



MWD
DGR Dual Gamma Ray
ACAL Acoustic Caliper
SLD Stabilized Litho-Density
CNP Compensated Neutron Porosity

[illegible]

WELL INFORMATION

MWD Run Number	200				
Date run completed	26-Nov-03				
Rig Bit Number	3				
Bit Size (mm)	311				
Tool Nominal OD (mm)	203				
Log Start Depth (MD, m)	831.00				
Log End Depth (MD, m)	2,546.00				
Drill or Wipe	Drilling				
Drill/Wipe Start Date and Time	22-Nov-03 16:42				
Drill/Wipe End Date and Time	26-Nov-03 10:30				
Min Inc (deg) @ Depth (MD, m)	0.09 @ 845.67				
Max Inc (deg) @ Depth (MD, m)	4.02 @ 1,458.10				
Bit TFA(in2) / Bit Type	1.2 / Security 2563				
Flow Rate (gpm)	880				
Max AV (mpm) / CV (mpm) @ MWD	82.7 / 153.6				
Fluid Type	Aqua-Drill				
Density (sg) / Viscosity (spl)	1.1 / 79				
Filtrate CL (ppm)	39400				
pH / Fluid Loss (cptm)	9.25 / 5.0				
PV (cp) / YP (lhf2)	21 / 33				
% Solids / % Sand	5.5 / 0.25				
% Oil / Oil:Water Ratio	N/A / N/A:100				
Rm @ Measured Temp (degC)	0.14 @ 18.00				
Rmf @ Measured Temp (degC)	0.08 @ 18.00				
Rmc @ Measured Temp (degC)	0.36 @ 18.00				
Max Tool Temp (degC) / Source	67.00 / EWR-P4				
Rm @ Max Tool Temp (degC)	0.06 @ 67.00				
Lead MWD Engineer	F. Besanger				
Customer Representative	P.Devine				

SENSOR INFORMATION

Downhole Processor Information

Tool Type	HCIM				
Software Version	66.37				
Sub Serial Number	198841				
Insert Serial Number	10503669				
Logging String Serial Number	DM90031515XHBNRL				
Date and Time Initialized	22-Nov-03 05:15				
Date and Time Read	26-Nov-03 20:20				

Directional Sensor Information

Tool Type	DM				
Distance From Bit (m)	41.20				
Software Version	3.15				
Sub Serial Number	DM90026200F8				
Sonde Serial Number	85267				
Sensor ID Number	185535				
Survey String Serial Number	DM1708KF8				
Toolface Offset (deg)	N/A				

Gamma Ray Sensor Information

Tool Type	DGR				
Distance From Bit (m)	25.30				
Recorded Sample Period (sec)	10				
Software Version	N/A				
Sub Serial Number	082377				
Insert/Sonde Serial Number	132474				

Neutron Sensor Information

Tool Type	CNP				
Distance From Bit (m)	34.64				
Recorded Sample Period (sec)	12				
Sub Serial Number	125695				
Insert Serial Number	74044				
Source Serial Number	2307 GW				
Source Factor	1.1840				
Pin Orientation	Down				

Density Sensor Information

Tool Type	SLD				
Distance From Bit (m)	28.71				
Recorded Sample Period (sec)	14				
Software Version	11.00				
Sub Serial Number	121774				
Insert Serial Number	077162				
Sensor ID Number	355				
Source Serial Number	2307 GW				
Pin Orientation	Up				
Stabilizer Blade O.D. (mm)	301.625				
DPA Offset	0				

Caliper Sensor Information

Tool Type	ACAL				
Distance From Bit (m)	36.93				
Software Version	2.05				
Sub Serial Number	87524				

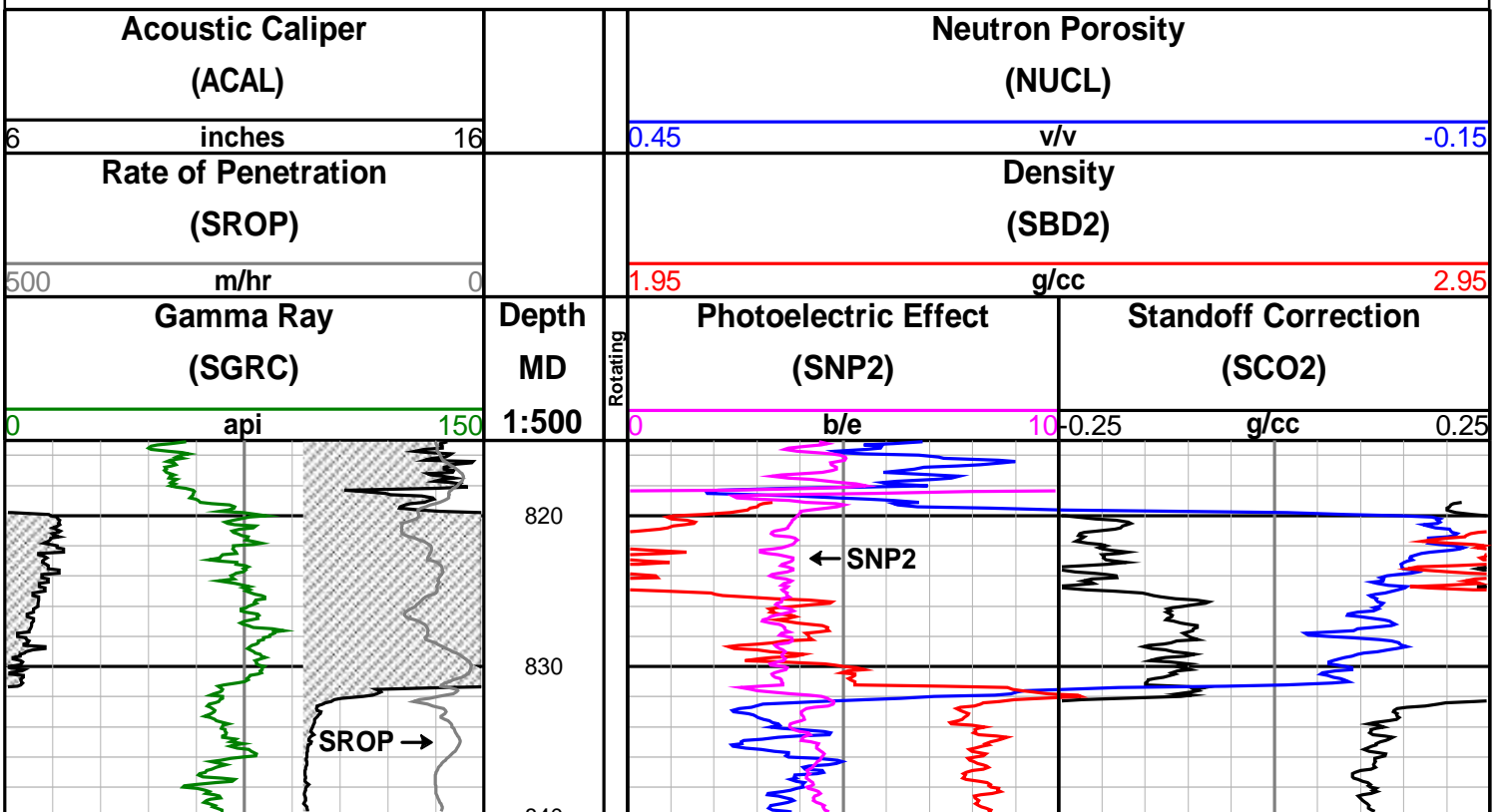
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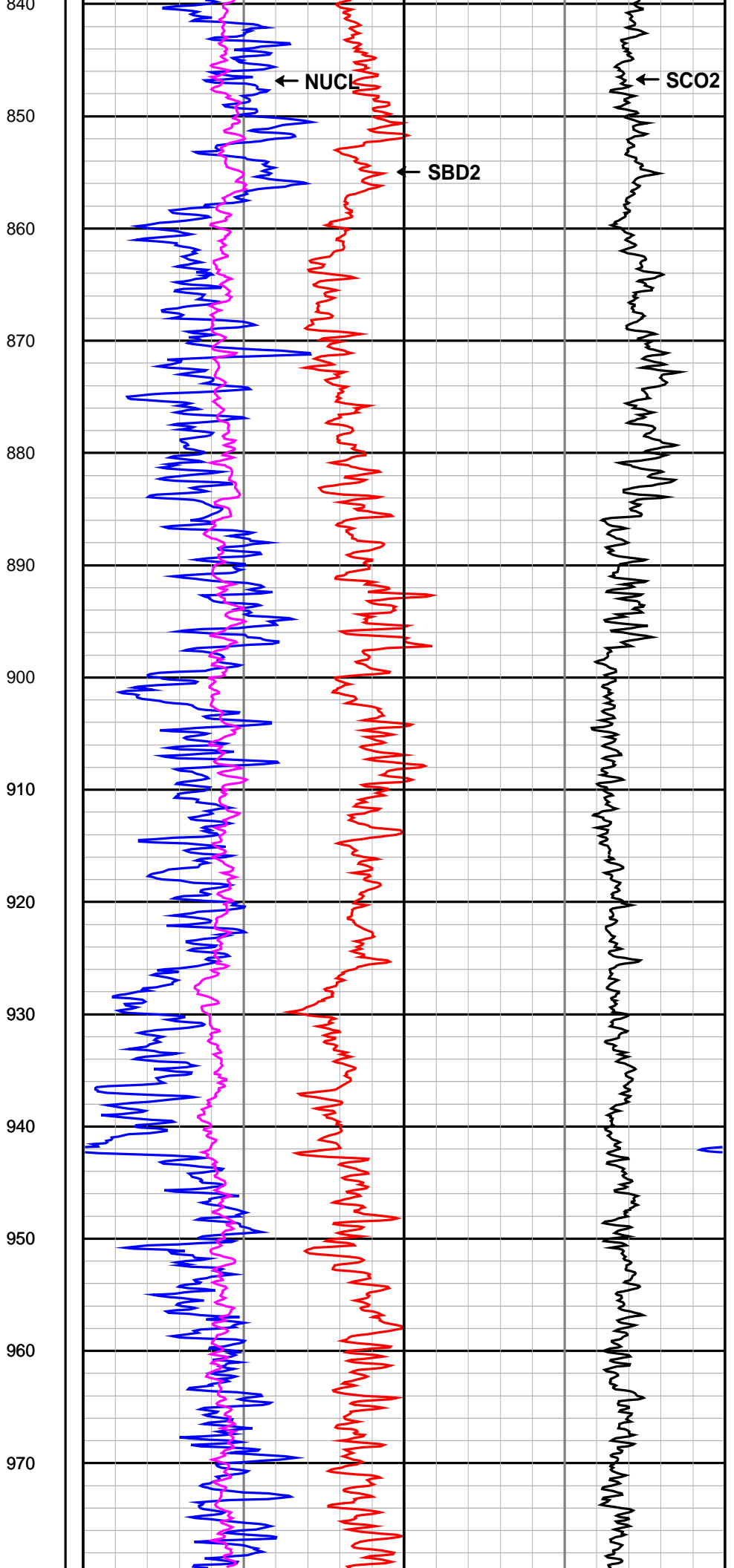
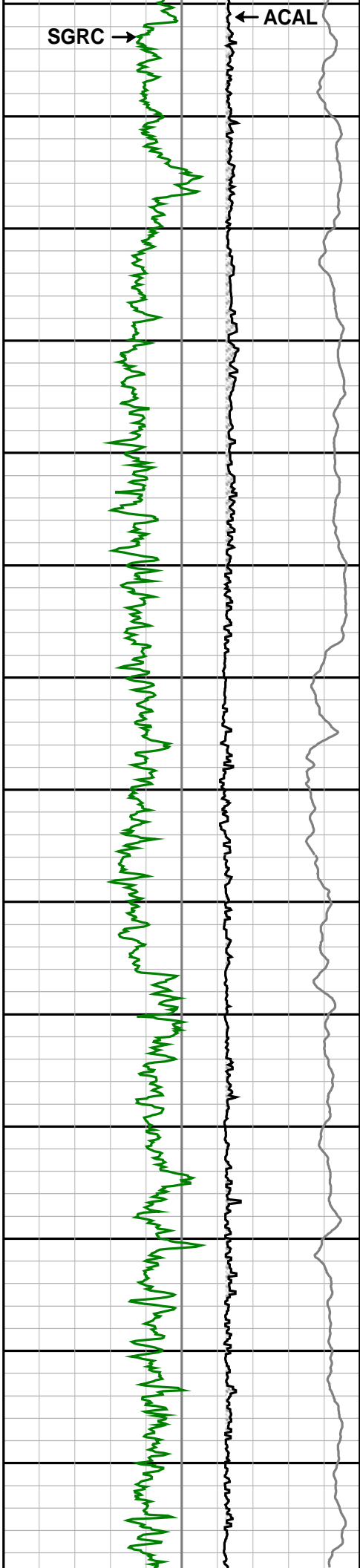
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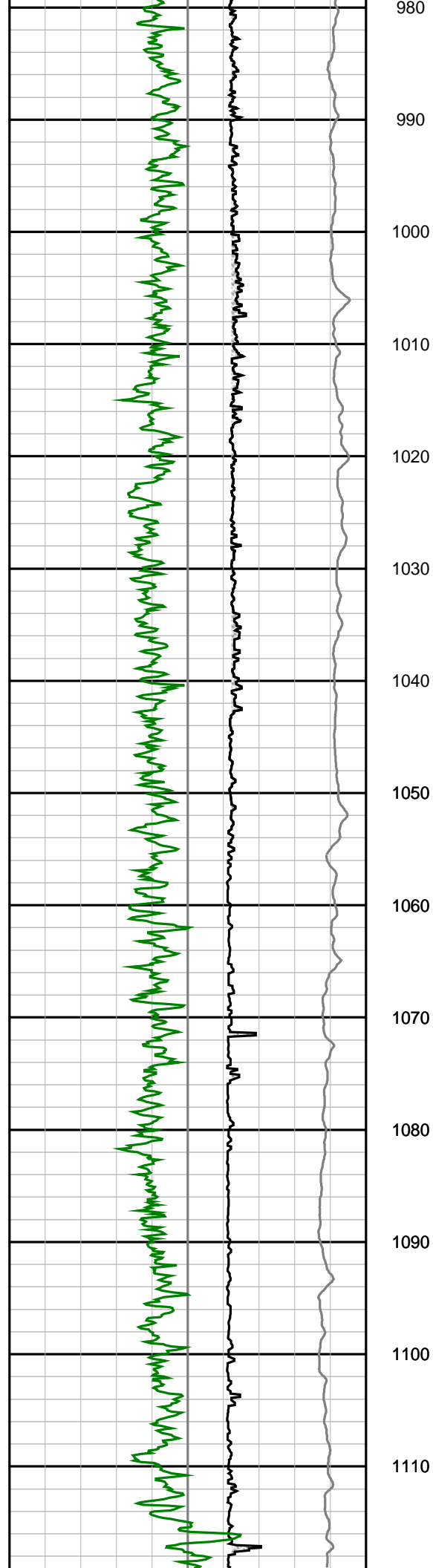
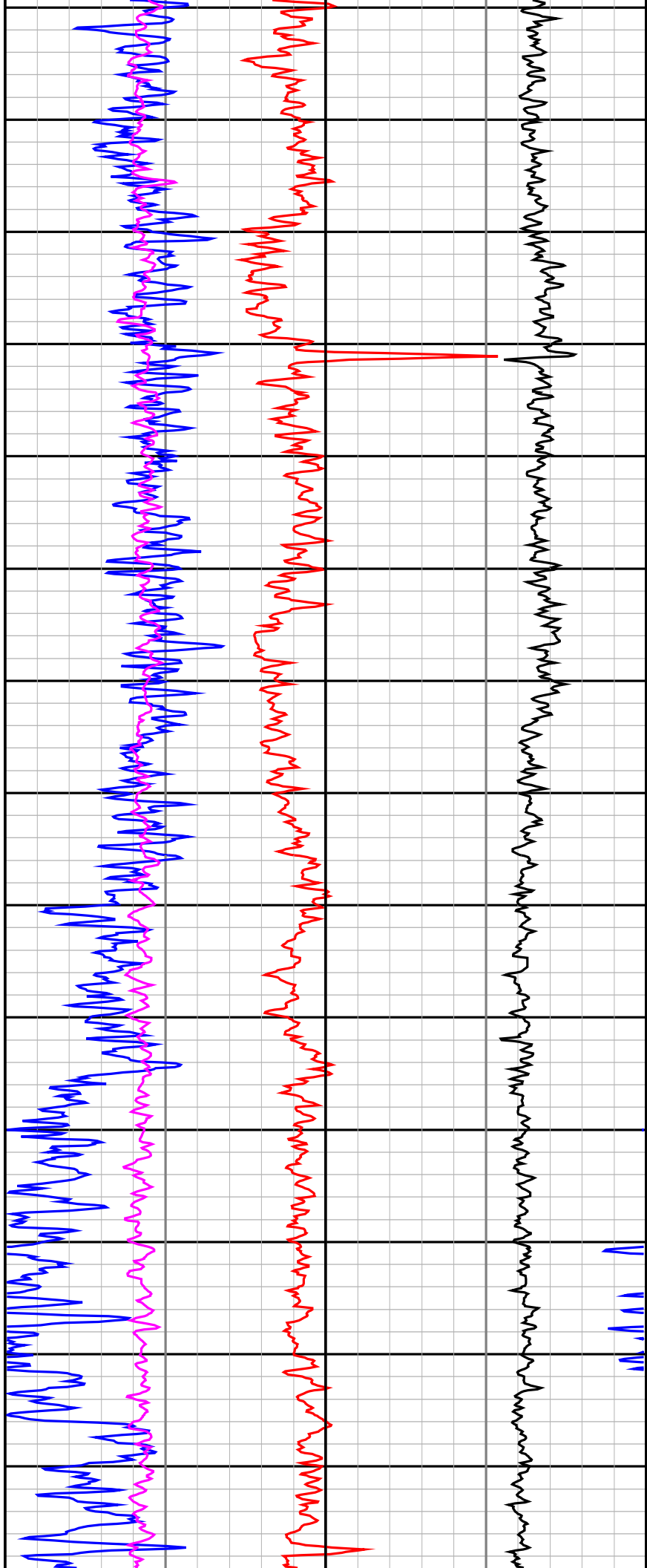
- All depths are bit depths and referenced to the drillers pipe tally unless otherwise noted.
- AV/CV is calculated at the MWD collar using the Power Law for water based muds and is in m/min.
- Curve mnemonics are :
 - SGRC - Smoothed Gamma Ray Combined, api
 - ACAL - Acoustic Caliper, inches.
 - SROP - Smoothed Rate of Penetration, m/hr
 - SBD2 - Smoothed Best Bin Bulk Density Compensated, g/cc
 - SCO2 - Smoothed Best Bin Stand-off Correction, g/cc
 - SNP2 - Smoothed Best Bin Near Photoelectric Effect, b/e
 - NUCL - Smoothed Porosity (Limestone Matrix) corrected for Salinity, Temperature and Pressure, v/v
- CNP data Processed using the CNP-E algorithm using the following parameters and is based on a Limestone Matrix:
 - MW = 1.11 - 1.16 sg
 - Formation Salinity = 50,000 ppm Cl
 - Mud Salinity = 30,000 - 39,500 ppm Cl
 - Matrix Density = 2.71 g/cc
 - Fluid Density = 1.00 g/cc
- CNP data has been reprocessed using data from the Caliper tool for borehole diameter.

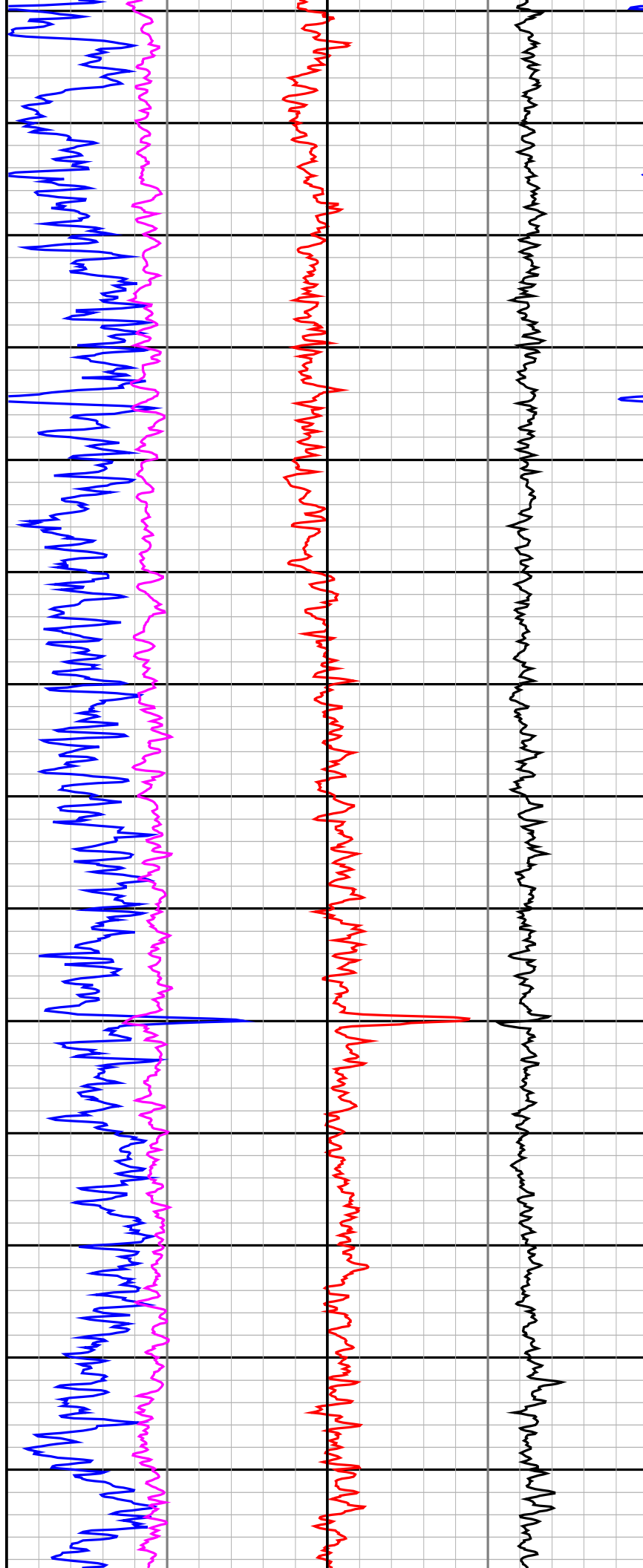
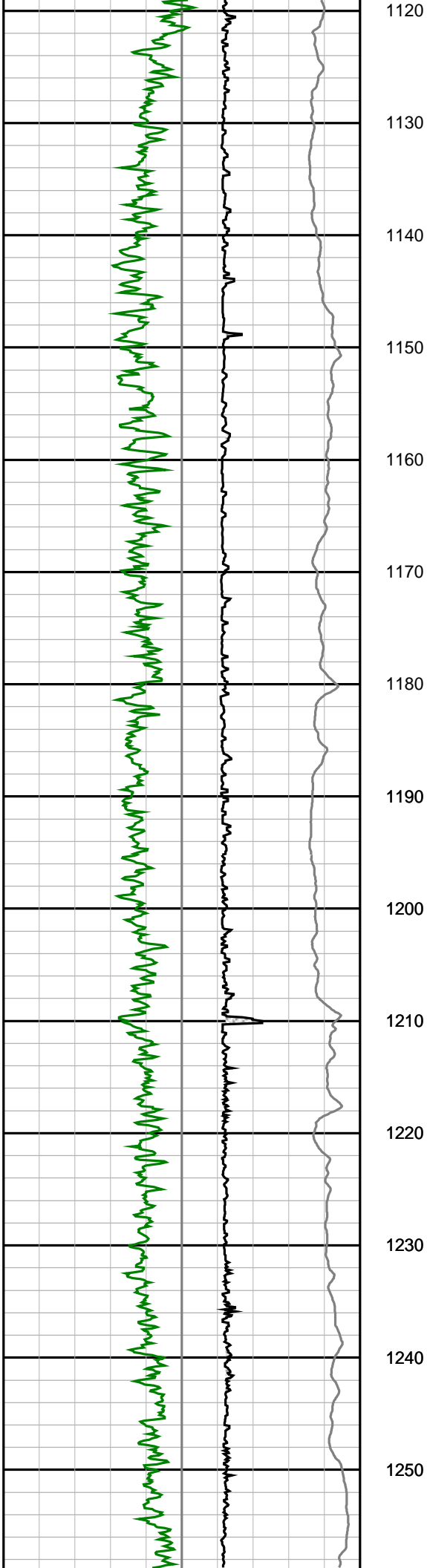
WARRANTY

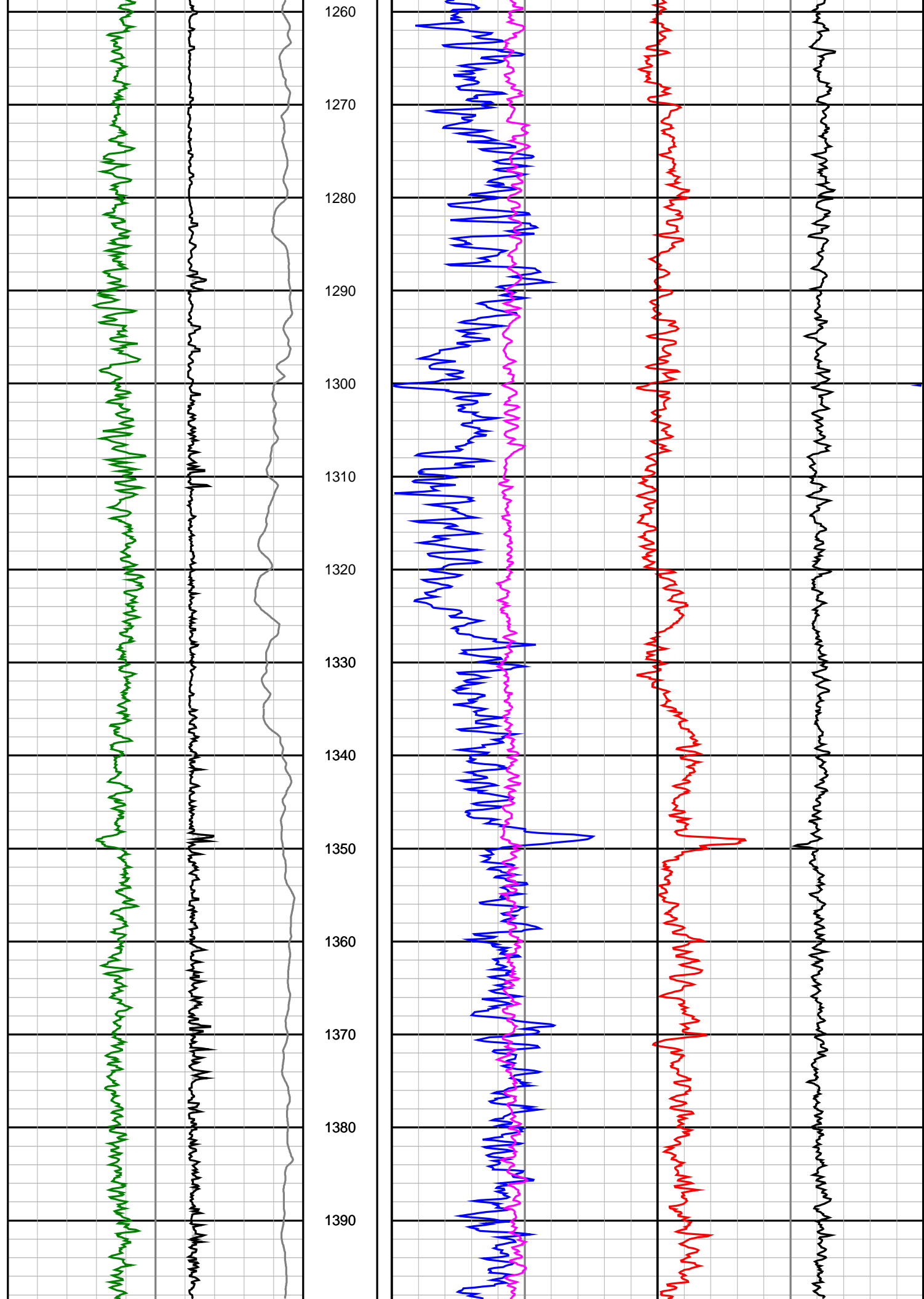
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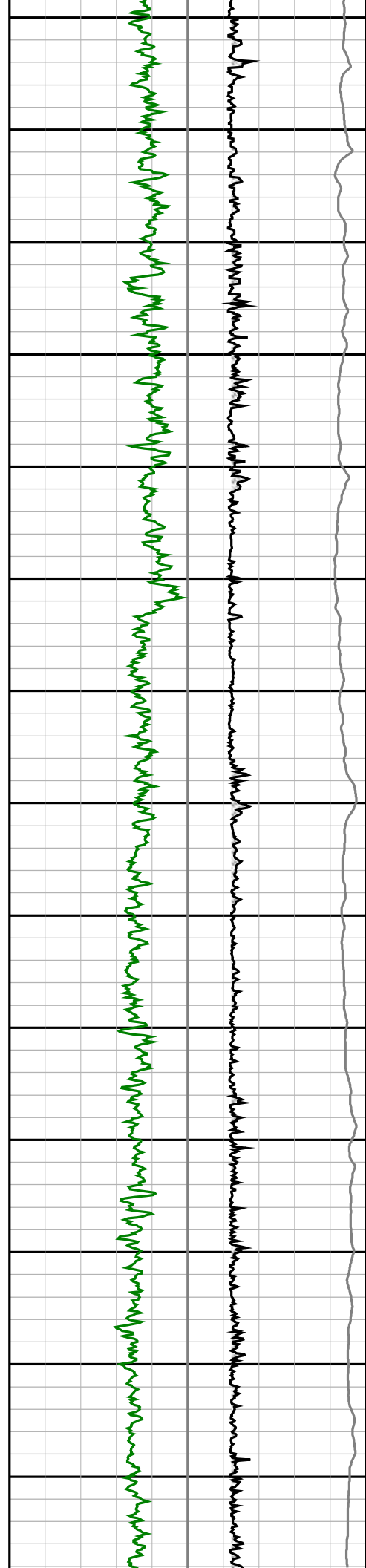




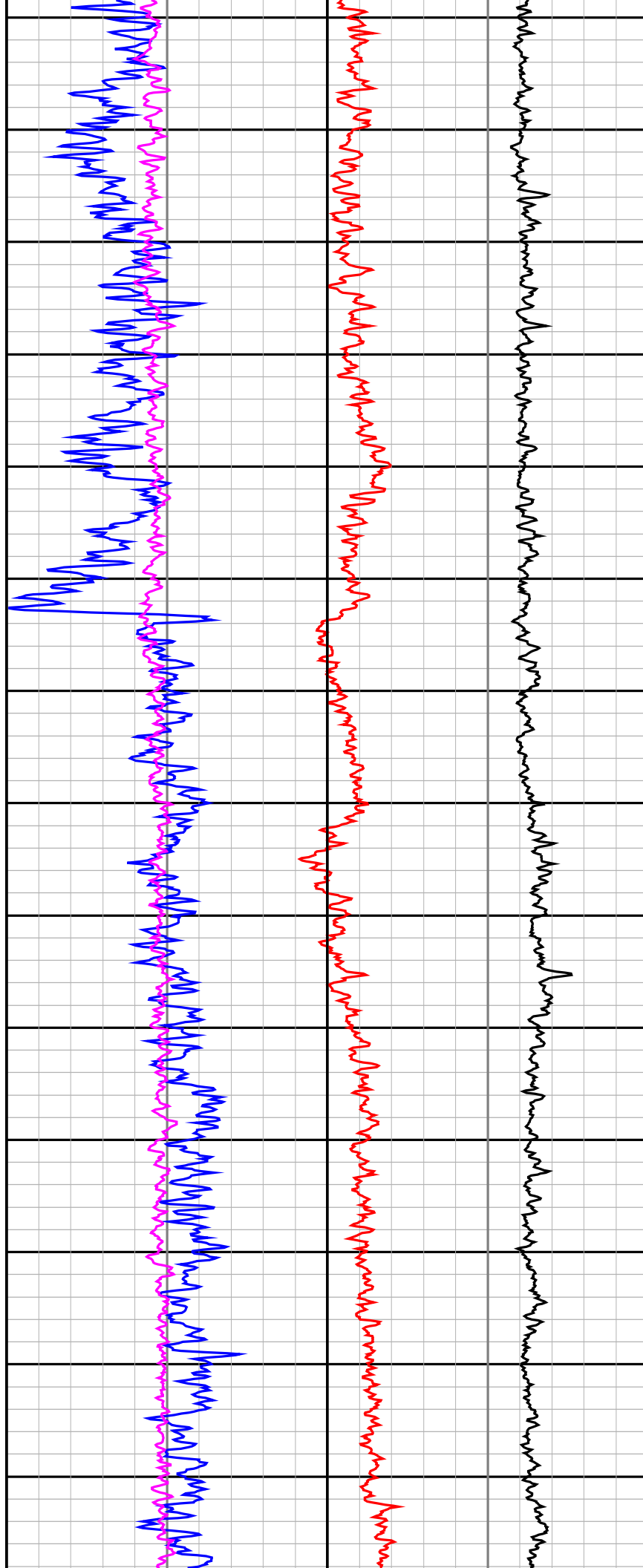


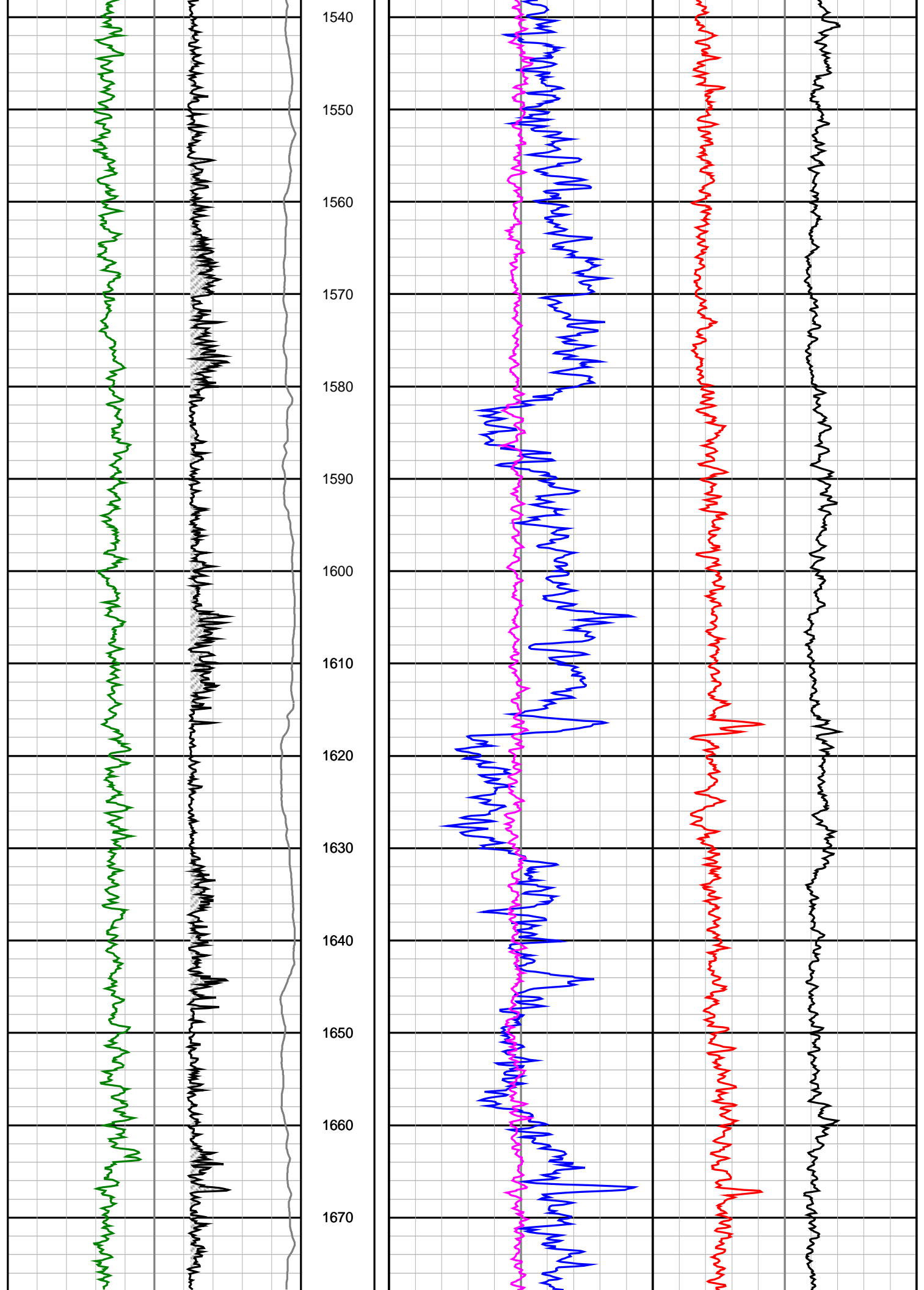


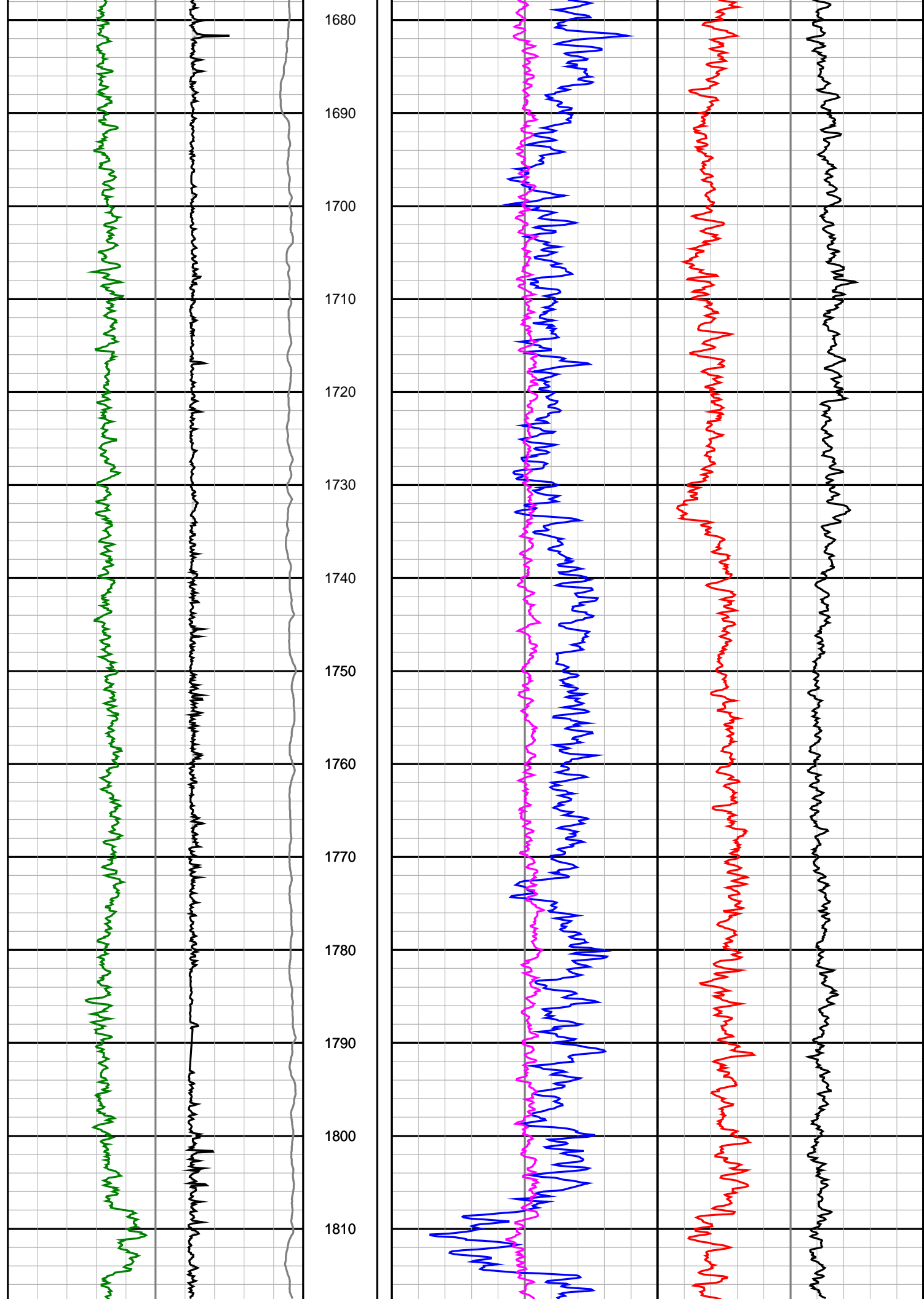


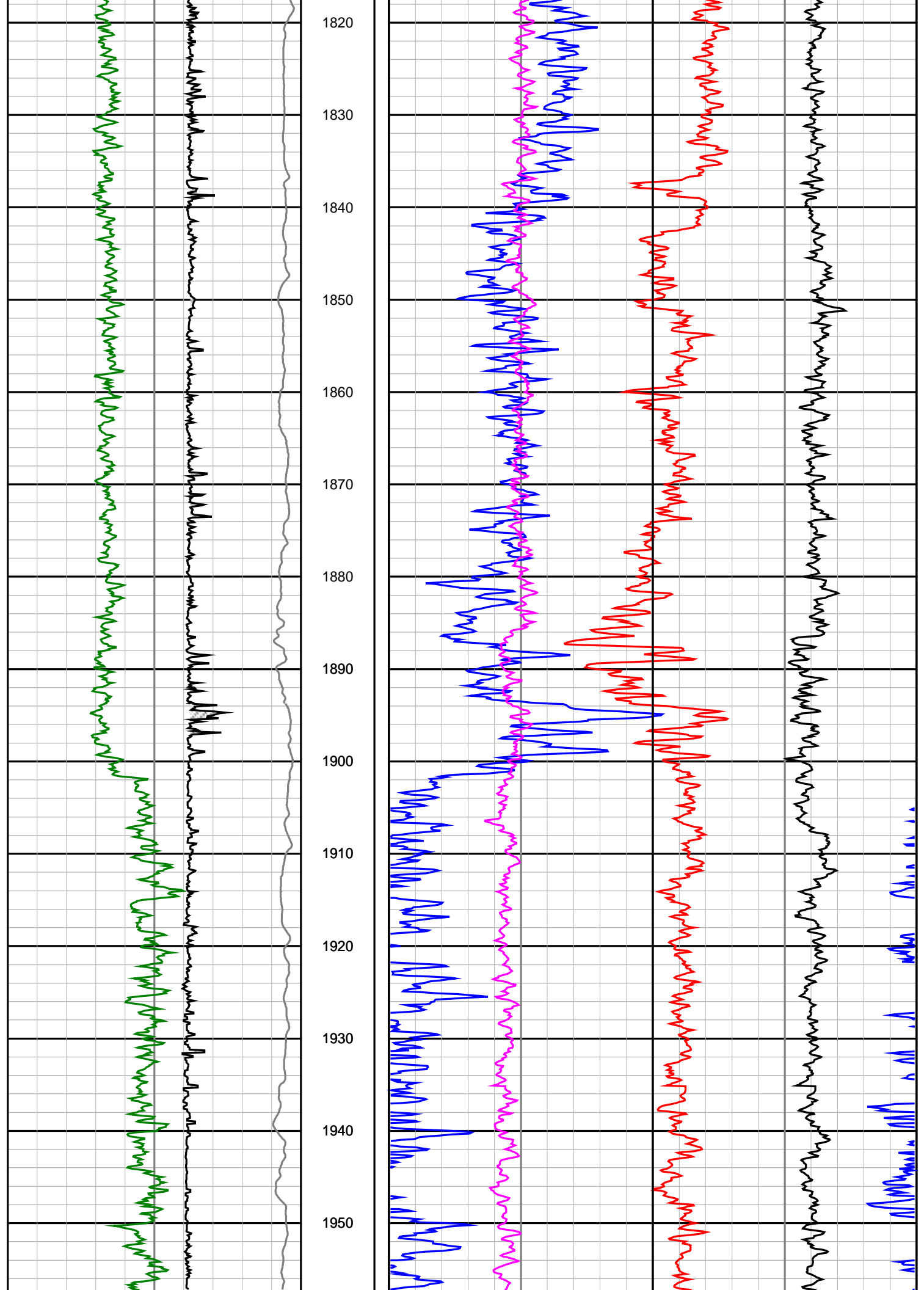


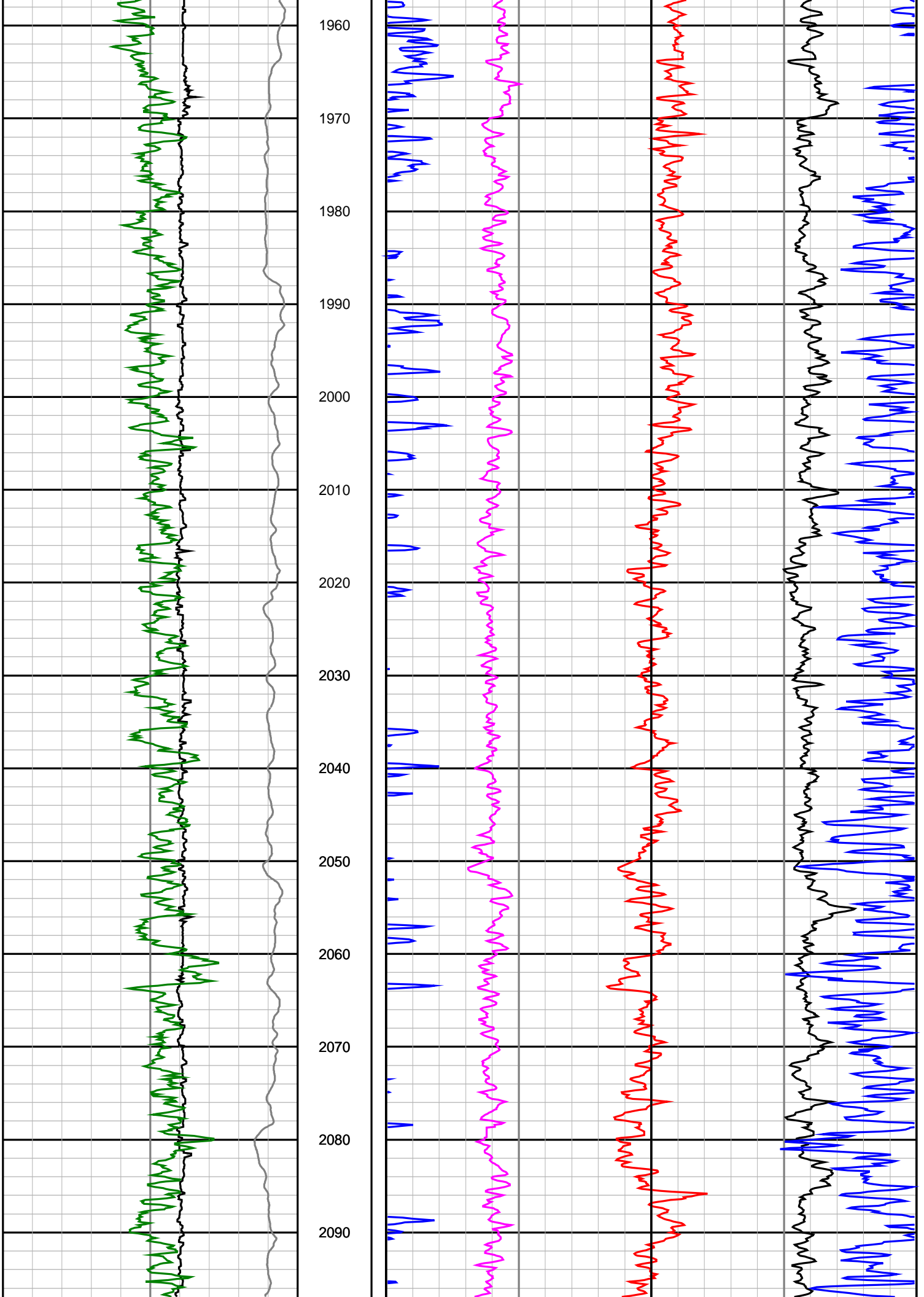
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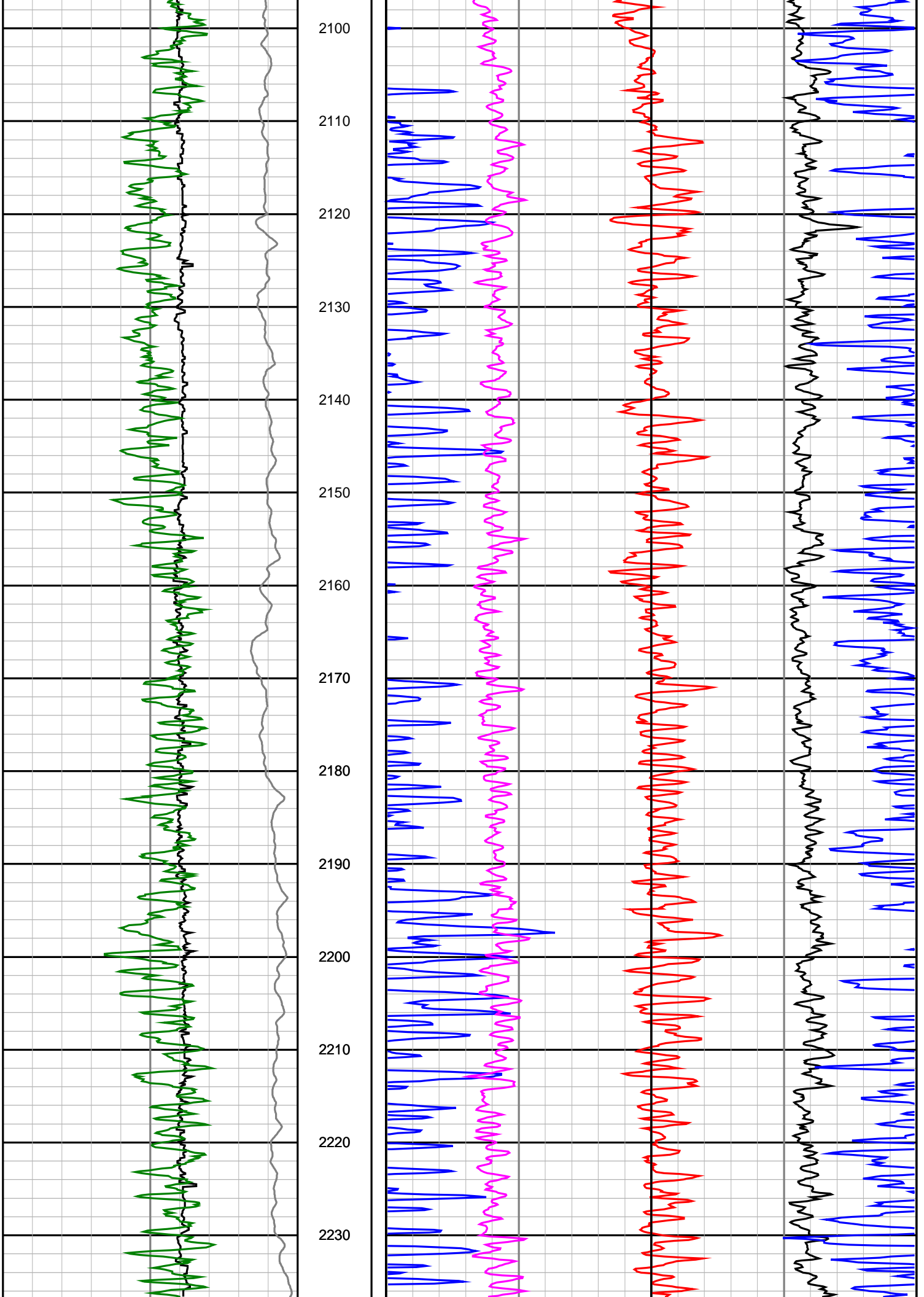


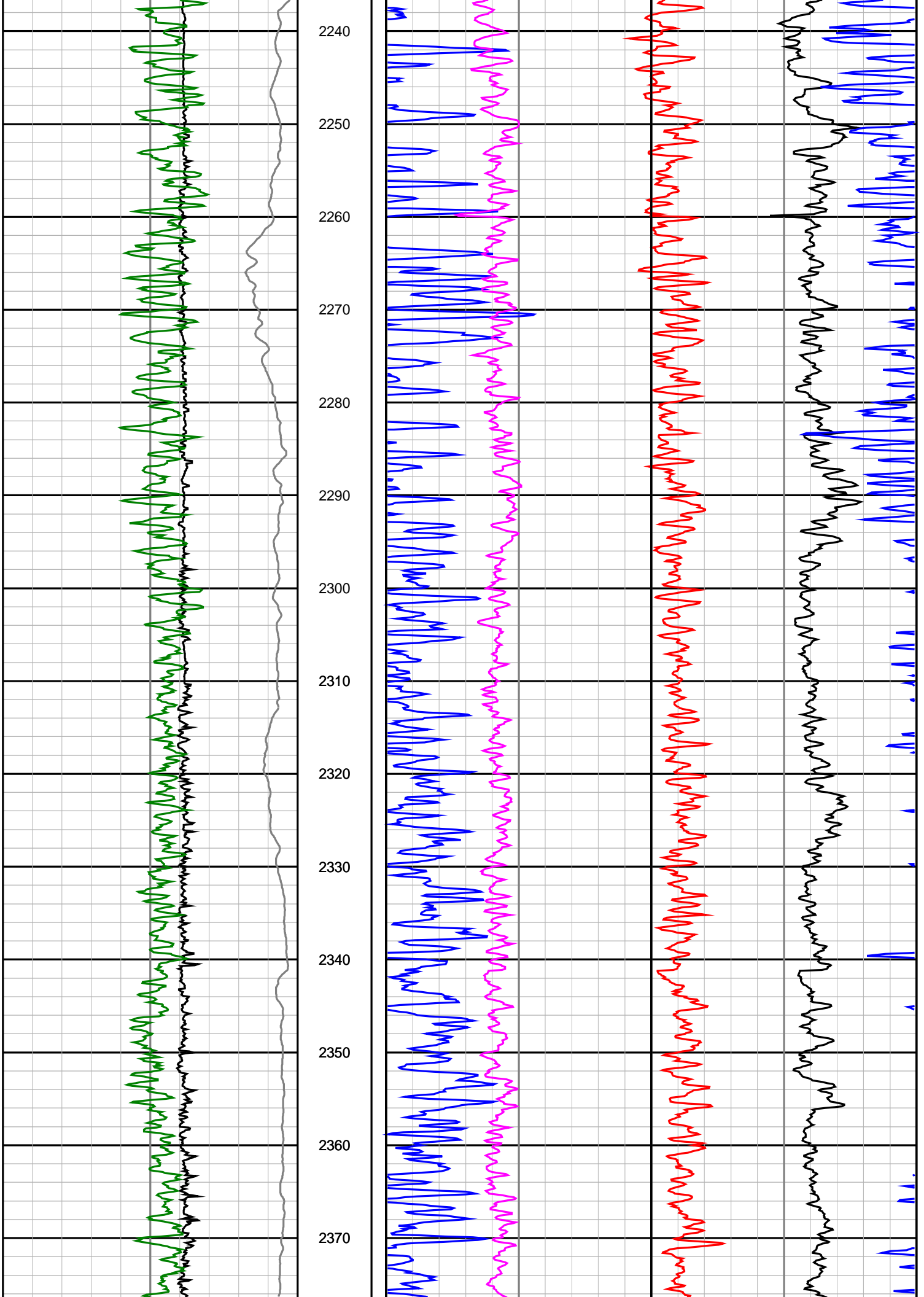


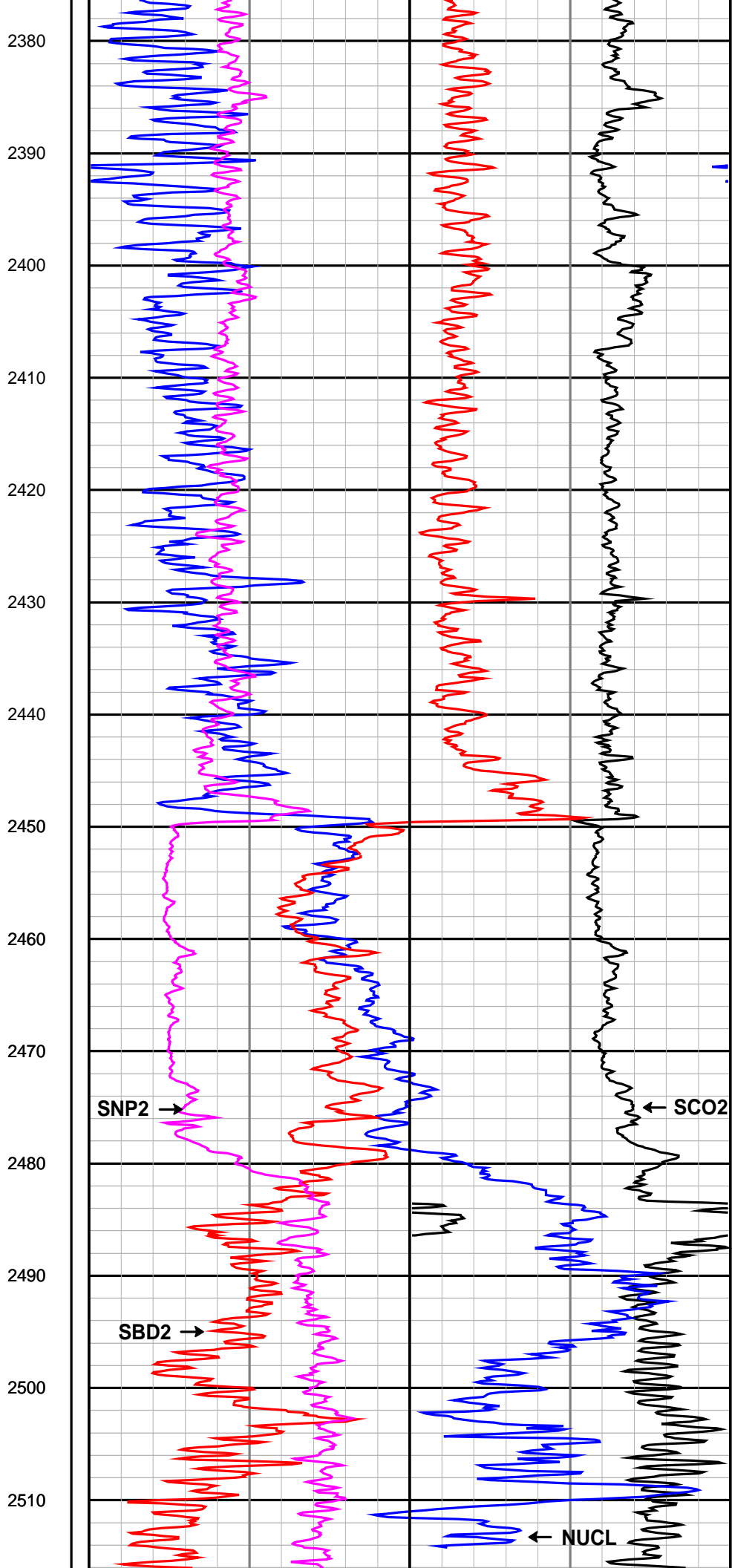
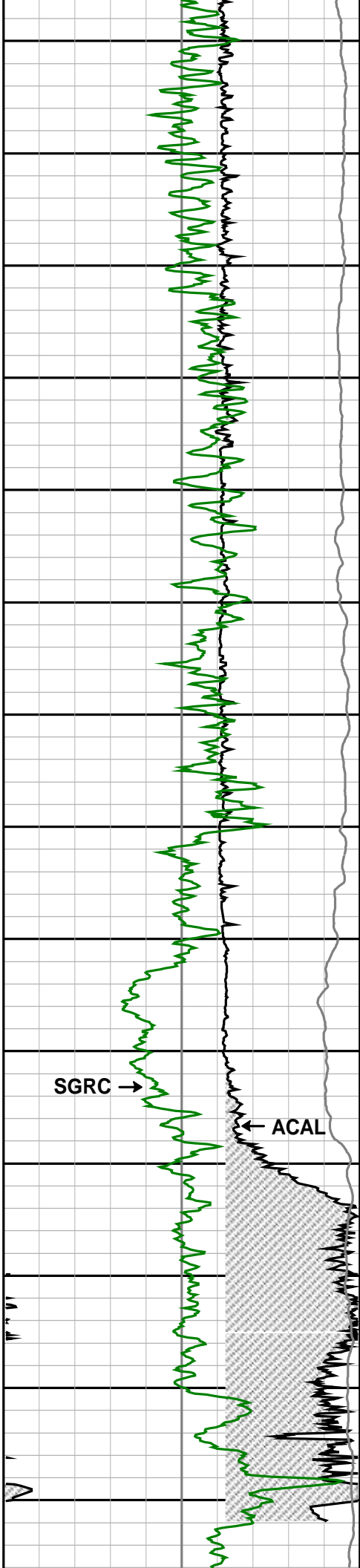


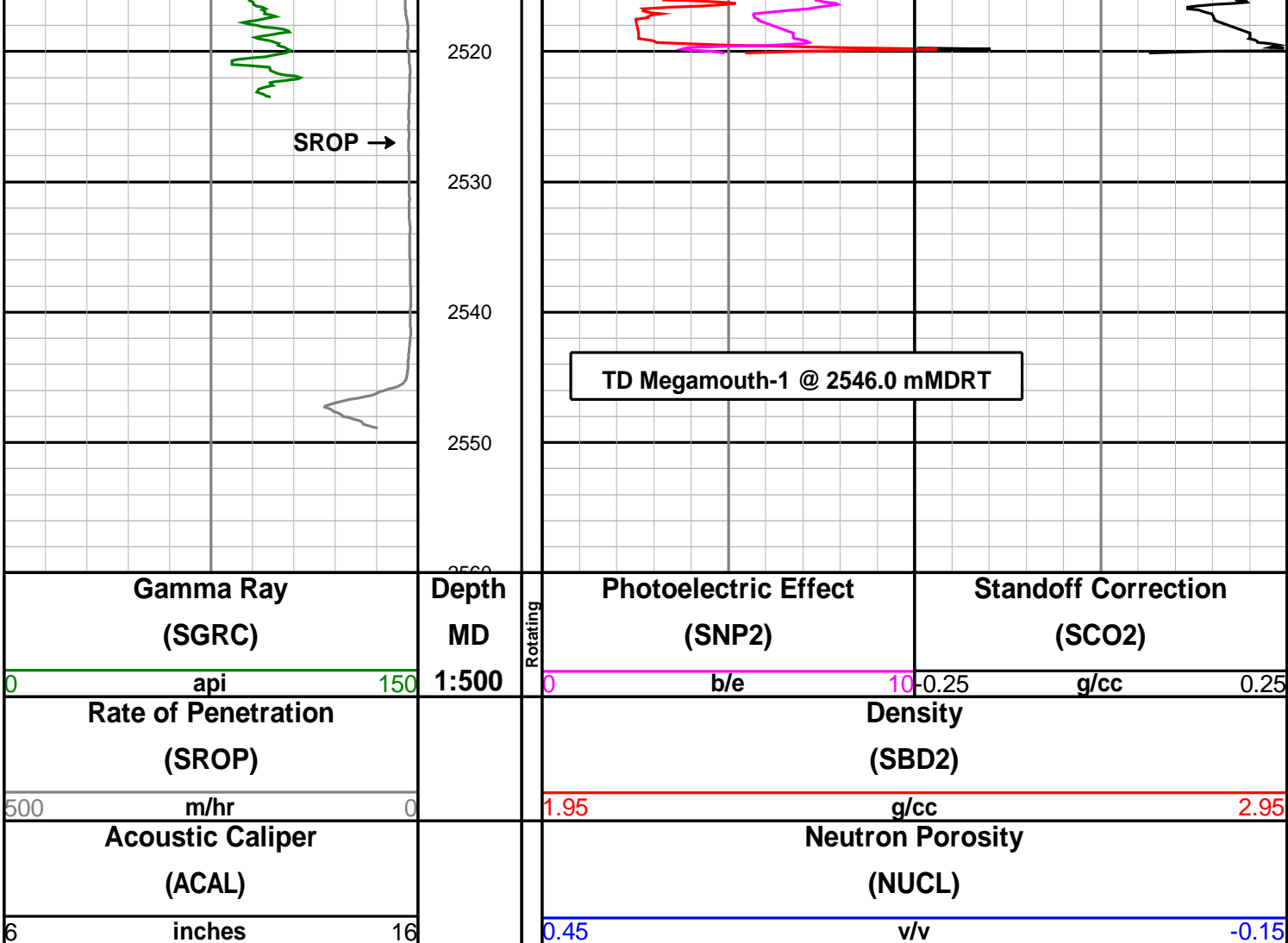












DIRECTIONAL SURVEY REPORT

BHP Billiton
Megamouth-1
Exploration
Victoria
Australia
AU-FE-0002723564
Final Survey Projected to TD

Measured Depth (metres)	Inclination (degrees)	Direction (degrees)	Vertical Depth (metres)	Latitude (metres)	Departure (metres)	Vertical Section (metres)	Dogleg (deg/30m)
0.000	0.00	0.00	0.000	0.000 N	0.000 E	0.000	TIE-IN
81.500	0.00	0.00	81.500	0.000 N	0.000 E	0.000	0.00
166.000	0.62	207.17	165.998	0.408 S	0.209 W	-0.398	0.22
195.900	0.61	179.98	195.897	0.711 S	0.283 W	-0.698	0.29
250.500	0.57	192.84	250.494	1.266 S	0.344 W	-1.250	0.07
279.300	0.44	183.73	279.293	1.517 S	0.383 W	-1.499	0.16
367.300	0.37	206.52	367.291	2.109 S	0.532 W	-2.084	0.06
454.000	0.50	187.15	453.988	2.735 S	0.704 W	-2.701	0.07
541.500	0.15	197.89	541.487	3.226 S	0.788 W	-3.188	0.12
628.700	0.26	209.80	628.686	3.512 S	0.924 W	-3.469	0.04

Megamouth-1

<i>Measured Depth (metres)</i>	<i>Inclination (degrees)</i>	<i>Direction (degrees)</i>	<i>Vertical Depth (metres)</i>	<i>Latitude (metres)</i>	<i>Departure (metres)</i>	<i>Vertical Section (metres)</i>	<i>Dogleg (deg/30m)</i>
684.500	0.13	189.38	684.486	3.687 S	0.999 W	-3.640	0.08
714.200	0.13	239.71	714.186	3.737 S	1.033 W	-3.689	0.11
821.000	0.19	228.46	820.985	3.916 S	1.270 W	-3.857	0.02
827.400	0.20	228.02	827.385	3.930 S	1.286 W	-3.870	0.02
845.670	0.09	72.72	845.655	3.947 S	1.296 W	-3.886	0.45
875.610	0.14	47.32	875.595	3.916 S	1.248 W	-3.857	0.07
905.100	0.26	40.22	905.085	3.842 S	1.180 W	-3.786	0.12
933.830	0.28	47.23	933.814	3.746 S	1.087 W	-3.695	0.04
962.400	0.35	27.79	962.384	3.622 S	0.996 W	-3.575	0.13
991.890	0.31	21.75	991.874	3.467 S	0.924 W	-3.424	0.05
1021.900	0.50	21.35	1021.883	3.269 S	0.846 W	-3.229	0.18
1049.700	0.49	8.82	1049.682	3.038 S	0.784 W	-3.001	0.12
1107.730	0.64	8.83	1107.709	2.472 S	0.696 W	-2.439	0.07
1136.800	0.91	4.66	1136.776	2.082 S	0.653 W	-2.052	0.29
1195.400	1.47	359.86	1195.363	0.868 S	0.617 W	-0.841	0.29
1282.000	2.90	3.60	1281.898	2.429 N	0.482 W	2.448	0.50
1312.100	3.07	3.39	1311.957	3.995 N	0.386 W	4.008	0.17
1397.400	3.67	2.54	1397.109	9.004 N	0.130 W	9.001	0.21
1458.100	4.02	1.09	1457.673	13.074 N	0.003 W	13.061	0.18
1484.800	3.92	0.93	1484.308	14.922 N	0.030 E	14.906	0.12
1514.410	3.77	0.58	1513.852	16.906 N	0.056 E	16.888	0.15
1539.660	3.69	1.00	1539.048	18.550 N	0.078 E	18.529	0.10
1570.320	3.85	1.88	1569.642	20.565 N	0.129 E	20.539	0.16
1597.800	3.86	0.11	1597.060	22.410 N	0.161 E	22.381	0.13
1627.800	3.73	359.86	1626.994	24.394 N	0.161 E	24.363	0.13
1654.500	3.53	1.04	1653.641	26.082 N	0.173 E	26.050	0.24
1716.000	2.75	0.13	1715.048	29.449 N	0.211 E	29.411	0.38
1744.200	2.57	359.92	1743.218	30.758 N	0.212 E	30.719	0.19
1773.870	2.29	358.46	1772.861	32.015 N	0.195 E	31.976	0.29
1801.500	2.06	358.97	1800.471	33.064 N	0.171 E	33.025	0.25
1831.750	1.87	355.50	1830.703	34.098 N	0.123 E	34.060	0.23
1861.750	1.82	353.71	1860.688	35.058 N	0.032 E	35.022	0.08
1887.010	1.74	356.67	1885.936	35.838 N	0.034 W	35.805	0.14
1917.630	1.57	355.94	1916.543	36.719 N	0.090 W	36.688	0.17
1949.310	1.51	352.76	1948.212	37.566 N	0.174 W	37.538	0.10
1974.670	1.50	351.45	1973.563	38.226 N	0.265 W	38.201	0.04
2003.170	1.49	349.21	2002.053	38.958 N	0.390 W	38.937	0.06
2032.800	1.37	350.27	2031.674	39.685 N	0.522 W	39.669	0.12
2121.700	1.27	350.42	2120.550	41.704 N	0.865 W	41.702	0.03
2209.500	1.05	346.85	2208.332	43.447 N	1.210 W	43.458	0.08
2297.700	0.88	349.11	2296.520	44.899 N	1.522 W	44.922	0.06
2354.830	0.88	347.07	2353.643	45.757 N	1.703 W	45.788	0.02
2383.080	0.83	351.30	2381.890	46.171 N	1.783 W	46.205	0.09
2466.600	0.69	350.51	2465.402	47.265 N	1.957 W	47.305	0.05
2546.000	0.69	350.51	2544.797	48.208 N	2.115 W	48.255	0.00

CALCULATION BASED ON MINIMUM CURVATURE METHOD

**SURVEY COORDINATES RELATIVE TO WELL SYSTEM REFERENCE POINT
TVD VALUES GIVEN RELATIVE TO DRILLING MEASUREMENT POINT**




















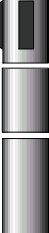


**VERTICAL SECTION RELATIVE TO WELL HEAD
VERTICAL SECTION IS COMPUTED ALONG A CLOSURE OF 357.49 DEGREES (GRID)
A TOTAL CORRECTION OF 14.07 DEG FROM MAGNETIC NORTH TO GRID NORTH HAS BEEN APPLIED**

**HORIZONTAL DISPLACEMENT IS RELATIVE TO THE WELL HEAD.
HORIZONTAL DISPLACEMENT(CLOSURE) AT 2546.000 METRES
IS 48.255 METRES ALONG 357.49 DEGREES (GRID)**

MWD RUN 200 - BHA
MWD RUN 200 - MWD

Component

Sensor

		Length (m)			Sensor Measure Point Distance To Bit (m)
HWDP		132.420	Sonic		
Sub		.640			
HWDP		9.470	MWD		
Sub		1.110			
Drill Collar		18.920	Directional		
Jar		9.750	Processor		
Drill Collar		55.780	MWD		
Sub		1.920			
MWD		28.560	Neutron		34.640
Reamer		2.740	Resistivity		31.680
Drill Collar		9.020	Density		28.710
Reamer		2.900			
Sub		.770			
Motor		8.290	Gamma Ray		25.300
Bit		.360			