ARRAY INDUCTION
SHALLOW FOCUSED
ELECTRIC LOG

Weatherford®

COMPANY	CIMAREX ENERGY CO.
WELL	HAMKER 20-4
FIELD	WILDCAT
PROVINCE/COUNTY	HASKELL
COUNTRY/STATE	U.S.A. / KANSAS
LOCATION	330' FSL & 1650' FWL SW SE SW

SEC	TWP	RGE	Other Services
30	30S	31W	MPD/MDN MML

API Number 15-081-22028
Permit Number

Permanent Datum GL, Elevation 2849 feet
Log Measured From KB
Drilling Measured From KB @ 8 FEET

Elevations:	feet
KB	2857.00
DF	2855.00
GL	2849.00

Date	05-SEP-2013			
Run Number	ONE			
Service Order	3541035			
Depth Driller	5559.00	feet		
Depth Logger	5558.00	feet		
First Reading	5555.00	feet		
Last Reading	1860.00	feet		
Casing Driller	1860.00	feet		
Casing Logger	857.00	feet		
Bit Size	7.875	inches		
Hole Fluid Type	GEL			
Density / Viscosity	9.00 lb/USg		65.00 CP	
PH / Fluid Loss	11.80		5.80 ml/30Min	
Sample Source	FLOW LINE			
Rm @ Measured Temp	1.50 @ 60.0	ohm-m		
Rmf @ Measured Temp	1.20 @ 60.0	ohm-m		
Rmc @ Measured Temp	1.80 @ 60.0	ohm-m		
Source Rmf / Rmc	CALC		CALC	
Rm @ BHT	0.70 @126.0	ohm-m		
Time Since Circulation	5 HRS			
Max Recorded Temp	126.00	deg F		
Equipment / Base	13244		KANSAS	
Recorded By	D. COLE			
Witnessed By	T. KOLODZIEJ		K. MARTIN	
JOB #	LB 13-250			

BOREHOLE RECORD

Last Edited: 05-SEP-2013 00:33

Bit Size inches	Depth From feet	Depth To feet
7.875	1860.00	5559.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	1860.00	24.00

REMARKS

- SOFTWARE ISSUE: WLS 13.05.9583.
- RUN ONE: MCG, MML, MDN, MPD, MIE, MAI RAN IN COMBINATION.
  - HARDWARE: DUAL BOWSPRING USED ON MDN.
    TWO 0.5 INCH STANDOFFS USED ON MAI AND MFE.
- 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 4000 FEET: 540 CU.FT.
- ANNULAR HOLE VOLUME WITH 5.5 INCH PRODUCTION CASING FROM TD 4000 FEET: 290 CU.FT.
- RIG: TOM CAT #4

- ENGINEER: D.COLE

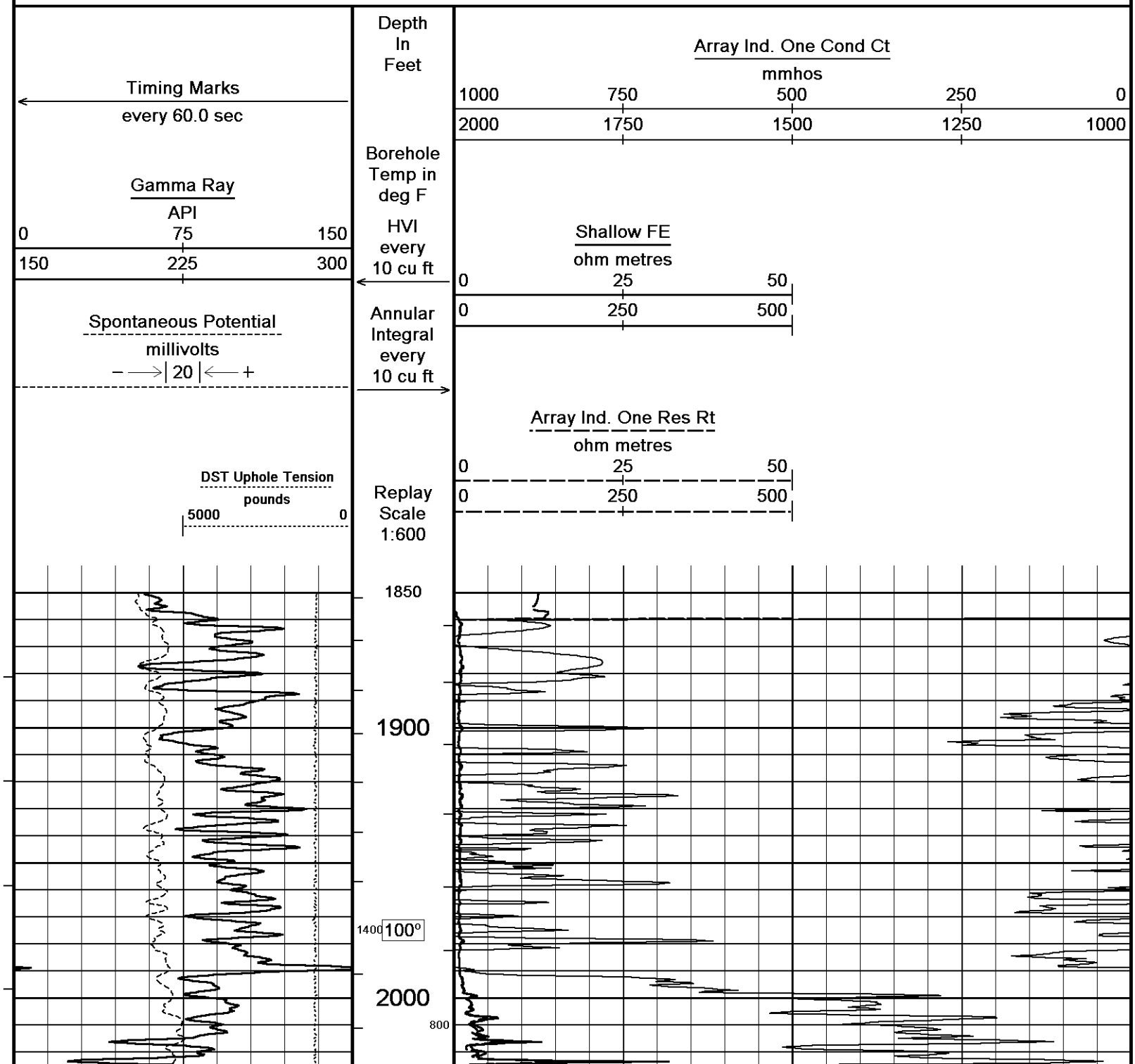
- OPERATOR: C. RAMIREZ

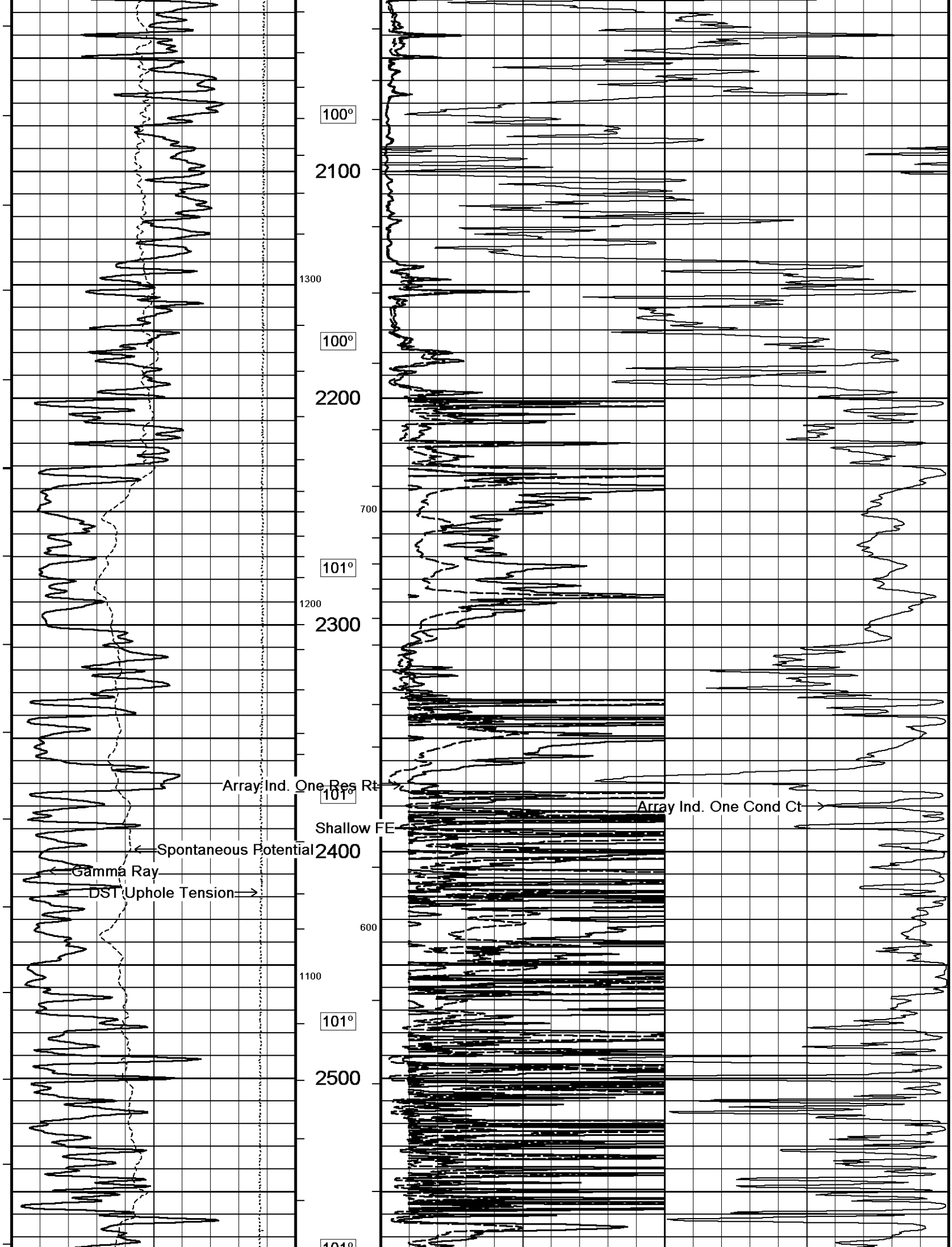
- DECLINATION: 6.22

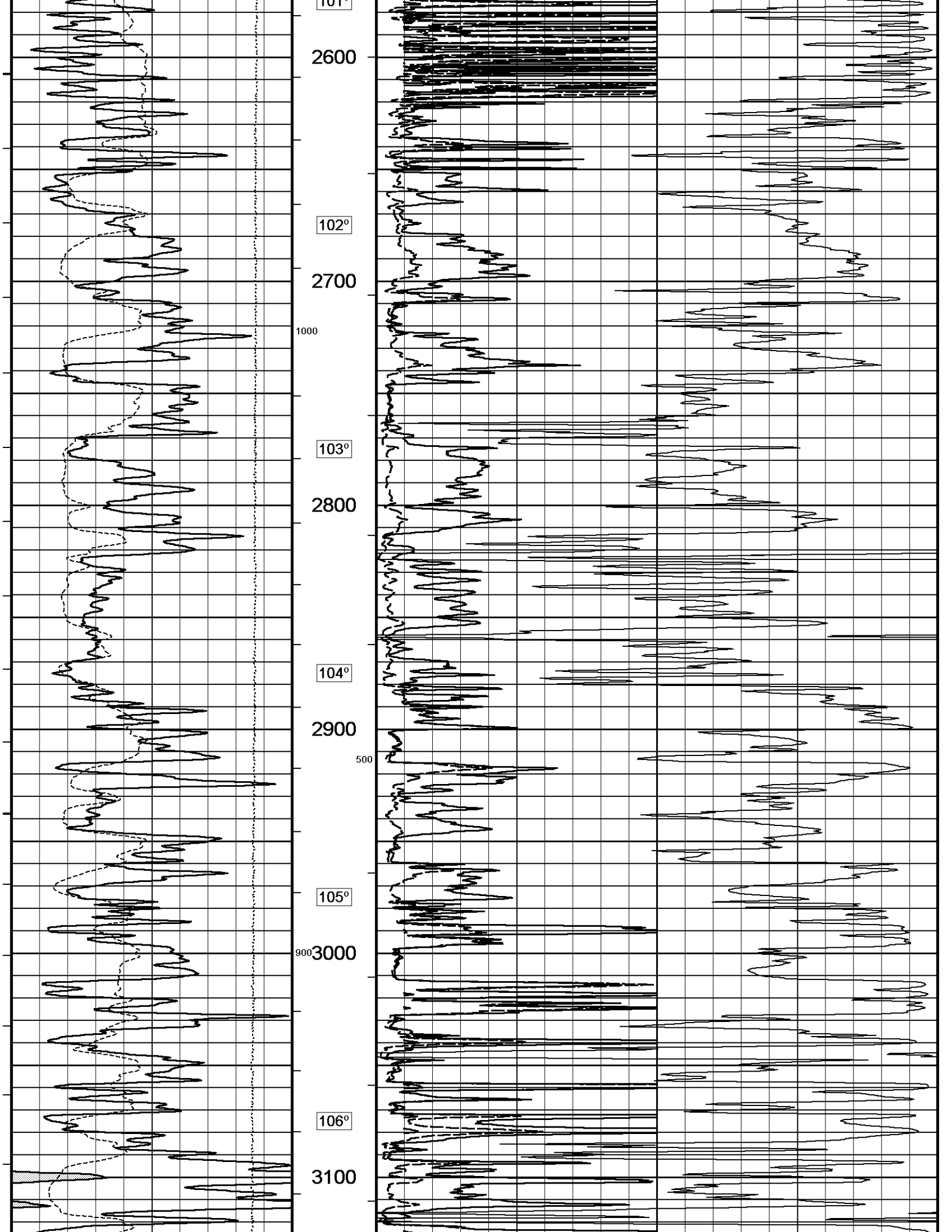
- LAT / LON: 37.41960N -100.75081W

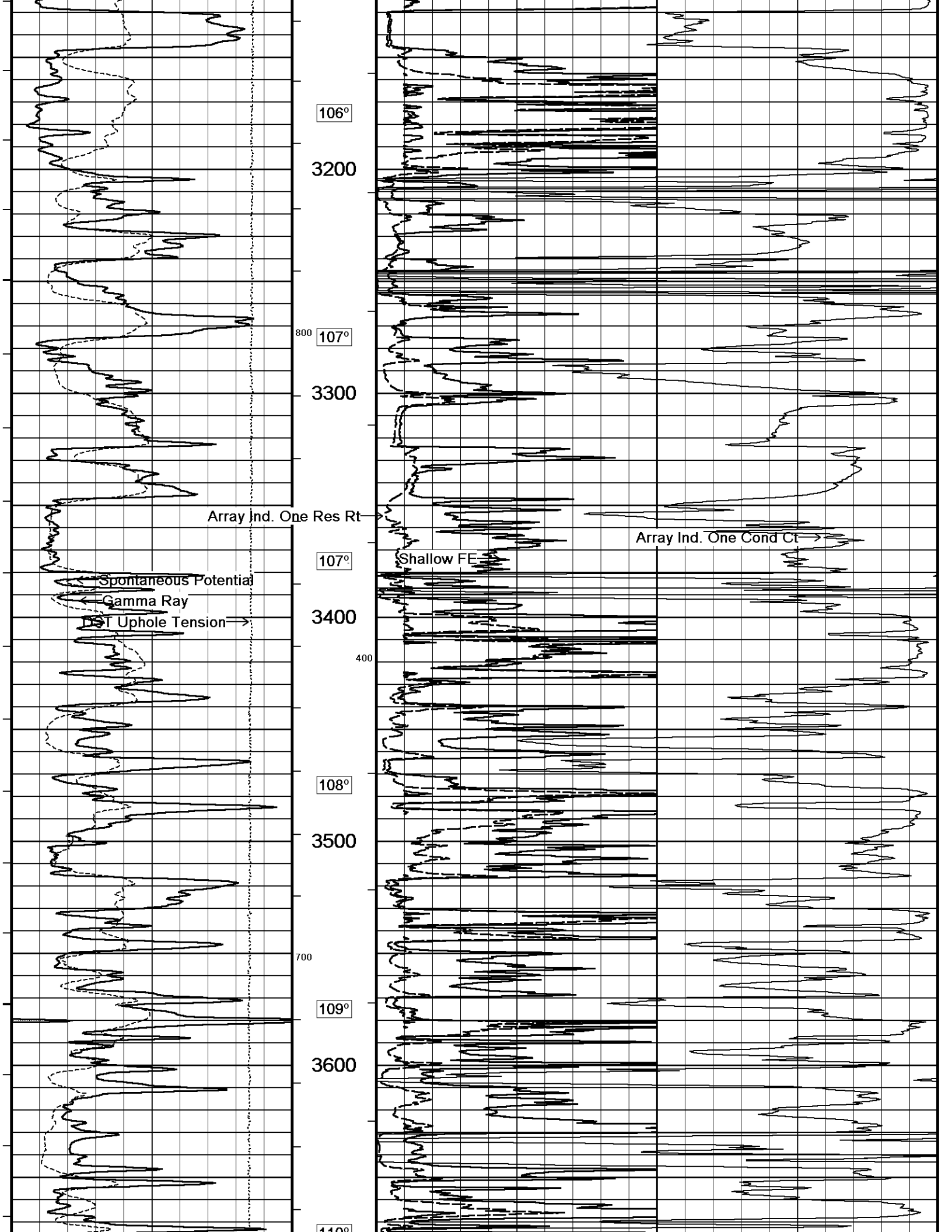
2 INCH MAIN

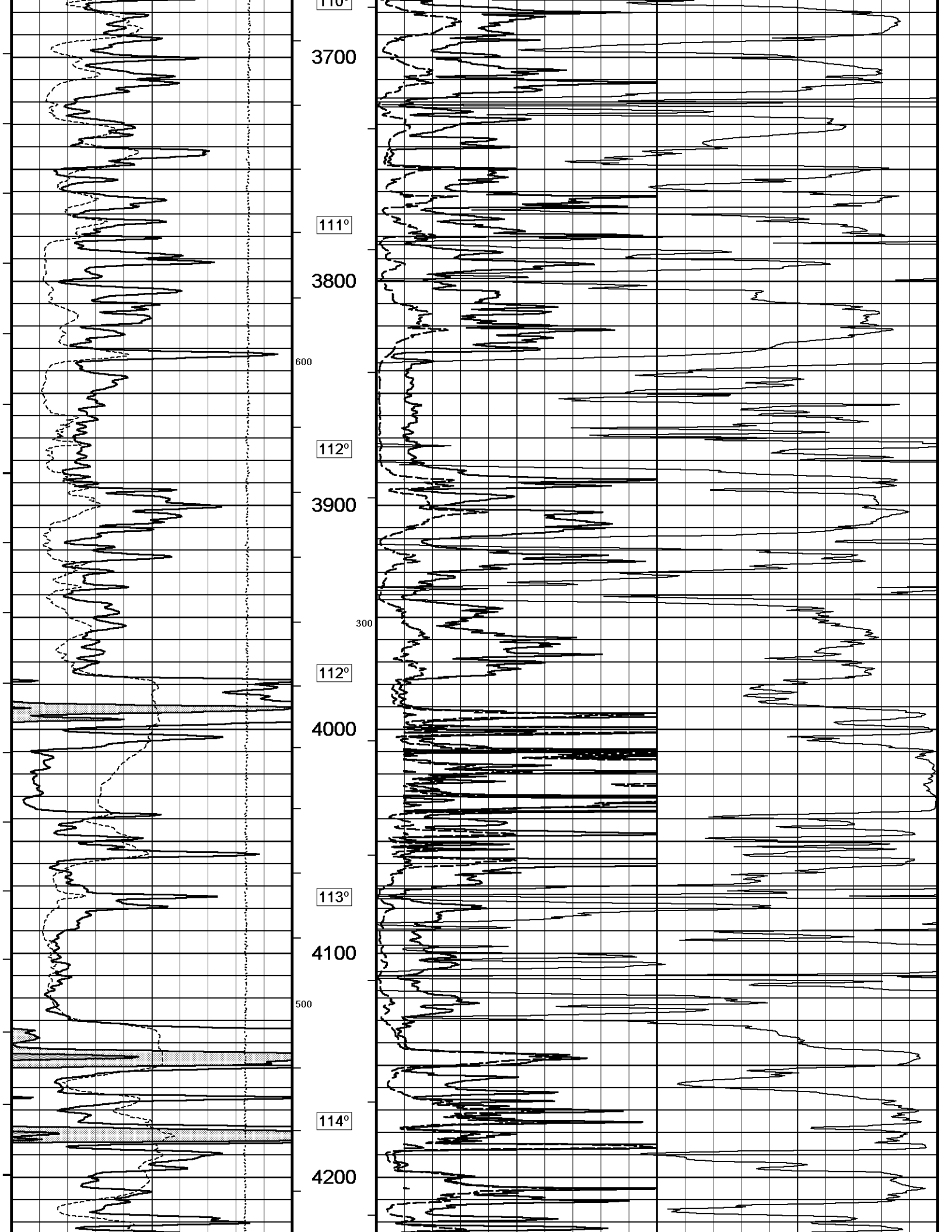
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 05-SEP-2013 08:32
Filename: C:\Minimus 13.05.9583\Logs\Cimarex Hamker 20-4\Cimarex Hamker 20-4 MAIN.dta
Recorded on 05-SEP-2013 05:26
System Versions: Logged with 13.05.9583 Plotted with 13.05.9583

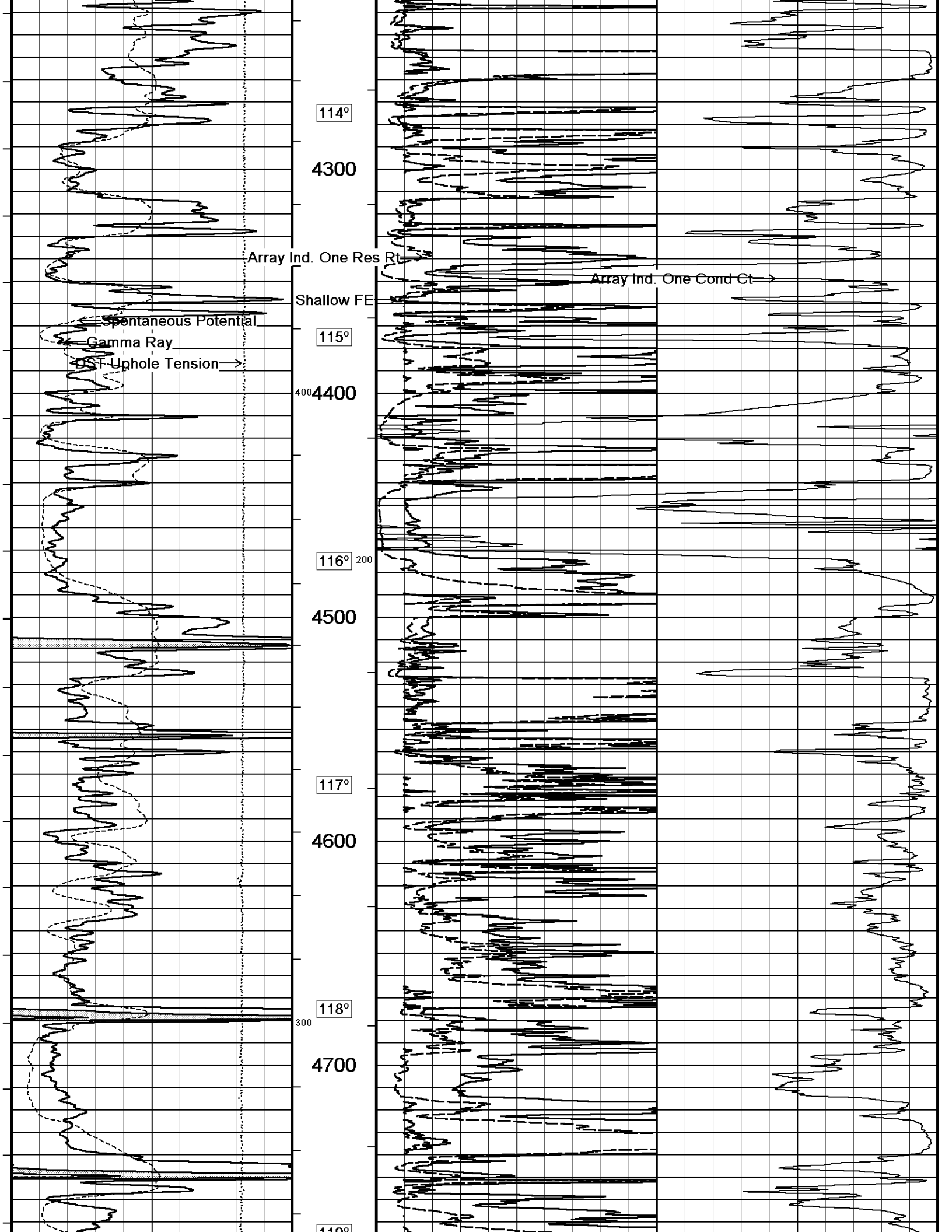


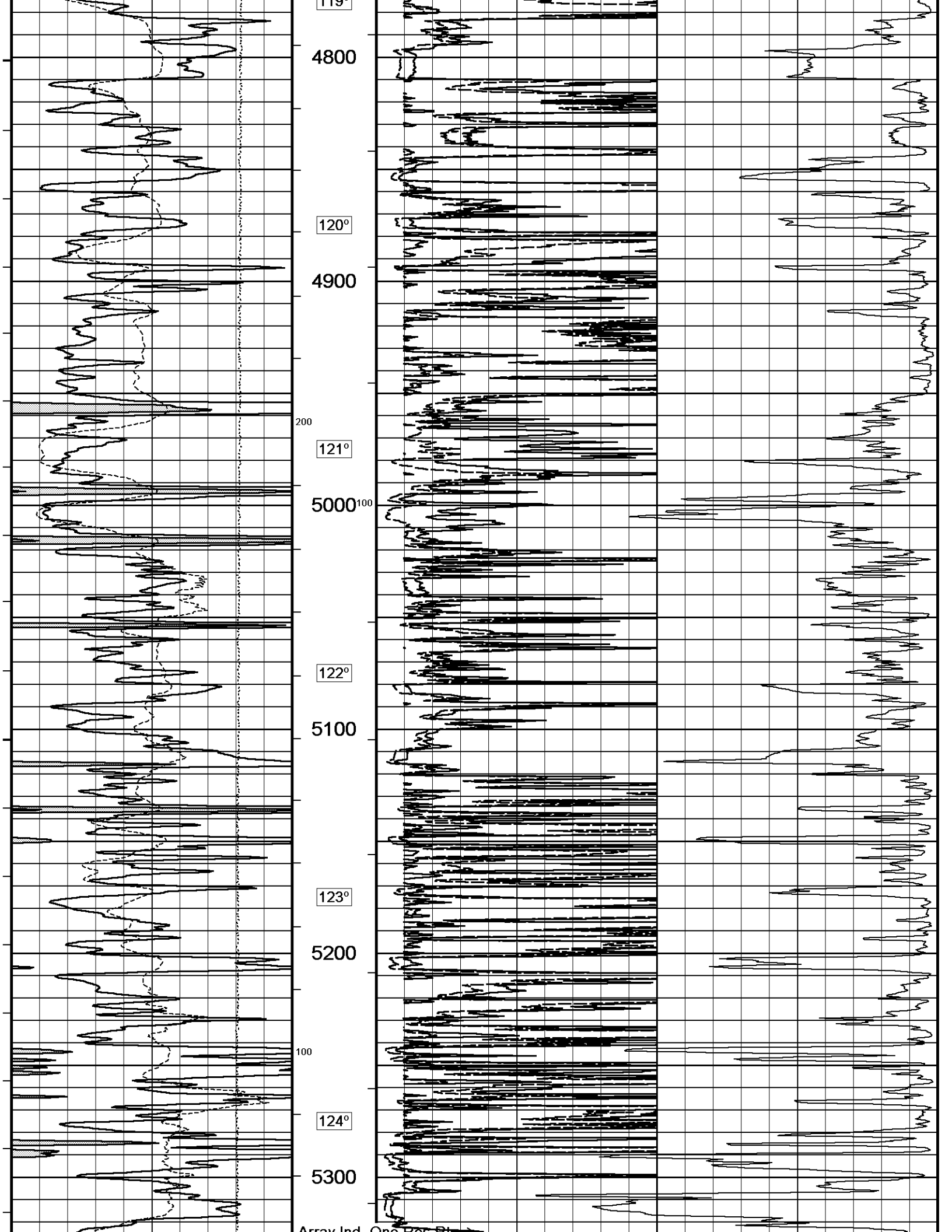

100°
2100
1300
100°
2200
700
101°
1200
2300
Array Ind. One Res Rt
101°
Array Ind. One Cond Ct
Shallow FE
Spontaneous Potential
2400
Gamma Ray
DST Uphole Tension
600
1100
101°
2500

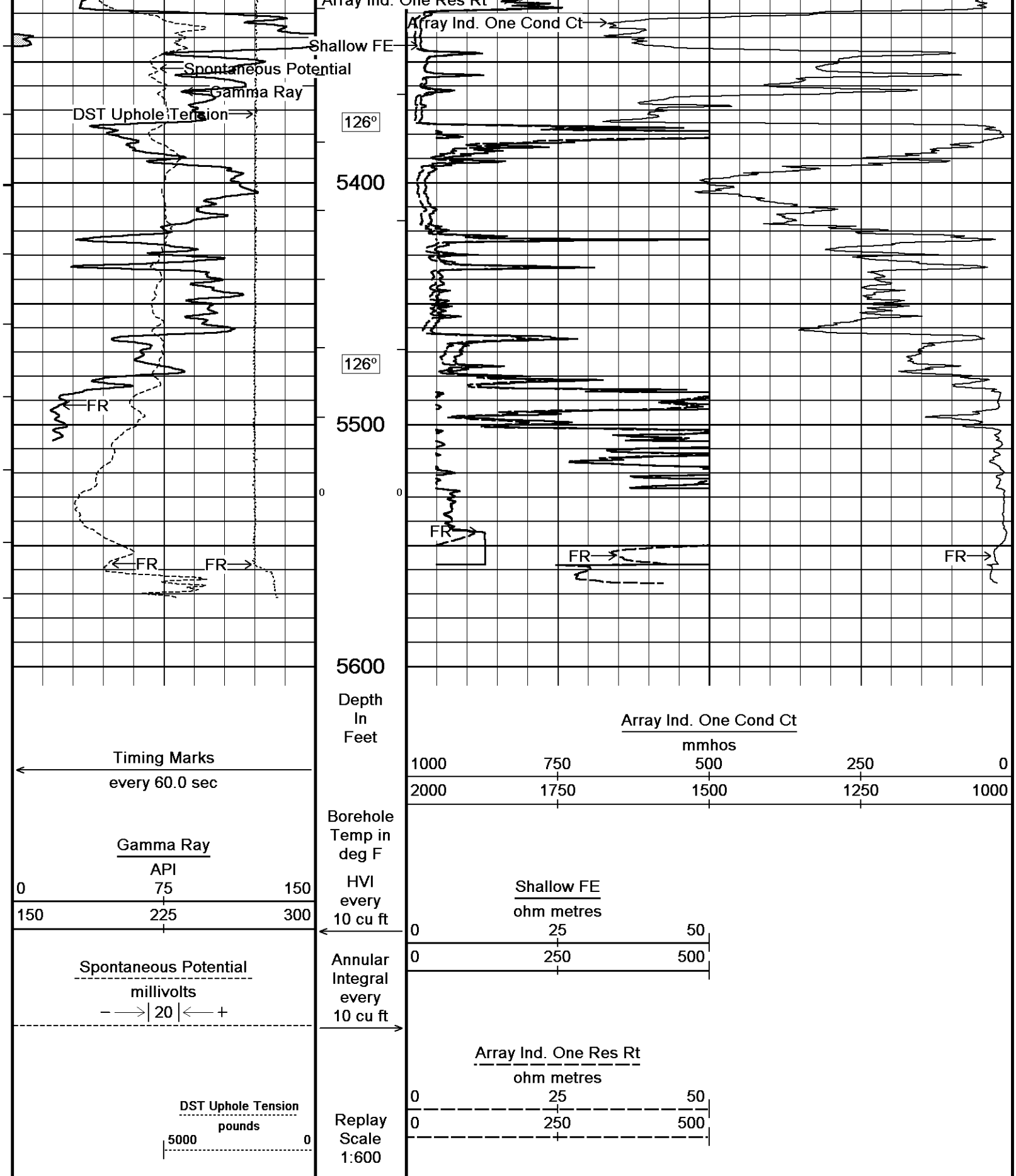

101°
2600
102°
2700
1000
103°
2800
104°
2900
500
105°
900
3000
106°
3100


106°
3200
800
107°
3300
Array Ind. One Res Rt
Array Ind. One Cond Ct
107°
Shallow FE
Spontaneous Potential
Gamma Ray
DST Uphole Tension
3400
400
108°
3500
700
109°
3600


110°
3700
111°
3800
600
112°
3900
300
112°
4000
113°
4100
500
114°
4200


114°
4300
Array Ind. One Res Rt
Array Ind. One Cond Ct
Shallow FE
Spontaneous Potential
115°
Gamma Ray
DST Uphole Tension
400
4400
116°
200
4500
117°
4600
118°
300
4700


119°
4800
120°
4900
200
121°
5000
100
122°
5100
123°
5200
100
124°
5300



Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 05-SEP-2013 08:32
Filename: C:\Minimus 13.05.9583\Logs\Cimarex Hamker 20-4\Cimarex Hamker 20-4 MAIN.dta
Recorded on 05-SEP-2013 05:26
System Versions: Logged with 13.05.9583 Plotted with 13.05.9583

2 INCH MAIN

5 INCH MAIN

5 INCH MAIN

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

Plotted on 05-SEP-2013 08:32
Recorded on 05-SEP-2013 05:26

Timing Marks
every 60.0 sec

Gamma Ray
API
0 75 150
150 225 300

Spontaneous Potential
millivolts
− → | 20 | ← +

DST Uphole Tension
pounds
5000 0

Depth in Feet

Borehole Temp in deg F

HVI every 10 cu ft

Annular Integral every 10 cu ft

Replay Scale 1:240

Shallow FE
ohm metres
0.20 1 10 100 1000 2000

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

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

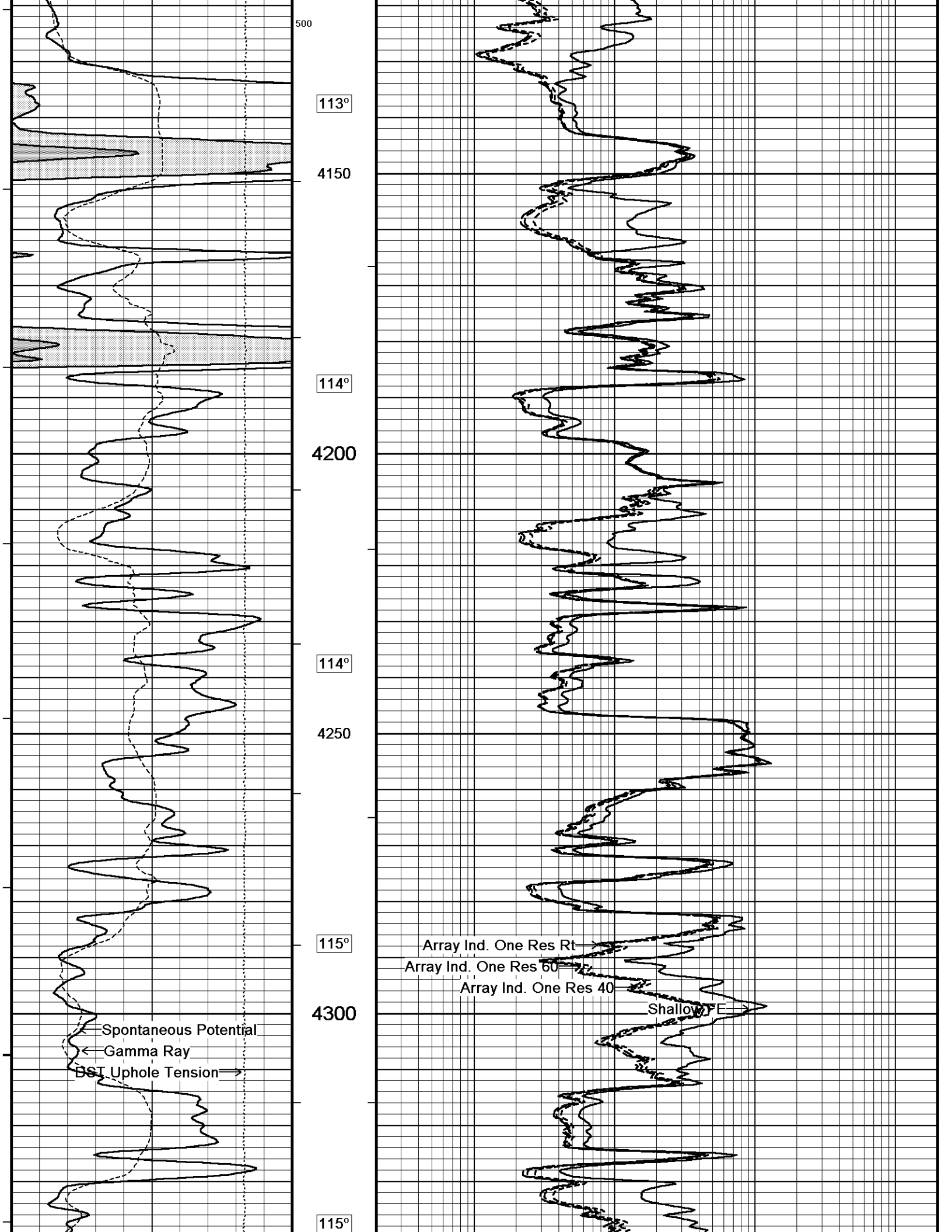
4000

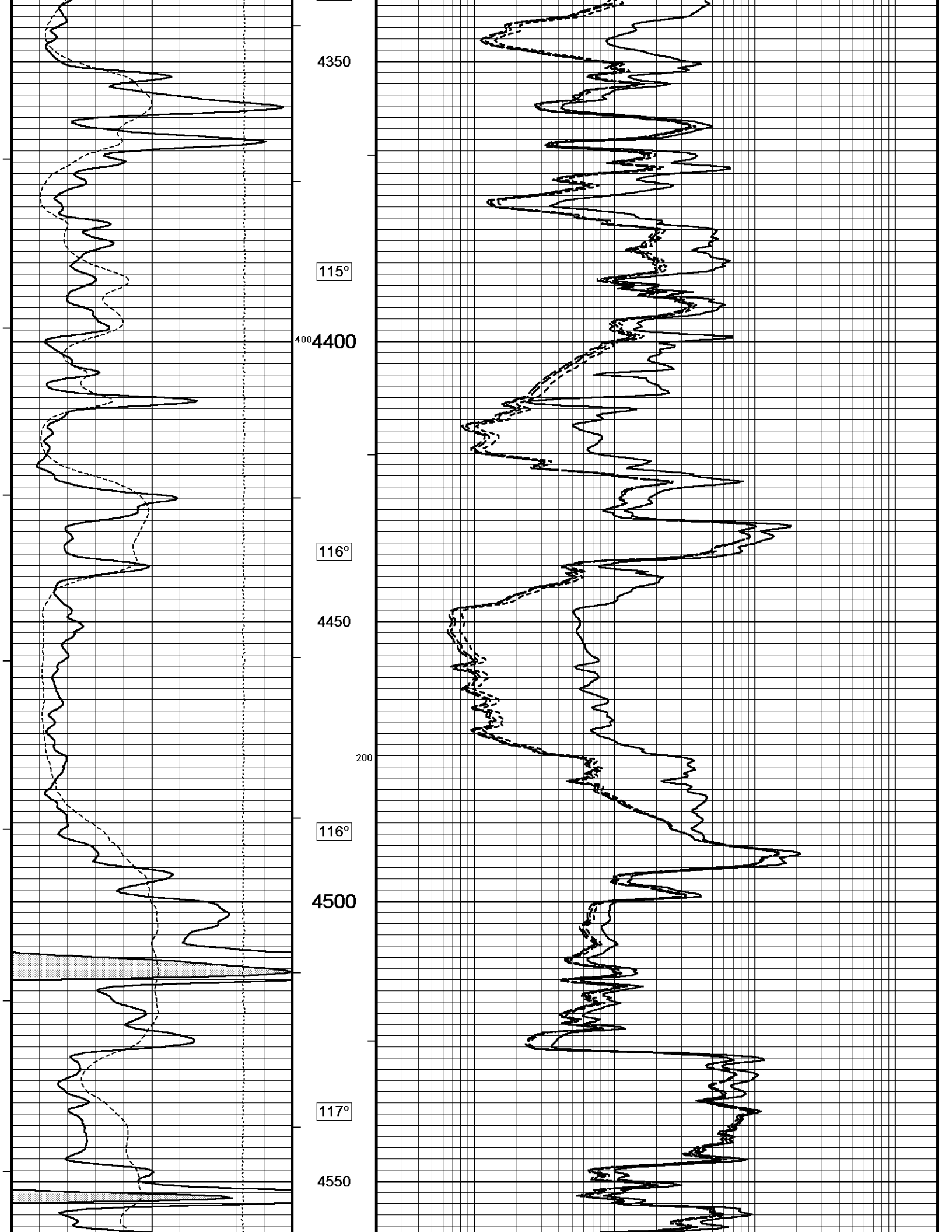
113°

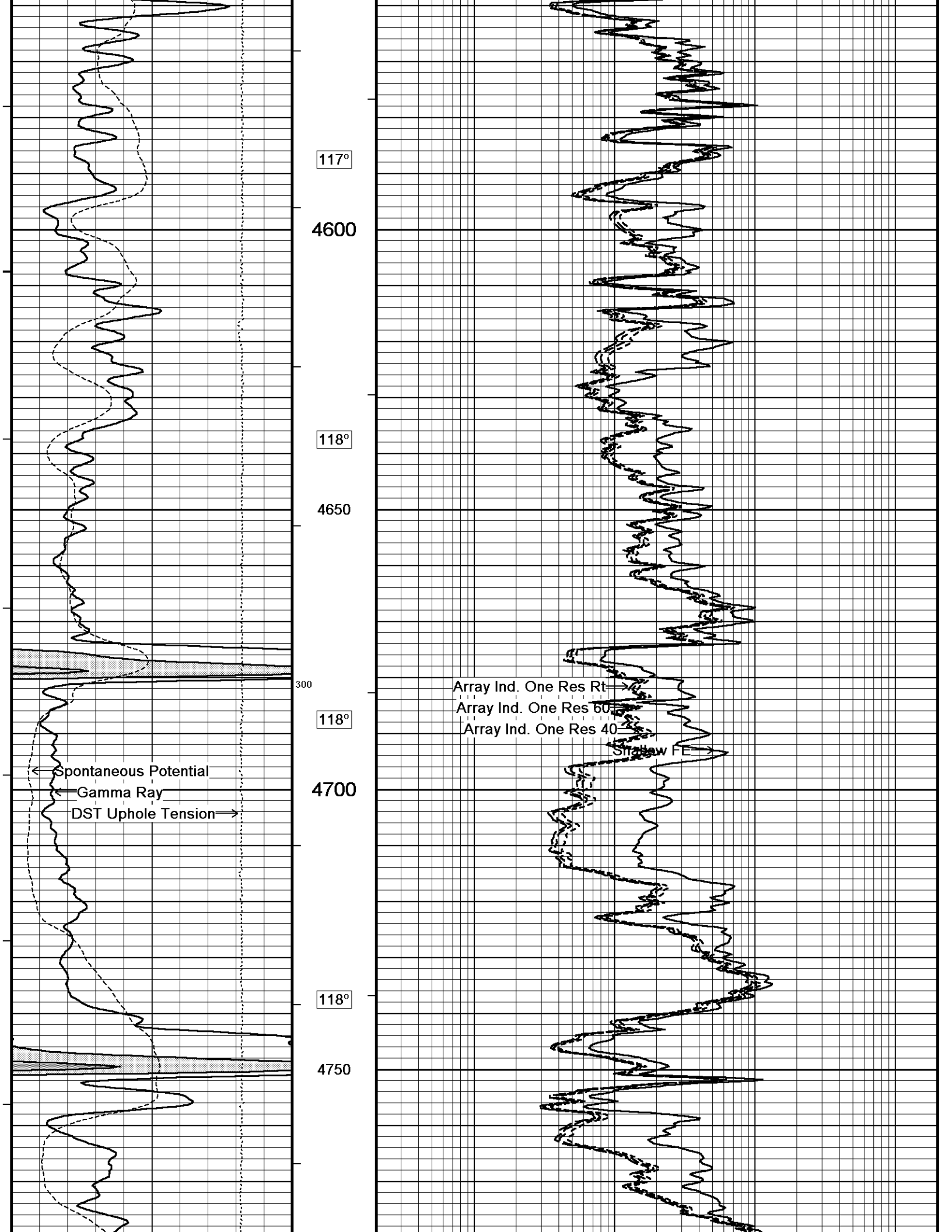
4050

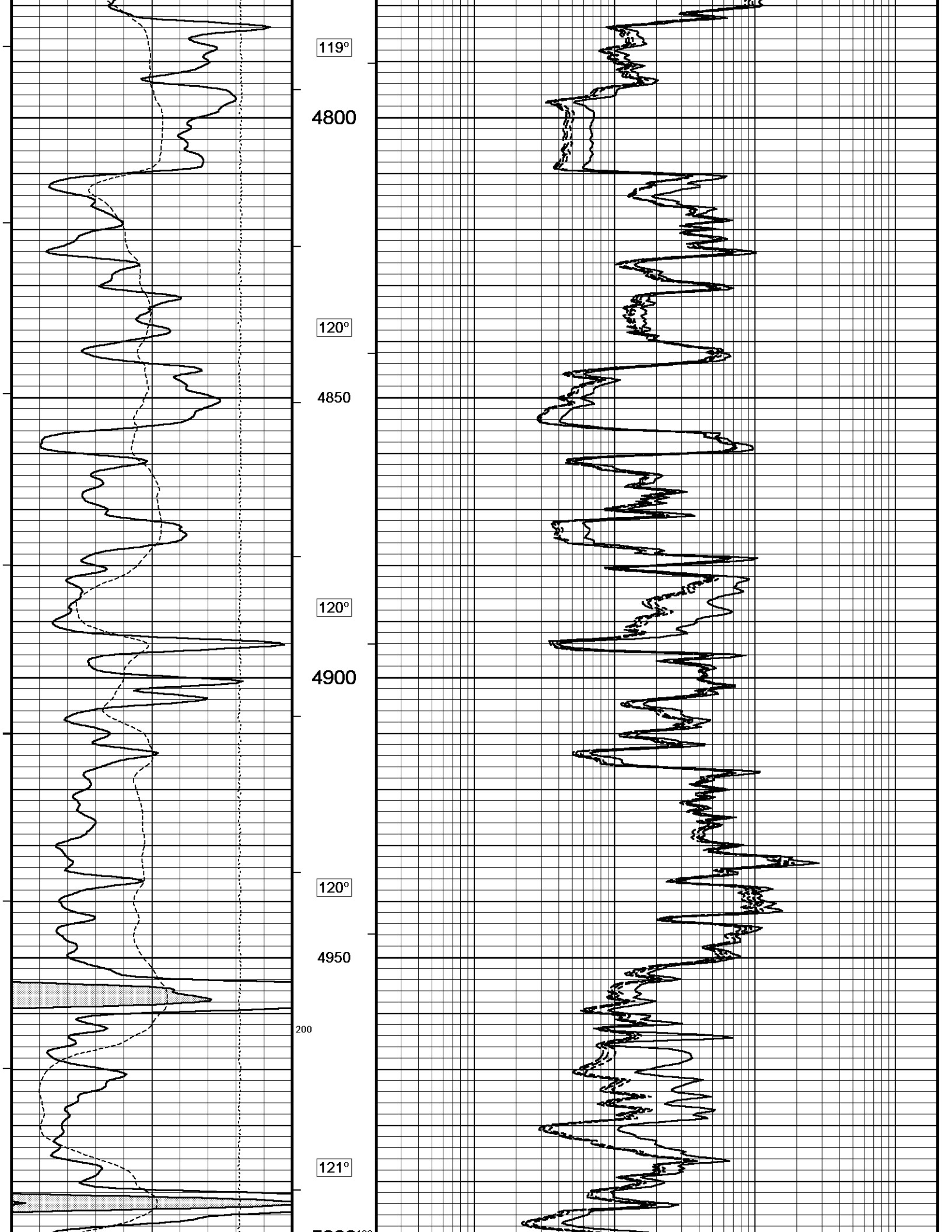
113°

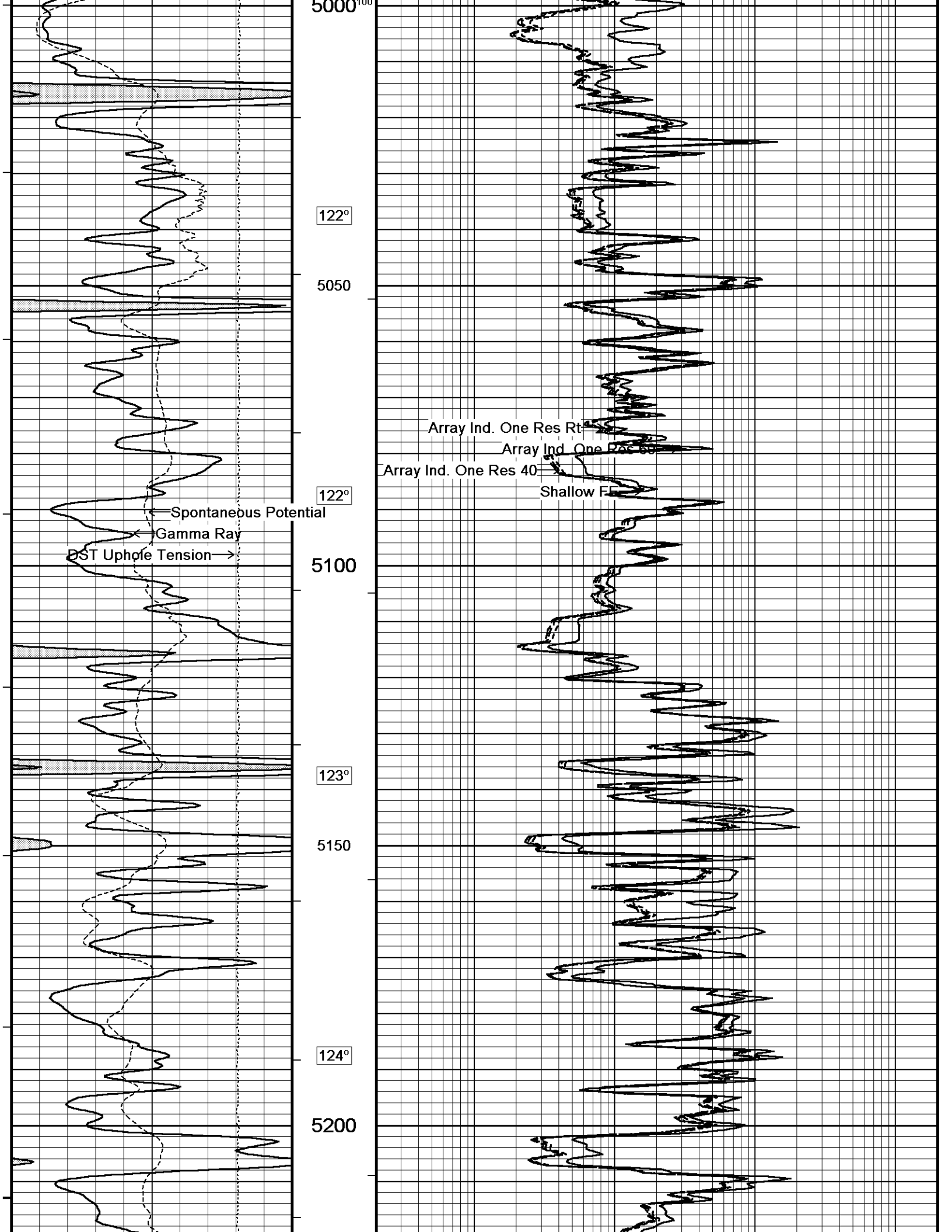
4100

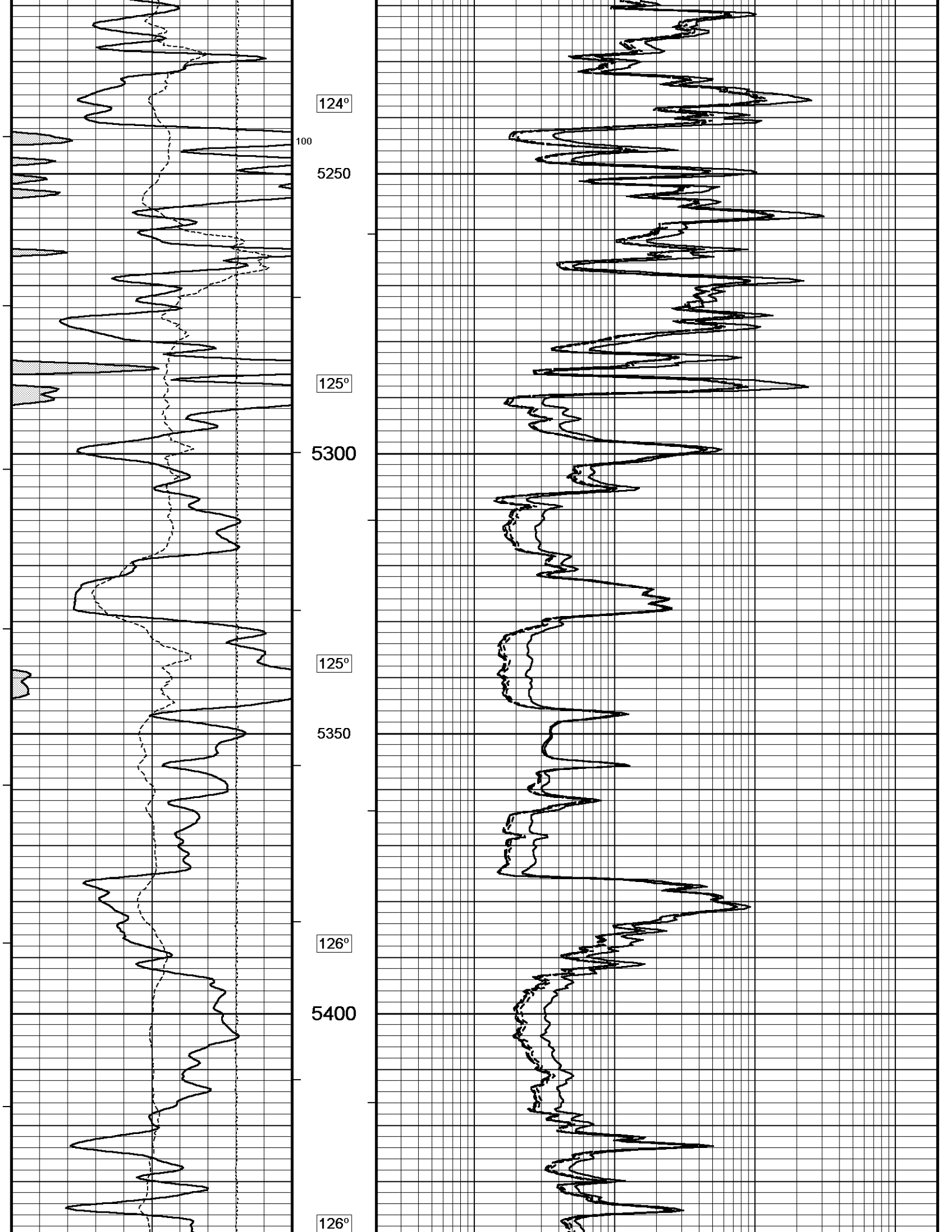

500
113°
4150
114°
4200
114°
4250
115°
4300
115°
Spontaneous Potential
Gamma Ray
DSI Uphole Tension
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FE

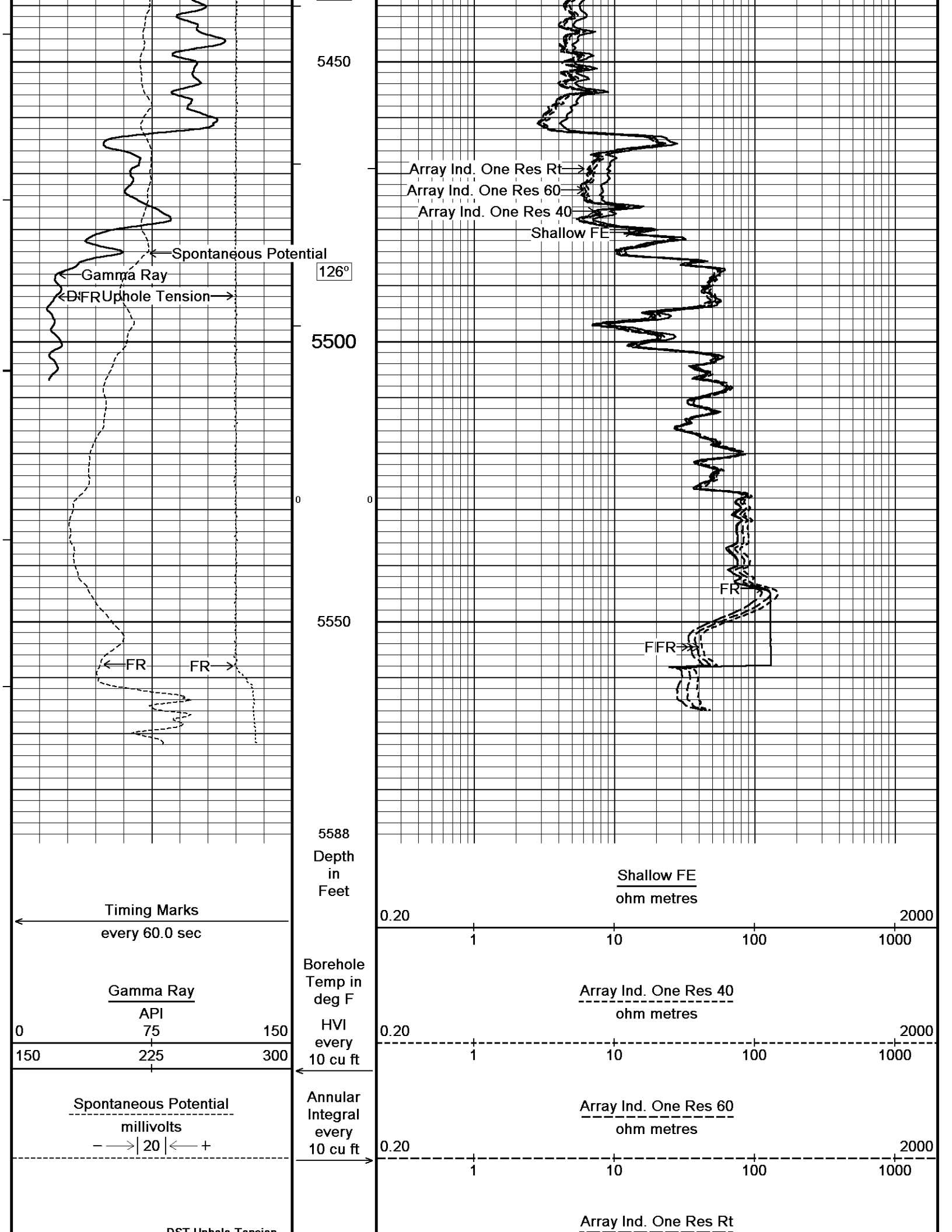

4350
115°
400
4400
116°
4450
200
116°
4500
117°
4550


117°
4600
118°
4650
300
118°
Spontaneous Potential
Gamma Ray
DST Uphole Tension
4700
118°
4750
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FE


119°
4800
120°
4850
120°
4900
120°
4950
200
121°


5000
122°
5050
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow F
122°
Spontaneous Potential
Gamma Ray
DST Uphole Tension
5100
123°
5150
124°
5200


124°
100
5250
125°
5300
125°
5350
126°
5400
126°


5450
5500
5550
5588
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FE
Spontaneous Potential
Gamma Ray
DIFR Uphole Tension
126°
FR
FR
FR
FFR
0
0
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
Shallow FE
ohm metres
0.20
2000
1
10
100
1000
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

DST Uphole Tension
pounds
5000 0

Replay Scale 1:240

ohm metres
0.20 2000
1 10 100 1000

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5 INCH MAIN

REPEAT SECTION

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 05-SEP-2013 08:32
Filename: C:\Minimus 13.05.9583\Logs\Cimarex Hamker 20-4\Cimarex Hamker 20-4 REPEAT.dta
Recorded on 05-SEP-2013 03:33
System Versions: Logged with 13.05.9583 Plotted with 13.05.9583

Timing Marks
every 60.0 sec

Gamma Ray
API
0 75 150
150 225 300

Spontaneous Potential
millivolts
− | 20 | +

Depth in Feet

Borehole Temp in deg F

HVI every 10 cu ft

Annular Integral every 10 cu ft

Shallow FE
ohm metres
0.20 2000
1 10 100 1000

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

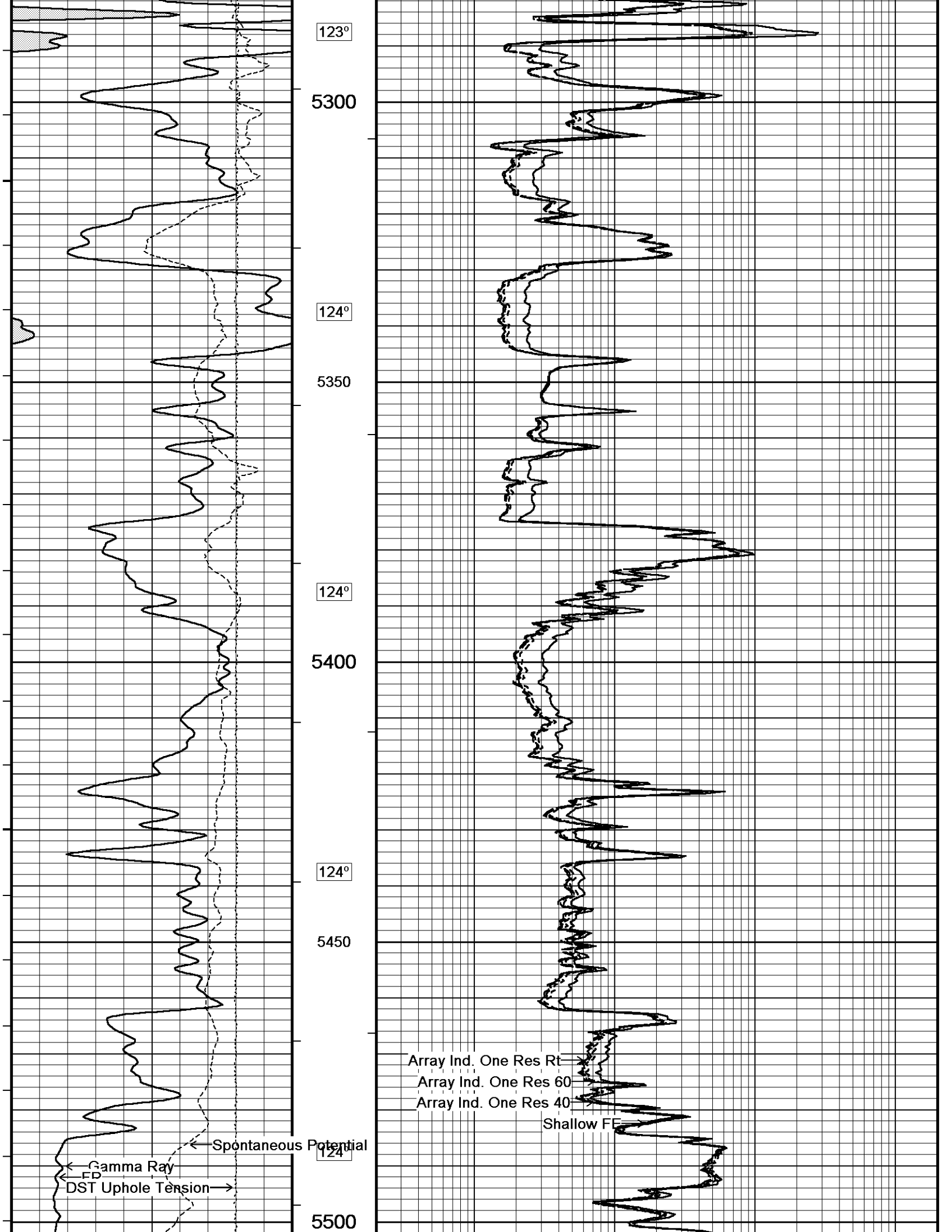
Replay Scale 1:240

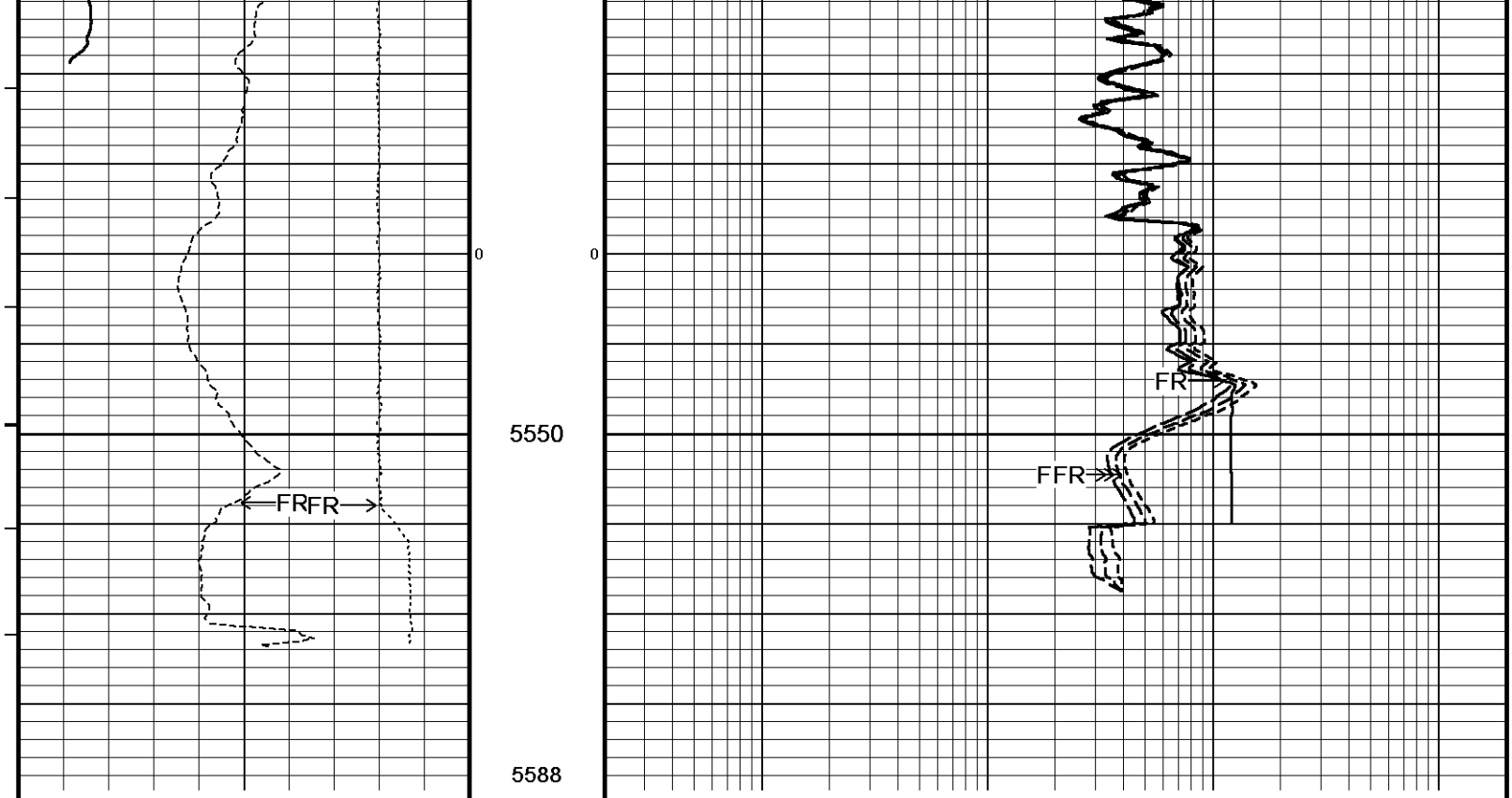
5200

122°

100

5250


123°
5300
124°
5350
124°
5400
124°
5450
124°
5500
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FE
Spontaneous Potential
Gamma Ray
FE
DST Uphole Tension



5588

Depth in Feet

Timing Marks
every 60.0 sec

Gamma Ray
API
0 75 150
150 225 300

Spontaneous Potential
millivolts
– → | 20 | ← +

DST Uphole Tension
pounds
5000 0

Borehole Temp in deg F

HVI every 10 cu ft

Annular Integral every 10 cu ft

Replay Scale 1:240

Shallow FE
ohm metres
0.20 2000
1 10 100 1000

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

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 05-SEP-2013 08:32
Filename: C:\Minimus 13.05.9583\Logs\Cimarex Hamker 20-4\Cimarex Hamker 20-4 REPEAT.dta
Recorded on 05-SEP-2013 03:33
System Versions: Logged with 13.05.9583 Plotted with 13.05.9583

REPEAT SECTION

BEFORE SURVEY CALIBRATION

C:\Minimus 13.05.9583\Logs\Cimarex Hamker 20-4\Cimarex Hamker 20-4 REPEAT.dta

General Constants All 000

Last Edited on 05-SEP-2013,00:24

General Parameters

Mud Resistivity	1.500	ohm-metres
Mud Resistivity Temperature	60.000	degrees F
Water Level	0.000	feet

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	MIE Caliper X	

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 443

Field Calibration on 28-AUG-2013 04:17

	Measured	Calibrated (API)
Background	53	36
Calibrator (Gross)	1112	761
Calibrator (Net)	1059	725

Gamma Constants MCG-D.K 443

Last Edited on 05-SEP-2013,00:25

Gamma Calibrator Number	GRC38	
Mud Density	1.08	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 443

Field Calibration on 28-AUG-2013,04:08

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

High Resolution Temperature Constants MCG-D.K 443

Last Edited on 28-AUG-2013,04:08

Pre-filter Length	11

Accelerometer Parameters MIE-A.A 209

Date Of Last Accelerometer Calibration 20-FEB-2013,10:48

	X Accelerometer	Y Accelerometer	Z Accelerometer
Slope	-1.113935	-1.111537	-1.102344
Offset	0.004254	0.005471	0.009082

Accelerometer Constants MIE-A.A 209

Last Edited on 18-JUN-2013,10:20

Accelerometer Calibrator Number 000

Accelerometer Temperature Characterisation

X Accelerometer

Serial Number	826			
Calibration Date	18-Mar-2009			
	B0	B1	B2	B3
Bias(g)	0.00000e+000	2.32377e-005	-1.87334e-008	9.07324e-011
	SF0	SF1	SF2	SF3
Scale Factor(mA/g)	3.00000e+000	2.71389e-004	4.55326e-007	4.58364e-010

Y Accelerometer

Serial Number	617			
Calibration Date	11-May-2008			
	B0	B1	B2	B3
Bias(g)	0.00000e+000	1.76675e-005	6.93464e-010	2.98691e-011
	SF0	SF1	SF2	SF3
Scale Factor(mA/g)	3.00000e+000	2.56882e-004	5.72598e-007	2.37496e-010

Z Accelerometer

Serial Number	844

Calibration Date	20-Mar-2009			
	B0	B1	B2	B3
Bias(g)	0.00000e+000	-1.21769e-005	-1.46867e-008	-6.44015e-011
	SF0	SF1	SF2	SF3
Scale Factor(mA/g)	3.00000e+000	2.73539e-004	4.65657e-007	2.88996e-010

Caliper Calibration MIE-A.A 209

Base Calibration on 18-JUN-2013 10:29
Field Calibration on 25-AUG-2013 20:26

Base Calibration

Reading No	Pads 1-5 Meas.	Pads 3-7 Meas.	Calibrator Size (in)
1	25996	27327	5.98
2	35112	36609	7.97
3	43537	44699	9.86
4	54458	53758	11.92
5	0	0	0.00

Reading No	Pad 2 Meas.	Pad 4 Meas.	Pad 6 Meas.	Pad 8 Meas.	Calibrator Size (in)
1	24866	26950	24809	22742	5.98
2	33198	36237	32734	30154	7.97
3	41719	46122	40442	36719	9.86
4	52107	57802	48995	43412	11.92
5	0	0	0	0	0.00

Field Calibration

Measured Pads 1-5 Caliper(in)	Measured Pads 3-7 Caliper(in)	Actual Caliper(in)
6.26	5.88	5.98

Measured Pad 2 Caliper(in)	Measured Pad 4 Caliper(in)	Measured Pad 6 Caliper(in)	Measured Pad 8 Caliper(in)	Actual Caliper(in)
3.08	2.85	2.94	3.22	5.98

Caliper Constants MIE-A.A 209

Last Edited on 18-JUN-2013,10:20

Caliper Difference for BRKT	0.120	inches

Magnetometer Parameters MIE-A.A 209

Date Of Last Magnetometer Calibration 20-FEB-2013,13:52

	X Magnetometer	Y Magnetometer	Z Magnetometer
Slope	-1.000000	-1.012493	-1.007780
Offset	0.011941	-0.015960	0.015669

Magnetometer Constants MIE-A.A 209

Last Edited on

Magnetometer Calibrator Number	000

Navigation Constants MIE-A.A 209

Last Edited on 12-AUG-2013,10:56

Magnetic Declination	6.62	degrees	East

Compact Micro Imager Constants MIE-A.A 209

Last Edited on

Sonde Configuration	Imager Mode	
Arm-Pad Kit	Normal Pads (12.25 in)	
Arm-Pad Kit Serial Number		
Centre Pad 1 Rotational Offset	0.00	degrees
Image/Borehole Ovality Reference	Azimuth of Pad 1	
Non Active Buttons	Omit	
Search Angle	0.00	degrees
Correlation Interval	3.28	feet
Correlation Step	1.64	feet
Current Offset	0.0000	mAmp
Squasher Start	0.0500	mAmp
Image Processing	Enabled	

FE Calibration MFE-A.A 55

Base Calibration on 16-AUG-2013 08:59
Field Check on 28-AUG-2013 03:57

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	950.9	126.8

Base Check	281.6
Field Check	281.7

FE Constants MFE-A.A 55

Last Edited on 05-SEP-2013,00:26

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 178

Base Calibration on 28-AUG-2013,08:48
Field Check on 28-AUG-2013,09:29

Base Calibration

Test Loop Calibration

Channel	Measured Low	Measured High	Calibrated (mmho/m) Low	Calibrated (mmho/m) High
1	17.6	484.7	9.3	966.2
2	6.2	391.4	7.6	821.4
3	4.0	264.5	5.2	566.0
4	2.3	135.1	2.6	279.2

Array Temperature	77.0	Deg F

Channel	Base Check (mmho/m) Low	Base Check (mmho/m) High	Field Check (mmho/m) Low	Field Check (mmho/m) High
1			12.8	3763.8
2			29.8	3468.0
3			27.3	3014.6
4			18.8	2065.2
Deep			16.0	1995.4
Medium			40.3	3955.8
Shallow			45.7	5083.6
Array Temperature	0.0		81.0	Deg F

Induction Constants MAI-A.A 178

Last Edited on 05-SEP-2013,00:26

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	

DOWNHOLE EQUIPMENT

C:\Minimus 13.05.9583\Logs\Cimarex Hamker 20-4\Cimarex Hamker 20-4 REPEAT.dta

CBH-C, Cablehead, 11 pin
CBH-C 0 LG: 2.40 ft WT: 24.3 lb OD: 2.24 in

Compact Comms Gamma
MCG-D.K 443 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Micro-log
MML-A 16 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

Compact Neutron
MDN-B.J 387 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper
MPD-B 59 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

SKJ-D.A Compact Knuckle Joint
SKJ-D.A 36 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

SKJ-D.A Compact Knuckle Joint
SKJ-D.A 37 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

Compact MMI Memory Section
MIM-B.A 251 LG: 4.65 ft WT: 26.5 lb OD: 2.24 in

Compact MMI Electrode Section
MIE-A.A 209 LG: 13.96 ft WT: 99.2 lb OD: 4.09 in

Compact Focussed Electric
MFE-A.A 55 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Induction
MAI-A.A 178 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 73.48 ft Weight: 582.0 lb

65.80 ft	GRGC - Gamma Ray
62.90 ft	CGXT - MCG External Temperature
56.18 ft	MINV - Micro-inverse
56.18 ft	MNRL - Micro-normal
57.17 ft	MLTC - MML Caliper
51.38 ft	NPRL - Limestone Neutron Por.
44.14 ft	CLDC - Density Caliper
42.21 ft	DPRL - Limestone Density Por.
42.21 ft	DEN - Compensated Density
42.21 ft	DCOR - Density Correction
42.15 ft	PDPE - PE
19.10 ft	IECX - MIE Caliper X
19.10 ft	IECY - MIE Caliper Y
18.59 ft	DI26 - Imager Diameter 2 - 6
18.59 ft	DI48 - Imager Diameter 4 - 8
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	CIMAREX ENERGY CO

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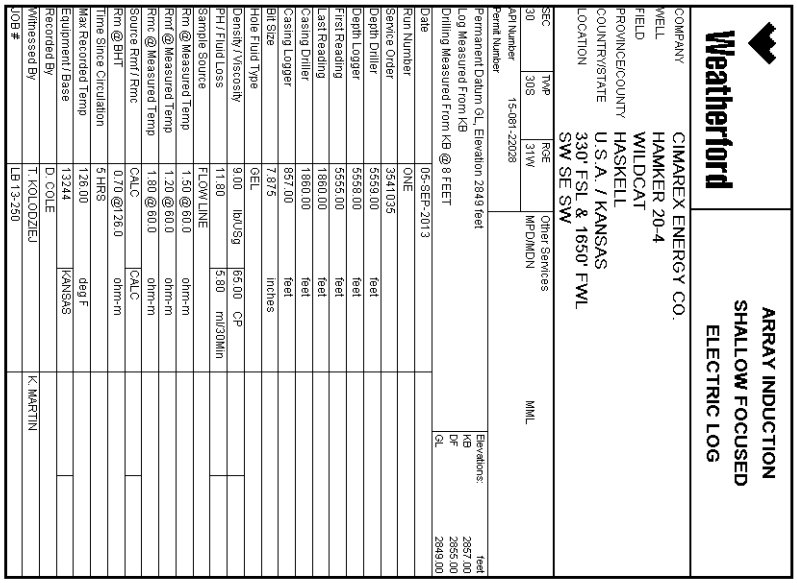
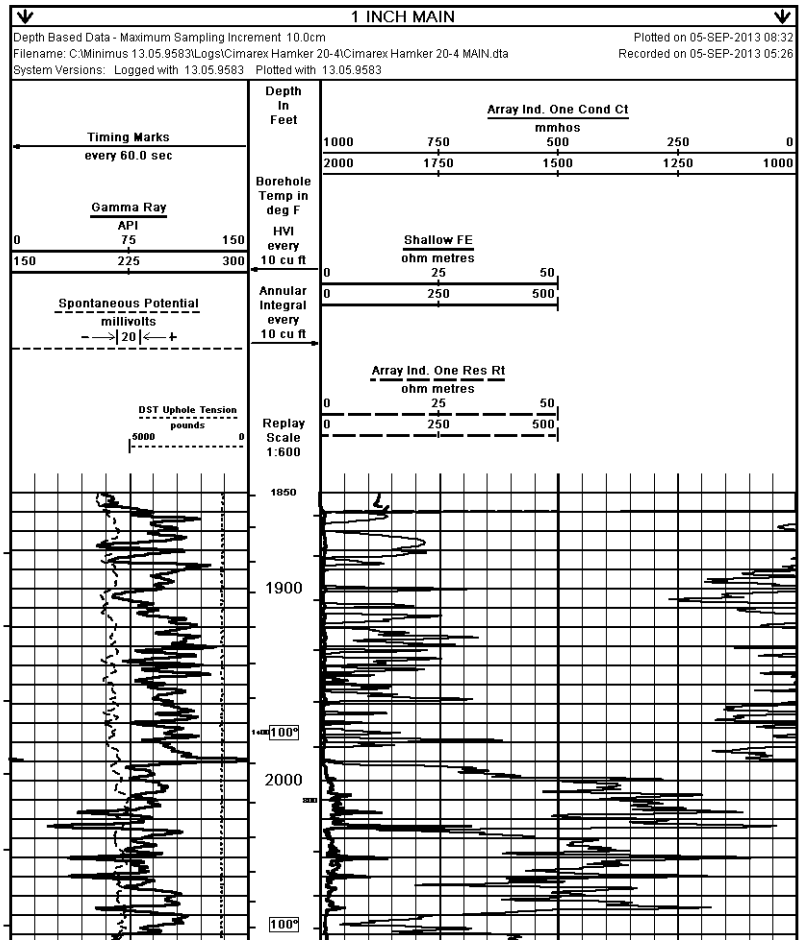
WELL	HAMKER 20-4
FIELD	WILDCAT
PROVINCE/COUNTY	HASKELL
COUNTRY/STATE	U.S.A. / KANSAS

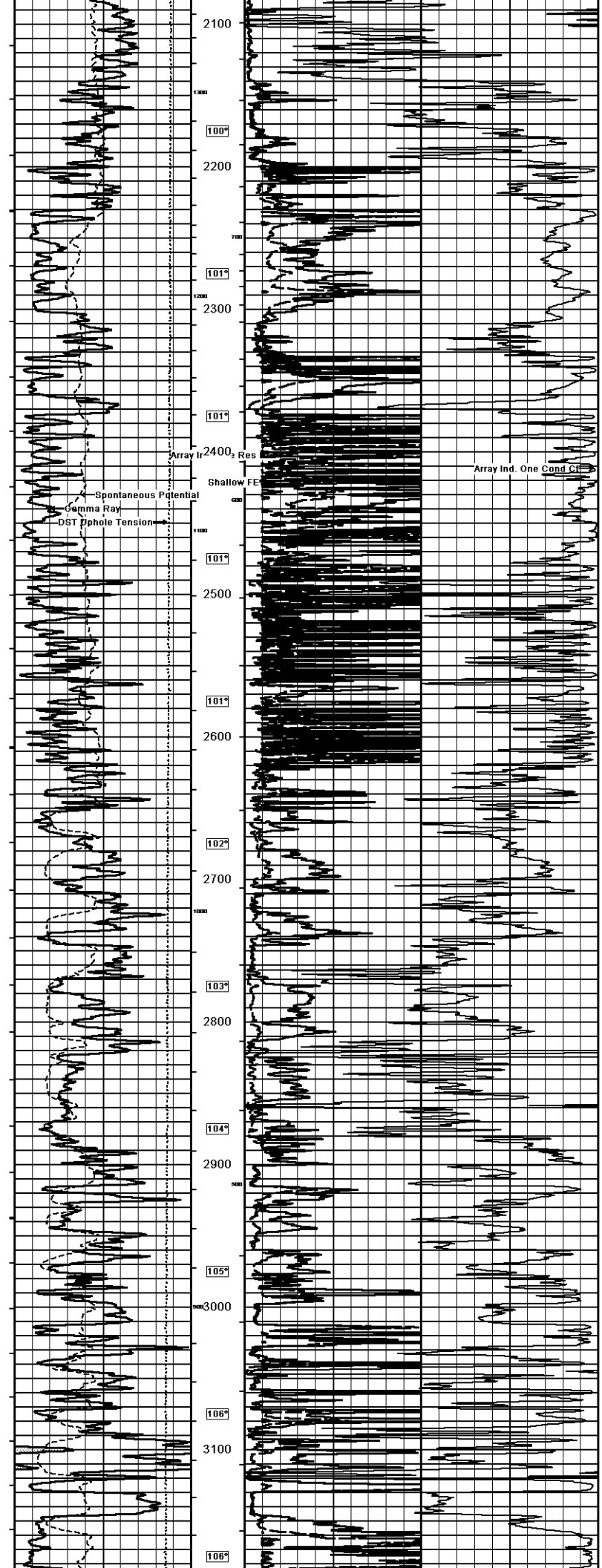
Elevation Kelly Bushing	2857.00	feet	First Reading	5555.00	feet
Elevation Drill Floor	2855.00	feet	Depth Driller	5559.00	feet
Elevation Ground Level	2849.00	feet	Depth Logger	5558.00	feet

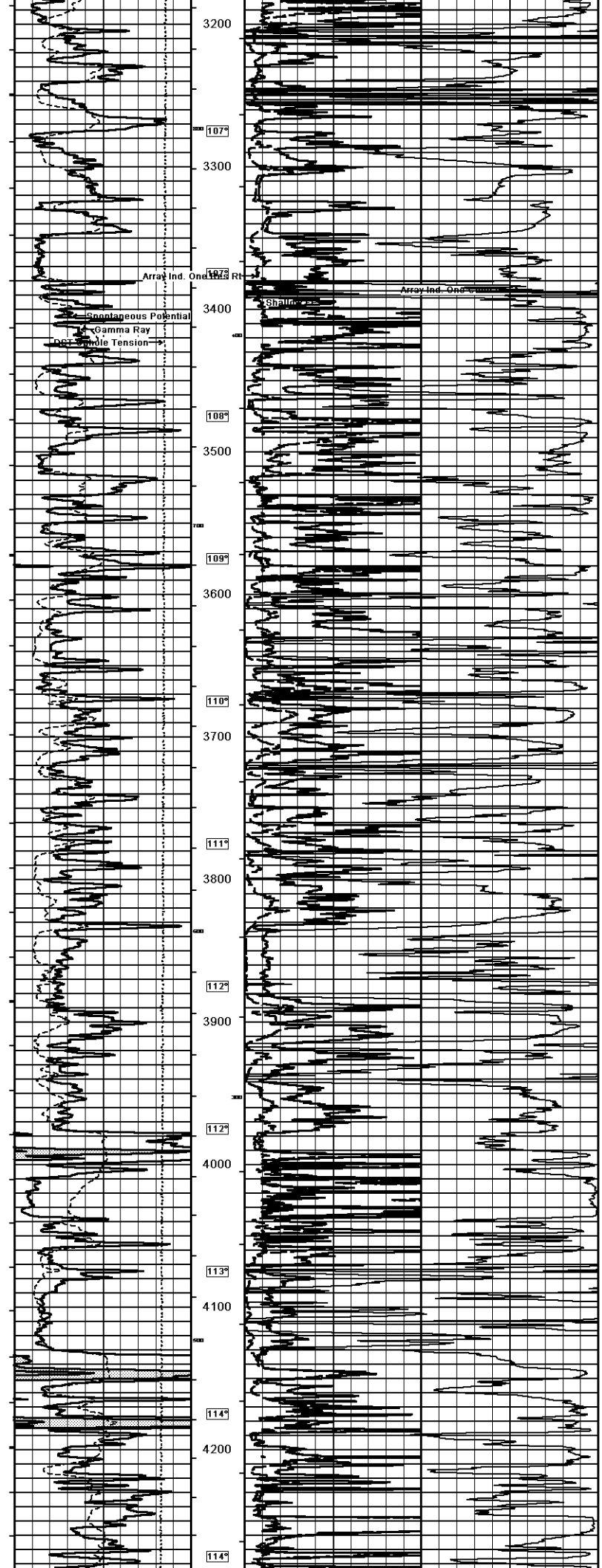
Weatherford®

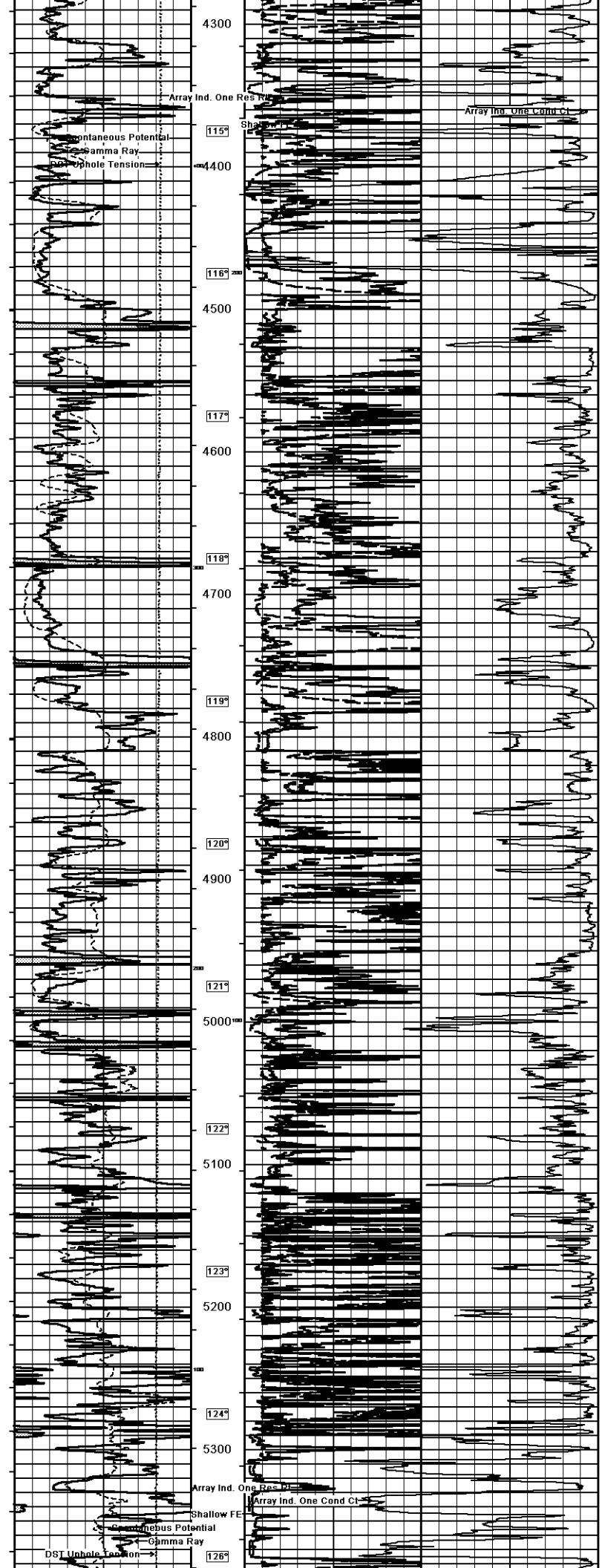
ARRAY INDUCTION
SHALLOW FOCUSED
ELECTRIC LOG

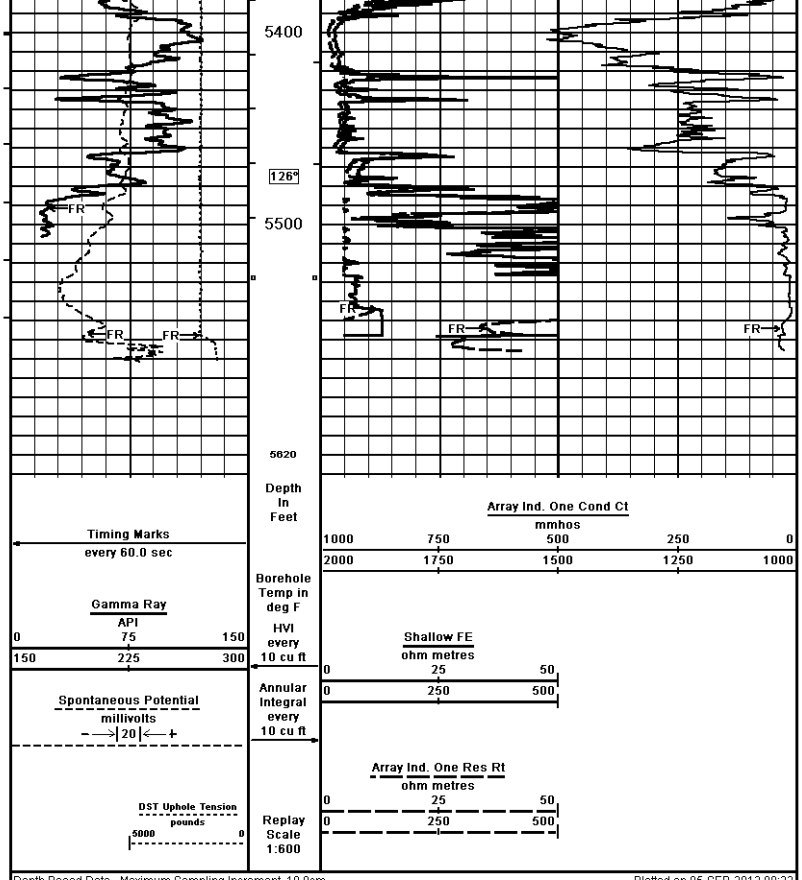





2100
100°
2200
101°
2300
101°
2400
Array Ir
Res
Shallow FE
Array Ind. One Cond C
Spontaneous Potential
Gamma Ray
DST Dphole Tension
101°
2500
101°
2600
102°
2700
103°
2800
104°
2900
105°
3000
106°
3100
106°


3200
107°
3300
Array Ind. One Inch Rt
Array Ind. One Inch
Shallow
Spontaneous Potential
Gamma Ray
Det. Cable Tension
108°
3500
109°
3600
110°
3700
111°
3800
112°
3900
112°
4000
113°
4100
114°
4200
114°


4300
Array Ind. One Res RT
Array Ind. One Cond Ct
Shallow RT
115°
Spontaneous Potential
Gamma Ray
DST Uphole Tension
4400
116°
4500
117°
4600
118°
4700
119°
4800
120°
4900
121°
5000
122°
5100
123°
5200
124°
5300
Array Ind. One Res RT
Array Ind. One Cond Ct
Shallow FE
Spontaneous Potential
Gamma Ray
DST Uphole Tension
126°



Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 05-SEP-2013 08:32
Filename: C:\Minimus 13.05.9583\Logs\Cimarex Hamker 20-4\Cimarex Hamker 20-4 MAIN.dta
Recorded on 05-SEP-2013 05:26
System Versions: Logged with 13.05.9583 Plotted with 13.05.9583

1 INCH MAIN

COMPANY	CIMAREX ENERGY CO.
WELL	HAMKER 20-4
FIELD	WILDCAT
PROVINCE/COUNTY	HASKELL
COUNTRY/STATE	U.S.A. / KANSAS

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