Sperry Drilling Services

INSITE

MWD

DGR Dual Gamma Ray
DDS Drill String Dynamics

1 : 1000

Company	: Nexus Energy Ltd
Rig	: Ocean Patriot
Well	: Culverin-1
Field	: Exploration
Country	: Australia
DOE Number	:

Country	: Australia
Field	: Exploration
Location	: Lat: 38° 24' 8.14" South Long: 148° 39' 14.92" East
Well	: Culverin-1
Company	: Nexus Energy Ltd
Rig	: Ocean Patriot

LOCATION

Latitude	: 38° 24' 8.14" South
Longitude	: 148° 39' 14.92" East
UTM Easting =	644,437.30 m
UTM Northing =	5,748,256.39 m

Other Services
Directional Drilling

Permanent Datum	: LAT	Elevation :	0.00 m
Log Measured From	: Drill Floor	21.50 m	Above Permanent Datum
Drilling Measured From	: Drill Floor		

MD LOG

Elev.	KB		
	DF	21.50 m	
	GL		
	WD	585.50 m	

Depth Logged	: 650.00 m To 3,758.00 m	Unit No.	: 182
Date Logged	: 16-Dec-05 To 07-Jan-06		
Total Depth MD	: 3,758.00 m TVD: 3,753.86 m	Plot Type	: Final
Spud Date	: 16-Dec-05	Plot Date	: 17-Jan-06

Job No. : AU-FE-0003951414

Borehole Record (MD)

Run No.	Size	From	To
3	311.000 mm	1,525.00 m	3,402.00 m
4	311.000 mm	3,402.00 m	3,571.00 m
6	311.000 mm	3,571.00 m	3,758.00 m

Borehole Record (MD)

Run No.	Size	From	To

Casing Record (MD)

Size	Weight	From	To
508.000 mm	192.00 kg/m	SURFACE	650.00 m
340.000 mm	101.00 kg/m	SURFACE	1,511.80 m

WELL INFORMATION

MWD Run Number	300	400	600		
Date run completed	30-Dec-05	02-Jan-06	07-Jan-06		
Rig Bit Number	3	4	6		
Bit Size (mm)	311	311	311		
Tool Nominal OD (mm)	203	203	203		
Log Start Depth (MD, m)	1,525.00	3,402.00	3,571.00		
Log End Depth (MD, m)	3,402.00	3,571.00	3,758.00		
Drill or Wipe	Drilling	Drilling	Drilling		
Drill/Wipe Start Date and Time	24-Dec-05 17:15	31-Dec-05 12:35	04-Jan-06 09:52		
Drill/Wipe End Date and Time	30-Dec-05 08:30	01-Jan-06 18:58	07-Jan-06 00:10		
Min Inc (deg) @ Depth (MD, m)	0.33 @ 1,540.46	3.32 @ 3,547.59	2.98 @ 3,641.38		
Max Inc (deg) @ Depth (MD, m)	4.30 @ 2,457.14	3.59 @ 3,432.80	3.36 @ 3,555.34		
Bit TFA(in2) / Bit Type	2.197 / Hycalog RSX-616M	2.197 / Hycalog RSX-616M	0.920 / Smith GF30BODVCP		
Flow Rate (gpm)	900	850	795		
Max AV (mpm) / CV (mpm) @ MWD	78.0 / 138.1	78.0 / 150.0	70.4 / 142.9		
Fluid Type	MixSalt-Glydrill	MixSalt-Glydrill	MixSalt-Glydrill		
Density (sg) / Viscosity (spqt)	1.2 / 57.00	1.2 / 62.0	1.2 / 59.0		
Filtrate CL (ppm)	82,000	84,000	79,000		
pH / Fluid Loss (mptm)	9.00 / 4.0	6.00 / 6.0	9.00 / 9.0		
PV (cp) / YP (lhf2)	17 / 30.00	17 / 33.0	15 / 30.0		
% Solids / % Sand	10.5 / 1.25	10.5 / 1.50	10.5 / 0.7		
% Oil / Oil:Water Ratio	0 / N/A	0 / N/A	0 / N/A		
Rm @ Measured Temp (degC)	0.07 @ 23.9	0.07 @ 24.4	0.07 @ 23.9		
Rmf @ Measured Temp (degC)	0.05 @ 23.9	0.06 @ 24.4	0.06 @ 23.9		
Rmc @ Measured Temp (degC)	0.11 @ 23.9	0.11 @ 24.4	0.10 @ 23.9		
Max Tool Temp (degC) / Source	56.00 / EWRP4	75.00 / EWR-P4	58.00 / EWR-P4		
Rm @ Max Tool Temp (degC)	0.04 @ 56.00	0.03 @ 75.0	0.04 @ 58.0		
Lead MWD Engineer	A. Oraekwuotu	A. Rule	A. Oraekwuotu		
Customer Representative	R. King	R. King	R. King		

SENSOR INFORMATION

Downhole Processor Information

Tool Type	HCIM	HCIM	HCIM		
Software Version	68.18	68.18	68.18		
Sub Serial Number	AX8005	AX8005	078516		
Insert Serial Number	093281	093281	160772		
Logging String Serial Number	90089208XH1RGV8	90089208H1RGV8	90089207H1RGV8		
Date and Time Initialized	24-Dec-05 00:23	30-Dec-05 23:36	03-Jan-06 12:52		
Date and Time Read	30-Dec-05 19:04:00	02-Jan-06 05:19:00	07-Jan-06 17:22:00		

Directional Sensor Information

Tool Type	DM	DM	DM		
Distance From Bit (m)	13.13	13.09	13.55		
Software Version	3.15	3.15	3.15		
Sub Serial Number	10603354	10603354	111363		
Sonde Serial Number	185534	185534	149865		
Sensor ID Number	N/A	N/A	N/A		
Survey String Serial Number	N/A	N/A	N/A		
Toolface Offset (deg)	N/A	N/A	N/A		

Gamma Ray Sensor Information

Tool Type	DGR	DGR	DGR		
Distance From Bit (m)	15.73	15.70	16.17		
Recorded Sample Period (sec)	10	10	10		
Software Version	N/A	N/A	N/A		
Sub Serial Number	210655	210655	10718409		
Insert/Sonde Serial Number	172498	172498	151081		

Drillstring Dynamics Sensor Information

Tool Type	DDS	DDS	DDS		
Distance From Bit (m)	0	0	0		
Recorded Sample Period (sec)	16	16	16		
Software Version	0.50	0.50	0.50		
Sub Serial Number	210655	210655	10718409		
Insert Serial Number	172498	172498	151081		
Sensor ID Number	699	699	1149		

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)

4. No Geoservices Data received from 3571.0m to 3600.0mMDRT.

5. No Gamma Ray data from 3698.70m to 3758.0mMDRT due to LWD Downhole Processor (HCIM) failure.

6. No DDS data from 3730.0m to 3758.0mMDRT due to LWD Downhole Processor (HCIM) failure.

7. DGR data from interval 1510.7 to 1511.8 mMDRT was logged behind casing.

WARRANTY

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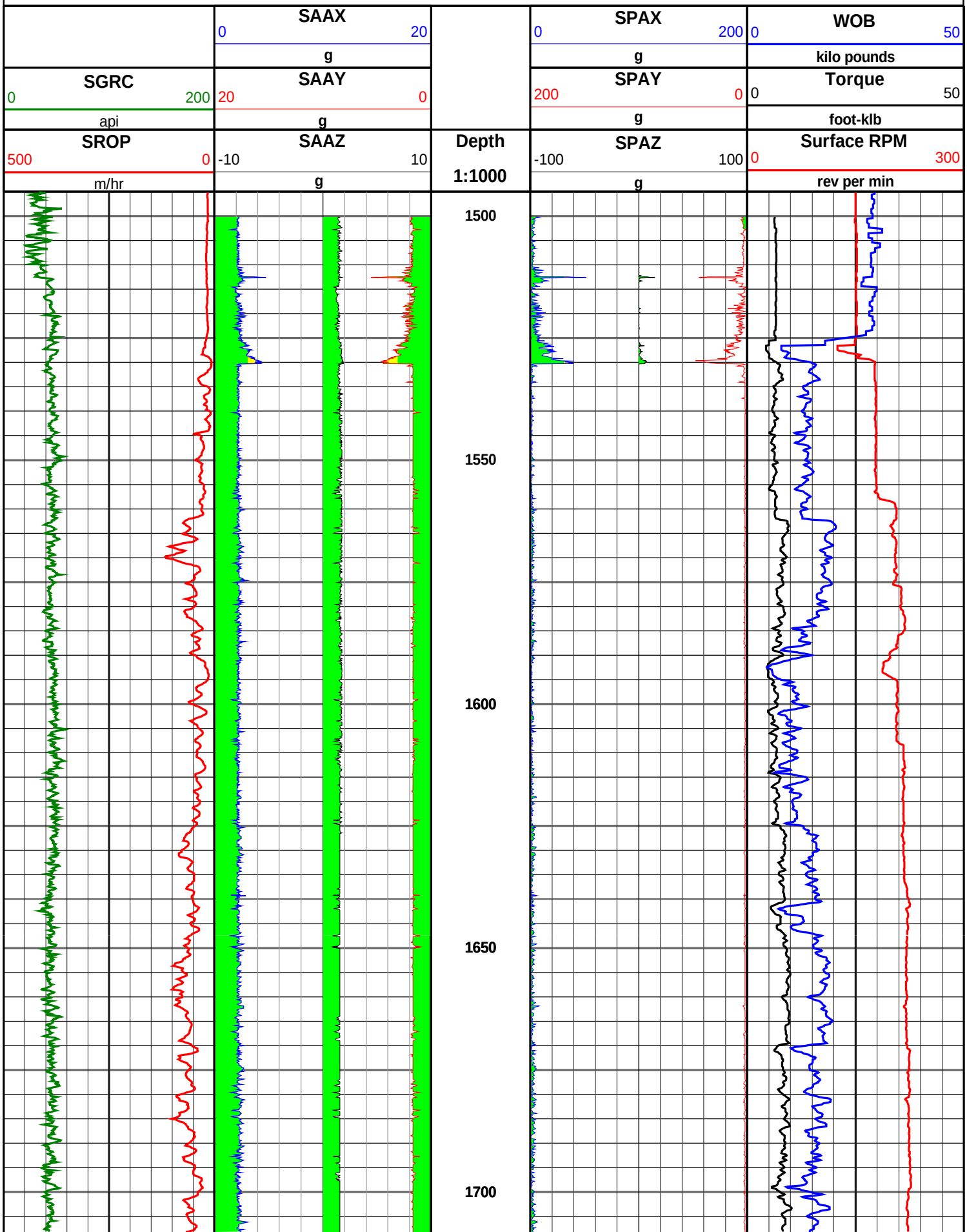

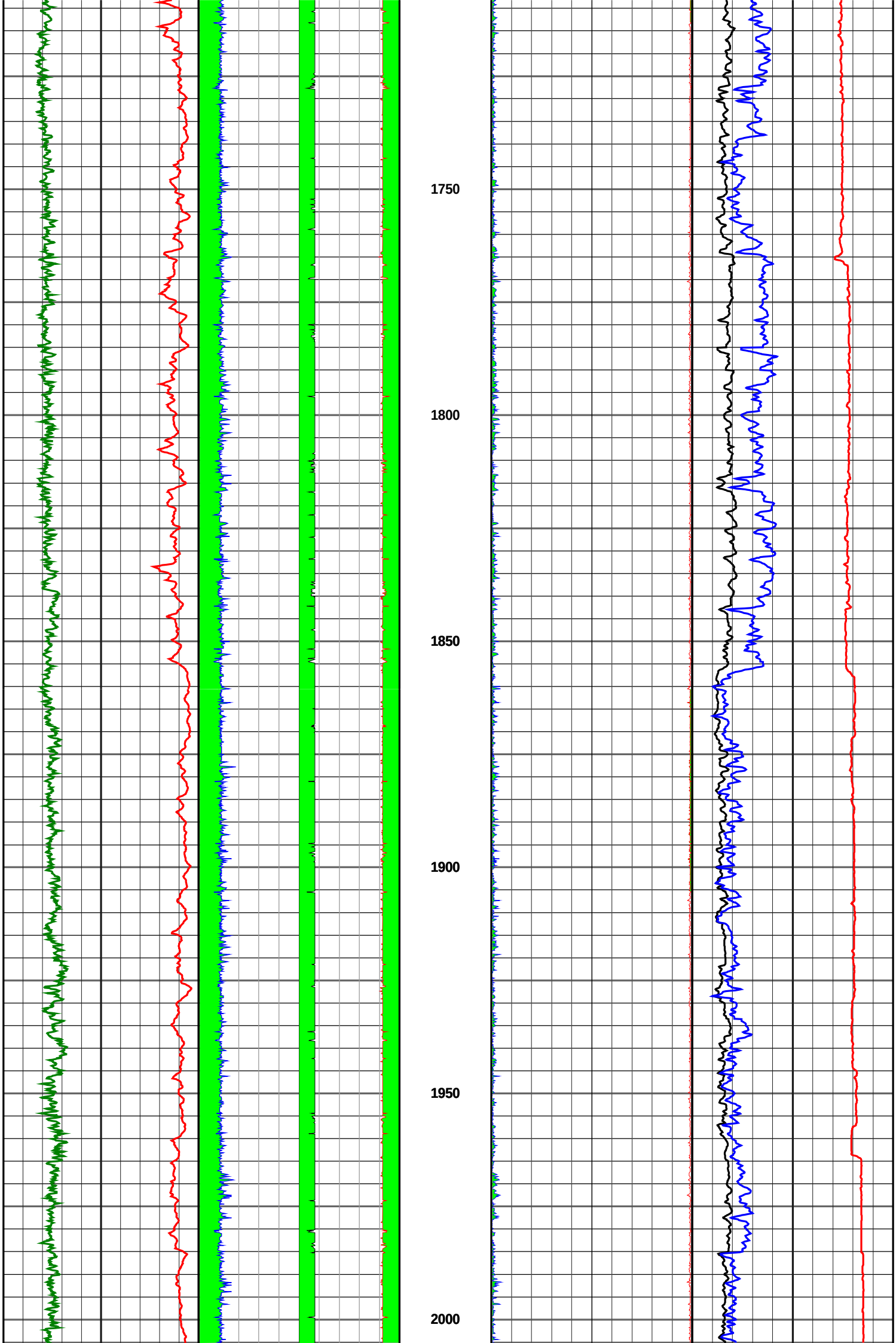
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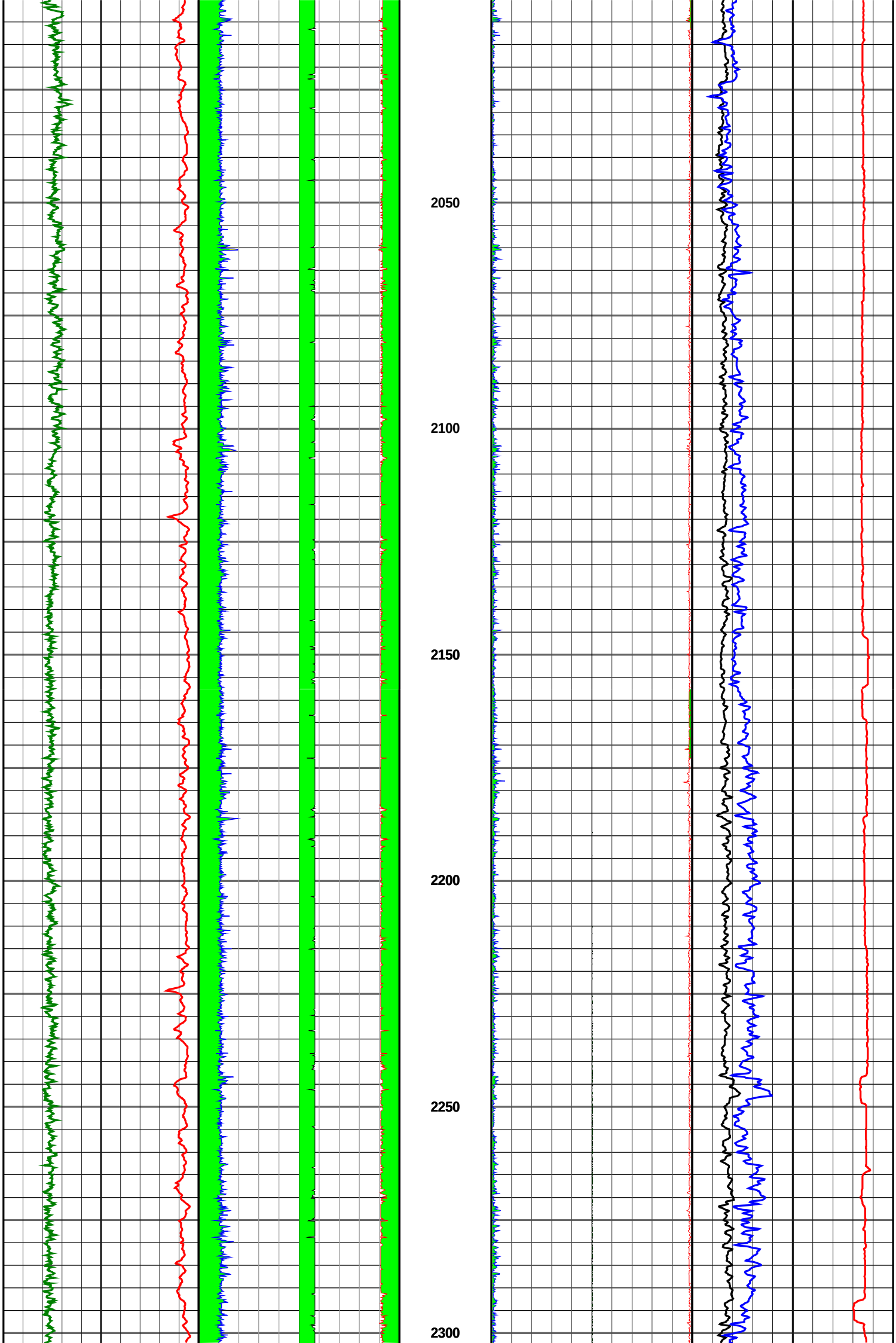
1900
1950
2000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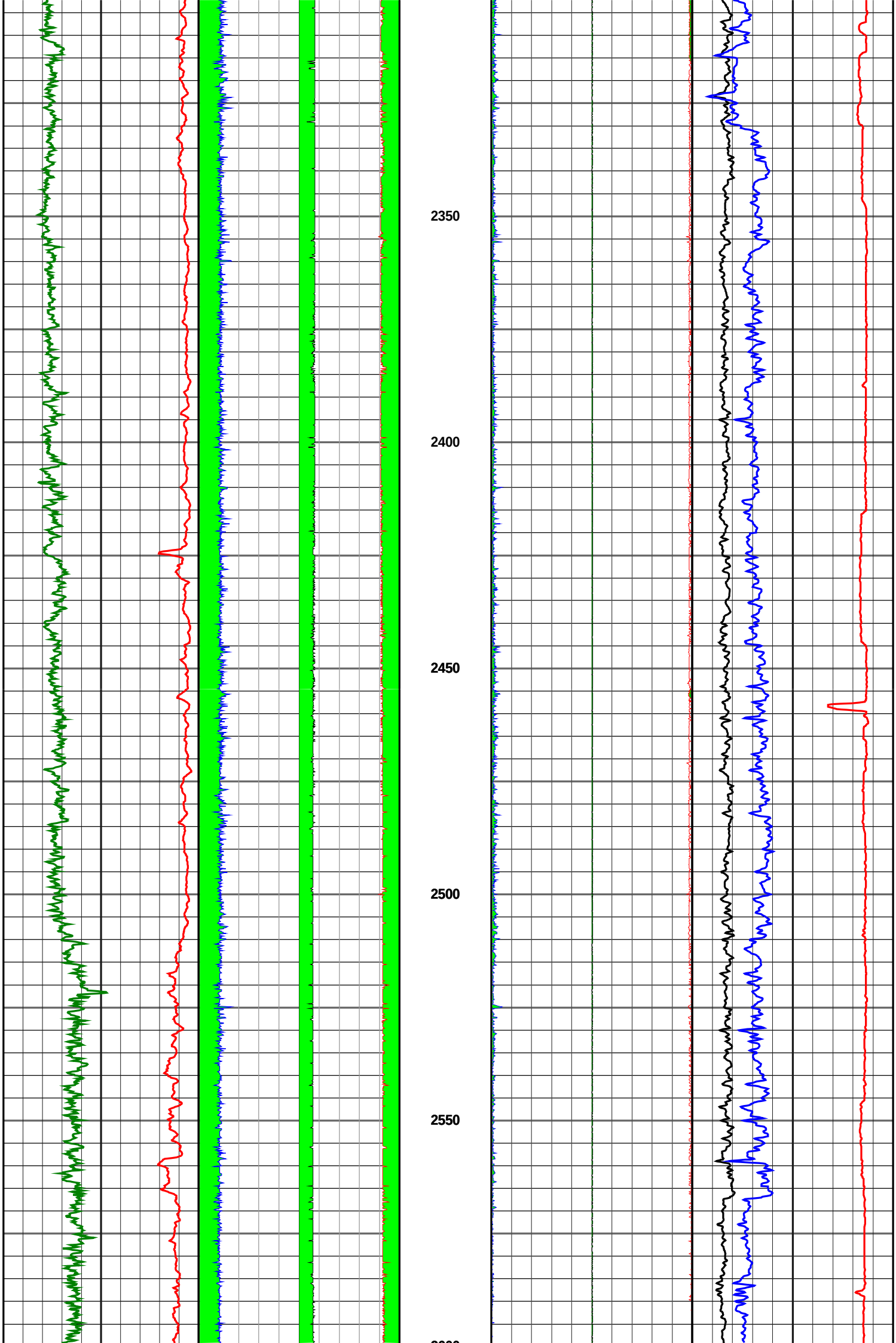
2300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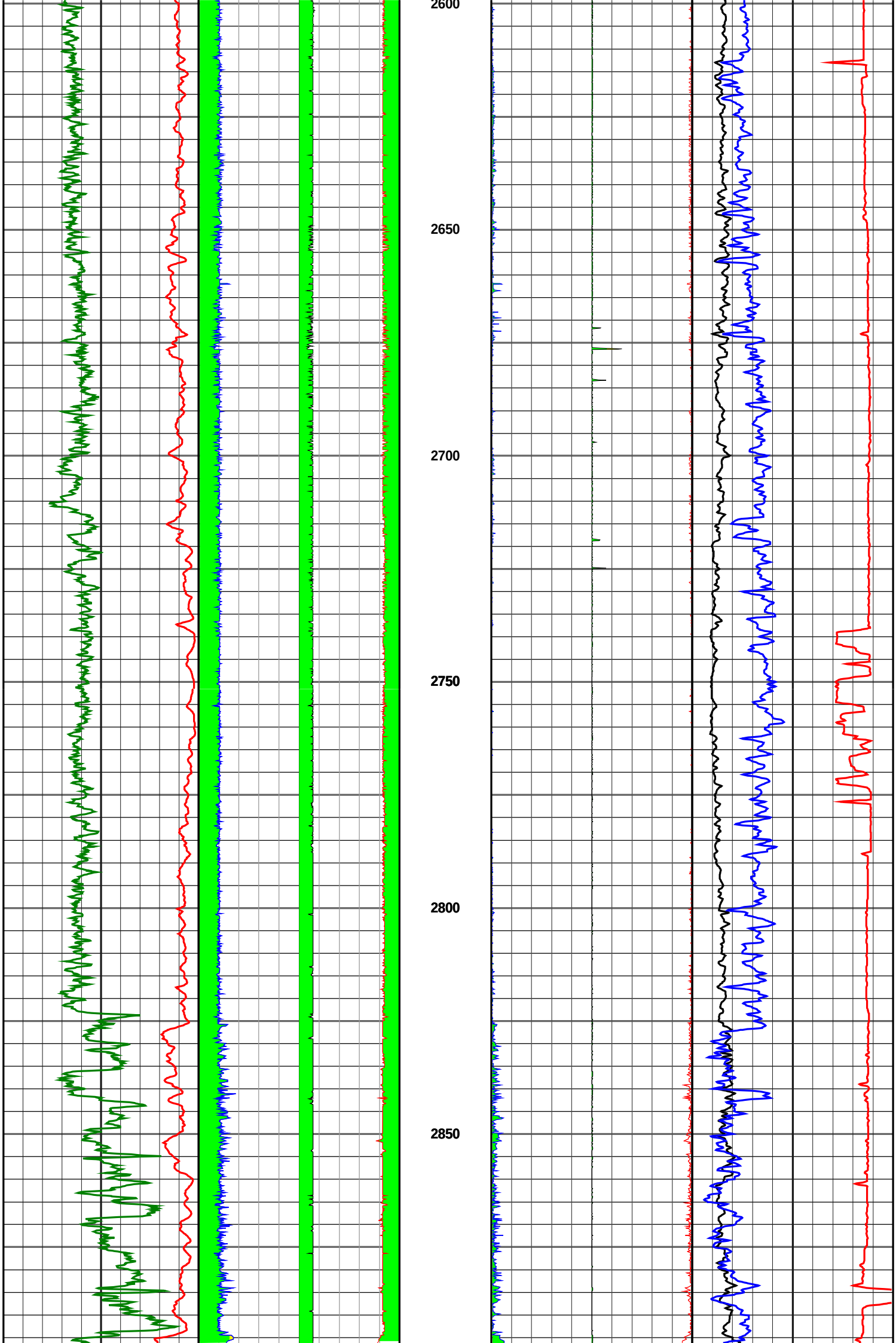
2500
2550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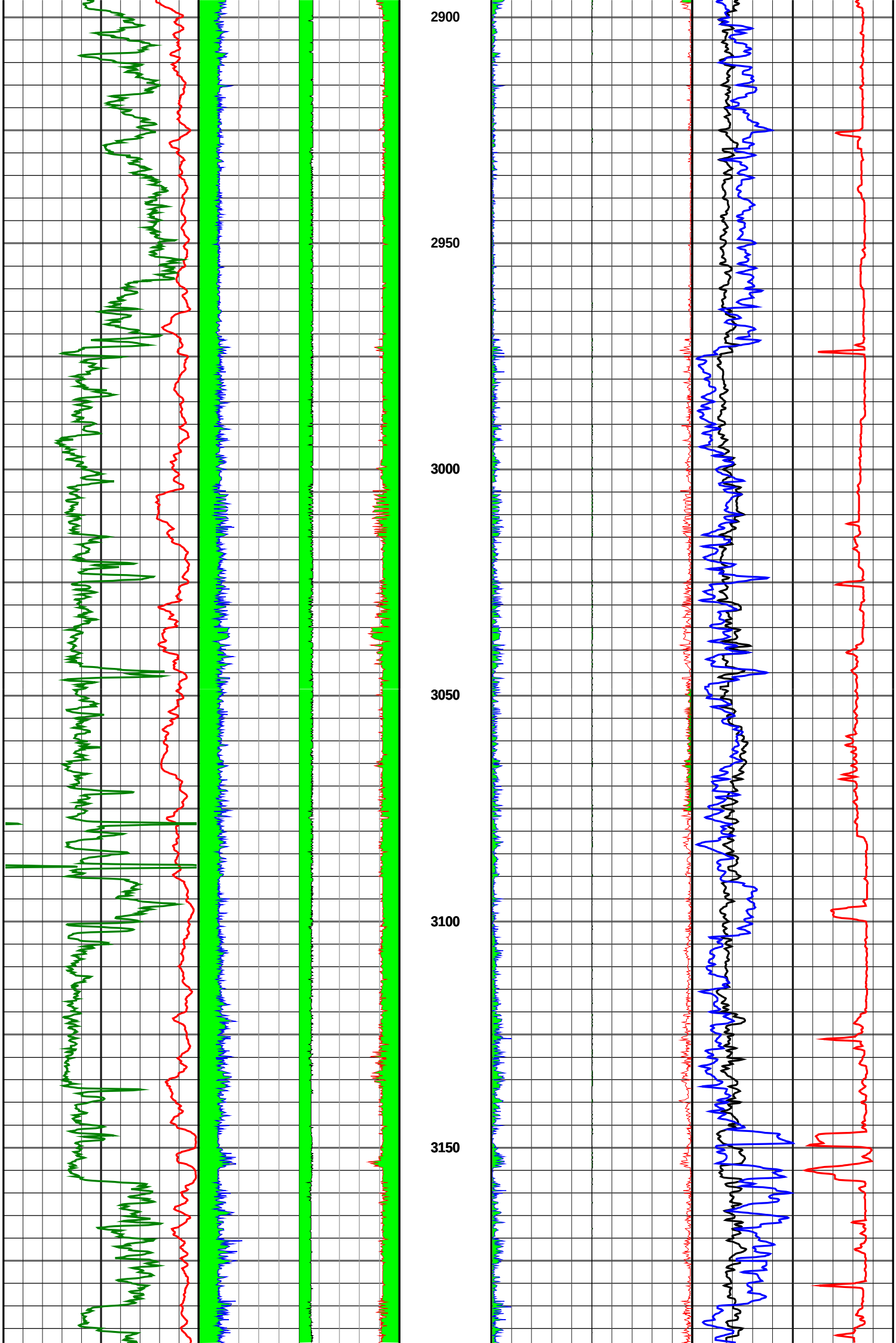
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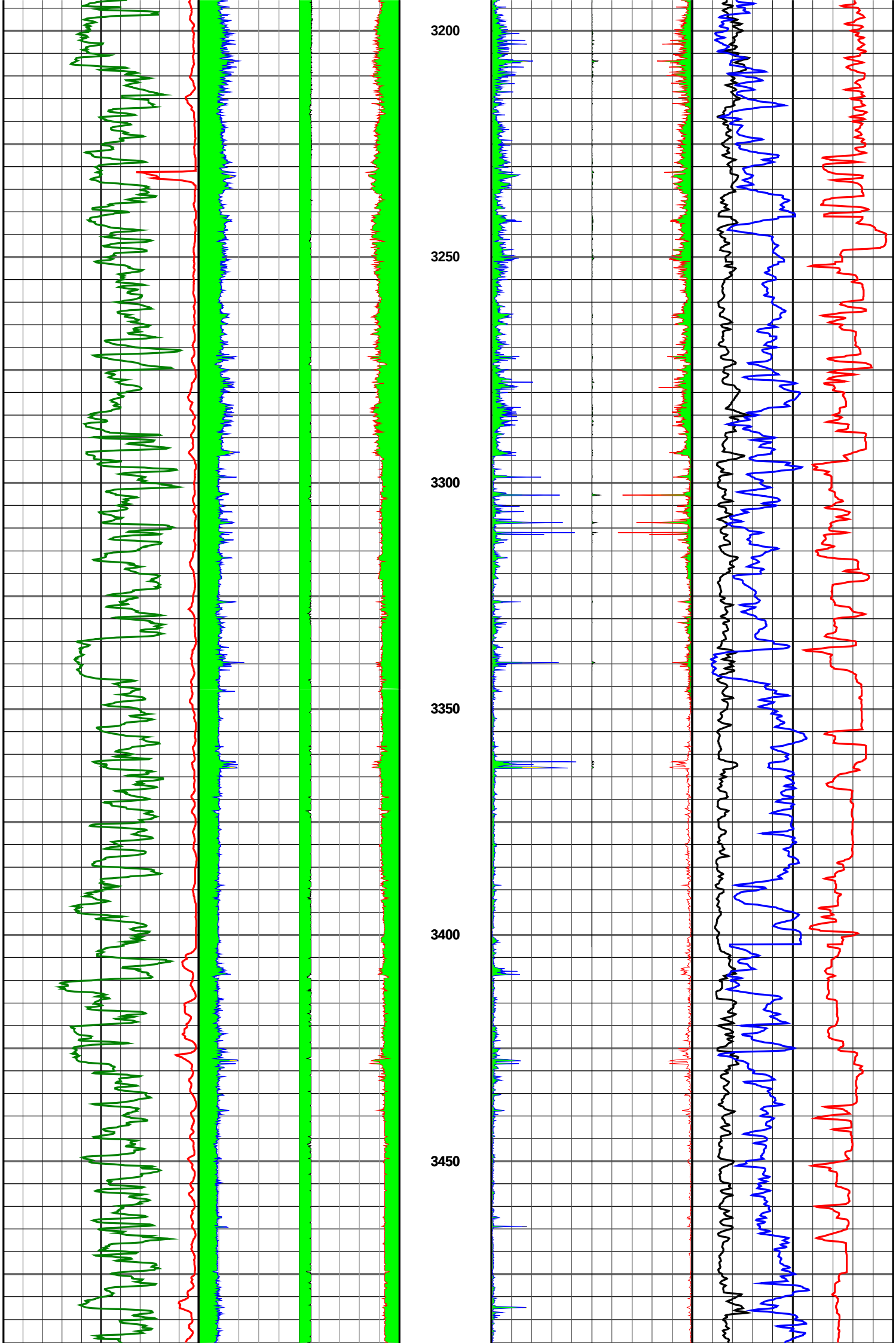
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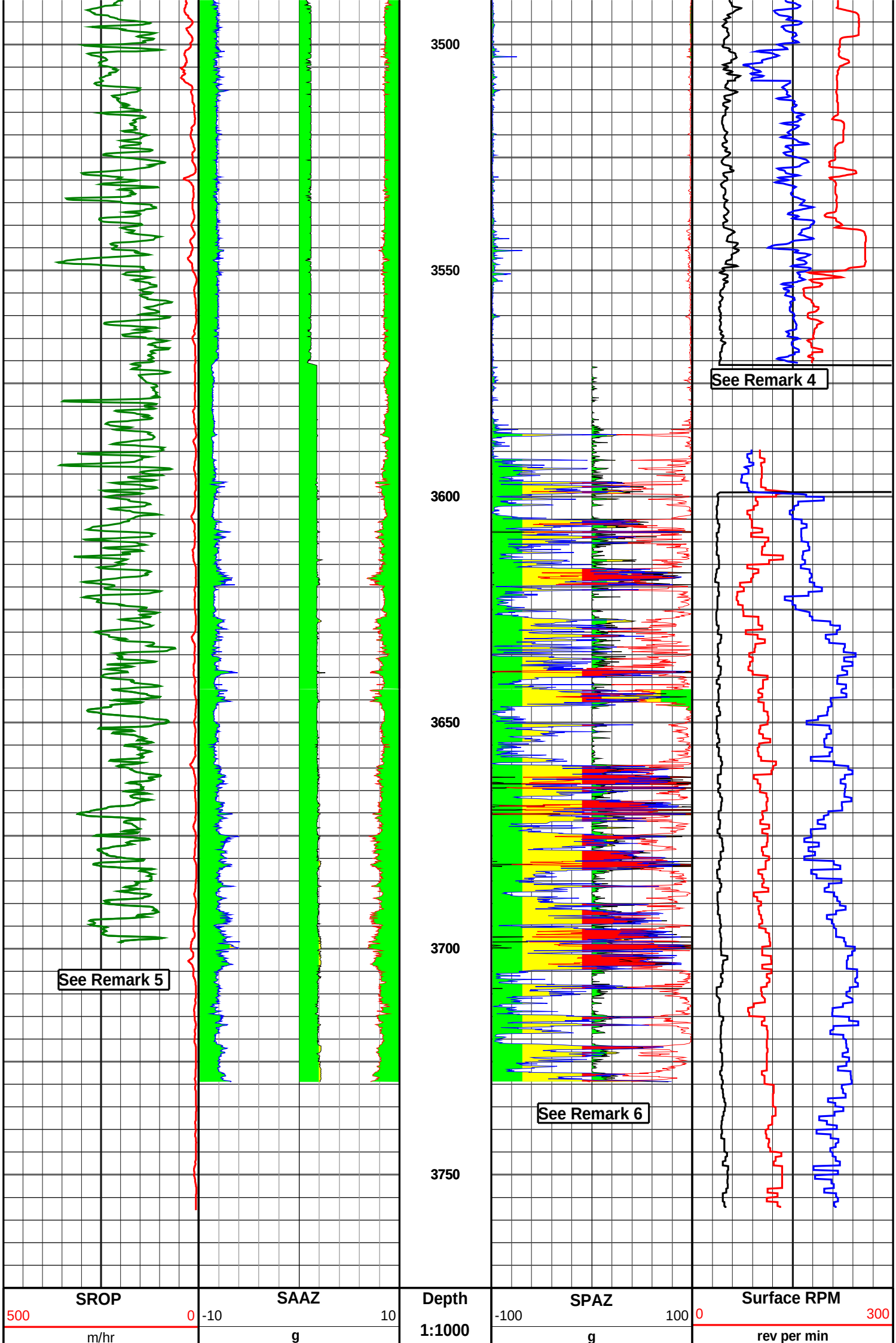
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3650
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3750
See Remark 4
See Remark 5
See Remark 6
SROP
500
0
m/hr
SAAZ
-10
10
g
Depth
1:1000
SPAZ
-100
100
g
Surface RPM
0
300
rev per min

SGRC	SAAY		SPAY	Torque
0 — 200	20 — 0		200 — 0	0 — 50
api	g		g	foot-klb
	SAAX		SPAX	WOB
	0 — 20		0 — 200	0 — 50
	g		g	kilo pounds

HALLIBURTON

DIRECTIONAL SURVEY REPORT

Nexus Energy Ltd
Culverin-1
Exploration
Victoria
Australia
AU-FE-0003951414
RT - LAT = 21.5m. 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
681.950	1.26	227.00	681.895	5.102 S	5.471 W	-7.379	0.06
767.680	0.81	263.55	767.612	5.812 S	6.763 W	-8.729	0.27
825.040	0.93	254.57	824.965	5.981 S	7.615 W	-9.383	0.09
911.190	1.09	257.49	911.102	6.344 S	9.088 W	-10.567	0.06
1027.780	0.85	252.60	1027.675	6.844 S	10.998 W	-12.127	0.06
1056.460	0.79	254.04	1056.352	6.962 S	11.391 W	-12.460	0.07
1085.160	0.77	260.55	1085.050	7.048 S	11.770 W	-12.760	0.09
1113.810	0.62	255.11	1113.698	7.119 S	12.110 W	-13.023	0.18
1142.540	0.51	257.73	1142.426	7.186 S	12.384 W	-13.244	0.11
1171.110	0.43	257.64	1170.995	7.236 S	12.615 W	-13.424	0.08
1228.350	0.22	250.90	1228.234	7.318 S	12.928 W	-13.679	0.12
1257.080	0.17	244.39	1256.964	7.355 S	13.019 W	-13.764	0.05
1342.790	0.06	257.65	1342.674	7.421 S	13.181 W	-13.915	0.04
1371.460	0.03	247.14	1371.344	7.427 S	13.204 W	-13.934	0.03
1428.750	0.11	336.43	1428.634	7.382 S	13.240 W	-13.920	0.06
1486.030	0.16	21.18	1485.914	7.258 S	13.234 W	-13.818	0.06
1509.770	0.09	0.70	1509.654	7.210 S	13.222 W	-13.773	0.10
1540.460	0.33	354.58	1540.343	7.098 S	13.230 W	-13.689	0.24
1569.110	0.36	350.12	1568.993	6.926 S	13.254 W	-13.567	0.04
1597.730	0.50	2.93	1597.612	6.714 S	13.263 W	-13.404	0.18
1626.440	0.63	1.96	1626.321	6.431 S	13.251 W	-13.173	0.14
1655.170	0.86	9.39	1655.048	6.061 S	13.210 W	-12.855	0.26
1683.810	1.15	21.61	1683.684	5.583 S	13.070 W	-12.390	0.38
1712.560	1.54	24.62	1712.426	4.963 S	12.802 W	-11.735	0.42
1741.120	1.85	23.41	1740.973	4.190 S	12.458 W	-10.912	0.33
1769.900	2.12	24.21	1769.736	3.276 S	12.055 W	-9.942	0.28
1798.490	2.39	23.17	1798.304	2.246 S	11.603 W	-8.850	0.28
1827.170	2.73	24.42	1826.955	1.075 S	11.086 W	-7.607	0.36
1855.780	2.98	24.43	1855.530	0.221 N	10.497 W	-6.220	0.27
1884.430	3.09	24.80	1884.139	1.601 N	9.865 W	-4.741	0.12
1913.080	3.07	24.58	1912.748	3.000 N	9.222 W	-3.240	0.02
1941.890	3.12	23.61	1941.516	4.421 N	8.587 W	-1.726	0.08
1970.980	3.18	24.11	1970.562	5.884 N	7.939 W	-0.171	0.07
1999.060	3.22	24.85	1998.598	7.312 N	7.289 W	1.358	0.06
2027.820	3.27	25.23	2027.312	8.789 N	6.599 W	2.949	0.06
2056.650	3.24	27.04	2056.095	10.260 N	5.878 W	4.555	0.11
2085.120	3.33	26.59	2084.518	11.717 N	5.141 W	6.160	0.10
2113.640	3.40	27.83	2112.989	13.207 N	4.375 W	7.808	0.10
2142.040	3.46	29.61	2141.338	14.697 N	3.558 W	9.487	0.13
2170.630	3.60	30.30	2169.874	16.223 N	2.679 W	11.232	0.15
2199.170	3.77	30.65	2198.355	17.802 N	1.749 W	13.051	0.18
2227.870	3.85	36.05	2226.992	19.392 N	0.702 W	14.950	0.38
2256.540	3.99	35.43	2255.595	20.983 N	0.443 E	16.909	0.16
2285.350	4.14	37.21	2284.332	22.630 N	1.654 E	18.953	0.20

HALLIBURTON

Culverin-1

Measured Depth (metres)	Inclination (degrees)	Direction (degrees)	Vertical Depth (metres)	Latitude (metres)	Departure (metres)	Vertical Section (metres)	Dogleg (deg/30m)
2314.020	4.15	34.69	2312.927	24.308 N	2.871 E	21.025	0.19
2342.600	4.24	35.48	2341.430	26.018 N	4.072 E	23.113	0.11
2371.300	4.20	37.23	2370.053	27.718 N	5.323 E	25.223	0.14
2399.910	4.28	37.96	2398.584	29.394 N	6.614 E	27.338	0.10
2428.460	4.30	38.32	2427.054	31.073 N	7.933 E	29.474	0.04
2457.140	4.30	37.54	2455.653	32.770 N	9.255 E	31.625	0.06
2514.650	4.09	38.40	2513.009	36.089 N	11.845 E	35.835	0.11
2543.240	4.05	40.48	2541.527	37.657 N	13.134 E	37.863	0.16
2572.000	4.01	40.97	2570.216	39.188 N	14.452 E	39.880	0.05
2600.650	3.91	40.54	2598.798	40.686 N	15.743 E	41.855	0.11
2629.390	3.86	40.58	2627.472	42.165 N	17.009 E	43.799	0.05
2658.020	3.89	41.30	2656.036	43.626 N	18.277 E	45.730	0.06
2686.600	3.77	41.46	2684.552	45.058 N	19.538 E	47.633	0.12
2715.150	3.77	40.42	2713.041	46.476 N	20.768 E	49.507	0.07
2743.830	3.80	42.10	2741.658	47.900 N	22.017 E	51.397	0.12
2772.650	3.83	43.73	2770.414	49.304 N	23.323 E	53.306	0.12
2801.660	3.84	42.76	2799.359	50.718 N	24.652 E	55.237	0.07
2830.440	3.89	43.81	2828.074	52.130 N	25.982 E	57.168	0.09
2859.140	3.95	44.31	2856.706	53.540 N	27.347 E	59.118	0.08
2887.700	3.86	45.65	2885.200	54.916 N	28.722 E	61.046	0.14
2916.430	3.87	45.26	2913.865	56.273 N	30.101 E	62.963	0.03
2944.960	3.83	45.79	2942.331	57.614 N	31.466 E	64.858	0.06
2973.530	3.73	46.71	2970.839	58.916 N	32.826 E	66.718	0.12
3002.190	3.72	46.75	2999.438	60.192 N	34.182 E	68.557	0.01
3059.490	3.72	46.57	3056.618	62.743 N	36.885 E	72.226	0.01
3088.210	3.81	46.46	3085.276	64.040 N	38.253 E	74.088	0.10
3116.080	3.75	45.37	3113.085	65.318 N	39.572 E	75.905	0.10
3145.070	3.74	48.33	3142.013	66.613 N	40.954 E	77.774	0.20
3173.790	3.67	49.59	3170.673	67.832 N	42.354 E	79.594	0.11
3202.650	3.71	48.97	3199.473	69.044 N	43.762 E	81.413	0.06
3231.770	3.53	48.20	3228.535	70.260 N	45.141 E	83.217	0.20
3260.370	3.66	49.86	3257.079	71.435 N	46.494 E	84.973	0.17
3317.480	3.72	47.74	3314.070	73.856 N	49.259 E	88.578	0.08
3346.360	3.65	50.41	3342.891	75.074 N	50.663 E	90.398	0.19
3375.030	3.69	54.03	3371.502	76.198 N	52.114 E	92.174	0.25
3404.400	3.54	54.90	3400.813	77.275 N	53.621 E	93.946	0.17
3432.800	3.59	51.96	3429.159	78.327 N	55.038 E	95.643	0.20
3461.320	3.48	51.53	3457.624	79.415 N	56.418 E	97.347	0.12
3490.240	3.38	50.31	3486.493	80.504 N	57.760 E	99.029	0.13
3519.260	3.32	50.11	3515.463	81.590 N	59.063 E	100.683	0.06
3547.590	3.32	49.95	3543.745	82.644 N	60.321 E	102.285	0.01
3555.340	3.36	53.74	3551.482	82.922 N	60.676 E	102.722	0.87
3583.830	3.00	50.85	3579.928	83.887 N	61.927 E	104.249	0.41
3641.380	2.98	50.16	3637.400	85.797 N	64.244 E	107.176	0.02
3758.000	2.98	50.16	3753.862	89.681 N	68.900 E	113.093	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 37.53 DEGREES (GRID)
A TOTAL CORRECTION OF 14.43 DEG FROM MAGNETIC NORTH TO GRID NORTH HAS BEEN APPLIED

HORIZONTAL DISPLACEMENT IS RELATIVE TO THE WELL HEAD.
HORIZONTAL DISPLACEMENT(CLOSURE) AT 3758.000 METRES
IS 113.093 METRES ALONG 37.53 DEGREES (GRID)

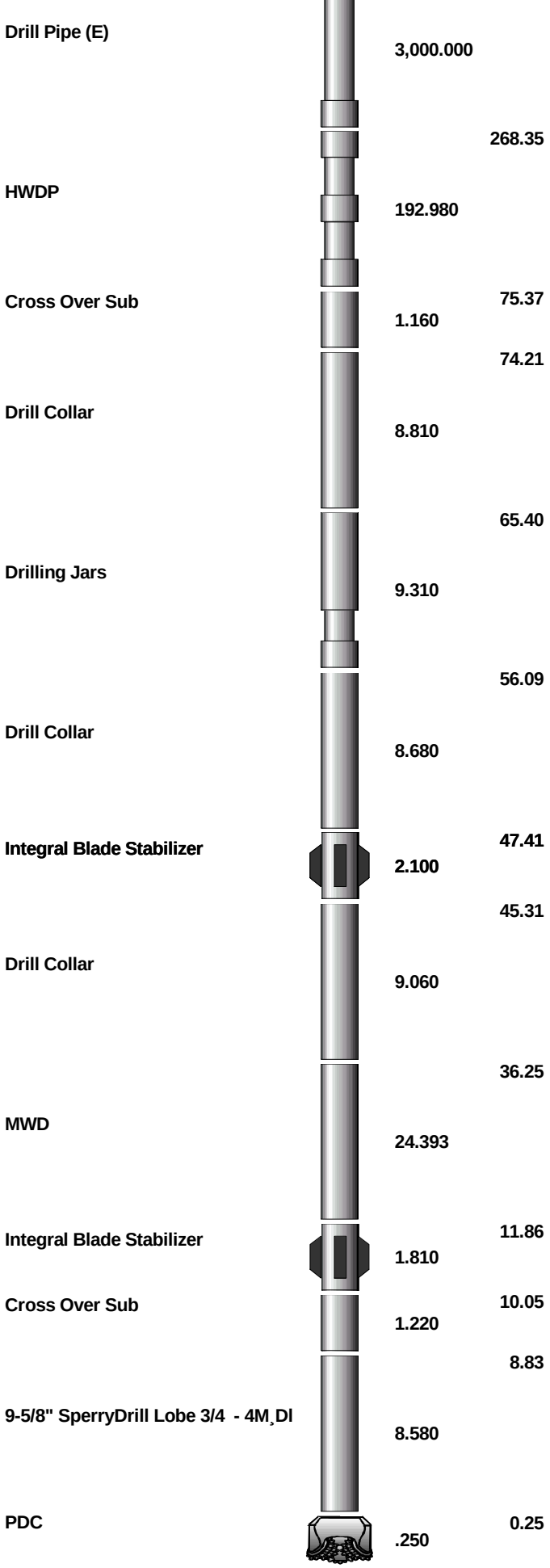
MWD RUN 300 - BHA

MWD RUN 300 - MWD

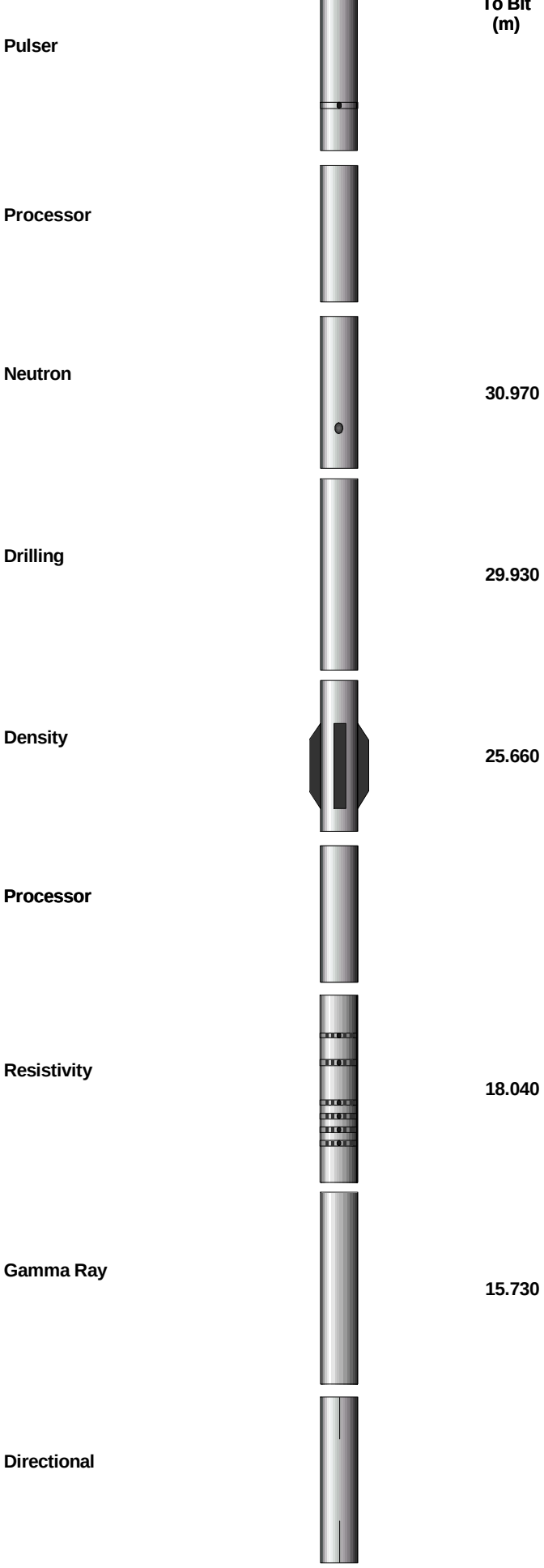
Date Printed:17 January 2006

Component Length (m)	Cumulative Length (m)
	3268.35

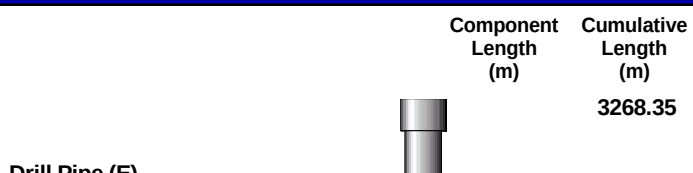
Sensor Measure Point Distance To Bit

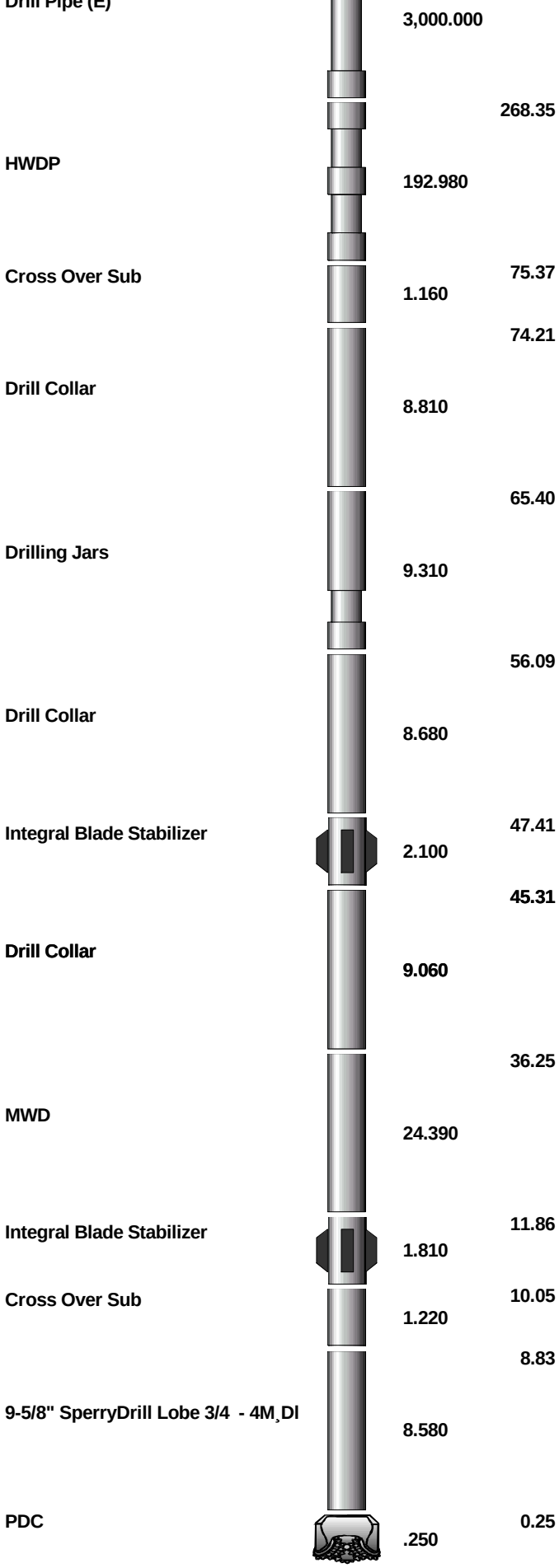


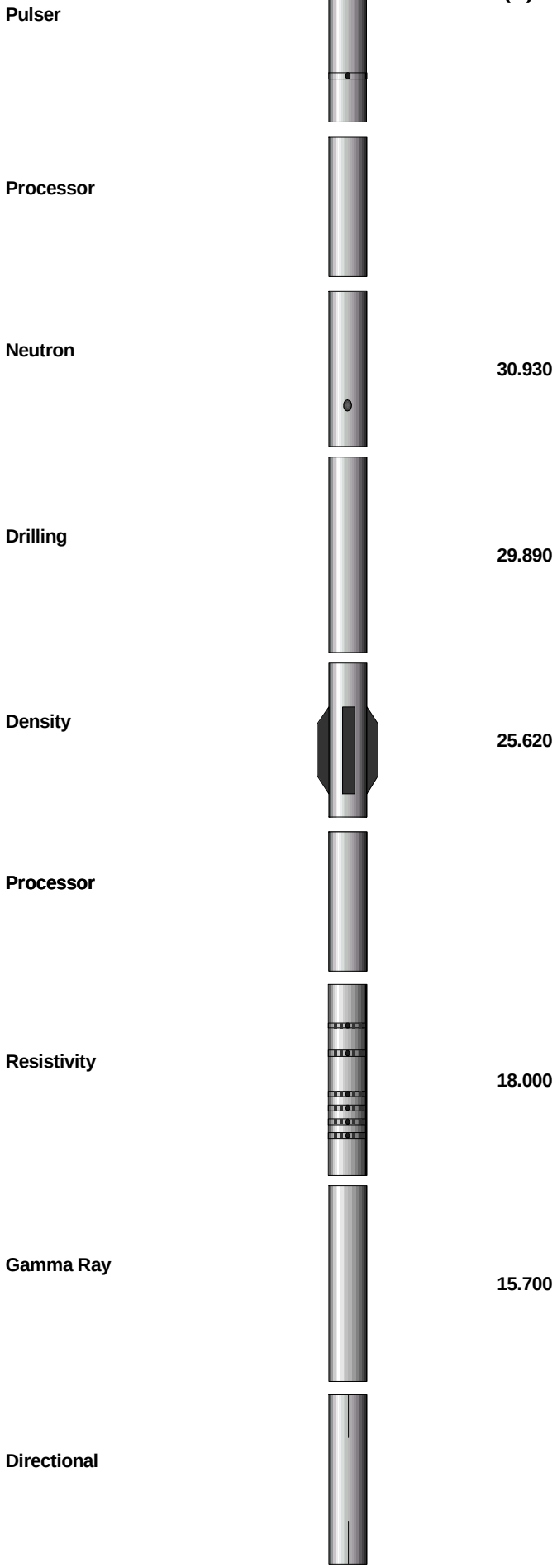
MWD RUN 400 - BHA



MWD RUN 400 - MWD

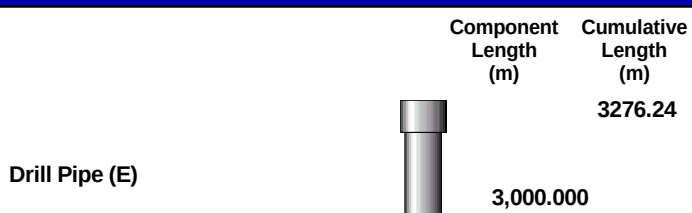


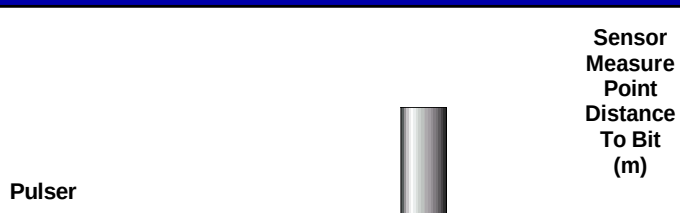


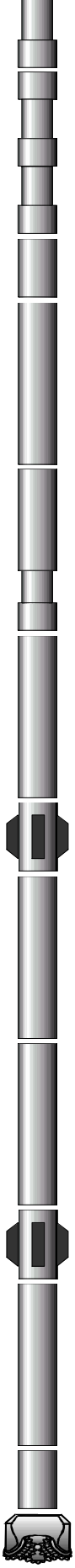


MWD RUN 600 - BHA

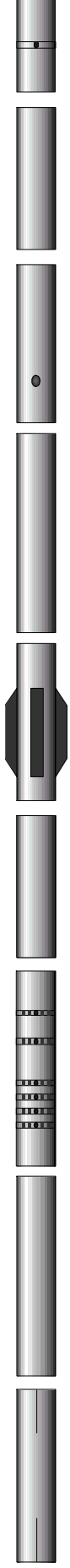
MWD RUN 600 - MWD







		276.24
HWDP	138.220	
		138.02
Cross Over Sub	1.160	
		136.86
Drill Collar	8.810	
		128.05
Drilling Jars	9.660	
		118.39
Drill Collar	70.570	
		47.82
Integral Blade Stabilizer	2.100	
		45.72
Drill Collar	9.060	
		36.66
MWD	24.380	
		12.28
Integral Blade Stabilizer	1.810	
		10.47
Drill Collar	9.040	
		1.43
Bit Sub	1.100	
		0.33
Tricone	.330	



Processor	
Neutron	31.430
Drilling	30.390
Density	26.130
Processor	
Resistivity	18.530
Gamma Ray	16.170
Directional	