



Weatherford[®]

**ARRAY INDUCTION
SHALLOW FOCUSED
ELECTRIC LOG**

COMPANY				McCOY PETROLEUM CORPORATION			
WELL				MTPRC 'A' #3-27			
FIELD				ALFORD			
PROVINCE/COUNTY				KIOWA			
COUNTRY/STATE				U.S.A. / KANSAS			
LOCATION				710' FNL & 1320' FEL			
SEC 27	TWP 30S	RGE 19W	Other Services		MML		
Latitude		MPD/MDN					
Longitude							
API Number		15-097-21803					
Permanent Datum GL, Elevation 2238 feet							
Log Measured From KB							
Drilling Measured From KB @ 13 FEET							
Date	21-AUG-2014						
Run Number	ONE						
Service Order	4558-95825207						
Depth Driller	5225.00		feet				
Depth Logger	5224.00		feet				
First Reading	5221.00		feet				
Last Reading	650.00		feet				
Casing Driller	652.00		feet				
Casing Logger	650.00		feet				
Bit Size	7.875		inches				
Hole Fluid Type	CHEMICAL						
Density / Viscosity	9.50 lb/USg		66.00 CP				
PH / Fluid Loss	9.50		9.60 ml/30Min				
Sample Source	FLOWLINE						
Rm @ Measured Temp	0.56 @ 93.0		ohm-m				
Rmf @ Measured Temp	0.45 @ 93.0		ohm-m				
Rmc @ Measured Temp	0.67 @ 93.0		ohm-m				
Source Rmf / Rmc	CALC		CALC				
Rm @ BHT	0.47 @112.0		ohm-m				
Time Since Circulation	4 HOURS						
Max Recorded Temp	112.00		deg F				
Equipment / Base	13244		LIB				
Recorded By	ADAM SILL						
Witnessed By	ZACH WIELE						
JOB #	LB14-244						

BOREHOLE RECORD					Last Edited: 21-AUG-2014 16:34
Bit Size inches		Depth From feet		Depth To feet	
7.875		652.00		5225.00	
CASING RECORD					
Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft	
SURFACE	8.625	0.00	652.00	24.00	

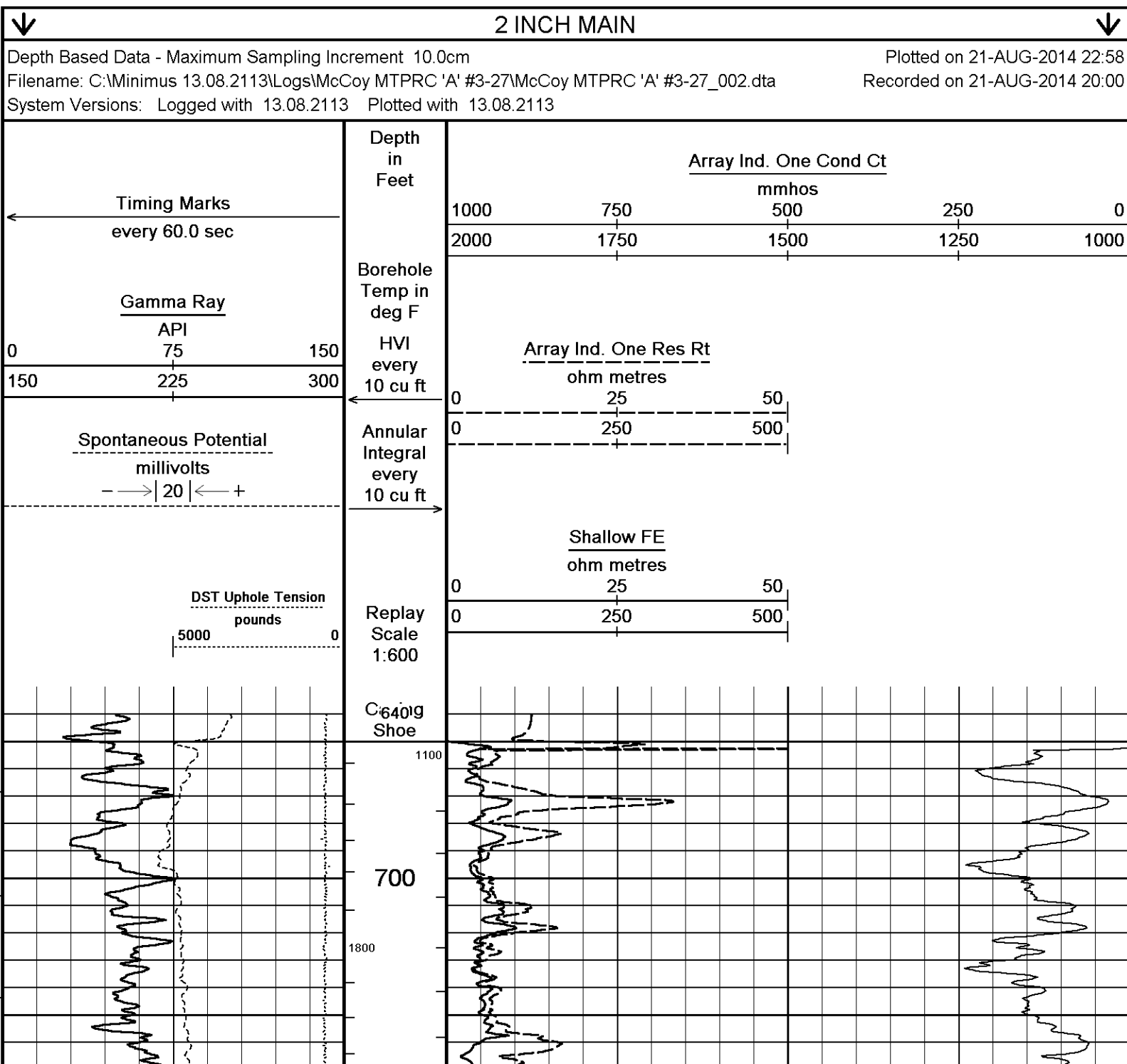
REMARKS
- SOFTWARE ISSUE: WLS 13.08.2113.
- RUN ONE: MCG, MML, MDN, MPD, MFE, MAI RUN IN COMBINATION. - HARDWARE: DUAL BOWSPRING USED ON MDN. 0.5 INCH STANDOFF USED ON MFE. 0.5 INCH STANDOFF USED ON MAI.
- 2.71 G/CC LIMESTONE DENSITY MATRIX USED TO CALCULATE POROSITY.
- BOREHOLE RUGOSITY, TIGHT PULLS, AND WASHOUTS WILL AFFECT DATA QUALITY.
- ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST.
- TOTAL HOLE VOLUME FROM TD TO SURFACE CASING: 1854 CU.FT.
- ANNULAR HOLE VOLUME WITH 5.5 INCH PRODUCTION CASING FROM TD TO 3900 FEET: 211 CU.FT.
- RIG: STERLING #5

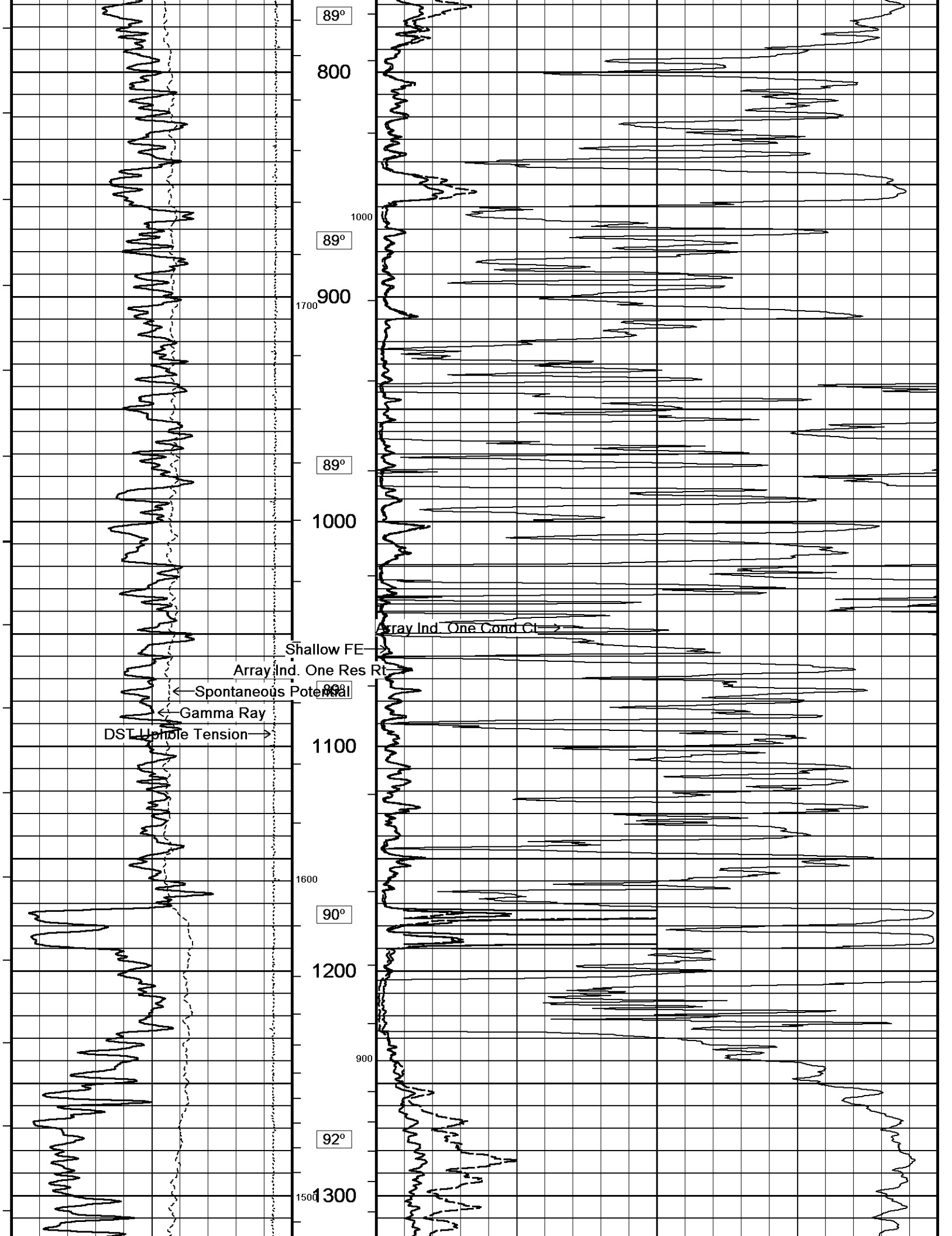
CRIS: OPERATOR: N. ADAME, J. DUNLAP.

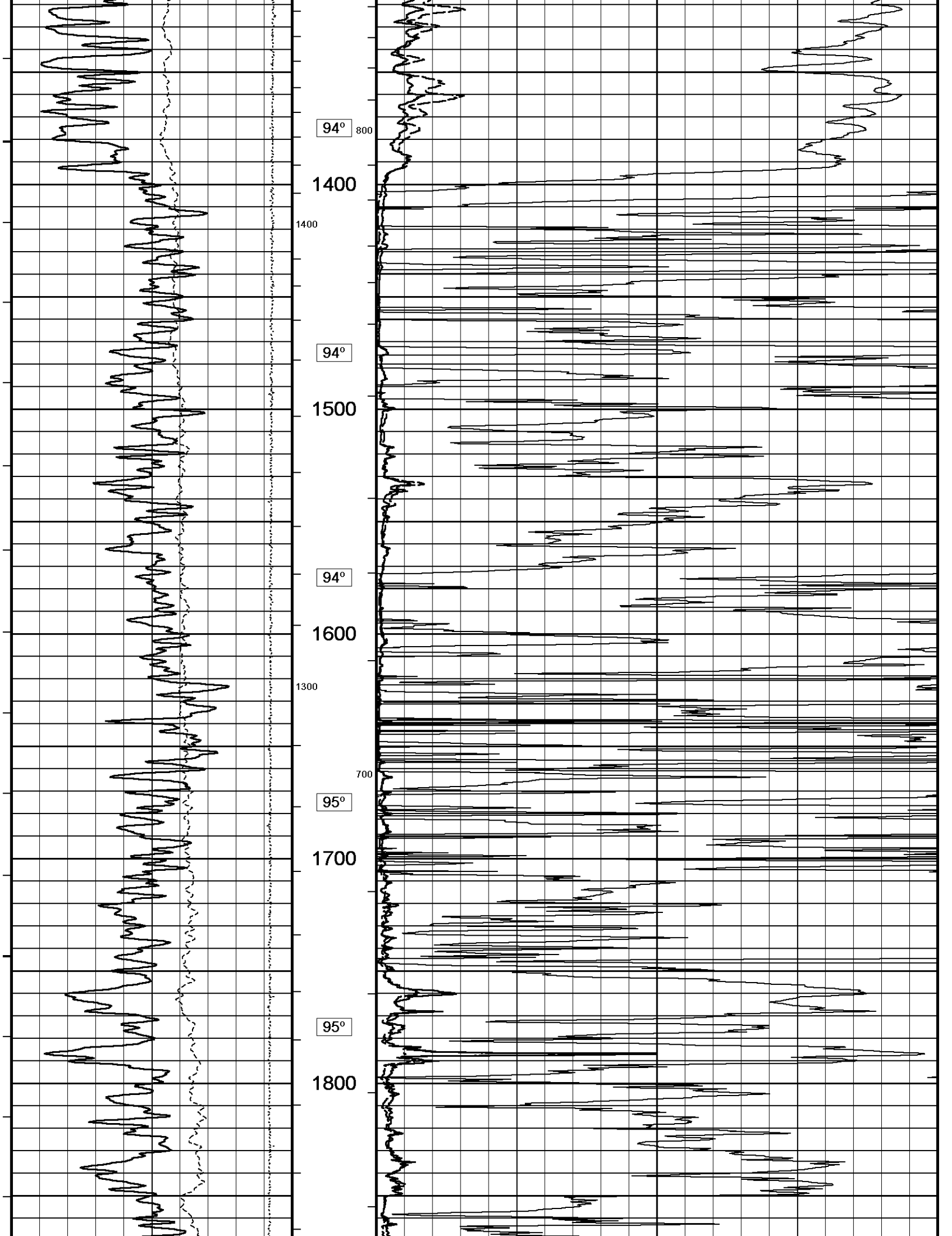
- ENGINEER: A. SILL.

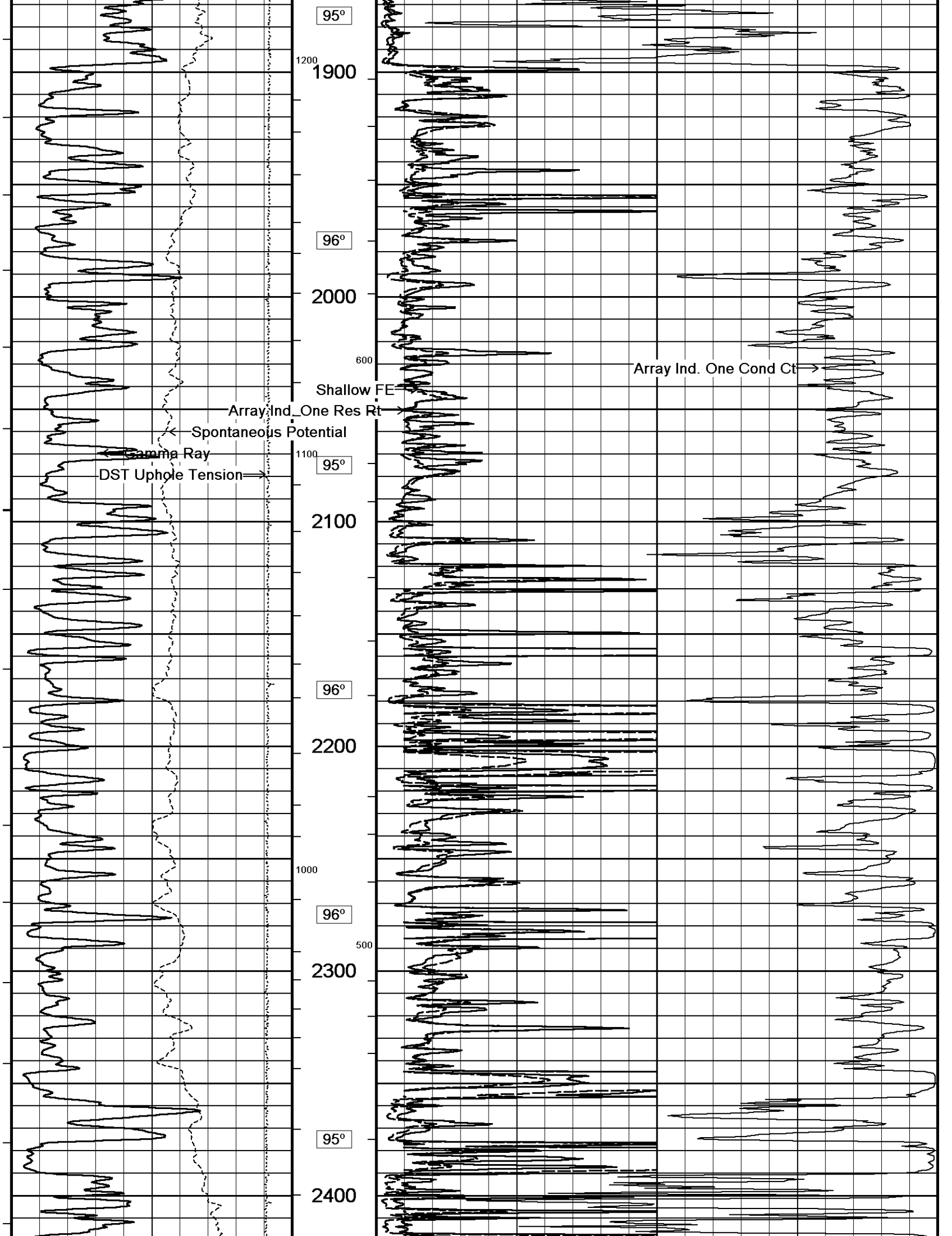
- OPERATOR: N. ADAME, J. DUNLAP.

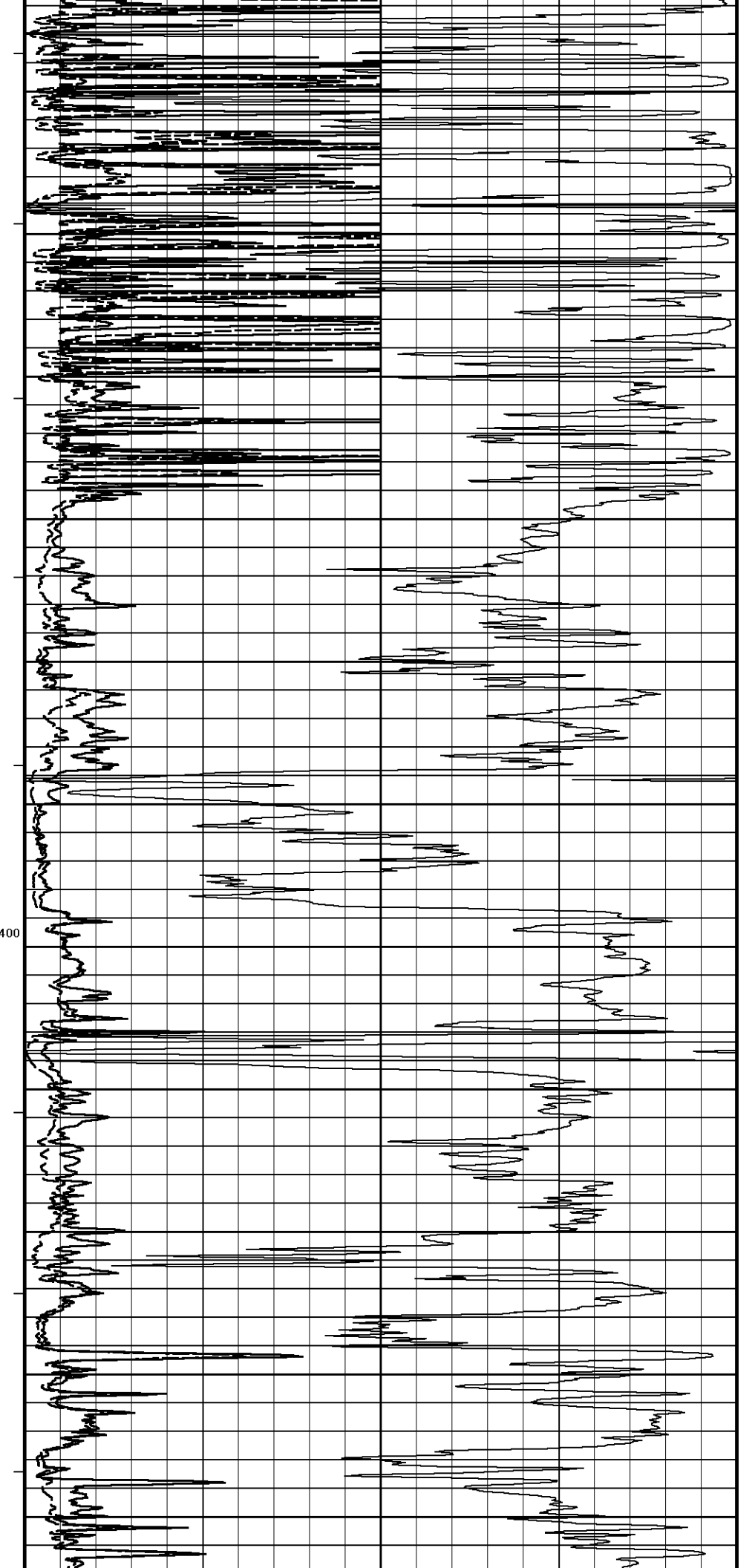
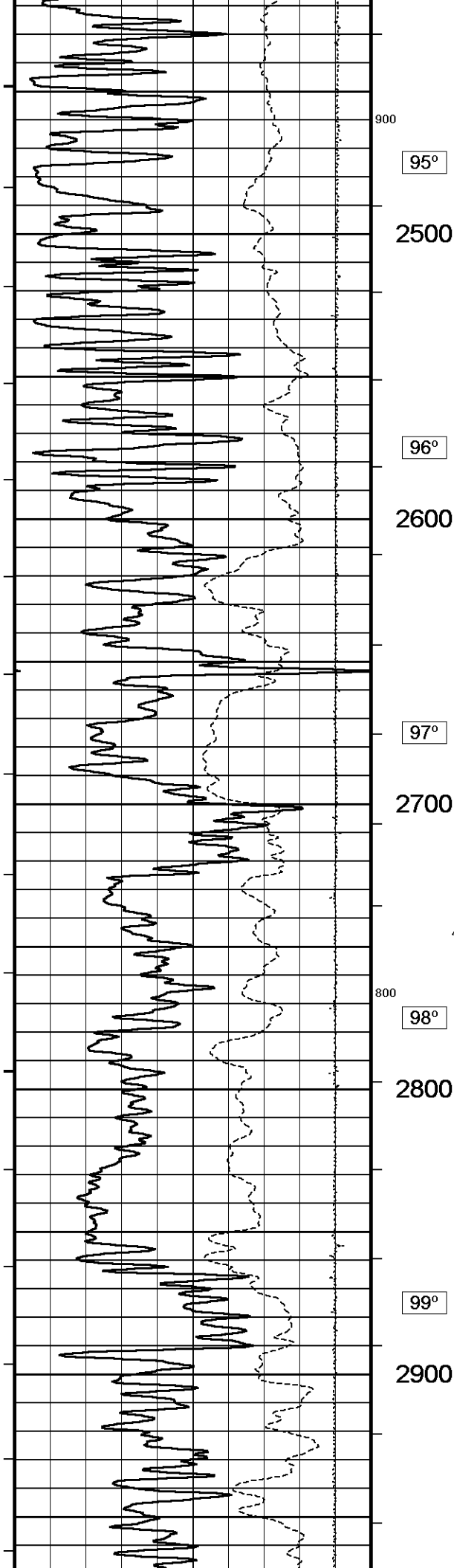
In interpreting, communicating or providing information and/or making recommendations, either written or oral, as to logs or test or other data, type or amount of material, or Work or other service to be furnished, or manner of performance, or in predicting results to be obtained, the Contractor will give the Company the benefit of the Contractor's best judgment based on its experience and will perform all such Work in a good and workmanlike manner. Any interpretation of test or other data, and any recommendation or reservoir description based upon such interpretations, are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and assumptions are not infallible, and with respect to which professional engineers and analysts may differ. ACCORDINGLY ANY INTERPRETATION OR RECOMMENDATION RESULTING FROM THE SERVICES WILL BE AT THE SOLE RISK OF THE COMPANY, AND THE CONTRACTOR CANNOT AND DOES NOT WARRANT THE ACCURACY, CORRECTNESS OR COMPLETENESS OF ANY SUCH INTERPRETATION OR RECOMMENDATION, WHICH INTERPRETATIONS AND RECOMMENDATIONS SHOULD NOT, THEREFORE, UNDER ANY CIRCUMSTANCES BE RELIED UPON AS THE SOLE OR MAIN BASIS FOR ANY DRILLING, COMPLETION, WELL TREATMENT, PRODUCTION OR FINANCIAL DECISION, OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING ACTIVITY, DRILLING RIG OR ITS CREW OR ANY OTHER INDIVIDUAL. THE COMPANY HAS FULL RESPONSIBILITY FOR ALL DECISIONS CONCERNING THE SERVICES.

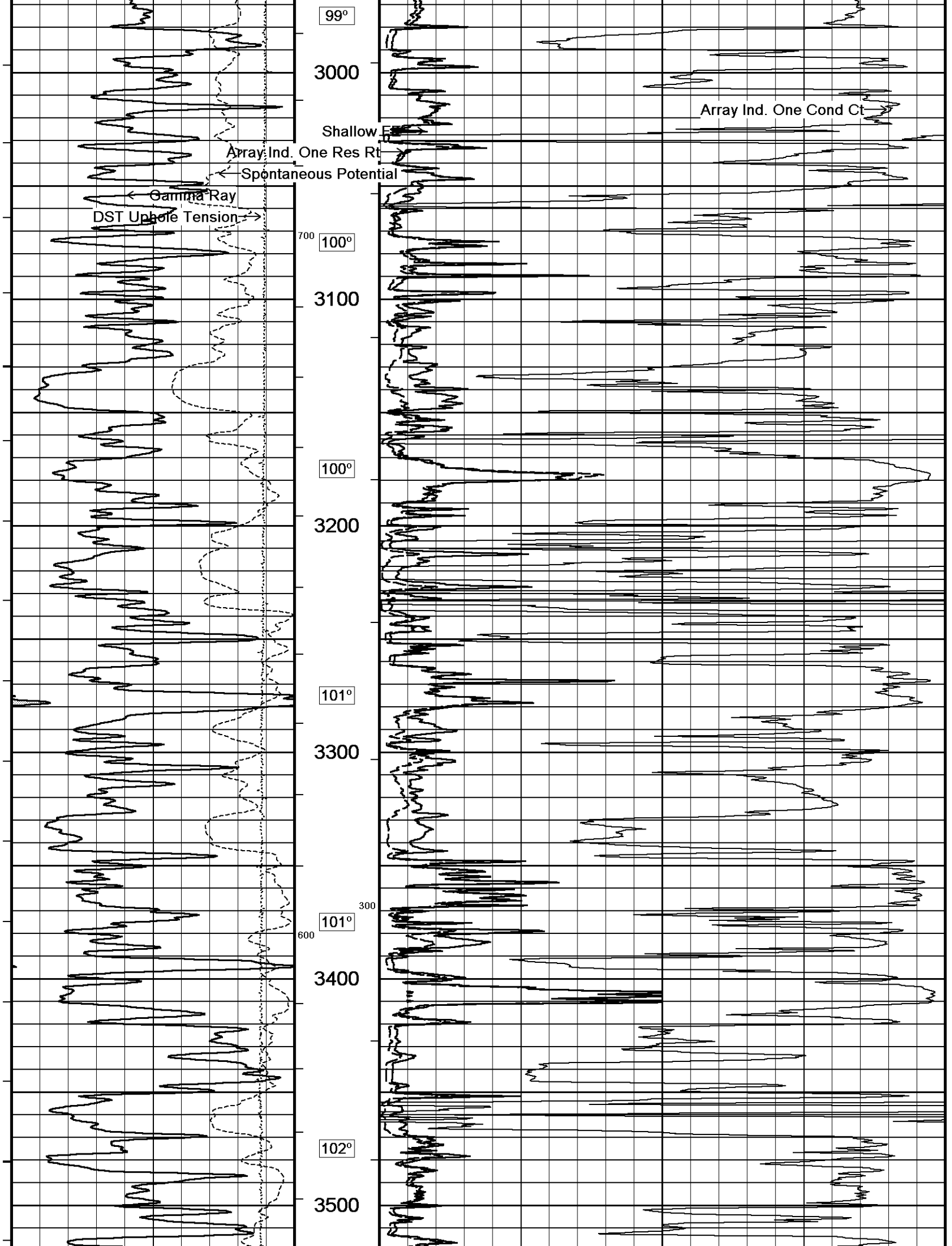


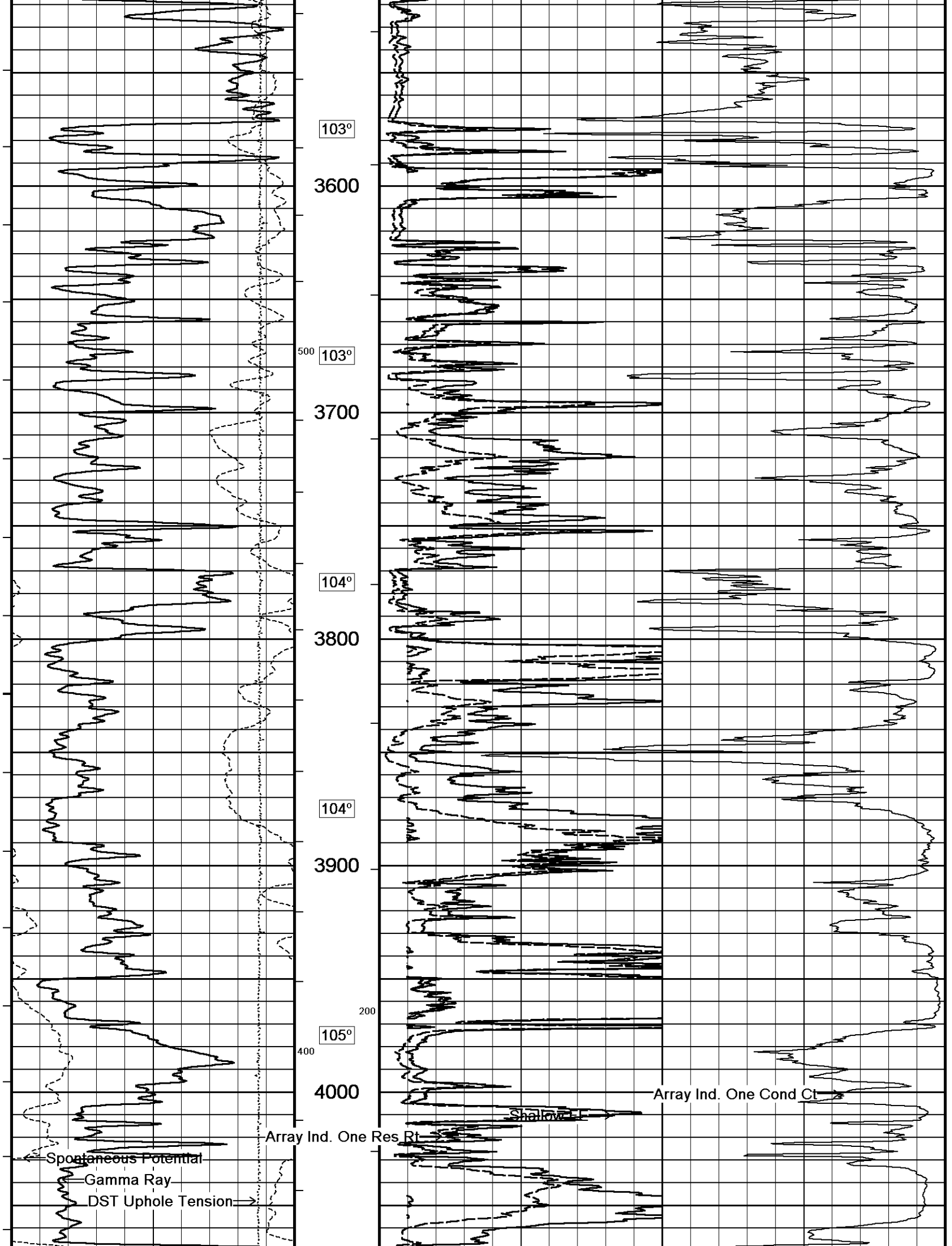


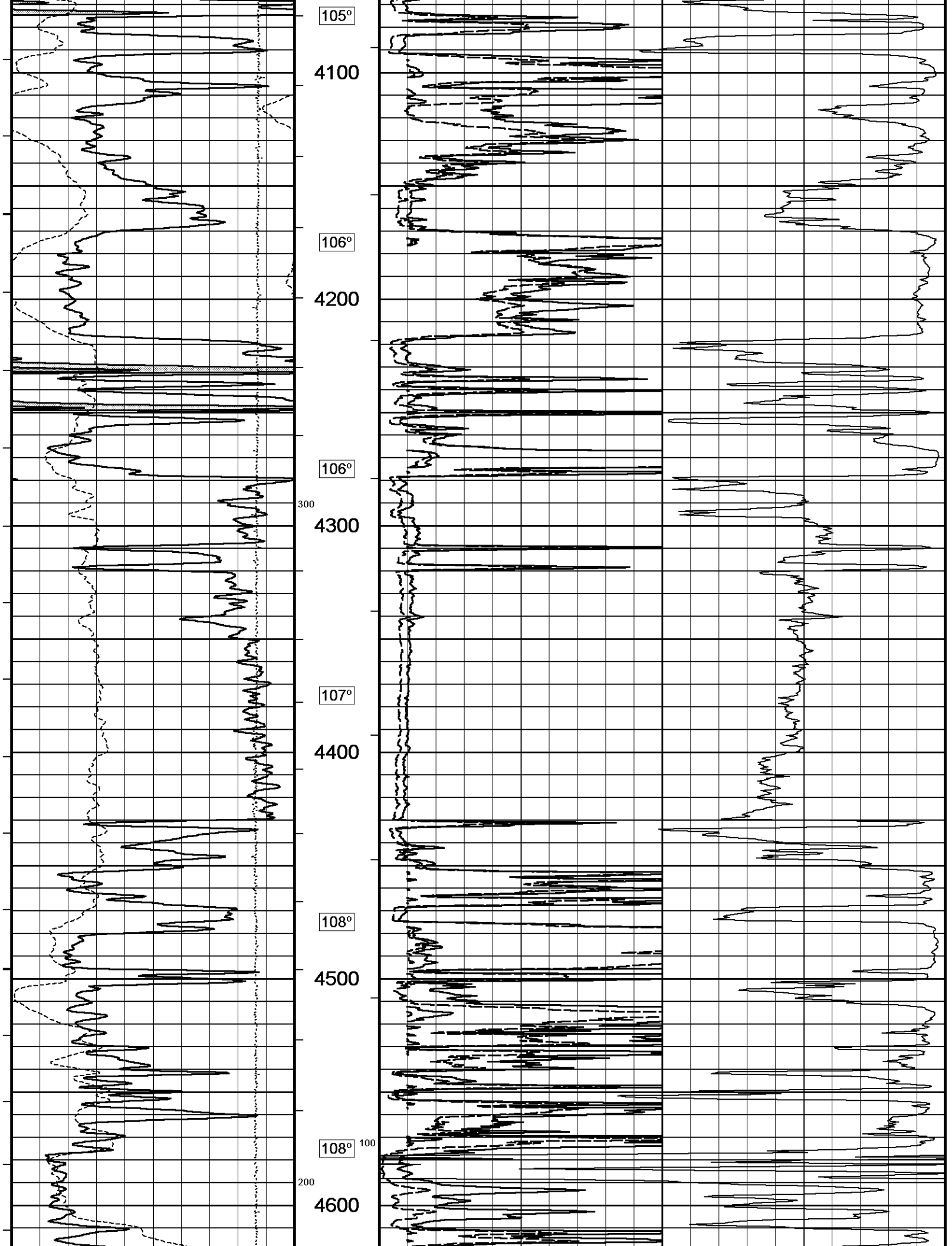


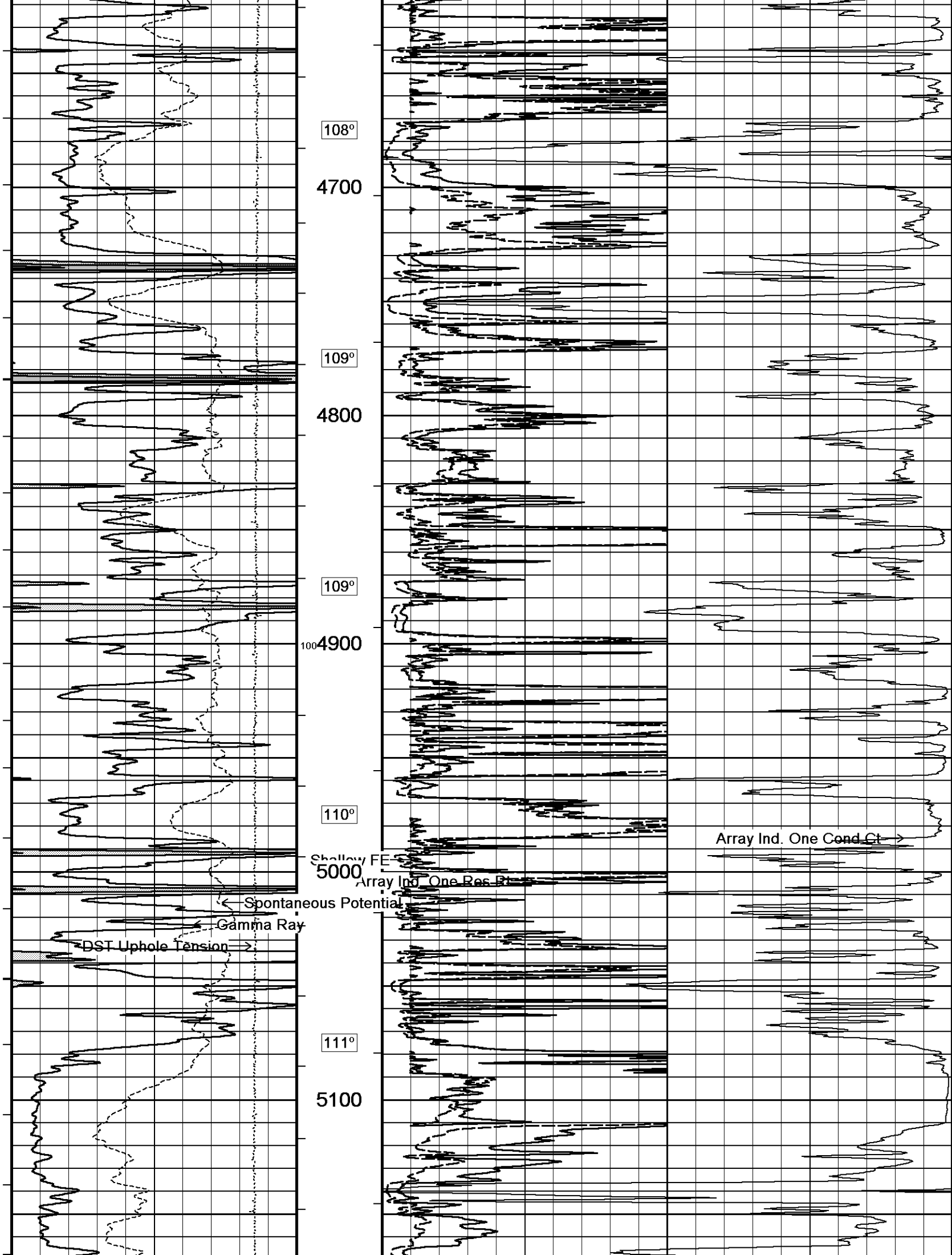


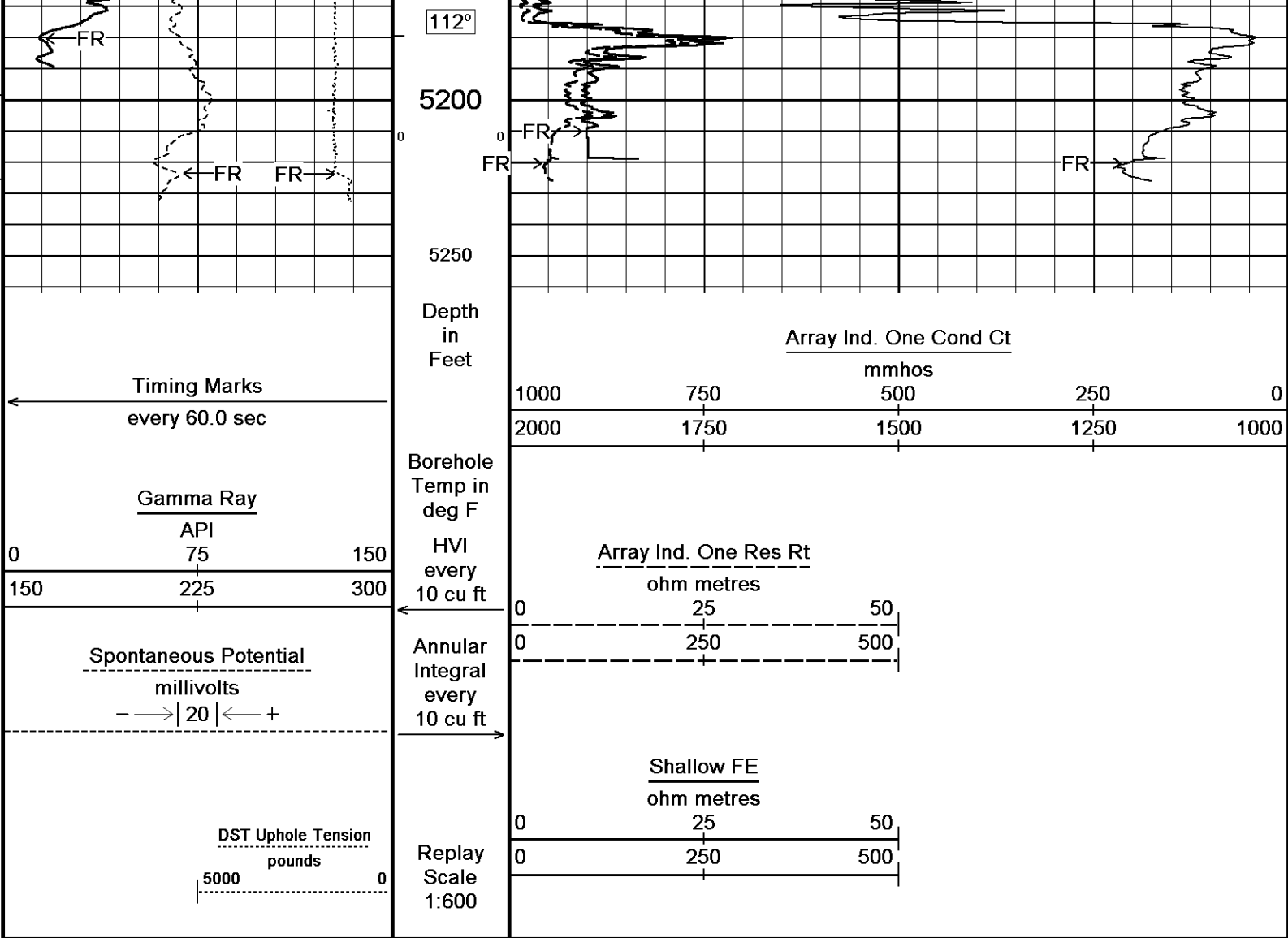










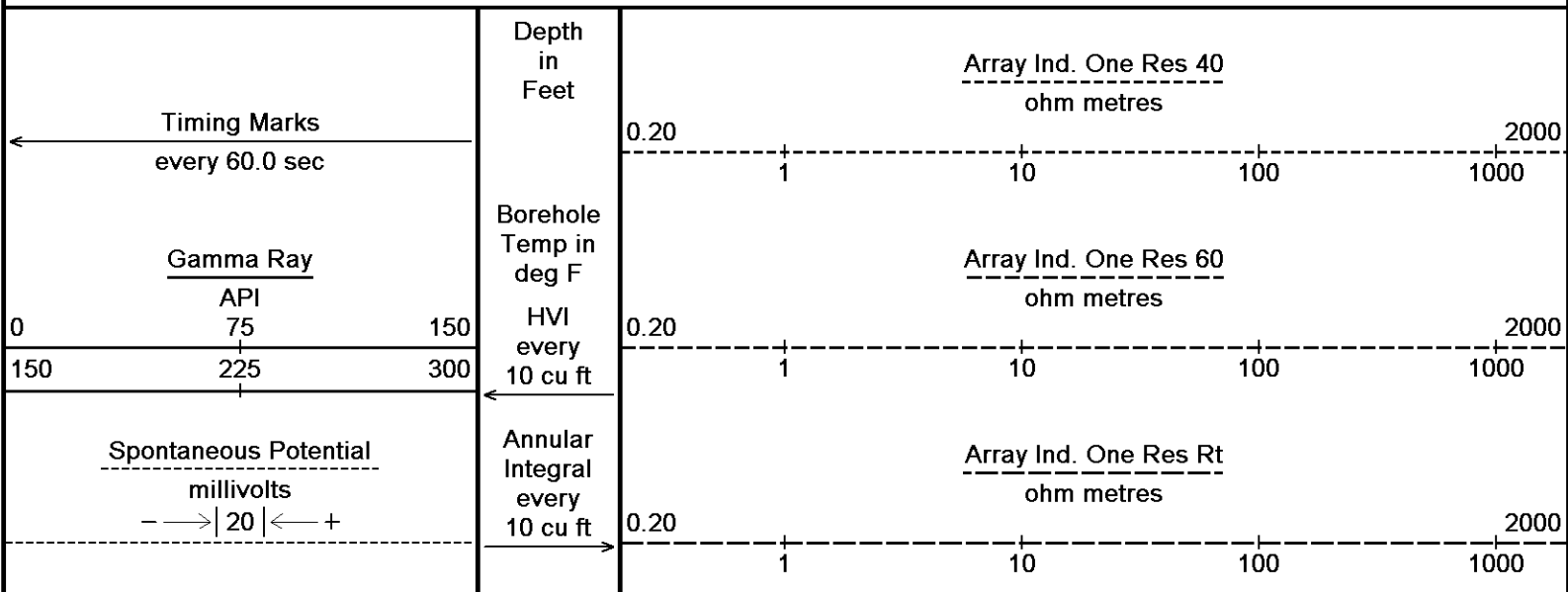


Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 21-AUG-2014 22:58
Filename: C:\Minimus 13.08.2113\Logs\McCoy MTPRC 'A' #3-27\McCoy MTPRC 'A' #3-27_002.dta Recorded on 21-AUG-2014 20:00
System Versions: Logged with 13.08.2113 Plotted with 13.08.2113

2 INCH MAIN

5 INCH MAIN

Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 21-AUG-2014 22:58
Filename: C:\Minimus 13.08.2113\Logs\McCoy MTPRC 'A' #3-27\McCoy MTPRC 'A' #3-27_002.dta Recorded on 21-AUG-2014 20:00
System Versions: Logged with 13.08.2113 Plotted with 13.08.2113



DST Uphole Tension
pounds
5000 0

Replay
Scale
1:240

Shallow FE
ohm metres

0.20 1 10 100 1000 2000

3900

105°

3950

200

400

105°

4000

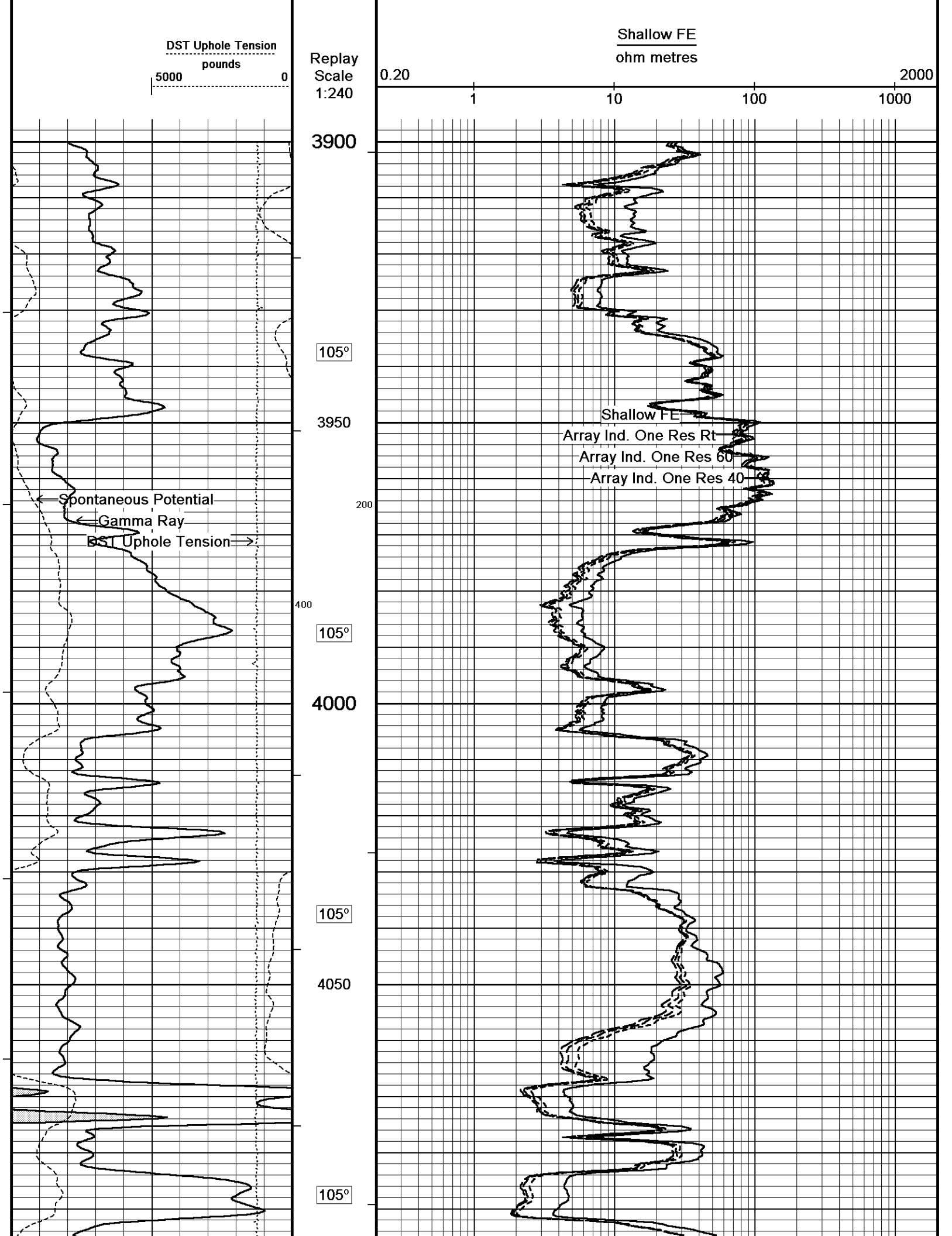
105°

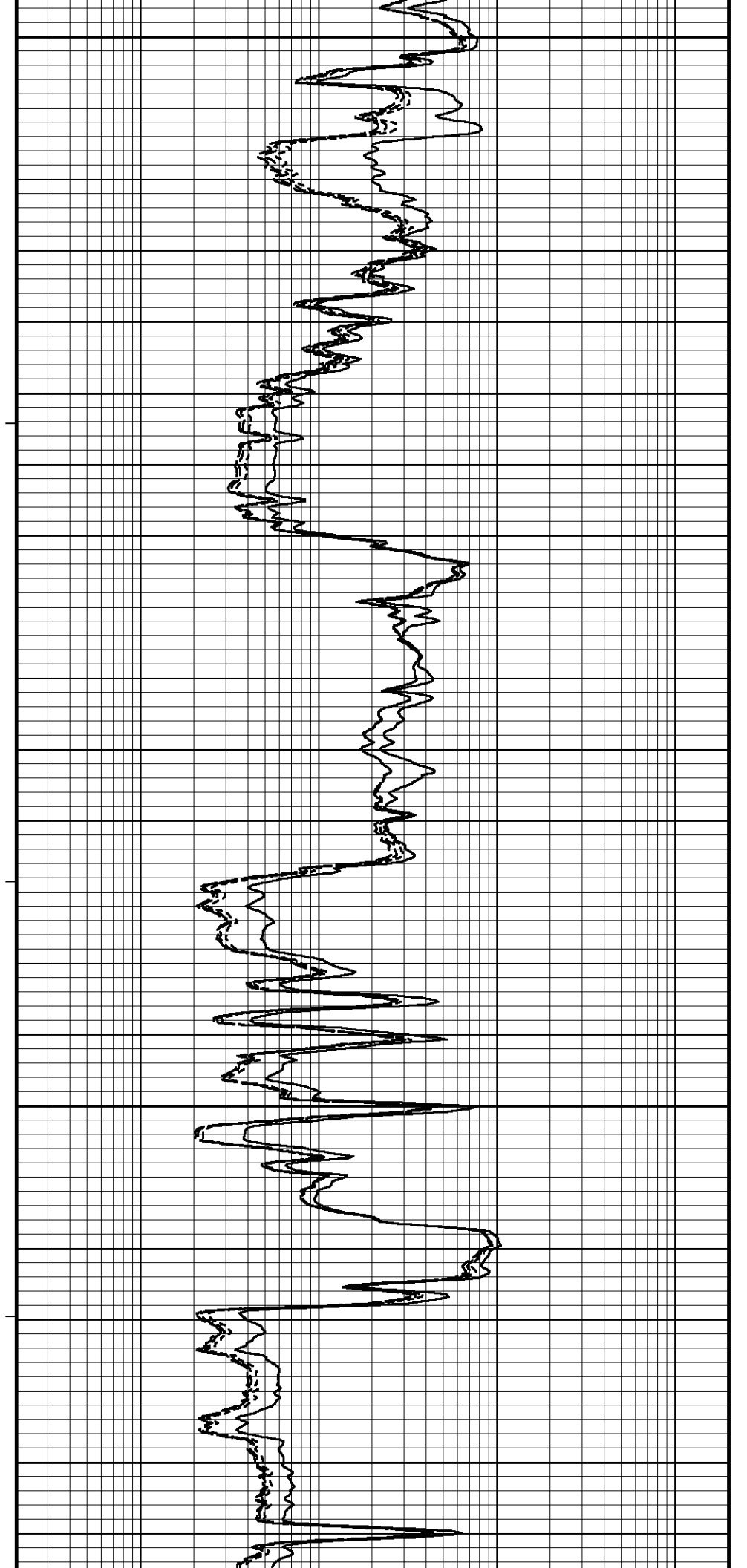
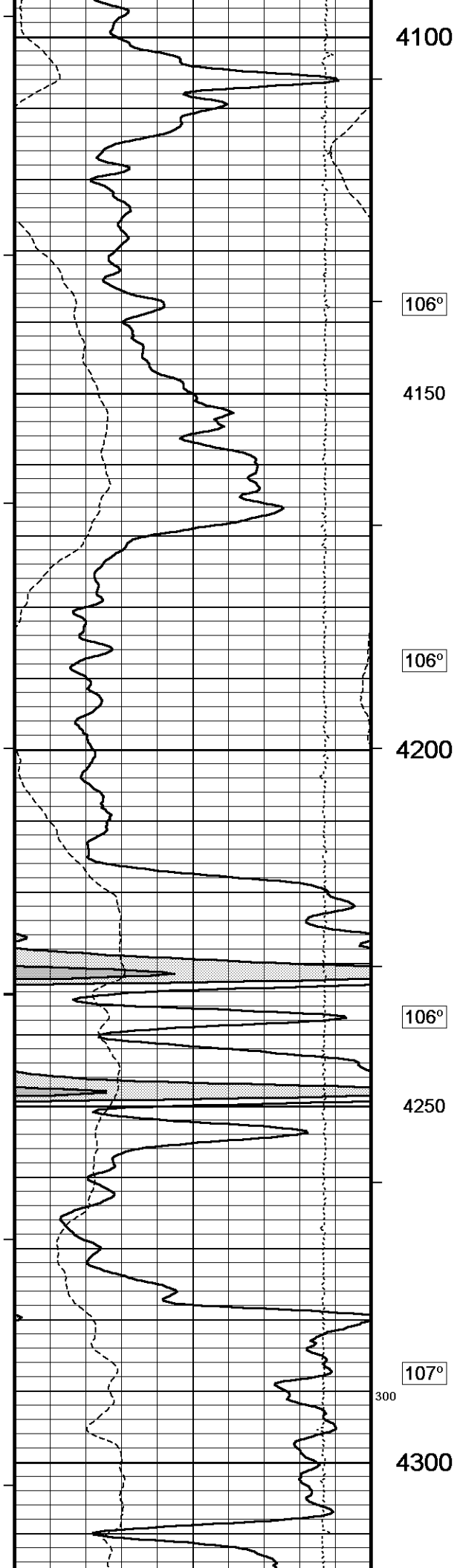
4050

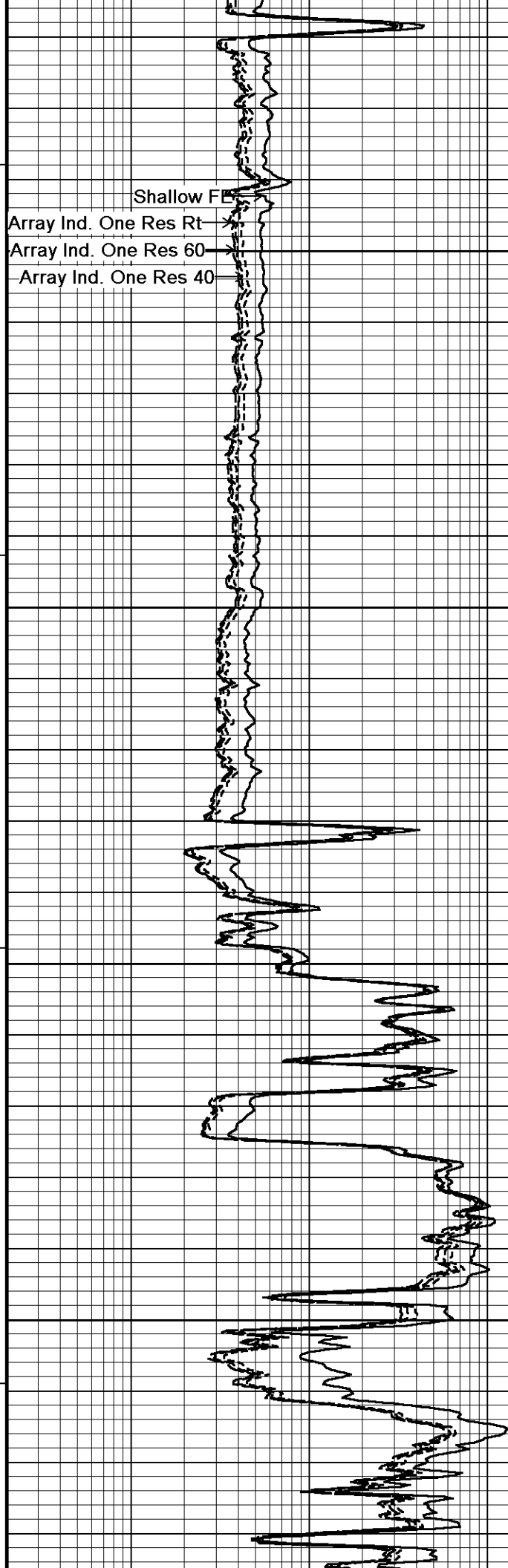
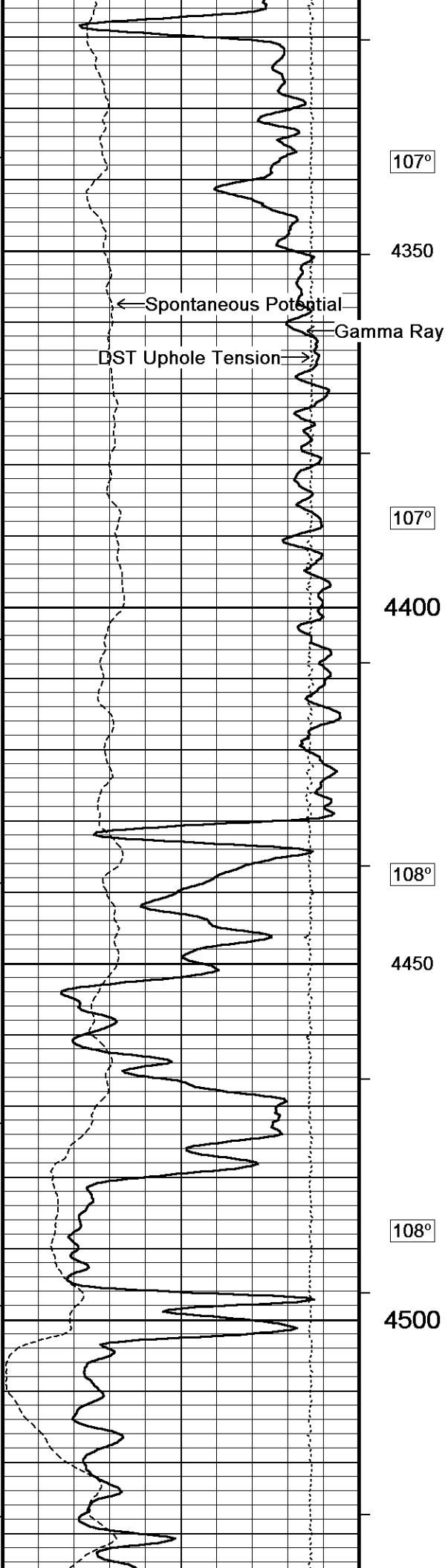
105°

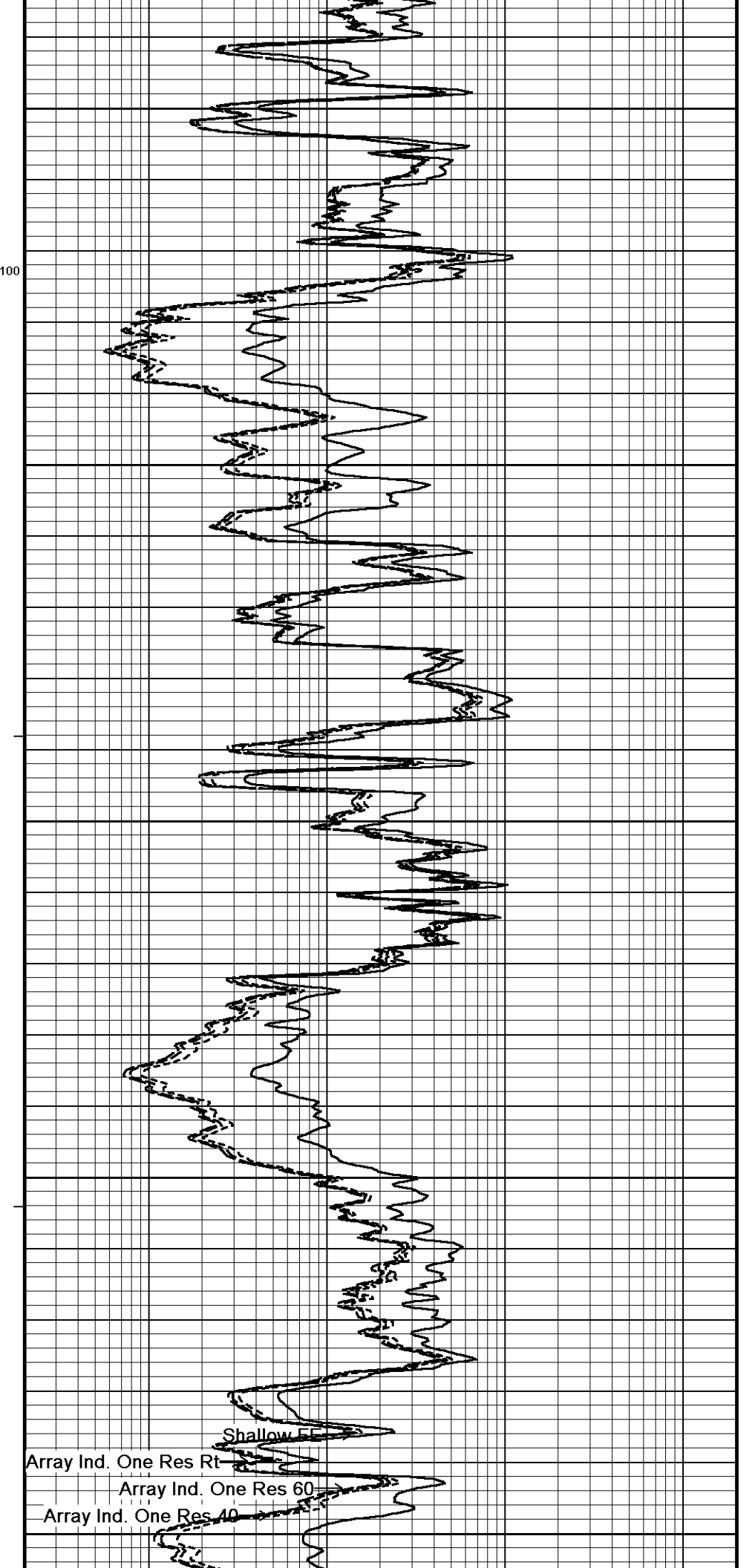
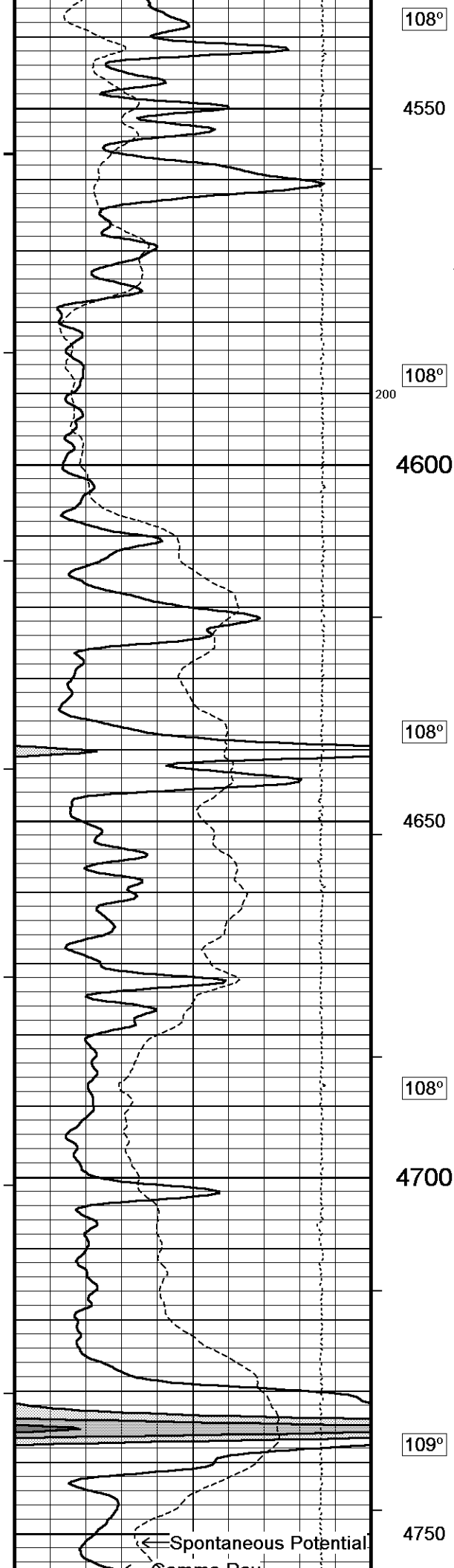
Shallow FE
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40

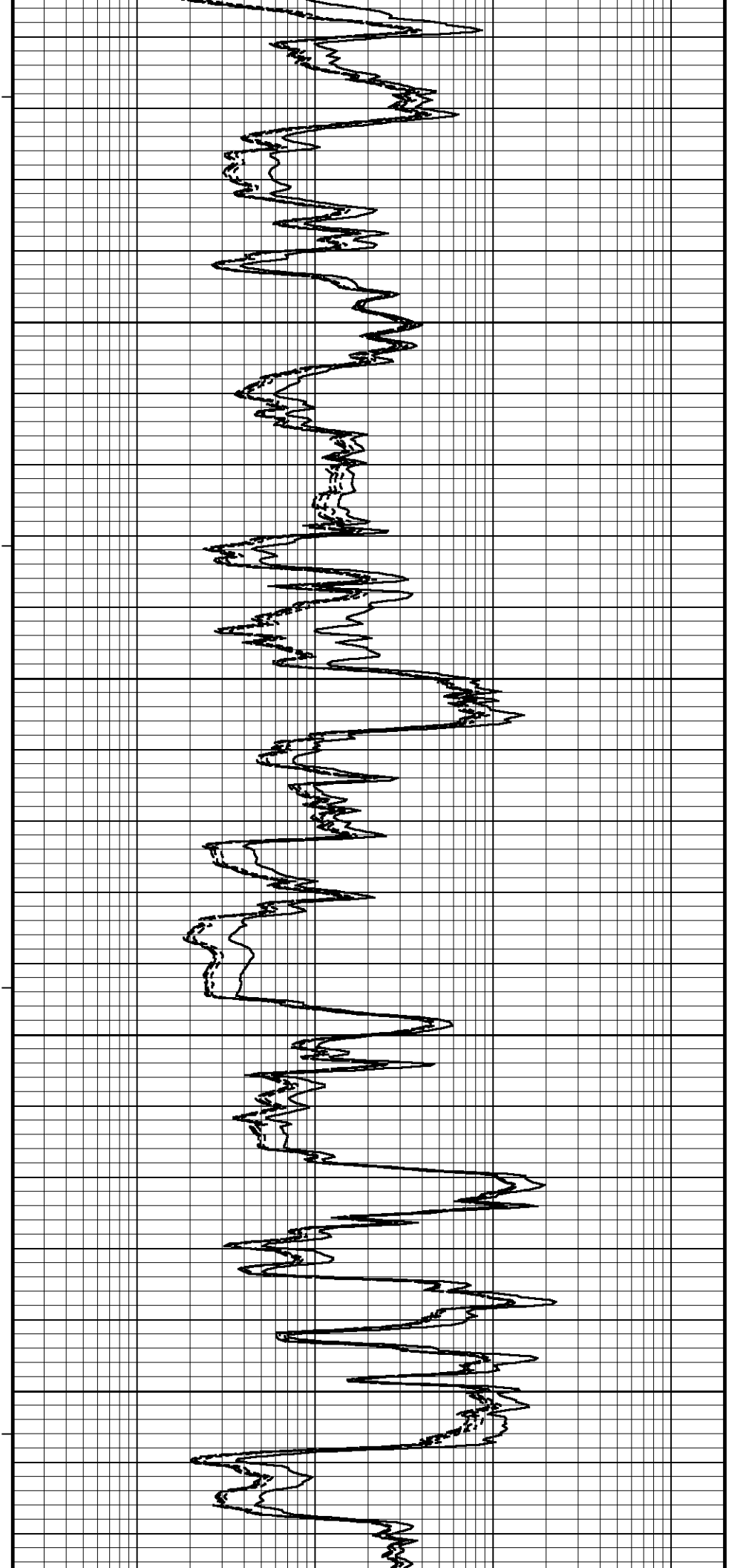
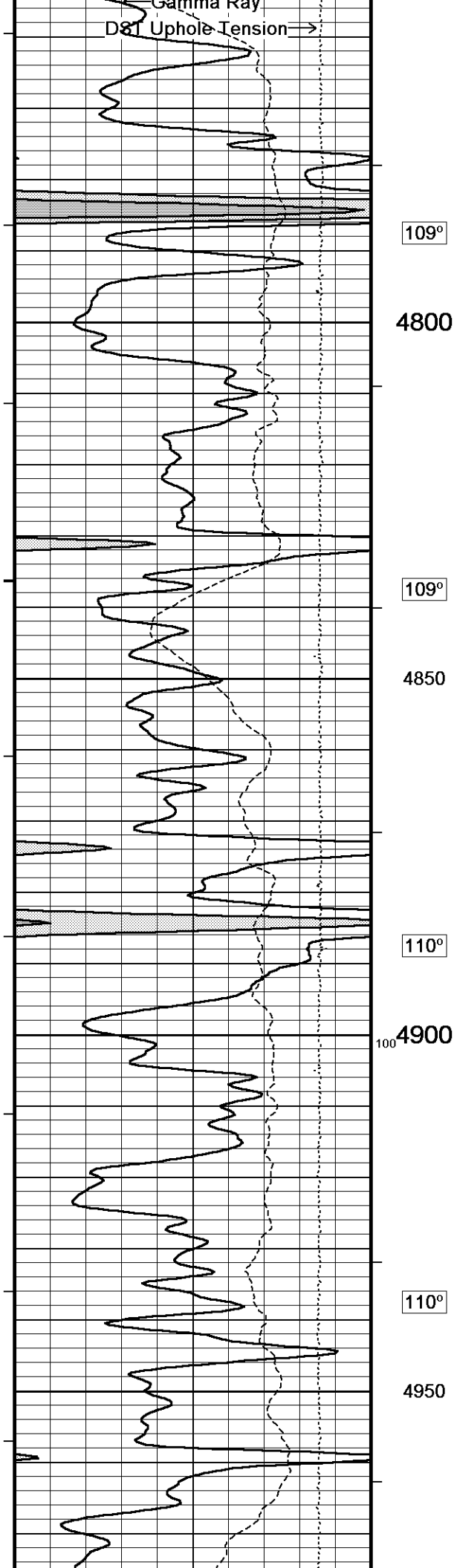
Spontaneous Potential
Gamma Ray
DST Uphole Tension

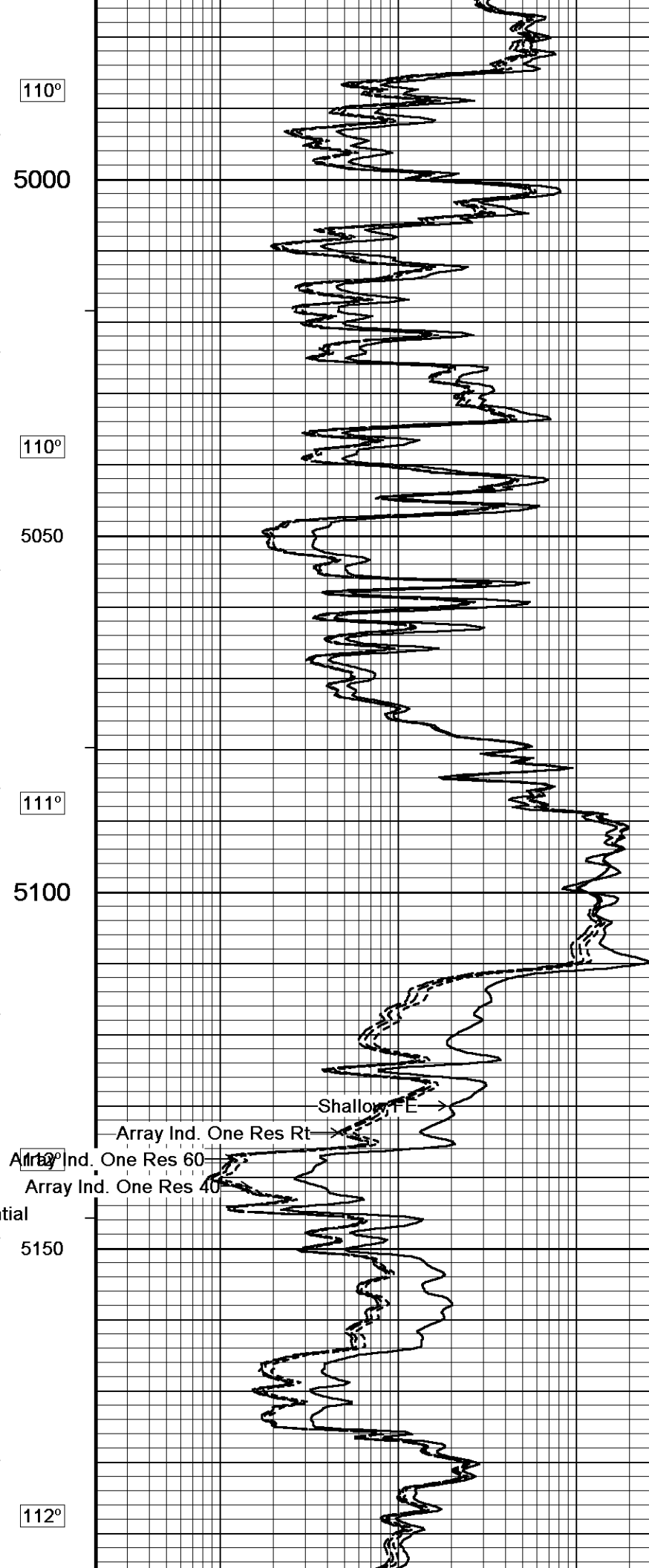
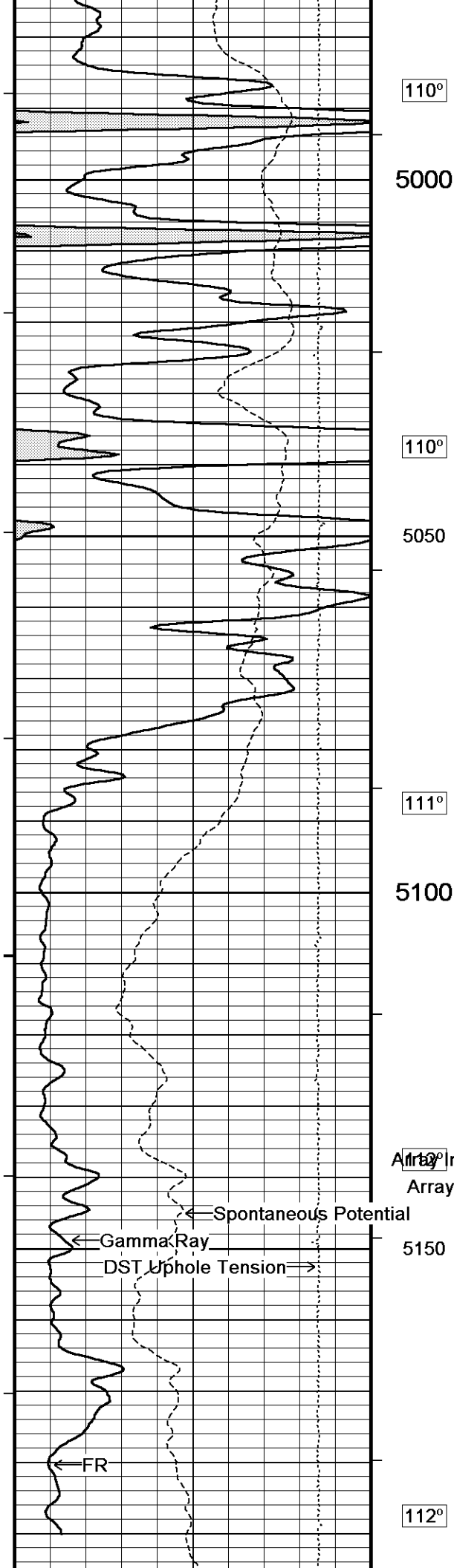


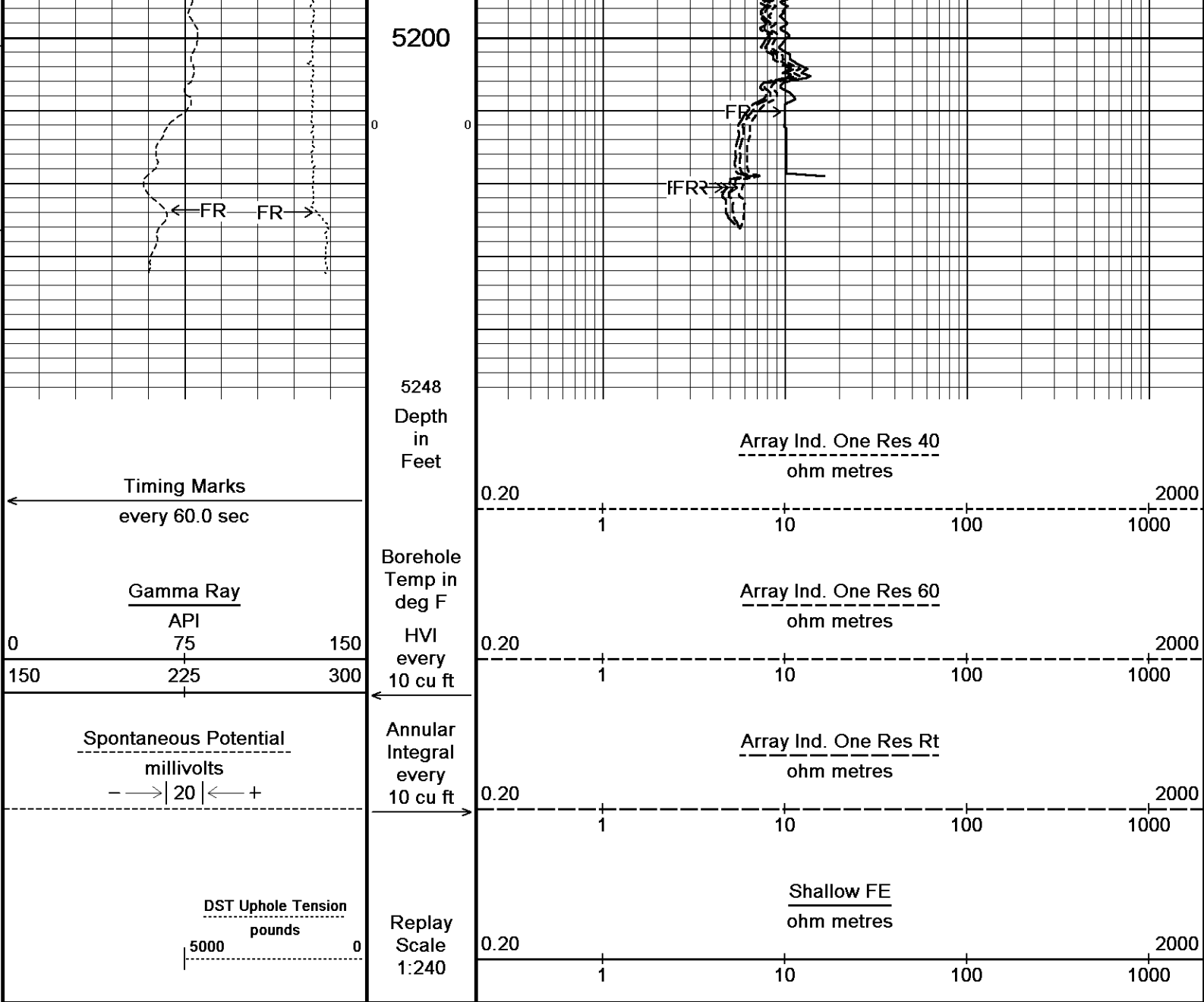










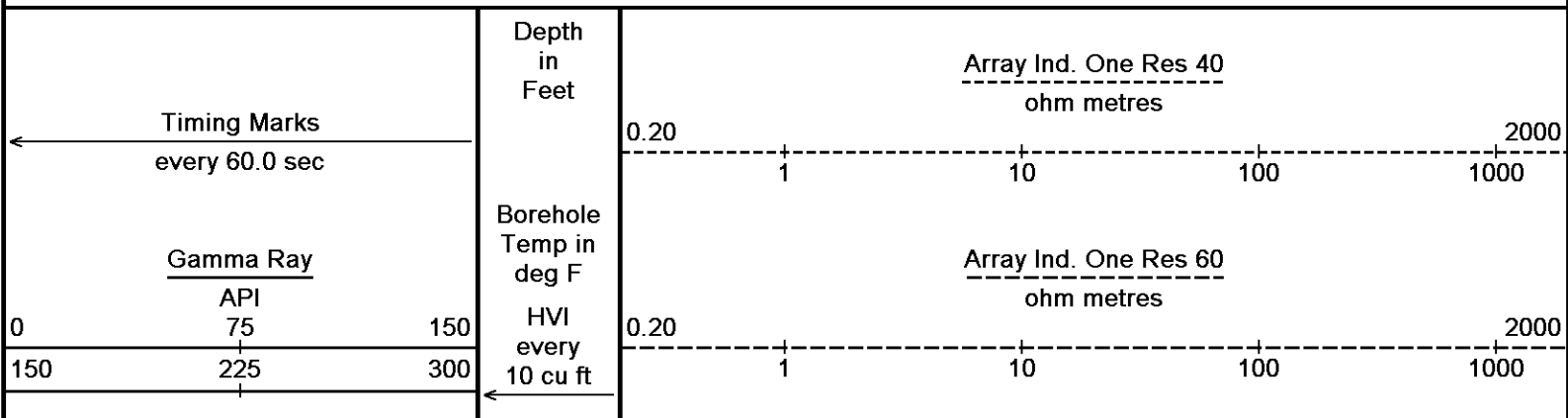


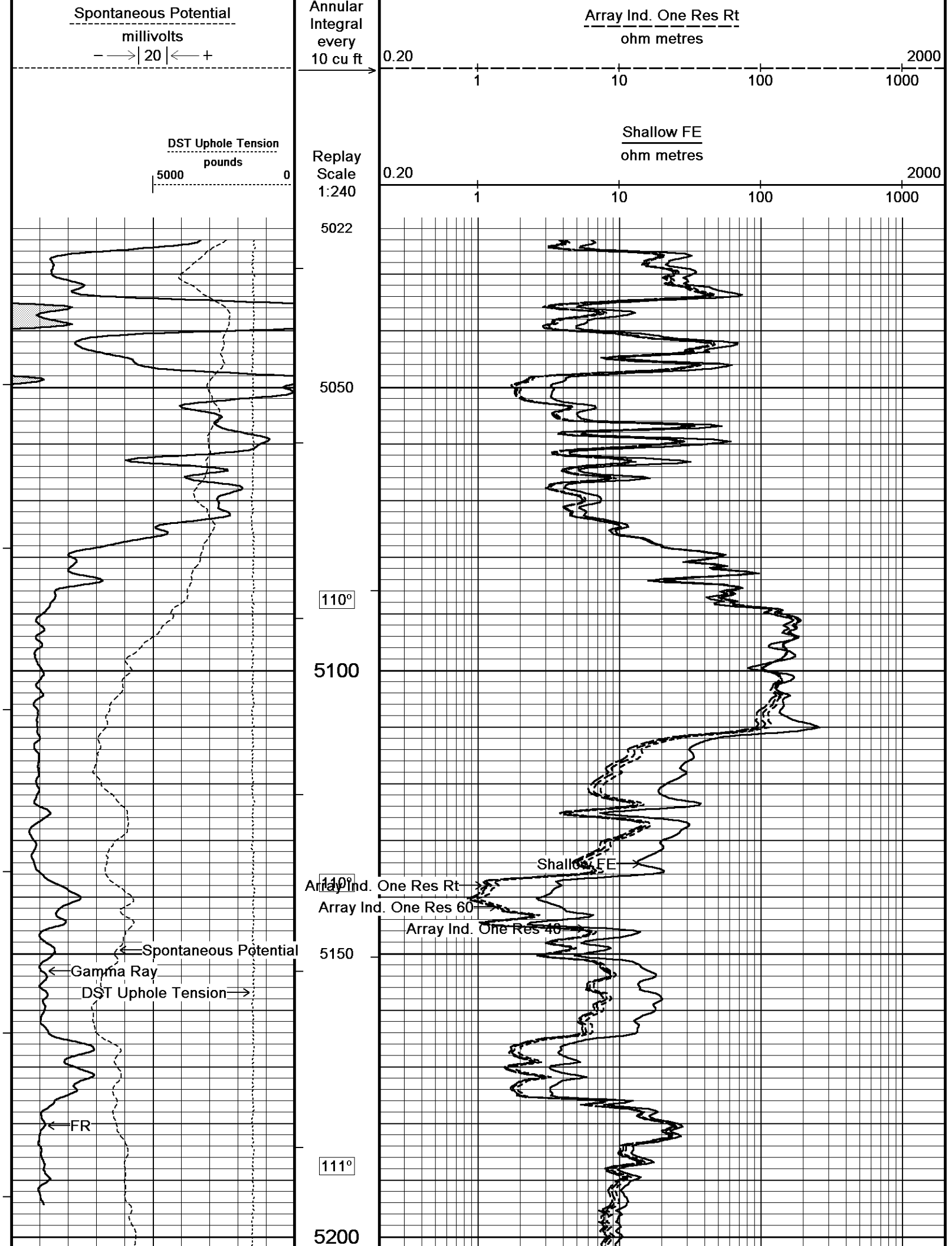
Depth Based Data - Maximum Sampling Increment 10.0cm	Plotted on 21-AUG-2014 22:58
Filename: C:\Minimus 13.08.2113\Logs\McCoy MTPRC 'A' #3-27\McCoy MTPRC 'A' #3-27_002.dta	Recorded on 21-AUG-2014 20:00
System Versions: Logged with 13.08.2113 Plotted with 13.08.2113	

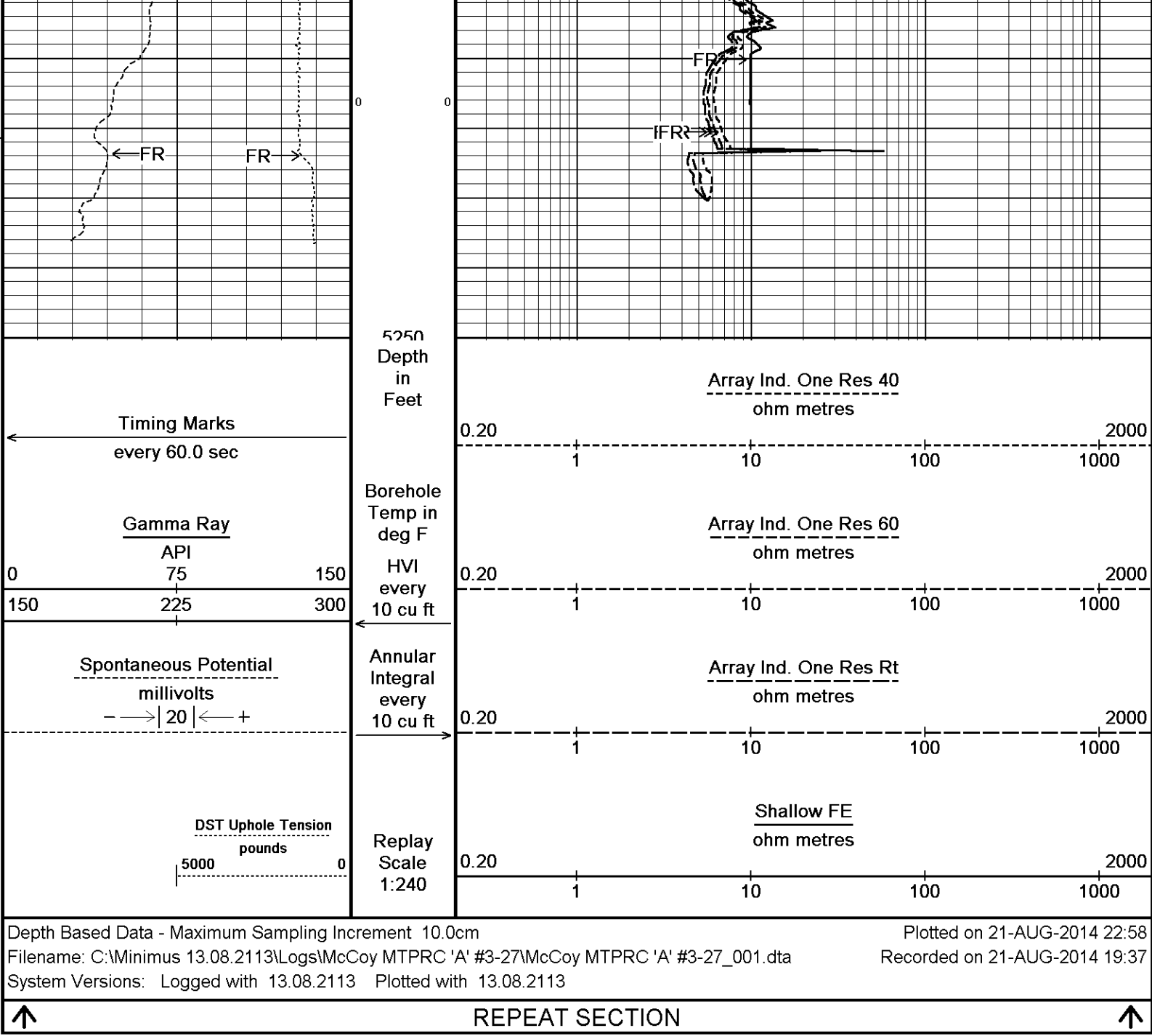
↑ 5 INCH MAIN ↑

↓ REPEAT SECTION ↓

Depth Based Data - Maximum Sampling Increment 10.0cm	Plotted on 21-AUG-2014 22:58
Filename: C:\Minimus 13.08.2113\Logs\McCoy MTPRC 'A' #3-27\McCoy MTPRC 'A' #3-27_001.dta	Recorded on 21-AUG-2014 19:37
System Versions: Logged with 13.08.2113 Plotted with 13.08.2113	







BEFORE SURVEY CALIBRATION			
C:\Minimus 13.08.2113\Logs\McCoy MTPRC 'A' #3-27\McCoy MTPRC 'A' #3-27_001.dta			
General Constants All 000			Last Edited on 21-AUG-2014,18:40
General Parameters			
Mud Resistivity	0.560	ohm-metres	
Mud Resistivity Temperature	93.000	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	Crossplot Porosity		
Resistivity used	Array Ind. One Res Rt		

RWA Constant A	0.610
RWA Constant M	2.150
SW/APOR Tool Source	0.000

Down-hole Tension Calibration SMS 0			Field Calibration on 15-AUG-2014 17:39
Reading No	Measured	Calibrated (lbs)	
1	15259.48	0.00	
2	15798.58	244.70	

Gamma Calibration MCG-C 123			Field Calibration on 21-AUG-2014 10:21
	Measured	Calibrated (API)	
Background	69	47	
Calibrator (Gross)	1132	772	
Calibrator (Net)	1063	725	

Gamma Constants MCG-C 123			Last Edited on 21-AUG-2014,16:37
Gamma Calibrator Number	GRC038		
Mud Density	1.14	gm/cc	
Caliper Source for Processing	Density Caliper		
Tool Position	Eccentred		
Concentration of KCl		kppm	
K Mud Type	Chloride		
K Mud Concentration	0.00	%	

SP Calibration MCG-C 123			Field Calibration on 21-AUG-2014 10:29
	Measured	Calibrated (mV)	
Reference 1	99.2	98.8	
Reference 2	-98.3	-98.9	

High Resolution Temperature Calibration MCG-C 123			Field Calibration on 21-AUG-2014,10:26
	Measured	Calibrated(Deg F)	
Lower	50.00	50.00	
Upper	75.00	75.00	

High Resolution Temperature Constants MCG-C 123			Last Edited on 21-AUG-2014,10:26
Pre-filter Length	11		

Micro Normal and Micro Inverse Calibration MMR-A 29					Base Calibration on 13-AUG-2014 16:50 Field Check on 21-AUG-2014 13:12	
Base Calibration						
		Measured		Calibrated (ohm-m)		
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2		
Micro Normal	10.2	49.8	5.1	25.6		
Micro Inverse	10.0	49.5	3.4	16.9		
Channel		Base Check (ohm-m)		Field Check (ohm-m)		
Micro Normal		93.7		93.7		
Micro Inverse		62.3		62.3		

Micro Normal and Micro Inverse Constants MMR-A 29			Last Edited on 13-AUG-2014,16:47
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	0.0000	inches	

Caliper Calibration MMR-A 29			Base Calibration on 13-AUG-2014 17:05 Field Calibration on 21-AUG-2014 13:11
Base Calibration			
Reading No	Measured	Calibrator Size (in)	
1	13833	5.96	
2	17084	7.98	
3	20261	9.85	
4	24276	11.92	
5	0	0.00	
6	N/A	N/A	
Field Calibration			

Measured Caliper (in)		Actual Caliper (in)	
7.98		7.97	
Neutron Calibration MDN-B.J 387		Base Calibration on 31-JUL-2014 11:36 Field Check on 21-AUG-2014 10:26	
Base Calibration			
Ratio	Measured		Calibrated (cps)
	Near	Far	Near Far
	2985	92	3714 110
	32.470		33.764
Field Calibrator at Base			
Ratio			Calibrated (cps)
			1675 2460
			0.681
Field Check			
Ratio			Calibrated (cps)
			1690 2481
			0.681

Neutron Constants MDN-B.J 387			Last Edited on 21-AUG-2014,16:37
Neutron Source Id	P58125B		
Neutron Jig Number	5824NE		
Epithermal Neutron			
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	None		
Formation Pressure	N/A	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 55			Base Calibration on 30-JUL-2014 09:41 Field Check on 21-AUG-2014 09:52
Base Calibration			
Reference 1	Measured		Calibrated (ohm-m)
		0.0	0.0
Reference 2		951.6	126.8
Base Check			281.4
Field Check			281.4

FE Constants MFE-A.A 55			Last Edited on 21-AUG-2014,16:36
Running Mode		No Sleeve	
MFE K Factor		0.1268	
Caliper Source for FE correction		Density Caliper	
Caliper Value for FE correction		N/A	
Rm Source for FE correction		Temperature Corr	
Temp. for Rm Corr.	MCG External Temperature		
Stand-off		0.5	inches

Induction Calibration MAI-A.A 5			Base Calibration on 21-JAN-2014,09:50 Field Check on 21-AUG-2014 09:51
Base Calibration			
Test Loop Calibration		Measured	
Channel	Low High		Calibrated (mmho/m)
			Low High
1	16.3	470.8	9.3 966.2
2	5.6	376.1	7.6 821.4
3	2.6	266.1	5.2 566.0
4	1.6	130.0	2.6 279.2
Array Temperature		71.1	Deg F

Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1			15.8	3862.3
2			31.9	3590.2
3			29.8	2970.8
4			20.8	2125.7
Deep			18.5	1911.7
Medium			43.0	3860.4
Shallow			47.5	5372.0
Array Temperature			85.0	Deg F

Induction Constants MAI-A.A 5

Last Edited on 21-AUG-2014,16:36

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	

High Resolution Temperature Calibration MAI-A.A 5

Field Calibration on 21-JAN-2014,15:43

	Measured	Calibrated(Deg F)
Lower	50.00	50.00
Upper	75.00	75.00

High Resolution Temperature Constants MAI-A.A 5

Last Edited on 27-JUN-2014,14:12

Pre-filter Length	11
-------------------	----

Caliper Calibration MPD-D.A 481

Base Calibration on 15-JUL-2014 21:58

Field Calibration on 21-AUG-2014 09:54

Base Calibration		
Reading No	Measured	Calibrator Size (in)
1	17157	3.99
2	27203	5.98
3	37251	7.97
4	47048	9.86
5	58065	11.92
6	N/A	N/A

Field Calibration

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

Photo Density Calibration MPD-D.A 481

Base Calibration on 15-JUL-2014 22:16
Field Check on 21-AUG-2014 09:59Density Calibration
Base Calibration

	Near	Far	Near	Far
Background	1220	1433		
Reference 1	55282	26261	59556	30836
Reference 2	22309	2604	24941	2541

Field Check at Base

1220.2 1433.1

Field Check

1217.1 1436.1

PE Calibration

Base Calibration

	WS	Measured WH	Ratio	Calibrated Ratio
Background	231	1089		
Reference 1	24198	55085	0.444	0.371
Reference 2	6814	22169	0.312	0.272

Field Check at Base

231.4 1089.2

Field Check

232.7 1088.4

Density Constants MPD-D.A 481

Last Edited on 21-AUG-2014,16:37

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	1.14 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

DOWNHOLE EQUIPMENT

C:\Minimus 13.08.2113\Logs\McCoy MTPRC 'A' #3-27\McCoy MTPRC 'A' #3-27_001.dta

CBH-C, Cablehead, 11 pin
CBH-C 265 LG: 2.40 ft WT: 24.3 lb OD: 2.240 in

Compact Comms Gamma
MCG-C 123 LG: 8.70 ft WT: 63.9 lb OD: 2.244 in



43.50 ft GRGC - Gamma Ray
40.59 ft CGXT - MCG External Temperature

Compact Micro-Resistivity
MMR-A 29 LG: 8.59 ft WT: 81.6 lb OD: 4.882 in

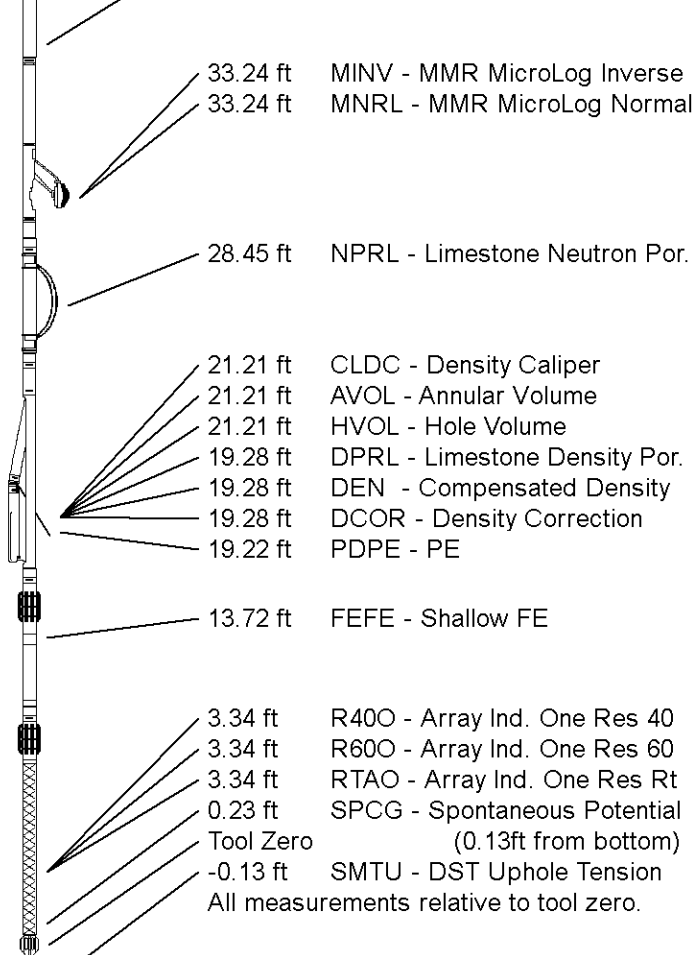
Compact Neutron
MDN-B.J 387 LG: 5.04 ft WT: 50.7 lb OD: 2.244 in

Compact Density/Caliper
MPD-D.A 481 LG: 9.59 ft WT: 90.4 lb OD: 2.449 in

Compact Focussed Electric
MFE-A.A 55 LG: 6.05 ft WT: 48.5 lb OD: 2.244 in

Compact Induction
MAI-A.A 5 LG: 10.81 ft WT: 48.5 lb OD: 2.244 in

Total Length: 51.18 ft Weight: 407.9 lb



COMPANY McCOY PETROLEUM CORPORATION
WELL MTPRC 'A' #3-27
FIELD ALFORD
PROVINCE/COUNTY KIOWA
COUNTRY/STATE U.S.A. / KANSAS

Elevation Kelly Bushing	2251.00	feet	First Reading	5221.00	feet
Elevation Drill Floor	2249.00	feet	Depth Driller	5225.00	feet
Elevation Ground Level	2238.00	feet	Depth Logger	5224.00	feet

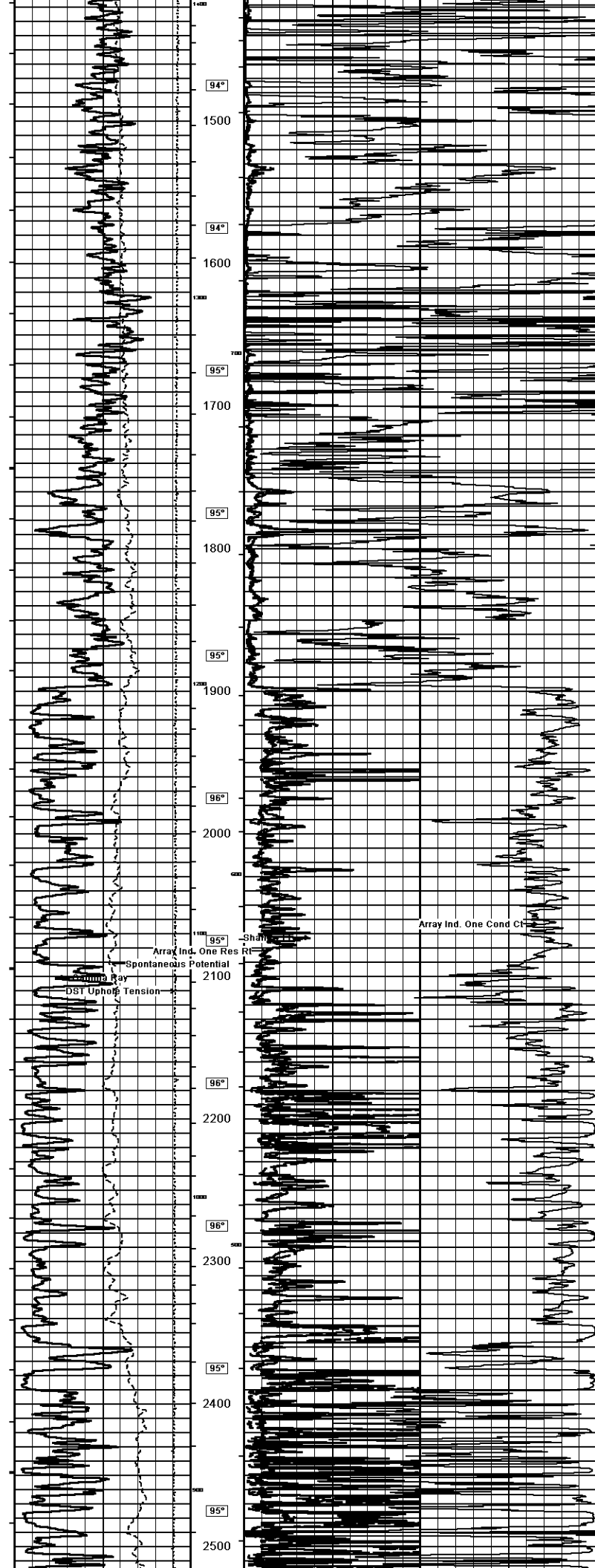


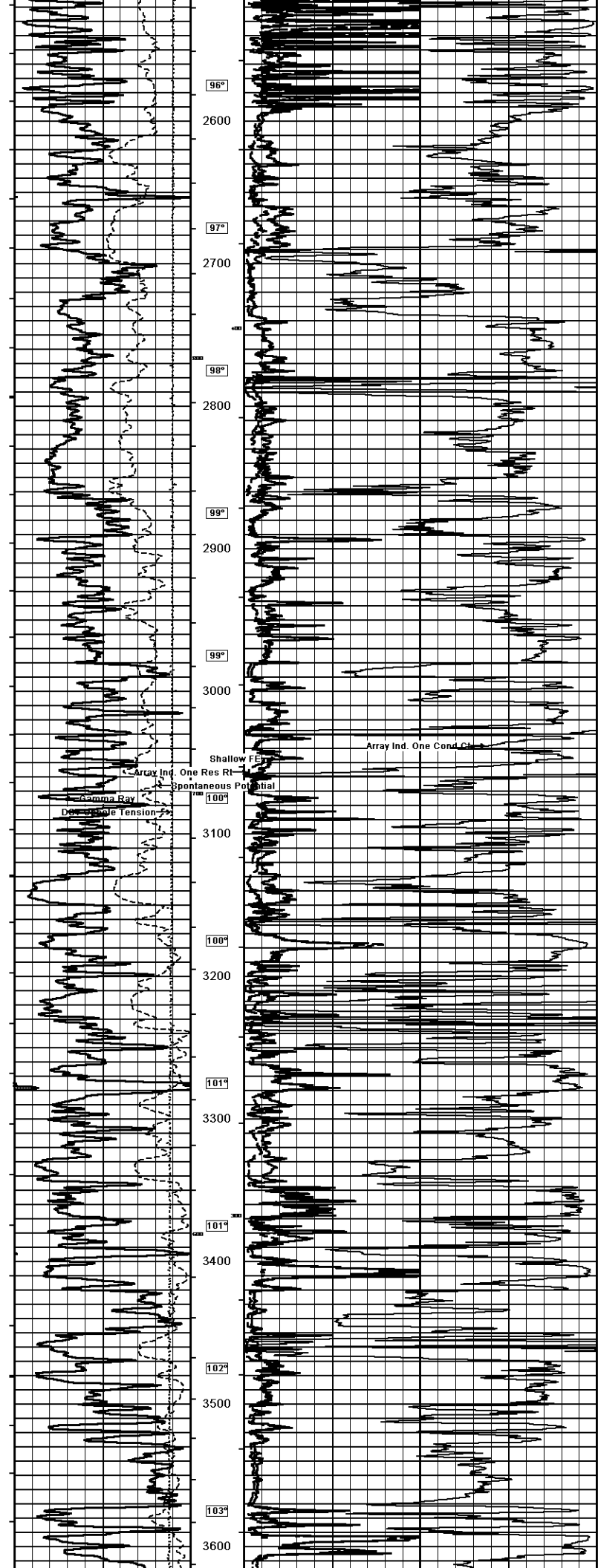
**ARRAY INDUCTION
SHALLOW FOCUSED
ELECTRIC LOG**

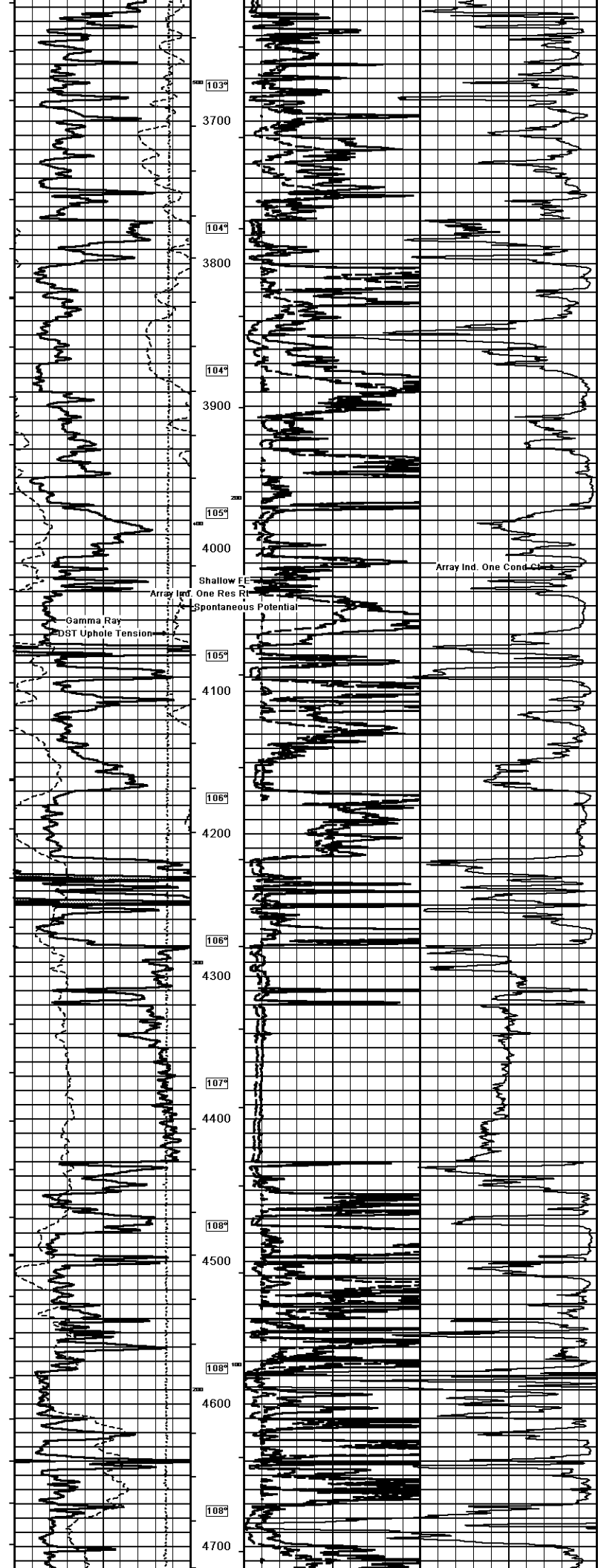
Weatherford®

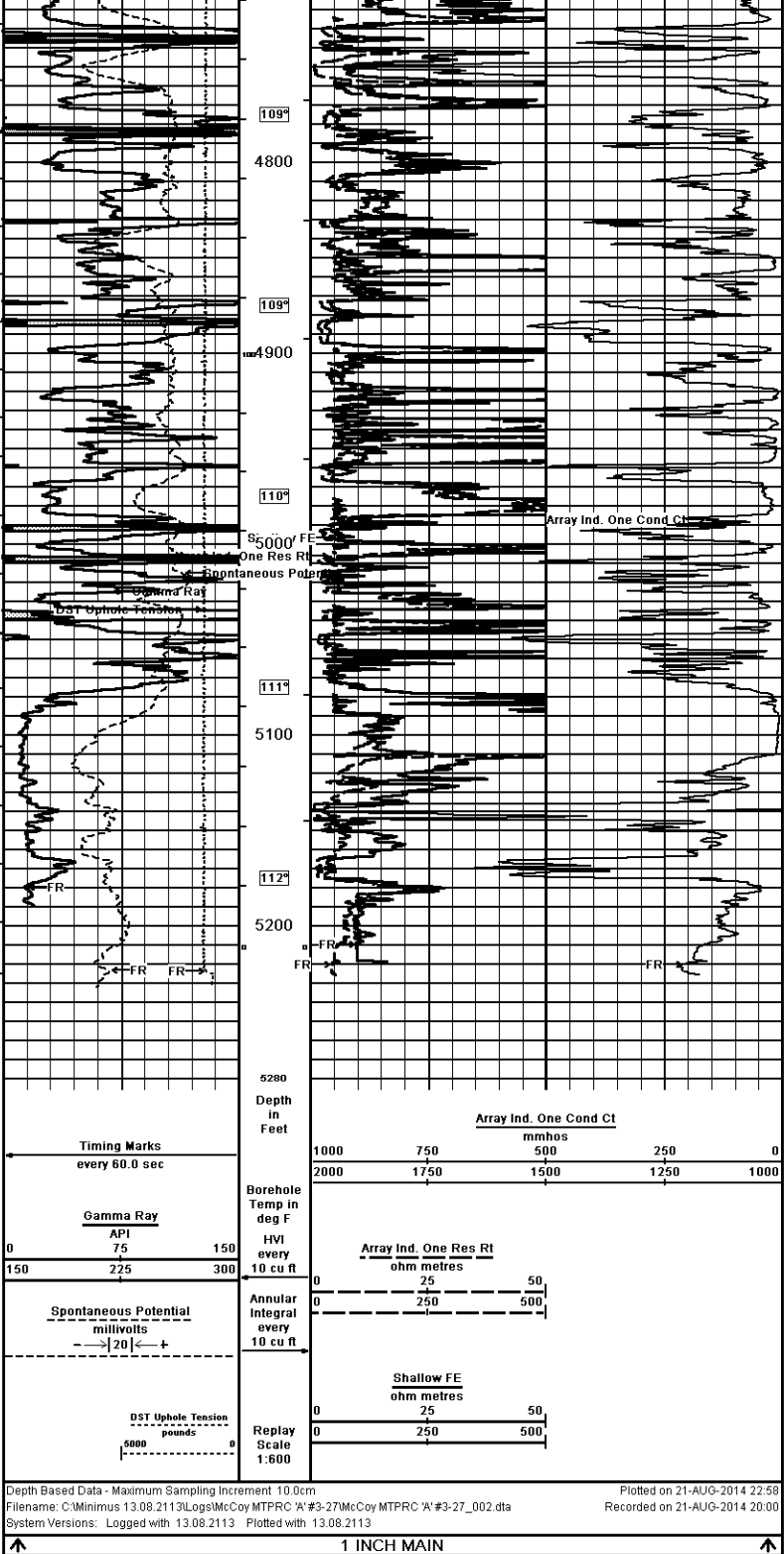
Weatherford		ARRAY INDUCTION SHALLOW FOCUSED ELECTRIC LOG	
COMPANY	McCOY PETROLEUM CORPORATION	WELL	MTPRC 'A' #3-27
FIELD	ALFORD	PROVINCE/COUNTY	KIOWA
COUNTRY/STATE	U.S.A. / KANSAS	LOCATION	740' ENL & 1320' FEL
SEC 27	TWP 30S	R02E	19W
Latitude	36.98721000	Longitude	-96.98721000
Permanant Datum GL, Elevation	2238 feet	Log Measured From KB	13 FEET
Drilling Measured From KB	13 FEET	Run Number	ONE
Service Order	4558-9882507	Depth Driller	5225.00 feet
Depth Logger	5224.00 feet	First Reading	5221.00 feet
Last Reading	5221.00 feet	Casing Driller	650.00 feet
Casing Logger	650.00 feet	Bit Size	7.875 inches
Hole Fluid Type	CHEMICAL	Density/Viscosity	9.50 lb/sg 66.00 CP
PH/Fluid Loss	9.50	Flow Line	9.50 ml/30min
Sample Source		Rm @ Measured Temp	0.56 @ 93.0 ohm-m
Rmt @ Measured Temp	0.45 @ 93.0 ohm-m	Rmt @ Measured Temp	0.67 @ 93.0 ohm-m
Source Rmt / Rmtc	CALC	Source Rmt / Rmtc	CALC
Rm @ BHT	0.47 @ 112.0 ohm-m	Time Since Circulation	4 HOURS
Max Recorded Temp	112.00 deg F	Equipment / Base	13244 LIB
Recorded By	ADAM SILL	Missed By	ZACH WHELE
Log #	LIB-244		











COMPANY	McCOY PETROLEUM CORPORATION			
WELL	MTPRC 'A' #3-27			
FIELD	ALFORD			
PROVINCE/COUNTY	KIOWA			
COUNTRY/STATE	U.S.A. / KANSAS			
Elevation Kelly Bushing	2251.00	feet	First Reading	5221.00 feet
Elevation Drill Floor	2249.00	feet	Depth Driller	5225.00 feet
Elevation Ground Level	2238.00	feet	Depth Logger	5224.00 feet
Weatherford ARRAY INDUCTION SHALLOW FOCUSED ELECTRIC LOG				

