

| Bit Run Summary | | | | | | | | | | |
|------------------------|-----|-----------|-----------|-----------|--|--|--|--|--|--|
| Run number | | 2 | 3 | 4 | | | | | | |
| Bit size | in. | 8.5 | 8.5 | 8.5 | | | | | | |
| Bit start depth | m | 843.0 | 1253.0 | 1902.0 | | | | | | |
| Bit end depth | m | 1253.0 | 1902.0 | 2641.0 | | | | | | |
| Top interval logged | m | 836.0 | 1221.2 | 1870.2 | | | | | | |
| Bottom interval logged | m | 1243.8 | 1892.8 | 2631.8 | | | | | | |
| Begin log: time | | 19:21 | 20:56 | 06:30 | | | | | | |
| Begin log: date | | 04-Aug-05 | 06-Aug-05 | 08-Aug-05 | | | | | | |
| End log: time | | 07:49 | 16:49 | 13:05 | | | | | | |
| End log: date | | 06-Aug-05 | 07-Aug-05 | 09-Aug-05 | | | | | | |
| Mud data | | | | | | | | | | |
| Depth | m | 1192.0 | 1809.0 | 2641.0 | | | | | | |

| Type | | KCl/PHPA/Glycol | KCl/PHPA/Glycol | KCl/PHPA/Glycol | | | | | | |
|----------------------------|----------|-----------------|-----------------|-----------------|----------|----------|-----------|--|--|--|
| Mud weight | ppg | 9.60 | 9.70 | 9.85 | | | | | | |
| Solids | % | 4.2 | 5.0 | 6.0 | | | | | | |
| Chlorides | mg/L | 43000 | 45000 | 46000 | | | | | | |
| Rm | ohm.m@°C | 0.10@21.0 | 0.10@21.1 | 0.09@20.8 | | | | | | |
| Rmf | ohm.m@°C | 0.08@20.9 | 0.09@21.0 | 0.08@20.6 | | | | | | |
| Rmc | ohm.m@°C | 0.13@21.0 | 0.13@21.7 | 0.14@21.0 | | | | | | |
| Potassium | % | 8.0 | 8.0 | 8.0 | | | | | | |
| Environmental data | | | | | | | | | | |
| GR | | | | | | | | | | |
| Mud weight | ppg | 9.60 | 9.70 | 9.85 | | | | | | |
| Bit size | in. | 8.5 | 8.5 | 8.5 | | | | | | |
| Resistivity | | | | | | | | | | |
| Neutron porosity | | | | | | | | | | |
| Hole Size | in. | 8.5 | 8.5 | 8.5 | | | | | | |
| Mud weight | ppg | 9.60 | 9.70 | 9.85 | | | | | | |
| Temperature | °C | 65.0 | 68.0 | 87.0 | | | | | | |
| Mud salinity | ppm | 84775 | 76924 | 83929 | | | | | | |
| Formation salinity | | | | | | | | | | |
| Recording rate 1 | SEC | 5 sec. | 5 sec. | 5 sec. | | | | | | |
| Recording rate 2 | SEC | 5 sec. | 5 sec. | 5 sec. | | | | | | |
| Filtering GR | | 3 pt. | 3 pt. | 3 pt. | | | | | | |
| Filtering density | | 3 pt. | 3 pt. | 3 pt. | | | | | | |
| Filtering Neutron | | 3 pt. | 3 pt. | 3 pt. | | | | | | |
| Company representative | | R. Bain | M. Jackson | J. MacKinnon | | | | | | |
| Schlumberger D&M Personnel | | J. Dolan | M. Y. Tan | D. Hastie | T. Auger | C. Soper | B. Hanson | | | |

DISCLAIMER

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| | | | | | |
|--|--|---|--|--|--|
| OTHER SERVICES FOR RUN2 Xceed* RSS D&I Survey | | OTHER SERVICES FOR RUN3 Xceed* RSS D&I Survey | | OTHER SERVICES FOR RUN4 Xceed* RSS D&I Survey | |
| REMARKS: RUN NUMBER 2 8-1/2 in. hole section was drilled from 843.0 m to 1253.0 m. Depth is referenced to Driller's Depth. All data presented is from tool memory. Environmental Corrections: – GR is corrected for mud weight, tool and bit size, but not corrected for Potassium content. GVR* resistivity is corrected for bit size, mud resistivity and borehole temperature. Neutron porosity is calculated with a limestone matrix and is corrected for hole size (DCAV), borehole salinity, temperature and mud hydrogen index (derived from mud weight, temperature and pressure at depth). Surface temperature is adjusted to give a correct computed downhole temperature gradient. Neutron porosity data was processed without | | REMARKS: RUN NUMBER 3 8-1/2 in. hole section was drilled from 1253.0 m to 1902.0 m. Depth is referenced to Driller's Depth. All data presented is from tool memory. Environmental Corrections: – GR is corrected for mud weight, tool and bit size, but not corrected for Potassium content. GVR*6 resistivity is corrected for bit size, mud resistivity and borehole temperature. Neutron porosity is calculated with a limestone matrix and is corrected for hole size (DCAV), borehole salinity, temperature and mud hydrogen index (derived from mud weight, temperature and pressure at depth). Surface temperature is adjusted to give a correct computed downhole temperature gradient. Resistivity data was processed until the depth | | REMARKS: RUN NUMBER 4 8-1/2 in. hole section was drilled from 1902.0 m to 2641.0 m. Depth is referenced to Driller's Depth. All data presented is from tool memory. Environmental Corrections: – GR is corrected for mud weight, tool and bit size, but not corrected for Potassium content. GVR* resistivity is corrected for bit size, mud resistivity and borehole temperature. Neutron porosity is calculated with a limestone matrix and is corrected for hole size (DCAV), borehole salinity, temperature and mud hydrogen index (derived from mud weight, temperature and pressure at depth). Surface temperature is adjusted to give a correct computed downhole temperature gradient. Resistivity data between the interval of | |

FR11 and FR21.

of 1864.0 m MD.

1864.0 m to 1893.0 m MD was acquired by
reaming down the section.

EQUIPMENT DESCRIPTION

RUN2

RUN3

RUN4

DOWNHOLE EQUIPMENT

6-3/4 in. ADN*6C Neutron F 31.81 33.78
S/N: 0403 Neutron N 31.66
8-1/4 in. Stabiliser Density S 30.79
NSR-M A202 Density L 30.69
GSR-J A1994 UltraSonic 30.31
Software: V8.3A02 R-O Port 29.55

6-3/4 in. Sonic*6 27.18
S/N: 34641
Software: V6.4B10
Receiver Array 24.12
R-O Port 23.72
Transmitter 20.68

6-3/4 in. PowerPulse* 19.89
MDC Z411
MEC 212
MDI 1096
MVC 282
Software: V8.0B96
D&I 15.69

6-3/4 in. GVR* 11.54
S/N: 191
Software: V6.2B01
Shallow 10.04
Medium 9.92
Deep 9.74
Ring Res 9.57
R-O Port 9.43
GR 9.21

6-3/4 in. Xceed* RSS 7.89
S/N: 060

DOWNHOLE EQUIPMENT

6-3/4 in. ADN*6C Neutron F 31.79 33.74
S/N: FE55 Neutron N 31.64
8-3/16 in. Stabiliser Density S 30.77
NSR-M A202 Density L 30.67
GSR-J A1994 UltraSonic 30.29
Software: V8.3B02 R-O Port 29.53

6-3/4 in. Sonic*6 27.14
S/N: 34641
Software: V6.4B10
Receiver Array 24.08
R-O Port 23.68
Transmitter 20.64

6-3/4 in. PowerPulse* 19.85
MDC Z411
MEC 212
MDI 1096
MVC 282
Software: V8.0B96
D&I 15.65

6-3/4 in. GVR* 11.50
S/N: 191
Software: V6.2B01
Shallow 10.00
Medium 9.88
Deep 9.70
Ring Res 9.53
R-O Port 9.39
GR 9.17

6-3/4 in. Xceed* RSS 7.85
S/N: 060

DOWNHOLE EQUIPMENT

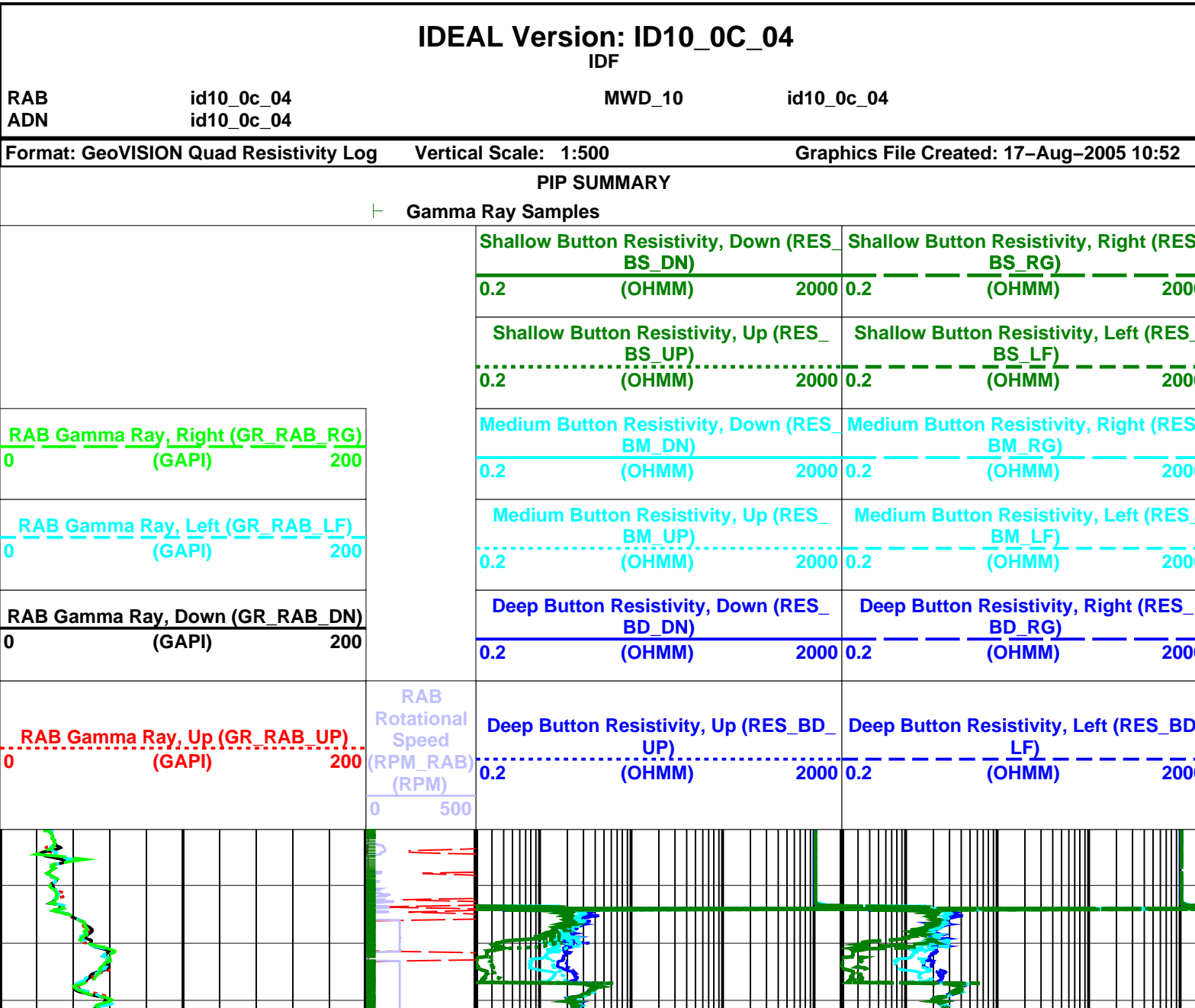
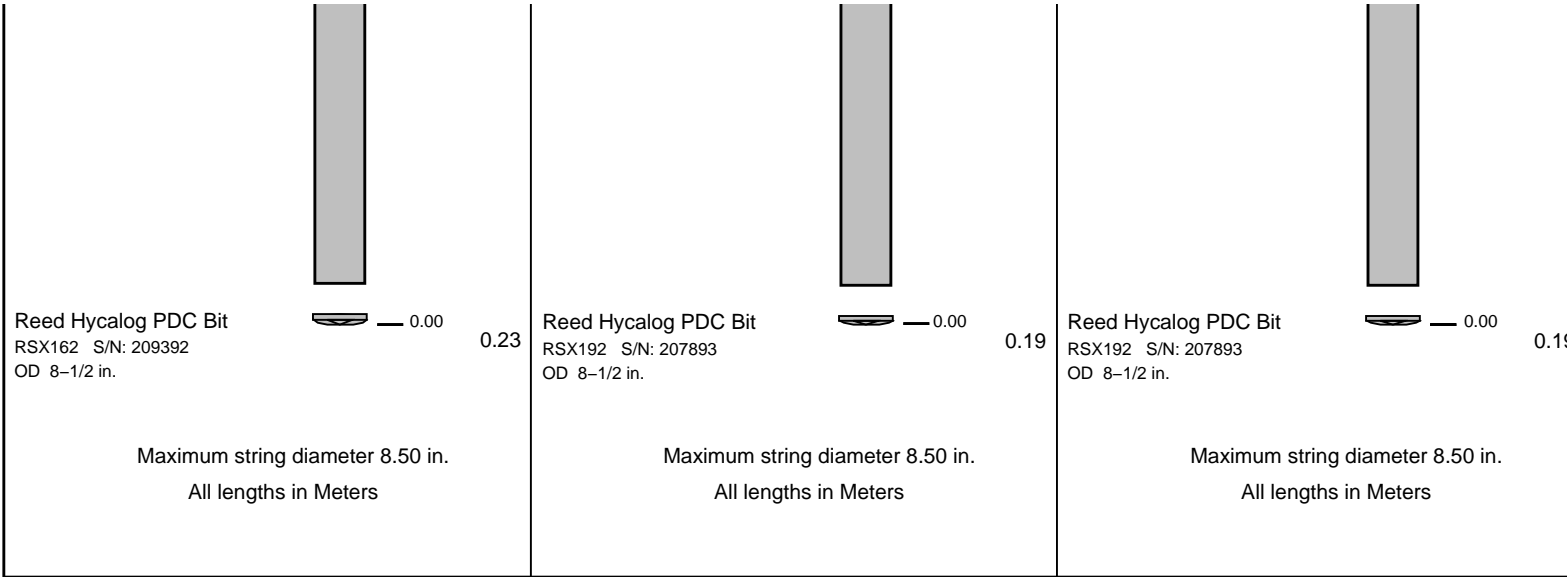
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S/N: FE55 Neutron N 31.60
8-3/16 in. Stabiliser Density S 30.73
NSR-M A202 Density L 30.63
GSR-J A1994 UltraSonic 30.25
Software: V8.3B02 R-O Port 29.49

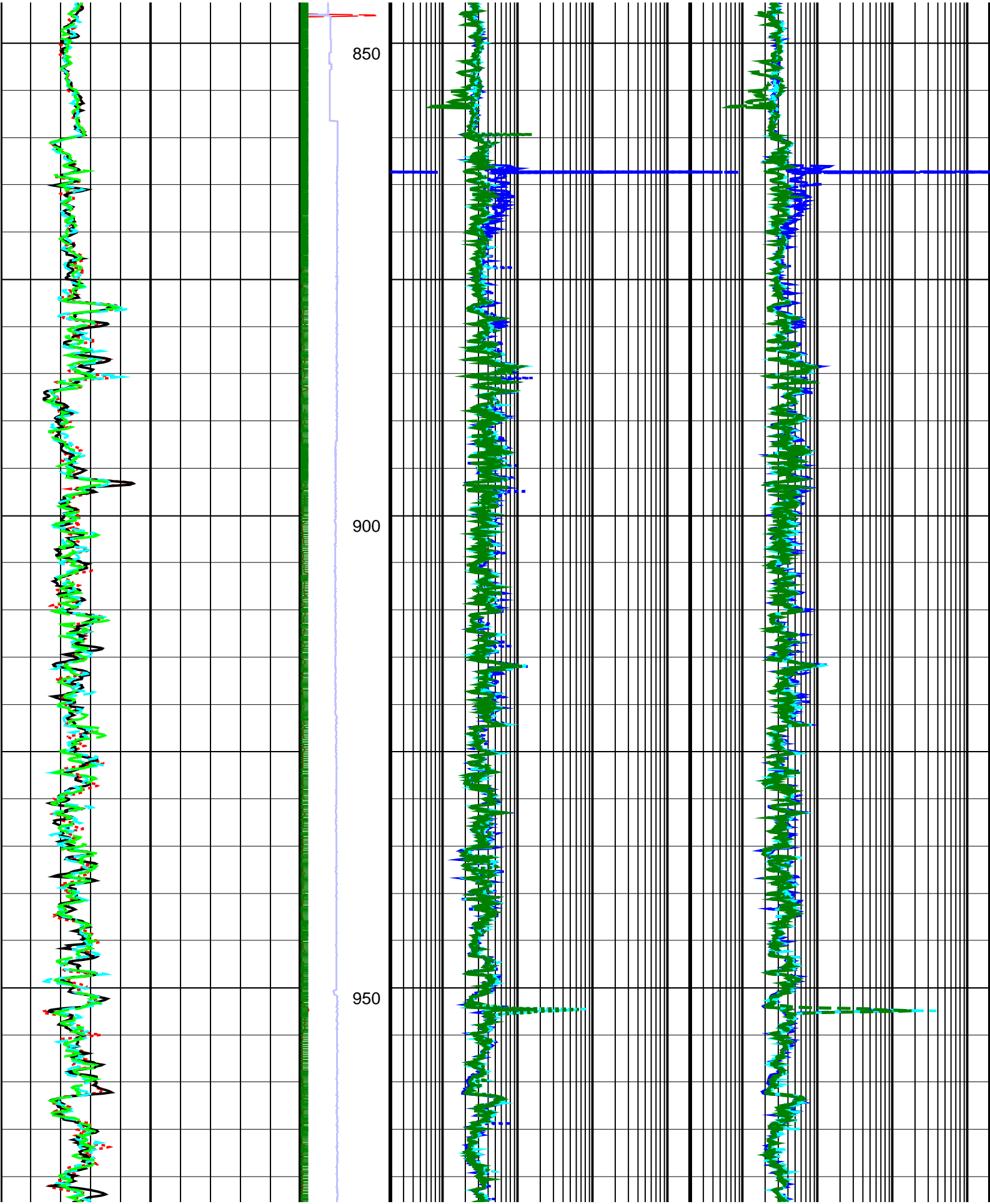
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Transmitter 20.60

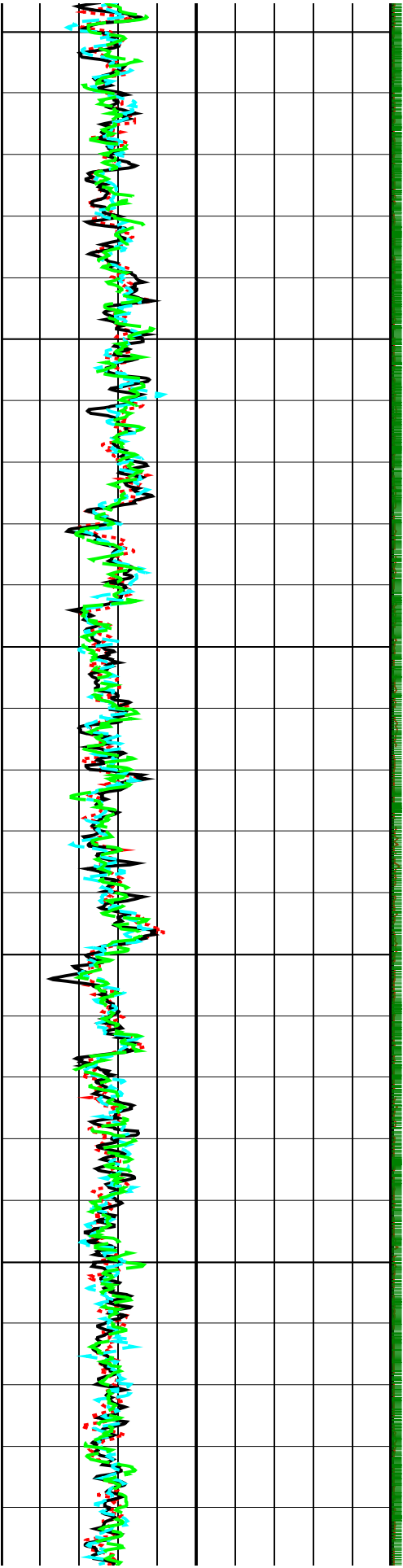
6-3/4 in. PowerPulse* 19.81
MDC Z411
MEC 212
MDI 1096
MVC 282
Software: V8.0B96
D&I 15.61

6-3/4 in. GVR* 11.46
S/N: 147
Software: V6.2B01
Shallow 9.99
Medium 9.87
Deep 9.69
Ring Res 9.52
R-O Port 9.38
GR 9.16

6-3/4 in. Xceed* RSS 7.85
S/N: 060

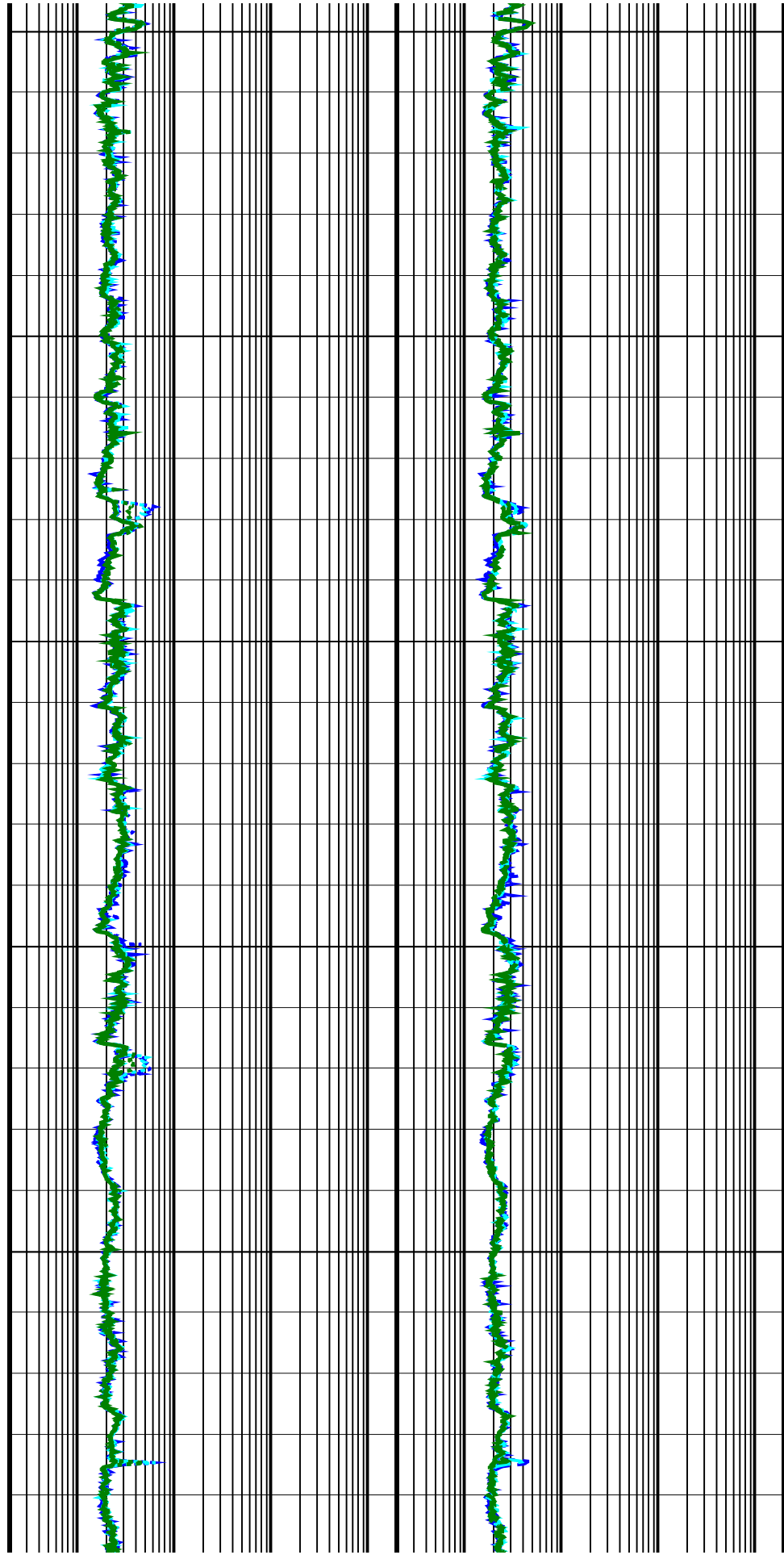


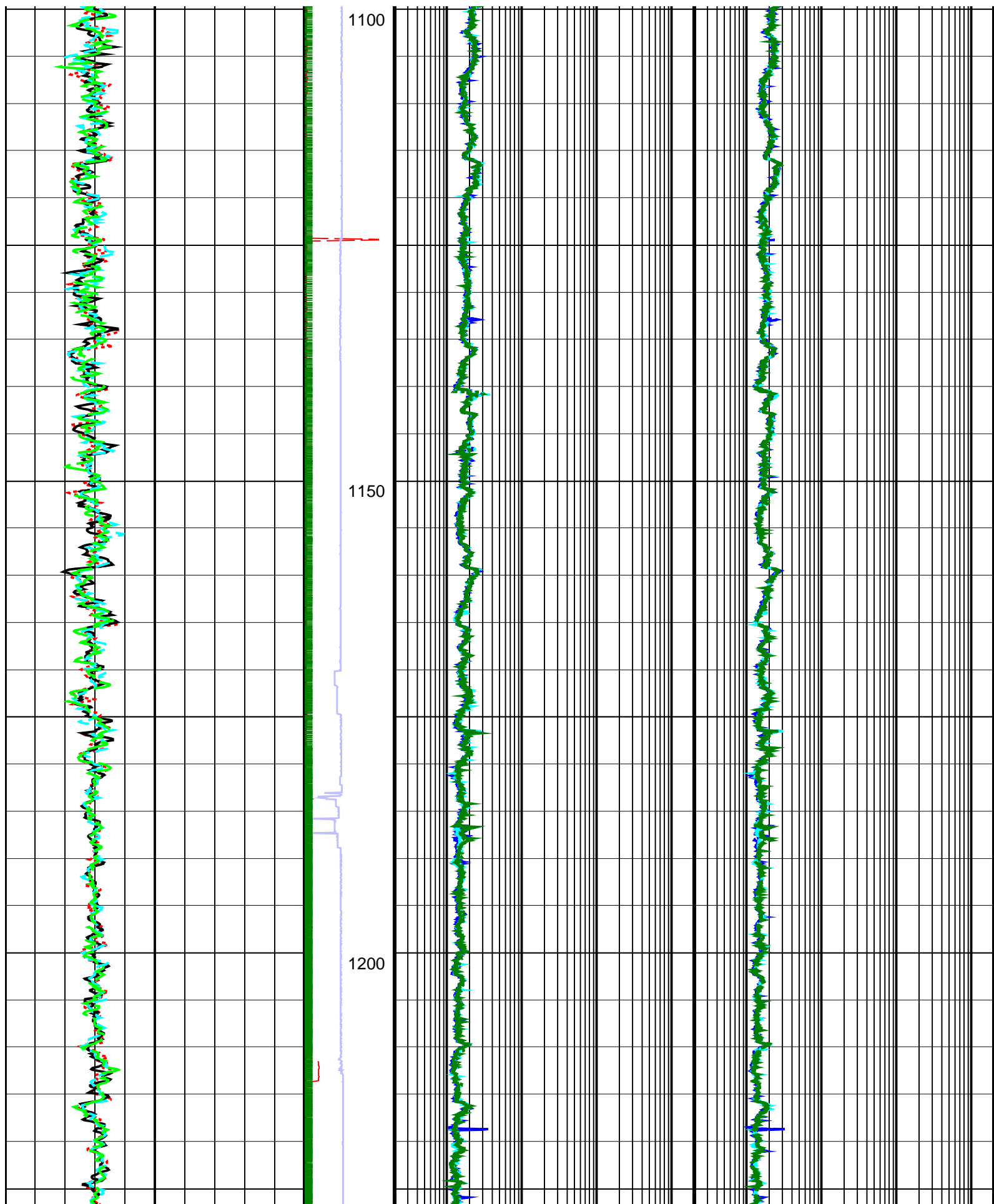


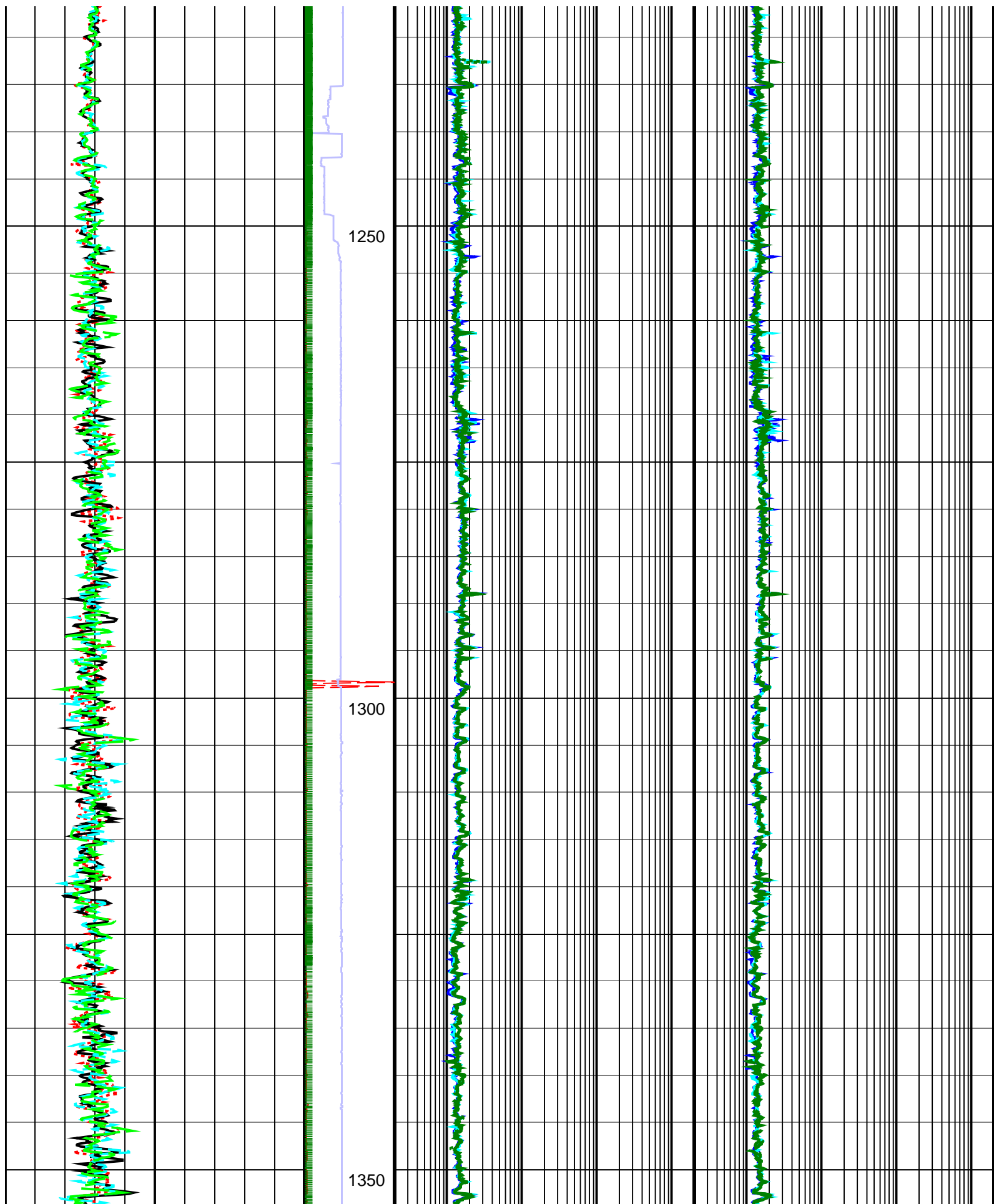


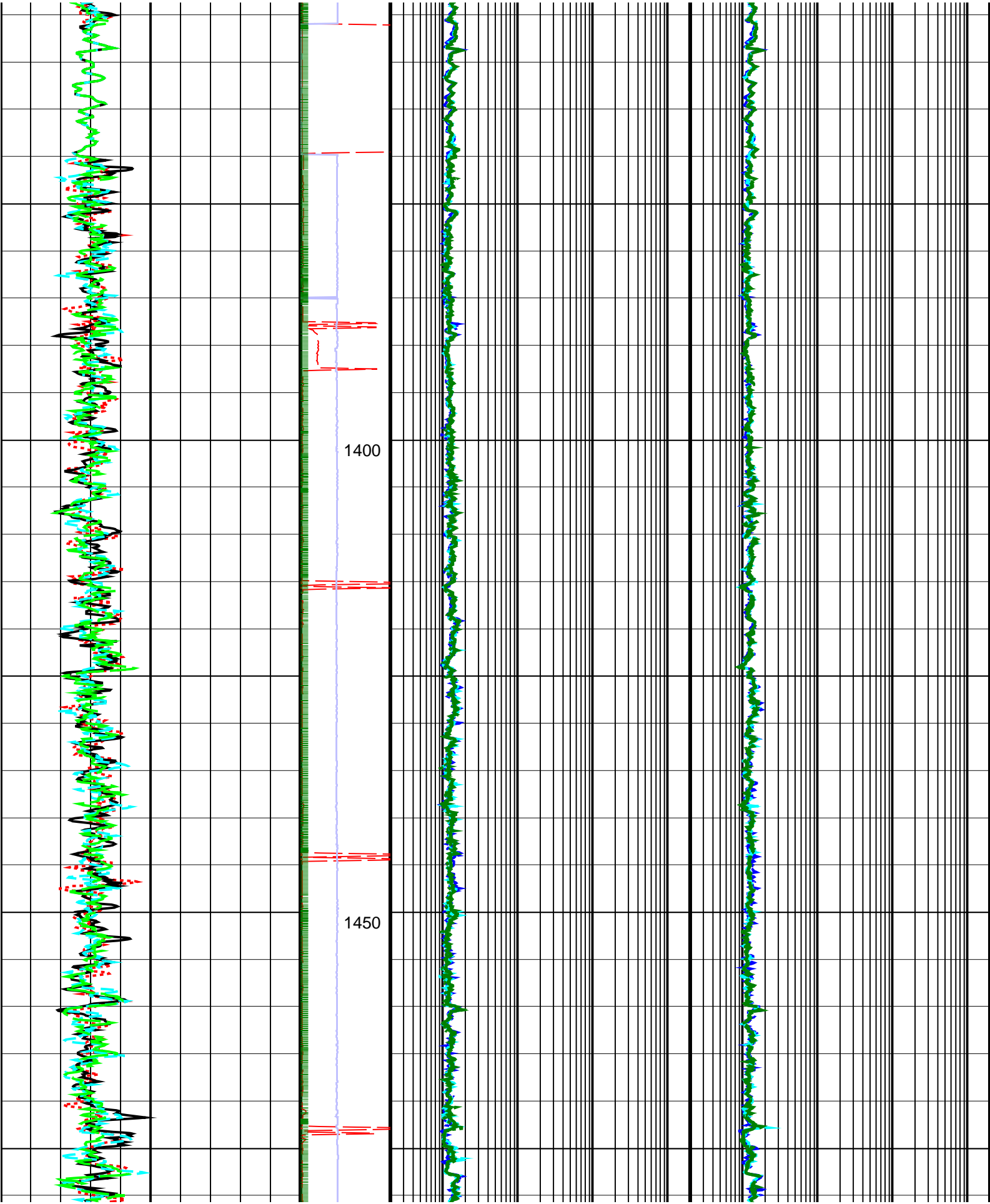
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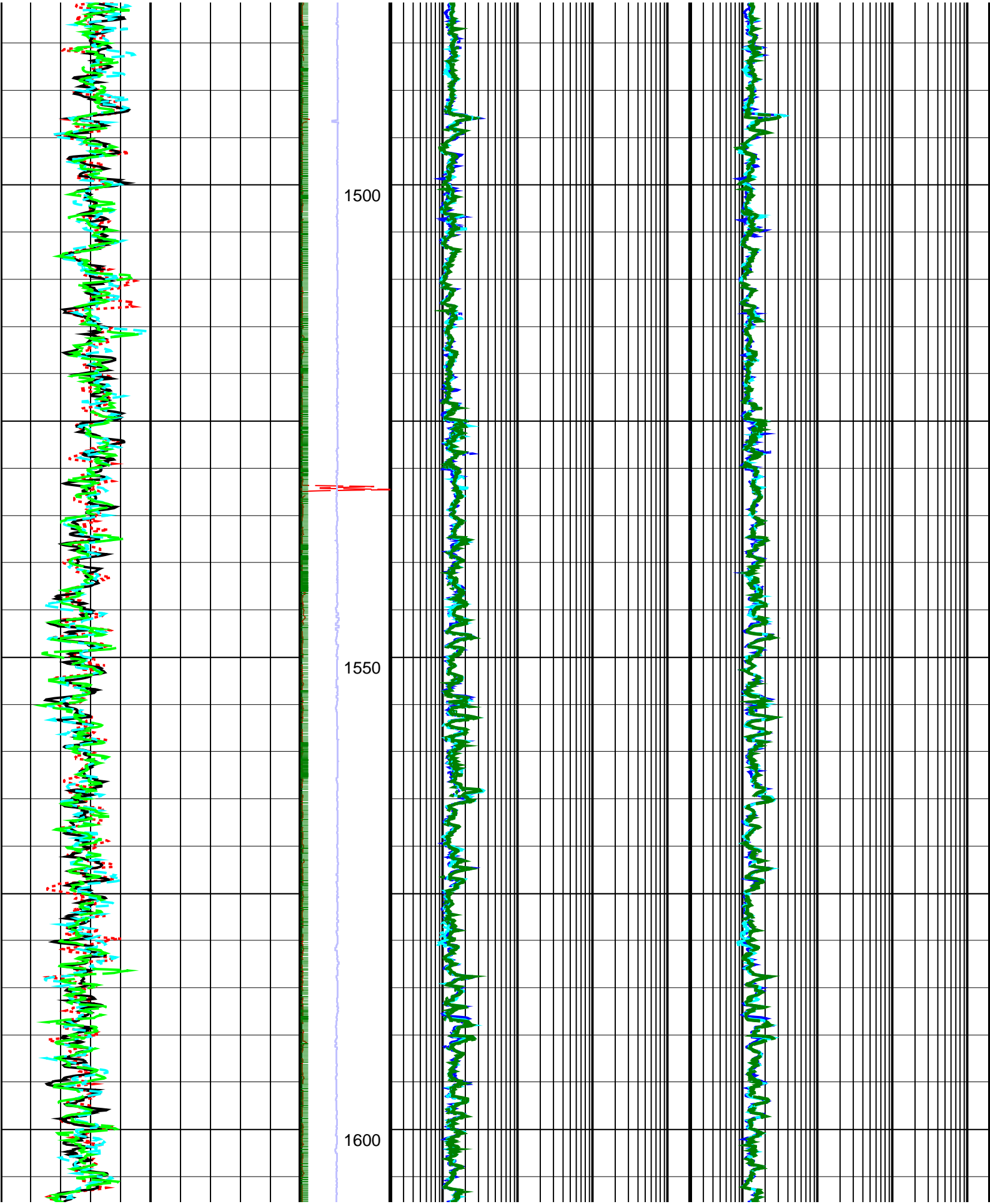
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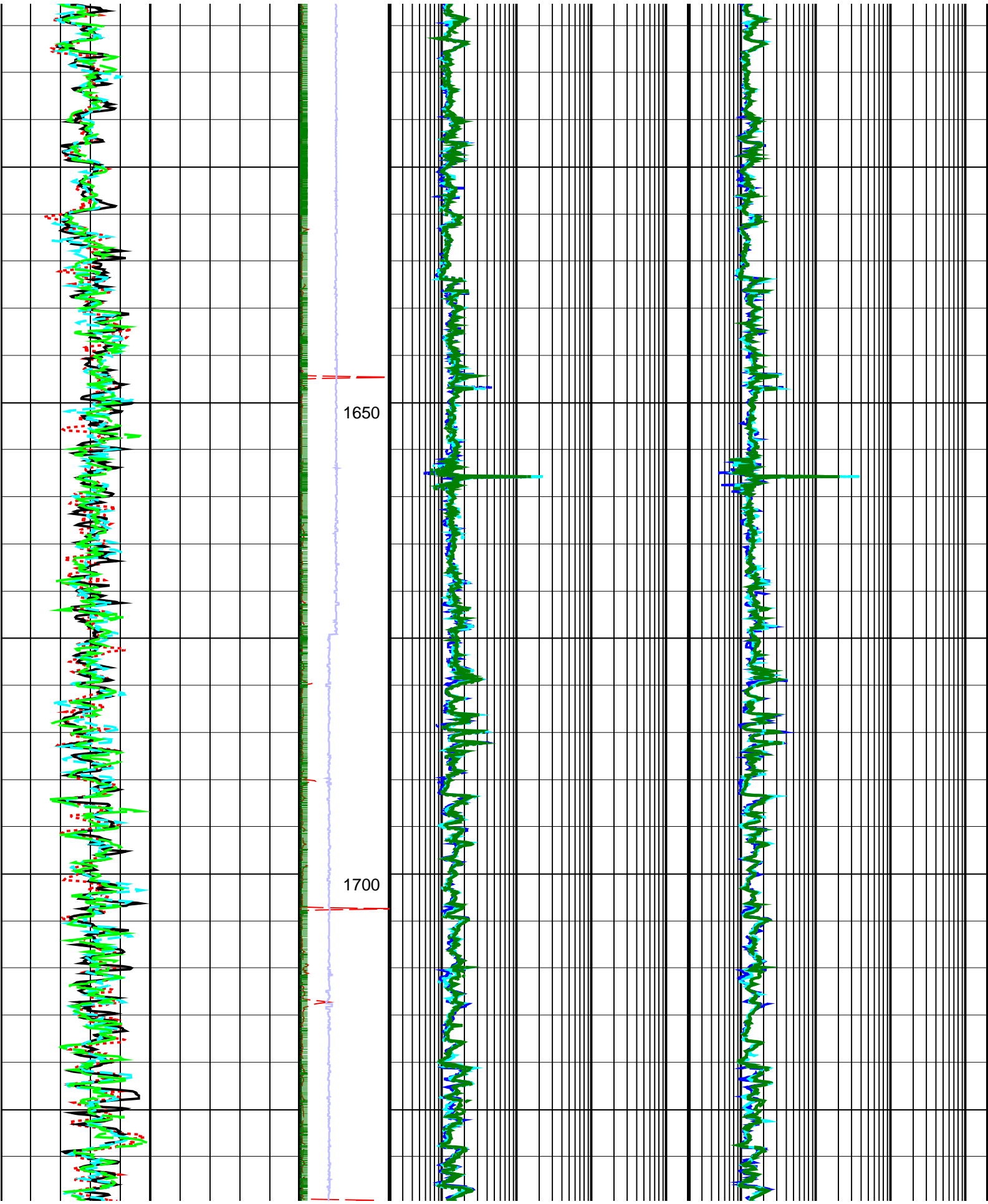


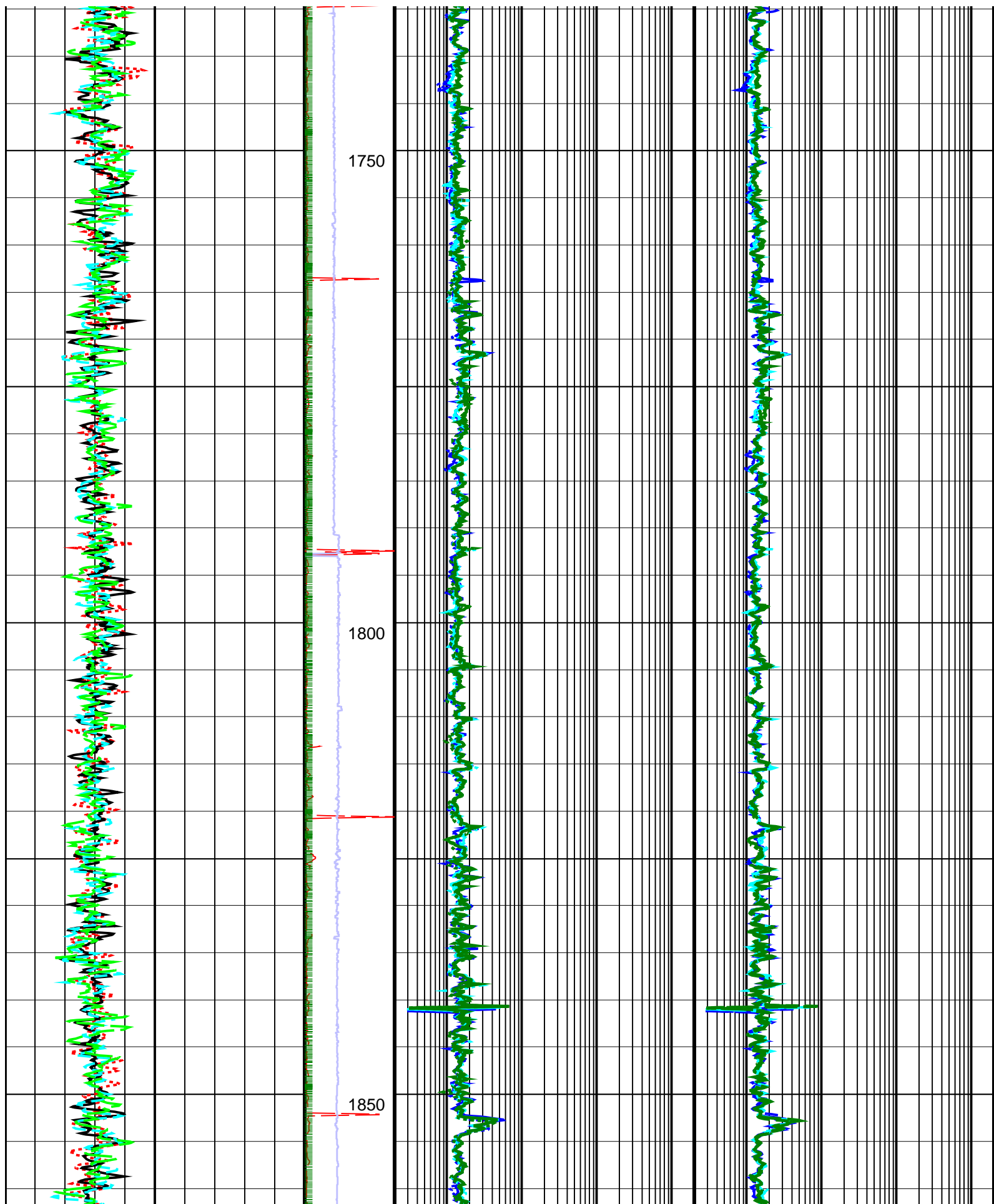


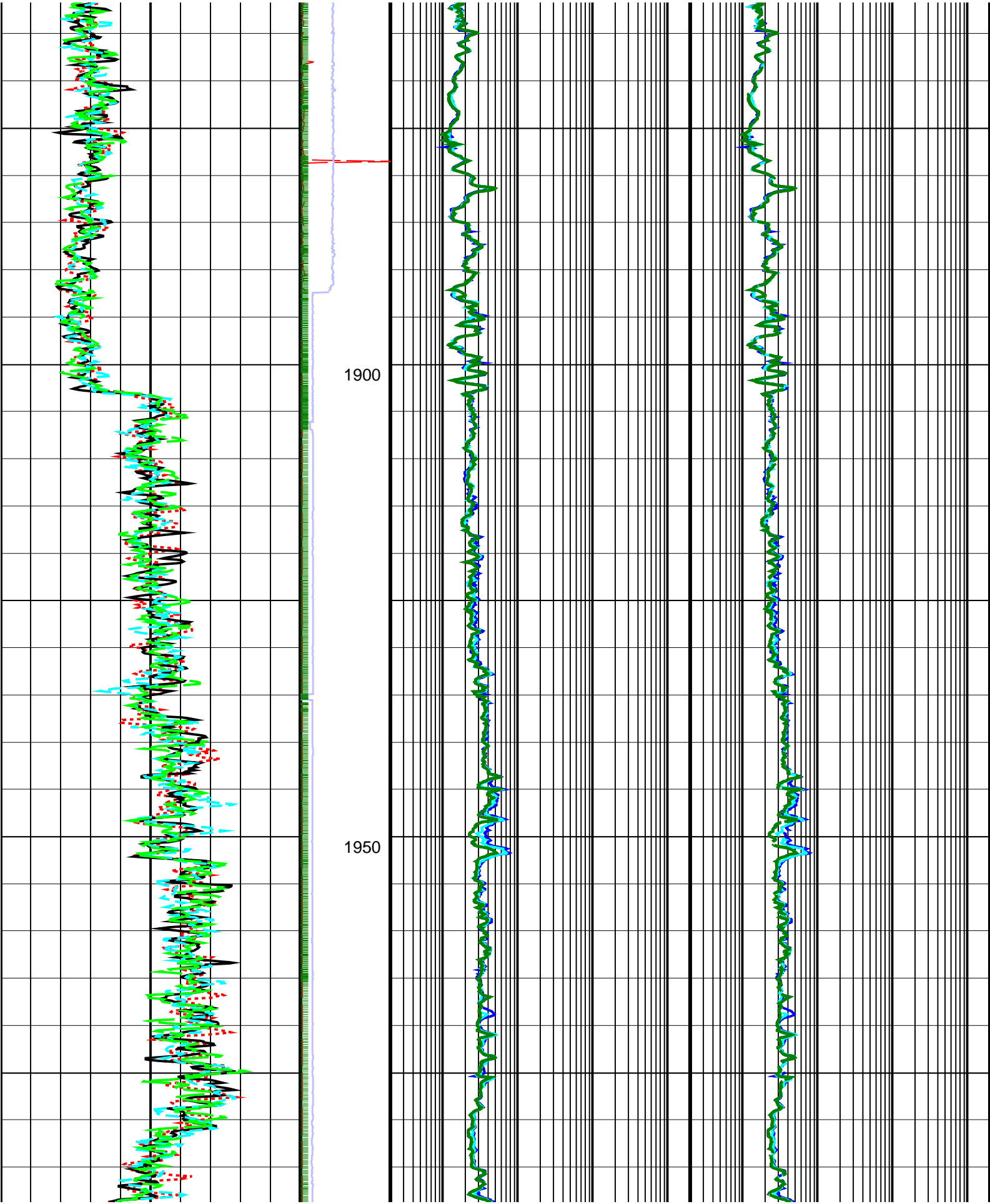


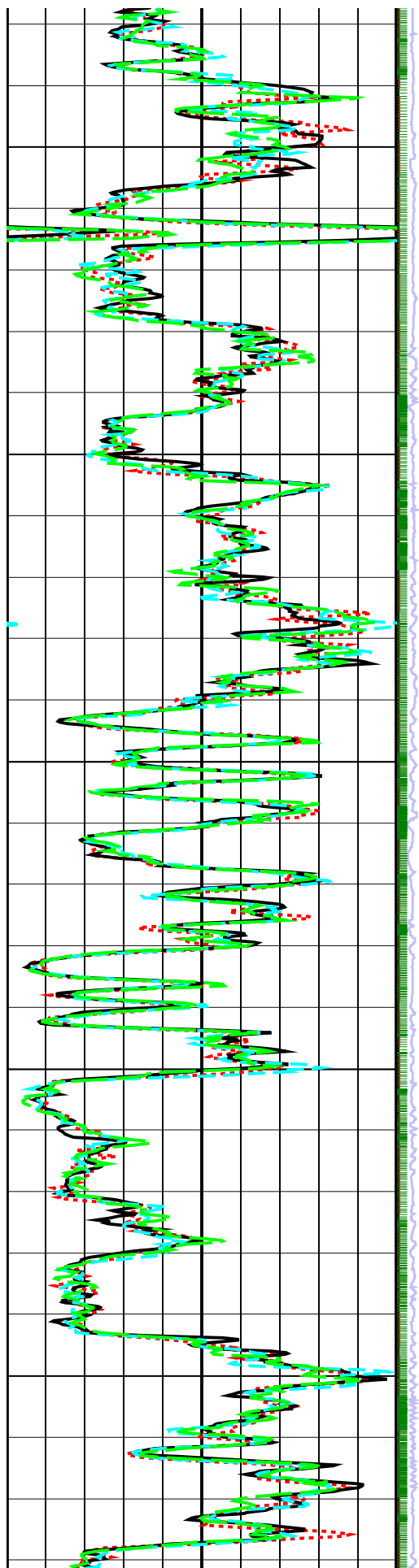








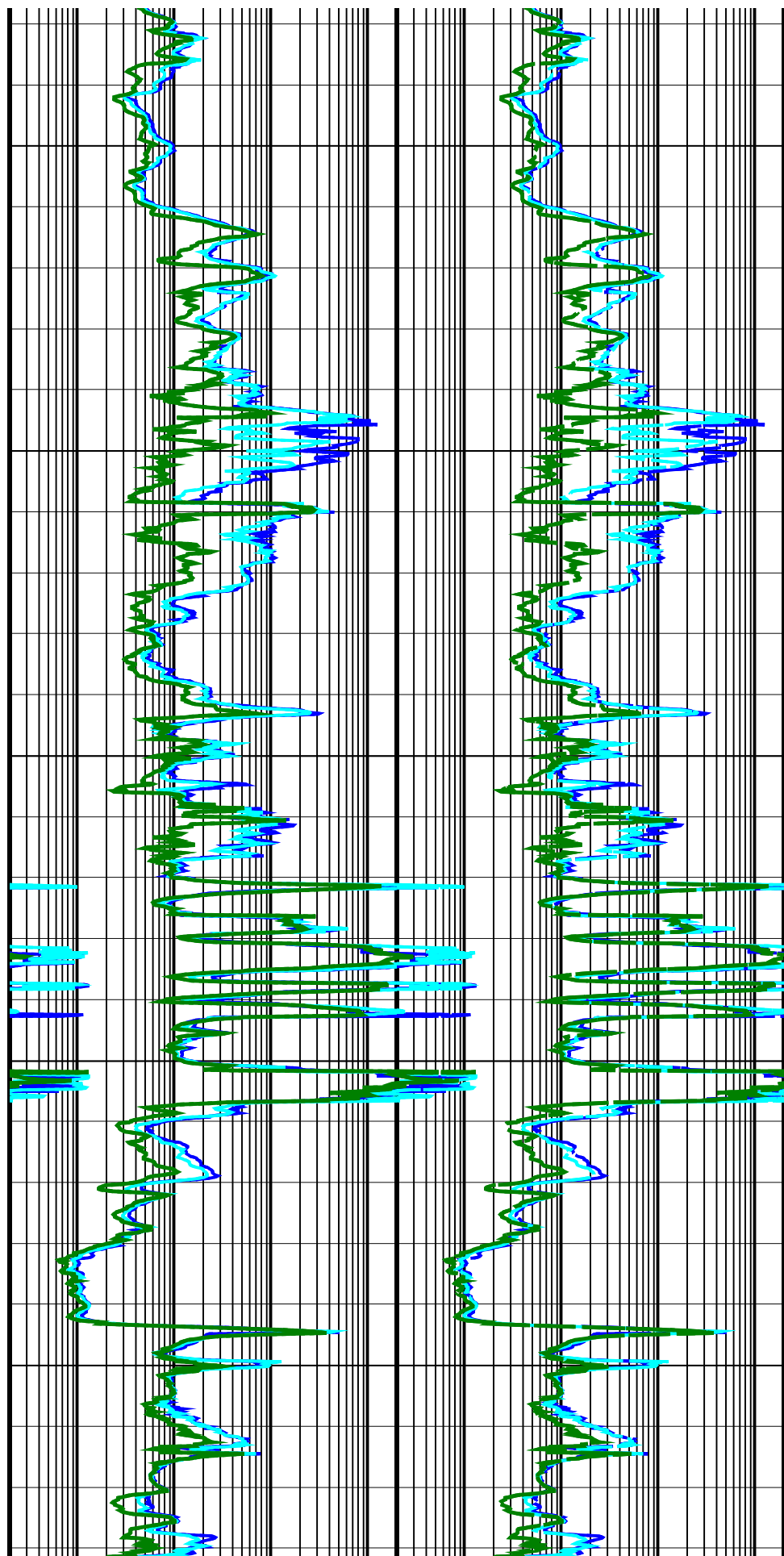


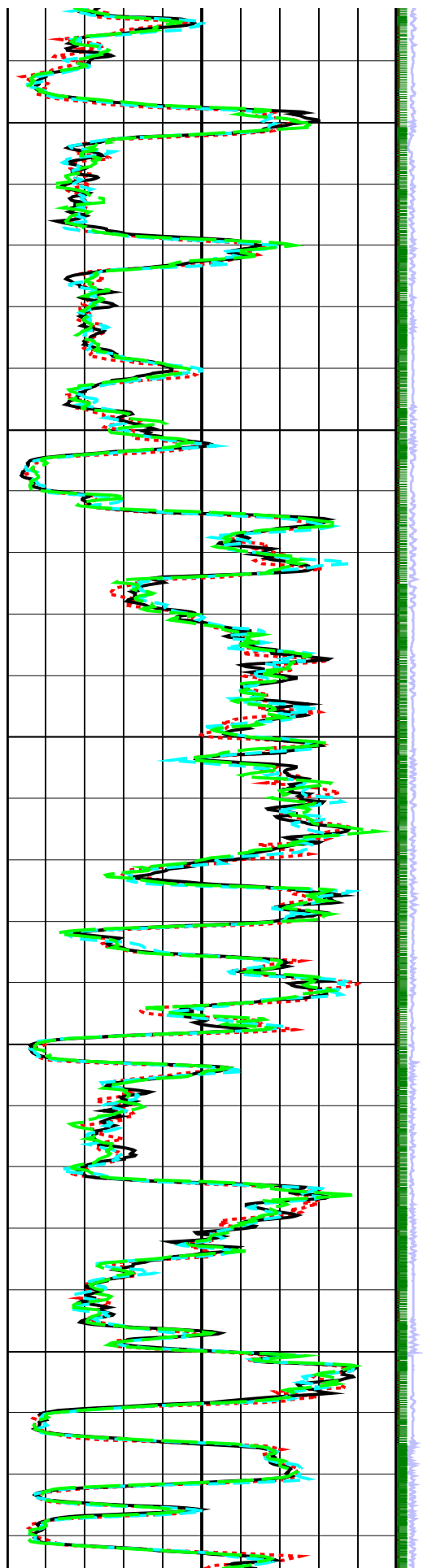


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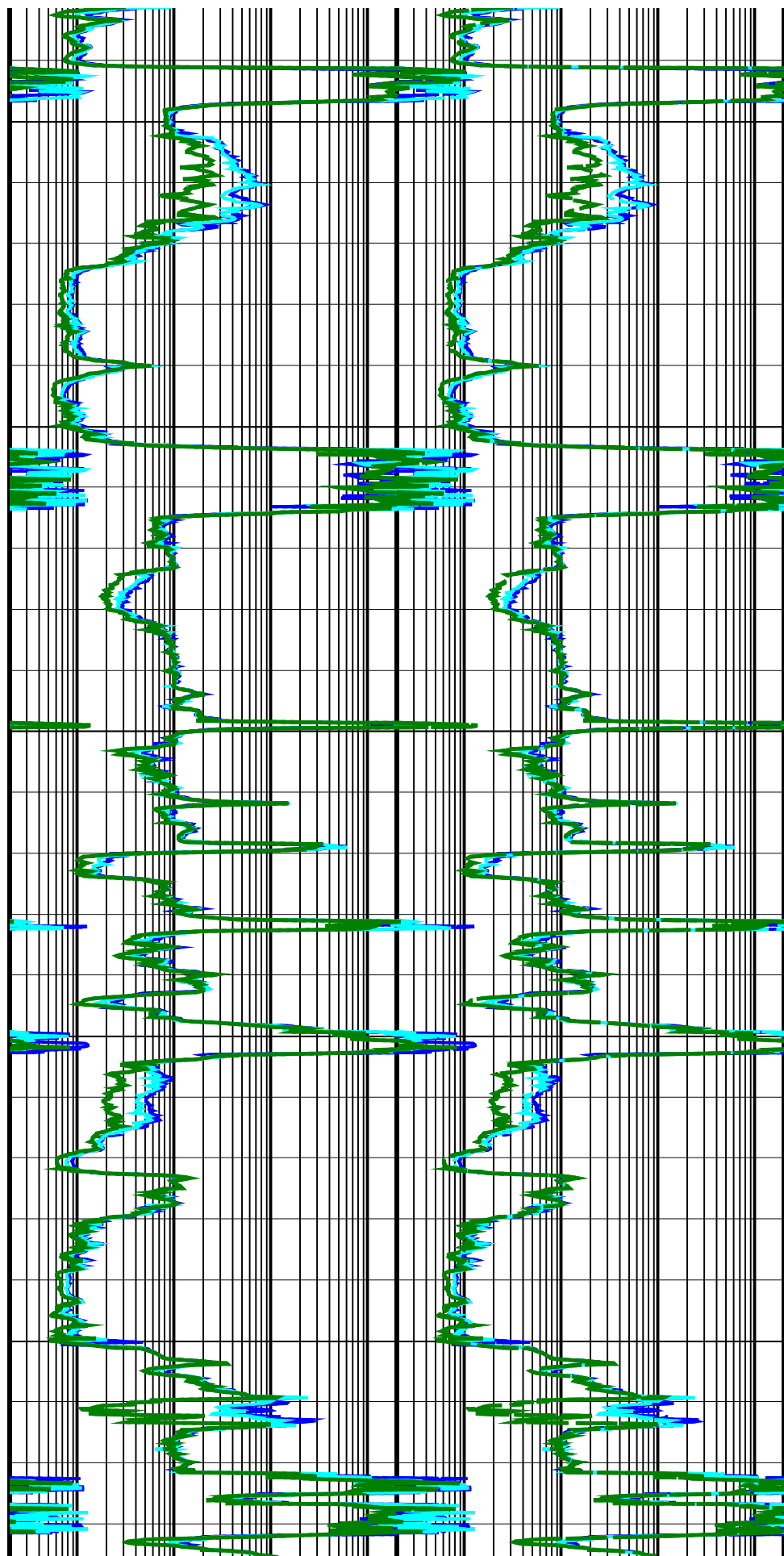
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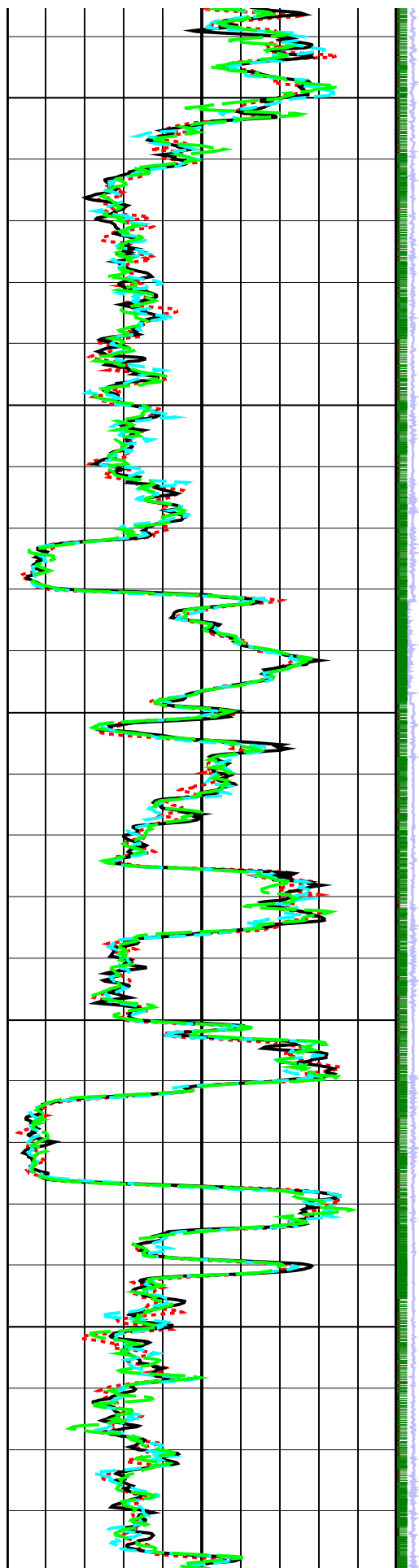




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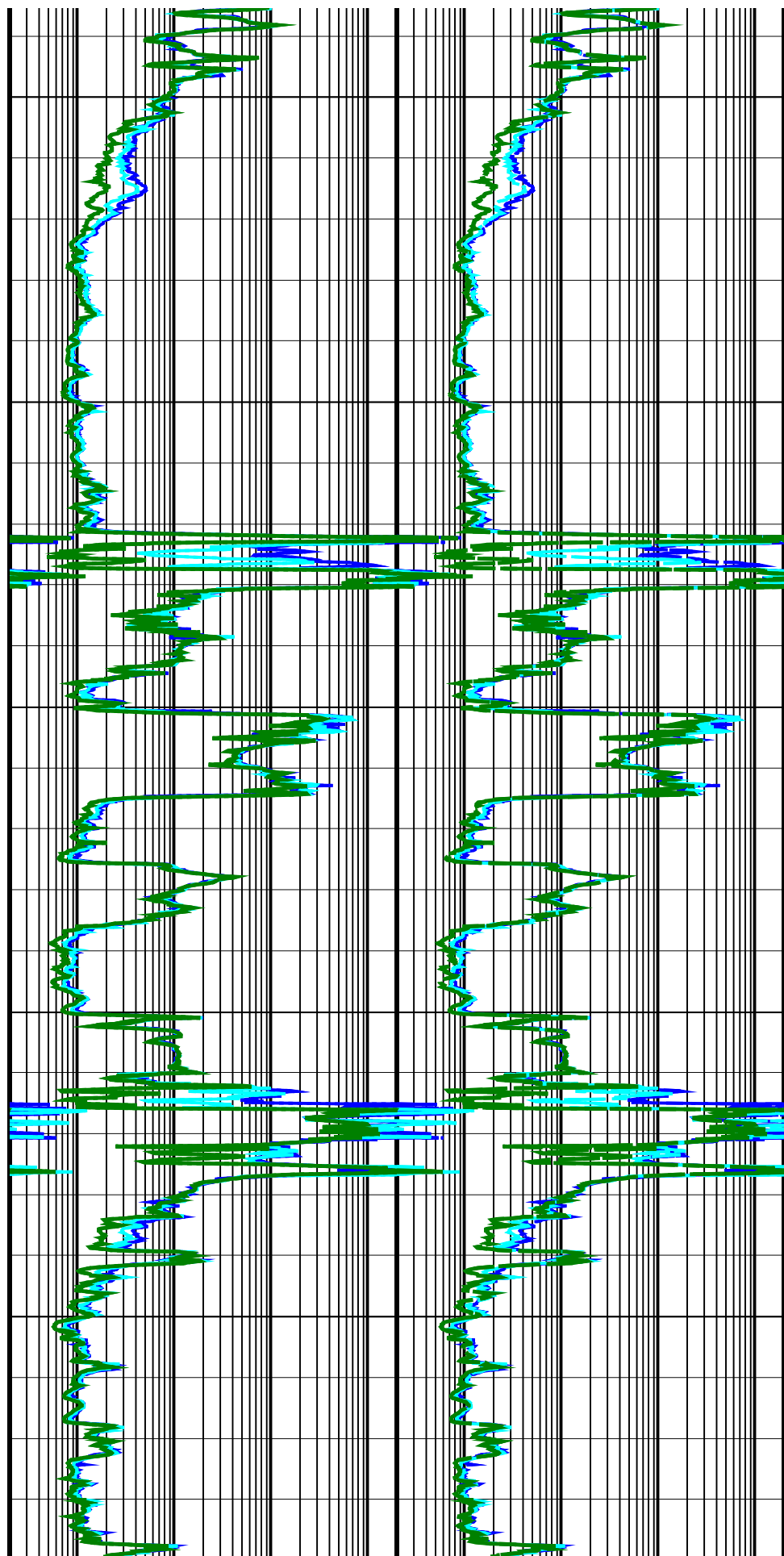


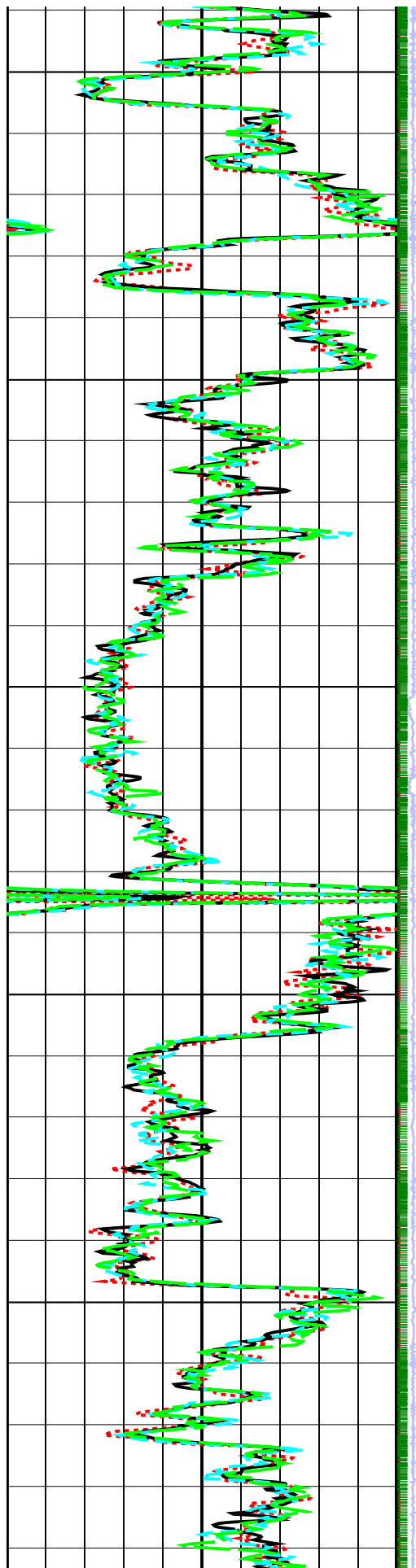


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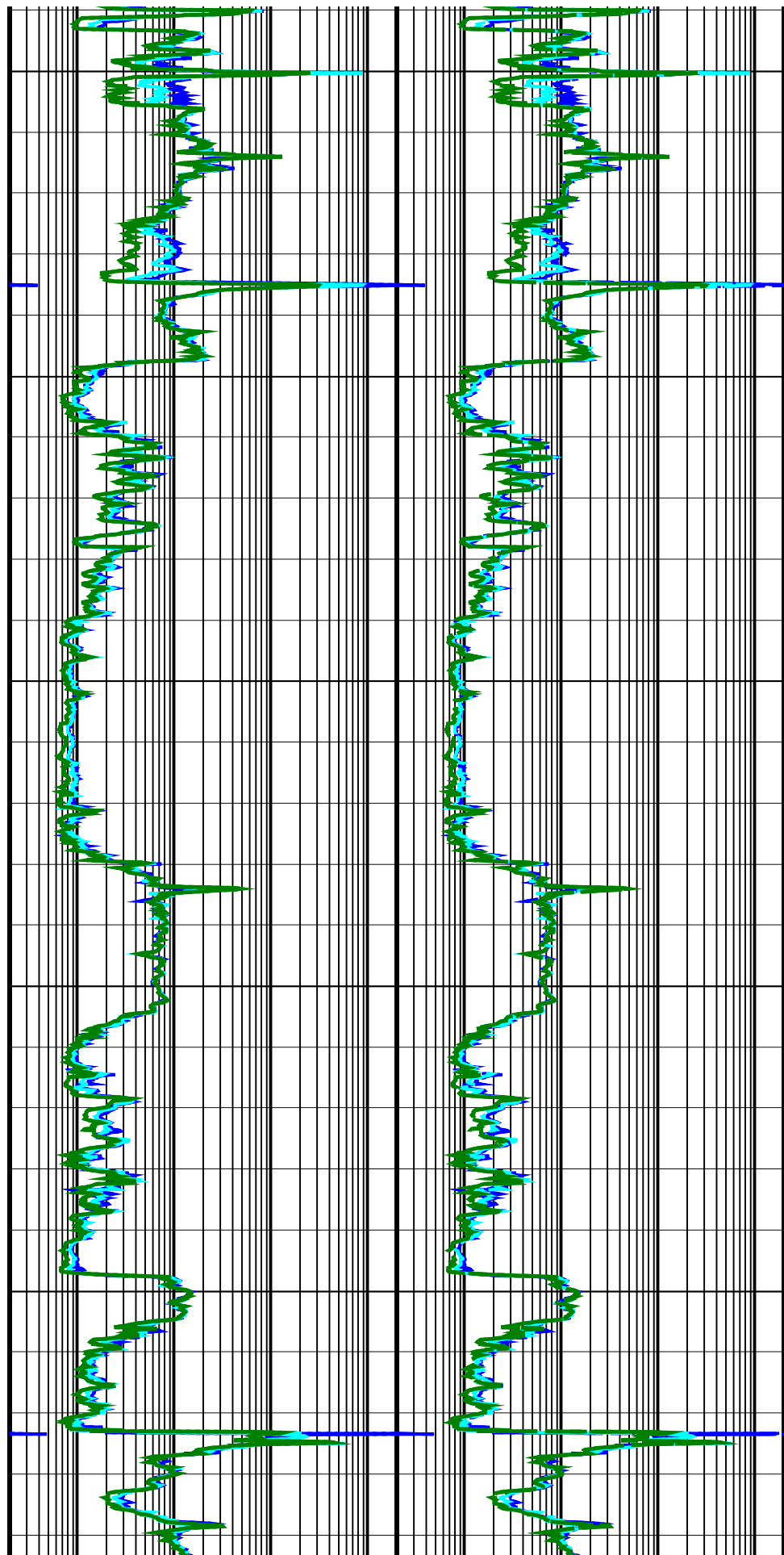
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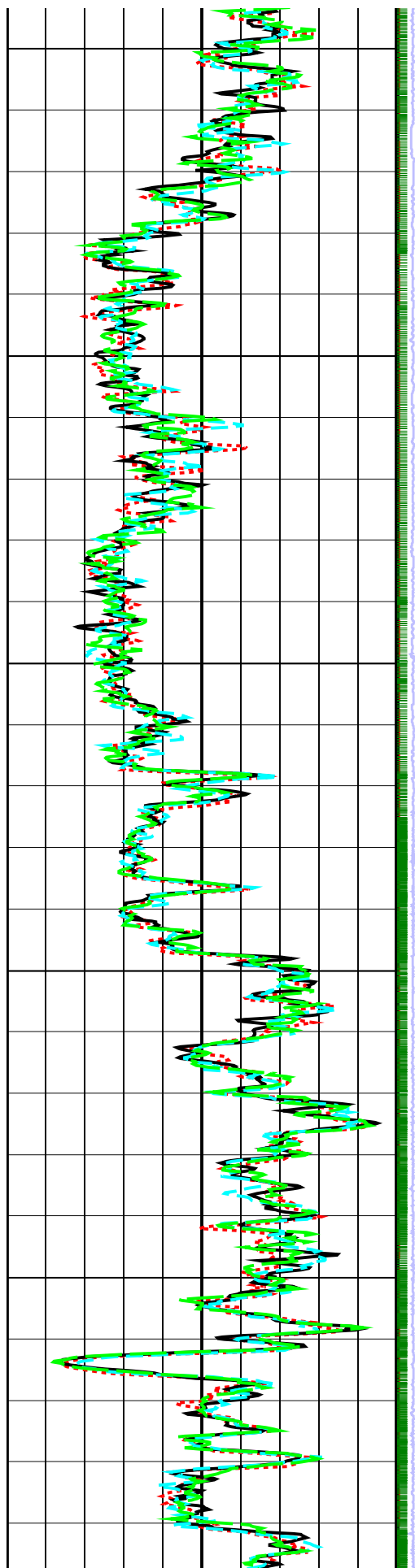




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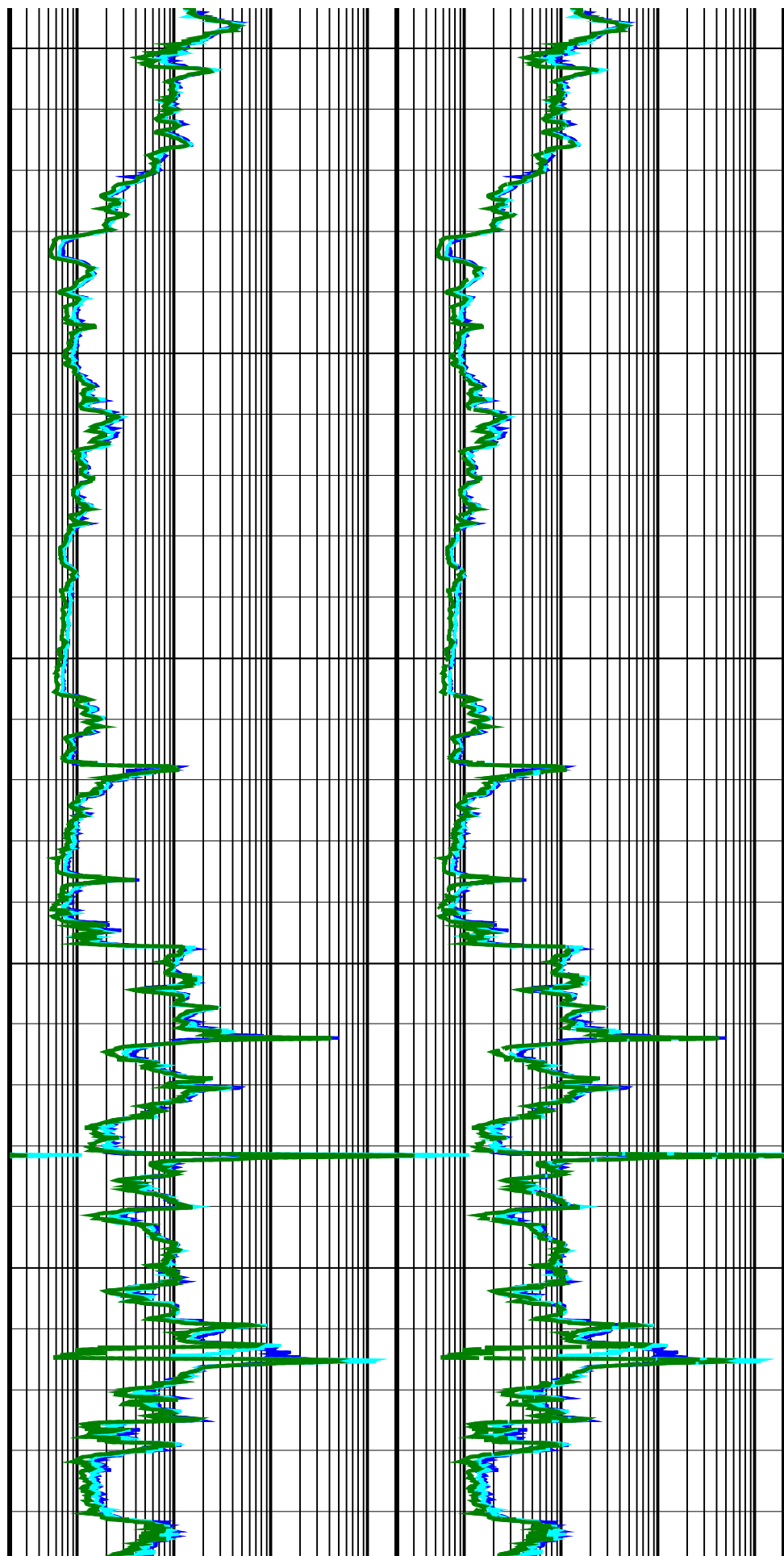


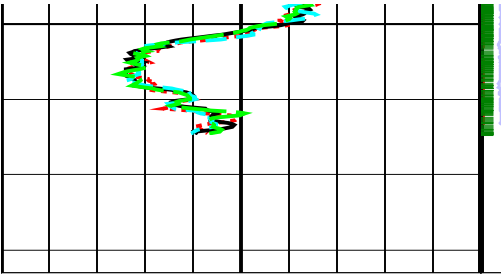


2500

2550

2600





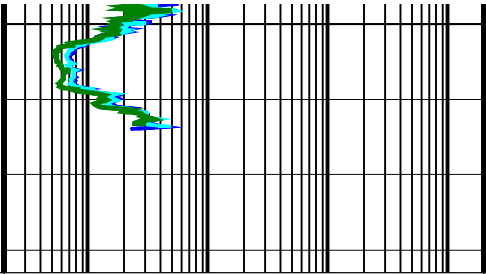
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(GAPI) 0 200

RAB Gamma Ray, Down (GR_RAB_DN)
(GAPI) 0 200

RAB Gamma Ray, Left (GR_RAB_LF)
(GAPI) 0 200

RAB Gamma Ray, Right (GR_RAB_RG)
(GAPI) 0 200

RAB
Rotational
Speed
(RPM_RAB)
(RPM)
0 500



Deep Button Resistivity, Up (RES_BD_UP)
(OHMM) 0.2 2000

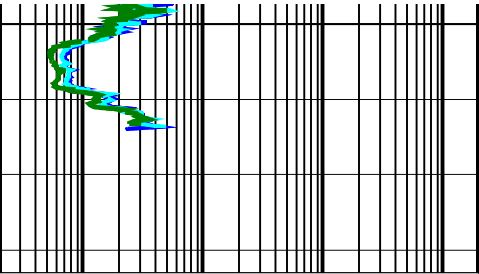
Deep Button Resistivity, Down (RES_BD_DN)
(OHMM) 0.2 2000

Medium Button Resistivity, Up (RES_BM_UP)
(OHMM) 0.2 2000

Medium Button Resistivity, Down (RES_BM_DN)
(OHMM) 0.2 2000

Shallow Button Resistivity, Up (RES_BS_UP)
(OHMM) 0.2 2000

Shallow Button Resistivity, Down (RES_BS_DN)
(OHMM) 0.2 2000



Deep Button Resistivity, Left (RES_BD_LF)
(OHMM) 0.2 2000

Deep Button Resistivity, Right (RES_BD_RG)
(OHMM) 0.2 2000

Medium Button Resistivity, Left (RES_BM_LF)
(OHMM) 0.2 2000

Medium Button Resistivity, Right (RES_BM_RG)
(OHMM) 0.2 2000

Shallow Button Resistivity, Left (RES_BS_LF)
(OHMM) 0.2 2000

Shallow Button Resistivity, Right (RES_BS_RG)
(OHMM) 0.2 2000

PIP SUMMARY

Gamma Ray Samples

IDEAL Version: ID10_0C_04

IDF

RAB id10_0c_04 MWD_10 id10_0c_04
ADN id10_0c_04

6.75-in. Azimuthal Density Neutron / Equipment Identification

Primary Equipment:
Tool Name and Serial Number
Collar Type and Serial Number
Chassis Type and Serial Number
Stabilizer Type and Serial Number
Neutron Logging Source
Density Logging Source
Stabilizer Size
Calibration Status

ADN6 - CA 0403
ADDC - AA 0403
ADSE - EA 18
Clamp-On 699198
NSR - M 202
GSR - JZ 1994
8.25-in.
Valid




Master: 21-Jun-2005 11:22

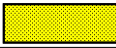
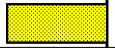

6.75-in. Azimuthal Density Neutron Calibration

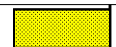

Density: Magnesium Block





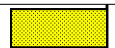

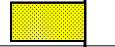
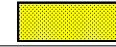
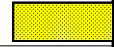






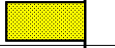
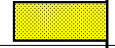
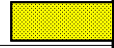






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|--------|---|-------|--------|--|-------|--------|--|-------|
| Master | | 1052 | Master | | 2361 | Master | | 6156 |
| | 250.0 (Minimum) 4125 (Nominal) 8000 (Maximum) | | | 700.0 (Minimum) 9350 (Nominal) 18000 (Maximum) | | | 2500 (Minimum) 23750 (Nominal) 45000 (Maximum) | |

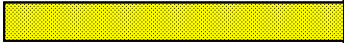
Master: 21-Jun-2005 11:22

| 6.75-in. Azimuthal Density Neutron Calibration | | | | | | | | | | | | | | |
|--|---|--------------------|-------------------|-------|--------------------|---|-------------------|--|-------|-------------------|---|--------------------|--|-------|
| Density: Aluminum Block | | | | | | | | | | | | | | |
| Phase | LS window 3 – Al CPS | | | Value | Phase | SS window 1 – Al CPS | | | Value | Phase | SS window 3 – Al CPS | | | Value |
| Master |  | | | 163.3 | Master |  | | | 1238 | Master |  | | | 3922 |
| | 50.00 (Minimum) | 725.0 (Nominal) | 1400 (Maximum) | | 500.0 (Minimum) | 4250 (Nominal) | 8000 (Maximum) | | | 1500 (Minimum) | 15750 (Nominal) | 30000 (Maximum) | | |













| Master: 21-Jun-2005 11:22 | | | | | | | | | | | |
|--|---|--------------------|--------------------|--------|---|--------------------|--------------------|--------|---|--------------------|-------------------|
| 6.75-in. Azimuthal Density Neutron Calibration | | | | | | | | | | | |
| Density: Background | | | | | | | | | | | |
| Phase | LS window 3 – Background CPS | | Value | Phase | SS window 1 – Background CPS | | Value | Phase | SS window 3 – Background CPS | | Value |
| Master |  | | 33.84 | Master |  | | 106.5 | Master |  | | 474.2 |
| | 15.00 (Minimum) | 82.50 (Nominal) | 150.0 (Maximum) | | 40.00 (Minimum) | 220.0 (Nominal) | 400.0 (Maximum) | | 150.0 (Minimum) | 825.0 (Nominal) | 1500 (Maximum) |


| | | | | | | | | | |
|--|---|--------------------|--------------------|-------|--------|---|--------------------|--------------------|-------|
| Master: 21-Jun-2005 11:22 | | | | | | | | | |
| 6.75-in. Azimuthal Density Neutron Calibration | | | | | | | | | |
| Density: Water Block Check | | | | | | | | | |
| Phase | Long spacing water density G/C3 | | | Value | Phase | Short spacing water density G/C3 | | | Value |
| Master |  | | | 1.030 | Master |  | | | 1.120 |
| | 1.024 (Minimum) | 1.039 (Nominal) | 1.054 (Maximum) | | | 1.096 (Minimum) | 1.126 (Nominal) | 1.156 (Maximum) | |

| Master: 21-Jun-2005 11:22 | | | | | | | | | | | |
|--|---|--------------------|--------------------|--------|---|--------------------|--------------------|--------|---|--------------------|--------------------|
| 6.75-in. Azimuthal Density Neutron Calibration | | | | | | | | | | | |
| Neutron: 3-Point Calibration | | | | | | | | | | | |
| Phase | Far 1 tube 1 Air Point Measure CPS | | Value | Phase | Far 1 tube 1 Rod Point Measure CPS | | Value | Phase | Far 1 tube 1 H2O Point Measure CPS | | Value |
| Master |  | | 17.01 | Master |  | | 4.142 | Master |  | | 2.060 |
| | 15.00 (Minimum) | 19.05 (Nominal) | 21.00 (Maximum) | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | 1.900 (Minimum) | 2.363 (Nominal) | 2.700 (Maximum) |
| Phase | Far 1 tube 2 Air Point Measure CPS | | Value | Phase | Far 1 tube 2 Rod Point Measure CPS | | Value | Phase | Far 1 tube 2 H2O Point Measure CPS | | Value |
| Master |  | | 18.12 | Master |  | | 4.335 | Master |  | | 2.137 |
| | 16.00 (Minimum) | 19.05 (Nominal) | 22.00 (Maximum) | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | 1.900 (Minimum) | 2.363 (Nominal) | 2.800 (Maximum) |
| Phase | Far 1 tube 3 Air Point Measure CPS | | Value | Phase | Far 1 tube 3 Rod Point Measure CPS | | Value | Phase | Far 1 tube 3 H2O Point Measure CPS | | Value |
| Master |  | | 17.15 | Master |  | | 4.188 | Master |  | | 2.066 |
| | 15.00 (Minimum) | 19.05 (Nominal) | 21.00 (Maximum) | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | 1.900 (Minimum) | 2.363 (Nominal) | 2.700 (Maximum) |
| Phase | Far 2 tube 1 Air Point Measure CPS | | Value | Phase | Far 2 tube 1 Rod Point Measure CPS | | Value | Phase | Far 2 tube 1 H2O Point Measure CPS | | Value |
| Master |  | | 17.52 | Master |  | | 4.365 | Master |  | | 2.173 |
| | 15.00 (Minimum) | 19.05 (Nominal) | 21.00 (Maximum) | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | 1.900 (Minimum) | 2.363 (Nominal) | 2.700 (Maximum) |
| Phase | Far 2 tube 2 Air Point Measure CPS | | Value | Phase | Far 2 tube 2 Rod Point Measure CPS | | Value | Phase | Far 2 tube 2 H2O Point Measure CPS | | Value |
| Master |  | | 18.07 | Master |  | | 4.211 | Master |  | | 1.982 |
| | 16.00 (Minimum) | 19.05 (Nominal) | 22.00 (Maximum) | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | 1.900 (Minimum) | 2.363 (Nominal) | 2.800 (Maximum) |
| Phase | Far 2 tube 3 Air Point Measure CPS | | Value | Phase | Far 2 tube 3 Rod Point Measure CPS | | Value | Phase | Far 2 tube 3 H2O Point Measure CPS | | Value |
| Master |  | | 17.03 | Master |  | | 4.348 | Master |  | | 2.060 |
| | 15.00 (Minimum) | 19.05 (Nominal) | 21.00 (Maximum) | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | 1.900 (Minimum) | 2.363 (Nominal) | 2.700 (Maximum) |
| Phase | Near 1 tube 1 Air Point Measure CPS | | Value | Phase | Near 1 tube 1 Rod Point Measure CPS | | Value | Phase | Near 1 tube 1 H2O Point Measure CPS | | Value |
| Master |  | | 458.8 | Master |  | | 722.7 | Master |  | | 319.9 |
| | 400.0 (Minimum) | 487.5 (Nominal) | 540.0 (Maximum) | | 610.0 (Minimum) | 768.8 (Nominal) | 850.0 (Maximum) | | 270.0 (Minimum) | 343.7 (Nominal) | 390.0 (Maximum) |
| Phase | Near 2 tube 1 Air Point Measure CPS | | Value | Phase | Near 2 tube 1 Rod Point Measure CPS | | Value | Phase | Near 2 tube 1 H2O Point Measure CPS | | Value |
| Master |  | | 454.0 | Master |  | | 727.3 | Master |  | | 320.0 |
| | 400.0 (Minimum) | 487.5 (Nominal) | 540.0 (Maximum) | | 610.0 (Minimum) | 768.8 (Nominal) | 850.0 (Maximum) | | 270.0 (Minimum) | 343.7 (Nominal) | 390.0 (Maximum) |

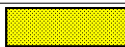
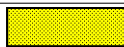
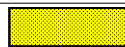
| | | |
|--|---|-------|
| Master: 21-Jun-2005 11:22 | | |
| 6.75-in. Azimuthal Density Neutron Calibration | | |
| Neutron: Water Block Check | | |
| Phase | Far Neutron water porosity PU | Value |
| Master |  | 92.83 |
| | 90.00 (Minimum) 100.0 (Nominal) 125.0 (Maximum) | |

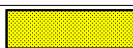
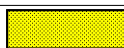
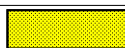
| | | |
|--|-----------|-----|
| 6.75-in. Resistivity At-the-Bit / Equipment Identification | | |
| Primary Equipment: | | |
| Tool Name and Serial Number | RAB6 - CA | 191 |
| Calibration Status | Valid | |




| | | | | | | | | |
|---|---|--------|--------|---|--------|--------|---|--------|
| Master: 29-Jul-2005 15:21 | | | | | | | | |
| 6.75-in. Resistivity At-the-Bit Calibration | | | | | | | | |
| Resistivity: Fixture | | | | | | | | |
| Phase | Ring/T1 factor ---- | Value | Phase | Ring/T2 factor ---- | Value | Phase | M0/T1 factor ---- | Value |
| Master |  | 0.9949 | Master |  | 0.9924 | Master |  | 1.006 |
| | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | |
| Phase | M0/T2 factor ---- | Value | Phase | M2/T1 factor ---- | Value | Phase | M2/T2 factor ---- | Value |
| Master |  | 1.003 | Master |  | 1.007 | Master |  | 1.003 |
| | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | |
| Phase | BTN shallow/T1 factor ---- | Value | Phase | BTN shallow/T2 factor ---- | Value | Phase | BTN medium/T1 factor ---- | Value |
| Master |  | 1.002 | Master |  | 0.9996 | Master |  | 0.9951 |
| | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | |
| Phase | BTN medium/T2 factor ---- | Value | Phase | BTN deep/T1 factor ---- | Value | Phase | BTN deep/T2 factor ---- | Value |
| Master |  | 0.9922 | Master |  | 1.012 | Master |  | 1.009 |
| | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | |



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|---|---|--------|
| Master: 29-Jul-2005 15:21 | | |
| 6.75-in. Resistivity At-the-Bit Calibration | | |
| Gamma Ray: Blanket | | |
| Phase | Gamma ray factor ---- | Value |
| Master |  | 0.9256 |
| | 0.7500 (Minimum) 1.000 (Nominal) 1.250 (Maximum) | |



















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|---|--------------|------|
| 6.75-in. Azimuthal Density Neutron / Equipment Identification | | |
| Primary Equipment: | | |
| Tool Name and Serial Number | ADN6 - CA | EE55 |
| Collar Type and Serial Number | ADDC - AA | EE55 |
| Chassis Type and Serial Number | ADSE - EA | 380 |
| Stabilizer Type and Serial Number | IBS | |
| Neutron Logging Source | NSR - M | 202 |
| Density Logging Source | GSR - JZ | 1994 |
| Stabilizer Size | 8-3/16 - in. | |
| Calibration Status | Valid | |







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|--|---|-------------------|-------------------|-------|--------------------|---|--------------------|--|-------|-------------------|---|--------------------|--|-------|
| Master: 19-Jun-2005 14:46 | | | | | | | | | | | | | | |
| 6.75-in. Azimuthal Density Neutron Calibration | | | | | | | | | | | | | | |
| Density: Magnesium Block | | | | | | | | | | | | | | |
| Phase | LS window 3 – Mg CPS | | | Value | Phase | SS window 1 – Mg CPS | | | Value | Phase | SS window 3 – Mg CPS | | | Value |
| Master |  | | | 1069 | Master |  | | | 2586 | Master |  | | | 6392 |
| | 250.0 (Minimum) | 4125 (Nominal) | 8000 (Maximum) | | 700.0 (Minimum) | 9350 (Nominal) | 18000 (Maximum) | | | 2500 (Minimum) | 23750 (Nominal) | 45000 (Maximum) | | |


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|--|---|--------------------|-------------------|-------|--------------------|---|-------------------|--|-------------------|--------------------|---|--|--|-------|
| Master: 19-Jun-2005 14:46 | | | | | | | | | | | | | | |
| 6.75-in. Azimuthal Density Neutron Calibration | | | | | | | | | | | | | | |
| Density: Aluminum Block | | | | | | | | | | | | | | |
| Phase | LS window 3 – Al CPS | | | Value | Phase | SS window 1 – Al CPS | | | Value | Phase | SS window 3 – Al CPS | | | Value |
| Master |  | | | 160.3 | Master |  | | | 1306 | Master |  | | | 4004 |
| | 50.00 (Minimum) | 725.0 (Nominal) | 1400 (Maximum) | | 500.0 (Minimum) | 4250 (Nominal) | 8000 (Maximum) | | 1500 (Minimum) | 15750 (Nominal) | 30000 (Maximum) | | | |

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|--|---|--------------------|--------------------|-------|--------|---|--------------------|--------------------|-------|--------|---|--------------------|-------------------|-------|
| Master: 19-Jun-2005 14:46 | | | | | | | | | | | | | | |
| 6.75-in. Azimuthal Density Neutron Calibration | | | | | | | | | | | | | | |
| Density: Background | | | | | | | | | | | | | | |
| Phase | LS window 3 – Background | | CPS | Value | Phase | SS window 1 – Background | | CPS | Value | Phase | SS window 3 – Background | | CPS | Value |
| Master |  | | | 50.02 | Master |  | | | 127.9 | Master |  | | | 555.3 |
| | 15.00 (Minimum) | 82.50 (Nominal) | 150.0 (Maximum) | | | 40.00 (Minimum) | 220.0 (Nominal) | 400.0 (Maximum) | | | 150.0 (Minimum) | 825.0 (Nominal) | 1500 (Maximum) | |

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|--|---|--------------------|--------------------|--------|---|--------------------|--------------------|--|--|
| Master: 19-Jun-2005 14:46 | | | | | | | | | |
| 6.75-in. Azimuthal Density Neutron Calibration | | | | | | | | | |
| Density: Water Block Check | | | | | | | | | |
| Phase | Long spacing water density G/C3 | | Value | Phase | Short spacing water density G/C3 | | Value | | |
| Master |  | | 1.031 | Master |  | | 1.130 | | |
| | 1.024 (Minimum) | 1.039 (Nominal) | 1.054 (Maximum) | | 1.096 (Minimum) | 1.126 (Nominal) | 1.156 (Maximum) | | |

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|--|---|--------------------|--------------------|-------|--------|---|--------------------|--------------------|-------|--------|---|--------------------|--------------------|-------|
| Master: 19-Jun-2005 14:46 | | | | | | | | | | | | | | |
| 6.75-in. Azimuthal Density Neutron Calibration | | | | | | | | | | | | | | |
| Neutron: 3-Point Calibration | | | | | | | | | | | | | | |
| Phase | Far 1 tube 1 Air | Point Measure | CPS | Value | Phase | Far 1 tube 1 Rod | Point Measure | CPS | Value | Phase | Far 1 tube 1 H2O | Point Measure | CPS | Value |
| Master |  | | | 17.72 | Master |  | | | 4.474 | Master |  | | | 2.147 |
| | 15.00 (Minimum) | 19.05 (Nominal) | 21.00 (Maximum) | | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | | 1.900 (Minimum) | 2.363 (Nominal) | 2.700 (Maximum) | |
| Phase | Far 1 tube 2 Air | Point Measure | CPS | Value | Phase | Far 1 tube 2 Rod | Point Measure | CPS | Value | Phase | Far 1 tube 2 H2O | Point Measure | CPS | Value |
| Master |  | | | 18.93 | Master |  | | | 4.707 | Master |  | | | 2.299 |
| | 16.00 (Minimum) | 19.05 (Nominal) | 22.00 (Maximum) | | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | | 1.900 (Minimum) | 2.363 (Nominal) | 2.800 (Maximum) | |
| Phase | Far 1 tube 3 Air | Point Measure | CPS | Value | Phase | Far 1 tube 3 Rod | Point Measure | CPS | Value | Phase | Far 1 tube 3 H2O | Point Measure | CPS | Value |
| Master |  | | | 18.55 | Master |  | | | 4.486 | Master |  | | | 2.279 |
| | 15.00 (Minimum) | 19.05 (Nominal) | 21.00 (Maximum) | | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | | 1.900 (Minimum) | 2.363 (Nominal) | 2.700 (Maximum) | |
| Phase | Far 2 tube 1 Air | Point Measure | CPS | Value | Phase | Far 2 tube 1 Rod | Point Measure | CPS | Value | Phase | Far 2 tube 1 H2O | Point Measure | CPS | Value |
| Master |  | | | 17.65 | Master |  | | | 4.416 | Master |  | | | 2.151 |
| | 15.00 (Minimum) | 19.05 (Nominal) | 21.00 (Maximum) | | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | | 1.900 (Minimum) | 2.363 (Nominal) | 2.700 (Maximum) | |
| Phase | Far 2 tube 2 Air | Point Measure | CPS | Value | Phase | Far 2 tube 2 Rod | Point Measure | CPS | Value | Phase | Far 2 tube 2 H2O | Point Measure | CPS | Value |
| Master |  | | | 18.97 | Master |  | | | 4.543 | Master |  | | | 2.222 |
| | 16.00 (Minimum) | 19.05 (Nominal) | 22.00 (Maximum) | | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | | 1.900 (Minimum) | 2.363 (Nominal) | 2.800 (Maximum) | |
| Phase | Far 2 tube 3 Air | Point Measure | CPS | Value | Phase | Far 2 tube 3 Rod | Point Measure | CPS | Value | Phase | Far 2 tube 3 H2O | Point Measure | CPS | Value |
| Master |  | | | 18.19 | Master |  | | | 4.596 | Master |  | | | 2.253 |
| | 15.00 (Minimum) | 19.05 (Nominal) | 21.00 (Maximum) | | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | | 1.900 (Minimum) | 2.363 (Nominal) | 2.700 (Maximum) | |

| (Phase Near 1 tube 1 Air) | | | | (Phase Near 1 tube 1 Rod) | | | | (Phase Near 1 tube 1 H2O) | | | |
|---------------------------|---|--------------------|--|---------------------------|---|--------------------|--|---------------------------|---|--------------------|--|
| Point Measure | CPS | Value | | Point Measure | CPS | Value | | Point Measure | CPS | Value | |
| Master |  | 455.2 | | Master |  | 728.7 | | Master |  | 326.1 | |
| 400.0 (Minimum) | 487.5 (Nominal) | 540.0 (Maximum) | | 610.0 (Minimum) | 768.8 (Nominal) | 850.0 (Maximum) | | 270.0 (Minimum) | 343.7 (Nominal) | 390.0 (Maximum) | |
| (Phase Near 2 tube 1 Air) | | | | (Phase Near 2 tube 1 Rod) | | | | (Phase Near 2 tube 1 H2O) | | | |
| Point Measure | CPS | Value | | Point Measure | CPS | Value | | Point Measure | CPS | Value | |
| Master |  | 474.0 | | Master |  | 746.7 | | Master |  | 342.4 | |
| 400.0 (Minimum) | 487.5 (Nominal) | 540.0 (Maximum) | | 610.0 (Minimum) | 768.8 (Nominal) | 850.0 (Maximum) | | 270.0 (Minimum) | 343.7 (Nominal) | 390.0 (Maximum) | |

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|--|---|--------------------|--------------------|-------|
| Master: 19-Jun-2005 14:46 | | | | |
| 6.75-in. Azimuthal Density Neutron Calibration | | | | |
| Neutron: Water Block Check | | | | |
| Phase | Far Neutron water porosity PU | | | Value |
| Master |  | | | 94.31 |
| | 90.00 (Minimum) | 100.0 (Nominal) | 125.0 (Maximum) | |

6.75-in. Resistivity At-the-Bit / Equipment Identification

Primary Equipment:













Tool Name and Serial Number


RAB6 - CA

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Calibration Status

Valid

| | | | | | | | | | | | | | | |
|---|---|--------------------|--------------------|-------|--------|---|--------------------|--------------------|--------|--------|---|--------------------|--------------------|--------|
| Master: 29-Jul-2005 17:20 | | | | | | | | | | | | | | |
| 6.75-in. Resistivity At-the-Bit Calibration | | | | | | | | | | | | | | |
| Resistivity: Fixture | | | | | | | | | | | | | | |
| Phase | Ring/T1 factor ---- | | | Value | Phase | Ring/T2 factor ---- | | | Value | Phase | M0/T1 factor ---- | | | Value |
| Master |  | | | 1.012 | Master |  | | | 1.011 | Master |  | | | 1.002 |
| | 0.9750 (Minimum) | 1.000 (Nominal) | 1.025 (Maximum) | | | 0.9750 (Minimum) | 1.000 (Nominal) | 1.025 (Maximum) | | | 0.9750 (Minimum) | 1.000 (Nominal) | 1.025 (Maximum) | |
| Phase | M0/T2 factor ---- | | | Value | Phase | M2/T1 factor ---- | | | Value | Phase | M2/T2 factor ---- | | | Value |
| Master |  | | | 1.002 | Master |  | | | 0.9986 | Master |  | | | 0.9982 |
| | 0.9750 (Minimum) | 1.000 (Nominal) | 1.025 (Maximum) | | | 0.9750 (Minimum) | 1.000 (Nominal) | 1.025 (Maximum) | | | 0.9750 (Minimum) | 1.000 (Nominal) | 1.025 (Maximum) | |
| Phase | BTN shallow/T1 factor ---- | | | Value | Phase | BTN shallow/T2 factor ---- | | | Value | Phase | BTN medium/T1 factor ---- | | | Value |
| Master |  | | | 1.009 | Master |  | | | 1.009 | Master |  | | | 1.002 |
| | 0.9750 (Minimum) | 1.000 (Nominal) | 1.025 (Maximum) | | | 0.9750 (Minimum) | 1.000 (Nominal) | 1.025 (Maximum) | | | 0.9750 (Minimum) | 1.000 (Nominal) | 1.025 (Maximum) | |
| Phase | BTN medium/T2 factor ---- | | | Value | Phase | BTN deep/T1 factor ---- | | | Value | Phase | BTN deep/T2 factor ---- | | | Value |
| Master |  | | | 1.001 | Master |  | | | 1.001 | Master |  | | | 0.9999 |
| | 0.9750 (Minimum) | 1.000 (Nominal) | 1.025 (Maximum) | | | 0.9750 (Minimum) | 1.000 (Nominal) | 1.025 (Maximum) | | | 0.9750 (Minimum) | 1.000 (Nominal) | 1.025 (Maximum) | |

| | | | | |
|---|---|--------------------|--------------------|--------|
| Master: 29-Jul-2005 17:20 | | | | |
| 6.75-in. Resistivity At-the-Bit Calibration | | | | |
| Gamma Ray: Blanket | | | | |
| Phase | Gamma ray factor ---- | | | Value |
| Master |  | | | 0.9611 |
| | 0.7500 (Minimum) | 1.000 (Nominal) | 1.250 (Maximum) | |

SCHLUMBERGER

Survey report

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Client.....: ESSO Australia Pty. Ltd.
Field.....: Bream B

Well.....: BMB-B16
API number.....:
Engineer.....: J.Dolan, M.Y.Tan, D.Hastie

RIG:.....: ENSCO 102
STATE:.....: Victoria

Spud date.....: 05-Jul-2005
Last survey date.....: 09-Aug-05
Total accepted surveys...: 92
MD of first survey.....: 0.00 m
MD of last survey.....: 2641.00 m

----- Survey calculation methods-----
Method for positions.....: Minimum curvature
Method for DLS.....: Mason & Taylor

----- Geomagnetic data -----
Magnetic model.....: BGGM version 2005
Magnetic date.....: 29-Jul-2005
Magnetic field strength...: 1203.00 HCNT
Magnetic dec (+E/W-).....: 13.10 degrees
Magnetic dip.....: -69.05 degrees

----- Depth reference -----
Permanent datum.....: Mean Sea Level
Depth reference.....: Driller's Depth
GL above permanent.....: -61.00 m
KB above permanent.....: Top Drive
DF above permanent.....: 47.17 m

----- MWD survey Reference Criteria -----
Reference G.....: 1000.05 mGal
Reference H.....: 1203.00 HCNT
Reference Dip.....: -69.05 degrees
Tolerance of G.....: (+/-) 2.50 mGal
Tolerance of H.....: (+/-) 6.00 HCNT
Tolerance of Dip.....: (+/-) 0.45 degrees

----- Vertical section origin-----
Latitude (+N/S-).....: -7.80 m
Departure (+E/W-).....: -0.30 m

----- Platform reference point-----
Latitude (+N/S-).....:
Departure (+E/W-).....:

----- Corrections -----
Magnetic dec (+E/W-).....: 13.10 degrees
Grid convergence (+E/W-)..: -0.52 degrees
Total az corr (+E/W-).....: 13.62 degrees
(Total az corr = magnetic dec - grid conv)
Survey Correction Type ...:
I=Sag Corrected Inclination
M=Schlumberger Magnetic Correction
S=Shell Magnetic Correction
F=Failed Axis Correction
R=Magnetic Resonance Tool Correction
D=Dmag Magnetic Correction

Azimuth from Vsect Origin to target: 119.19 degrees

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SCHLUMBERGER Survey Report

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| Seq # | Measured depth (m) | Incl angle (deg) | Azimuth angle (deg) | Course length (m) | TVD depth (m) | Vertical section (m) | Displ +N/S- (m) | Displ +E/W- (m) | Total displ (m) | At Azim (deg) | DLS (deg/ 100f) | Srvy tool type | Tool Corr (deg) |
|----------|--------------------------|------------------------|---------------------------|-------------------------|---------------------|----------------------------|-----------------------|-----------------------|-----------------------|---------------------|-----------------------|----------------------|-----------------------|
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -7.80 | -0.30 | 7.81 | 182.20 | 0.00 | TIP | None |
| 2 | 107.50 | 0.00 | 0.00 | 107.50 | 107.50 | 0.00 | -7.80 | -0.30 | 7.81 | 182.20 | 0.00 | GYR | None |
| 3 | 110.30 | 0.15 | 158.53 | 2.80 | 110.30 | 0.00 | -7.80 | -0.30 | 7.81 | 182.19 | 1.63 | GYR | None |
| 4 | 138.80 | 0.18 | 157.67 | 28.50 | 138.80 | 0.07 | -7.88 | -0.27 | 7.88 | 181.95 | 0.03 | GYR | None |
| 5 | 157.60 | 0.16 | 154.47 | 18.80 | 157.60 | 0.11 | -7.93 | -0.25 | 7.93 | 181.77 | 0.04 | GYR | None |
| 6 | 174.50 | 0.11 | 156.53 | 16.90 | 174.50 | 0.14 | -7.97 | -0.23 | 7.97 | 181.65 | 0.09 | GYR | None |
| 7 | 183.49 | 0.57 | 272.31 | 8.99 | 183.49 | 0.11 | -7.97 | -0.27 | 7.98 | 181.94 | 2.12 | GYR | None |
| 8 | 214.10 | 2.13 | 263.97 | 30.61 | 214.09 | -0.49 | -8.03 | -0.99 | 8.09 | 187.02 | 1.56 | GYR | None |
| 9 | 244.30 | 4.13 | 267.49 | 30.20 | 244.24 | -1.87 | -8.13 | -2.63 | 8.55 | 197.94 | 2.03 | GYR | None |
| 10 | 273.44 | 6.20 | 258.68 | 29.14 | 273.26 | -3.96 | -8.49 | -5.22 | 9.97 | 211.61 | 2.31 | GYR | None |
| 11 | 302.32 | 6.79 | 248.99 | 28.88 | 301.96 | -6.24 | -9.41 | -8.35 | 12.58 | 221.59 | 1.31 | GYR | None |
| 12 | 320.98 | 6.50 | 238.20 | 18.66 | 320.49 | -7.46 | -10.36 | -10.27 | 14.59 | 224.77 | 2.09 | MWD | None |
| 13 | 360.36 | 6.56 | 225.35 | 39.38 | 359.62 | -9.17 | -13.11 | -13.77 | 19.02 | 226.40 | 1.13 | GYR | None |
| 14 | 389.61 | 6.38 | 219.35 | 29.25 | 388.69 | -9.92 | -15.54 | -15.99 | 22.30 | 225.81 | 0.73 | GYR | None |
| 15 | 418.79 | 6.26 | 225.03 | 29.18 | 417.69 | -10.64 | -17.92 | -18.14 | 25.50 | 225.35 | 0.66 | GYR | None |
| 16 | 447.48 | 6.24 | 222.63 | 28.69 | 446.21 | -11.43 | -20.18 | -20.30 | 28.62 | 225.18 | 0.28 | GYR | None |
| 17 | 476.58 | 6.16 | 224.05 | 29.10 | 475.14 | -12.20 | -22.46 | -22.46 | 31.77 | 225.00 | 0.18 | GYR | None |
| 18 | 505.66 | 6.06 | 219.91 | 29.08 | 504.05 | -12.88 | -24.76 | -24.53 | 34.85 | 224.73 | 0.47 | GYR | None |
| 19 | 534.65 | 6.06 | 217.45 | 28.99 | 532.88 | -13.39 | -27.15 | -26.44 | 37.90 | 224.25 | 0.27 | GYR | None |
| 20 | 563.70 | 6.02 | 217.76 | 29.05 | 561.77 | -13.83 | -29.57 | -28.31 | 40.94 | 223.75 | 0.05 | GYR | None |
| 21 | 592.73 | 5.72 | 226.27 | 29.03 | 590.65 | -14.49 | -31.77 | -30.29 | 43.90 | 223.63 | 0.97 | GYR | None |
| 22 | 621.85 | 5.72 | 231.95 | 29.12 | 619.62 | -15.47 | -33.67 | -32.48 | 46.78 | 223.97 | 0.59 | GYR | None |
| 23 | 650.71 | 5.56 | 228.28 | 28.86 | 648.34 | -16.49 | -35.49 | -34.65 | 49.60 | 224.32 | 0.42 | GYR | None |
| 24 | 680.04 | 5.51 | 231.33 | 29.33 | 677.54 | -17.48 | -37.31 | -36.81 | 52.41 | 224.61 | 0.31 | GYR | None |
| 25 | 697.53 | 5.50 | 228.98 | 17.49 | 694.95 | -18.08 | -38.39 | -38.10 | 54.08 | 224.78 | 0.39 | MWD | None |
| 26 | 726.22 | 5.50 | 228.97 | 28.69 | 723.50 | -19.01 | -40.19 | -40.17 | 56.82 | 224.99 | 0.00 | MWD | None |
| 27 | 755.02 | 5.47 | 224.63 | 28.80 | 752.17 | -19.84 | -42.07 | -42.18 | 59.57 | 225.07 | 0.44 | MWD | None |
| 28 | 784.05 | 5.45 | 220.42 | 29.03 | 781.07 | -20.48 | -44.11 | -44.04 | 62.33 | 224.96 | 0.42 | MWD | None |
| 29 | 812.94 | 5.55 | 224.13 | 28.89 | 809.83 | -21.11 | -46.15 | -45.91 | 65.10 | 224.85 | 0.39 | MWD | None |
| 30 | 856.11 | 5.52 | 225.75 | 43.17 | 852.80 | -22.24 | -49.10 | -48.85 | 69.26 | 224.85 | 0.11 | MWD | None |

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| Seq # | Measured depth (m) | Incl angle (deg) | Azimuth angle (deg) | Course length (m) | TVD depth (m) | Vertical section (m) | Displ +N/S- (m) | Displ +E/W- (m) | Total displ (m) | At Azim (deg) | DLS (deg/ 100f) | Srvy tool type | Tool Corr (deg) |
|----------|--------------------------|------------------------|---------------------------|-------------------------|---------------------|----------------------------|-----------------------|-----------------------|-----------------------|---------------------|-----------------------|----------------------|-----------------------|
| 31 | 885.50 | 5.60 | 224.98 | 29.39 | 882.05 | -23.03 | -51.10 | -50.87 | 72.11 | 224.87 | 0.11 | MWD | None |
| 32 | 914.67 | 5.60 | 223.80 | 29.17 | 911.08 | -23.78 | -53.14 | -52.86 | 74.95 | 224.85 | 0.12 | MWD | None |
| 33 | 943.84 | 5.47 | 223.94 | 29.17 | 940.11 | -24.49 | -55.16 | -54.81 | 77.77 | 224.82 | 0.14 | MWD | None |
| 34 | 972.77 | 5.37 | 223.05 | 28.93 | 968.91 | -25.17 | -57.15 | -56.69 | 80.50 | 224.77 | 0.14 | MWD | None |
| 35 | 1001.99 | 5.46 | 223.36 | 29.22 | 998.00 | -25.83 | -59.16 | -58.58 | 83.26 | 224.72 | 0.10 | MWD | None |
| 36 | 1030.57 | 5.41 | 224.95 | 28.58 | 1026.46 | -26.53 | -61.10 | -60.47 | 85.96 | 224.70 | 0.17 | MWD | None |
| 37 | 1059.72 | 5.32 | 225.10 | 29.15 | 1055.48 | -27.28 | -63.03 | -62.40 | 88.69 | 224.71 | 0.10 | MWD | None |
| 38 | 1088.71 | 5.11 | 226.63 | 28.99 | 1084.35 | -28.03 | -64.86 | -64.29 | 91.32 | 224.75 | 0.26 | MWD | None |
| 39 | 1117.66 | 5.03 | 225.28 | 28.95 | 1113.18 | -28.77 | -66.64 | -66.13 | 93.88 | 224.78 | 0.15 | MWD | None |
| 40 | 1146.60 | 5.09 | 226.31 | 28.94 | 1142.01 | -29.50 | -68.42 | -67.96 | 96.43 | 224.81 | 0.11 | MWD | None |
| 41 | 1175.41 | 5.01 | 225.26 | 28.81 | 1170.71 | -30.22 | -70.19 | -69.77 | 98.97 | 224.83 | 0.13 | MWD | None |
| 42 | 1204.65 | 4.90 | 227.98 | 29.24 | 1199.84 | -30.98 | -71.92 | -71.61 | 101.49 | 224.87 | 0.27 | MWD | None |
| 43 | 1233.79 | 4.85 | 227.90 | 29.14 | 1228.87 | -31.78 | -73.58 | -73.45 | 103.96 | 224.95 | 0.05 | MWD | None |
| 44 | 1262.27 | 5.07 | 228.33 | 28.48 | 1257.25 | -32.57 | -75.22 | -75.28 | 106.42 | 225.02 | 0.24 | MWD | None |
| 45 | 1291.51 | 5.31 | 229.22 | 29.24 | 1286.37 | -33.46 | -76.97 | -77.27 | 109.06 | 225.11 | 0.26 | MWD | None |
| 46 | 1320.64 | 5.99 | 219.17 | 29.13 | 1315.36 | -34.19 | -79.03 | -79.25 | 111.92 | 225.08 | 1.25 | MWD | None |
| 47 | 1349.52 | 7.66 | 193.37 | 28.88 | 1344.04 | -33.92 | -82.07 | -80.65 | 115.06 | 224.50 | 3.64 | MWD | None |
| 48 | 1378.46 | 10.94 | 165.80 | 28.94 | 1372.61 | -31.51 | -86.61 | -80.42 | 118.19 | 222.88 | 5.73 | MWD | None |
| 49 | 1407.52 | 13.12 | 139.65 | 29.06 | 1401.05 | -26.52 | -91.80 | -77.61 | 120.21 | 220.21 | 6.09 | MWD | None |
| 50 | 1436.56 | 14.26 | 126.97 | 29.04 | 1429.27 | -19.89 | -96.46 | -72.61 | 120.74 | 216.97 | 3.36 | MWD | None |
| 51 | 1465.33 | 14.22 | 127.37 | 28.77 | 1457.16 | -12.88 | -100.74 | -66.97 | 120.97 | 213.62 | 0.11 | MWD | None |
| 52 | 1494.32 | 13.91 | 123.06 | 28.99 | 1485.28 | -5.88 | -104.80 | -61.22 | 121.37 | 210.29 | 1.15 | MWD | None |
| 53 | 1523.35 | 13.91 | 114.26 | 29.03 | 1513.46 | 1.08 | -108.14 | -55.12 | 121.38 | 207.01 | 2.22 | MWD | None |
| 54 | 1552.33 | 13.77 | 107.16 | 28.98 | 1541.60 | 7.93 | -110.59 | -48.64 | 120.82 | 203.74 | 1.79 | MWD | None |
| 55 | 1581.19 | 13.47 | 106.93 | 28.86 | 1569.65 | 14.57 | -112.58 | -42.15 | 120.21 | 200.52 | 0.32 | MWD | None |
| 56 | 1610.23 | 13.22 | 106.90 | 29.04 | 1597.90 | 21.12 | -114.53 | -35.73 | 119.98 | 197.33 | 0.26 | MWD | None |
| 57 | 1639.24 | 12.97 | 106.76 | 29.01 | 1626.16 | 27.54 | -116.43 | -29.44 | 120.10 | 194.19 | 0.26 | MWD | None |
| 58 | 1668.40 | 14.75 | 106.71 | 29.16 | 1654.47 | 34.36 | -118.45 | -22.75 | 120.61 | 190.87 | 1.86 | MWD | None |
| 59 | 1697.46 | 18.56 | 110.49 | 29.06 | 1682.31 | 42.55 | -121.13 | -14.88 | 122.04 | 187.00 | 4.15 | MWD | None |
| 60 | 1726.01 | 22.22 | 113.20 | 28.55 | 1709.06 | 52.41 | -124.85 | -5.65 | 124.98 | 182.59 | 4.03 | MWD | None |

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SCHLUMBERGER Survey Report

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| Seq # | Measured depth (m) | Incl angle (deg) | Azimuth angle (deg) | Course length (m) | TVD depth (m) | Vertical section (m) | Displ +N/S- (m) | Displ +E/W- (m) | Total displ (m) | At Azim (deg) | DLS (deg/ 100f) | Srvy tool type | Tool Corr (deg) |
|----------|--------------------------|------------------------|---------------------------|-------------------------|---------------------|----------------------------|-----------------------|-----------------------|-----------------------|---------------------|-----------------------|----------------------|-----------------------|
| 61 | 1755.12 | 25.46 | 114.56 | 29.11 | 1735.69 | 64.12 | -129.62 | 5.10 | 129.72 | 177.75 | 3.44 | MWD | None |
| 62 | 1784.08 | 28.71 | 115.07 | 28.96 | 1761.47 | 77.27 | -135.15 | 17.06 | 136.23 | 172.80 | 3.43 | MWD | None |
| 63 | 1813.12 | 32.21 | 113.25 | 29.04 | 1786.50 | 91.93 | -141.17 | 30.50 | 144.42 | 167.81 | 3.80 | MWD | None |
| 64 | 1842.22 | 35.30 | 112.90 | 29.10 | 1810.69 | 108.01 | -147.50 | 45.37 | 154.32 | 162.90 | 3.24 | MWD | None |
| 65 | 1871.31 | 38.11 | 113.30 | 29.09 | 1834.01 | 125.29 | -154.32 | 61.36 | 166.08 | 158.32 | 2.95 | MWD | None |
| 66 | 1899.95 | 41.20 | 113.37 | 28.64 | 1856.05 | 143.47 | -161.56 | 78.14 | 179.47 | 154.19 | 3.29 | MWD | None |
| 67 | 1929.05 | 45.21 | 113.03 | 29.10 | 1877.26 | 163.28 | -169.41 | 96.45 | 194.94 | 150.35 | 4.21 | MWD | None |
| 68 | 1958.45 | 49.07 | 111.54 | 29.40 | 1897.26 | 184.67 | -177.57 | 116.39 | 212.32 | 146.76 | 4.16 | MWD | None |
| 69 | 1987.31 | 52.44 | 109.37 | 28.86 | 1915.51 | 206.75 | -185.37 | 137.33 | 230.70 | 143.47 | 3.98 | MWD | None |
| 70 | 2016.22 | 56.23 | 108.21 | 28.91 | 1932.37 | 229.85 | -192.93 | 159.56 | 250.36 | 140.41 | 4.12 | MWD | None |
| 71 | 2044.75 | 58.13 | 107.85 | 28.53 | 1947.83 | 253.37 | -200.35 | 182.36 | 270.91 | 137.69 | 2.06 | MWD | None |
| 72 | 2073.75 | 56.68 | 107.89 | 29.00 | 1963.45 | 277.33 | -207.84 | 205.61 | 292.36 | 135.31 | 1.52 | MWD | None |
| 73 | 2102.65 | 56.17 | 107.47 | 28.90 | 1979.43 | 300.92 | -215.16 | 228.55 | 313.89 | 133.27 | 0.65 | MWD | None |
| 74 | 2131.41 | 55.69 | 106.87 | 28.76 | 1995.54 | 324.22 | -222.19 | 251.32 | 335.45 | 131.48 | 0.73 | MWD | None |
| 75 | 2160.35 | 55.85 | 106.48 | 28.94 | 2011.82 | 347.58 | -229.06 | 274.24 | 357.31 | 129.87 | 0.38 | MWD | None |
| 76 | 2189.30 | 54.86 | 106.25 | 28.95 | 2028.28 | 370.80 | -235.77 | 297.09 | 379.27 | 128.44 | 1.06 | MWD | None |
| 77 | 2218.83 | 53.99 | 105.47 | 29.53 | 2045.46 | 394.17 | -242.33 | 320.19 | 401.56 | 127.12 | 1.11 | MWD | None |
| 78 | 2247.97 | 53.59 | 105.31 | 29.14 | 2062.68 | 417.01 | -248.57 | 342.86 | 423.49 | 125.94 | 0.44 | MWD | None |
| 79 | 2277.03 | 54.85 | 105.22 | 29.06 | 2079.67 | 439.89 | -254.78 | 365.60 | 445.62 | 124.87 | 1.32 | MWD | None |
| 80 | 2306.49 | 53.74 | 104.80 | 29.46 | 2096.86 | 463.08 | -260.97 | 388.71 | 468.19 | 123.88 | 1.20 | MWD | None |
| 81 | 2335.48 | 53.21 | 104.61 | 28.99 | 2114.11 | 485.64 | -266.89 | 411.24 | 490.25 | 122.98 | 0.58 | MWD | None |
| 82 | 2364.40 | 53.21 | 104.10 | 28.92 | 2131.43 | 508.03 | -272.63 | 433.68 | 512.25 | 122.16 | 0.43 | MWD | None |
| 83 | 2393.21 | 51.92 | 103.86 | 28.81 | 2148.94 | 530.10 | -278.16 | 455.88 | 534.04 | 121.39 | 1.38 | MWD | None |
| 84 | 2422.27 | 52.23 | 104.37 | 29.06 | 2166.81 | 552.23 | -283.75 | 478.11 | 555.97 | 120.69 | 0.53 | MWD | None |
| 85 | 2451.33 | 52.61 | 104.69 | 29.06 | 2184.53 | 574.52 | -289.53 | 500.40 | 578.12 | 120.05 | 0.48 | MWD | None |
| 86 | 2480.33 | 52.86 | 105.28 | 29.00 | 2202.09 | 596.89 | -295.49 | 522.70 | 600.44 | 119.48 | 0.56 | MWD | None |
| 87 | 2509.25 | 51.86 | 105.68 | 28.92 | 2219.75 | 619.14 | -301.60 | 544.77 | 622.68 | 118.97 | 1.11 | MWD | None |
| 88 | 2538.42 | 52.71 | 106.56 | 29.17 | 2237.59 | 641.61 | -308.01 | 566.93 | 645.20 | 118.52 | 1.15 | MWD | None |
| 89 | 2567.49 | 53.16 | 106.46 | 29.07 | 2255.11 | 664.24 | -314.60 | 589.17 | 667.91 | 118.10 | 0.48 | MWD | None |
| 90 | 2596.48 | 52.44 | 107.42 | 28.99 | 2272.64 | 686.81 | -321.33 | 611.26 | 690.58 | 117.73 | 1.10 | MWD | None |

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SCHLUMBERGER Survey Report

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| Seq # | Measured depth (m) | Incl angle (deg) | Azimuth angle (deg) | Course length (m) | TVD depth (m) | Vertical section (m) | Displ +N/S- (m) | Displ +E/W- (m) | Total displ (m) | At Azim (deg) | DLS (deg/ 100f) | Srvy tool type | Tool Corr (deg) |
|----------|--------------------------|------------------------|---------------------------|-------------------------|---------------------|----------------------------|-----------------------|-----------------------|-----------------------|---------------------|-----------------------|----------------------|-----------------------|
| 91 | 2623.96 | 51.70 | 107.50 | 27.48 | 2289.53 | 708.03 | -327.83 | 631.94 | 711.91 | 117.42 | 0.82 | MWD | None |

Company:

ESSO Australia Pty. Ltd.

Schlumberger

Well:

BMB-B16

Field:

Bream B

Rig:

ENSCO 102

8.5 in. Section

State:

Victoria

GeoVISION Quadrant Resistivity

1:500 Measured Depth

Recorded Mode Log