

Sperry Drilling Services

1 : 1000



MWD
DGR Dual Gamma Ray
DDS Drill String Dynamics

Country : Australia			
Field :			
Location : Lat: 38° 34' 45.67" South GDA94 Long: 142° 43' 50.82" East GDA94			
Well : Halladale-1 DW2			
Company : Woodside Energy Ltd			
Rig : Ocean Patriot			
LOCATION			
Latitude : Lat: 38° 34' 45.67" South GDA94 Longitude : Long: 142° 43' 50.82" East GDA94			
UTM Easting = 650,763.20 m UTM Northing = 5,728,485.20 m			
Company : Woodside Energy Ltd			
Rig : Ocean Patriot			
Well : Halladale-1 DW2			
Field :			
Country : Australia			
DOE Number :			
Permanent Datum : Mean Sea Level			
Log Measured From : Drill Floor			
Drilling Measured From : Drill Floor			
Depth Logged : 853.00 m To 1,941.00 m			
Date Logged : 10-Apr-05 To 18-Apr-05			
Total Depth MD : 1,941.00 m TVD : 1,879.96 m			
Spud Date : 10-Apr-05			
Unit No. : 197			
Plot Type : Final			
Plot Date : 06-May-05			
Borehole Record (MD)			
Run No.			
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SENSOR INFORMATION

Downhole Processor Information

Tool Type	HCIM	HCIM	HCIM		
Software Version	68.18	68.18	68.18		
Sub Serial Number	107429	107429	10562757		
Insert Serial Number	76442	76442	160772		
Logging String Serial Number	90069311XHWRG6	90069311XHWRG6	90069312XHWRG6		
Date and Time Initialized	10-Apr-05 11:20	13-Apr-05 07:46	16-Apr-05 21:50		
Date and Time Read	01-Jan-70 00:00	01-Jan-70 00:00	03-Apr-05 01:24:00		

Directional Sensor Information

Tool Type	DM	DM	DM		
Distance From Bit (m)	8.97	8.98	3.14		
Software Version	3.15	3.15	3.15		
Sub Serial Number	783004	783004	30534076		
Sonde Serial Number	87896	87896	581139		
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)	11.53	11.54	5.57		
Recorded Sample Period (sec)	12	12	12		
Software Version	N/A	N/A	N/A		
Sub Serial Number	070755	070755	131257		
Insert/Sonde Serial Number	10505416	10505416	176691		

Drillstring Dynamics Sensor Information

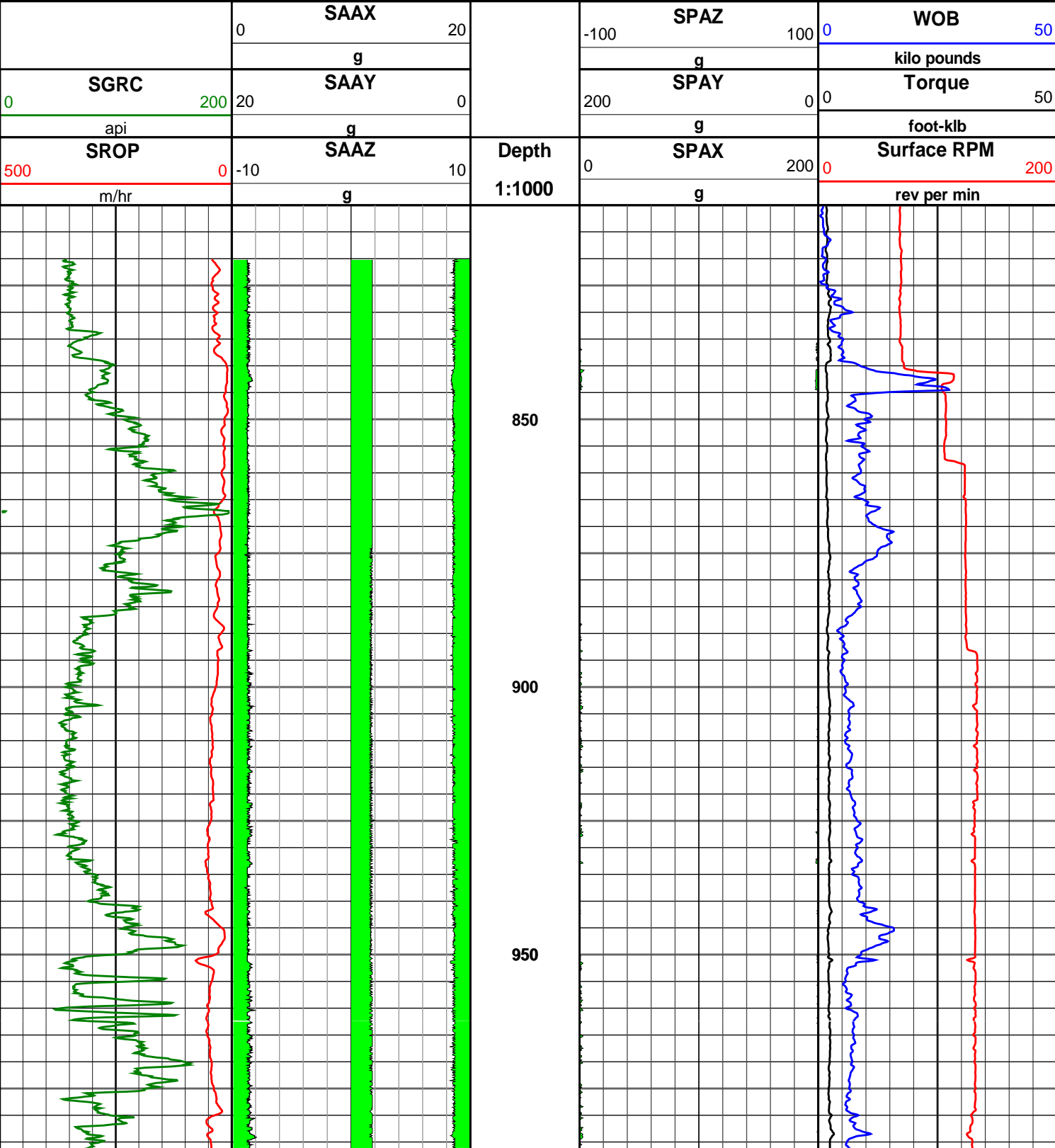
Tool Type	DDS	DDS	DDS		
Distance From Bit (m)	0	0	0		
Recorded Sample Period (sec)	12	12	12		
Software Version	.50	.50	0.50		
Sub Serial Number	70755	70755	131257		
Insert Serial Number	891	891	622		
Sensor ID Number	891	891	622		

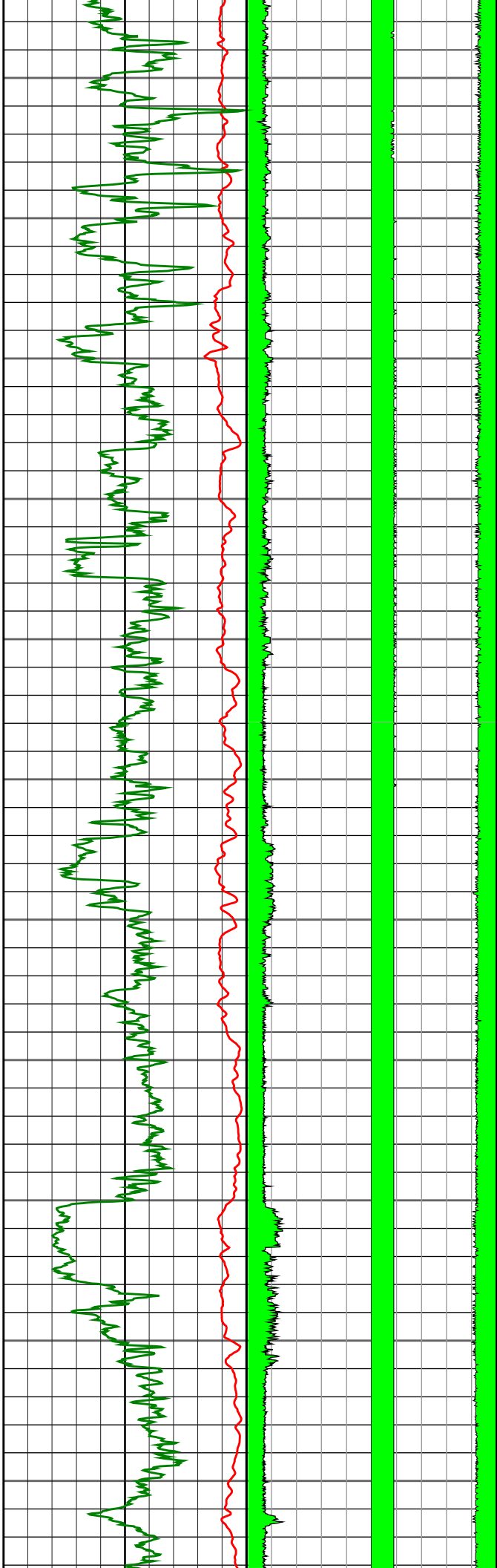
REMARKS

1. All depths are bit depths and referenced to the drillers pipe tally.
2. AV/CV is calculated at the MWD collar using the Powers Law for water based muds and is in m/min.
3. Curve mnemonics are:
SGRC - Smoothed Gamma Ray Combined, api
SROP - Smoothed Rate of Penetration, m/hr
SAAX - Smoothed Average X-Axis Accelerometer, g's
SAAY - Smoothed Average Y-Axis Accelerometer, g's
SAAZ - Smoothed Average Z-Axis Accelerometer, g's
SPAX - Smoothed Peak X-Axis Accelerometer, g's
SPAY - Smoothed Peak Y-Axis Accelerometer, g's
SPAZ - Smoothed Peak Z-Axis Accelerometer, g's
WOB - Weight on Bit, klb
RPM - Surface Drillstring Revolutions Per Minute, rpm
TORQUE - Surface Torque, ft-klbs
4. MWD data from 1808.0 to 1835.0 mMDRT was wiped after coring this interval prior to Run 400. SDL data displayed over same interval was collected whilst coring.

WARRANTY

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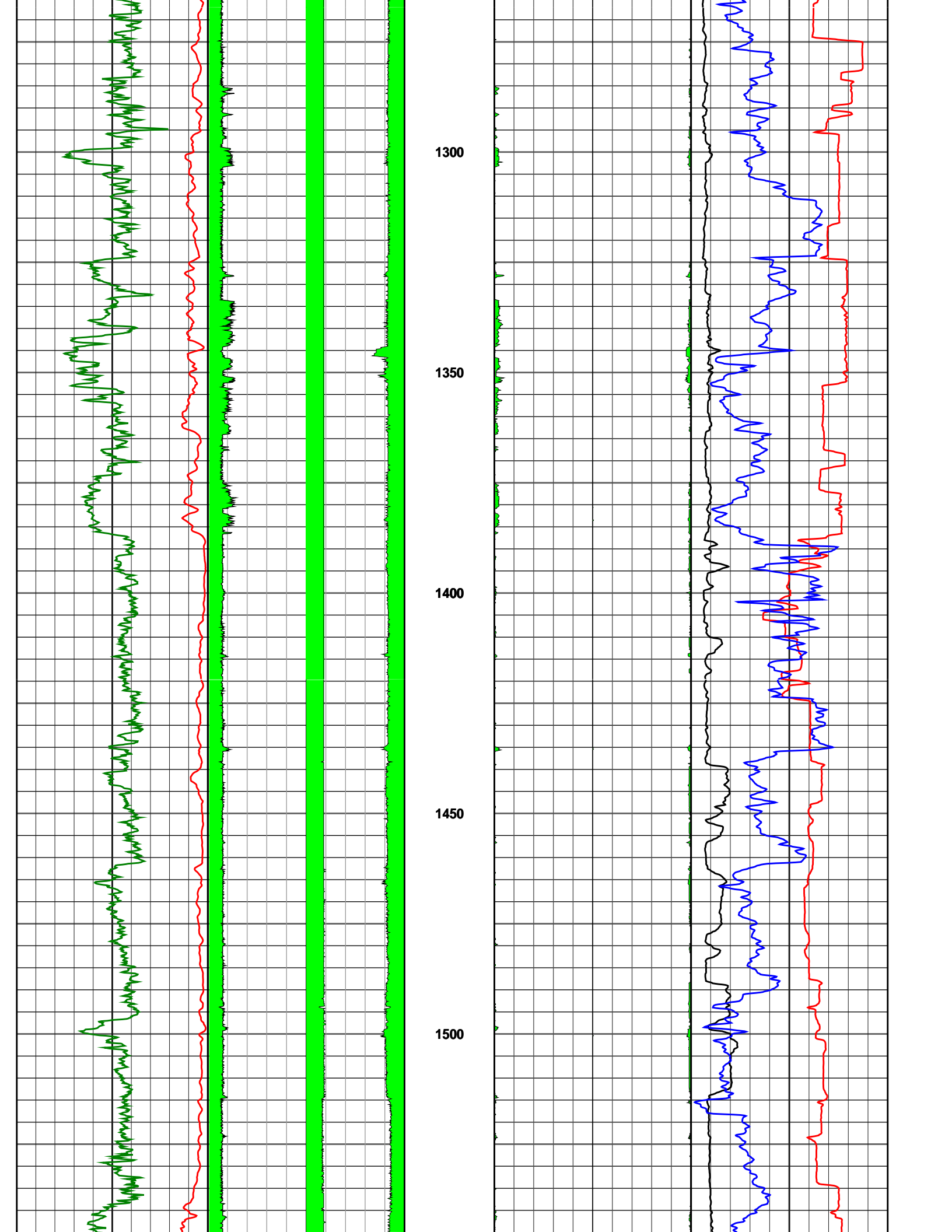
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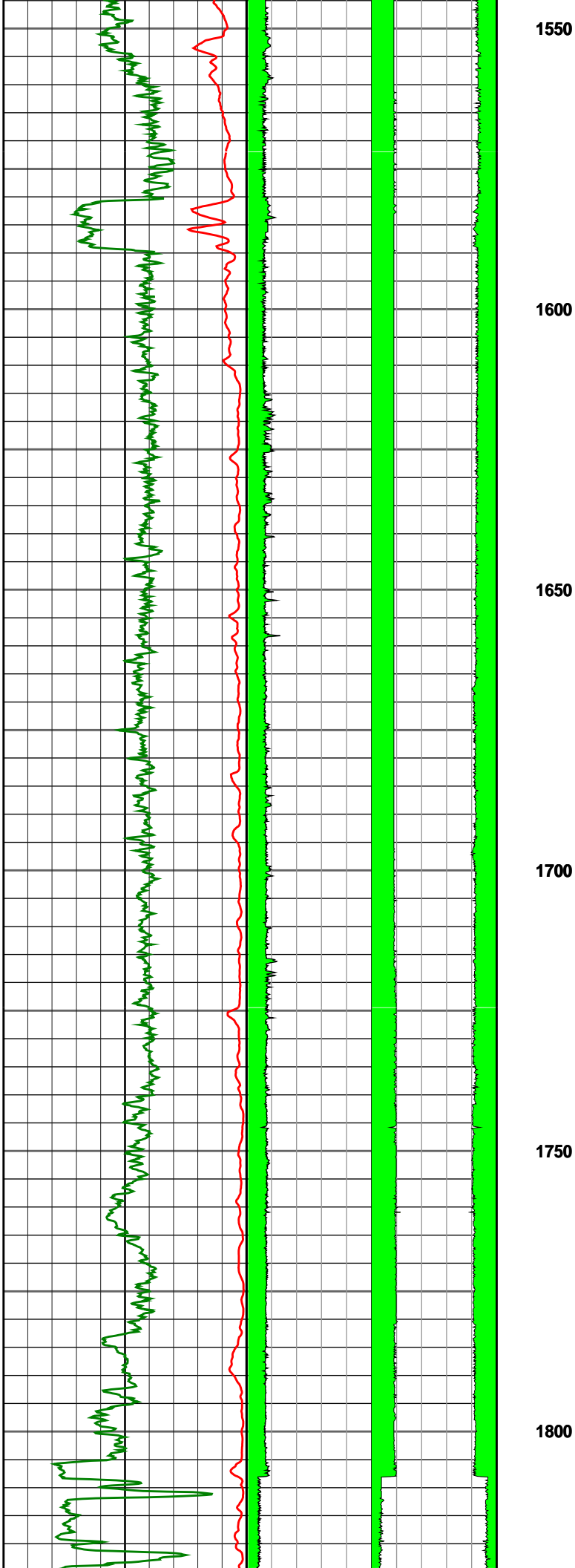
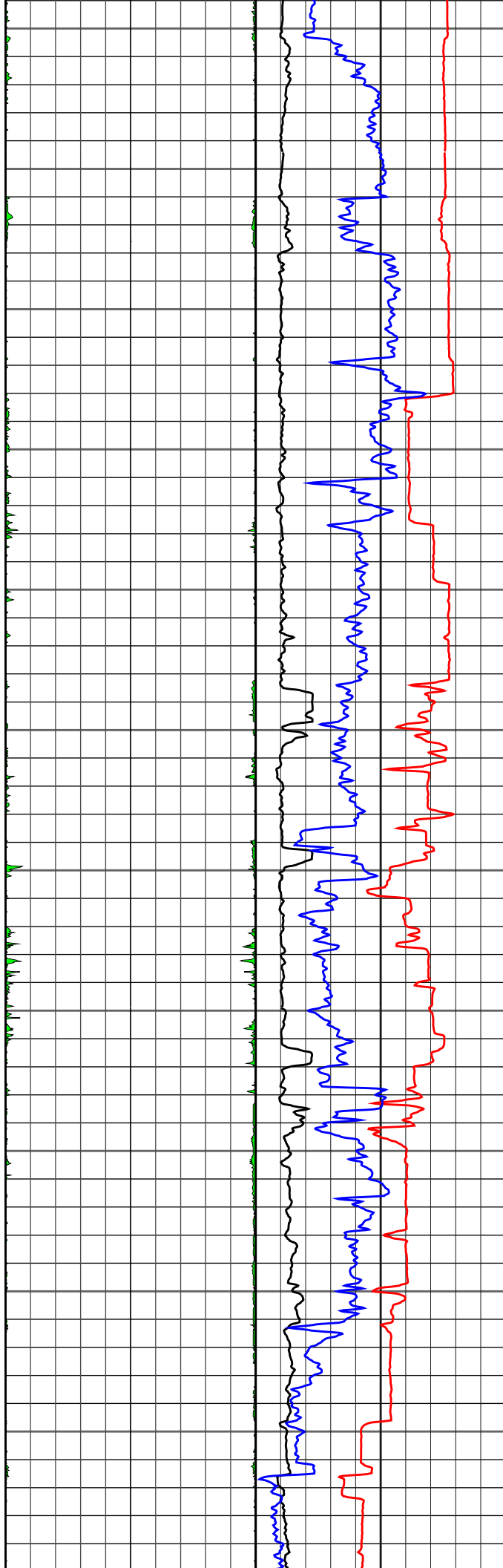
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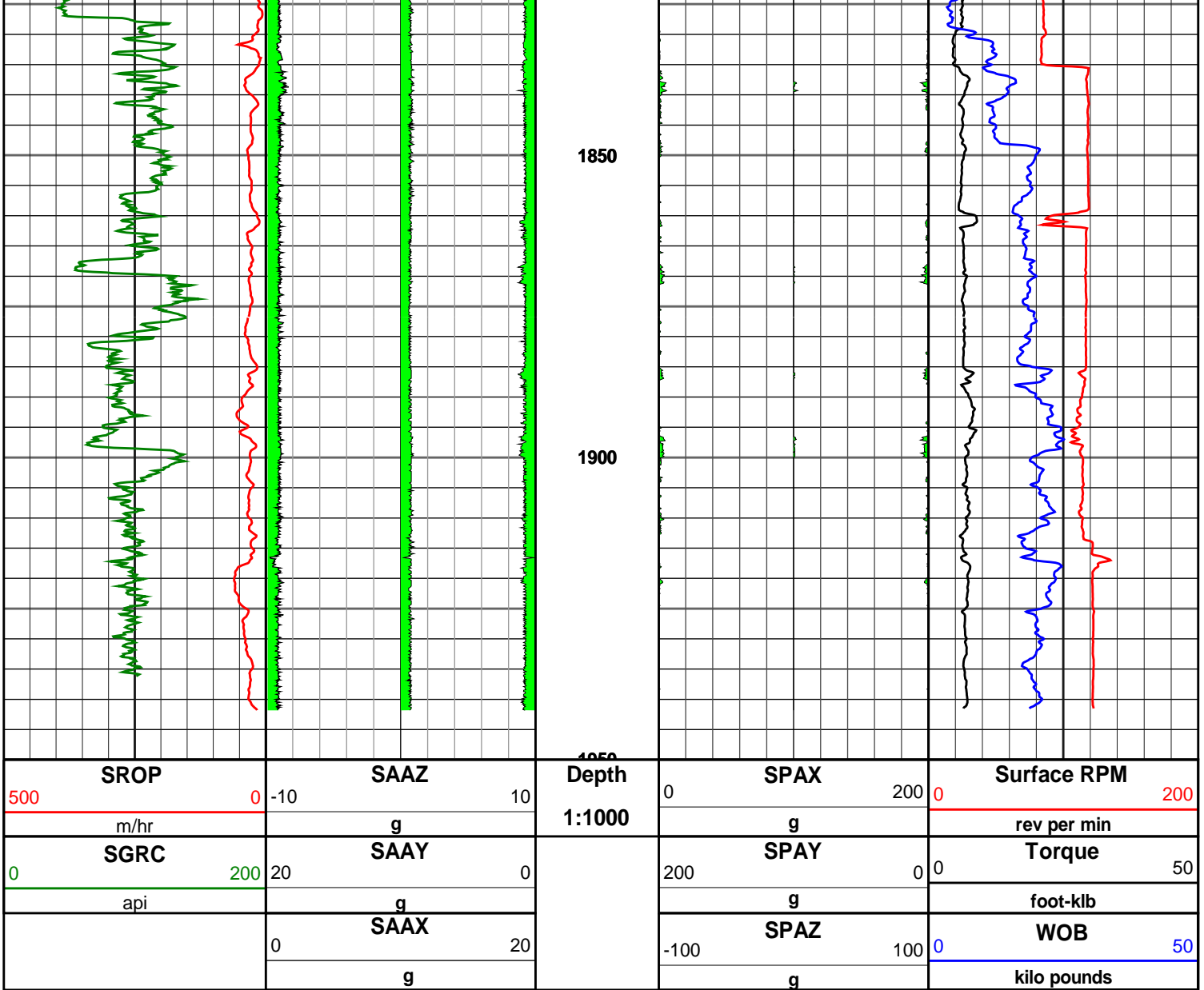
1200

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HALLIBURTON

DIRECTIONAL SURVEY REPORT

Woodside Energy Ltd

Halladale-1 DW2

VIC

Australia

AU-FE-0003325468

Final survey projected to TD. RT-LAT=21.5m

Measured Depth (metres)	Inclination (degrees)	Direction (degrees)	Vertical Depth (metres)	Latitude (metres)	Departure (metres)	Vertical Section (metres)	Dogleg (deg/30m)
810.510	4.59	213.32	810.220	1.716 S	9.639 W	-5.042	TIE-IN
852.560	4.74	218.31	852.131	4.485 S	11.640 W	-8.343	0.31
881.040	3.38	227.57	880.539	5.975 S	12.990 W	-10.216	1.59
909.540	2.36	275.21	909.007	6.489 S	14.194 W	-11.125	2.63
938.460	2.99	330.60	937.900	5.777 S	15.158 W	-10.805	2.64
967.340	4.38	356.47	966.721	4.020 S	15.595 W	-9.319	2.22
996.060	7.12	4.58	995.294	1.151 S	15.521 W	-6.612	2.98
1024.960	9.29	0.02	1023.897	2.968 N	15.377 W	-2.713	2.35
1055.560	12.32	353.37	1053.952	8.682 N	15.753 W	2.491	3.21
1084.420	14.52	350.57	1082.023	15.310 N	16.701 W	8.345	2.38
1112.890	16.05	349.61	1109.485	22.702 N	17.996 W	14.789	1.63
1141.340	17.92	346.59	1136.693	30.829 N	19.720 W	21.766	2.18
1169.860	20.36	343.90	1163.635	39.866 N	22.114 W	29.354	2.73
1198.200	21.57	340.05	1190.100	49.500 N	25.259 W	37.232	1.94
1226.910	21.90	339.02	1216.769	59.460 N	28.977 W	45.211	0.53

1256.080	22.21	337.21	1243.804	69.622 N	33.060 W	53.248	0.77
1284.960	21.89	340.96	1270.573	79.744 N	36.931 W	61.323	1.50
1311.610	23.12	342.06	1295.194	89.418 N	40.163 W	69.207	1.46
1340.280	23.01	345.53	1321.573	100.200 N	43.297 W	78.161	1.43
1368.830	22.99	346.35	1347.853	111.021 N	46.007 W	87.303	0.34
1397.820	23.70	346.53	1374.470	122.188 N	48.701 W	96.775	0.74
1426.750	22.93	345.84	1401.037	133.307 N	51.434 W	106.188	0.85
1454.770	22.79	347.81	1426.857	143.904 N	53.915 W	115.202	0.83
1503.000	21.72	346.50	1471.494	161.713 N	57.971 W	130.393	0.73
1510.750	21.22	346.89	1478.706	164.473 N	58.623 W	132.739	2.01
1539.560	21.91	348.03	1505.499	174.810 N	60.921 W	141.575	0.84
1568.700	21.37	347.26	1532.586	185.307 N	63.219 W	150.562	0.63
1597.380	21.89	344.99	1559.246	195.568 N	65.756 W	159.243	1.03
1625.950	22.06	342.29	1585.741	205.823 N	68.768 W	167.749	1.08
1654.300	21.72	343.30	1612.047	215.919 N	71.895 W	176.065	0.54
1683.200	21.55	344.71	1638.912	226.161 N	74.831 W	184.586	0.57
1714.560	21.72	343.34	1668.062	237.276 N	78.013 W	193.834	0.51
1742.320	21.67	344.05	1693.856	247.125 N	80.894 W	202.007	0.29
1771.450	21.26	343.64	1720.966	257.364 N	83.860 W	210.514	0.45
1795.600	21.51	343.38	1743.453	265.807 N	86.360 W	217.511	0.33
1855.710	20.58	343.78	1799.553	286.512 N	92.463 W	234.676	0.47
1884.130	19.43	342.64	1826.258	295.820 N	95.268 W	242.370	1.28
1912.690	19.24	343.45	1853.207	304.865 N	98.026 W	249.836	0.35
1936.360	19.03	343.20	1875.569	312.297 N	100.252 W	255.986	0.29
1941.000	19.03	343.20	1879.956	313.746 N	100.690 W	257.183	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

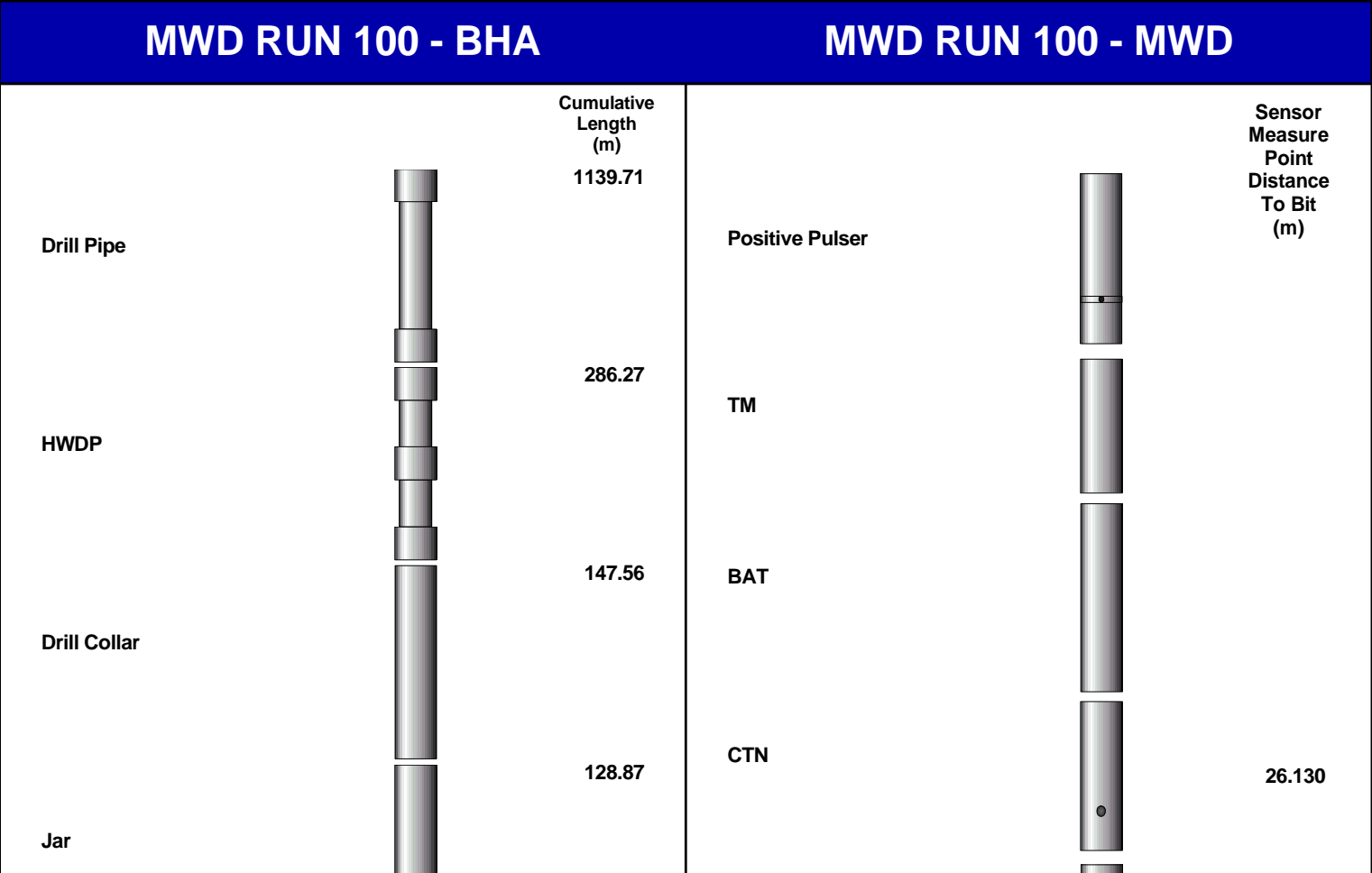
VERTICAL SECTION IS COMPUTED ALONG A DIRECTION OF 20.90 DEGREES (GRID)
















A TOTAL CORRECTION OF 11.97 DEG FROM MAGNETIC NORTH TO GRID NORTH HAS BEEN APPLIED

HORIZONTAL DISPLACEMENT IS RELATIVE TO THE WELL HEAD.

HORIZONTAL DISPLACEMENT(CLOSURE) AT 1941.000 METRES













IS 329.507 METRES ALONG 342.21 DEGREES (GRID)


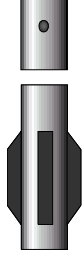




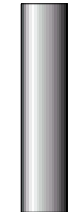


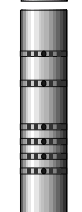

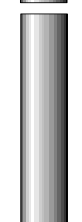

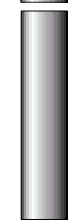



			SLD		
		119.07			22.050
Drill Collar			HCIM		
Sub		35.19			
Reamer		32.91	PWD		16.370
Sub		30.89			
Stabilizer		30.27	EWR-P4		13.850
		29.59			
Drill Collar					
			DGR		11.530
		26.79			
MWD					
			GeoPilot		1.320
Bit		0.42			

MWD RUN 200 - BHA







MWD RUN 200 - MWD

















		Cumulative Length (m)			Sensor Measure Point Distance To Bit (m)
		1167.20			
Drill Pipe			Positive Pulser		
		313.76			
			TM		
HWDP					
		175.05	BAT		
Drill Collar					
		156.36	CTN		26.140

Jar			SLD		
		146.63			22.060
Drill Collar			HCIM		
Sub		34.79			
Reamer		32.51	PWD		16.370
Sub		30.90			
Stabilizer		30.28	EWR-P4		13.860
		29.60			
Drill Collar			DGR		11.540
		26.80			
MWD			GeoPilot		1.330
Bit		0.43			

MWD RUN 400 - BHA

MWD RUN 400 - MWD

		Cumulative Length (m)			Sensor Measure Point Distance To Bit (m)
Drill Pipe		2810.48	Positive Pulser		
		310.48	TM		
HWDP			BAT		
		171.77			
Drill Collar					

Drill Collar			CTN		20.060
		153.08			
Jar			SLD		16.010
		143.35			
Drill Collar			HCIM		
Sub		31.51	PWD		10.400
Sub		29.23			
Stabilizer		28.61	EWR-P4		7.870
		27.94			
MWD			DGR		5.570
Stabilizer		1.67	PM		
Bit		0.30			