

1 : 500

**WILD**

**EWMR Electromagnetic Wave Resistivity
DGR Dual Gamma Ray
SLD Stabilized Litho-Density
CNP Compensated Neutron Porosity**

[illegible]

MWD Run Number	800	900	1000	1100	
Date run completed	27-May-05	28-May-05	31-May-05	04-Jun-05	
Rig Bit Number	12	13	14	15	
Bit Size (mm)	311	311	311	216	
Tool Nominal OD (mm)	203	203	203	171	
Log Start Depth (MD, m)	1,146.0	1,157.0	1,274.0	1,998.0	
Log End Depth (MD, m)	1,157.0	1,274.0	1,998.0	2,404.0	
Drill or Wipe	Drilling	Drilling	Drilling	Drilling	
Drill/Wipe Start Date and Time	27-May-05 00:00	27-May-05 19:55	29-May-05 00:45	02-Jun-05 14:51	
Drill/Wipe End Date and Time	27-May-05 07:25	28-May-05 10:40	30-May-05 16:04	04-Jun-05 03:31	
Min Inc (deg) @ Depth (MD, m)	3.91 @ 1,133.97	5.08 @ 1,166.38	10.53 @ 1,287	76.66 @ 2,020.94	
Max Inc (deg) @ Depth (MD, m)	3.91 @ 1,133.97	10.24 @ 1,250.01	76.28 @ 1,975.04	87.78 @ 2,193.21	
Bit TFA(in2) / Bit Type	1.11 / HYC DS43GTS	1.11 / Sec XL12D	1.77 / DBS FS2663	0.98 / Sec FMF3553	
Flow Rate (gpm)	866	843	960	745	
Max AV (mpm) / CV (mpm) @ MWD	75.4 / 178.6	79.3 / 164.9	87 / 176	224 / 220	
Fluid Type	KCl/Polymer	KCl/Polymer	KCl/Polymer	Flo Pro	
Density (sg) / Viscosity (spqt)	1.3 / 68	1.3 / 60	1.3 / 69	1.3 / 57	
Filtrate CL (ppm)	46,000	46,000	46,000	120,000	
pH / Fluid Loss (mptm)	11 / 11	10.8 / 10.8	8.5 / 8.5	9.7 / 9.7	
PV (cp) / YP (lhf2)	18 / 42	16 / 37	20 / 43	17 / 41	
% Solids / % Sand	12 / 0.01	13 / 0.1	14 / 0.1	15 / 0.25	
% Oil / Oil:Water Ratio	N/A / N/A	N/A / N/A	N/A / N/A	N/A / N/A	
Rm @ Measured Temp (degC)	0.11 @ 19.4	0.11 @ 20.0	0.12 @ 21.7	0.06 @ 23.3	
Rmf @ Measured Temp (degC)	0.08 @ 19.4	0.10 @ 20.0	0.09 @ 23.3	0.04 @ 23.9	
Rmc @ Measured Temp (degC)	0.28 @ 20.0	0.16 @ 18.9	0.17 @ 21.1	0.09 @ 20.0	
Max Tool Temp (degC) / Source	57.0 / EWR-P4	58.0 / EWR-P4	76.0 / HCIM	78.0 / EWR-P4	
Rm @ Max Tool Temp (degC)	0.06 @ 57.0	0.06 @ 58.0	0.05 @ 76.0	0.03 @ 78.0	
Lead MWD Engineer	A.Rule	A. Rule	A.Rule	A.Rule	
Customer Representative	C.Wise	C.Wise	C.Wise	R.King	

SENSOR INFORMATION

Downhole Processor Information					
Tool Type	HCIM	HCIM	HCIM	HCIM	
Software Version	68.18	68.18	68.18	68.18	
Sub Serial Number	198838	198838	198838	10630413	
Insert Serial Number	163155	163155	163155	093281	
Logging String Serial Number	90072522XH1WRG	DM90072522	DM90072522	90073263HWRG6	
Date and Time Initialized	26-May-05 12:49	27-May-05 11:11	28-May-05 18:32	02-Jun-05 09:19	
Date and Time Read	27-May-05 10:26	28-May-05 15:49	31-May-05 23:02	04-Jun-05 15:29	

Directional Sensor Information					
Tool Type	DM	DM	DM	DM	
Distance From Bit (m)	20.91	22.98	19.97	8.97	
Software Version	3.15	3.15	3.15	3.15	
Sub Serial Number	128402	128402	128402	Flex773864	
Sonde Serial Number	581139	581139	581139	149865	
Sensor ID Number	N/A	N/A	N/A	N/A	
Survey String Serial Number	N/A	N/A	N/A	N/A	
Toolface Offset (deg)	101.30	272.43	N/A	N/A	

Gamma Ray Sensor Information					
Tool Type	DGR	DGR	DGR	DGR	
Distance From Bit (m)	12.09	14.16	11.15	11.44	
Recorded Sample Period (sec)	12	12	12	12	
Software Version	N/A	N/A	N/A	N/A	
Sub Serial Number	059984	059984	059984	078523	
Insert/Sonde Serial Number	151078	151078	151078	126021	

Resistivity Sensor Information					
Tool Type	EWR-P4	EWR-P4	EWR-P4	EWR-P4	
Distance From Bit (m)	14.43	16.50	13.49	13.78	
Recorded Sample Period (sec)	14	14	14	14	
Software Version	1.38	1.38	1.38	1.38	
Sub Serial Number	96506	96506	96506	156219	
Receiver Insert Serial Number	45162	45162	45162	138389	
Transmitter Insert Serial Number	123860	123860	123860	127877	
Receiver Orientation	Down	Down	Down	Down	

Neutron Sensor Information					
Tool Type				CNP	
Distance From Bit (m)				24.52	
Recorded Sample Period (sec)				16	
Sub Serial Number				74050	
Insert Serial Number				74044	
Source Serial Number				8625NK	
Source Factor				1.0590	
Pin Orientation				Down	

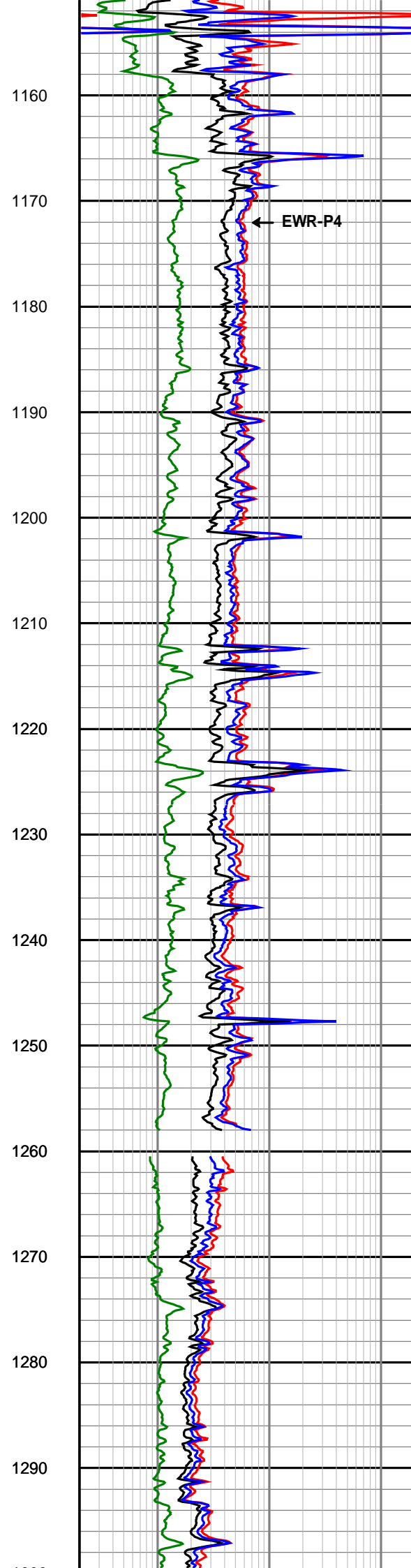
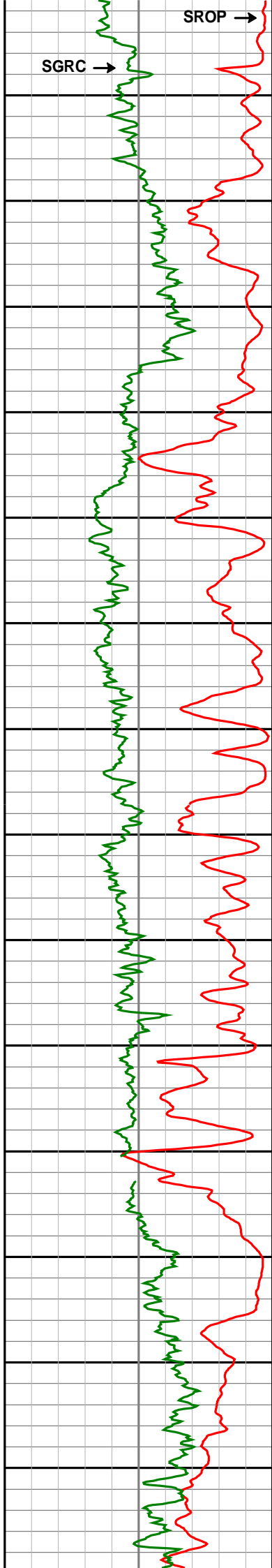
Density Sensor Information					
Tool Type				ALD	
Distance From Bit (m)				21.05	
Recorded Sample Period (sec)				16	
Software Version				2.13	
Sub Serial Number				101673	
Insert Serial Number				121808	
Sensor ID Number				12012	
Source Serial Number				2579GW	
Pin Orientation				Down	
Stabilizer Blade O.D. (mm)				209.550	
DPA Offset				0	

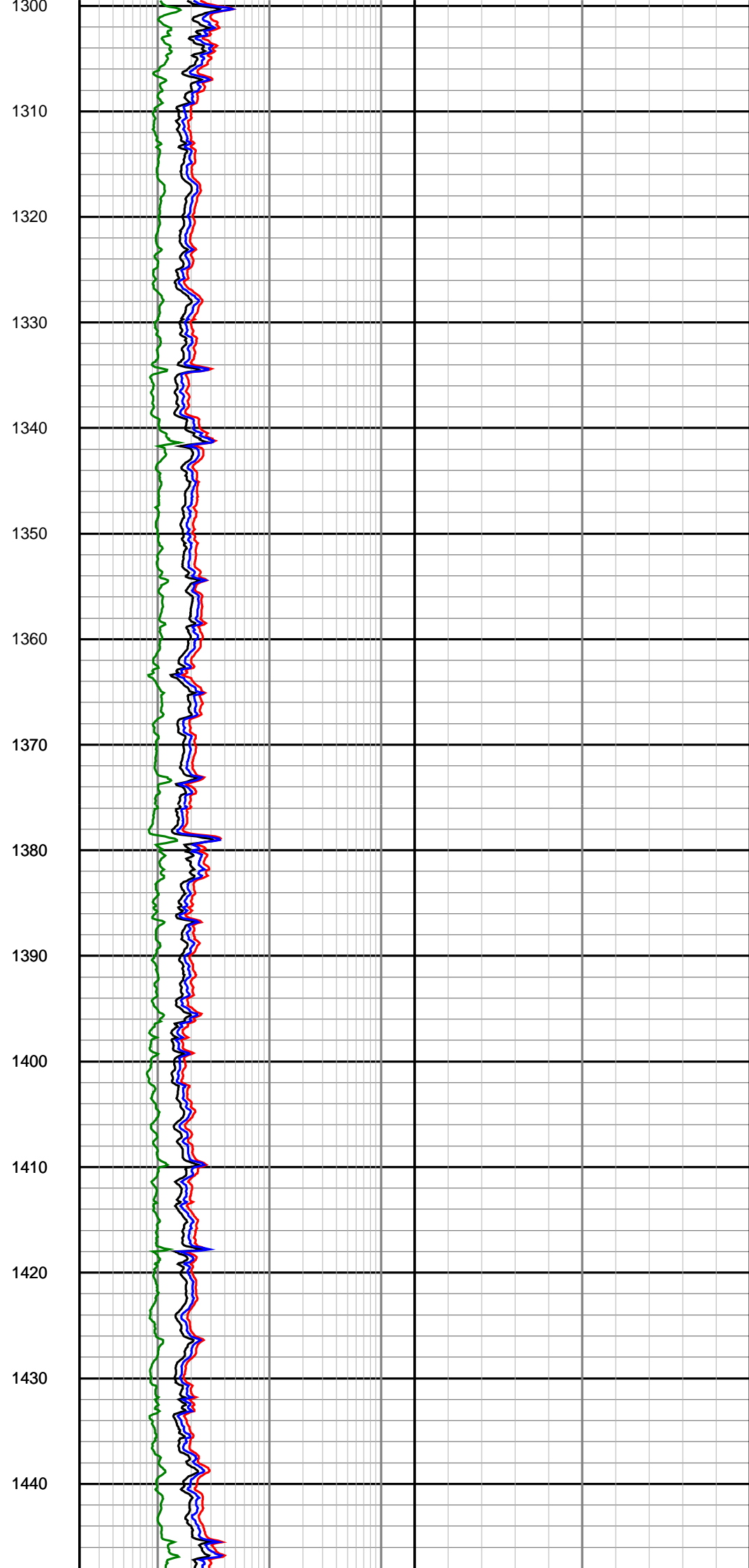
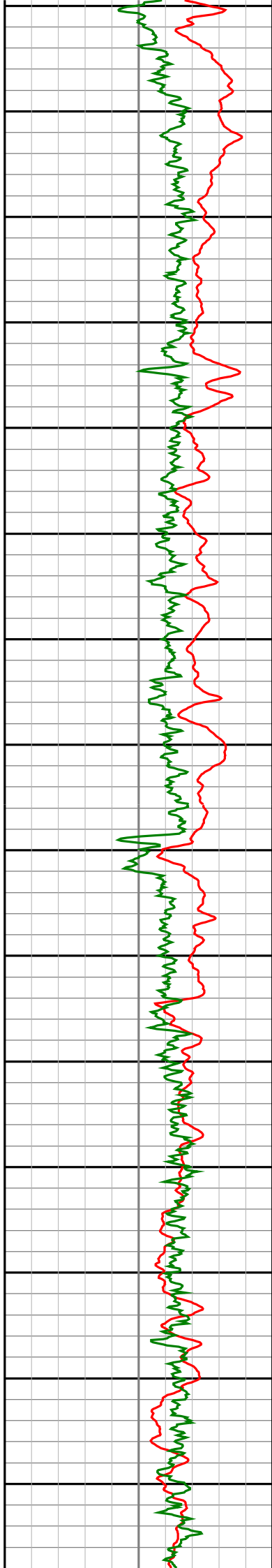
GeoPilot Sensor Information					
Tool Type			GP	GP	

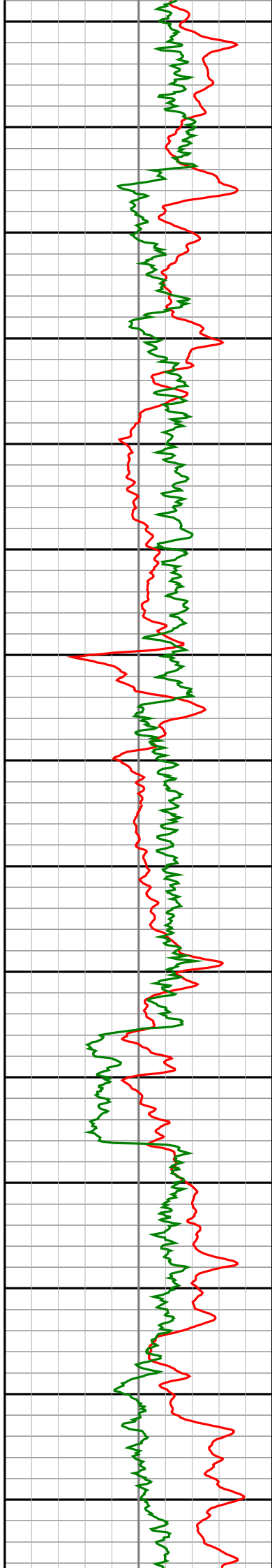
Distance From Bit (m)			1.74	1.42	
Software Version			3	3	
Sub Serial Number			GP1225TL062	GP0850TL084	

REMARKS					
<div> <div>1. All depths are bit depths and referenced to the drillers pipe tally</div> <div>2. AV/CV is calculated at the MWD collar using the Power Law for water based muds and the Bingham's Plastic Law for oil based muds.</div> <div> <div>3. Curve mnemonics are:</div> <div>SGRC - Smoothed Gamma Ray combined (Sperry)</div> <div>SEXP - Smoothed Extra Shallow Spacing Phase-Shift Derived Resistivity (Sperry)</div> <div>SESP - Smoothed Shallow Spacing Phase-Shift Derived Resistivity (Sperry)</div> <div>SEMP - Smoothed Medium Spacing Phase-Shift Derived Resistivity (Sperry)</div> <div>SEDP - Smoothed Deep Spacing Phase-Shift Derived Resistivity (Sperry)</div> <div>SROP - Smoothed Rate of Penetration (Sperry)</div> <div>SBD2 - Smoothed Rapid Sample Bulk Density (Sperry)</div> <div>NUCL - Smoothed Neutron Porosity (Sperry)</div> <div>SCO2 - Smoothed Delta Rho (Sperry)</div> </div> <div>4. CNP data processed using the CNP-E algorithm using the following parameters and is based on a Limestone matrix:</div> <div> <div>MW = 10.5 - 10.7 ppg</div> <div>Formation Salinity = 27,000 ppm Cl</div> <div>Mud Salinity = 127,000 ppm Cl</div> <div>Matrix Density = 2.71 g/cc</div> <div>Fluid Density = 1.00 g/cc</div> </div> <div>5. Casino-4DW2 was kicked off from Casino-4 at 1146.0 mMDRT</div> </div>					

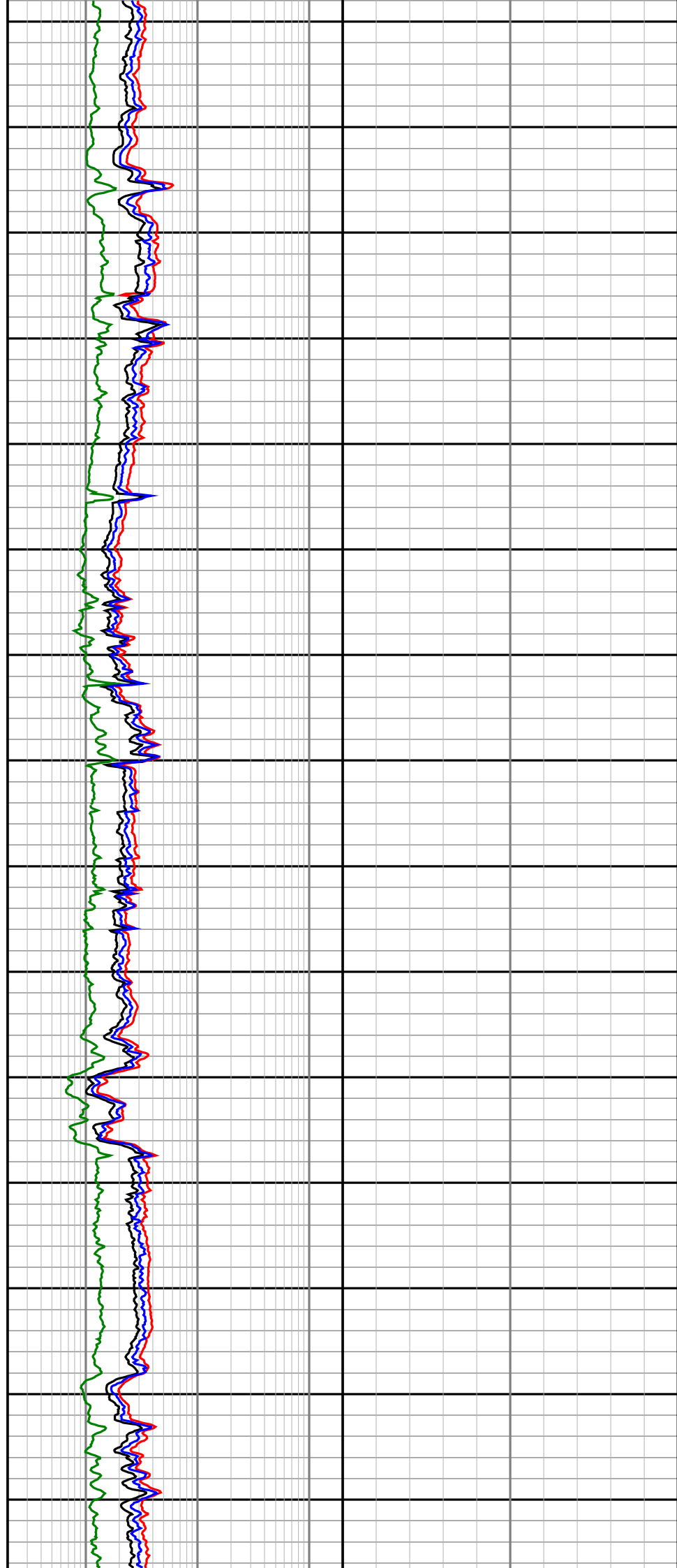
WARRANTY									
HALLIBURTON ENERGY SERVICES (HES) WILL USE ITS BEST EFFORTS TO FURNISH CUSTOMERS WITH ACCURATE INFORMATION AND INTERPRETATIONS THAT ARE PART OF, AND INCIDENT TO, THE SERVICES PROVIDED. HOWEVER, HES CANNOT AND DOES NOT WARRANT THE ACCURACY OR CORRECTNESS OF SUCH INFORMATION AND INTERPRETATIONS. UNDER NO CIRCUMSTANCES SHOULD ANY SUCH INFORMATION OR INTERPRETATION BE RELIED UPON AS THE SOLE BASIS FOR ANY DRILLING, COMPLETION, PRODUCTION, OR FINANCIAL DECISION OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING VENTURE, DRILLING RIG OR ITS CREW OR ANY OTHER THIRD PARTY. THE CUSTOMER HAS FULL RESPONSIBILITY FOR ALL DRILLING, COMPLETION AND PRODUCTION OPERATION. HES MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE SERVICES RENDERED. IN NO EVENT WILL HES BE LIABLE FOR FAILURE TO OBTAIN ANY PARTICULAR RESULTS OR FOR ANY DAMAGES, INCLUDING, BUT NOT LIMITED TO, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, RESULTING FROM THE USE OF ANY INFORMATION OR INTERPRETATION PROVIDED BY HES.									
<div>Hole Size Indicator (SHSI)</div> <div>616</div> <div>inches</div> <div>Rate of Penetration (SROP)</div> <div>1000</div> <div>m/hr</div>		Deep Phase Resistivity (SEDP)							
		0.2200							
		ohmm							
		Medium Phase Resistivity (SEMP)		Delta Rho (SCO2)					
		0.2200		-0.750.25					
		ohmm		sg					
Gamma Ray (SGRC)		Shallow Phase Resistivity (SESP)		Bulk Density (SBD2)					
		0.2200		1.952.95					
		ohmm		g/cc					
Depth MD		X-Shallow Phase Resistivity (SEXP)		Neutron Porosity (NUCL)					
1:500		0.2200		0.45-0.15					
		ohmm		v/v					
1140				Casino-4DW2 was kicked off from Casino-4 @ 1146.0 mMDRT					
1150									

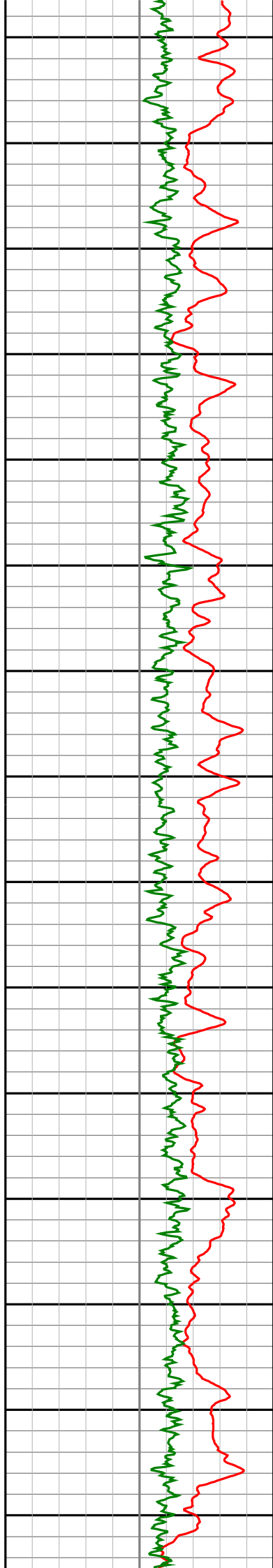






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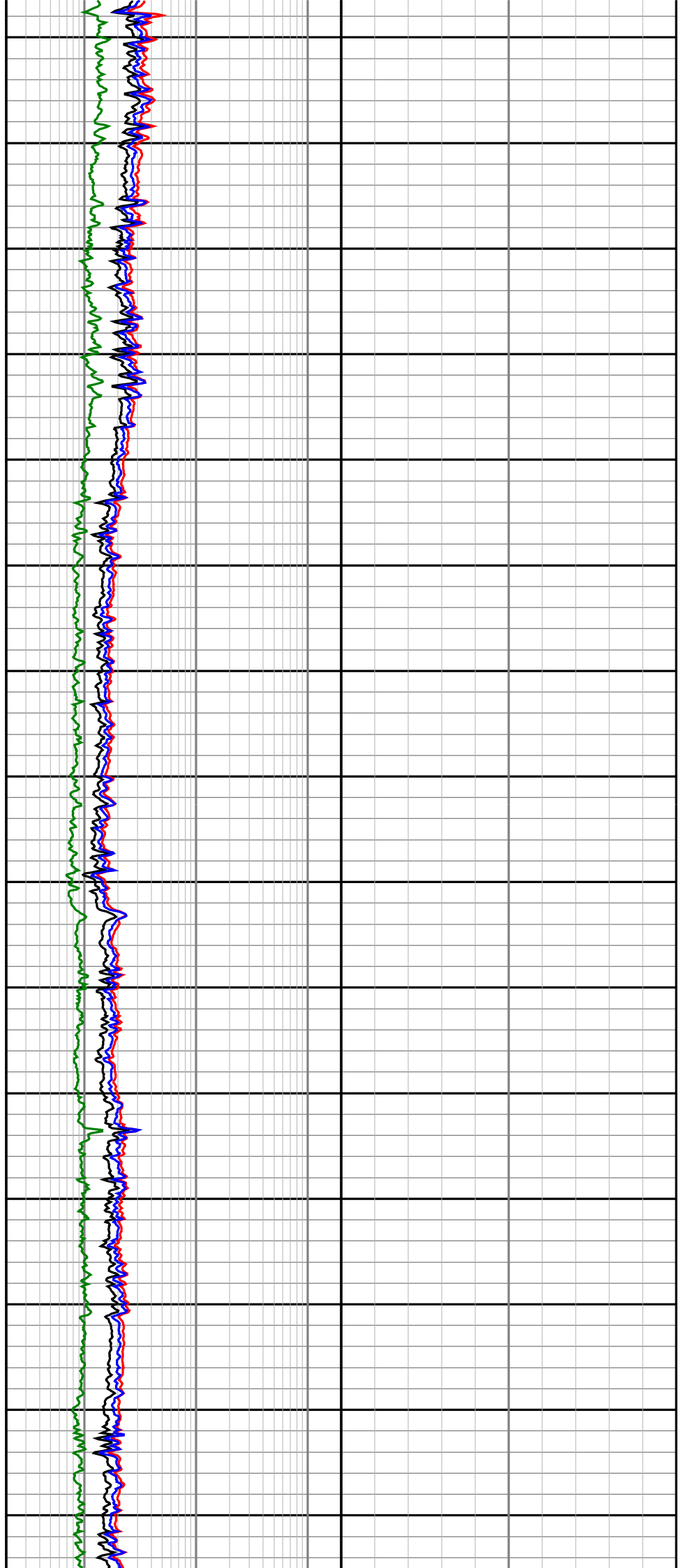
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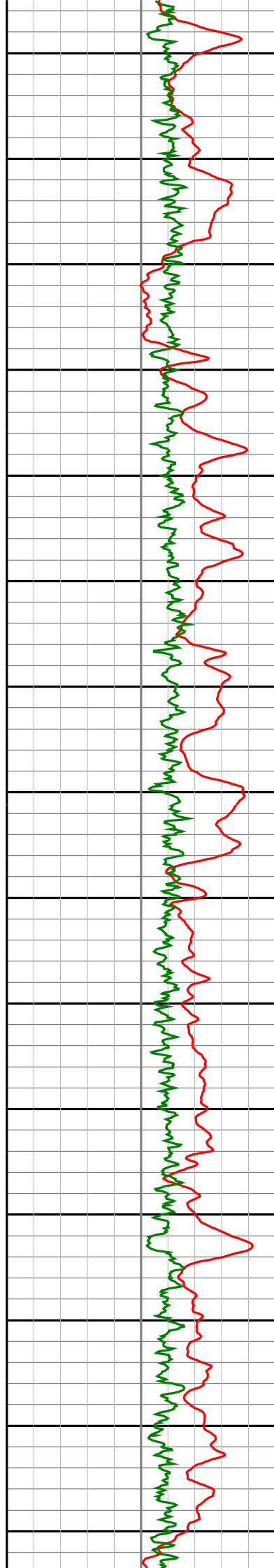
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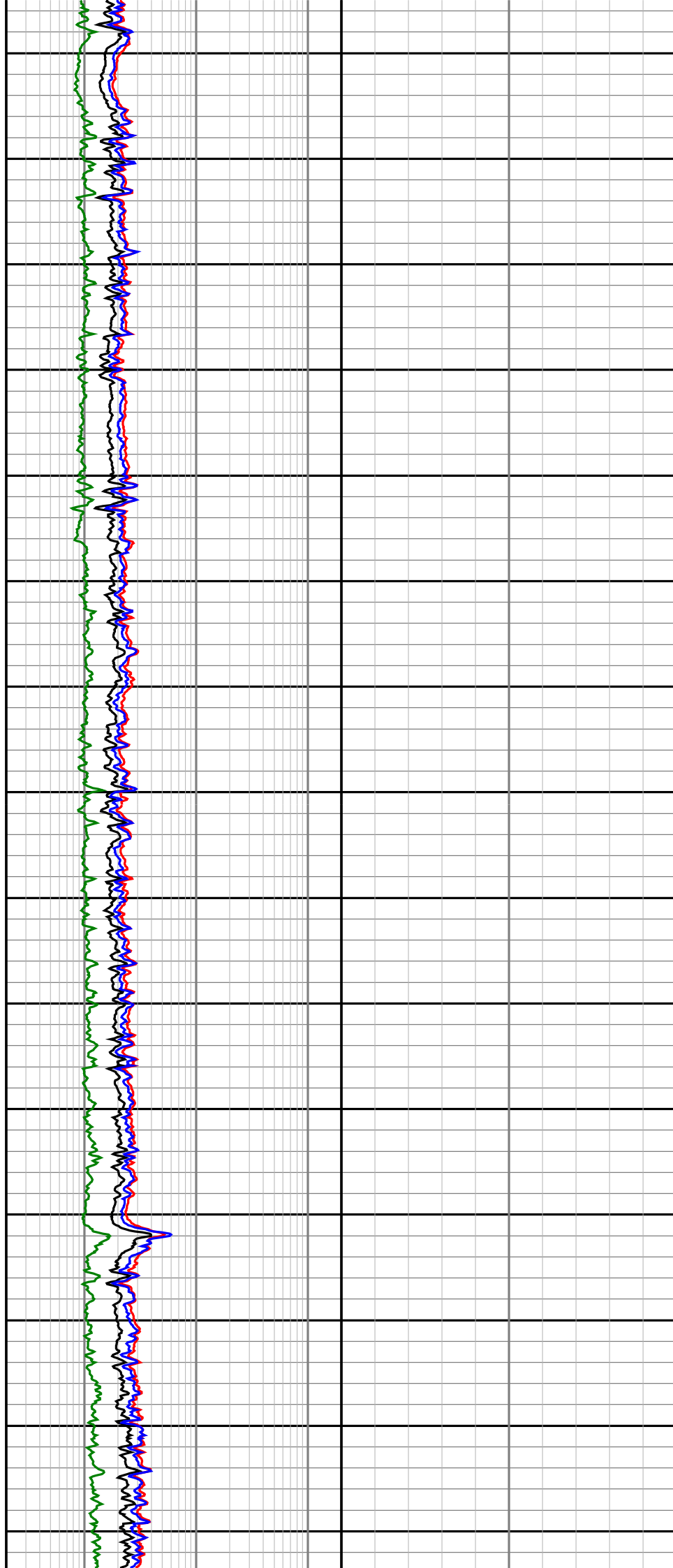
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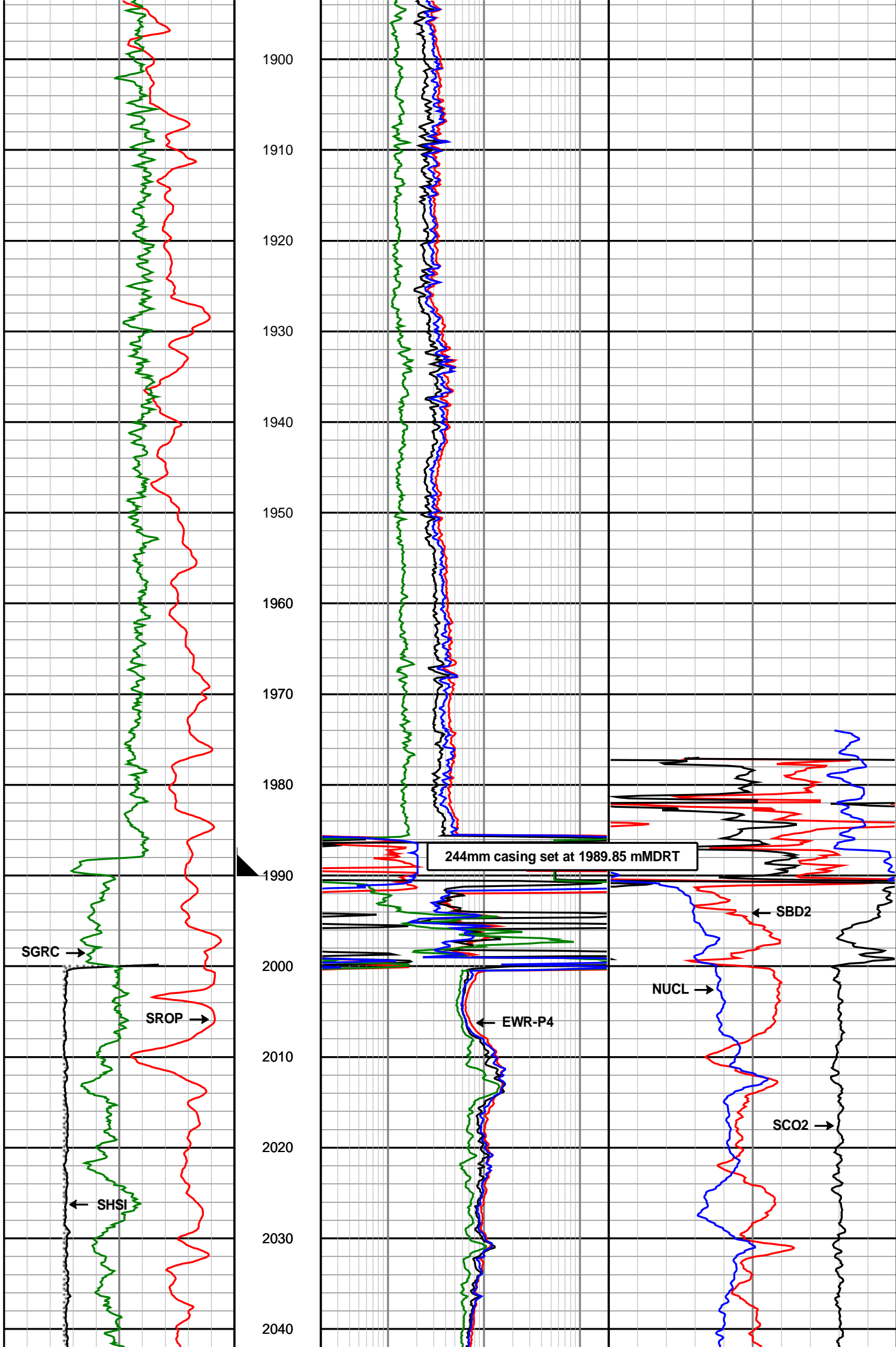
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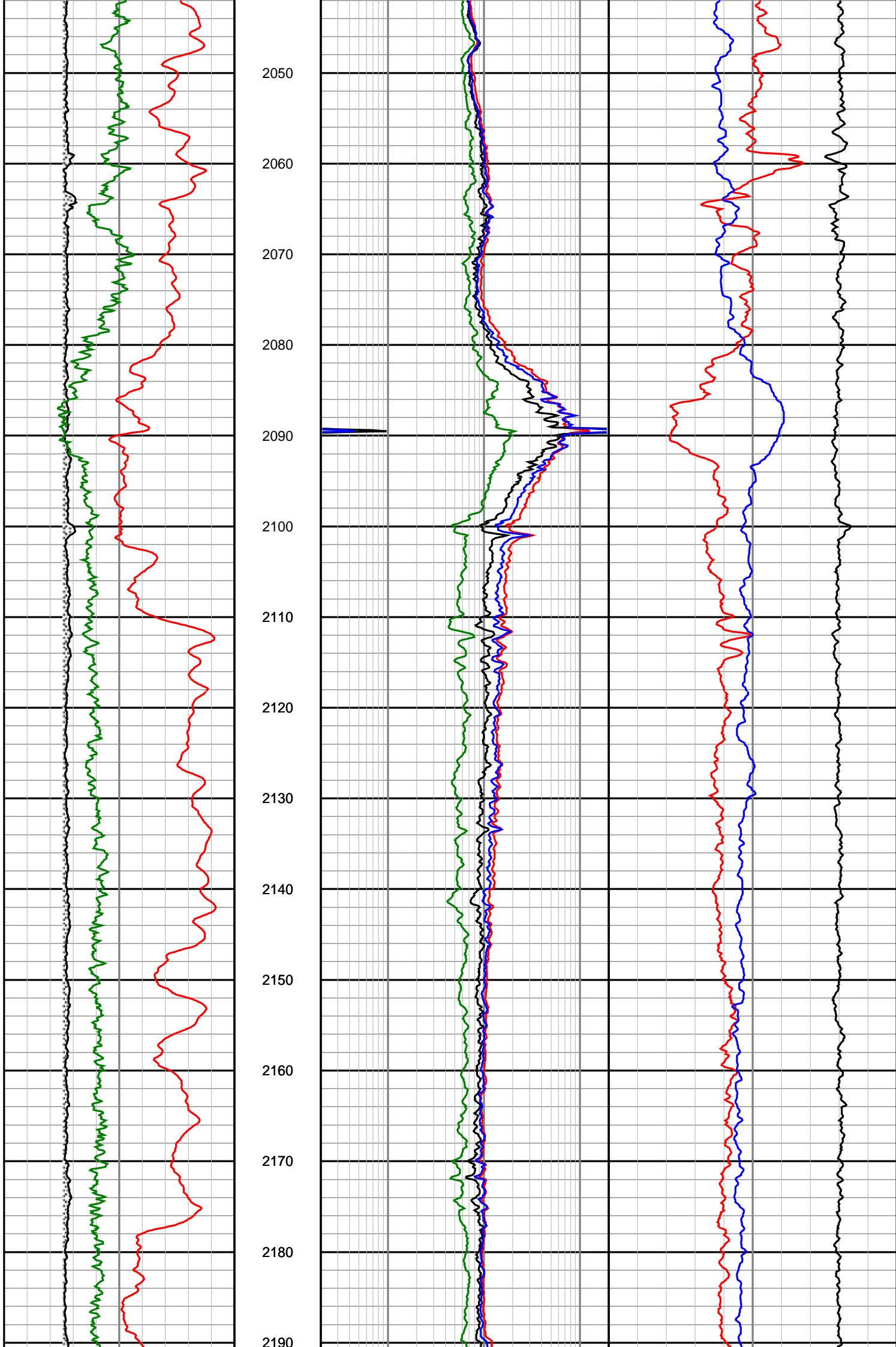


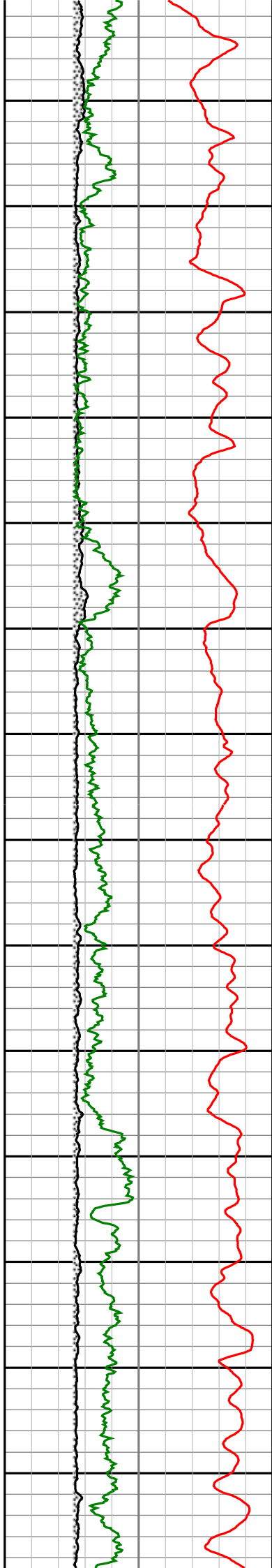


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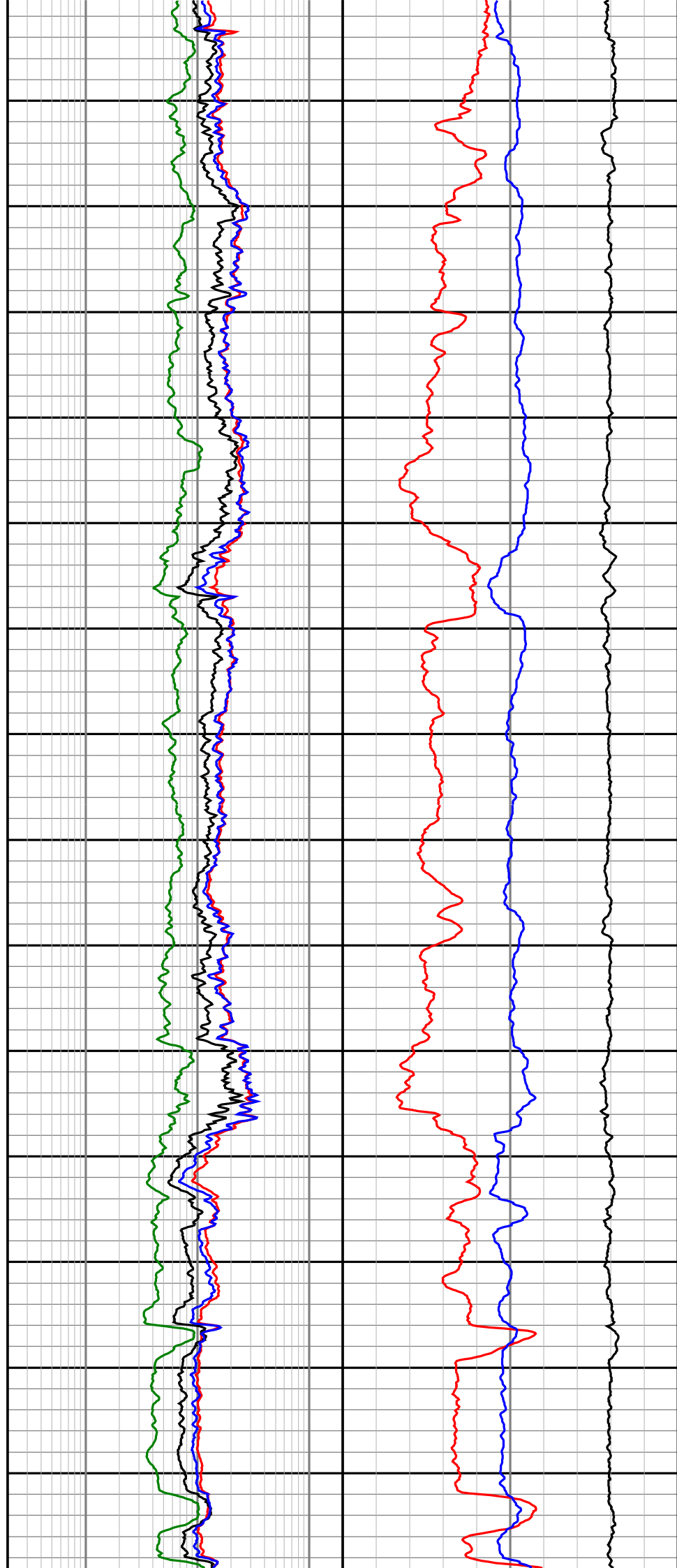
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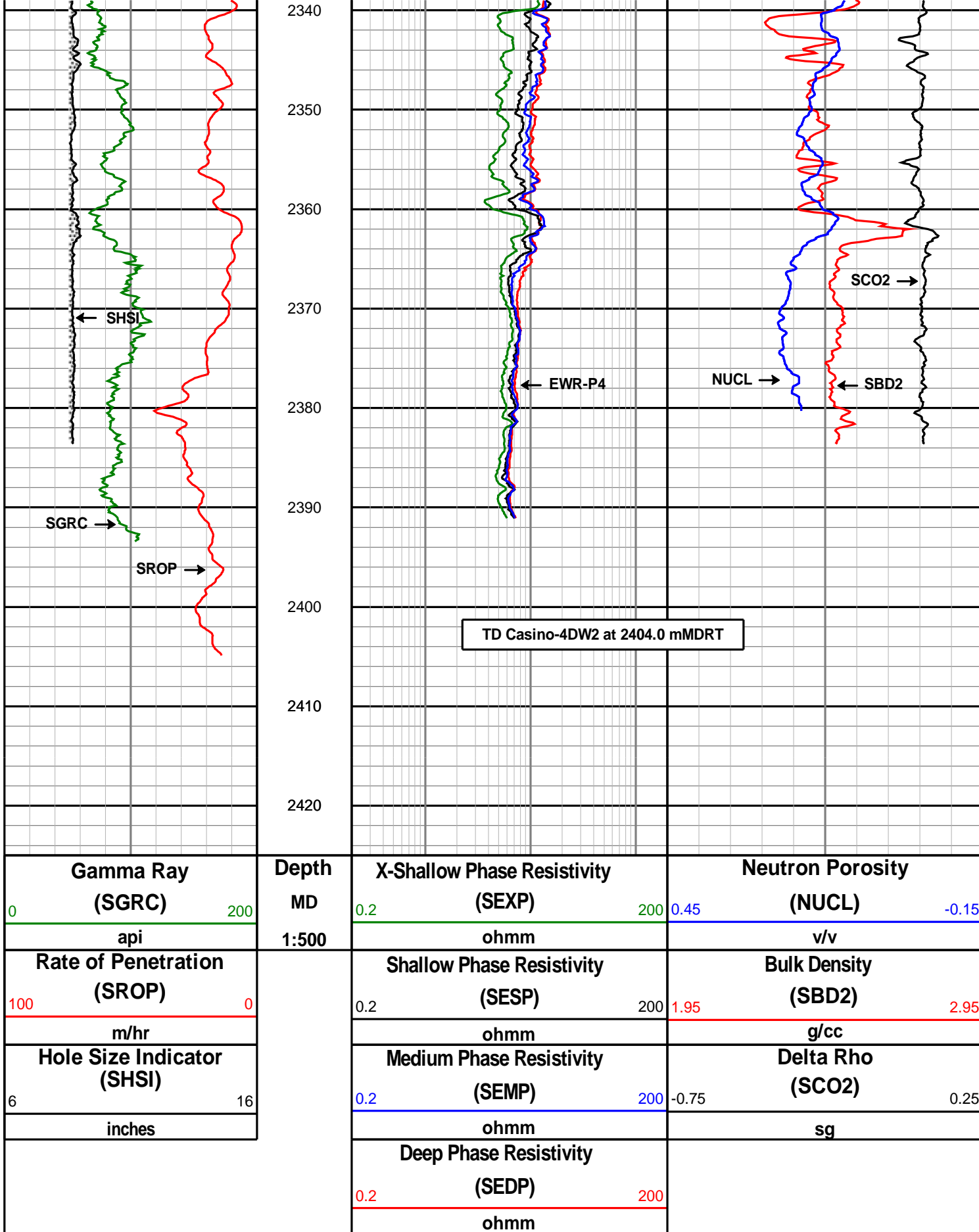
2300

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2330





TD Casino-4DW2 at 2404.0 mMDRT



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DIRECTIONAL SURVEY REPORT

<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>
1146.000	4.50	204.71	1145.630	2.700 S	1.750 E	-2.565	TIE-IN
1166.380	5.08	197.94	1165.939	4.285 S	1.138 E	-2.528	1.19
1196.520	6.90	204.40	1195.913	7.203 S	0.021 W	-2.432	1.93
1225.280	9.13	213.00	1224.392	10.691 S	1.978 W	-1.779	2.63
1250.010	10.24	216.17	1248.769	14.111 S	4.344 W	-0.719	1.49
1257.460	10.16	218.79	1256.101	15.158 S	5.146 W	-0.320	1.90
1287.270	10.53	234.54	1285.433	18.788 S	9.013 W	2.080	2.86
1314.960	11.47	254.15	1312.623	21.009 S	13.724 W	5.754	4.16
1342.920	12.82	274.39	1339.969	21.531 S	19.494 W	11.002	4.76
1371.810	14.63	289.92	1368.043	20.042 S	26.123 W	17.741	4.25
1403.350	16.96	298.16	1398.394	16.513 S	33.925 W	26.279	3.07
1430.210	19.64	303.85	1423.895	12.148 S	41.130 W	34.539	3.59
1460.580	23.39	309.06	1452.146	5.504 S	50.054 W	45.191	4.15
1487.440	26.26	311.42	1476.522	1.789 N	58.651 W	55.758	3.39
1515.920	30.69	310.65	1501.551	10.696 N	68.895 W	68.422	4.68
1544.450	35.01	308.80	1525.514	20.572 N	80.803 W	82.981	4.66
1574.020	39.48	307.90	1549.047	31.668 N	94.839 W	99.955	4.57
1601.660	43.46	306.39	1569.754	42.710 N	109.431 W	117.434	4.45
1630.500	47.12	305.12	1590.041	54.678 N	126.065 W	137.148	3.92
1659.470	51.07	302.67	1609.008	66.872 N	144.241 W	158.390	4.52
1688.150	54.91	300.23	1626.271	78.807 N	163.778 W	180.823	4.50
1716.830	59.06	298.06	1641.895	90.507 N	184.781 W	204.554	4.74
1745.430	62.89	296.17	1655.770	101.895 N	207.039 W	229.359	4.38
1775.140	65.13	291.82	1668.794	112.742 N	231.430 W	255.986	4.55
1803.180	66.82	288.55	1680.212	121.573 N	255.465 W	281.591	3.67
1832.100	67.00	288.55	1691.554	130.036 N	280.686 W	308.187	0.19
1861.050	70.00	287.81	1702.163	138.438 N	306.274 W	335.107	3.19
1889.710	70.27	288.54	1711.901	146.845 N	331.884 W	362.049	0.77
1918.350	71.02	288.14	1721.393	155.348 N	357.532 W	389.061	0.88
1946.760	73.24	288.85	1730.111	163.925 N	383.173 W	416.090	2.45
1975.040	76.28	287.89	1737.544	172.522 N	409.065 W	443.362	3.37
2020.940	76.66	287.87	1748.282	186.223 N	451.536 W	487.960	0.25
2049.610	78.96	288.67	1754.336	195.009 N	478.144 W	515.971	2.54
2078.360	82.52	288.53	1758.961	204.058 N	505.033 W	544.334	3.72
2107.040	86.73	289.13	1761.647	213.272 N	532.053 W	572.876	4.45
2135.830	87.47	289.13	1763.104	222.695 N	559.218 W	601.627	0.77
2164.510	87.78	290.18	1764.292	232.333 N	586.203 W	630.281	1.14
2193.210	87.78	290.62	1765.404	242.330 N	613.083 W	658.959	0.46
2221.710	87.29	289.70	1766.630	252.143 N	639.812 W	687.432	1.10
2250.280	85.93	289.24	1768.319	261.649 N	666.700 W	715.950	1.51
2279.030	86.30	289.25	1770.267	271.104 N	693.781 W	744.632	0.39
2307.850	85.37	288.38	1772.360	280.374 N	720.988 W	773.370	1.32
2336.650	82.20	287.82	1775.478	289.268 N	748.198 W	801.983	3.35
2365.230	80.01	287.52	1779.897	297.838 N	775.101 W	830.196	2.32
2394.210	79.83	287.71	1784.969	306.473 N	802.296 W	858.706	0.27
2404.000	79.83	287.71	1786.697	309.404 N	811.475 W	868.335	0.00

CALCULATION BASED ON MINIMUM CURVATURE METHOD



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

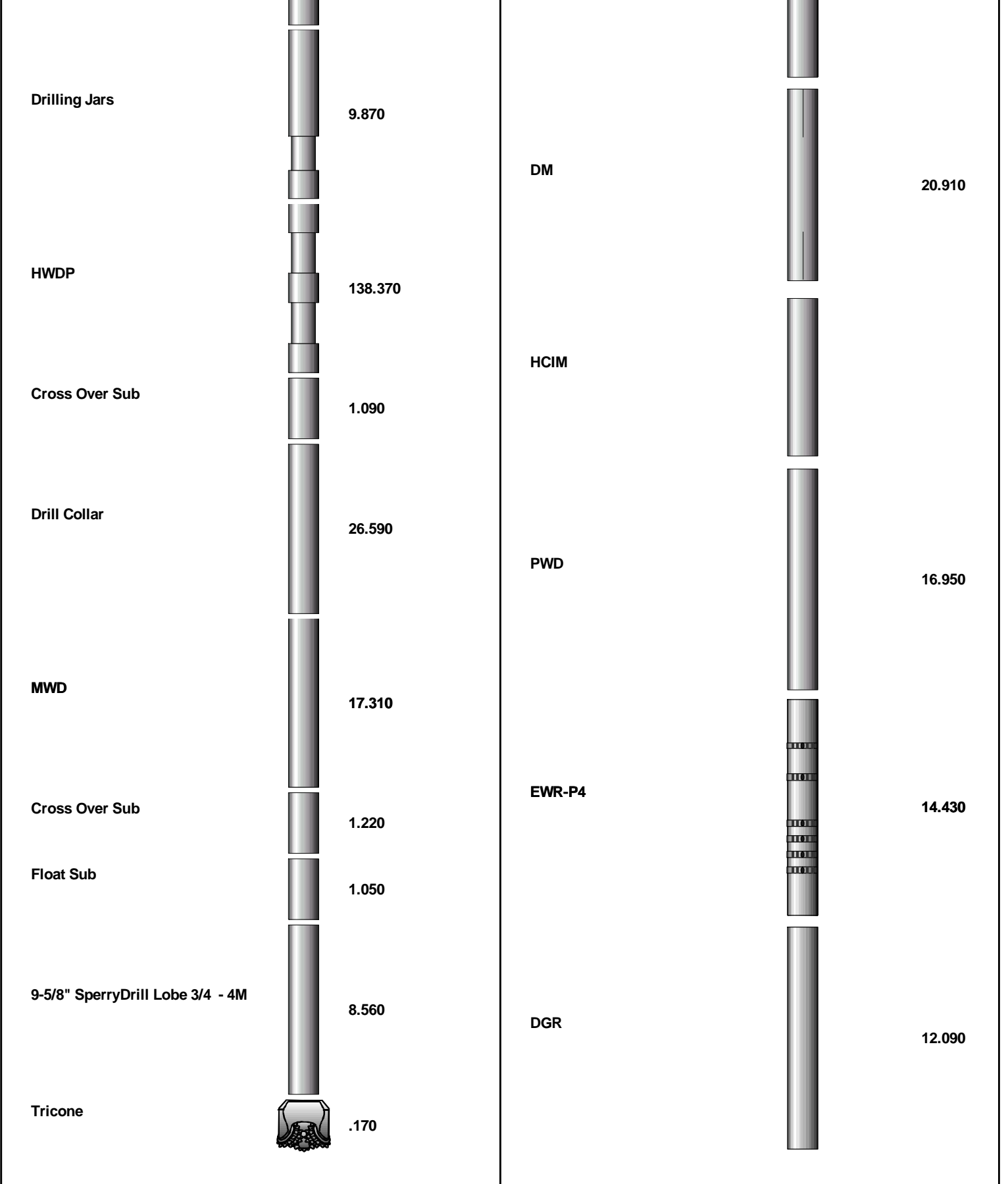
VERTICAL SECTION RELATIVE TO WELL HEAD
VERTICAL SECTION IS COMPUTED ALONG A DIRECTION OF 289.90 DEGREES (GRID)
A TOTAL CORRECTION OF 12.01 DEG FROM MAGNETIC NORTH TO GRID NORTH HAS BEEN APPLIED

HORIZONTAL DISPLACEMENT IS RELATIVE TO THE WELL HEAD.
HORIZONTAL DISPLACEMENT(CLOSURE) AT 2404.000 METRES
IS 868.460 METRES ALONG 290.87 DEGREES (GRID)

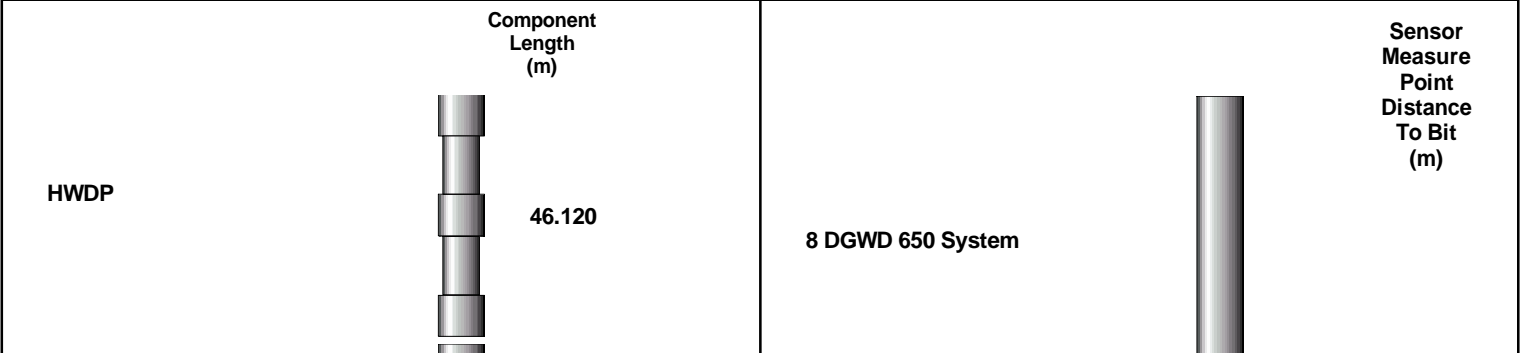
MWD RUN 800 - BHA
















































MWD RUN 800 - MWD

<p>HWDP Date Printed:29 June 2005</p>  <p>Component Length (m)</p> <p>46.120</p>	<p>Sensor Measure Point Distance To Bit (m)</p> <p>8 DGWD 650 System</p> 
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MWD RUN 900 - BHA	MWD RUN 900 - MWD
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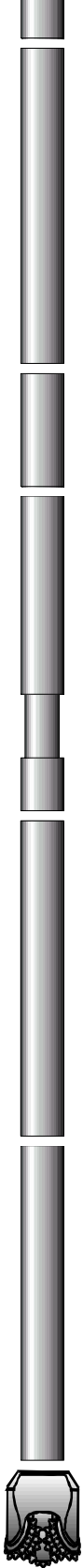



Drilling Jars		9.870	DM		22.980
					
					
					
HWDP		138.370			
					
Cross Over Sub		1.090	HCIM		
					
Drill Collar		26.590			
			PWD		19.020
MWD		14.310			
					
Cross Over Sub		1.220	EWR-P4		16.500
					
					
					
					
Integral Blade Stabilizer		1.900			
					
Float Sub		1.050			
					
9-5/8" SperryDrill Lobe 3/4 - 4M		8.560	DGR		14.160
					
Tricone		.340			

MWD RUN 1000 - BHA



MWD RUN 1000 - MWD

Component Length (m)		Sensor Measure Point Distance To Bit (m)	
HWDP		8 DGWD 650 System	

<div>  <p>Drill Collar</p> <p>Cross Over Sub</p> <p>Drilling Jars</p> <p>Drill Collar</p> <p>MWD</p> <p>PDC</p> </div> <div> <p>27.810</p> <p>1.090</p> <p>9.670</p> <p>88.330</p> <p>23.630</p> <p>.640</p> </div>	<div>  <p>DM</p> <p>HCIM</p> <p>PWD</p> <p>EWR-P4</p> <p>DGR</p> <p>GeoPilot</p> </div> <div> <p>19.970</p> <p>16.010</p> <p>13.490</p> <p>11.150</p> <p>1.740</p> </div>
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MWD RUN 1100 - BHA

MWD RUN 1100 - MWD

	Sensor Measure Point Distance To Bit (m)
<div>  <p>HWDP</p> </div> <div> <p>46.120</p> </div>	<div>  <p>8 DGWD 650 System</p> <p>CNP</p> </div> <div> <p>24.520</p> </div>

