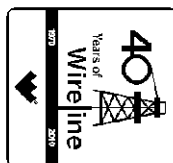




Weatherford

ARRAY INDUCTION SHALLOW FOCUSED ELECTRIC LOG



COMPANY	GRAND MESA OPERATING			
WELL	DBY # 1-16			
FIELD	WILDCAT			
PROVINCE/COUNTY	SCOTT			
COUNTRY/STATE	U. S. A / KANSAS			
LOCATION	524' FSL & 1307' FWL			
SEC	TWP	RGE	Other Services	
16	16S	33W	MPD/MDN	
API Number	15-171-20822		MML	
Permit Number	MSS			
Permanent Datum G.L., Elevation 3075 feet				Elevations: feet
Log Measured From KB				KB 3086.00
Drilling Measured From K.B.				DF 3084.00
				GL 3075.00
Date	06-AUG-2011			
Run Number	ONE			
Depth Driller	4900.00 feet			
Depth Logger	4902.00 feet			
First Reading	4899.00 feet			
Last Reading	225.00 feet			
Casing Driller	226.00 feet			
Casing Logger	225.00 feet			
Bit Size	7.875 inches			
Hole Fluid Type	CHEMICAL			
Density / Viscosity	9.10 lb/USg		40.00 CP	
PH / Fluid Loss	10.00		9.60 ml/30Min	
Sample Source	FLOWLINE			
Rm @ Measured Temp	0.47 @ 94.0		ohm-m	
Rmf @ Measured Temp	0.34 @ 94.0		ohm-m	
Rmc @ Measured Temp	0.56 @ 94.0		ohm-m	
Source Rmf / Rmc	CALC	CALC		
Rm @ BHT	0.36 @126.0		ohm-m	
Time Since Circulation	4 HOURS			
Max Recorded Temp	126.00		deg F	
Equipment Name	COMPACT			
Equipment / Base	13025	LIB		
Recorded By	R. HOFFMAN		F. MARTINS	
Witnessed By	STEVE CARL			
S.O. # / JOB #	3529200		LB11 - 188	

BOREHOLE RECORD			Last Edited: 06-AUG-2011 07:31	
Bit Size inches	Depth From feet		Depth To feet	
7.875	225.00		4902.00	
CASING RECORD				
Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	225.00	24.00

REMARKS	
Tools Used: MPD, MCG, MDN, MML, MFE, MAI, MSS Hardware: MPD: 8 inch profile plate used. MDN: Dual Bowspring used. 2.71 G/CC Limestone density matrix used to calculate porosity. Sonic porosity calculated using a Limestone scale (47.5 usec/ft.). Borehole rugosity, tight pulls, and washouts will affect data quality. All intervals logged and scaled per customer's request. Annular volume with 5.5 inch production casing = 221 cu. ft. Service order #3529200 Rig: Murtin # 22 Engineer: R. Hoffman / F. Martins Operator(s): J. Lapoint	

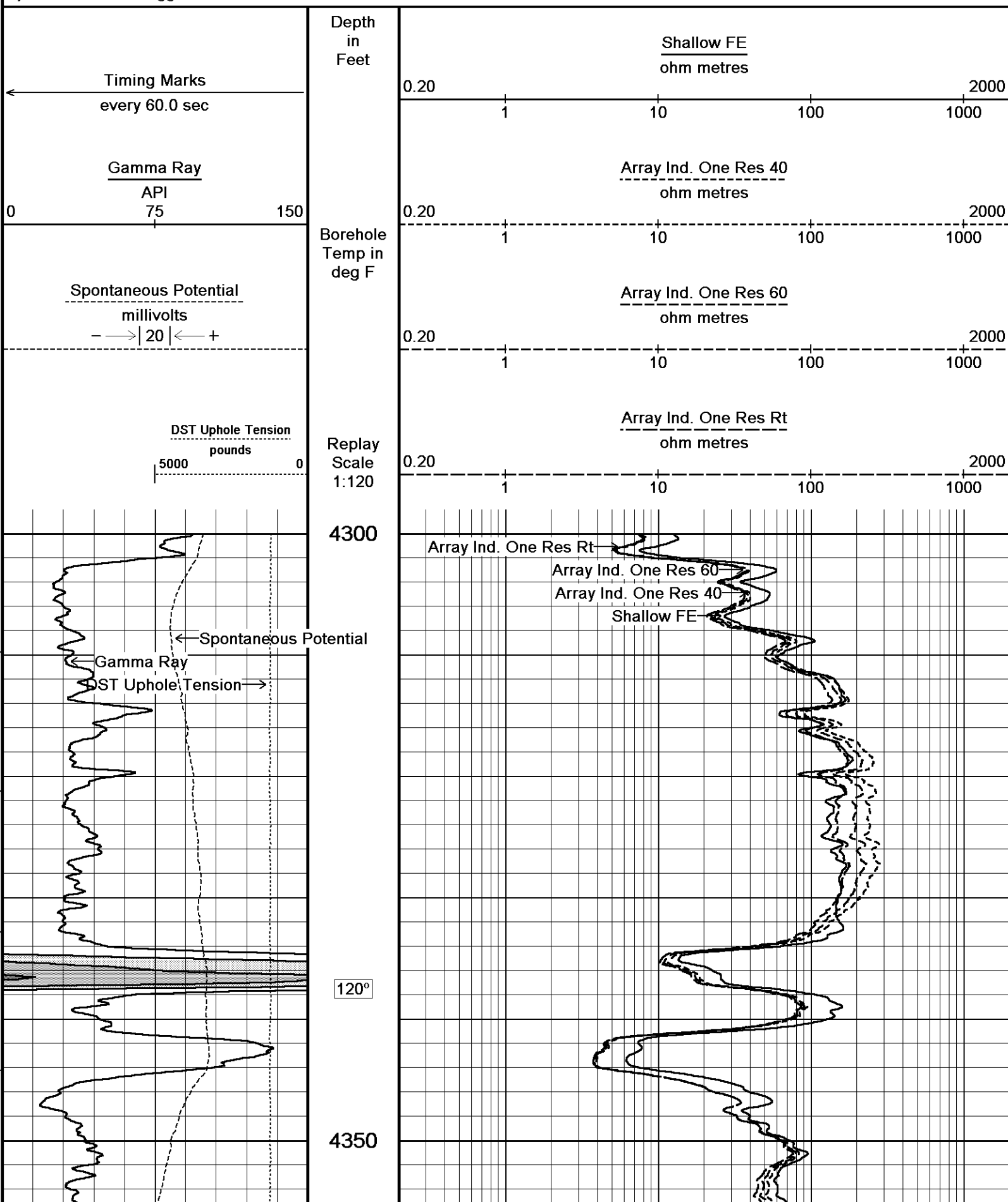
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

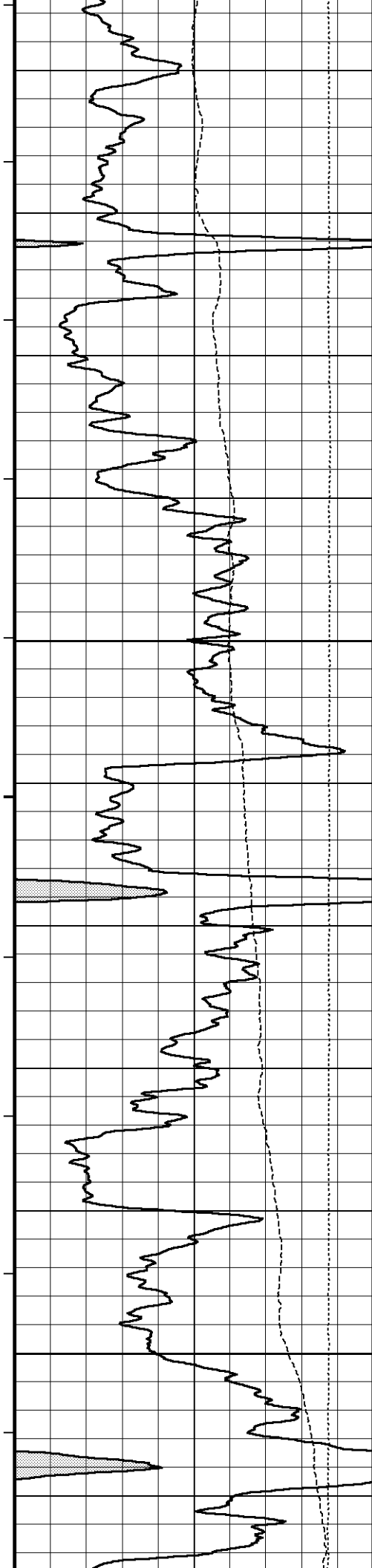
↓	HIGH RESOLUTION	↓
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Plotted on 31-AUG-2011 09:35

Recorded on 06-AUG-2011 03:37

System Versions: Logged with 11.03.4044 Plotted with 12.01.3513



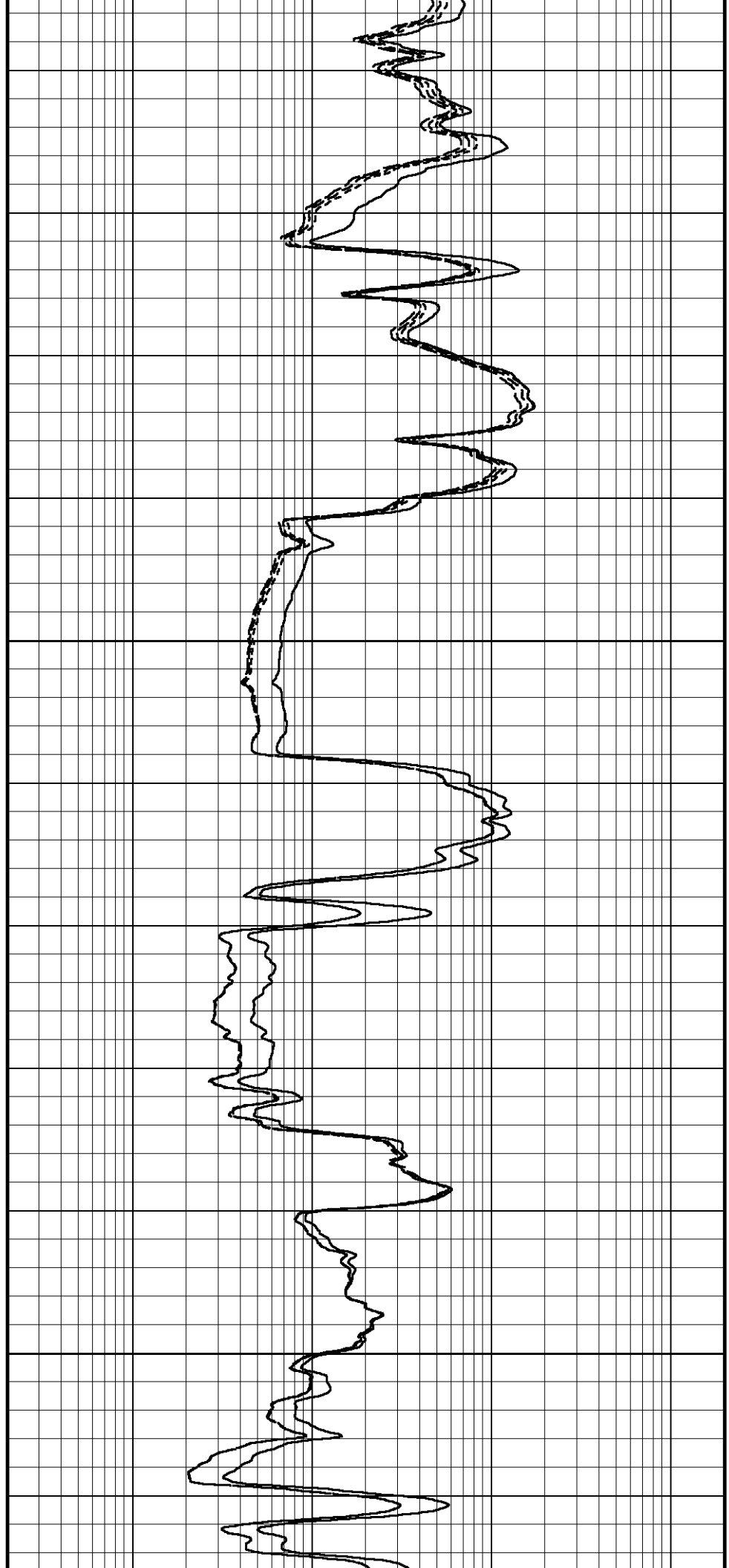


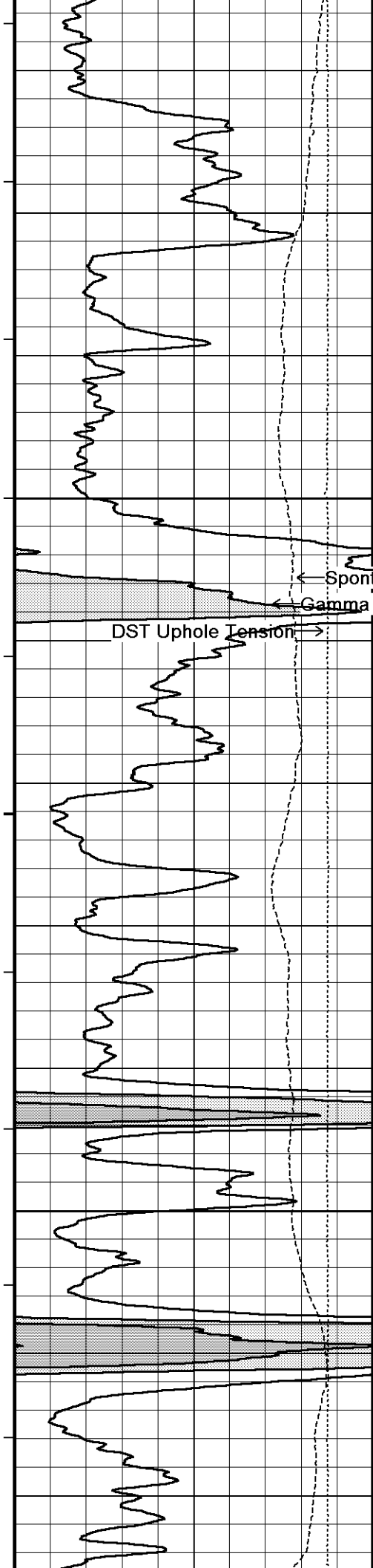
120°

4400

121°

4450





121°

4500

← Spontaneous Potential

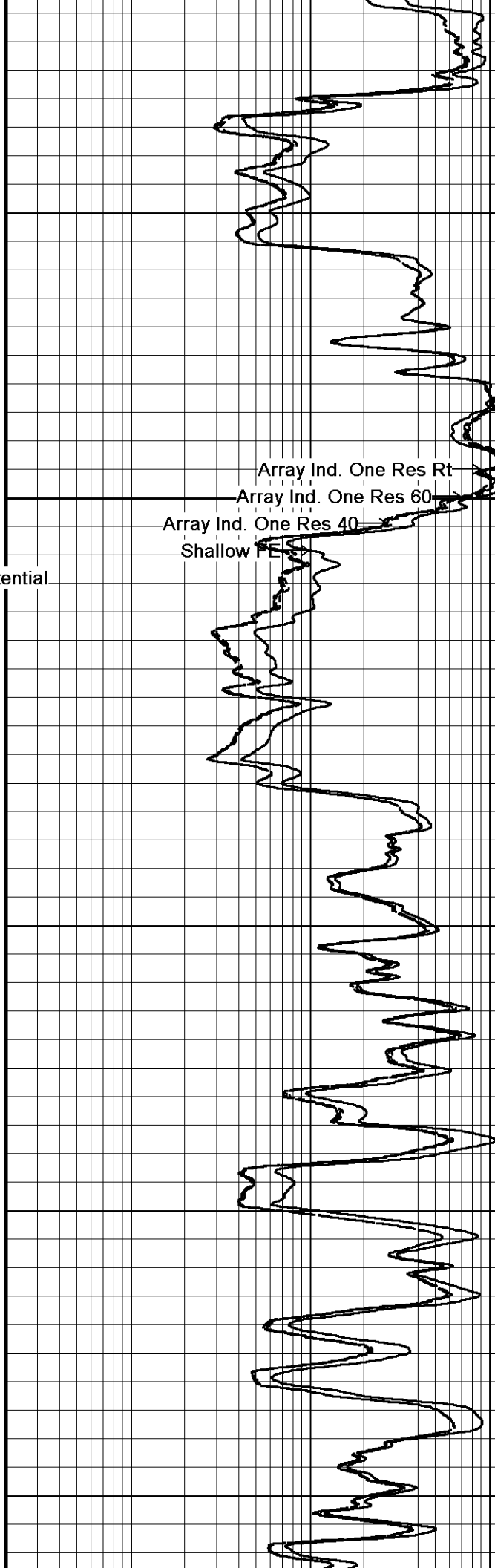
← Gamma Ray

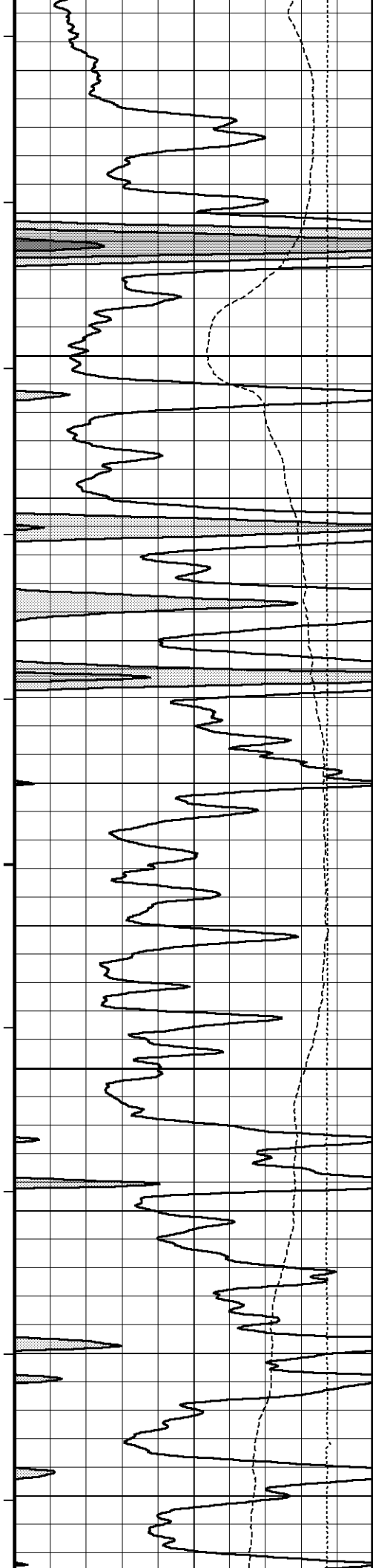
DST Uphole Tension →

122°

4550

Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow F



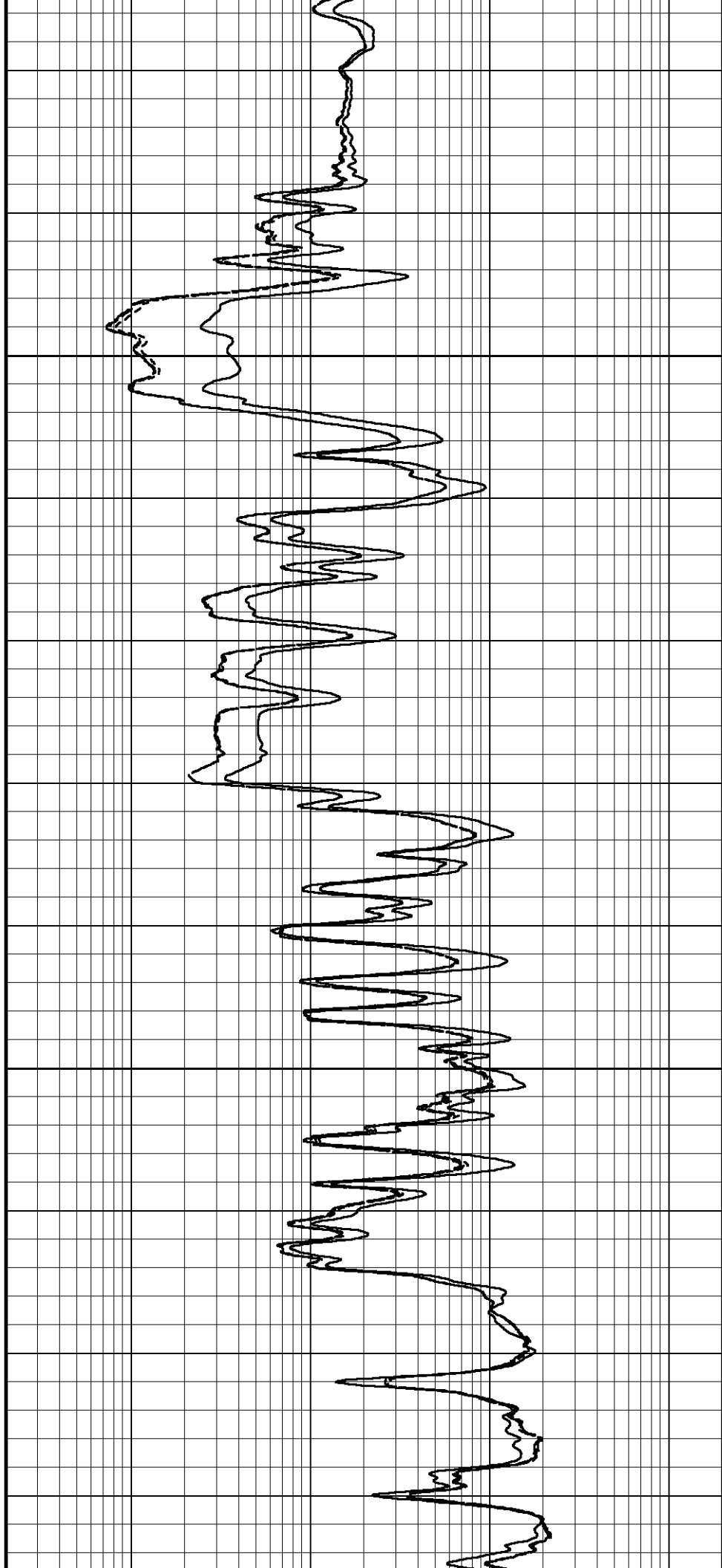


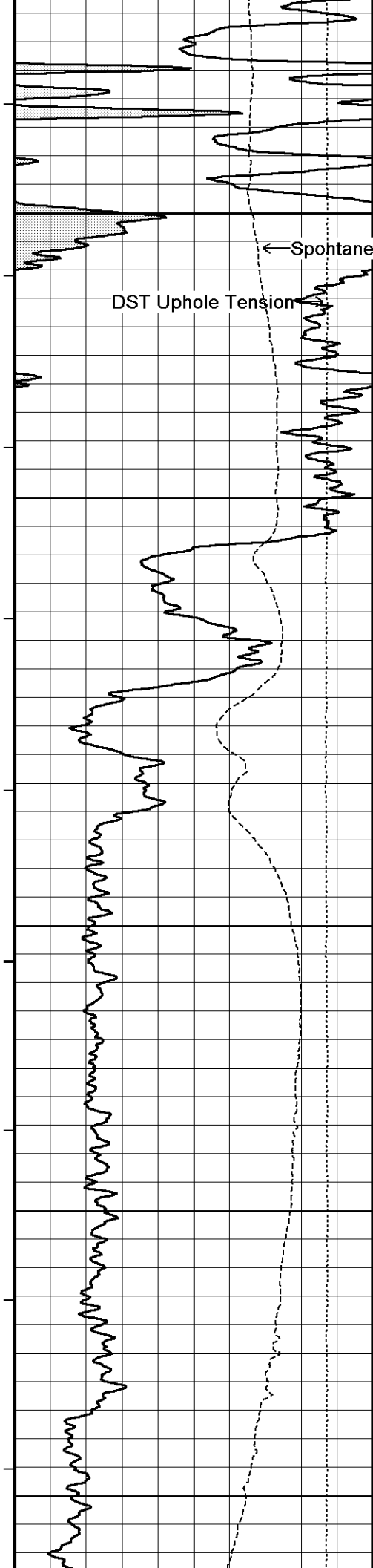
122°

4600

122°

4650





123°

4700

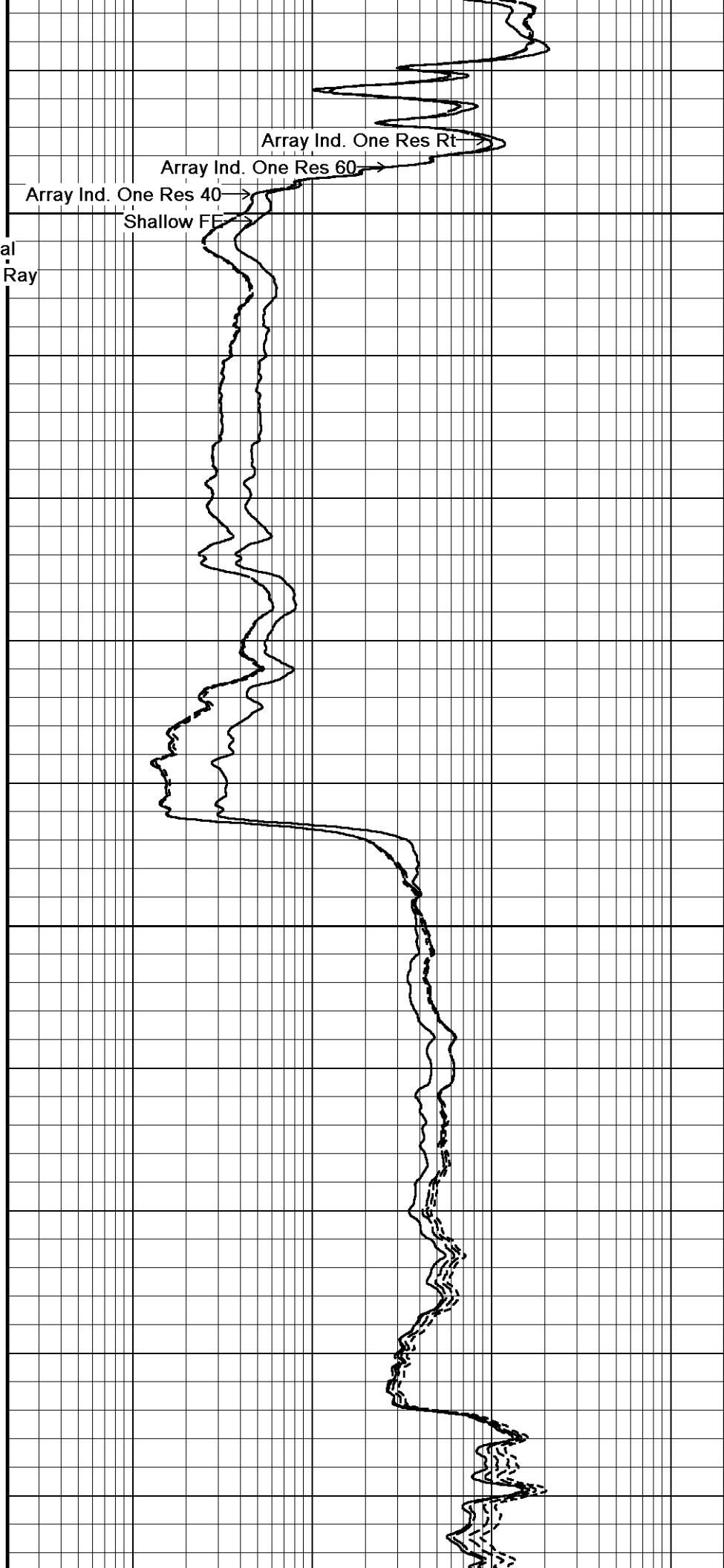
← Spontaneous Potential
← Gamma Ray

DST Uphole Tension

124°

4750

125°

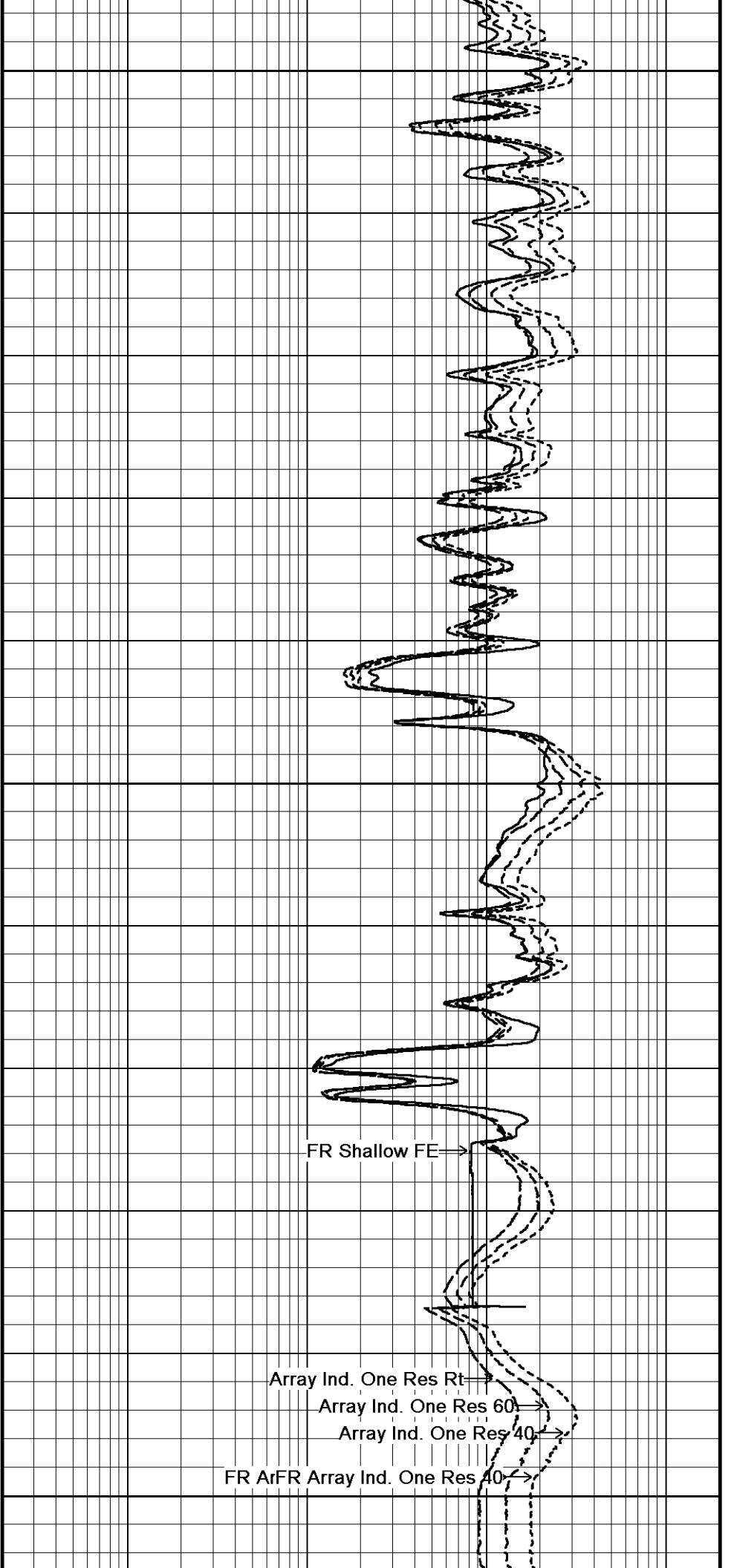
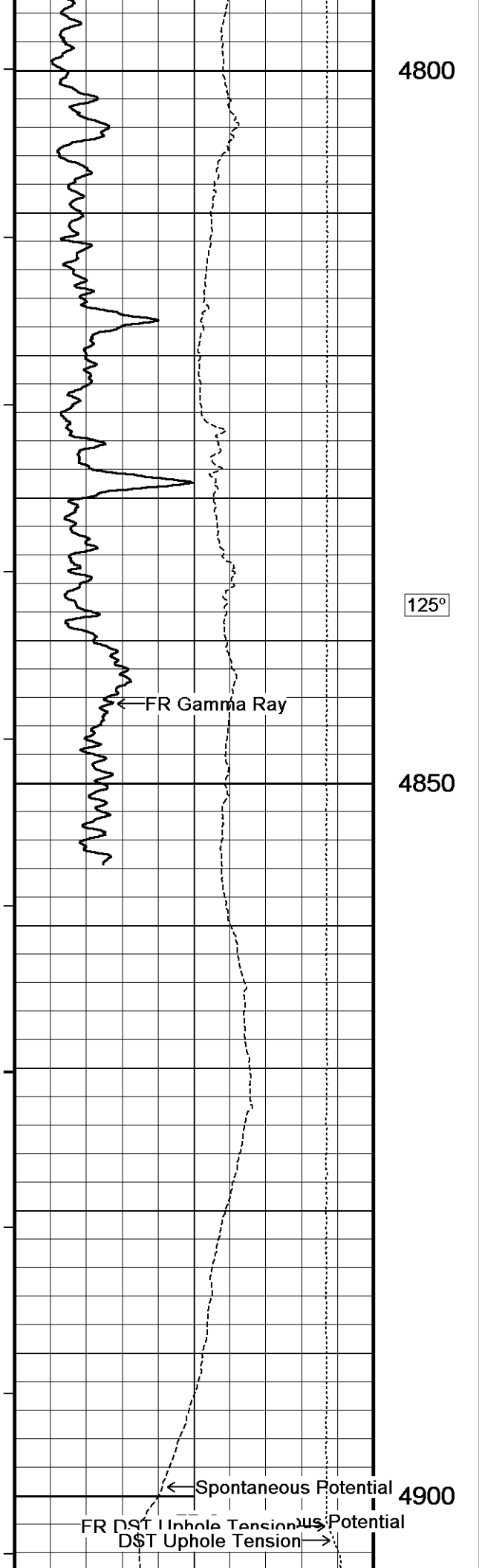


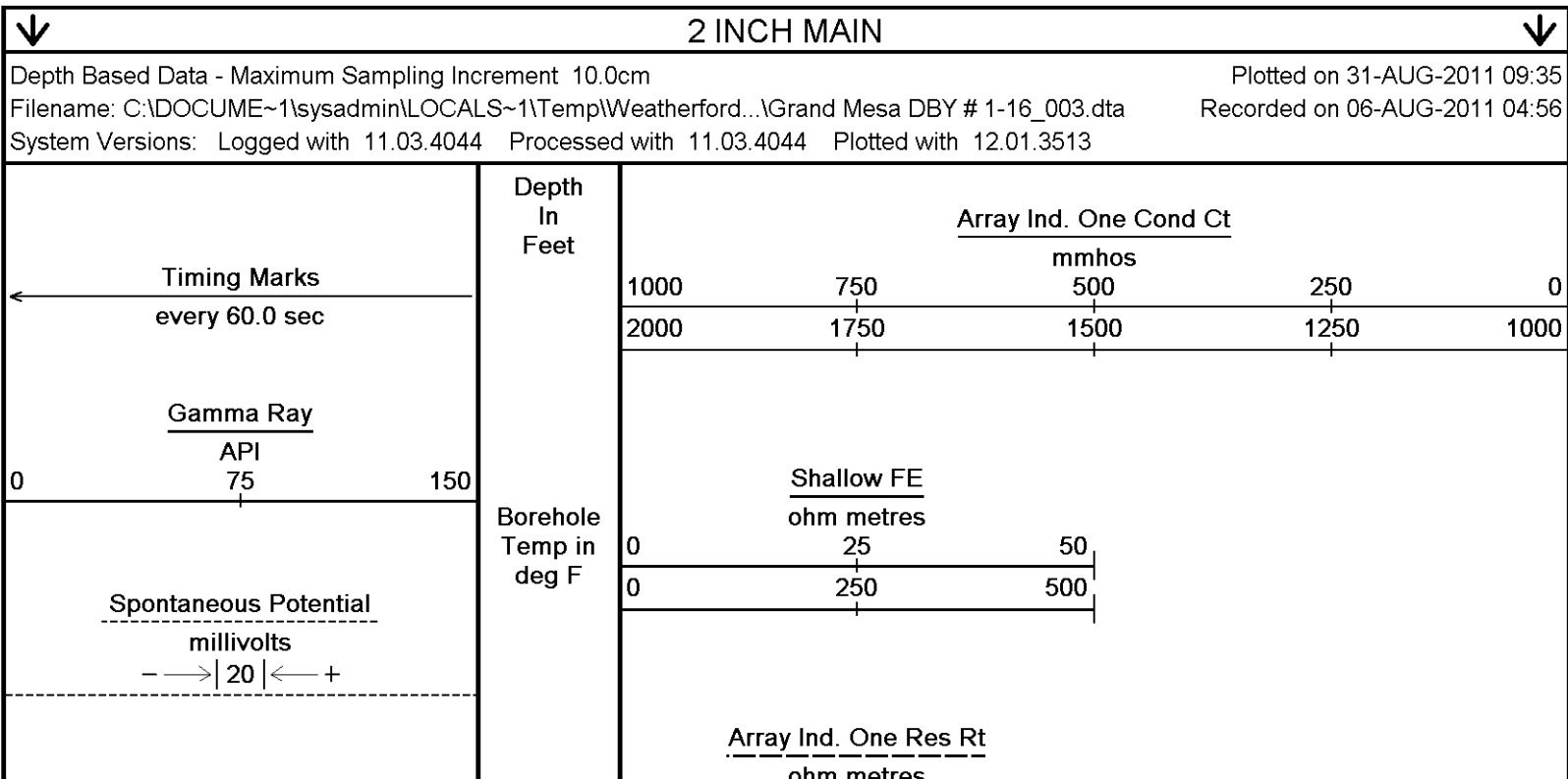
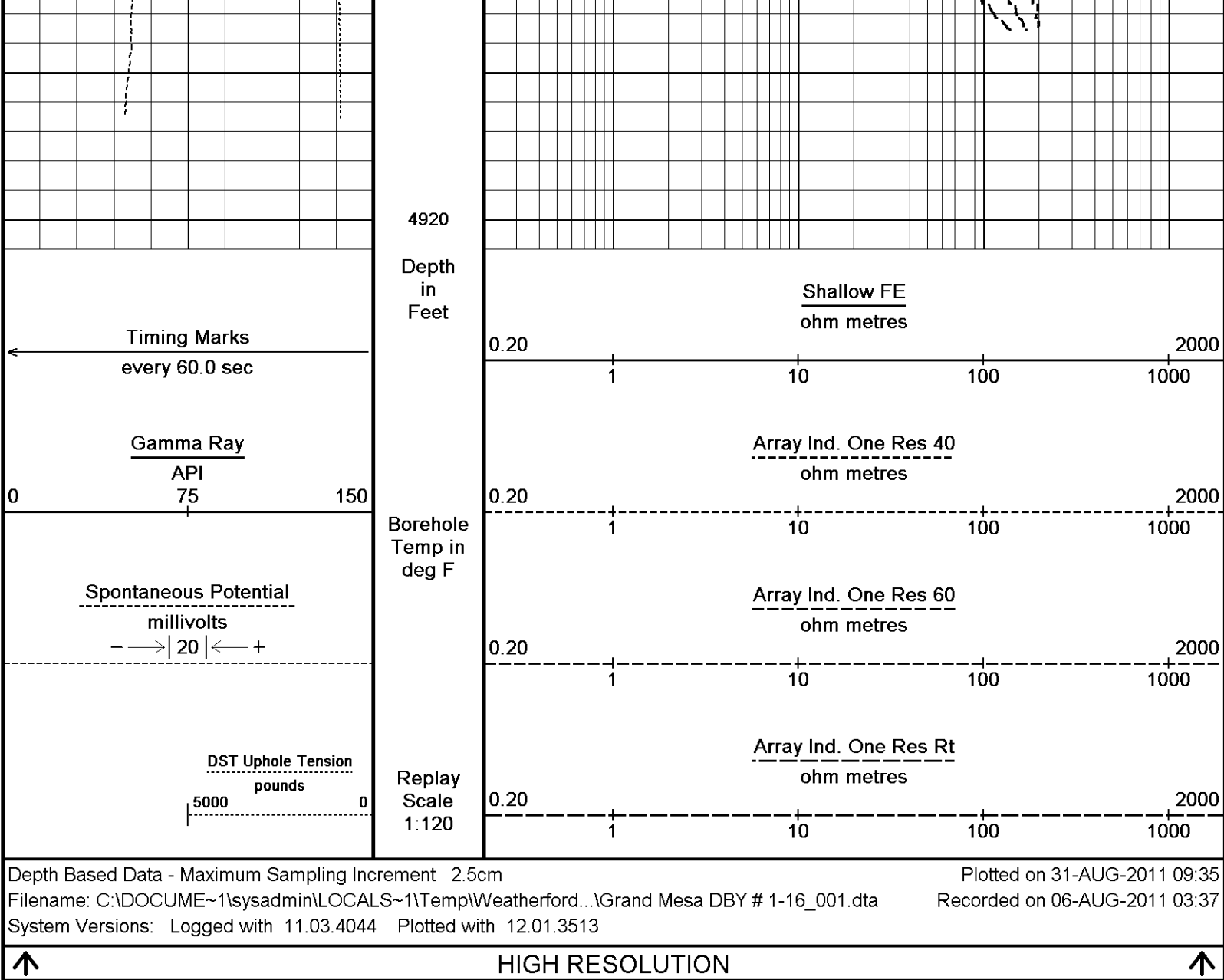
Array Ind. One Res Rt

Array Ind. One Res 60

Array Ind. One Res 40

Shallow FF

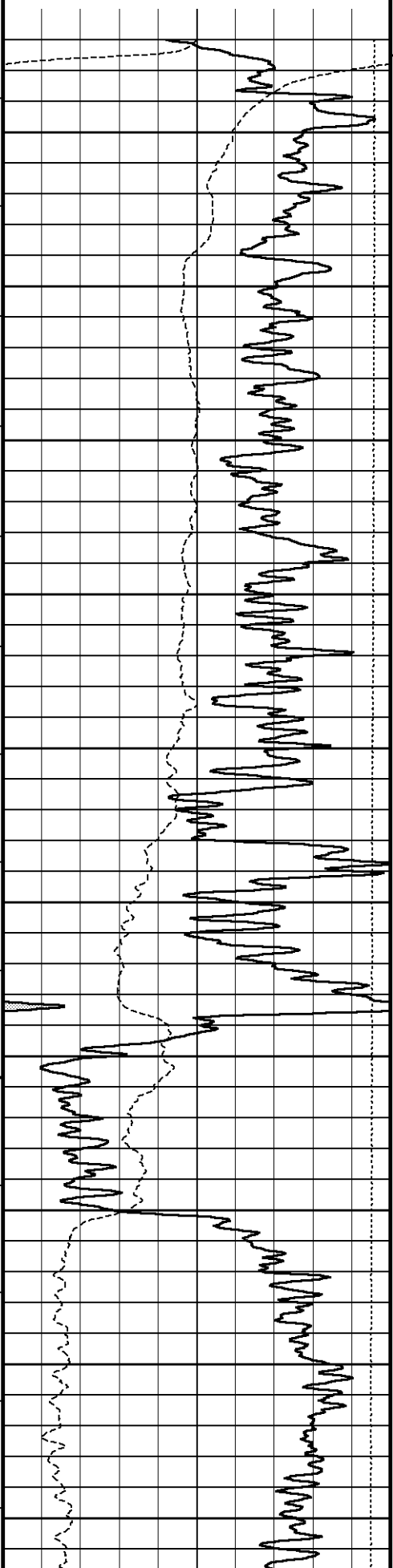




DST Uphole Tension
pounds
5000 0

Replay
Scale
1:600

0 25 50
0 250 500



220₃

300

98°

400

99°

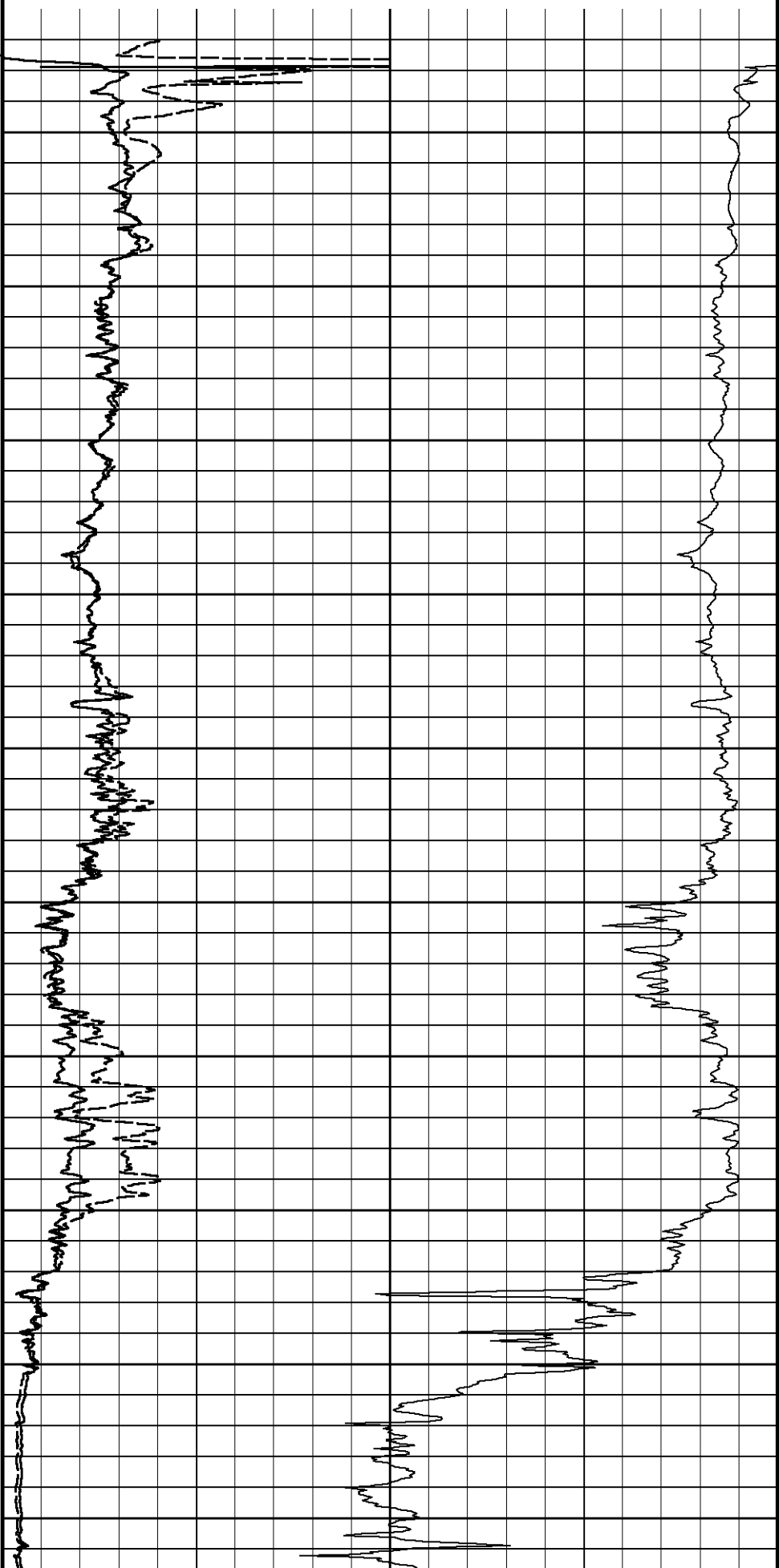
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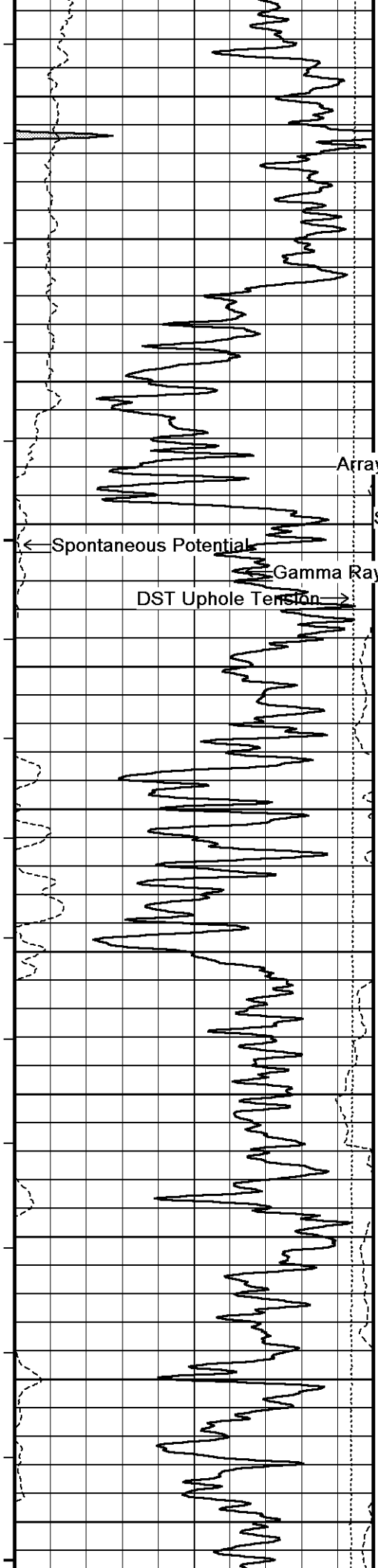
100°

600

101°

700





101°

800

101°

Array Ind. One Res RI

Shale

900

102°

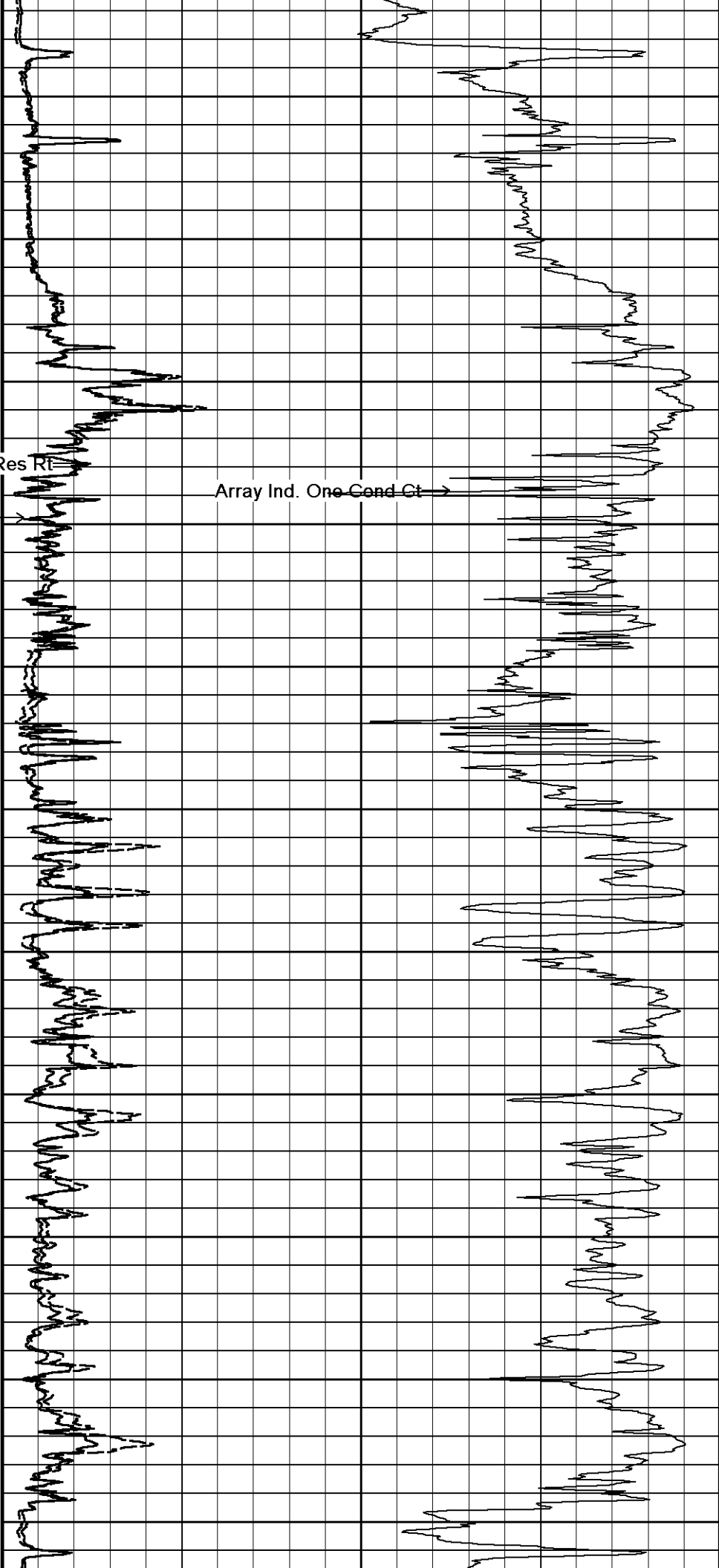
1000

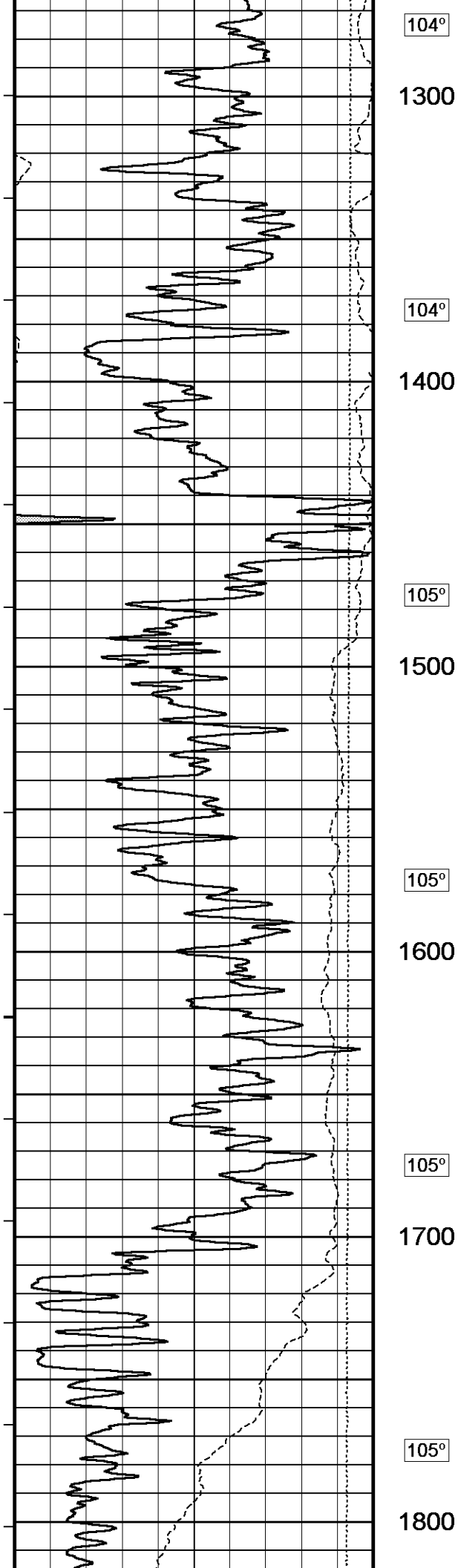
103°

1100

103°

1200





104°

1300

104°

1400

105°

1500

105°

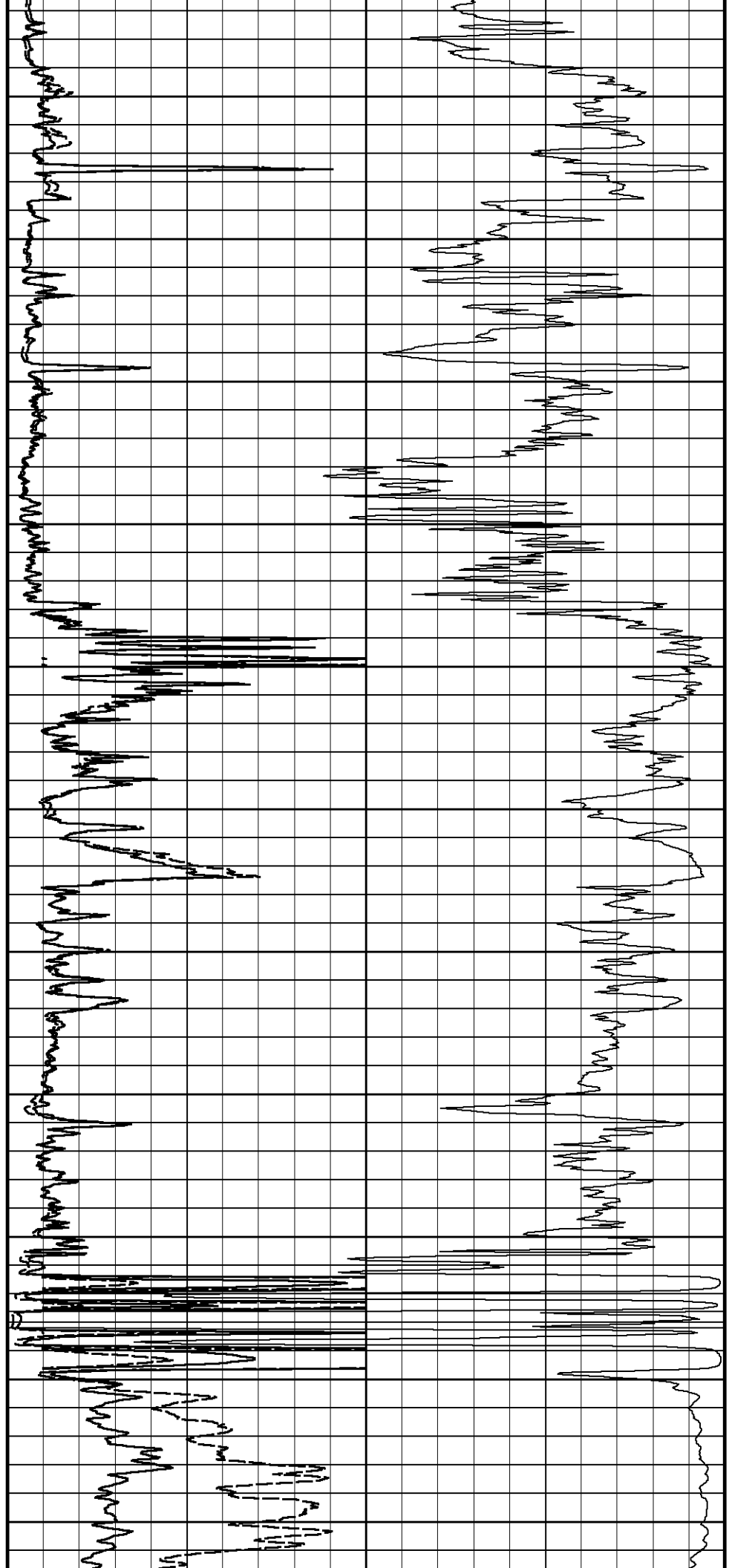
1600

105°

1700

105°

1800



Array Ind. One Res Rt

105°

Shallow FE

Array Ind. One Cond Ct

Spontaneous Potential

Gamma Ray

DST Uphole Tension

1900

106°

2000

107°

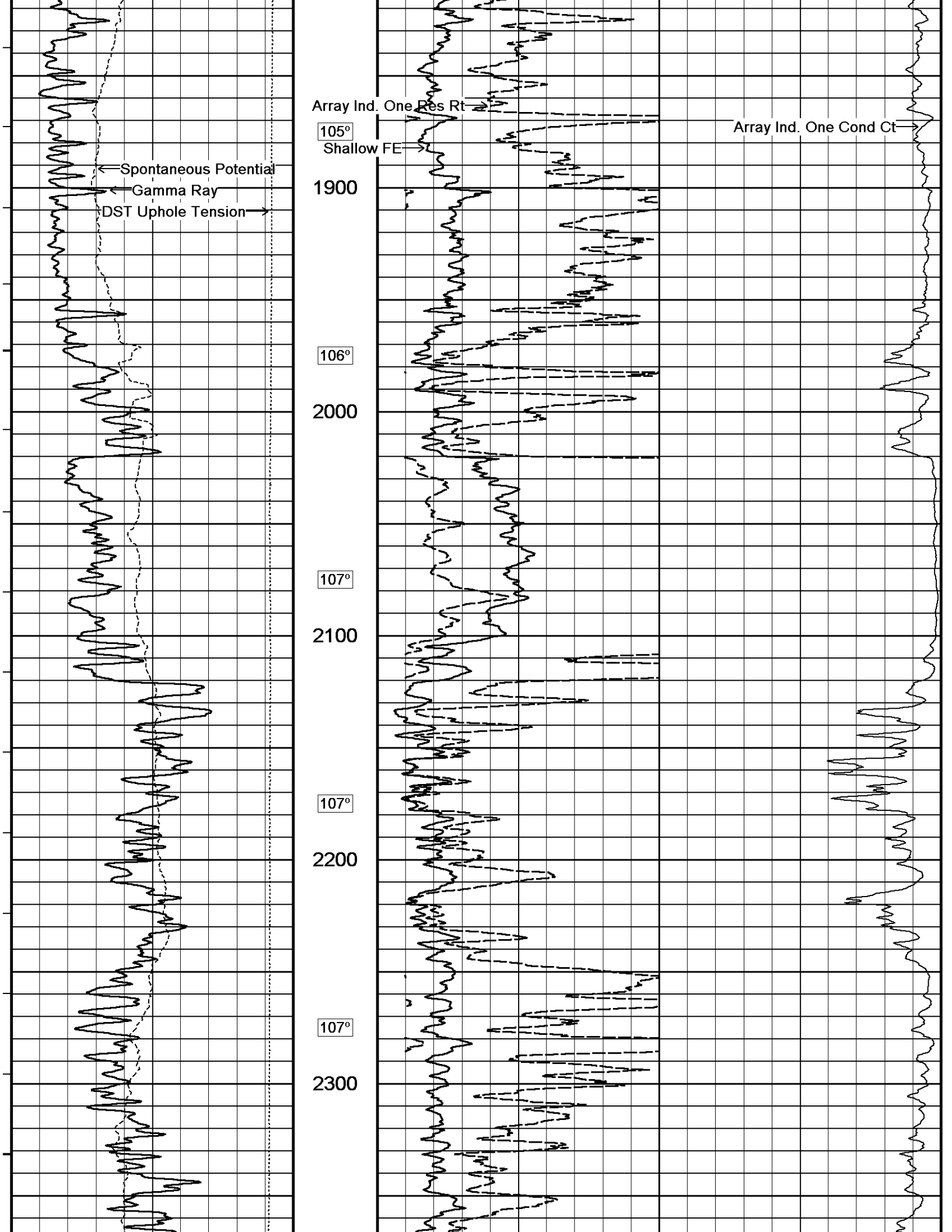
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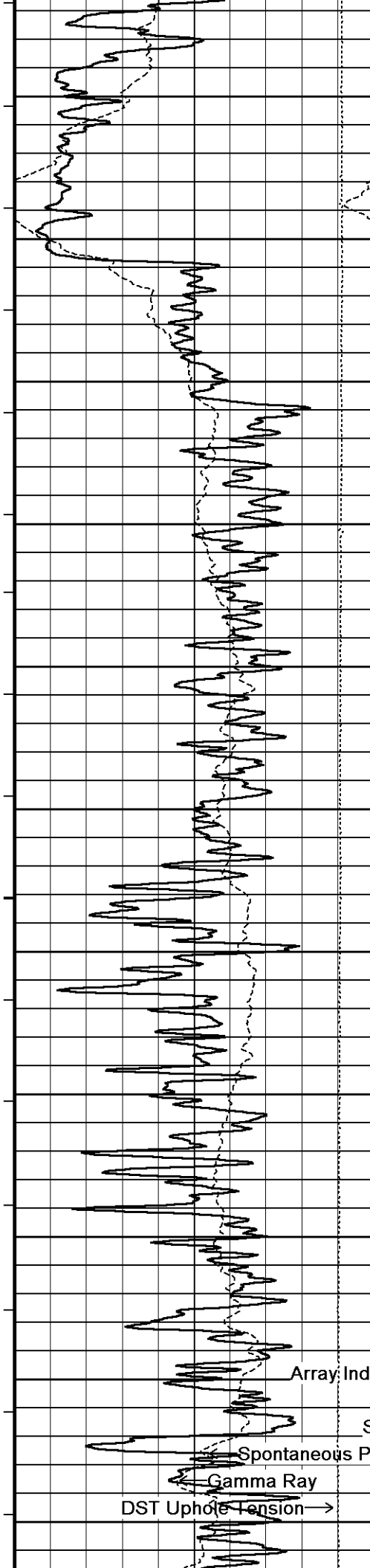
107°

2200

107°

2300





109°

2400

109°

2500

110°

2600

110°

2700

111°

2800

Array Ind. One Res Rt

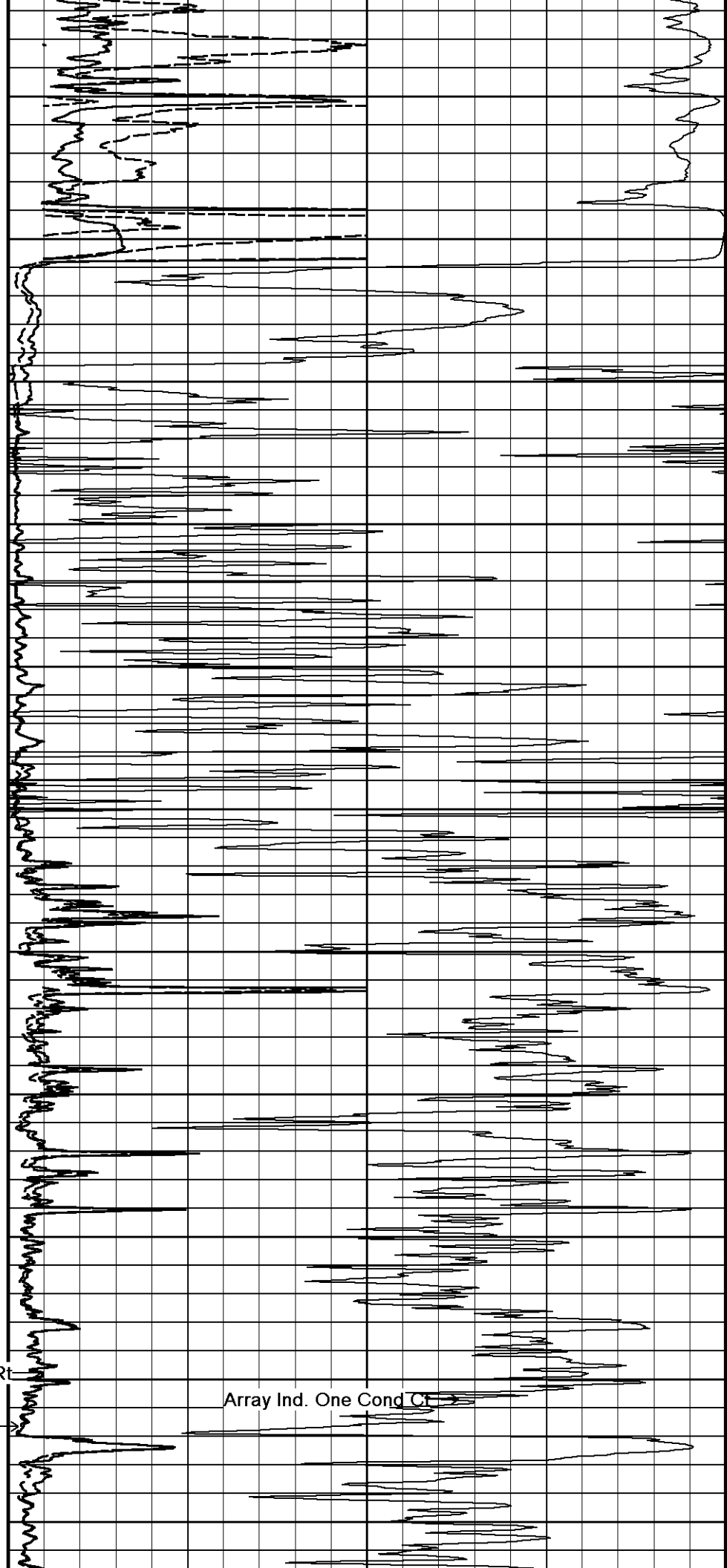
Shallow FE

Spontaneous Potential

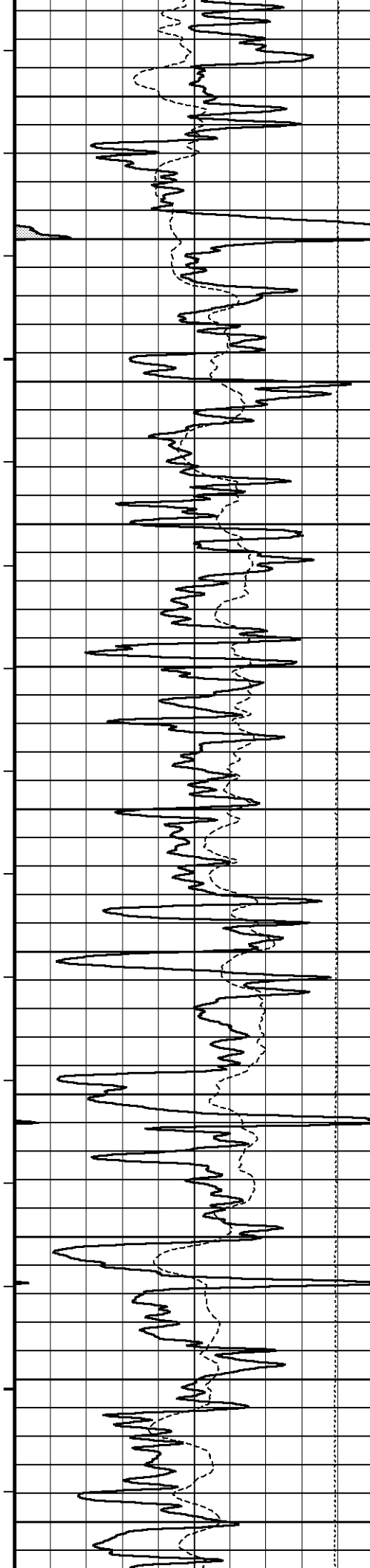
Gamma Ray

DST Up-hole Tension

2900



Array Ind. One Cond Ct



112°

3000

113°

3100

114°

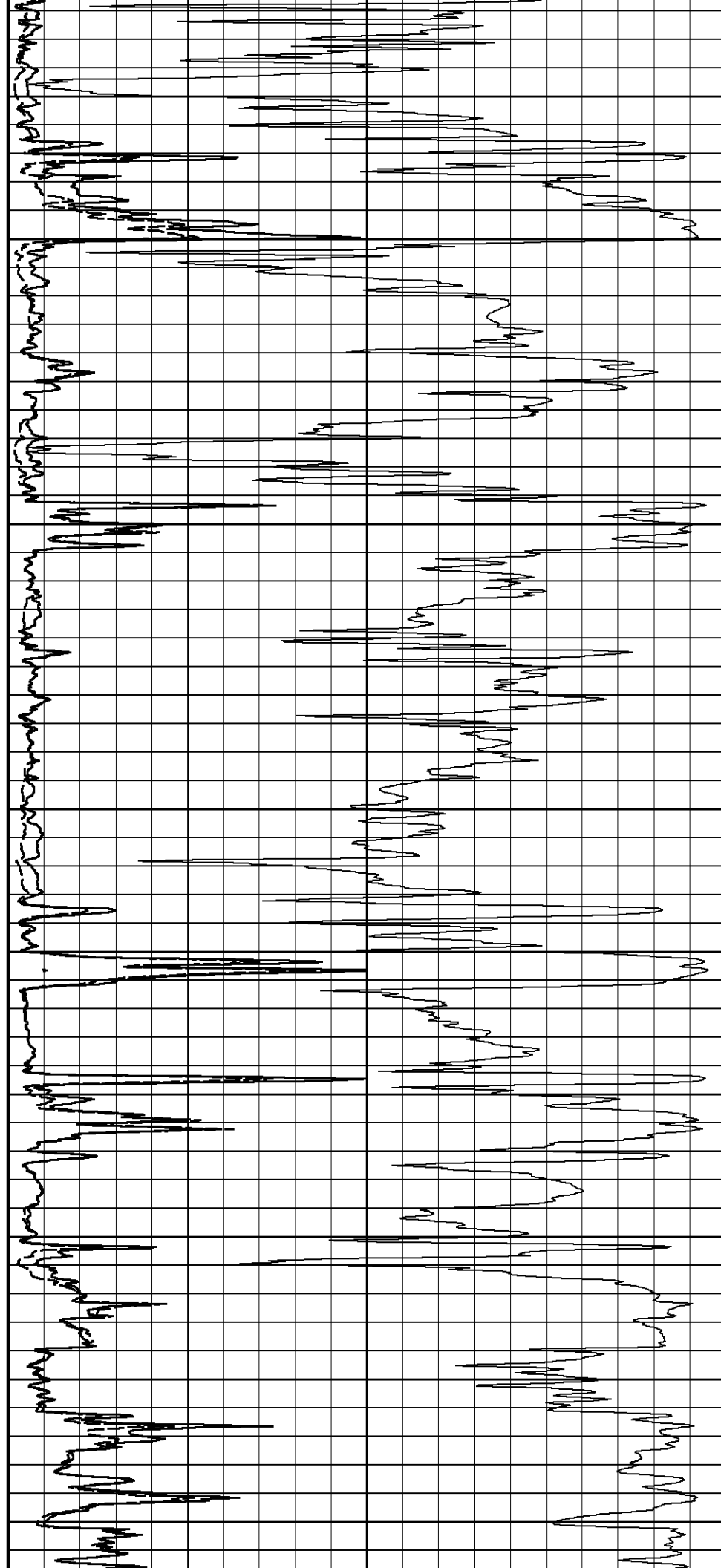
3200

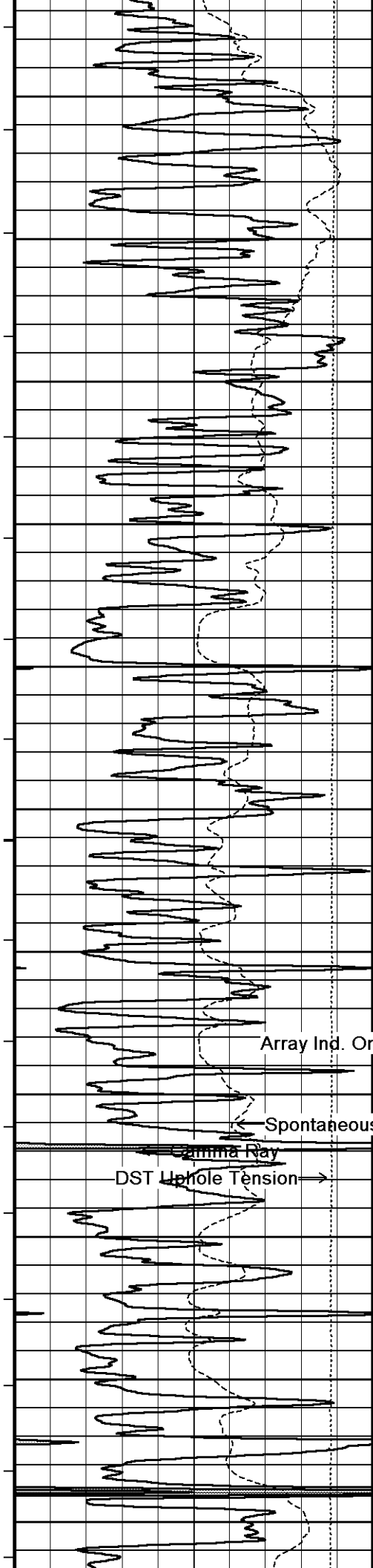
115°

3300

115°

3400





115°

3500

116°

3600

117°

3700

117°

3800

Array Ind. One Res Rt

Shallow FF

Spontaneous Potential

Gamma Ray

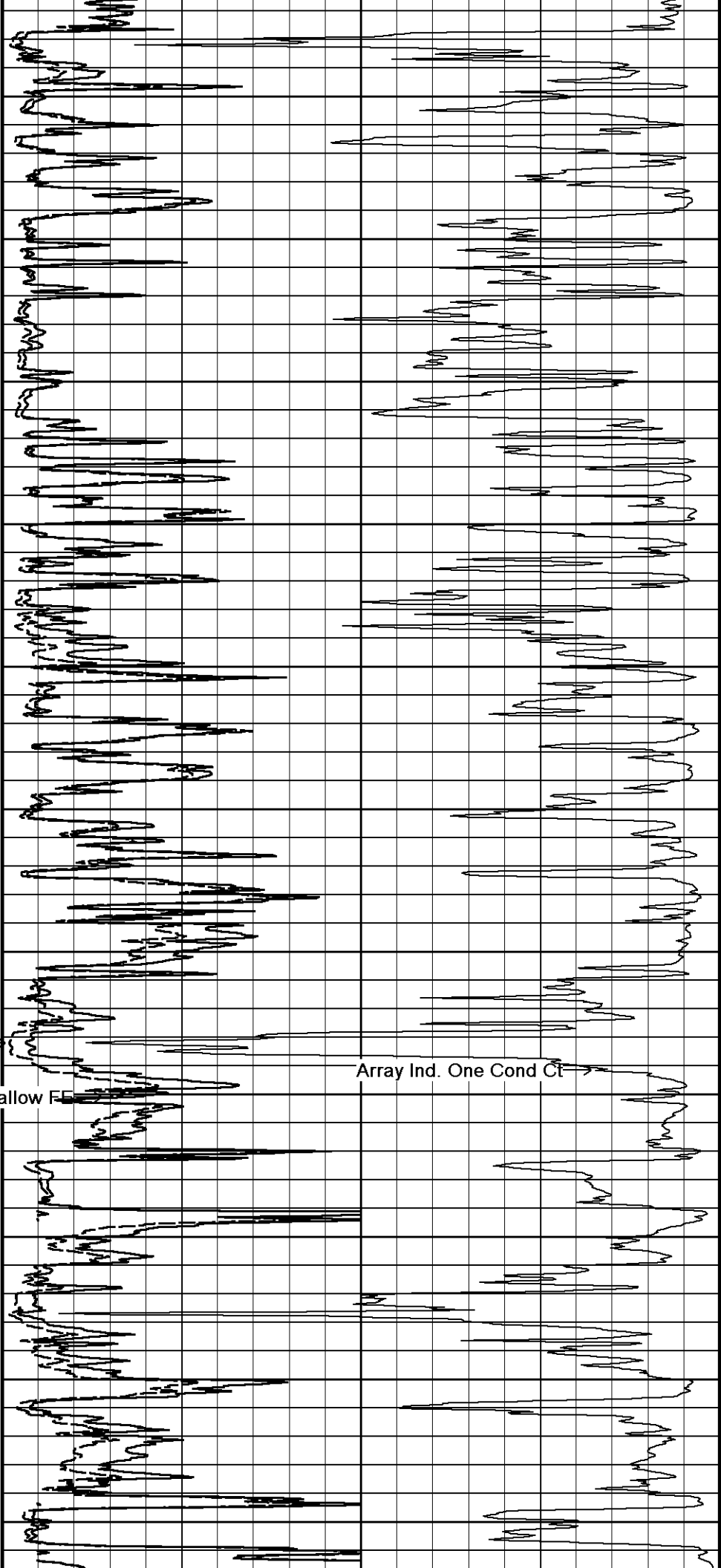
DST Uphole Tension

118°

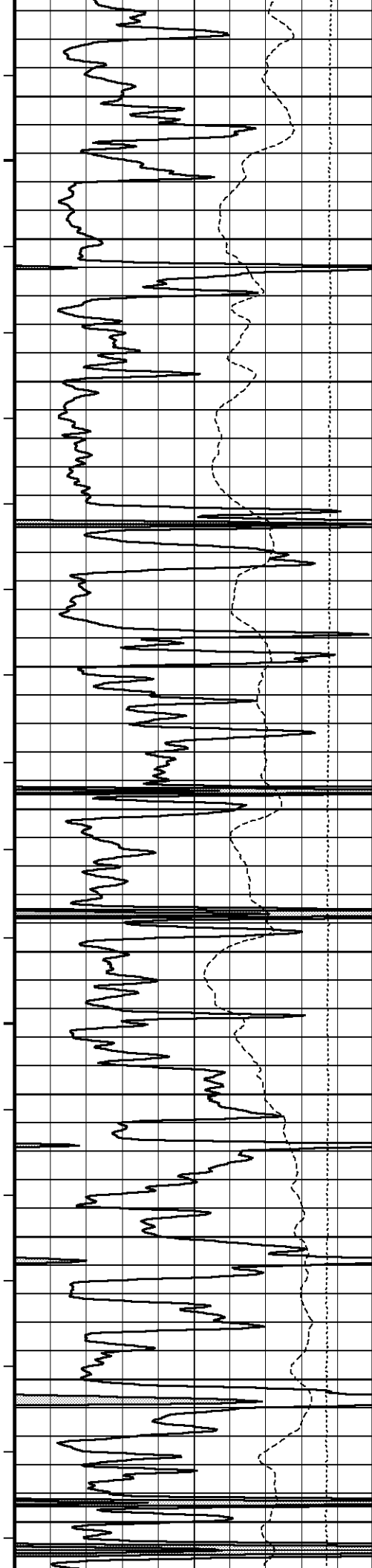
3900

118°

4000



Array Ind. One Cond Ct



119°

4100

119°

4200

120°

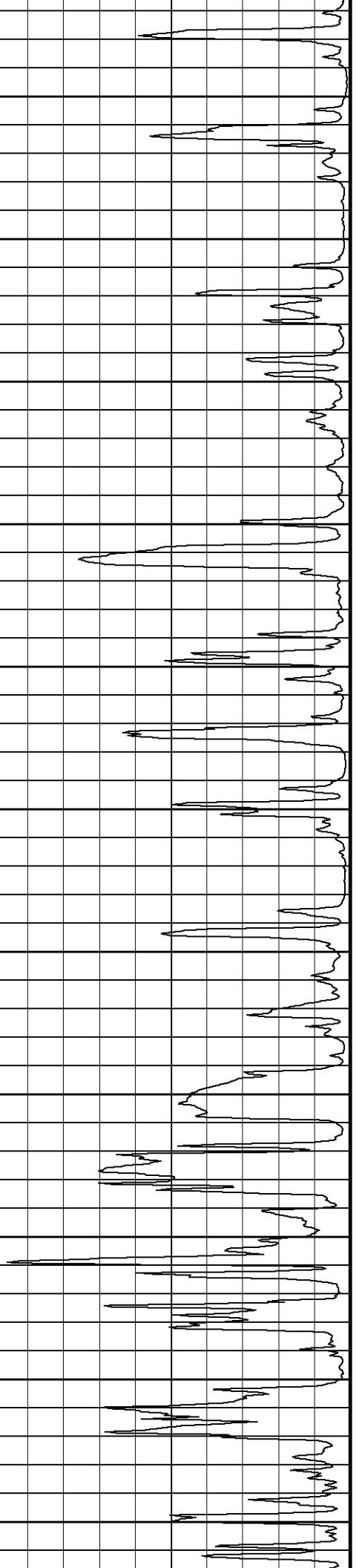
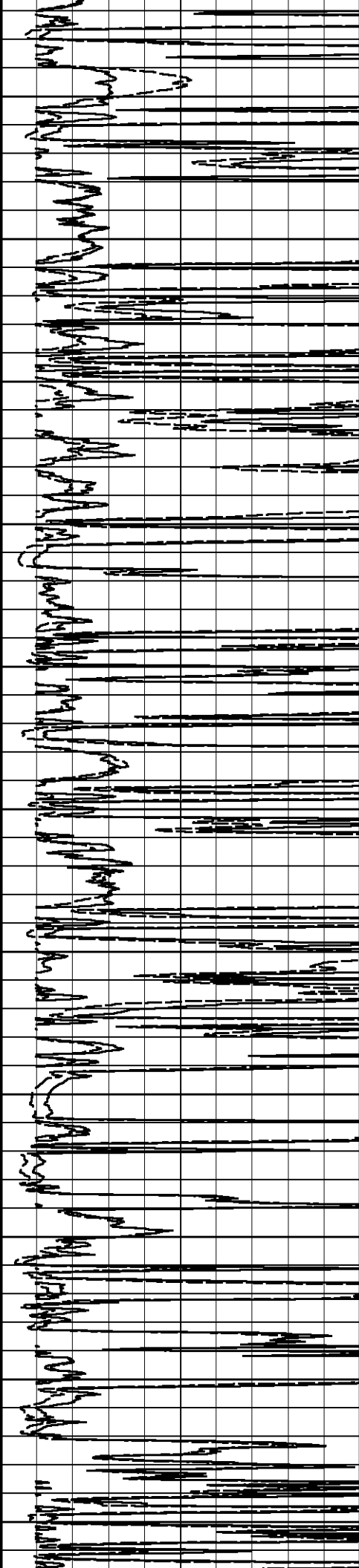
4300

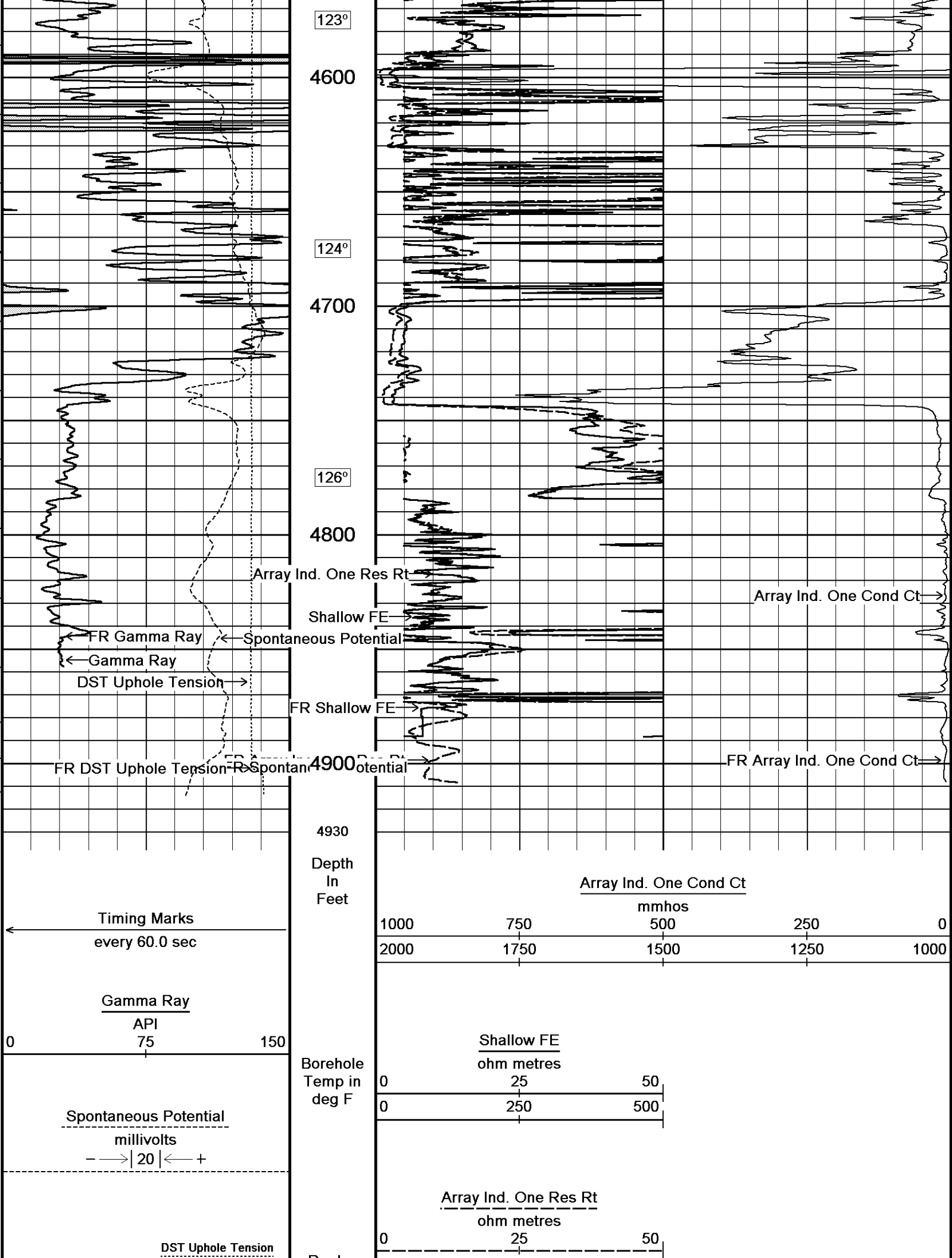
121°

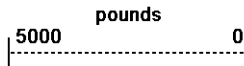
4400

122°

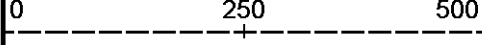
4500







Replay
Scale
1:600

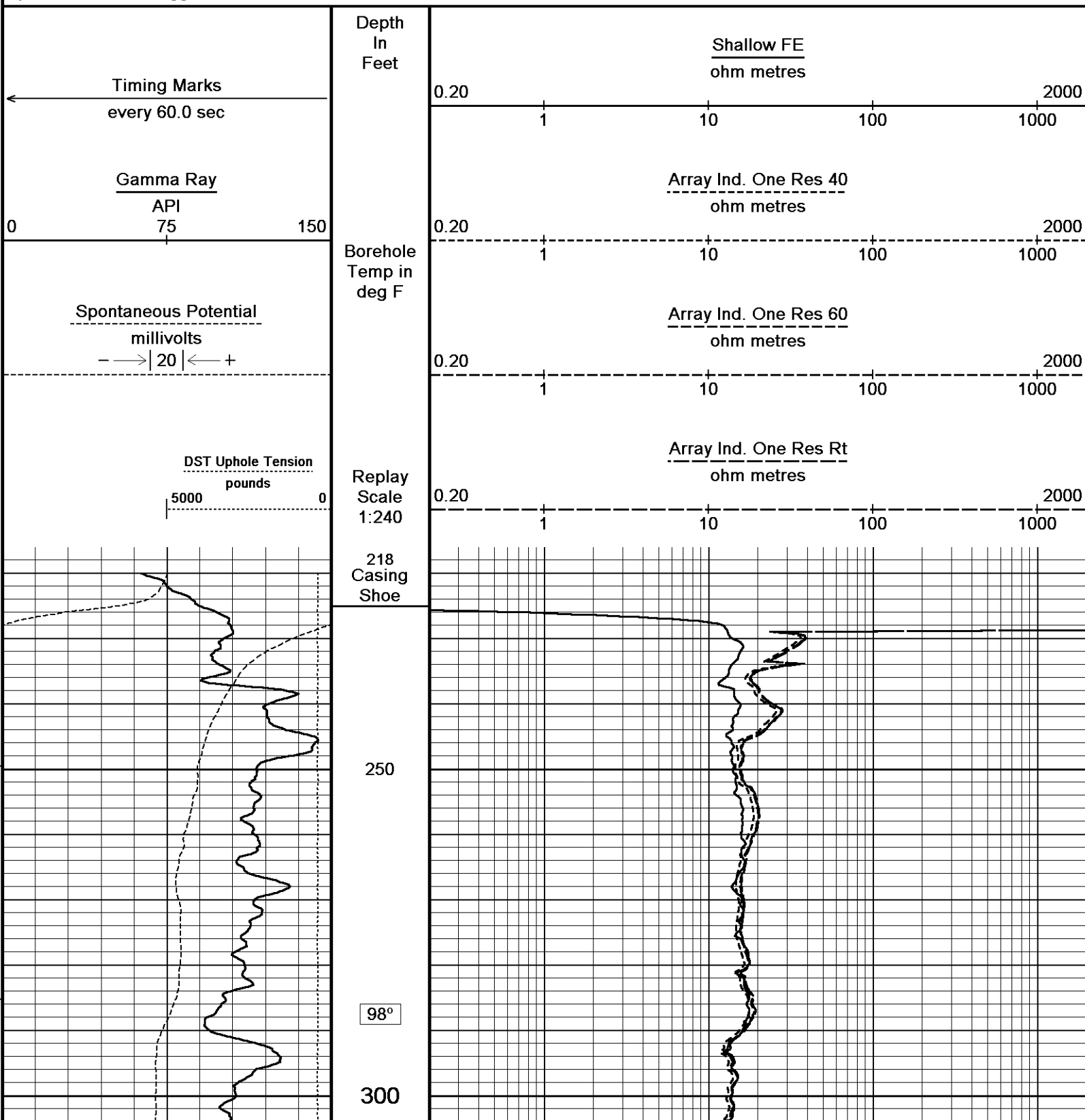


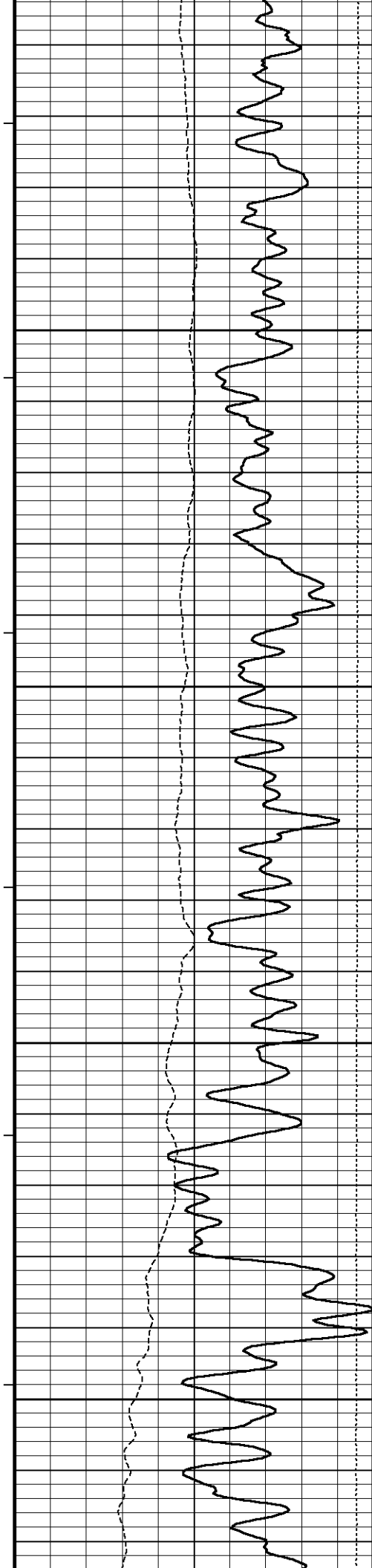
Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\DOCUME~1\sysadmin\LOCALS~1\Temp\Weatherford...\Grand Mesa DBY # 1-16_003.dta
System Versions: Logged with 11.03.4044 Processed with 11.03.4044 Plotted with 12.01.3513

↑ 2 INCH MAIN ↑

↓ 5 INCH MAIN ↓

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\DOCUME~1\sysadmin\LOCALS~1\Temp\Weatherford...\Grand Mesa DBY # 1-16_003.dta
System Versions: Logged with 11.03.4044 Processed with 11.03.4044 Plotted with 12.01.3513





98°

350

98°

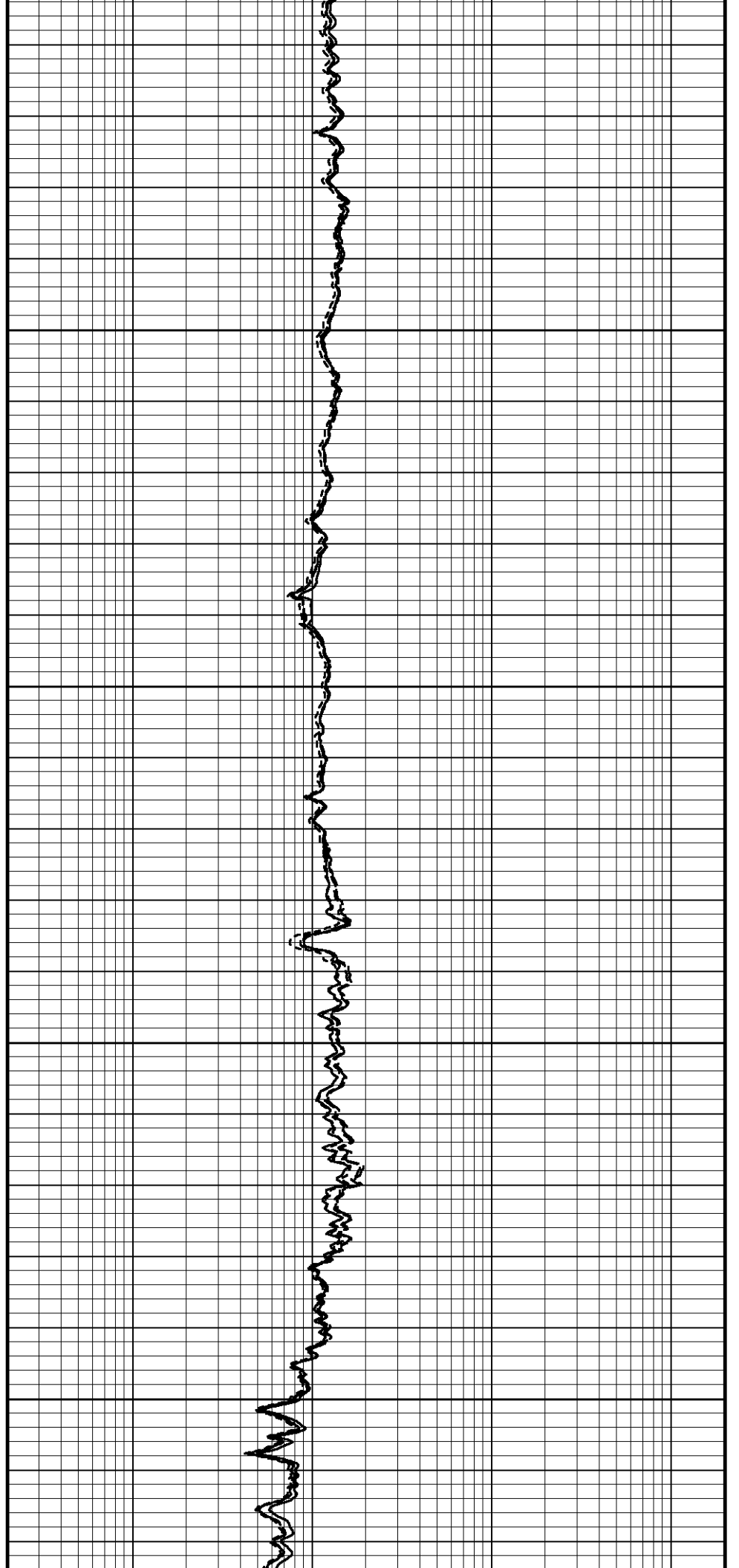
400

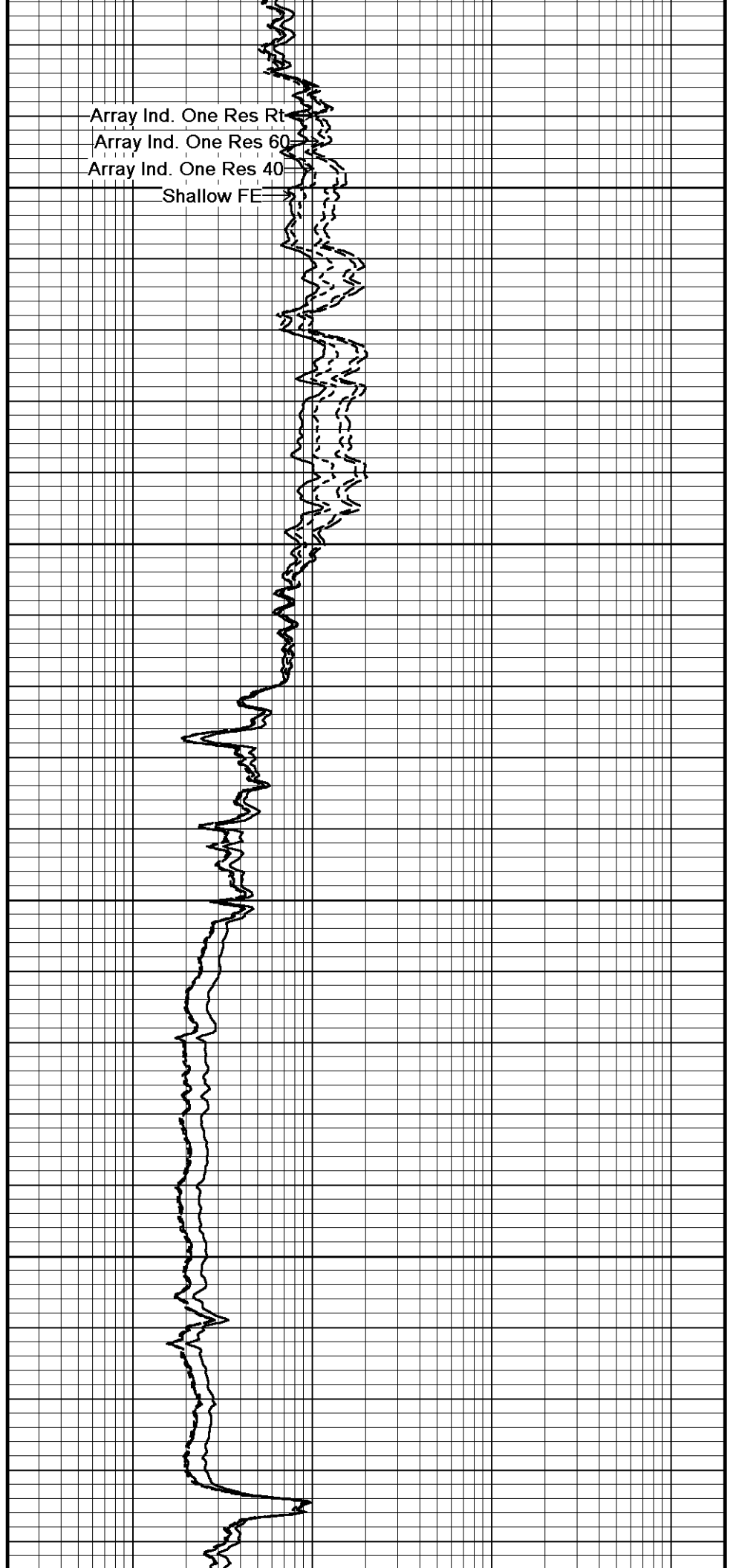
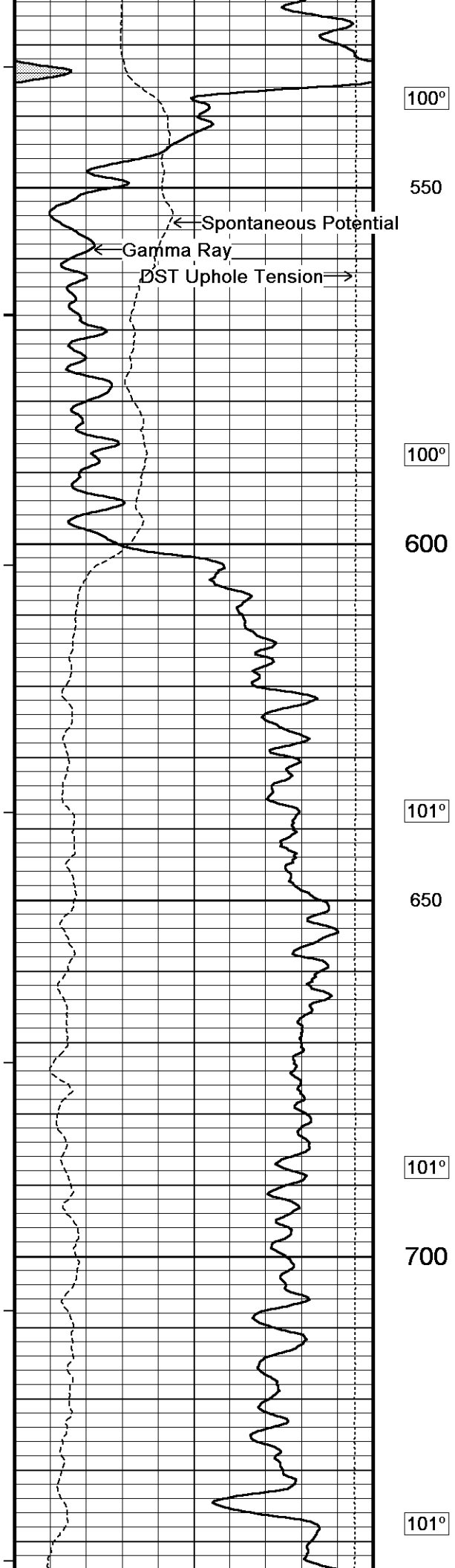
99°

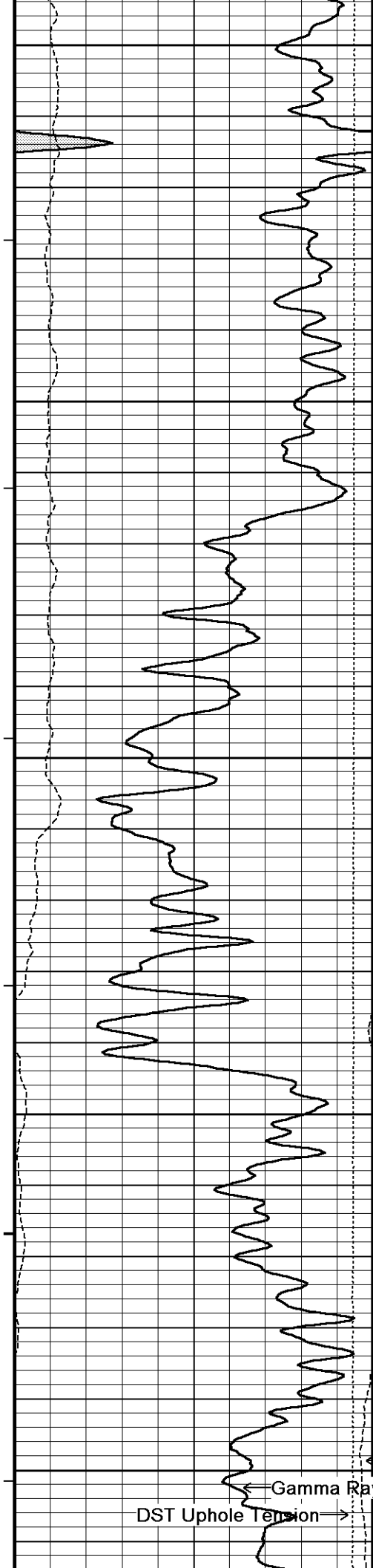
450

99°

500







750

101°

800

101°

850

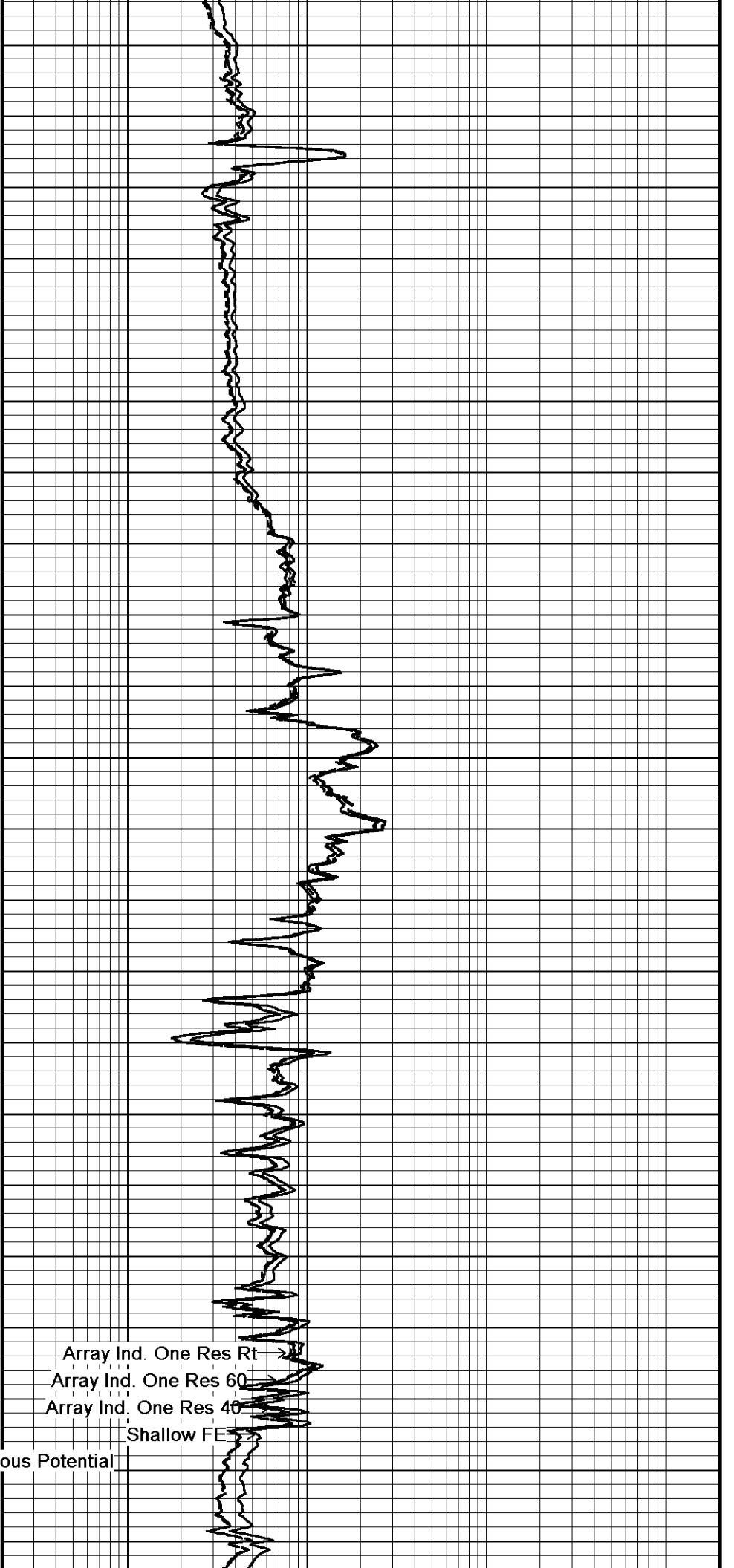
101°

900

102°

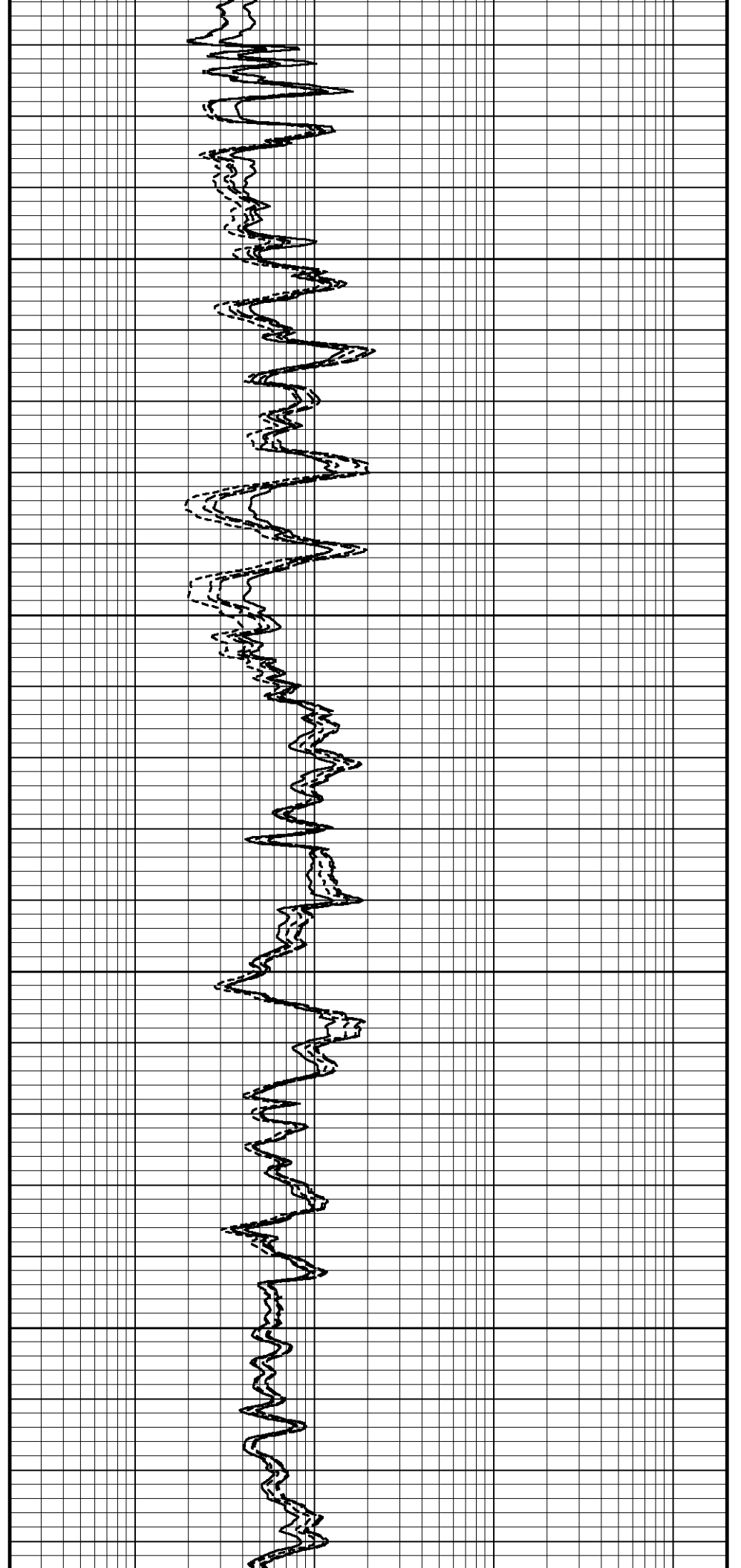
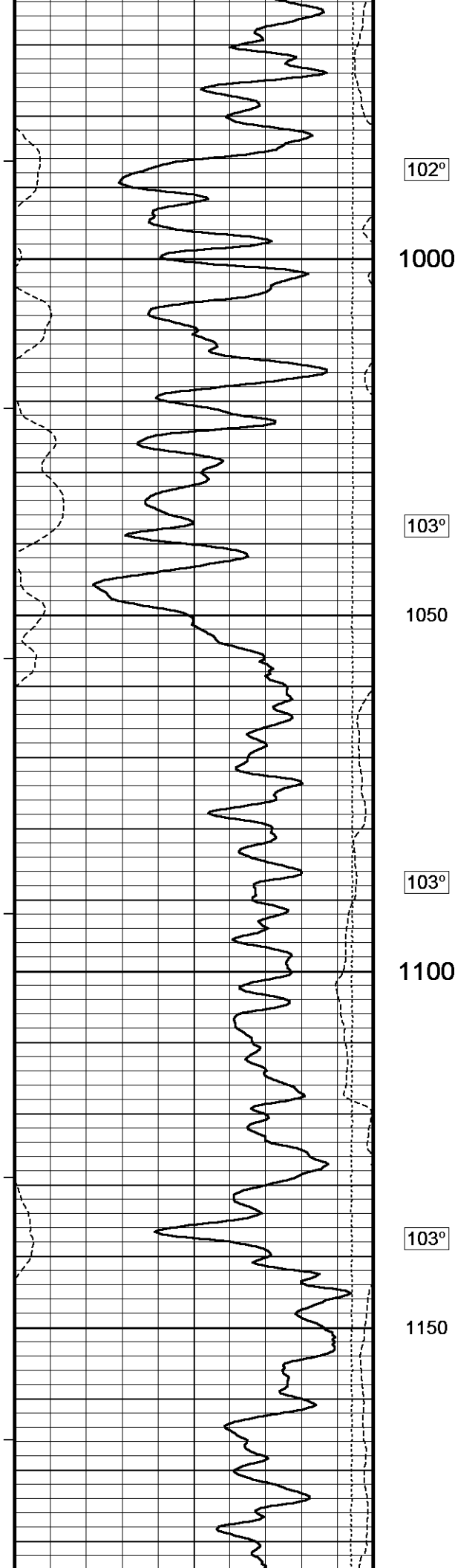
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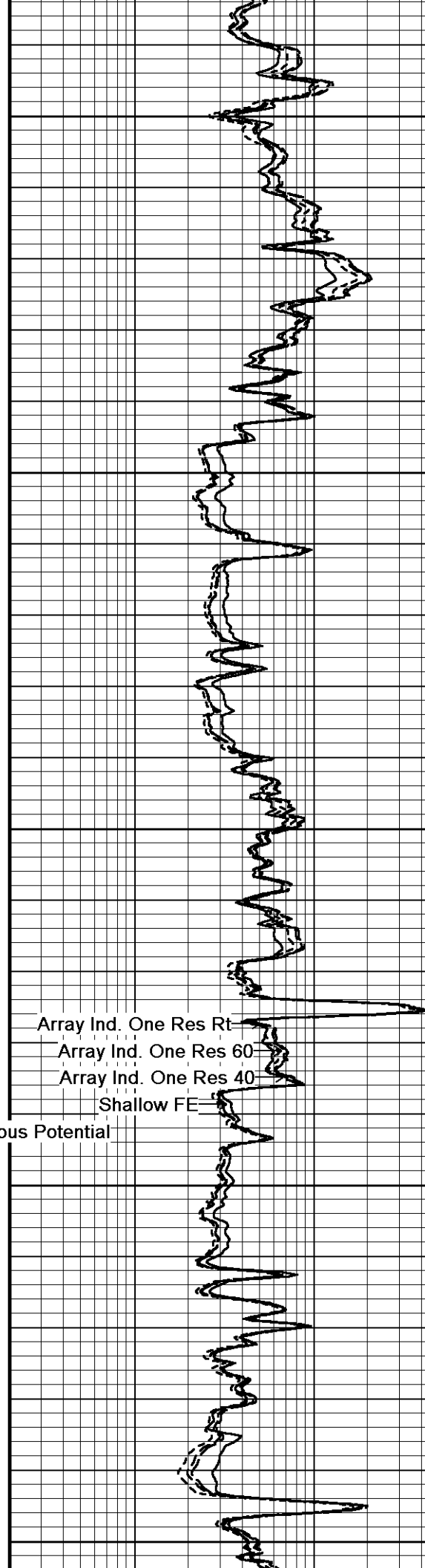
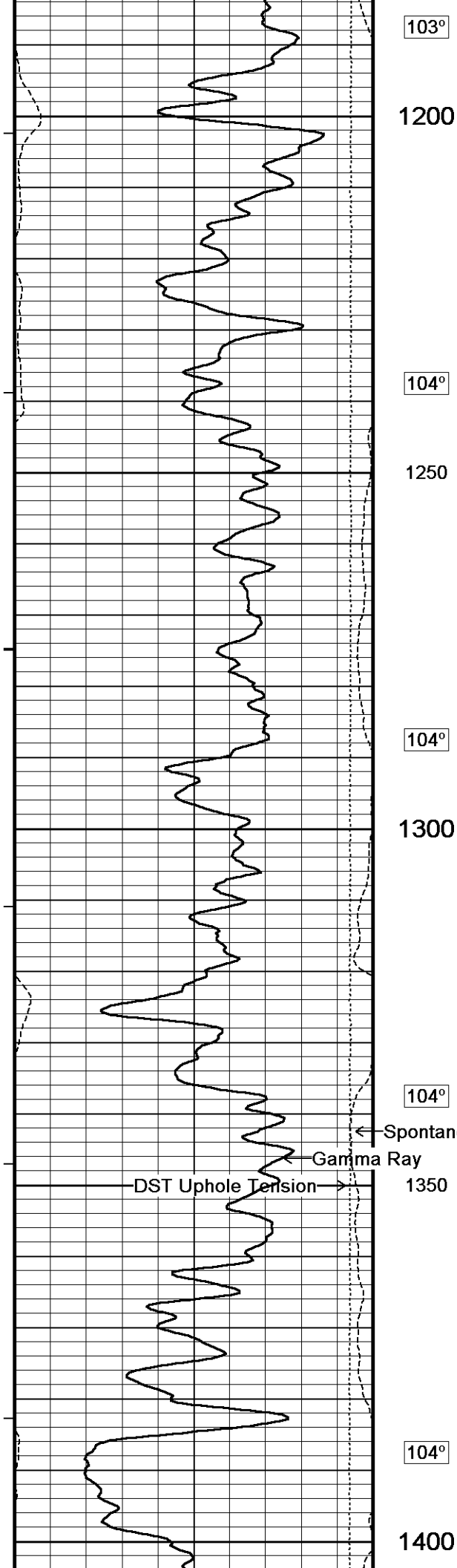
Gamma Ray
DST Uphole Tension

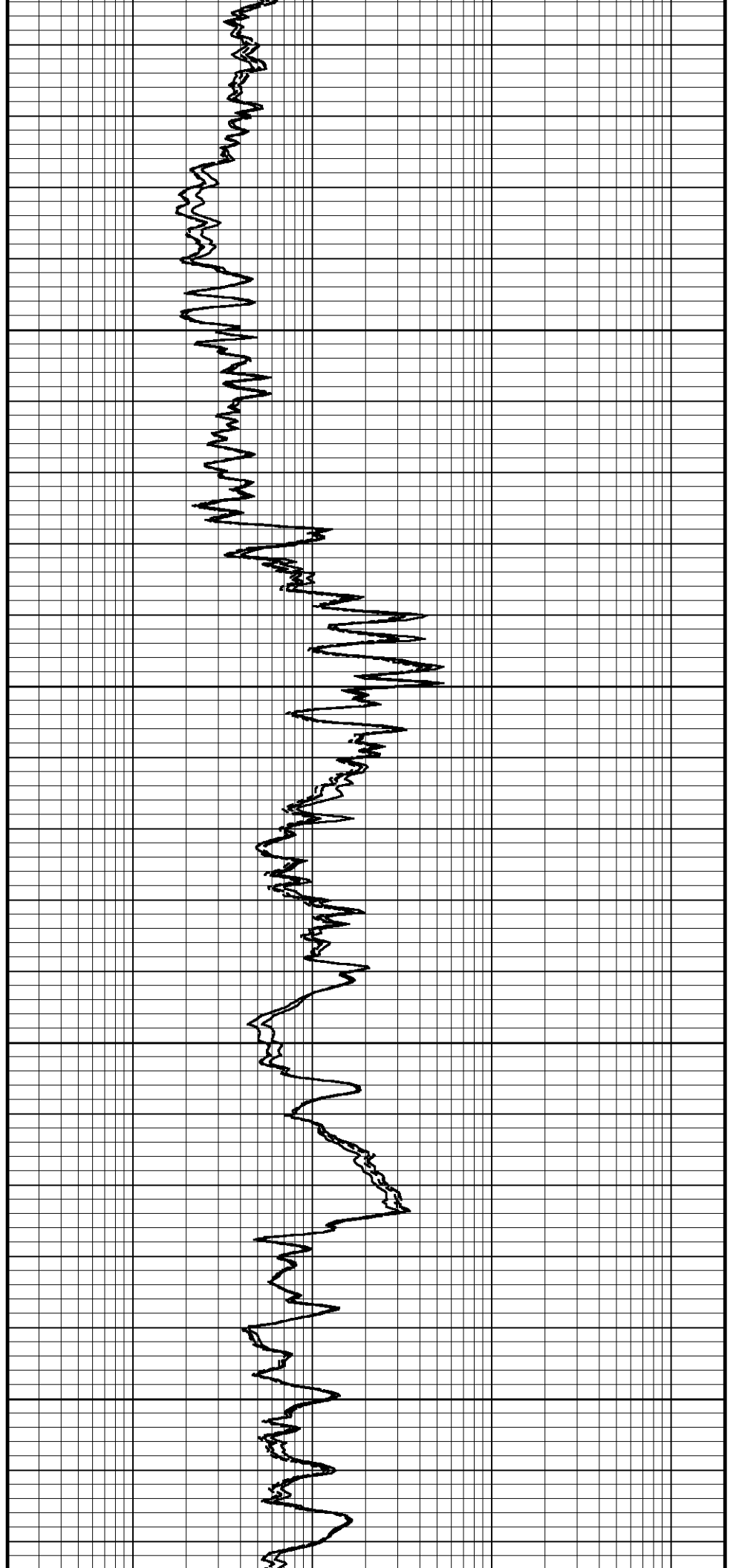
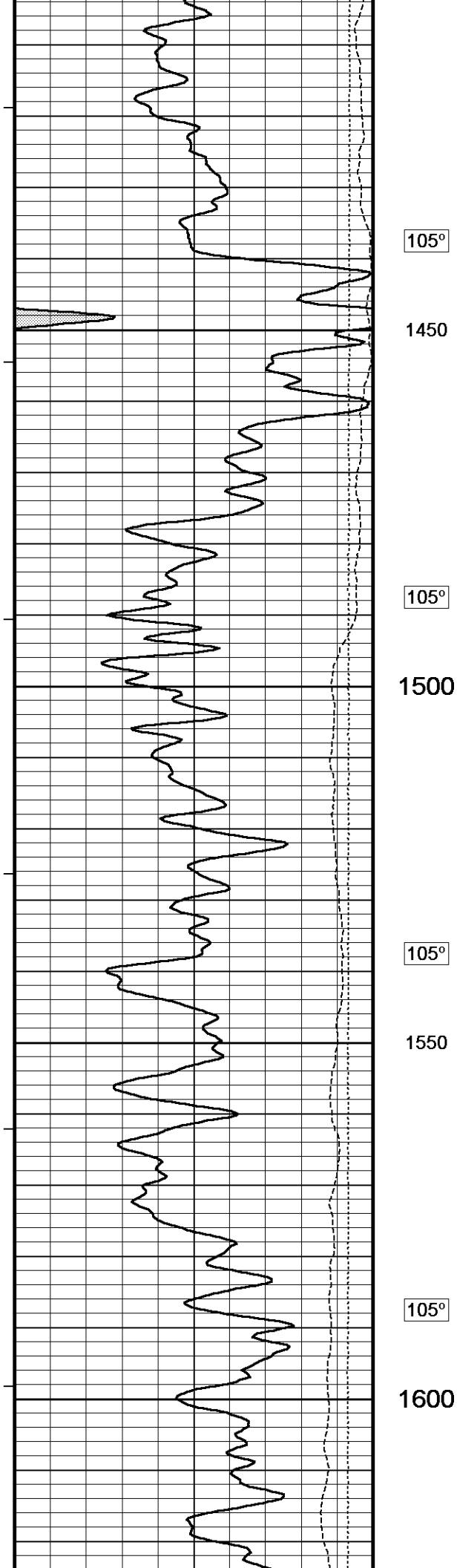


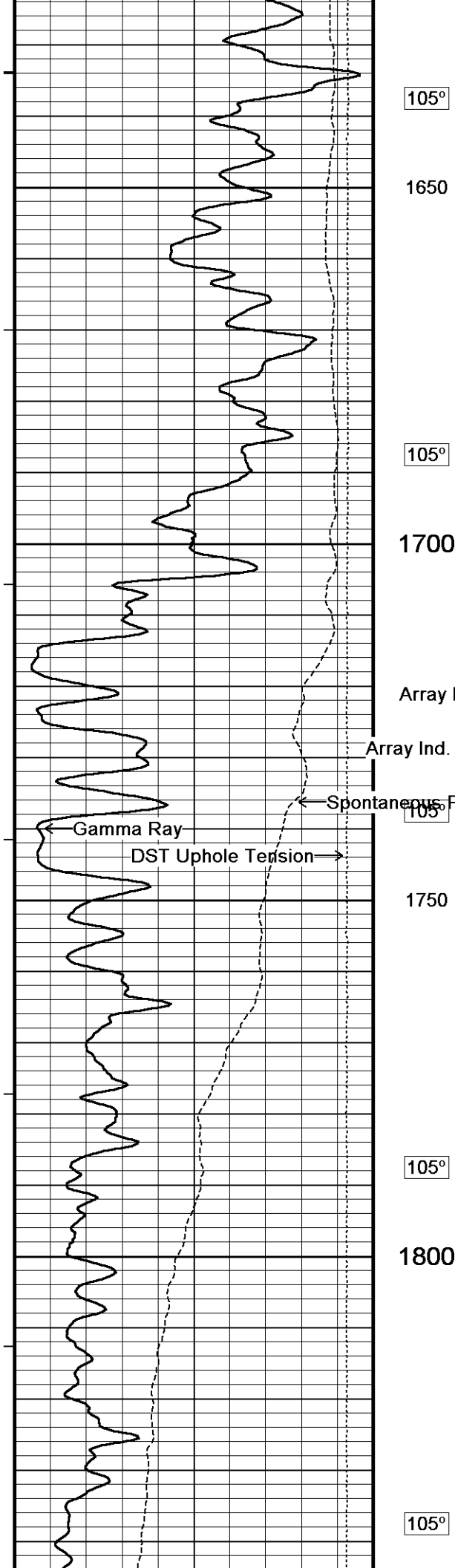
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FE

Spontaneous Potential









105°

1650

105°

1700

Array Ind. One Res Rt

Array Ind. One Res 40

Spontaneous Potential

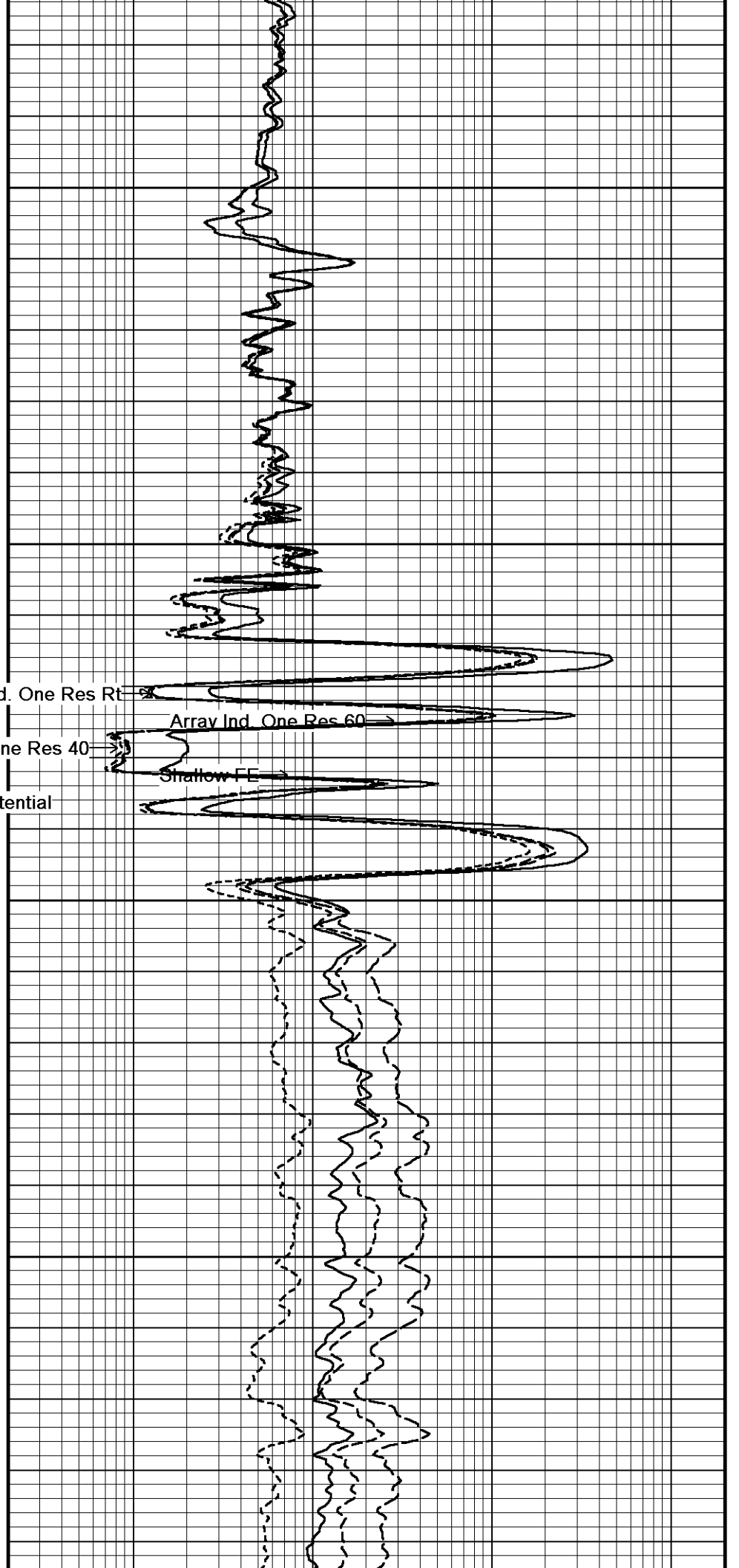
DST Uphole Tension

1750

105°

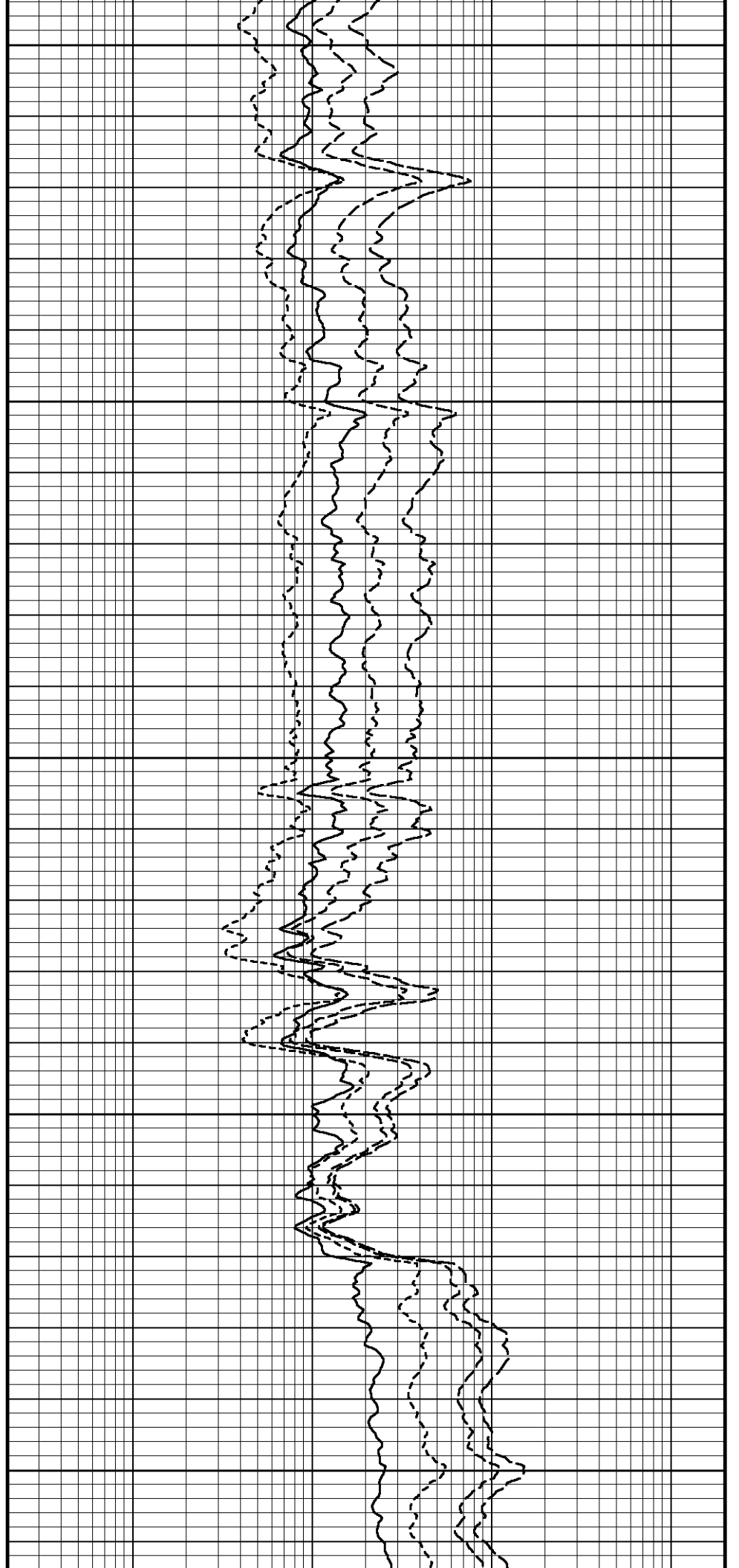
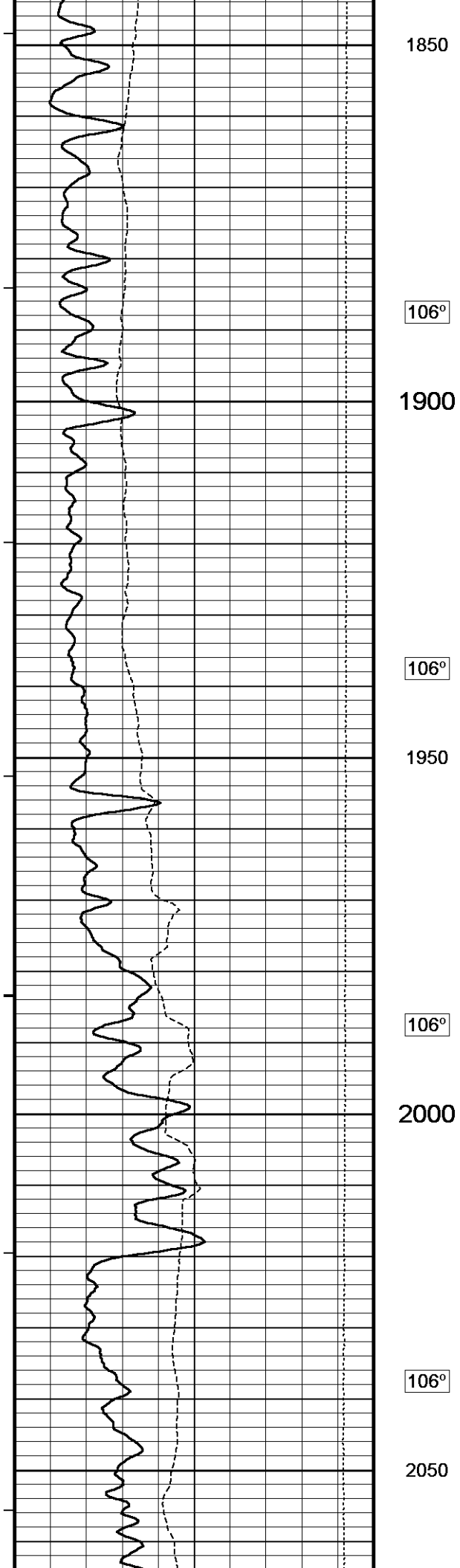
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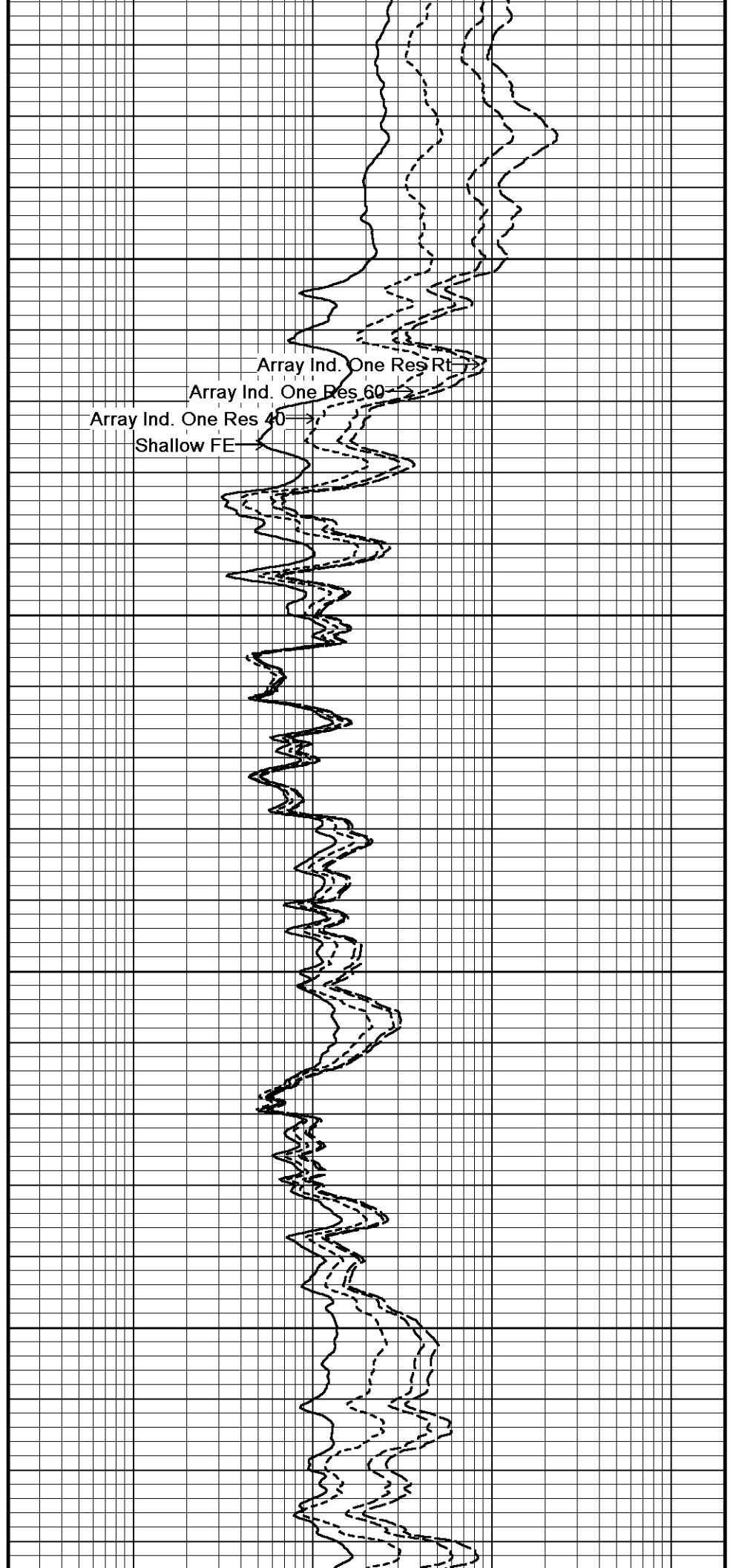
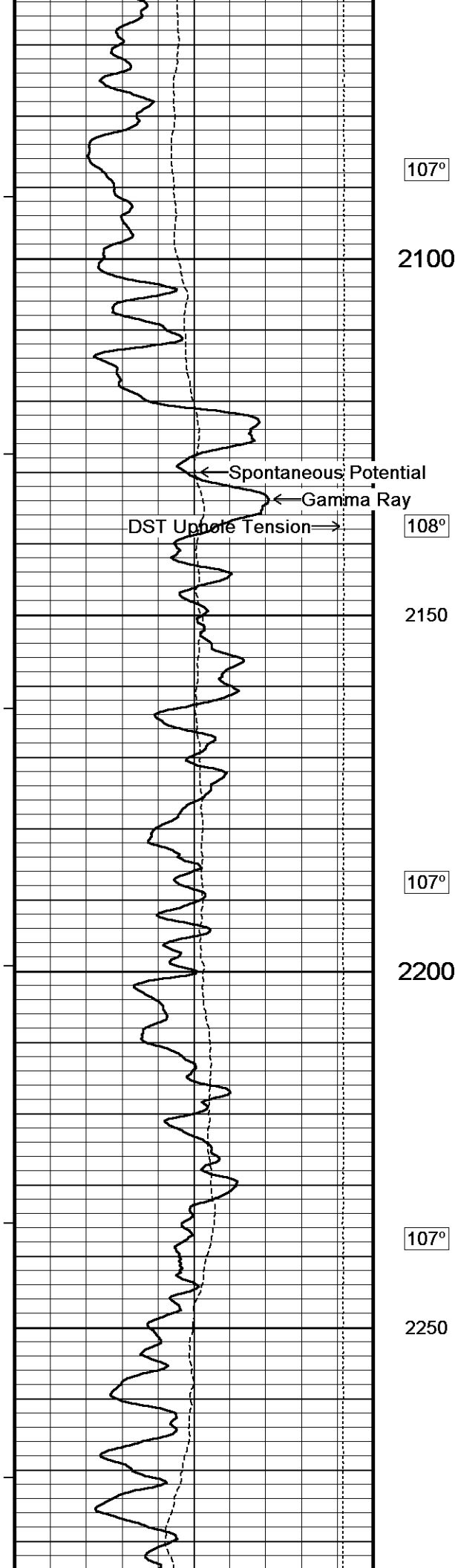
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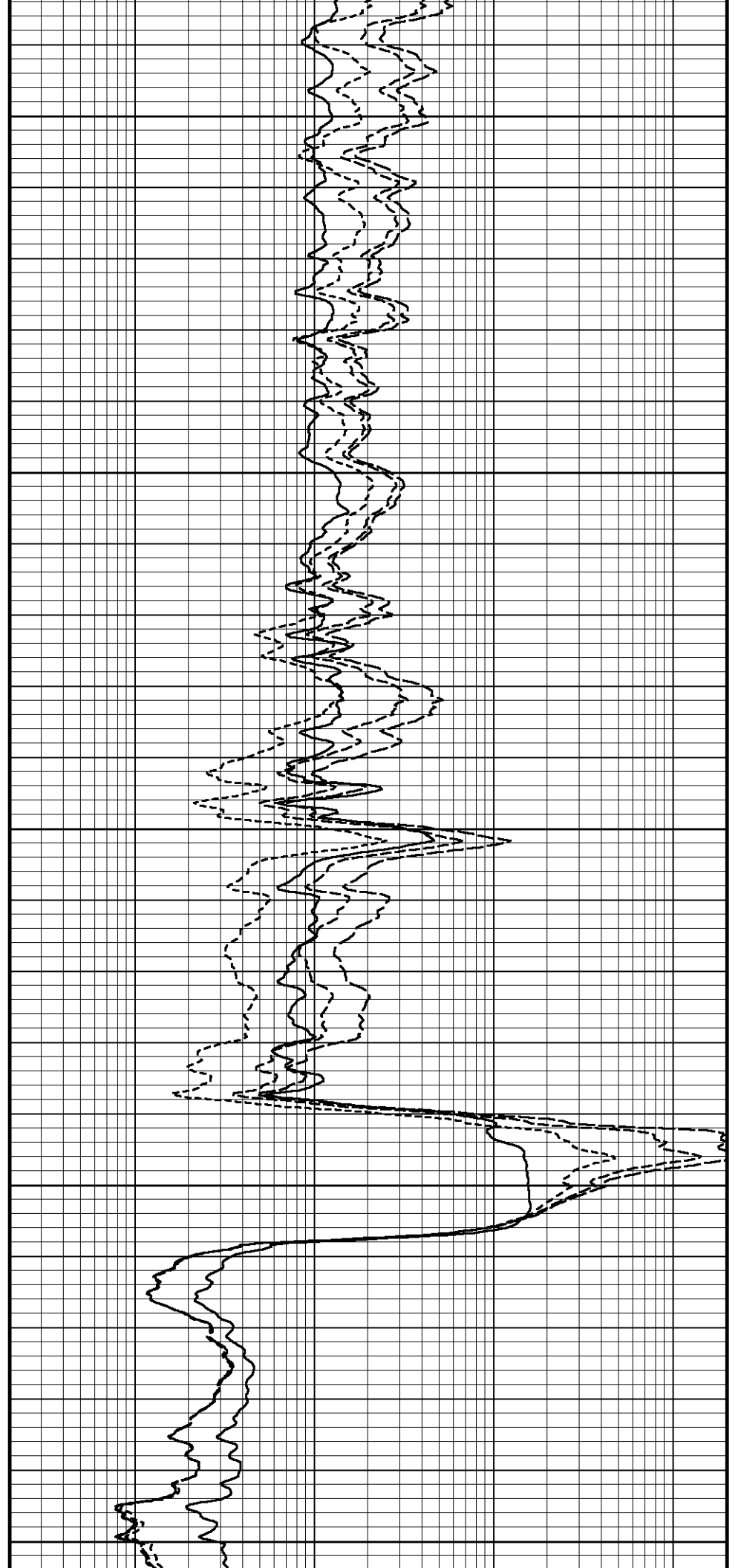
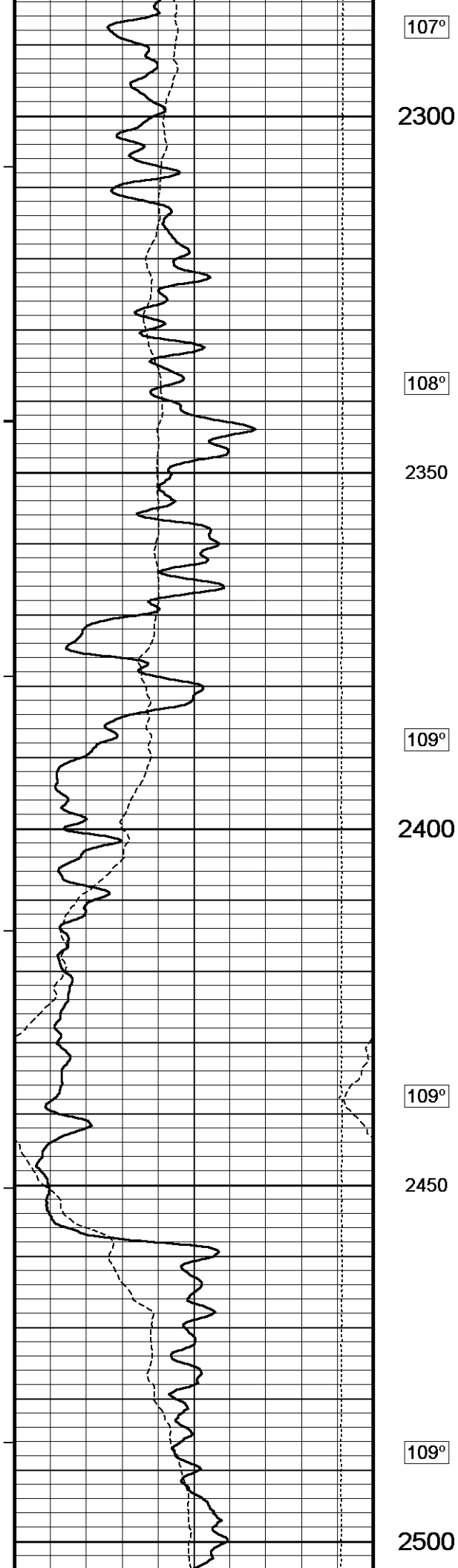


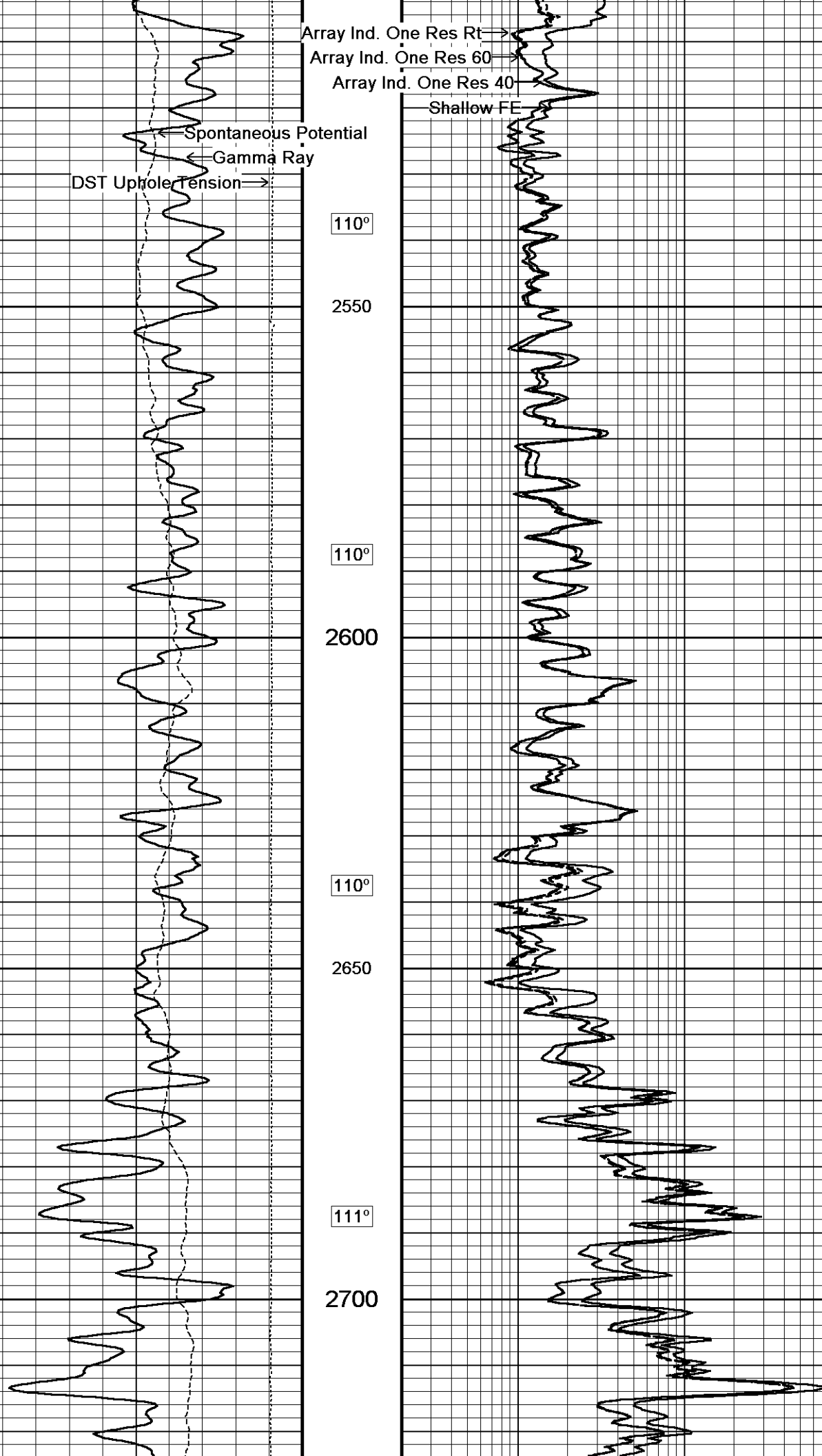
Array Ind. One Res 60

Shallow FE









Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FE

110°

2550

110°

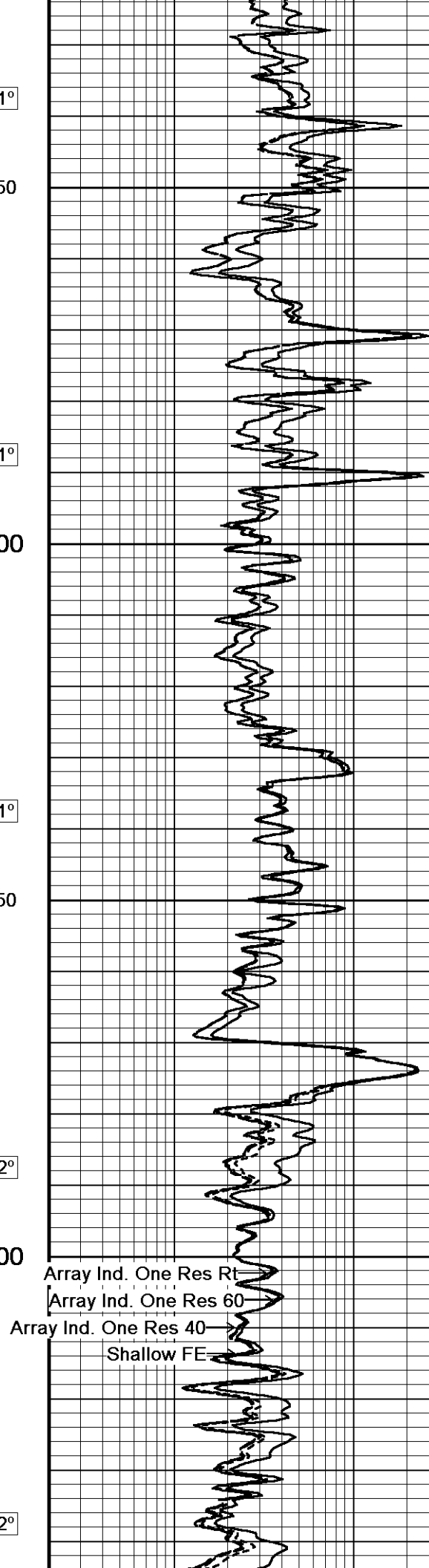
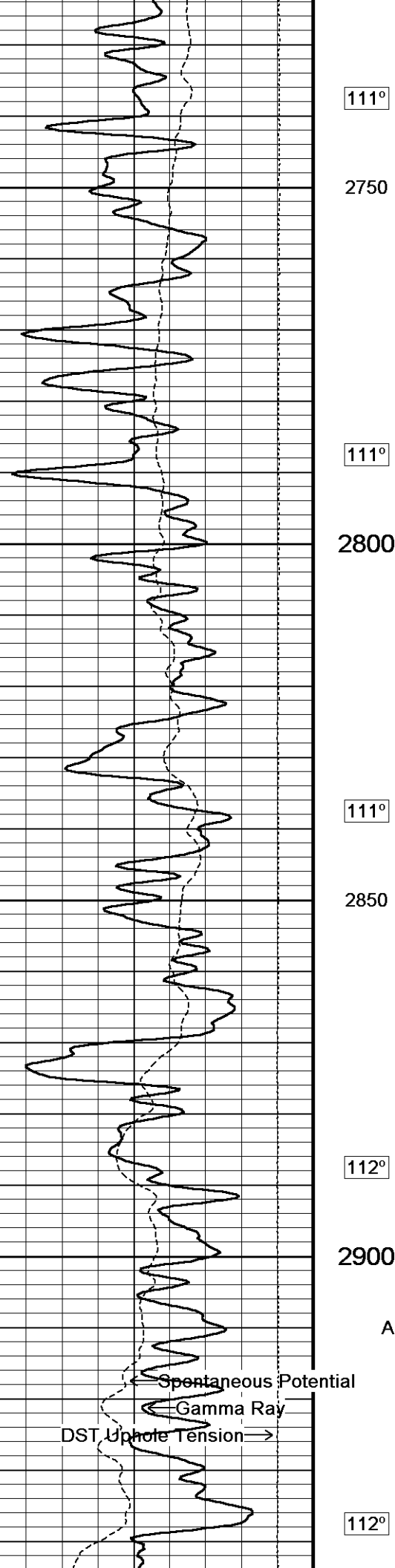
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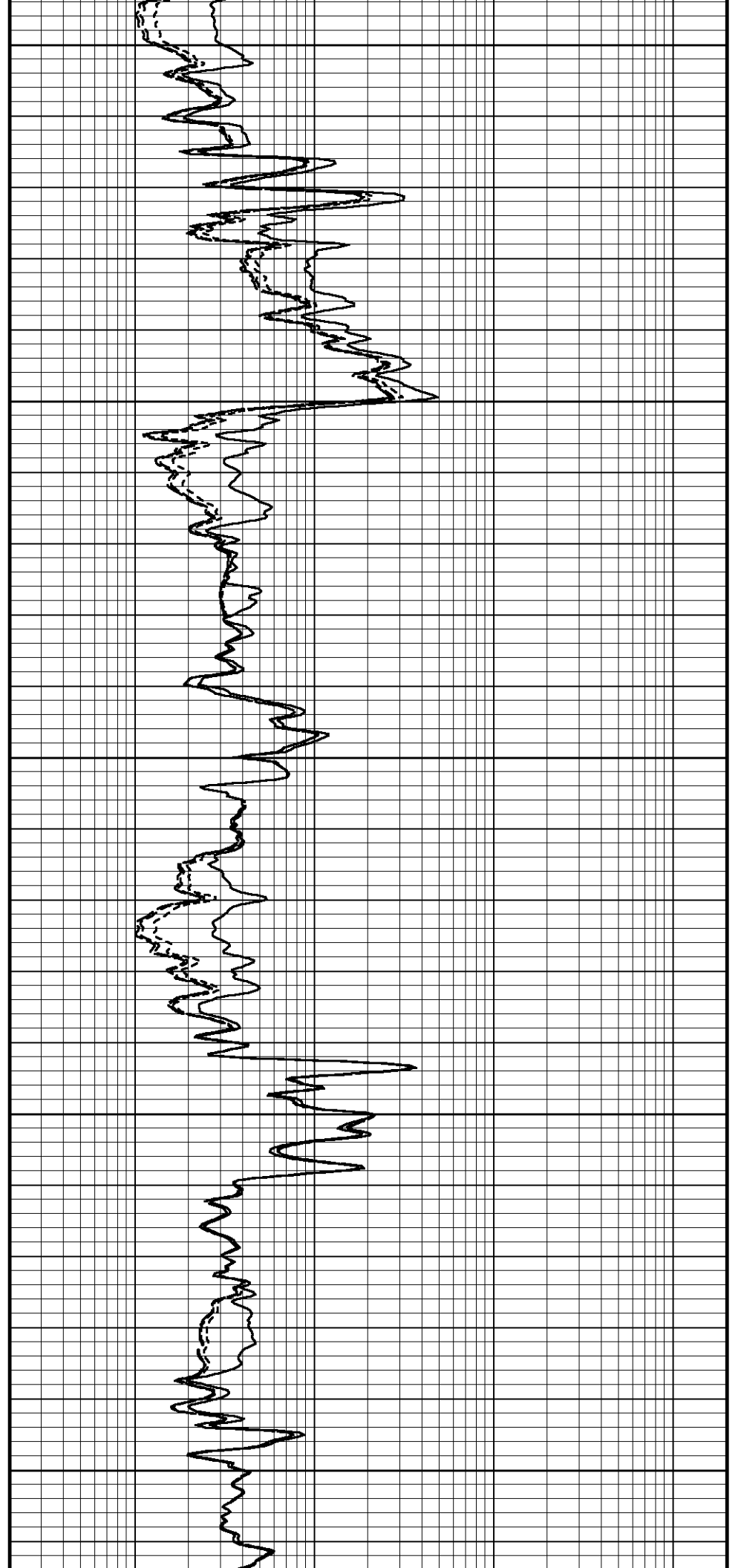
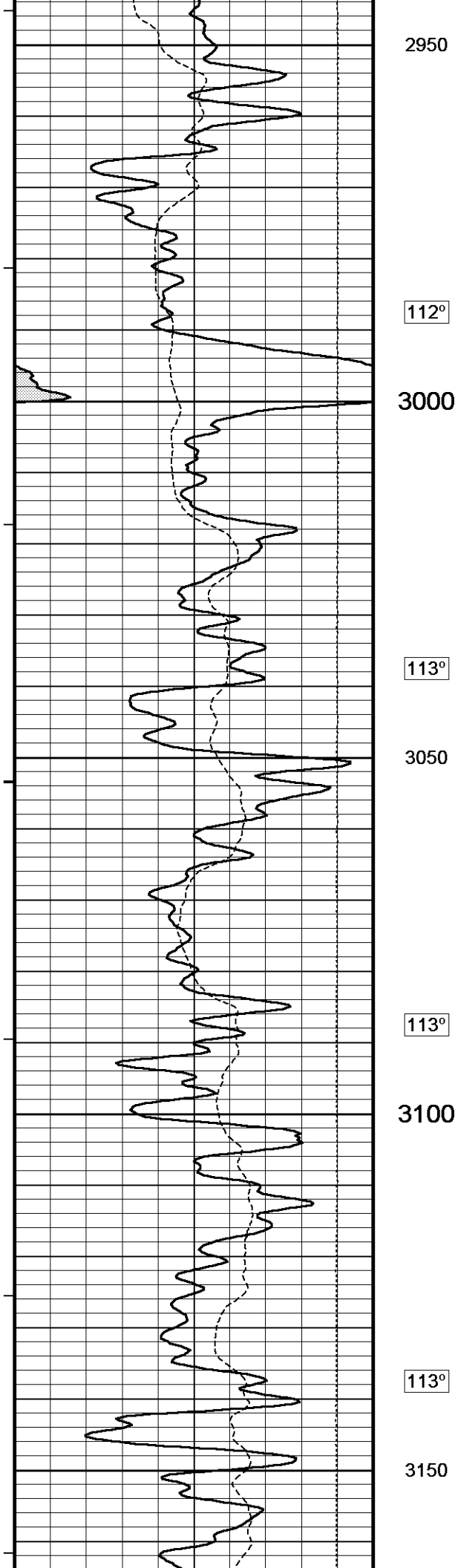
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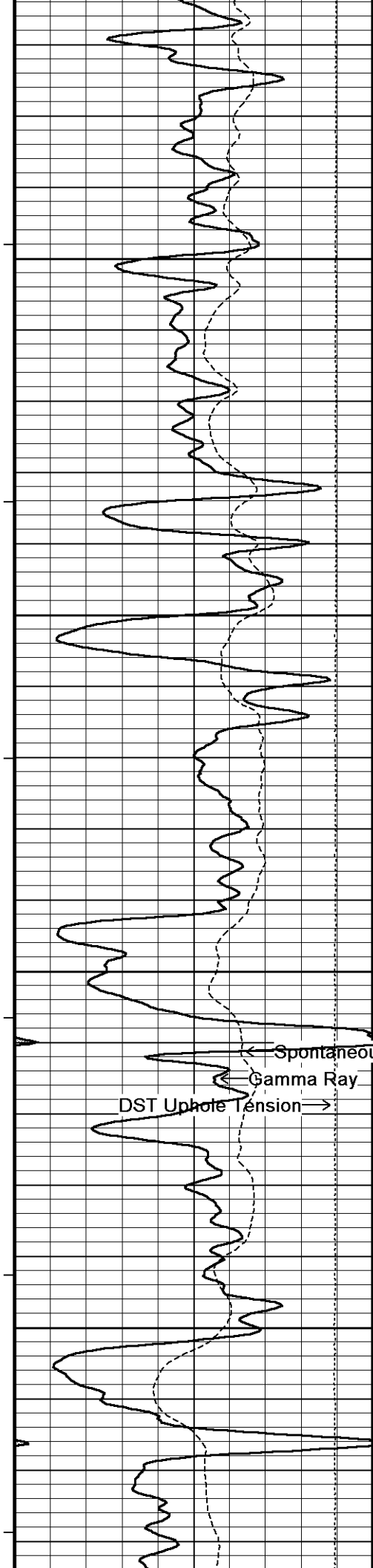
2650

111°

2700







114°

3200

114°

3250

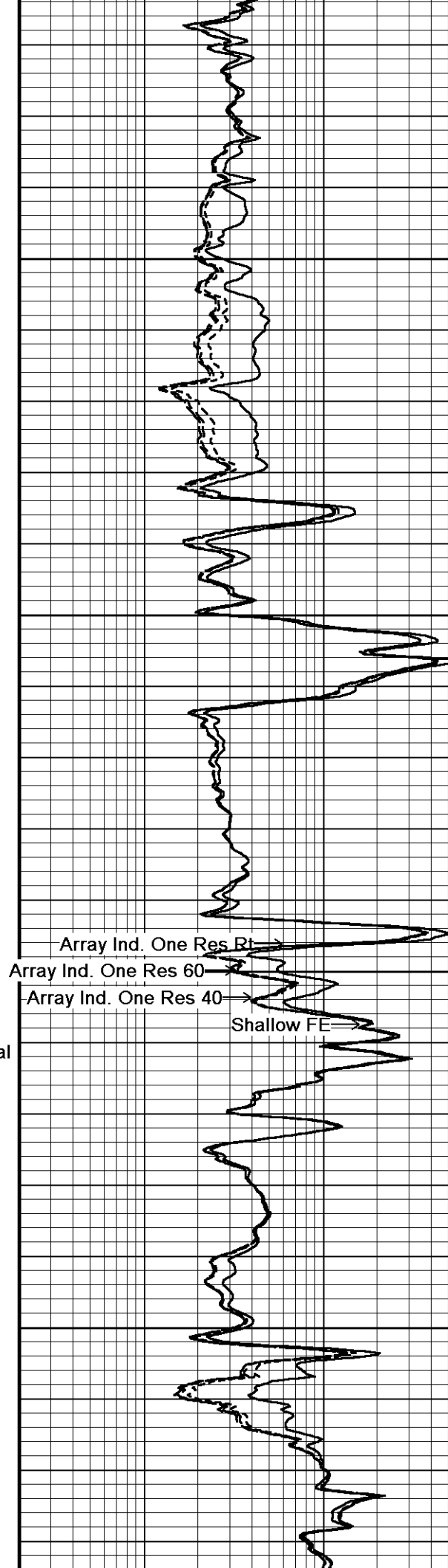
115°

3300

115°

3350

← Spontaneous Potential
← Gamma Ray
DST Up-hole Tension →

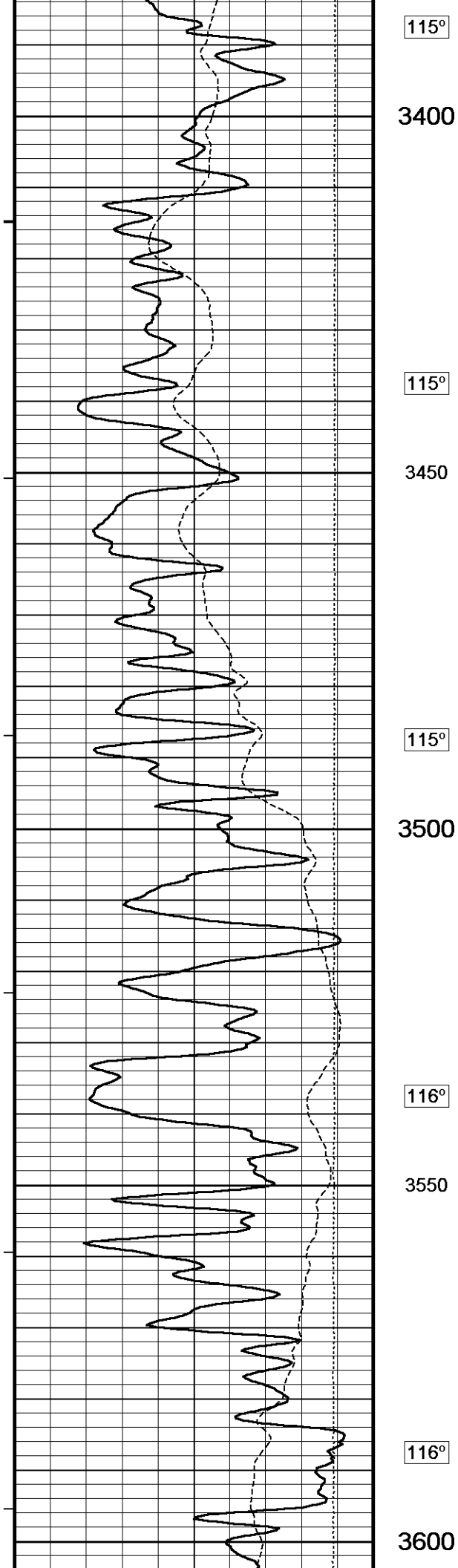


Array Ind. One Res Rt →

Array Ind. One Res 60 →

Array Ind. One Res 40 →

Shallow FE →



115°

3400

115°

3450

115°

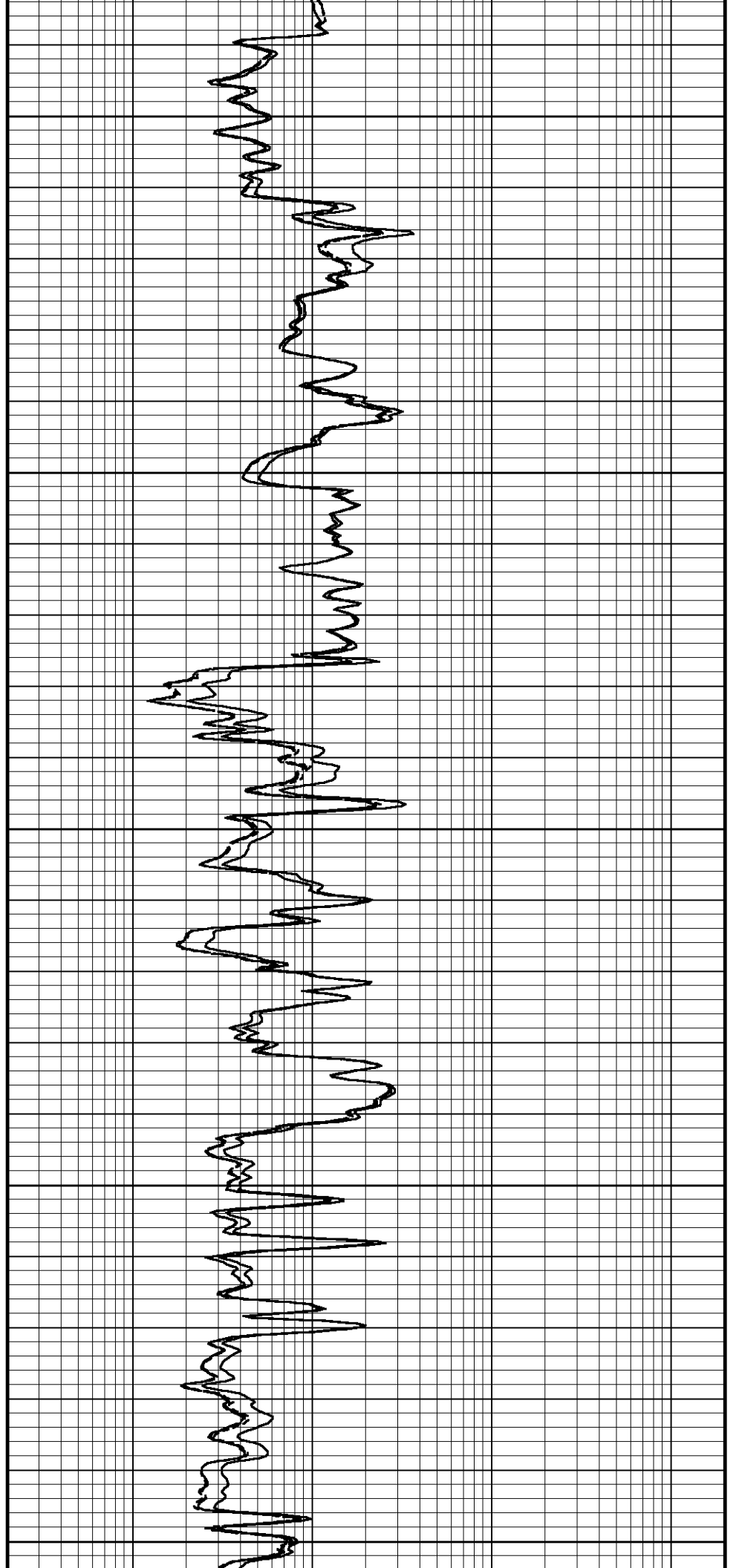
3500

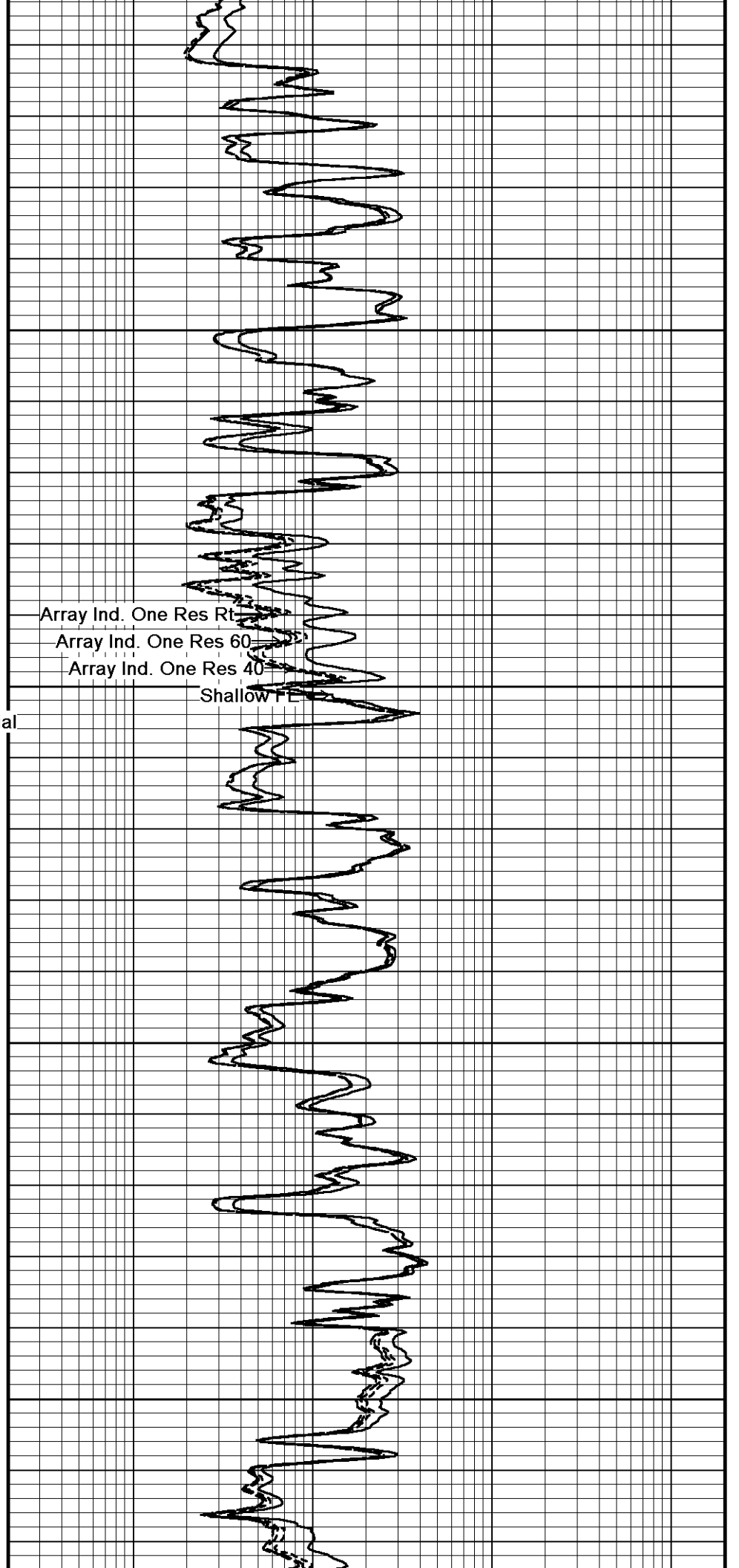
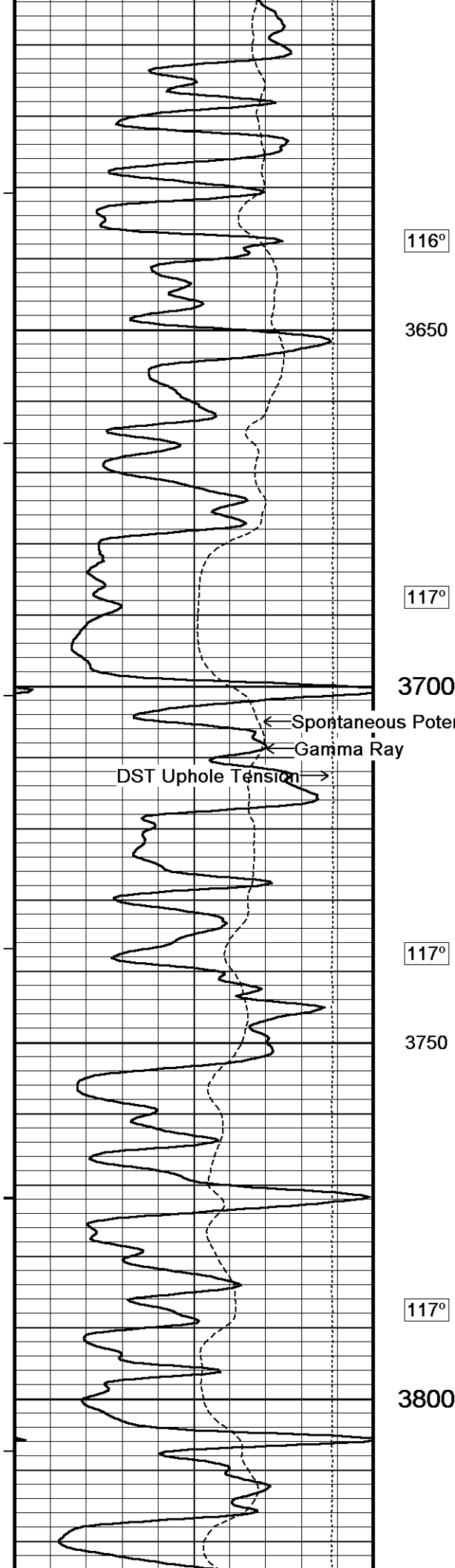
116°

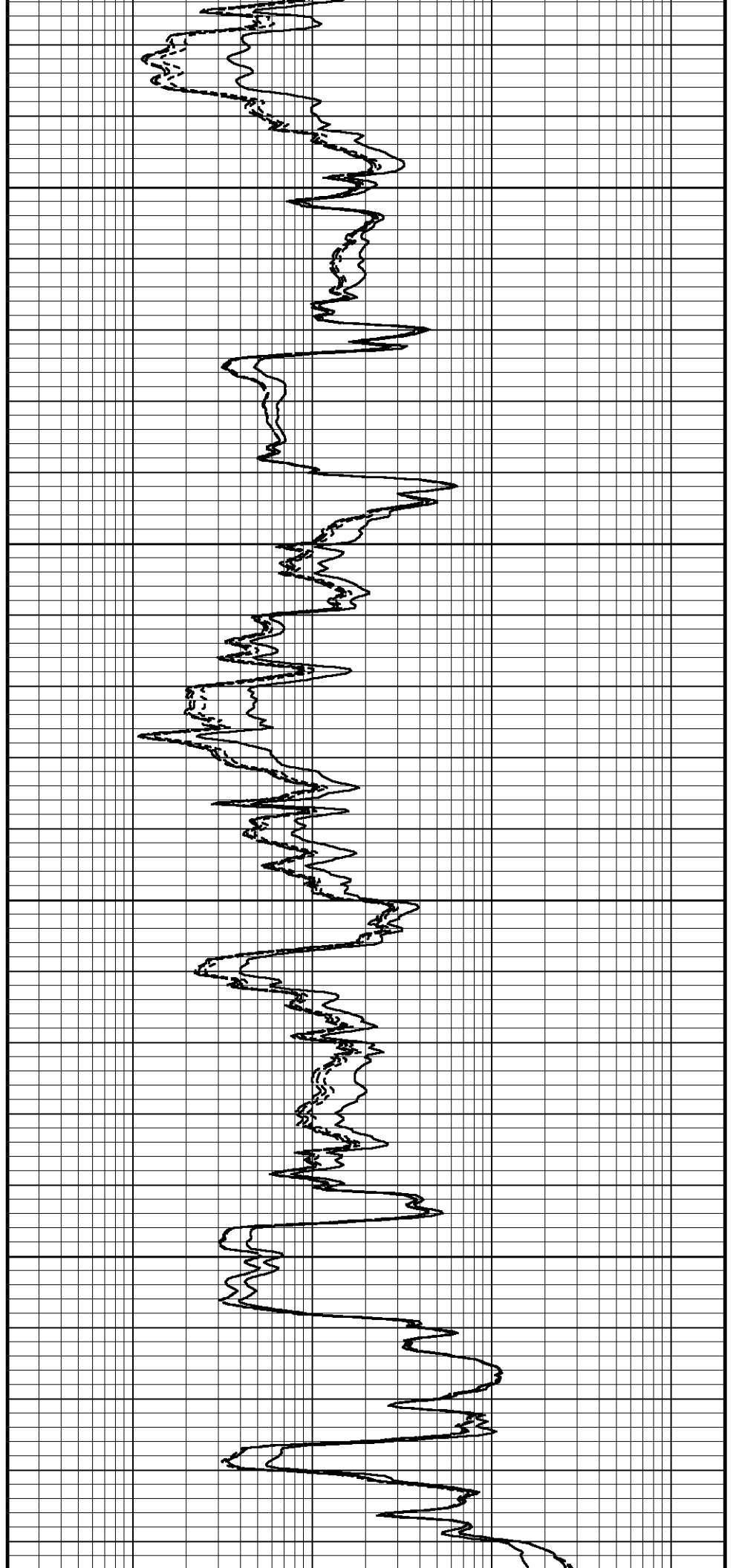
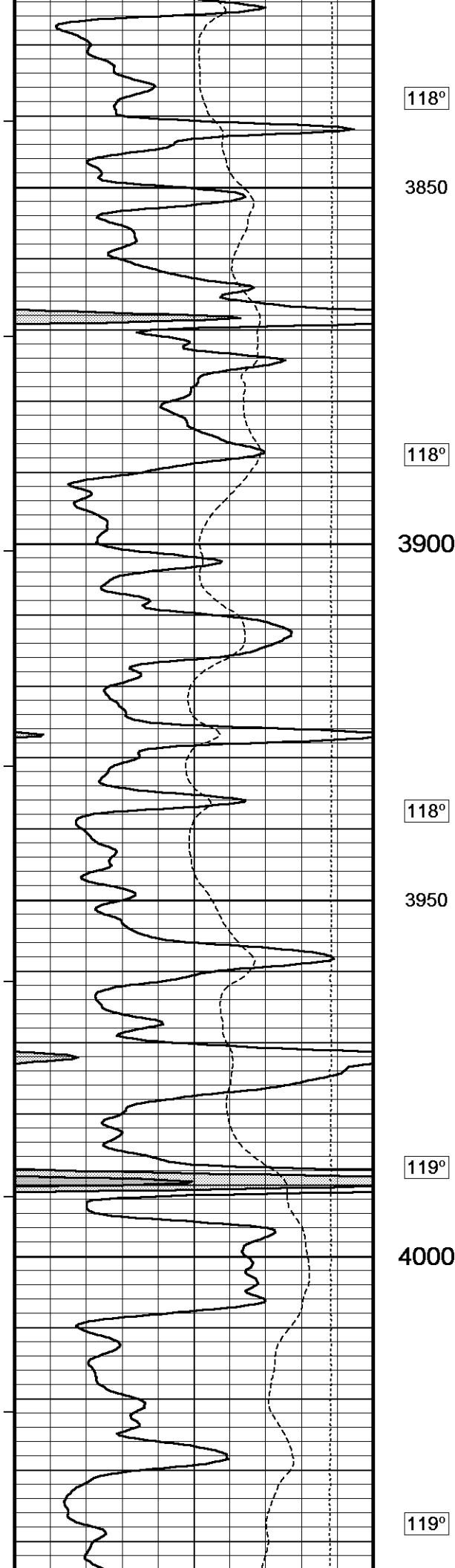
3550

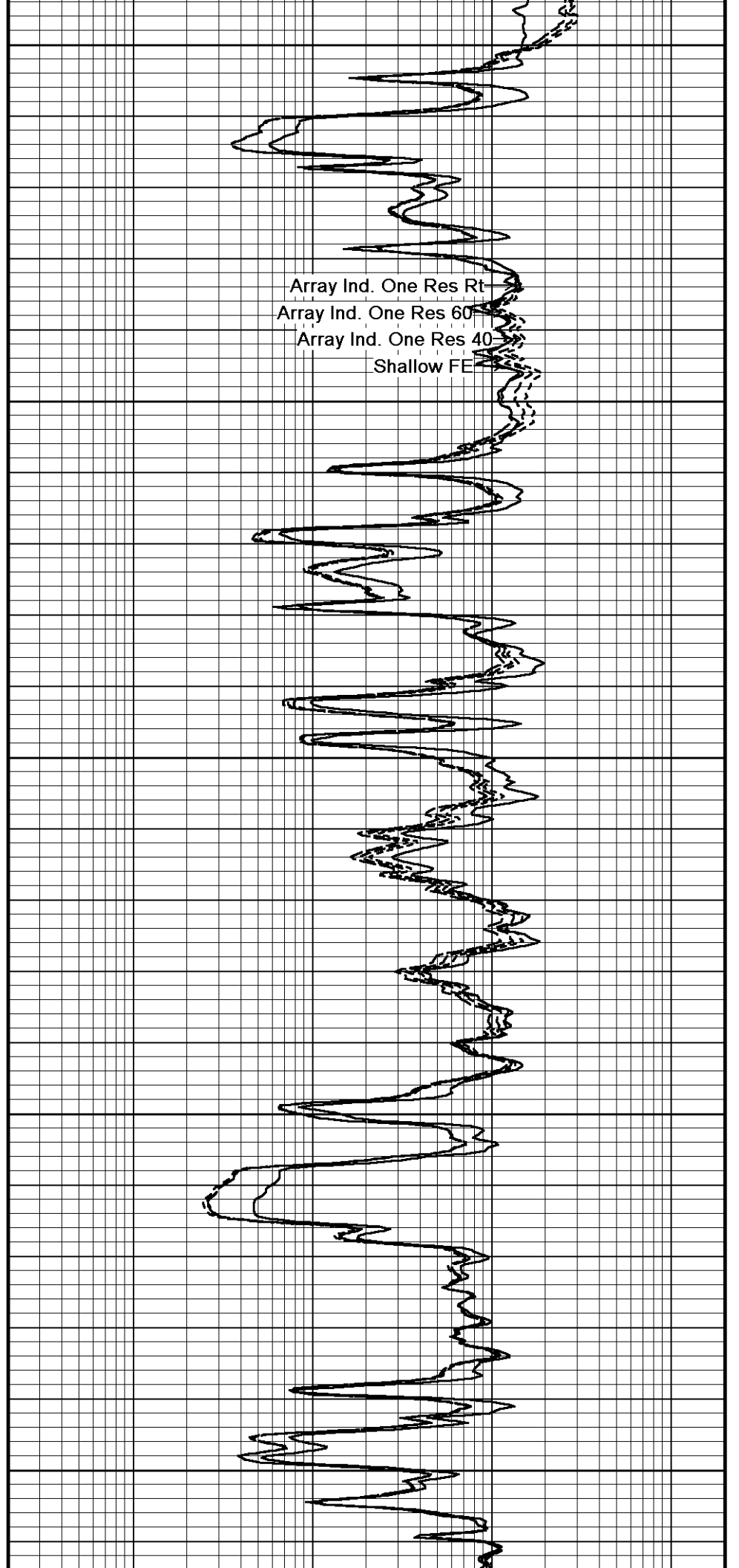
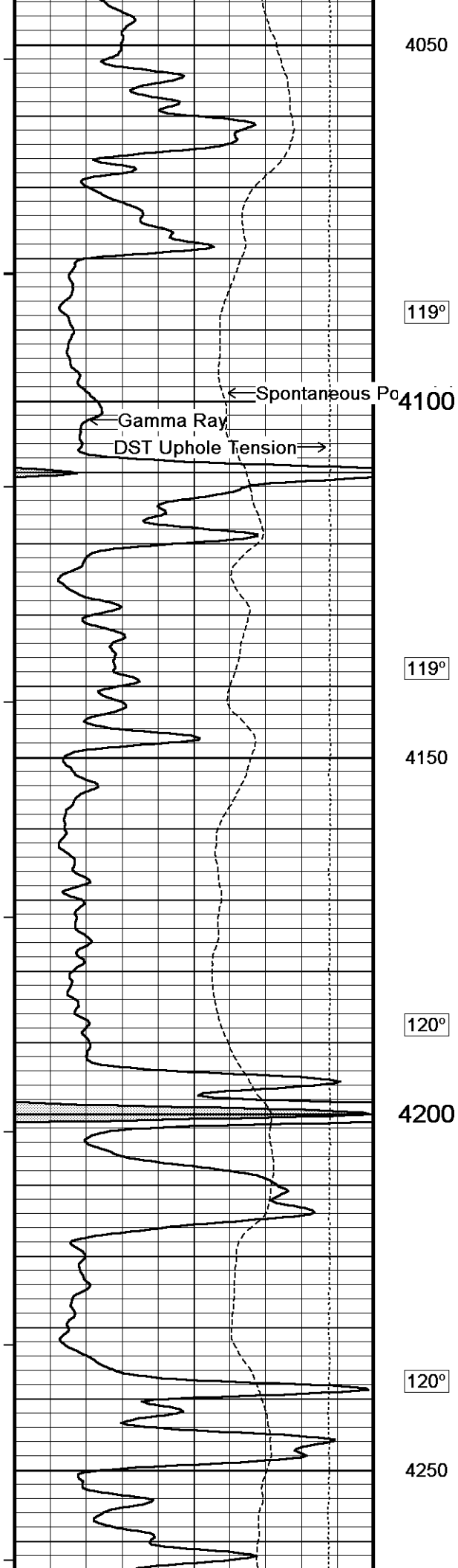
116°

3600











120°

4300

121°

4350

121°

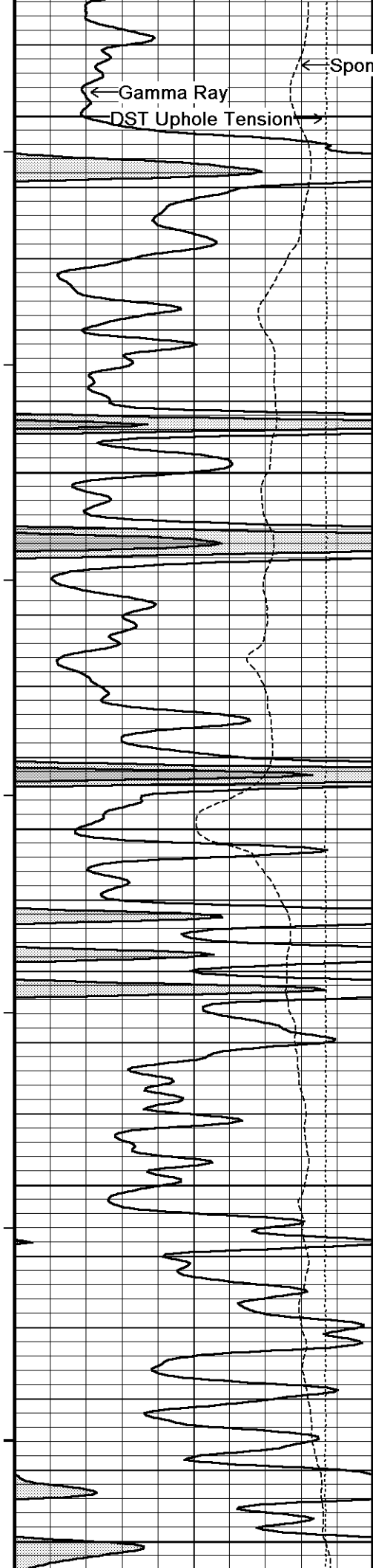
4400

122°

4450

Array Ind. One Res Rt

Array Ind. One Res 60



122°

Spontaneous Potential

Gamma Ray

DST Uphole Tension

4500

122°

4550

123°

4600

124°

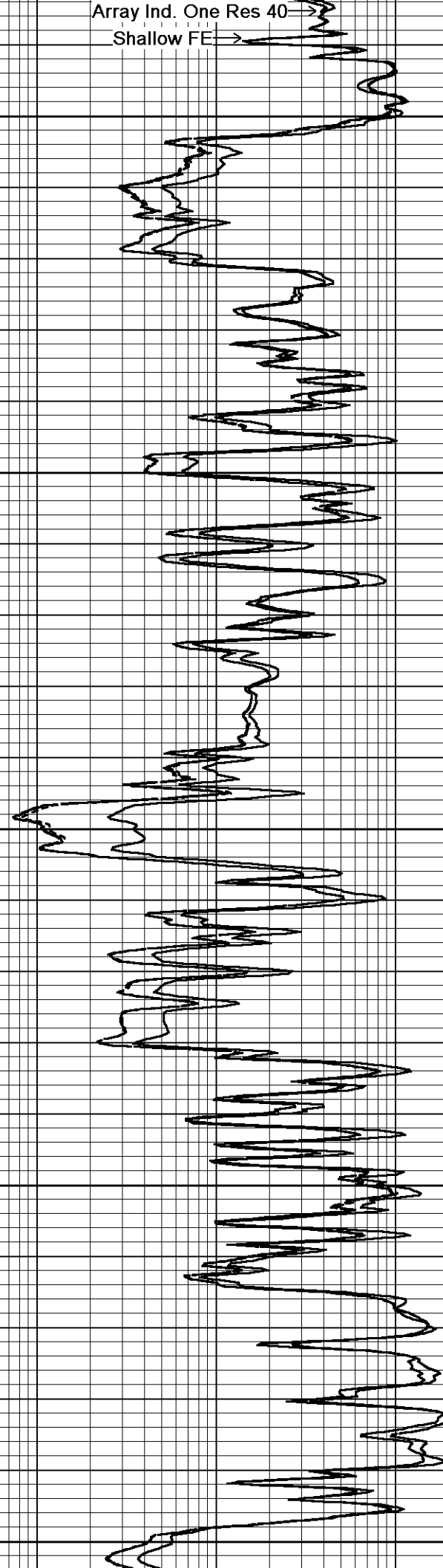
4650

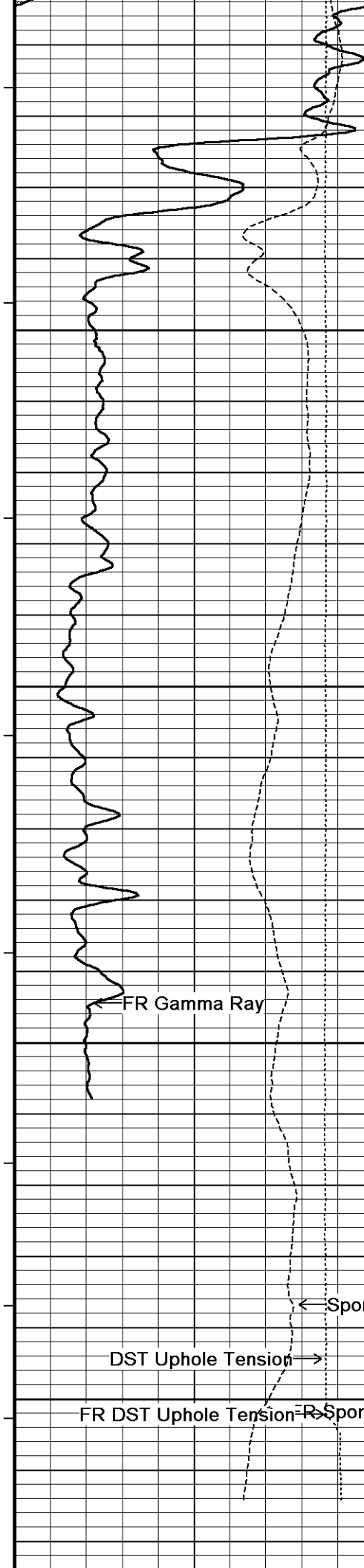
124°

4700

Array Ind. One Res 40

Shallow FE





126°

4750

126°

4800

126°

4850

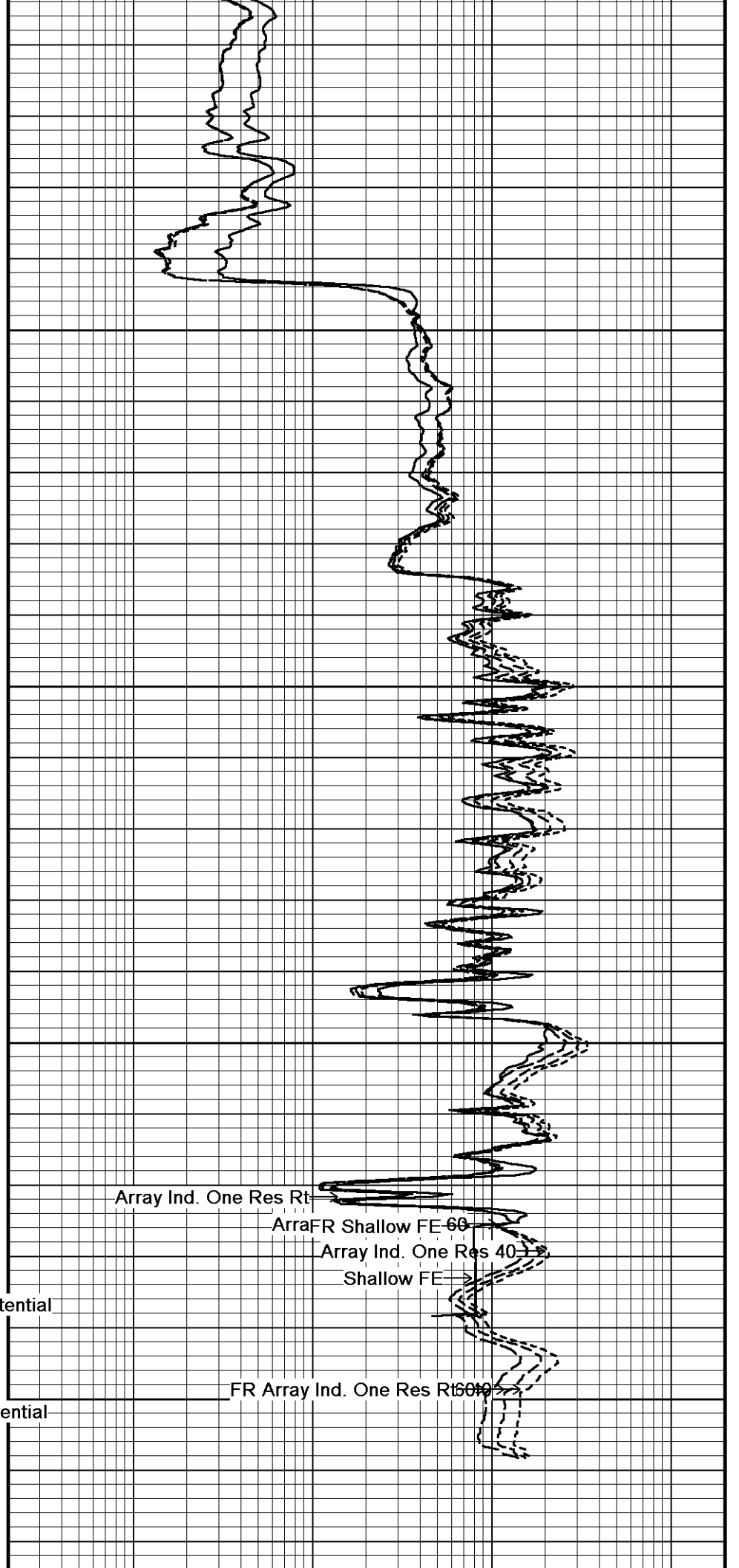
FR Gamma Ray

Spontaneous Potential

DST Uphole Tension

FR DST Uphole Tension

4900



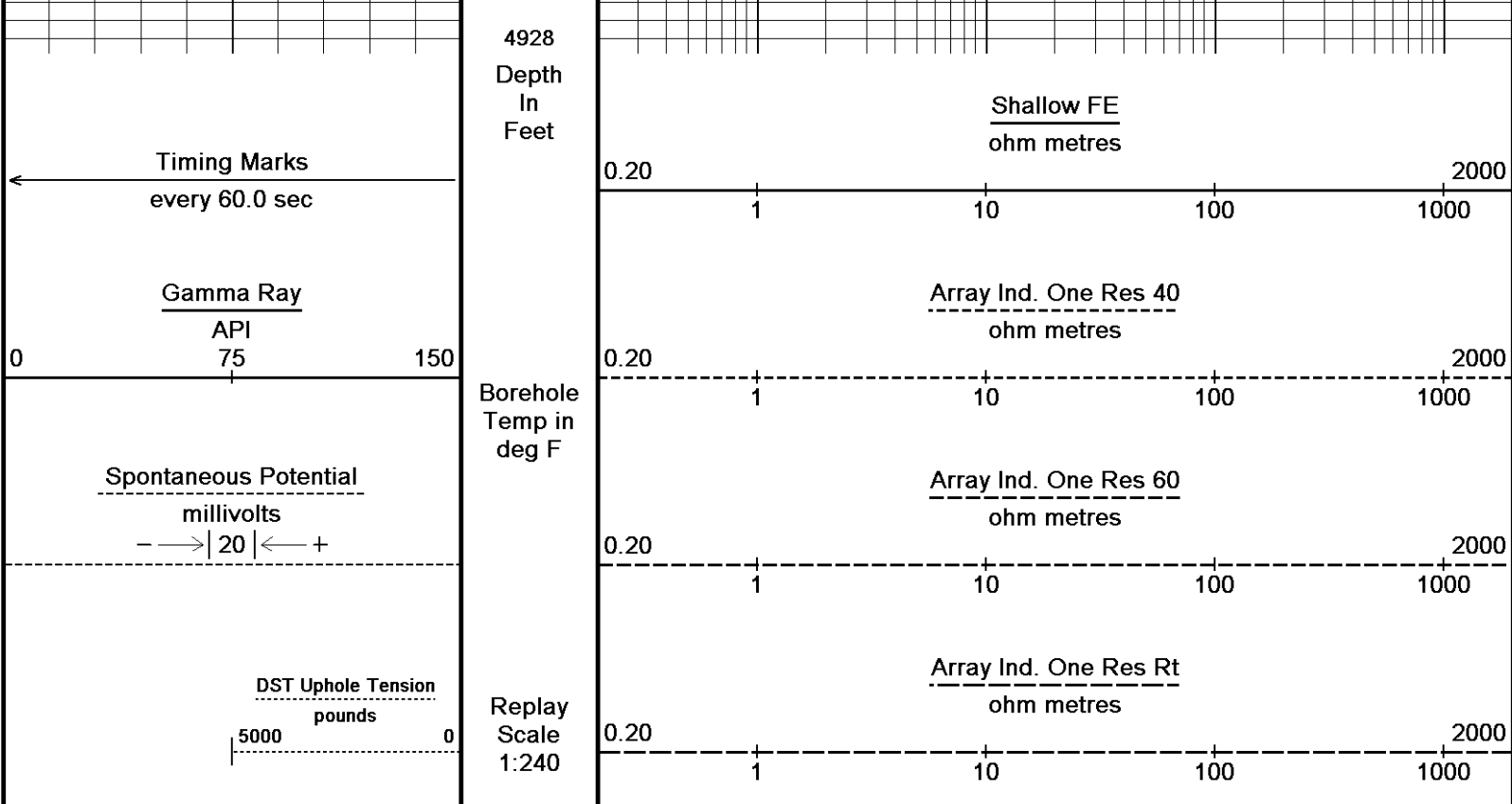
Array Ind. One Res Rt

FR Shallow FE 60

Array Ind. One Res 40

Shallow FE

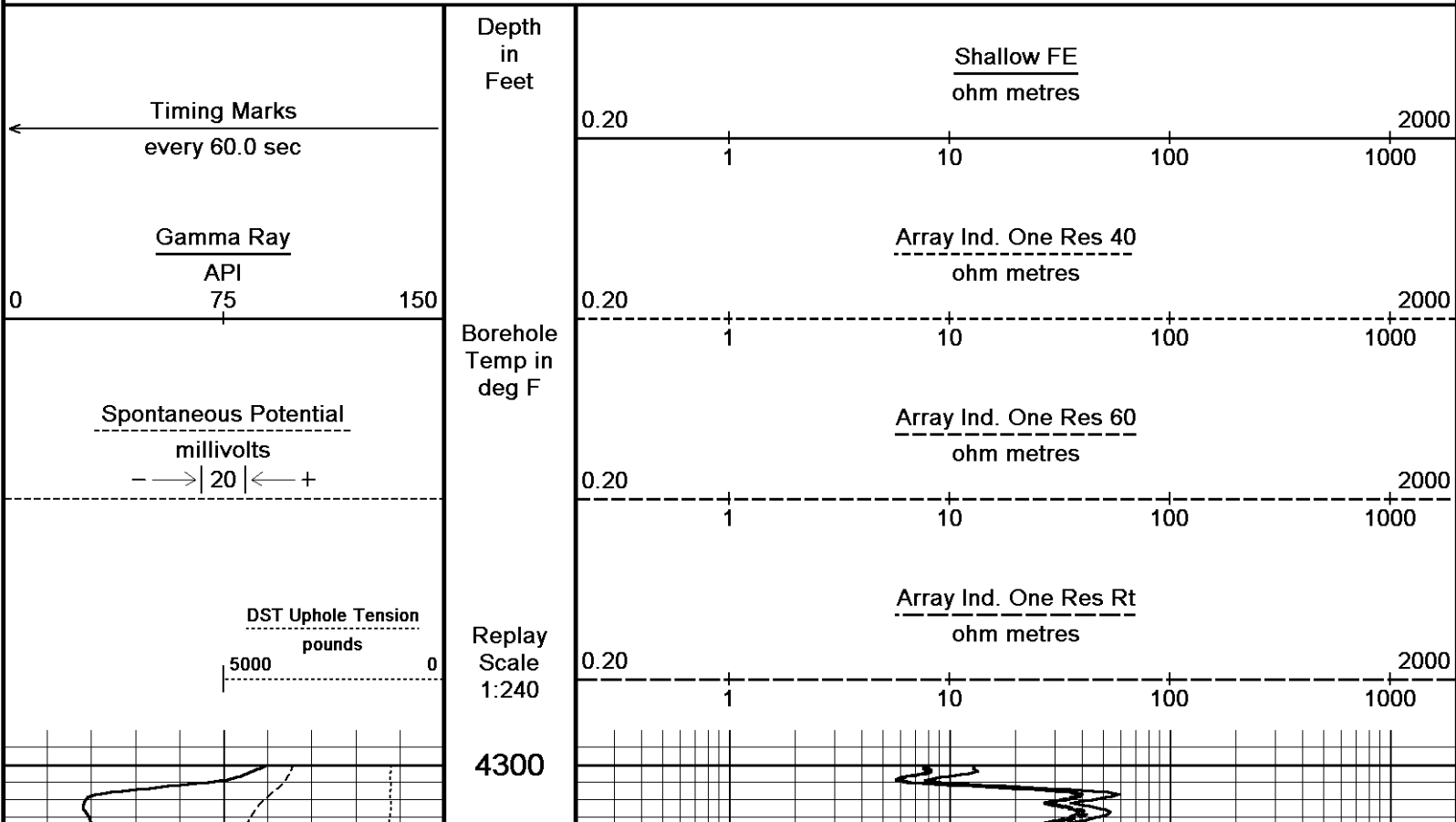
FR Array Ind. One Res Rt

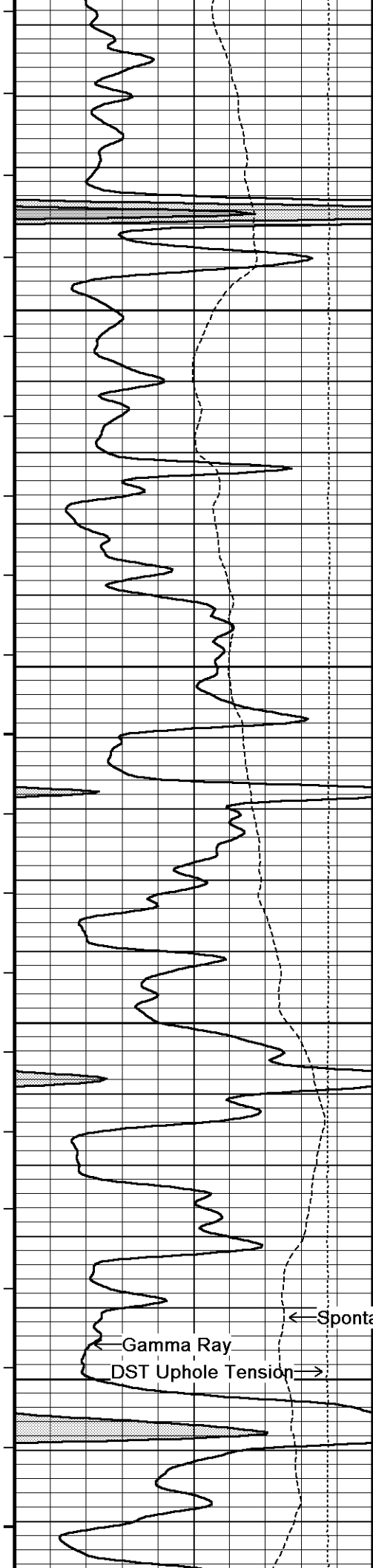


Depth Based Data - Maximum Sampling Increment 10.0cm	Plotted on 31-AUG-2011 09:35
Filename: C:\DOCUME~1\sysadmin\LOCALS~1\Temp\Weatherford...\Grand Mesa DBY # 1-16_003.dta	Recorded on 06-AUG-2011 04:56
System Versions: Logged with 11.03.4044 Processed with 11.03.4044 Plotted with 12.01.3513	

↑	5 INCH MAIN	↑
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↓	REPEAT SECTION	↓
Depth Based Data - Maximum Sampling Increment 10.0cm		Plotted on 31-AUG-2011 09:35
Filename: C:\DOCUME~1\sysadmin\LOCALS~1\Temp\Weatherford...\Grand Mesa DBY # 1-16_002.dta		Recorded on 06-AUG-2011 03:37
System Versions: Logged with 11.03.4044 Processed with 11.03.4044 Plotted with 12.01.3513		





120°

4350

120°

4400

121°

4450

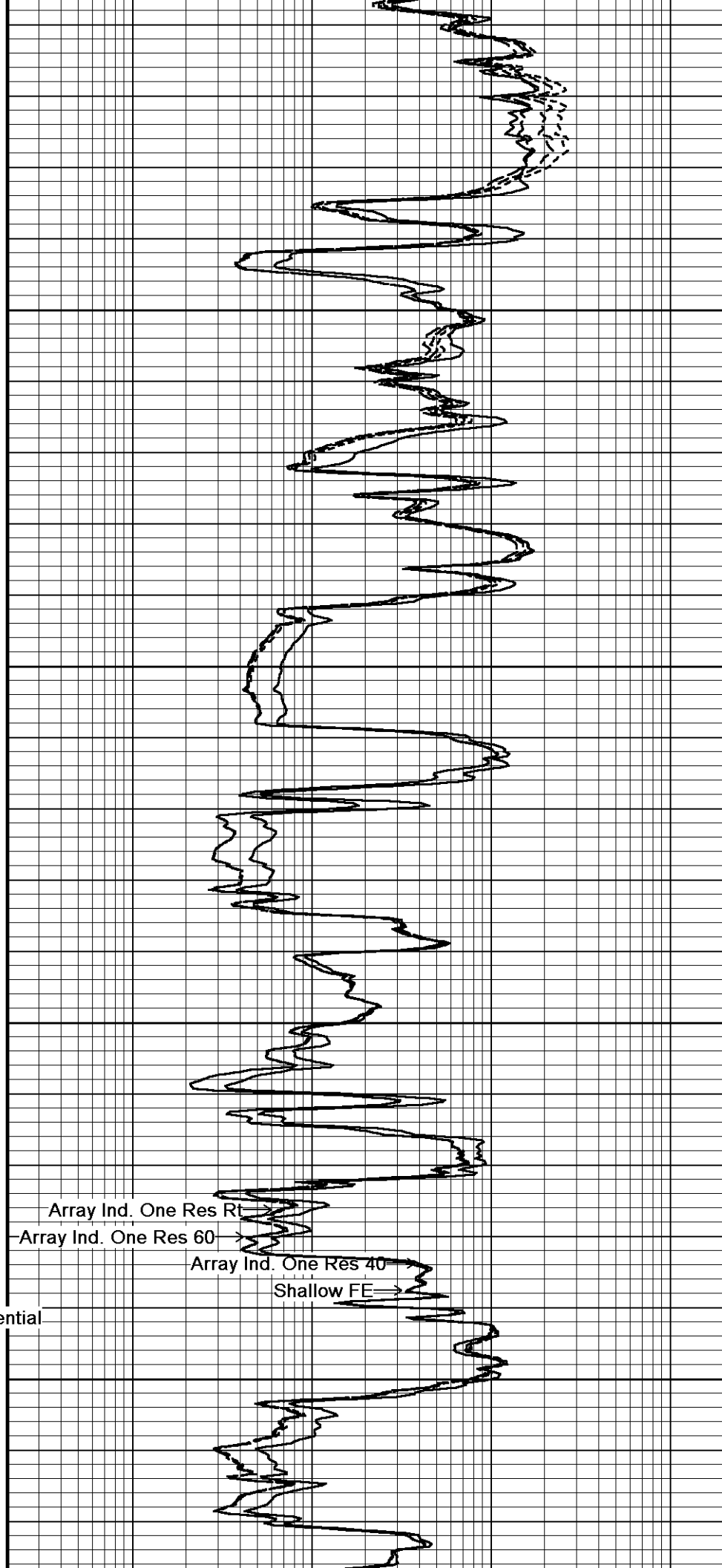
121°

← Spontaneous Potential

Gamma Ray

DST Uphole Tension →

4500

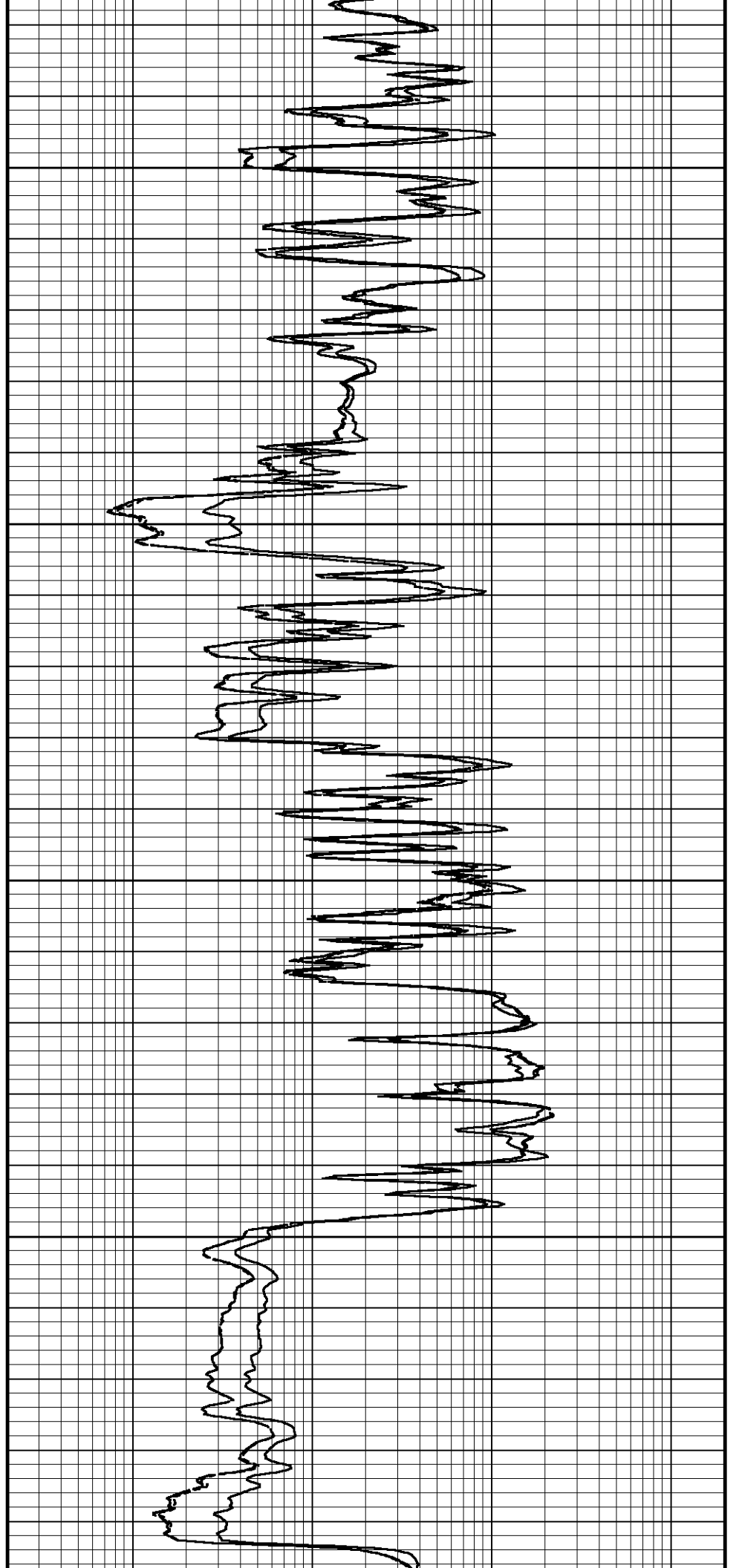
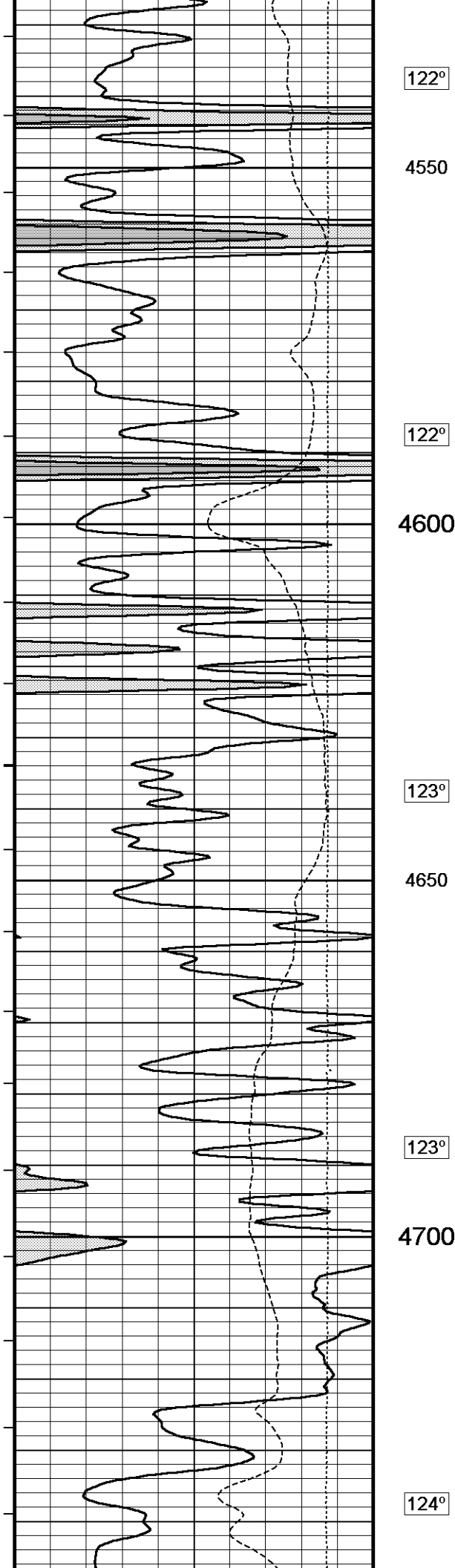


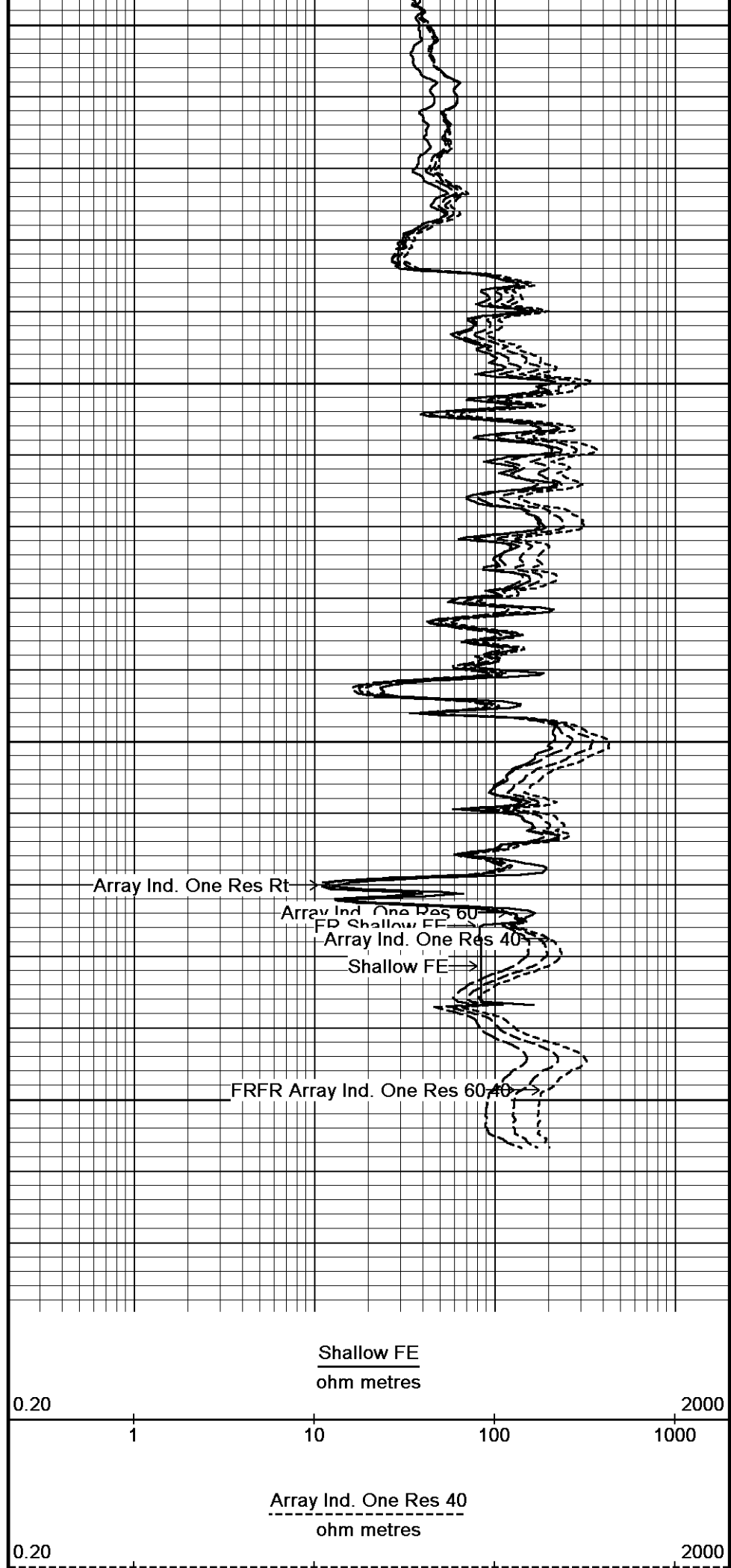
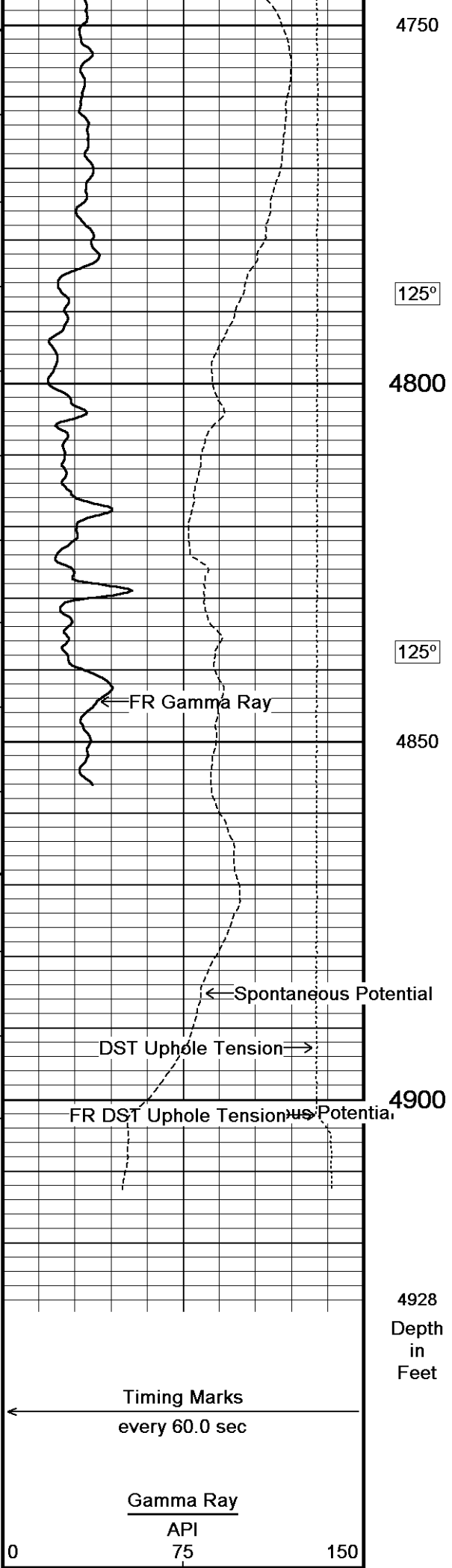
Array Ind. One Res Rt →

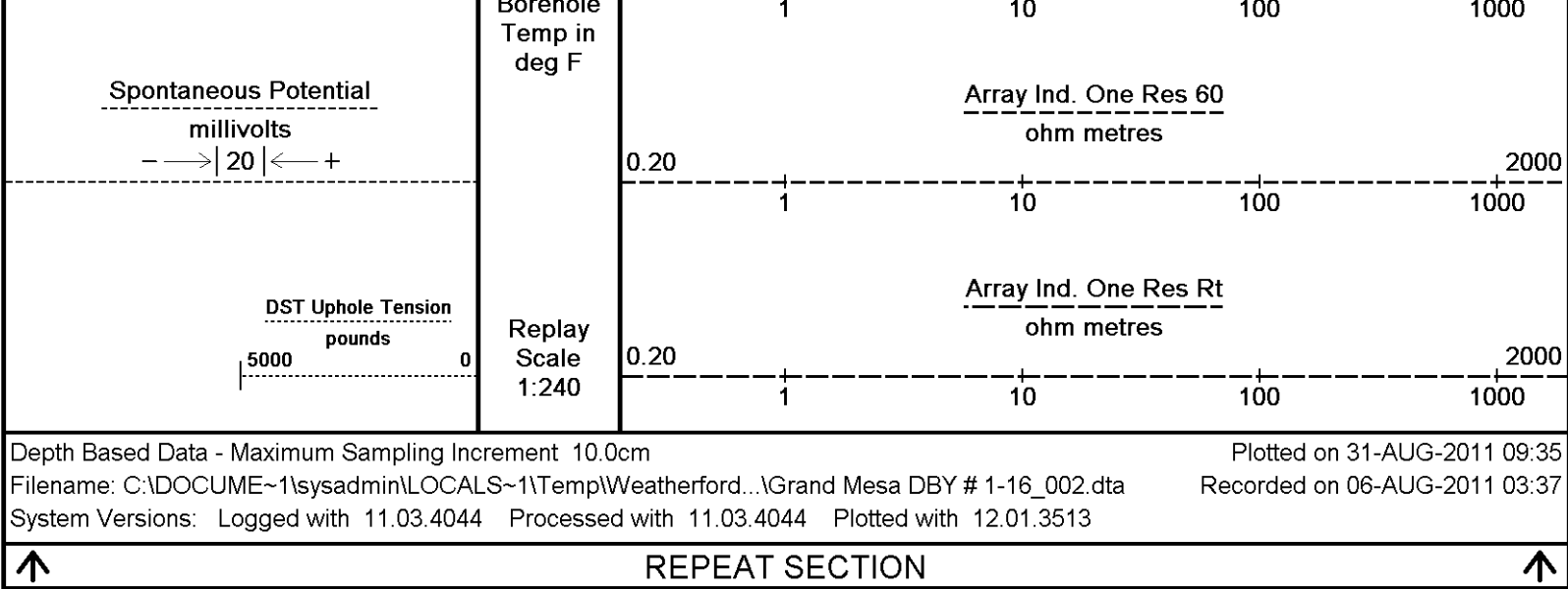
Array Ind. One Res 60 →

Array Ind. One Res 40 →

Shallow FE →







BEFORE SURVEY CALIBRATION			
C:\DOCUME~1\sysadmin\LOCALS~1\Temp\Weatherford PreView\0\Grand Mesa DBY # 1-16_003.dta			
General Constants All 000		Last Edited on 06-AUG-2011 08:50	
General Parameters			
Mud Resistivity	0.470	ohm-metres	
Mud Resistivity Temperature	94.000	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	Deep Induction		
RWA Constant A	0.610		
RWA Constant M	2.150		
Down-hole Tension Calibration All 000		Field Calibration on 30-JUN-2010 01:00	
Reading No	Measured	Calibrated (lbs)	
1	14112.01	10.00	
2	15164.79	427.00	
Down-hole Tension Calibration SMS 0		Field Calibration on 30-JUN-2010 01:00	
Reading No	Measured	Calibrated (lbs)	
1	14112.01	10.00	
2	15164.79	427.00	
High Resolution Temperature Calibration MCG-C 139		Field Calibration on 02-AUG-2011 18:13	
	Measured	Calibrated(Deg F)	
Lower	50.00	50.00	
Upper	75.00	75.00	
High Resolution Temperature Constants MCG-C 139		Last Edited on	
Pre-filter Length	11		
SP Calibration MCG-C 139		Field Calibration on 02-AUG-2011 18:12	
	Measured	Calibrated (mV)	
Reference 1	103.5	100.0	
Reference 2	96.0	100.0	

Reference 2		-96.9	-100.0	
Gamma Calibration MCG-C 139			Field Calibration on 02-AUG-2011 18:12	
	Measured	Calibrated (API)		
Background	78	54		
Calibrator (Gross)	1136	779		
Calibrator (Net)	1058	725		
Gamma Constants MCG-C 139			Last Edited on 06-AUG-2011 02:50	
Gamma Calibrator Number	grc38			
Mud Density	1.09	gm/cc		
Caliper Source for Processing	Density Caliper			
Tool Position	Eccentred			
Concentration of KCl	0.00	kppm		
Micro Normal and Micro Inverse Calibration MML-A 16			Base Calibration on 02-AUG-2011 16:55 Field Check on 02-AUG-2011 16:57	
Base Calibration				
		Measured	Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Micro Normal	12.2	60.2	2.6	12.8
Micro Inverse	15.6	78.4	1.7	8.4
Channel	Base Check (ohm-m)		Field Check (ohm-m)	
Micro Normal	32.1		32.1	
Micro Inverse	16.3		16.3	
Micro Normal and Micro Inverse Constants MML-A 16			Last Edited on 06-AUG-2011 02:28	
Pad Type	8-12 in Soft Rubber Inflatable 006-9011-159			
Micro Normal K Factor	0.5110			
Micro Inverse K Factor	0.3380			
Standoff Offset	N/A inches			
Caliper Calibration MML-A 16			Base Calibration on 02-AUG-2011 17:07 Field Calibration on 02-AUG-2011 17:09	
Base Calibration				
Reading No	Measured		Calibrator Size (in)	
1	14087		5.98	
2	17465		7.97	
3	20778		9.86	
4	24732		11.92	
5	0		0.00	
6	N/A		N/A	
Field Calibration				
	Measured Caliper (in)		Actual Caliper (in)	
	6.04		5.98	
Neutron Calibration MDN-A.B 66			Base Calibration on 02-AUG-2011 19:16 Field Check on 02-AUG-2011 19:29	
Base Calibration				
		Measured	Calibrated (cps)	
	Near	Far	Near	Far
	3250	102	3714	110
Ratio	31.962		33.764	
Field Calibrator at Base			Calibrated (cps)	
			1591	2269
Ratio	0.701			
Field Check			Calibrated (cps)	
			1573	2249
Ratio	0.699			
Neutron Constants MDN-A.B 66			Last Edited on 06-AUG-2011 02:50	
Neutron Source Id	P58125B			
Neutron Jig Number	5824NE			
Epithermal Neutron	No			
Caliper Source for Processing	Density Caliper			
Stand-off	0.00 inches			

Stand-off	0.00	inches
Mud Density	1.00	gm/cc
Limestone Sigma	7.10	cu
Sandstone Sigma	4.26	cu
Dolomite Sigma	4.70	cu
Formation Pressure Source	None	
Formation Pressure	N/A	kpsi
Temperature Source	Constant Value	
Temperature	68.00	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 52		Base Calibration on 02-AUG-2011 16:38 Field Check on 02-AUG-2011 16:48	
Base Calibration			
	Measured	Calibrated (ohm-m)	
Reference 1	0.0	0.0	
Reference 2	964.4	126.8	
Base Check		280.0	
Field Check		280.1	

FE Constants MFE-A.A 52		Last Edited on 06-AUG-2011 02:27	
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	

Sonic Constants MSS-C.K 330			Last Edited on 30-JUN-2011 19:01		
Maximum Boundary Contrast	100.00	micro-sec/ft			
Fluid Transit Time	189.00	micro-sec/ft			
Limestone Transit Time	47.50	micro-sec/ft			
Sandstone Transit Time	55.50	micro-sec/ft			
Dolomite Transit Time	43.50	micro-sec/ft			
Sonic used for Porosities	3-5' Compensated				
Correction for Sonde Skew	Applied				
Cycle Stretch Algorithm	Applied				
MN3FT	0.00	micro-sec			
MX3FT	1500.00	micro-sec			
Hunt-Raymer Constant	83.13	micro-sec/ft			
Sonde Mode	Compensated				
Hole Type	Open Hole				
Sonde Parameters					
	Measured	Calibrated			
Offset	0.0000	0.0000			
Free Pipe	0.0000	0.0000			
Peak Amplitude Source	0				
Waveform	Start Time (micro-sec)	Width (micro-sec)	Pre Gain	Start Gain	Discriminator (mV)
3'	N/A	N/A	N/A	N/A	N/A
4'	N/A	N/A	N/A	N/A	N/A
5'	N/A	N/A	N/A	N/A	N/A
6'	N/A	N/A	N/A	N/A	N/A

Processed Fixed Gate Parameters

Waveform Used For Processing	N/A			
Start Time (micro-sec)	End Time (micro-sec)	Discriminator (mV)	Depth (ft)	
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

0.00

0.00

Full Waveform Parameters

Use 3' Waveform to derive TR	No	
Use 4' Waveform to derive TR	No	
Use 5' Waveform to derive TR	No	
Use 6' Waveform to derive TR	No	
3' Waveform Discriminator Level	0.30	mV
4' Waveform Discriminator Level	0.30	mV
5' Waveform Discriminator Level	0.15	mV
6' Waveform Discriminator Level	0.15	mV
3' Waveform Filter	0	
4' Waveform Filter	0	
5' Waveform Filter	0	
6' Waveform Filter	0	
Semblance Level	0.50	
Semblance Window Width	120.00	micro-sec
Sonic 1 Despiker	100.00	micro-sec/ft
Sonic 2 Despiker	100.00	micro-sec/ft

High Resolution Temperature Calibration MAI-A.A 167

Field Calibration on 02-AUG-2011 18:25

	Measured	Calibrated(Deg F)
Lower	1.00	33.80
Upper	11.00	51.80

High Resolution Temperature Constants MAI-A.A 167

Last Edited on

Pre-filter Length	11
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Induction Calibration MAI-A.A 167

Base Calibration on 11-MAR-2011 09:58

Field Check on 02-AUG-2011 18:28

Base Calibration

Test Loop Calibration

Channel	Measured		Calibrated (mmho/m)	
	Low	High	Low	High
1	17.3	474.2	9.3	966.2
2	6.3	388.4	7.6	821.4
3	3.3	259.4	5.2	566.0
4	1.9	133.0	2.6	279.2

Array Temperature	76.8	Deg F
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Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1	0.0	0.0	14.6	3835.9
2	0.0	0.0	30.0	3472.7
3	0.0	0.0	29.3	3049.0
4	0.0	0.0	19.8	2078.8
Deep	0.0	0.0	18.6	2046.2
Medium	0.0	0.0	42.3	3985.8
Shallow	0.0	0.0	43.7	5048.2

Array Temperature	0.0	98.0	Deg F
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Induction Constants MAI-A.A 167

Last Edited on 06-AUG-2011 02:27

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	8.0000	
Stand-off Fin Angle	45.00	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	

Caliper Calibration MPD-B 35

Base Calibration on 02-AUG-2011 17:17
Field Calibration on 02-AUG-2011 17:18

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	19303	3.99
2	29535	5.98
3	39888	7.97
4	49472	9.86
5	60384	11.92
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
5.97	5.98

Photo Density Calibration MPD-B 35

Base Calibration on 02-AUG-2011 18:00
Field Check on 02-AUG-2011 18:07

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	56174	27139	59556	30836
Reference 2	22984	2574	24941	2541

Field Check at Base

1165.2	1387.5
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Field Check

1166.3	1381.9
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PE Calibration

Base Calibration		Measured		Calibrated
	WS	WH	Ratio	Ratio
Background	207	1028		
Reference 1	20811	55977	0.375	0.371
Reference 2	6055	22836	0.268	0.272

Field Check at Base

207.3	1028.3
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Field Check

208.8	1027.5
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Density Constants MPD-B 35

Last Edited on 06-AUG-2011 02:28

Density Source Id	p50557b
Nylon Calibrator Number	dnce695
Aluminium Calibrator Number	dacd698
Density Shoe Profile	8 inch

Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.09	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

DOWNHOLE EQUIPMENT

C:\DOCUME~1\sysadmin\LOCALS~1\Temp\Weatherford PreView\0\Grand Mesa DBY # 1-16_003.dta

Compact Comms Gamma
MCG-C 139 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Comms Gamma
MCG-C 139 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Micro-log
MML-A 16 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

Compact Micro-log
MML-A 16 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

Compact Neutron
MDN-A.B 66 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Neutron
MDN-A.B 66 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper
MPD-B 35 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

Compact Density/Caliper
MPD-B 35 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

SKJ-D.A Compact Knuckle Joint
SKJ-D.A 36 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

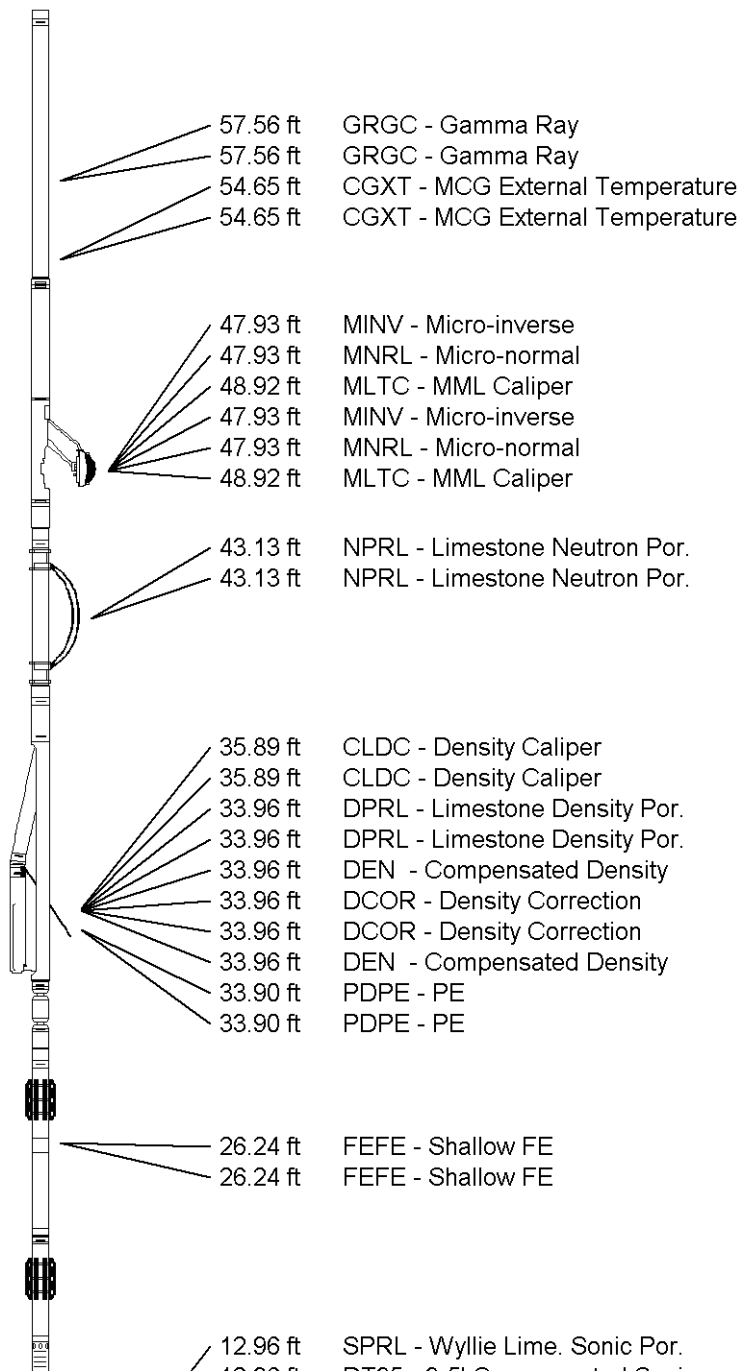
SKJ-D.A Compact Knuckle Joint
SKJ-D.A 36 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

Compact Focussed Electric
MFE-A.A 52 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

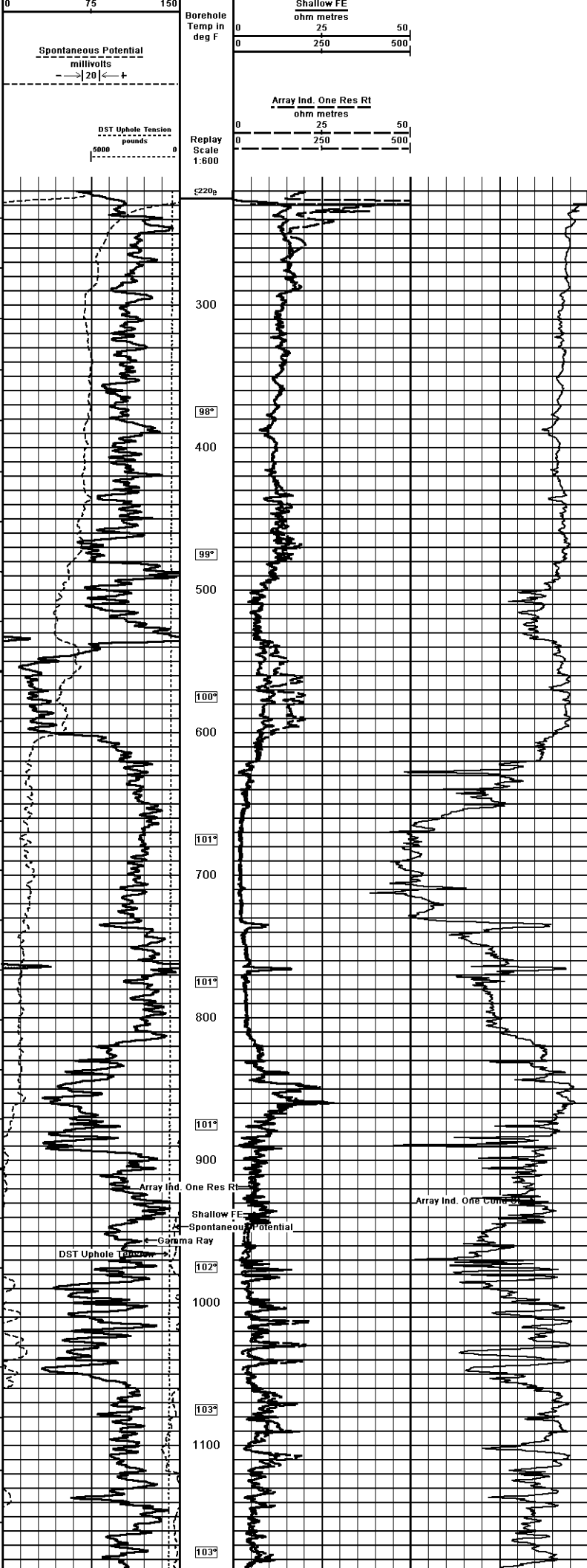
Compact Focussed Electric
MFE-A.A 52 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

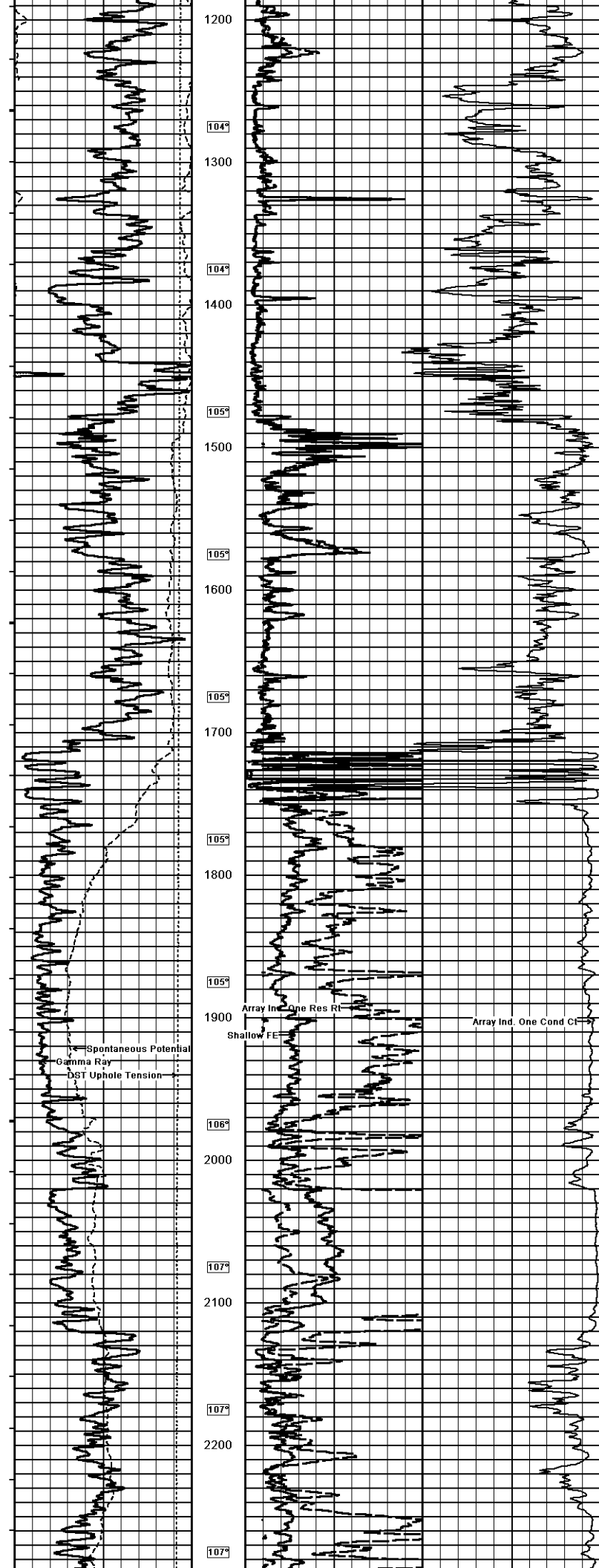
Compact Sonic
MSS-C.K 330 LG: 12.52 ft WT: 72.8 lb OD: 2.24 in

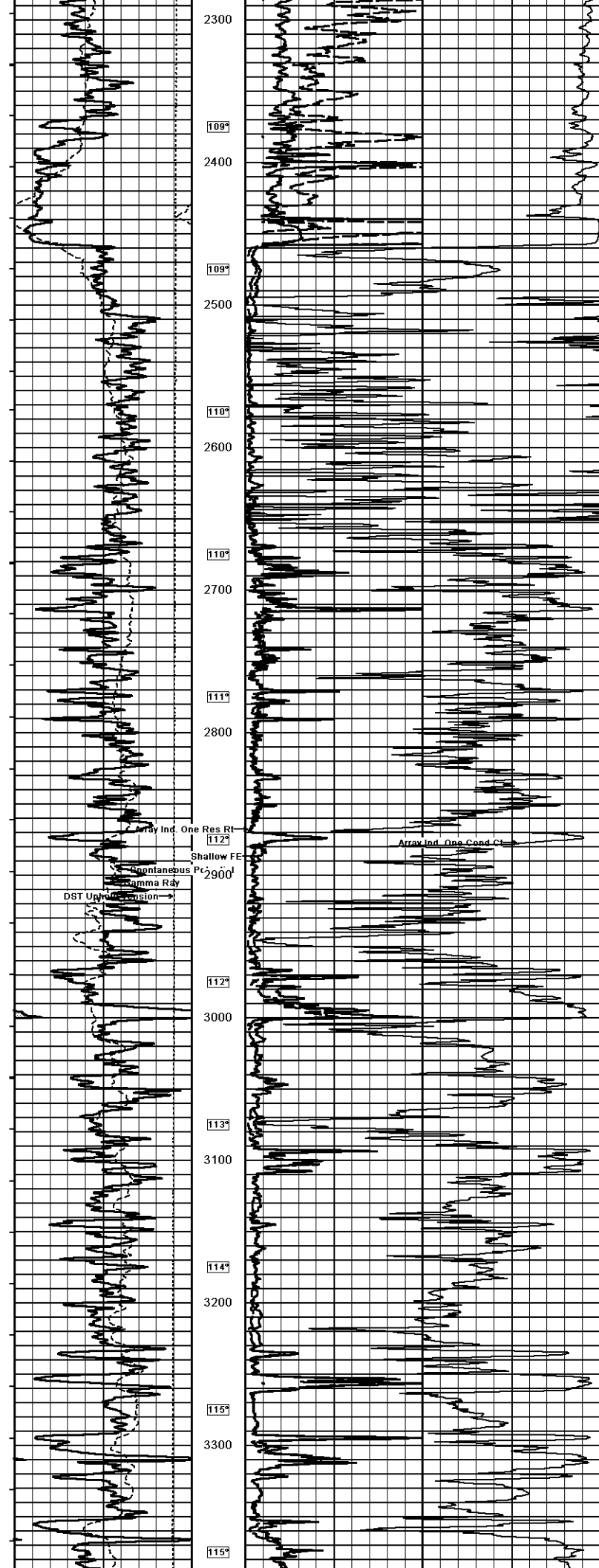
Compact Sonic
MSS-C.K 330 LG: 12.52 ft WT: 72.8 lb OD: 2.24 in

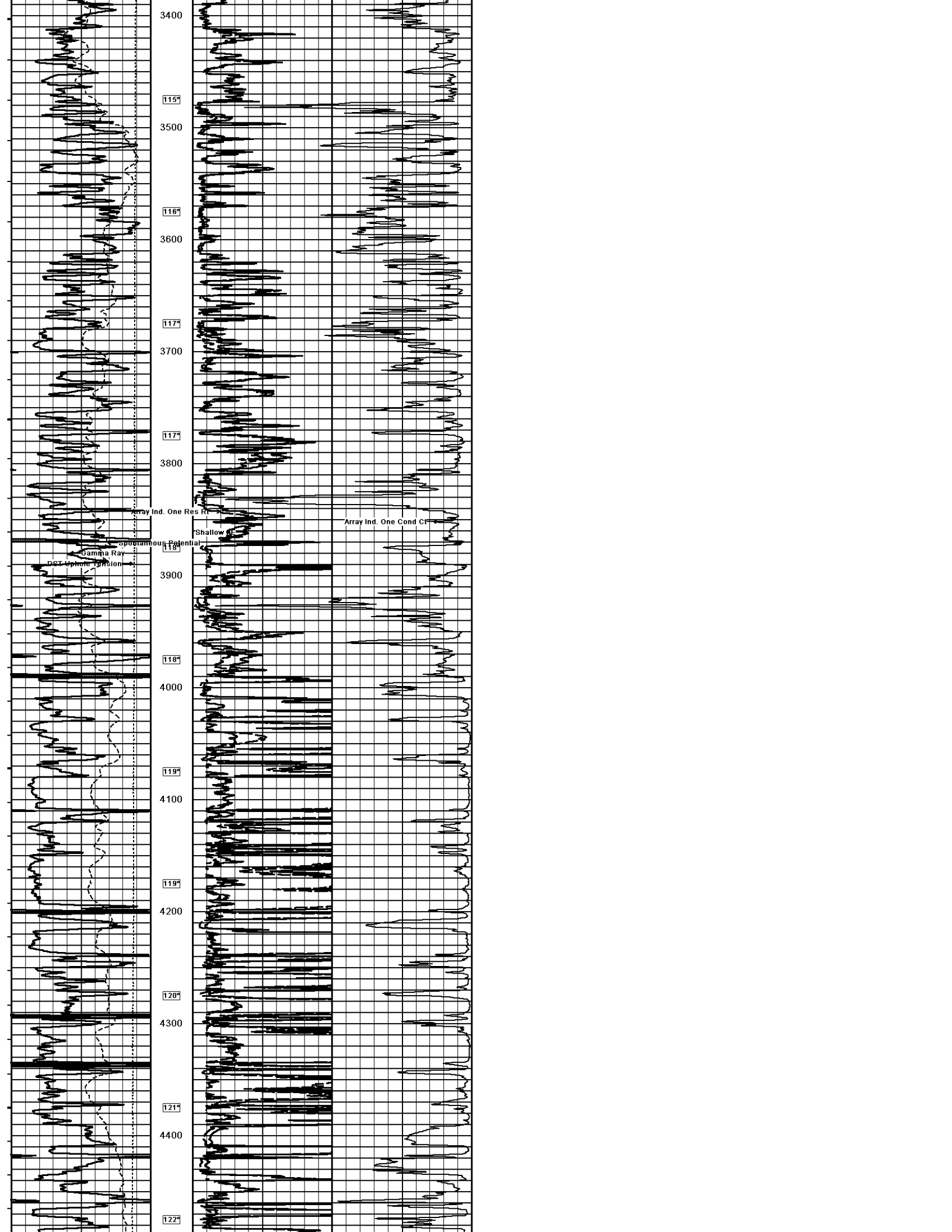


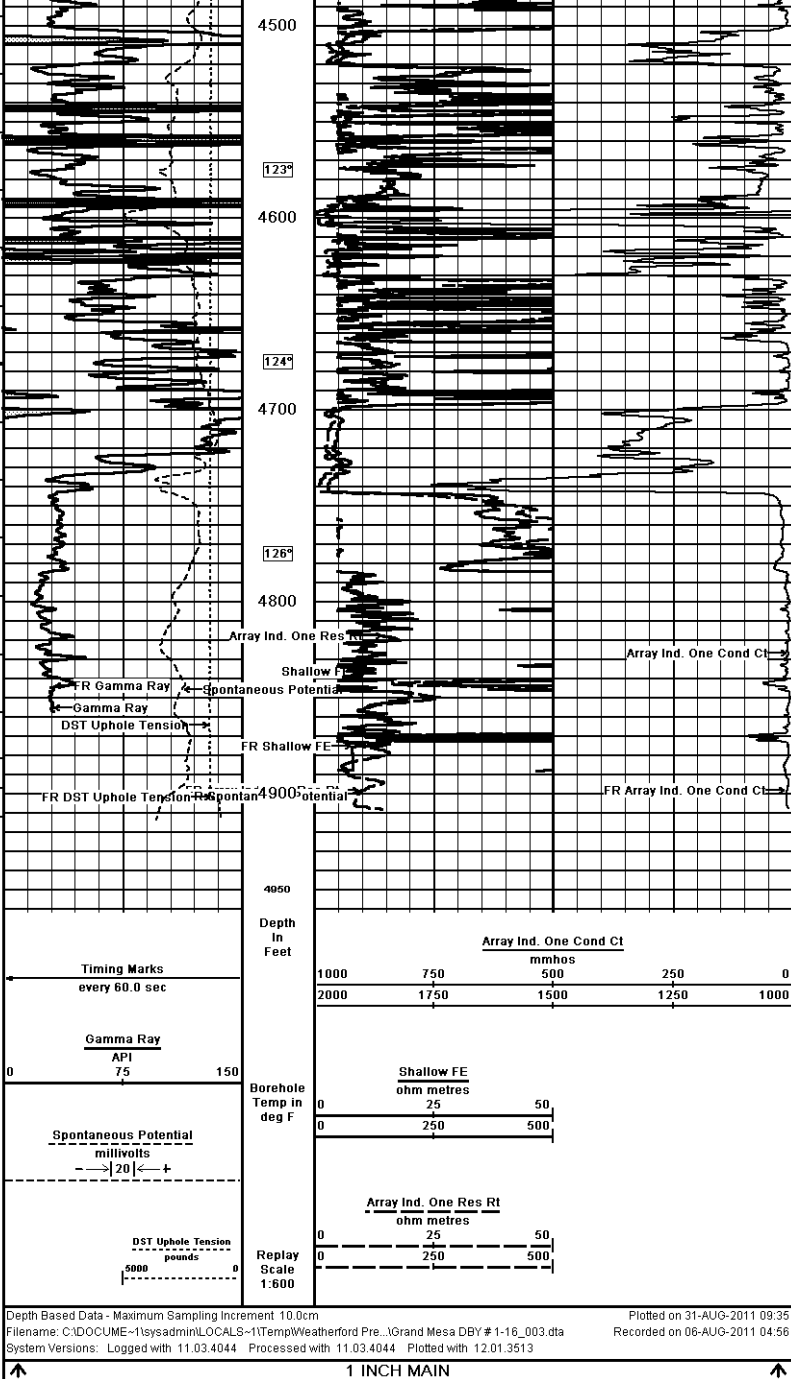
Timing Marks every 60.0 sec Gamma Ray API	Depth in Feet	Array Ind. One Cond Ct				
		mmhos				
		1000	750	500	250	0
		2000	1750	1500	1250	1000











COMPANY	GRAND MESA OPERATING			
WELL	DBY # 1-16			
FIELD	WILDCAT			
PROVINCE/COUNTY	SCOTT			
COUNTRY/STATE	U. S. A / KANSAS			
Elevation Kelly Bushing	3086.00	feet	First Reading	4899.00 feet
Elevation Drill Floor	3084.00	feet	Depth Driller	4900.00 feet
Elevation Ground Level	3075.00	feet	Depth Logger	4902.00 feet
			ARRAY INDUCTION	
			SHALLOW FOCUSED	
			ELECTRIC LOG	
				