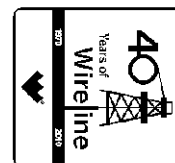




Weatherford

**COMPACT TRIPLE COMBO
QUICKLOOK
LOG**

COMPANY BILL BARRETT CORPORATION
WELL GGU KAUFMAN 32D-30-691
FIELD GIBSON GULCH
PROVINCE/COUNTY GARFIELD
COUNTRY/STATE U.S.A. / COLORADO
LOCATION SHL: 1680' FNL & 1007' FWL
BHL: 1510' FNL & 1984' FEL



SEC	TWP	RGE	Other Services	
30	6S	91W		
API Number		05-045-20741		
Permit Number				
Permanent Datum G.L., Elevation 5835 feet				
Log Measured From KB				
Drilling Measured From K.B. @ 23 FT.				
Date	19-DEC-2011		Elevations:	
Run Number	ONE		KB 5858.00	
Depth Driller	7900.00		feet	
Depth Logger	7899.00		feet	
First Reading	7896.00			
Last Reading	824.00			
Casing Driller	825.00		feet	
Casing Logger	824.00		feet	
Bit Size	7.875		inches	
Hole Fluid Type	LSND			
Density / Viscosity	10.90 lb/USg	43.00 sec/qt		
PH / Fluid Loss	9.30	10.00 ml/30Min		
Sample Source	FLOW LINE			
Rm @ Measured Temp	4.0 @ 91.5		ohm-m	
Rmf @ Measured Temp	3.20 @ 91.5		ohm-m	
Rmc @ Measured Temp	4.80 @ 91.5		ohm-m	
Source Rmf / Rmc	CALC	CALC		
Rm @ BHT	1.986 @187.0		ohm-m	
Time Since Circulation	6 HOURS			
Max Recorded Temp	187.00		deg F	
Equipment Name	COMPACT			
Equipment / Base	13045	GD JCT		
Recorded By	D. KUNTZ			
Witnessed By	D. MILLER			
Service Order	3531779			

BOREHOLE RECORD

Last Edited: 19-DEC-2011 17:19

Bit Size inches	Depth From feet	Depth To feet
8.750	824.00	5497.00
7.875	5497.00	7900.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	9.625	0.00	824.00	36.00

REMARKS

LOGGED USING WLS SOFTWARE VERSION 12.02.4401

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

HARDWARE: MPD: (1) 8 INCH PROFILE PLATE
MAI: (2) 0.5 INCH STANDOFF
MFE: (1) 0.5 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.

MAXIMUM DEVIATION OF 38.6 DEGREES.

CALIPER CHECK IN CASING PRESENTED, REFERENCE I.D. = 9.05" (9 5/8", 36 LB/FT CASING)

8.75 INCH BIT USED FROM SURFACE CASING TO 5497 FEET.

TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 3295 CU.FT.

ANNULAR VOLUME WITH 4.5 INCH PRODUCTION CASING = 2515 CU.FT.

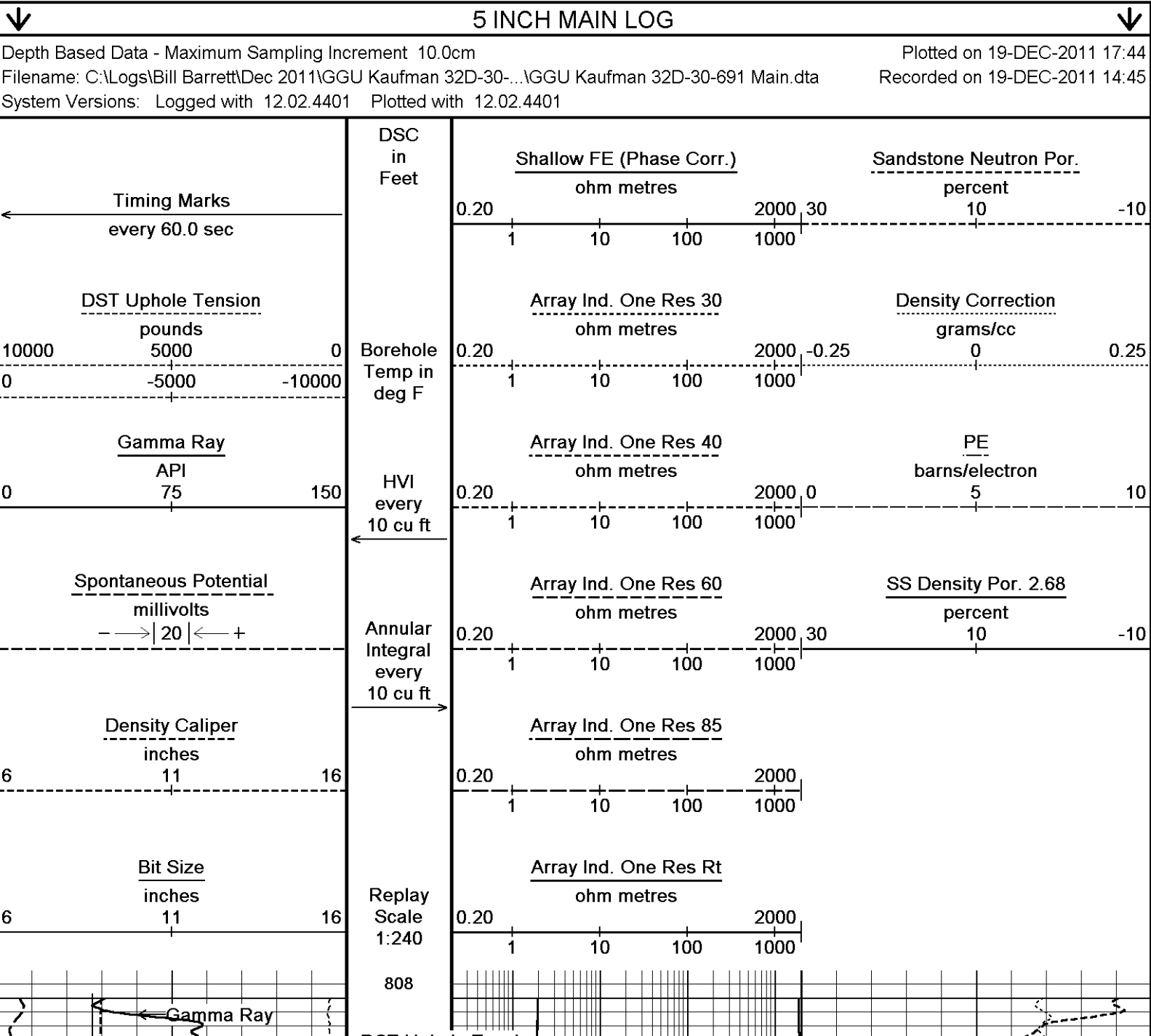
ENGINEER(S): D. KUNTZ, M. BRENNAN(JFE)

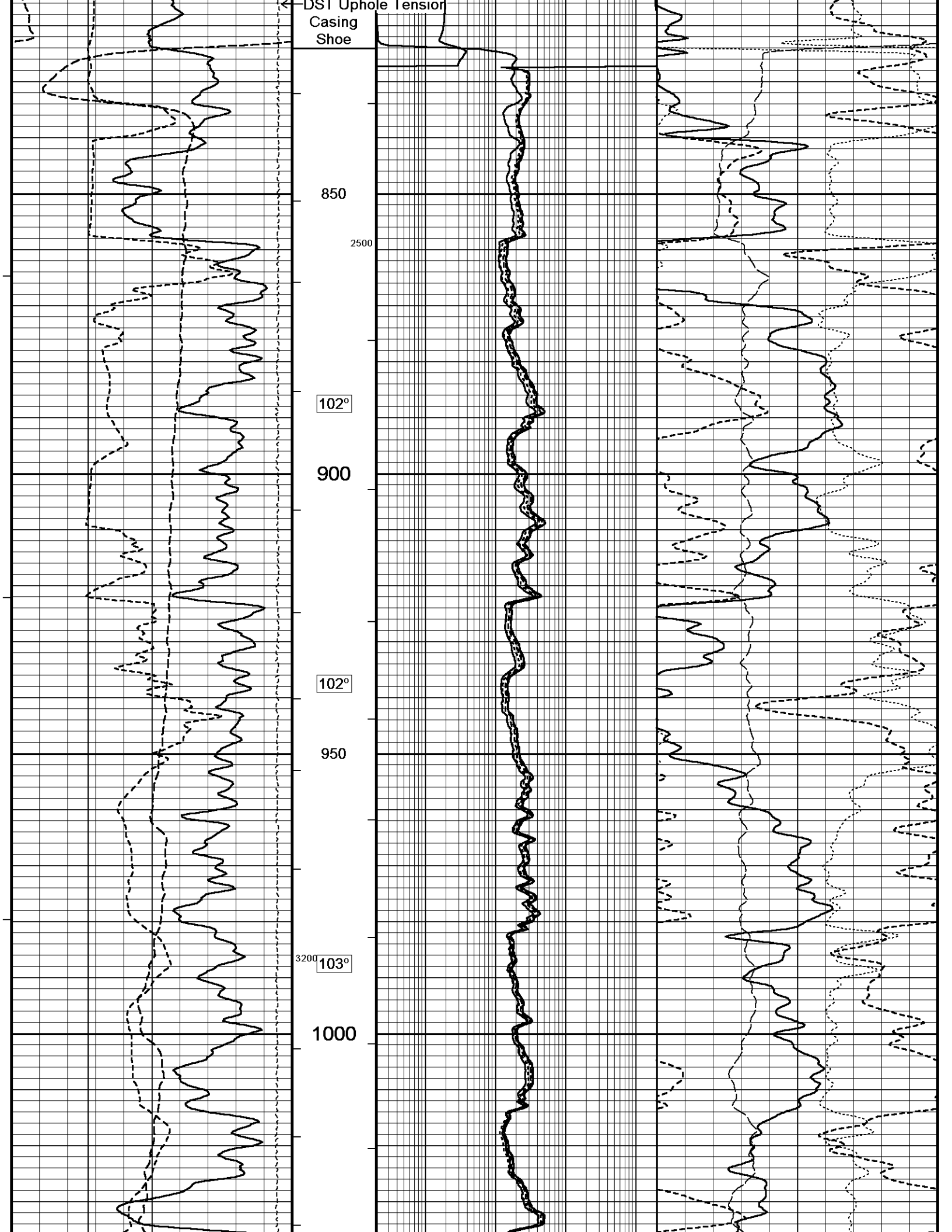
OPERATOR(S): A. ALLRED, B. FRISBIE

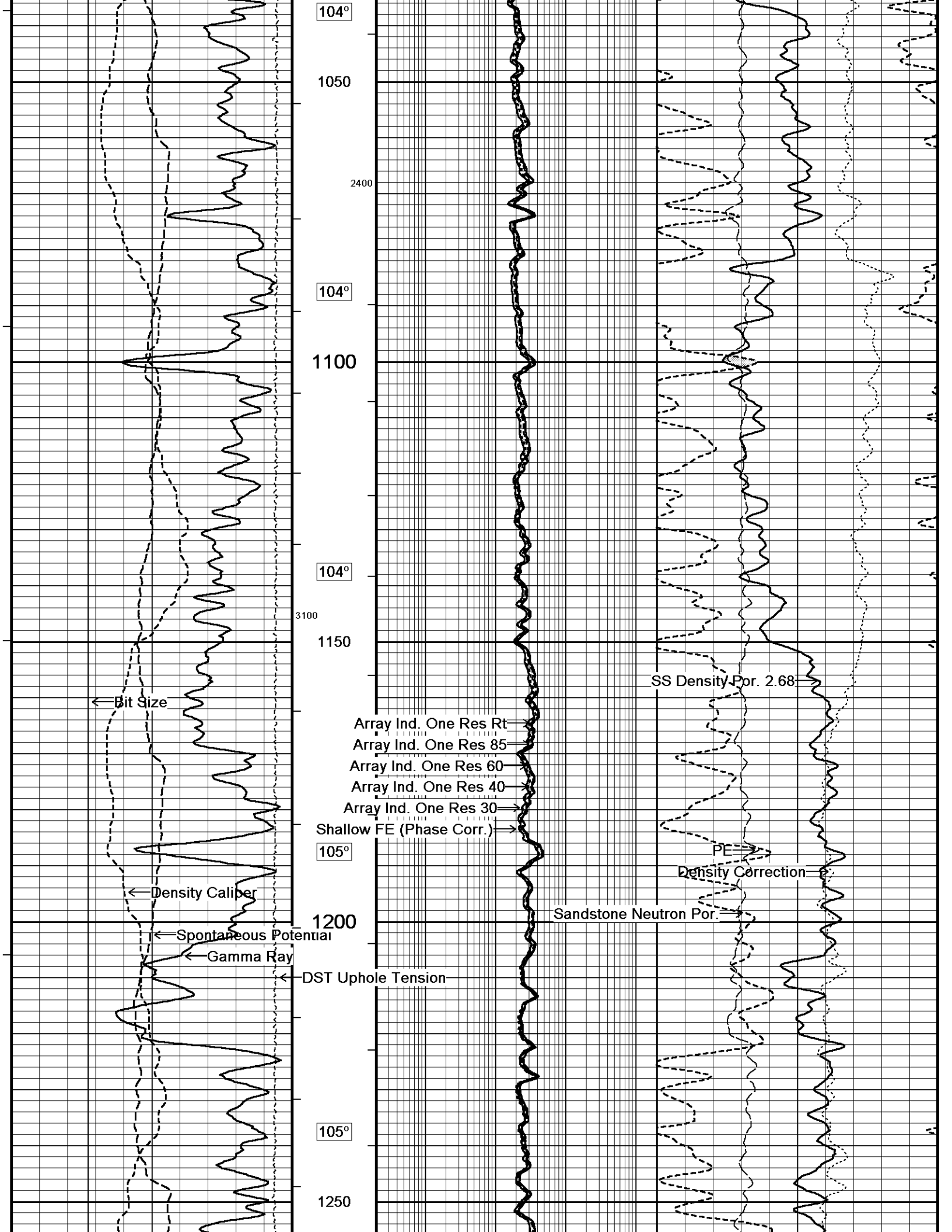
RIG: PATTERSON 313

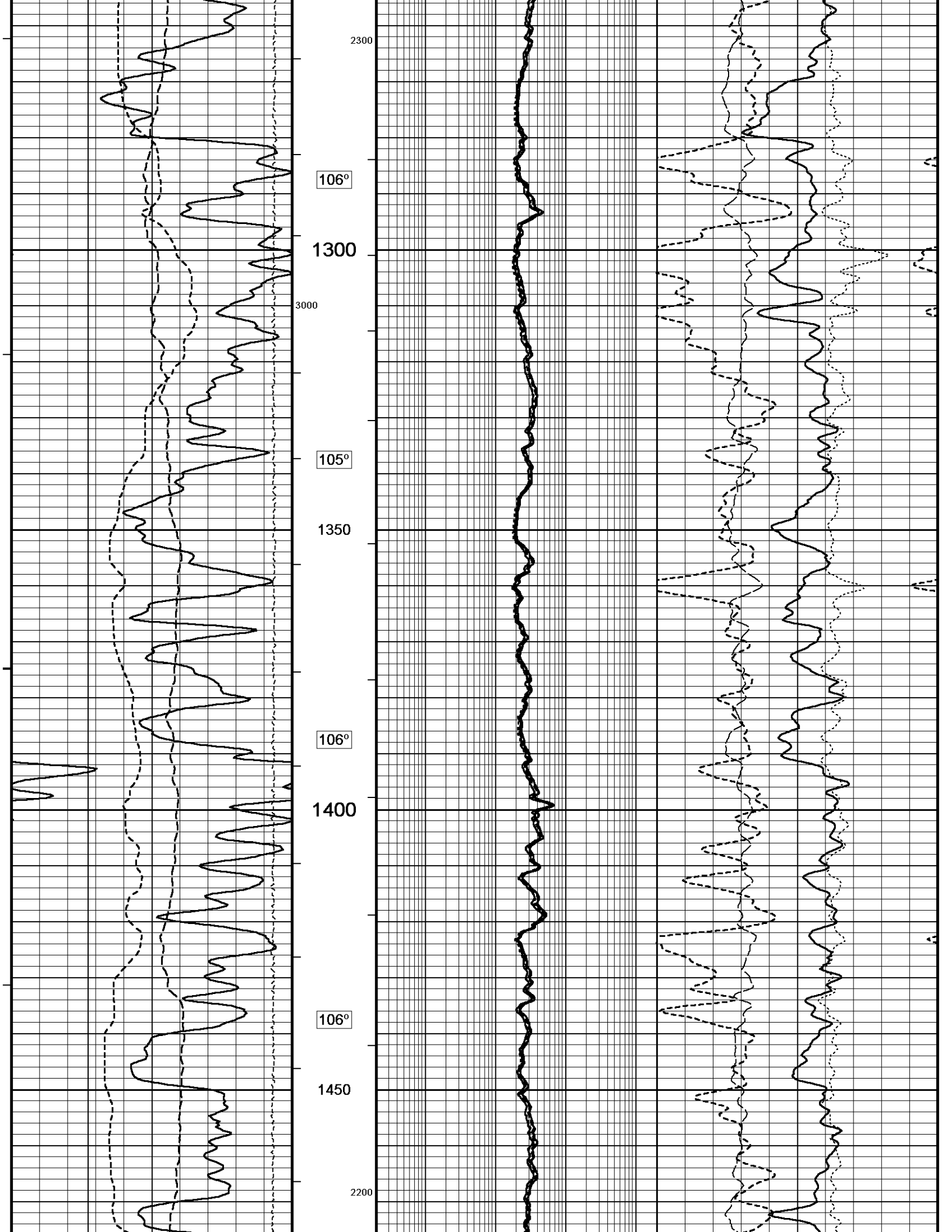
SERVICE ORDER: #3531779

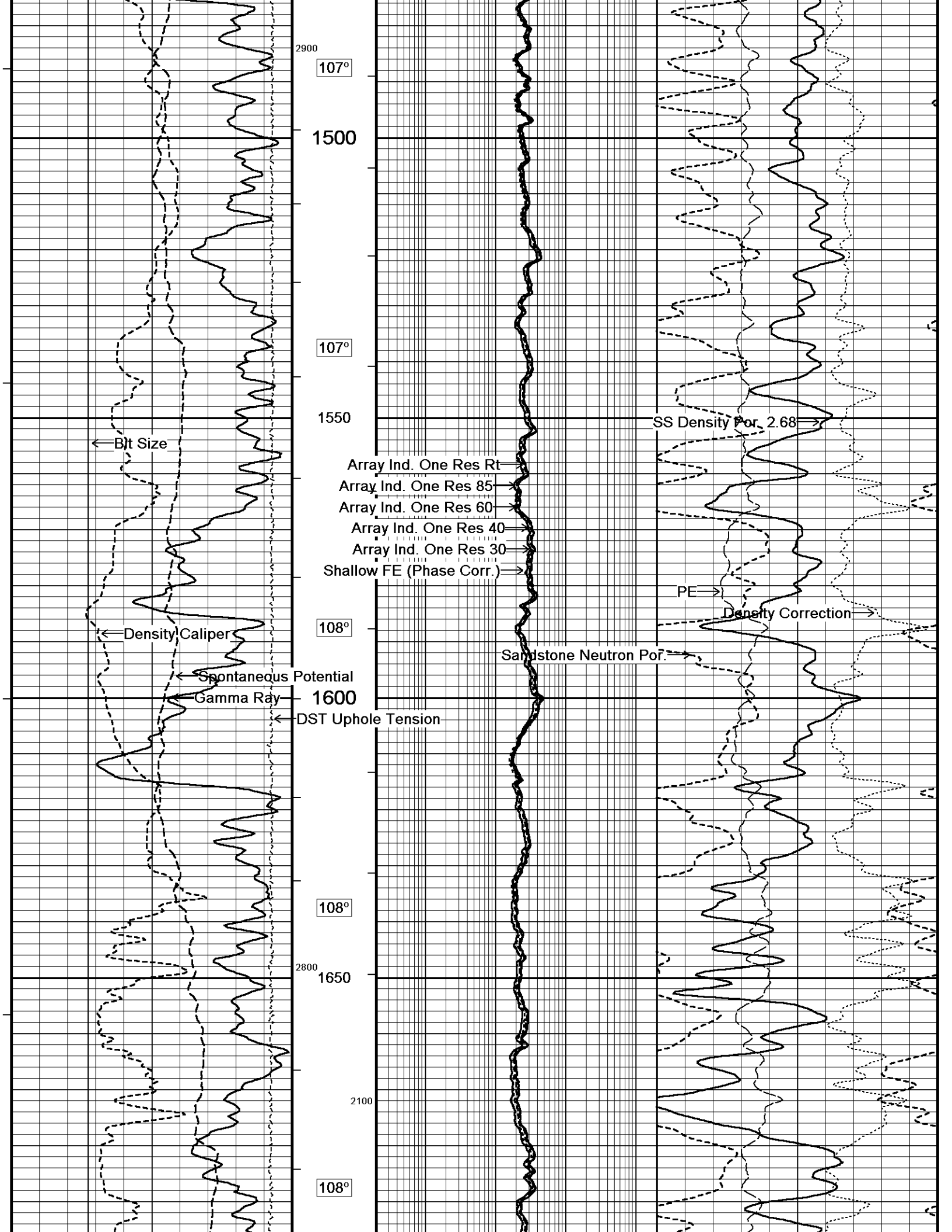
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

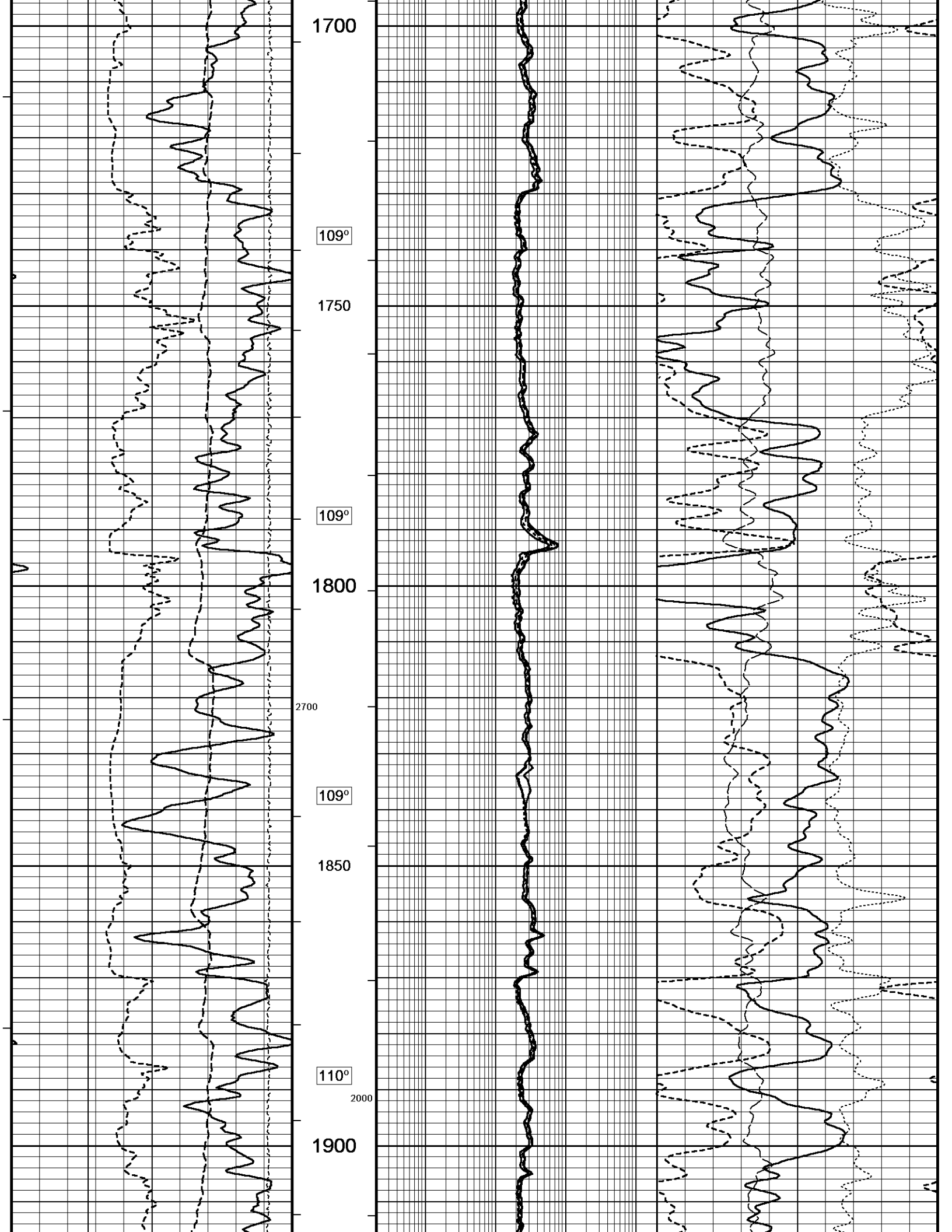


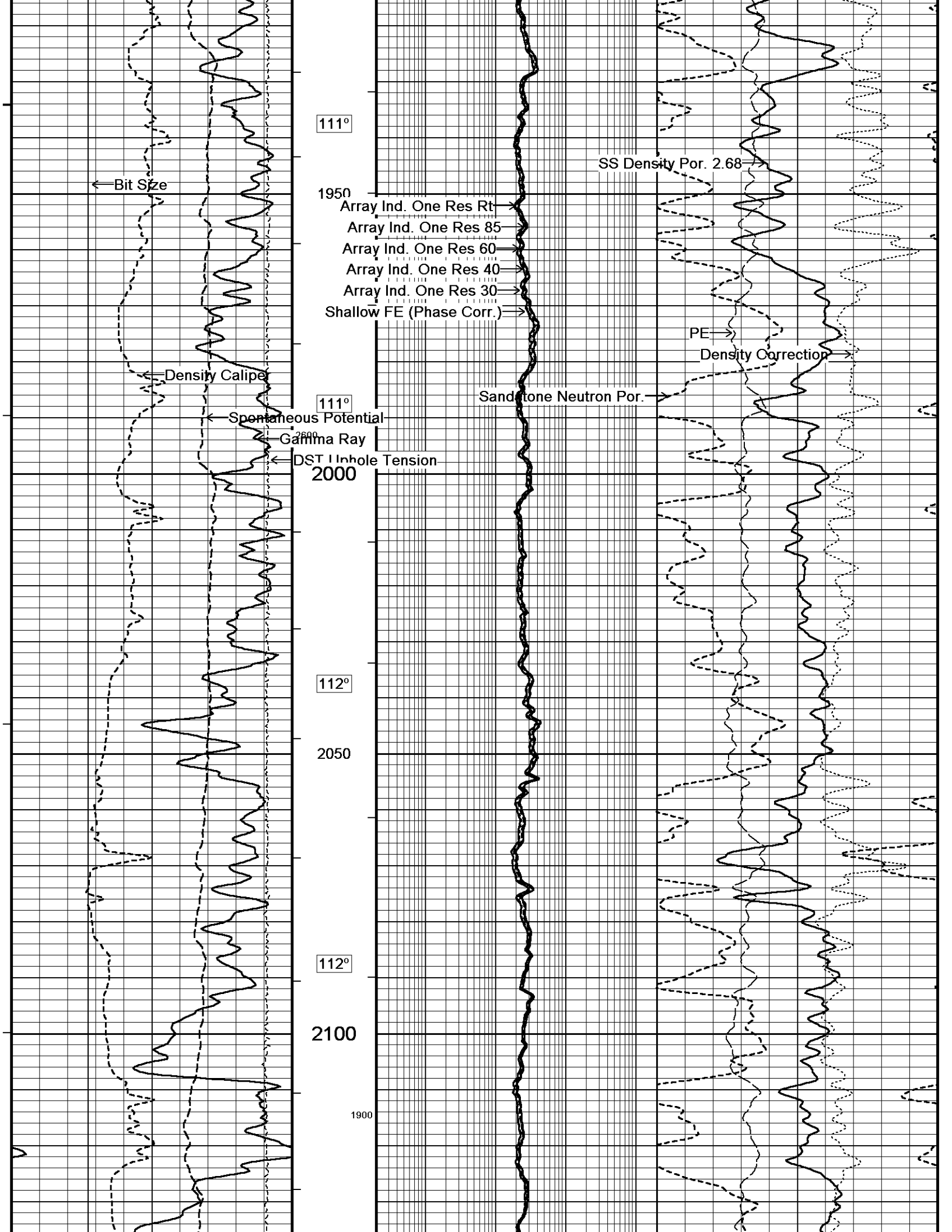


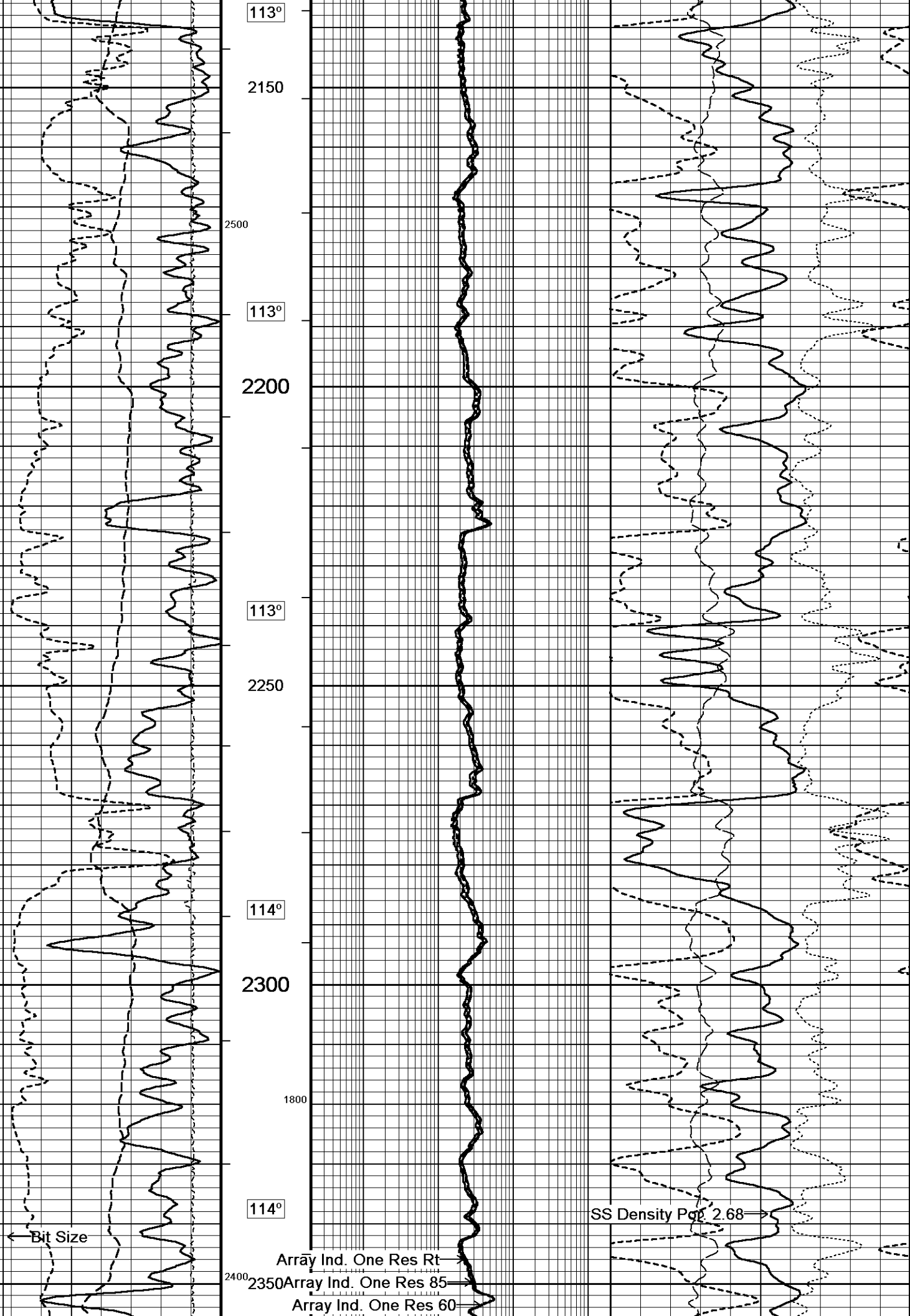


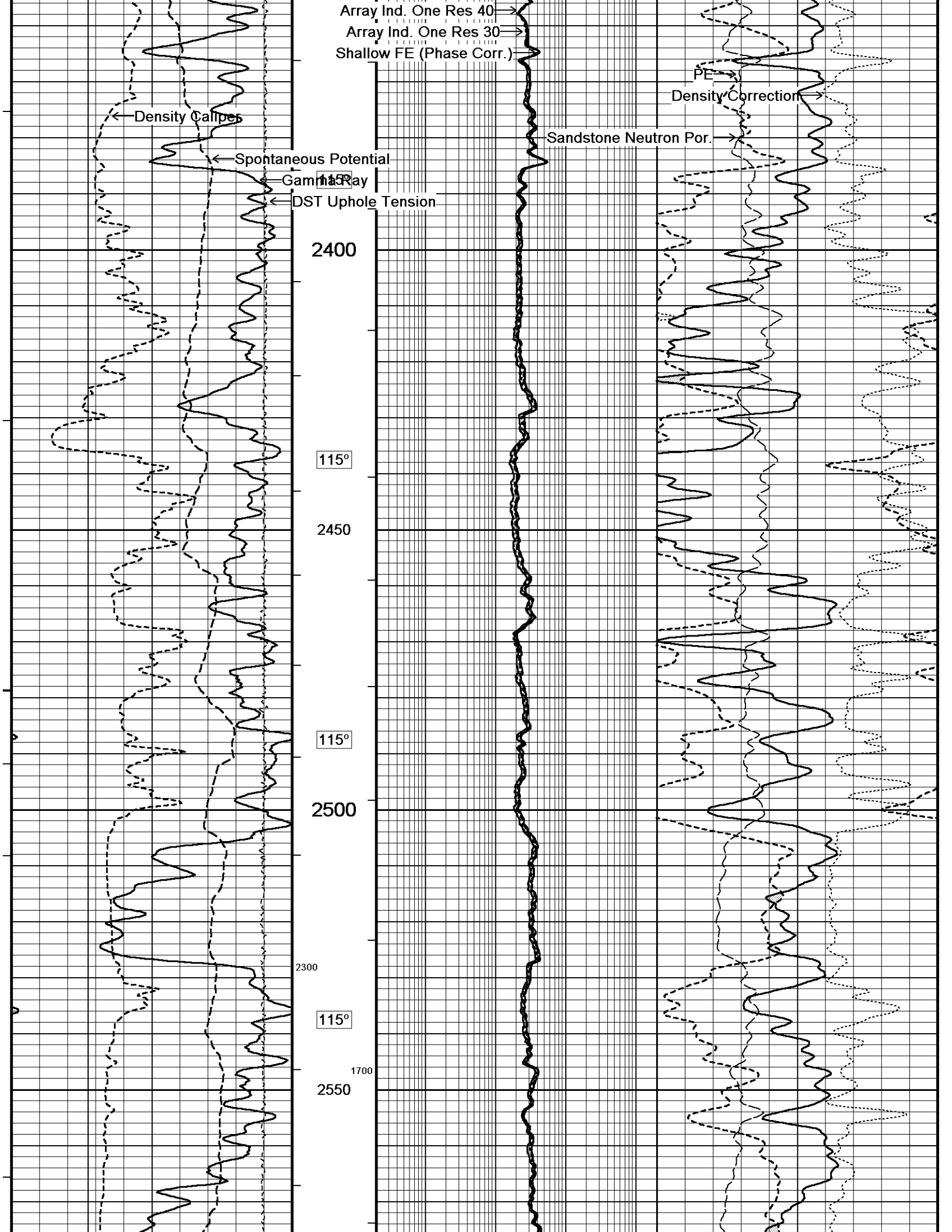


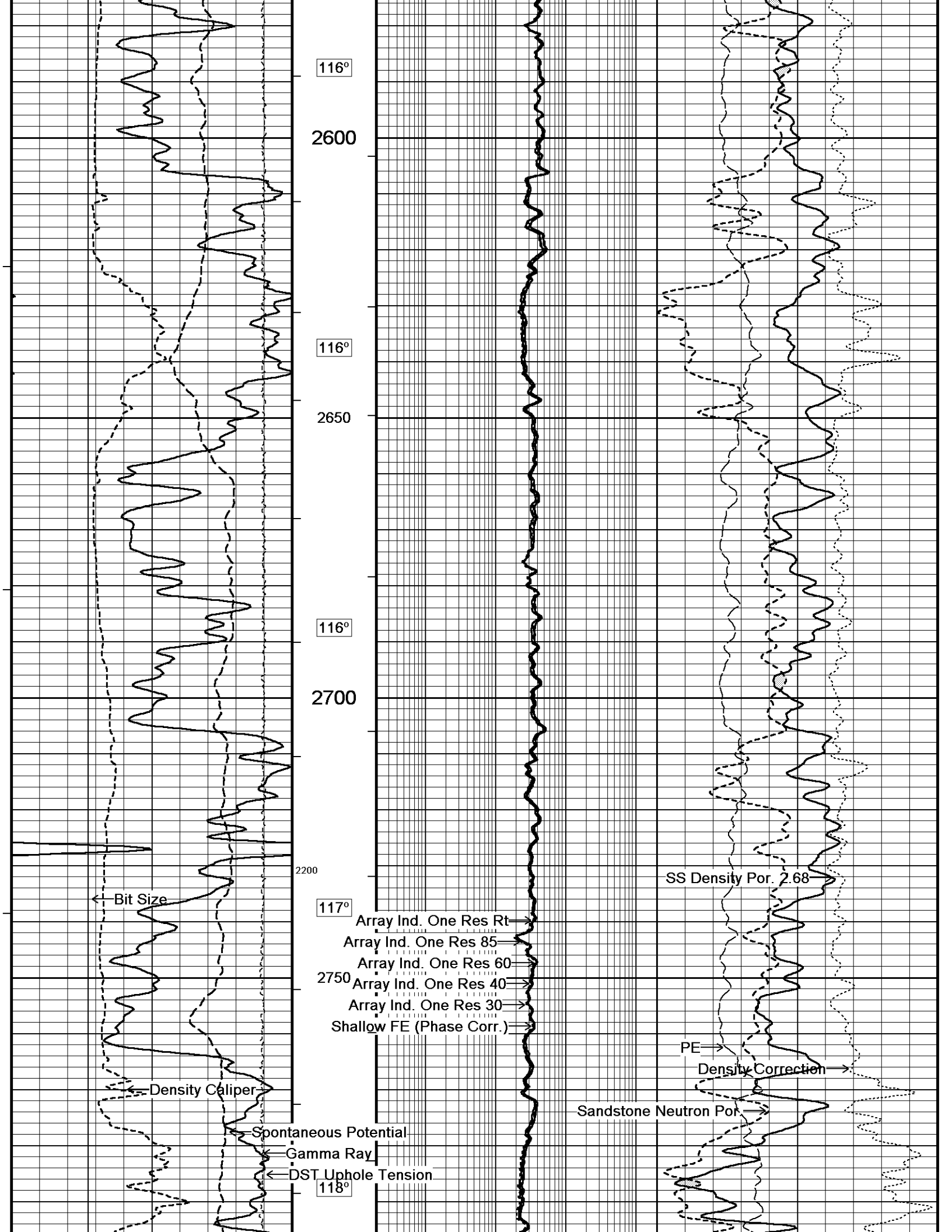


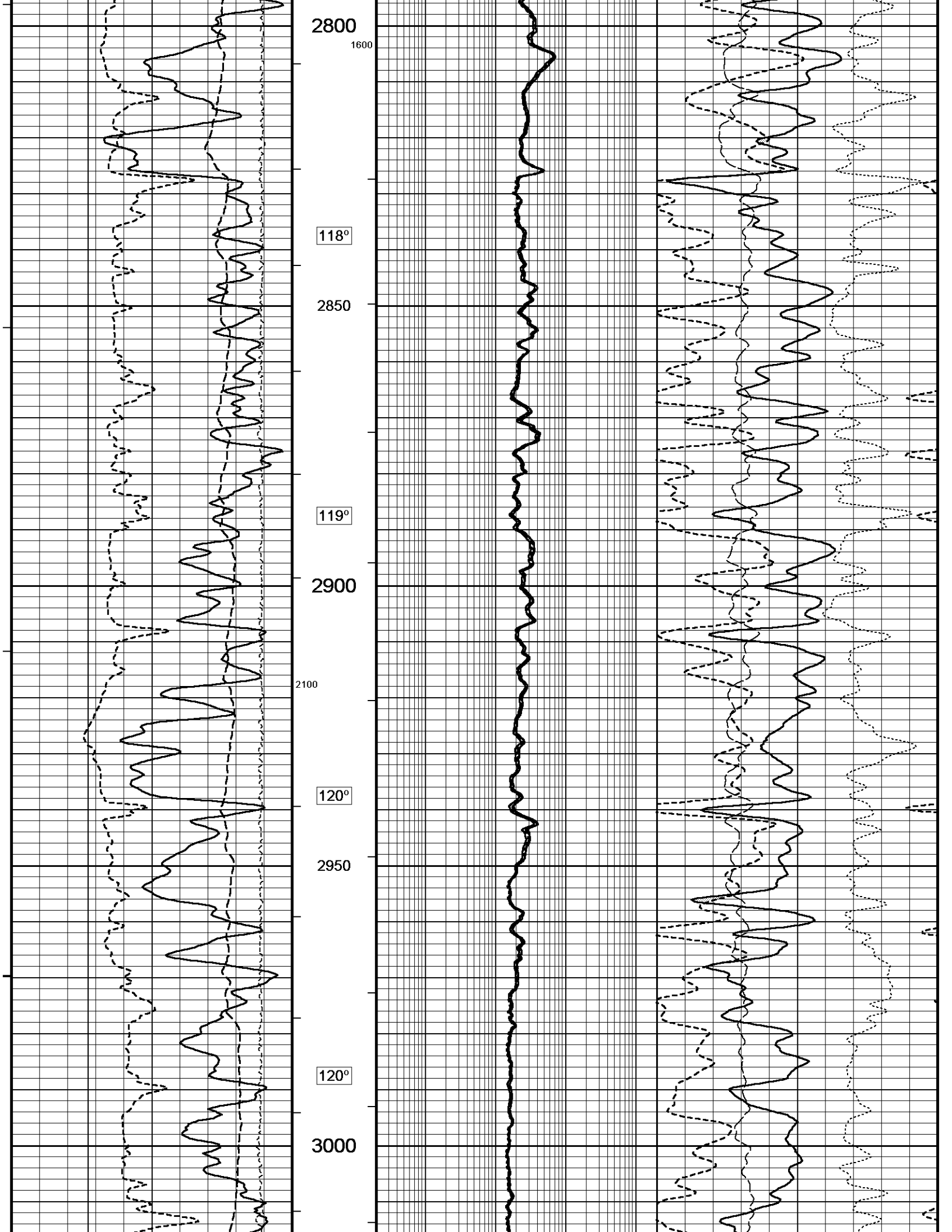


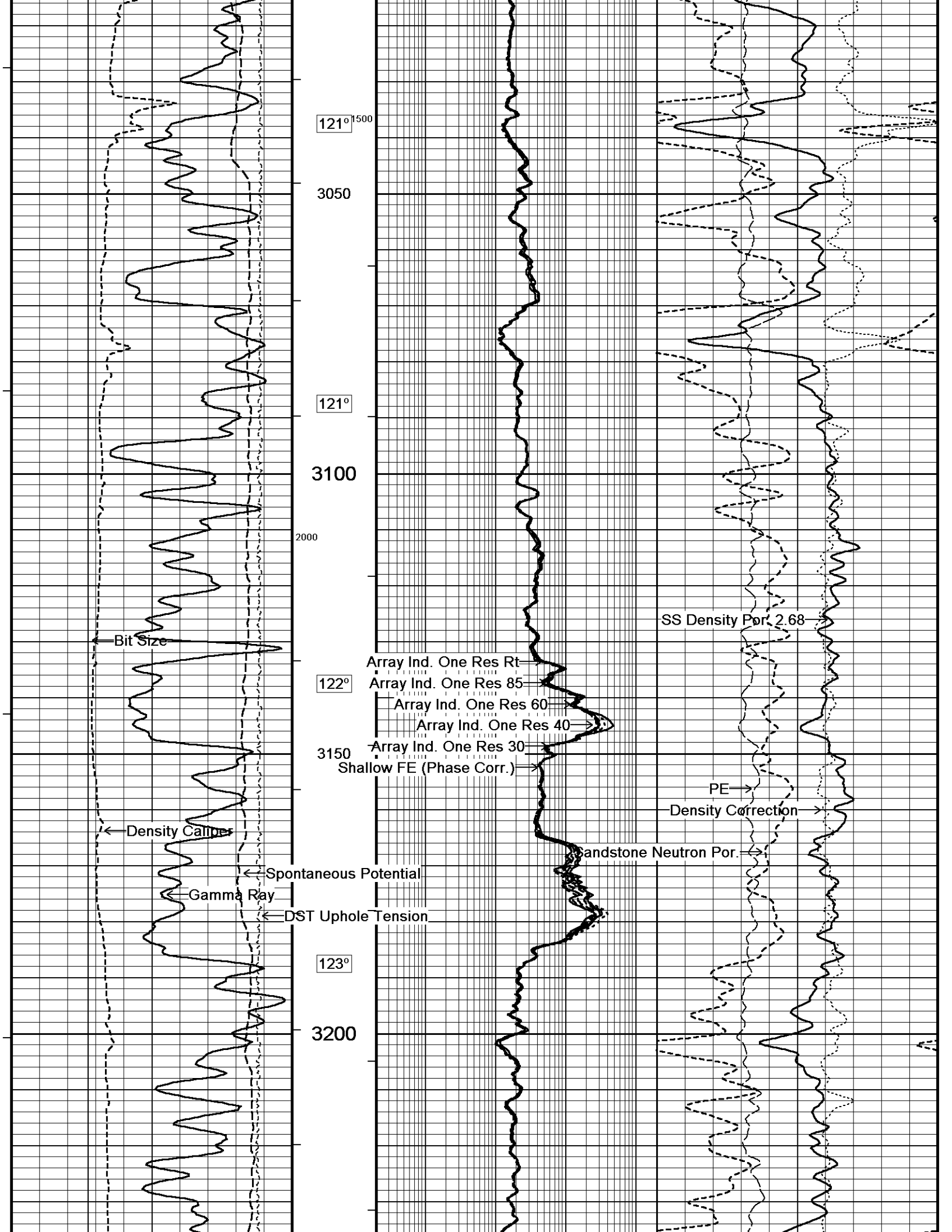


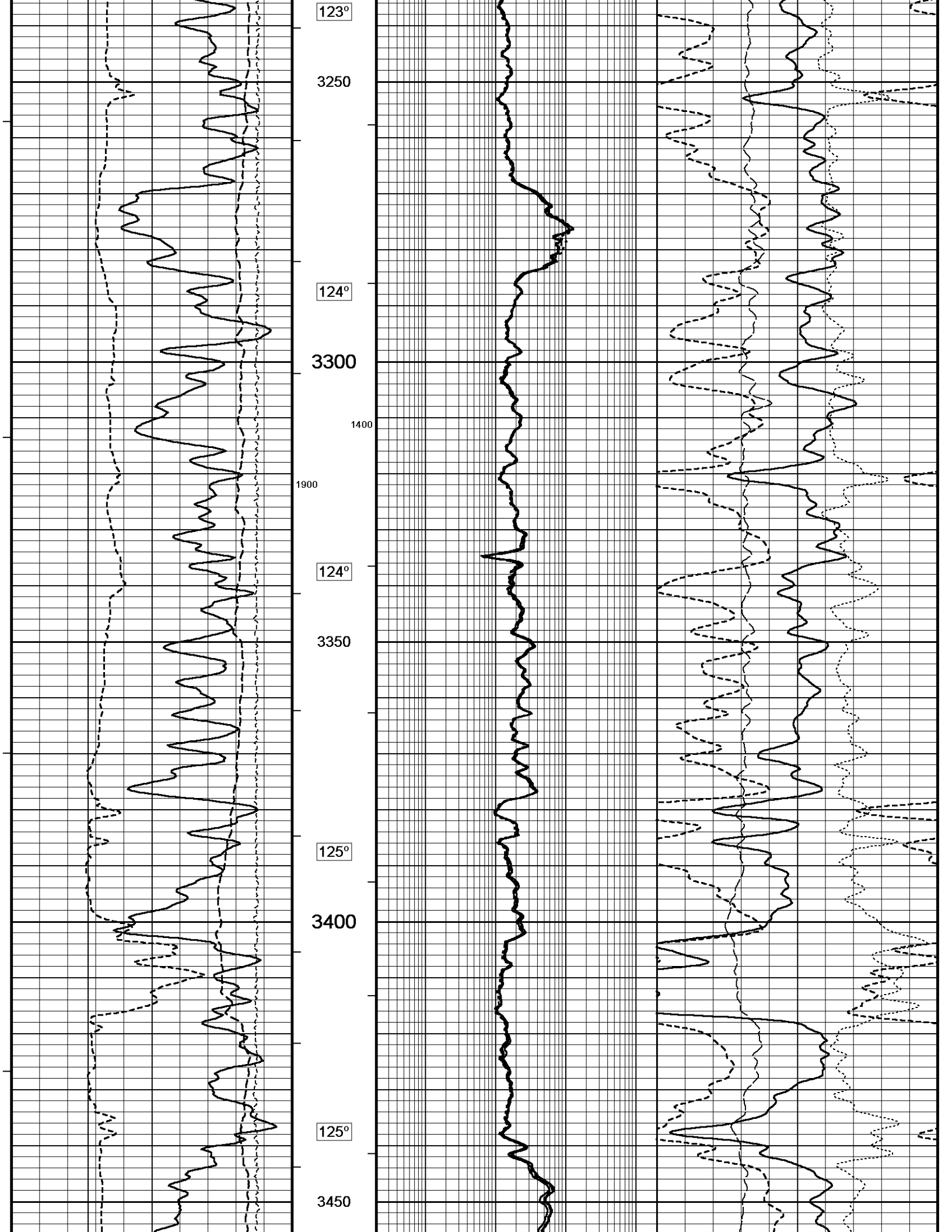


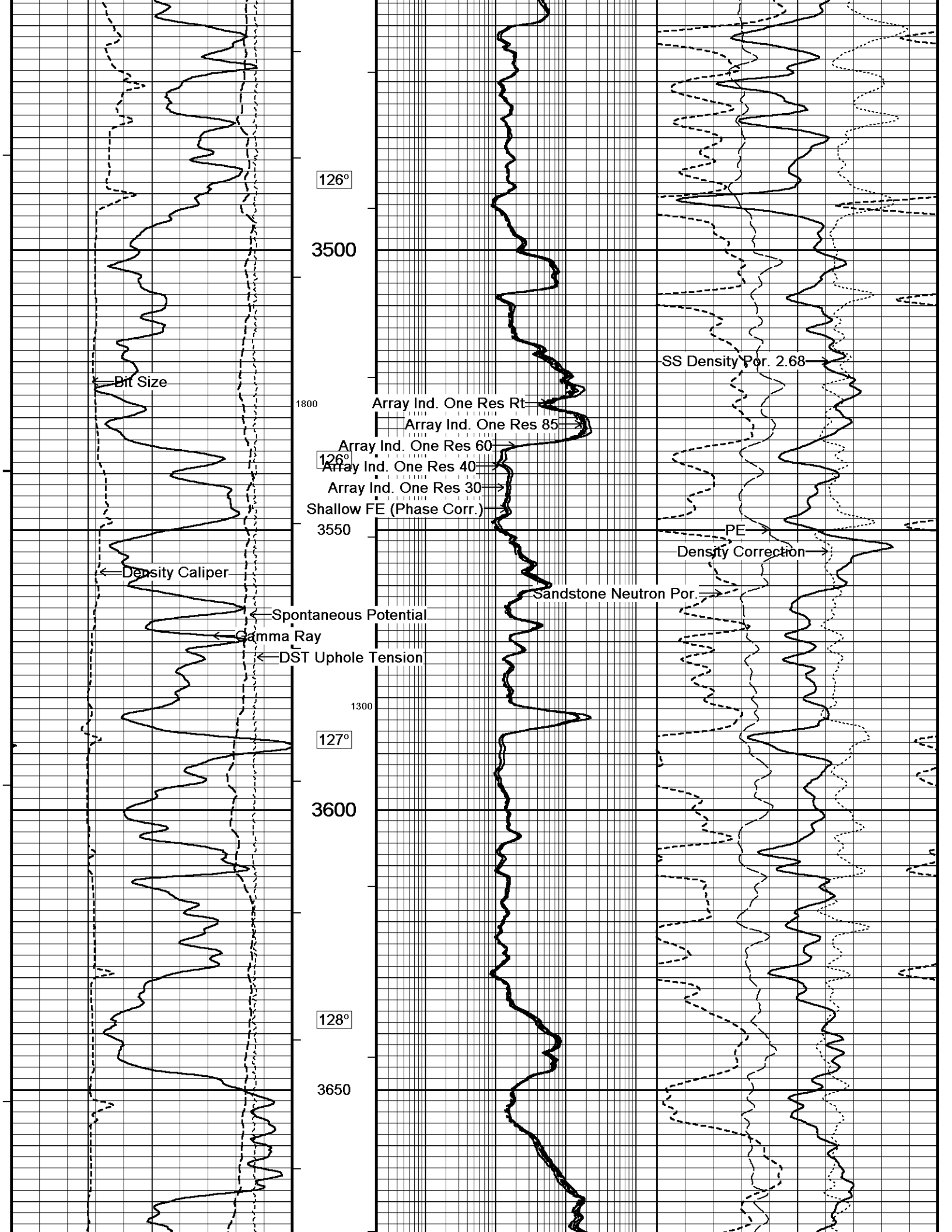


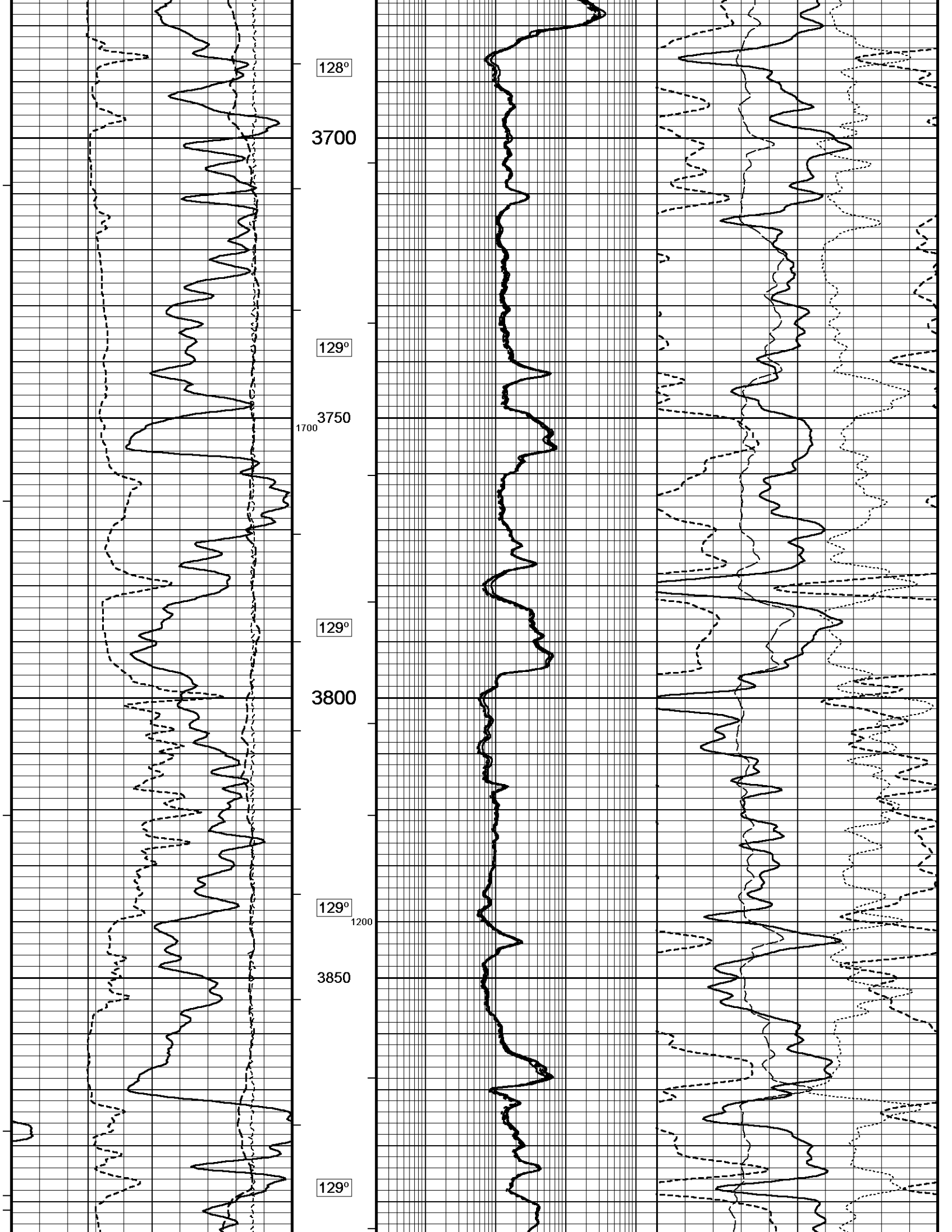


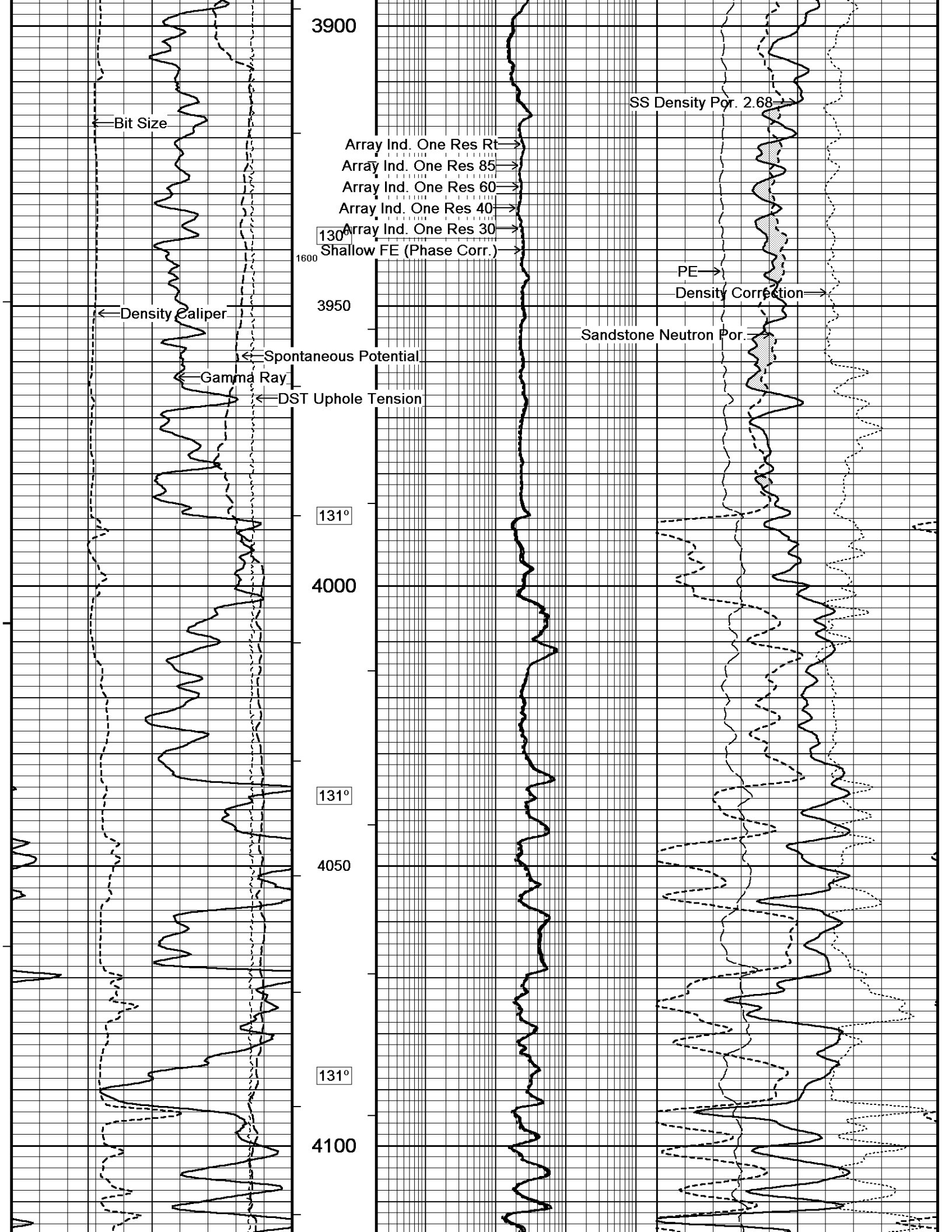


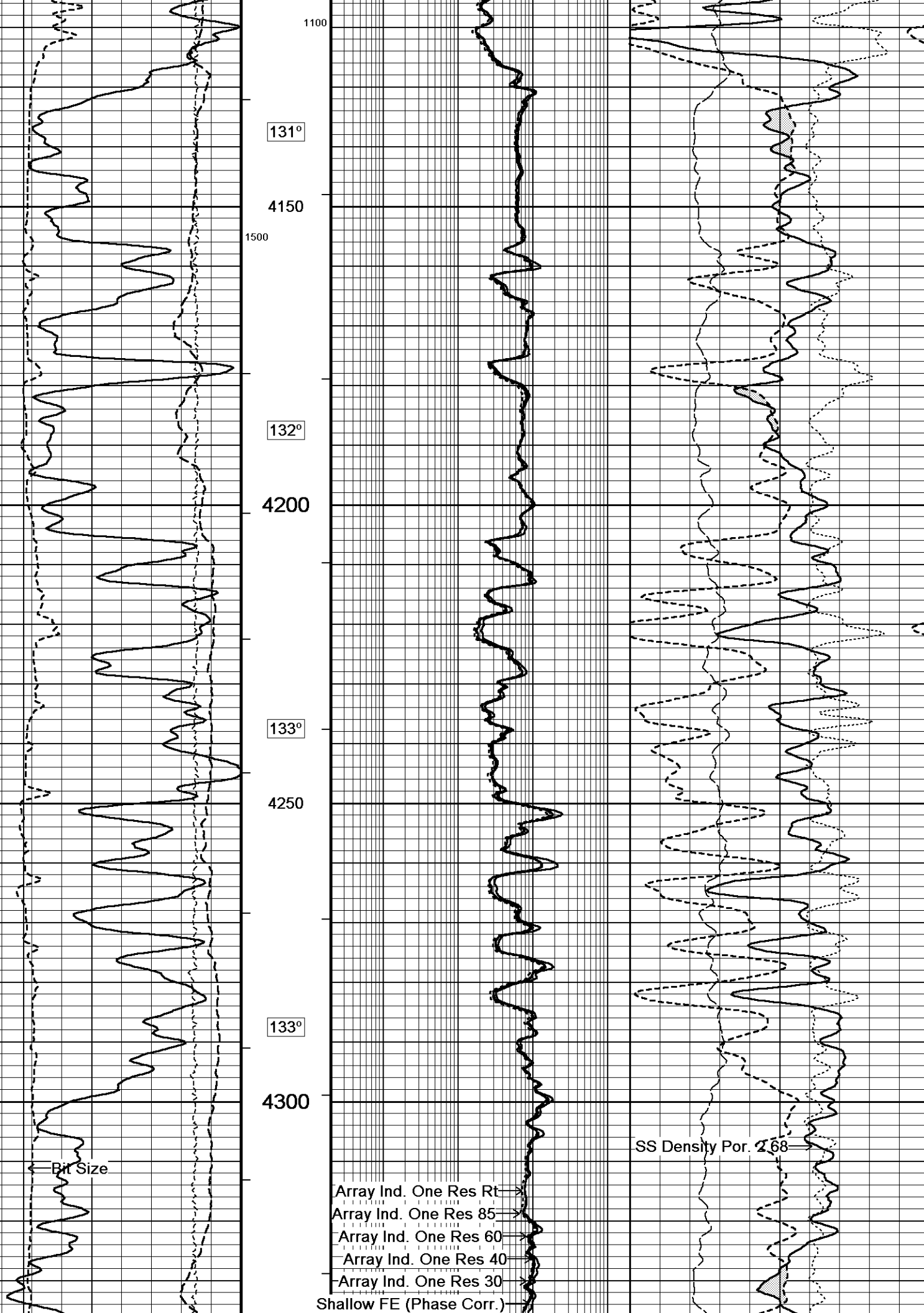


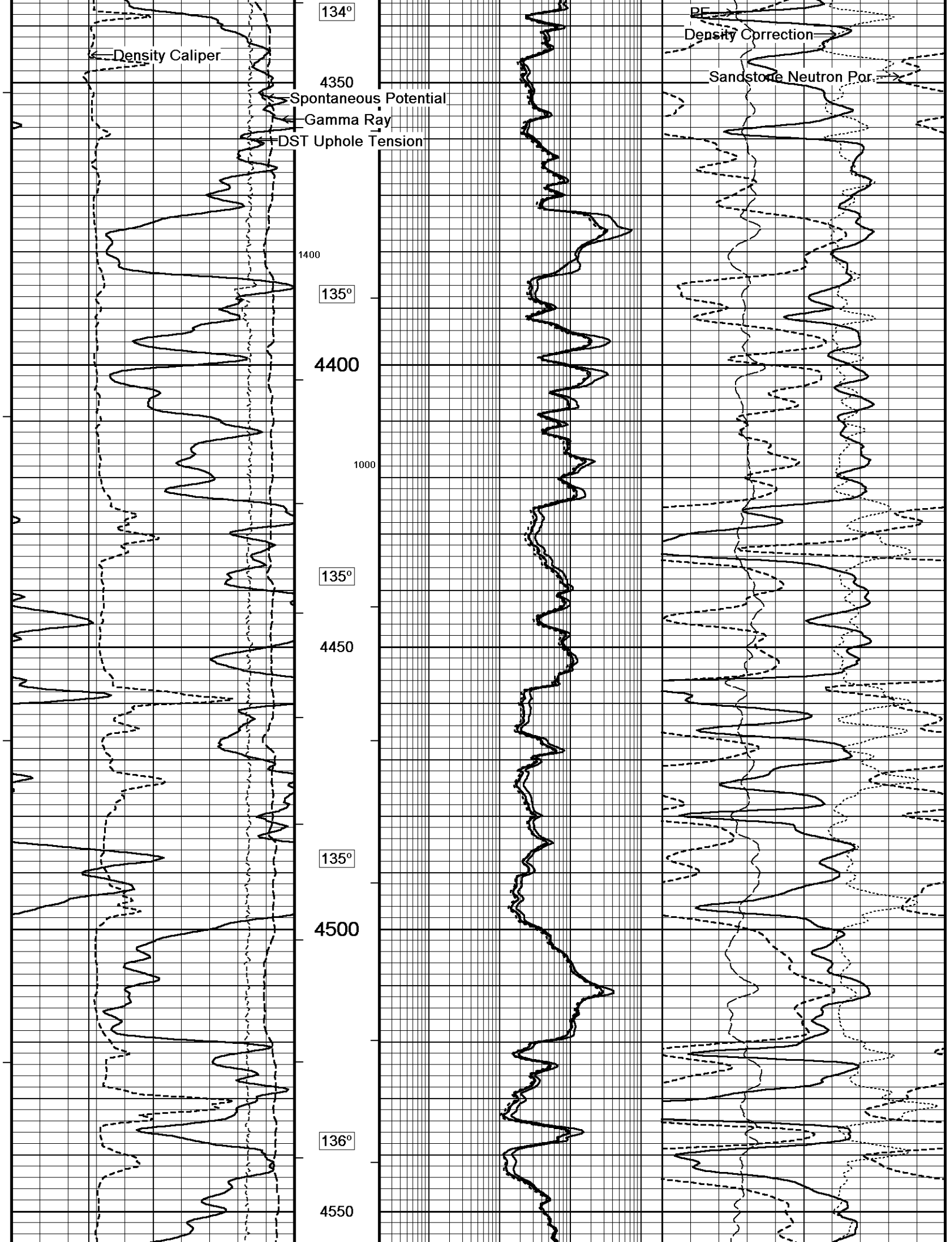


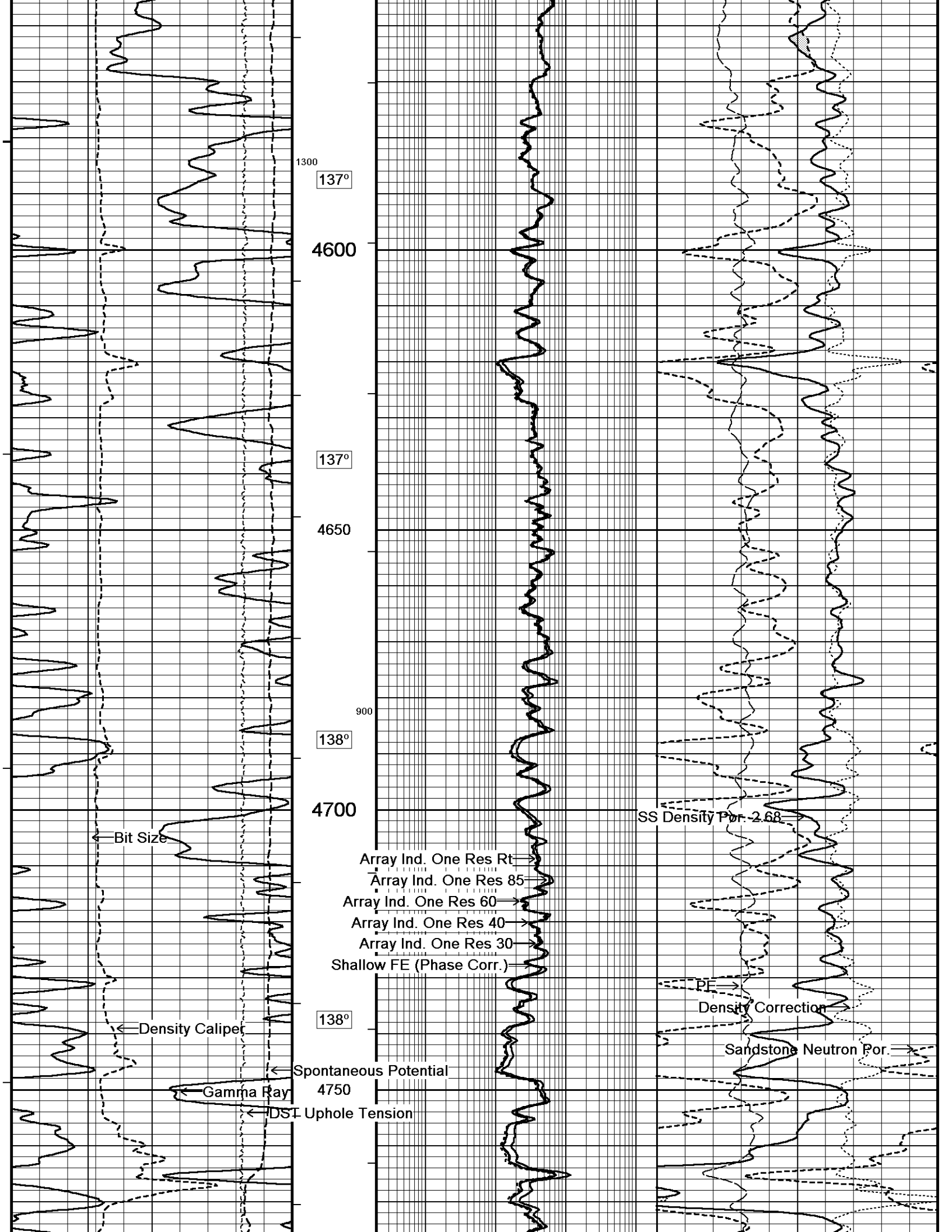


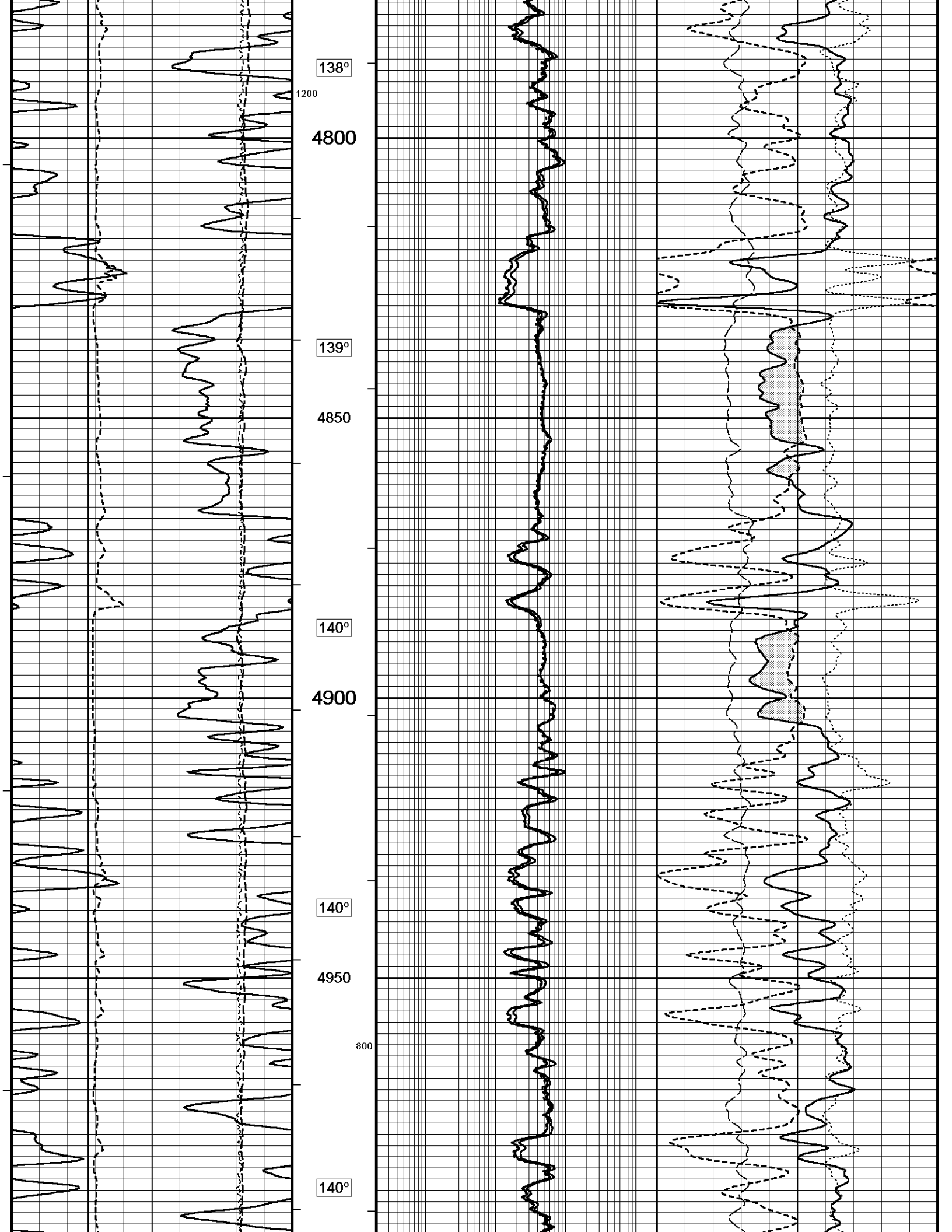


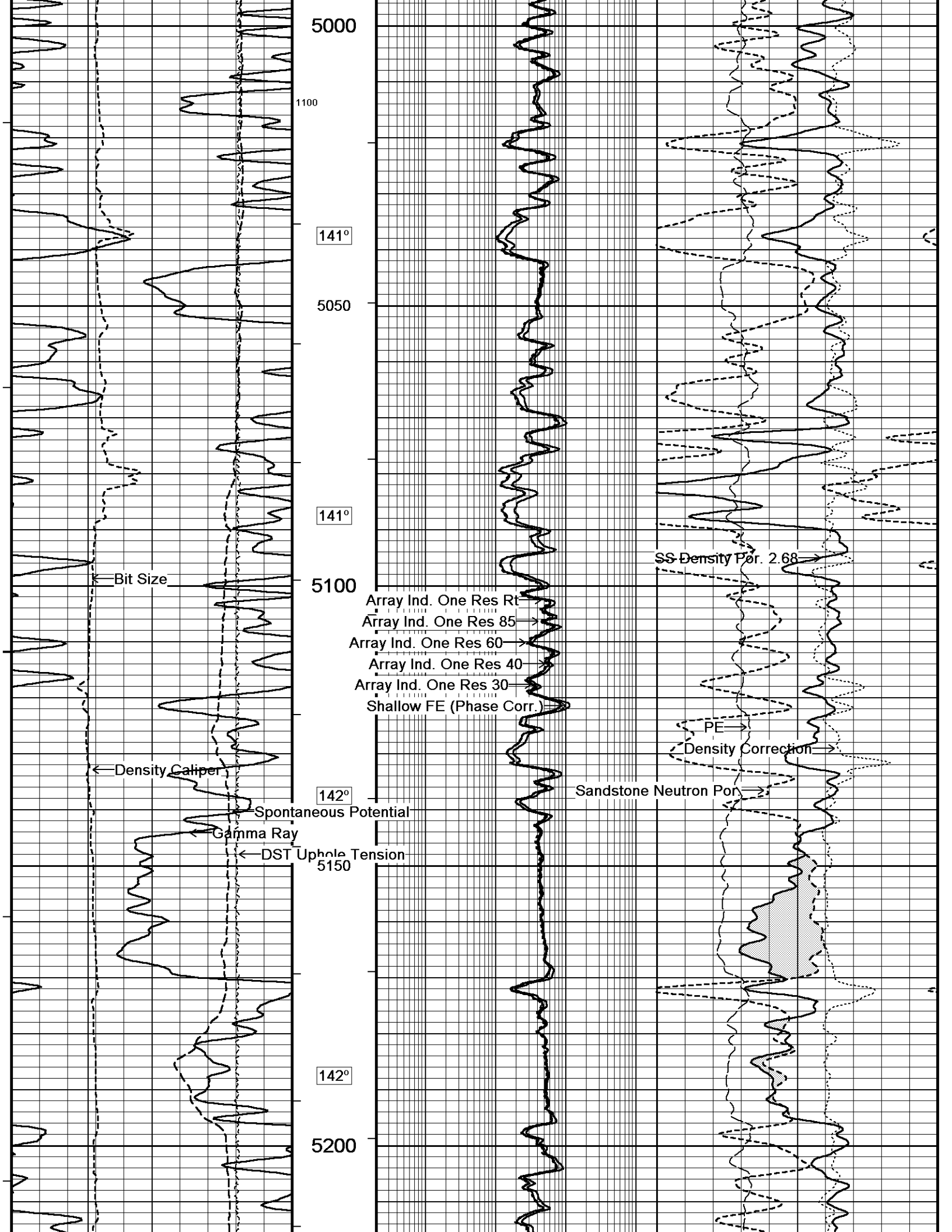


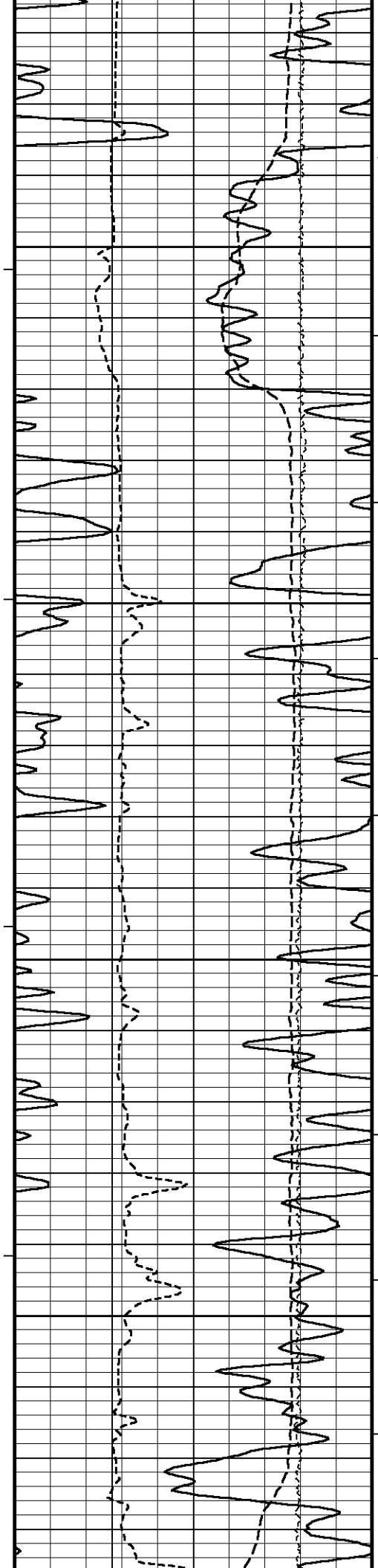












1000 143°

5250

700

144°

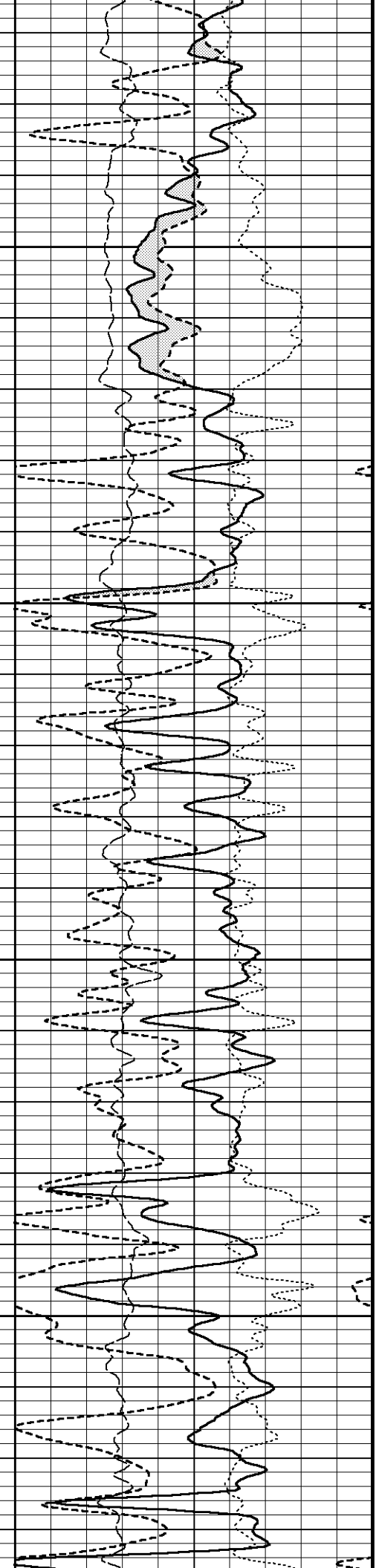
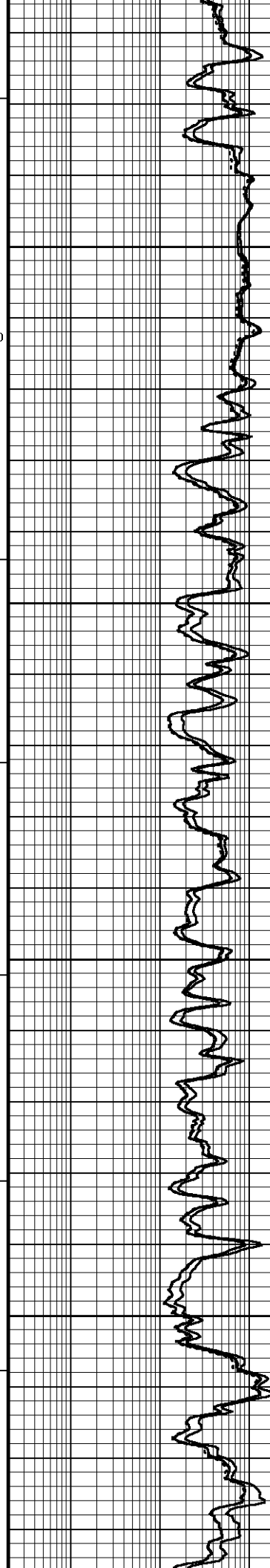
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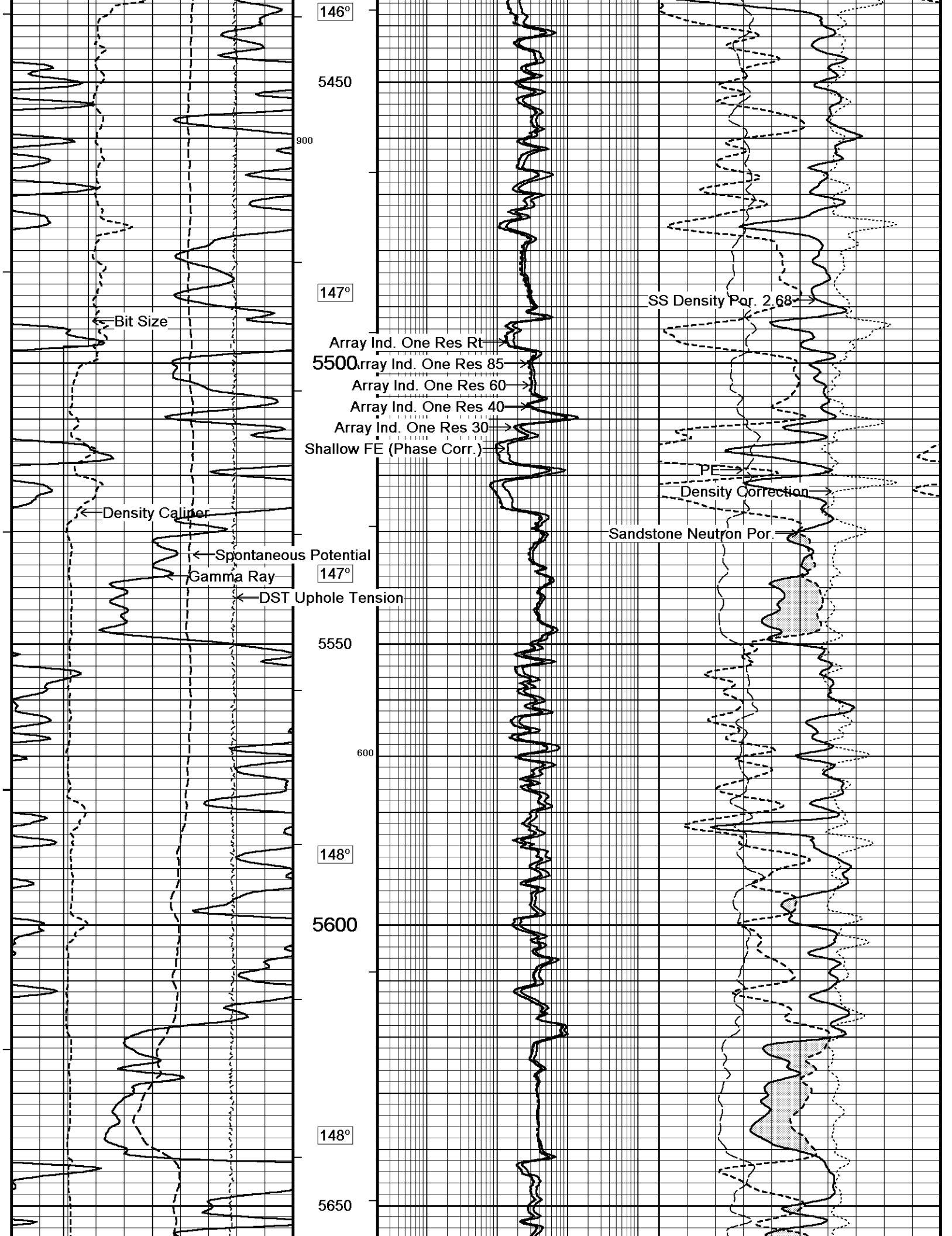
145°

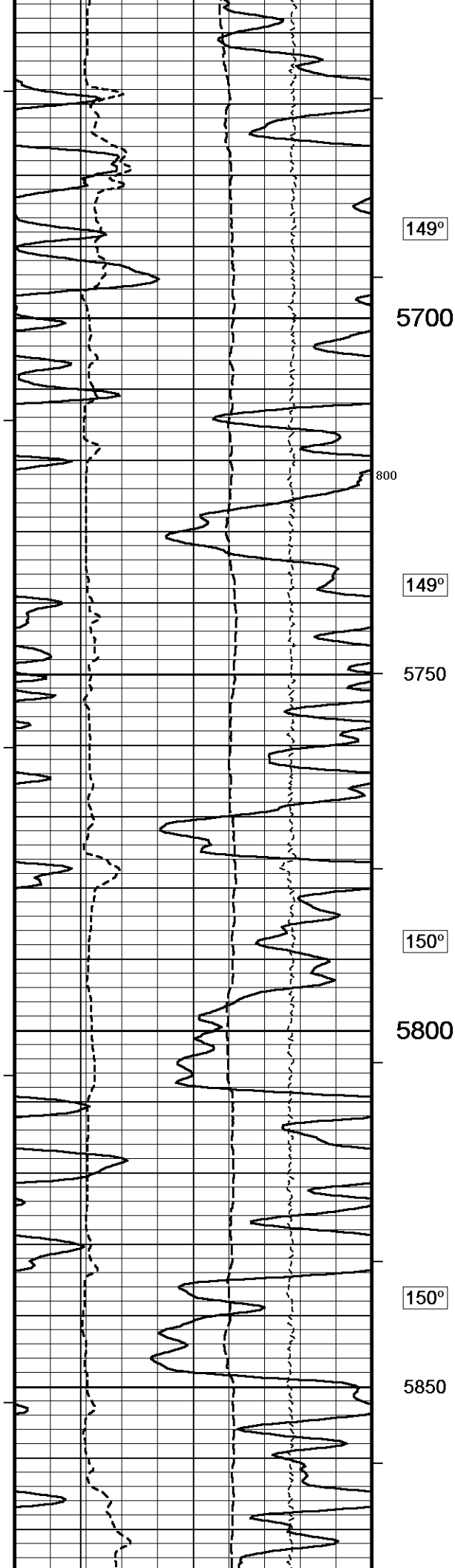
5350

145°

5400







149°

5700

800

149°

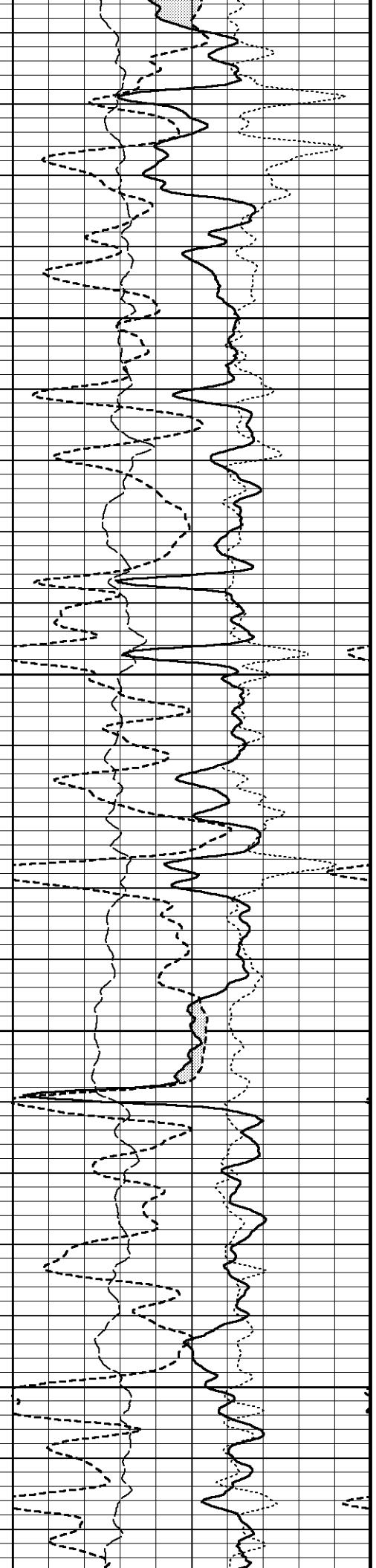
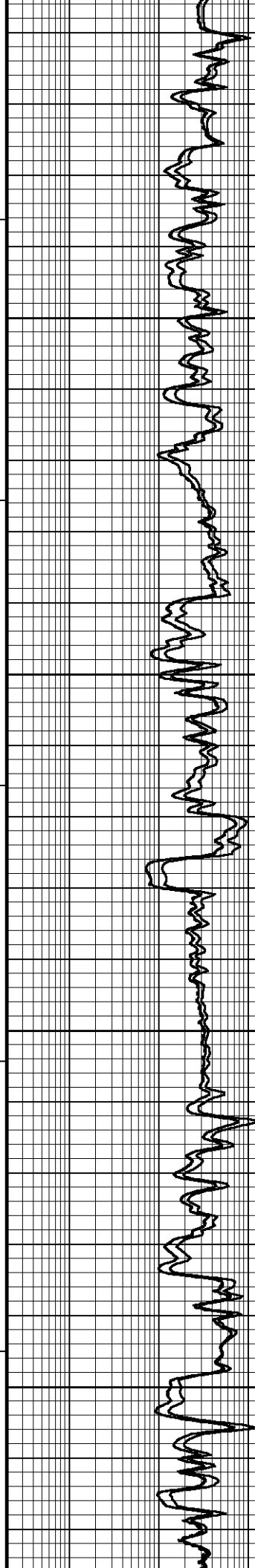
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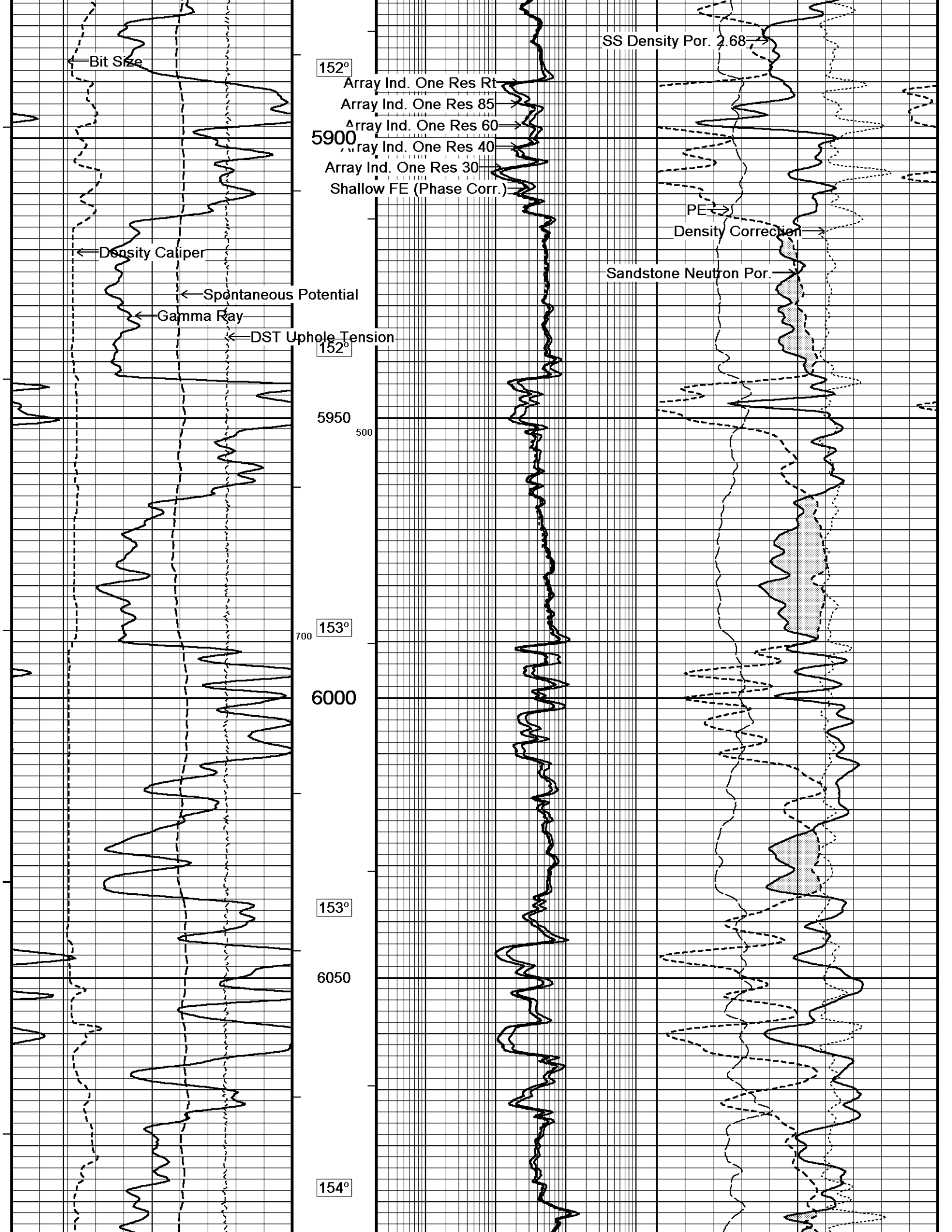
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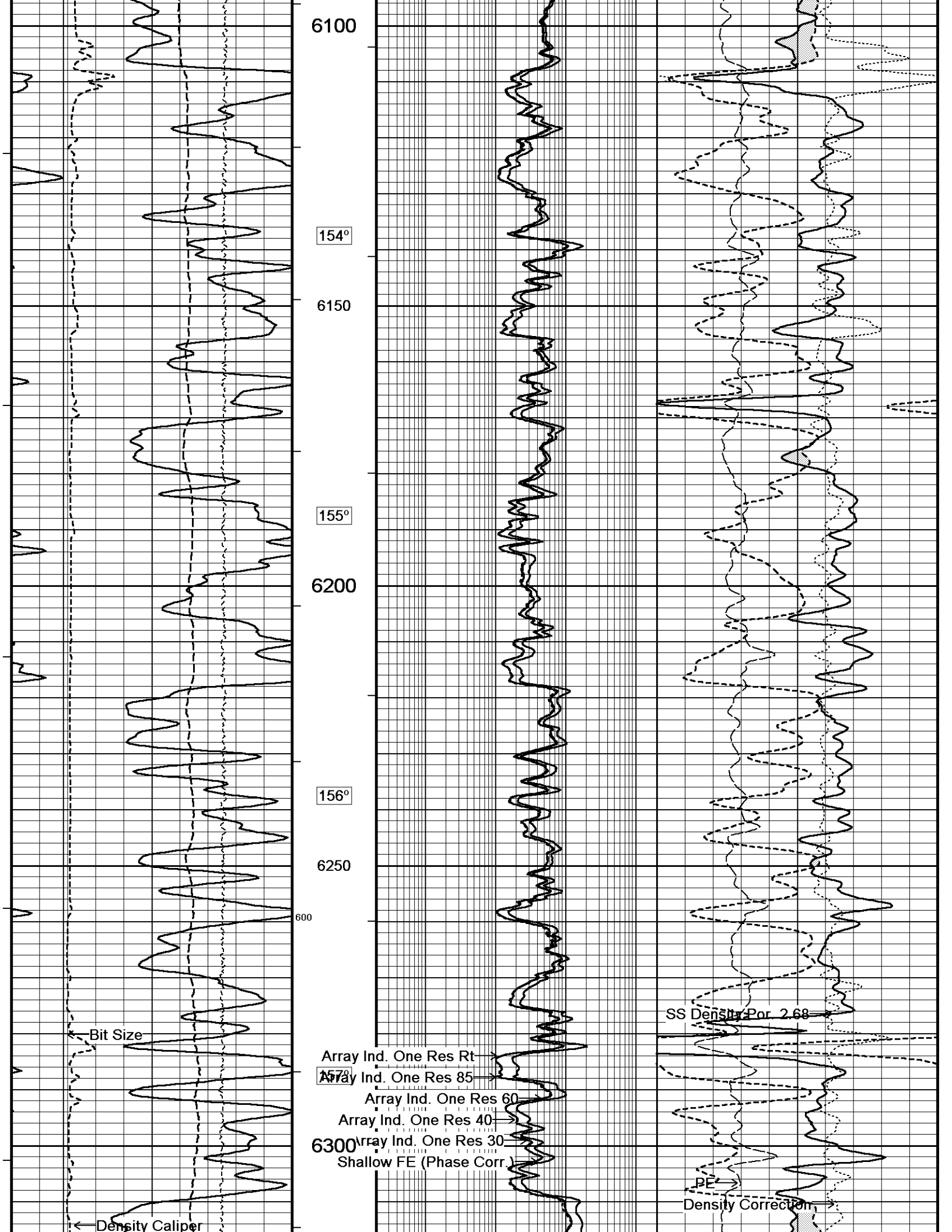
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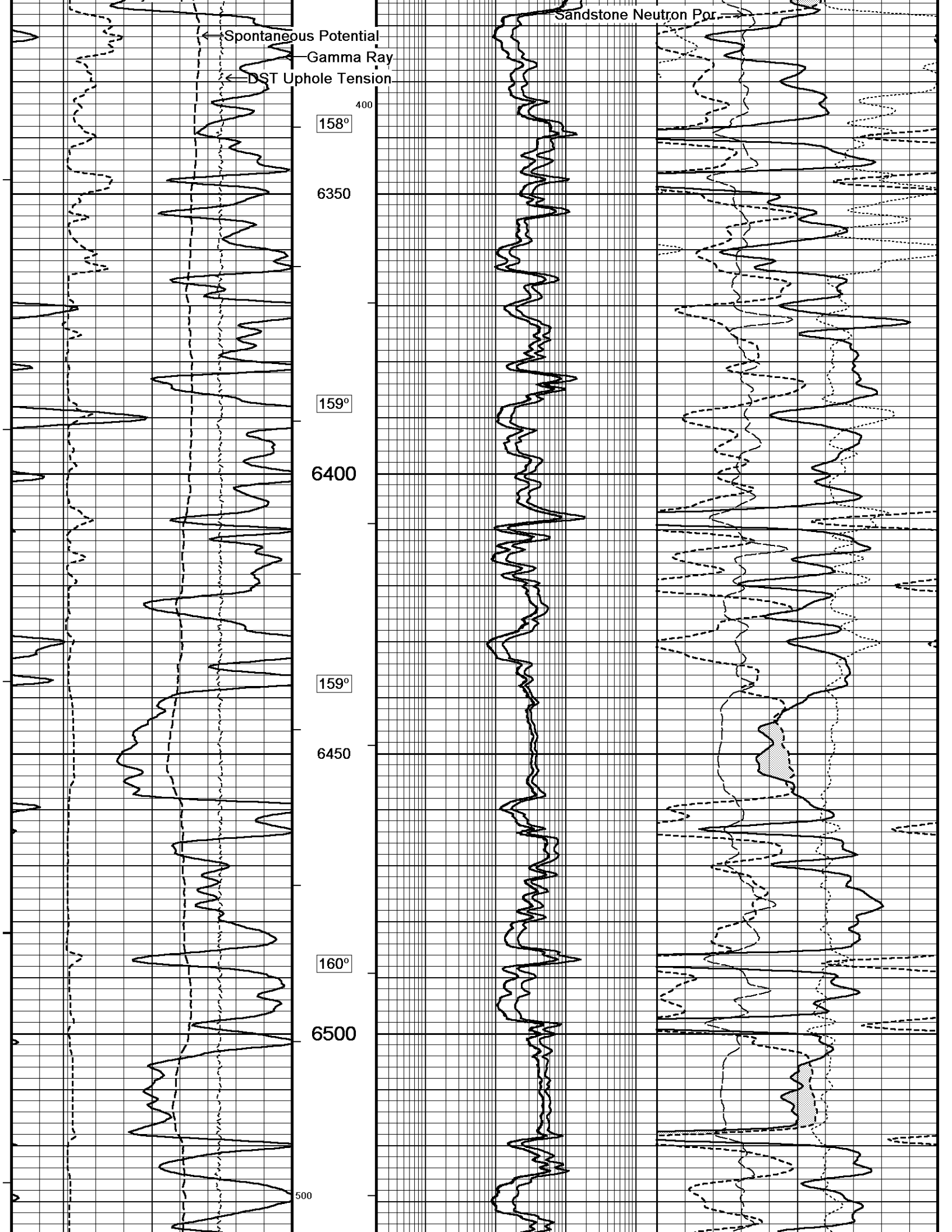
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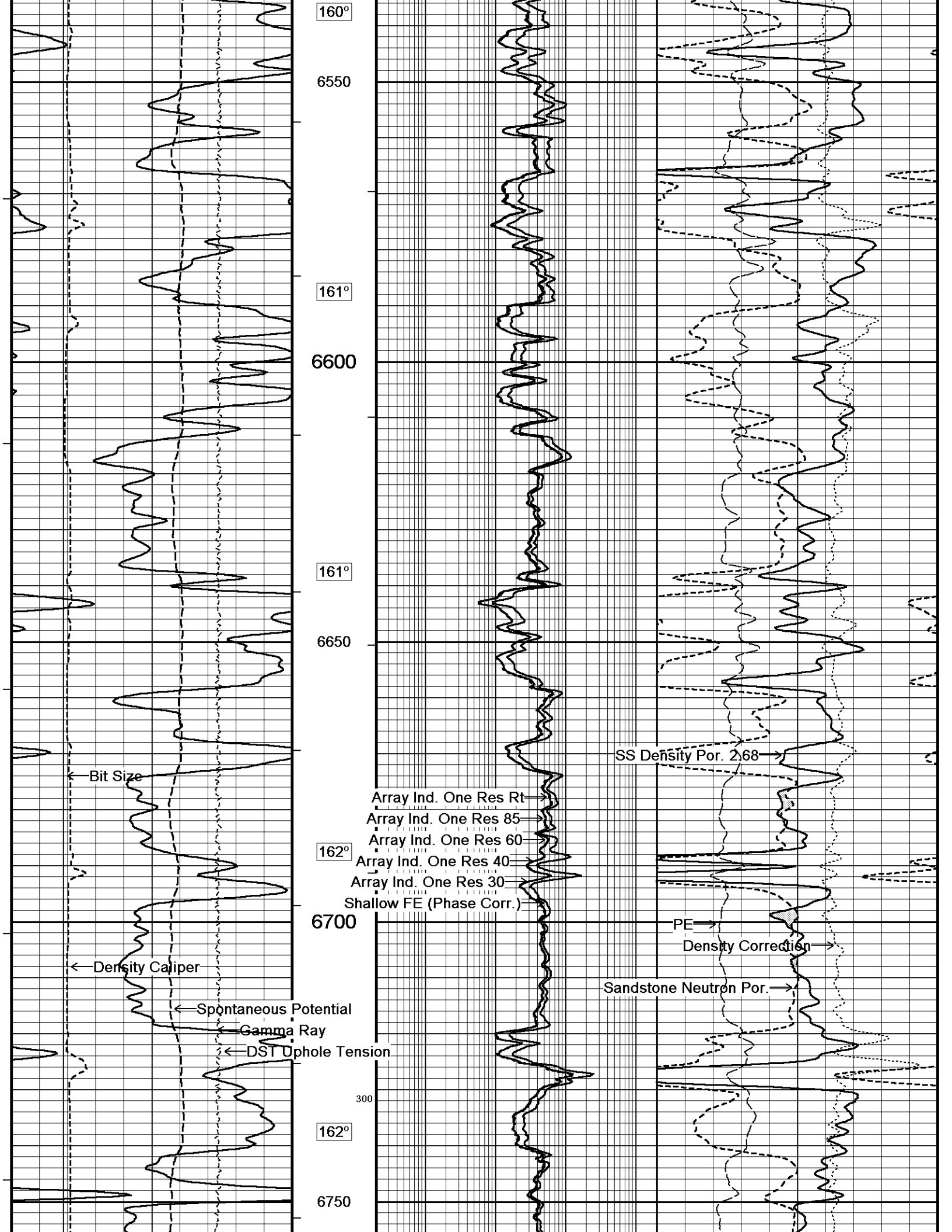
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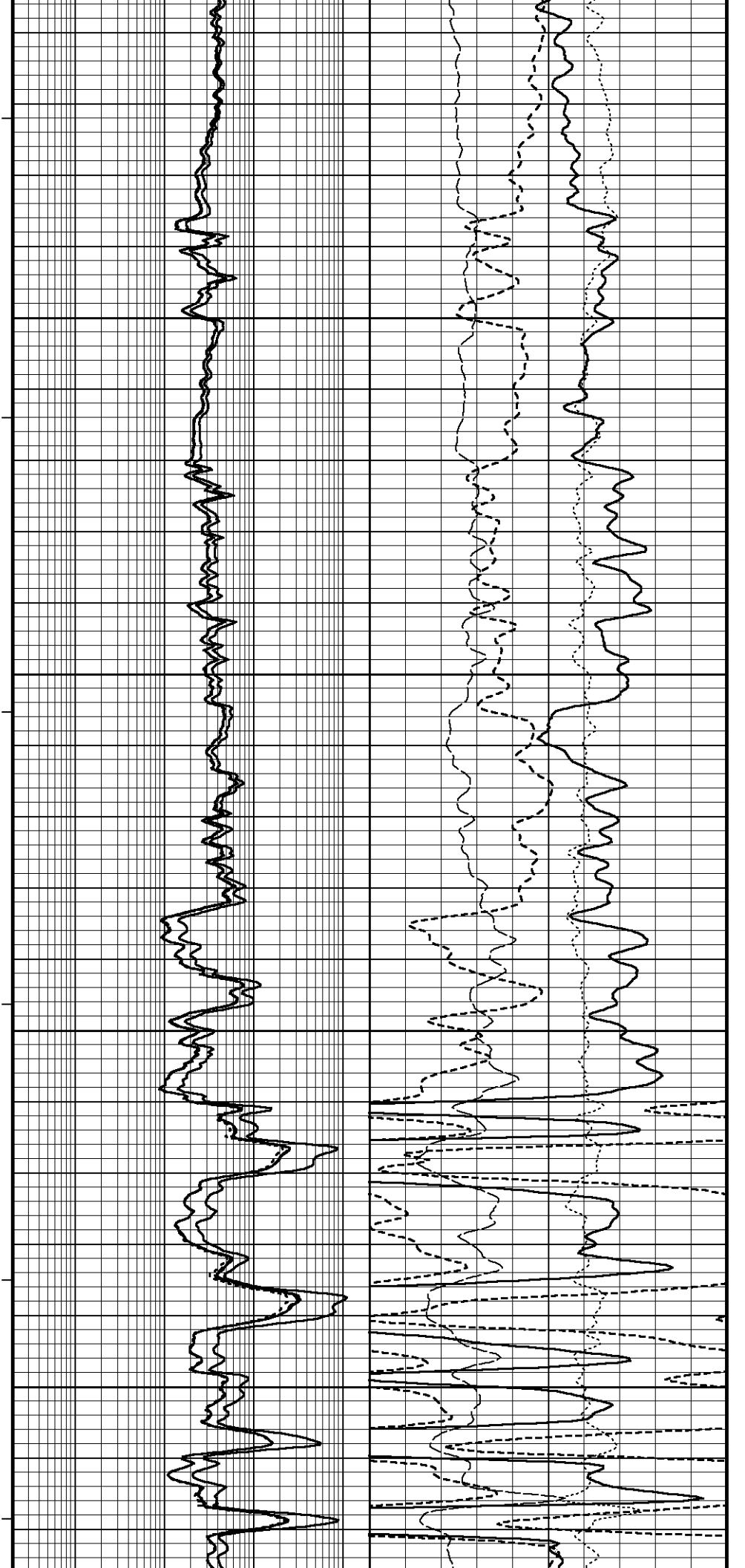
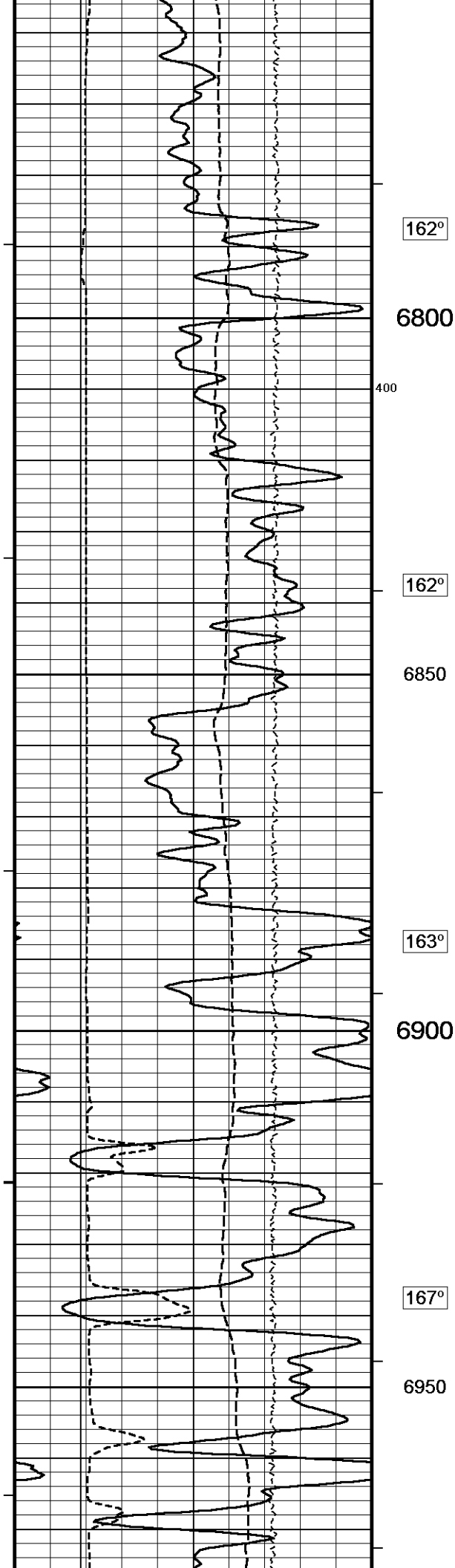


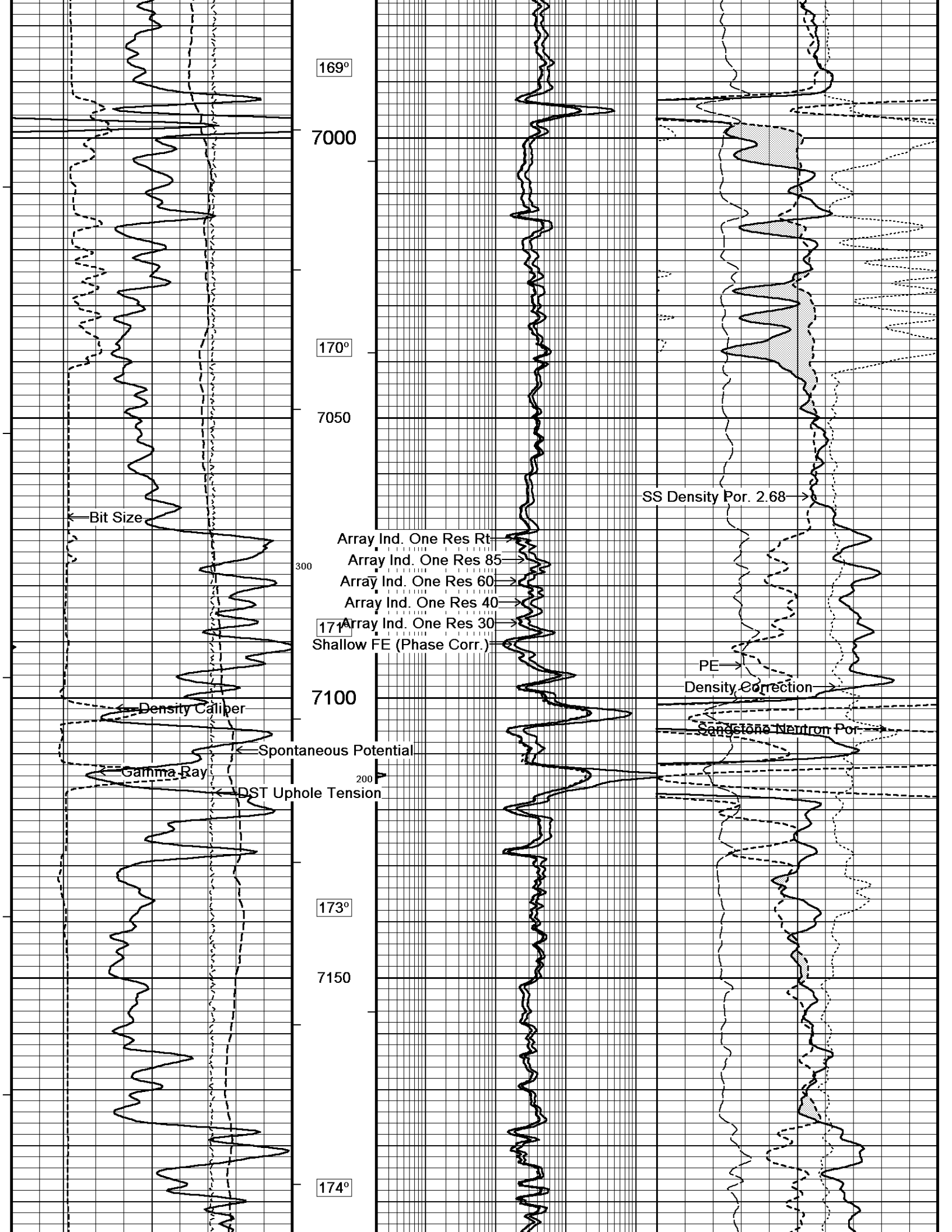


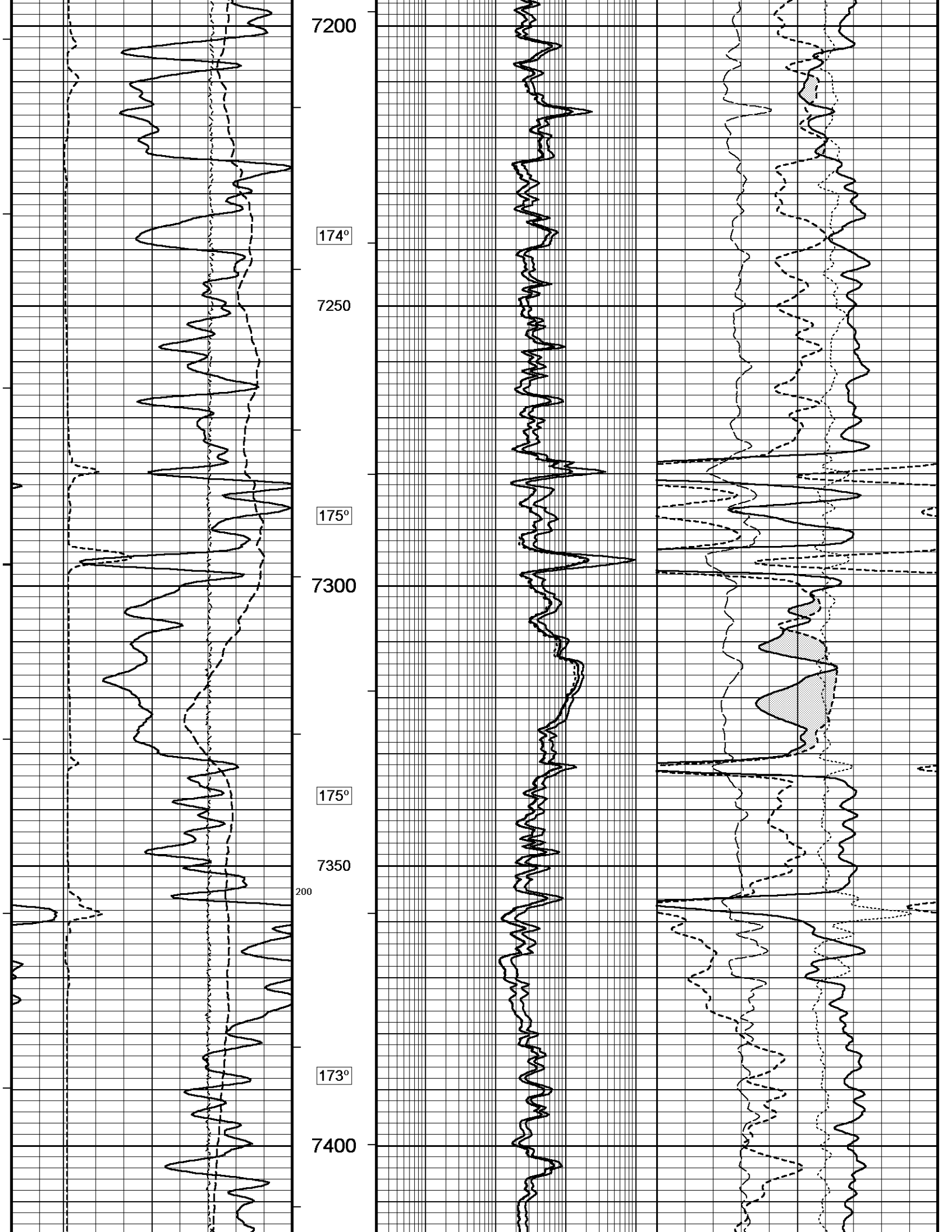


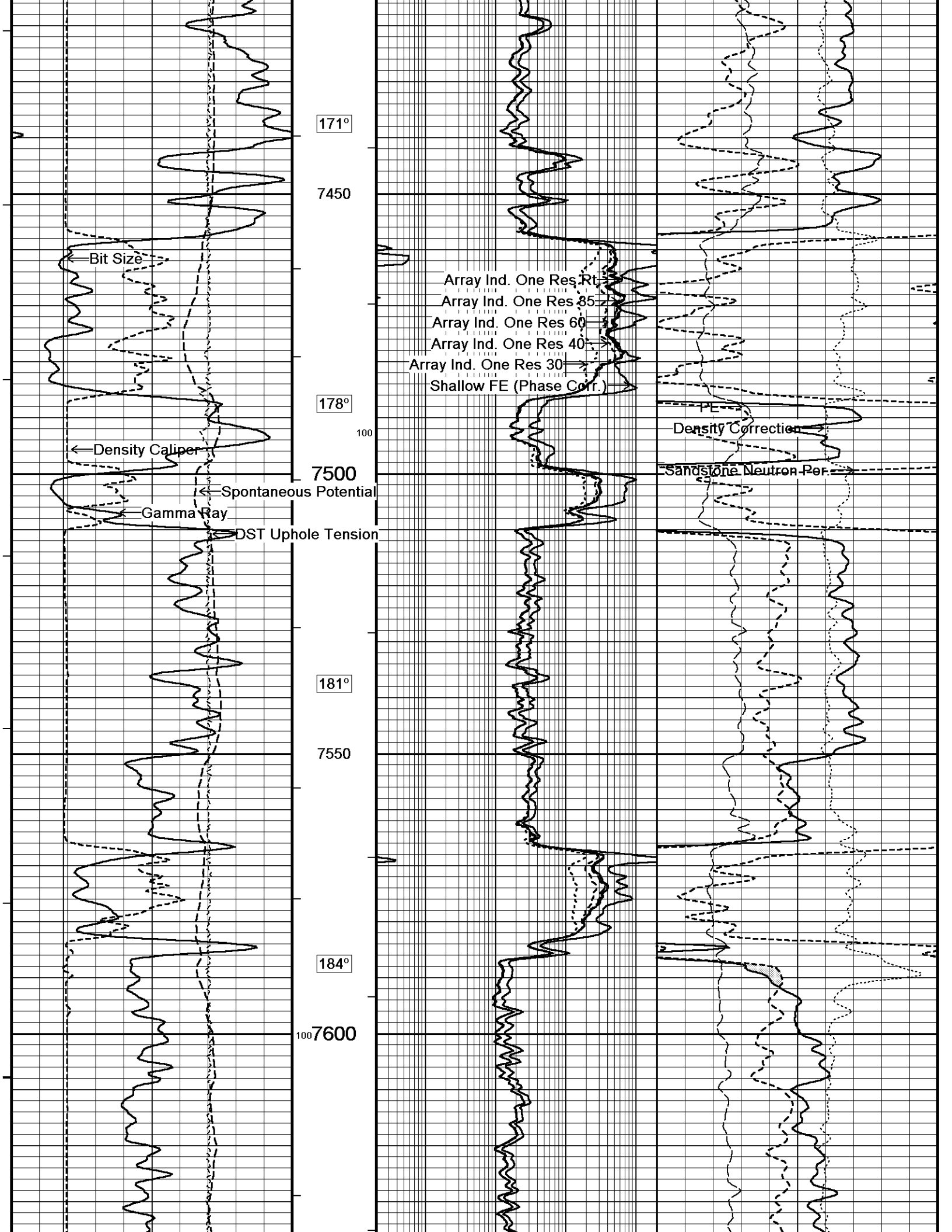


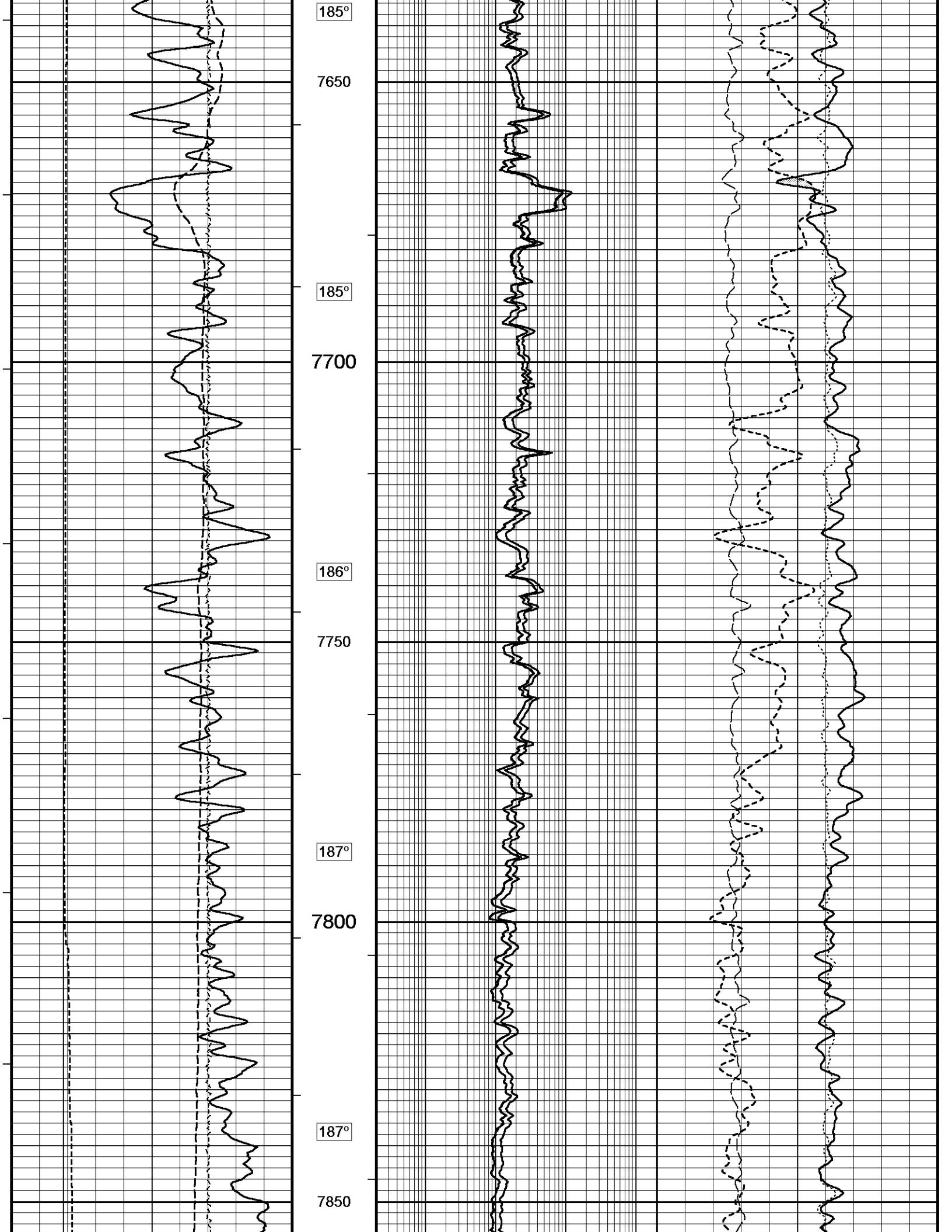


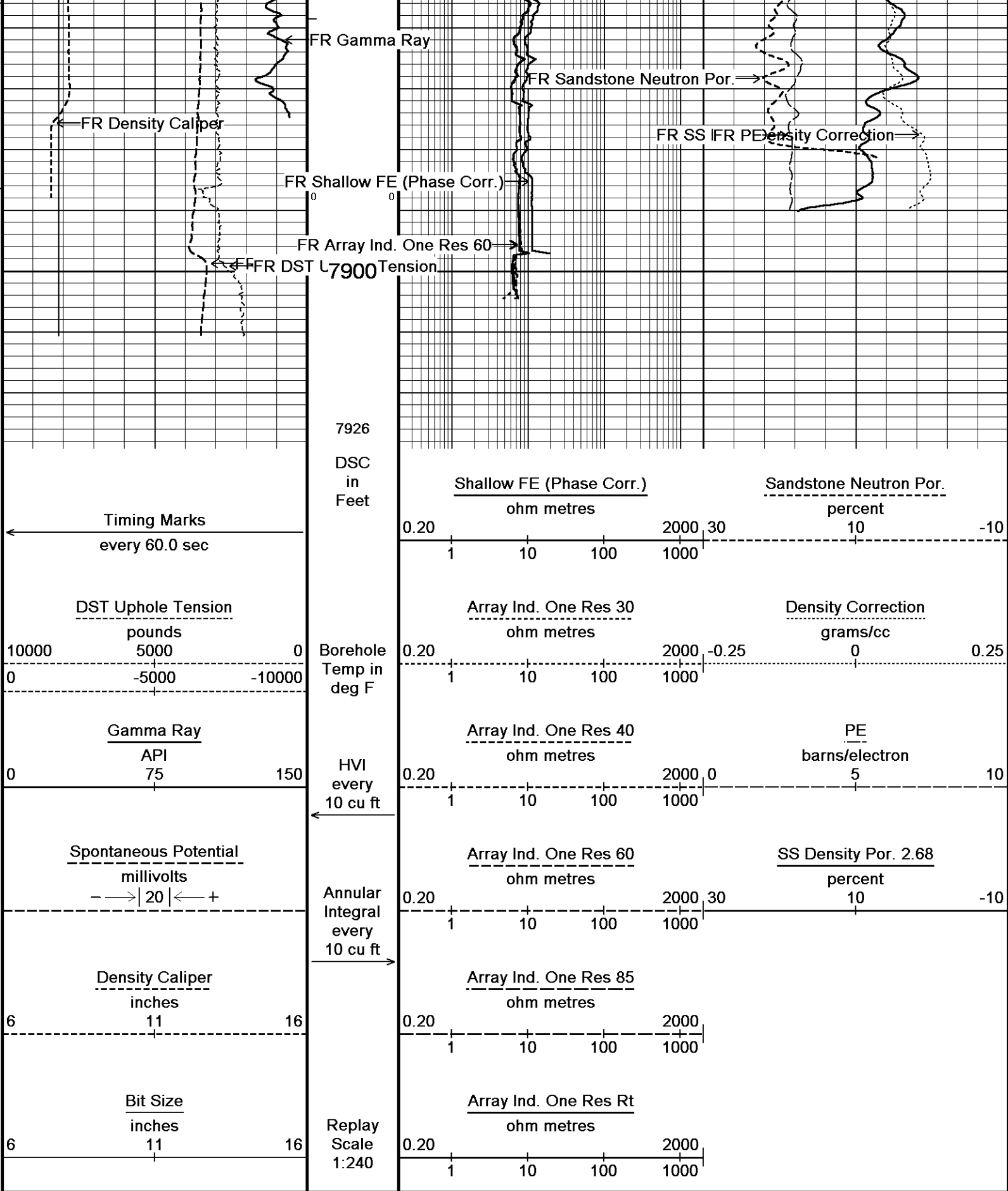


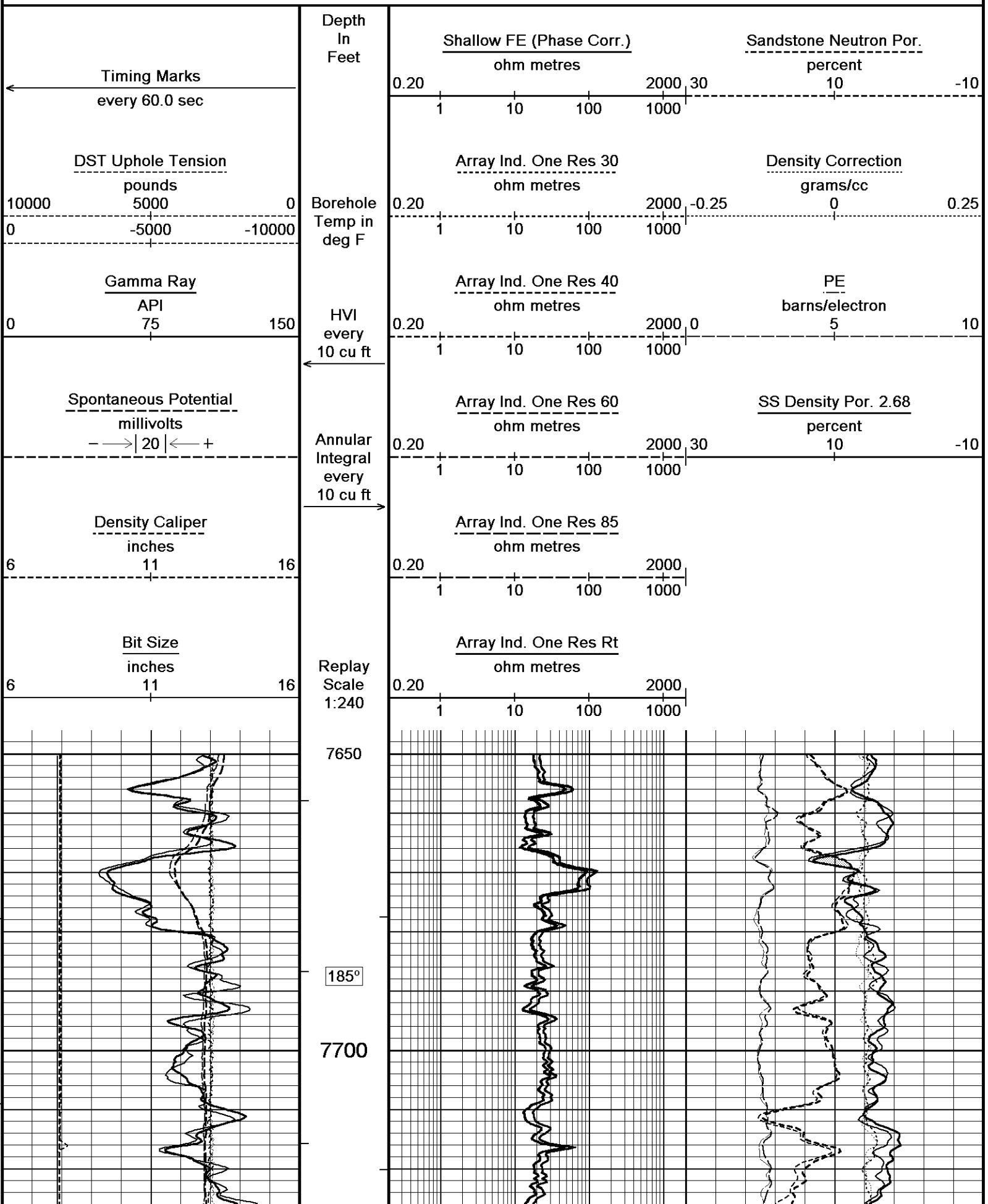


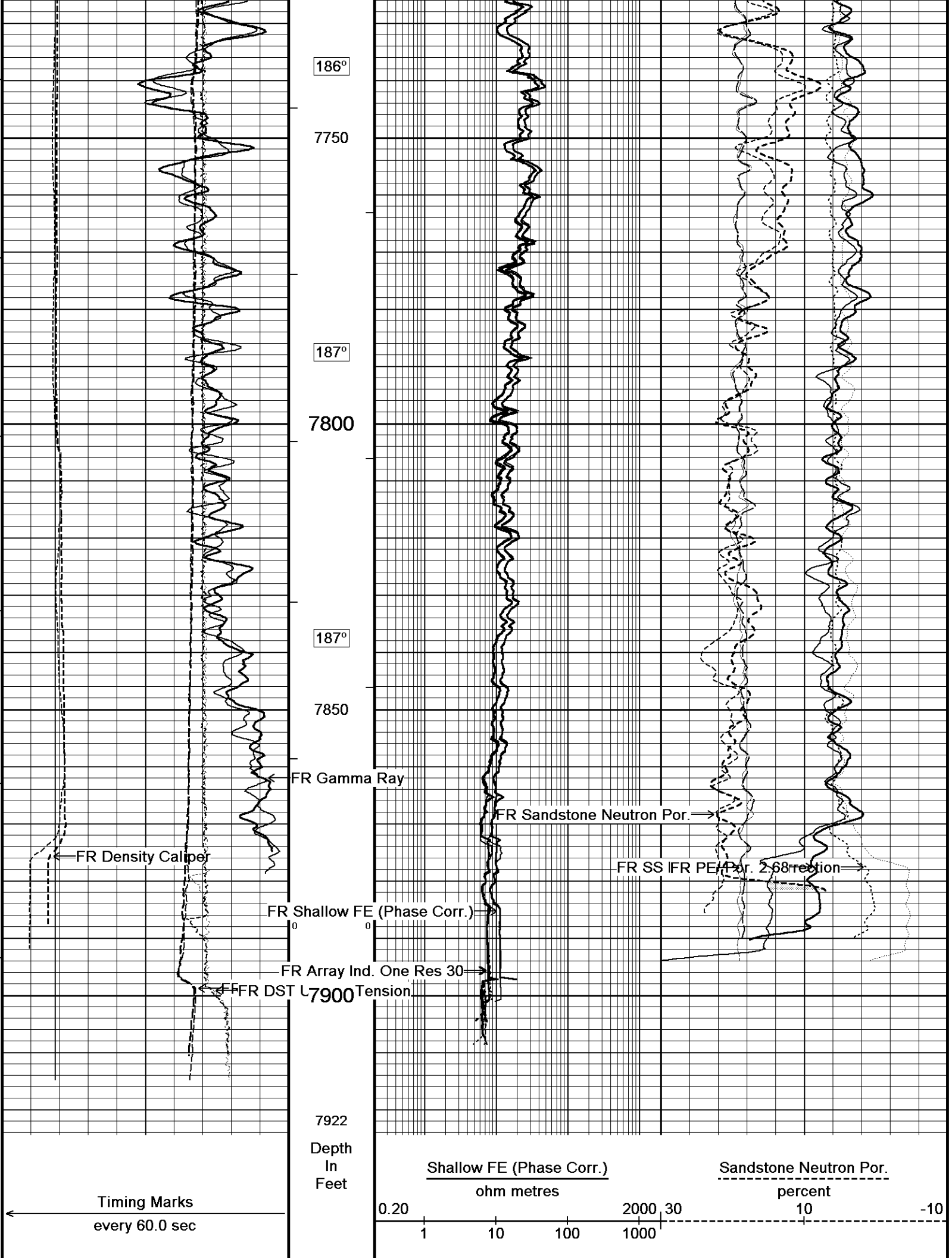


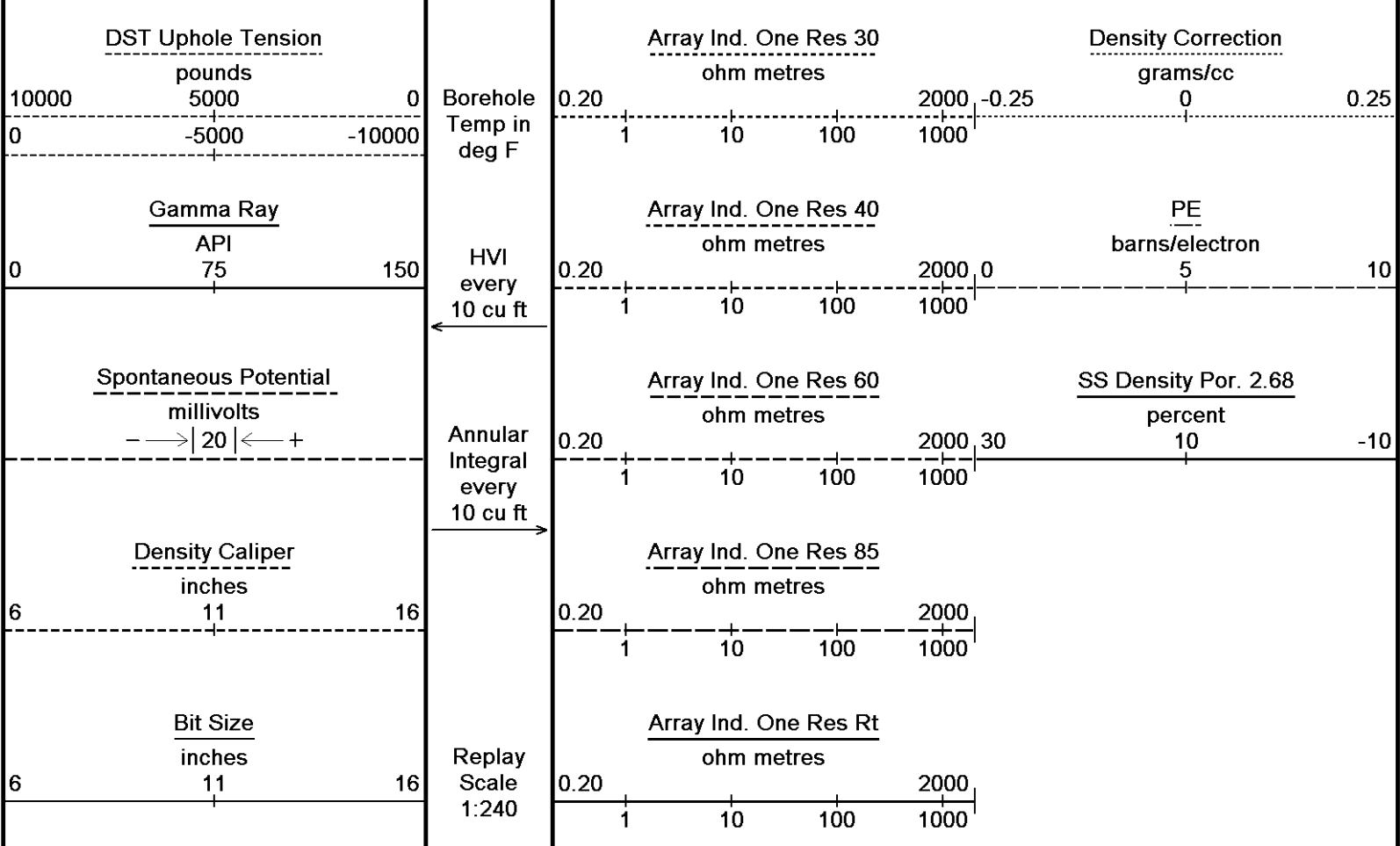












Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 19-DEC-2011 17:45

Filename: C:\Logs\Bill Barrett\Dec 2011\GGU Kaufman 32D-30-691\GGU Kaufman 32D-30-691 Main.dta

Recorded on 19-DEC-2011 14:45

Filename: C:\Logs\Bill Barrett\Dec 2011\GGU Kaufman 32D-30-691\GGU Kaufman 32D-30-691 Repeat.dta

Recorded on 19-DEC-2011 14:29

System Versions: Logged with 12.02.4401 Plotted with 12.02.4401

↑ OVERLAY ↑

BEFORE SURVEY CALIBRATION			
C:\Logs\Bill Barrett\Dec 2011\GGU Kaufman 32D-30-691\GGU Kaufman 32D-30-691 Main.dta			
General Constants All 000		Last Edited on 19-DEC-2011 12:04	
General Parameters			
Mud Resistivity	4.000	ohm-metres	
Mud Resistivity Temperature	91.500	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	Density Caliper		
Rwa Parameters			
Porosity used	Base Density Porosity		
Resistivity used	Array Ind. One Res Rt		
RWA Constant A	0.610		
RWA Constant M	2.150		
High Resolution Temperature Calibration MCG-D.A 342		Field Calibration on 19-DEC-2011 11:38	
	Measured	Calibrated(Deg F)	
Lower	10.00	10.00	
Upper	75.00	75.00	

Pre-filter Length 11

Gamma Calibration MCG-D.A 342

Field Calibration on 19-DEC-2011 11:38

	Measured	Calibrated (API)
Background	121	81
Calibrator (Gross)	903	608
Calibrator (Net)	782	527

Gamma Constants MCG-D.A 342

Last Edited on 19-DEC-2011 12:04

Gamma Calibrator Number	GRC-174	
Mud Density	1.00	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

Neutron Calibration MDN-B.A 250

Base Calibration on 29-NOV-2011 11:12

Field Check on 19-DEC-2011 11:42

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	2901	89	3714	110
Ratio	32.678		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	2346	3424
Ratio	0.685	

Field Check

	Calibrated (cps)	
	2376	3454
Ratio	0.688	

Neutron Constants MDN-B.A 250

Last Edited on 19-DEC-2011 12:05

Neutron Source Id	P44384B	
Neutron Jig Number	NJ6584	
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	
Salinity Correction	Not Applied	

FE Calibration MFE-B.A 179

Base Calibration on 12-NOV-2011 12:46

Field Check on 19-DEC-2011 11:51

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	965.6	126.8

Base Check	279.6
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Field Check	279.7
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FE Constants MFE-B.A 179

Last Edited on 19-DEC-2011 12:07

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 191

Base Calibration on 31-AUG-2011 09:58
Field Check on 19-DEC-2011 11:54

Base Calibration

Test Loop Calibration

Channel	Measured		Calibrated (mmho/m)	
	Low	High	Low	High
1	15.8	467.8	9.3	966.2
2	6.2	382.6	7.6	821.4
3	3.9	257.9	5.2	566.0
4	2.1	136.5	2.6	279.2

Array Temperature 88.9 Deg F

Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1	13.7	3863.4	14.3	3864.1
2	29.4	3514.0	29.6	3514.2
3	27.4	3064.1	27.5	3064.1
4	18.6	2020.7	18.6	2020.6
Deep	16.4	1982.6	16.4	1982.5
Medium	40.3	4080.4	40.3	4080.5
Shallow	44.6	5207.3	44.8	5208.0

Array Temperature 37.6 46.8 Deg F

Induction Constants MAI-A.A 191

Last Edited on 19-DEC-2011 12:07

Induction Model

Caliper for Borehole Corr.	RtAP-WBM
Hole Size for Borehole Correction	Density Caliper
Tool Centred	N/A
Stand-off Type	No
Stand-off	Fins
Number of Fins on Stand-off	0.50
Stand-off Fin Angle	inches
Stand-off Fin Width	6.0000
Borehole Corr. Rm Source	degrees
Temp. for Rm Corr.	0.5000
Squasher Start	inches
Squasher Offset	0.0020
	N/A
	mhos/metre
	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-B 167

Base Calibration on 08-DEC-2011 11:58
Field Calibration on 19-DEC-2011 11:47

Base Calibration

Reading No	Measured	Calibrator Size (in)
------------	----------	----------------------

1	14191	3.98
2	22640	5.96
3	31232	7.96
4	39520	9.86
5	48571	11.88
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.99	7.96

Photo Density Calibration MPD-B 167

Base Calibration on 28-NOV-2011 14:53

Field Check on 19-DEC-2011 11:47

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	51237	17934	53115	19186
Reference 2	24001	2998	25020	2536

Field Check at Base

1237.2 1713.8

Field Check

1225.1 1709.6

PE Calibration

Base Calibration	Measured		Calibrated
	WS	WH	Ratio
Background	226	1112	
Reference 1	17253	51055	0.341
Reference 2	6645	23865	0.282

Field Check at Base

225.6 1112.1

Field Check

224.5 1099.0

Density Constants MPD-B 167

Last Edited on 19-DEC-2011 12:06

Density Source Id	P44263B
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	1.31 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\Dec 2011\GGU Kaufman 32D-30-691\GGU Kaufman 32D-30-691 Main.dta

FE Check MFE-B.A 179

Before Survey Check 19-DEC-2011 11:51

After Survey Check on 19-DEC-2011 17:39

Before (ohm-m)
279.7

After (ohm-m)
279.5

Induction Check MAI-A.A 191

Before Survey Check on 19-DEC-2011 11:54

After Survey Check on 19-DEC-2011 17:37

Channel	Before Survey (mmho/m)		After Survey (mmho/m)	
	Low	High	Low	High
1	14.3	3864.1	16.3	3864.5
2	29.6	3514.2	30.3	3513.6
3	27.5	3064.1	28.0	3063.9
4	18.6	2020.6	18.8	2020.5
Deep	16.4	1982.5	16.8	1982.9
Medium	40.3	4080.5	40.9	4079.8
Shallow	44.8	5208.0	45.8	5206.2
Array Temperature	46.8		73.0 Deg F	

Photo Density Check MPD-B 167

Before Survey Check on 19-DEC-2011 11:47

After Survey Check on 19-DEC-2011 17:43

Density Check

	Near		Far	
	Before	After	Before	After
	1225.1	1229.4	1709.6	1711.3

PE Check

	Before	After
WS	224.5	223.3
WH	1099.0	1104.0

DOWNHOLE EQUIPMENT

C:\Logs\Bill Barrett\Dec 2011\GGU Kaufman 32D-30-691\GGU Kaufman 32D-30-691 Main.dta

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-D.A 342 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Neutron

MDN-B.A 250 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-D.A Compact Knuckle Joint

SKJ-D.A 88 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

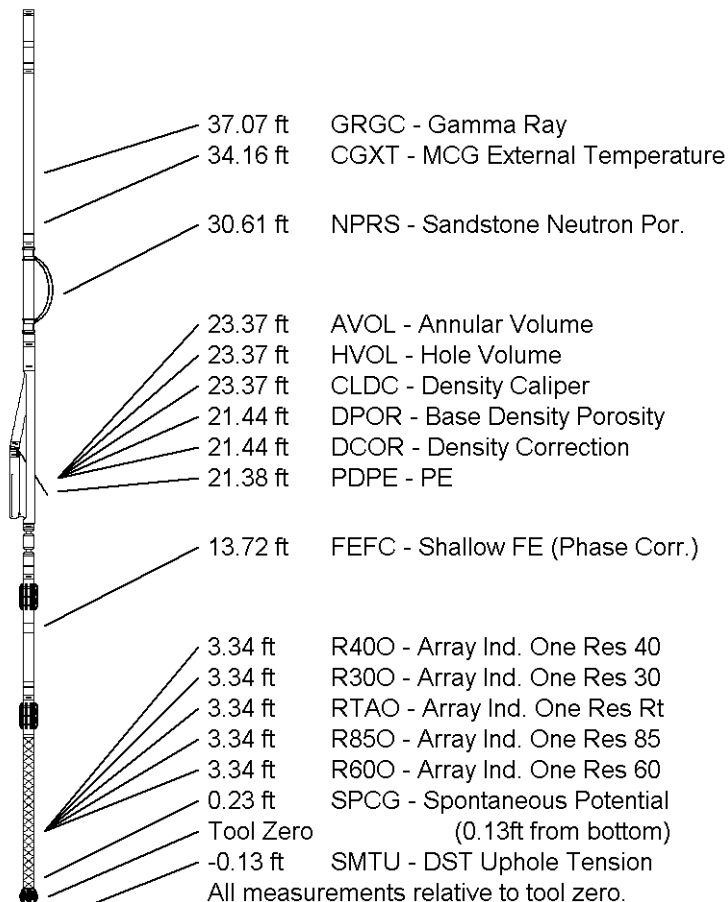
Compact Focussed Electric

MFE-B.A 179 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Induction

MAI-A.A 191 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 44.66 ft Weight: 348.3 lb



COMPANY

WELL

FIELD

BILL BARRETT CORPORATION

GGU KAUFMAN 32D-30-691

GIBSON CULCH

FIELD GIBSON GULCH
PROVINCE/COUNTY GARFIELD
COUNTRY/STATE U.S.A. / COLORADO

Elevation Kelly Bushing	5858.00	feet	First Reading	7896.00	
Elevation Drill Floor	5858.00	feet	Depth Driller	7900.00	feet
Elevation Ground Level	5835.00	feet	Depth Logger	7899.00	feet



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COMPACT TRIPLE COMBO
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