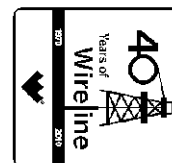




Weatherford

ARRAY INDUCTION SHALLOW FOCUSED ELECTRIC LOG

COMPANY CITATION OIL & GAS CORP.
WELL SCHMITT # 8-11
FIELD FAIRPORT
PROVINCE/COUNTY ELLIS
COUNTRY/STATE U.S.A. / KANSAS
LOCATION 293' FNL & 3455' FEL
NE NW NE NW



SEC 12	TWP 13S	RGE 16W	Other Services MPD/MDN	Permanent Datum G.L., Elevation 1940 feet Log Measured From KB Drilling Measured From K.B.	Elevations: KB 1948.00 DF 1946.00 GL 1940.00
API Number	15-051-26153	MML	MSS		
Permit Number					
Date	28-FEB-2012				
Run Number	ONE				
Depth Driller	3460.00	feet			
Depth Logger	3461.00	feet			
First Reading	3458.00	feet			
Last Reading	1015.00	feet			
Casing Driller	1015.00	feet			
Casing Logger	1015.00	feet			
Bit Size	7.875	inches			
Hole Fluid Type	CHEMICAL				
Density / Viscosity	8.80 lb/USg	42.00 CP			
PH / Fluid Loss	11.00	6.80 ml/30Min			
Sample Source	FLOWLINE				
Rm @ Measured Temp	1.04 @ 70.0	ohm-m			
Rmf @ Measured Temp	0.83 @ 70.0	ohm-m			
Rmc @ Measured Temp	1.25 @ 70.0	ohm-m			
Source Rmf / Rmc	CALC	CALC			
Rm @ BHT	0.84 @ 88.0	ohm-m			
Time Since Circulation	4 HOURS				
Max Recorded Temp	88.00	deg F			
Equipment Name	COMPACT				
Equipment / Base	13057	LIB			
Recorded By	A. GIAMBALVO				
Witnessed By	JOSH KULL				
S.O. / JOB #	3534614				LB12-048

BOREHOLE RECORD

Last Edited: 28-FEB-2012 10:48

Bit Size inches	Depth From feet	Depth To feet
7.875	1015.00	3461.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	8.00	1015.00	24.00

REMARKS

Tools Ran: MCG, MML, MDN, MPD, SKJ, MFE, MSS, MAI.
Hardware Used: MDN Dual Eccentralizer used. MPD 8 inch profile plate used. MFE, MSS and MAI 0.5 inch standoffs used.
2.71 g/cc Limestone Density Matrix used to calculate porosity.
Sonic porosity calculated using a Limestone scale (47.5 usec/ft).
All intervals logged and scaled per customer's request.
Annular volume with 5.5 inch production casing calculated = 869 cu. ft.
Total hole volume from TD to surface casing = 1258 cu. ft.
Service order #3534614
Rig: Duke Drilling Rig #2
Engineer: A. Giambalvo
Operator(s): N. Adame

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.

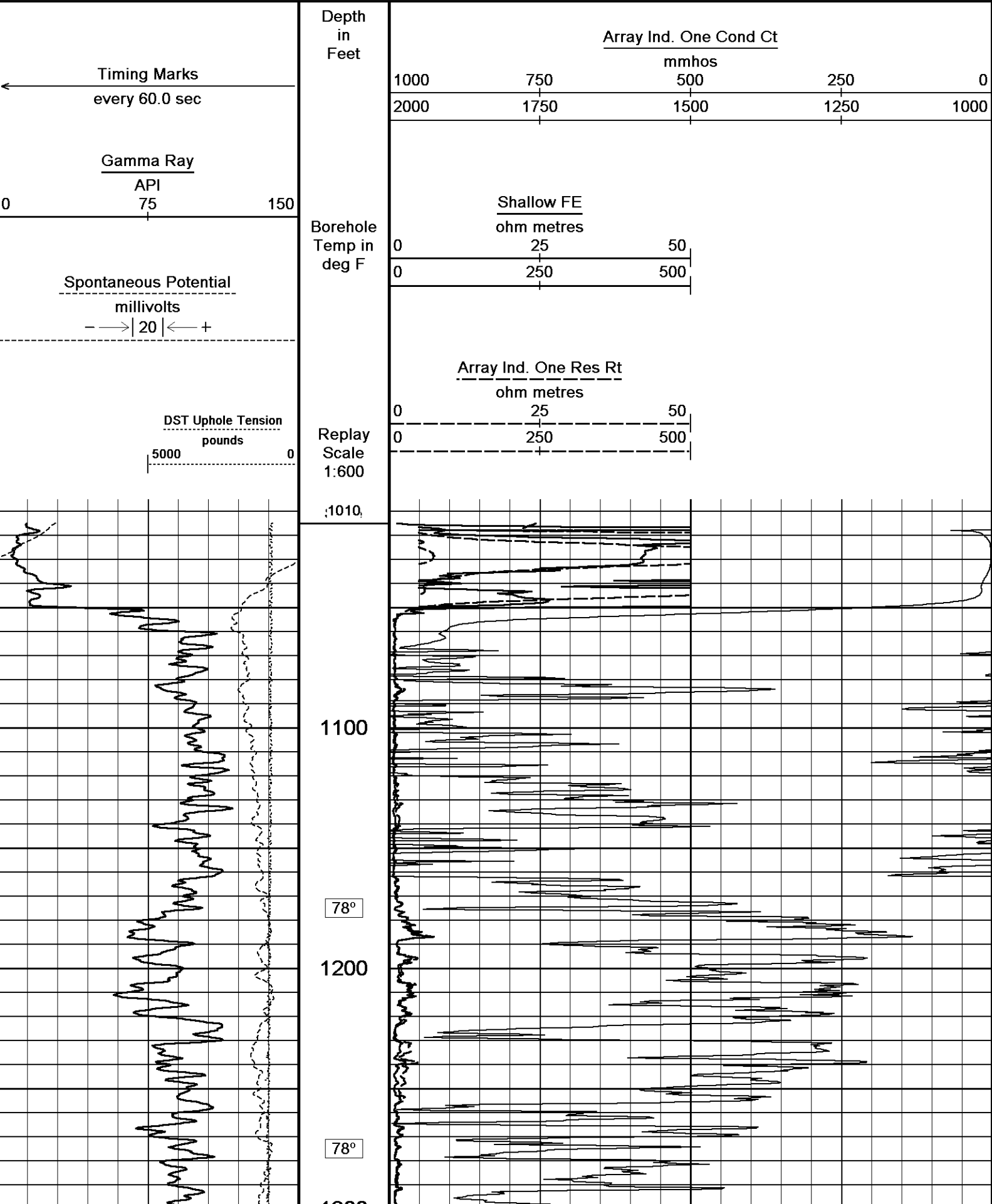


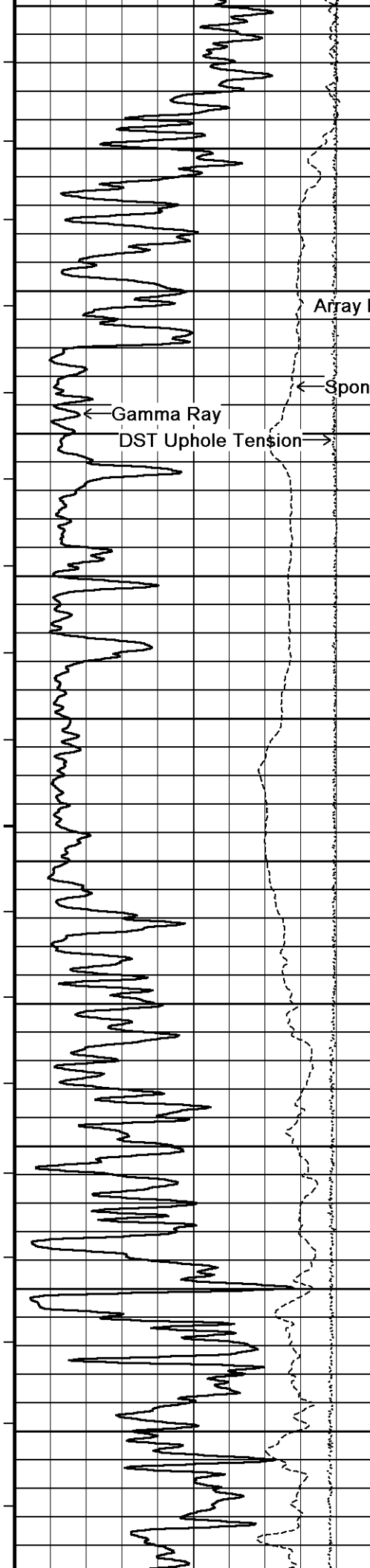
2 INCH MAIN PASS



Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\Minimus 11.03.4044\Data\Citation Schmitt # 8-11\Citation Schmitt # 8-11_003.dta
System Versions: Logged with 11.03.4044 Plotted with 11.03.4044

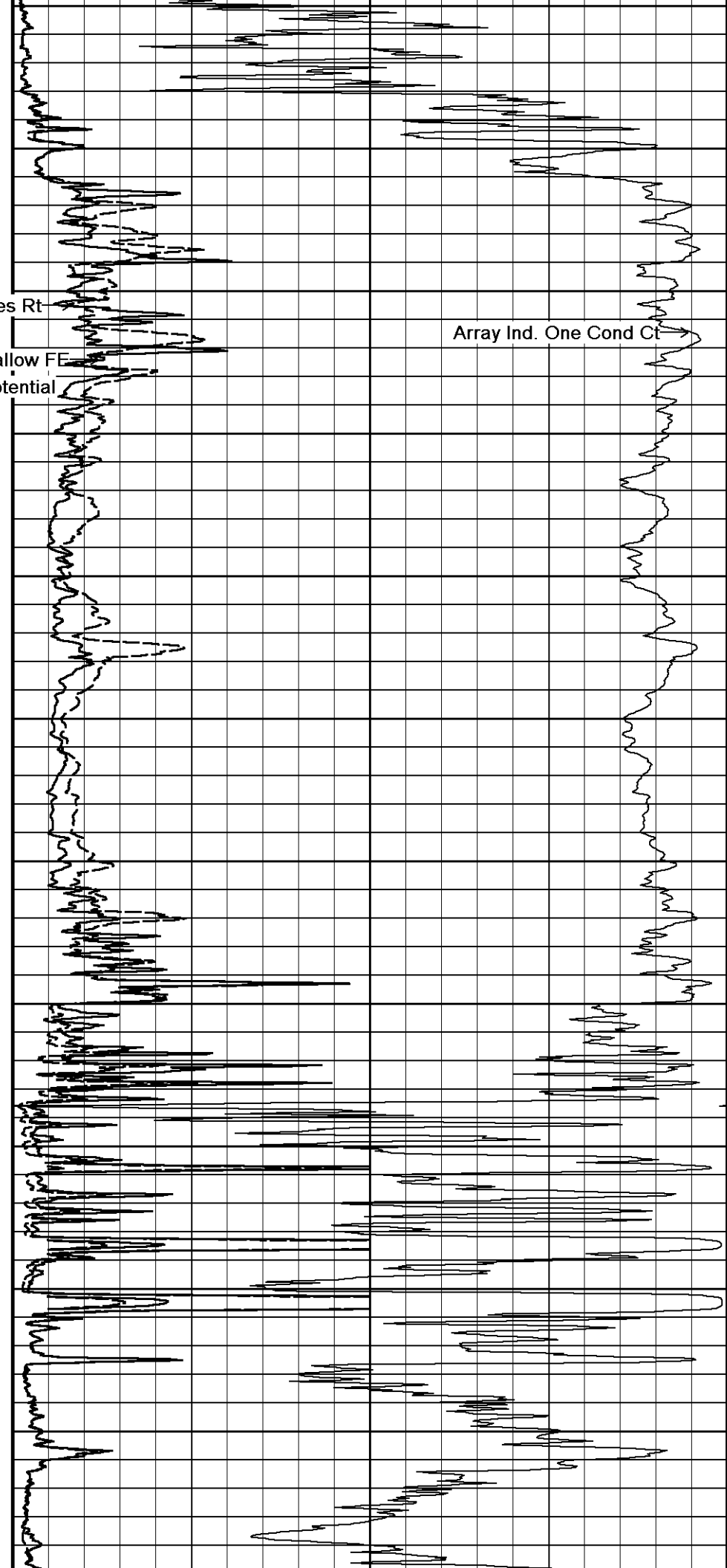
Plotted on 28-FEB-2012 10:50
Recorded on 28-FEB-2012 09:19



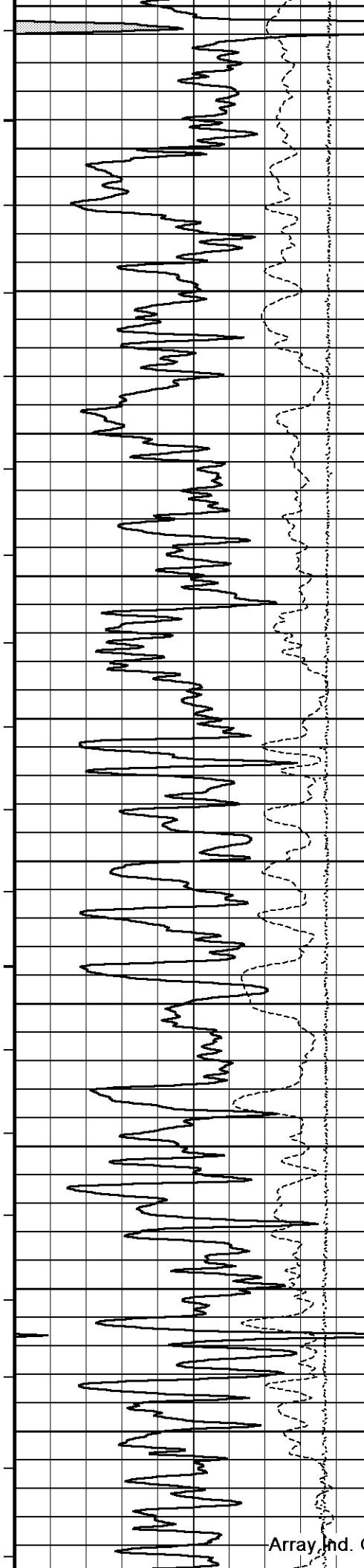


1300
79°
1400
80°
1500
79°
1600
79°
1700
80°
1800

Array Ind. One Res Rt
Shallow FE
Spontaneous Potential



Array Ind. One Cond Ct



80°

1900

80°

2000

81°

2100

81°

2200

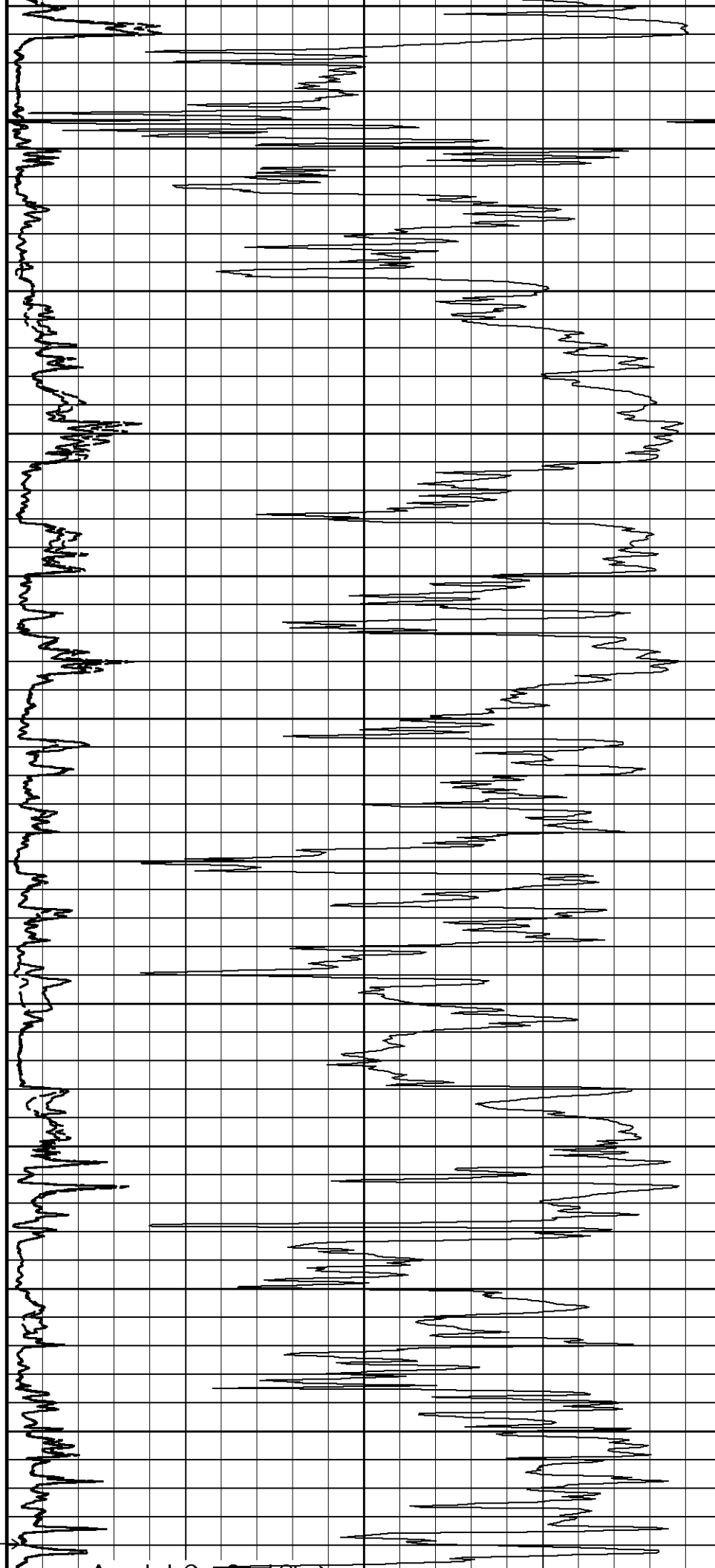
82°

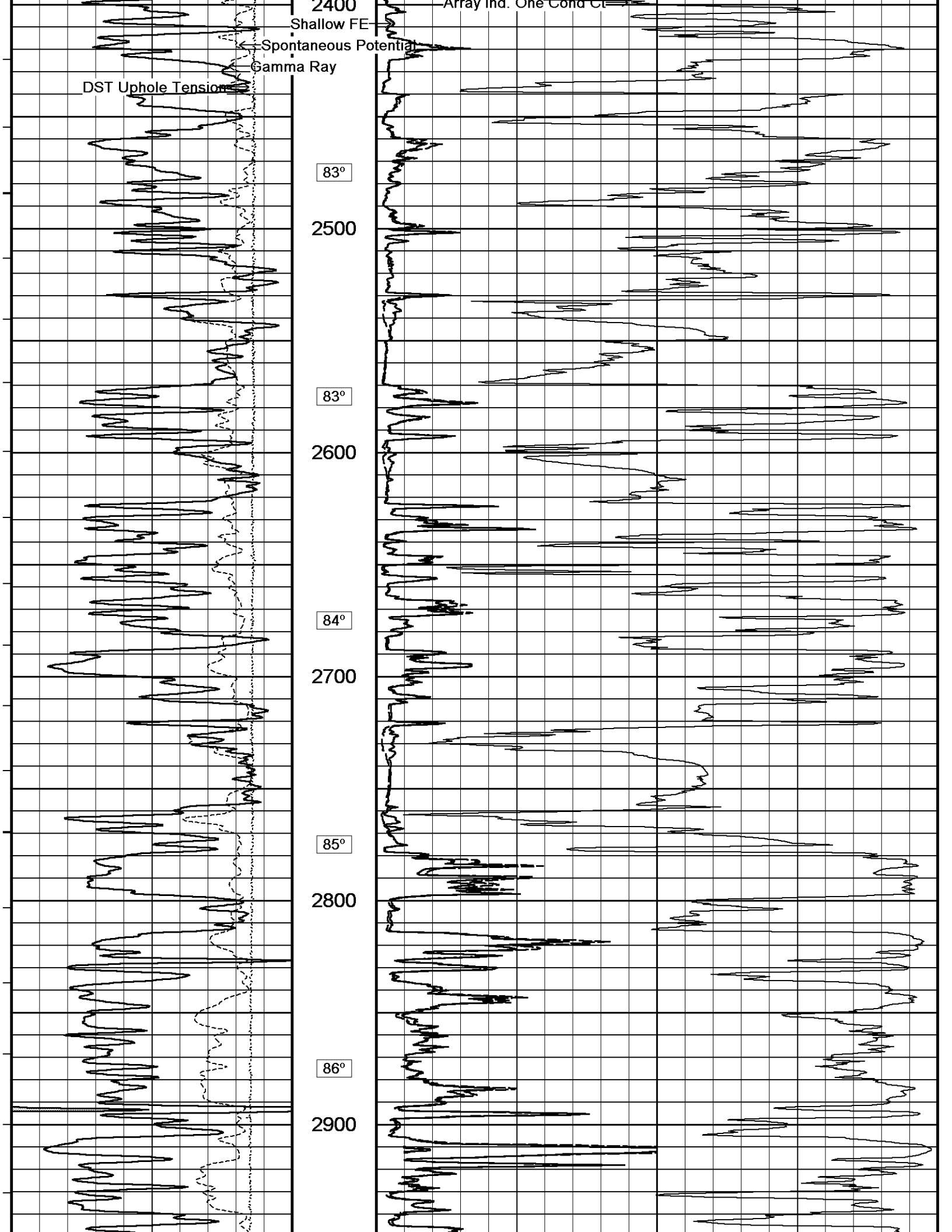
2300

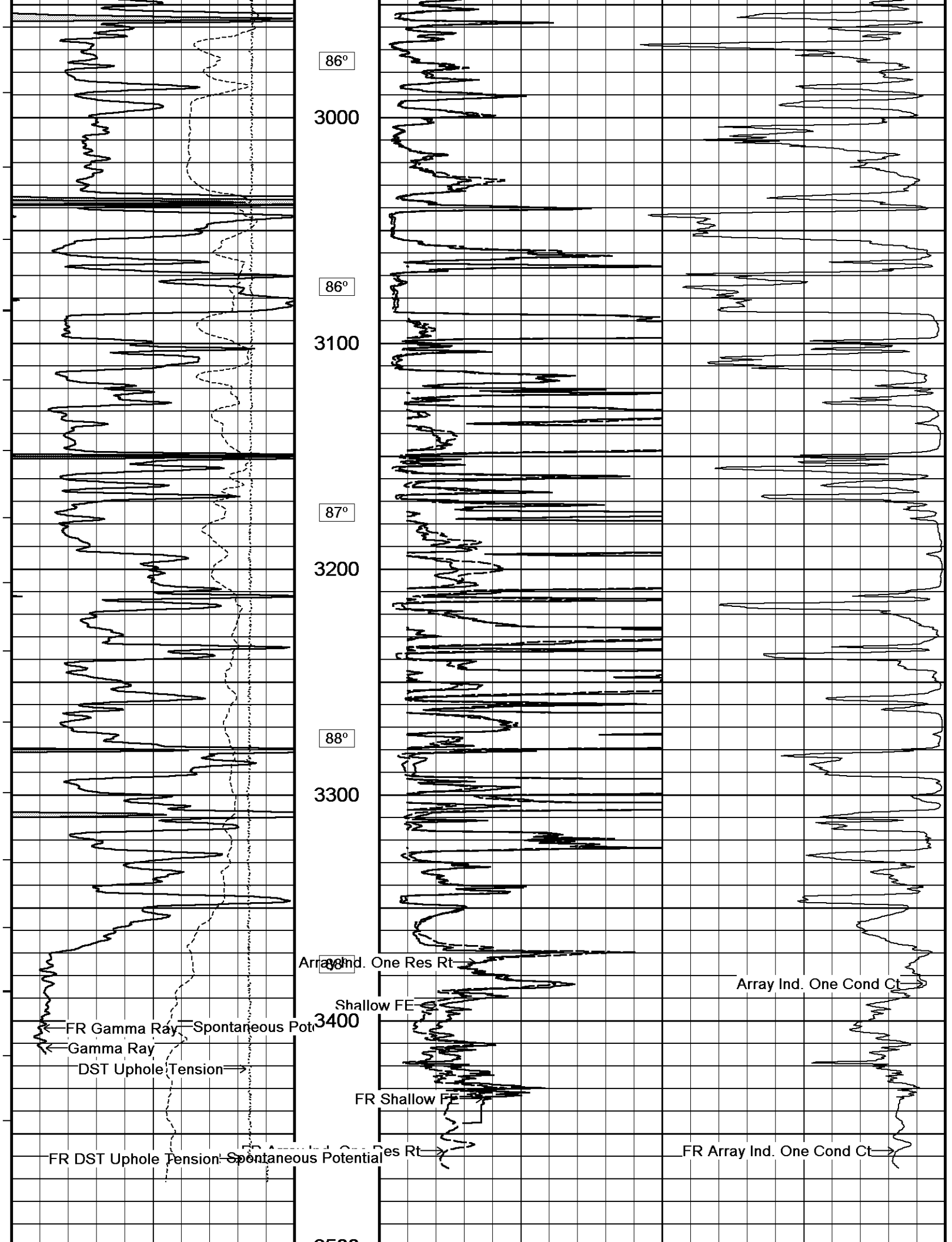
82°

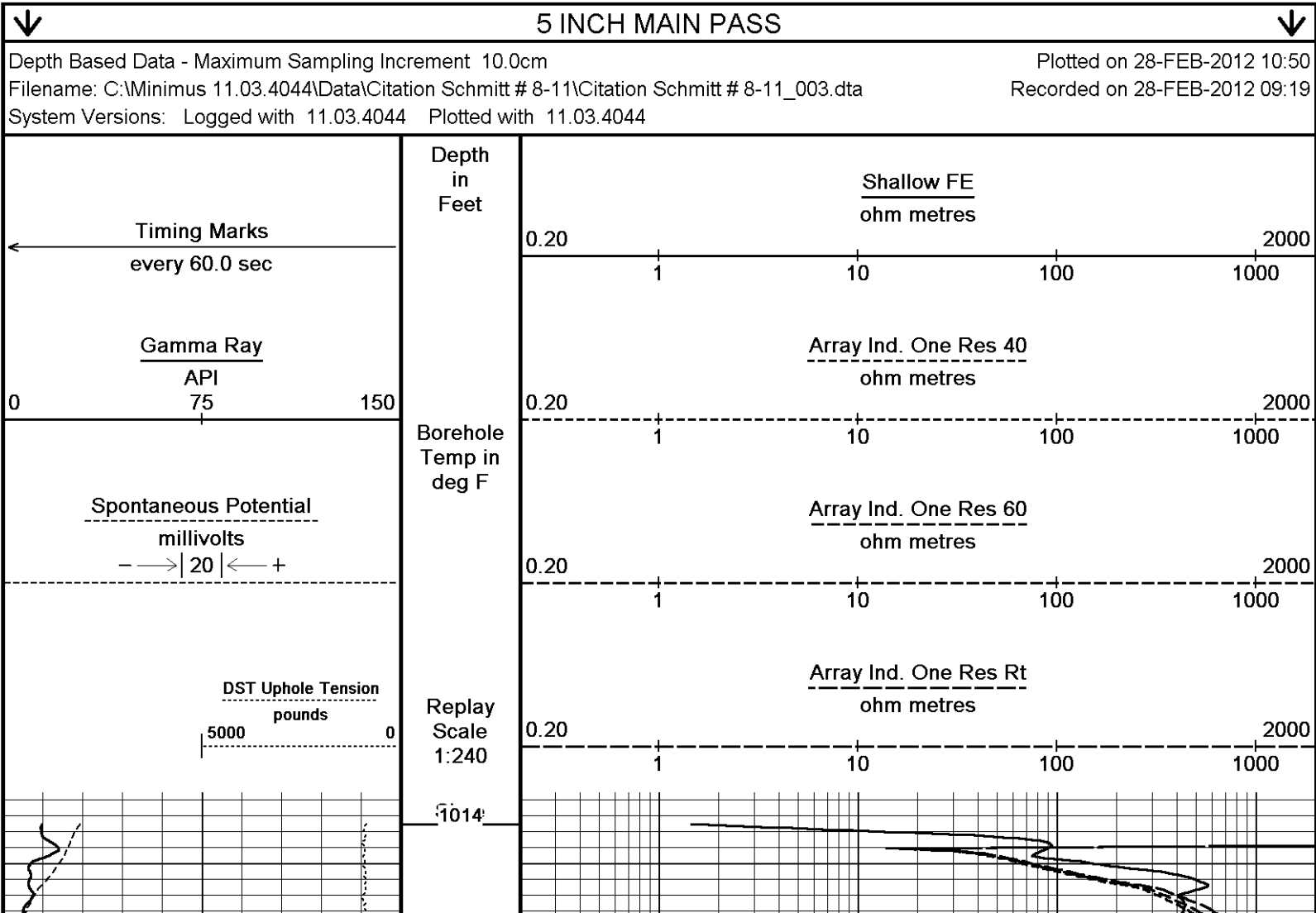
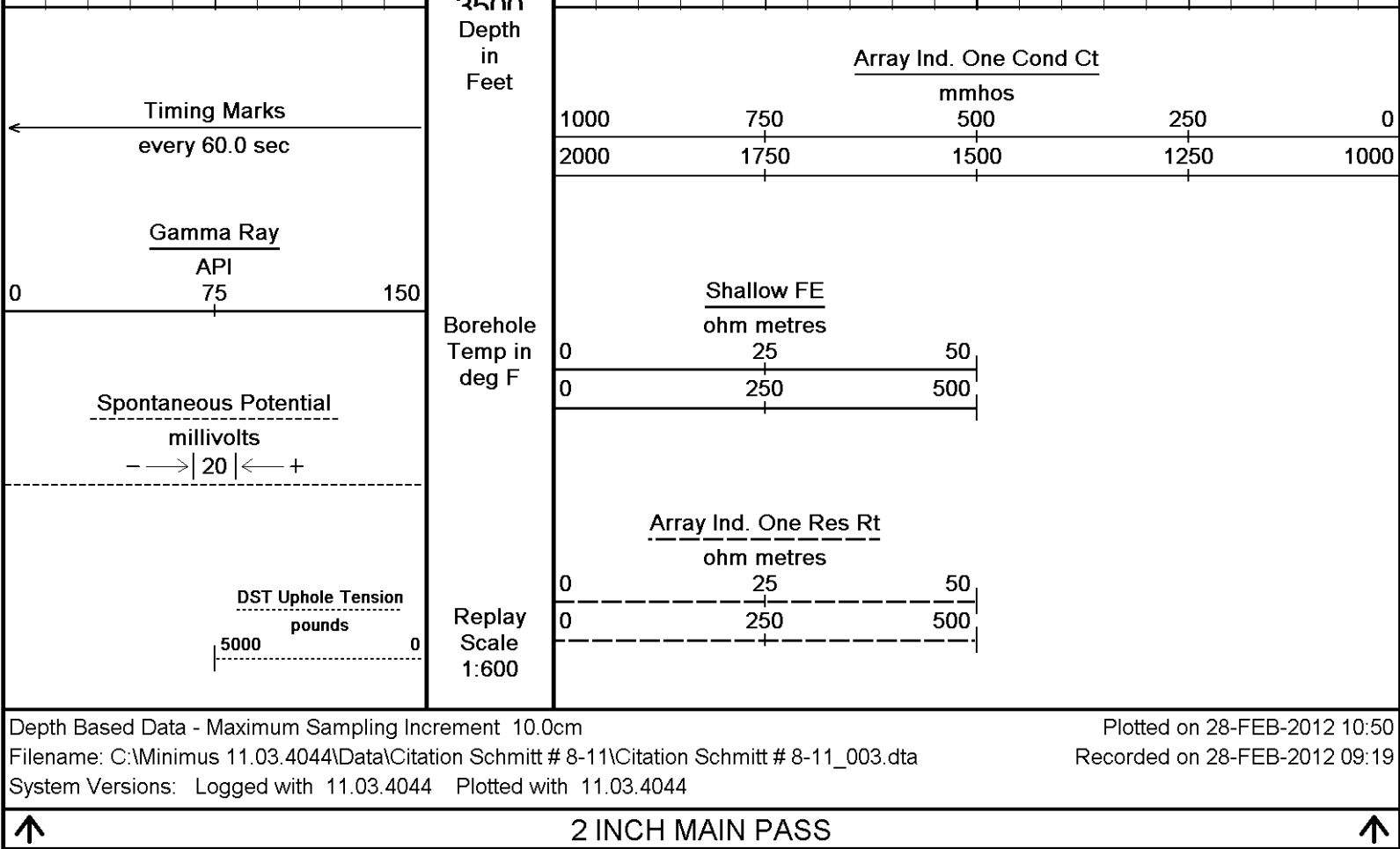
Array, Ind. One Res Rt

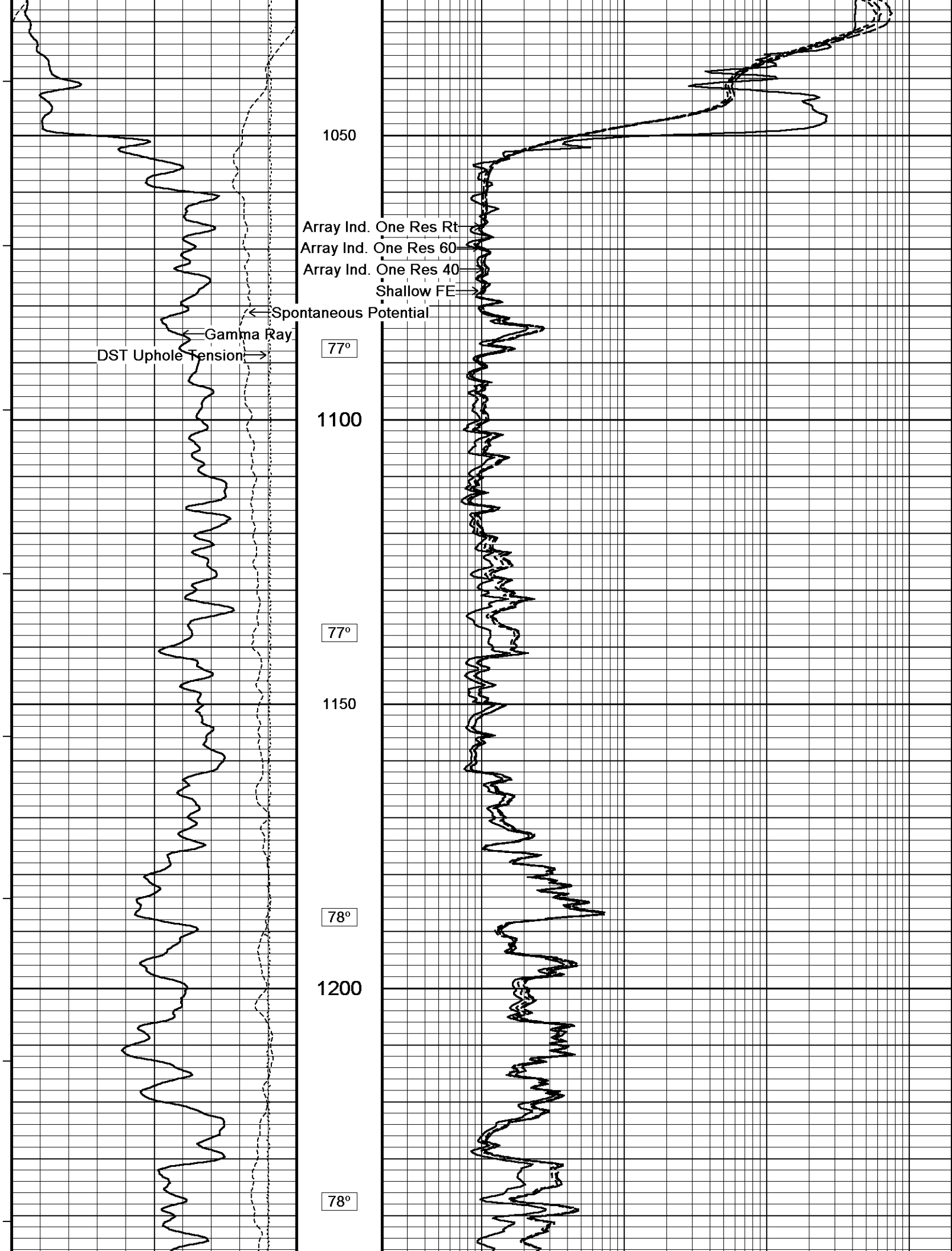
2400

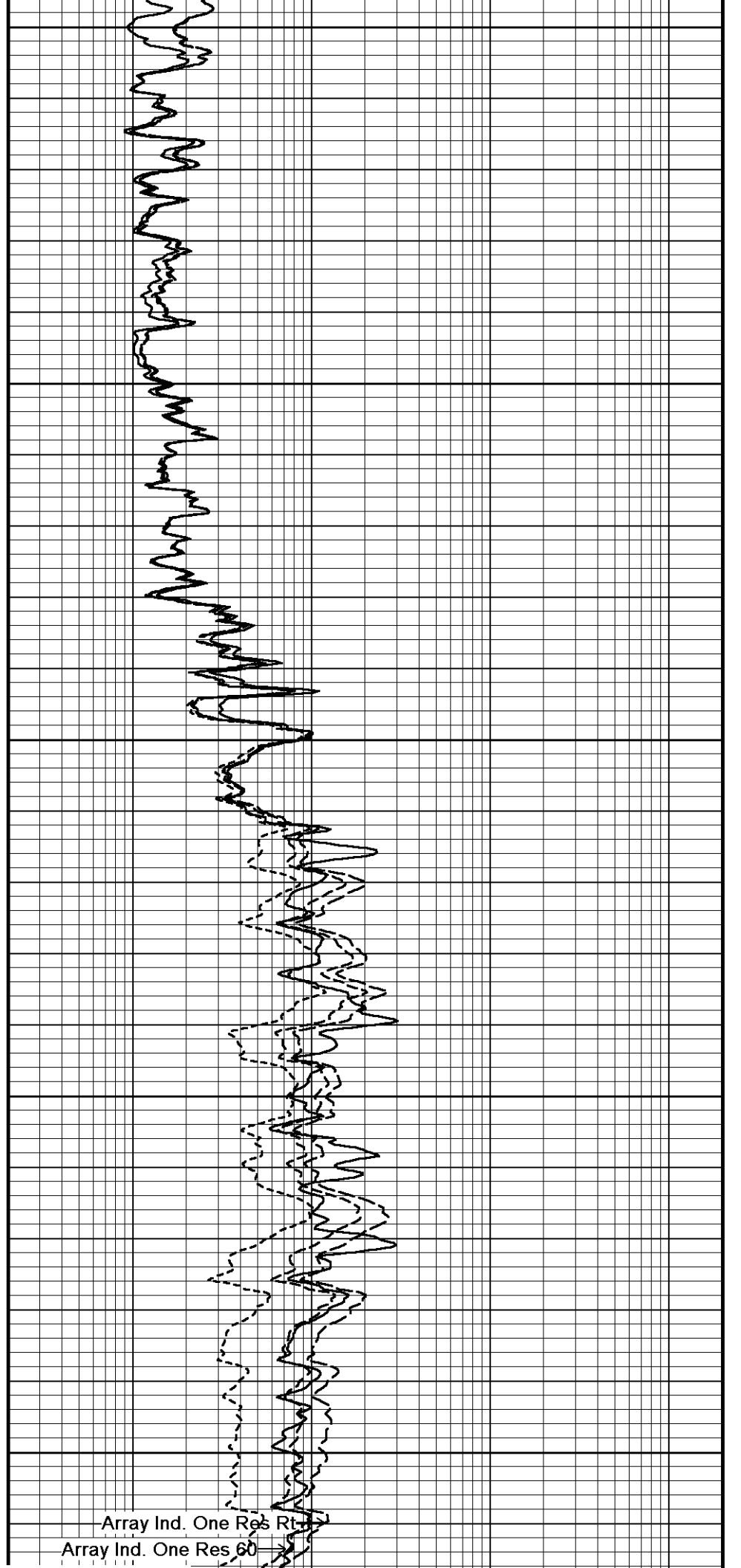
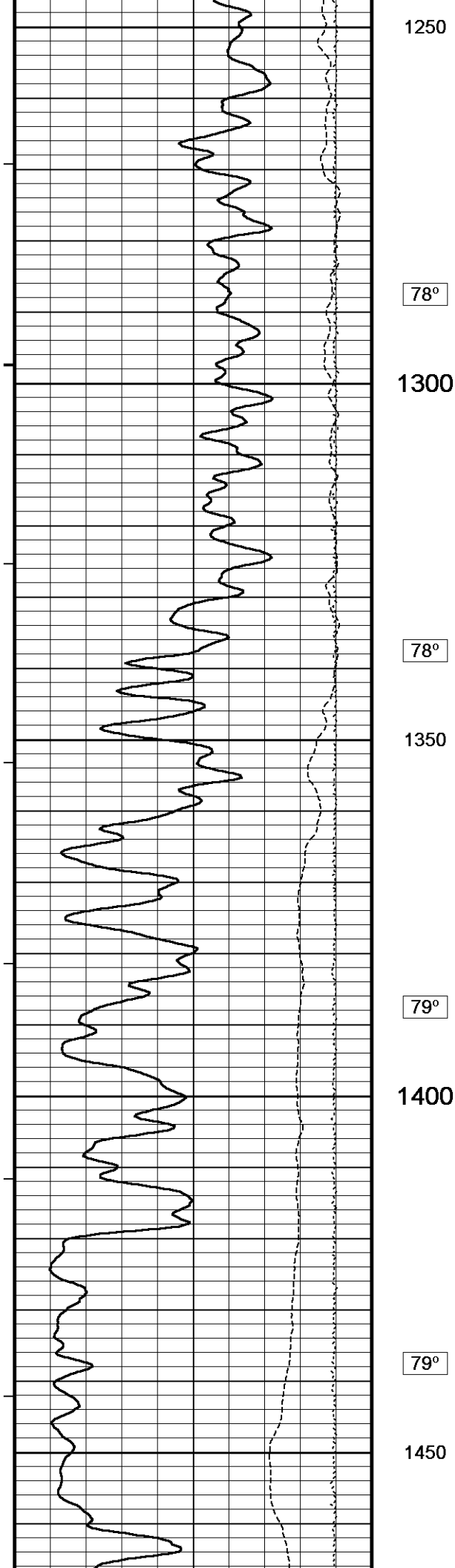


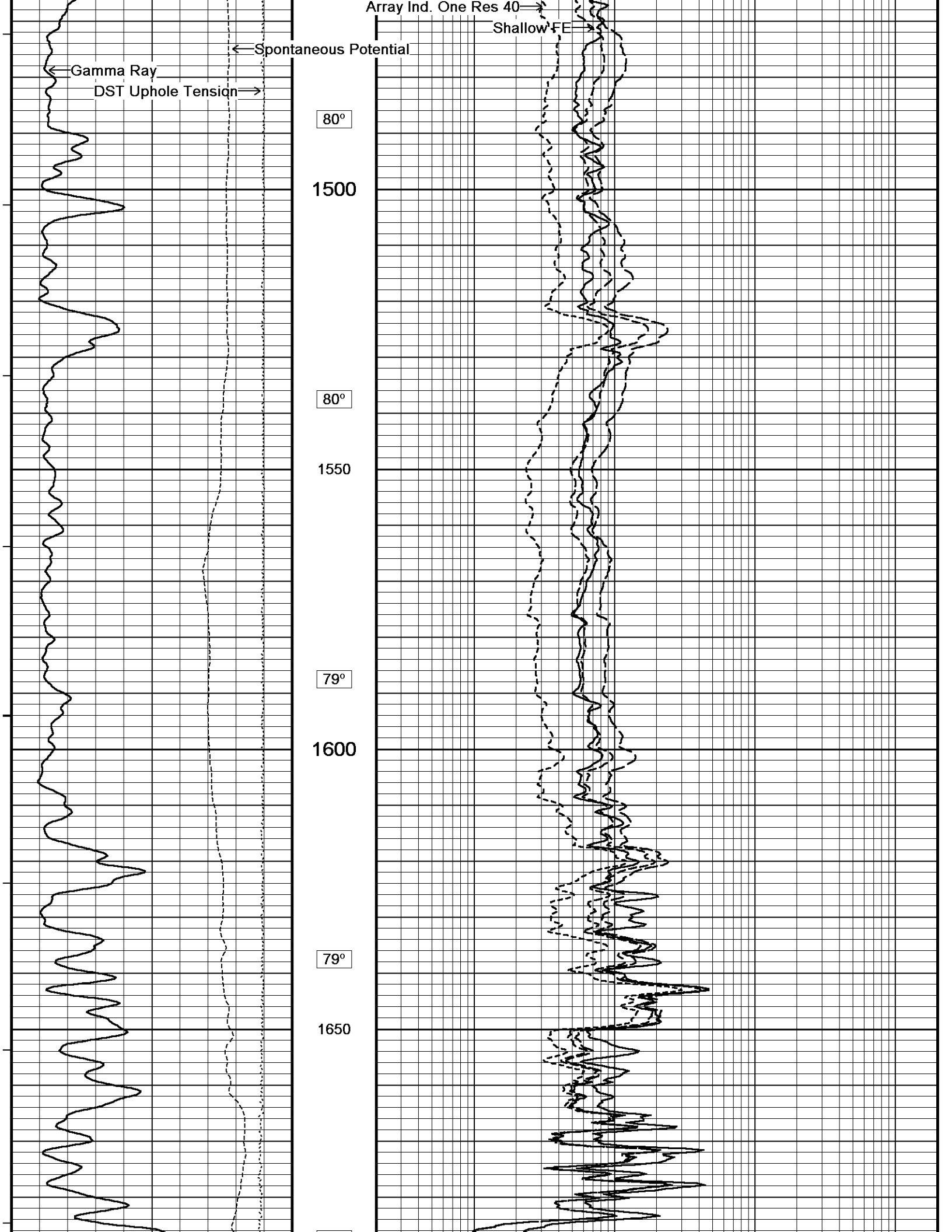


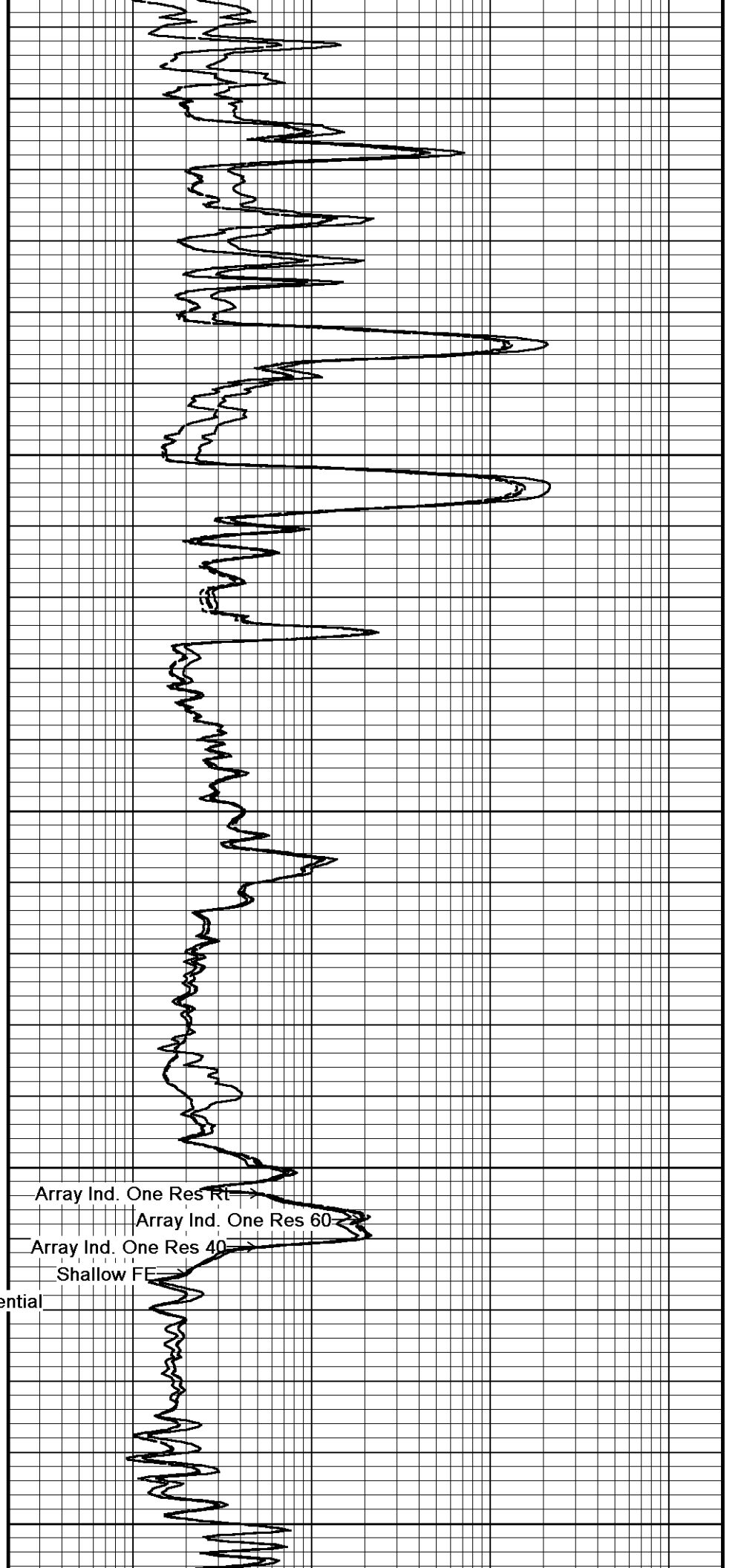
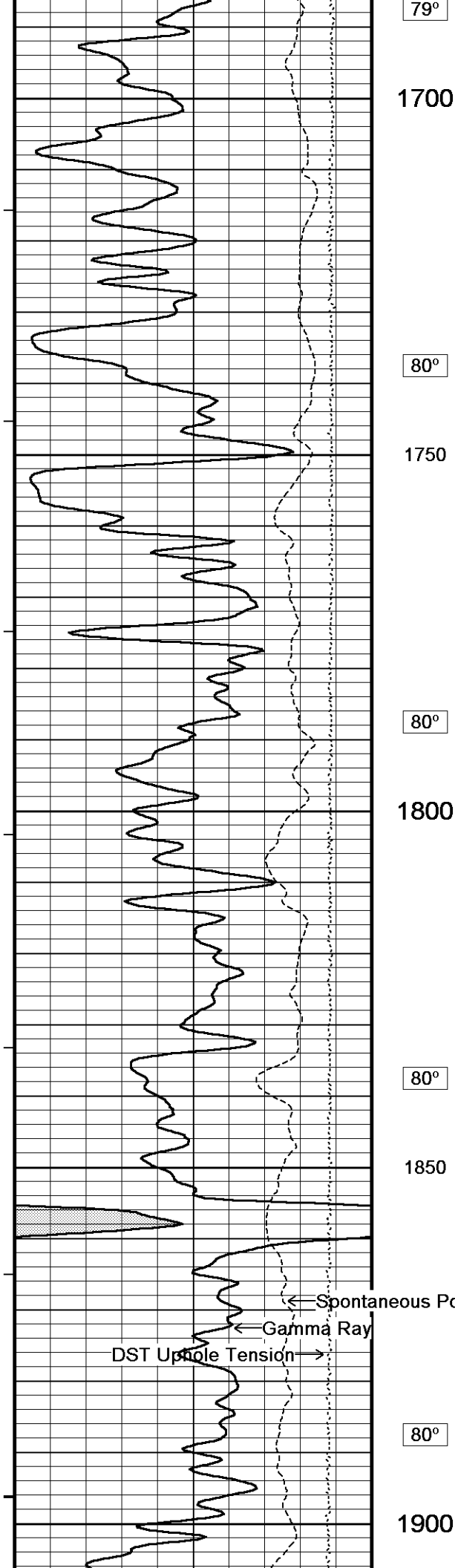


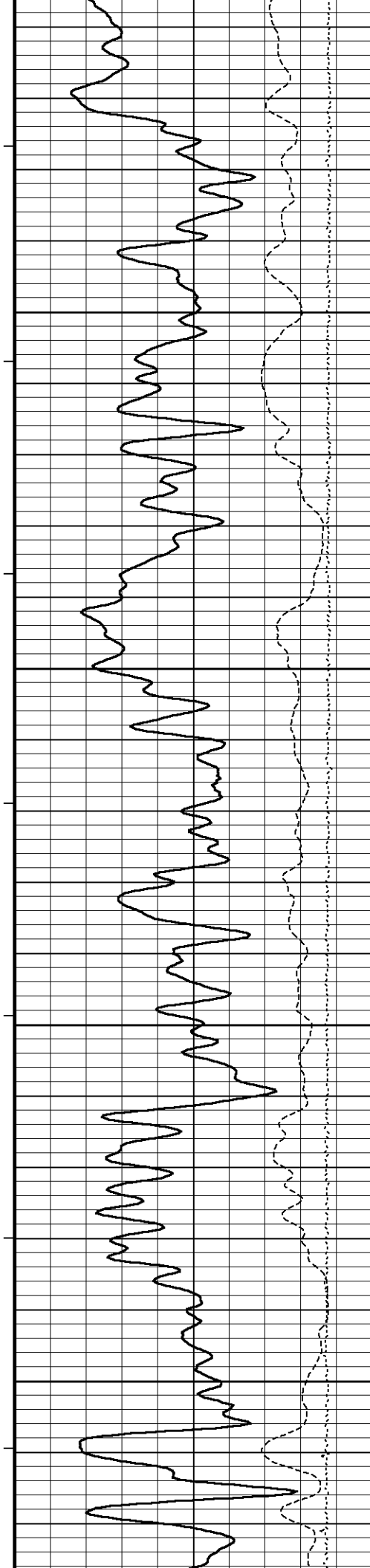












80°

1950

80°

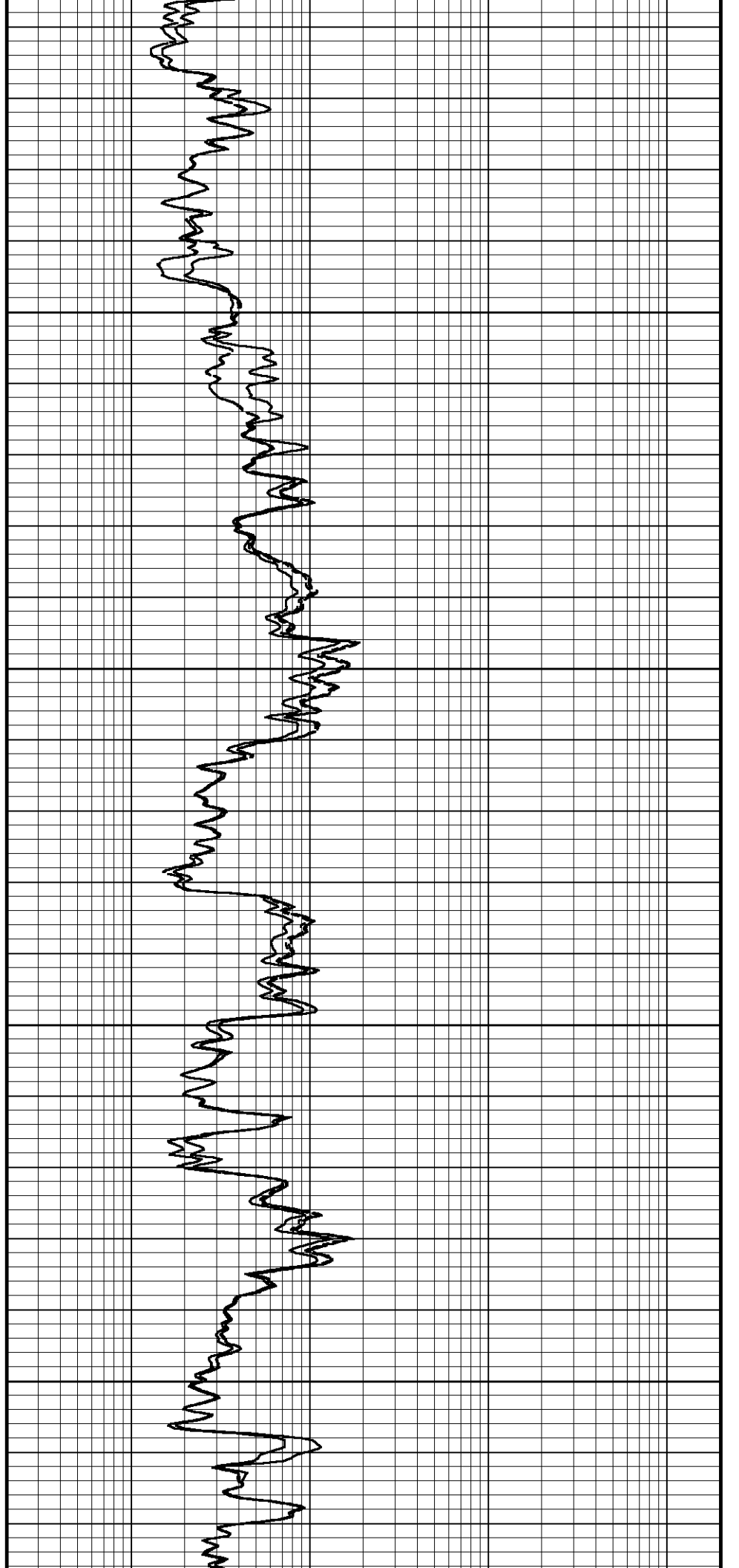
2000

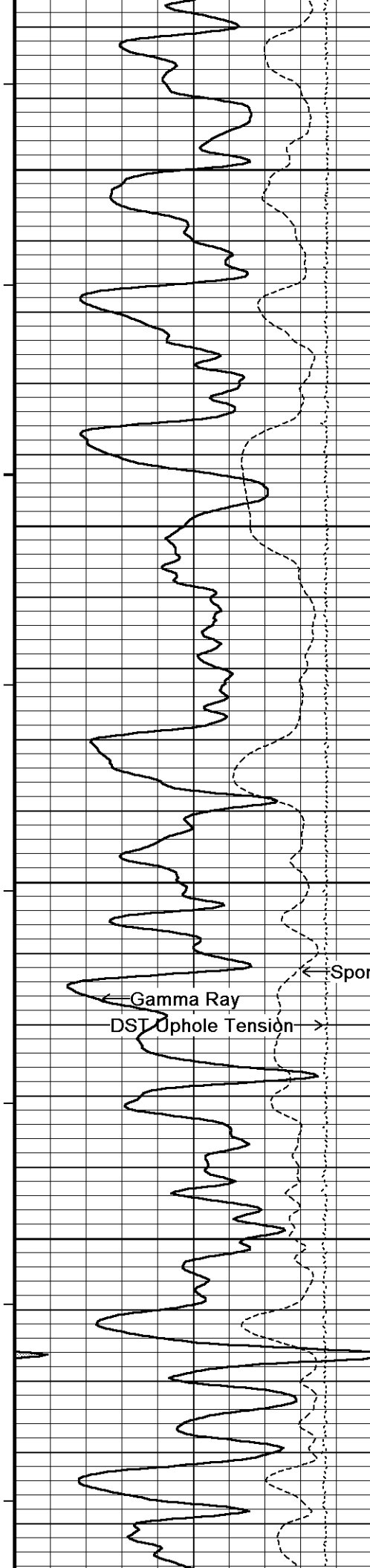
81°

2050

81°

2100





81°

2150

81°

2200

82°

2250

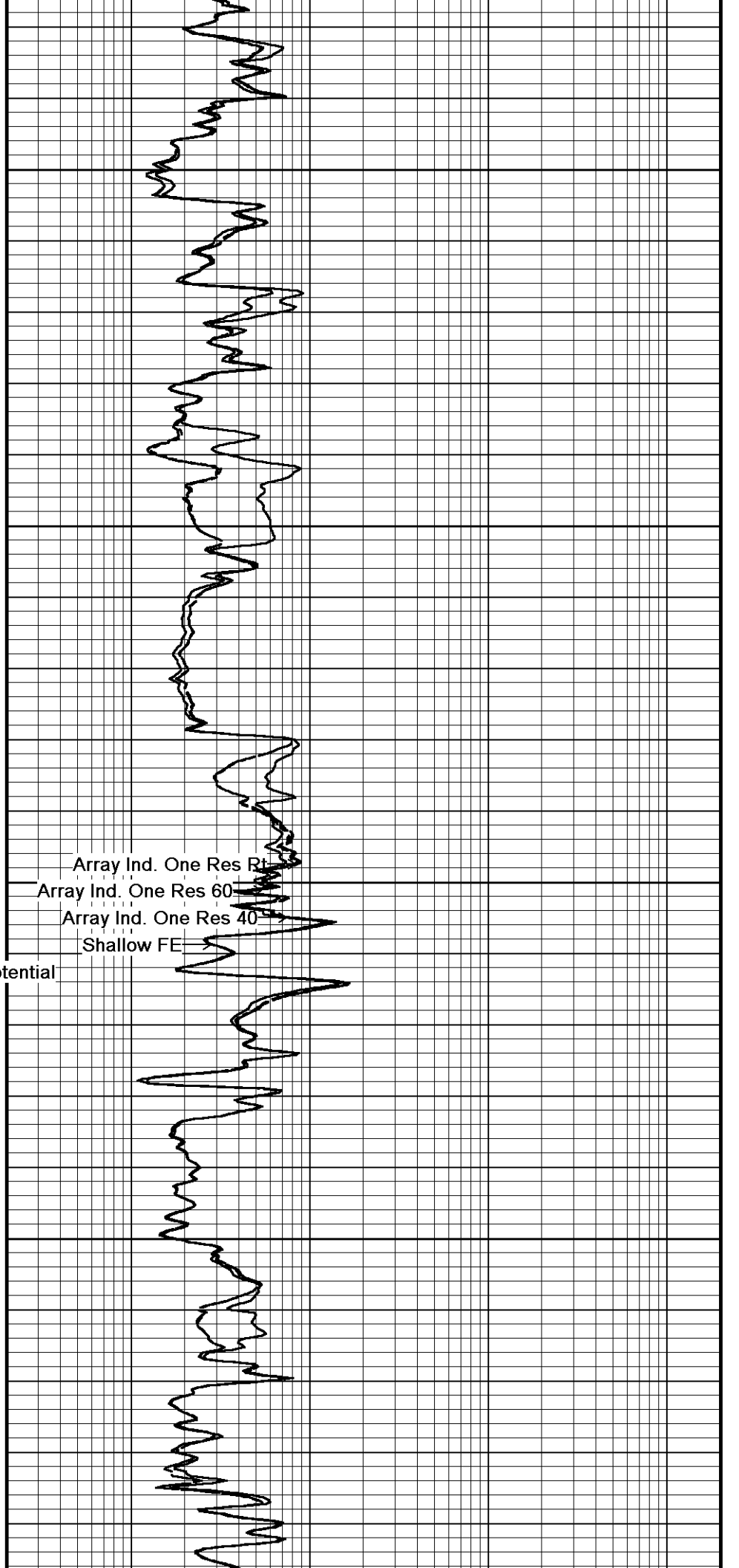
← Spontaneous Potential

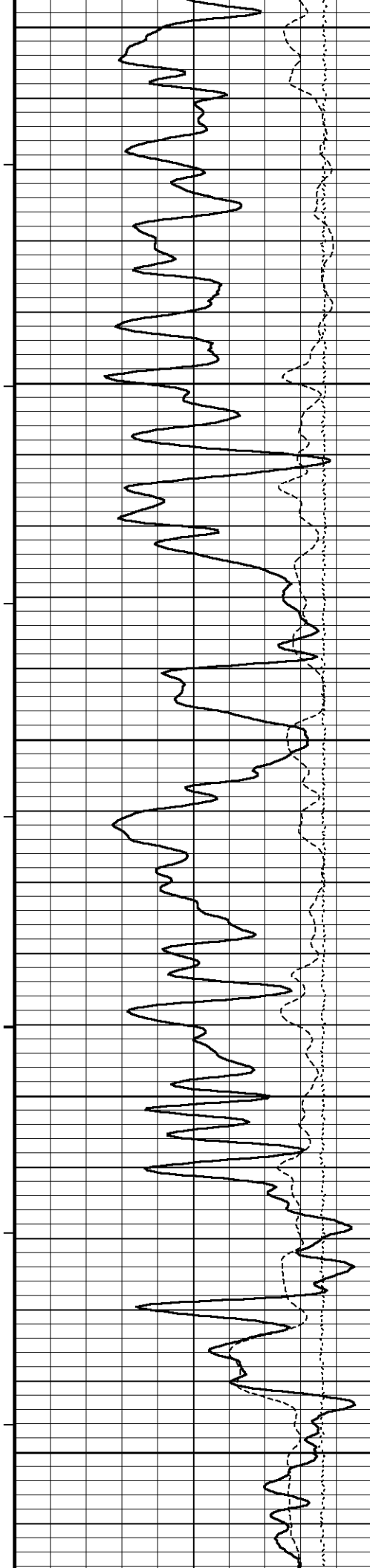
← Gamma Ray
DST Uphole Tension →

82°

2300

82°





2350

82°

2400

83°

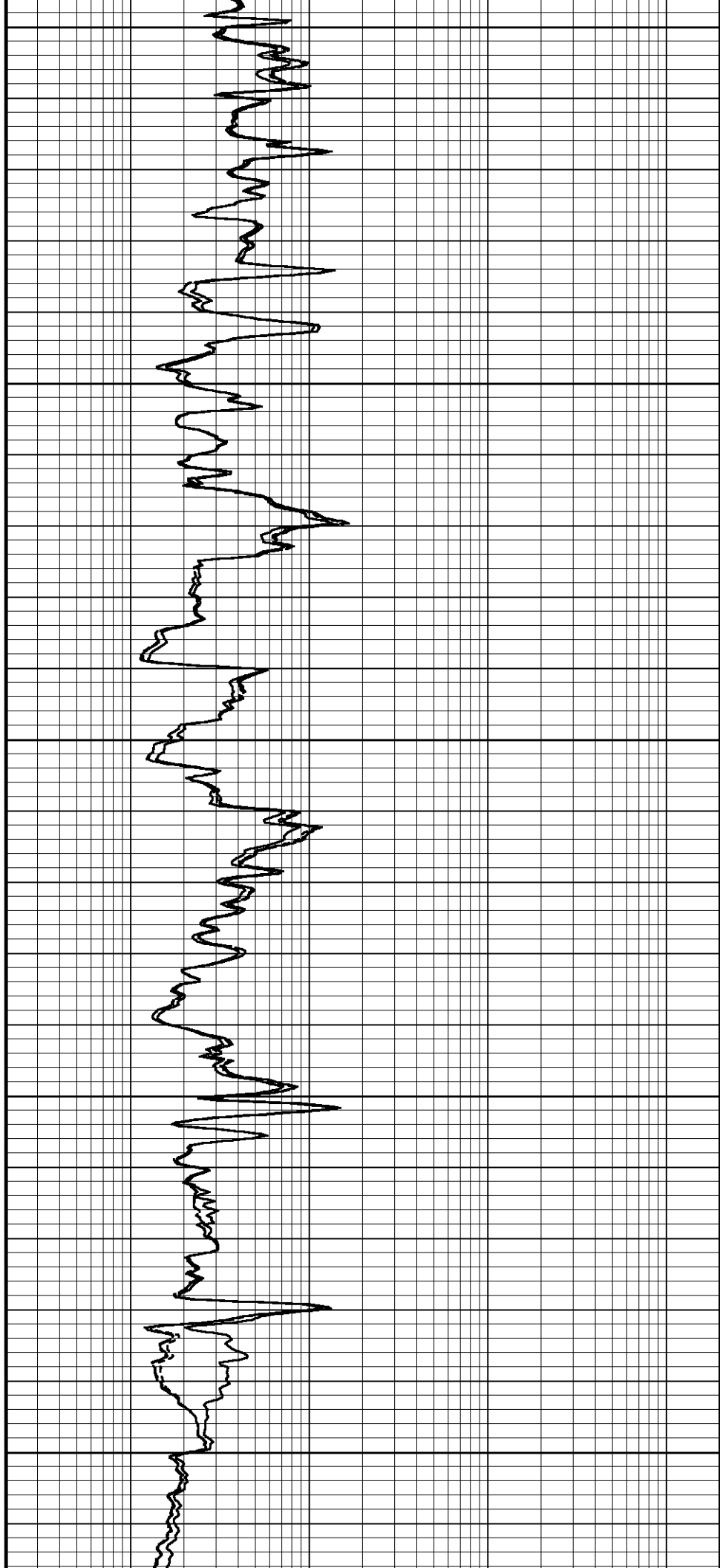
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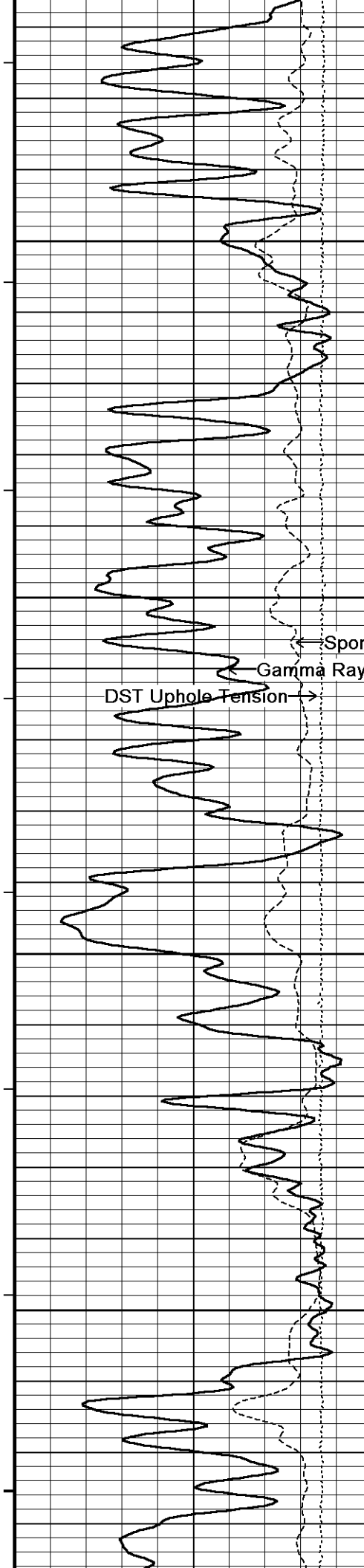
83°

2500

83°

2550





83°

2600

84°

2650

84°

2700

85°

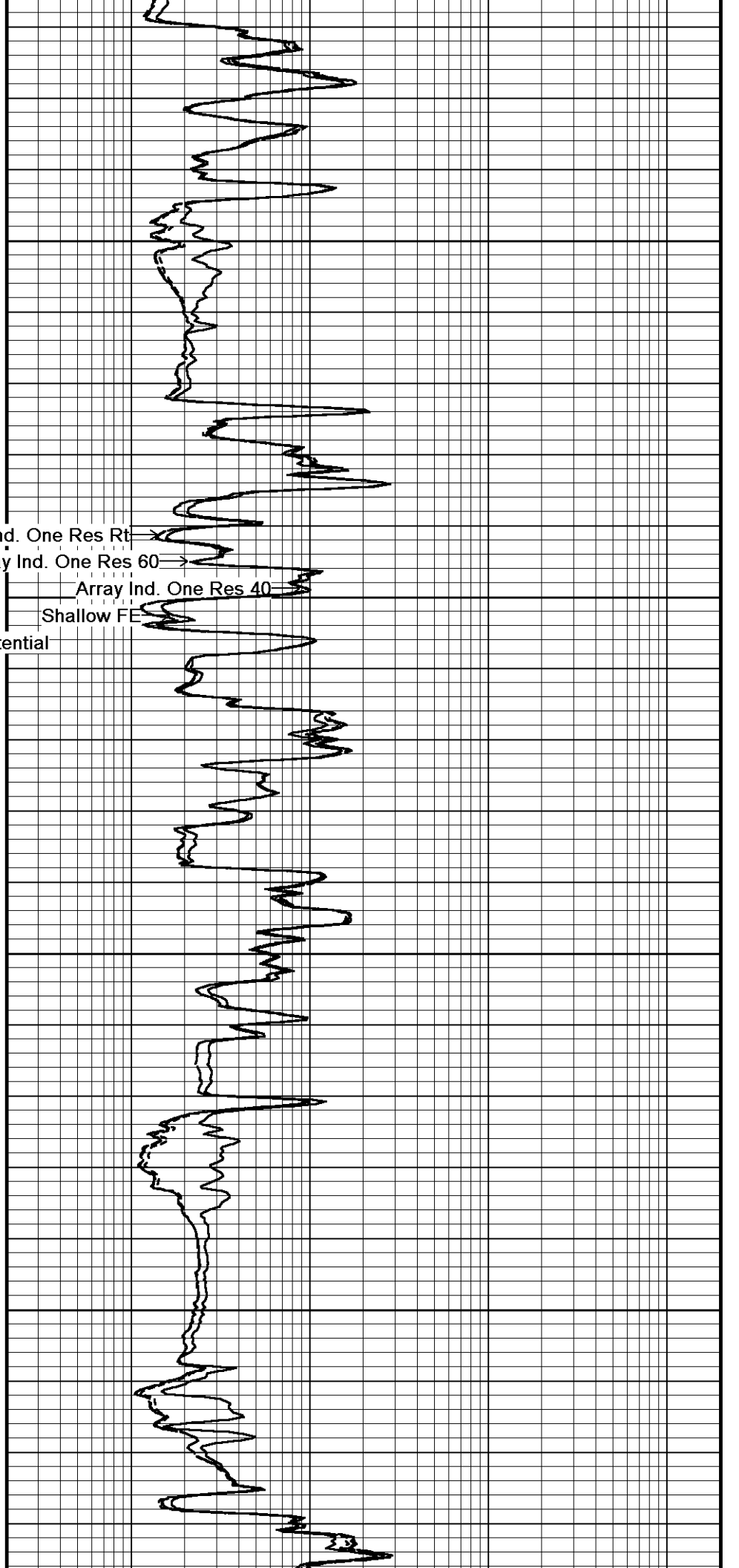
2750

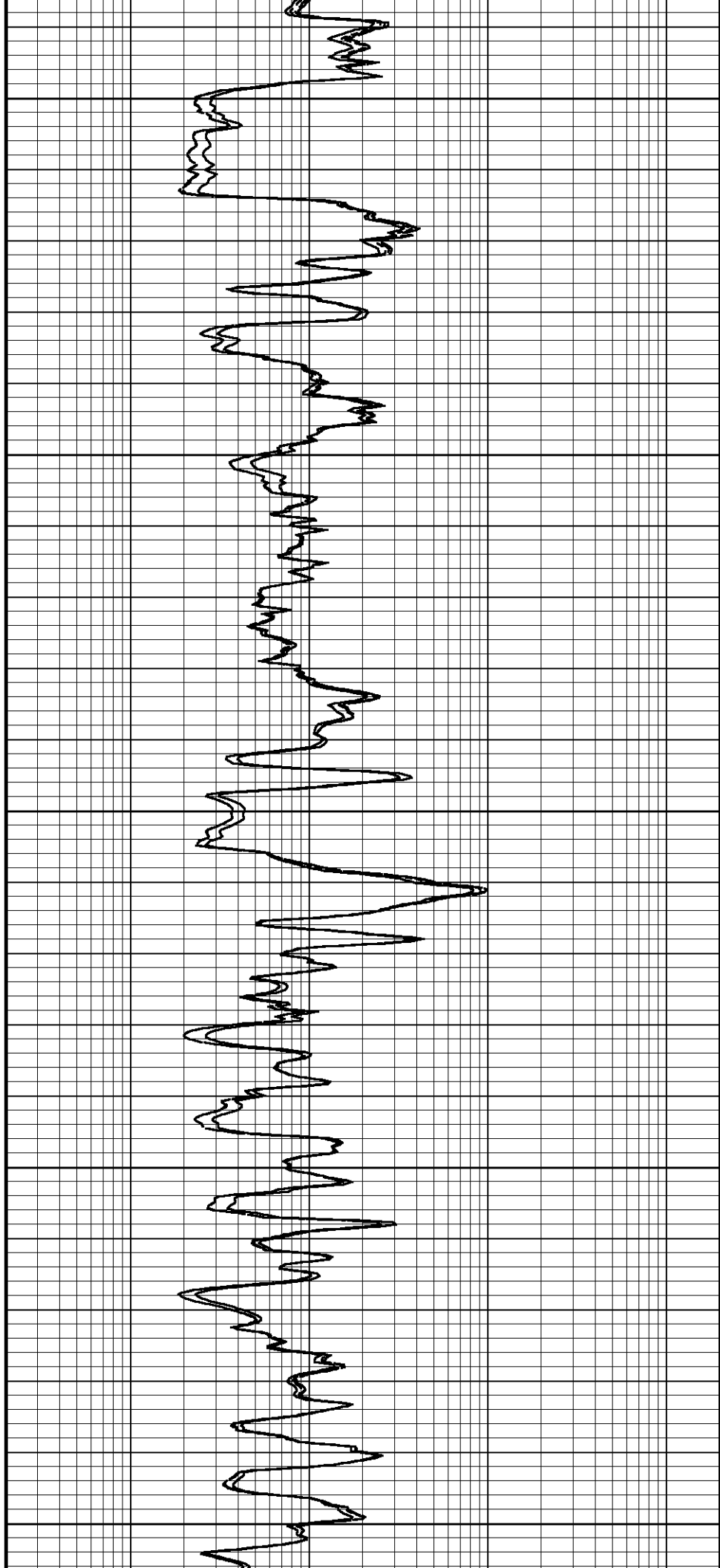
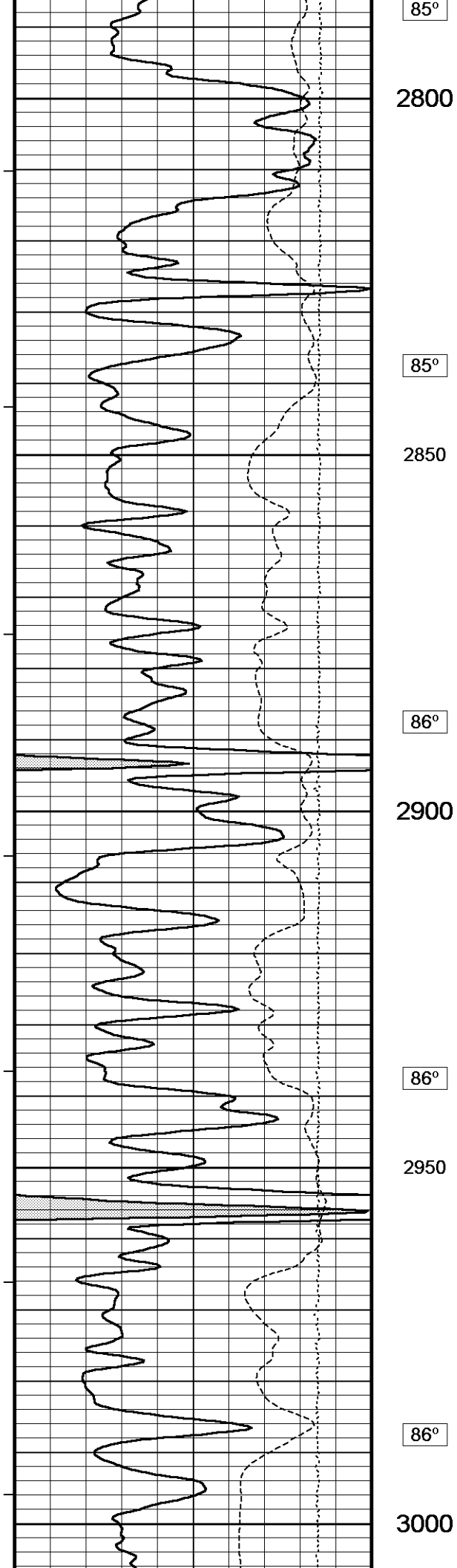
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FE

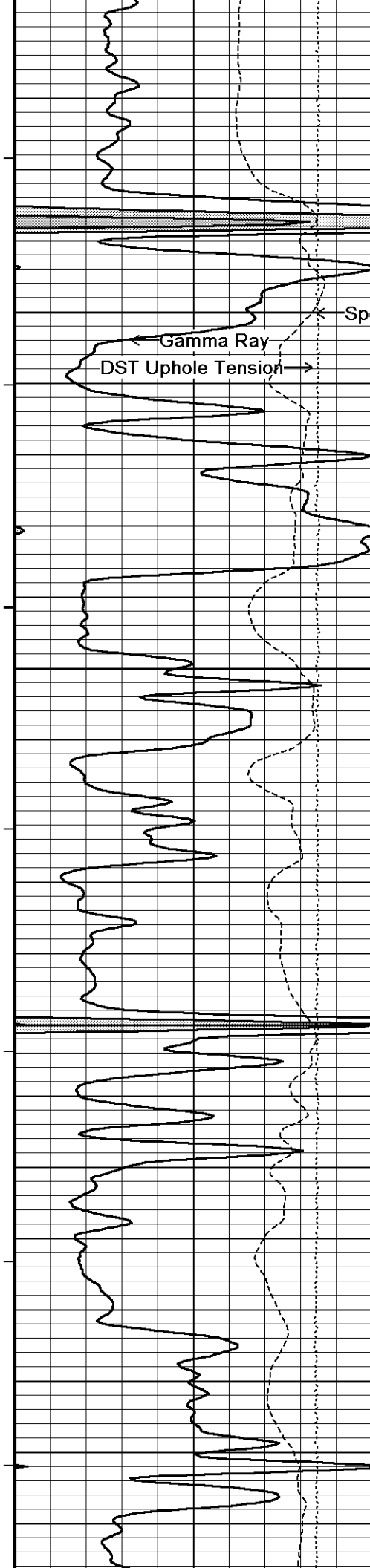
Spontaneous Potential

Gamma Ray

DST Uphole Tension





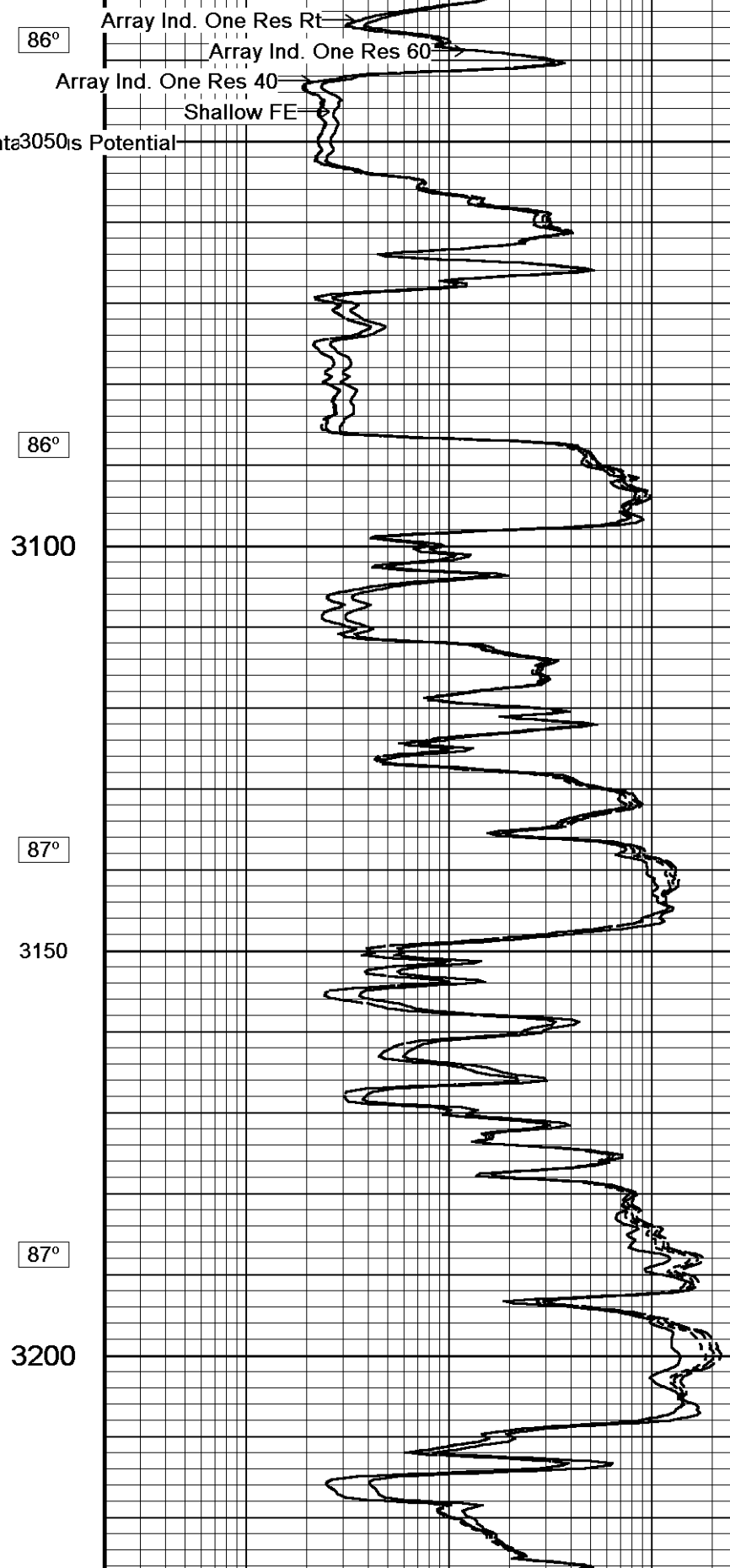


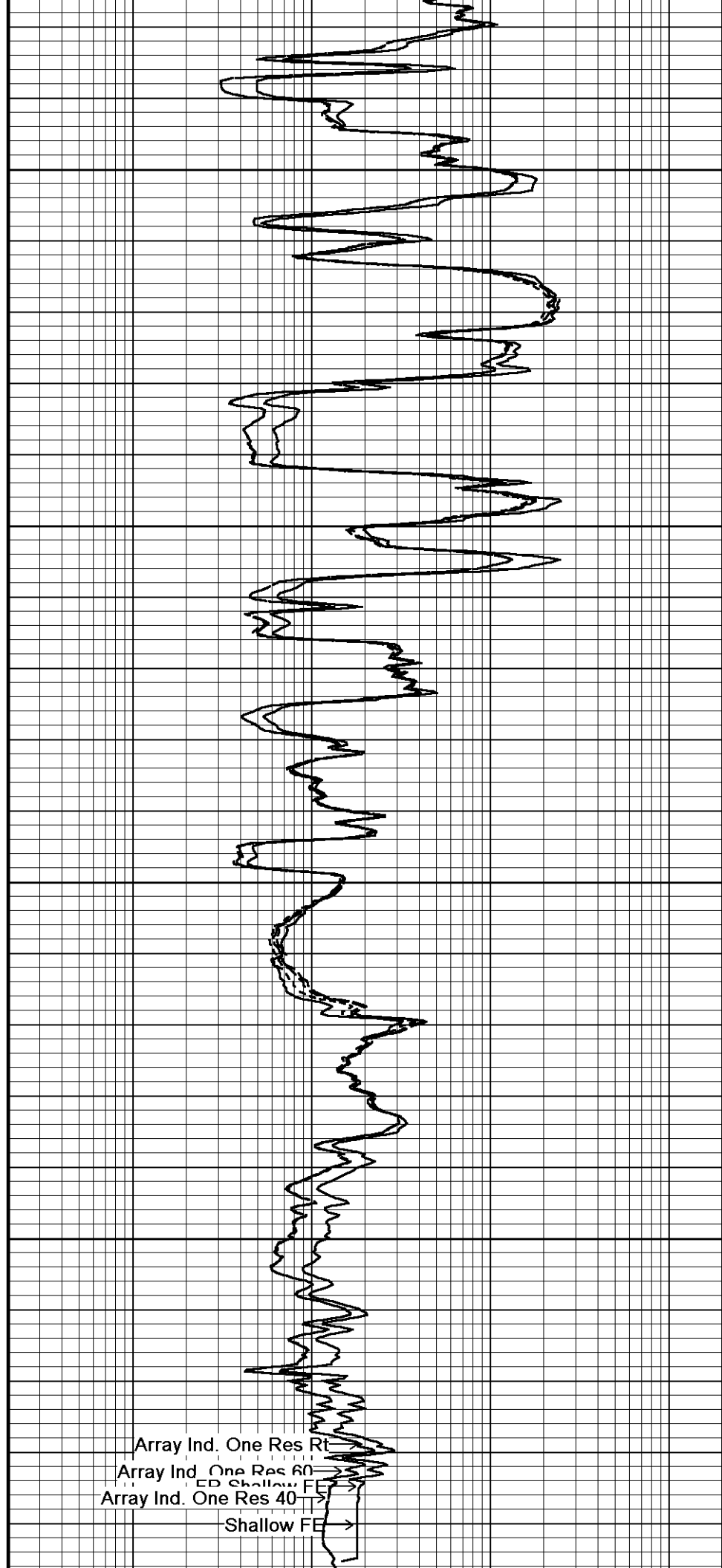
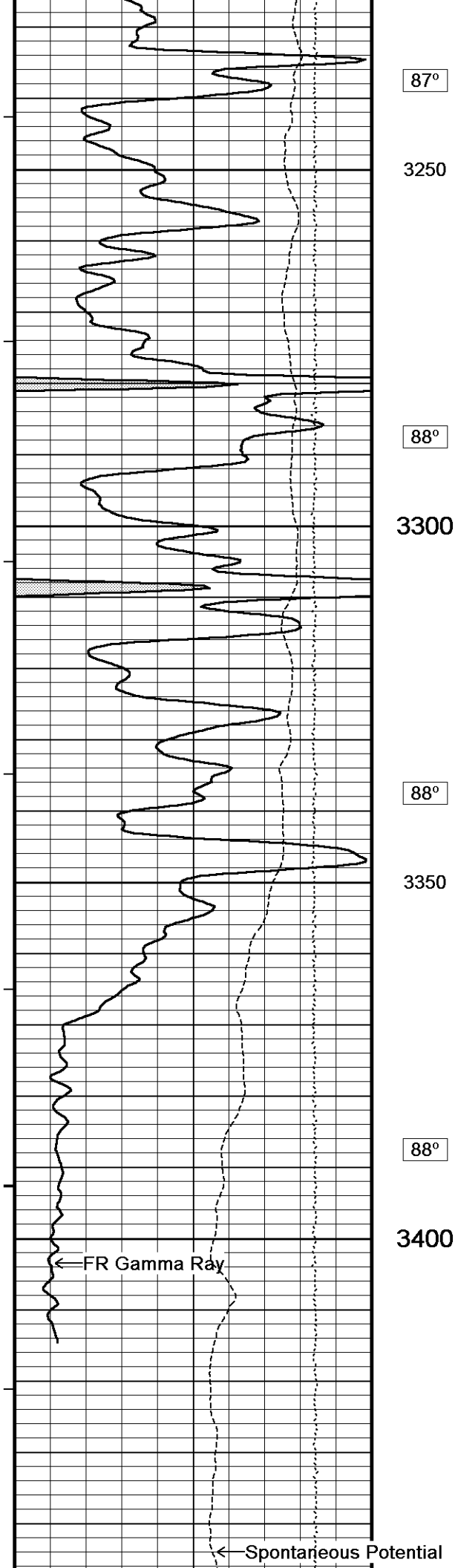
86°

86°

87°

87°





DST Uphole Tension
pounds

5000 0

Replay
Scale
1:240

3200

86°

3250

87°

3300

87°

3350

87°

Array Ind. One Res Rt
ohm metres

0.20

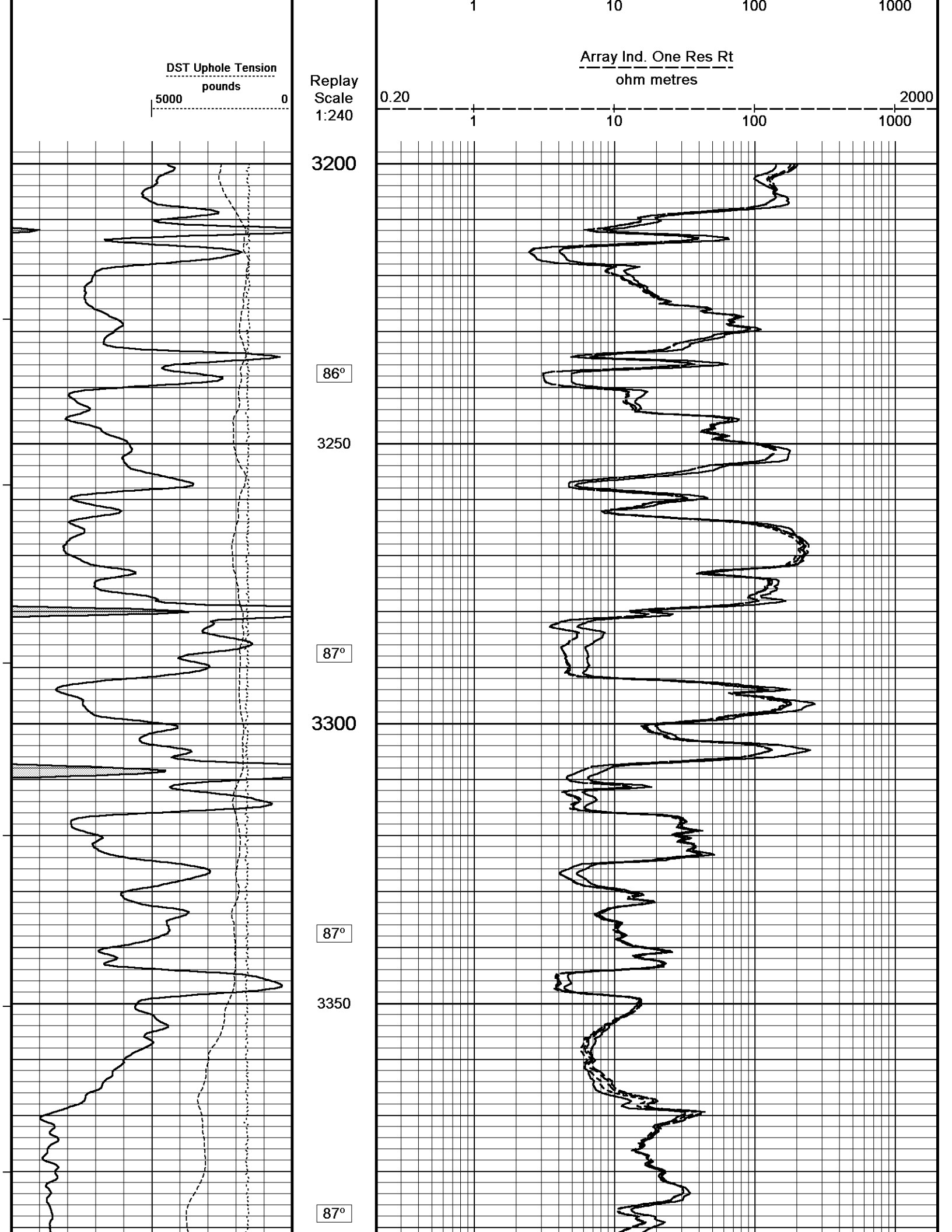
1

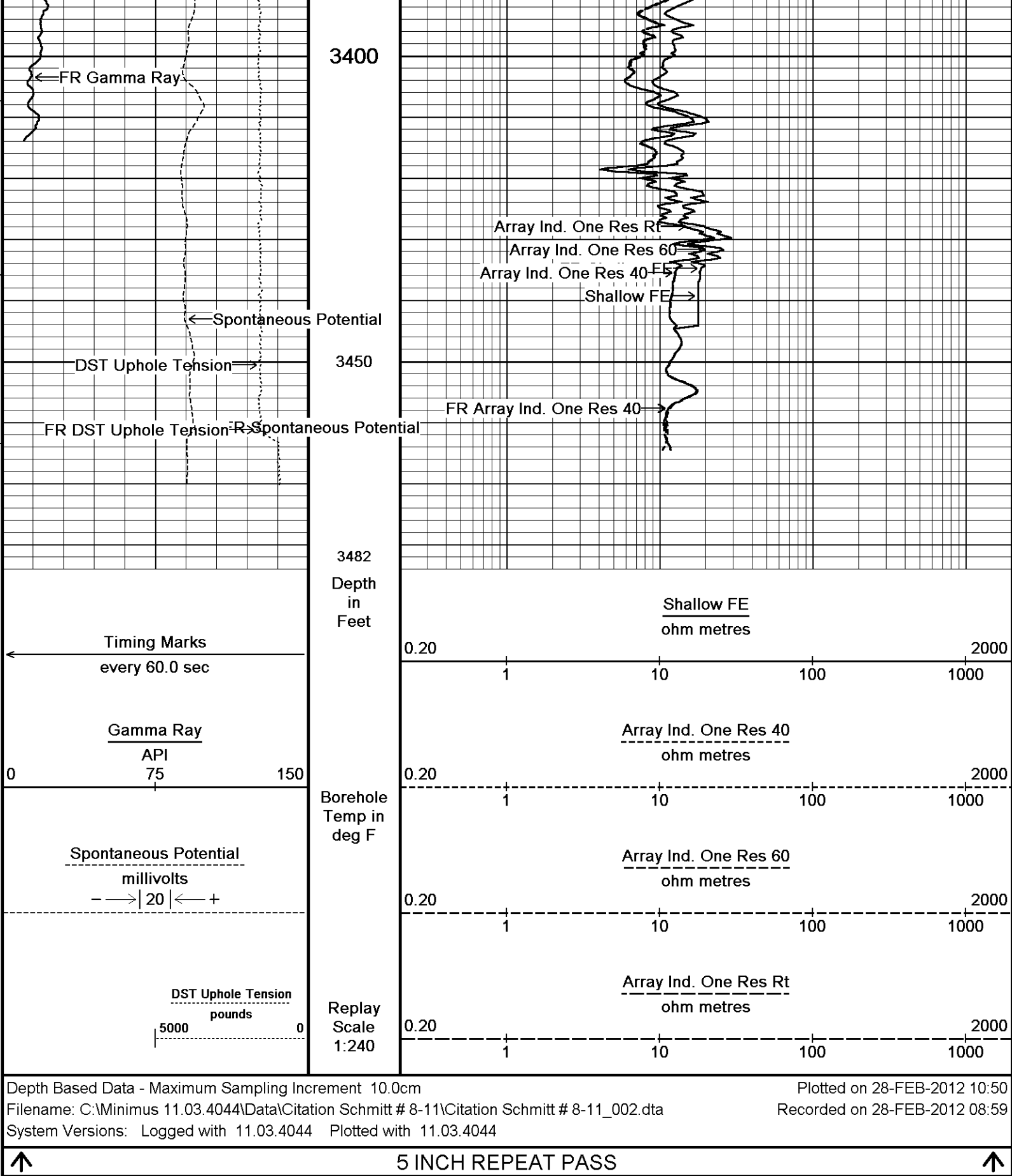
10

100

1000

2000





BEFORE SURVEY CALIBRATION

C:\Minimus 11.03.4044\Data\Citation Schmitt # 8-11\Citation Schmitt # 8-11_003.dta

General Constants All 000

Last Edited on 28-FEB-2012,07:50

General Parameters

Mud Resistivity

1.040

ohm-metres

Mud Resistivity Temperature	70.000	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	Limestone Density Por.	
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 24-DEC-2011 19:14
Reading No	Measured	Calibrated (lbs)	
1	13180.10	0.00	
2	14049.87	408.00	

Gamma Calibration MCG-D.K 442			Field Calibration on 27-FEB-2012 09:38
	Measured	Calibrated (API)	
Background	69	47	
Calibrator (Gross)	1134	772	
Calibrator (Net)	1065	725	

Gamma Constants MCG-D.K 442			Last Edited on 28-FEB-2012,07:50
Gamma Calibrator Number	grc38		
Mud Density	1.06	gm/cc	
Caliper Source for Processing	Density Caliper		
Tool Position	Eccentred		
Concentration of KCl	0.00	kppm	

SP Calibration MCG-D.K 442			Field Calibration on 06-FEB-2012 10:17
	Measured	Calibrated (mV)	
Reference 1	101.0	100.0	
Reference 2	-99.9	-100.0	

High Resolution Temperature Calibration MCG-D.K 442			Field Calibration on 02-DEC-2011,12:34
	Measured	Calibrated(Deg F)	
Lower	50.00	50.00	
Upper	75.00	75.00	

High Resolution Temperature Constants MCG-D.K 442			Last Edited on 25-SEP-2011,21:25
Pre-filter Length	11		

Caliper Calibration MML-A 4			Base Calibration on 13-FEB-2012 09:03 Field Calibration on 27-FEB-2012 09:30
Base Calibration			
Reading No	Measured	Calibrator Size (in)	
1	15017	5.98	
2	18447	7.97	
3	21786	9.86	
4	25801	11.92	
5	0	0.00	
6	N/A	N/A	
Field Calibration			
	Measured Caliper (in)	Actual Caliper (in)	
	6.07	5.98	

Micro Normal and Micro Inverse Calibration MML-A 4			Base Calibration on 13-FEB-2012 09:11 Field Check on 27-FEB-2012 09:28
Base Calibration			
	Measured	Calibrated (ohm-m)	
Channel	Register 1 Register 2	Register 1 Register 2	

Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Micro Normal	12.2	60.2	2.6	12.8
Micro Inverse	15.7	78.3	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 4				Last Edited on 27-FEB-2012,09:27
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			
Neutron Calibration MDN-A.B 65				Base Calibration on 13-FEB-2012 14:25 Field Check on 27-FEB-2012 09:42
Base Calibration				
	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3053	95	3714	110
Ratio	32.113		33.764	
Field Calibrator at Base			Calibrated (cps)	
			1672	2379
Ratio	0.703			
Field Check			Calibrated (cps)	
			1684	2404
Ratio	0.701			
Neutron Constants MDN-A.B 65				Last Edited on 28-FEB-2012,07:50
Neutron Source Id	14035B			
Neutron Jig Number	5824NE			
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	4.26		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	
Formation Fluid Salinity Source	Constant Value			
Formation Fluid Salinity	0.00		kppm	
Barite Mud Correction	Not Applied			
FE Calibration MFE-A.A 55				Base Calibration on 13-FEB-2012 09:17 Field Check on 27-FEB-2012 09:20
Base Calibration				
	Measured		Calibrated (ohm-m)	
Reference 1	0.0		0.0	
Reference 2	951.6		126.8	
Base Check			281.6	
Field Check			281.6	
FE Constants MFE-A.A 55				Last Edited on 28-FEB-2012,07:51
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 28-FEB-2012,07:51

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 Sonic	
Correction for Sonde Skew	Applied	
Cycle Stretch Algorithm	Applied	
MN3FT	N/A	micro-sec
MX3FT	N/A	micro-sec
Hunt-Raymer Constant	83.13	micro-sec/ft

Sonde Mode	Compensated
Hole Type	Open Hole

Sonde Parameters

	Measured	Calibrated
Offset	N/A	0.0000
Free Pipe	N/A	N/A
Peak Amplitude Source		N/A

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)
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

Full Waveform Parameters

Use 3' Waveform to derive TR	N/A
Use 4' Waveform to derive TR	N/A
Use 5' Waveform to derive TR	N/A
Use 6' Waveform to derive TR	N/A
3' Waveform Discriminator Level	N/A mV
4' Waveform Discriminator Level	N/A mV
5' Waveform Discriminator Level	N/A mV
6' Waveform Discriminator Level	N/A mV
3' Waveform Filter	N/A
4' Waveform Filter	N/A
5' Waveform Filter	N/A
6' Waveform Filter	N/A
Semblance Level	N/A
Semblance Window Width	N/A micro-sec
Sonic 1 Despiker	N/A
Sonic 2 Despiker	N/A

High Resolution Temperature Calibration MAI-A.A 45

Field Calibration on 12-JAN-2012,13:36

	Measured	Calibrated(Deg F)
Lower	50.00	50.00
Upper	100.00	100.00

High Resolution Temperature Constants MAI-A.A 45

Last Edited on 12-JAN-2012,11:13

Pre-filter Length	11
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Induction Calibration MAI-A.A 45

Base Calibration on 12-JAN-2012,13:34
Field Check on 27-FEB-2012 09:19

Base Calibration	
Test Loop Calibration	Measured
	Calibrated (mmho/m)

Channel	Low	High	Low	High
1	14.4	472.6	9.3	966.2
2	5.7	374.0	7.6	821.4
3	3.4	261.2	5.2	566.0
4	2.5	133.9	2.6	279.2

Array Temperature 79.4 Deg F

Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1	0.0	0.0	18.4	3850.6
2	0.0	0.0	31.6	3628.7
3	0.0	0.0	28.6	3048.9
4	0.0	0.0	18.3	2078.8
Deep	0.0	0.0	16.0	1910.9
Medium	0.0	0.0	42.5	4059.9
Shallow	0.0	0.0	49.5	5482.0
Array Temperature		0.0		60.9 Deg F

Induction Constants MAI-A.A 45

Last Edited on 28-FEB-2012,07:51

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 64

Base Calibration on 13-FEB-2012 10:56
Field Calibration on 27-FEB-2012 09:26

Base Calibration		
Reading No	Measured	Calibrator Size (in)
1	13425	3.99
2	22192	5.98
3	30768	7.97
4	39024	9.86
5	48432	11.92
6	N/A	N/A

Field Calibration

Measured Caliper (in)
5.91Actual Caliper (in)
5.98

Photo Density Calibration MPD-B 64

Base Calibration on 13-FEB-2012 11:14
Field Check on 27-FEB-2012 09:25

Density Calibration

Base Calibration

Measured

Calibrated (sdu)

Near

Far

Near

Far

Reference 1

47670

25060

59556

30836

Reference 2

19597

2525

24941

2541

Field Check at Base

1199.0

1386.9

Field Check

1204.9

1393.5

PE Calibration

Base Calibration

Measured

Calibrated

WS

WH

Ratio

Ratio

Background

218

1072

Reference 1

18017

47489

0.383

0.371

Reference 2

5304

19465

0.276

0.272

Field Check at Base

218.3

1071.8

Field Check

216.5

1076.6

Density Constants MPD-B 64

Last Edited on 28-FEB-2012,07:50

Density Source Id

254

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

1.06

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

DOWNHOLE EQUIPMENT

C:\Minimus 11.03.4044\Data\Citation Schmitt # 8-11\Citation Schmitt # 8-11_003.dta

MCB-A.A 11B Tension Cablehead

MCB-A.A 175 LG: 2.40 ft WT: 19.8 lb OD: 2.24 in

MCB-A.A 11B Tension Cablehead

MCB-A.A 175 LG: 2.40 ft WT: 19.8 lb OD: 2.24 in

Compact Comms Gamma

MCG-D.K 442 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in



Compact Comms Gamma
MCG-D.K 442 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Micro-log
MML-A 4 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

Compact Micro-log
MML-A 4 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

Compact Neutron
MDN-A.B 65 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Neutron
MDN-A.B 65 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper
MPD-B 64 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

Compact Density/Caliper
MPD-B 64 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

SKJ-D.A Compact Knuckle Joint
SKJ-D.A 37 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

SKJ-D.A Compact Knuckle Joint
SKJ-D.A 37 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

Compact Focussed Electric
MFE-A.A 55 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Focussed Electric
MFE-A.A 55 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

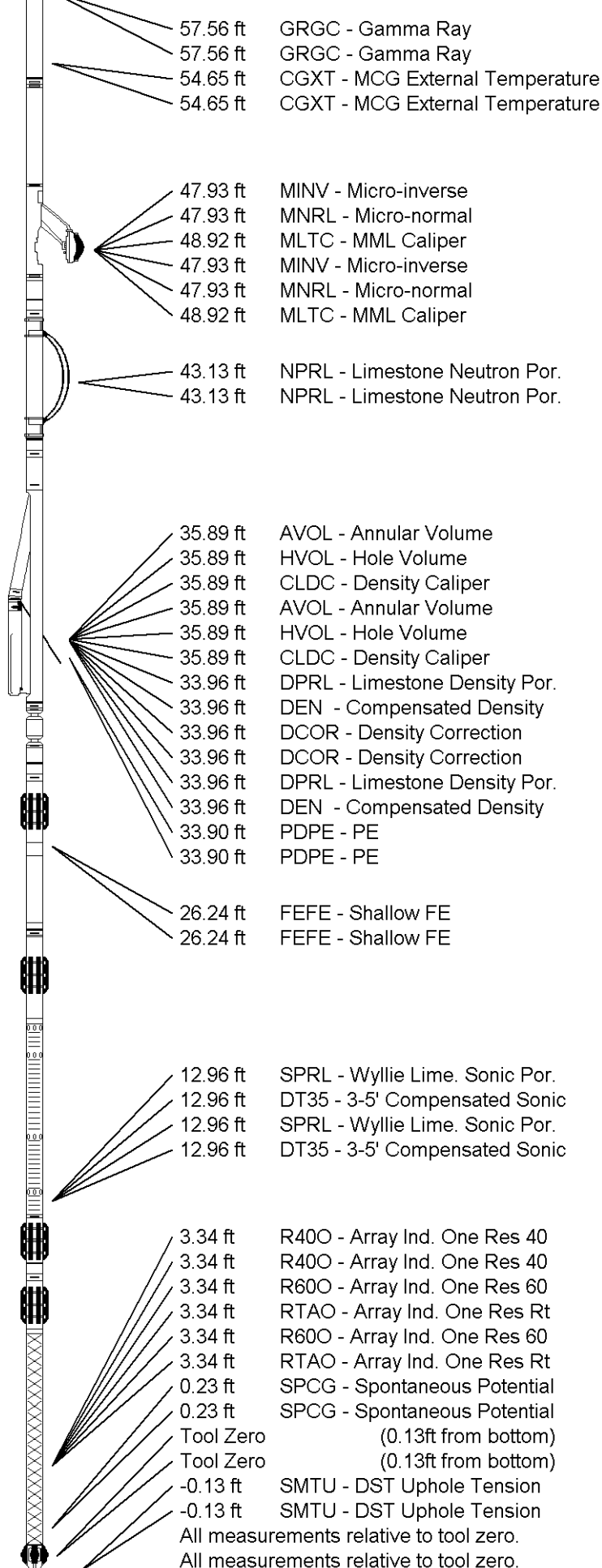
Compact Sonic
MSS-C.K 330 LG: 12.52 ft WT: 72.8 lb OD: 2.24 in

Compact Induction
MAI-A.A 45 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Compact Induction
MAI-A.A 45 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 65.24 ft Weight: 500.4 lb

Total Length: 65.24 ft Weight: 500.4 lb



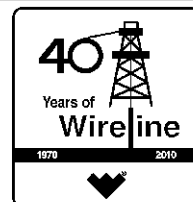
WELL SCHMITT # 8-11
FIELD FAIRPORT
PROVINCE/COUNTY ELLIS
COUNTRY/STATE U.S.A. / KANSAS

Elevation Kelly Bushing	1948.00	feet	First Reading	3458.00	feet
Elevation Drill Floor	1946.00	feet	Depth Driller	3460.00	feet
Elevation Ground Level	1940.00	feet	Depth Logger	3461.00	feet

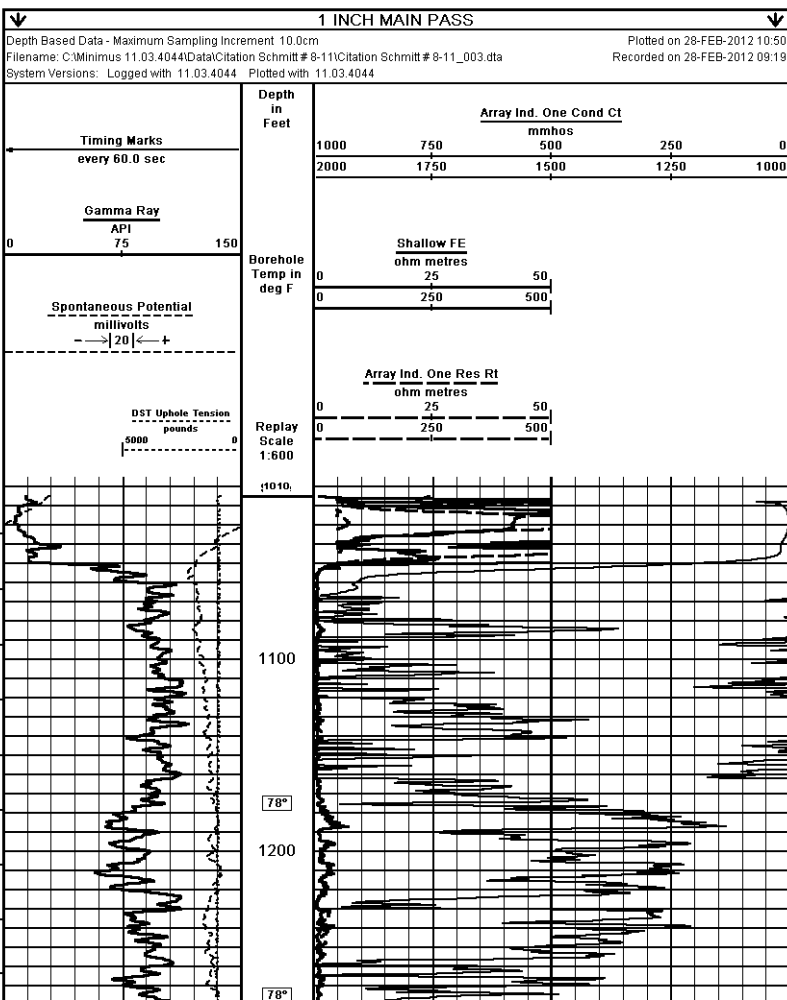


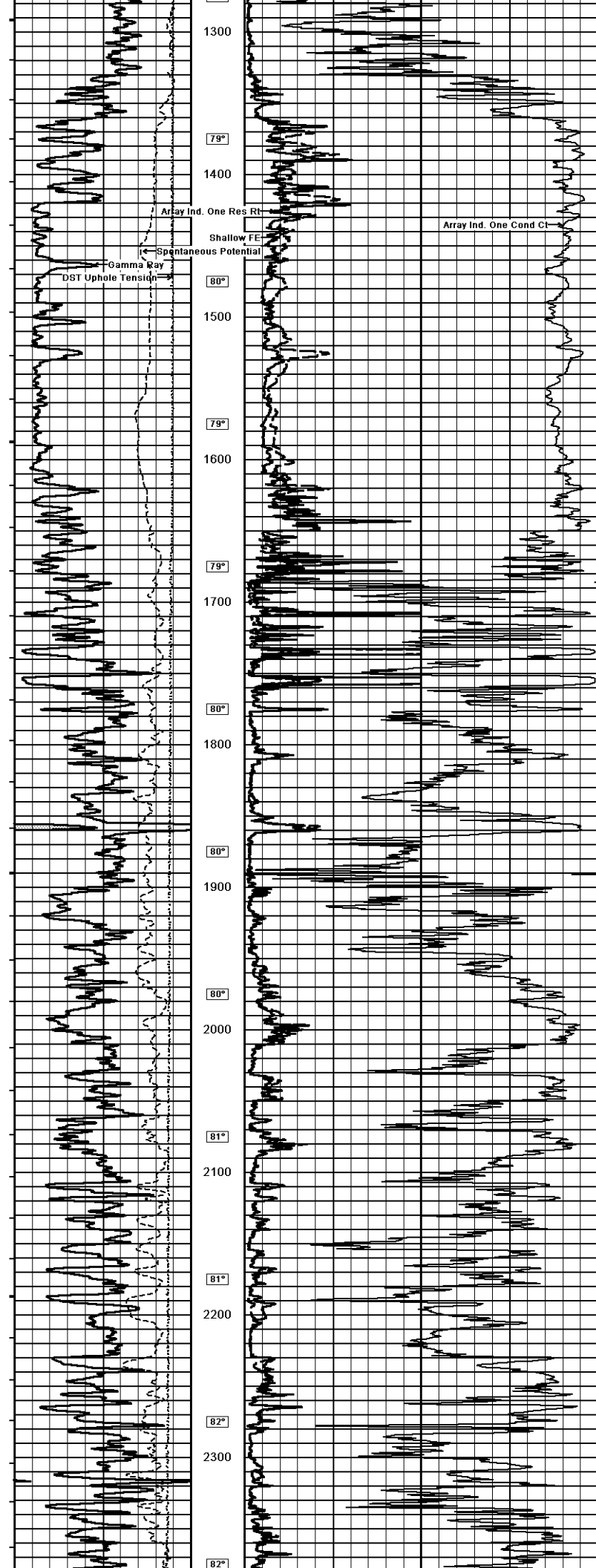
Weatherford®

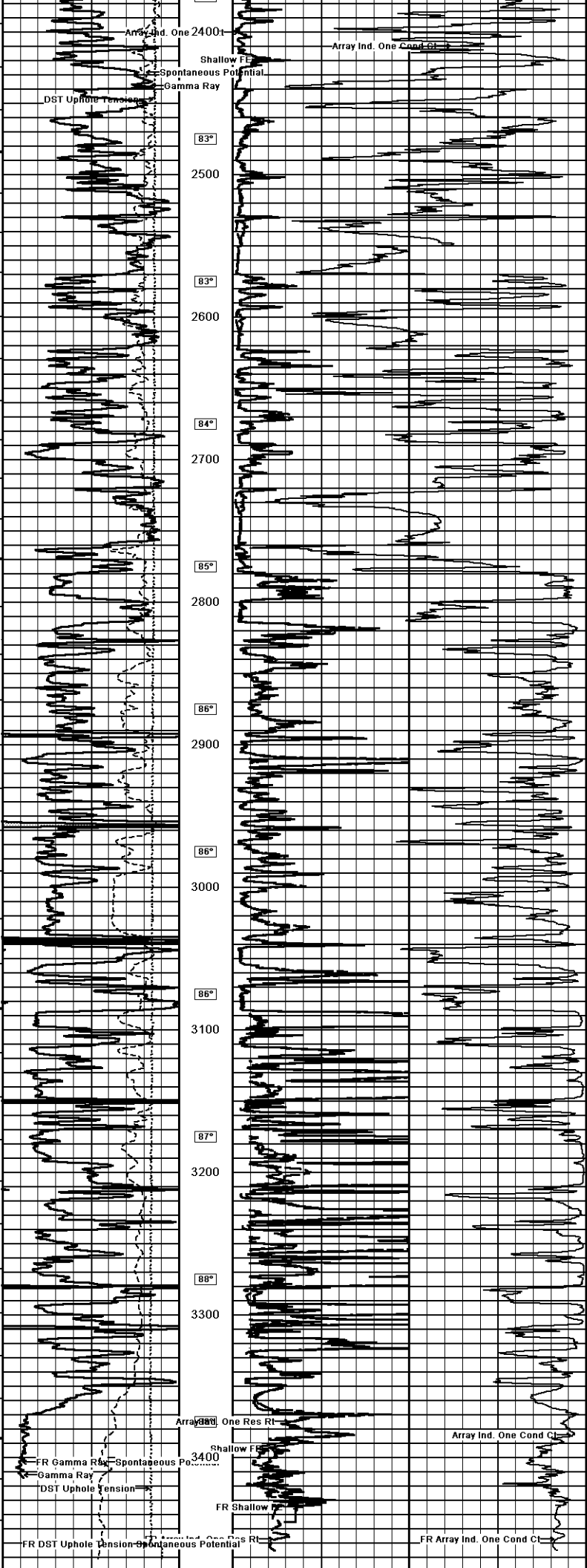
ARRAY INDUCTION
SHALLOW FOCUSED
ELECTRIC LOG

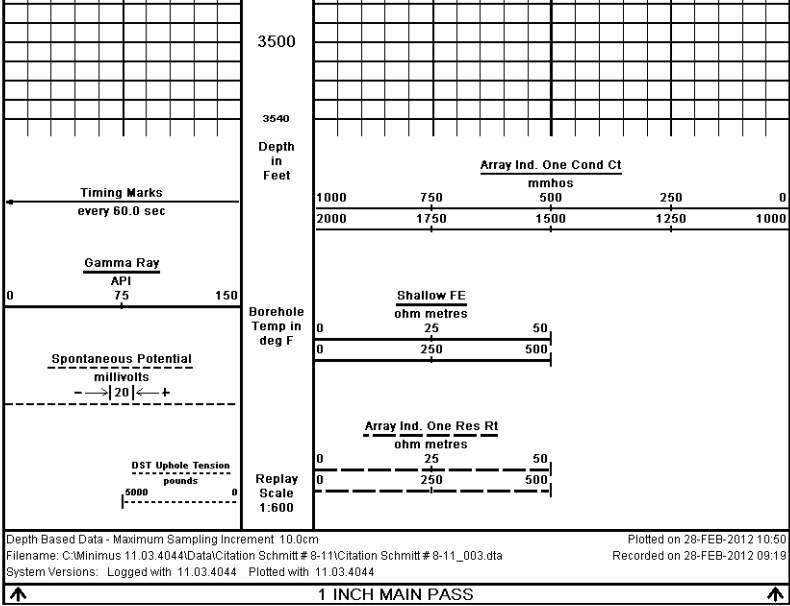


Weatherford		ARRAY INDUCTION SHALLOW FOCUSED ELECTRIC LOG	
COMPANY CITATION OIL & GAS CORP.			
WELL SCHMITT # 8-11			
FIELD FAIRPORT			
PROVINCE/COUNTY ELLIS			
COUNTRY/STATE U.S.A. / KANSAS			
LOCATION 293' FNL & 3455' FEL NE NW NE NW			
SEC 12	TWP 13S	R6E	Other Services
APN Number 15-061-26153	10W	14N	
Permanent Datum G.L. Elevation 1940 feet			
Log Measured From KB			
Drilling Measured From KB			
Date 28-FEB-2012			
Run Number ONE			
Depth Driller 3460.00	feet		
Depth Logger 3461.00	feet		
First Reading 3458.00	feet		
Last Reading 1015.00	feet		
Casing Driller 1015.00	feet		
Casing Logger 1015.00	feet		
Bit Size 7/8 1/2	inches		
How Fluid Type CHEMICAL			
Density/Viscosity 8.80 lb/cu ft	6.80 m/cu ft		
PPH/Fluid Loss 11.00			
Sample Source FLOWLINE			
Run @ Measured Temp 1.04 @ 70.0	ohm-m		
Run @ Measured Temp 0.83 @ 70.0	ohm-m		
Run @ Measured Temp 1.25 @ 70.0	ohm-m		
Source Print Rms CALC			
Run @ BHT 0.84 @ 98.0	ohm-m		
Time Since Circulation 4 HOURS			
Max Recorded Temp 88.00	deg F		
Equipment Name COMPACT			
Equipment Base 13067	LIB		
Recorded By A. GAMBALLO			
Witnessed By JOSH KULL			
S/O / JOB # 3534814			









COMPANY	CITATION OIL & GAS CORP.				
WELL	SCHMITT # 8-11				
FIELD	FAIRPORT				
PROVINCE/COUNTY	ELLIS				
COUNTRY/STATE	U.S.A. / KANSAS				
Elevation Kelly Bushing	1948.00	feet	First Reading	3458.00	feet
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ARRAY INDUCTION
SHALLOW FOCUSED
ELECTRIC LOG

