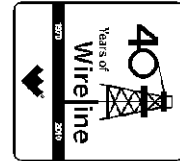




Weatherford[®]

**COMPACT TRIPLE COMBO
QUICKLOOK
LOG**

COMPANY **BILL BARRETT CORPORATION**
WELL **CB TG LAND 11D-20-692**
FIELD **MAMM CREEK**
PROVINCE/COUNTY **GARFIELD**
COUNTRY/STATE **U.S.A. / COLORADO**
LOCATION **SHL: 628' FNL & 2581' FEL**
BHL: 105' FNL & 660' FWL



SEC	TWP	RGE	Other Services
20	6S	92W	
API Number	05-045-19757		
Permit Number			

Permanent Datum G.L., Elevation 5530 feet
 Log Measured From KB
 Drilling Measured From K.B. @ 23 FT.

Elevations:	feet
KB	5553.00
DF	5552.00
GL	5530.00

Date	27-JUNE-2011
Run Number	ONE
Depth Driller	8193.00 feet
Depth Logger	8188.00 feet
First Reading	8185.00
Last Reading	857.00
Casing Driller	861.00 feet
Casing Logger	857.00 feet
Bit Size	7.875 inches
Hole Fluid Type	LSND
Density / Viscosity	10.70 lb/USg 55.00 CP
PH / Fluid Loss	9.30 8.00 ml/30Min
Sample Source	FLOW LINE
Rm @ Measured Temp	2.20 @ 97.0 ohm-m
Rmf @ Measured Temp	1.76 @ 97.0 ohm-m
Rmc @ Measured Temp	2.64 @ 97.0 ohm-m
Source Rmf / Rmc	CALC CALC
Rm @ BHT	1.096 @ 198.0 ohm-m
Time Since Circulation	5 HOURS
Max Recorded Temp	198.00 deg F
Equipment Name	COMPACT
Equipment / Base	13173 GD JCT
Recorded By	D. KUNTZ
Witnessed By	J. BOYD

BOREHOLE RECORD

Last Edited: 27-JUN-2011 17:03

Bit Size inches	Depth From feet	Depth To feet
8.750	857.00	5455.00
7.880	5455.00	8193.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	9.625	0.00	857.00	36.00

REMARKS

LOGGING SOFTWARE USED: 11.03.3657

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 STANDOFF 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.

MULTIPLE REPEAT SECTIONS CONDUCTED AND PRESENTED.

LOGS SPLICED AT FOLLOWING DEPTHS: 7910, 7590 FT.

SP READINGS MAY BE EFFECTED AT SPLICE DEPTHS.

UNDERGAUGE CALIPER READINGS WERE REPEATED AT FOLLOWING DEPTHS WITH NO CHANGE IN LOG RESPONSE: 7840-7860, 7660-7725, 7550-7570 FT.

CALIPER NOT REPEATED FROM 7050-7080 FT DUE TO TIGHT PULLS IN THE AREA,

CALIPER CHECK IN CASING PRESENTED, REFERENCE I.D. = 9.04" (9 5/8", 36 LB/FT CASING).

8.75 INCH BIT CHANGE AT 5455 FT.

TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 3065 CU.FT.

ANNULAR VOLUME WITH 4.5 INCH PRODUCTION CASING = 2255 CU.FT.

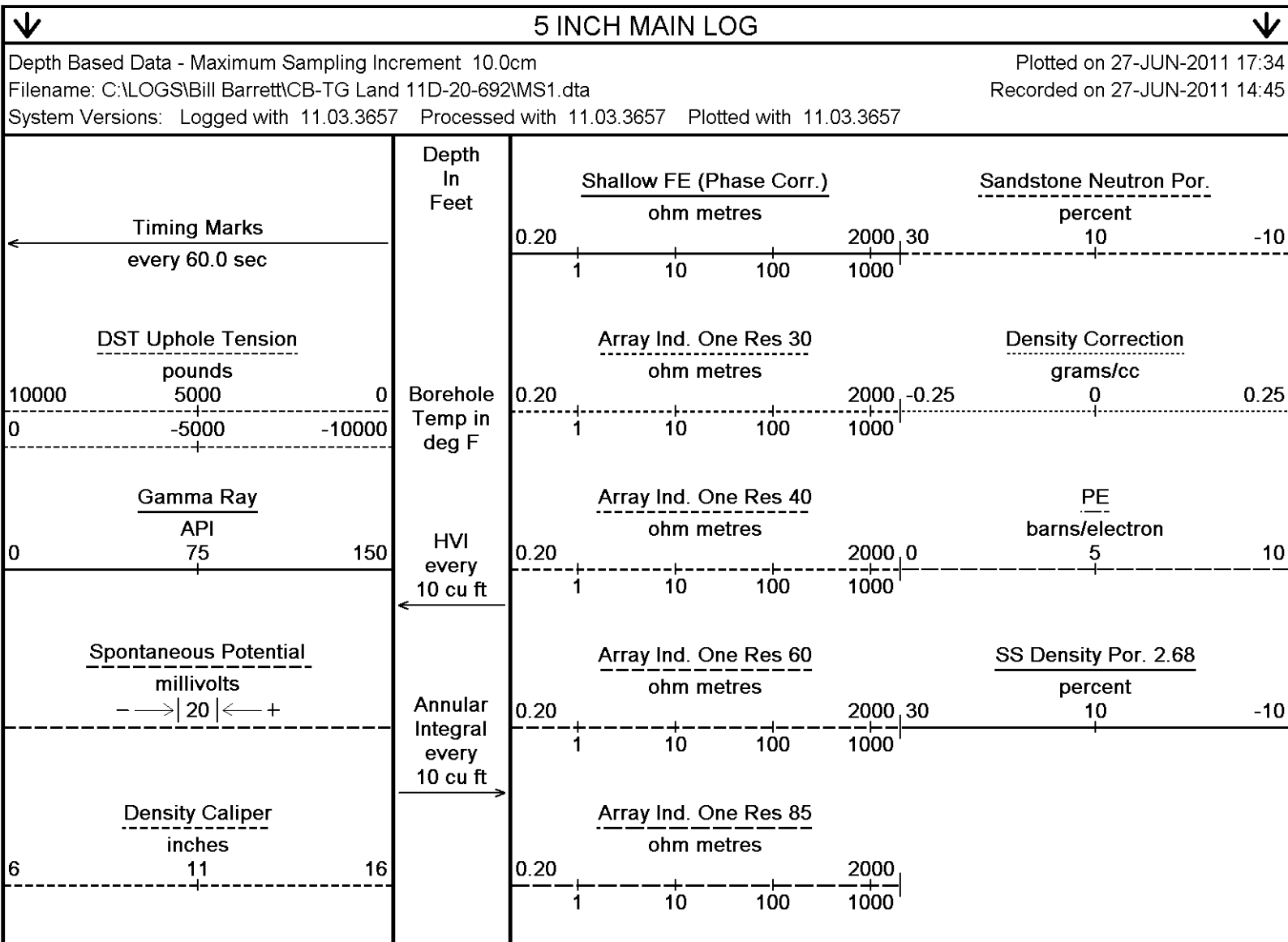
ENGINEER(S): D. KUNTZ

OPERATOR(S): R. SYERS, K. BOBLITT

SERVICE ORDER: # 3524750

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.



Bit Size
inches

6 11 16

Replay
Scale
1:240

Array Ind. One Res Rt
ohm metres

0.20 2000
1 10 100 1000

850
Casing
Shoe

105°

900

106°

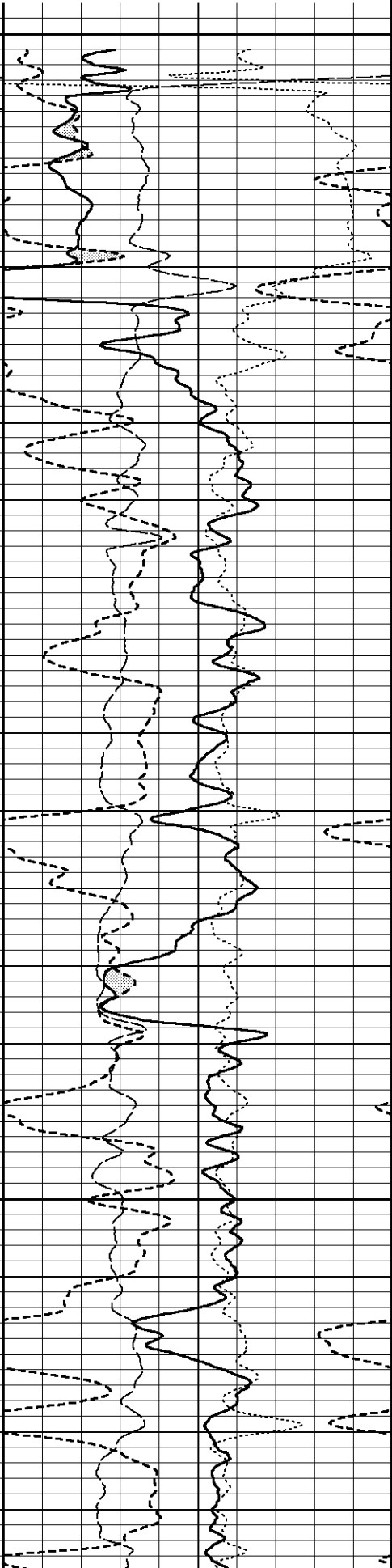
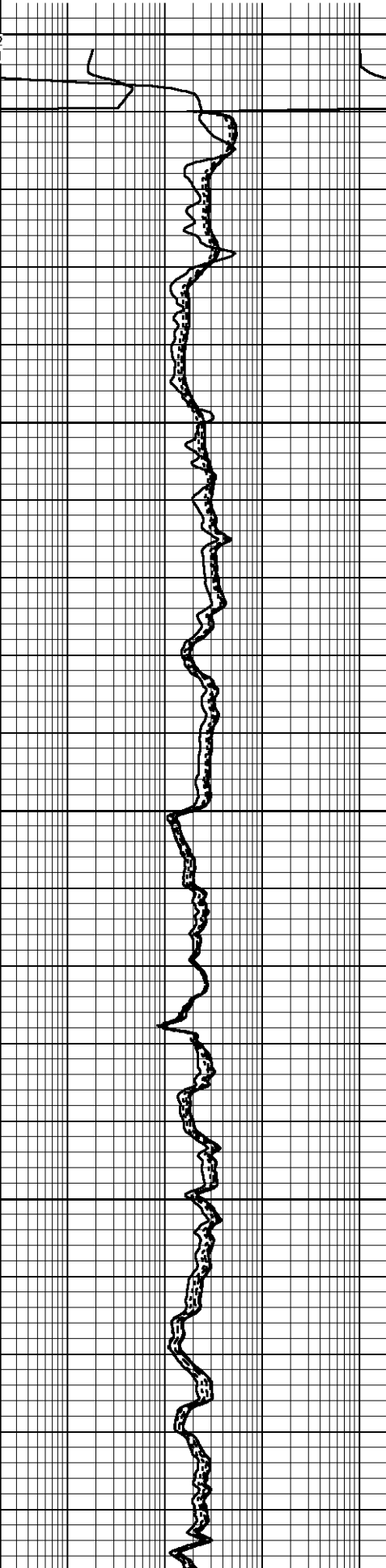
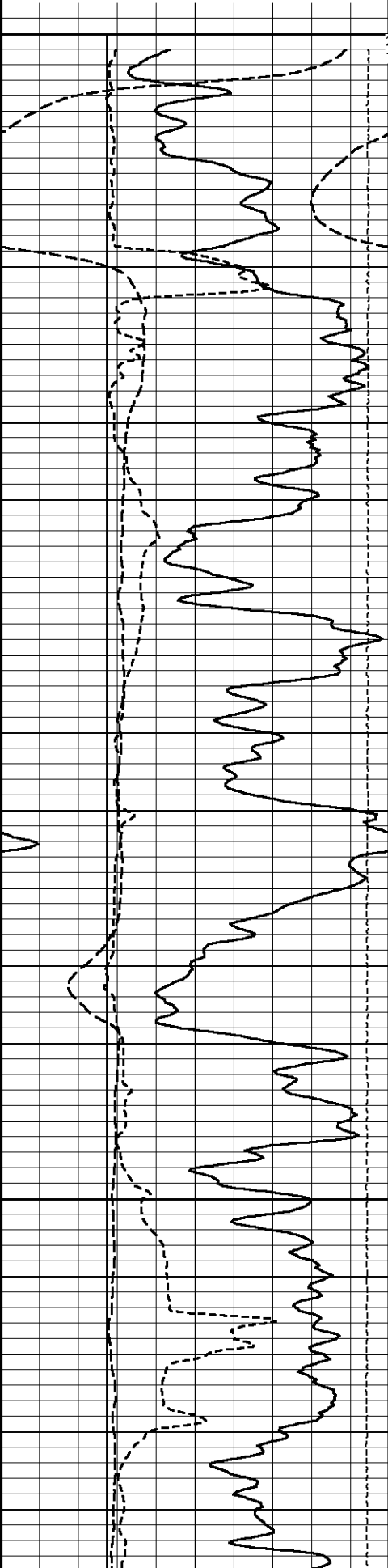
950

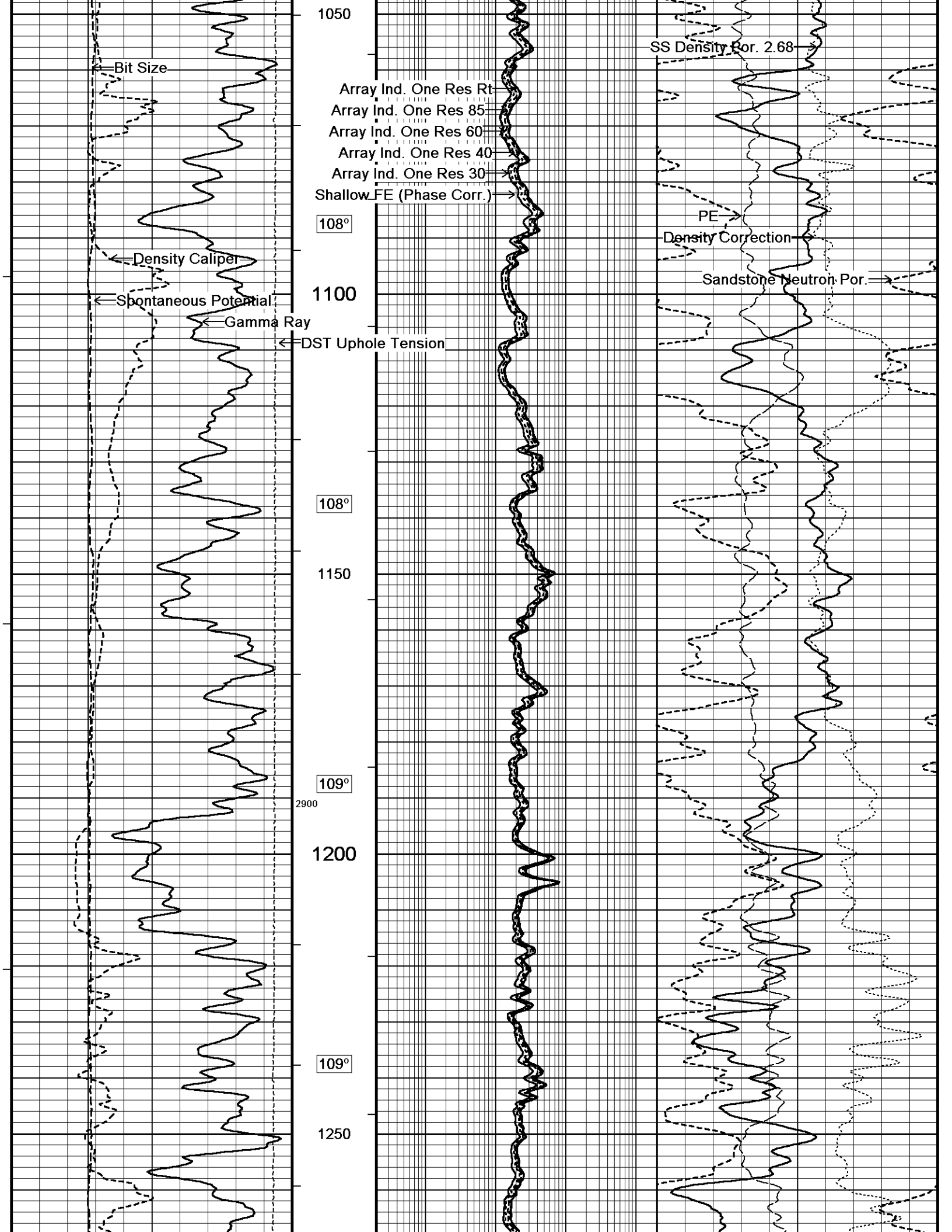
108°

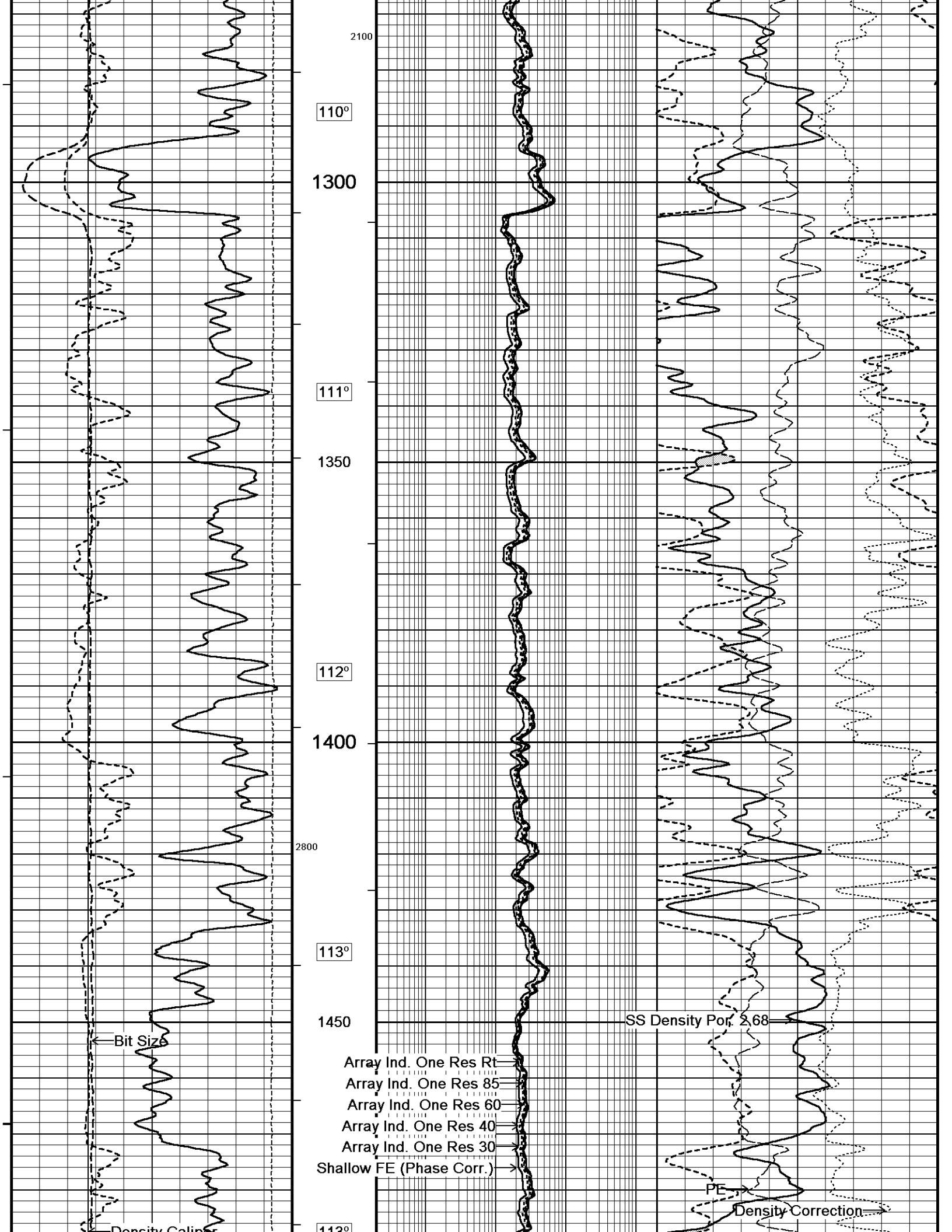
3000
1000

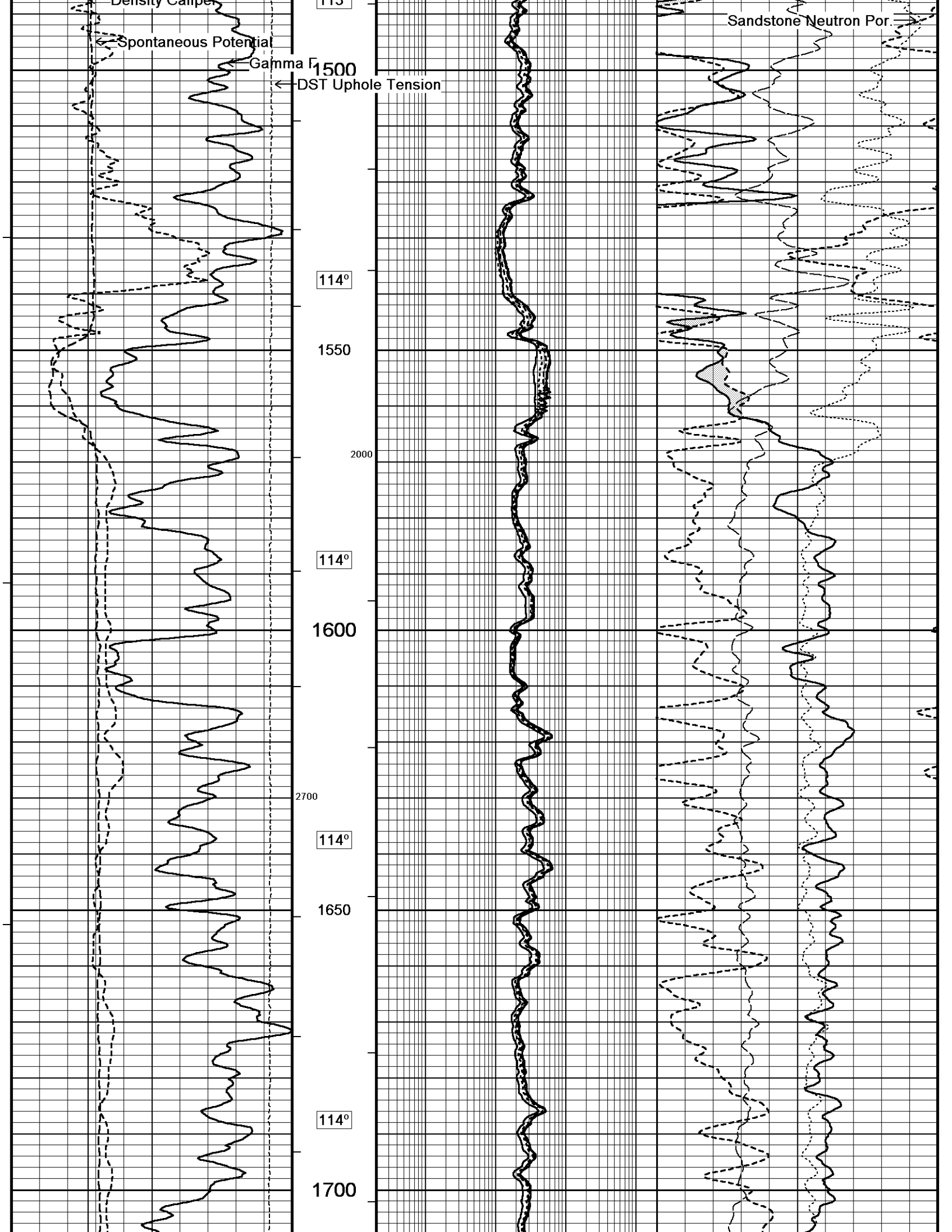
2200

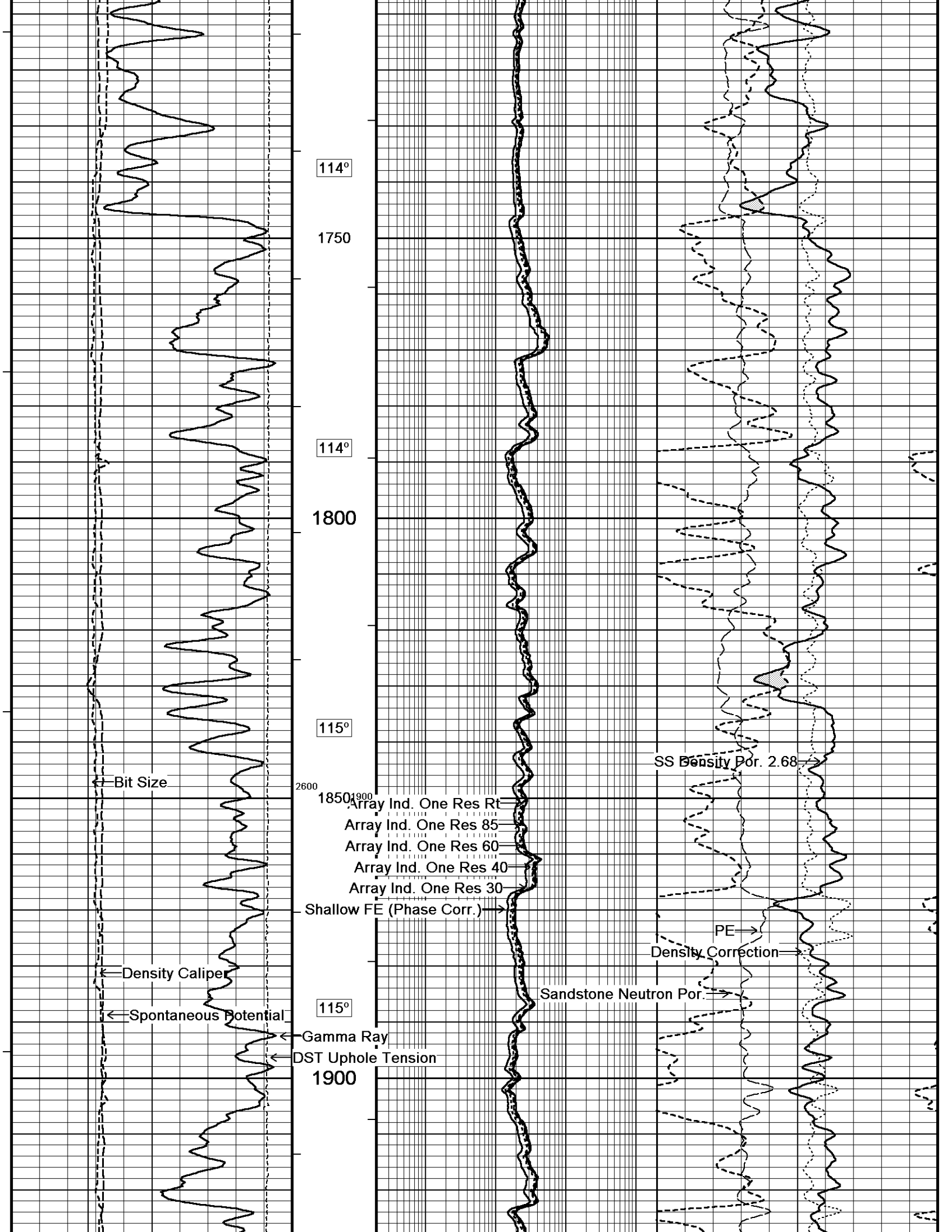
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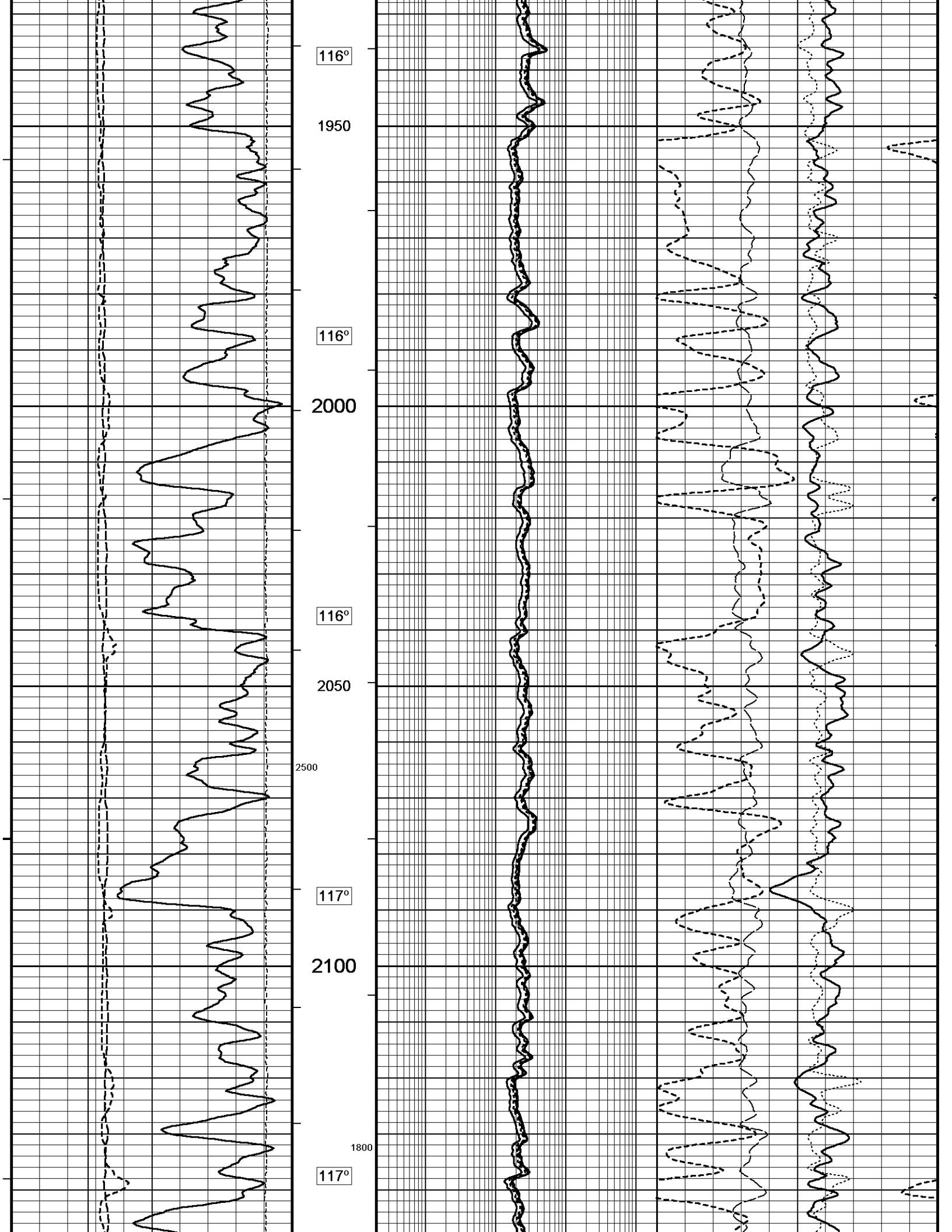


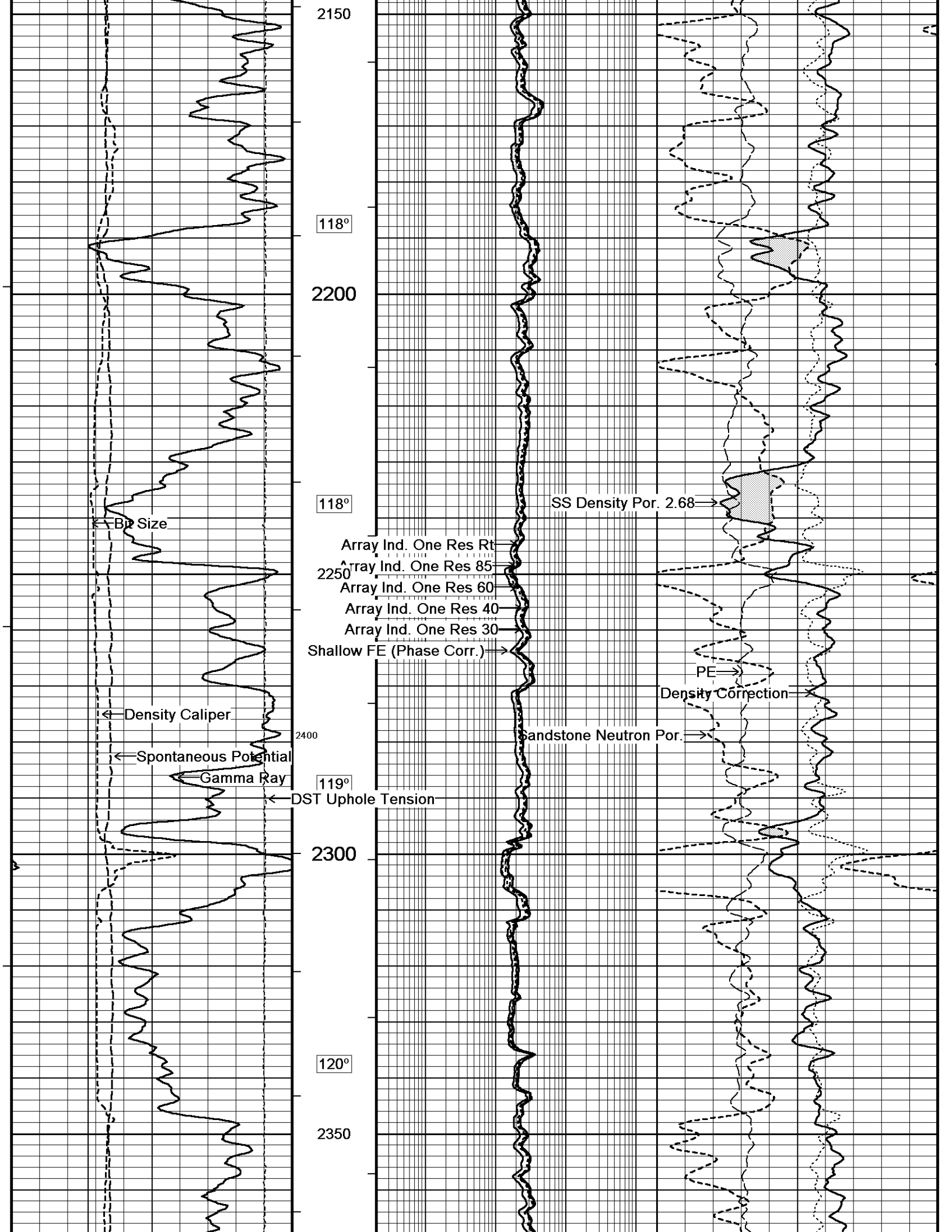


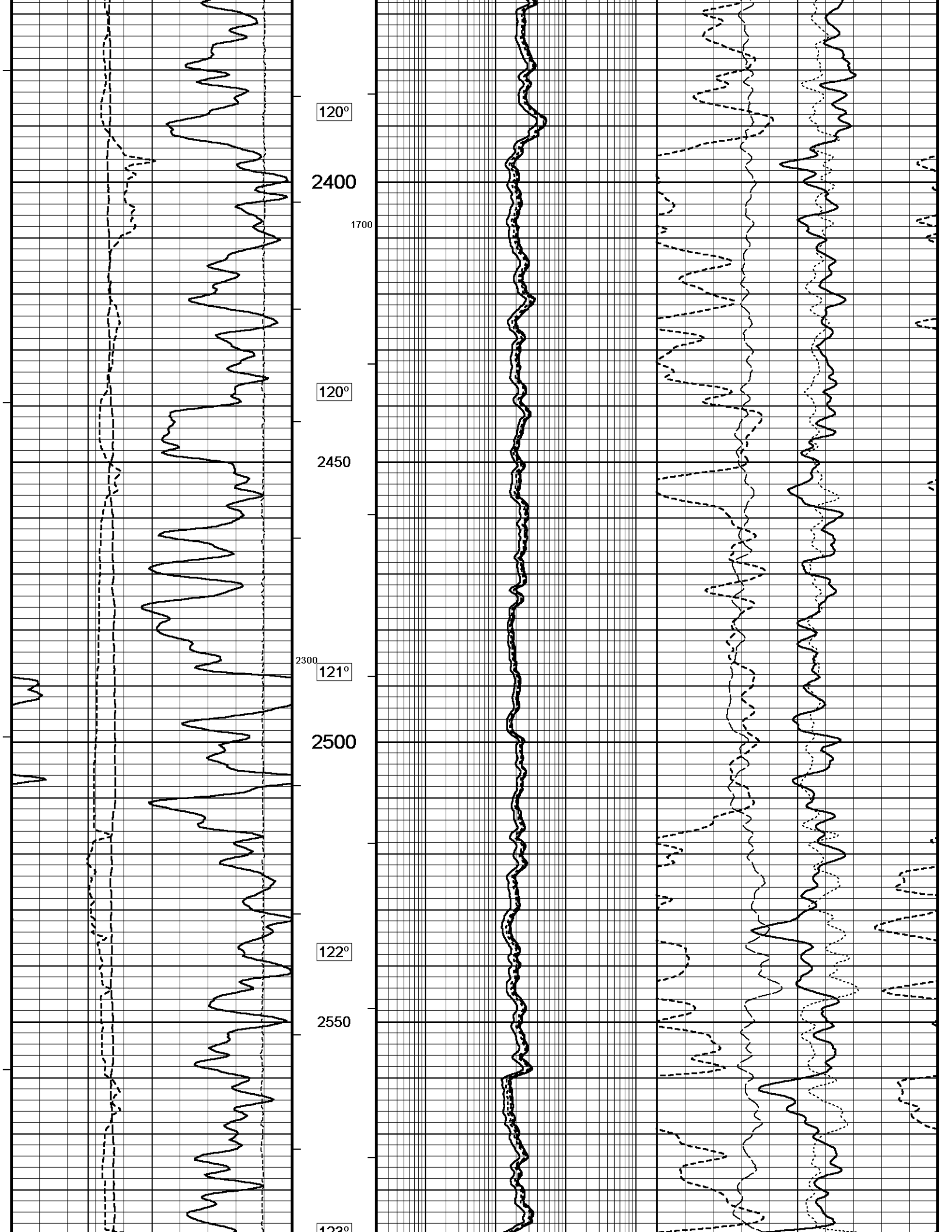


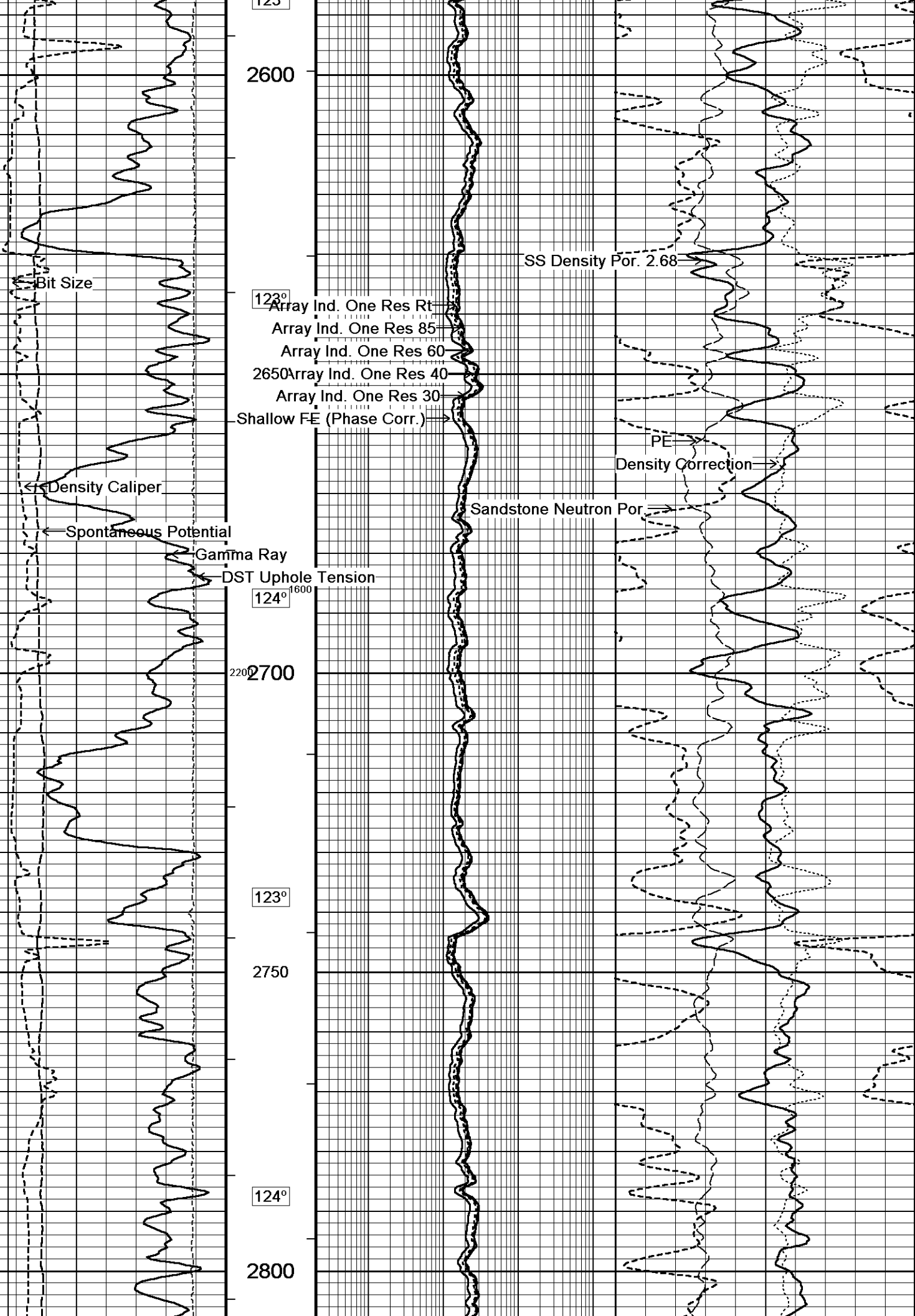












123°

2600

123°

2650

124°

2700

123°

2750

124°

2800

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.)

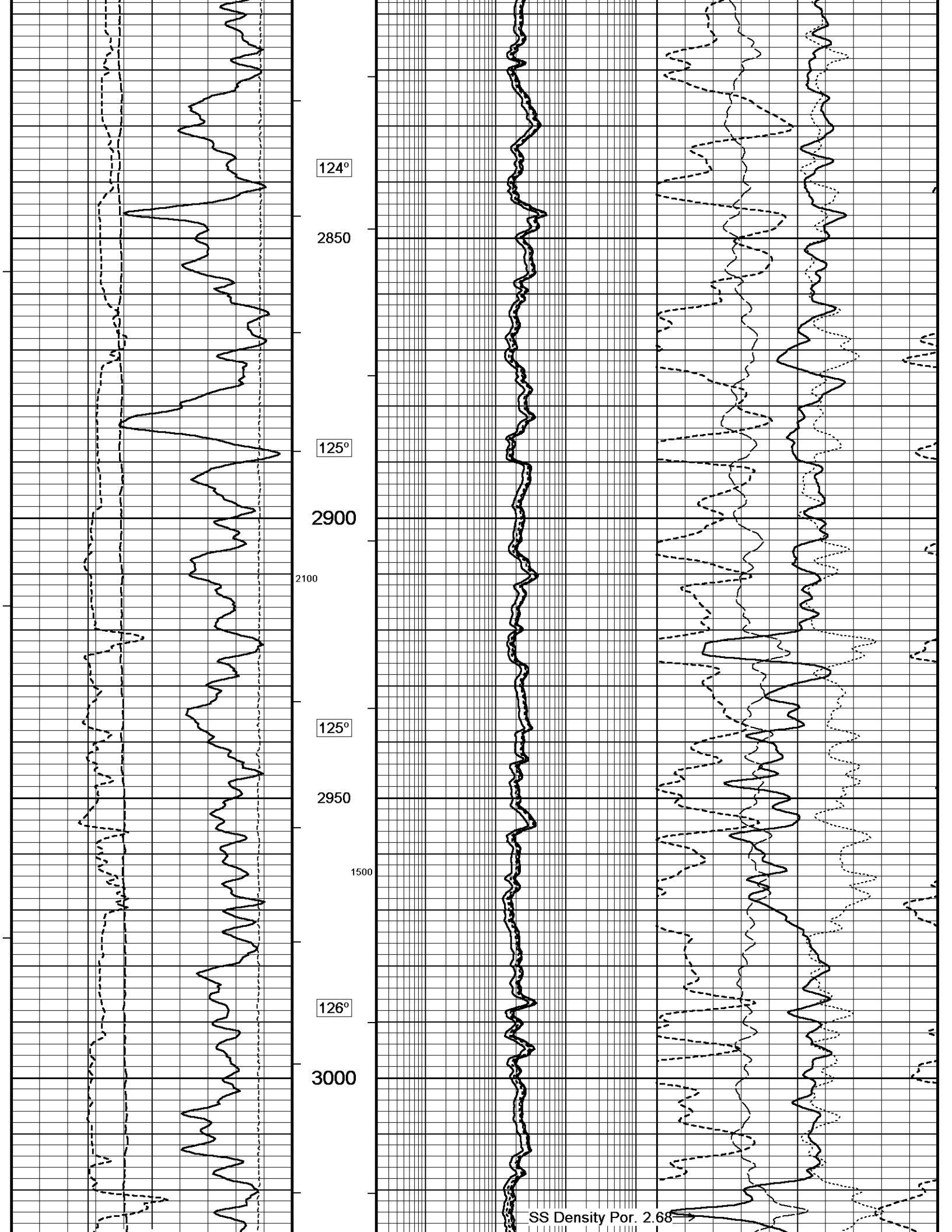
SS Density Por. 2.68

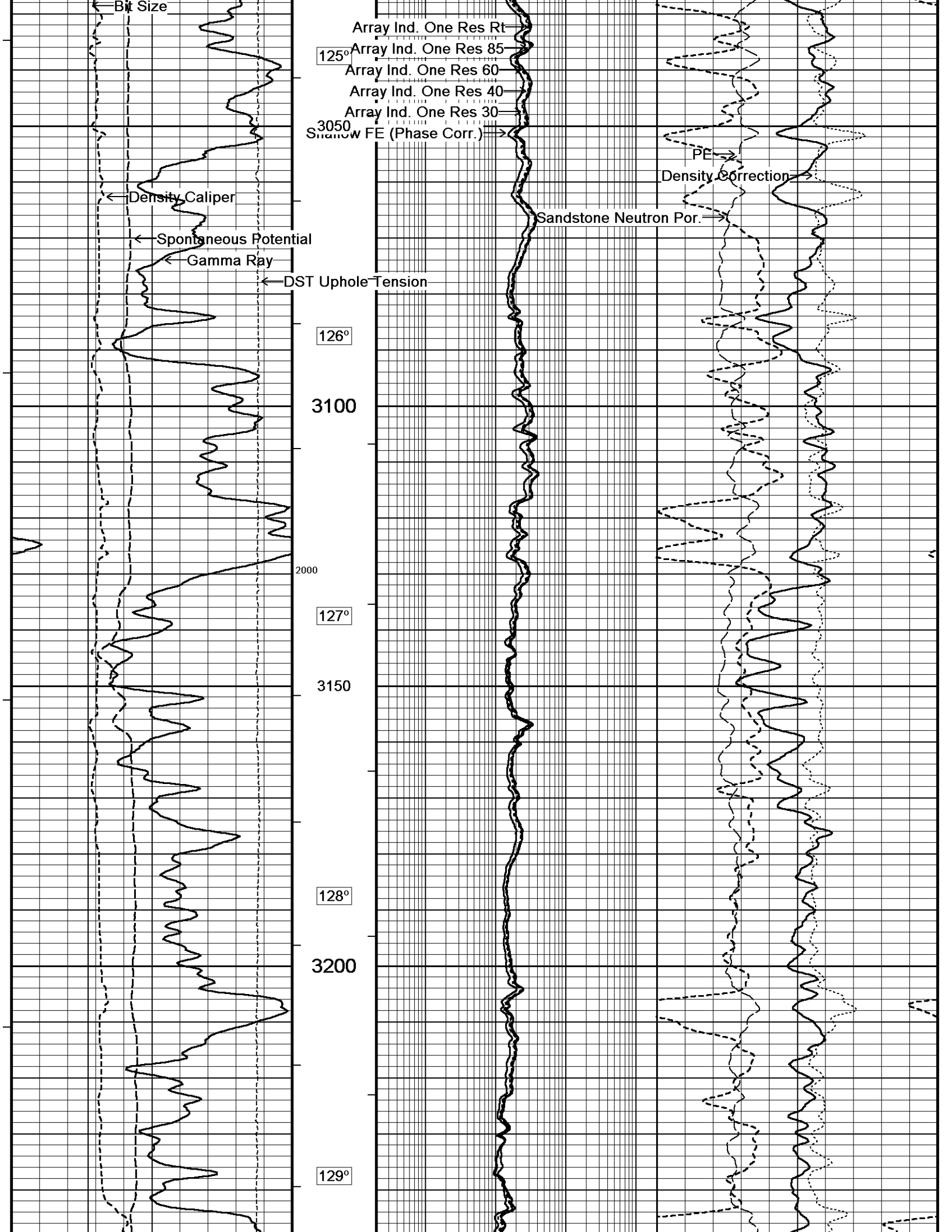
PE

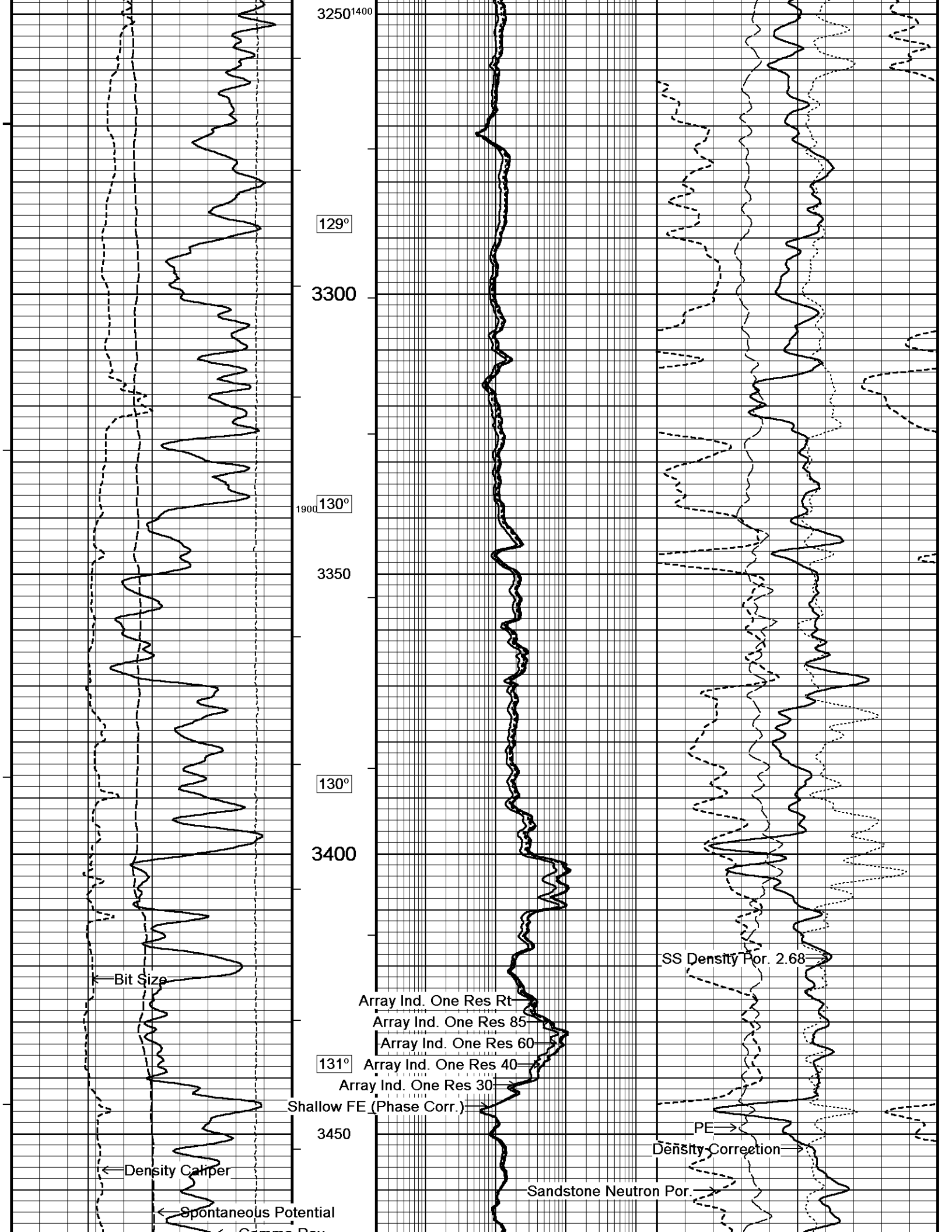
Density Correction

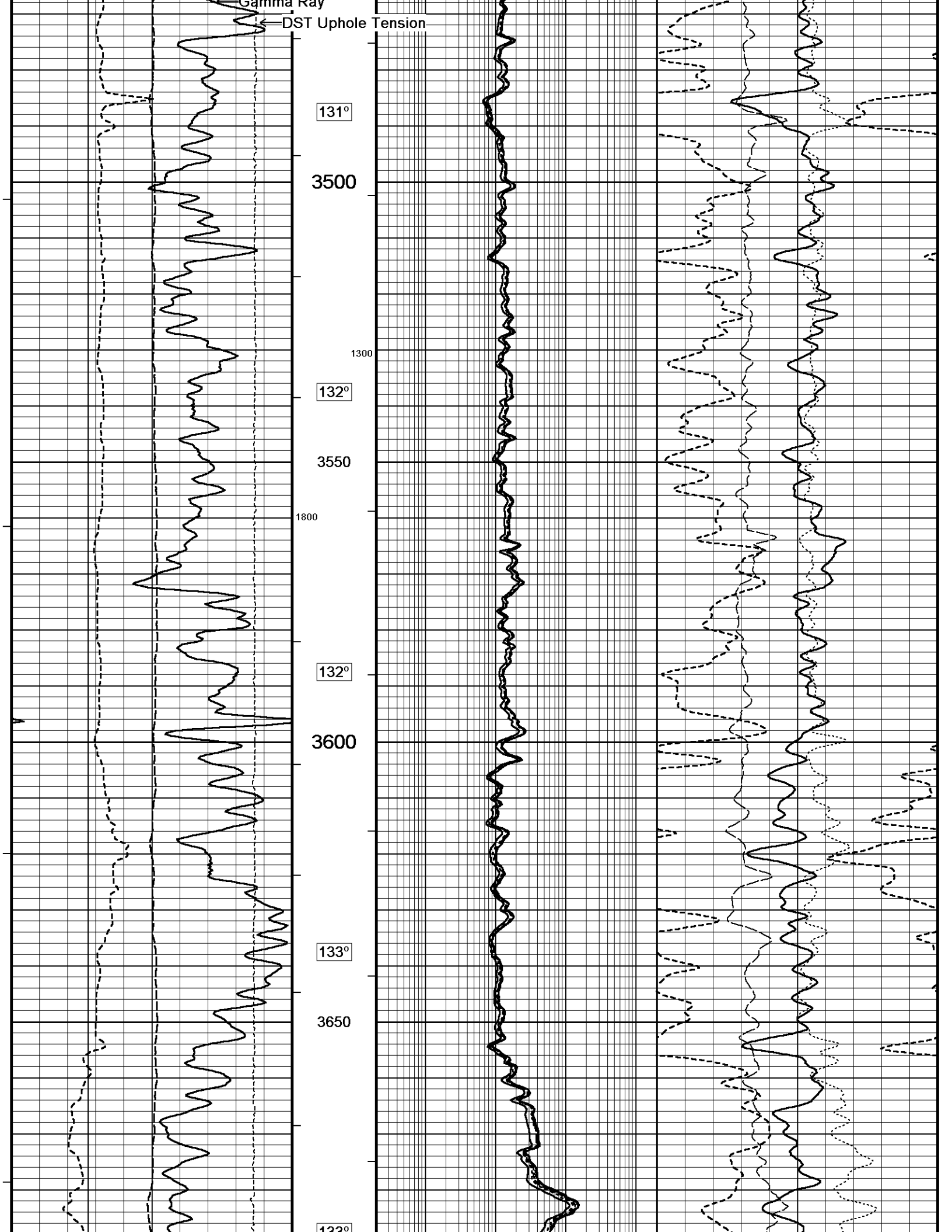
Sandstone Neutron Por

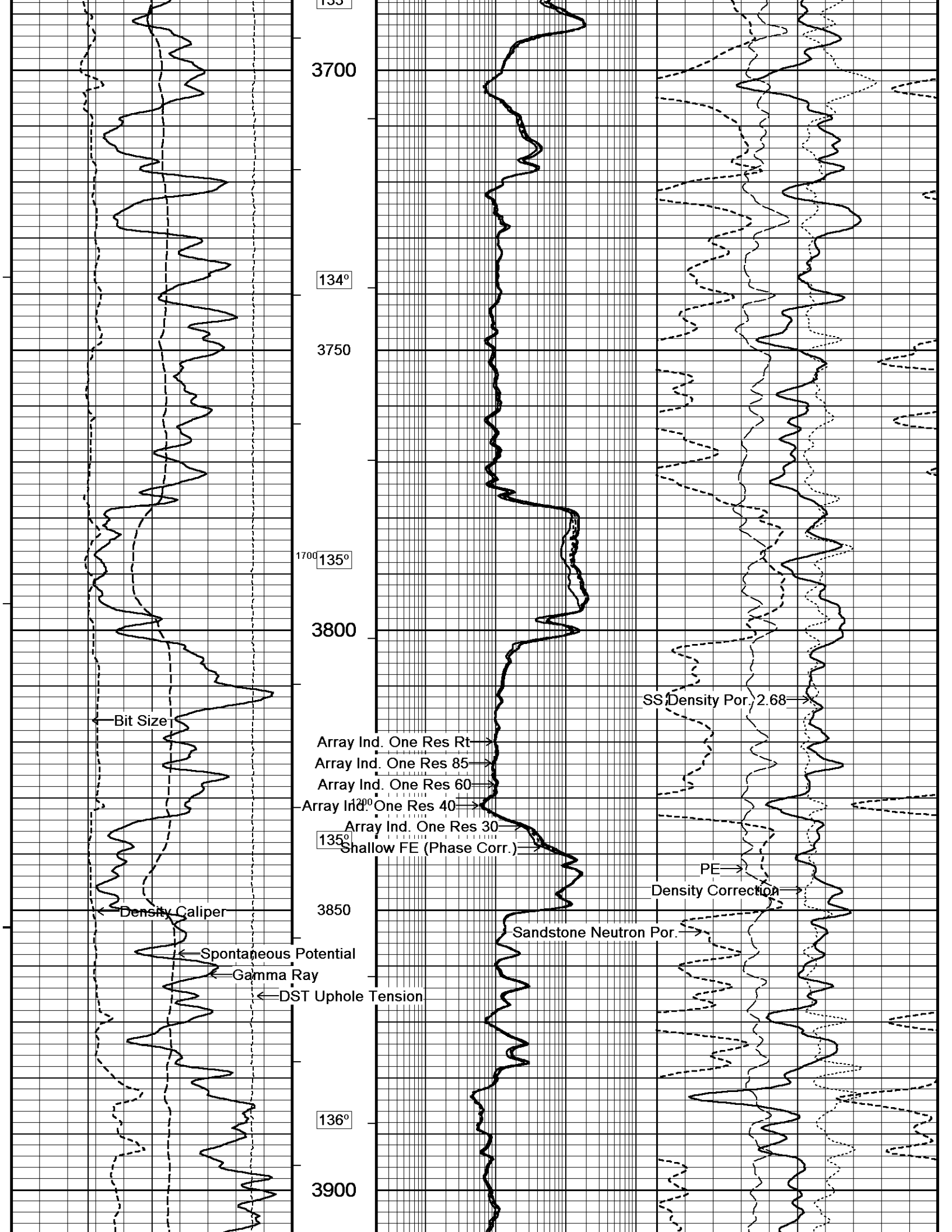
2200

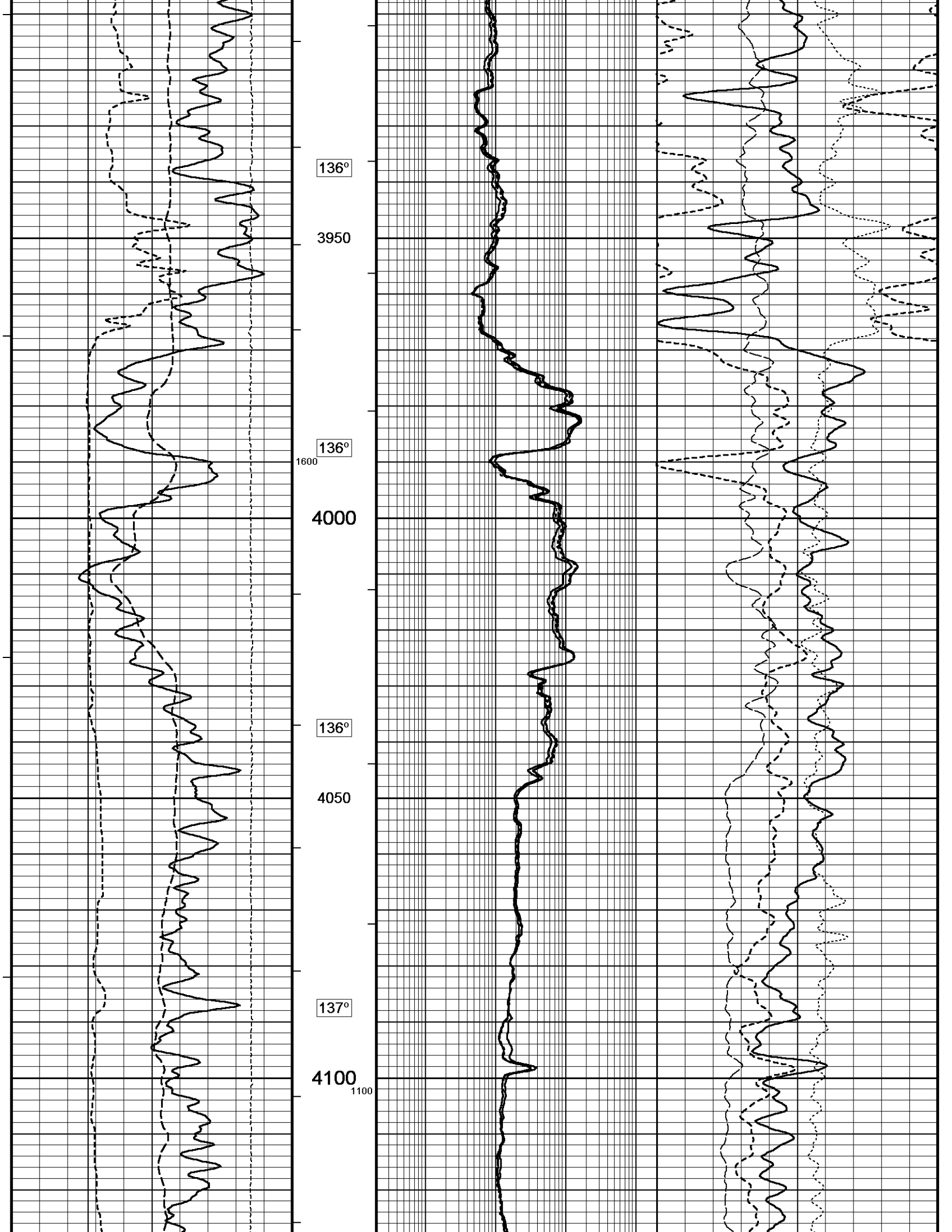


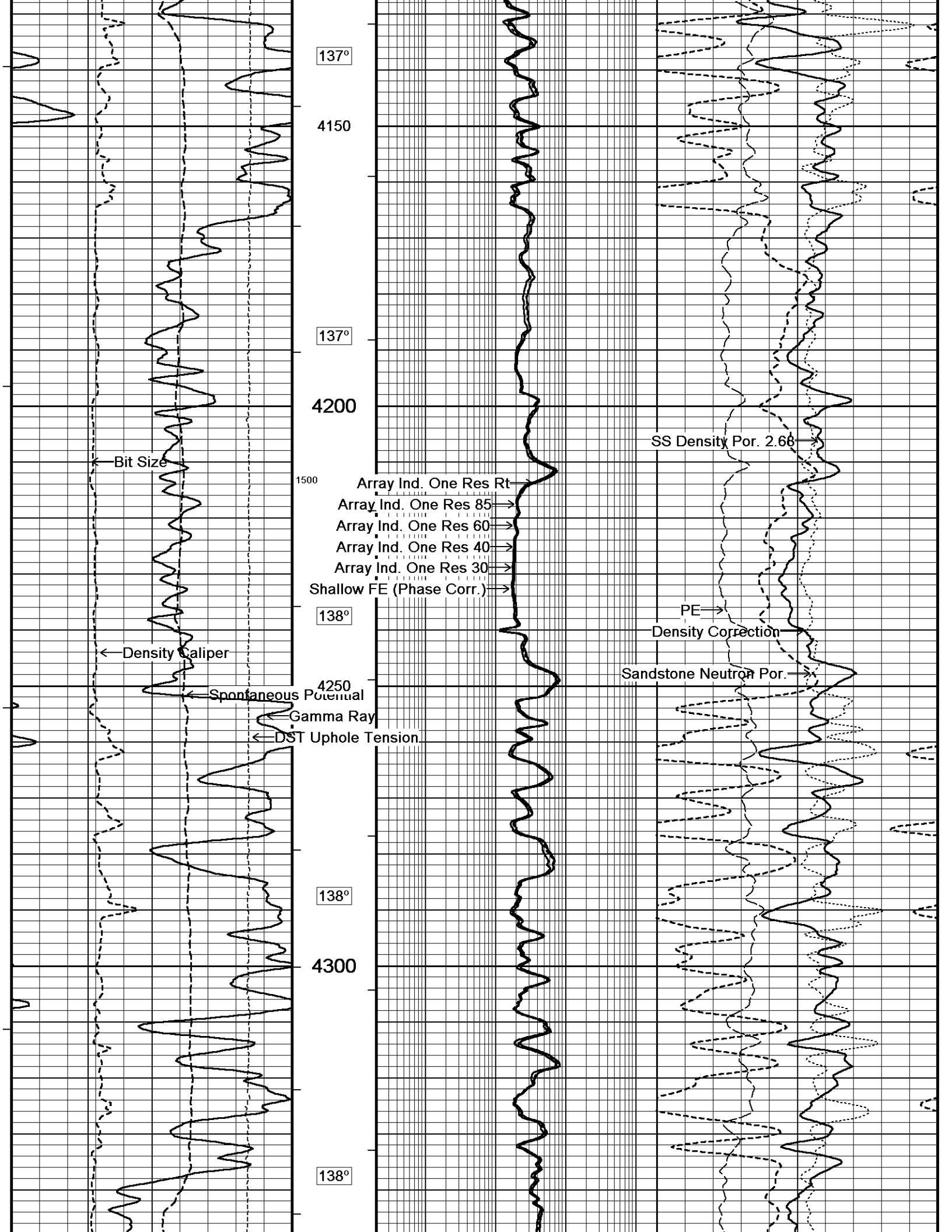












137°

4150

137°

4200

Bit Size

1500

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.)

138°

PE

Density Correction

Density Caliper

Sandstone Neutron Por.

Spontaneous Potential

Gamma Ray

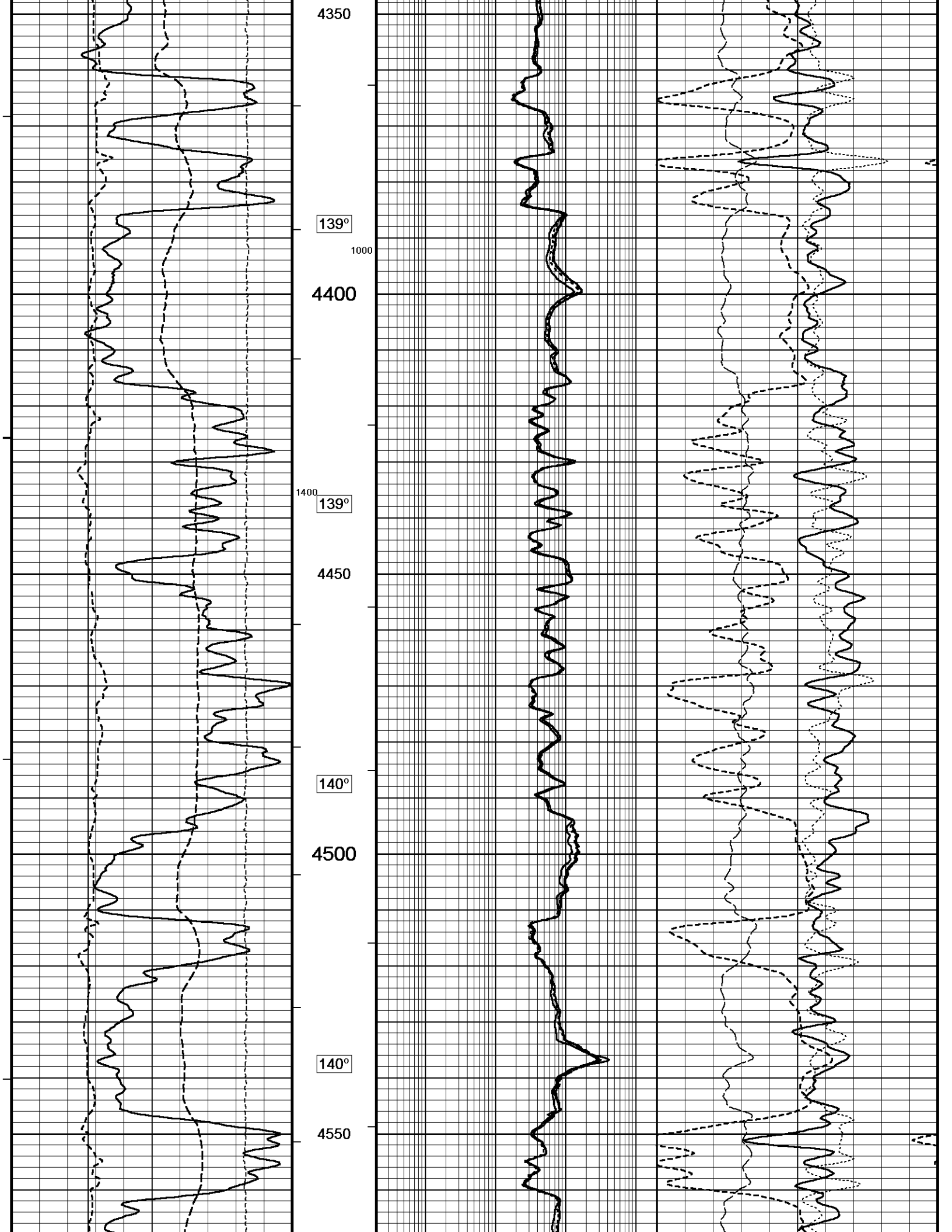
DST Uphole Tension

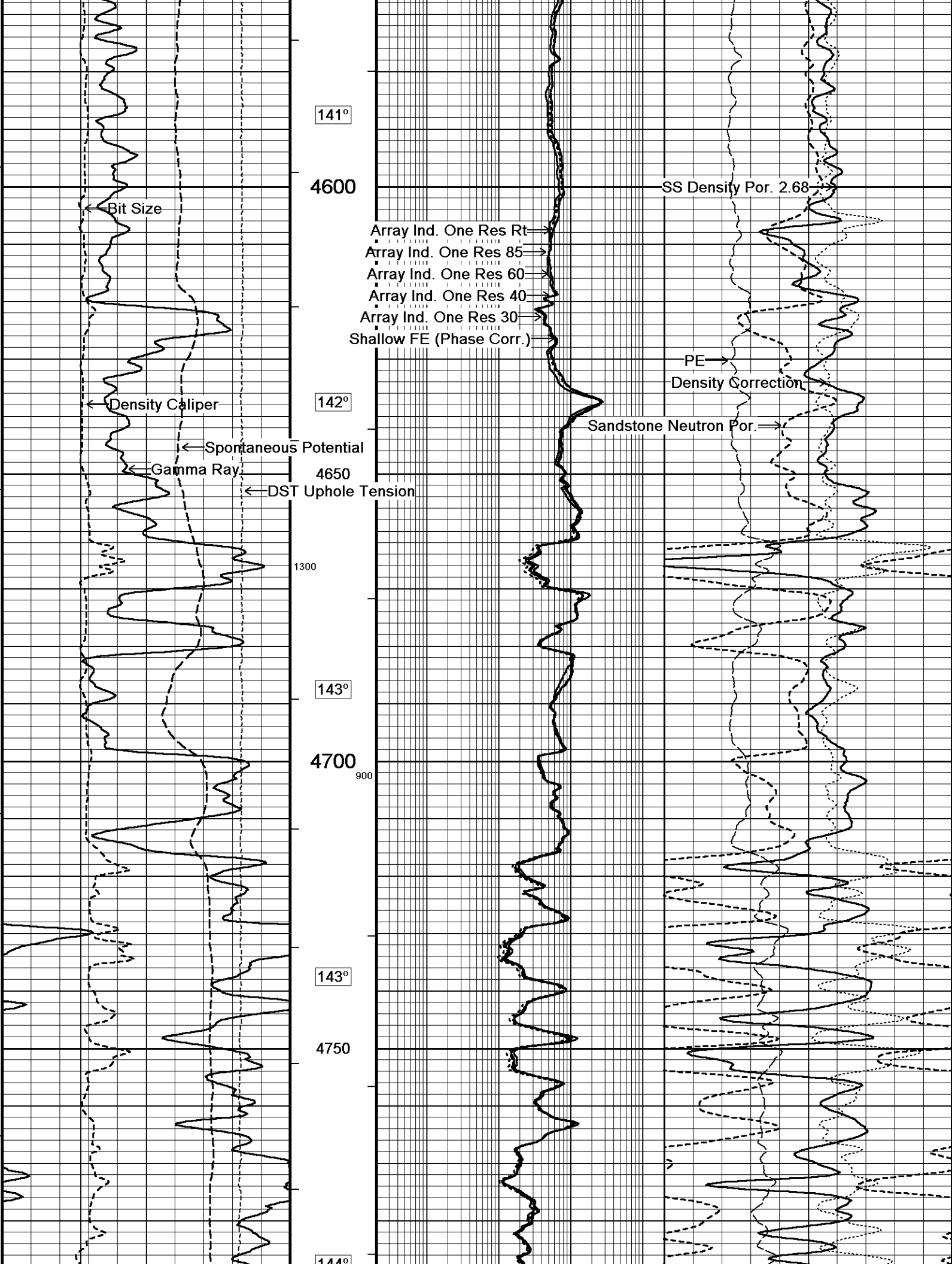
4250

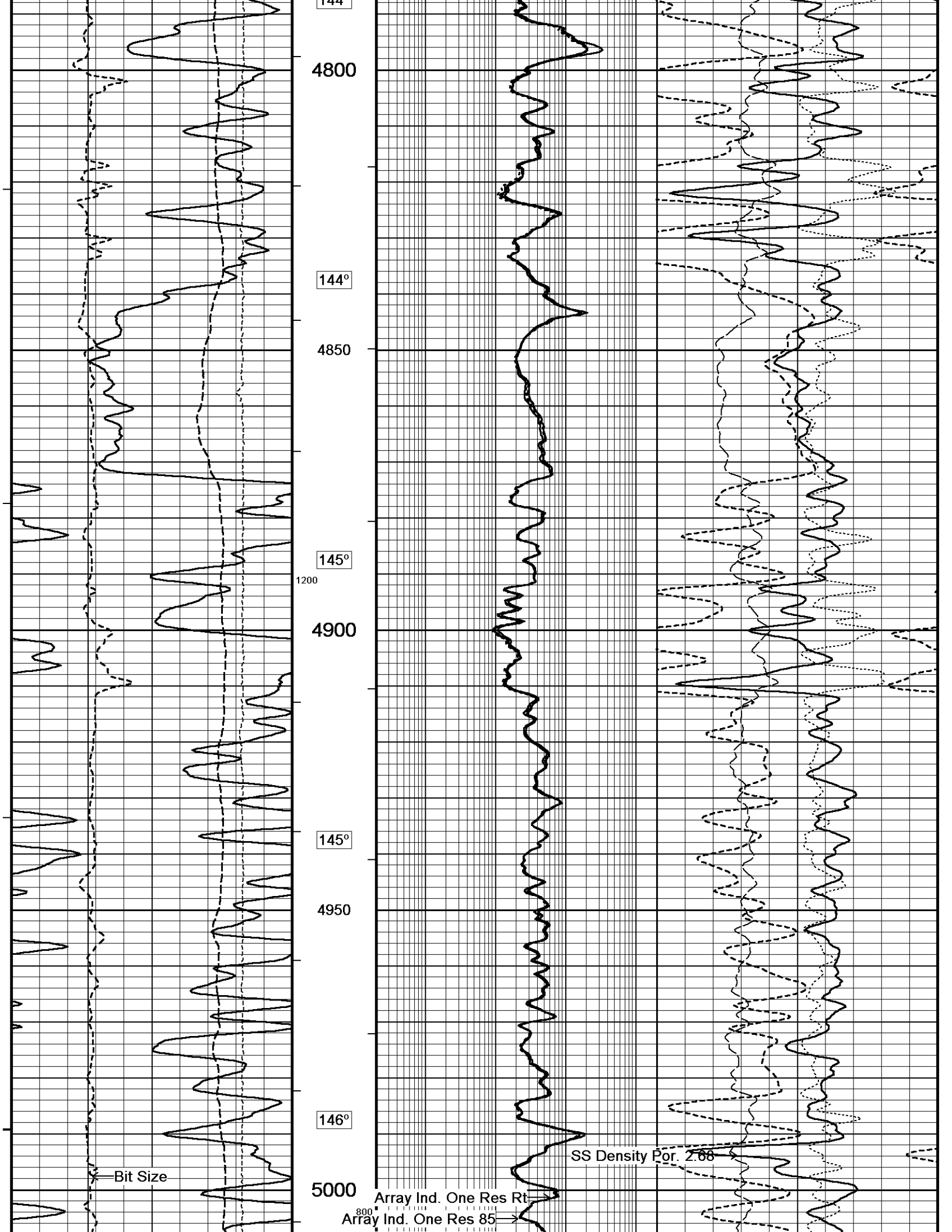
138°

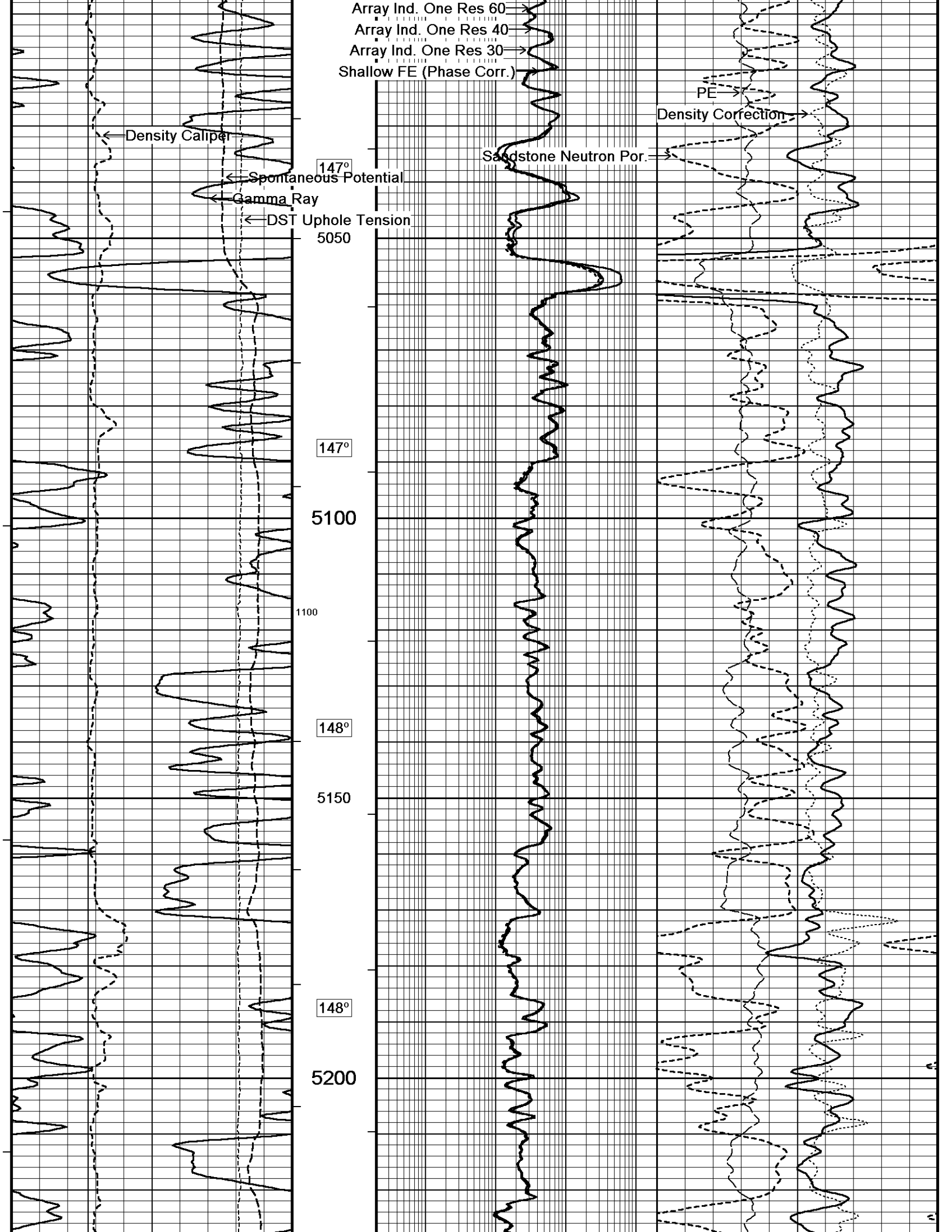
4300

138°









Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
Shallow FE (Phase Corr.)

Density Caliper
Spontaneous Potential
Gamma Ray
DST Uphole Tension

PE
Density Correction
Sandstone Neutron Por.

147°

147°

148°

148°

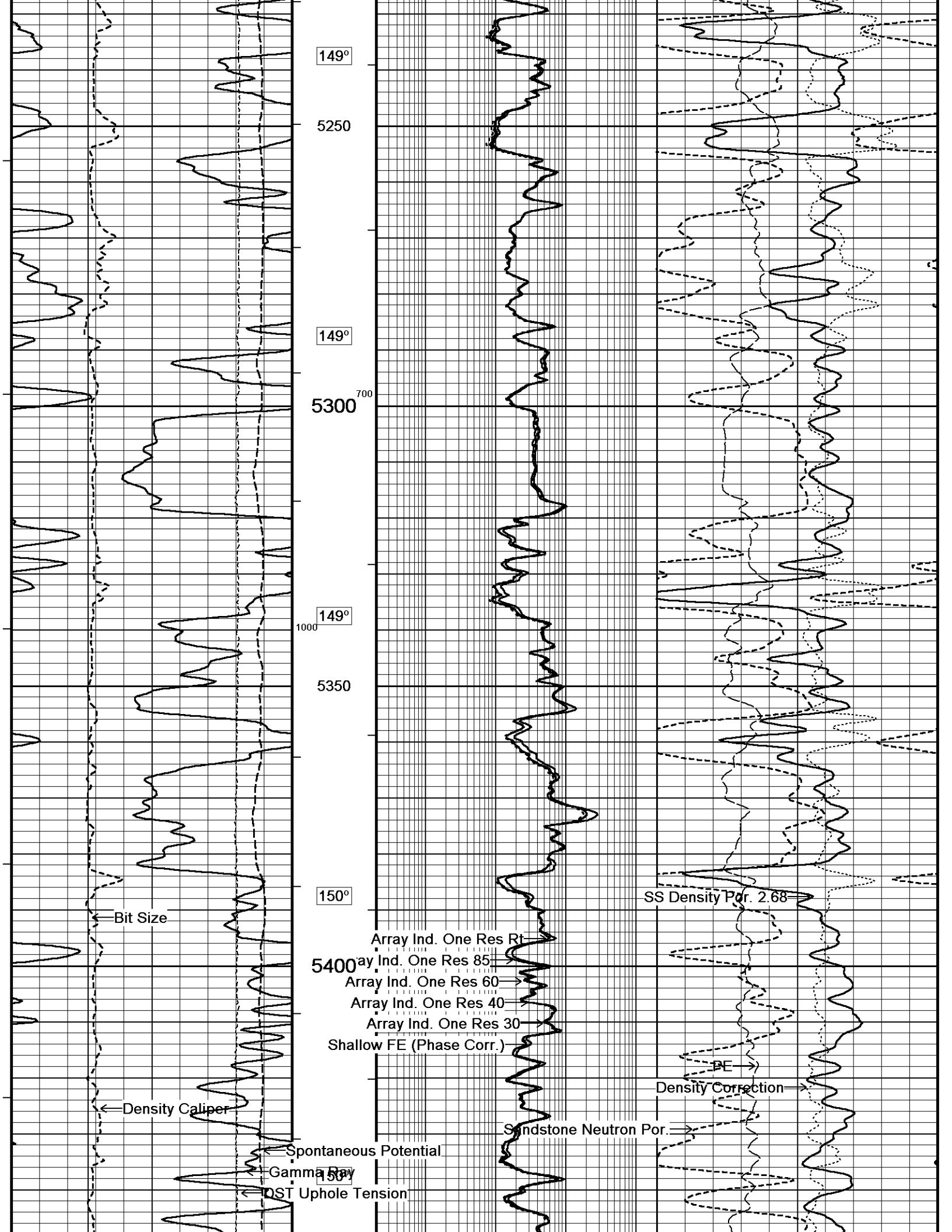
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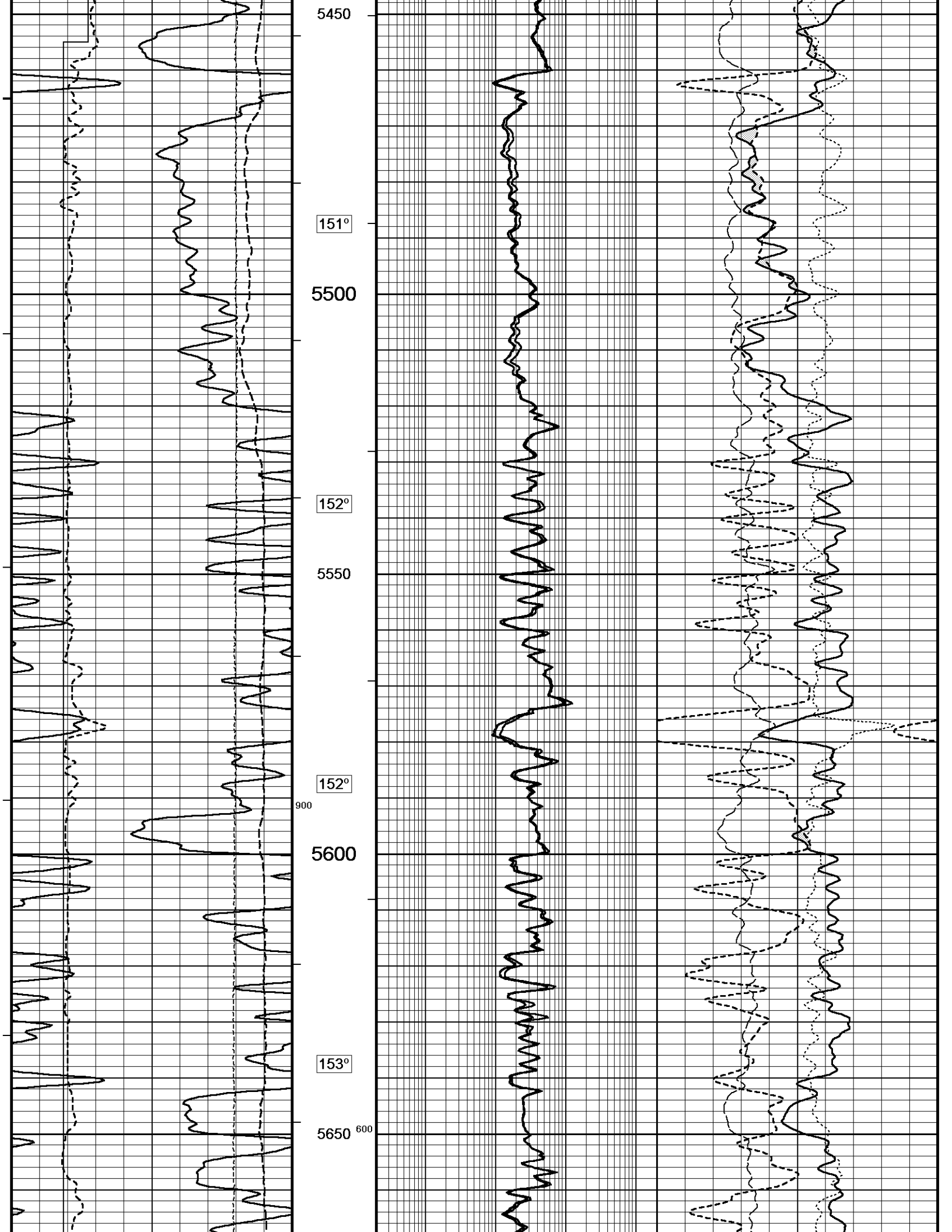
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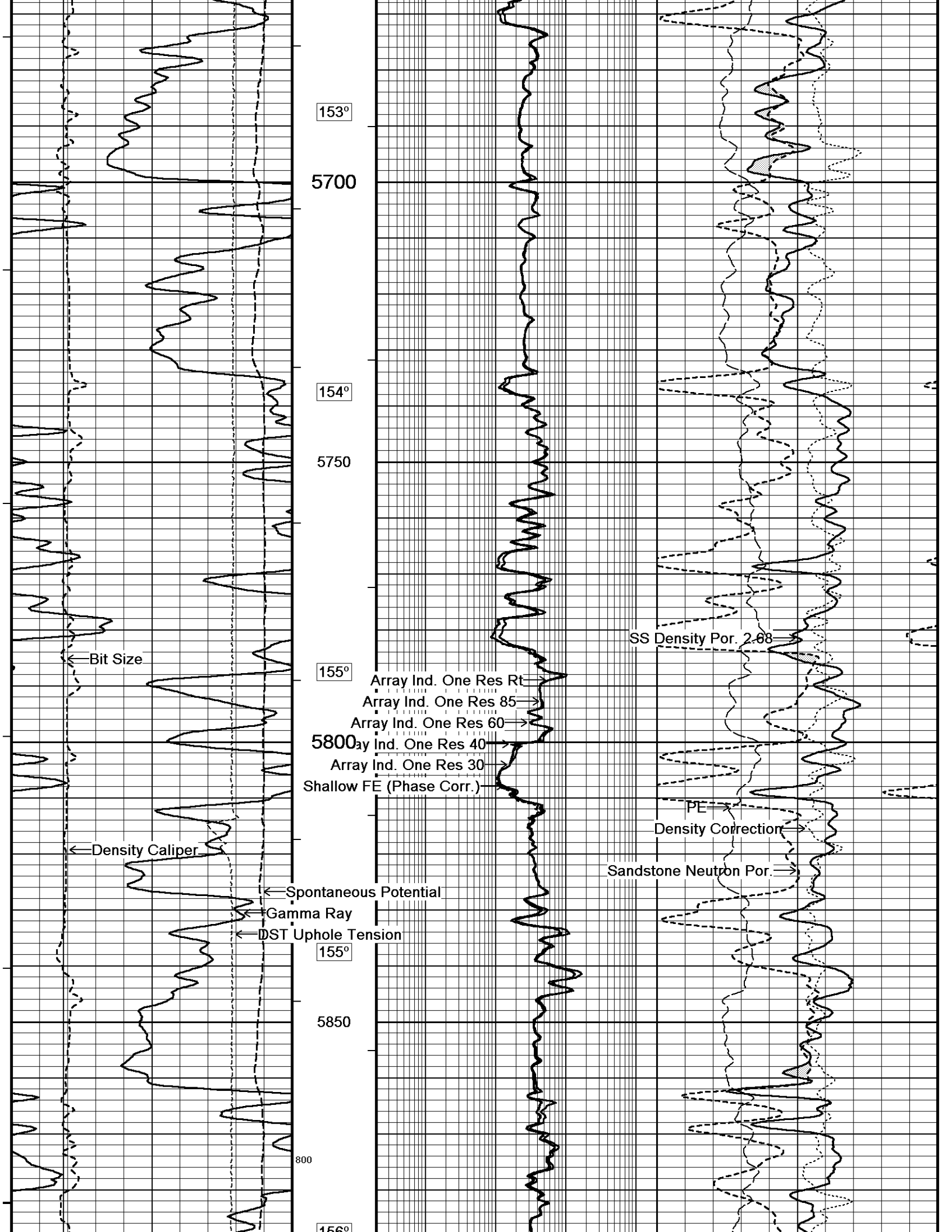
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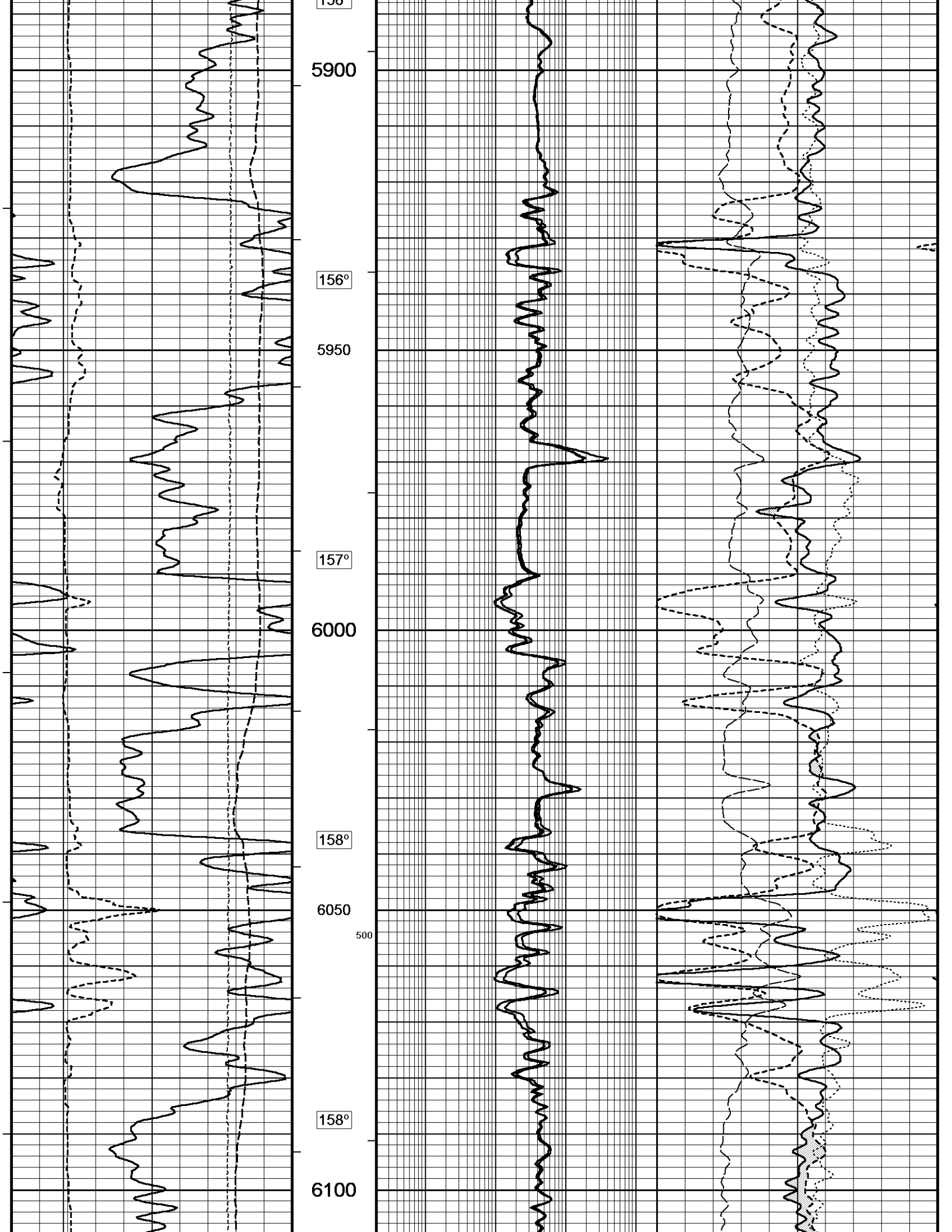
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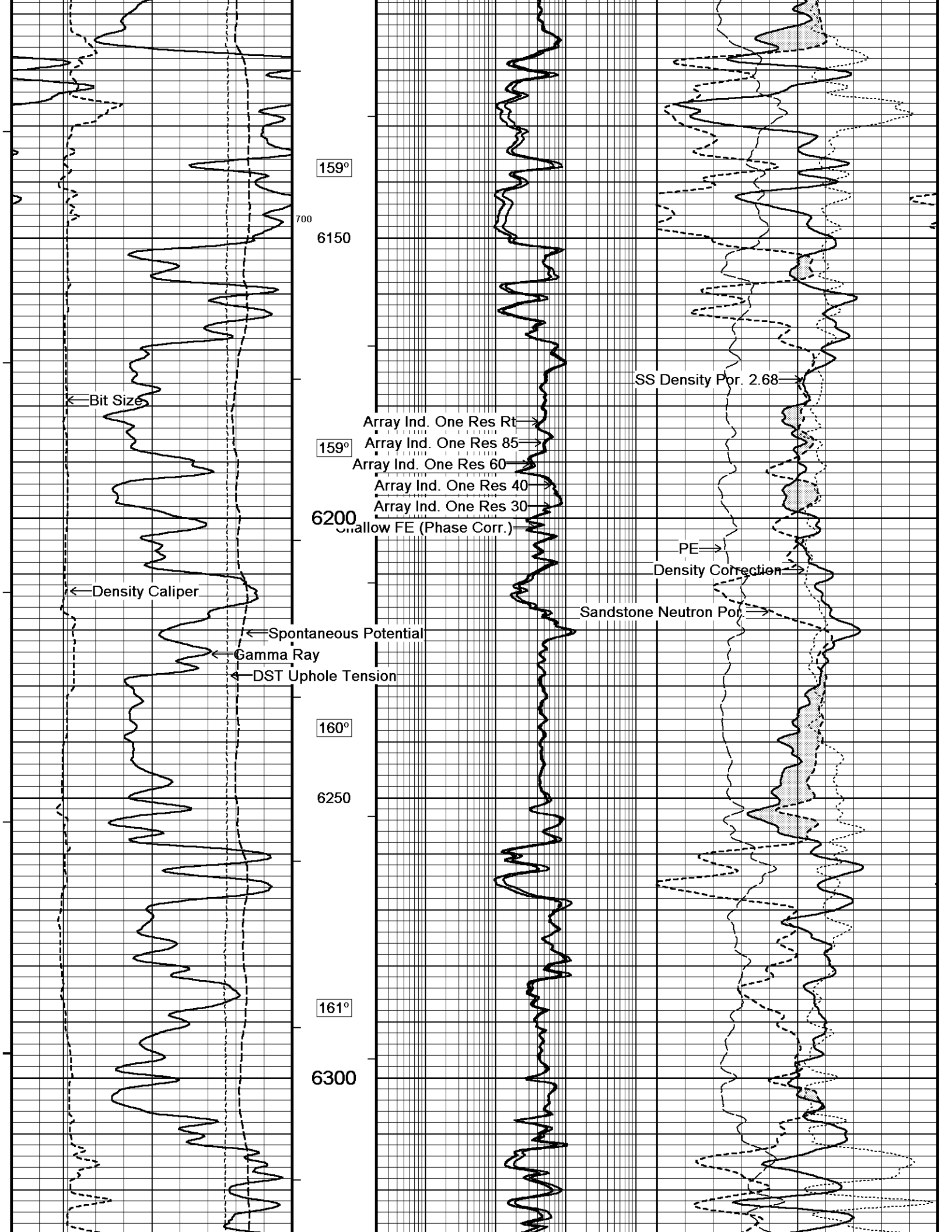
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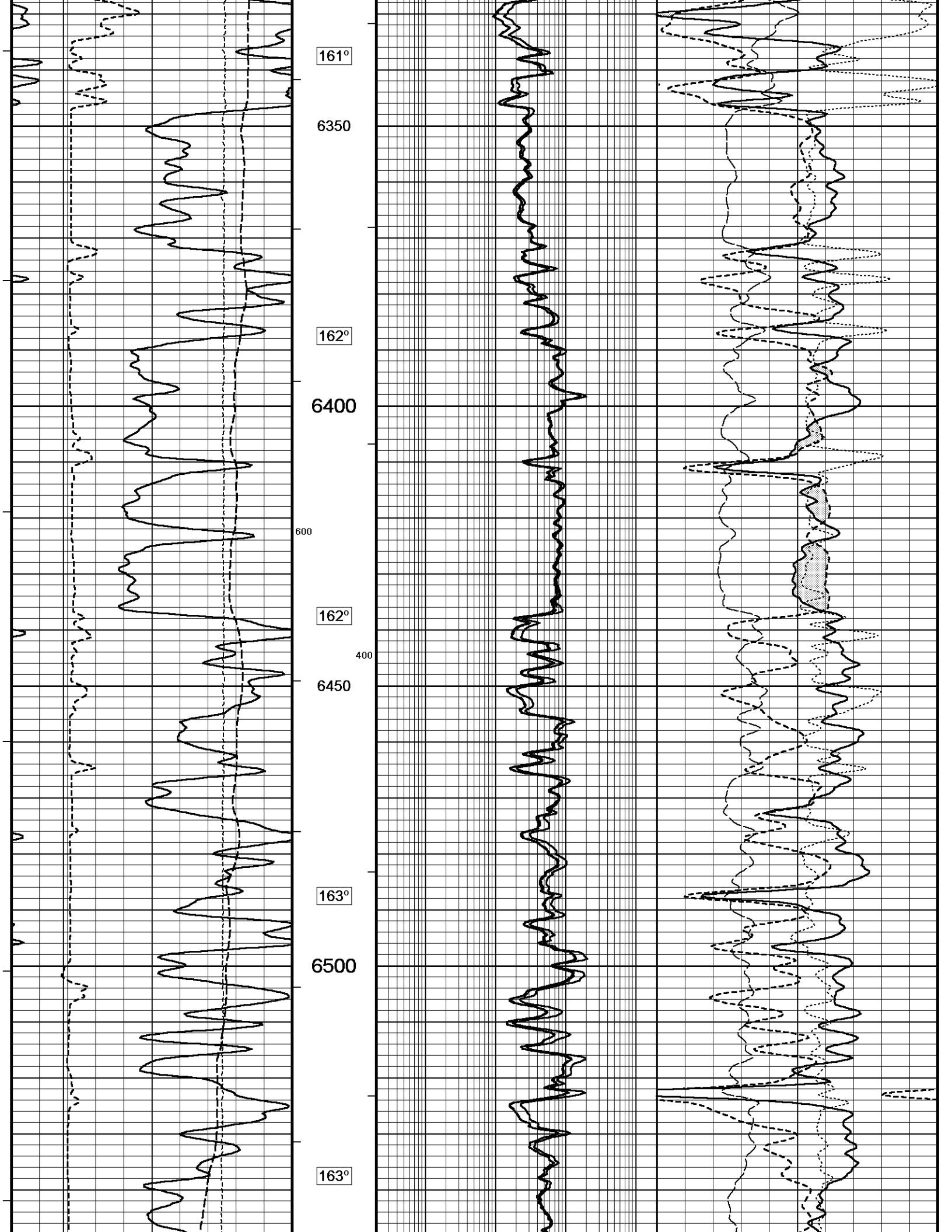


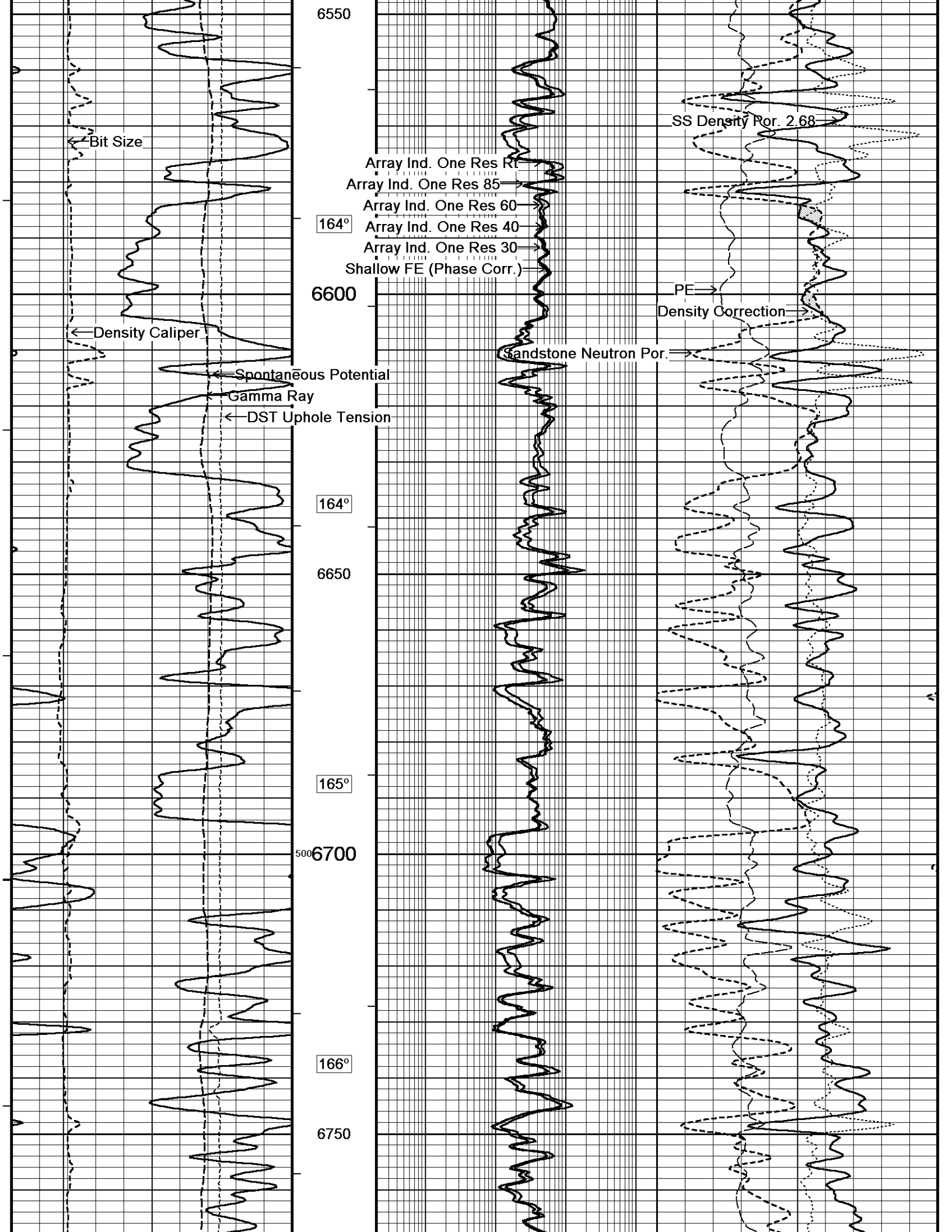


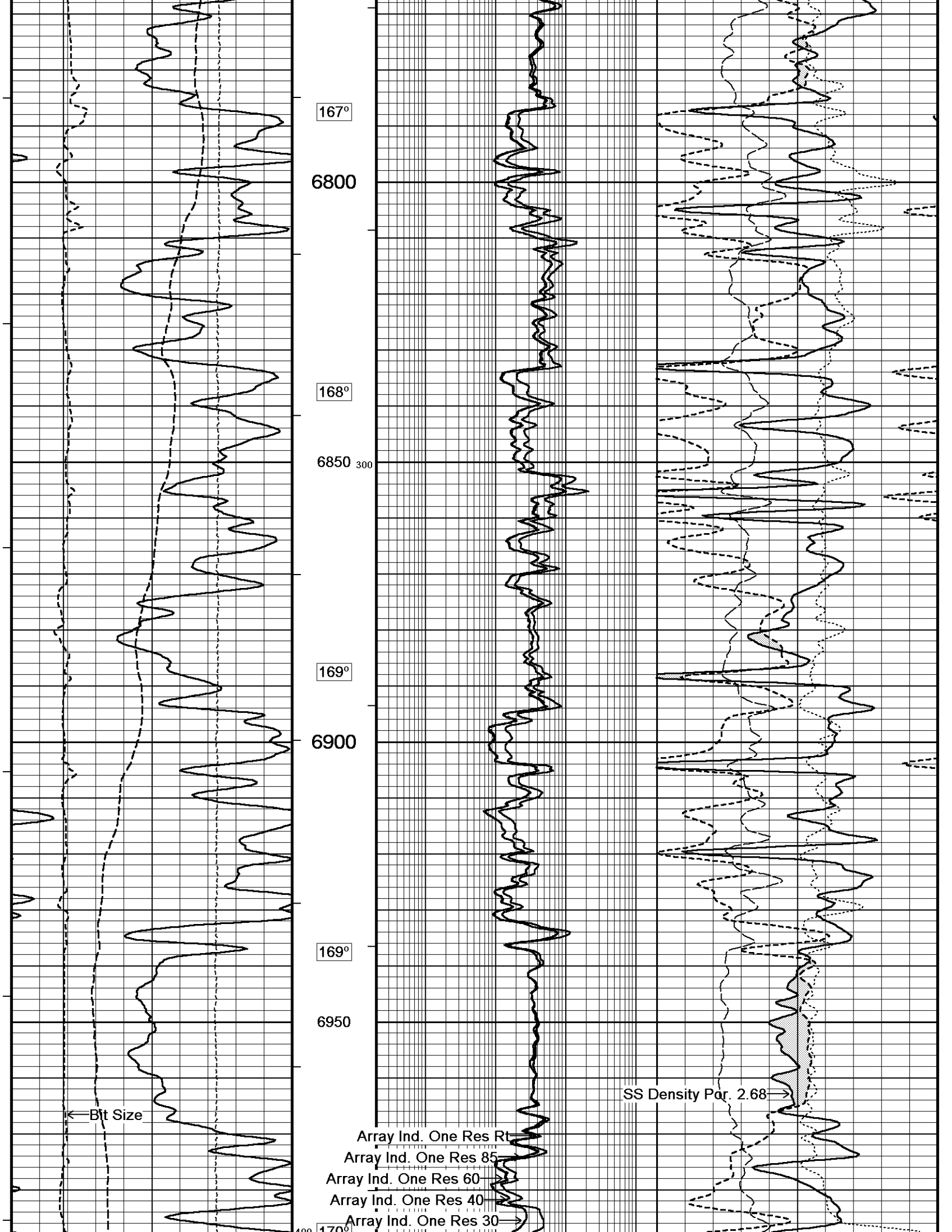


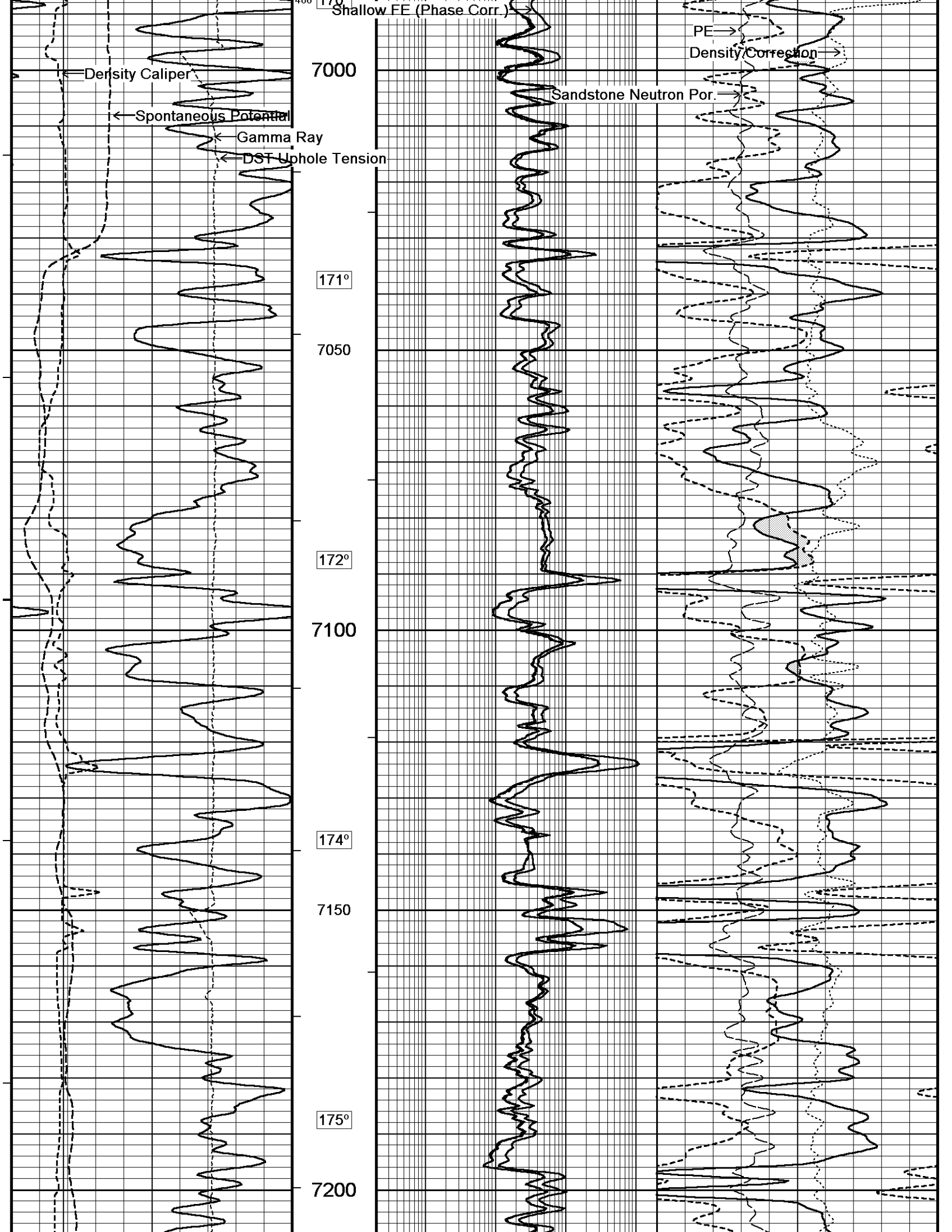


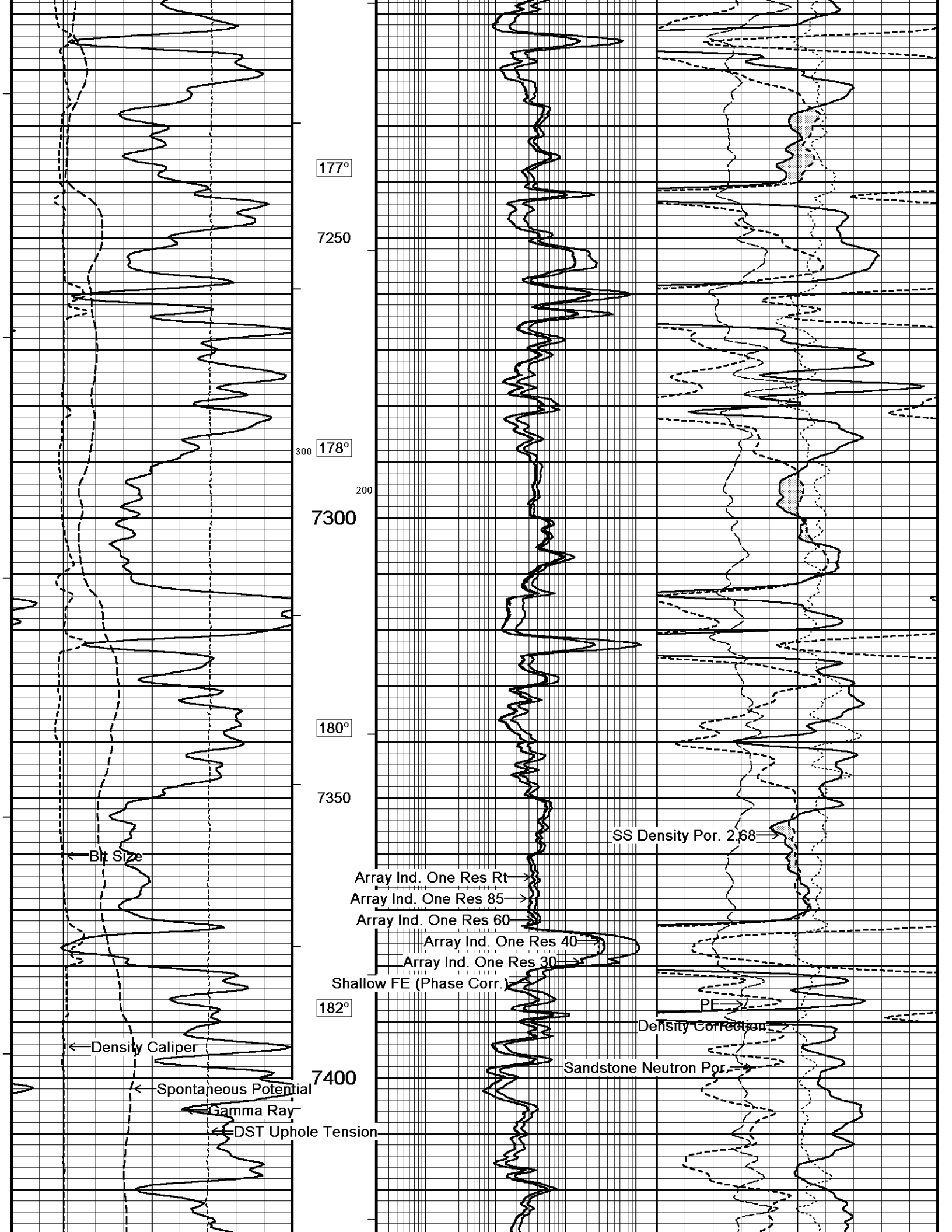


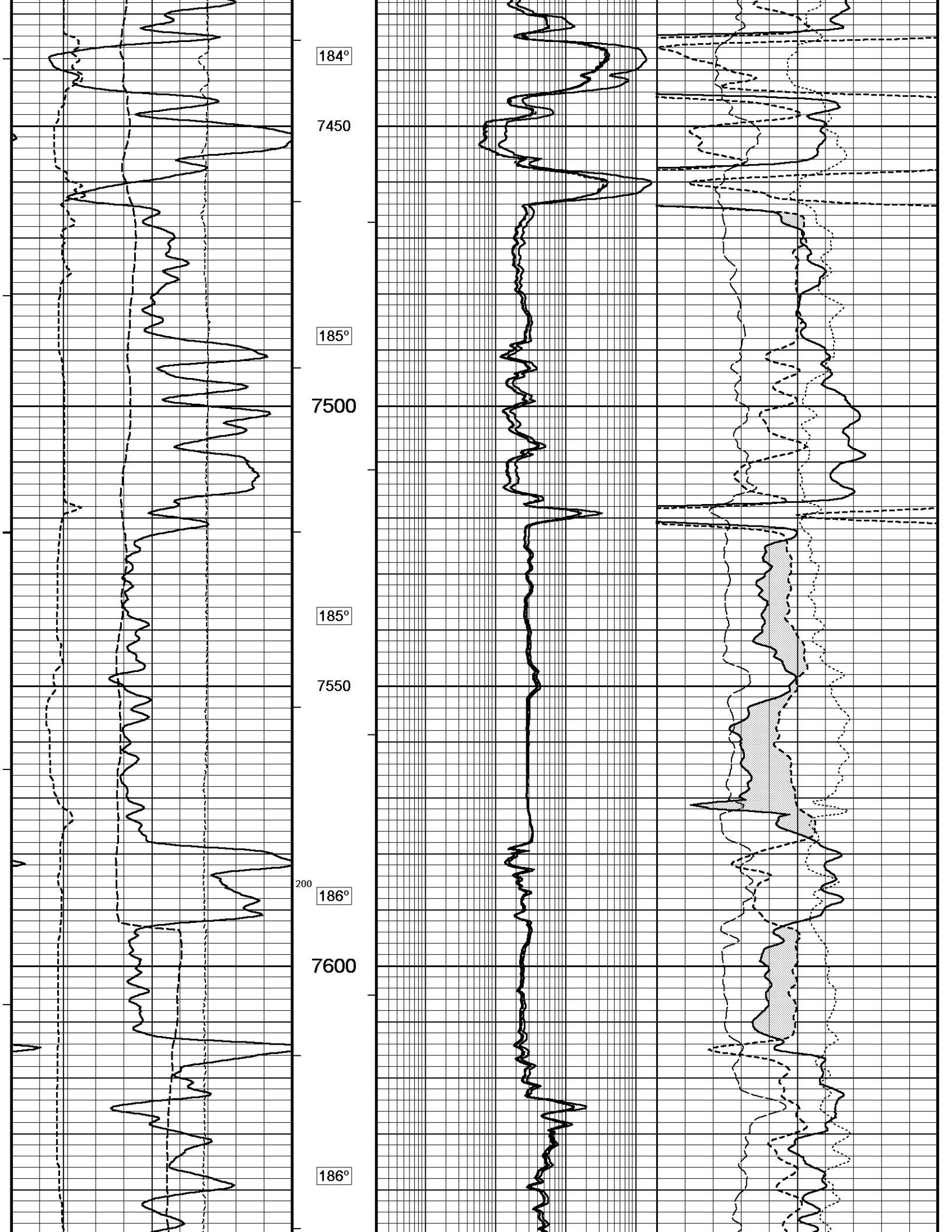


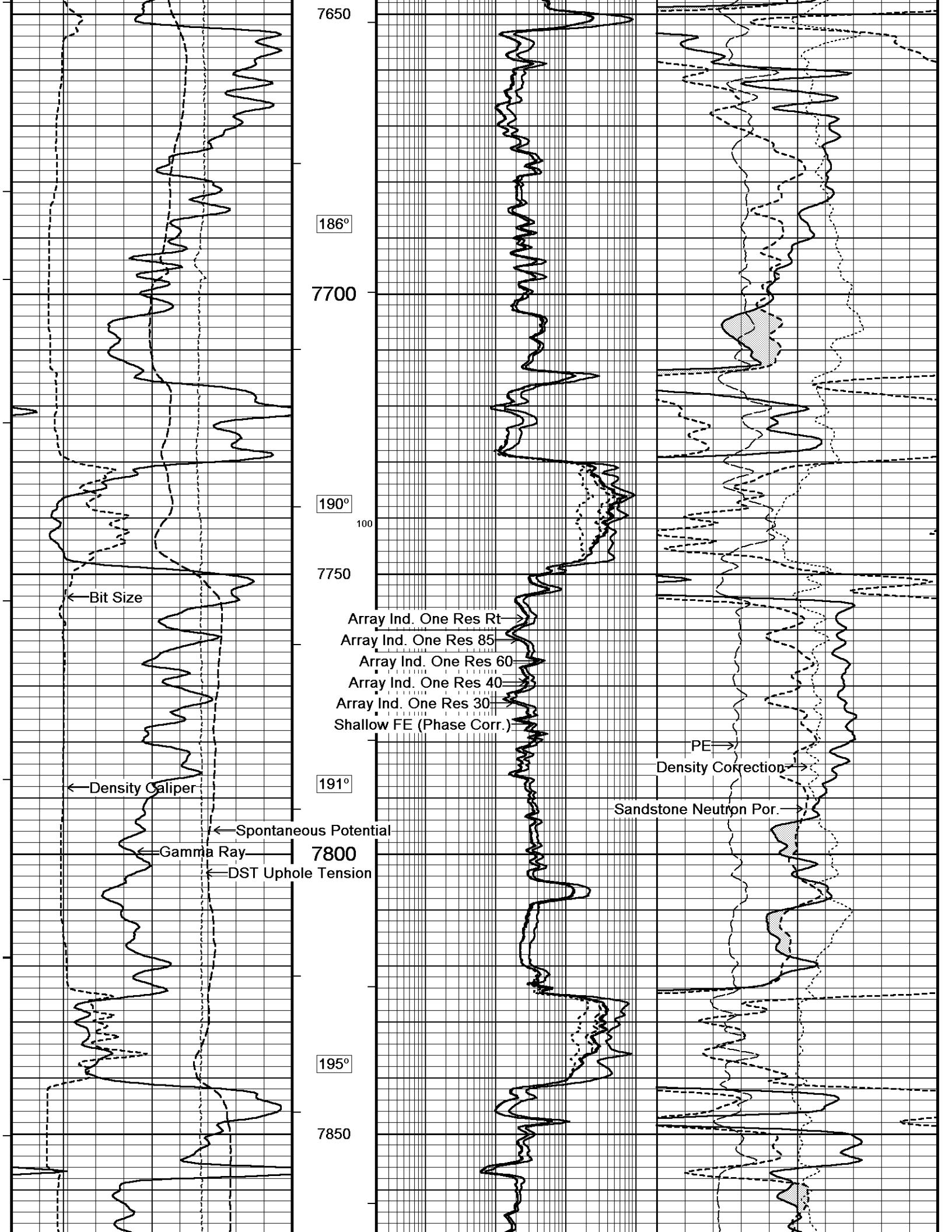


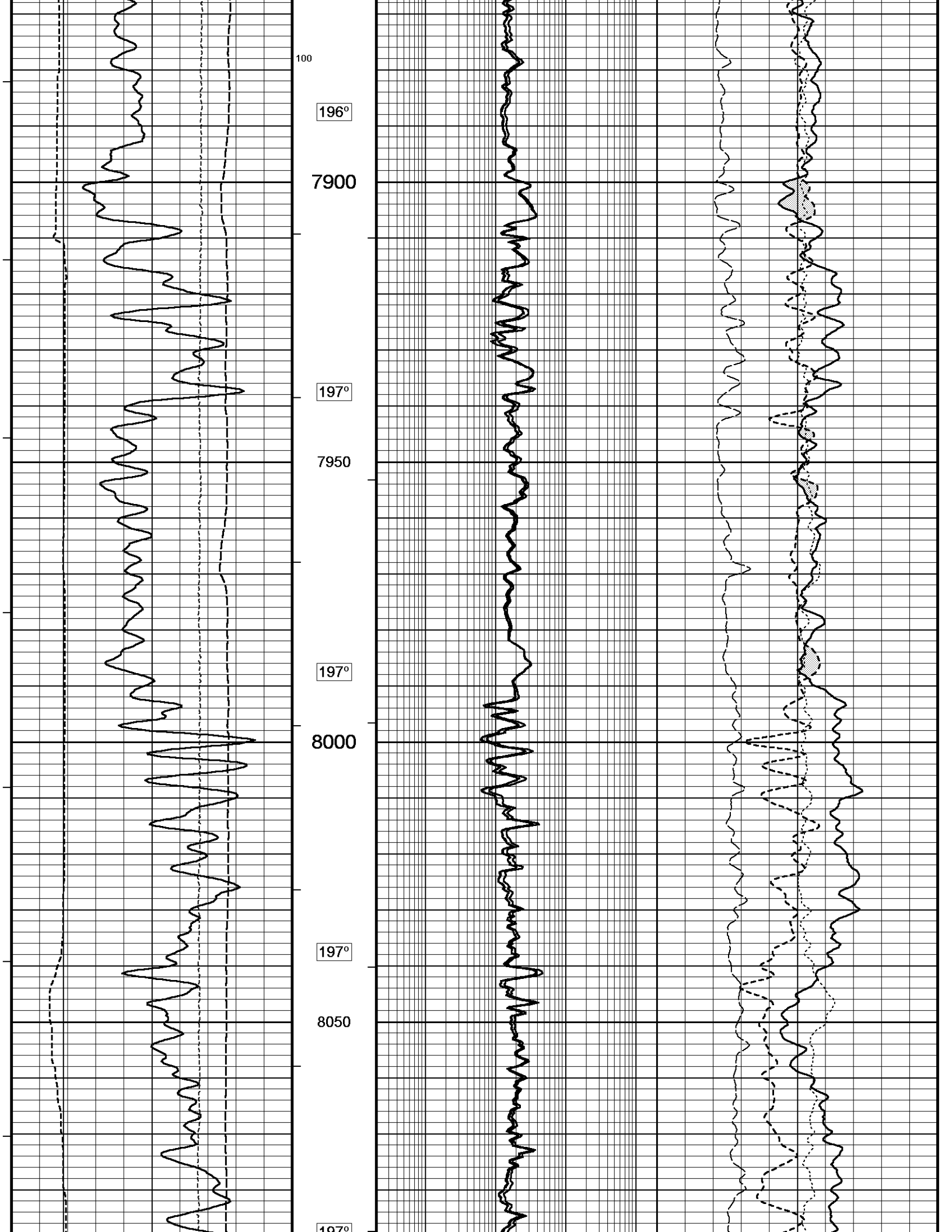


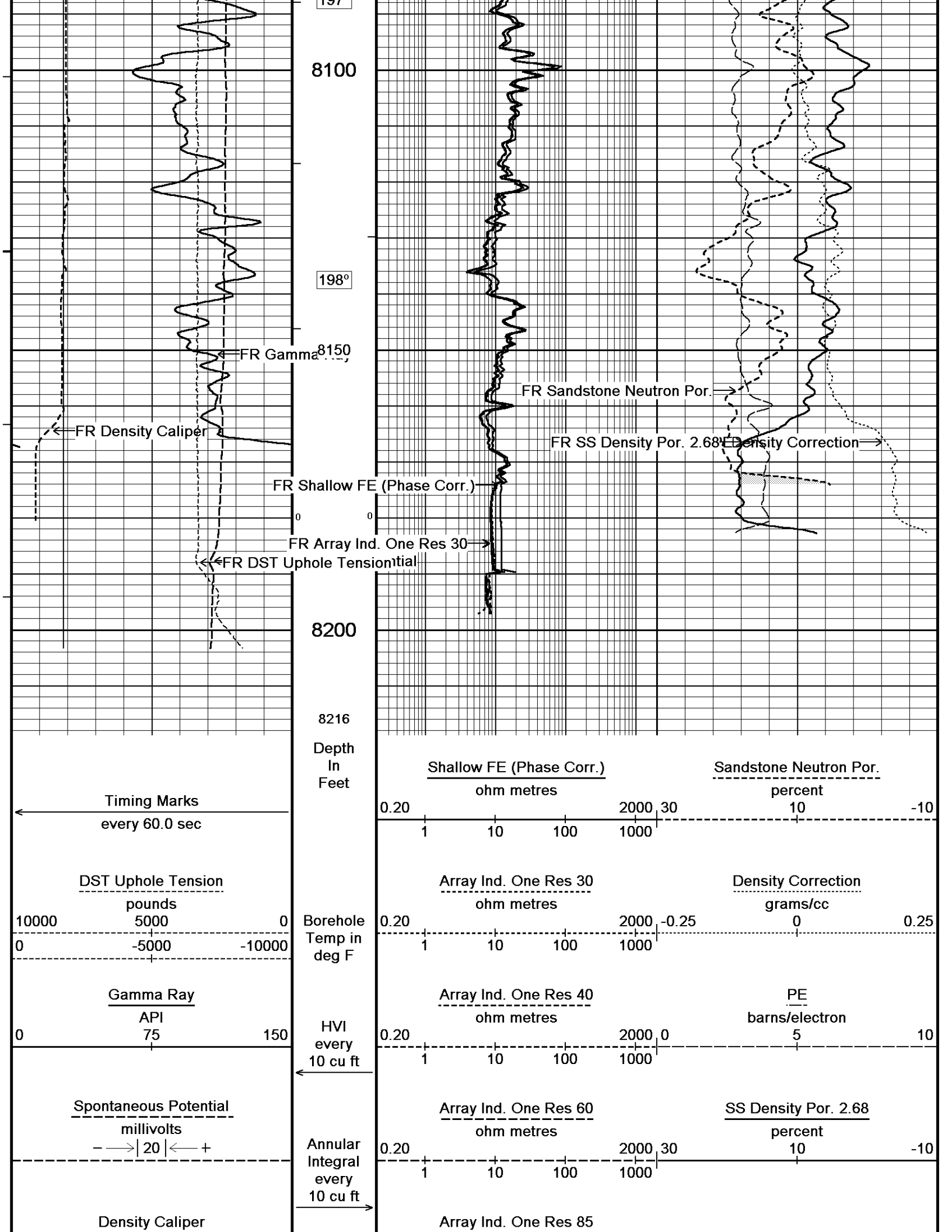


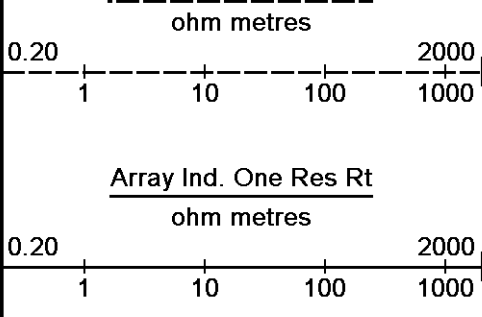
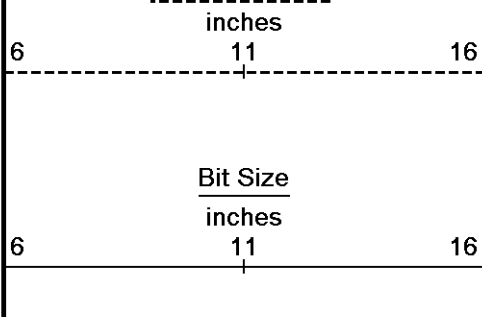












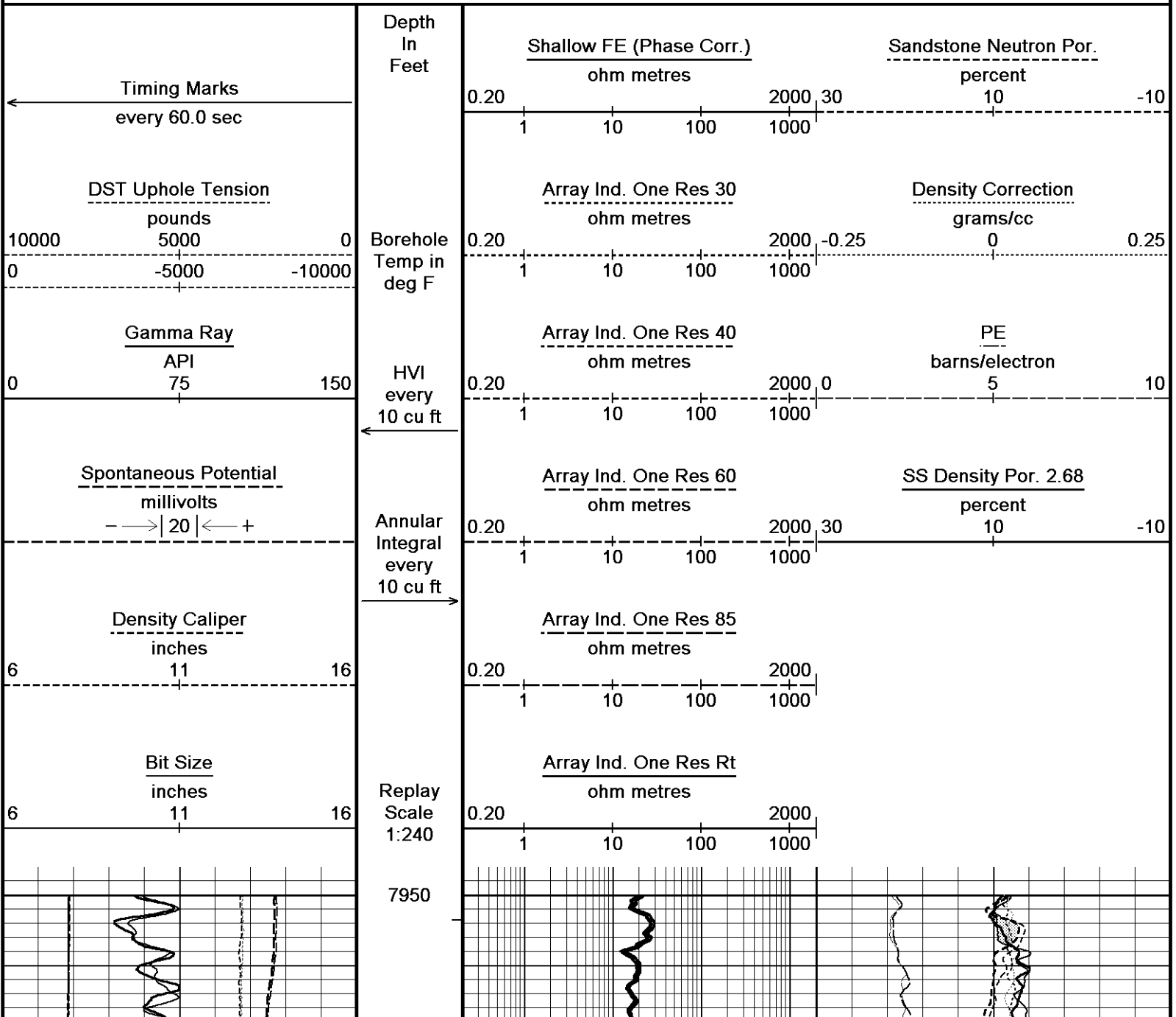
Replay
Scale
1:240

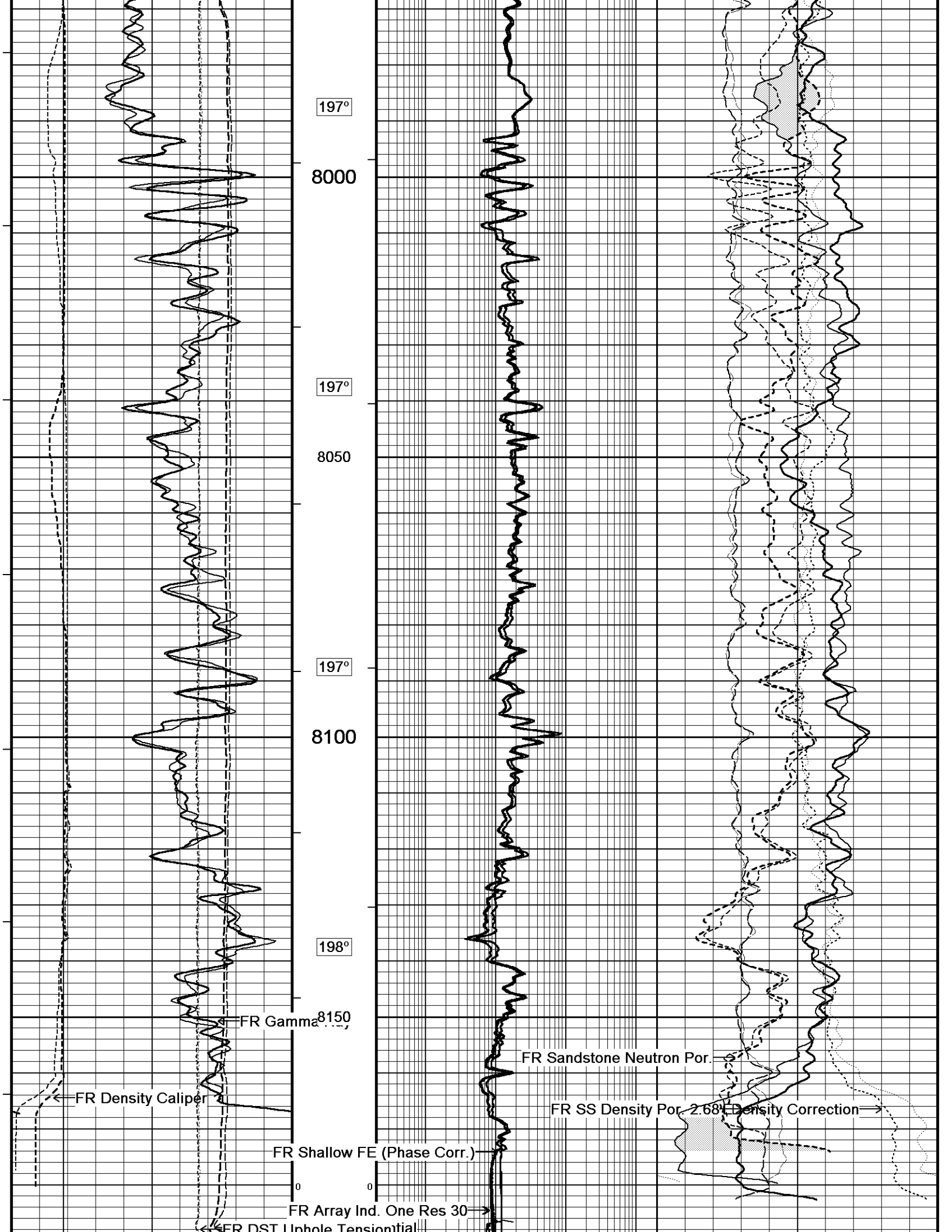
Depth Based Data - Maximum Sampling Increment 10.0cm
 Plotted on 27-JUN-2011 17:34
 Filename: C:\LOGS\Bill Barrett\CB-TG Land 11D-20-692\MS1.dta
 Recorded on 27-JUN-2011 14:45
 System Versions: Logged with 11.03.3657 Processed with 11.03.3657 Plotted with 11.03.3657

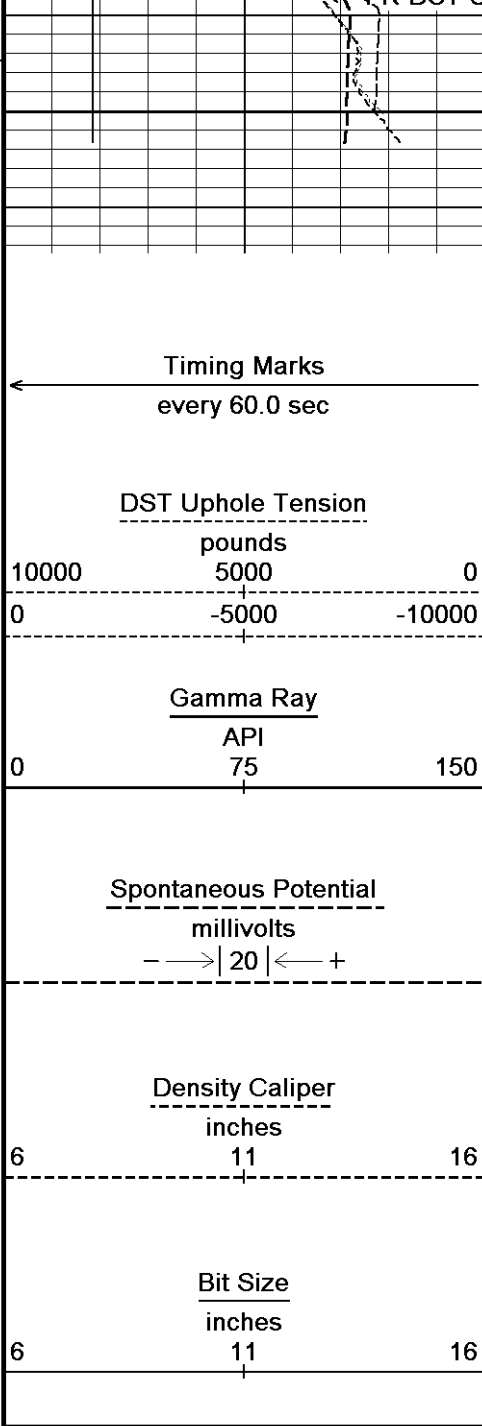
↑ 5 INCH MAIN LOG ↑

↓ OVERLAY ↓

Depth Based Data - Maximum Sampling Increment 10.0cm
 Plotted on 27-JUN-2011 17:34
 Filename: C:\LOGS\Bill Barrett\CB-TG Land 11D-20-692\MS1.dta
 Recorded on 27-JUN-2011 14:45
 Filename: C:\LOGS\Bill Barrett\CB-TG Land 11D-20-692>Main.dta
 Recorded on 27-JUN-2011 14:00
 System Versions: Logged with 11.03.3657 Processed with 11.03.3657 Plotted with 11.03.3657







8200

8212

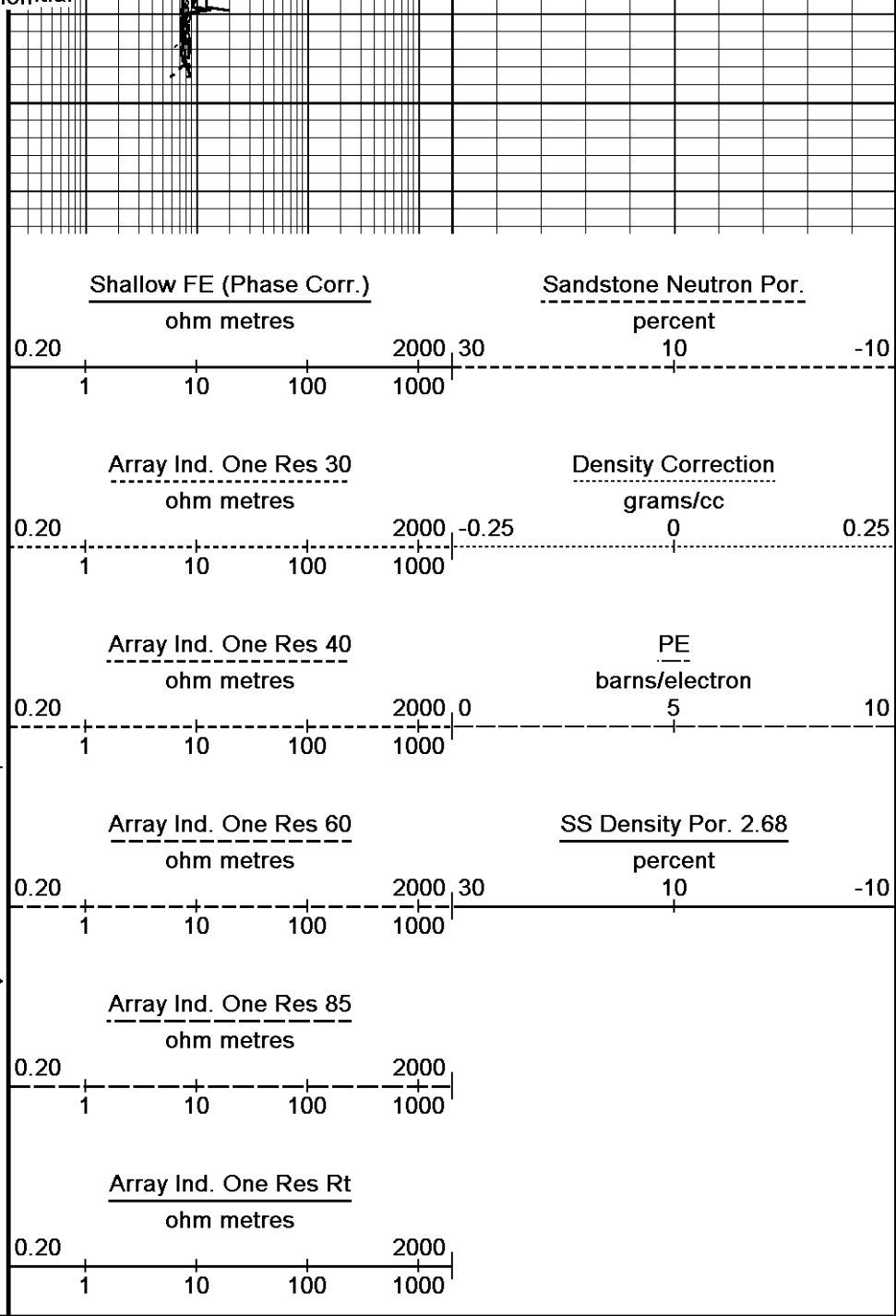
Depth
In
Feet

Borehole
Temp in
deg F

HVI
every
10 cu ft

Annular
Integral
every
10 cu ft

Replay
Scale
1:240

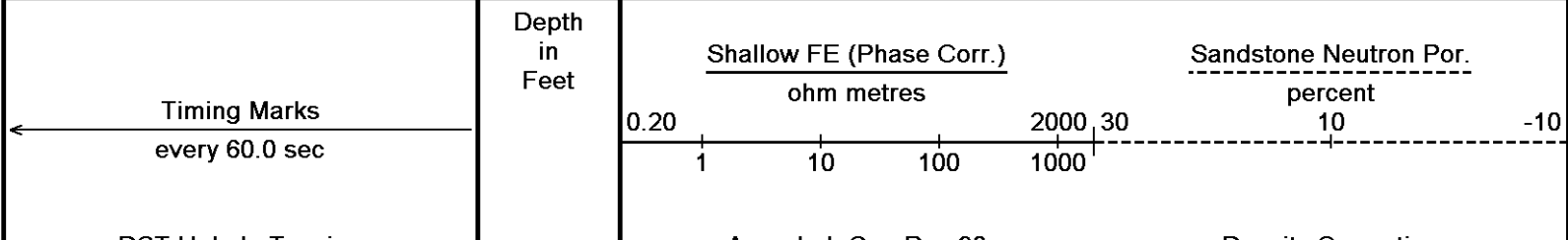


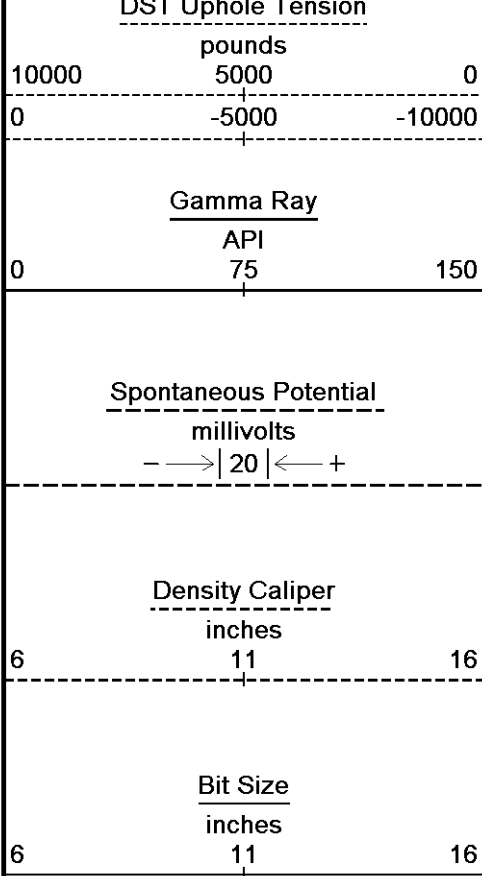
Depth Based Data - Maximum Sampling Increment 10.0cm
 Plotted on 27-JUN-2011 17:34
 Filename: C:\LOGS\Bill Barrett\CB-TG Land 11D-20-692\MS1.dta
 Recorded on 27-JUN-2011 14:45
 Filename: C:\LOGS\Bill Barrett\CB-TG Land 11D-20-692\Main.dta
 Recorded on 27-JUN-2011 14:00
 System Versions: Logged with 11.03.3657 Processed with 11.03.3657 Plotted with 11.03.3657

↑ OVERLAY ↑

↓ OVERLAY 2 ↓

Depth Based Data - Maximum Sampling Increment 10.0cm
 Plotted on 27-JUN-2011 17:34
 Filename: C:\LOGS\Bill Barrett\CB-TG Land 11D-20-692\MS1.dta
 Recorded on 27-JUN-2011 14:45
 Filename: C:\LOGS\Bill Barrett\CB-TG Land 11D-20-692\Repeat.dta
 Recorded on 27-JUN-2011 13:44
 System Versions: Logged with 11.03.3657 Processed with 11.03.3657 Plotted with 11.03.3657



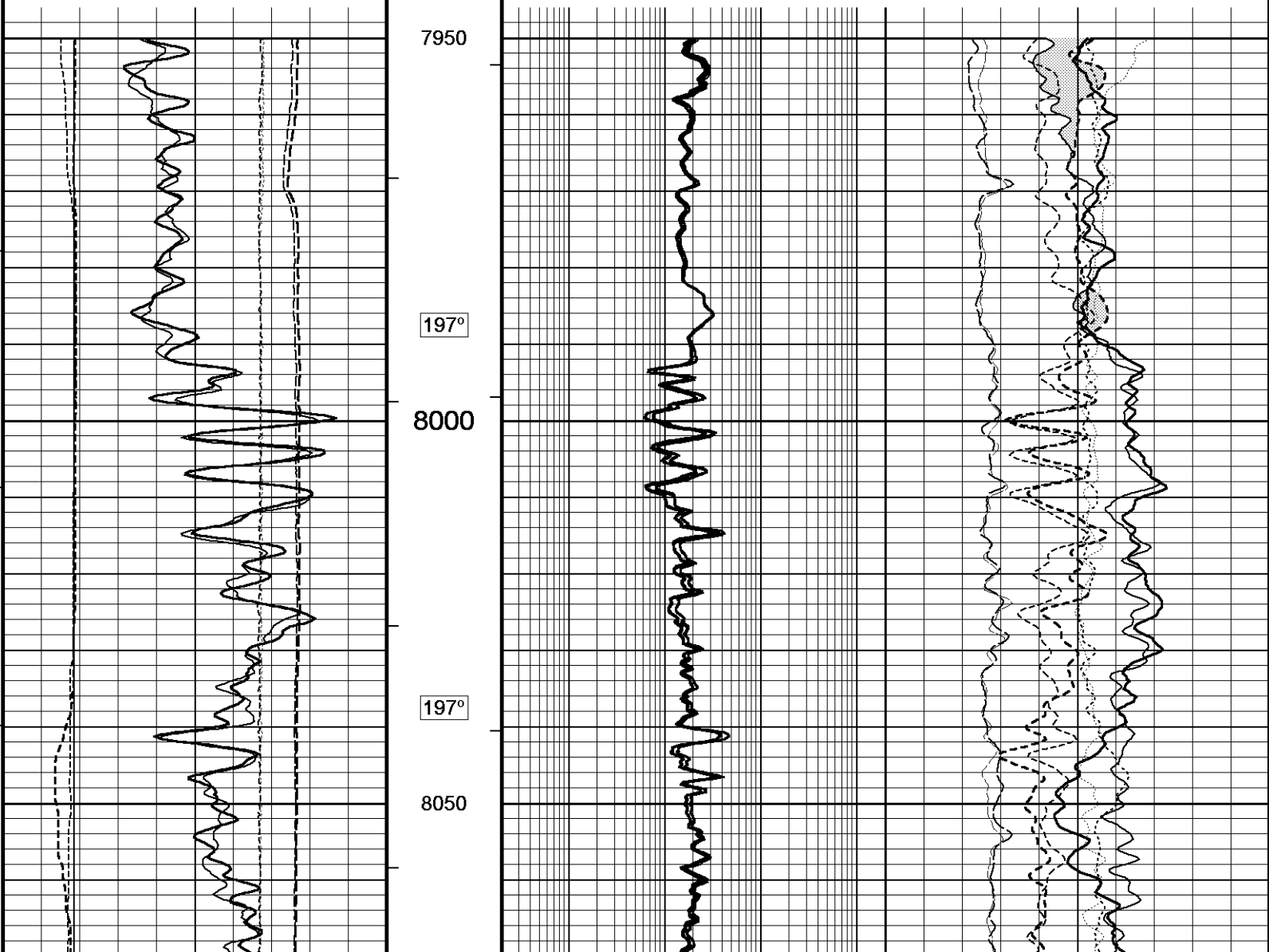
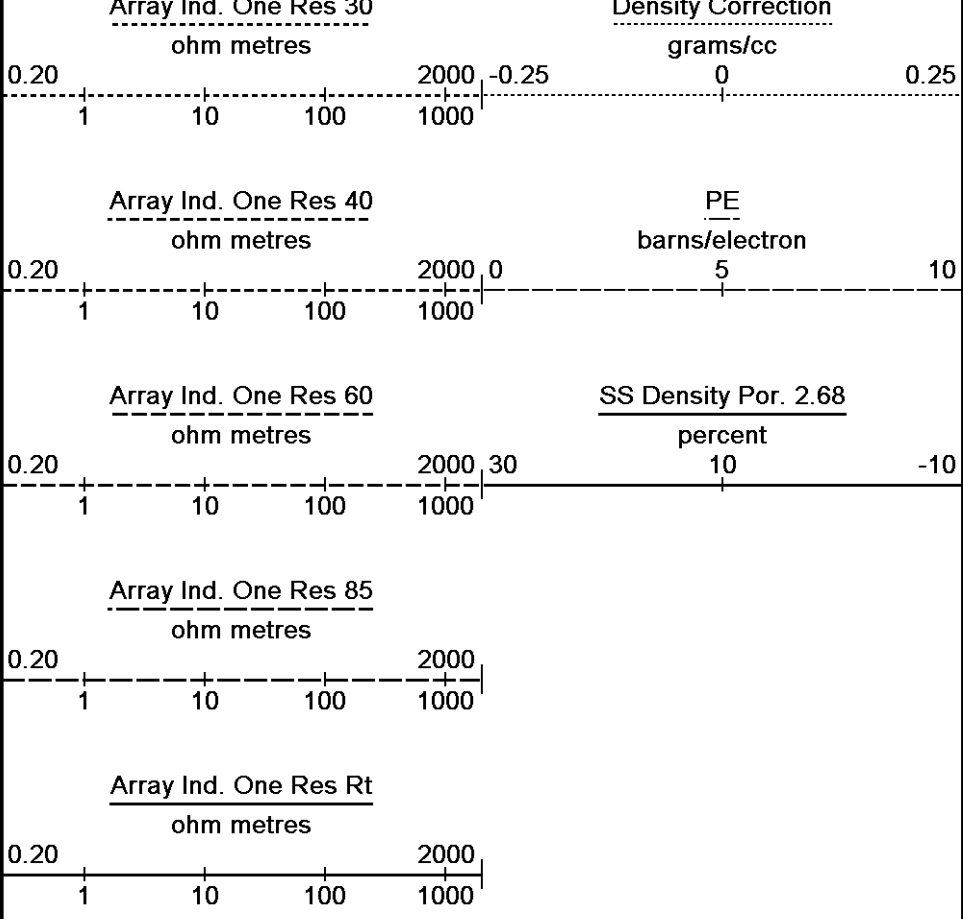


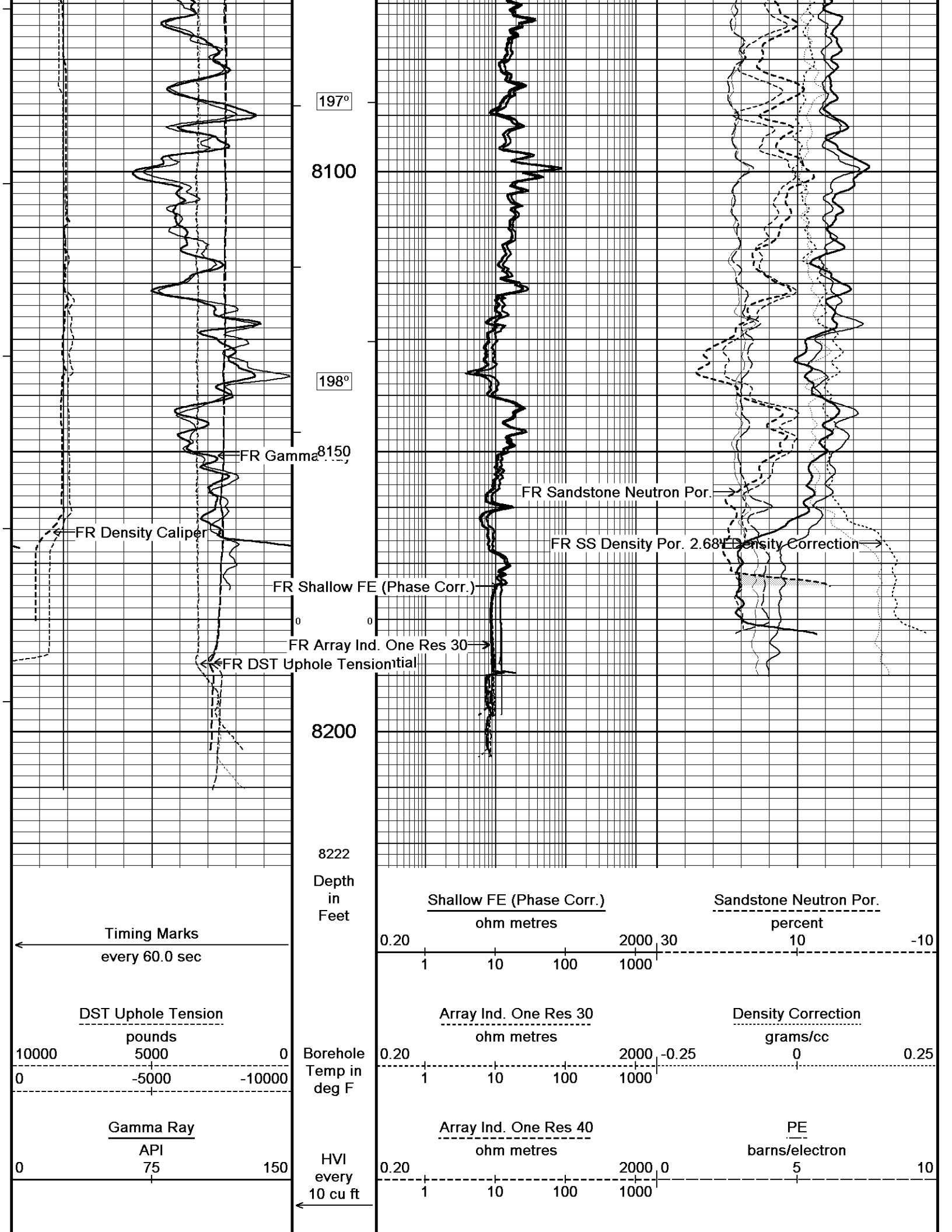
Borehole Temp in deg F

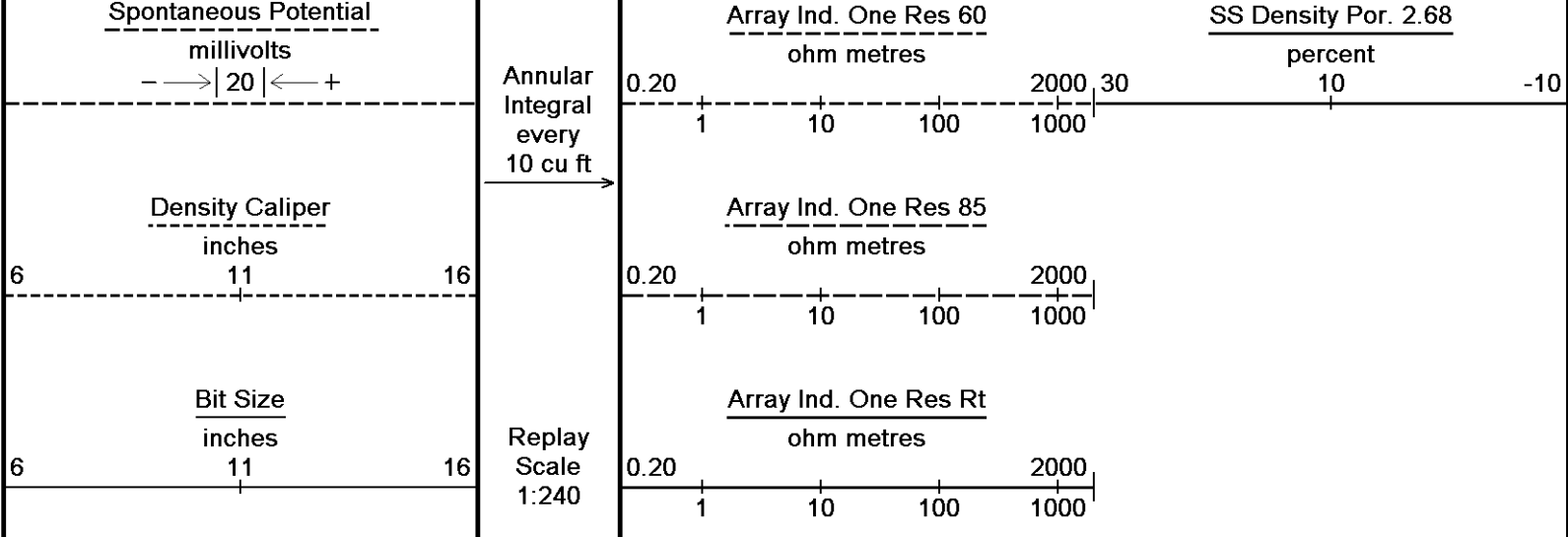
HVI every 10 cu ft

Annular Integral every 10 cu ft

Replay Scale 1:240







Depth Based Data - Maximum Sampling Increment 10.0cm
 Plotted on 27-JUN-2011 17:34
 Filename: C:\LOGS\Bill Barrett\CB-TG Land 11D-20-692\MS1.dta
 Recorded on 27-JUN-2011 14:45
 Filename: C:\LOGS\Bill Barrett\CB-TG Land 11D-20-692\Repeat.dta
 Recorded on 27-JUN-2011 13:44
 System Versions: Logged with 11.03.3657 Processed with 11.03.3657 Plotted with 11.03.3657

↑ OVERLAY 2 ↑

BEFORE SURVEY CALIBRATION
 C:\LOGS\Bill Barrett\CB-TG Land 11D-20-692\MS1.dta

General Constants All 000 Last Edited on 27-JUN-2011,12:27

General Parameters		
Mud Resistivity	2.200	ohm-metres
Mud Resistivity Temperature	97.000	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 27-JUN-2011 12:15

Reading No	Measured	Calibrated (lbs)
1	15317.11	0.00
2	16092.52	370.00

Gamma Calibration MCG-D.A 287 Field Calibration on 27-JUN-2011 09:57

	Measured	Calibrated (API)
Background	143	96
Calibrator (Gross)	1499	1008
Calibrator (Net)	1356	912

Gamma Constants MCG-D.A 287 Last Edited on 27-JUN-2011,10:01

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 27-JUN-2011,10:01

	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 27-JUN-2011,10:01

	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 27-JUN-2011 09:39

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)	
1360	2011
Ratio	0.677

Neutron Constants MDN-A.B 160

Last Edited on 27-JUN-2011,10:01

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 04-MAY-2011 15:19

Field Check on 27-JUN-2011 09:49

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	965.0	126.8

Base Check 281.4

Field Check 281.9

FE Constants MFE-A.A 85

Last Edited on 27-JUN-2011,10:03

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 27-JUN-2011,10:03

	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-JUN-2011,04:47
Field Check on 27-JUN-2011 09:34

Base Calibration

Test Loop Calibration

Channel	Measured		Calibrated (mmho/m)	
	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	14.1	3936.2	14.2	3936.9
2	30.2	3539.7	30.2	3539.8
3	28.8	3114.2	28.8	3113.9
4	19.0	2096.8	19.0	2096.7
Deep	17.3	2078.6	17.4	2078.3
Medium	42.4	4088.0	42.4	4087.5
Shallow	45.4	5158.7	45.3	5159.1

Array Temperature 73.3 74.5 Deg F

Induction Constants MAI-B.A 213

Last Edited on 27-JUN-2011,10:03

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	

AFTER SURVEY CALIBRATION

C:\LOGS\Bill Barrett\CB-TG Land 11D-20-692\MS1.dta

FE Check MFE-A.A 85	Before (ohm-m) 281.9	After (ohm-m) 281.5	Before Survey Check 27-JUN-2011 09:49 After Survey Check on 27-JUN-2011 17:25
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Induction Check MAI-B.A 213			Before Survey Check on 27-JUN-2011 09:34 After Survey Check on 27-JUN-2011 17:27	
Channel	Before Survey (mmho/m)		After Survey (mmho/m)	
	Low	High	Low	High
1	14.2	3936.9	15.1	3937.2
2	30.2	3539.8	30.5	3540.6
3	28.8	3113.9	29.0	3114.6
4	19.0	2096.7	19.1	2096.8
Deep	17.4	2078.3	17.5	2078.4
Medium	42.4	4087.5	42.6	4088.9
Shallow	45.3	5159.1	45.9	5160.6
Array Temperature	74.5		87.5	Deg F

Photo Density Check MPD-B 167			Before Survey Check on 27-JUN-2011 09:46 After Survey Check on 27-JUN-2011 17:24	
Density Check				
		Near		Far
	Before	After	Before	After
	1164.9	1165.3	1733.8	1732.0
PE Check				
		Before		After
WS		211.3		210.9
WH		1046.5		1037.5

DOWNHOLE EQUIPMENT

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- 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-F Compact Swivel Head Adaptor
SHA-F 82 LG: 2.74 ft WT: 26.5 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

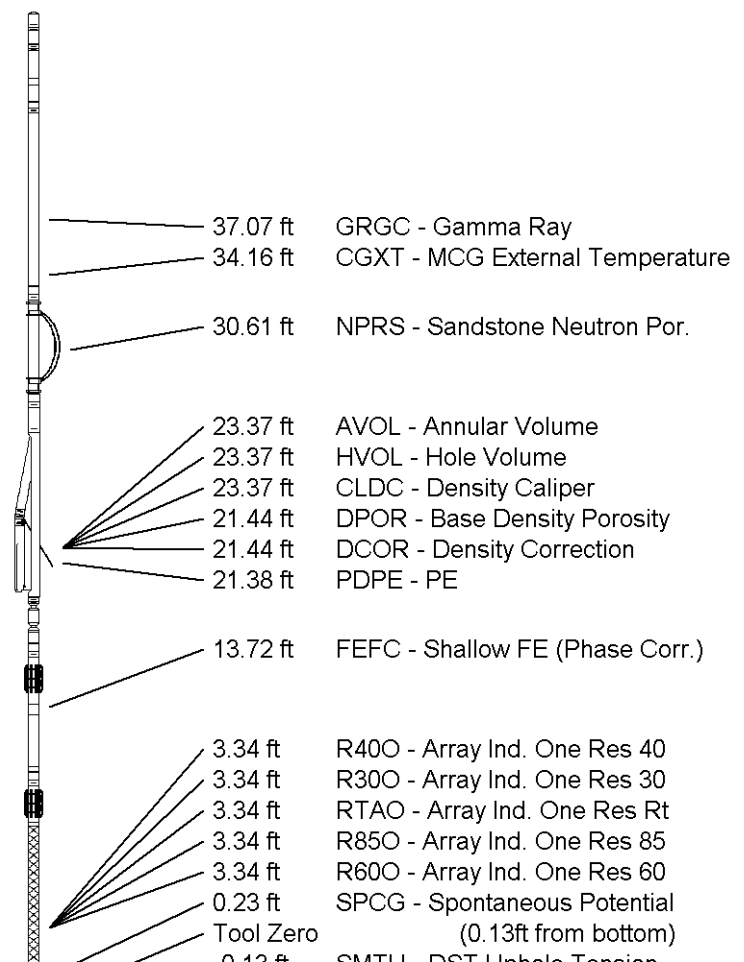
- Compact Density/Caliper
MPD-B 167 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

- 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 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: 46.67 ft Weight: 368.2 lb



COMPANY	BILL BARRETT CORPORATION
WELL	CB TG LAND 11D-20-692
FIELD	MAMM CREEK
PROVINCE/COUNTY	GARFIELD
COUNTRY/STATE	U.S.A. / COLORADO

Elevation Kelly Bushing	5553.00	feet	First Reading	8185.00	
Elevation Drill Floor	5552.00	feet	Depth Driller	8193.00	feet
Elevation Ground Level	5530.00	feet	Depth Logger	8188.00	feet



COMPACT TRIPLE COMBO
QUICKLOOK
LOG

