



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

Country		: Australia			
Field		: VIC-P-45			
Location		: Lat: 38° 35' 44.230" South Long: 148° 16' 31.859" East			
Well		: Megamouth-1ST			
Company		: BHP Billiton			
Rig		: Ocean Epoch			
LOCATION				Company : BHP Billiton Rig : Ocean Epoch Well : Megamouth-1ST Field : VIC-P-45 Country : Australia DOE Number :	
Latitude : Lat: 38° 35' 44.230" South Longitude : Long: 148° 16' 31.859" East					
UTM Easting = 611,077.19 m UTM Northing = 5,727,325.06 m					
Permanent Datum : LAT		Elevation : 0.00 m		Elev. KB	
Log Measured From : Drill Floor		22.40 m Above Permanent Datum		DF 22.40 m GL WD 80.20 m	
Drilling Measured From : Drill Floor		MD LOG			
Depth Logged : 2,393.00 m To 2,688.00 m		Unit No. : LT 1087		Job No. : AUFE-0002796094	
Date Logged : 27-Nov-03 To 02-Dec-03		Plot Type : Final			
Total Depth MD : 2,688.00 m TVD: 2,677.28 m		Plot Date : 08-Jan-04			
Spud Date : 27-Nov-03					
Run No.		Borehole Record (MD)		Borehole Record (MD)	
		Size	From	To	
4	311,000 mm	2,450.00 m	2,483.00 m		
5	311,000 mm	2,393.00 m	2,688.00 m		

SENSOR INFORMATION

Downhole Processor Information

Tool Type	HCIM	HCIM			
Software Version	66.37	66.37			
Sub Serial Number	198838	198838			
Insert Serial Number	132882	132882			
Logging String Serial Number	DM90031516XHRLG	DM90031516XHRLG			
Date and Time Initialized	28-Nov-03 16:22	30-Nov-03 14:52			
Date and Time Read	29-Nov-03 14:09	03-Dec-03 08:15			

Directional Sensor Information

Tool Type	DM	DM			
Distance From Bit (m)	26.71	26.71			
Software Version	3.15	3.15			
Sub Serial Number	29034	29034			
Sonde Serial Number	103286	103286			
Sensor ID Number	N/A	N/A			
Survey String Serial Number	DM90026201F8	DM90026201F8			
Toolface Offset (deg)	18.00	18.00			

Gamma Ray Sensor Information

Tool Type	DGR	DGR			
Distance From Bit (m)	12.94	12.94			
Recorded Sample Period (sec)	10	10			
Software Version	N/A	N/A			
Sub Serial Number	082377	082377			
Insert/Sonde Serial Number	89753	89753			

Neutron Sensor Information

Tool Type	CNP	CNP			
Distance From Bit (m)	22.31	22.31			
Recorded Sample Period (sec)	12	12			
Sub Serial Number	125694	125694			
Insert Serial Number	87644	87644			
Source Serial Number	1399NN	1399NN			
Source Factor	1.1840	1.1840			
Pin Orientation	Down	Down			

Density Sensor Information

Tool Type	SLD	SLD			
Distance From Bit (m)	16.40	16.40			
Recorded Sample Period (sec)	12	12			
Software Version	11.00	11.00			
Sub Serial Number	130149	130149			
Insert Serial Number	152522	152522			
Sensor ID Number	423	423			
Source Serial Number	2100GW	2100GW			
Pin Orientation	Up	Up			
Stabilizer Blade O.D. (mm)	301.625	301.625			
DPA Offset	138.00	138.00			

REMARKS

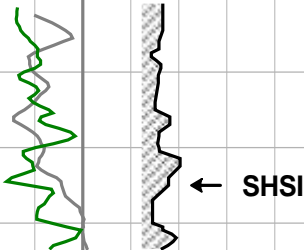
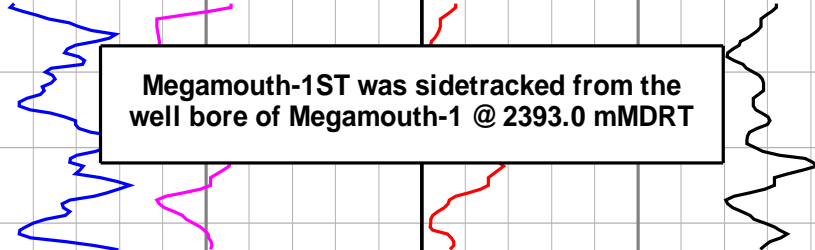
1. All depths are bit depths and referenced to the drillers pipe tally unless otherwise noted.
2. AV/CV is calculated at the MWD collar using the Power Law for water based muds and is in m/min.

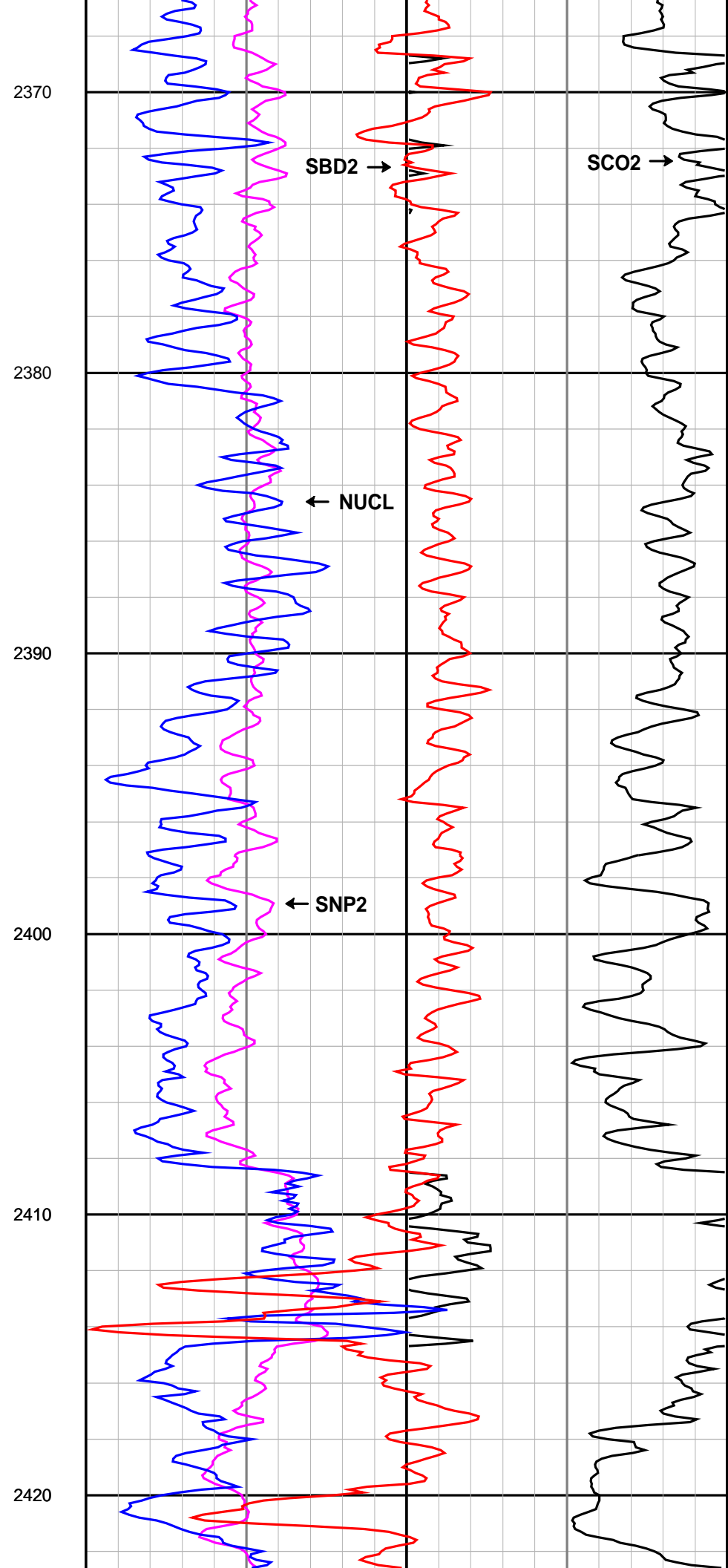
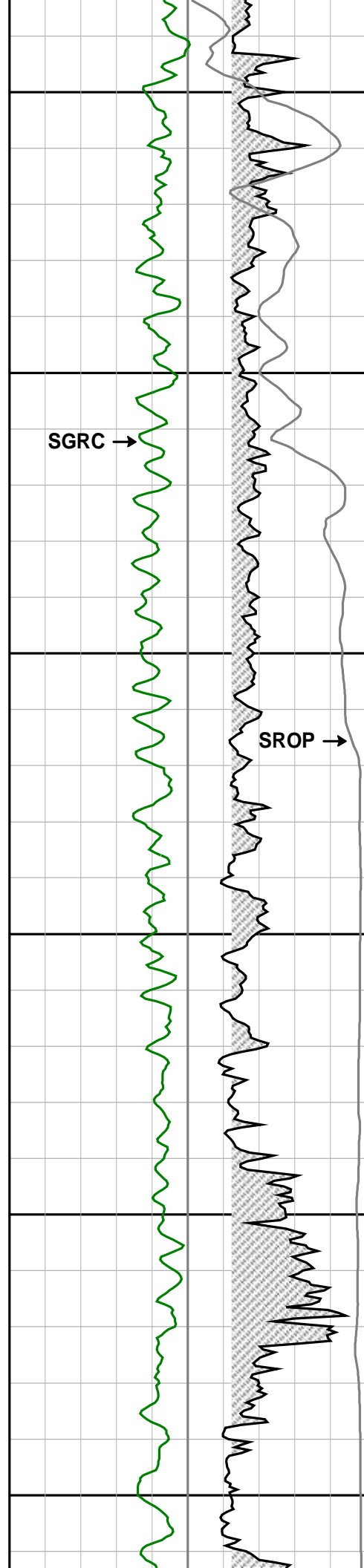
SGRC - Smoothed Gamma Ray Combined, api
SBD2 - Smoothed Best Bin Bulk Density Compensated, g/cc
SROP - Smoothed Rate of Penetration, m/hr
SCO2 - Smoothed Best Bin Stand-off Correction, g/cc
SNP2 - Smoothed Best Bin Near Photoelectric Effect, b/e
NUCL - Smoothed Porosity (Limestone Matrix) corrected for Salinity, Temperature and Pressure, v/v
SHSI - Smoothed Density Hole Size Indicator, inches

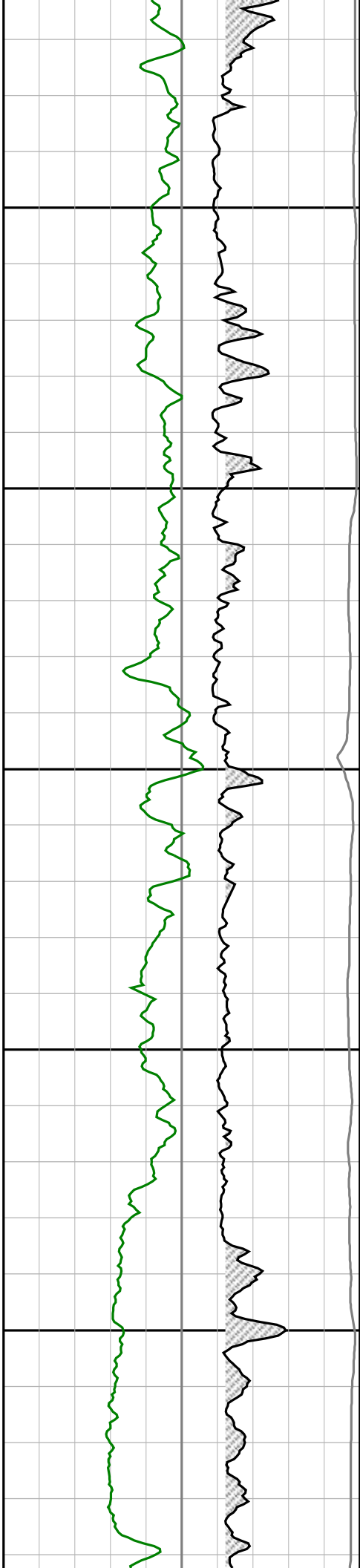
MW = 1.20 SG
Formation Salinity = 50,000 ppm CL
Mud Salinity = 38,500 ppm CL
Matrix Density = 2.71 g/cc
Fluid Density = 1.00 g/cc

5. CNP data has been reprocessed using data from the Density tool for borehole diameter.

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SLD Rapid Caliper (SHSI)			Neutron Porosity (NUCL)	
6	inches	16	0.45	v/v -0.15
Rate of Penetration (SROP)			Density (SBD2)	
500	m/hr	0	1.95	g/cc 2.95
Gamma Ray (SGRC)		Depth MD	Photoelectric Effect (SNP2)	Standoff Correction (SCO2)
0	api	200	0	b/e 10 -0.25 g/cc 0.25
		1:200		
		2550		
		2360		
		 <div data-bbox="756 1894 1377 2011" style="border: 1px solid black; padding: 5px; text-align: center;"> Megamouth-1ST was sidetracked from the well bore of Megamouth-1 @ 2393.0 mMDRT </div>		





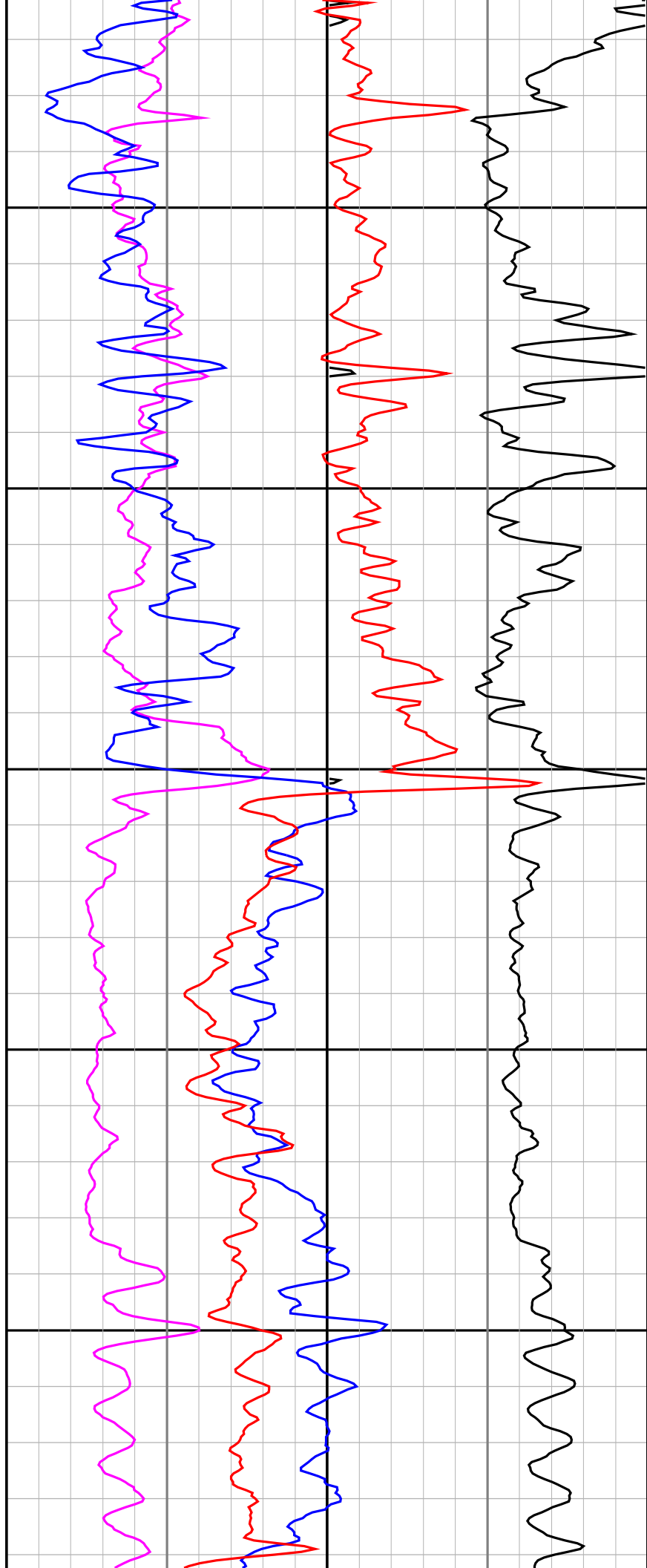
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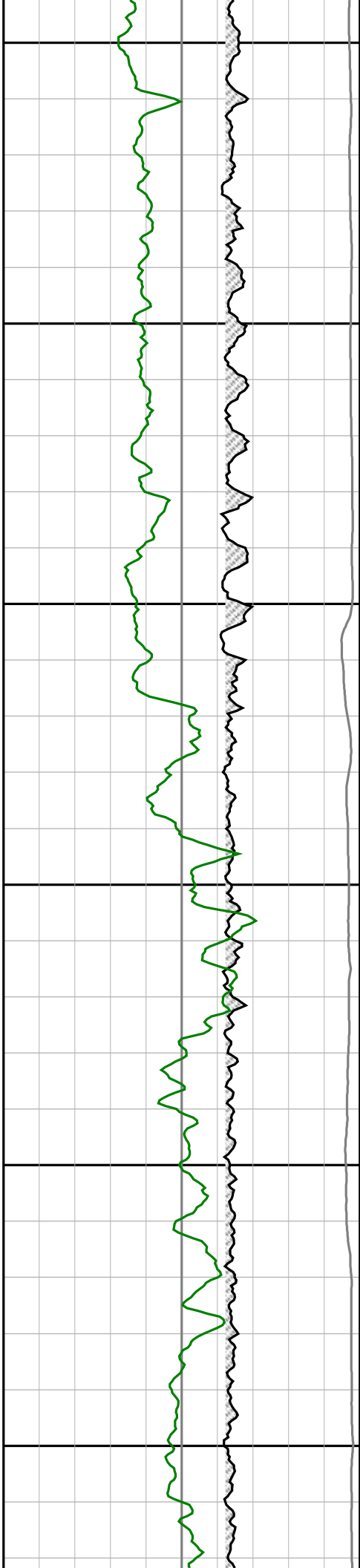
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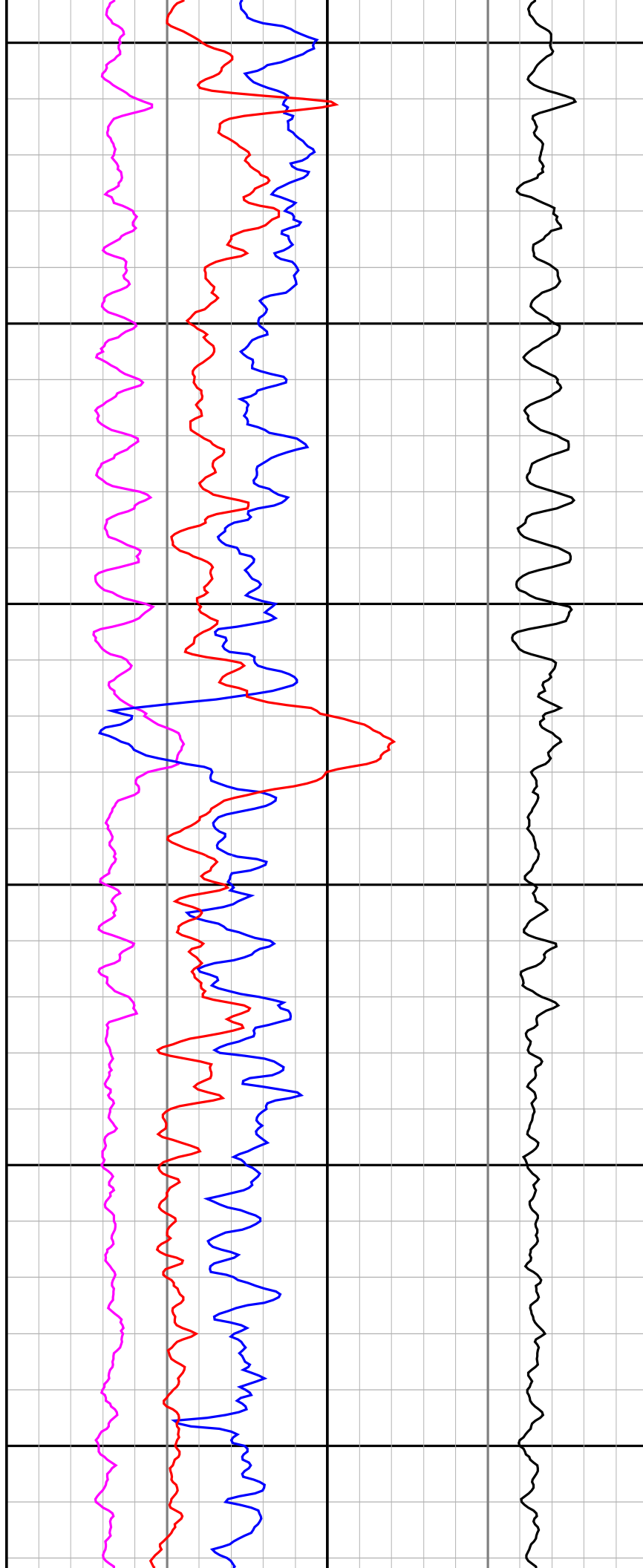
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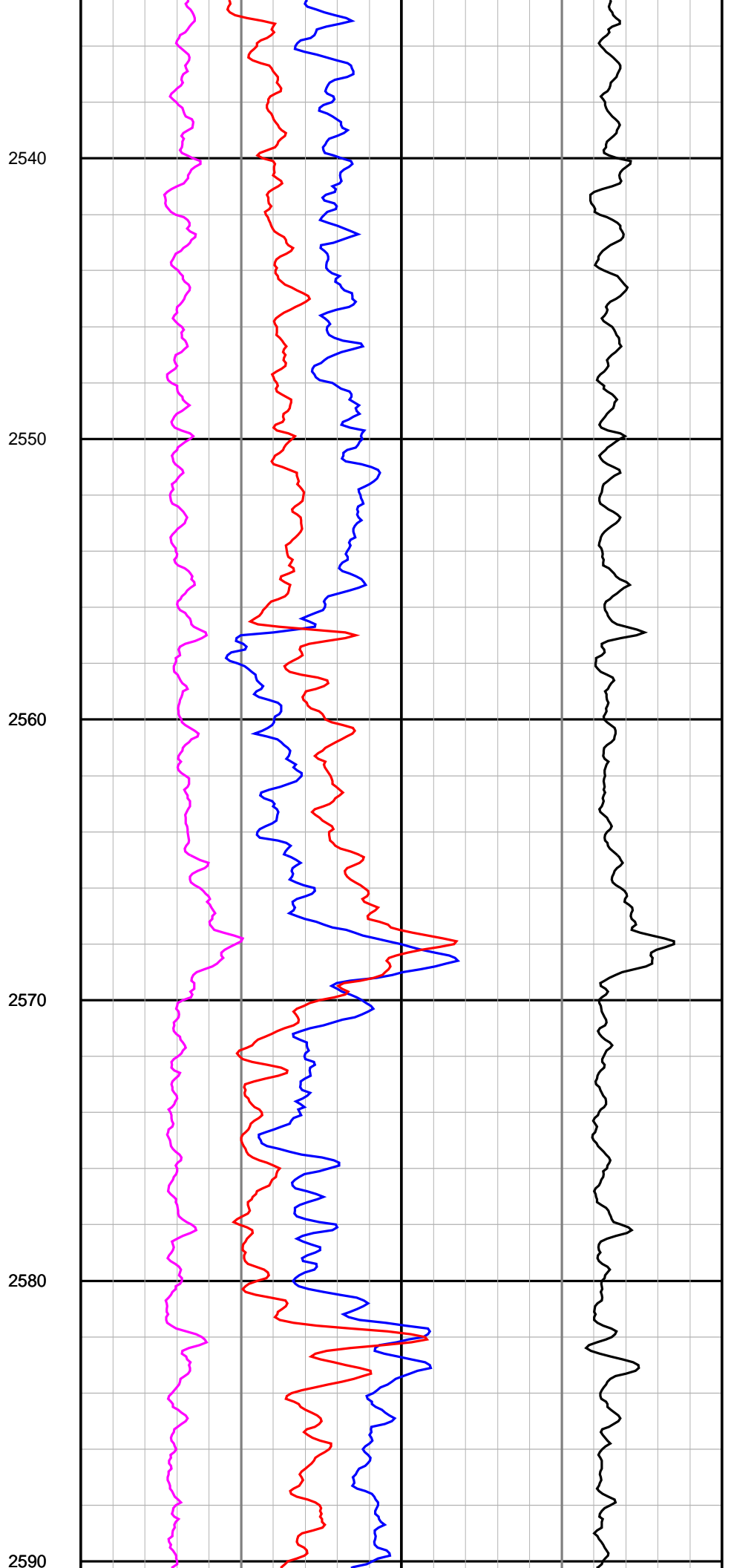
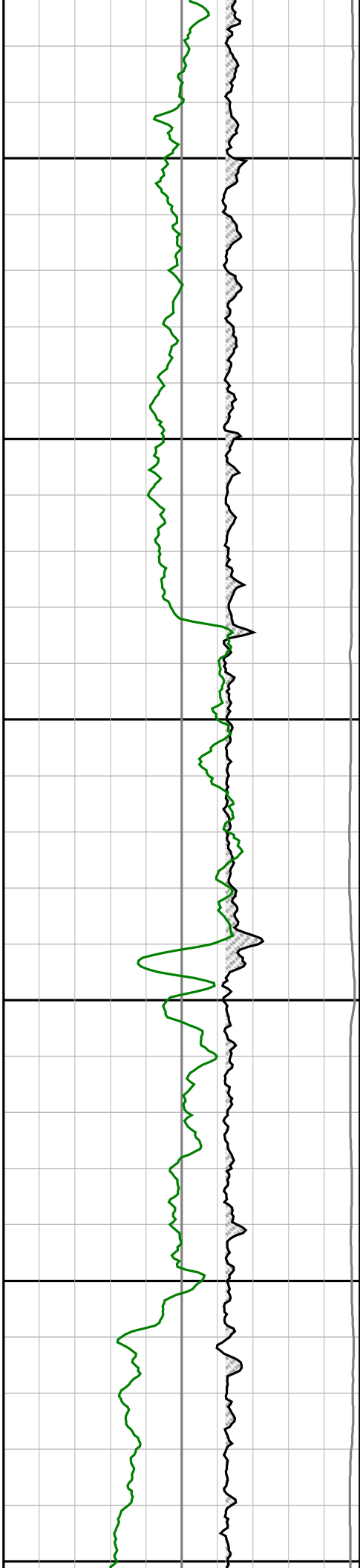
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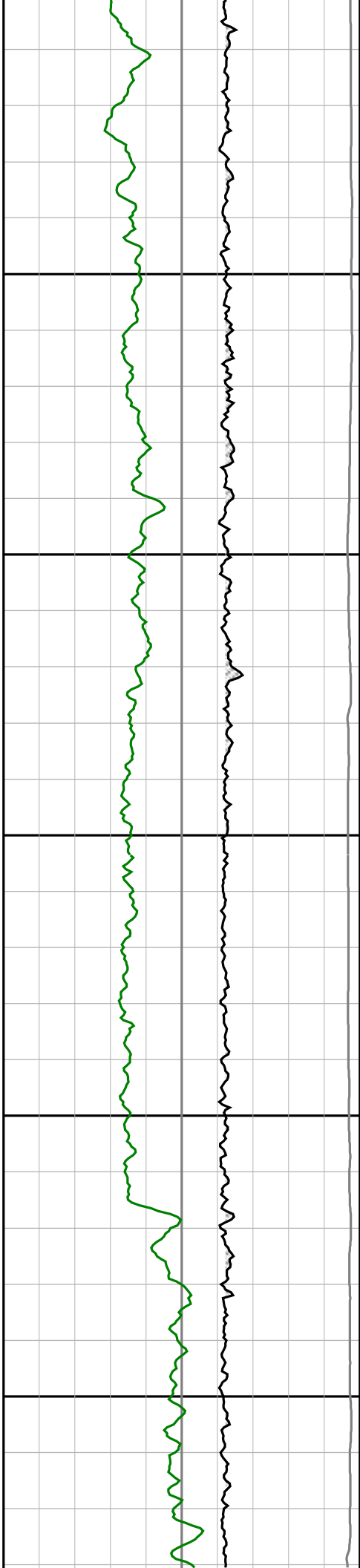
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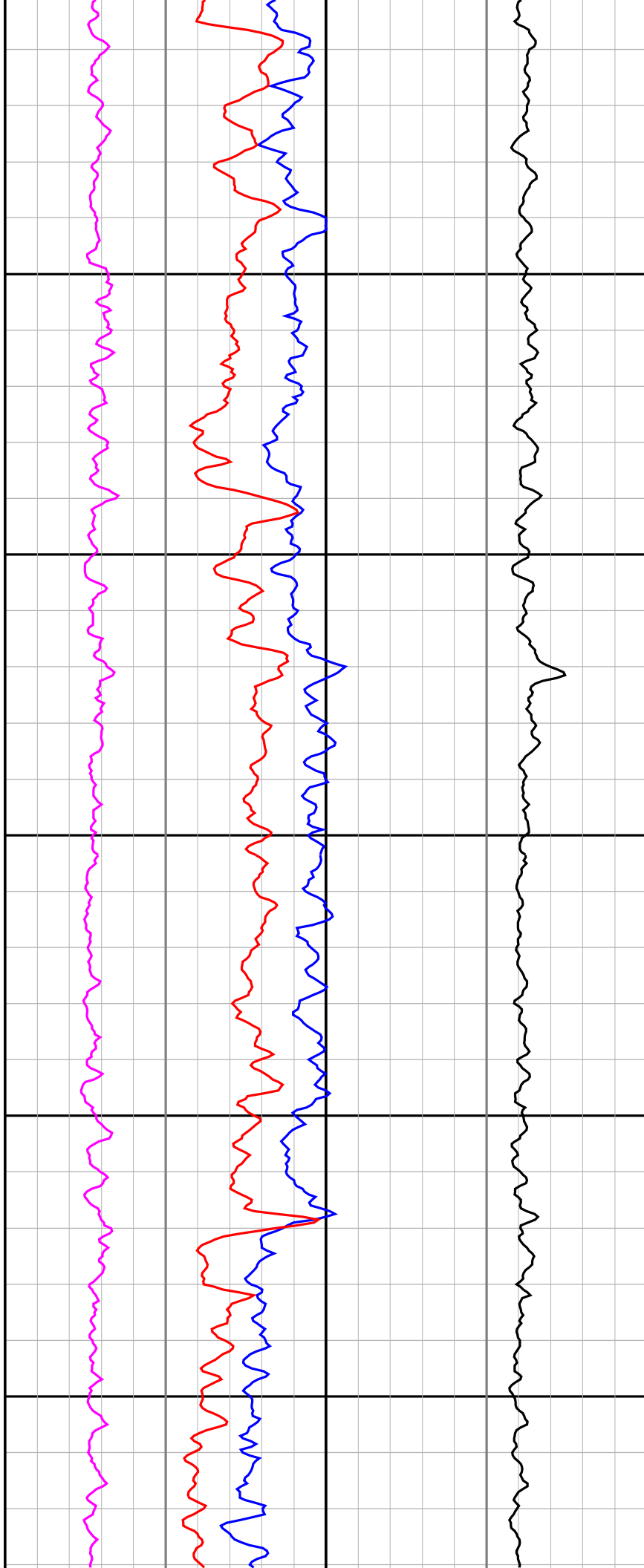
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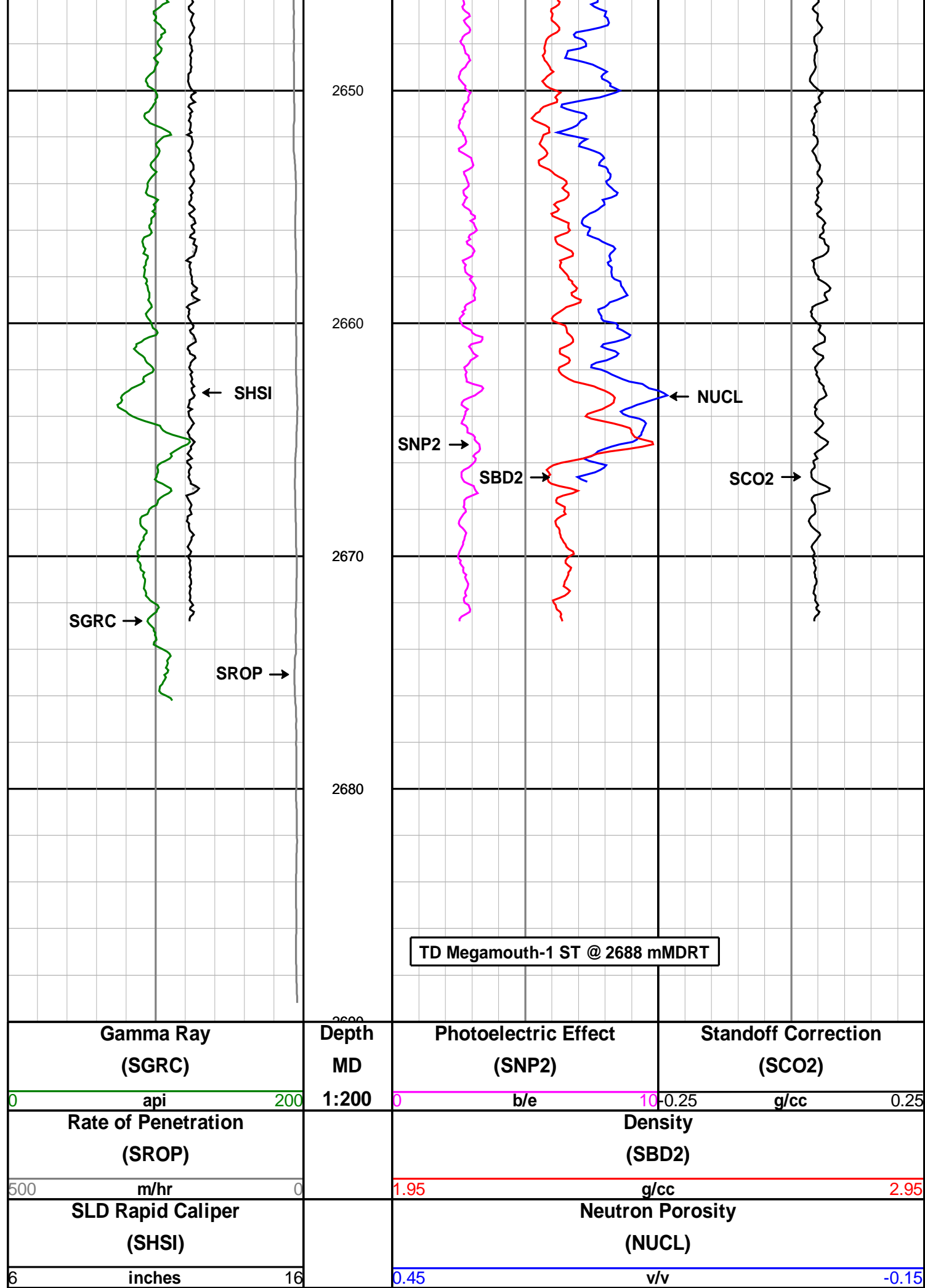
2610

2620

2630

2640







DIRECTIONAL SURVEY REPORT

BHP Billiton
Megamouth-1ST
VIC-P-45
Victoria
Australia
AU-FE-0002796094
Final Survey Projected to TD

<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>
2383.080	0.83	351.30	2381.890	46.190 N	1.780 W	46.190	TIE-IN
2384.750	0.76	350.33	2383.560	46.213 N	1.784 W	-41.053	1.22
2412.800	0.28	303.92	2411.609	46.435 N	1.871 W	-41.217	0.65
2443.800	7.35	186.91	2442.525	44.507 N	2.172 W	-39.344	7.23
2469.500	14.35	185.33	2467.750	39.699 N	2.666 W	-34.784	8.18
2499.760	15.12	185.79	2497.015	32.039 N	3.413 W	-27.535	0.78
2528.500	15.52	186.75	2524.733	24.491 N	4.244 W	-20.352	0.49
2553.500	16.08	187.06	2548.789	17.733 N	5.062 W	-13.889	0.68
2585.900	16.57	187.44	2579.882	8.698 N	6.212 W	-5.224	0.47
2614.750	17.07	187.73	2607.497	0.421 N	7.315 W	2.734	0.53
2656.600	17.94	187.31	2647.409	12.059 S	8.961 W	14.727	0.63
2688.000	17.94	187.31	2677.282	21.653 S	10.192 W	23.932	0.00

CALCULATION BASED ON MINIMUM CURVATURE METHOD

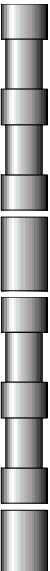





SURVEY COORDINATES RELATIVE TO WELL SYSTEM REFERENCE POINT
TVD VALUES GIVEN RELATIVE TO DRILLING MEASUREMENT POINT












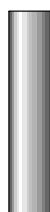




VERTICAL SECTION RELATIVE TO WELL HEAD
VERTICAL SECTION IS COMPUTED ALONG A CLOSURE OF 205.21 DEGREES (GRID)
A TOTAL CORRECTION OF 14.07 DEG FROM MAGNETIC NORTH TO GRID NORTH HAS BEEN APPLIED

HORIZONTAL DISPLACEMENT IS RELATIVE TO THE WELL HEAD.
HORIZONTAL DISPLACEMENT(CLOSURE) AT 2688.000 METRES
IS 23.932 METRES ALONG 205.21 DEGREES (GRID)

MWD RUN 300 - BHA





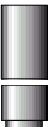


MWD RUN 300 - MWD













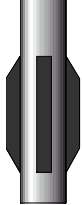




		Cumulative Length (m)		Sensor Measure Point Distance To Bit (m)
HWDP		211.42	BAT	
Sub		135.77		
		135.13	8 DGWD 650 System	
Sub		125.66		
Date Printed:08 January 2004		124.55	PM	
Drill Collar				

Drill Collar					
Jar		105.63	HCIM		
Drill Collar		95.88	CNP		22.310
Sub		40.10			
MWD		38.18	EWR-P4		19.360
Reamer		11.73	SLD		16.400
Sub		9.41			
Motor		8.64	DGR		12.940
Bit		0.35			

MWD RUN 400 - BHA

MWD RUN 400 - MWD

		Cumulative Length (m)			Sensor Measure Point Distance To Bit (m)
HWDP		211.42		BAT	
Sub		135.77			
HWDP		135.13		8 DGWD 650 System	
Sub		125.66			

Drill Collar		124.55	PM		
Jar		105.63	HCIM		
Drill Collar	 	95.88	CNP		22.310
Sub		40.10			
MWD		38.18	EWR-P4		19.360
Reamer		11.73	SLD		16.400
Sub		9.41			
Motor		8.64	DGR		12.940
Bit		0.35			