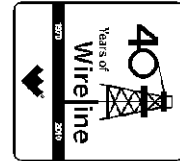




Weatherford[®]

**COMPACT TRIPLE COMBO
QUICKLOOK
LOG**

COMPANY **BILL BARRETT CORPORATION**
WELL **GGU MILLER 13A-31-691**
FIELD **GIBSON GULCH**
PROVINCE/COUNTY **GARFIELD**
COUNTRY/STATE **U.S.A. / COLORADO**
LOCATION **SHL: 1568' FSL & 1347' FWL**
BHL: 1475' FSL & 665' FWL



SEC **TWP** **RGE** **Other Services**
31 **6S** **91W**
API Number **05-045-19520**
Permit Number

Permanent Datum G.L., Elevation 6029 feet
Log Measured From K.B. @ 18 FEET above Permanent Datum
Drilling Measured From K.B.

Elevations: **feet**
KB **6047.00**
DF **6046.00**
GL **6029.00**

Date	23-APR-2011
Run Number	ONE
Depth Driller	7240.00 feet
Depth Logger	7238.00 feet
First Reading	7235.00
Last Reading	742.00
Casing Driller	744.00 feet
Casing Logger	742.00 feet
Bit Size	7.875 inches
Hole Fluid Type	LSND
Density / Viscosity	11.10 lb/USg 59.00 CP
PH / Fluid Loss	10.20 7.50 ml/30Min
Sample Source	FLOW LINE
Rm @ Measured Temp	1.43 @ 98.0 ohm-m
Rmf @ Measured Temp	1.14 @ 98.0 ohm-m
Rmc @ Measured Temp	1.72 @ 98.0 ohm-m
Source Rmf / Rmc	CALC CALC
Rm @ BHT	0.78 @183.0 ohm-m
Time Since Circulation	5 HOURS
Max Recorded Temp	183.00 deg F
Equipment Name	COMPACT
Equipment / Base	13045 GD JCT
Recorded By	D.KUNTZ
Witnessed By	D.ASAY

BOREHOLE RECORD

Last Edited: 23-APR-2011 19:49

Bit Size inches	Depth From feet	Depth To feet
8.750	742.00	6258.00
7.880	6258.00	7240.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	9.625	0.00	742.00	36.00

REMARKS

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.

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

8.75 INCH BIT USED FROM SURFACE CASING TO 6258 FT.

TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 2850 CU.FT.

ANNULAR VOLUME WITH 4.5 INCH PRODUCTION CASING = 2135 CU.FT.

ENGINEER(S): D.KUNTZ, O.GOYZUETA (JFE), F.MRABET (JFE)

OPERATOR(S): K.BOBLITT

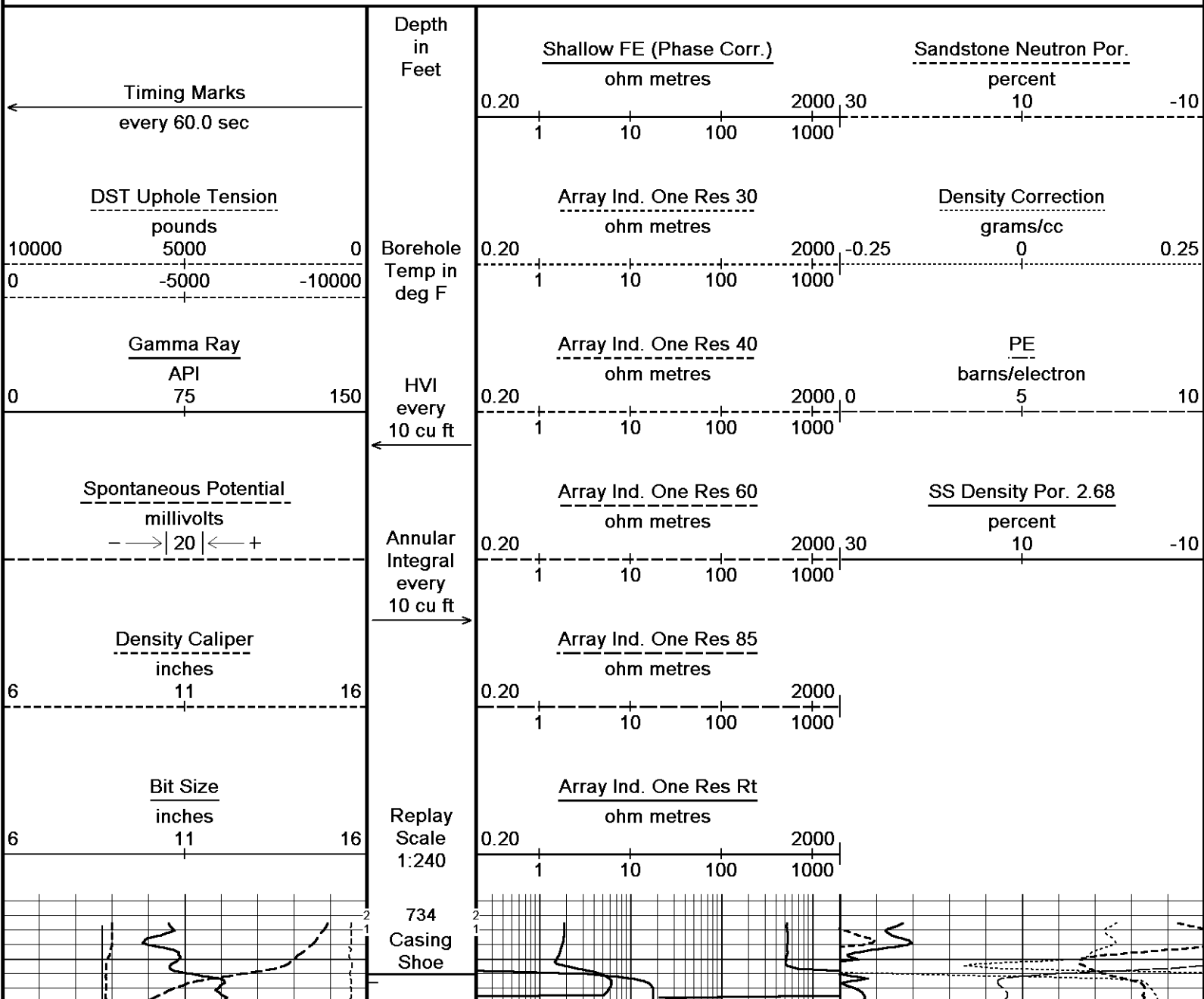
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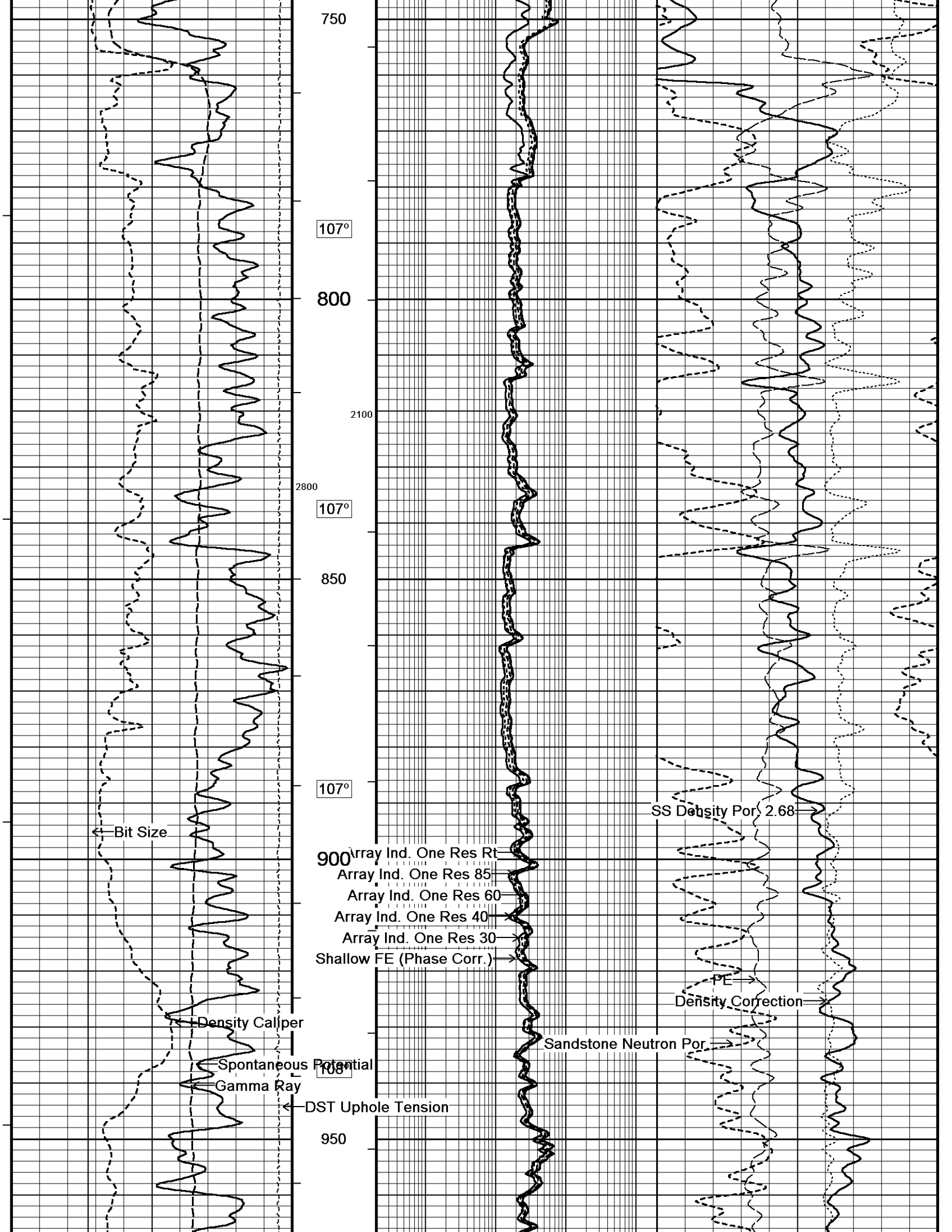
RIG: PATTERSON #51

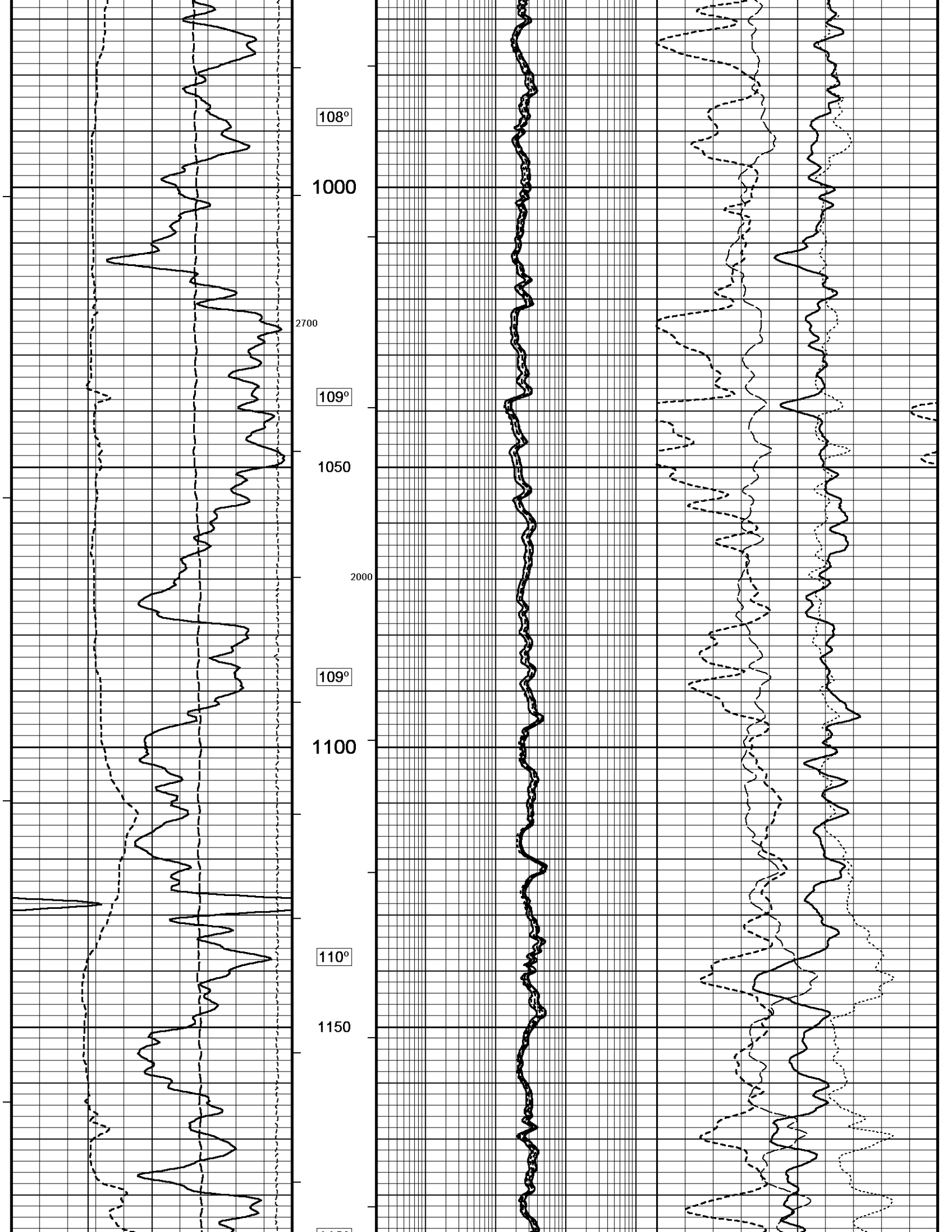
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

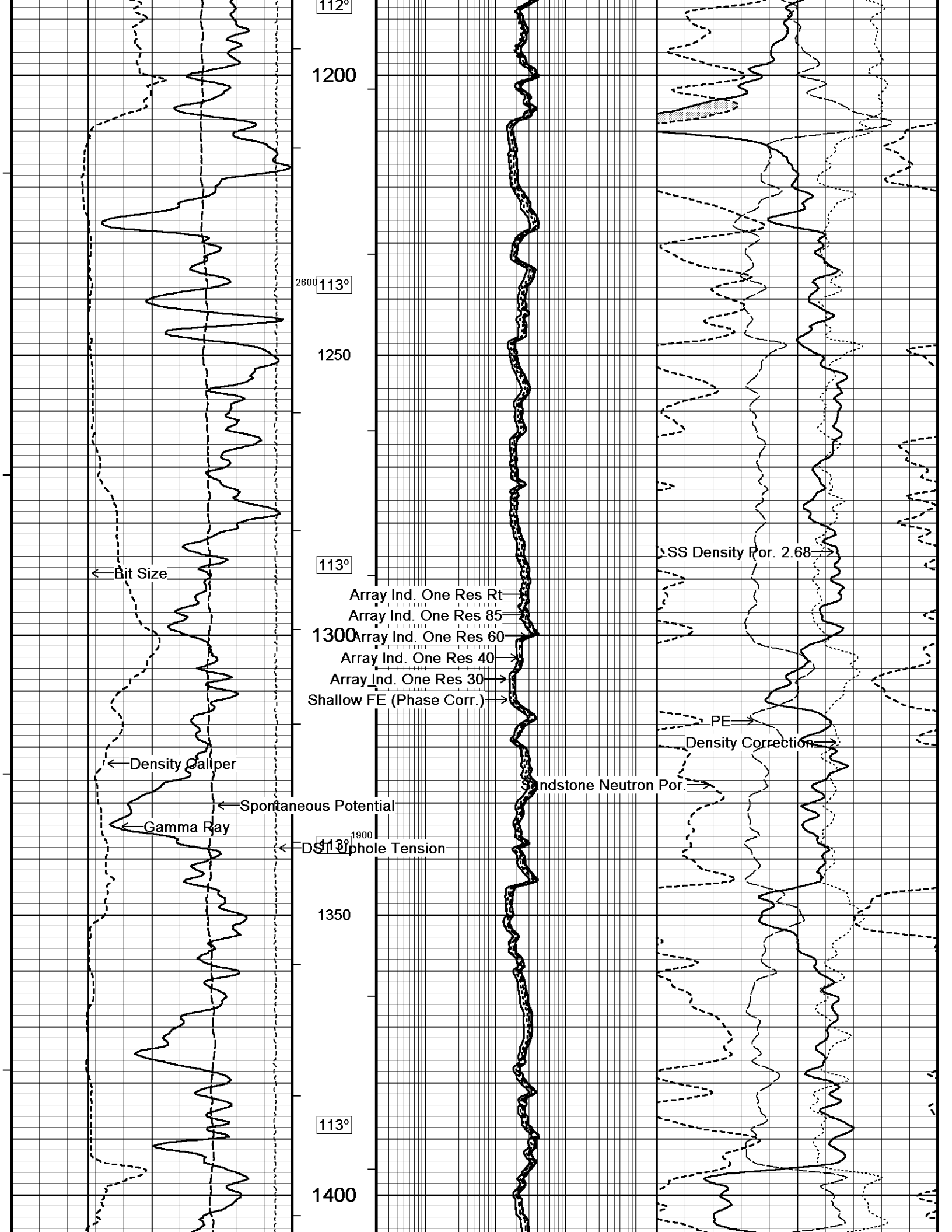
5 INCH MAIN LOG

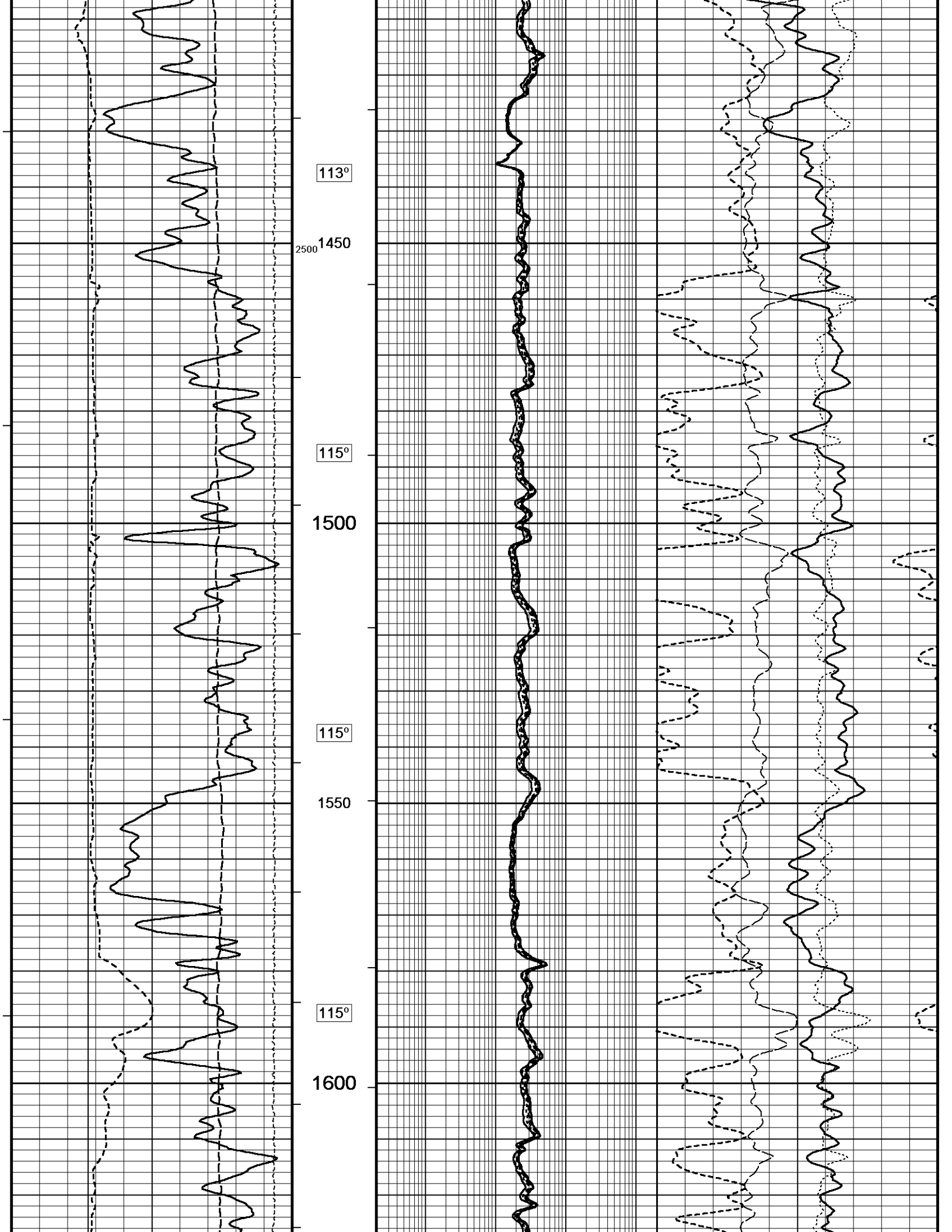
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 System Versions: Logged with 11.02.3186 Plotted with 11.02.3186

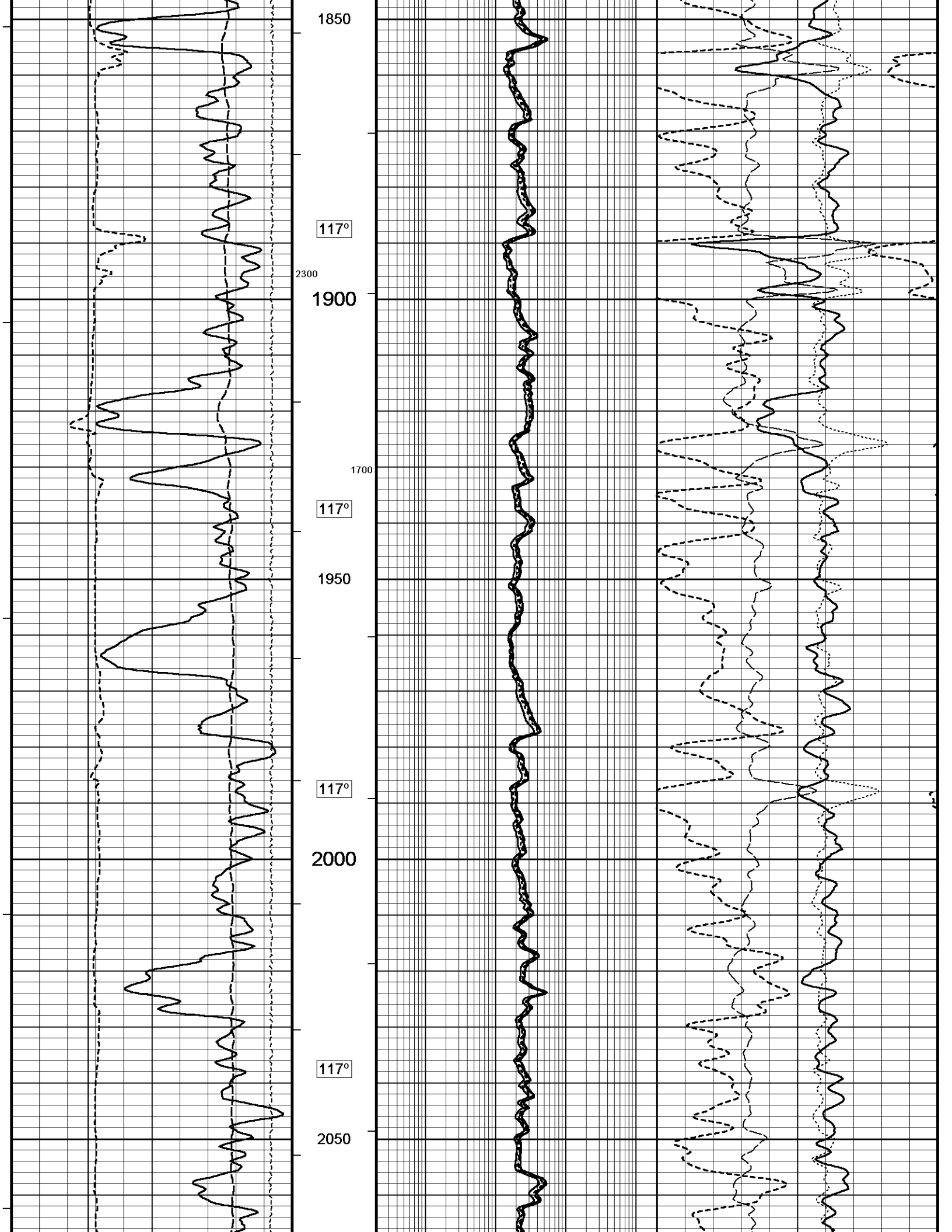


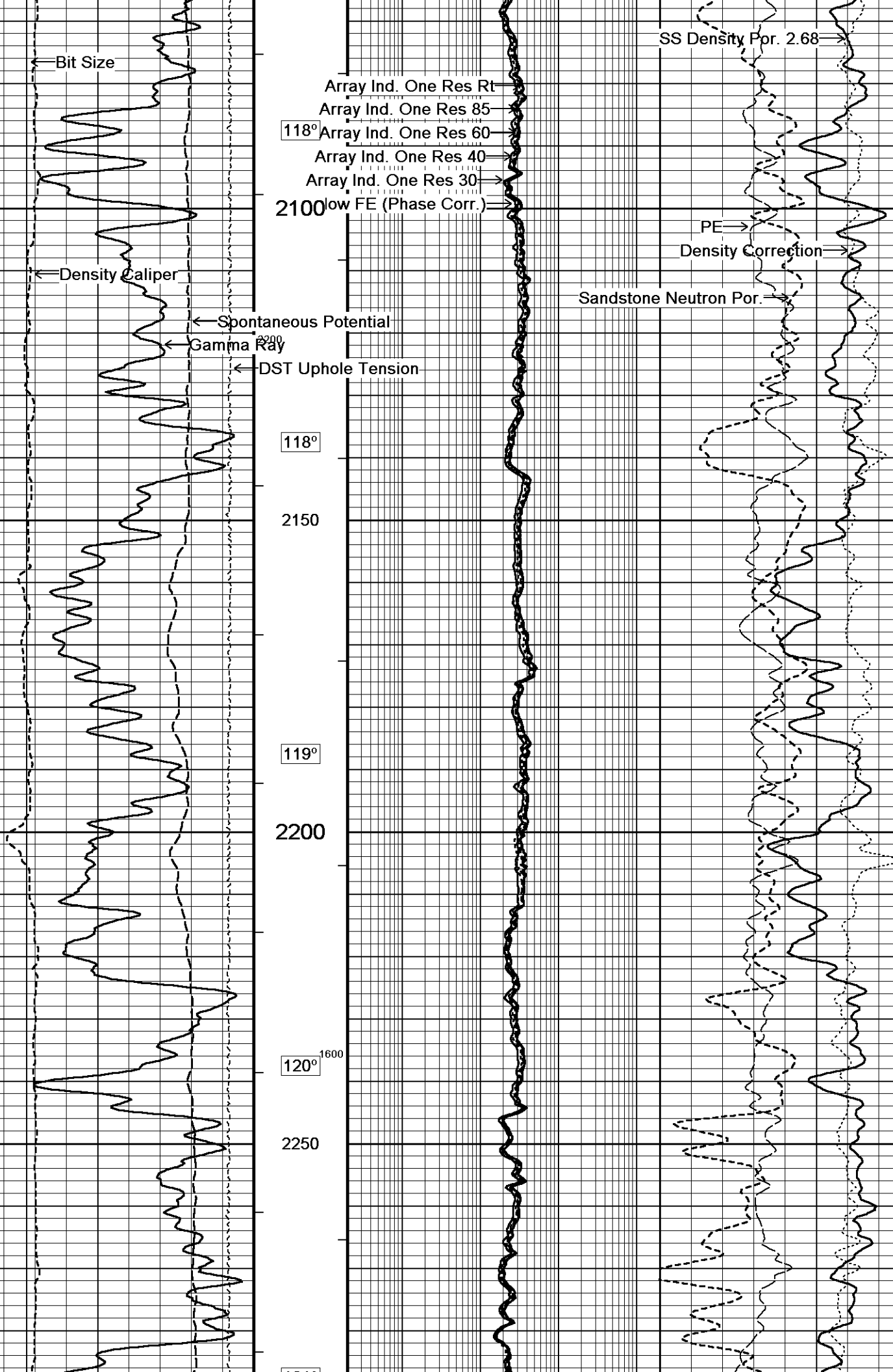


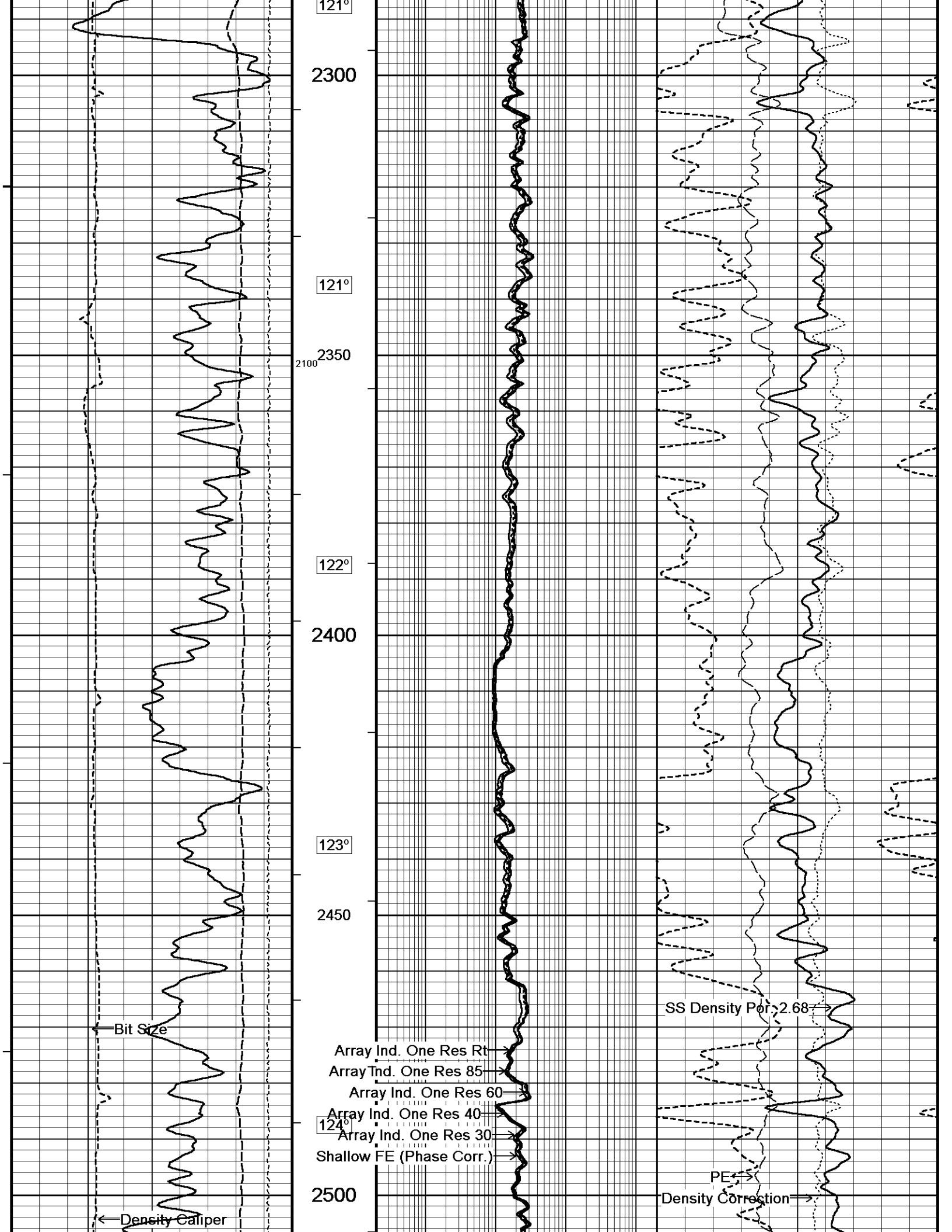


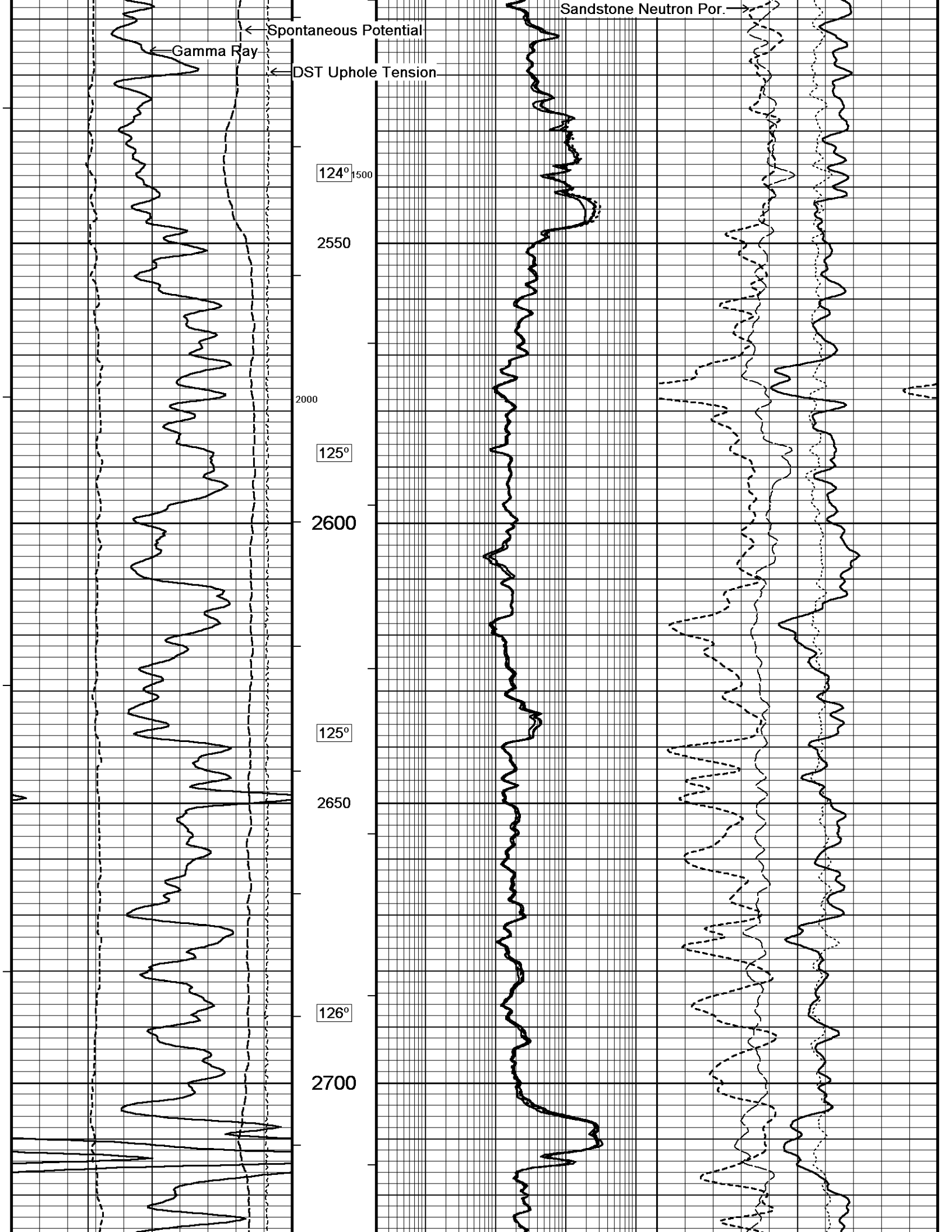


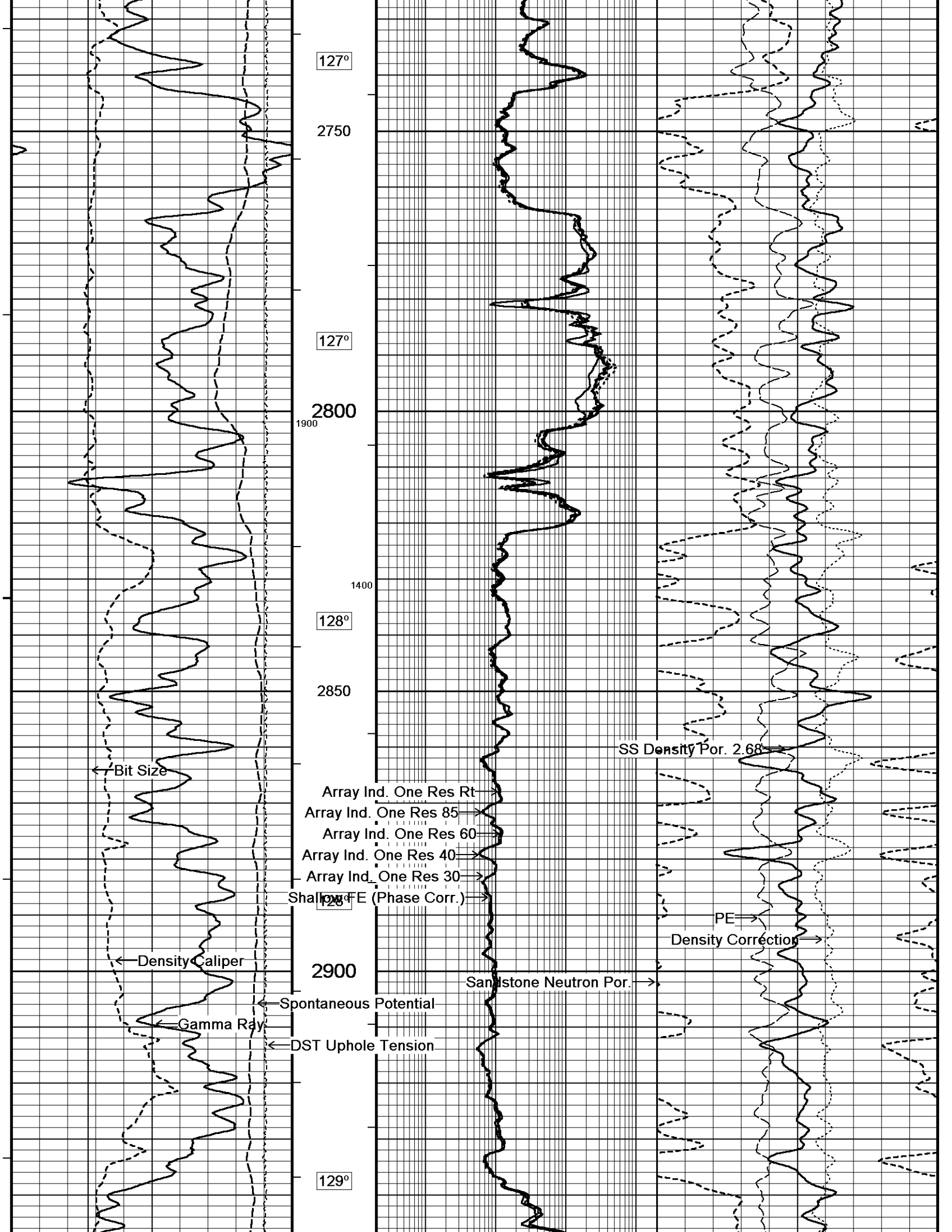


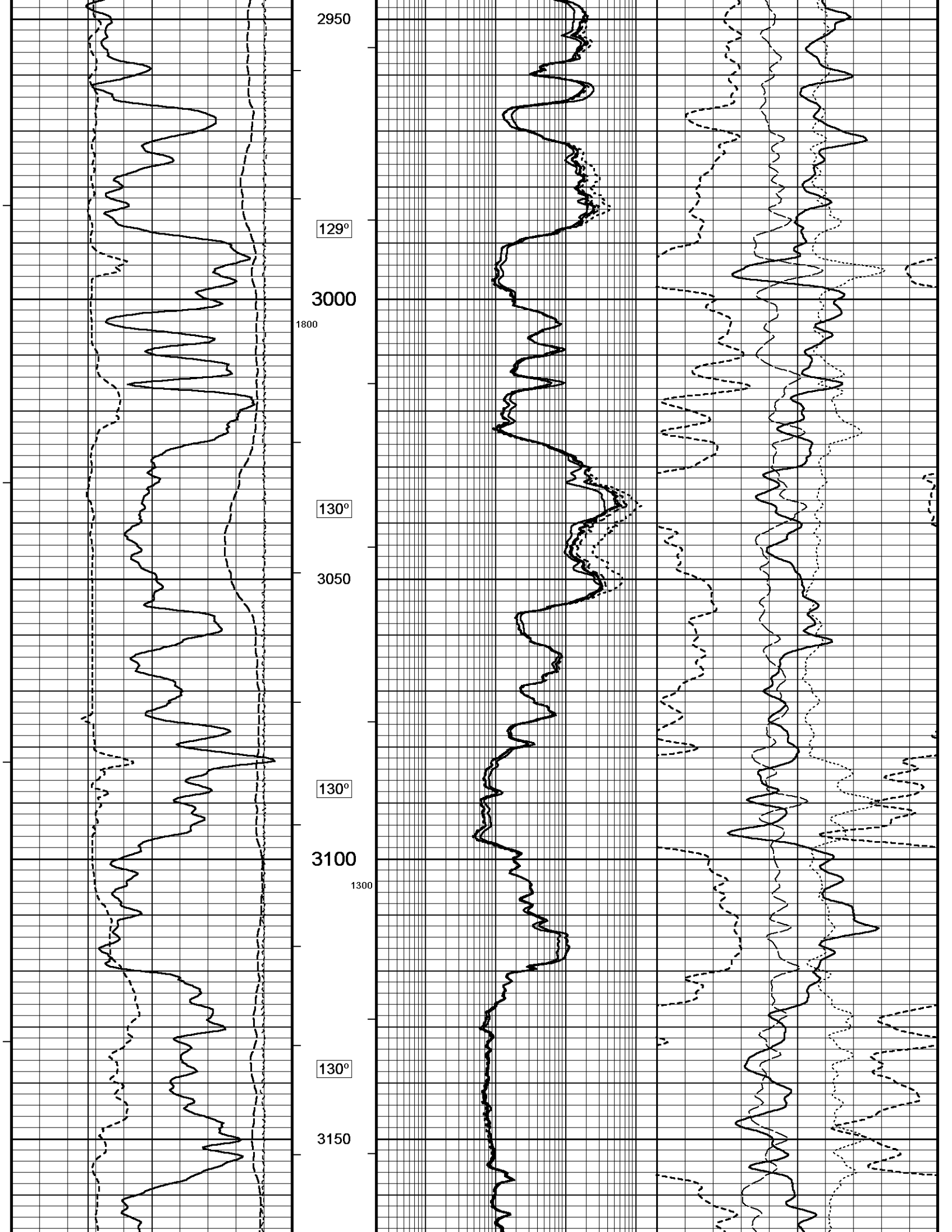


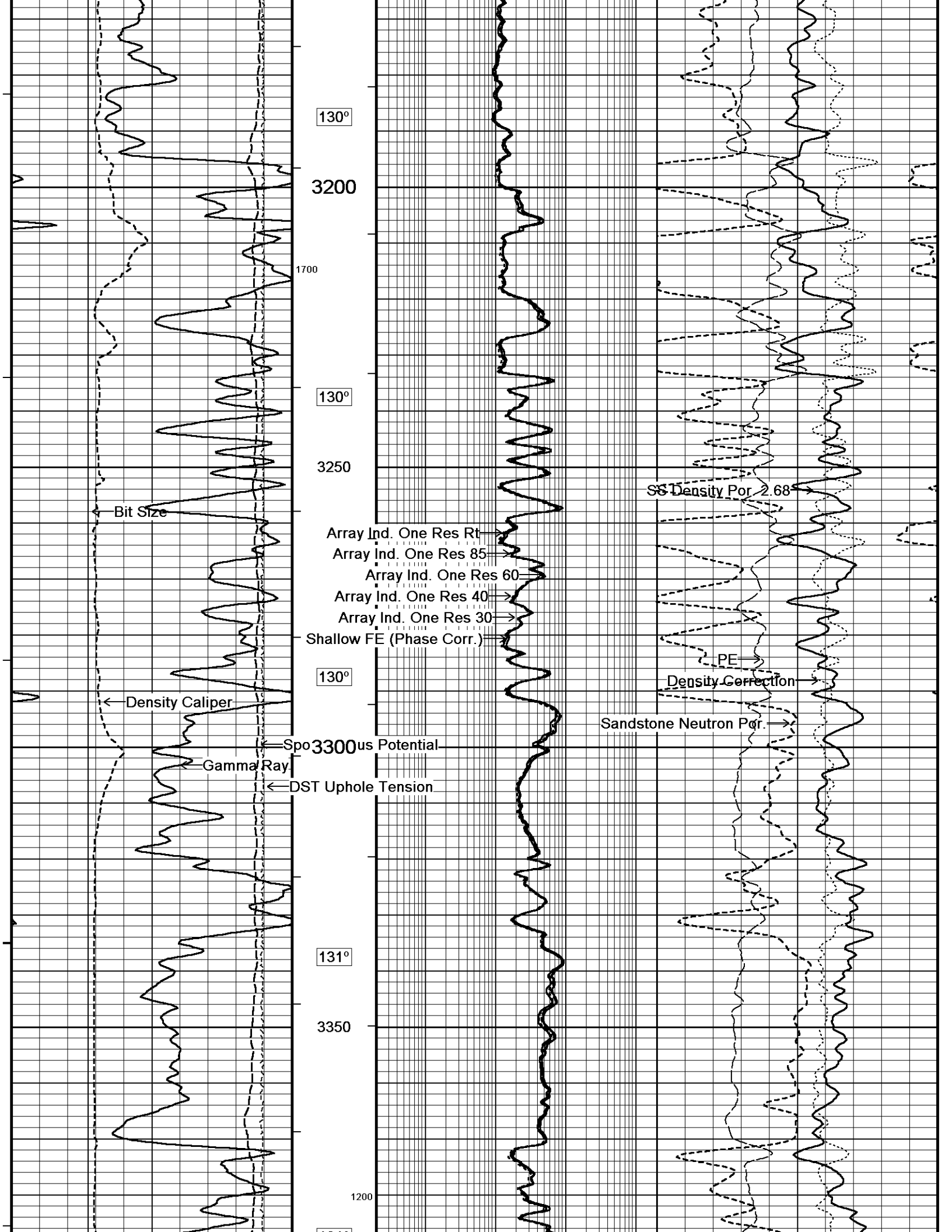


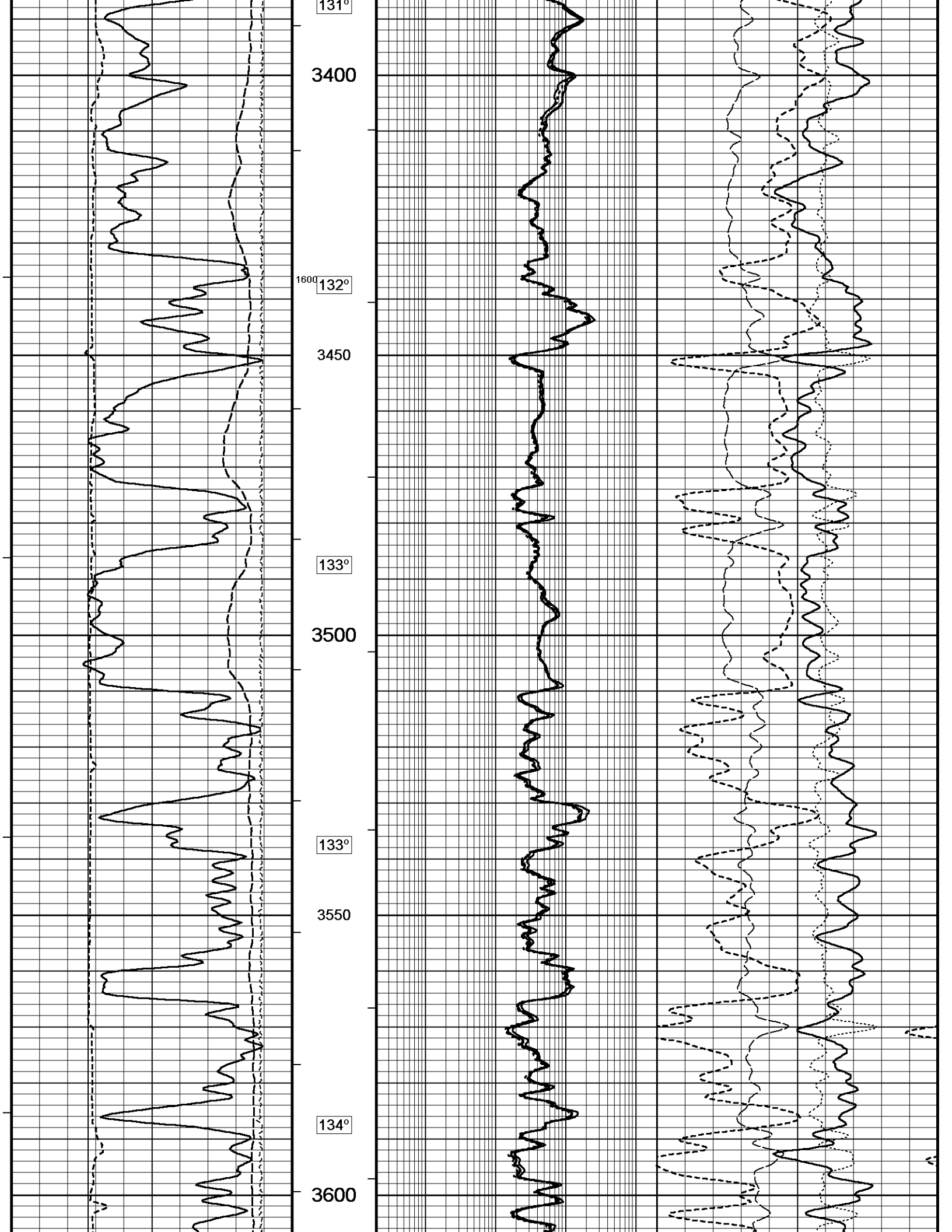


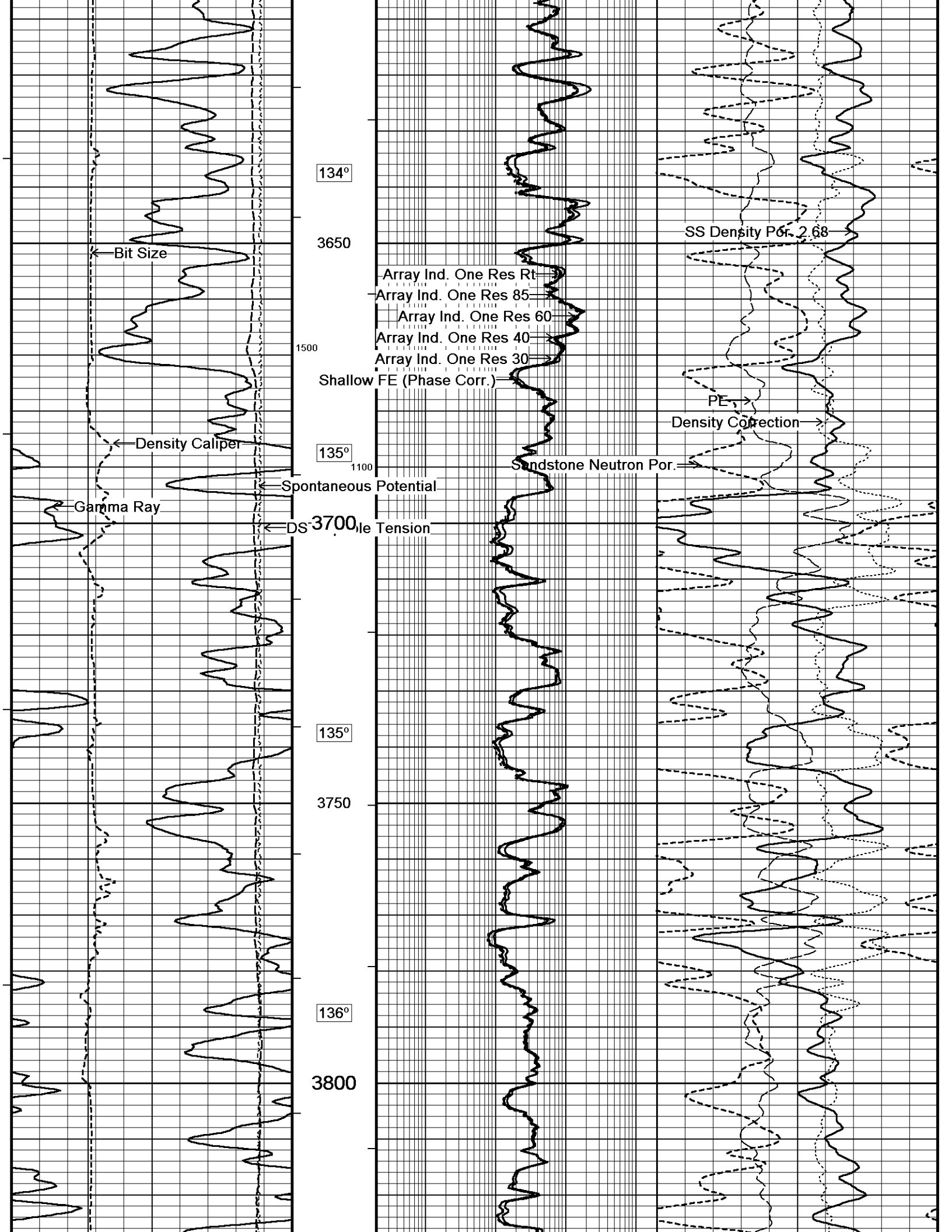


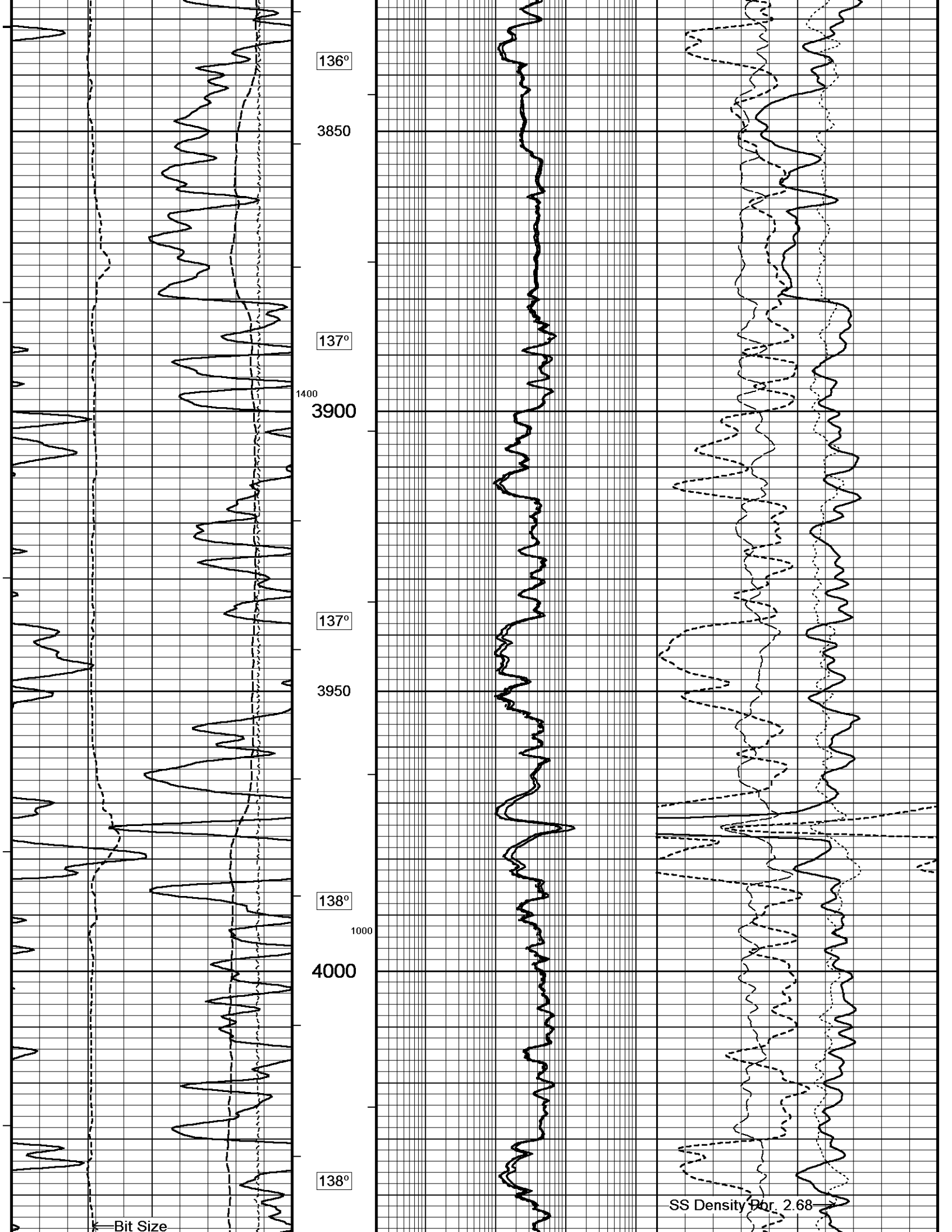


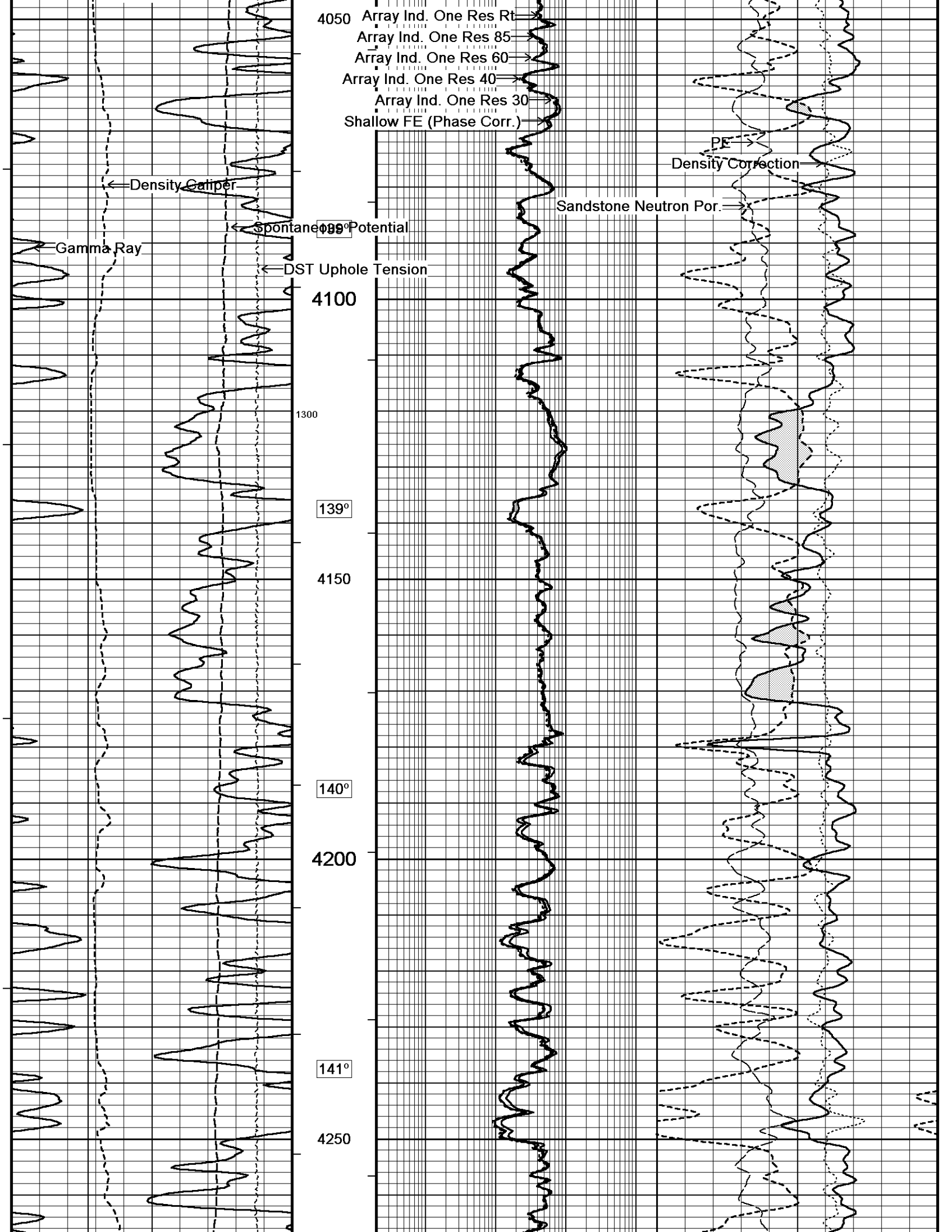


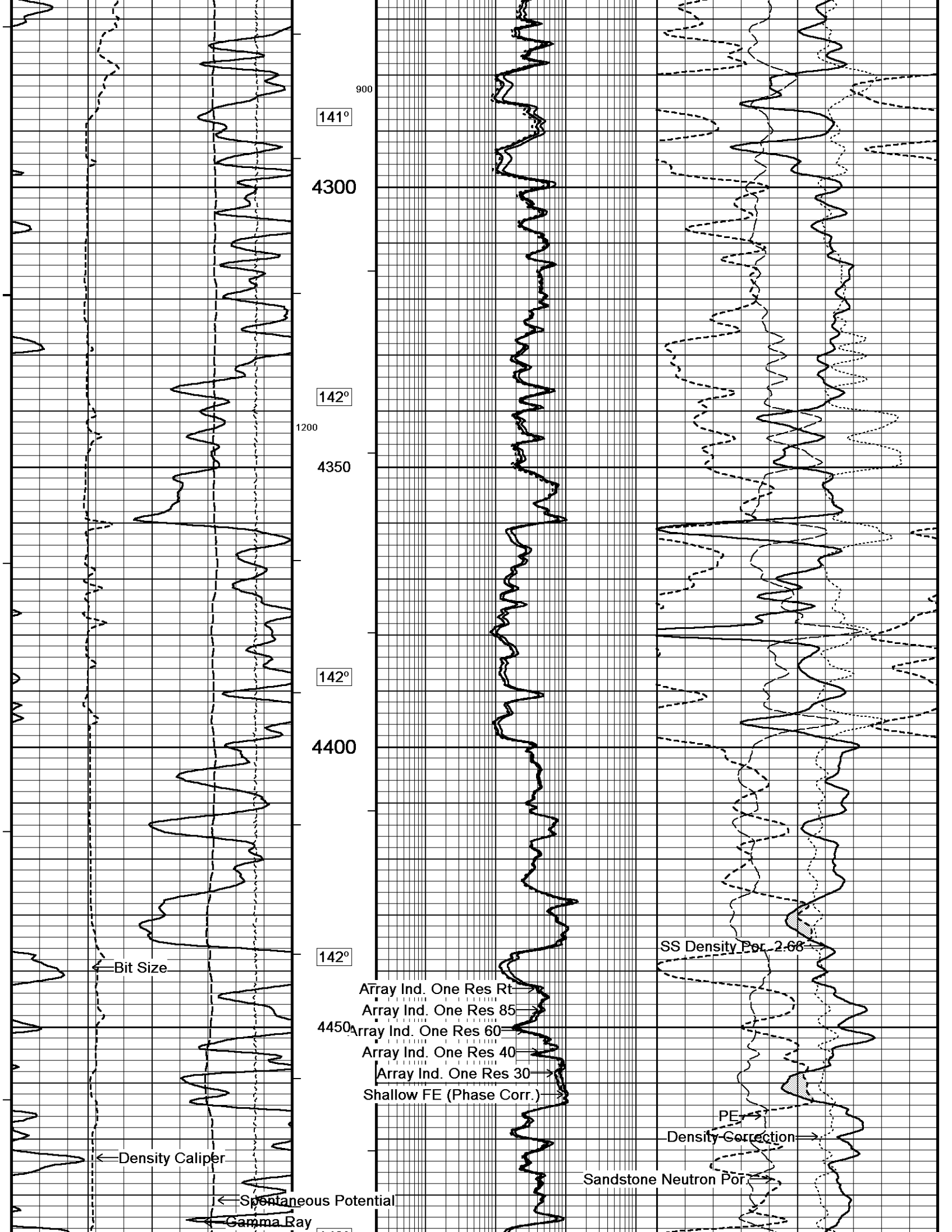


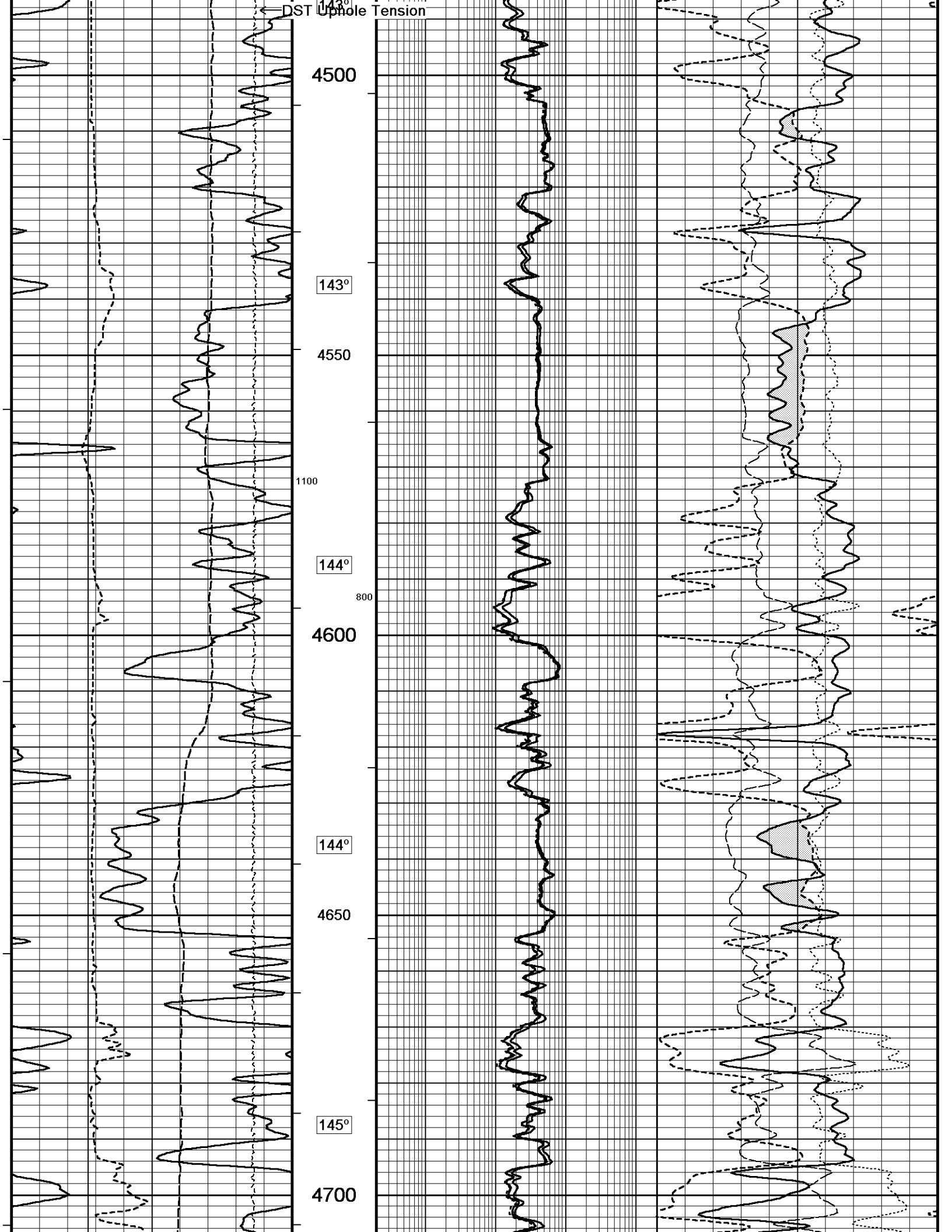


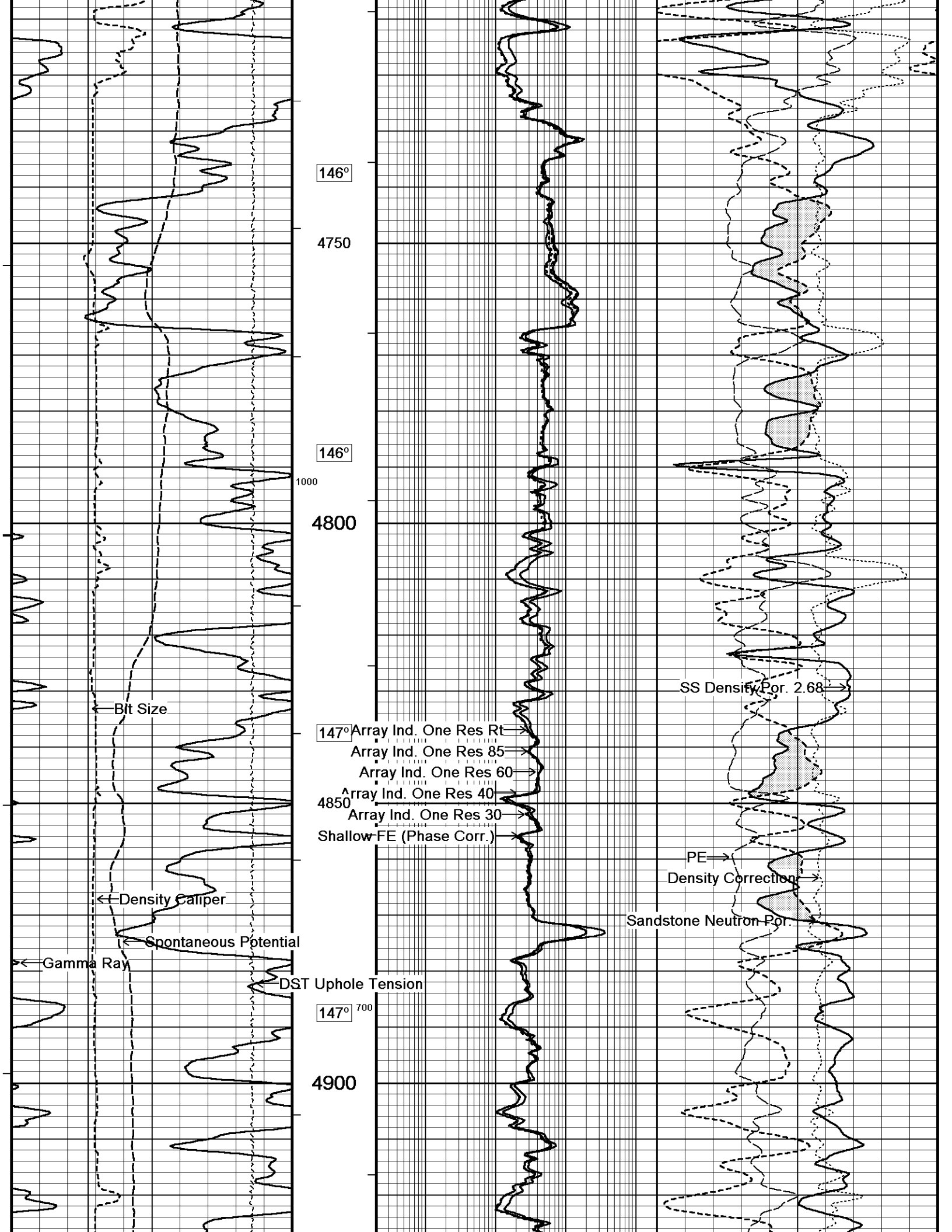


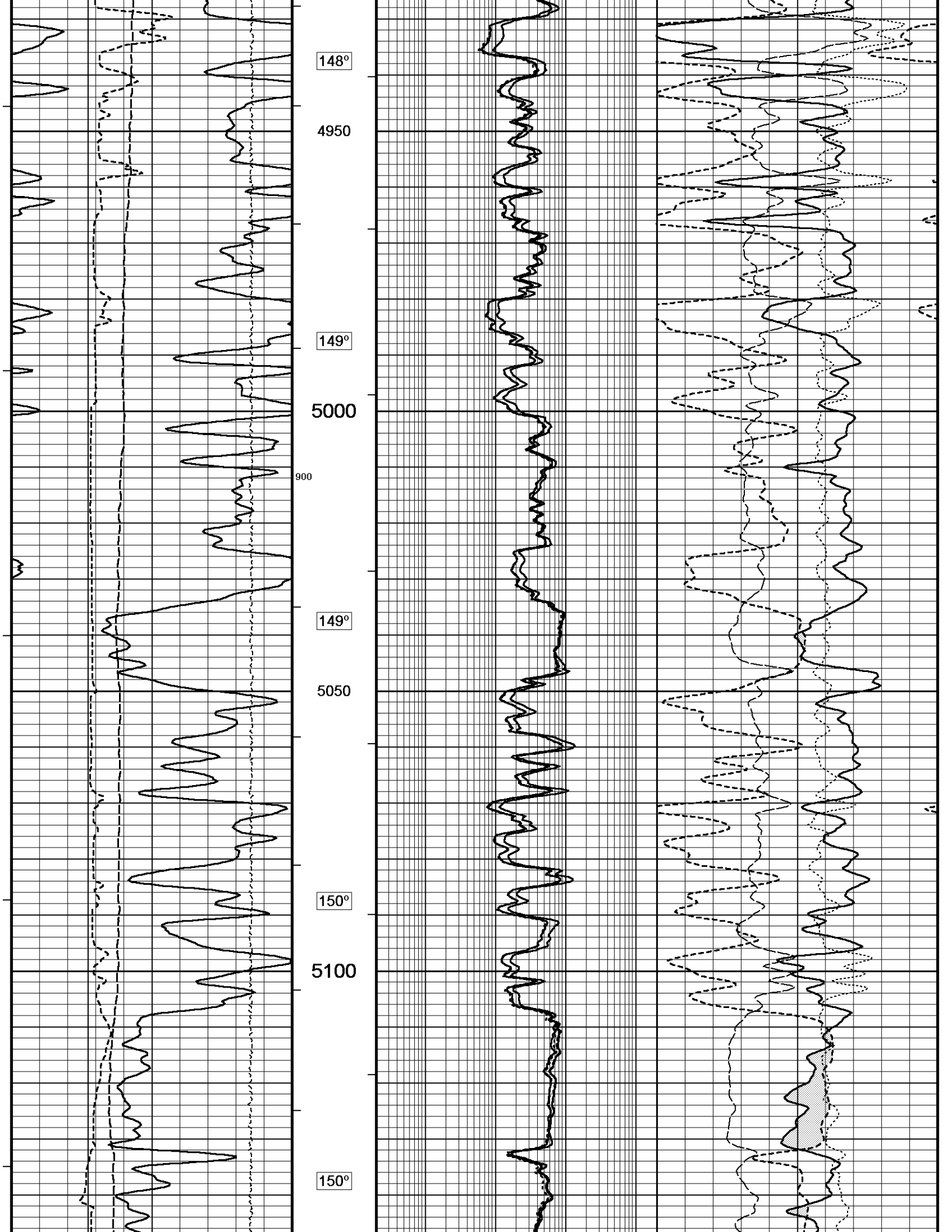


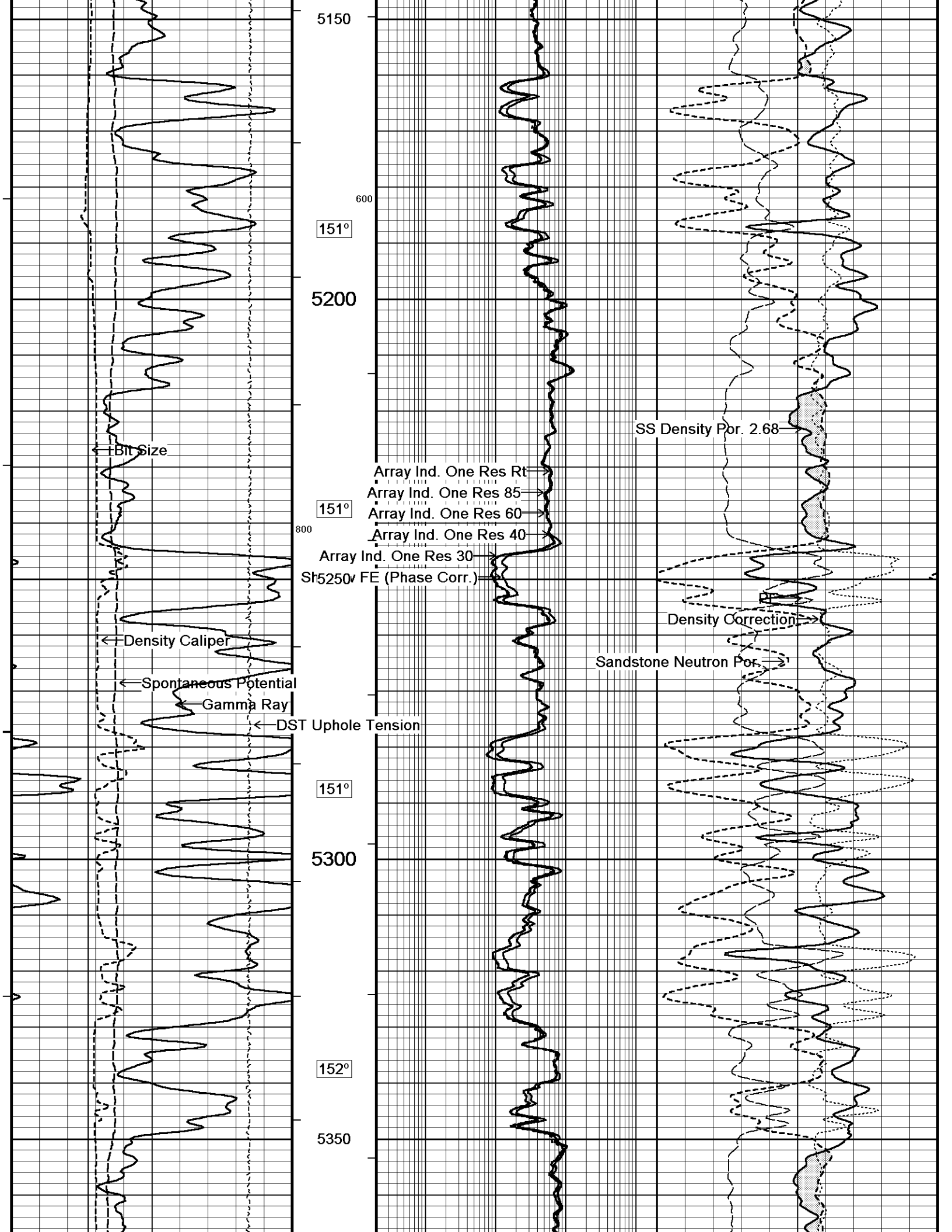












5150

600

151°

5200

151°

800

Sh5250v FE (Phase Corr.)

DST Uphole Tension

151°

5300

152°

5350

Bit Size

Density Caliper

Spontaneous Potential

Gamma Ray

Array Ind. One Res Rt

Array Ind. One Res 85

Array Ind. One Res 60

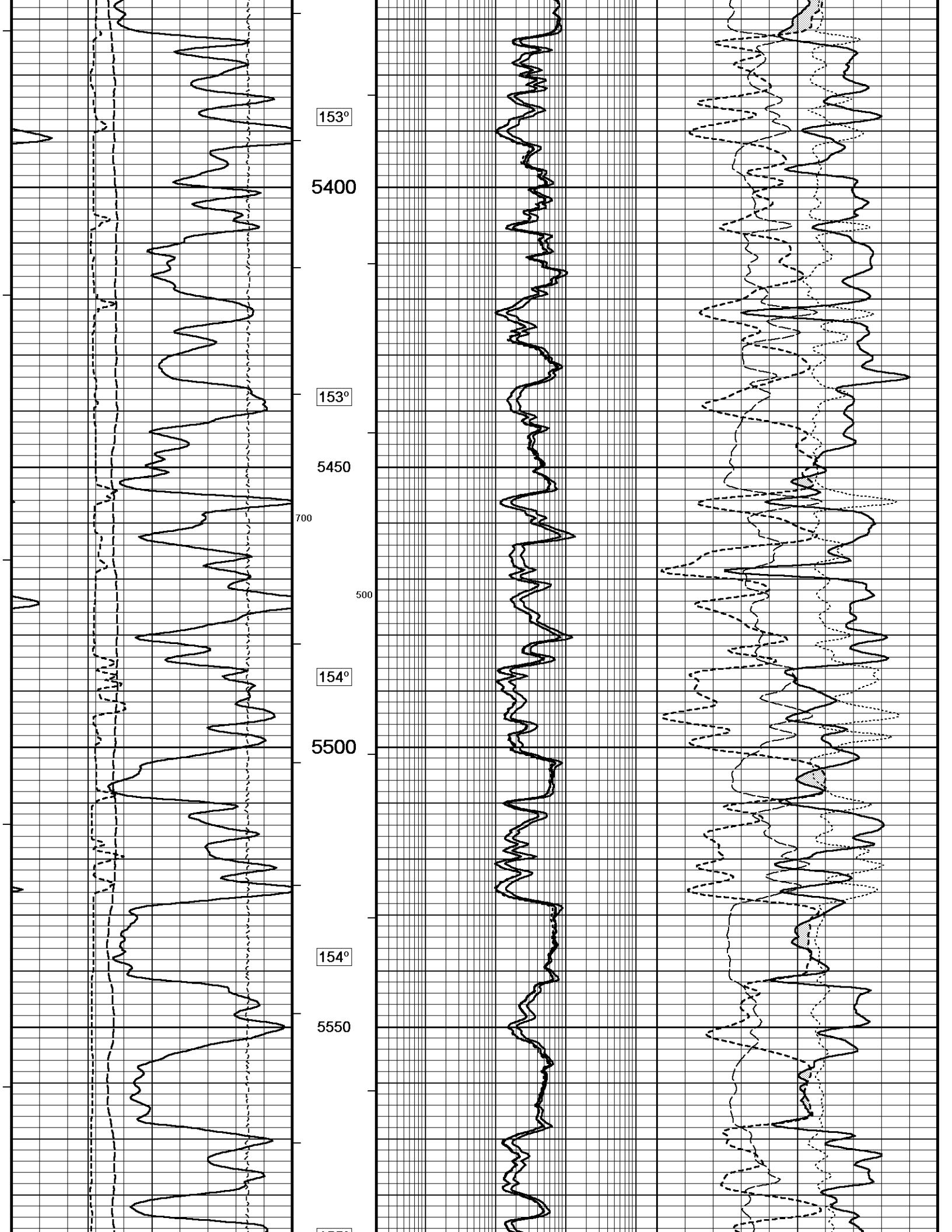
Array Ind. One Res 40

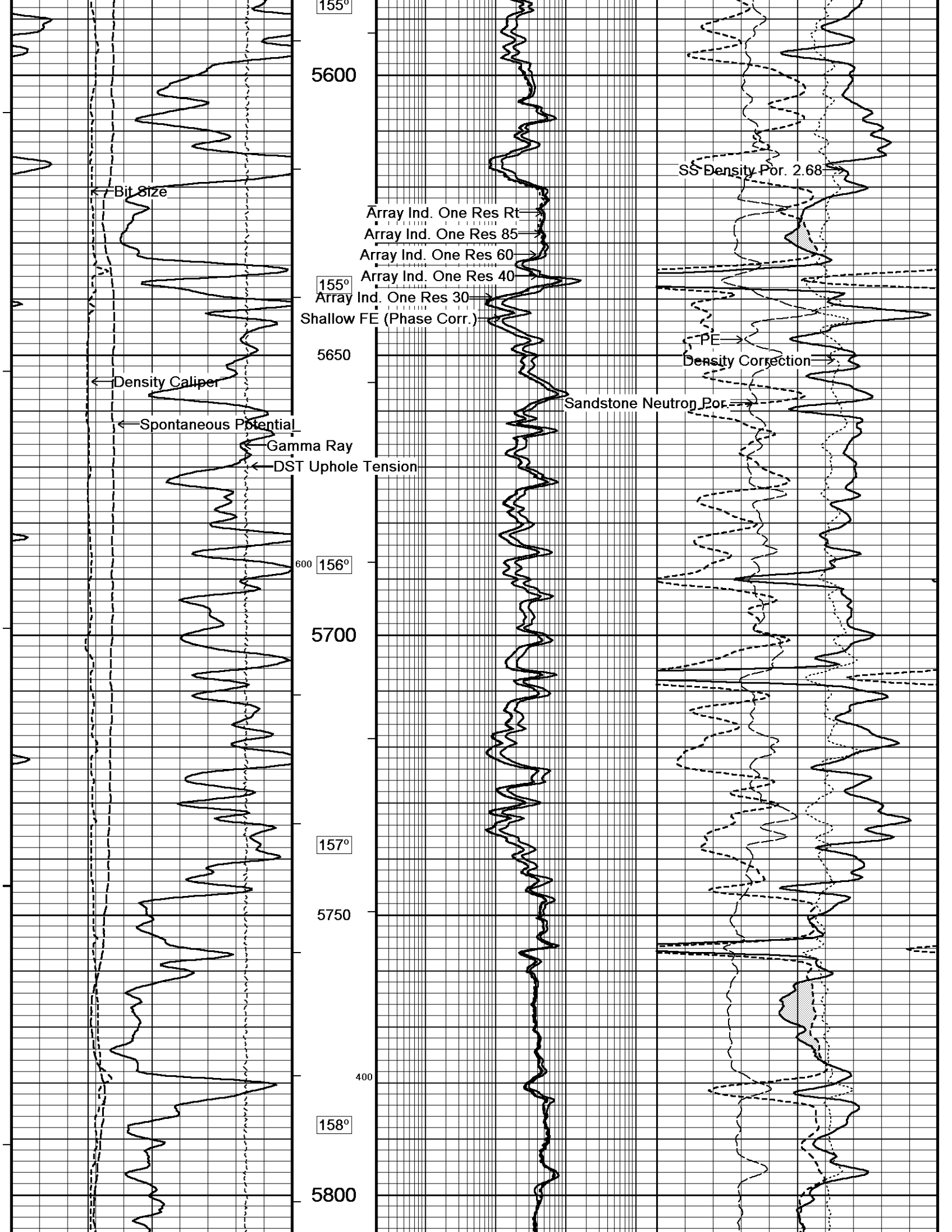
Array Ind. One Res 30

SS Density Por. 2.68

Density Correction

Sandstone Neutron Por.





155°

5600

← Bit Size

Array Ind. One Res Rt

Array Ind. One Res 85

Array Ind. One Res 60

Array Ind. One Res 40

155° Array Ind. One Res 30

Shallow FE (Phase Corr.)

5650

← Density Caliper

SS Density Por. 2.68

PE

Density Correction

← Spontaneous Potential

Gamma Ray

← DST Uphole Tension

Sandstone Neutrop_Por.

600 156°

5700

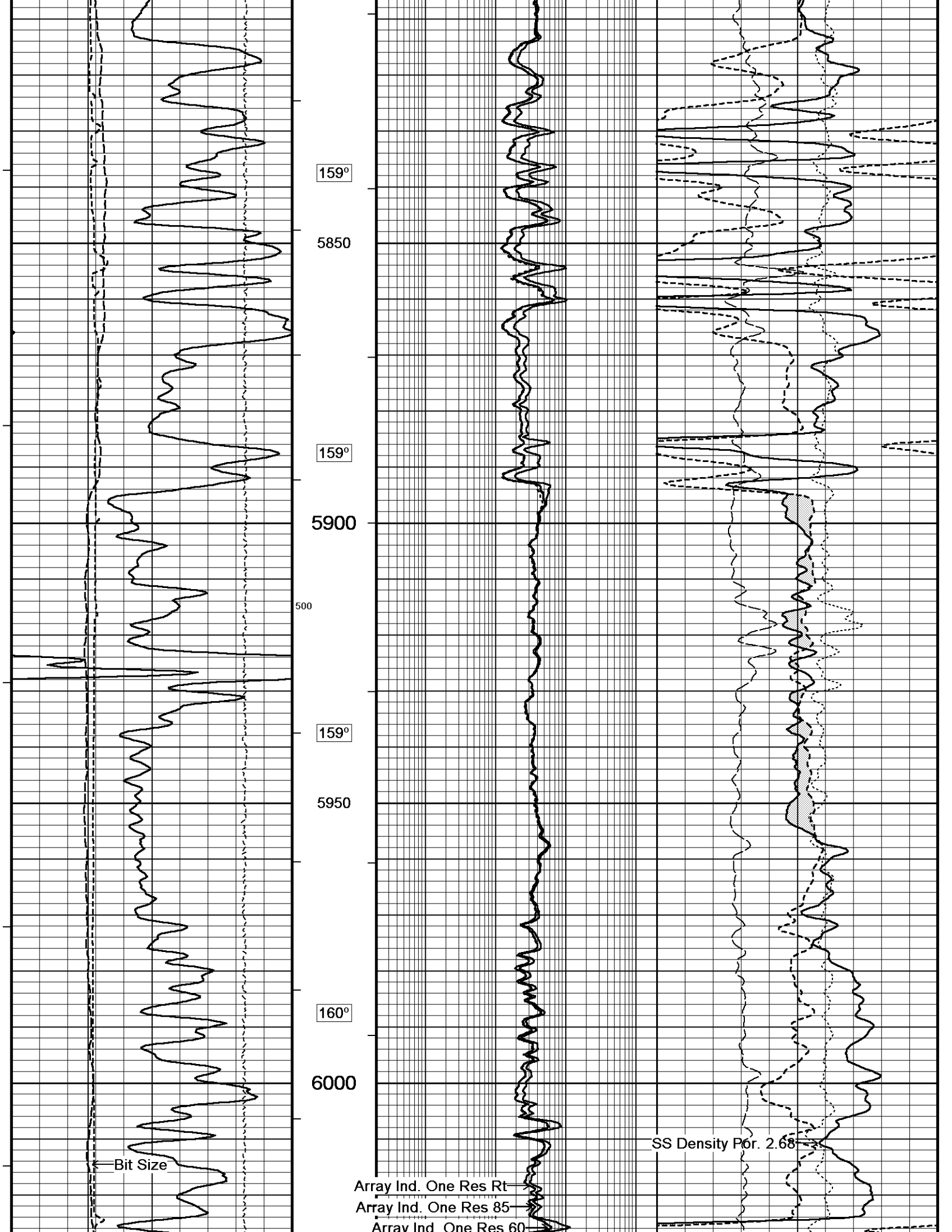
157°

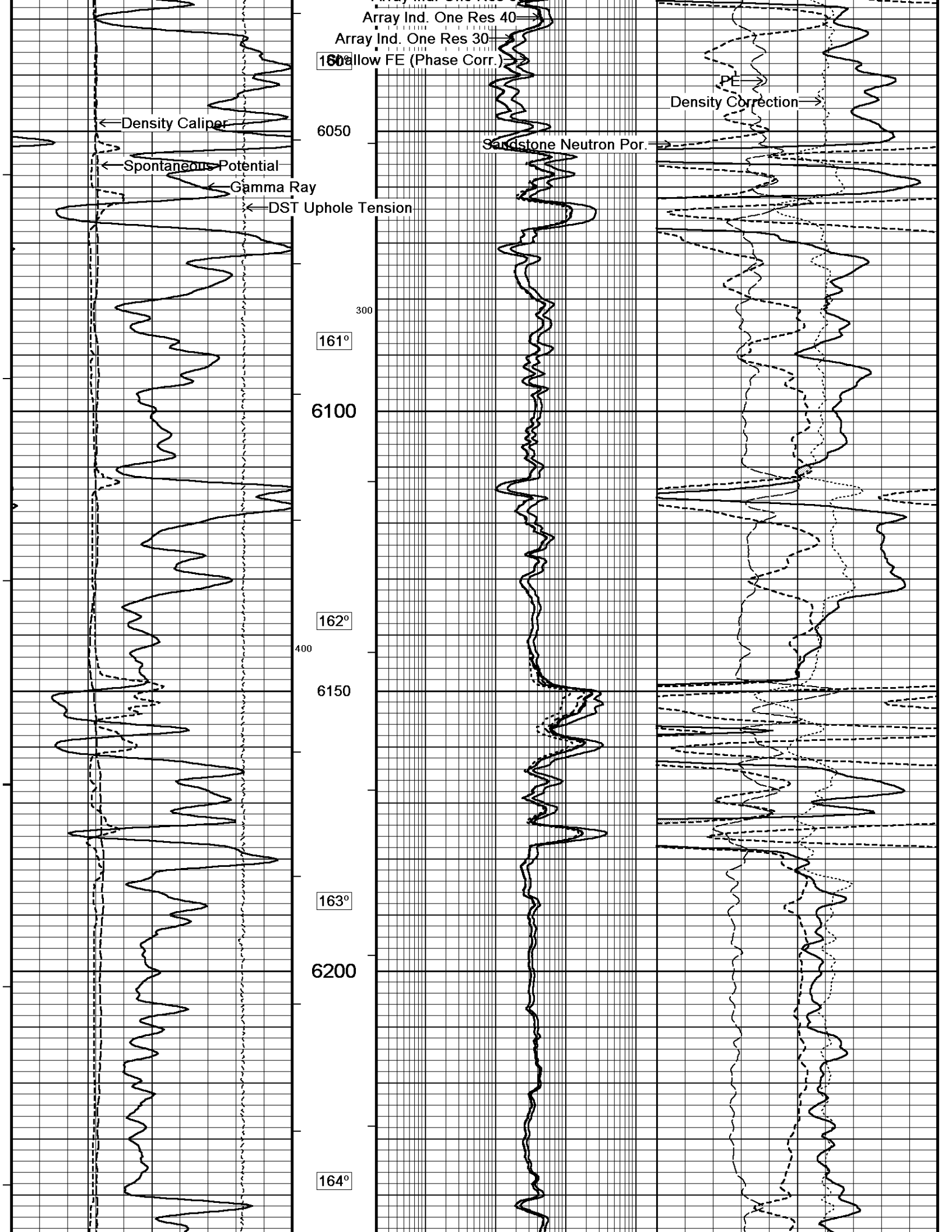
5750

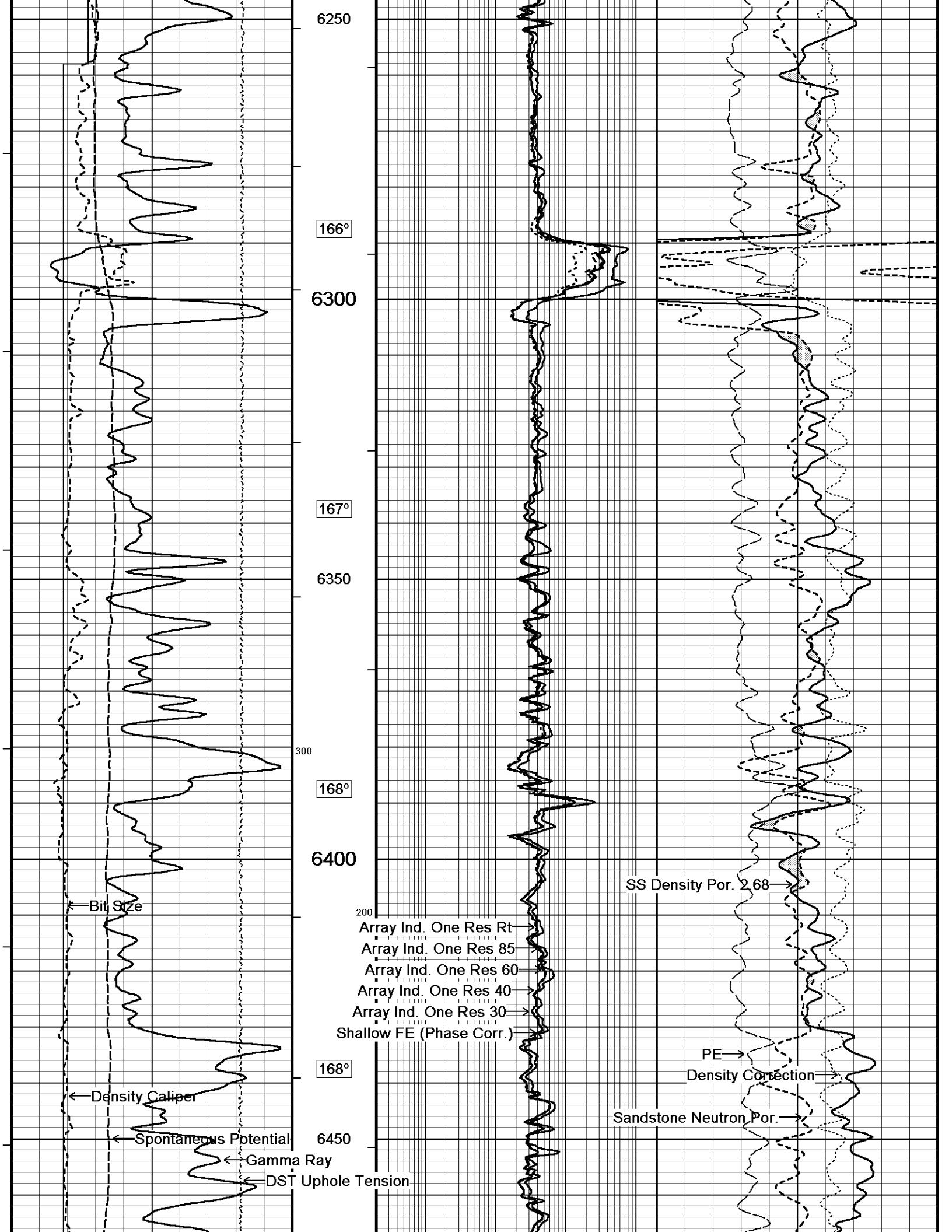
400

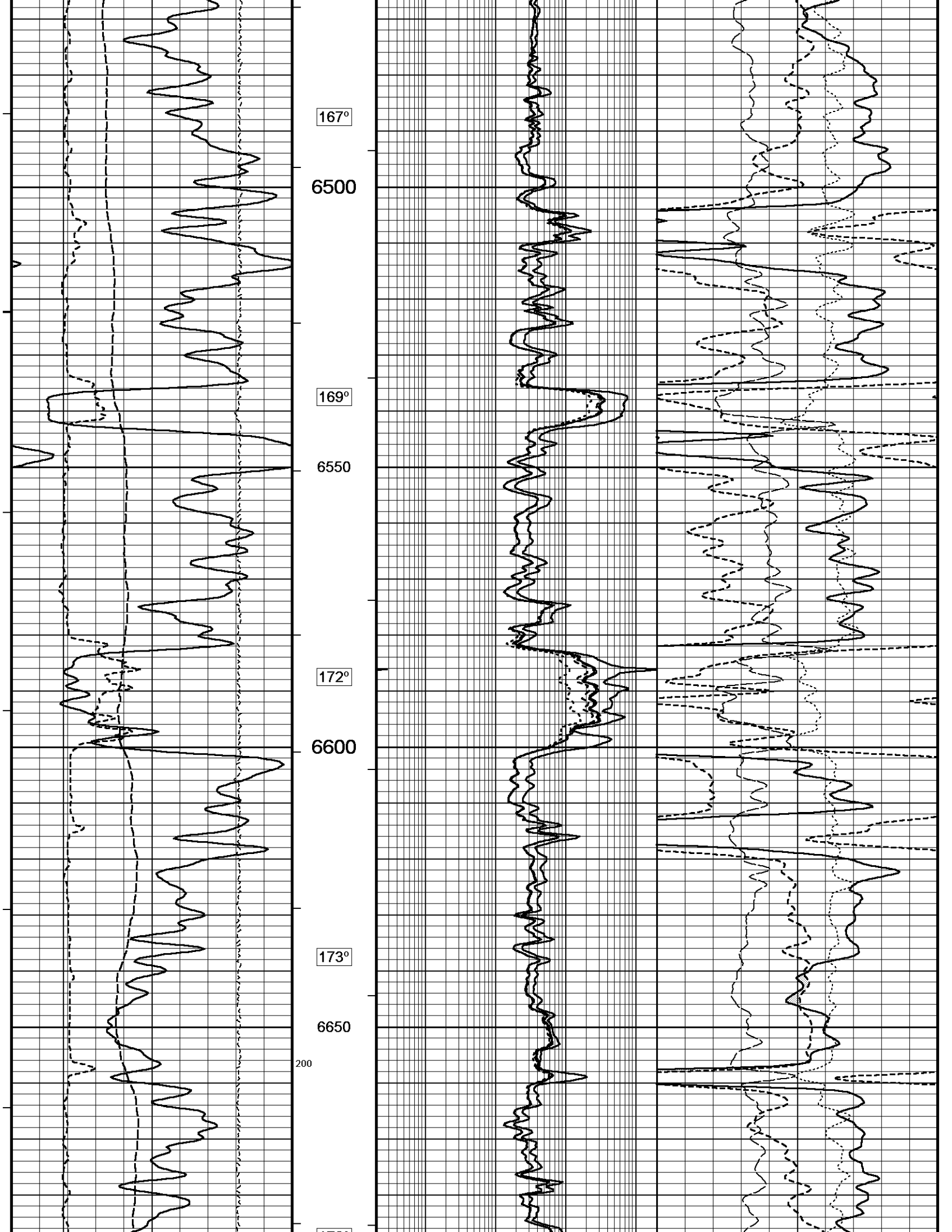
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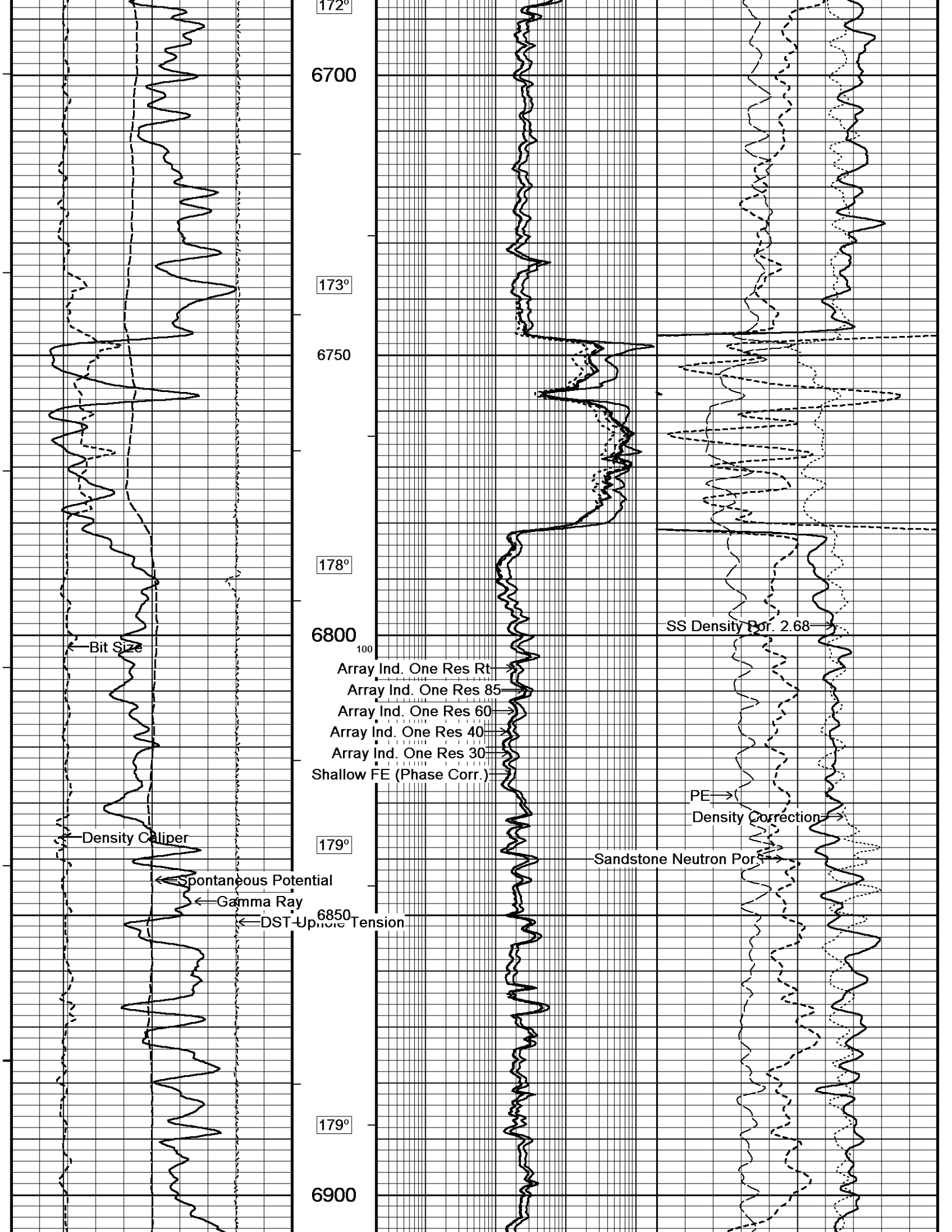
5800

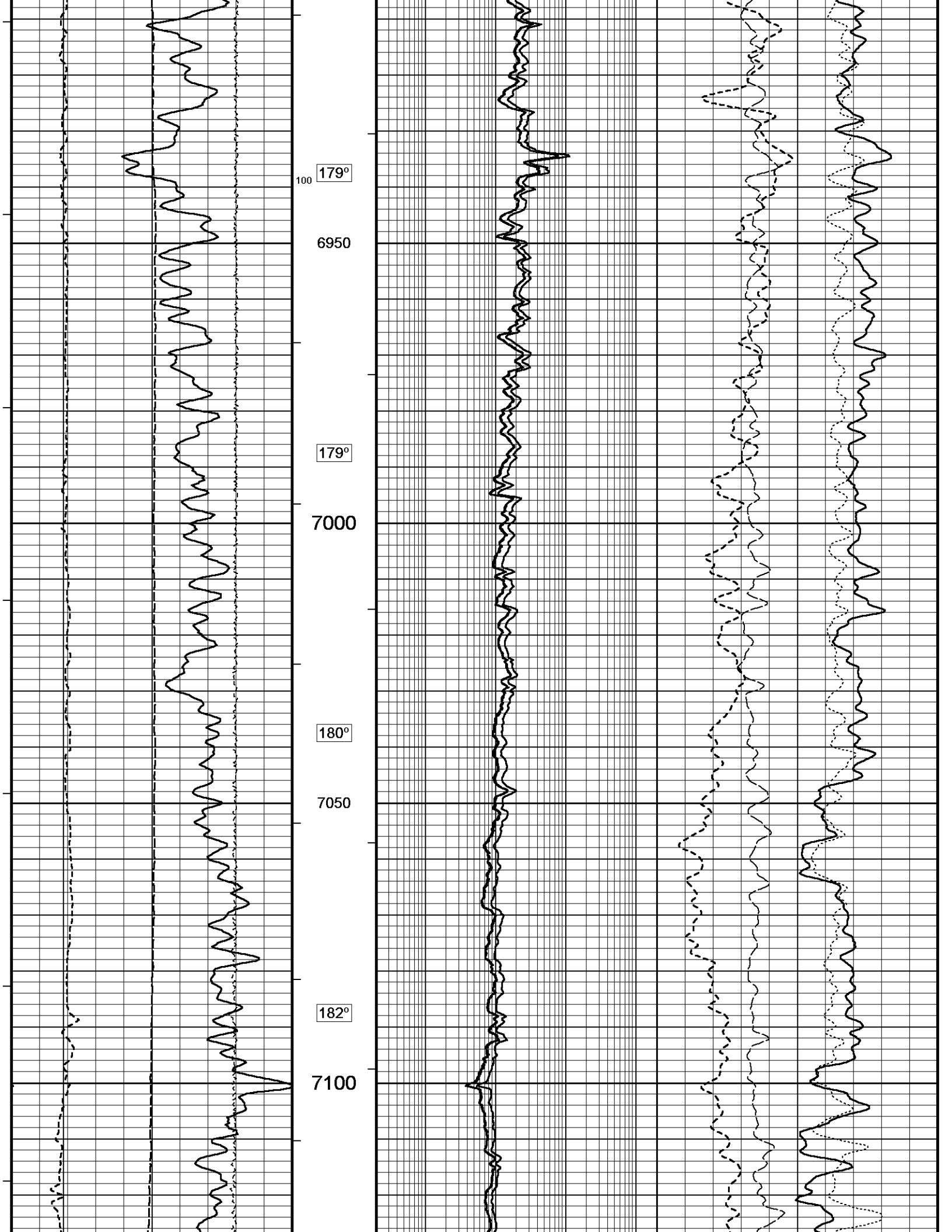


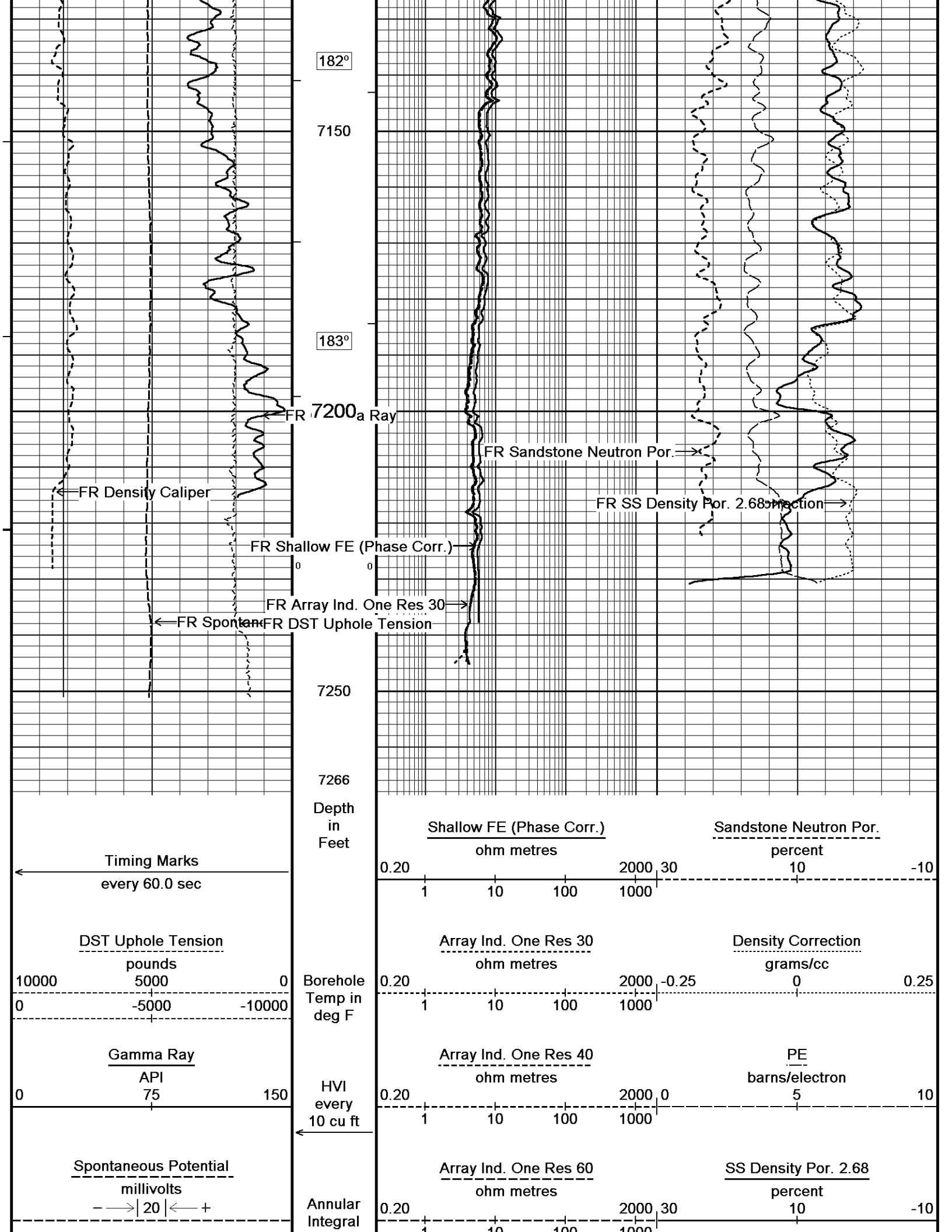


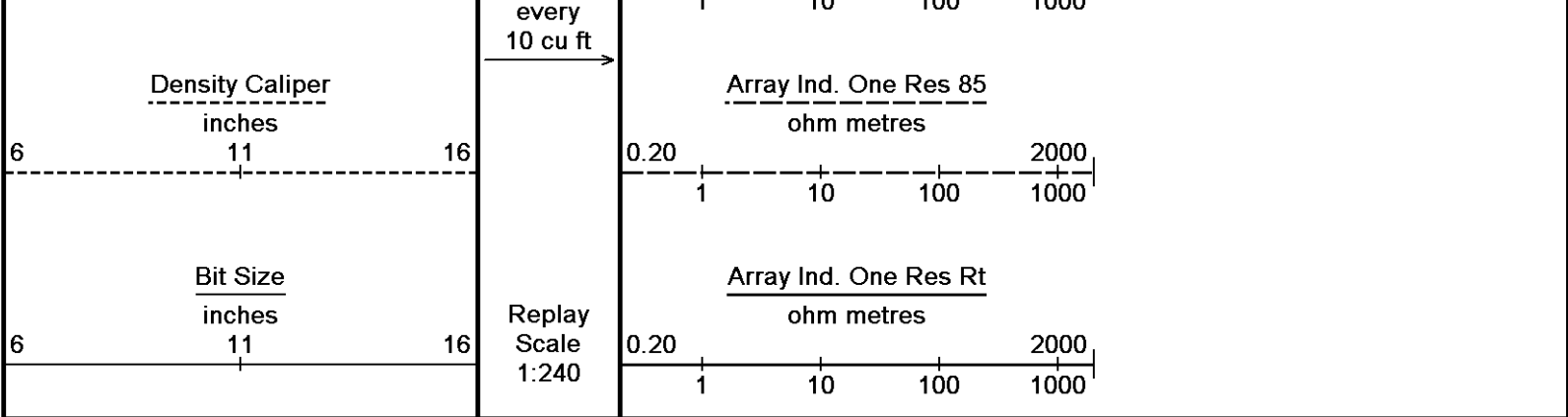










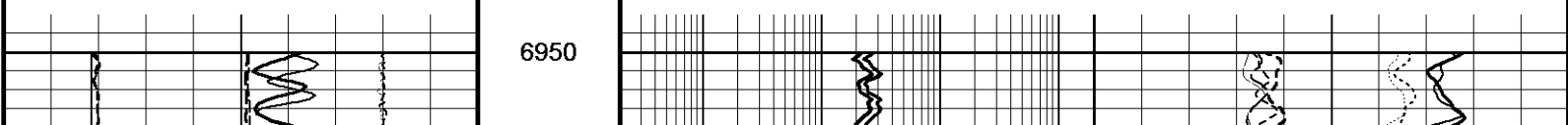
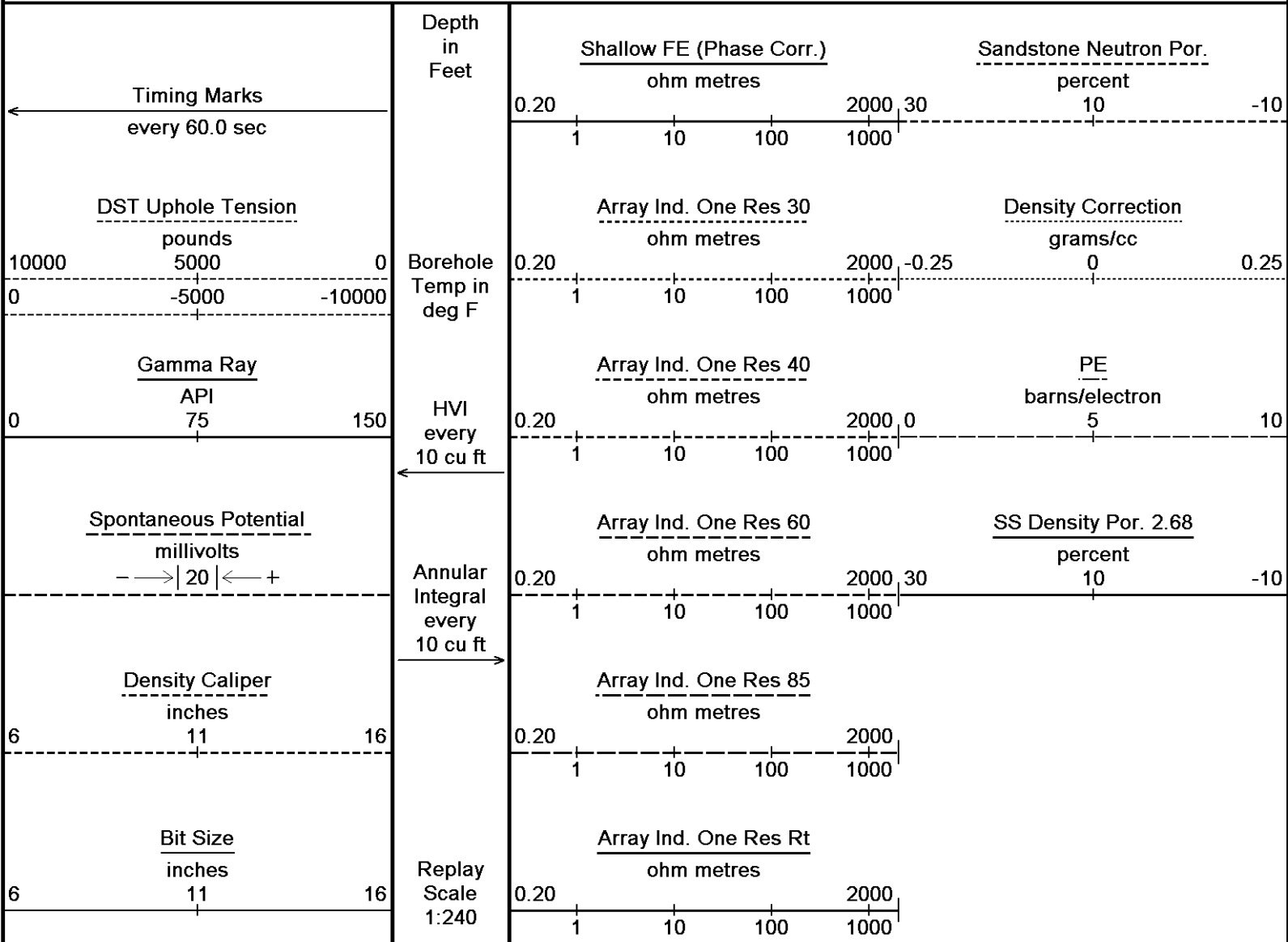


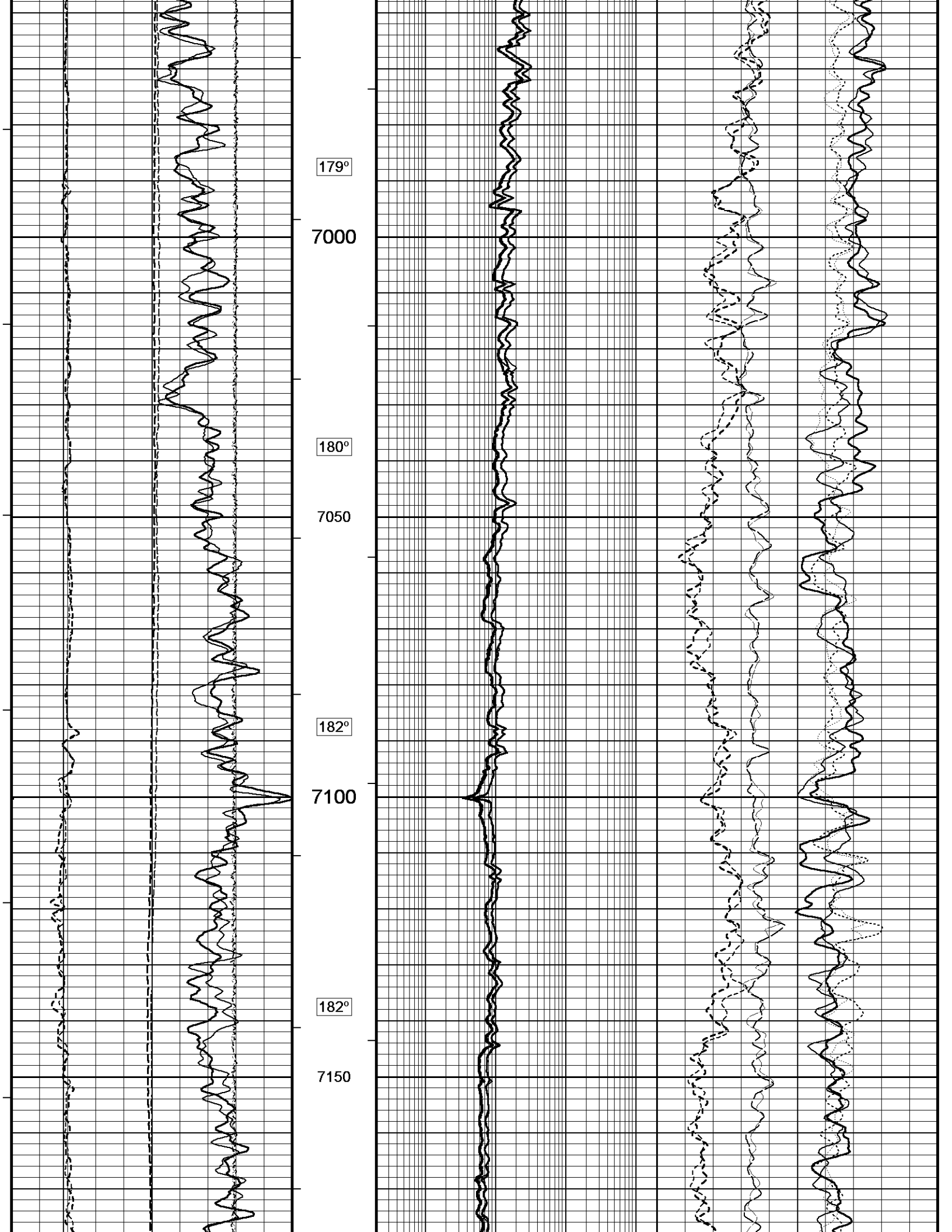
Depth Based Data - Maximum Sampling Increment 10.0cm
 Plotted on 23-APR-2011 19:58
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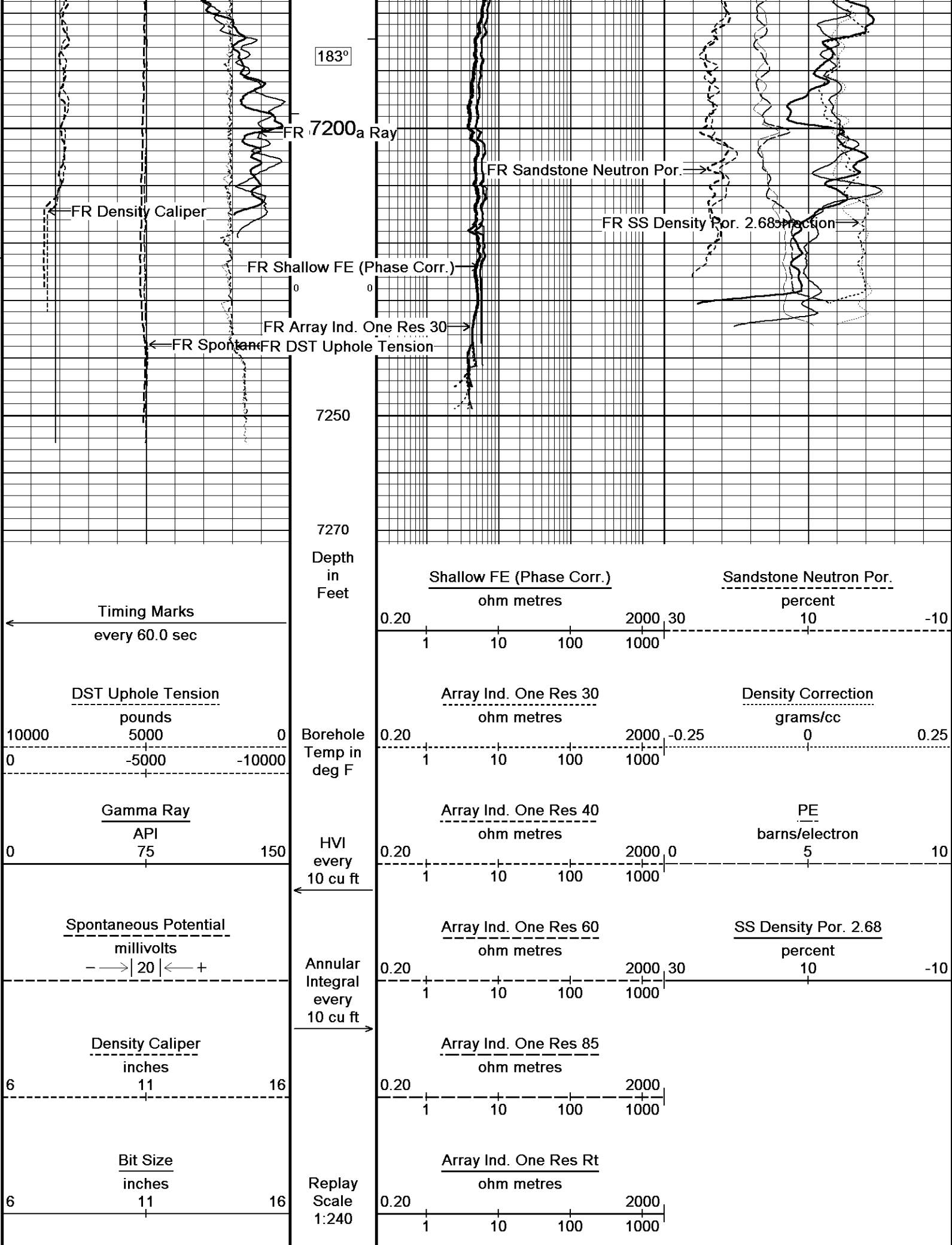
↑ **5 INCH MAIN LOG** ↑

↓ **OVERLAY** ↓

Depth Based Data - Maximum Sampling Increment 10.0cm
 Plotted on 23-APR-2011 19:58
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 Recorded on 23-APR-2011 17:24
 Filename: C:\Minimus\LOGS\Bill Barrett\GGU Miller 13A-31-691\Repeat.dta
 Recorded on 23-APR-2011 17:05
 System Versions: Logged with 11.02.3186 Plotted with 11.02.3186







183°

FR 7200_a Ray

FR Sandstone Neutron Por.

FR SS Density Por. 2.68 fraction

FR Shallow FE (Phase Corr.)

FR Array Ind. One Res 30

FR Spont Pot

FR DST Uphole Tension

7250

7270

Depth
in
Feet

Timing Marks
every 60.0 sec

Shallow FE (Phase Corr.)
ohm metres

Sandstone Neutron Por.
percent

DST Uphole Tension
pounds
10000 5000 0
0 -5000 -10000

Borehole
Temp in
deg F

Array Ind. One Res 30
ohm metres
0.20 2000 -0.25
1 10 100 1000

Density Correction
grams/cc
0 0.25

Gamma Ray
API
0 75 150

HVI
every
10 cu ft

Array Ind. One Res 40
ohm metres
0.20 2000 0
1 10 100 1000

PE
barns/electron
5 10

Spontaneous Potential
millivolts
- - -> | 20 | <- - +

Annular
Integral
every
10 cu ft

Array Ind. One Res 60
ohm metres
0.20 2000 30
1 10 100 1000

SS Density Por. 2.68
percent
10 -10

Density Caliper
inches
6 11 16

Array Ind. One Res 85
ohm metres
0.20 2000
1 10 100 1000

Bit Size
inches
6 11 16

Array Ind. One Res Rt
ohm metres
0.20 2000
1 10 100 1000

Replay
Scale
1:240

OVERLAY

BEFORE SURVEY CALIBRATION

C:\Minimus\LOGS\Bill Barrett\GGU Miller 13A-31-691\Main.dta

General Constants All 000 Last Edited on 23-APR-2011,13:28

General Parameters

Mud Resistivity	1.430	ohm-metres
Mud Resistivity Temperature	98.000	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 23-APR-2011 15:36

Reading No	Measured	Calibrated (lbs)
1	14756.19	0.00
2	16524.25	370.00

High Resolution Temperature Calibration MCG-D.A 287 Field Calibration on 23-APR-2011,13:07

	Measured	Calibrated(Deg F)
Lower	10.00	10.00
Upper	100.00	100.00

High Resolution Temperature Constants MCG-D.A 287 Last Edited on 22-FEB-2011,07:38

Pre-filter Length 11

SP Calibration MCG-D.A 287 Field Calibration on 23-APR-2011,13:07

	Measured	Calibrated (mV)
Reference 1	103.8	100.2
Reference 2	-96.9	-100.2

Gamma Calibration MCG-D.A 287 Field Calibration on 23-APR-2011 13:03

	Measured	Calibrated (API)
Background	113	76
Calibrator (Gross)	1469	988
Calibrator (Net)	1356	912

Gamma Constants MCG-D.A 287 Last Edited on 23-APR-2011,12:48

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

Neutron Calibration MDN-B.A 306 Base Calibration on 05-APR-2011 16:34
Field Check on 23-APR-2011 12:56

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far

Ratio	2836	89	3714	110
	31.929		33.764	
Field Calibrator at Base			Calibrated (cps)	
			1451	2165
Ratio			0.670	
Field Check			Calibrated (cps)	
			1494	2189
Ratio			0.683	

Neutron Constants MDN-B.A 306		Last Edited on 23-APR-2011,13:08		
Neutron Source Id	P44384B			
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-B.A 179		Base Calibration on 05-APR-2011 14:36		
		Field Check on 23-APR-2011 15:42		
Base Calibration		Measured	Calibrated (ohm-m)	
Reference 1		0.0	0.0	
Reference 2		962.8	126.8	
Base Check			280.1	
Field Check			280.8	

FE Constants MFE-B.A 179		Last Edited on 23-APR-2011,13:09		
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 23-APR-2011,13:10		
		Measured	Calibrated(Deg F)	
Lower		10.00	50.00	
Upper		100.00	212.00	

High Resolution Temperature Constants MAI-B.A 301		Last Edited on 07-FEB-2011,07:23		
Pre-filter Length	11			

Induction Calibration MAI-B.A 301		Base Calibration on 09-JUN-2010,11:38			
		Field Check on 23-APR-2011 15:41			
Base Calibration		Measured	Calibrated (mmho/m)		
Test Loop Calibration		Low	High	Low	High
Channel					
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	11.6	3734.4	11.6	3734.6
2	30.0	3445.3	30.0	3445.4
3	28.1	3059.5	28.1	3059.4
4	19.1	2020.9	19.1	2020.8
Deep	16.5	2017.0	16.5	2016.8
Medium	41.8	4070.4	41.8	4070.2
Shallow	45.8	5043.4	45.8	5043.6
Array Temperature	56.8		55.8	Deg F

Induction Constants MAI-B.A 301

Last Edited on 23-APR-2011,13:10

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	0.7756	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-C.A 220

Base Calibration on 22-MAR-2011 14:45
Field Calibration on 23-APR-2011,13:09

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	14594	3.98
2	23120	5.96
3	30832	7.96
4	39120	9.86
5	48144	11.88
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.87	7.96

Photo Density Calibration MPD-C.A 220

Base Calibration on 22-MAR-2011 15:35
Field Check on 23-APR-2011 15:47

Density Calibration

	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	54094	17586	53237	19445
Reference 2	24697	2444	25135	2545

Field Check at Base
1179.9 1201.9

Field Check
1180.0 1194.4

PE Calibration

	WS	Measured		Calibrated Ratio
		WH	Ratio	
Background	213	1042		
Reference 1	18385	53903	0.344	0.320
Reference 2	6809	24551	0.281	0.274

Field Check at Base
212.5 1042.1

Field Check
212.5 1042.8

Density Constants MPD-C.A 220

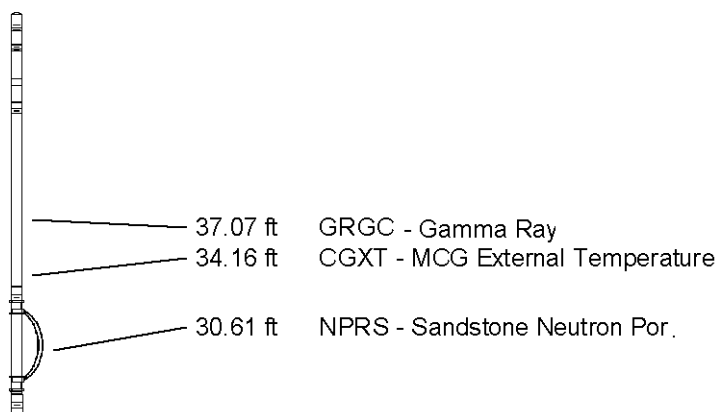
Last Edited on 23-APR-2011, 13:09

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	1.33	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	0.00	

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-B.A 306 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in



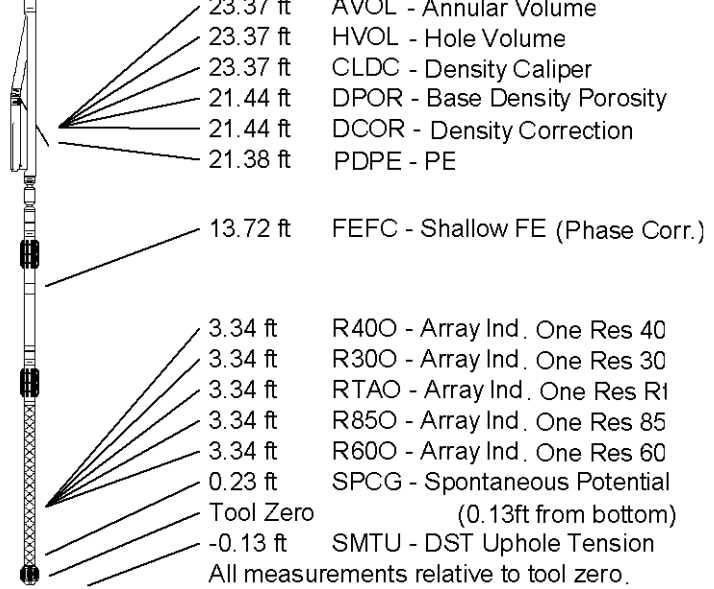
Compact Density/Caliper
 MPD-C.A 220 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

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: 46.67 ft Weight: 368.2 lb



COMPANY	BILL BARRETT CORPORATION
WELL	GGU MILLER 13A-31-691
FIELD	GIBSON GULCH
PROVINCE/COUNTY	GARFIELD
COUNTRY/STATE	U.S.A. / COLORADO

Elevation Kelly Bushing	6047.00	feet	First Reading	7235.00	
Elevation Drill Floor	6046.00	feet	Depth Driller	7240.00	feet
Elevation Ground Level	6029.00	feet	Depth Logger	7238.00	feet



COMPACT TRIPLE COMBO
 QUICKLOOK
 LOG

