

ARRAY INDUCTION SHALLOW FOCUSED ELECTRIC LOG

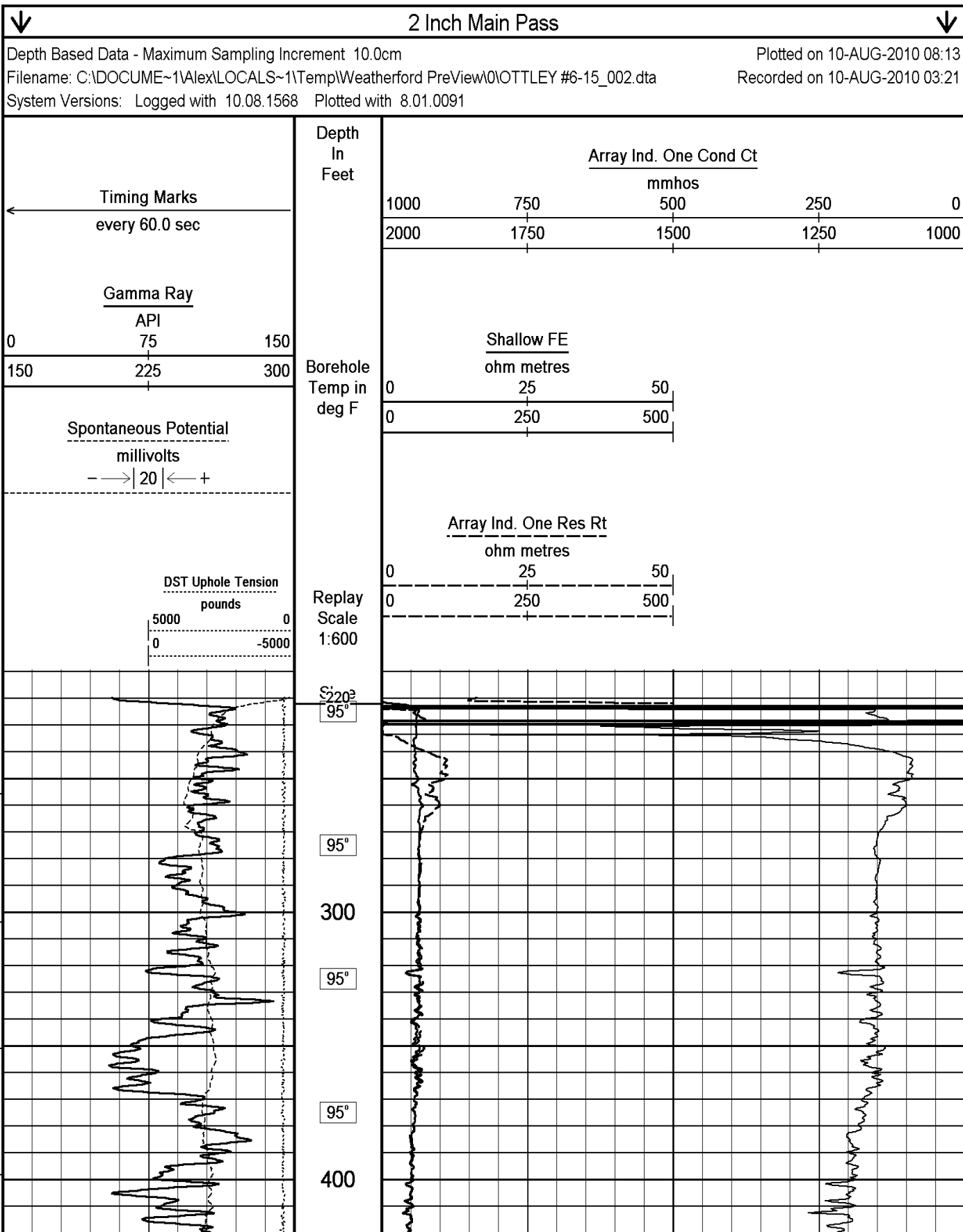
COMPANY		SHAKESPEARE	
WELL		OTTLEY #6-15	
FIELD		WILDCAT	
PROVINCE/COUNTY		LOGAN	
COUNTRY/STATE		U.S.A./KANSAS	
LOCATION		1335' FNL & 1585' FEL	
		COMPACT	
SEC	TWP	RGE	Other Services
15	4S	32W	MPD/MDN
API Number	15-109-20933		MML
Permit Number			
Permanent Datum G.L., Elevation 2729 feet			Elevations:
Log Measured From K.B. @ 10 FEET above Permanent Datum			KB
Drilling Measured From K.B.			DF
Date	10-AUG-2010		GL
Run Number	ONE		
Depth Driller	4490.00	feet	
Depth Logger	4488.00	feet	
First Reading	4485.00	feet	
Last Reading	222.00	feet	
Casing Driller	222.00	feet	
Casing Logger	222.00	feet	
Bit Size	7.880	inches	
Hole Fluid Type	CHEMICAL		
Density / Viscosity	9.30 lb/USg	49.00 CP	
PH / Fluid Loss	11.00	7.20 ml/30Min	
Sample Source	FLOWLINE		
Rm @ Measured Temp	0.71 @ 88.0	ohm-m	
Rmf @ Measured Temp	0.57 @ 88.0	ohm-m	
Rmc @ Measured Temp	0.85 @ 88.0	ohm-m	
Source Rmf / Rmc	CALC	CALC	
Rm @ BHT	0.53 @ 117.0	ohm-m	
Time Since Circulation	5 HOURS		
Max Recorded Temp	117.00	deg F	
Equipment Name	COMPACT		
Equipment / Base	13057	LIB	
Recorded By	SHAWN NUTT		
Witnessed By	STEVE DAVIS		
S.O.#/JOB#	3524515		LB10-199

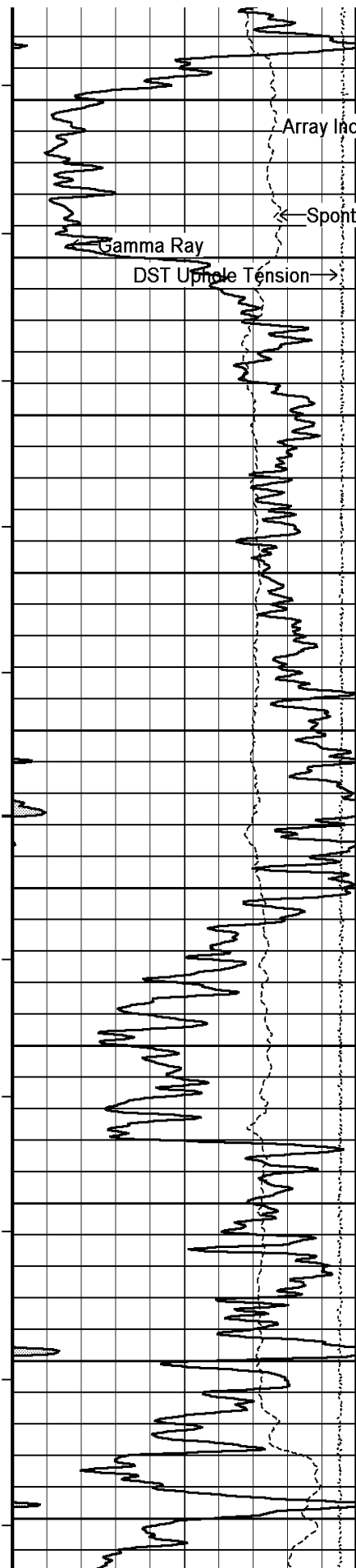
BOREHOLE RECORD			Last Edited: 10-AUG-2010 05:11	
Bit Size inches	Depth From feet		Depth To feet	
7.880	222.00		4488.00	
CASING RECORD				
Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	222.00	24.00

REMARKS
Tools Used: MAI, MPD, MCG, MDN, MML, MFE, SKJ, Hardware: MPD: 8 inch profile plate used. MAI and MFE: 0.5 Inch standoffs used. MDN: Dual Bowspring used. 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. Annular volume with 5.5 inch production casing= 296 cu. ft. Service order #3518969 Rig: HD #2 Engineer: L. Scott Operator(s): B. Reeves

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

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96°

Array Ind. One Res Rt

96°

Shallow FE

← Spontaneous Potential

Gamma Ray

DST Up

500

96°

97°

600

97°

97°

700

98°

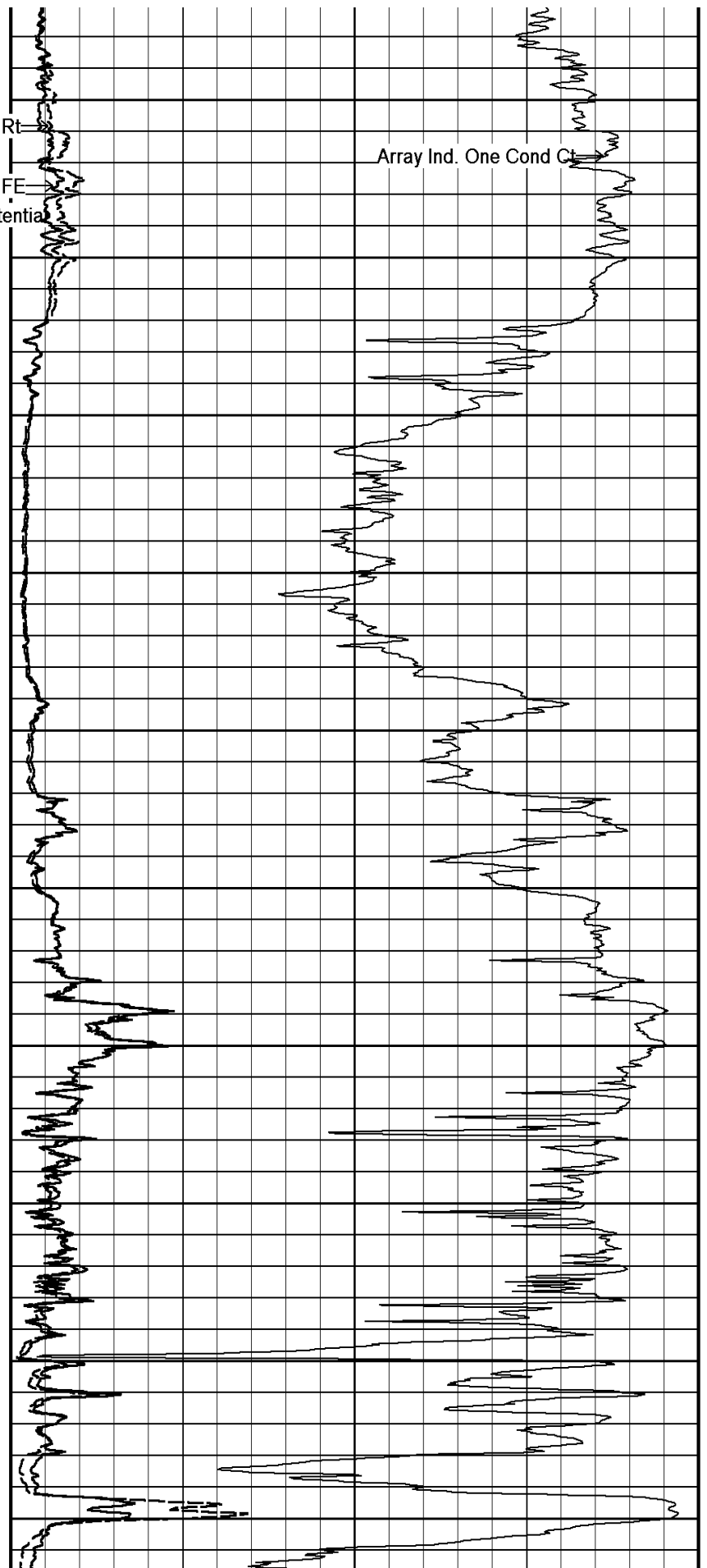
98°

800

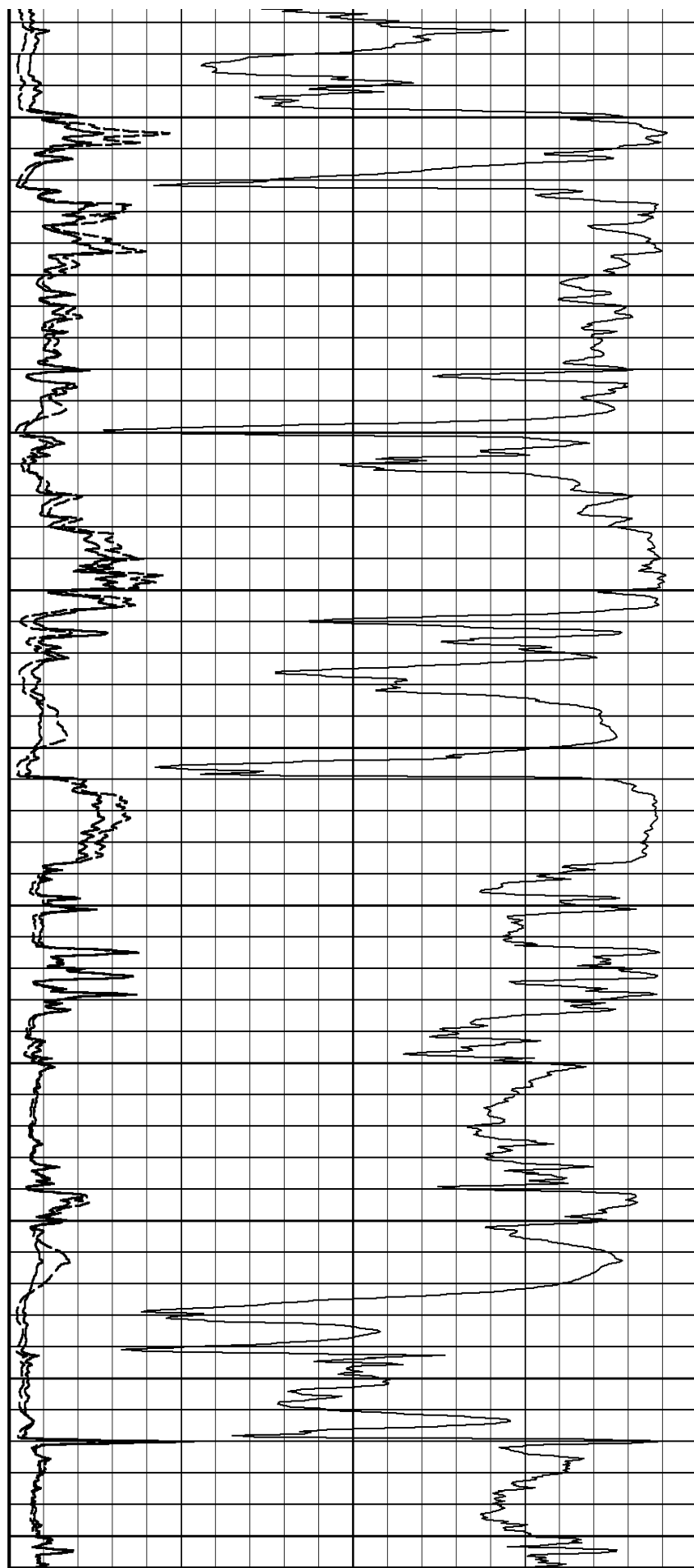
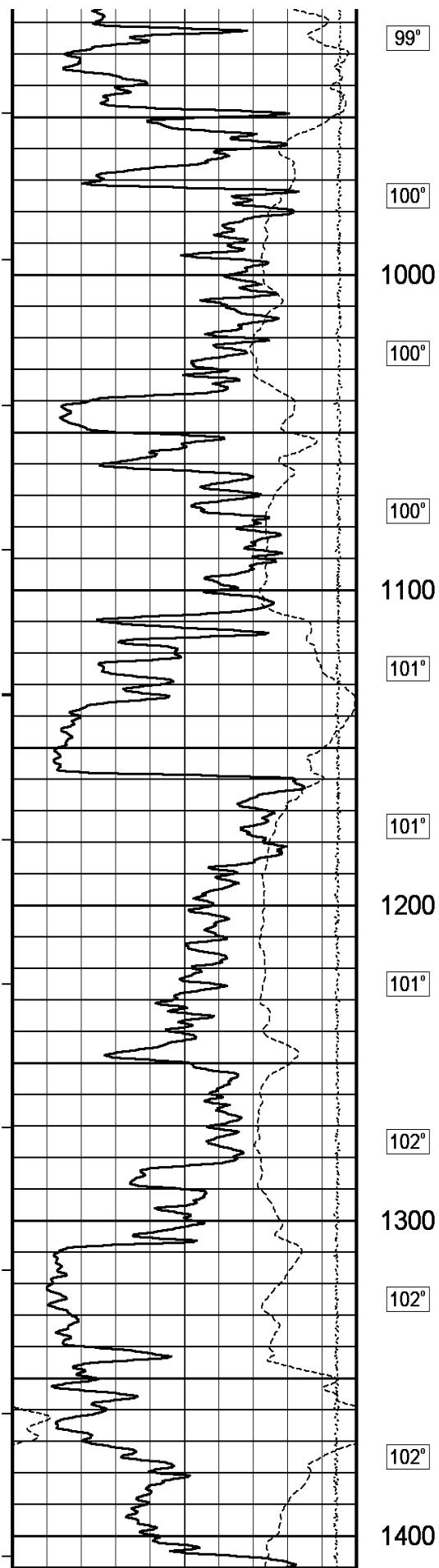
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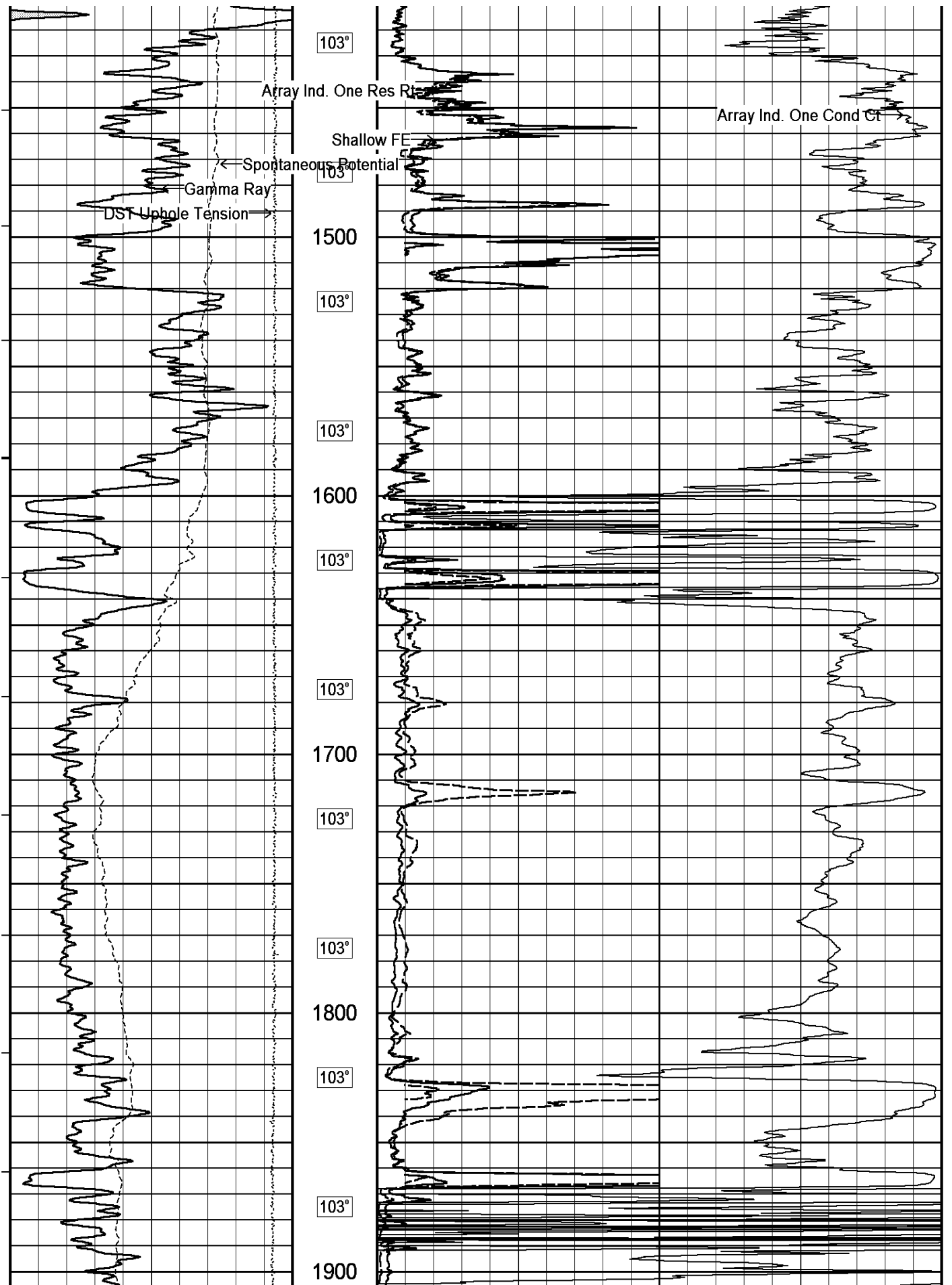
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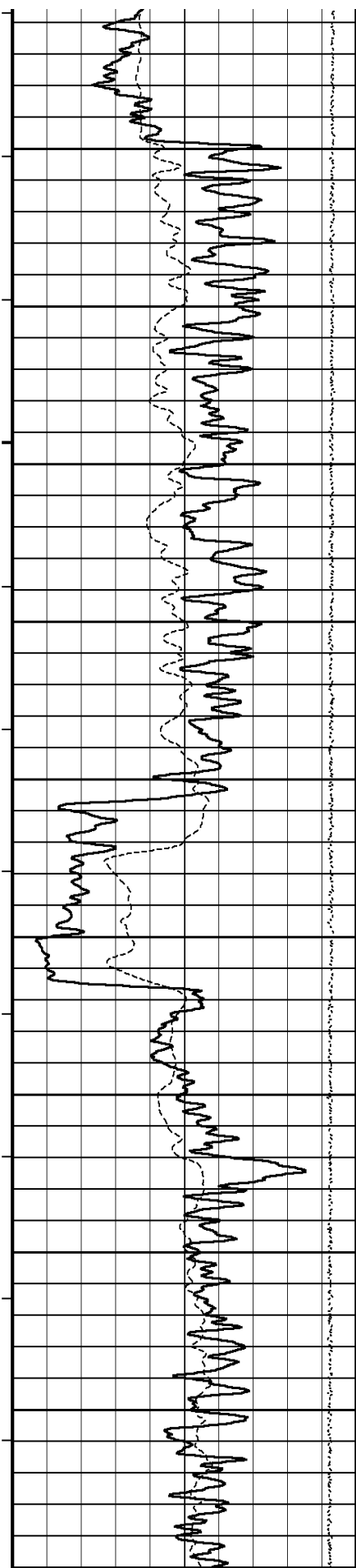
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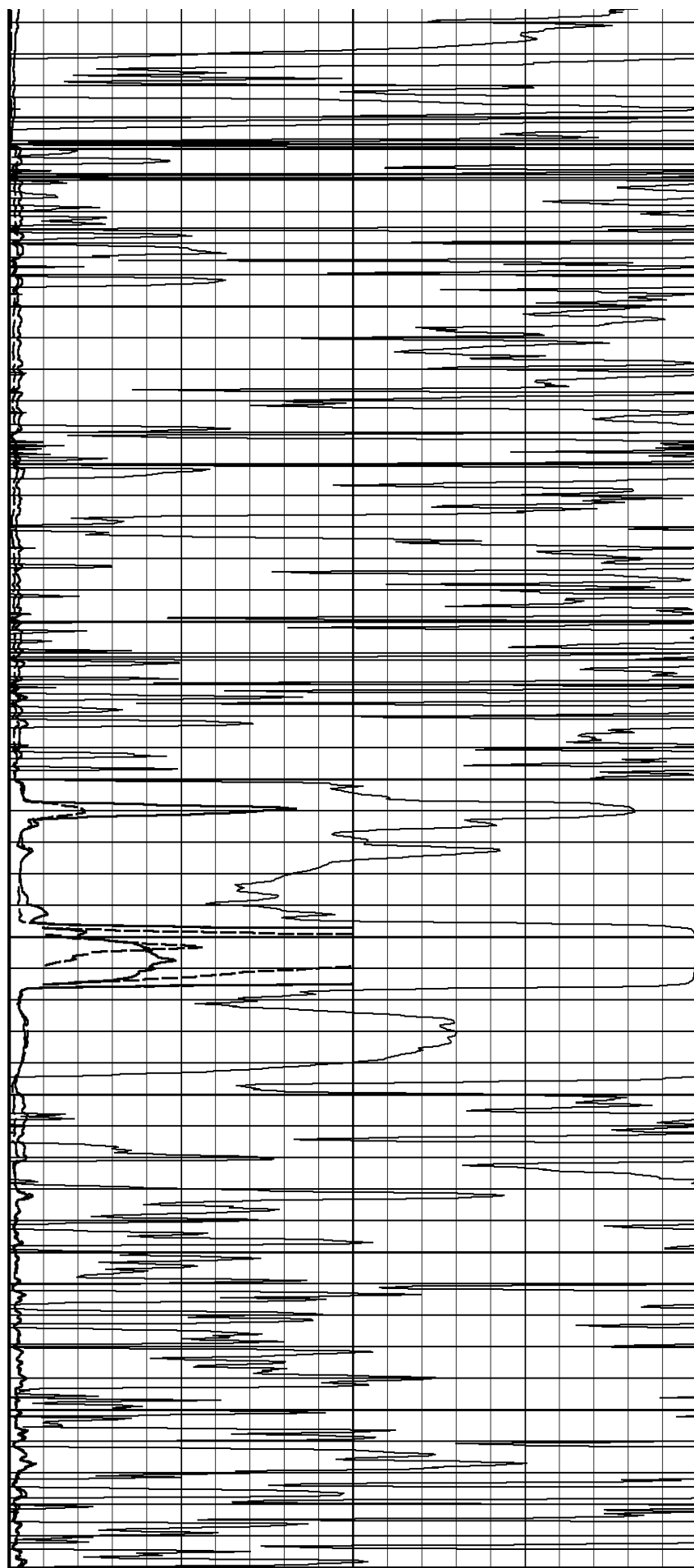
Array Ind. One Cond C

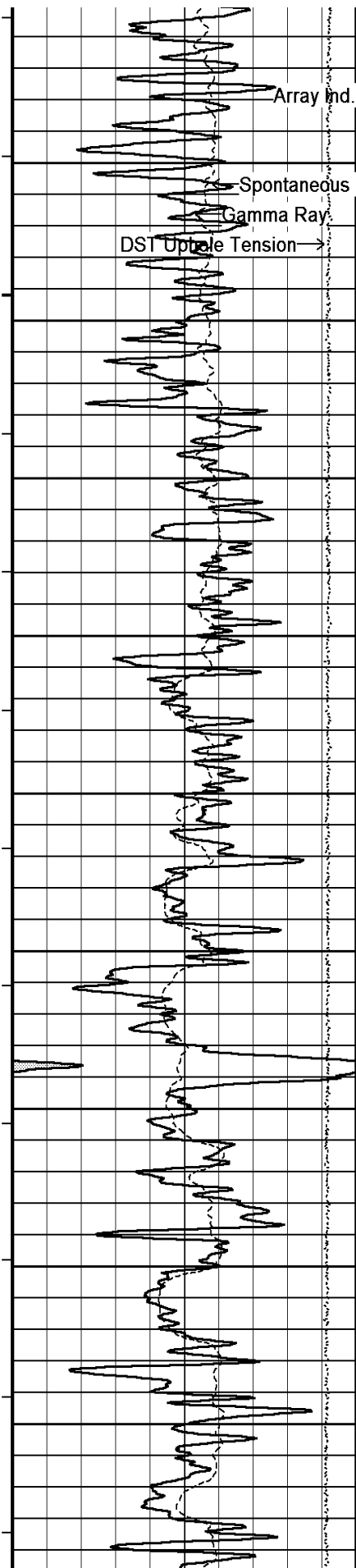




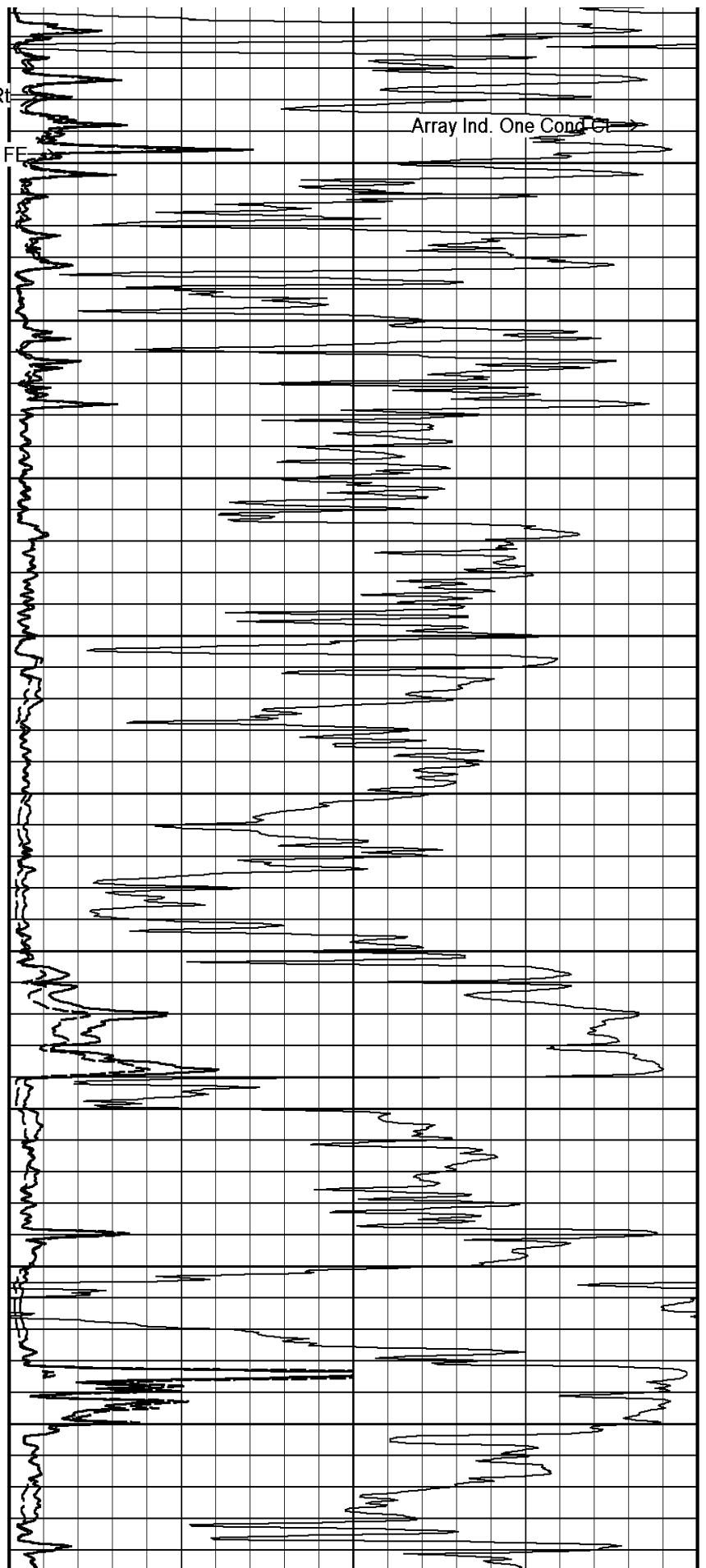


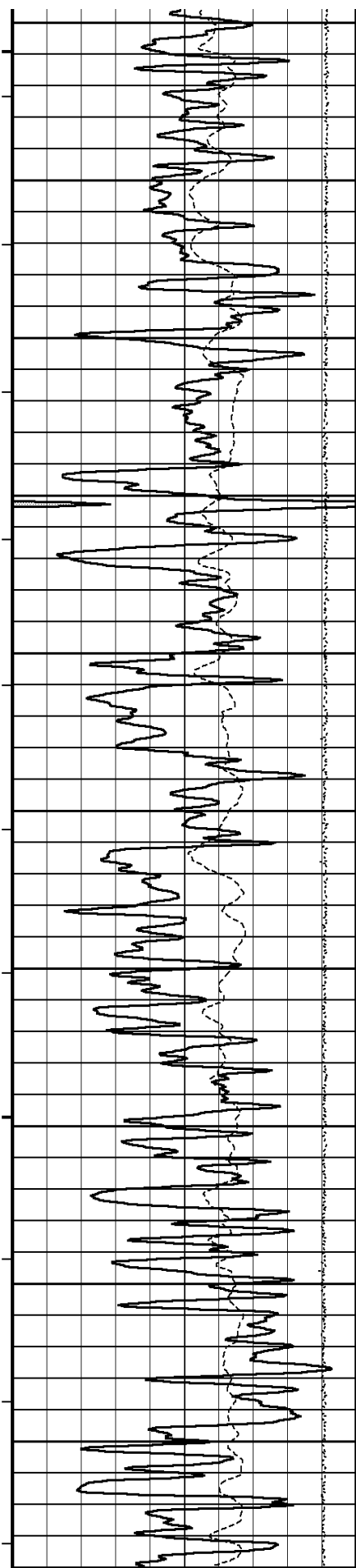
104°
104°
2000
104°
105°
2100
105°
105°
2200
105°
106°
2300
105°
106°
2400





2400
106°
Shallow FF
2500
106°
2600
107°
2700
107°
2800
108°
108°
108°





2900

109°

109°

3000

109°

109°

3100

110°

110°

3200

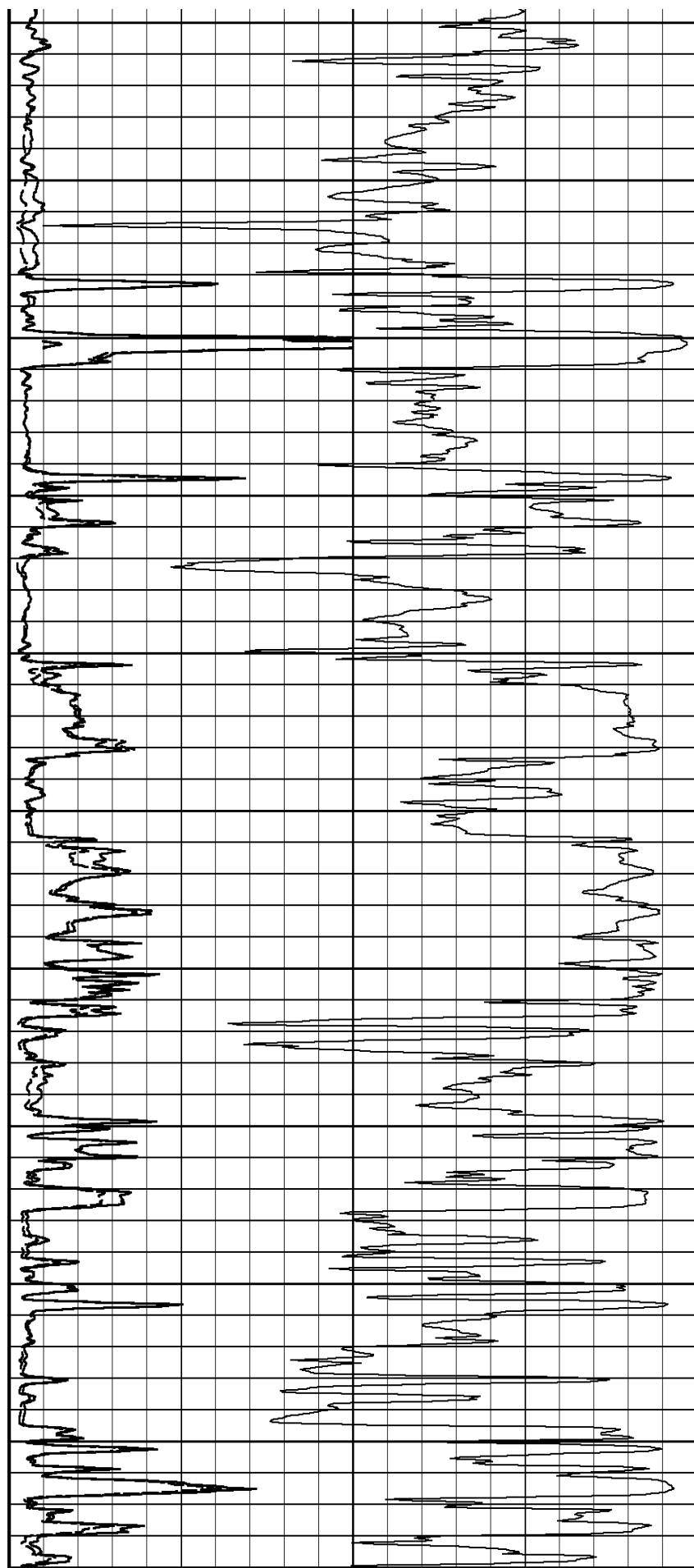
110°

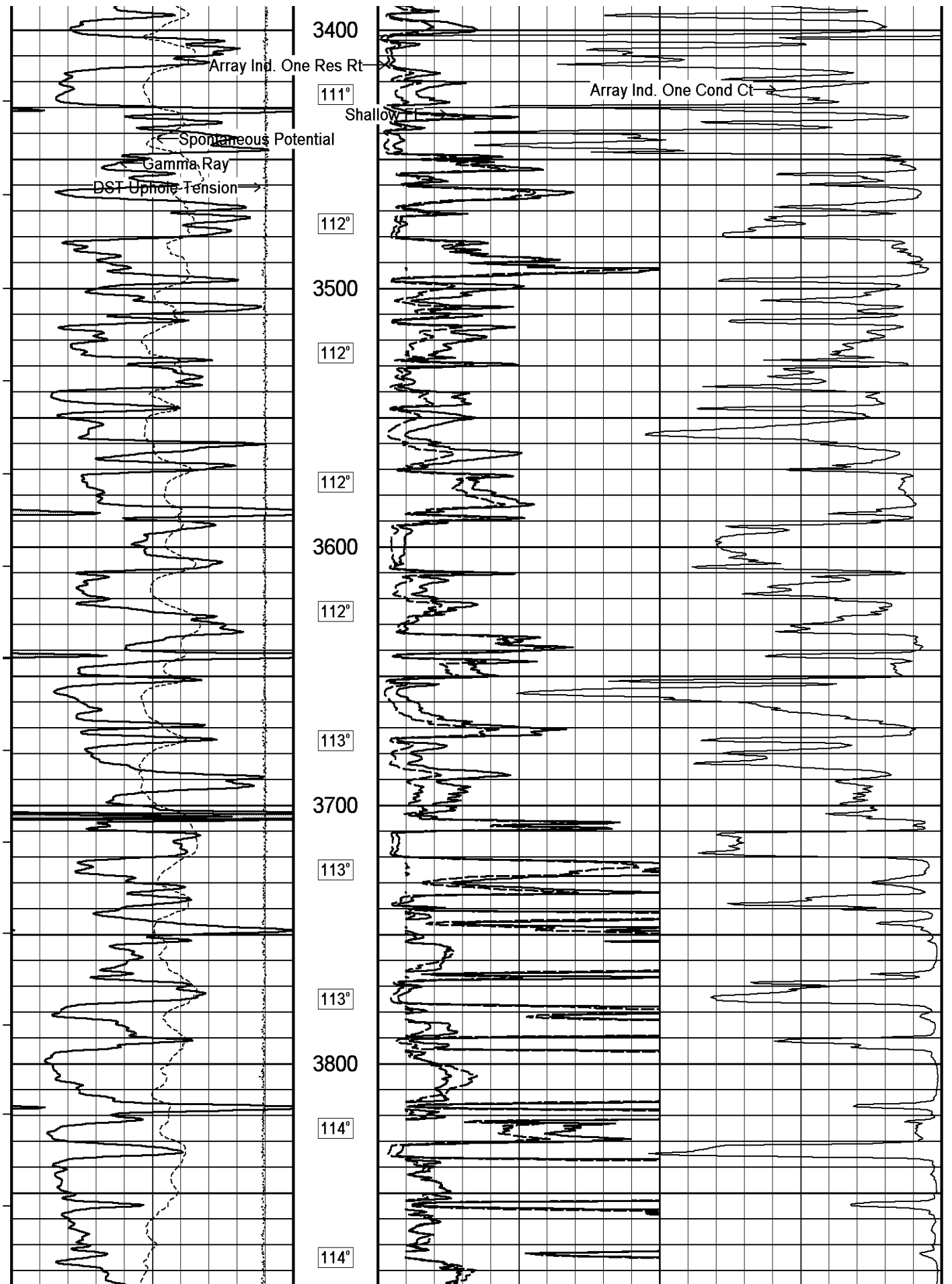
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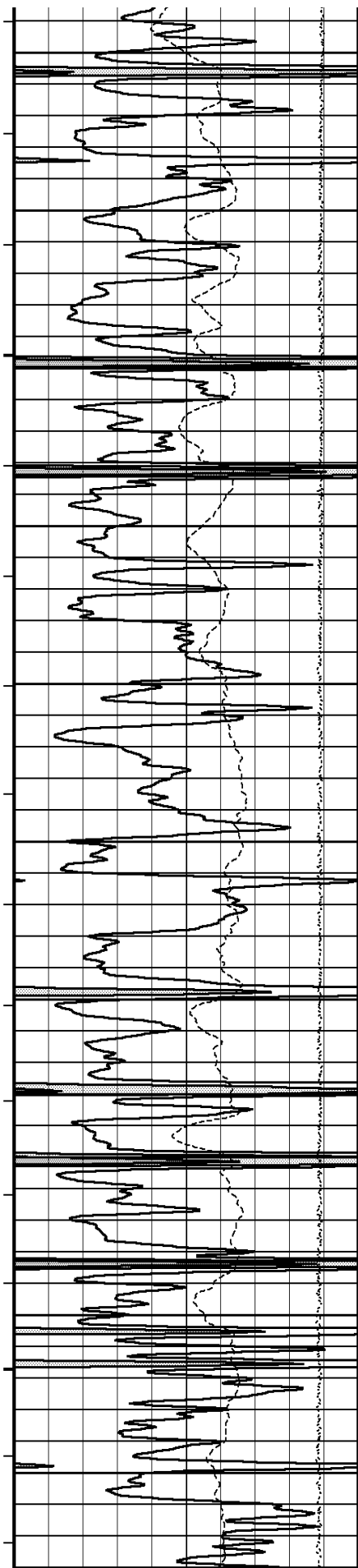
3300

111°

111°







3900

114°

114°

4000

115°

115°

4100

115°

116°

4200

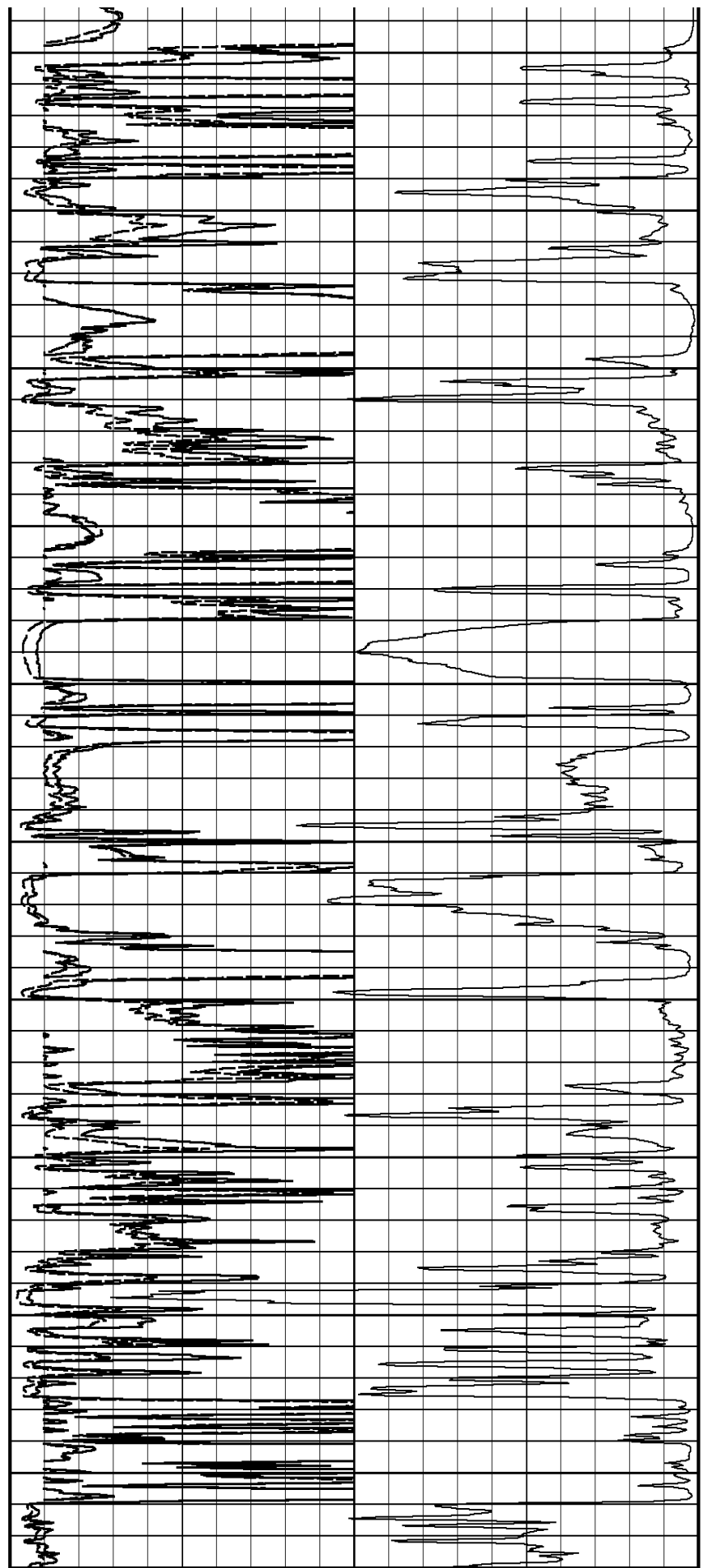
116°

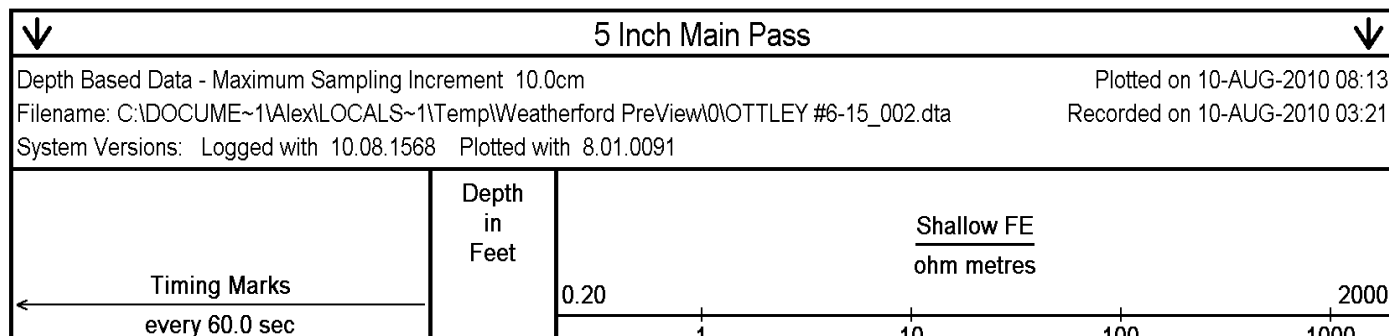
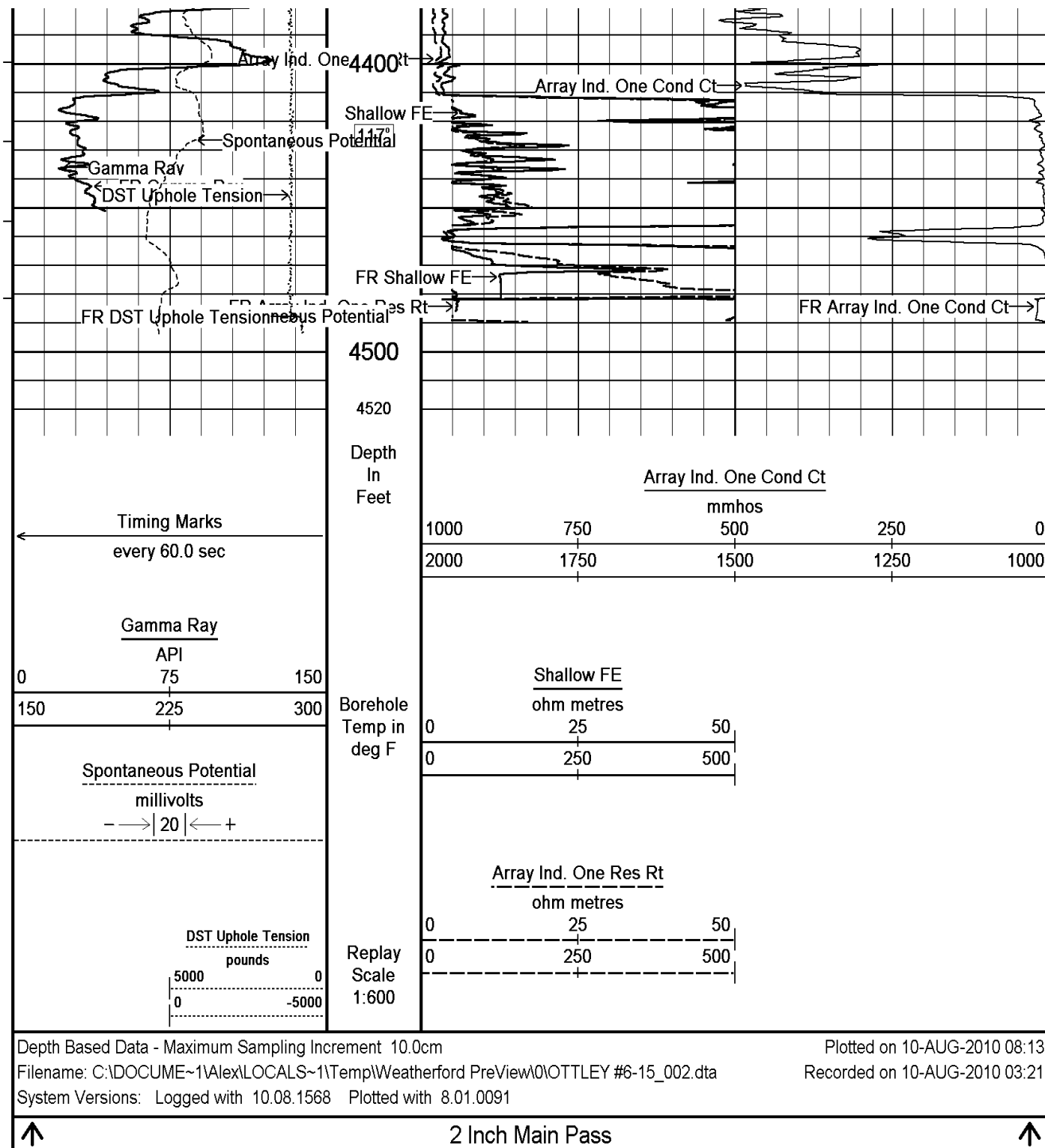
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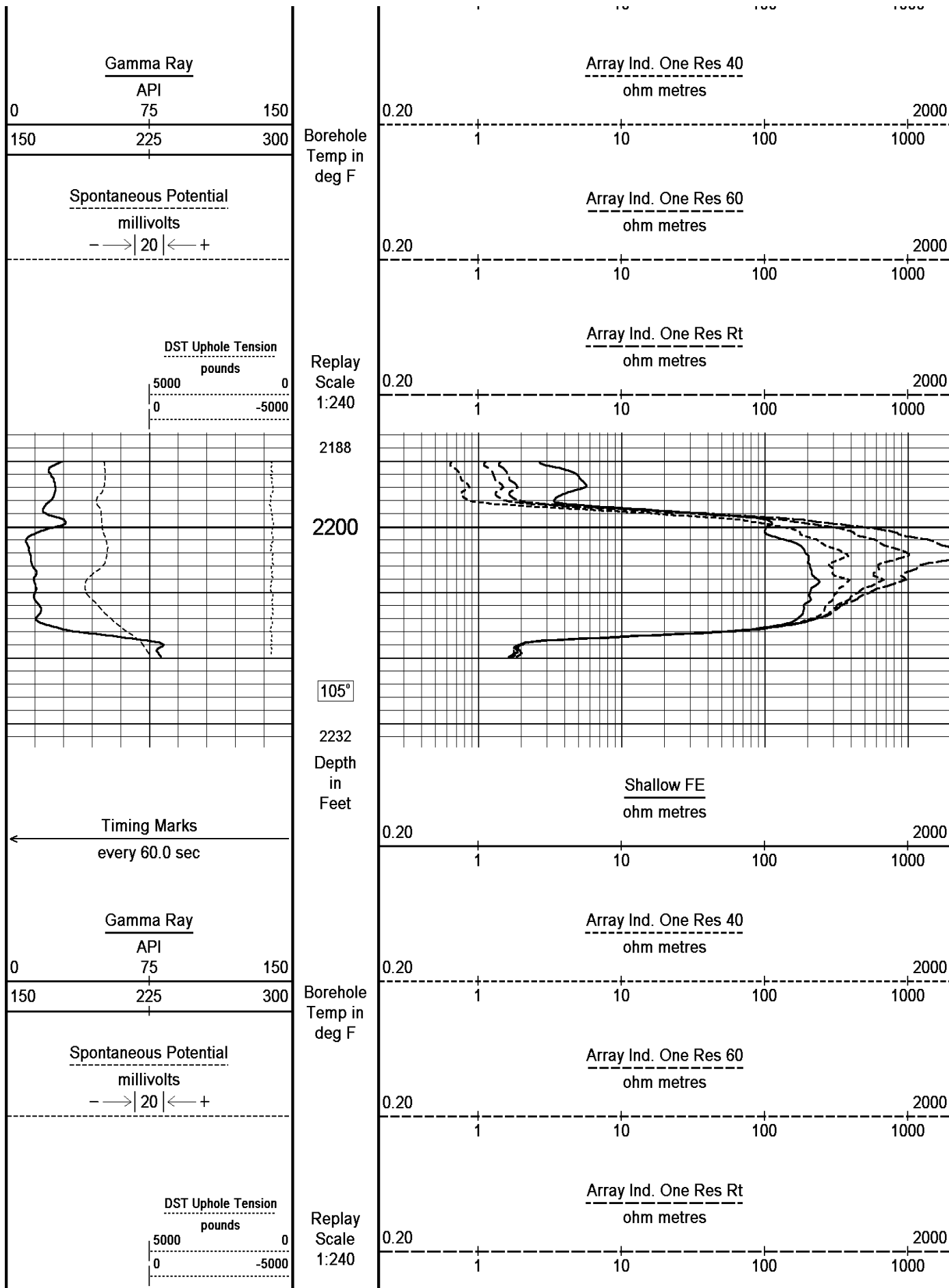
4300

118°

118°







5 Inch Main Pass

5 INCH MAIN

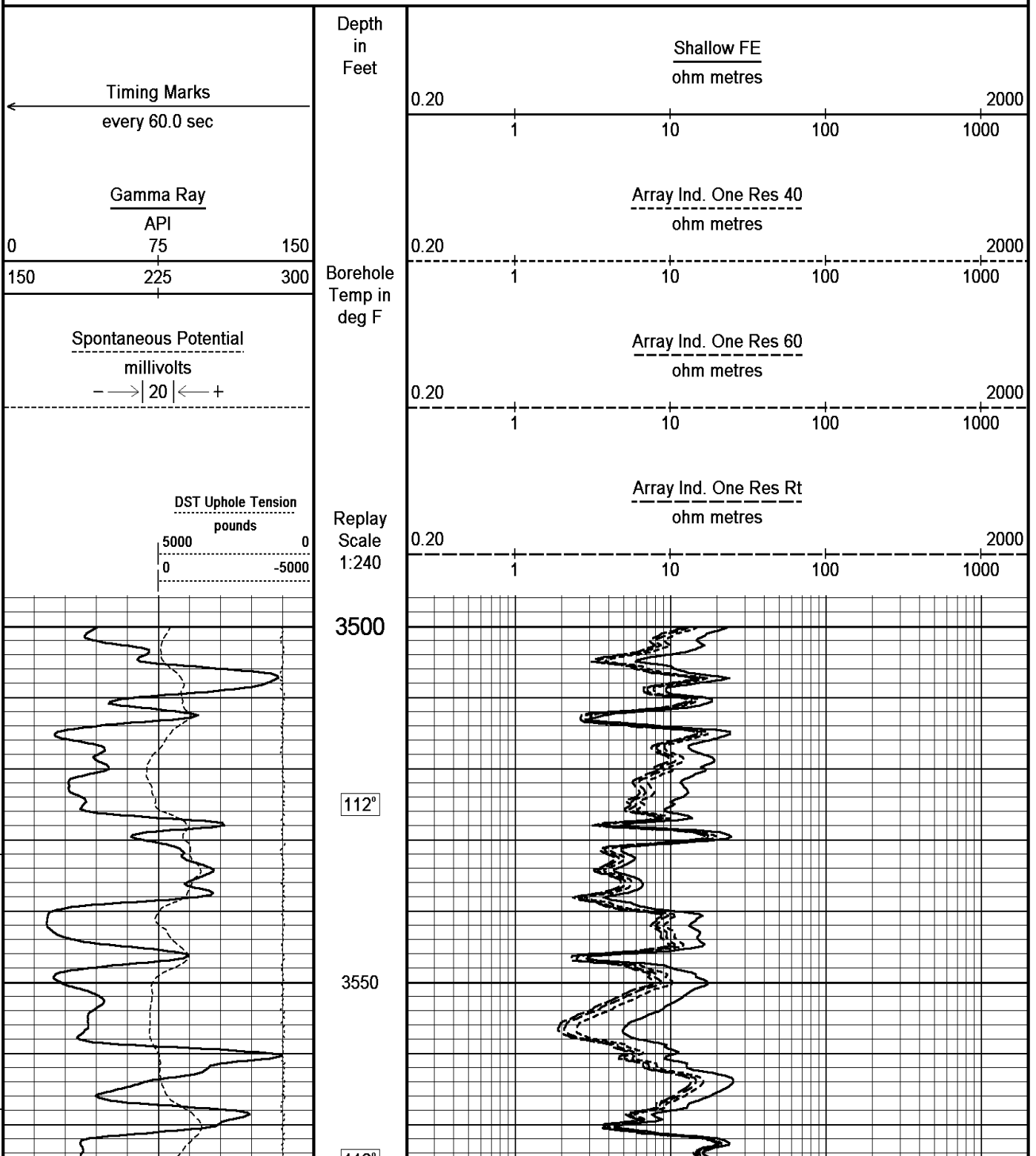
Depth Based Data - Maximum Sampling Increment 10.0cm

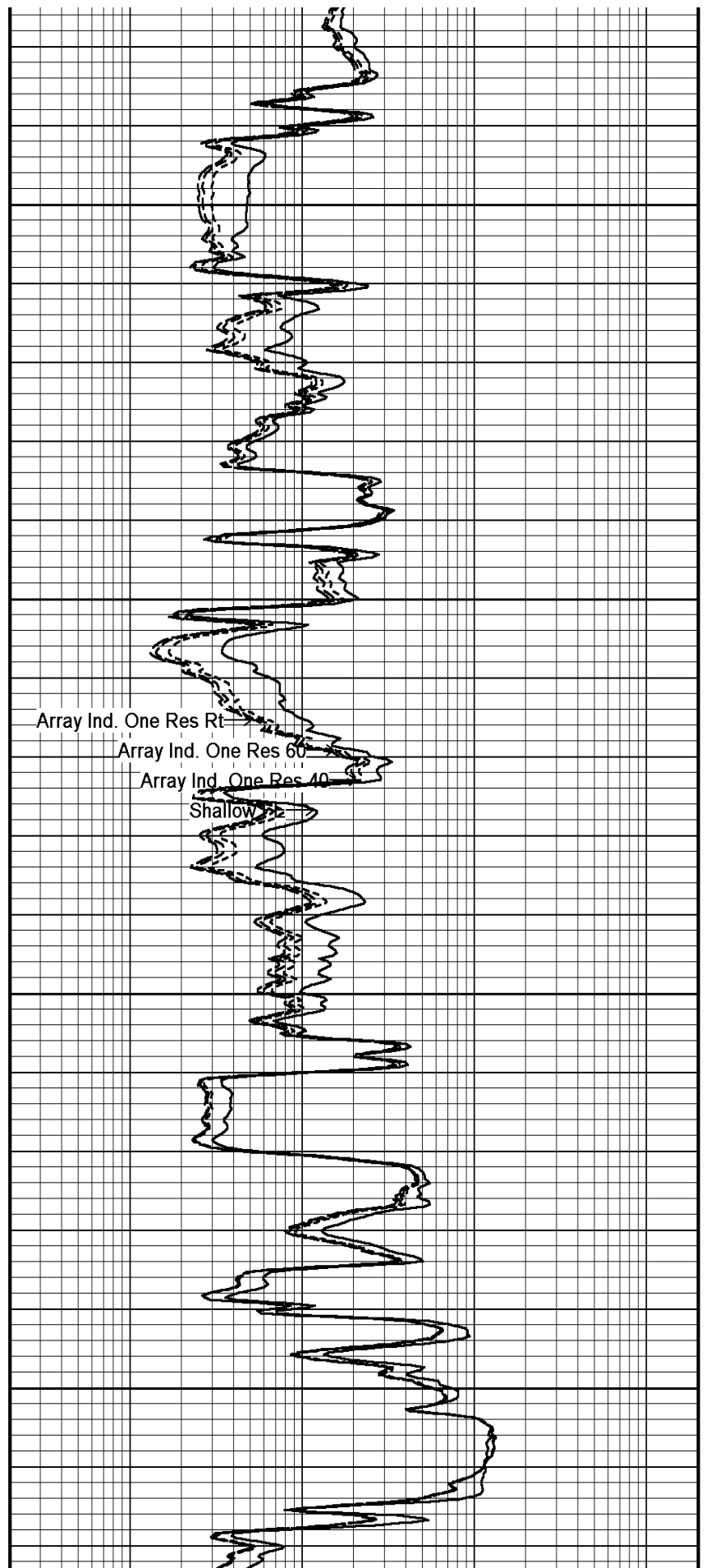
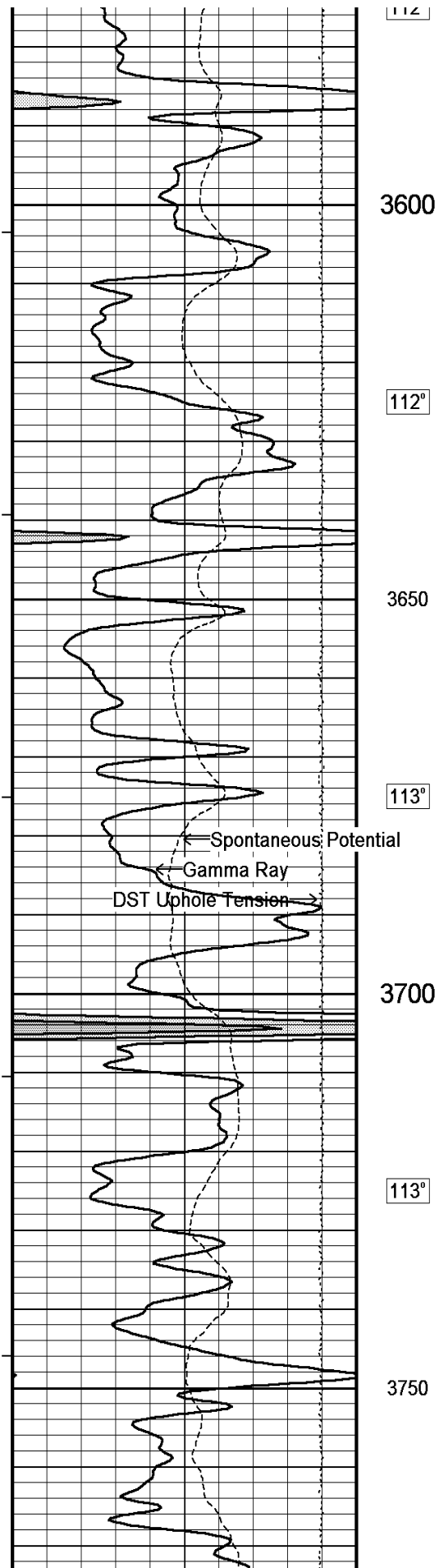
Plotted on 10-AUG-2010 08:13

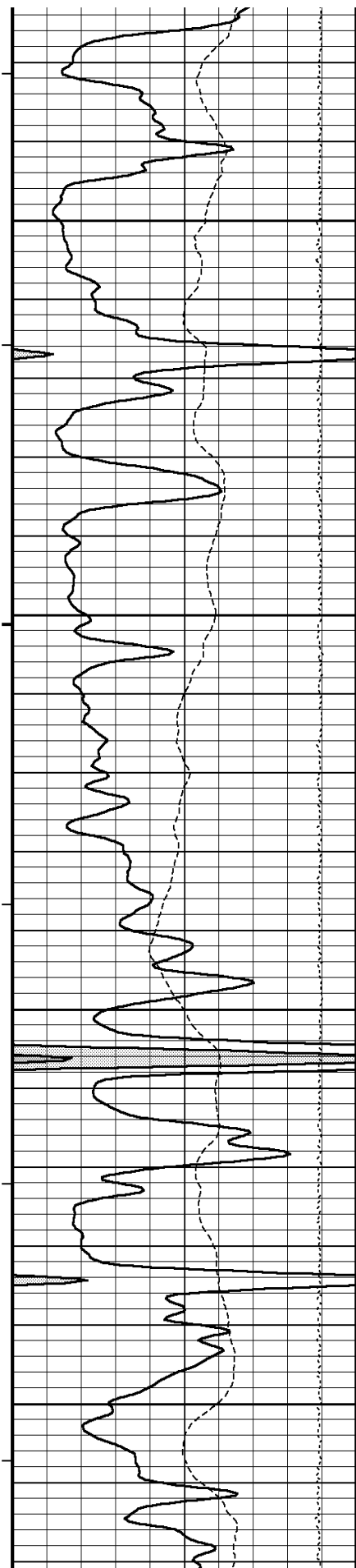
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Recorded on 10-AUG-2010 03:21

System Versions: Logged with 10.08.1568 Plotted with 8.01.0091







113°

3800

114°

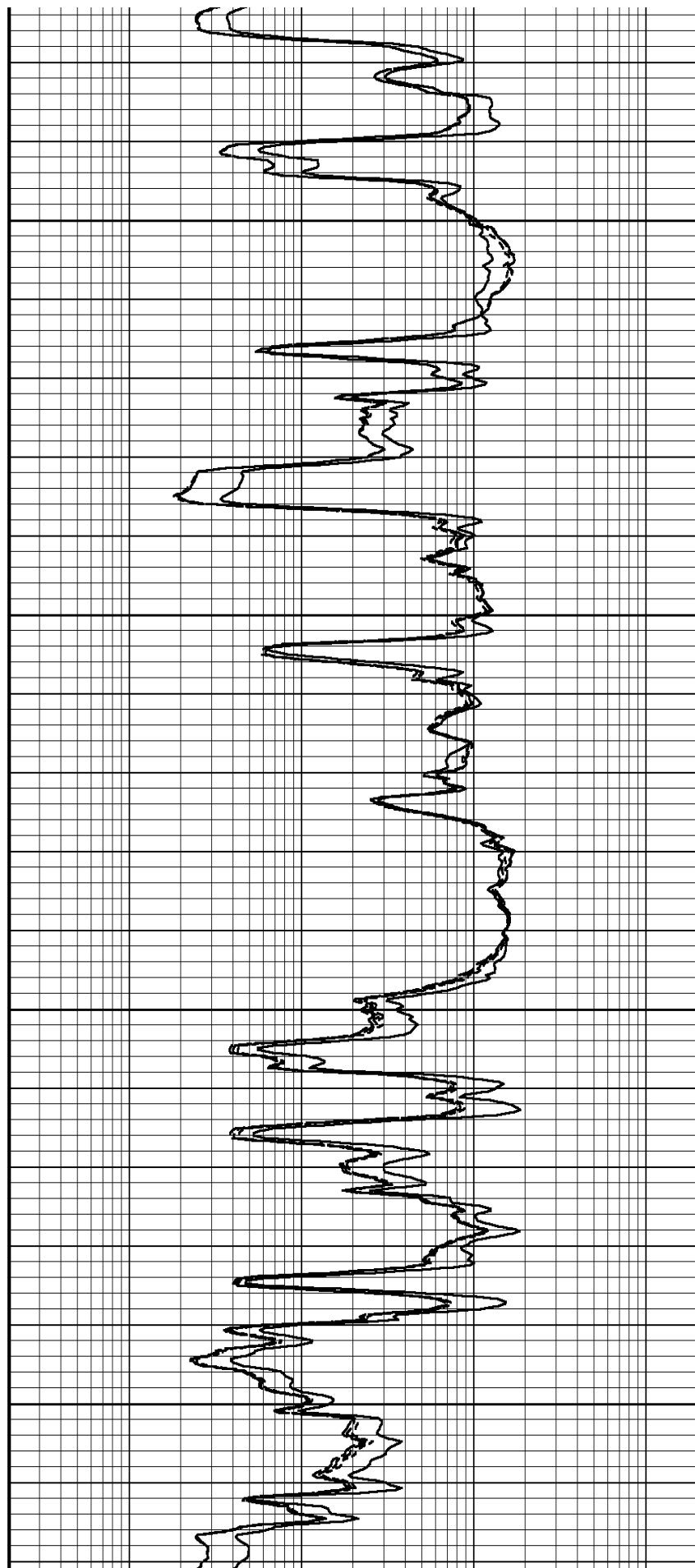
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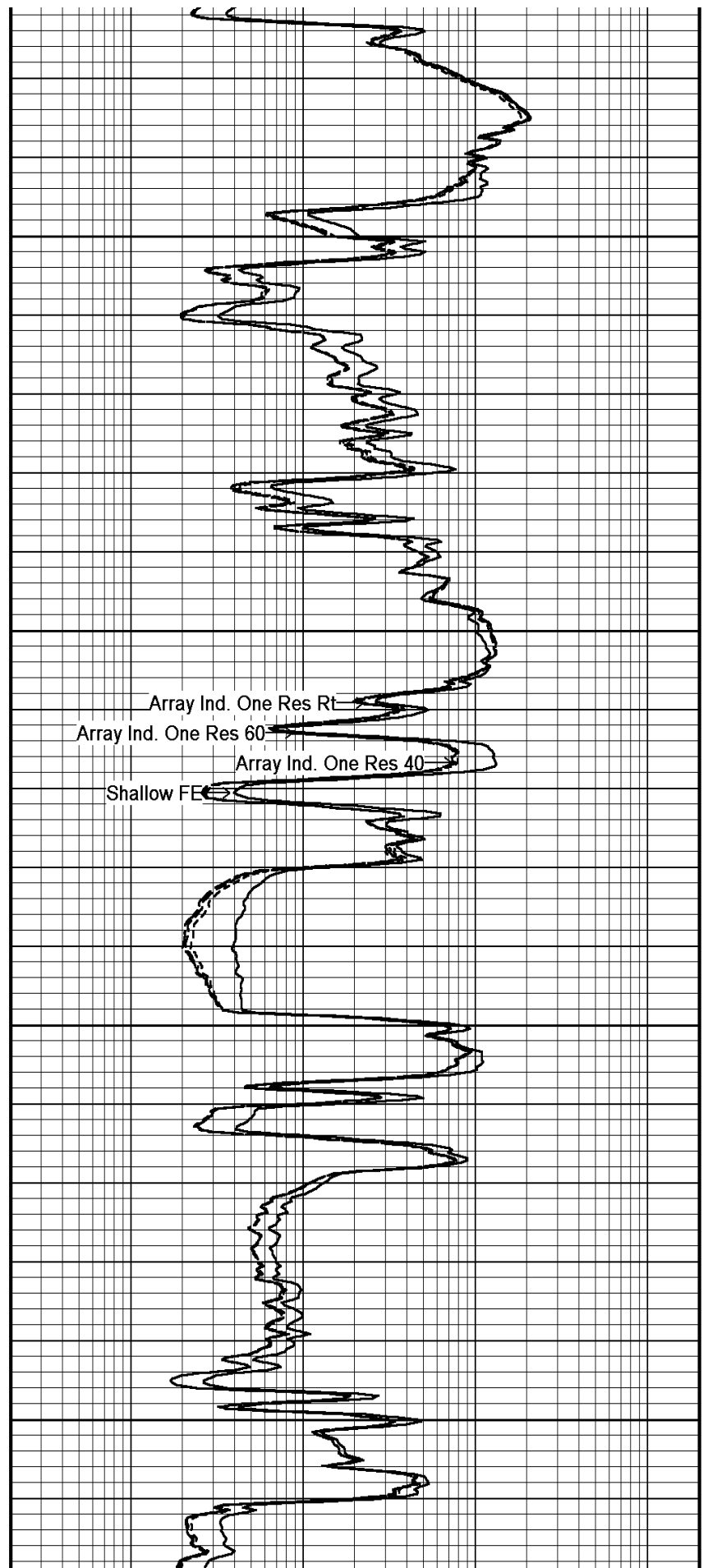
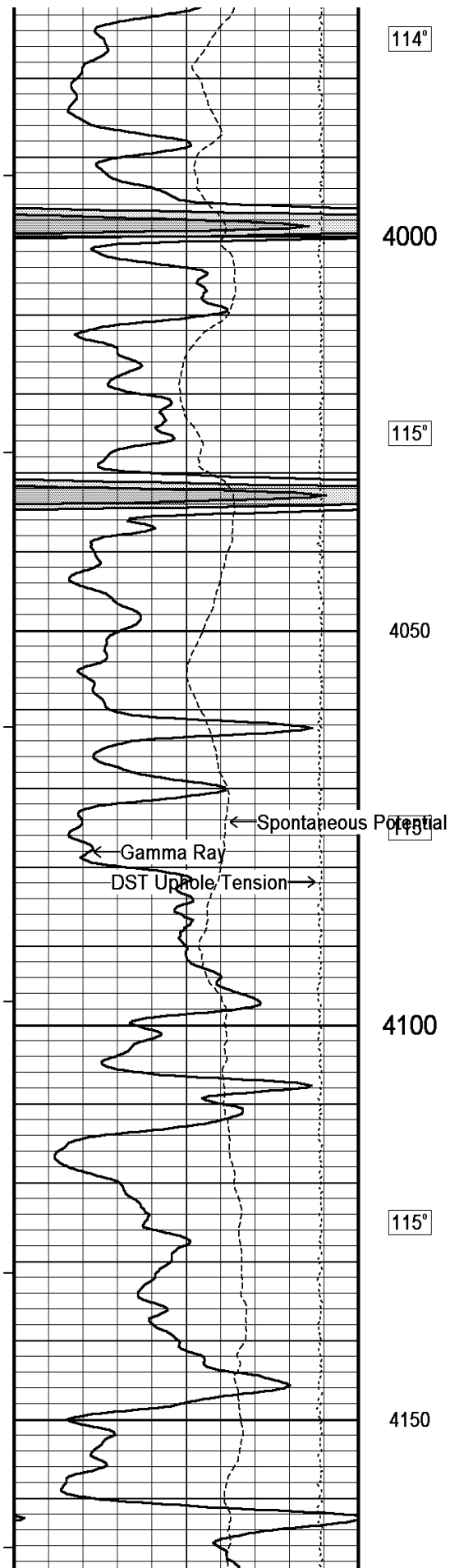
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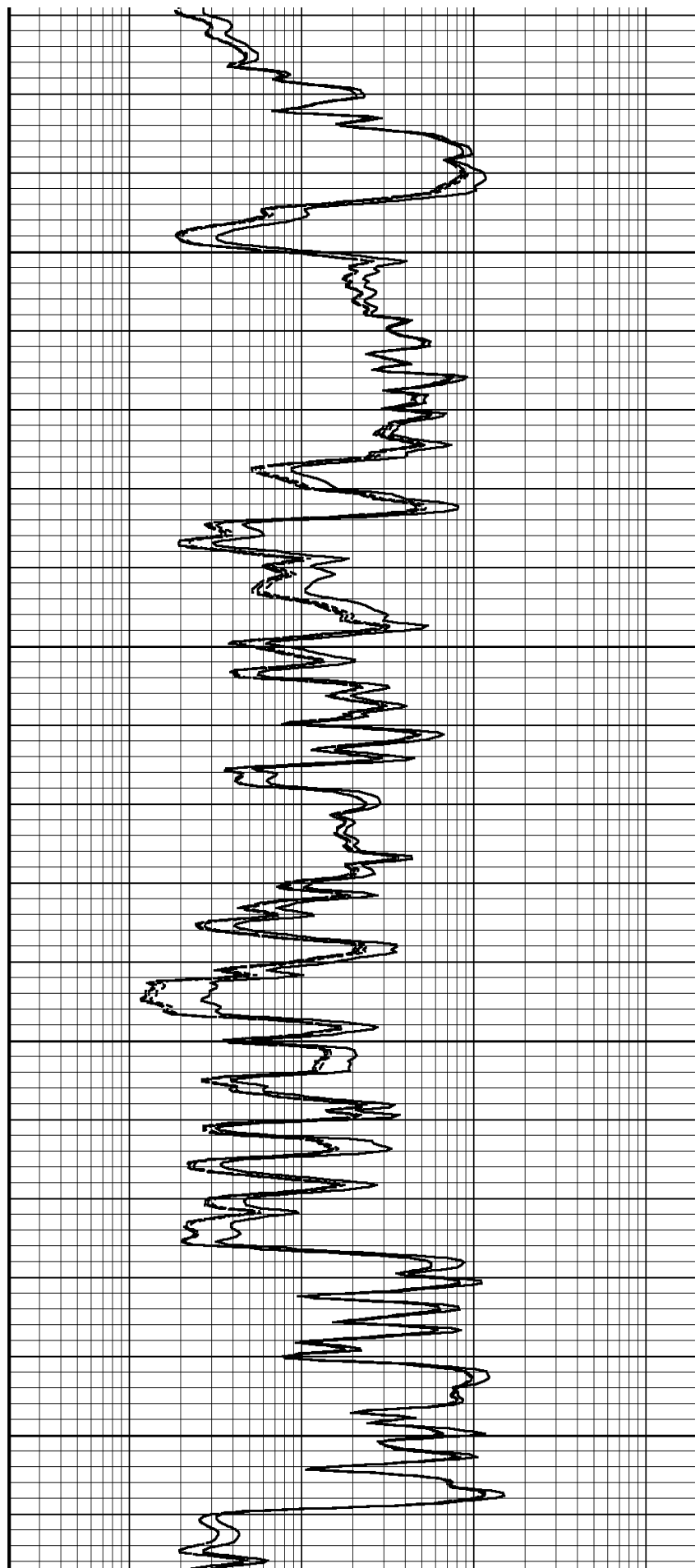
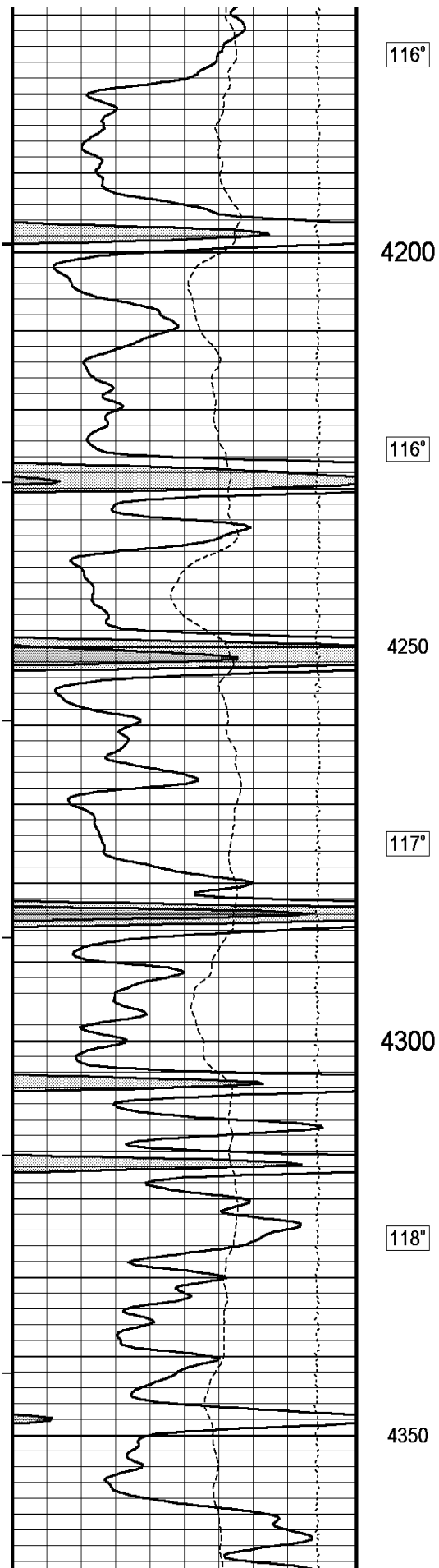
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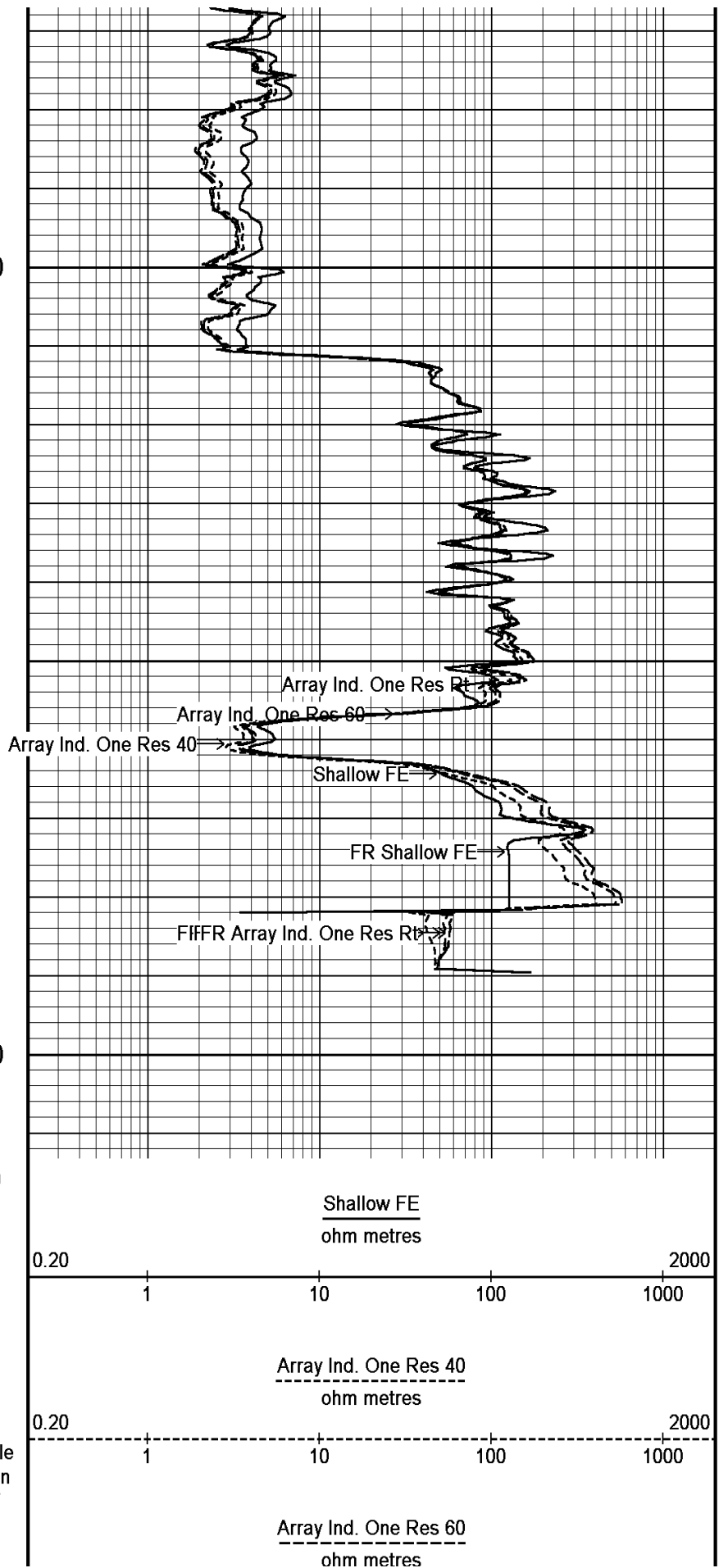
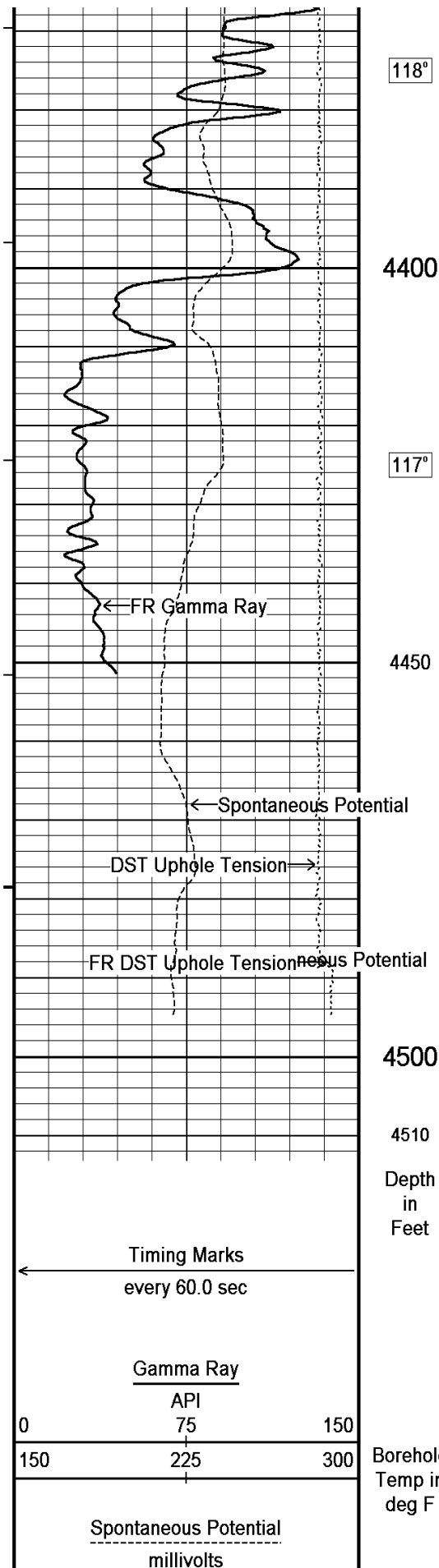
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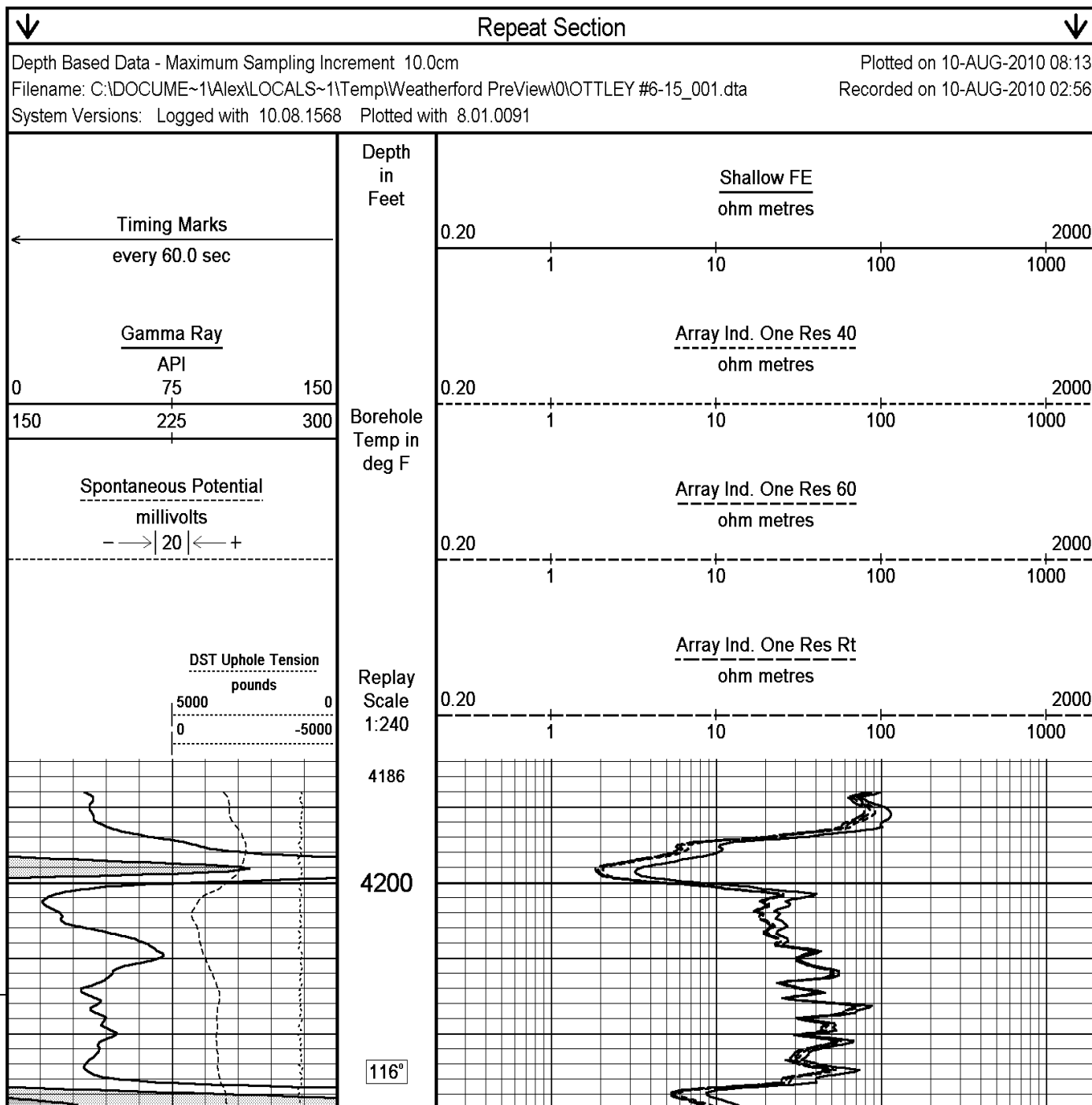
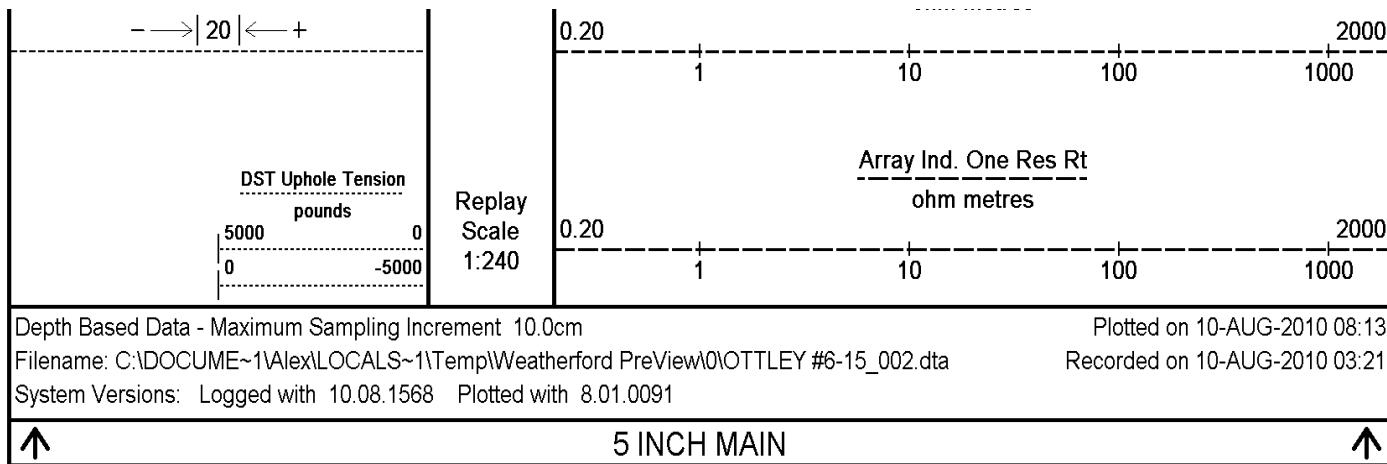
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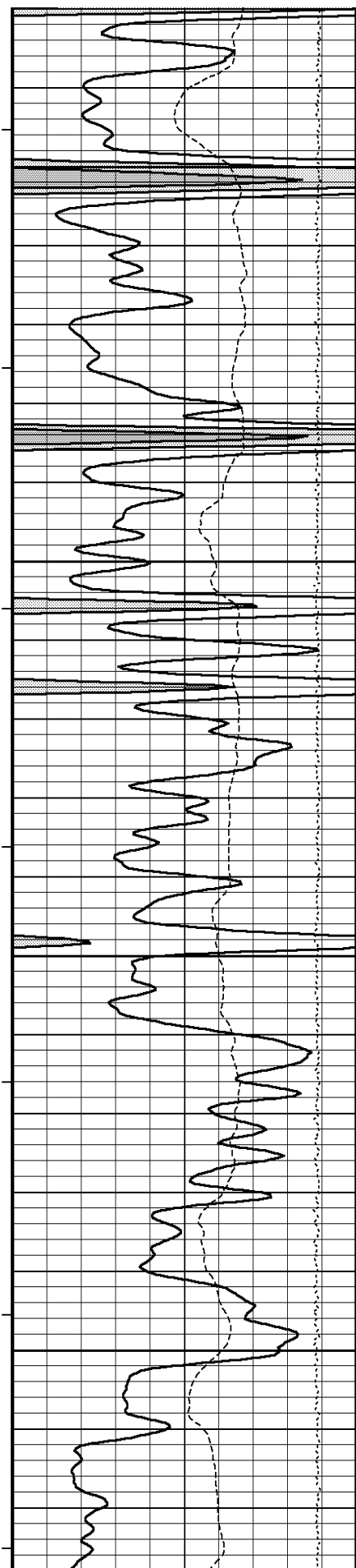












4250

117°

4300

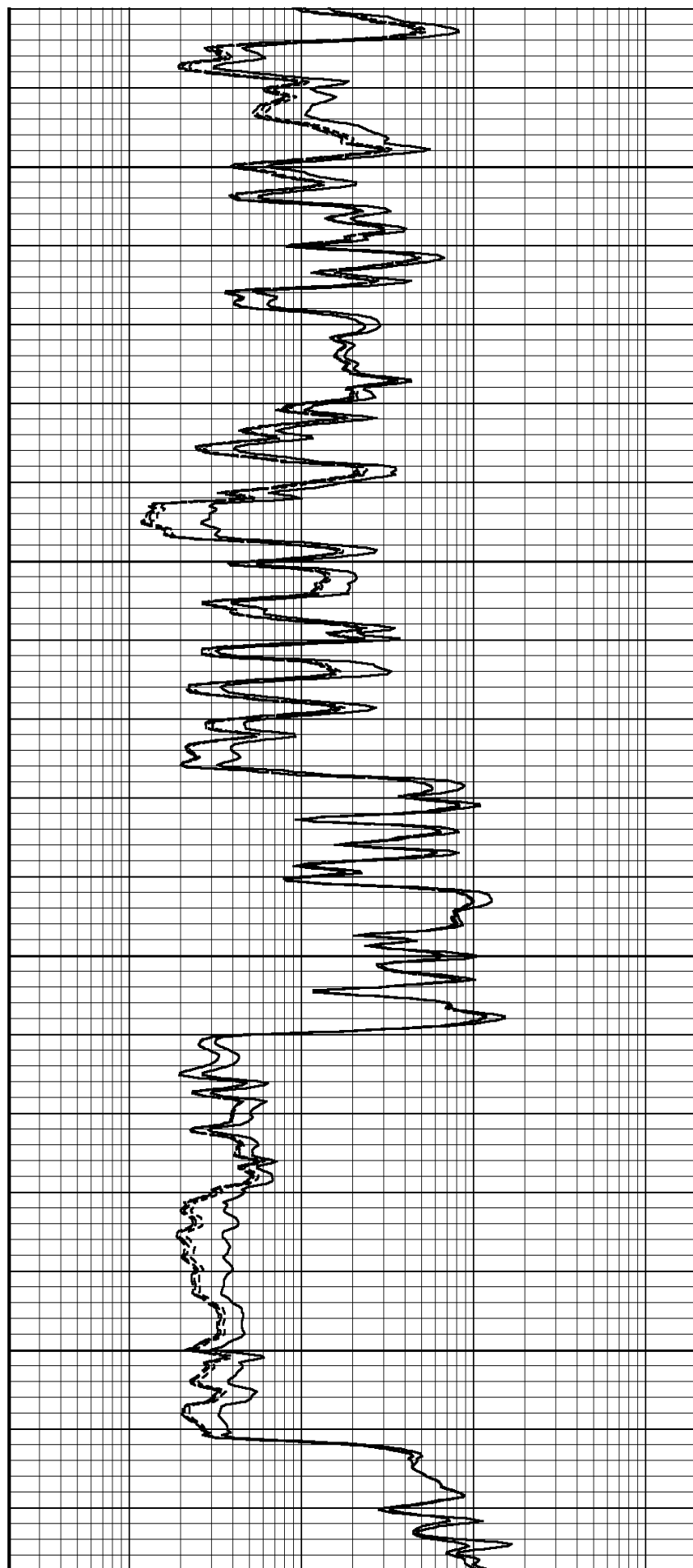
117°

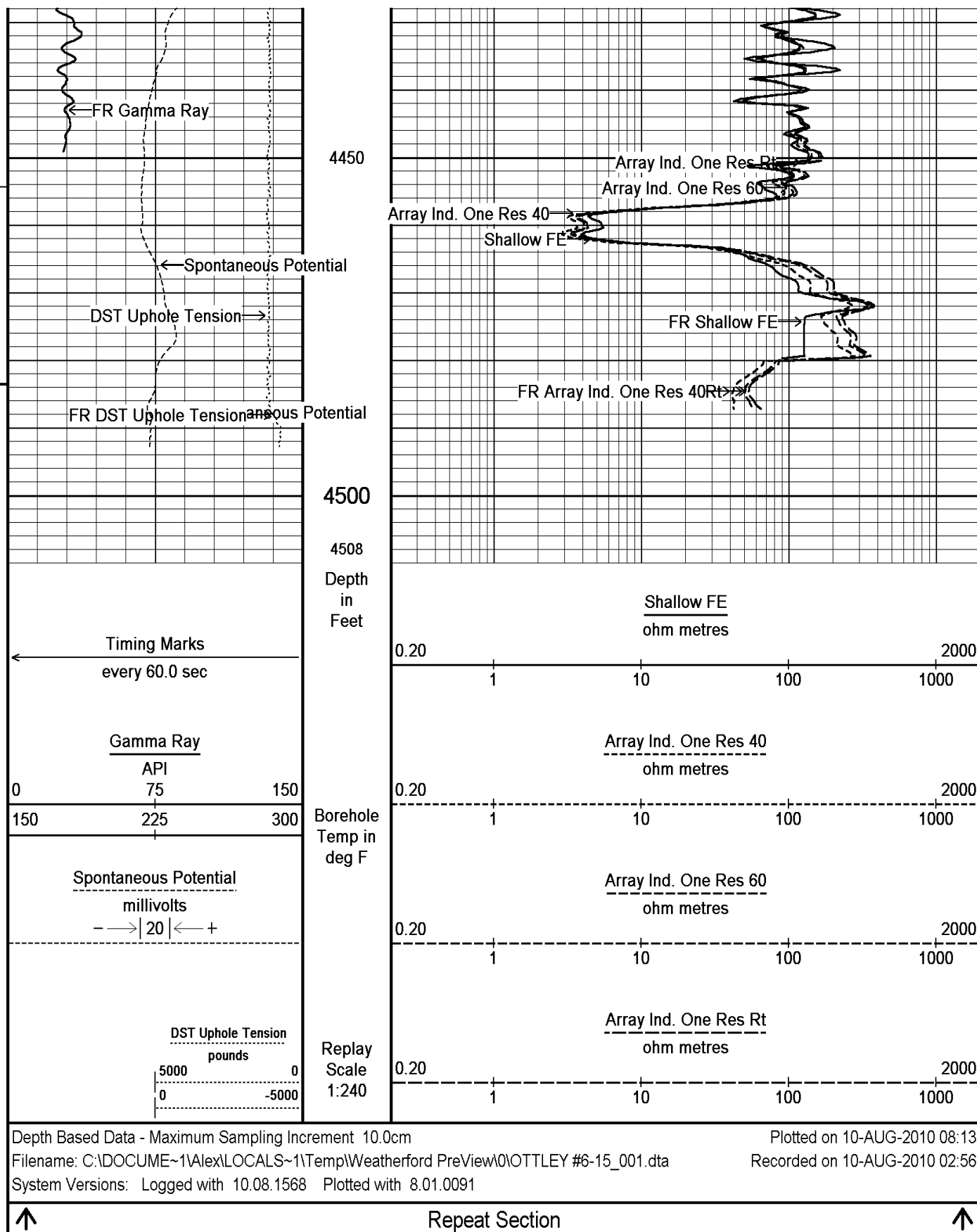
4350

117°

4400

117°





BEFORE SURVEY CALIBRATION

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General Parameters

Mud Resistivity	0.710	ohm-metres
Mud Resistivity Temperature	88.000	degrees F
Water Level	0.000	feet
Density/Neutron Processing	Wet Hole	

Hole/Annular Volume and Differential Caliper Parameters

HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	N/A	
Annular Volume Diameter	5.500	inches
Caliper for Differential Caliper	None	

Rwa Parameters

Porosity used	Limestone Density Por.
Resistivity used	Array Ind. One Res Rt
RWA Constant A	1.000
RWA Constant M	2.000

DOWNHOLE EQUIPMENT

C:\DOCUME~1\Alex\LOCALS~1\Temp\Weatherford PreView\0\OTTLEY #6-15.dta

3/8" Triple Cone Cable Head (MCB C A)

MCB 5 Length: 1.58 ft Weight: 15.4 lb

Compact Gamma

MCG 34 Length: 8.70 ft Weight: 63.9 lb

Compact Micro-log

MML 9 Length: 7.97 ft Weight: 81.6 lb

Compact Neutron

MDN 65 Length: 5.04 ft Weight: 50.7 lb

Compact Density/Caliper

MPD 35 Length: 9.59 ft Weight: 90.4 lb

SKJ-D.A Compact Knuckle Joint

SKJ 37 Length: 2.17 ft Weight: 24.3 lb

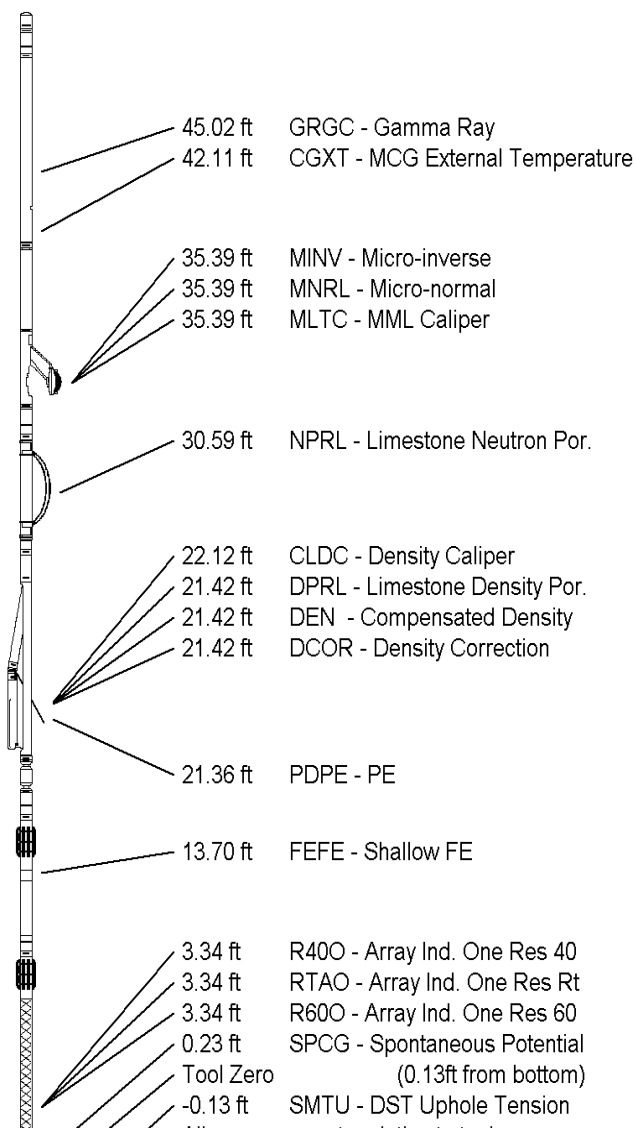
Compact Focussed Electric

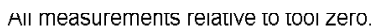
MFE 55 Length: 6.03 ft Weight: 48.5 lb

Compact Induction

MAI 178 Length: 10.81 ft Weight: 48.5 lb

Total Length: 51.88 ft Weight: 423.3 lb



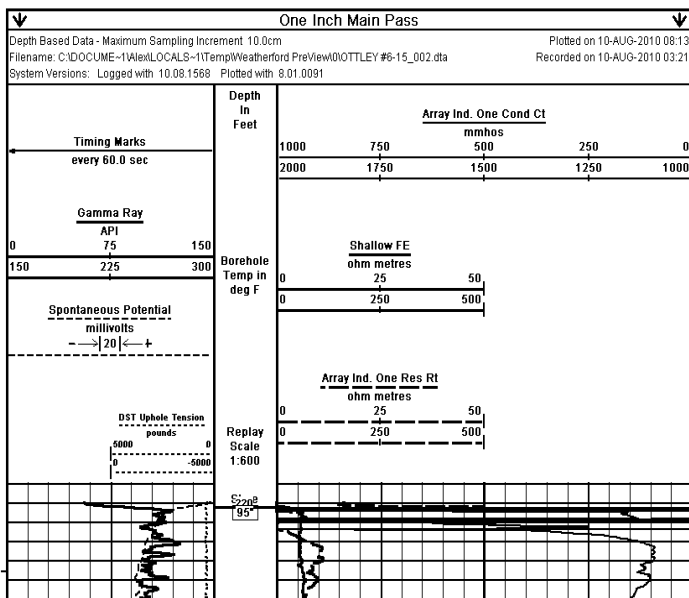
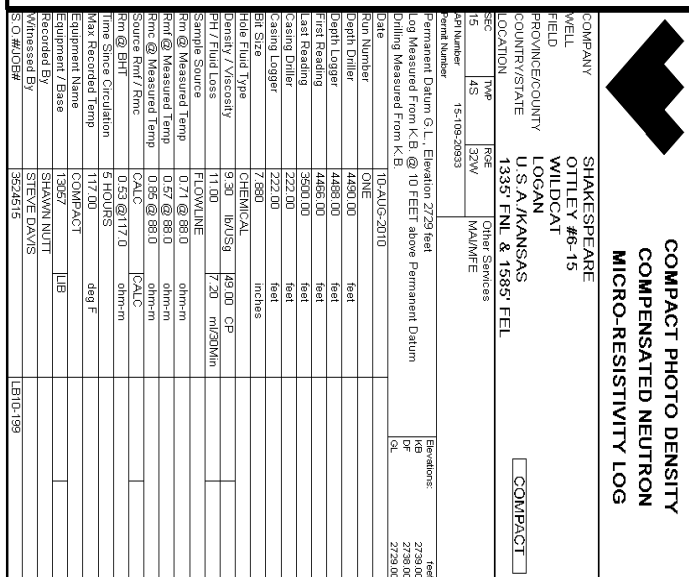


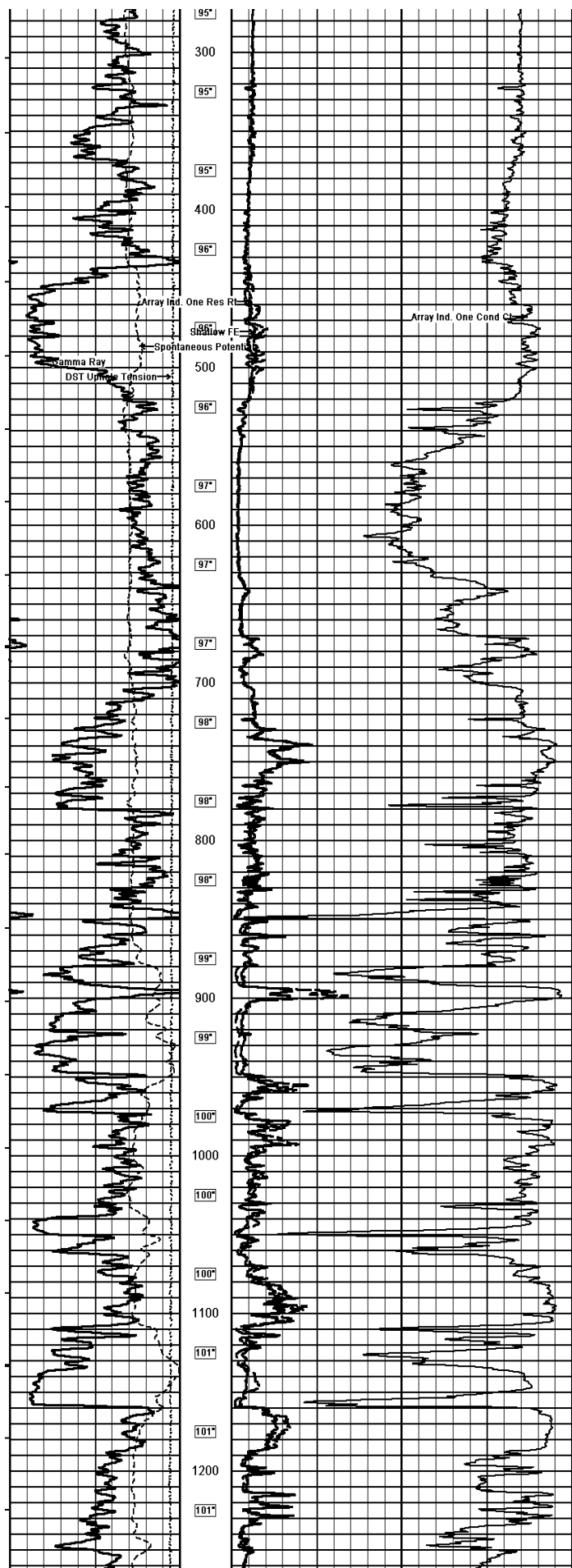
Elevation Kelly Bushing	2739.00	feet	First Reading	4466.00	feet
Elevation Drill Floor	2738.00	feet	Depth Driller	4490.00	feet
Elevation Ground Level	2729.00	feet	Depth Logger	4488.00	feet

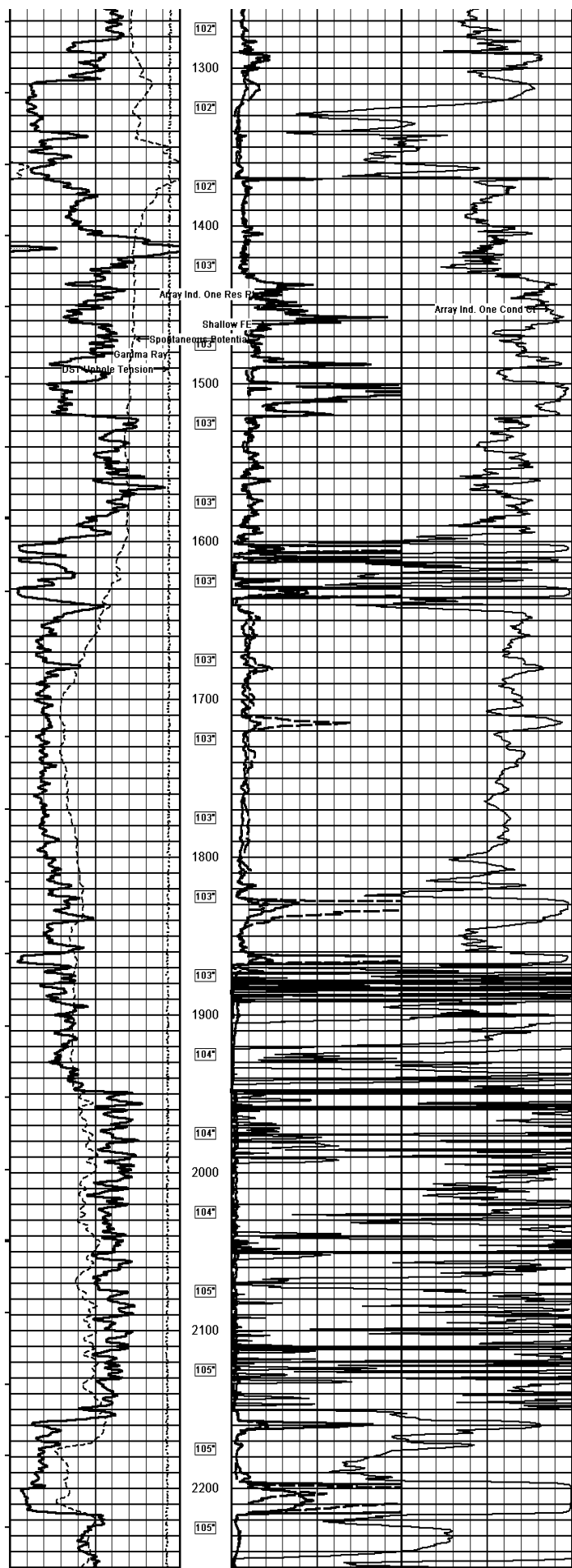


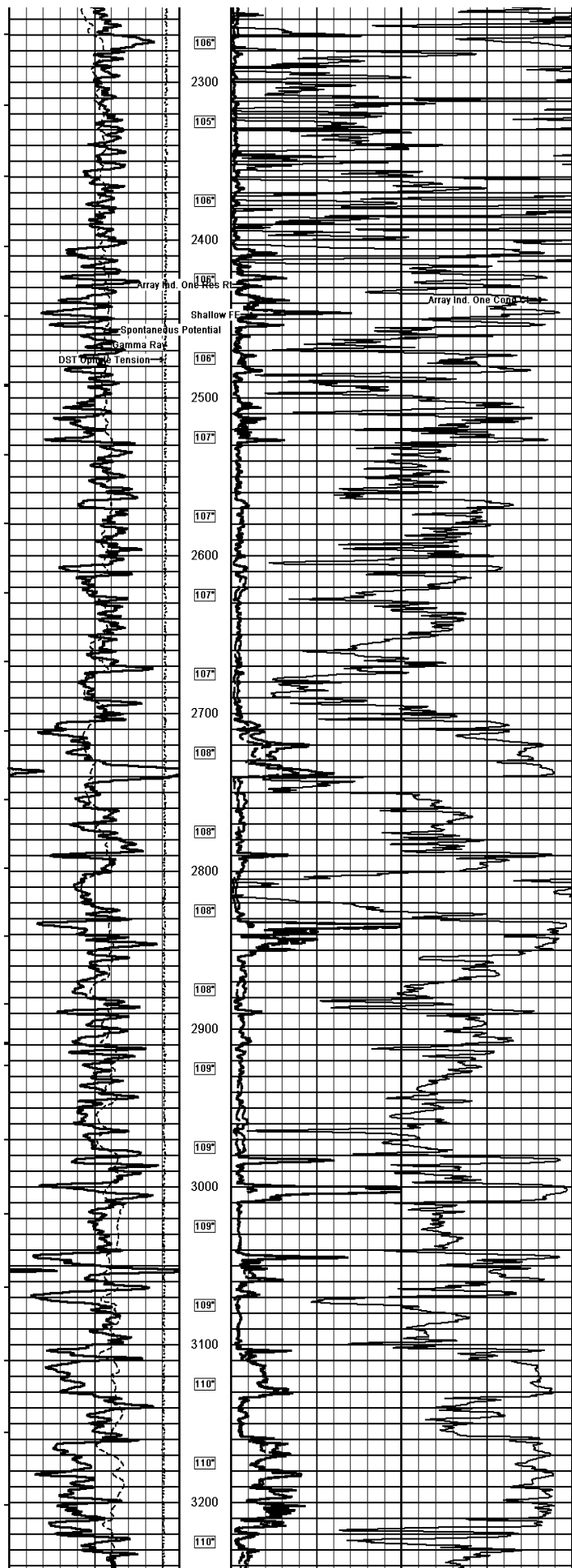
Weatherford®

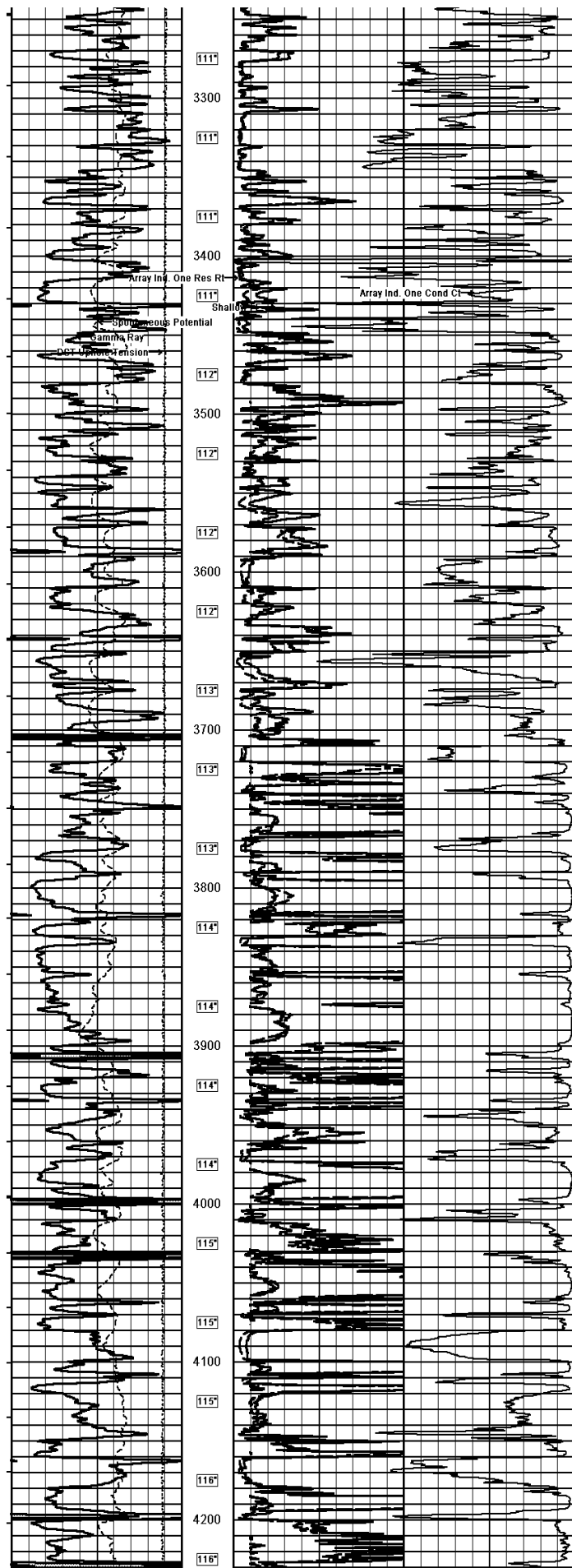
COMPACT PHOTO DENSITY COMPENSATED NEUTRON MICRO-RESISTIVITY LOG

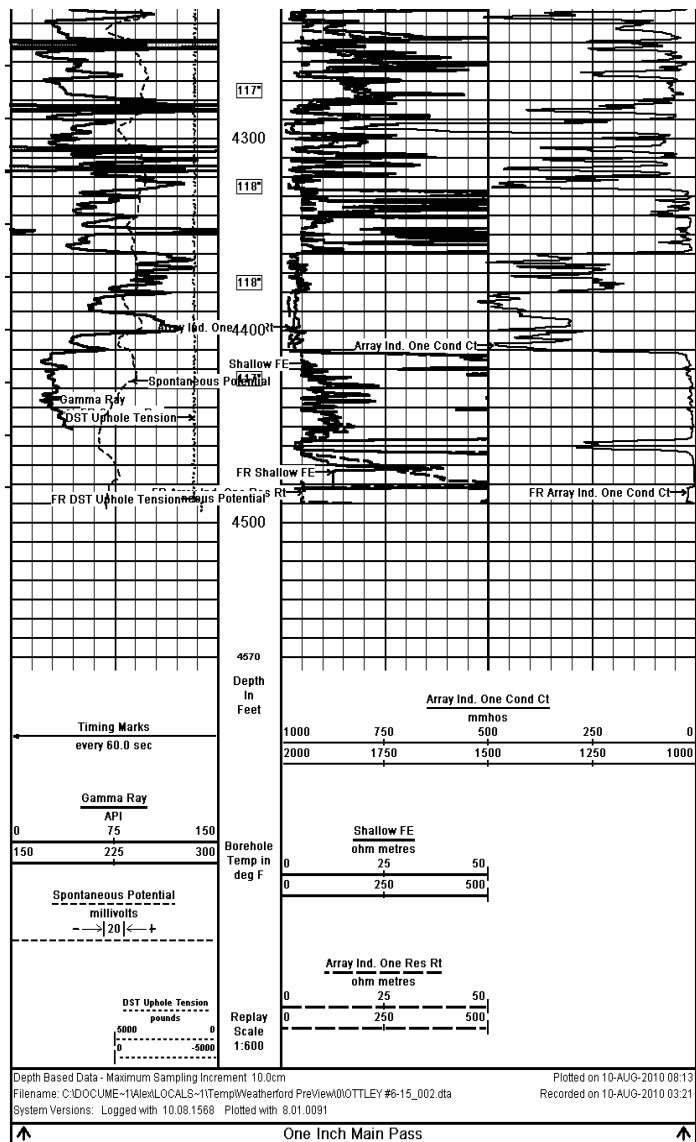












COMPANY	SHAKESPEARE				
WELL	OTTLEY #6-15				
FIELD	WILDCAT				
PROVINCE/COUNTY	LOGAN				
COUNTRY/STATE	U.S.A./KANSAS				
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COMPACT PHOTO DENSITY
COMPENSATED NEUTRON
MICRO-RESISTIVITY LOG