HALLIBURTON

DGR Dual Gamma Ray
ACAL Acoustic Caliper
EWR-Phase 4
ALD Azimuthal Lithodensity
CTN Compensated Thermal Neutron

Powered by INSITE™

1 : 500

Sperry Drilling Services

Company : SANTOS Ltd.
Rig : Ensign Rig 32
Well : Galloway-1
Field : Exploration
Country : Australia
DOE Number :

LOCATION

Latitude : 38° 5' 8.75" South
Longitude : 147° 33' 44.11" East
UTM Easting = 549,307.00 m
UTM Northing = 5,784,519.99 m

Other Services
Directional Drilling

Elev.
KB
DF 8.60 m
GL
2.78 m
WD

Country : Australia
Field : Exploration
Location : Lat: 38° 5' 8.75" South
Long: 147° 33' 44.11" East
Well : Galloway-1
Company : SANTOS Ltd.
Rig : Ensign Rig 32

Permanent Datum : Mean Sea Level Elevation : 0.00 m
Log Measured From : Drill Floor 8.60 m Above Permanent Datum
Drilling Measured From : Drill Floor

TVD LOG

Depth Logged : 314.88 m To 1,364.69 m
Date Logged : 25-Jul-06 To 22-Aug-06
Total Depth MD : 2,315.00 m TVD : 1,364.69 m
Spud Date : 25-Jul-06

Unit No. : 182
Job No. : AU-FE-0004392520
Plot Type : Final
Plot Date : 04-Oct-06

Borehole Record (TVD)

Run No.	Size	From	To
1	17.500 in	60.00 m	314.88 m
2	12.250 in	314.88 m	525.19 m
3	12.250 in	525.19 m	830.45 m
4	8.500 in	830.45 m	848.32 m
5	8.500 in	848.32 m	855.74 m
6	8.500 in	855.74 m	965.75 m
7	8.500 in	965.75 m	1,364.69 m

Casing Record (TVD)

Run No.	Size	Weight	From	To
1	20.000 in	198.00 kgpm	SURFACE	60.00 m
2	13.380 in	101.00 kgpm	SURFACE	312.11 m
3	9.625 in	70.00 kgpm	SURFACE	827.87 m

Borehole Record (TVD)

Run No.	Size	From	To

WELL INFORMATION

MWD Run Number	200	300	400	500	600
Date run completed	03-Aug-06	06-Aug-06	13-Aug-06	15-Aug-06	16-Aug-06
Rig Bit Number	3	4	7	8	8RR
Bit Size (in)	12.25	12.25	8.5	8.5	8.5
Tool Nominal OD (in)	8.00	8.00	6.75	6.75	6.75
Log Start Depth (TVD, m)	314.87	525.19	834.88	848.32	855.74
Log End Depth (TVD, m)	525.19	830.45	848.32	855.74	965.75
Drill or Wipe	Drilling	Drilling	Drilling	Drilling	Drilling
Drill/Wipe Start Date and Time	02-Aug-06 22:42	04-Aug-06 12:19	12-Aug-06 02:08	13-Aug-06 13:12	15-Aug-06 09:35
Drill/Wipe End Date and Time	03-Aug-06 14:45	06-Aug-06 02:19	12-Aug-06 14:24	14-Aug-06 20:52	16-Aug-06 06:41
Min Inc (deg) @ Depth (TVD, m)	22.40 @ 319.6	70.35 @ 550.27	69.84 @ 844.03	N/A @ N/A	47.98 @ 945.05
Max Inc (deg) @ Depth (TVD, m)	70.37 @ 520.63	73.81 @ 577.54	71.72 @ 834.93	N/A @ N/A	67.72 @ 854.73
Bit TFA(in2) / Bit Type	1.03 / Reed T11C	1.37 / Reed RSX516S	90 / Reed RSX616MB1	90 / Reed RSX616MB1	49 / Reed RSX616MB1
Flow Rate (gpm)	701	770	580	554	600
Max AV (mpm) / CV (mpm) @ MWD	76.1 / 127.0	96.1 / 64.0	162.4 / 167.0	164.8 / 167.0	168.0 / 162.0
Fluid Type	Polymer	Polymer	Polymer	Polymer	Polymer
Density (sg) / Viscosity (spqt)	1.09 / 45	1.13 / 58	1.15 / 53	1.17 / 55	1.25 / 51
Filtrate CL (ppm)	25,307	34,742	30,062	30,062	36,602
pH / Fluid Loss (mptm)	10.00 / 5	9.00 / 5.8	9.50 / 5	9.50 / 5	9.00 / 9.0
PV (cP) / YP (lhf2)	12 / 14	22 / 40	12 / 21	16 / 24	21 / 29
% Solids / % Sand	3.4 / 0.75	4.6 / 1	6.5 / 0.1	6.6 / 0.3	8.6 / 0.2
% Oil / Oil:Water Ratio	0 / 0:100	0 / 0:100	0 / 0:100	0 / 0:100	0 / 0:100
Rm @ Measured Temp (degC)	N/A @ N/A	N/A @ N/A	0.15 @ 22.00	0.14 @ 21.00	0.10 @ 22.00
Rmf @ Measured Temp (degC)	N/A @ N/A	0 @ N/A	0.12 @ 24.00	0.12 @ 20.00	0.09 @ 20.00
Rmc @ Measured Temp (degC)	N/A @ N/A	N/A @ N/A	0.3 @ 24.00	0.25 @ 26.00	0.18 @ 22.00
Max Tool Temp (degC) / Source	51.00 / HCIM	67.00 / HCIM	47.00 / EWR-P4	52.00 / EWR-P4	67.00 / EWR-P4
Rm @ Max Tool Temp (degC)	N/A @ 51.00	N/A @ 67.00	0.10 @ 47.00	0.09 @ 52.00	0.03 @ 67.00
Lead MWD Engineer	A. Rule	A. Rule	M. Lee	M. Lee	M. Lee
Customer Representative	T. Reid	T. Reid	T. Reid	T. Reid	T. Reid

SENSOR INFORMATION

Downhole Processor Information

Tool Type	HCIM	HCIM	HCIM	HCIM	HCIM
Software Version	72.13	72.13	72.13	72.13	72.13
Sub Serial Number	078516	078516	145273	145273	145273
Insert Serial Number	076895	076895	81832	81832	81832
Date and Time Initialized	02-Aug-06 15:32	04-Aug-06 00:49	11-Aug-06 14:53	13-Aug-06 21:32	15-Aug-06 04:48:08
Date and Time Read	03-Aug-06 19:49	06-Aug-06 16:25	13-Aug-06 00:04	15-Aug-06 02:05	16-Aug-06 14:41:15

Directional Sensor Information

Tool Type	DM	DM	DM	DM	DM
Distance From Bit (m)	12.99	8.90	8.95	8.96	8.96
Software Version	3.15	3.15	3.15	3.15	3.15
Sub Serial Number	10603354	CP5763	CP1004338	CP1004338	CP1004338
Sonde Serial Number	85268	85267	85268	85268	85268
Sensor ID Number	N/A	N/A	N/A	N/A	N/A
Toolface Offset (deg)	168	Rotary	Rotary	Rotary	Rotary

Gamma Ray Sensor Information

Tool Type	DGR	DGR	DGR	DGR	DGR
Distance From Bit (m)	16.34	11.99	11.42	11.43	11.43
Recorded Sample Period (sec)	12	12	12	12	12
Software Version	N/A	N/A	N/A	N/A	N/A
Sub Serial Number	177739	177739	176027	176027	176027
Insert/Sonde Serial Number	10602972	10602972	16131	16131	16131

Resistivity Sensor Information

Tool Type			EWR-P4	EWR-P4	EWR-P4
Distance From Bit (m)			13.78	13.79	13.79
Recorded Sample Period (sec)			12	12	12
Software Version			1.38	1.38	1.38
Sub Serial Number			226818	226818	226818
Receiver Insert Serial Number			225217	225217	225217
Transmitter Insert Serial Number			225154	225154	225154
Receiver Orientation			Down	Down	Down

Neutron Sensor Information

Tool Type			CTN	CTN	CTN
Distance From Bit (m)			26.16	26.75	26.75
Recorded Sample Period (sec)			12	12	12
Sub Serial Number			10603697	10603696	10603696
Insert Serial Number			192981	10508914	10508914
Source Serial Number			0044NN	0044NN	0044NN
Source Factor			N/A	N/A	N/A
Pin Orientation			Up	Up	Up

Density Sensor Information

Tool Type			ALD	ALD	ALD
Distance From Bit (m)			22.10	22.69	22.69
Recorded Sample Period (sec)			16	16	16
Software Version			2.13	2.13	2.13
Sub Serial Number			96941	174401	174401
Insert Serial Number			10640614	215917	215917
Sensor ID Number			12024	32001	32001
Source Serial Number			2615GW	2852GW	2852GW
Pin Orientation			Up	Up	Up
Stabilizer Blade O.D. (in)			8.250	8.250	8.250
DPA Offset			100.00	250.00	250.00

Caliper Sensor Information

Tool Type			ACAL		
Distance From Bit (m)			25.10		

Software Version			4.20		
Sub Serial Number			10603697		
Insert Serial Number			192981		

WELL INFORMATION

MWD Run Number	700				
Date run completed	21-Aug-06				
Rig Bit Number	9				
Bit Size (in)	8.50				
Tool Nominal OD (in)	6.75				
Log Start Depth (TVD, m)	965.75				
Log End Depth (TVD, m)	1364.69				
Drill or Wipe	Drilling				
Drill/Wipe Start Date and Time	17-Aug-06 11:25				
Drill/Wipe End Date and Time	20-Aug-06 15:32				
Min Inc (deg) @ Depth (TVD, m)	0.92 @ 1333.80				
Max Inc (deg) @ Depth (TVD, m)	44.71 @ 965.06				
Bit TFA(in2) / Bit Type	0.92 / PDC				
Flow Rate (gpm)	570				
Max AV (mpm) / CV (mpm) @ MWD	157.0 / 205.0				
Fluid Type	Polymer				
Density (sg) / Viscosity (spqt)	1.26 / 60				
Filtrate CL (ppm)	34,742				
pH / Fluid Loss (mptm)	9.00 / 9.0				
PV (cP) / YP (lhf2)	25 / 36				
% Solids / % Sand	10.3 / 0.3				
% Oil / Oil:Water Ratio	0 / 0:100				
Rm @ Measured Temp (degC)	0.09 @ 28.00				
Rmf @ Measured Temp (degC)	0.06 @ 20.00				
Rmc @ Measured Temp (degC)	0.27 @ 26.00				
Max Tool Temp (degC) / Source	63.00 / EWR-P4				
Rm @ Max Tool Temp (degC)	0.04 @ 63.00				
Lead MWD Engineer	M. Lee				
Customer Representative	T. Reid				

SENSOR INFORMATION

Downhole Processor Information

Tool Type	HCIM				
Software Version	72.13				
Sub Serial Number	145273				
Insert Serial Number	81832				
Date and Time Initialized	16-Aug-06 17:02:11				
Date and Time Read	21-Aug-06 01:32				

Directional Sensor Information

Tool Type	DM				
Distance From Bit (m)	9.18				
Software Version	3.15				
Sub Serial Number	CP1004338				
Sonde Serial Number	85268				
Sensor ID Number	N/A				
Toolface Offset (deg)	Rotary				

Gamma Ray Sensor Information

Tool Type	DGR				
Distance From Bit (m)	11.65				
Recorded Sample Period (sec)	12				
Software Version	N/A				
Sub Serial Number	176027				
Insert/Sonde Serial Number	16131				

Resistivity Sensor Information

Resistivity Sensor Information

Tool Type	EWR-P4				
Distance From Bit (m)	14.01				
Recorded Sample Period (sec)	12				
Software Version	1.38				
Sub Serial Number	226818				
Receiver Insert Serial Number	225217				
Transmitter Insert Serial Number	225154				
Receiver Orientation	Down				

Neutron Sensor Information

Tool Type	CTN				
Distance From Bit (m)	26.97				
Recorded Sample Period (sec)	12				
Sub Serial Number	10603696				
Insert Serial Number	10508914				
Source Serial Number	0044NN				
Source Factor	N/A				
Pin Orientation	Up				

Density Sensor Information

Tool Type	ALD				
Distance From Bit (m)	22.91				
Recorded Sample Period (sec)	16				
Software Version	2.13				
Sub Serial Number	174401				
Insert Serial Number	215917				
Sensor ID Number	32001				
Source Serial Number	2852GW				
Pin Orientation	Up				
Stabilizer Blade O.D. (in)	8.250				
DPA Offset	250.00				

Caliper Sensor Information

Tool Type					
Distance From Bit (m)					
Software Version					
Sub Serial Number					
Insert Serial Number					

REMARKS

1.) All depths are bit depths and are referenced to the driller's pipe tally unless otherwise noted.

2.) AV/CV values are calculated at the LWD collar using the Bingham Law for oil based mud, measured in m/min.

3.) Curve Mnemonics used are:

SGRC - Smoothed Combined Gamma Ray, api
SROP - Smoothed Rate of Penetration, m/hr
SEXP - Smoothed Extra-Shallow Phase Resistivity, ohm-metre
SESP - Smoothed Shallow Phase Resistivity, ohm-metre
SEMP - Smoothed Medium Phase Resistivity, ohm-metre
SEDP - Smoothed Deep Phase Resistivity, ohm-metre
ACAL - Smoothed Acoustic Caliper Hole Size, inches
SCO2 - Smoothed Best Bin Stand Off Correction, g/cc
SBD2 - Smoothed Best Bin Bulk Density, g/cc
SNP2 - Smoothed Near Detector Pe, b/e
TNPL - Smoothed Compensated Thermal Neutron Porosity (LS), v/v

4.) CTN data processed using the CTN algorithm using the following parameters and is based on a Limestone matrix:

MW = 1.19 - 1.25 SG
Formation Salinity = 50,000 ppm Cl
Mud Salinity = 28177 - 39378 ppm
Matrix Density = 2.71 g/cc

Matrix Density = 2.71 g/cc
Fluid Density = 1.00 g/cc

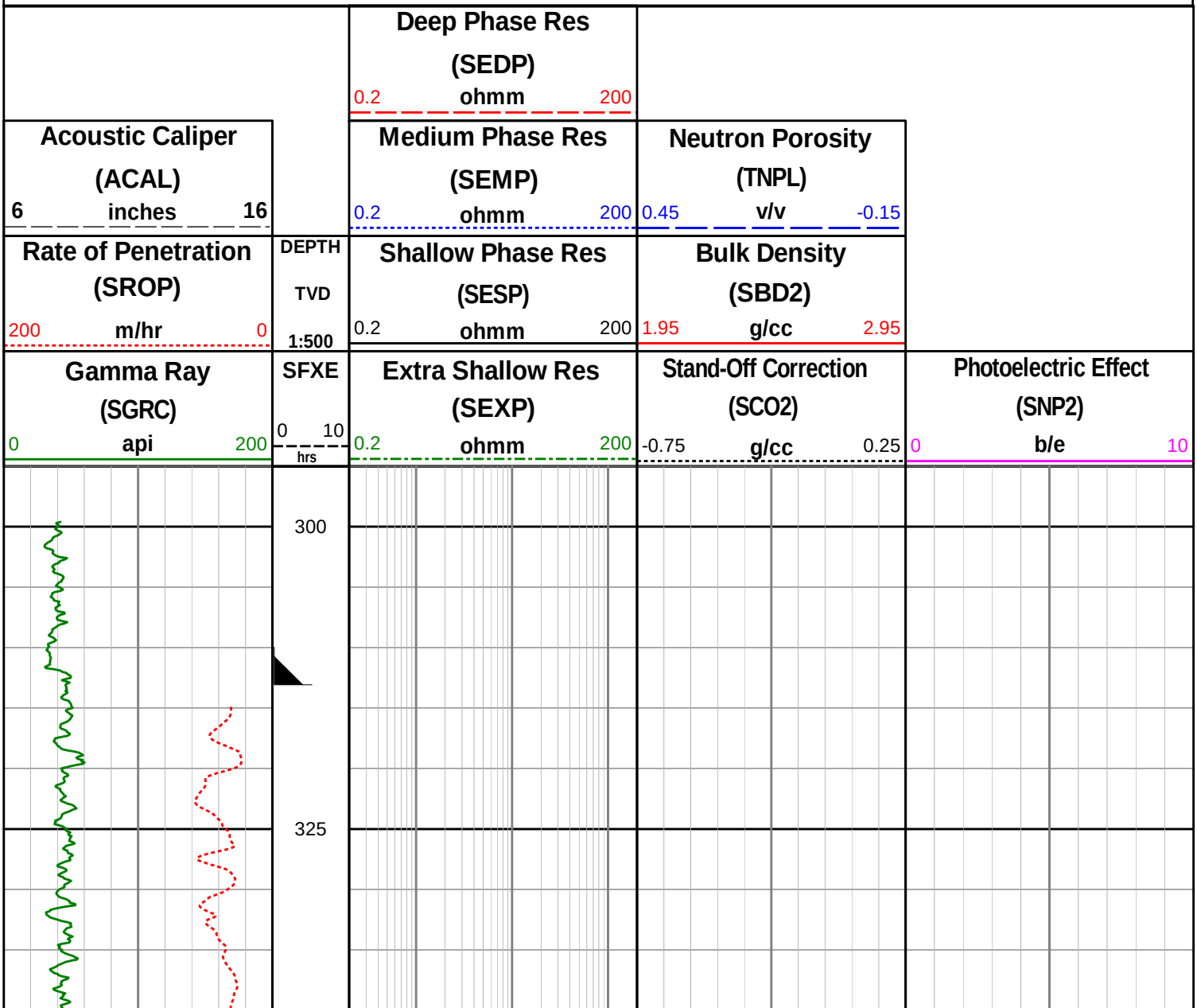
5.) CTN data has been reprocessed using hole size derived from the Acoustic Caliper tool for run 400 and the ALD tool (HSI) for run 500.

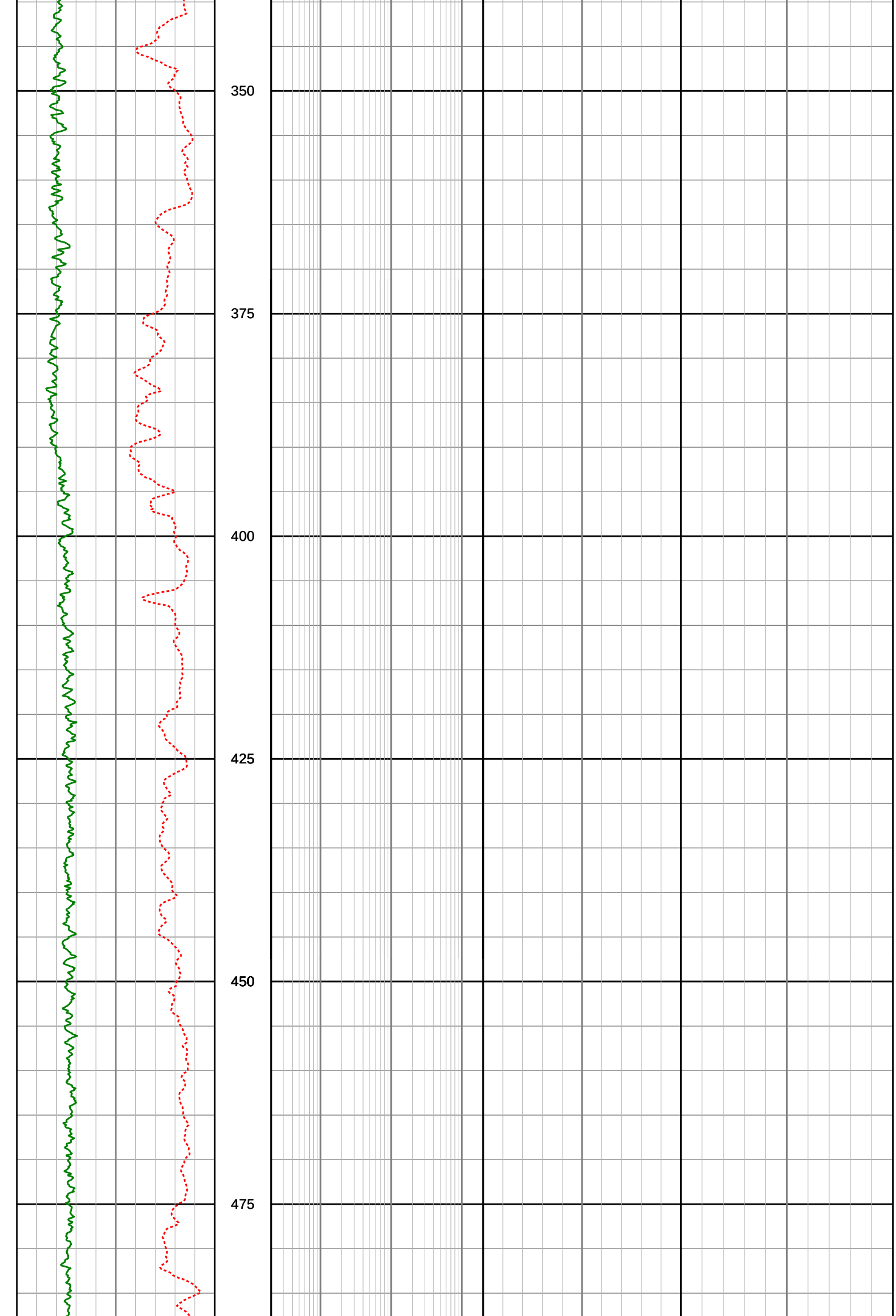
6.) CTN data is not presented from 827.9 to 839.5 mTVDRT due to tool failure.

7.) Hole size indicator (HSI) from the ALD tool has been presented, from 848.3 to 1342.1 mTVDRT, as the Acoustic Caliper (ACAL) was not used during runs 500, 600 and 700.

8.) The ALD tool was not setup for Azimuthal sampling for the 8½" hole section.

WARRANTY

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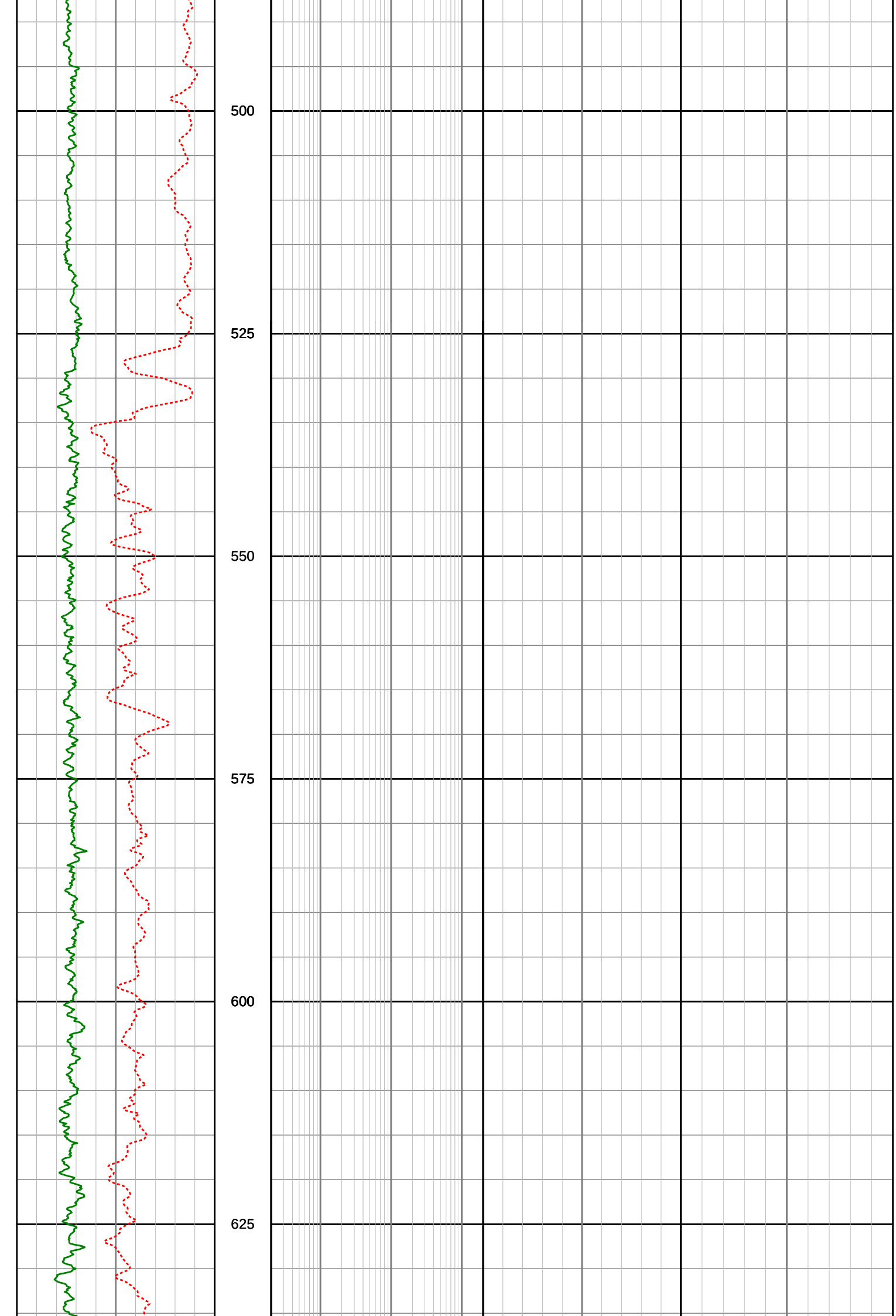
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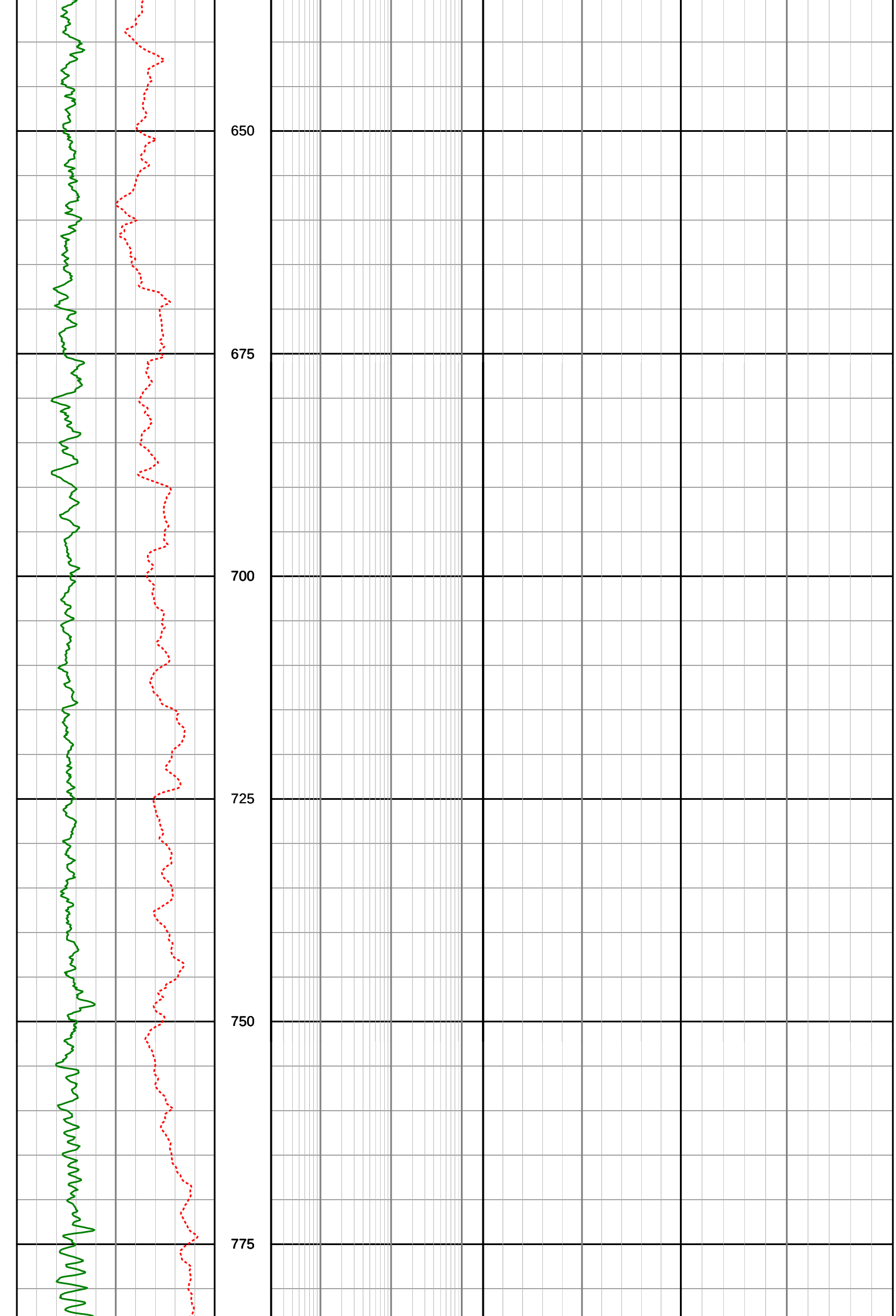
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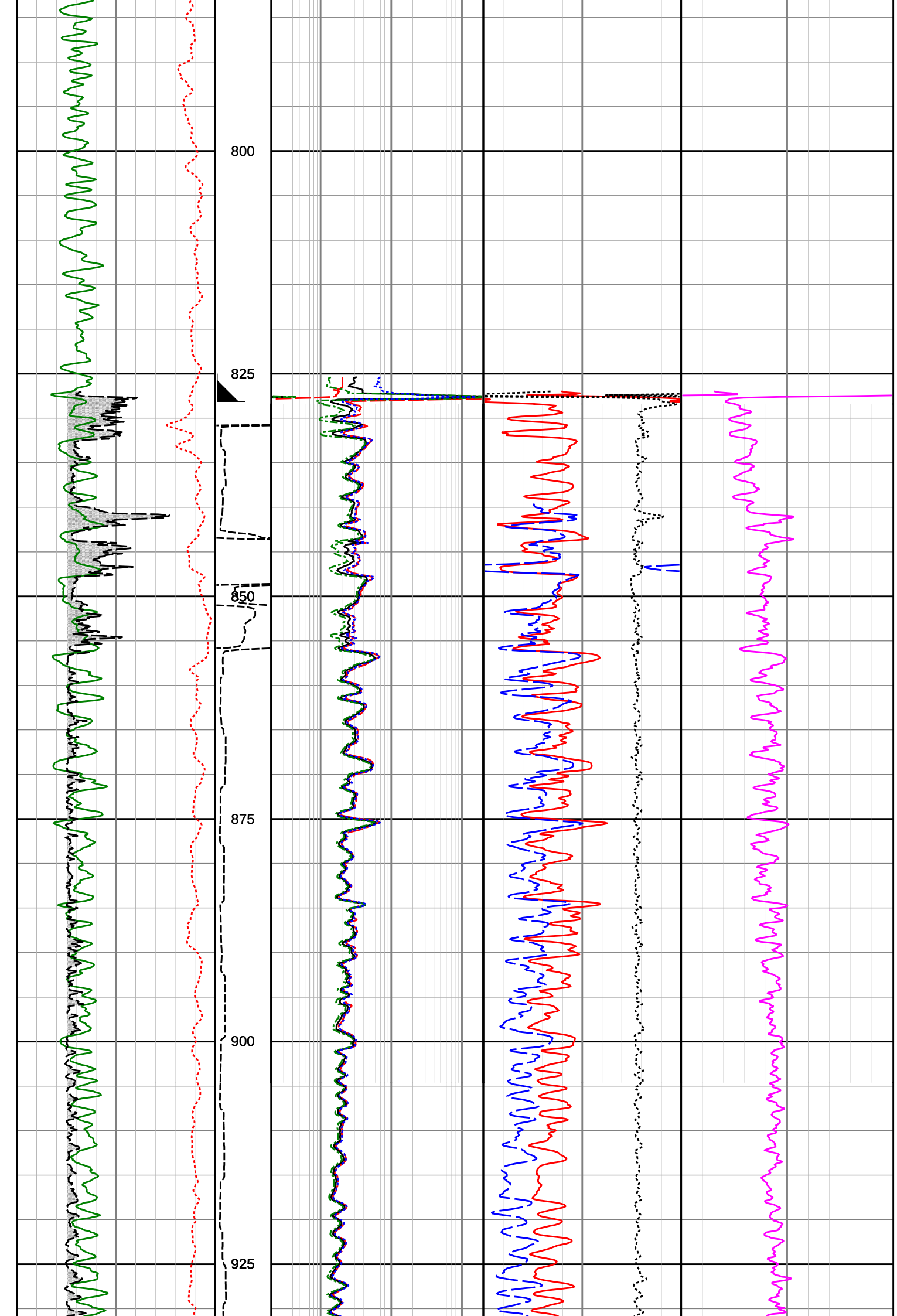
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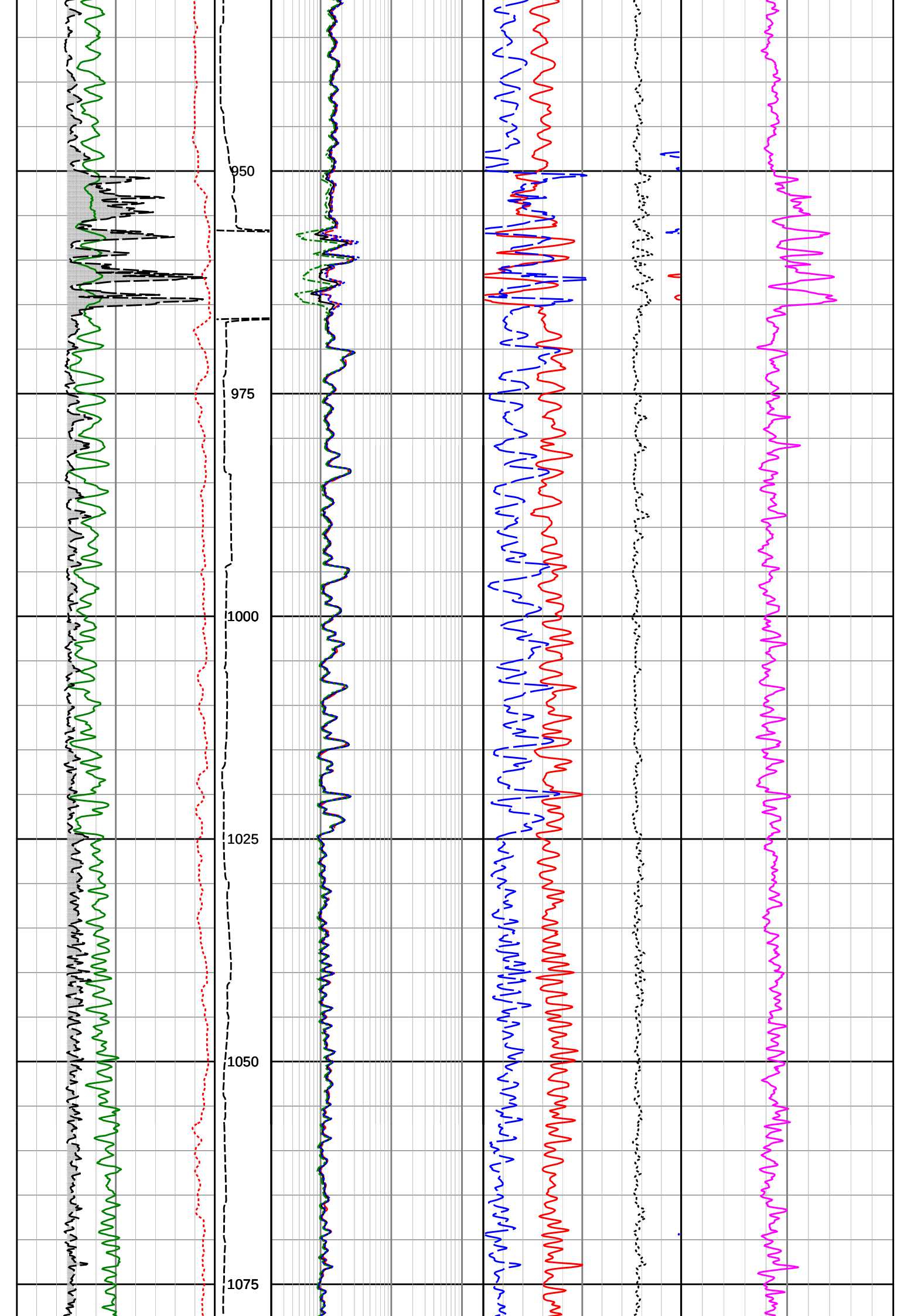
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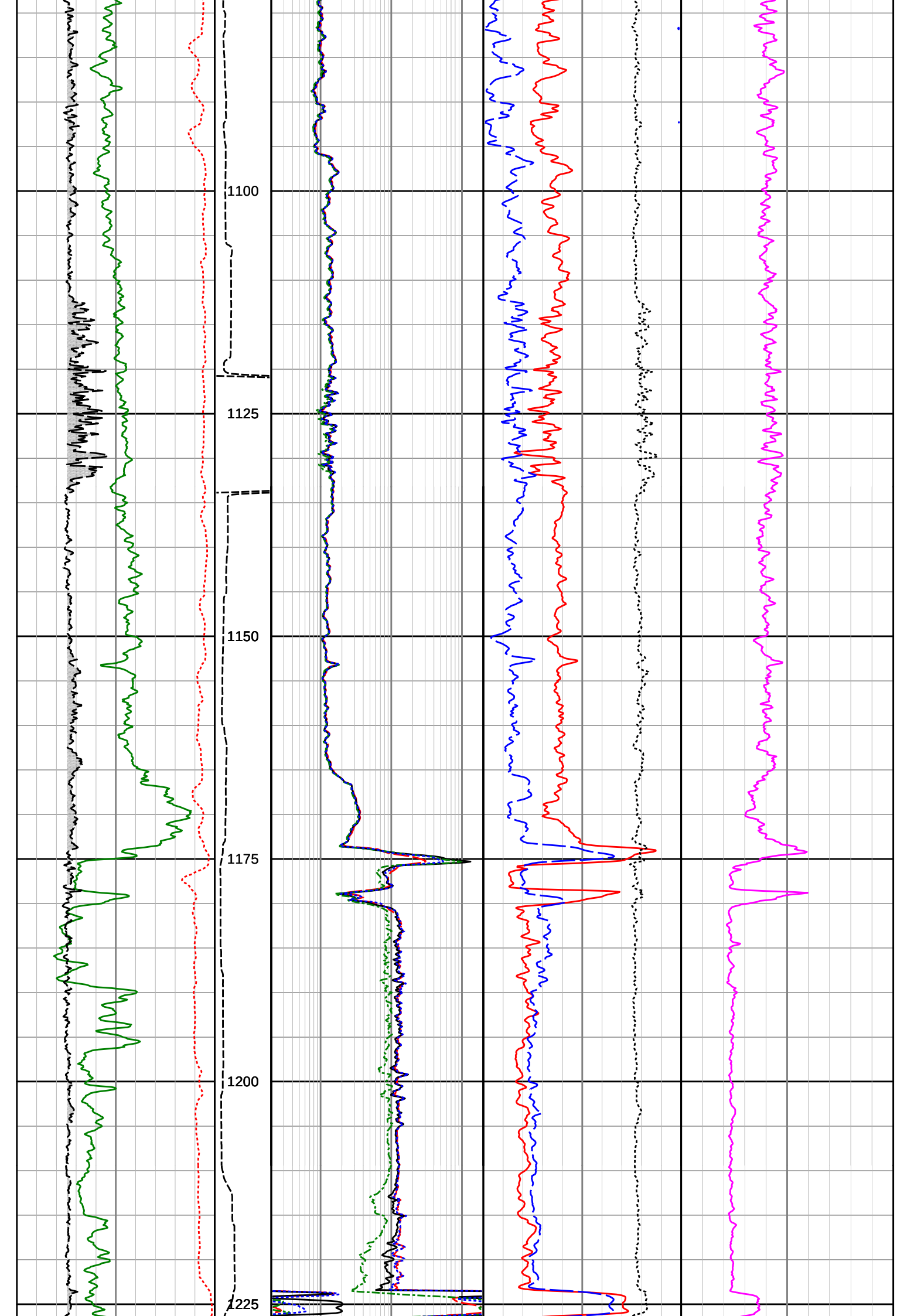
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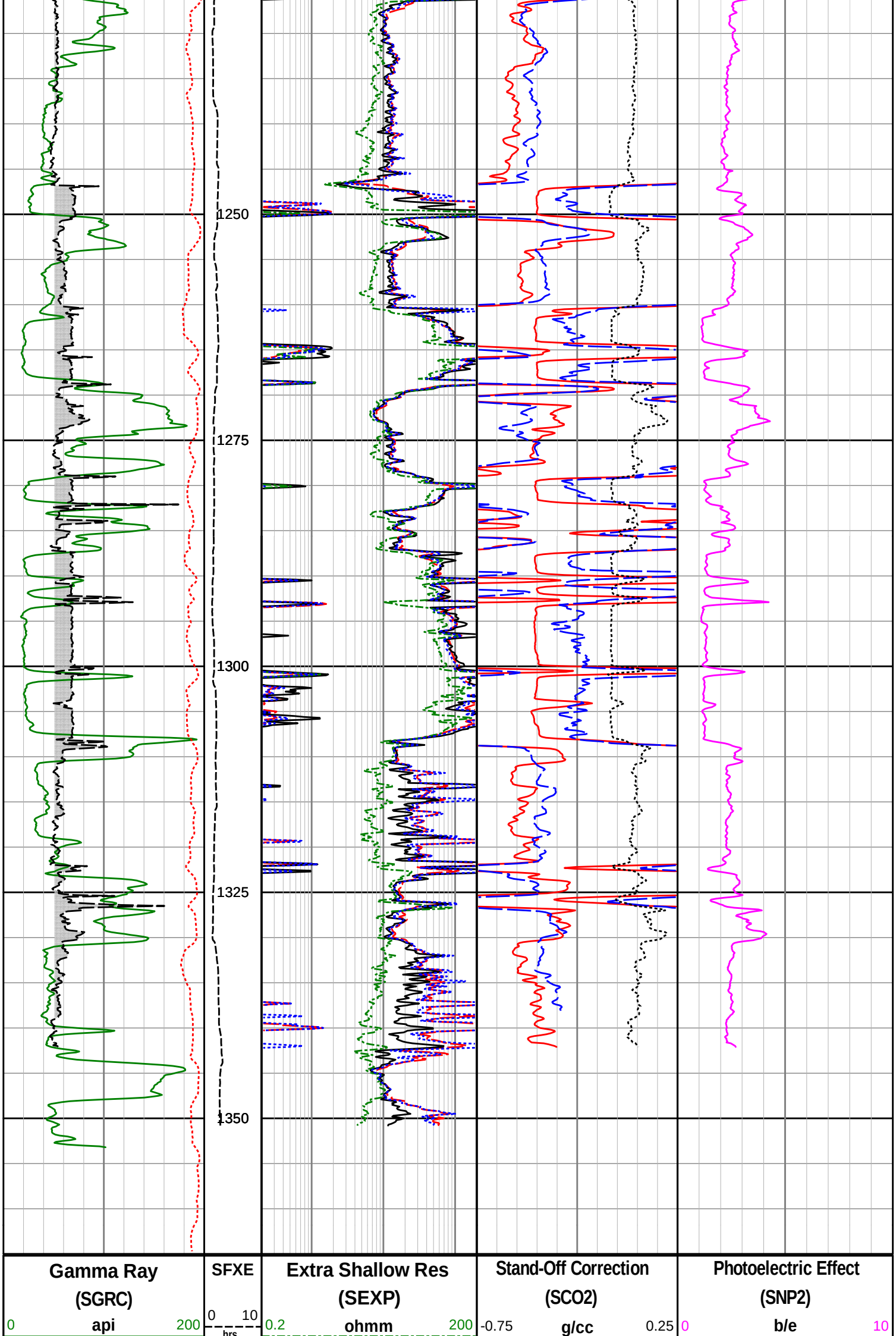
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(SGRC)
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200
SFXE
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10
hrs
Extra Shallow Res
(SEXP)
0.2
ohmm
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(SCO2)
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g/cc
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Photoelectric Effect
(SNP2)
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b/e
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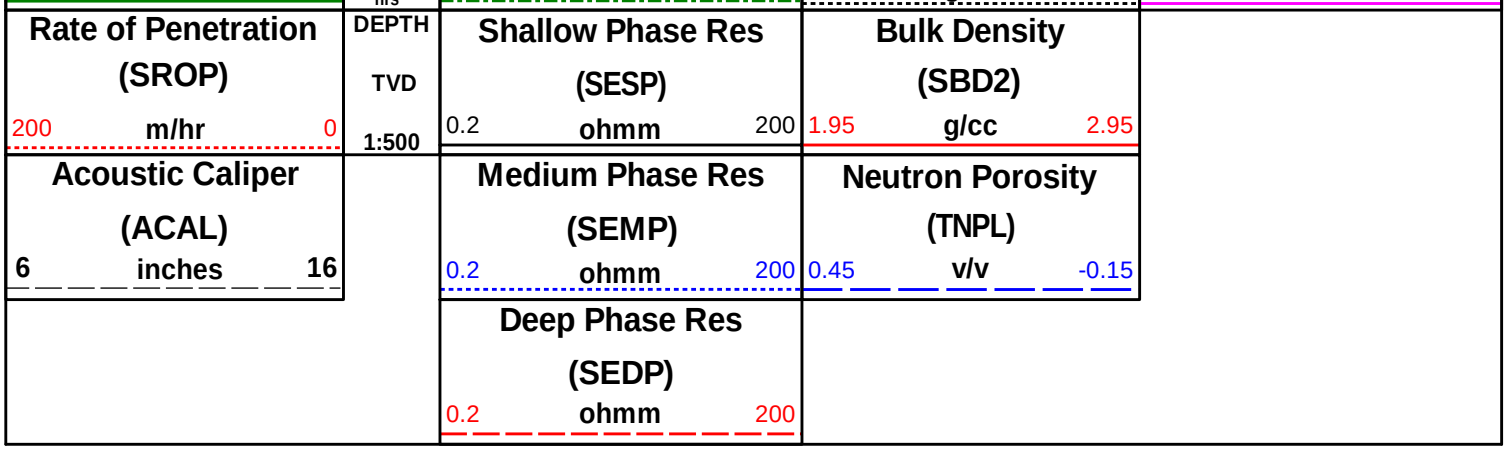


Sperry Drilling Services

DIRECTIONAL SURVEY REPORT

SANTOS Ltd.
Galloway-1
Exploration
VIC
Australia
AU-FE-000439252
Final survey has been projected to TD.
RT - MSL = 8.6m

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
68.730	0.22	154.70	68.730	0.119 S	0.056 E	0.106	0.10
89.740	0.64	277.76	89.739	0.140 S	0.043 W	0.029	1.12
118.310	0.63	112.18	118.309	0.178 S	0.055 W	0.036	1.32
125.390	0.31	210.53	125.389	0.209 S	0.029 W	0.074	3.14
146.550	1.33	135.42	146.547	0.433 S	0.114 E	0.307	1.82
163.200	2.41	112.53	163.188	0.705 S	0.573 E	0.840	2.33
175.900	2.70	134.29	175.875	1.016 S	1.034 E	1.394	2.37
190.200	4.40	115.22	190.148	1.485 S	1.772 E	2.265	4.30
204.730	5.78	113.55	204.620	2.015 S	2.947 E	3.551	2.87
219.700	8.44	111.19	219.474	2.713 S	4.662 E	5.392	5.36
233.580	10.99	113.04	233.154	3.599 S	6.830 E	7.720	5.55
247.700	13.99	113.35	246.938	4.803 S	9.636 E	10.760	6.38
261.590	16.60	112.23	260.335	6.219 S	13.015 E	14.405	5.67
276.520	19.07	117.09	274.547	8.137 S	17.161 E	18.964	5.79
291.260	21.66	120.03	288.365	10.596 S	21.661 E	24.092	5.67
303.700	23.23	118.68	299.862	12.922 S	25.801 E	28.840	3.98
325.211	22.40	120.78	319.690	17.056 S	33.044 E	37.178	1.62
334.100	23.32	120.73	327.881	18.821 S	36.012 E	40.629	3.11
341.630	24.17	120.94	334.774	20.376 S	38.615 E	43.658	3.40
354.390	25.45	121.32	346.356	23.144 S	43.198 E	49.007	3.03
368.840	26.91	120.74	359.323	26.429 S	48.661 E	55.375	3.08
382.560	29.25	120.44	371.427	29.715 S	54.220 E	61.829	5.13
398.500	32.80	120.73	385.085	33.896 S	61.291 E	70.038	6.69
411.790	34.80	121.09	396.128	37.694 S	67.634 E	77.424	4.54
426.360	36.07	120.21	407.999	41.999 S	74.901 E	85.865	2.82
441.550	39.04	119.30	420.040	46.591 S	82.939 E	95.120	5.97
454.180	41.35	119.26	429.687	50.578 S	90.049 E	103.270	5.49
470.210	44.59	118.69	441.414	55.869 S	99.607 E	114.195	6.11
483.690	47.79	118.33	450.745	60.510 S	108.154 E	123.921	7.15
498.440	50.43	118.30	460.400	65.799 S	117.970 E	135.070	5.37
512.240	53.16	117.92	468.934	70.907 S	127.534 E	145.913	5.97
527.620	56.02	117.93	477.844	76.777 S	138.609 E	158.446	5.58
541.360	58.57	119.10	485.268	82.297 S	148.766 E	170.007	5.97
556.000	60.63	119.75	492.676	88.501 S	159.763 E	182.632	4.37
570.640	62.05	120.65	499.697	94.963 S	170.865 E	195.472	3.33
584.890	64.27	121.30	506.131	101.507 S	181.766 E	208.174	4.83
598.880	66.35	122.11	511.974	108.188 S	192.579 E	220.864	4.73
613.580	68.65	121.68	517.599	115.363 S	204.109 E	234.420	4.76
622.250	70.37	121.24	520.634	119.601 S	211.036 E	242.531	6.12
654.810	71.72	121.17	531.210	135.555 S	237.374 E	273.290	1.25
683.790	70.55	121.69	540.581	149.855 S	260.774 E	300.677	1.31

712.750	70.35	122.39	550.271	164.332 S	283.907 E	327.915	0.71
741.720	71.06	123.87	559.844	179.276 S	306.804 E	355.167	1.62
770.660	71.98	125.52	569.018	194.900 S	329.369 E	382.453	1.88
799.620	73.81	126.25	577.536	211.124 S	351.793 E	409.901	2.03
828.550	73.62	125.41	585.648	227.380 S	374.307 E	437.443	0.86
857.490	72.83	124.33	594.001	243.221 S	397.039 E	464.980	1.35
886.430	71.86	122.55	602.778	258.418 S	420.049 E	492.453	2.03
915.360	70.94	122.36	612.006	273.132 S	443.185 E	519.806	0.97
944.350	71.53	122.47	621.331	287.846 S	466.357 E	547.191	0.62
973.270	72.75	121.46	630.201	302.417 S	489.709 E	574.666	1.61
1002.250	72.51	119.57	638.854	316.460 S	513.536 E	602.306	1.88
1031.200	72.38	117.86	647.586	329.721 S	537.742 E	629.906	1.69
1060.160	71.85	117.00	656.480	342.418 S	562.203 E	657.461	1.01
1089.080	71.39	116.01	665.599	354.666 S	586.763 E	684.889	1.09
1118.040	71.67	115.22	674.774	366.541 S	611.531 E	712.322	0.83
1147.010	71.72	114.43	683.873	378.088 S	636.494 E	739.769	0.78
1175.950	71.38	114.73	693.032	389.507 S	661.458 E	767.158	0.46
1204.930	71.66	115.31	702.218	401.132 S	686.365 E	794.592	0.64
1233.870	71.80	114.62	711.290	412.730 S	711.278 E	822.021	0.69
1262.800	72.05	114.78	720.266	424.223 S	736.264 E	849.463	0.30
1291.770	72.51	114.84	729.084	435.802 S	761.312 E	877.001	0.48
1320.700	72.00	115.71	737.901	447.566 S	786.228 E	904.511	1.01
1349.570	71.48	115.11	746.947	459.330 S	810.992 E	931.887	0.80
1378.370	70.75	115.43	756.268	470.963 S	835.634 E	959.093	0.82
1407.210	70.63	115.67	765.805	482.702 S	860.189 E	986.274	0.27
1436.050	70.95	116.59	775.295	494.696 S	884.640 E	1013.485	0.96
1464.900	71.22	116.99	784.647	506.997 S	909.002 E	1040.765	0.48
1493.720	71.07	117.29	793.961	519.438 S	933.273 E	1068.031	0.33
1522.570	71.02	117.07	803.332	531.902 S	957.545 E	1095.309	0.22
1551.400	70.95	118.07	812.725	544.517 S	981.707 E	1122.562	0.99
1580.210	71.07	117.93	822.100	557.306 S	1005.760 E	1149.803	0.19
1596.100	71.07	117.39	827.255	564.284 S	1019.073 E	1164.832	0.96
1620.160	71.72	118.44	834.932	574.959 S	1039.222 E	1187.633	1.48
1647.790	69.84	118.53	844.028	587.400 S	1062.153 E	1213.721	2.05
1677.350	67.72	119.25	854.727	600.711 S	1086.278 E	1241.274	2.25
1706.300	64.96	118.42	866.343	613.501 S	1109.503 E	1267.788	2.96
1735.260	61.92	118.32	879.291	625.809 S	1132.292 E	1293.688	3.16
1764.180	58.81	117.25	893.591	637.529 S	1154.525 E	1318.819	3.36
1793.140	55.54	117.44	909.288	648.704 S	1176.139 E	1343.146	3.39
1822.110	51.89	116.24	926.430	659.251 S	1196.969 E	1366.484	3.90
1851.050	47.98	115.64	945.053	668.940 S	1216.881 E	1388.607	4.08
1880.030	44.71	114.61	965.055	677.846 S	1235.860 E	1409.536	3.47
1908.970	41.14	113.88	986.242	685.943 S	1253.827 E	1429.188	3.73
1937.900	37.77	114.06	1008.576	693.410 S	1270.624 E	1447.513	3.50
1966.870	33.71	114.22	1032.085	700.327 S	1286.063 E	1464.382	4.21
1995.760	30.21	114.36	1056.593	706.615 S	1300.000 E	1479.630	3.64
2024.650	26.31	113.76	1082.035	712.195 S	1312.485 E	1493.264	4.06
2053.450	22.08	113.22	1108.298	716.903 S	1323.306 E	1505.021	4.41
2082.290	19.06	112.80	1135.297	720.866 S	1332.631 E	1515.107	3.15
2111.130	15.99	111.66	1162.795	724.157 S	1340.665 E	1523.737	3.22
2139.980	13.10	108.53	1190.718	726.663 S	1347.459 E	1530.904	3.10
2168.790	9.86	104.21	1218.948	728.307 S	1352.949 E	1536.513	3.49
2197.640	6.92	99.24	1247.486	729.192 S	1357.061 E	1540.549	3.14
2226.470	3.33	92.87	1276.197	729.513 S	1359.612 E	1542.944	3.78
2255.270	1.11	90.43	1304.973	729.557 S	1360.727 E	1543.945	2.31
2284.100	0.92	88.16	1333.799	729.552 S	1361.238 E	1544.391	0.21
2303.740	1.19	92.86	1353.436	729.557 S	1361.598 E	1544.710	0.43
2315.000	1.19	92.86	1364.693	729.569 S	1361.832 E	1544.921	0.01

CALCULATION BASED ON MINIMUM CURVATURE METHOD

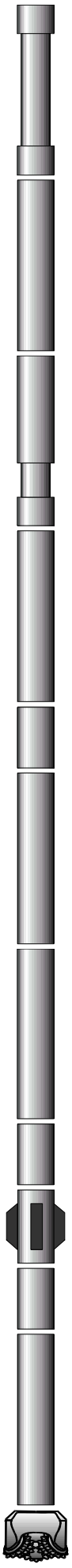
SURVEY COORDINATES RELATIVE TO WELL SYSTEM REFERENCE POINT
TVD VALUES GIVEN RELATIVE TO DRILLING MEASUREMENT POINT

VERTICAL SECTION RELATIVE TO WELL HEAD
VERTICAL SECTION IS COMPUTED ALONG A DIRECTION OF 118.50 DEGREES (GRID)
A TOTAL CORRECTION OF 13.14 DEG FROM MAGNETIC NORTH TO GRID NORTH HAS BEEN APPLIED

HORIZONTAL DISPLACEMENT IS RELATIVE TO THE WELL HEAD.
HORIZONTAL DISPLACEMENT(CLOSURE) AT 2315.000 METRES
IS 1544.945 METRES ALONG 118.18 DEGREES (GRID)

Date Printed:04 October 2006

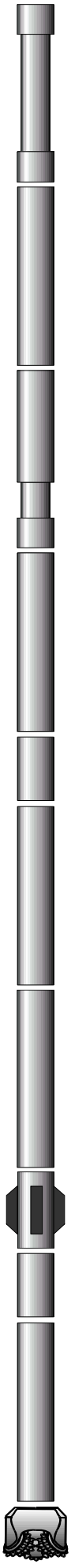
	Component Length (m)
Heavy Weight	86.050
Drill Collar	9.420
Jar	9.950
Drill Collar	9.050
X-Over Sub	.800
Drill Collar	27.610
MWD	5.85
X-Over Sub	.790
Integral Blade	2.590
Float Sub	.830
Mud Motor	9.680
Tricone	.470



	Sensor Measure Point Distance To Bit (m)
Positive Pulser	
TM	
DM Sonde	15.820

MWD RUN 200 - BHA

MWD RUN 200 - MWD

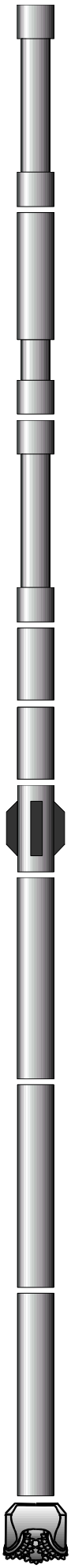


	Component Length (m)
Heavy Weight	86.050
Drill Collar	9.420
Jar	9.950
Drill Collar	9.050
X-Over Sub	.800
Drill Collar	27.610
MWD	11.21
Integral Blade	1.890
Float Sub	.650
Mud Motor	8.160
Tricone	.820

MWD RUN 300 - BHA

	Sensor Measure Point Distance To Bit (m)
TM	
Positive Pulser	
HCIM Insert	
PWD Insert	17.210
DDS Insert	0
DGR Insert	16.340
DM Sonde	12.990

MWD RUN 300 - MWD

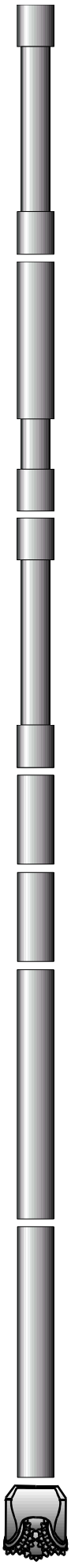


	Component Length (m)
Heavy Weight	57.170
Jar	9.950
Heavy Weight	86.050
X-Over Sub	.800
Float Sub	.650
String Reamer	2.010
MWD	8.44
Flex	2.810
Geo-Pilot	6.610
PDC	.530

MWD RUN 400 - BHA

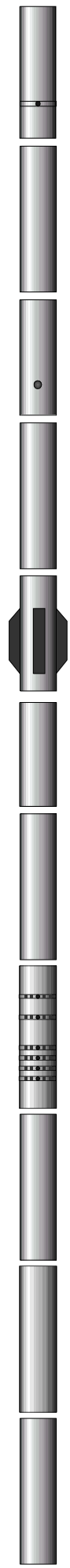
	Sensor Measure Point Distance To Bit (m)
Positive Pulser	
TM	
HCIM Insert	
PWD Insert	12.860
DDS Insert	0
DGR Insert	11.990

MWD RUN 400 - MWD



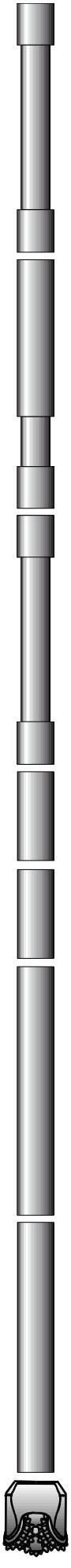
	Component Length (m)
Heavy Weight	57.170
Jar	9.950
Heavy Weight	86.050
X-Over Sub	.350
Float Sub	.630
MWD	22.95
Geo-Pilot	7.080
PDC	.400

MWD RUN 500 - BHA



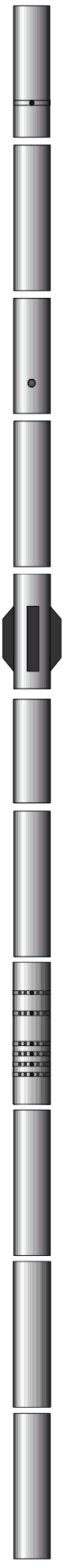
	Sensor Measure Point Distance To Bit (m)
Positive Pulser	
TM	
CTN Insert	26.160
ACAL Insert	25.100
ALD Insert	22.100
HCIM Insert	
PWD Insert	16.310
EWR-P4 Insert	13.780
DDS Insert	0
DGR Insert	11.420
DM Sonde	8.950

MWD RUN 500 - MWD



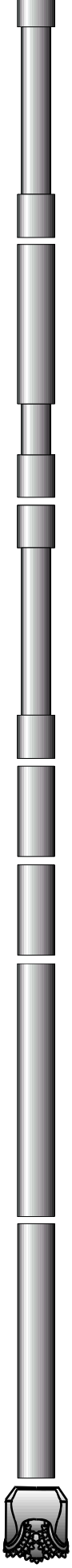
	Component Length (m)
Heavy Weight	57.170
Jar	9.950
Heavy Weight	86.050
X-Over Sub	.350
Float Sub	.630
MWD	23.53
Geo-Pilot	7.080
PDC	.410

MWD RUN 600 - BHA



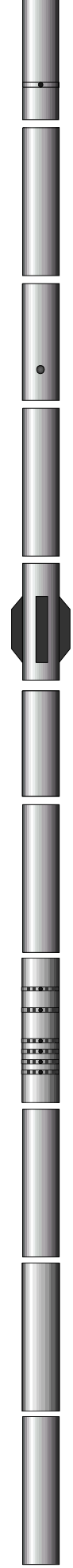
	Sensor Measure Point Distance To Bit (m)
Positive Pulser	
TM	
CTN Insert	26.750
ACAL Insert	
ALD Insert	22.690
HCIM Insert	
PWD Insert	16.320
EWR-P4 Insert	13.790
DDS Insert	0
DGR Insert	11.430
DM Sonde	8.960

MWD RUN 600 - MWD



Heavy Weight	57.170
Jar	9.950
Heavy Weight	86.050
X-Over Sub	.350
Float Sub	.630
MWD	23.53
Geo-Pilot	7.080
PDC	.410

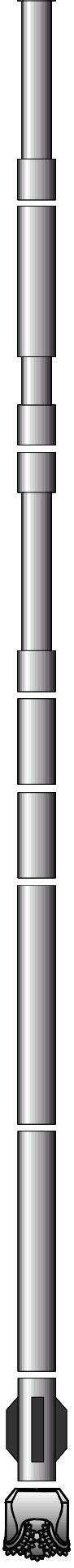
MWD RUN 700 - BHA



	Sensor Measure Point Distance To Bit (m)
Positive Pulser	
TM	
CTN Insert	26.750
ACAL Insert	
ALD Insert	22.690
HCIM Insert	
PWD Insert	16.320
EWR-P4 Insert	13.790
DDS Insert	0
DGR Insert	11.430
DM Sonde	8.960

MWD RUN 700 - MWD

Heavy Weight	57.170
Jar	9.950
Heavy Weight	86.050
X-Over Sub	.350
Float Sub	.630
MWD	23.53
Geo-Pilot	7.080
Stabilizer	.380
PDC	.250



Positive Pulser	(m)
TM	
CTN Insert	26.970
ACAL Insert	
ALD Insert	22.910
HCIM Insert	
PWD Insert	16.540
EWR-P4 Insert	14.010
DDS Insert	0
DGR Insert	11.650
DM Sonde	9.180