COMPOSITE LOG

COMPANY	TAOS RESOURCES OPERATING COMPANY
WELL	MCCONAGHY #17-1
FIELD	TISDALE GAS
PROVINCE/COUNTY	COWLEY
COUNTRY/STATE	USA / KANSAS
LOCATION	825' FNL & 2145' FEL OF NW/4

SEC 17	TWP 33S	RGE 5E	Other Services
Latitude	37.18414080		NONE
Longitude	-96.90742700		
API Number	15-035-24605		

Permanent Datum GL, Elevation 1283 feet
Log Measured From KB
Drilling Measured From KB

Elevations:	feet
KB	1293.00
DF	1291.00
GL	1283.00

Date	06-NOV-2014			
Run Number	ONE			
Service Order	7055-102487062			
Depth Driller	3750.00	feet		
Depth Logger	3750.00	feet		
First Reading	3747.00	feet		
Last Reading	261.00	feet		
Casing Driller	265.00	feet		
Casing Logger	261.00	feet		
Bit Size	7.875	inches		
Hole Fluid Type	WBM			
Density / Viscosity	9.30 lb/USg		50.00 sec/qt	
PH / Fluid Loss	10.00		8.20 ml/30Min	
Sample Source	MUD PIT			
Rm @ Measured Temp	1.90 @ 85.0	ohm-m		
Rmf @ Measured Temp	1.52 @ 85.0	ohm-m		
Rmc @ Measured Temp	2.28 @ 85.0	ohm-m		
Source Rmf / Rmc	CALC		CALC	
Rm @ BHT	1.50 @109.0	ohm-m		
Time Since Circulation	5 HOURS			
Max Recorded Temp	109.00	deg F		
Equipment / Base	13039		OKC	
Recorded By	JUSTIN HICKS		JEREMY NORWOOD	
Witnessed By	DAVID GRIFFITH			

BOREHOLE RECORD

Last Edited: 06-NOV-2014 18:41

Bit Size inches	Depth From feet	Depth To feet
7.875	265.00	3750.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	265.00	24.00

REMARKS

TOOLS RAN: CBH, SHA, MCG, SGS, MMR, MDN, MPD, MFE, MSS, MAI RAN IN COMBINATION.

HARDWARE USED:
MAI: TWO 0.5 INCH STANDOFFS.
MFE: ONE 0.5 INCH STANDOFF.
MDN: DUAL NEUTRON BOWSPRING.
MPD: 8 INCH PROFILE PLATE.
MSS: THREE 0.5 INCH STANDOFFS.

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 SURFACE CASING = 1404 CU.FT.
ANNULAR HOLE VOLUME WITH 5.5 INCH PRODUCTION CASING FROM TD TO SURFACE CASING = 831 CU.FT.

FIELD TICKET NUMBER: 7055-102487062

RIG: VAL DRILLING RIG #3

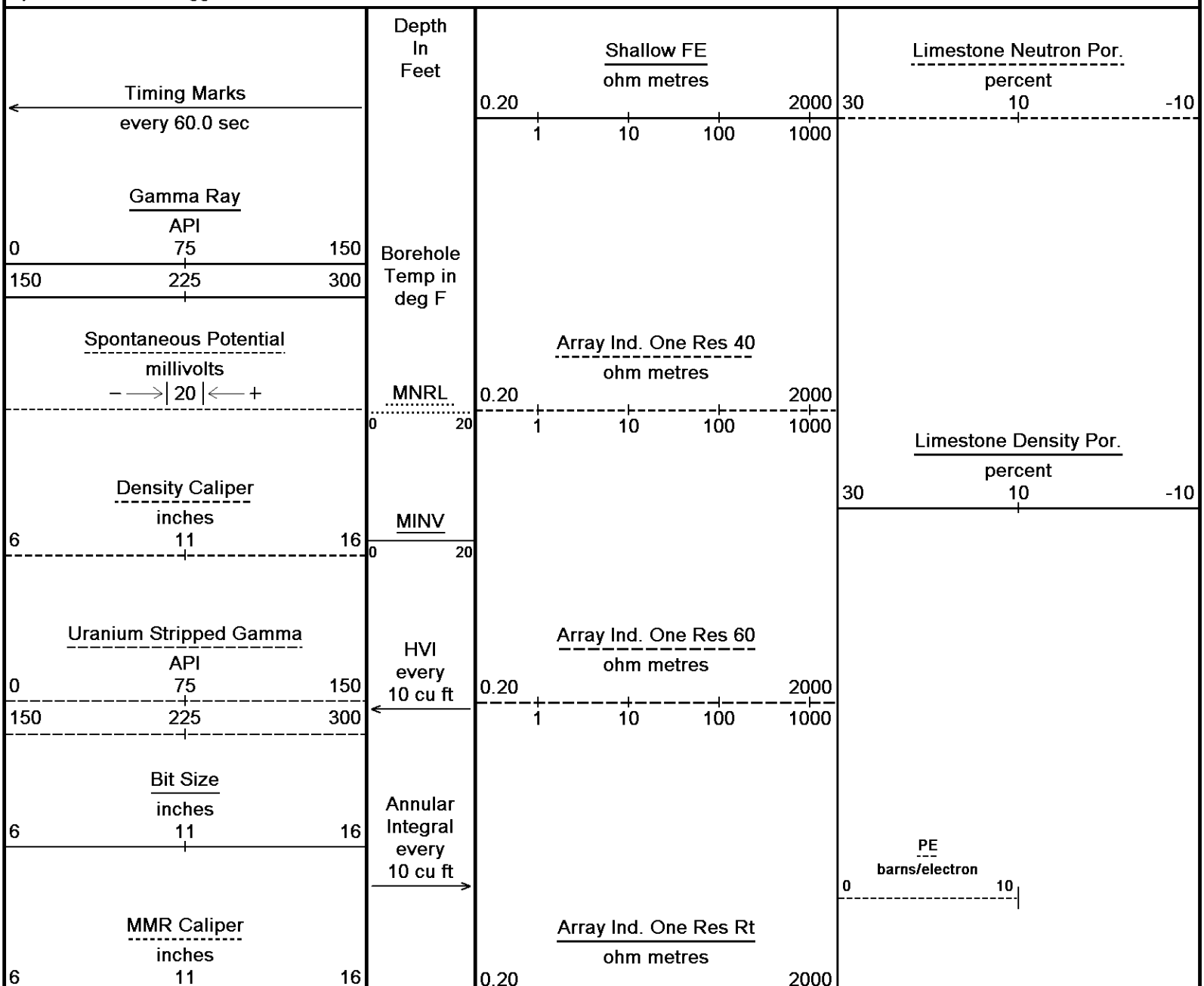
RIG: VAL DRILLING, RIG #6

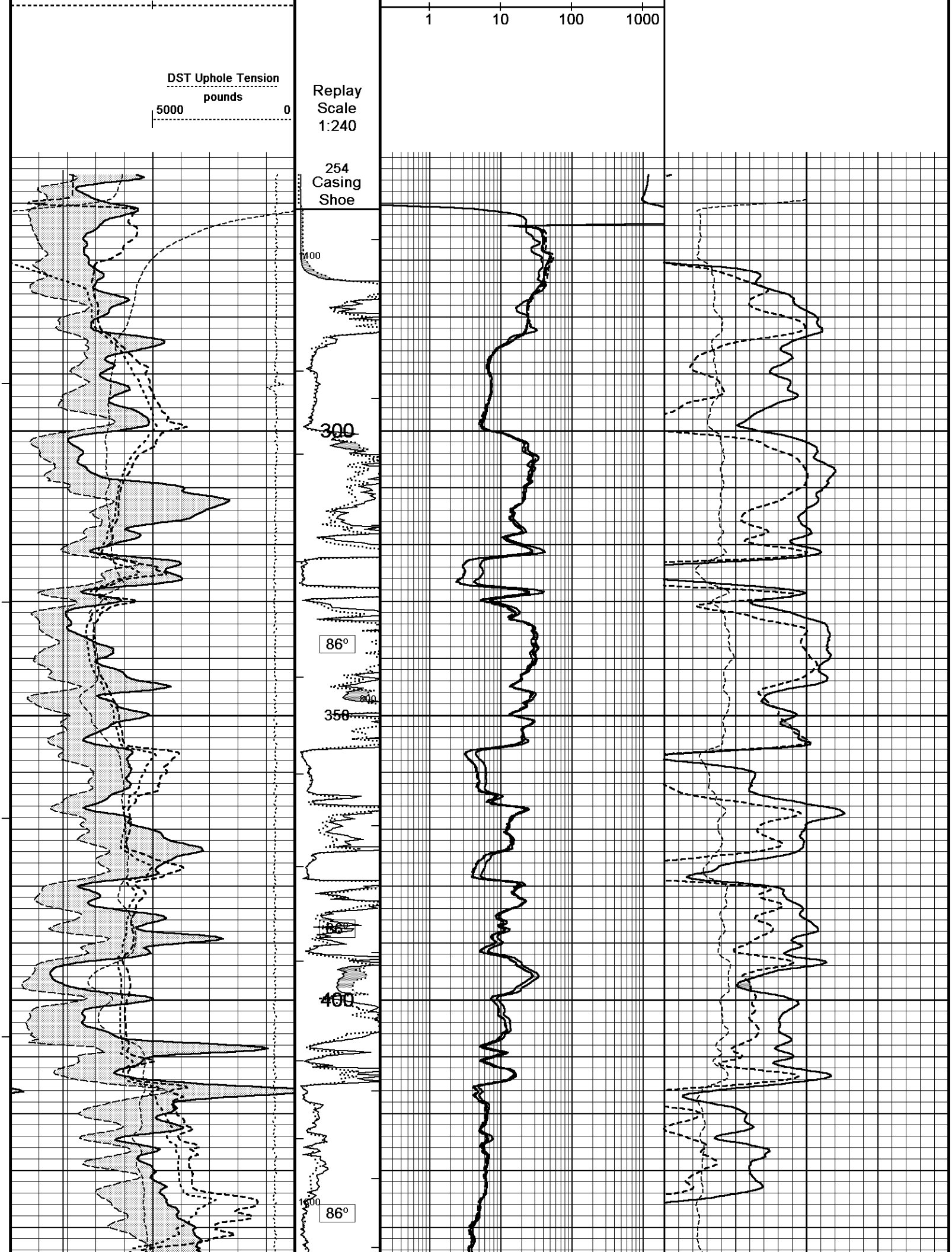
OPERATOR(S): C. ALEXANDER

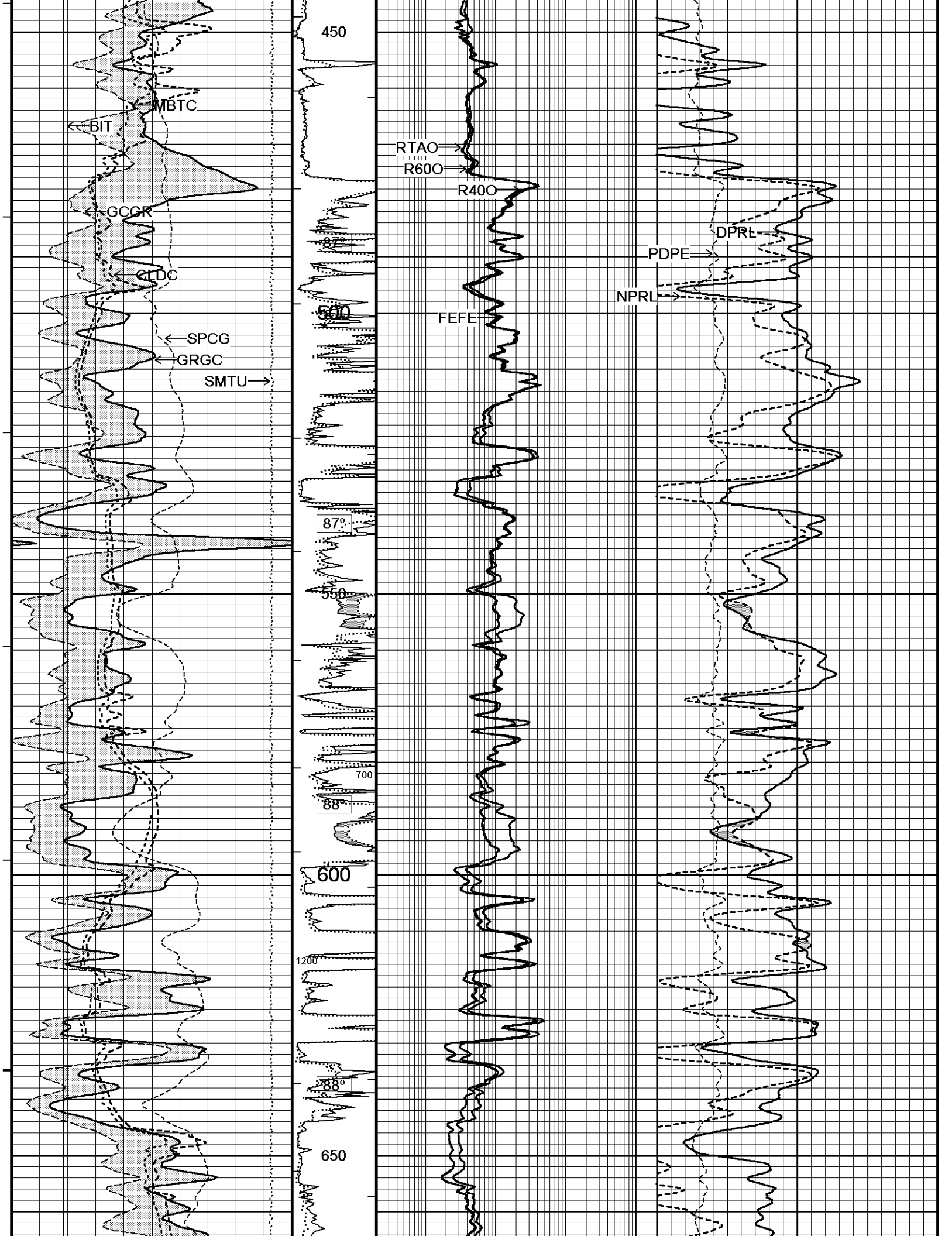
HOLE WASHOUTS AND RUGOSITY WILL AFFECT LOG QUALITY AND REPEATABILITY.

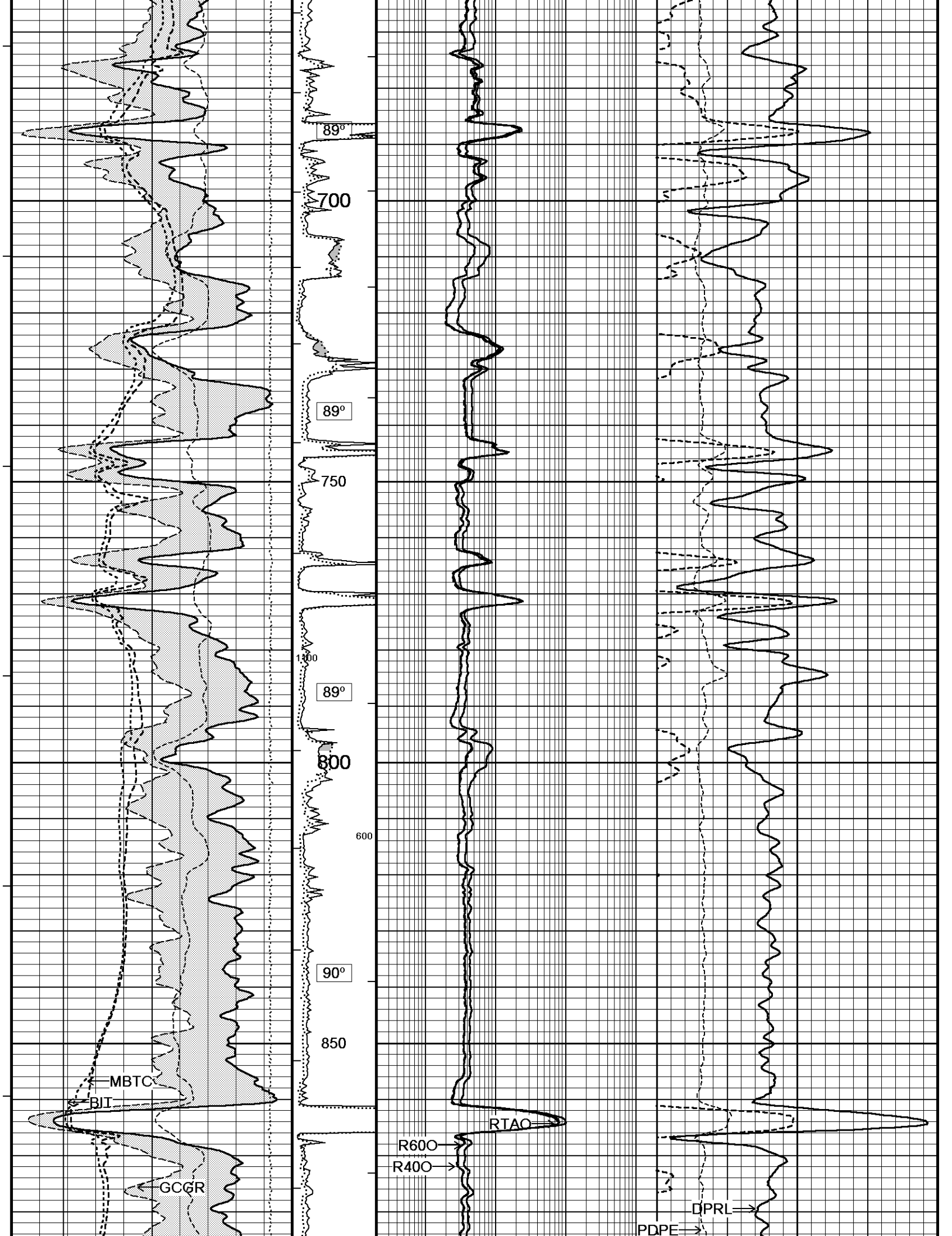
5 INCH MAIN LOG 1:240

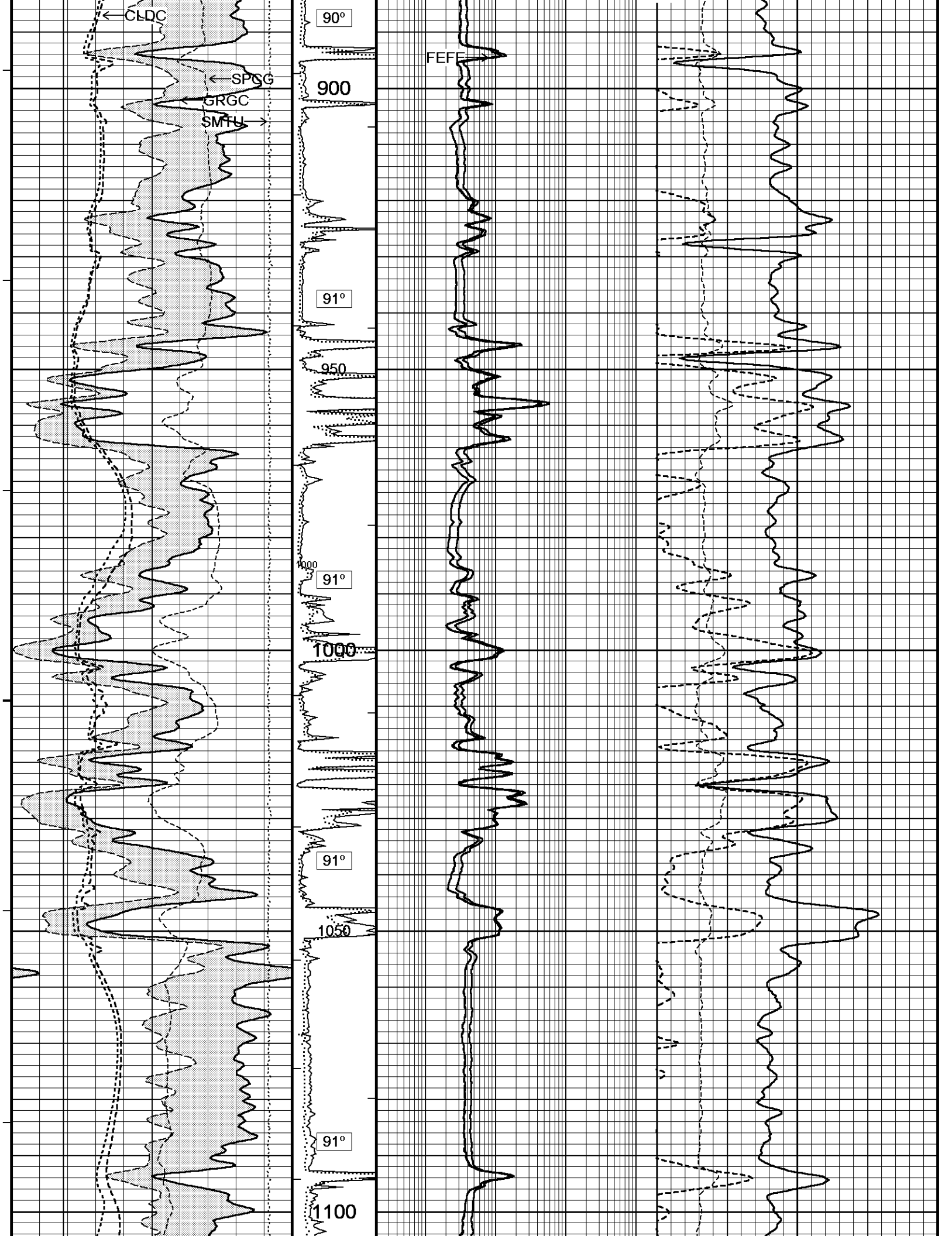
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 06-NOV-2014 23:24
Filename: D:\14.03\TAOS (MCCONAGHY #17-1)\MAIN PASS.dta
Recorded on 06-NOV-2014 20:40
System Versions: Logged with 14.03.5114 Processed with 14.03.5114 Plotted with 14.03.5114

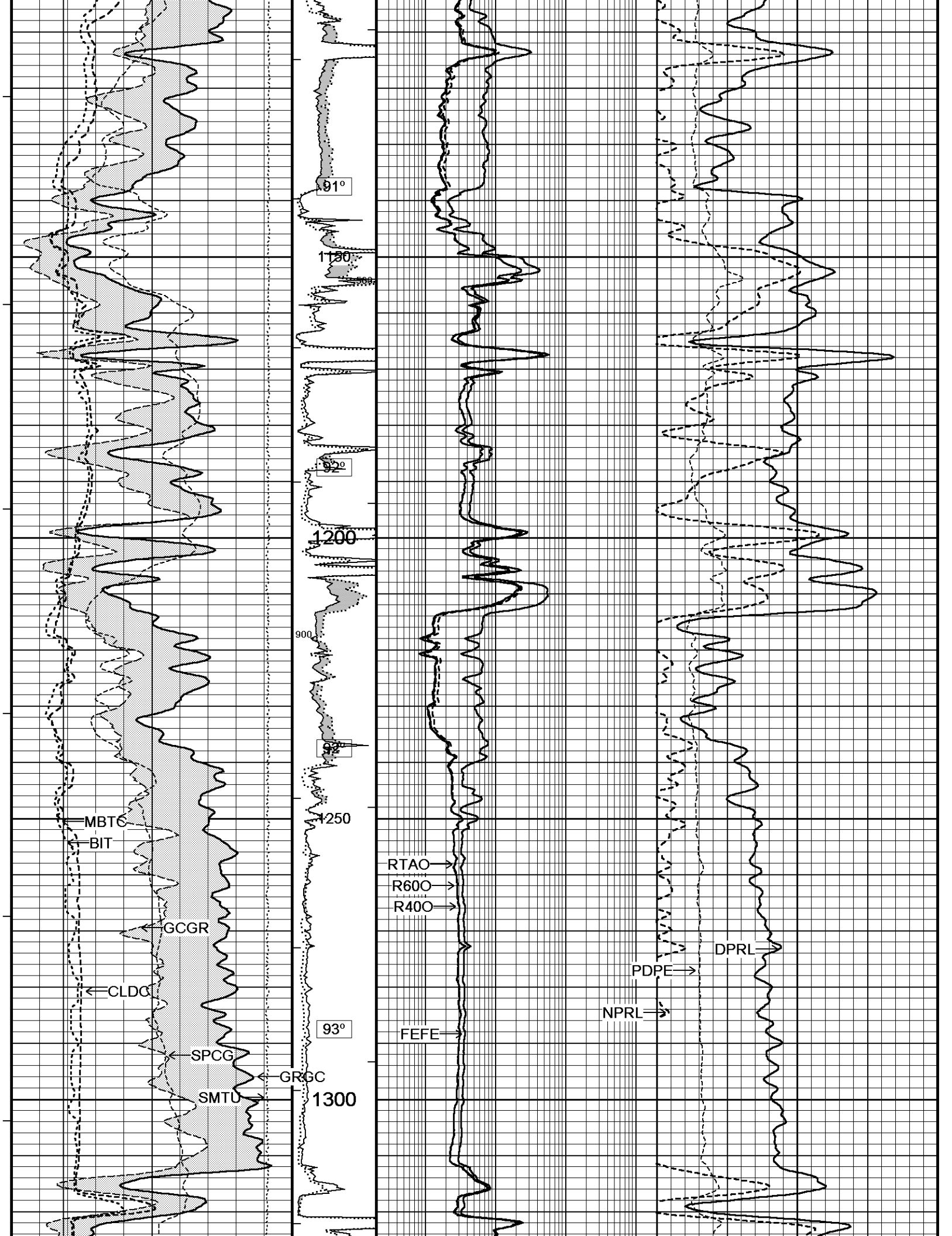


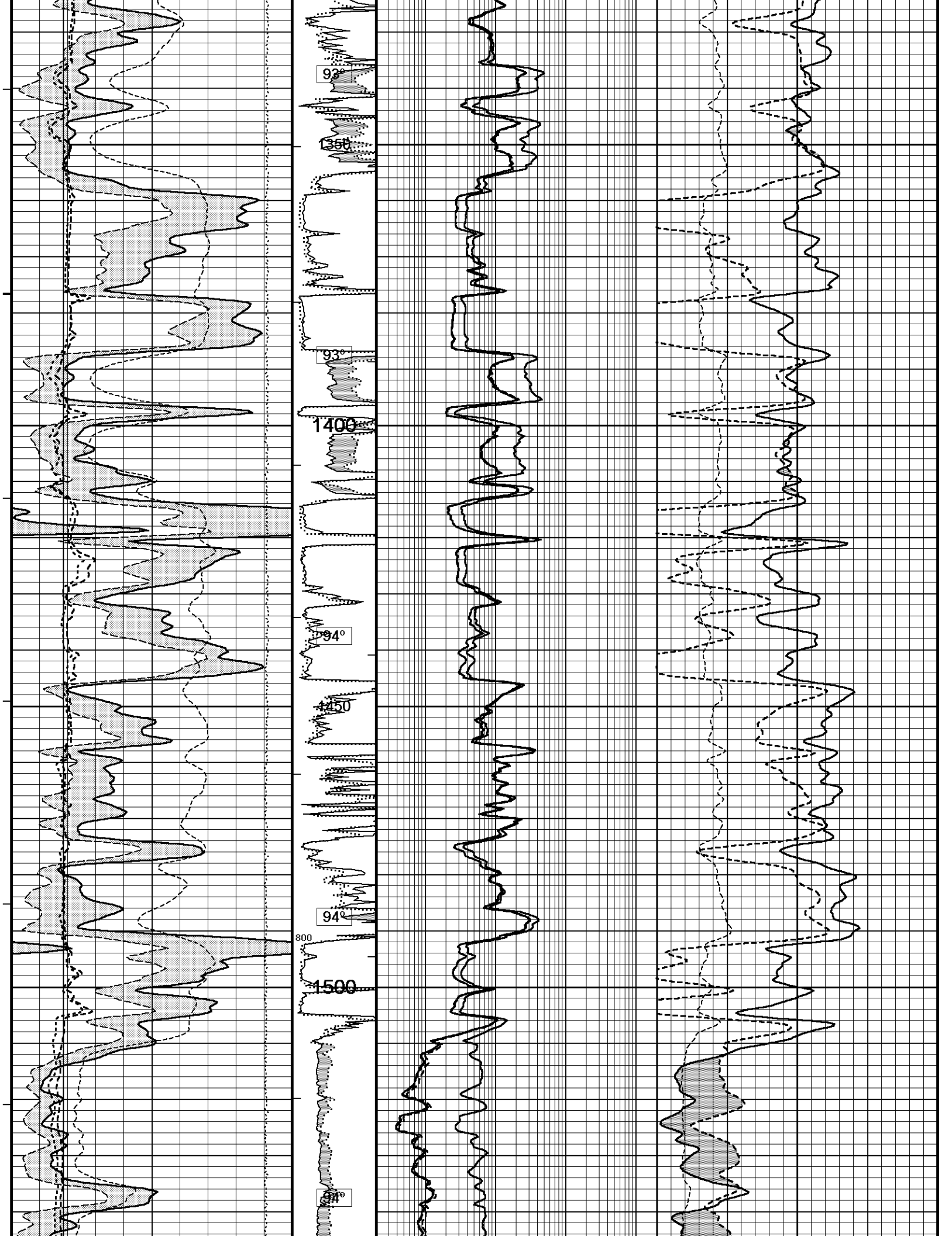

DST Uphole Tension
pounds
5000
0
Replay
Scale
1:240
254
Casing
Shoe
400
300
86°
350
86°
400
1600
86°
1
10
100
1000

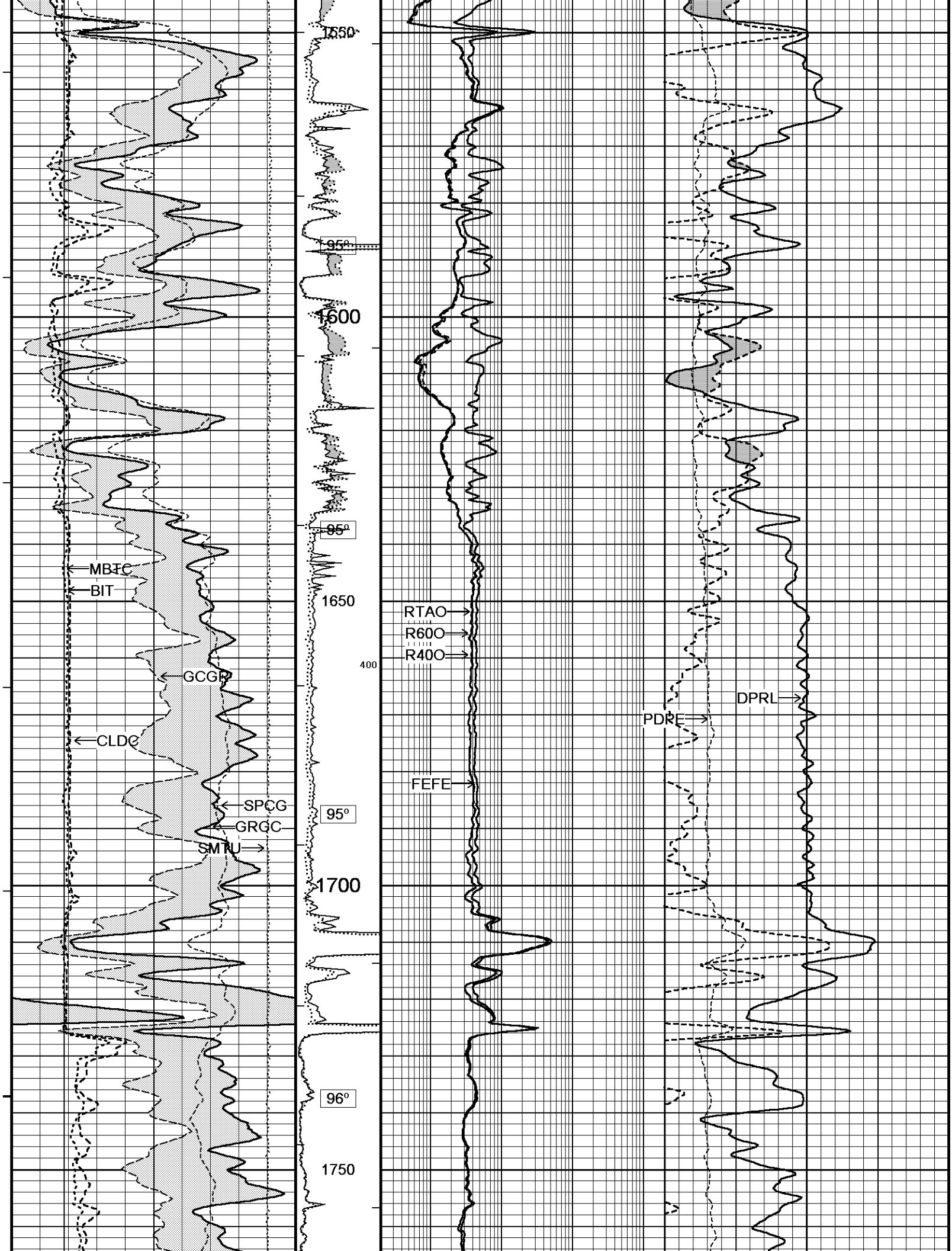

MBTC
BIT
GCGR
CLDC
SPCG
GRGC
SMTU
450
87°
500
87°
550
700
88°
600
1200
88°
650
RTAO
R60O
R40O
FEFE
DPRL
PDPE
NPRL

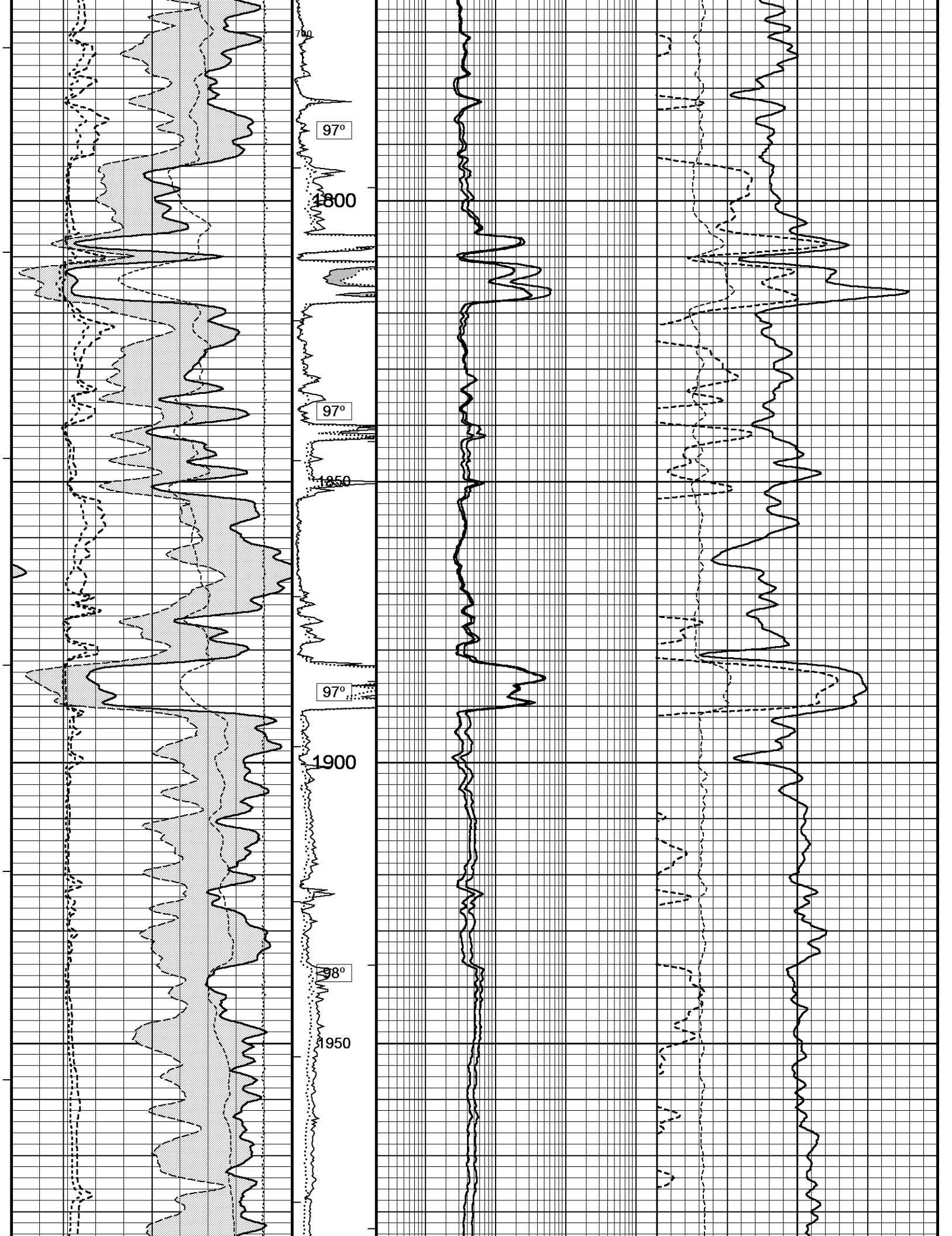

89°
700
89°
750
1300
89°
800
600
90°
850
MBTC
BIT
GCGR
RTAO
R60O
R40O
DPRL
PDPE

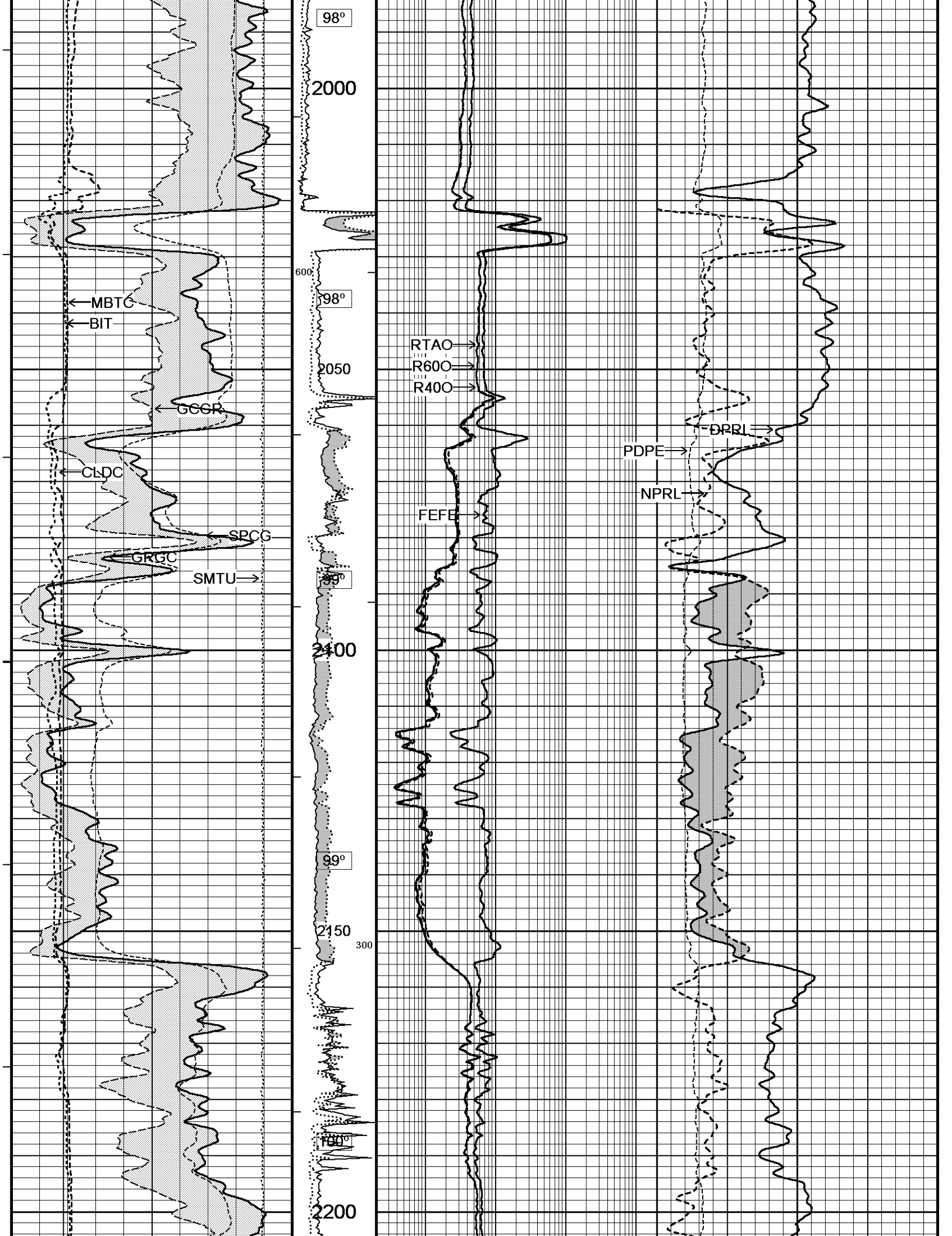

CLDC
SPSG
GRGC
SMTU
90°
900
91°
950
000
91°
1000
91°
1050
91°
1100
FEFE

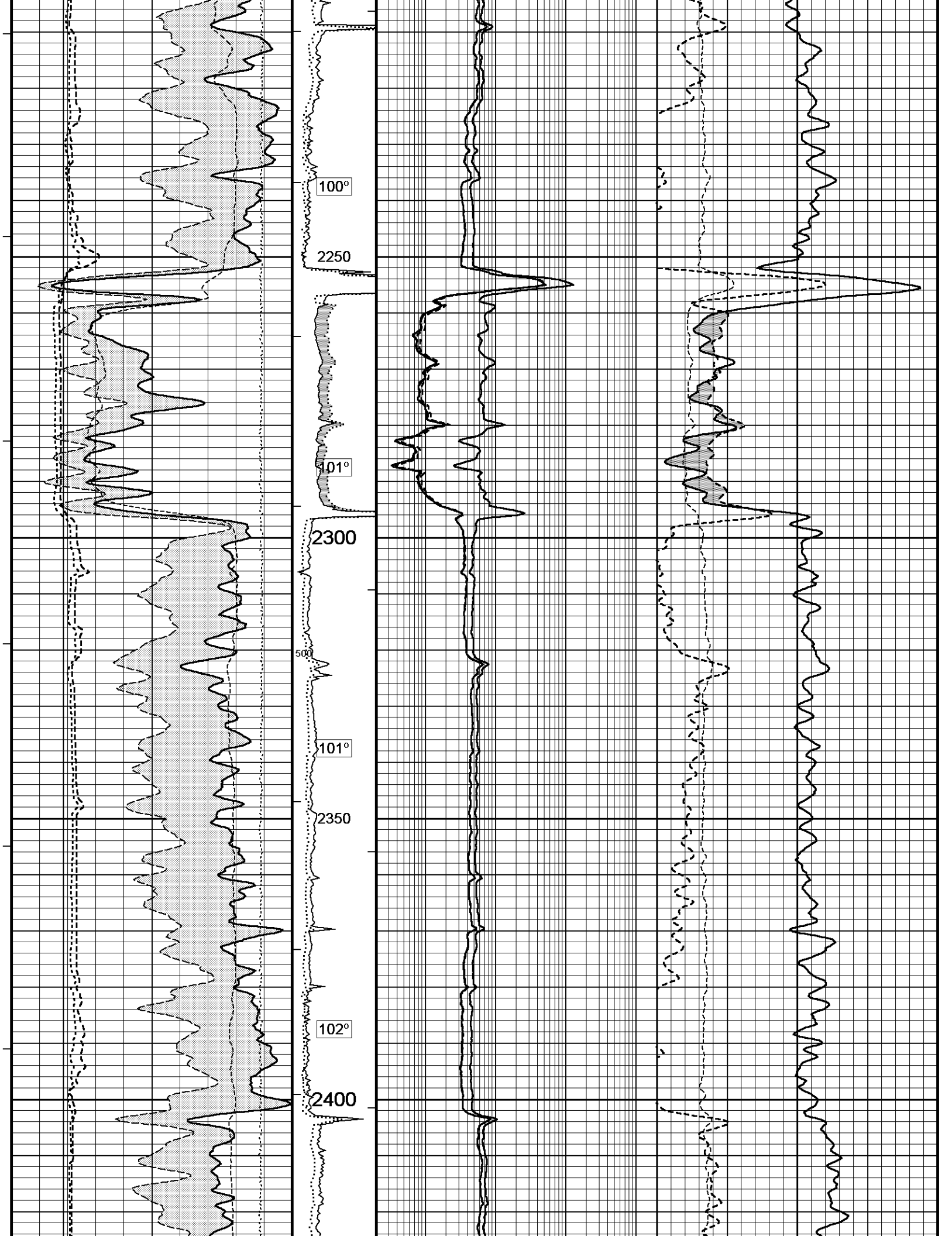

91°
1100
92°
1200
900
92°
1250
MBTC
BIT
RTAO
R60O
R40O
GCGR
DPRL
PDPE
CLDC
NPRL
93°
FEFE
SPCG
GRGC
SMTU
1300

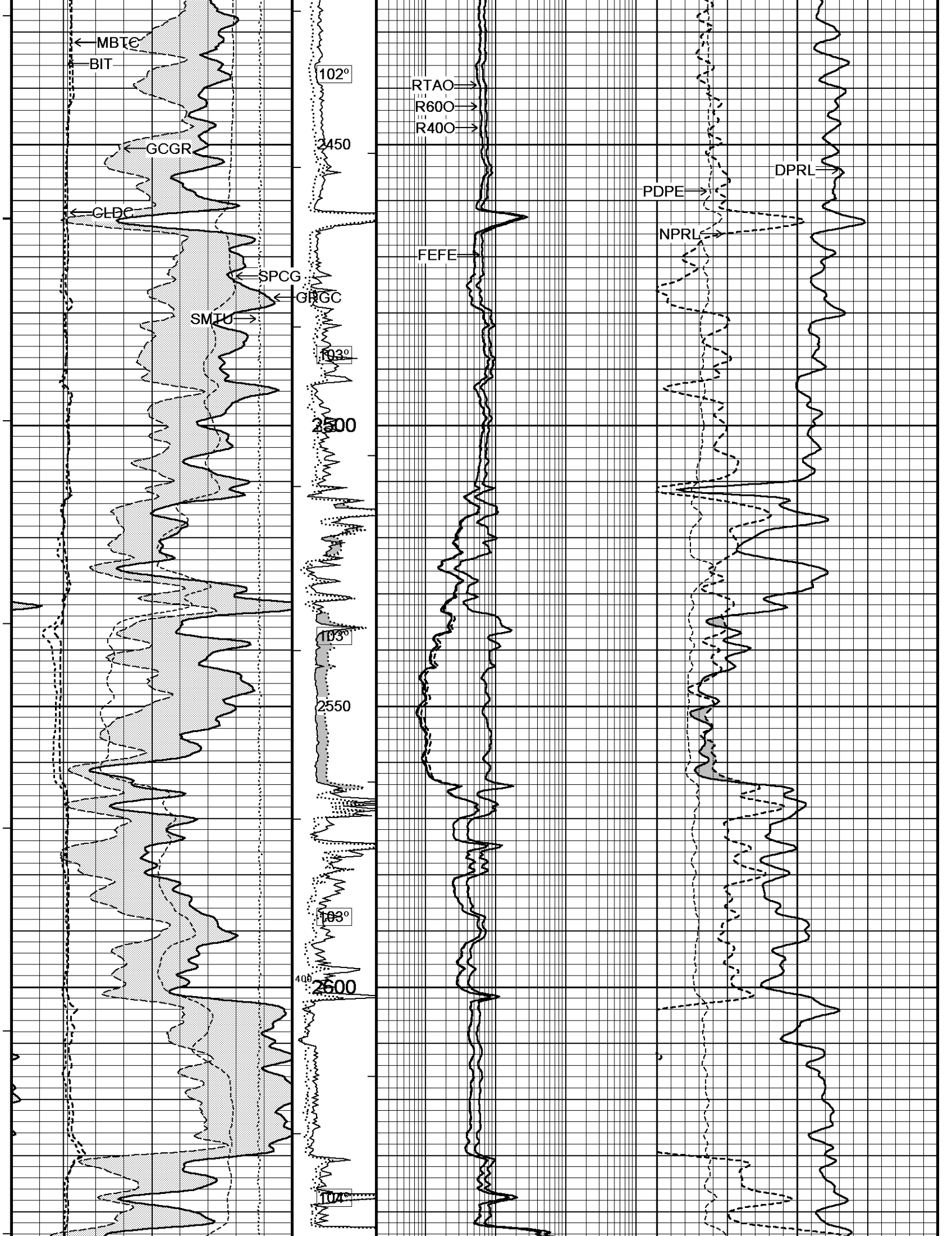

92°
1350
93°
1400
94°
1450
94°
800
1500
94°

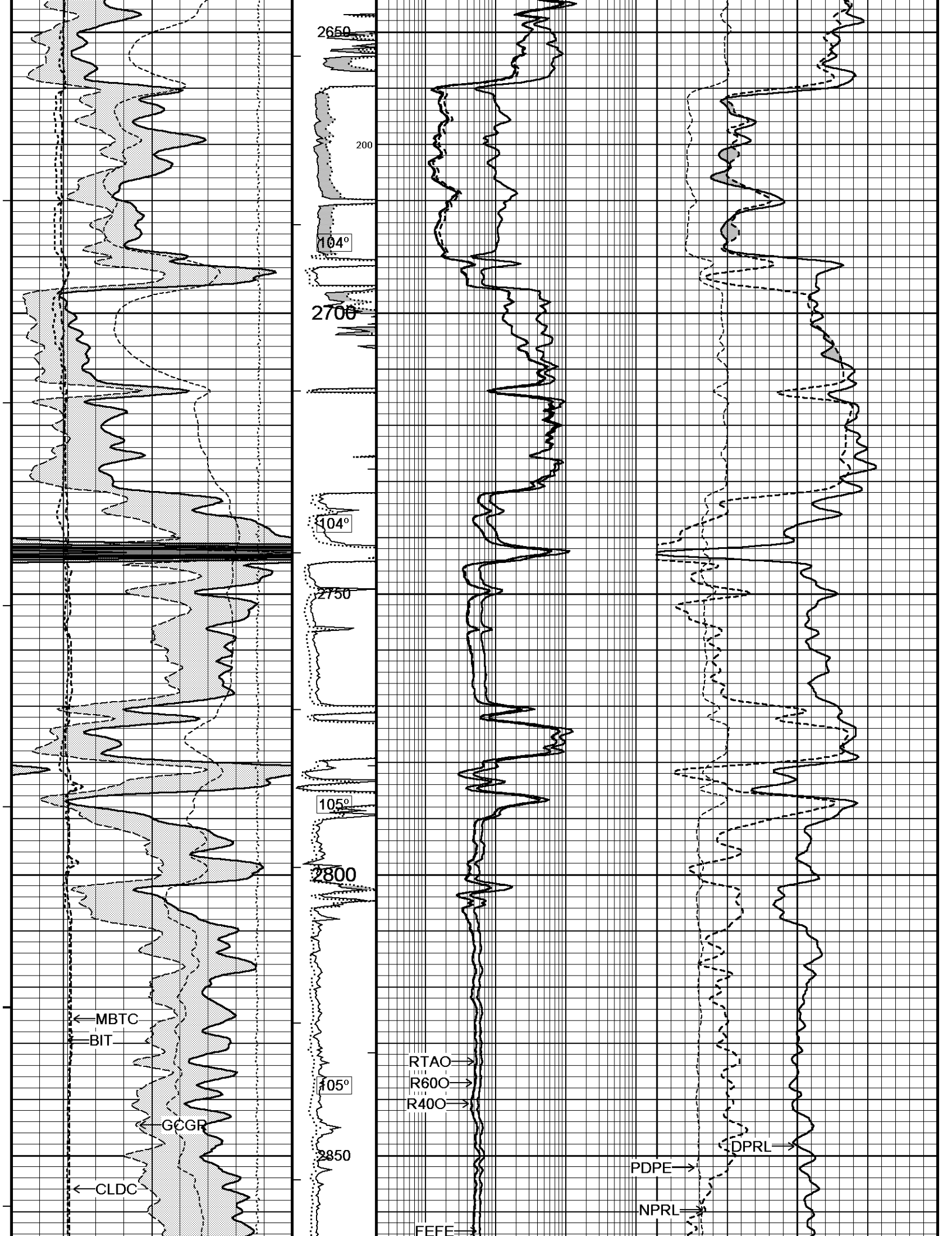

1550
95°
1600
95°
MBIC
BIT
1650
RTAO
R60O
R40O
400
GCGR
DPRL
PDRE
CLDC
FEFE
SPCG
GRGC
SMTU
95°
1700
96°
1750

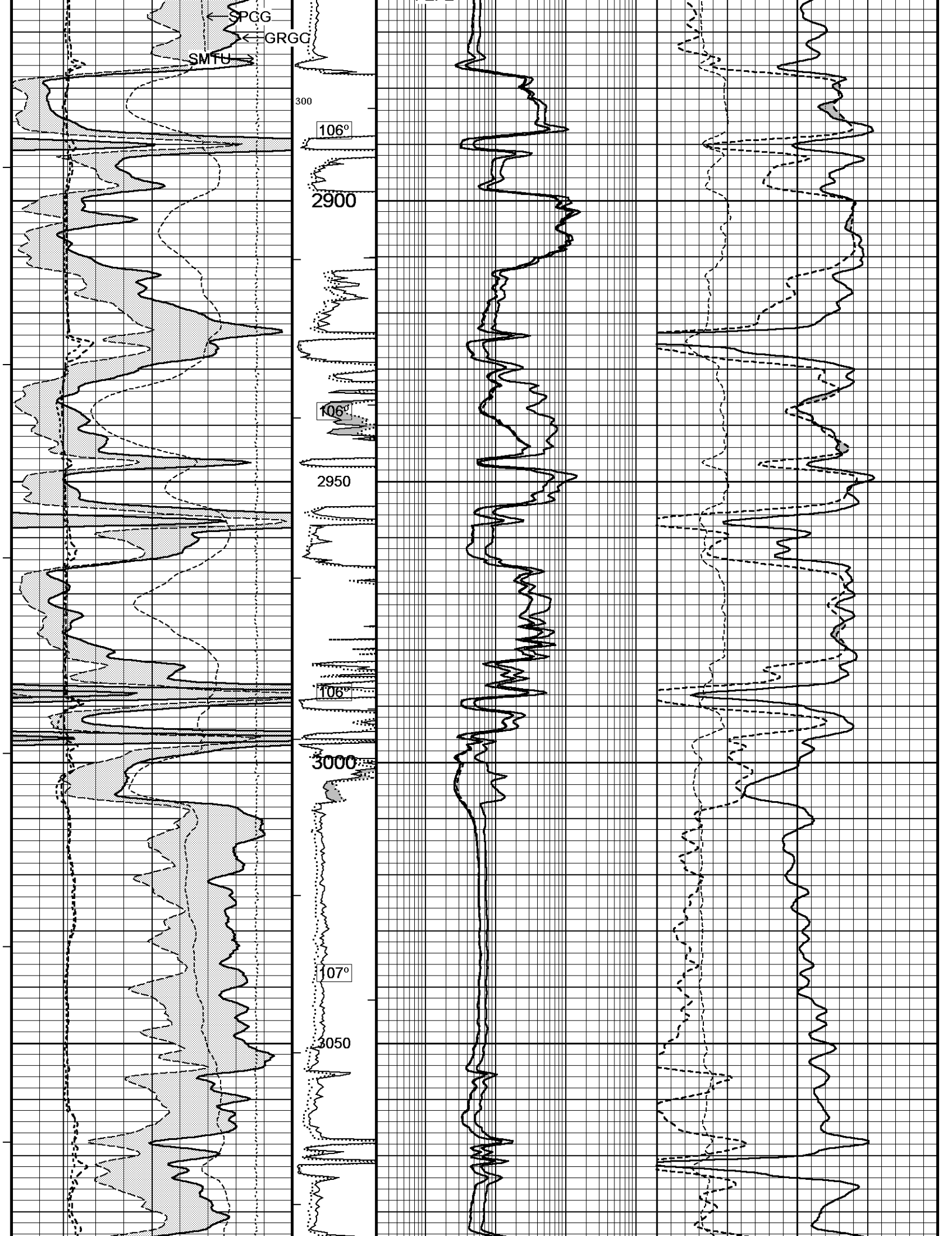

700
97°
1800
97°
1850
97°
1900
98°
1950

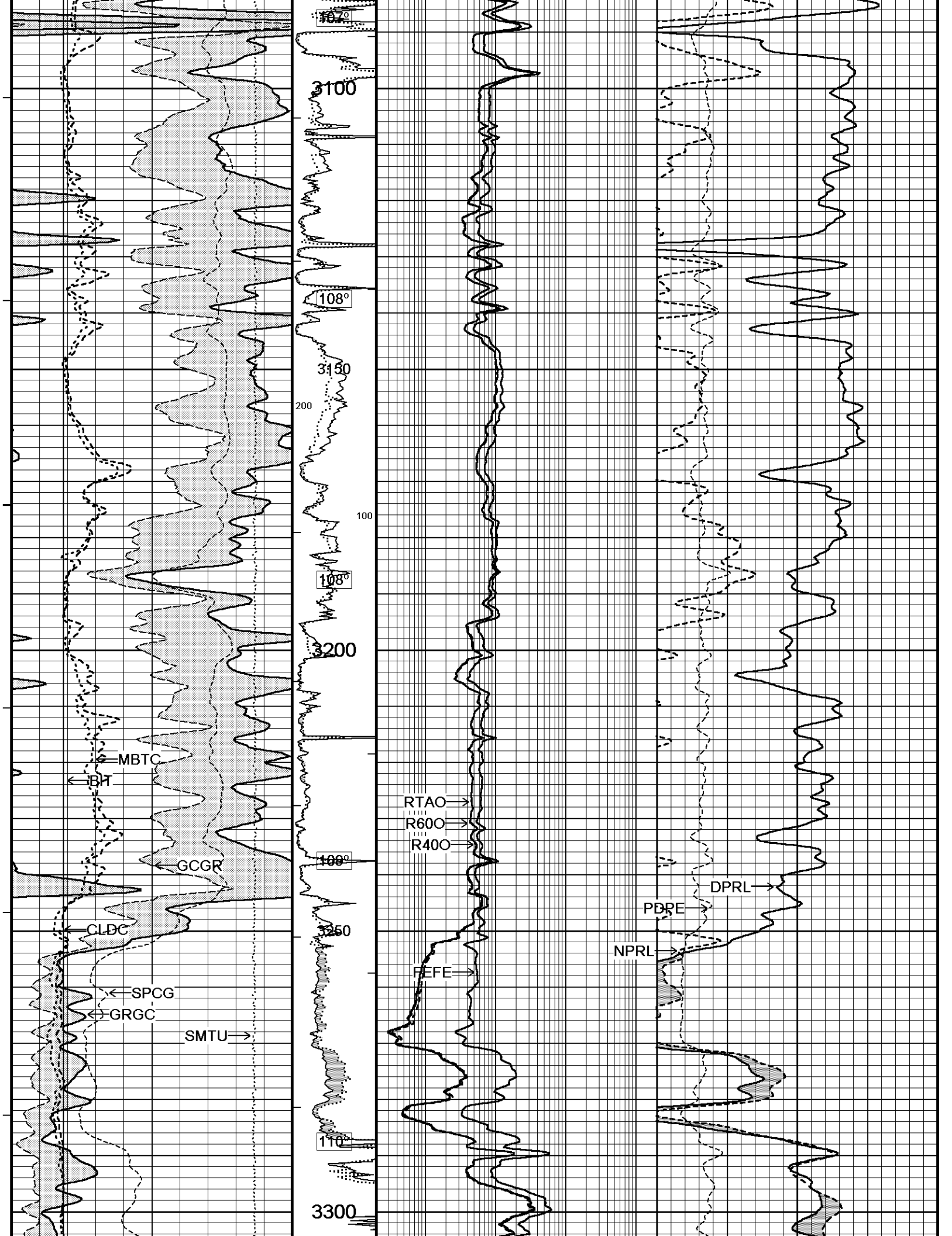

98°
2000
600
98°
MBTC
BIT
RTAO
R60O
R40O
2050
GCGR
DPRL
PDPE
CLDC
NPRL
FEFE
SPCG
GRGC
SMTU
99°
2100
99°
2150
300
100°
2200

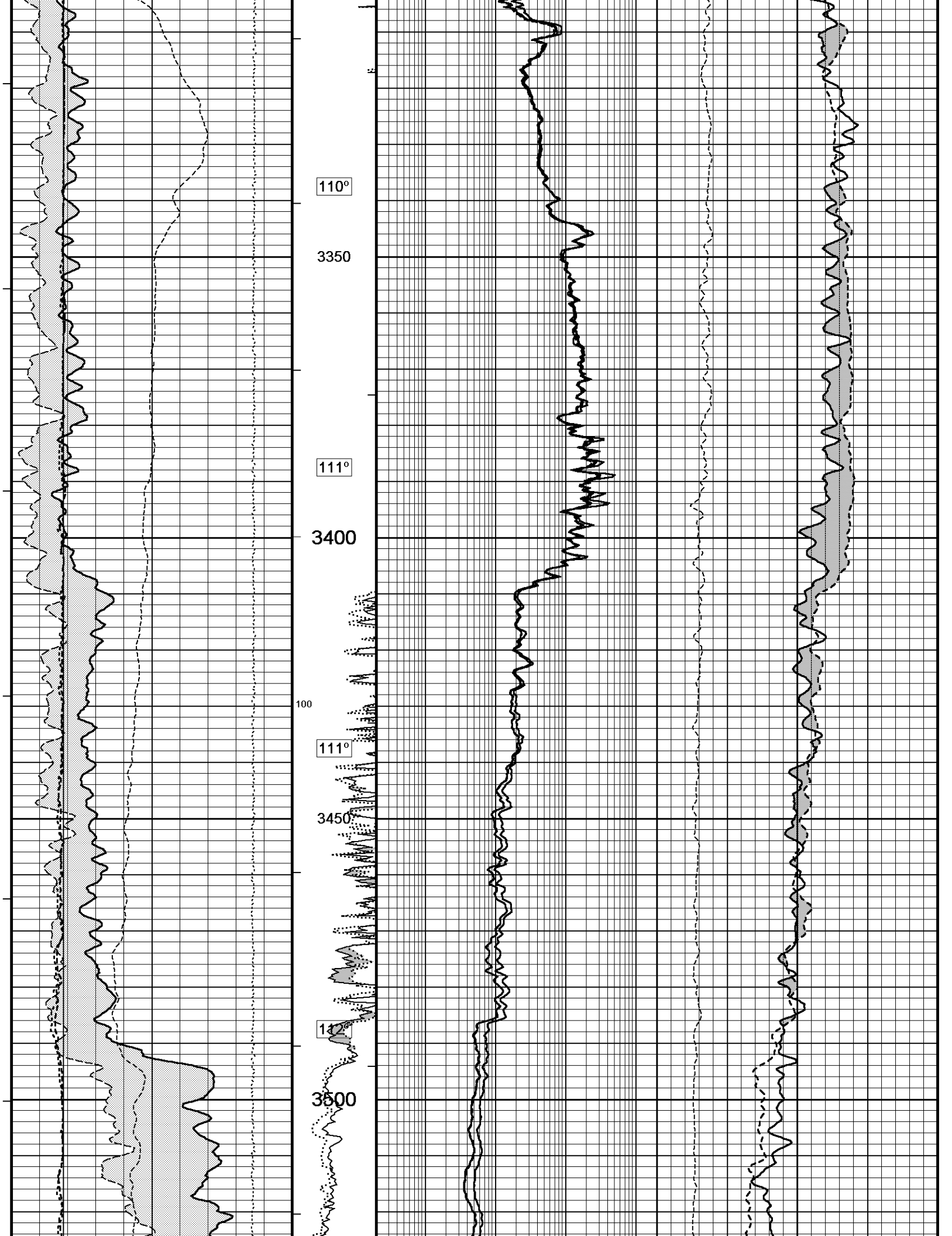

100°
2250
101°
2300
500
101°
2350
102°
2400

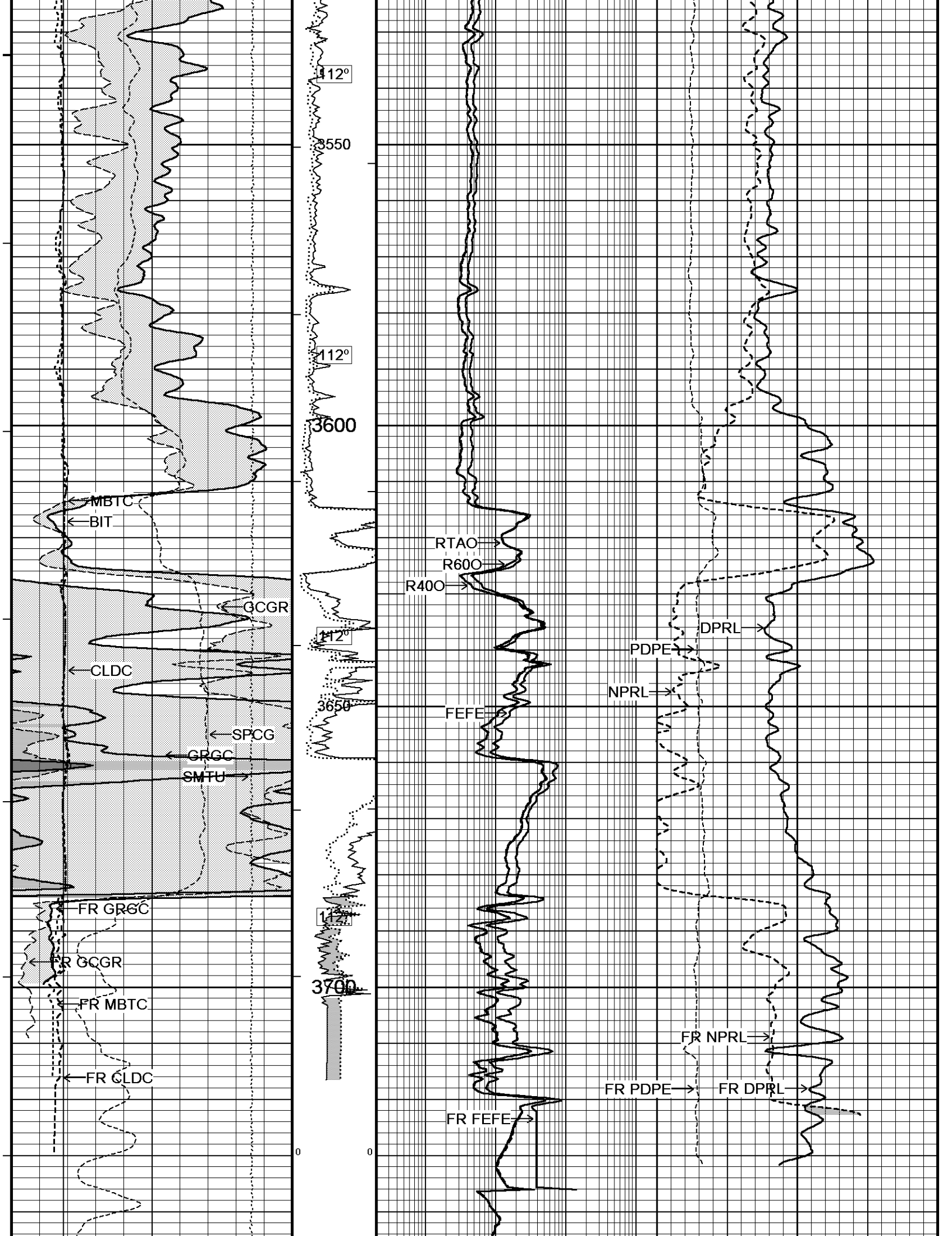

MBTC
BIT
GCGR
CLDC
SPCG
GRGC
SMTU
RTAO
R60O
R40O
FEFE
PDPE
DPRL
NPRL
102°
2450
103°
2500
103°
2550
103°
2600
104°

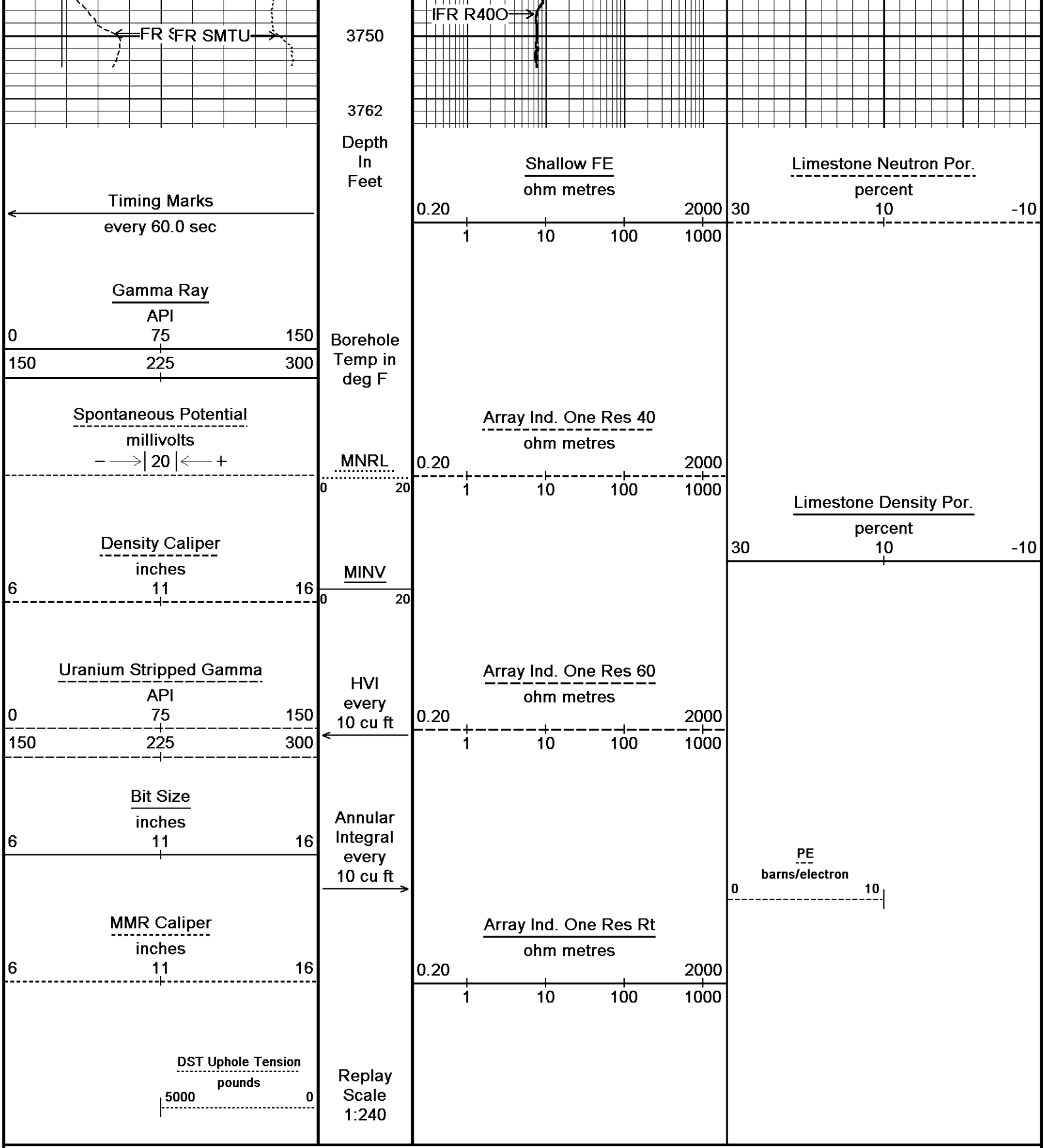

2650
200
104°
2700
104°
2750
105°
2800
105°
2850
MBTC
BIT
GCGR
CLDC
RTAO
R60O
R40O
DPRL
PDPE
NPRL
FEFE


SPCG
GRGC
SMTU
300
106°
2900
106°
2950
106°
3000
107°
3050


107°
3100
108°
3150
200
100
108°
3200
MBTC
BIT
RTAO
R60O
R40O
GCGR
100°
DPRL
PDRE
CLDC
3250
NPRL
PEFE
SPCG
GRGC
SMTU
110°
3300


110°
3350
111°
3400
100
111°
3450
112°
3500


112°
3550
112°
3600
MBTC
BIT
RTAO
R60O
R40O
GCGR
112°
DPRL
PDPE
CLDC
NPRL
3650
FEFE
SPCG
GRGC
SMTU
FR GRGC
112°
FR GCGR
3700
FR MBTC
FR NPRL
FR CLDC
FR PDPE
FR DPRL
FR FEFE
0
0



Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: D:\14.03\TAOS (MCCONAGHY #17-1)\MAIN PASS.dta
System Versions: Logged with 14.03.5114 Processed with 14.03.5114 Plotted with 14.03.5114

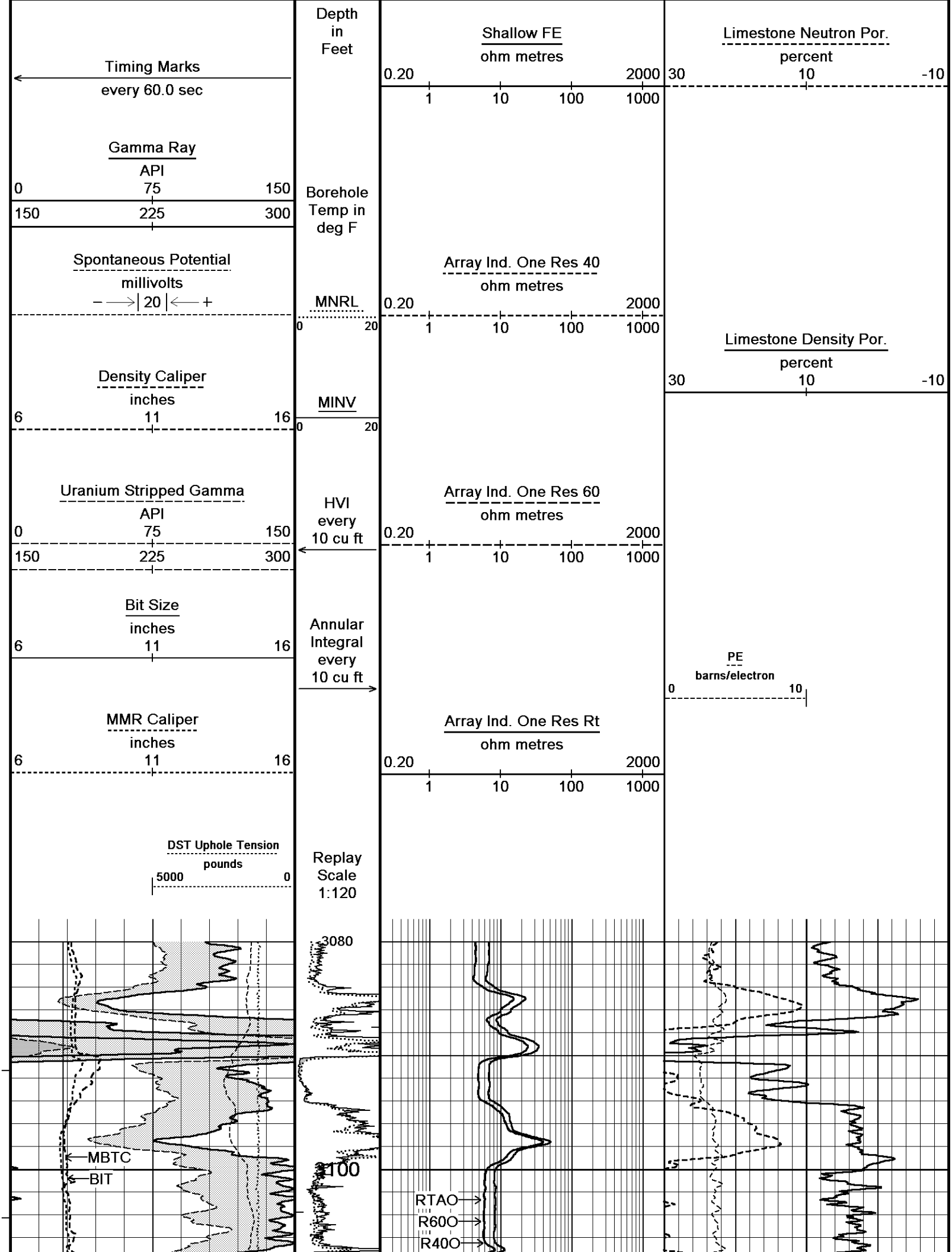
Plotted on 06-NOV-2014 23:24
Recorded on 06-NOV-2014 20:40

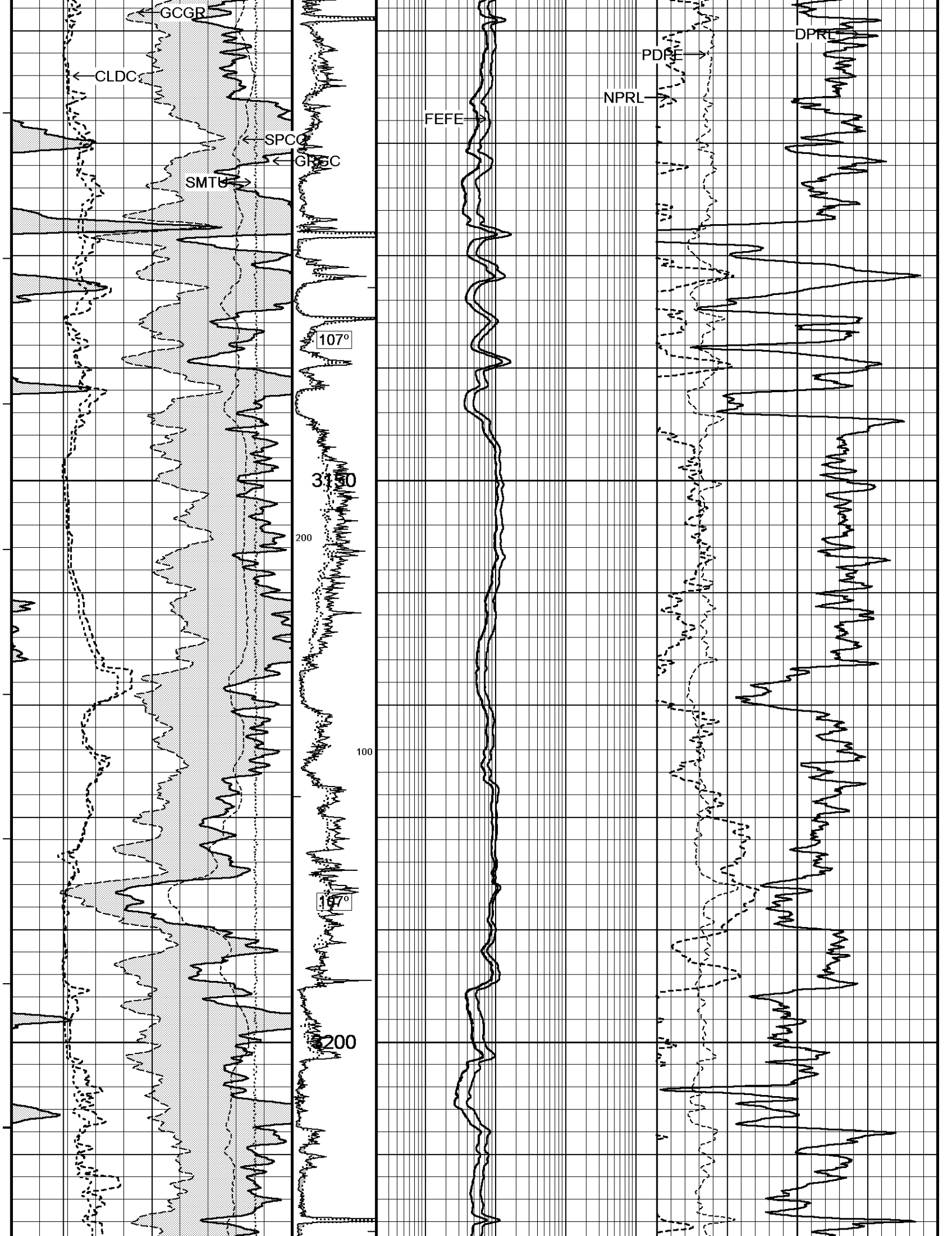
5 INCH MAIN LOG 1:240

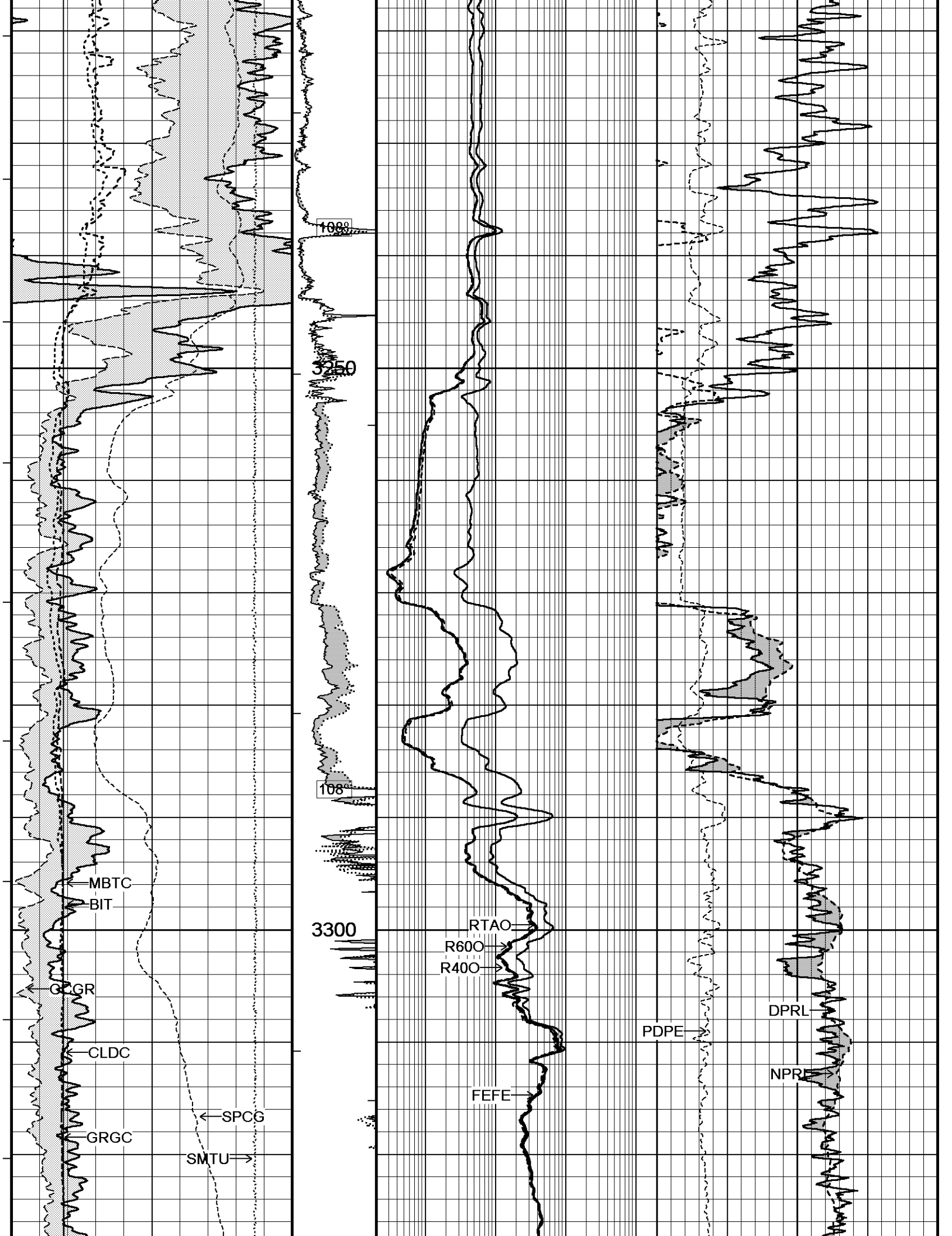
10 INCH HIGH RESOLUTION LOG 1:120

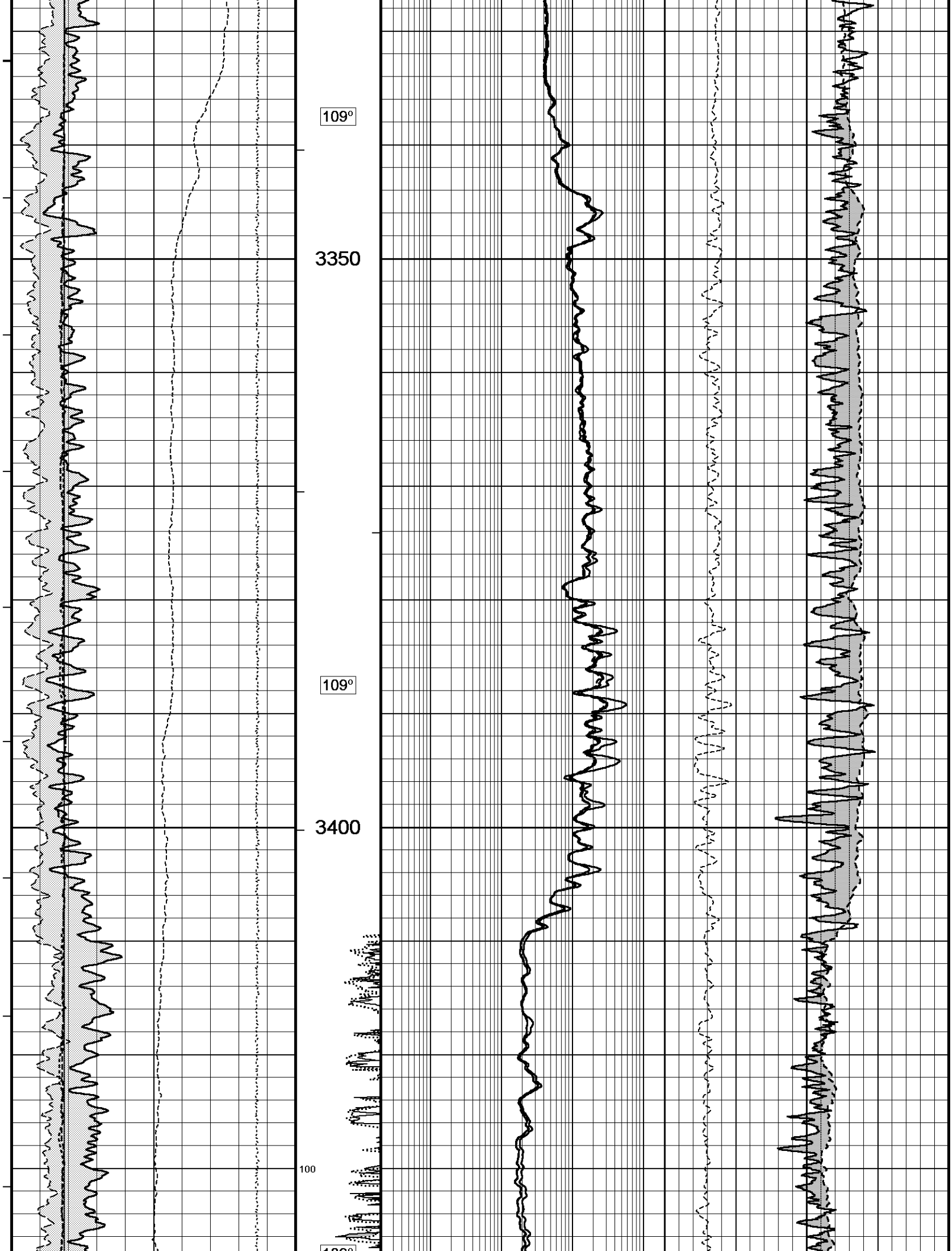
Depth Based Data - Maximum Sampling Increment 2.5cm
Filename: D:\14.03\TAOS (MCCONAGHY #17-1)\HIGH RES PASS.dta
System Versions: Logged with 14.03.5114 Plotted with 14.03.5114

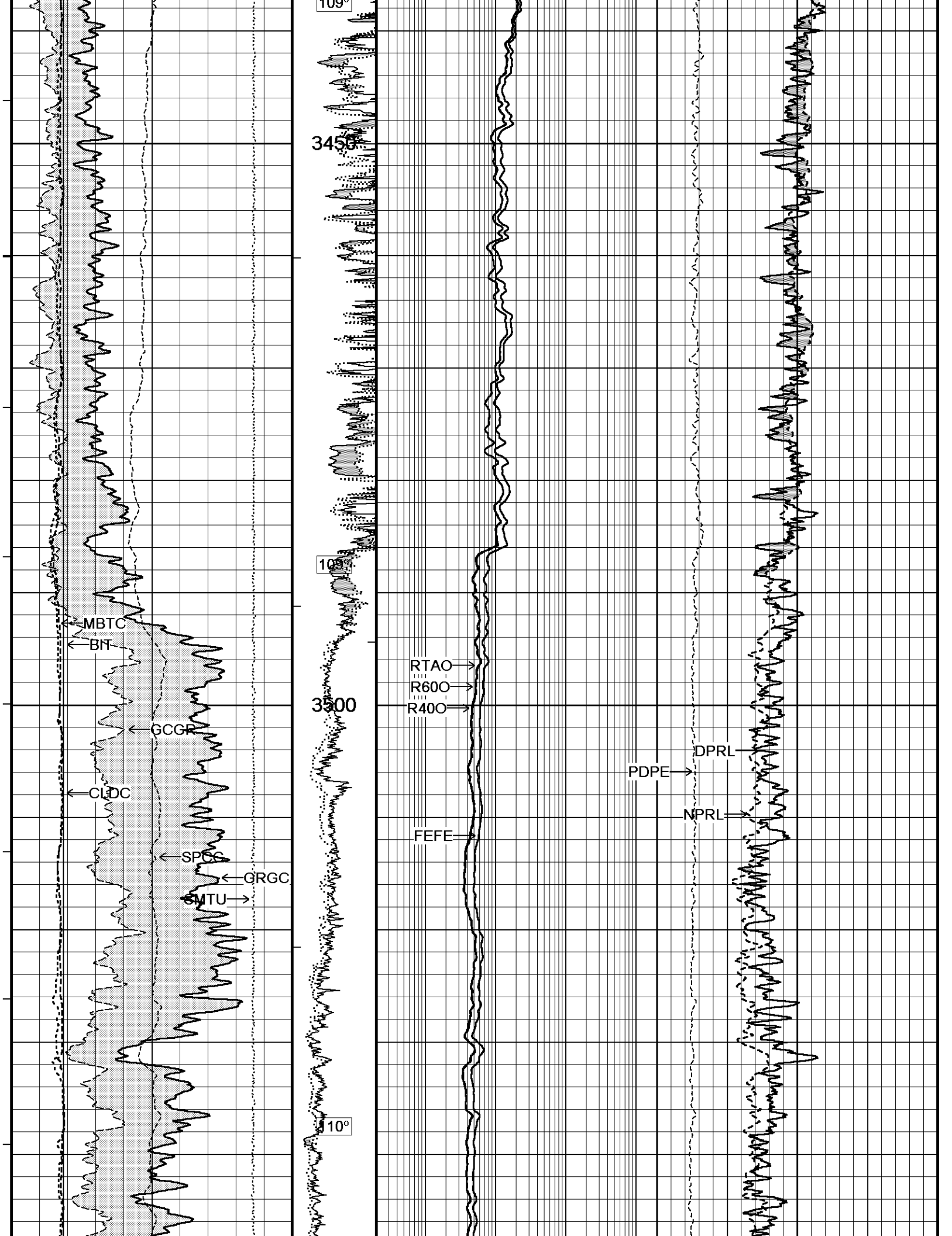
Plotted on 06-NOV-2014 23:24
Recorded on 06-NOV-2014 19:29

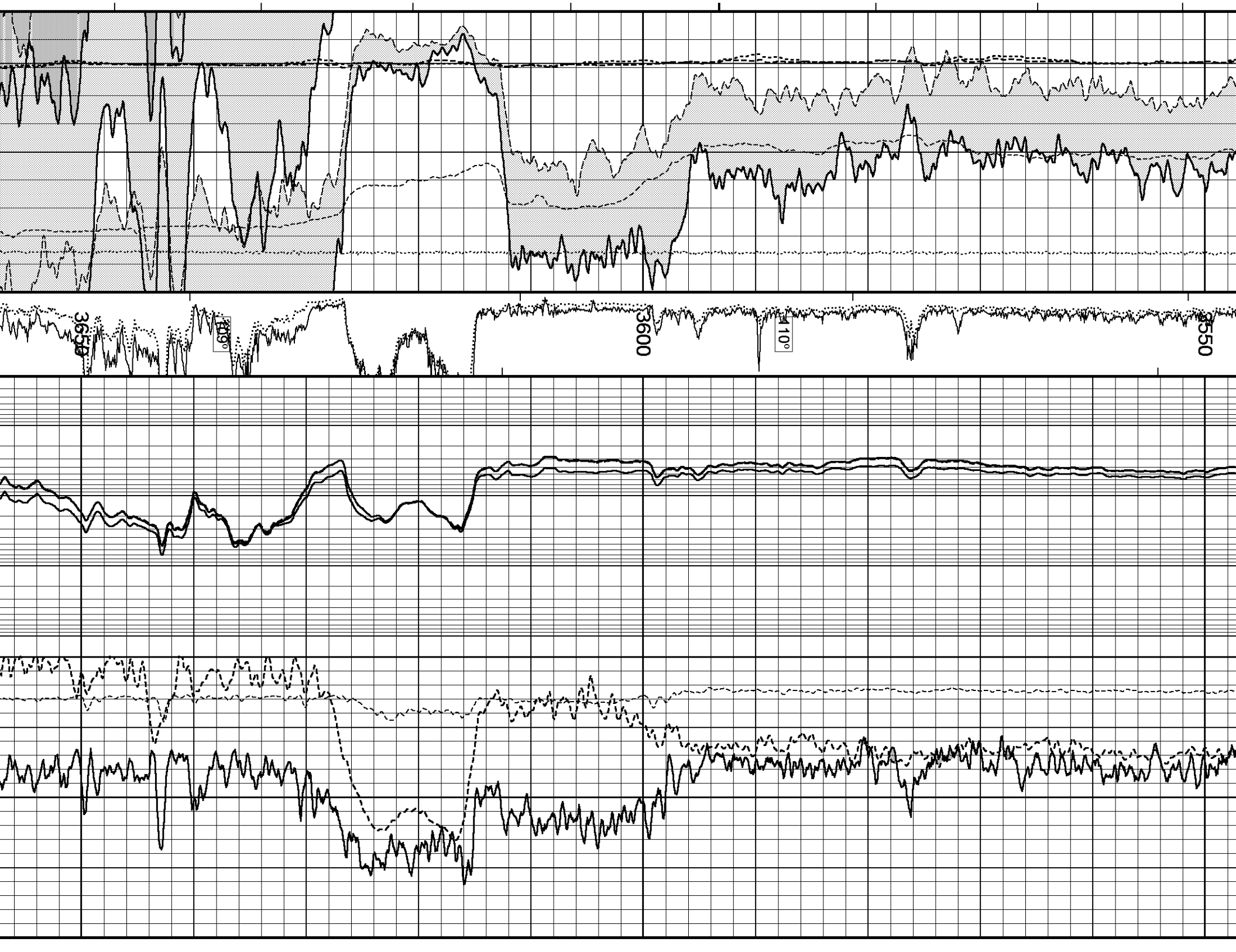

Timing Marks
every 60.0 sec
Gamma Ray
API
0
75
150
150
225
300
Spontaneous Potential
millivolts
– 20 +
Density Caliper
inches
6
11
16
Uranium Stripped Gamma
API
0
75
150
150
225
300
Bit Size
inches
6
11
16
MMR Caliper
inches
6
11
16
DST Uphole Tension
pounds
5000
0
Depth
in
Feet
Borehole
Temp in
deg F
MNRL
0
20
MINV
0
20
HVI
every
10 cu ft
Annular
Integral
every
10 cu ft
Replay
Scale
1:120
3080
100
MBTC
BIT
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
RTAO
R60O
R40O
Limestone Neutron Por.
percent
30
10
-10
Limestone Density Por.
percent
30
10
-10
PE
barns/electron
0
10

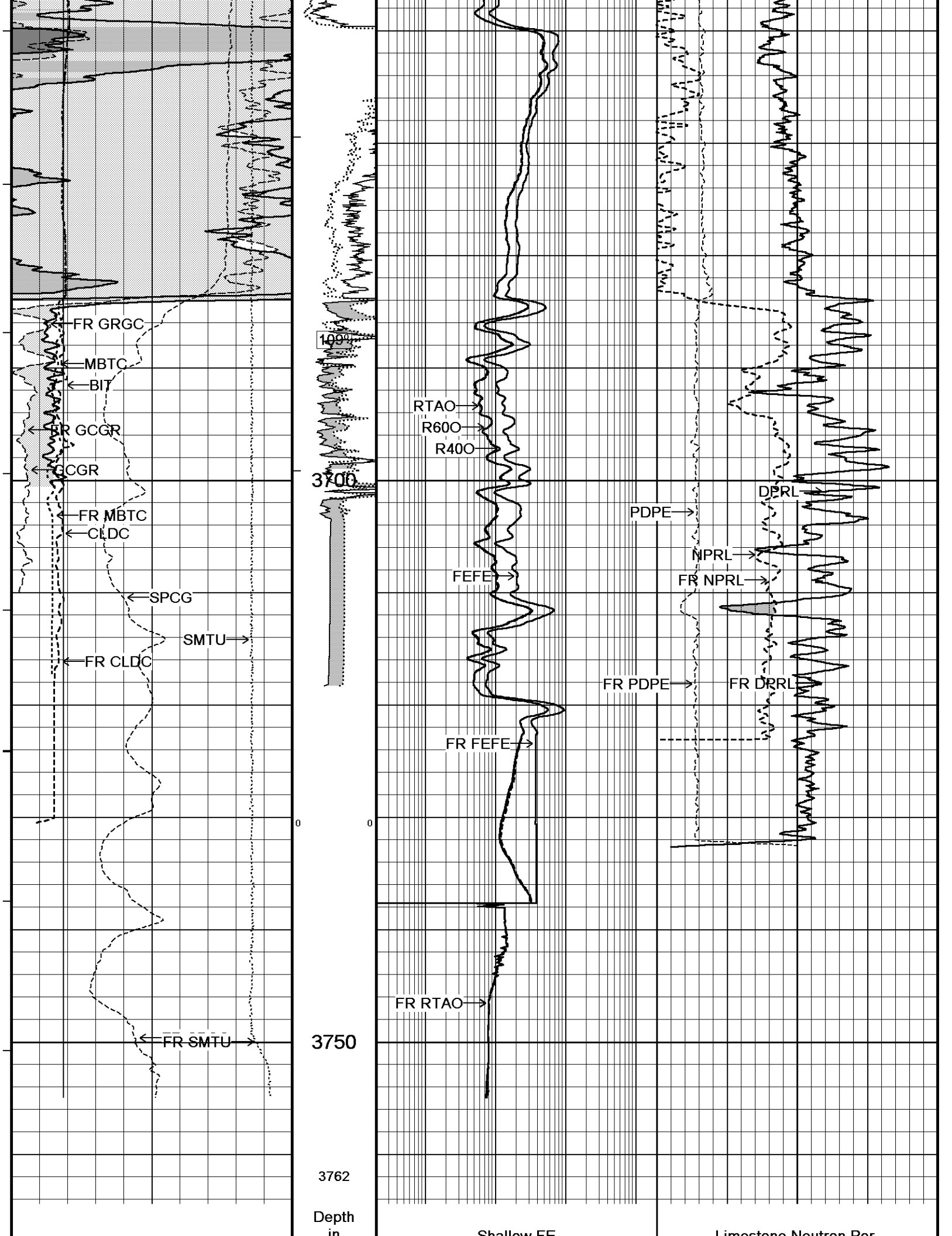

GCGR
CLDC
SPCC
GRGC
SMTU
FEFE
PDPE
NPRL
DPRL
107°
3150
200
100
167°
200

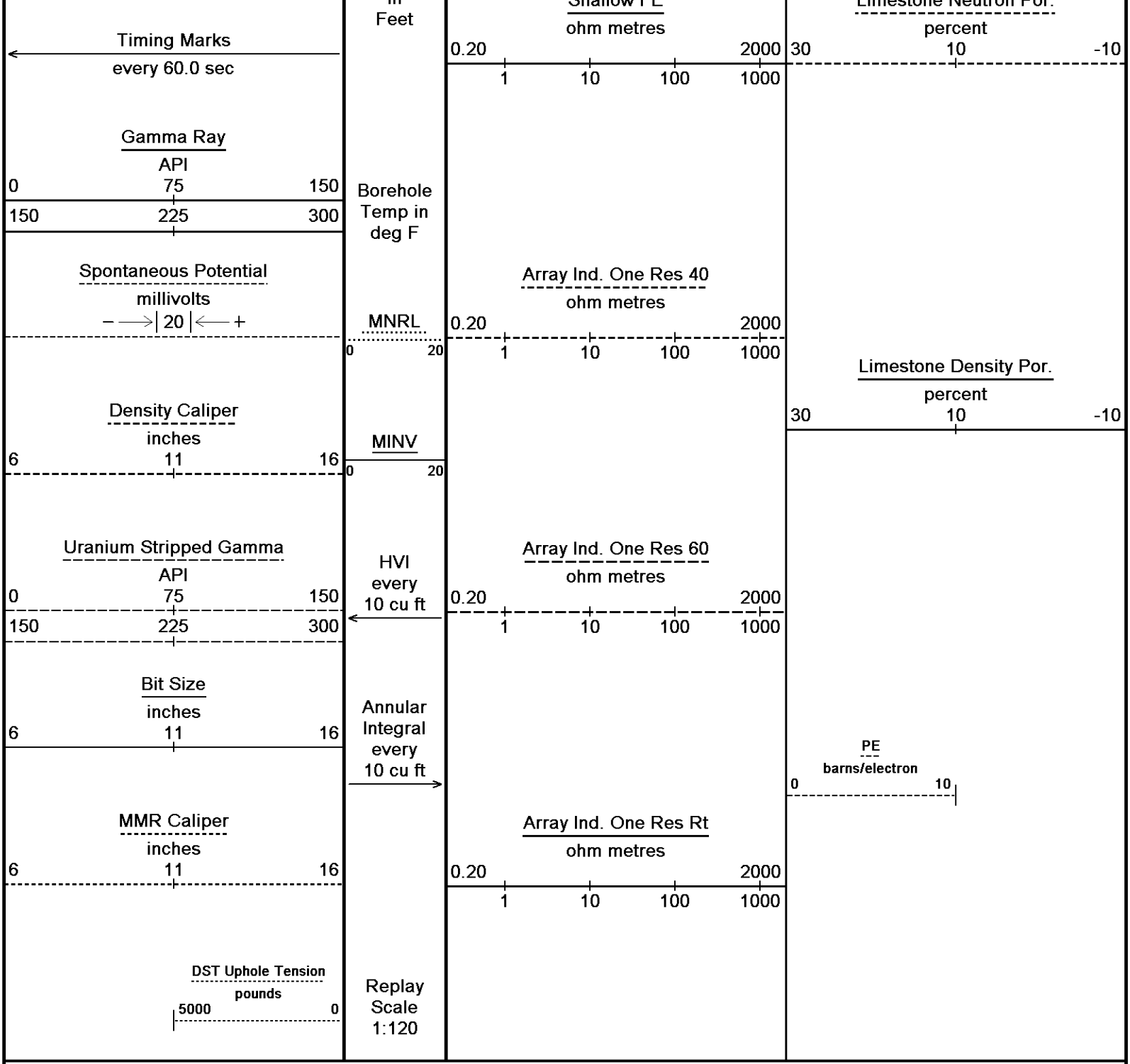

108
3250
108
MBTC
BIT
3300
RTAO
R60O
R40O
GCGR
CLDC
SPCG
GRGC
SMTU
FEFE
PDPE
DPRL
NPRL


109°
3350
109°
3400
100


109°
3450
109°
3500
10°
MBTC
BIT
GCGR
CLDC
SPGC
GRGC
SMTU
RTAO
R60O
R40O
FEFE
DPRL
PDPE
NPRL


3650
3600
3550
10°
10°


FR GRGC
MBTC
BIT
FR GCGR
GCGR
FR MBTC
CLDC
SPCG
SMTU
FR CLDC
FR SMTU
100
3700
3750
3762
0
0
RTAO
R60O
R40O
FEFE
FR FEFE
FR RTAO
DPRL
PDPE
NPRL
FR NPRL
FR PDPE
FR DPRL
Depth
in
Shallow FE
Limestone Neutron Por



Depth Based Data - Maximum Sampling Increment 2.5cm
Filename: D:\14.03\TAOS (MCCONAGHY #17-1)\HIGH RES PASS.dta
System Versions: Logged with 14.03.5114 Plotted with 14.03.5114

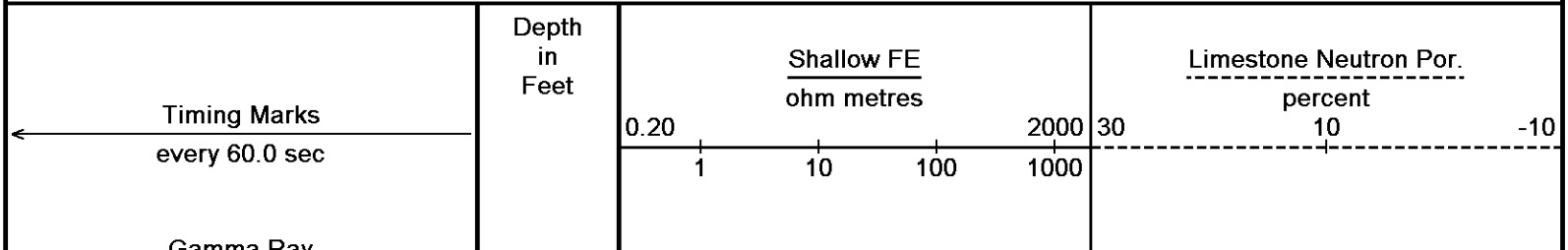
Plotted on 06-NOV-2014 23:24
Recorded on 06-NOV-2014 19:29

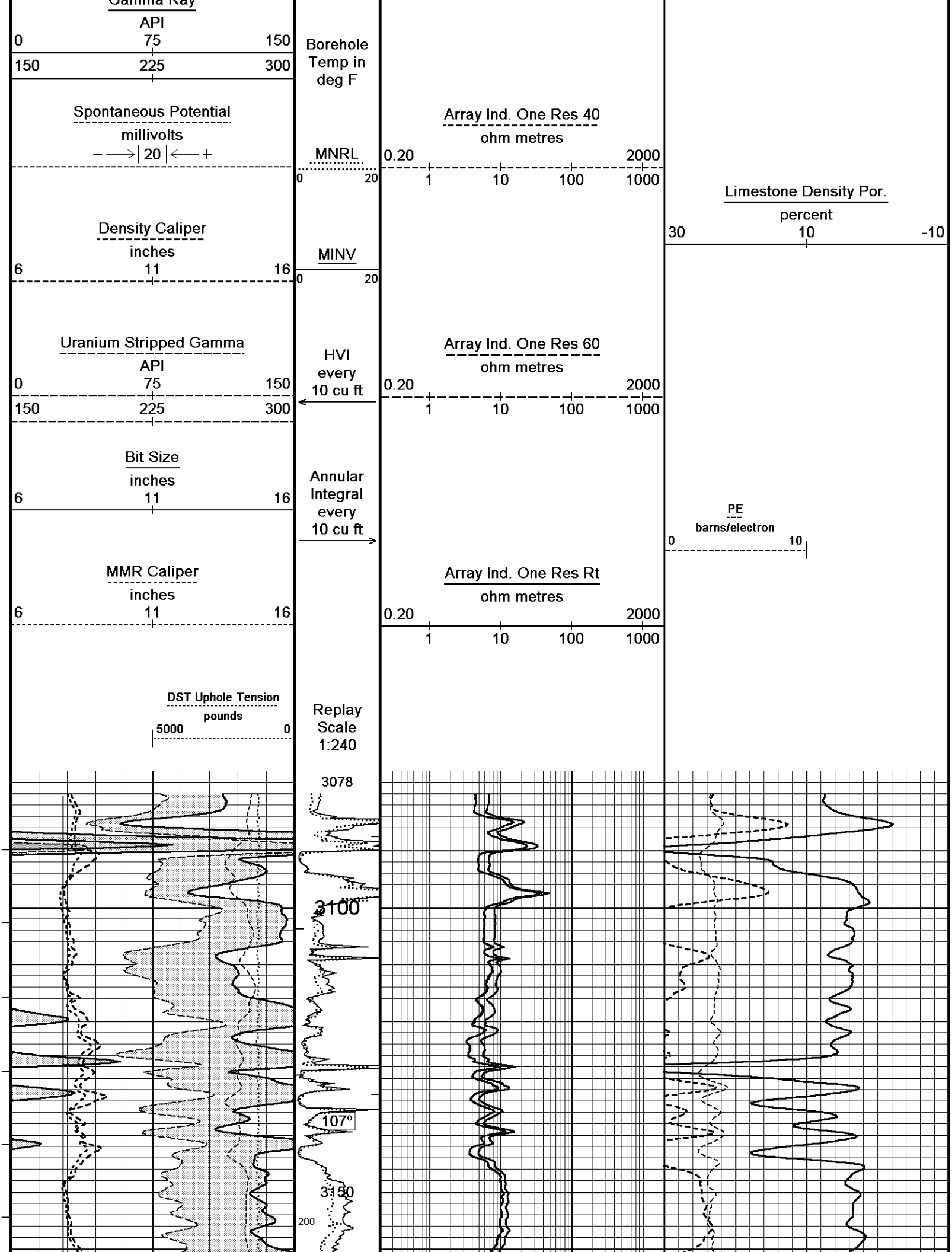
10 INCH HIGH RESOLUTION LOG 1:120

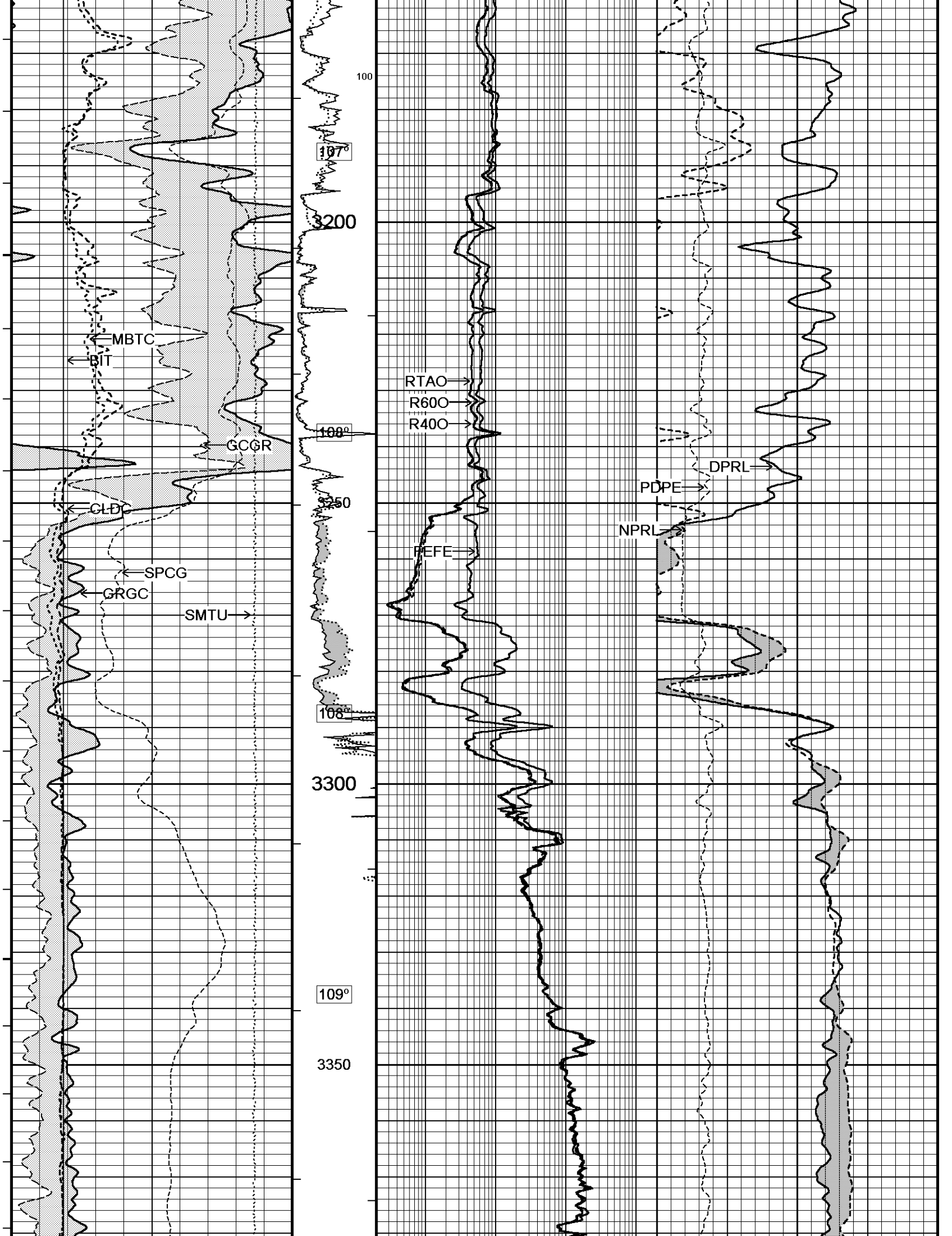
5 INCH REPEAT 1:240

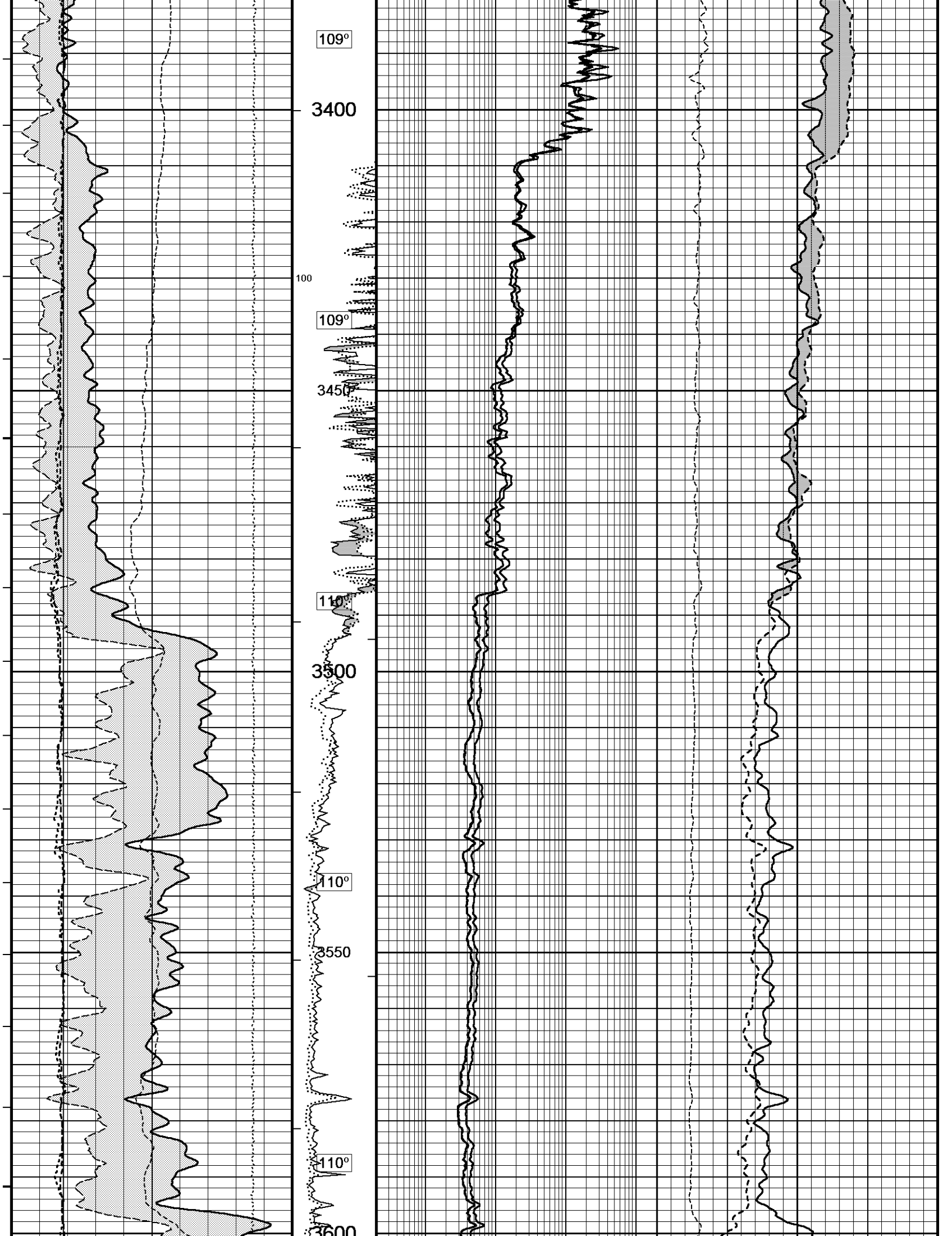
Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: D:\14.03\TAOS (MCCONAGHY #17-1)\REPEAT PASS.dta
System Versions: Logged with 14.03.5114 Processed with 14.03.5114 Plotted with 14.03.5114

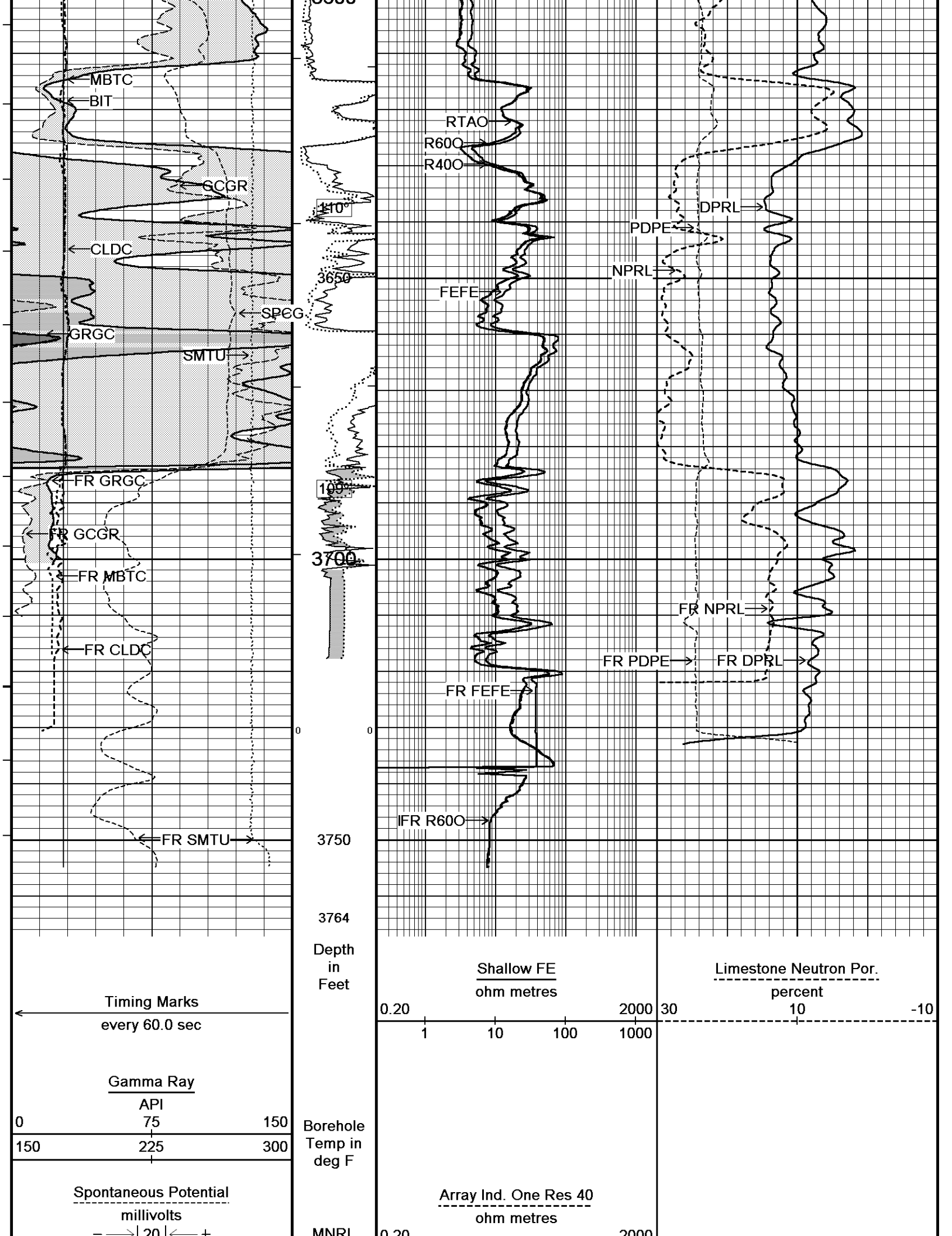
Plotted on 06-NOV-2014 23:24
Recorded on 06-NOV-2014 19:29

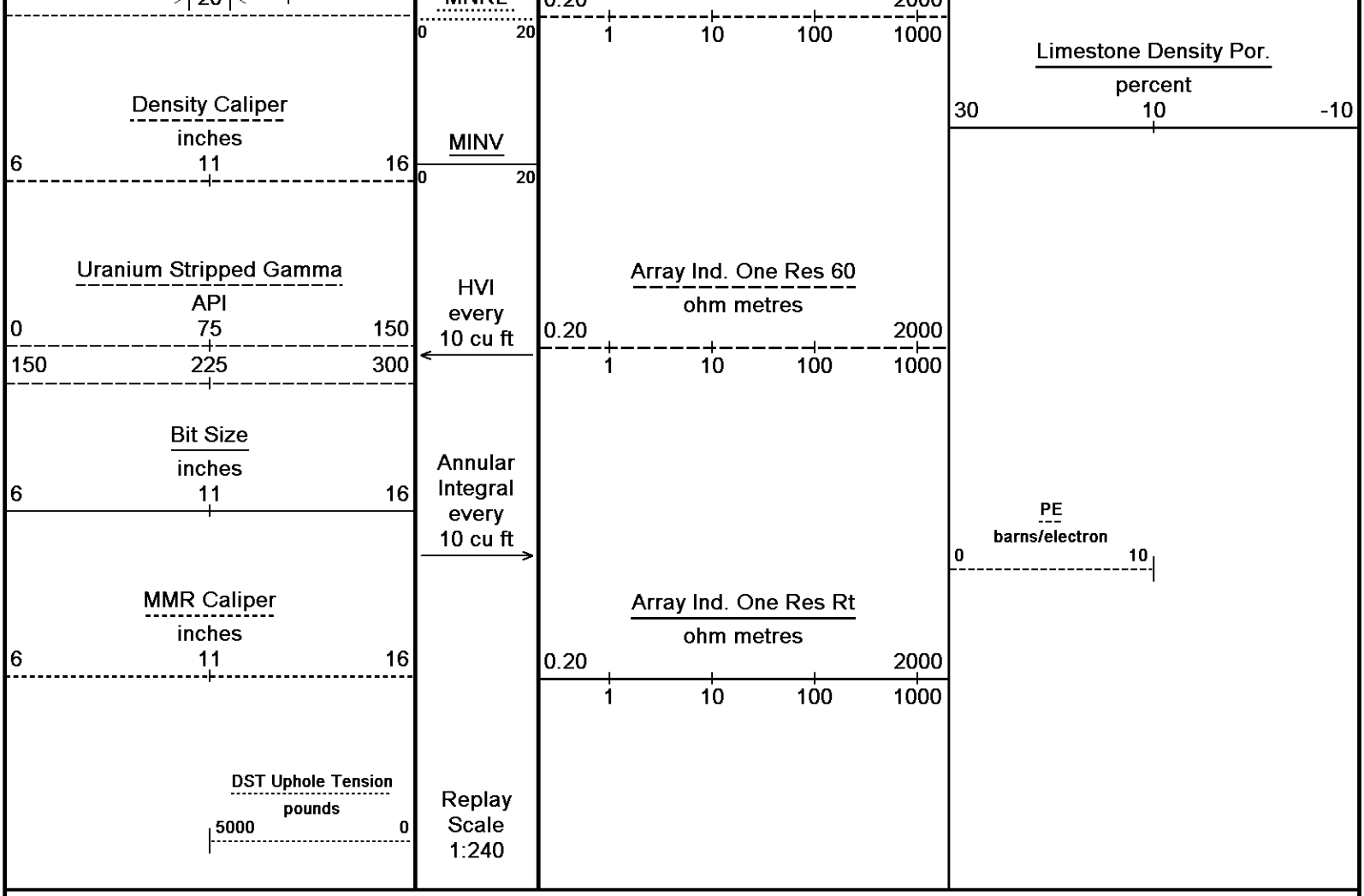



Gamma Ray
API
0
75
150
150
225
300
Borehole Temp in deg F
Spontaneous Potential
millivolts
20
MNRL
0
20
Array Ind. One Res 40
ohm metres
0.20
2000
1
10
100
1000
Limestone Density Por.
percent
30
10
-10
Density Caliper
inches
6
11
16
MINV
0
20
Uranium Stripped Gamma
API
0
75
150
150
225
300
HVI every 10 cu ft
Array Ind. One Res 60
ohm metres
0.20
2000
1
10
100
1000
Bit Size
inches
6
11
16
Annular Integral every 10 cu ft
PE
barns/electron
0
10
MMR Caliper
inches
6
11
16
Array Ind. One Res Rt
ohm metres
0.20
2000
1
10
100
1000
DST Uphole Tension
pounds
5000
0
Replay Scale 1:240
3078
3100
107°
3150
200


100
107°
3200
MBTC
BIT
RTAO
R60O
R40O
108°
GCGR
DPRL
PDPE
3250
CLDC
NPRL
PEFE
SPCG
GRGC
SMTU
108°
3300
109°
3350


109°
3400
100
109°
3450
110°
3500
110°
3550
110°
3600


MBTC
BIT
GCGR
CLDC
SPEG
GRGC
SMTU
FR GRGC
FR GCGR
FR MBTC
FR CLDC
FR SMTU
RTAO
R60O
R40O
FEFE
IFR R60O
DPRL
PDPE
NPRL
FR NPRL
FR PDPE
FR DPRL
FR FEFE
3650
3700
3750
3764
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
Shallow FE
ohm metres
0.20
2000
1
10
100
1000
Limestone Neutron Por.
percent
30
10
-10
Array Ind. One Res 40
ohm metres
0.20
2000
MNRL



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 06-NOV-2014 23:24
Filename: D:\14.03\TAOS (MCCONAGHY #17-1)\REPEAT PASS.dta — Recorded on 06-NOV-2014 19:29
System Versions: Logged with 14.03.5114 Processed with 14.03.5114 Plotted with 14.03.5114

5 INCH REPEAT 1:240

BEFORE SURVEY CALIBRATION

D:\14.03\TAOS (MCCONAGHY #17-1)\DATA.dta

General Constants All 000

Last Edited on 06-NOV-2014,17:11

General Parameters		
Mud Resistivity	1.900	ohm-metres
Mud Resistivity Temperature	85.000	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	Density Caliper	
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 03-NOV-2014 10:22

Reading No	Measured	Calibrated (lbs)
1	16628.00	0.00

2	17807.55	429.90

High Resolution Temperature Calibration MCG-D.K 431

Field Calibration on 05-NOV-2014,10:08

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

High Resolution Temperature Constants MCG-D.K 431

Last Edited on 31-JUL-2014,11:55

Pre-filter Length	11

SP Calibration MCG-D.K 431

Field Calibration on 05-NOV-2014,10:07

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

Gamma Calibration MCG-D.K 431

Field Calibration on 05-NOV-2014 10:07

	Measured	Calibrated (API)
Background	35	24
Calibrator (Gross)	1085	720
Calibrator (Net)	1050	696

Gamma Calibration Tolerances MCG-D.K 431

Ratio	1.508	1.40 / 1.475 / 1.55	Counts/API	

Gamma Constants MCG-D.K 431

Last Edited on 06-NOV-2014,17:11

Gamma Calibrator Number	696	
GRC-M Calibrator Jig in Use?	NO	
Inactive Background Jig in Use?	NO	
Mud Density	1.11	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl		kppm
K Mud Type	Chloride	
K Mud Concentration	0.00	%

Micro Laterolog Calibration MMR-C.A 247

Base Calibration on 31-DEC-1999 00:00
Field Check on 31-DEC-1999 00:00

Base Calibration

Measured		Calibrated (ohm-m)	
Ref 1	Ref 2	Ref 1	Ref 2
0.0	0.0	0.0	0.0

Base Check (ohm-m)	Field Check (ohm-m)
0.0	0.0

Micro Laterolog Constants MMR-C.A 247

Last Edited on 04-DEC-2013,20:55

Pad Type	6 in Solid Nylon B23059	
Micro Laterolog K Factor	0.0128	
Standoff Offset	0.0000	inches

Mudcake Thickness Correction Constants

Mud Cake Source	Constant Value	
Mud Cake Thickness	0.4000	inches
Mud Cake Thickness Caliper	N/A	
Mud Cake Resistivity	0.1500	ohm-m
Mud Cake Resistivity Temp.	68.00	Deg F
Mud Cake Resistivity Source	Constant Value	
Temp. Source Rmc Correc.	N/A	

Caliper Calibration MMR-C.A 247

Base Calibration on 08-OCT-2014 08:42
Field Calibration on 05-NOV-2014 09:55

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	14269	5.96
2	17503	7.98
3	20736	9.86
4	24020	11.88

4	24639	11.88
5	0	0.00
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
9.93	9.86

Caliper Calibration Tolerances MMR-C.A 247

Short Arm Field Cal. 9.93 (9.66 | 9.86 | 10.06) in

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

Base Calibration on 08-OCT-2014 08:32
Field Check on 05-NOV-2014 09:50

Base Calibration

Channel	Measured Resistor 1	Measured Resistor 2	Calibrated (ohm-m) Resistor 1	Calibrated (ohm-m) Resistor 2
Micro Normal	11.7	59.6	5.0	25.0
Micro Inverse	15.5	77.3	5.0	25.0

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Micro Normal	76.2	76.2
Micro Inverse	59.0	59.0

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

Micro Normal Res. 1 11.7 (-5% | 5.0 | +5%) ohm
Micro Normal Res. 2 59.6 (-5% | 25.0 | +5%) ohm
Micro Inverse Res. 1 15.5 (-5% | 5.0 | +5%) ohm
Micro Inverse Res. 2 77.3 (-5% | 25.0 | +5%) ohm

Micro Normal Base Check 76.2 (-2% | 76.35 | +2%) ohm-m
Micro Inverse Base Check 59.0 (-2% | 58.89 | +2%) ohm-m

Micro Normal Field Check 76.2 (-2% | 76.2 | +2%) ohm-m
Micro Inverse Field Check 59.0 (-2% | 59.0 | +2%) ohm-m

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

Last Edited on 28-APR-2014,08:45

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

Micro-Resistivity Caliper Constants MMR-C.A 247

Last Edited on

Sonde Configuration Resistivity Mode

Neutron Calibration MDN-B.J 422

Base Calibration on 28-OCT-2014 08:46
Field Check on 05-NOV-2014 10:12

Base Calibration

	Measured Near	Measured Far	Calibrated (cps) Near	Calibrated (cps) Far
	3063	96	3714	110
Ratio	31.920		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	2299	3378
Ratio	0.680	

Field Check

	Calibrated (cps)	
	2333	3368
Ratio	0.693	

Neutron Calibration Tolerances MDN-B.J 422

Near Reading 3063 (-25% | 3500 | +25%) cps
Far Reading 96 (-50% | 106 | +50%) cps
Ratio 31.920 (-5% | 33 | +5%)

Base Check 0.680 (0.65 | 0.7 | 0.75)

		0.660	0.680	0.700
Field Check	0.693			

Neutron Constants MDN-B.J 422

Last Edited on 05-NOV-2014,10:08

Neutron Source Id	15785B	
Neutron Jig Number	36	
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	Constant Value	
Formation Fluid Salinity	0.00	kppm
Barite Mud Correction	Not Applied	

FE Calibration MFE-C.A 432

Base Calibration on 08-OCT-2014 08:05
Field Check on 05-NOV-2014 09:45

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	962.9	126.8
Base Check		281.5
Field Check		281.8

FE Calibration Tolerances MFE-C.A 432

		-3%	980.0	+3%	
Reference 2	962.9				ohm

		-2%	277.0	+2%	
Base Check	281.5				ohm-m

		-2%	281.5	+2%	
Field Check	281.8				ohm-m

FE Constants MFE-C.A 432

Last Edited on 05-NOV-2014,09:43

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 66

Base Calibration on 28-OCT-2014,13:08
Field Check on 05-NOV-2014 09:29

Base Calibration

Test Loop Calibration

Channel	Measured Low	Measured High	Calibrated (mmho/m) Low	Calibrated (mmho/m) High
1	16.3	454.6	9.3	966.2
2	5.6	370.2	7.6	821.4
3	3.7	253.8	5.2	566.0
4	1.9	131.5	2.6	279.2

Array Temperature 78.4 Deg F

Test Loop Calibration Verified

Channel	Base Check (mmho/m) Low	Base Check (mmho/m) High	Field Check (mmho/m) Low	Field Check (mmho/m) High
1	0.0	0.0	14.0	4010.9
2	0.0	0.0	31.7	3653.6
3	0.0	0.0	28.3	3139.9

3	0.0	0.0	28.3	3136.9	
4	0.0	0.0	19.7	2113.3	
Deep			16.0	2024.9	
Medium			41.7	4149.3	
Shallow			49.3	5432.4	
Array Temperature		0.0		56.2	Deg F

Induction Calibration Tolerances MAI-A.A 66

Low Conductivity 1	16.3	13.0 / 17.0 / 21.0	mmho/m	High Conductivity 1	454.6	430.0 / 475.0 / 520.0	mmho/m
Low Conductivity 2	5.6	4.5 / 6.0 / 7.5	mmho/m	High Conductivity 2	370.2	345.0 / 385.0 / 425.0	mmho/m
Low Conductivity 3	3.7	1.0 / 3.5 / 6.0	mmho/m	High Conductivity 3	253.8	240.0 / 260.0 / 280.0	mmho/m
Low Conductivity 4	1.9	0.0 / 2.0 / 4.0	mmho/m	High Conductivity 4	131.5	120.0 / 135.0 / 150.0	mmho/m
Background Vx 1	0.0	-110.0 / -32.5 / 45.0	mmho/m	Phase Check Loop 1	0.0	-2.0 / 0.0 / 2.0	%
Background Vx 2	0.0	-35.0 / 20.0 / 75.0	mmho/m	Phase Check Loop 2	0.0	-2.0 / 0.0 / 2.0	%
Background Vx 3	0.0	-60.0 / 2.5 / 65.0	mmho/m	Phase Check Loop 3	0.0	-2.0 / 0.0 / 2.0	%
Background Vx 4	0.0	-50.0 / -17.5 / 15.0	mmho/m	Phase Check Loop 4	0.0	-2.0 / 0.0 / 2.0	%

Induction Constants MAI-A.A 66

Last Edited on 05-NOV-2014,09:43

Induction Model	RtAP-WBM	
Caliper for Borehole Corr.	Density Caliper	
Hole Size for Borehole Correction	2.500	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	

High Resolution Temperature Calibration MAI-A.A 66

Field Calibration on 30-OCT-2014,13:33

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

High Resolution Temperature Constants MAI-A.A 66

Last Edited on 31-JUL-2014,11:49

Pre-filter Length	11

Sonic Constants MSS-C.A 147

Last Edited on 01-NOV-2014,04:46

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)	Depth (ft)
N/A	N/A	N/A	
N/A	N/A	N/A	0.00
N/A	N/A	N/A	0.00
N/A	N/A	N/A	0.00
N/A	N/A	N/A	0.00
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
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

Photo Density Calibration MPD-B 167

Base Calibration on 06-OCT-2014 09:37
Field Check on 05-NOV-2014 09:49

Density Calibration

Base Calibration	Measured Near	Measured Far	Calibrated (sdu) Near	Calibrated (sdu) Far
Background	1149	1610		
Reference 1	51572	25102	59869	31110
Reference 2	21250	2768	24557	2522

Field Check at Base

1149.3	1610.5

Field Check

1144.9 1605.3

PE Calibration

Base Calibration

	Measured WS	Measured WH	Measured Ratio	Calibrated Ratio
Background	209	1031		
Reference 1	19790	51391	0.389	0.369
Reference 2	5736	21120	0.275	0.271

Field Check at Base

209.3 1030.7

Field Check

208.3 1025.1

Photo Density Calibration Tolerances MPD-B 167

Near Density Ratio	2.51	-5% 2.52 +5%	Far Density Ratio	20.29	-5% 21.00 +5%
PE Calibration	0.107	0.089 0.110 0.131			
Near Den. Field Check	1144.9	-3% 1149.3 +3%	Far Den. Field Check	1605.3	-3% 1610.5 +3%
PE WS Field Check	208.3	-6% 209.3 +6%	PE WH Field Check	1025.1	-6% 1030.7 +6%

Density Constants MPD-B 167

Last Edited on 06-NOV-2014,17:11

Density Source Id	15774B	
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	1.11	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

Caliper Calibration MPD-B 167

Base Calibration on 06-OCT-2014 09:56
Field Calibration on 05-NOV-2014 09:52

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	14161	4.00
2	22288	5.96
3	30742	7.98
4	38736	9.86
5	47504	11.88
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.86	7.98

Caliper Calibration Tolerances MPD-B 167

Short Arm Field Cal. 7.86 (7.78 7.98 8.18) in

Spectral Gamma Calibration SGS-E_L171

Base Calibration on 20-AUG-2014 14:53

Spectral Gamma Calibration SGS-E.J 171 — Base Calibration on 20-AUG-2014 14:08
Field Calibration on 20-AUG-2014 15:11

Base Calibration

Potassium Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	70.0	20.7	1.9	0.6	1.1
Calibrator (Gross)	193.2	104.4	24.2	0.7	1.0
Calibrator (Net)	123.2	83.7	22.2	0.1	-0.0

	K %	U ppm	Th ppm
Concentrations	5.8	0.0	0.0

Uranium Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	70.0	20.7	1.9	0.6	1.1
Calibrator (Gross)	517.7	178.6	15.5	9.1	4.2
Calibrator (Net)	447.7	158.0	13.5	8.5	3.1

	K %	U ppm	Th ppm
Concentrations	0.0	14.8	0.0

Thorium Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	70.0	20.7	1.9	0.6	1.1
Calibrator (Gross)	385.1	136.7	10.2	6.1	15.1
Calibrator (Net)	315.1	116.0	8.3	5.5	14.1

	K %	U ppm	Th ppm
Concentrations	0.0	0.0	44.3

Mixture Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	70.0	20.7	1.9	0.6	1.1
Calibrator (Gross)	931.2	372.5	45.3	14.3	17.1
Calibrator (Net)	861.3	351.9	43.4	13.7	16.1

Field Calibration

Gamma Ray

	Measured	Calibrated (API)
Background	98	19
Calibrator (Gross)	1383	269
Calibrator (Net)	1285	250

Mixture Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	69.1	20.2	2.2	0.8	1.1
Calibrator (Gross)	929.4	370.2	45.6	14.9	17.7
Calibrator (Net)	860.3	350.0	43.4	14.1	16.6

Spectral Gamma Constants SGS-E.J 171

Last Edited on 20-AUG-2014,14:09

Background Calibrator Number	496	
Mixture Calibrator Number	525	
Potassium Calibrator Number	499	
Uranium Calibrator Number	505	
Thorium Calibrator Number	502	
Mud Density	1.00	gm/cc
Caliper Source for Processing	Bit Size	
Tool Position	Eccentred	
Concentration of KCl		kppm
K Mud Type	Chloride	
K Mud Concentration	0.00	%

DOWNHOLE EQUIPMENT

D:\14.03\TAOS (MCCONAGHY #17-1)\DATA.dta

CBH-C, Cablehead, 11 pin
CBH-CA 177 LG: 2.40 ft WT: 24.3 lb OD: 2.244 in

SHA-J.A Compact Swivel Head Adaptor
SHA-J.A 450 LG: 2.30 ft WT: 22.0 lb OD: 2.244 in

Compact Comms Gamma
MCG-D.K 431 LG: 8.70 ft WT: 63.9 lb OD: 2.244 in

Spectral Gamma Ray Sub
SGS-E.J 171 LG: 7.78 ft WT: 105.8 lb OD: 3.543 in

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

Compact Neutron
MDN-B.J 422 LG: 5.04 ft WT: 50.7 lb OD: 2.244 in

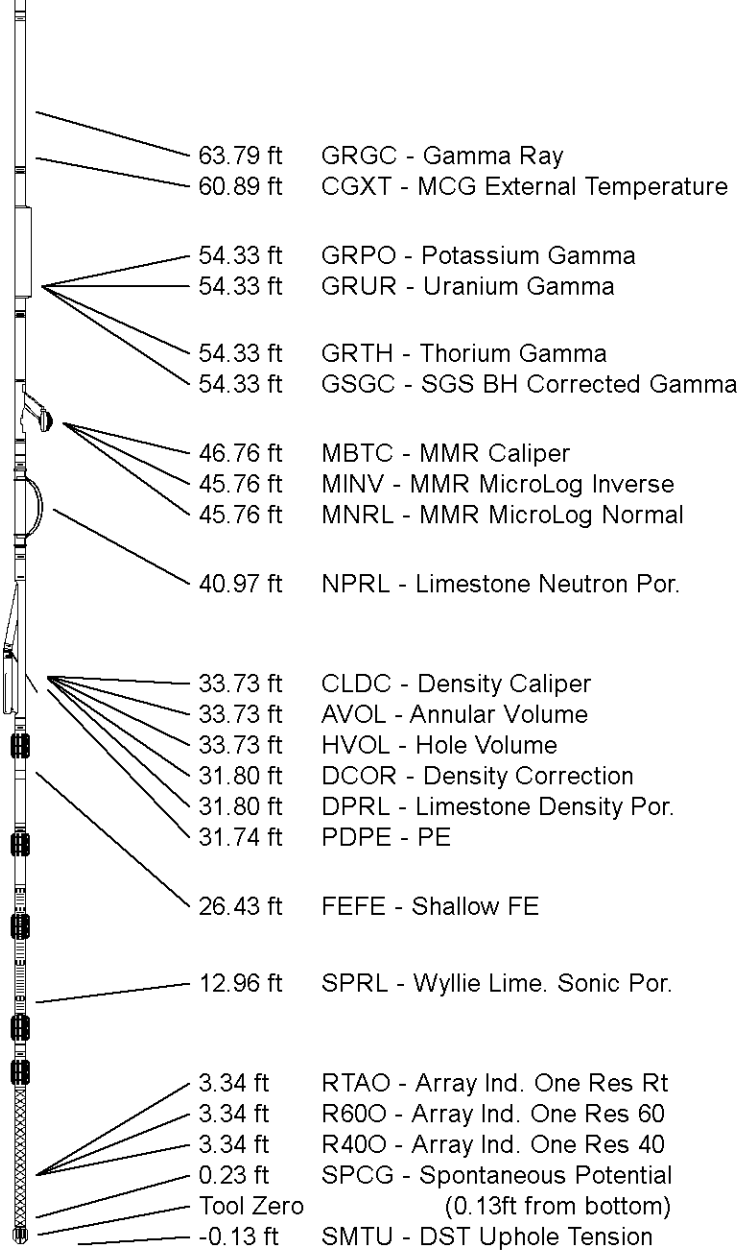
Compact Density/Caliper
MPD-B 167 LG: 9.59 ft WT: 90.4 lb OD: 2.449 in

Compact Focussed Electric
MFE-C.A 432 LG: 6.05 ft WT: 48.5 lb OD: 2.244 in

Compact Sonic
MSS-C.A 147 LG: 12.52 ft WT: 72.8 lb OD: 2.244 in

Compact Induction
MAI-A.A 66 LG: 10.81 ft WT: 48.5 lb OD: 2.240 in

Total Length: 73.77 ft Weight: 608.5 lb



COMPANY	TAOS RESOURCES OPERATING COMPANY
WELL	MCCONAGHY #17-1
FIELD	TISDALE GAS
PROVINCE/COUNTY	COWLEY
COUNTRY/STATE	USA / KANSAS

Elevation Kelly Bushing	1293.00	feet	First Reading	3747.00	feet
Elevation Drill Floor	1291.00	feet	Depth Driller	3750.00	feet
Elevation Ground Level	1283.00	feet	Depth Logger	3750.00	feet

Weatherford®

COMPOSITE LOG