



Weatherford

ARRAY INDUCTION / SFE
PHOTO DENSITY / NEUTRON
GAMMA RAY LOG

COMPANY SMITH PRODUCTION
 WELL WS PATOUT #1
 FIELD JEANERETTE
 PROVINCE/COUNTY SAINT MARY
 COUNTRY/STATE U.S.A. / LOUISIANA
 LOCATION SEC 68 TWN 13S RGE 8E
 PERMIT NUMBER 246651

SEC 68 TWP 13S RGE 8E Other Services SWC
 Longitude TVD
 API Number 17-101-22497
 Permanent Datum GL, Elevation 10 feet
 Log Measured From KB Elevations: KB 27.00
 Drilling Measured From KB DF 26.00
 GL 10.00

Date	29-AUG-2013
Run Number	ONE
Service Order	3542524
Depth Driller	8065.00 feet
Depth Logger	8067.00 feet
First Reading	8063.66 feet
Last Reading	1522.00 feet
Casing Driller	1521.00 feet
Casing Logger	1522.00 feet
Bit Size	8.500 inches
Hole Fluid Type	WATER BASED
Density / Viscosity	9.90 lb/USg 40.00 CP
PH / Fluid Loss	9.40 14.00 ml/30Min
Sample Source	CIRC TANK
Rm @ Measured Temp	1.20 @ 80.0 ohm-m
Rmf @ Measured Temp	0.90 @ 80.0 ohm-m
Rmc @ Measured Temp	1.80 @ 90.0 ohm-m
Source Rmf / Rmc	CALC CALC
Rm @ BHT	0.56 @175.0 ohm-m
Time Since Circulation	8 HOURS
Max Recorded Temp	175.00 deg F
Equipment / Base	13227 TYLER
Recorded By	B. BEASLEY
Witnessed By	D. OPRY
	H. ANTIE

REMARKS

ALL TOOLS RUN IN COMBINATION: MAI-MFE-MPD-MDN-MCG-SHA

HARDWARE:
 MAI: HOLE FINDER USED
 MDN: DUAL ECCENTERED BOWSPRING USED.
 MPD: 8 INCH PROFILE PLATE AND TWO STABILIZERS USED.

DENSITY POROSITY MEASURED USING SANDSTONE MATRIX (2.65).
 ANNULAR HOLE VOLUME CALCULATED ASSUMING 5.5" CASING.

LOGGED INTERVALS AS PER CLIENT REQUEST.

BOREHOLE SIZE AND RUGOSITY AFFECTS LOG QUALITY.

CREW: COY MARTIN, RICKEY PARISH
 THANK YOU FOR CHOOSING WEATHERFORD WIRELINE!!!

BOREHOLE RECORD

Last Edited: 29-AUG-2013 09:41

Bit Size inches	Depth From feet	Depth To feet
8.500	1521.00	8065.00

CASING RECORD

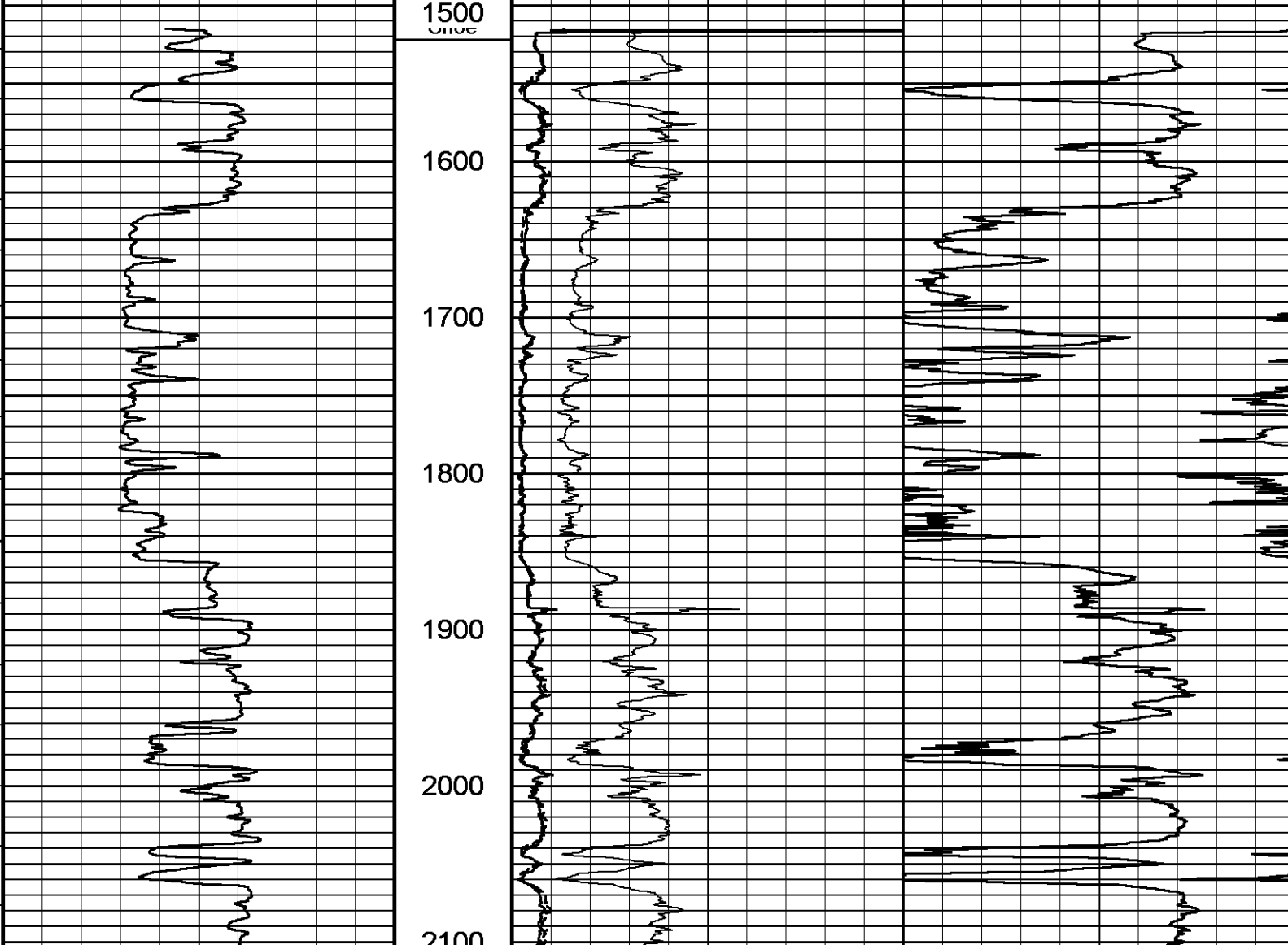
Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	9.625	0.00	1521.00	36.00

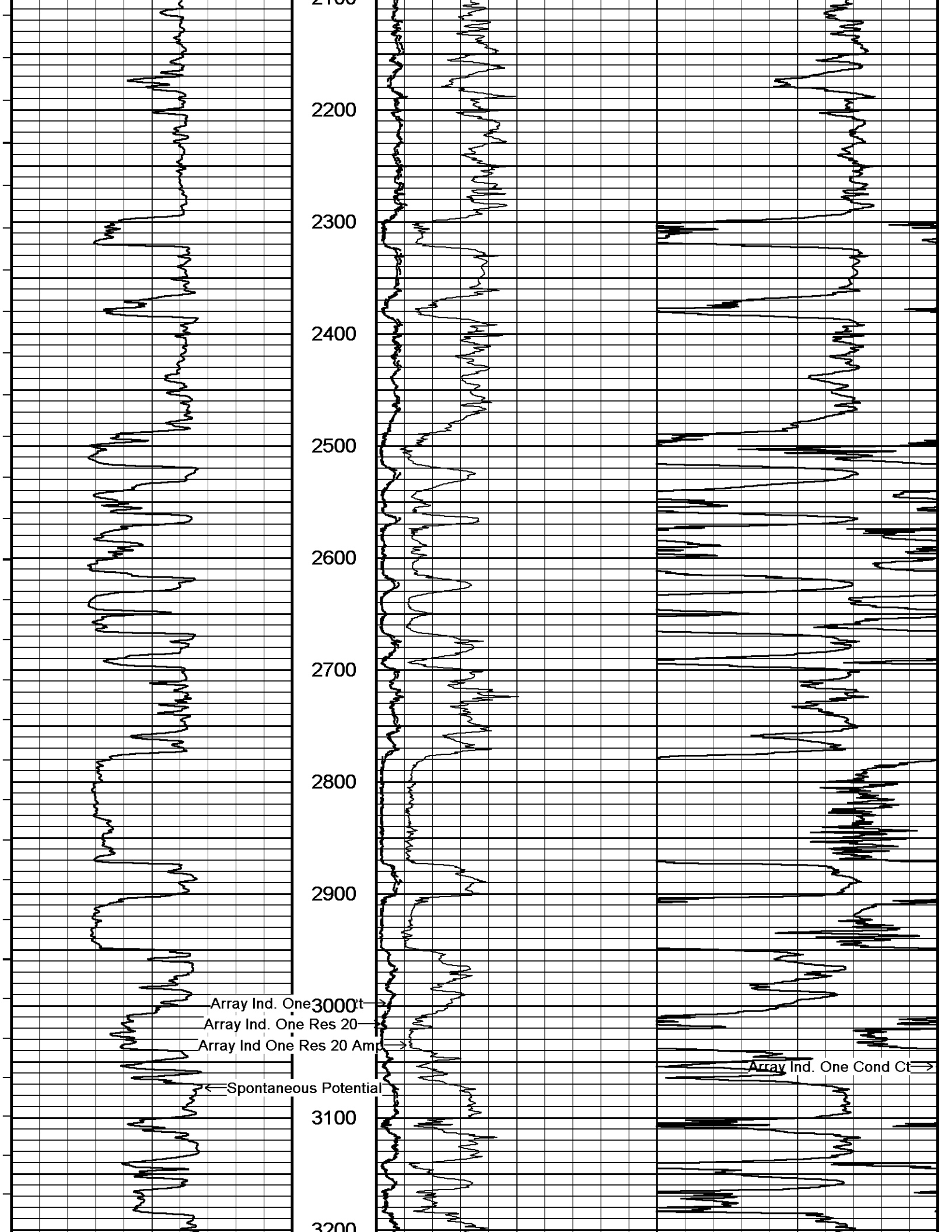
All interpretations are opinions based on electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or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

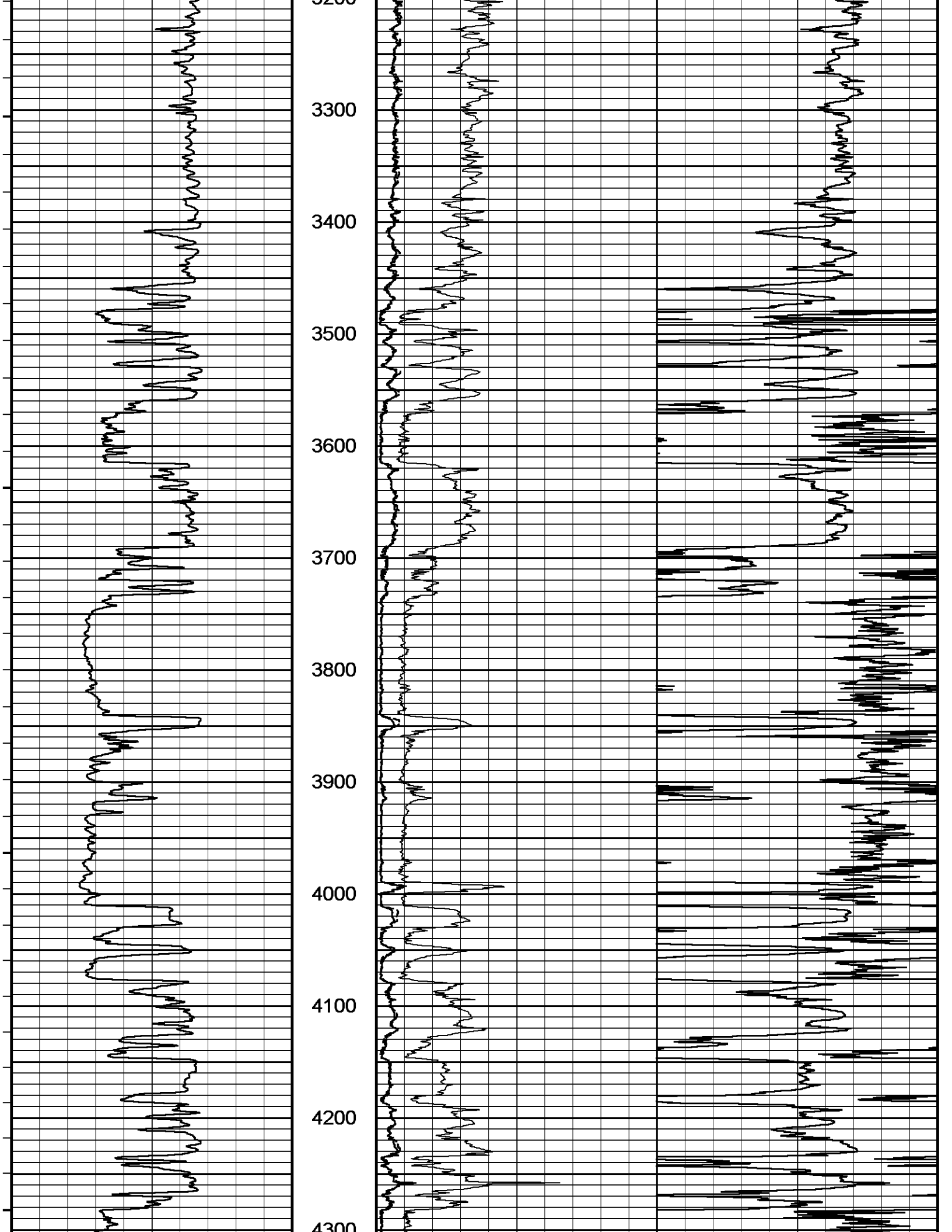
1 INCH MAIN LOG

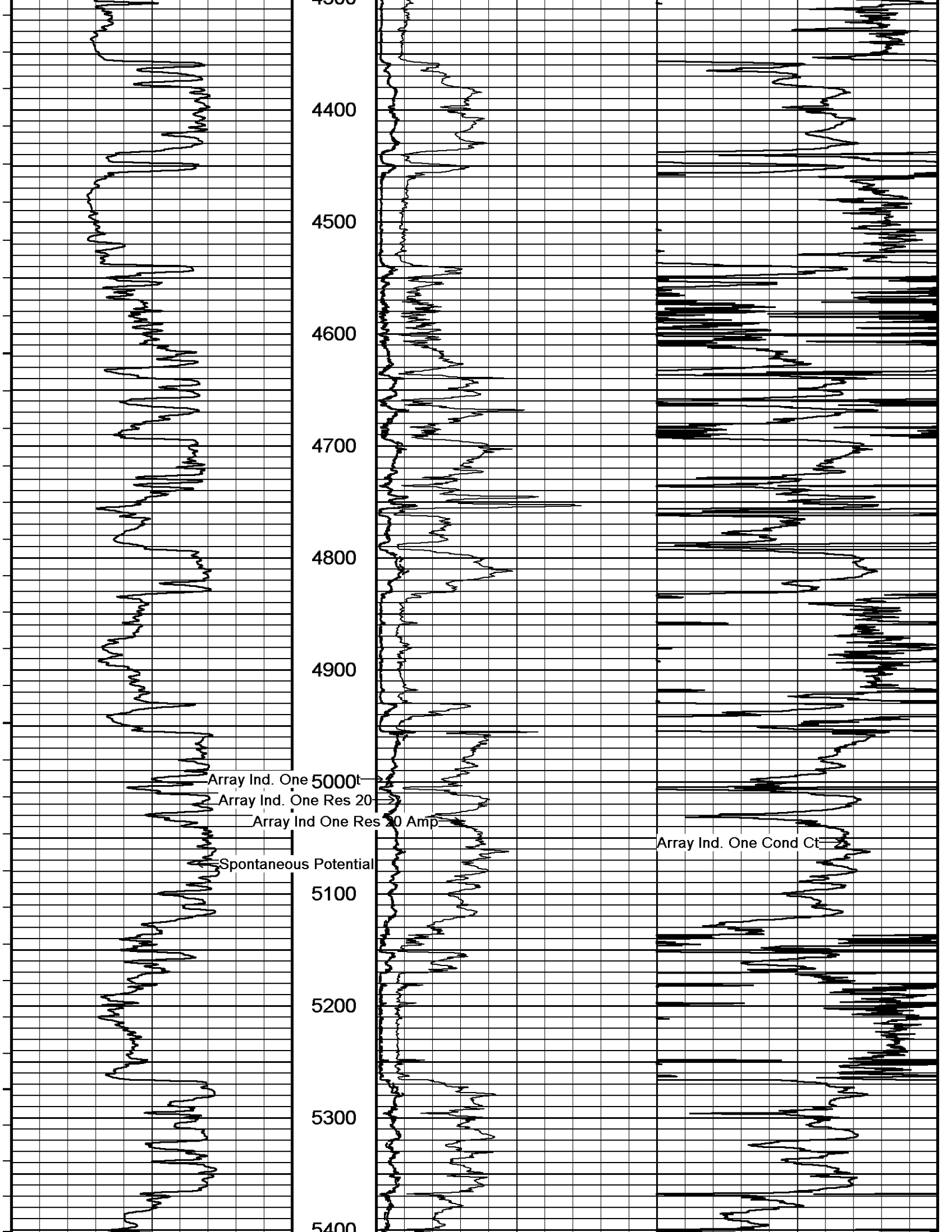
Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 29-AUG-2013 18:05
 Filename: C:\DATA\Smith Production\WS Patout #1\MAINREP.dta Recorded on 29-AUG-2013 12:44
 System Versions: Processed with 13.06.9804 Plotted with 13.06.9804

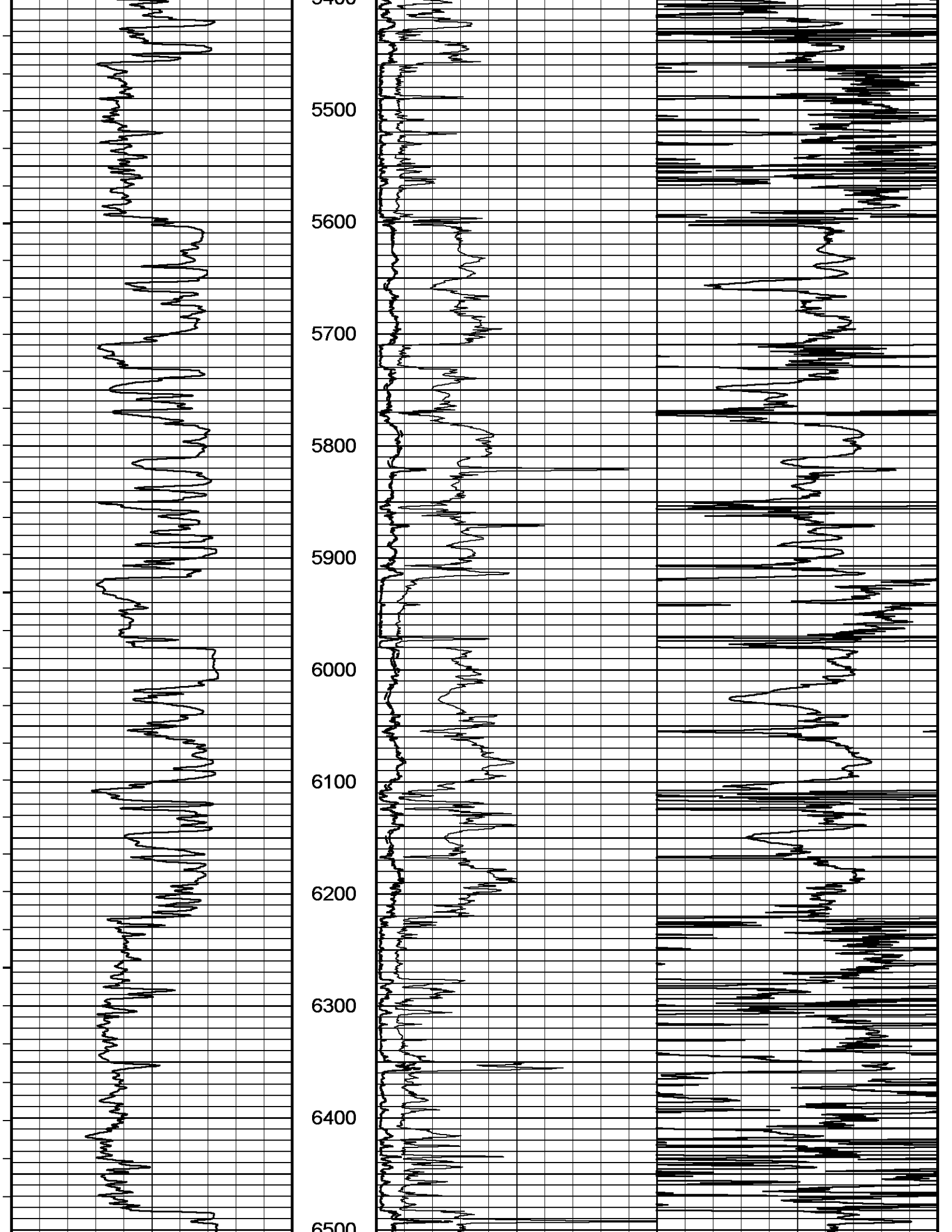
<p style="text-align: center;">Timing Marks every 60.0 sec</p> <hr/> <p style="text-align: center;">Spontaneous Potential millivolts --> 20 ←+</p>	<p style="text-align: center;">Depth in Feet</p>	<p style="text-align: center;"><u>Array Ind One Res 20 Amp</u> ohm metres</p> <p style="text-align: center;">0 1 2 4000 0</p> <hr/> <p style="text-align: center;">8000 6000 4000</p> <p style="text-align: center;"><u>Array Ind. One Res 20</u> ohm metres</p> <p style="text-align: center;">0 5 10</p> <hr/> <p style="text-align: center;">0 50 100</p> <p style="text-align: center;"><u>Array Ind. One Res Rt</u> ohm metres</p> <p style="text-align: center;">0 5 10</p> <hr style="border-top: 1px dashed black;"/> <p style="text-align: center;">0 50 100</p>	<p style="text-align: center;"><u>Array Ind. One Cond Ct</u> mmhos</p> <p style="text-align: center;">2000 0</p> <hr/> <p style="text-align: center;">6000 4000</p>
<p>Replay Scale 1:1200</p>			

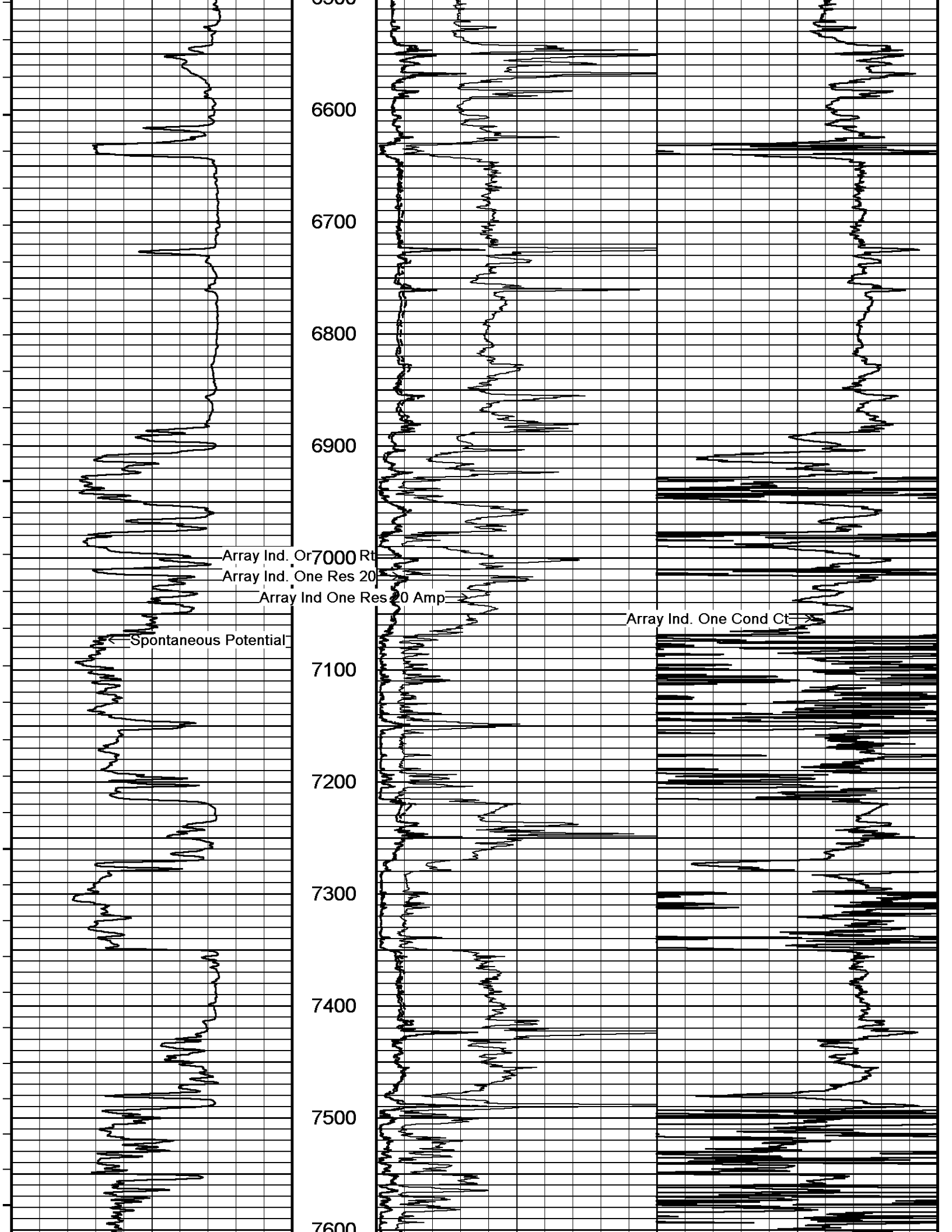


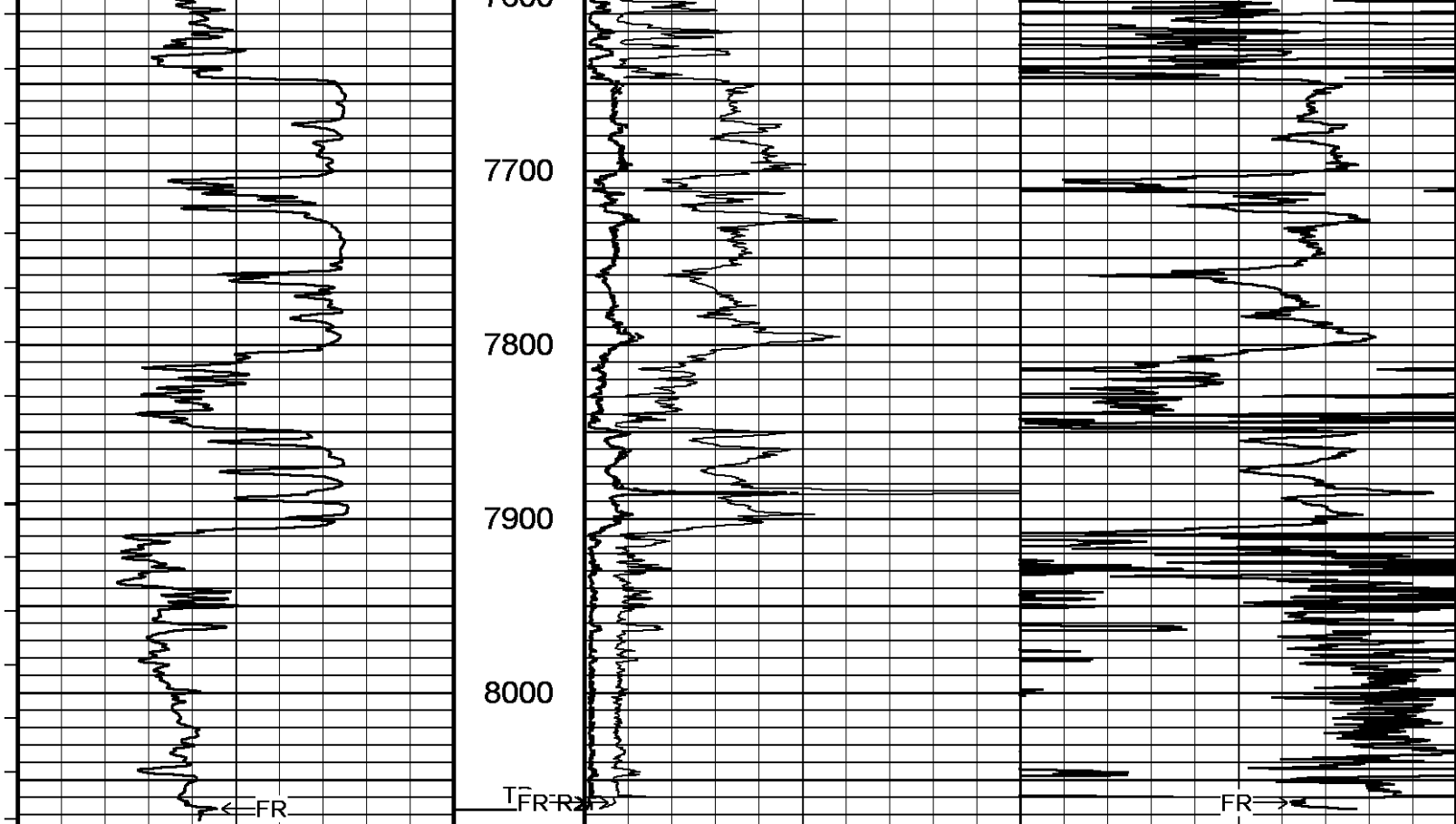












← FR

Timing Marks
every 60.0 sec

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

7600

7700

7800

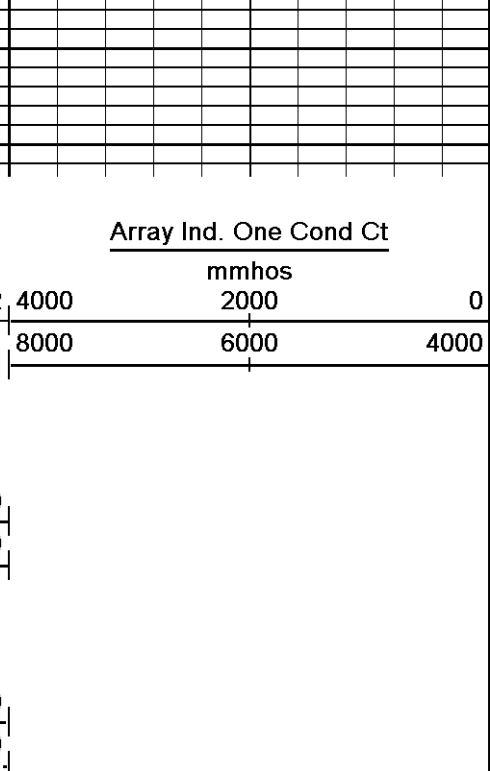
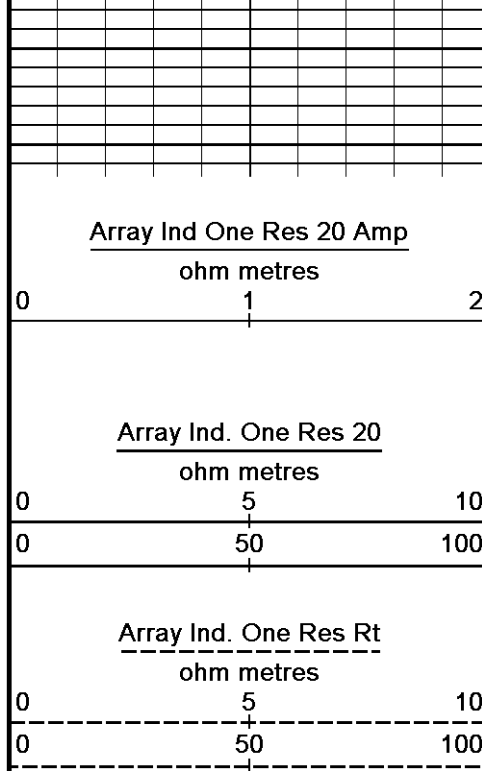
7900

8000

8100

Depth
in
Feet

Replay
Scale
1:1200



Depth Based Data - Maximum Sampling Increment 10.0cm

Filename: C:\DATA\Smith Production\WS Patout #1\MAINREP.dta

System Versions: Processed with 13.06.9804 Plotted with 13.06.9804

Plotted on 29-AUG-2013 18:05

Recorded on 29-AUG-2013 12:44

↑ 1 INCH MAIN LOG ↑

↓ 5 INCH MAIN LOG ↓

Depth Based Data - Maximum Sampling Increment 10.0cm

Filename: C:\DATA\Smith Production\WS Patout #1\MAINREP.dta

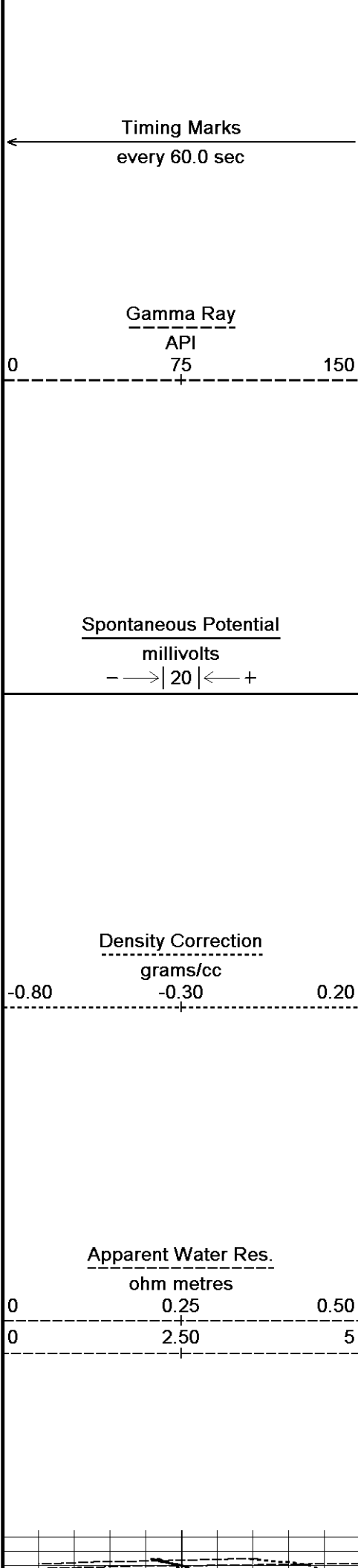
System Versions: Processed with 13.06.9804 Plotted with 13.06.9804

Plotted on 29-AUG-2013 18:05

Recorded on 29-AUG-2013 12:44

Depth in

Shallow EE



Feet

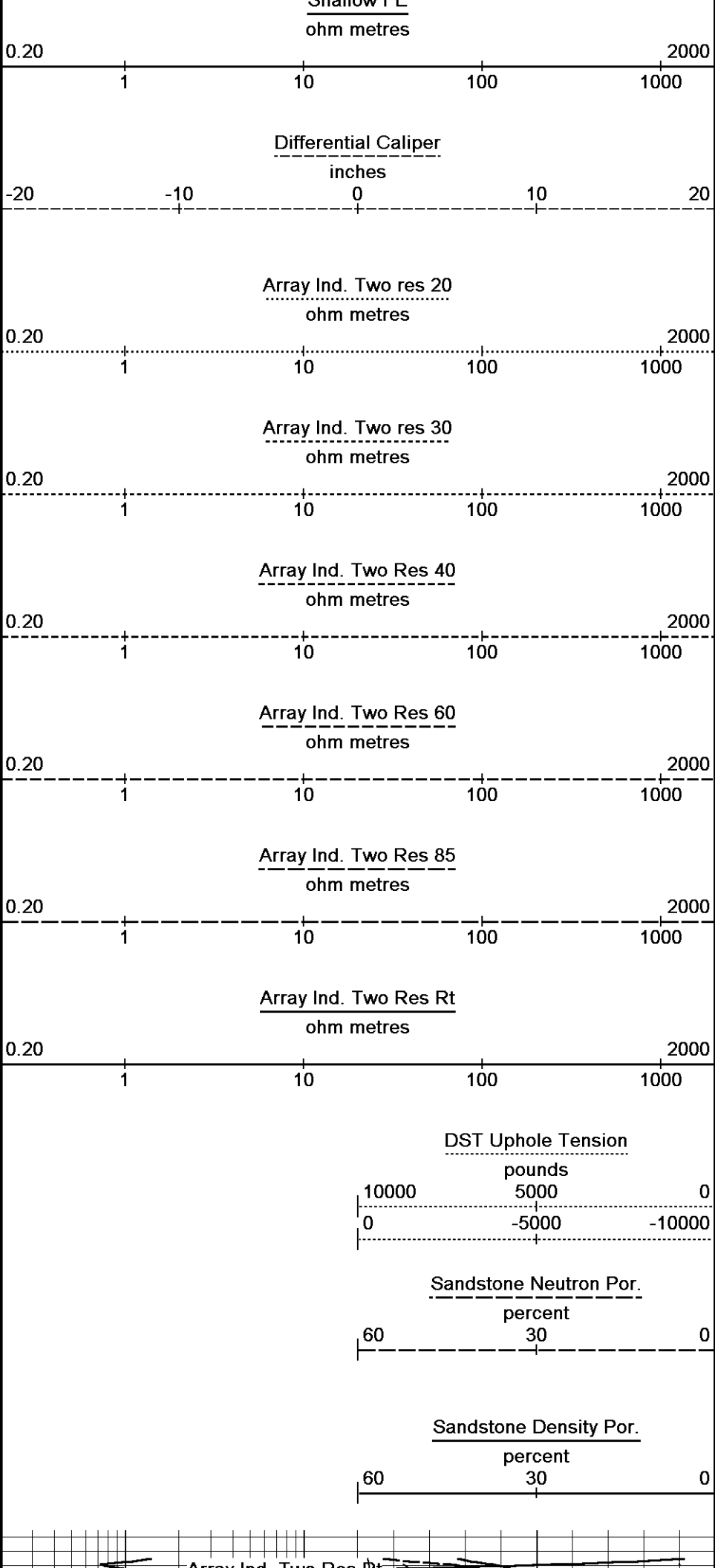
Borehole Temp in deg F

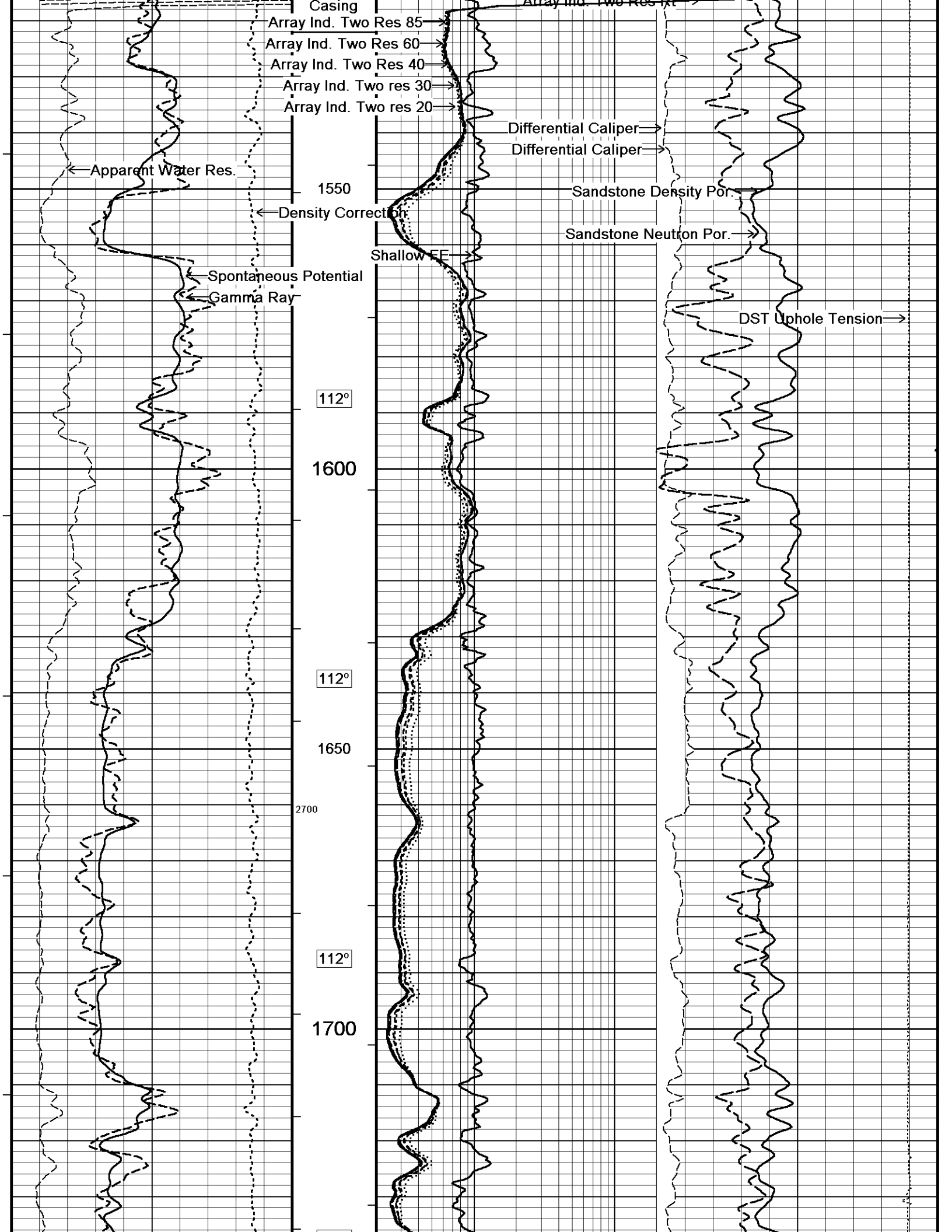
HVI every 10 cu ft

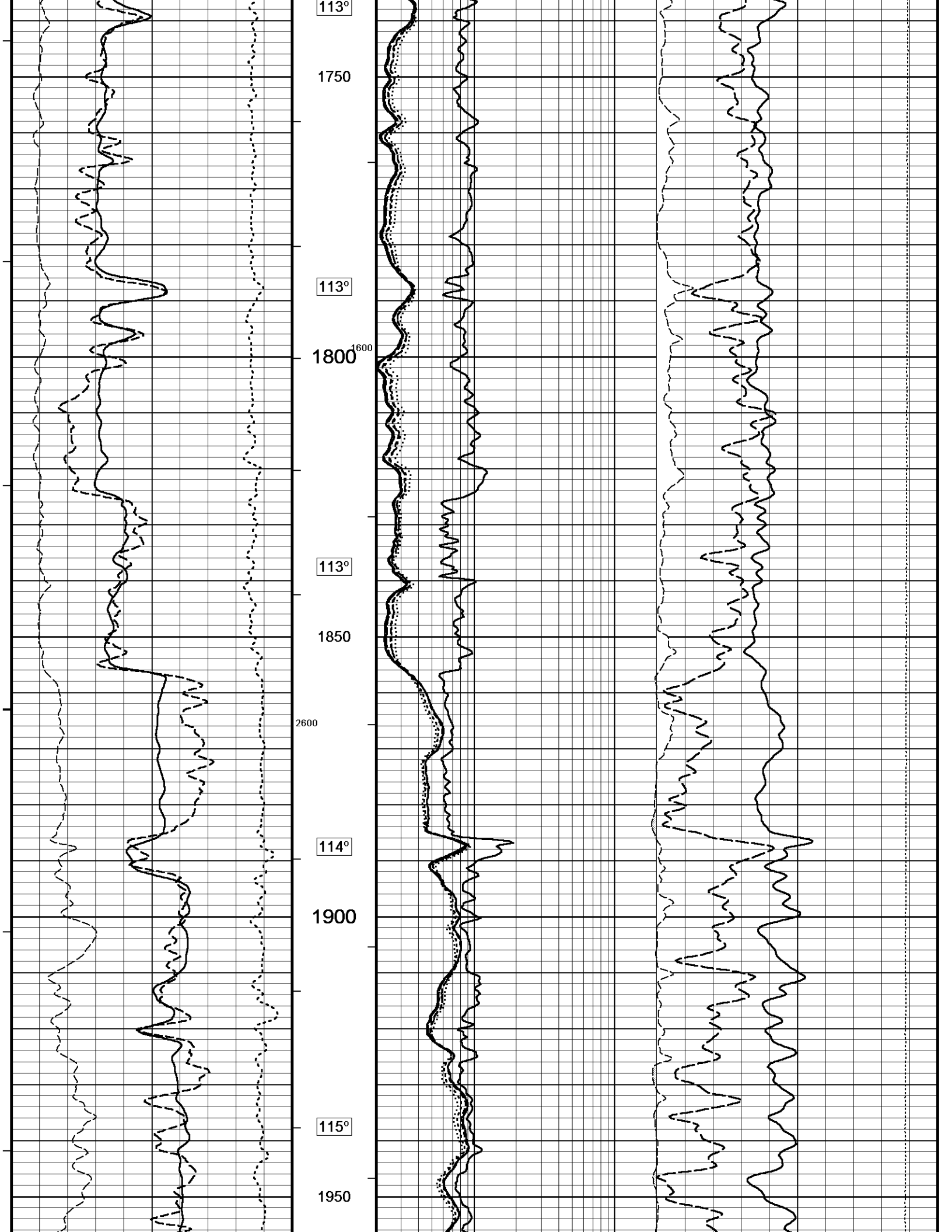
Annular Integral every 10 cu ft

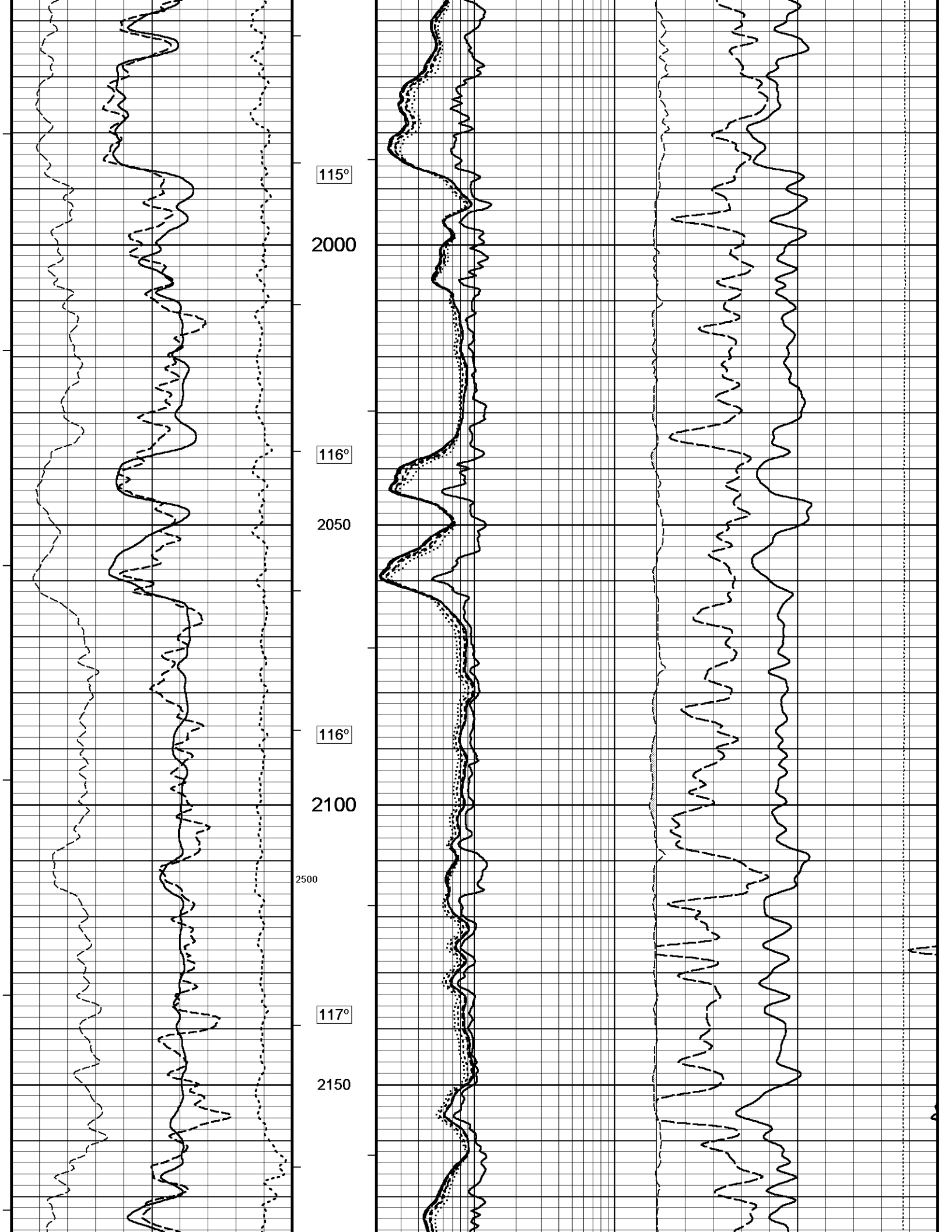
Replay Scale 1:240

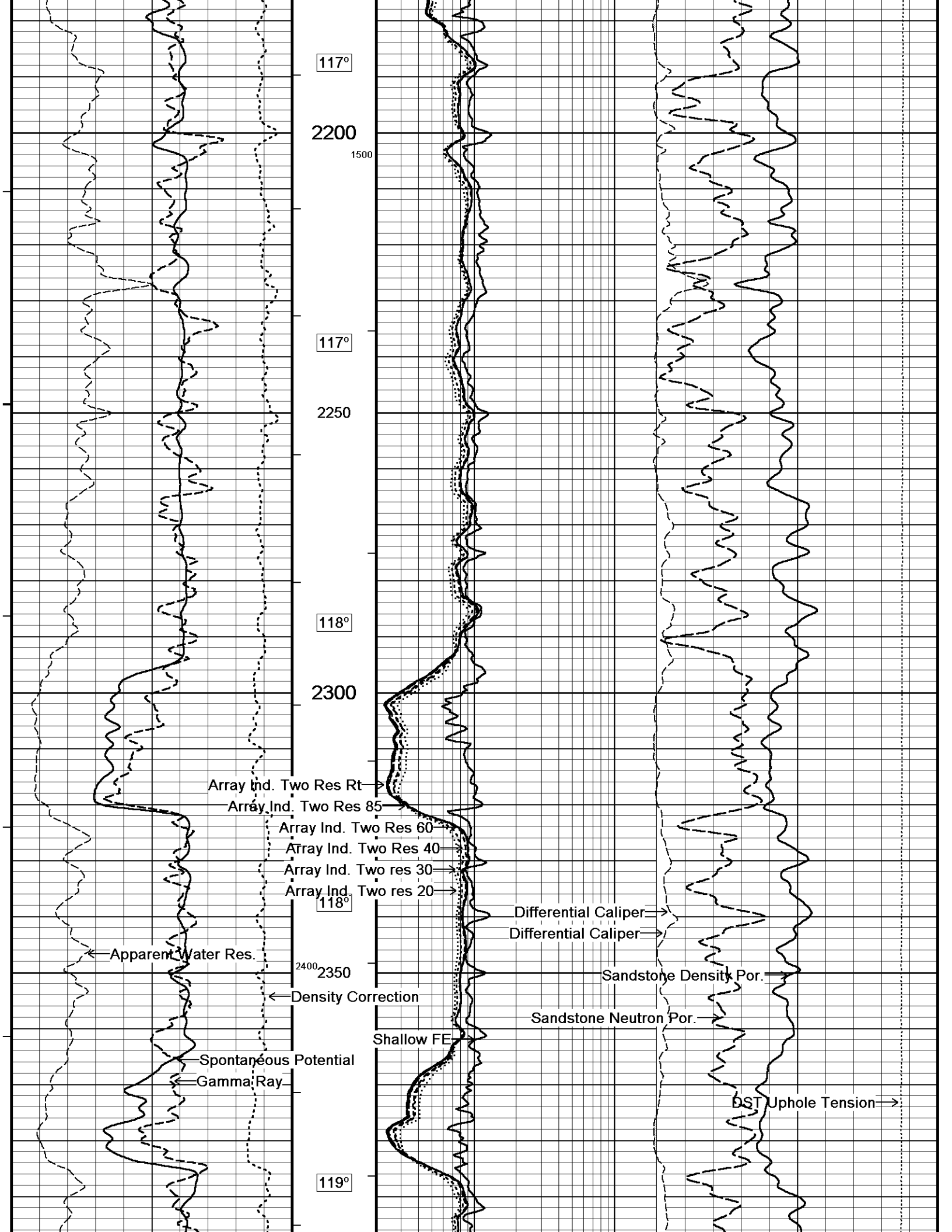
1514

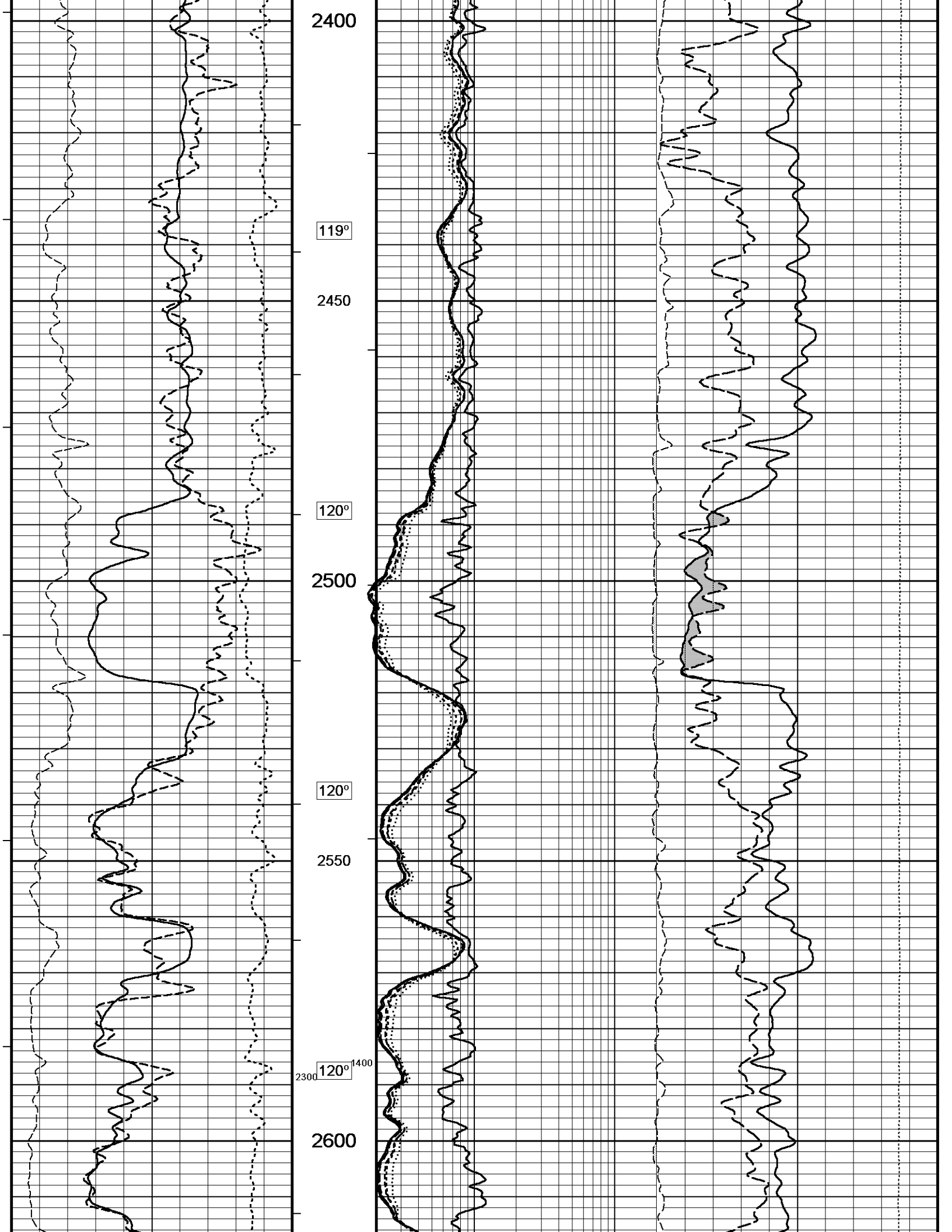


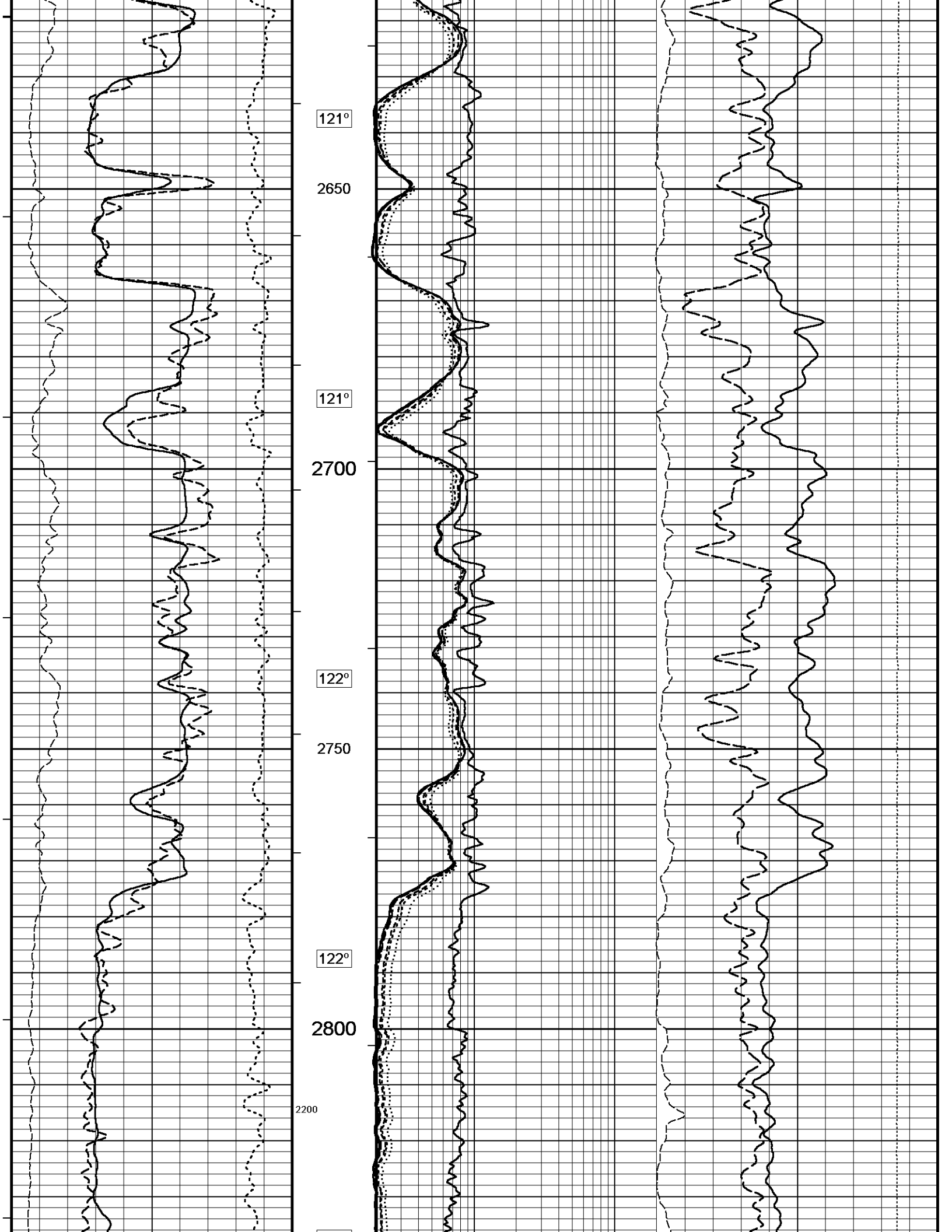


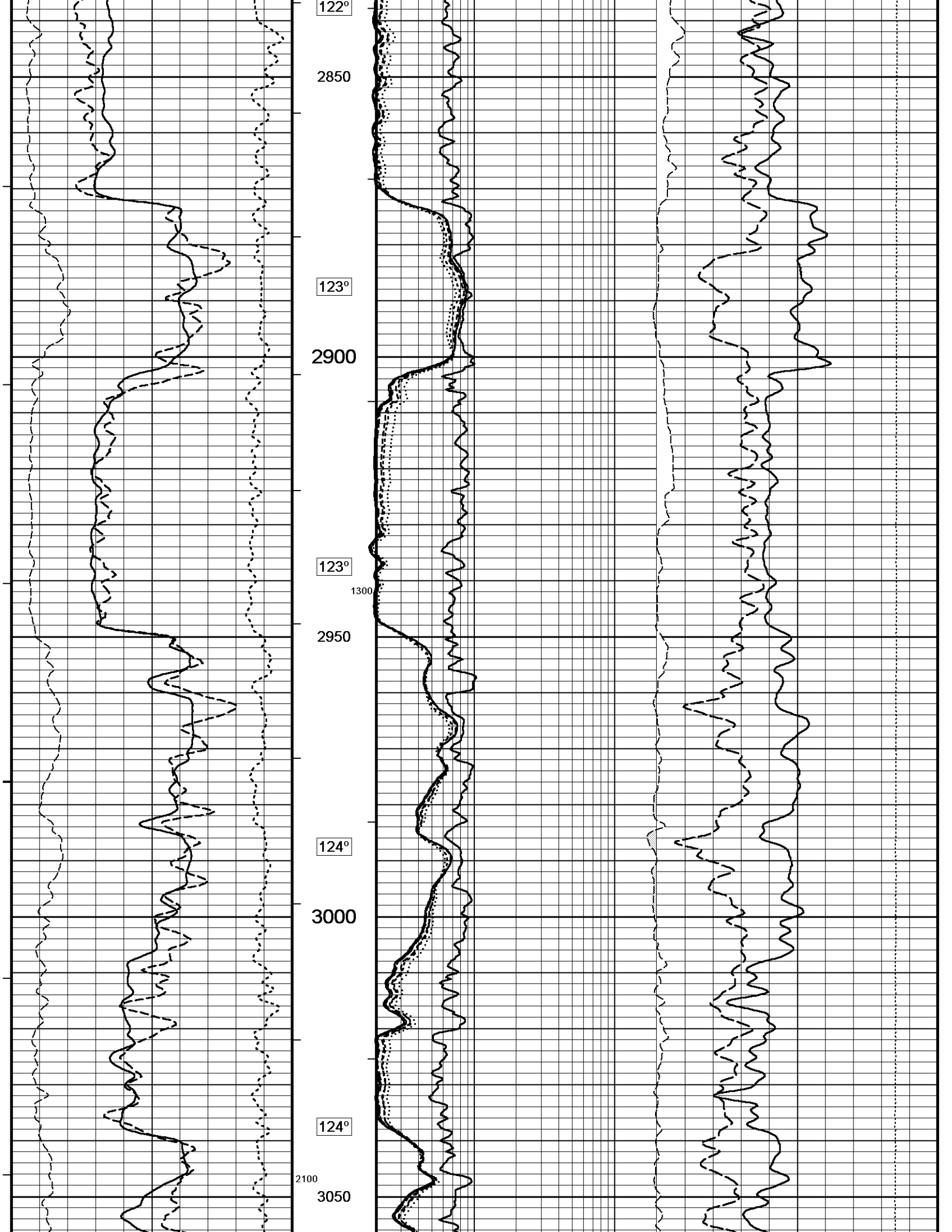


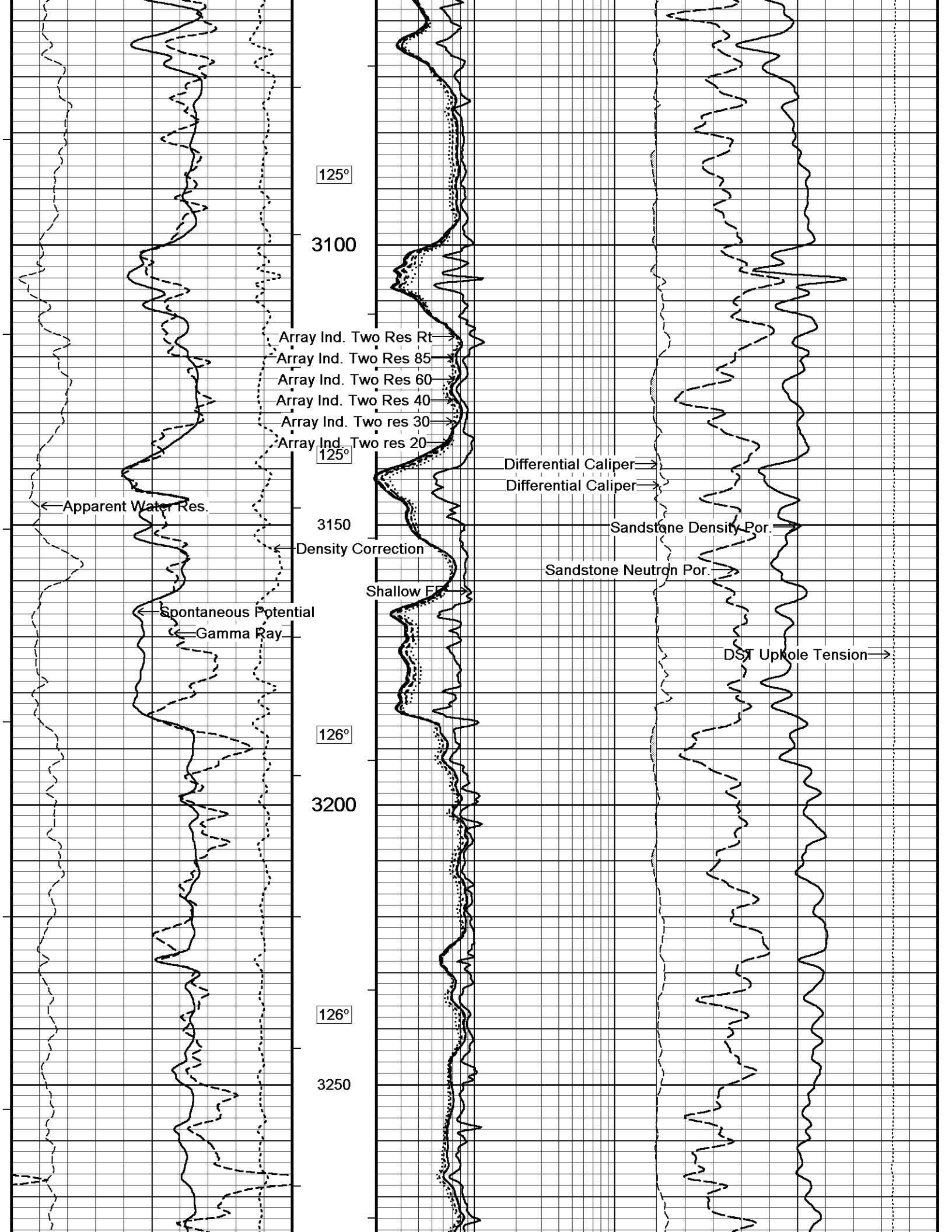


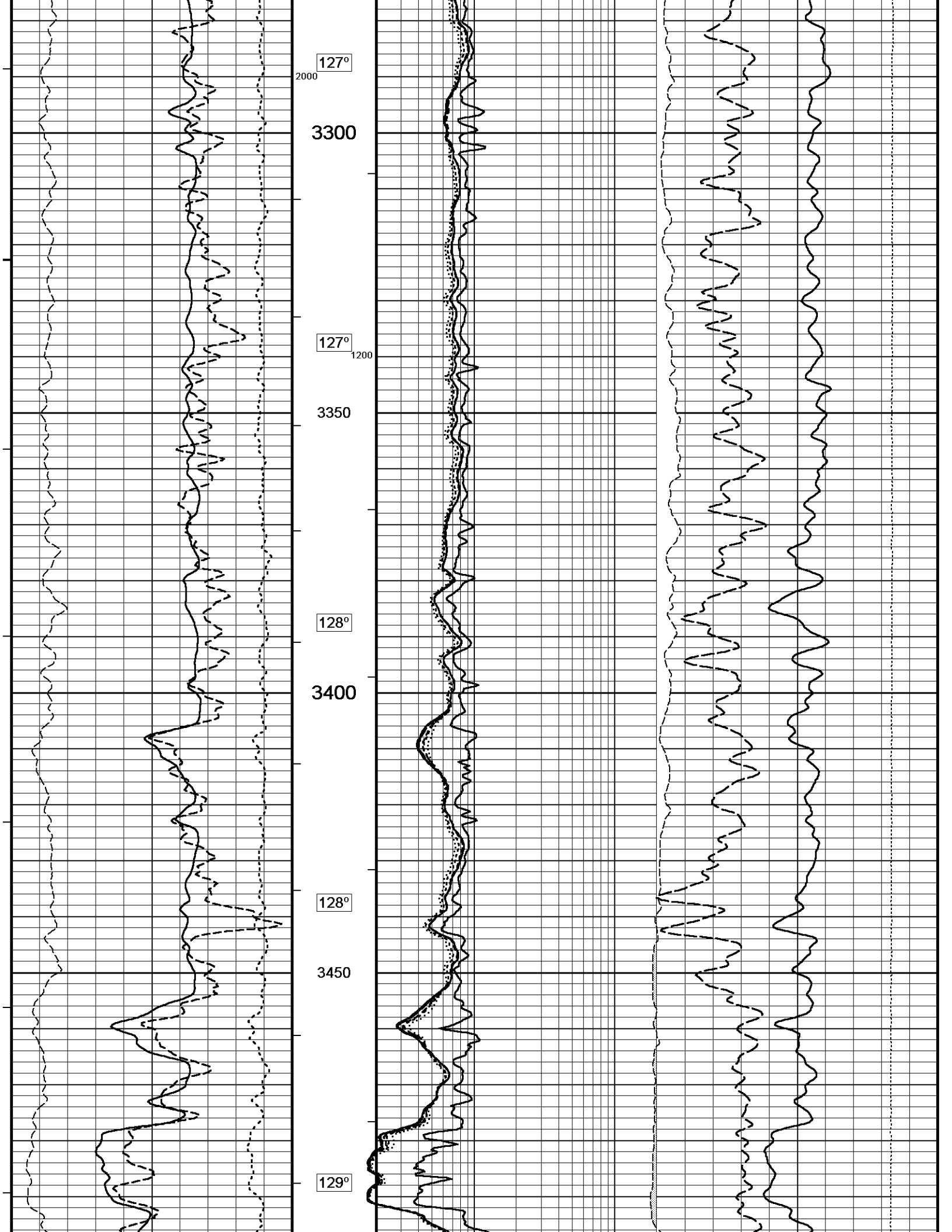


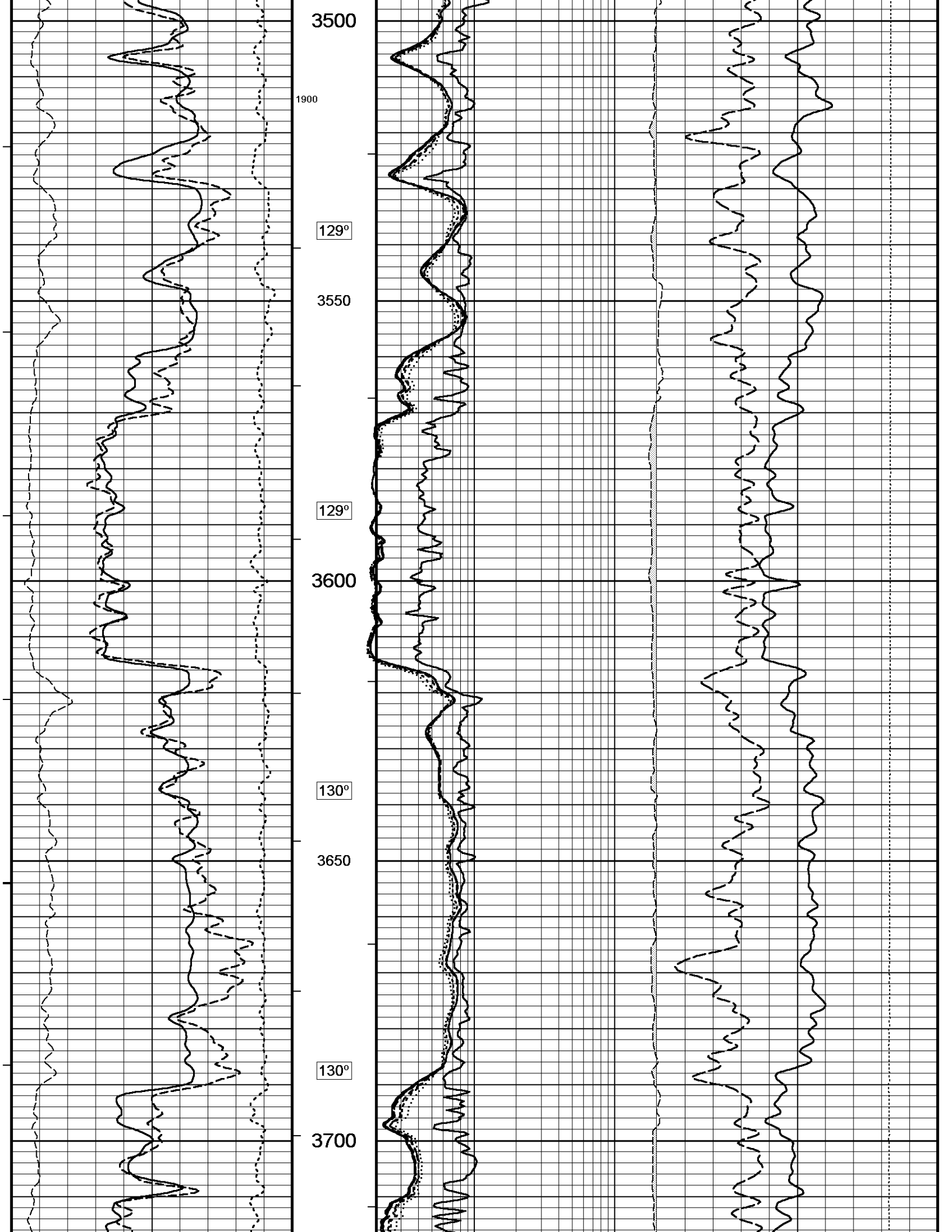


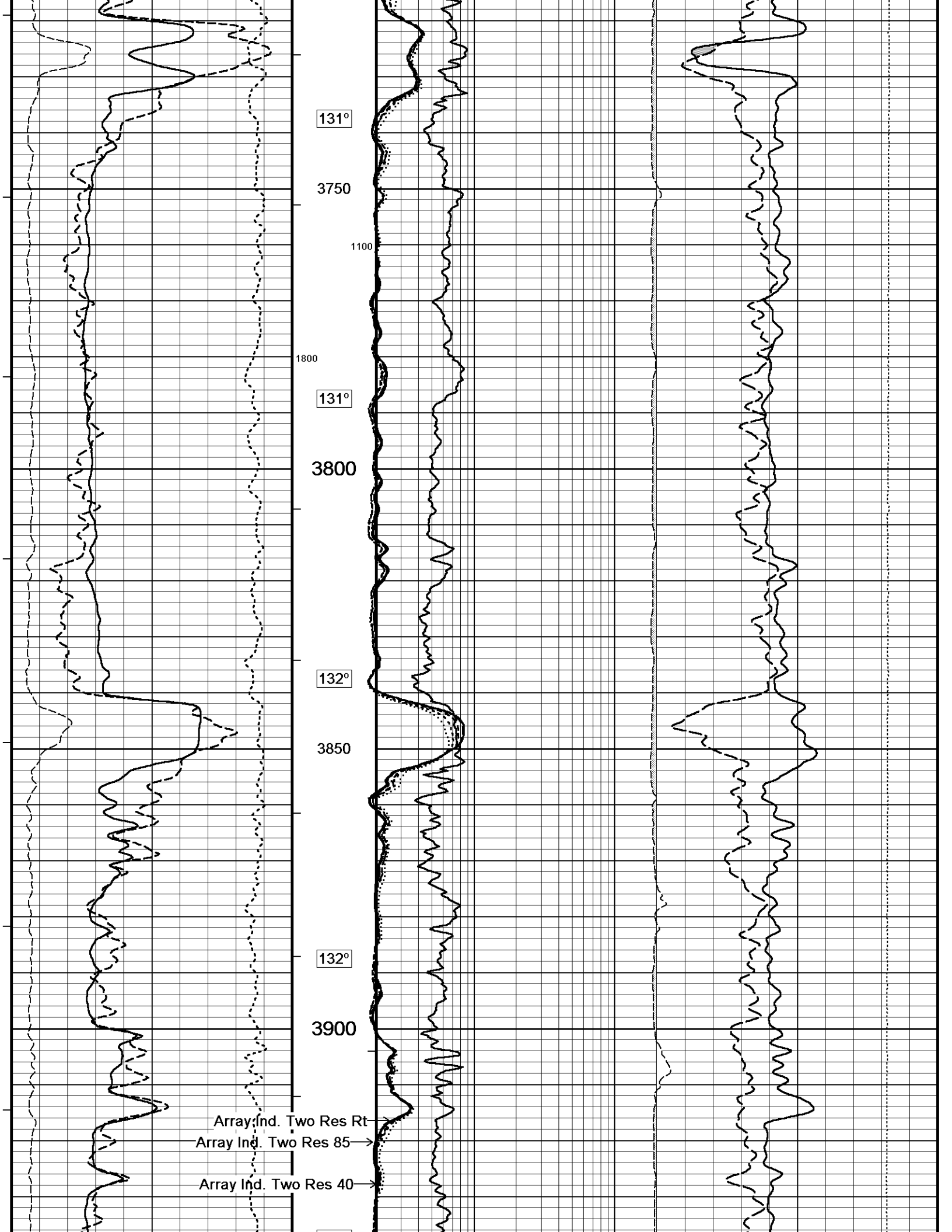


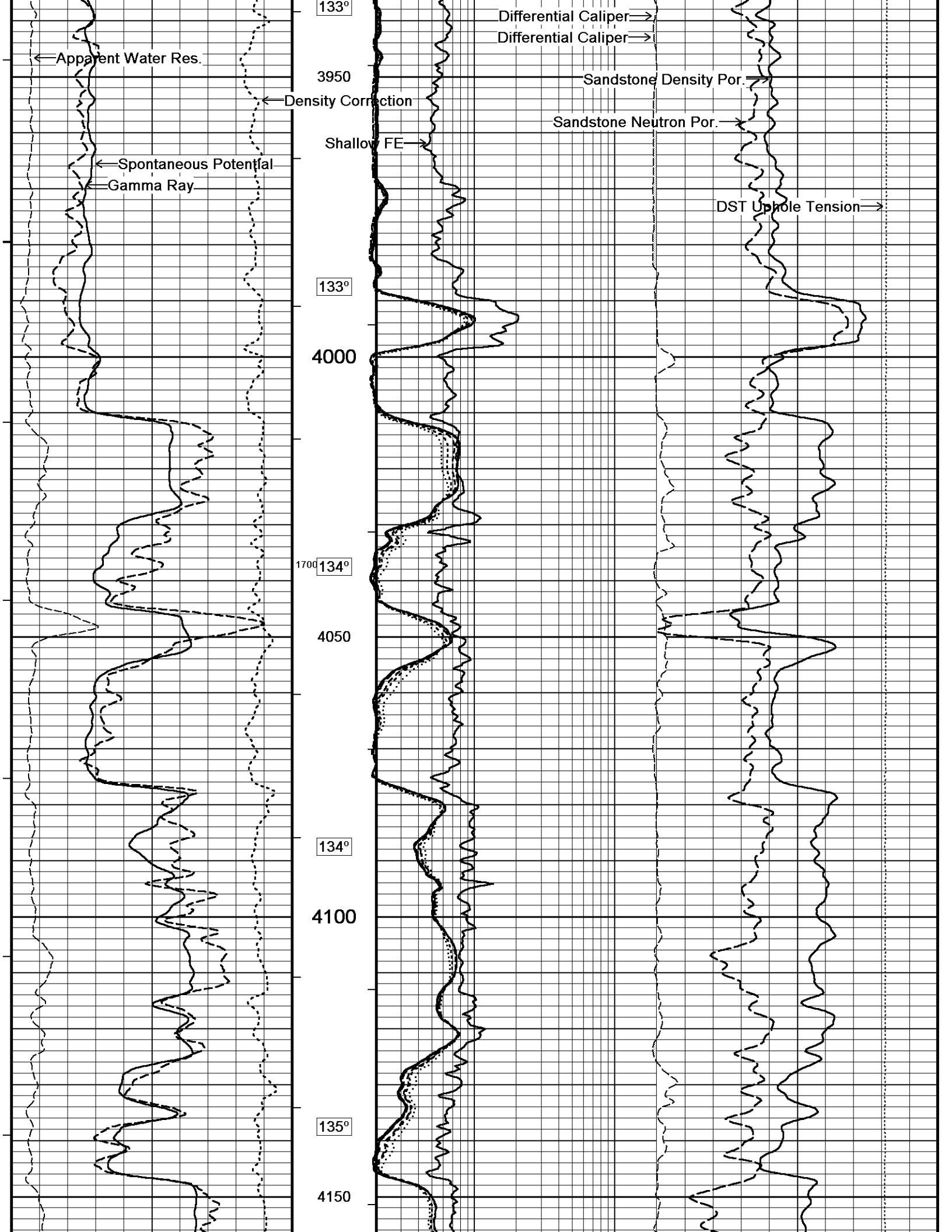


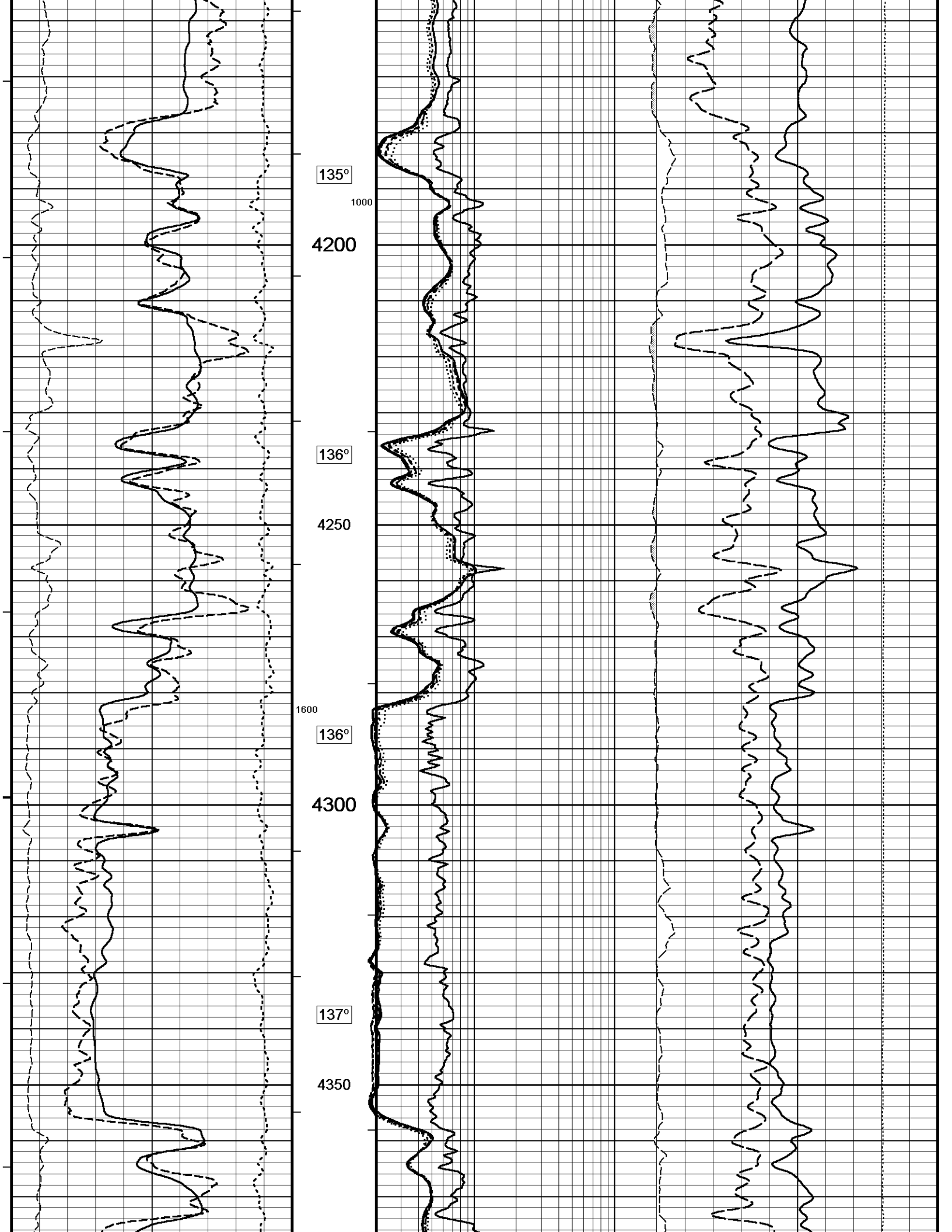


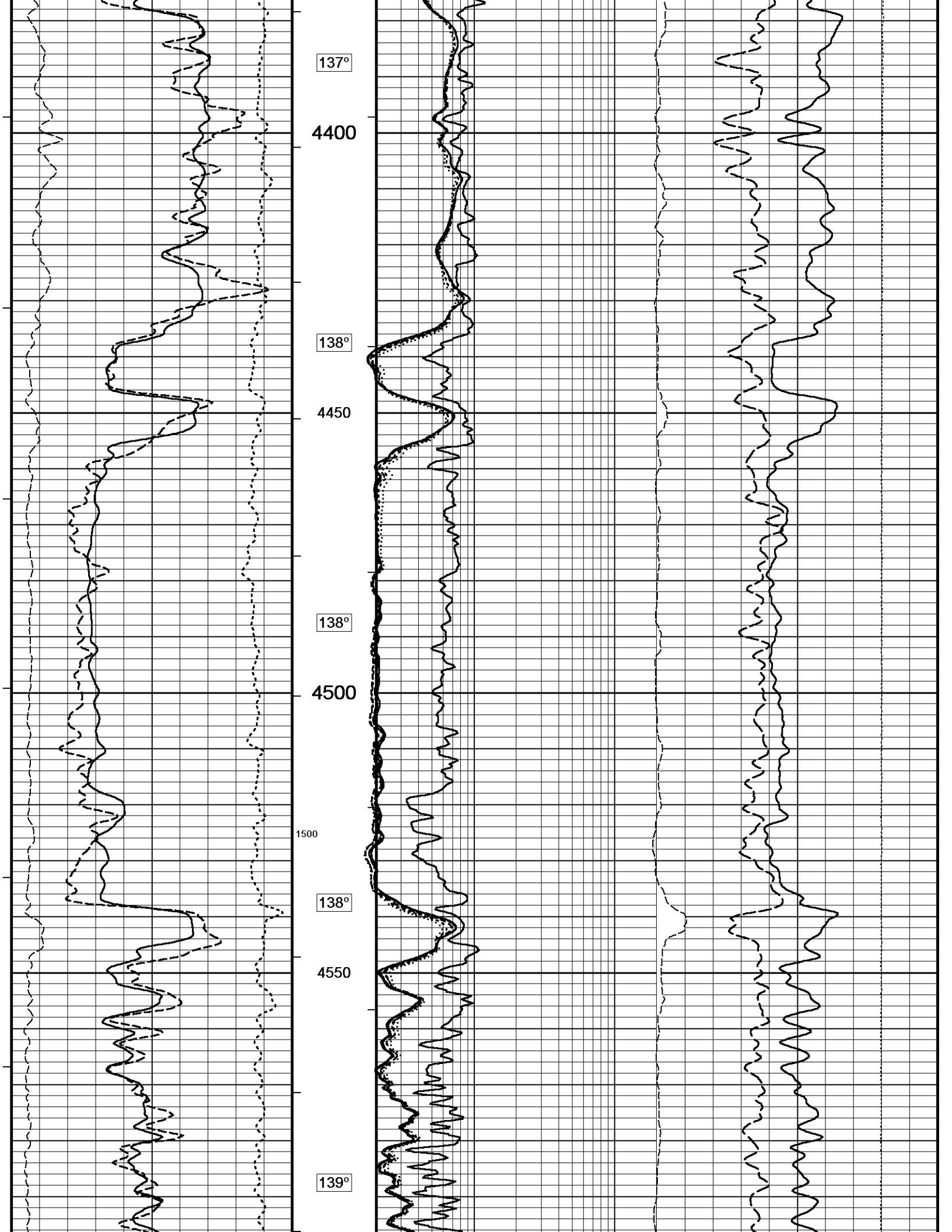


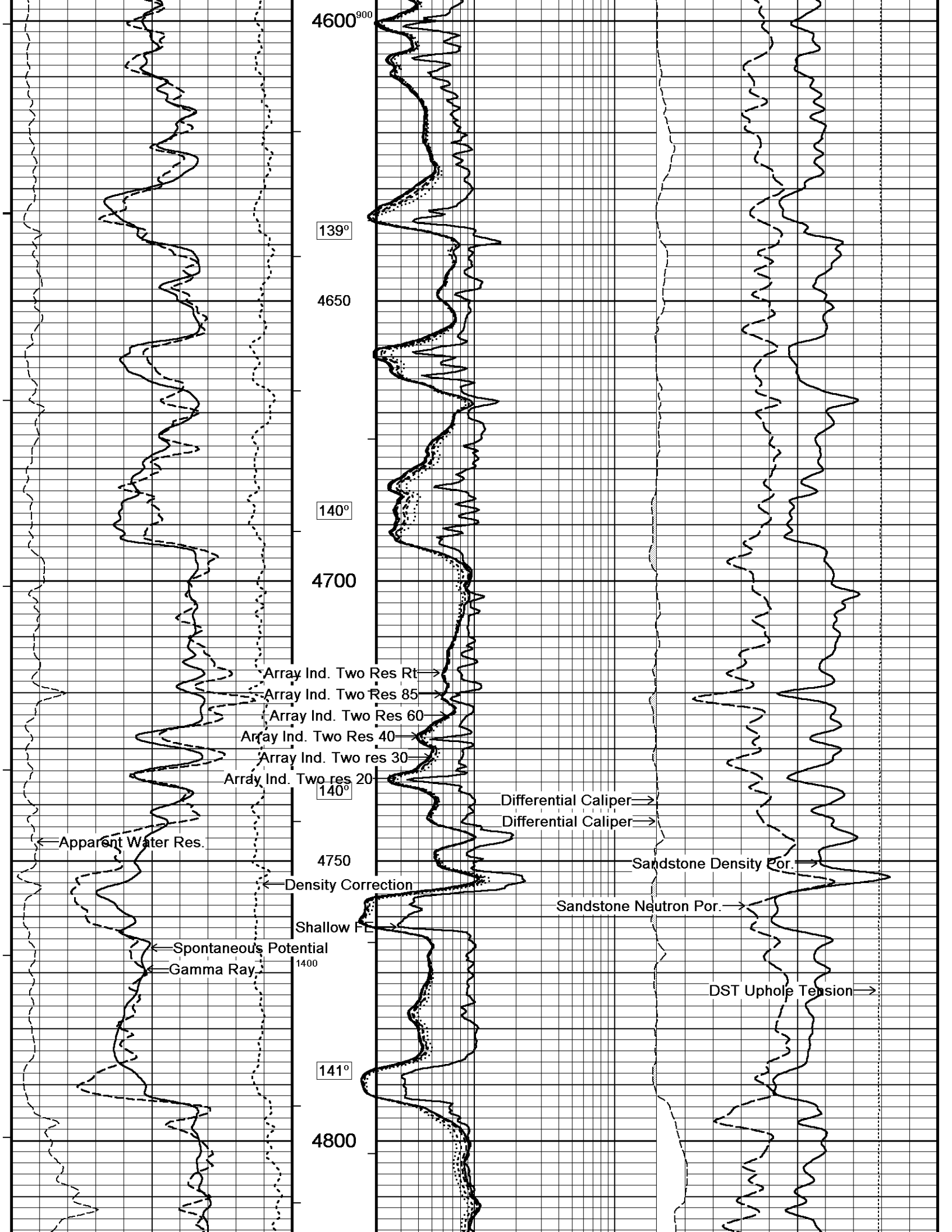


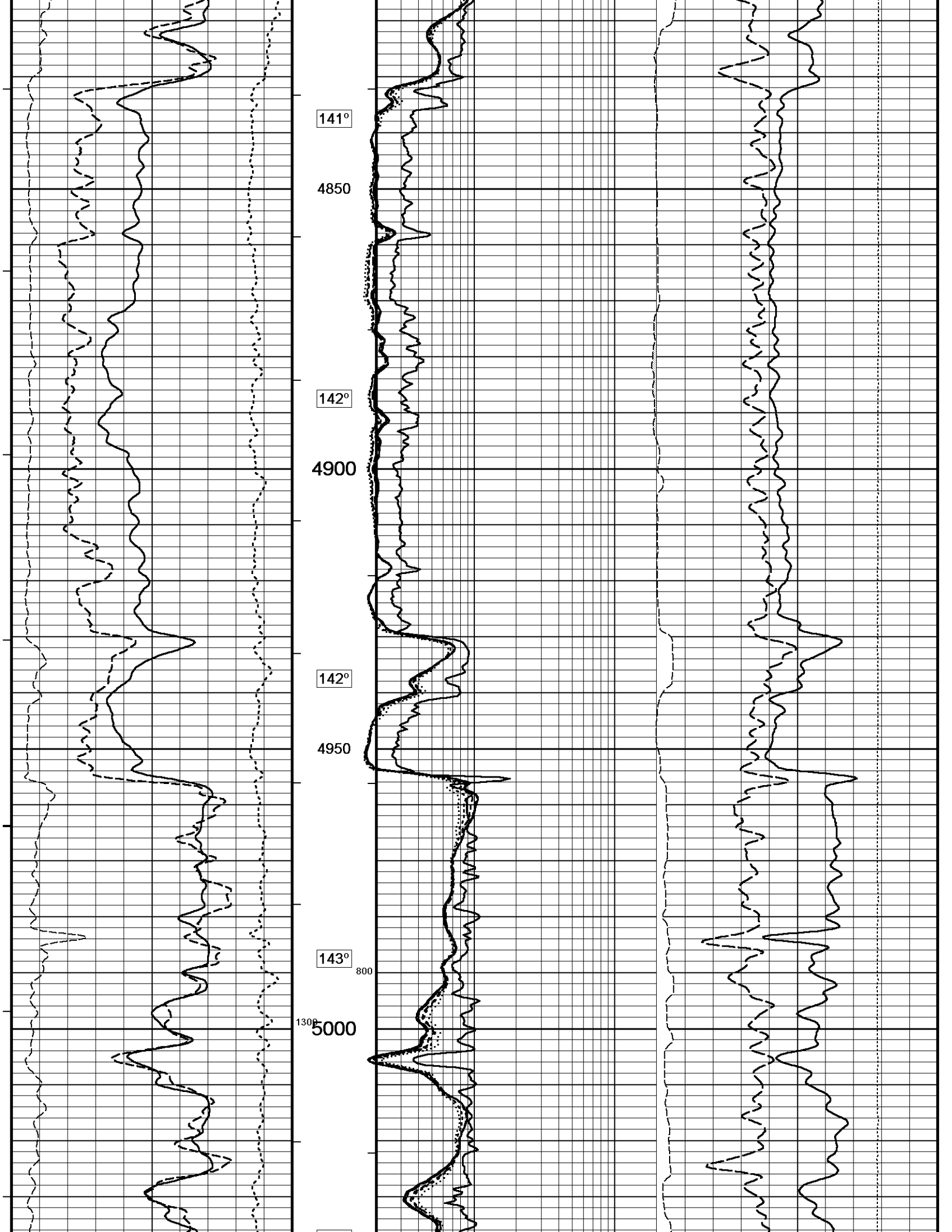


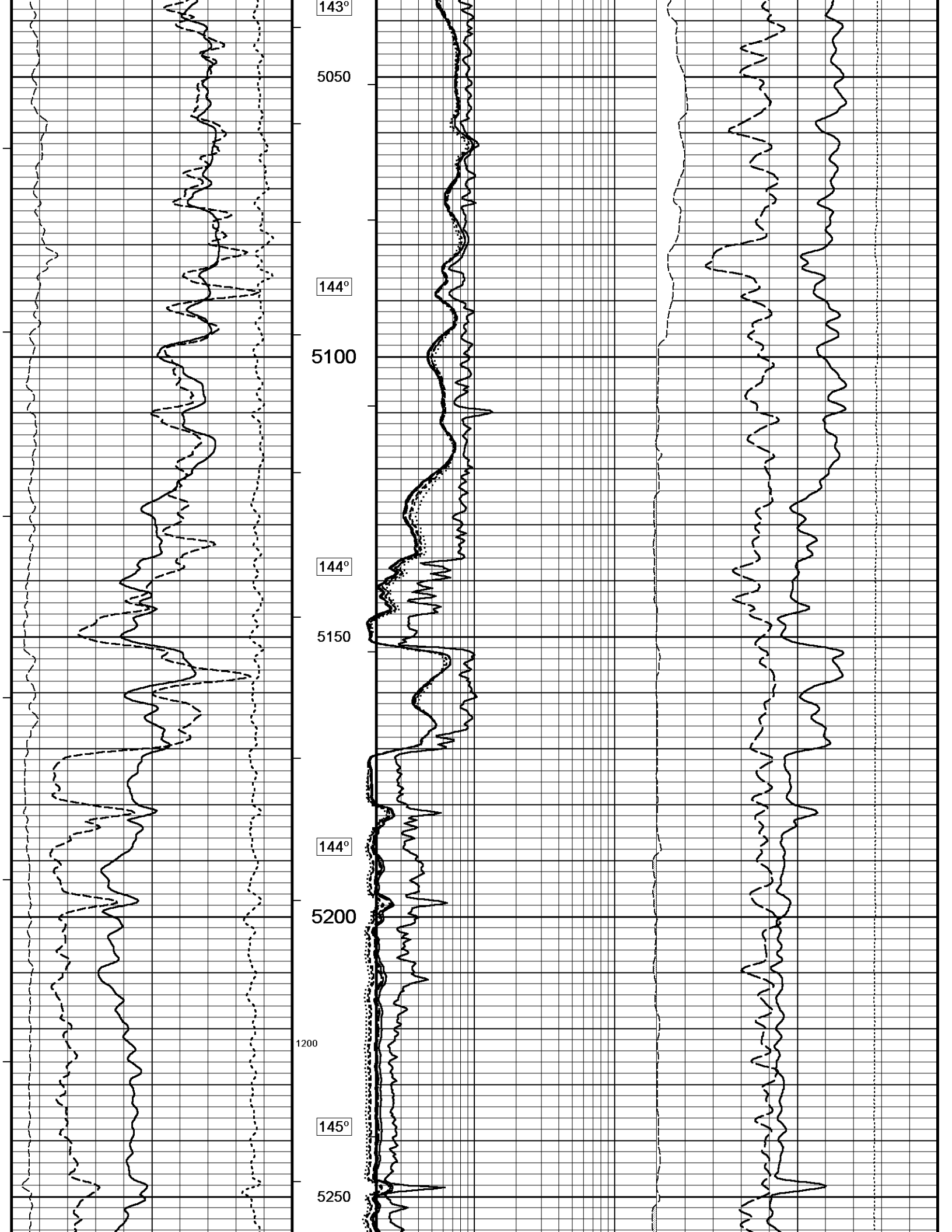


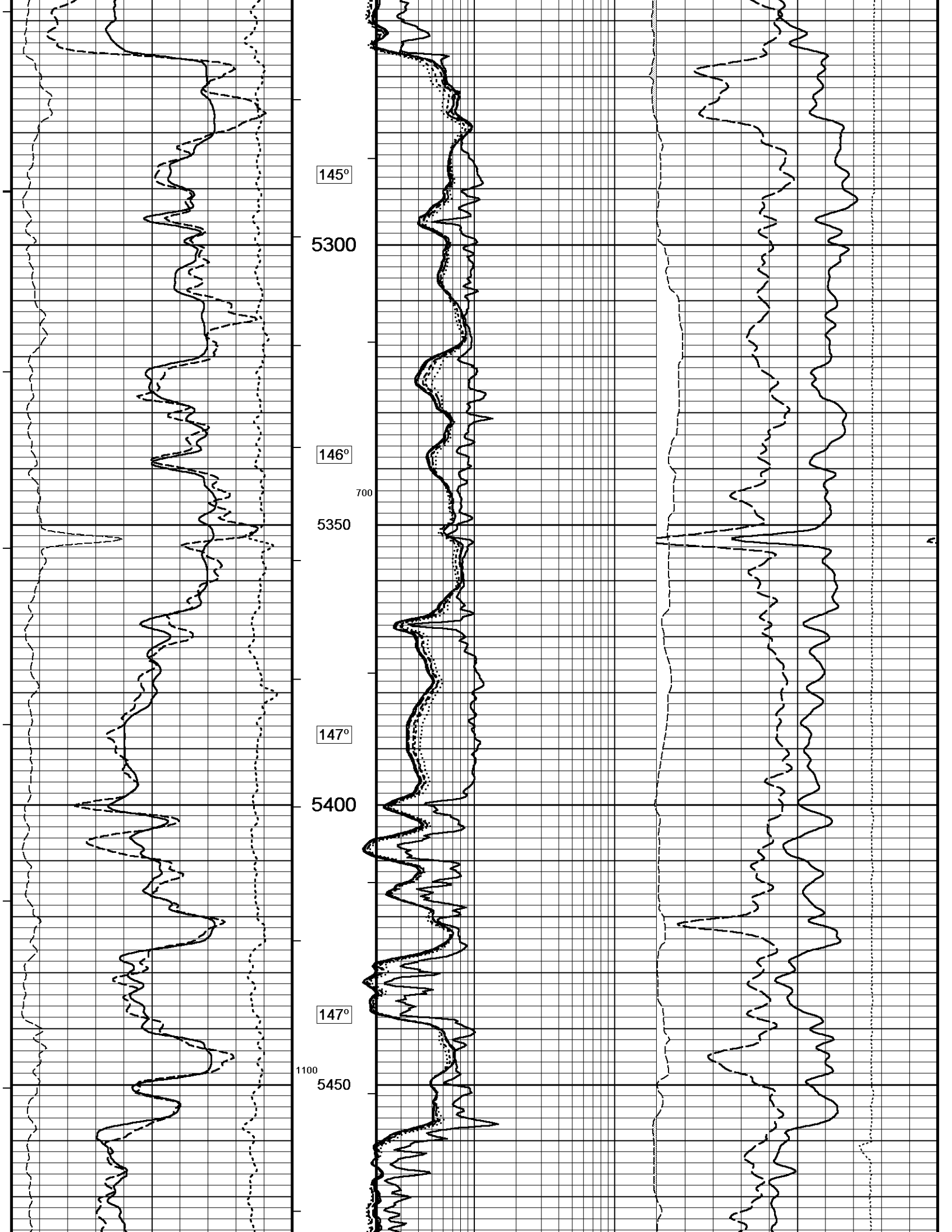


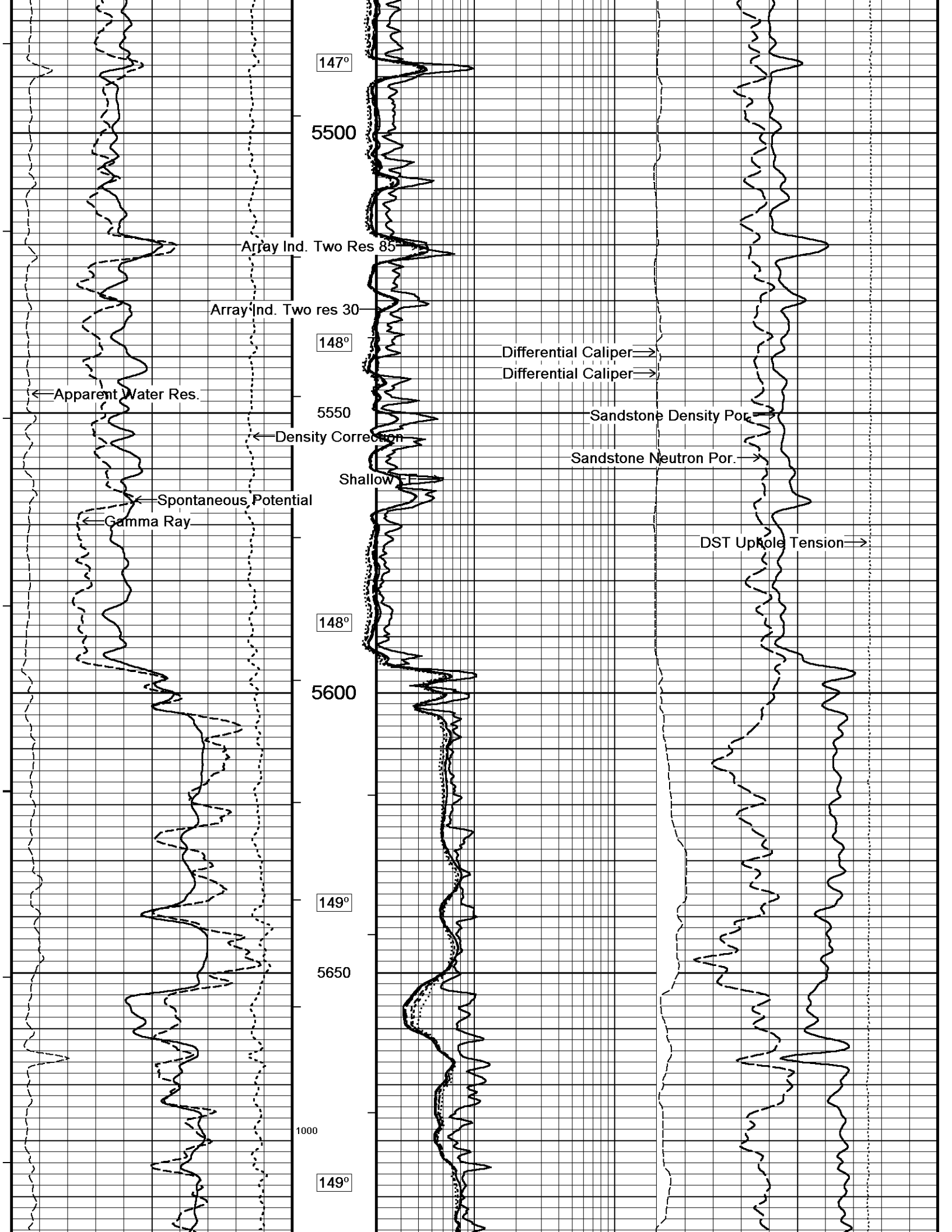


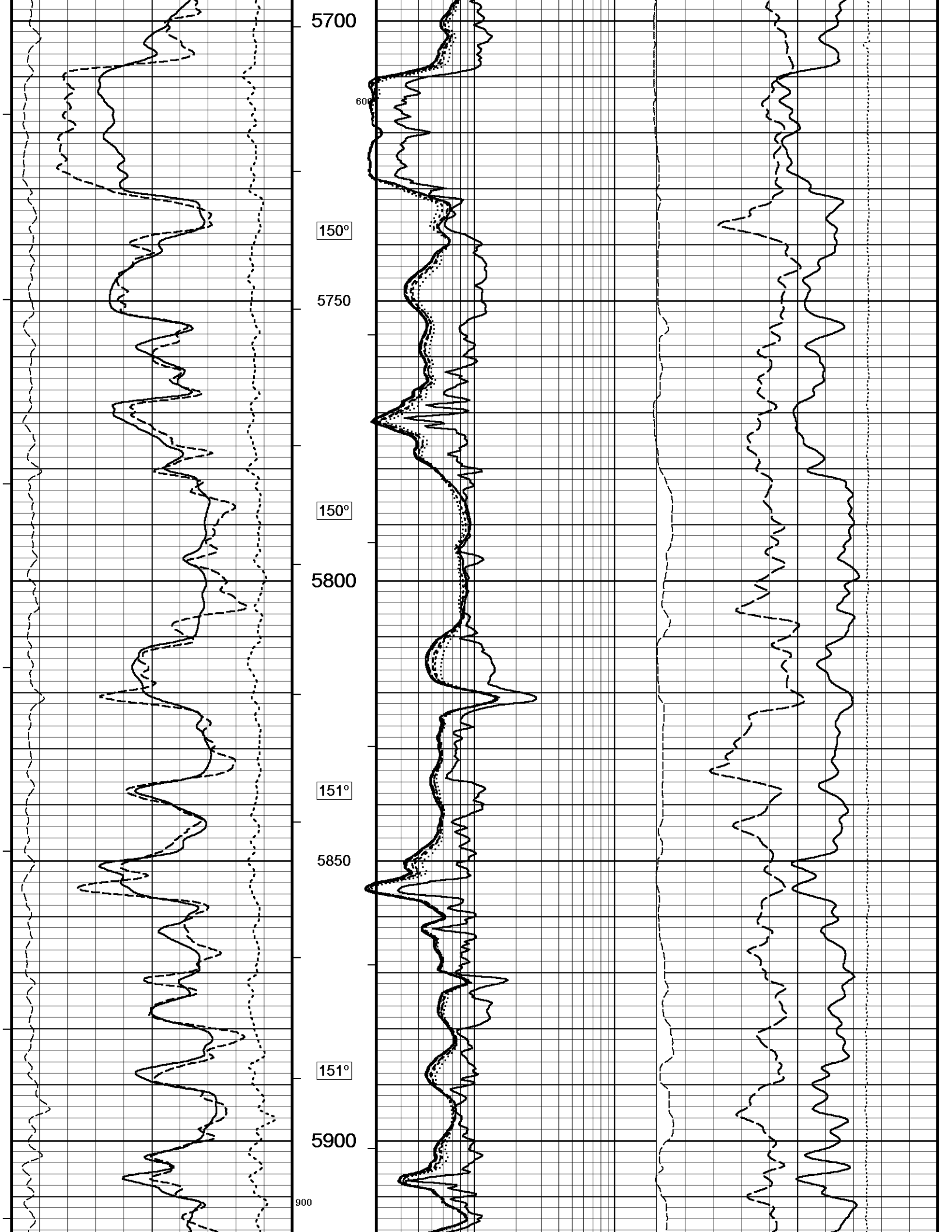


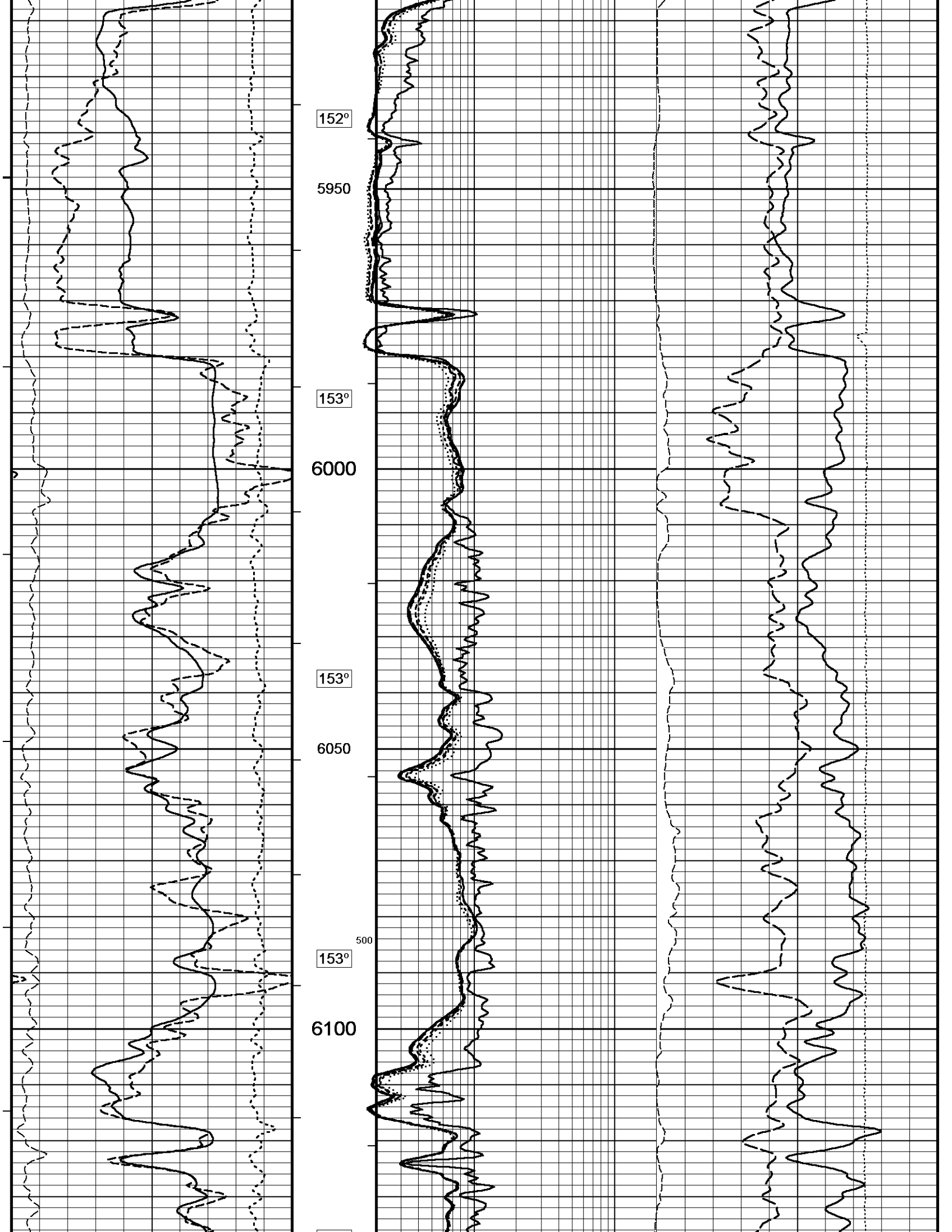


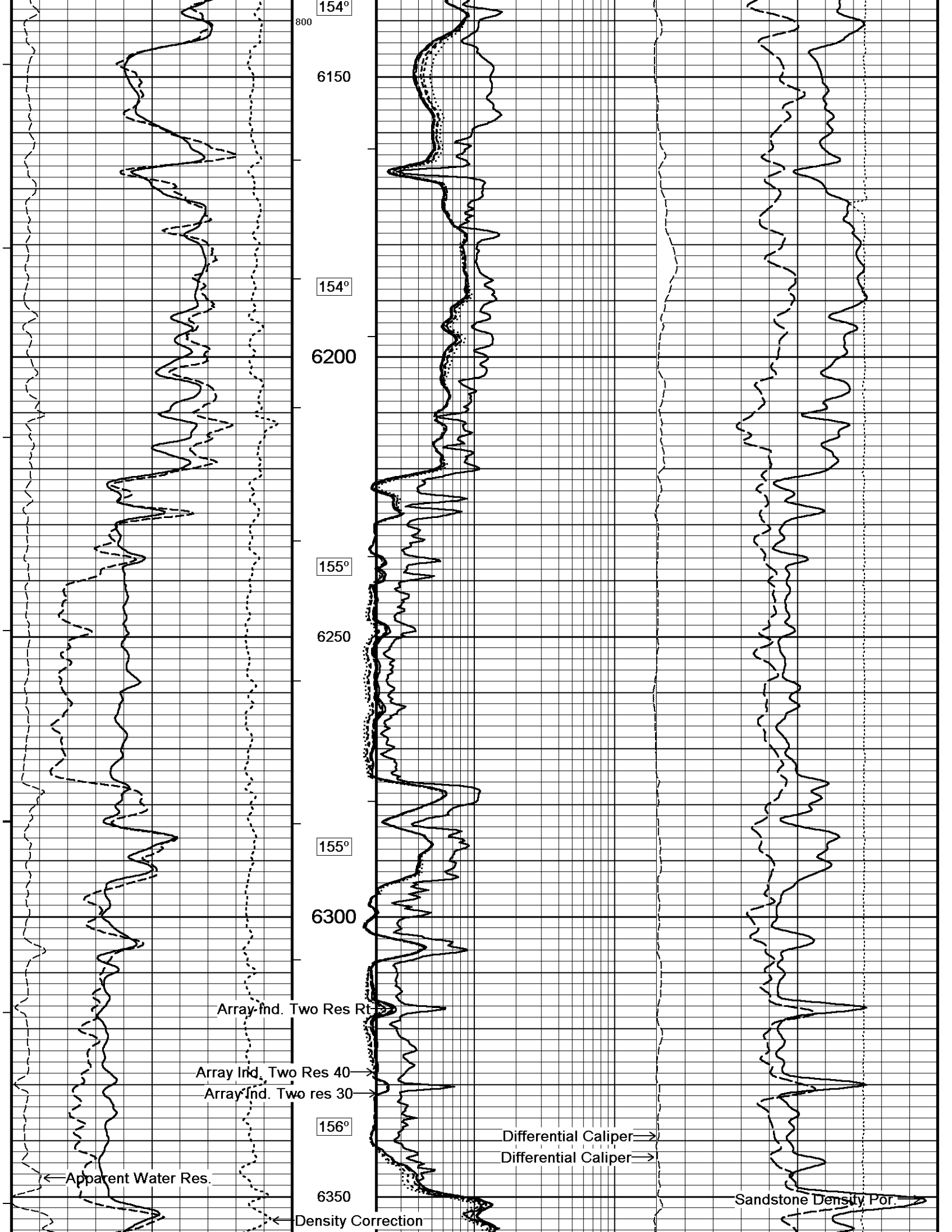


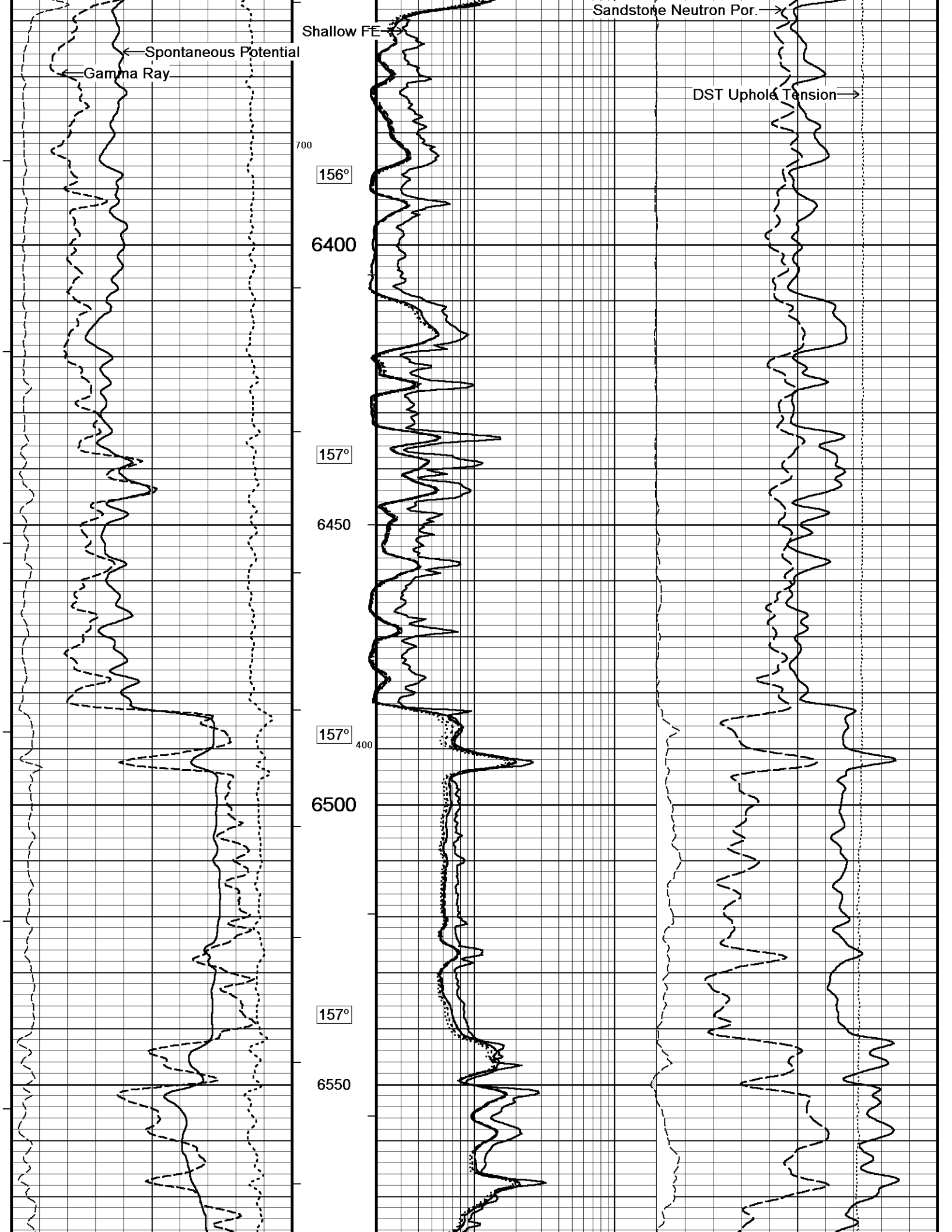


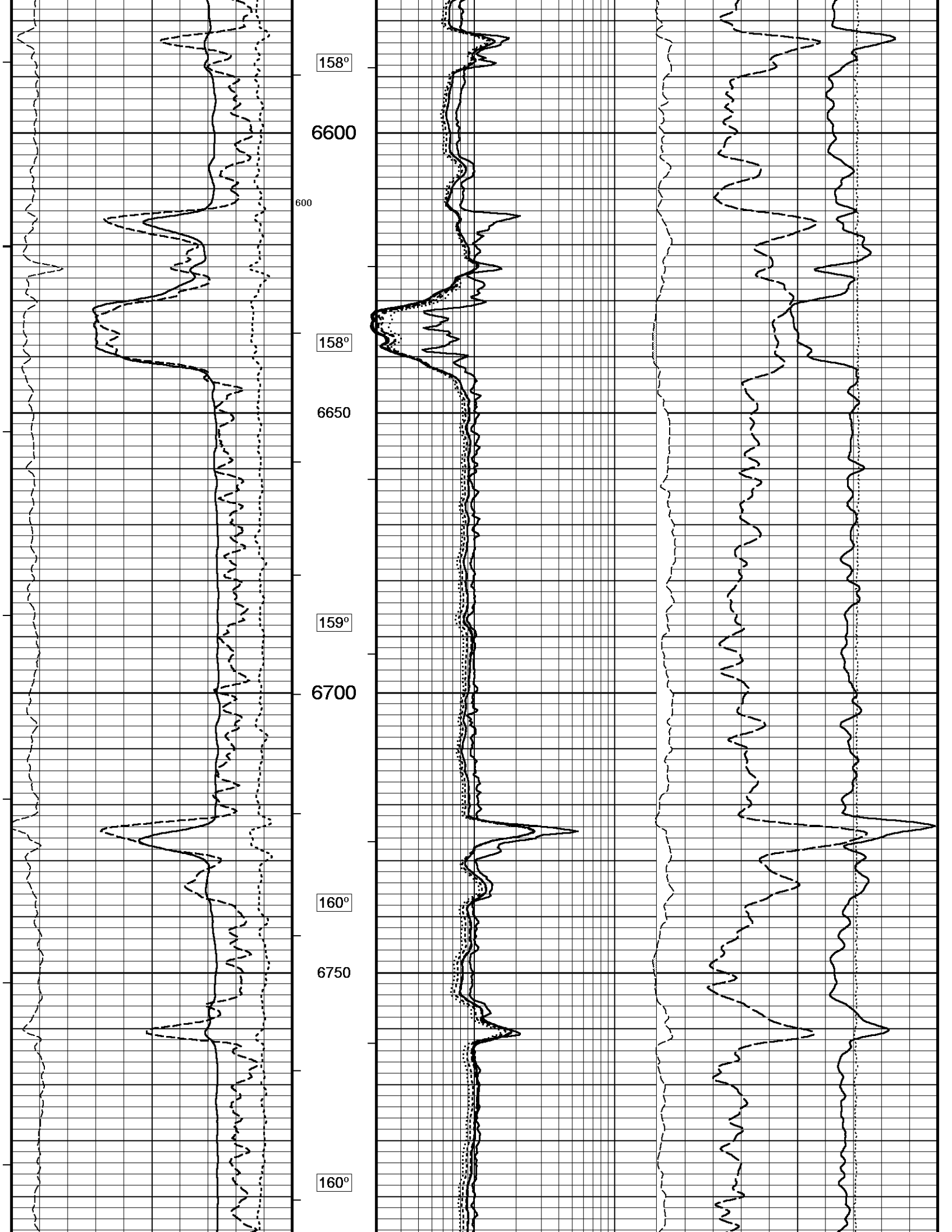


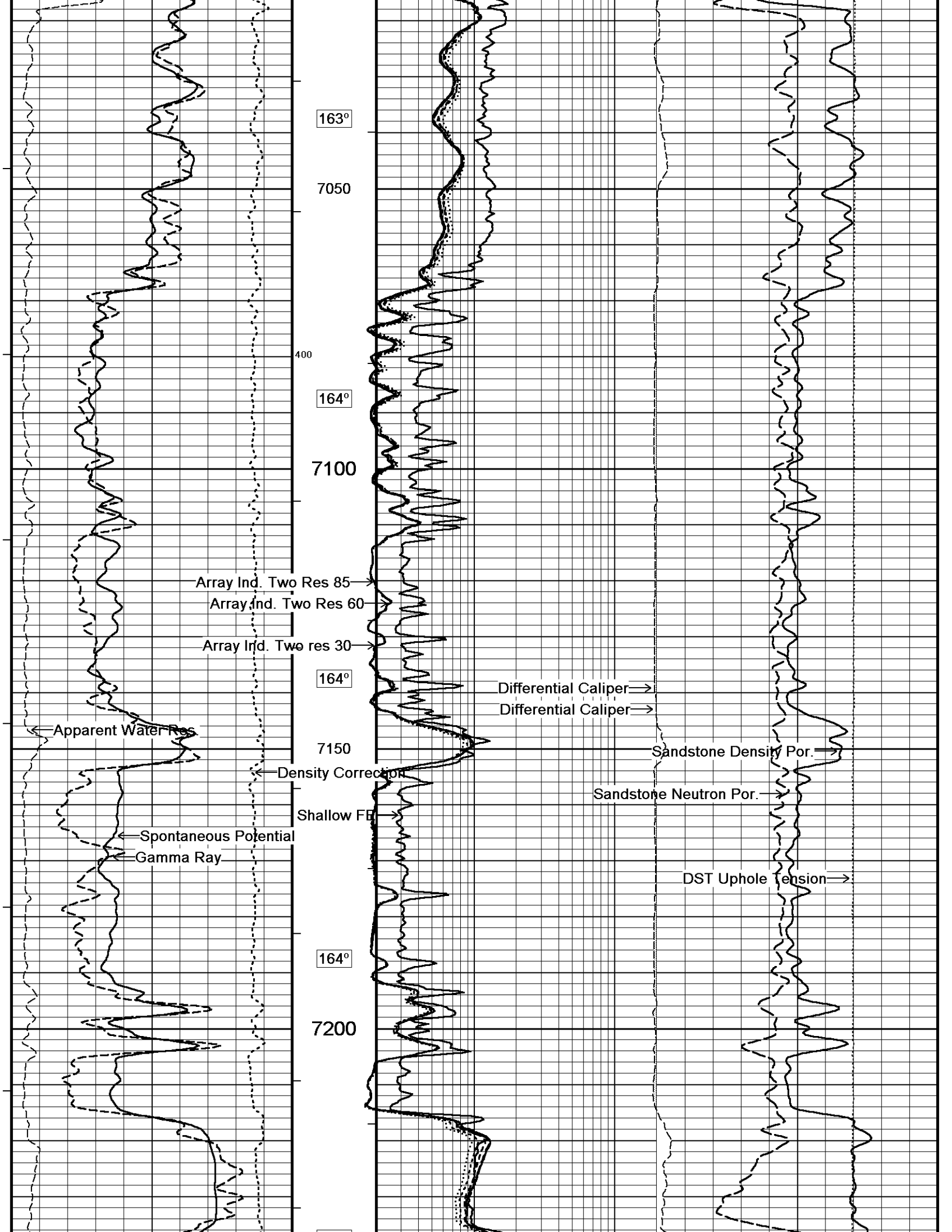


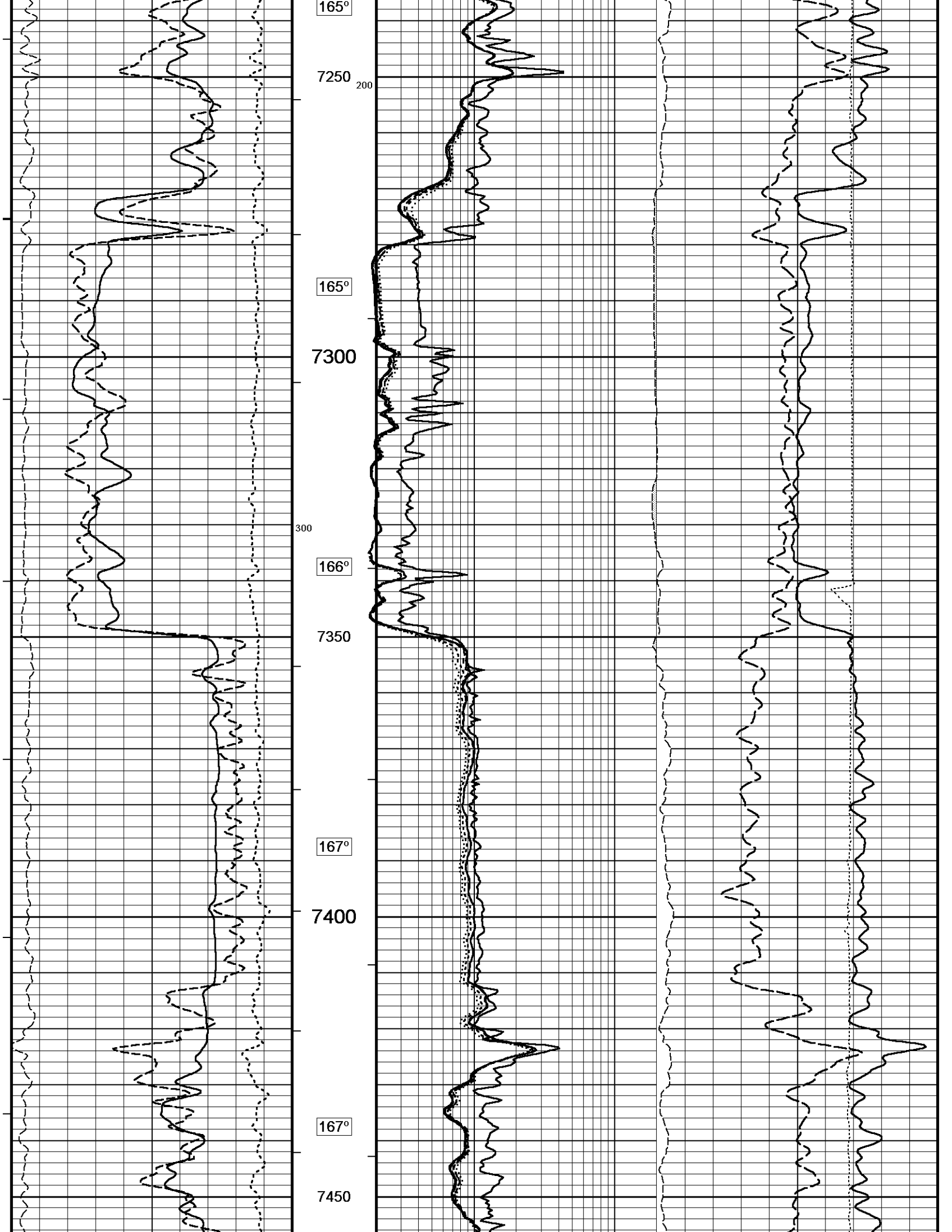


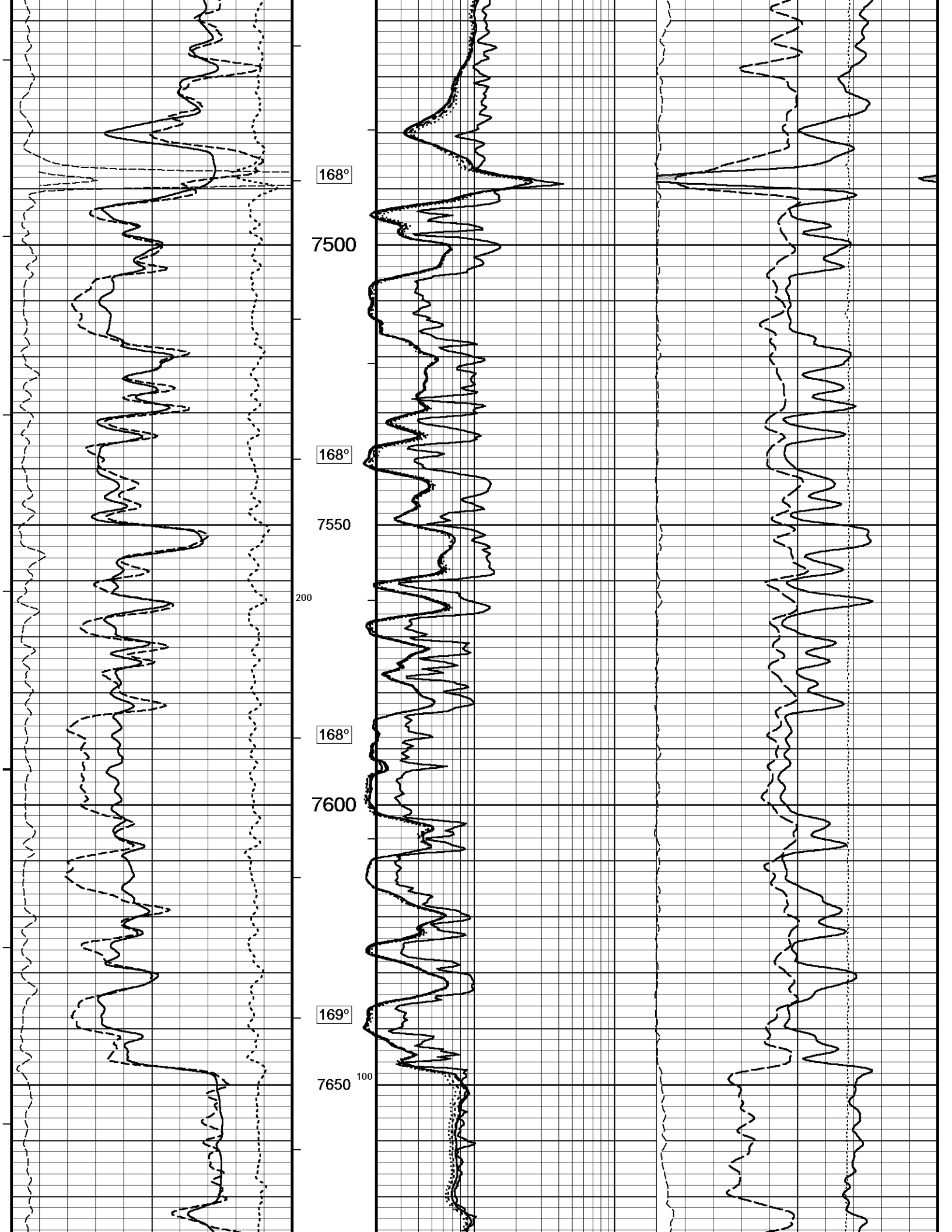


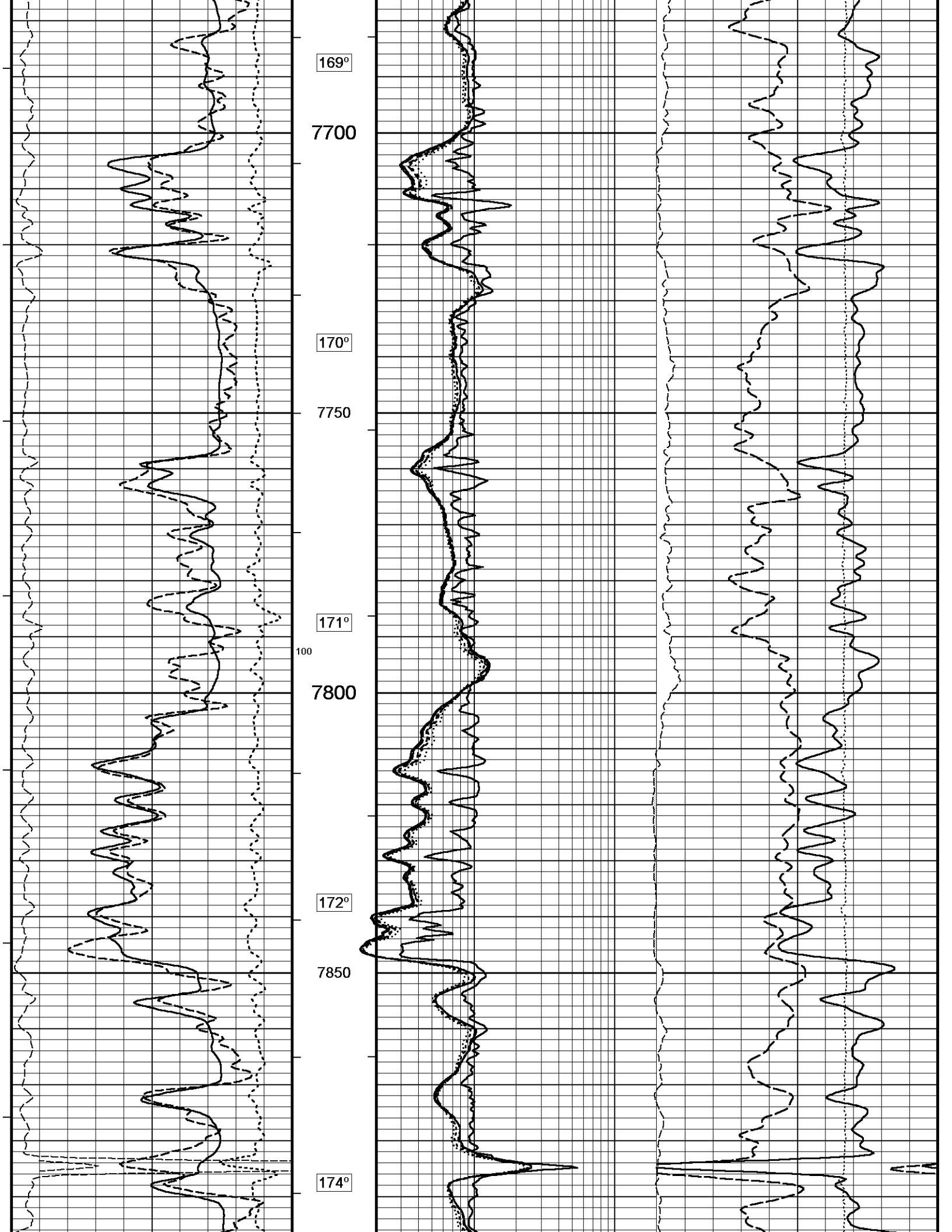


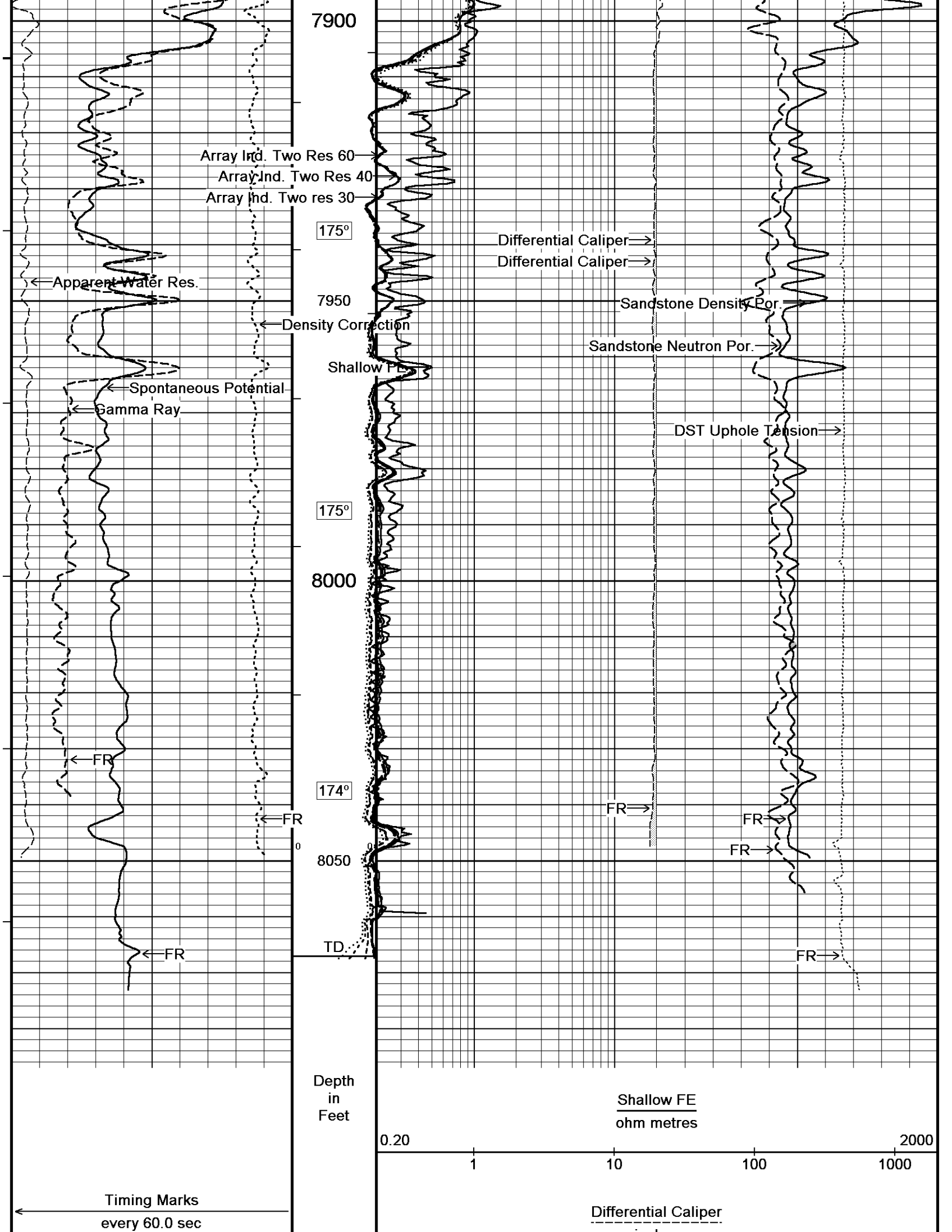


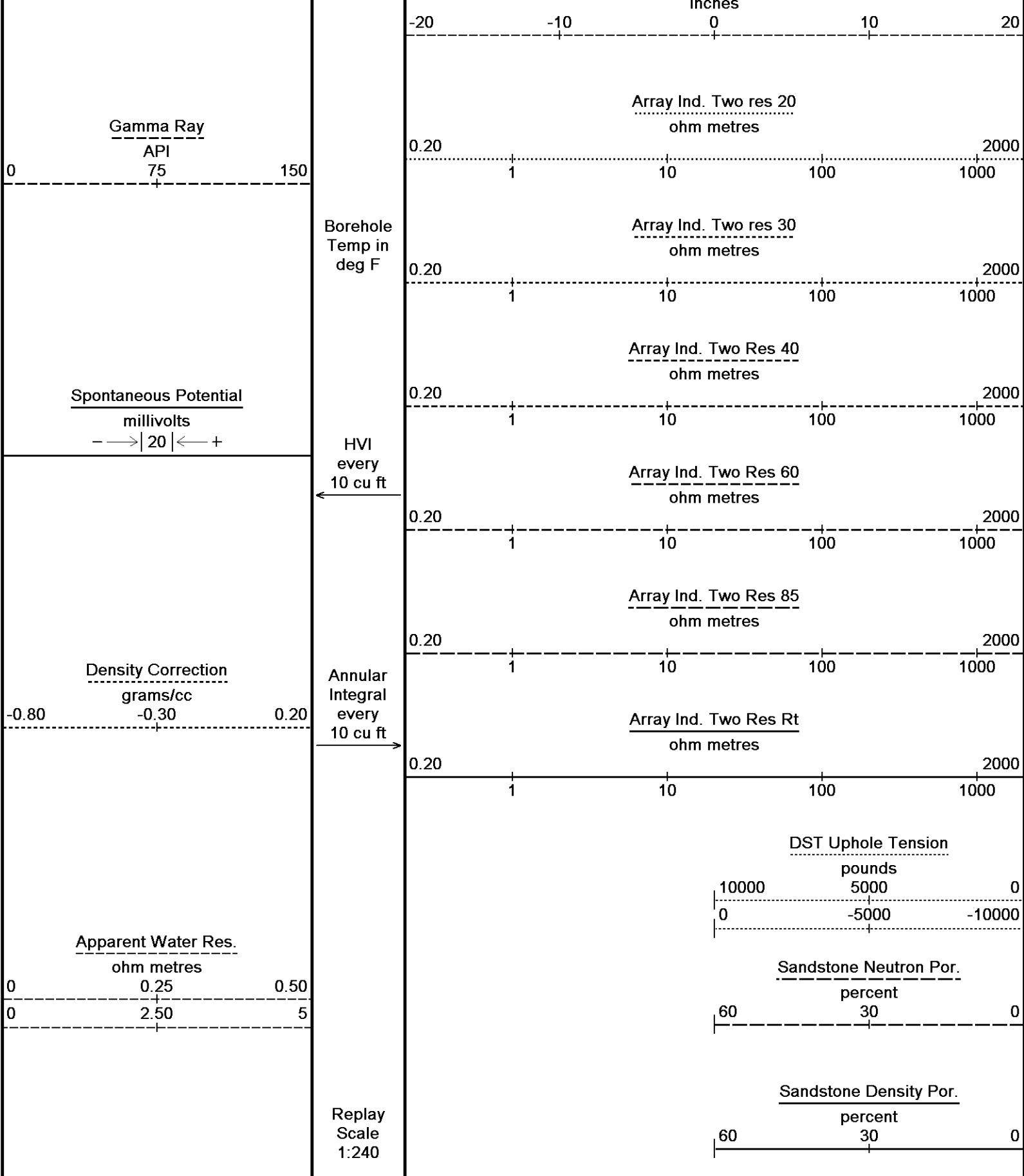










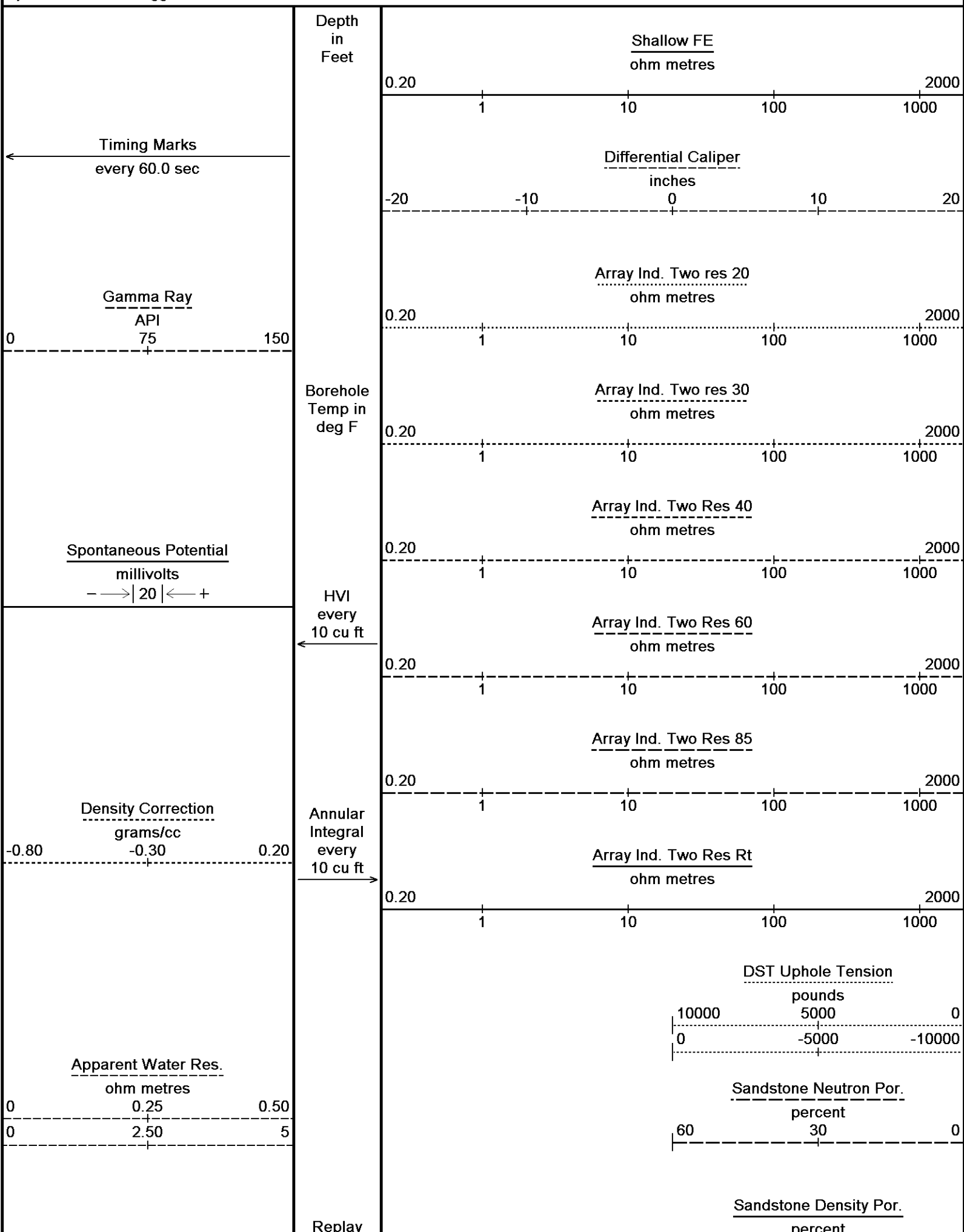


Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 29-AUG-2013 18:05
 Filename: C:\DATA\Smith Production\WS Patout #1\MAINREP.dta Recorded on 29-AUG-2013 12:44
 System Versions: Processed with 13.06.9804 Plotted with 13.06.9804

↑ **5 INCH MAIN LOG** ↑

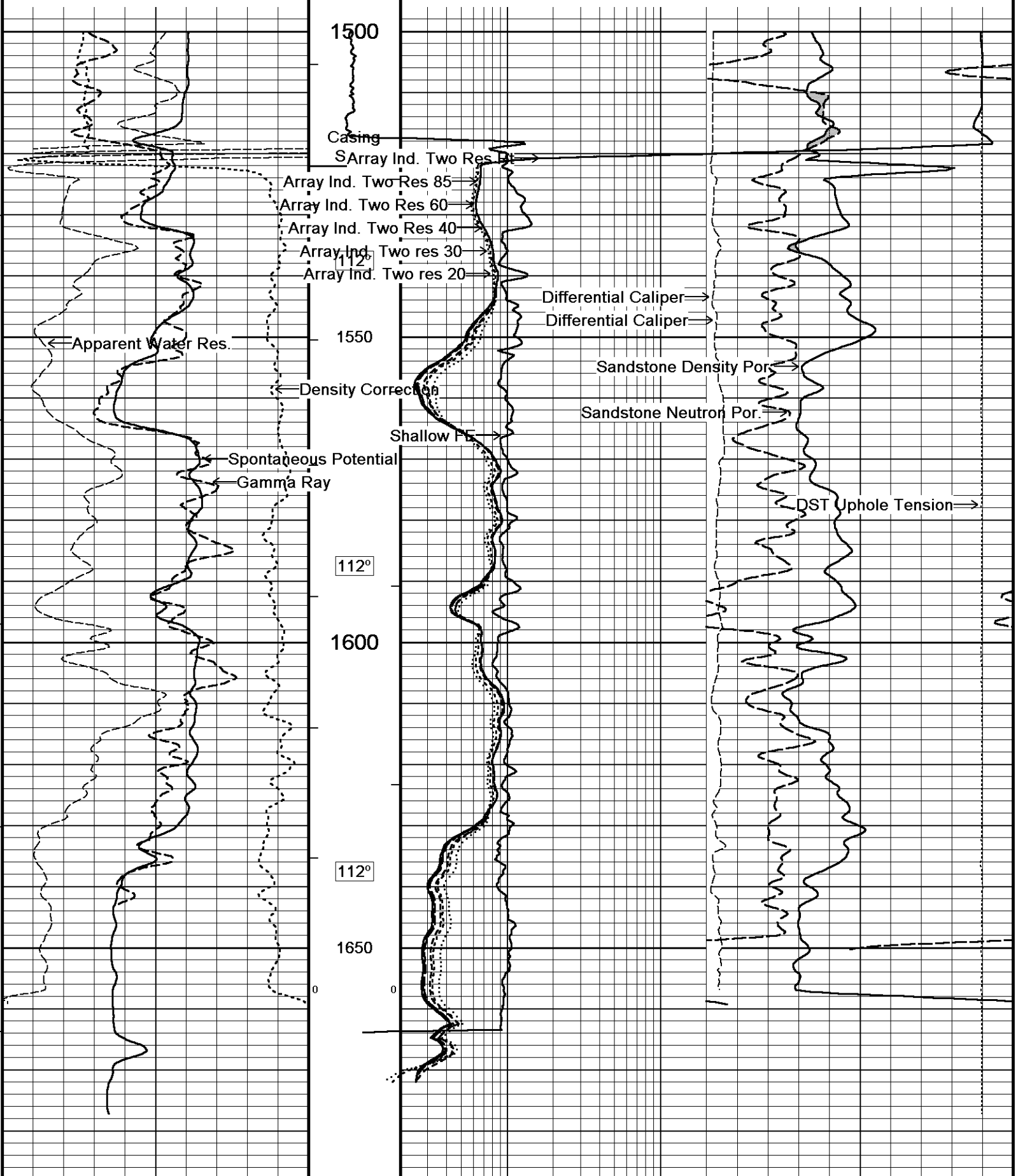
↓ **5 INCH CASING CHECK** ↓

Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 29-AUG-2013 18:05



Scale
1:240

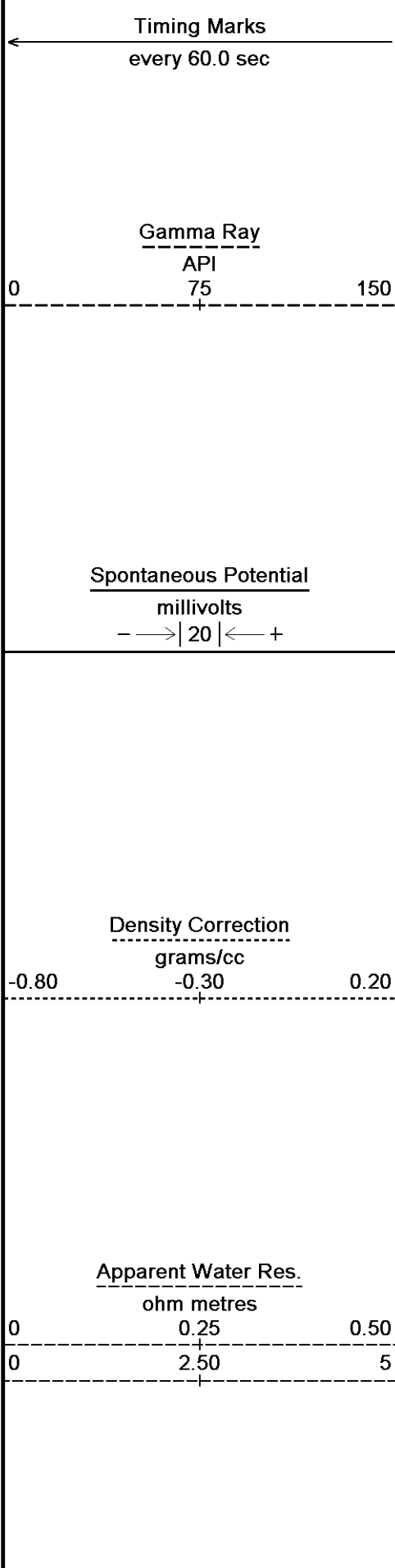
60 30 0
percent



Depth
in
Feet

Shallow FE
ohm metres

0.20 1 10 100 1000 2000

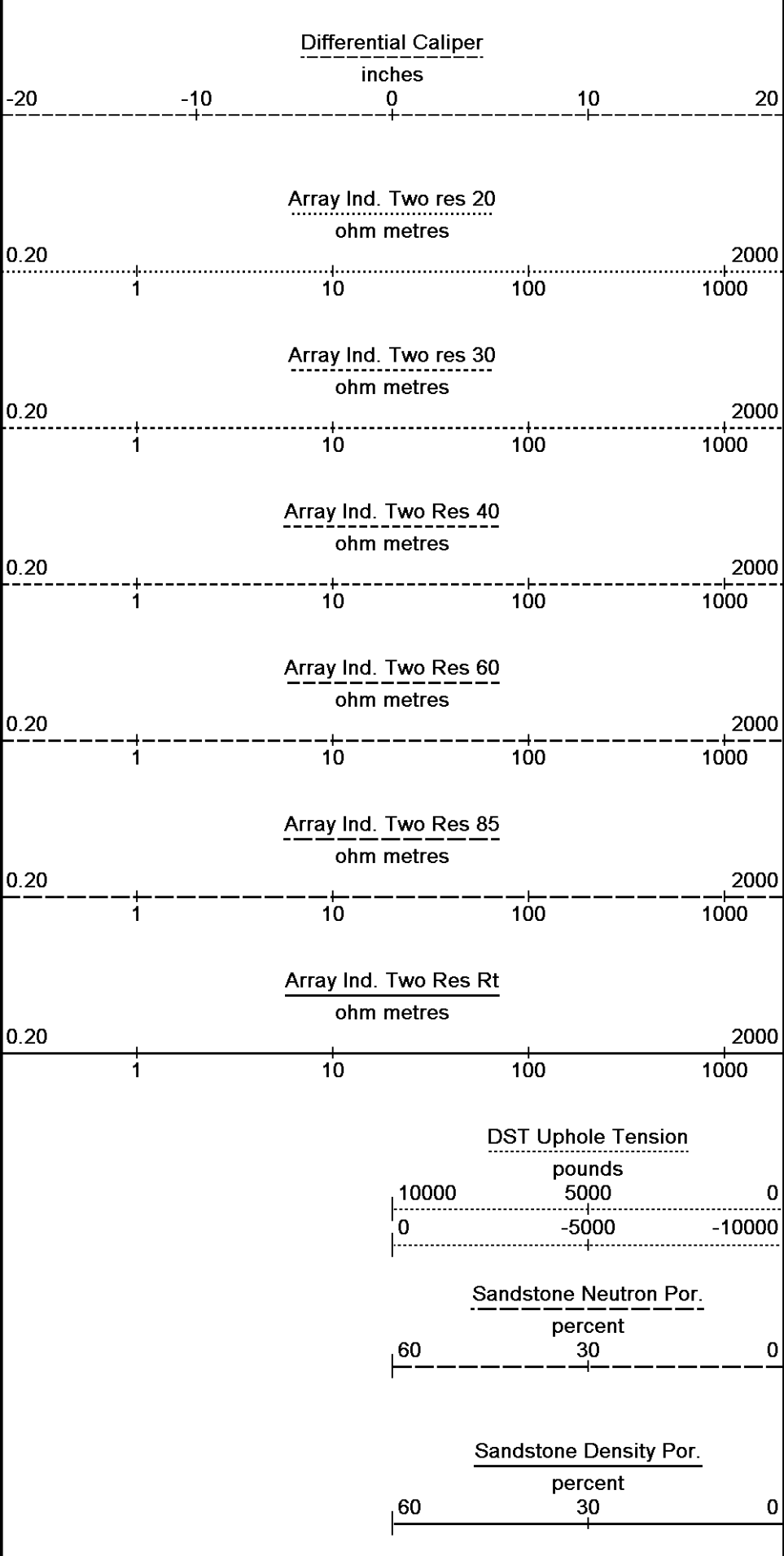


Borehole Temp in deg F

HVI every 10 cu ft

Annular Integral every 10 cu ft

Replay Scale 1:240



BEFORE SURVEY CALIBRATION

C:\DATA\Smith Production\WS Patout #1\MAIN.dta

General Constants All 000

Last Edited on 29-AUG-2013,10:25

General Parameters

Mud Resistivity	1.200	ohm-metres
Mud Resistivity Temperature	80.000	degrees F
Water Level	0.000	feet
Borehole Fluid 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	5.500	inches
Caliper for Differential Caliper	Density Caliper	

Rwa Parameters

Porosity used	Sandstone Density Por.
Resistivity used	Array Ind. Two Res Rt
RWA Constant A	0.620
RWA Constant M	2.150
SW/APOR Tool Source	0.000

Gamma Calibration MCG-B 51

Field Calibration on 07-AUG-2013 10:16

	Measured	Calibrated (API)
Background	54	36
Calibrator (Gross)	2095	1400
Calibrator (Net)	2041	1364

Gamma Constants MCG-B 51

Last Edited on 29-AUG-2013,09:37

Gamma Calibrator Number	GRC-C-53	
Mud Density	1.19	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl		kppm
K Mud Type	Chloride	
K Mud Concentration	0.00	%

High Resolution Temperature Constants MCG-B 51

Last Edited on

Pre-filter Length	11
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Neutron Calibration MDN-B.A 190

Base Calibration on 07-AUG-2013 07:54

Field Check on 07-AUG-2013 08:14

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
Ratio	3036	93	3714	110
	32.503		33.764	

Field Calibrator at Base

	Calibrated (cps)	
Ratio	1413	2037
	0.694	

Field Check

	Calibrated (cps)	
Ratio	1418	2055
	0.690	

Neutron Constants MDN-B.A 190

Last Edited on 29-AUG-2013,09:37

Neutron Source Id	P44389B	
Neutron Jig Number	6071NE	
Epithermal Neutron	No	
Caliper Source for Processing	Density Caliper	
Stand-off	0.00	inches
Mud Density	1.00	gm/cc
Limestone Sigma	7.10	cm

Limestone Sigma	7.10	cu
Sandstone Sigma	7.00	cu
Dolomite Sigma	4.70	cu
Formation Pressure Source	Constant Value	
Formation Pressure	0.00	kpsi
Temperature Source	Constant Value	
Temperature	68.00	degrees F
Mud Salinity	0.00	kppm
Salinity Correction	Not Applied	
Formation Fluid Salinity Source	None	
Formation Fluid Salinity	N/A	kppm
Barite Mud Correction	Not Applied	

FE Calibration MFE-A.A 104

Base Calibration on 07-AUG-2013 11:23

Field Check on 07-AUG-2013 11:28

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	961.9	126.8
Base Check		281.6
Field Check		281.2

FE Constants MFE-A.A 104

Last Edited on 29-AUG-2013,09:33

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	0.0	inches

Induction Calibration MAI-A.A 36

Base Calibration on 16-JUN-2010,18:02

Field Check on 27-AUG-2013 12:33

Base Calibration

Test Loop Calibration Channel	Measured		Calibrated (mmho/m)	
	Low	High	Low	High
1	16.8	457.1	9.3	966.2
2	5.7	363.8	7.6	821.4
3	3.1	256.9	5.2	566.0
4	2.0	128.4	2.6	279.2

Array Temperature 77.4 Deg F

Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1	0.0	0.0	18.6	3975.2
2	0.0	0.0	33.5	3702.2
3	0.0	0.0	30.1	3074.6
4	0.0	0.0	20.4	2152.4

Deep 17.4 1949.0
 Medium 43.9 4039.4
 Shallow 51.8 5574.1

Array Temperature 0.0 155.8 Deg F

Induction Constants MAI-A.A 36

Last Edited on 29-AUG-2013,09:33

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	

High Resolution Temperature Constants MAI-A.A 36

Last Edited on

Pre-filter Length	11
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Caliper Calibration MPD-C.A 193

Base Calibration on 07-AUG-2013 15:19

Field Calibration on 07-AUG-2013 15:20

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	23520	5.97
2	32144	7.97
3	40416	9.84
4	49696	11.92
5	0	0.00
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.98	7.97

Photo Density Calibration MPD-C.A 193

Base Calibration on 07-AUG-2013 16:02

Field Check on 07-AUG-2013 16:43

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	49300	25371	59639	30772
Reference 2	19881	2540	25018	2537

Field Check at Base

1186.4	1425.1
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Field Check

1184.2	1422.6
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PE Calibration

Base Calibration	WS	Measured		Calibrated Ratio
		WH	Ratio	
Background	213	1059		
Reference 1	19659	49113	0.405	0.369
Reference 2	5535	19746	0.285	0.271

Field Check at Base

213.0	1058.8
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Field Check

213.6	1061.3
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Density Source Id	P44268B	
Nylon Calibrator Number	DNC-E-701	
Aluminium Calibrator Number	DAC-D-615	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.19	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)
2.71	
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	0.00

DOWNHOLE EQUIPMENT

C:\DATA\Smith Production\WS Patout #1\MAIN.dta

- MCC-A 11C Tension Cablehead
MCC-A 1 LG: 2.40 ft WT: 19.8 lb OD: 2.24 in

- 11C-11B MTA-A Compact Tool Adaptor
MTA-A 1 LG: 1.53 ft WT: 13.2 lb OD: 2.24 in

- SHA-H Compact Swivel Head Adaptor
SHA-H 145 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

- Compact Comms Gamma
MCG-B 51 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

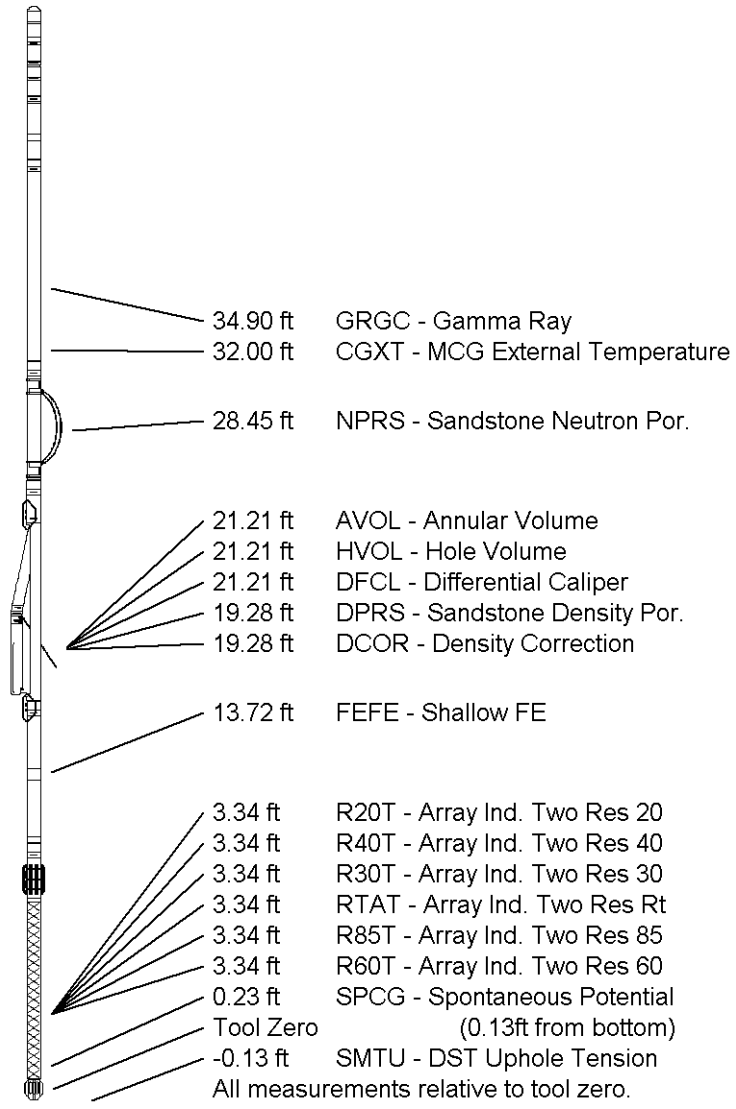
- Compact Neutron
MDN-B.A 190 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

- Compact Density/Caliper
MPD-C.A 193 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

- Compact Focused Electric
MFE-A.A 104 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

- Compact Induction
MAI-A.A 36 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

- Total Length: 46.41 ft Weight: 357.1 lb**



COMPANY SMITH PRODUCTION
WELL WS PATOUT #1
FIELD JEANERETTE
PROVINCE/COUNTY SAINT MARY
COUNTRY/STATE U.S.A. / LOUISIANA

Elevation Kelly Bushing	27.00	feet	First Reading	8063.66	feet
Elevation Drill Floor	26.00	feet	Depth Driller	8065.00	feet
Elevation Ground Level	10.00	feet	Depth Logger	8067.00	feet



Weatherford[®]

ARRAY INDUCTION / SFE
PHOTO DENSITY / NEUTRON
GAMMA RAY LOG