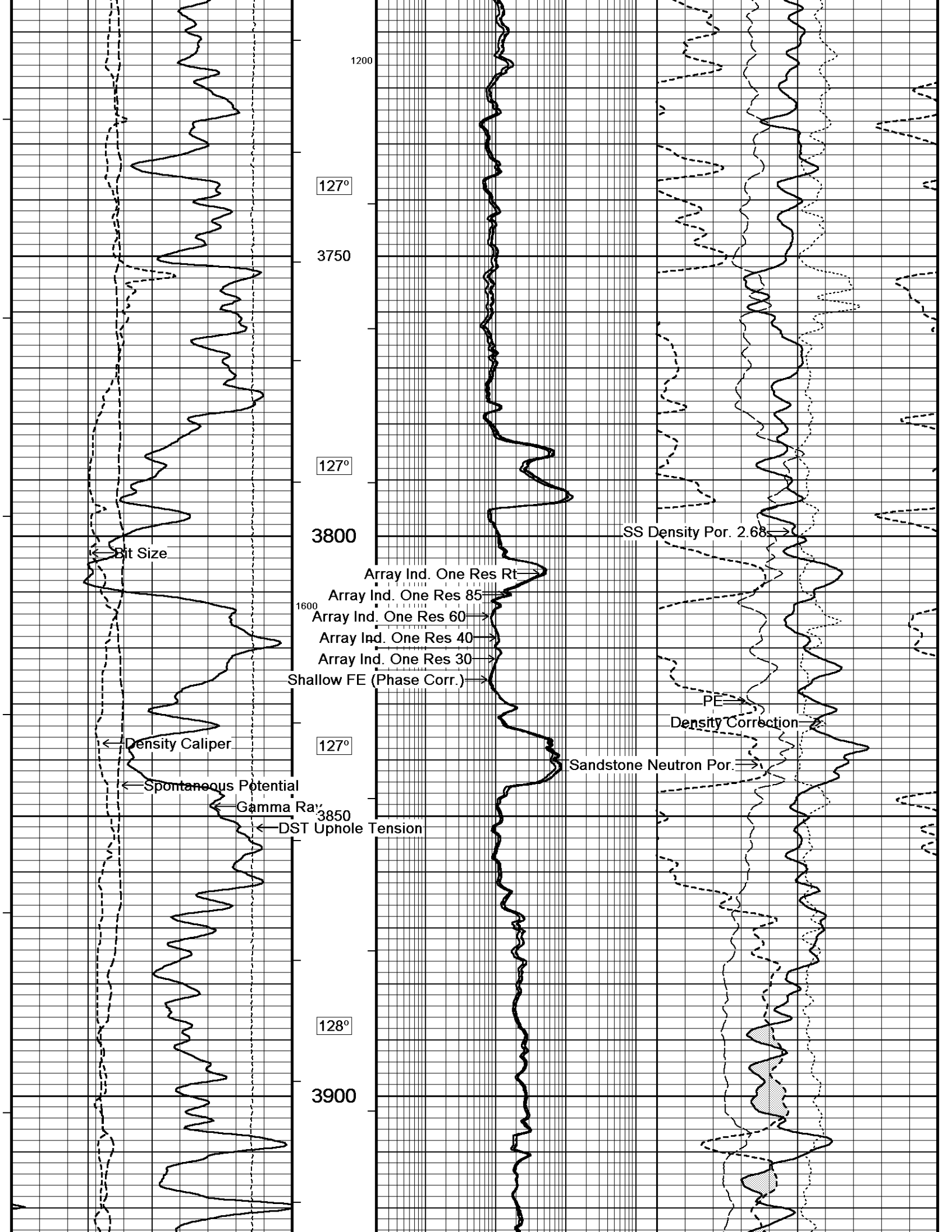


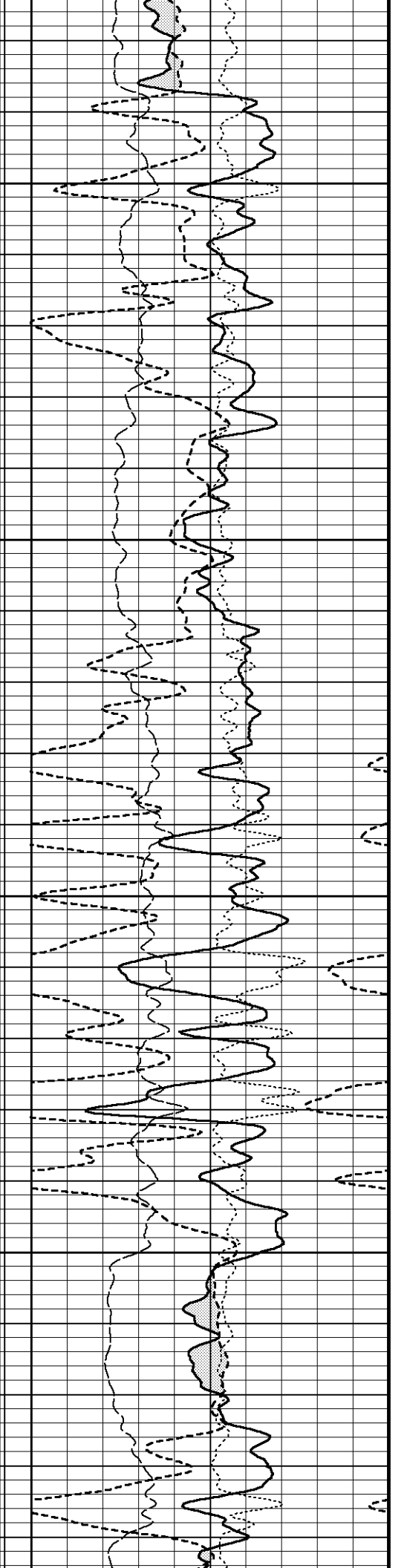
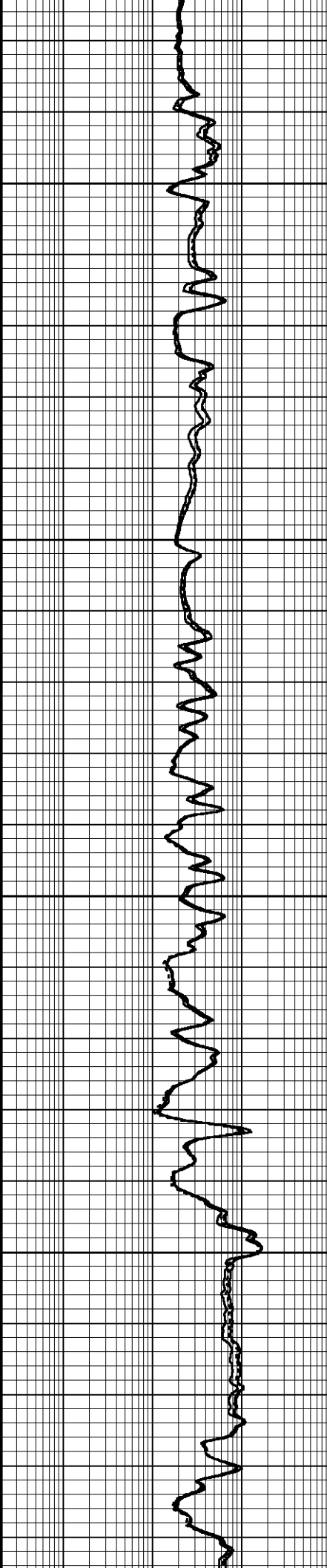
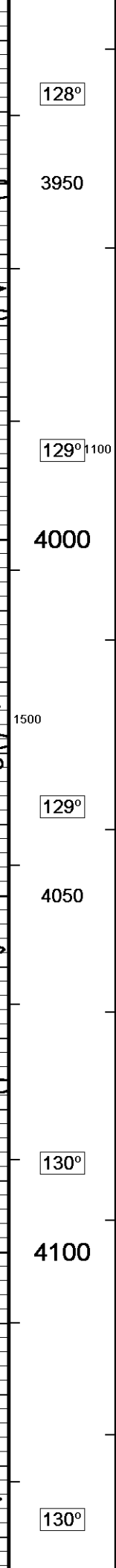
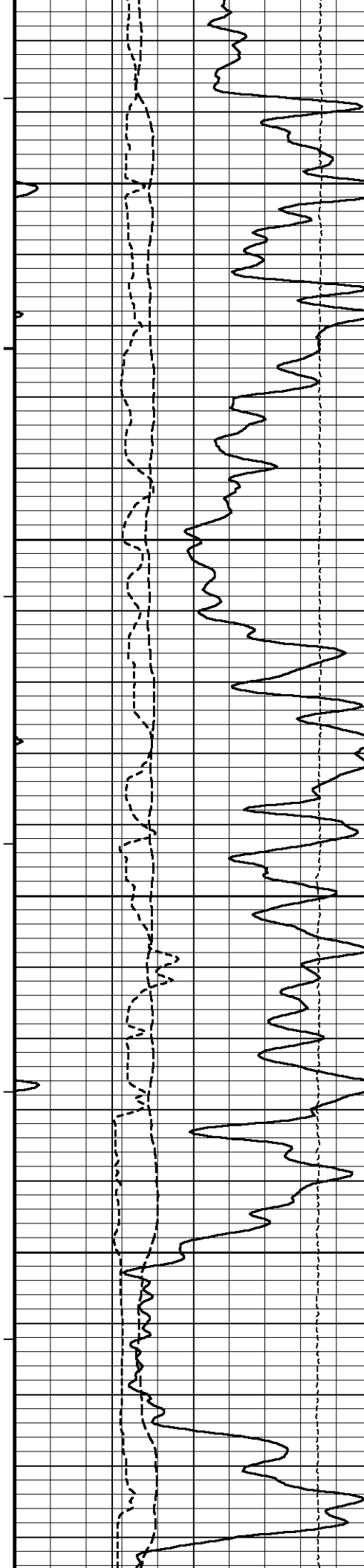


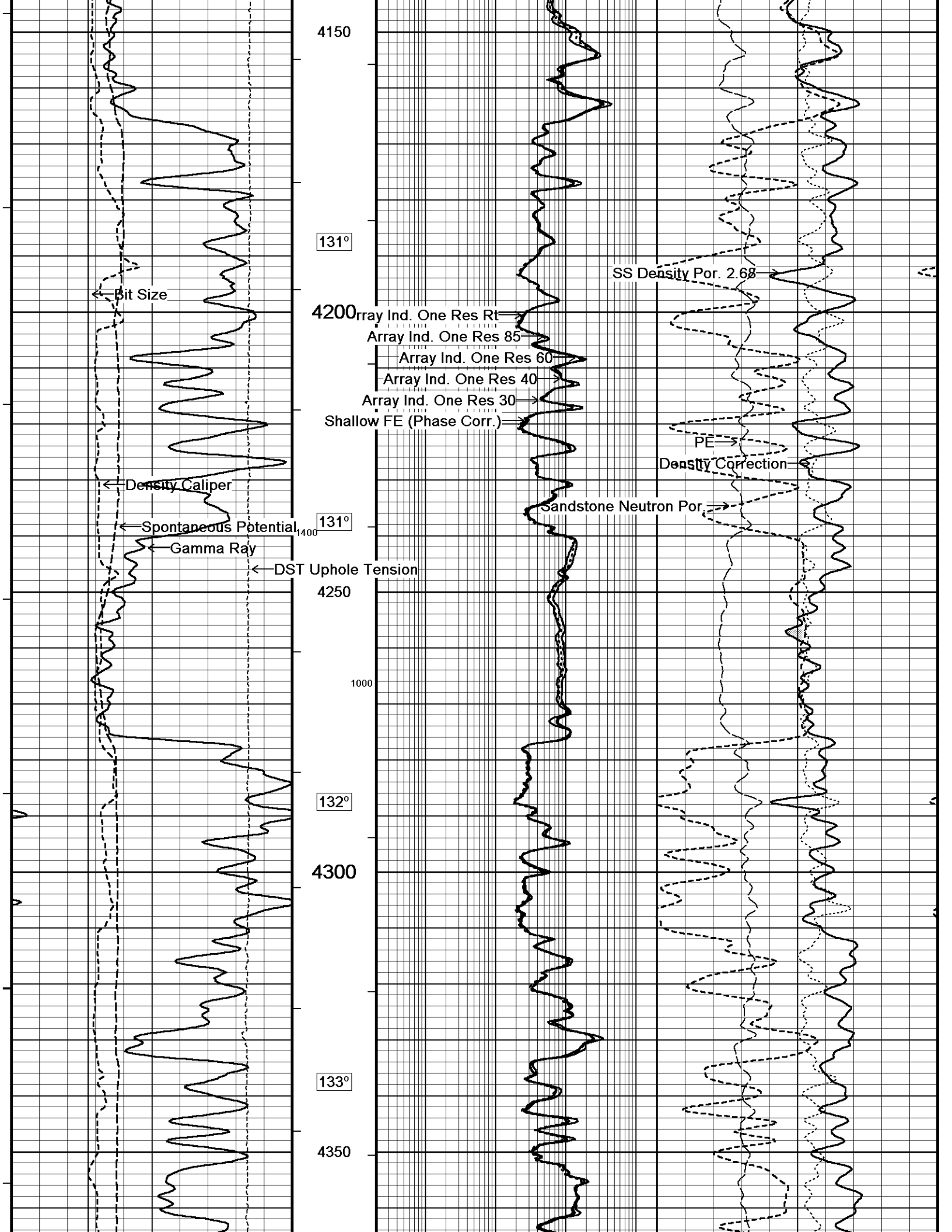


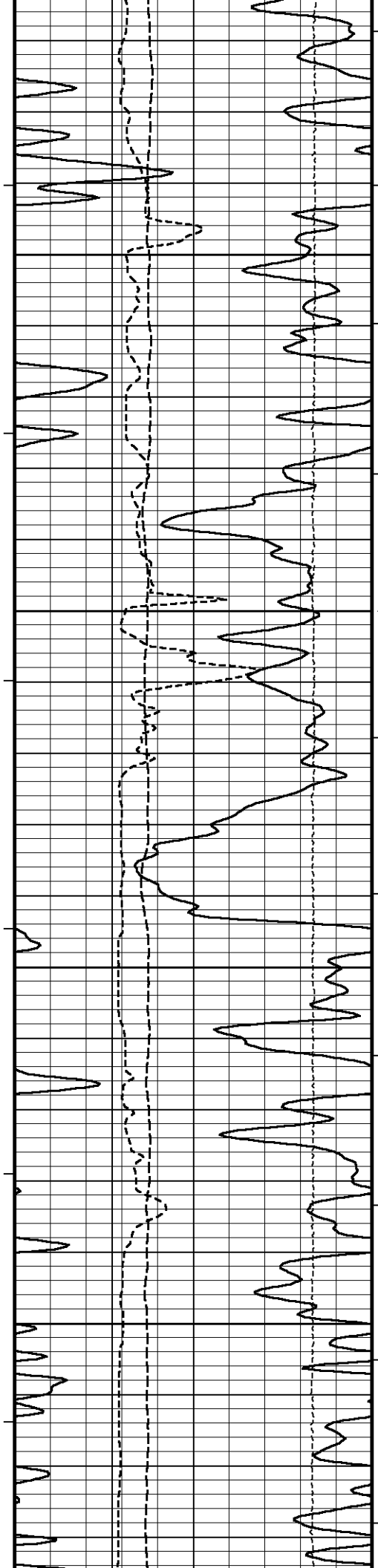












133°

4400

134°

4450

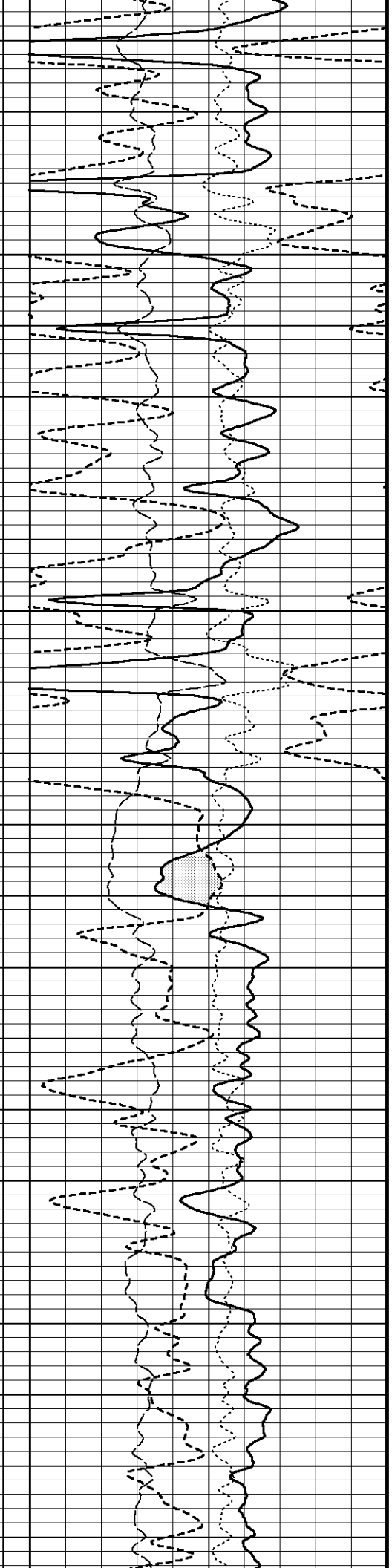
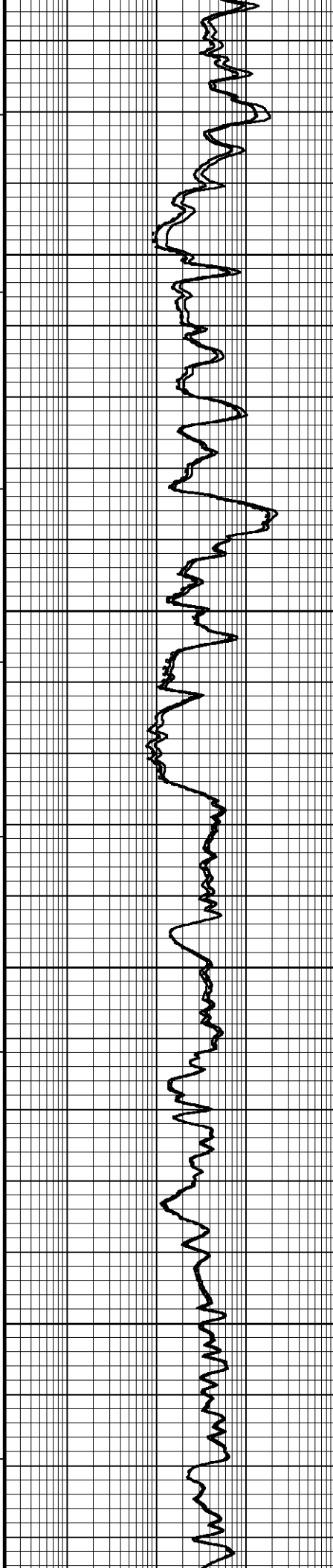
134°

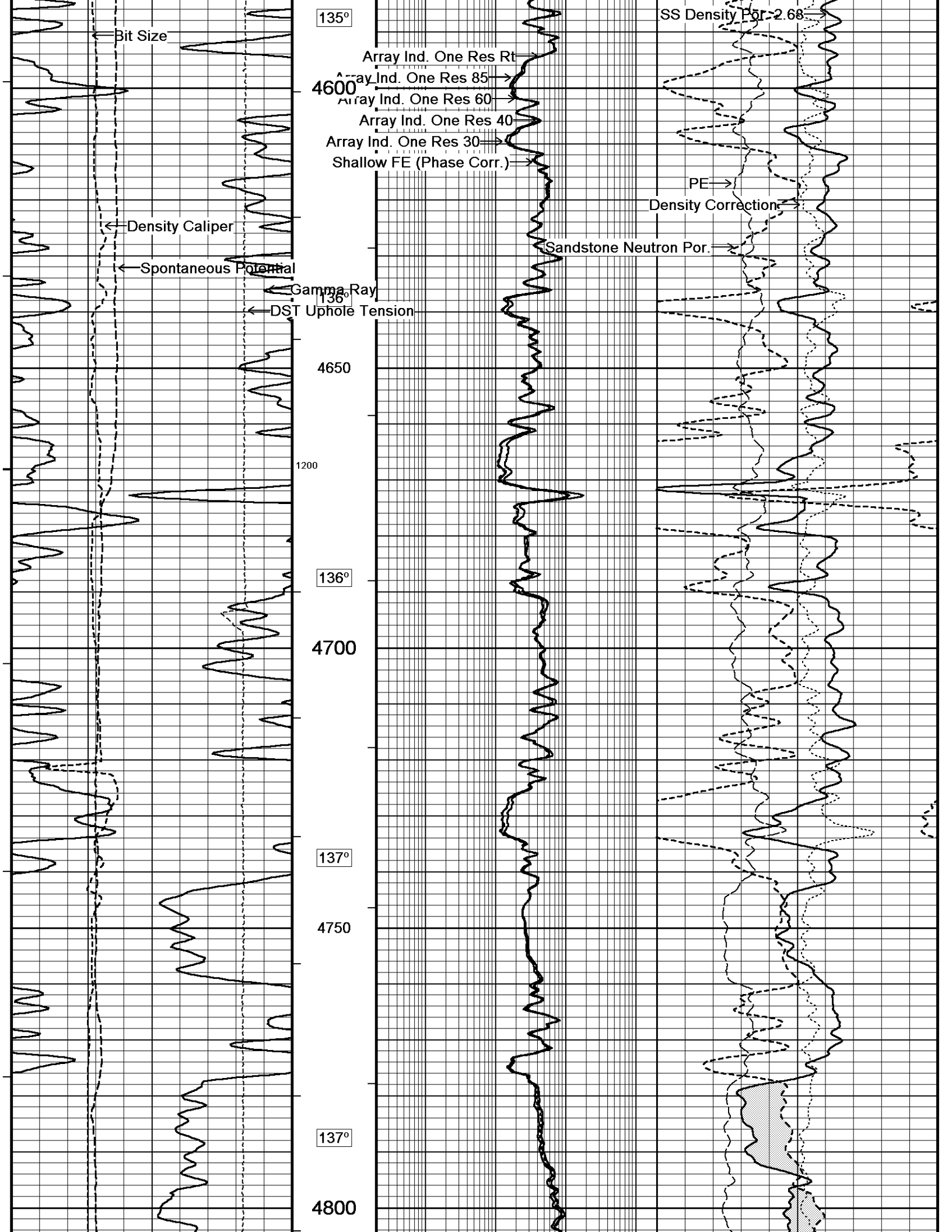
4500

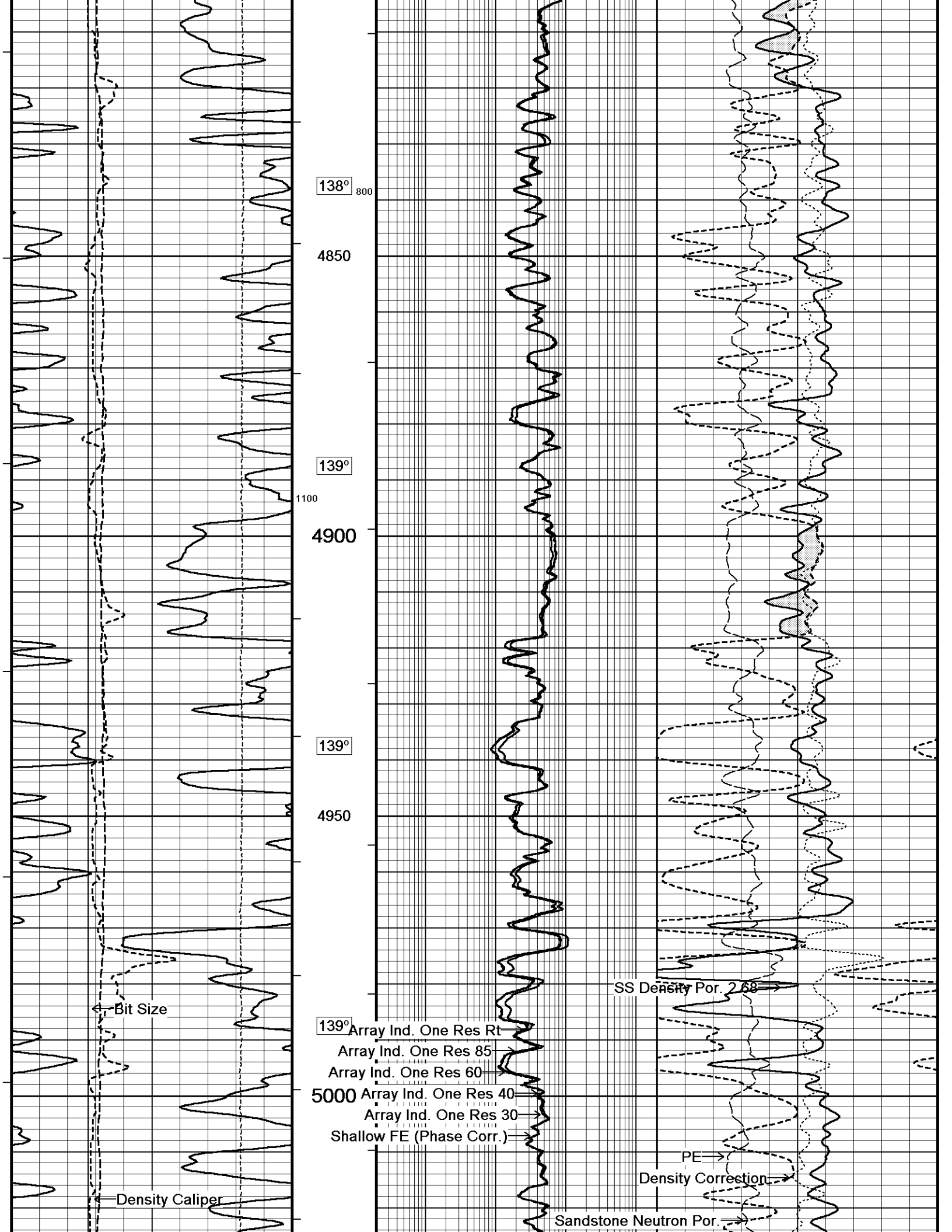
135°

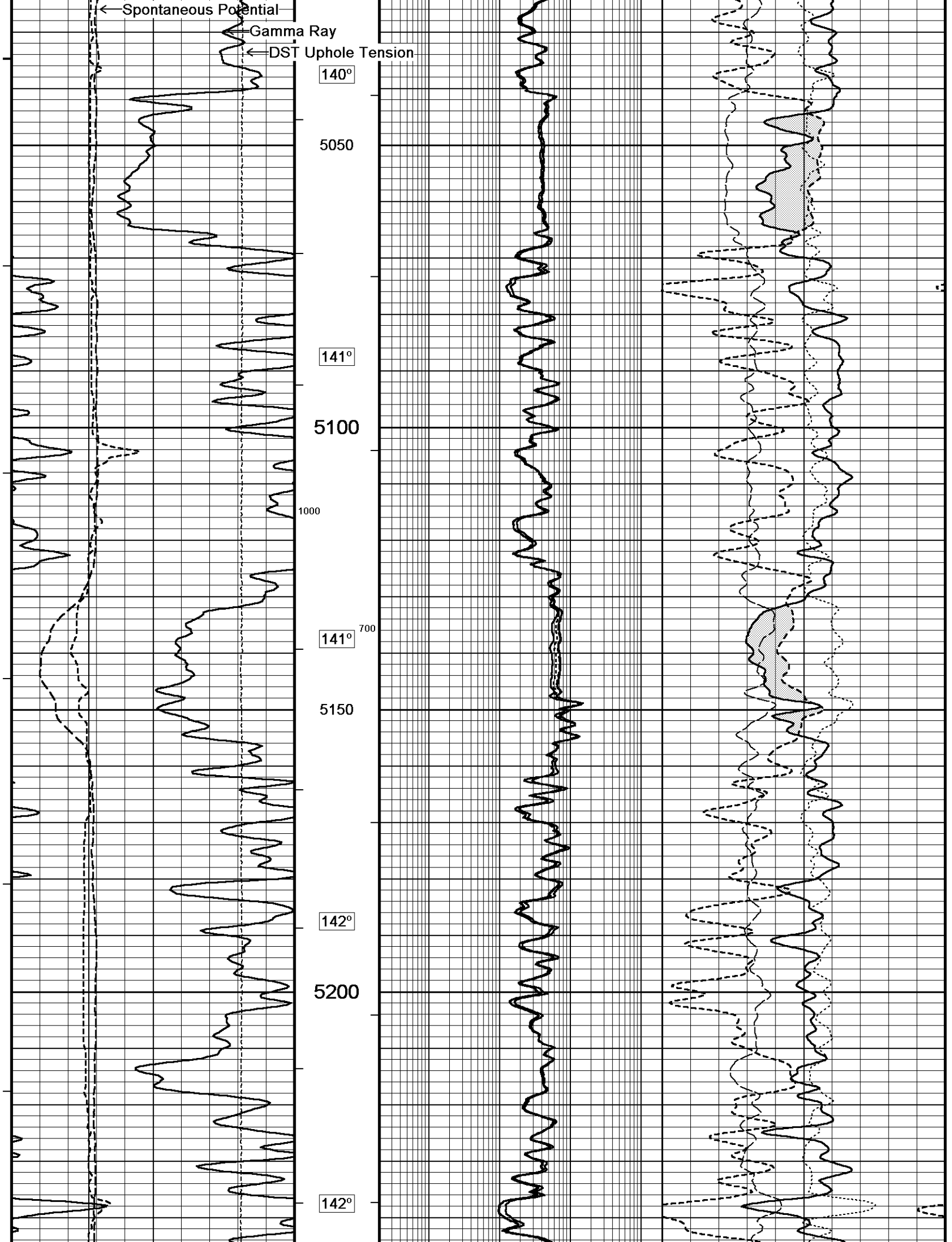
4550

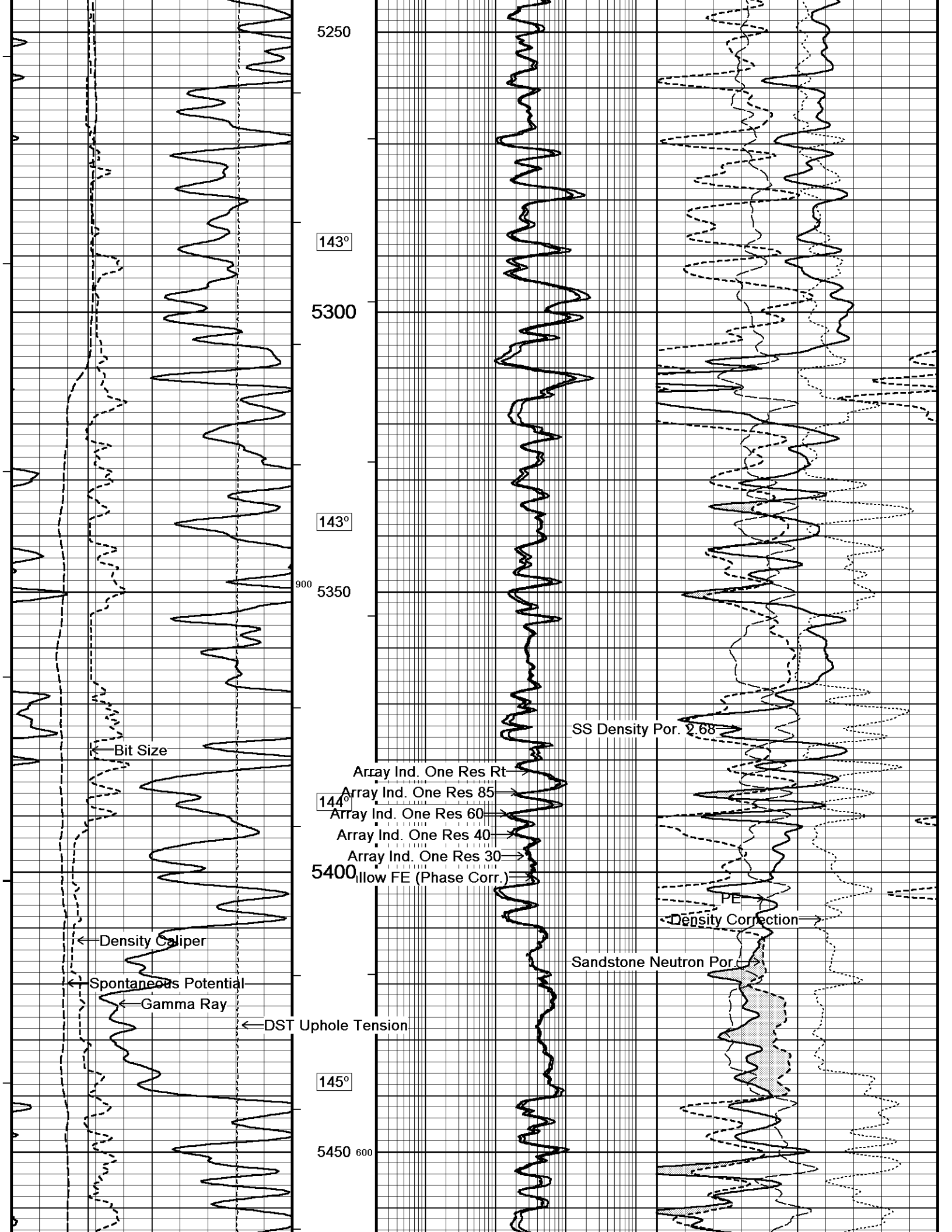
900

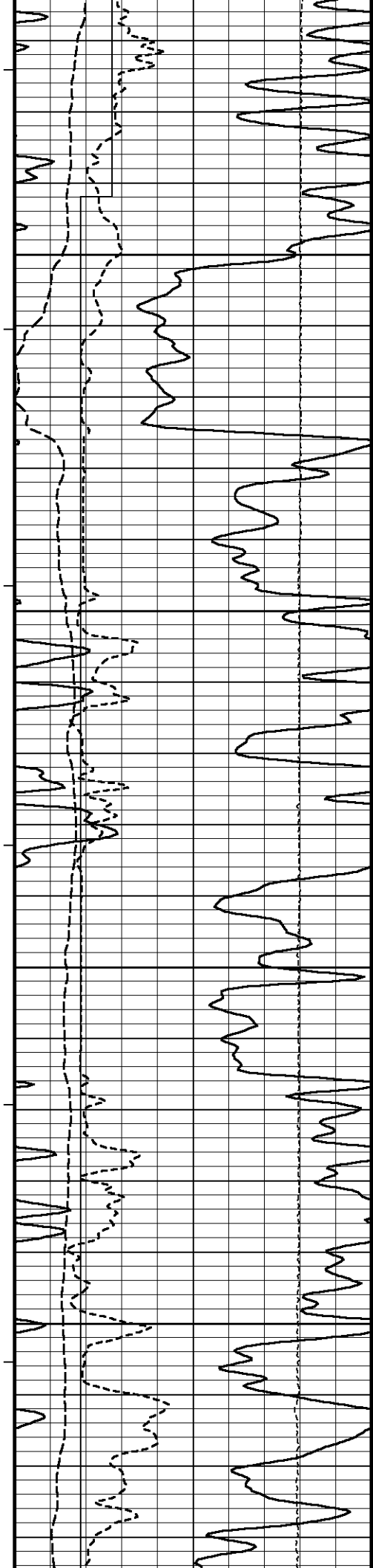












145°

5500

146°

5550

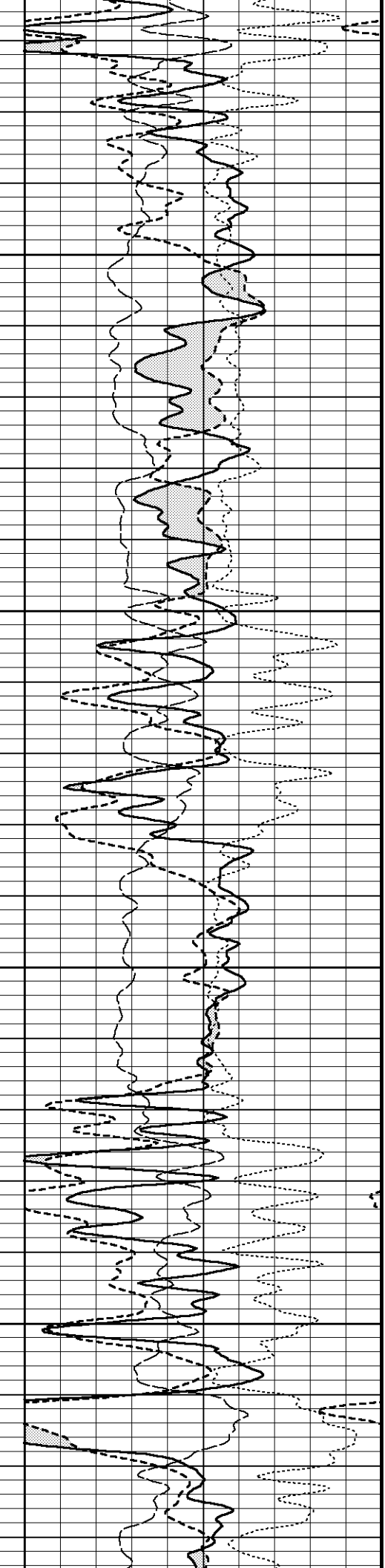
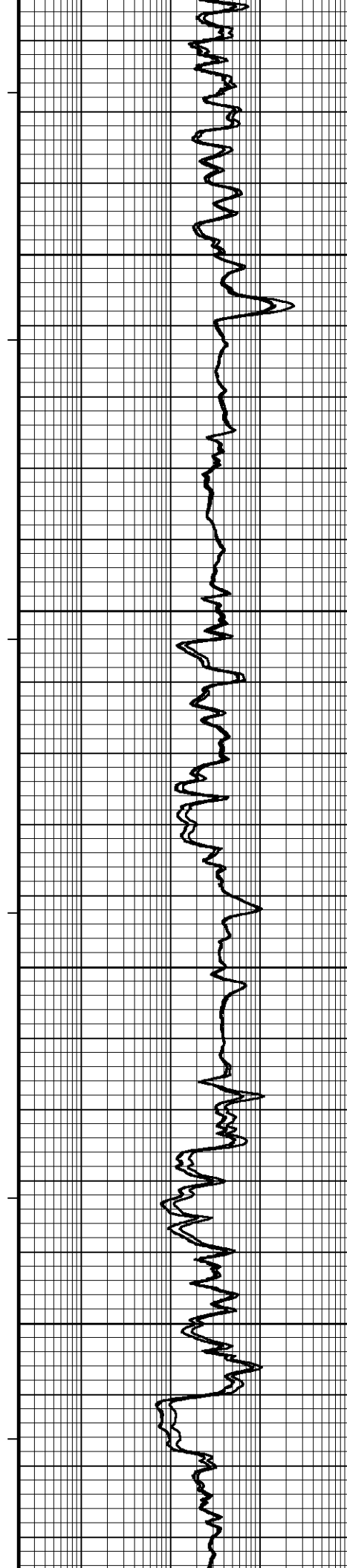
146°

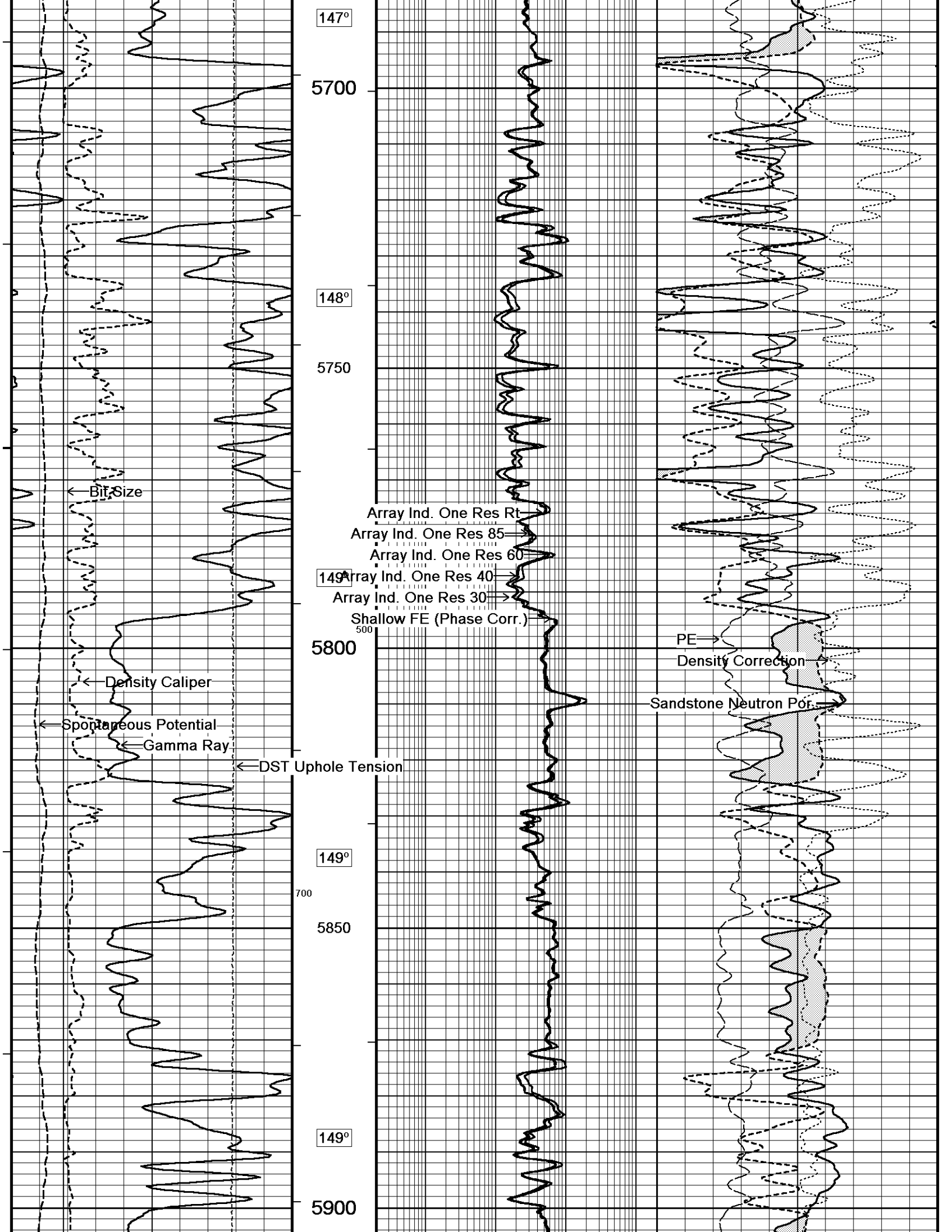
800

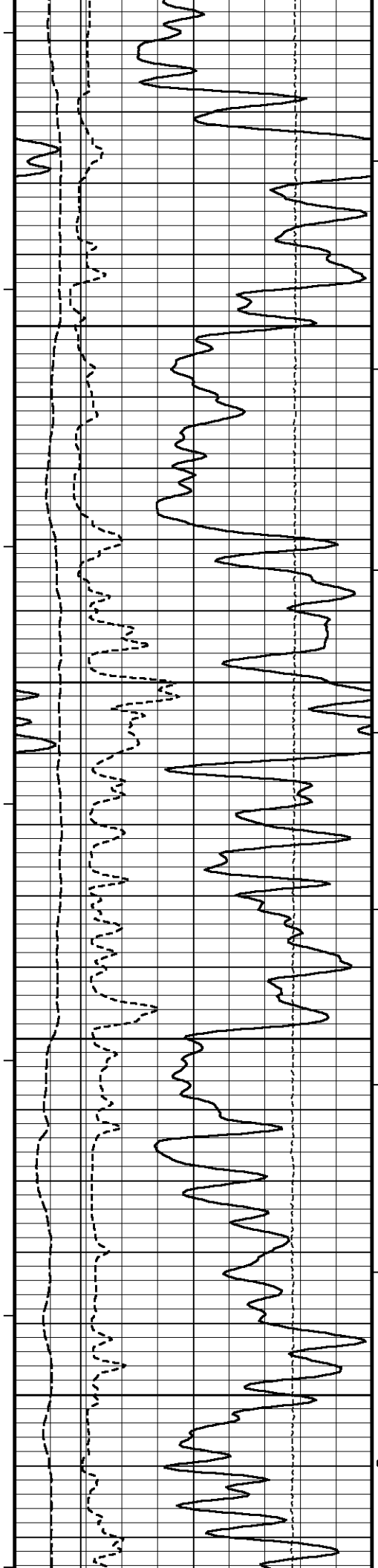
5600

147°

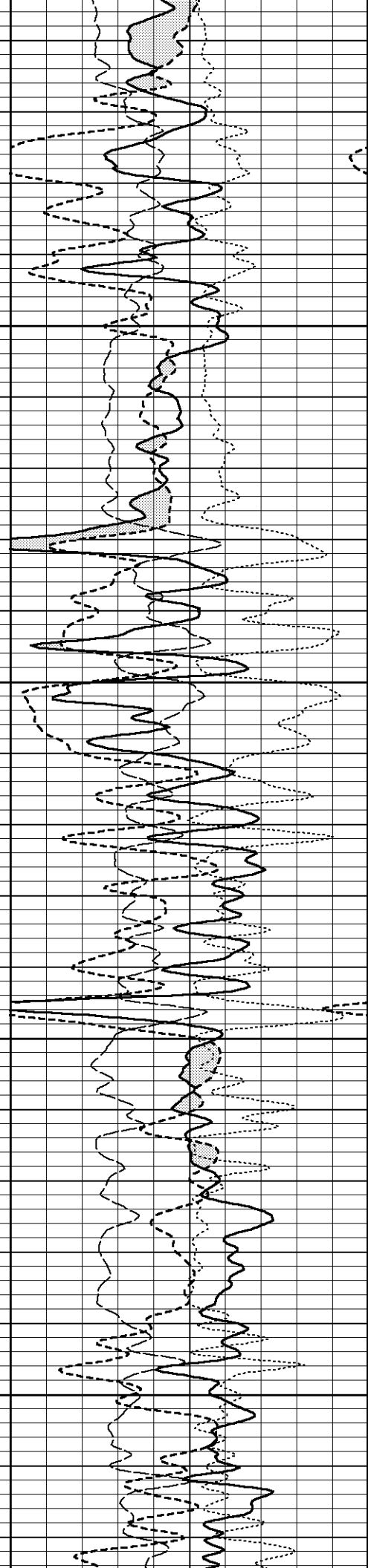
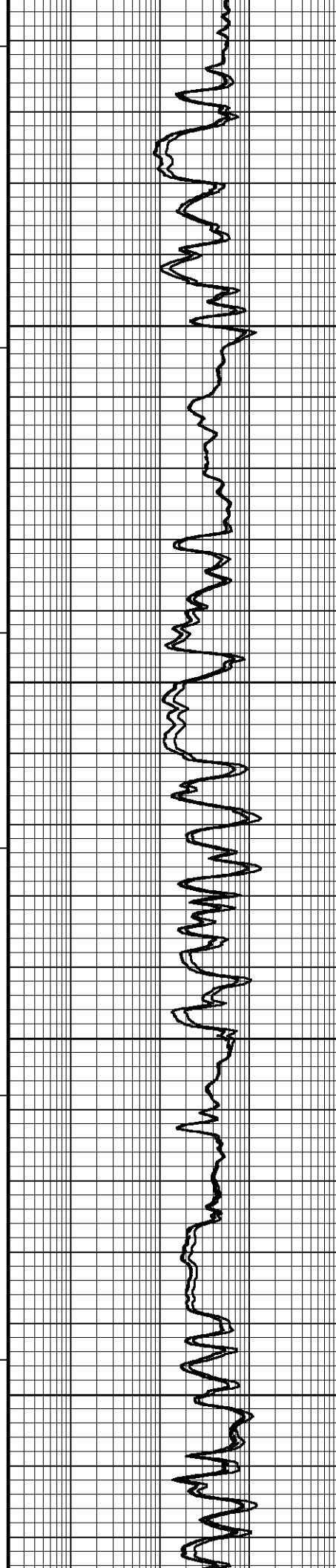
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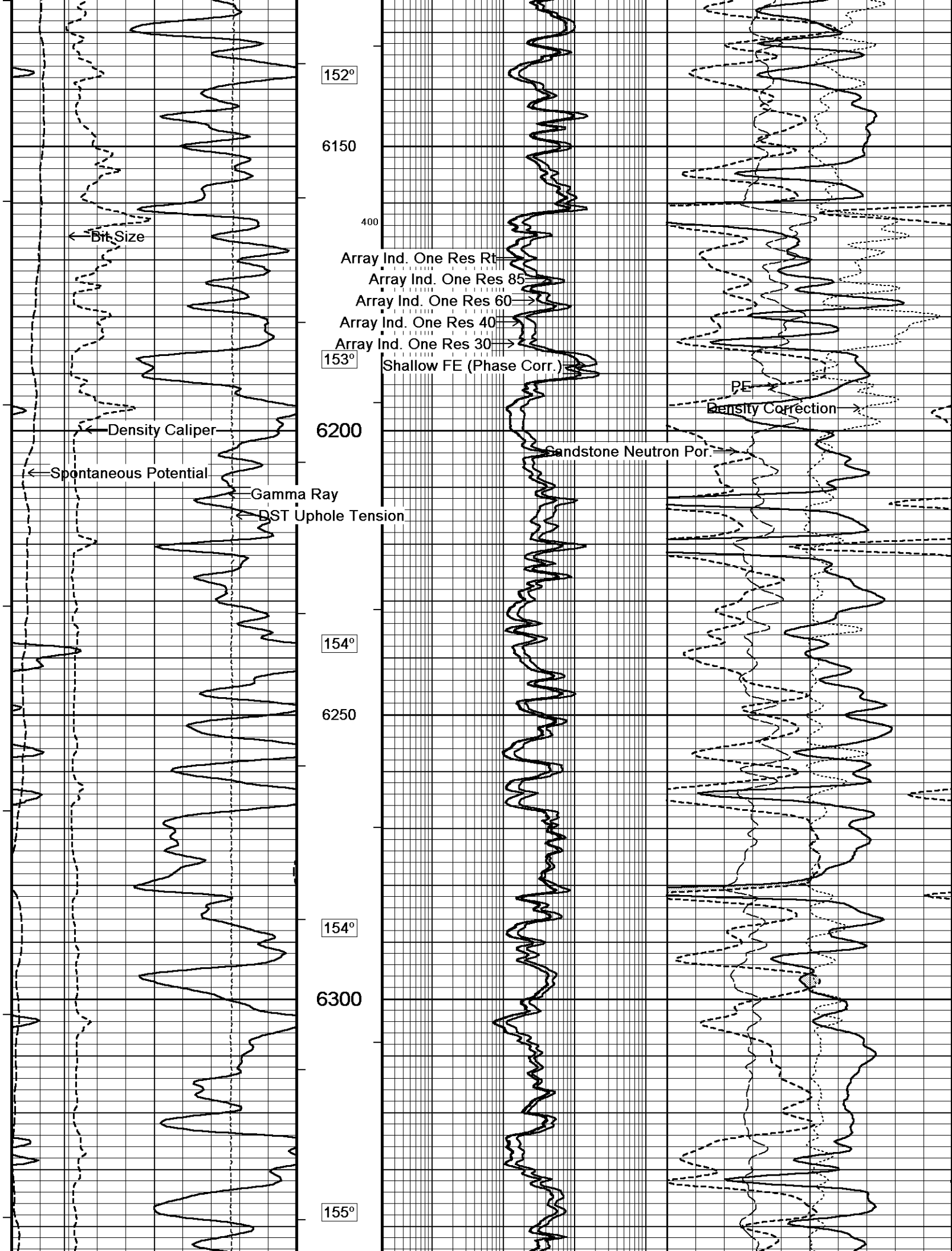


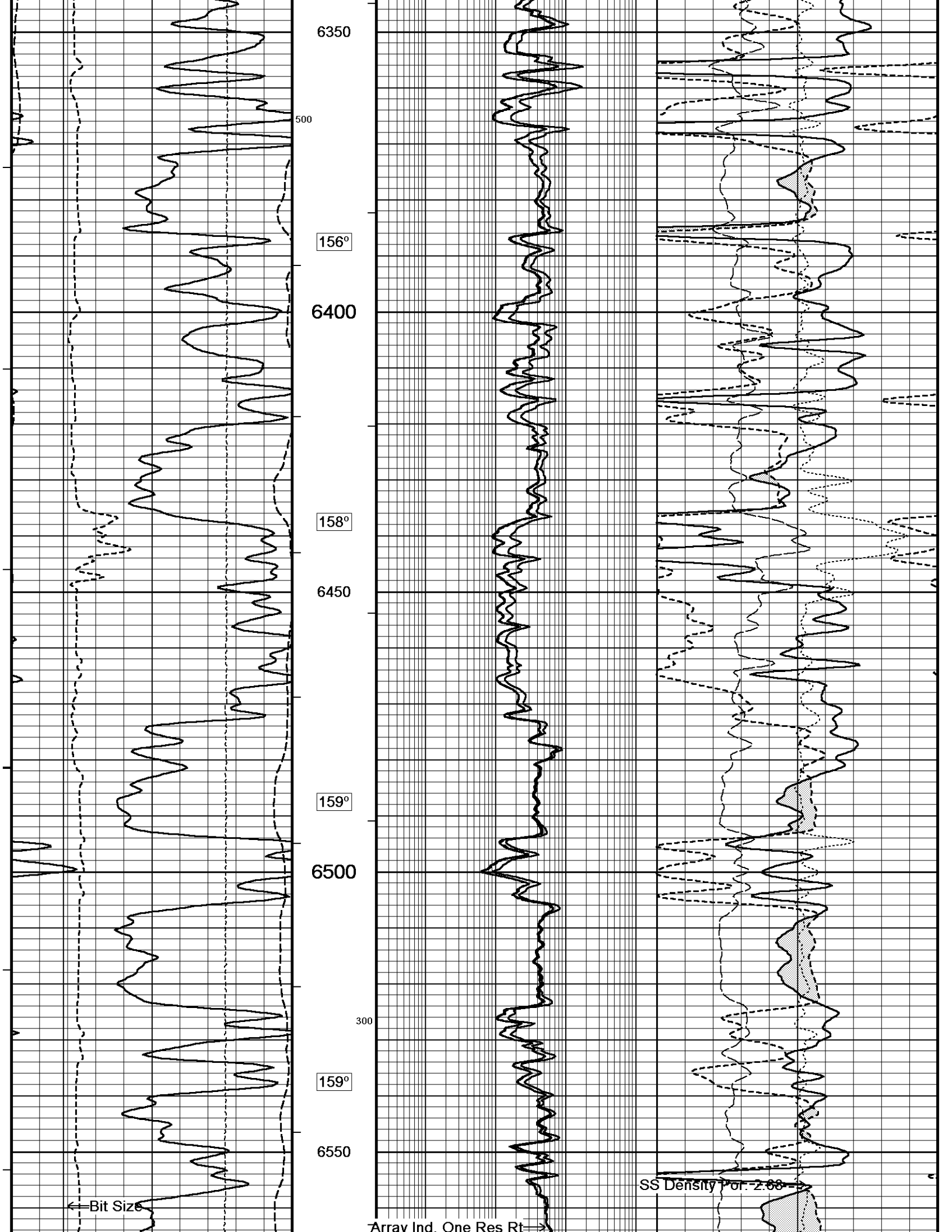


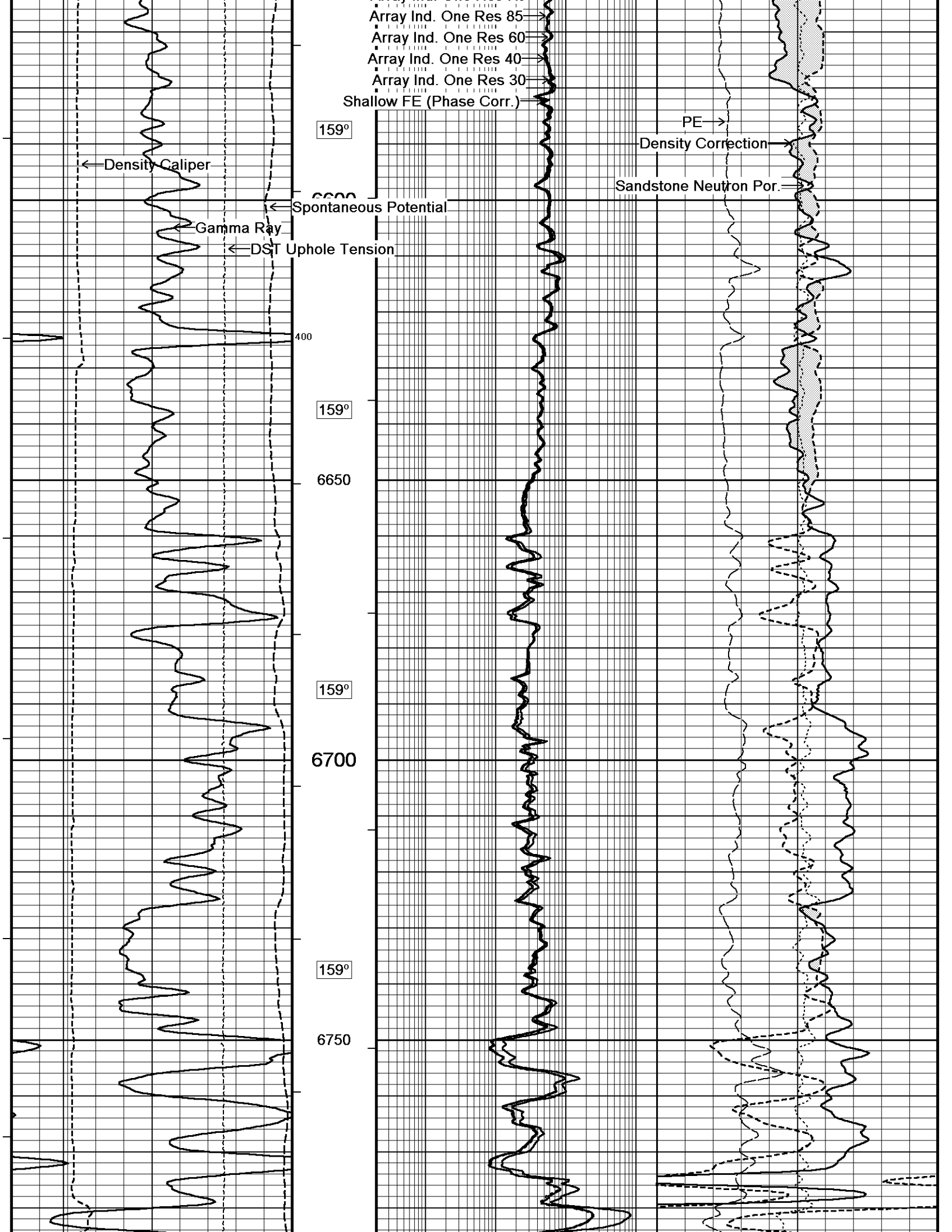


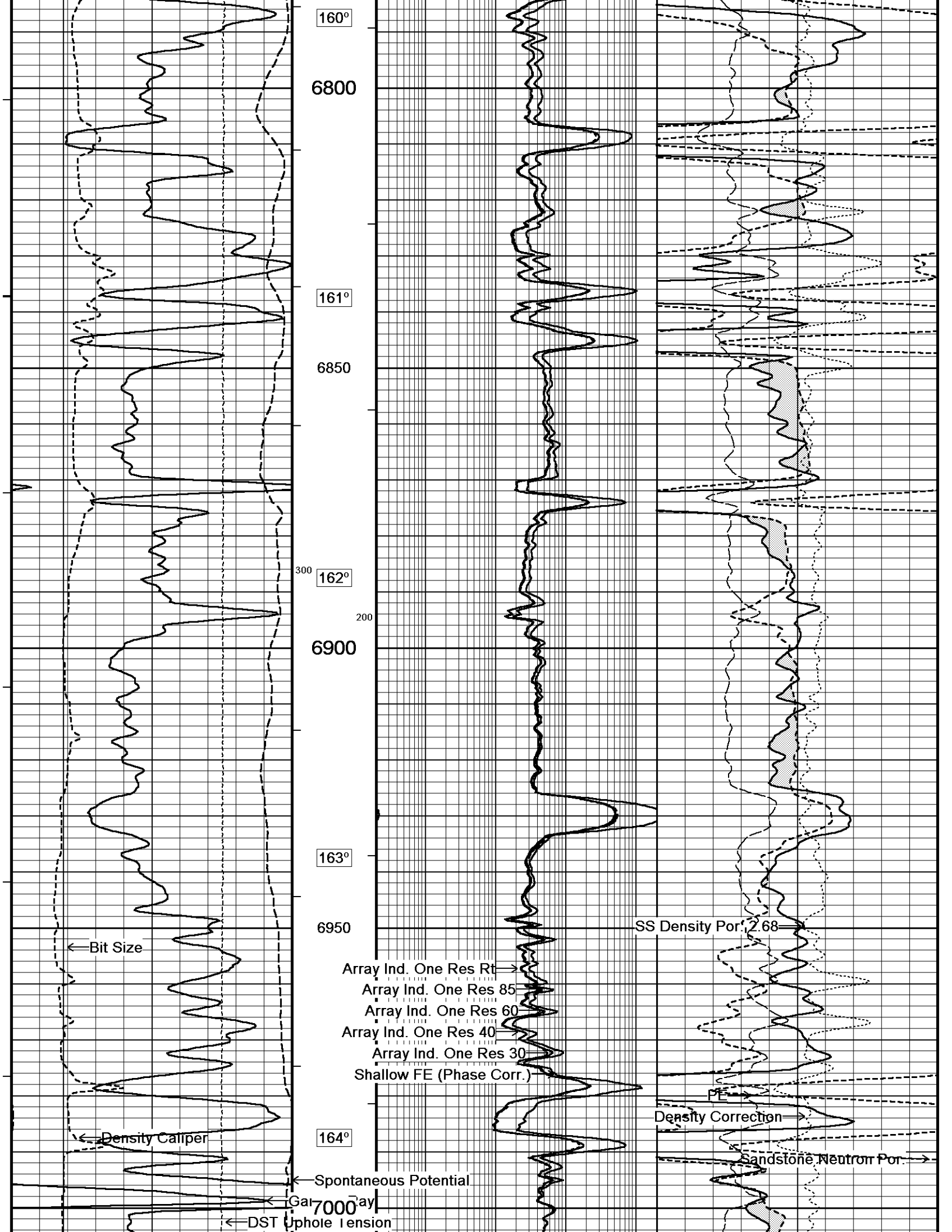
150°
5950
151°
6000
151°
6050
152°
6100
600

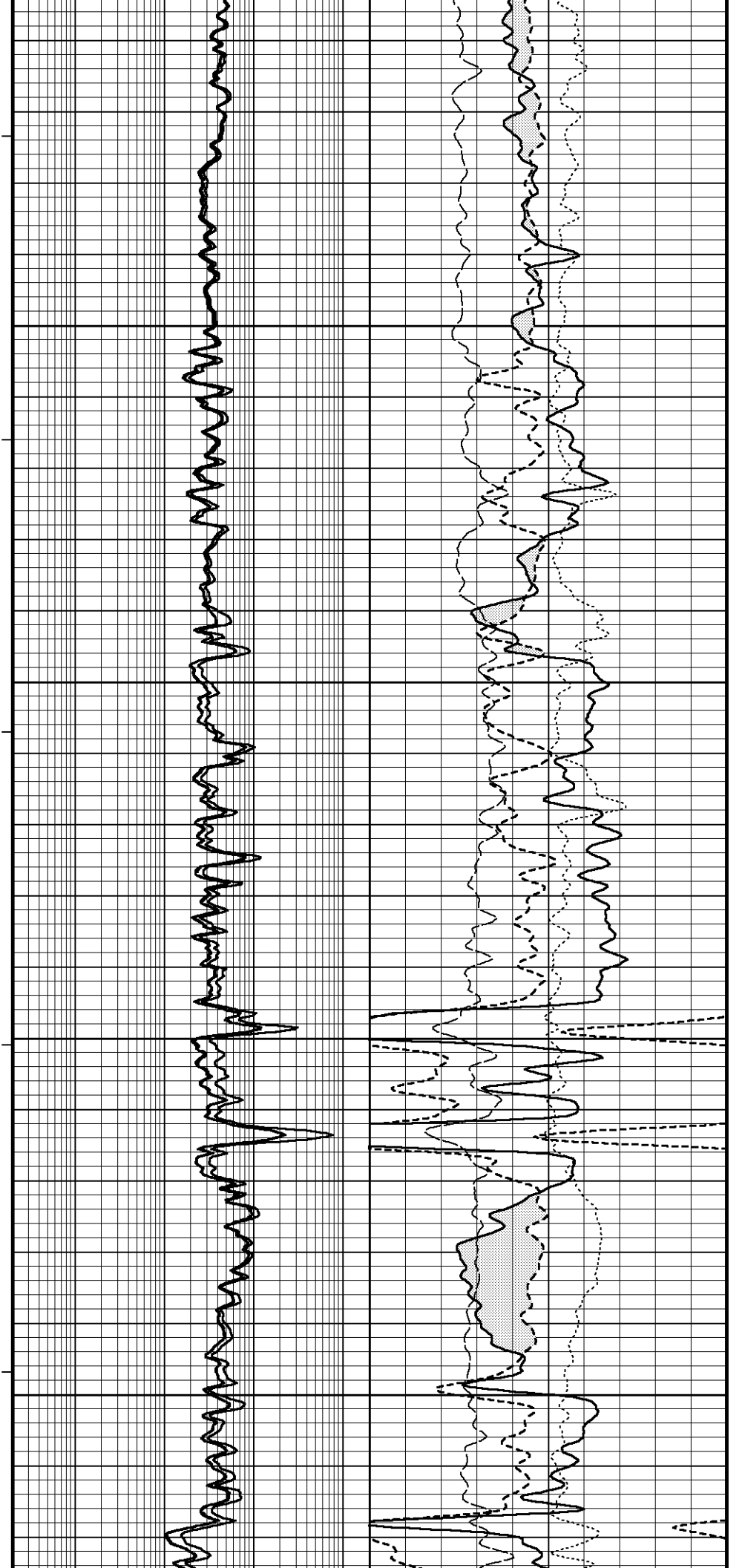
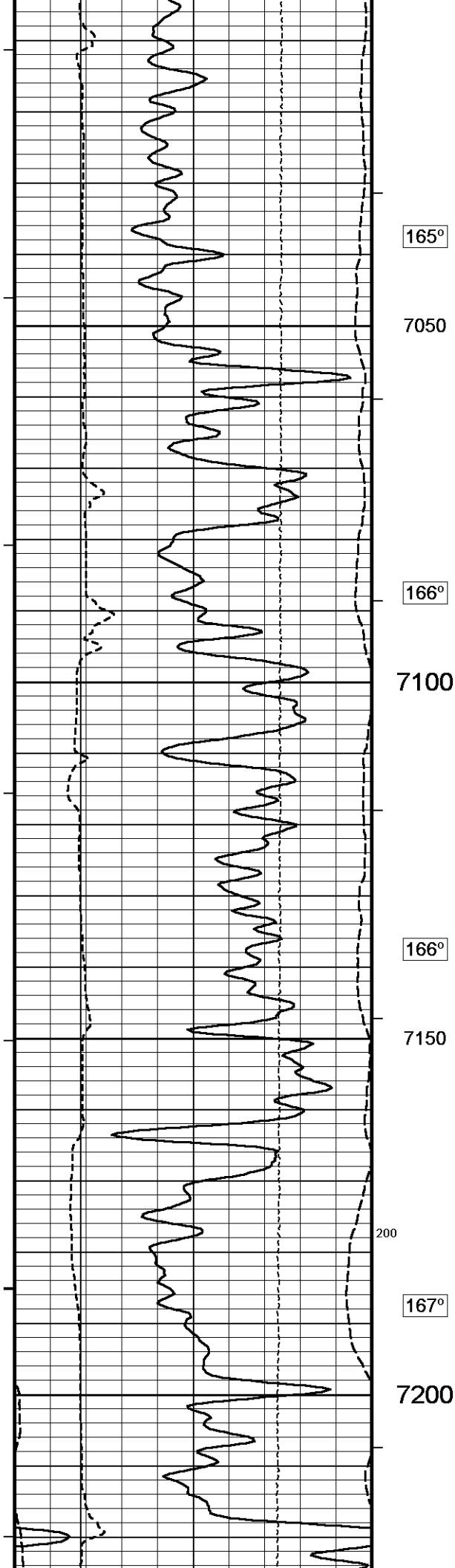


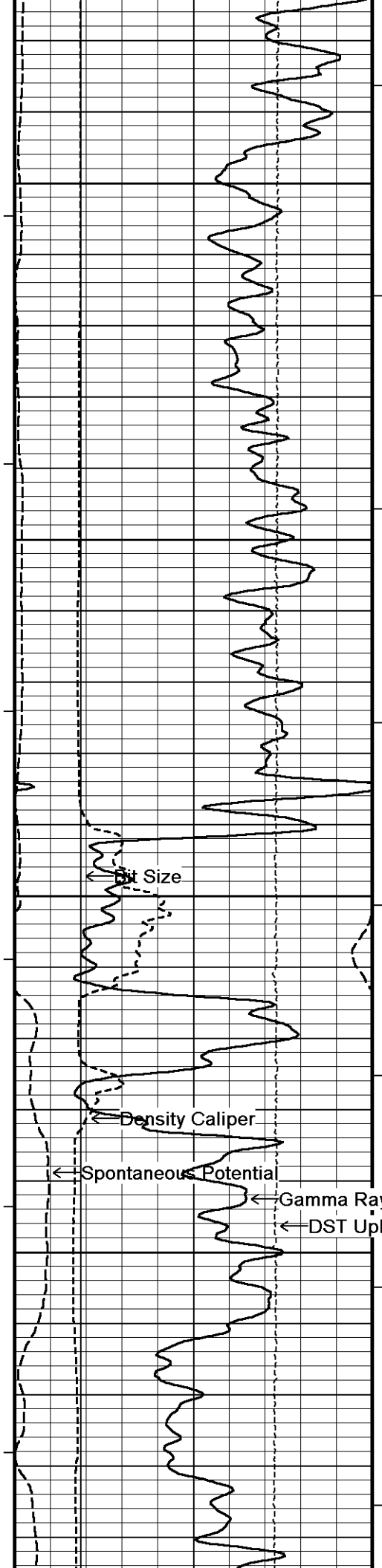




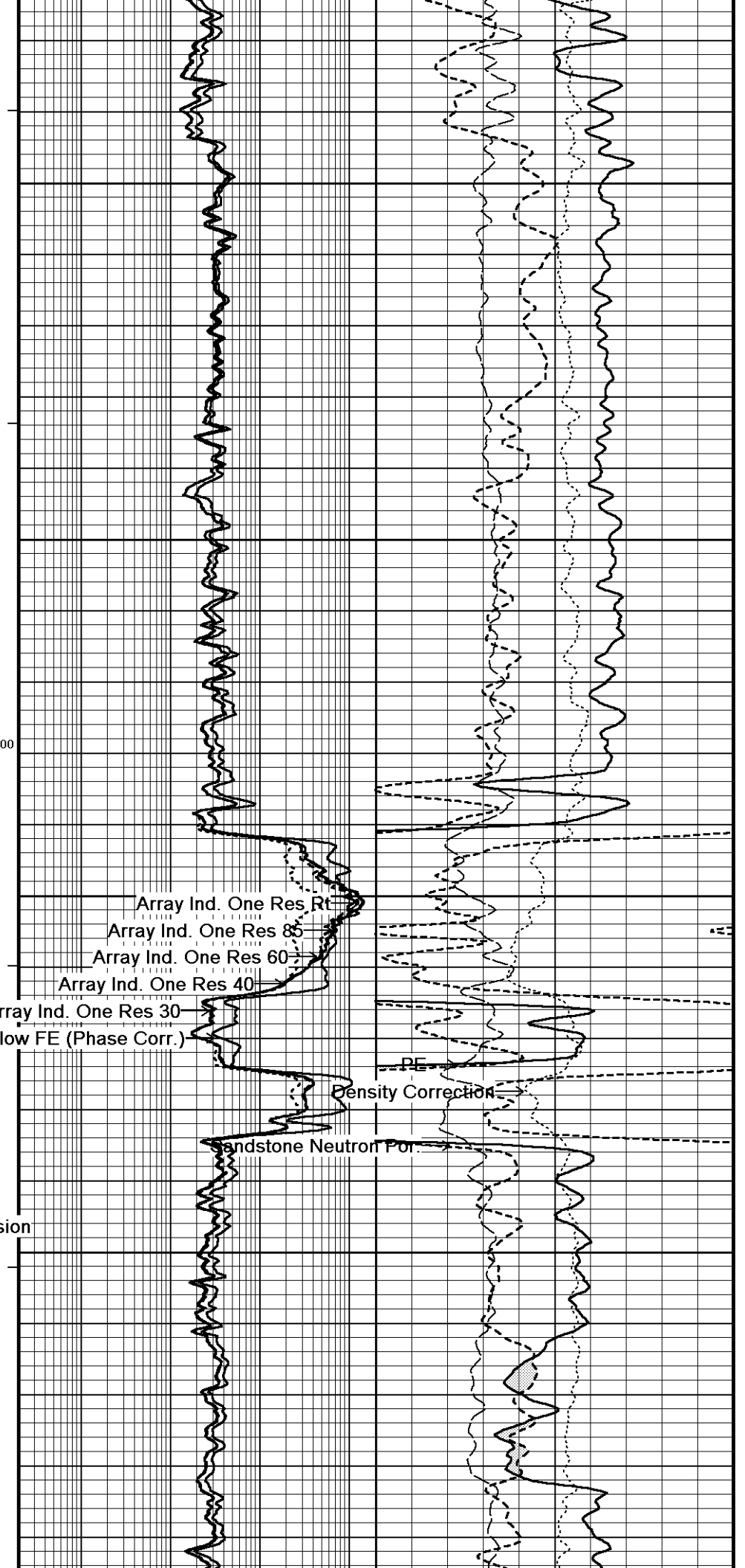




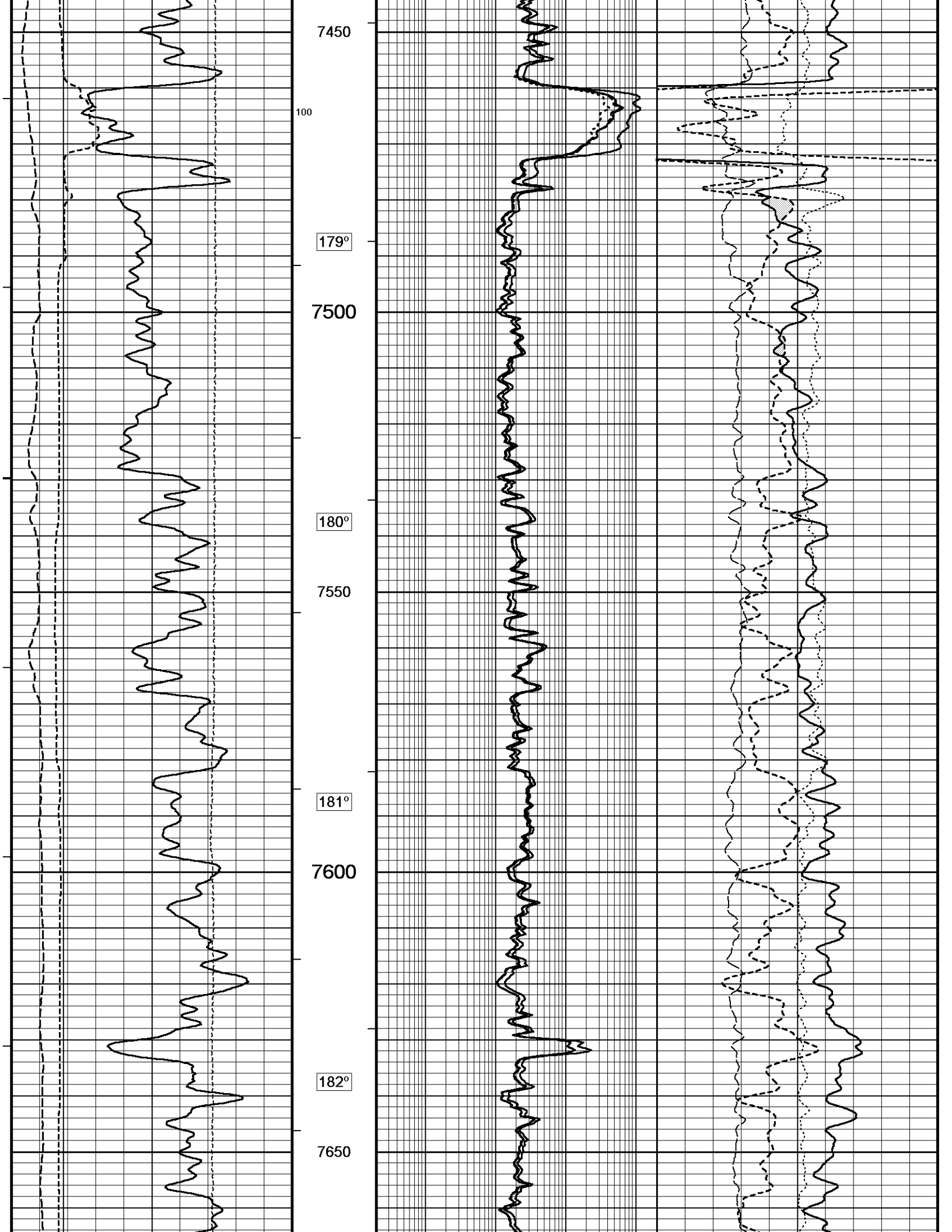


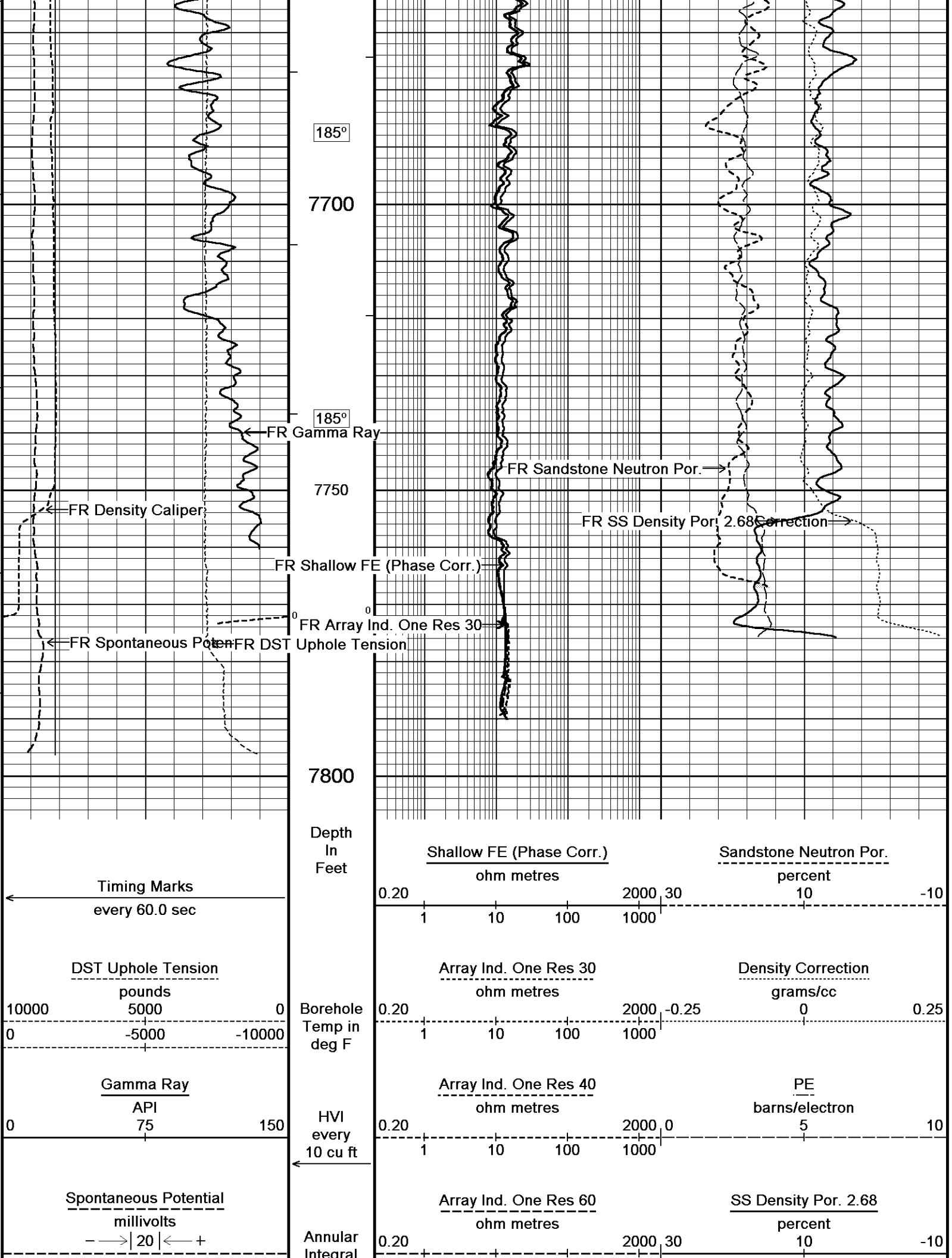


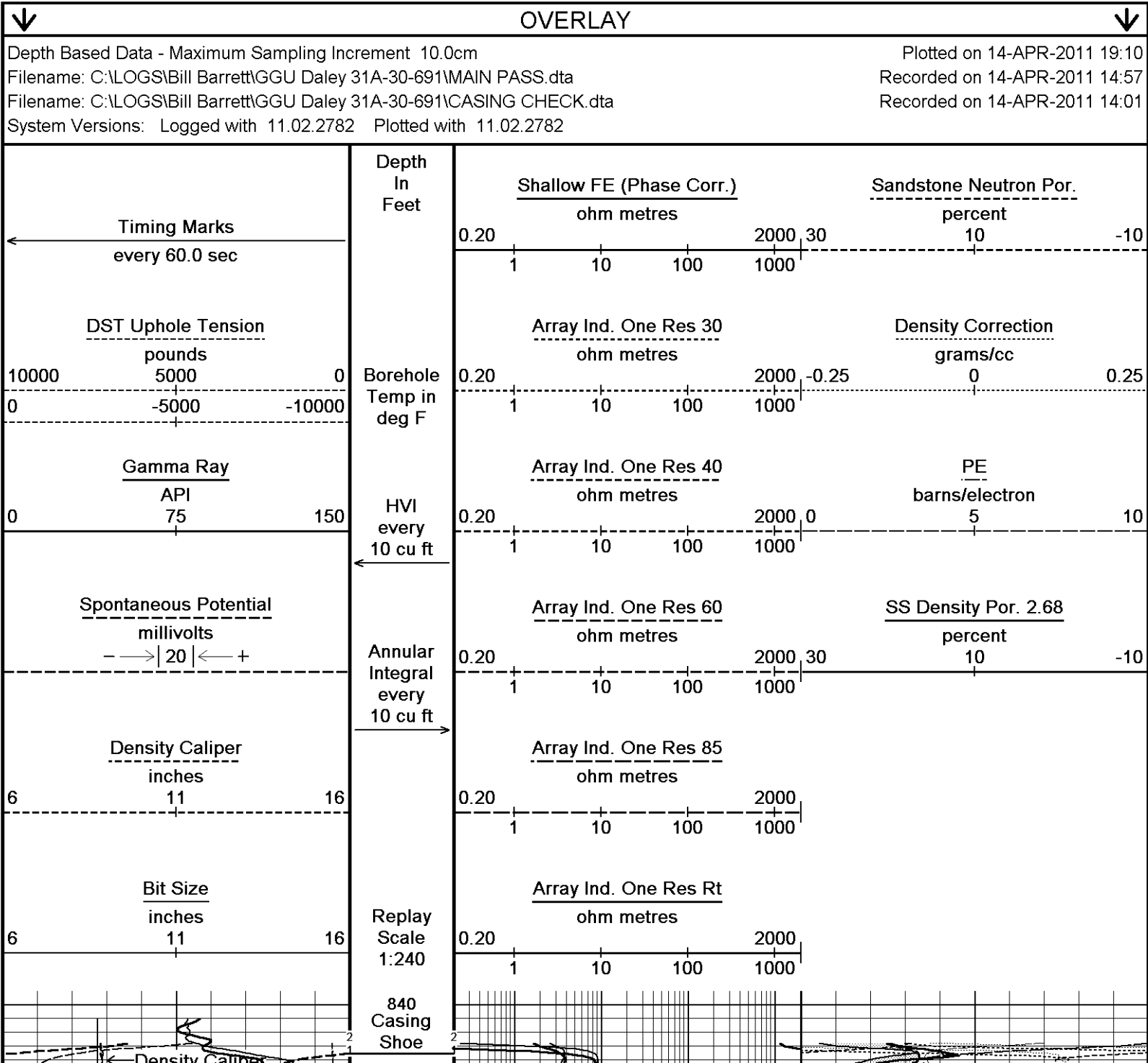
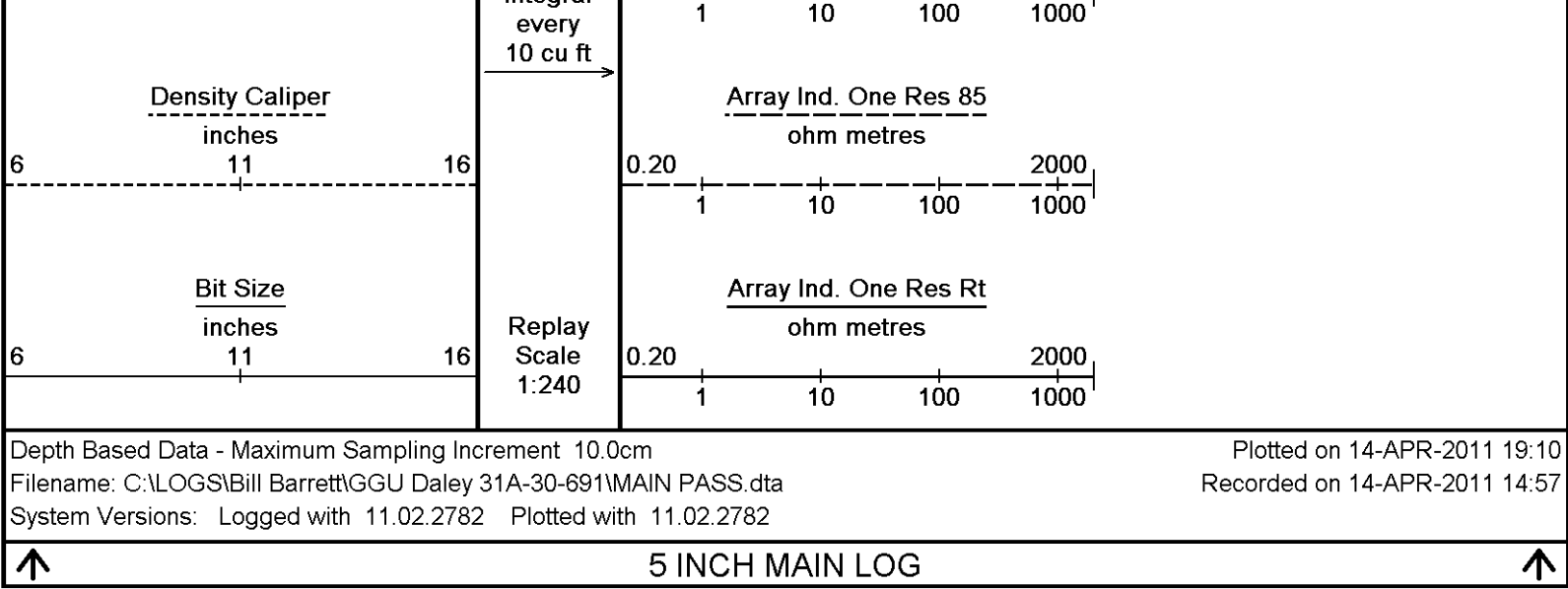
167°
7250
165°
7300
100
168°
7350
174°
7400
175°

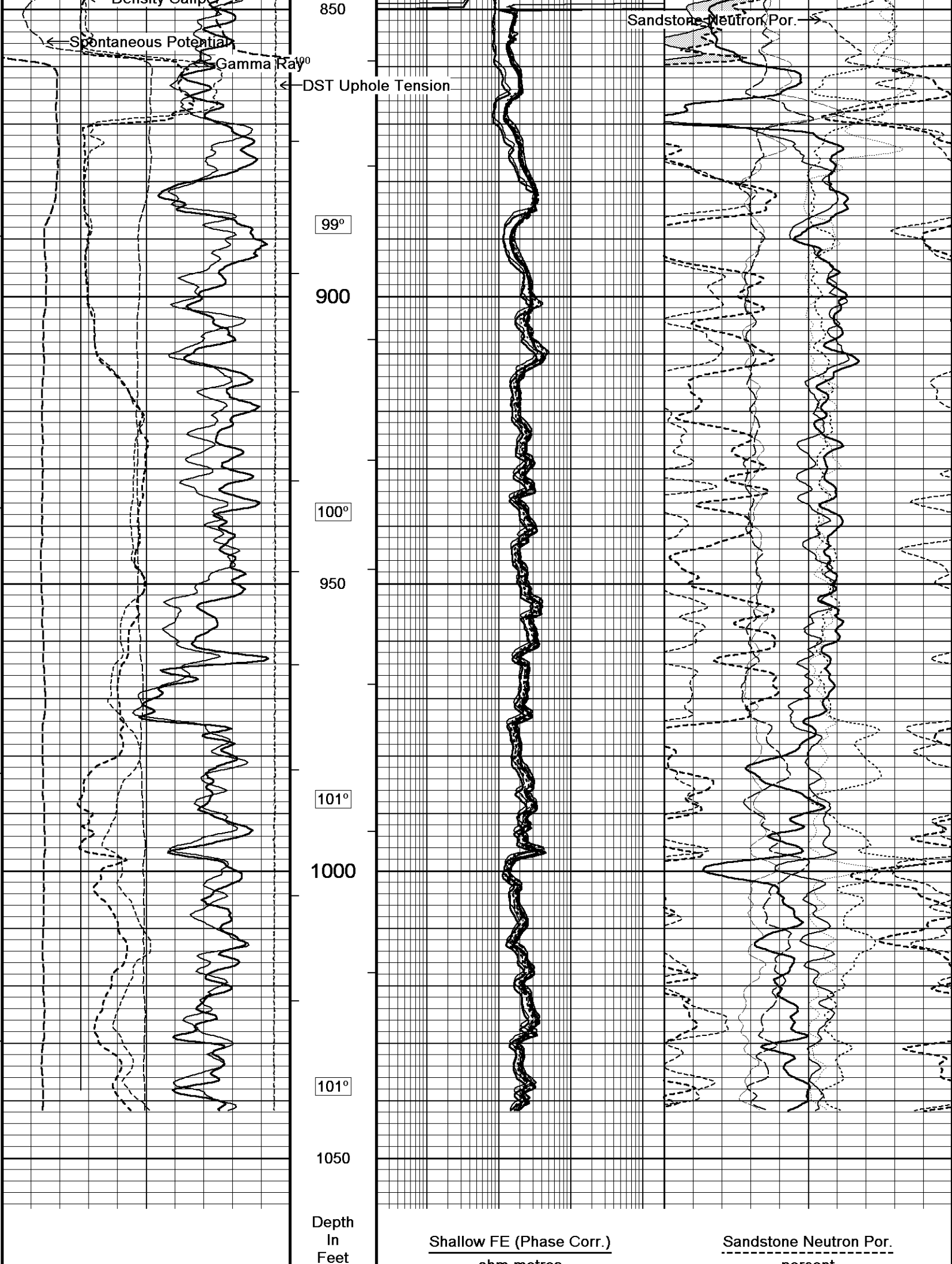


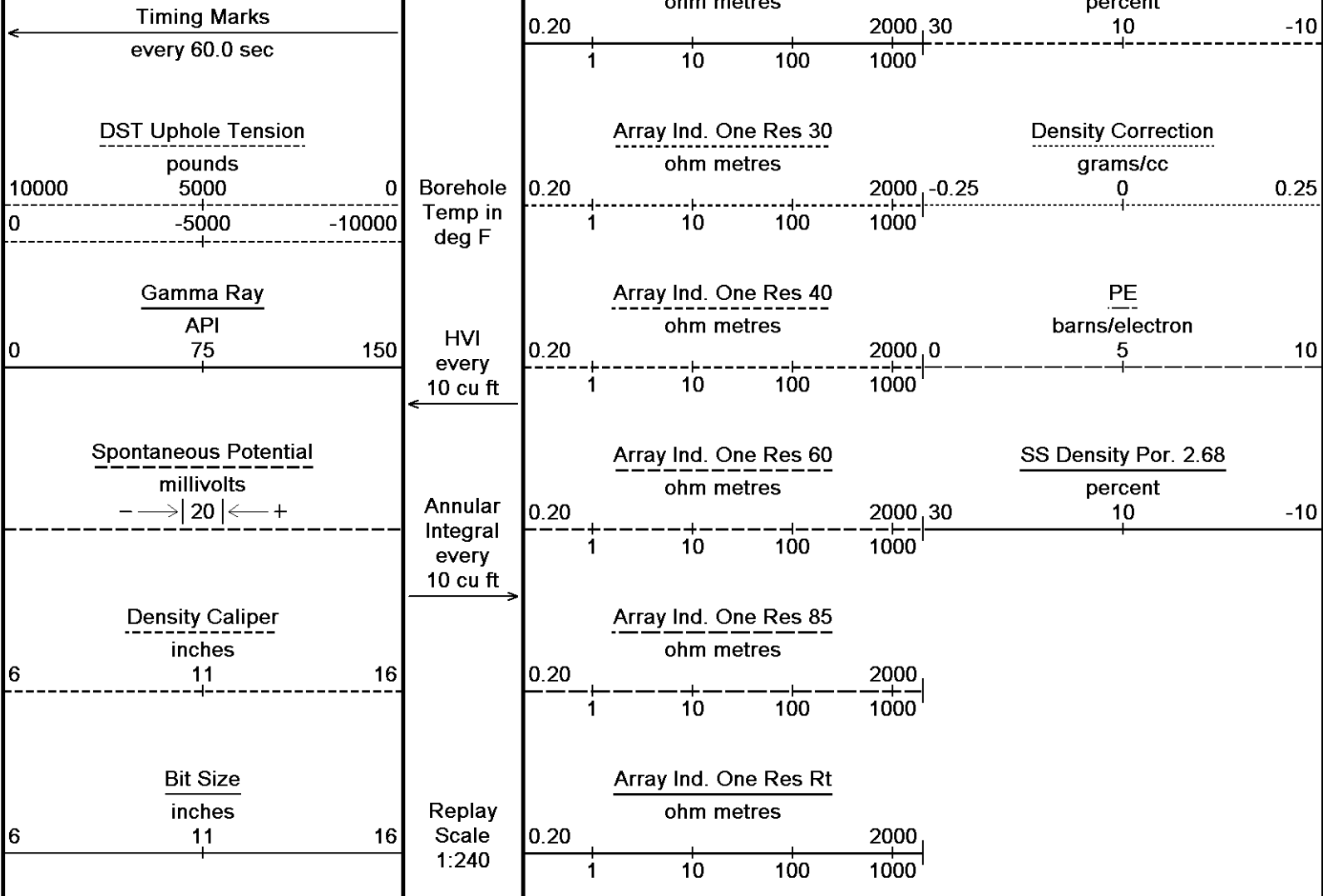
Bit Size
Density Caliper
Spontaneous Potential
Gamma Ray
DST Uphole Tension
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
Shallow FE (Phase Corr.)
Density Correction
Sandstone Neutron Por











Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 14-APR-2011 19:10

Filename: C:\LOGS\Bill Barrett\GGU Daley 31A-30-691\MAIN PASS.dta

Recorded on 14-APR-2011 14:57

Filename: C:\LOGS\Bill Barrett\GGU Daley 31A-30-691\CASING CHECK.dta

Recorded on 14-APR-2011 14:01

System Versions: Logged with 11.02.2782 Plotted with 11.02.2782

↑

OVERLAY

↑

BEFORE SURVEY CALIBRATION		
C:\LOGS\Bill Barrett\GGU Daley 31A-30-691\MAIN PASS.dta		
General Constants All 000		Last Edited on 14-APR-2011,13:45
General Parameters		
Mud Resistivity	2.600	ohm-metres
Mud Resistivity Temperature	89.000	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	

Reading No	Measured	Calibrated (lbs)
1	15857.02	0.00
2	16955.52	320.00
High Resolution Temperature Calibration MCG-C 192		
	Measured	Calibrated(Deg F)
Lower	50.00	50.00
Upper	75.00	75.00
High Resolution Temperature Constants MCG-C 192		
Last Edited on 14-APR-2011,13:46		
Pre-filter Length	11	
SP Calibration MCG-C 192		
	Measured	Calibrated (mV)
Reference 1	100.9	100.0
Reference 2	-100.2	-100.0
Gamma Calibration MCG-C 192		
	Measured	Calibrated (API)
Background	106	73
Calibrator (Gross)	1425	985
Calibrator (Net)	1320	912
Gamma Constants MCG-C 192		
Last Edited on 14-APR-2011,13:46		
Gamma Calibrator Number	GRC-072	
Mud Density	1.28	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm
Neutron Calibration MDN-A.B 160		
Base Calibration on 30-MAR-2011 10:45		
Field Check on 13-APR-2011 23:38		
Base Calibration		
	Measured	Calibrated (cps)
	Near Far	Near Far
	3133 97	3714 110
Ratio	32.392	33.764
Field Calibrator at Base		Calibrated (cps)
		1341 2027
Ratio		0.661
Field Check		Calibrated (cps)
		1344 2002
Ratio		0.671
Neutron Constants MDN-A.B 160		
Last Edited on 14-APR-2011,13:46		
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-A.A 85		
Base Calibration on 29-MAR-2011 15:03		
Field Check on 14-APR-2011 01:36		

Reference 1	Measured	Calibrated (ohm-m)		
Reference 2	9.7	1.3		
	965.2	126.8		
Base Check		281.8		
Field Check		281.7		
FE Constants MFE-A.A 85			Last Edited on 14-APR-2011,13:48	
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-B.A 213			Field Calibration on 07-APR-2011,01:27	
	Measured	Calibrated(Deg F)		
Lower	10.00	10.00		
Upper	100.00	100.00		
High Resolution Temperature Constants MAI-B.A 213			Last Edited on 13-DEC-2010,09:54	
Pre-filter Length	11			
Induction Calibration MAI-B.A 213			Base Calibration on 22-FEB-2011,05:28 Field Check on 14-APR-2011 01:35	
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	13.4	3933.5	13.8	3933.6
2	30.0	3538.3	30.2	3538.4
3	28.7	3113.3	28.9	3113.0
4	19.0	2095.8	19.1	2095.9
Deep	17.3	2077.8	17.4	2077.5
Medium	42.4	4087.3	42.6	4086.8
Shallow	45.1	5156.8	45.4	5157.1
Array Temperature	61.7		64.6	Deg F
Induction Constants MAI-B.A 213			Last Edited on 14-APR-2011,13:49	
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

MRM2	0.0000	MRC2	0.0000
SRM1	0.0000	SRC1	0.0000
SRM2	0.0000	SRC2	0.0000

Calibration Site Corrections

Channel 1	0.00	mmhos/metre
Channel 2	0.00	mmhos/metre
Channel 3	0.00	mmhos/metre
Channel 4	0.00	mmhos/metre

Apparent Porosity and Water Saturation Constants

Archie Constant (A)	1.00	
Cementation Exponent (M)	2.00	
Saturation Exponent (N)	2.00	
Saturation of Water for Apor	100.00	percent
Resistivity of Water for Apor and Sw	0.05	ohm-m
Resistivity of Mud Filtrate for Sw	0.00	ohm-m
Source for Rt	0.00	
Source for Rxo	0.00	

Caliper Calibration MPD-B 167			Base Calibration on 24-MAR-2011 14:48
			Field Calibration on 14-APR-2011,13:47
Base Calibration			
Reading No	Measured	Calibrator Size (in)	
1	18272	4.00	
2	26728	5.96	
3	35183	7.98	
4	43312	9.86	
5	52336	11.88	
6	N/A	N/A	
Field Calibration			
	Measured Caliper (in)	Actual Caliper (in)	
	7.99	7.98	

Photo Density Calibration MPD-B 167				Base Calibration on 24-MAR-2011 14:37	
				Field Check on 14-APR-2011 01:40	
Density Calibration					
Base Calibration		Measured		Calibrated (sdu)	
		Near	Far	Near	Far
	Reference 1	50013	18682	53115	19186
	Reference 2	23150	3037	25020	2536
Field Check at Base					
		1169.0	1734.7		
Field Check					
		1164.0	1740.5		
PE Calibration					
Base Calibration		Measured		Calibrated	
	WS	WH	Ratio	Ratio	
	Background	210	1040		
	Reference 1	15507	49836	0.313	0.320
	Reference 2	6038	23013	0.265	0.272
Field Check at Base					
		209.6	1039.8		
Field Check					
		213.6	1043.2		

Density Constants MPD-B 167		Last Edited on 14-APR-2011,13:46	
Density Source Id	P50561B		
Nylon Calibrator Number	507		
Aluminium Calibrator Number	507		
Density Shoe Profile	8 inch		
Caliper Source for Processing	Density Caliper		
PE Correction to Density	Not Applied		
Mud Density	1.28	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	

DOWNHOLE EQUIPMENT

C:\LOGS\Bill Barrett\GGU Daley 31A-30-691\MAIN PASS.dta

3/8" Triple Cone Cable Head (MCB C A)

MCB-C.A 5 LG: 1.58 ft WT: 15.4 lb OD: 2.24 in

SHA-J.A Compact Swivel Head Adaptor

SHA-J.A 314 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

Compact Comms Gamma

MCG-C 192 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Neutron

MDN-A.B 160 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper

MPD-B 167 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

SKJ-E.A Compact Knuckle Joint

SKJ-E.A 114 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

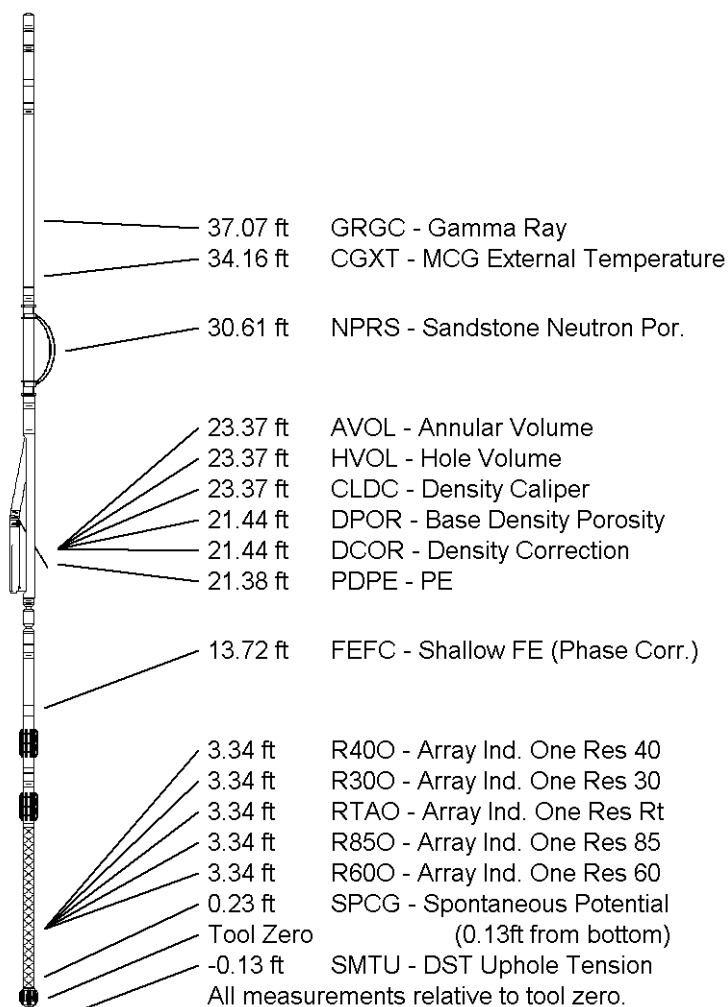
Compact Focussed Electric

MFE-A.A 85 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Induction

MAI-B.A 213 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 46.23 ft Weight: 363.8 lb



COMPANY

BILL BARRETT CORPORATION

WELL

GGU DALEY 31A-30-691

FIELD

GIBSON GULCH

PROVINCE/COUNTY

GARFIELD

COUNTRY/STATE

U.S.A. / COLORADO

Elevation Kelly Bushing 5847.00 feet

Elevation Drill Floor 5847.00 feet

First Reading 7774.00

Depth Driller 7775.00 feet

Elevation Ground Level 5824.00 feet

Depth Logger

7777.00 feet



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COMPACT TRIPLE COMBO
QUICKLOOK
LOG

