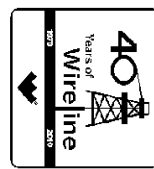




Weatherford

**COMPACT TRIPLE COMBO
QUICKLOOK
LOG**

COMPANY **BILL BARRETT CORPORATION**
WELL **CB-TG LAND 21C-20-692**
FIELD **MAMM CREEK**
PROVINCE/COUNTY **GARFIELD**
COUNTRY/STATE **U.S.A. / COLORADO**
LOCATION **SHL: 643' FNL & 2577' FEL**
BHL: 469' FNL & 1972' FWL



SEC **20** TWP **6S** RGE **92W**
API Number **05-045-19769**
Permit Number

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

Elevations: **KB 5553.00**
DF 5552.00
GL 5530.00

Date	21-JUNE-2011
Run Number	ONE
Depth Driller	7687.00 feet
Depth Logger	7685.00 feet
First Reading	7682.00
Last Reading	808.00
Casing Driller	813.00 feet
Casing Logger	808.00 feet
Bit Size	7.875 inches
Hole Fluid Type	LSND
Density / Viscosity	10.50 lb/USg 50.00 CP
PH / Fluid Loss	9.80 7.60 ml/30Min
Sample Source	FLOW LINE
Rm @ Measured Temp	1.78 @ 93.0 ohm-m
Rmf @ Measured Temp	1.42 @ 93.0 ohm-m
Rmc @ Measured Temp	2.13 @ 93.0 ohm-m
Source Rmf / Rmc	CALC CALC
Rm @ BHT	0.865 @ 195.0 ohm-m
Time Since Circulation	7 HOURS
Max Recorded Temp	195.00 deg F
Equipment Name	COMPACT
Equipment / Base	13045 GD JCT
Recorded By	M.RICHINS
Witnessed By	C. CROWTON

BOREHOLE RECORD			Last Edited: 21-JUN-2011 08:10
Bit Size inches	Depth From feet	Depth To feet	
8.750	813.00	4423.00	
7.880	4423.00	7687.00	

CASING RECORD				
Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	9.625	0.00	813.00	36.00

REMARKS

LOGGED USING WLS SOFTWARE VERSION 11.02.3186

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
MDN: (1) DUAL BOWSPRING
MFE: (1) 0.5 INCH STANDOFF

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.

UNDERGAUGE SECTION AT 7400 FEET NOT REPEATED DUE TO OBSTRUCTIONS UPON ENTRY, AND TIGHT PULLS AT SAME DEPTH.

LOGS SPLICED AT 6300 AND 5750 FEET DUE TO SONDE SKEW.

CALIPER CHECK IN CASING PRESENTED, REFERENCE I.D. = 8.93" (9 5/8", 36 LB/FT CASING)

TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 2180CU.FT.

ANNULAR VOLUME WITH 4.5 INCH PRODUCTION CASING = 1570CU.FT.

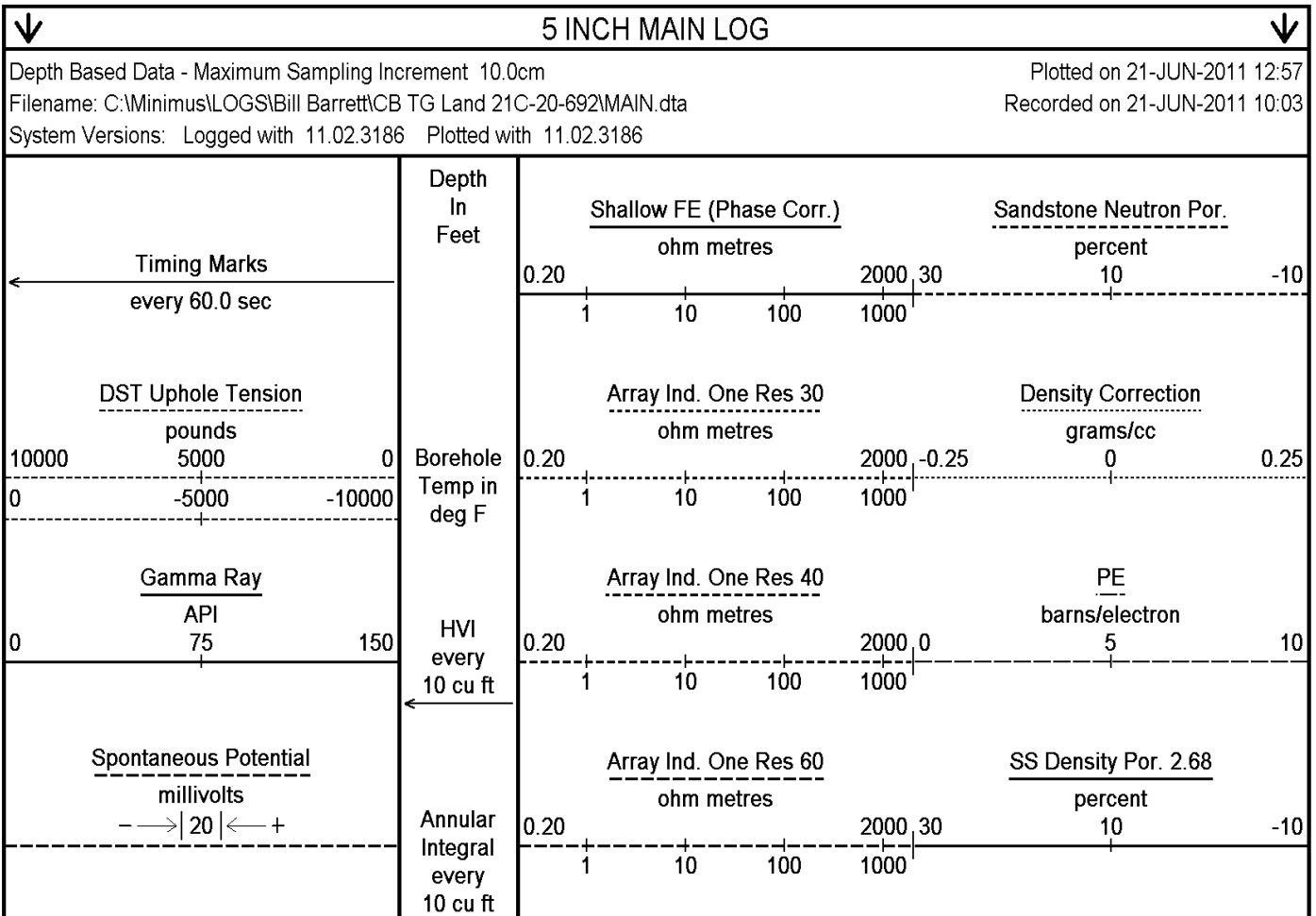
SERVICE ORDER: #3524781

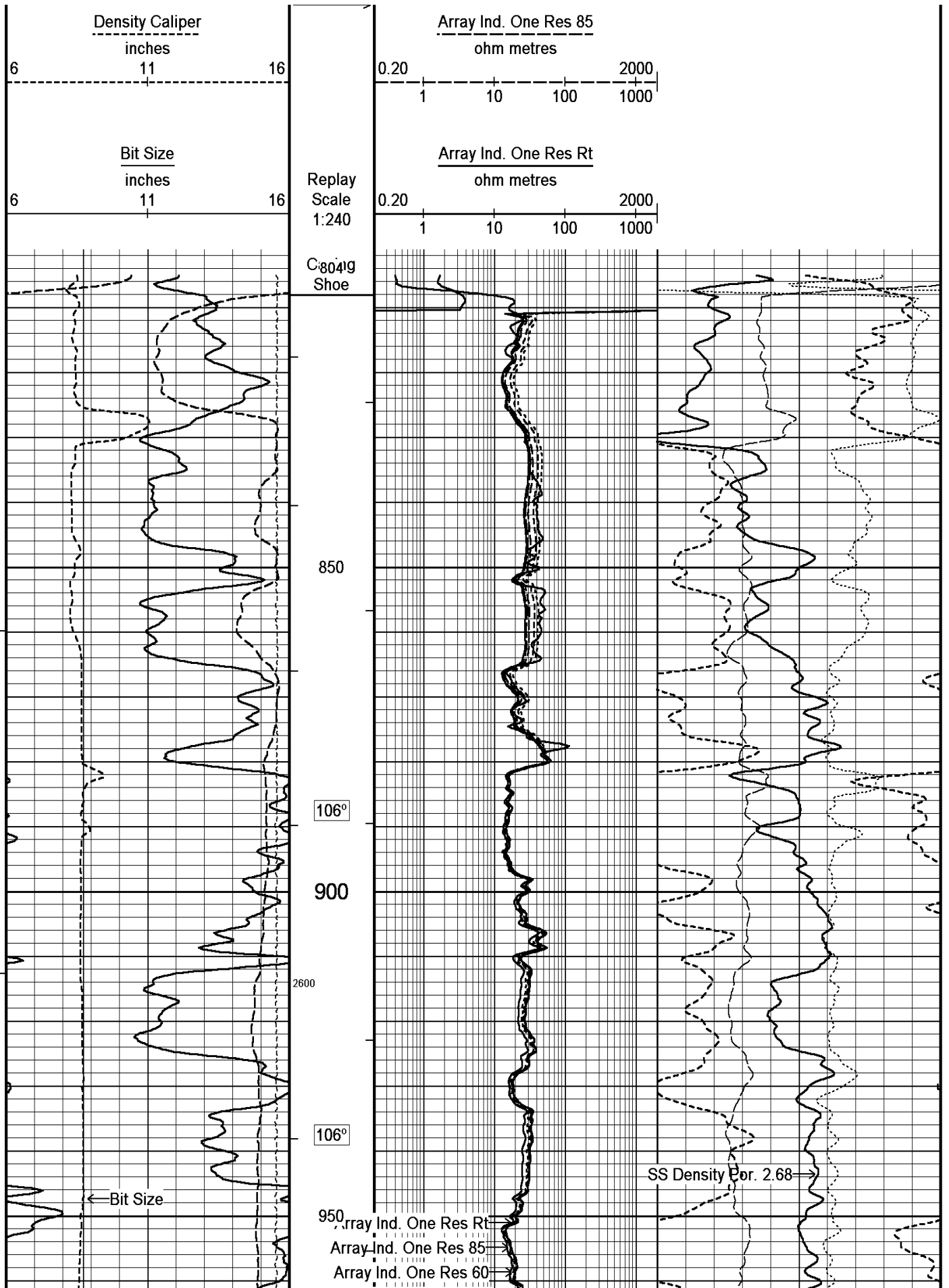
RIG: NABORS #37

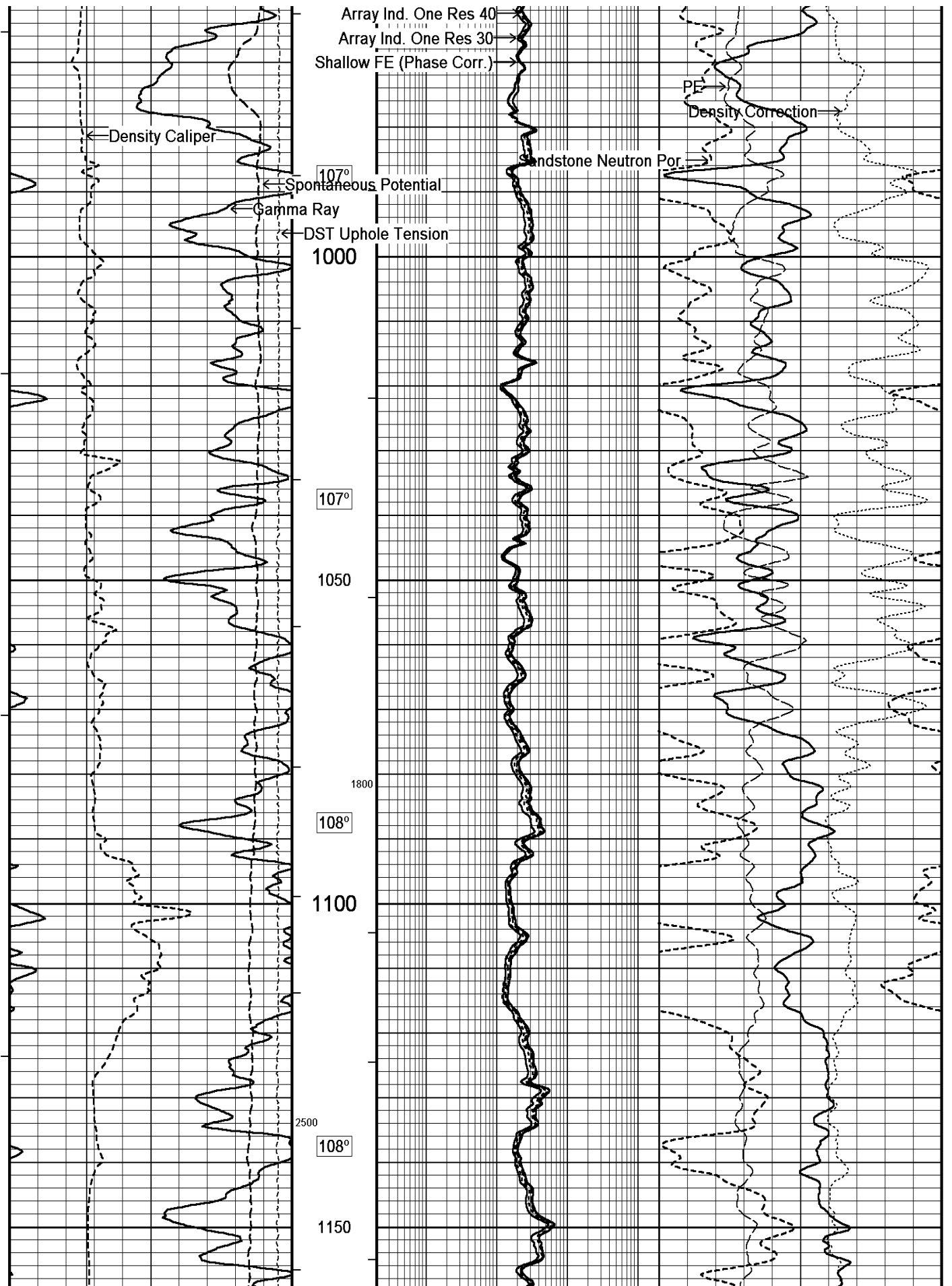
ENGINEER(S): M.RICHINS

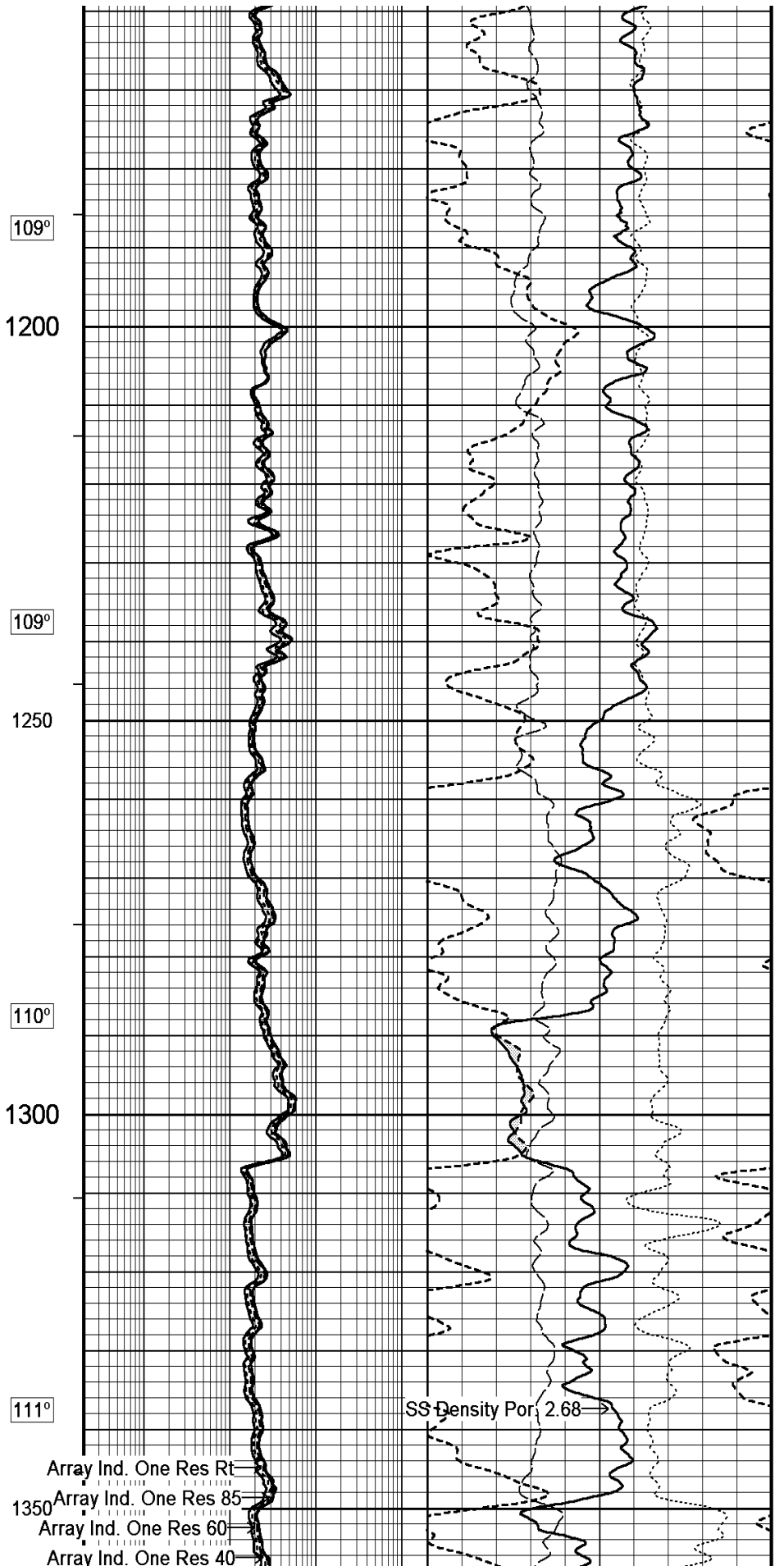
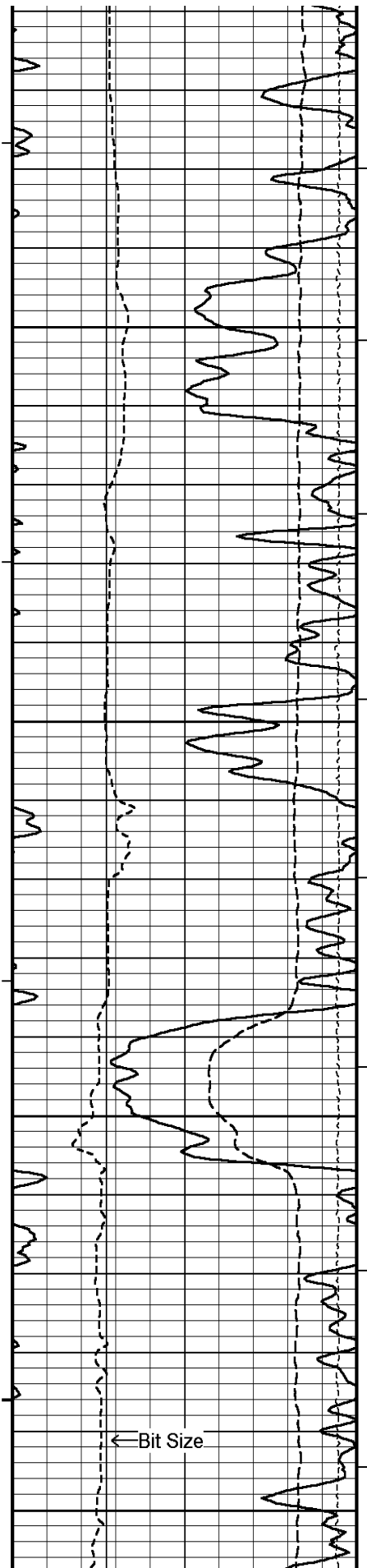
OPERATOR(S): S.KAISER

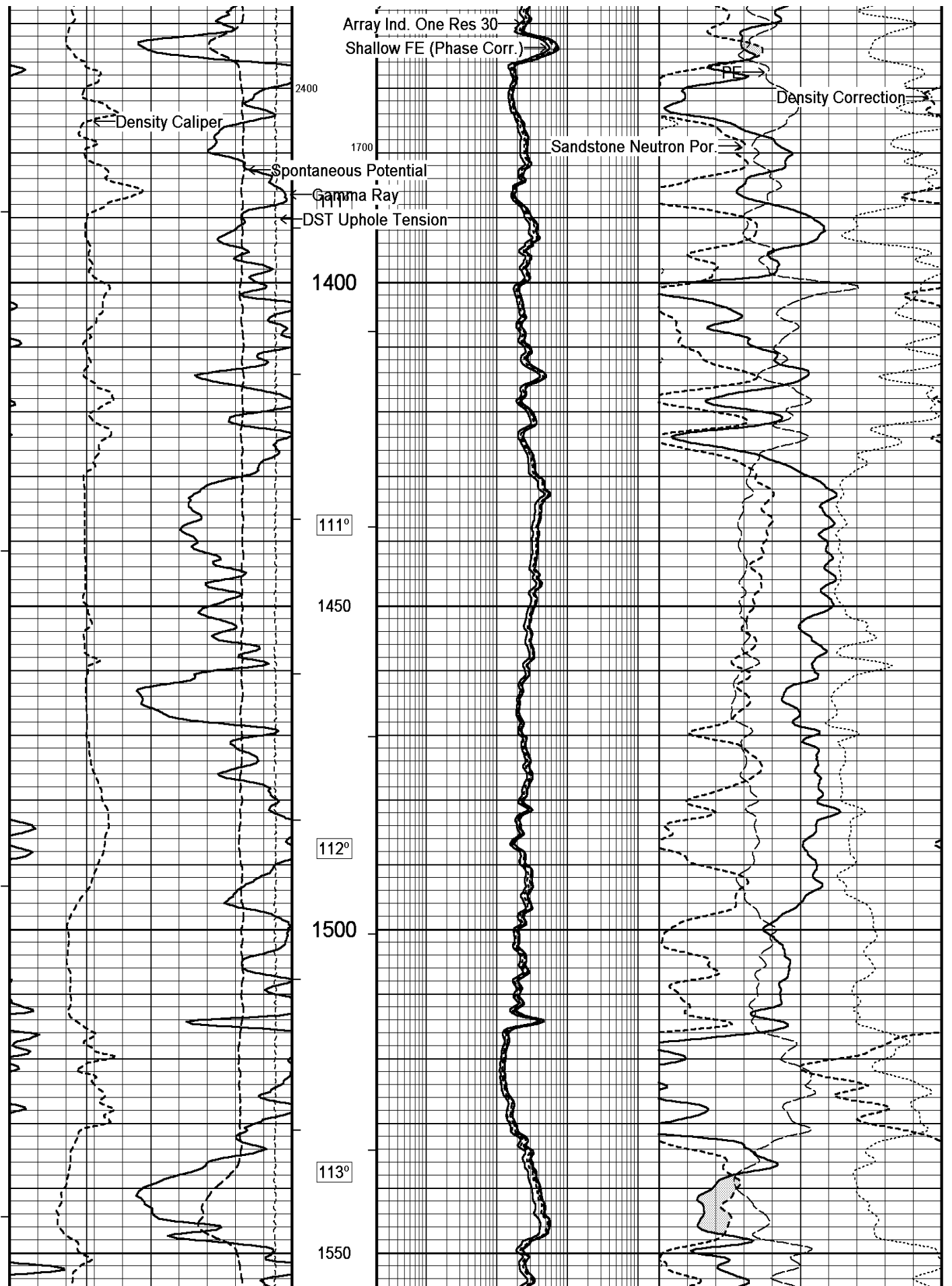
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

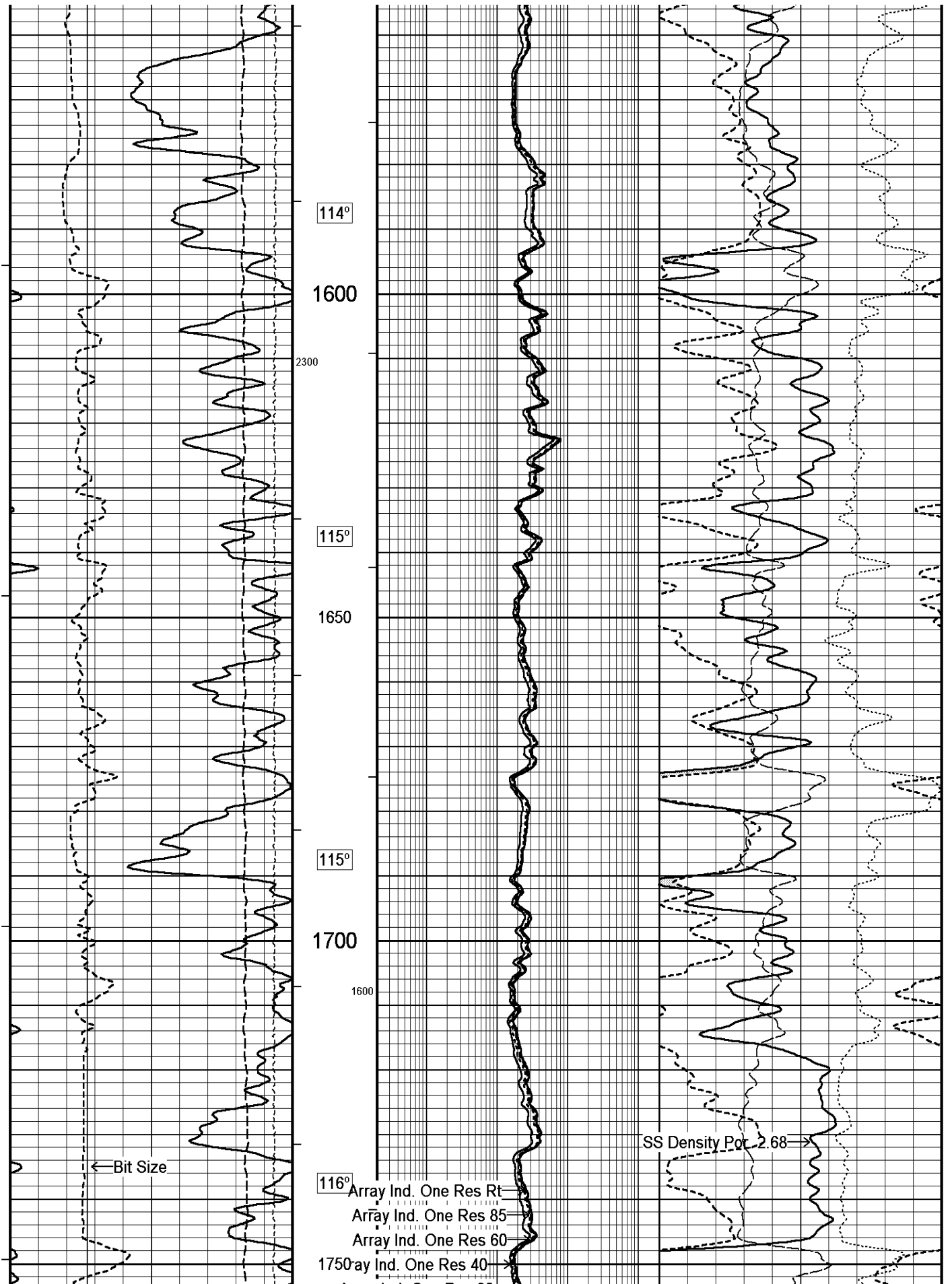


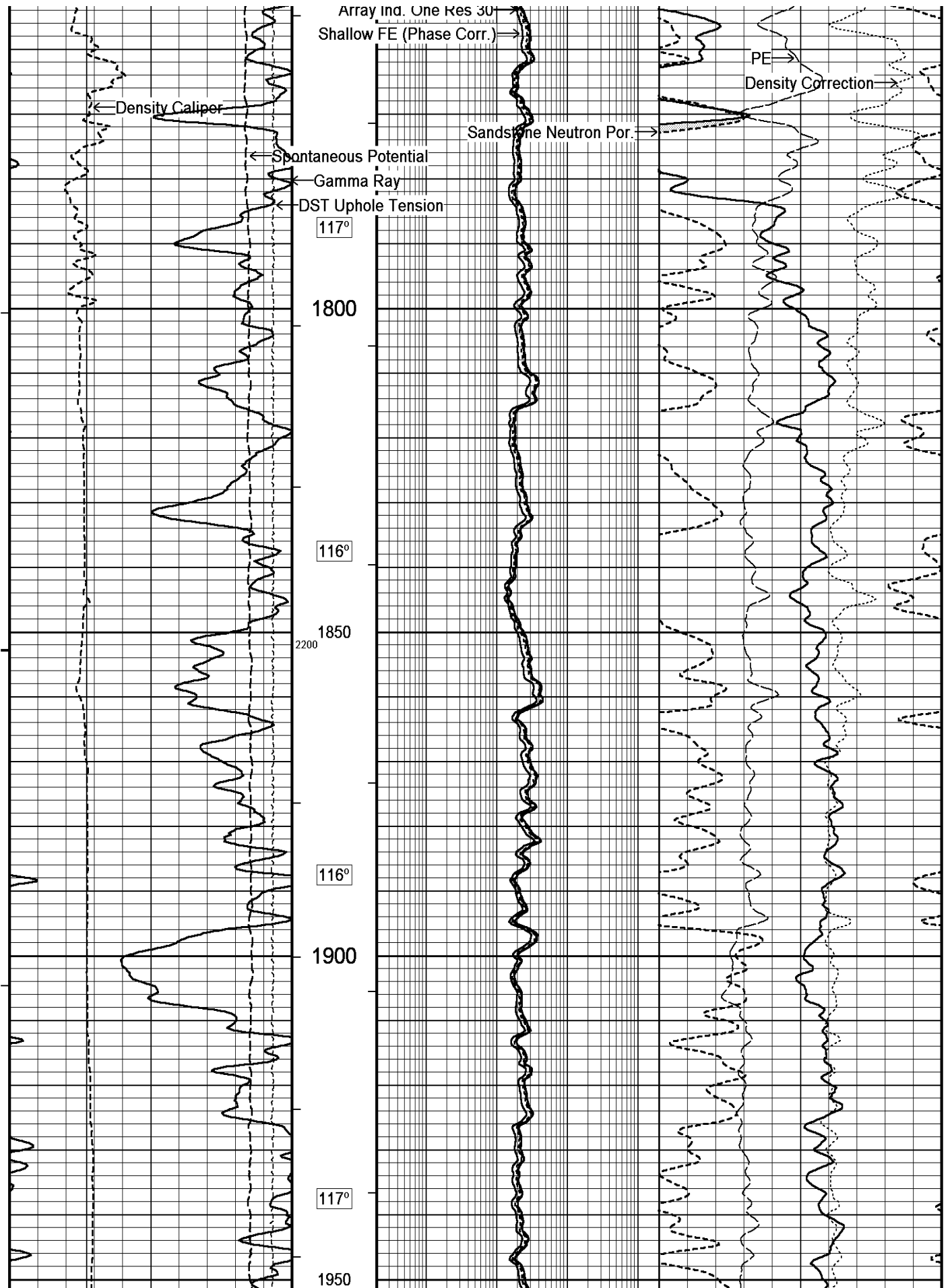


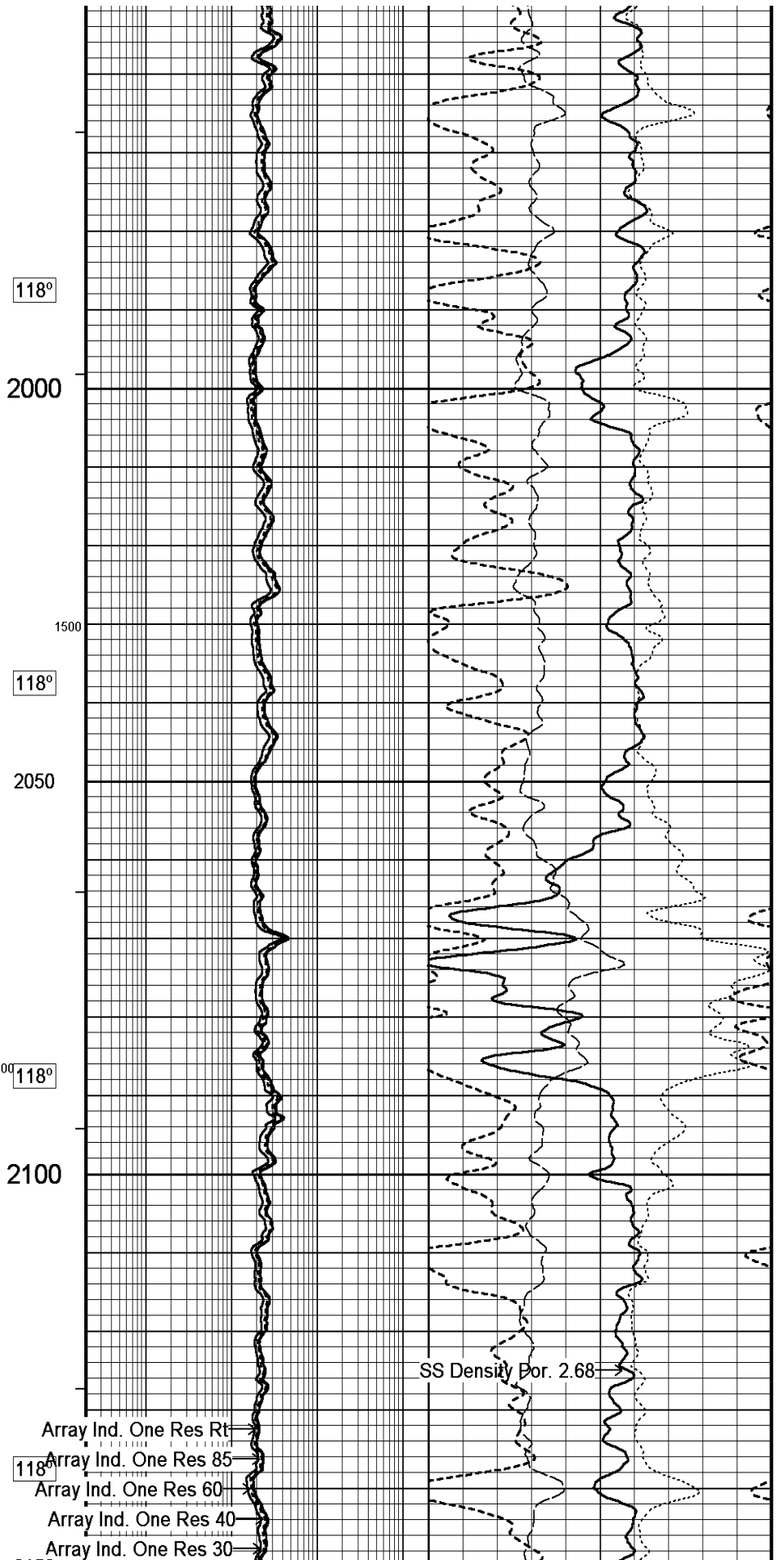
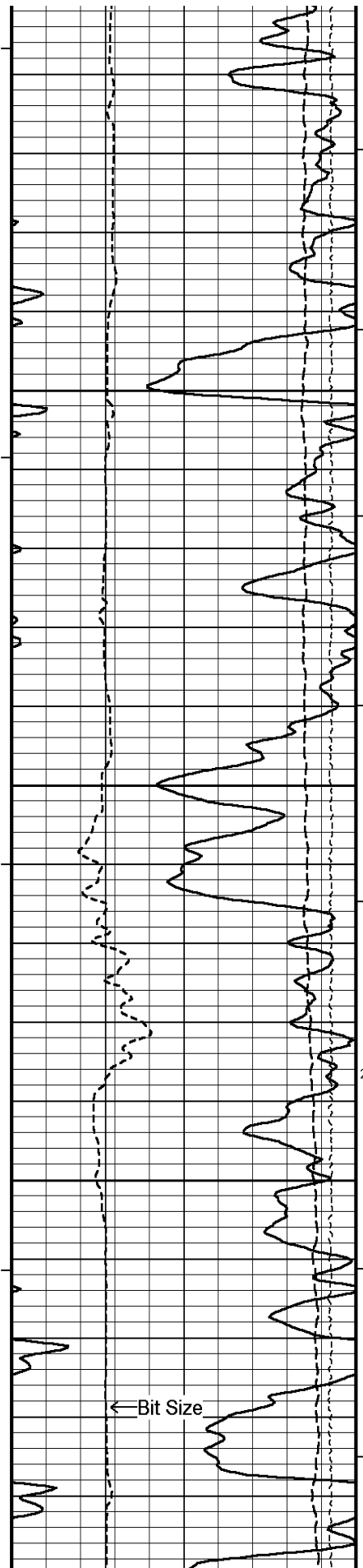


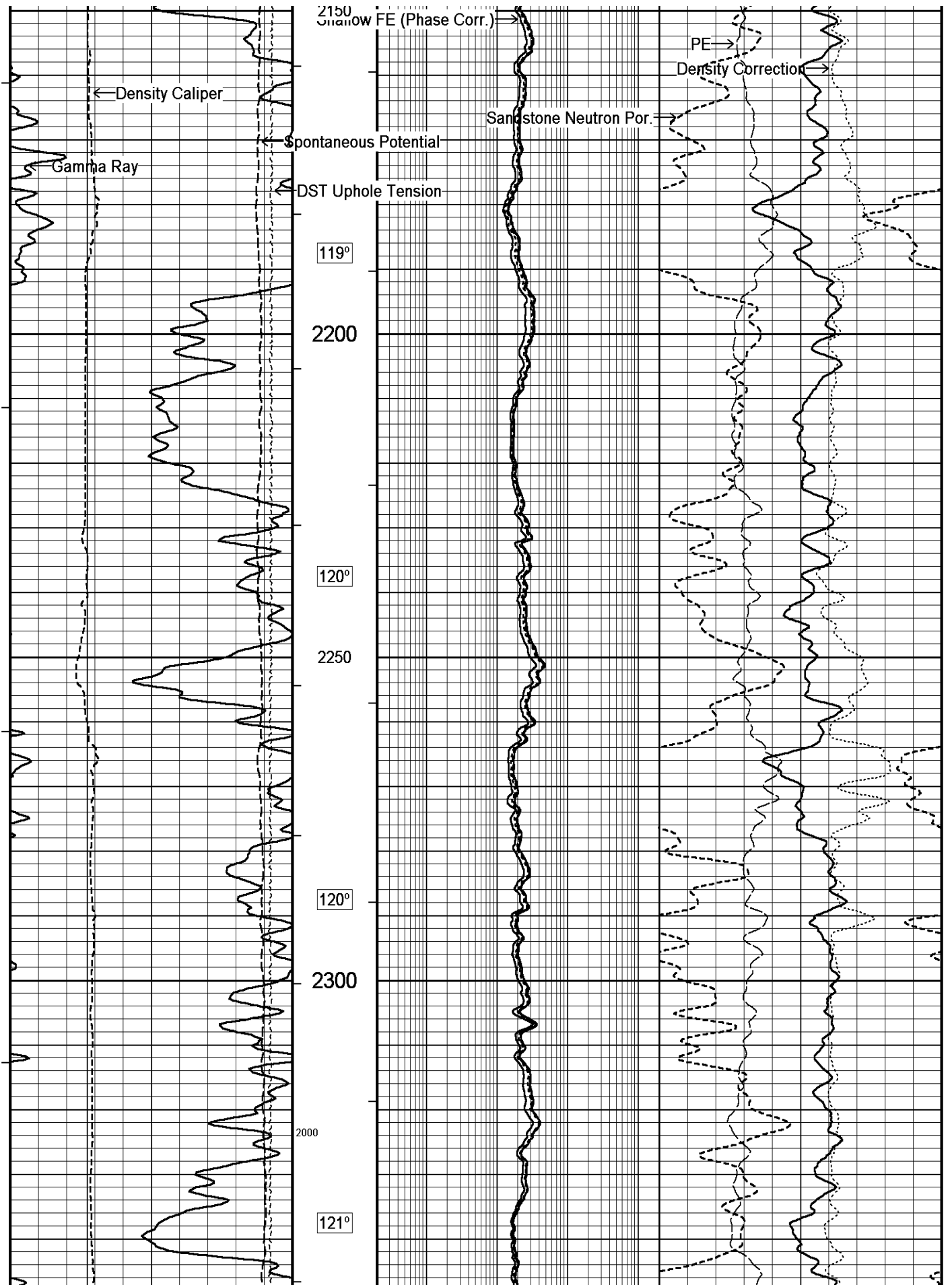


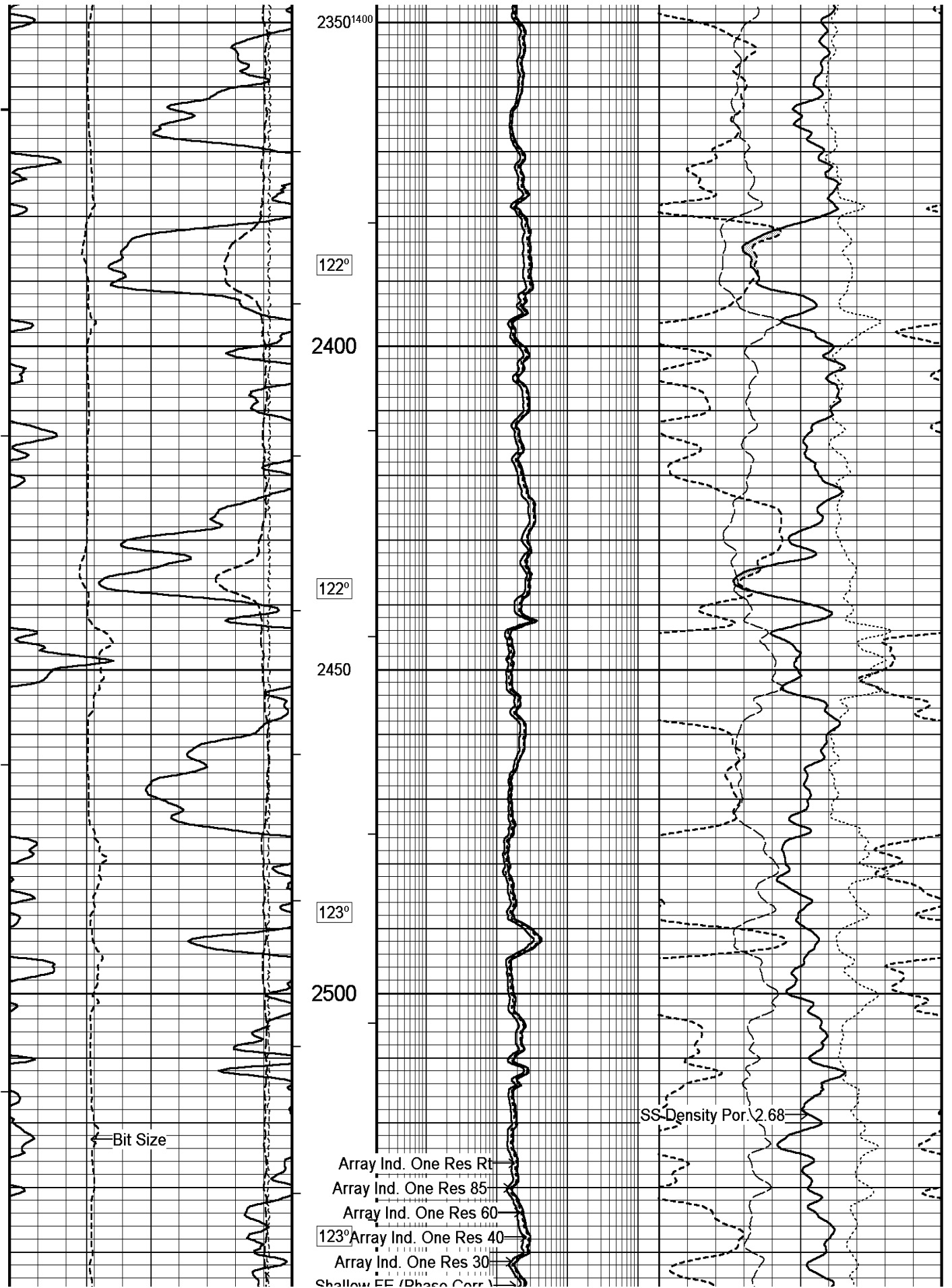


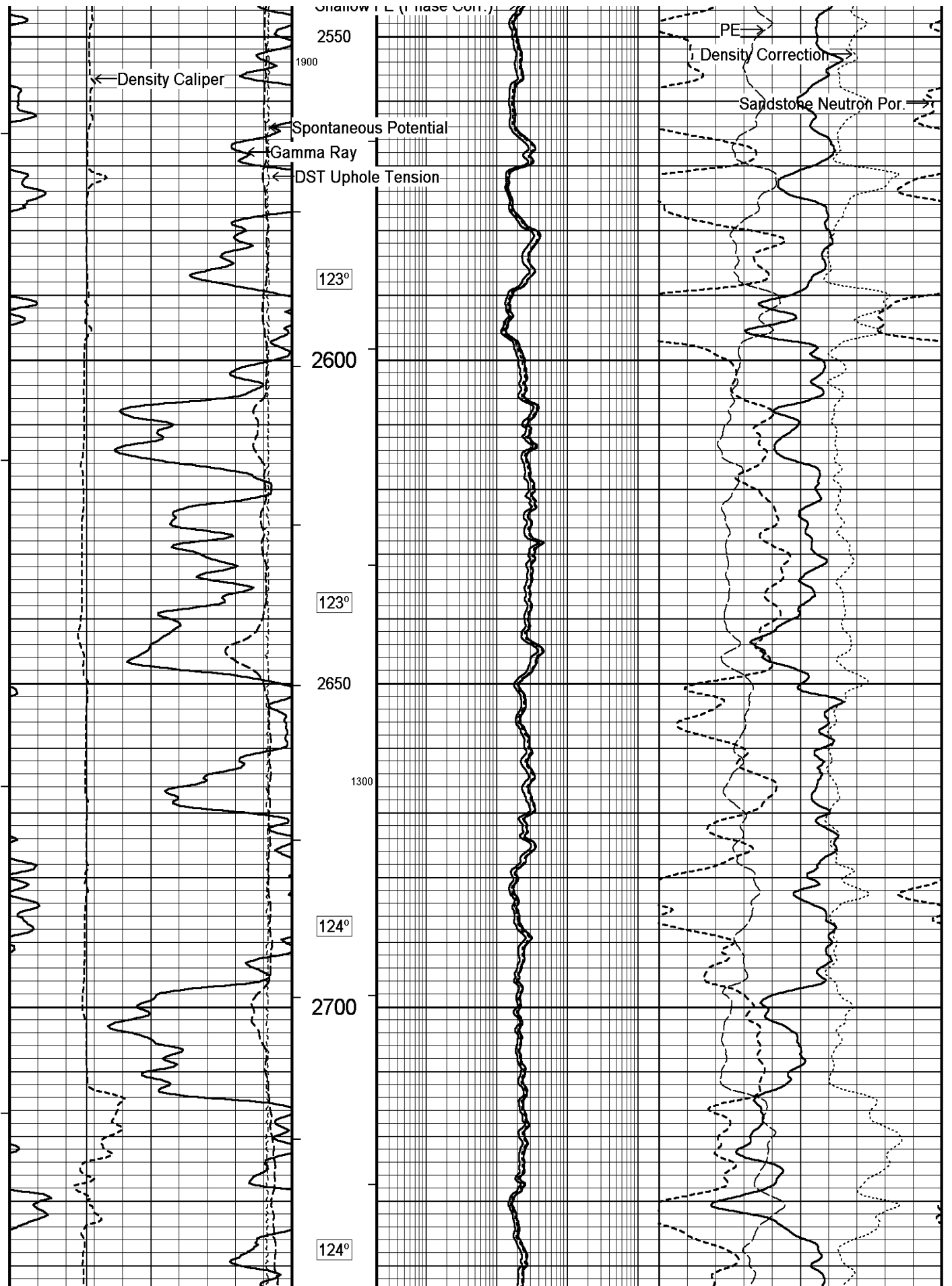


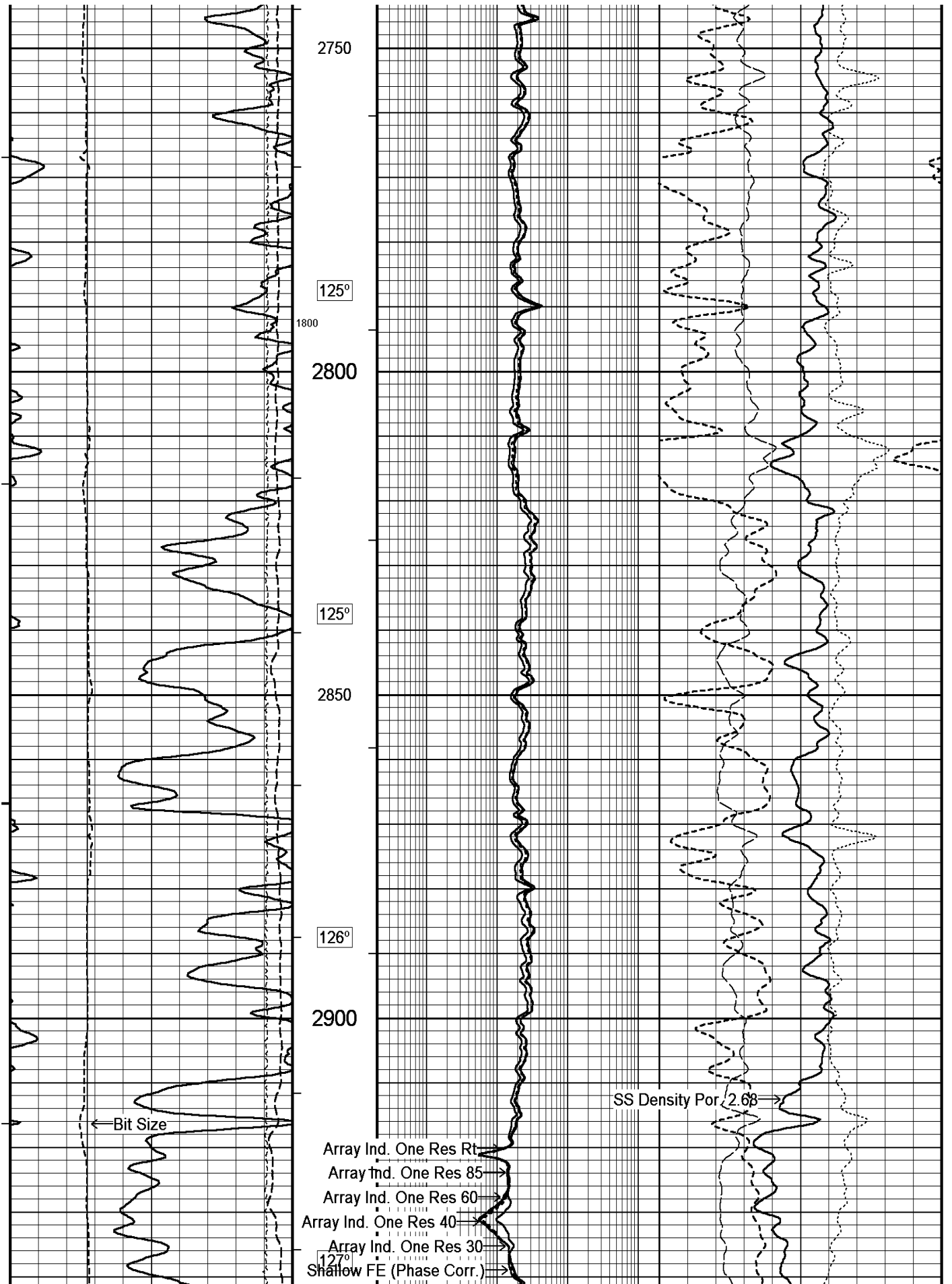


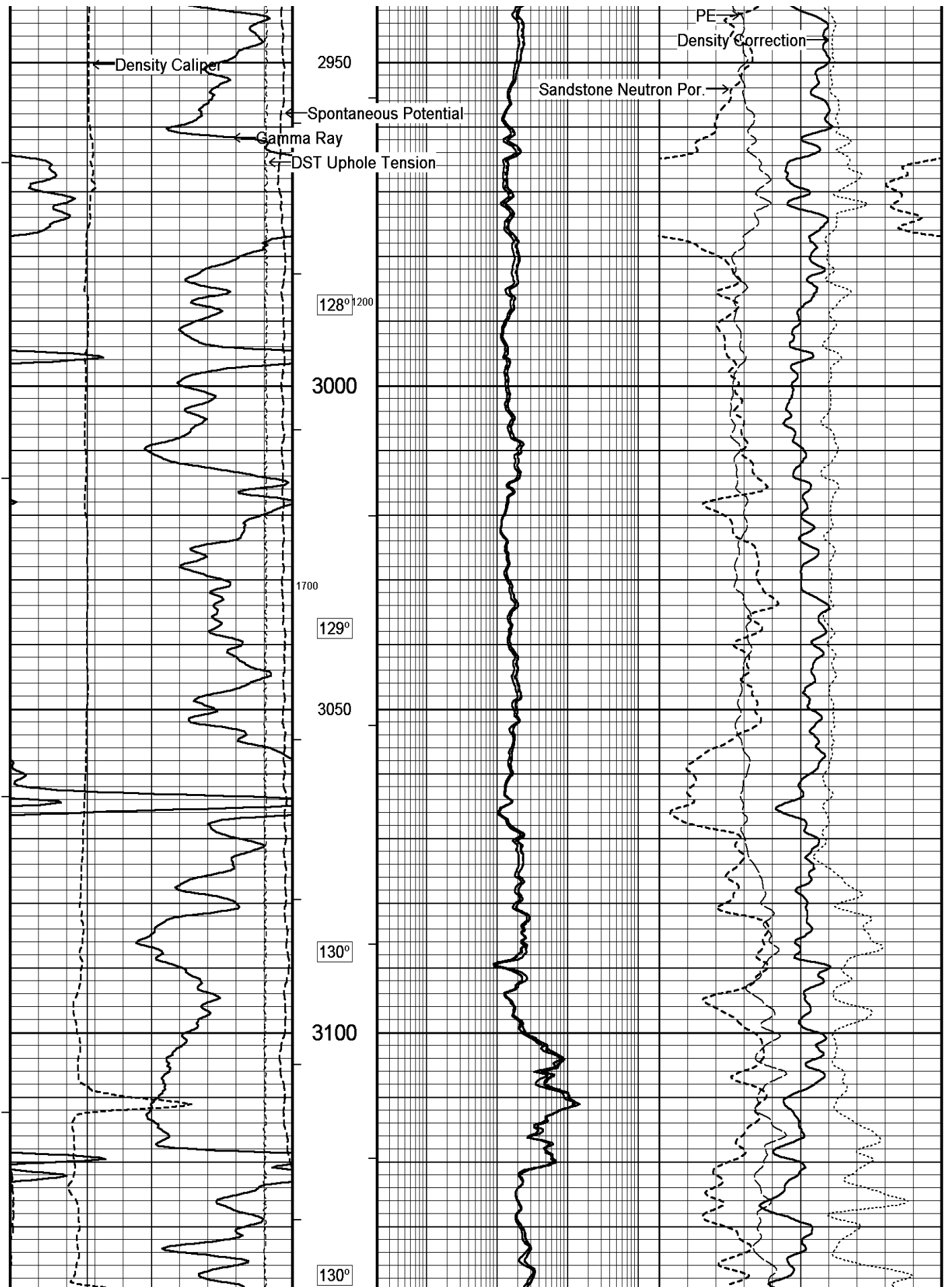


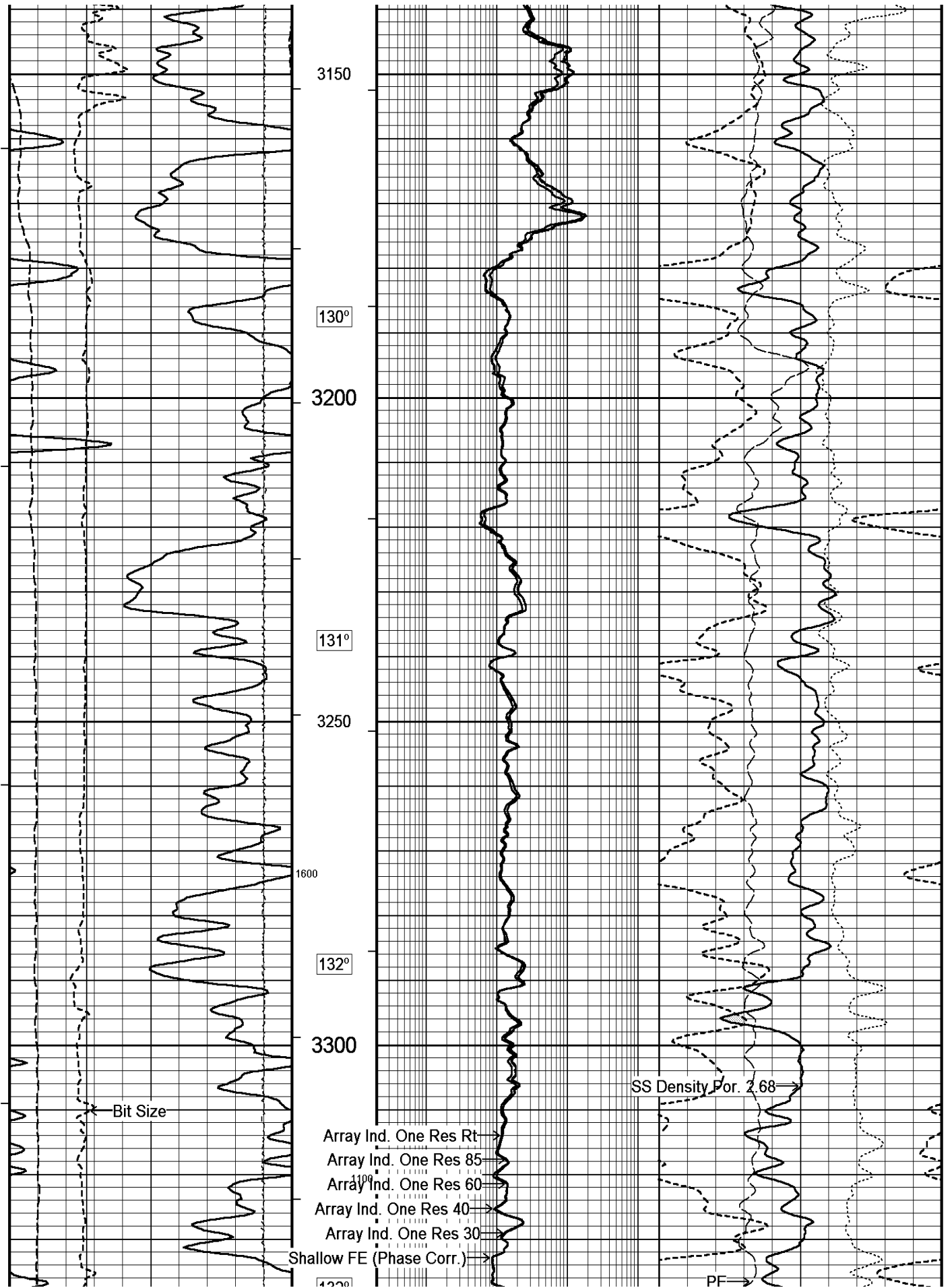


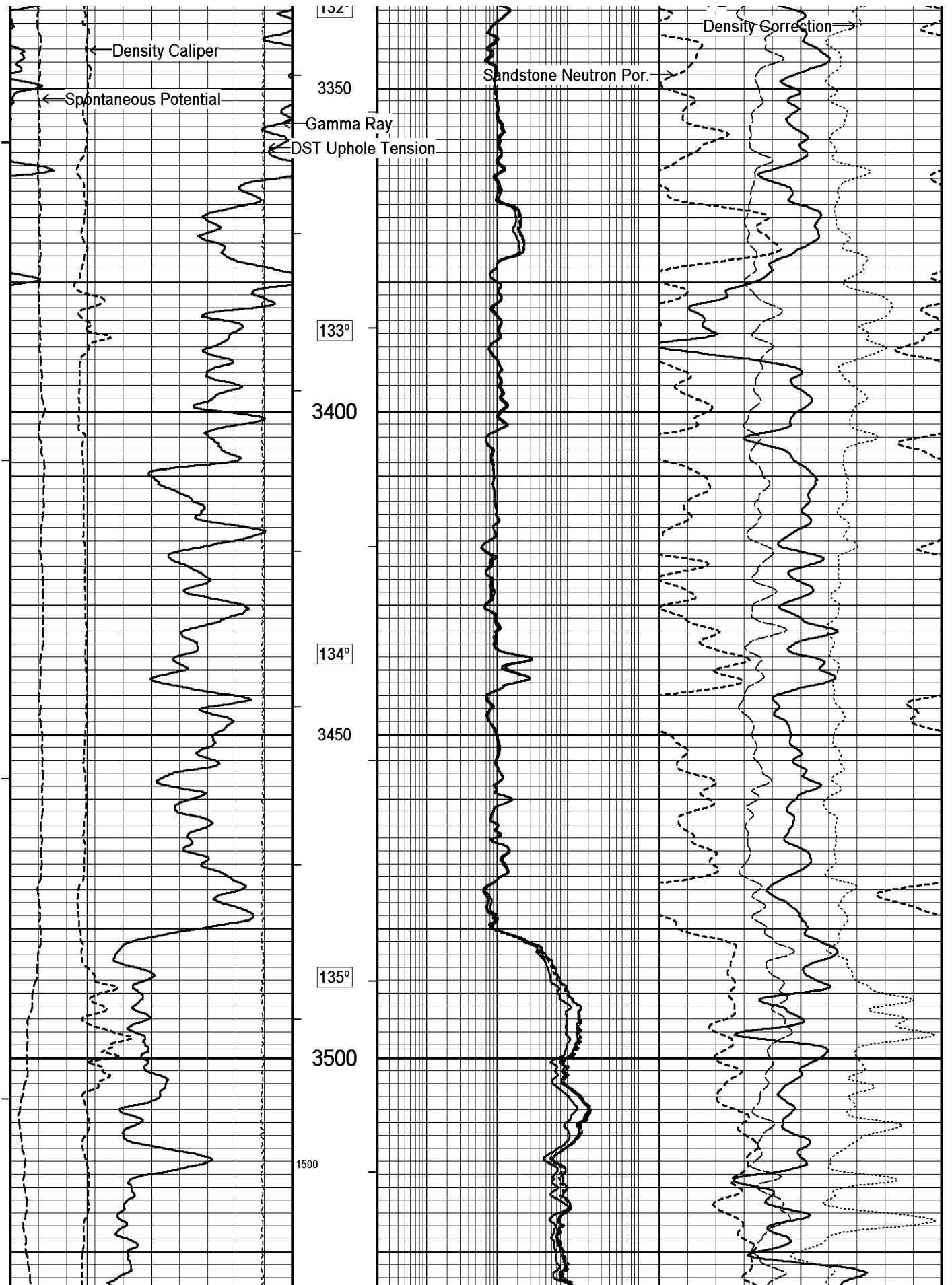


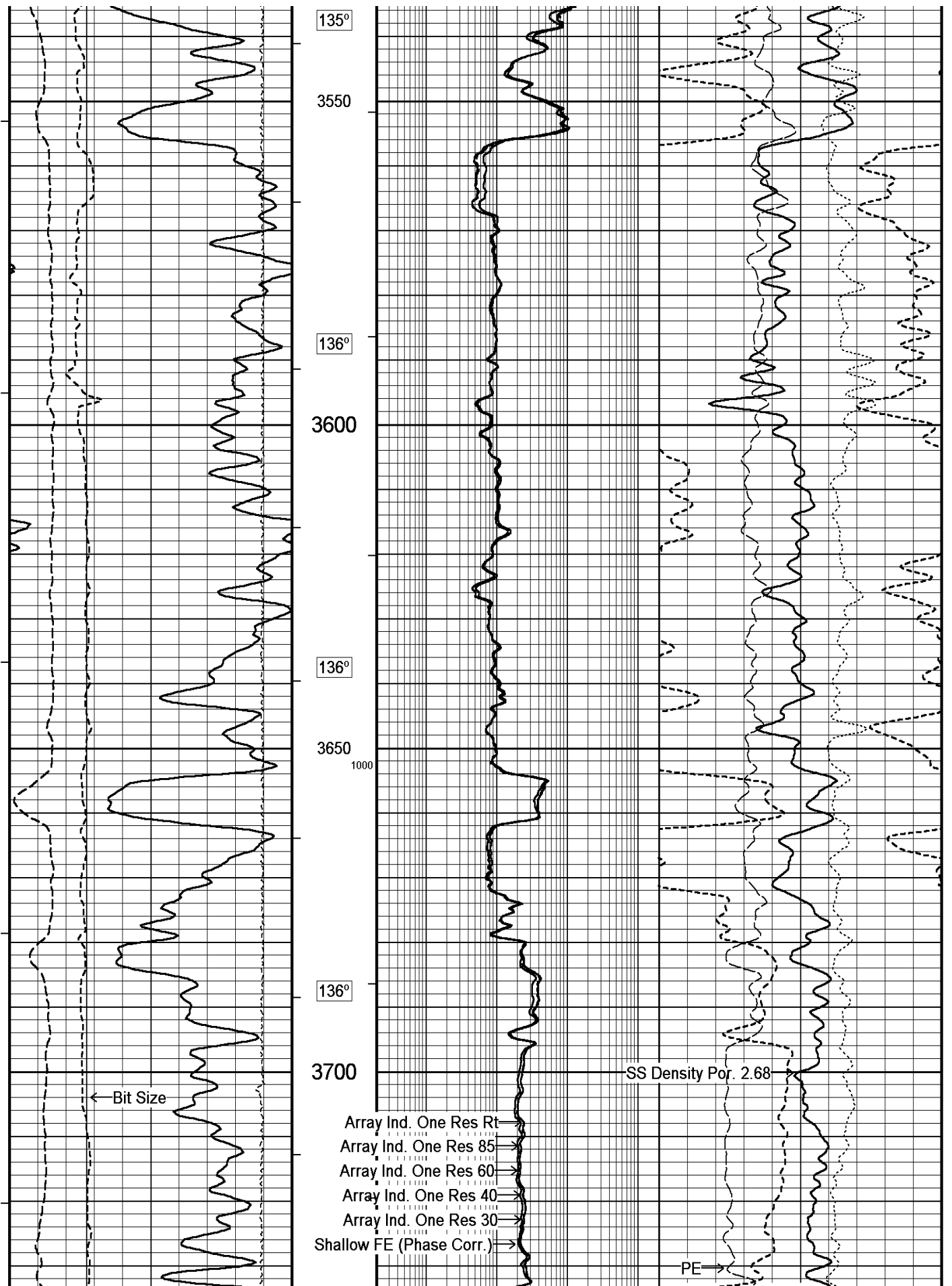


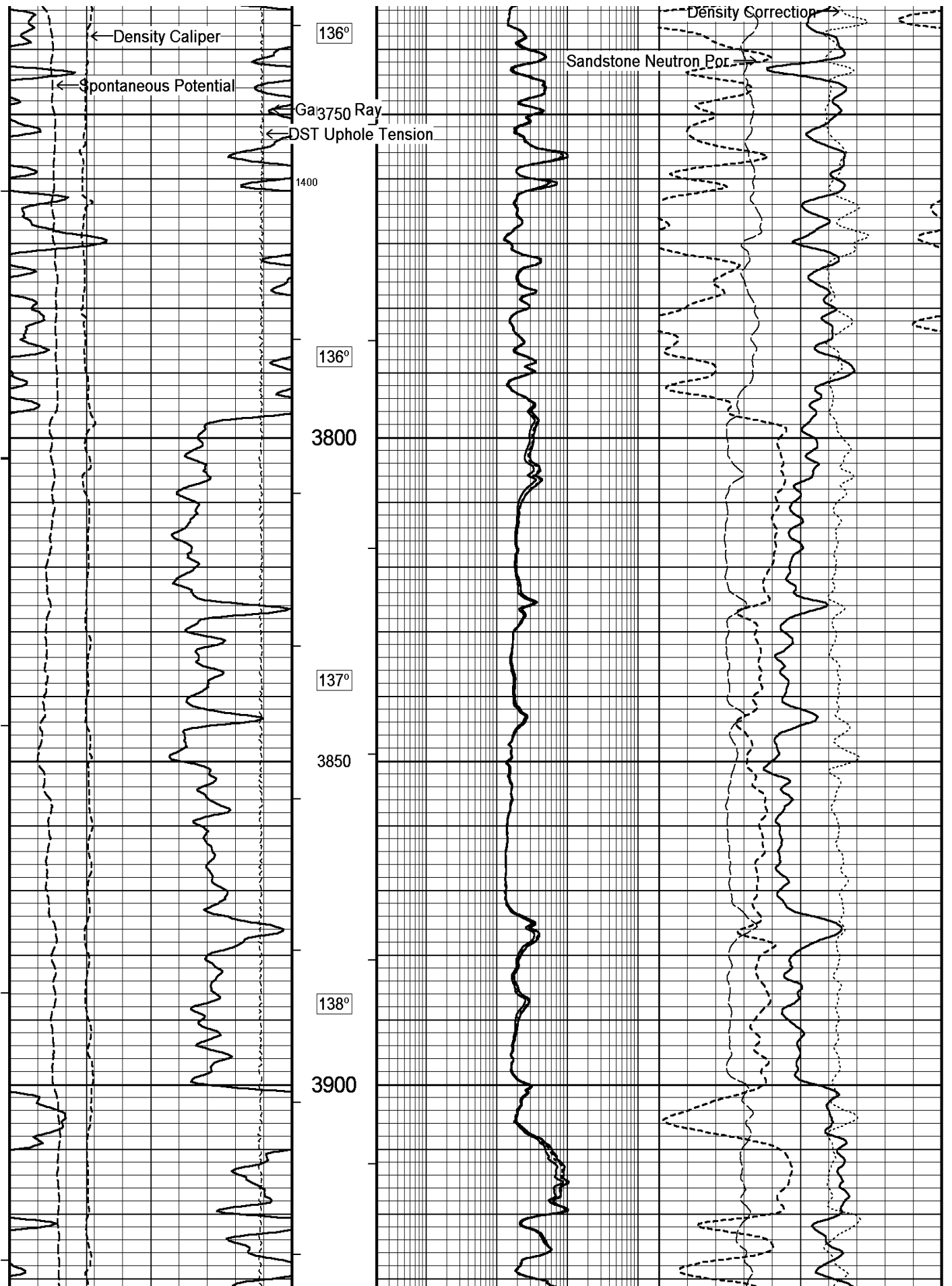


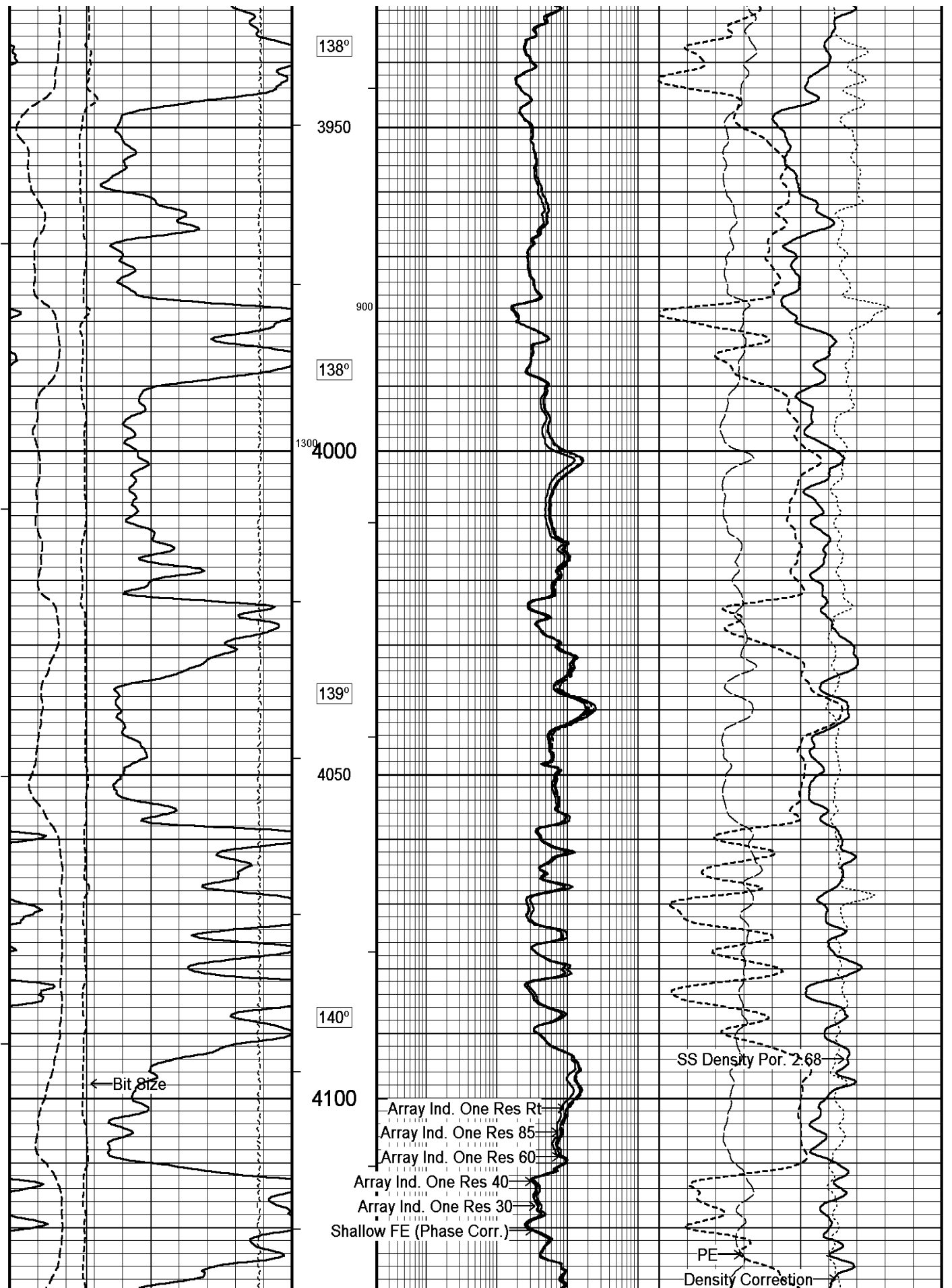


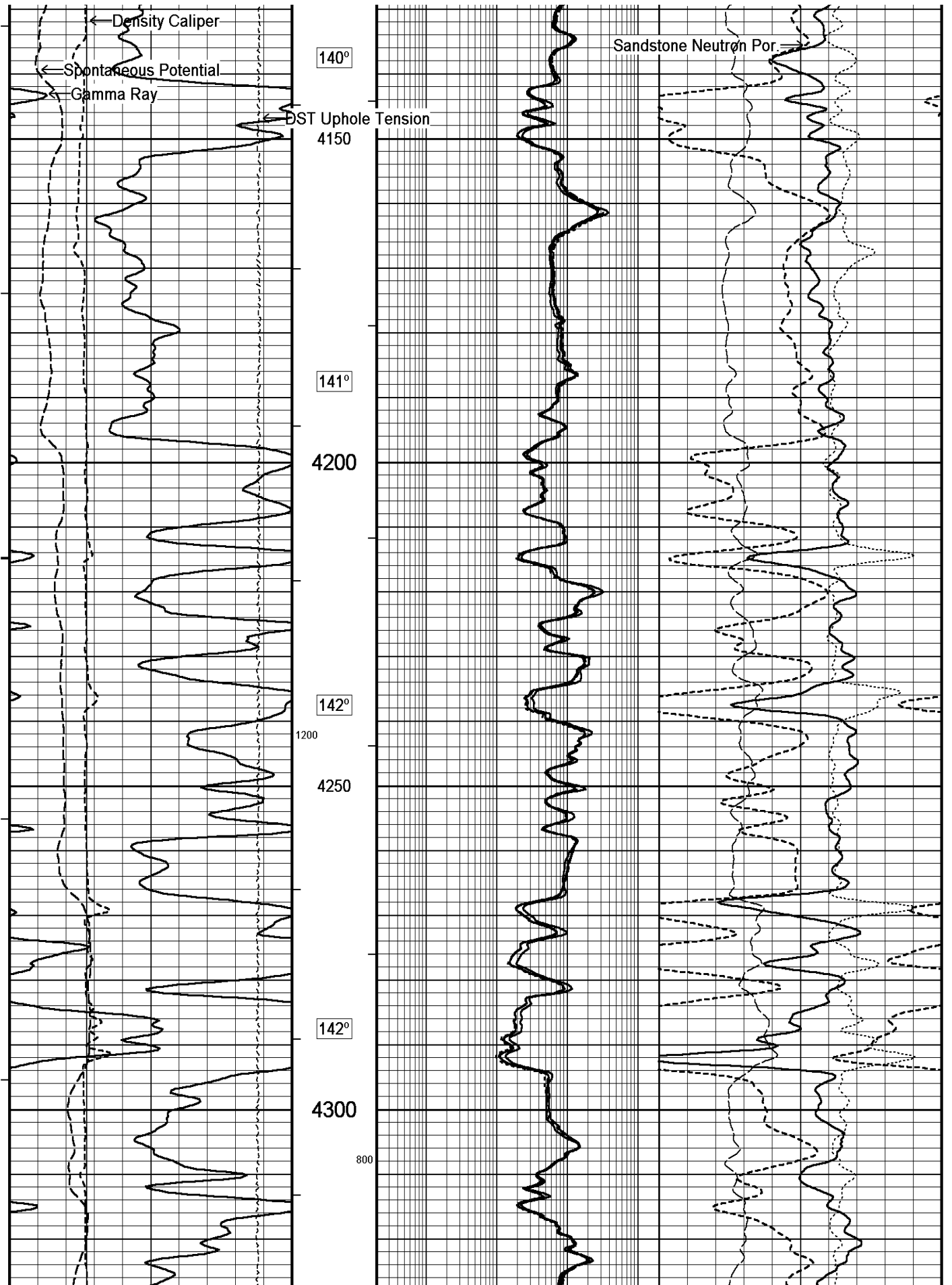


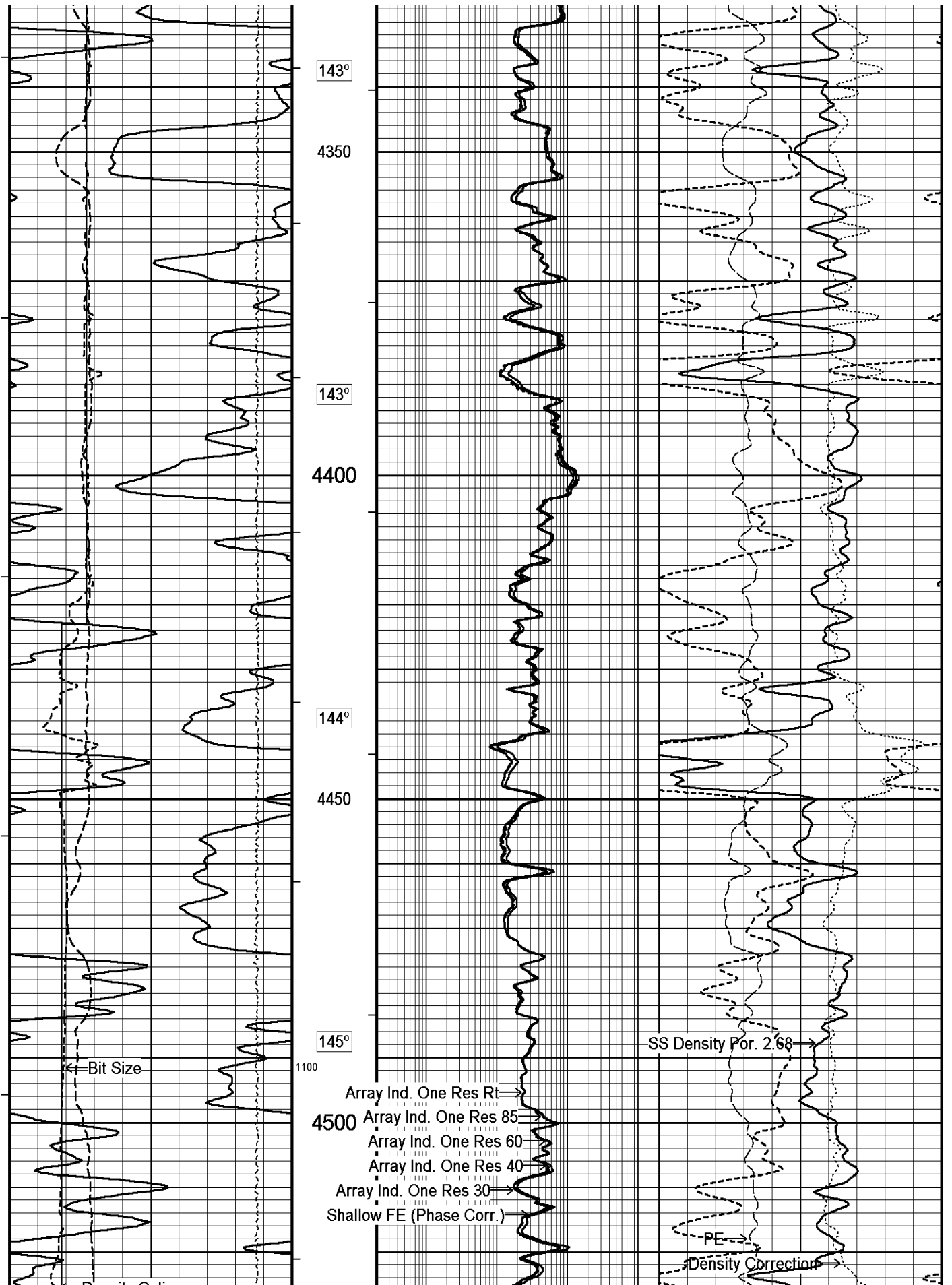


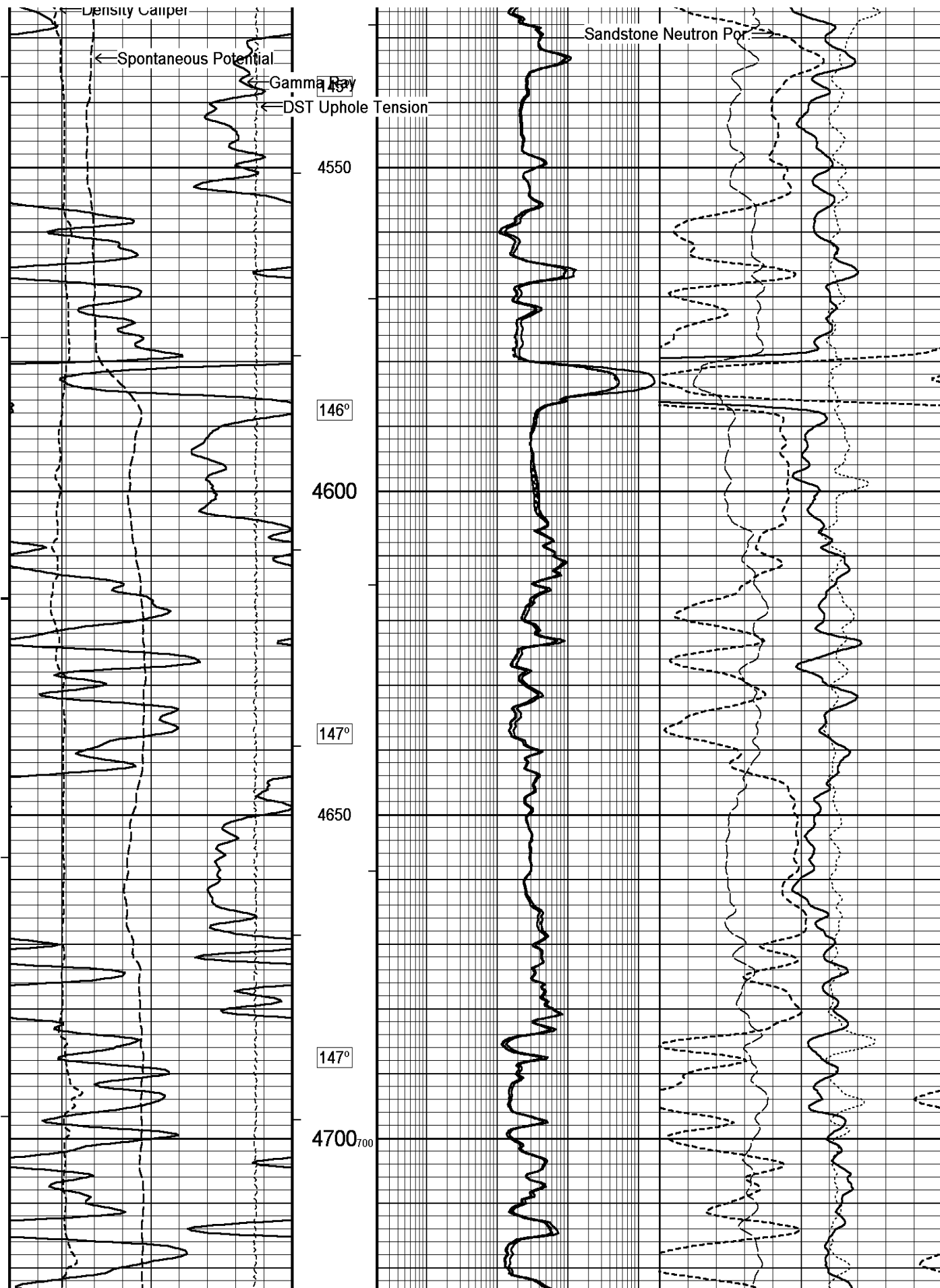


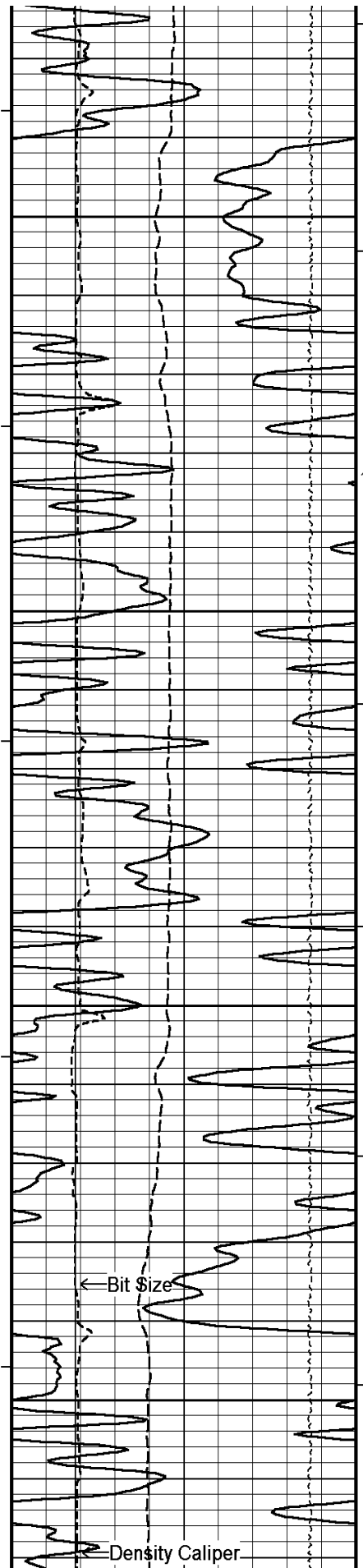






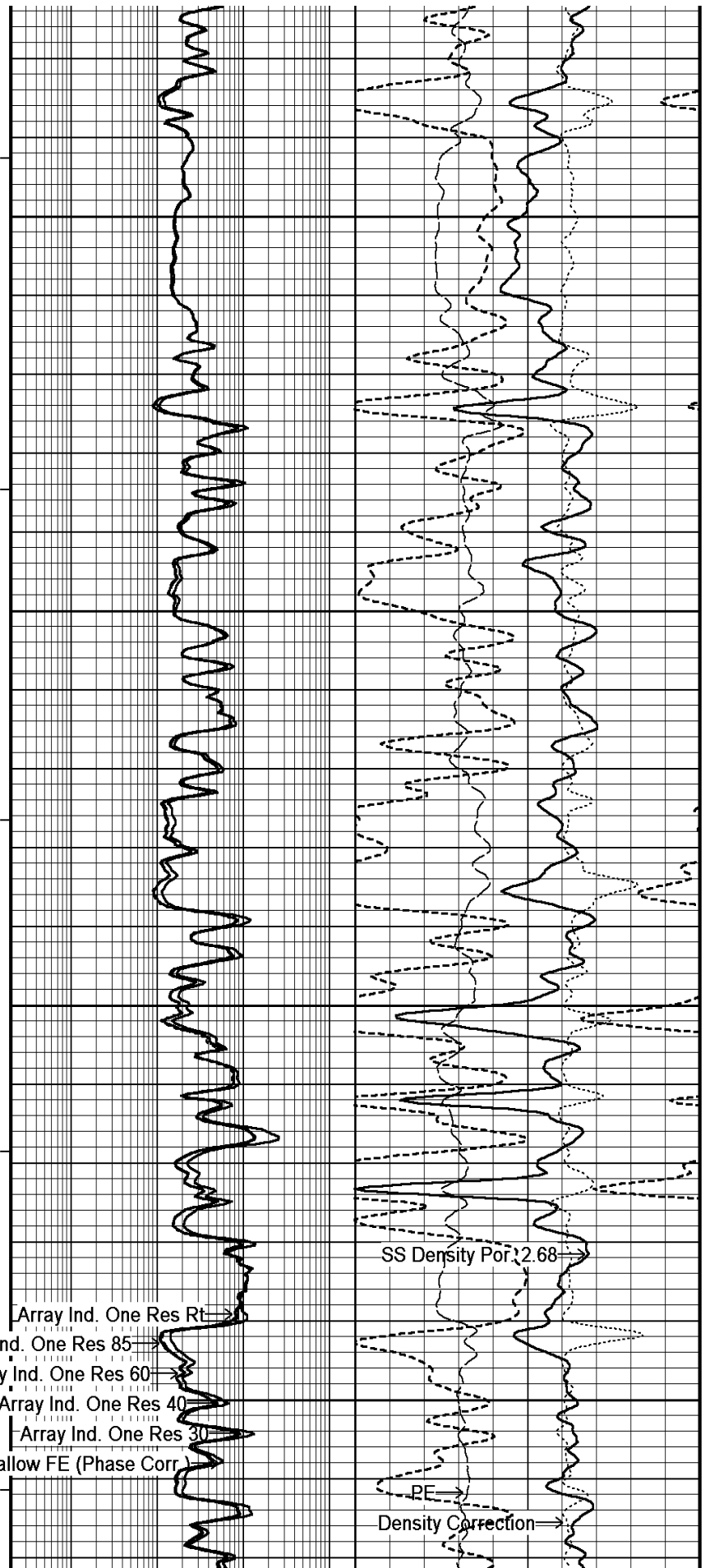




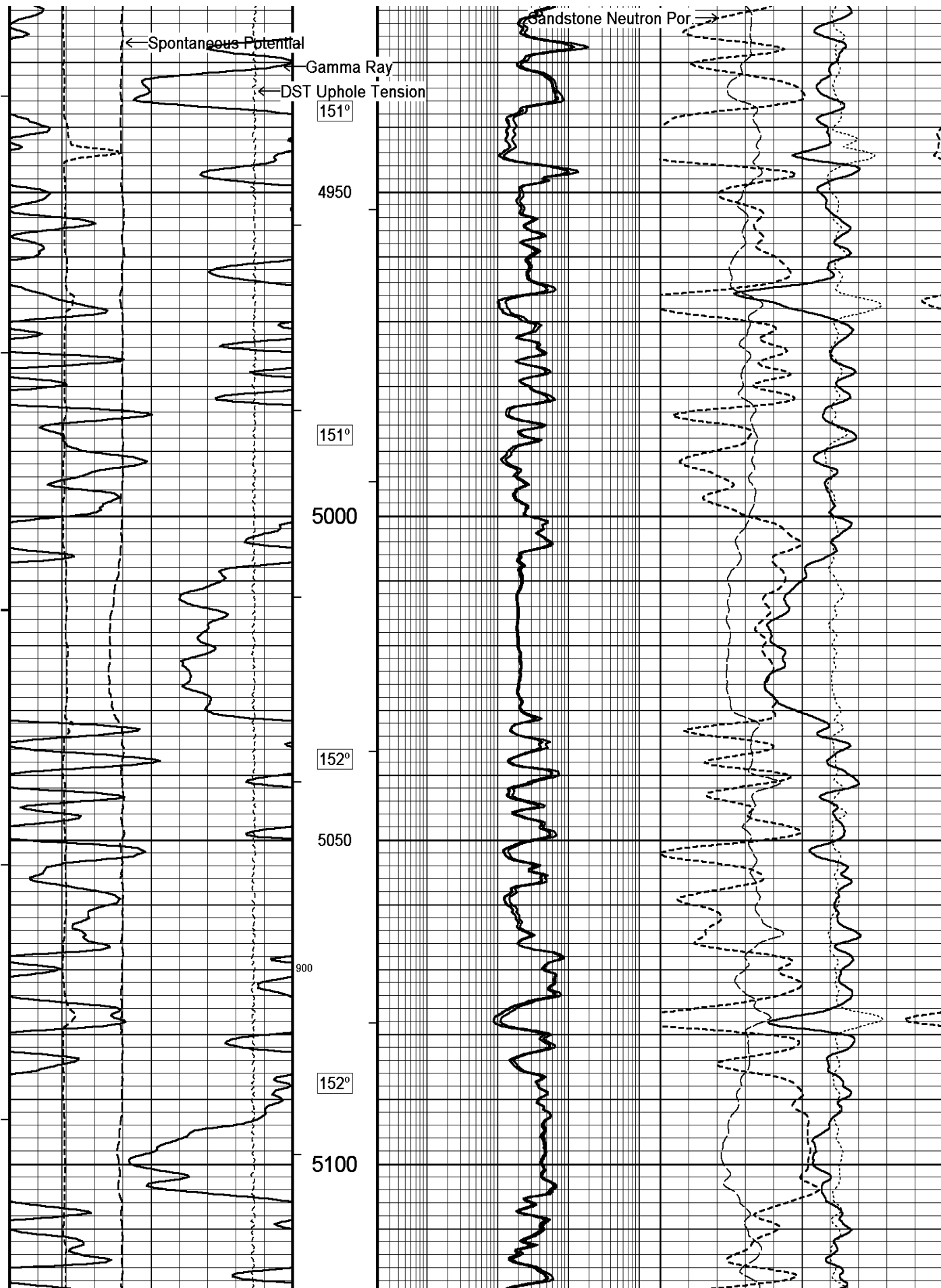


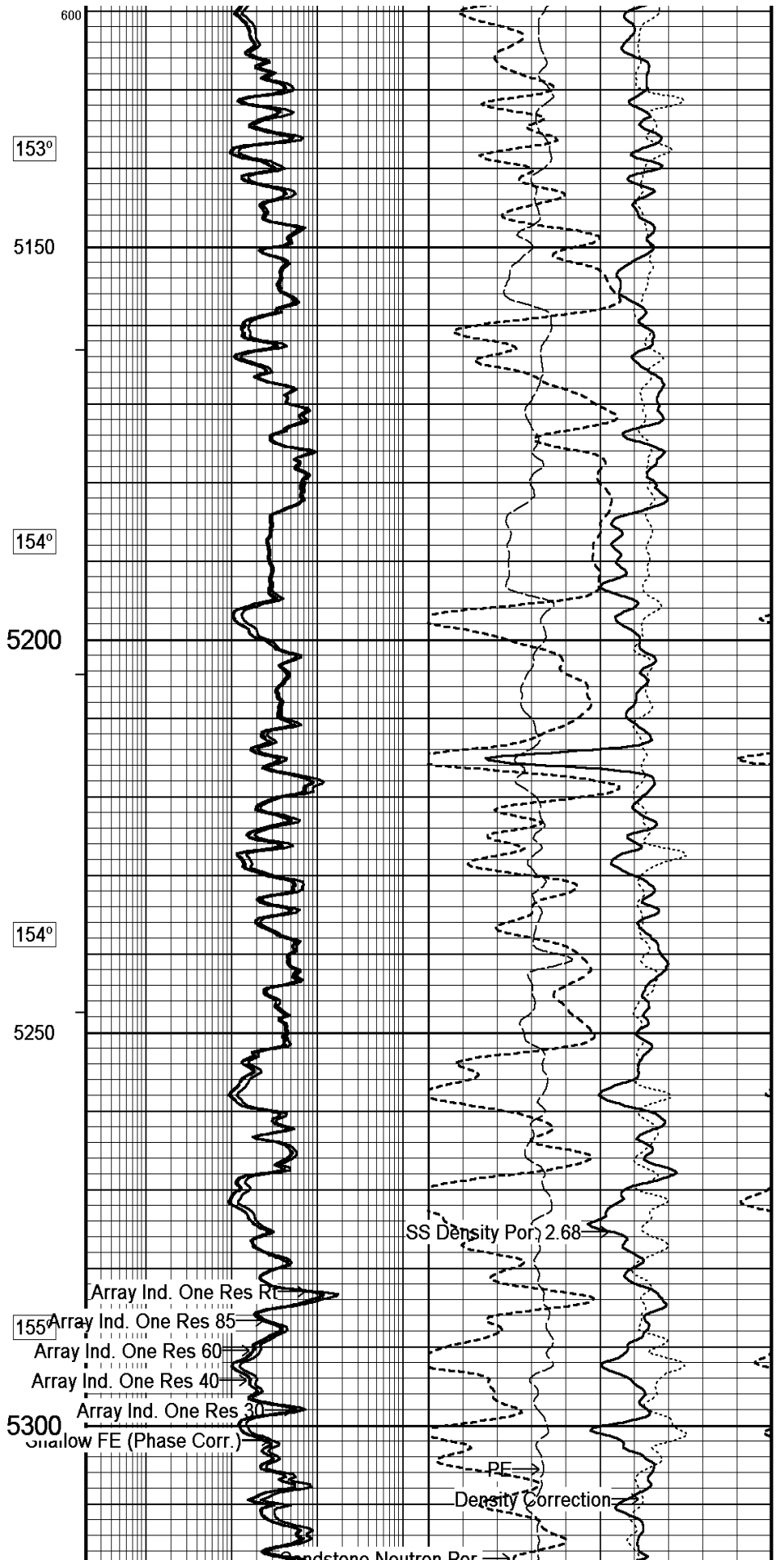
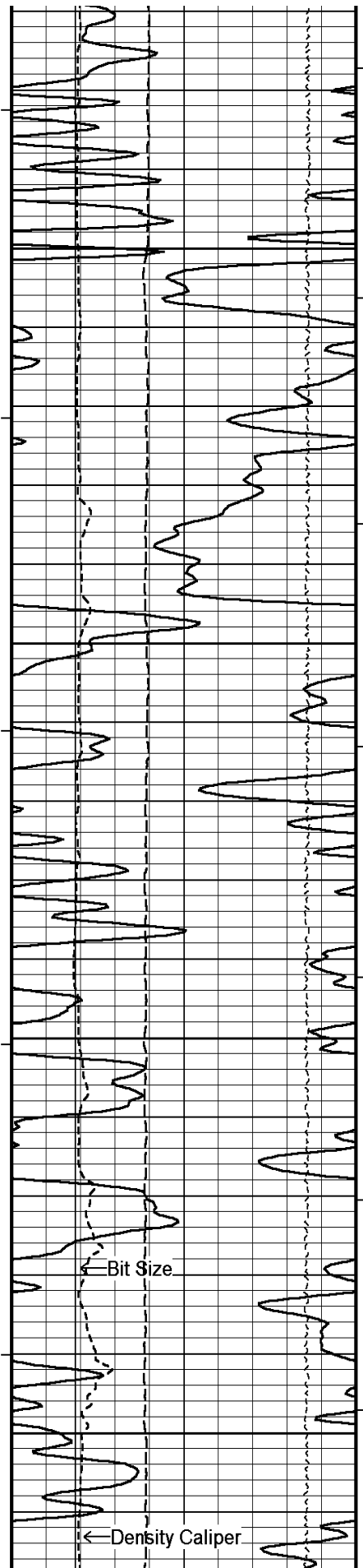
148°
4750
1000
149°
4800
149°
4850
150°

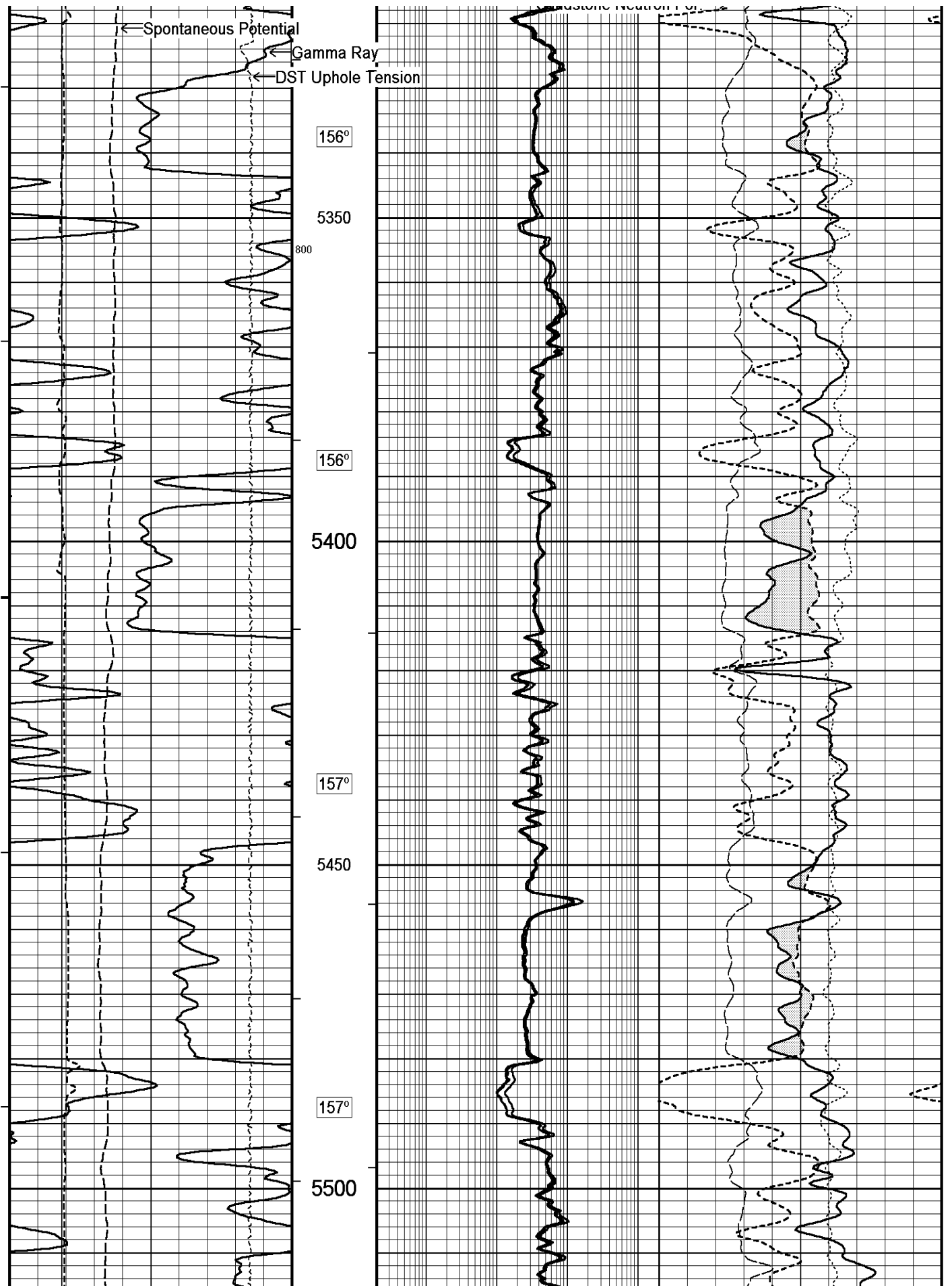
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
4900 Array Ind. One Res 40
Array Ind. One Res 30
Shallow FE (Phase Corr)

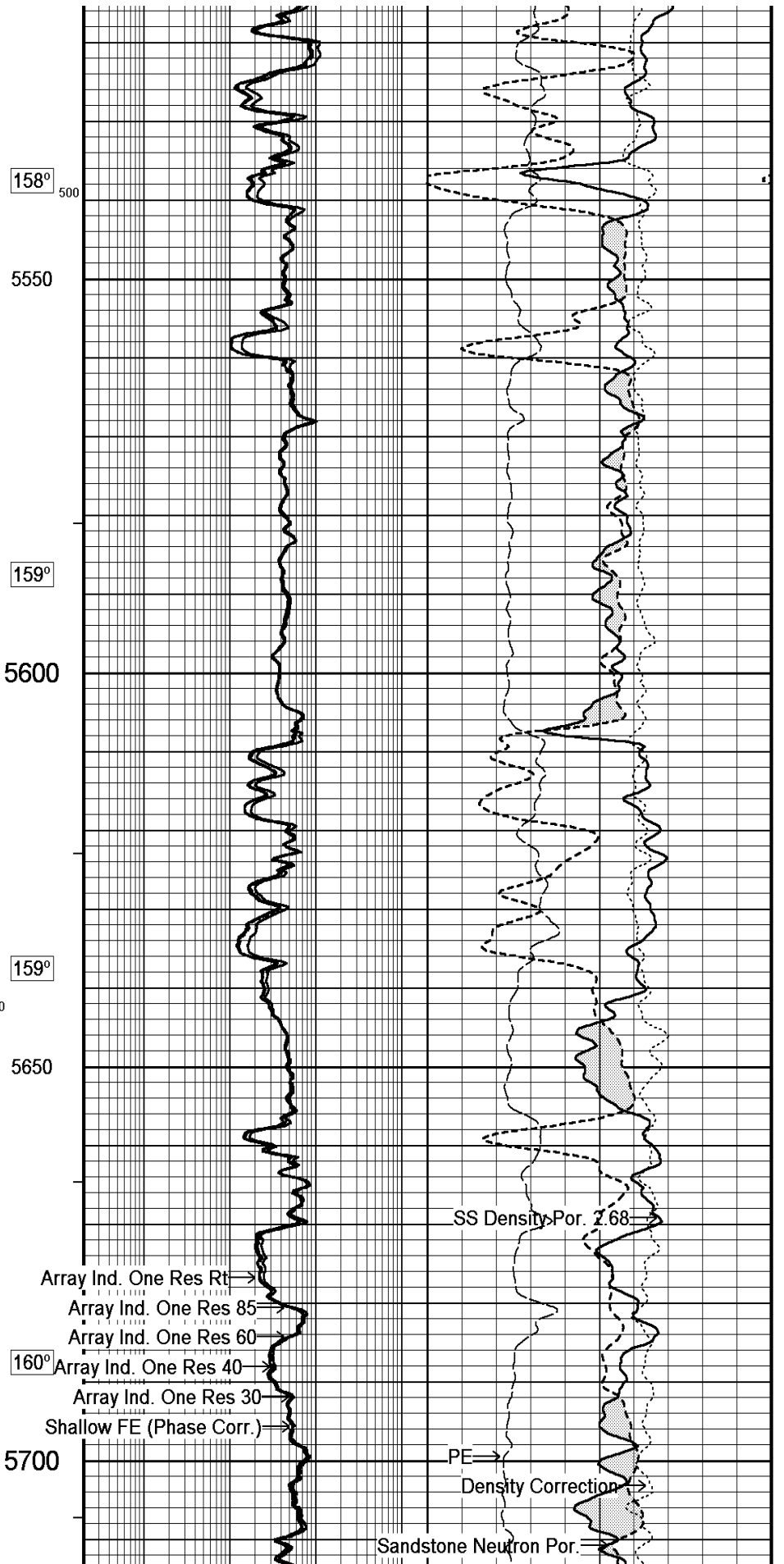
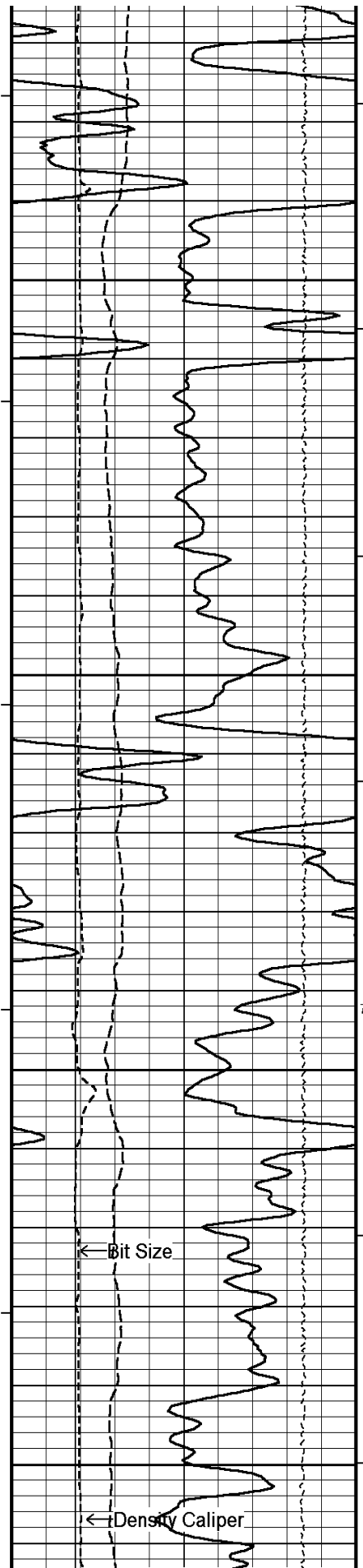


SS Density Por 2.68
PE
Density Correction









158°

5550

159°

5600

159°

5650

160°

5700

← Bit Size

← Density Caliper

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 →

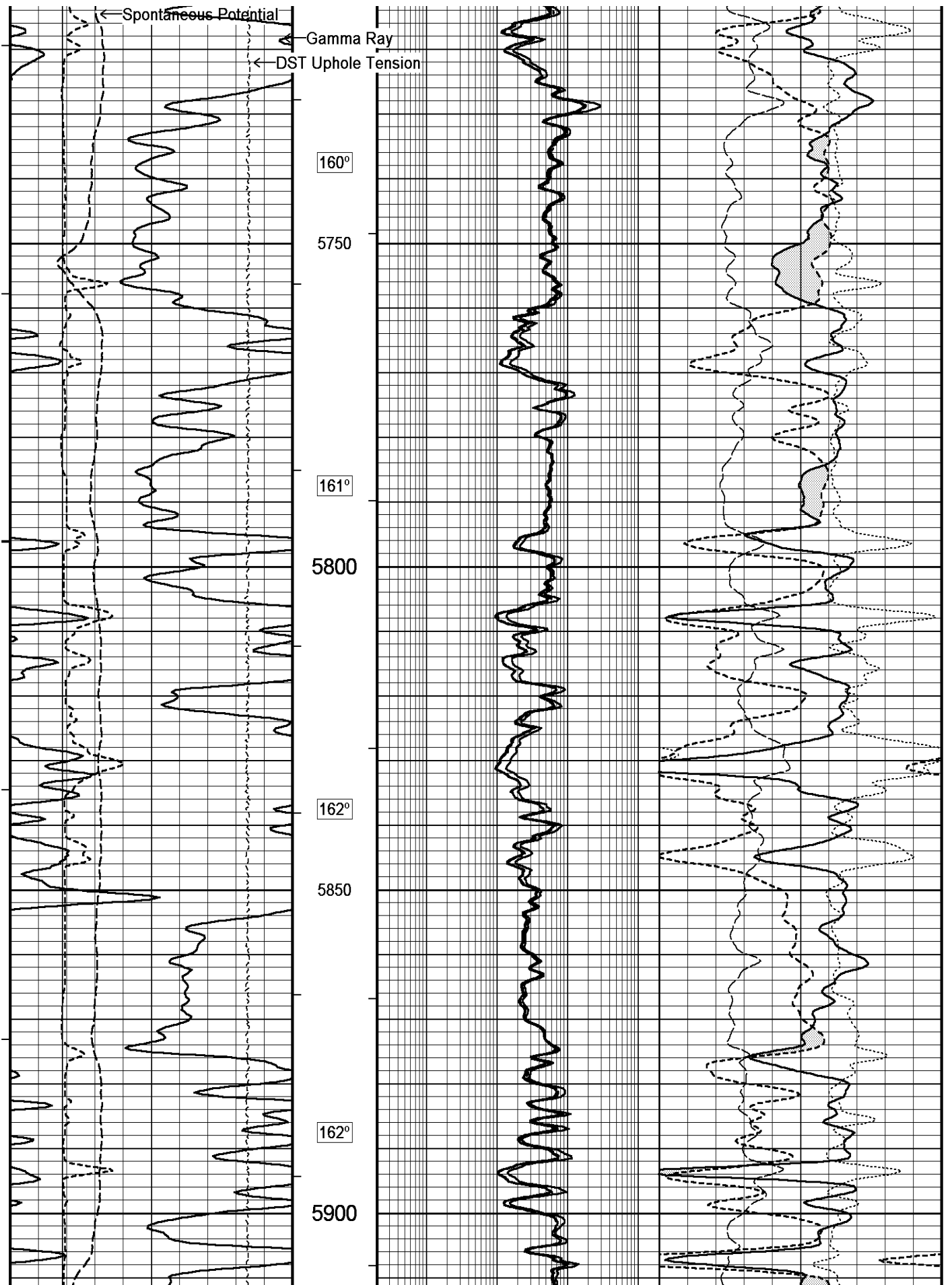
Shallow FE (Phase Corr.) →

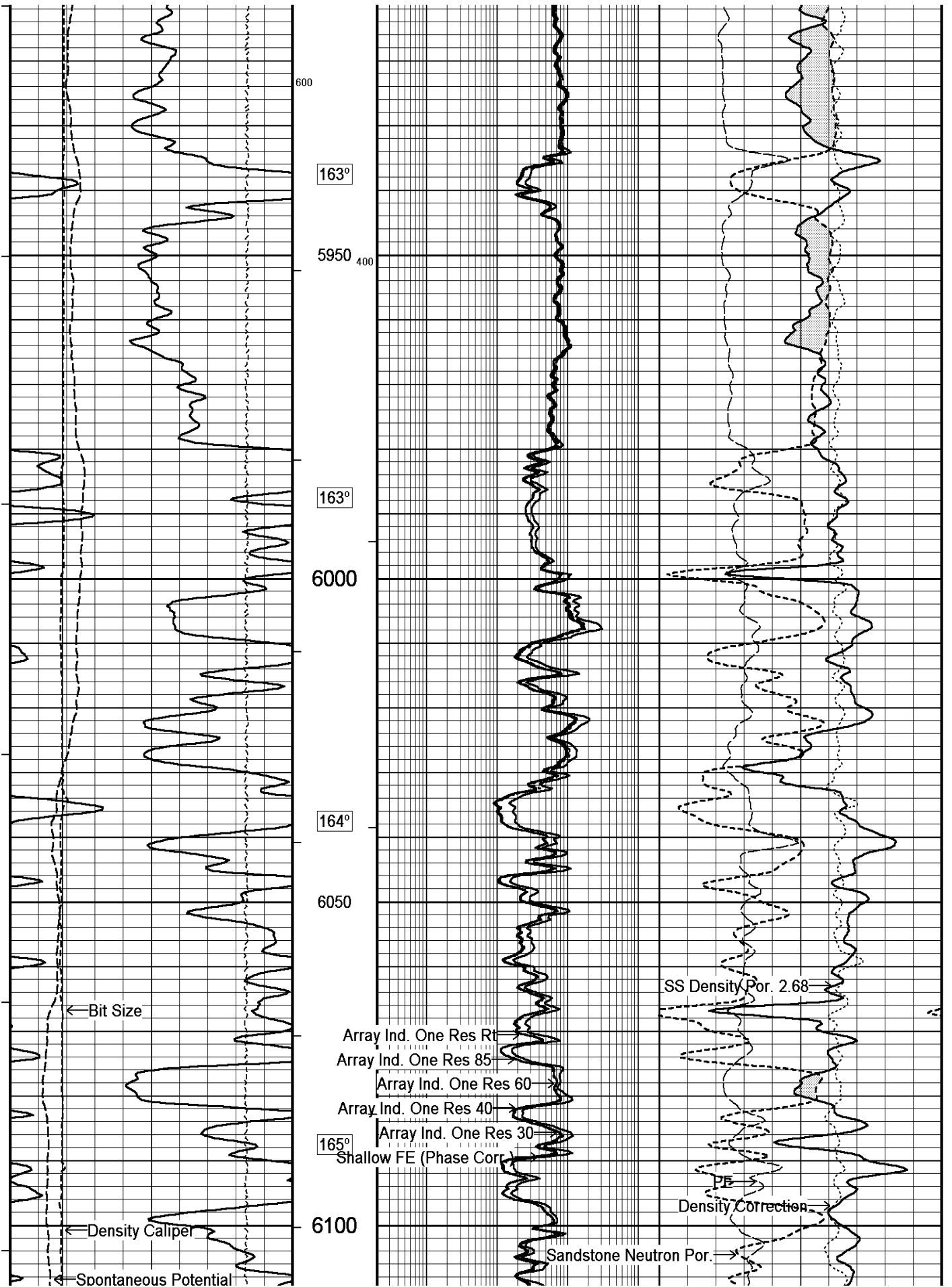
SS Density Por. 2.68 →

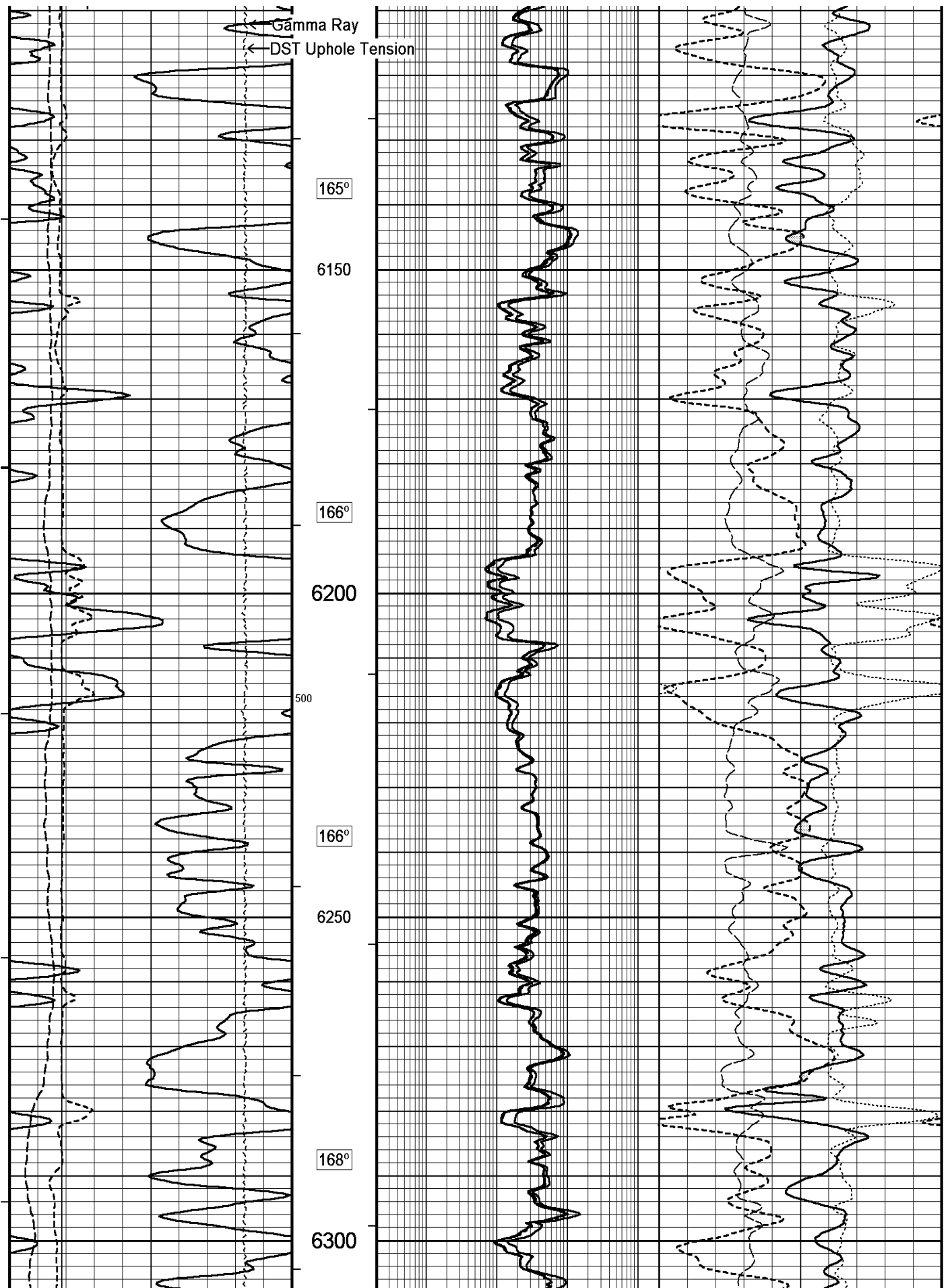
PE →

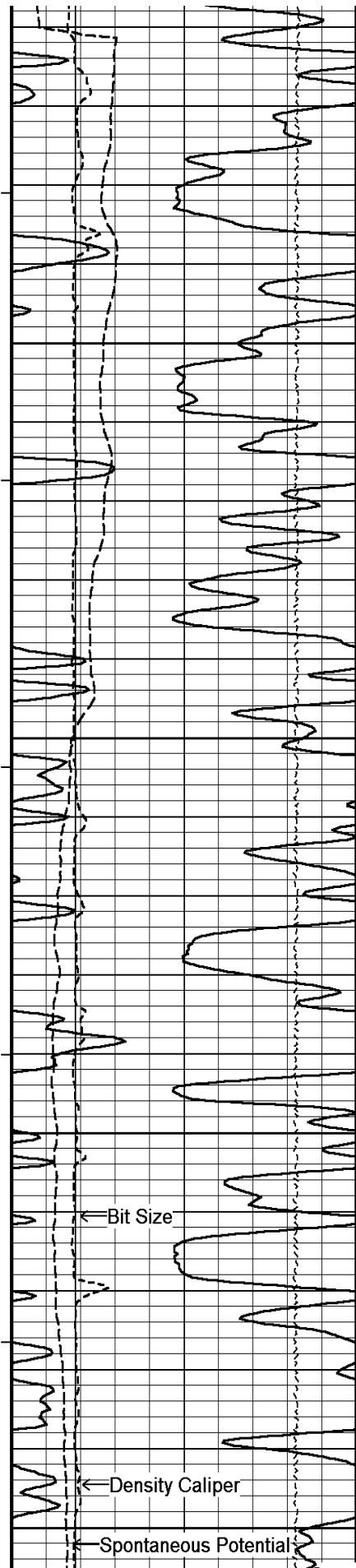
Density Correction →

Sandstone Neutron Por. →

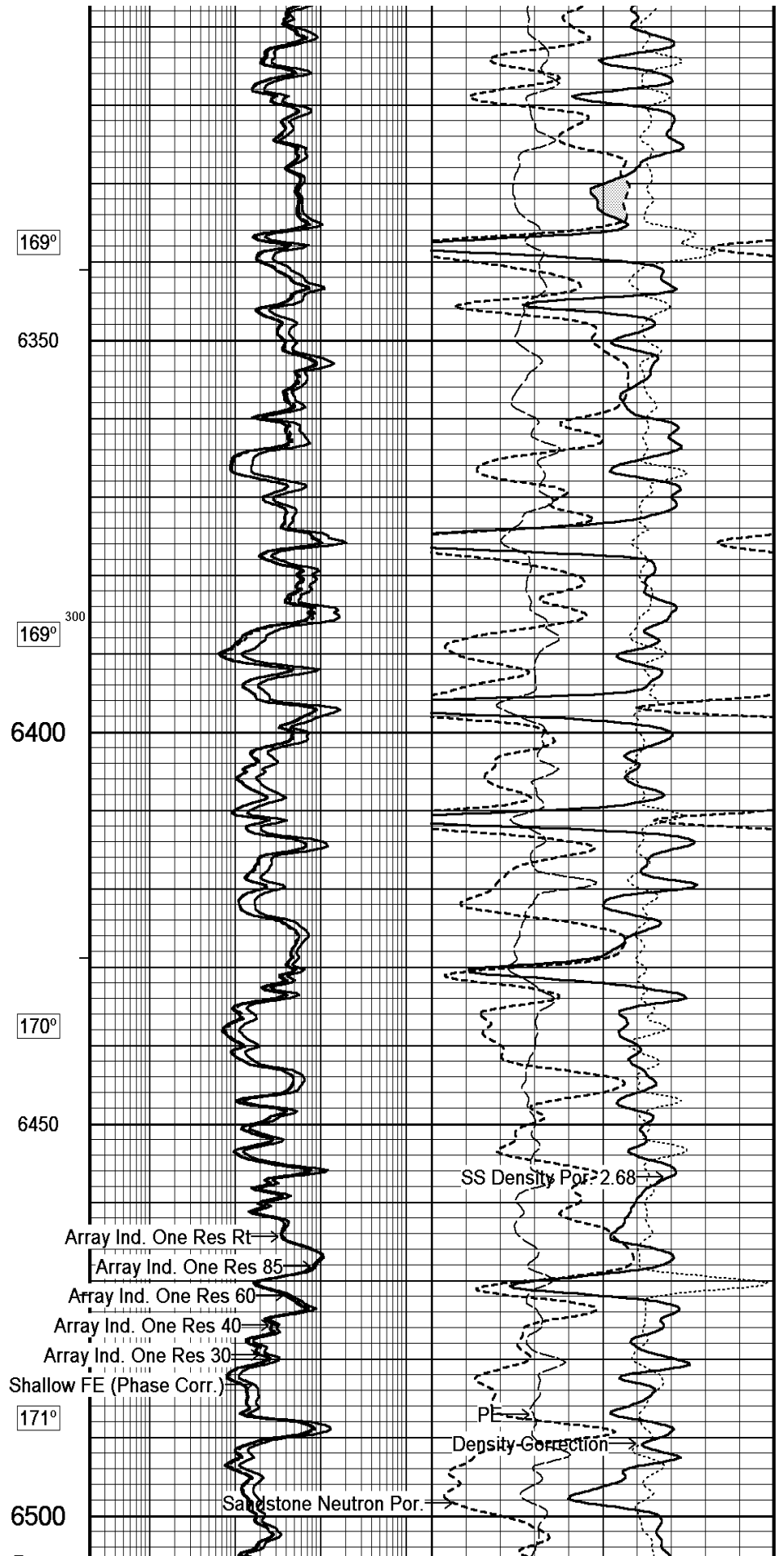


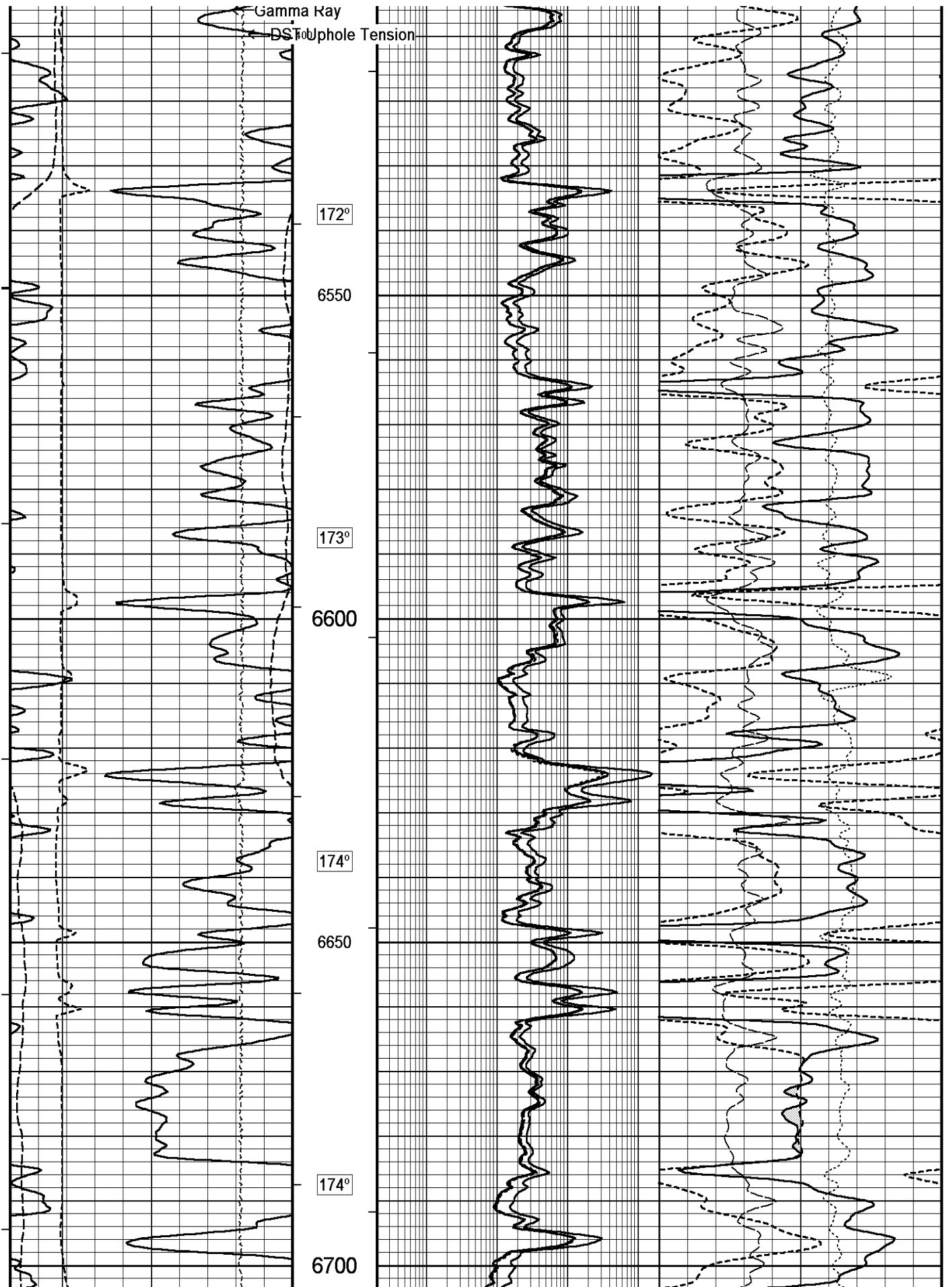


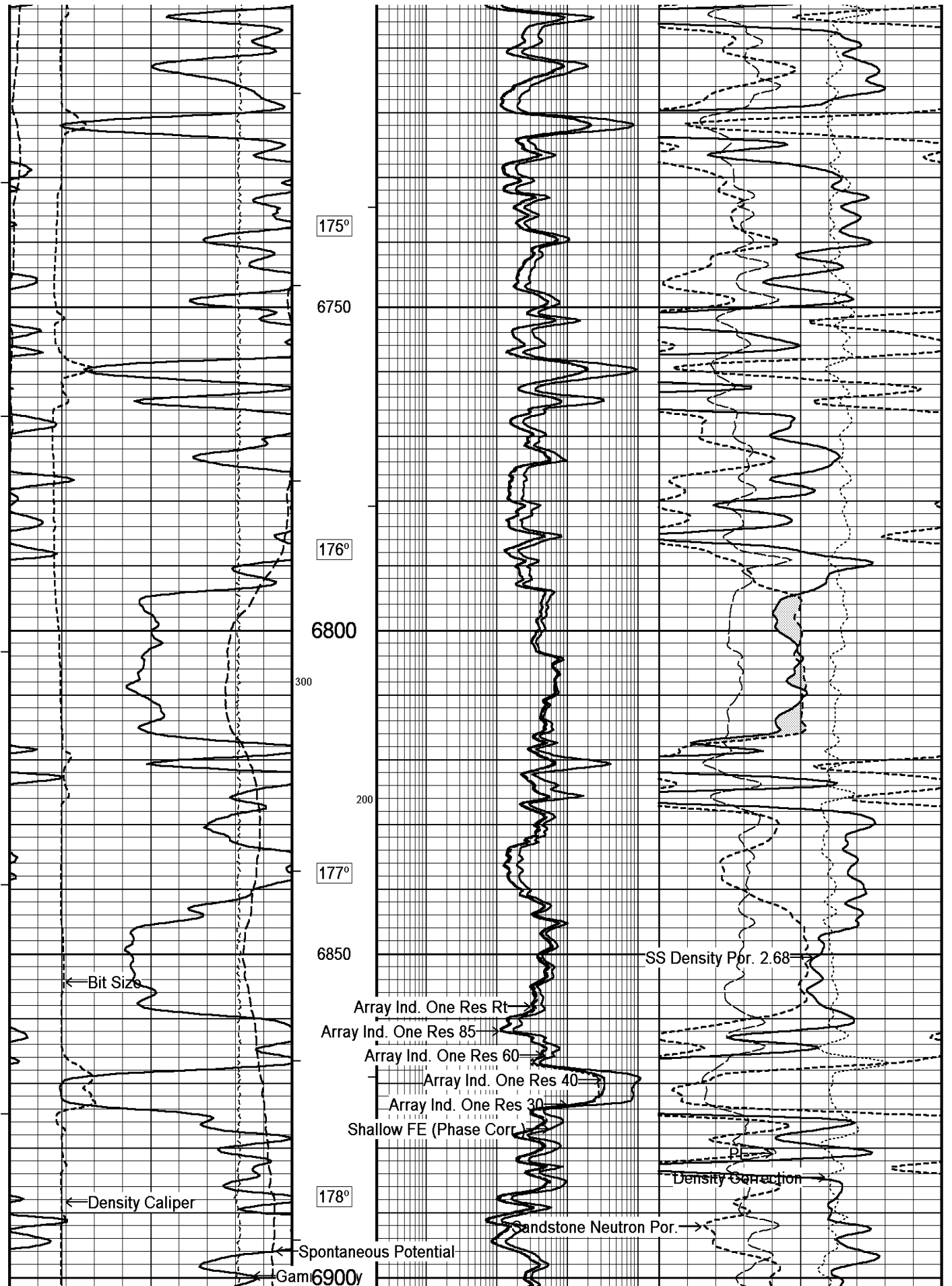


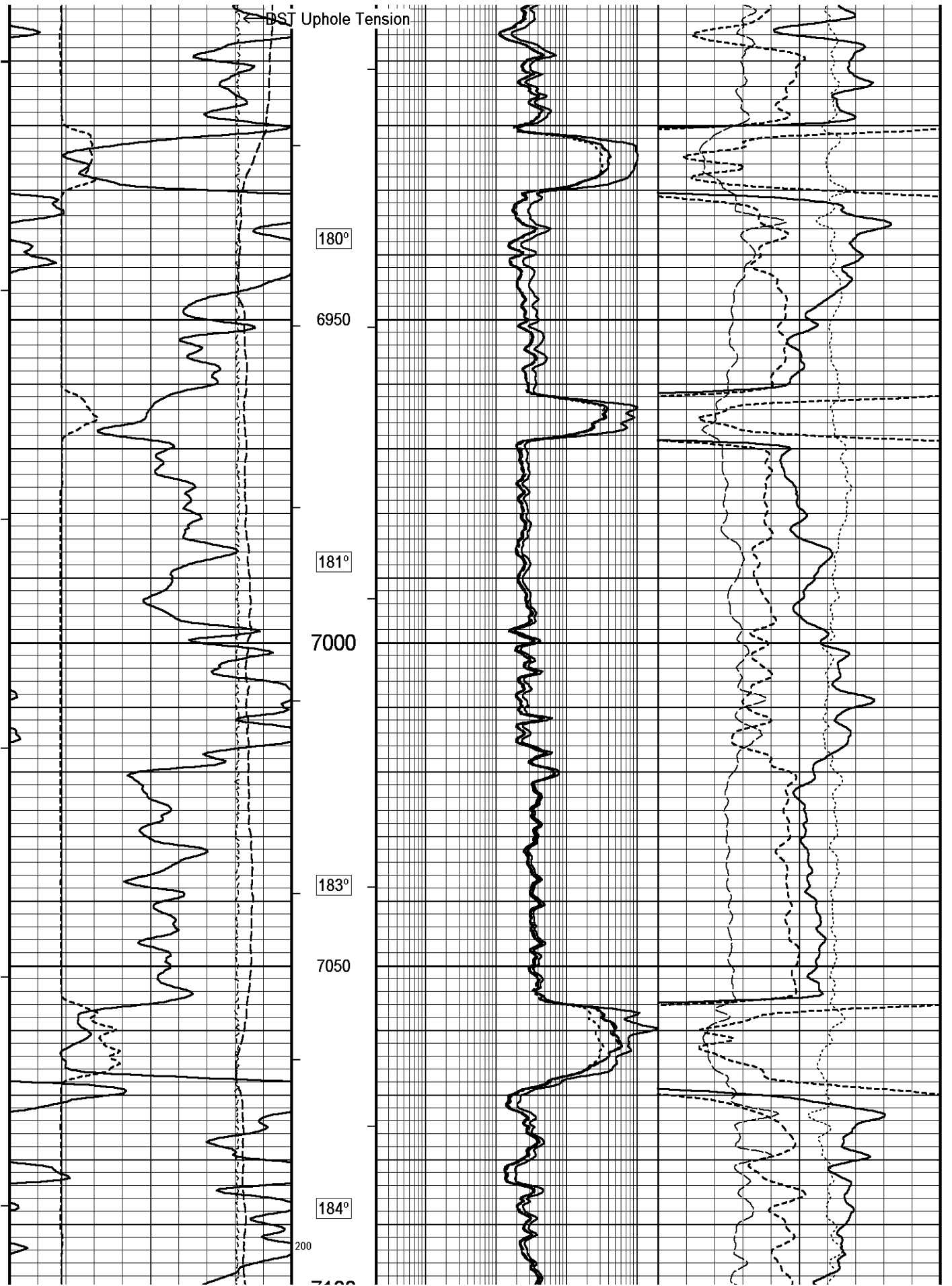


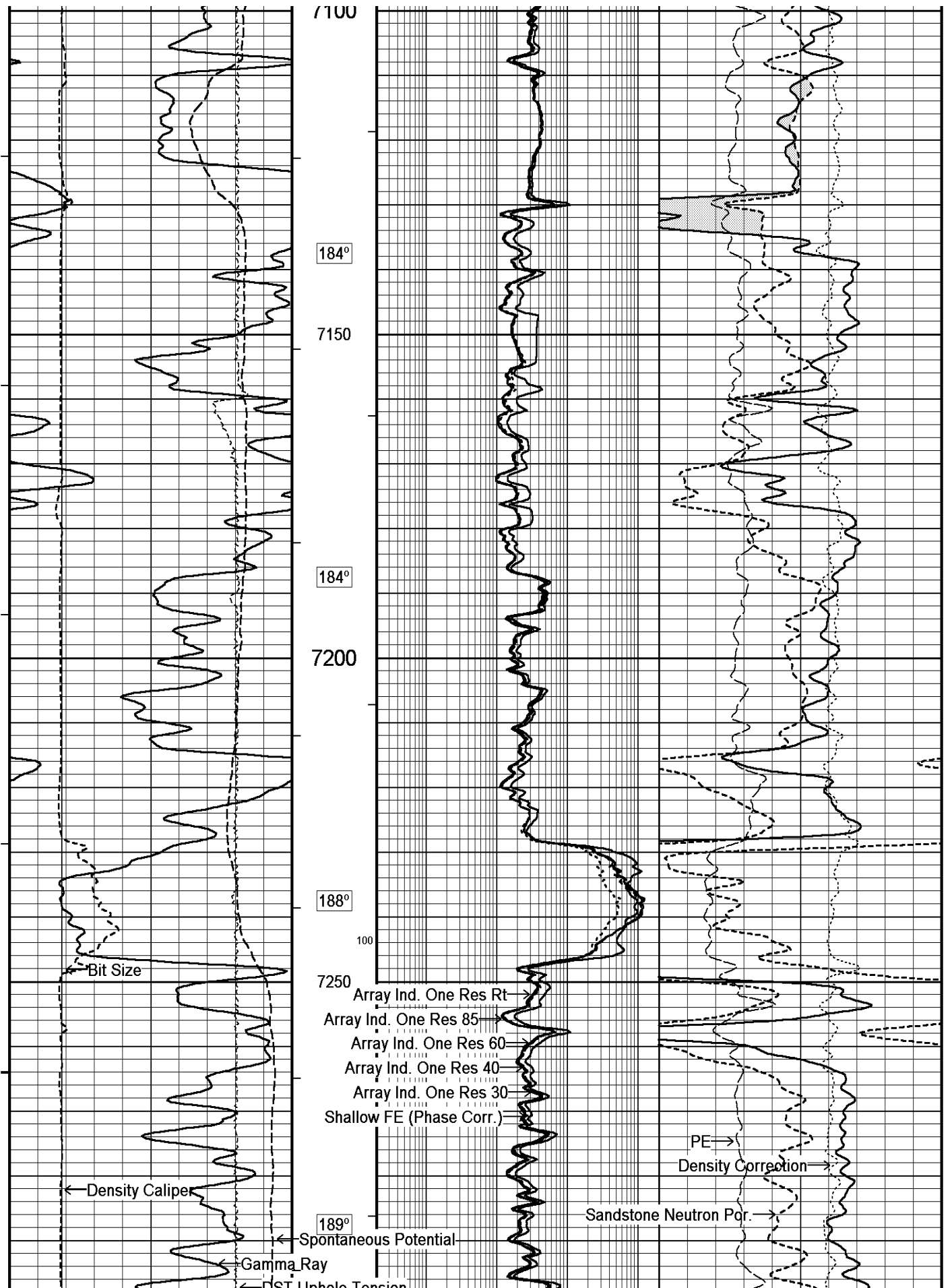
169°
 6350
 169°³⁰⁰
 6400
 170°
 6450
 171°
 6500

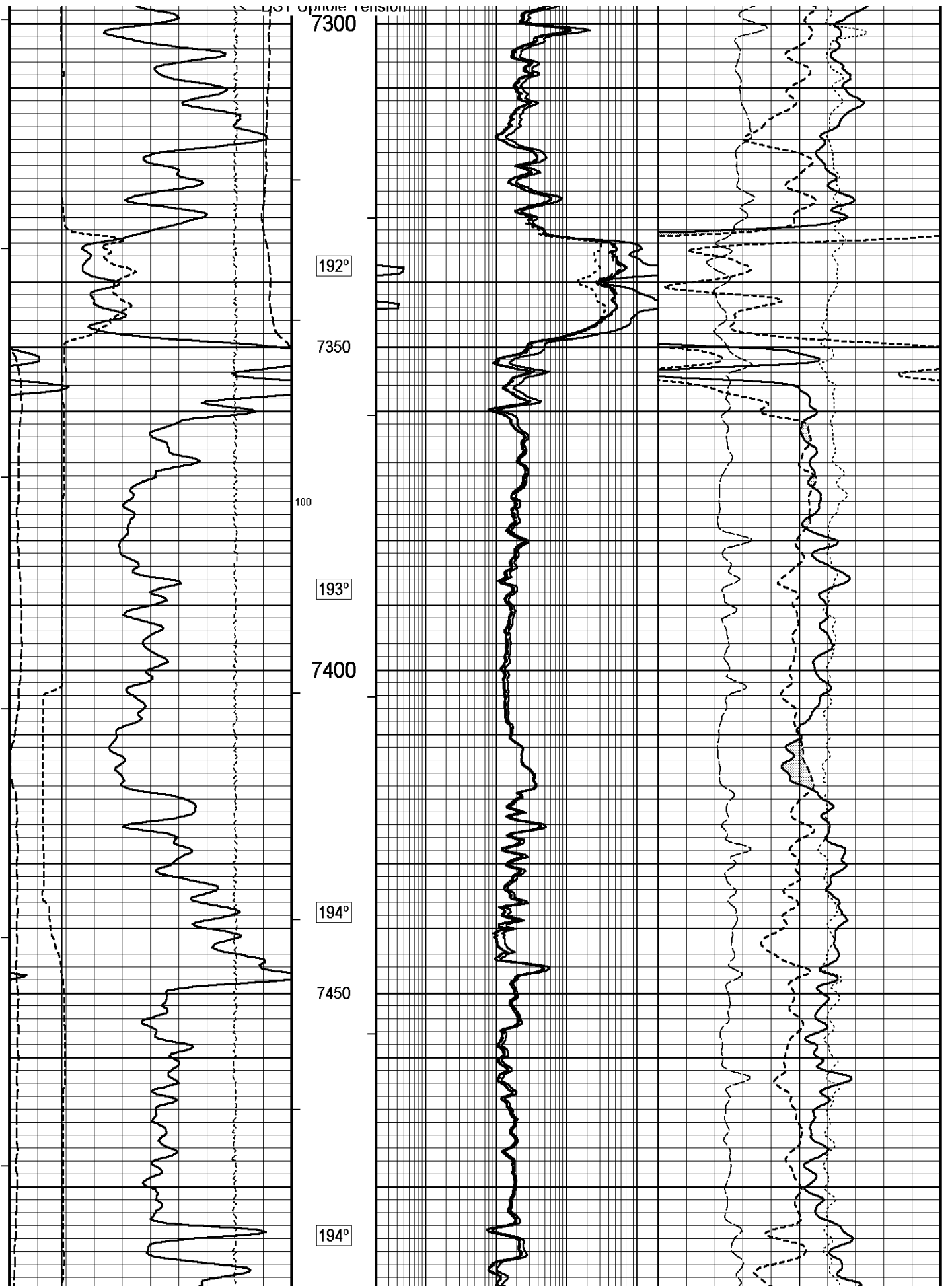


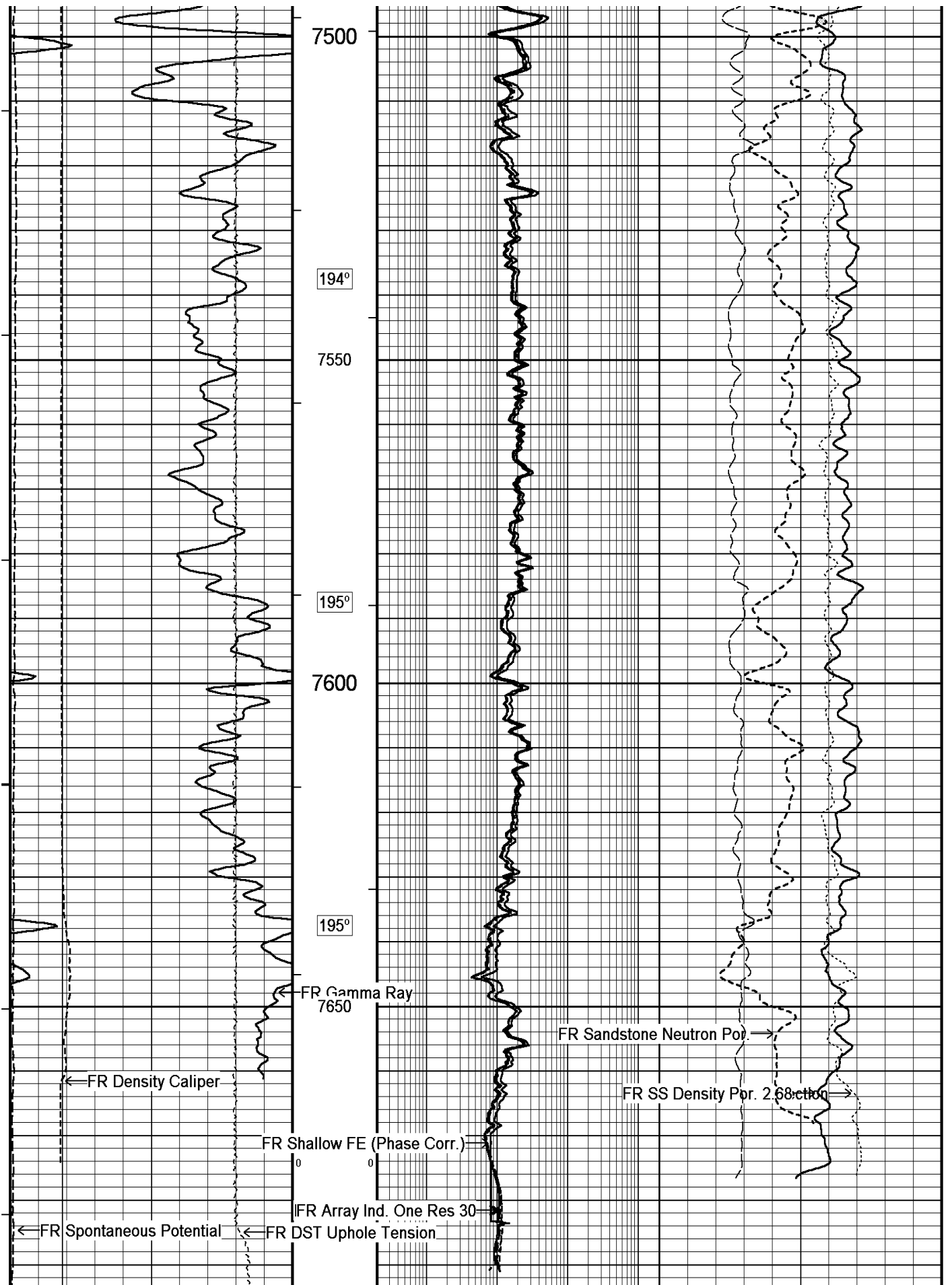


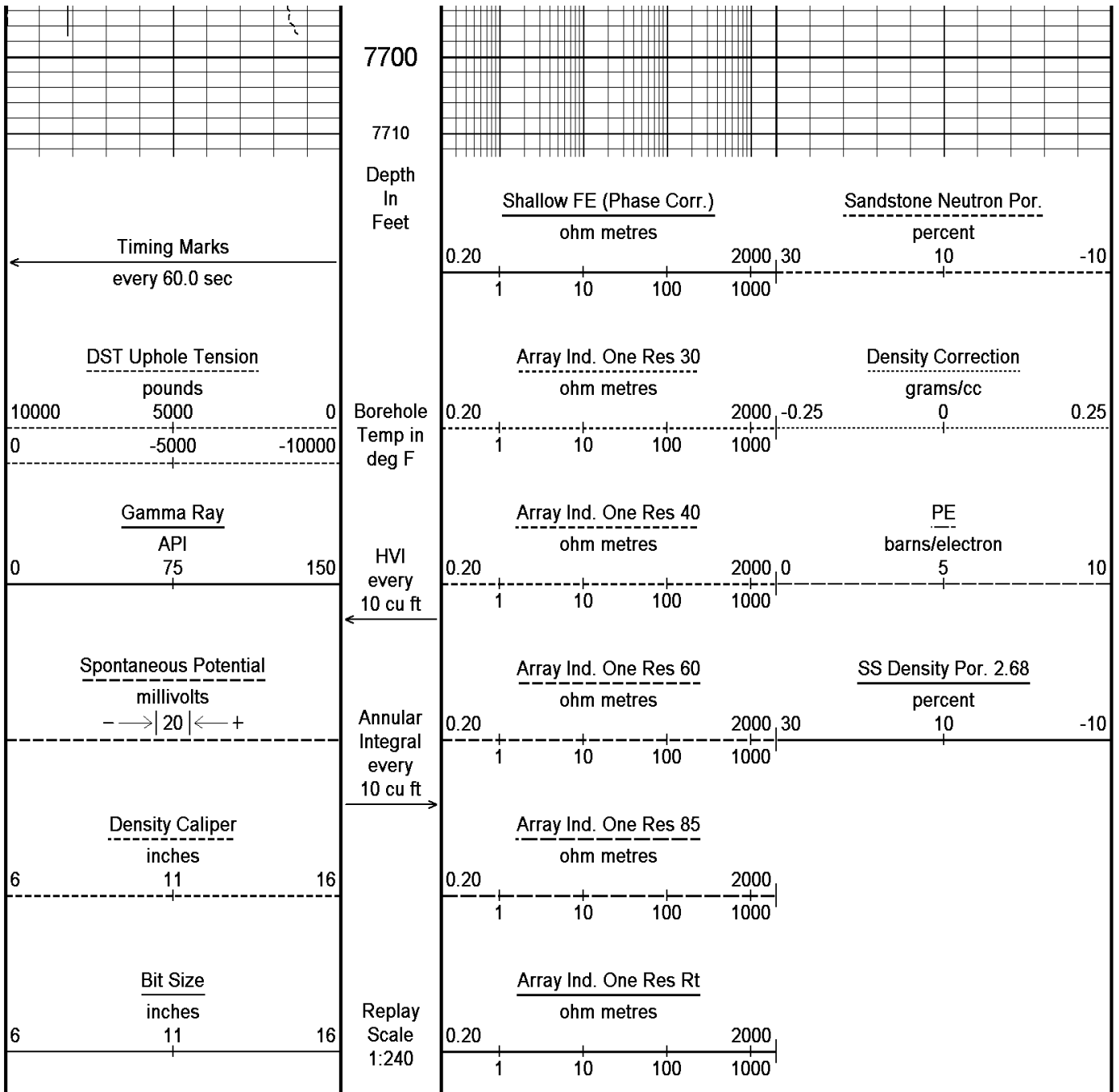








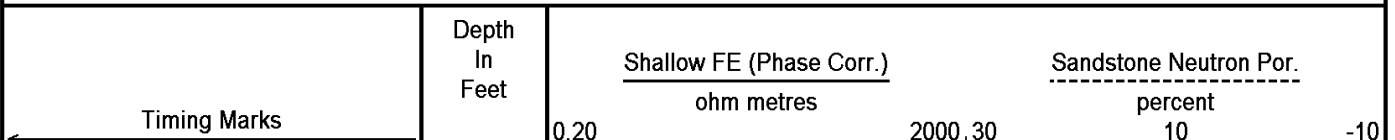


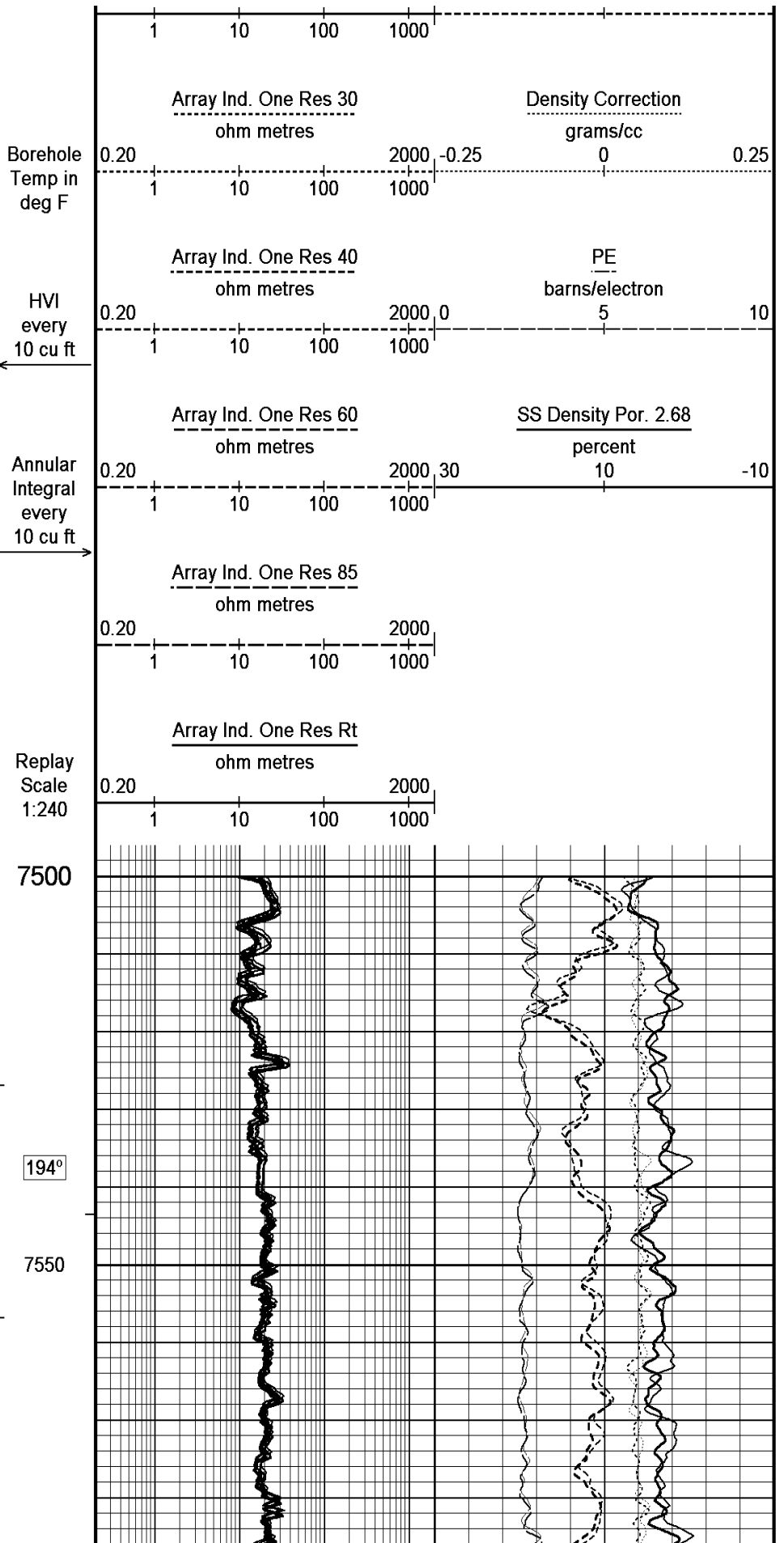
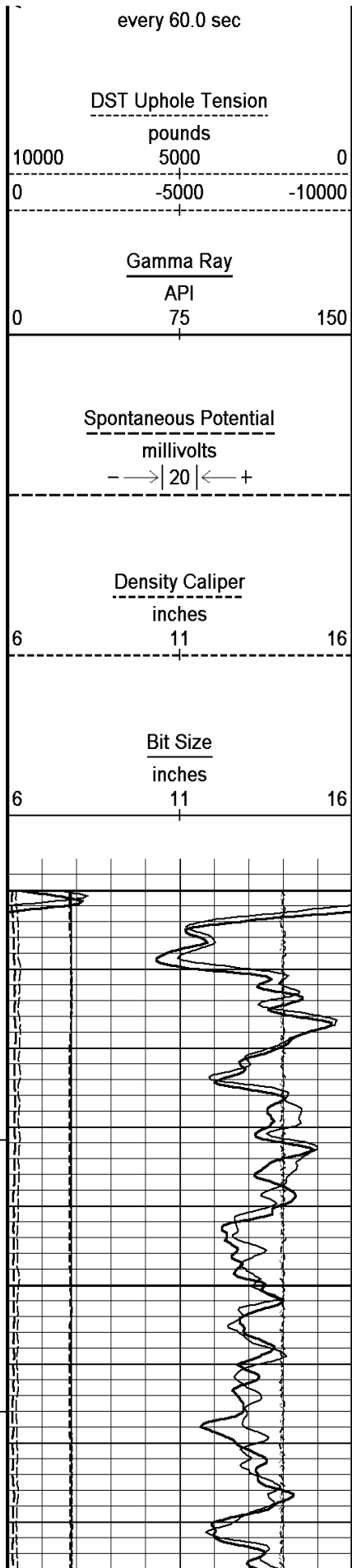


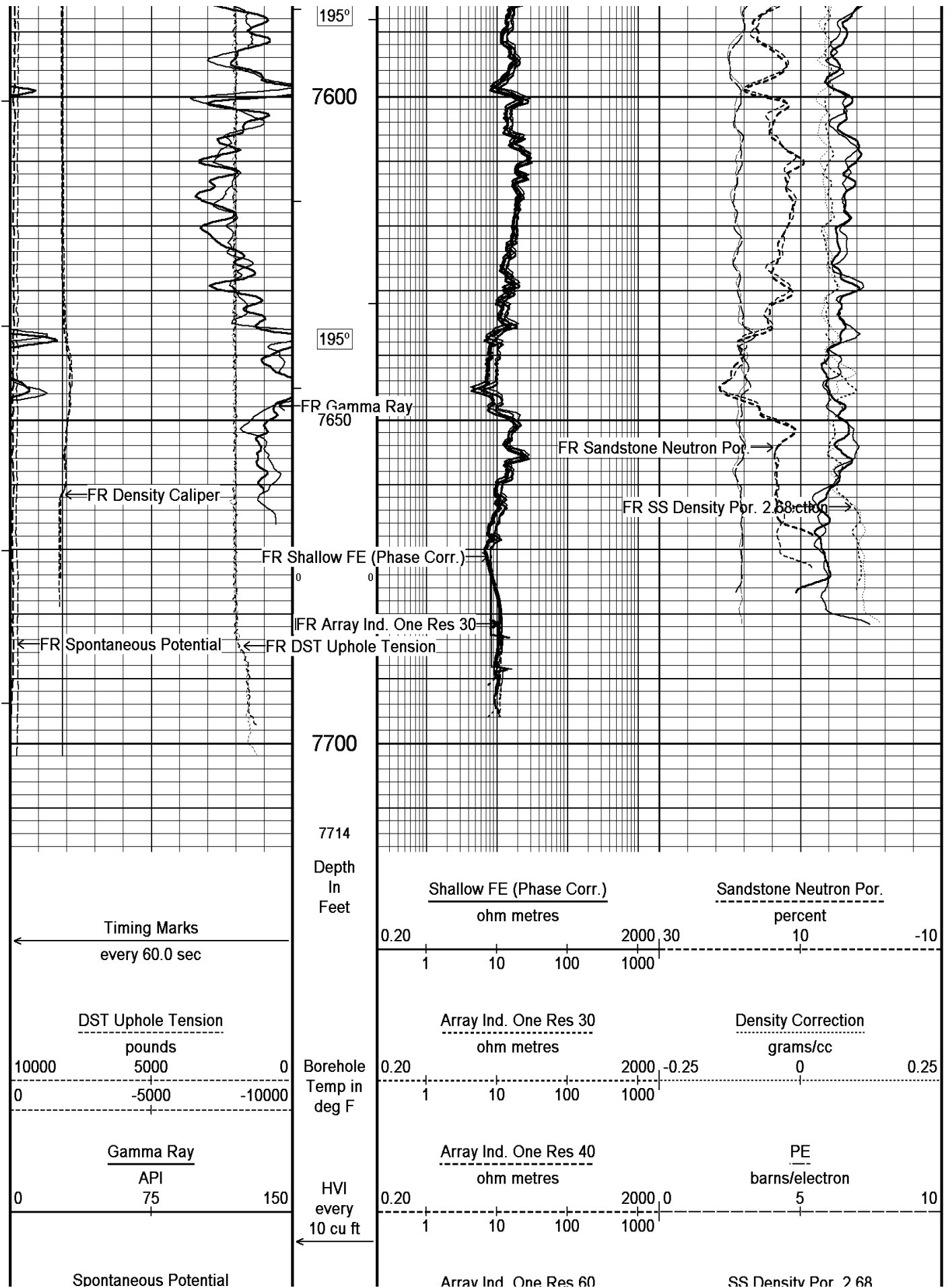
Depth Based Data - Maximum Sampling Increment 10.0cm
 Plotted on 21-JUN-2011 12:57
 Filename: C:\Minimus\LOGS\Bill Barrett\CB TG Land 21C-20-692\MAIN.dta
 Recorded on 21-JUN-2011 10:03
 System Versions: Logged with 11.02.3186 Plotted with 11.02.3186

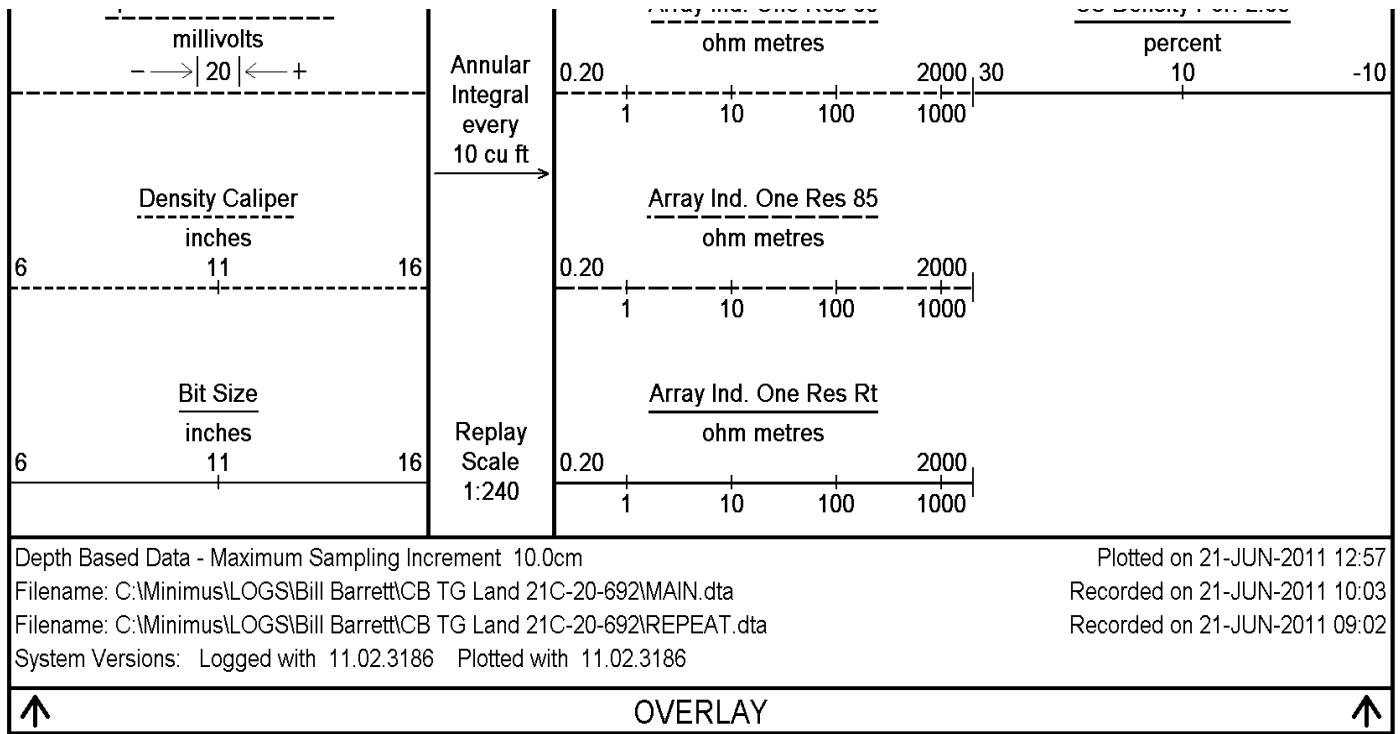
↑ 5 INCH MAIN LOG ↑

↓ OVERLAY ↓
 Depth Based Data - Maximum Sampling Increment 10.0cm
 Plotted on 21-JUN-2011 12:57
 Filename: C:\Minimus\LOGS\Bill Barrett\CB TG Land 21C-20-692\MAIN.dta
 Recorded on 21-JUN-2011 10:03
 Filename: C:\Minimus\LOGS\Bill Barrett\CB TG Land 21C-20-692\REPEAT.dta
 Recorded on 21-JUN-2011 09:02
 System Versions: Logged with 11.02.3186 Plotted with 11.02.3186









BEFORE SURVEY CALIBRATION			C:\Minimus\LOGS\Bill Barrett\CB TG Land 21C-20-692\MAIN.dta	
General Constants All 000			Last Edited on 21-JUN-2011,08:25	
General Parameters				
Mud Resistivity	1.780	ohm-metres		
Mud Resistivity Temperature	93.000	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	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			
Down-hole Tension Calibration SMS 0			Field Calibration on 21-JUN-2011 07:54	
Reading No	Measured	Calibrated (lbs)		
1	16209.09	0.00		
2	17972.06	350.00		
High Resolution Temperature Calibration MCG-D.A 342			Field Calibration on 21-JUN-2011,05:26	
	Measured	Calibrated(Deg F)		
Lower	10.00	10.00		
Upper	100.00	100.00		
High Resolution Temperature Constants MCG-D.A 342			Last Edited on 21-JUN-2011,05:26	

SP Calibration MCG-D.A 342

Field Calibration on 21-JUN-2011,05:26

	Measured	Calibrated (mV)
Reference 1	100.0	100.0
Reference 2	-100.0	-100.0

Gamma Calibration MCG-D.A 342

Field Calibration on 21-JUN-2011 05:24

	Measured	Calibrated (API)
Background	127	98
Calibrator (Gross)	933	724
Calibrator (Net)	806	626

Gamma Constants MCG-D.A 342

Last Edited on 21-JUN-2011,08:09

Gamma Calibrator Number	GRC-174	
Mud Density	1.25	gm/cc
Caliper Source for Processing	Bit Size	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

Neutron Calibration MDN-B.A 306

Base Calibration on 20-JUN-2011,07:44
Field Check on 21-JUN-2011 05:34

Base Calibration				
	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	2836	89	3714	110
Ratio	31.929		33.764	
Field Calibrator at Base				
			Calibrated (cps)	
			1451	2165
Ratio			0.670	
Field Check				
			Calibrated (cps)	
			2415	3510
Ratio			0.688	

Neutron Constants MDN-B.A 306

Last Edited on 21-JUN-2011,05:27

Neutron Source Id	P44384B	
Neutron Jig Number	5922	
Epithermal Neutron	No	
Caliper Source for Processing	Bit Size	
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	Constant Value	
Formation Fluid Salinity	0.00	kppm
Barite Mud Correction	Not Applied	

FE Calibration MFE-B.A 179

Base Calibration on 09-JUN-2011 13:34
Field Check on 21-JUN-2011 07:59

Base Calibration		
	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	961.3	126.8

Base Check						280.4
Field Check						280.7
FE Constants MFE-B.A 179						Last Edited on 21-JUN-2011,07:58
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 301						Field Calibration on 21-JUN-2011,07:55
			Measured		Calibrated(Deg F)	
Lower			10.00		10.00	
Upper			100.00		100.00	
High Resolution Temperature Constants MAI-B.A 301						Last Edited on 21-JUN-2011,07:55
Pre-filter Length						11
Induction Calibration MAI-B.A 301						Base Calibration on 09-JUN-2010,11:38 Field Check on
Base Calibration						
Test Loop Calibration			Measured		Calibrated (mmho/m)	
Channel		Low	High		Low	High
1		17.5	487.4		9.3	966.2
2		5.9	392.1		7.6	821.4
3		3.8	259.5		5.2	566.0
4		2.0	137.2		2.6	279.2
Array Temperature			71.1		Deg F	
Channel		Base Check (mmho/m)		Field Check (mmho/m)		
		Low	High	Low	High	
1		0.0	0.0	0.0	0.0	
2		0.0	0.0	0.0	0.0	
3		0.0	0.0	0.0	0.0	
4		0.0	0.0	0.0	0.0	
Deep		0.0	0.0	0.0	0.0	
Medium		0.0	0.0	0.0	0.0	
Shallow		0.0	0.0	0.0	0.0	
Array Temperature			0.0		0.0 Deg F	
Induction Constants MAI-B.A 301						Last Edited on 21-JUN-2011,07:56
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	

Photo Density Calibration MPD-C.A 298

Base Calibration on 12-JUN-2011 14:53
Field Check on 21-JUN-2011 08:08

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	50099	16826	53237	19445
Reference 2	23038	2568	25135	2545

Field Check at Base

1239.2 1382.1

Field Check

1237.7 1385.0

PE Calibration

Base Calibration	WS	Measured		Calibrated Ratio
		WH	Ratio	
Background	225	1107		
Reference 1	17368	49908	0.351	0.320
Reference 2	6575	22894	0.291	0.274

Field Check at Base

225.4 1107.1

Field Check

224.8 1104.6

Density Constants MPD-C.A 298

Last Edited on 21-JUN-2011,08:00

Density Source Id	P44263B	
Nylon Calibrator Number	532	
Aluminium Calibrator Number	532	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.25	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
Densitiv Z/A Correction	Hvbrid	

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
0.00	0.00

Caliper Calibration MPD-C.A 298		Base Calibration on 12-JUN-2011 15:04
		Field Calibration on 21-JUN-2011,07:59
Base Calibration		
Reading No	Measured	Calibrator Size (in)
1	17760	3.98
2	26044	5.96
3	33840	7.96
4	42001	9.86
5	51232	11.88
6	N/A	N/A
Field Calibration		
	Measured Caliper (in)	Actual Caliper (in)
	7.95	7.96

AFTER SURVEY CALIBRATION					
C:\Minimus\LOGS\Bill Barrett\CB TG Land 21C-20-692\MAIN.dta					
FE Check MFE-B.A 179			Before Survey Check 21-JUN-2011 07:59		
			After Survey Check on 21-JUN-2011 12:33		
	Before (ohm-m)		After (ohm-m)		
	280.7		280.6		
Induction Check MAI-B.A 301				Before Survey Check on	
				After Survey Check on 21-JUN-2011 12:32	
Channel	Before Survey (mmho/m)		After Survey (mmho/m)		
	Low	High	Low	High	
1	0.0	0.0	14.8	3732.8	
2	0.0	0.0	31.5	3442.4	
3	0.0	0.0	29.3	3057.0	
4	0.0	0.0	19.7	2019.1	
Deep	0.0	0.0	17.3	2015.6	
Medium	0.0	0.0	43.1	4066.8	
Shallow	0.0	0.0	47.9	5038.9	
Array Temperature		0.0		88.8	
Photo Density Check MPD-C.A 298			Before Survey Check on 21-JUN-2011 08:08		
			After Survey Check on 21-JUN-2011 12:37		
Density Check					
	Near		Far		
	Before	After	Before	After	
	1237.7	1238.8	1385.0	1387.6	
PE Check					
	Before		After		
WS	224.8		225.0		
WH	1104.6		1105.3		

DOWNHOLE EQUIPMENT

3/8" Triple Cone Cable Head (MCB C A)
 MCB-C.A 197 LG: 1.58 ft WT: 15.4 lb OD: 2.24 in

SHA-J.A Compact Swivel Head Adaptor
 SHA-J.A 213 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 306 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

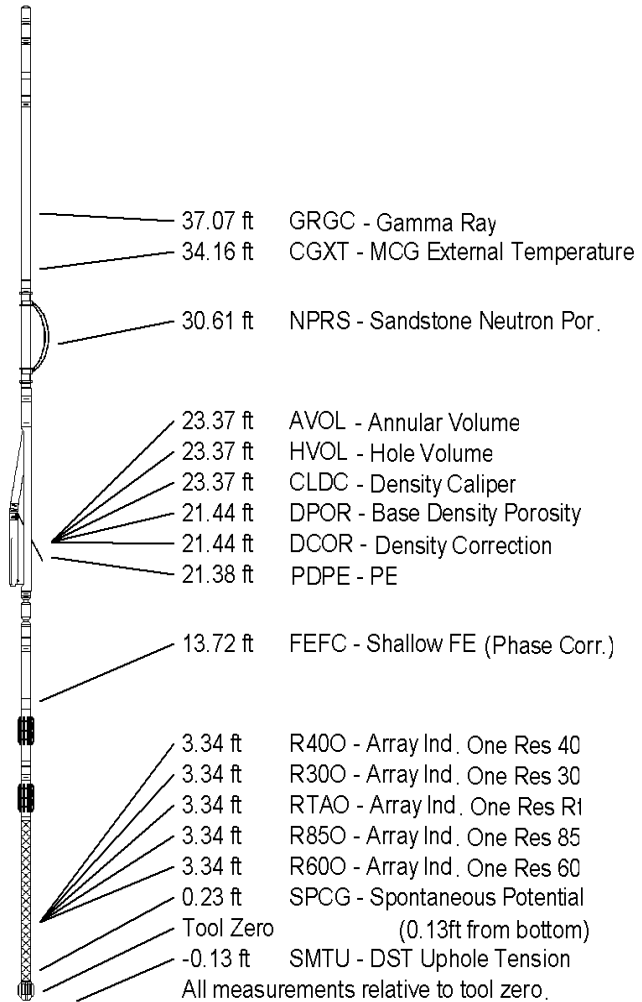
Compact Density/Caliper
 MPD-C.A 298 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

SKJ-D.A Compact Knuckle Joint
 SKJ-D.A 115 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-B.A 301 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 21C-20-692
FIELD	MAMM CREEK
PROVINCE/COUNTY	GARFIELD
COUNTRY/STATE	U.S.A. / COLORADO

Elevation Kelly Bushing	5553.00	feet	First Reading	7682.00	
Elevation Drill Floor	5552.00	feet	Depth Driller	7687.00	feet
Elevation Ground Level	5530.00	feet	Depth Logger	7685.00	feet



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