



Weatherford

COMPOSITE LOG

COMPANY				O'BRIEN RESOURCES LLC			
WELL				PECK 1 #1			
FIELD				WILDCAT			
PROVINCE/COUNTY				LANE			
COUNTRY/STATE				U.S.A. / KANSAS			
LOCATION				1170' FNL & 790' FWL SW SE NW NW			
SEC	TWP	RGE	Other Services		MAI/MFE		
1	18S	29W	MPD/MDN		MSS		
API Number		15-101-22482		MML			
Permit Number							
Permanent Datum GL, Elevation 2714 feet							
Log Measured From KB						Elevations:	feet
Drilling Measured From KB AT 10 FEET						KB	2724.00
						DF	2722.00
						GL	2714.00
Date	14-JAN-2014						
Run Number	ONE						
Service Order	7036-76935286						
Depth Driller	4625.00					feet	
Depth Logger	4622.00					feet	
First Reading	4618.00					feet	
Last Reading	273.00					feet	
Casing Driller	273.00					feet	
Casing Logger	273.00					feet	
Bit Size	7.875					inches	
Hole Fluid Type	CHEMICAL						
Density / Viscosity	9.40 lb/USg			44.00 CP			
PH / Fluid Loss	10.00			7.20 ml/30Min			
Sample Source	FLOWLINE						
Rm @ Measured Temp	0.88 @ 77.8			ohm-m			
Rmf @ Measured Temp	0.70 @ 77.8			ohm-m			
Rmc @ Measured Temp	1.06 @ 77.8			ohm-m			
Source Rmf / Rmc	CALC			CALC			
Rm @ BHT	0.62 @ 112.0			ohm-m			
Time Since Circulation	2.5 HOURS						
Max Recorded Temp	112.00			deg F			
Equipment / Base	13096			LIB			
Recorded By	DEREK CARTER						
Witnessed By	KURT TALBOTT						
JOB #	LB14-004						

BOREHOLE RECORD

Last Edited: 14-JAN-2014 23:45

Bit Size inches	Depth From feet	Depth To feet
7.875	273.00	4625.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	273.00	24.00

REMARKS

- SOFTWARE ISSUE: WLS 13.05.9583
- TOOLS: MCG, MML, MDN, MPD, MFE, MSS, MAI RUN IN COMBINATION
- HARDWARE:
 - MDN: DUAL BOWSPRING ECCENTRALIZER
 - MFE: 1 X 0.5 INCH STANDOFF
 - MSS: 2 X 0.5 INCH STANDOFF
 - MAI: 2 X 0.5 INCH STANDOFF
- 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 PIPE: 1820 CU. FT

- ANNULAR HOLE VOLUME WITH 4.5 INCH CASING FROM TD TO SURFACE PIPE: 1340 CU. FT

- RIG: MAVERICK DRILLING #108

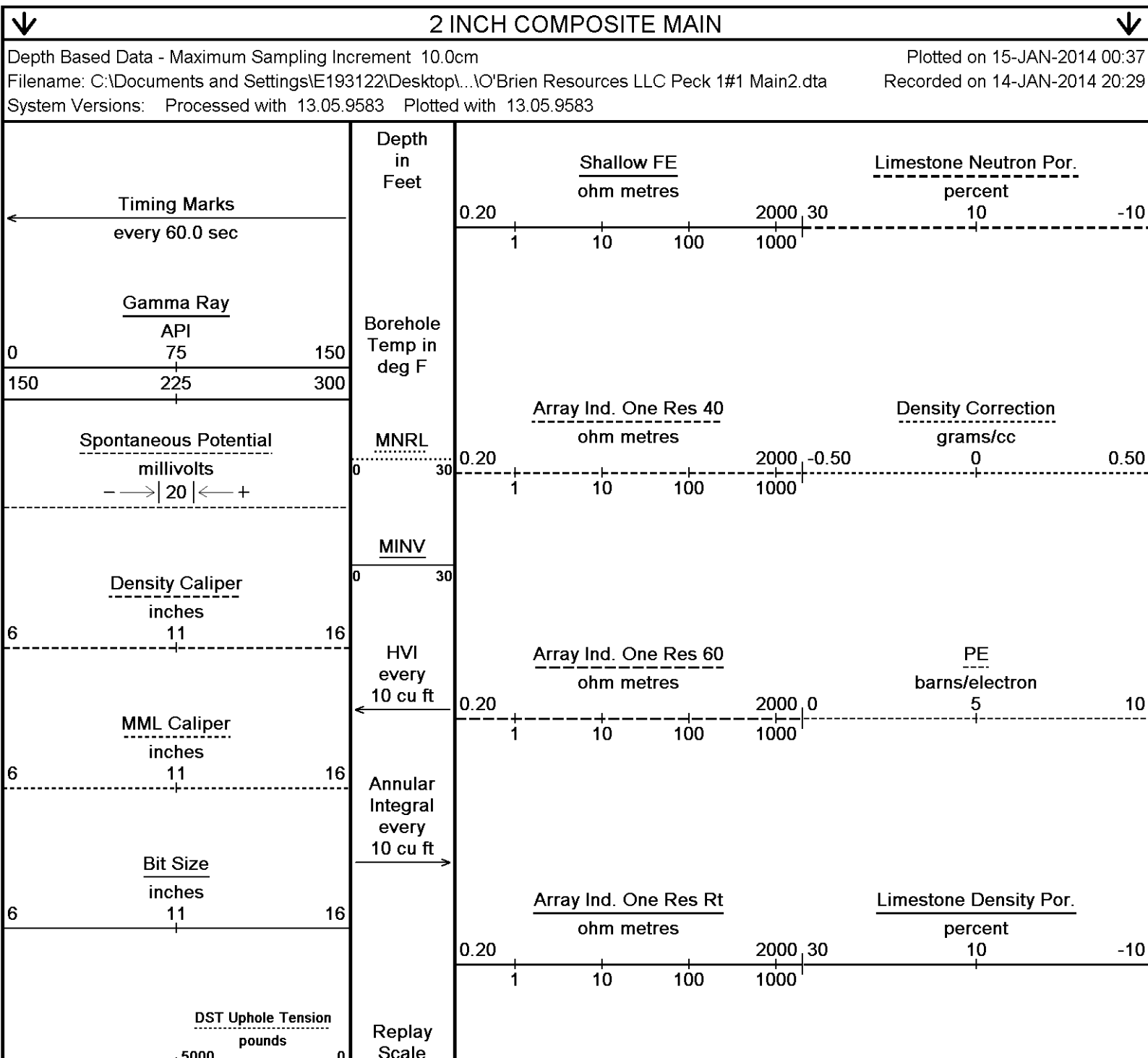
- ENGINEER: DEREK CARTER

- OPERATORS: KEN RINEHART, TROWDY DICKENS

- PER CUSTOMER REQUEST A COMPOSITE (E-LOG ONLY, NO FIELD PRINT) IS BEING INCLUDED WITH THE STANDARD TRIPLECOMBO E-LOGS (DEN-NEU-MIC, INDUCTION, MICROLOG)

- SP CURVE HAS A NUMBER OF DISCONTINUITIES AND ERRATIC SPOTS (557-560 FT., 596-599 FT., 710-728 FT., 854-859 FT., 1292-1294 FT., 2236-2254 FT., 3454-3456 FT.). THE RIG CREW HAD A TRASH PUMP THAT PERIODICALLY OPERATED IN ORDER TO PUMP EXCESS MUD. IT IS BELIEVED THAT THIS MAY HAVE CAUSED THE DISCONTINUITIES AND ERRATIC INTERVALS.

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.



5555

1:600

C260g
Shoe

300

1800

400

1300

Array Ind. One Res Rt

Array Ind. One Res 60

Array Ind. One Res 40

Shallow FE

Spontaneous Potential

Gar500 Ray

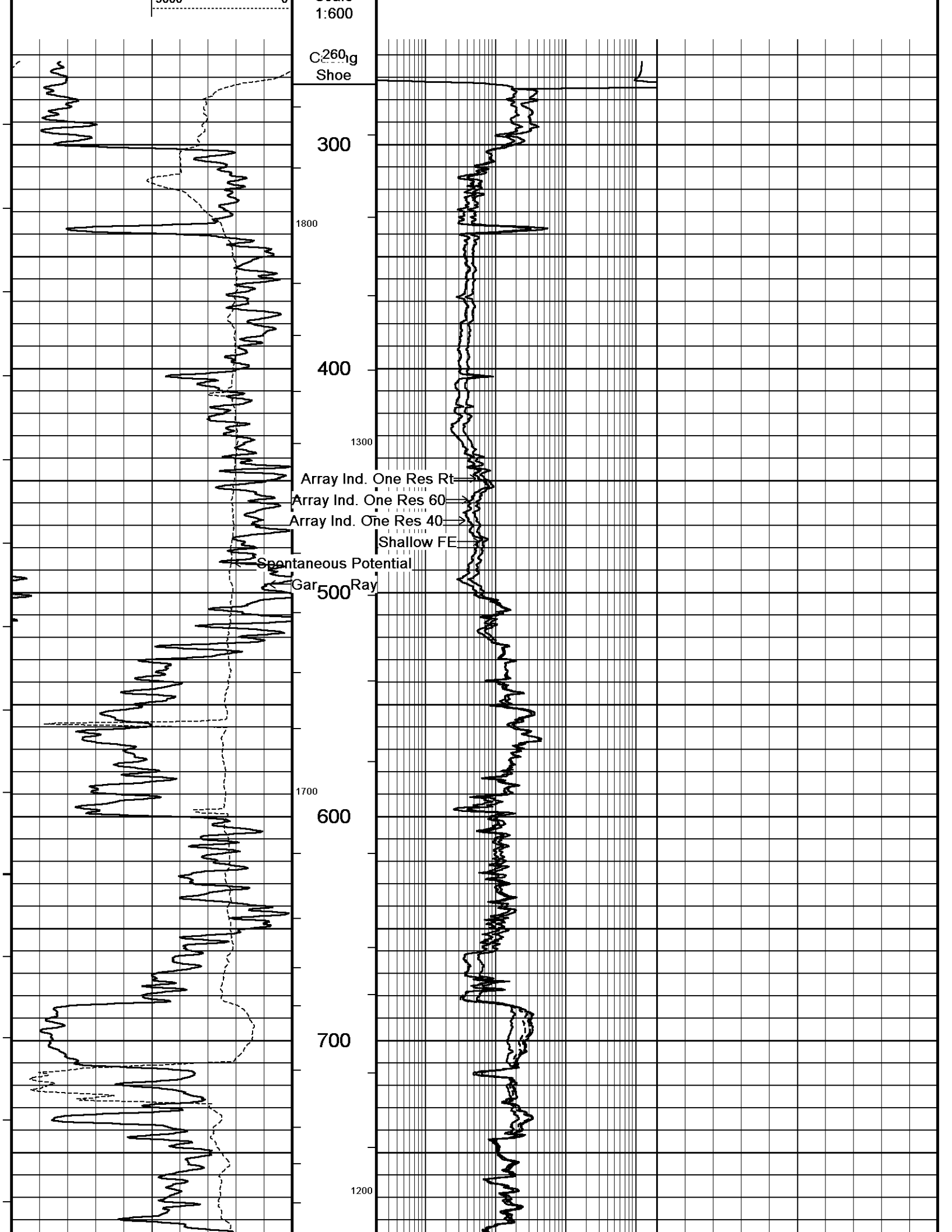
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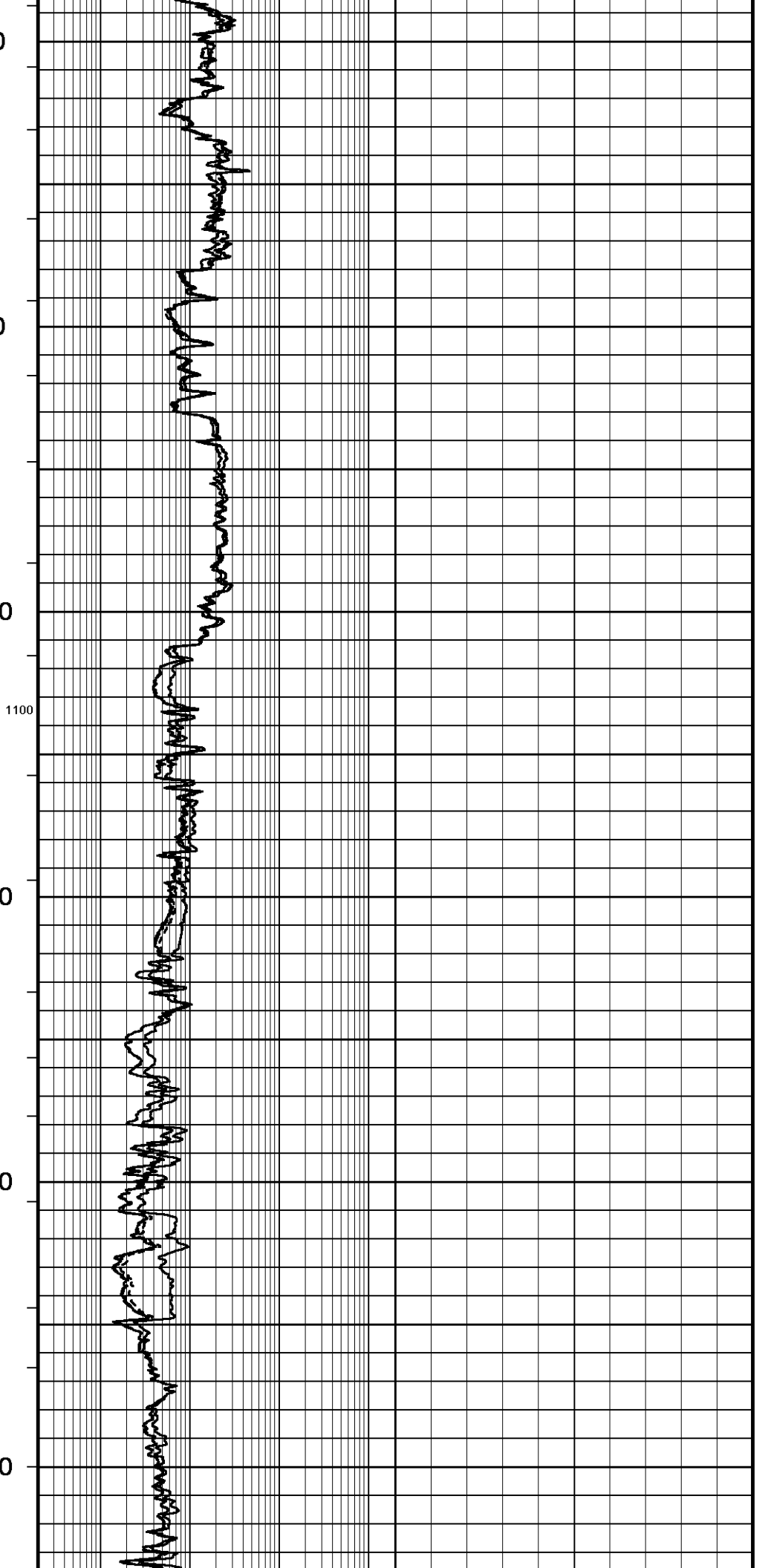
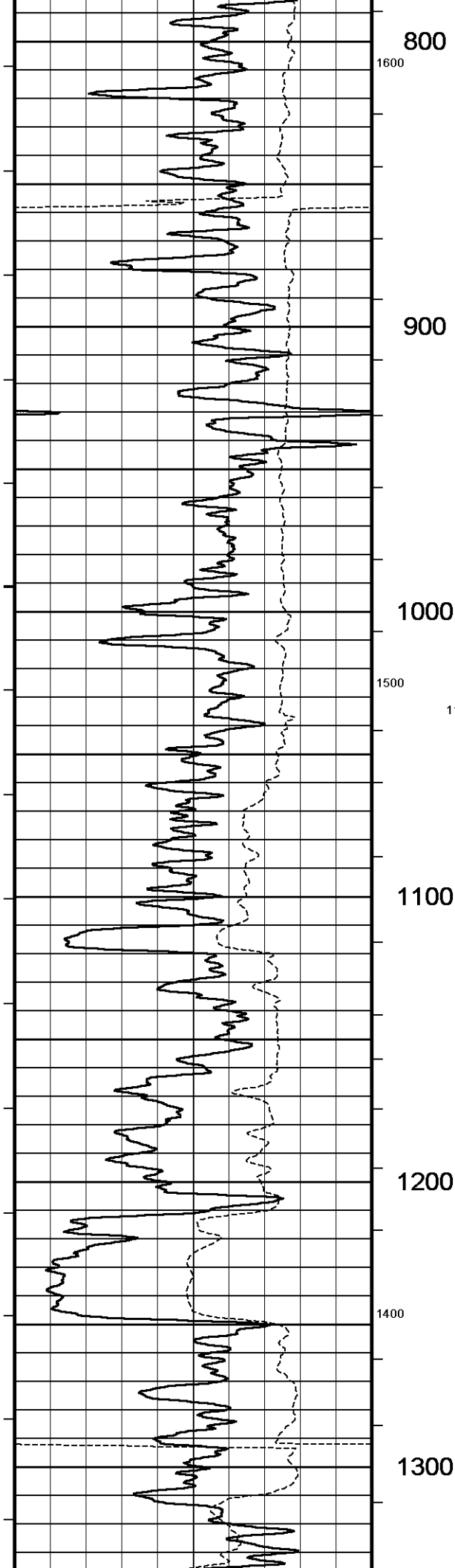
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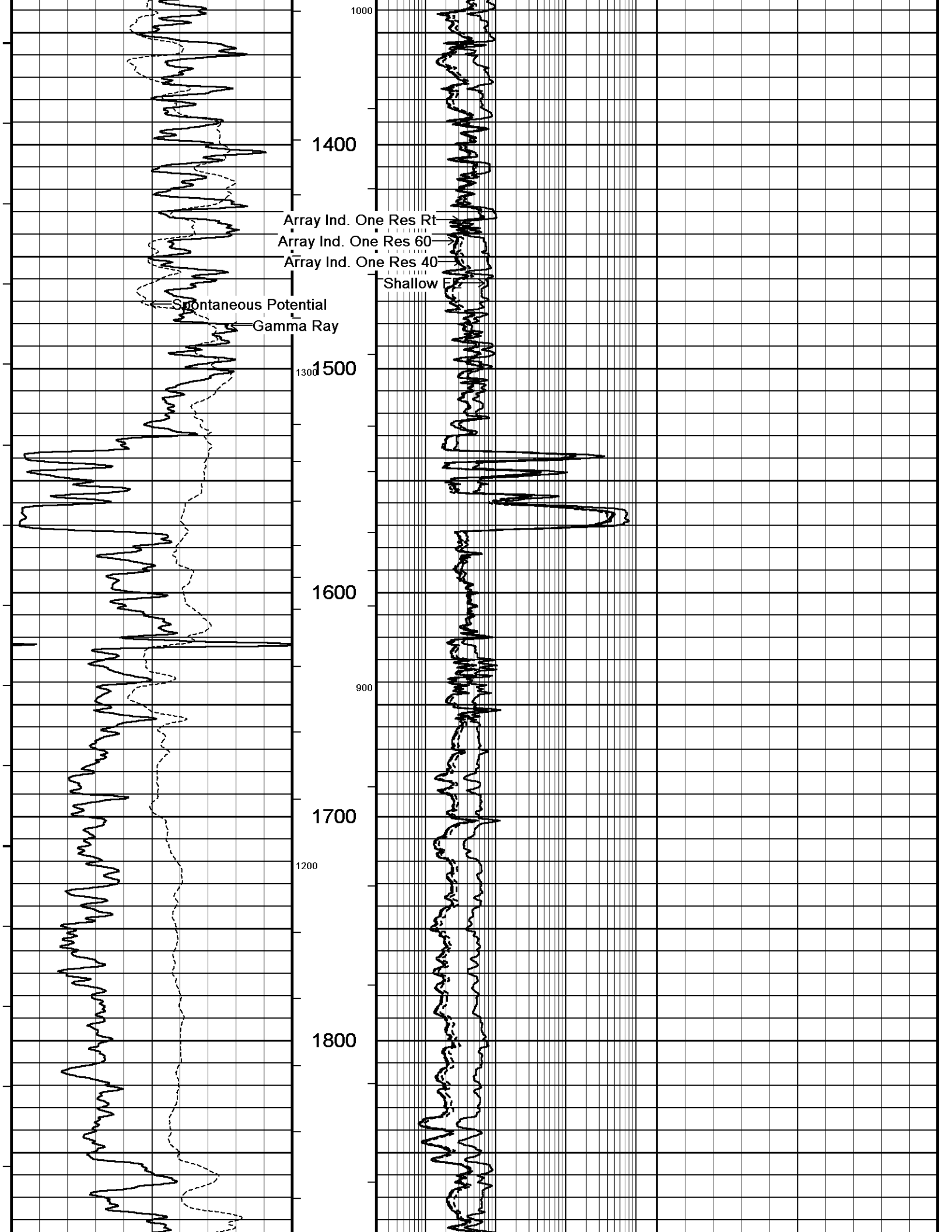
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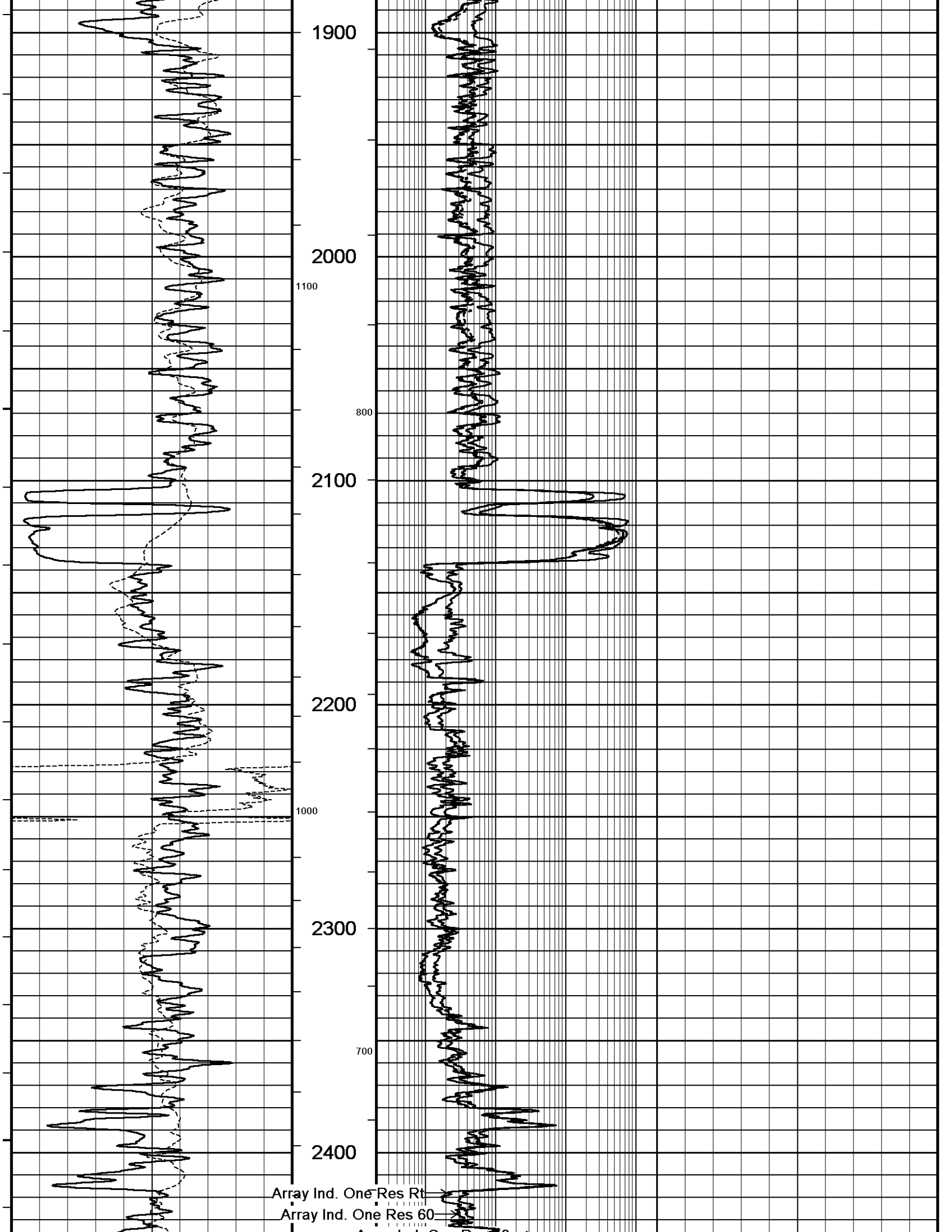
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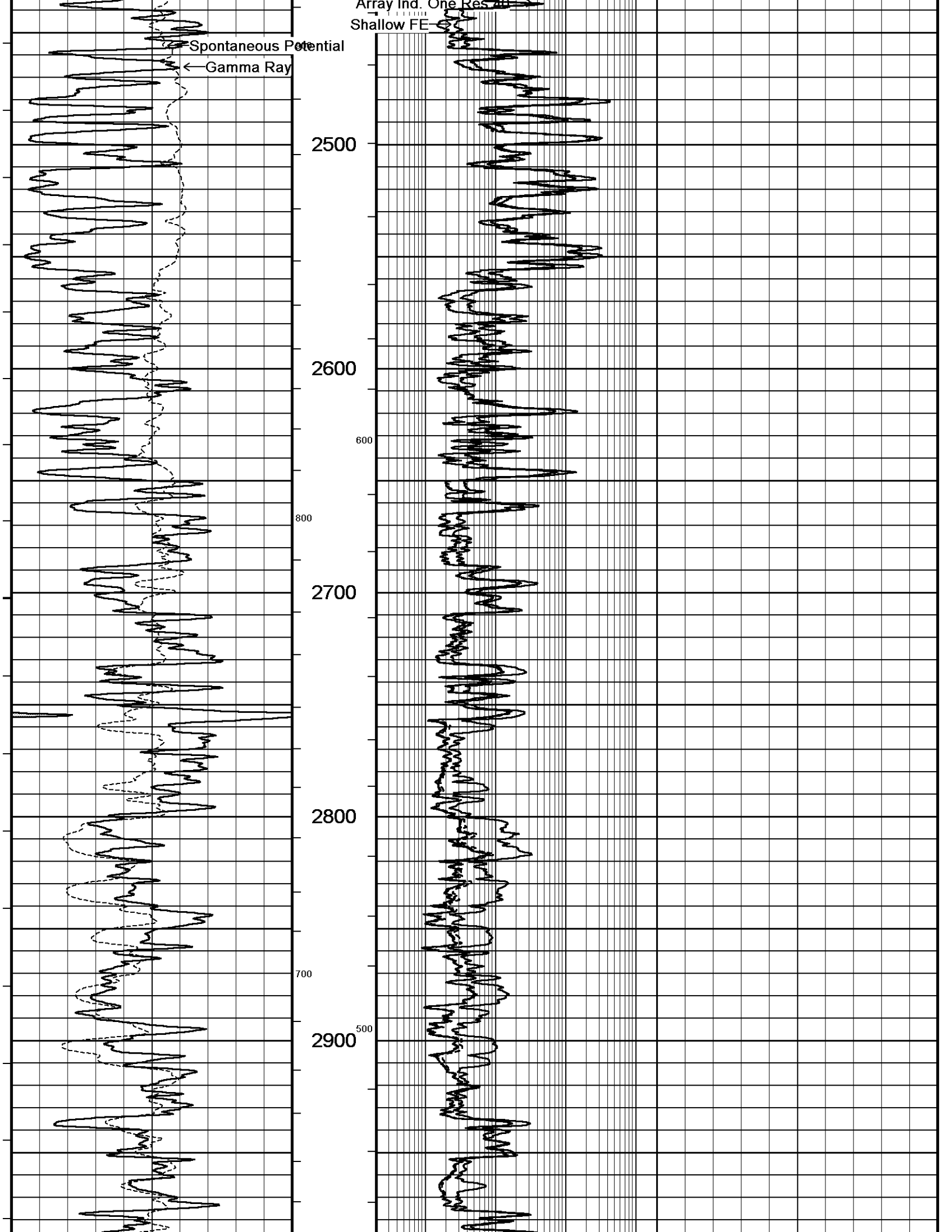
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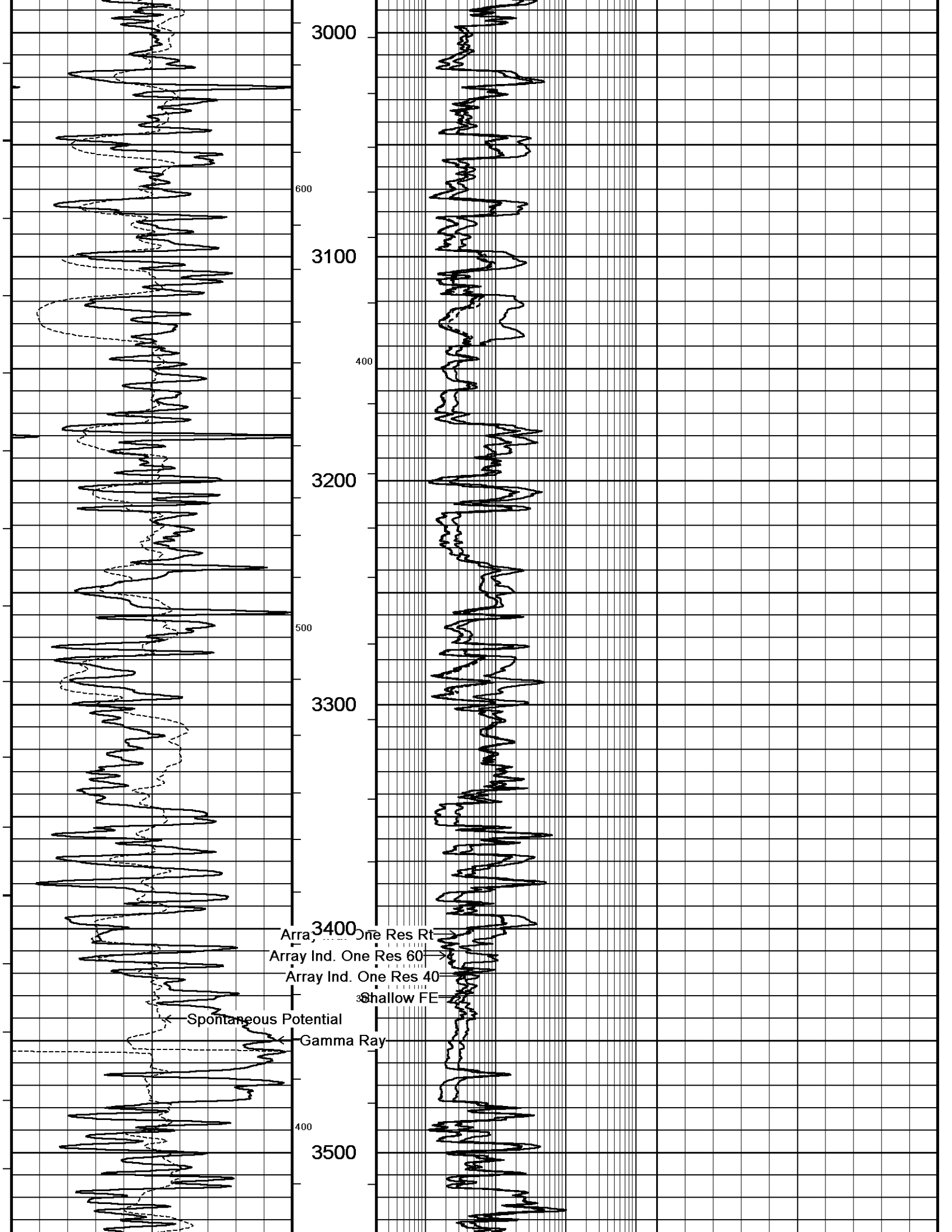


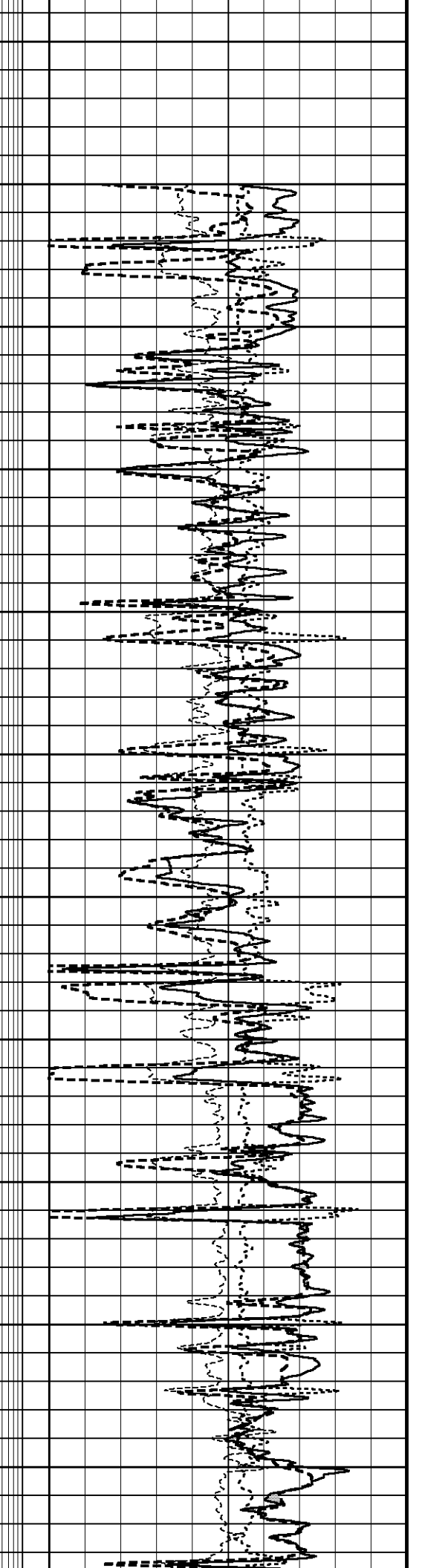
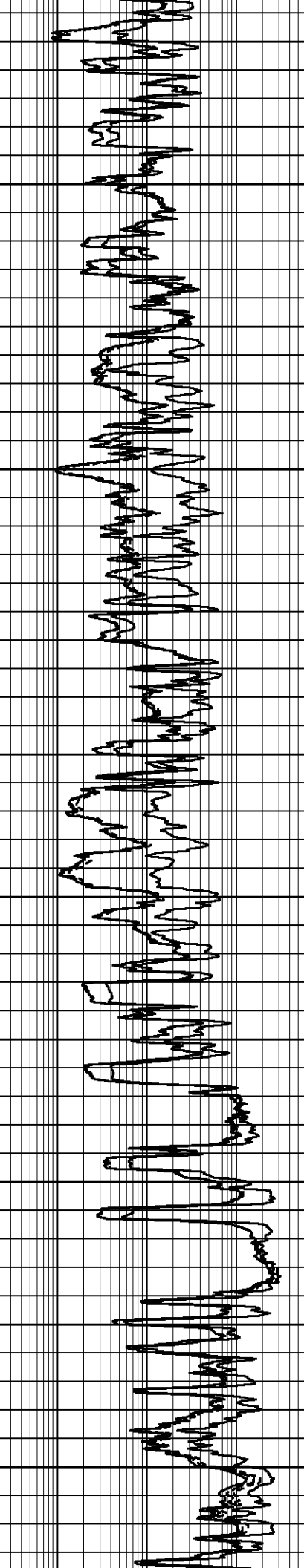
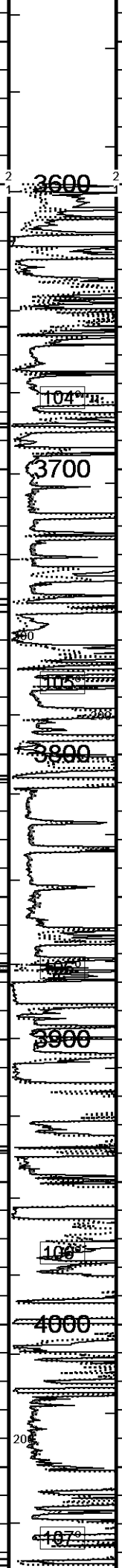
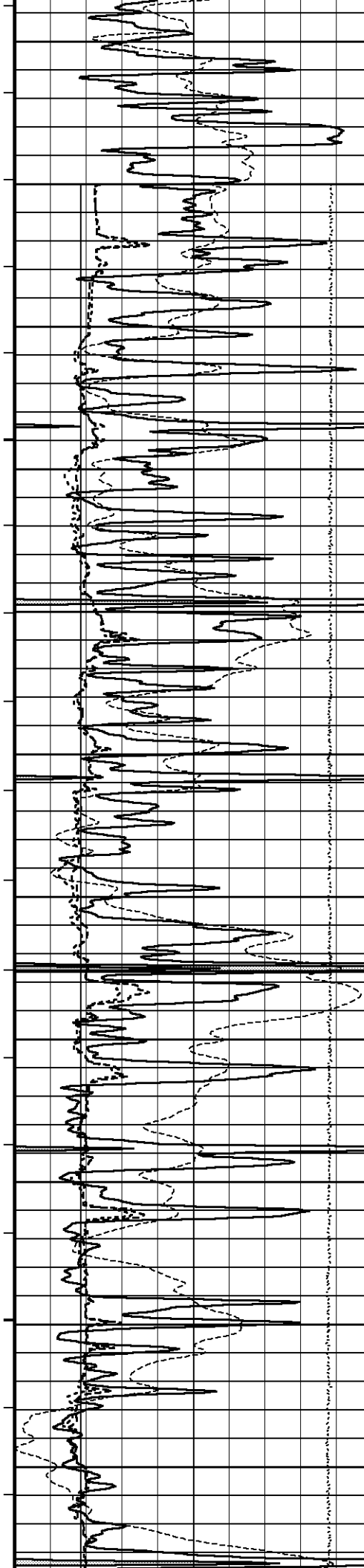


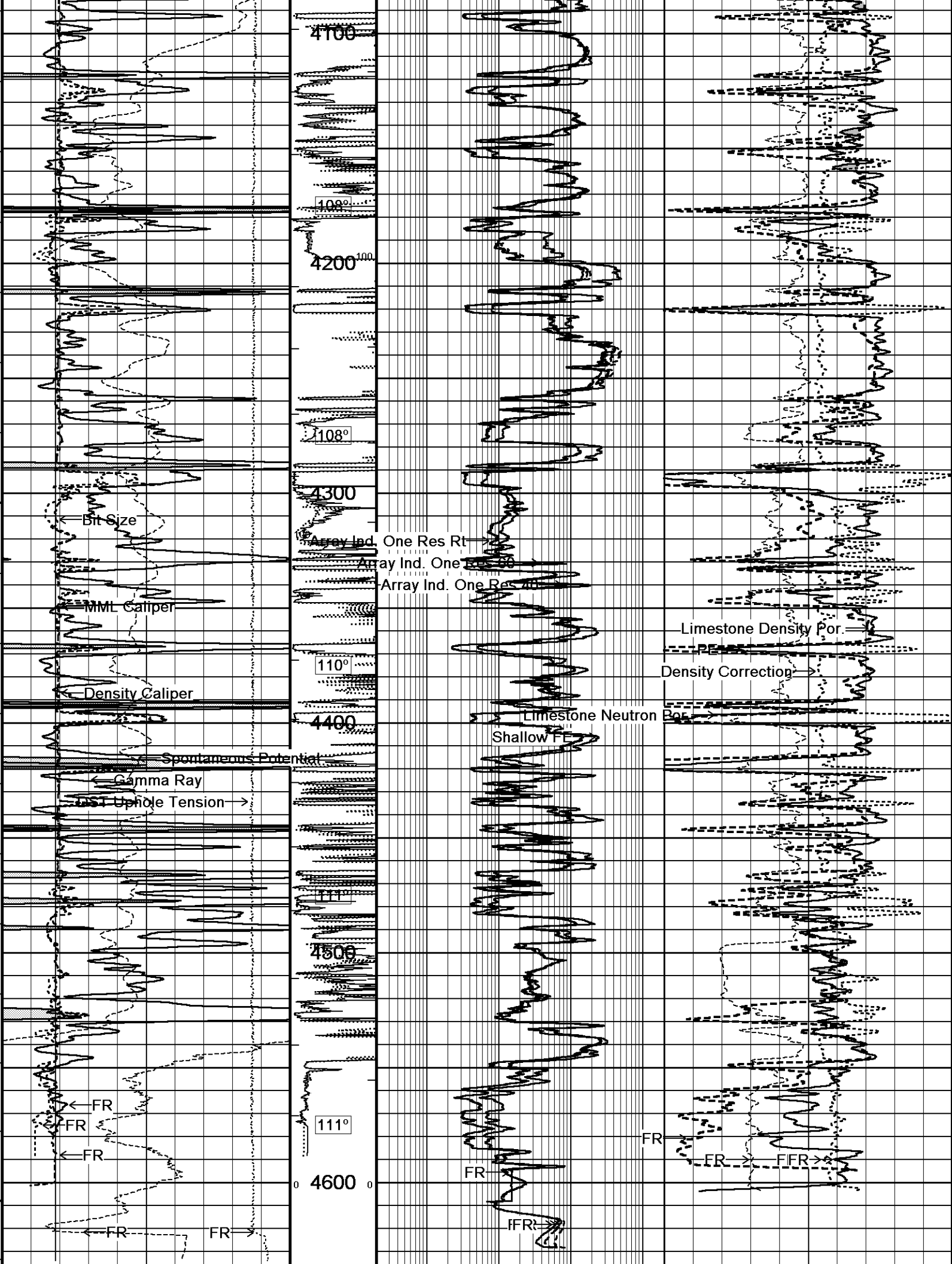


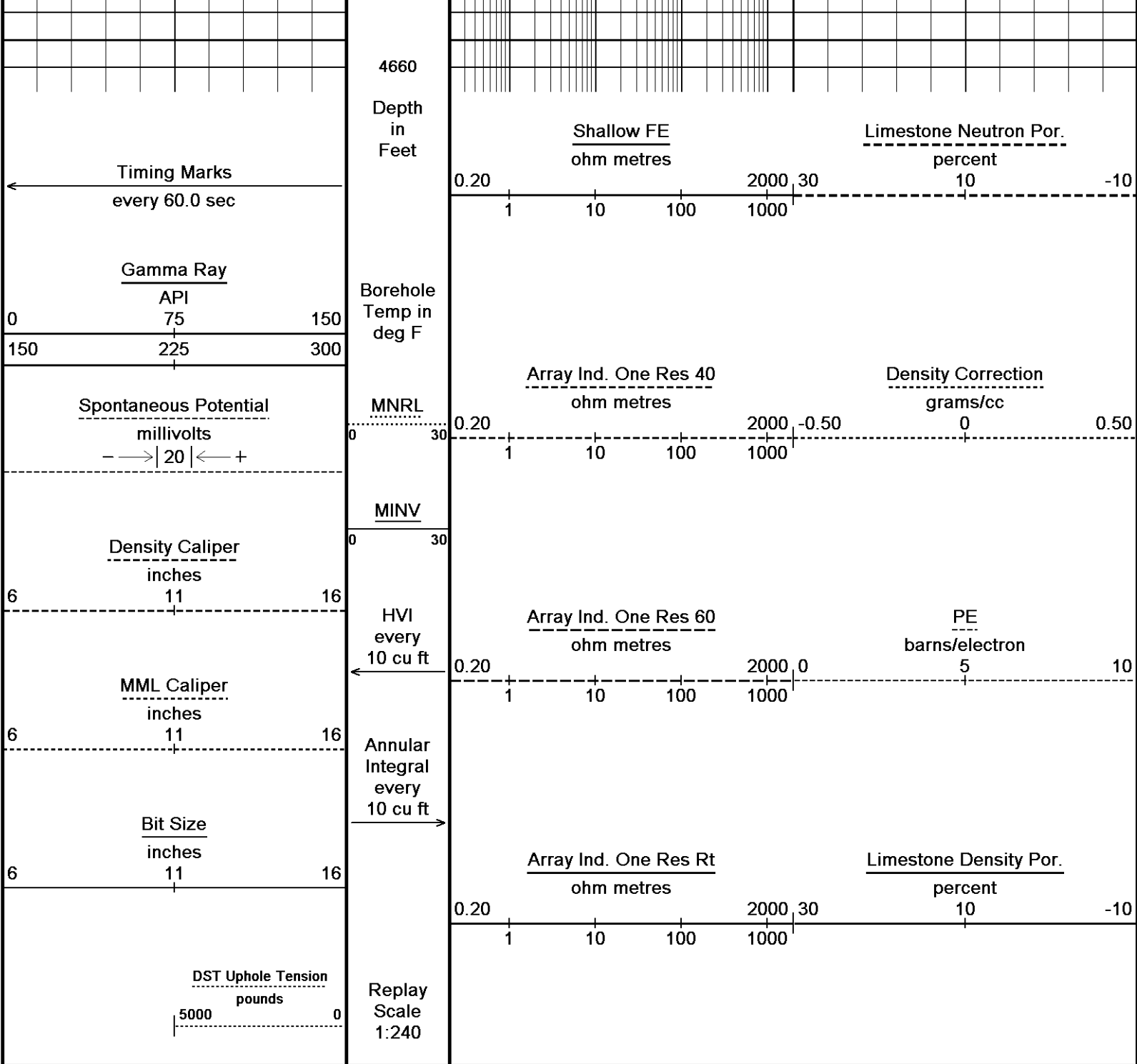












Depth Based Data - Maximum Sampling Increment 10.0cm
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System Versions: Processed with 13.05.9583 Plotted with 13.05.9583

Plotted on 15-JAN-2014 00:37
Recorded on 14-JAN-2014 20:29

↑

2 INCH COMPOSITE MAIN

↑

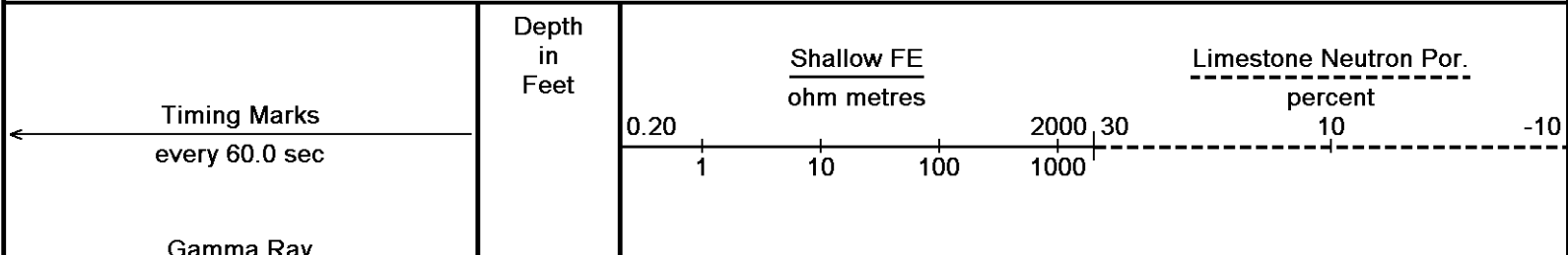
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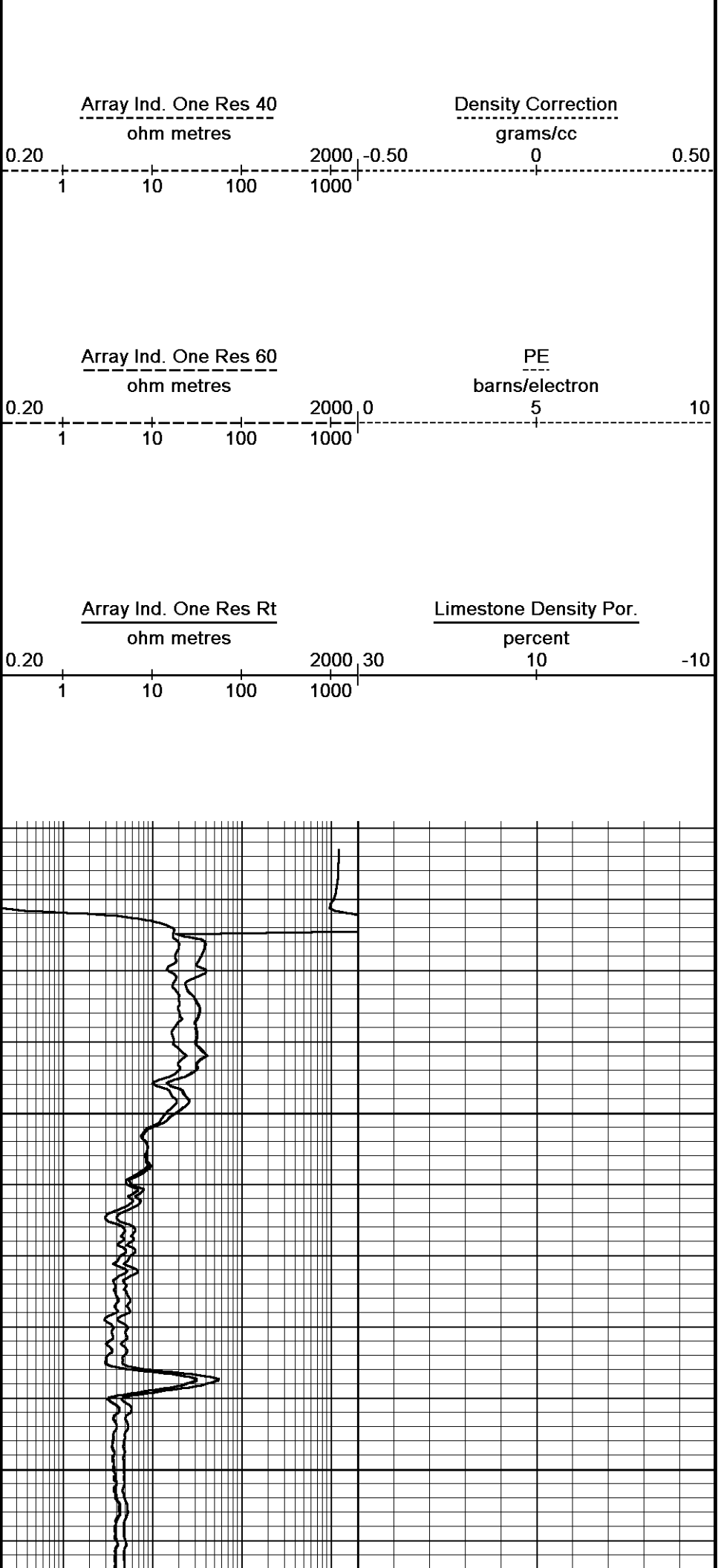
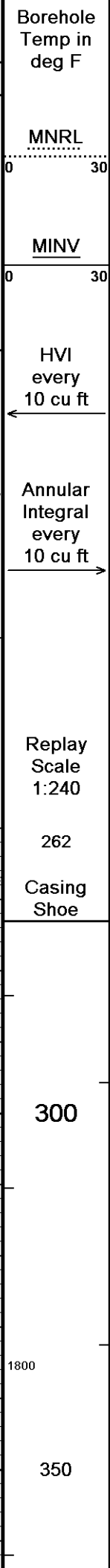
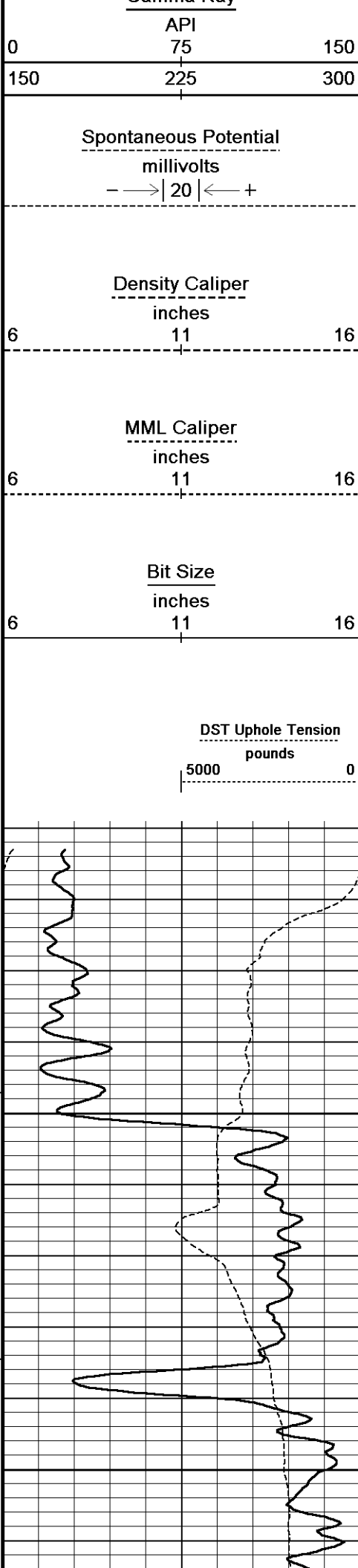
5 INCH COMPOSITE MAIN

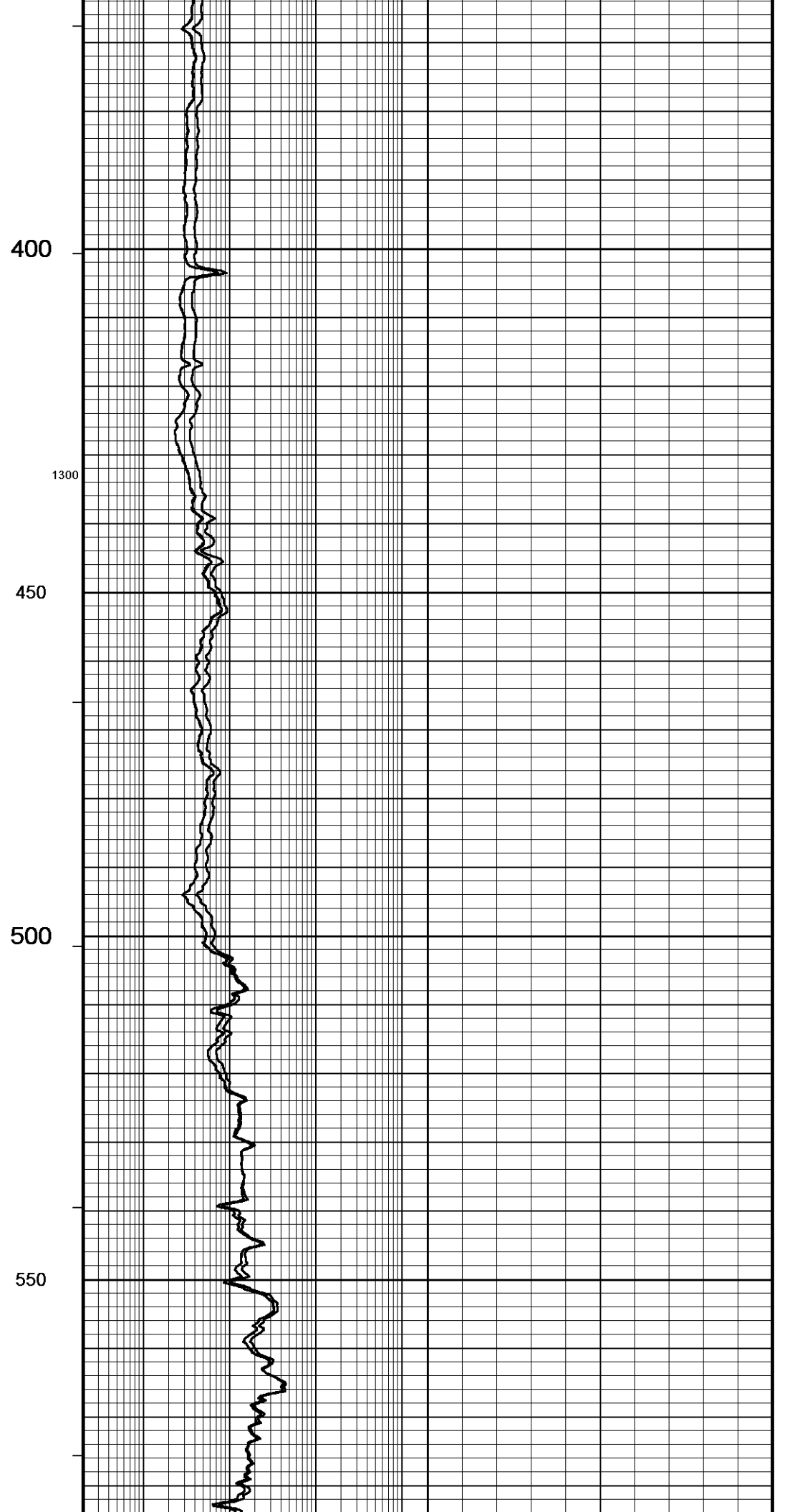
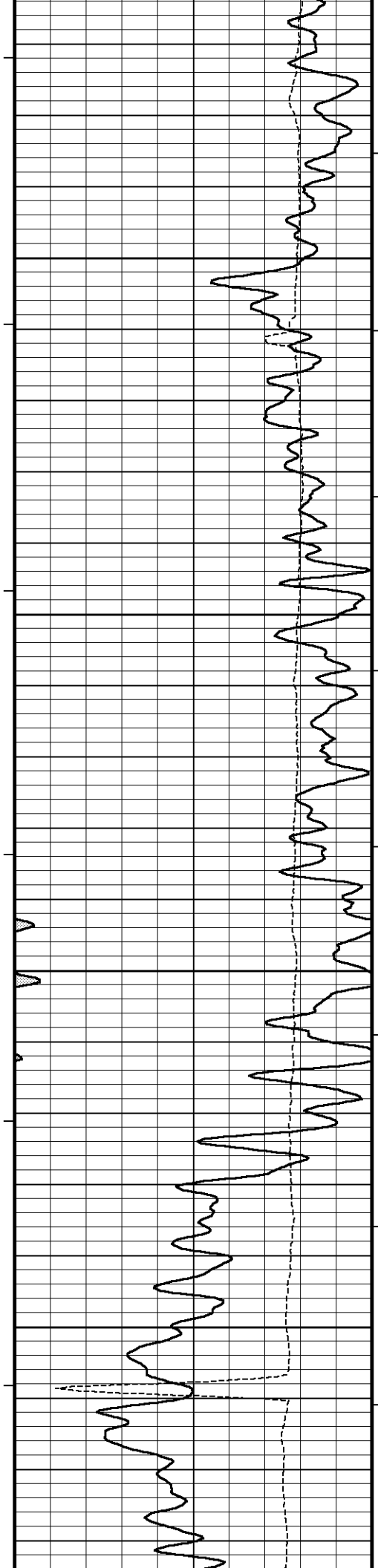
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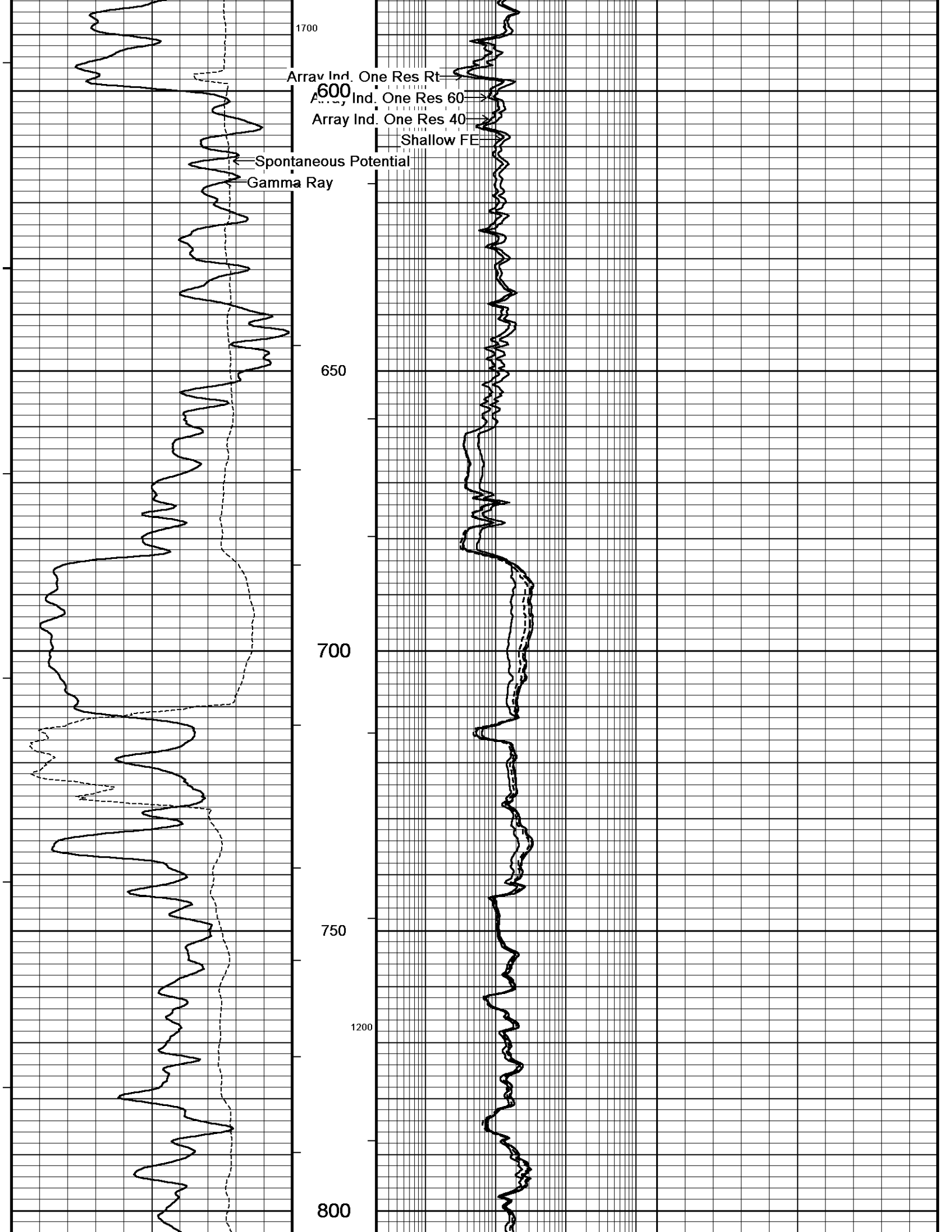
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System Versions: Processed with 13.05.9583 Plotted with 13.05.9583

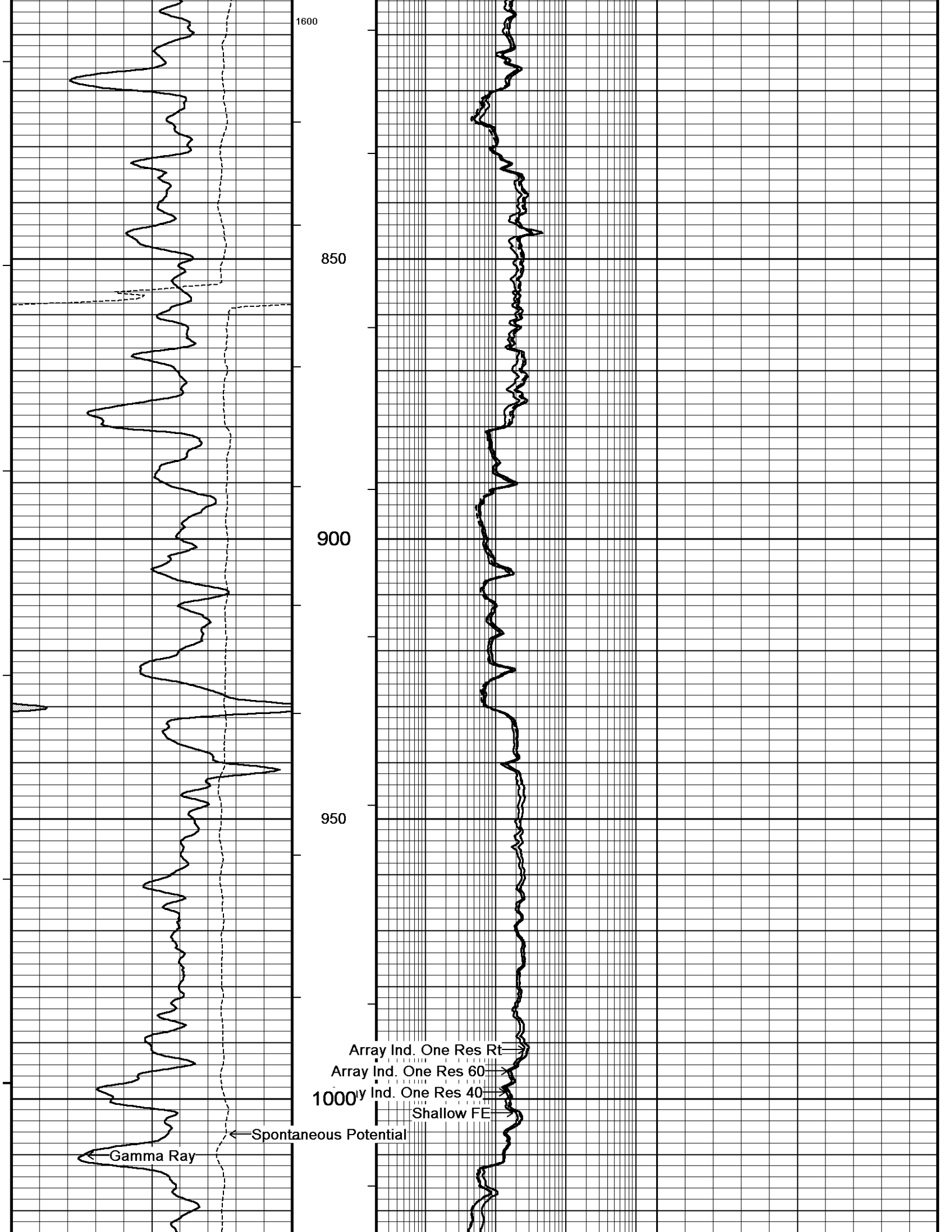
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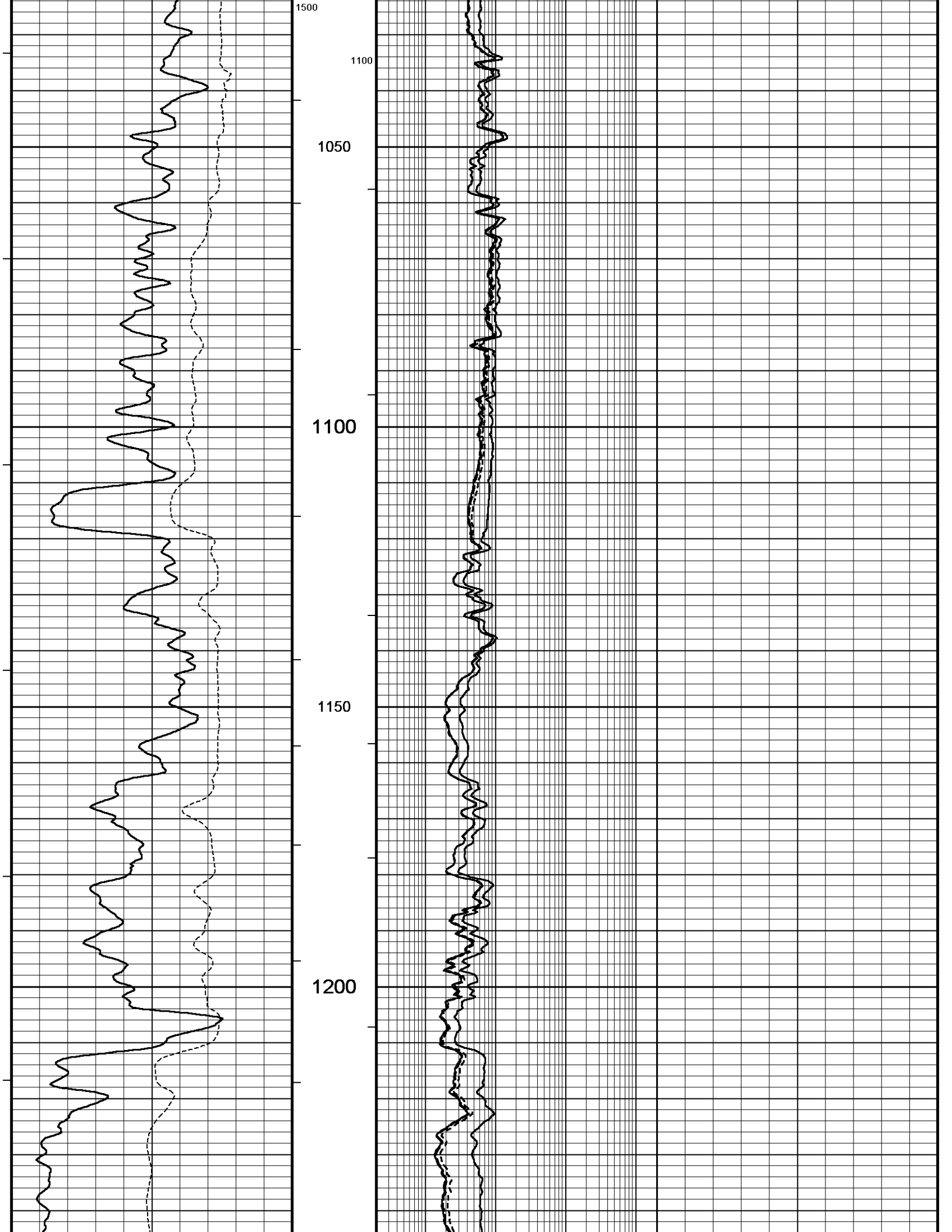


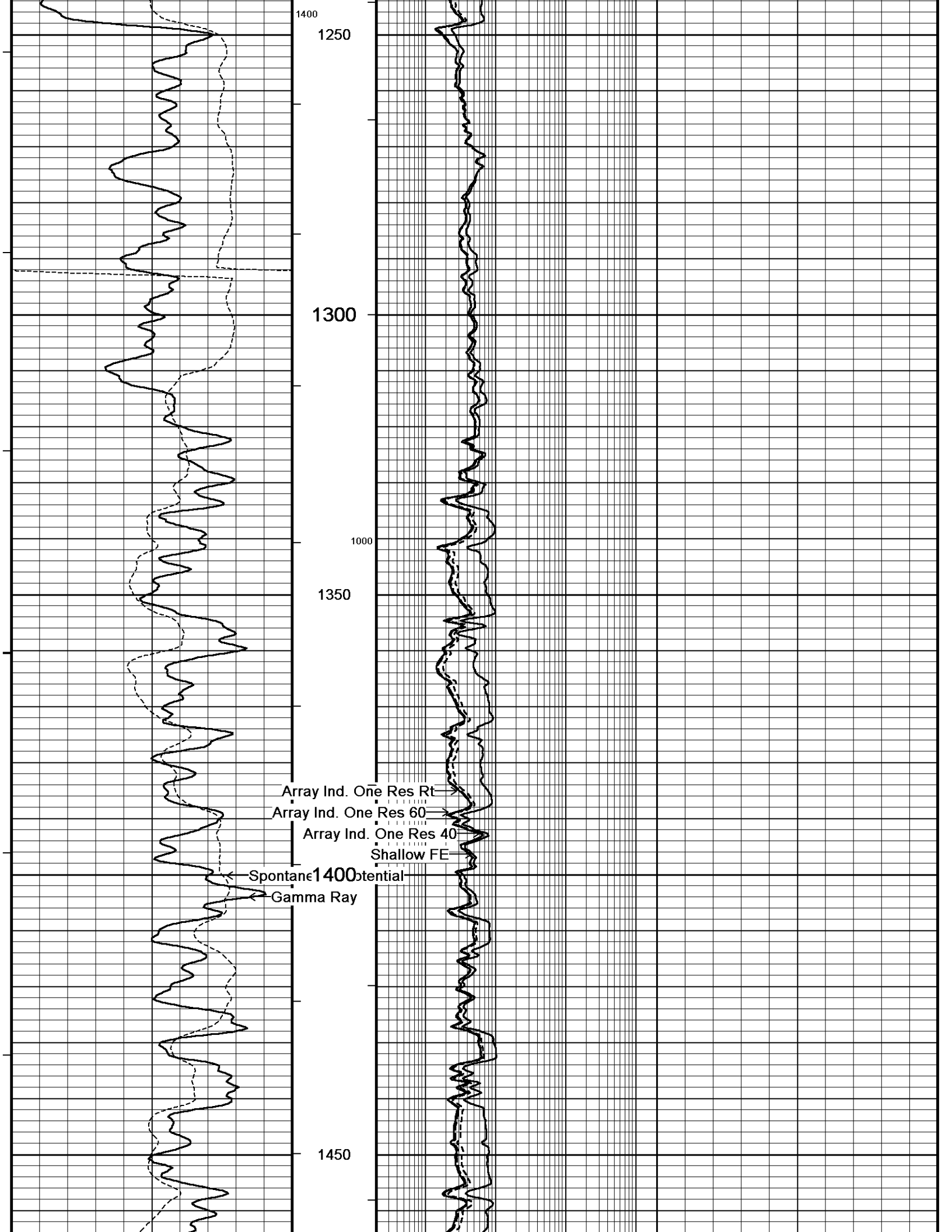


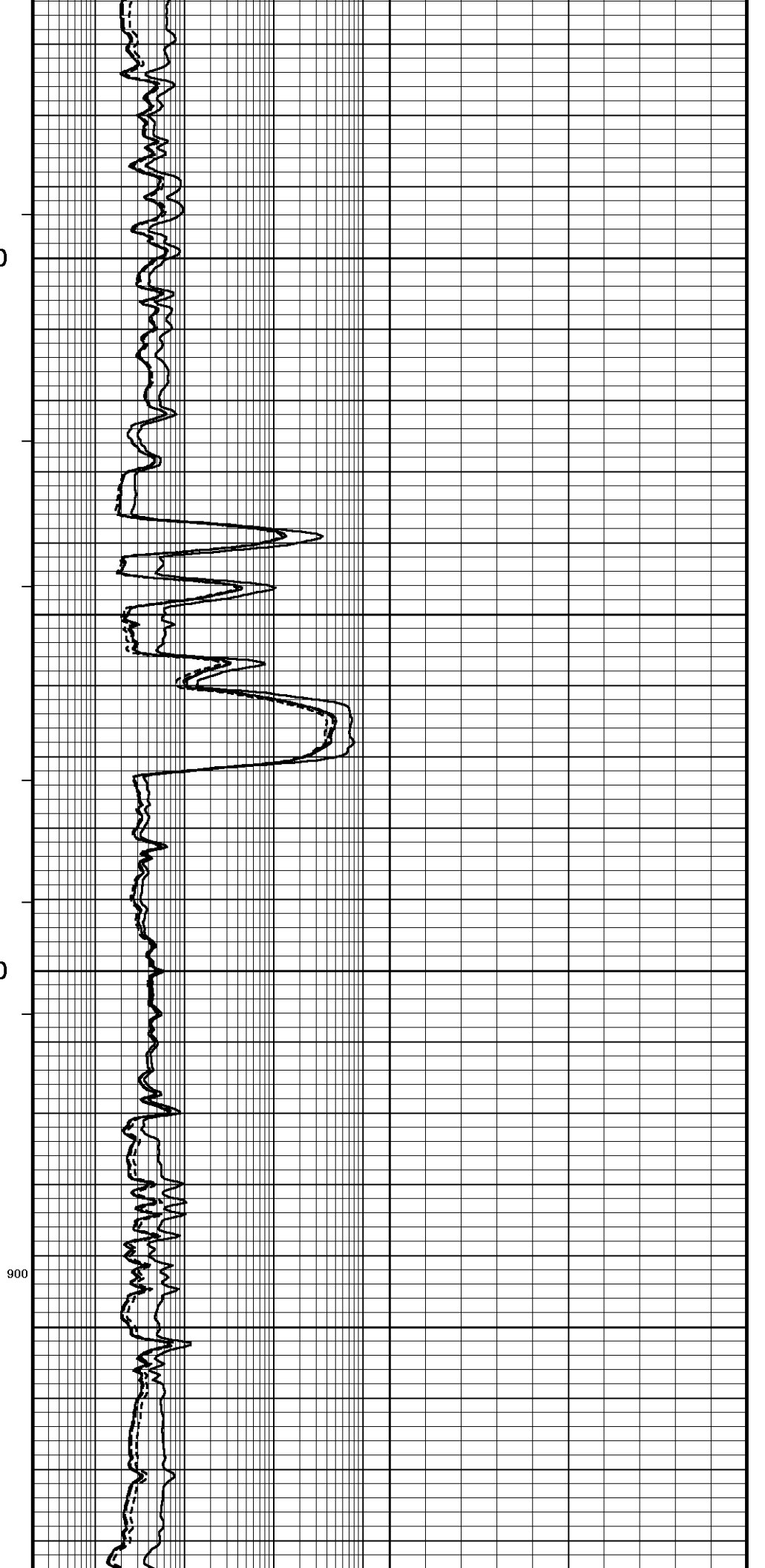
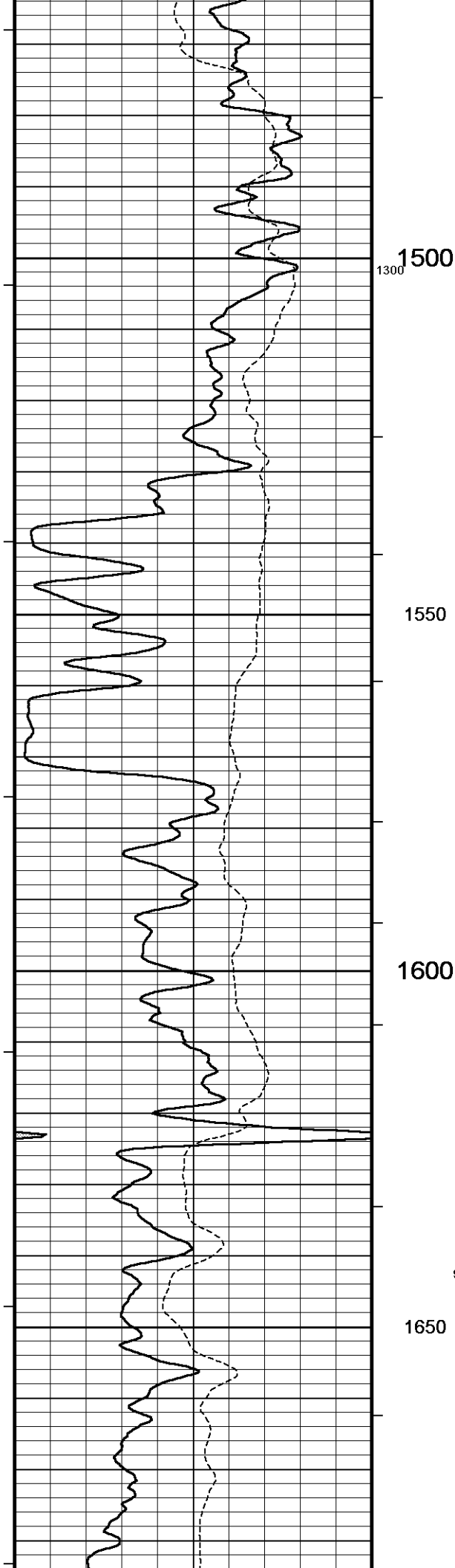


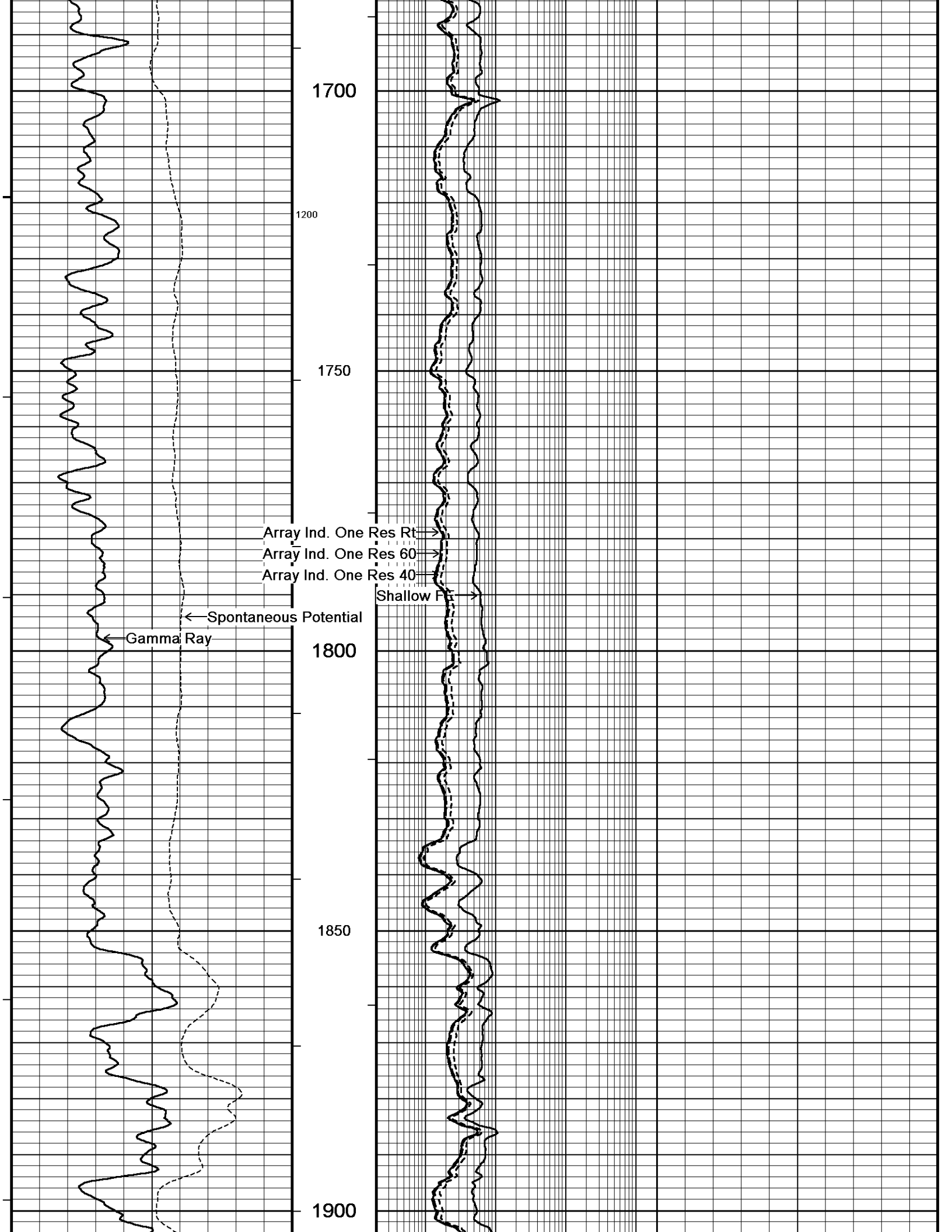


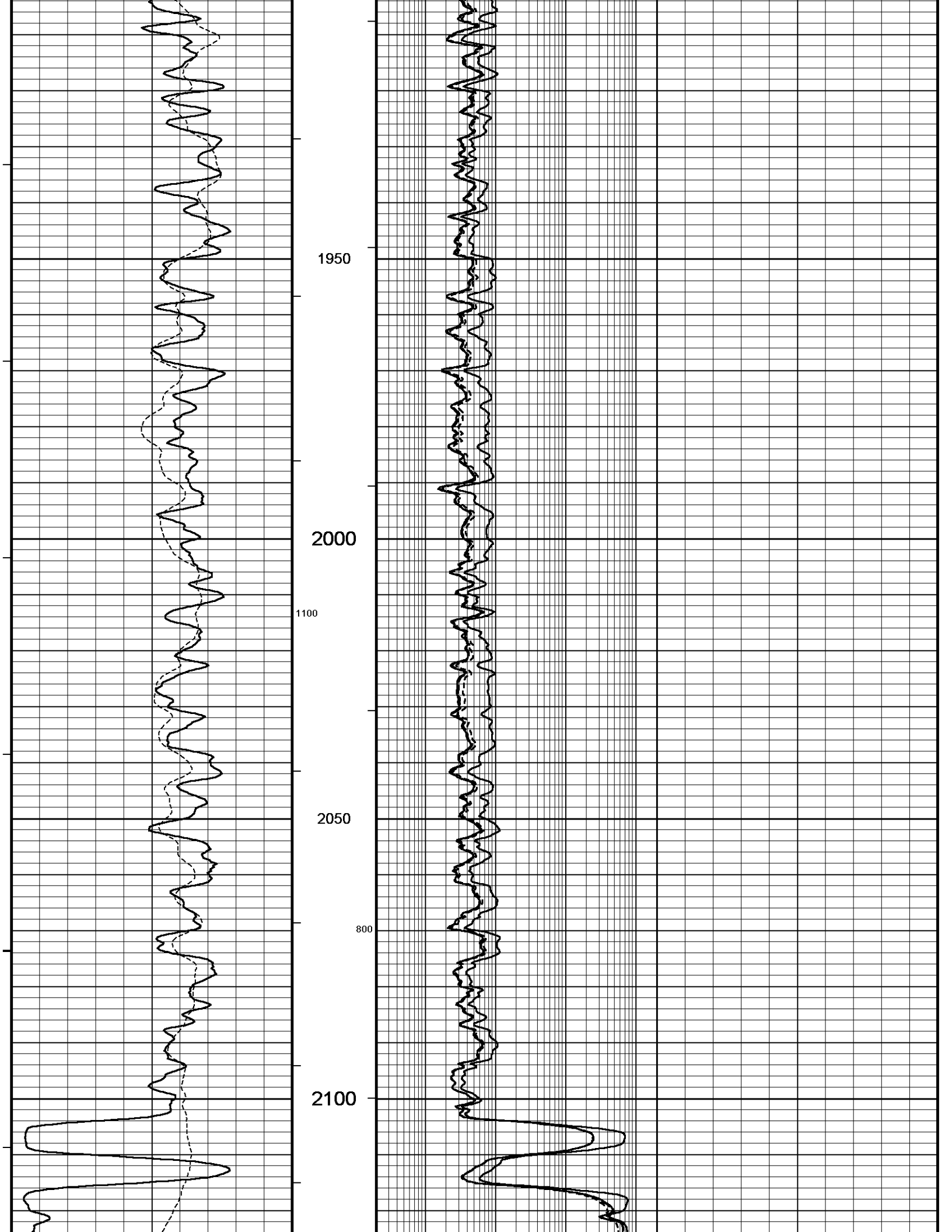


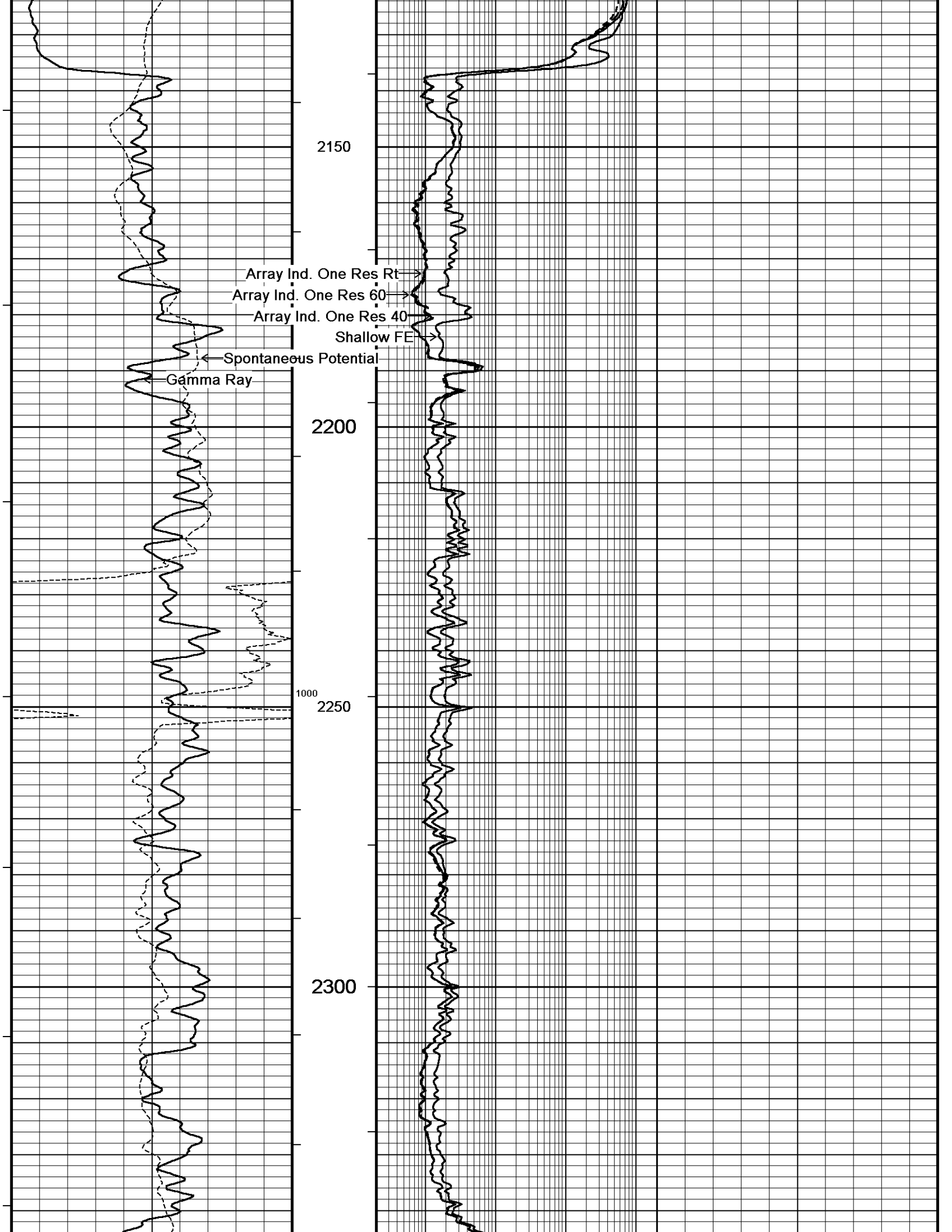


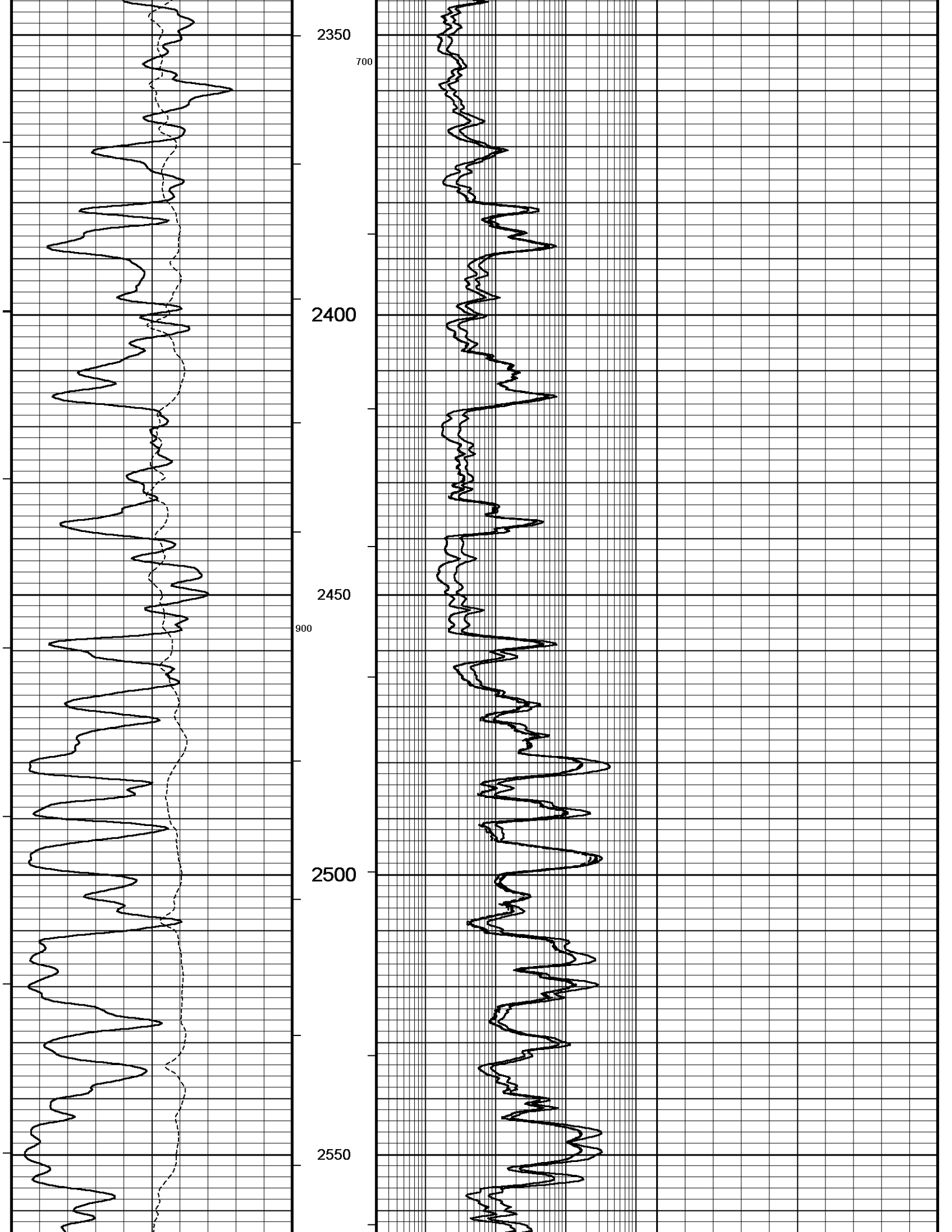


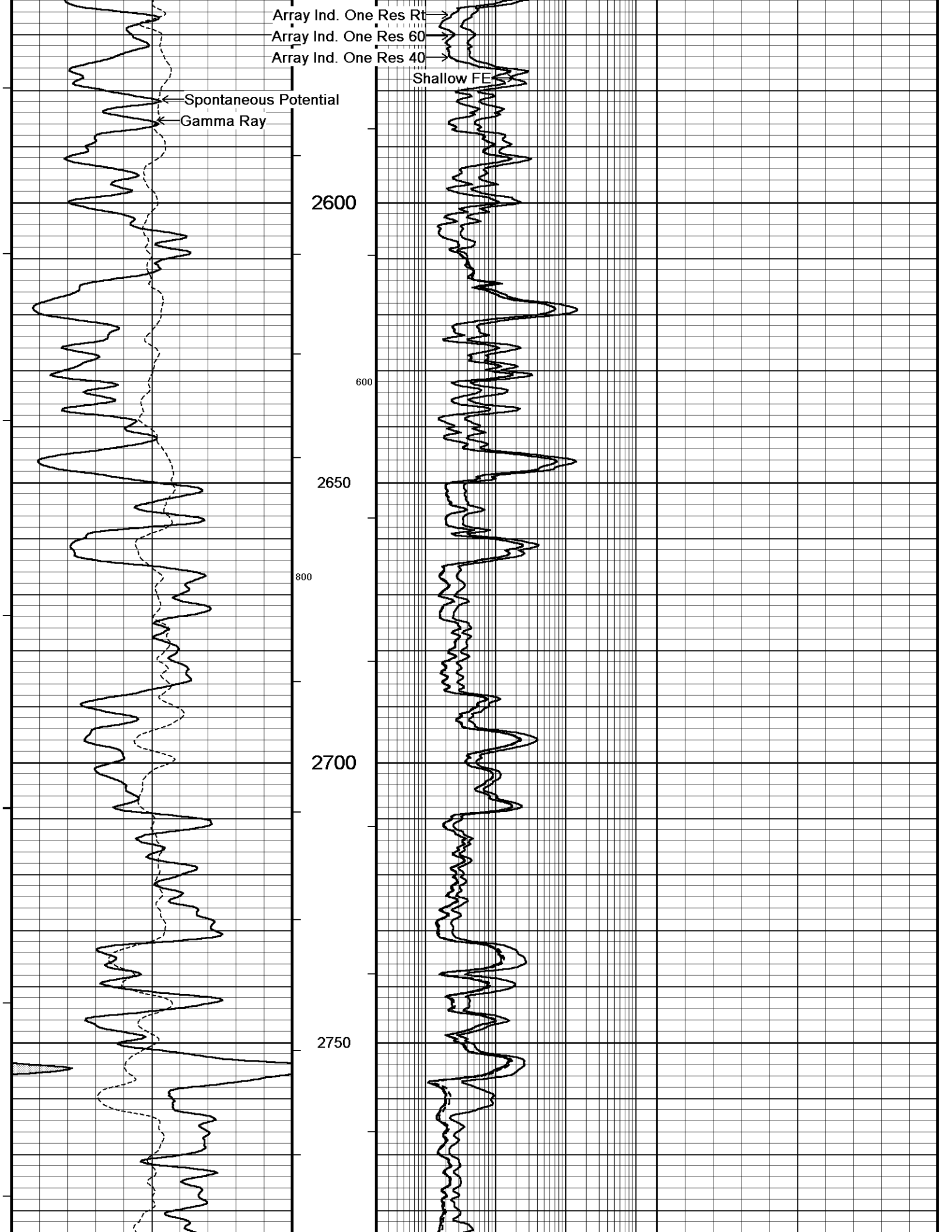


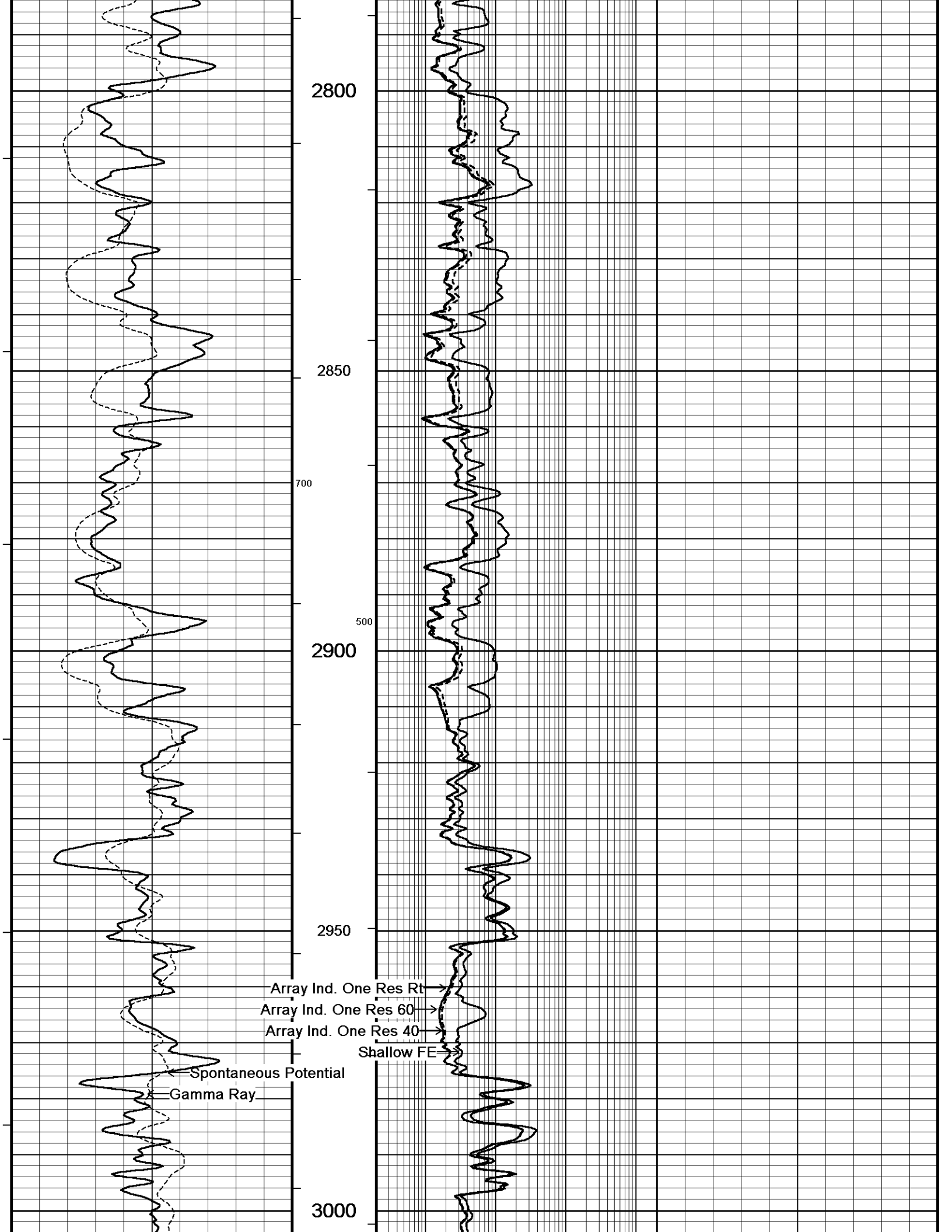


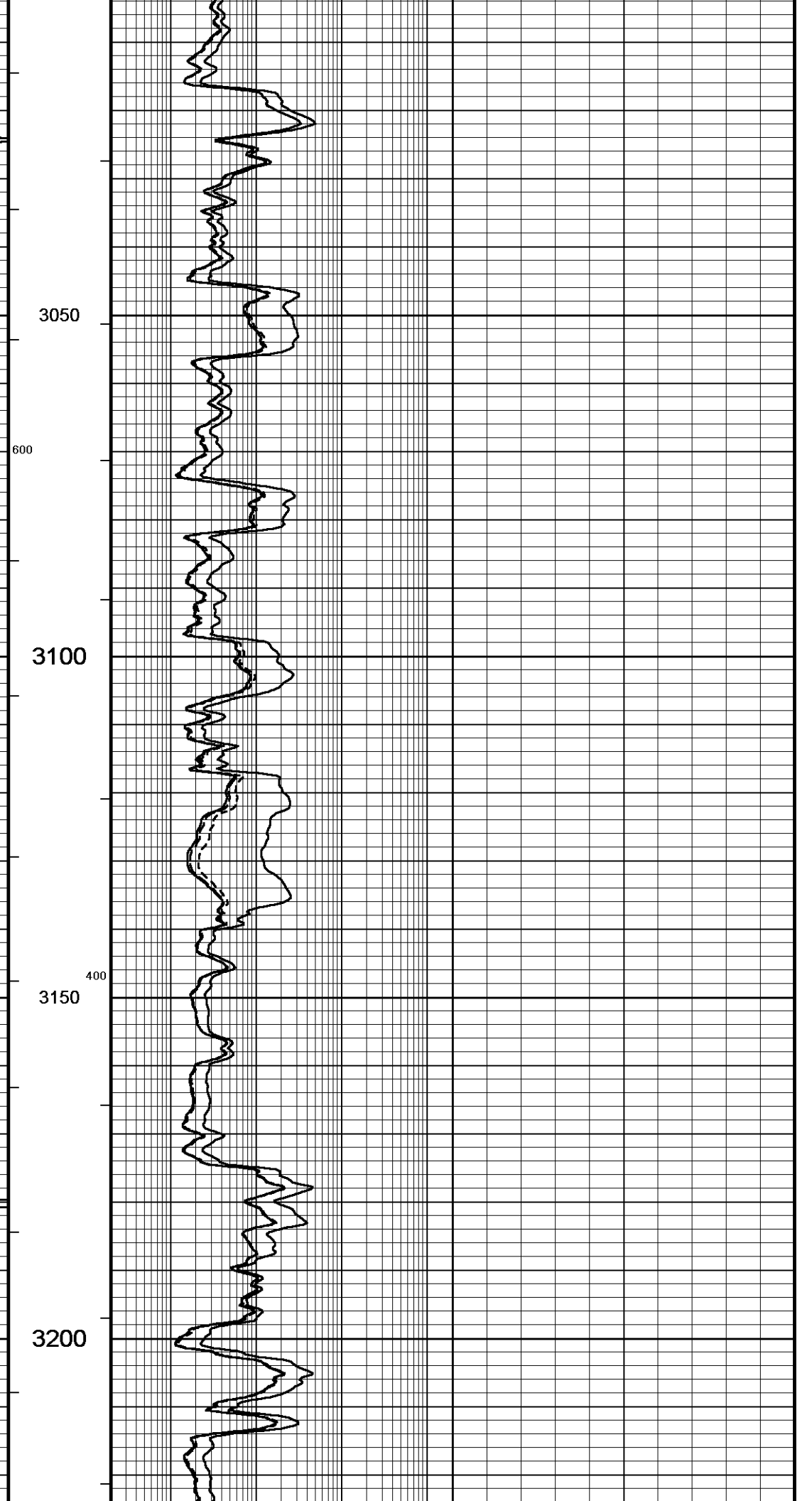
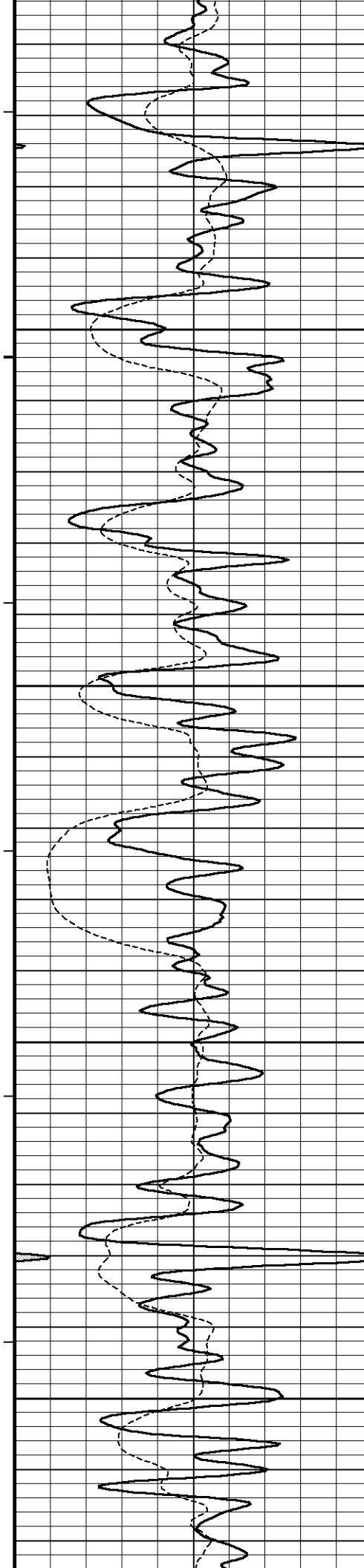


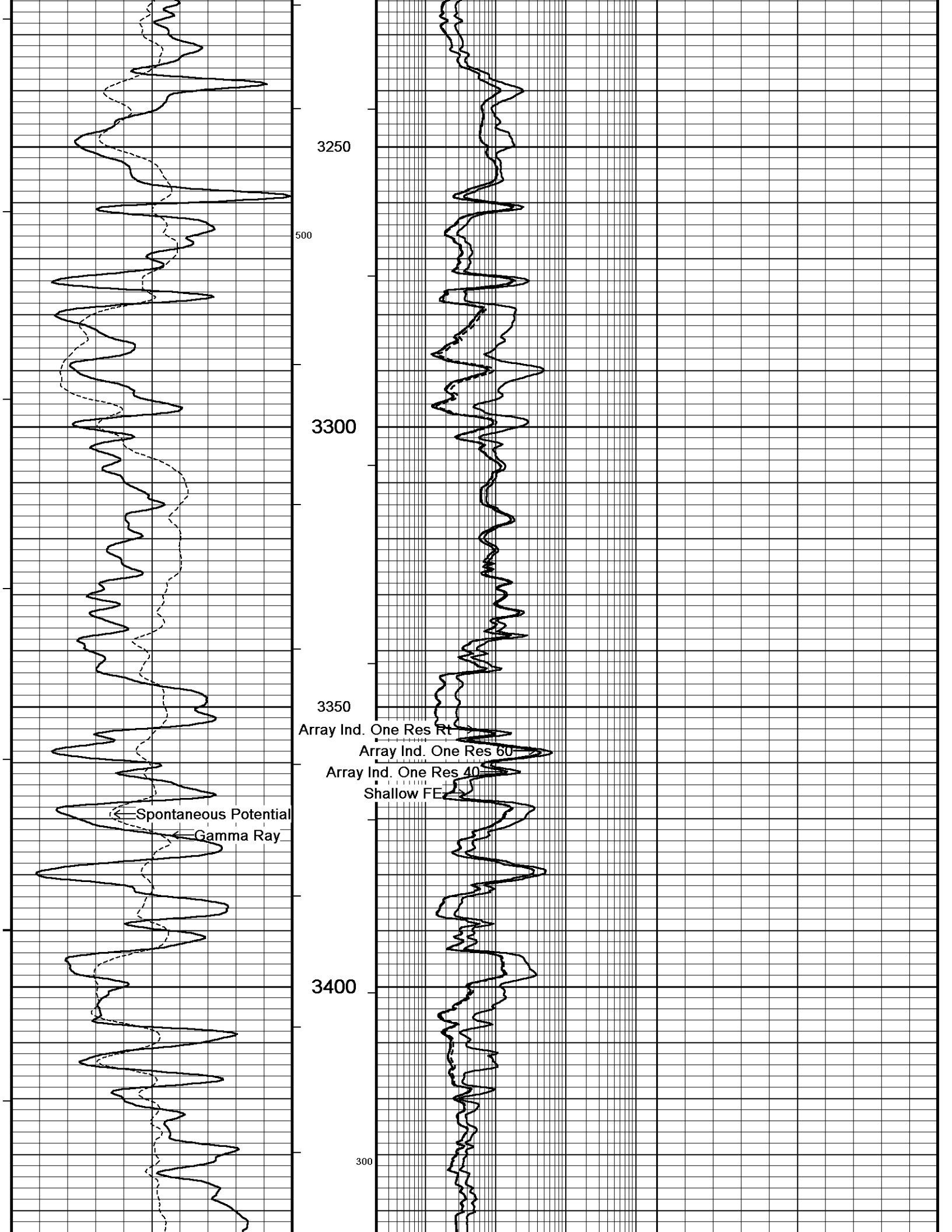


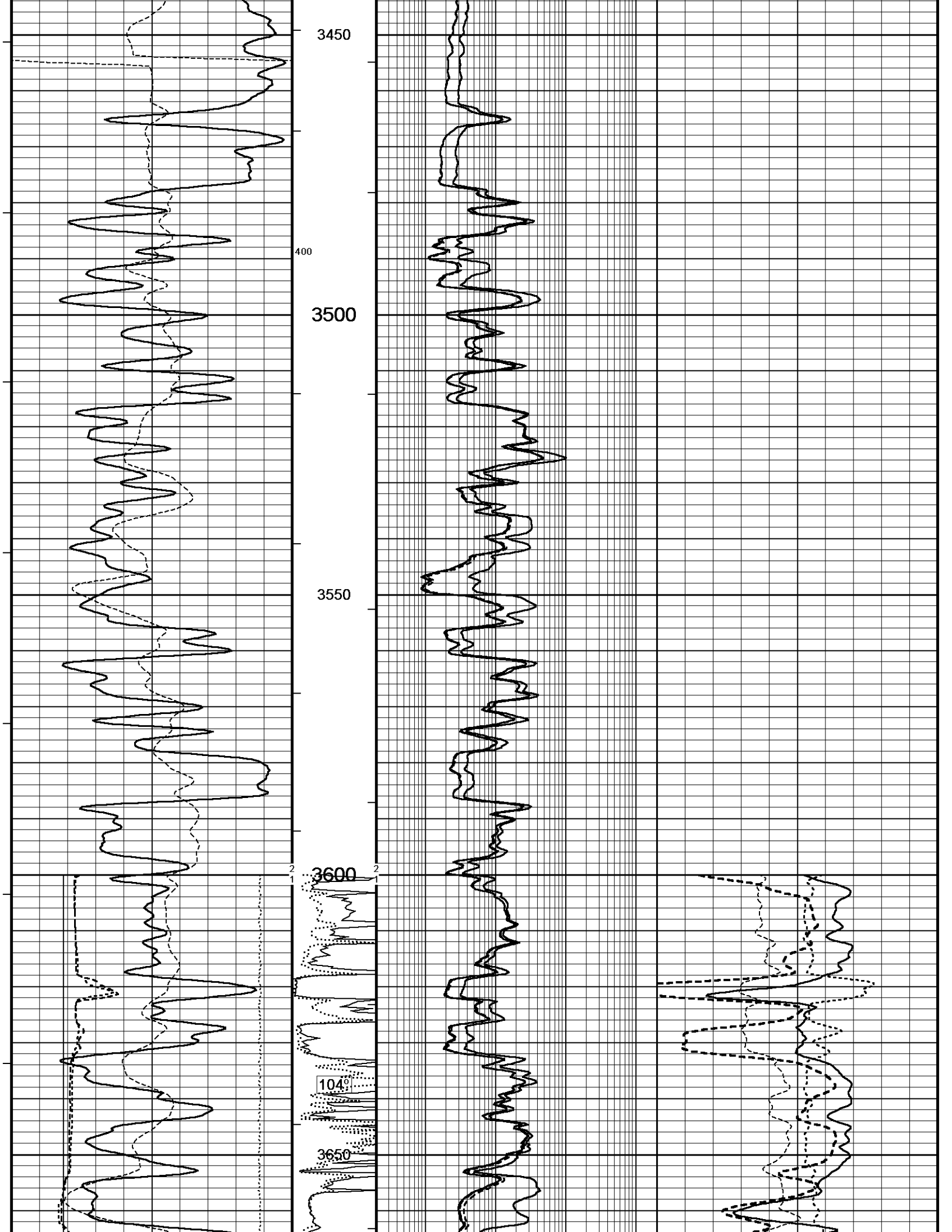


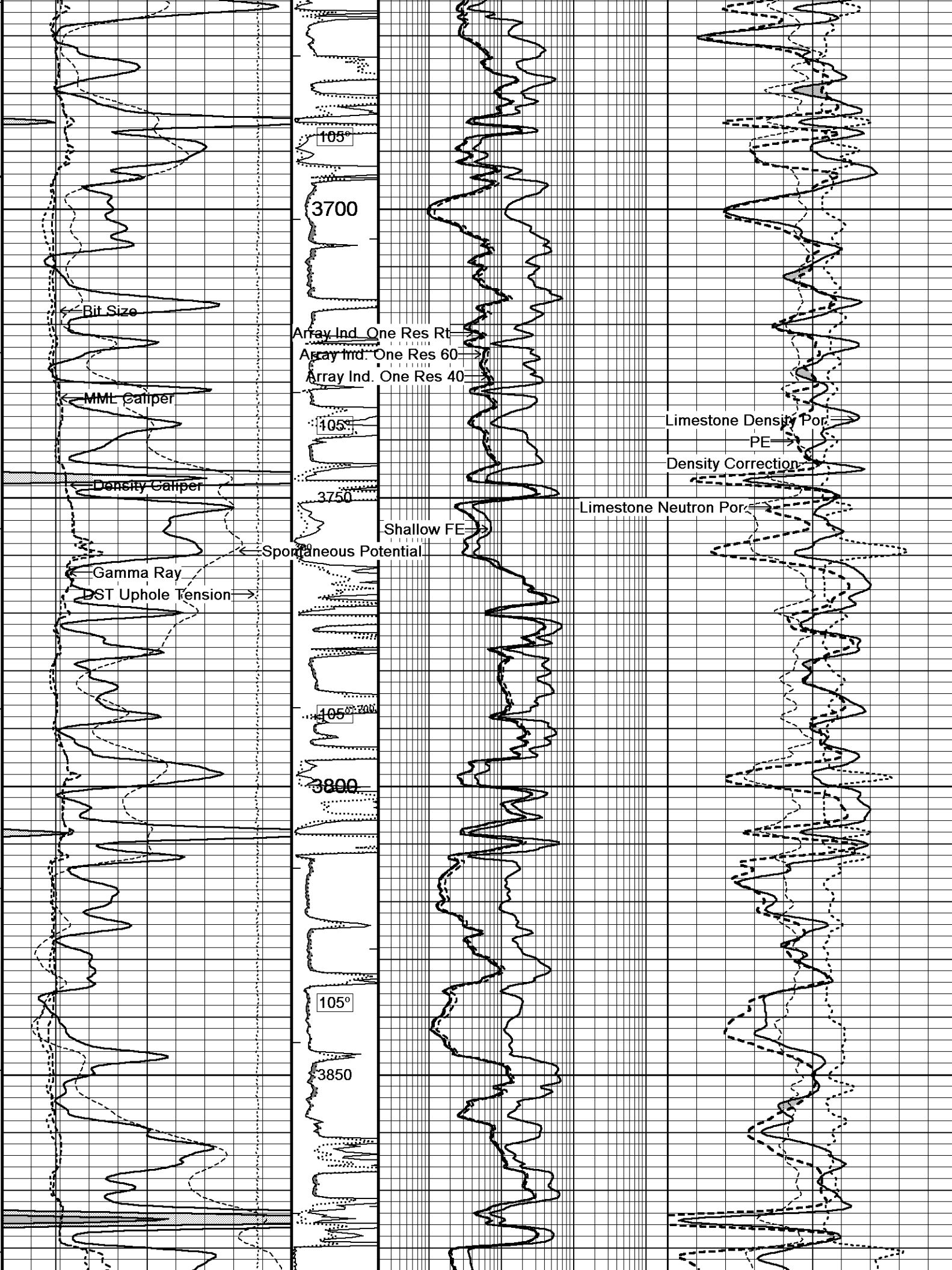


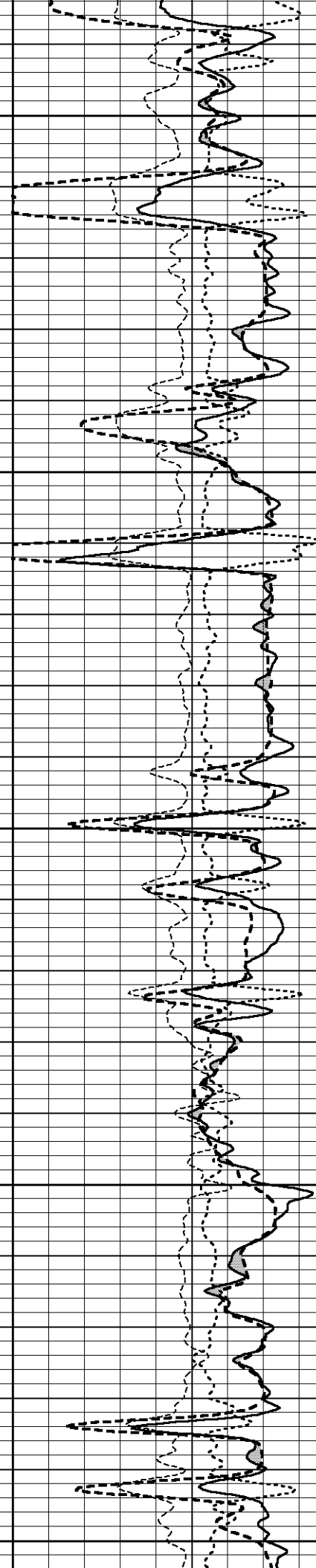
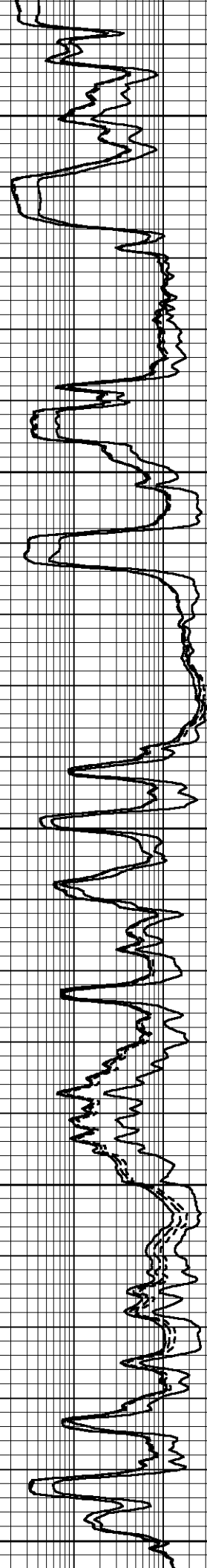
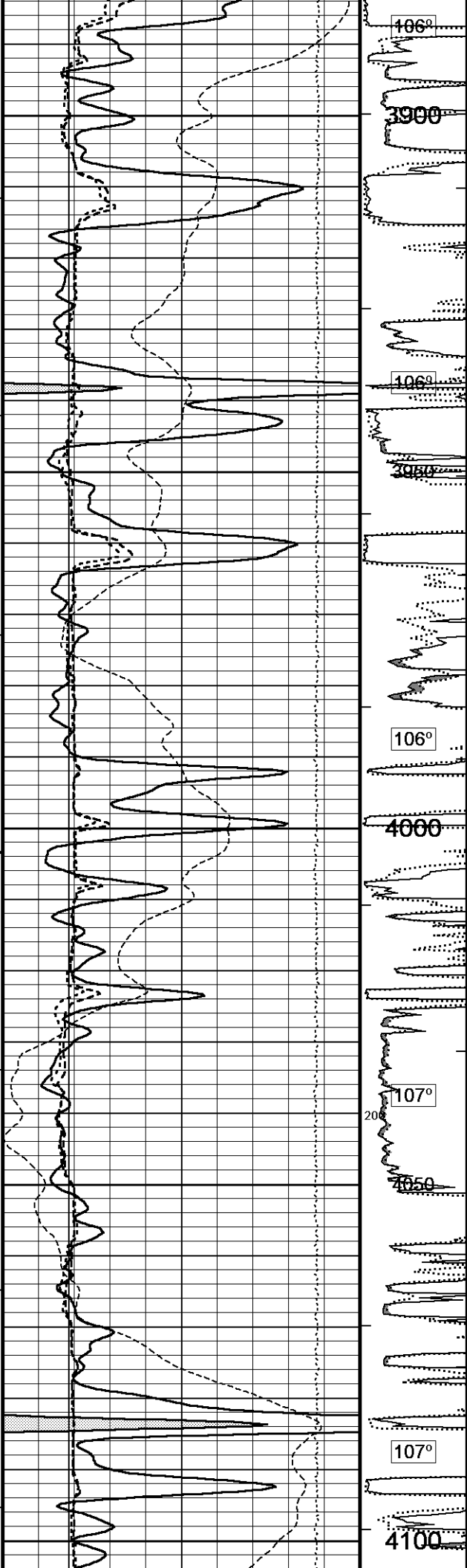


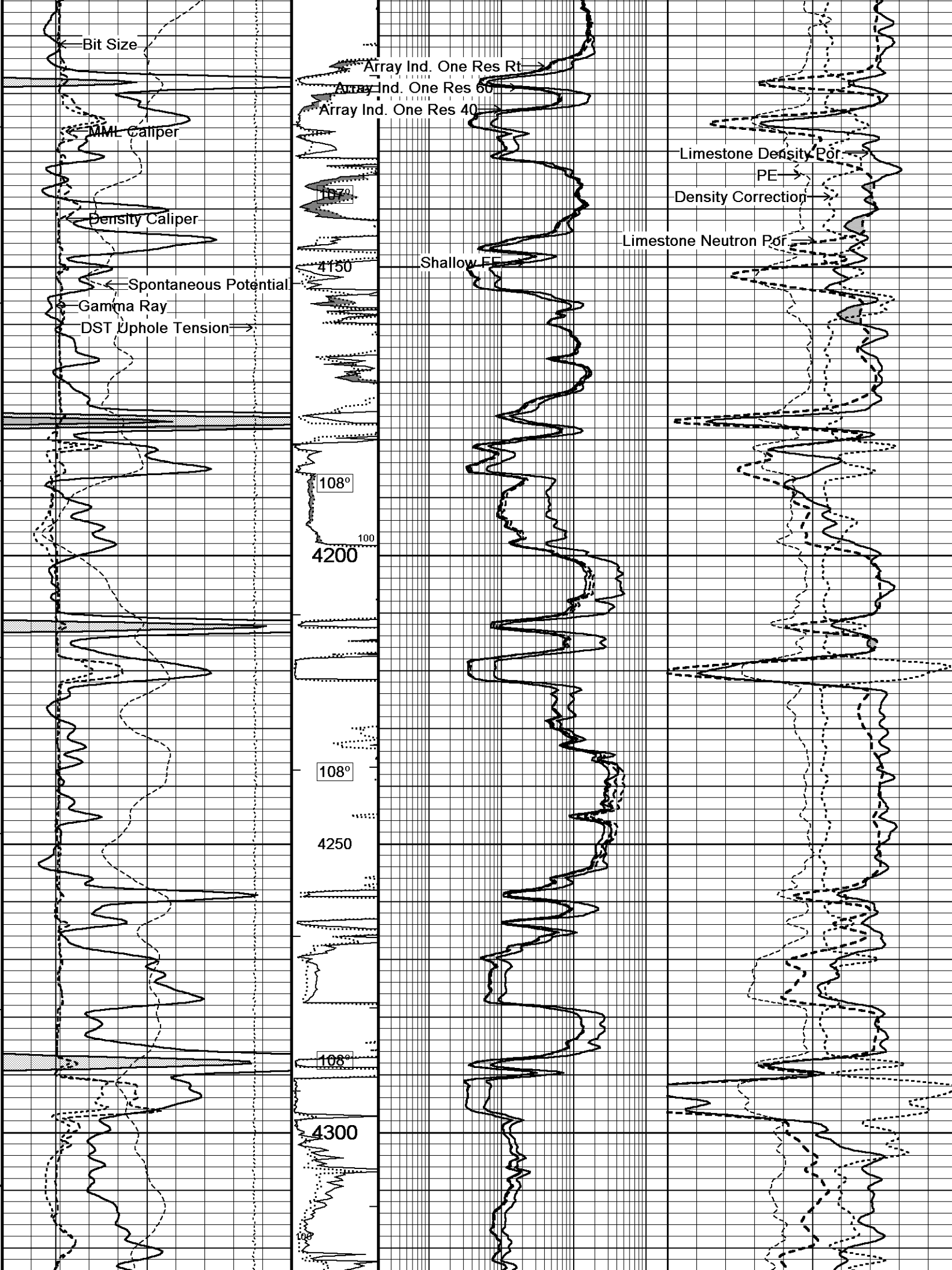


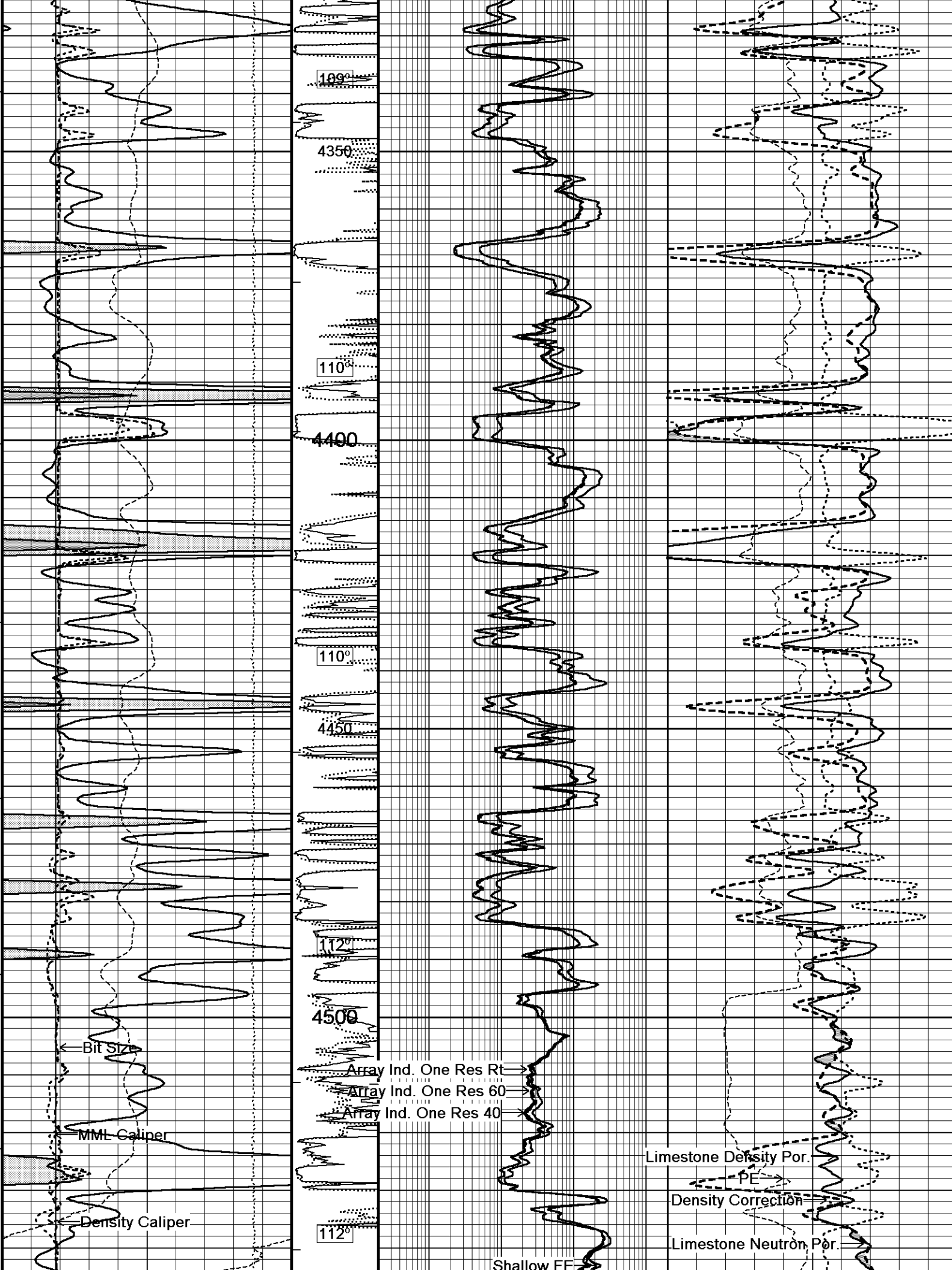


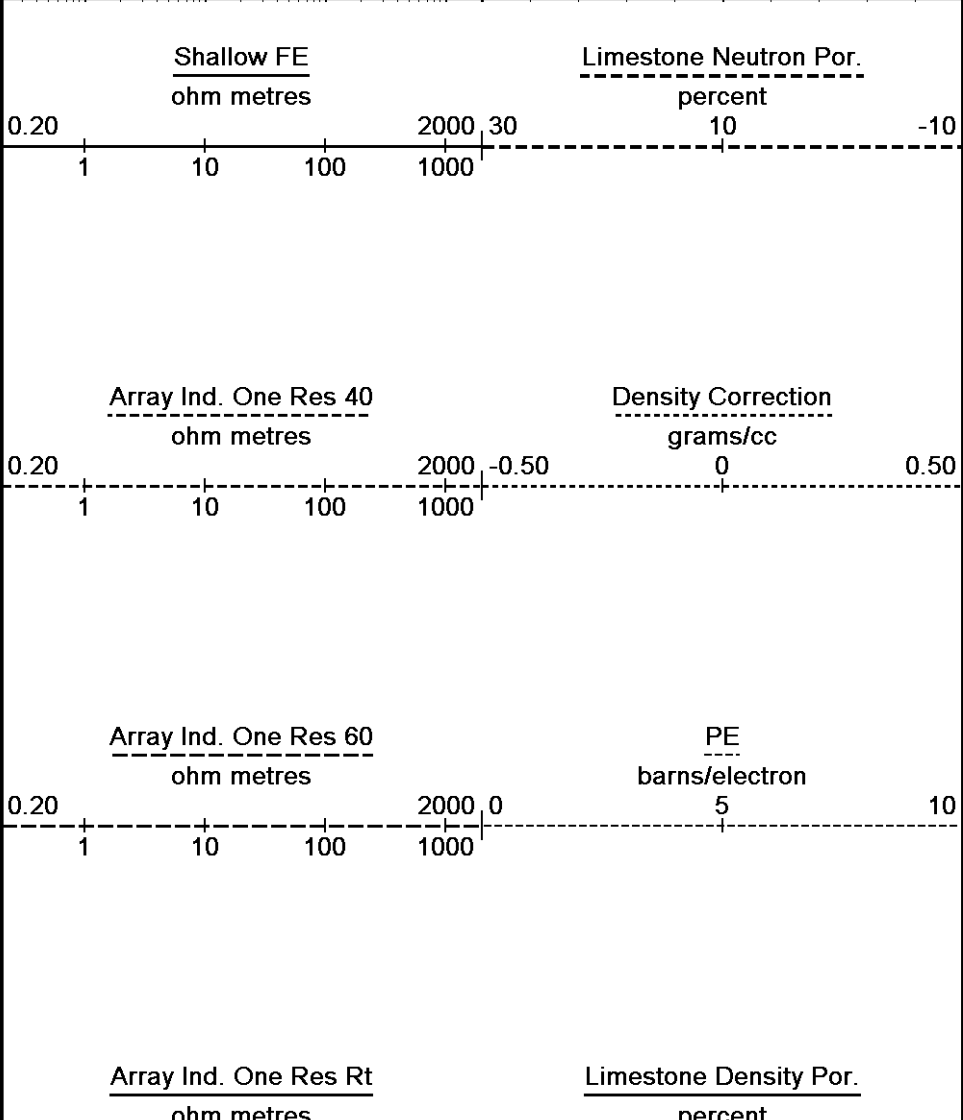
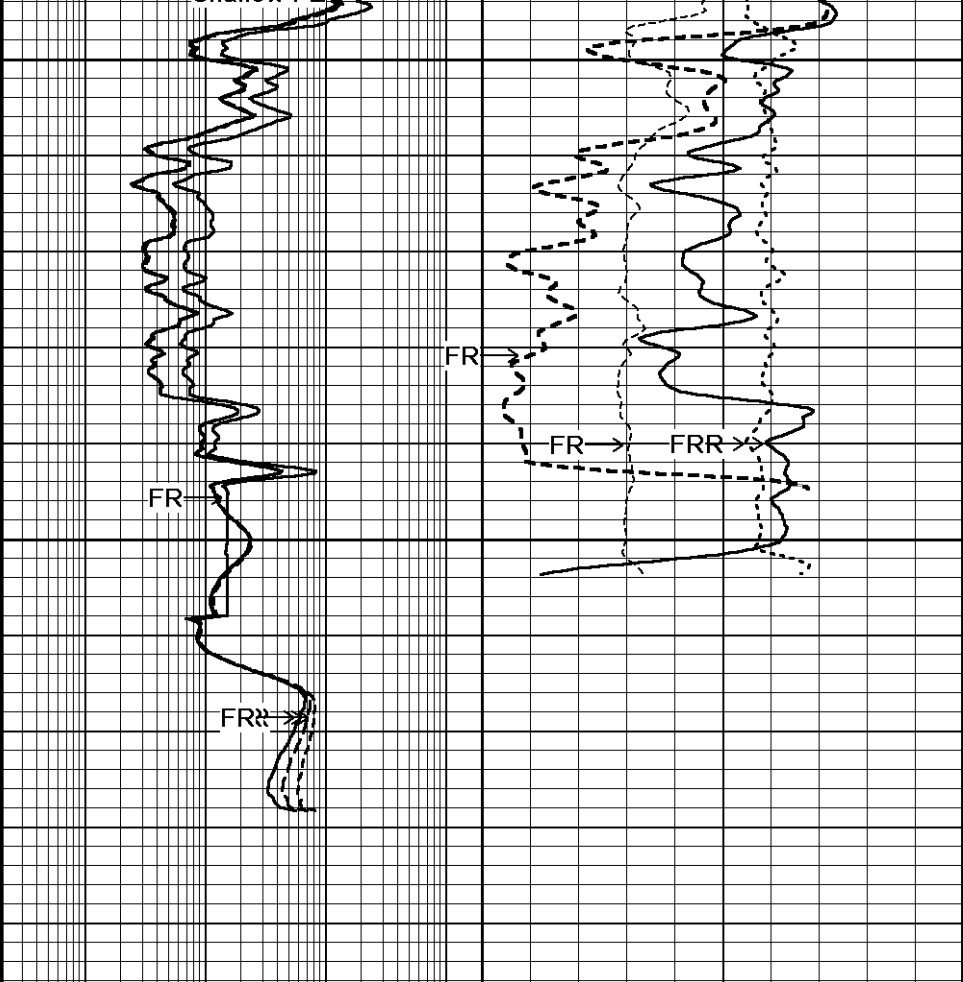
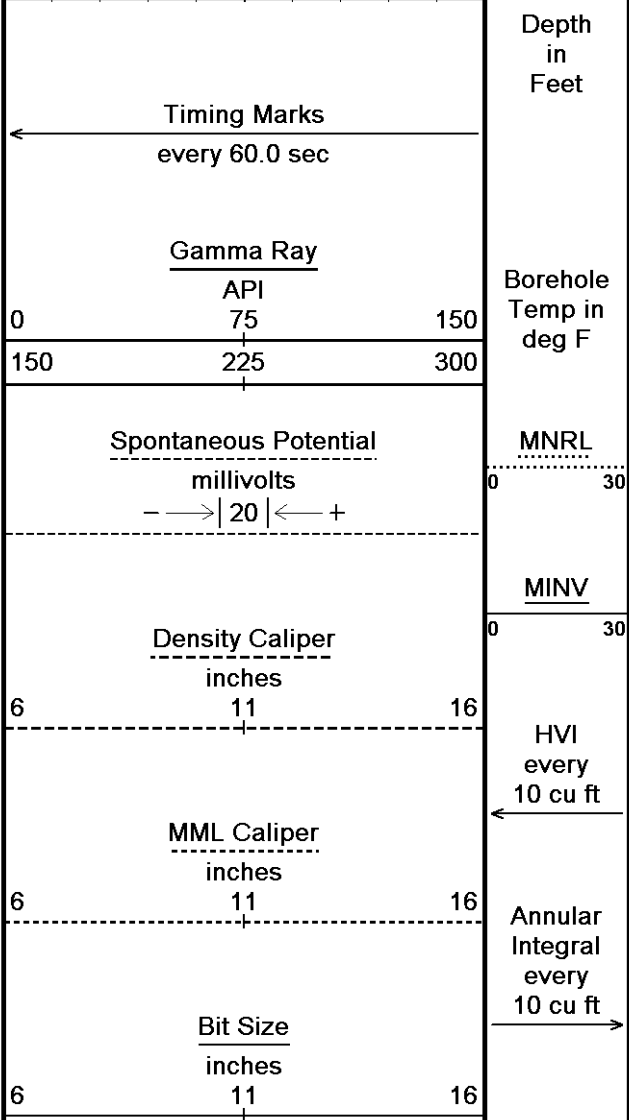
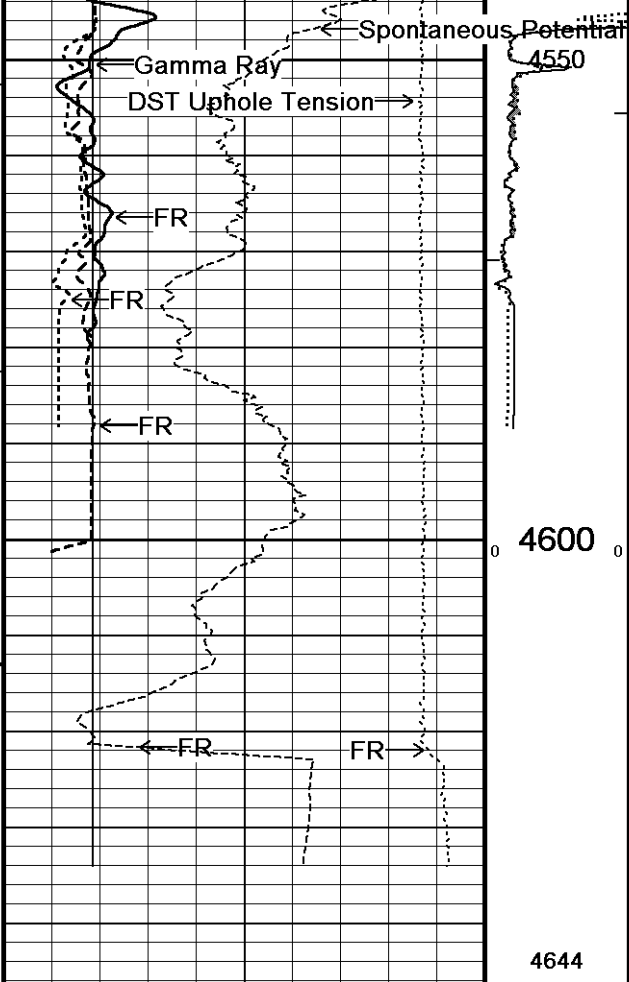


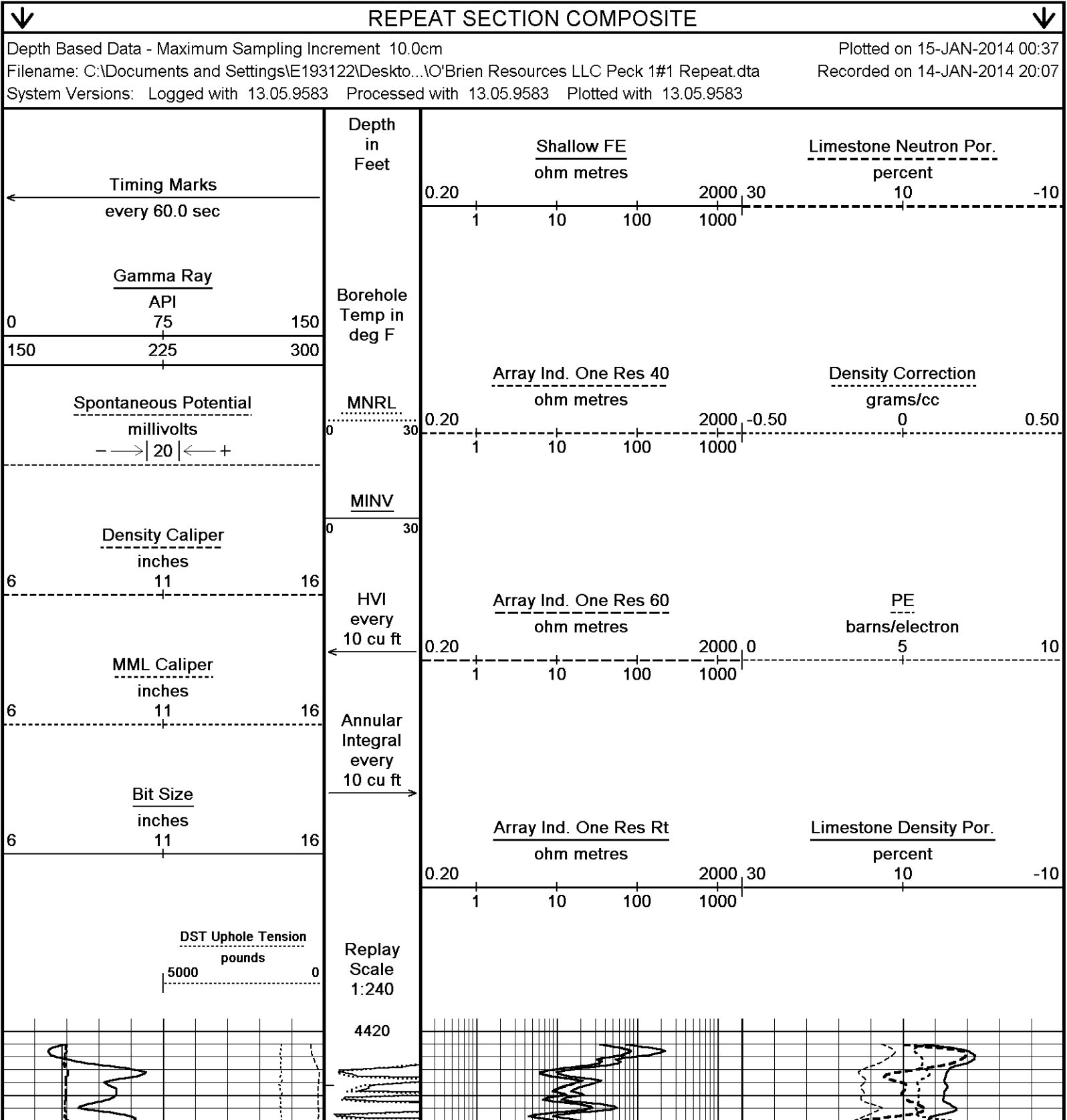
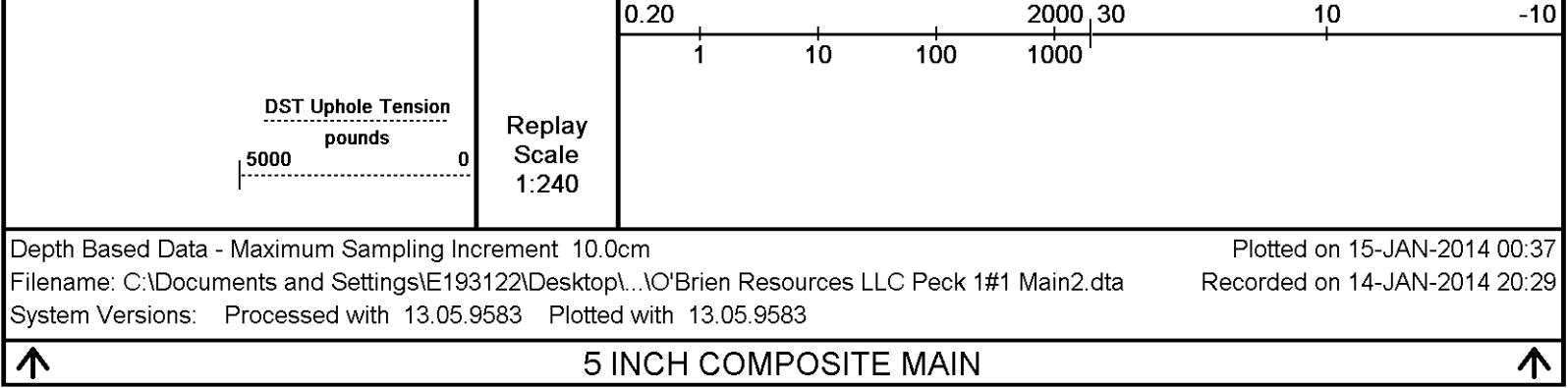


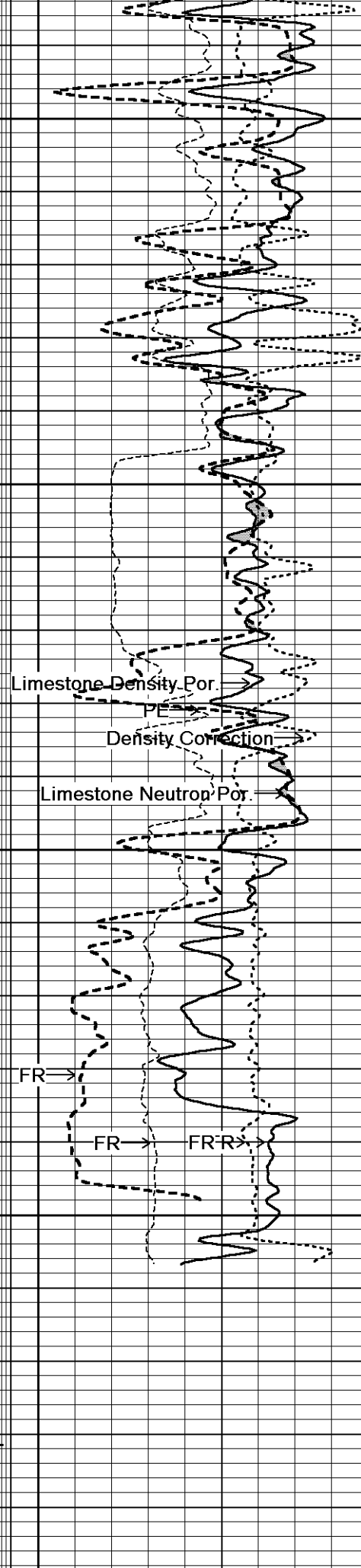
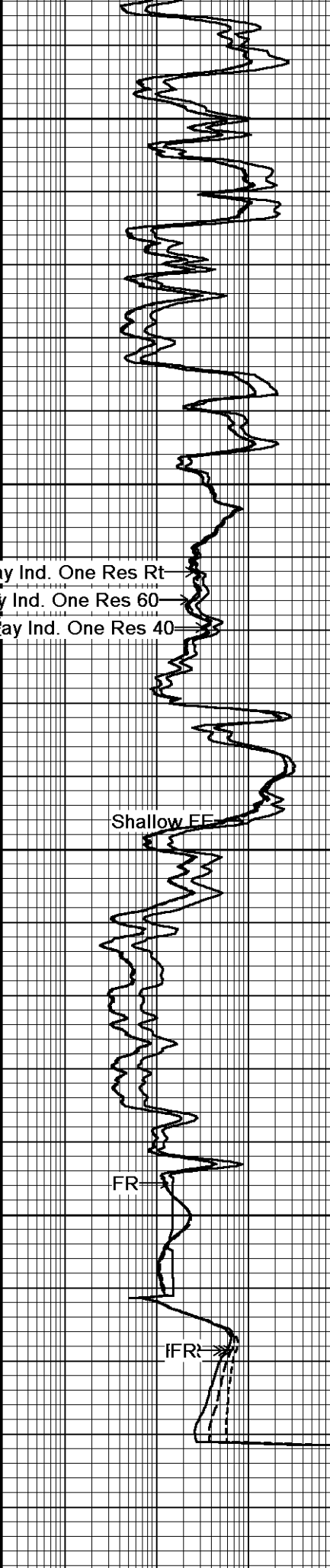
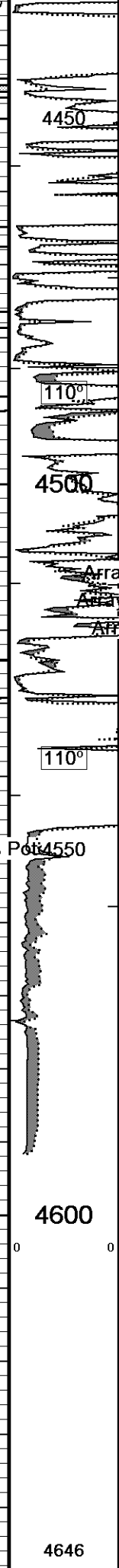
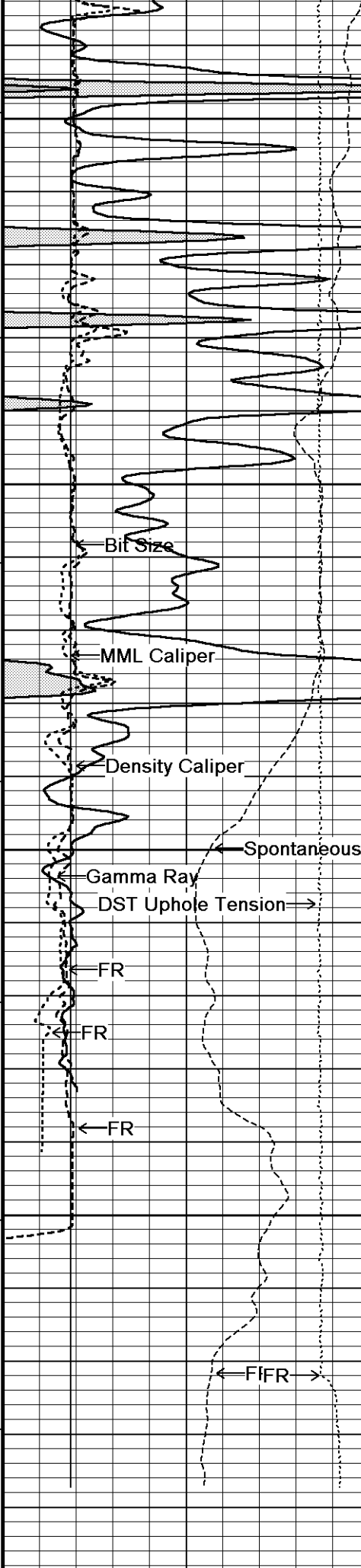


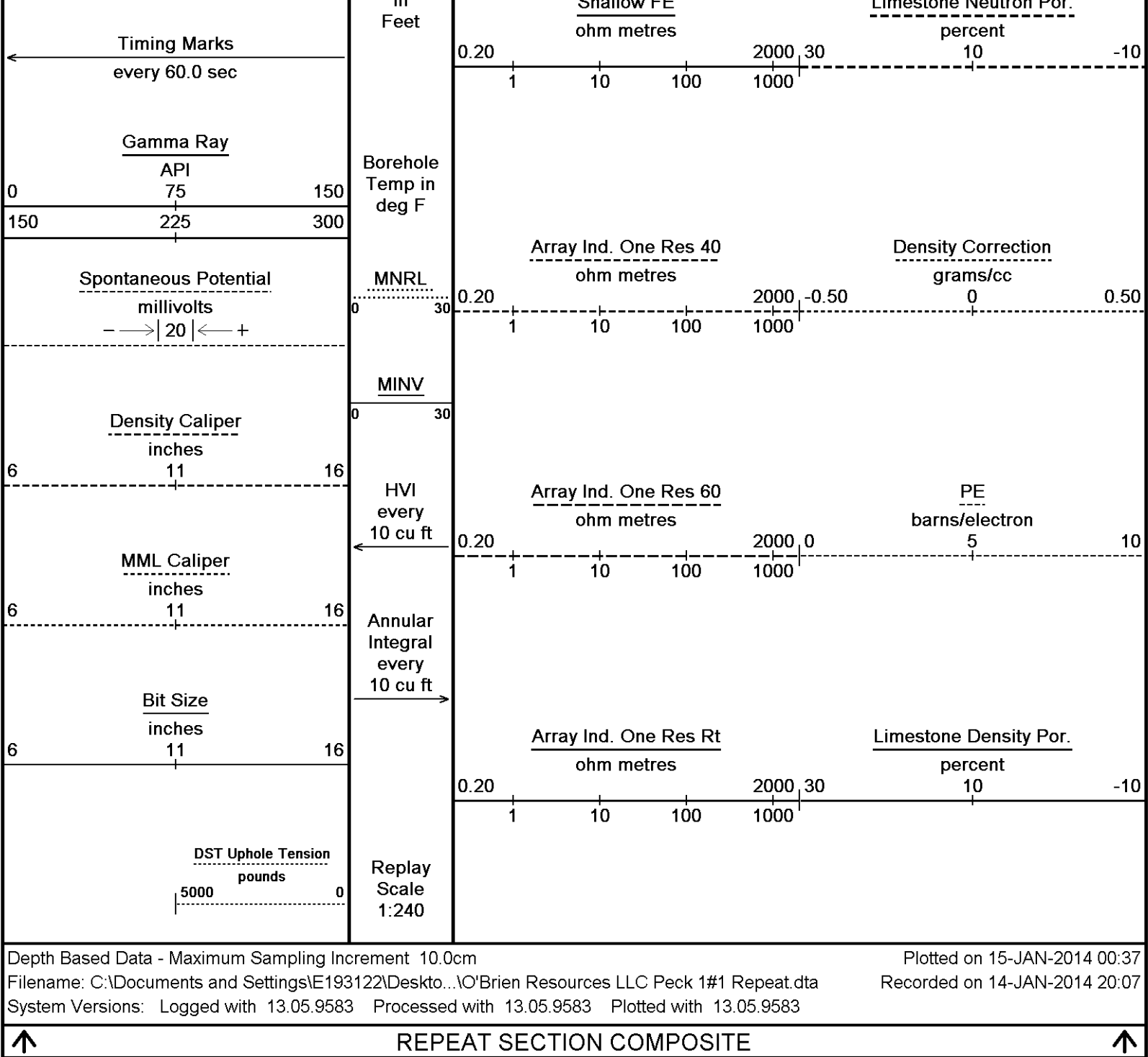












BEFORE SURVEY CALIBRATION

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General Constants All 000

Last Edited on 14-JAN-2014,19:13

General Parameters

Mud Resistivity	0.880	ohm-metres
Mud Resistivity Temperature	77.800	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	4.500	inches
Caliper for Differential Caliper	None	

Rwa Parameters

Porosity used	Crossplot Porosity		
Resistivity used	Array Ind. One Res Rt		
RWA Constant A	1.000		
RWA Constant M	2.000		
SW/APOR Tool Source	0.000		
Gamma Calibration MCG-D.K 469			
	Measured	Calibrated (API)	Field Calibration on 13-JAN-2014 14:21
Background	65	43	
Calibrator (Gross)	1158	768	
Calibrator (Net)	1093	725	
Gamma Constants MCG-D.K 469			
			Last Edited on 14-JAN-2014,19:13
Gamma Calibrator Number	GRC38		
Mud Density	1.13	gm/cc	
Caliper Source for Processing	Density Caliper		
Tool Position	Eccentred		
Concentration of KCl		kppm	
K Mud Type	Chloride		
K Mud Concentration	0.00	%	
High Resolution Temperature Calibration MCG-D.K 469			
	Measured	Calibrated(Deg F)	Field Calibration on 11-JAN-2014,16:37
Lower	50.00	50.00	
Upper	100.00	100.00	
High Resolution Temperature Constants MCG-D.K 469			
			Last Edited on 11-JAN-2014,16:37
Pre-filter Length	11		
Caliper Calibration MML-A 3			
			Base Calibration on 30-DEC-2013 11:54
			Field Calibration on 13-JAN-2014 14:15
Base Calibration			
Reading No	Measured	Calibrator Size (in)	
1	14864	5.98	
2	18053	7.97	
3	21223	9.86	
4	25163	11.92	
5	0	0.00	
6	N/A	N/A	
Field Calibration			
	Measured Caliper (in)	Actual Caliper (in)	
	7.93	7.97	
Micro Normal and Micro Inverse Calibration MML-A 3			
			Base Calibration on 30-DEC-2013 12:09
			Field Check on 13-JAN-2014 14:13
Base Calibration			
	Measured	Calibrated (ohm-m)	
Channel	Resistor 1 Resistor 2	Resistor 1 Resistor 2	
Micro Normal	12.1 60.2	5.0 25.0	
Micro Inverse	15.7 78.4	5.0 25.0	
Channel	Base Check (ohm-m)	Field Check (ohm-m)	
Micro Normal	62.9	62.9	
Micro Inverse	48.2	48.2	
Micro Normal and Micro Inverse Constants MML-A 3			
			Last Edited on 14-JAN-2014,19:12
Pad Type	8-12 in Soft Rubber Inflatable 006-9011-159		
Micro Normal K Factor	1.0000		
Micro Inverse K Factor	1.0000		
Standoff Offset	N/A	inches	
Neutron Calibration MDN-A.B 66			
			Base Calibration on 19-NOV-2013 15:33
			Field Check on 13-JAN-2014 14:25
Base Calibration			
	Measured	Calibrated (cps)	
	Near Far	Near Far	
	3066 94	3714 110	
Ratio	32.484	33.764	

Field Calibrator at Base	Calibrated (cps)
	1680 2433
Ratio	0.691
Field Check	Calibrated (cps)
	1658 2414
Ratio	0.693

Neutron Constants MDN-A.B 66		Last Edited on 14-JAN-2014,19:12	
Neutron Source Id	P0204NN		
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	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-B.J 353		Base Calibration on 30-DEC-2013 12:34 Field Check on 13-JAN-2014 14:05	
Base Calibration	Measured	Calibrated (ohm-m)	
Reference 1	0.0	0.0	
Reference 2	964.4	126.8	
Base Check		280.9	
Field Check		281.1	

FE Constants MFE-B.J 353		Last Edited on 14-JAN-2014,19:12	
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 167		Base Calibration on 02-OCT-2013,14:21 Field Check on 13-JAN-2014 14:04	
Base Calibration			
Test Loop Calibration	Measured	Calibrated (mmho/m)	
Channel	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	
Channel	Base Check (mmho/m)	Field Check (mmho/m)	
	Low High	Low High	
1		12.1 3840.7	
2		29.4 3478.8	
3		29.0 3054.8	
4		19.8 2082.8	
Deep		18.5 2050.1	
Medium		42.3 3993.6	
Shallow		42.7 5056.8	

Induction Constants MAI-A.A 167

Last Edited on 14-JAN-2014,19:12

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	

Photo Density Calibration MPD-C.A 216

Base Calibration on 30-DEC-2013 16:39

Field Check on 13-JAN-2014 14:12

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	60912	31239	59556	30836
Reference 2	25458	2782	24941	2541

Field Check at Base

1112.0 1316.2

Field Check

1111.2 1311.3

PE Calibration

Base Calibration	WS	Measured		Calibrated Ratio
		WH	Ratio	
Background	202	993		
Reference 1	25023	60709	0.416	0.371
Reference 2	7244	25325	0.289	0.272

Field Check at Base

202.1 992.6

Field Check

201.2 991.0

Density Constants MPD-C.A 216

Last Edited on 14-JAN-2014,19:12

Density Source Id	18235B	
Nylon Calibrator Number	DNCE528	
Aluminium Calibrator Number	DACD528	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.13	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 (m)
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

Caliper Calibration MPD-C.A 216

Base Calibration on 30-DEC-2013 16:06
Field Calibration on 13-JAN-2014 14:07

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	16063	3.99
2	26074	5.98
3	36080	7.97
4	45856	9.86
5	57120	11.92
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.96	7.97

DOWNHOLE EQUIPMENT

C:\Documents and Settings\E193122\Desktop\Archive\Logs\13 O'Brien Resources LL...\O'Brien Resources LLC Peck 1#1 Main2.dta

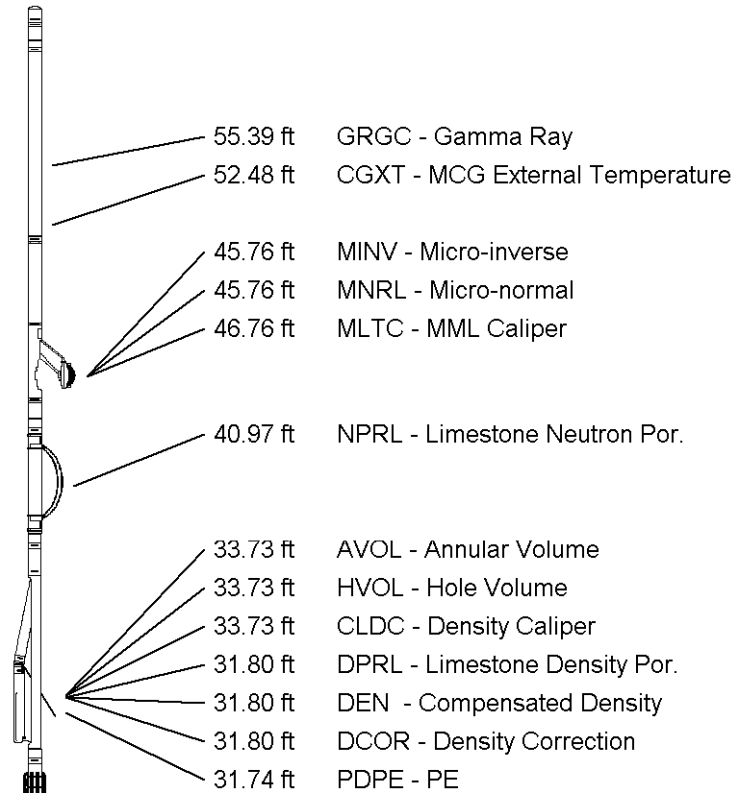
3/8" Triple Cone Cable Head (MCB C A)
MCB-C.A 5 LG: 1.58 ft WT: 15.4 lb OD: 2.24 in

Compact Comms Gamma
MCG-D.K 469 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Micro-log
MML-A 3 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 Density/Caliper
MPD-C.A 216 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

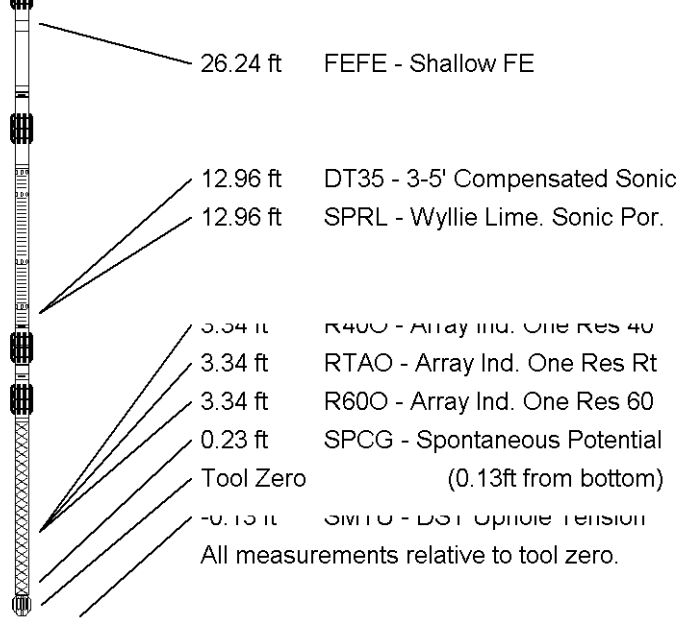


Compact Focussed Electric
MFE-B.J 353 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

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

Compact Induction
MAI-A.A 167 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 62.25 ft Weight: 471.8 lb



COMPANY O'BRIEN RESOURCES LLC
WELL PECK 1 #1
FIELD WILDCAT
PROVINCE/COUNTY LANE
COUNTRY/STATE U.S.A. / KANSAS

Elevation Kelly Bushing	2724.00	feet	First Reading	4618.00	feet
Elevation Drill Floor	2722.00	feet	Depth Driller	4625.00	feet
Elevation Ground Level	2714.00	feet	Depth Logger	4622.00	feet



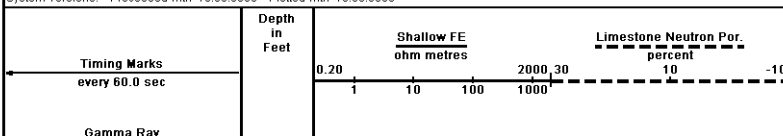
COMPOSITE LOG

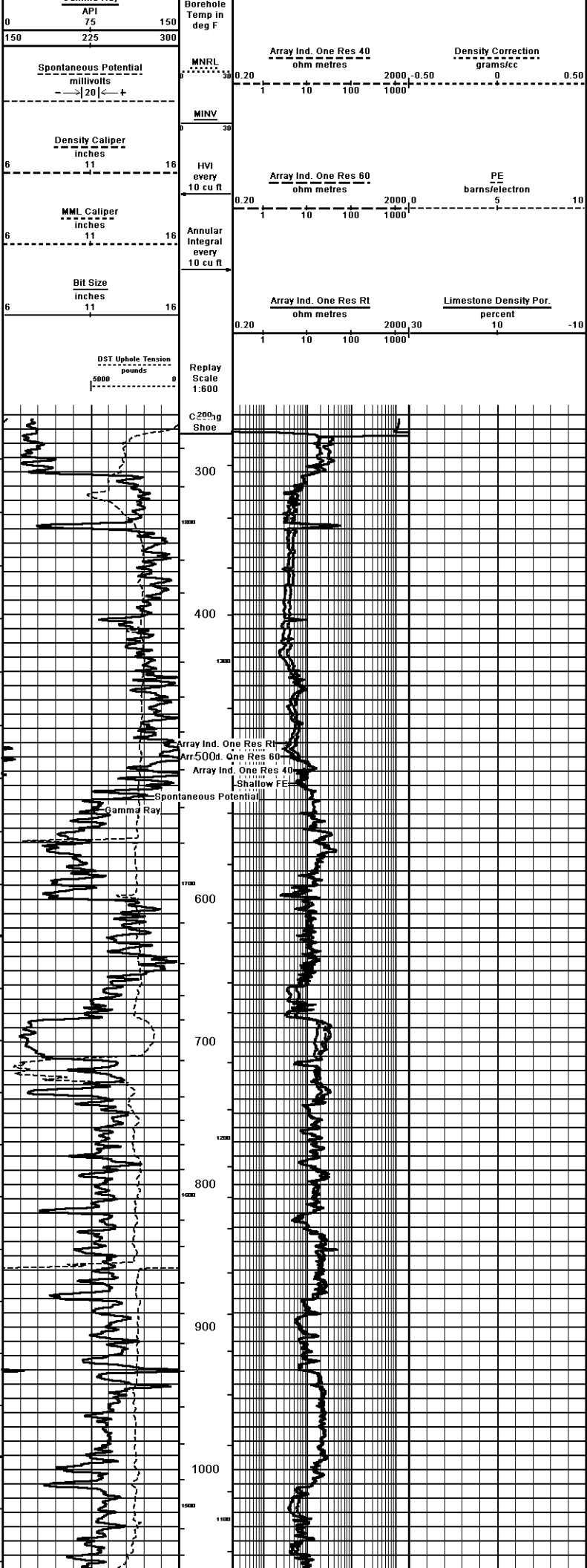
Weatherford®

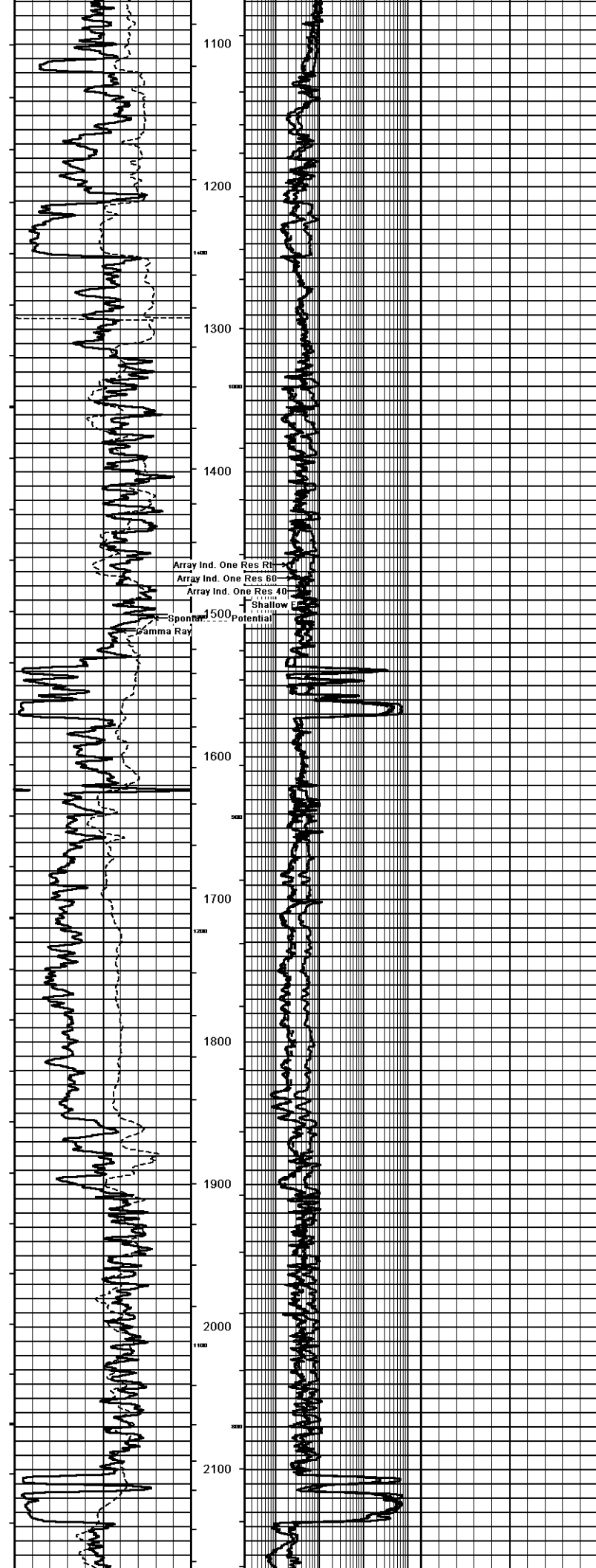
Weatherford		COMPOSITE LOG	
COMPANY	O'BRIEN RESOURCES LLC	WELL	PECK 1 #1
FIELD	WILDCAT	PROVINCE/COUNTY	LANE
COUNTRY/STATE	U.S.A. / KANSAS	LOCATION	1170' FWL & 790' FWL SW SE NW NW
SEC	TYPE	LOG	Other Services
1	18S	38W	INFO/MDN
15-101-22482	MMML	MSS	MAINF
Permeant Datum Q.L. Elevation 2714 feet			
Log Measured From KB			
Drilling Measured From KB AT 10 FEET			
Date	14-JAN-2014		
Run Number	ONE		
Service Order	7036-7693286		
Depth Driller	4625.00	feet	
Depth Logger	4622.00	feet	
First Reading	4618.00	feet	
Last Reading	273.00	feet	
Casing Driller	273.00	feet	
Casing Logger	273.00	feet	
Bit Size	7.875	inches	
Hole Fluid Type	CHEMICAL		
Density/Viscosity	9.40 lb/dl @ 7.20 m/30min		
PH/Fluid Loss	10.00		
Sample Source	FLOWLINE		
Rm @ Measured Temp	0.88 @ 77.8	ohm-m	
Rmt @ Measured Temp	0.70 @ 77.8	ohm-m	
Rmt @ Measured Temp	1.06 @ 77.8	ohm-m	
Source Rmt/Rmc	CALC		
Rm @ BHT	0.62 @ 12.0	ohm-m	
Time Since Circulation	2.5 HOURS		
Max Recorded Temp	117.00	deg F	
Equipment Base	13008		
Recorded by	DEREK CARTER		
Witnessed by	KURT TALBOT		
LOG #	LE14-004		

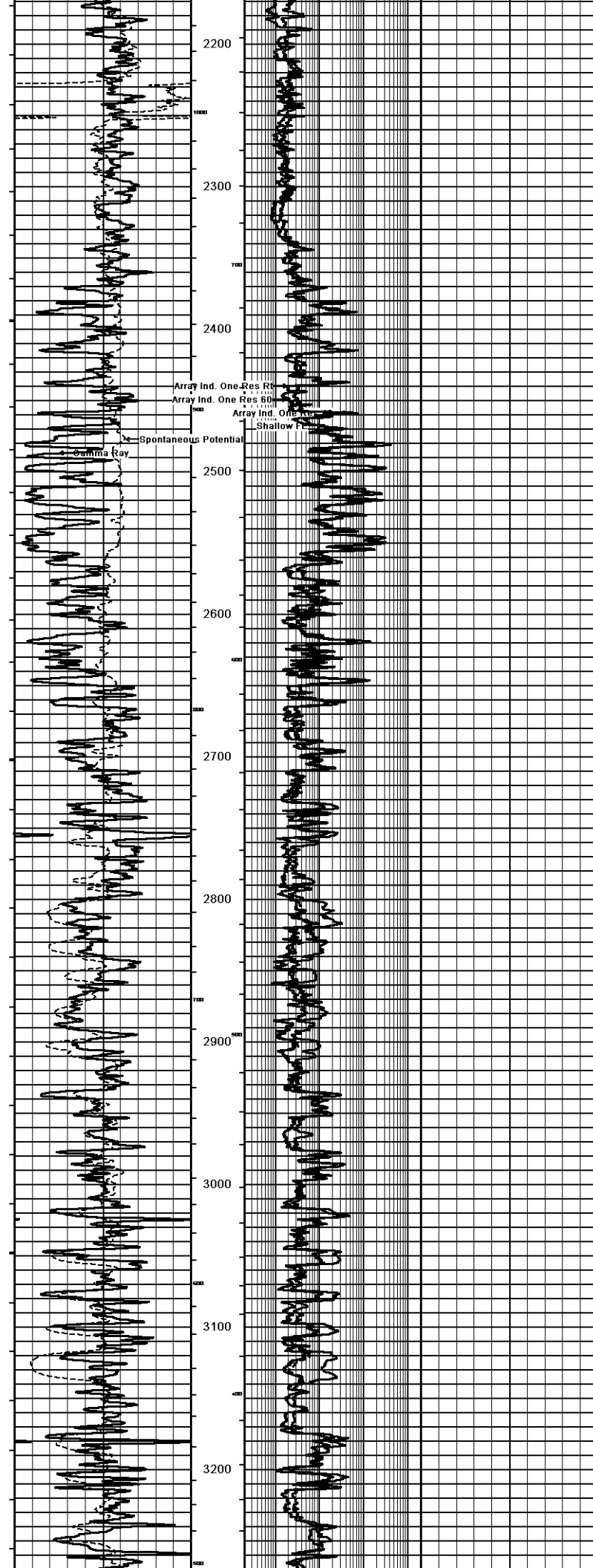
1 INCH COMPOSITE MAIN

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 15-JAN-2014 00:37
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Recorded on 14-JAN-2014 20:29
System Versions: Processed with 13.05.9583 Plotted with 13.05.9583









3300

3400

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

Spontaneous Potential
Gamma Ray

3500

3600

3700

3800

3900

4000

4100

4200

4300

4400

4500

4600

4700

4800

4900

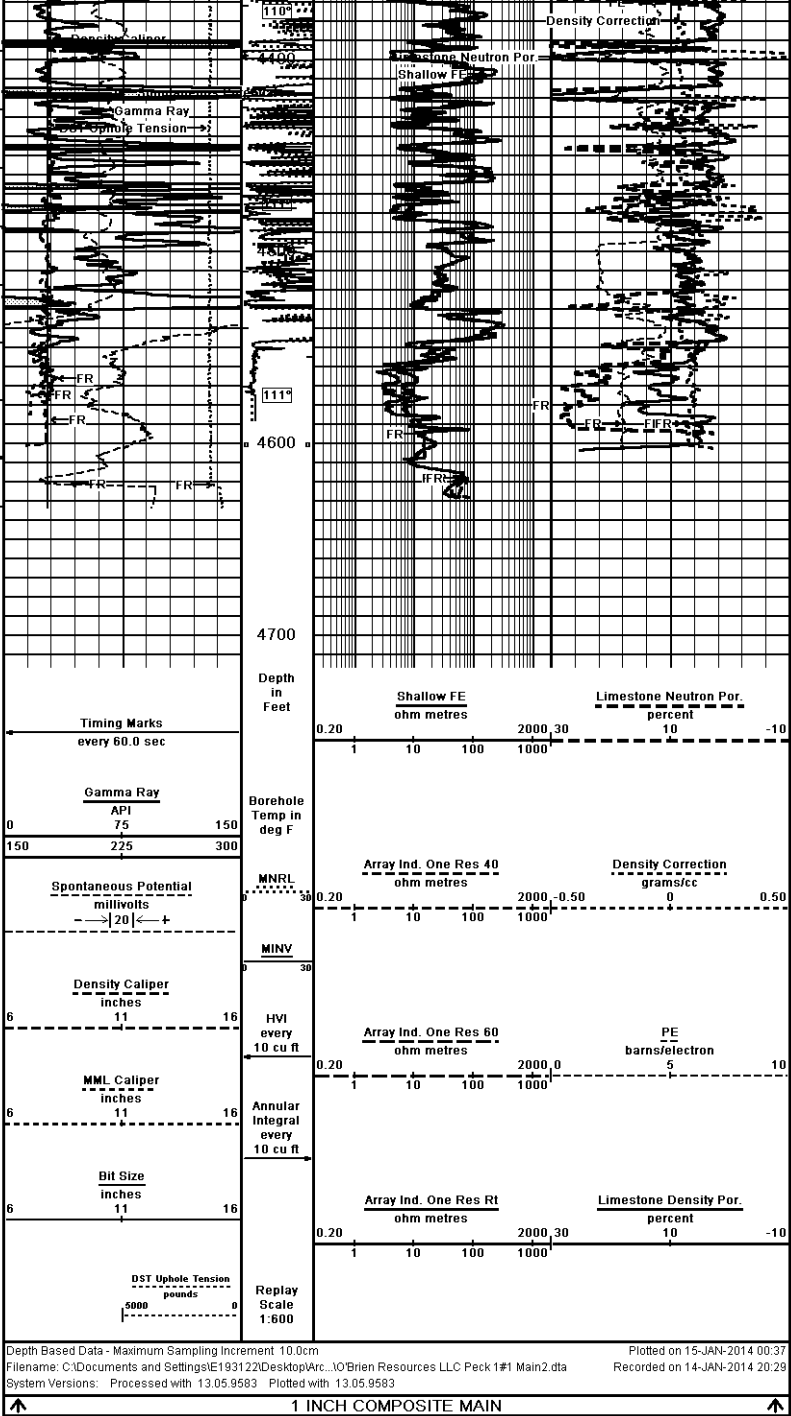
5000

One Res RT
One Res 60
One Res 40

Bit Size

MML Caliper

Limestone Density Log



COMPANY		O'BRIEN RESOURCES LLC			
WELL		PECK 1 #1			
FIELD		WILDCAT			
PROVINCE/COUNTY		LANE			
COUNTRY/STATE		U.S.A. / KANSAS			
Elevation Kelly Bushing	2724.00	feet	First Reading	4618.00	feet
Elevation Drill Floor	2722.00	feet	Depth Driller	4625.00	feet
Elevation Ground Level	2714.00	feet	Depth Logger	4622.00	feet
 COMPOSITE LOG Weatherford					