



DGR Dual Gamma Ray
DDS Drill String Dynamics

										Company : Apache Energy Ltd									
										Rig : Ocean Patriot									
										Well : Fur Seal-1									
										Field : Exploration									
										Country : Australia									
										DOE Number :									
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										Field : Exploration									
										Well : Fur Seal-1									
										Rig : Ocean Patriot									
										Company : Apache Energy Ltd									
										Well : Fur Seal-1									
										Field : Exploration									
										Country : Australia									
										DOE Number :									
										Latitude : 38° 7' 47.91" South									
										Longitude : 148° 9' 8.44" East									
										UTM Easting = 600,995.50 m									
										UTM Northing = 5,779,136.70 m									
										Other Services									
										Elev. KB									
										DF 21.50 m									
										GL									
										WD 56.62 m									
										</									

Downhole Processor Information

Tool Type	HCIM	HCIM			
Software Version	68.18	68.18			
Sub Serial Number	198838	195232			
Insert Serial Number	074608	209729			
Logging String Serial Number	90086009H1GVR8	90086708H1RGV6			
Date and Time Initialized	25-Oct-05 03:08	28-Oct-05 12:54			
Date and Time Read	26-Oct-05 05:54:00	01-Jan-70 00:00			

Directional Sensor Information

Tool Type	PM	PM			
Distance From Bit (m)	18.36	32.73			
Software Version	N/A	N/A			
Sub Serial Number	124777	178482			
Sonde Serial Number	022873	126995			
Sensor ID Number	022873	126995			
Survey String Serial Number	90086411M8	90082559			
Toolface Offset (deg)	N/A	N/A			

Gamma Ray Sensor Information

Tool Type	DGR	DGR			
Distance From Bit (m)	14.98	11.51			
Recorded Sample Period (sec)	10	10			
Software Version	N/A	N/A			
Sub Serial Number	210651	64636			
Insert/Sonde Serial Number	184694	53520			

Drillstring Dynamics Sensor Information

Tool Type	DDS	DDS			
Distance From Bit (m)	0	0			
Recorded Sample Period (sec)	12	8			
Software Version	0.37	0.50			
Sub Serial Number	210651	064636			
Insert Serial Number	184694	53520			
Sensor ID Number	1004	126			

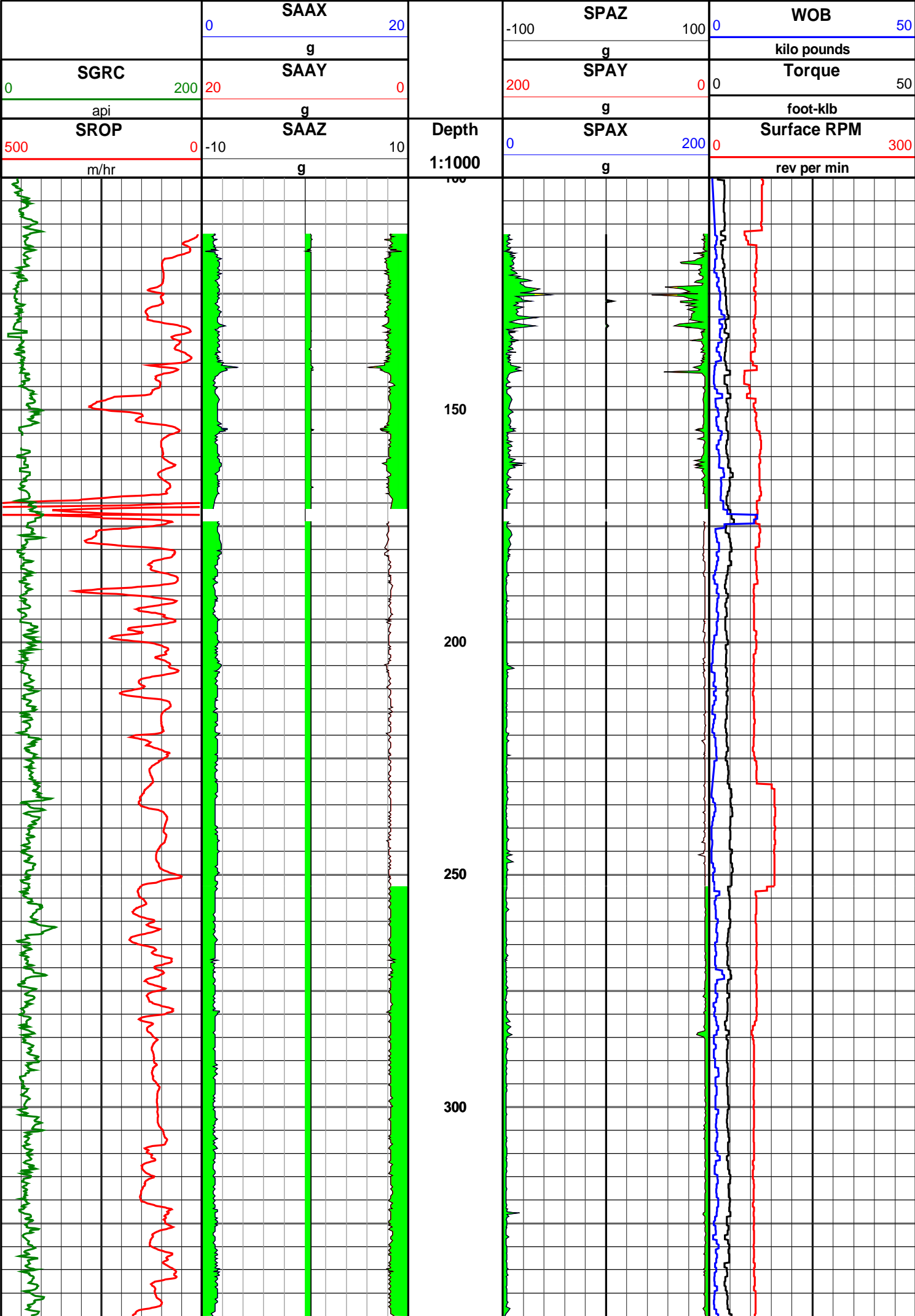
REMARKS

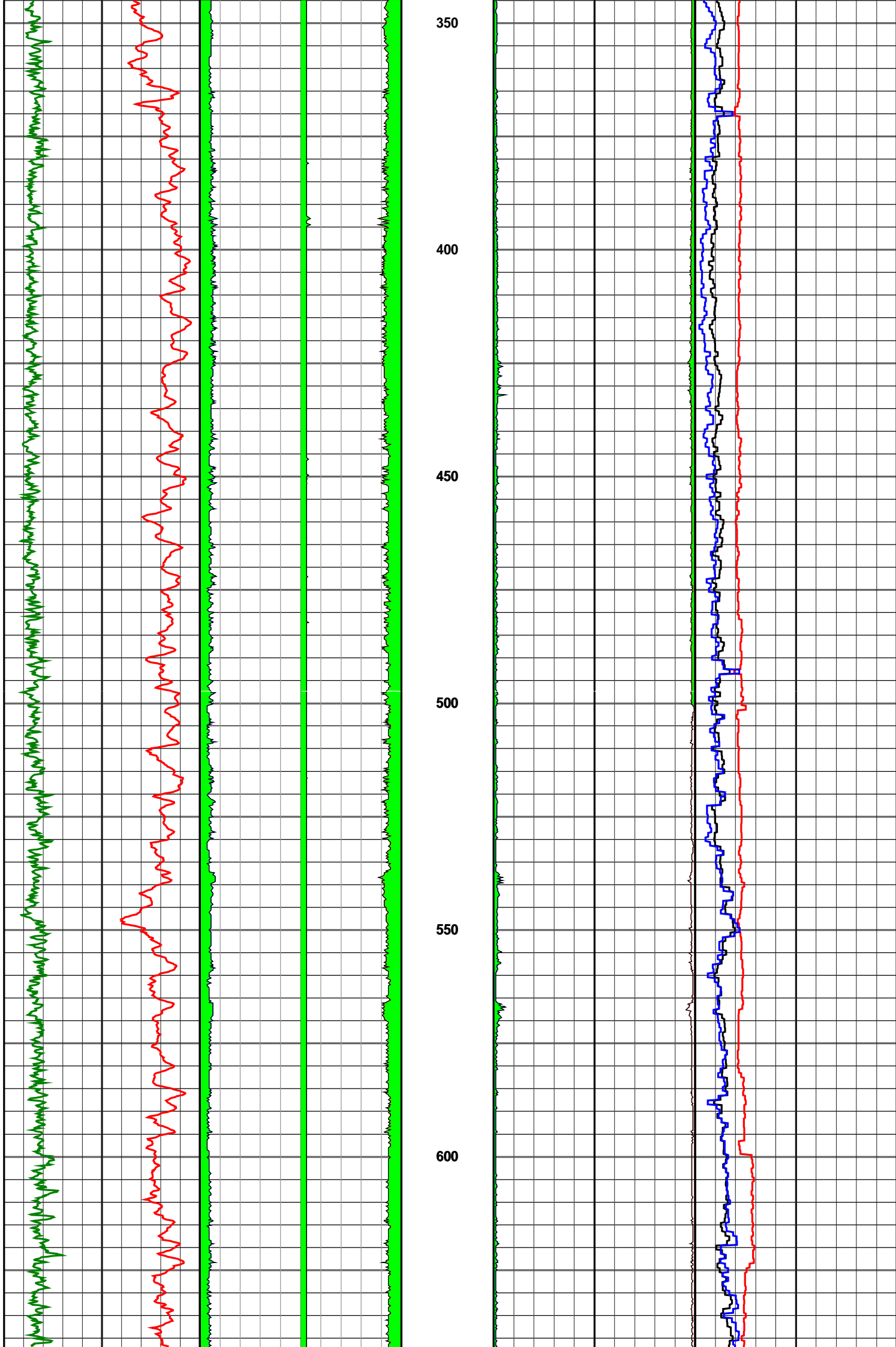
1. All depths are bit depths and referenced to the drillers pipe tally unless otherwise noted.
2. AV/CV is calculated at the MWD collar using the Power Law for water based muds and is in m/min.
3. Curve mnemonics are :
 - SROP - Smoothed Rate of Penetration, m/hr (Sperry)
 - SGRC - Smoothed Gamma Ray Combined, api (Sperry)
 - SAAX - Smoothed Average X-Axis Accelerometer, g's (Sperry)
 - SAAY - Smoothed Average Y-Axis Accelerometer, g's (Sperry)
 - SAAZ - Smoothed Average Z-Axis Accelerometer, g's (Sperry)
 - SPAX - Smoothed Peak X-Axis Accelerometer, g's (Sperry)
 - SPAY - Smoothed Peak Y-Axis Accelerometer, g's (Sperry)
 - SPAZ - Smoothed Peak Z-Axis Accelerometer, g's (Sperry)
 - WOB - Weight on Bit, klb (GeoServices)
 - RPM - Surface Drillstring Revolutions per minute, rpm (GeoServices)
 - TORQUE - Surface Torque, ft-klbs (GeoServices)

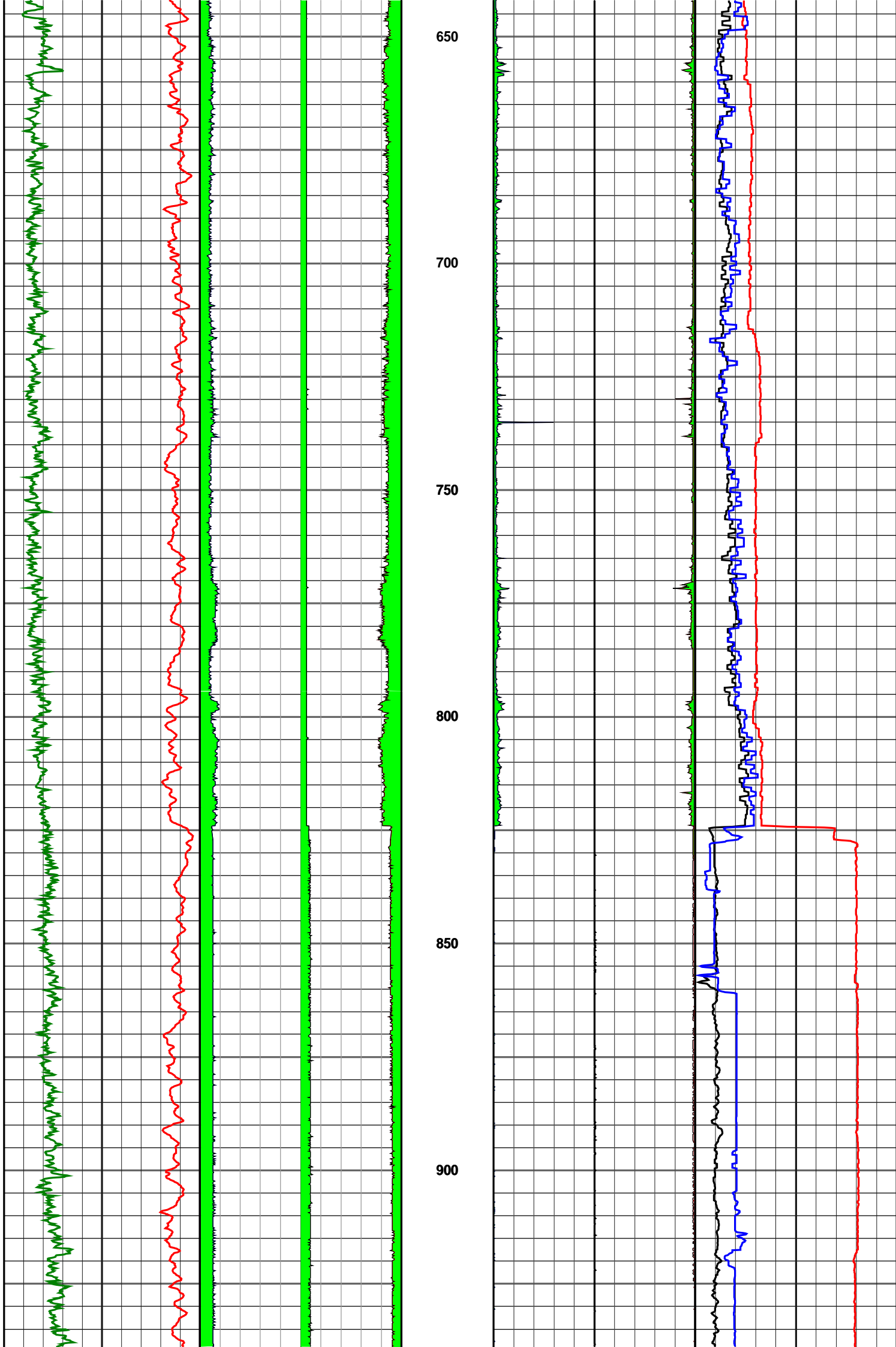
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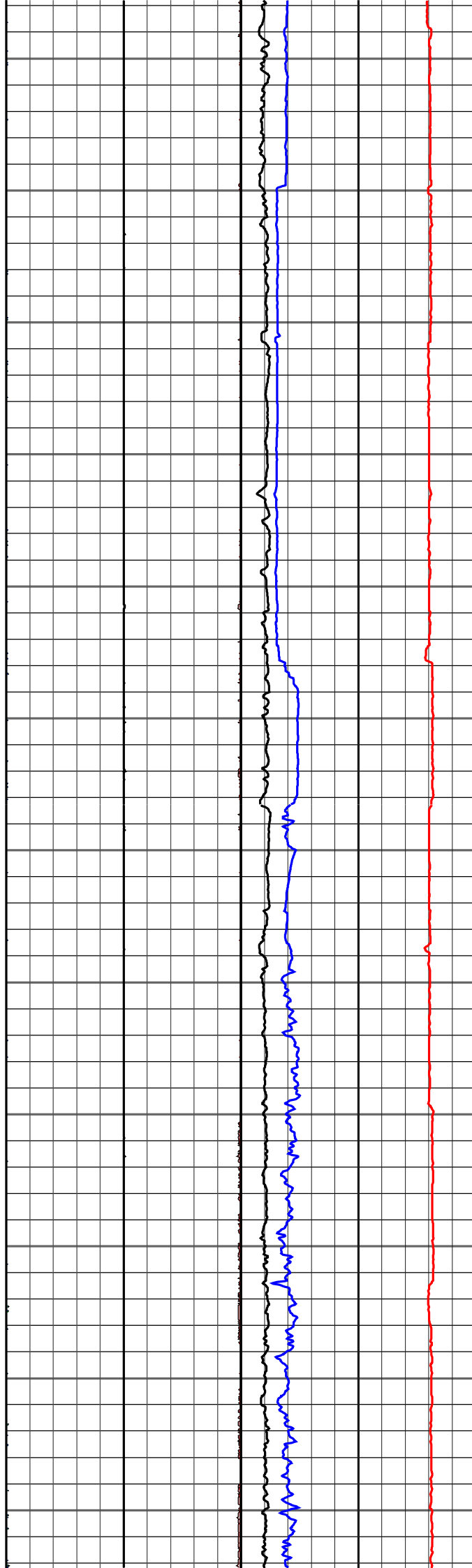
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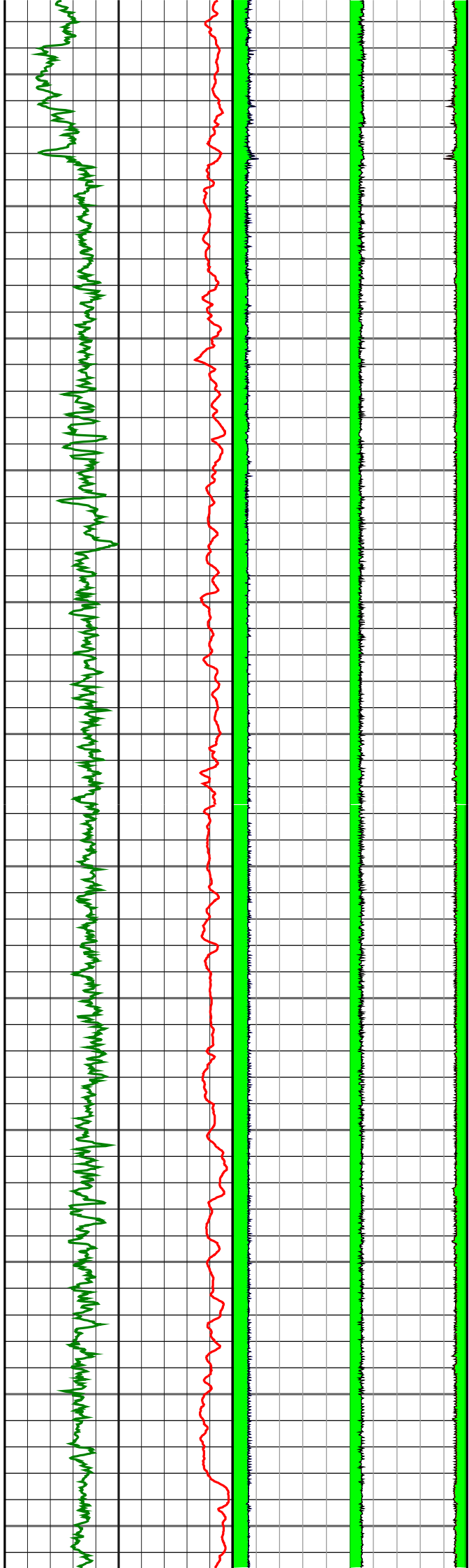
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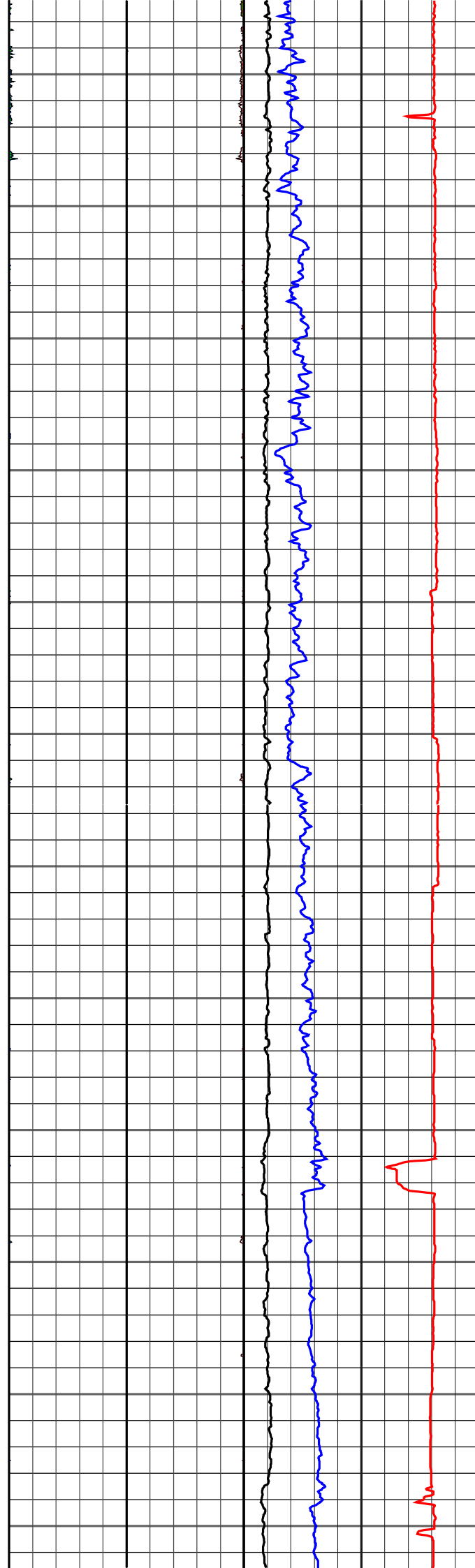
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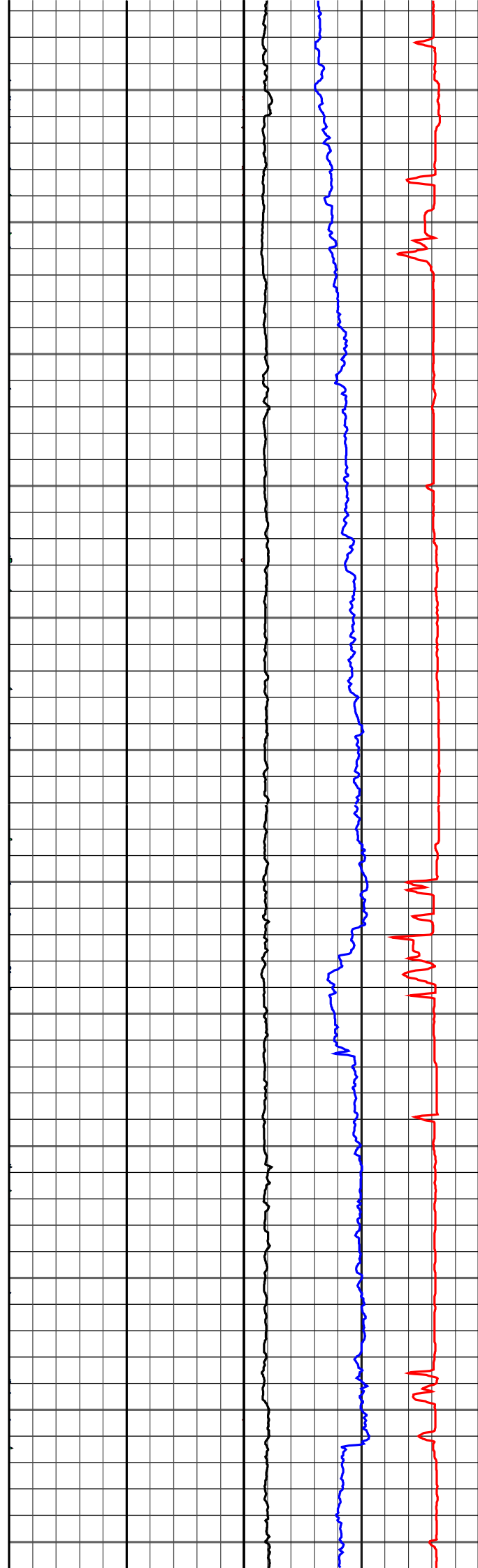
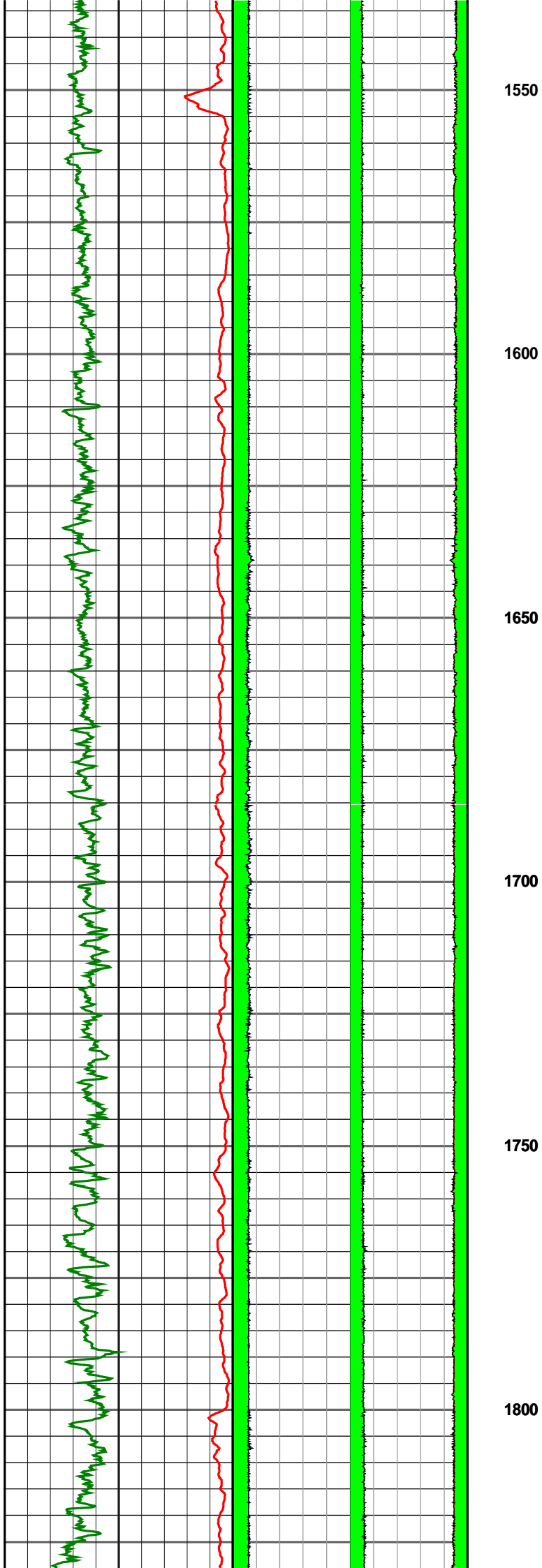
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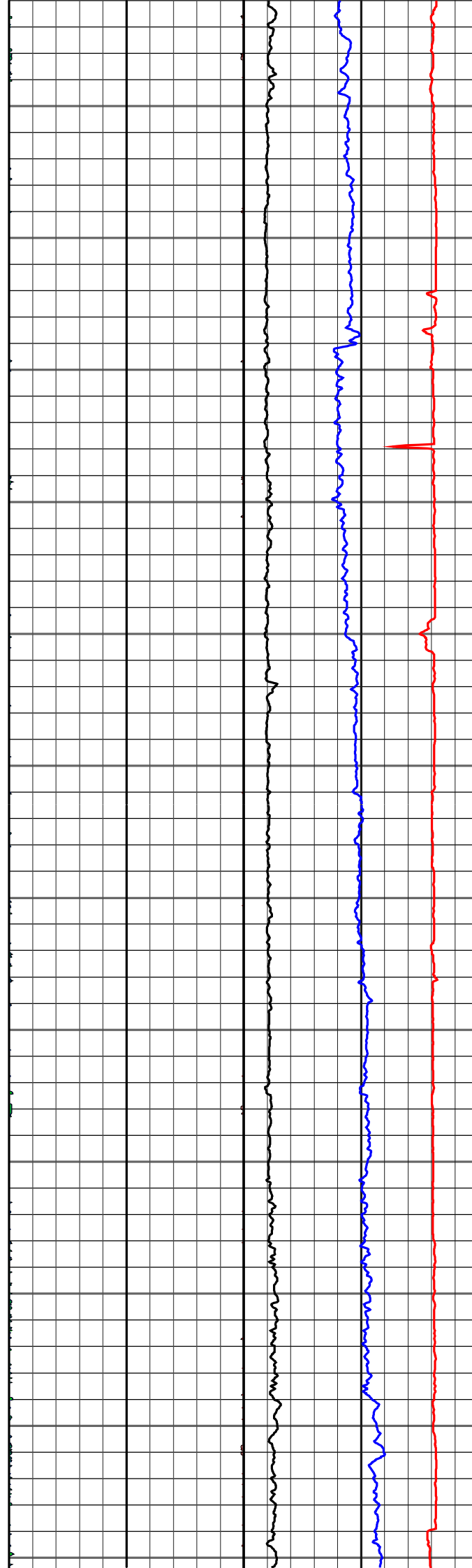
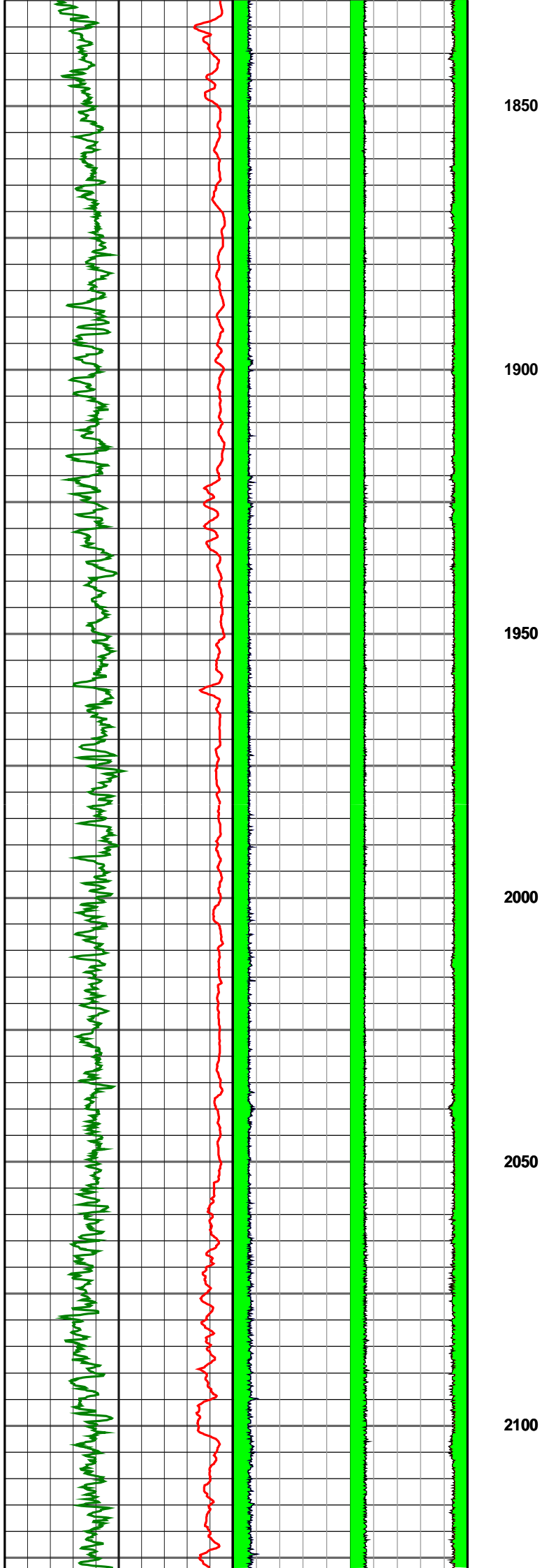
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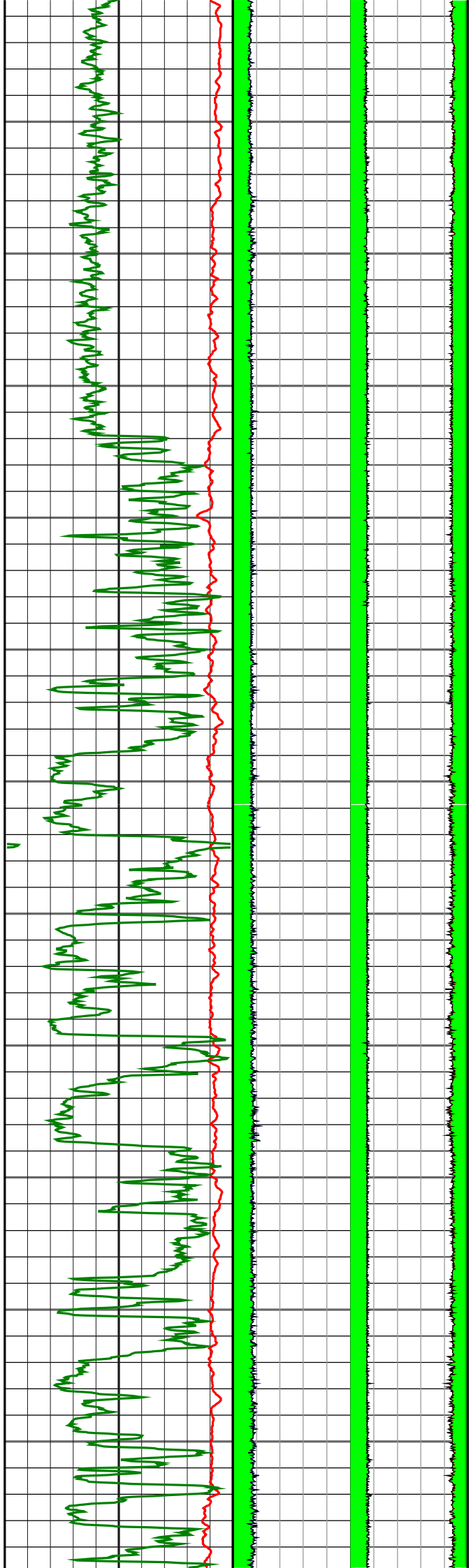
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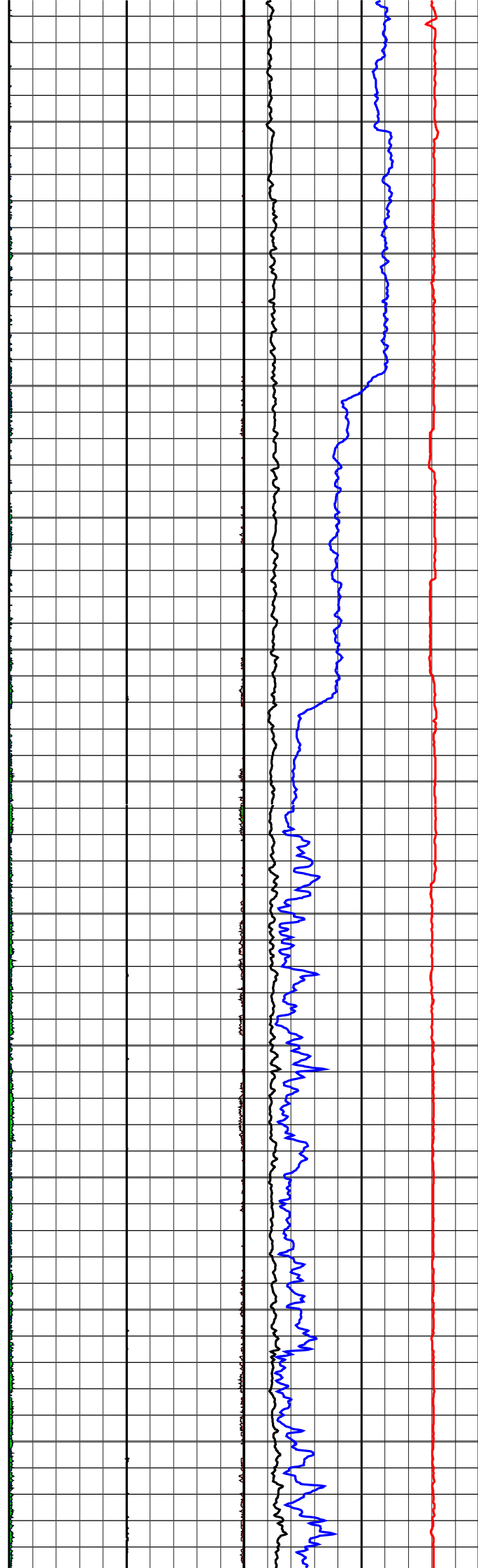
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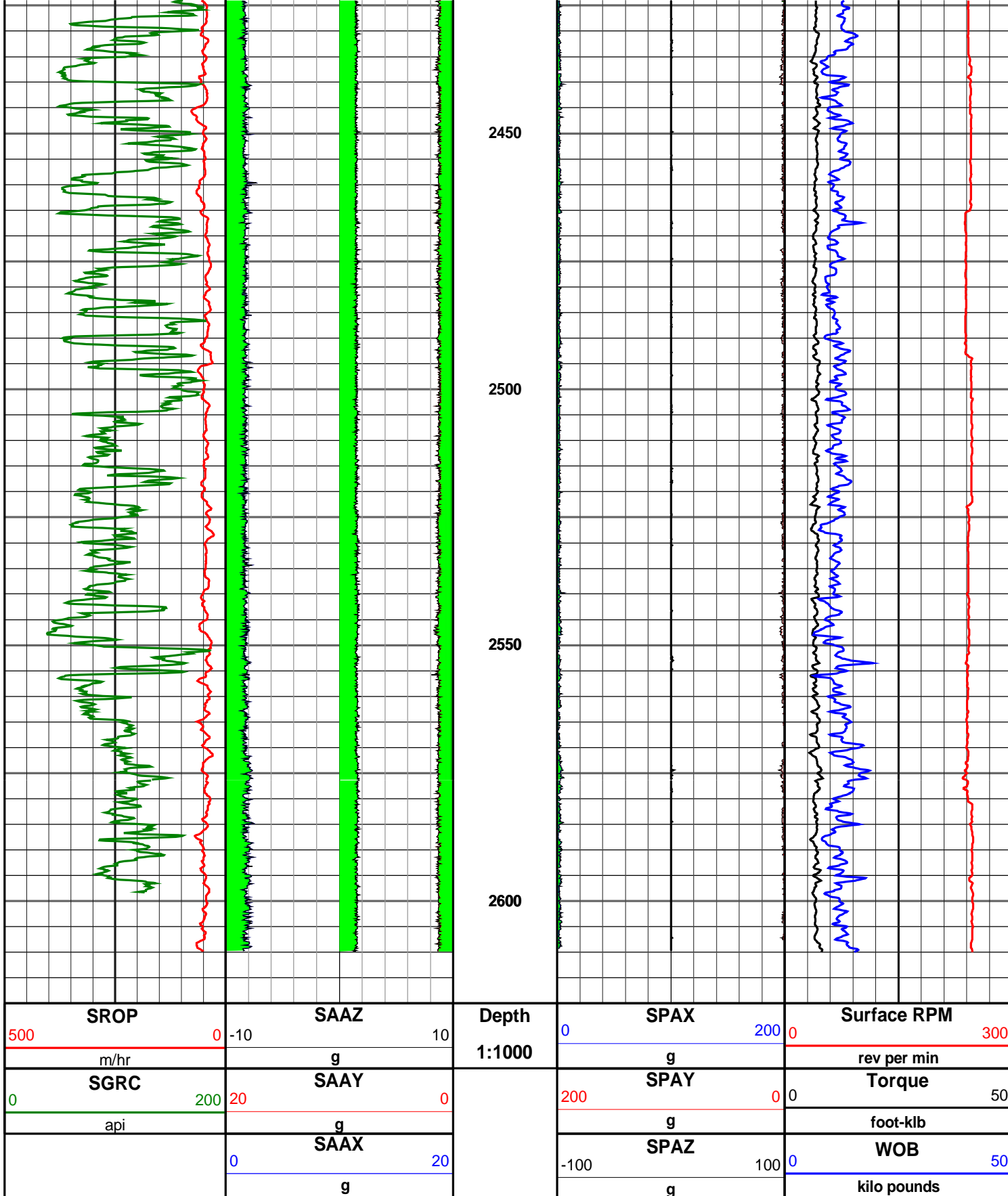
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HALLIBURTON

DIRECTIONAL SURVEY REPORT

Apache Energy Ltd
Fur Seal-1
Exploration
Victoria

<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>
0.000	0.00	0.00	0.000	0.000 N	0.000 E	0.000	TIE-IN
147.580	0.20	177.10	147.580	0.260 S	0.013 E	-0.260	0.04
202.770	0.44	176.34	202.769	0.569 S	0.032 E	-0.569	0.13
230.700	0.60	175.42	230.698	0.821 S	0.050 E	-0.821	0.17
259.170	0.44	182.26	259.166	1.079 S	0.058 E	-1.079	0.17
316.460	0.19	202.22	316.456	1.388 S	0.014 E	-1.388	0.14
431.050	0.42	169.27	431.044	1.977 S	0.022 E	-1.977	0.08
574.280	0.77	174.99	574.266	3.457 S	0.205 E	-3.457	0.07
631.930	0.59	187.00	631.912	4.138 S	0.203 E	-4.138	0.12
747.010	1.16	234.79	746.979	5.397 S	0.820 W	-5.397	0.23
804.240	1.36	261.58	804.196	5.830 S	1.963 W	-5.830	0.32
825.390	1.41	257.87	825.340	5.921 S	2.465 W	-5.921	0.15
854.170	1.08	262.66	854.113	6.030 S	3.081 W	-6.030	0.36
882.940	1.07	265.44	882.878	6.086 S	3.618 W	-6.086	0.05
911.810	1.19	271.36	911.742	6.100 S	4.189 W	-6.100	0.17
940.400	1.16	271.02	940.326	6.088 S	4.775 W	-6.088	0.04
969.000	1.14	275.16	968.921	6.057 S	5.347 W	-6.057	0.09
997.650	1.07	274.19	997.565	6.012 S	5.898 W	-6.012	0.09
1026.350	1.05	269.72	1026.260	5.994 S	6.426 W	-5.994	0.09
1054.970	0.93	273.03	1054.876	5.983 S	6.920 W	-5.983	0.14
1083.560	0.88	279.71	1083.463	5.934 S	7.368 W	-5.934	0.12
1112.050	0.86	280.50	1111.949	5.858 S	7.794 W	-5.858	0.02
1140.780	0.80	280.28	1140.676	5.782 S	8.205 W	-5.782	0.06
1169.420	0.69	281.95	1169.314	5.711 S	8.571 W	-5.711	0.12
1198.140	0.81	286.36	1198.031	5.618 S	8.934 W	-5.618	0.14
1255.860	1.01	305.38	1255.744	5.211 S	9.736 W	-5.211	0.19
1284.620	0.87	311.34	1284.500	4.921 S	10.105 W	-4.921	0.18
1313.270	0.86	333.94	1313.147	4.585 S	10.362 W	-4.585	0.35
1341.990	0.67	334.23	1341.865	4.241 S	10.529 W	-4.241	0.21
1370.650	0.68	330.15	1370.523	3.942 S	10.687 W	-3.942	0.05
1427.720	0.77	326.65	1427.588	3.328 S	11.066 W	-3.328	0.05
1456.160	0.82	328.79	1456.025	2.995 S	11.277 W	-2.995	0.07
1484.950	0.85	336.79	1484.812	2.622 S	11.468 W	-2.622	0.12
1513.890	0.88	324.92	1513.749	2.244 S	11.680 W	-2.244	0.19
1542.830	0.86	327.87	1542.686	1.878 S	11.923 W	-1.878	0.05
1571.590	0.87	324.35	1571.442	1.517 S	12.166 W	-1.517	0.06
1599.700	0.77	338.40	1599.549	1.166 S	12.360 W	-1.166	0.24
1657.300	0.97	353.39	1657.143	0.322 S	12.559 W	-0.322	0.15
1686.010	0.88	355.80	1685.849	0.138 N	12.603 W	0.138	0.10
1715.080	0.89	6.11	1714.916	0.585 N	12.596 W	0.585	0.16
1743.680	0.78	6.96	1743.513	1.000 N	12.548 W	1.000	0.12
1772.080	0.50	6.19	1771.911	1.316 N	12.511 W	1.316	0.29
1800.650	0.48	16.78	1800.480	1.554 N	12.464 W	1.554	0.10
1829.260	0.58	38.40	1829.089	1.782 N	12.339 W	1.782	0.23
1858.090	0.50	34.50	1857.917	2.000 N	12.178 W	2.000	0.09
1887.200	0.56	59.17	1887.026	2.177 N	11.984 W	2.177	0.24
1916.070	0.69	58.49	1915.894	2.340 N	11.715 W	2.340	0.14
1944.740	0.66	50.11	1944.562	2.536 N	11.442 W	2.536	0.11
1973.020	0.75	60.07	1972.840	2.732 N	11.157 W	2.732	0.16
2001.540	0.62	65.93	2001.358	2.888 N	10.854 W	2.888	0.15
2030.200	0.47	54.96	2030.017	3.020 N	10.615 W	3.020	0.19
2058.700	0.51	43.07	2058.516	3.179 N	10.433 W	3.179	0.11
2087.390	0.51	81.71	2087.205	3.290 N	10.221 W	3.290	0.35
2116.440	0.55	117.19	2116.254	3.244 N	9.970 W	3.244	0.34
2144.780	0.56	102.11	2144.592	3.153 N	9.713 W	3.153	0.16
2231.210	0.95	136.21	2231.015	2.547 N	8.802 W	2.547	0.20
2317.050	0.95	103.22	2316.844	1.871 N	7.619 W	1.871	0.19
2402.730	0.93	77.31	2402.513	1.861 N	6.254 W	1.861	0.15
2431.360	1.07	70.01	2431.139	2.003 N	5.778 W	2.003	0.20
2460.090	1.06	56.97	2459.864	2.239 N	5.303 W	2.239	0.25
2488.890	1.28	60.60	2488.658	2.543 N	4.799 W	2.543	0.24
2517.630	1.41	56.39	2517.390	2.896 N	4.225 W	2.896	0.17
2610.000	1.41	56.39	2609.732	4.153 N	2.333 W	4.153	0.00

CALCULATION BASED ON MINIMUM CURVATURE METHOD

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



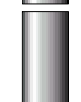

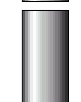

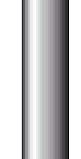



VERTICAL SECTION RELATIVE TO WELL HEAD
VERTICAL SECTION IS COMPUTED ALONG A DIRECTION OF 0.00 DEGREES (GRID)
A TOTAL CORRECTION OF 13.79 DEG FROM MAGNETIC NORTH TO GRID NORTH HAS BEEN APPLIED

HORIZONTAL DISPLACEMENT IS RELATIVE TO THE WELL HEAD.
HORIZONTAL DISPLACEMENT(CLOSURE) AT 2610.000 METRES
IS 4.764 METRES ALONG 330.68 DEGREES (GRID)

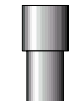

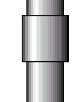

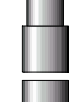

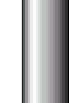

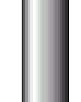

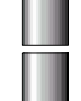



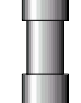

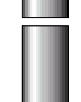

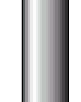

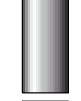


MWD RUN 100 - BHA

MWD RUN 100 - MWD

	Component Length (m)	Cumulative Length (m)		Sensor Measure Point Distance To Bit (m)
		267.89		
HWDP	138.100		Sonic	
		129.79		
Cross Over Sub	1.100			
		128.69		
Drill Collar	17.470		Pulser	
		111.22		
Drilling Jars	9.050		Processor	
		102.17		
Drill Collar	70.480		Directional	18.360
		31.69		
Integral Blade Stabilizer	2.150		Processor	
		29.54		
MWD	19.610			

						
Cross Over Sub		.970	9.93	Gamma Ray		14.980
			8.96			
9-5/8" SperryDrill Lobe 3/4 - 4M ₃ DI		8.540		Resistivity		11.950
PDC		.420	0.42			

MWD RUN 200 - BHA	MWD RUN 200 - MWD
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		Component Length (m)	Cumulative Length (m)			Sensor Measure Point Distance To Bit (m)
			259.78			
HWDP		110.550		Pulser		
			149.23			
Drill Collar		18.620		Processor		
			130.61	Directional		32.730
Drilling Jars		9.680				
			120.93	Sonic		
Drill Collar		83.680		Neutron		
			37.25	Density		20.400
MWD		26.920		Processor		
			10.33			
Integral Blade Stabilizer		1.530			