Weatherford®

ARRAY INDUCTION SHALLOW FOCUSED ELECTRIC LOG

COMPANY	UNIT PETROLEUM COMPANY
WELL	LOUDENBACK 7 #1
FIELD	WILDCAT
PROVINCE/COUNTY	RENO
COUNTRY/STATE	U.S.A. / KANSAS
LOCATION	150' FNL & 850' FEL NE-NW-NE-NW

SEC	TWP	RGE	Other Services
18	25S	10W	MDN/MPD MML

API Number 15-155-21662
Permit Number

Permanent Datum GL, Elevation 1770 feet
Log Measured From KB
Drilling Measured From KB

Elevations:	feet
KB	1784.00
DF	1785.00
GL	1770.00

Date	22-JUL-2013			
Run Number	ONE			
Service Order	3542196			
Depth Driller	4158.00	feet		
Depth Logger	4156.00	feet		
First Reading	4153.00	feet		
Last Reading	1514.00	feet		
Casing Driller	1515.00	feet		
Casing Logger	1514.00	feet		
Bit Size	8.750	inches		
Hole Fluid Type	WBM			
Density / Viscosity	9.40 lb/USg	40.00 CP		
PH / Fluid Loss	10.60	6.80 ml/30Min		
Sample Source	MUD PIT			
Rm @ Measured Temp	0.90 @109.0	ohm-m		
Rmf @ Measured Temp	0.72 @109.0	ohm-m		
Rmc @ Measured Temp	1.08 @109.0	ohm-m		
Source Rmf / Rmc	CALC	CALC		
Rm @ BHT	0.77 @127.0	ohm-m		
Time Since Circulation	4 HOURS			
Max Recorded Temp	128.00	deg F		
Equipment / Base	13145	OKC		
Recorded By	JIM SCHULER		J. HICKS	
Witnessed By	ROB WILSON		LARRY MILLER	

BOREHOLE RECORD

Last Edited: 22-JUL-2013 15:33

Bit Size inches	Depth From feet	Depth To feet
12.250	0.00	1515.00
8.750	1515.00	4158.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	9.650	0.00	1515.00	36.00

REMARKS

WLS 13.04.8723

MAGNETIC DECLINATION = 4.2

DEPTH CONTROL: CALIBRATED MEASURING WHEEL

TOOLS RAN: SHA, MCG, MMR, MDN, MPD, MFE, MAI RAN IN COMBINATION

HARDWARE:
MAI: TWO 0.5 INCH STANDOFFS USED.
MFE: ONE 0.5 INCH STANDOFF USED
MDN: DUAL NEUTRON BOW SPRINGS USED.
MPD: 8 INCH PROFILE PLATE USED.

2.71 G/CC DENSITY MATRIX USED TO CALCULATE POROSITY
ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST.

TOTAL HOLE VOLUME FROM TD TO 1514' = 1551 CU.FT.
ANNULAR HOLE VOLUME WITH 7.0 INCH PRODUCTION CASING FROM TD TO 1514' = 855 CU.FT.

SERVICE ORDER # 3542196

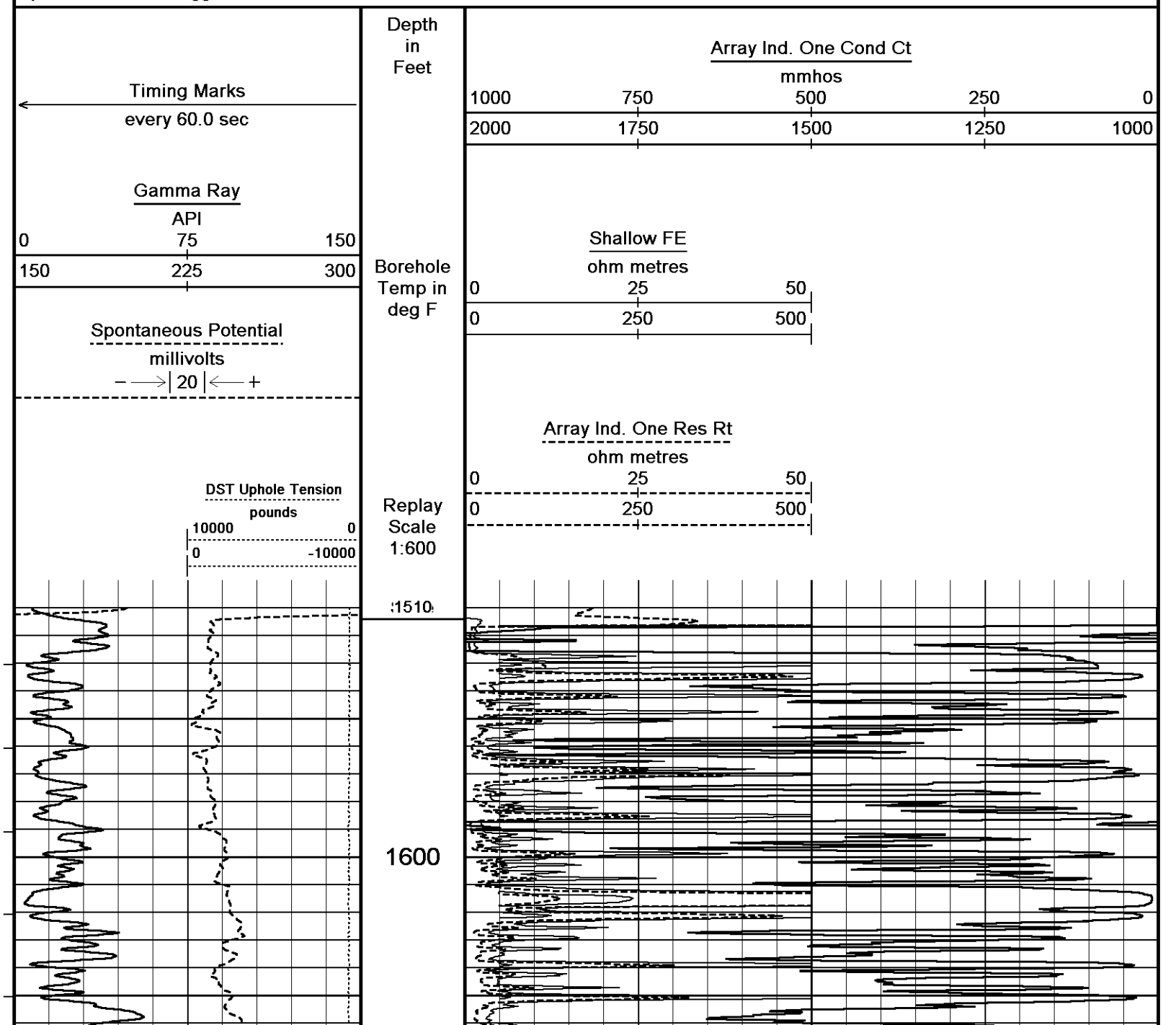
RIG: UNIT TEXAS RIG 331

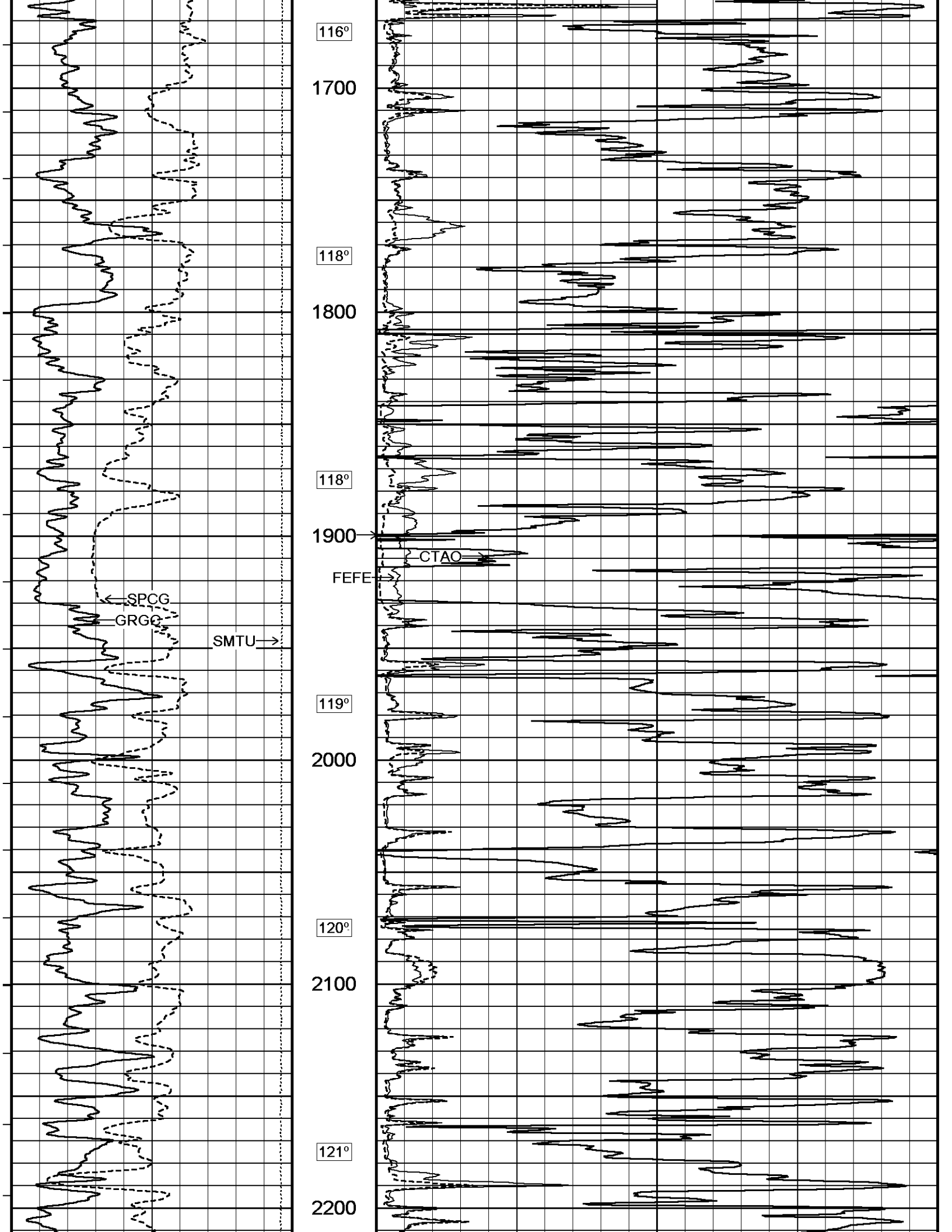
OPERATOR(S): JASON TURNER

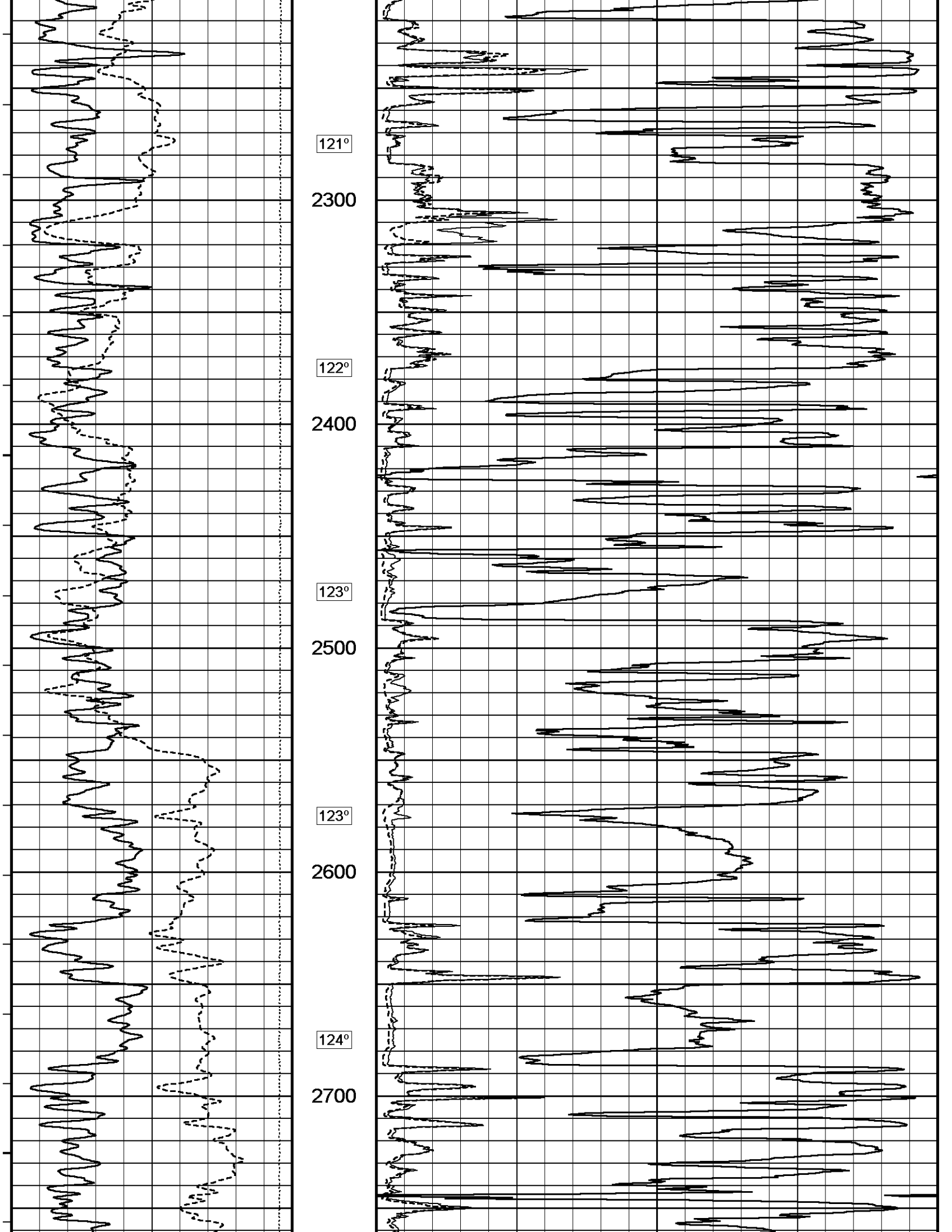
HOLE WASHOUTS AND RUGOSITY WILL AFFECT LOG QUALITY AND REPEATABILITY

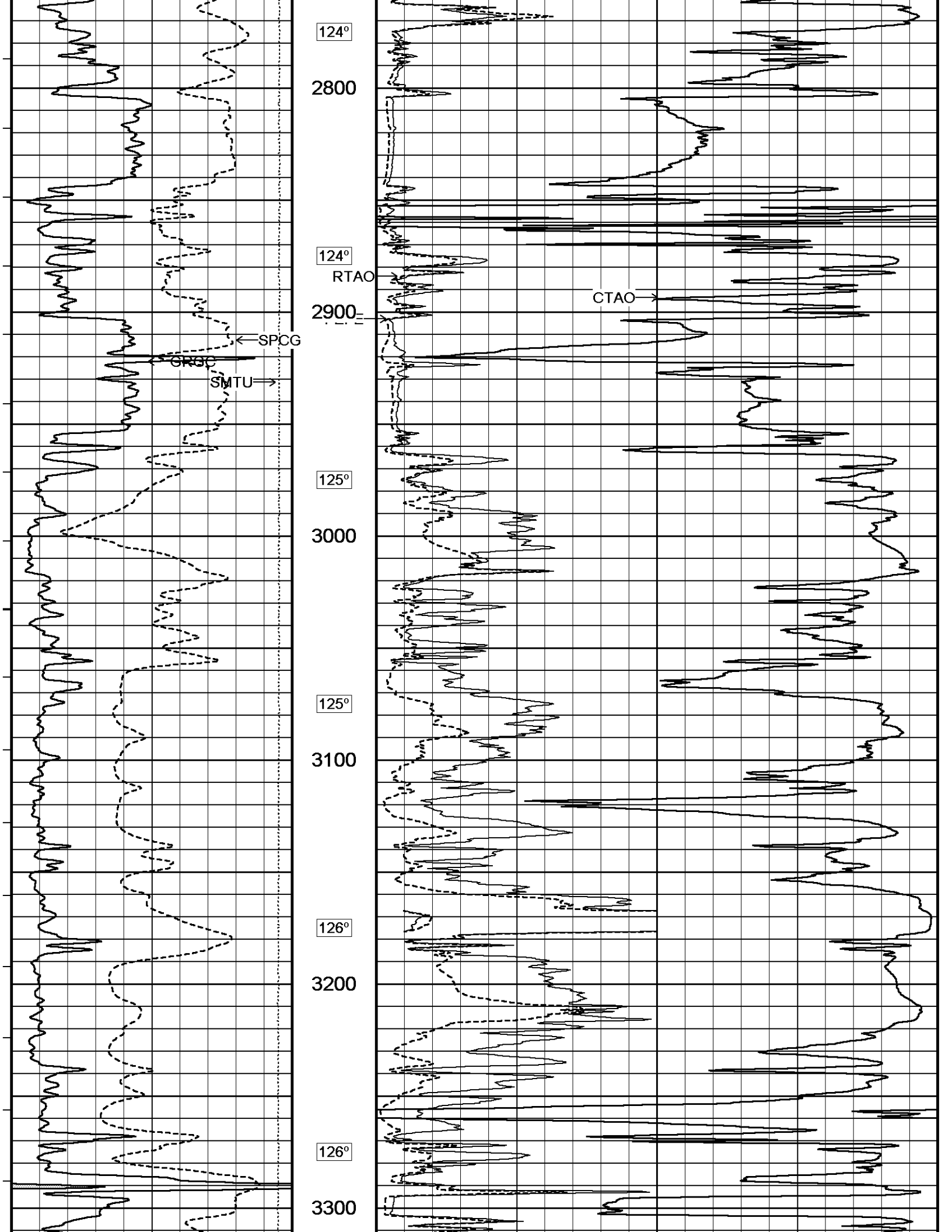
2 INCH MAIN LOG

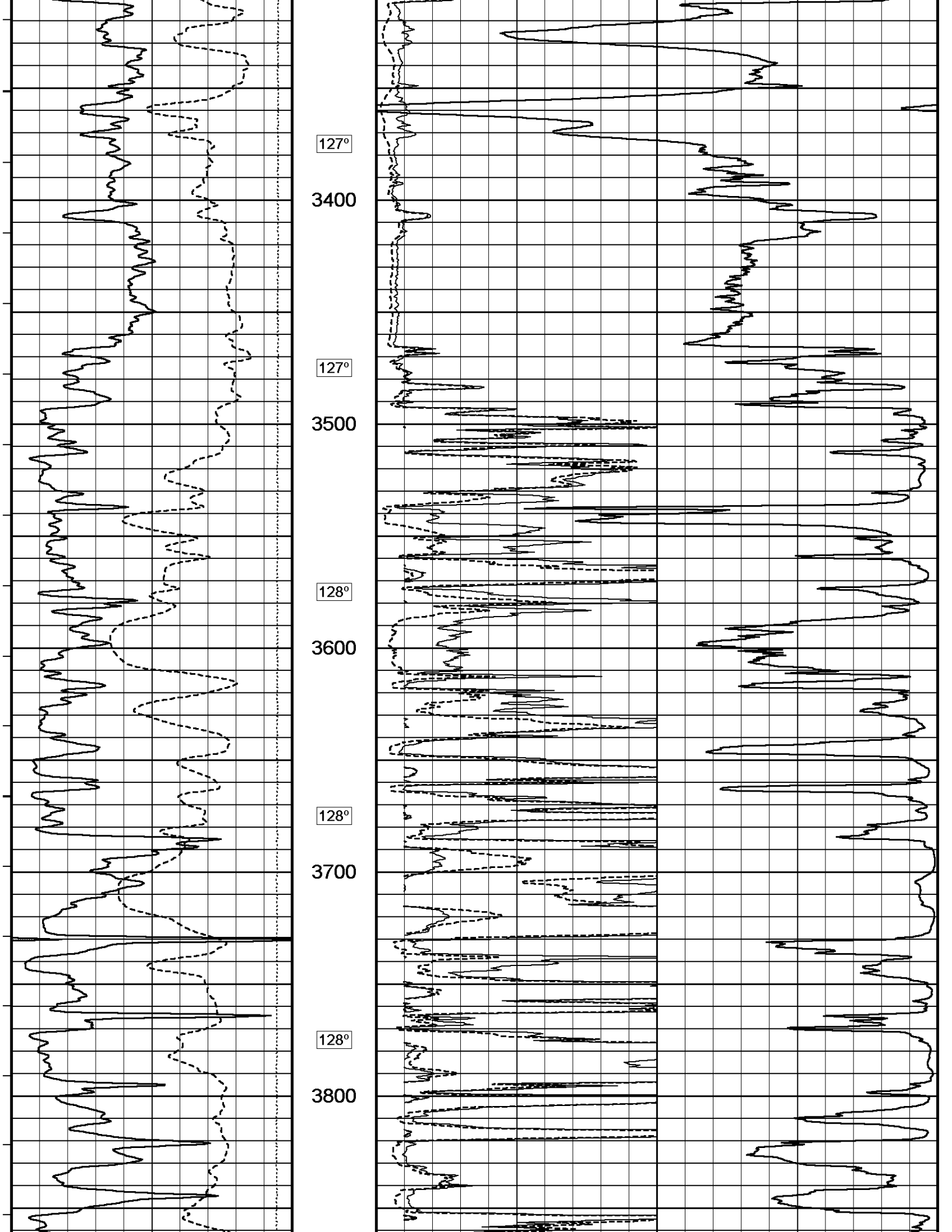
Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 22-JUL-2013 22:08
Filename: C:\Program Files\Weatherford\WLS 13.04\DATA\UNIT PETRLOEUM (LOU...\MAIN_003.dta — Recorded on 22-JUL-2013 19:56
System Versions: Logged with 13.04.8723 Processed with 13.04.8723 Plotted with 13.04.8723

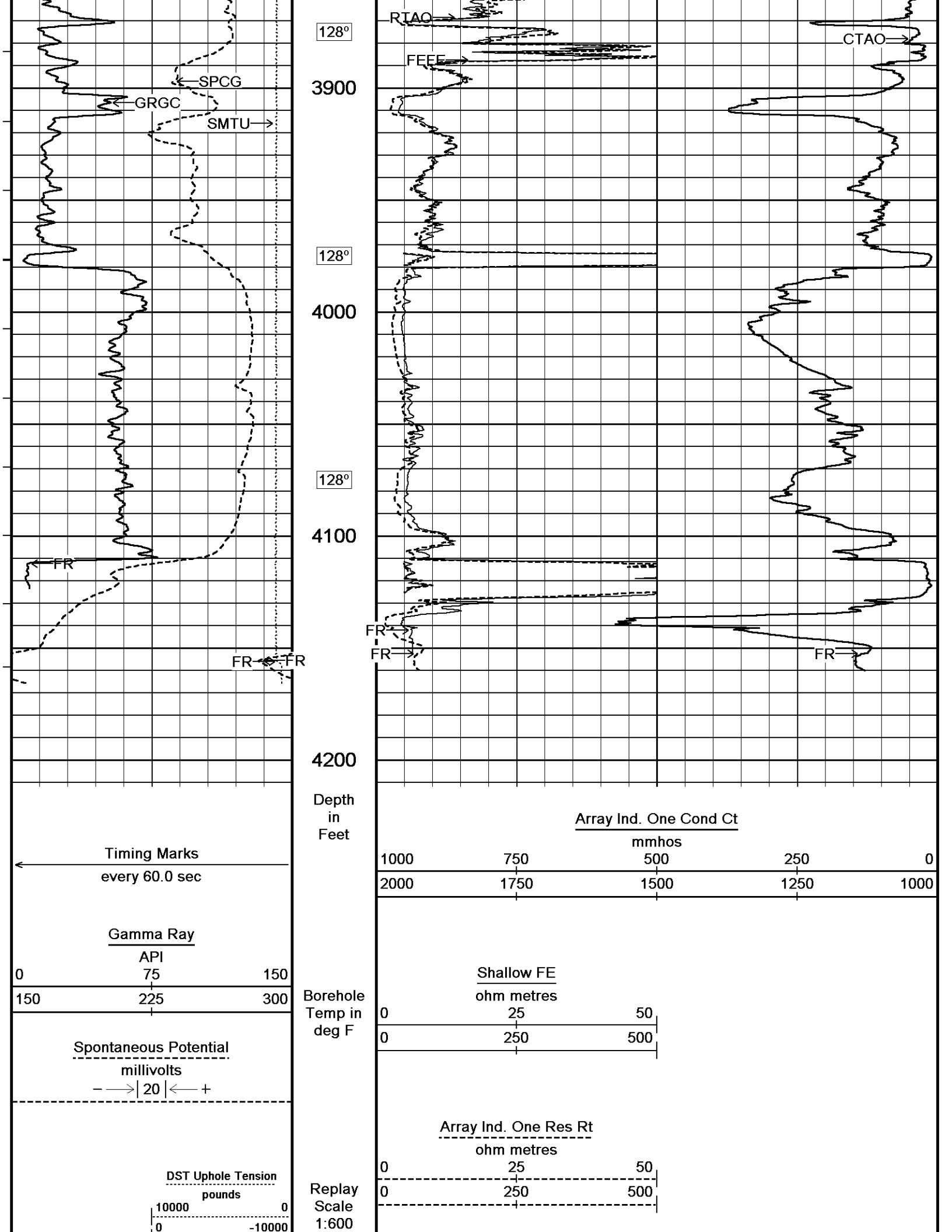



116°
1700
118°
1800
118°
1900
CTAO
FEFE
SPCG
GRGC
SMTU
119°
2000
120°
2100
121°
2200


121°
2300
122°
2400
123°
2500
123°
2600
124°
2700


124°
2800
124°
RTAO
CTAO
2900
SPCG
GRGC
SMTU
125°
3000
125°
3100
126°
3200
126°
3300


127°
3400
127°
3500
128°
3600
128°
3700
128°
3800


RTAO
CTAO
FEEE
SPCG
GRGC
SMTU
128°
128°
128°
3900
4000
4100
4200
FR
FR
FR
FR
FR
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
10000
0
0
-10000
Borehole Temp in deg F
Array Ind. One Cond Ct
mmhos
1000
750
500
250
0
2000
1750
1500
1250
1000
Shallow FE
ohm metres
0
25
50
0
250
500
Array Ind. One Res Rt
ohm metres
0
25
50
0
250
500
Replay Scale 1:600

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 22-JUL-2013 22:08
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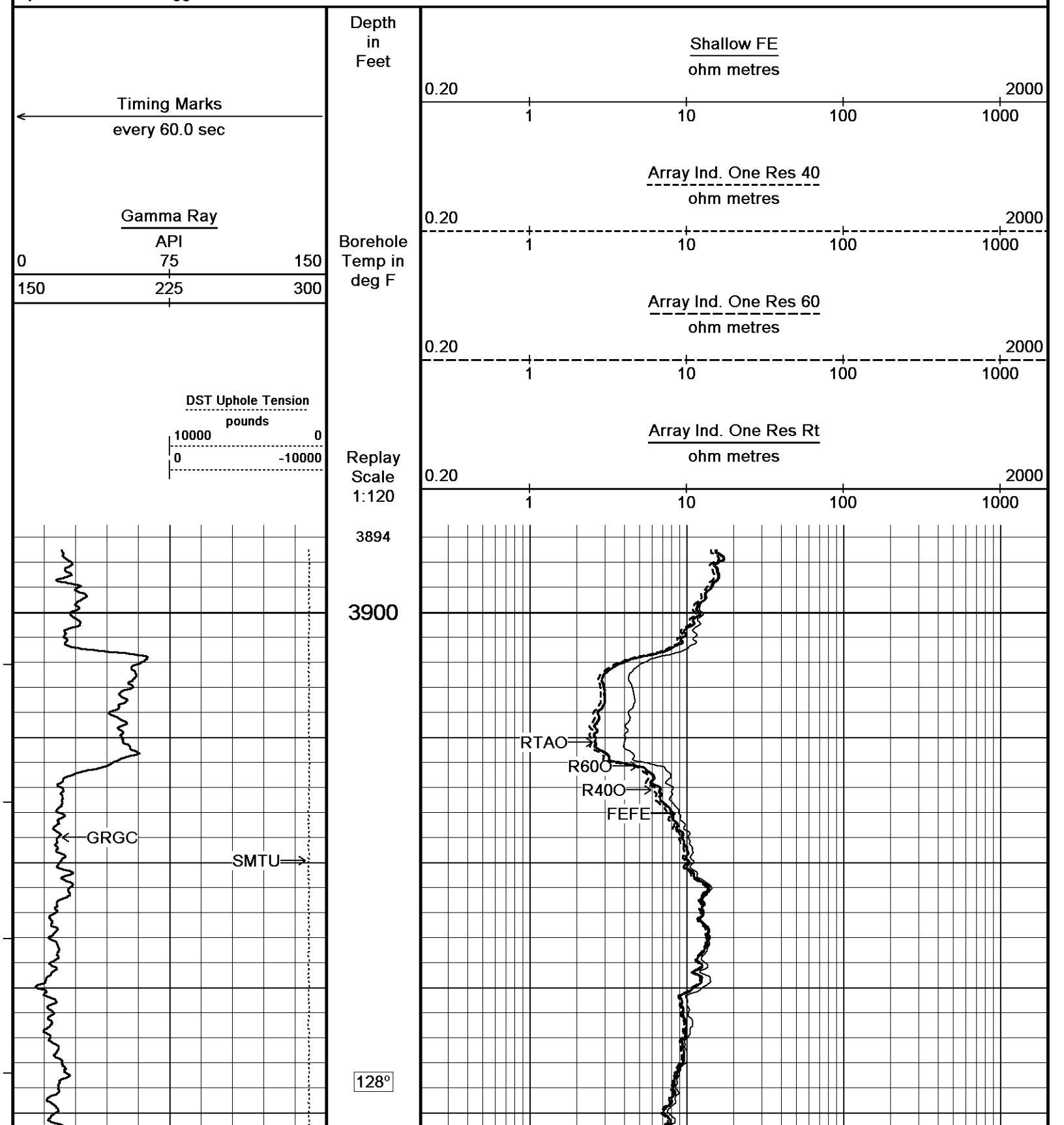
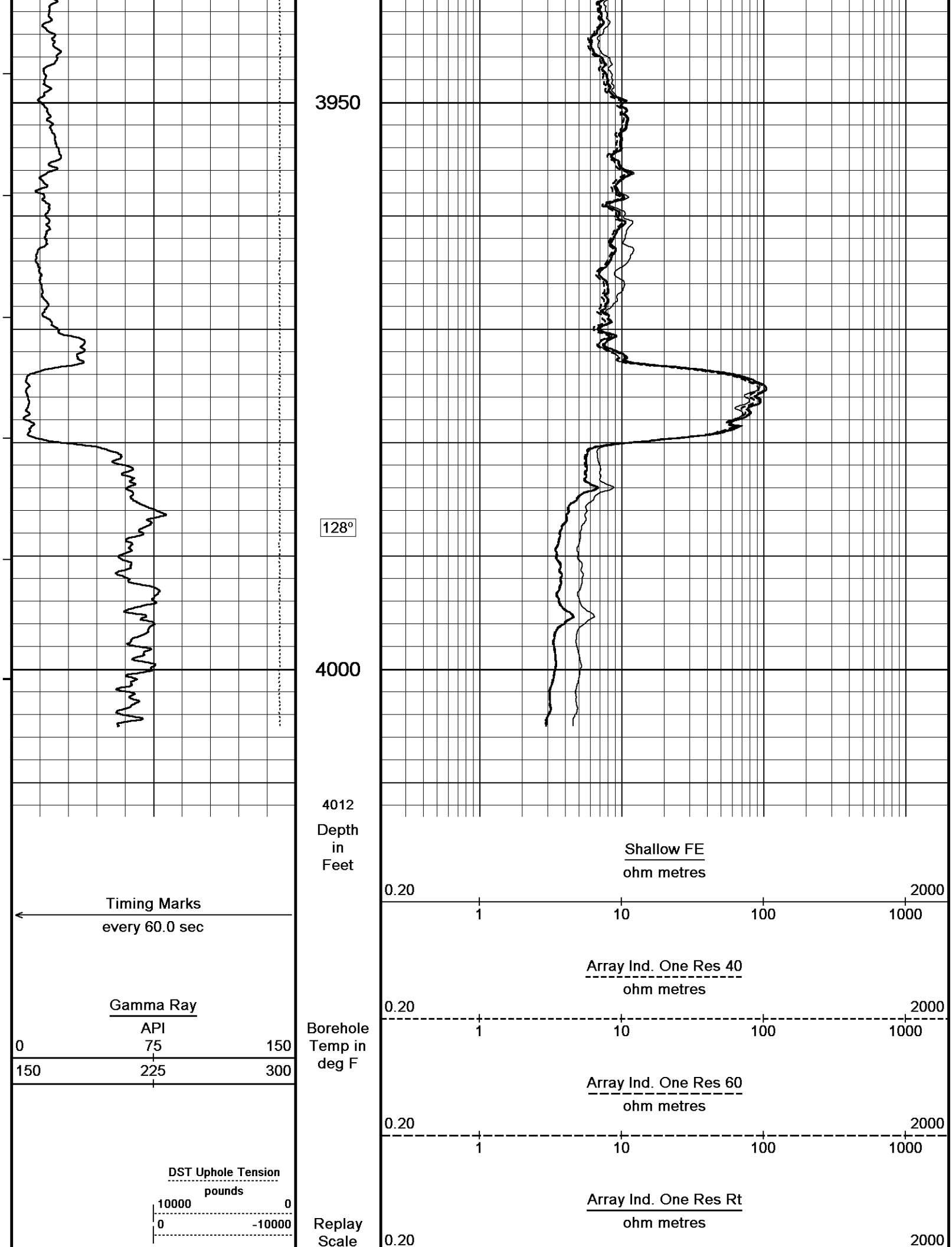
2 INCH MAIN LOG

10 INCH HI RESOLUTION SECTION

Depth Based Data - Maximum Sampling Increment 2.5cm — Plotted on 22-JUL-2013 22:08
Filename: C:\Program Files\Weatherford\WLS 13.04\DATA\UNIT PETRLOEUM (LOU...\MAIN_001.dta — Recorded on 22-JUL-2013 19:21
System Versions: Logged with 13.04.8723 Plotted with 13.04.8723




3950
128°
4000
4012
Depth
in
Feet
Timing Marks
every 60.0 sec
Gamma Ray
API
0
75
150
150
225
300
DST Uphole Tension
pounds
10000
0
0
-10000
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
Borehole
Temp in
deg F
Array Ind. One Res 60
ohm metres
0.20
2000
1
10
100
1000
Array Ind. One Res Rt
ohm metres
0.20
2000
Replay
Scale

1:120

1 10 100 1000

Depth Based Data - Maximum Sampling Increment 2.5cm — Plotted on 22-JUL-2013 22:08
Filename: C:\Program Files\Weatherford\WLS 13.04\DATA\UNIT PETRLOEUM (LOU...\MAIN_001.dta — Recorded on 22-JUL-2013 19:21
System Versions: Logged with 13.04.8723 Plotted with 13.04.8723

10 INCH HI RESOLUTION SECTION

5 INCH MAIN LOG

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 22-JUL-2013 22:08
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Timing Marks
every 60.0 sec

Gamma Ray
API
0 75 150
150 225 300

Spontaneous Potential
millivolts
− → | 20 | ← +

DST Uphole Tension
pounds
10000 0
0 -10000

Depth in Feet

Borehole Temp in deg F

Replay Scale 1:240

1508 Casing Shoe

1550

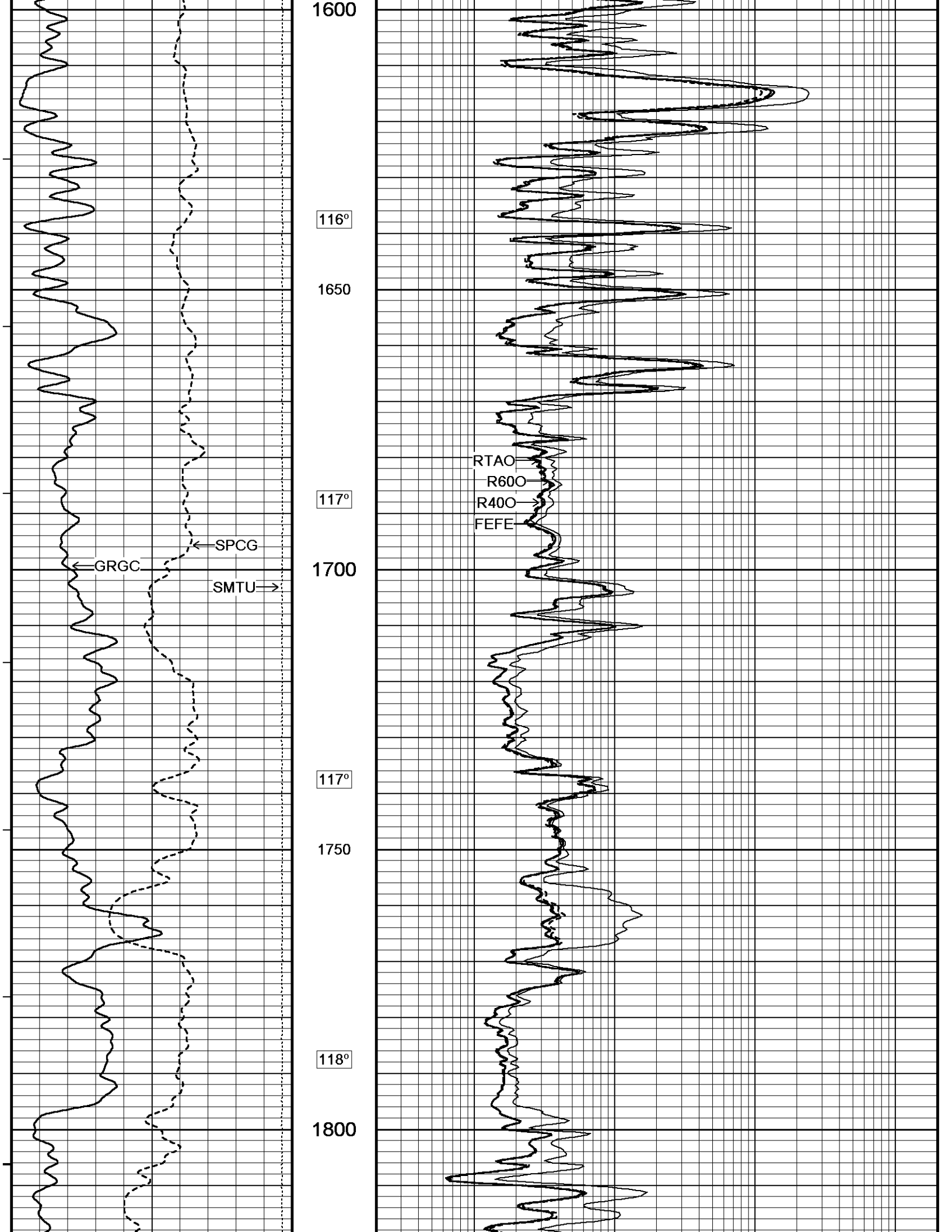
115°

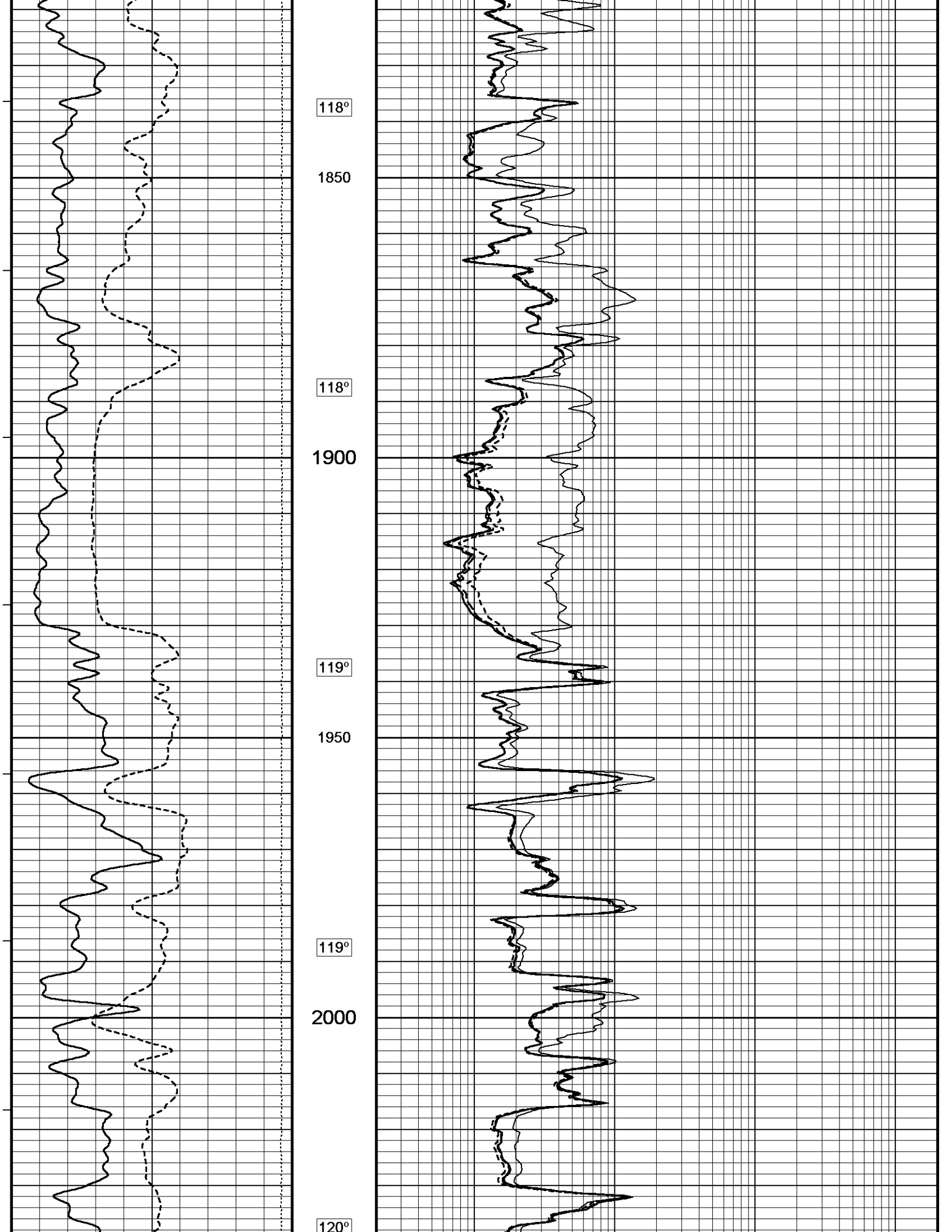
Shallow FE
ohm metres
0.20 2000
1 10 100 1000

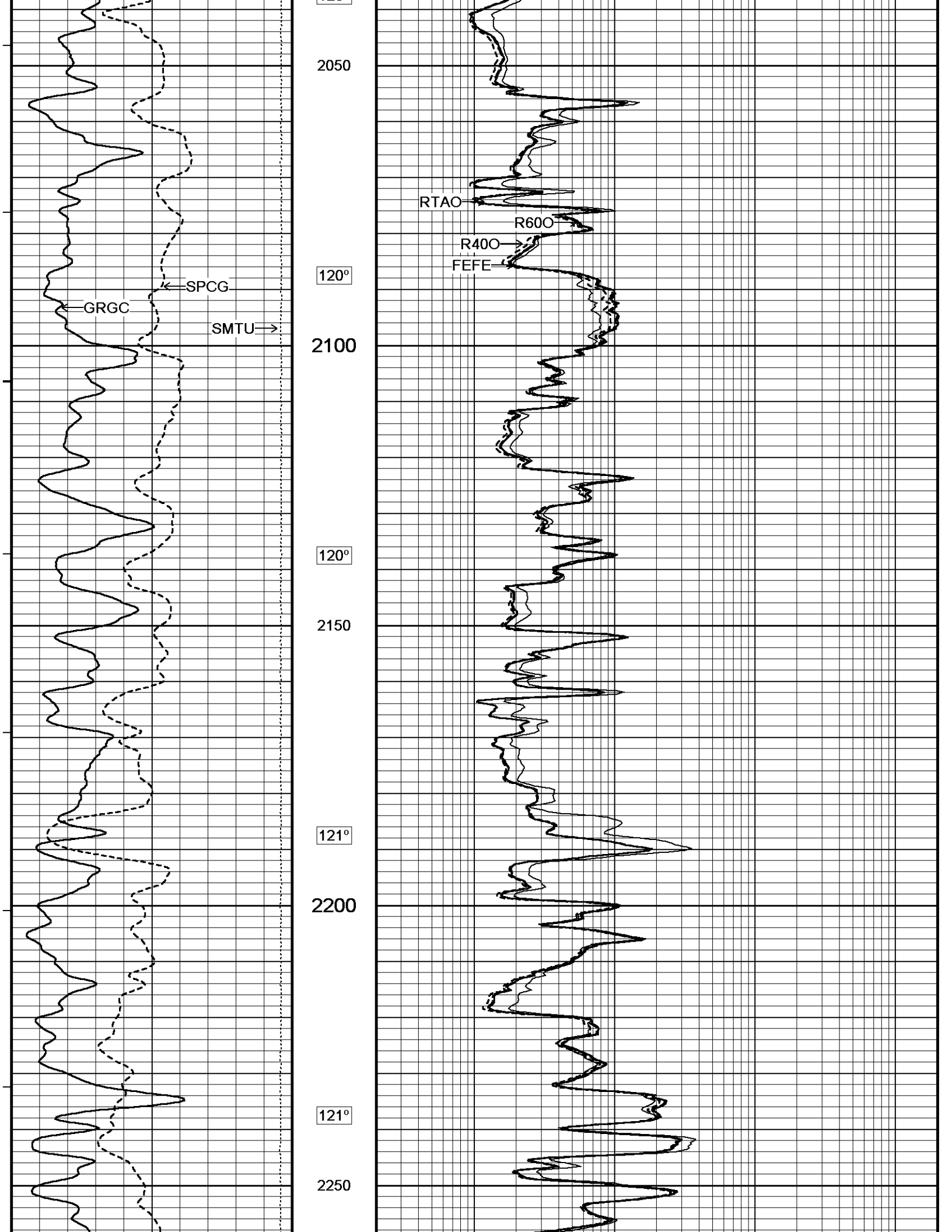
Array Ind. One Res 40
ohm metres
0.20 2000
1 10 100 1000

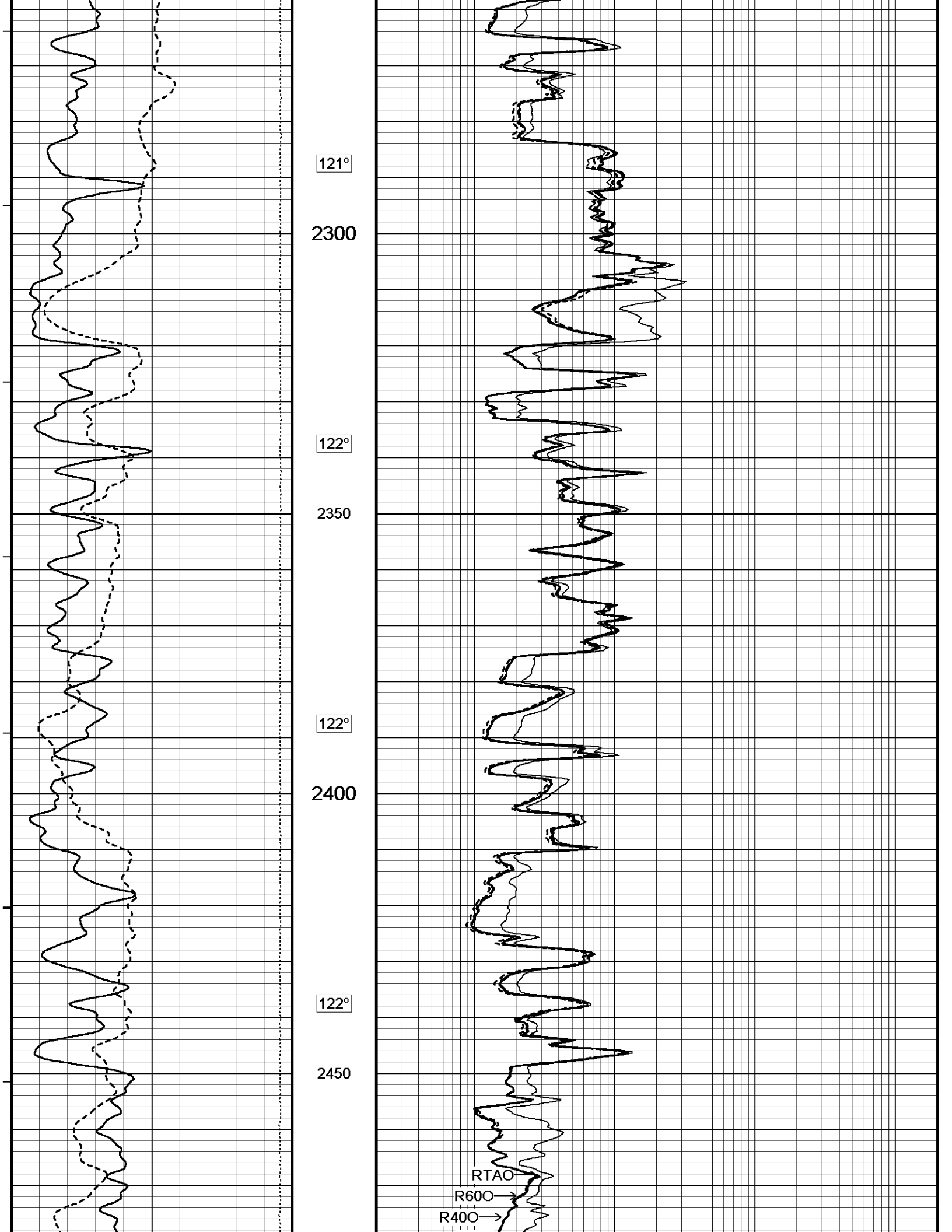
Array Ind. One Res 60
ohm metres
0.20 2000
1 10 100 1000

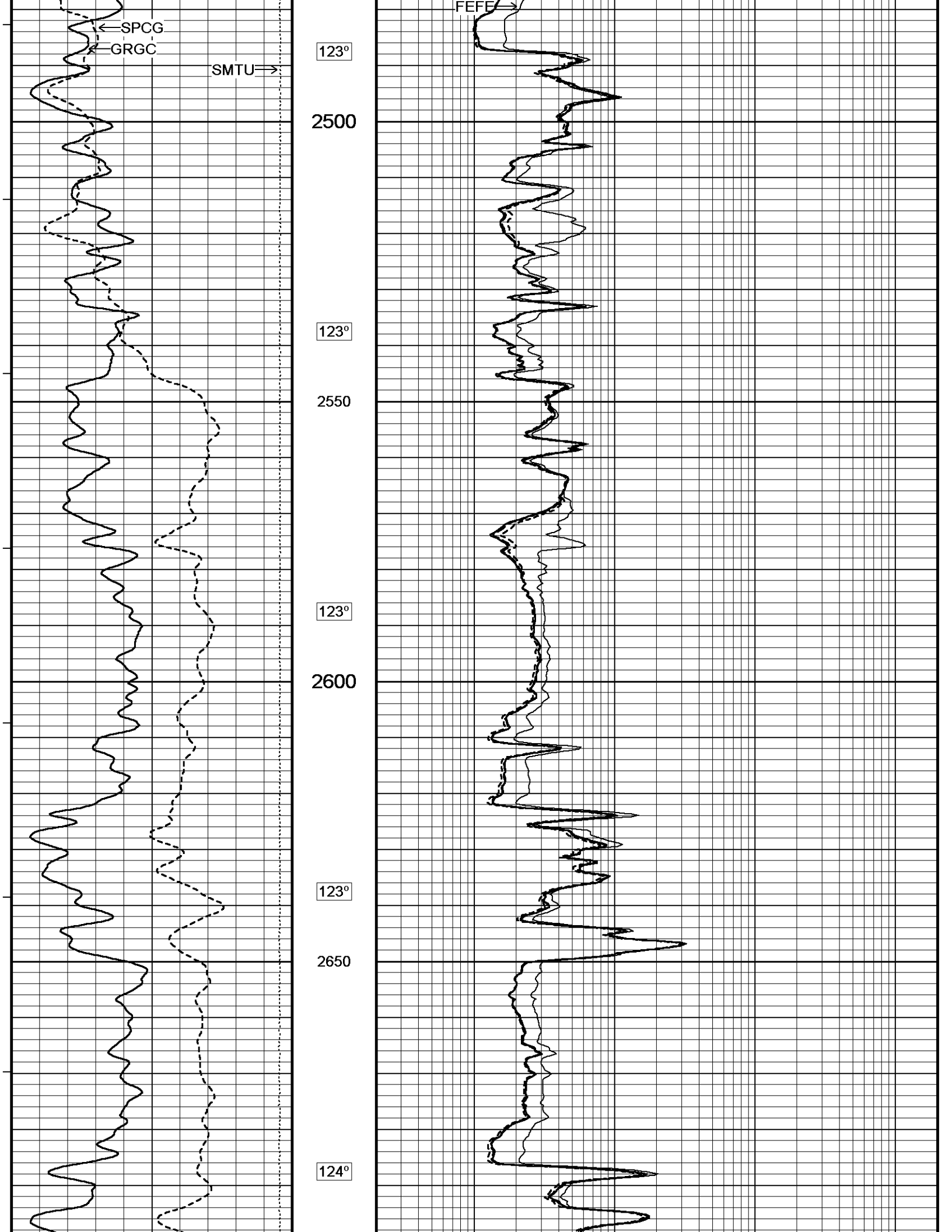
Array Ind. One Res Rt
ohm metres
0.20 2000
1 10 100 1000

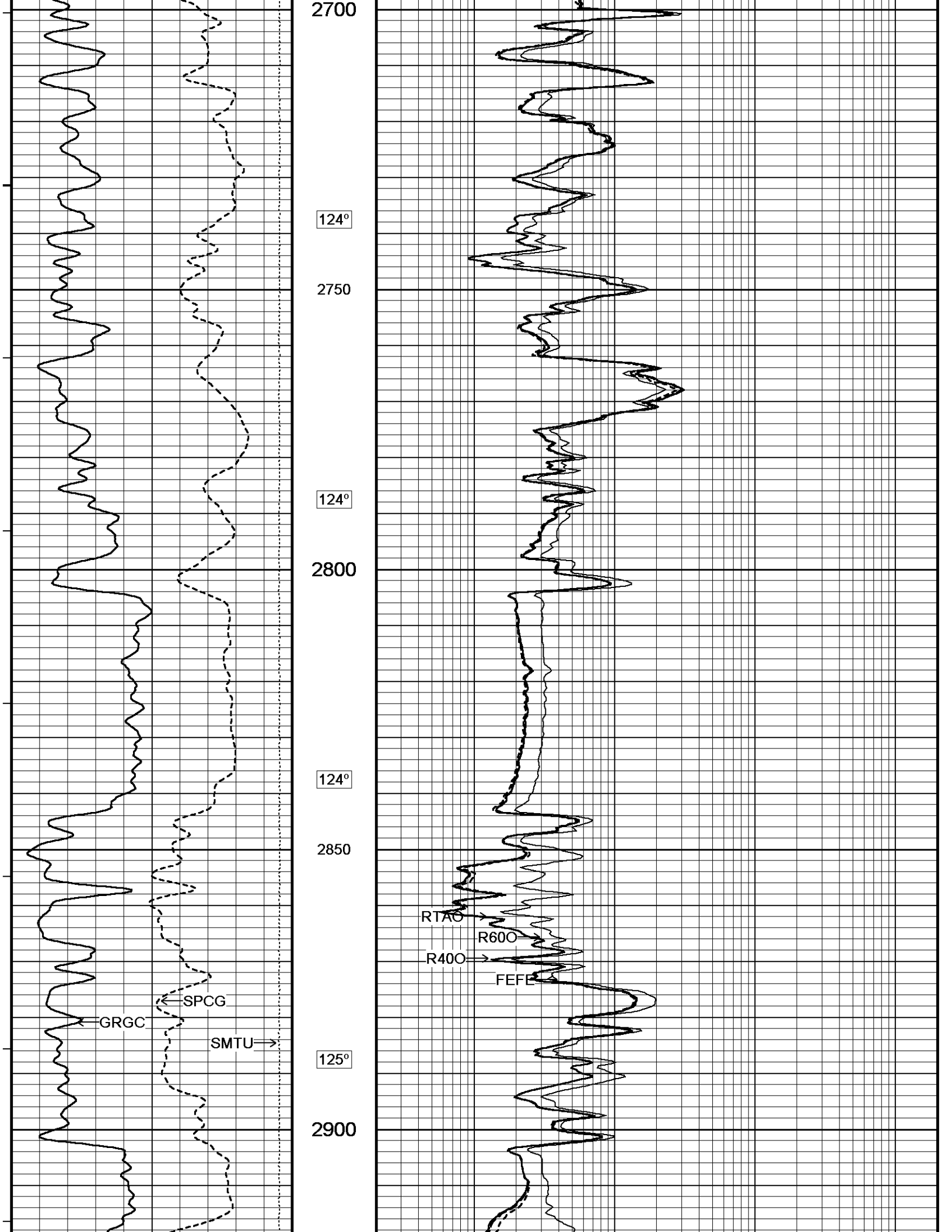

1600
116°
1650
RTAO
R60O
R40O
FEFE
117°
SPCG
GRGC
1700
SMTU
117°
1750
118°
1800

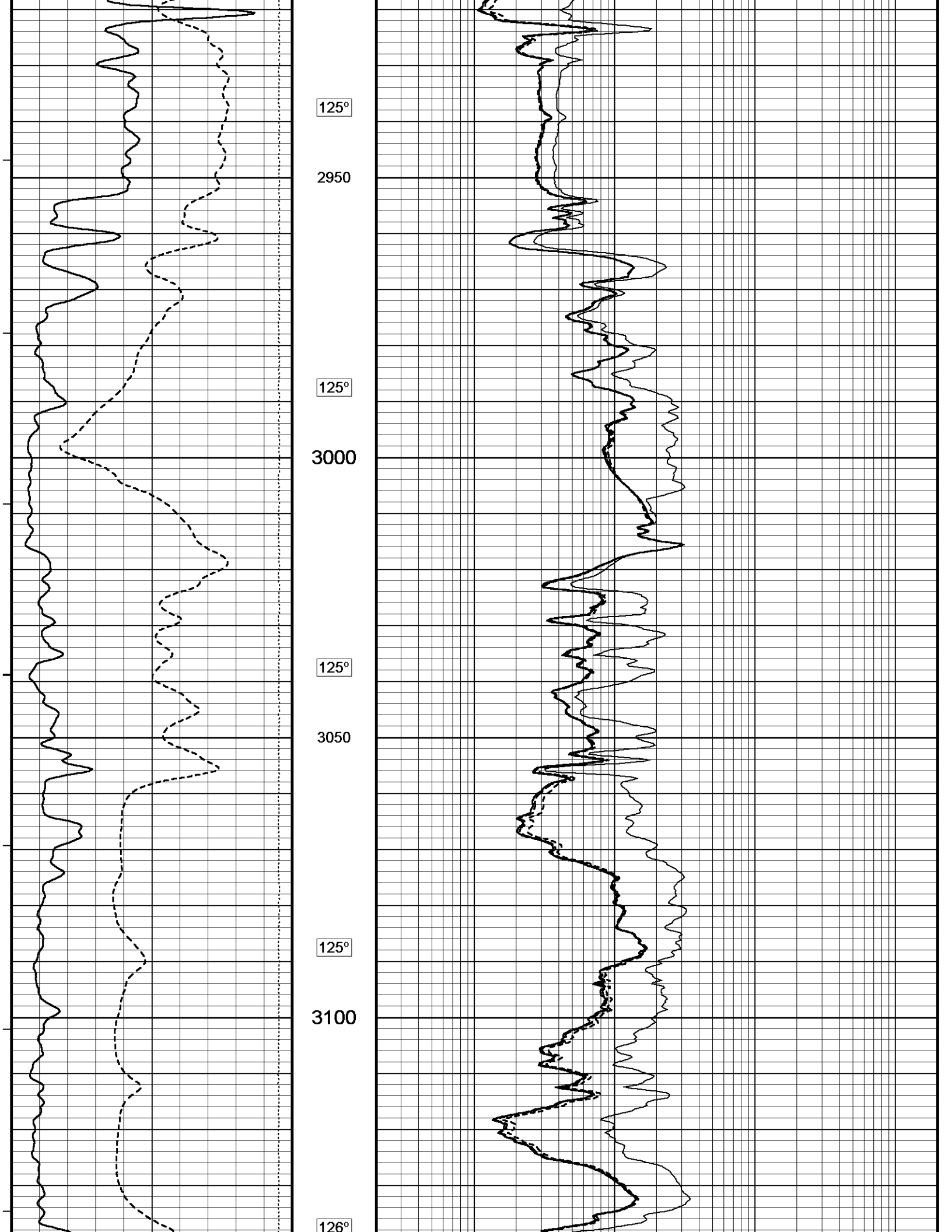

118°
1850
118°
1900
119°
1950
119°
2000
120°

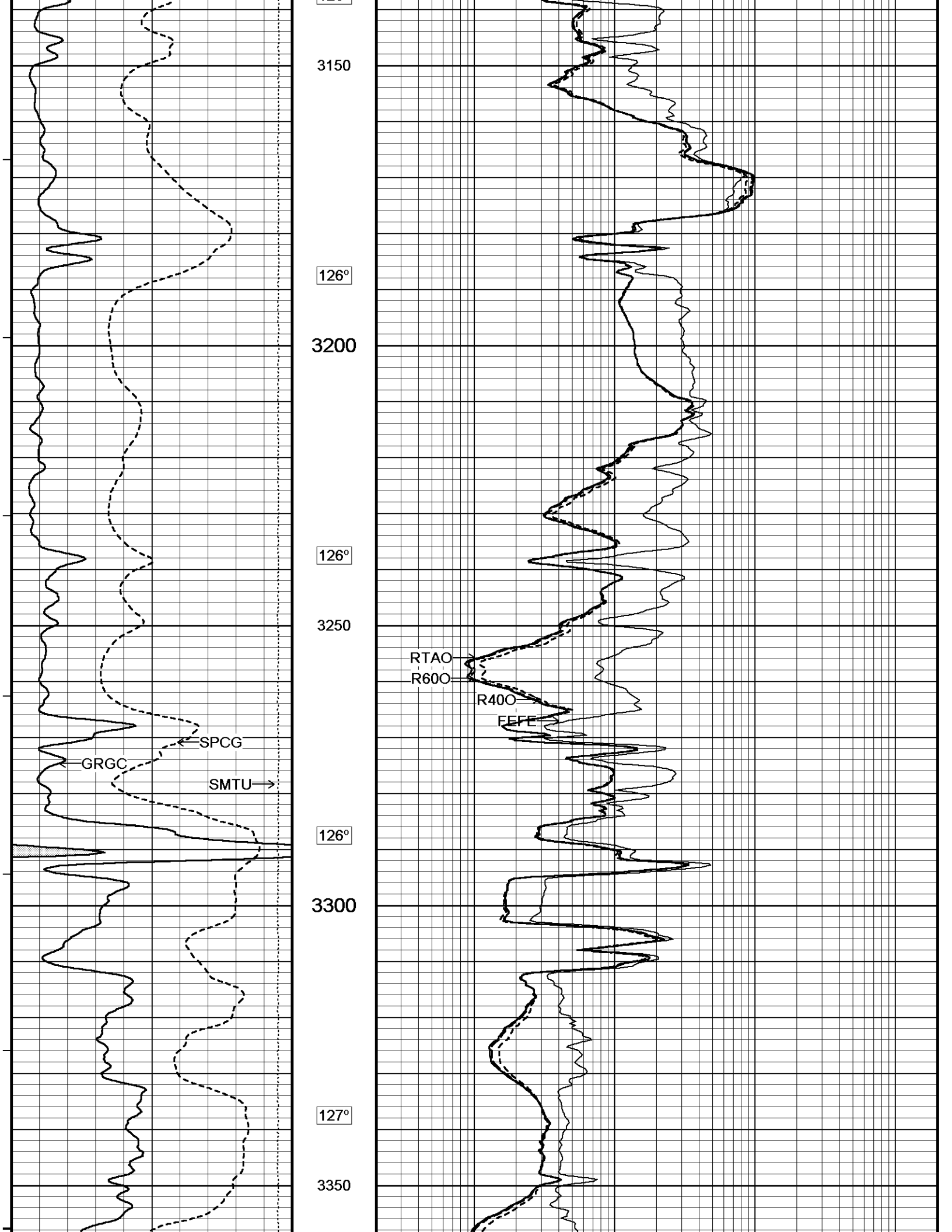

2050
RTAO
R60O
R40O
FEFE
120°
SPCG
GRGC
SMTU
2100
120°
2150
121°
2200
121°
2250

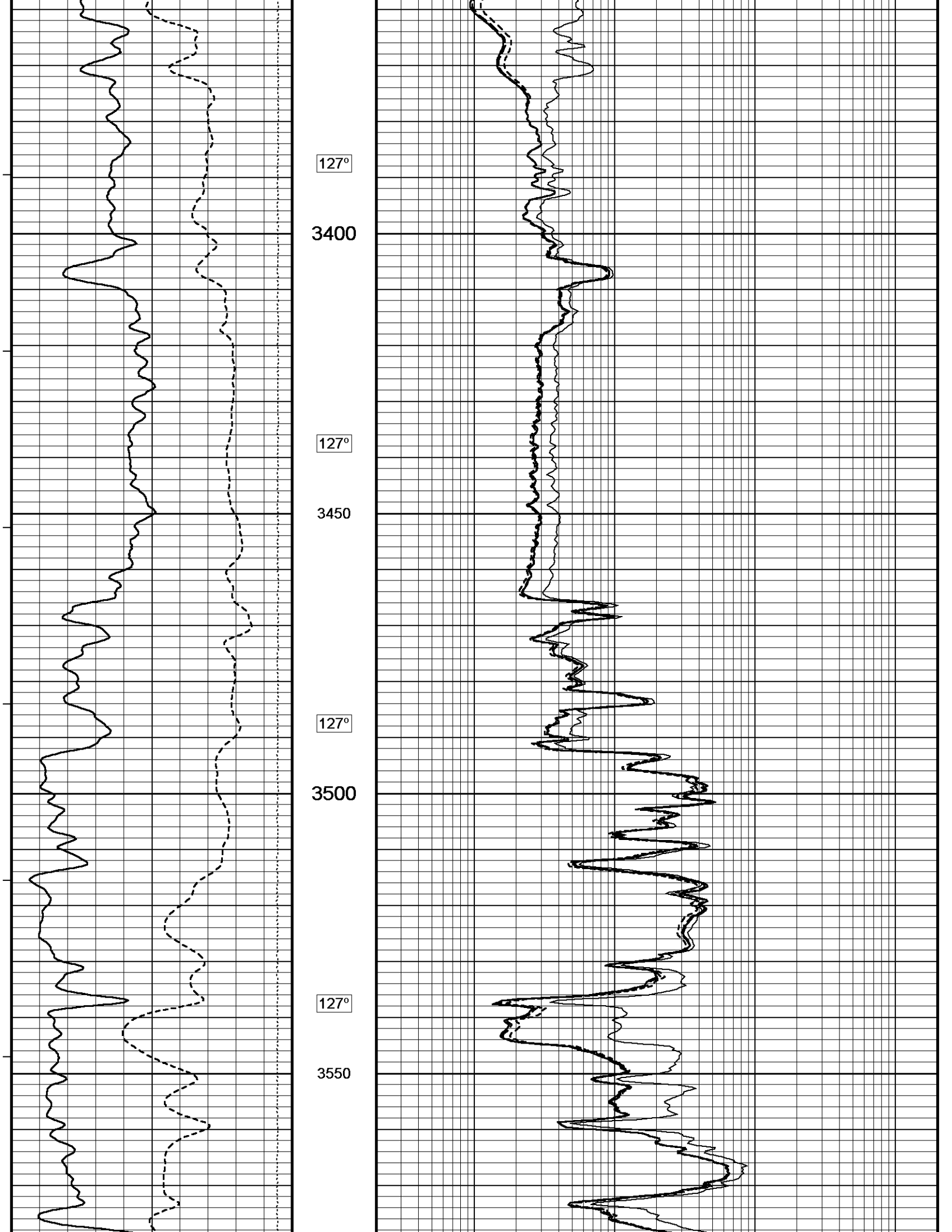

121°
2300
122°
2350
122°
2400
122°
2450
RTAO
R60O
R40O

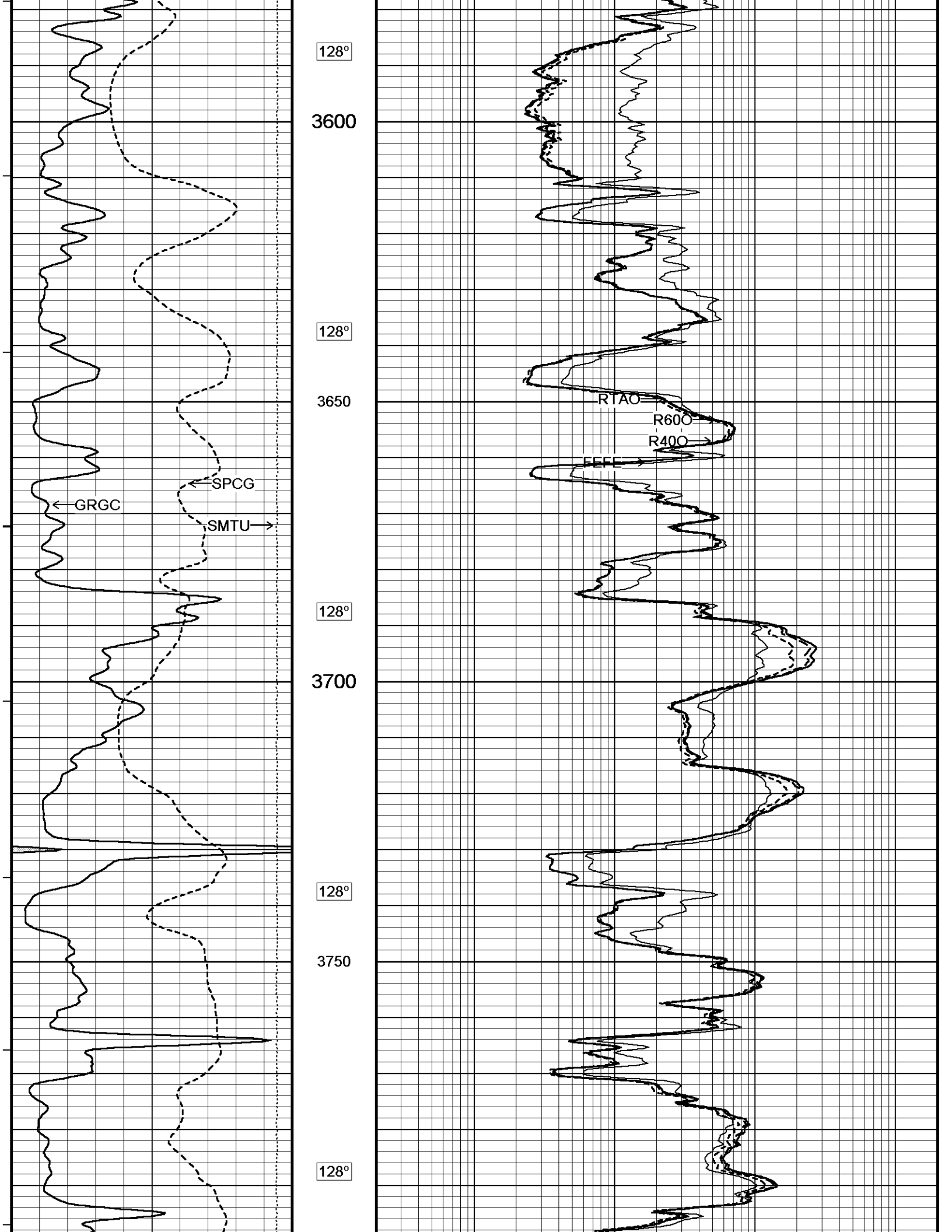

SPCG
GRGC
SMTU
FEFE
123°
2500
123°
2550
123°
2600
123°
2650
124°

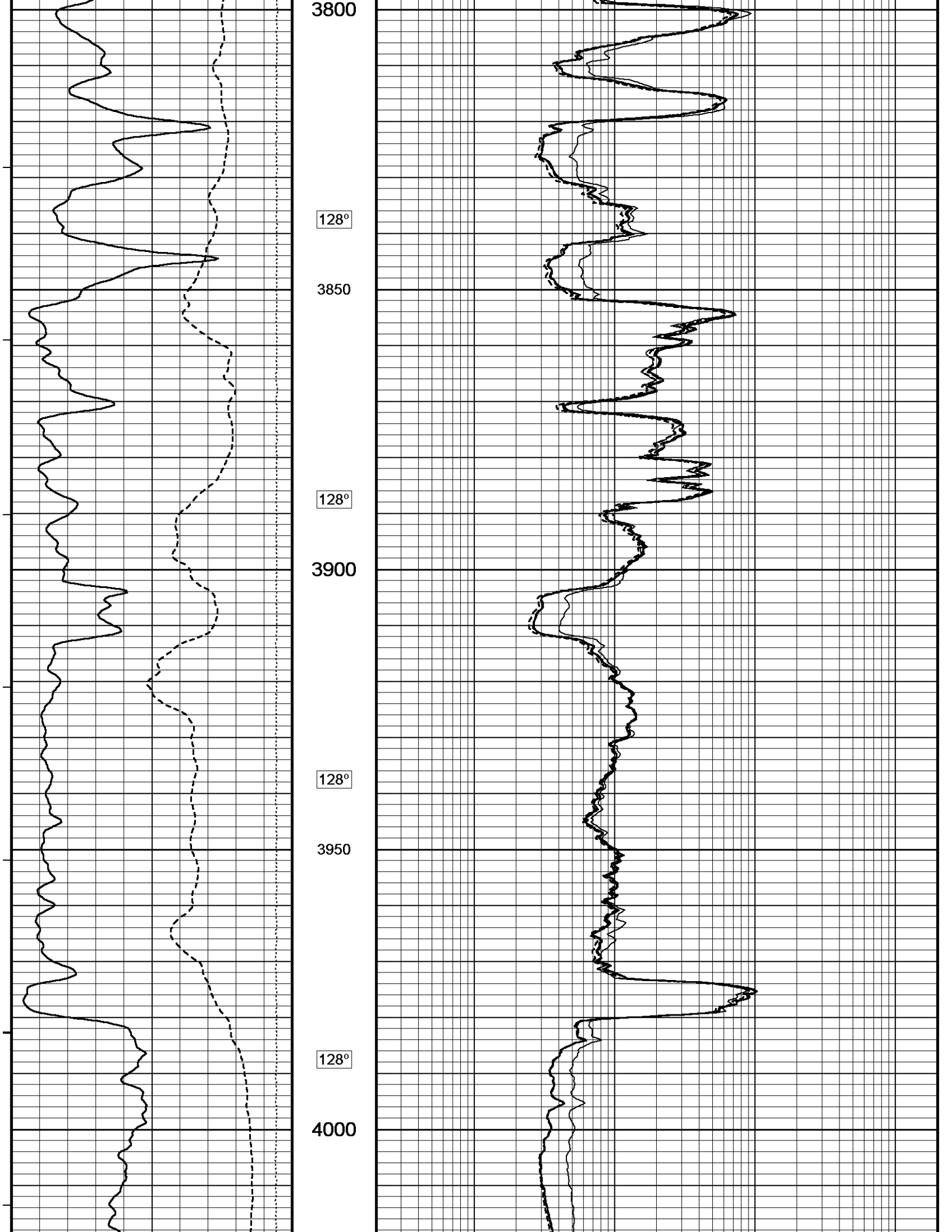

2700
124°
2750
124°
2800
124°
2850
125°
2900
SPCG
GRGC
SMTU
RTAO
R60O
R40O
FEFE

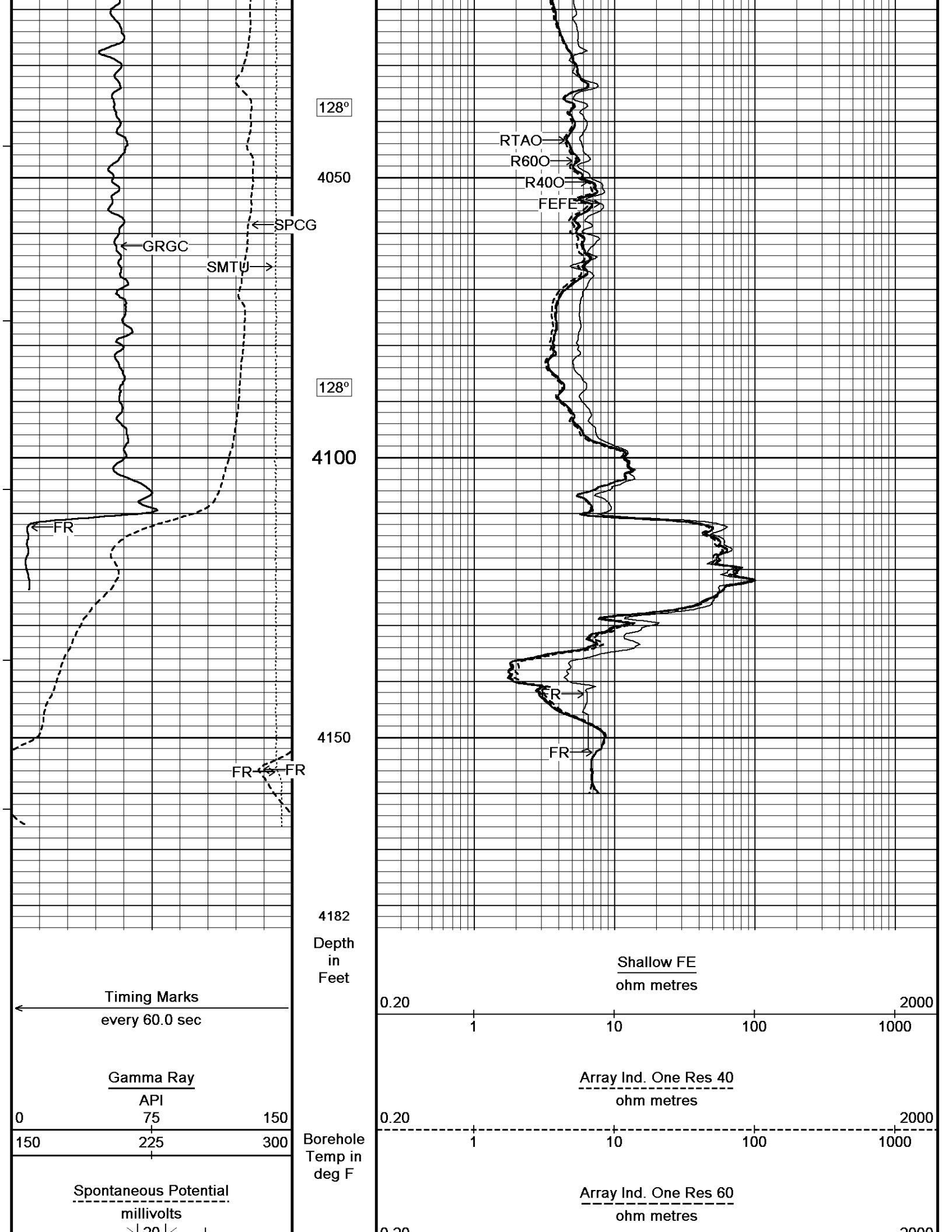

125°
2950
125°
3000
125°
3050
125°
3100
126°

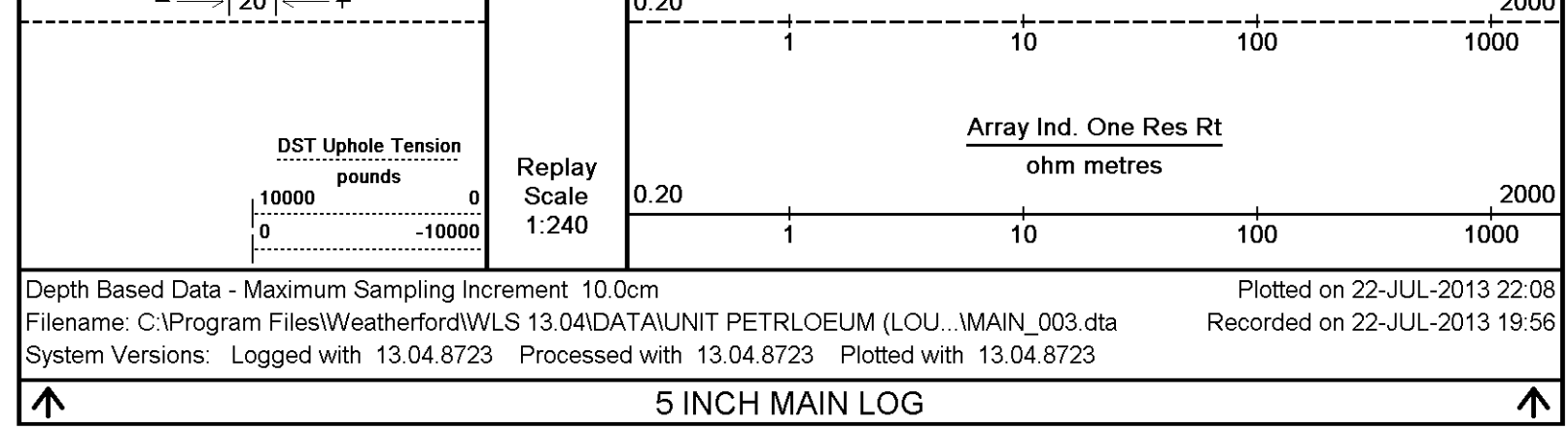

3150
126°
3200
126°
3250
RTAO
R60O
R40O
FEFE
SPCG
GRGC
SMTU
126°
3300
127°
3350


127°
3400
127°
3450
127°
3500
127°
3550


128°
3600
128°
3650
RTAO
R60O
R40O
FEFE
SPCG
GRGC
SMTU
128°
3700
128°
3750
128°


3800
128°
3850
128°
3900
128°
3950
128°
4000


128°
4050
SPCG
GRGC
SMTU
128°
4100
FR
4150
FR
FR
RTAO
R60O
R40O
FEFE
FR
FR
4182
Depth
in
Feet
Timing Marks
every 60.0 sec
Gamma Ray
API
0
75
150
150
225
300
Spontaneous Potential
millivolts
Borehole
Temp in
deg F
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



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 22-JUL-2013 22:08
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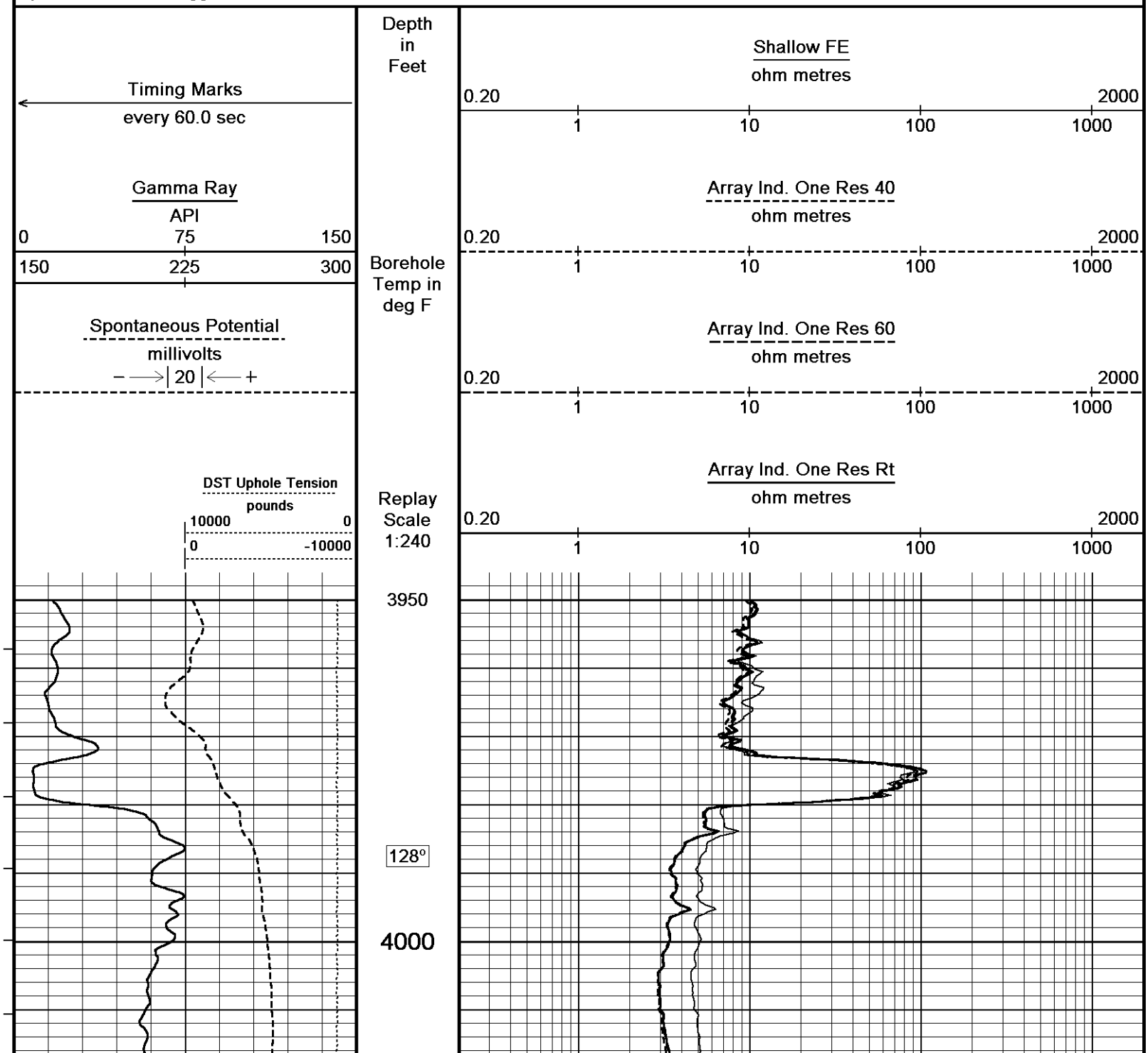
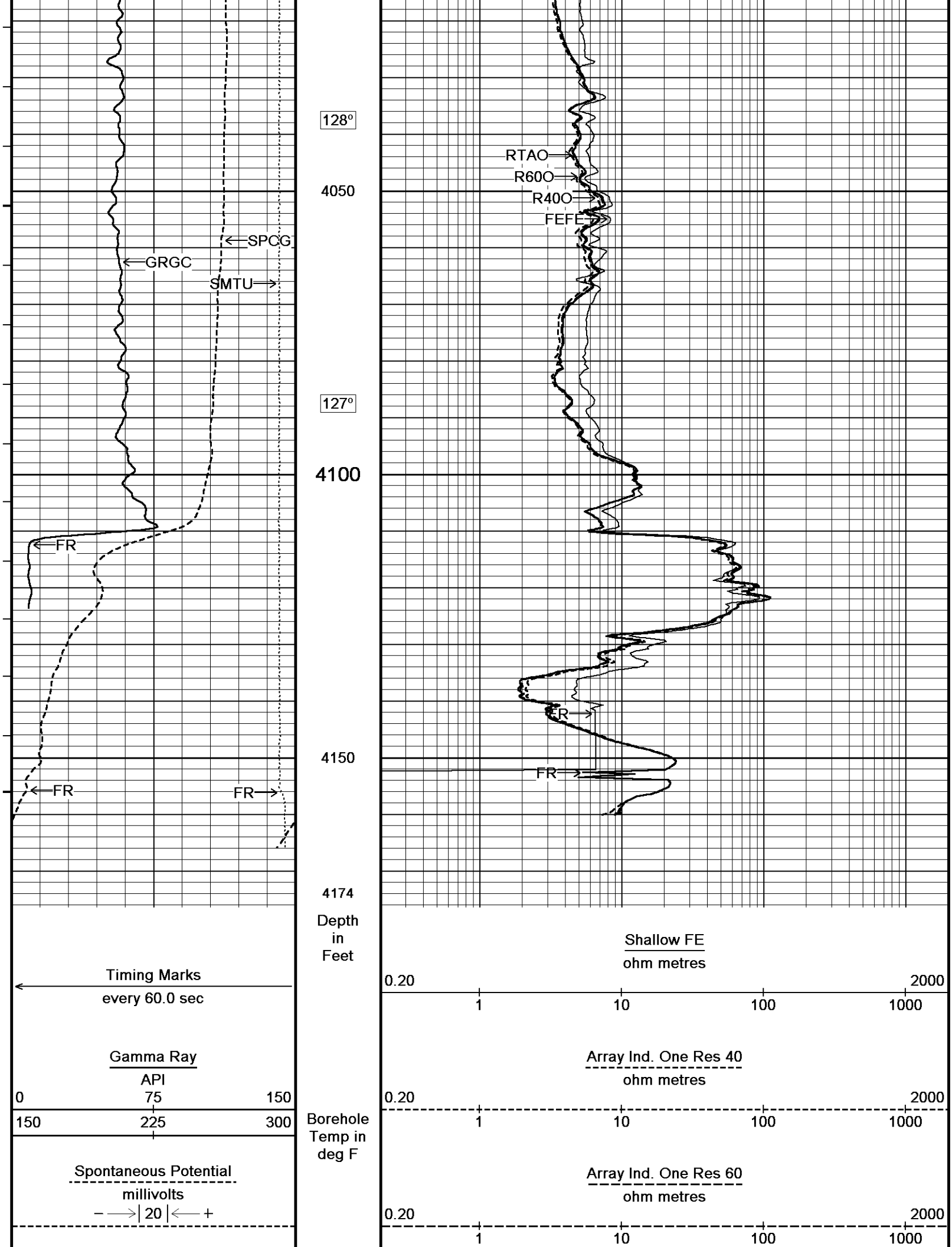
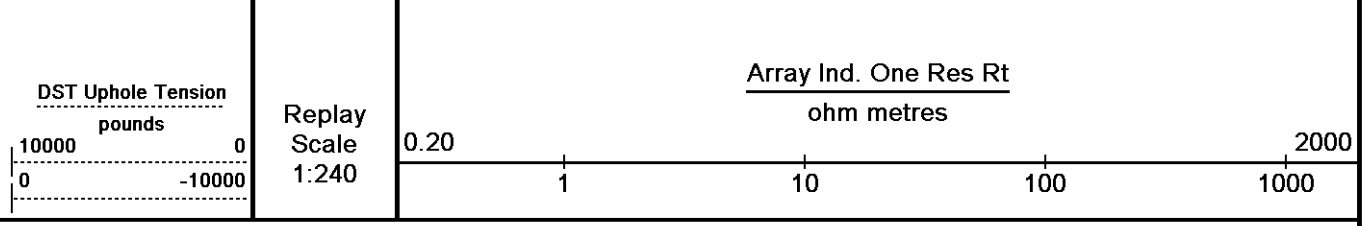
5 INCH MAIN LOG

REPEAT SECTION

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 22-JUL-2013 22:08
Filename: C:\Program Files\Weatherford\WLS 13.04\DATA\UNIT PETRLOEUM (LOU...\MAIN_002.dta — Recorded on 22-JUL-2013 19:21
System Versions: Logged with 13.04.8723 Processed with 13.04.8723 Plotted with 13.04.8723




128°
4050
127°
4100
4150
4174
SPCG
GRGC
SMTU
FR
FR
FR
RTAO
R60O
R40O
FEFE
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
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



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REPEAT SECTION

BEFORE SURVEY CALIBRATION

C:\Program Files\Weatherford\WLS 13.04\DATA\UNIT PETRLOEUM (LOUDENBACK 7 #1)\MAIN.dta

General Constants All 000

Last Edited on 22-JUL-2013,17:46

General Parameters		
Mud Resistivity	0.900	ohm-metres
Mud Resistivity Temperature	109.000	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	7.000	inches
Caliper for Differential Caliper	None	
Rwa Parameters		
Porosity used	Limestone Density Por.	
Resistivity used	Array Ind. One Res Rt	
RWA Constant A	0.610	
RWA Constant M	2.150	

Down-hole Tension Calibration SMS 0

Field Calibration on 22-JUL-2013 18:50

Reading No	Measured	Calibrated (lbs)
1	13022.91	0.00
2	13023.63	375.00

Gamma Calibration MCG-D.K 475

Field Calibration on 21-JUL-2013 22:42

	Measured	Calibrated (API)
Background	38	14
Calibrator (Gross)	1863	710
Calibrator (Net)	1826	696

Gamma Constants MCG-D.K 475

Last Edited on 22-JUL-2013,15:44

Gamma Calibrator Number	46	
Mud Density	1.13	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

SP Calibration MCG-D.K 475

Field Calibration on 21-JUL-2013,22:50

	Measured	Calibrated (mV)
Reference 1	100.0	100.0
Reference 2	-100.0	-100.0

High Resolution Temperature Calibration MCG-D.K 475

Field Calibration on 21-JUL-2013,22:50

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

High Resolution Temperature Constants MCG-D.K 475

Last Edited on 21-JUL-2013,23:00

Pre-filter Length	11

Micro Normal and Micro Inverse Calibration MMR-B.A 68

Base Calibration on 28-JUN-2013,03:34
Field Check on 21-JUL-2013 22:05

Base Calibration

Channel	Measured Resistor 1	Measured Resistor 2	Calibrated (ohm-m) Resistor 1	Calibrated (ohm-m) Resistor 2
Micro Normal	11.9	58.8	5.0	25.0
Micro Inverse	15.5	77.0	5.0	25.0

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Micro Normal	77.5	77.5
Micro Inverse	59.2	59.2

Micro Normal and Micro Inverse Constants MMR-B.A 68

Last Edited on 04-JUN-2013,09:48

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	0.0000	inches

Caliper Calibration MMR-B.A 68

Base Calibration on 28-JUN-2013,03:33
Field Calibration on 21-JUL-2013 22:18

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	14007	5.96
2	17124	7.98
3	20434	9.94
4	24160	11.91
5	0	0.00
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
10.02	9.94

Neutron Calibration MDN-A.B 55

Base Calibration on 28-JUN-2013,03:34
Field Check on 21-JUL-2013 22:50

Base Calibration

	Measured Near	Measured Far	Calibrated (cps) Near	Calibrated (cps) Far
	3091	97	3714	110
Ratio	31.818		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	2024	3009
Ratio	0.673	

Field Check

	Calibrated (cps)	
	1226	1798
Ratio	0.691	

Neutron Constants MDN-A.B 55

Last Edited on 21-JUL-2013,23:02

Neutron Source Id	P14033B	
Neutron Jig Number	NEC056	
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	Constant Value	
Formation Pressure	0.00	kpsi
Temperature Source	MCG External Temperature	
Temperature	N/A	degrees F
Mud Salinity	0.00	kppm
Salinity Correction	Not Applied	
Formation Fluid Salinity Source	Constant Value	
Formation Fluid Salinity	0.00	kppm
Barite Mud Correction	Not Applied	

Barite Mud Correction: Not Applied

FE Calibration MFE-A.A 65

Base Calibration on 28-JUN-2013,03:35
Field Check on 21-JUL-2013 22:03

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	9.7	1.3
Reference 2	956.6	126.8
Base Check		282.0
Field Check		281.9

FE Constants MFE-A.A 65

Last Edited on 21-JUL-2013,23:02

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

High Resolution Temperature Calibration MAI-A.A 102

Field Calibration on 21-JUL-2013,22:57

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

High Resolution Temperature Constants MAI-A.A 102

Last Edited on 21-JUL-2013,23:03

Pre-filter Length	11

Induction Calibration MAI-A.A 102

Base Calibration on 28-JUN-2013,03:36
Field Check on 21-JUL-2013 22:02

Base Calibration

Test Loop Calibration

Channel	Measured Low	Measured High	Calibrated (mmho/m) Low	Calibrated (mmho/m) High
1	18.0	481.9	9.3	966.2
2	6.6	378.8	7.6	821.4
3	4.0	256.0	5.2	566.0
4	3.8	134.5	2.6	279.2

Array Temperature: 86.5 Deg F

Channel	Base Check (mmho/m) Low	Base Check (mmho/m) High	Field Check (mmho/m) Low	Field Check (mmho/m) High
1			10.3	3806.1
2			27.8	3600.5
3			26.4	3128.4
4			14.7	2098.3
Deep			13.2	2016.9
Medium			42.2	4173.6
Shallow			45.3	5344.9

Array Temperature: 90.8 Deg F

Induction Constants MAI-A.A 102

Last Edited on 21-JUL-2013,23:03

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	6.0000	
Stand-off Fin Angle	60.00	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	

Caliper Calibration MPD-B 165

Base Calibration on 19-JUL-2013 12:51
Field Calibration on 21-JUL-2013,23:02

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	14317	4.01
2	22698	5.96
3	31426	7.98
4	39984	9.94
5	48822	11.91
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.99	7.98

Photo Density Calibration MPD-B 165

Base Calibration on 19-JUL-2013 13:22
Field Check on 21-JUL-2013,23:02

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	44710	22034	59869	31110
Reference 2	18707	2248	24557	2522

Field Check at Base

1138.1	1219.2

Field Check

1138.1	1222.3

PE Calibration

Base Calibration	Measured			Calibrated
	WS	WH	Ratio	Ratio
Background	206	1018		
Reference 1	18814	44541	0.428	0.369
Reference 2	5343	18579	0.293	0.271

Field Check at Base

206.3	1018.4

Field Check

207.2	1015.6

Density Constants MPD-B 165

Last Edited on 22-JUL-2013,15:44

Density Source Id	260
Nylon Calibrator Number	633
Aluminium Calibrator Number	633
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 (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

DOWNHOLE EQUIPMENT

C:\Program Files\Weatherford\WLS 13.04\DATA\UNIT PETRLOEUM (LOUDENBACK 7 #1)\MAIN.dta

SHA-J.B Compact Swivel Head Adaptor
SHA-J.B 592 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

Compact Comms Gamma
MCG-D.K 475 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Micro-Resistivity
MMR-B.A 68 LG: 8.59 ft WT: 81.6 lb OD: 4.88 in

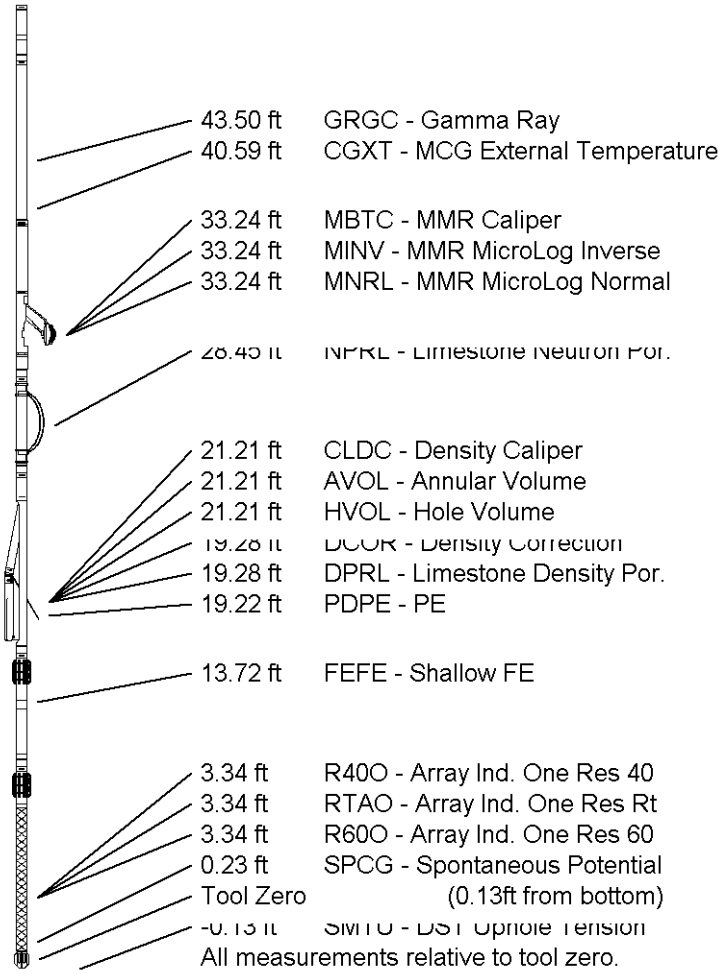
Compact Neutron
MDN-A.B 55 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper
MPD-B 165 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

Compact Focussed Electric
MFE-A.A 65 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Induction
MAI-A.A 102 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 51.08 ft Weight: 405.7 lb



COMPANY	UNIT PETROLEUM COMPANY
WELL	LOUDENBACK 7 #1
FIELD	WILDCAT
PROVINCE/COUNTY	RENO
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	1784.00	feet	First Reading	4153.00	feet

Elevation Kelly Bushing	1784.00	feet	First Reading	4153.00	feet
Elevation Drill Floor	1785.00	feet	Depth Driller	4158.00	feet
Elevation Ground Level	1770.00	feet	Depth Logger	4156.00	feet

ARRAY INDUCTION
SHALLOW FOCUSED
ELECTRIC LOG

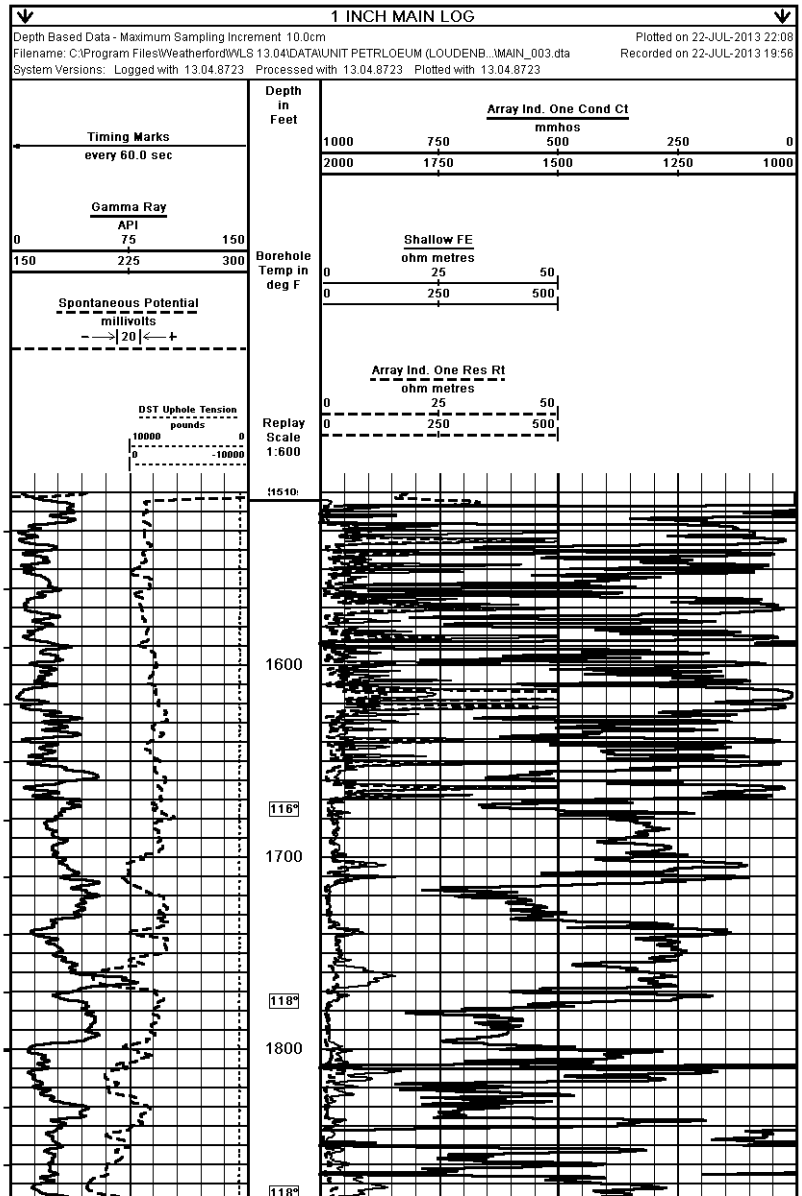
Weatherford®

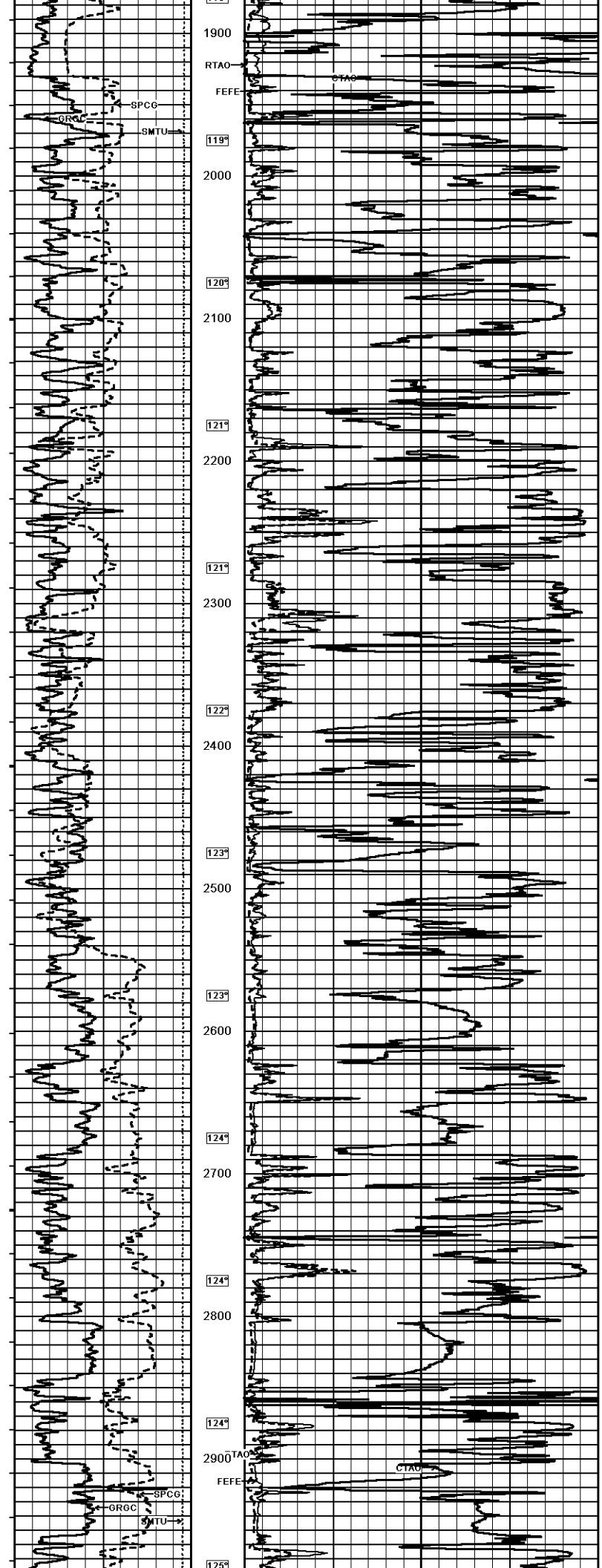
COMPANY	UNIT PETROLEUM COMPANY
WELL	LOUDENBACK 7 #1
FIELD	WILDCAT
PROVINCE/COUNTY	RENO
COUNTRY/STATE	U.S.A. / KANSAS
LOCATION	150' FNL & 850' FEL
	NE-NW-NE-NW
SEC 18 TWP 25S RGE 10W	Other Services MDN/MPD MML
API Number 15-155-21662	
Permit Number	
Permanent Datum GL Elevation 1770 feet	Elevations: KB 1784.00 feet, DF 1785.00, GL 1770.00
Log Measured From KB	
Drilling Measured From KB	
Date	22-JUL-2013
Run Number	ONE
Service Order	3547196
Depth Driller	4158.00 feet
Depth Logger	4156.00 feet
First Reading	4153.00 feet
Last Reading	1514.00 feet
Casing Driller	1515.00 feet
Casing Logger	1514.00 feet
Bit Size	8.750 inches
Hole Fluid Type	WBM
Density / Viscosity	9.40 lbm/USg 40.00 CP
PH / Fluid Loss	10.60 6.80 ml/30Min
Sample Source	MUD PIT
Rm @ Measured Temp	0.90 @109.0 ohm-m
Rmf @ Measured Temp	0.72 @109.0 ohm-m
Rmc @ Measured Temp	1.08 @109.0 ohm-m
Source Rmf / Rmc	CALC CALC
Rm @ BHT	0.77 @127.0 ohm-m
Time Since Circulation	4 HOURS
Max Recorded Temp	128.00 deg F
Equipment / Base	13145 OKC
Recorded By	JIM SCHULER J. HICKS
Witnessed By	ROB WILSON LARRY MILLER

ARRAY INDUCTION
SHALLOW FOCUSED
ELECTRIC LOG

1 INCH MAIN LOG

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 22-JUL-2013 22:08
Filename: C:\Program Files\Weatherford\WLS 13.04\DATA\UNIT PETRLOEUM (LOUDENB...\MAIN_003.dta — Recorded on 22-JUL-2013 19:56
System Versions: Logged with 13.04.8723 Processed with 13.04.8723 Plotted with 13.04.8723

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CTAO
FEFE
SPCG
GRGC
SMTU
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2000
120°
2100
121°
2200
121°
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123°
2500
123°
2600
124°
2700
124°
2800
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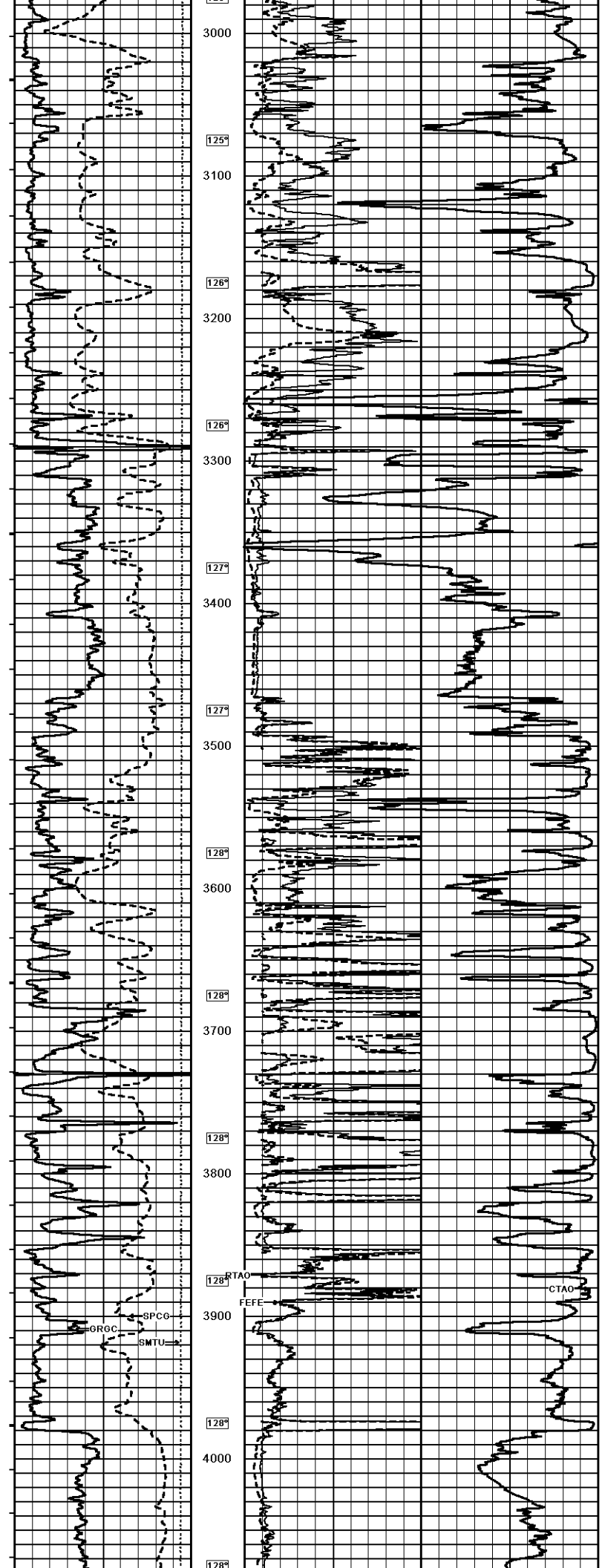
2900
TAO
CTAO
FEFE
SPCG
GRGC
SMTU
125°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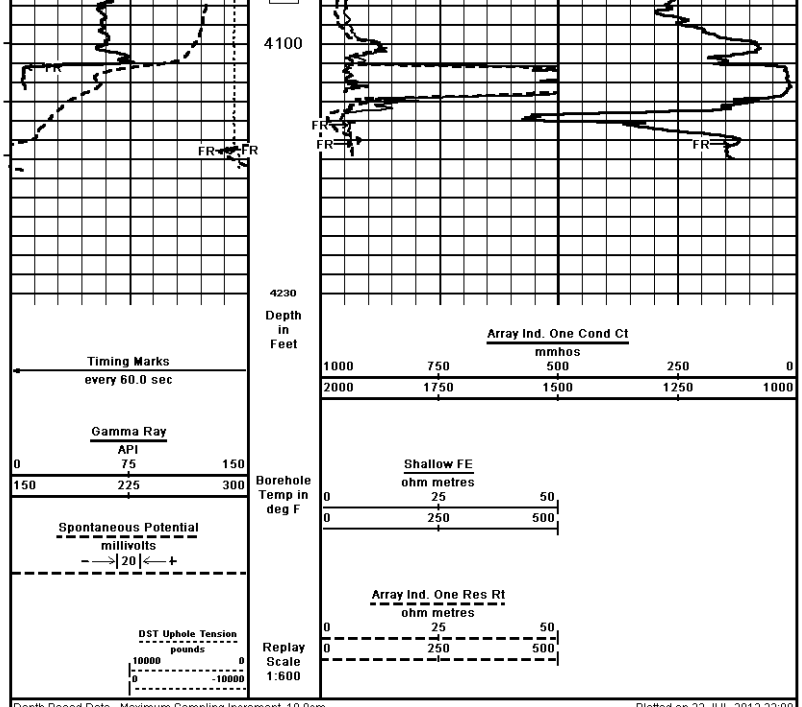
125°
3100
126°
3200
126°
3300
127°
3400
127°
3500
128°
3600
128°
3700
128°
3800
128°
RTAO
FEFE
CTAO
3900
SPCG
GRGC
SMTU
128°
4000
128°



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
10000 0
0 -10000

Array Ind. One Cond Ct
mmhos
1000 750 500 250 0
2000 1750 1500 1250 1000

Shallow FE
ohm metres
0 25 50
0 250 500

Borehole Temp in deg F

Array Ind. One Res Rt
ohm metres
0 25 50
0 250 500

Replay Scale 1:600

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 22-JUL-2013 22:08
Filename: C:\Program Files\Weatherford\WLS 13.04\DATA\UNIT PETRLOEUM (LOUDENB...\MAIN_003.dta — Recorded on 22-JUL-2013 19:56
System Versions: Logged with 13.04.8723 Processed with 13.04.8723 Plotted with 13.04.8723

1 INCH MAIN LOG

COMPANY	UNIT PETROLEUM COMPANY
WELL	LOUDENBACK 7 #1
FIELD	WILDCAT
PROVINCE/COUNTY	RENO
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	1784.00	feet	First Reading	4153.00	feet
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