PRECISION ENERGY SERVICES

DLL - SLL - MLL - SONIC
DENSITY - NEUTRON
1:500

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA
LOCATION	38DEG29'31.96"S 142DEG44'46.66"E

COMPACT

FINAL PRINT

LSD	SEC	TWP	RGE	Other Services

API Number
Permit Number PEP 154

Permanent Datum GROUND LEVEL, Elevation 46.2 metres
Log Measured From R.T. @ 5.3 METREabove Permanent Datum
Drilling Measured From R.T.

Elevations:
KB 51.50 metres
DF metres
GL 46.20 metres

Date	03-Oct-2005		01-Oct-2005	
Run Number	TWO		ONE	
Depth Driller	2658.00	metres	2545.00	metres
Depth Logger	2656.80	metres	2529.00	metres
First Reading	2656.80		2528.15	
Last Reading	2400.00		0.00	
Casing Driller	544.50	metres	544.50	metres
Casing Logger	544.20	metres	544.20	metres
Bit Size	8.50	inches	8.50	inches
Hole Fluid Type	KCL/PHPA/POL		KCL/PHPA/POL	
Density / Viscosity	1.16 g/c3	58.00 CP	1.15 g/c3	59.00 CP
PH / Fluid Loss	8.00	5.00	8.60	4.00
Sample Source	FLOWLINE		FLOWLINE	
Rm @ Measured Temp	0.18 @ 25.0	ohm-m	0.65 @ 13.9	ohm-m
Rmf @ Measured Temp	0.20 @ 25.0	ohm-m	1.06 @ 13.9	ohm-m
Rmc @ Measured Temp	0.13 @ 25.0	ohm-m	0.53 @ 14.1	ohm-m
Source Rmf / Rmc	PRESS	FILTER	PRESS	FILTER
Rm @ BHT	0.07 @ 93.5	ohm-m	0.09 @ 95.5	ohm-m
Time Since Circulation	11.8 HOURS		18 HOURS	
Max Recorded Temp	93.50	deg C	95.50	deg C
Equipment Name	COMPACT		COMPACT	
Equipment / Base	8	SALE	8	SALE
Recorded By	BEN MOSS			
Witnessed By	JOHN HOBDAY			
CIRC. STOP	13:00 3/10		00:00 1/10	

BOREHOLE RECORD

Last Edited: 3-OCT-2005 20:29

Bit Size inches	Depth From metres	Depth To metres
8.500	544.50	2658.00

CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	9.625	0.00	544.50	36.00

REMARKS

1) SOFTWARE ISSUE: JUN 17, 2004.
2) CUSTOMER SCALES AND INTERVALS LOGGED.
3) HFS, MMR, MLE, MUG, MSS, SKJ, MPD,MDN, MCG, MBE RAN IN COMBINATION.
4) HARDWARE: MMR: ONE 25.4MM STANDOFF
MSS: TWO 25.4MM STANDOFF
MUG: ONE 25.4MM STANDOFF
MBE: ONE 25.4MM STANDOFF
5) SERVICE ORDER: 2071
6) RIG:CENTURY 7
PRINTS: 1 FIELD 3 FINALS
7) TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 79.7 CU.M.
8) TOTAL ANNULAR VOLUME WITH 7 INCH CASING = 27.7 CU.M.
9) SONIC CASING SIGNAL AT 500.5 M.

MAIN LOG 1:500

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 04-NOV-2005 16:06
Filename: C:\Program Files\Precision\PreView\Precisi...\SUPERCOMBO_COMBINED_MAIN_LOG.dta
Recorded on 04-OCT-2005 00:45
System Versions: Plotted with 7.01.0179

Timing Marks
every 60.0 sec

DST Uphole Tension
pounds
0 5000
5000 10000

Density Caliper
inches
6 16

Spontaneous Potential
millivolts
– → | 40 | ← +

MMR Caliper
inches
6 16

Borehole Corrected Gamm
API
0 200
200 400

Bit Size
inches
6 16

Depth in Metres

Borehole Temp in deg C

TR21
1100 100

TR11
1100 100

TR22
1100 100

TR12
1100 100

HVI every 0.1 cu m

Annular Integral every 0.1 cu m

Replay Scale 1:500

32

50

Limestone Neutron Por.
percent
45 -15

PE
barns/electron
0 10

Shallow Laterolog
ohm metres
0.20 2000
1 10 100 1000

Density Correction
grams/cc
-1.50 0.50

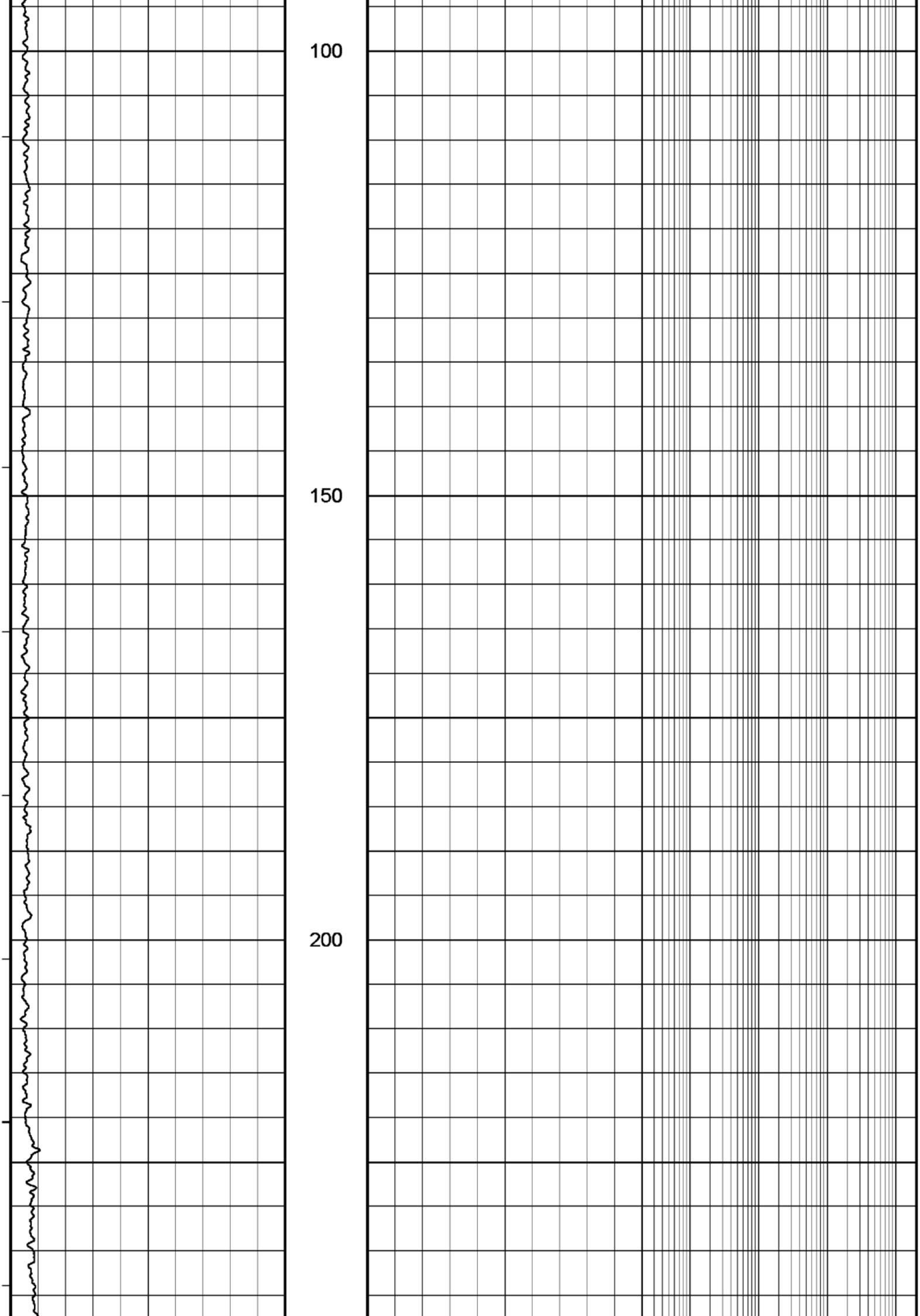
Deep Laterolog
ohm metres
0.20 2000
1 10 100 1000

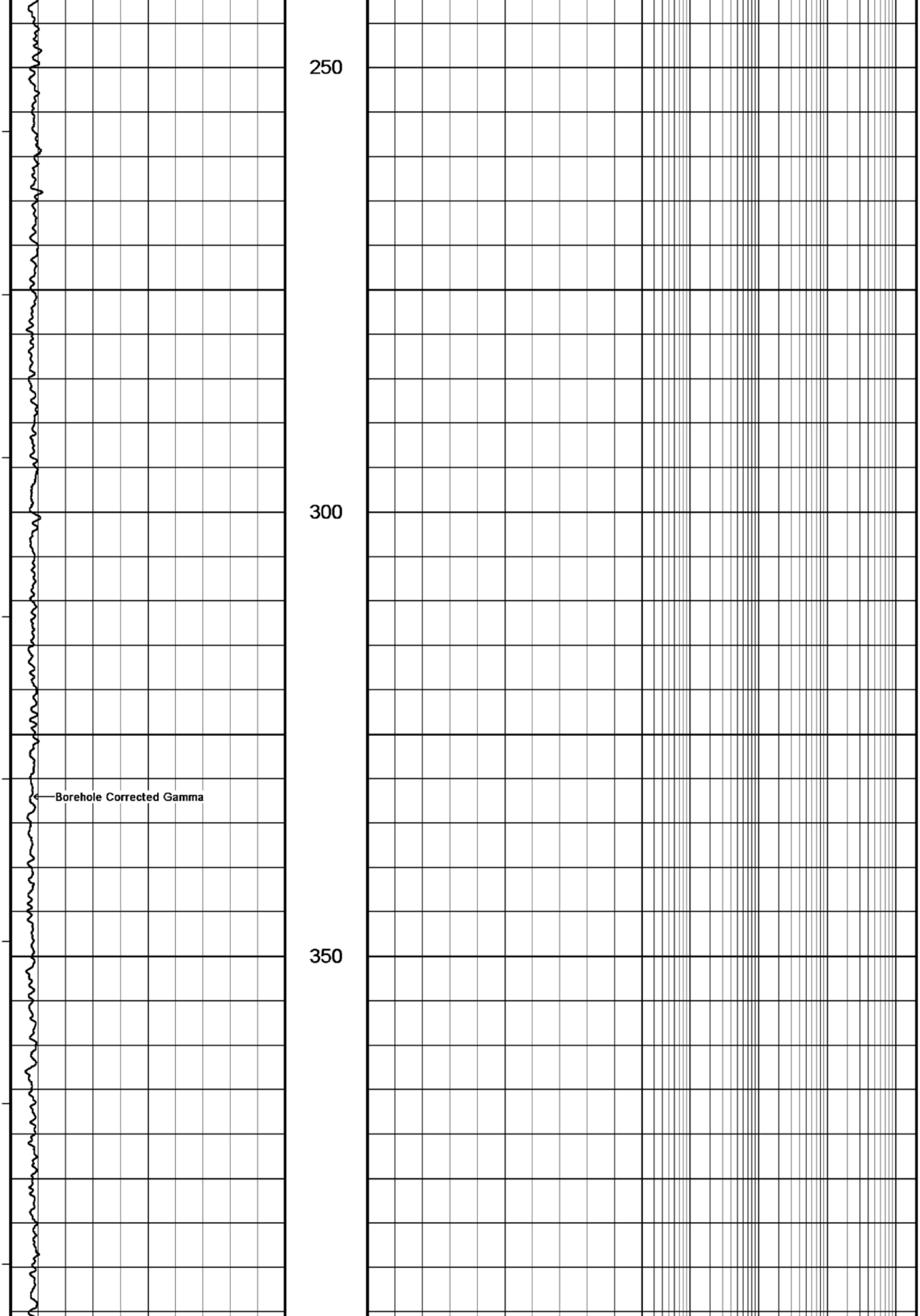
3-5' Compensated Sonic
microsec/foot
140 40

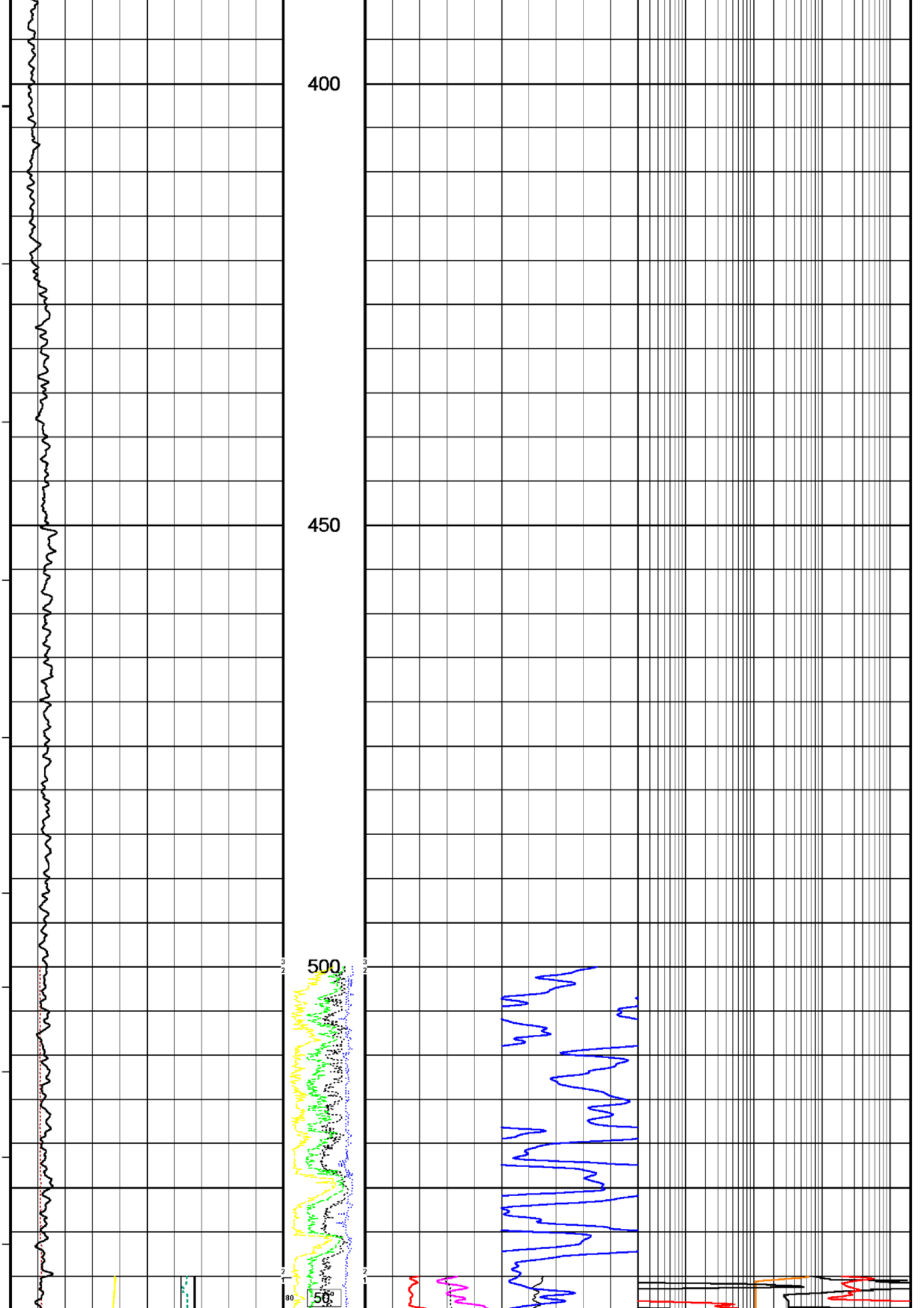
Compensated Density
grams/cc
1.95 2.95

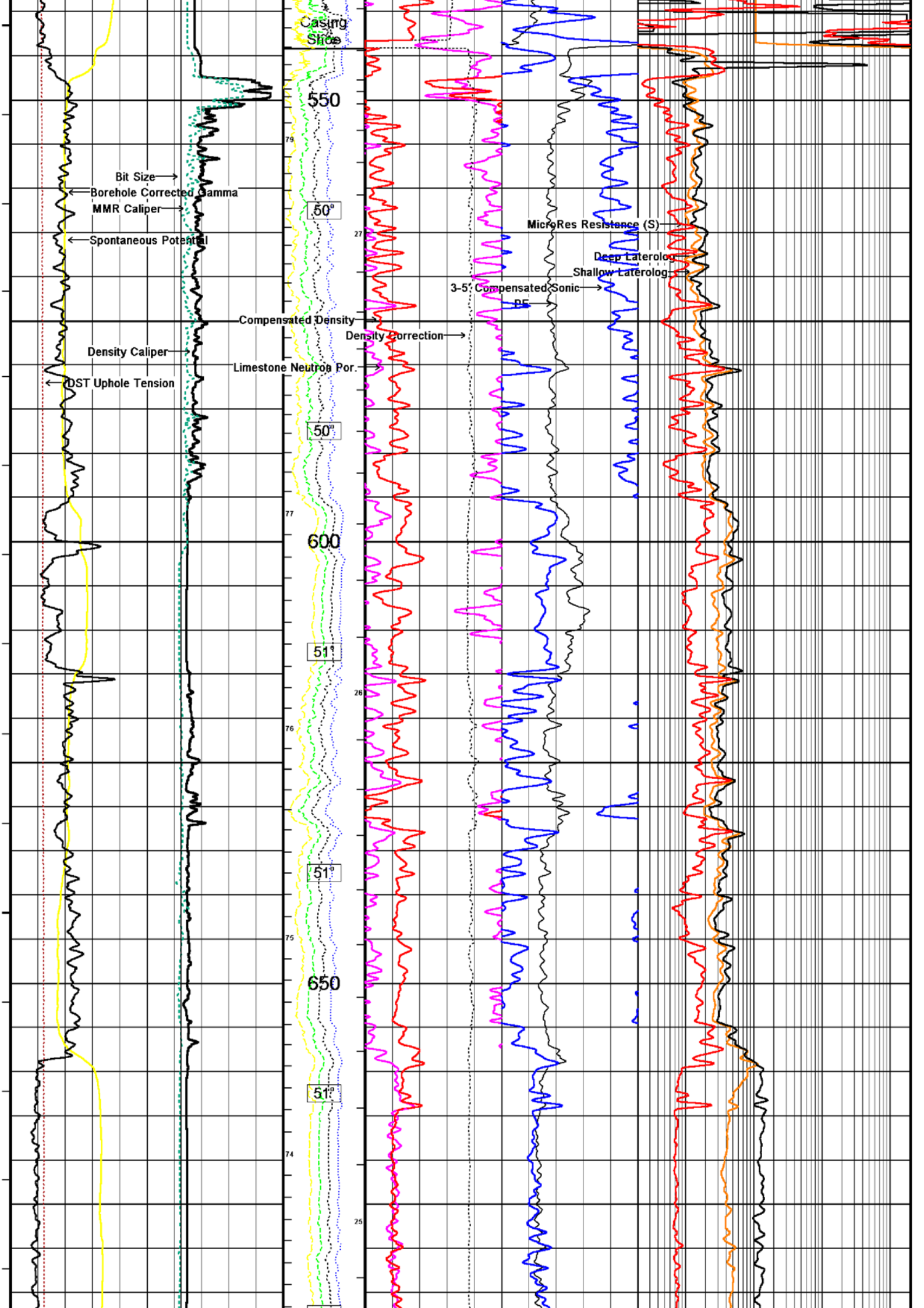
MicroRes Resistance (S)
ohm metres
0.20 2000
1 10 100 1000

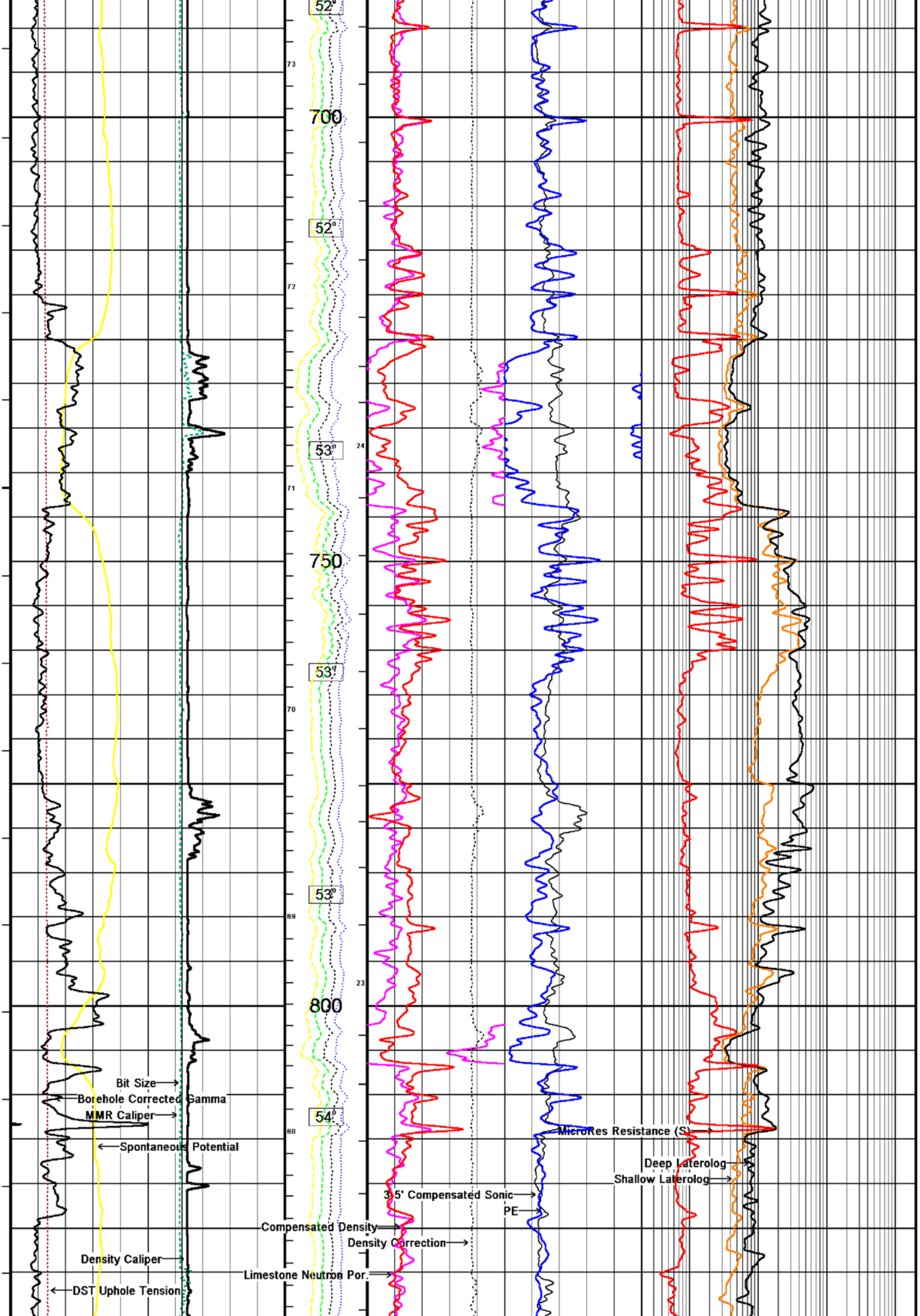
← Borehole Corrected Gamma

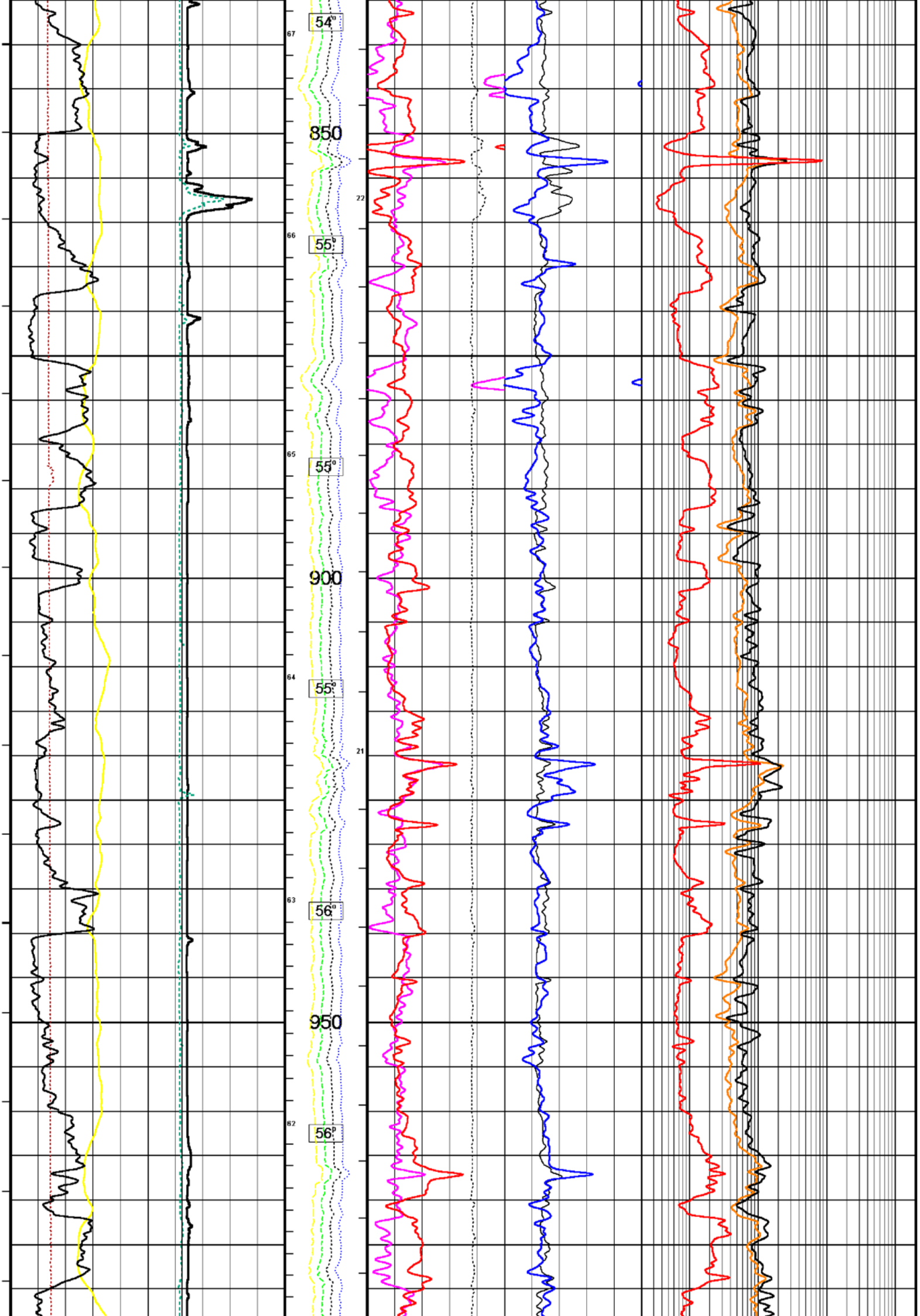

100
150
200

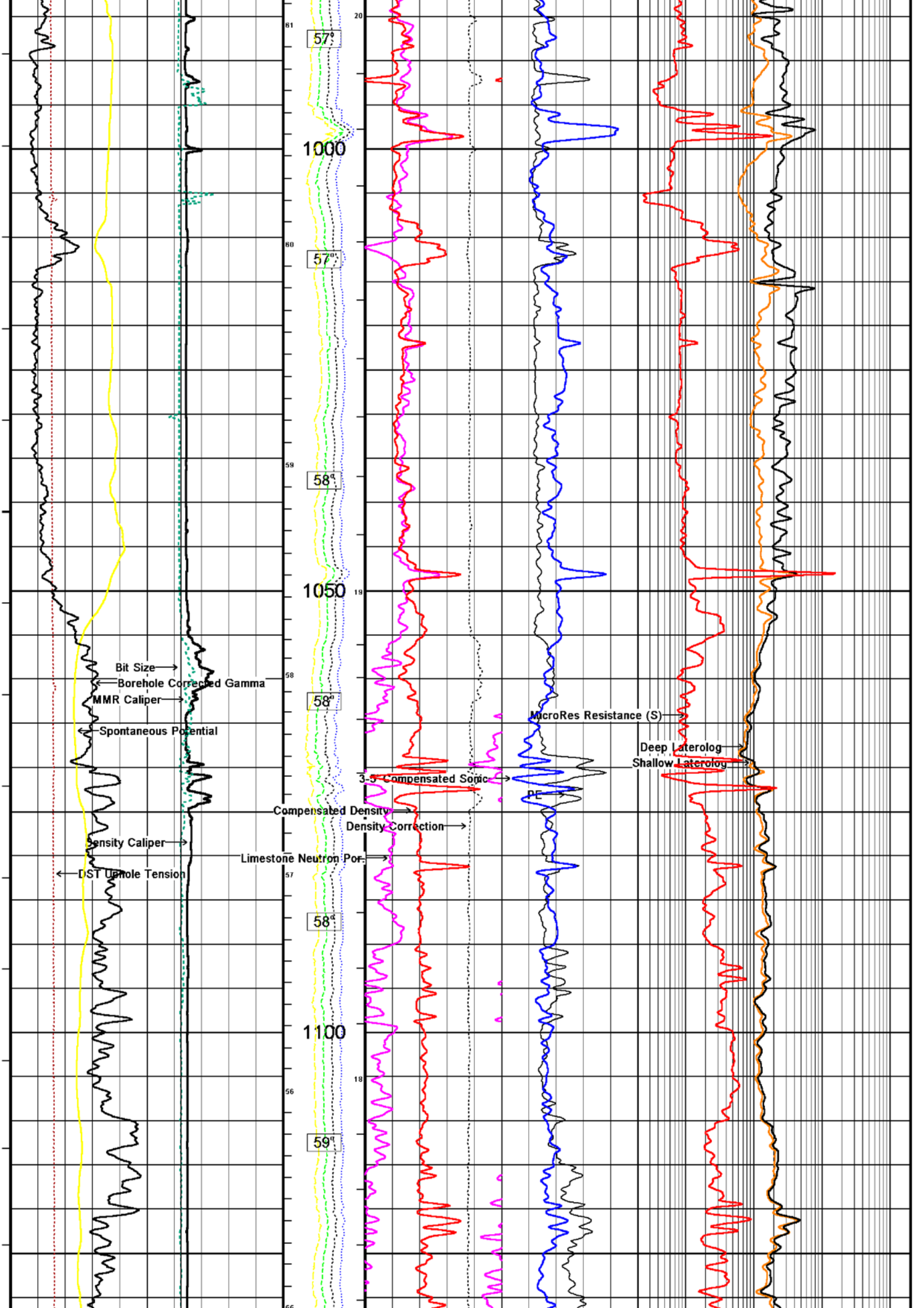

250
300
350
Borehole Corrected Gamma

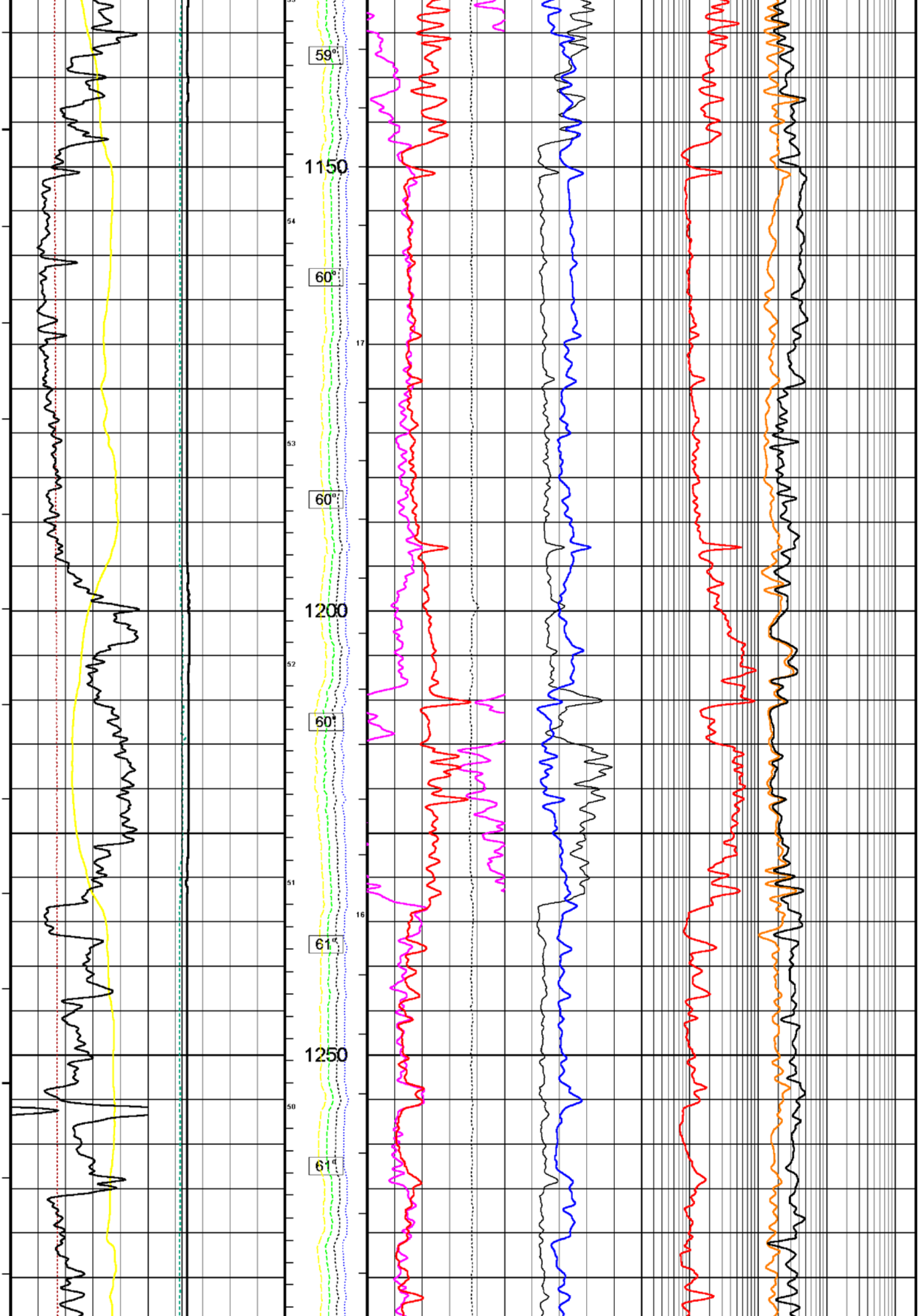

400
450
500
3
2
3
2
2
2
80
50

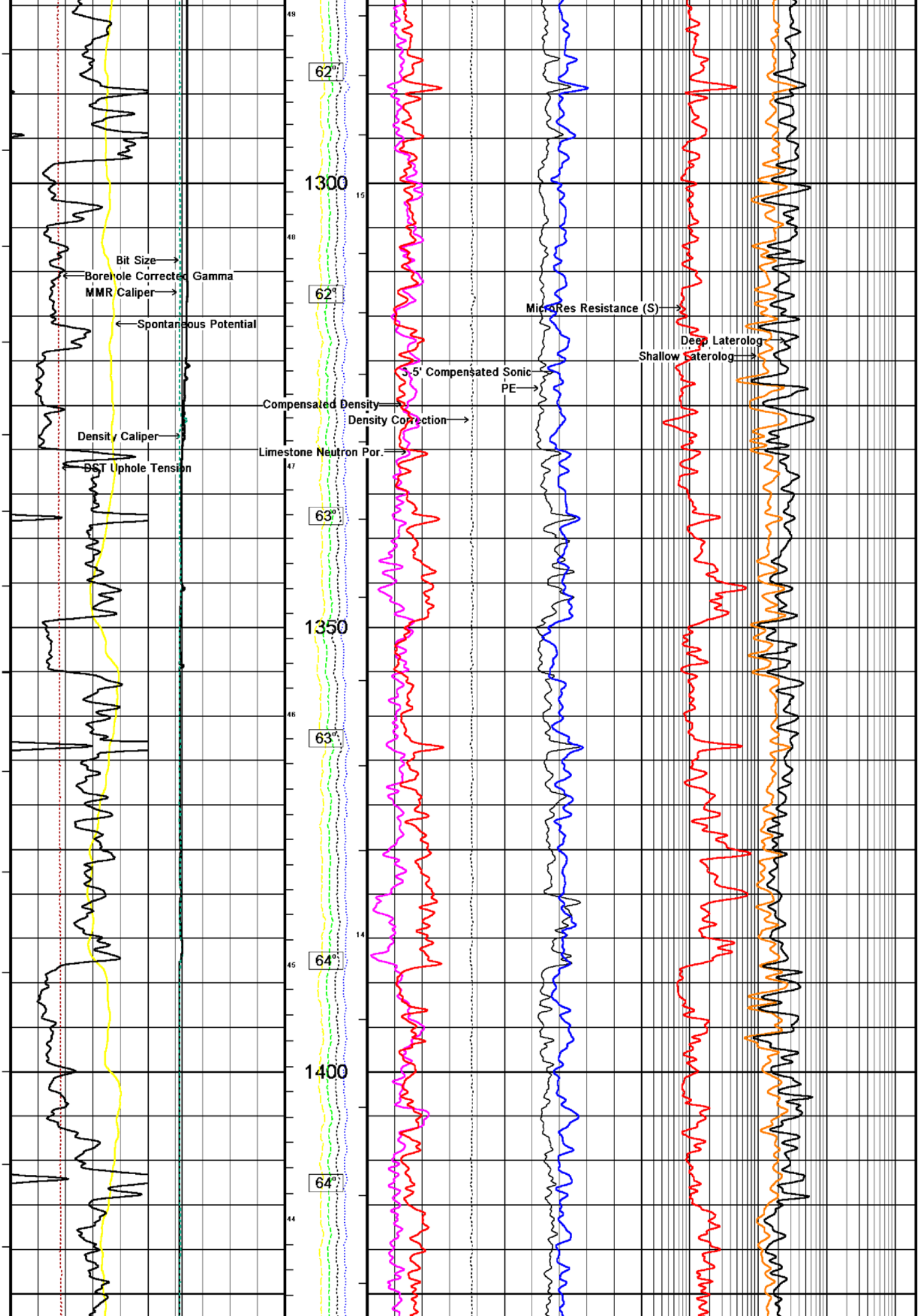

Casing Slice
550
600
650
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Compensated Density
Limestone Neutron Por.
Density Correction
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
50°
50°
51°
51°
51°
79
77
76
75
74
27
26
25

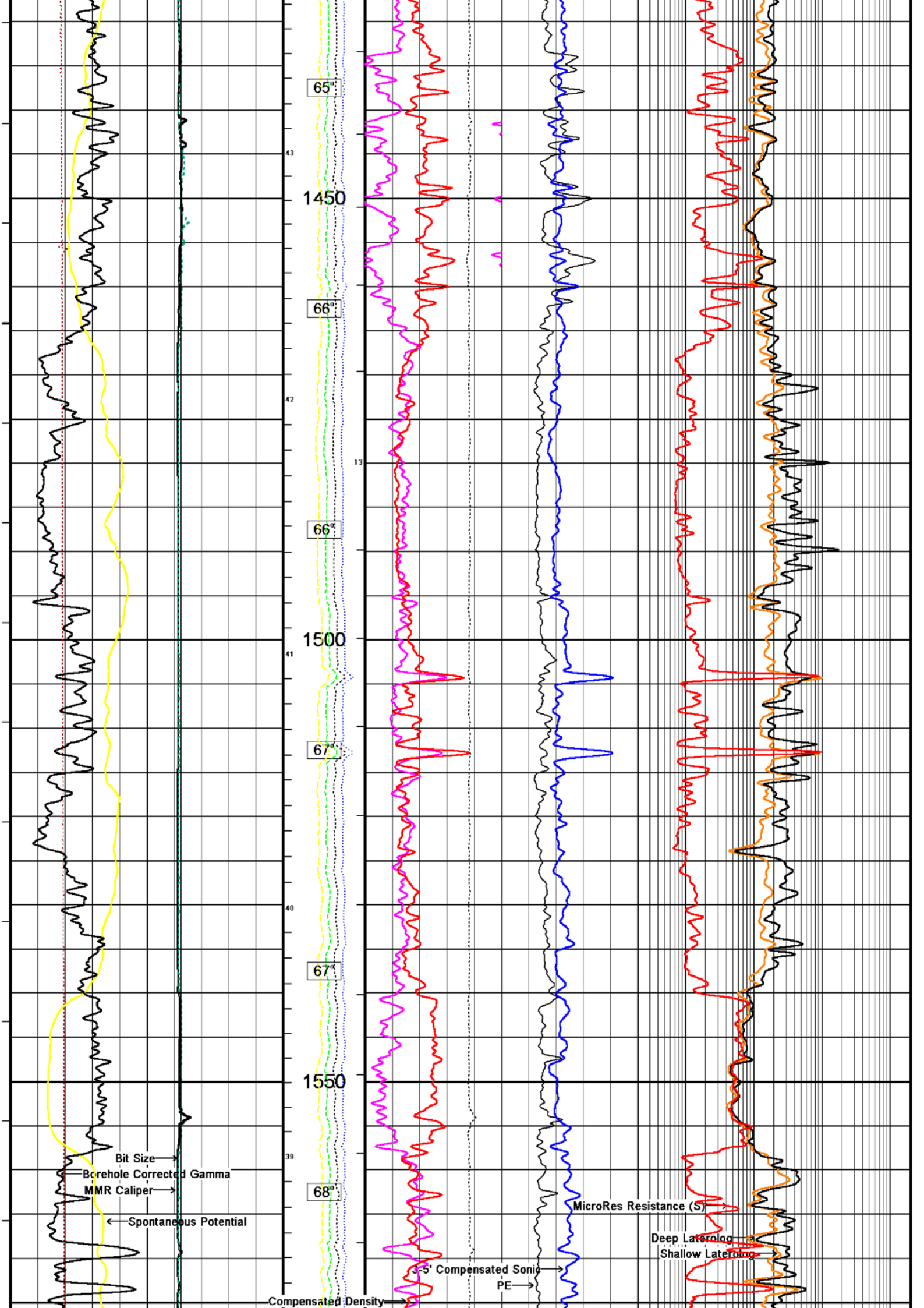

700
750
800
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Compensated Density
Density Correction
Limestone Neutron Por.
3.5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog

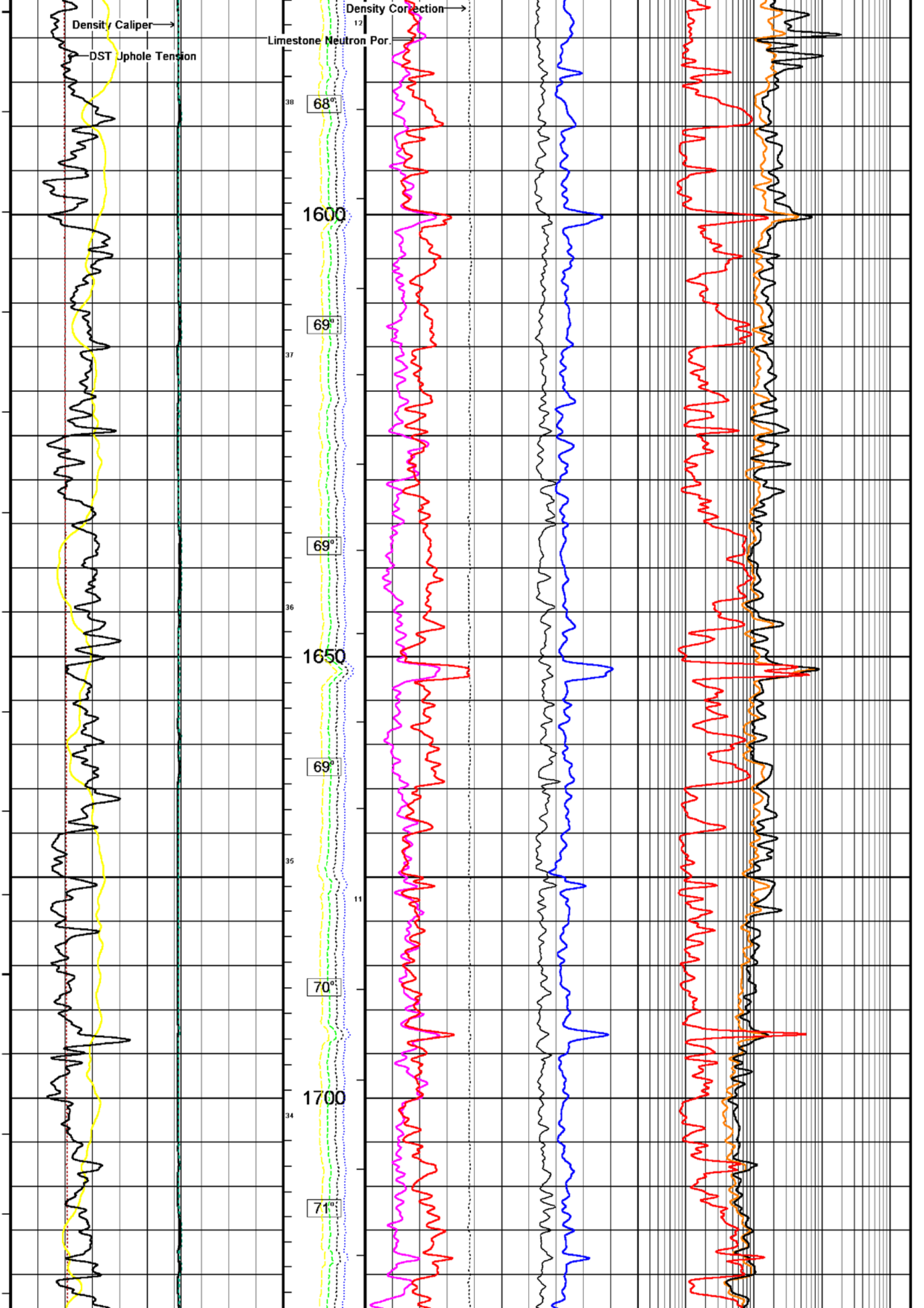

850
900
950

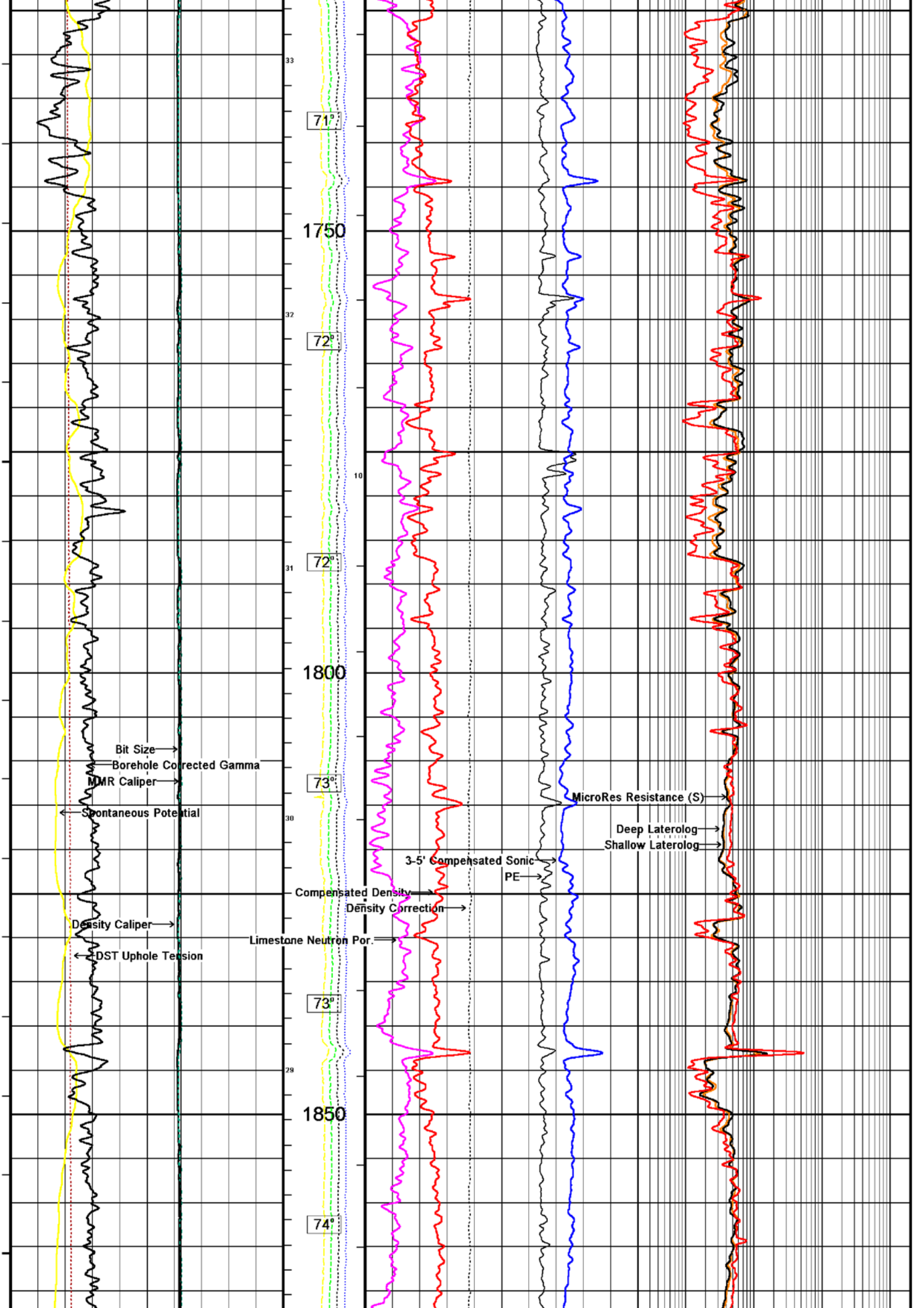

1000
1050
1100
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Sensity Caliper
DST Uphole Tension
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.

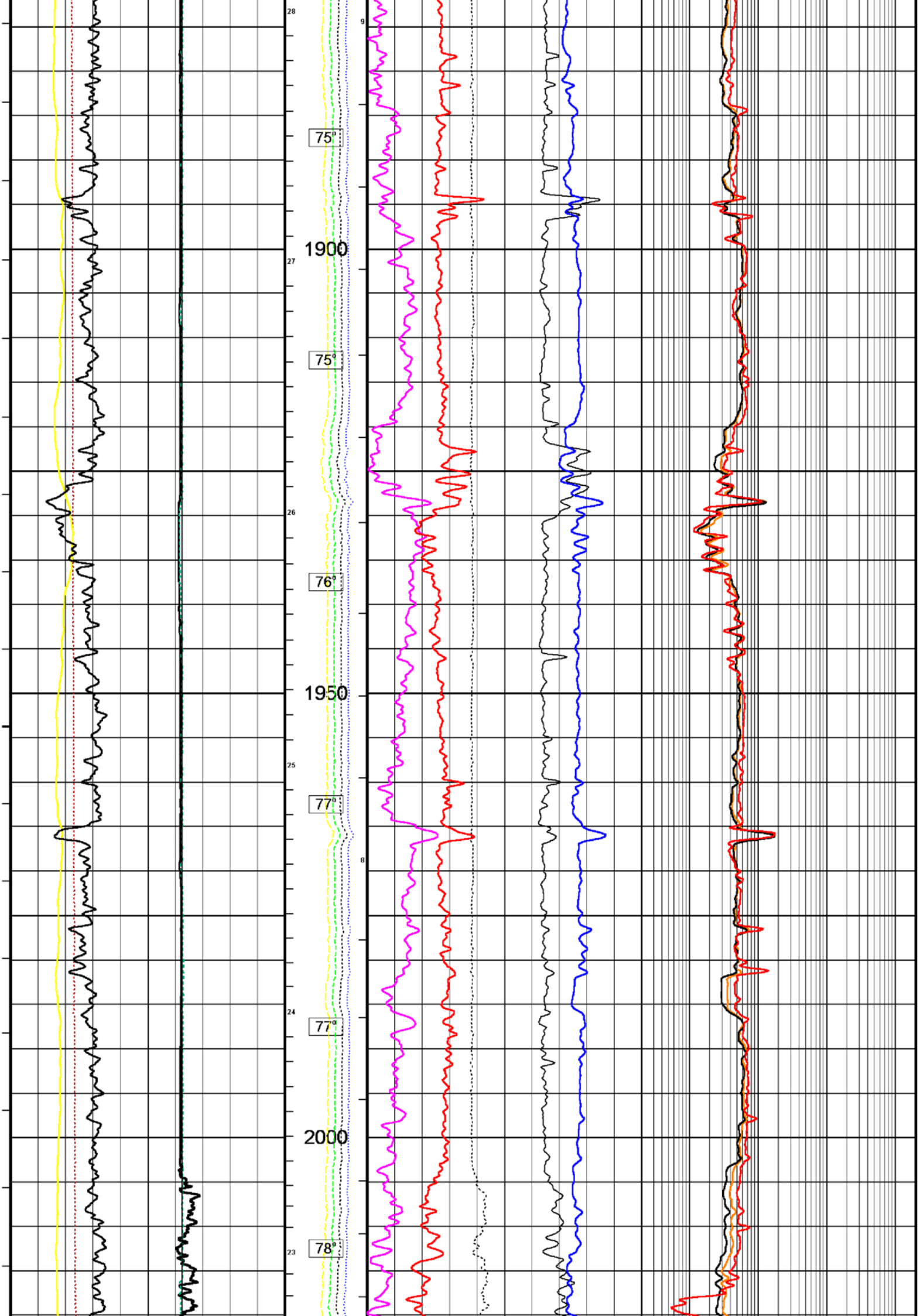

59°
1150
60°
60°
1200
60°
61°
1250
61°

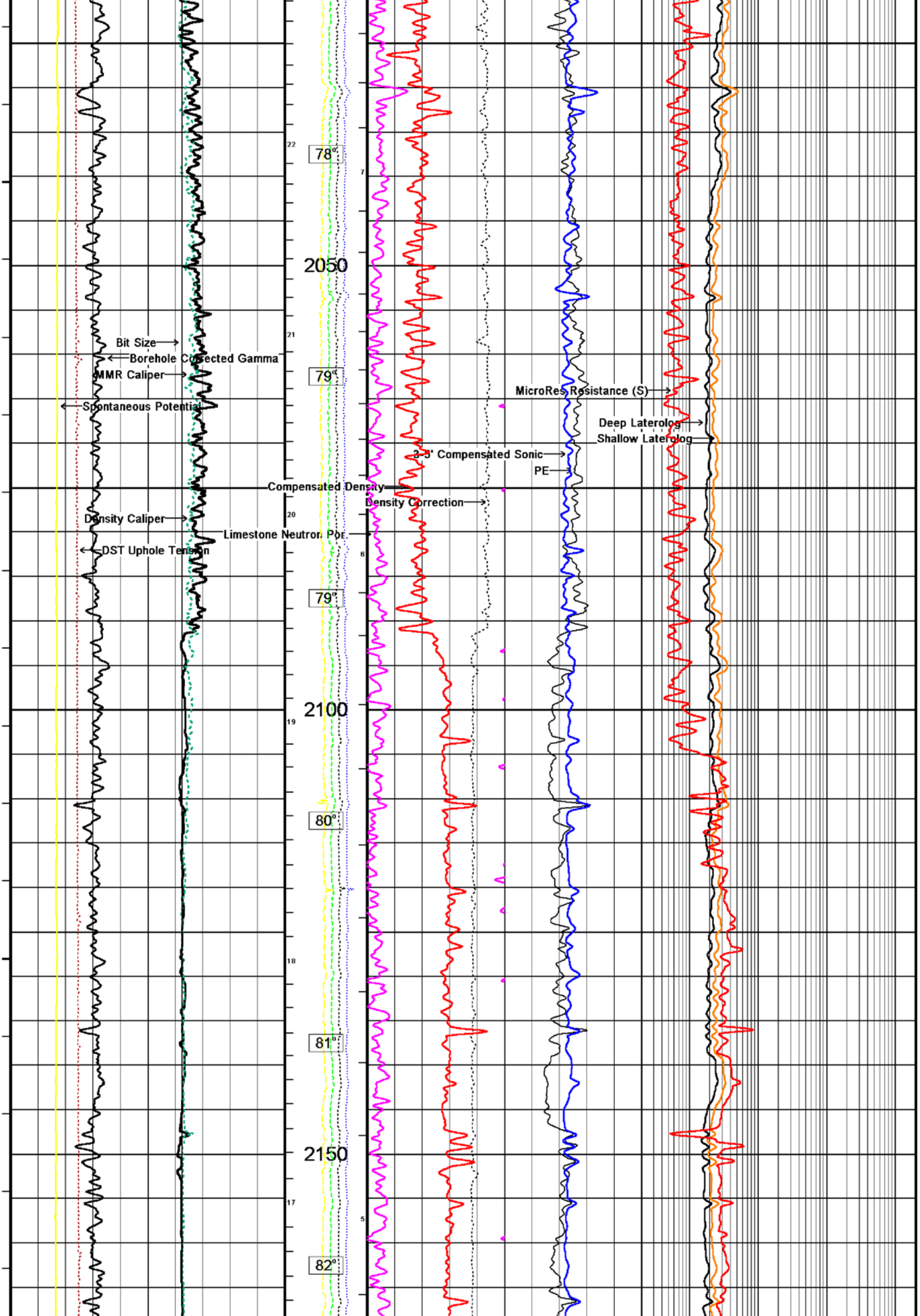

Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Compensated Density
Density Correction
Limestone Neutron Por.
3.5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
62°
62°
63°
63°
64°
64°
1300
1350
1400

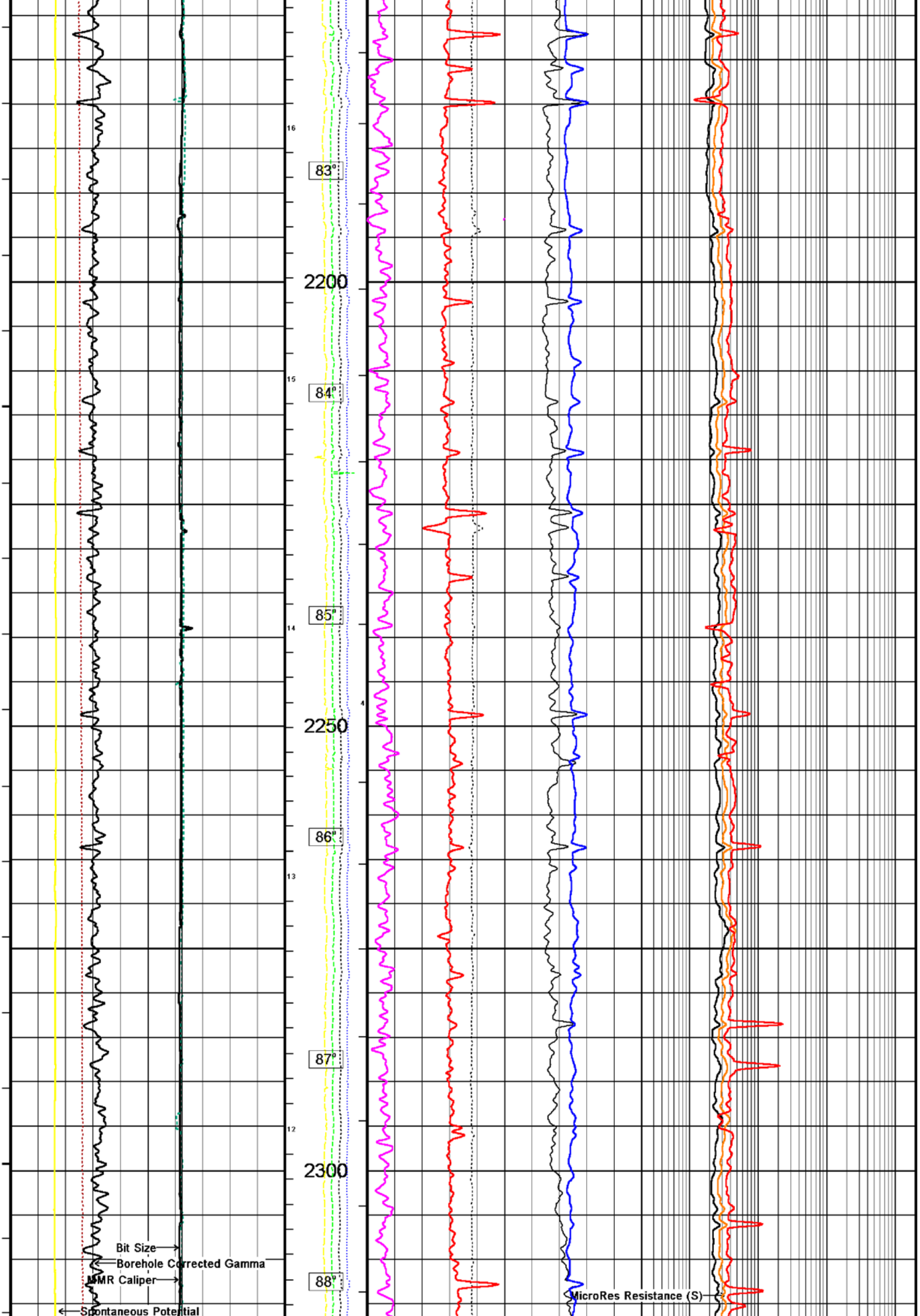

65°
1450
66°
66°
1500
67°
67°
1550
68°
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
5' Compensated Sonic
PE
Compensated Density

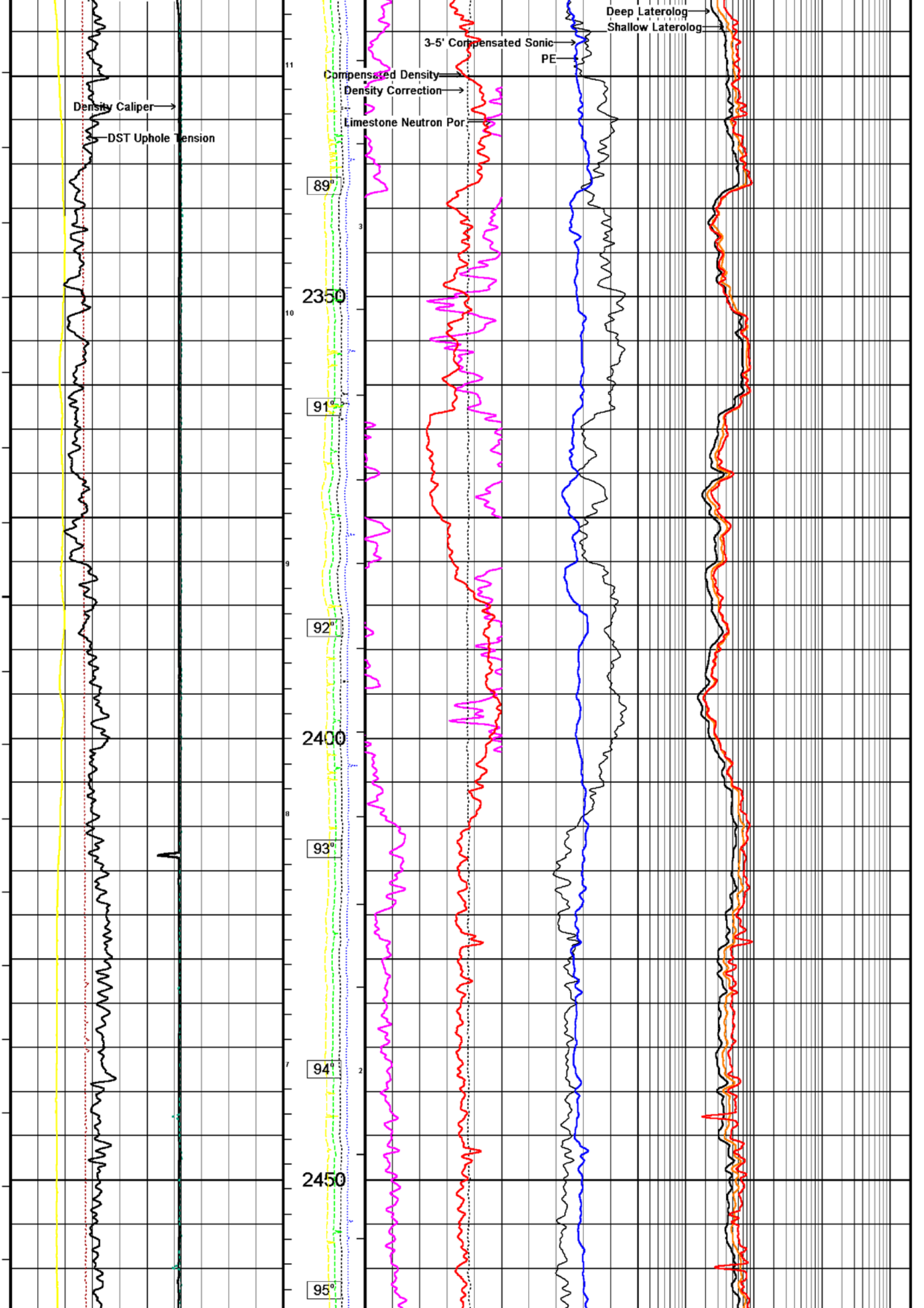

Density Caliper
DST Uphole Tension
Density Correction
Limestone Neutron Por.
38
37
36
35
34
12
11
68°
69°
69°
69°
70°
71°
1600
1650
1700

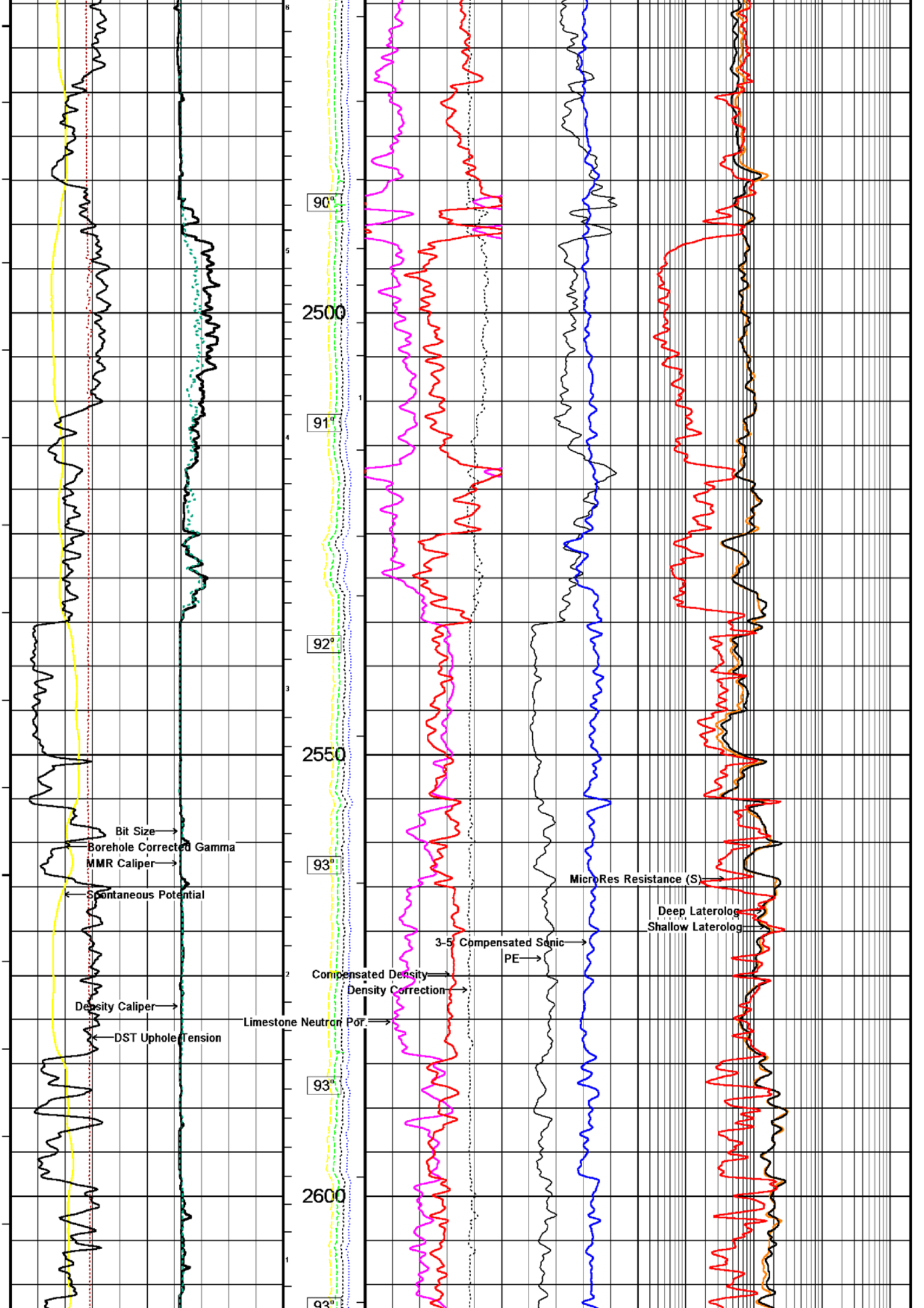

Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Limestone Neutron Por.
Compensated Density
Density Correction
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
1750
1800
1850
71°
72°
72°
73°
73°
74°
33
32
10
31
30
29

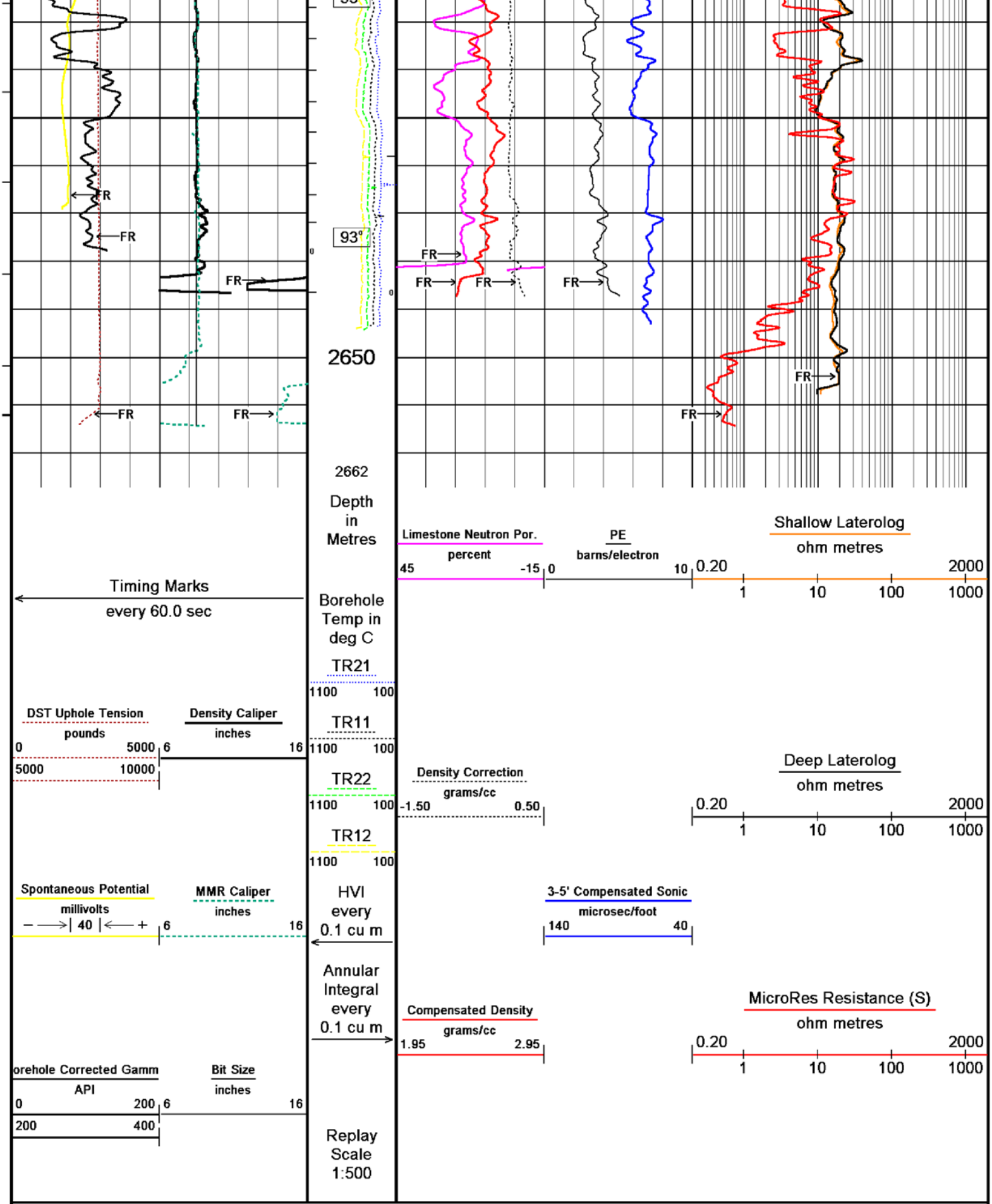

75°
1900
75°
76°
1950
77°
77°
2000
78°


Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Limestone Neutron Por
Compensated Density
Density Correction
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
78°
79°
79°
80°
81°
82°
2050
2100
2150


16
83°
2200
15
84°
85°
14
2250
86°
13
87°
12
2300
88°
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
MicroRes Resistance (S)


Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por
Density Caliper
DST Uphole Tension
89°
2350
91°
92°
2400
93°
94°
2450
95°


90°
2500
91°
92°
2550
93°
93°
2600
93°
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Limestone Neutron Por.
Compensated Density
Density Correction
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog



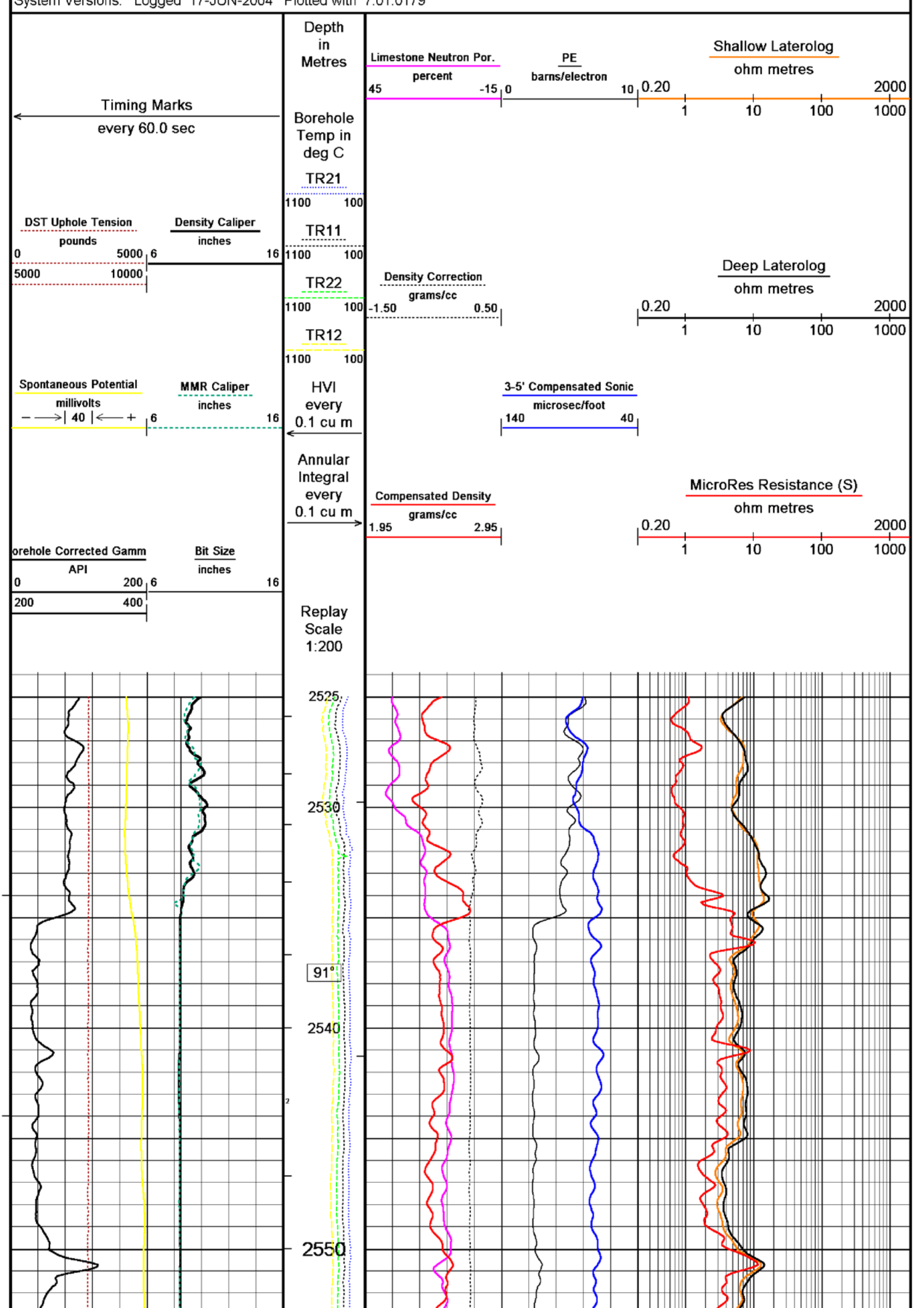
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 04-NOV-2005 16:06
Filename: C:\Program Files\Precision\PreView\Precisi...\SUPERCOMBO_COMBINED_MAIN_LOG.dta
Recorded on 04-OCT-2005 00:45
System Versions: Plotted with 7.01.0179

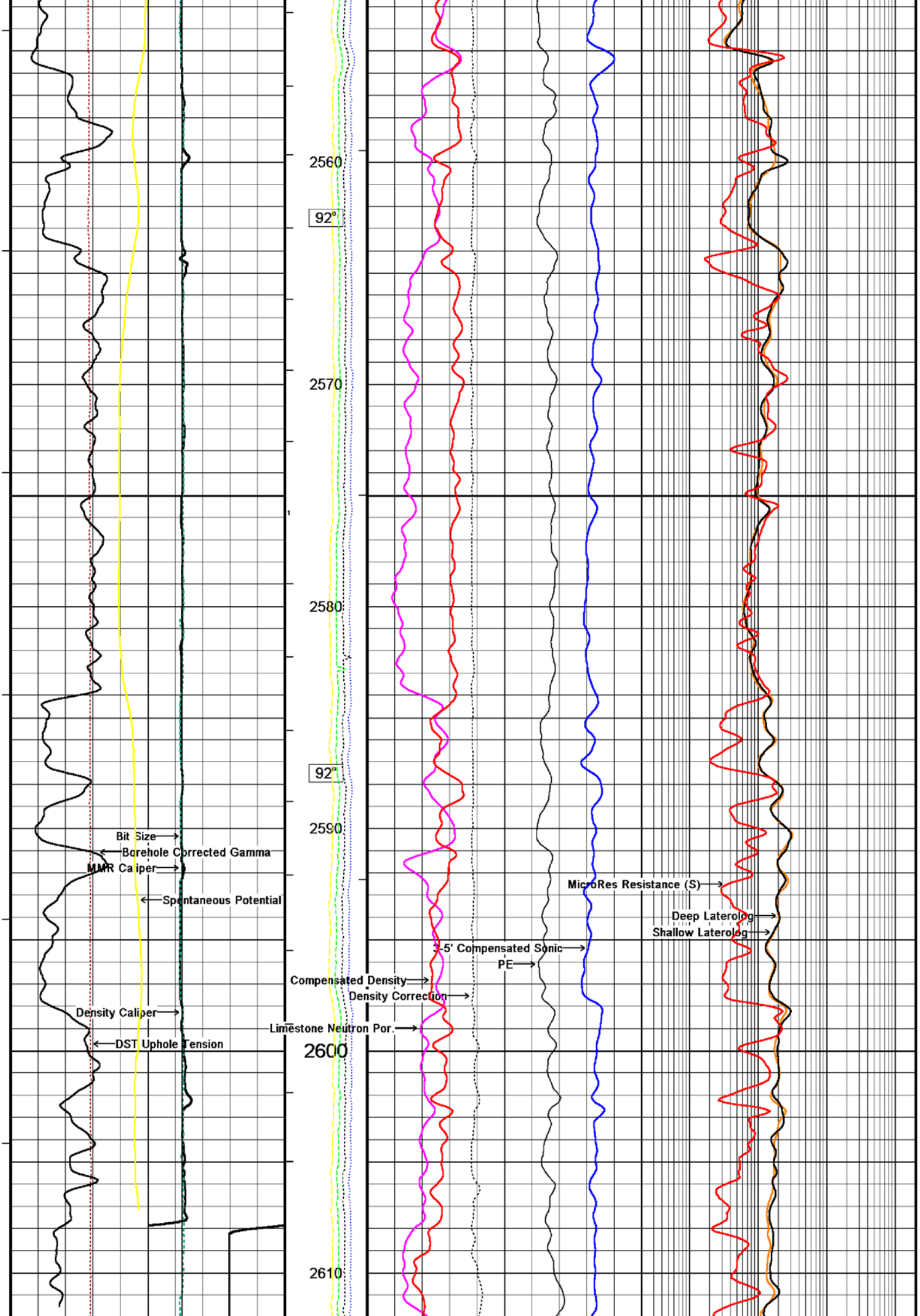
MAIN LOG 1:500

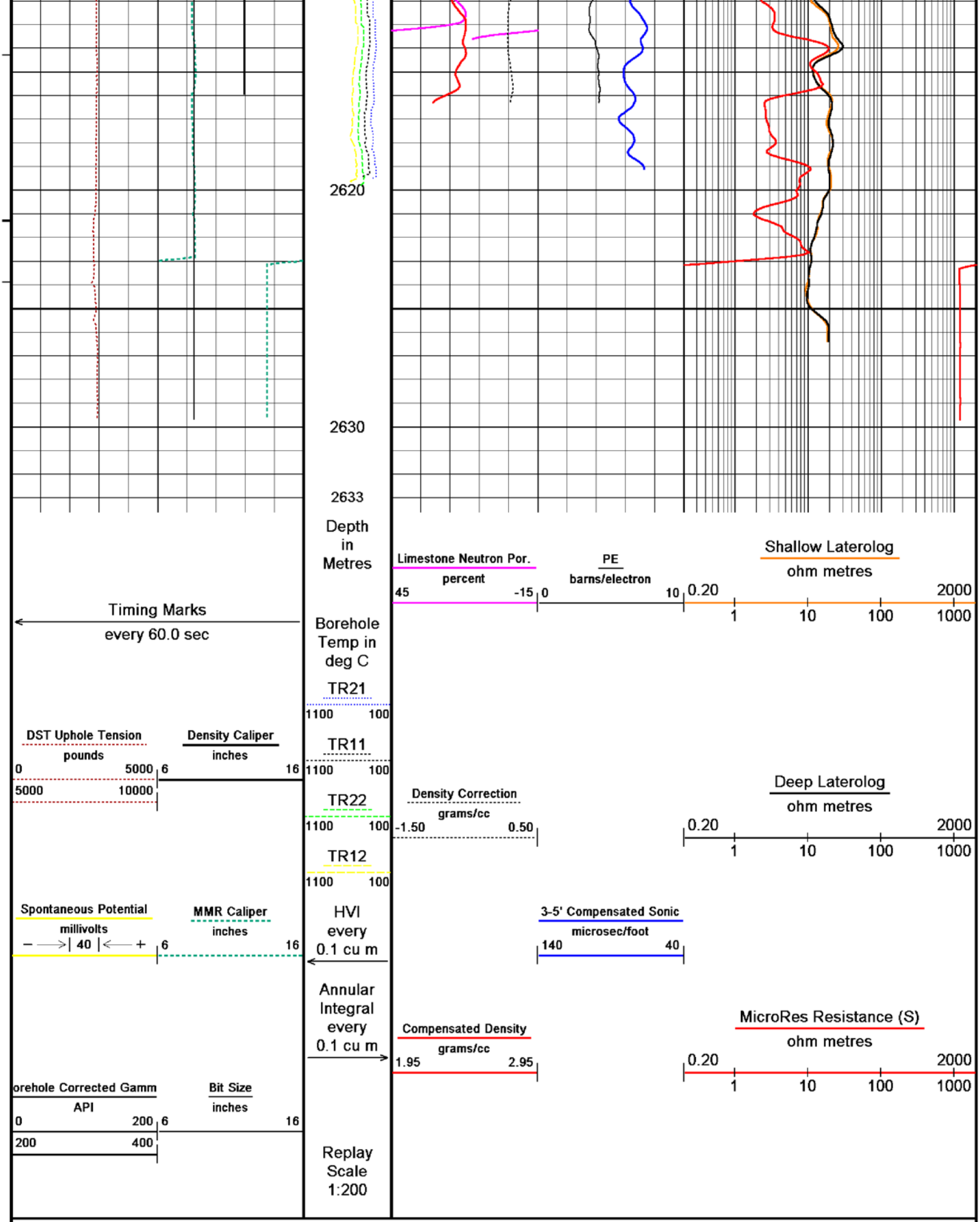
REPEAT SECTION 1:500 RUN 2

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 04-NOV-2005 16:06
Filename: C:\Program Files\Precision\PreView\Precision PreView\SUPERCOMBO_4_002.dta
Recorded on 04-OCT-2005 00:11
System Versions: Logged 17-JUN-2004 Plotted with 7.01.0179

System Versions: Logged 17-JUN-2004 Plotted with 7.01.0179




2560
92°
2570
2580
92°
2590
2600
2610
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.



Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 04-NOV-2005 16:06
Filename: C:\Program Files\Precision\PreView\Precision PreView\SUPERCOMBO_4_002.dta
Recorded on 04-OCT-2005 00:11
System Versions: Logged 17-JUN-2004 Plotted with 7.01.0179

REPEAT SECTION 1:500 RUN 2

REPEAT SECTION 1:500 RUN 1

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 04-NOV-2005 16:06

Filename: C:\Program Files\Precision\PreView\Precision PreView\SUPERCOMBO2.dta
Recorded on 01-OCT-2005 18:14
System Versions: Logged 17-JUN-2004 Plotted with 7.01.0179

Timing Marks
every 60.0 sec

Depth
in
Metres

Borehole
Temp in
deg C

TR21
1100 100

TR11
1100 100

TR22
1100 100

TR12
1100 100

HVI
every
0.1 cu m

Annular
Integral
every
0.1 cu m

Replay
Scale
1:200

DST Uphole Tension
pounds
0 5000
5000 10000

Density Caliper
inches
6 16

Spontaneous Potential
millivolts
– 40 +

MMR Caliper
inches
6 16

orehole Corrected Gamm
API
0 200
200 400

Bit Size
inches
6 16

Limestone Neutron Por.
percent
45 -15

PE
barns/electron
0 10

Shallow Laterolog
ohm metres
0.20 2000
1 10 100 1000

Density Correction
grams/cc
-1.50 0.50

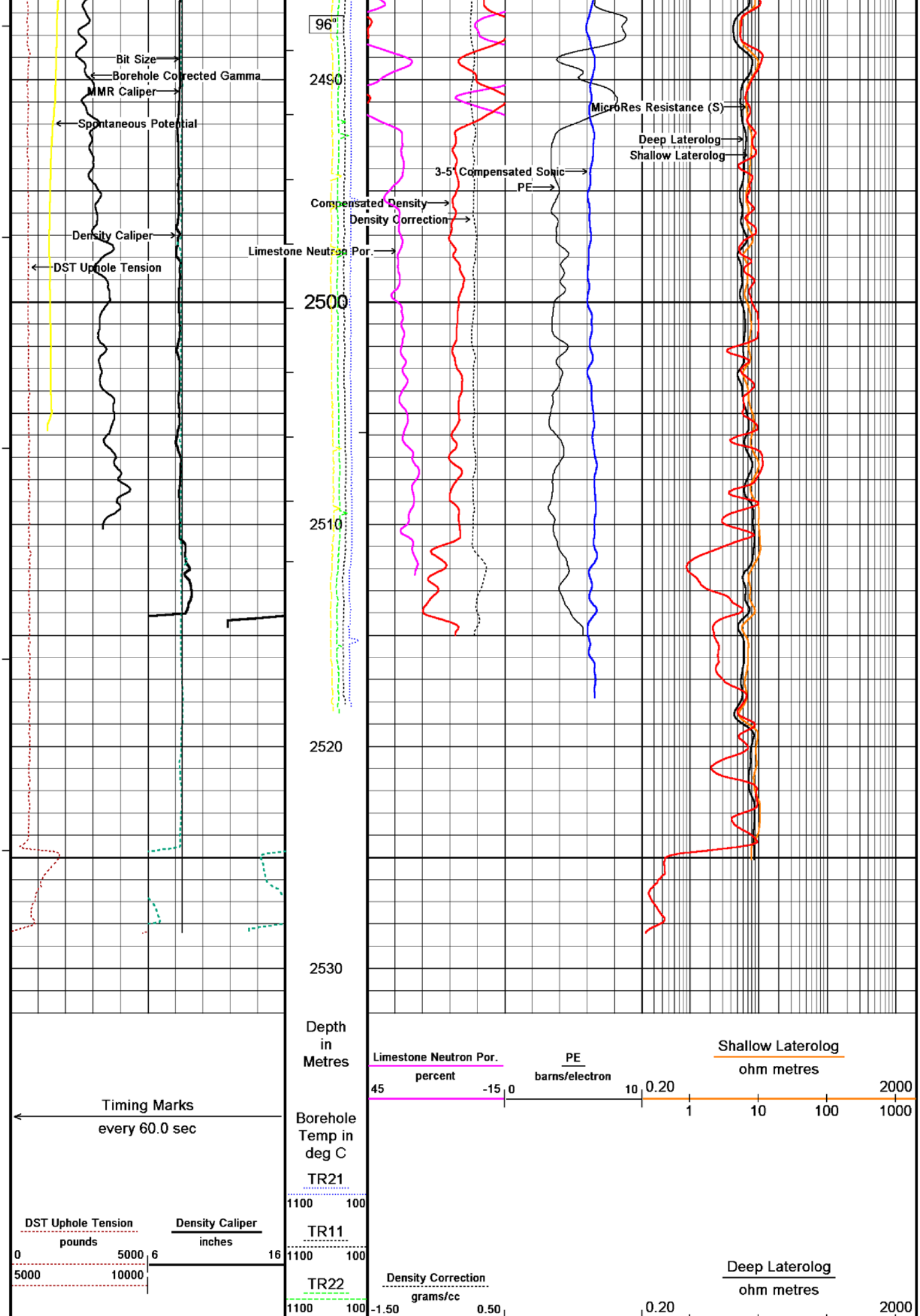
Deep Laterolog
ohm metres
0.20 2000
1 10 100 1000

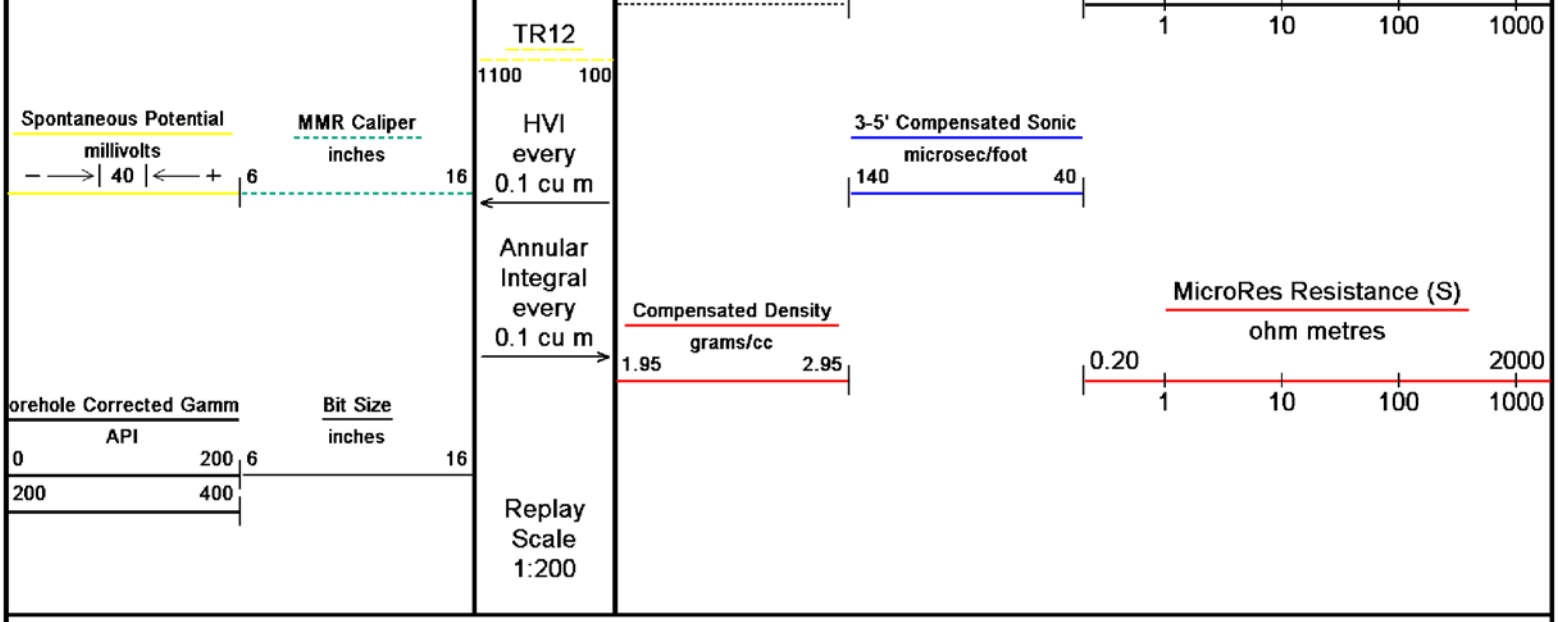
3-5' Compensated Sonic
microsec/foot
140 40

Compensated Density
grams/cc
1.95 2.95

MicroRes Resistance (S)
ohm metres
0.20 2000
1 10 100 1000

2460
95°
2470
2480


96°
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
2490
2500
2510
2520
2530
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.
Depth in Metres
Timing Marks
every 60.0 sec
Borehole Temp in deg C
TR21
1100 100
TR11
1100 100
TR22
1100 100
DST Uphole Tension
pounds
0 5000
5000 10000
Density Caliper
inches
6 16
Limestone Neutron Por.
percent
45 -15
PE
barns/electron
0 10
Density Correction
grams/cc
-1.50 0.50
Shallow Laterolog
ohm metres
0.20 2000
1 10 100 1000
Deep Laterolog
ohm metres
0.20 2000



Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 04-NOV-2005 16:06
Filename: C:\Program Files\Precision\PreView\Precision PreView\SUPERCOMBO2.dta
Recorded on 01-OCT-2005 18:14
System Versions: Logged 17-JUN-2004 Plotted with 7.01.0179

REPEAT SECTION 1:500 RUN 1

DOWNHOLE EQUIPMENT

C:\Program Files\Precision\PreView\Precision PreView\SUPERCOMBO2.dta

Compact Stiff Bridle Electrode Sub.
MBE 22 Length: 3.76 m Weight: 94.8 lb

Compact Stiff Bridle Electrode Sub.
MBE 42 Length: 3.76 m Weight: 94.8 lb

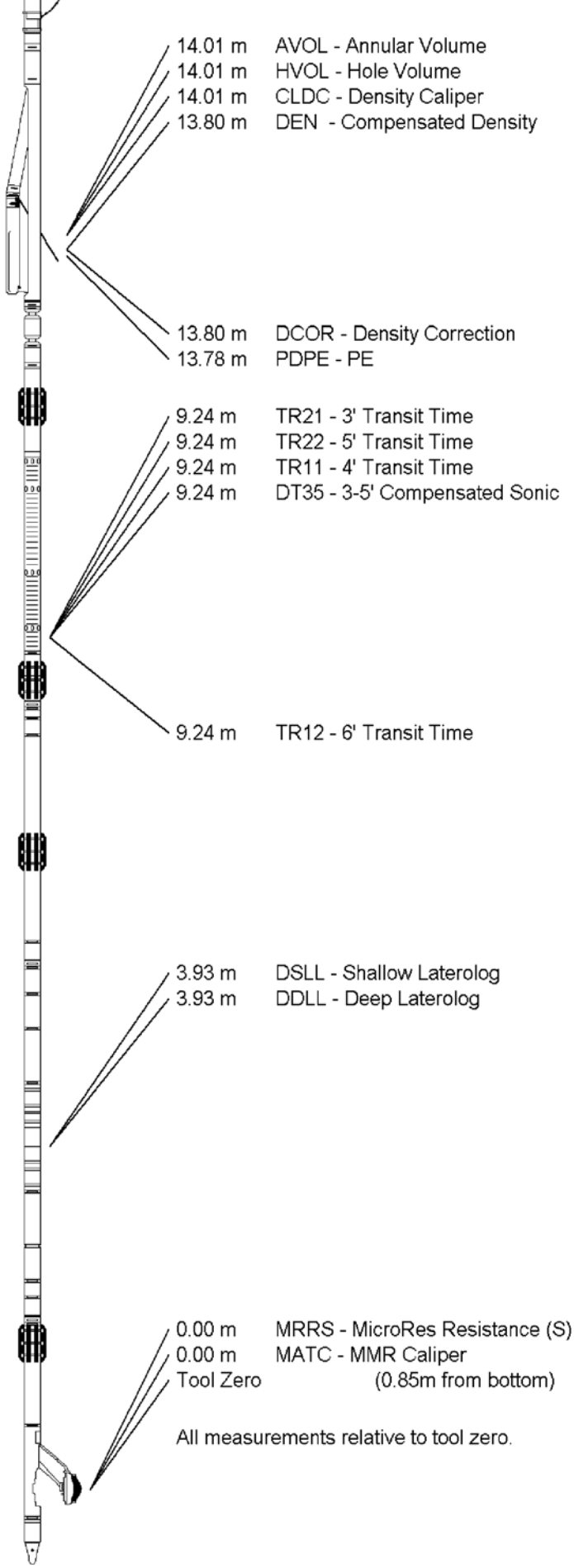
22.90 m SPDL - Spontaneous Potential

Compact Gamma
MCG 98 Length: 2.65 m Weight: 63.9 lb

18.56 m GGCE - Borehole Corrected Gamma
17.67 m CGXT - MCG External Temperature

Compact Neutron
MDN 43 Length: 1.53 m Weight: 50.7 lb

16.69 m NPRL - Limestone Neutron Por.



Compact Density/Caliper
MPD 66 Length: 2.92 m Weight: 90.4 lb

Compact Knuckle Joint
SKJ 3 Length: 0.66 m Weight: 24.3 lb

Compact Sonic
MSS 49 Length: 3.82 m Weight: 72.8 lb

Compact Upper Guard Sub.
MUG 20 Length: 2.74 m Weight: 68.3 lb

Compact Laterolog Electrode Sub.
MLE 16 Length: 3.76 m Weight: 92.6 lb

Compact Micro-Resistivity
MMR 5 Length: 2.62 m Weight: 81.6 lb

Pressure Bung + Hole Finder
HFS 3 Length: 0.28 m Weight: 6.6 lb

Total Length: 28.50 m Weight: 740.8 lb

BEFORE SURVEY CALIBRATION

C:\Program Files\Precision\PreView\Precision PreView\SUPERCOMBO_COMBINED_MAIN_LOG.dta

General Constants All 000 — Last Edited on 1-OCT-2005,07:46

General Parameters

Mud Resistivity	3.210	ohm-metres
Mud Resistivity Temperature	20.000	degrees C

Mud Resistivity Temperature	20.000	degrees C
Water Level	0.000	metres
Density/Neutron Processing	Wet Hole	

Hole/Annular Volume and Differential Caliper Parameters

HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	Density Caliper	
Annular Volume Diameter	7.000	inches
Caliper for Differential Caliper	Density Caliper	

Rwa Parameters

Porosity used	Limestone Sonic Porosity	
Resistivity used	Deep Laterolog	
RWA Constant A	0.610	
RWA Constant M	2.150	

Gamma Calibration MCG 098

Field Calibration on 3-OCT-2005,19:46

	Measured	Calibrated (API)
Background	29	22
Calibrator (Gross)	1029	771
Calibrator (Net)	1000	749

Gamma Constants MCG 098

Last Edited on 3-OCT-2005,20:14

Gamma Calibrator Number	30	
Mud Density	1.16	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

High Resolution Temperature Calibration MCG 098

Field Calibration on 3-OCT-2005,20:14

	Measured	Calibrated(Deg C)
Lower	0.00	0.00
Upper	100.00	100.00

High Resolution Temperature Constants MCG 098

Pre-filter Length	11

Neutron Calibration MDN 043

Base Calibration on 22-AUG-2005 15:53
Field Check on 3-OCT-2005,20:14

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3021	94	3714	110
Ratio	32.071		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	1674	2333
Ratio	0.717	

Field Check

	Calibrated (cps)	
	1647	2293
Ratio	0.718	

Neutron Constants MDN 043

Last Edited on 3-OCT-2005,20:15

Neutron Source Id	NSNE-747	
Neutron Jig Number	31	
Epithermal Neutron	No	
Caliper Source for Processing	Density Caliper	
Stand-off	0.00	inches
Mud Density	1.16	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	Constant Value	
Temperature	20.00	degrees C
Mud Salinity	11.57	kppm
Formation Fluid Salinity Source	Constant Value	
Formation Fluid Salinity	0.00	kppm
Barite Mud Correction	Not Applied	

Photo Density Calibration MPD 066

Base Calibration on 22-AUG-2005,12:13

Field Check on 3-OCT-2005,20:15

Density Calibration

Base Calibration	Measured Near	Measured Far	Calibrated (sdu) Near	Calibrated (sdu) Far
Reference 1	49825	17938	53111	19310
Reference 2	23308	2480	24951	2530

Field Check at Base

	918.0	1089.7

Field Check

	919.8	1086.8

PE Calibration

Base Calibration	WS	Measured WH	Ratio	Calibrated Ratio
Background	176	793		
Reference 1	15856	49650	0.321	0.320
Reference 2	6240	23176	0.271	0.273

Field Check at Base

176.0	793.2	

Field Check

173.6	795.1	

Density Constants MPD 066

Last Edited on 3-OCT-2005,20:15

Density Source Id	NSDL250	
Nylon Calibrator Number	DNC-D-536	
Aluminium/Fe Calibrator Number	DAC-D-536	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.16	gm/cc
Mud Density Z/A Correction	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

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

Caliper Calibration MPD 066

Base Calibration on 22-AUG-2005 11:11
Field Calibration on 3-OCT-2005,20:15

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	11983	4.01
2	20446	5.99
3	29120	7.98
4	37568	9.94
5	47008	12.01
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
8.91	8.92

Sonic Constants MSS 049

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	
Correction for Sonde Skew	Applied	
Cycle Stretch Algorithm	Applied	

MN3FT	0.00	micro-sec
MX3FT	1500.00	micro-sec

Fixed Gate Parameters

Start Time (micro-sec)	End Time (micro-sec)	Discriminator (mV)	Depth (m)
0.00	0.00	0.00	
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00

Down Hole Fixed Gate Parameters

Gate Start	0.00	micro-sec
Gate Width	0.00	micro-sec
Initial Discriminator Level	0.0000	mVolts

Full Waveform Parameters

Use 3' Waveform to derive TR	No	
Use 4' Waveform to derive TR	No	
Use 5' Waveform to derive TR	No	
Use 6' Waveform to derive TR	No	
3' Waveform Discriminator Level	0.30	mV
4' Waveform Discriminator Level	0.30	mV
5' Waveform Discriminator Level	0.15	mV
6' Waveform Discriminator Level	0.15	mV
3' Waveform Filter	0	
4' Waveform Filter	0	
5' Waveform Filter	0	
6' Waveform Filter	0	
Semblance Level	0.50	
Semblance Window Width	120.00	micro-sec
Sonic 1 Despiker	100.00	micro-sec/ft
Sonic 2 Despiker	100.00	micro-sec/ft

Laterolog Calibration MLE 016

Base Calibration on 24-AUG-2005 11:54
Field Check on 3-OCT-2005,20:15

Base Calibration

	Measured		Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Shallow	9.7	965.7	13.3	1327.3
Deep	9.7	966.0	8.5	852.7
Groningen	9.7	966.3	8.5	852.7

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Shallow	49.4	49.4
Deep	31.7	31.7
Groningen	253.9	253.9

Laterolog Constants MLE 016

Last Edited on 31-AUG-2005,09:24

Squasher Start	40000	ohm-m
Shallow Laterolog K Factor	1.3273	
Deep Laterolog K Factor	0.8527	
Groningen Laterolog K Factor	0.8527	
Interference Rejection	50 Hz	
SP Connection	SP Bridle Electrode	
Groningen Connection	None	

Borehole Correction Constants

Stand-off	0	
Caliper Source	0	
Hole Size	0.000	0
Mud Resistivity Source	0	
Temp. for Rm Corr.	0	

SP Calibration MLE 016

Field Calibration on 3-OCT-2005,20:16

	Measured	Calibrated (mV)
Reference 1	93.1	100.0
Reference 2	-114.1	-100.0

Micro Laterolog Calibration MMR 005

Base Calibration on 24-AUG-2005 09:35
Field Check on 3-OCT-2005,20:16

Base Calibration

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

0.0	9744.7	0.0	196.0

Base Check (ohm-m)	Field Check (ohm-m)
8.1	8.0

Micro Laterolog Constants MMR 005 — Last Edited on 4-SEP-2005,19:44

Micro Laterolog K Factor	0.0196	
Standoff Offset	0.0000	inches
Borehole Correction Constants		
Mud Cake Source	0	
Mud Cake Thickness	0.0000	0
Mud Cake Thickness Caliper	0	
Mud Cake Resistivity	0.0000	ohm-m

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA

Elevation Kelly Bushing	51.50	metres	First Reading	2656.80	metres
Elevation Drill Floor		metres	Depth Driller	2658.00	metres
Elevation Ground Level	46.20	metres	Depth Logger	2656.80	metres

PRECISION ENERGY SERVICES

DLL - SLL - MLL - SONIC

DENSITY - NEUTRON

1:500