



**Weatherford**

**COMPACT TRIPLE COMBO  
QUICKLOOK  
LOG**

COMPANY

**BILL BARRETT CORPORATION**

WELL

**CB TG LAND 11C-20-692**

FIELD

**MAMM CREEK**

PROVINCE/COUNTY

**GARFIELD**

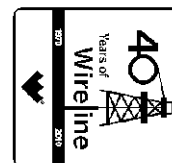
COUNTRY/STATE

**U.S.A. / COLORADO**

LOCATION

**SHL: 658' FNL & 2572' FEL**

**BHL: 429' FNL & 660' FWL**



SEC

TWP

RGE

Other Services

20

6S

92W

API Number

05-045-19752

Permit Number

Permanent Datum G.L., Elevation 5530 feet

Log Measured From KB

Drilling Measured From K.B.

Date

16-JUNE-2011

Elevations:

KB 5553.00  
DF 5553.00  
GL 5530.00

Run Number

ONE

Depth Driller

8110.00

feet

Depth Logger

8110.00

feet

First Reading

8107.00

Last Reading

854.00

feet

Casing Driller

858.00

feet

Casing Logger

854.00

feet

Bit Size

7.875

inches

Hole Fluid Type

LSND

Density / Viscosity

10.60

lb/USg

48.00

CP

PH / Fluid Loss

9.80

6.40

ml/30Min

Sample Source

FLOW LINE

Rm @ Measured Temp

2.77 @ 91.0

ohm-m

Rmf @ Measured Temp

2.21 @ 91.0

ohm-m

Rmc @ Measured Temp

3.32 @ 91.0

ohm-m

Source Rmf / Rmc

CALC

CALC

Rm @ BHT

1.31 @ 195.0

ohm-m

Time Since Circulation

5 HOURS

Max Recorded Temp

195.00

deg F

Equipment Name

COMPACT

GD JCT

M.RICHINS

Recorded By

Witnessed By

**BOREHOLE RECORD**

Last Edited: 16-JUN-2011 02:00

Bit Size  
inches

8.750

7.880

Depth From  
feet

858.00

5752.00

Depth To  
feet

5752.00

8110.00

**CASING RECORD**

Type

SURFACE

Size  
inches

9.625

Depth From  
feet

0.00

Shoe Depth  
feet

858.00

Weight  
pounds/ft

36.00

**REMARKS**

TOOLS: 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.  
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. = 8.94" (9 5/8", 36 LB/FT CASING).

8.75 INCH BIT CHANGE AT 5753 FT.

TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 3020 CUBIC

STRAIGHT HOLE VOLUME FROM TD TO SURFACE CASING = 3220 CU.FT.  
ANNULAR VOLUME WITH 4.5 INCH PRODUCTION CASING = 2220 CU.FT.

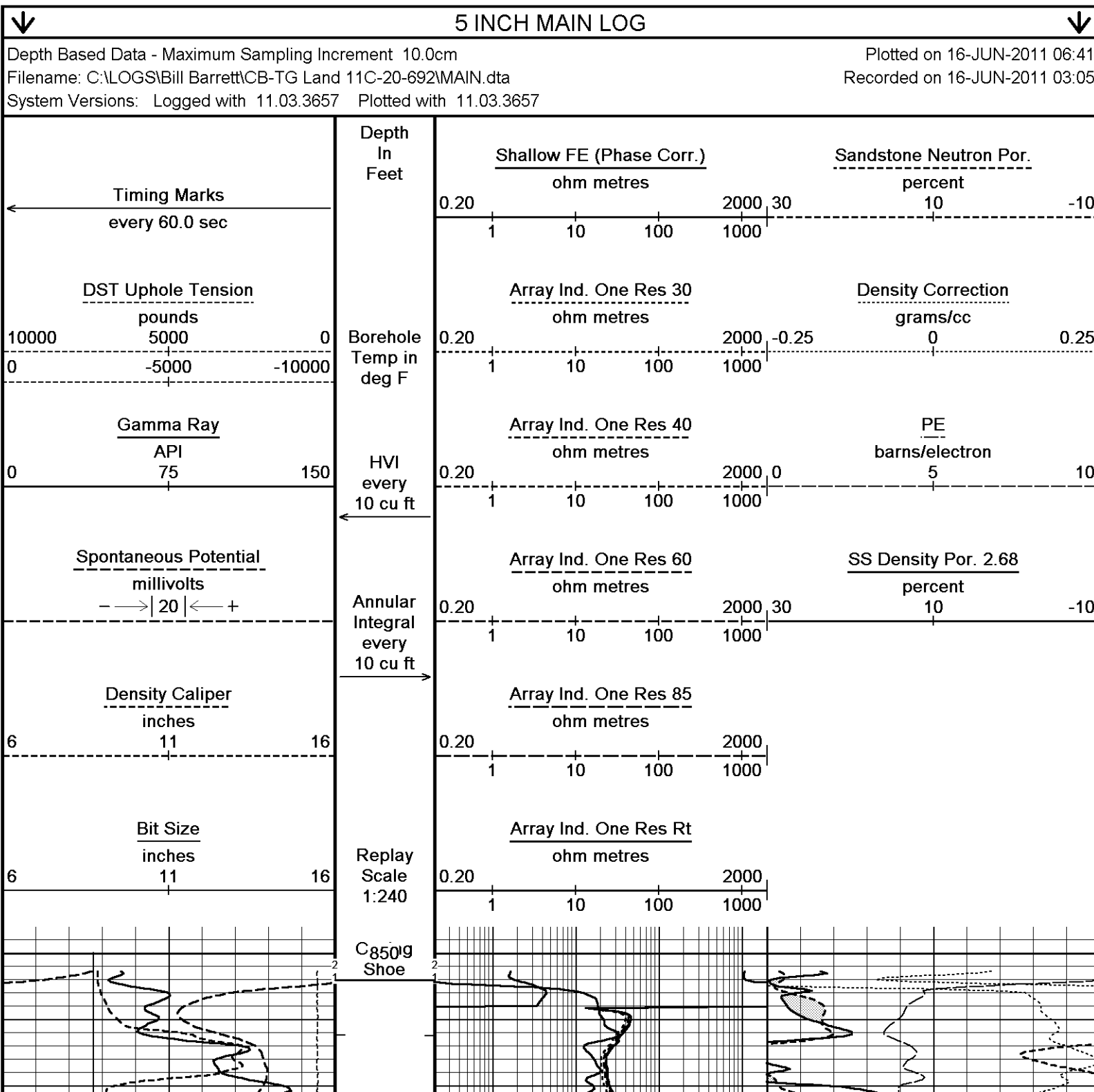
ENGINEER(S): M.RICHINS

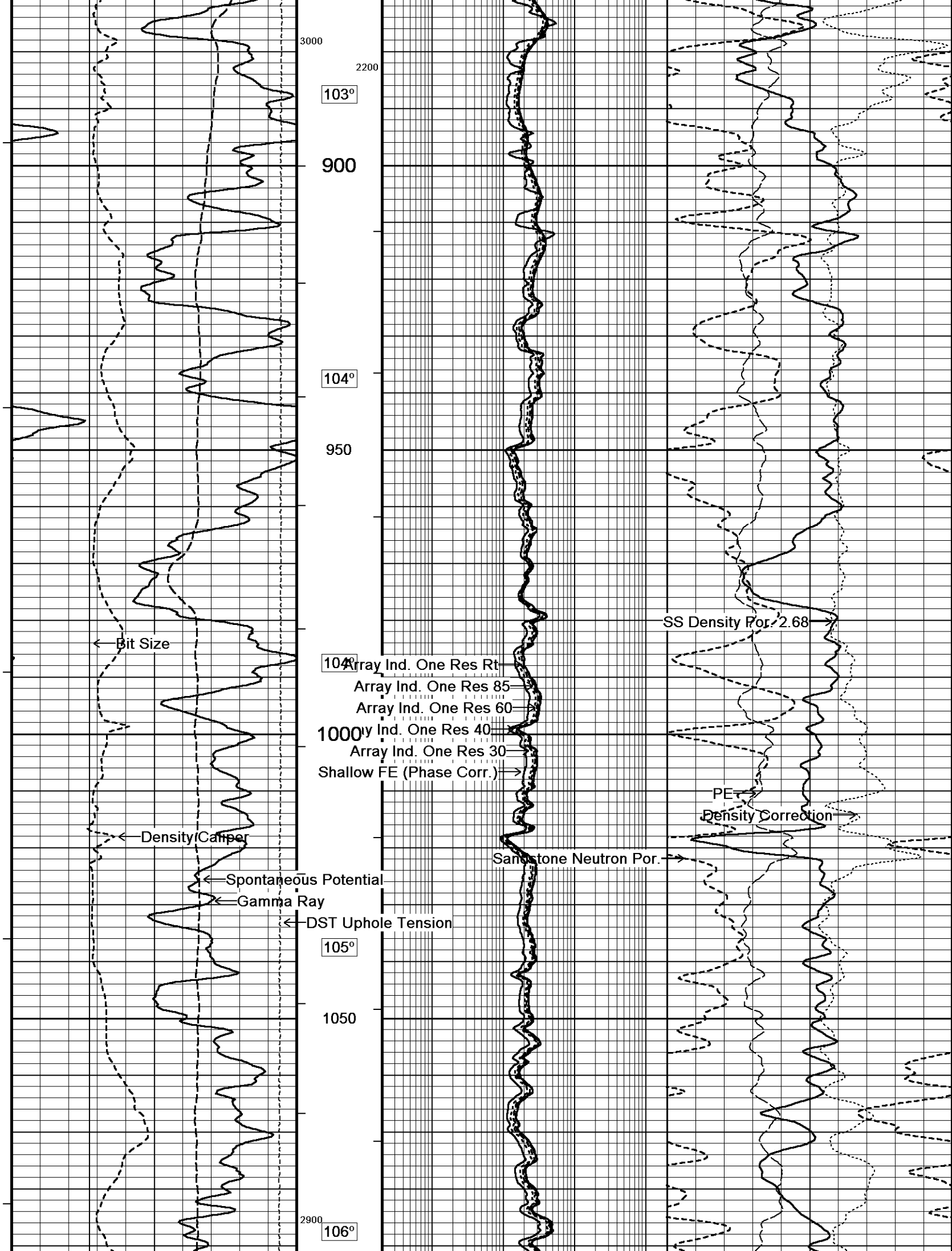
OPERATOR(S): J.BECKWITH

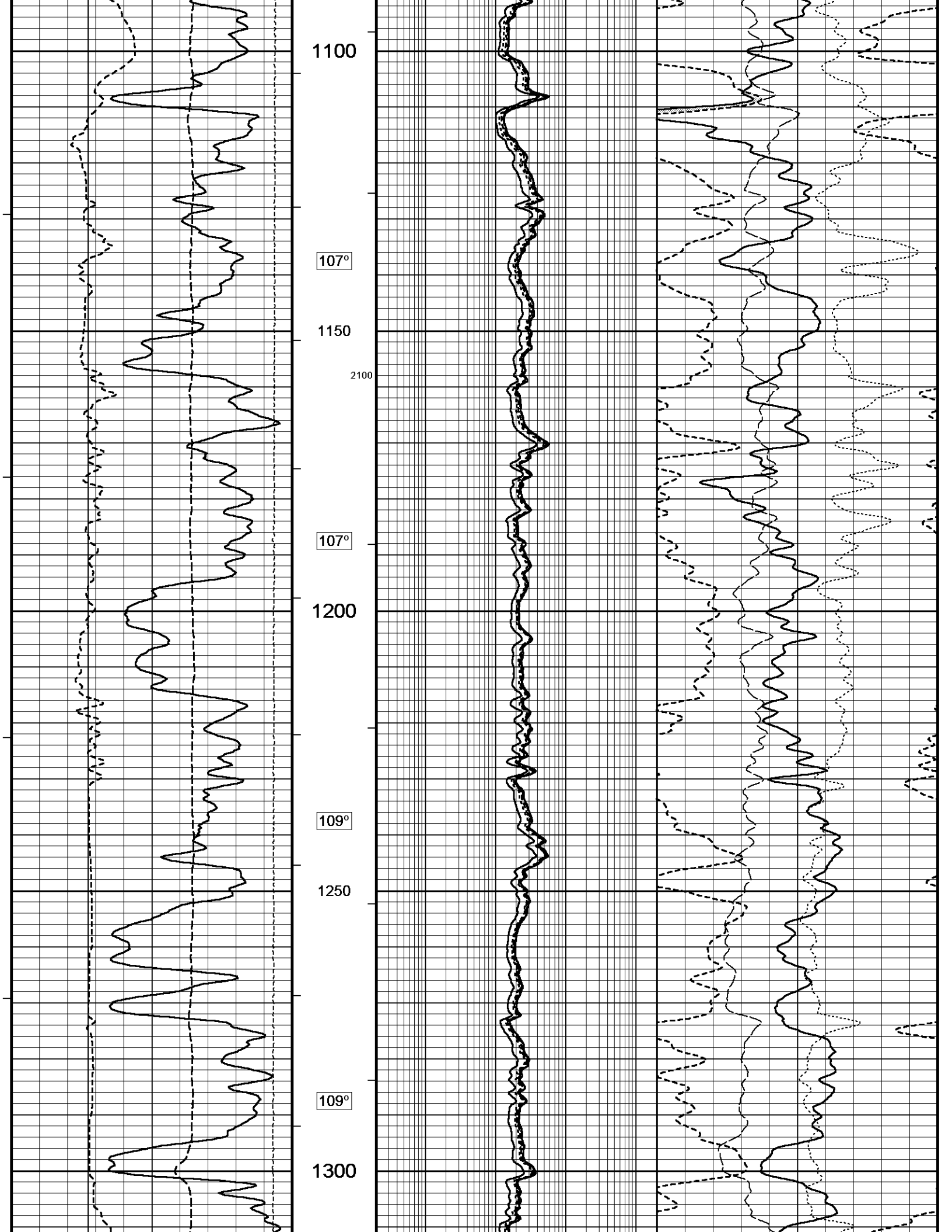
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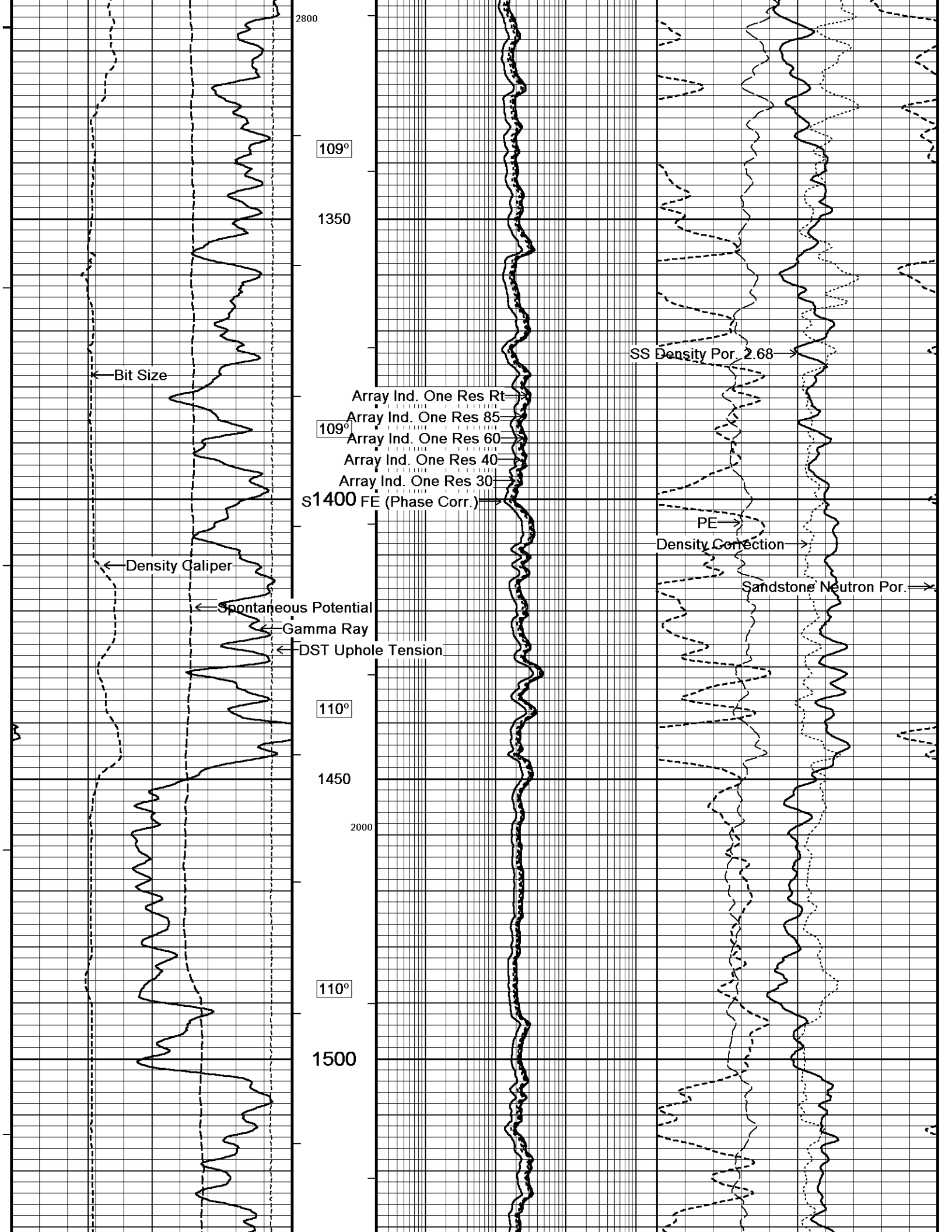
RIG: NABORS #37

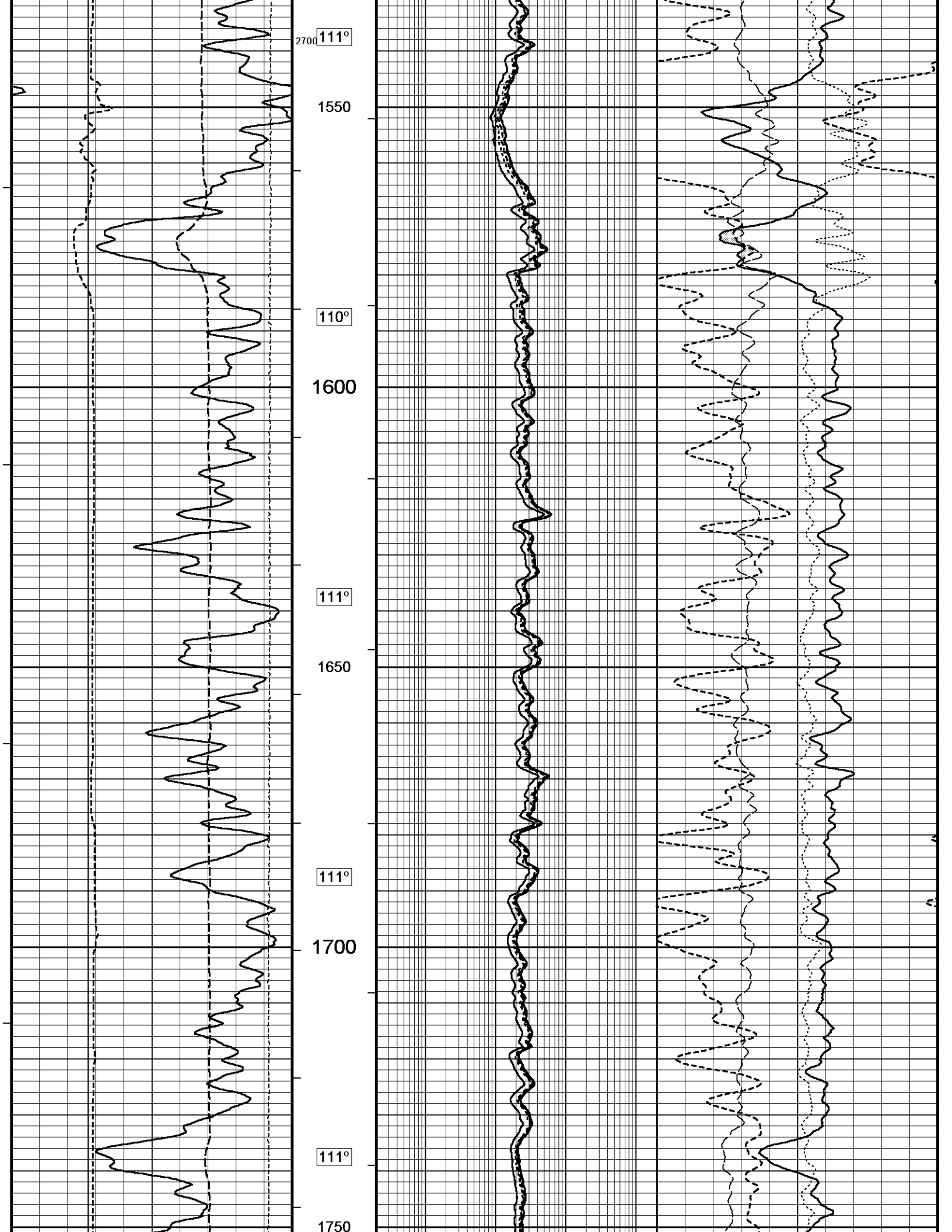
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

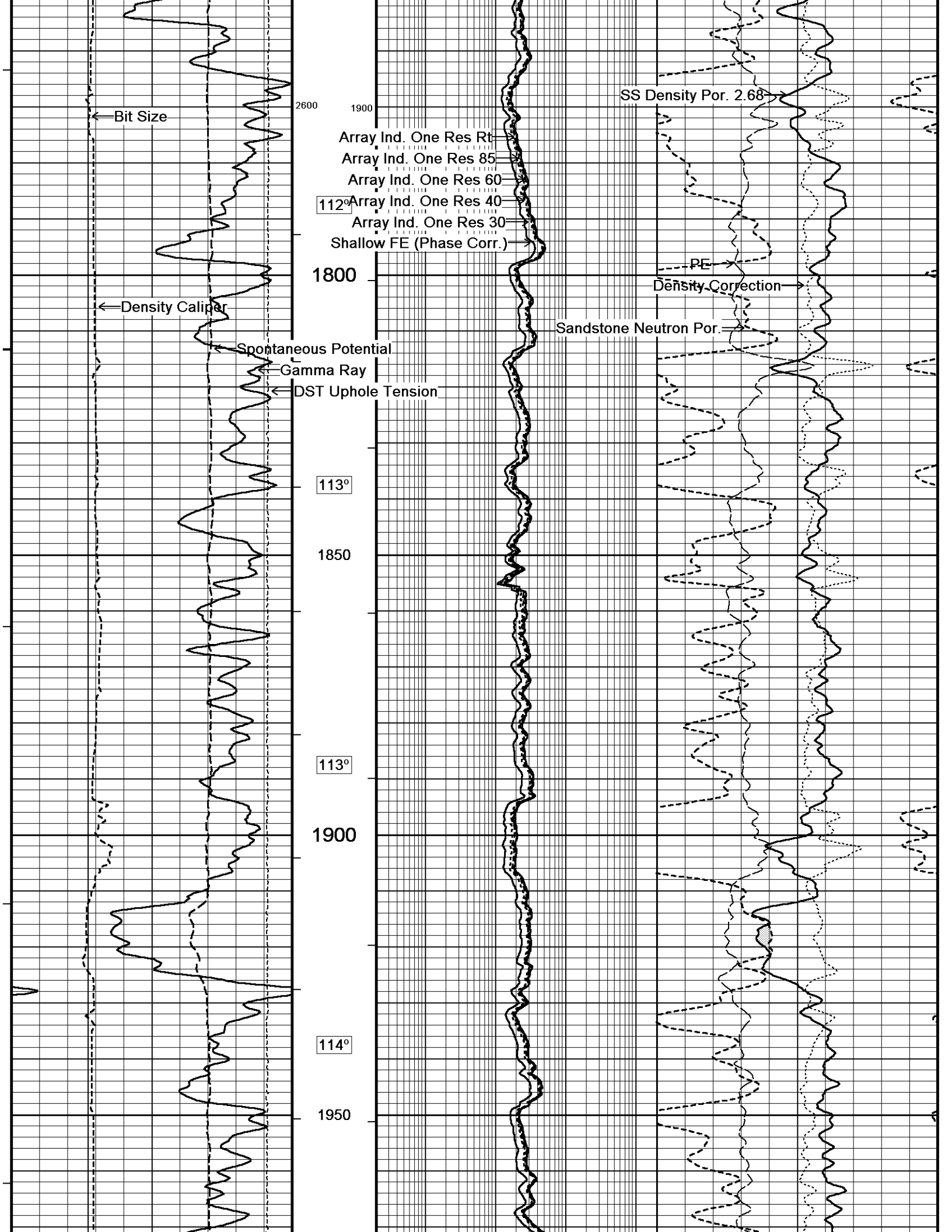


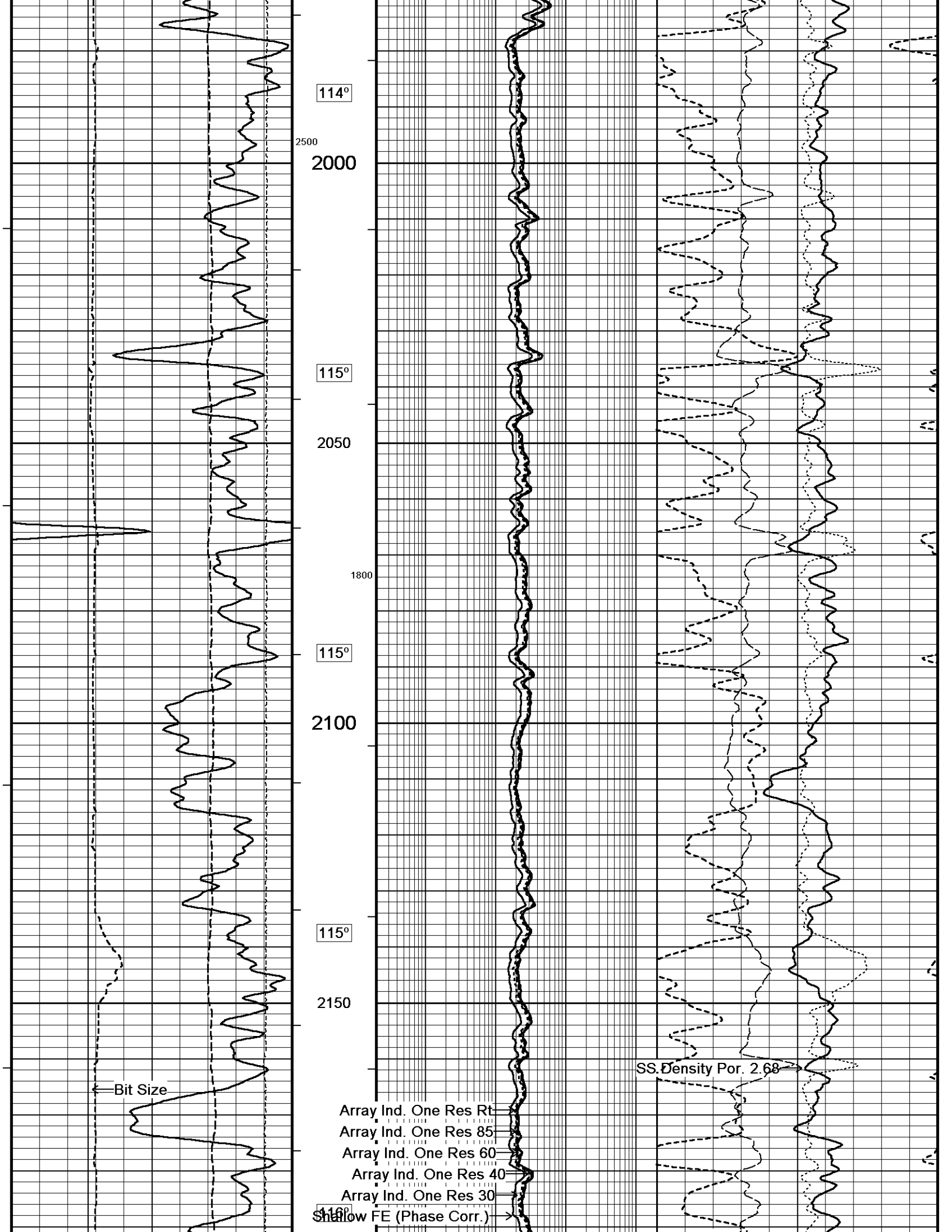




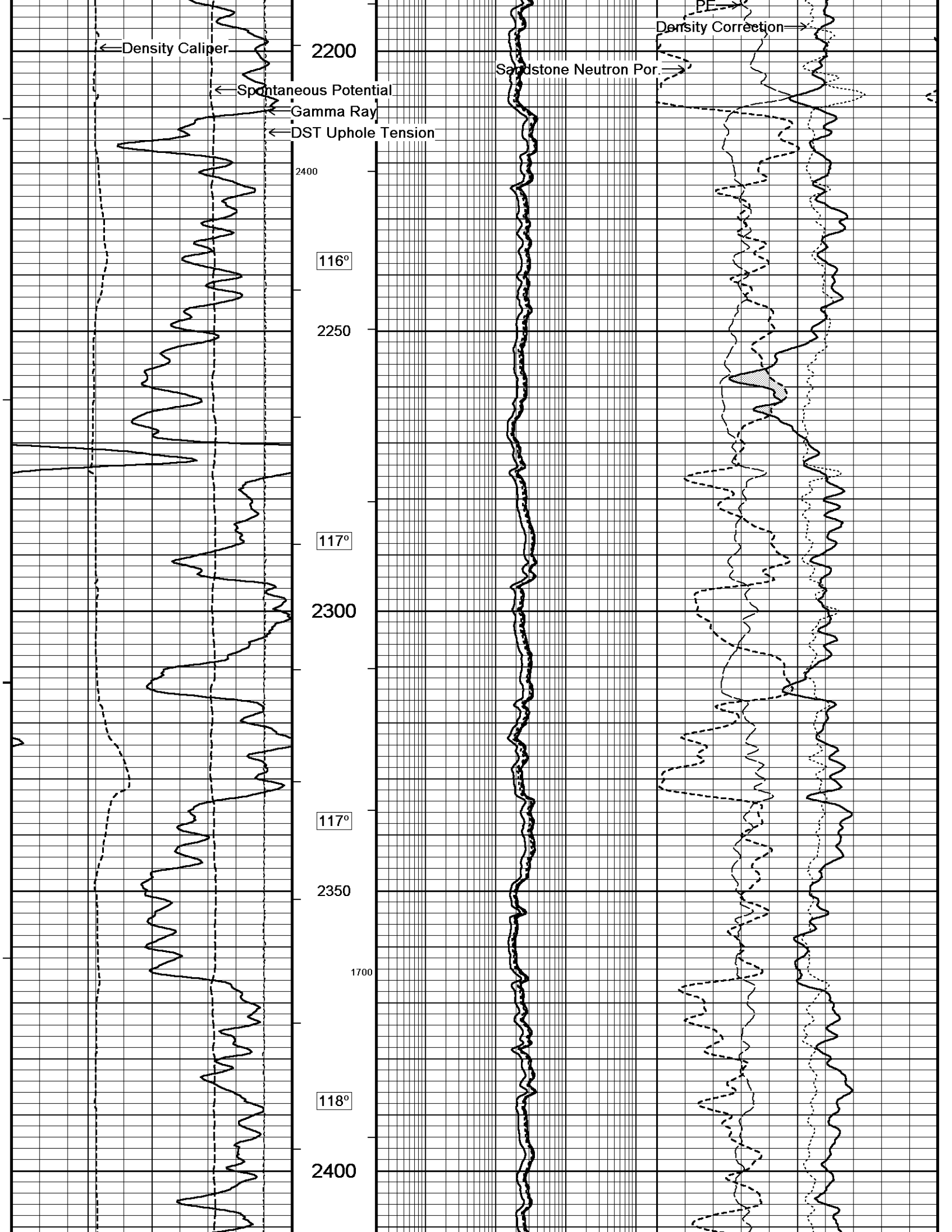


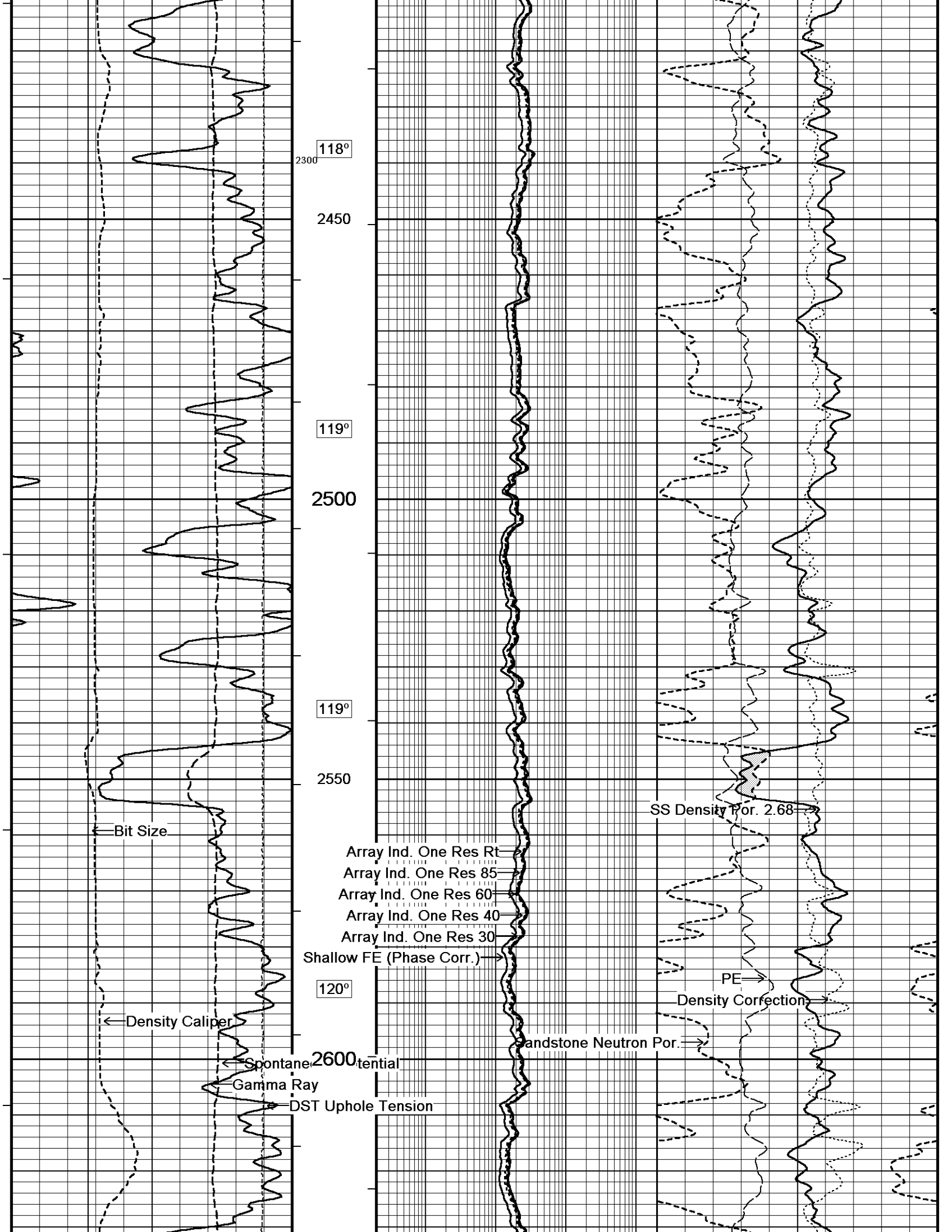


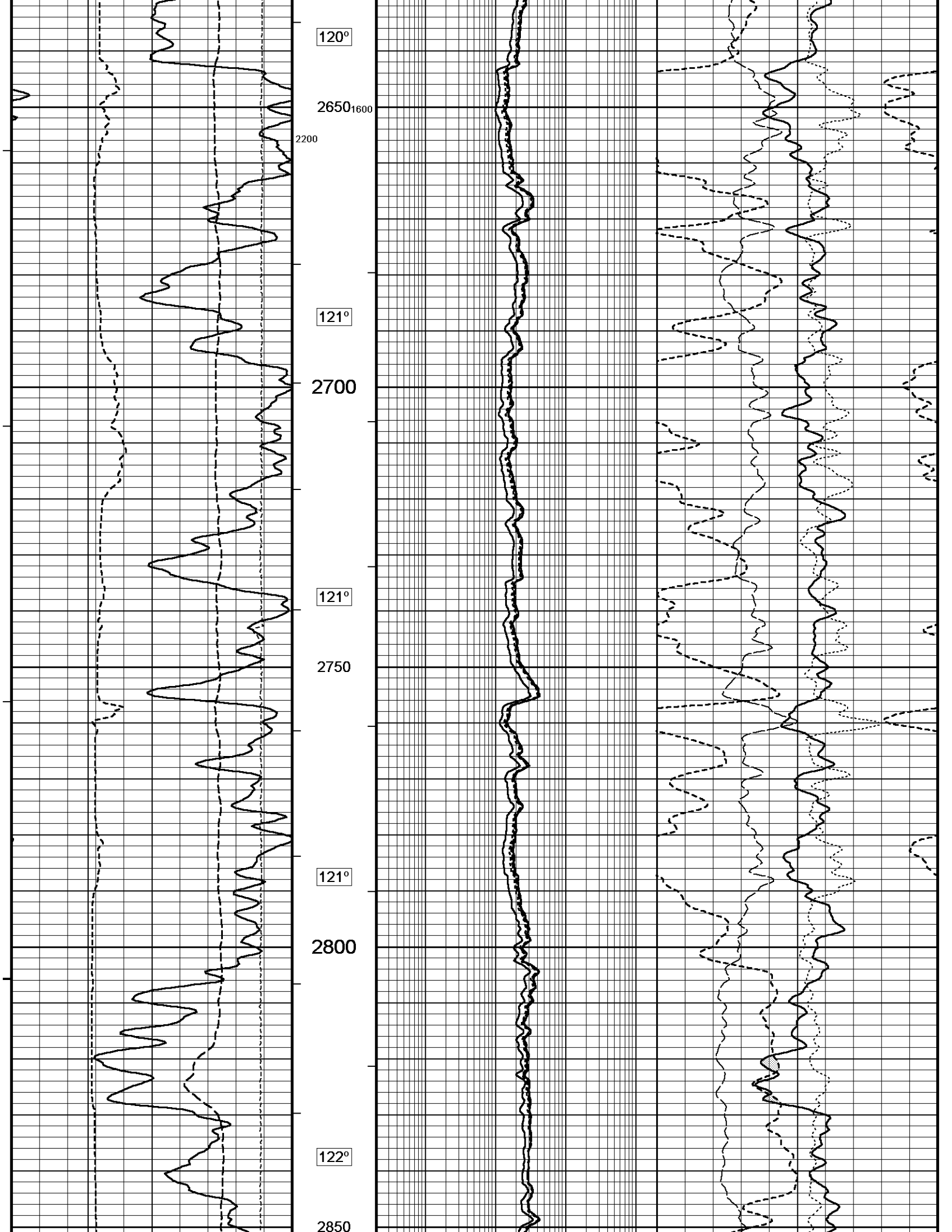


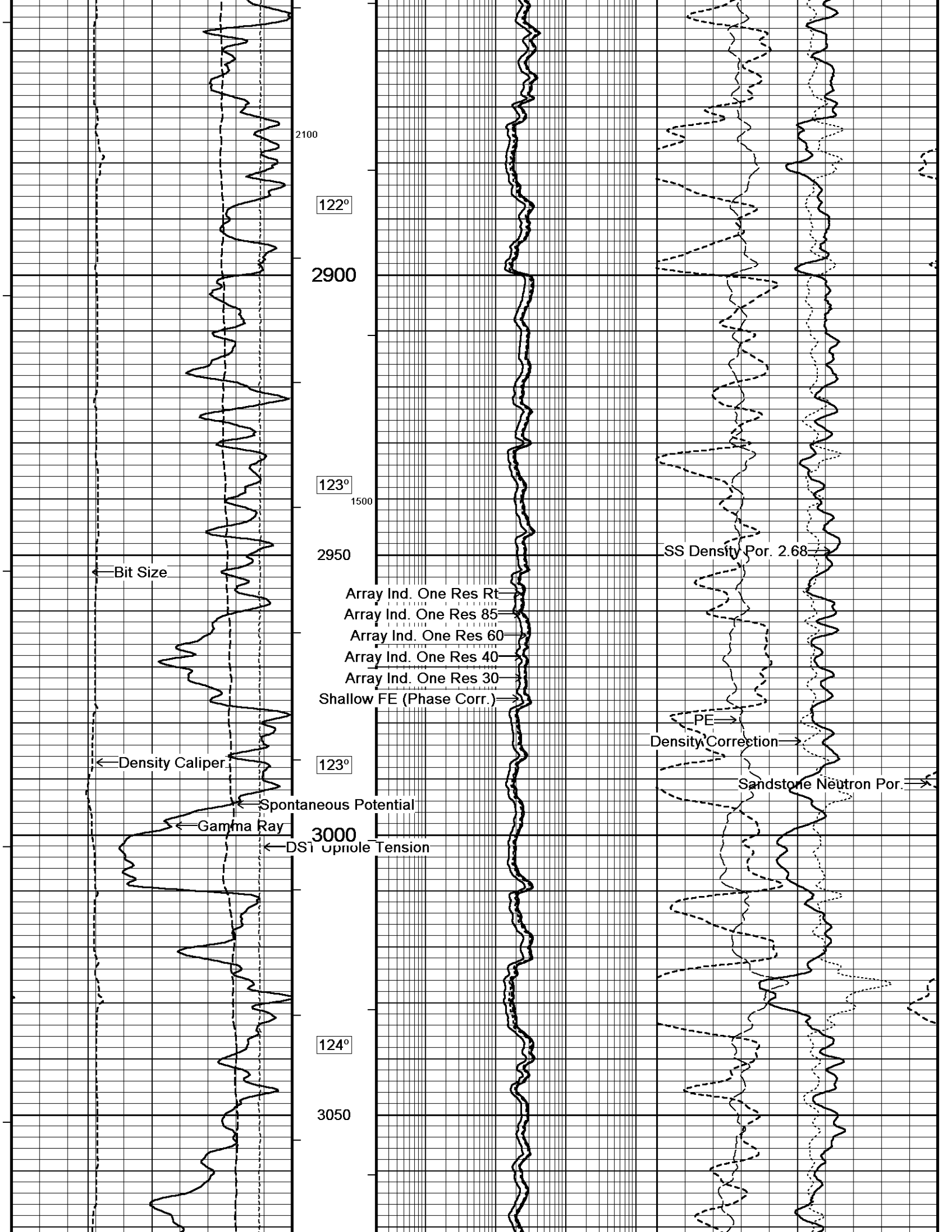


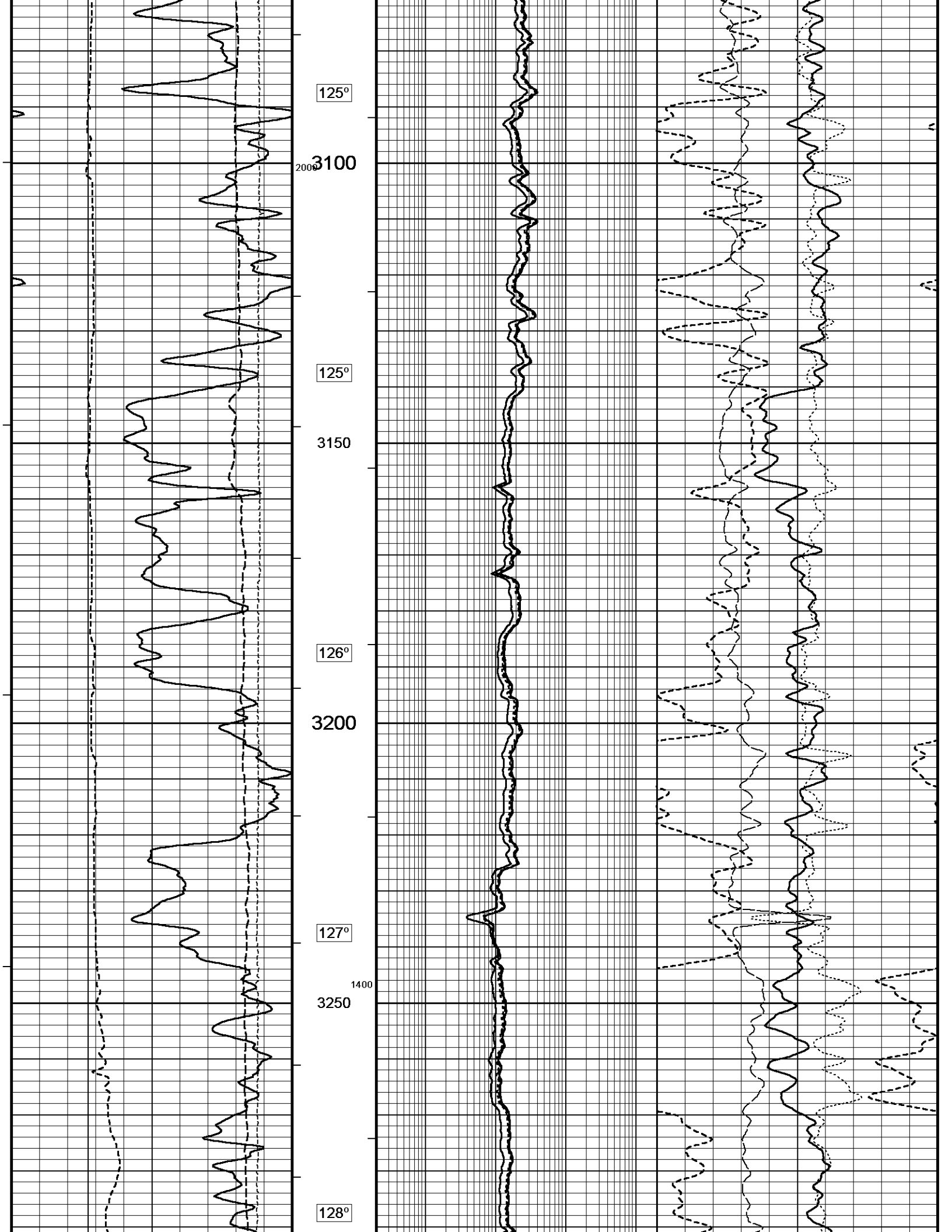


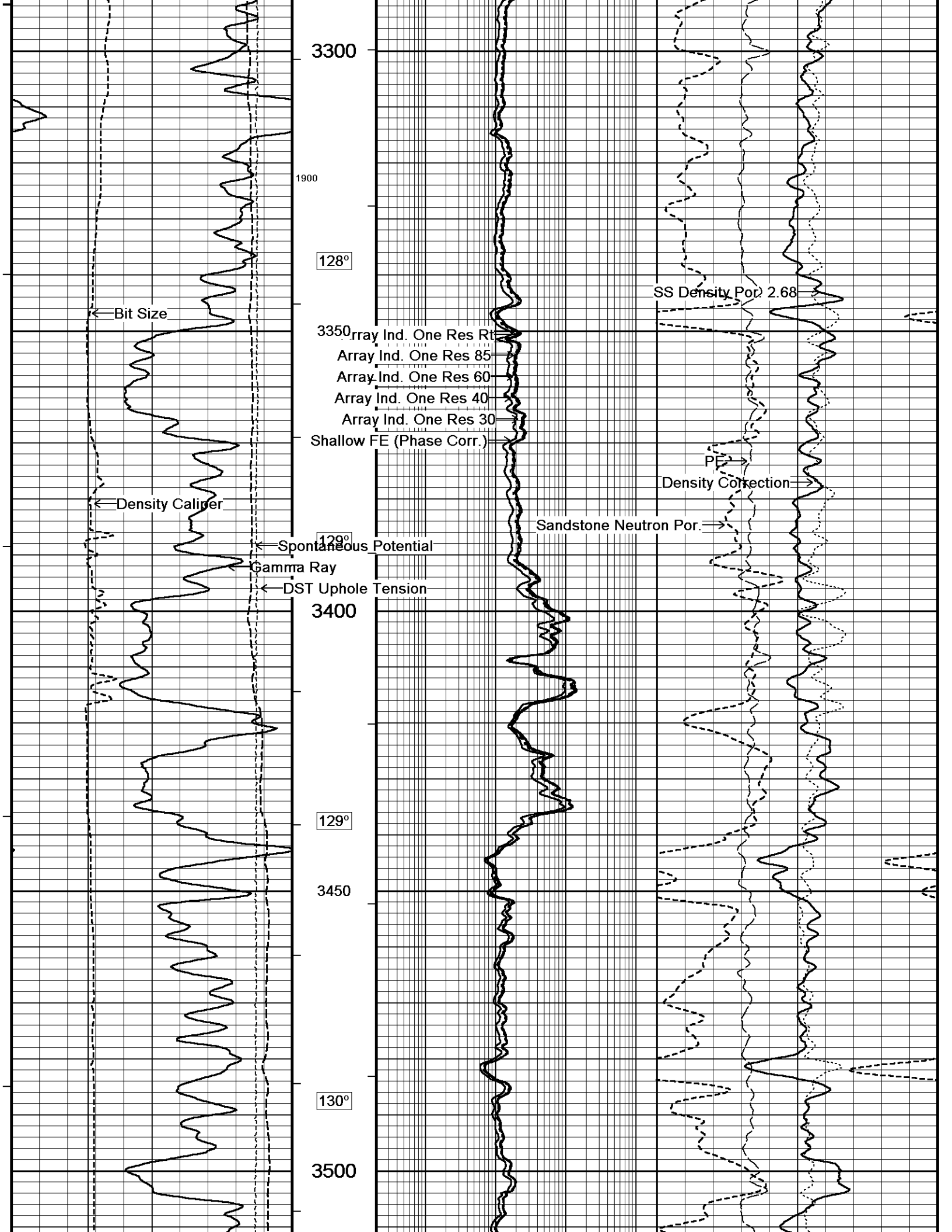


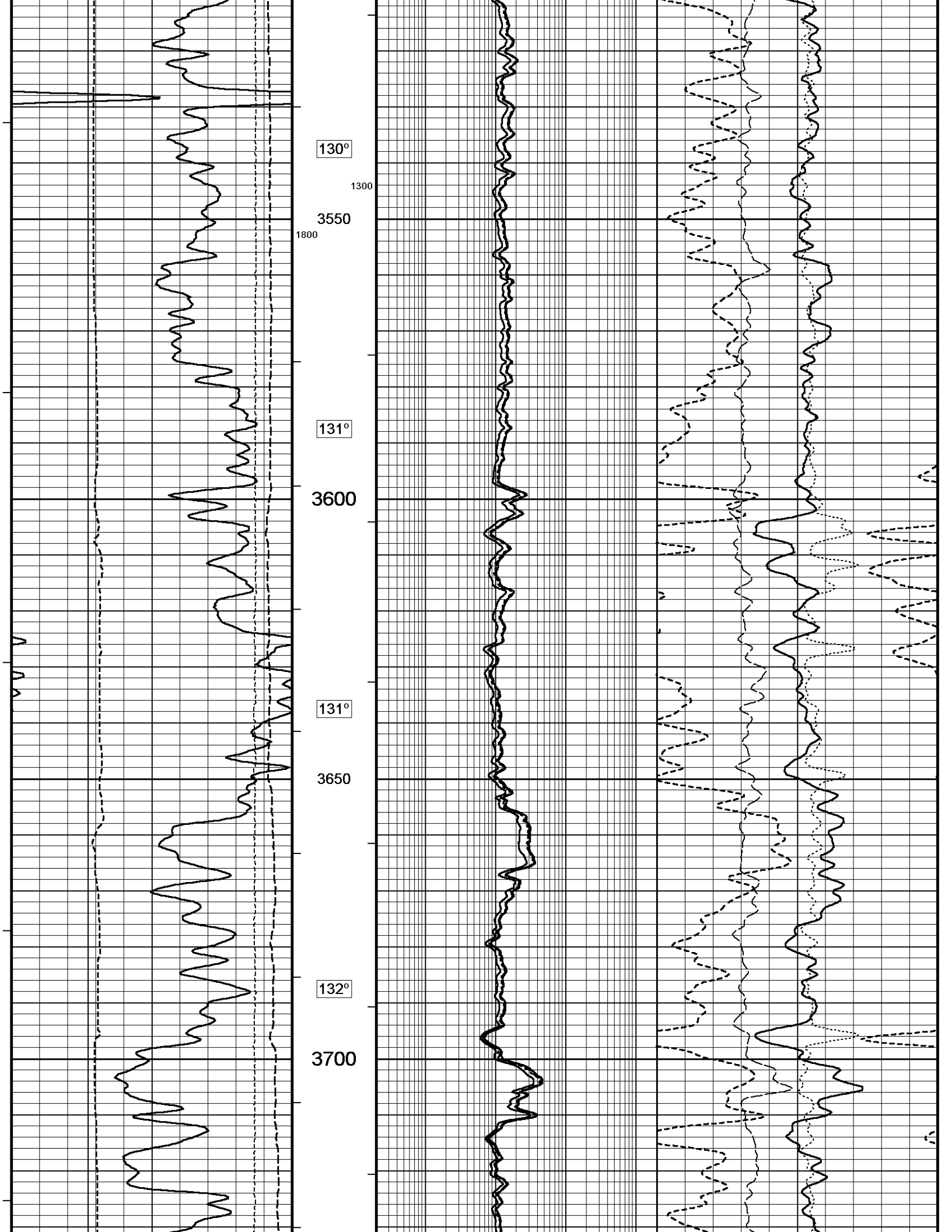


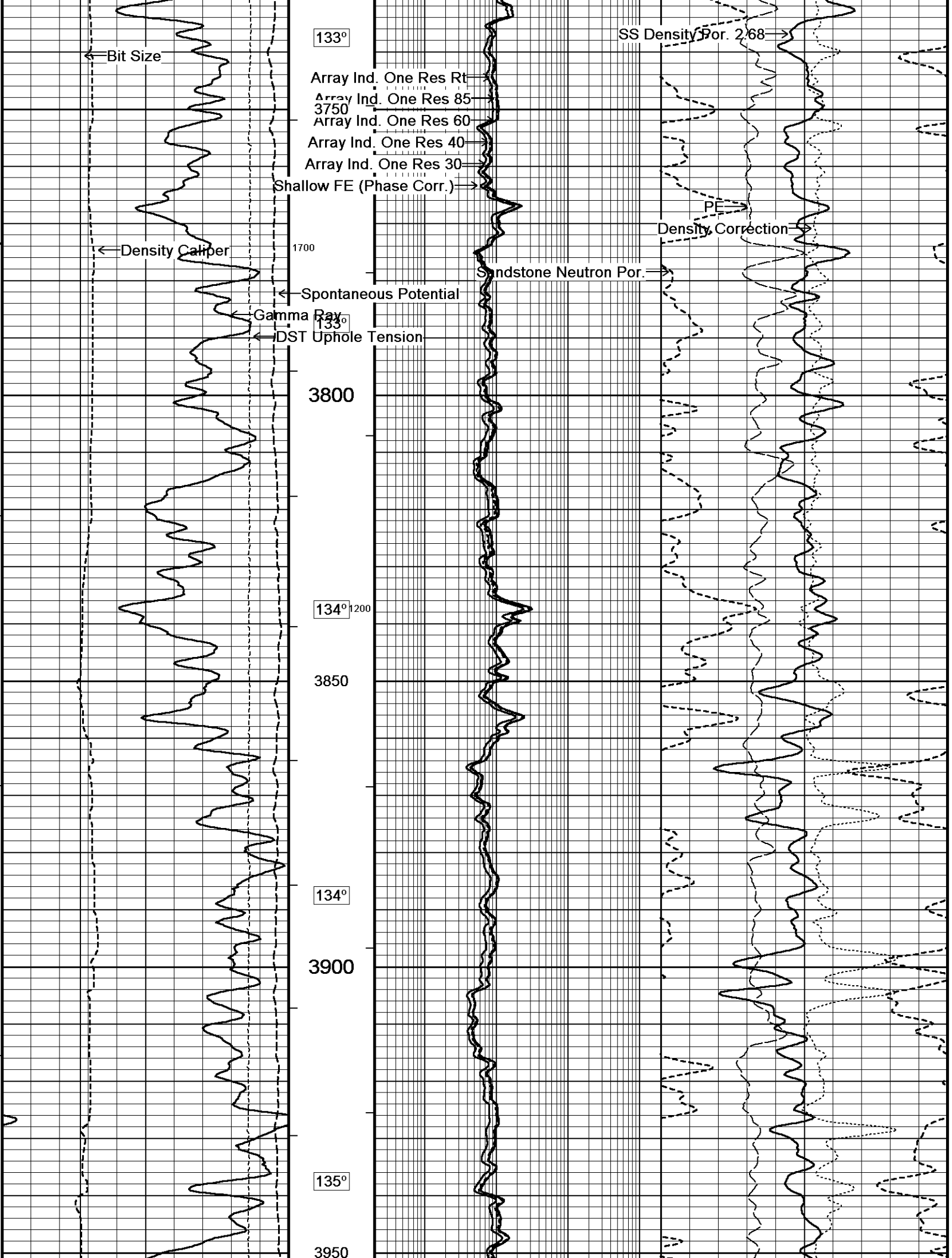




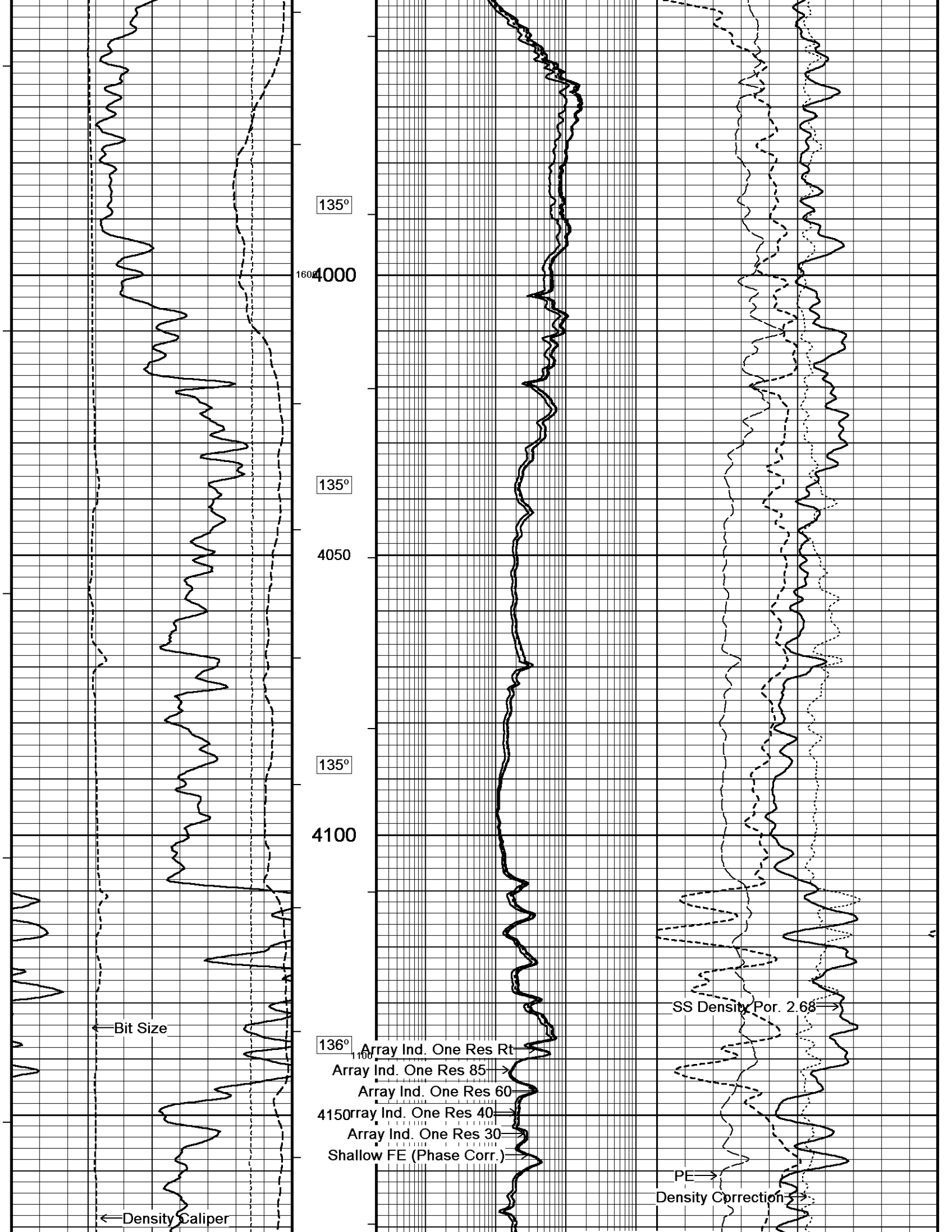


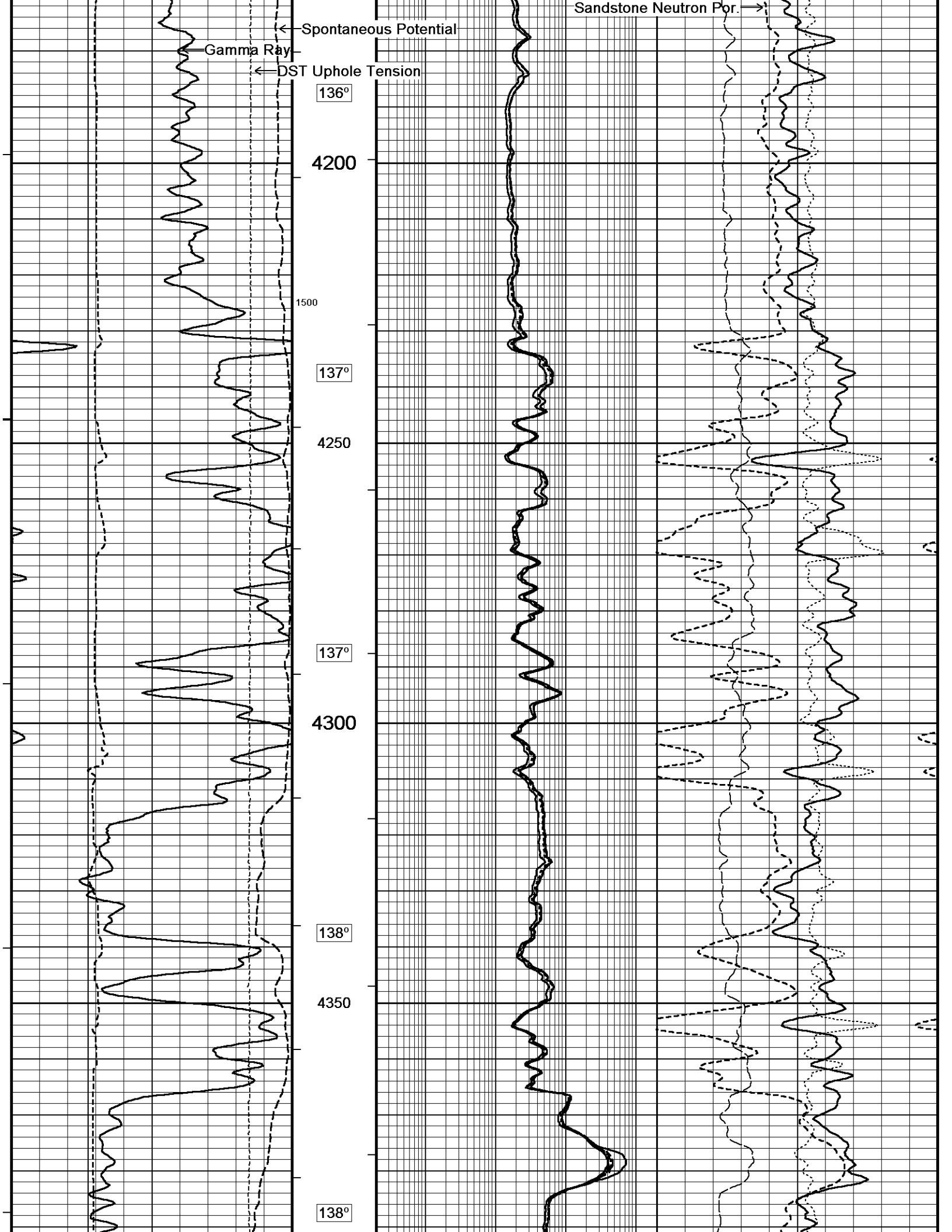


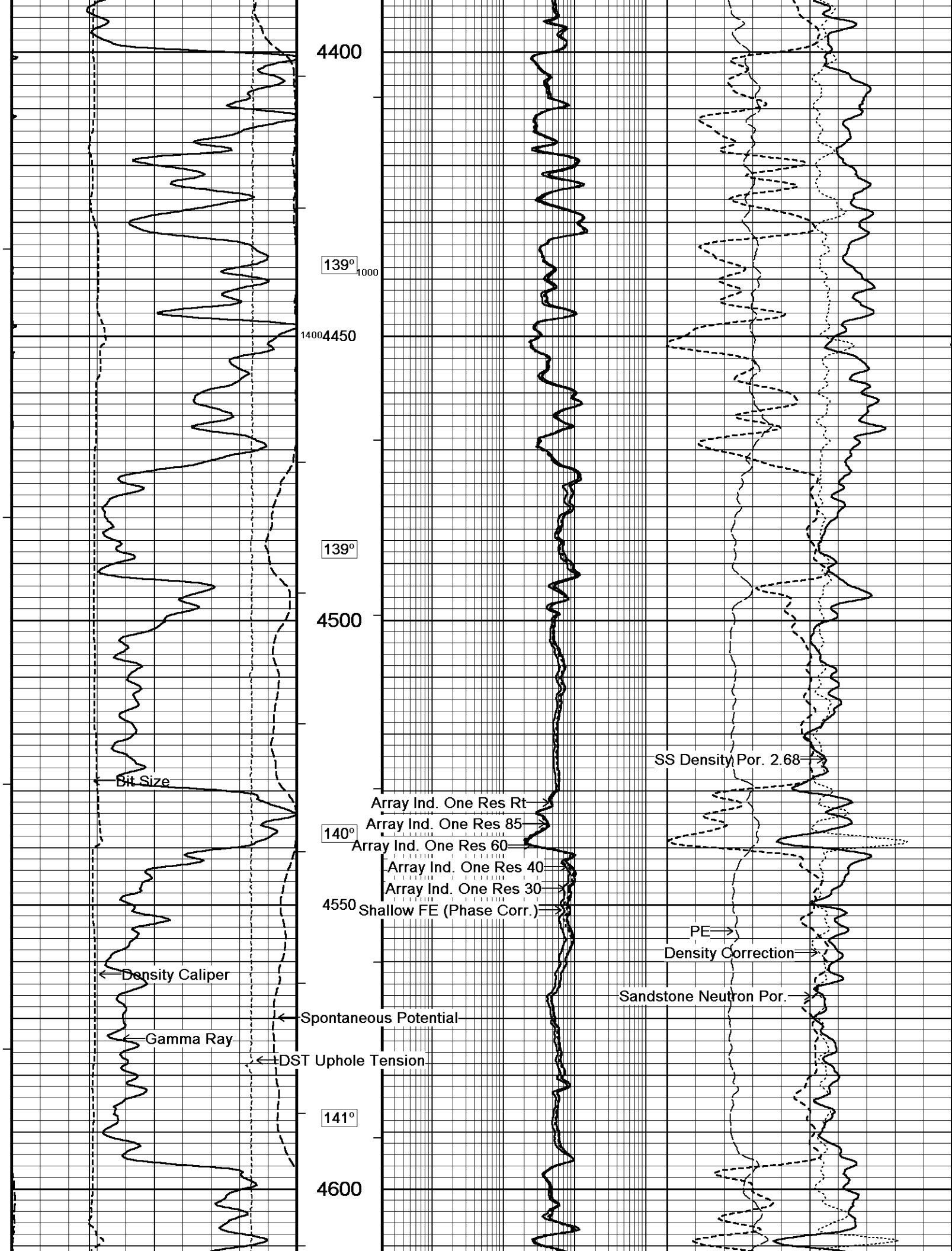


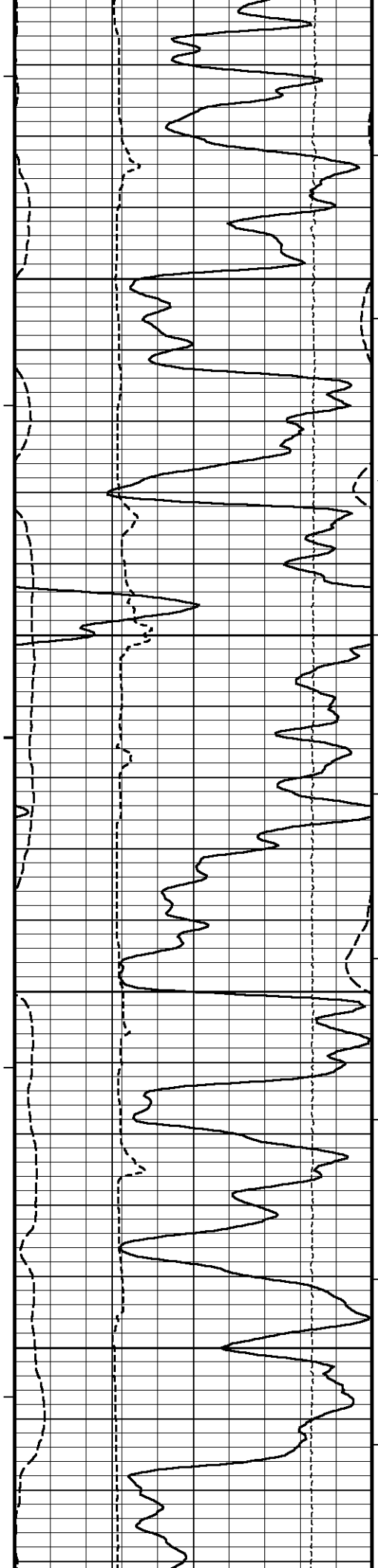




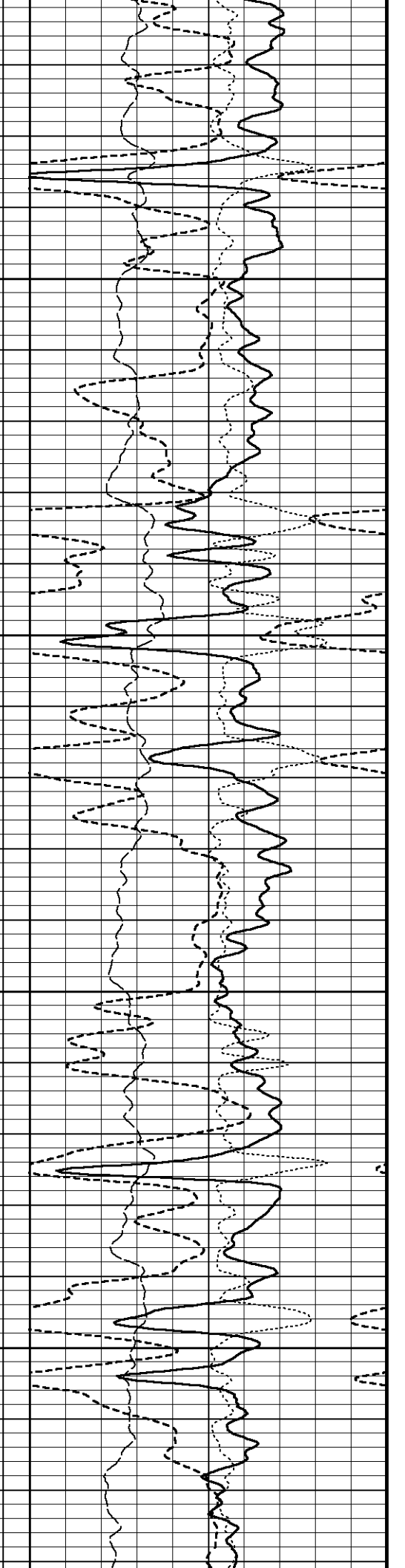
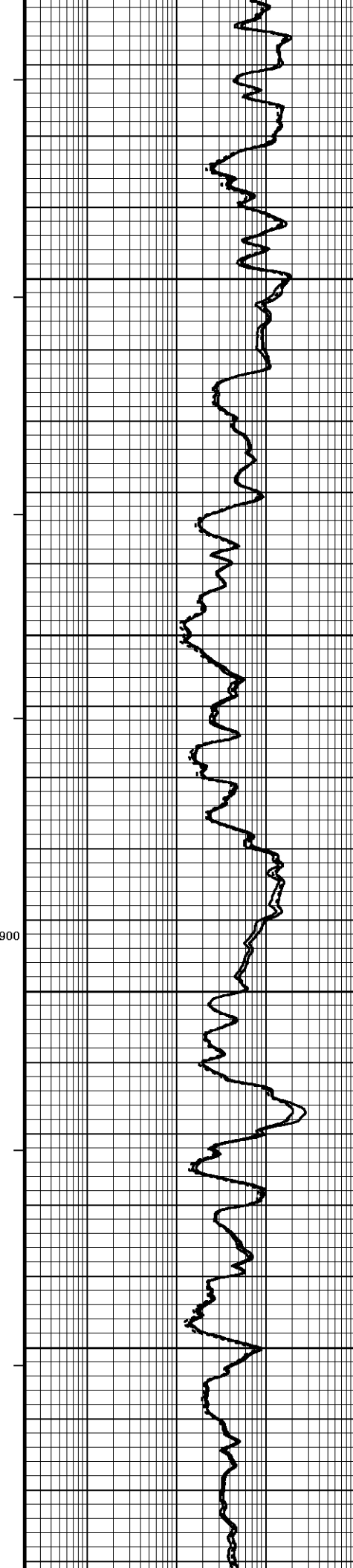


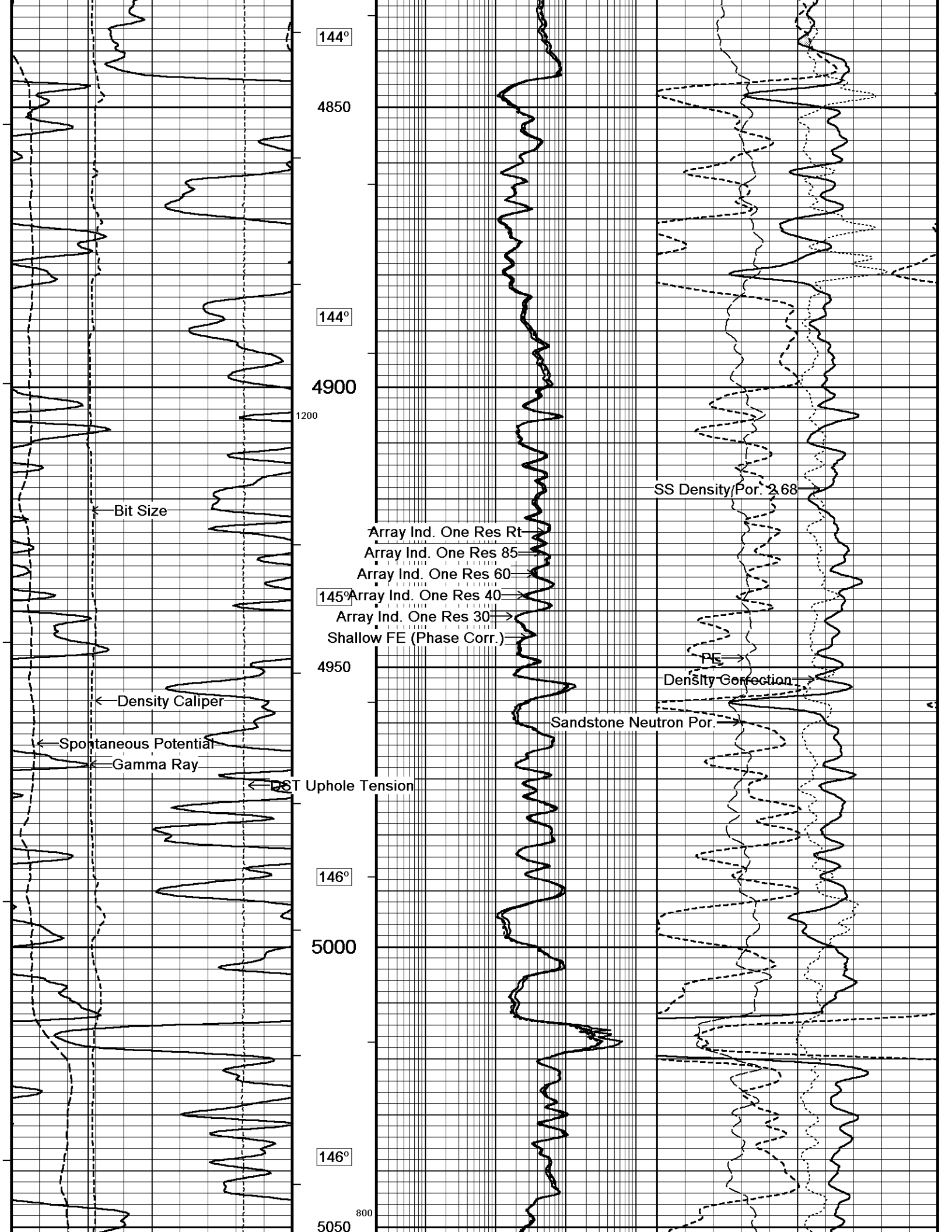


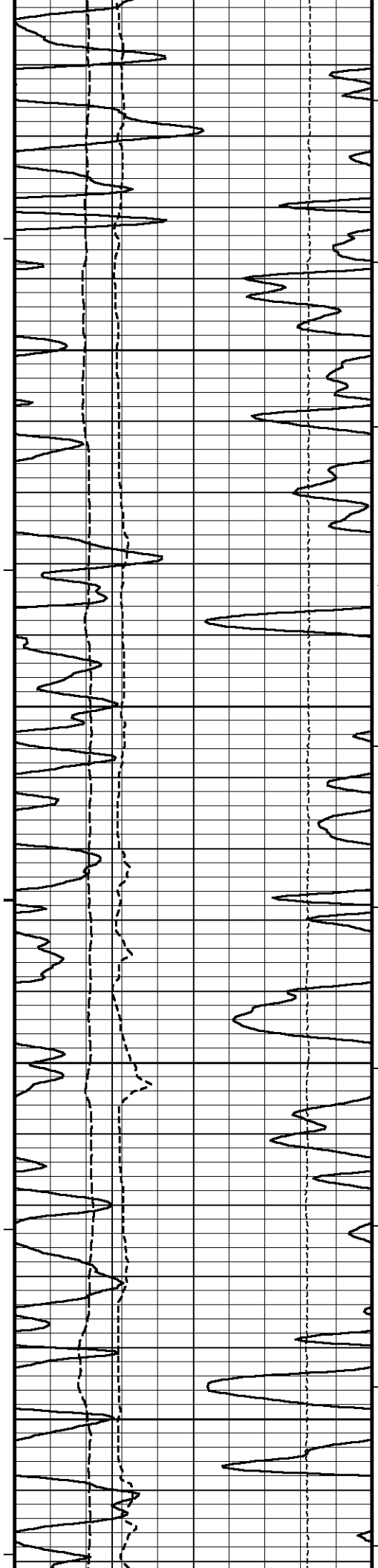




141°  
4650  
1300  
142°  
4700  
142°  
900  
4750  
143°  
4800







147°

5100

1100

148°

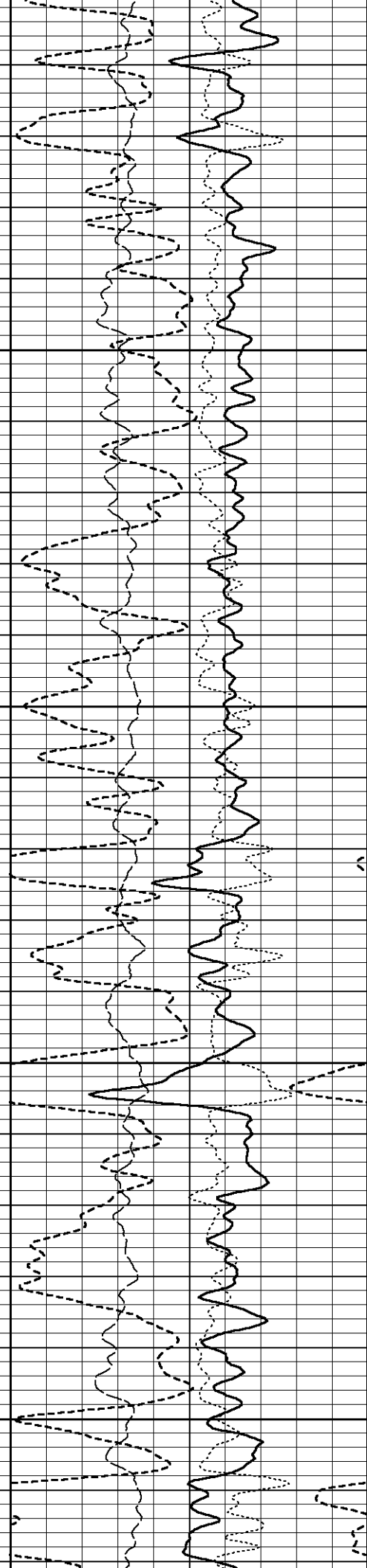
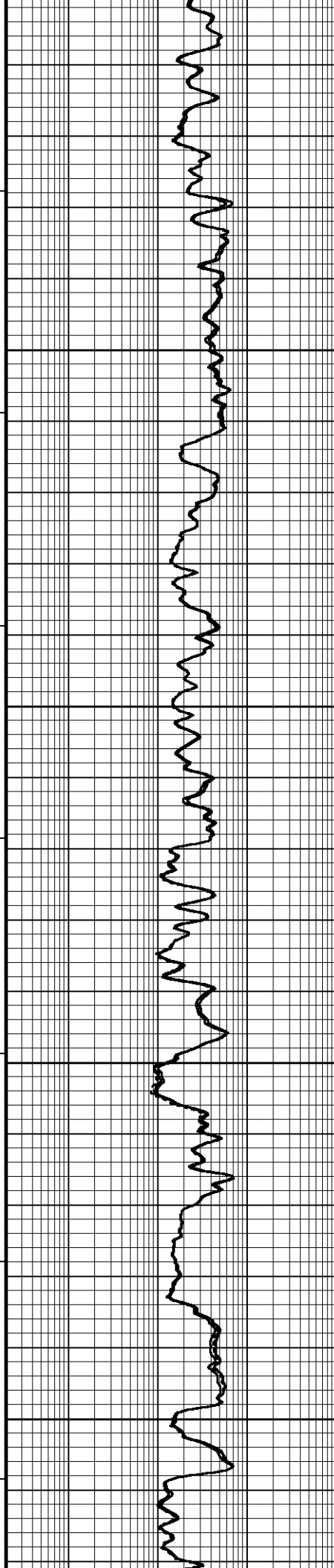
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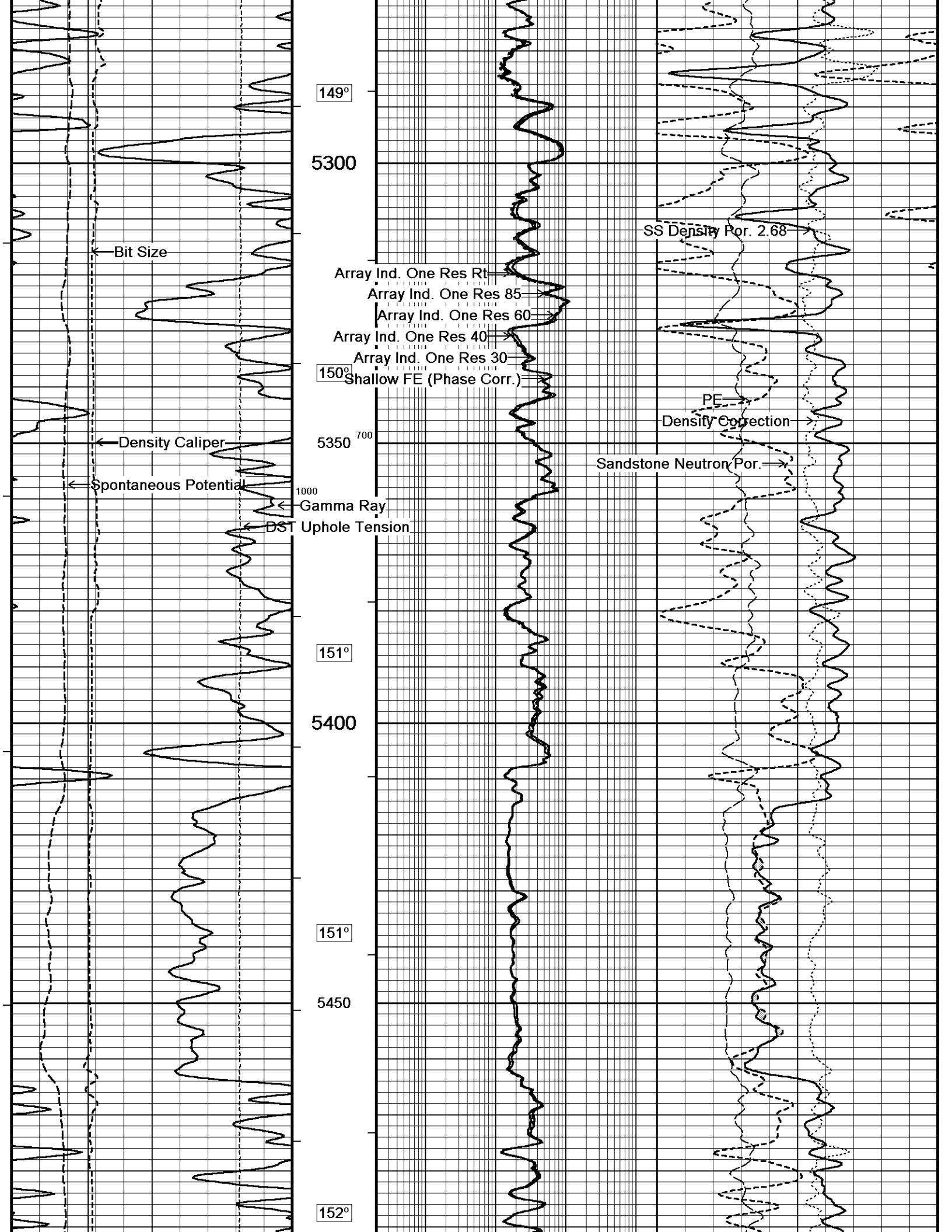
148°

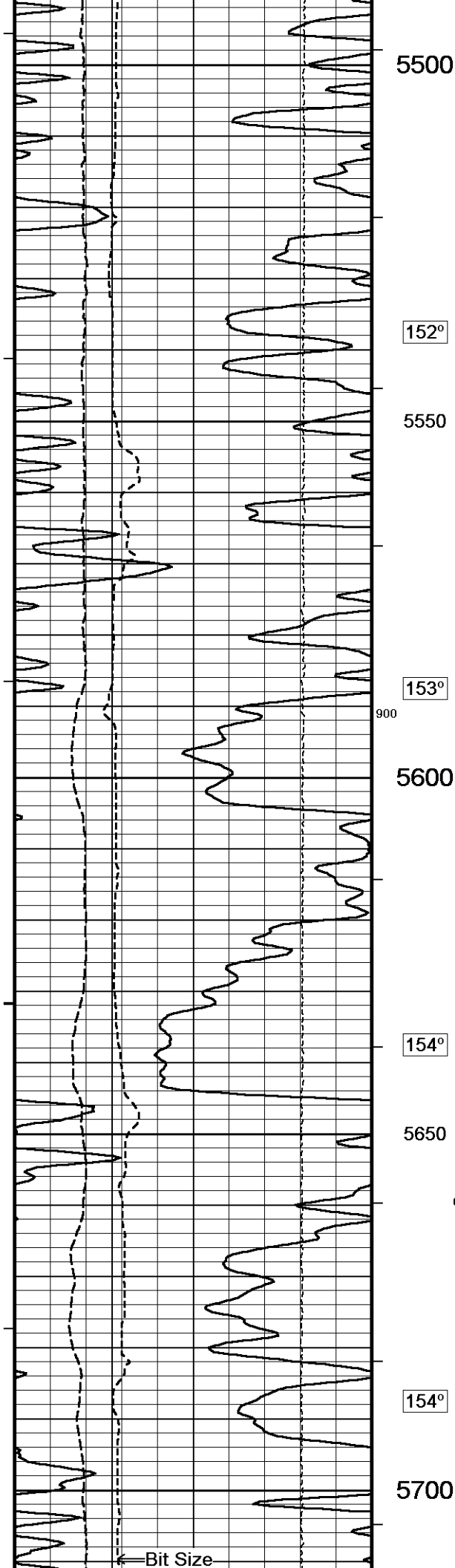
5200

149°

5250







5500

152°

5550

153°

900

5600

154°

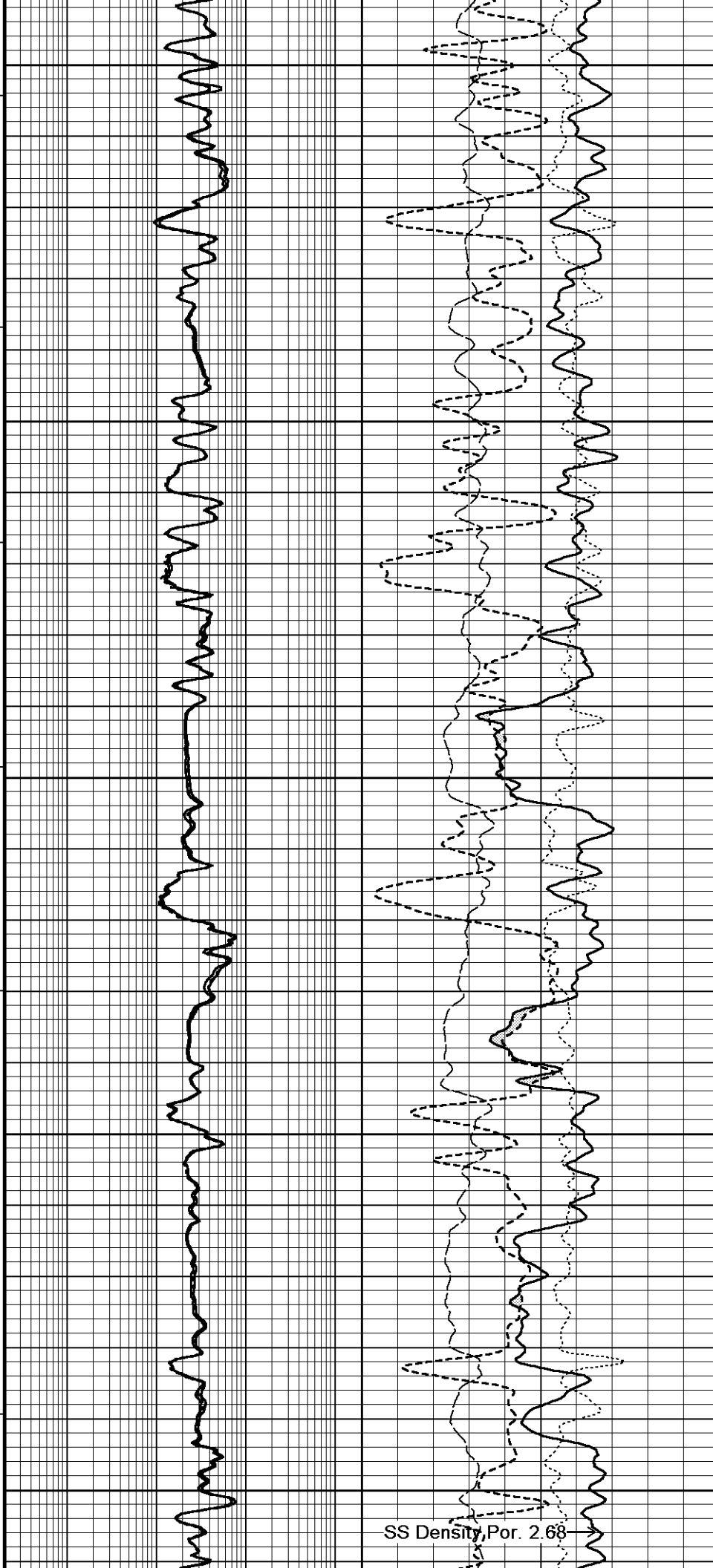
5650

600

154°

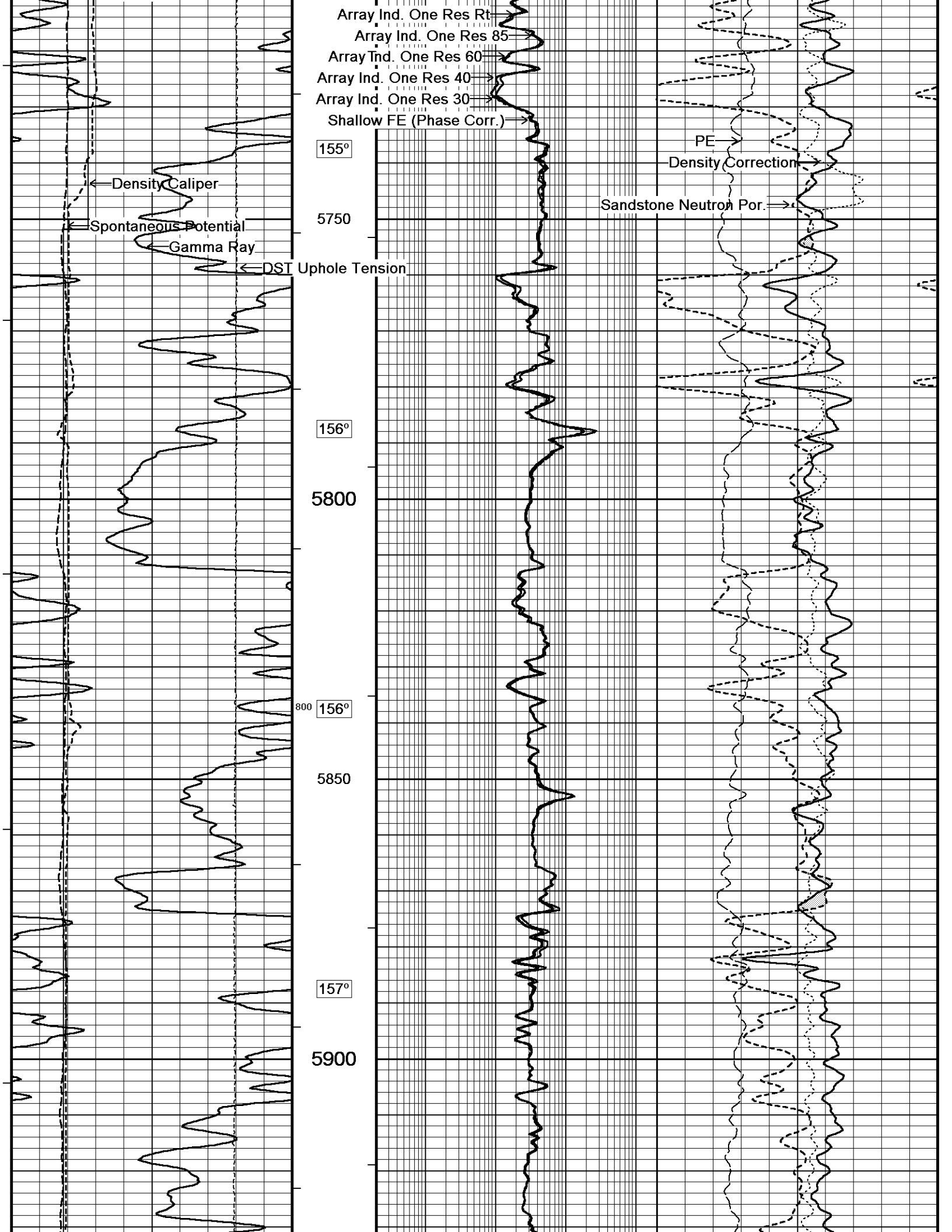
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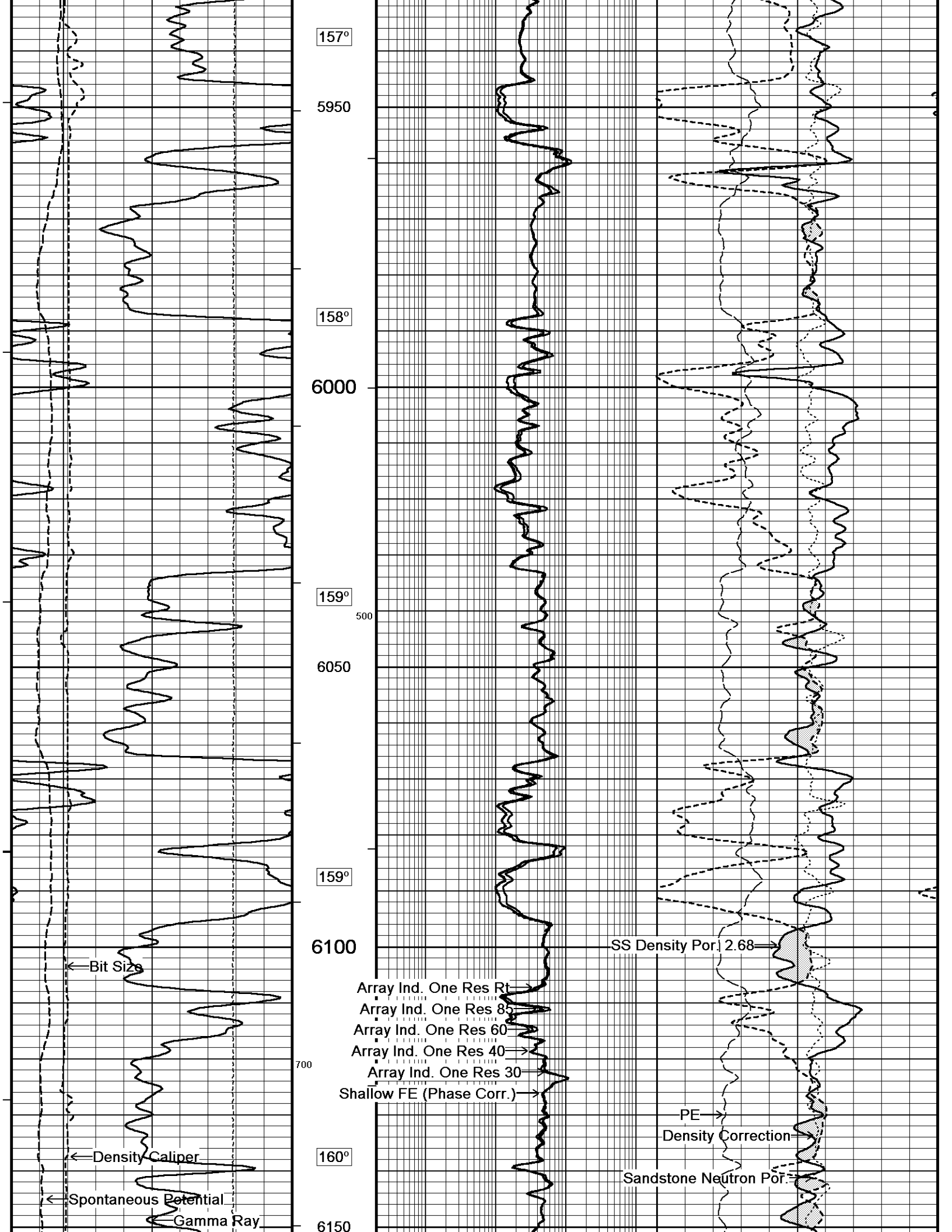
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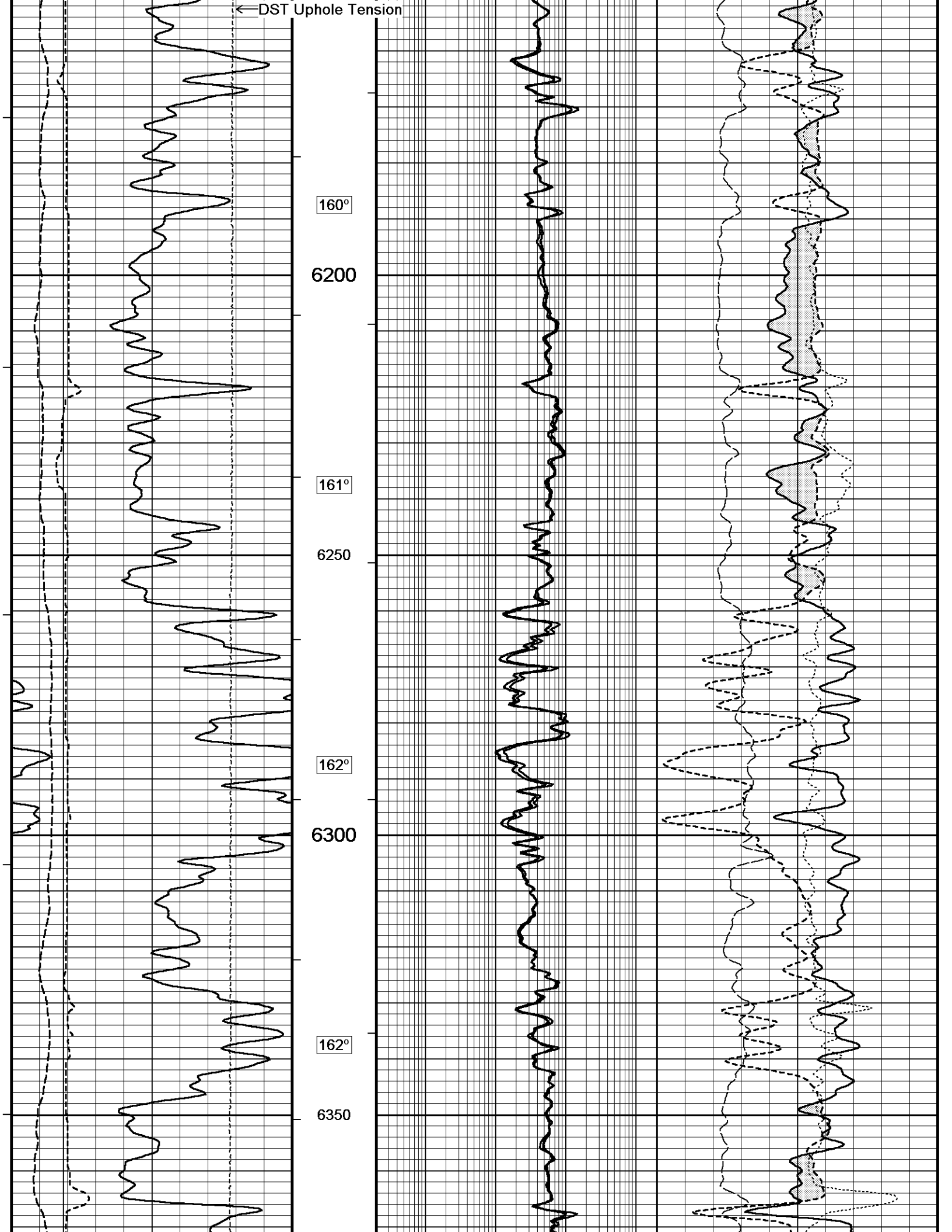


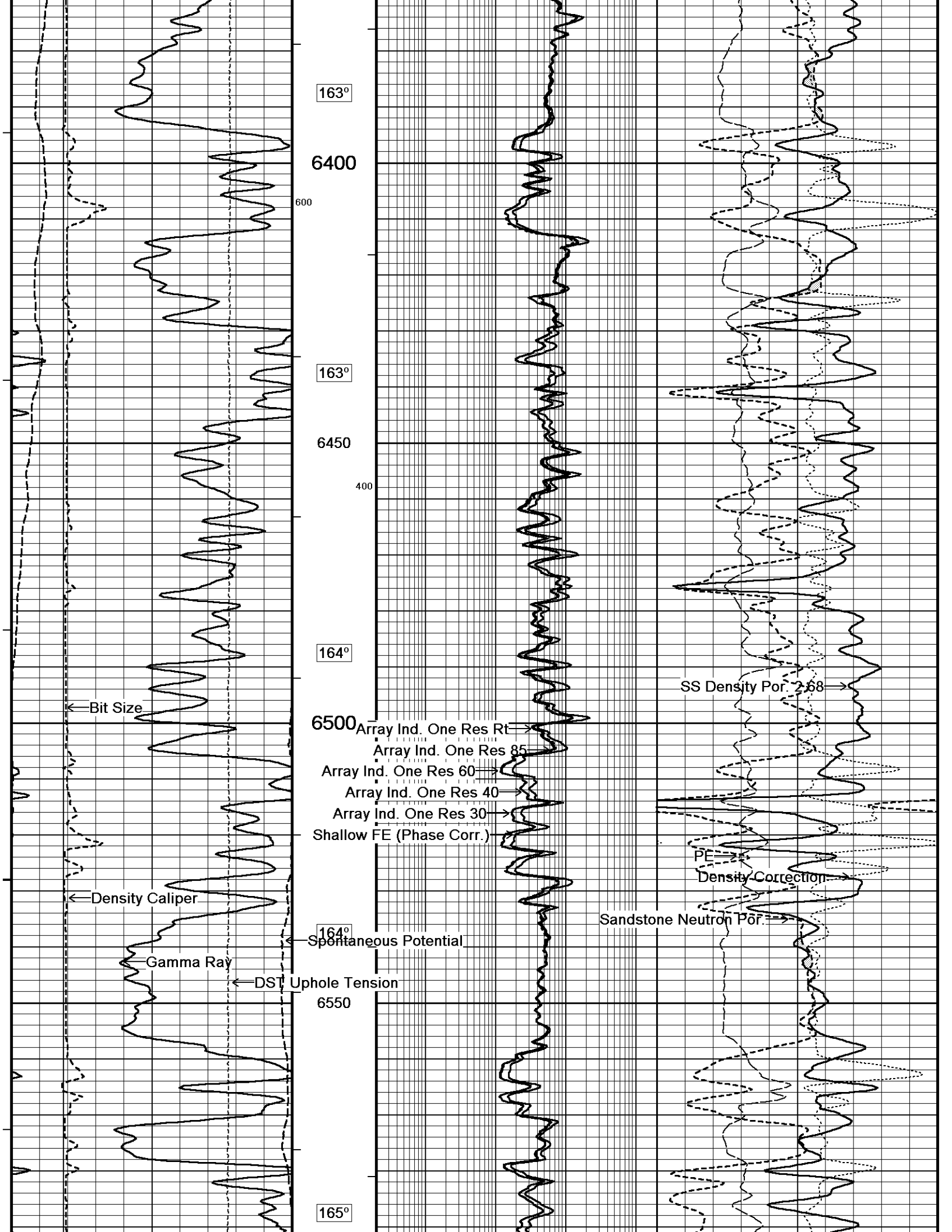
SS Density, Por. 2.68

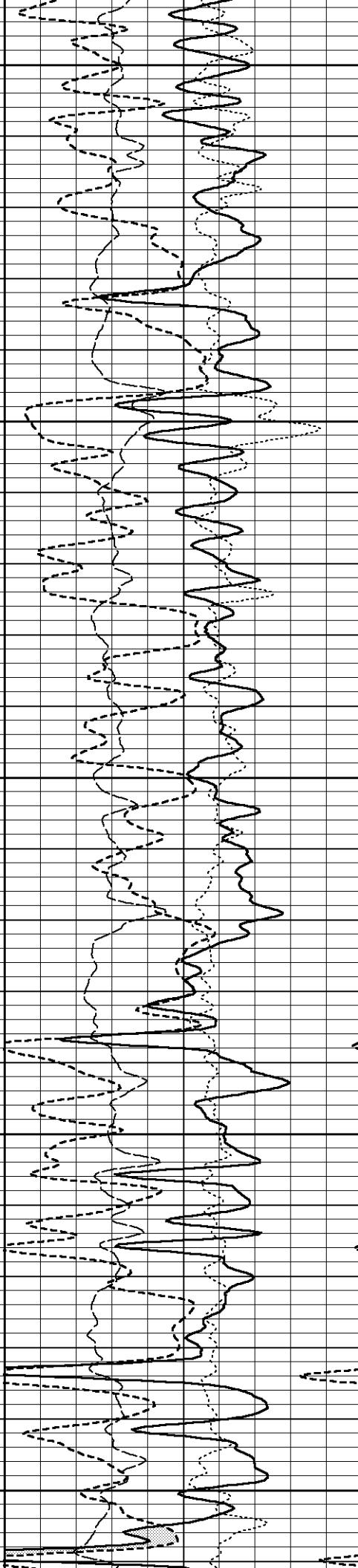
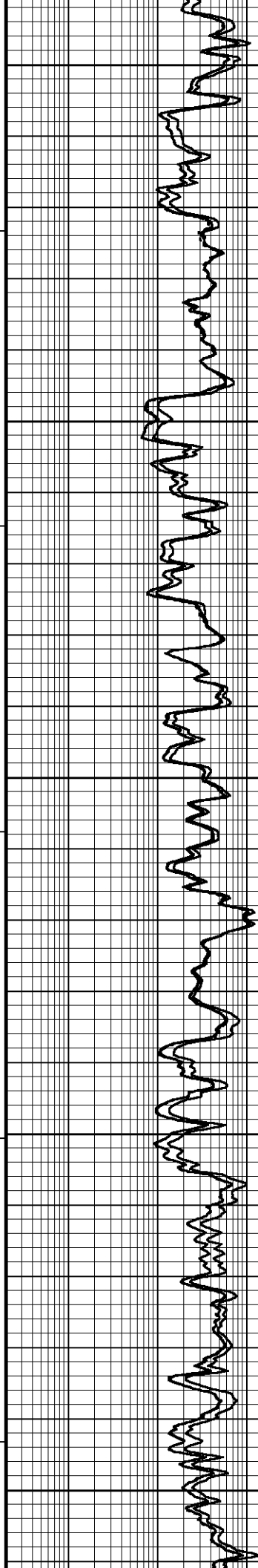
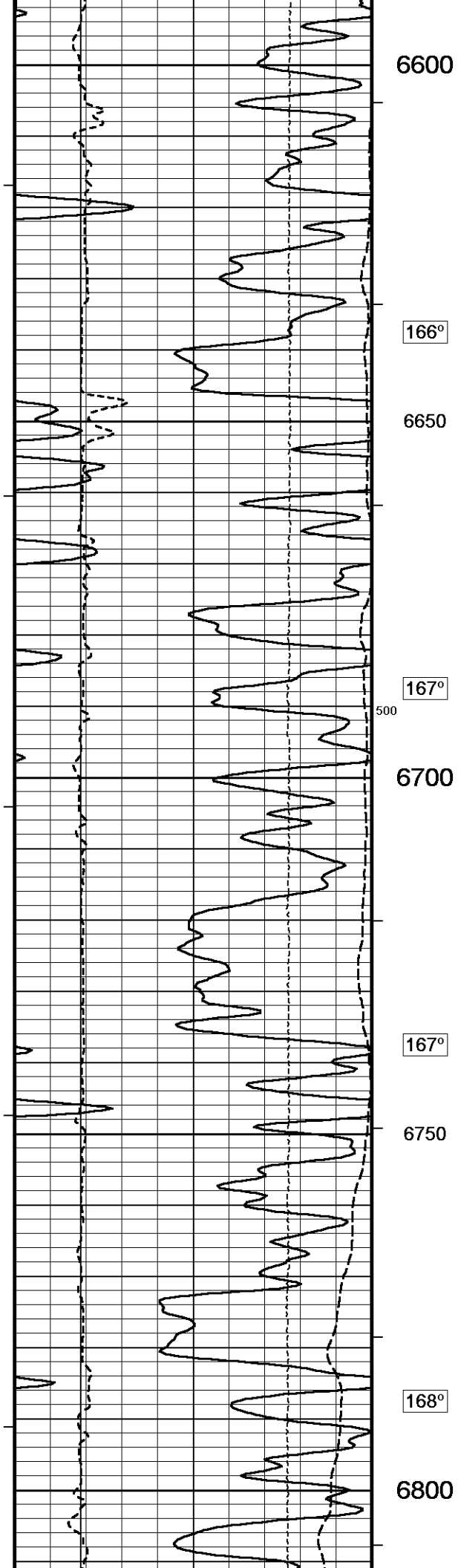


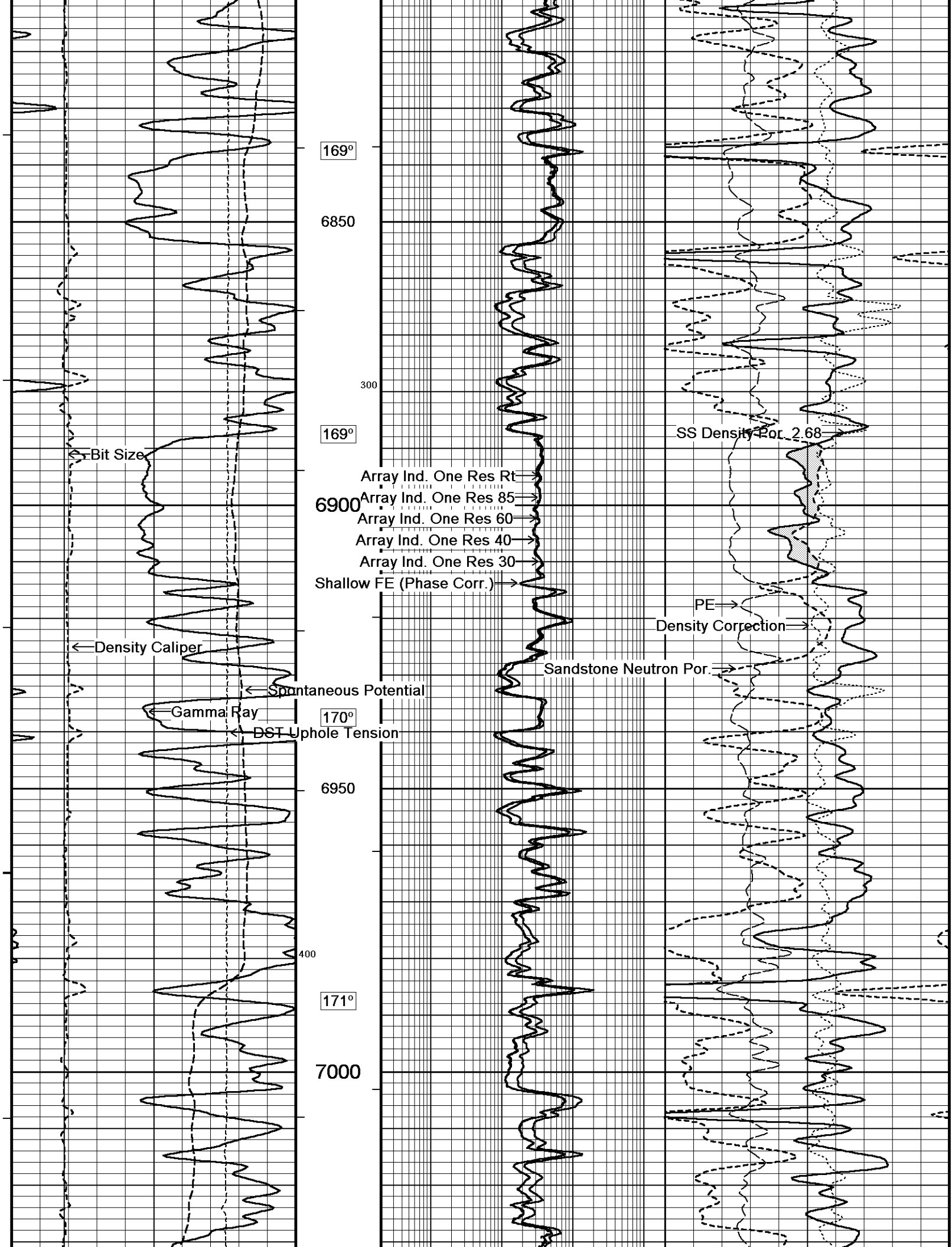


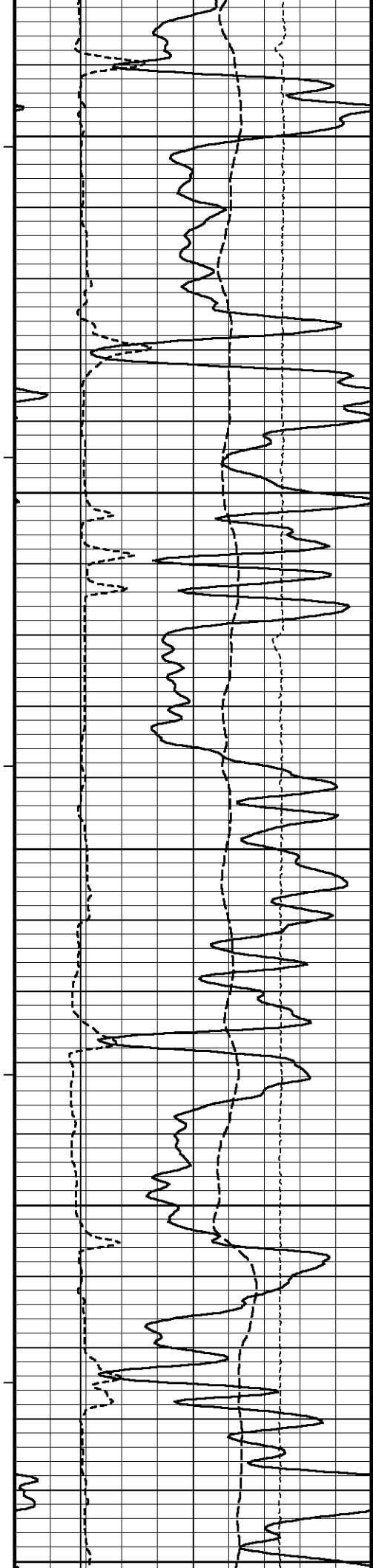












172°

7050

172°

7100

173°

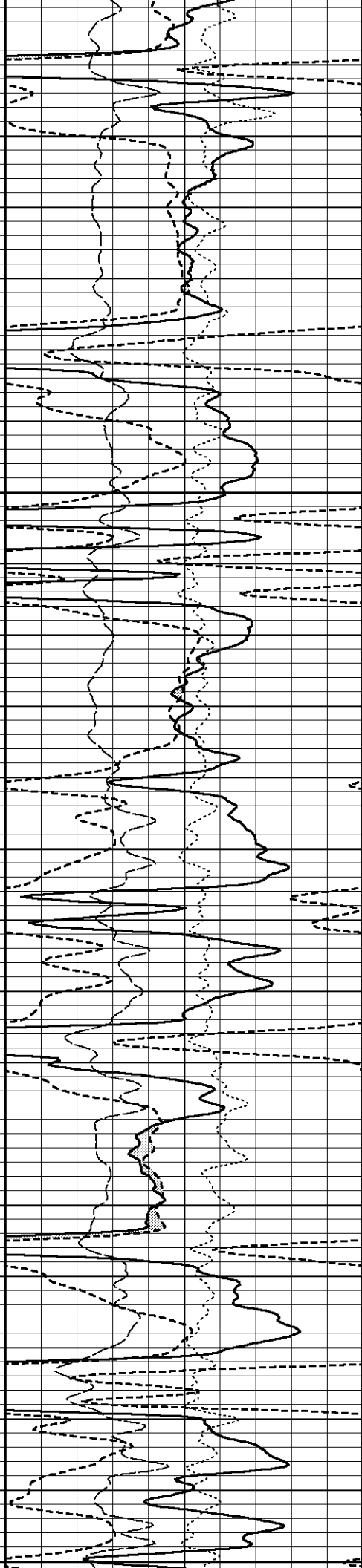
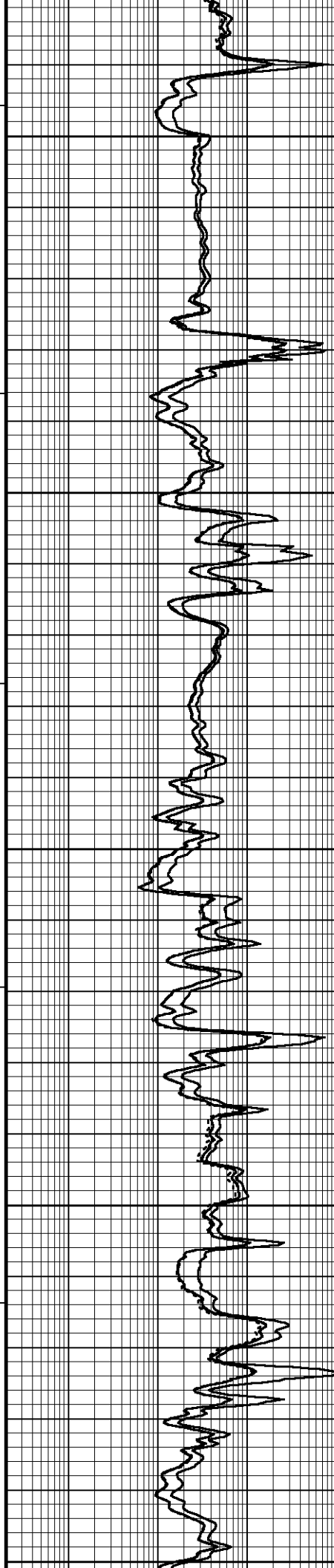
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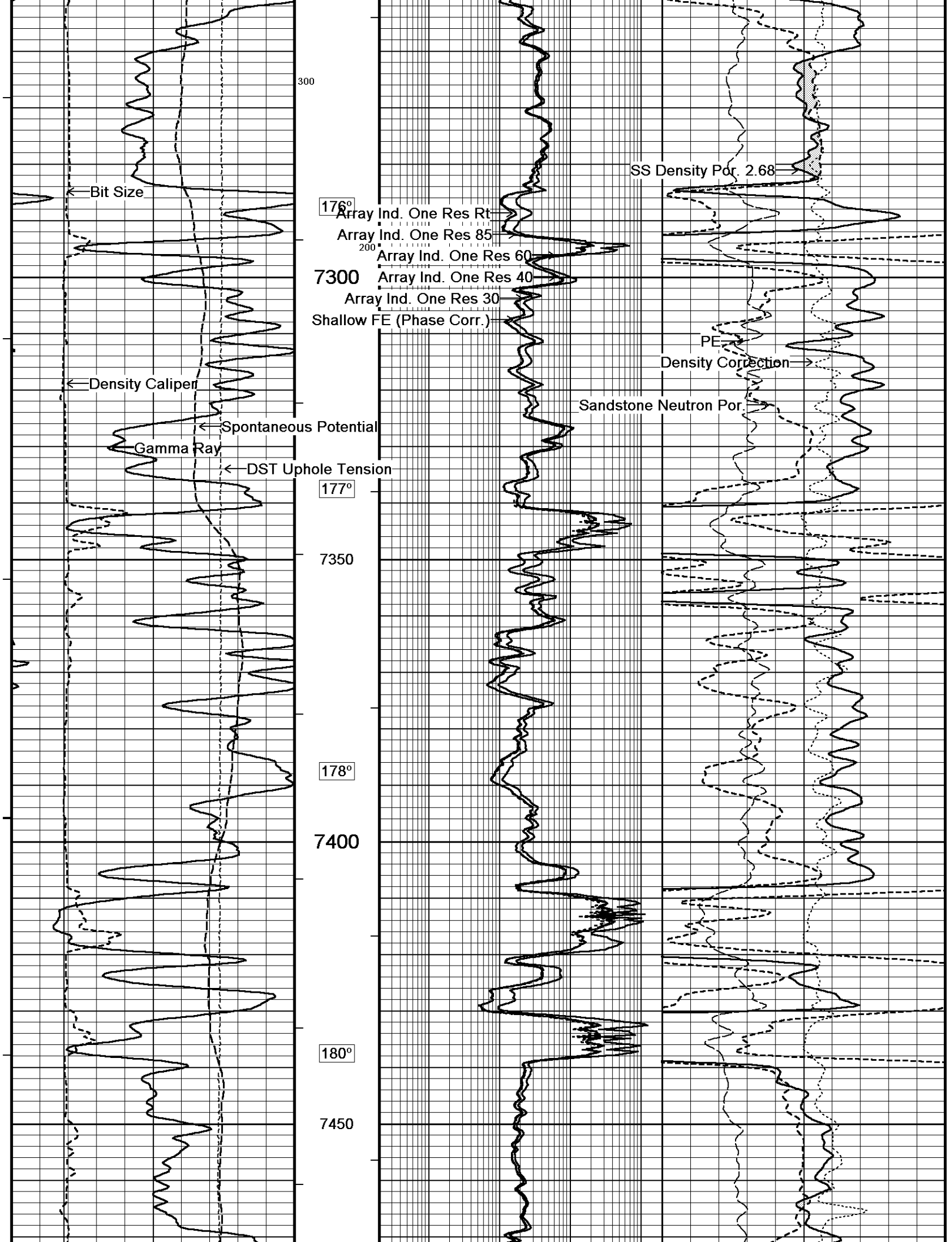
174°

7200

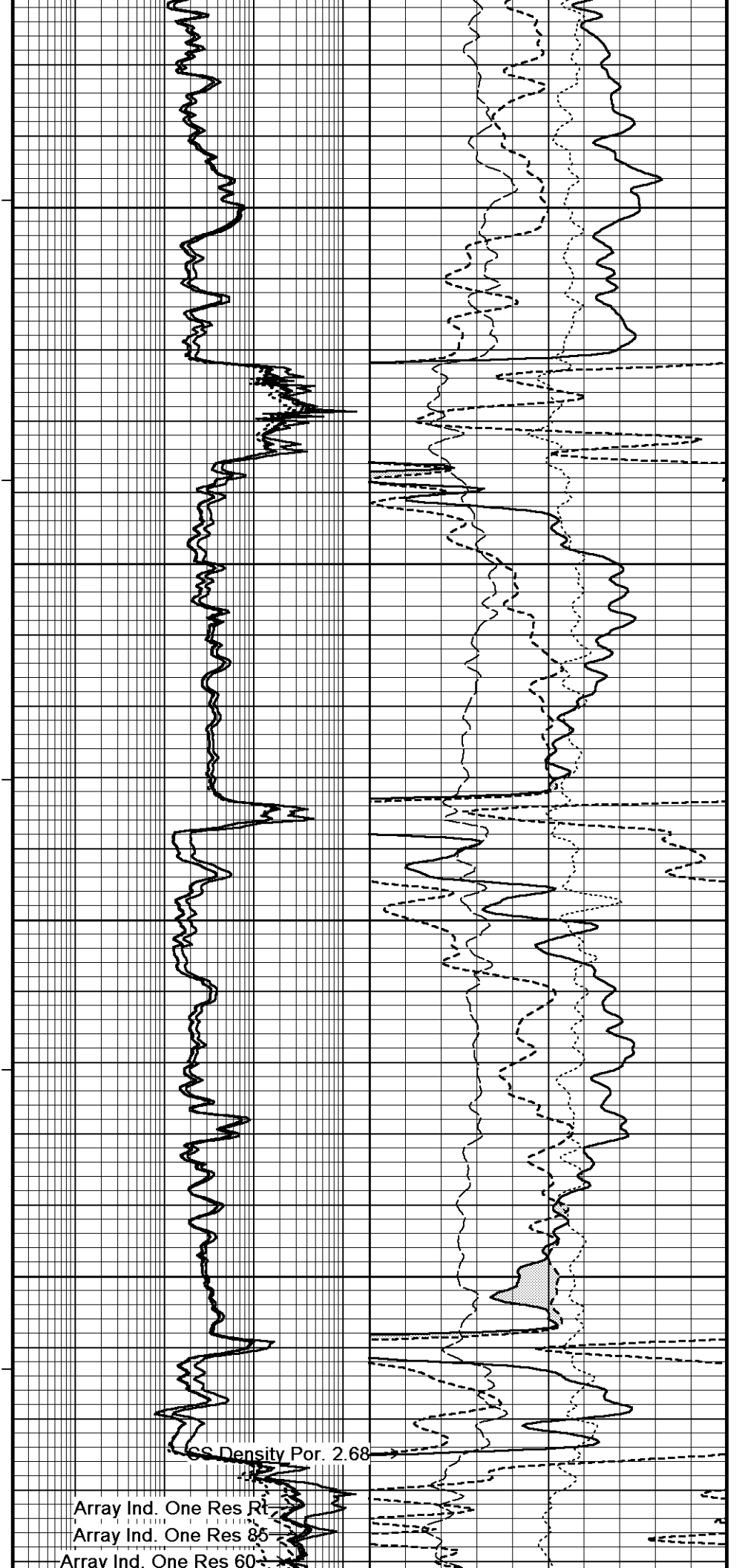
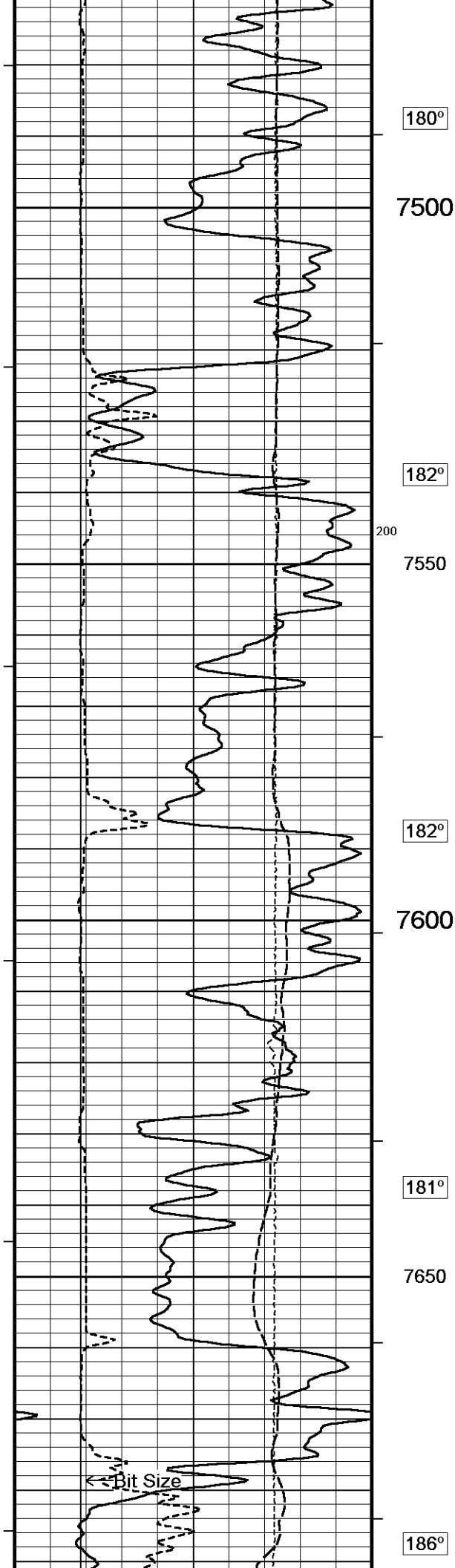
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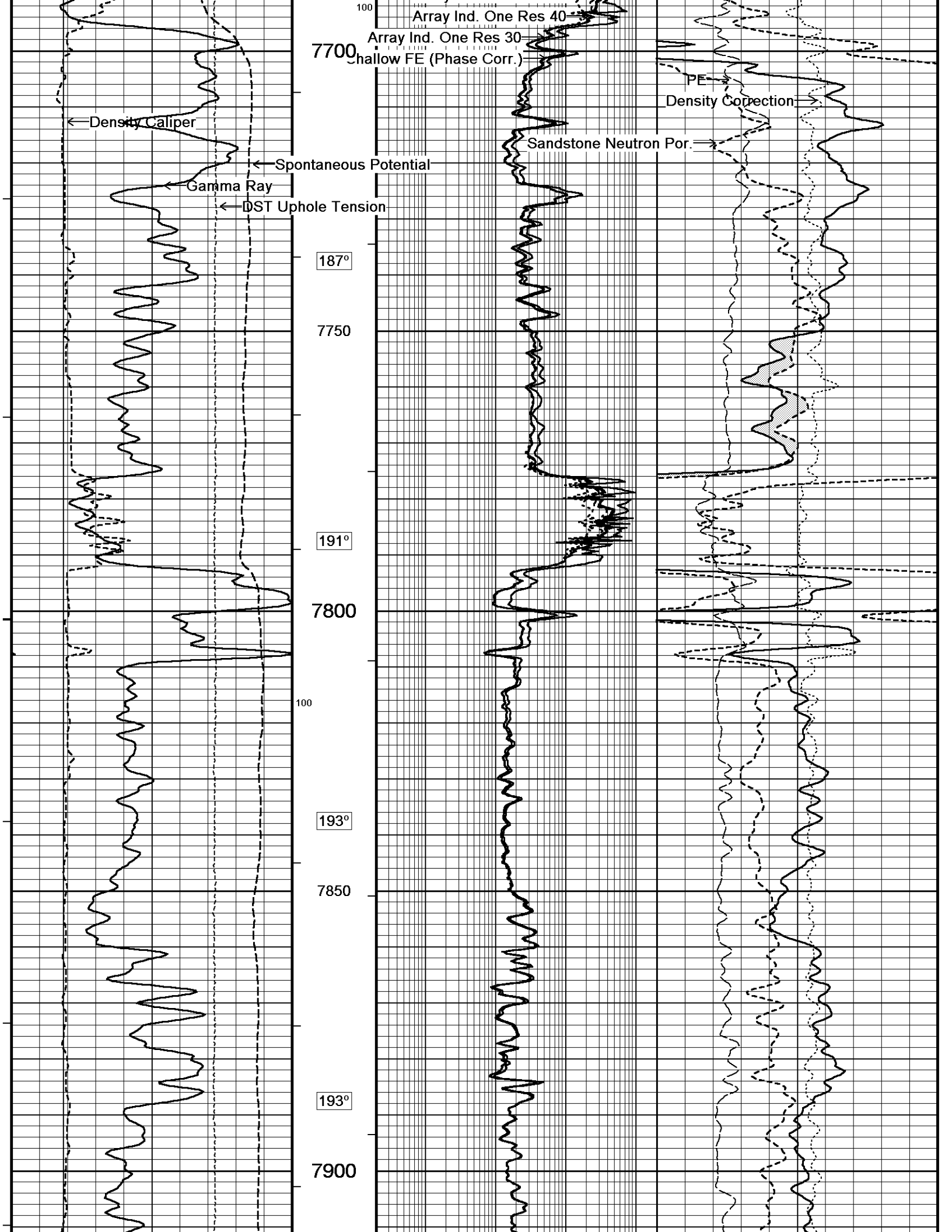
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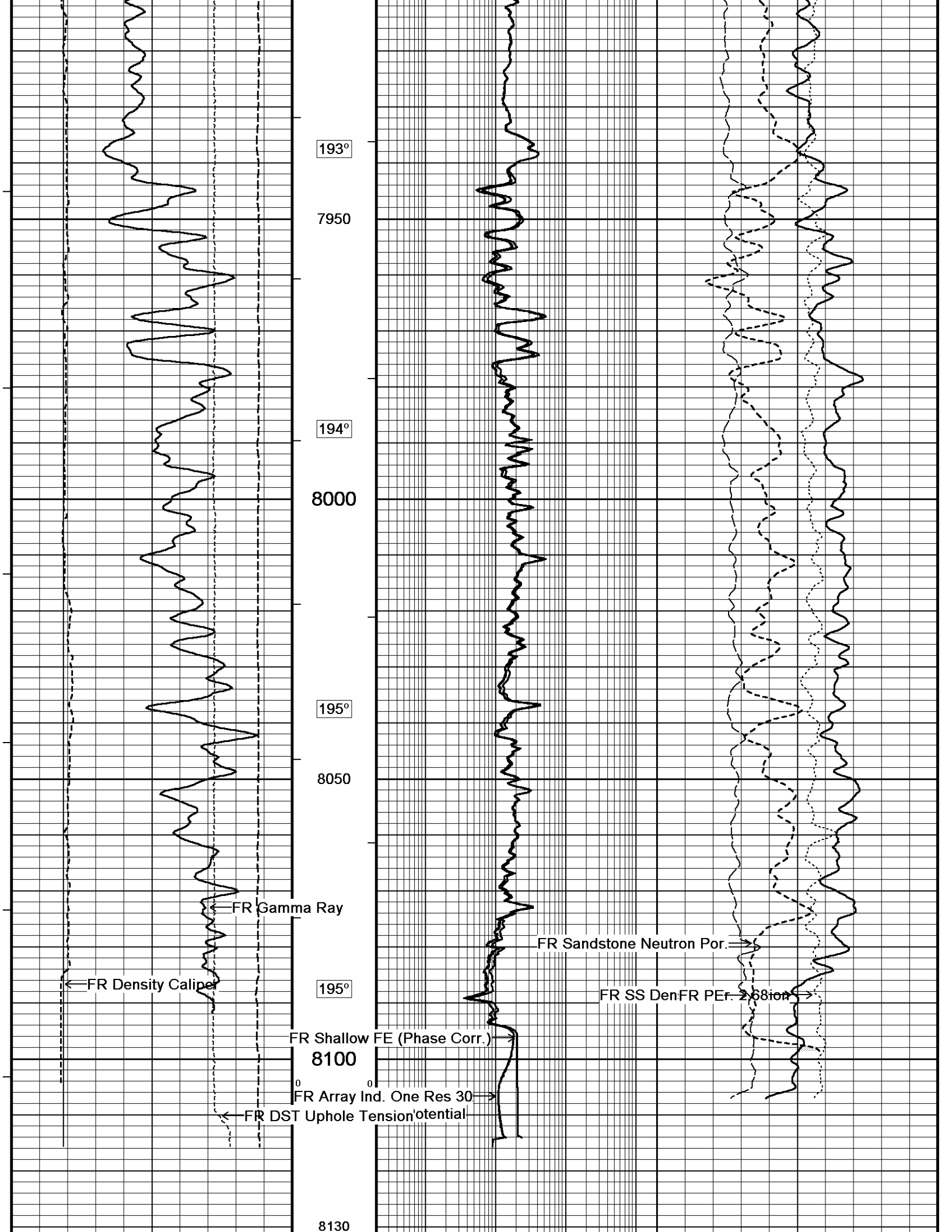


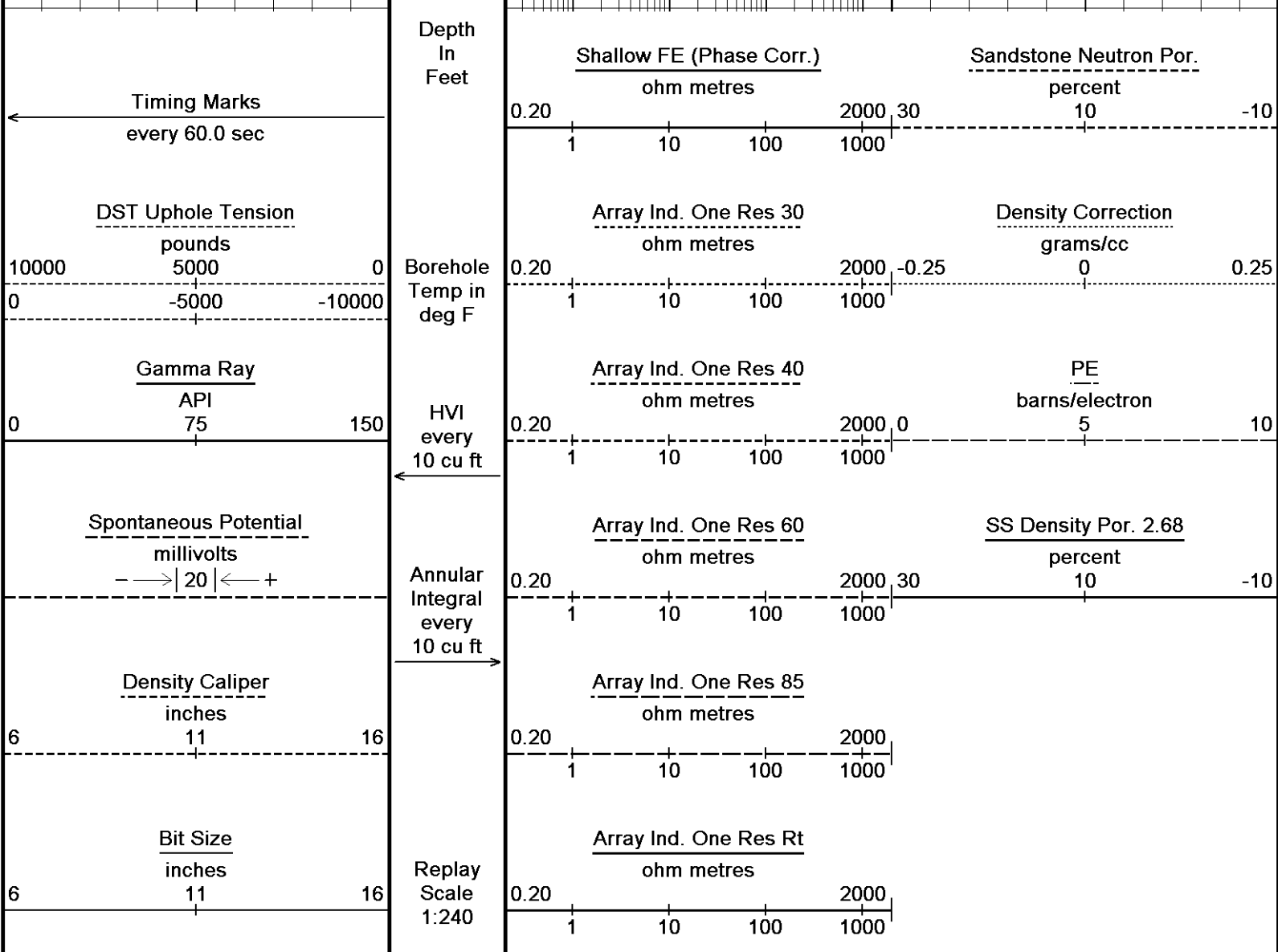












Depth Based Data - Maximum Sampling Increment 10.0cm	Plotted on 16-JUN-2011 06:41
Filename: C:\LOGS\Bill Barrett\CB-TG Land 11C-20-692\MAIN.dta	Recorded on 16-JUN-2011 03:05
System Versions: Logged with 11.03.3657 Plotted with 11.03.3657	

↑

5 INCH MAIN LOG

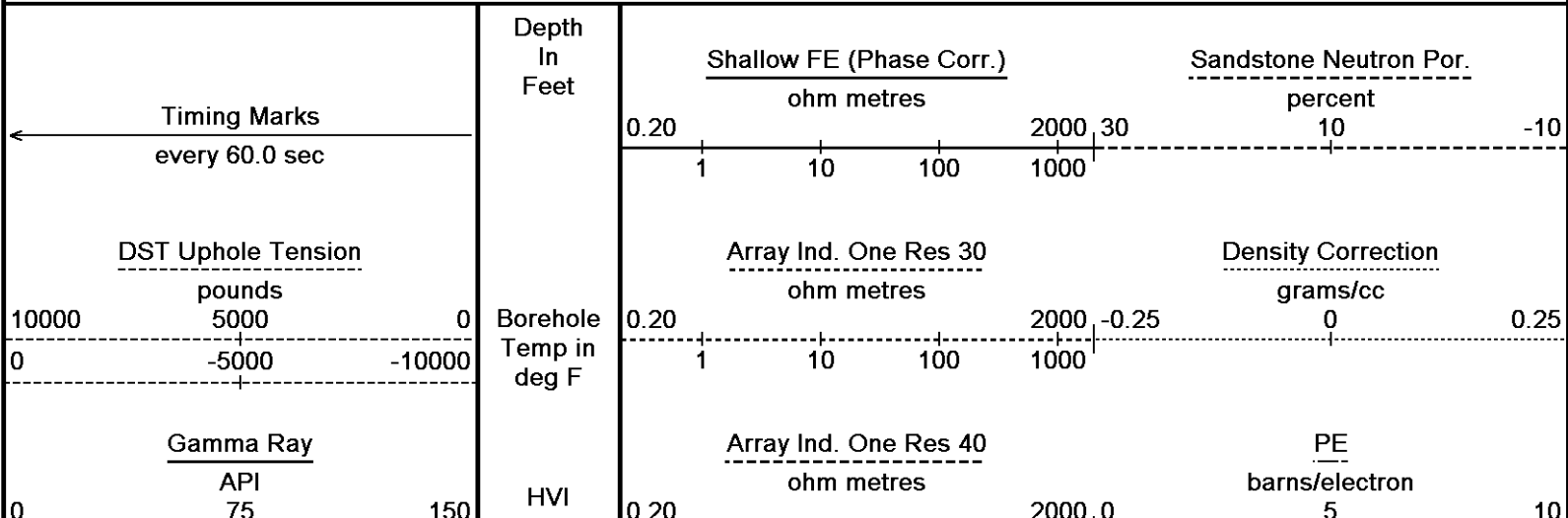
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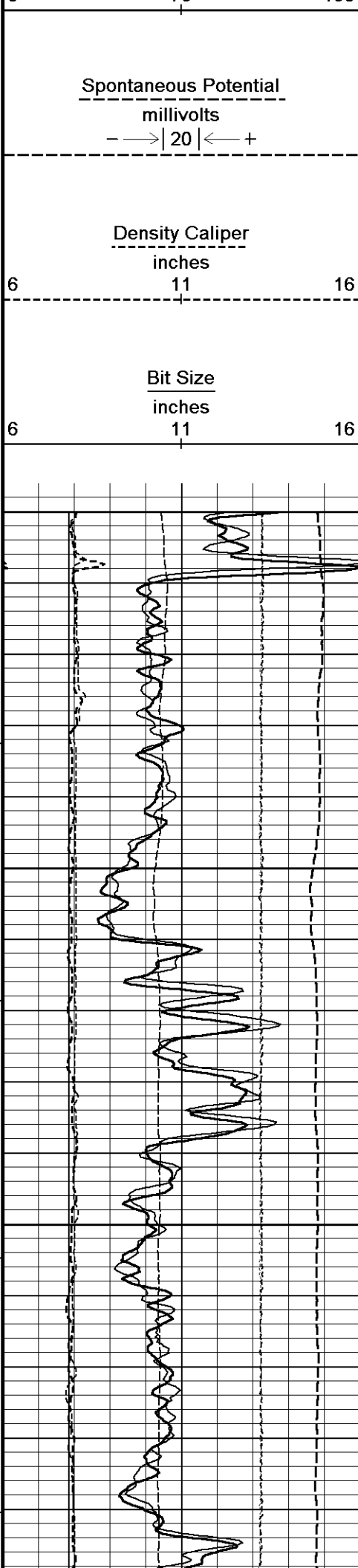
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OVERLAY

↓

Depth Based Data - Maximum Sampling Increment 10.0cm	Plotted on 16-JUN-2011 06:41
Filename: C:\LOGS\Bill Barrett\CB-TG Land 11C-20-692\MAIN.dta	Recorded on 16-JUN-2011 03:05
Filename: C:\LOGS\Bill Barrett\CB-TG Land 11C-20-692\REPEAT.dta	Recorded on 16-JUN-2011 02:51
System Versions: Logged with 11.03.3657 Plotted with 11.03.3657	





every  
10 cu ft

←

Annular  
Integral  
every  
10 cu ft

→

Replay  
Scale  
1:240

7800

100

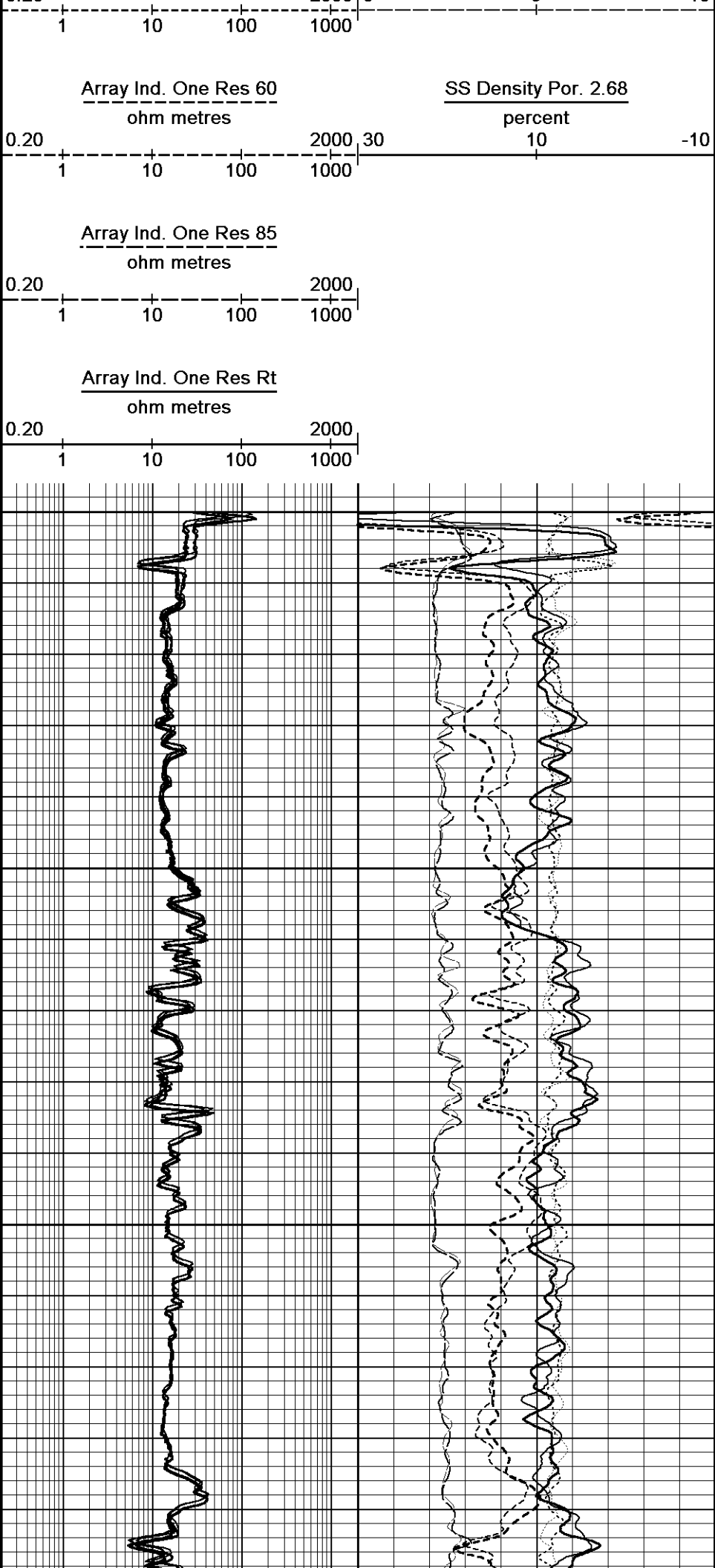
193°

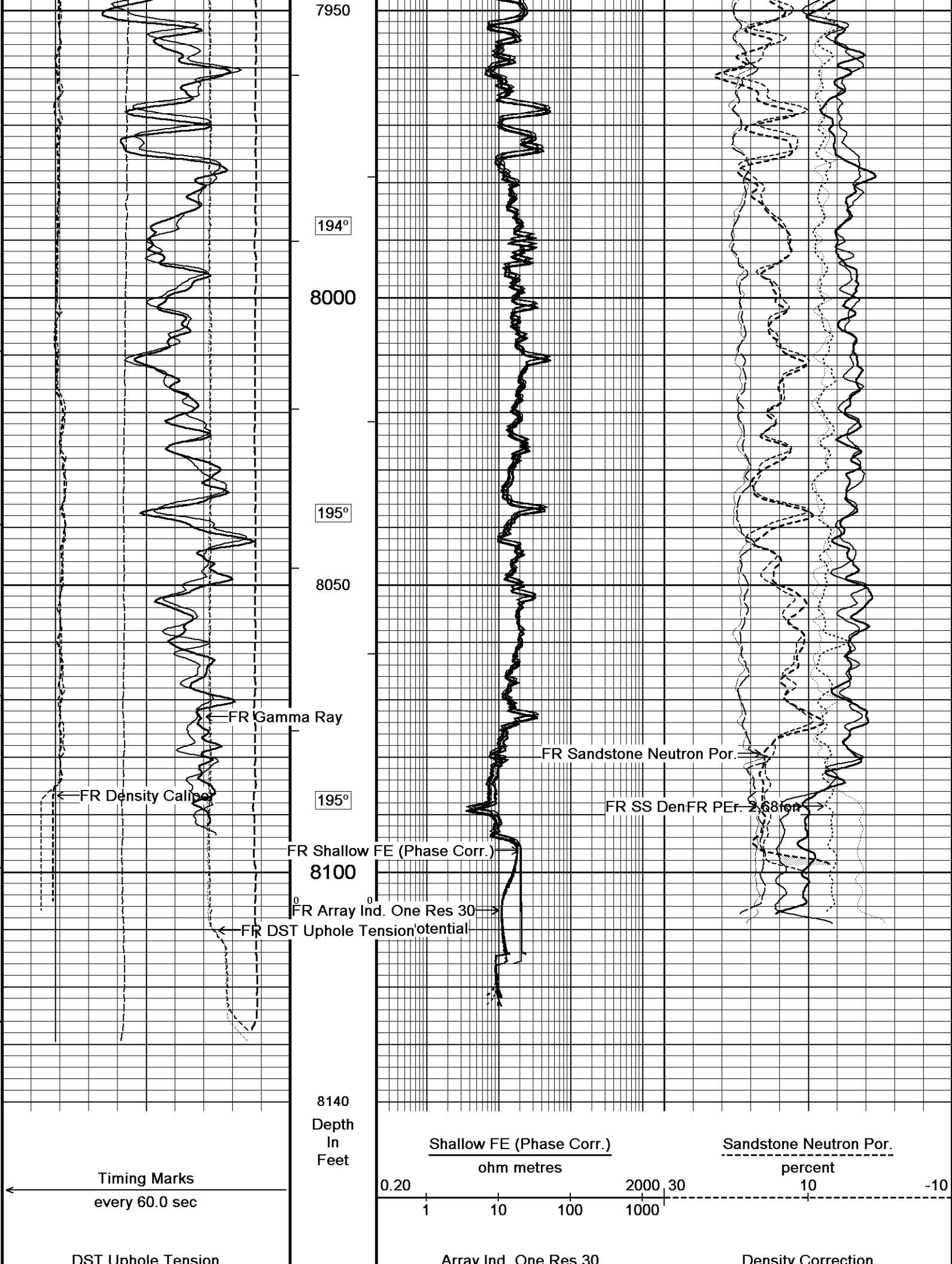
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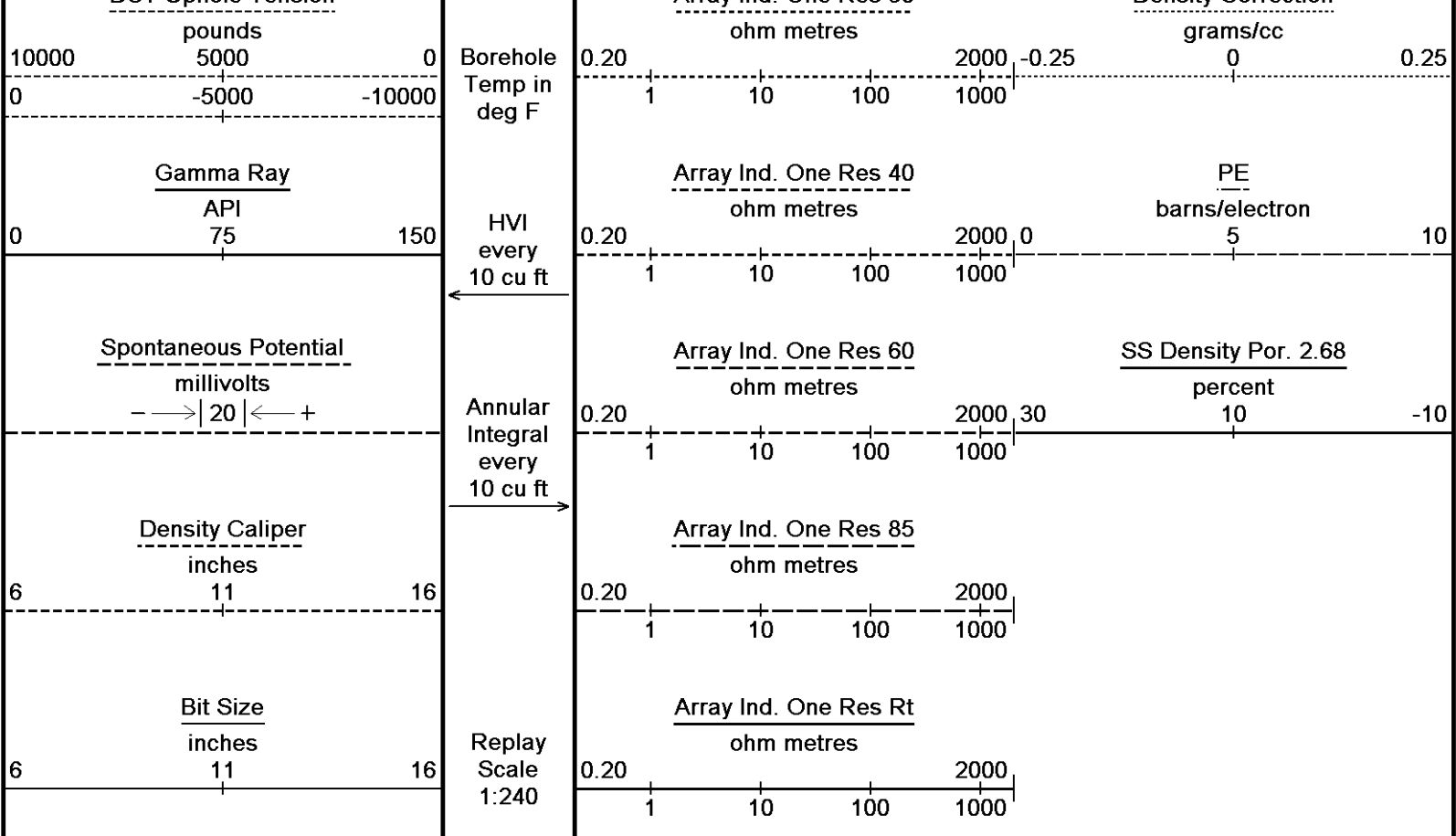
193°

7900

193°







Depth Based Data - Maximum Sampling Increment 10.0cm	Plotted on 16-JUN-2011 06:41
Filename: C:\LOGS\Bill Barrett\CB-TG Land 11C-20-692\MAIN.dta	Recorded on 16-JUN-2011 03:05
Filename: C:\LOGS\Bill Barrett\CB-TG Land 11C-20-692\REPEAT.dta	Recorded on 16-JUN-2011 02:51
System Versions: Logged with 11.03.3657 Plotted with 11.03.3657	

↑ OVERLAY ↑

BEFORE SURVEY CALIBRATION			
C:\LOGS\Bill Barrett\CB-TG Land 11C-20-692\MAIN.dta			
General Constants All 000		Last Edited on 16-JUN-2011,02:00	
General Parameters			
Mud Resistivity	2.770	ohm-metres	
Mud Resistivity Temperature	91.000	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 0		Field Calibration on 16-JUN-2011 01:23	
Reading No	Measured	Calibrated (lbs)	
1	15612.77	0.00	
2	16363.14	360.00	
Gamma Calibration MCG-D.A 287		Field Calibration on 16-JUN-2011 01:48	

Background	Measured	142	Calibrated (API)	97
Calibrator (Gross)		1479		1009
Calibrator (Net)		1337		912
Gamma Constants MCG-D.A 287				Last Edited on 16-JUN-2011,01:48
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	
SP Calibration MCG-D.A 287				Field Calibration on 16-JUN-2011,01:48
	Measured		Calibrated (mV)	
Reference 1		100.9		100.0
Reference 2		-100.2		-100.0
High Resolution Temperature Calibration MCG-D.A 287				Field Calibration on 16-JUN-2011,01:49
	Measured		Calibrated(Deg F)	
Lower		10.00		10.00
Upper		50.00		50.00
High Resolution Temperature Constants MCG-D.A 287				Last Edited on 16-JUN-2011,01:48
Pre-filter Length		11		
Neutron Calibration MDN-A.B 160				Base Calibration on 09-MAY-2011 11:52 Field Check on 16-JUN-2011,01:46
Base Calibration				
		Measured		Calibrated (cps)
	Near	Far	Near	Far
	3186	99	3714	110
Ratio		32.247		33.764
Field Calibrator at Base				
				Calibrated (cps)
			1296	1921
Ratio				0.675
Field Check				
				Calibrated (cps)
			1282	1897
Ratio				0.676
Neutron Constants MDN-A.B 160				Last Edited on 16-JUN-2011,01:46
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 95				Base Calibration on 26-MAY-2011 09:40 Field Check on 16-JUN-2011 01:31
Base Calibration				
	Measured		Calibrated (ohm-m)	
Reference 1		0.0		0.0
Reference 2		965.4		126.8
Base Check				283.9



Field Check	282.3
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FE Constants MFE-A.A 95			Last Edited on 16-JUN-2011,01:30		
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		0.5		inches	

High Resolution Temperature Calibration MAI-B.A 213		Field Calibration on 07-JUN-2011,13:27	
	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	
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	14.9	3935.9	0.0	0.0	
2	30.5	3538.8	0.0	0.0	
3	29.0	3113.2	0.0	0.0	
4	19.1	2096.3	0.0	0.0	
Deep	17.5	2078.1	0.0	0.0	
Medium	42.6	4086.4	0.0	0.0	
Shallow	45.8	5157.2	0.0	0.0	
Array Temperature		83.7	0.0	Deg F	

Induction Constants MAI-B.A 213		Last Edited on 16-JUN-2011,01:29	
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-B 167

Base Calibration on 24-MAR-2011 14:48  
Field Calibration on 06-JUN-2011,10:14

##### 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 05-MAY-2011 20:30  
Field Check on 16-JUN-2011 01:35

##### Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	48387	18472	53115	19186
Reference 2	22628	3021	25020	2536

##### Field Check at Base

1161.5	1739.6
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##### Field Check

1157.2	1735.6
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##### PE Calibration

Base Calibration	Measured		Calibrated
	WS	WH	Ratio
Background	212	1037	
Reference 1	14983	48216	0.313
Reference 2	5889	22492	0.265

##### Field Check at Base

212.3	1037.3
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##### Field Check

212.5	1034.2
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#### Density Constants MPD-B 167

Last Edited on 16-JUN-2011,01:31

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	1.27	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\CB-TG Land 11C-20-692\MAIN.dta

FE Check MFE-A.A 95

Before Survey Check 16-JUN-2011 01:31

After Survey Check on 16-JUN-2011 06:12

Before (ohm-m)  
282.3

After (ohm-m)  
279.1

Induction Check MAI-B.A 213

Before Survey Check on

After Survey Check on 16-JUN-2011 06:11

Channel	Before Survey (mmho/m)		After Survey (mmho/m)	
	Low	High	Low	High
1	0.0	0.0	14.3	3937.0
2	0.0	0.0	30.3	3539.7
3	0.0	0.0	28.9	3113.8
4	0.0	0.0	19.1	2096.6
Deep	0.0	0.0	17.4	2078.2
Medium	0.0	0.0	42.6	4087.2
Shallow	0.0	0.0	45.6	5159.0
Array Temperature	0.0		73.6	Deg F

Photo Density Check MPD-B 167

Before Survey Check on 16-JUN-2011 01:35

After Survey Check on 16-JUN-2011 06:16

Density Check

	Near		Far	
	Before	After	Before	After
	1157.2	1159.7	1735.6	1734.3

PE Check

	Before	After
WS	212.5	210.3
WH	1034.2	1033.7

## DOWNHOLE EQUIPMENT

C:\LOGS\Bill Barrett\CB-TG Land 11C-20-692\MAIN.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-D.A 287 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Neutron

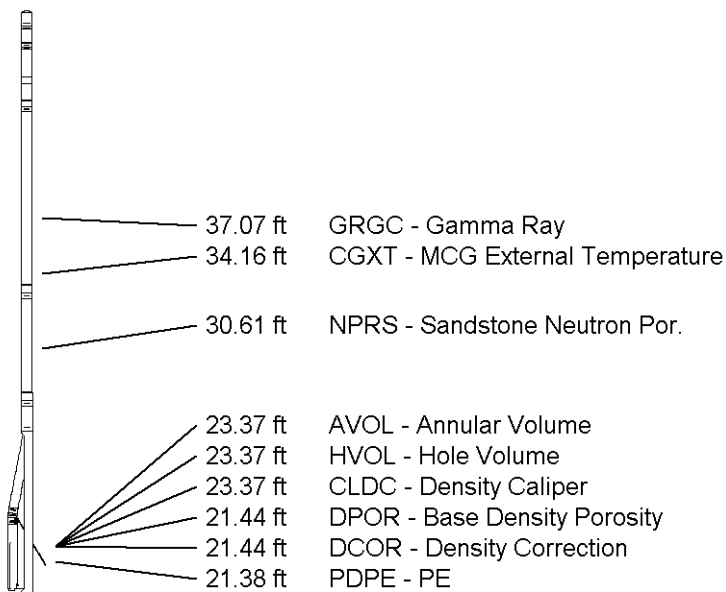
MDN-A.B 160 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper

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

SKJ-D.A Compact Knuckle Joint

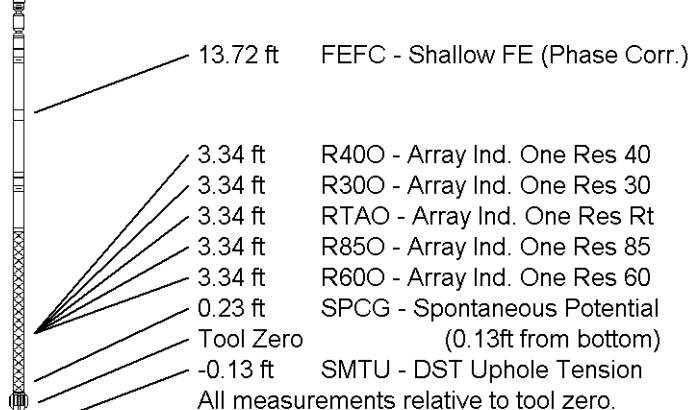
SKJ-D.A 114 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in



Compact Focussed Electric  
MFE-A.A 95 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	CB TG LAND 11C-20-692
FIELD	MAMM CREEK
PROVINCE/COUNTY	GARFIELD
COUNTRY/STATE	U.S.A. / COLORADO

Elevation Kelly Bushing	5553.00	feet	First Reading	8107.00	
Elevation Drill Floor	5553.00	feet	Depth Driller	8110.00	feet
Elevation Ground Level	5530.00	feet	Depth Logger	8110.00	feet



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