



Weatherford

ARRAY INDUCTION
SHALLOW FOCUSED
ELECTRIC LOG

COMPANY

SHAKESPEARE OIL CO., INC.

WELL

EDWARDS #1-21

FIELD

PENCE WEST

PROVINCE/COUNTY

SCOTT

COUNTRY/STATE

U.S.A. / KANSAS

LOCATION

1428' FSL & 481' FEL

SEC 21

TWP 16S

RGE 34W

Other Services

Latitude

MDN/MPD

MSS

MML

Longitude

15-171-21174

Permanent Datum GL, Elevation 3132 feet

Log Measured From KB

Drilling Measured From KB @ 8 FEET

Date

05-AUG-2016

Run Number

ONE

Service Order

4558-157610049

Depth Driller

4915.00

Depth Logger

4911.00

First Reading

4908.00

Last Reading

266.00

Casing Driller

264.00

Casing Logger

266.00

Bit Size

7.875

Hole Fluid Type

CHEMICAL

Density / Viscosity

9.50 lb/USg

59.00 CP

PH / Fluid Loss

10.50

8.00 ml/30Min

Sample Source

FLOWLINE

Rm @ Measured Temp

0.62 @ 75.0

ohm-m

Rmf @ Measured Temp

0.50 @ 75.0

ohm-m

Rmc @ Measured Temp

0.74 @ 75.0

ohm-m

Source Rmf / Rmc

CALC

CALC

Rm @ BHT

0.40 @ 116.0

ohm-m

Time Since Circulation

5 HOURS

Max Recorded Temp

116.00

deg F

Equipment / Base

13096

OKC

Recorded By

ADAM SILL

BOREHOLE RECORD

Last Edited: 05-AUG-2016 17:49

Bit Size
inches

7.875

Depth From
feet

264.00

Depth To
feet

4915.00

CASING RECORD

Type

Size
inches

8.625

Depth From
feet

0.00

Shoe Depth
feet

264.00

Weight
pounds/ft

24.00

REMARKS

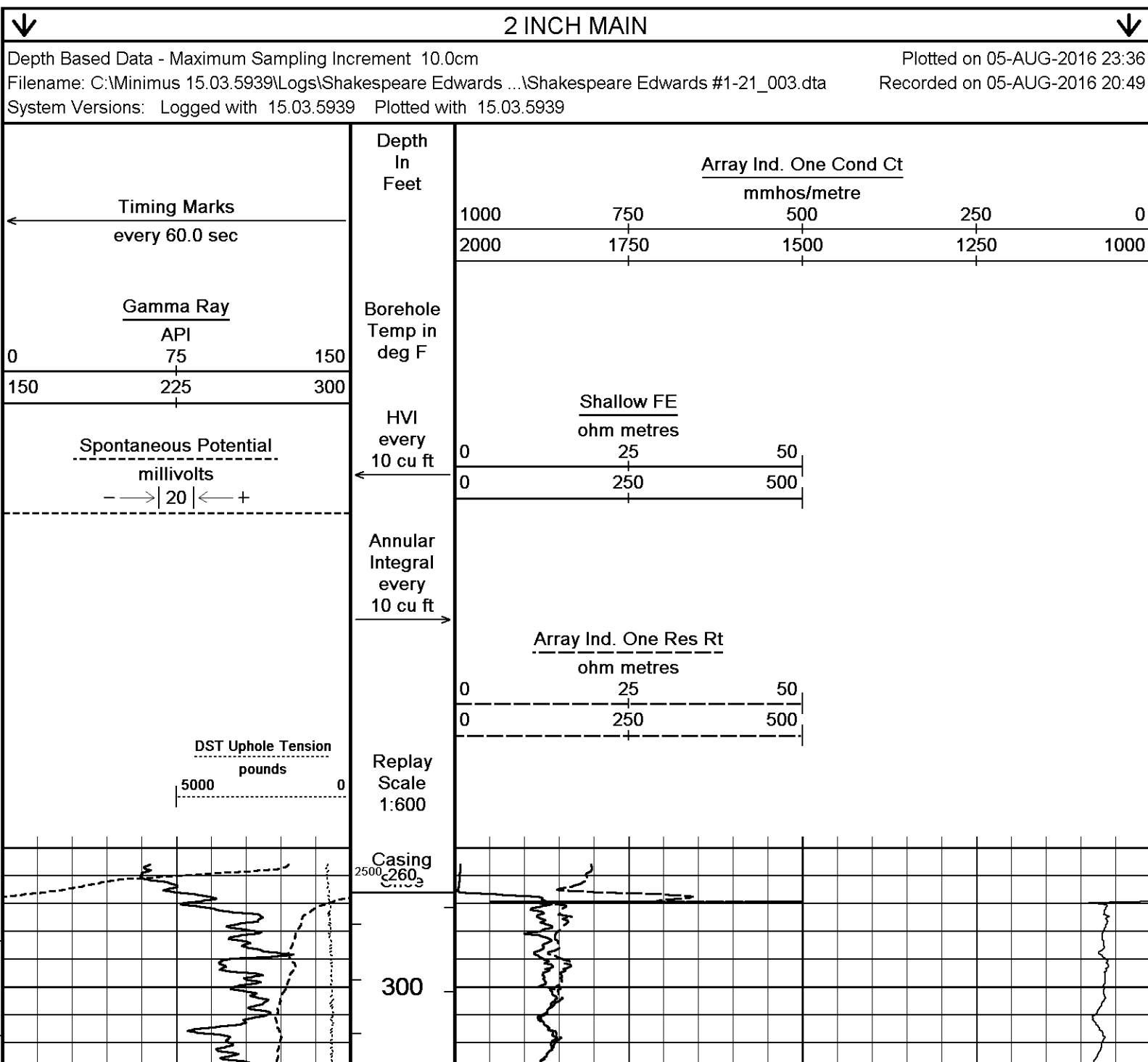
- SOFTWARE ISSUE: WLS 15.03.5939.
- RUN ONE: MCG, MML, MDN, MPD, MFE, MSS, MAI RUN IN COMBINATION.
 - HARDWARE: DUAL BOWSPRING USED ON MDN.
 - 0.5 INCH STANDOFF USED ON MFE.
 - TWO 0.5 INCH STANDOFFS USED ON MSS.
 - 0.5 INCH STANDOFF USED ON MAI.
- 2.71 G/CC LIMESTONE DENSITY MATRIX USED TO CALCULATE 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: 2496 CU.FT.
- ANNULAR HOLE VOLUME WITH 5.5 INCH PRODUCTION CASING FROM TD TO 3800 FEET: 288 CU.FT.

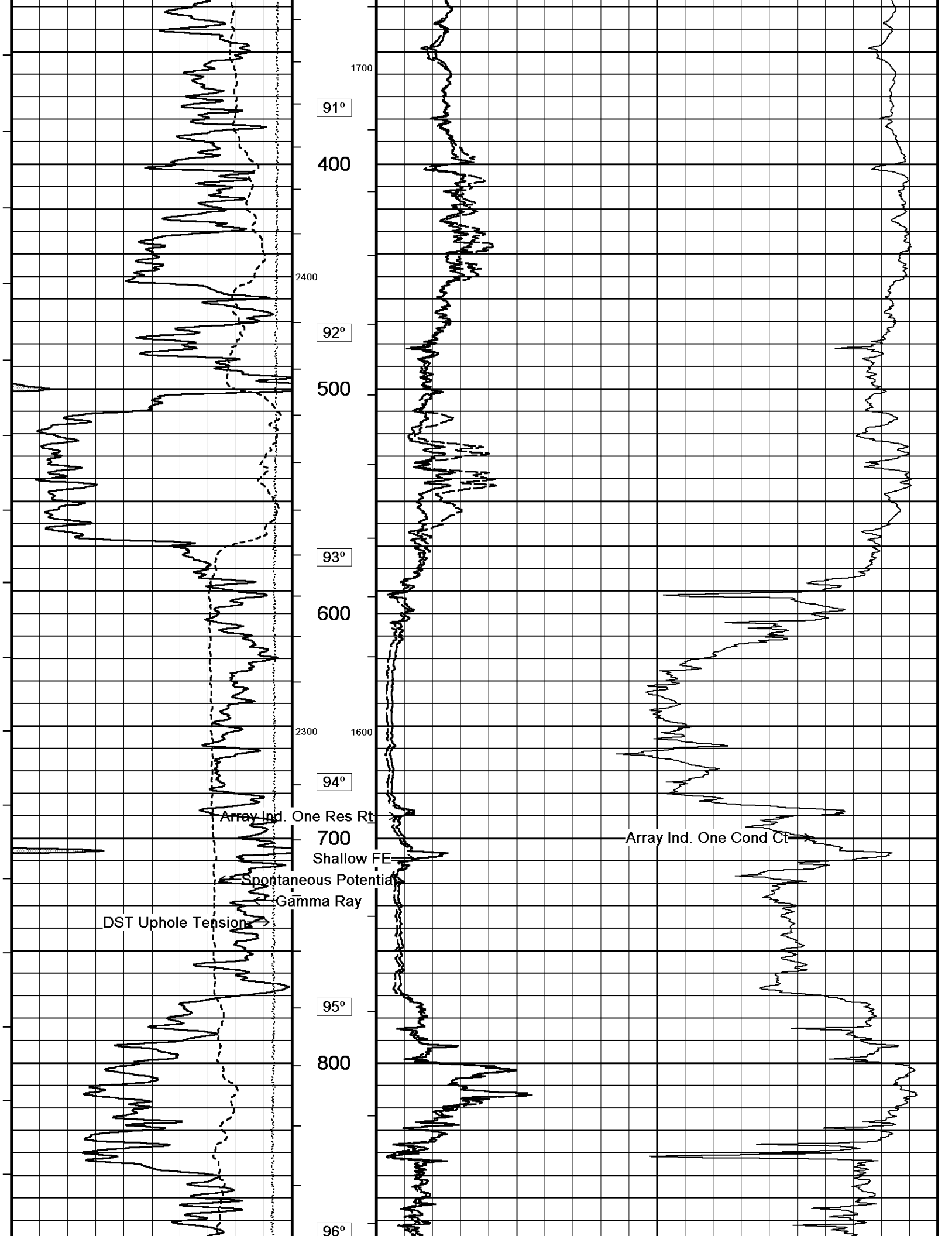
- RIG: DUKE #2.

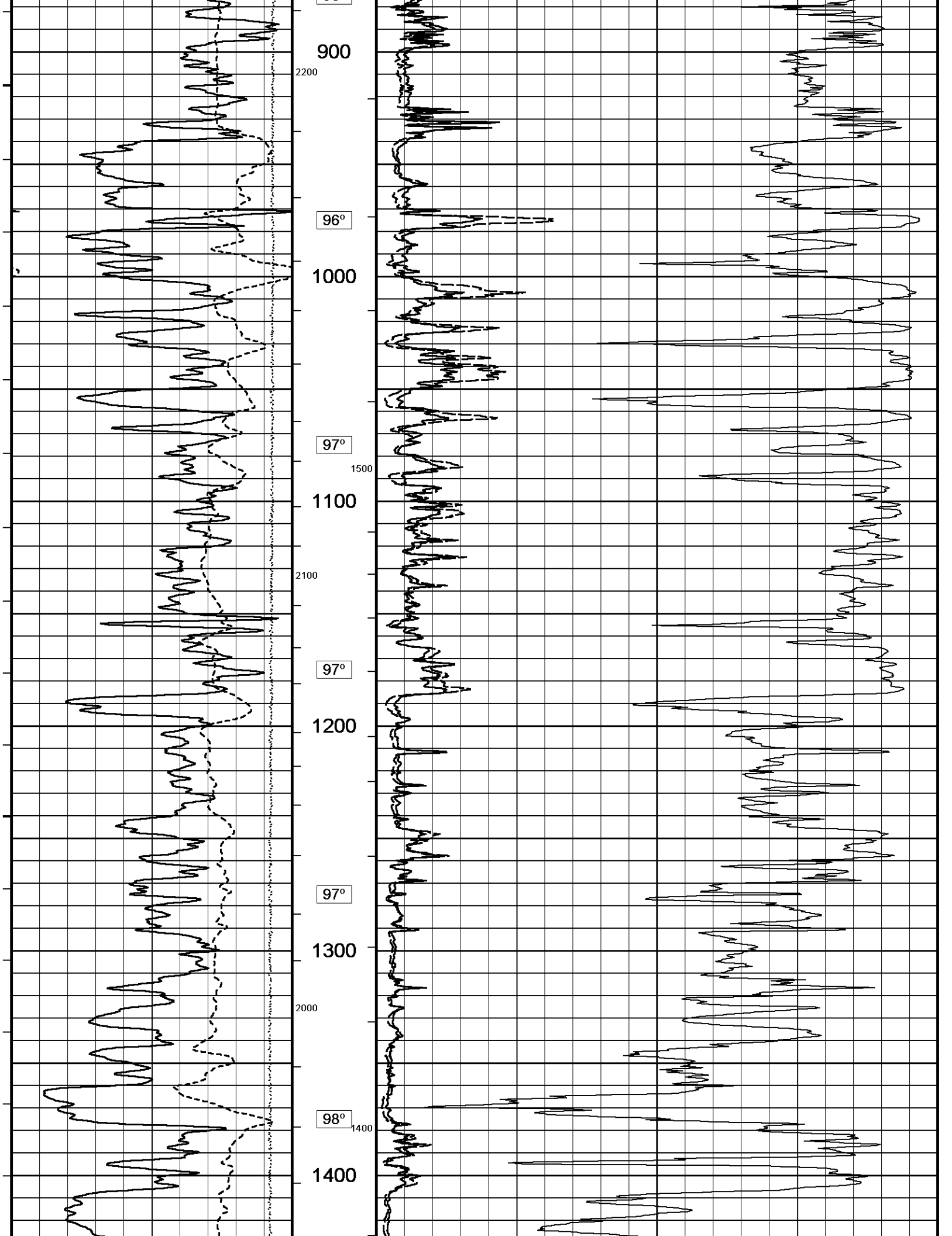
- ENGINEER: A. SILL.

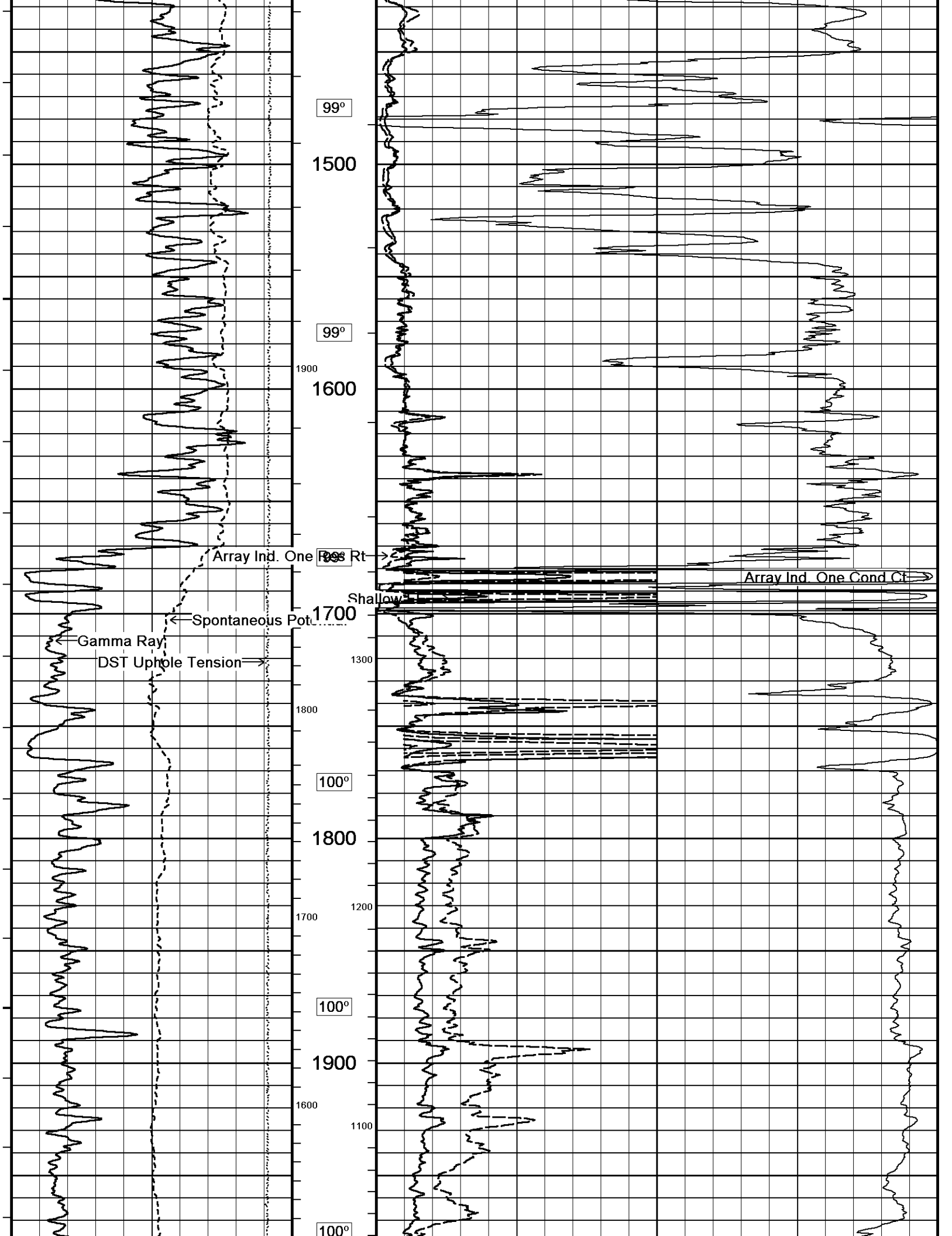
- OPERATOR: J. LaPOINT.

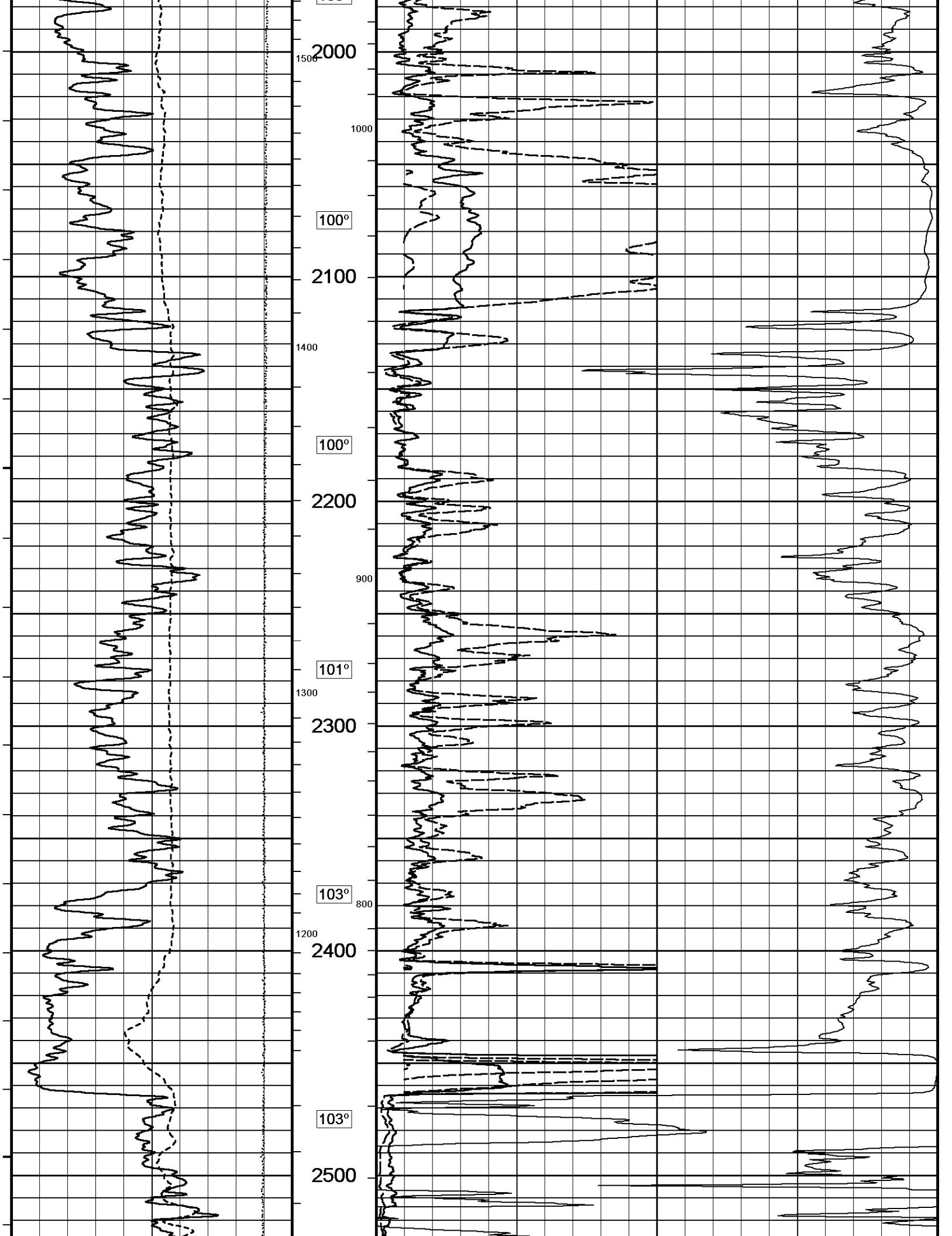
In interpreting, communicating or providing information and/or making recommendations, either written or oral, as to logs or test or other data, type or amount of material, or Work or other service to be furnished, or manner of performance, or in predicting results to be obtained, the Contractor will 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.

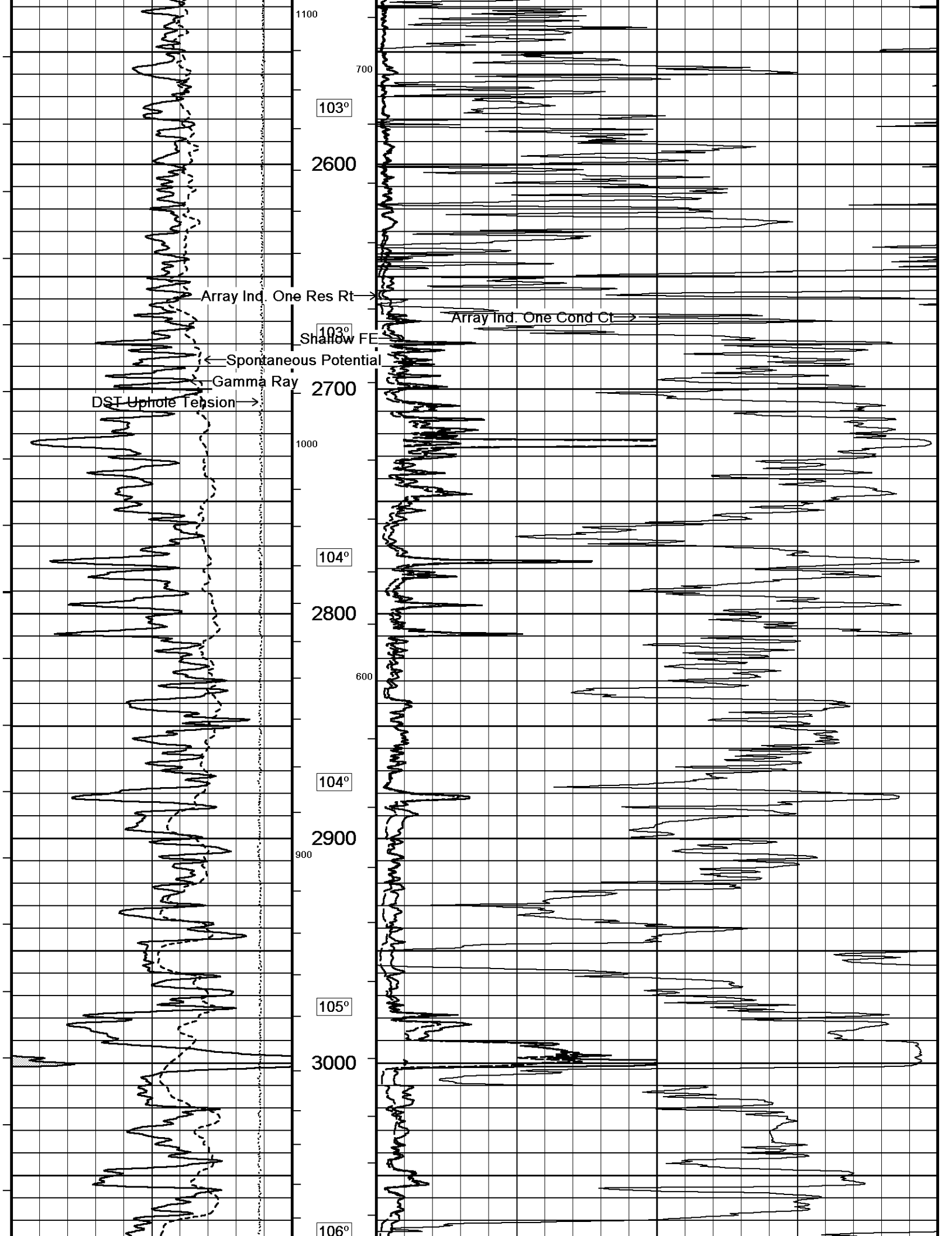


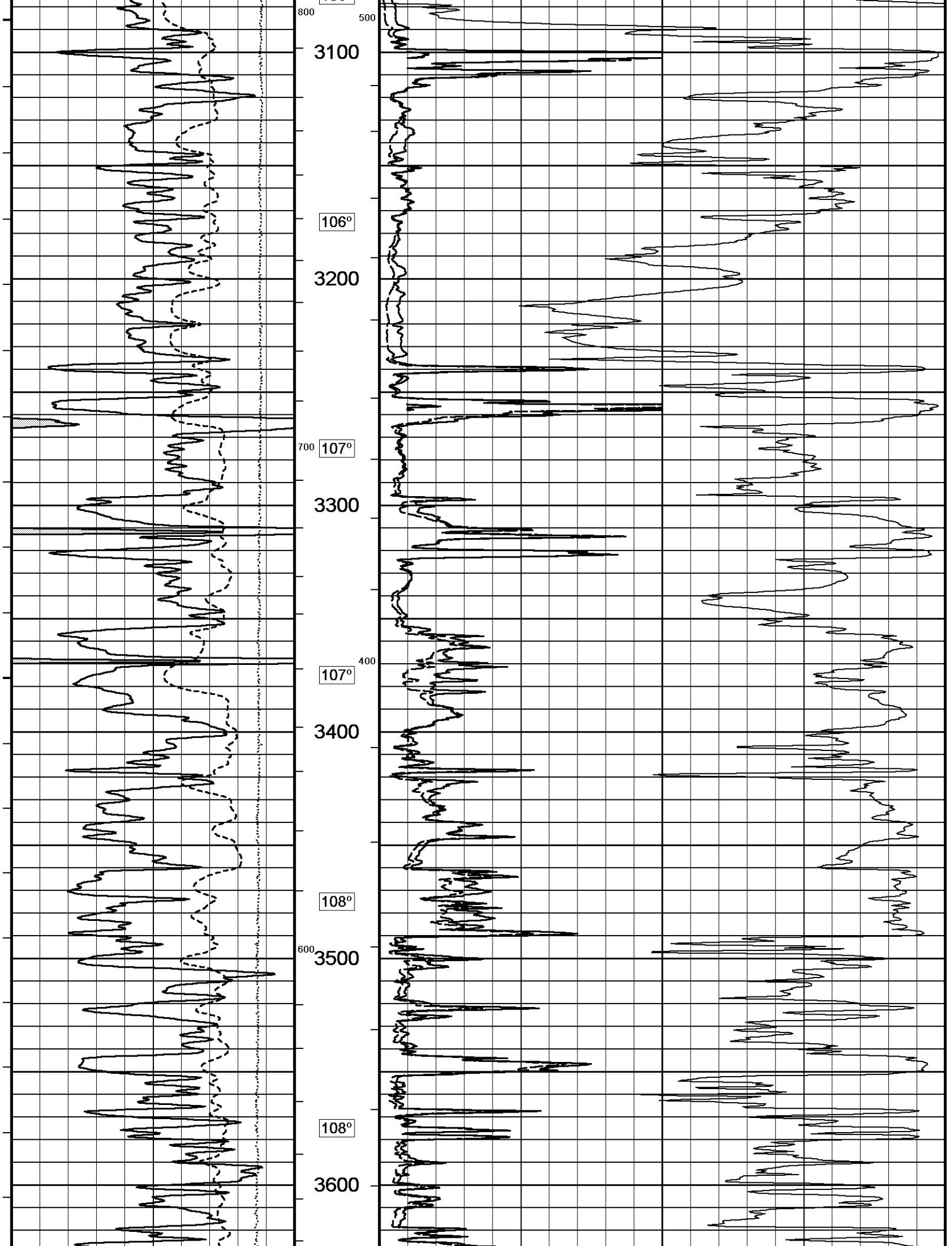


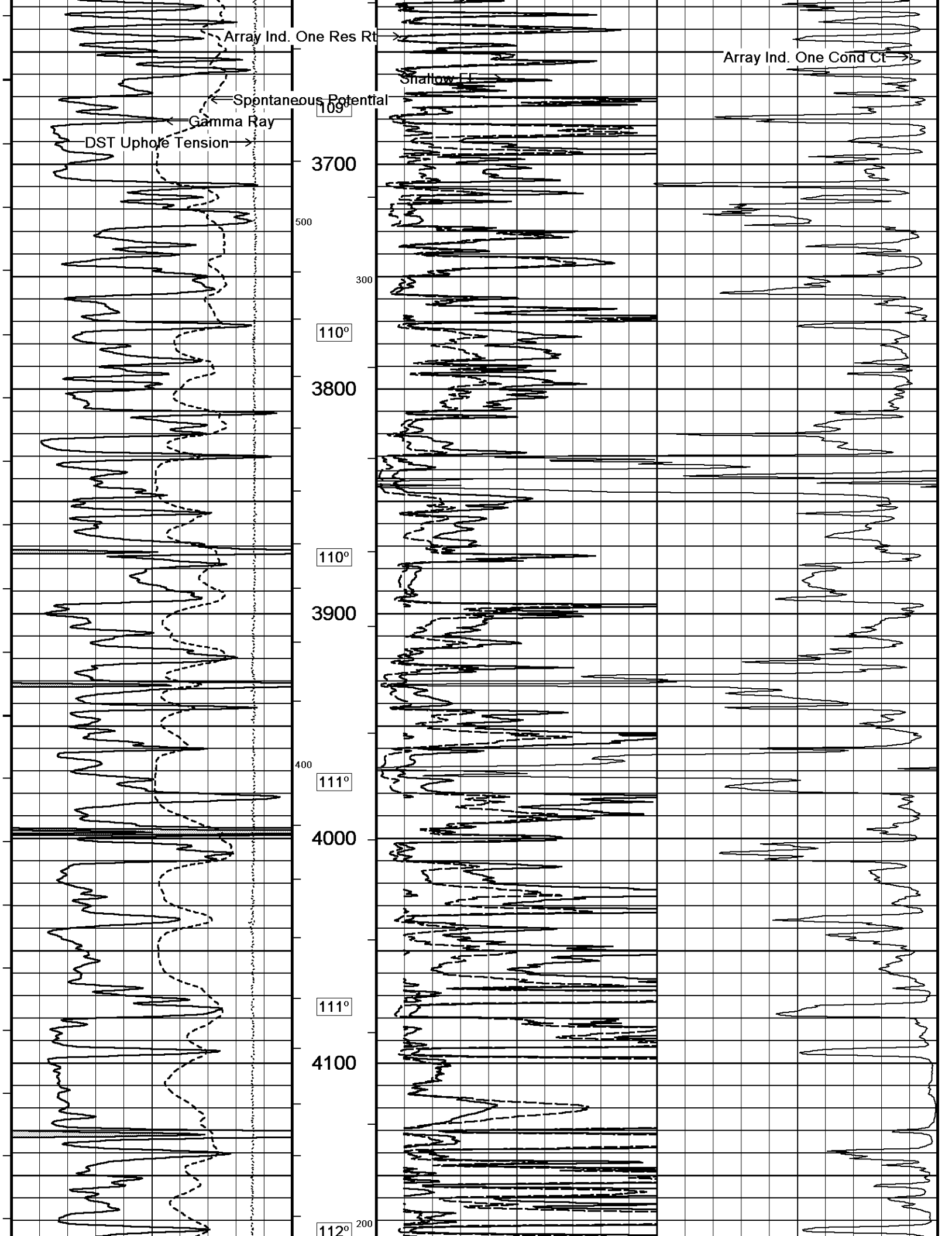


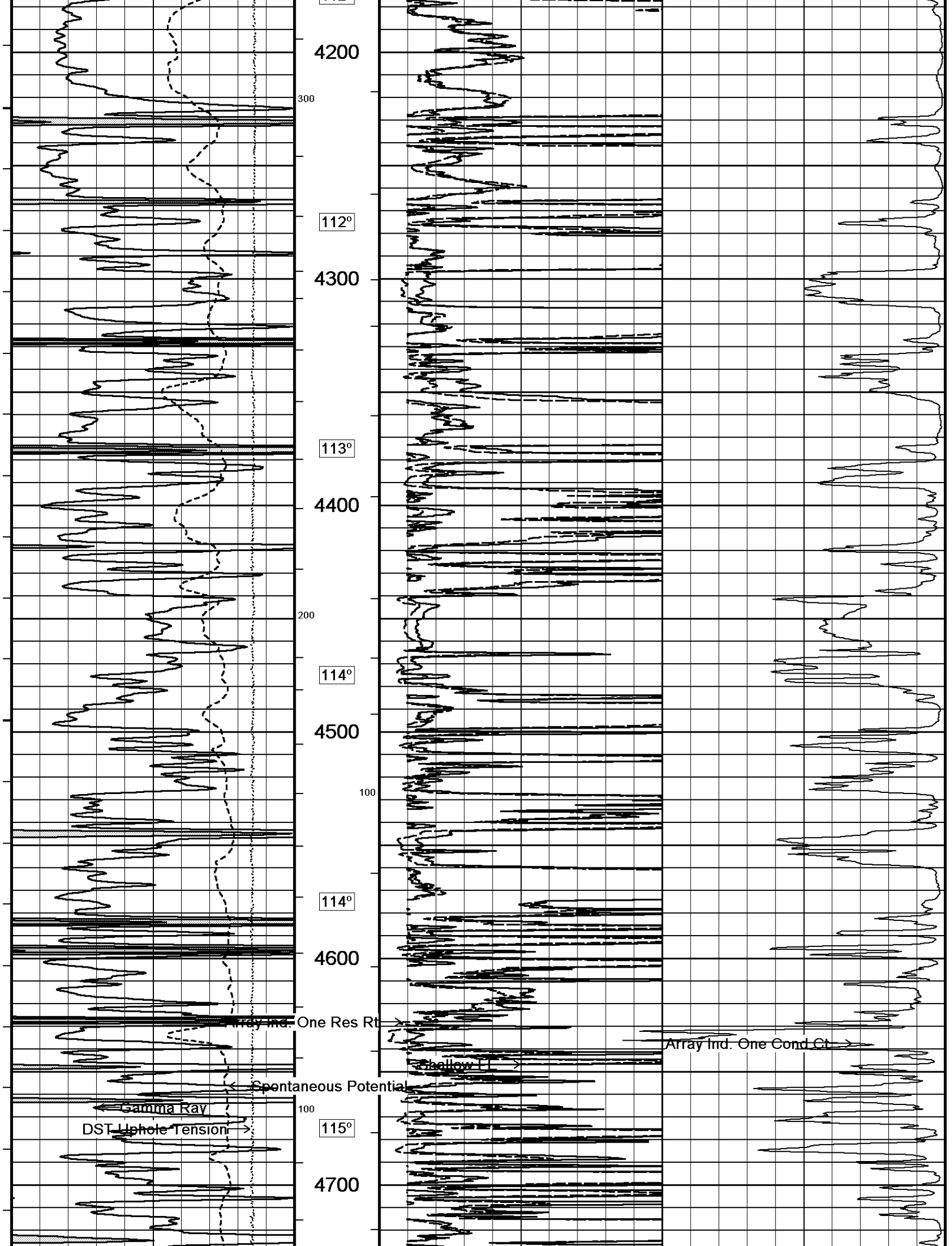


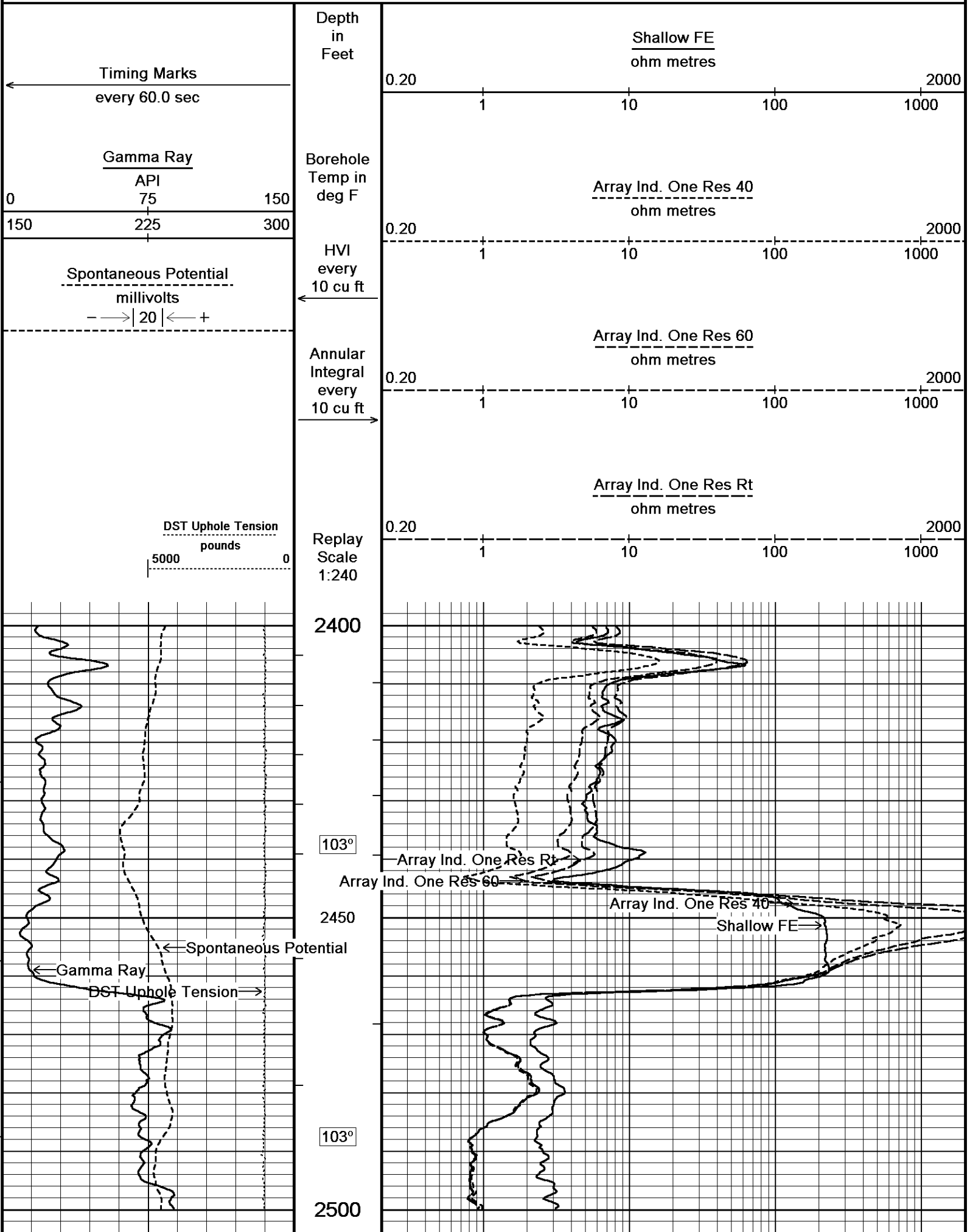


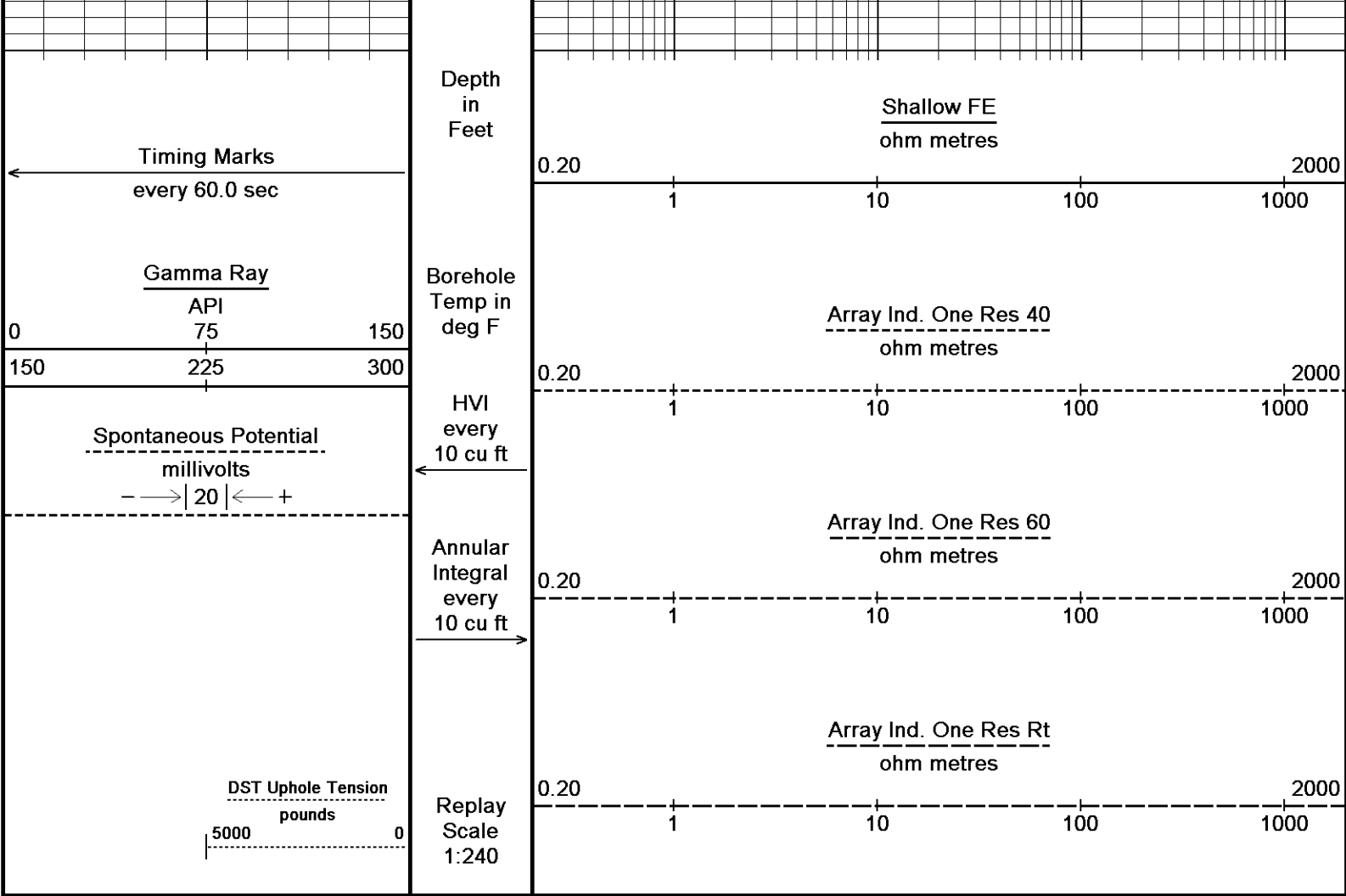












Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 05-AUG-2016 23:36

Filename: C:\Minimus 15.03.5939\Logs\Shakespeare Edwards ...\Shakespeare Edwards #1-21_003.dta

Recorded on 05-AUG-2016 20:49

System Versions: Logged with 15.03.5939 Plotted with 15.03.5939

↑

5 INCH MAIN - ANHYDRITE

↑

↓

5 INCH MAIN

↓

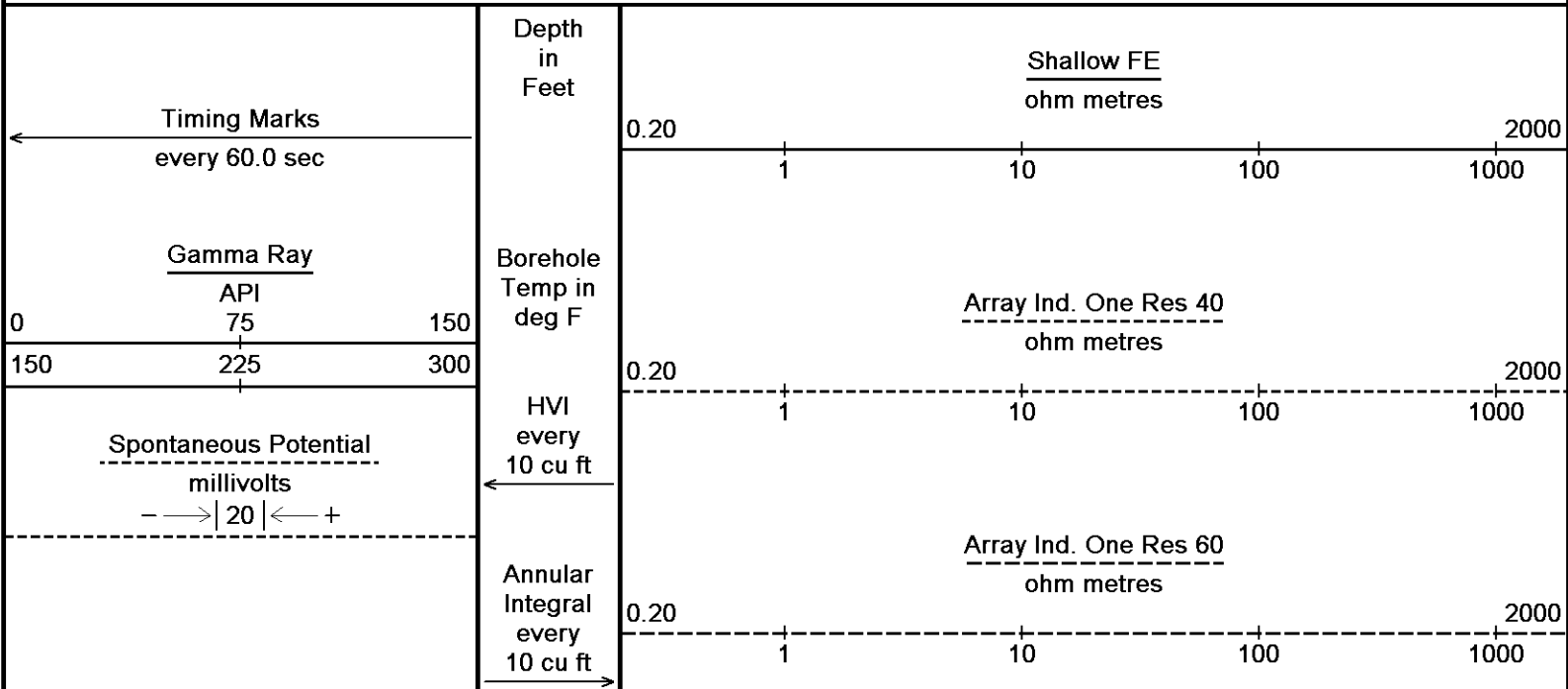
Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 05-AUG-2016 23:36

Filename: C:\Minimus 15.03.5939\Logs\Shakespeare Edwards ...\Shakespeare Edwards #1-21_003.dta

Recorded on 05-AUG-2016 20:49

System Versions: Logged with 15.03.5939 Plotted with 15.03.5939



DST Uphole Tension
pounds
5000 0

Replay
Scale
1:240

3800

110°

3850

110°

3900

110°

3950

400

Array Ind. One Res Rt
ohm metres

0.20

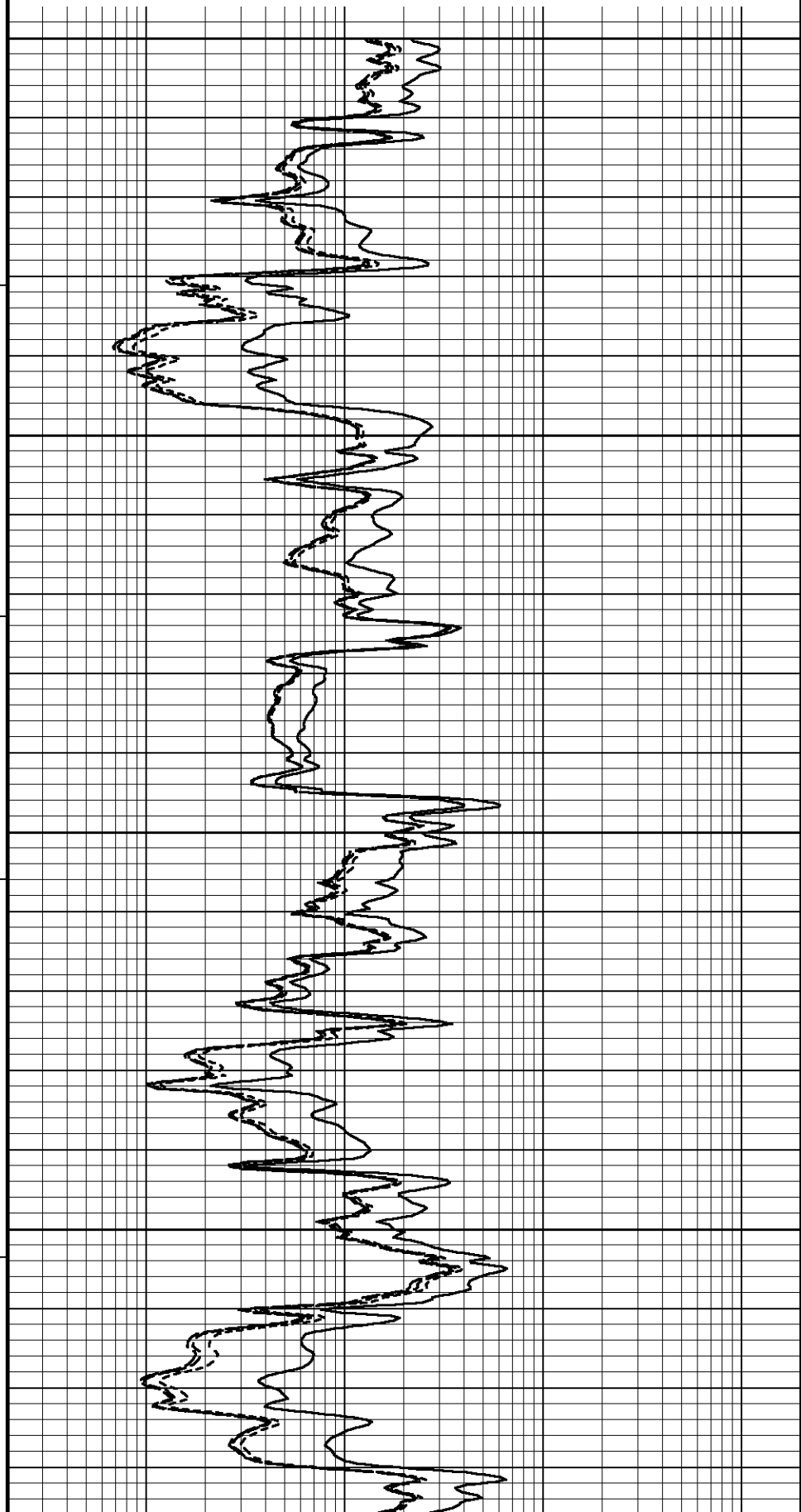
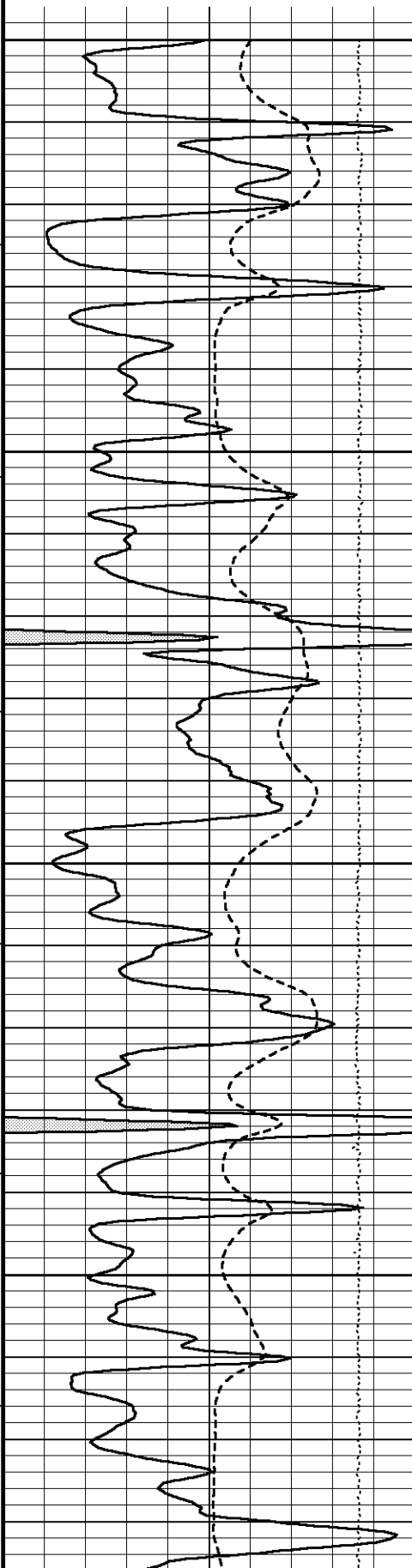
2000

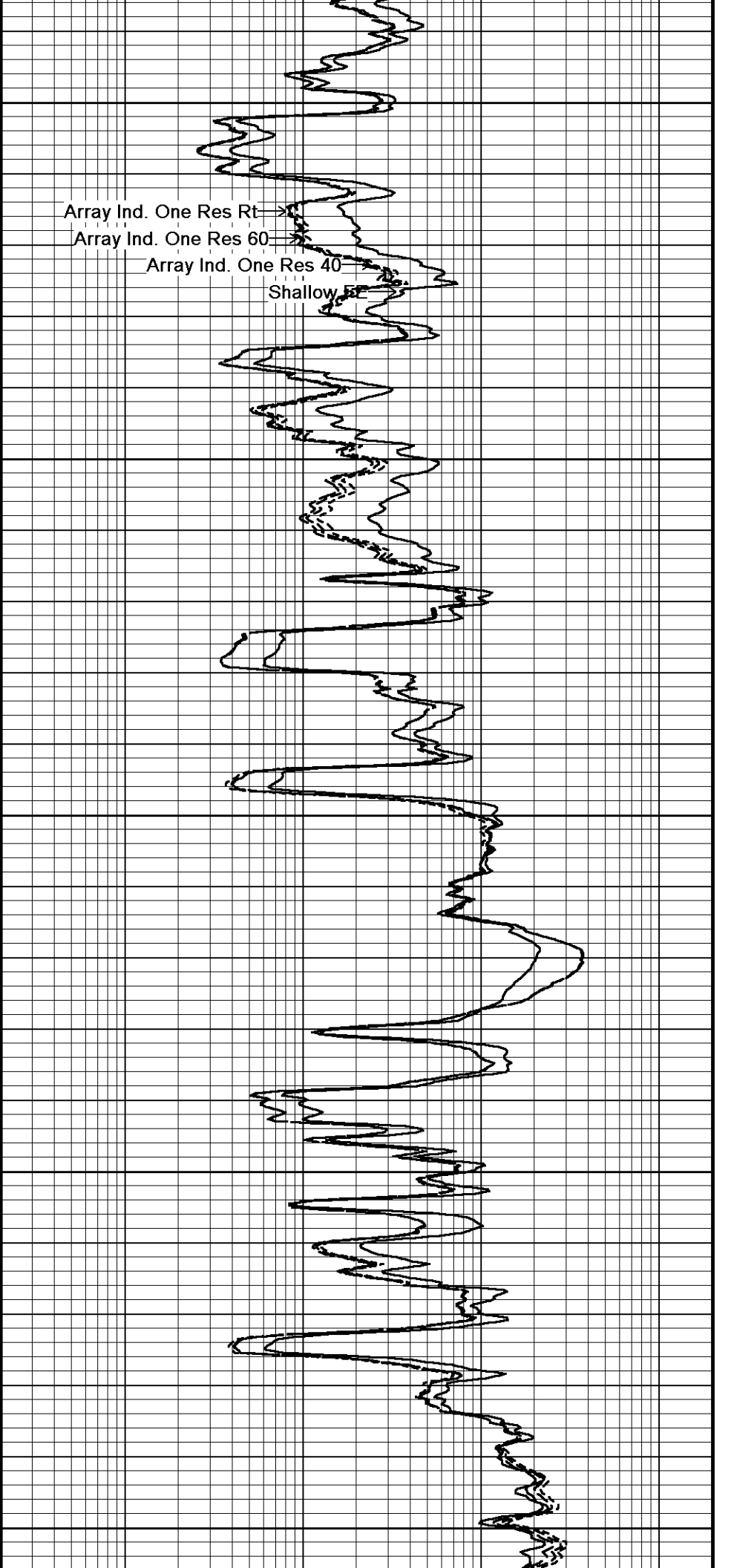
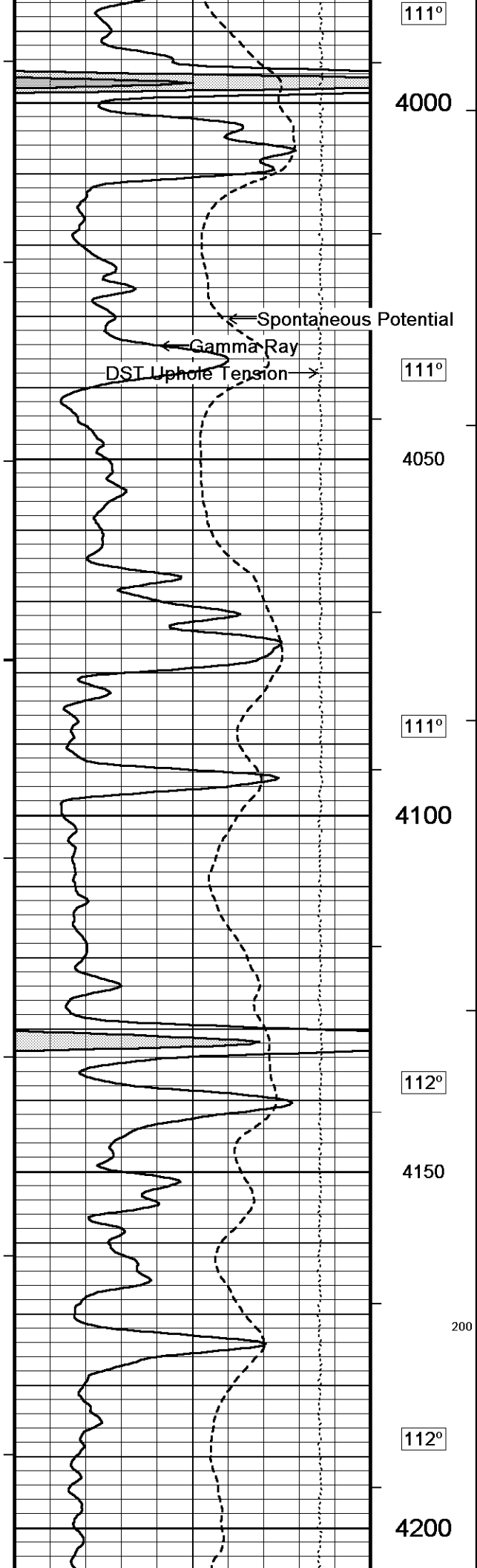
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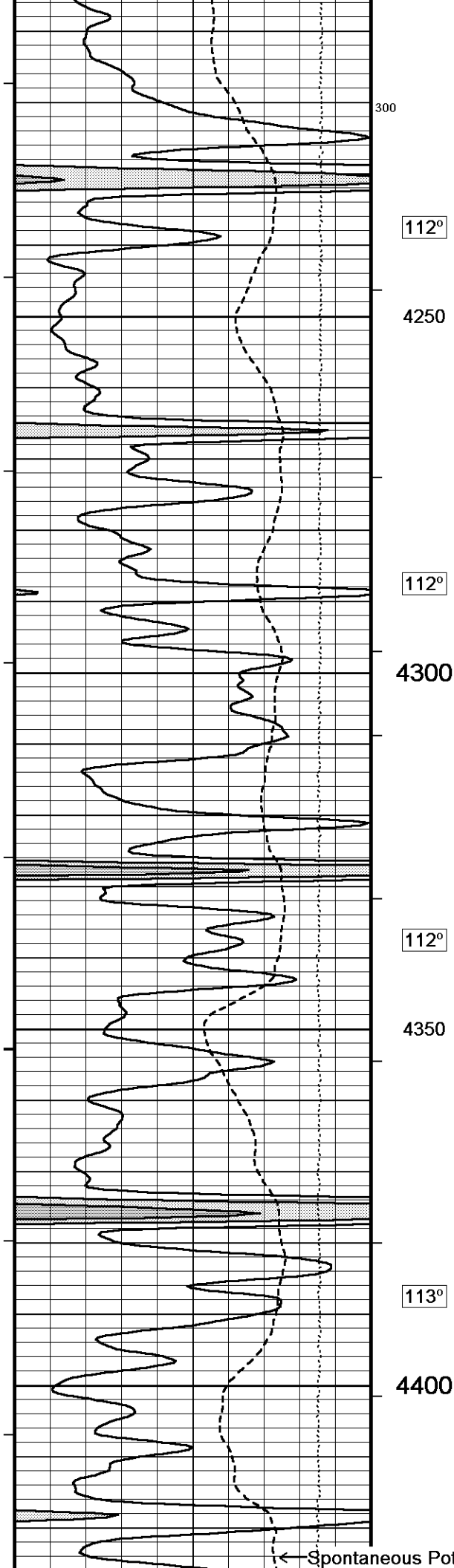
10

100

1000







300

112°

4250

112°

4300

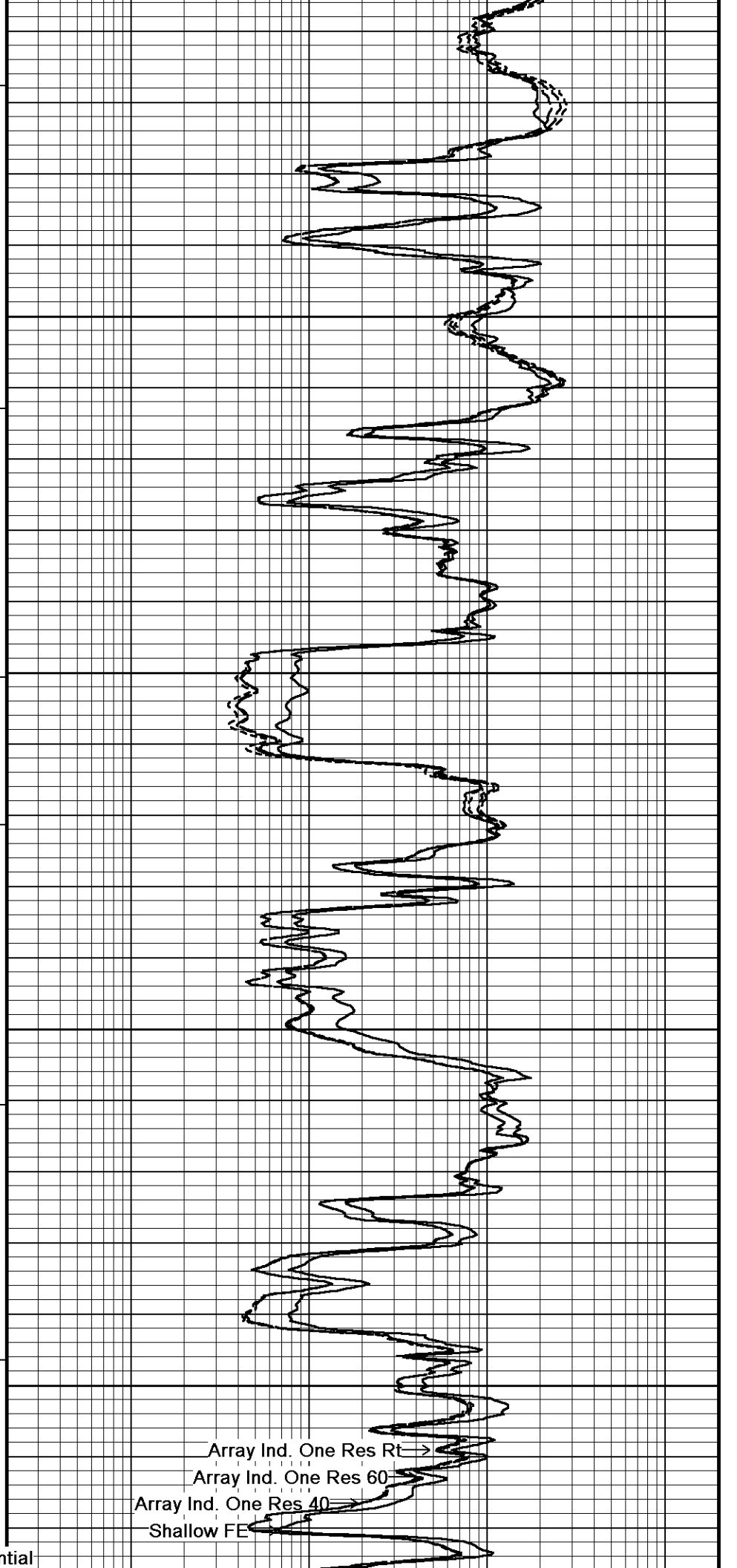
112°

4350

113°

4400

← Spontaneous Potential

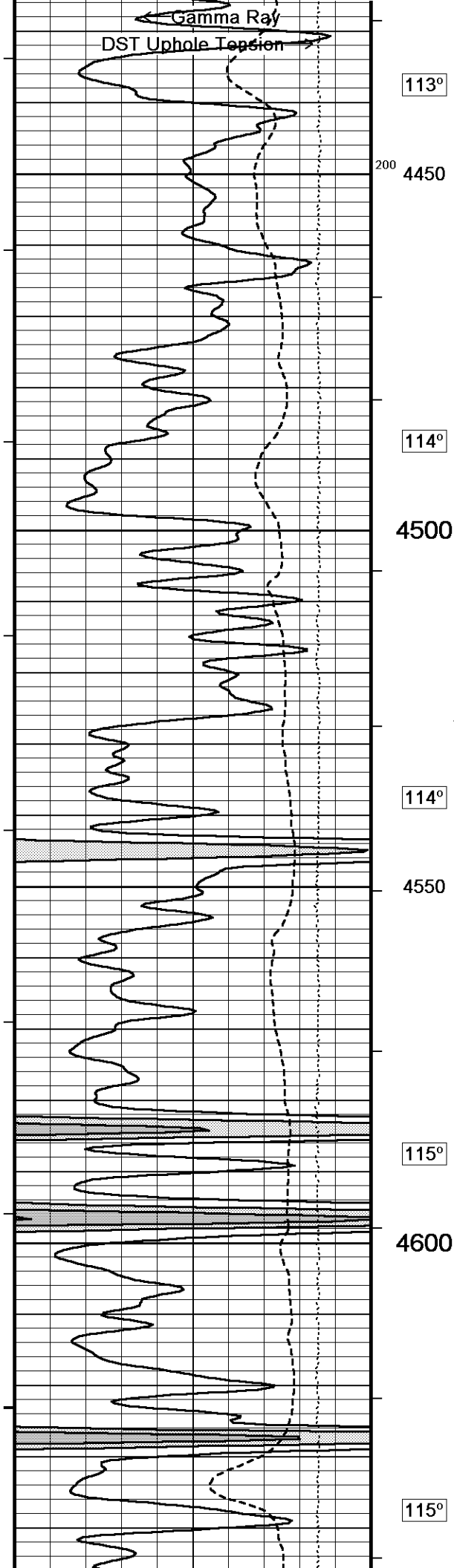


Array Ind. One Res Rt →

Array Ind. One Res 60 →

Array Ind. One Res 40 →

Shallow FE →



113°

114°

4500

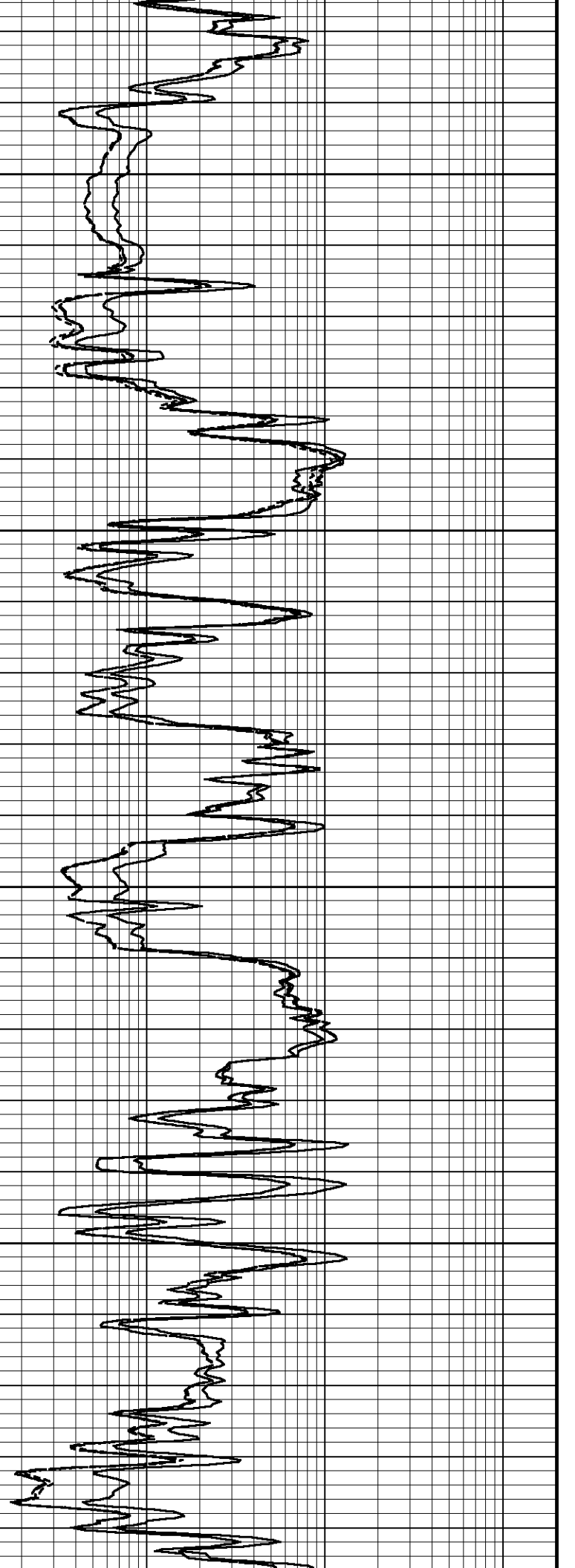
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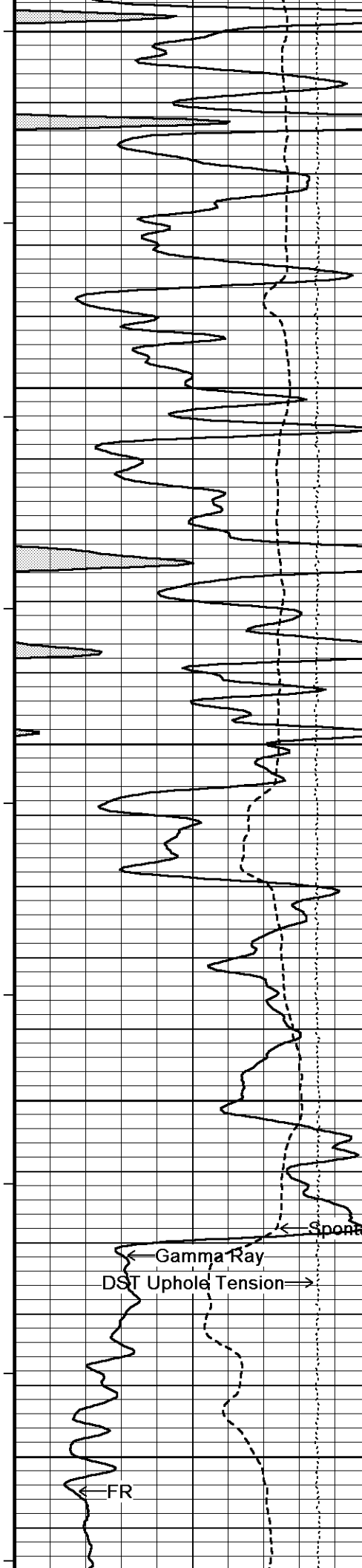
4550

115°

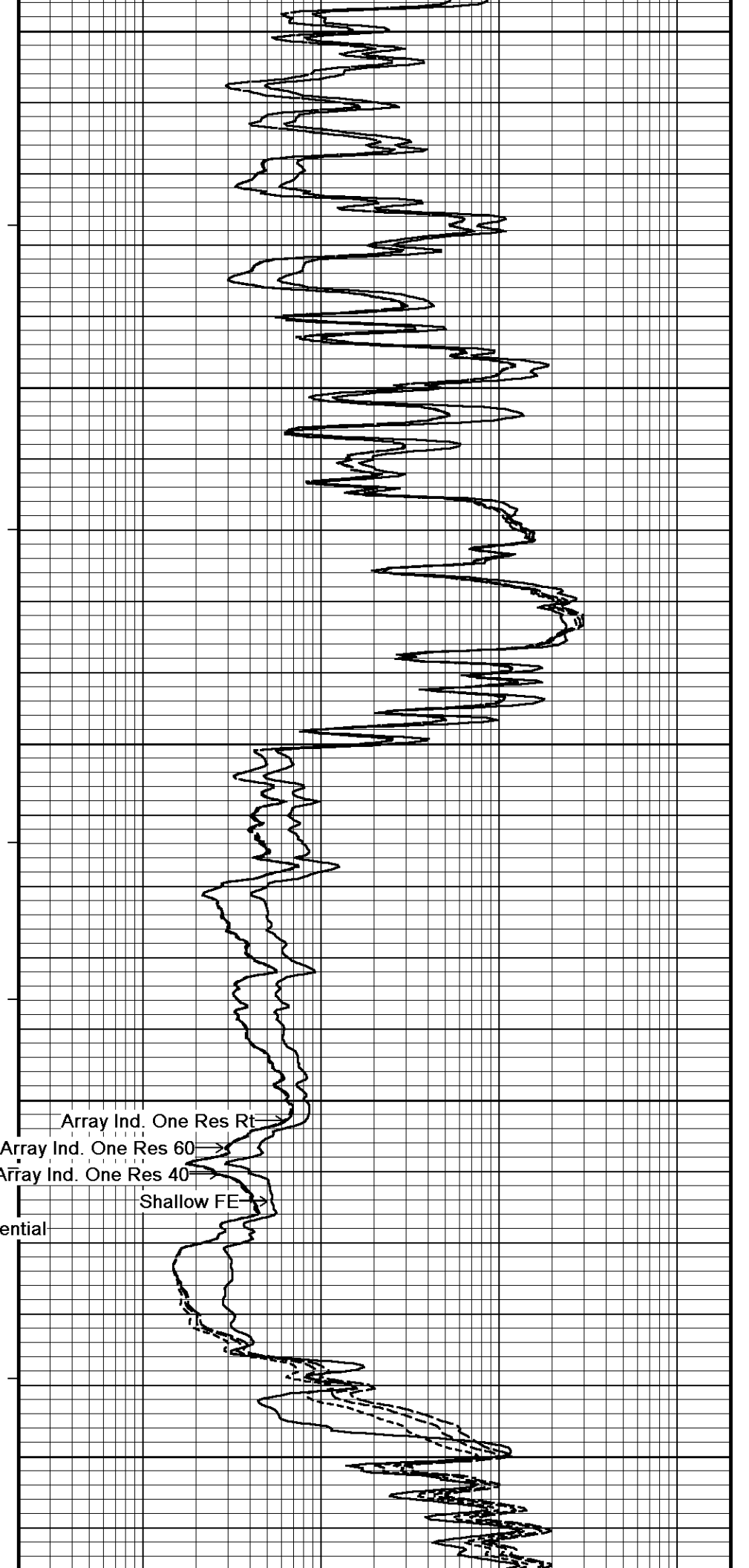
4600

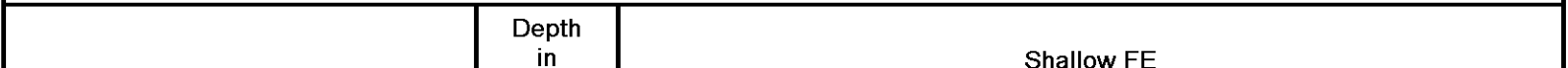
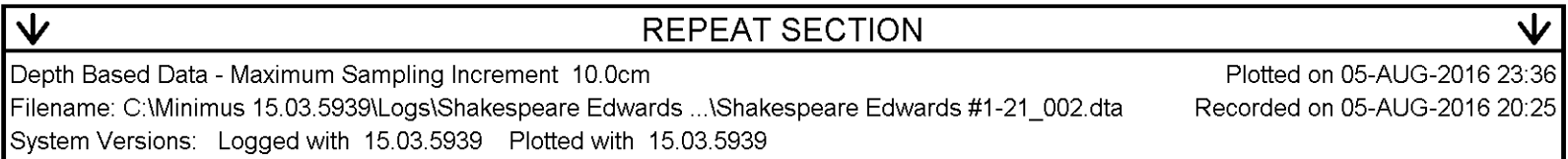
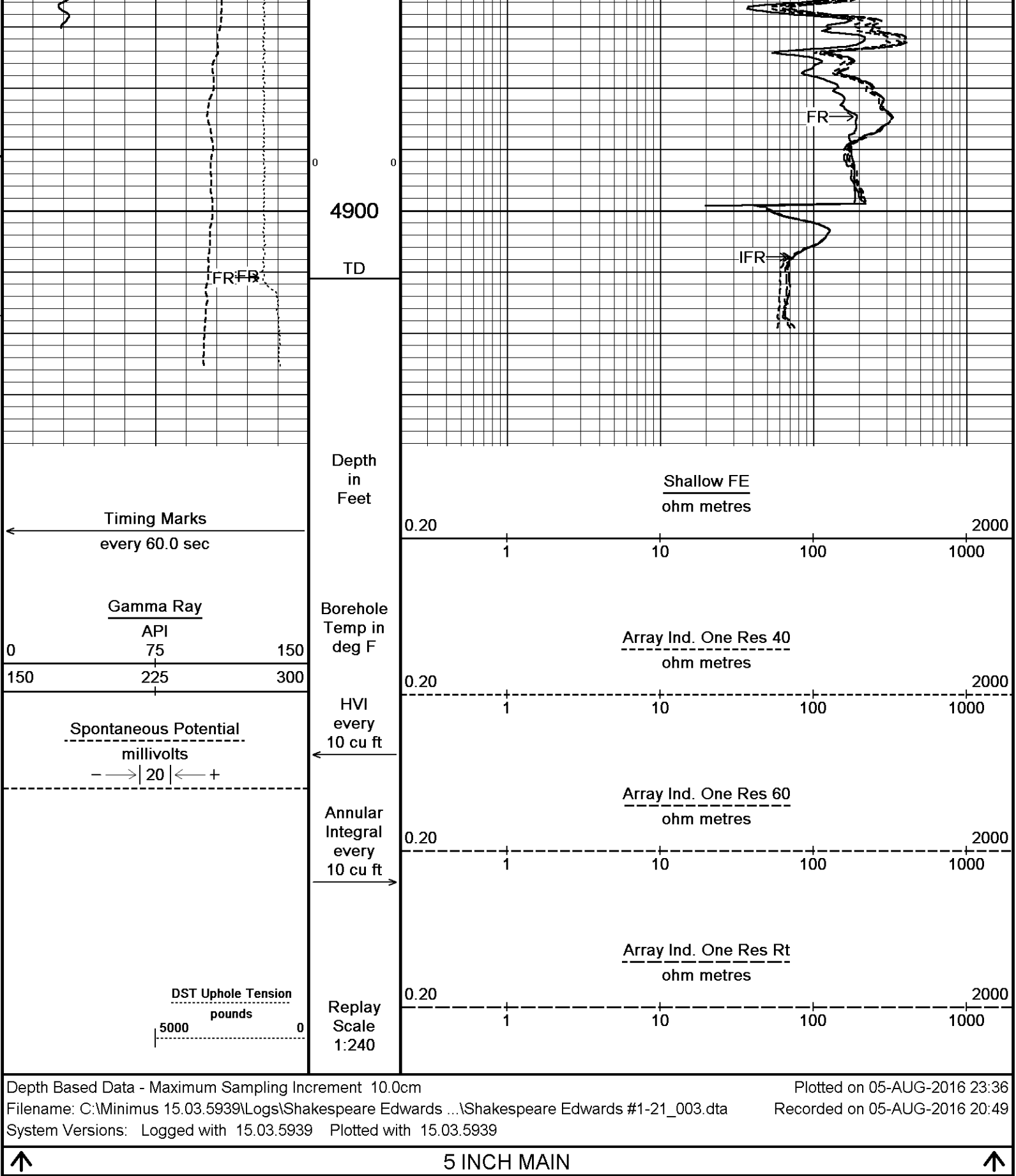
115°

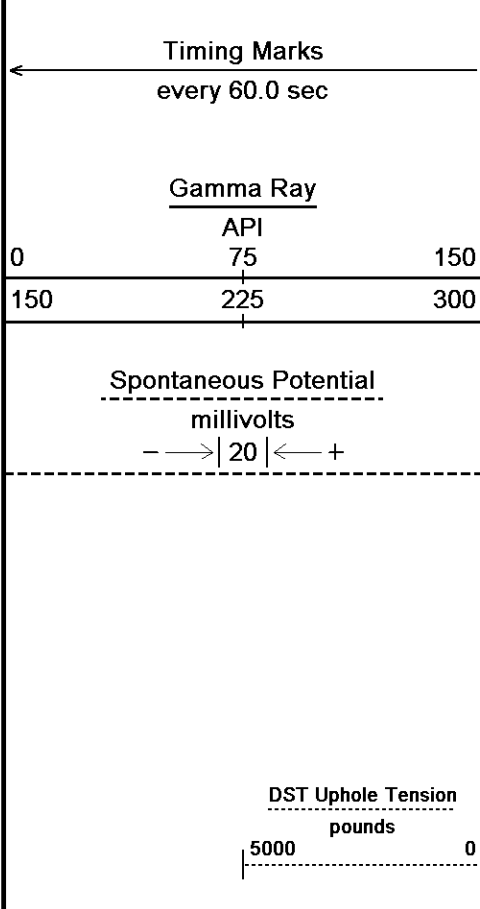




4650
100
115°
4700
115°
4750
116°
4800
116°
4850







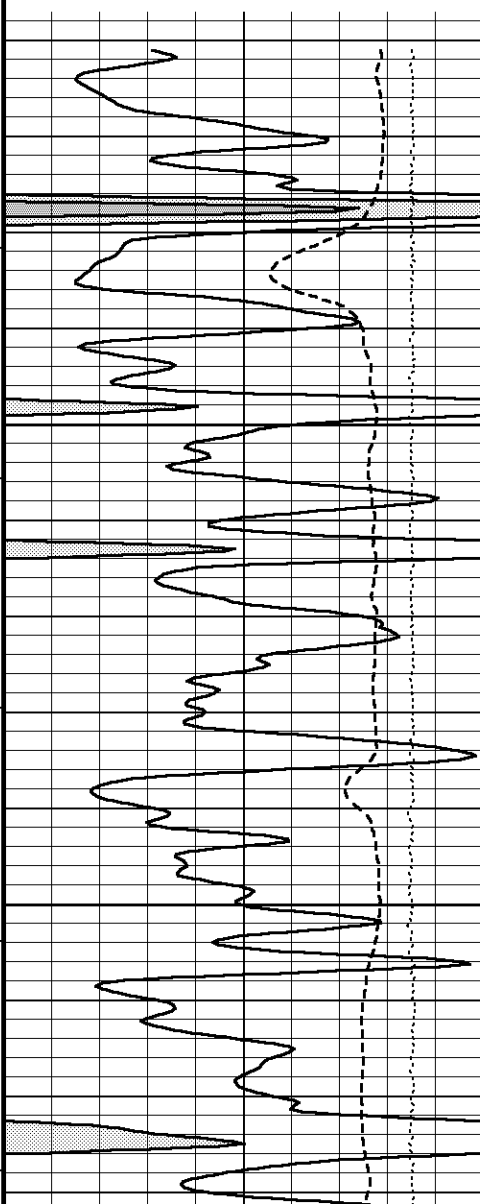
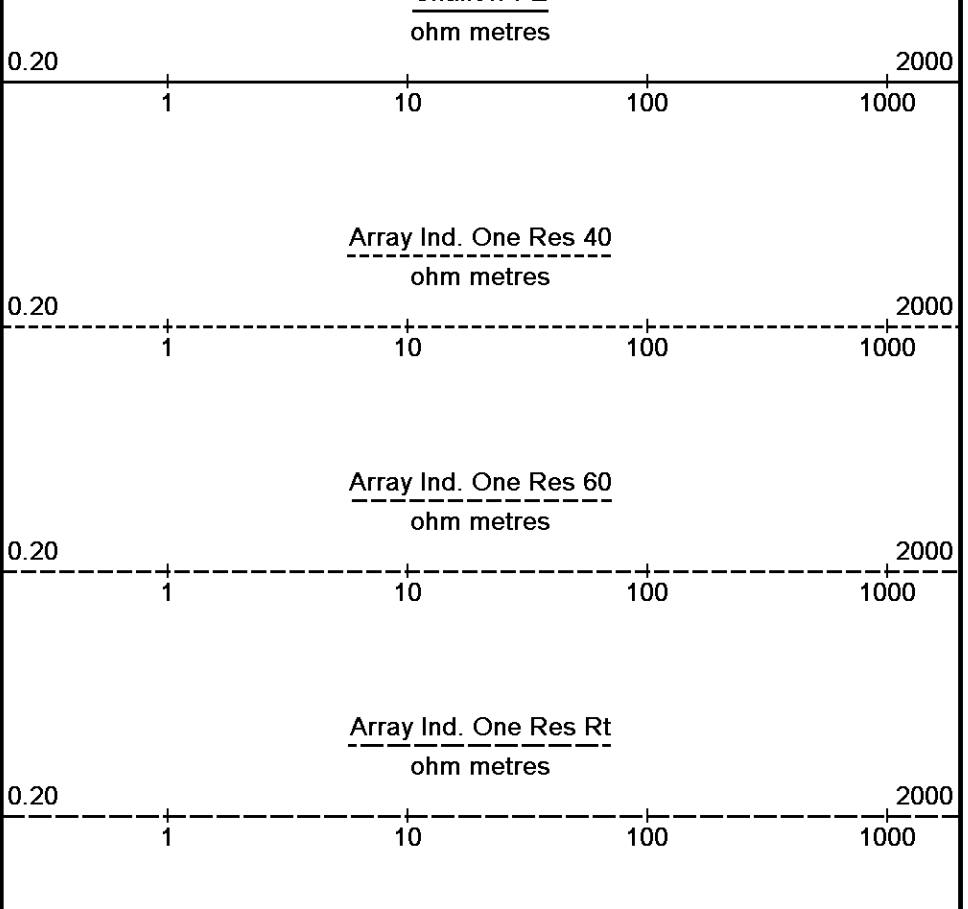
Feet

Borehole
Temp in
deg F

HVI
every
10 cu ft

Annular
Integral
every
10 cu ft

Replay
Scale
1:240



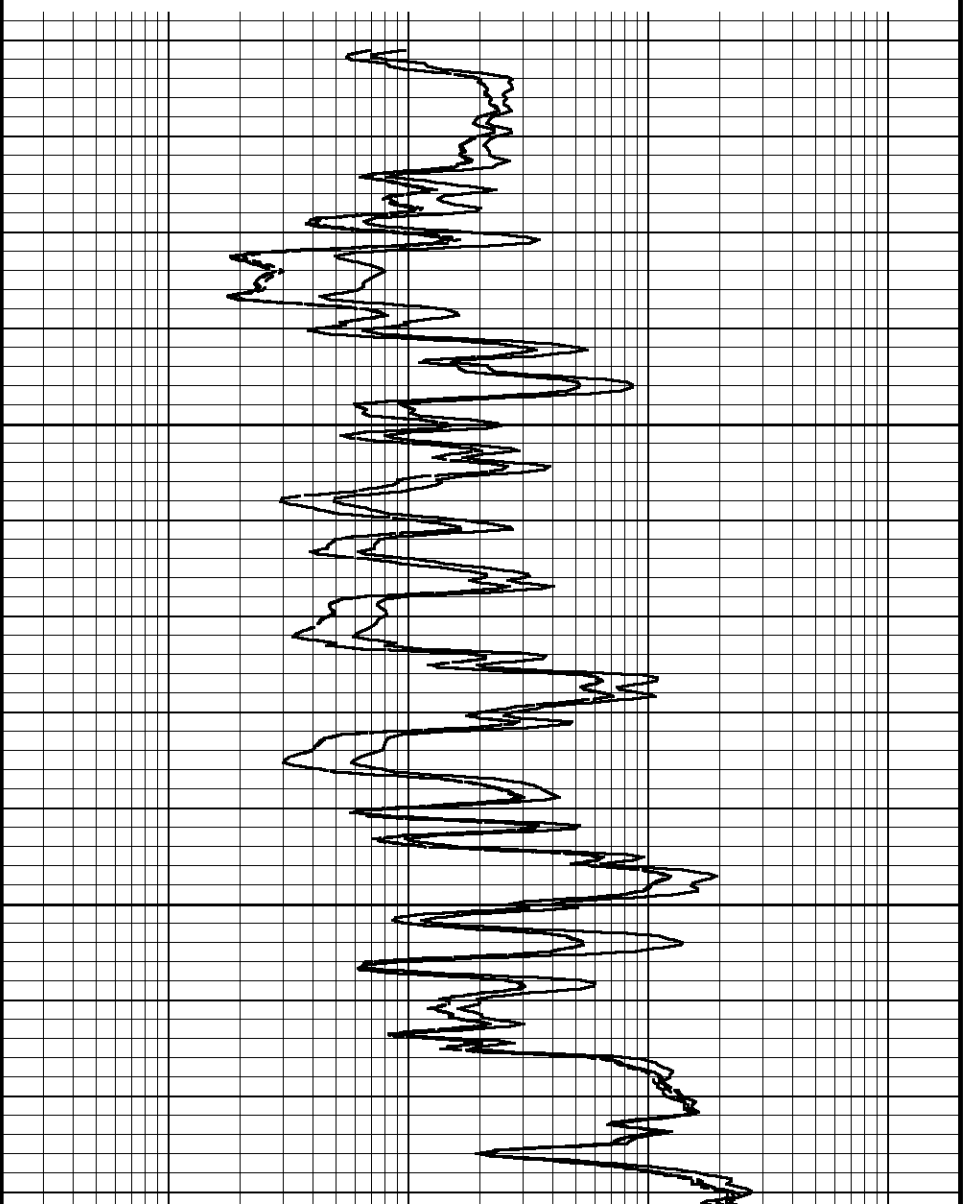
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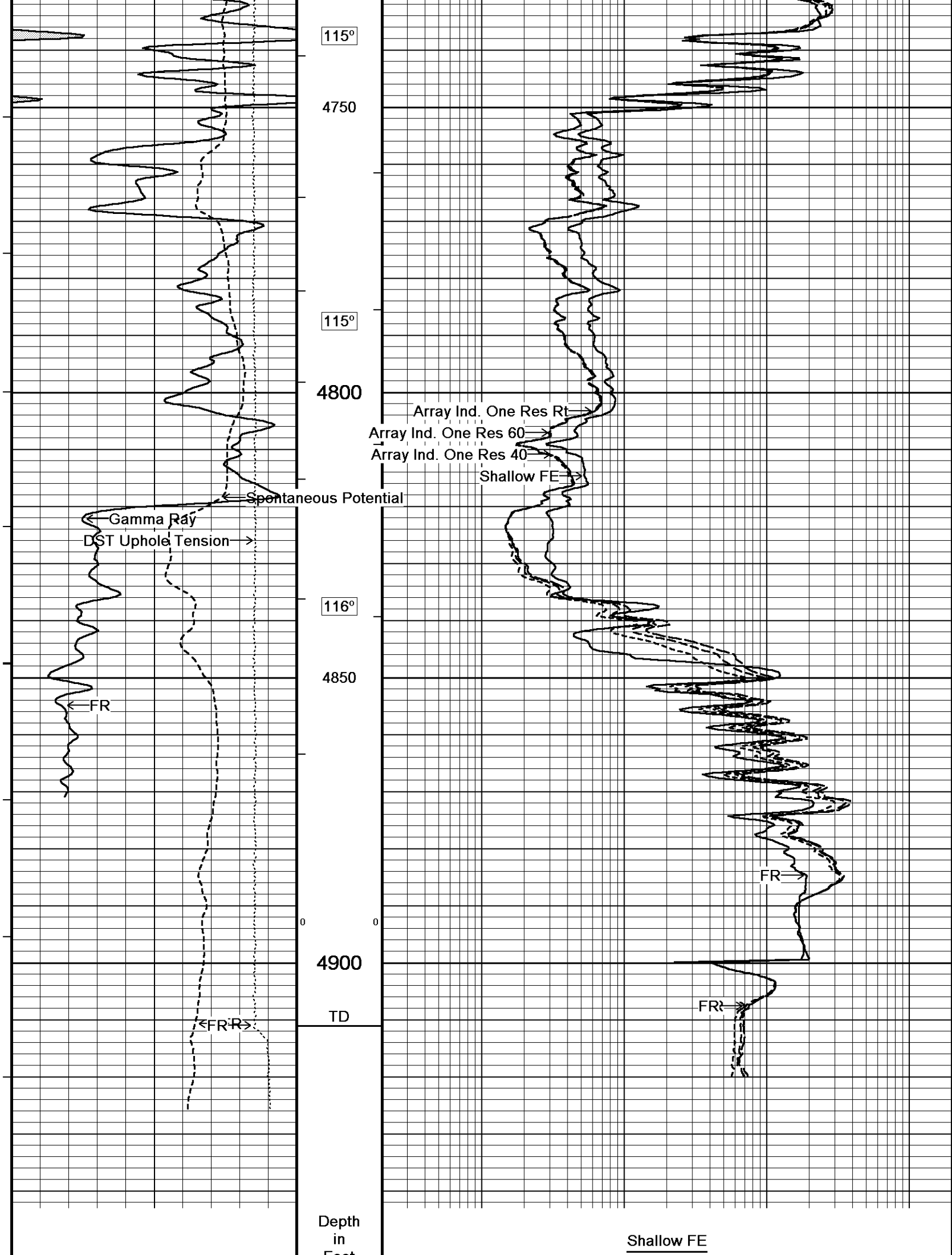
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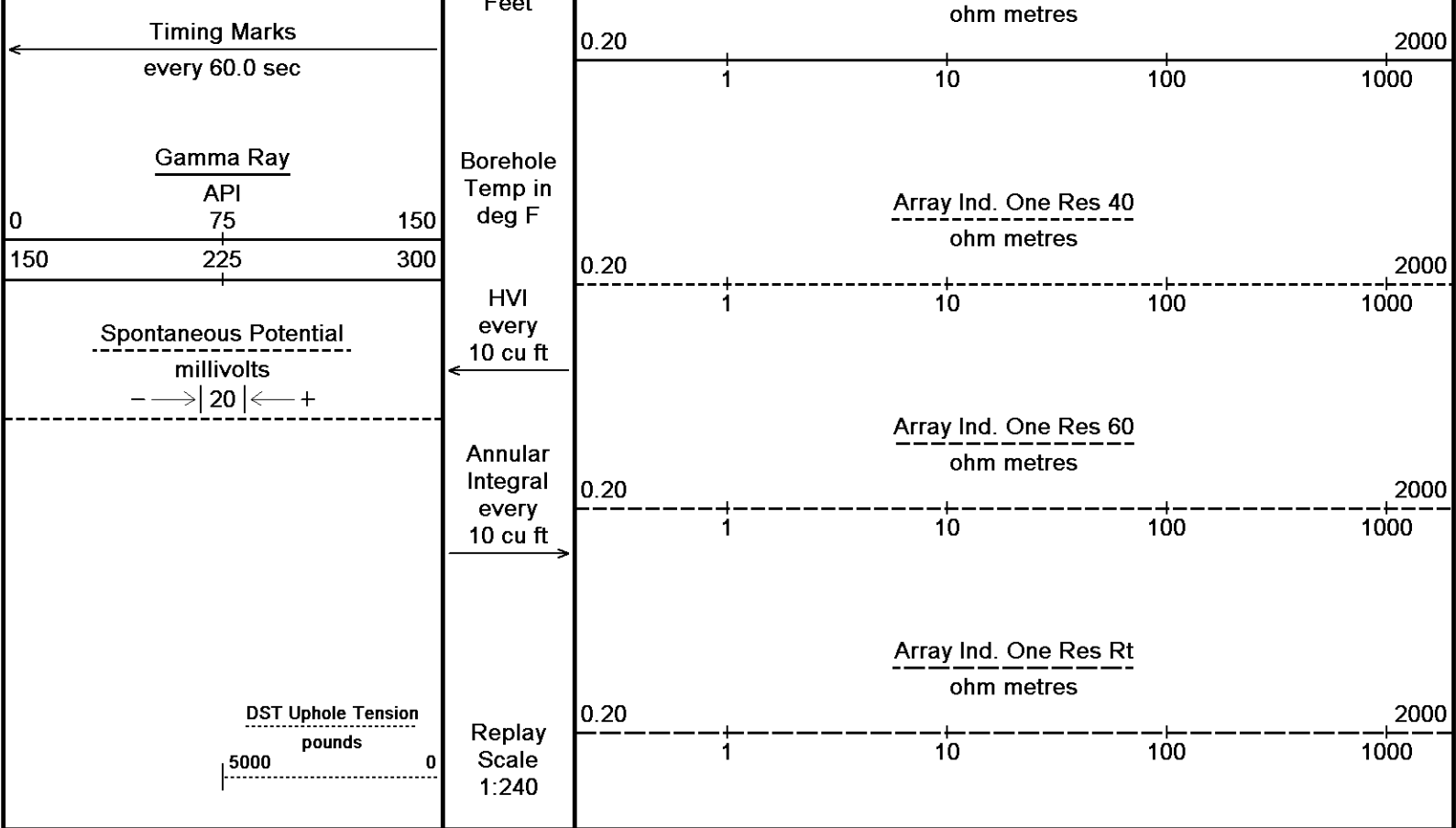
100

115°

4700







Depth Based Data - Maximum Sampling Increment 10.0cm
 Filename: C:\Minimus 15.03.5939\Logs\Shakespeare Edwards #1-21_002.dta
 System Versions: Logged with 15.03.5939 Plotted with 15.03.5939

Plotted on 05-AUG-2016 23:36
 Recorded on 05-AUG-2016 20:25

↑

REPEAT SECTION

↑

BEFORE SURVEY CALIBRATION			
C:\Minimus 15.03.5939\Logs\Shakespeare Edwards #1-21\Shakespeare Edwards #1-21_002.dta			
General Constants All 000		Last Edited on 05-AUG-2016,19:47	
General Parameters			
Mud Resistivity	0.620	ohm-metres	
Mud Resistivity Temperature	75.000	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	None		
Rwa Parameters			
Porosity used	Base Density 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 24-JUL-2016 15:20	
Reading No	Measured	Calibrated (lbs)	
1	15235.81	0.00	
2	16026.61	481.00	
Gamma Calibration MCG-C 123		Field Calibration on 04-AUG-2016 08:11	
	Measured	Calibrated (API)	

Background	71	49
Calibrator (Gross)	731	505
Calibrator (Net)	660	456

Gamma Calibration Tolerances MCG-C 123

Ratio 1.448  Counts/API

The scale shows three marked points: 1.40, 1.475, and 1.55. The value 1.448 is indicated by a black bar between 1.40 and 1.475.

Gamma Constants MCG-C 123

Last Edited on 05-AUG-2016,17:51

Gamma Calibrator Number MCGGRCC141
 GRC-M Calibrator Jig in Use? NO
 Inactive Background Jig in Use? NO
 Mud Density 1.14 gm/cc
 Caliper Source for Processing Density Caliper
 Tool Position Eccentred
 Potassium Equivalence Chloride
 K Mud Concentration 0.00 %

High Resolution Temperature Calibration MCG-C 123

Field Calibration on 31-OCT-2015,17:05

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

High Resolution Temperature Constants MCG-C 123

Last Edited on 22-SEP-2015,11:43

Pre-filter Length 11

SP Calibration MCG-C 123

Field Calibration on 14-JUL-2016 12:06

	Measured	Calibrated (mV)
Reference 1	101.2	100.6
Reference 2	-99.1	-99.9

Micro Normal and Micro Inverse Calibration MMR-C.A 247

Base Calibration on 22-MAY-2016 16:59

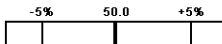
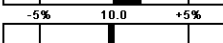
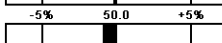
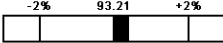
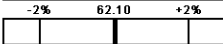
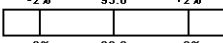
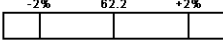
Field Check on 04-AUG-2016 07:56

Base Calibration

		Measured	Calibrated (ohm-m)
Channel	Resistor 1	Resistor 2	Resistor 1 Resistor 2
Micro Normal	10.2	49.9	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	93.6	93.6
Micro Inverse	62.2	62.2

Micro Normal & Micro Inverse Calibration Tolerance MMR-C.A 247

Micro Normal Res. 1	10.2		ohm	Micro Normal Res. 2	49.9		ohm
Micro Inverse Res. 1	10.0		ohm	Micro Inverse Res. 2	49.5		ohm
Micro Normal Base Check	93.6		ohm-m				
Micro Inverse Base Check	62.2		ohm-m				
Micro Normal Field Check	93.6		ohm-m				
Micro Inverse Field Check	62.2		ohm-m				

Micro Normal and Micro Inverse Constants MMR-C.A 247

Last Edited on 26-JUN-2016,15:44

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-C.A 247

Base Calibration on 22-MAY-2016 16:40

Field Calibration on 04-AUG-2016 07:55

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	14762	5.98
2	14827	7.27

2	18067	7.97
3	21325	9.86
4	25277	11.92
5	0	0.00
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.95	7.97

Caliper Calibration Tolerances MMR-C.A 247

Short Arm Field Cal.	7.95		in
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Micro-Resistivity Caliper Constants MMR-C.A 247

Last Edited on

Sonde Configuration	Resistivity Mode
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Neutron Calibration MDN-A.B 66

Base Calibration on 22-MAY-2016,18:15

Field Check on 04-AUG-2016 08:21

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3116	97	3714	110
Ratio	32.277		33.764	

Field Calibrator at Base

	Calibrated (cps)
	2061 3028
Ratio	0.681

Field Check

	Calibrated (cps)
	2178 3118
Ratio	0.698

Neutron Calibration Tolerances MDN-A.B 66

Ratio	32.277	
Base Check	0.681	
Field Check	0.698	

Neutron Constants MDN-A.B 66

Last Edited on 05-AUG-2016,17:51

Neutron Source Id	P0204NN	
Neutron Jig Number	NJ5736	
Air Hole Processing	Legacy	
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 352

Base Calibration on 22-MAY-2016 16:12

Field Check on 04-AUG-2016 07:46

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	972.3	126.8

Base Check	278.7
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FE Calibration Tolerances MFE-B.J 352

Reference 2	972.3		ohm
Base Check	278.7		ohm-m
Field Check	278.8		ohm-m

FE Constants MFE-B.J 352

Last Edited on 05-AUG-2016,17:50

Running Mode	No Sleeve
MFE K Factor	0.1268
Borehole Correction Constants	
Sonde Position	0.5 inches
Hole Size Source	Density Caliper
Hole Size Constant Value	N/A inches
Rm Source	Global Value: Temperature Corrected
Temp. for Rm Corr.	MCG External Temperature

Sonic Constants MSS-A.A 55

Last Edited on 05-AUG-2016,17:50

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)	Discriminator (mV)	N/A	
N/A	N/A	N/A		N/A
N/A	N/A	N/A		N/A
N/A	N/A	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

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	N/A
Sonic 2 Despiker	N/A	N/A

Induction Calibration MAI-A.A 111

Base Calibration on 05-AUG-2014,09:34

Field Check on 04-AUG-2016 07:45

Base Calibration

Test Loop Calibration Channel	Measured		Calibrated (mmho/m)	
	Low	High	Low	High
1	17.6	473.6	9.3	966.2
2	6.4	385.9	7.6	821.4
3	3.2	264.0	5.2	566.0
4	2.1	135.5	2.6	279.2

Array Temperature 23.0 Deg F

Test Loop Calibration Verified 22-MAY-2016,17:59

Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1	12.1	3873.0	10.5	3867.1
2	29.8	3528.1	27.6	3522.2
3	29.1	3021.3	27.1	3016.2
4	19.1	2058.5	17.8	2054.6
Deep	17.7	1962.1	16.5	1958.5
Medium	43.1	3976.4	40.4	3970.0
Shallow	44.4	5232.7	41.2	5224.4
Array Temperature	65.8		83.0	
			Deg F	

Induction Calibration Tolerances MAI-A.A 111

Low Conductivity 1	17.6		mmho/m	High Conductivity 1	473.6		mmho/m
Low Conductivity 2	6.4		mmho/m	High Conductivity 2	385.9		mmho/m
Low Conductivity 3	3.2		mmho/m	High Conductivity 3	264.0		mmho/m
Low Conductivity 4	2.1		mmho/m	High Conductivity 4	135.5		mmho/m
Background Vx 1	0.0		mmho/m	Phase Check Loop 1	0.0		%
Background Vx 2	0.0		mmho/m	Phase Check Loop 2	0.0		%
Background Vx 3	0.0		mmho/m	Phase Check Loop 3	0.0		%
Background Vx 4	0.0		mmho/m	Phase Check Loop 4	0.0		%

Induction Constants MAI-A.A 111

Last Edited on 05-AUG-2016,17:50

Induction Model		RtAP-WBM	
Borehole Correction Constants			
Tool Centred		No	
Hole Size Source		Density Caliper	
Hole Size Constant Value		N/A	inches
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
Rm Source	Global Value: Temperature Corrected		
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

Symmetrised Receiver Gains

Receiver 1	1.00
Receiver 2	1.00
Receiver 3	1.00
Receiver 4	1.00

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 111

Field Calibration on 24-NOV-2014,10:23

	Measured	Calibrated(Deg F)
Lower	10.00	10.00
Upper	100.00	100.00

High Resolution Temperature Constants MAI-A.A 111

Last Edited on 26-JUN-2014,15:06

Pre-filter Length	11
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Photo Density Calibration MPD-B 104

Base Calibration on 22-MAY-2016 17:45

Field Check on 04-AUG-2016 07:53

Density Calibration

Base Calibration

	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Background	1148	1338		
Reference 1	49789	23977	59556	30836
Reference 2	20127	2423	24941	2541

Field Check at Base

1148.2 1337.6

Field Check

1145.5 1333.5

PE Calibration

Base Calibration

	WS	Measured	Calibrated
		WH	Ratio
Background	211	1025	
Reference 1	20854	49612	0.425
Reference 2	5819	19993	0.296

Field Check at Base

211.2 1025.1

Field Check

211.0 1024.0

Photo Density Calibration Tolerances MPD-B 104

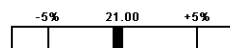
Near Density Ratio

2.56

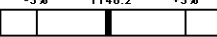


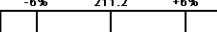
Far Density Ratio

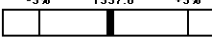
20.85

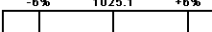


PE Calibration 0.121 

Near Den. Field Check 1145.5 

PE WS Field Check 211.0 

Far Den. Field Check 1333.5 

PE WH Field Check 1024.0 

Density Constants MPD-B 104

Last Edited on 05-AUG-2016,17:50

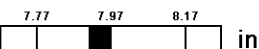
Density Source Id	P50557B	
Nylon Calibrator Number	DNCE695	
Aluminium Calibrator Number	DACD698	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.14	gm/cc
Mud Density Z/A Multiplier	1.11	
Mud Filtrate Density	1.00	gm/cc
Dry 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	0.00	

Caliper Calibration MPD-B 104

Base Calibration on 22-MAY-2016 17:26
Field Calibration on 04-AUG-2016 07:48

Base Calibration		
Reading No	Measured	Calibrator Size (in)
1	13598	3.99
2	22432	5.98
3	31029	7.97
4	39246	9.86
5	48339	11.92
6	N/A	N/A
Field Calibration		
	Measured Caliper (in)	Actual Caliper (in)
	7.91	7.97

Caliper Calibration Tolerances MPD-B 104

Short Arm Field Cal. 7.91  in

DOWNHOLE EQUIPMENT

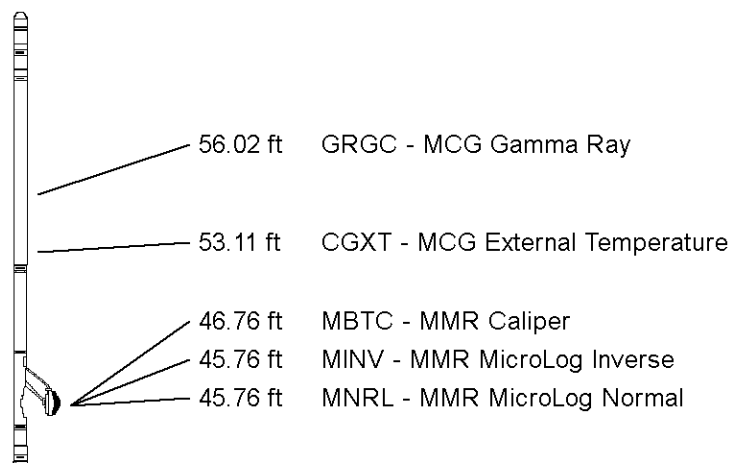
C:\Minimus 15.03.5939\Logs\Shakespeare Edwards #1-21\Shakespeare Edwards #1-21_002.dta

Cablehead, 11 pin
CBH-CA 176 LG: 2.40 ft WT: 24.3 lb OD: 2.244 in

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

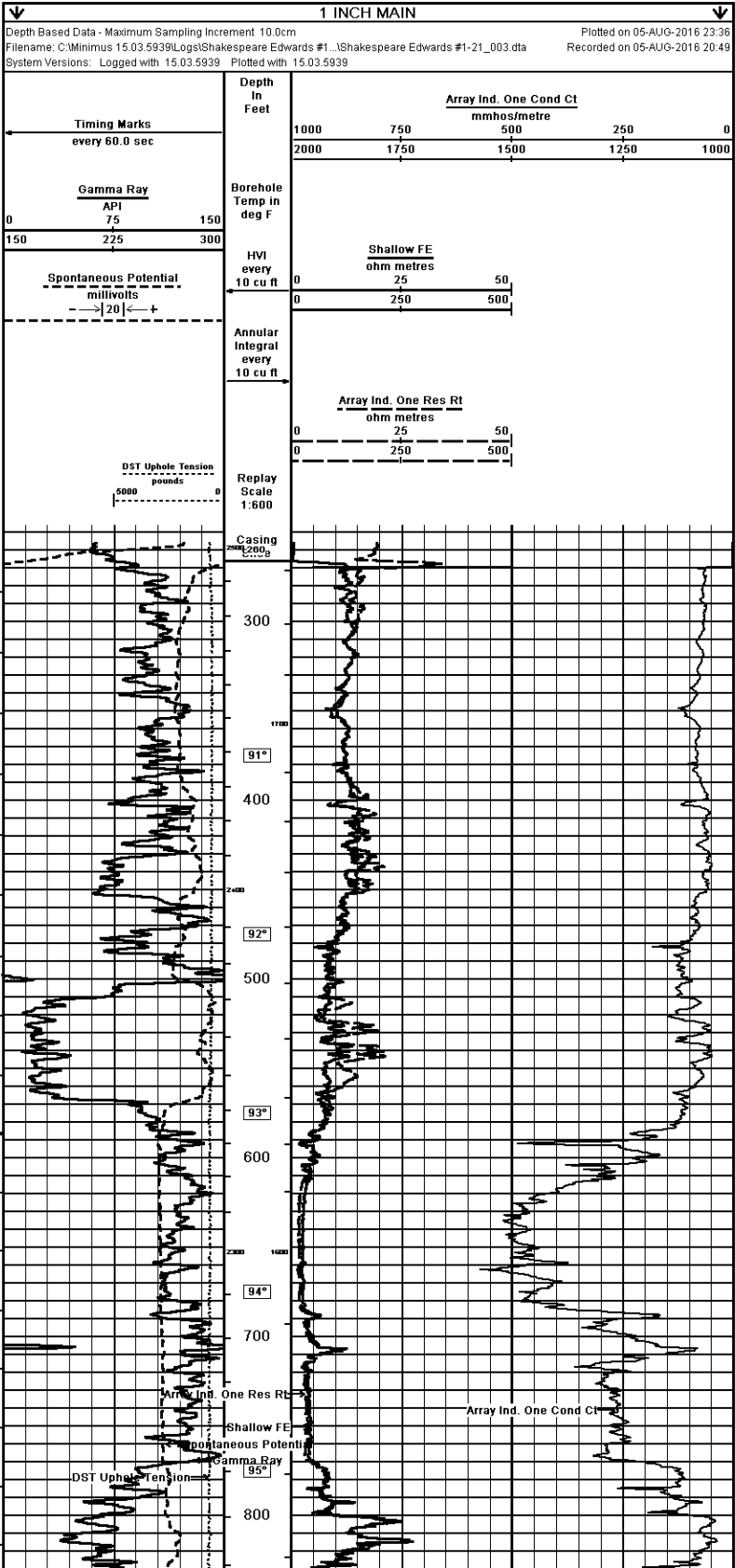
Compact Micro-Resistivity
MMR-C.A 247 LG: 8.59 ft WT: 81.6 lb OD: 4.882 in

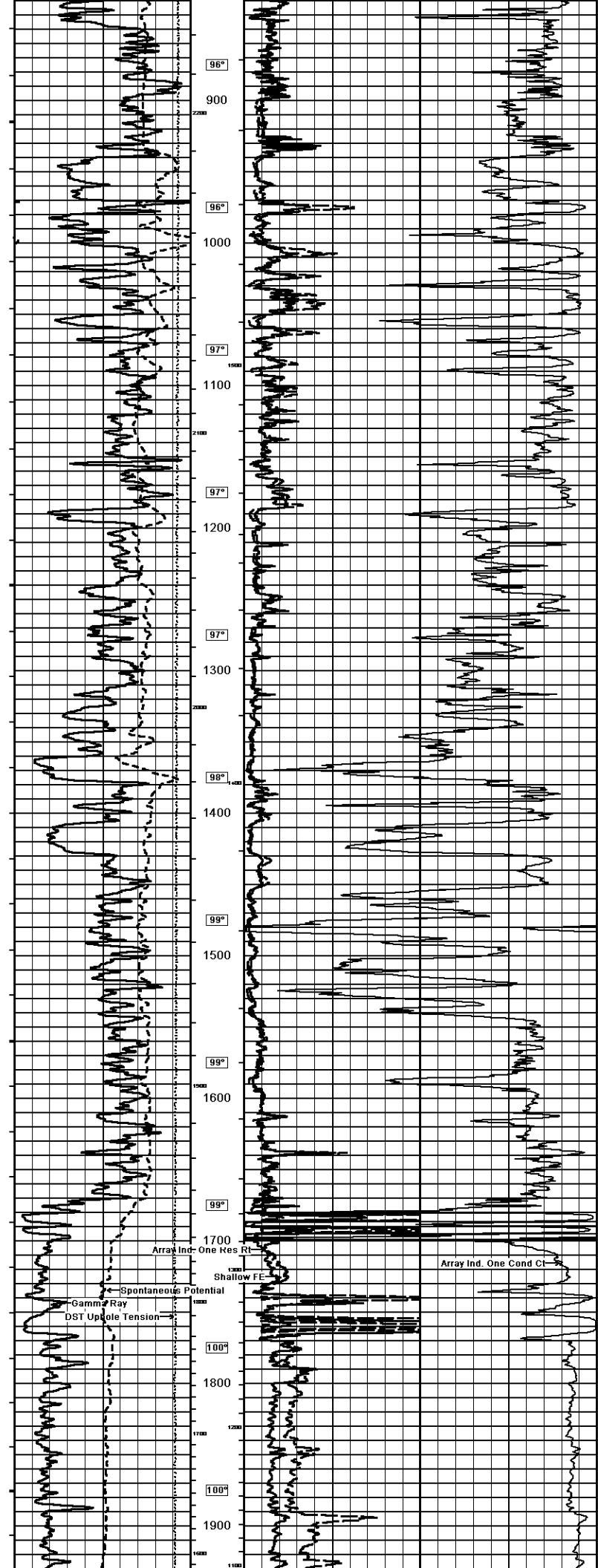
Compact Neutron

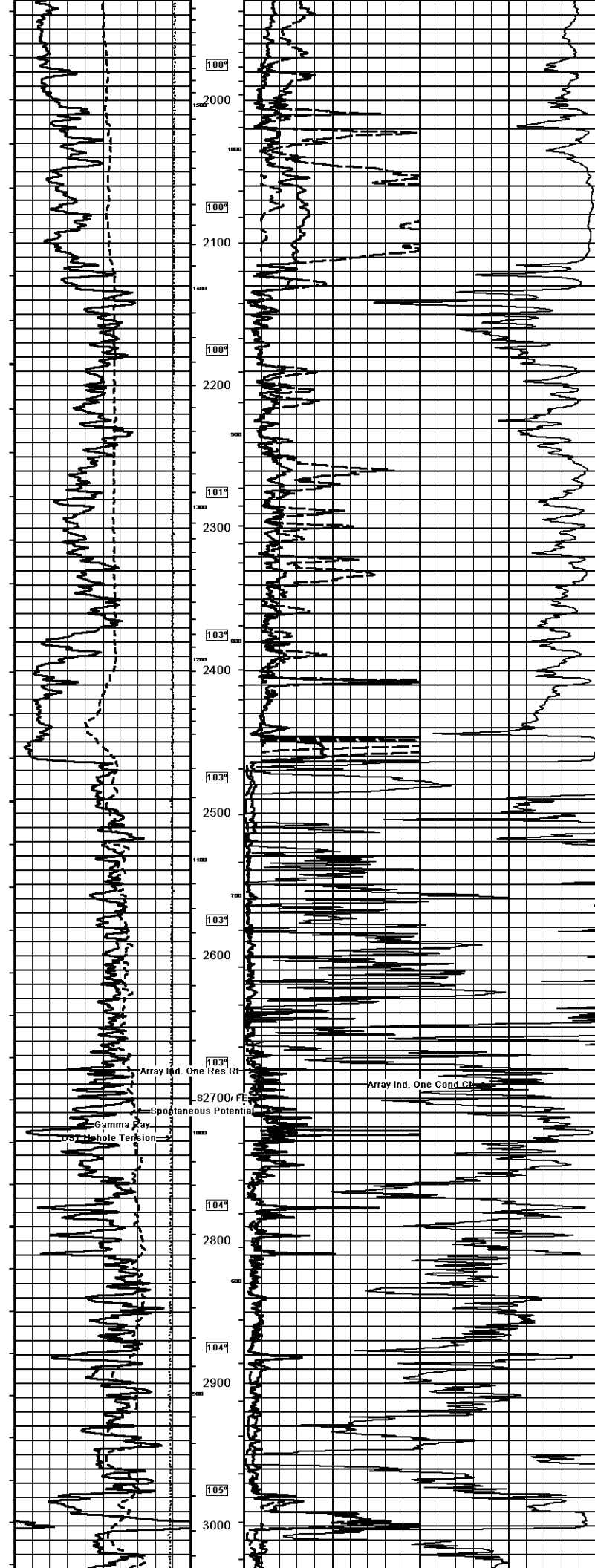


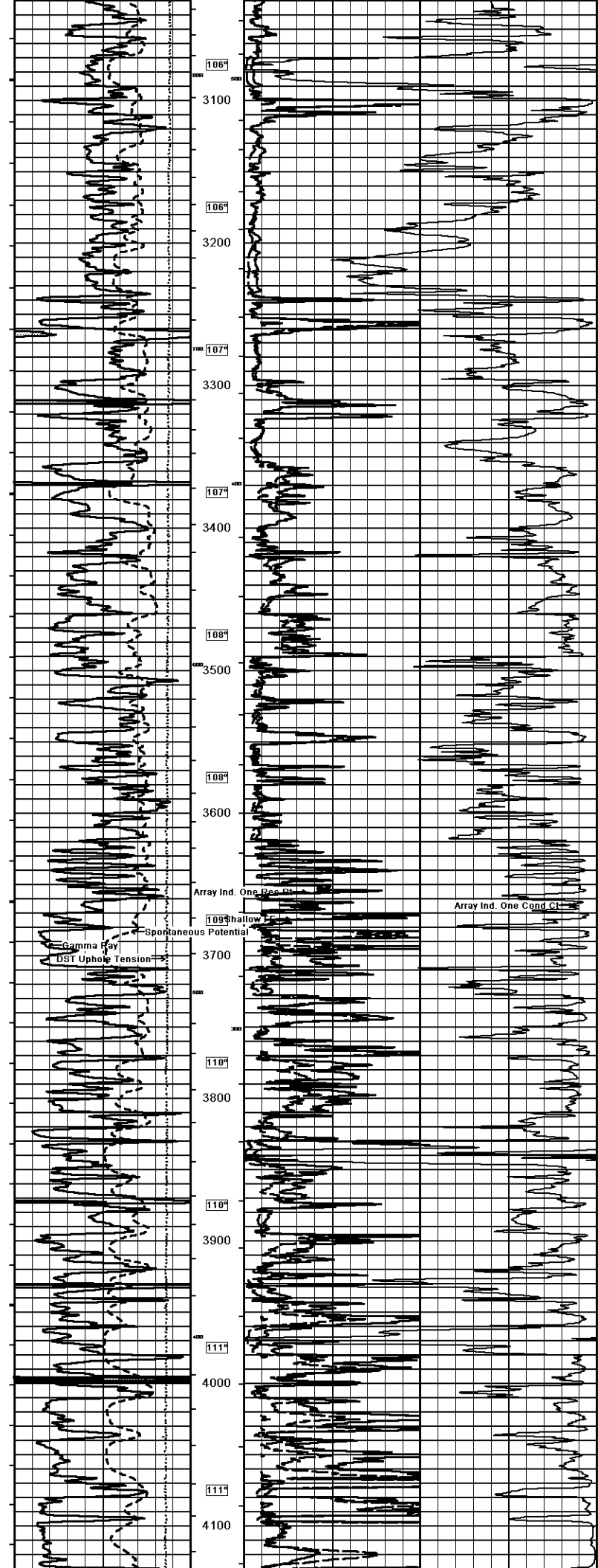
		COMPANY		SHAW
		WELL		EDW
		FIELD		PEN
		PROVINCE/COUNTY		U.S.
		COUNTY/STATE		U.S.
		LOCATION		1478
DATE	TIME	185	FEET	
LOGS		15-17		
Prepared Data of, Elevation				
Log Measured From IB				
Drilling Measured From IB @				
DATE				
Run Number				
Service Order				
Depth Driller				
Depth Logger				
First Reading				
Last Reading				
Casing Driller				
Casing Logger				
Bit Size				
Bit Type				
Core Fluid Type				
Core Viscosity				
PH / Viscosity				
PH / Fluid Loss				
Sample Source				
Run @ Measured Temp				
Run @ Measured Temp				
Run @ Measured Temp				
Source Run / Temp				
Run @ BHT				
Time Spent Circulation				
Max Recorded Temp				
Equipment Base				
Recorded by				
Witnessed by				

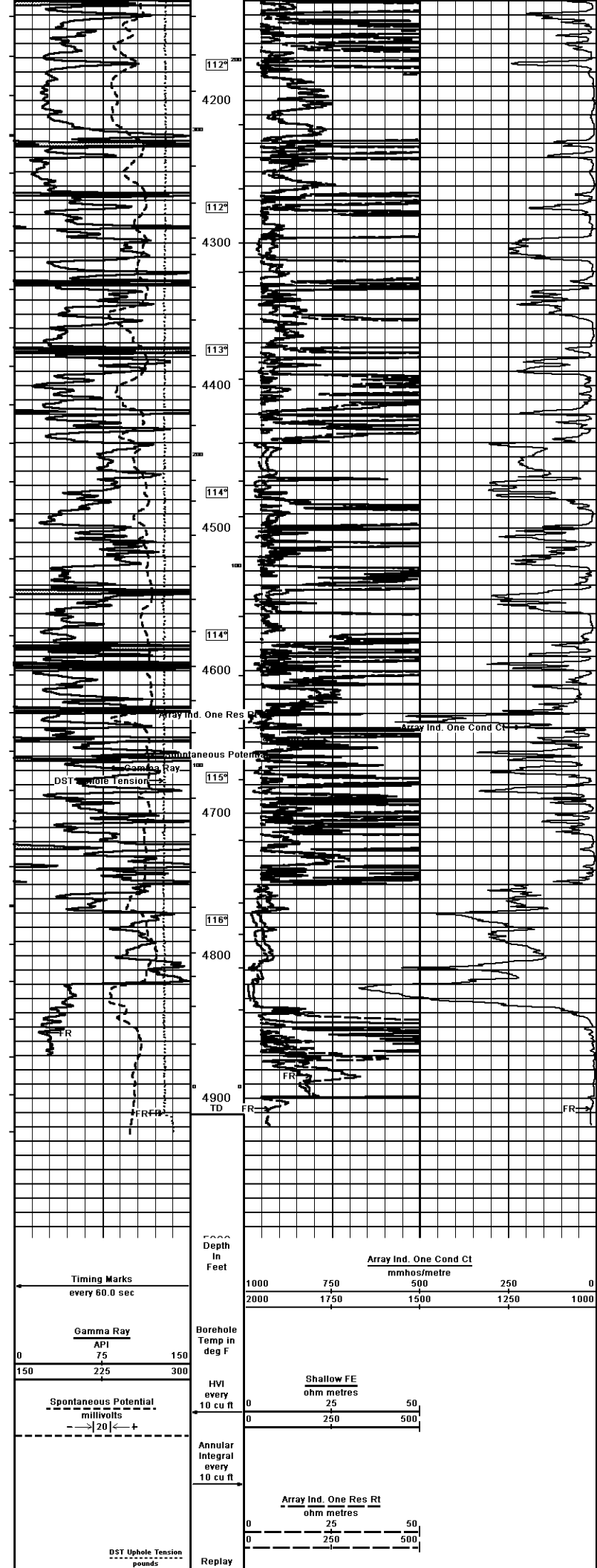
ARRAY INDUCTION SHALLOW FOCUSED ELECTRIC LOG		SHAKESPEARE OIL CO., INC. WARD #1-21 W. / KANSAS E. SL & 48TH EEL 34W MCDONALD MSS MML	
NE	05-AUG-2016	5558-57610049	feet
FEET		1915.00	feet
		1911.00	feet
		1908.00	feet
		1866.00	feet
		1824.00	feet
		1875	inches
CHEMICAL		8.00	CP
IBUSg		8.00	micromin
LOWLINE		0.02 @ 7.50	ohm-m
		0.50 @ 7.50	ohm-m
		0.74 @ 7.50	ohm-m
CALC		0.40 @ 11.60	ohm-m
5 HOURS		18.00	deg F
3096		OKC	
DOWNHILL			
MIN PRIEST			











5000

0

Scale
1:600

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 05-AUG-2016 23:36
Filename: C:\Minimus 15.03.5939\Logst\Shakespeare Edwards #1...\Shakespeare Edwards #1-21_003.dta
Recorded on 05-AUG-2016 20:49
System Versions: Logged with 15.03.5939 Plotted with 15.03.5939

1 INCH MAIN

COMPANY

WELL

FIELD

PROVINCE/COUNTY

COUNTRY/STATE

SHAKESPEARE OIL CO., INC.

EDWARDS #1-21

PENCE WEST

SCOTT

U.S.A. / KANSAS

Elevation Kelly Bushing	3140.00	feet	First Reading	4908.00	feet
Elevation Drill Floor	3138.00	feet	Depth Driller	4915.00	feet
Elevation Ground Level	3132.00	feet	Depth Logger	4911.00	feet

Weatherford

ARRAY INDUCTION
SHALLOW FOCUSED
ELECTRIC LOG