Weatherford

ARRAY INDUCTION SHALLOW FOCUSED ELECTRIC LOG

COMPANY	McCOY PETROLEUM CORPORATION
WELL	PATTERSON-O'BRATE 'A' #2-17
FIELD	WILDCAT
PROVINCE/COUNTY	MEADE
COUNTRY/STATE	U.S.A. / KANSAS
LOCATION	1980' FNL & 1980' FWL

SEC	TWP	RGE	Other Services
17	30S	30W	MPD/MDN MML

Latitude
Longitude
API Number 15-119-21364

Permanent Datum GL, Elevation 2814 feet
Log Measured From KB
Drilling Measured From KB

Elevations:	feet
KB	2825.00
DF	2823.00
GL	2814.00

Date	28-APR-2014			
Run Number	ONE			
Service Order	4558-85851716			
Depth Driller	5700.00	feet		
Depth Logger	5700.00	feet		
First Reading	5697.00	feet		
Last Reading	1826.00	feet		
Casing Driller	1827.00	feet		
Casing Logger	1826.00	feet		
Bit Size	7.875	inches		
Hole Fluid Type	CHEMICAL			
Density / Viscosity	9.20 lb/USg		56.00 CP	
PH / Fluid Loss	10.50		8.80 ml/30Min	
Sample Source	FLOWLINE			
Rm @ Measured Temp	0.99 @ 79.0	ohm-m		
Rmf @ Measured Temp	0.79 @ 79.0	ohm-m		
Rmc @ Measured Temp	1.19 @ 79.0	ohm-m		
Source Rmf / Rmc	CALC		CALC	
Rm @ BHT	0.65 @121.0	ohm-m		
Time Since Circulation	5 HOURS			
Max Recorded Temp	121.00	deg F		
Equipment / Base	13096		LIB	
Recorded By	ADAM SILL			
Witnessed By	DAVE WILLIAMS			
JOB #	LB14-130			

BOREHOLE RECORD

Last Edited: 28-APR-2014 02:56

Bit Size inches	Depth From feet	Depth To feet
7.875	1827.00	5700.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	1827.00	24.00

REMARKS

- SOFTWARE ISSUE: WLS 13.08.2113
- TOOL STRING: MCG, MML, MDN, MPD, MFE, MAI RUN IN COMBINATION
- HARDWARE: DUAL BOWSPRING ECCENTRALIZER 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: 1510 CU. FT.
- ANNULAR HOLE VOLUME WITH 5.5 INCH CASING FROM TD TO 4000 FEET: 289 CU. FT.

- RIG: STERLING #2.

- ENGINEER: A. SILL.

- OPERATORS: J. LaPOINT.

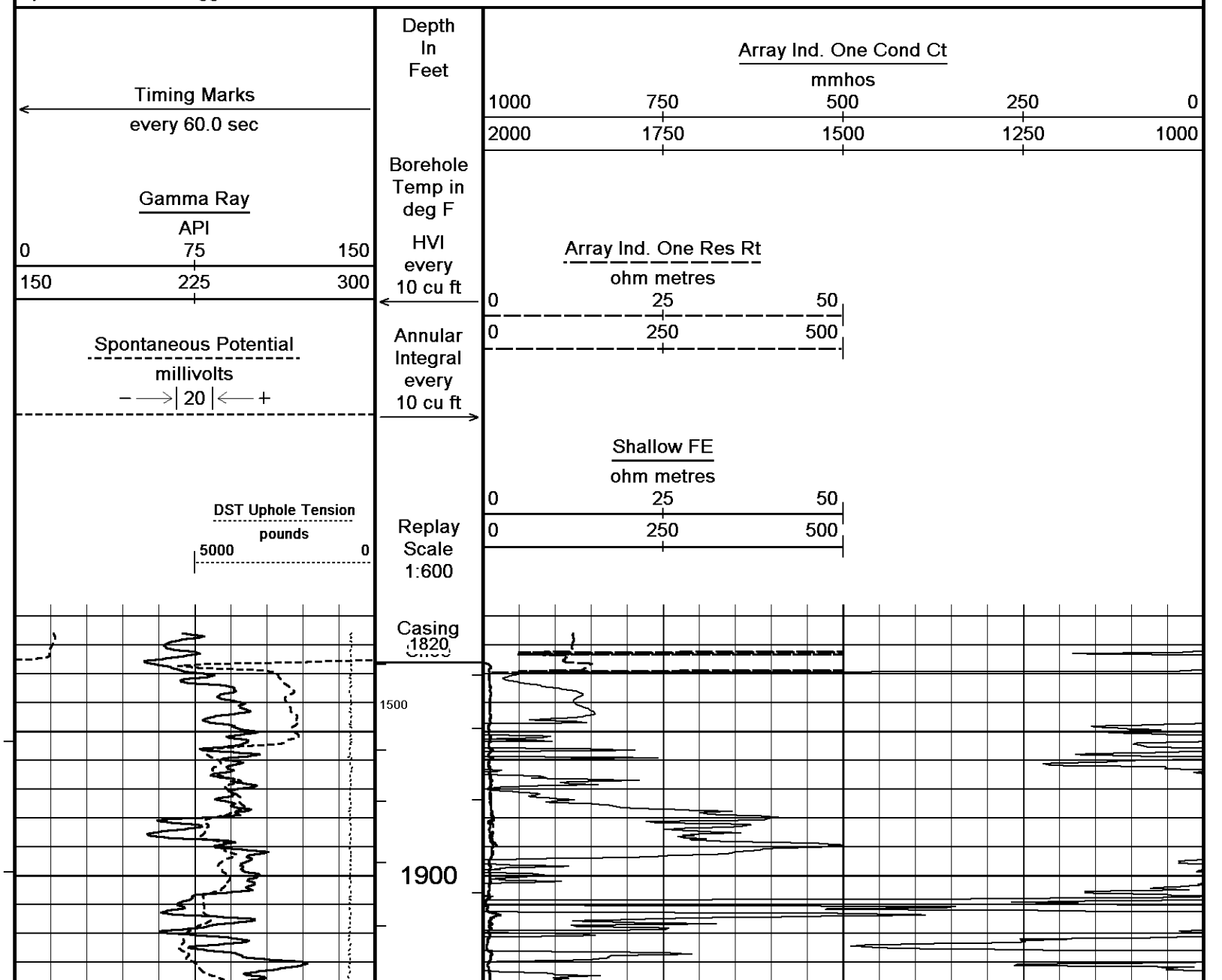
In interpreting, communicating or providing information and/or making recommendations, either written or oral, as to logs or test or other data, type or amount of material, or Work or other service to be furnished, or manner of performance, or in predicting results to be obtained, the Contractor will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

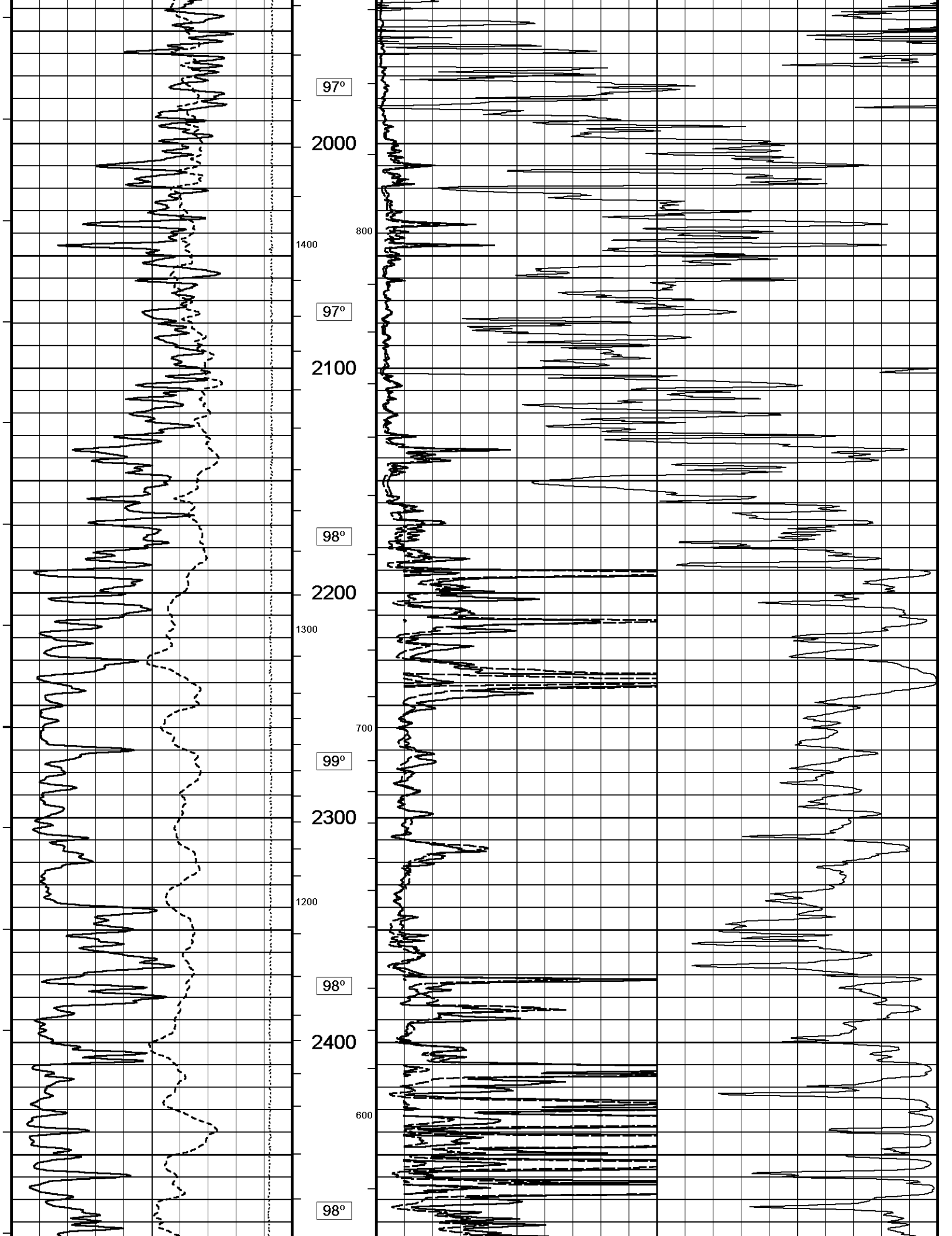
2 INCH MAIN

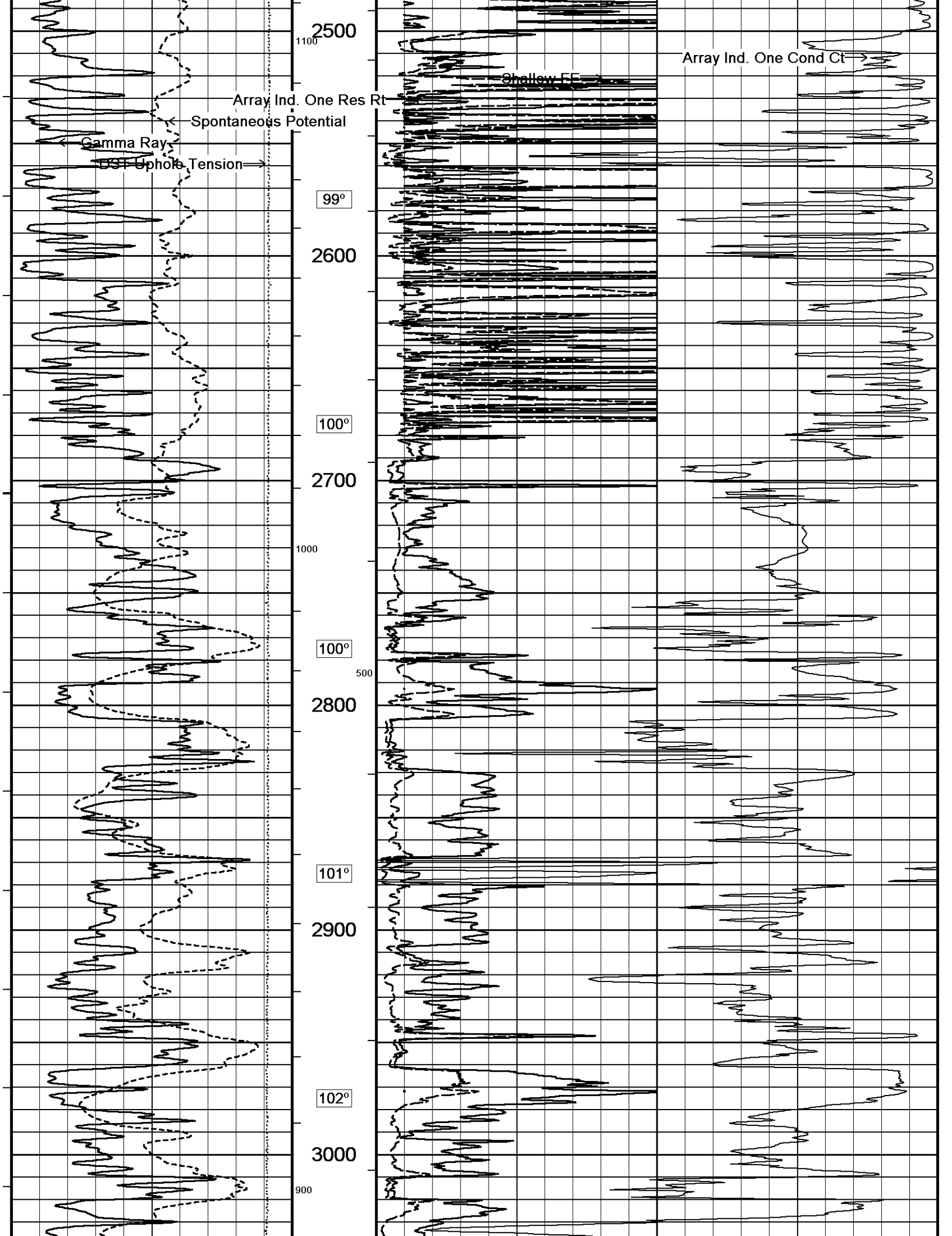
Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 28-APR-2014 07:44

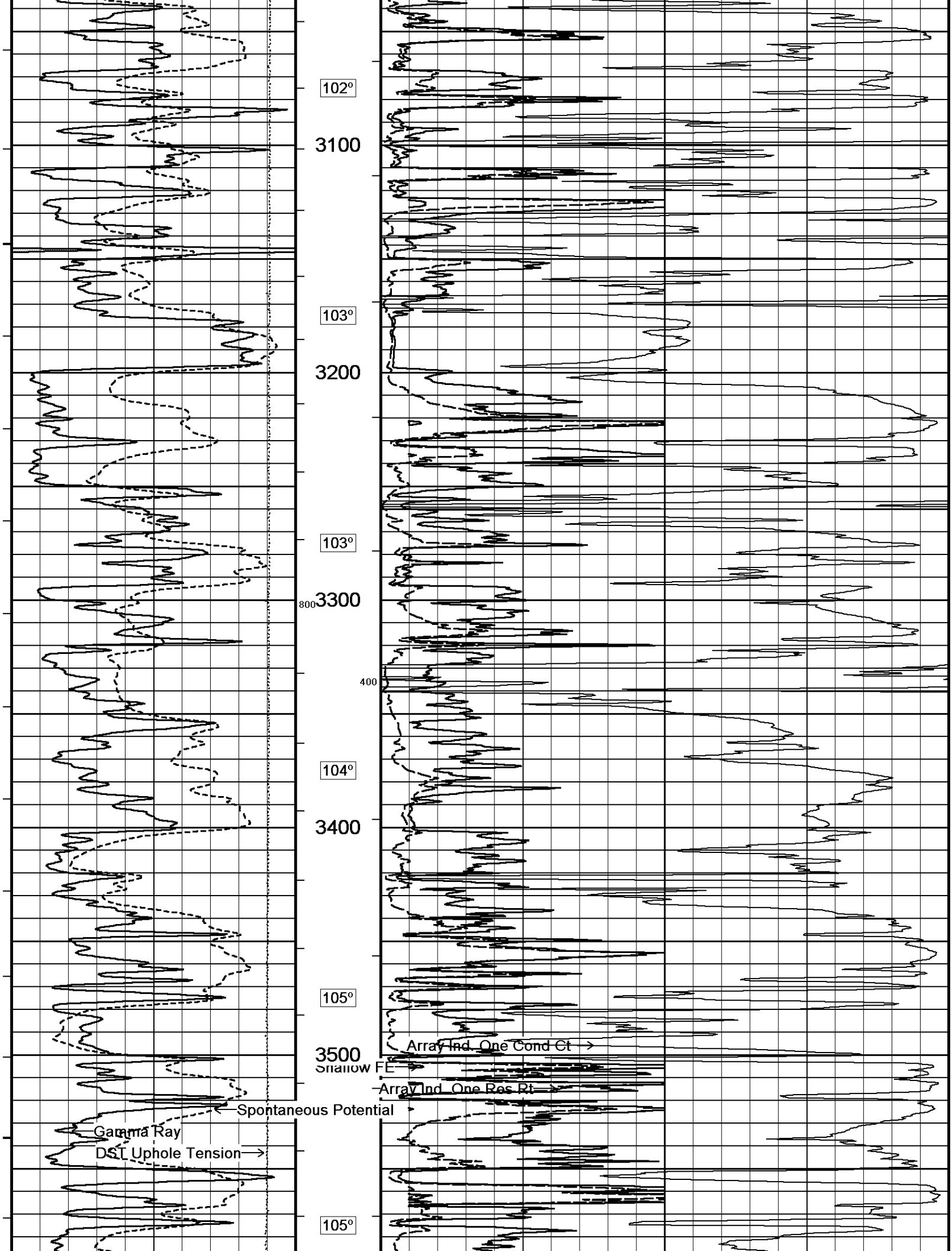
Filename: C:\Minimus 13.08.2113\Log Data\McCoy Patter...\McCoy Patterson-O'Brate 'A' #2-17_003.dta — Recorded on 28-APR-2014 05:47

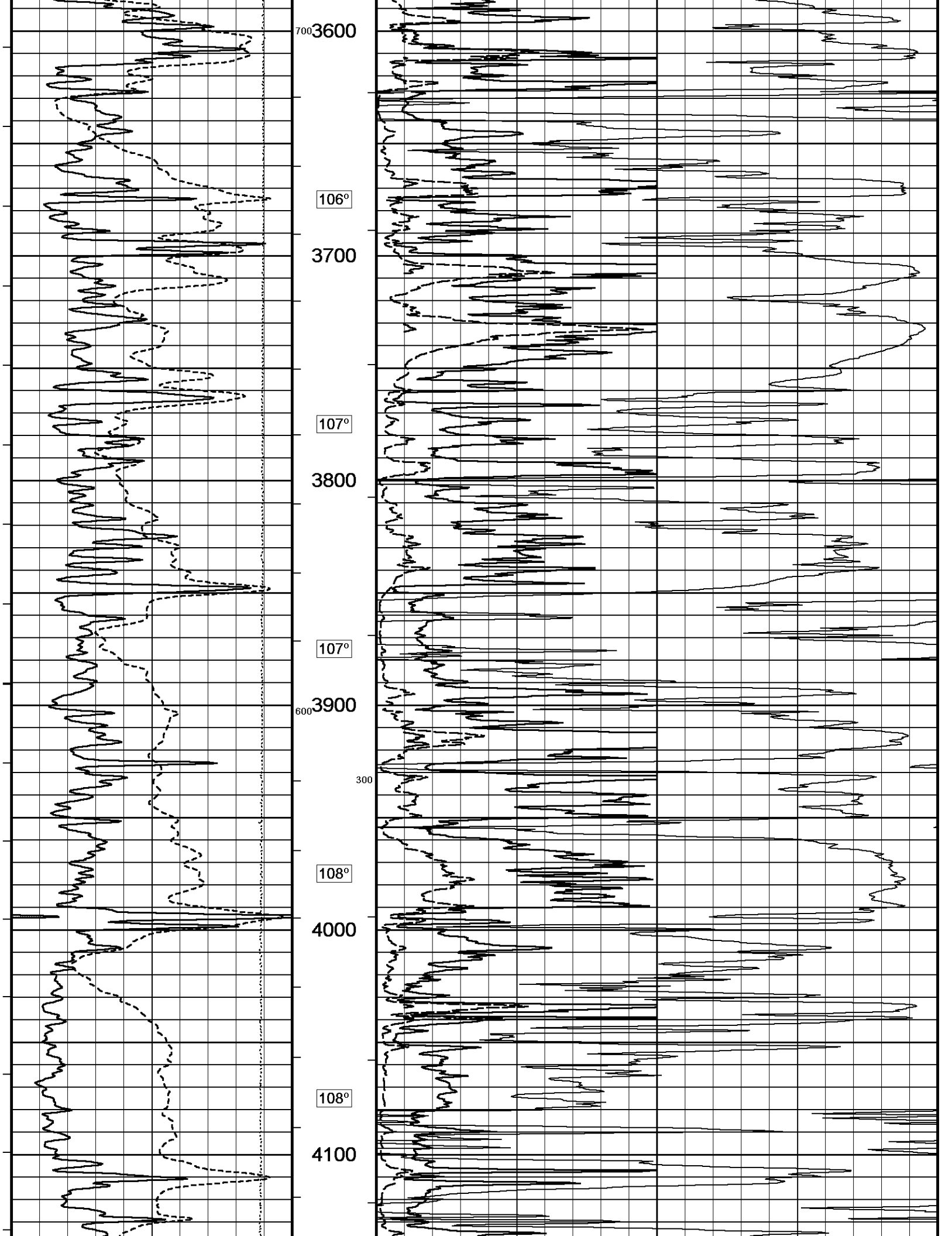
System Versions: Logged with 13.08.2113 Plotted with 13.08.2113

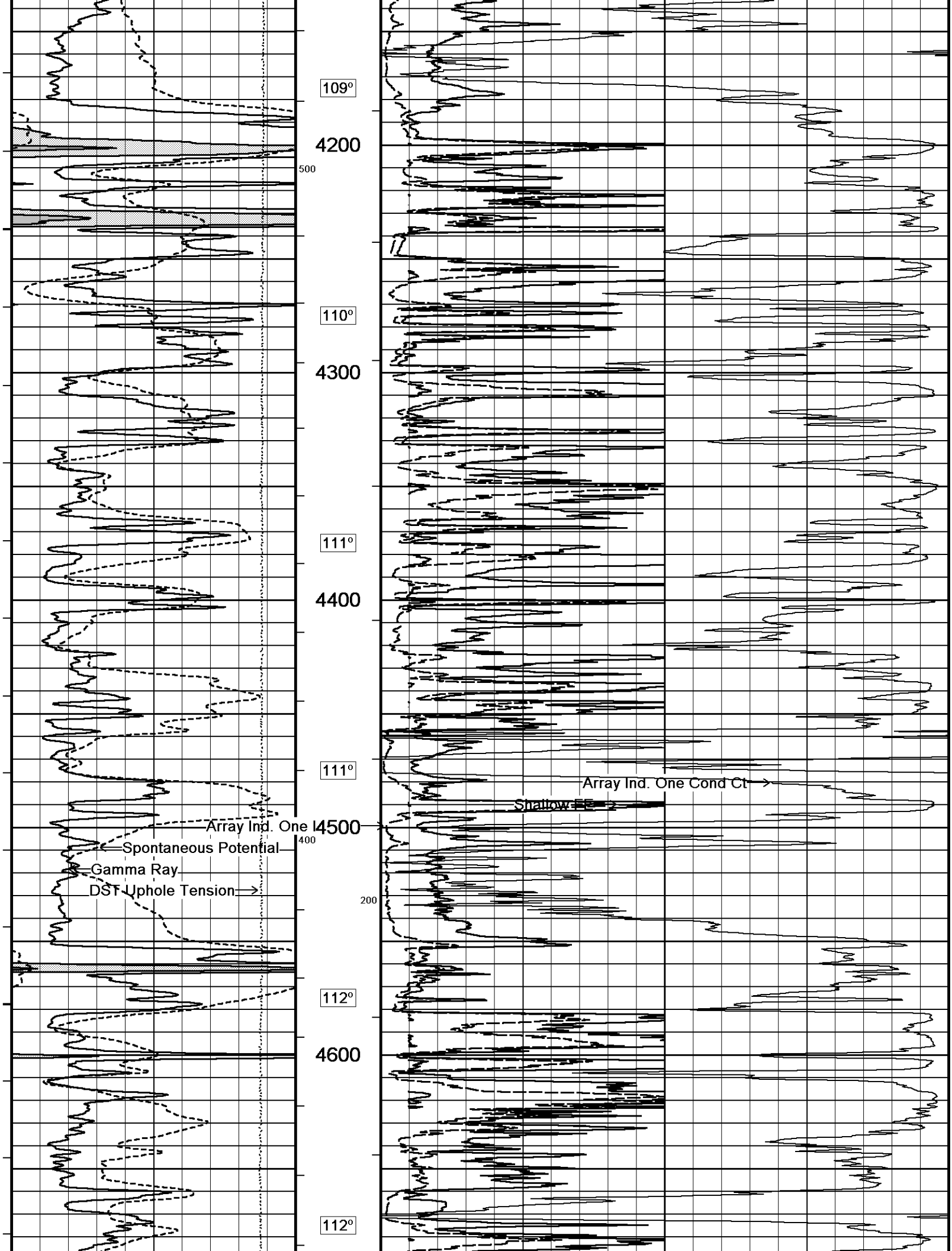


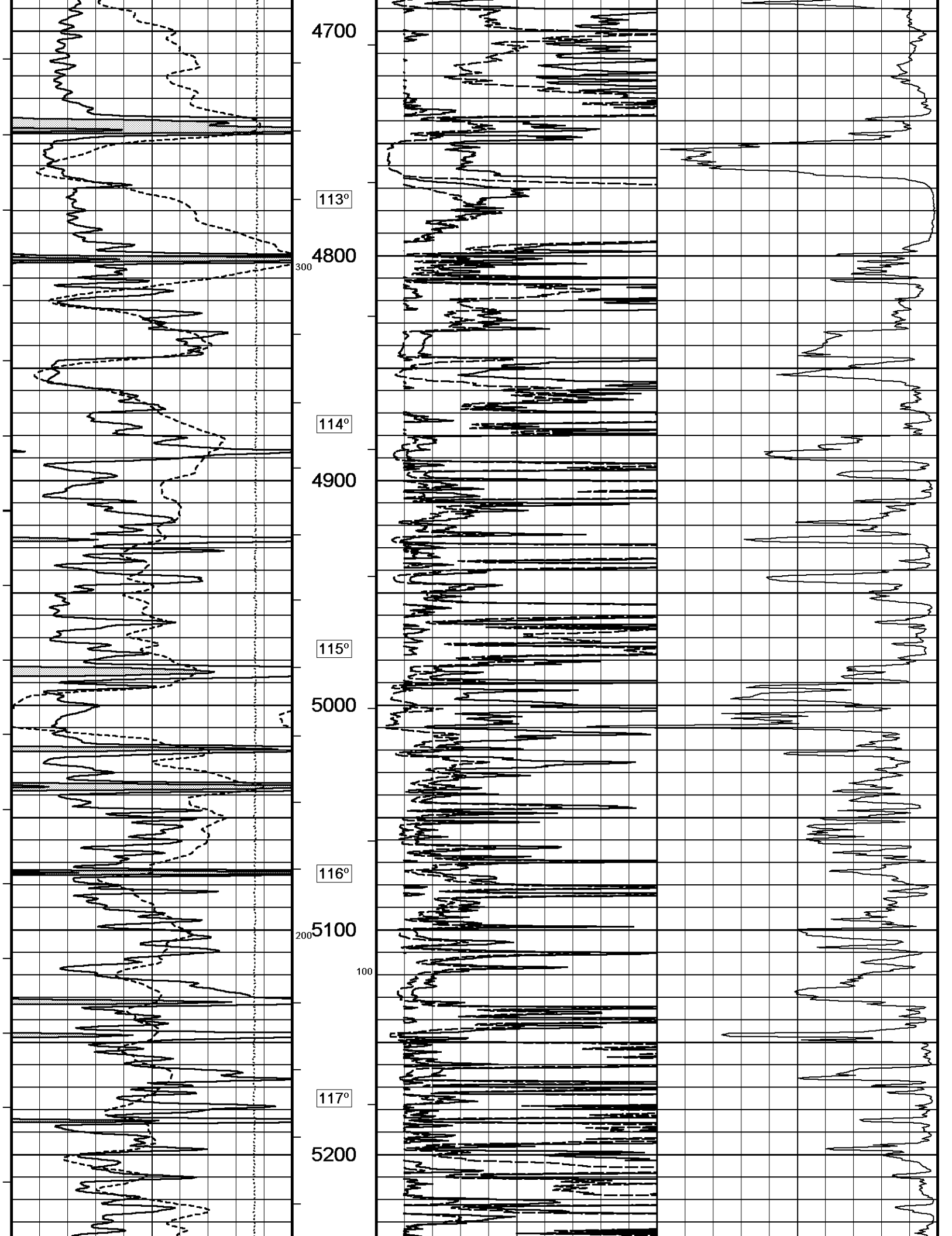

97°
2000
1400
97°
2100
98°
2200
1300
99°
2300
1200
98°
2400
98°
800
700
600

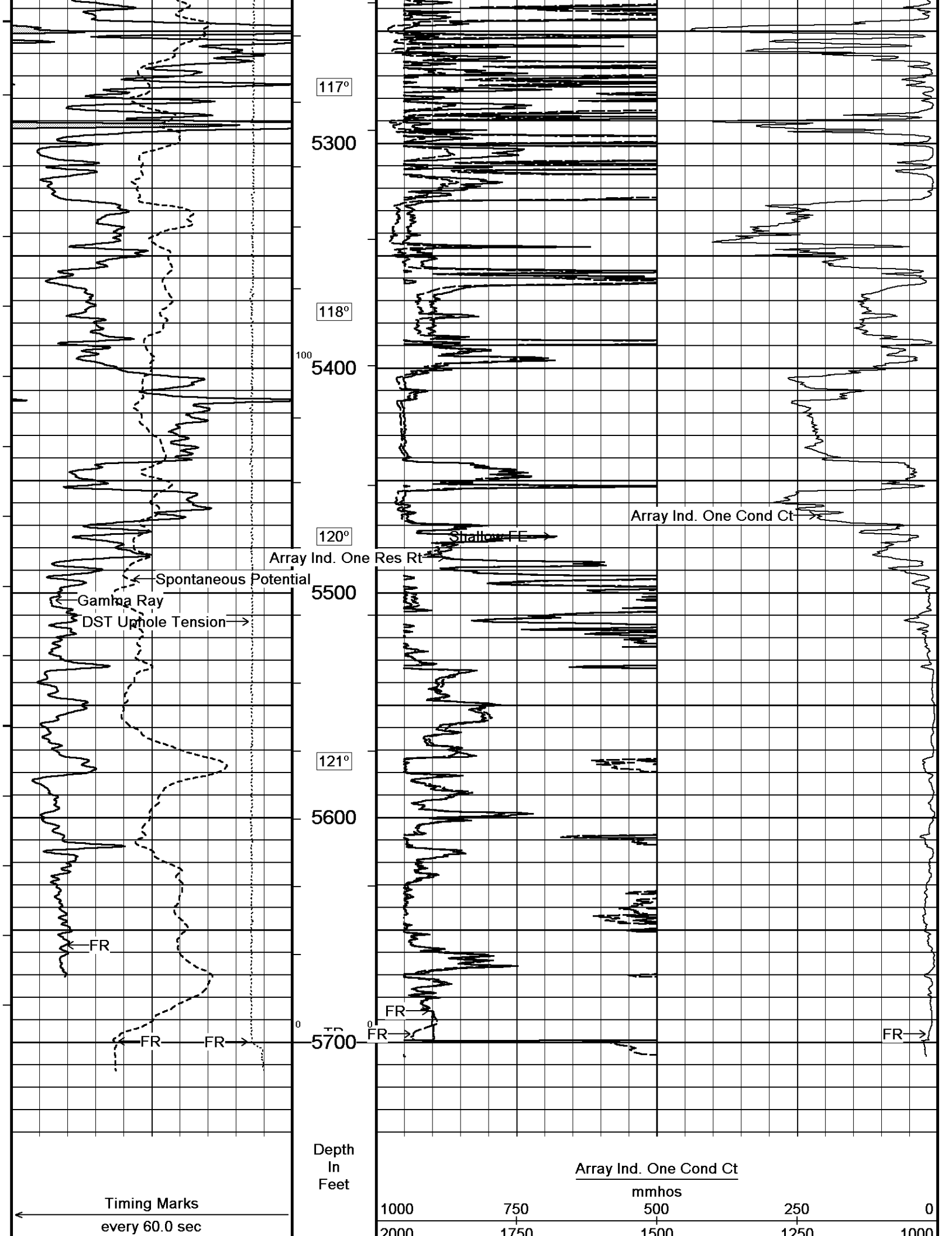

Array Ind. One Cond Ct
Shallow FE
Array Ind. One Res Rt
Spontaneous Potential
Gamma Ray
DST Uphole Tension
1100
2500
99°
2600
100°
2700
1000
100°
500
2800
101°
2900
102°
3000
900

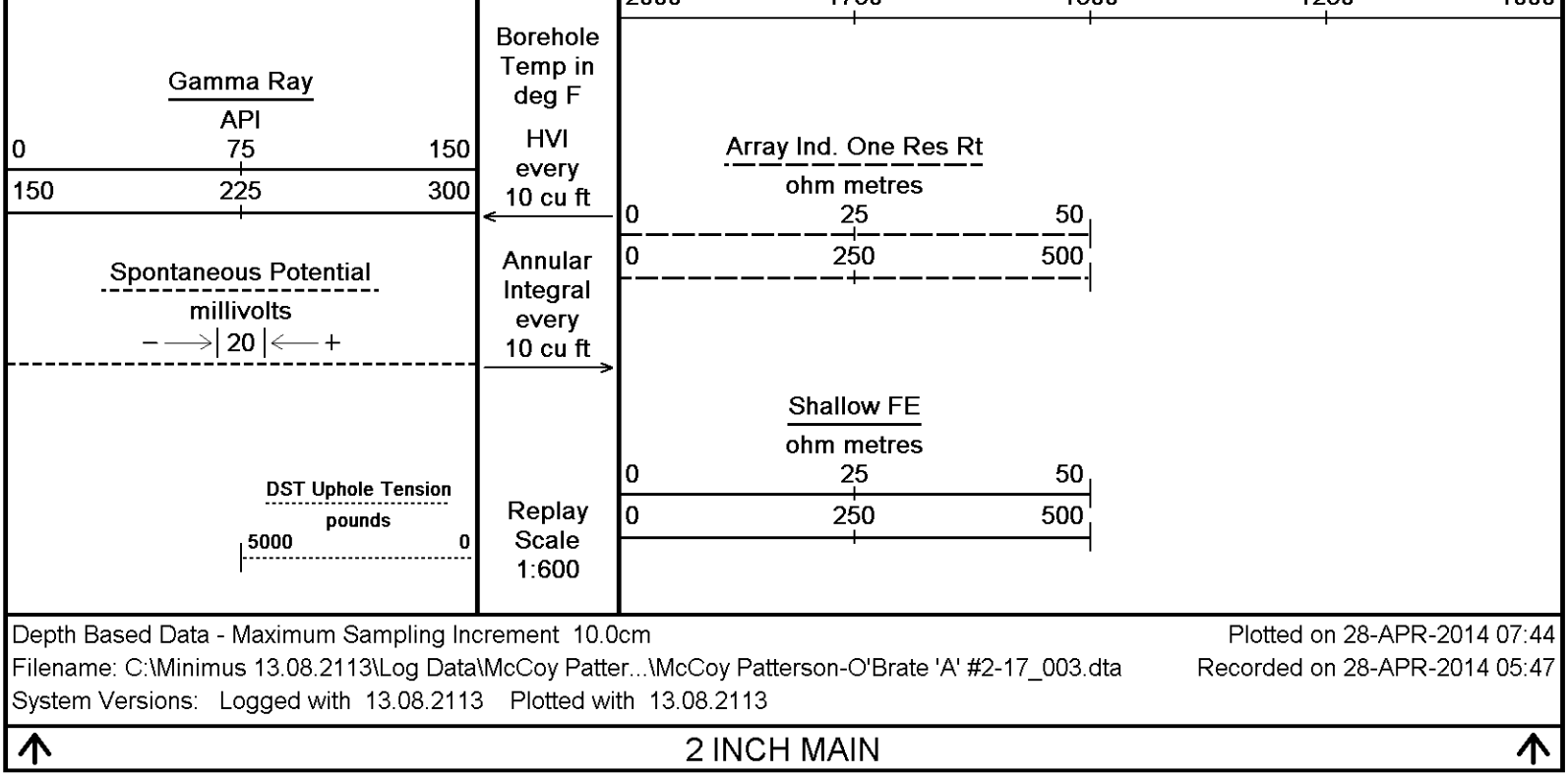

102°
3100
103°
3200
103°
800
3300
400
104°
3400
105°
3500
Array Ind. One Cond Ct →
Shallow FE →
Array Ind. One Res Rt →
← Spontaneous Potential
Gamma Ray
DST Uphole Tension →
105°


700
3600
106°
3700
107°
3800
107°
600
3900
300
108°
4000
108°
4100


109°
4200
500
110°
4300
111°
4400
111°
Array Ind. One Cond Ct
Shallow FF
Array Ind. One I
4500
400
Spontaneous Potential
Gamma Ray
DST Uphole Tension
200
112°
4600
112°


4700
113°
4800
300
114°
4900
115°
5000
116°
200
5100
100
117°
5200


117°
5300
118°
100
5400
120°
Array Ind. One Cond Ct
Shallow FE
Array Ind. One Res Rt
Spontaneous Potential
5500
Gamma Ray
DST Uphole Tension
121°
5600
FR
FR
0
FR
FR
FR
5700
Depth
In
Feet
Timing Marks
every 60.0 sec
Array Ind. One Cond Ct
mmhos
1000
750
500
250
0
2000
1750
1500
1250
1000



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 28-APR-2014 07:44
Filename: C:\Minimus 13.08.2113\Log Data\McCoy Patter...\McCoy Patterson-O'Brate 'A' #2-17_003.dta — Recorded on 28-APR-2014 05:47
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 28-APR-2014 07:44
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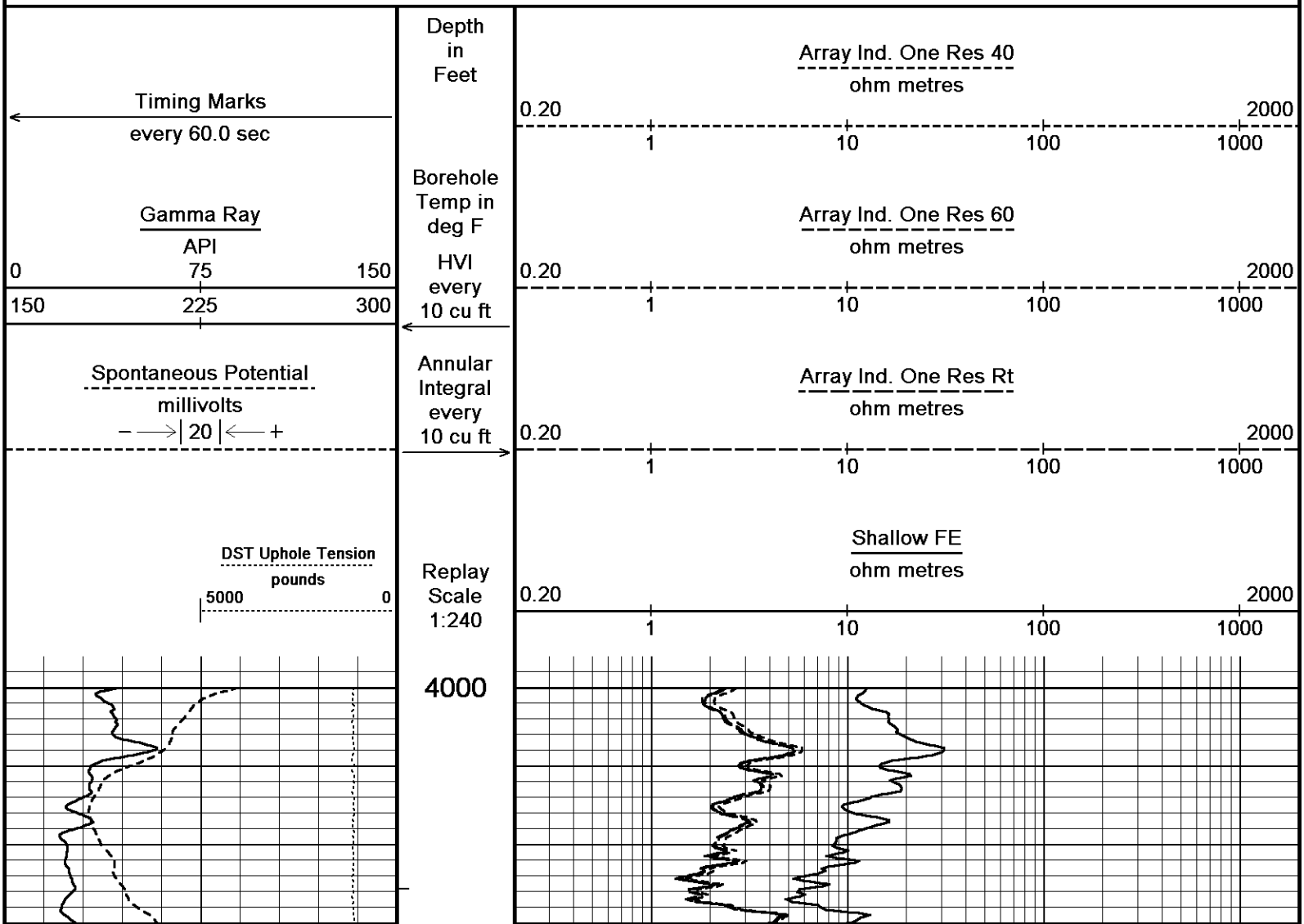
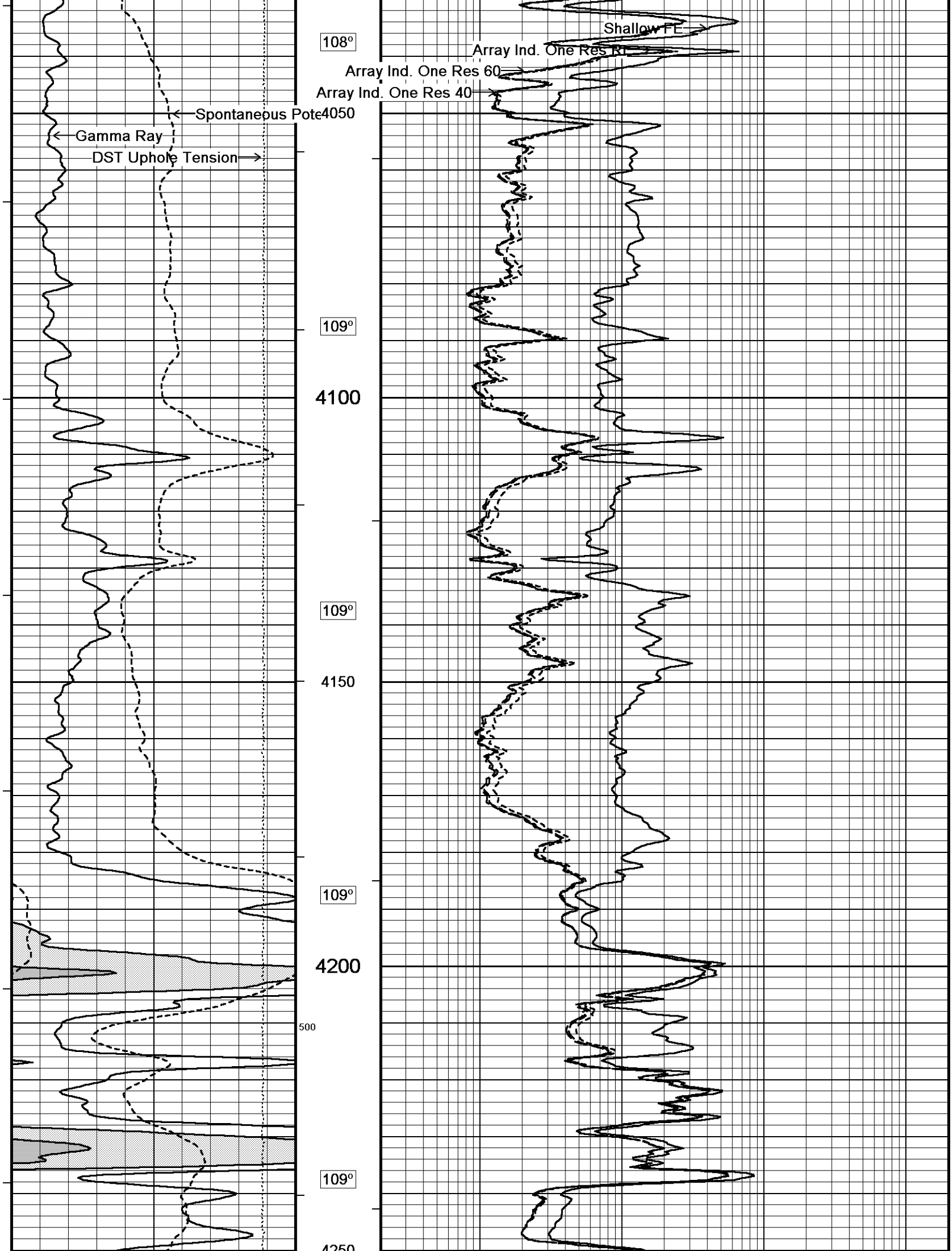
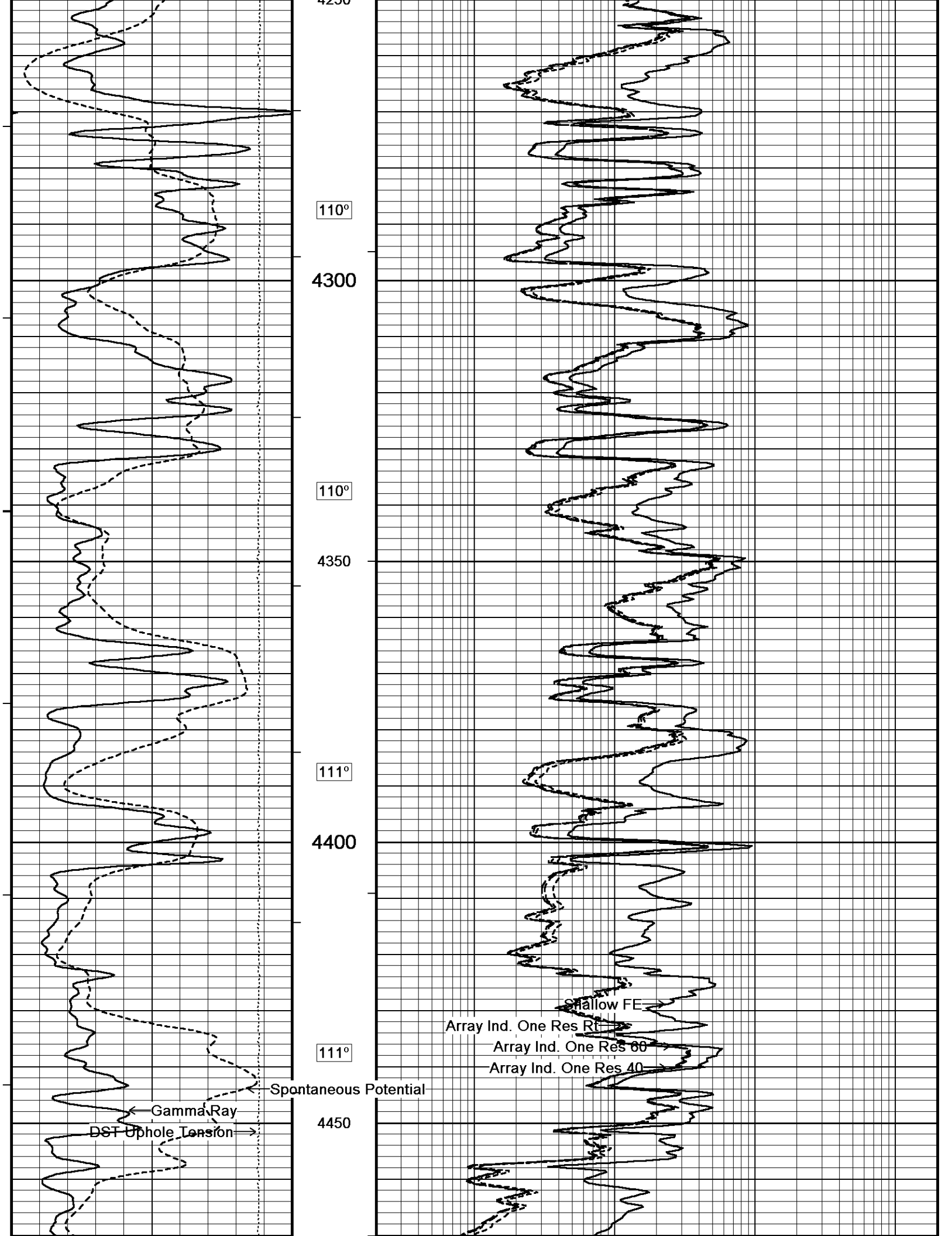
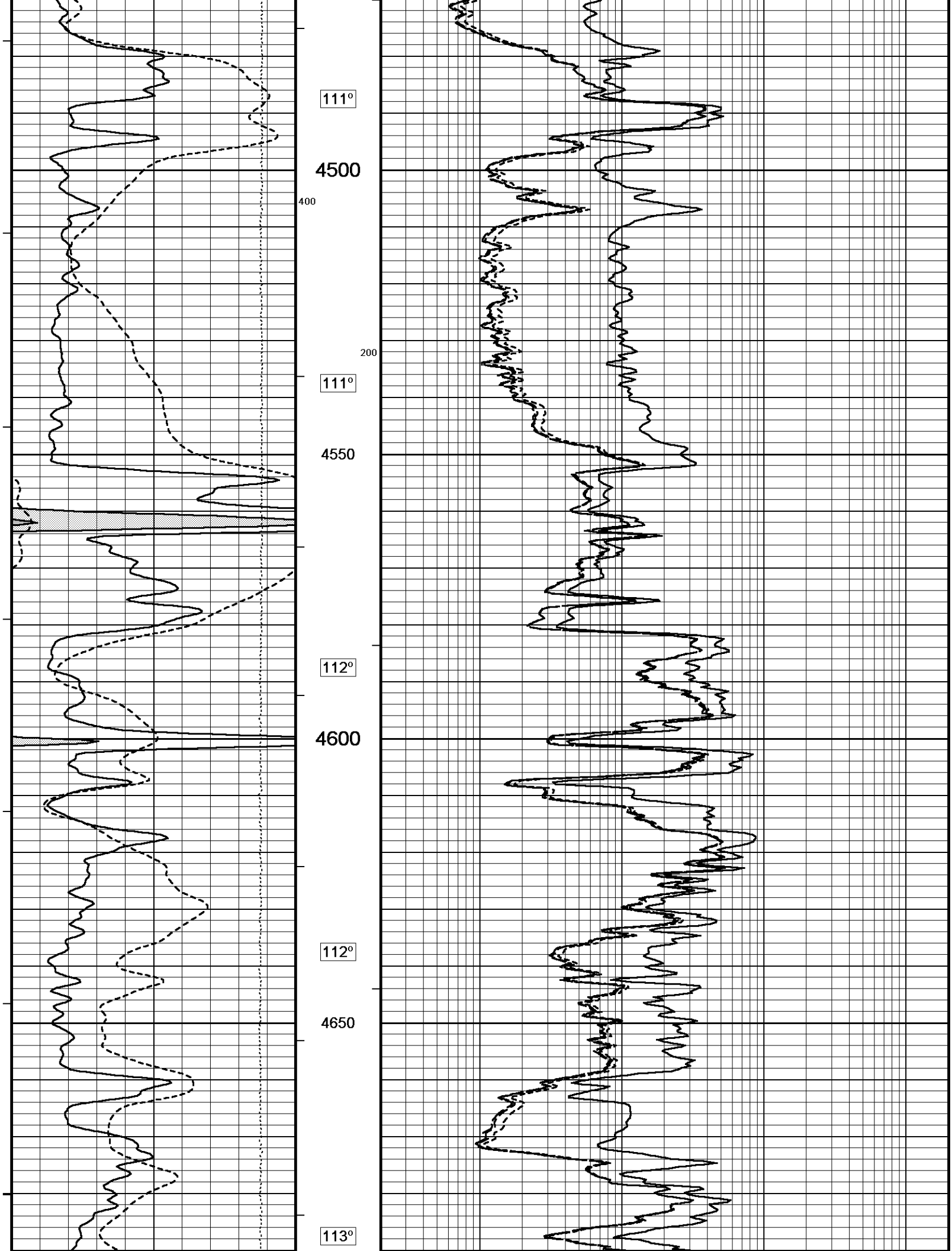
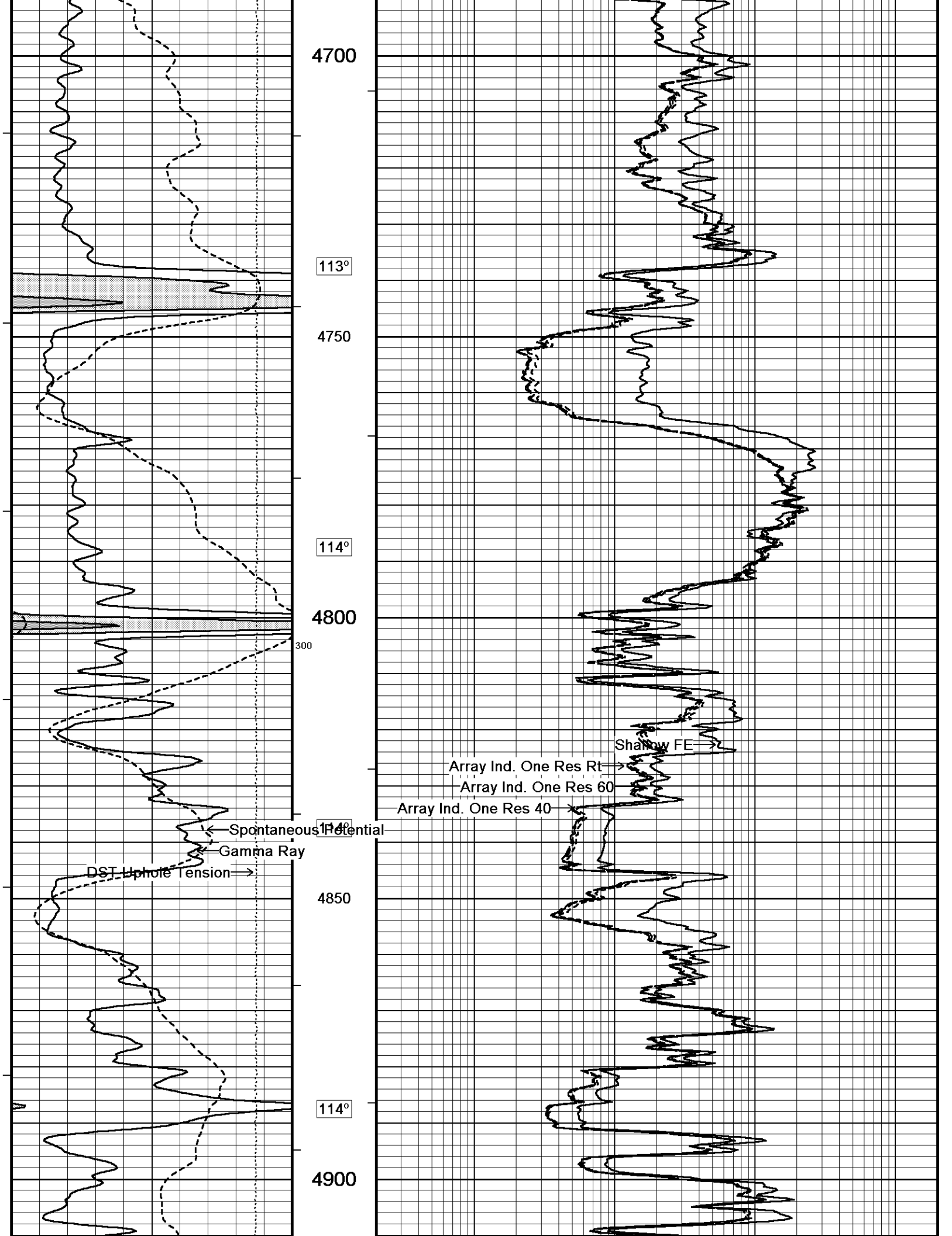
System Versions: Logged with 13.08.2113 Plotted with 13.08.2113

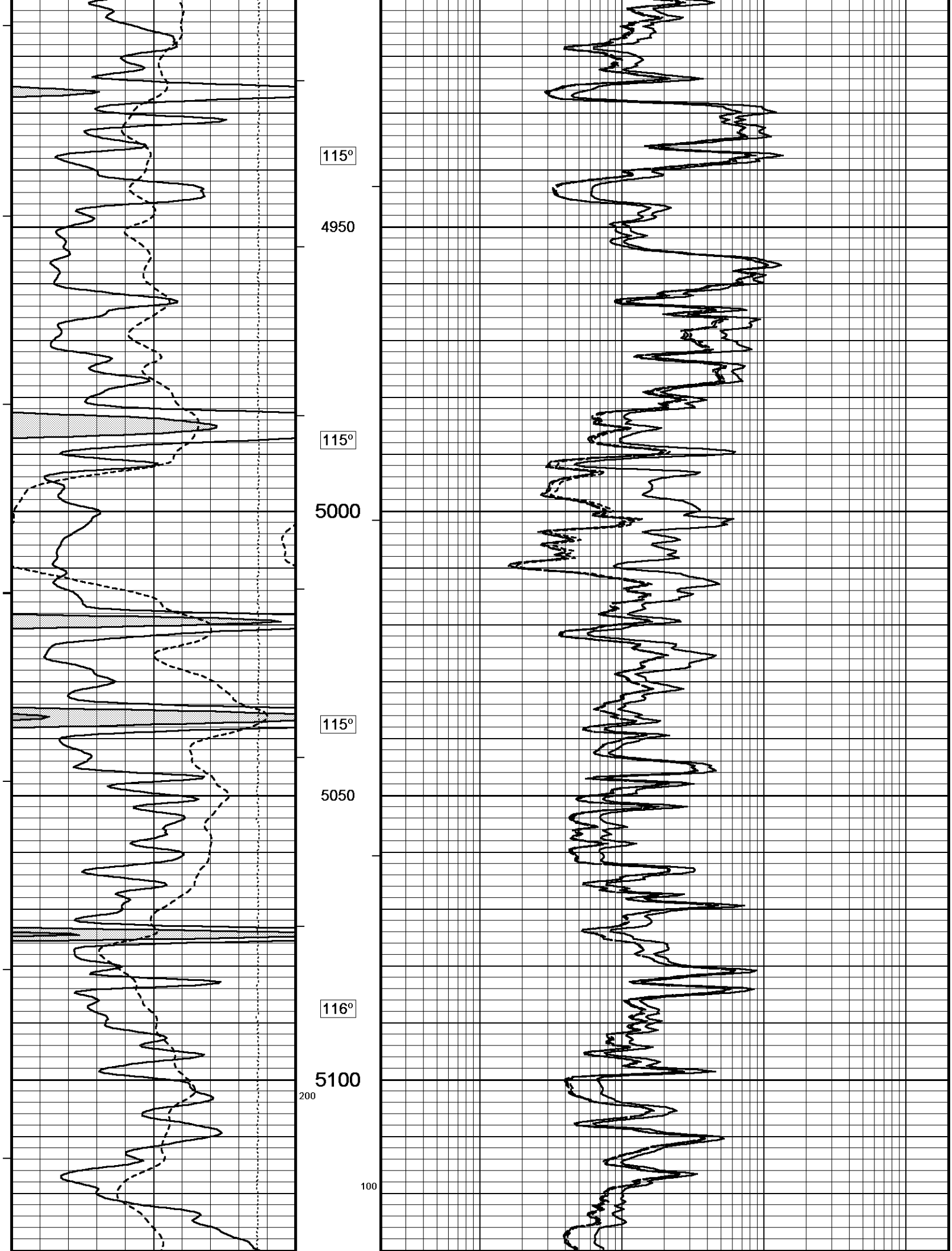


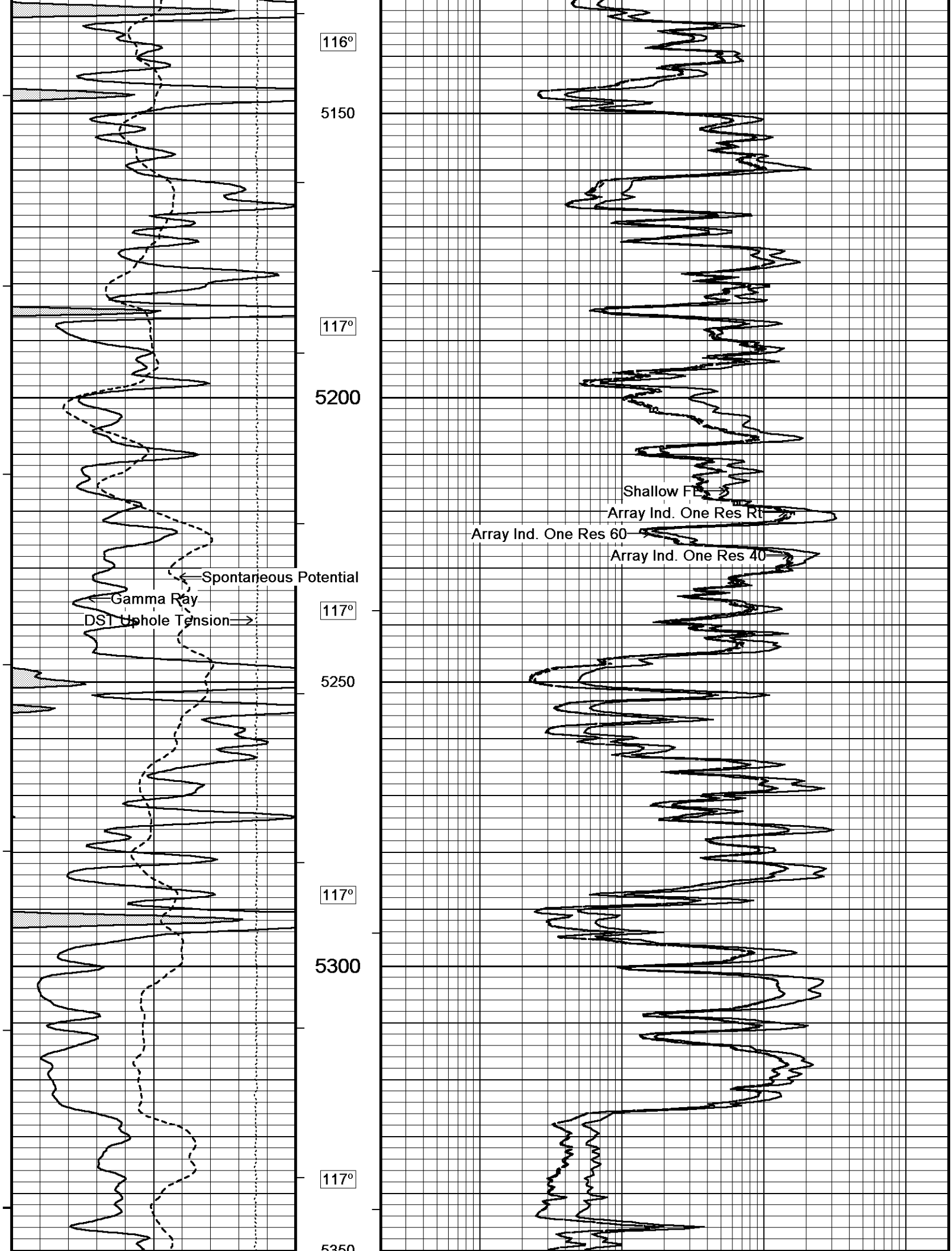

Shallow FE
Array Ind. One Res RT
Array Ind. One Res 60
Array Ind. One Res 40
Spontaneous Pote
Gamma Ray
DST Uphole Tension
108°
109°
109°
109°
109°
4050
4100
4150
4200
4250
500

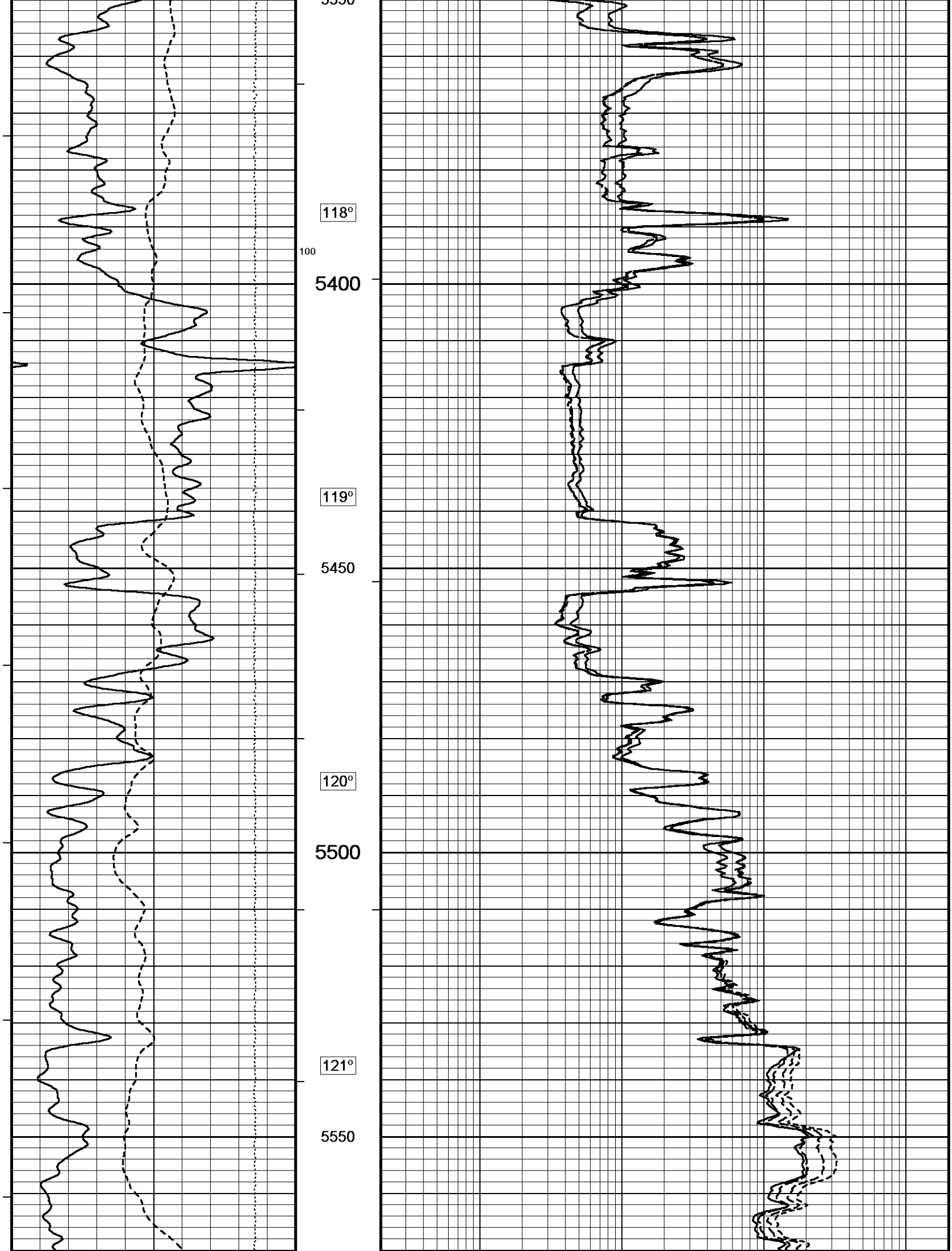

110°
4300
110°
4350
111°
4400
111°
4450
Shallow FE
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Spontaneous Potential
Gamma Ray
DST Uphole Tension

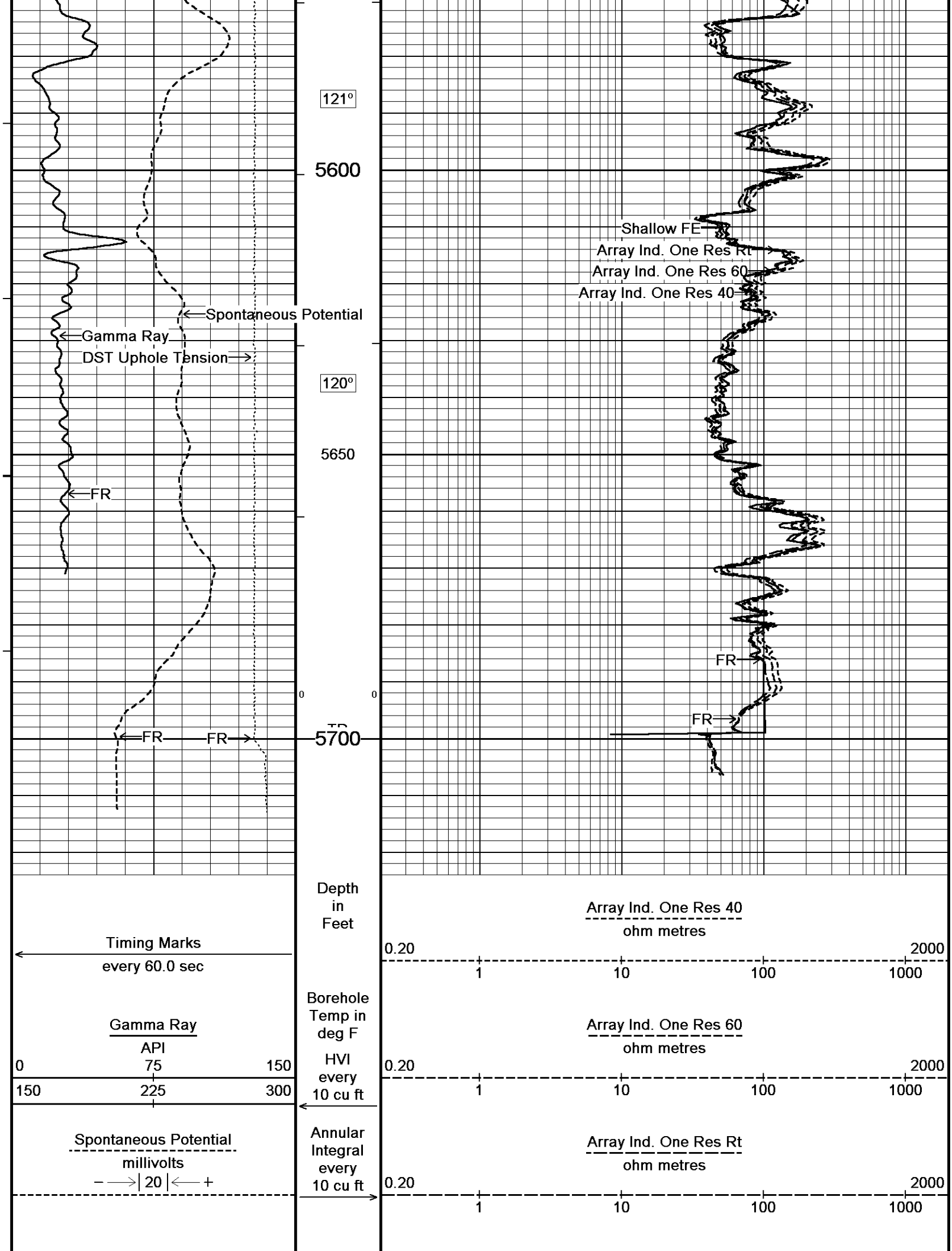

111°
4500
400
200
111°
4550
112°
4600
112°
4650
113°


4700
113°
4750
114°
4800
300
Shallow FE
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
114°
Spontaneous Potential
Gamma Ray
DST Uphole Tension
4850
114°
4900


115°
4950
115°
5000
115°
5050
116°
5100
200
100


116°
5150
117°
5200
Shallow FE
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Spontaneous Potential
Gamma Ray
DST Uphole Tension
117°
5250
117°
5300
117°
5350


118°
100
5400
119°
5450
120°
5500
121°
5550


121°
5600
120°
5650
5700
Spontaneous Potential
Gamma Ray
DST Uphole Tension
FR
FR
FR
Shallow FE
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
FR
FR
Depth in Feet
Timing Marks
every 60.0 sec
Gamma Ray
API
0
75
150
150
225
300
Spontaneous Potential
millivolts
20
Borehole Temp in deg F
HVI every 10 cu ft
Annular Integral every 10 cu ft
Array Ind. One Res 40
ohm metres
0.20
2000
1
10
100
1000
Array Ind. One Res 60
ohm metres
0.20
2000
1
10
100
1000
Array Ind. One Res Rt
ohm metres
0.20
2000
1
10
100
1000

DST Uphole Tension
pounds
5000 0

Replay
Scale
1:240

Shallow FE
ohm metres
0.20 2000
1 10 100 1000

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 28-APR-2014 07:44
Filename: C:\Minimus 13.08.2113\Log Data\McCoy Patter...\McCoy Patterson-O'Brate 'A' #2-17_003.dta
Recorded on 28-APR-2014 05:47
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 28-APR-2014 07:44
Filename: C:\Minimus 13.08.2113\Log Data\McCoy Patter...\McCoy Patterson-O'Brate 'A' #2-17_002.dta
Recorded on 28-APR-2014 05:22
System Versions: Logged with 13.08.2113 Plotted with 13.08.2113

Timing Marks
every 60.0 sec

Depth
in
Feet

Array Ind. One Res 40
ohm metres
0.20 2000
1 10 100 1000

Borehole
Temp in
deg F

Gamma Ray
API
0 75 150
150 225 300

HVI
every
10 cu ft

Array Ind. One Res 60
ohm metres
0.20 2000
1 10 100 1000

Spontaneous Potential
millivolts
− → | 20 | ← +

Annular
Integral
every
10 cu ft

Array Ind. One Res Rt
ohm metres
0.20 2000
1 10 100 1000

DST Uphole Tension
pounds
5000 0

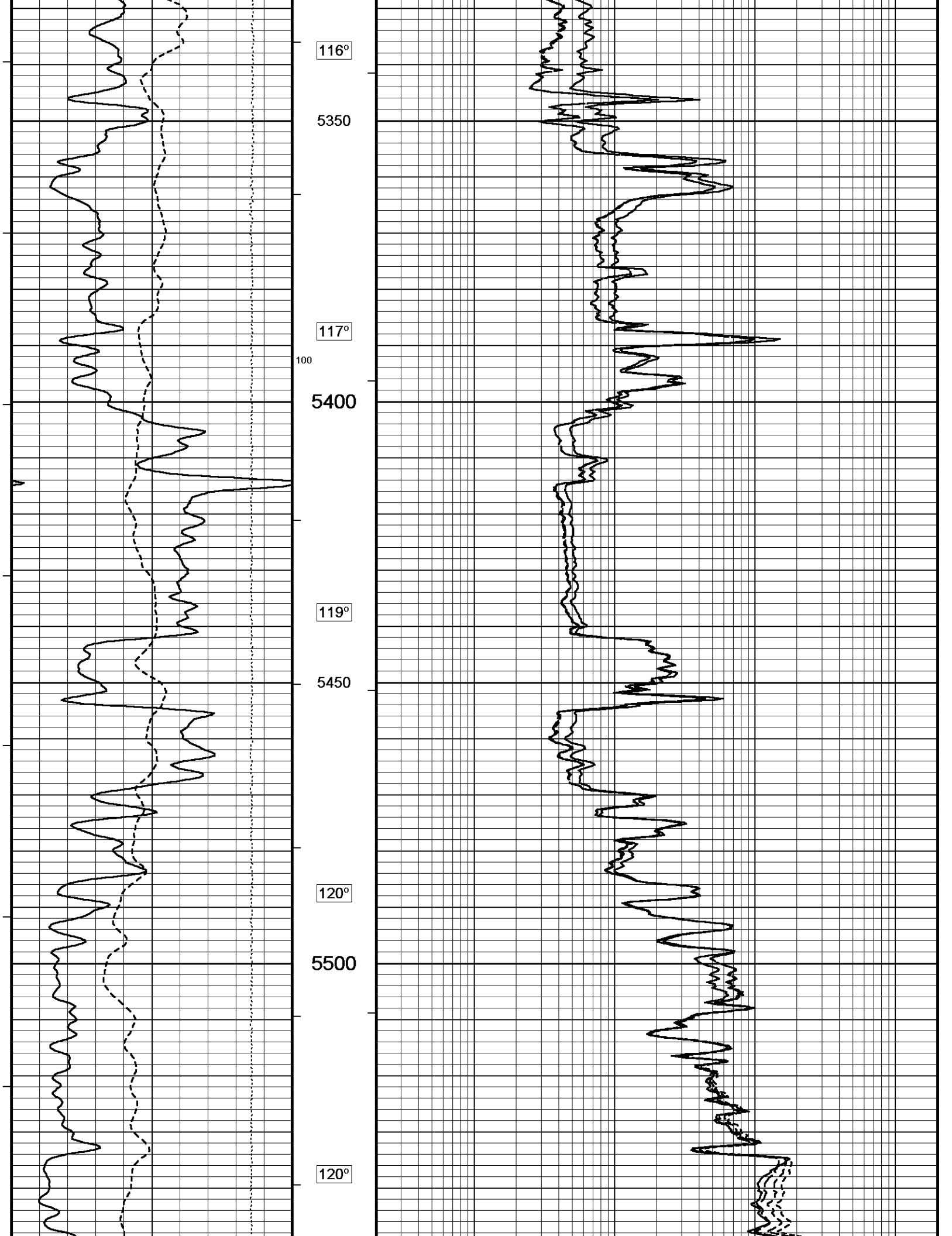
Replay
Scale
1:240

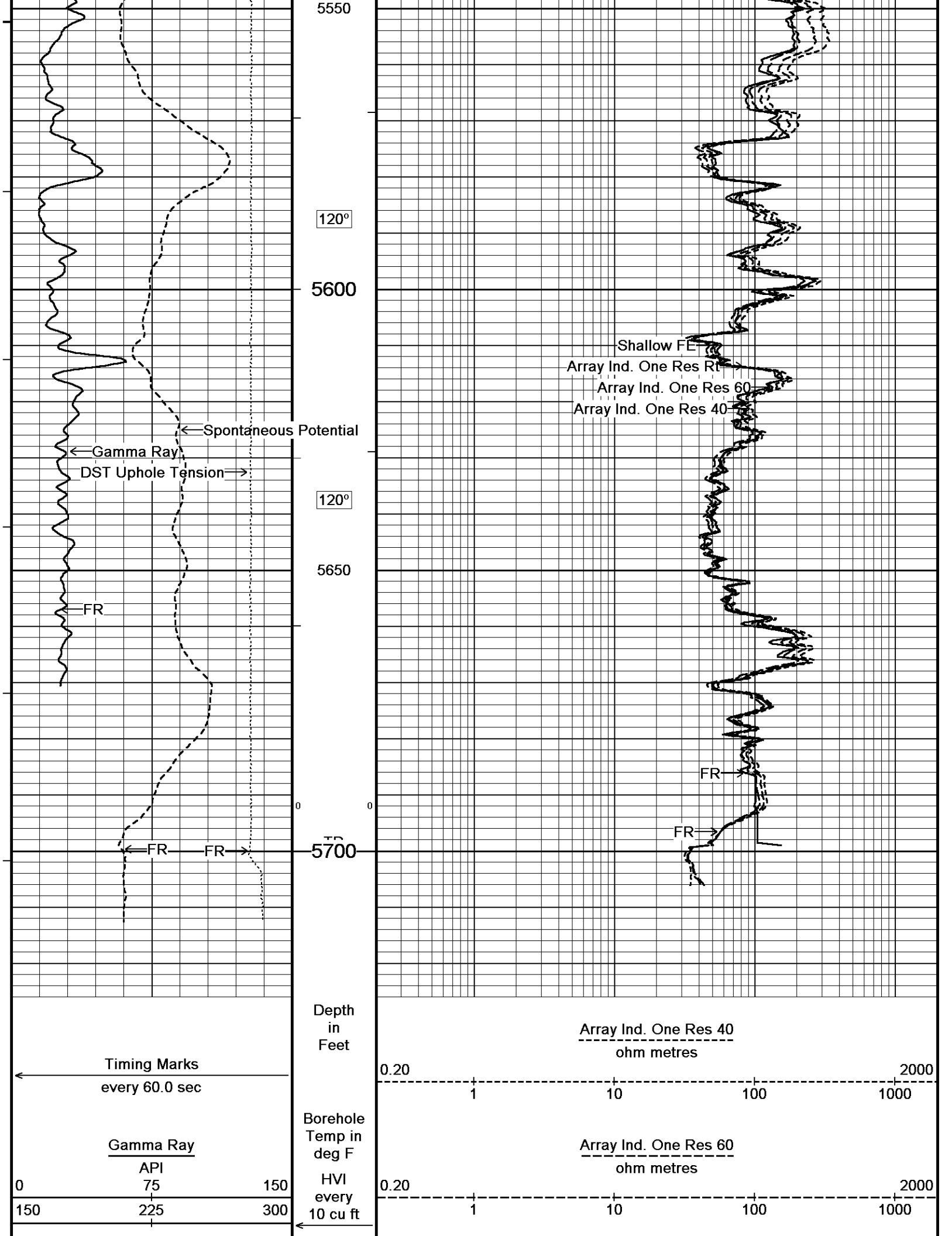
Shallow FE
ohm metres
0.20 2000
1 10 100 1000

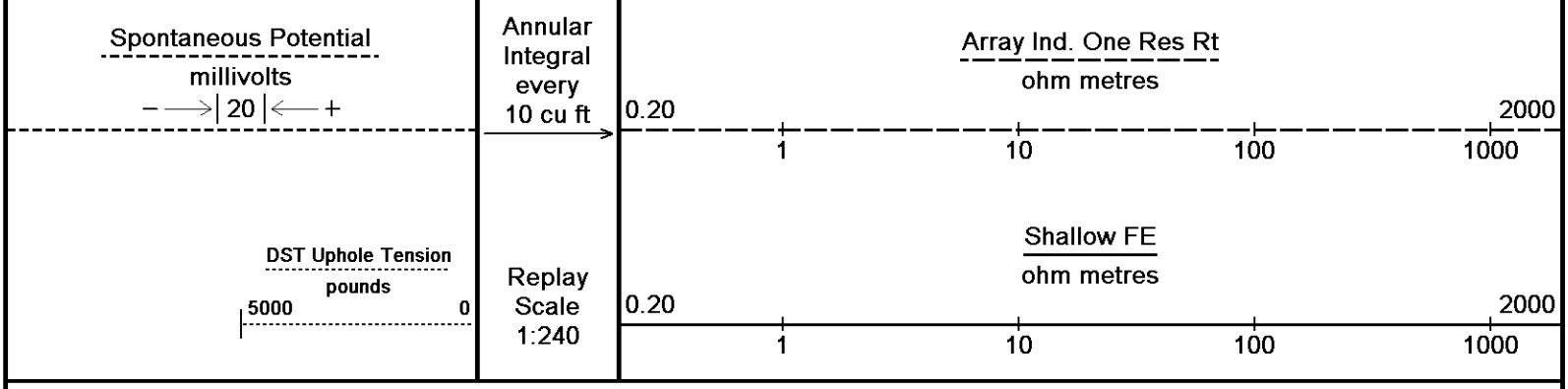
5250

116°

5300


116°
5350
117°
100
5400
119°
5450
120°
5500
120°


5550
120°
5600
Shallow FE
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Spontaneous Potential
Gamma Ray
DST Uphole Tension
120°
5650
FR
FR
FR
FR
5700
Depth in Feet
Timing Marks
every 60.0 sec
Gamma Ray
API
0
75
150
150
225
300
Borehole Temp in deg F
HVI
every 10 cu ft
Array Ind. One Res 40
ohm metres
0.20
1
10
100
1000
2000
Array Ind. One Res 60
ohm metres
0.20
1
10
100
1000
2000



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 28-APR-2014 07:44

Filename: C:\Minimus 13.08.2113\Log Data\McCoy Patter...\McCoy Patterson-O'Brate 'A' #2-17_002.dta — Recorded on 28-APR-2014 05:22

System Versions: Logged with 13.08.2113 Plotted with 13.08.2113

REPEAT SECTION

BEFORE SURVEY CALIBRATION

C:\Minimus 13.08.2113\Log Data\McCoy Patterson-O'Brate 'A' #2-17\McCoy Patterson-O'Brate 'A' #2-17_002.dta

General Constants All 000

Last Edited on 28-APR-2014,04:44

General Parameters		
Mud Resistivity	0.990	ohm-metres
Mud Resistivity Temperature	79.000	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	MML Caliper	
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	

Down-hole Tension Calibration SMS 0

Field Calibration on 28-APR-2014 04:29

Reading No	Measured	Calibrated (lbs)
1	15715.05	0.00
2	16399.64	408.00

Gamma Calibration MCG-D.K 469

Field Calibration on 28-APR-2014 01:21

	Measured	Calibrated (API)
Background	63	41
Calibrator (Gross)	1157	766
Calibrator (Net)	1094	725

Gamma Constants MCG-D.K 469

Last Edited on 28-APR-2014,03:02

Gamma Calibrator Number	GRC038	
Mud Density	1.10	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

Field Calibration on 18-APR-2014,19:10

	Measured	Calibrated(Deg F)
Lower	10.00	10.00

Upper	100.00	100.00

High Resolution Temperature Constants MCG-D.K 469

Last Edited on 25-APR-2014,03:00

Pre-filter Length	11

SP Calibration MCG-D.K 469

Field Calibration on 17-APR-2014 09:58

	Measured	Calibrated (mV)
Reference 1	100.1	99.9
Reference 2	-99.0	-100.0

Caliper Calibration MML-A 3

Base Calibration on 25-MAR-2014 11:38
Field Calibration on 28-APR-2014 01:05

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	14836	5.98
2	18178	7.97
3	21362	9.86
4	25372	11.92
5	0	0.00
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
8.01	7.97

Micro Normal and Micro Inverse Calibration MML-A 3

Base Calibration on 25-MAR-2014 11:48
Field Check on 28-APR-2014 01:07

Base Calibration

	Measured		Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Micro Normal	10.0	50.0	5.1	25.6
Micro Inverse	10.0	49.9	3.4	16.9

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Micro Normal	77.3	77.3
Micro Inverse	51.2	51.2

Micro Normal and Micro Inverse Constants MML-A 3

Last Edited on 28-APR-2014,03:02

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 66

Base Calibration on 24-MAR-2014 14:50
Field Check on 28-APR-2014 01:27

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3064	94	3714	110
Ratio	32.437		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	1641	2431
Ratio	0.675	

Field Check

	Calibrated (cps)	
	1667	2436
Ratio	0.686	

Neutron Constants MDN-A.B 66

Last Edited on 28-APR-2014,03:02

Neutron Source Id	P0204NN	
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 135

Base Calibration on 25-MAR-2014 12:07
Field Check on 28-APR-2014 00:57

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	963.6	126.8
Base Check		281.2
Field Check		281.2

FE Constants MFE-A.A 135

Last Edited on 28-APR-2014,03:01

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 22-FEB-2014,14:07
Field Check on 28-APR-2014 00:55

Base Calibration

Test Loop Calibration

Channel	Measured Low	Measured High	Calibrated (mmho/m) Low	Calibrated (mmho/m) High
1	17.3	474.2	9.3	967.1
2	6.3	388.4	7.6	822.1
3	3.3	259.4	5.2	566.5
4	1.9	133.0	2.6	279.5

Array Temperature 76.8 Deg F

Channel	Base Check (mmho/m) Low	Base Check (mmho/m) High	Field Check (mmho/m) Low	Field Check (mmho/m) High
1			12.3	3842.5
2			29.4	3480.1
3			29.0	3055.8
4			19.8	2083.6
Deep			18.5	2050.8
Medium			42.2	3994.8
Shallow			42.7	5058.6

Array Temperature 62.5 Deg F

Induction Constants MAI-A.A 167

Last Edited on 28-APR-2014,03:01

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 167

Field Calibration on 18-APR-2014,18:52

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

High Resolution Temperature Constants MAI-A.A 167

Last Edited on 18-APR-2014,18:52

Pre-filter Length	11

Caliper Calibration MPD-D.A 482

Base Calibration on 10-APR-2014 12:34
Field Calibration on 28-APR-2014 00:59

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	16267	3.99
2	26446	5.98
3	36593	7.97
4	46367	9.86
5	57395	11.92
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.94	7.97

Photo Density Calibration MPD-D.A 482

Base Calibration on 24-MAR-2014 13:51
Field Check on 28-APR-2014 01:04

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Background	1244	1407		
Reference 1	59945	29818	59556	30836
Reference 2	25150	2828	24941	2541

Field Check at Base

1243.8	1406.7

Field Check

1237.9	1409.9

PE Calibration

Base Calibration	Measured			Calibrated
	WS	WH	Ratio	Ratio
Background	235	1114		
Reference 1	26220	59734	0.443	0.371
Reference 2	7692	25010	0.312	0.272

Field Check at Base

235.0	1114.4

Field Check

235.4 1109.7

Density Constants MPD-D.A 482

Last Edited on 28-APR-2014,03:02

Density Source Id	18235B	
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	1.10	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
0.00	

DOWNHOLE EQUIPMENT

C:\Minimus 13.08.2113\Log Data\McCoy Patterson-O'Brate 'A' #2-17\McCoy Patterson-O'Brate 'A' #2-17_002.dta

CBH-C, Cablehead, 11 pin
CBH-C 0 LG: 2.40 ft WT: 24.3 lb OD: 2.244 in

Compact Comms Gamma
MCG-D.K 469 LG: 8.70 ft WT: 63.9 lb OD: 2.244 in

Compact Micro-log
MML-A 3 LG: 7.97 ft WT: 81.6 lb OD: 2.240 in

Compact Neutron
MDN-A.B 66 LG: 5.04 ft WT: 50.7 lb OD: 2.244 in

Compact Density/Caliper
MPD-D.A 482 LG: 9.59 ft WT: 90.4 lb OD: 2.449 in

Compact Focussed Electric
MFE-A.A 135 LG: 6.05 ft WT: 48.5 lb OD: 2.244 in

Compact Induction
MAI-A.A 167 LG: 10.81 ft WT: 48.5 lb OD: 2.244 in

Total Length: 50.55 ft Weight: 407.9 lb

42.87 ft	GRGC - Gamma Ray
39.96 ft	CGXT - MCG External Temperature
33.24 ft	MINV - Micro-inverse
33.24 ft	MNRL - Micro-normal
34.24 ft	MLTC - MML Caliper
28.45 ft	NPRL - Limestone Neutron Por.
21.21 ft	CLDC - Density Caliper
21.21 ft	AVOL - Annular Volume
21.21 ft	HVOL - Hole Volume
19.28 ft	DEN - Compensated Density
19.28 ft	DCOR - Density Correction
19.28 ft	DPRL - Limestone Density Por.
19.22 ft	PDPE - PE
13.72 ft	FEFE - Shallow FE
3.34 ft	R40O - Array Ind. One Res 40
3.34 ft	RTAO - Array Ind. One Res Rt
3.34 ft	R60O - Array Ind. One Res 60
0.23 ft	SPCG - Spontaneous Potential
Tool Zero	(0.13ft from bottom)
-0.13 ft	SMTU - DST Uphole Tension

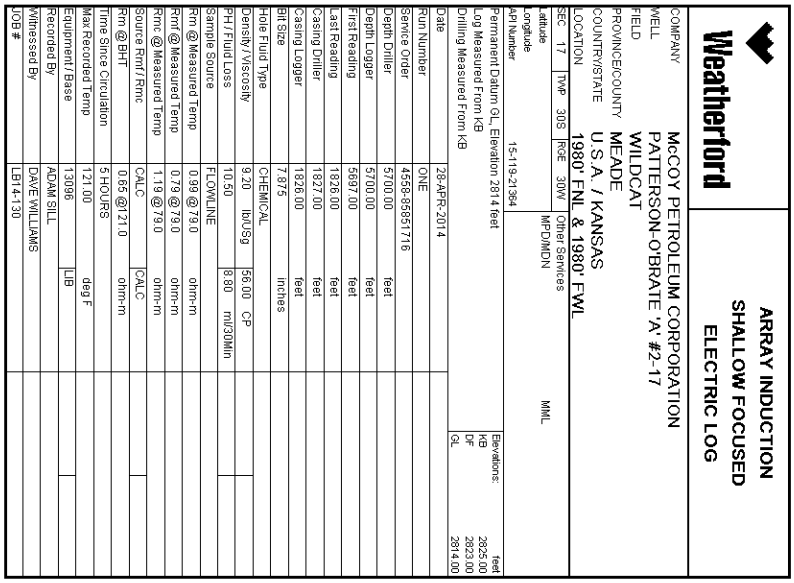
All measurements relative to tool zero.

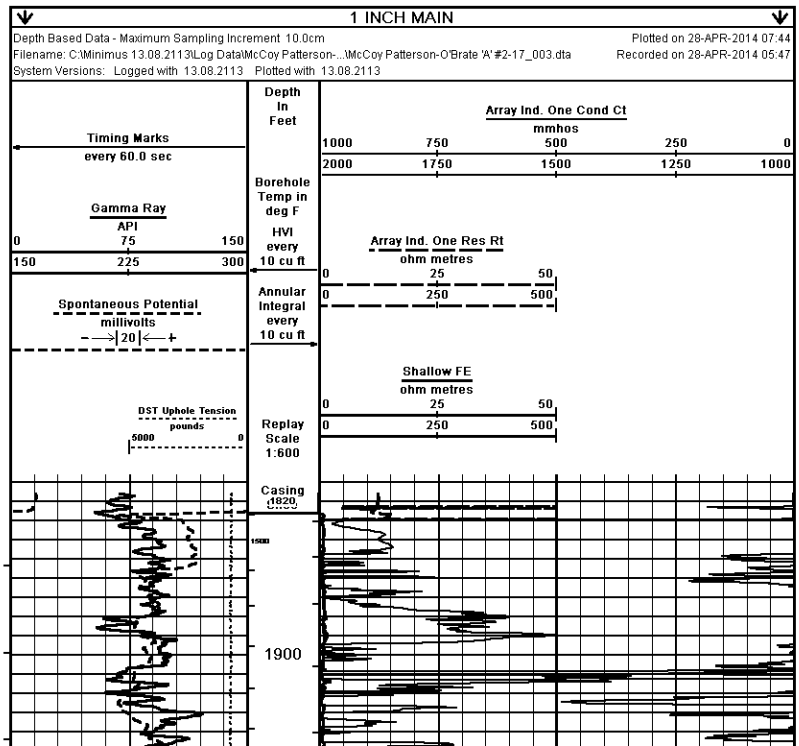
COMPANY	McCOY PETROLEUM CORPORATION
WELL	PATTERSON-O'BRATE 'A' #2-17
FIELD	WILDCAT
PROVINCE/COUNTY	MEADE
COUNTRY/STATE	U.S.A. / KANSAS

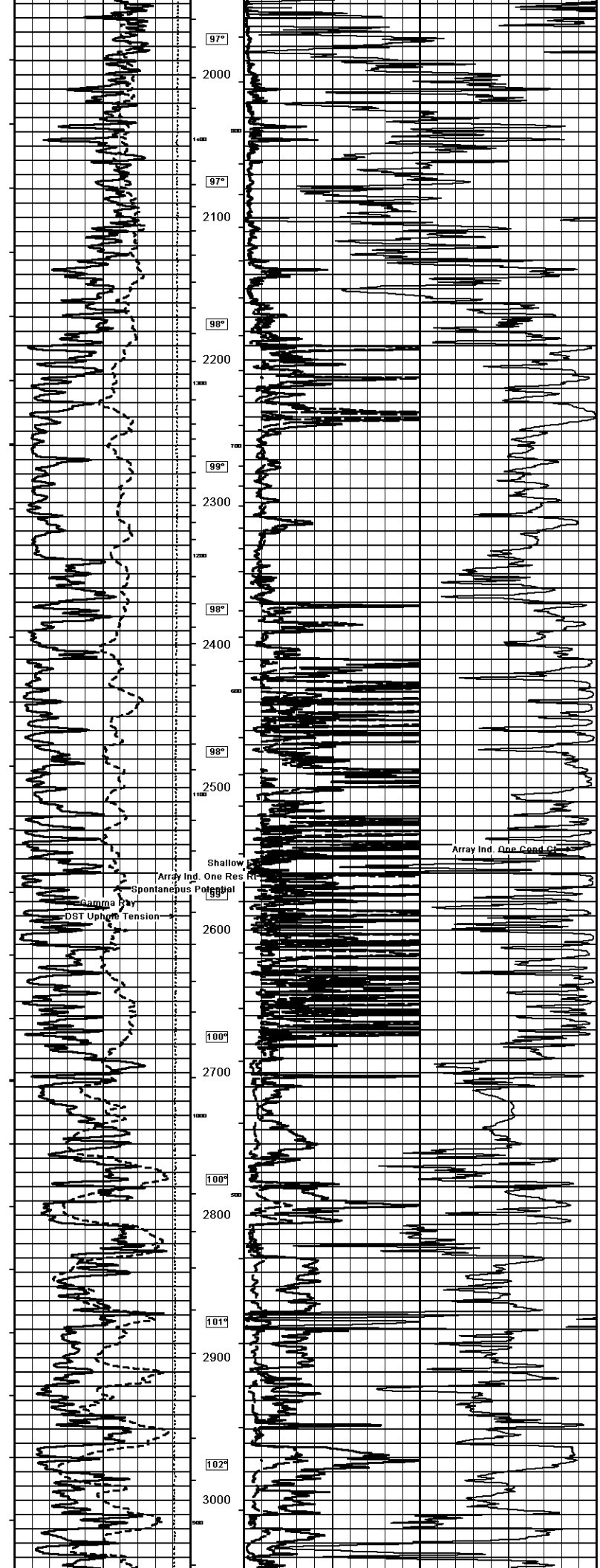
Elevation Kelly Bushing	2825.00	feet	First Reading	5697.00	feet
Elevation Drill Floor	2823.00	feet	Depth Driller	5700.00	feet
Elevation Ground Level	2814.00	feet	Depth Logger	5700.00	feet

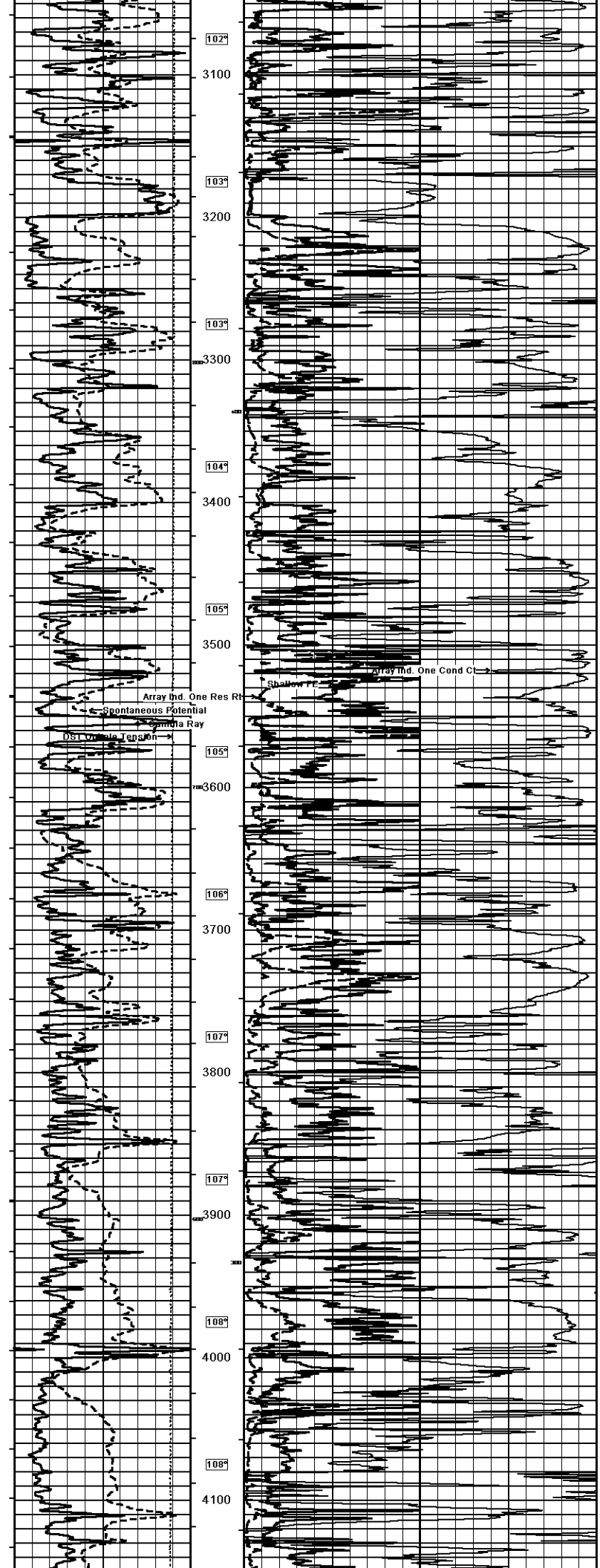
Weatherford®

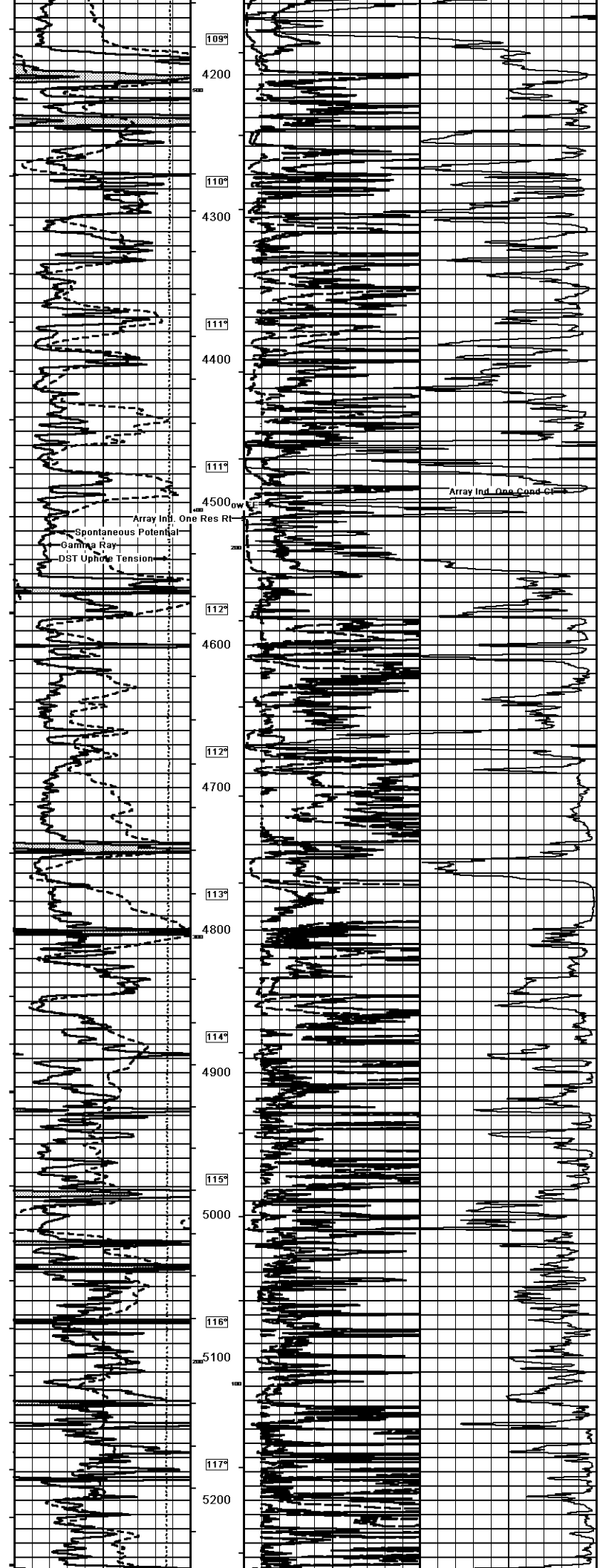
ARRAY INDUCTION
SHALLOW FOCUSED
ELECTRIC LOG

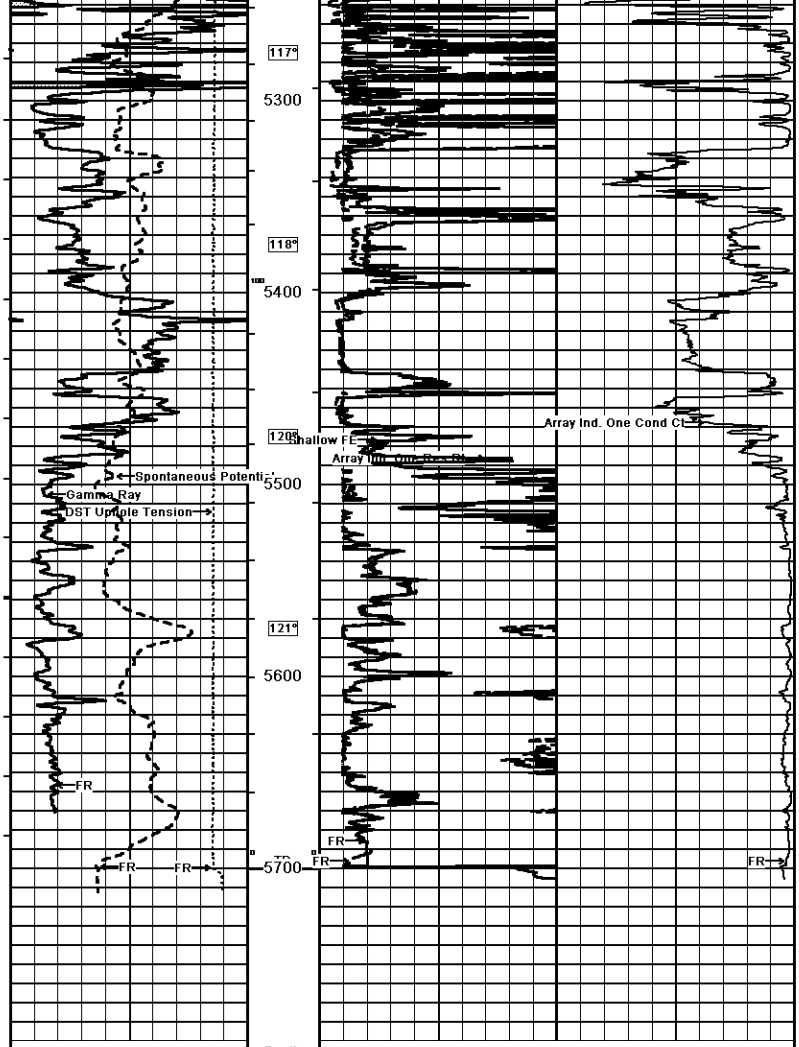





97°
2000
97°
2100
98°
2200
99°
2300
99°
2400
98°
2500
Array Ind. One Cond Cl
Shallow
Array Ind. One Res R
Spontaneous Potential
99°
Gamma Ray
DST Uphole Tension
2600
100°
2700
100°
2800
101°
2900
102°
3000


102°
3100
103°
3200
103°
3300
104°
3400
105°
3500
Array Ind. One Cond Ct
Shallow FE
Array Ind. One Res Rt
Spontaneous Potential
Gamma Ray
DST Cmple Tension
105°
3600
106°
3700
107°
3800
107°
3900
108°
4000
108°
4100


109°
4200
110°
4300
111°
4400
111°
4500
Array Ind. One Res Rt
Spontaneous Potential
Gamma Ray
DST Uphole Tension
Array Ind. One Cond Ct
112°
4600
112°
4700
113°
4800
114°
4900
115°
5000
116°
5100
117°
5200



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 28-APR-2014 07:44

Filename: C:\Minimus 13.08.2113\Log Data\McCoy Patterson-...\McCoy Patterson-O'Brate 'A' #2-17_003.dta — Recorded on 28-APR-2014 05:47

System Versions: Logged with 13.08.2113 Plotted with 13.08.2113

1 INCH MAIN

COMPANY	McCOY PETROLEUM CORPORATION
WELL	PATTERSON-O'BRATE 'A' #2-17
FIELD	WILDCAT
PROVINCE/COUNTY	MEADE
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	2825.00	feet	First Reading	5697.00	feet
Elevation Drill Floor	2823.00	feet	Depth Driller	5700.00	feet
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