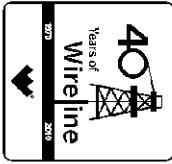




**Weatherford**

ARRAY INDUCTION / MFE  
PHOTO DENSITY / NEUTRON  
GAMMA RAY \*\*MD\*\* LOG

COMPANY SMITH PRODUCTION COMPANY  
 WELL EDMOND RICHARD #1  
 FIELD GRAND CHENIERE  
 PROVINCE/COUNTY CAMERON  
 COUNTRY/STATE U.S.A / LOUISIANA  
 LOCATION N63D 04' 27"W 10,6010.02' FROM NGS MON  
 "MARSH" X= 1,519,311' Y= 394, 346'



SEC 53 TWP 15S RGE 5W Other Services  
 TVD SWC  
 API Number 17023231220000  
 Permit Number 244658

Permanent Datum G.L., Elevation 3 feet  
 Log Measured From KB  
 Drilling Measured From KB

Elevations:  
 KB 18.00  
 DF 17.00  
 GL 3.00

Date	03-JULY-2012
Run Number	ONE
Depth Driller	11508.00 feet
Depth Logger	11485.00 feet
First Reading	11485.00 feet
Last Reading	3216.00 feet
Casing Driller	3225.00 feet
Casing Logger	3216.00 feet
Bit Size	9.875 inches
Hole Fluid Type	WATER BASED
Density / Viscosity	11.00 lb/USg 41.00
PH / Fluid Loss	11.30 4.40 ml/30Min
Sample Source	PIT
Rm @ Measured Temp	0.90 @ 88.0 ohm-m
Rmf @ Measured Temp	0.68 @ 88.0 ohm-m
Rmc @ Measured Temp	1.13 @ 88.0 ohm-m
Source Rmf / Rmc	CALC
Rm @ BHT	0.39 @211.0 ohm-m
Time Since Circulation	8 HOURS
Max Recorded Temp	211.00 deg F
Equipment Name	OPEN HOLE
Equipment / Base	13028 BRSD
Recorded By	M.ROMERO
Witnessed By	G.GRIMMETT
RIG	CROWN RIG 3

**BOREHOLE RECORD** Last Edited: 03-JUL-2012 08:40

Bit Size inches	Depth From feet	Depth To feet
9.875	3225.00	11508.00

**CASING RECORD**

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	10.750	0.00	3225.00	45.50

**REMARKS**

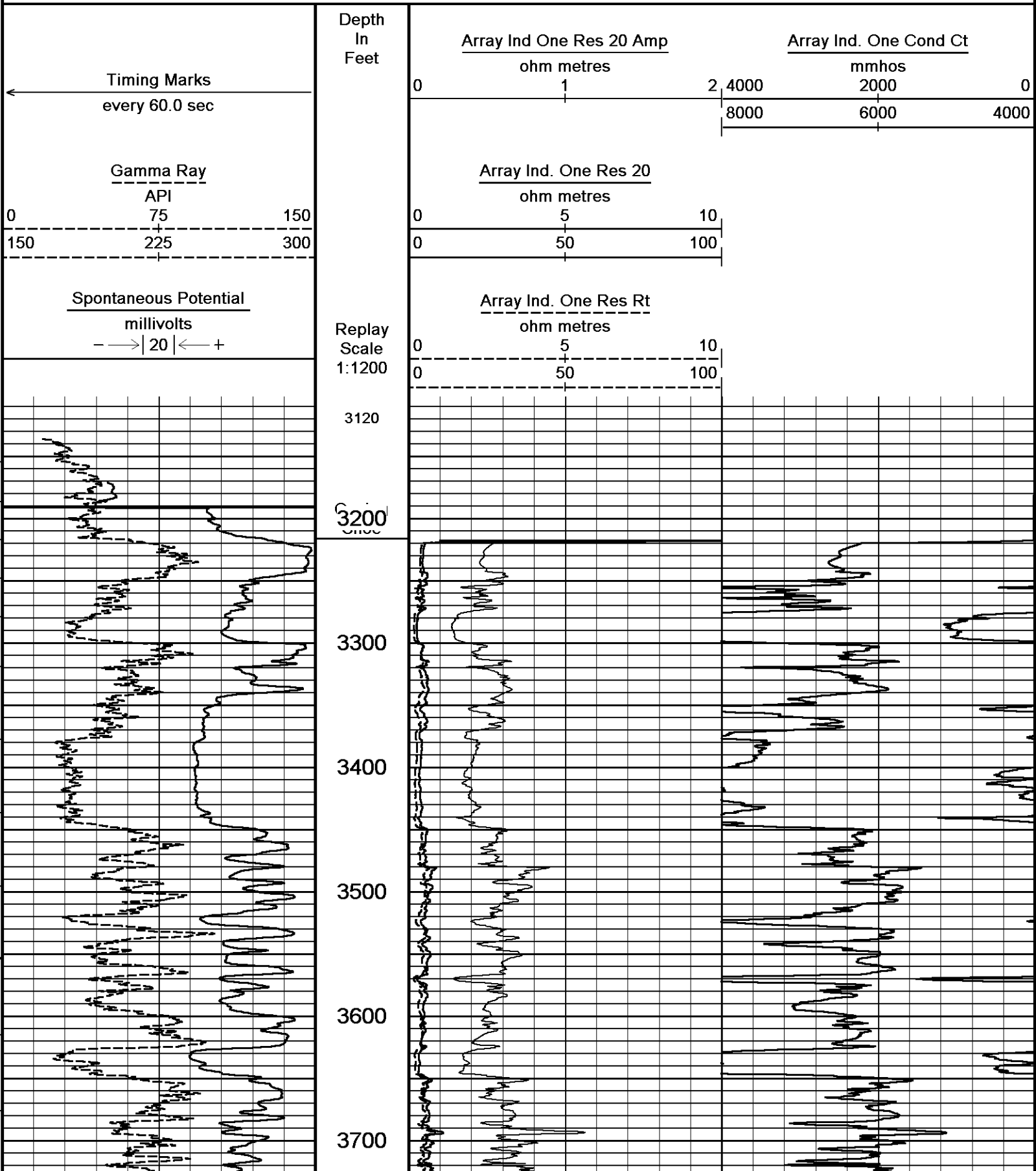
\*\*\*MEASURED DEPTH LOG\*\*\*  
 MAI / MFE / MPD / MDN / MCG / SHA RAN IN COMBINATION S.O. 3531063  
 FINS RAN ON INDUCTION AND MFE  
 DUAL BOWSPRINGS RAN ON NEUTRON  
 STABILIZER RAN ON DENSITY  
 DENSITY MATRIX (2.65g/cc)  
 RWA = A - 0.62 M - 2.15  
 CUSTOMER REQUESTED REPEAT BE PERFORMED UNDER CASING SHOE  
 ANNULAR VOLUME ASSUMES 5.5" PRODUCTION CASING  
 CREW: M.ROMERO, C.COSTLEY, R.STANSBURY  
 THANK YOU FOR CHOOSING WEATHERFORD WIRELINE!!!

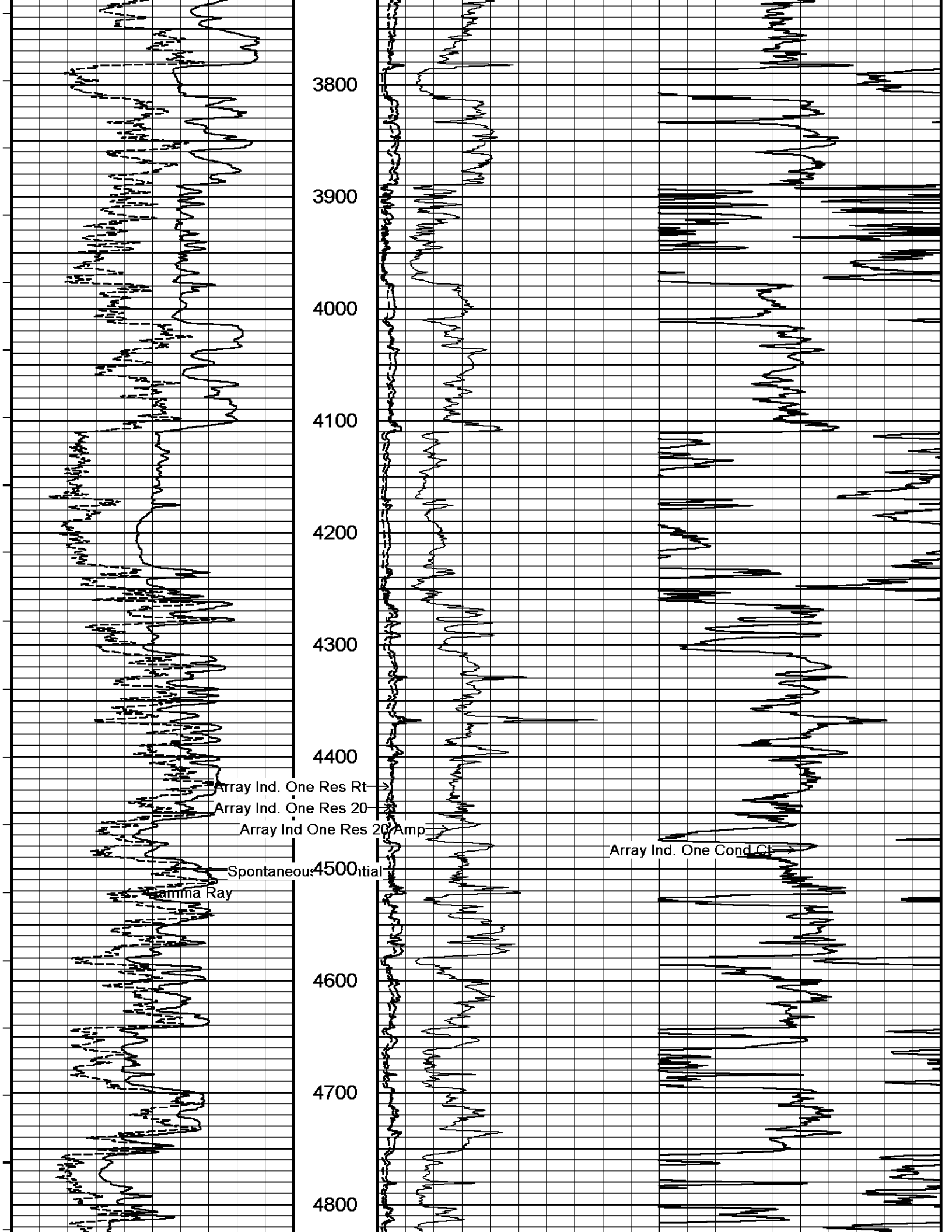
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or

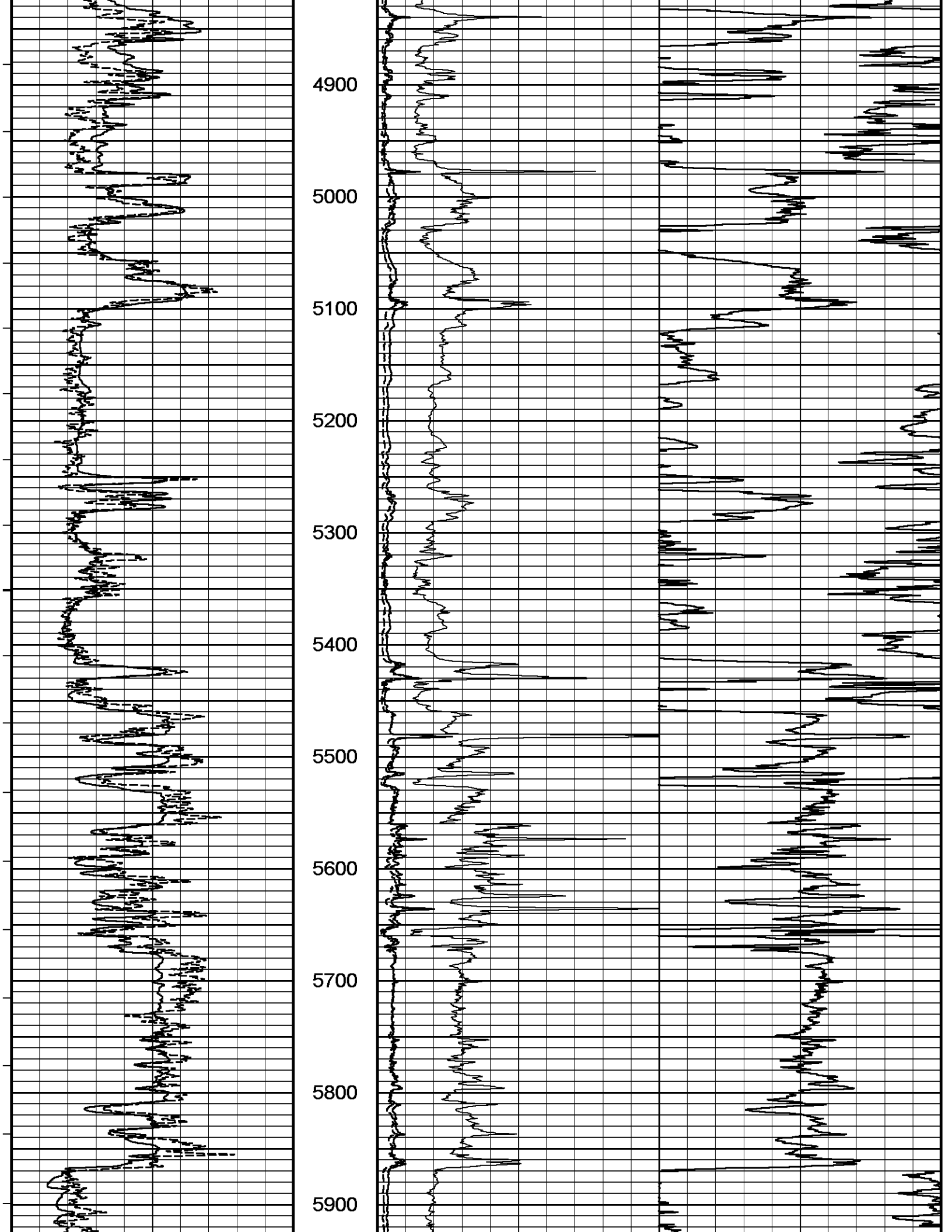
correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.

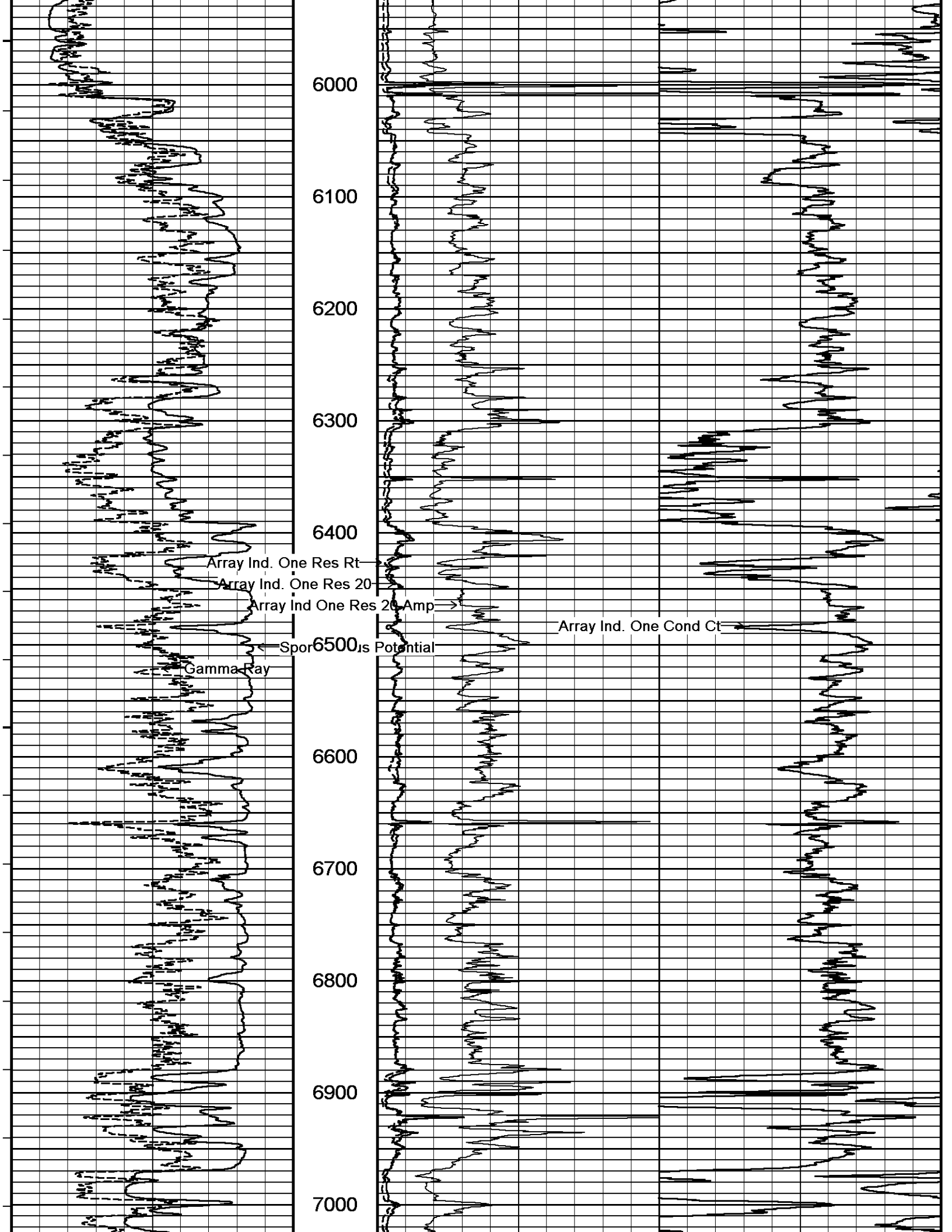
1" MAIN PASS 1:1200

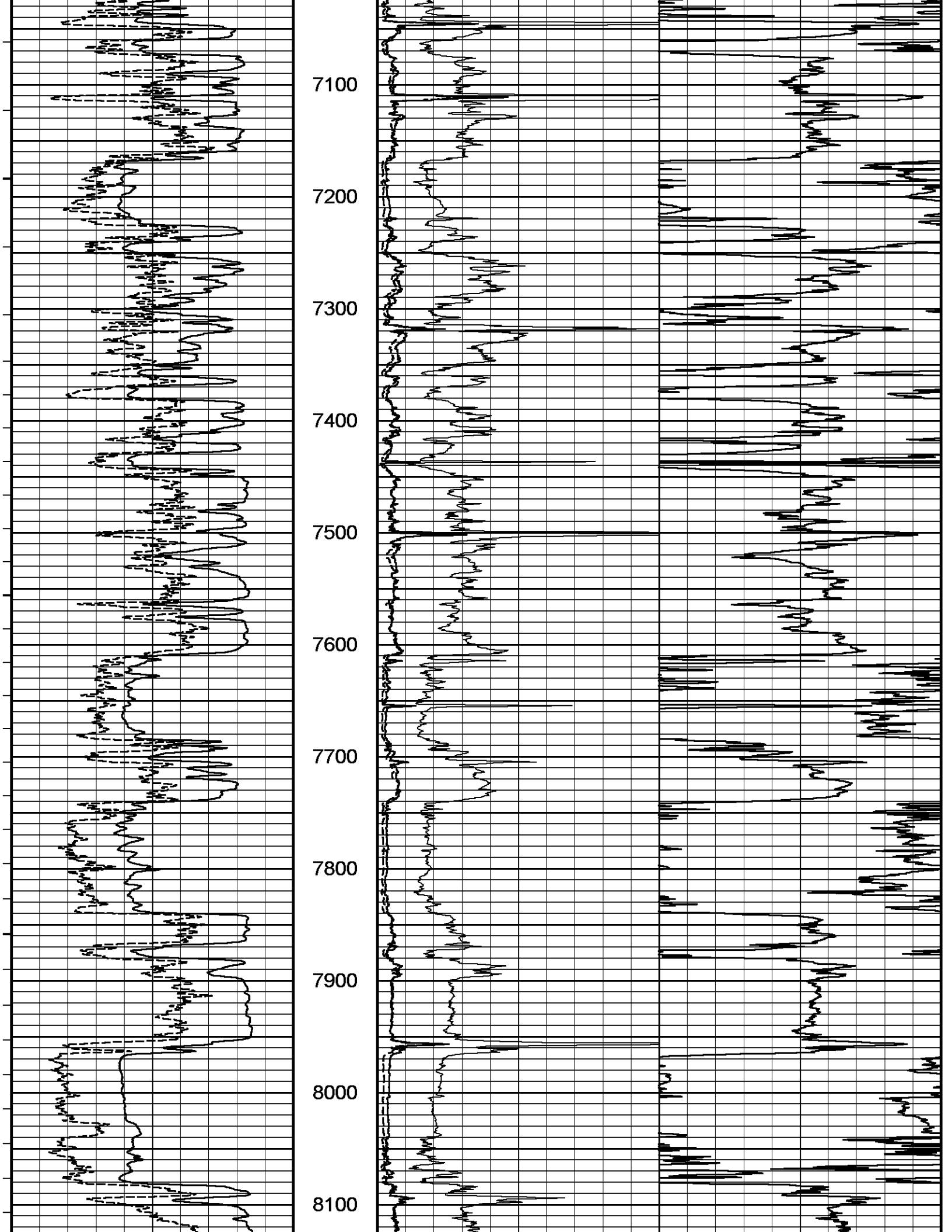
Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 06-JUL-2012 08:21  
 Filename: C:\Users\David\AppData\Local\Temp\Weatherford PreView0\uplog2.dta Recorded on 03-JUL-2012 15:11  
 System Versions: Logged with 13.02.6600 Plotted with 12.01.3513

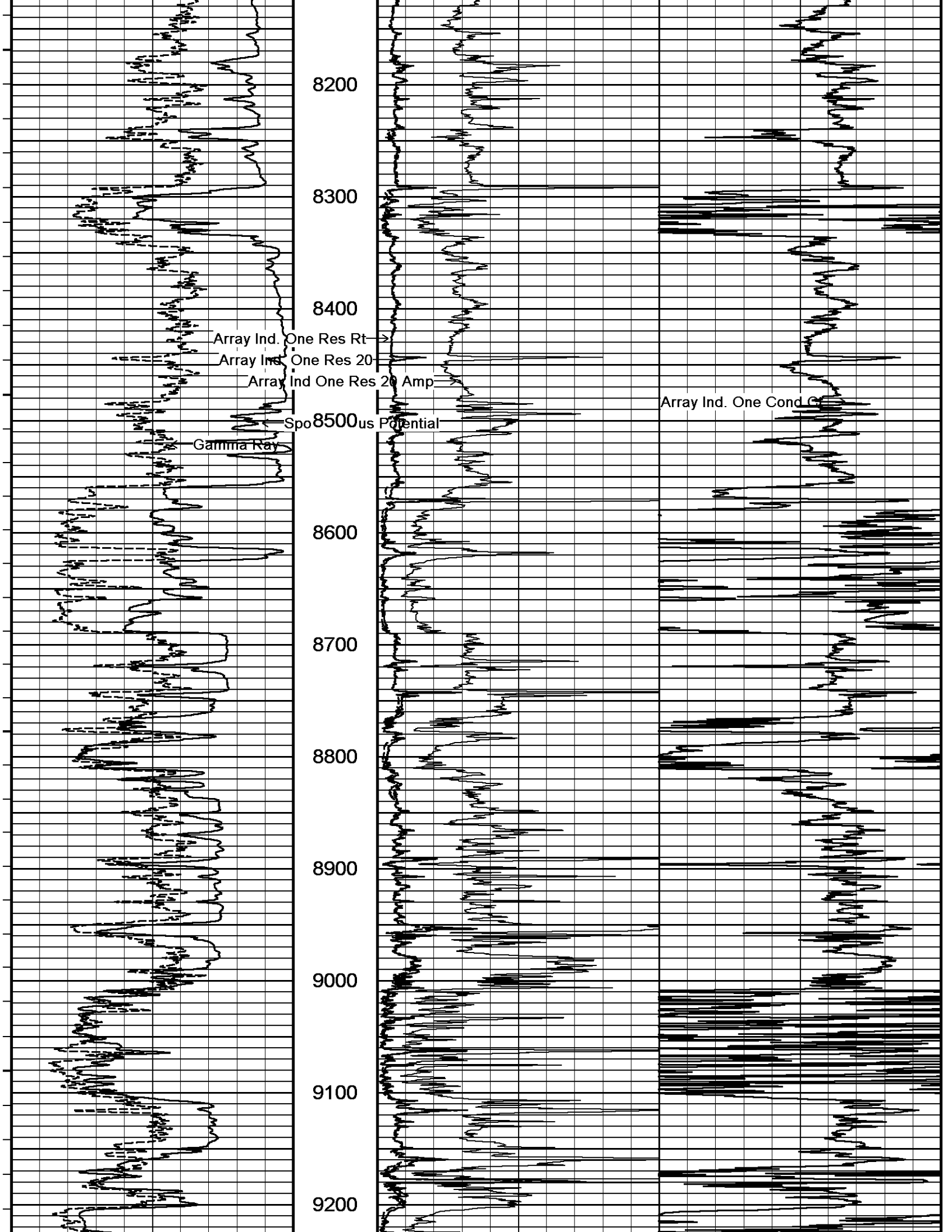


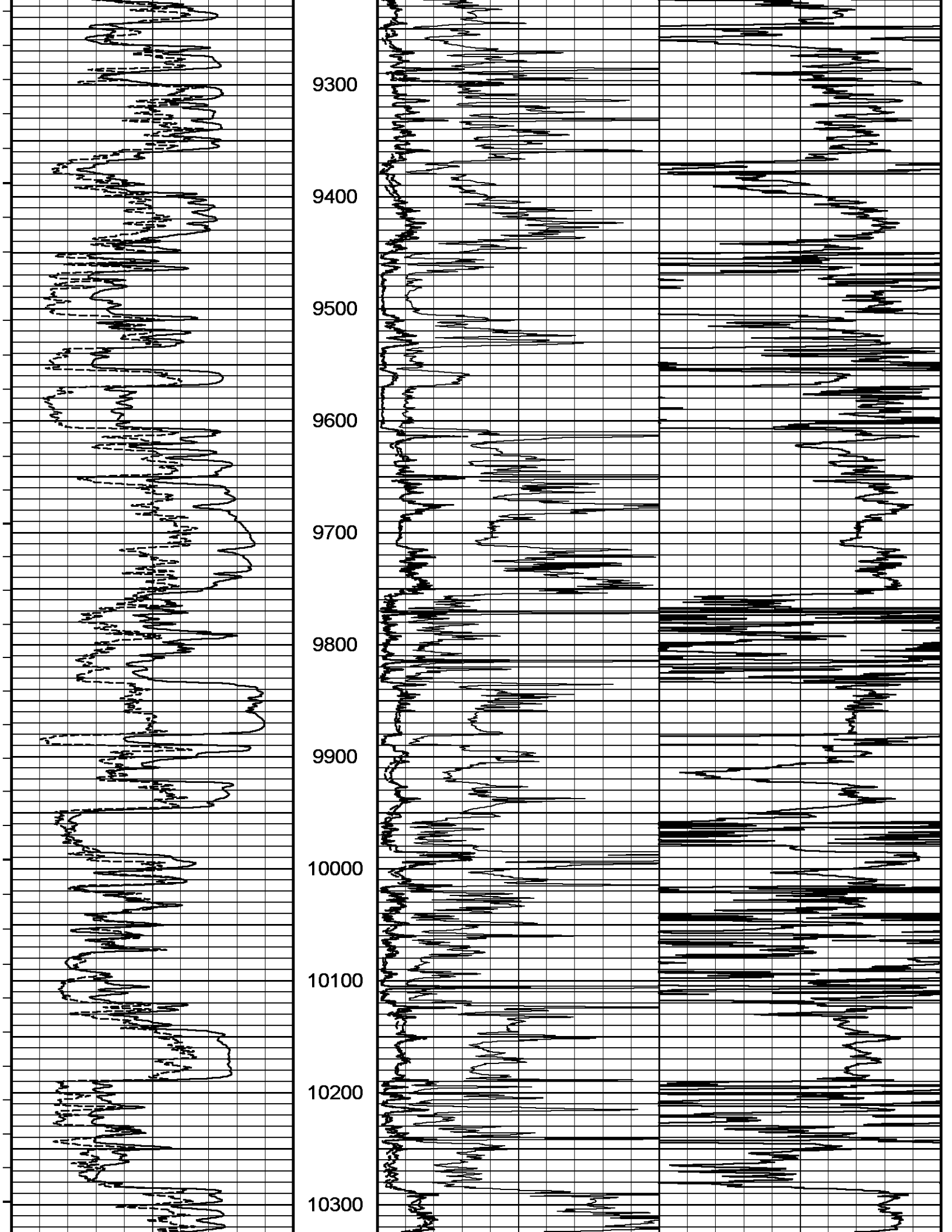


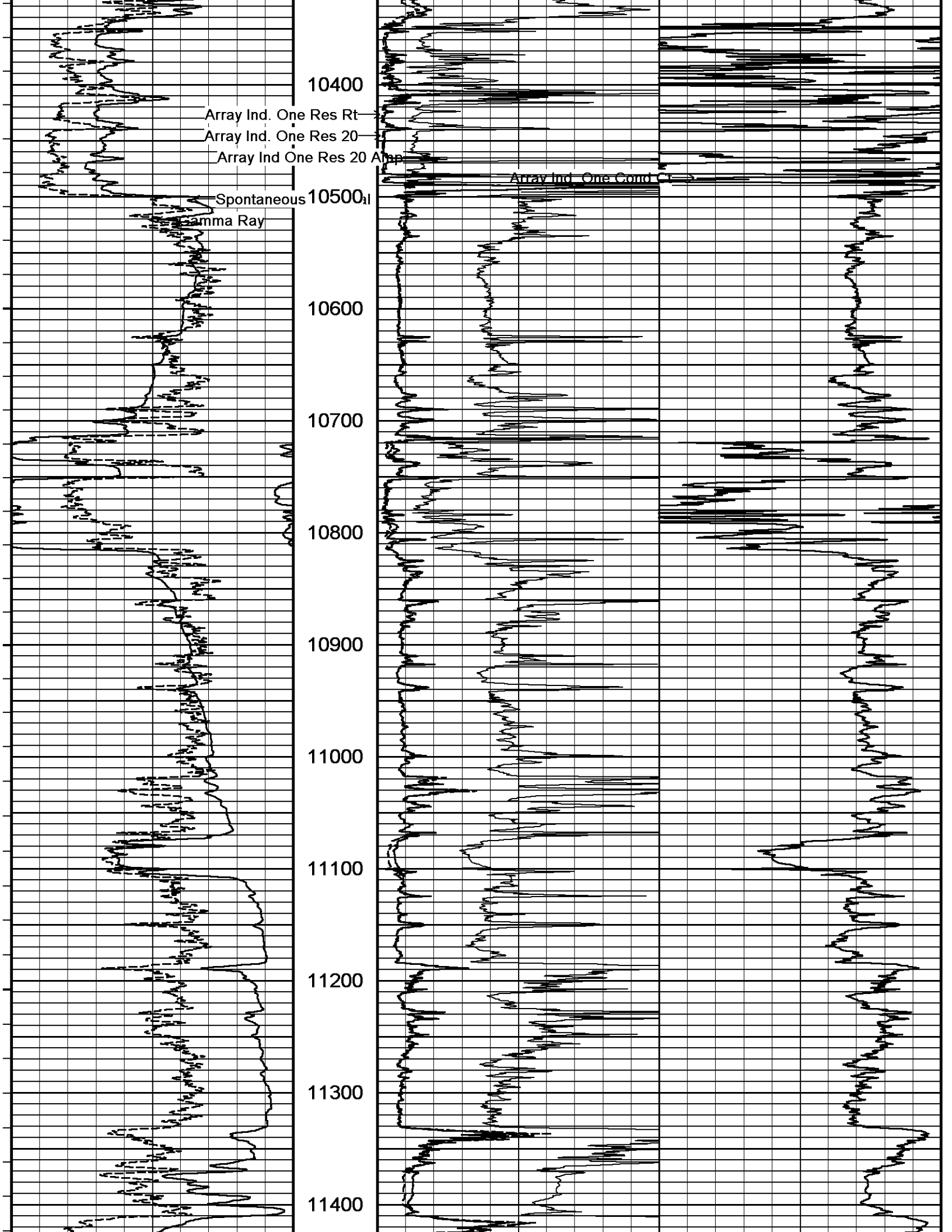


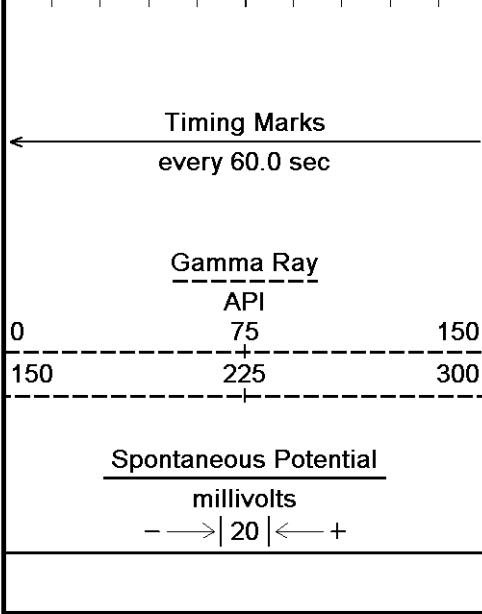
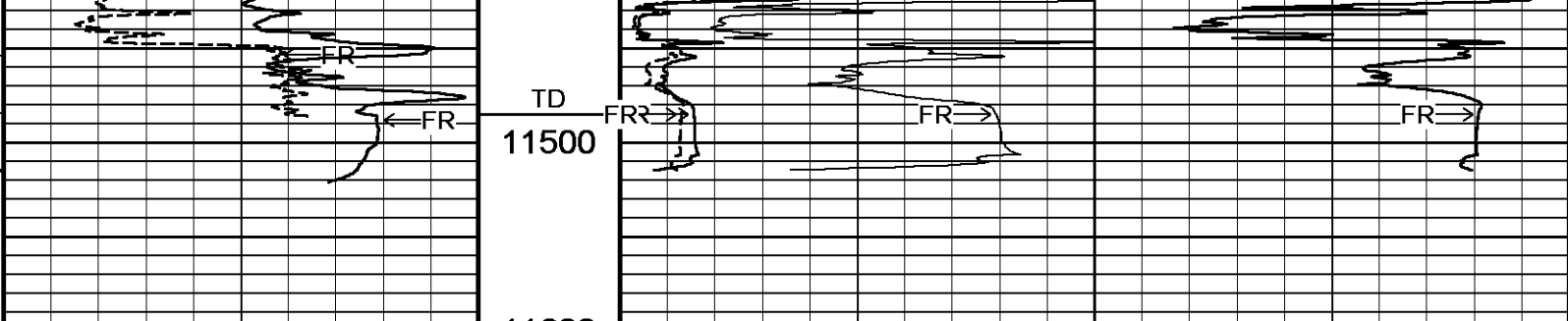










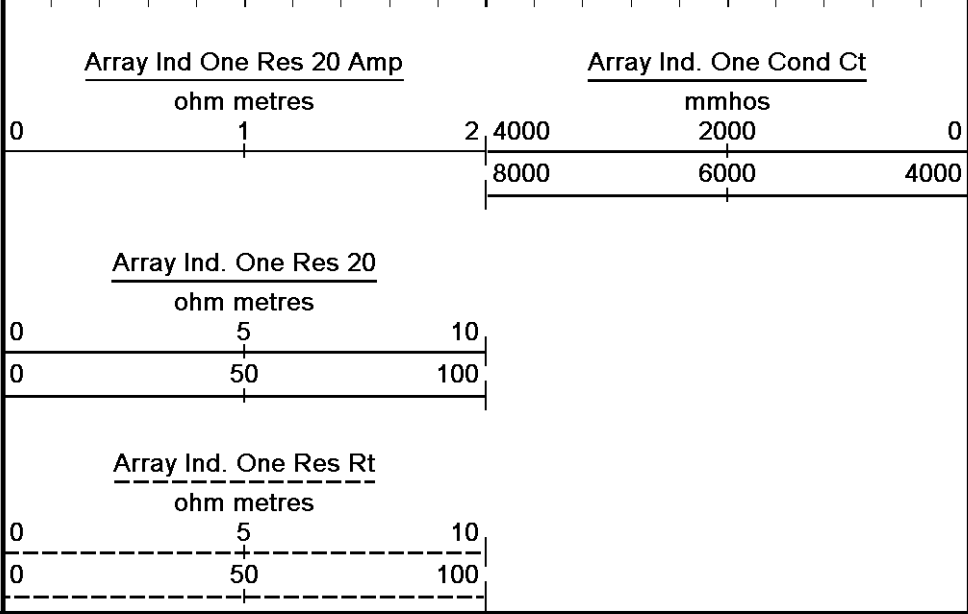


TD  
11500

11600

Depth  
In  
Feet

Replay  
Scale  
1:1200

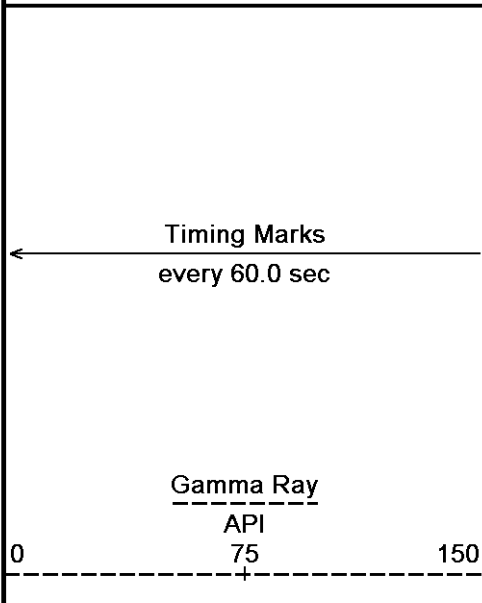


Depth Based Data - Maximum Sampling Increment 10.0cm  
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 Recorded on 03-JUL-2012 15:11  
 System Versions: Logged with 13.02.6600 Plotted with 12.01.3513

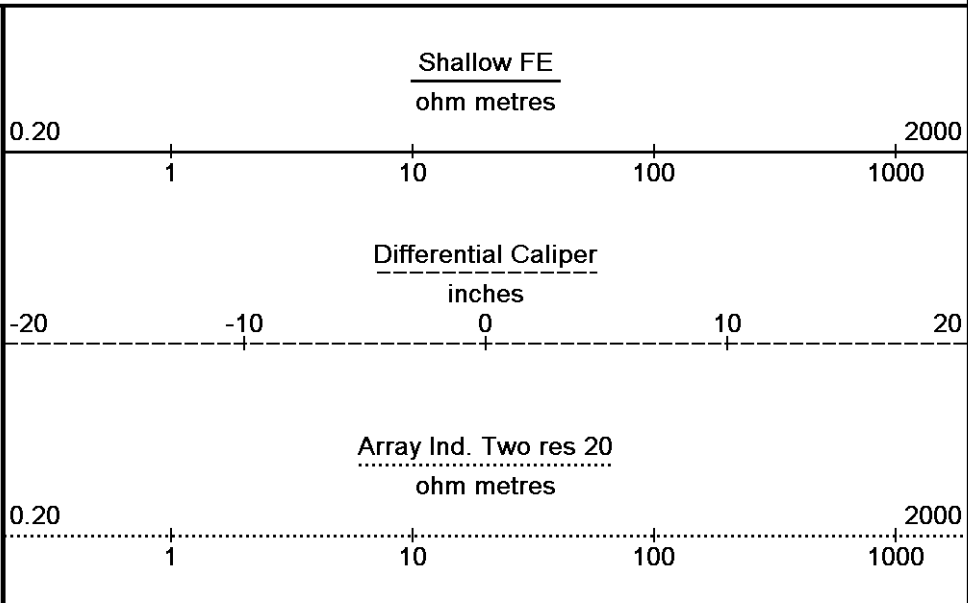
↑ 1" MAIN PASS 1:1200 ↑

↓ 5" MAIN PASS 1:240 ↓

Depth Based Data - Maximum Sampling Increment 10.0cm  
 Plotted on 06-JUL-2012 08:21  
 Filename: C:\Users\David\AppData\Local\Temp\Weatherford PreView\0\uplog2.dta  
 Recorded on 03-JUL-2012 15:11  
 System Versions: Logged with 13.02.6600 Plotted with 12.01.3513

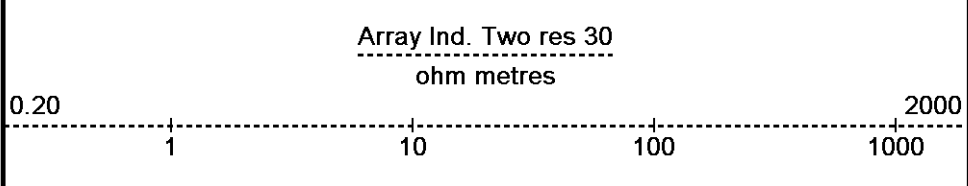


Depth  
In  
Feet



Borehole  
Temp in  
deg F

Borehole  
Temp in  
deg F



Spontaneous Potential

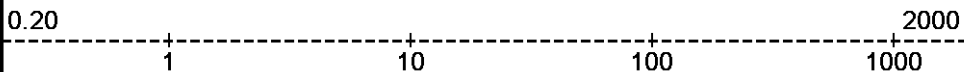
millivolts

-->| 20 |<--+

HVI  
every  
10 cu ft

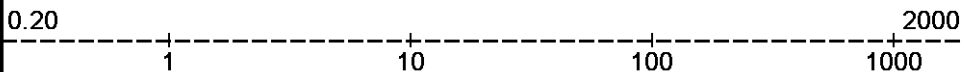
Array Ind. Two Res 40

ohm metres



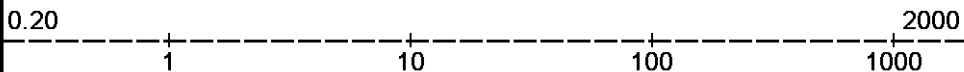
Array Ind. Two Res 60

ohm metres



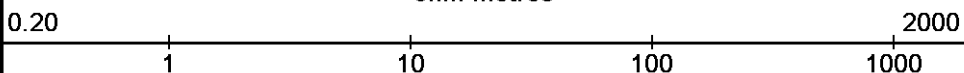
Array Ind. Two Res 85

ohm metres



Array Ind. Two Res Rt

ohm metres



Density Correction

grams/cc

-0.80 -0.30 0.20

Annular  
Integral  
every  
10 cu ft

DST Uphole Tension

pounds



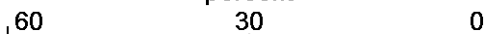
Apparent Water Res.

ohm metres

0 0.25 0.50

Sandstone Neutron Por.

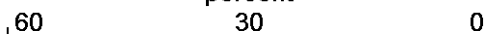
percent



0 2.50 5

Sandstone Density Por.

percent



Replay  
Scale  
1:240

3188

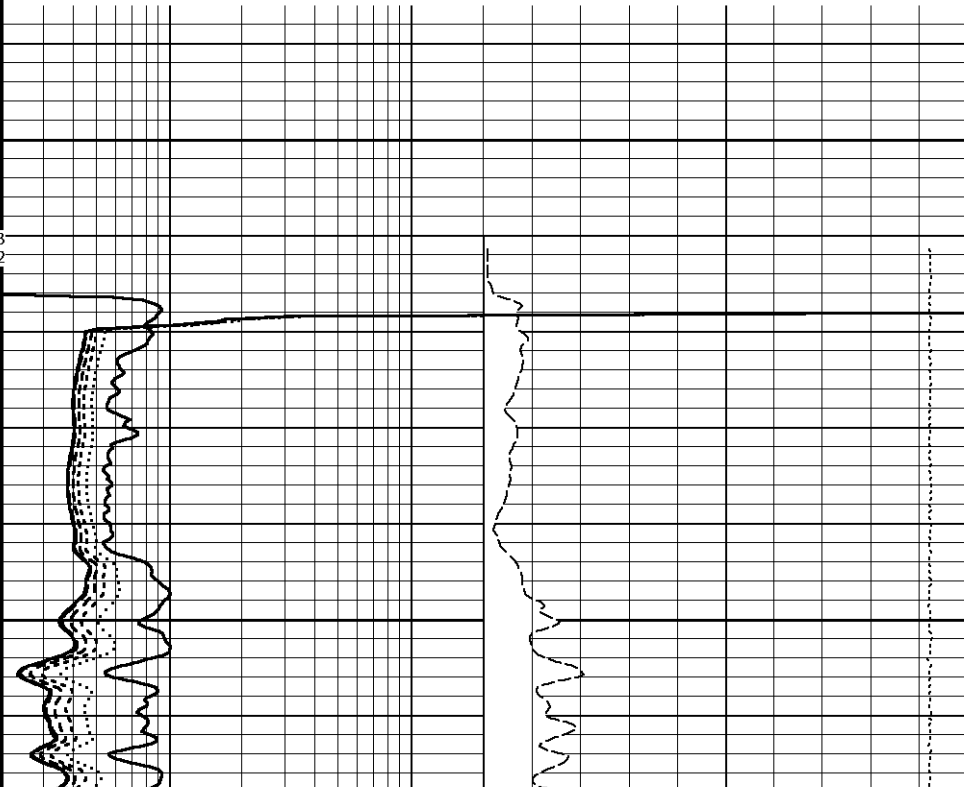
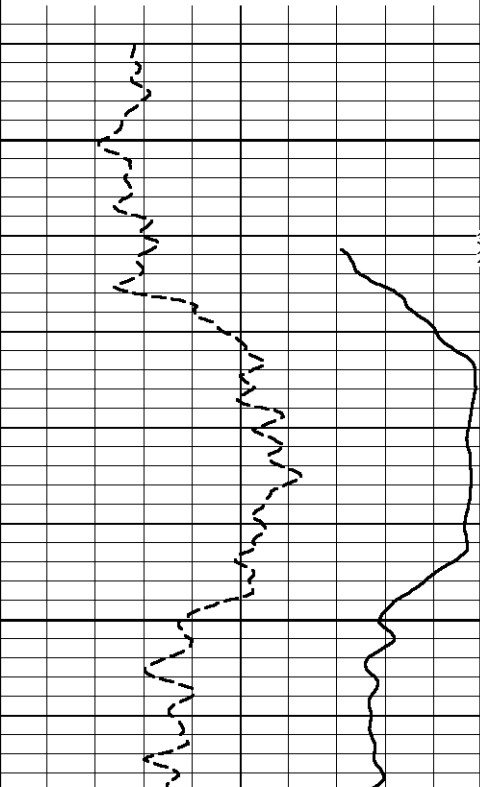
3200

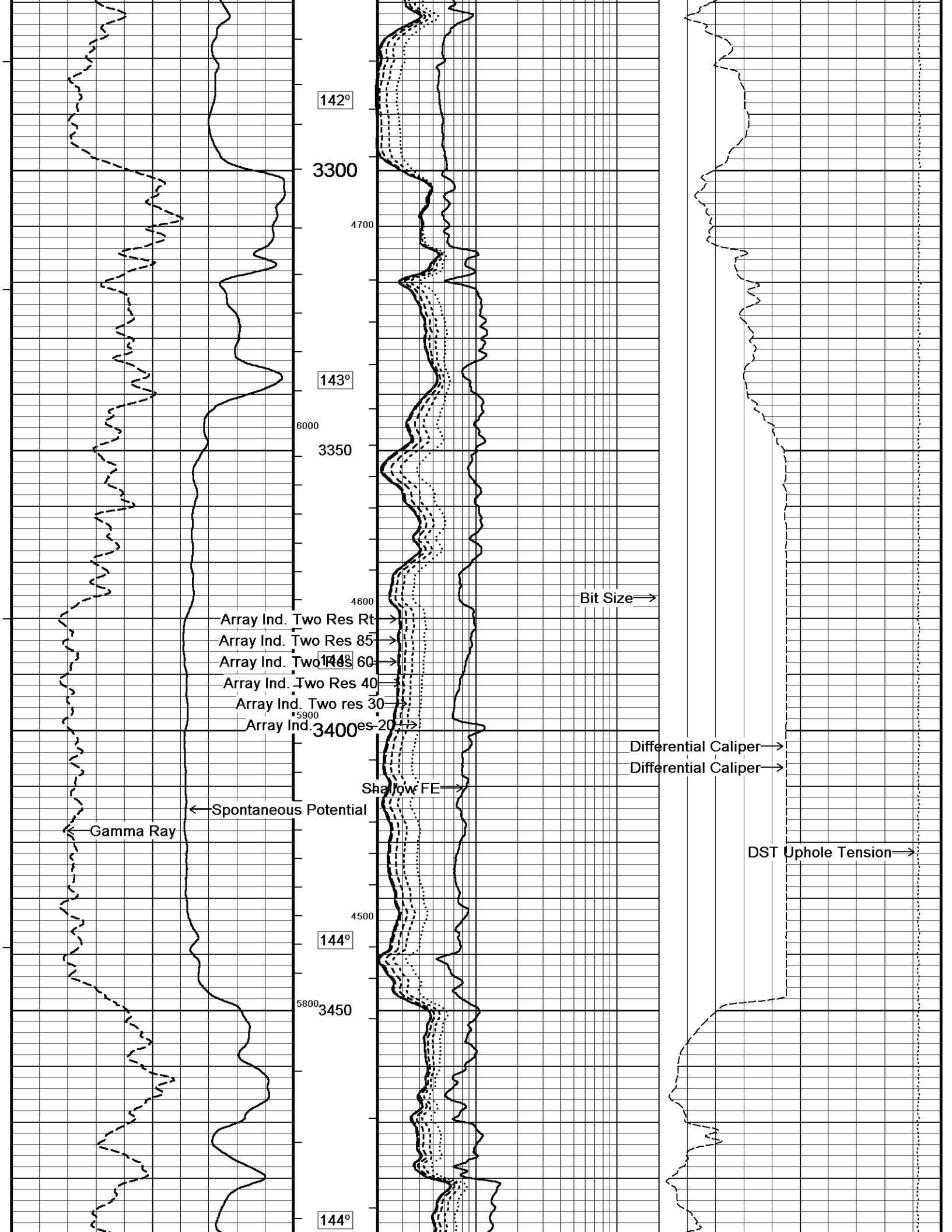
Casing  
Shoe

142°

3250

6100





142°

3300

4700

143°

6000

3350

4600

Array Ind. Two Res Rt

Array Ind. Two Res 85

Array Ind. Two Res 60

Array Ind. Two Res 40

Array Ind. Two res 30

Array Ind. 20

3400

Shallow FE

Bit Size

Differential Caliper

Differential Caliper

DST Uphole Tension

Gamma Ray

Spontaneous Potential

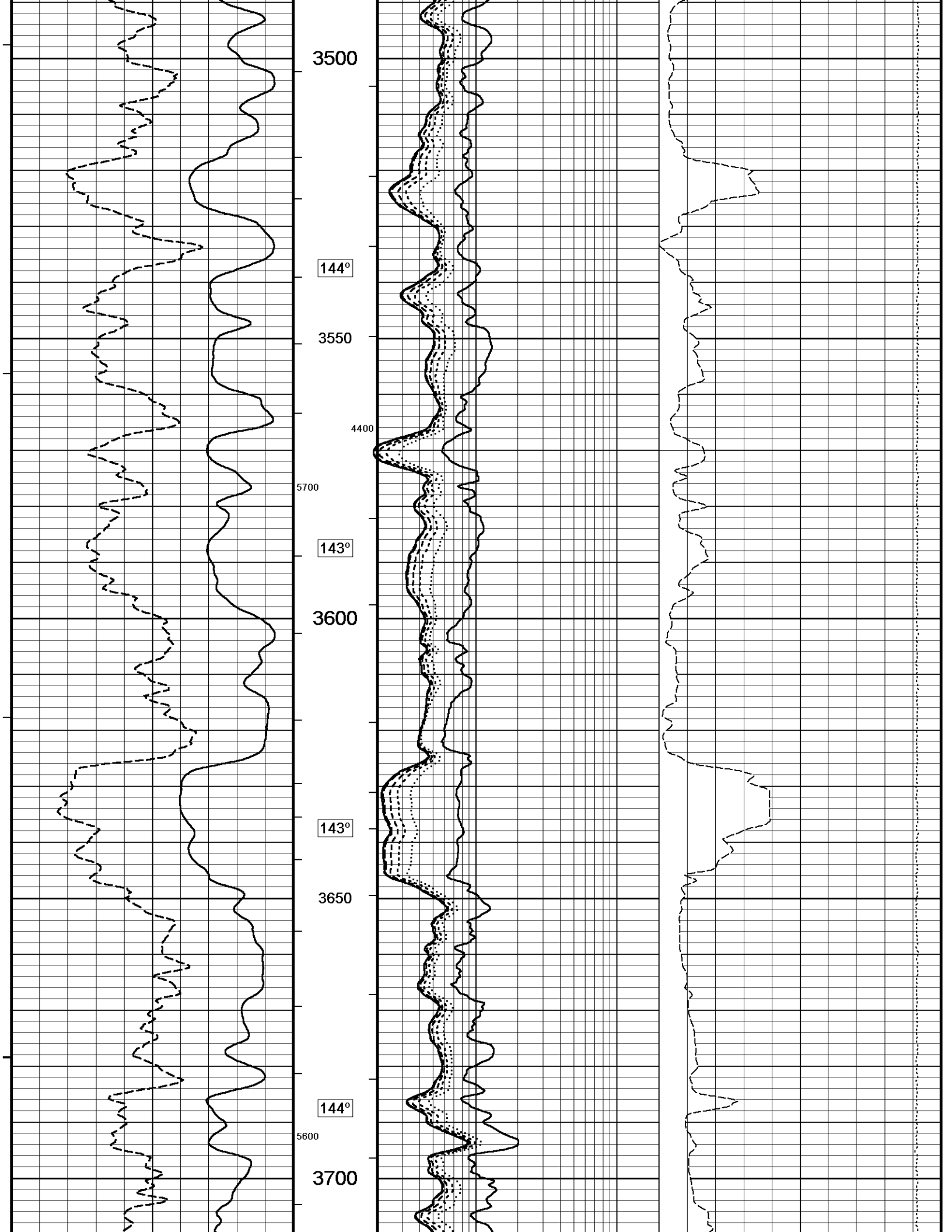
144°

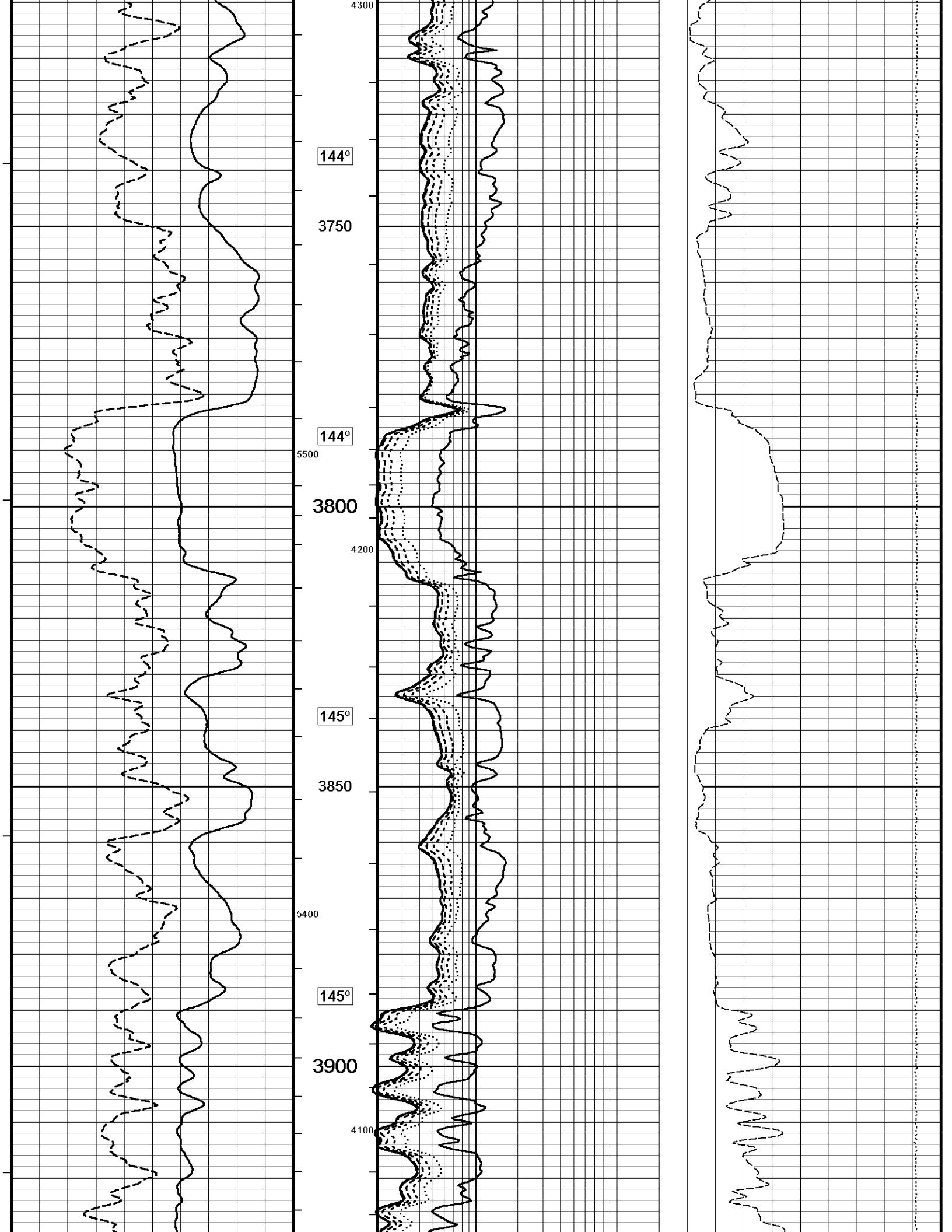
5800

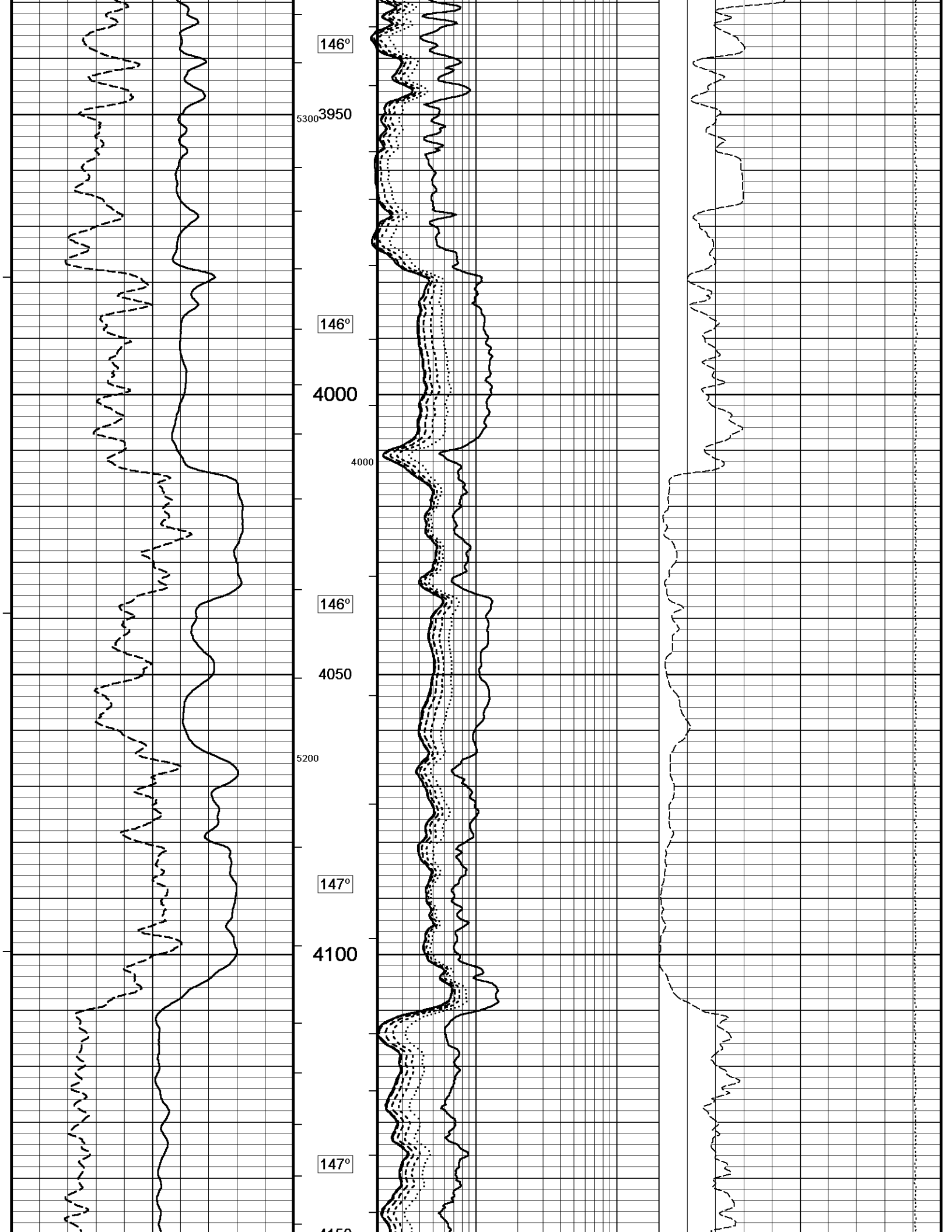
3450

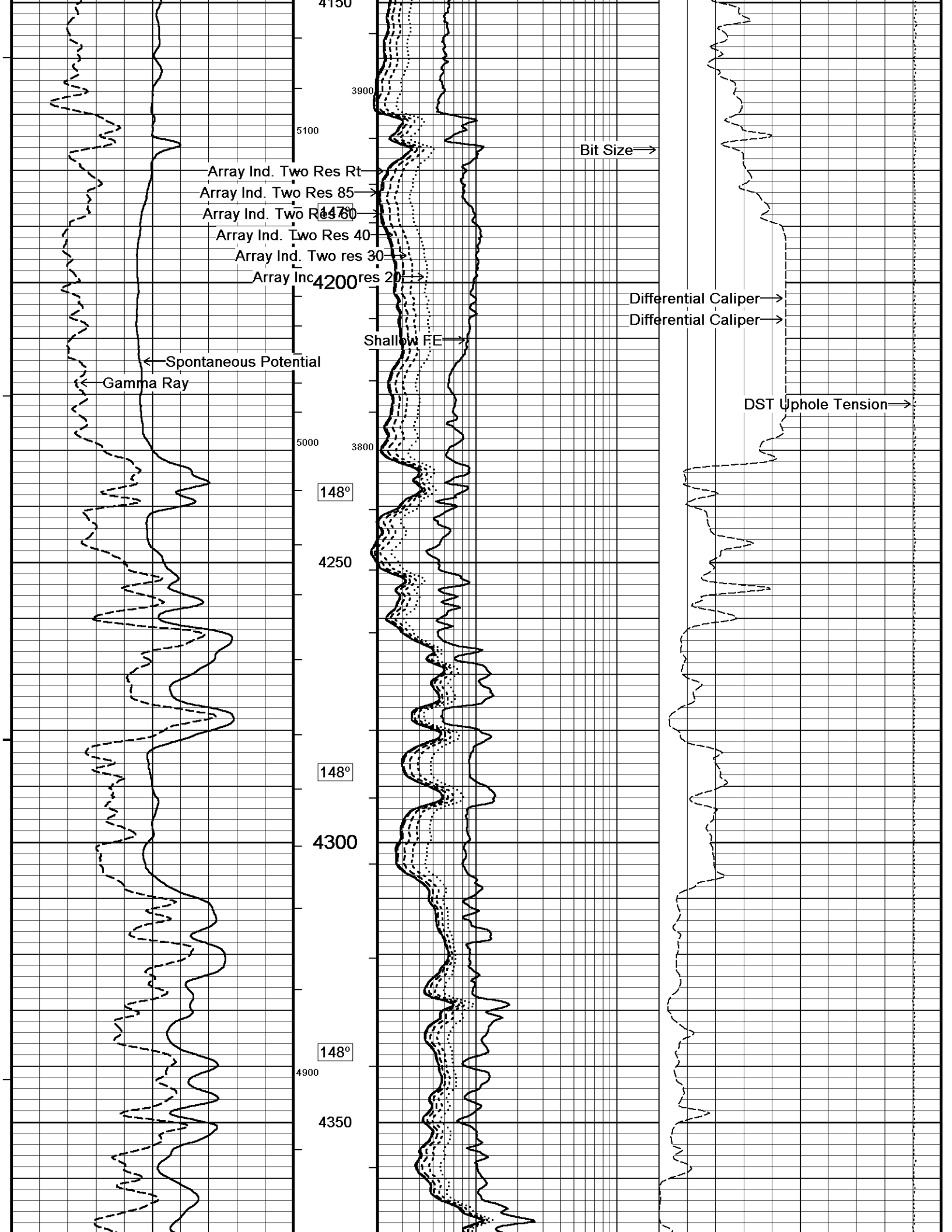
4500

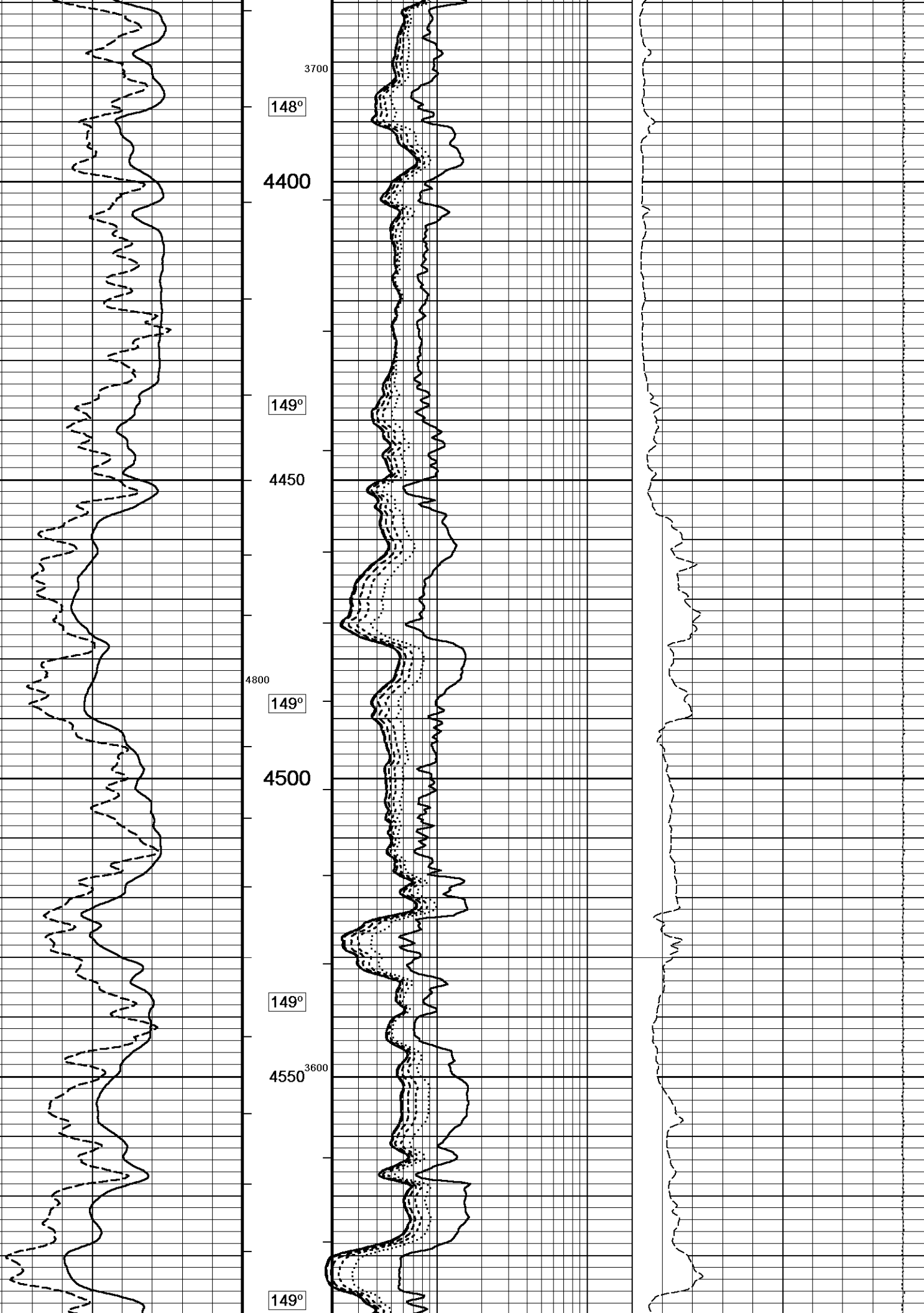
144°

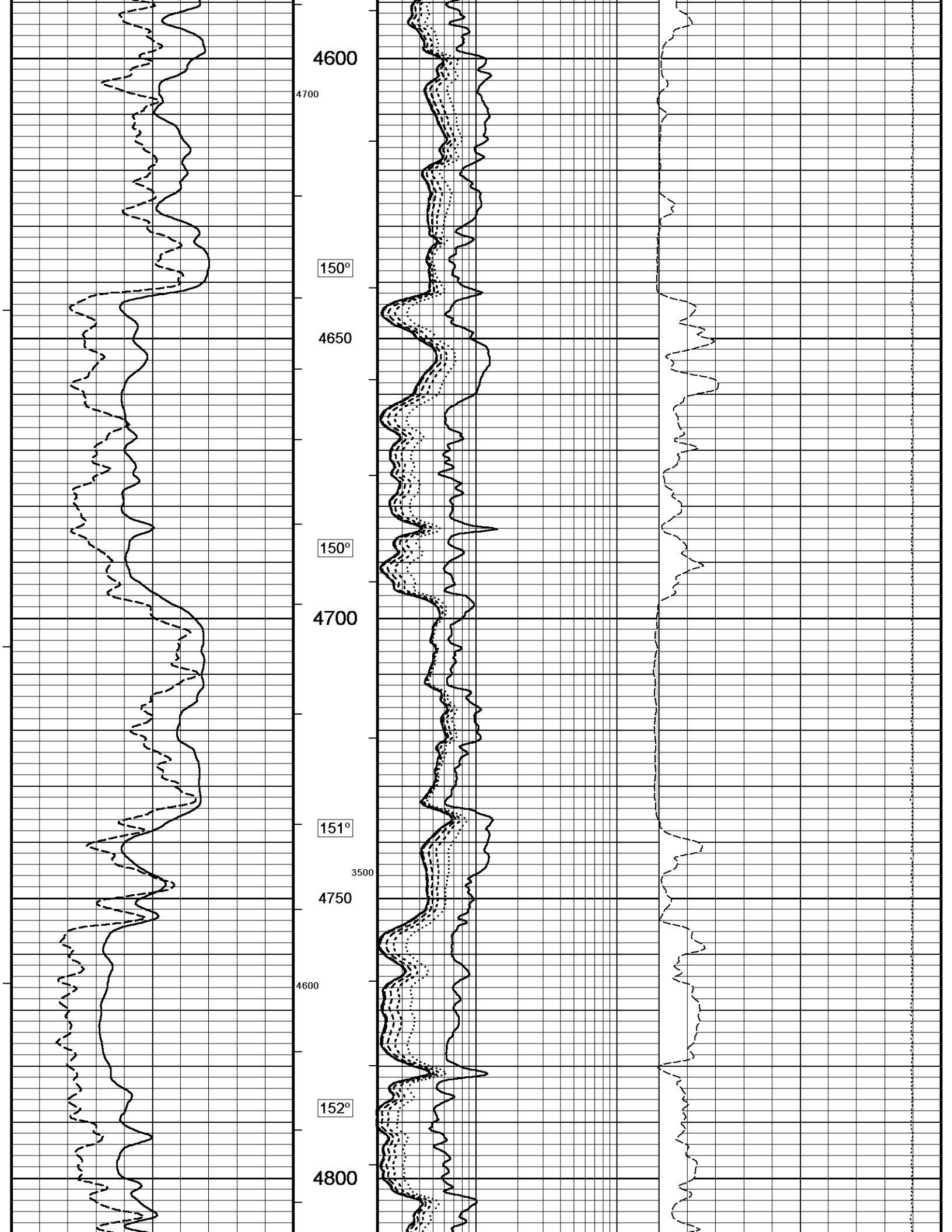


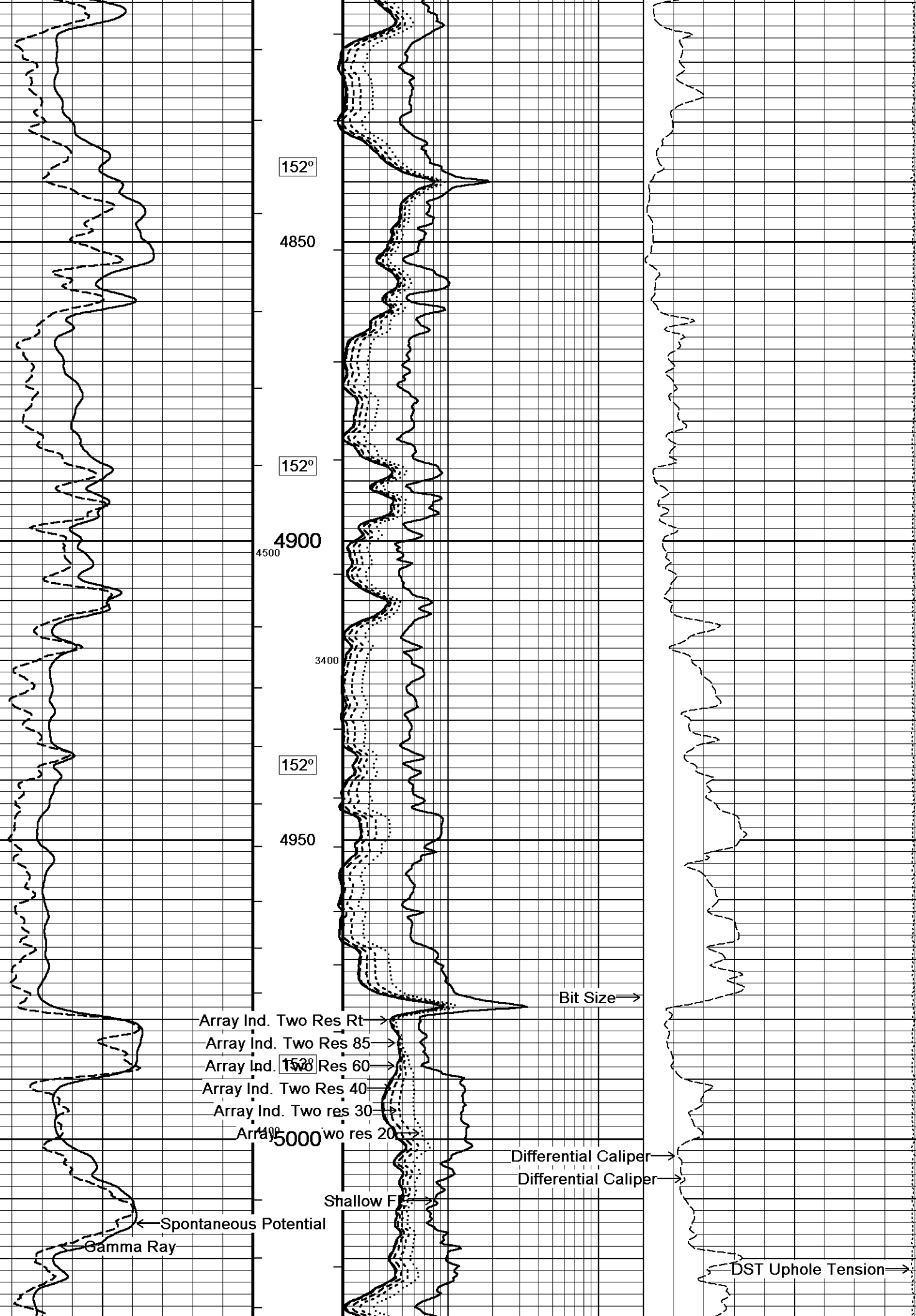


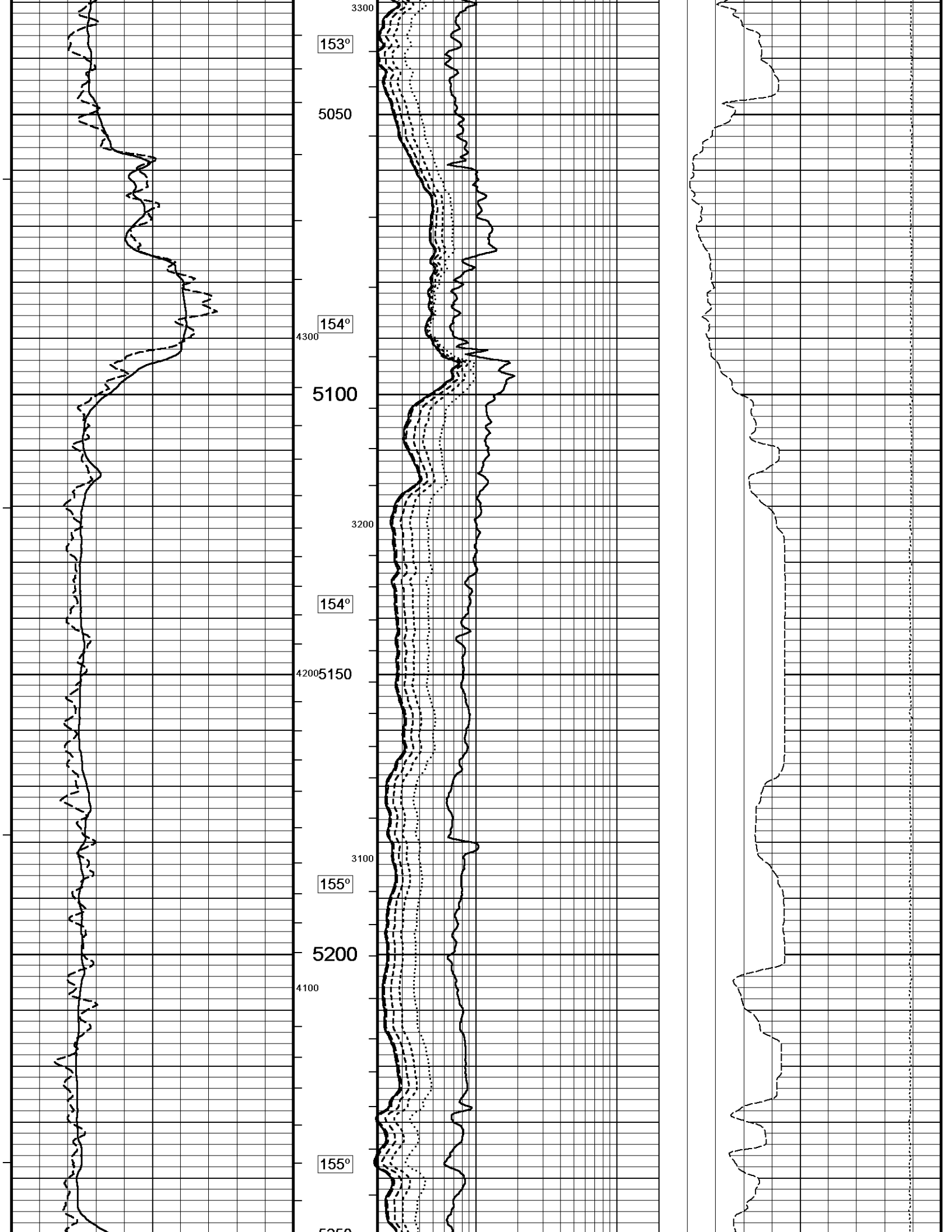


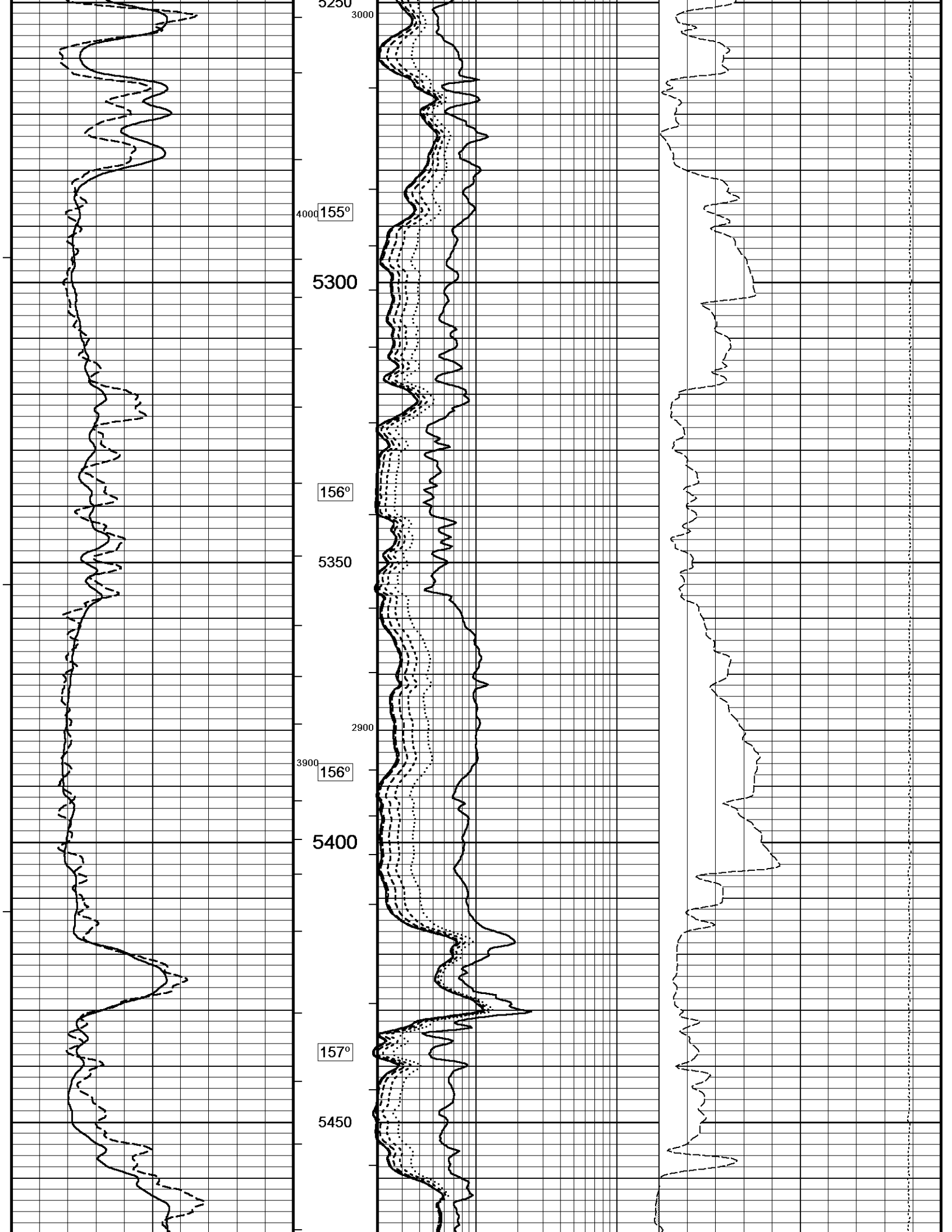


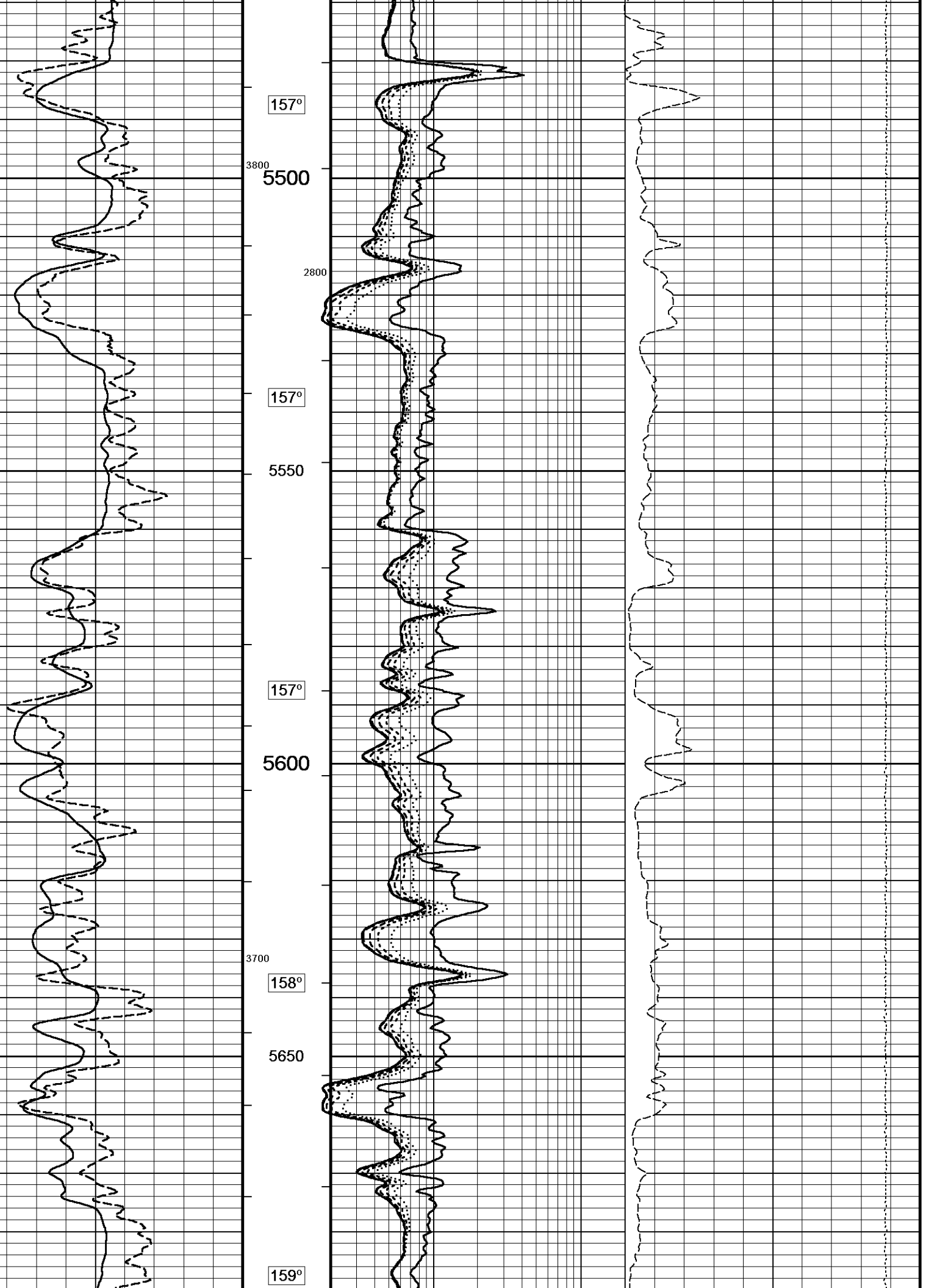












2700  
5700

159°

5750

5800

160°

5850

160°

5900

3500

- Array Ind. Two Res Rt →
- Array Ind. Two Res 85 →
- Array Ind. Two Res 60 →
- Array Ind. Two Res 40 →
- Array Ind. Two res 30 →
- Array Ind. Two res 20 →

Bit Size →

Differential Caliper →

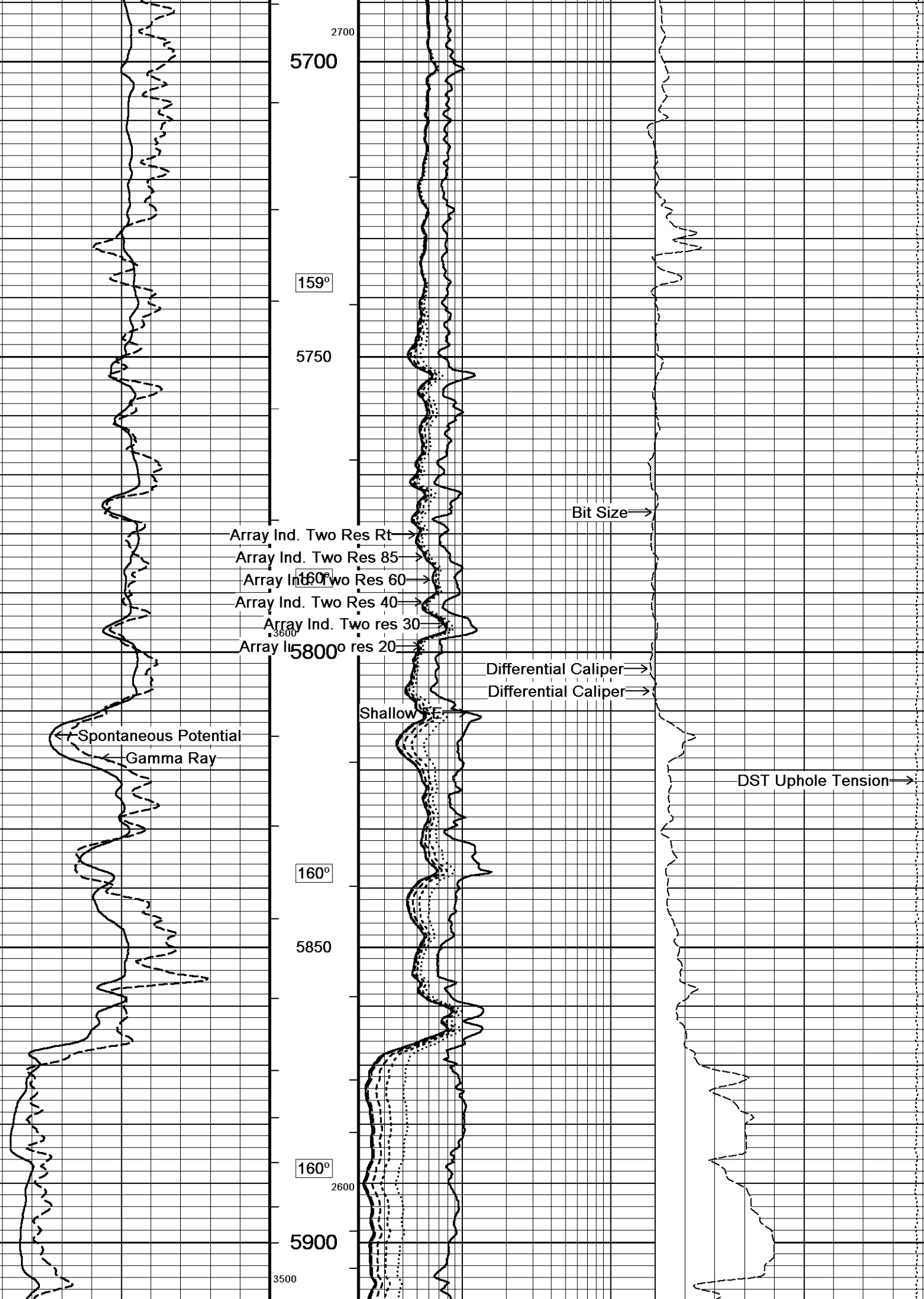
Differential Caliper →

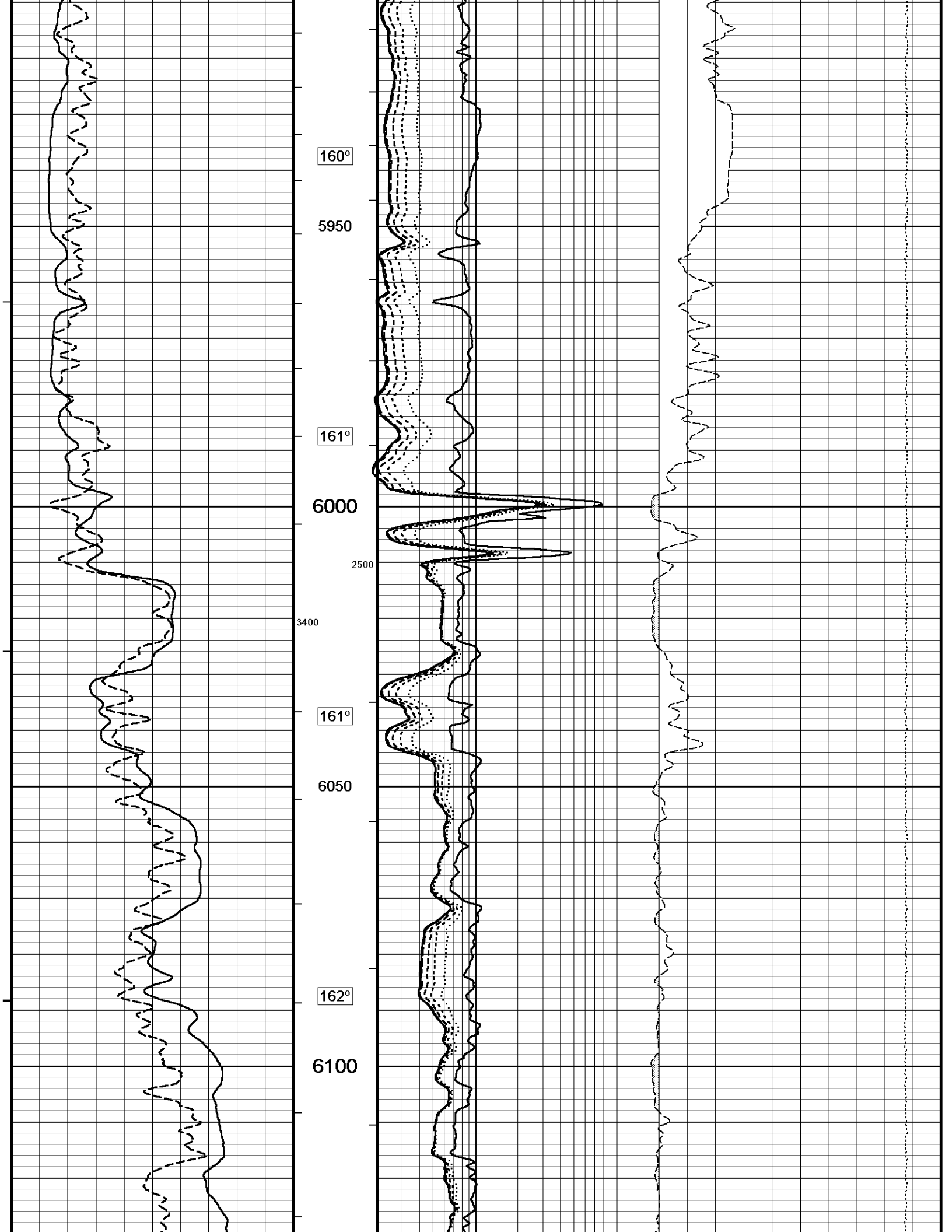
Shallow E

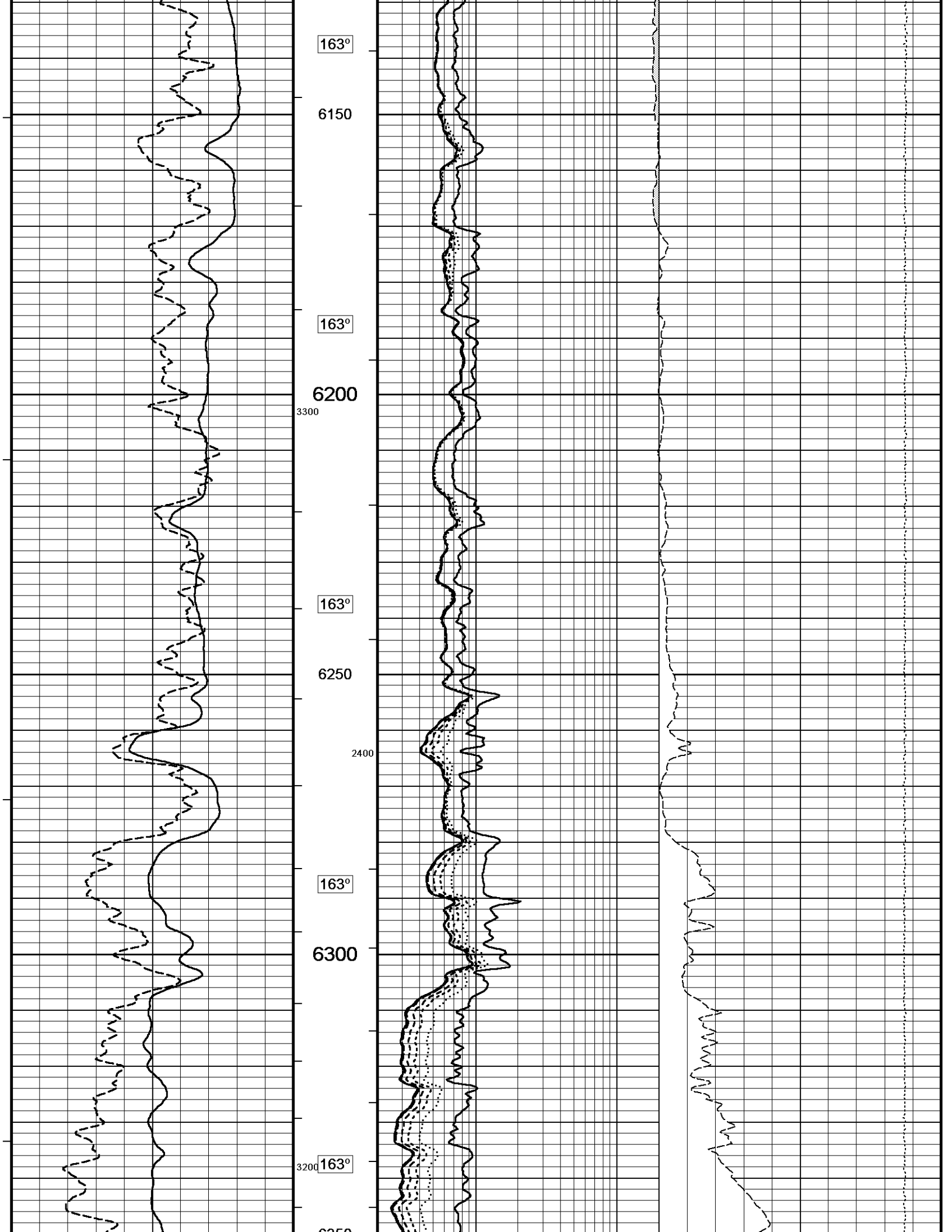
DST Uphole Tension →

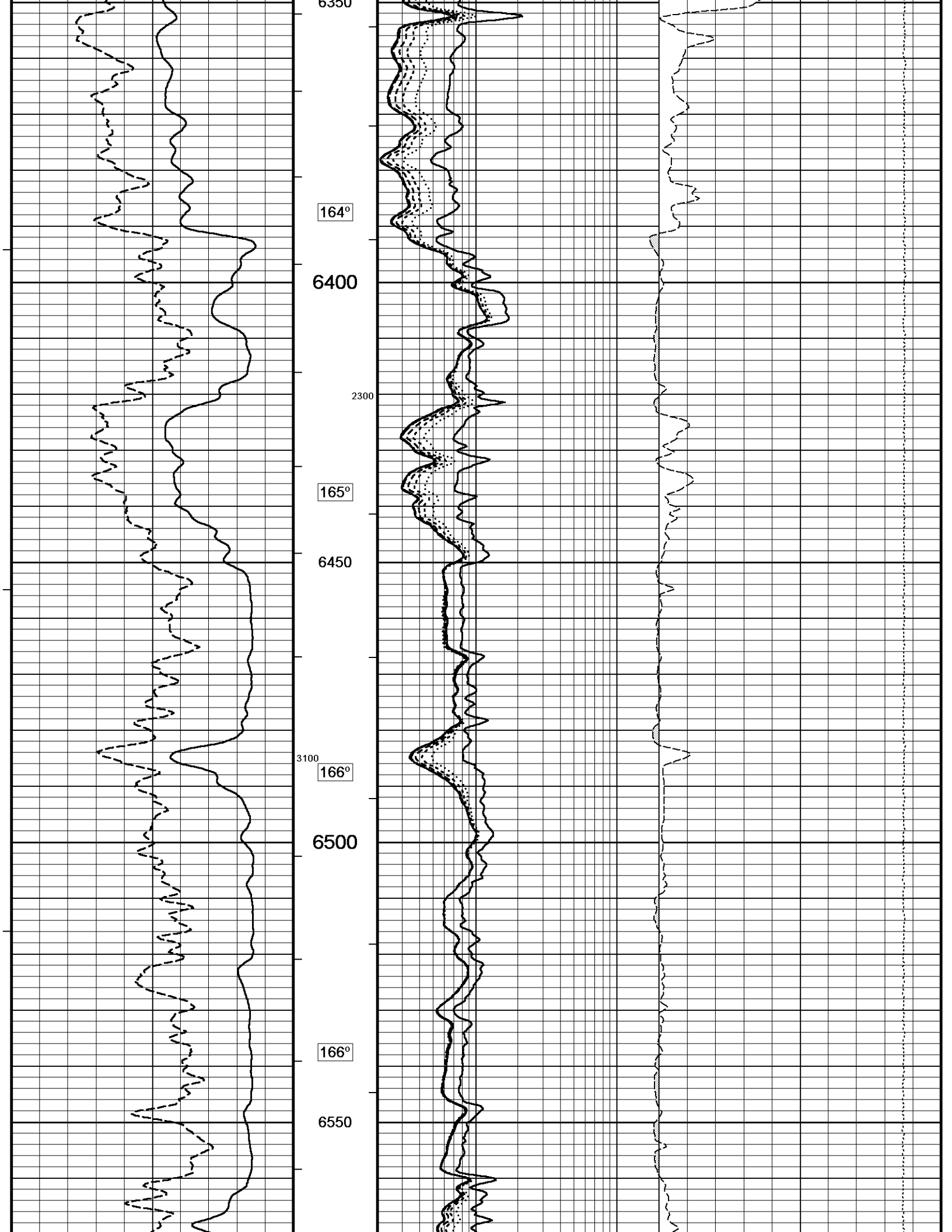
← Spontaneous Potential

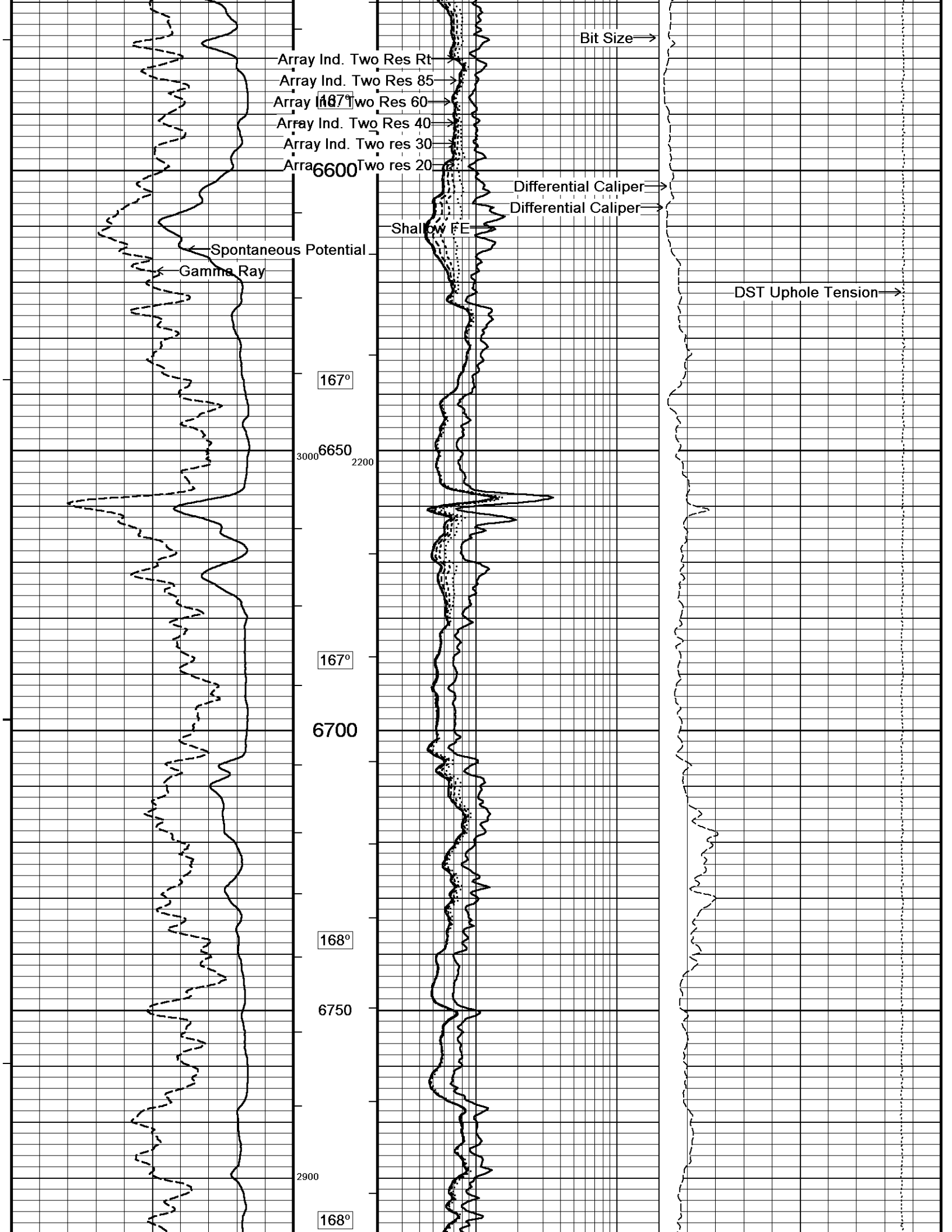
← Gamma Ray

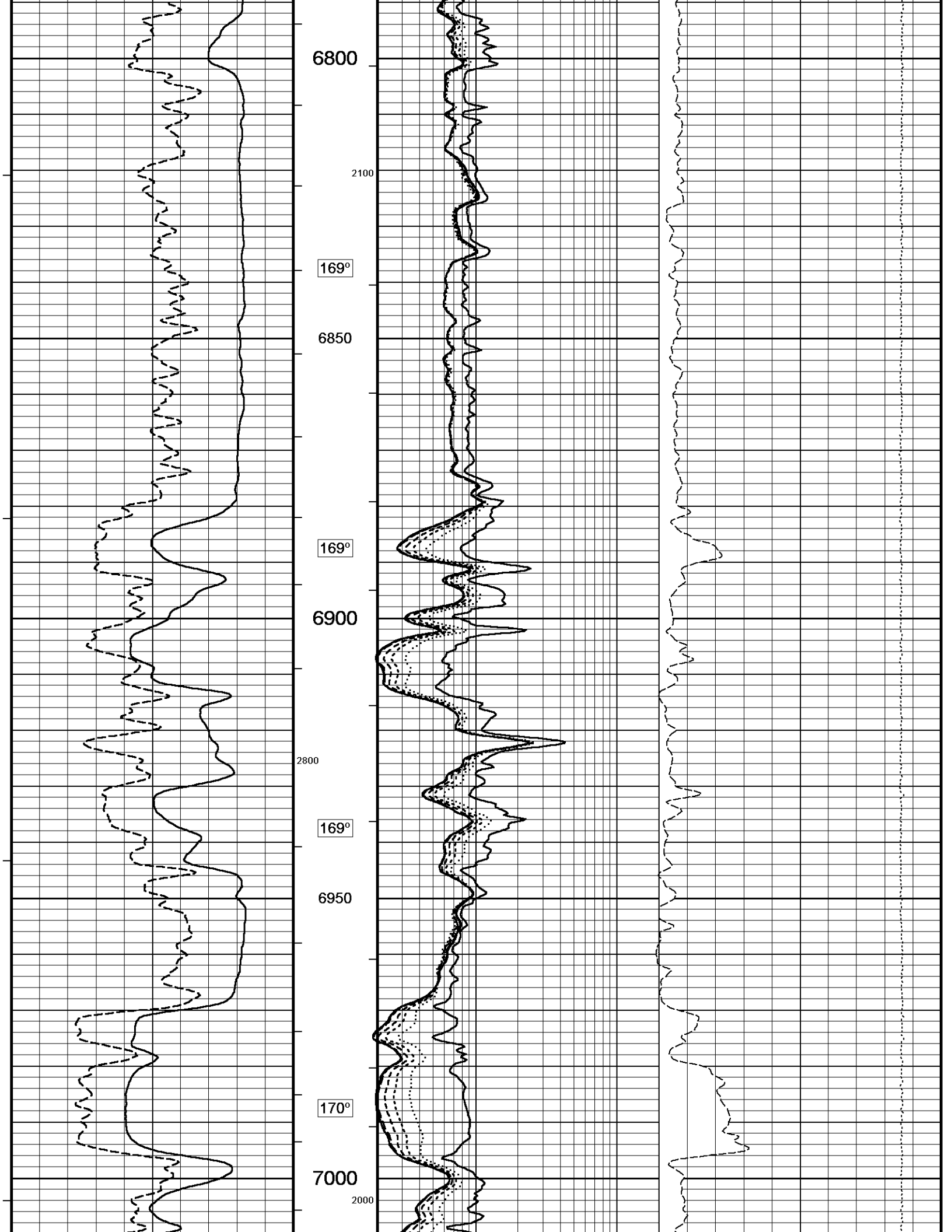


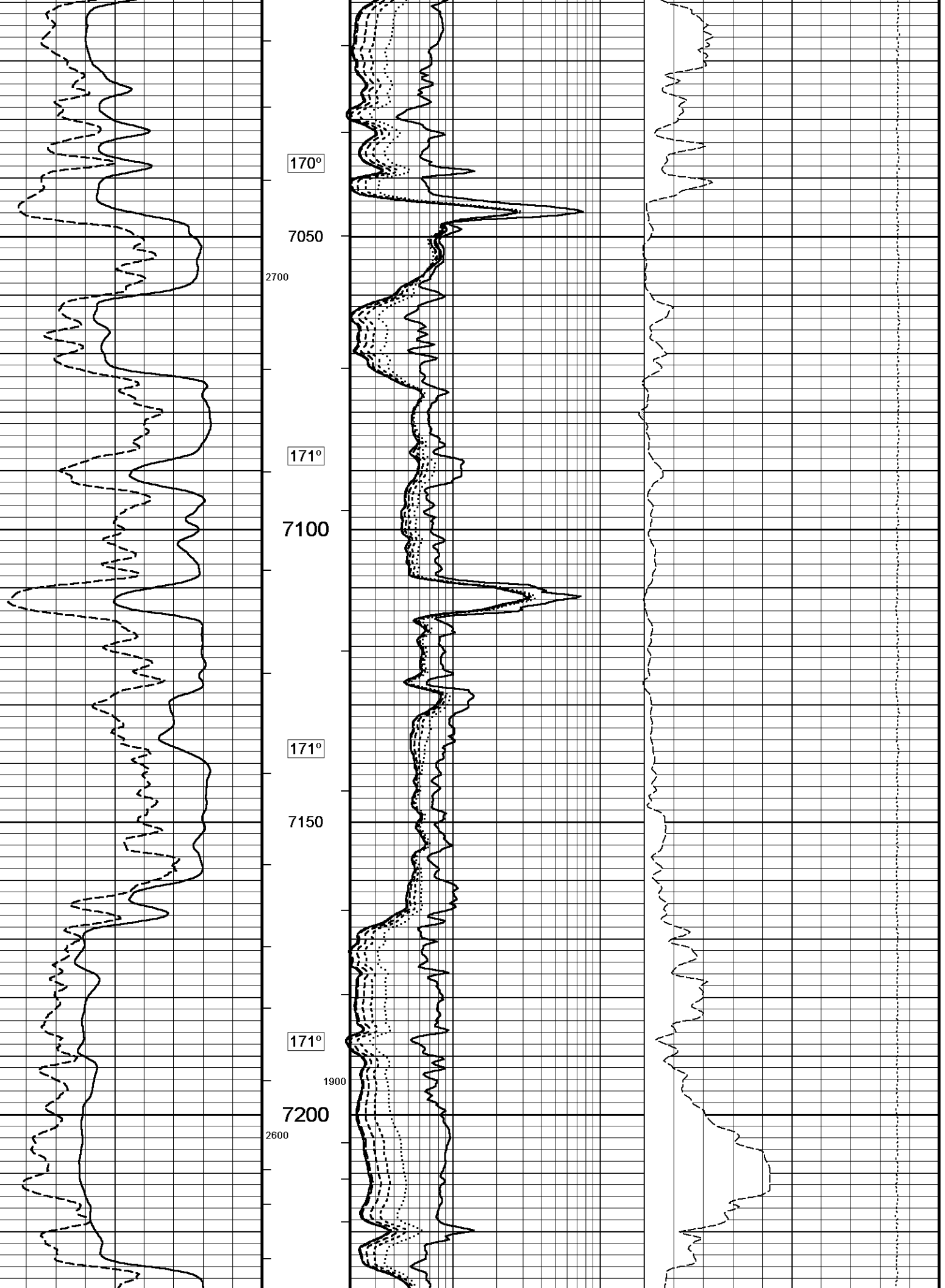


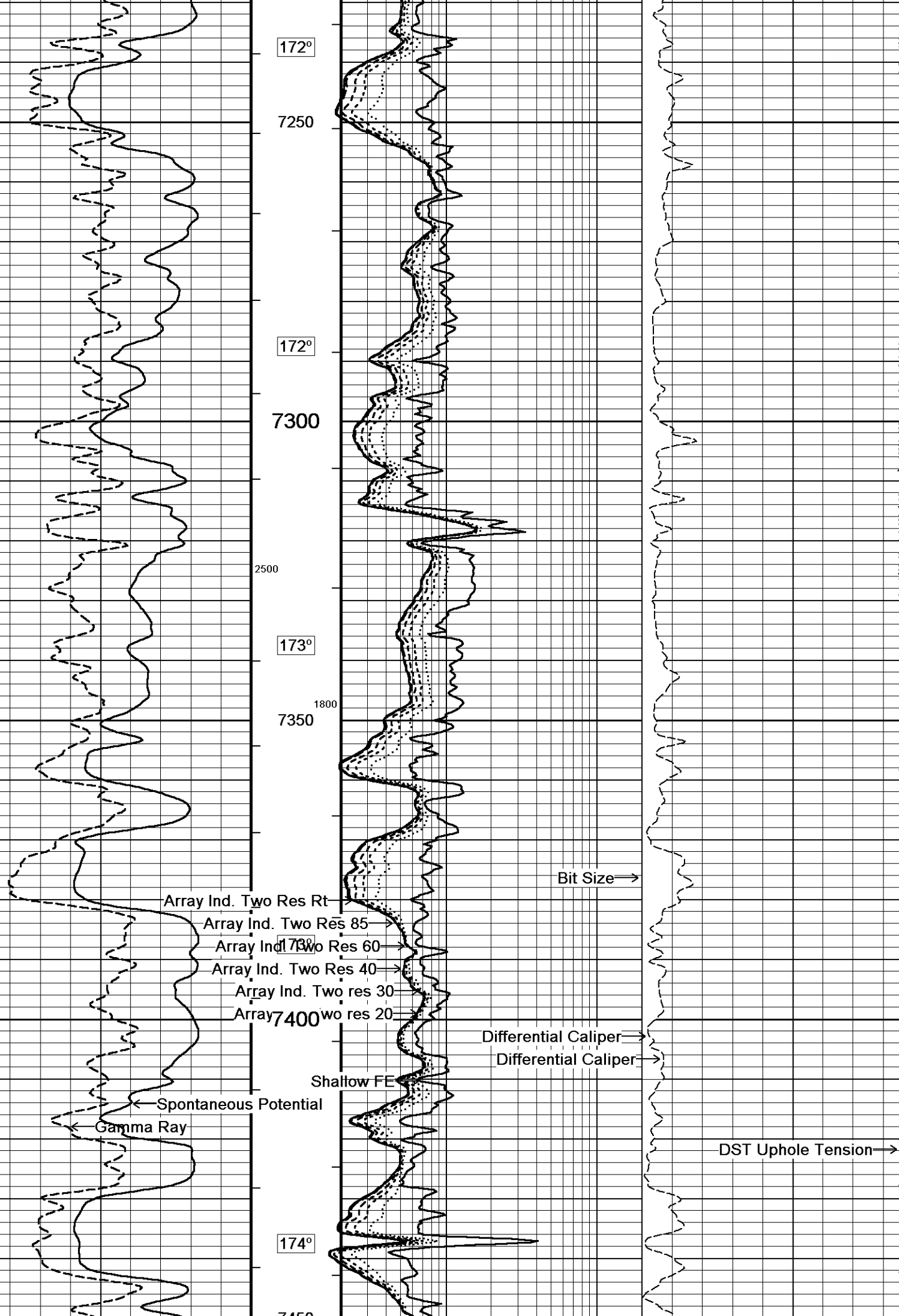


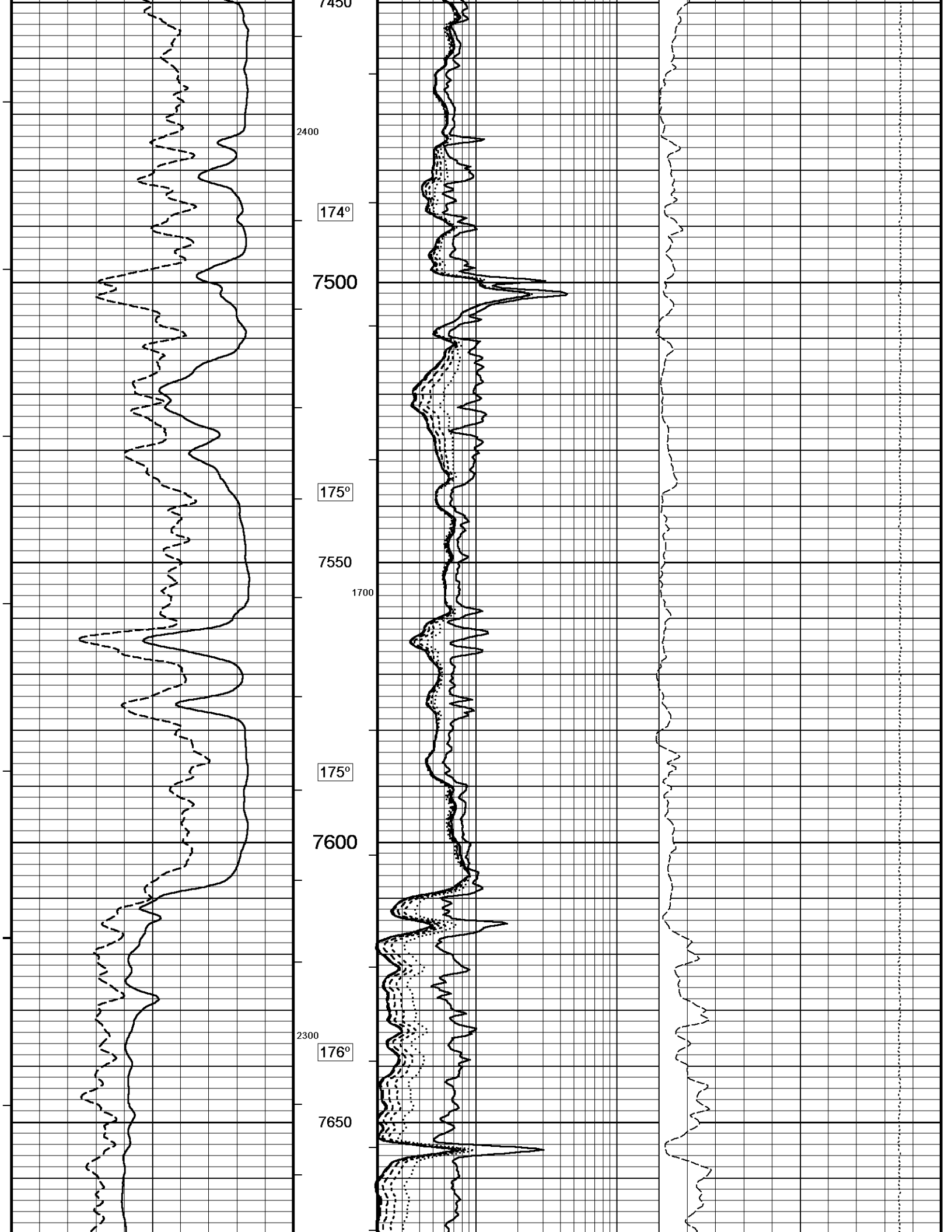


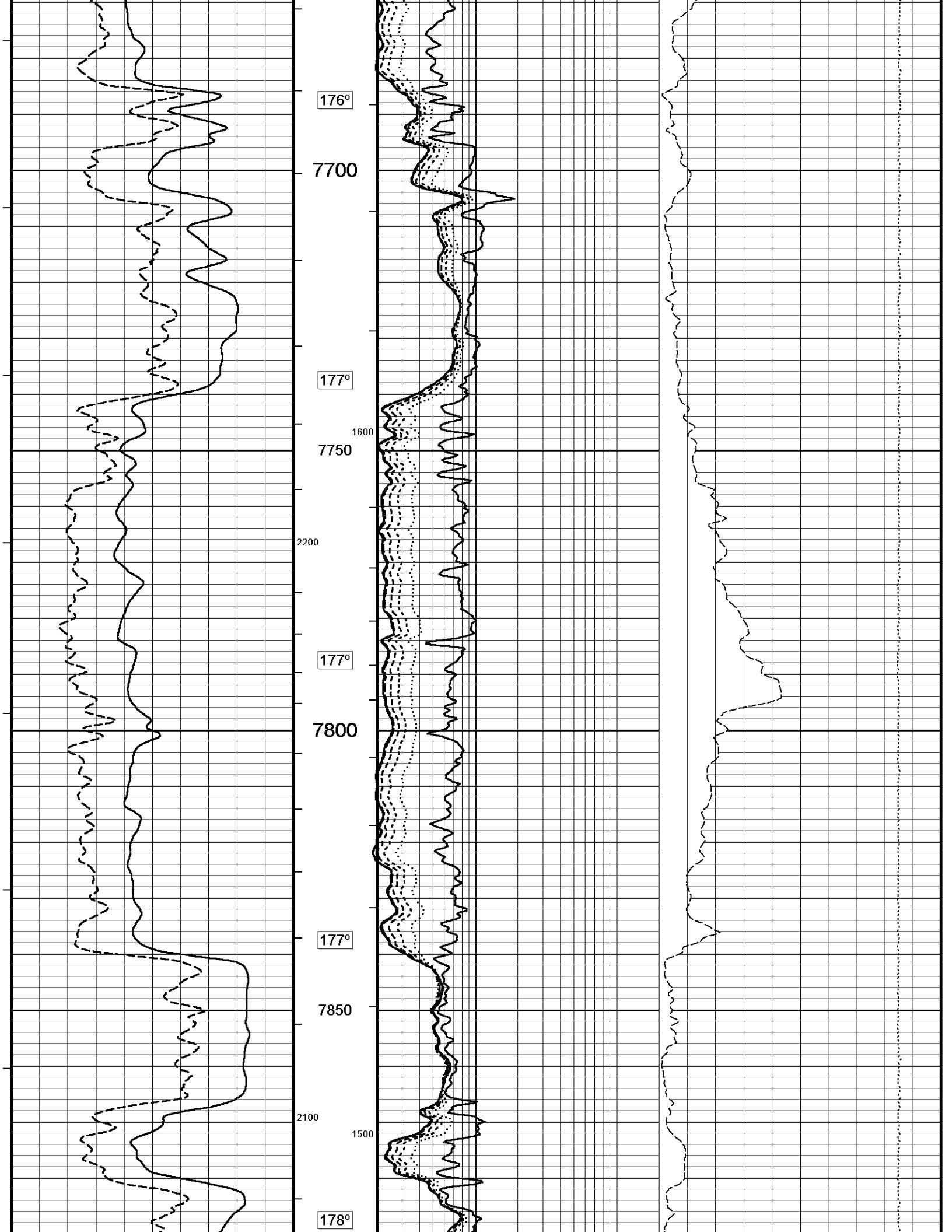


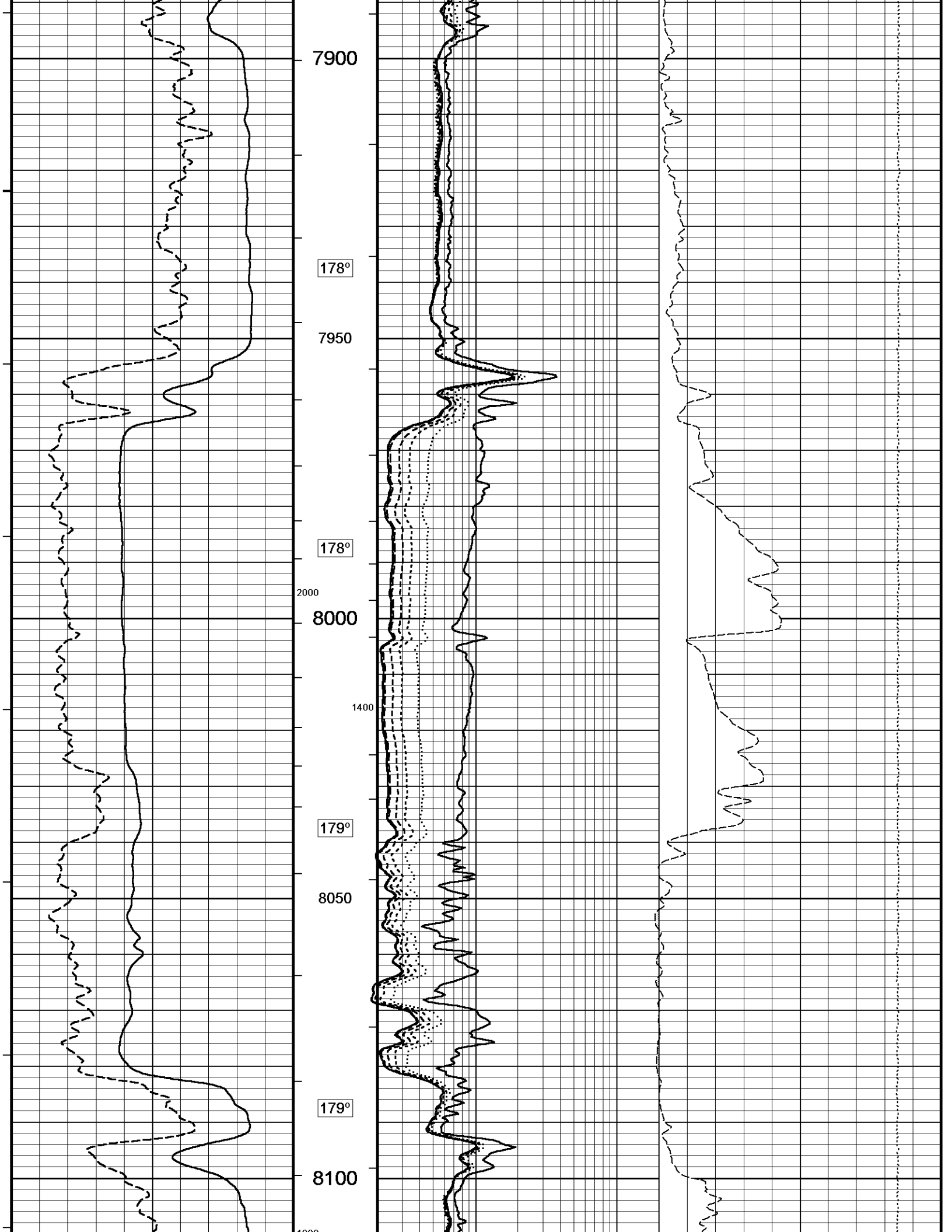


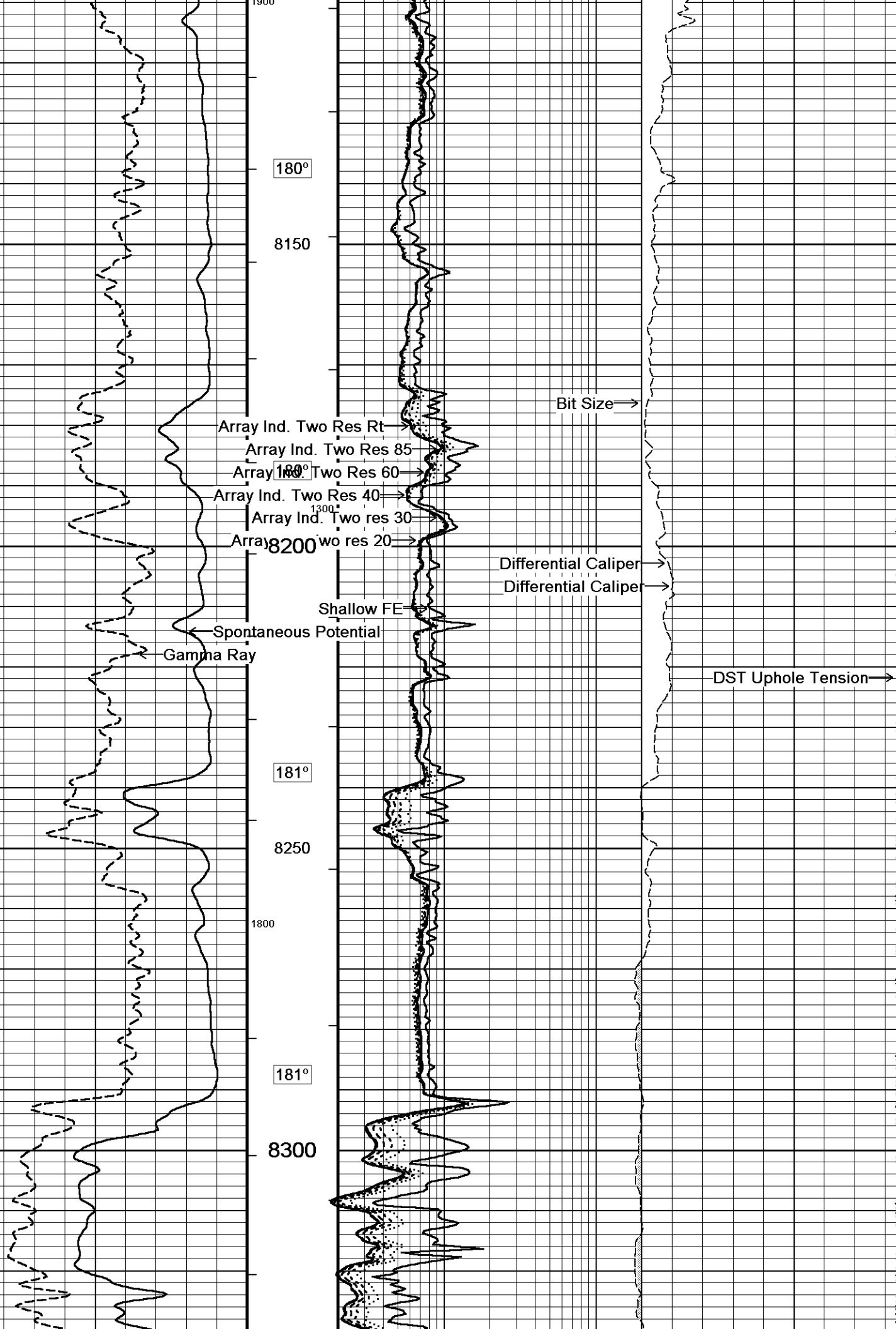


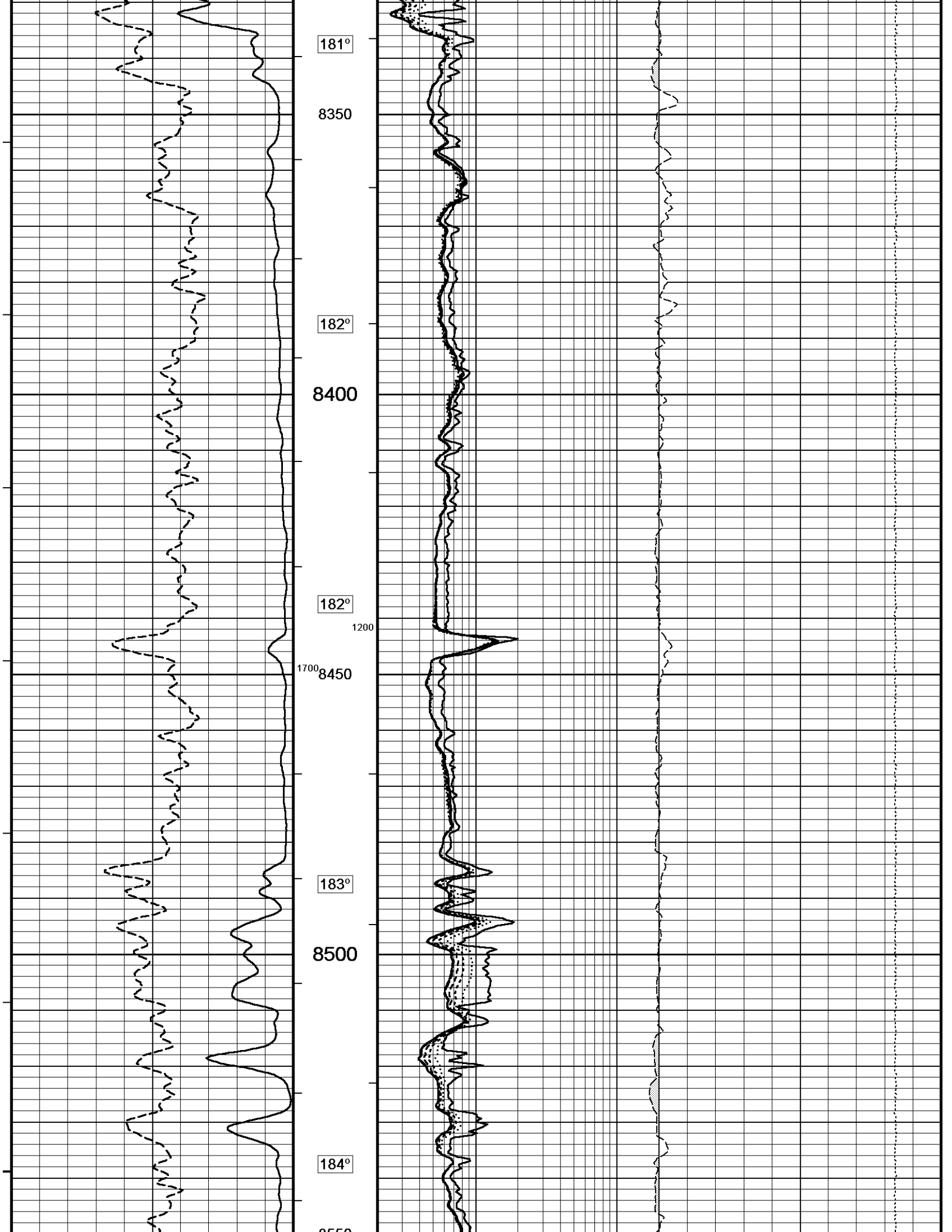


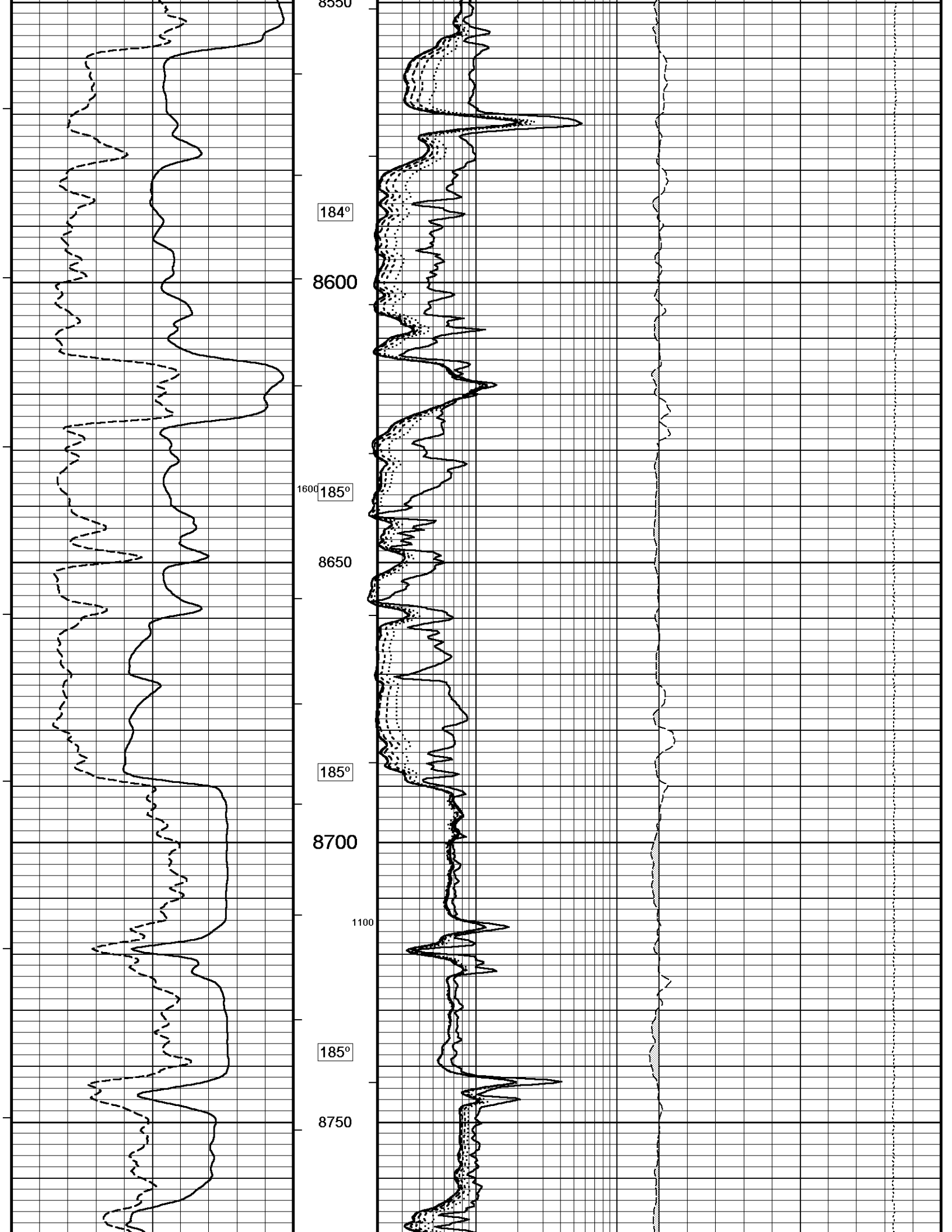


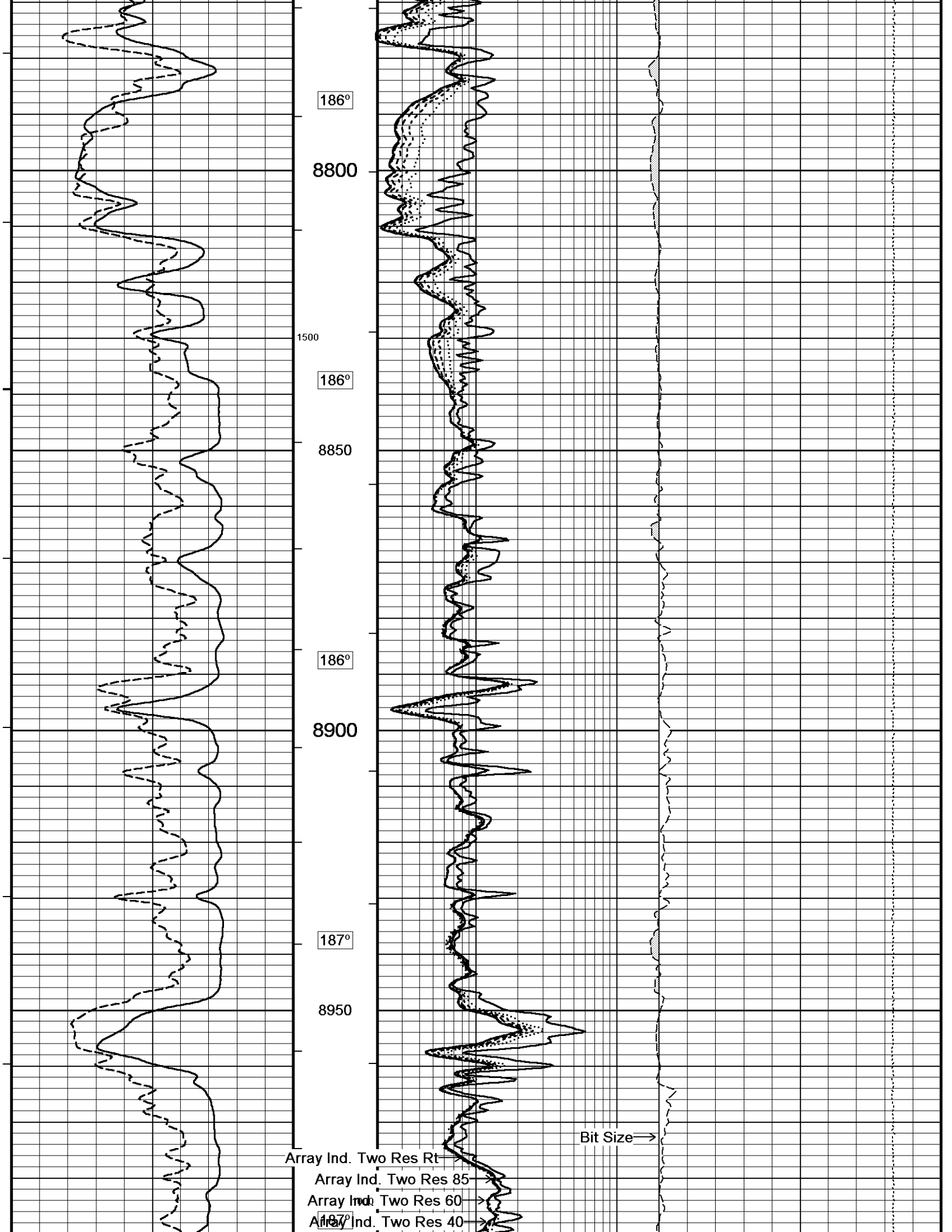












186°

8800

1500

186°

8850

186°

8900

187°

8950

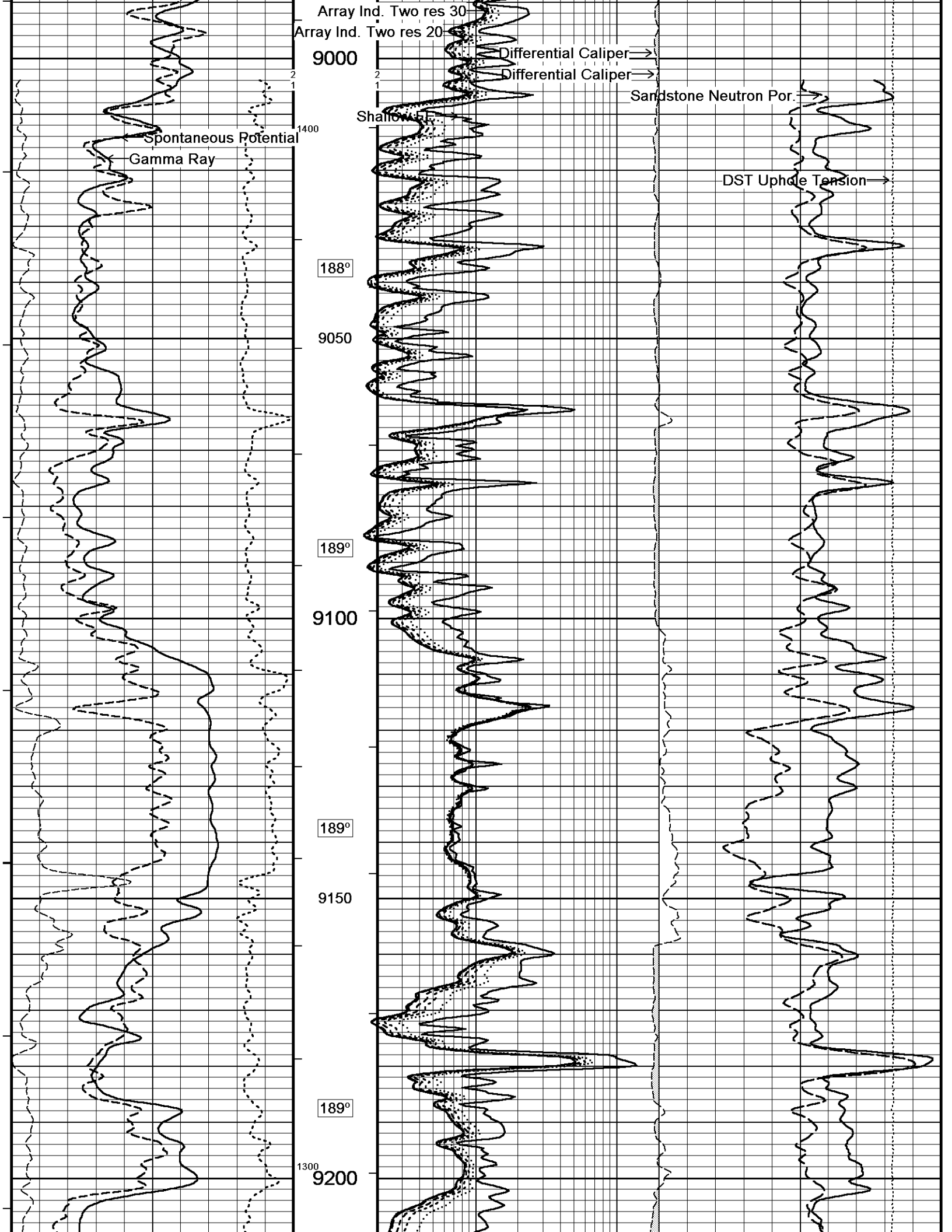
Bit Size →

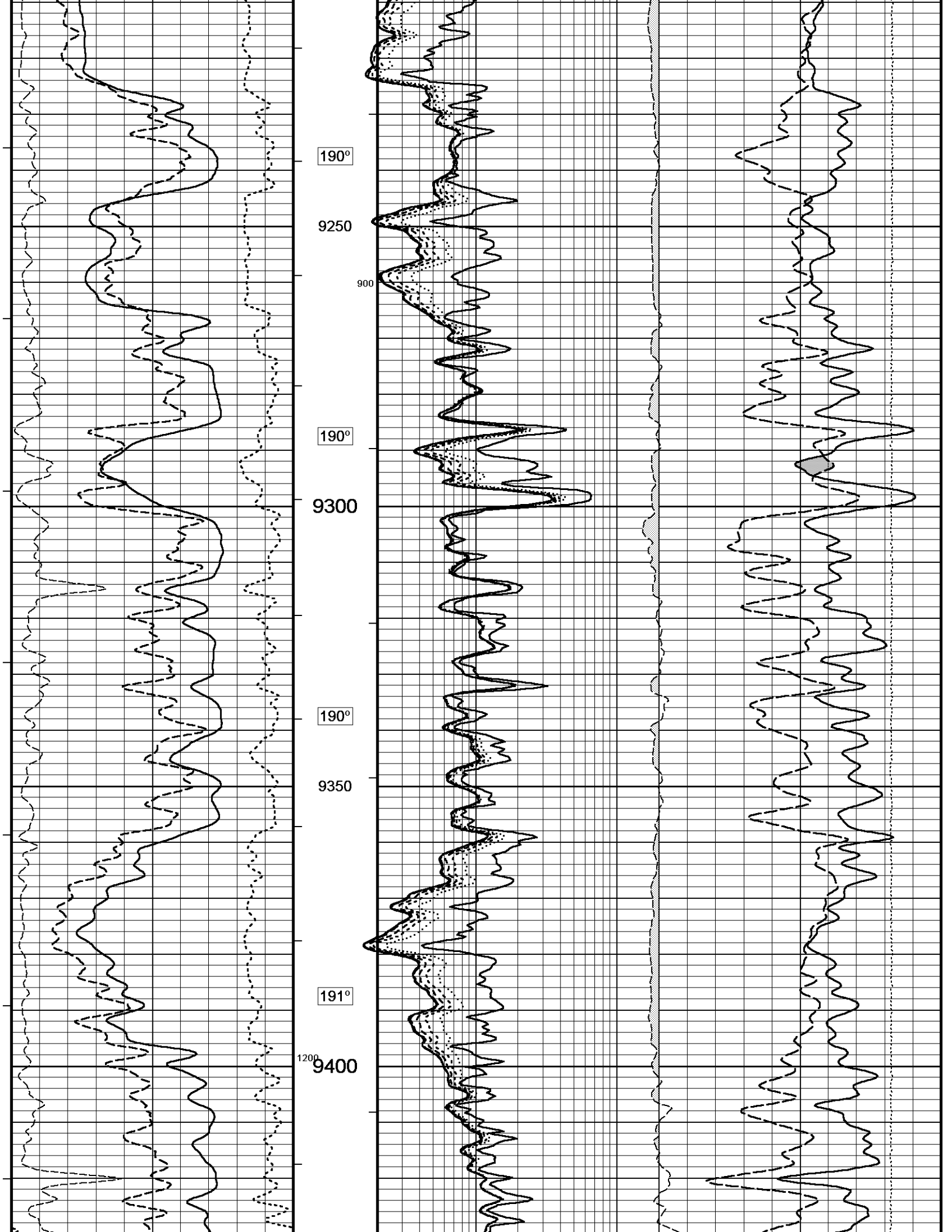
Array Ind. Two Res Rt →

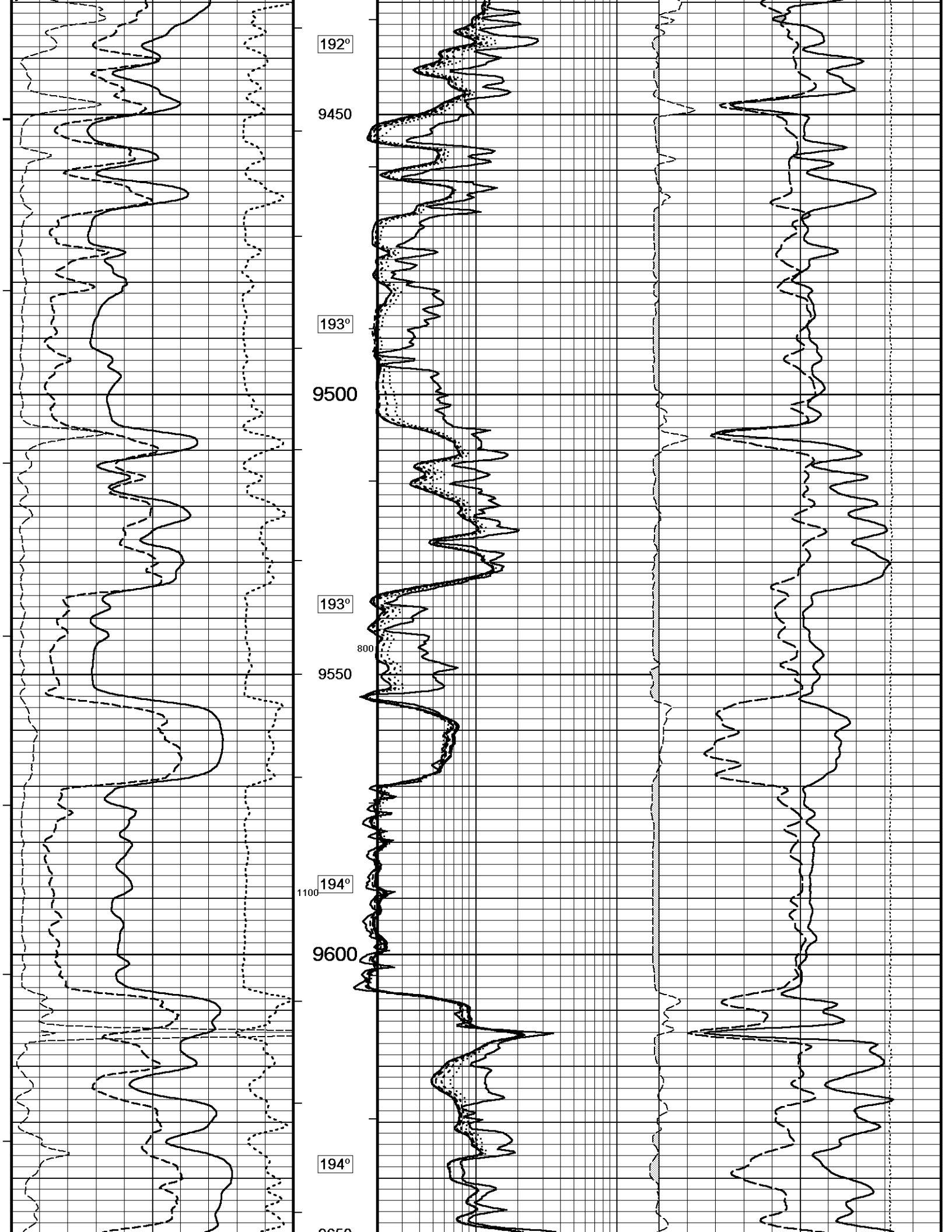
Array Ind. Two Res 85 →

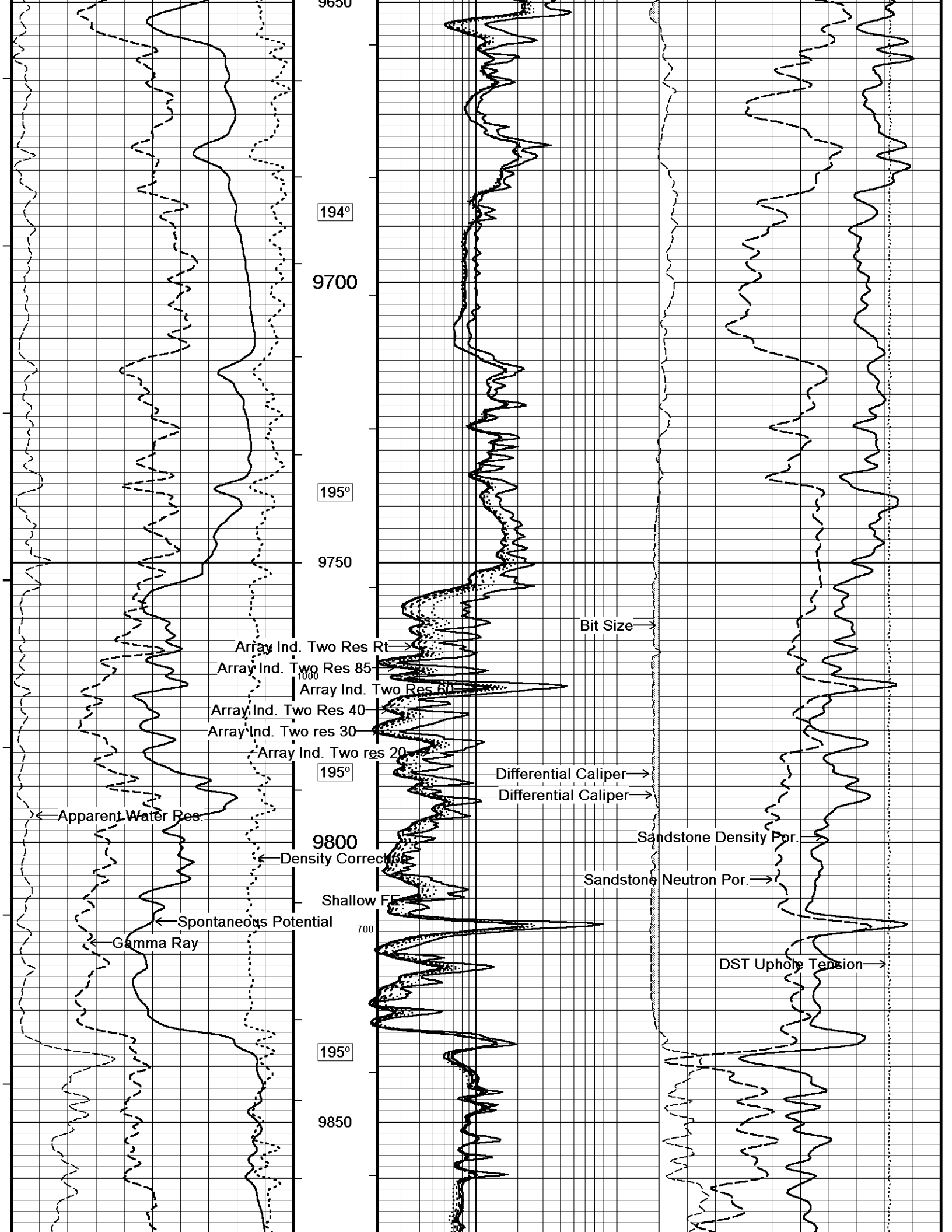
Array Ind. Two Res 60 →

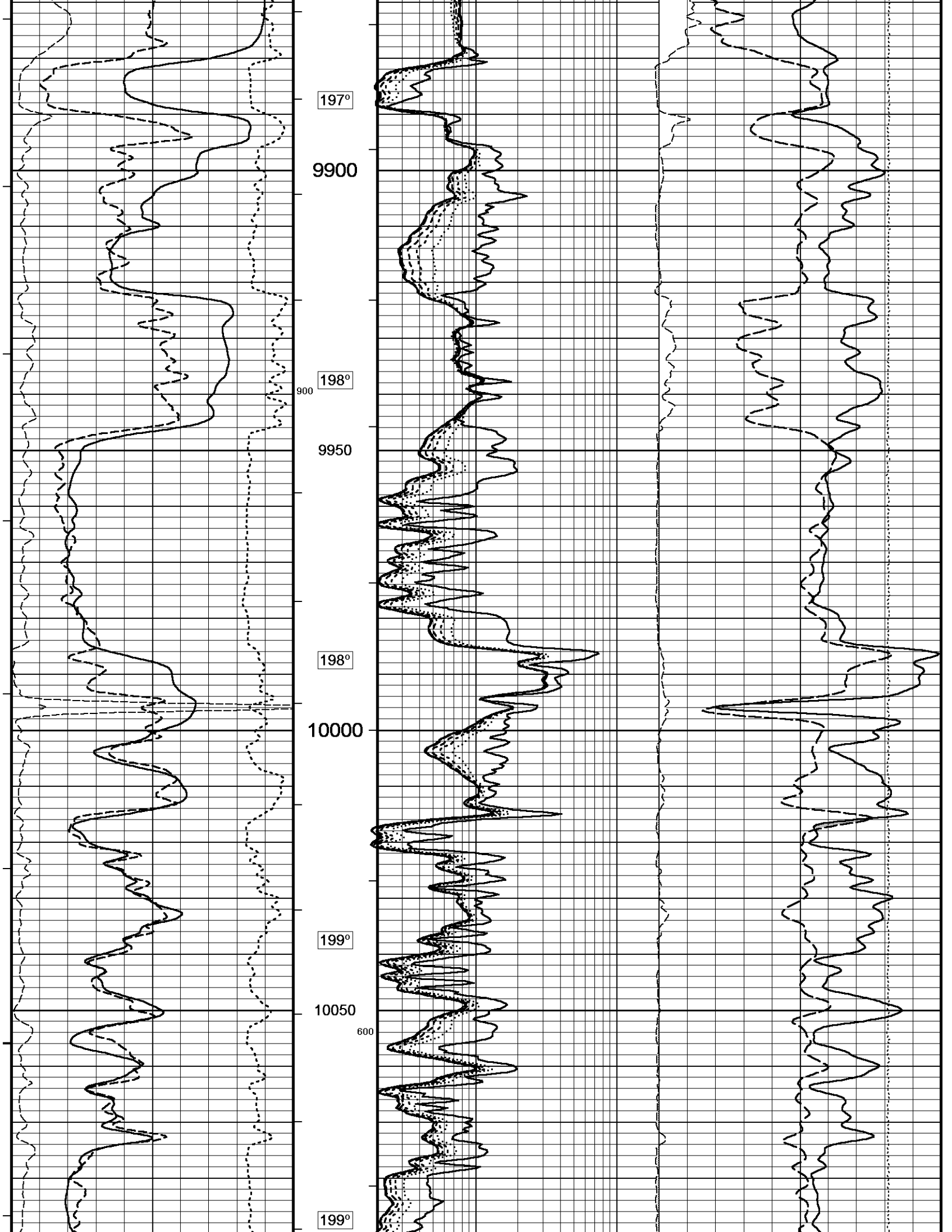
Array Ind. Two Res 40 →

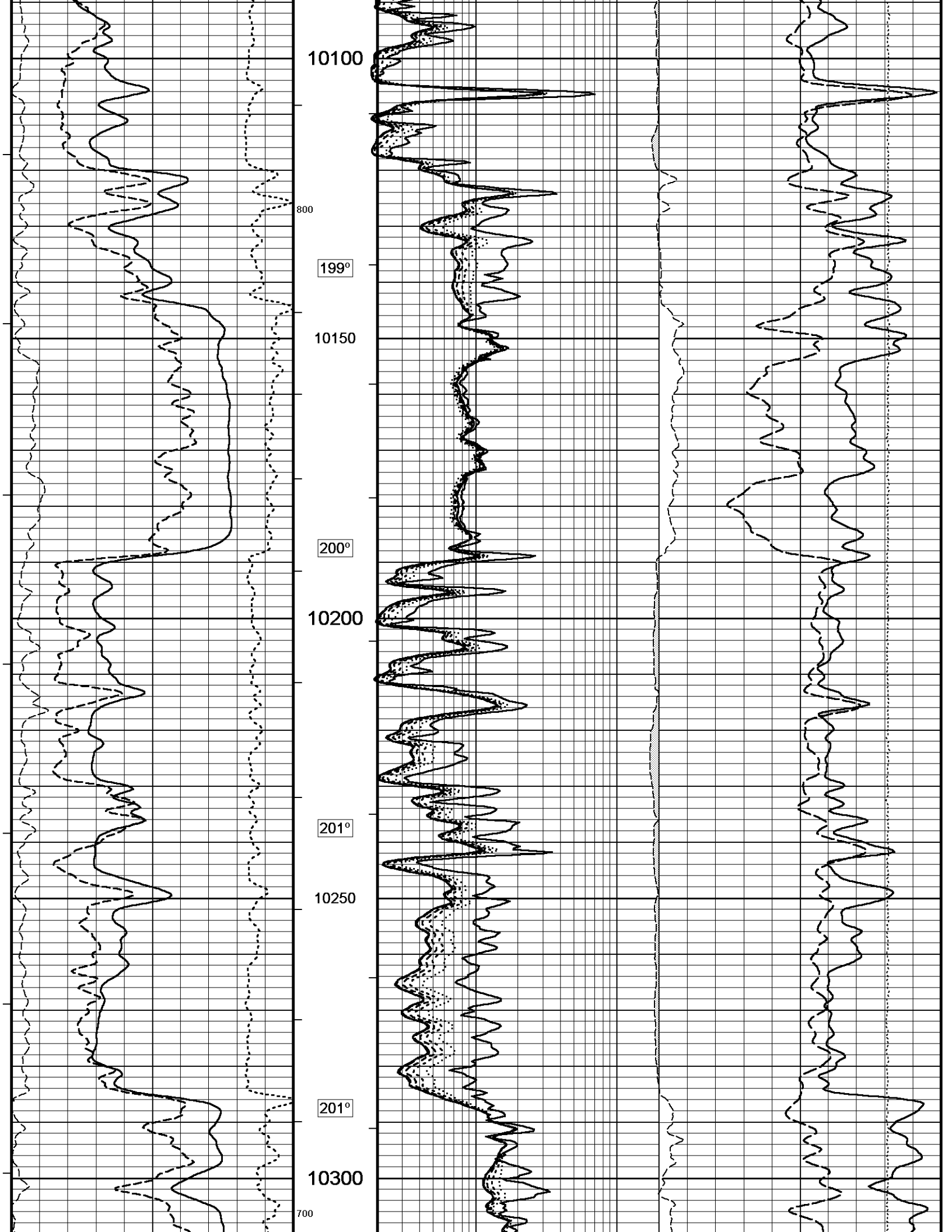


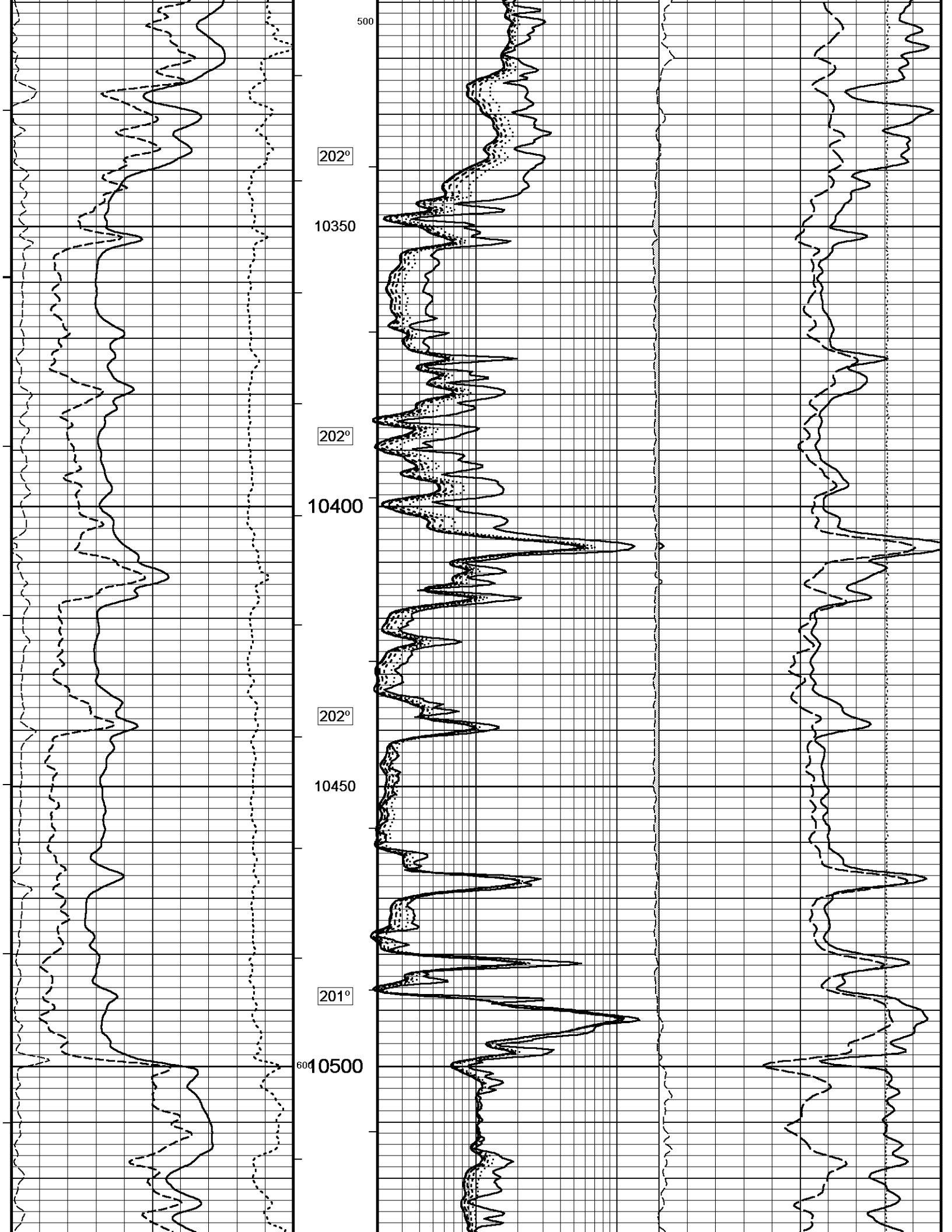


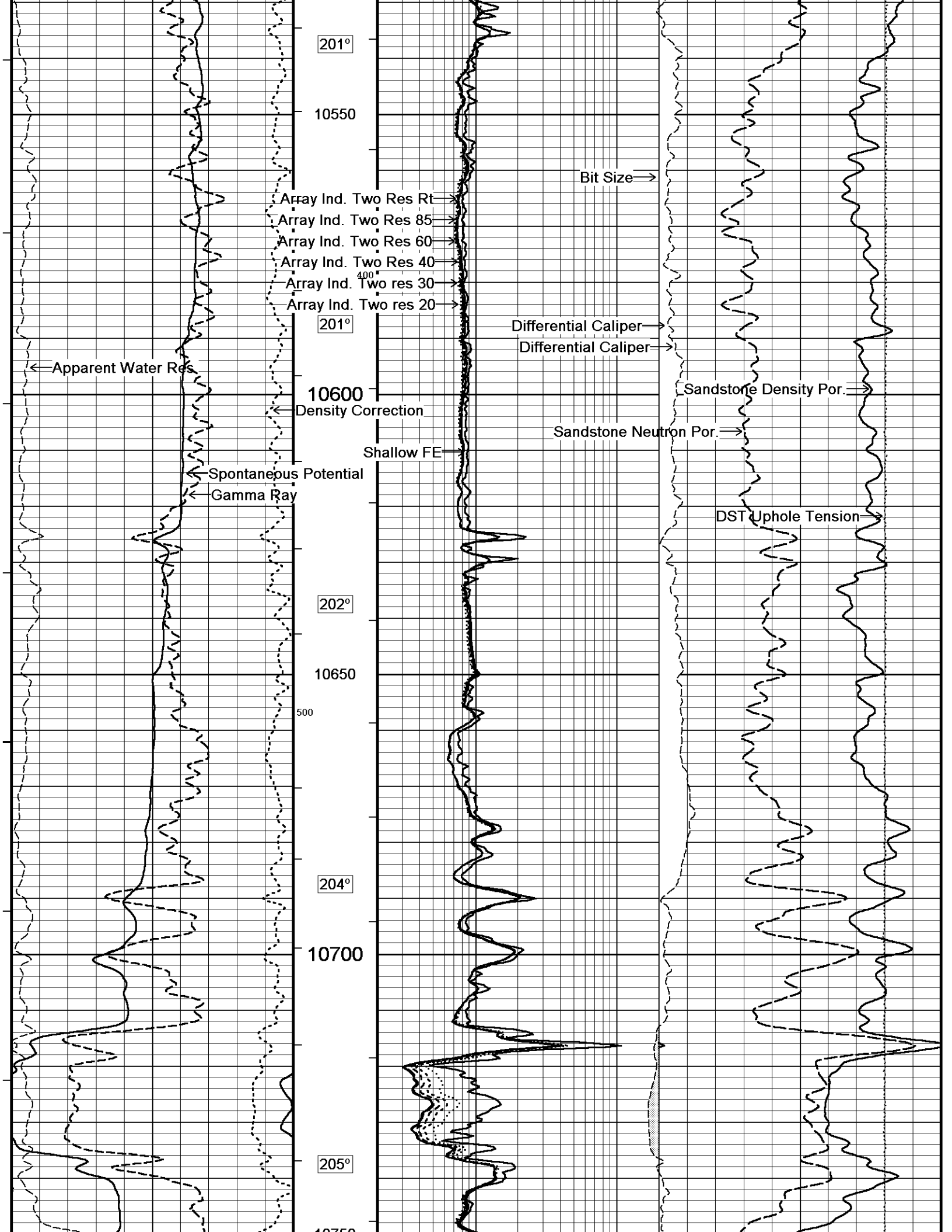


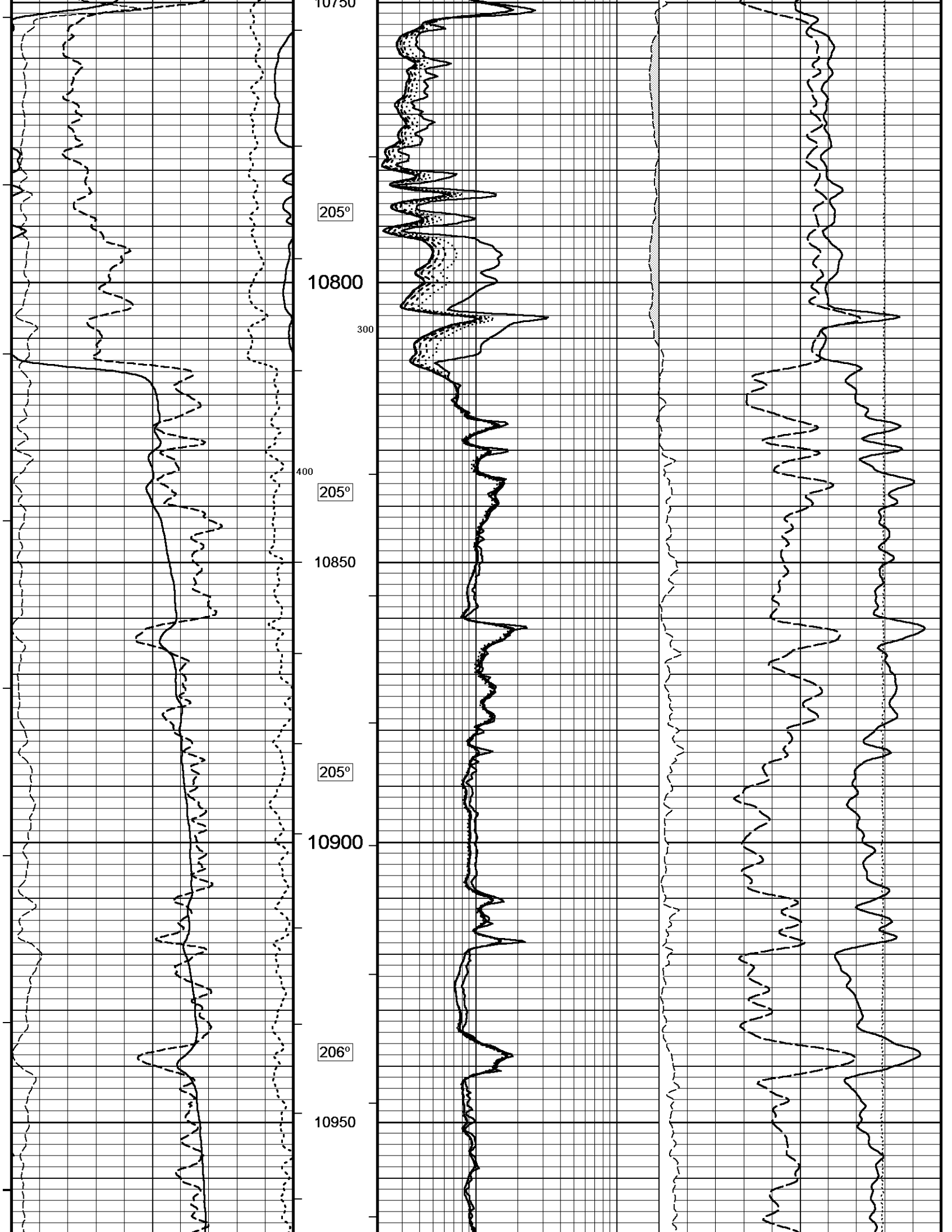


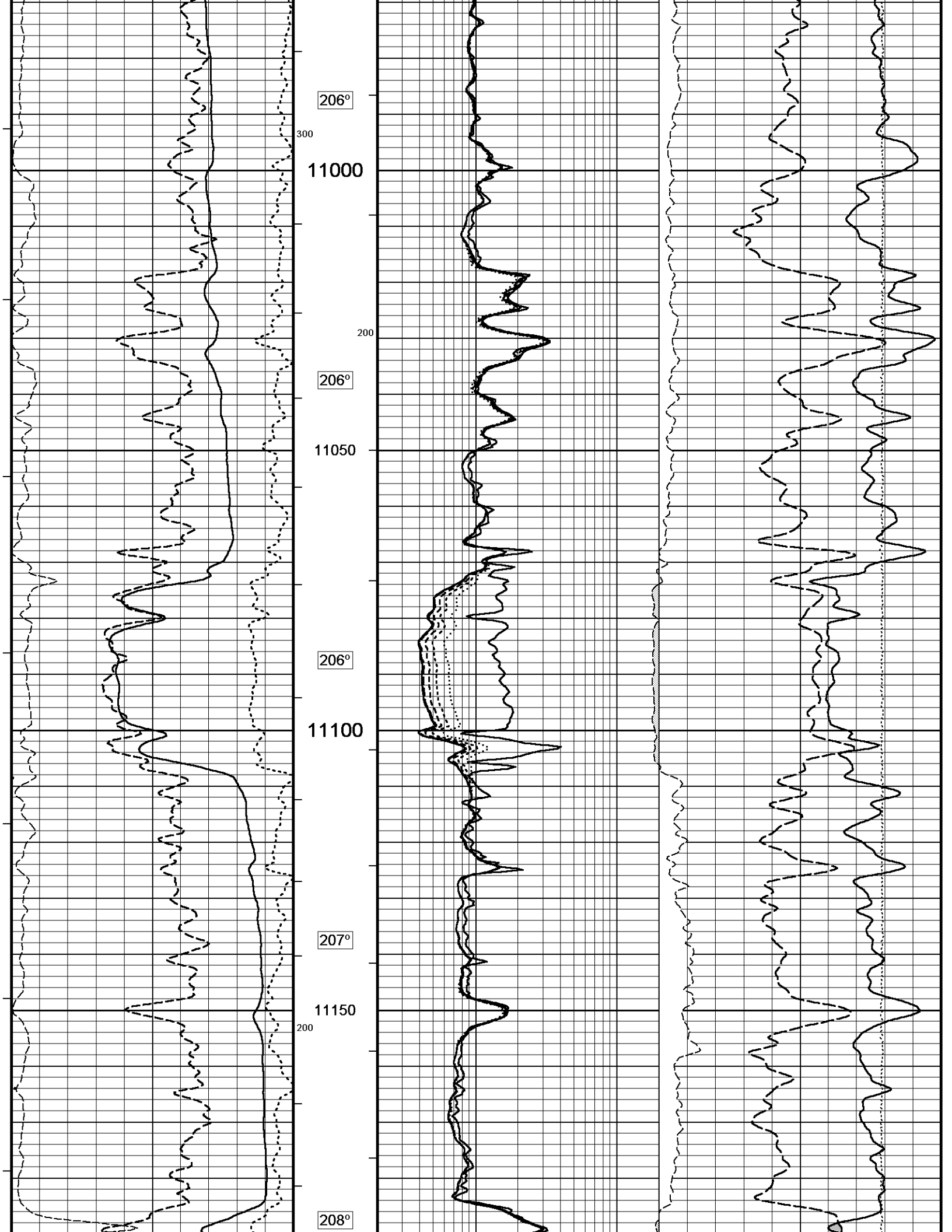


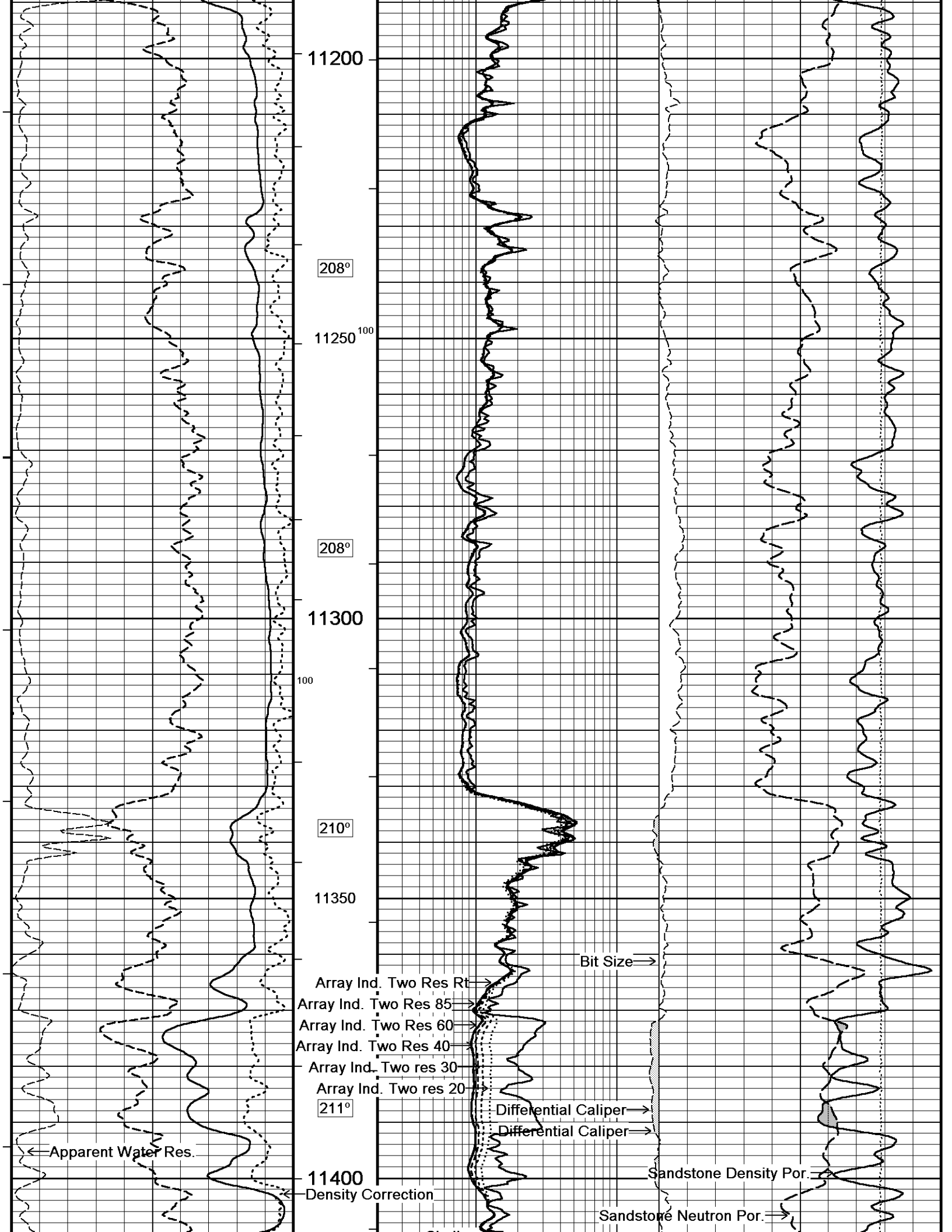












11200

208°

11250<sup>100</sup>

208°

11300

100

210°

11350

Bit Size →

Array Ind. Two Res Rt →

Array Ind. Two Res 85 →

Array Ind. Two Res 60 →

Array Ind. Two Res 40 →

Array Ind. Two res 30 →

Array Ind. Two res 20 →

211°

Differential Caliper →

Differential Caliper →

← Apparent Water Res.

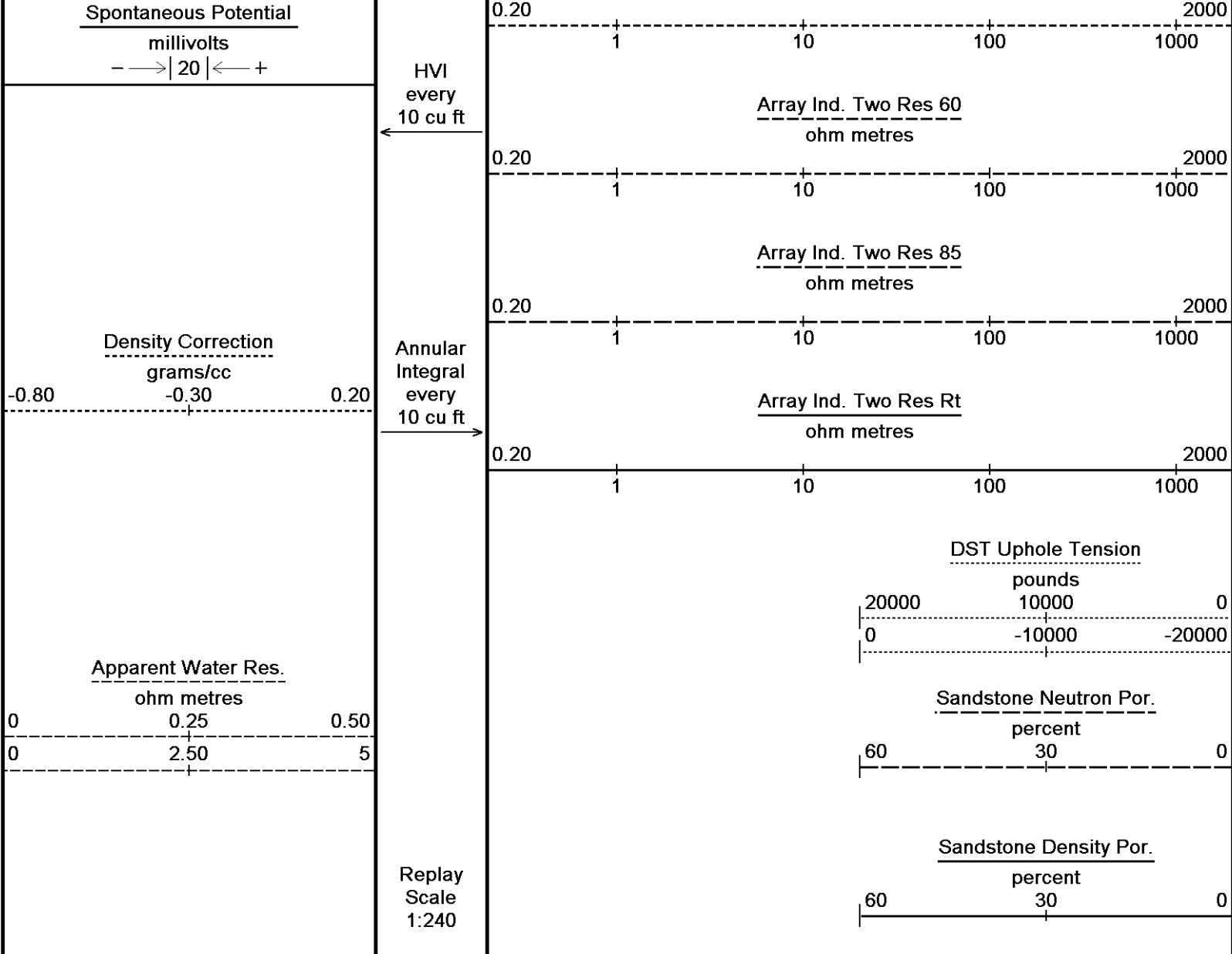
Density Correction

Sandstone Density Por. →

Sandstone Neutron Por. →

11400



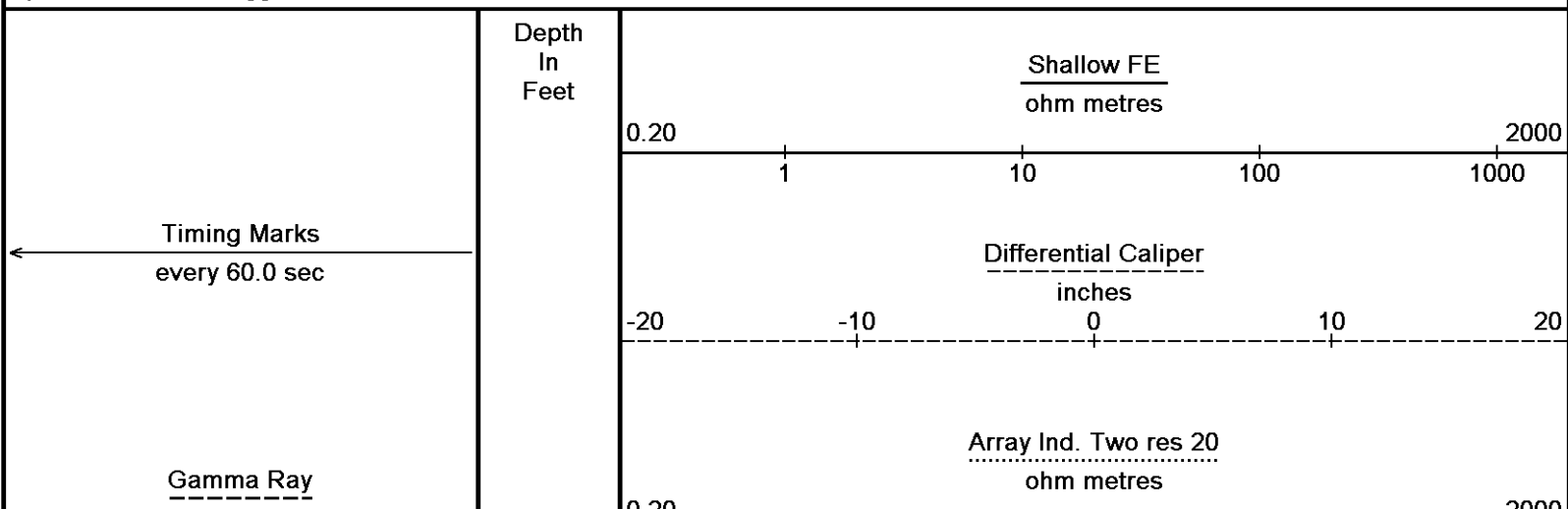


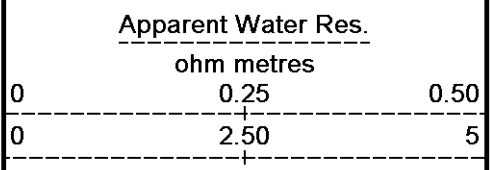
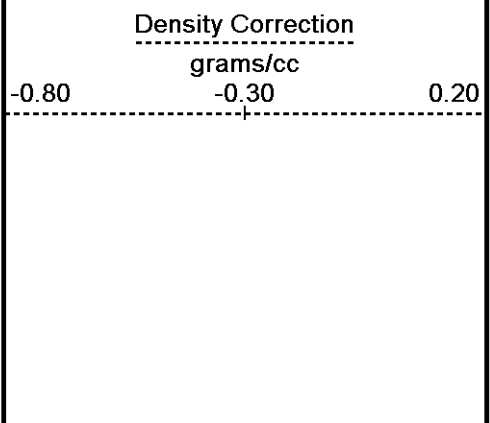
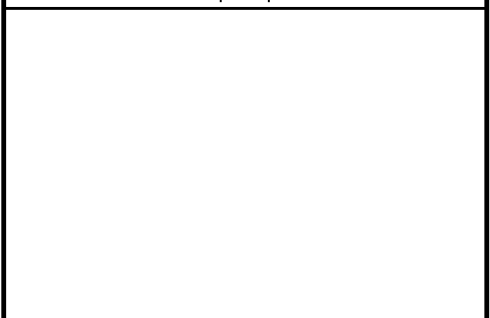
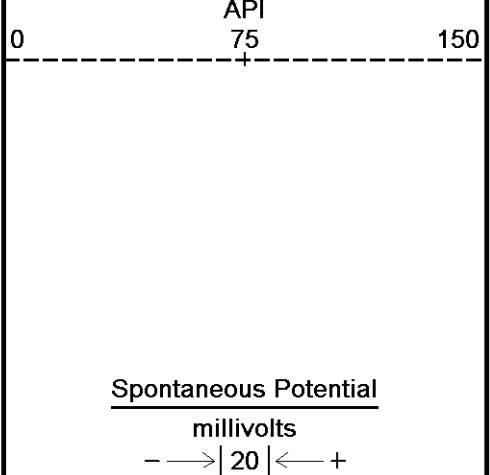
Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 06-JUL-2012 08:21  
 Filename: C:\Users\David\AppData\Local\Temp\Weatherford PreView\0uplog2.dta Recorded on 03-JUL-2012 15:11  
 System Versions: Logged with 13.02.6600 Plotted with 12.01.3513

↑ **5" MAIN PASS 1:240** ↑

↓ **5" REPEAT PASS 1:240** ↓

Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 06-JUL-2012 08:21  
 Filename: C:\Users\David\AppData\Local\Temp\Weatherford PreView\0repeat2.dta Recorded on 03-JUL-2012 12:46  
 System Versions: Logged with 13.02.6600 Plotted with 12.01.3513





Borehole Temp in deg F

HVI every 10 cu ft

Annular Integral every 10 cu ft

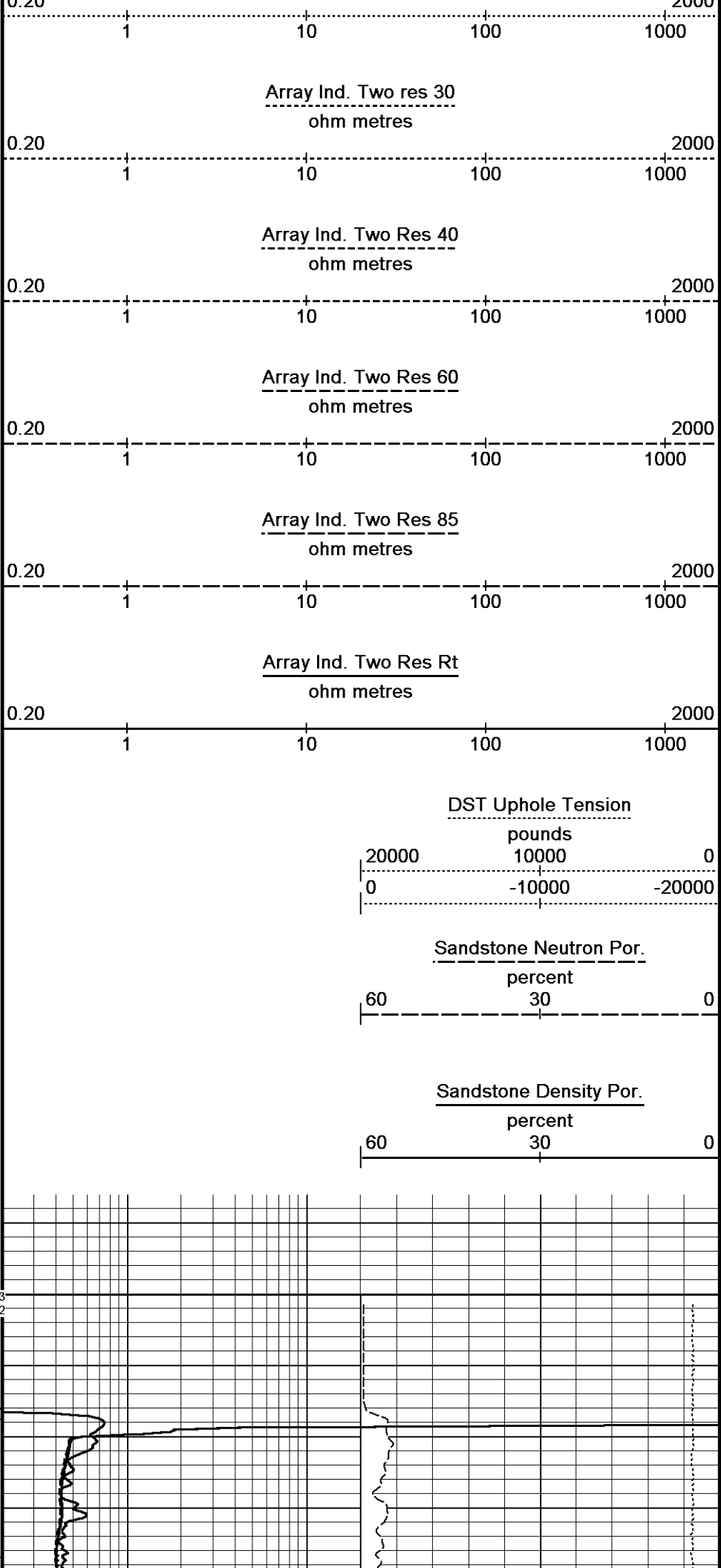
Replay Scale 1:240

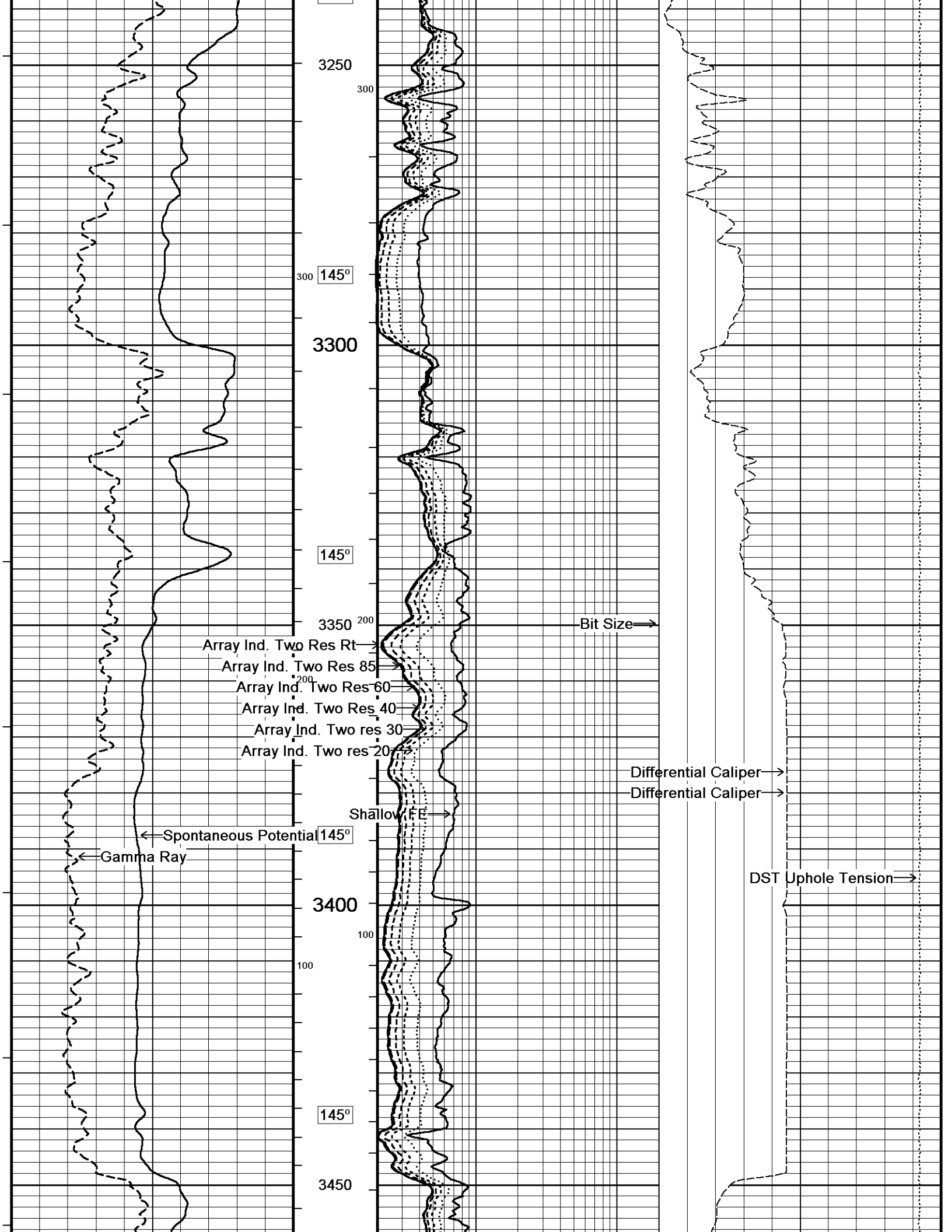
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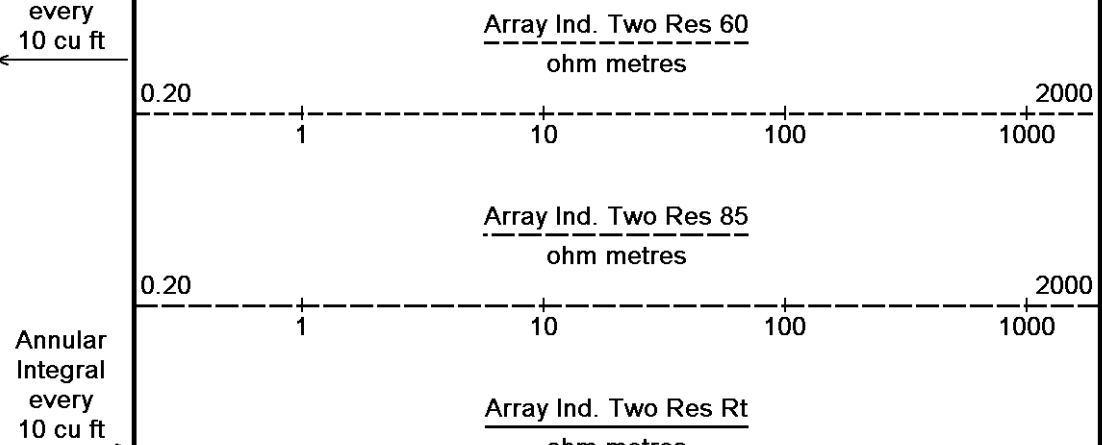
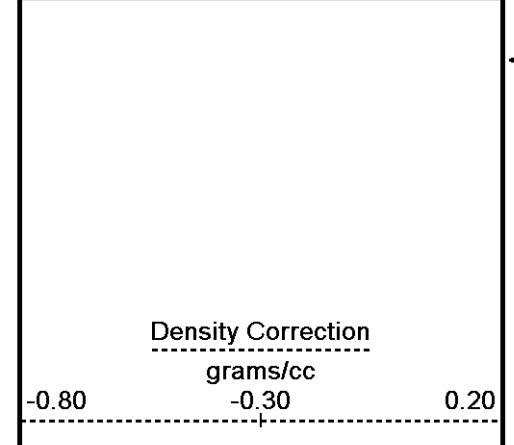
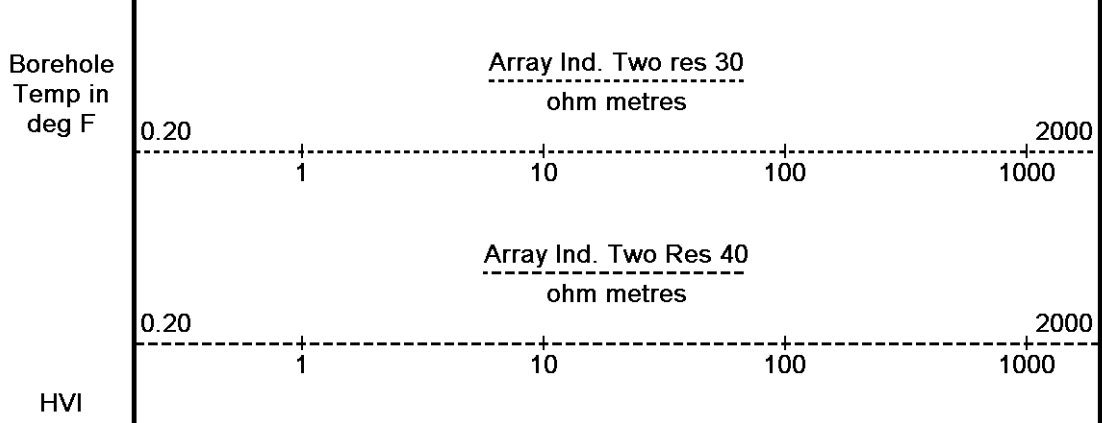
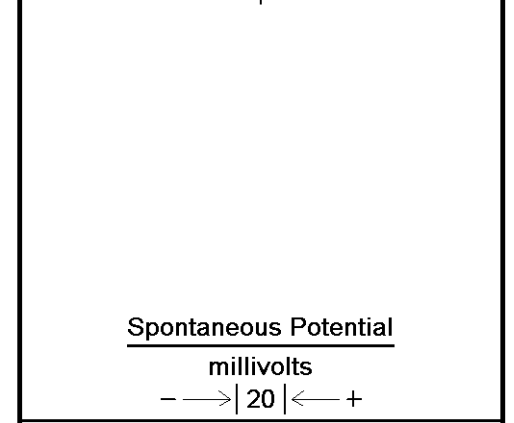
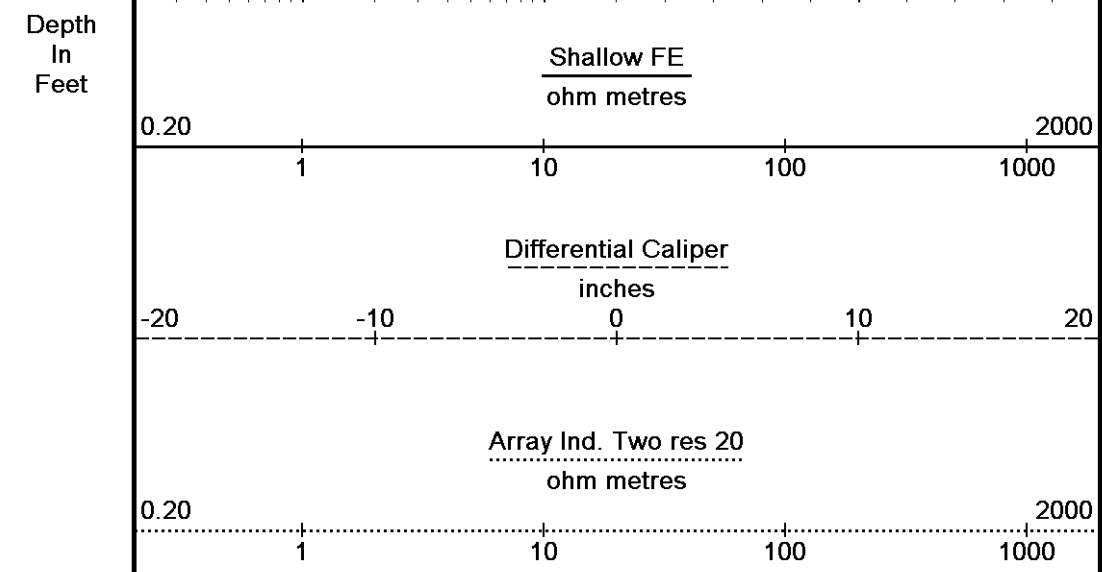
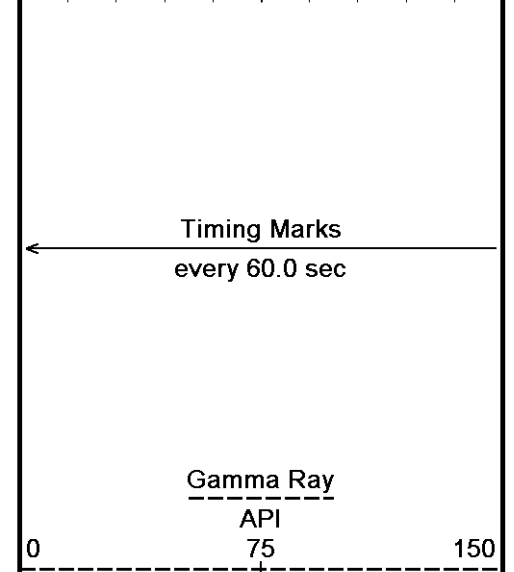
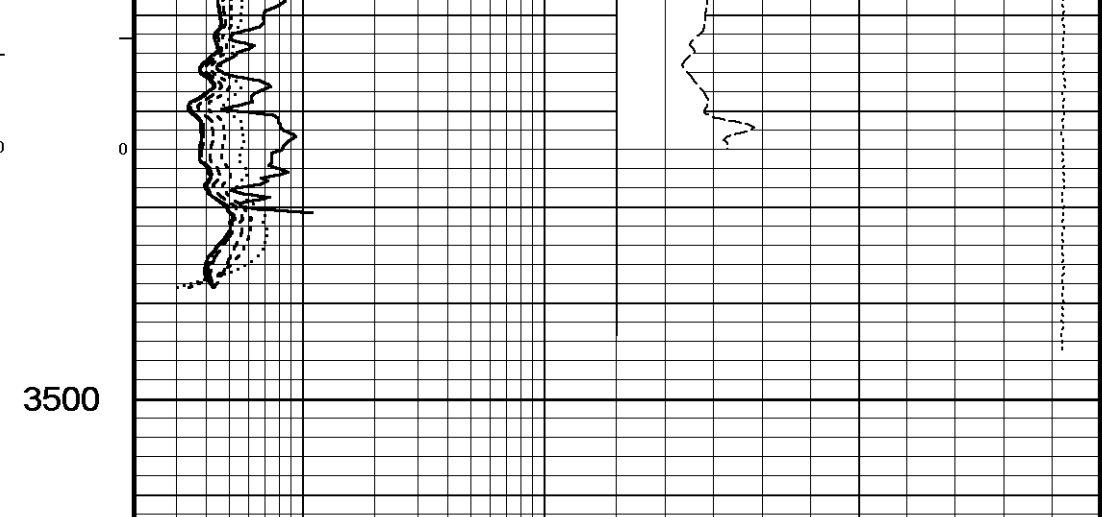
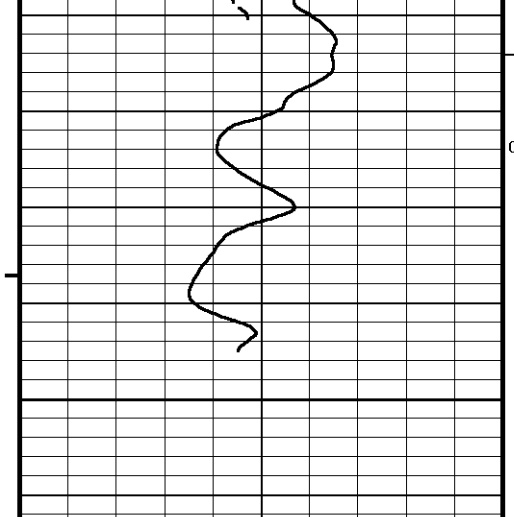
3200

Casing Shoe

145°

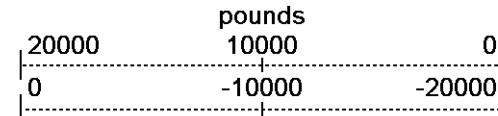




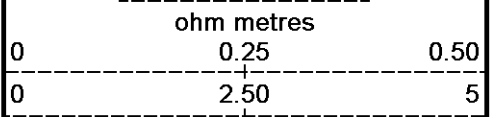


DST Uphole Tension

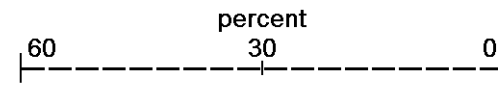
DOT Spindle Tension



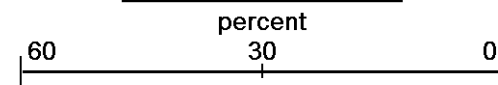
Apparent Water Res.



Sandstone Neutron Por.



Sandstone Density Por.



Replay Scale 1:240

Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 06-JUL-2012 08:21  
 Filename: C:\Users\David\AppData\Local\Temp\Weatherford PreView\0\repeat2.dta Recorded on 03-JUL-2012 12:46  
 System Versions: Logged with 13.02.6600 Plotted with 12.01.3513

↑ 5" REPEAT PASS 1:240 ↑

**BEFORE SURVEY CALIBRATION**

C:\Users\David\AppData\Local\Temp\Weatherford PreView\0\uplog2.dta

General Constants All 000 Last Edited on 03-JUL-2012 10:04

General Parameters		
Mud Resistivity	0.900	ohm-metres
Mud Resistivity Temperature	88.000	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	5.500	inches
Caliper for Differential Caliper	Density Caliper	
Rwa Parameters		
Porosity used	Base Density Porosity	
Resistivity used	Array Ind. Two Res Rt	
RWA Constant A	0.620	
RWA Constant M	2.150	

Gamma Calibration MCG-C 100 Field Calibration on 03-JUL-2012 10:04

	Measured	Calibrated (API)
Background	42	28
Calibrator (Gross)	1177	792
Calibrator (Net)	1135	764

Gamma Constants MCG-C 100 Last Edited on 03-JUL-2012 09:38

Gamma Calibrator Number	GRC-039	
Mud Density	1.32	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

SP Calibration MCG-C 100 Field Calibration on 22-FEB-2012 10:45

	Measured	Calibrated (mV)
Reference 1	94.7	91.0
Reference 2	-88.3	-91.0

High Resolution Temperature Calibration MCG-C 100 Field Calibration on 12-FEB-2012 05:14

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

High Resolution Temperature Constants MCG-C 100

Last Edited on

Pre-filter Length 11

Neutron Calibration MDN-A.B 155

Base Calibration on 12-JUN-2012 12:13  
Field Check on 03-JUL-2012 09:57

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
Ratio	2974	92	3714	110
	32.446		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	Near	Far
Ratio	1334	1980
	0.674	

Field Check

	Calibrated (cps)	
	Near	Far
Ratio	1315	1995
	0.659	

Neutron Constants MDN-A.B 155

Last Edited on 03-JUL-2012 09:52

Neutron Source Id	514	
Neutron Jig Number	5822NE	
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	Constant Value	
Formation Pressure	0.00	kpsi
Temperature Source	Constant Value	
Temperature	20.00	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-A.A 137

Base Calibration on 29-MAY-2012 14:51  
Field Check on 03-JUL-2012 09:42

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	964.4	126.8
Base Check		281.4
Field Check		281.4

FE Constants MFE-A.A 137

Last Edited on 03-JUL-2012 09:41

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

Induction Calibration MAI-A.A 77

Base Calibration on 11-MAY-2011 12:42  
Field Check on 03-JUL-2012 09:45

Base Calibration

Test Loop Calibration Channel	Measured		Calibrated (mmho/m)	
	Low	High	Low	High
1	15.7	471.1	9.3	966.2
2	5.2	374.2	7.6	821.4
3	2.6	250.7	5.2	566.0

4	1.1	129.3	2.6	279.2
Array Temperature		61.2	Deg F	
Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1	0.0	0.0	17.1	3846.4
2	0.0	0.0	33.0	3596.0
3	0.0	0.0	31.3	3143.2
4	0.0	0.0	22.0	2127.1
Deep	0.0	0.0	20.0	2064.2
Medium	0.0	0.0	44.6	4159.1
Shallow	0.0	0.0	48.3	5286.4
Array Temperature		0.0	82.4	Deg F

Induction Constants MAI-A.A 77 Last Edited on 03-JUL-2012 09:42

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)	0.62		
Cementation Exponent (M)	2.15		
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 Calibration MAI-A.A 77 Field Calibration on 13-OCT-2011 11:30

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

High Resolution Temperature Constants MAI-A.A 77 Last Edited on

Pre-filter Length	11
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Caliper Calibration MPD-B 154 Base Calibration on 17-JUN-2012 06:50  
Field Calibration on 26-JUN-2012 19:50

Base Calibration		
Reading No	Measured	Calibrator Size (in)
1	10944	4.00
2	17456	5.97

3	23919	7.96
4	30093	9.85
5	37136	11.91
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
9.82	9.85

Photo Density Calibration MPD-B 154

Base Calibration on 29-MAY-2012 14:25  
Field Check on 03-JUL-2012 09:51

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	57824	29402	59553	30910
Reference 2	23572	2326	25010	2543

Field Check at Base	774.7	958.2
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Field Check	774.8	957.1
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PE Calibration

Base Calibration	WS	Measured		Calibrated
		WH	Ratio	Ratio
Background	147	675		
Reference 1	23784	57661	0.415	0.371
Reference 2	6626	23462	0.284	0.273

Field Check at Base	147.4	674.7
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Field Check	147.4	674.5
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Density Constants MPD-B 154

Last Edited on 03-JUL-2012 09:39

Density Source Id	259
Nylon Calibrator Number	DNC-E662
Aluminium Calibrator Number	DAC-D687
Density Shoe Profile	8 inch
Caliper Source for Processing	Density Caliper
PE Correction to Density	Not Applied
Mud Density	1.32 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)
2.65	
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:\Users\David\AppData\Local\Temp\Weatherford PreView\0\uplog2.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 43 LG: 1.53 ft WT: 13.2 lb OD: 2.24 in

SHA-J.A Compact Swivel Head Adaptor  
 SHA-J.A 266 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

Compact Comms Gamma  
 MCG-C 100 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Neutron  
 MDN-A.B 155 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

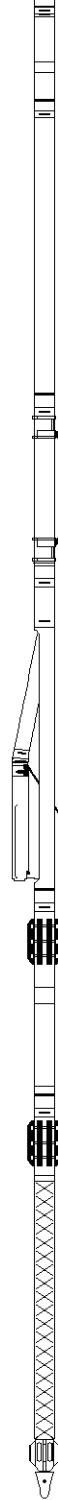
Compact Density/Caliper  
 MPD-B 154 LG: 9.59 ft WT: 90.4 lb OD: 2.91 in

Compact Focussed Electric  
 MFE-A.A 137 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Induction  
 MAI-A.A 77 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Compact Hole Finder  
 HFS 1 LG: 0.78 ft WT: 2.2 lb OD: 2.24 in

Total Length: 47.19 ft Weight: 359.4 lb



34.90 ft GRGC - Gamma Ray  
 32.00 ft CGXT - MCG External Temperature

28.45 ft NPRS - Sandstone Neutron Por.

21.21 ft AVOL - Annular Volume  
 21.21 ft HVOL - Hole Volume  
 21.21 ft DFCL - Differential Caliper  
 19.28 ft DPRS - Sandstone Density Por.  
 19.28 ft DCOR - Density Correction

13.72 ft FEFE - Shallow FE

3.34 ft R20T - Array Ind. Two Res 20  
 3.34 ft R40T - Array Ind. Two Res 40  
 3.34 ft R30T - Array Ind. Two Res 30  
 3.34 ft RTAT - Array Ind. Two Res Rt  
 3.34 ft R85T - Array Ind. Two Res 85  
 3.34 ft R60T - Array Ind. Two Res 60  
 0.23 ft SPCG - Spontaneous Potential

Tool Zero (0.91ft from bottom)  
 -0.91 ft SMTU - DST Uphole Tension  
 All measurements relative to tool zero.

COMPANY	SMITH PRODUCTION COMPANY
WELL	EDMOND RICHARD #1
FIELD	GRAND CHENIERE
PROVINCE/COUNTY	CAMERON
COUNTRY/STATE	U.S.A / LOUISIANA

Elevation Kelly Bushing	18.00	feet	First Reading	11485.00	feet
Elevation Drill Floor	17.00	feet	Depth Driller	11508.00	feet
Elevation Ground Level	3.00	feet	Depth Logger	11485.00	feet



ARRAY INDUCTION / MFE  
 PHOTO DENSITY / NEUTRON



