Weatherford®

COMPACT DENSITY SURFACE LOG

COMPANY	KINDER MORGAN C02 Co. L.P
WELL	YG-1
FIELD	McELMO DOME
PROVINCE/COUNTY	MONTEZUMA
COUNTRY/STATE	U.S.A. / COLORADO
LOCATION	SHL: 1796' FNL & 1915' FEL

SEC	TWP	RGE	Other Services	
14	37N	18W	MDL/MMR	CMI
				CXD

API Number 05-033-06697
Permit Number

Permanent Datum GL, Elevation 6661 feet
Log Measured From KB
Drilling Measured From KB

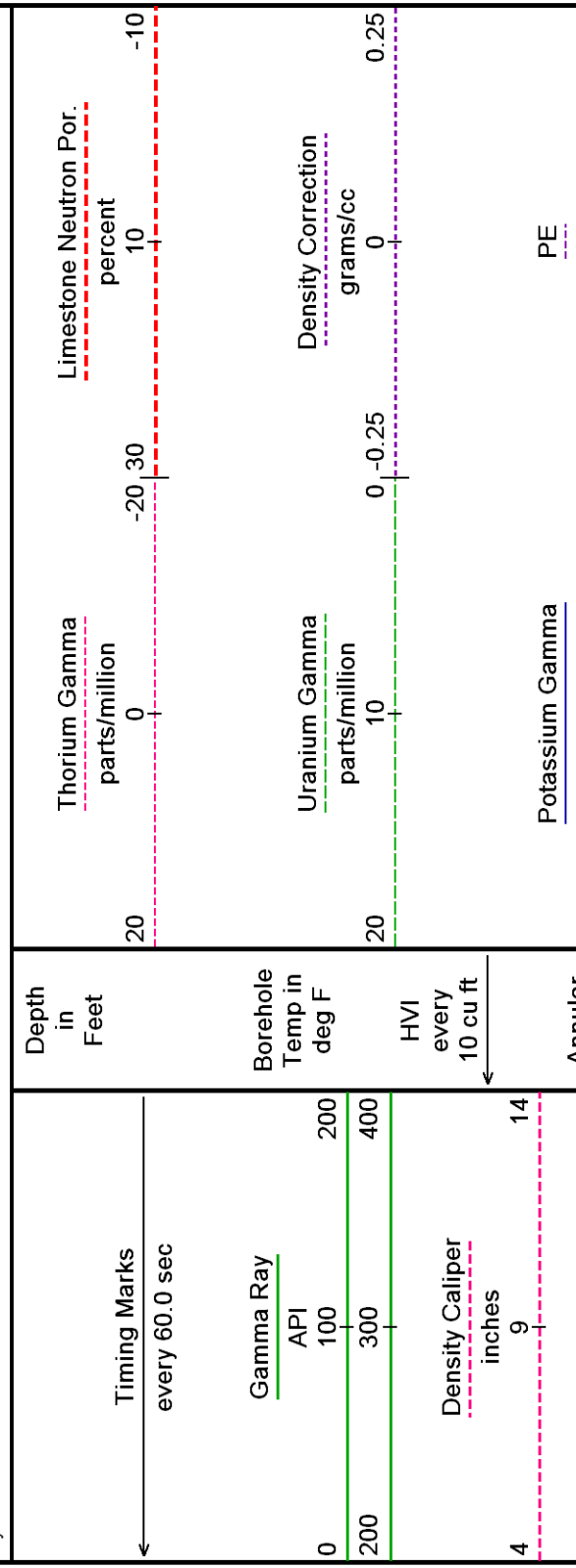
Elevations:	feet
KB	6686.00
DF	6686.00
GL	6661.00

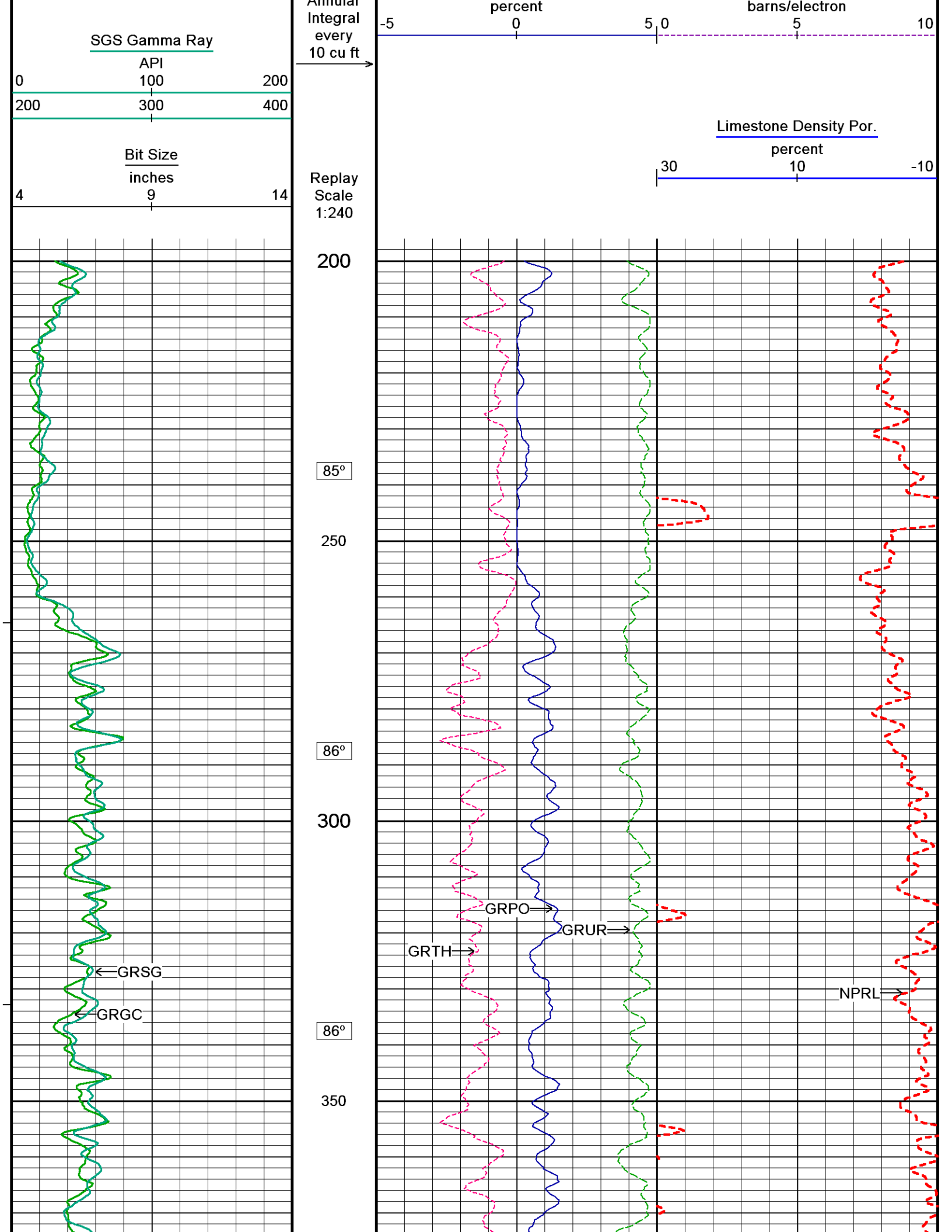
Date	29-SEP-2012			
Run Number	1			
Depth Driller	8200.00	feet		
Depth Logger	8200.00	feet		
First Reading	8197.00	feet		
Last Reading	200.00	feet		
Casing Driller	8045.00	feet		
Casing Logger	8026.00	feet		
Bit Size	6.000	inches		
Hole Fluid Type	H2O			
Density / Viscosity	8.30 g/c3			
PH / Fluid Loss	8.70			
Sample Source	PIT			
Rm @ Measured Temp	4.71 @ 62.0	ohm-m		
Rmf @ Measured Temp	3.76 @ 62.0	ohm-m		
Rmc @ Measured Temp	5.65 @ 61.0	ohm-m		
Source Rmf / Rmc	CAL	CAL		
Rm @ BHT	2.02 @148.0	ohm-m		
Time Since Circulation	8 HOURS			
Max Recorded Temp	148.00	deg F		
Equipment Name	COMPACT			
Equipment / Base	13038	GJ/CO		
Recorded By	M.RICHINS			
Witnessed By	E.NUCKOLS		GEOLOGIST	
COMPANY REP	D.RYAN			

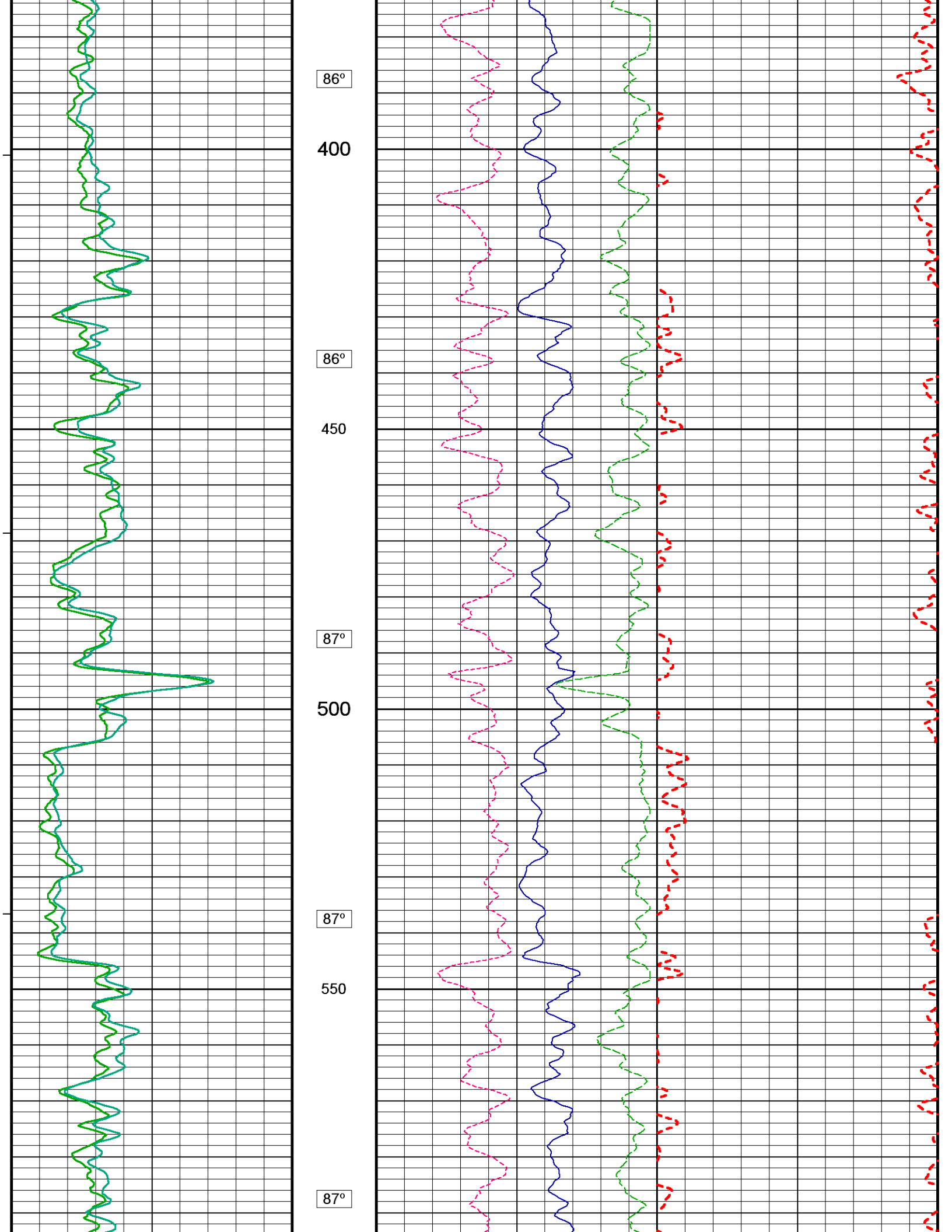
LOGS TO SURFACE 1:240

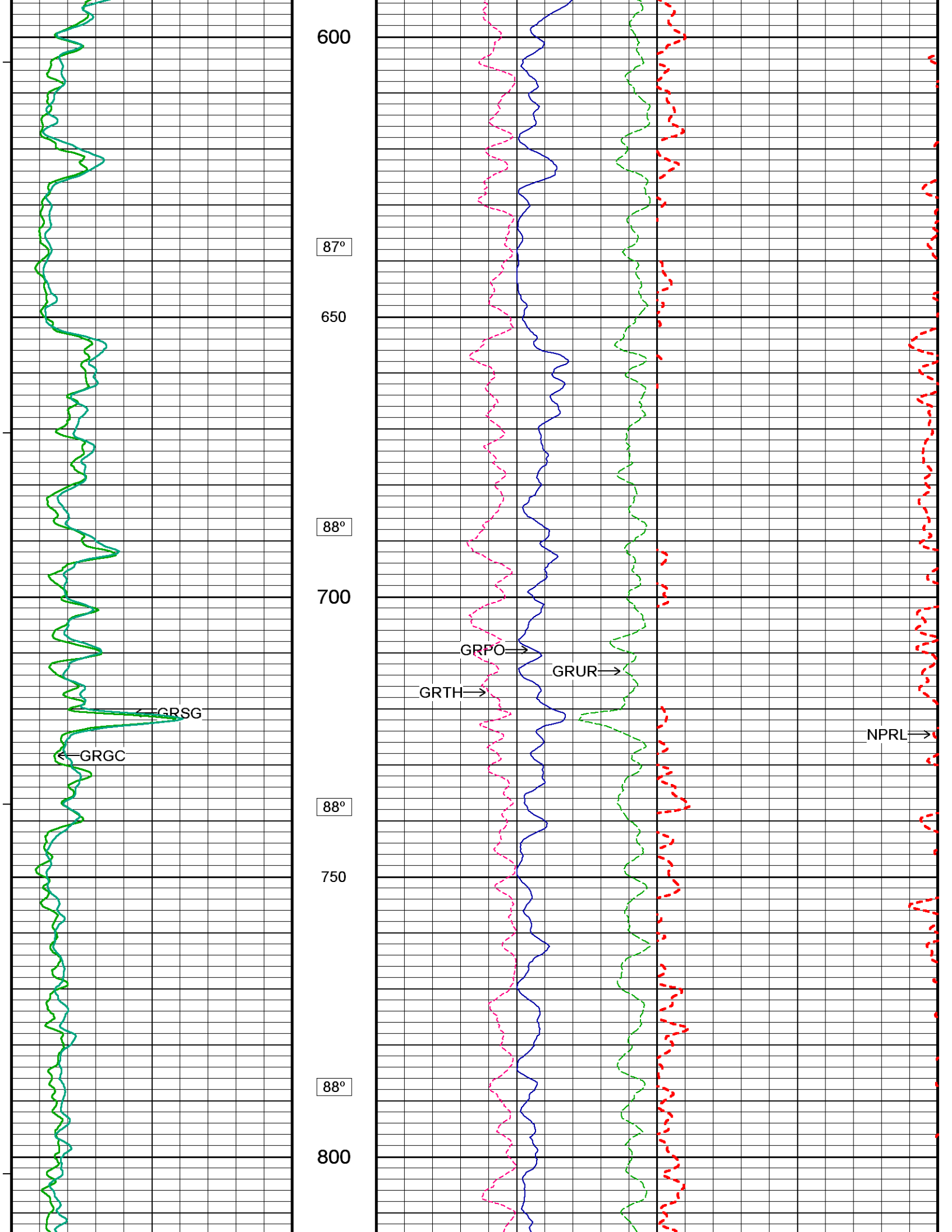
Plotted on 30-SEP-2012 20:36
Recorded on 30-SEP-2012 09:03

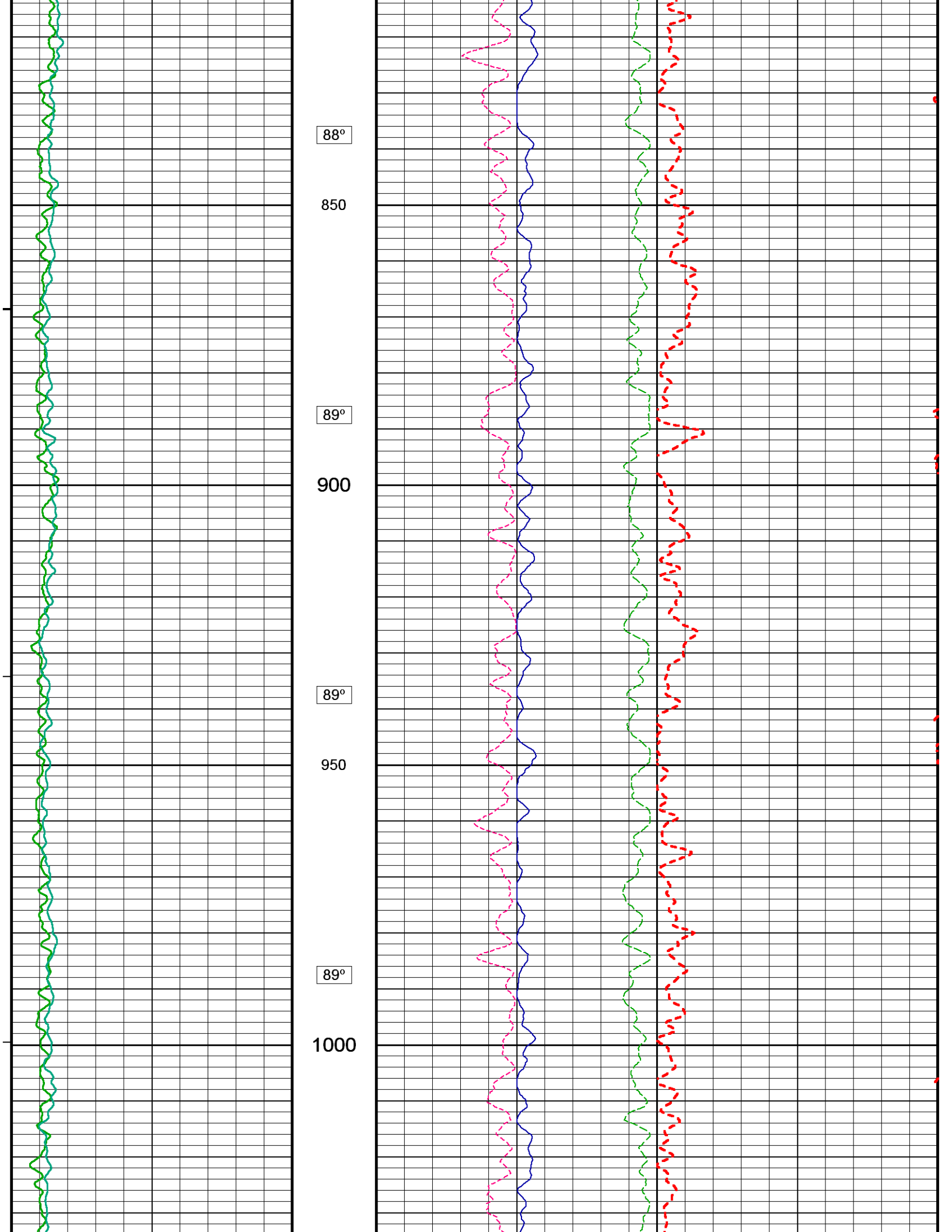
Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\LOGS\KINDER MORGAN\YG-1 processedto fix\Porosity Main.dta
System Versions: Processed with 12.03.5032 Plotted with 12.03.5032

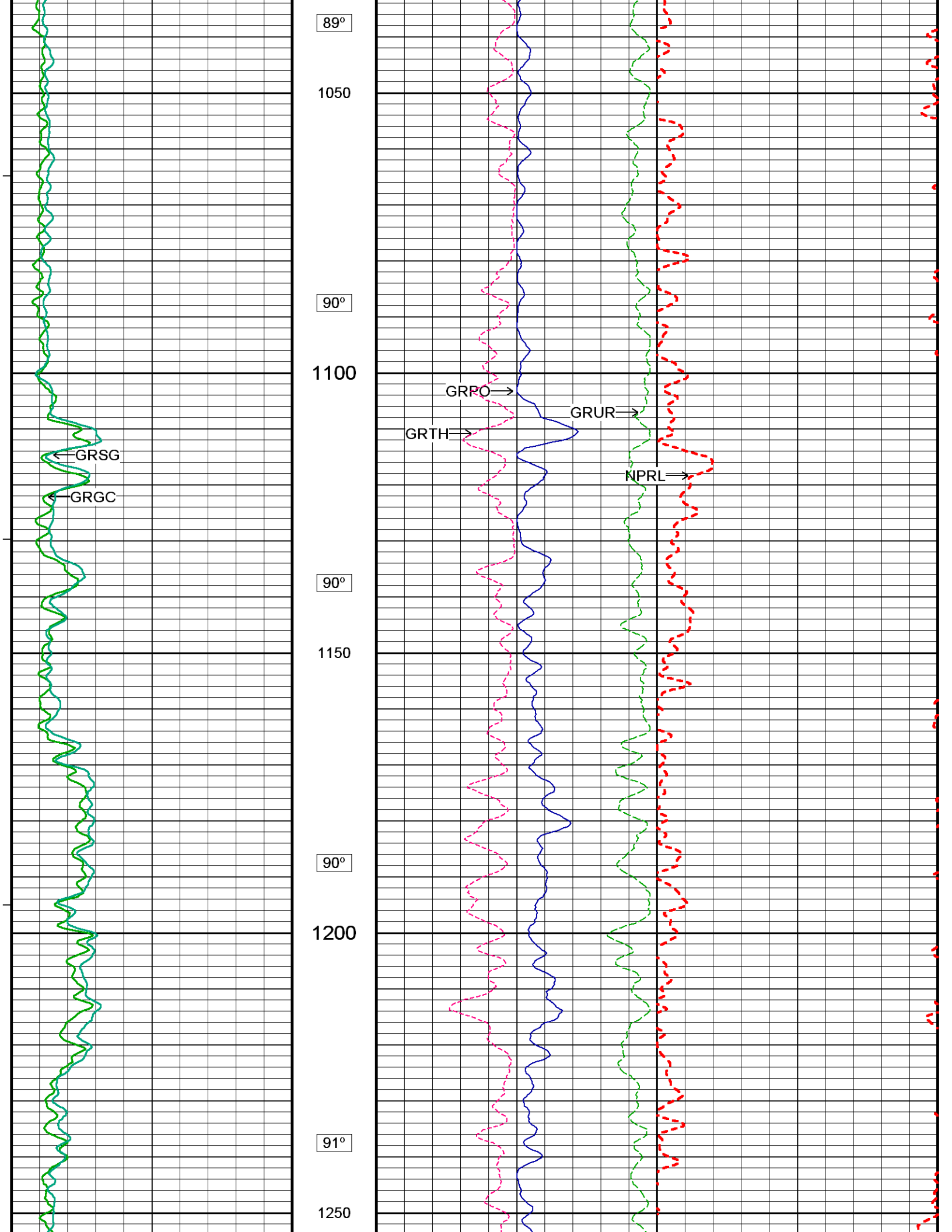


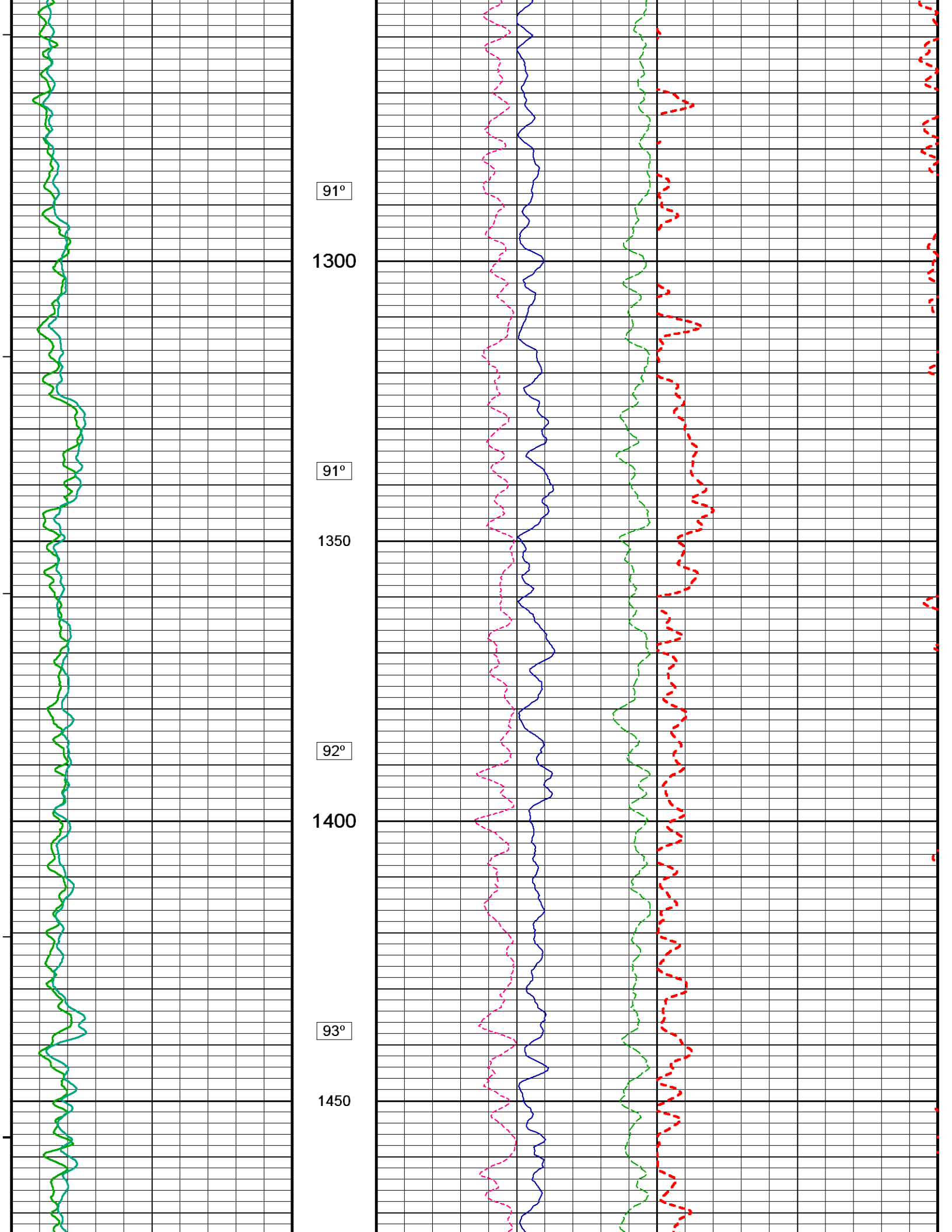

SGS Gamma Ray
API
0
100
200
200
300
400
Bit Size
inches
4
9
14
Annular Integral every 10 cu ft
Replay Scale 1:240
percent
-5
0
5
barns/electron
0
5
10
Limestone Density Por.
percent
30
10
-10
200
85°
250
86°
300
86°
350
GRSG
GRGC
GRPO
GRUR
GRTH
NPRL

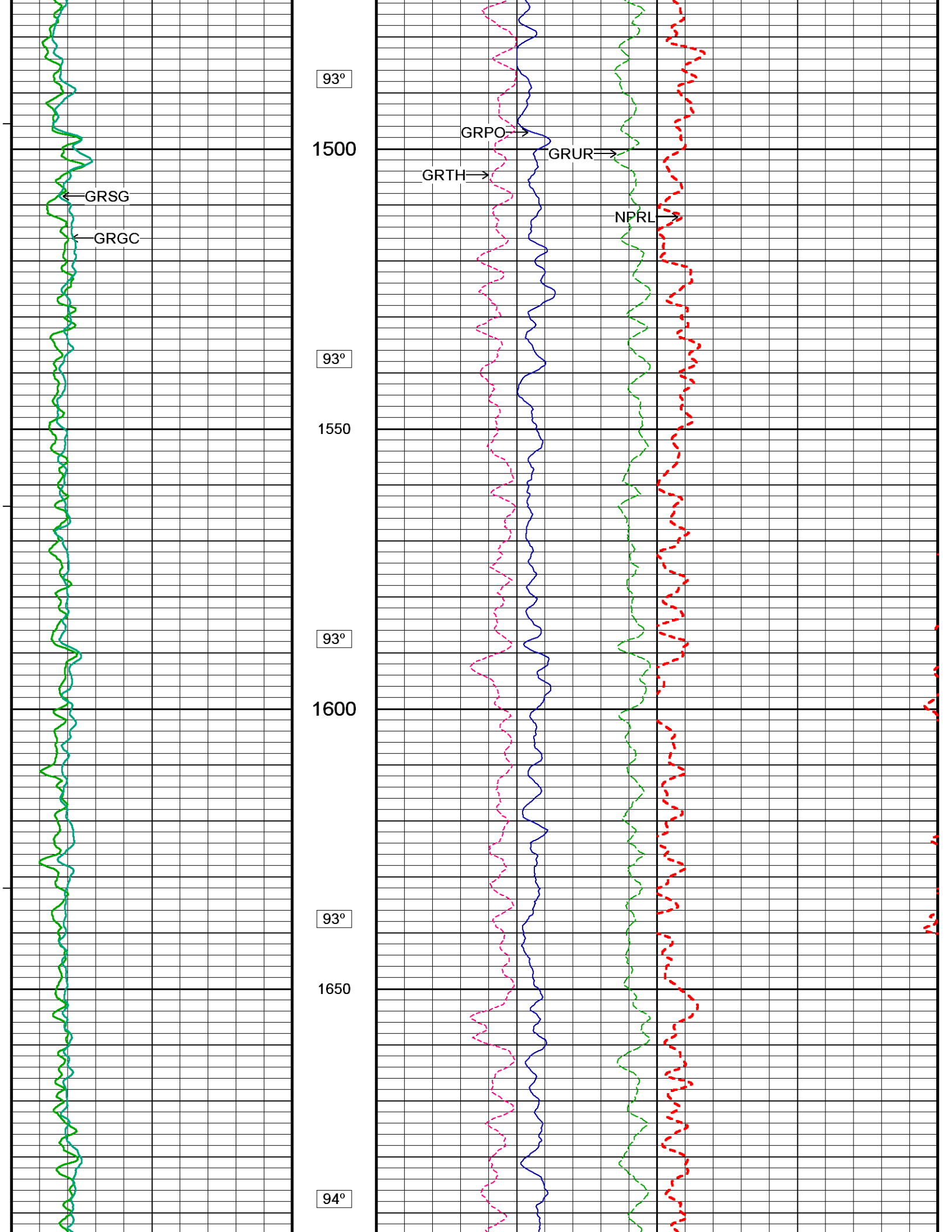

86°
400
86°
450
87°
500
87°
550
87°

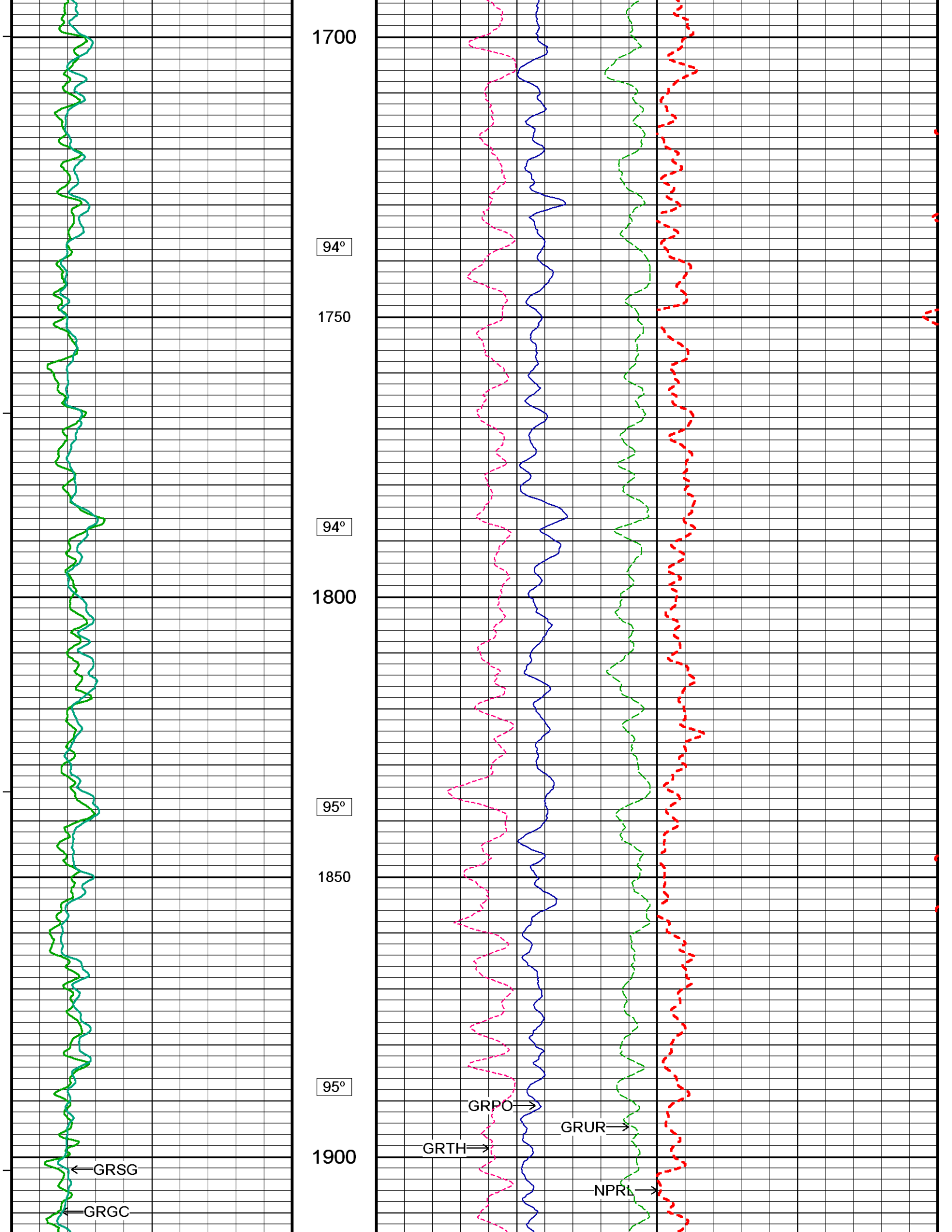

600
87°
650
88°
700
GRPO
GRUR
GRTH
GRSG
NPRL
GRGC
88°
750
88°
800

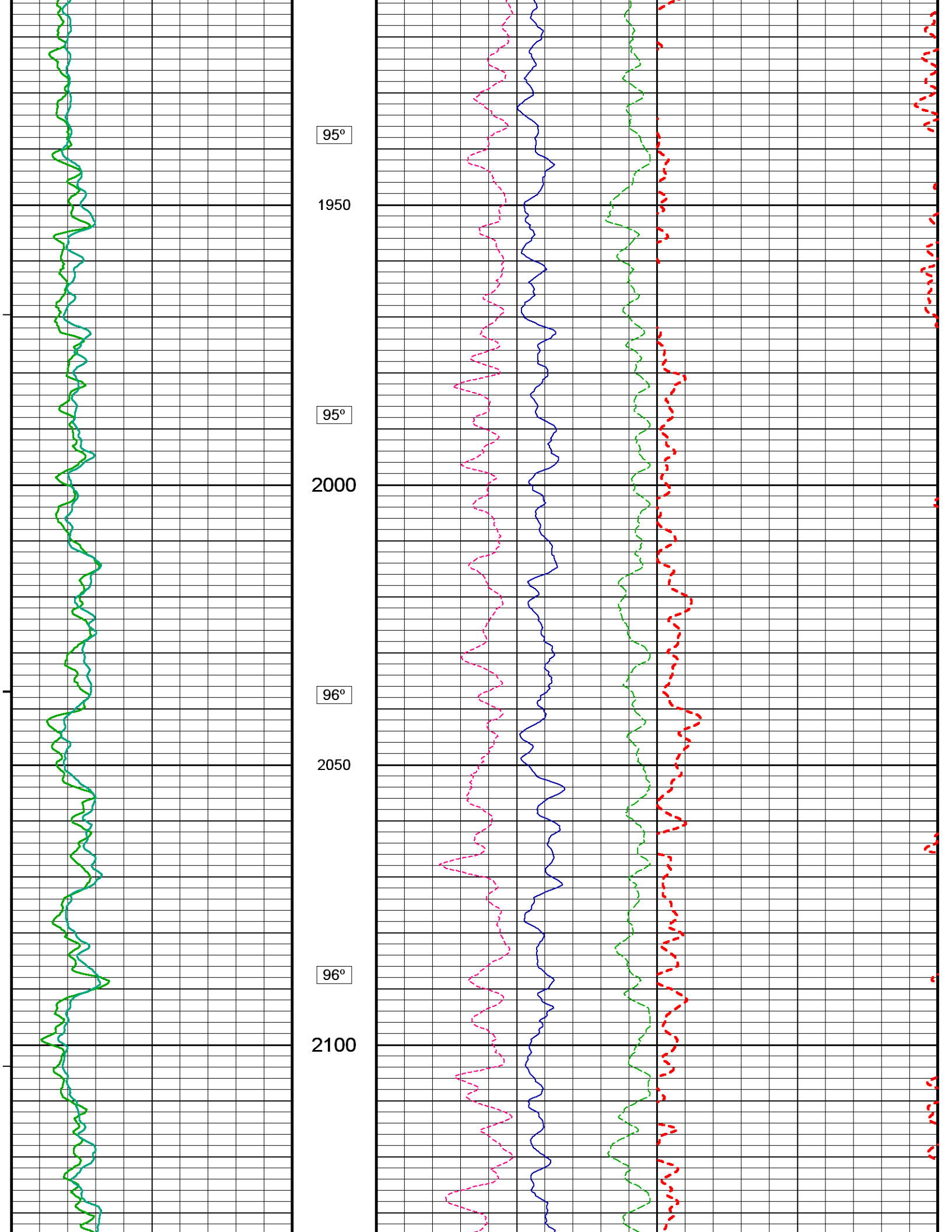

88°
850
89°
900
89°
950
89°
1000

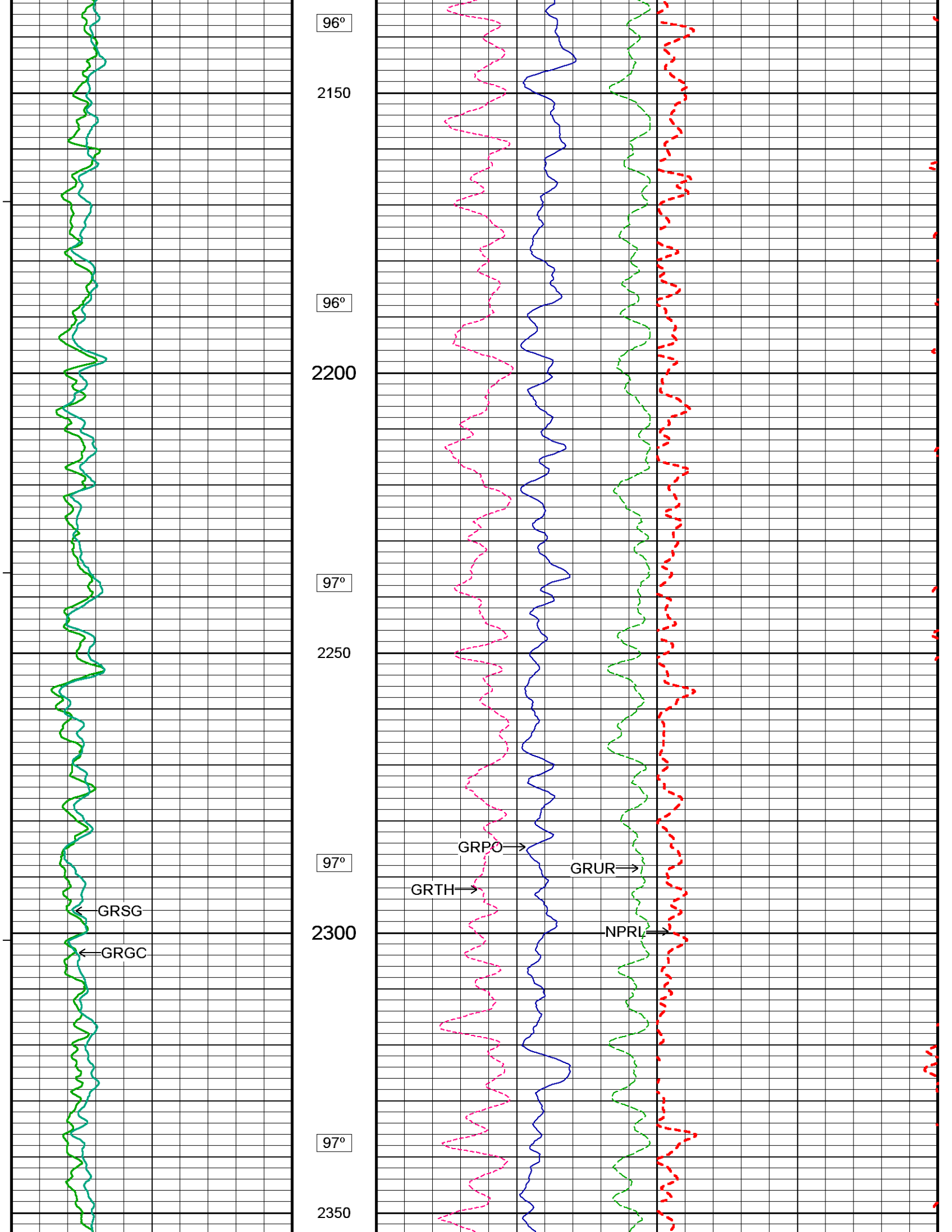

89°
1050
90°
1100
90°
1150
90°
1200
91°
1250
GRSG
GRGC
GRPO
GRUR
GRTH
NPRL

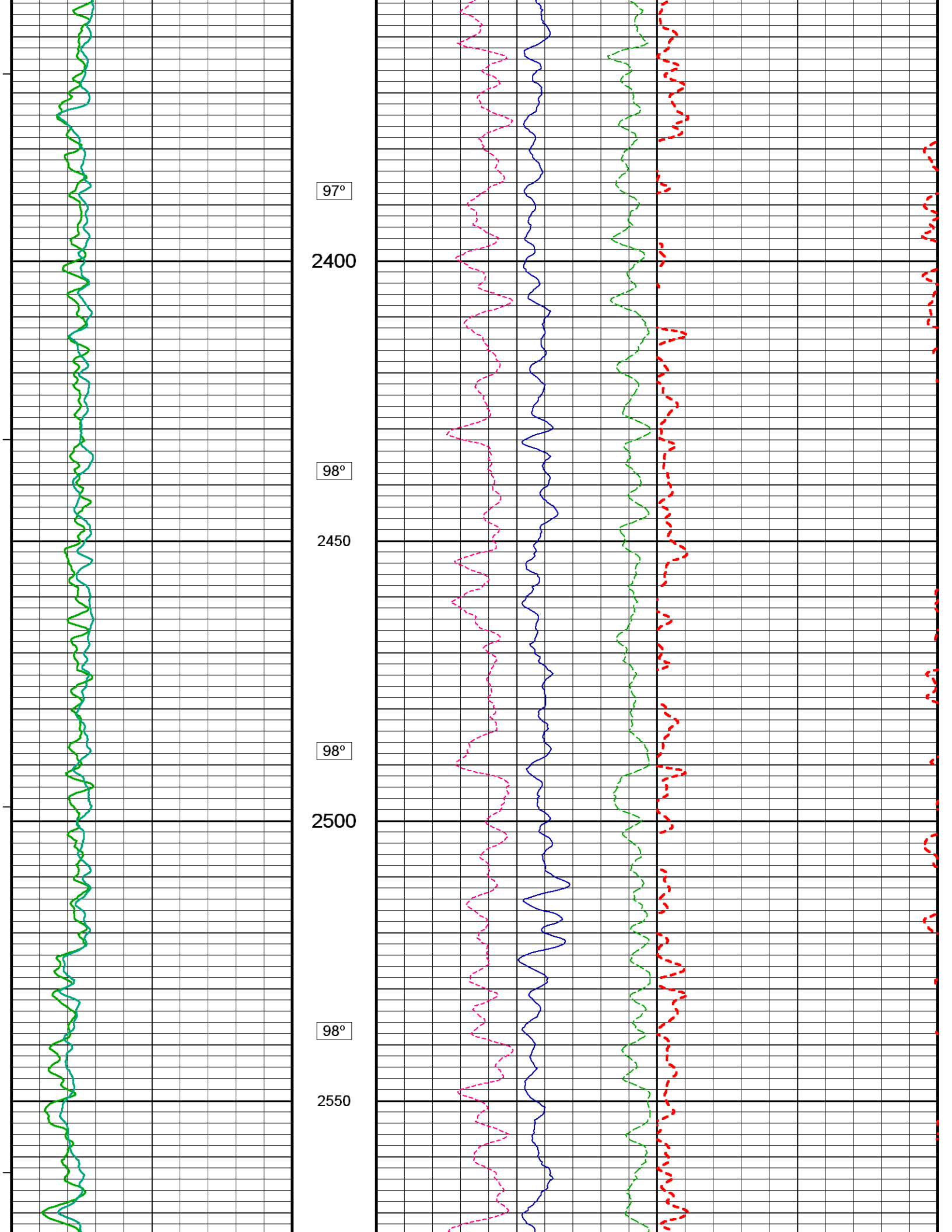

91°
1300
91°
1350
92°
1400
93°
1450

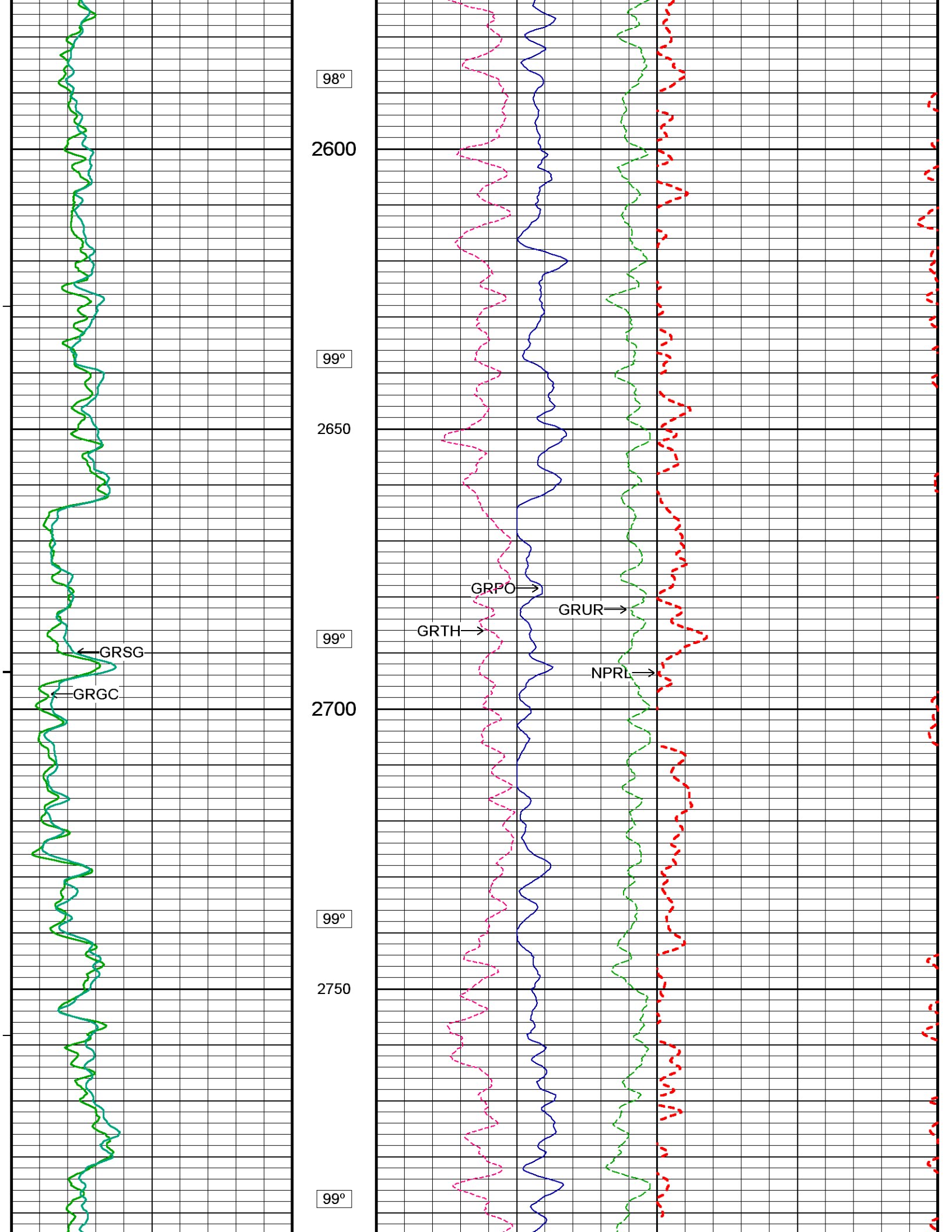

93°
1500
GRPO
GRUR
GRTH
NPRL
GRSG
GRGC
93°
1550
93°
1600
93°
1650
94°

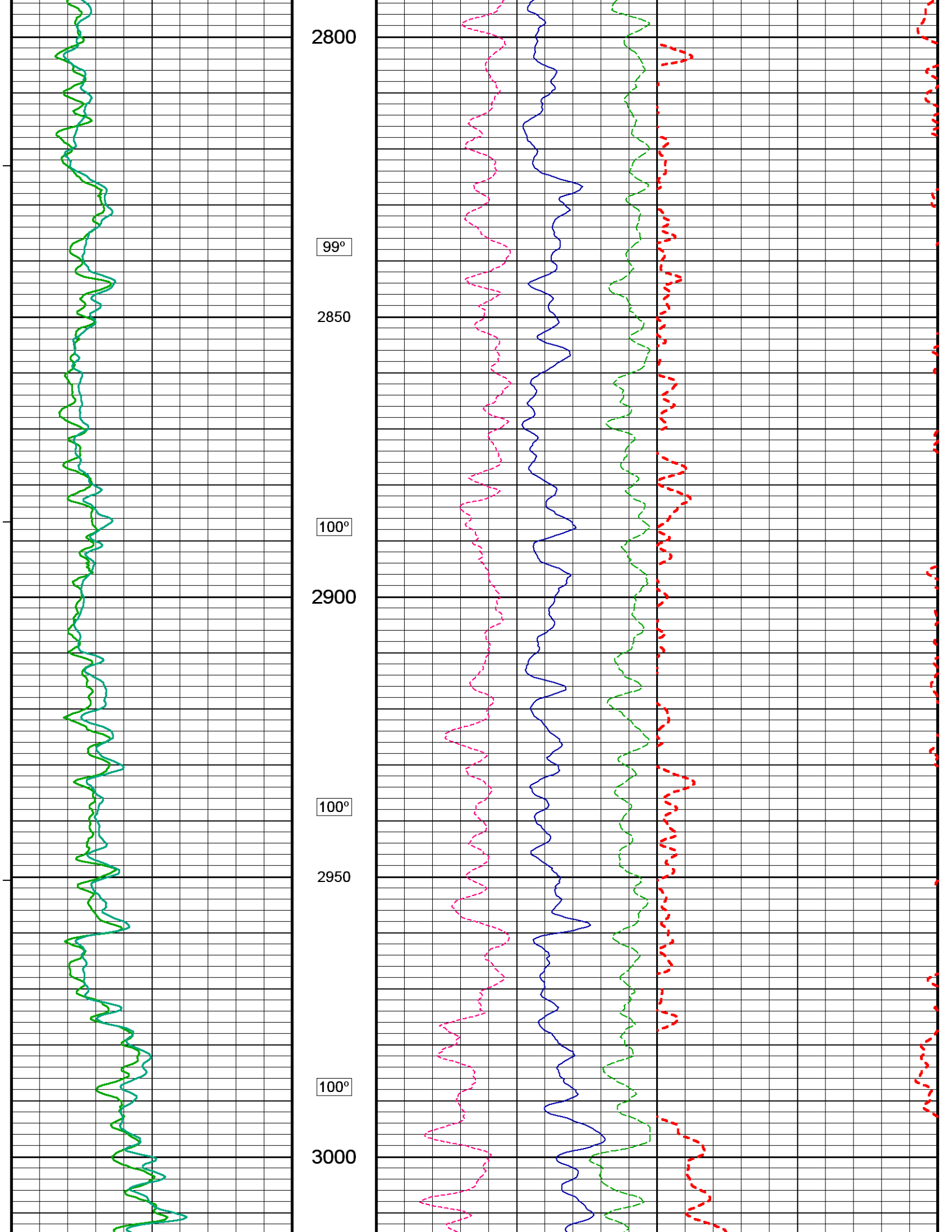

1700
94°
1750
94°
1800
95°
1850
95°
1900
GRPO
GRUR
GRTH
NPRL
GRSG
GRGC

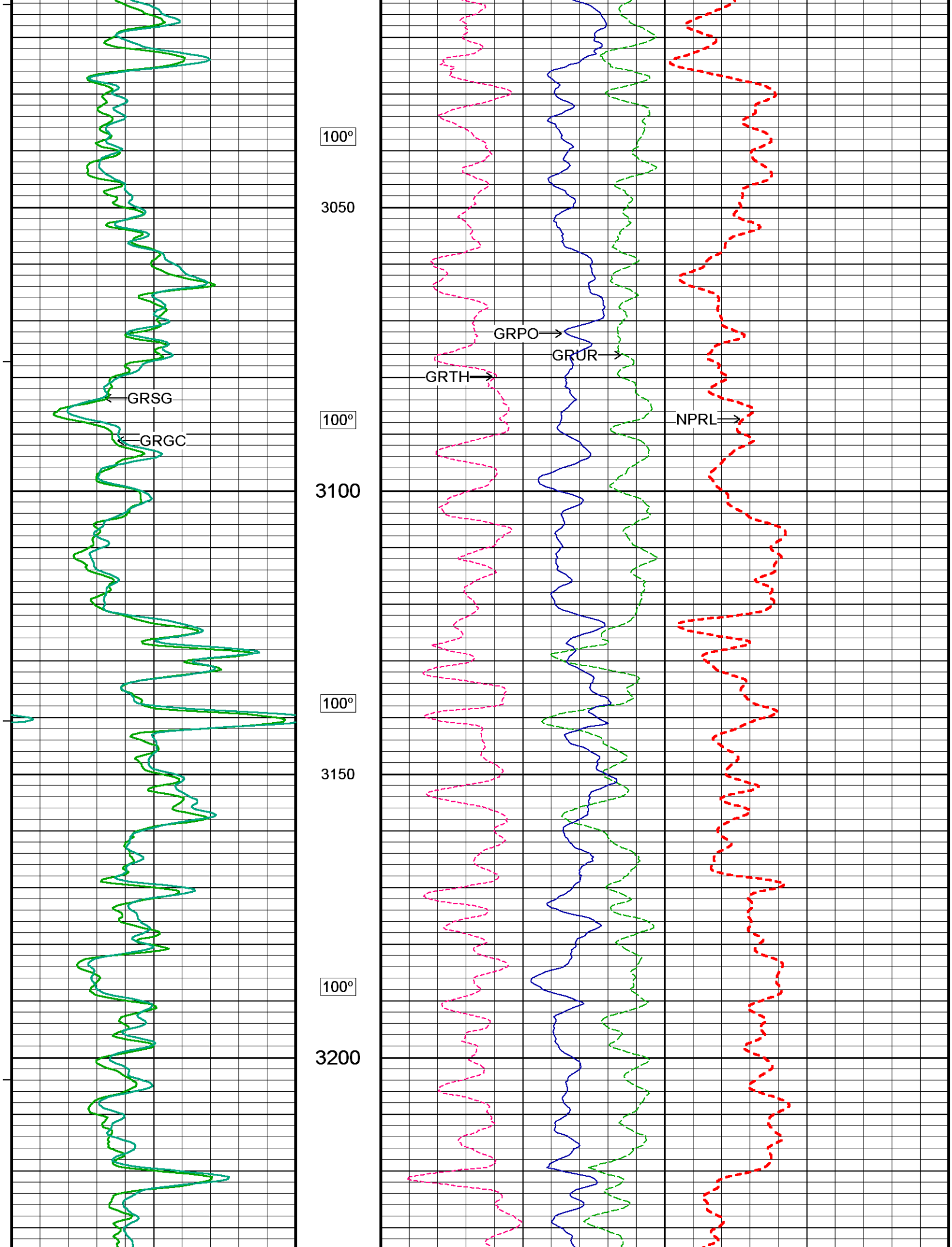

95°
1950
95°
2000
96°
2050
96°
2100

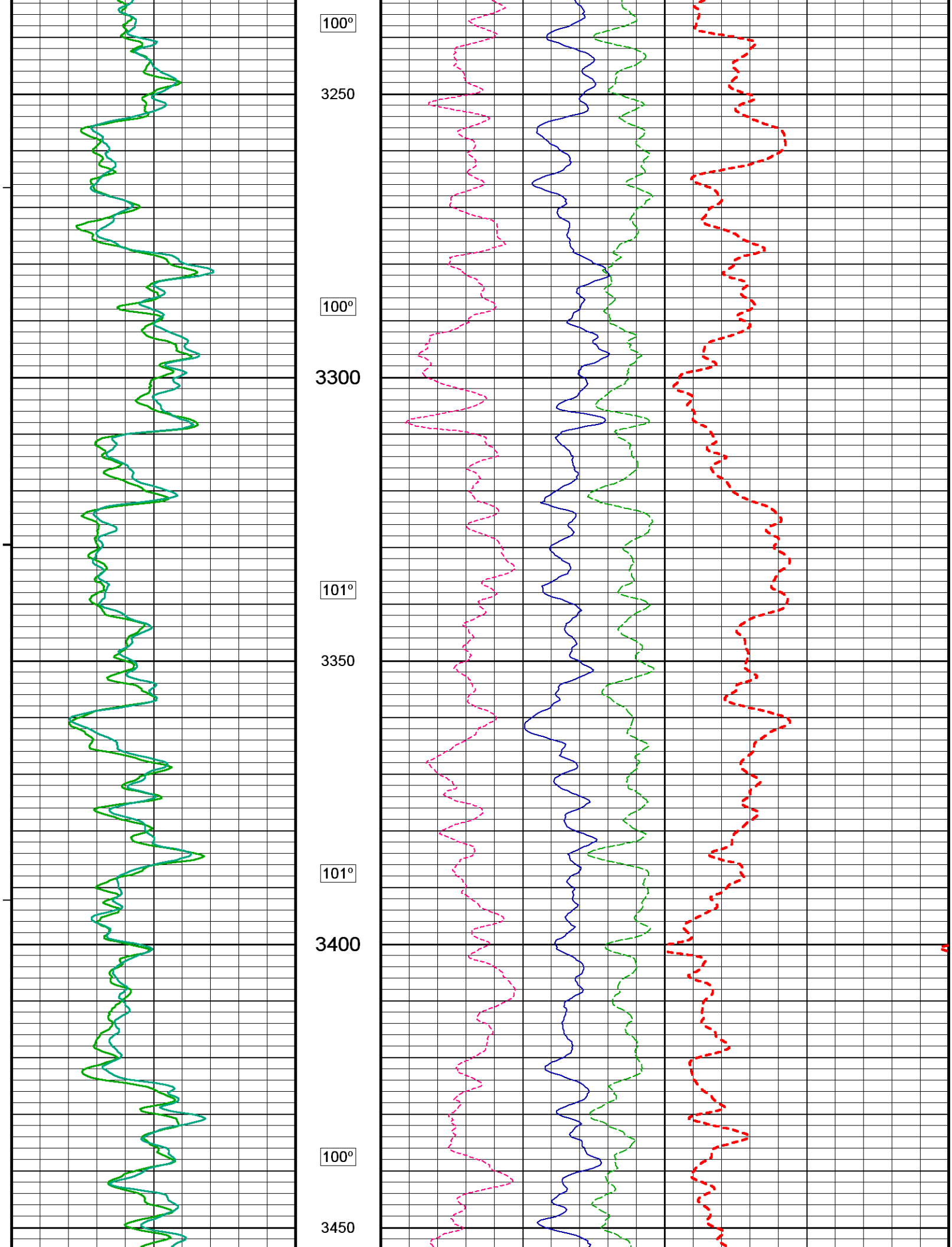

96°
2150
96°
2200
97°
2250
97°
GRPO
GRUR
GRTH
GRSG
2300
NPRL
GRGC
97°
2350

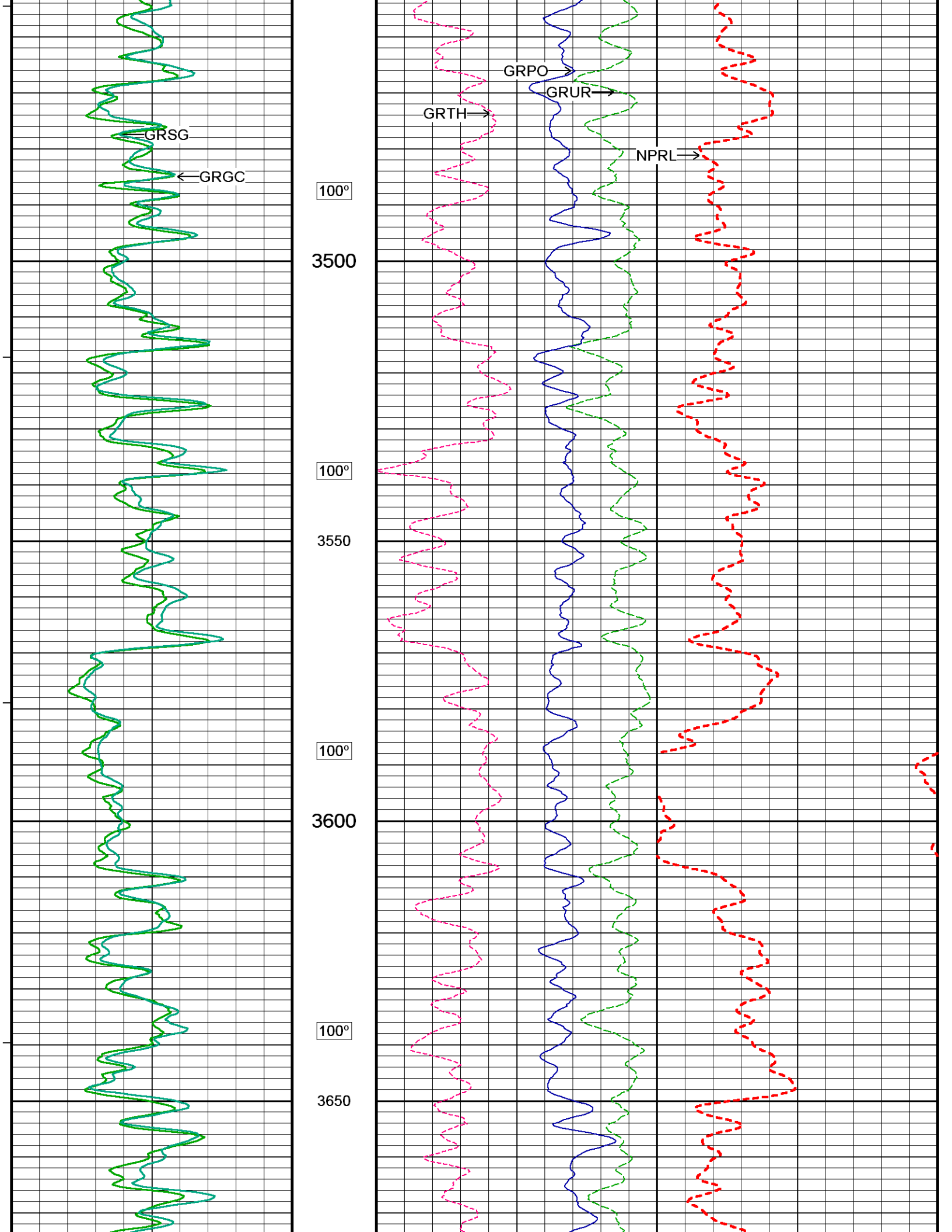

97°
2400
98°
2450
98°
2500
98°
2550

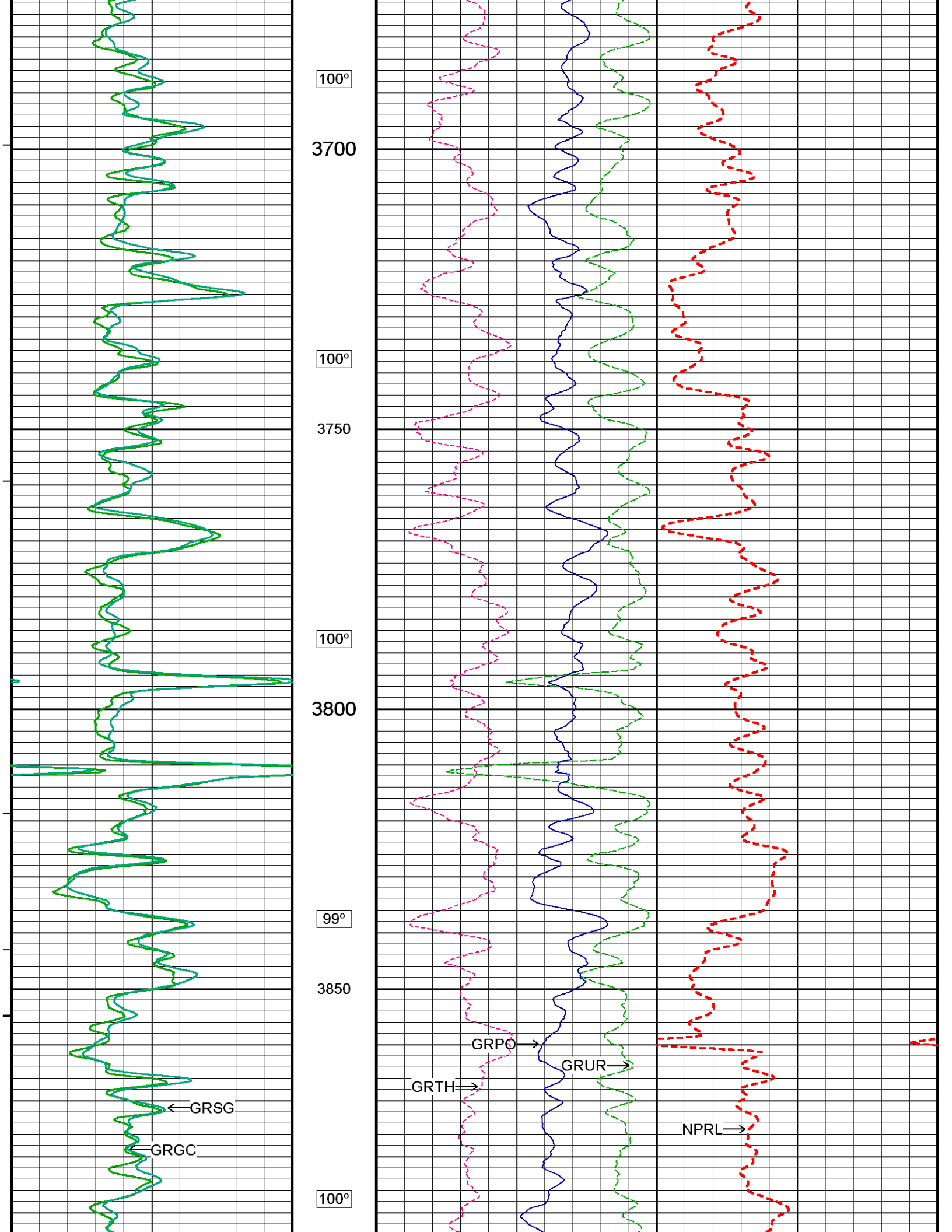

98°
2600
99°
2650
GRPO
GRUR
GRTH
99°
GRSG
NPRL
GRGC
2700
99°
2750
99°

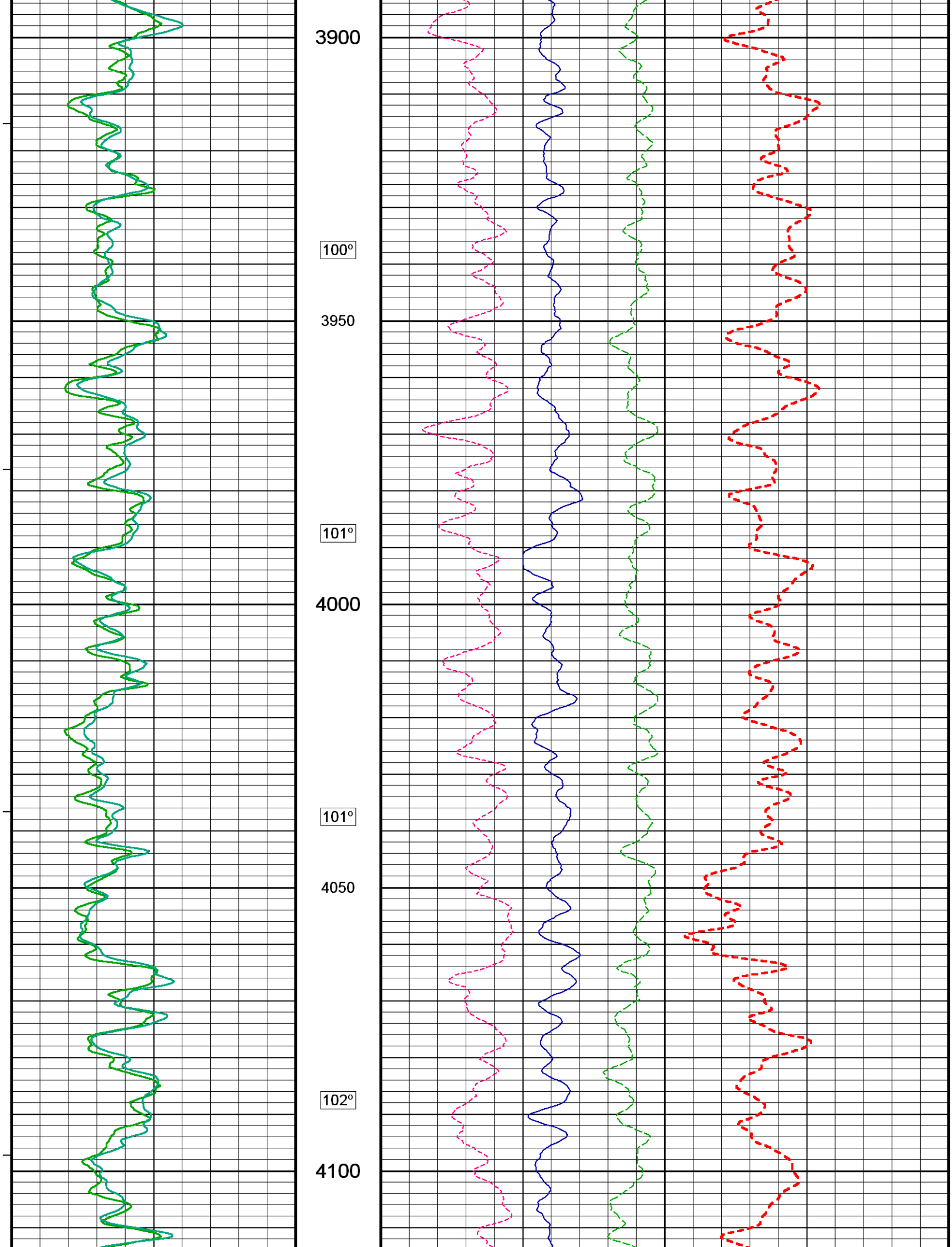

2800
99°
2850
100°
2900
100°
2950
100°
3000

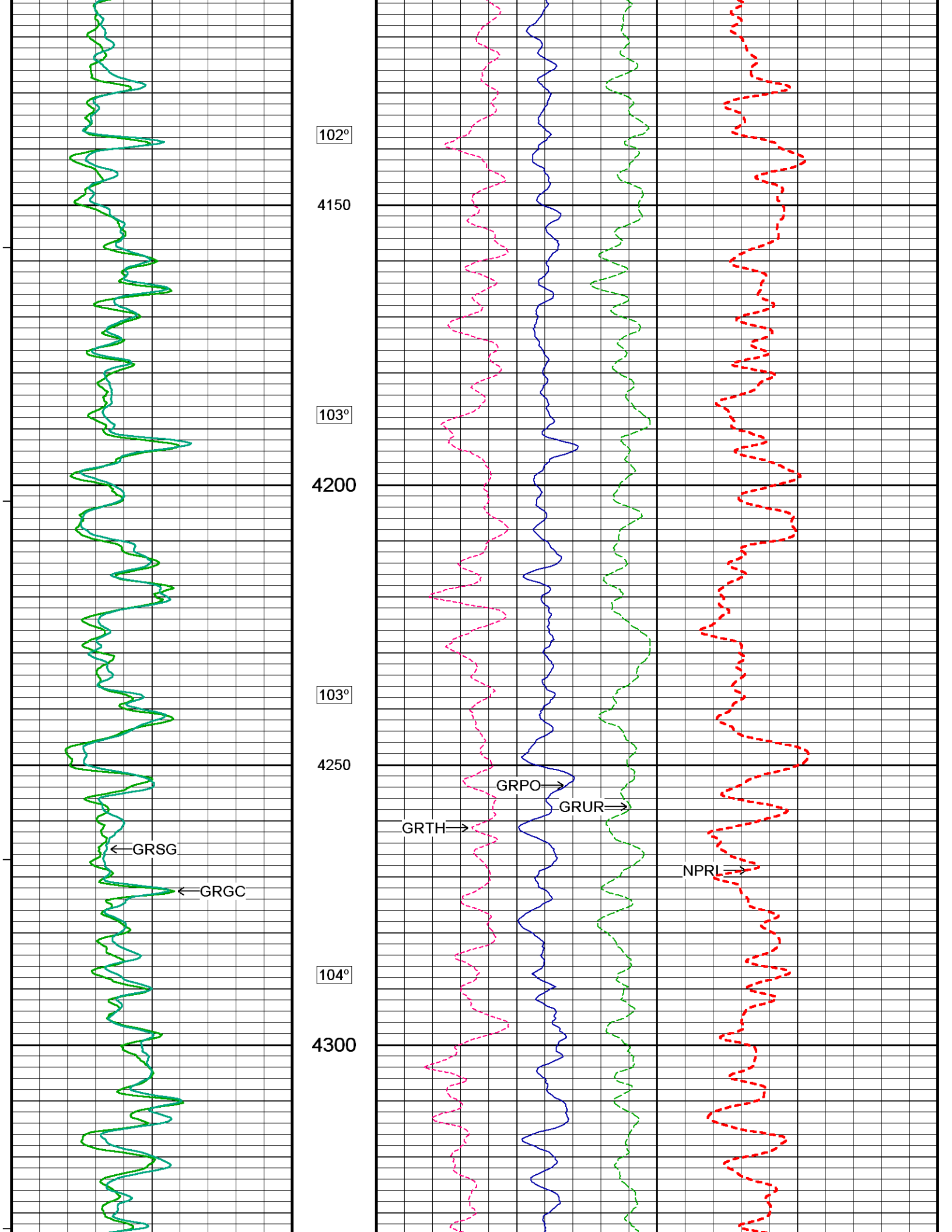

100°
3050
GRPO
GRUR
GRTH
GRSG
100°
NPRL
GRGC
3100
100°
3150
100°
3200

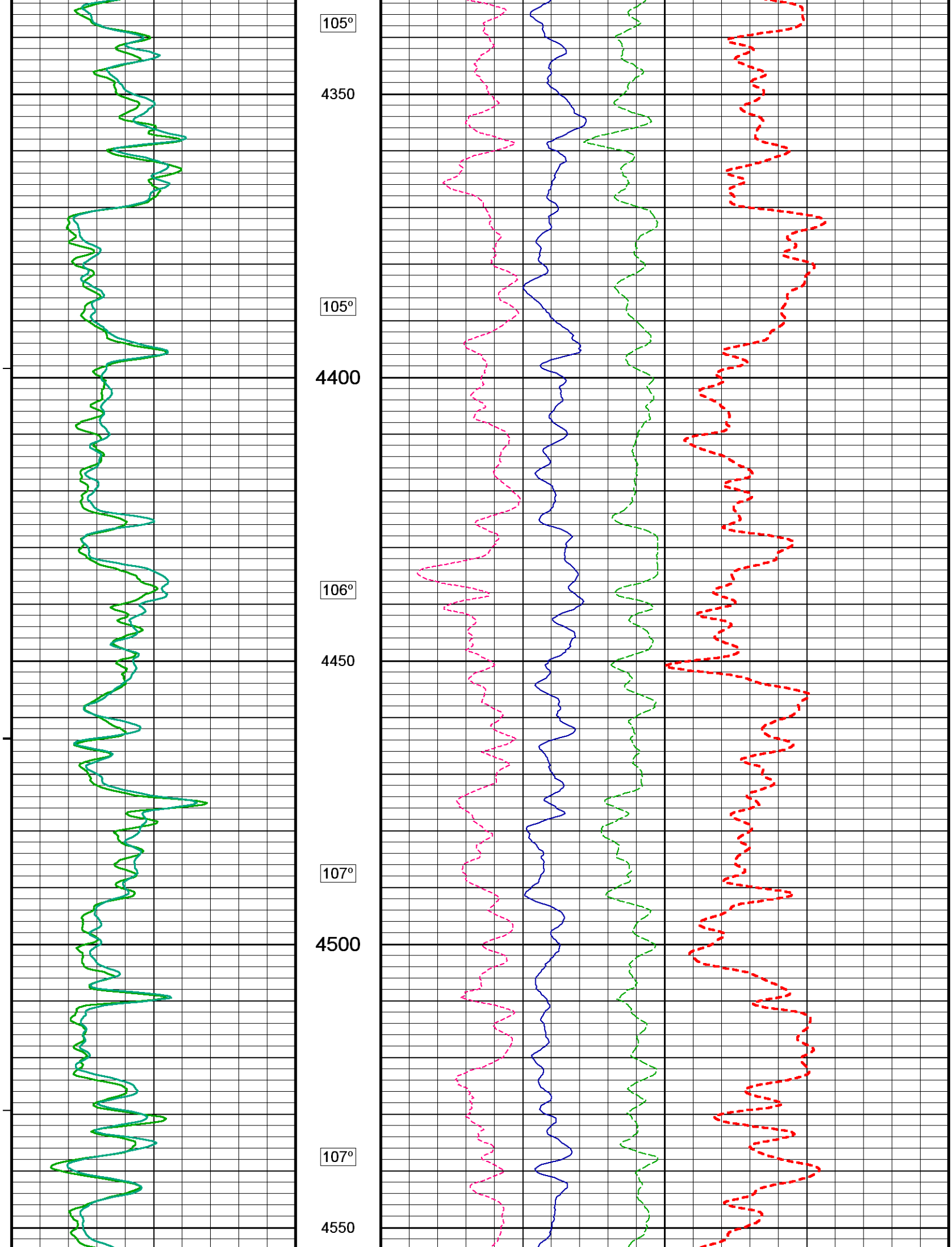

100°
3250
100°
3300
101°
3350
101°
3400
100°
3450

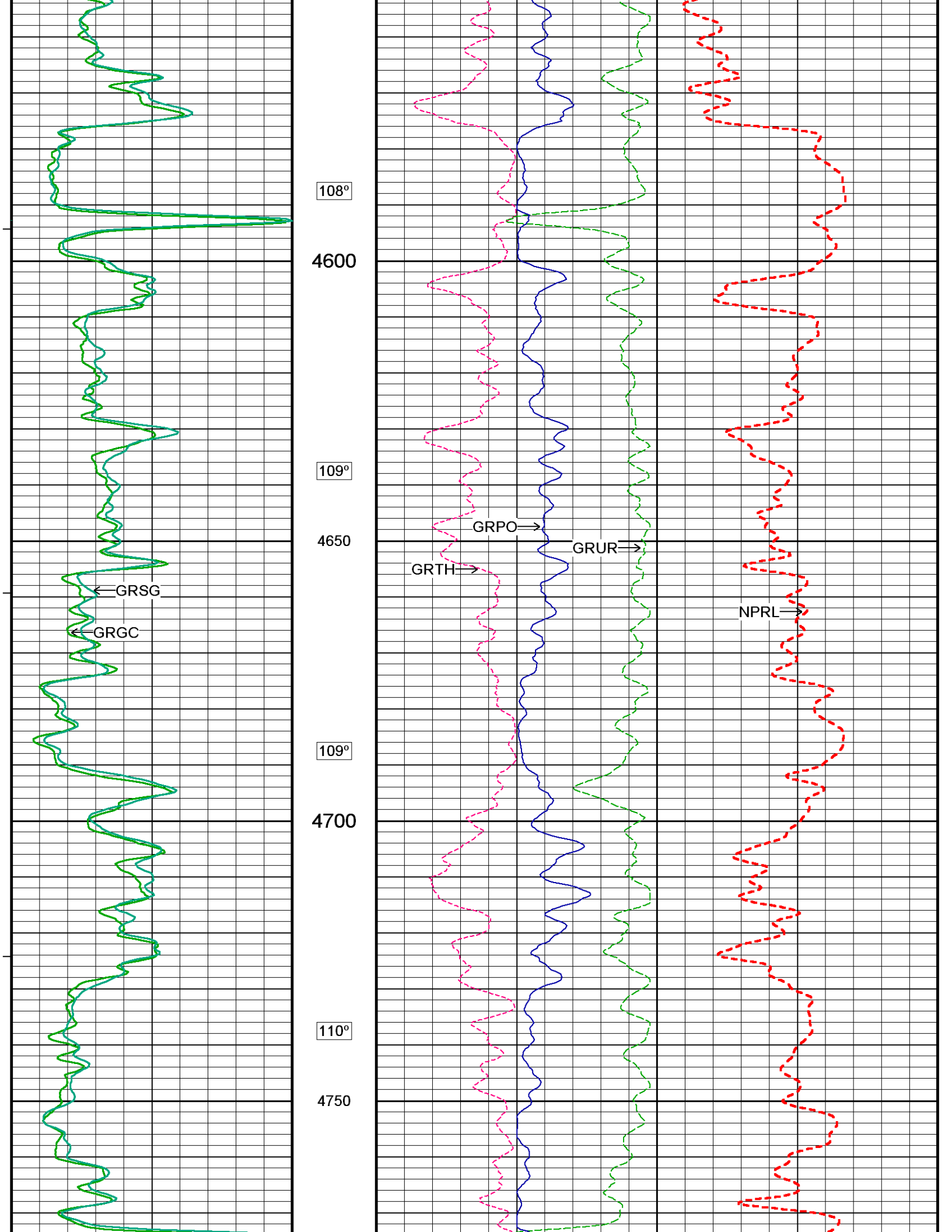

GRSG
GRGC
GRPO
GRUR
GRTH
NPRL
100°
3500
100°
3550
100°
3600
100°
3650

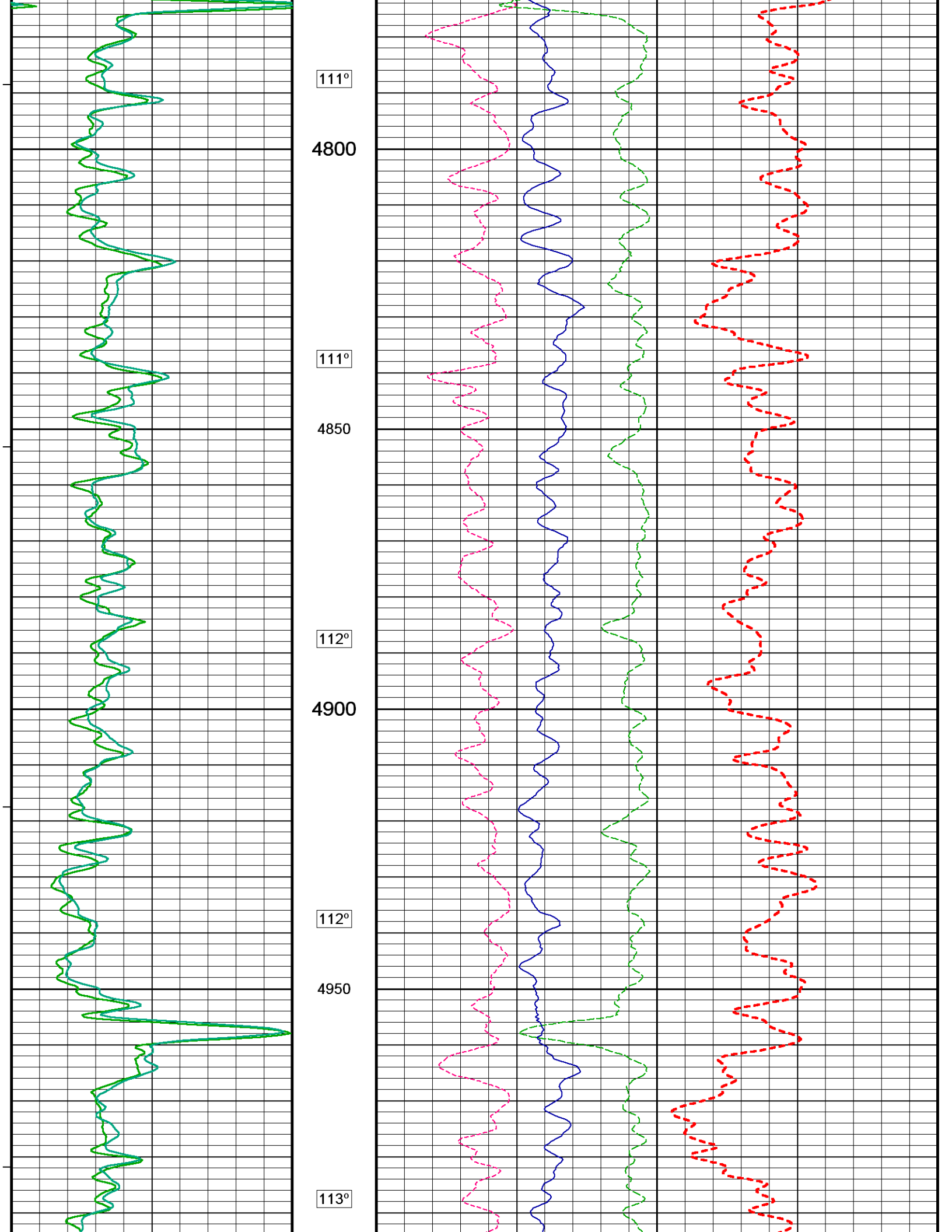

100°
3700
100°
3750
100°
3800
99°
3850
100°
GRSG
GRGC
GRTH
GRPO
GRUR
NPRL

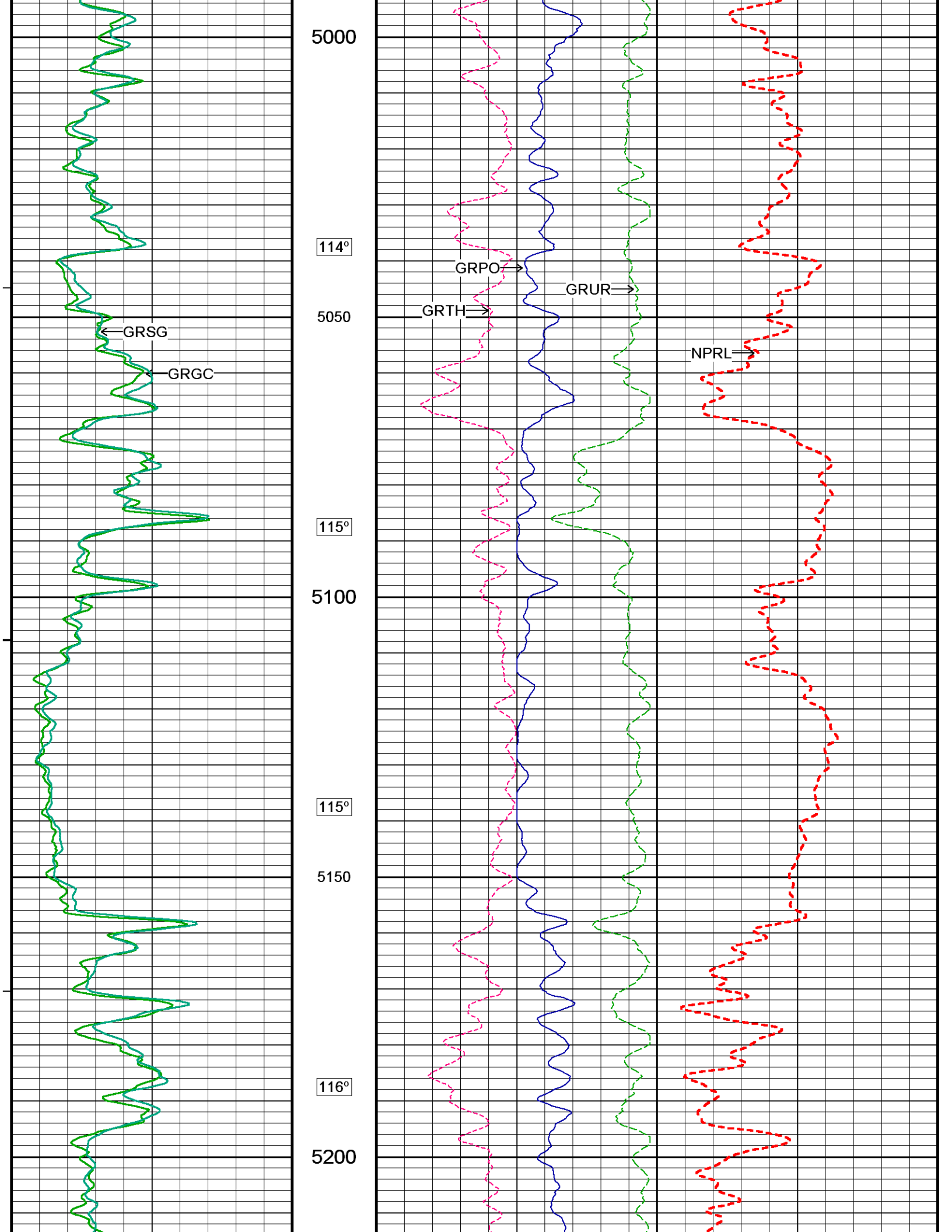

3900
100°
3950
101°
4000
101°
4050
102°
4100

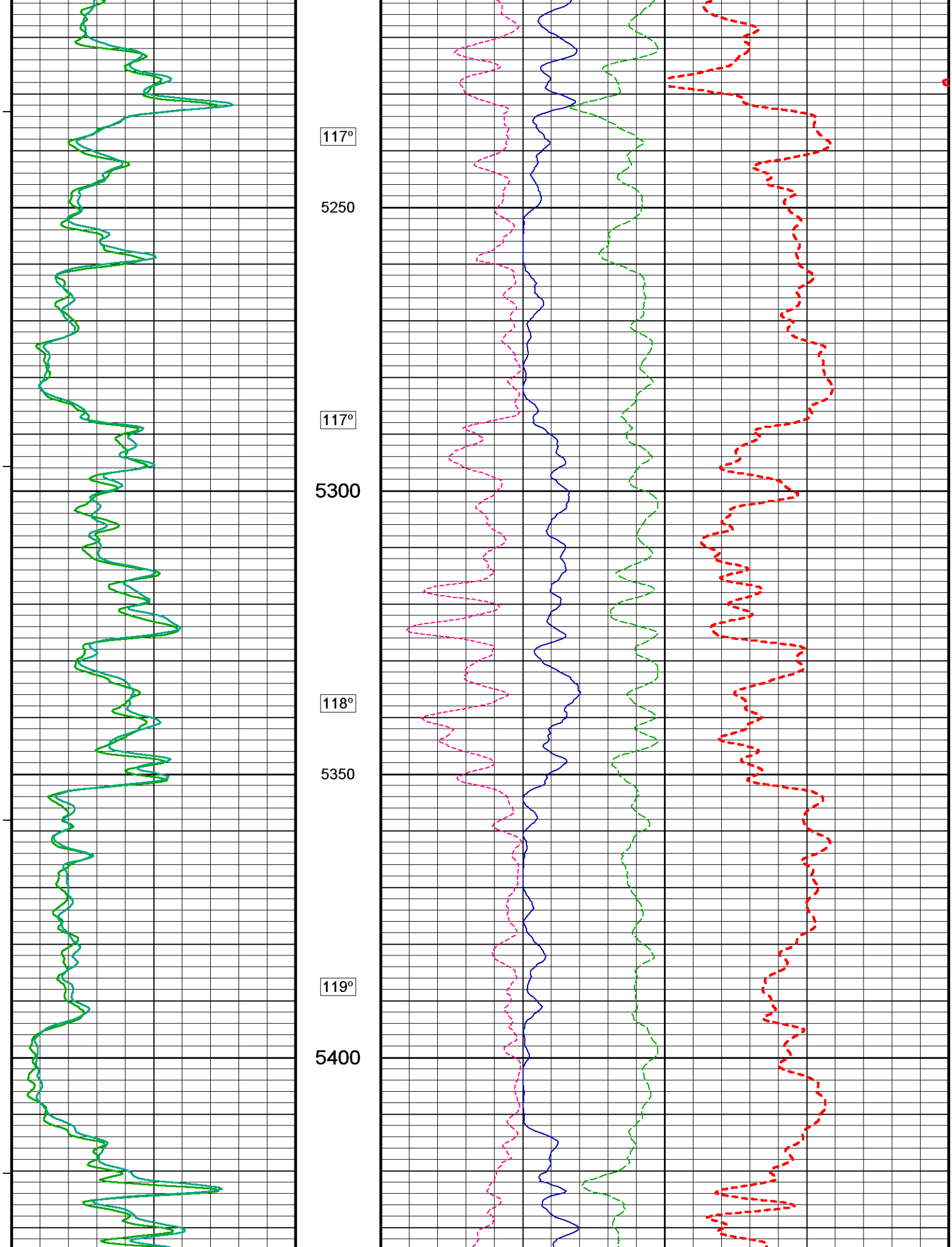

102°
4150
103°
4200
103°
4250
104°
4300
GRSG
GRGC
GRTH
GRPO
GRUR
NPRL

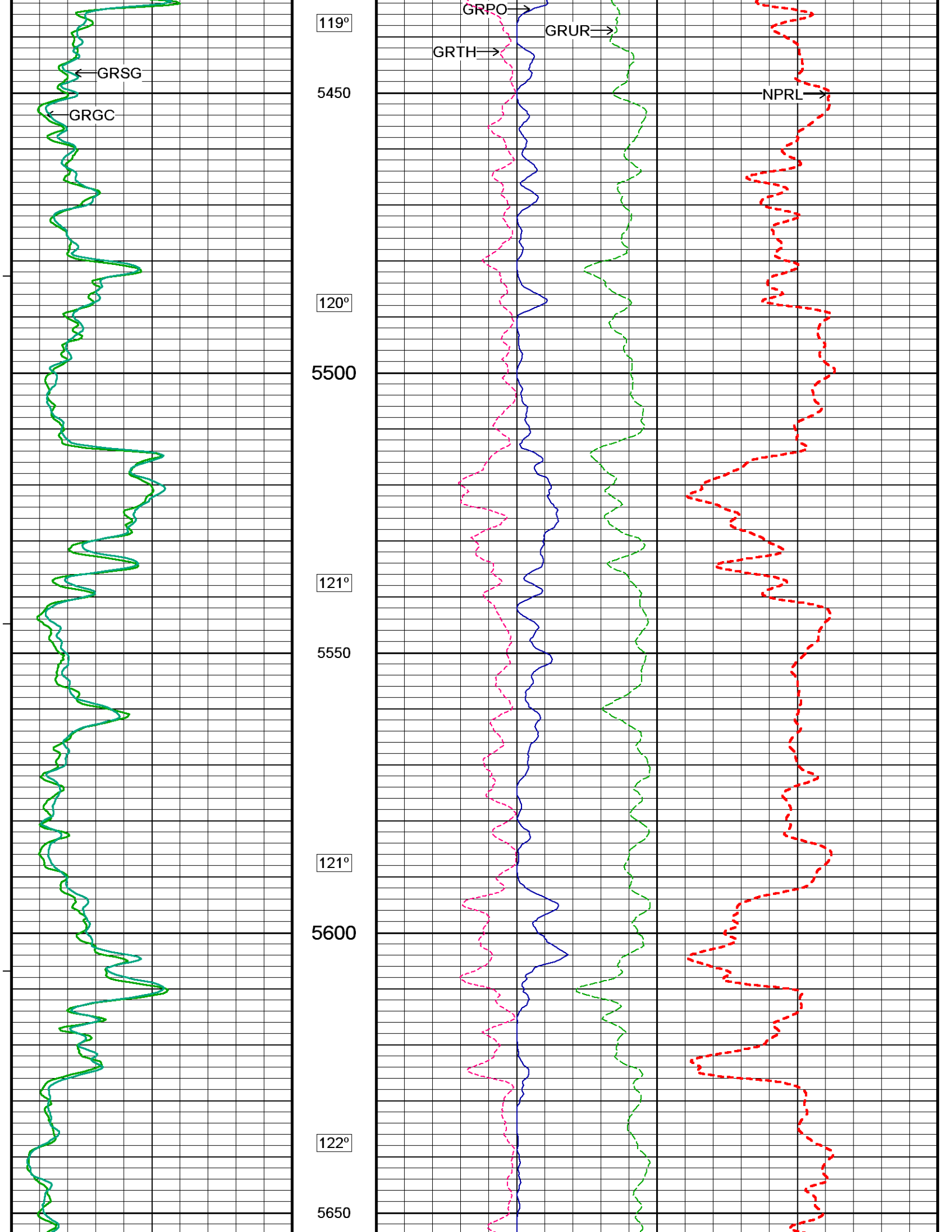

105°
4350
105°
4400
106°
4450
107°
4500
107°
4550

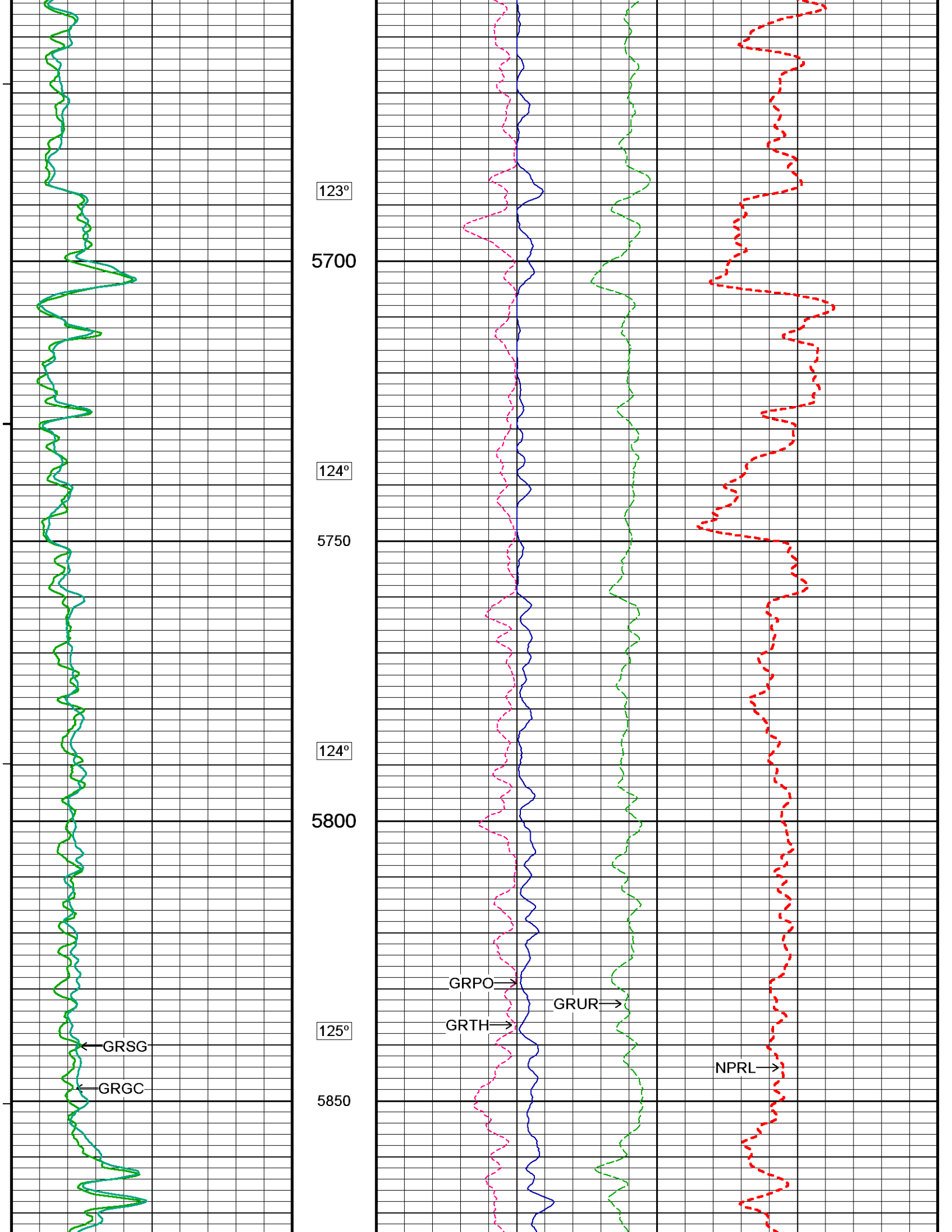

108°
4600
109°
4650
GRPO
GRUR
GRTH
GRSG
GRGC
NPRL
109°
4700
110°
4750

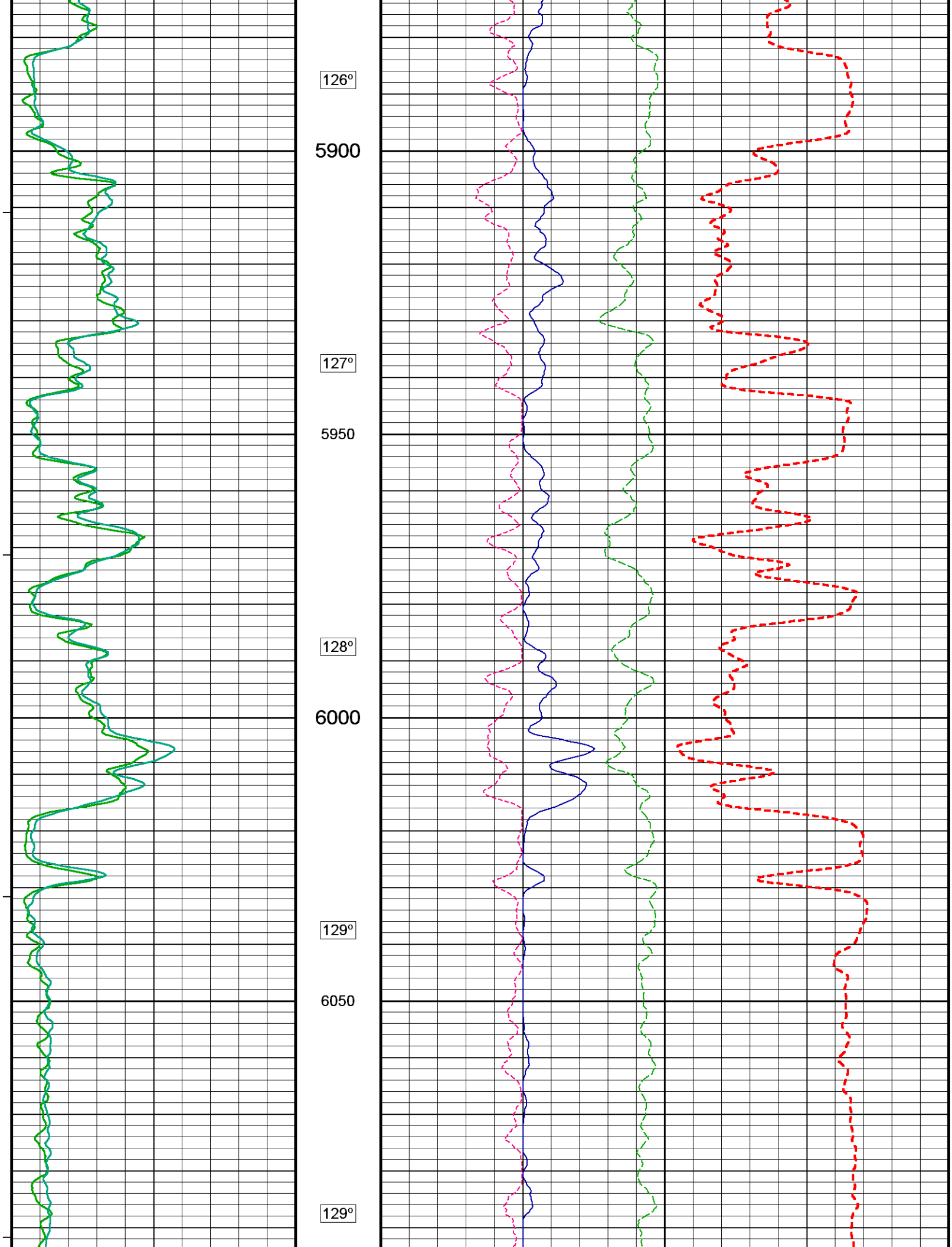

111°
4800
111°
4850
112°
4900
112°
4950
113°

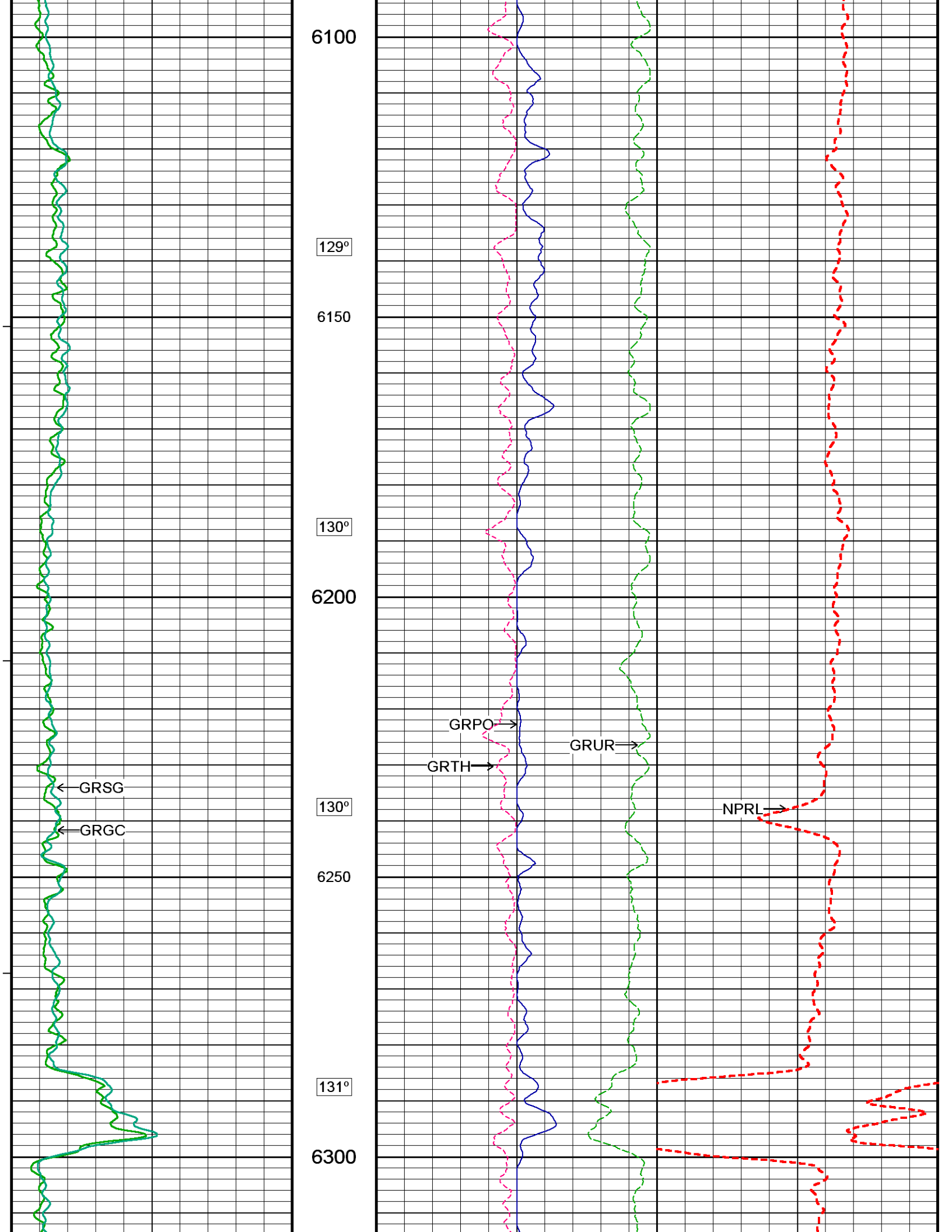

5000
114°
GRPO
GRUR
GRTH
5050
GRSG
GRGC
NPRL
115°
5100
115°
5150
116°
5200


117°
5250
117°
5300
118°
5350
119°
5400


GRSG
GRGC
119°
5450
120°
5500
121°
5550
121°
5600
122°
5650
GRPO
GRUR
GRTH
NPRL


123°
5700
124°
5750
124°
5800
125°
5850
GRSG
GRGC
GRPO
GRTH
GRUR
NPRL


126°
5900
127°
5950
128°
6000
129°
6050
129°


6100
129°
6150
130°
6200
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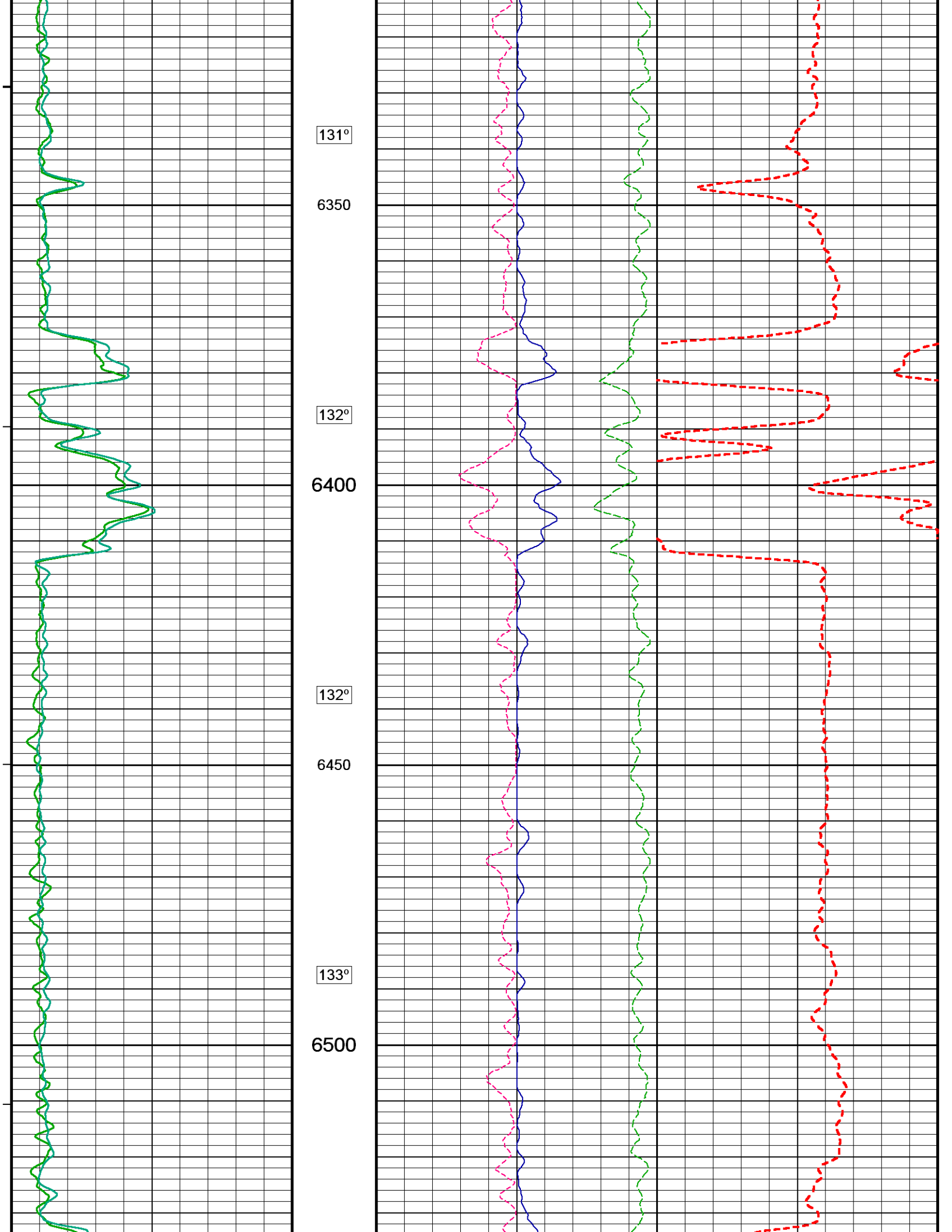
GRUR
GRTH
GRSG
GRGC
130°
NPRL
6250
131°
6300


131°
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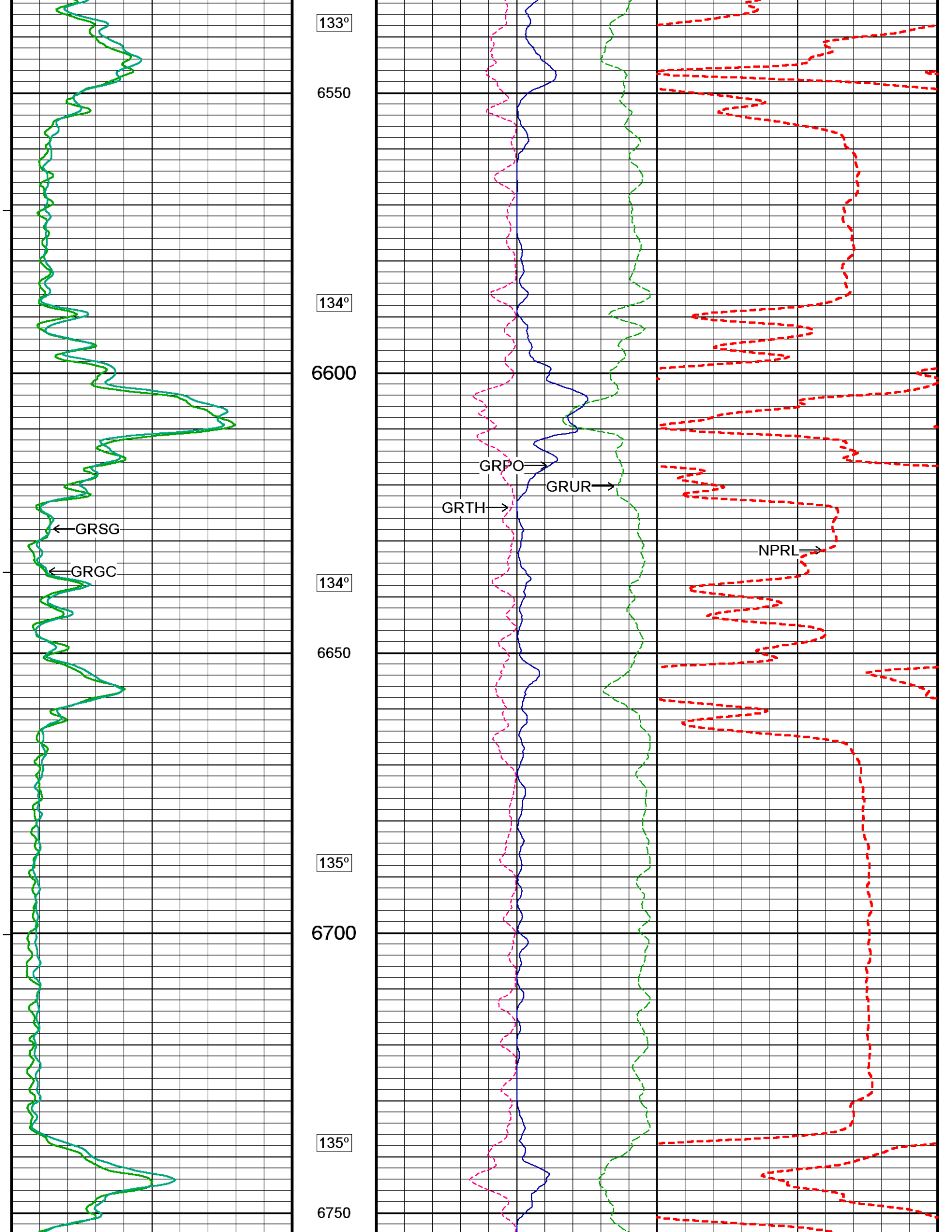
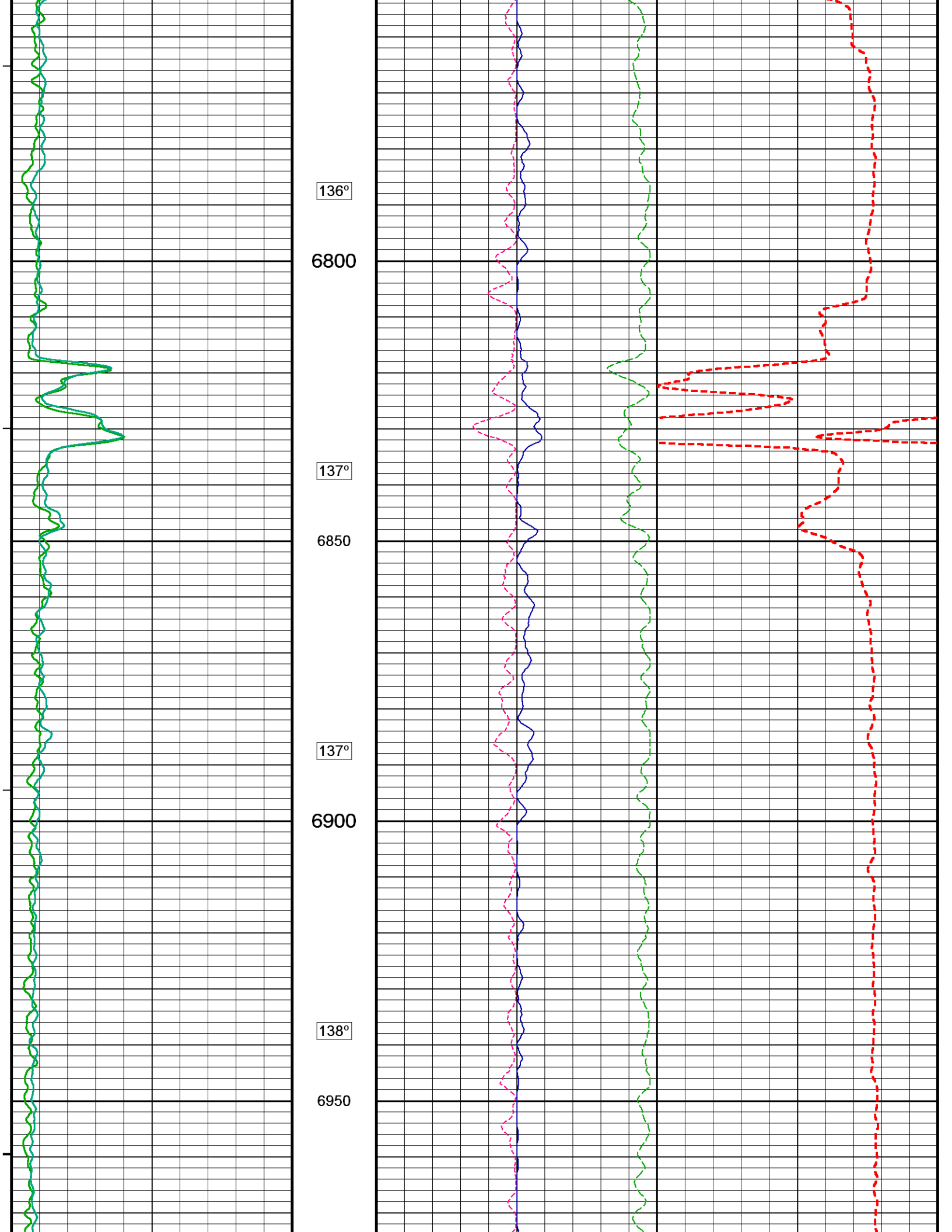
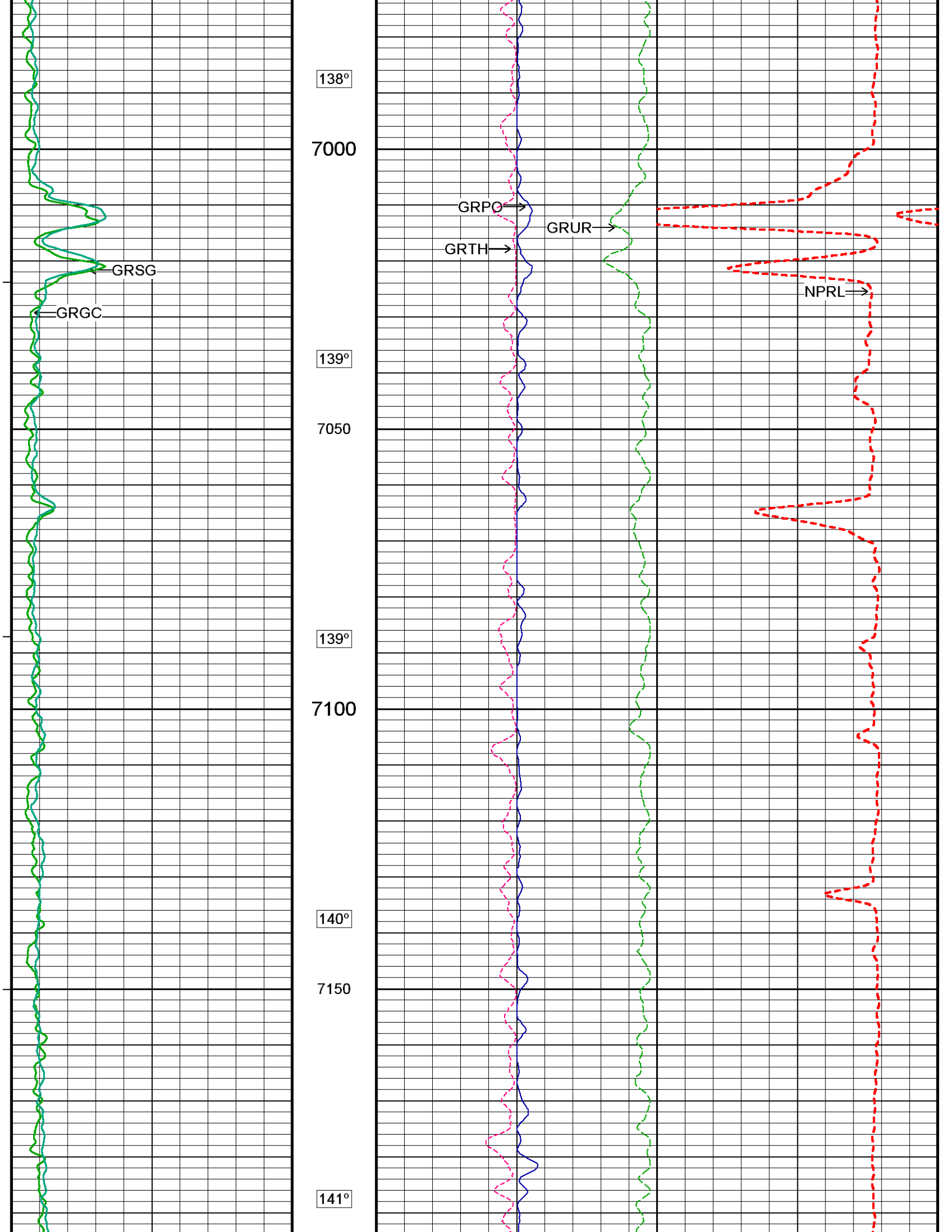
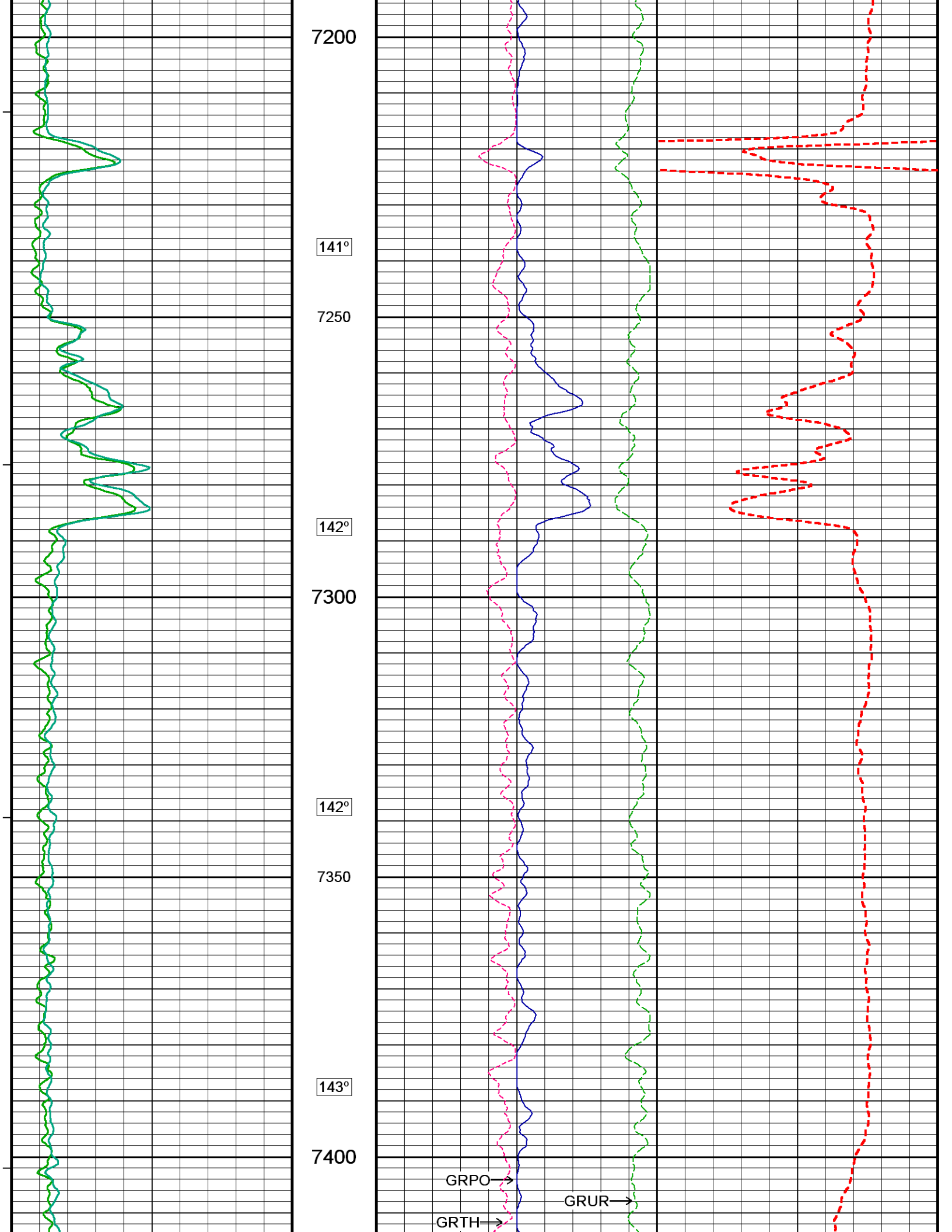
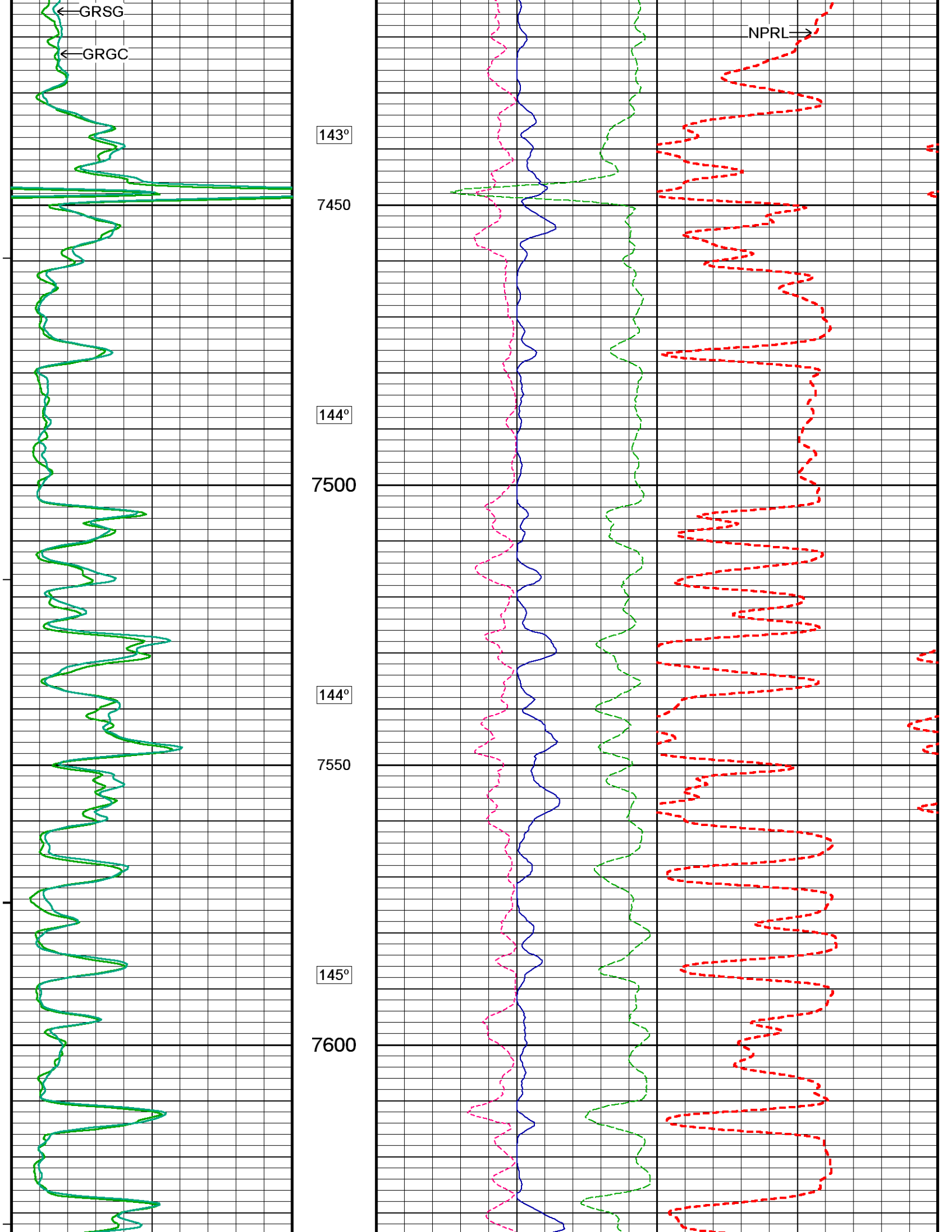
132°
6400
132°
6450
133°
6500

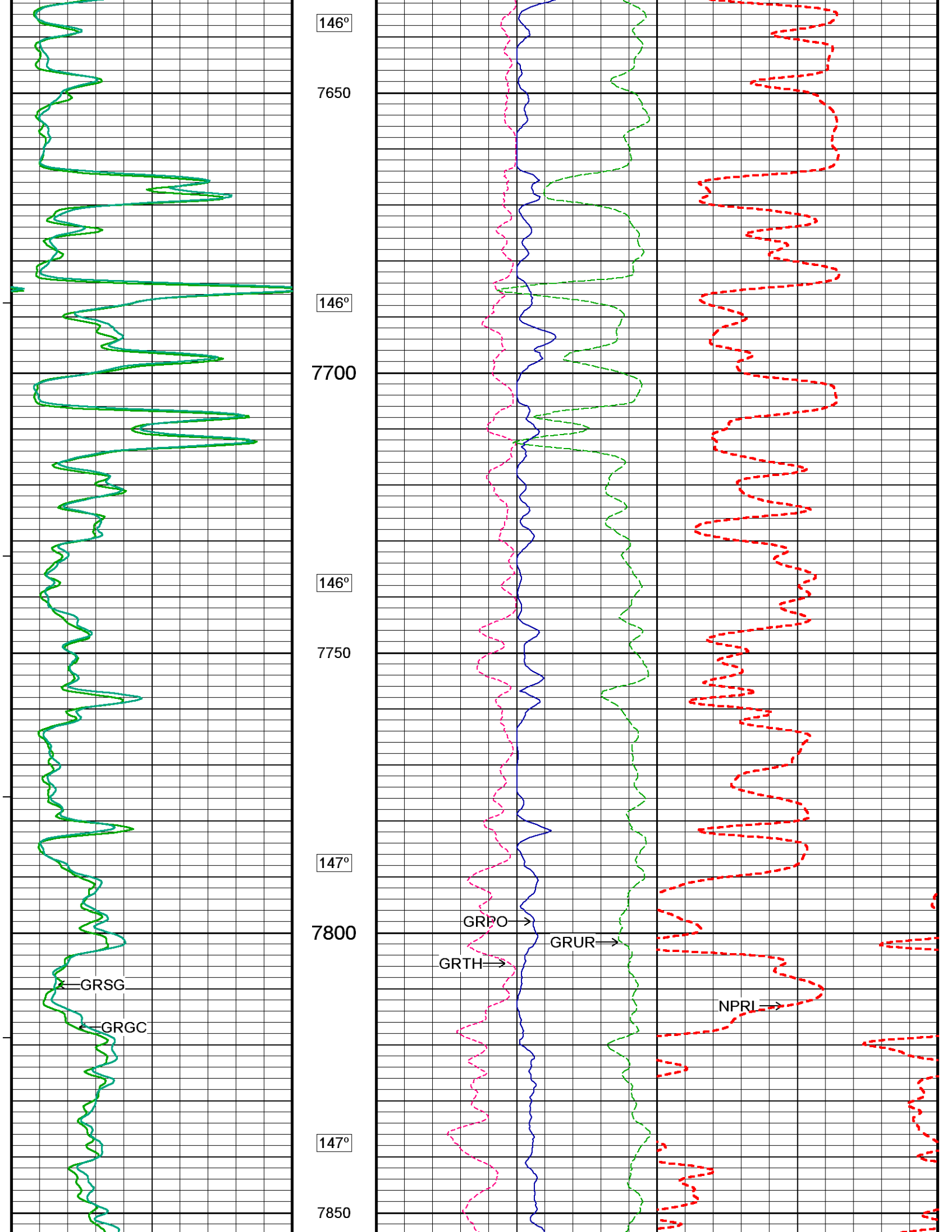

133°
6550
134°
6600
GRPO
GRUR
GRTH
GRSG
GRGC
NPRL
134°
6650
135°
6700
135°
6750

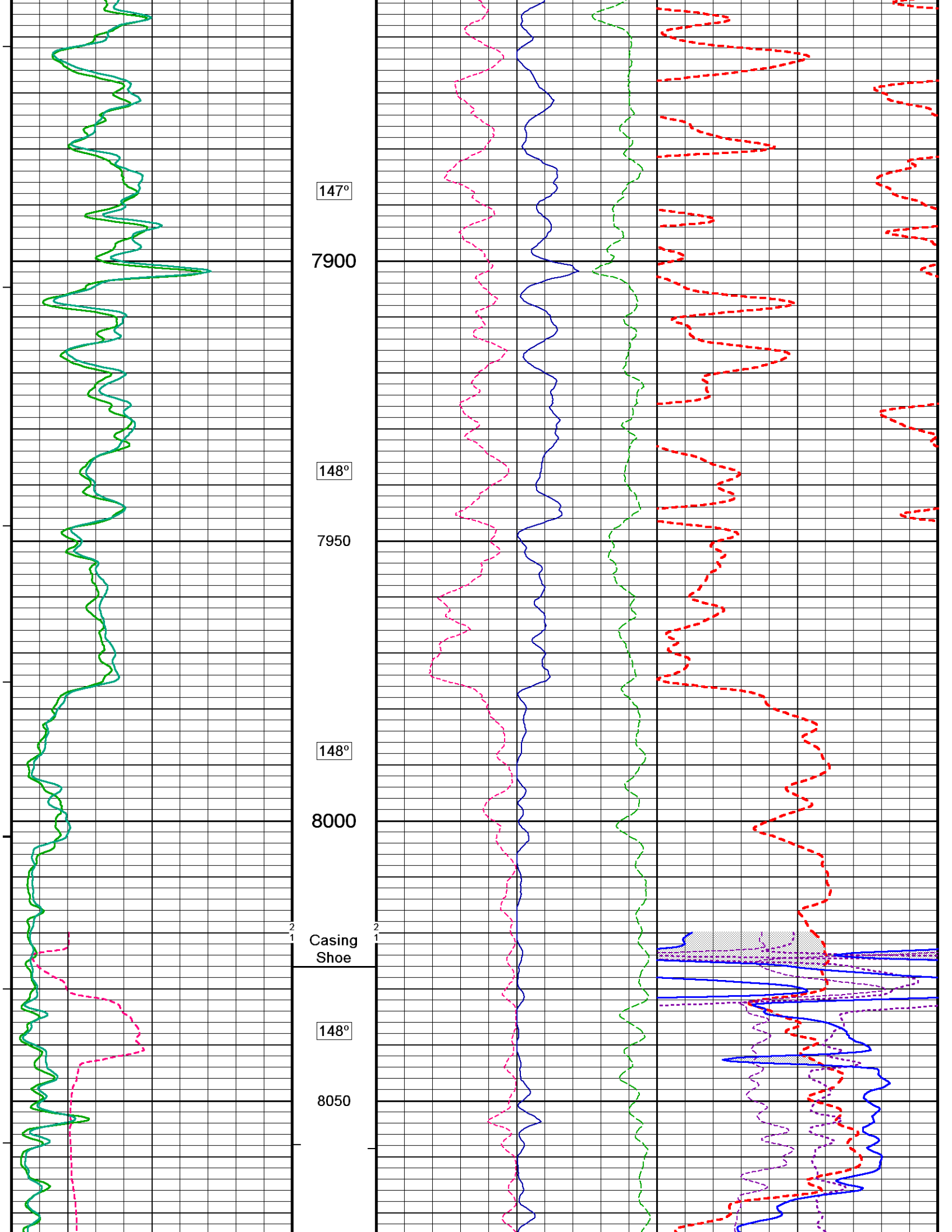

136°
6800
137°
6850
137°
6900
138°
6950

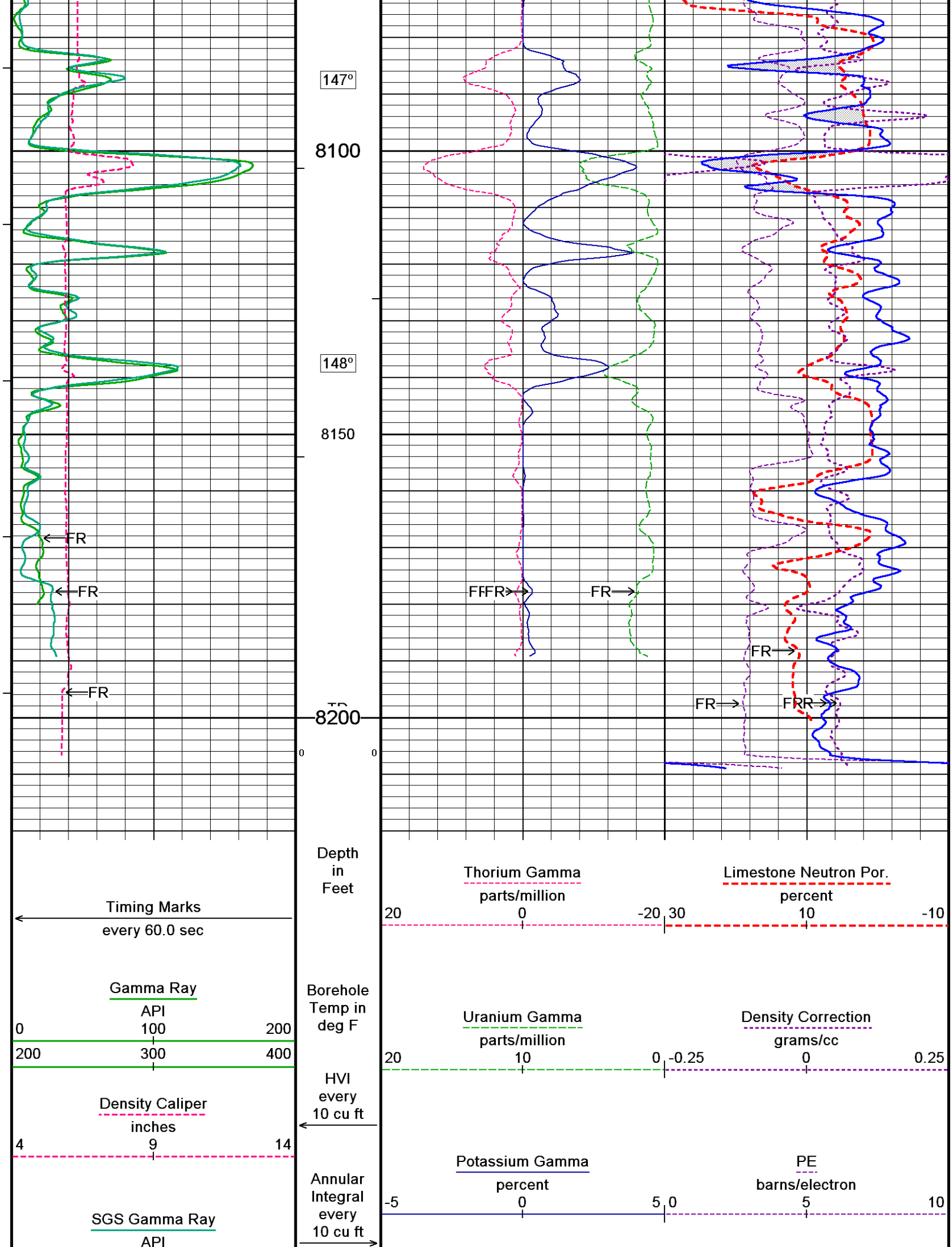

138°
7000
GRPO
GRUR
GRTH
GRSG
GRGC
NPRL
139°
7050
139°
7100
140°
7150
141°


7200
141°
7250
142°
7300
142°
7350
143°
7400
GRPO
GRUR
GRTH


GRSG
GRGC
NPRL
143°
7450
144°
7500
144°
7550
145°
7600


146°
7650
146°
7700
146°
7750
147°
7800
147°
7850
GRSG
GRGC
GRPO
GRUR
GRTH
NPRI


147°
7900
148°
7950
148°
8000
2
1
Casing
Shoe
2
1
148°
8050


147°
8100
148°
8150
8200
FR
FR
FR
FFFR
FR
FR
FR
FRR
Depth
in
Feet
Timing Marks
every 60.0 sec
Thorium Gamma
parts/million
20
0
-20
Limestone Neutron Por.
percent
30
10
-10
Gamma Ray
API
0
100
200
200
300
400
Borehole
Temp in
deg F
Uranium Gamma
parts/million
20
10
0
Density Correction
grams/cc
-0.25
0
0.25
Density Caliper
inches
4
9
14
HVI
every
10 cu ft
Potassium Gamma
percent
-5
0
5
PE
barns/electron
0
5
10
Annular
Integral
every
10 cu ft
SGS Gamma Ray
API

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 30-SEP-2012 20:36
Filename: C:\LOGS\KINDER MORGAN\YG-1 processed\to fix\Porosity Main.dta — Recorded on 30-SEP-2012 09:03
System Versions: Processed with 12.03.5032 Plotted with 12.03.5032

LOGS TO SURFACE 1:240

BEFORE SURVEY CALIBRATION

C:\LOGS\KINDER MORGAN\YG-1 processed\to fix\Porosity MAIN.dta

General Constants All 000

Last Edited on 30-SEP-2012,12:02

General Parameters		
Mud Resistivity	4.710	ohm-metres
Mud Resistivity Temperature	67.000	degrees F
Water Level	3860.000	feet
Density/Neutron Processing	Water Level Switch	
Hole/Annular Volume and Differential Caliper Parameters		
HVOL Method	Single Caliper	
HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	N/A	
Annular Volume Diameter	3.500	inches
Caliper for Differential Caliper	None	
Rwa Parameters		
Porosity used	N/A	
Resistivity used	N/A	
RWA Constant A	N/A	
RWA Constant M	N/A	

High Resolution Temperature Calibration MCG-D.J 417

Field Calibration on 27-SEP-2012,18:30

	Measured	Calibrated(Deg F)
Lower	25.00	25.00
Upper	150.00	150.00

High Resolution Temperature Constants MCG-D.J 417

Last Edited on 25-JUN-2012,10:27

Pre-filter Length	11

Gamma Calibration MCG-D.J 417

Field Calibration on 27-SEP-2012 18:29

	Measured	Calibrated (API)
Background	88	56
Calibrator (Gross)	917	583
Calibrator (Net)	829	527

Gamma Constants MCG-D.J 417

Last Edited on 27-SEP-2012,18:22

Gamma Calibrator Number	GRC-174	
Mud Density	1.00	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

Neutron Calibration MDN-B.A 296

Base Calibration on 21-SEP-2012 18:01
Field Check on 29-SEP-2012 22:45

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	2944	92	3714	110

Ratio	32.047	33.764

Field Calibrator at Base	Calibrated (cps)	
	1655	2423
Ratio	0.683	

Field Check	Calibrated (cps)	
	2347	3395
Ratio	0.691	

Neutron Constants MDN-B.A 296

Last Edited on 30-SEP-2012,07:49

Neutron Source Id	P44384B	
Neutron Jig Number	6532NK	
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	7.00	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	None	
Formation Fluid Salinity	N/A	kppm
Barite Mud Correction	Not Applied	

Photo Density Calibration MPD-D.A 460

Base Calibration on 21-SEP-2012 17:25
Field Check on 29-SEP-2012 22:50

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	57826	27793	59720	30898
Reference 2	23140	2818	24621	2513

Field Check at Base		
	1353.9	1668.8

Field Check		
	1329.6	1575.2

PE Calibration

Base Calibration	Measured			Calibrated
	WS	WH	Ratio	Ratio
Background	263	1217		
Reference 1	25582	57611	0.449	0.370
Reference 2	7352	22987	0.326	0.271

Field Check at Base		
	263.0	1216.6

Field Check		
	254.9	1187.5

Density Constants MPD-D.A 460

Last Edited on 30-SEP-2012,11:52

Density Source Id	P44263B	
Nylon Calibrator Number	628	
Aluminium Calibrator Number	628	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.00	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

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

Caliper Calibration MPD-D.A 460

Base Calibration on 21-SEP-2012 17:33
Field Calibration on 29-SEP-2012 22:54

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	19011	3.98
2	27874	5.96
3	35560	7.97
4	43991	9.84
5	53242	11.91
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
5.18	5.96

Spectral Gamma Calibration SGS-E.J 135

Base Calibration on 29-JUN-2012 15:48
Field Calibration on 29-JUN-2012 15:38

Base Calibration

Potassium Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	212.0	80.6	9.2	4.1	7.7
Calibrator (Gross)	330.6	160.9	33.8	4.2	7.7
Calibrator (Net)	118.5	80.4	24.6	0.0	0.0

	K %	U ppm	Th ppm
Concentrations	5.9	0.0	0.0

Uranium Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	212.0	80.6	9.2	4.1	7.7
Calibrator (Gross)	467.5	172.8	17.0	9.9	9.3
Calibrator (Net)	255.4	92.3	7.8	5.8	1.6

	K %	U ppm	Th ppm
Concentrations	0.0	9.7	0.0

Thorium Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	212.0	80.6	9.2	4.1	7.7
Calibrator (Gross)	509.0	192.5	17.0	9.3	22.1
Calibrator (Net)	296.9	112.0	7.8	5.1	14.4

	K %	U ppm	Th ppm
Concentrations	0.0	0.0	41.1

Mixture Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	212.0	80.6	9.2	4.1	7.7
Calibrator (Gross)	1096.1	450.7	57.6	21.5	26.4
Calibrator (Net)	884.1	370.2	48.3	17.3	18.7

Field Calibration

Gamma Ray

	Measured	Calibrated (API)
Background	327	61
Calibrator (Gross)	1666	311
Calibrator (Net)	1339	250

Mixture Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	212.0	80.6	9.2	4.1	7.7
Calibrator (Gross)	1096.1	450.7	57.6	21.5	26.4
Calibrator (Net)	884.1	370.2	48.3	17.3	18.7

Spectral Gamma Constants SGS-E.J 135 — Last Edited on 30-SEP-2012,07:51

Mixture Calibrator Number	485	
Potassium Calibrator Number	385	
Uranium Calibrator Number	383	
Thorium Calibrator Number	385	
Mud Density	1.00	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

COMPANY	KINDER MORGAN C02 Co. L.P
WELL	YG-1
FIELD	McELMO DOME
PROVINCE/COUNTY	MONTEZUMA
COUNTRY/STATE	U.S.A. / COLORADO

Elevation Kelly Bushing	6686.00	feet	First Reading	8197.00	feet
Elevation Drill Floor	6686.00	feet	Depth Driller	8200.00	feet
Elevation Ground Level	6661.00	feet	Depth Logger	8200.00	feet

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