

Company: Extraction Oil & Gas LLC

Well: Troutd 3

Field: Wattenberg

County: Weld State: Colorado

Ultrasonic Imager
Cement Evaluation
Gamma Ray - CCL Log

County: Weld
Field: Wattenberg
Location: SHL: SESE 537' FSL & 1007' FEL
Well: Troutd 3
Company: Extraction Oil & Gas LLC

| | | | |
|-------------------------|---------------|---|--|
| Location: | | SHL: SESE 537' FSL & 1007' FEL Section 32, Township 2N, Range 67W Lat: 40.089065, Long: -104.908915 | Elev.: K.B. 5097.00 ft G.L. 5077.00 ft D.F. 5096.00 ft |
| Permanent Datum: | Ground Level | Kelly Bushing | 5077.00 f |
| Log Measured From: | Kelly Bushing | | 20.00 ft above Perm.Datum |
| Drilling Measured From: | Kelly Bushing | | |
| API Serial No. | Section: 32 | Township: 2N | Range: 67W |
| 05-123-41437-00 | | | |

| | |
|--------------|-------------|
| Logging Date | 20-Sep-2015 |
|--------------|-------------|

| | |
|---------------------------|----------------------|
| Run Number | Run 1 |
| Depth Driller | 17454.00 ft |
| Schlumberger Depth | 17454.00 ft |
| Bottom Log Interval | 7500.00 ft |
| Top Log Interval | 50.00 ft |
| Casing Fluid Type | Salt Brine |
| Salinity | |
| Density | 8.4 lbm/gal |
| Fluid Level | 40.00 ft |
| BIT/CASING/TUBING STRING | |
| Bit Size | 7.88 in |
| From | 0.00 ft |
| To | 17454.00 ft |
| Casing/Tubing Size | 5.5 in |
| Weight | 20 lbm/ft |
| Grade | P110 |
| From | 0.00 ft |
| To | 17454.00 ft |
| Max Recorded Temperatures | 209 degF |
| Logger on Bottom | 20-Sep-2015 09:00:00 |
| Unit Number | 9108 |
| Recorded By | B. Panepucci/M. Pace |
| Witnessed By | Larry Seigel |

Disclaimer

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

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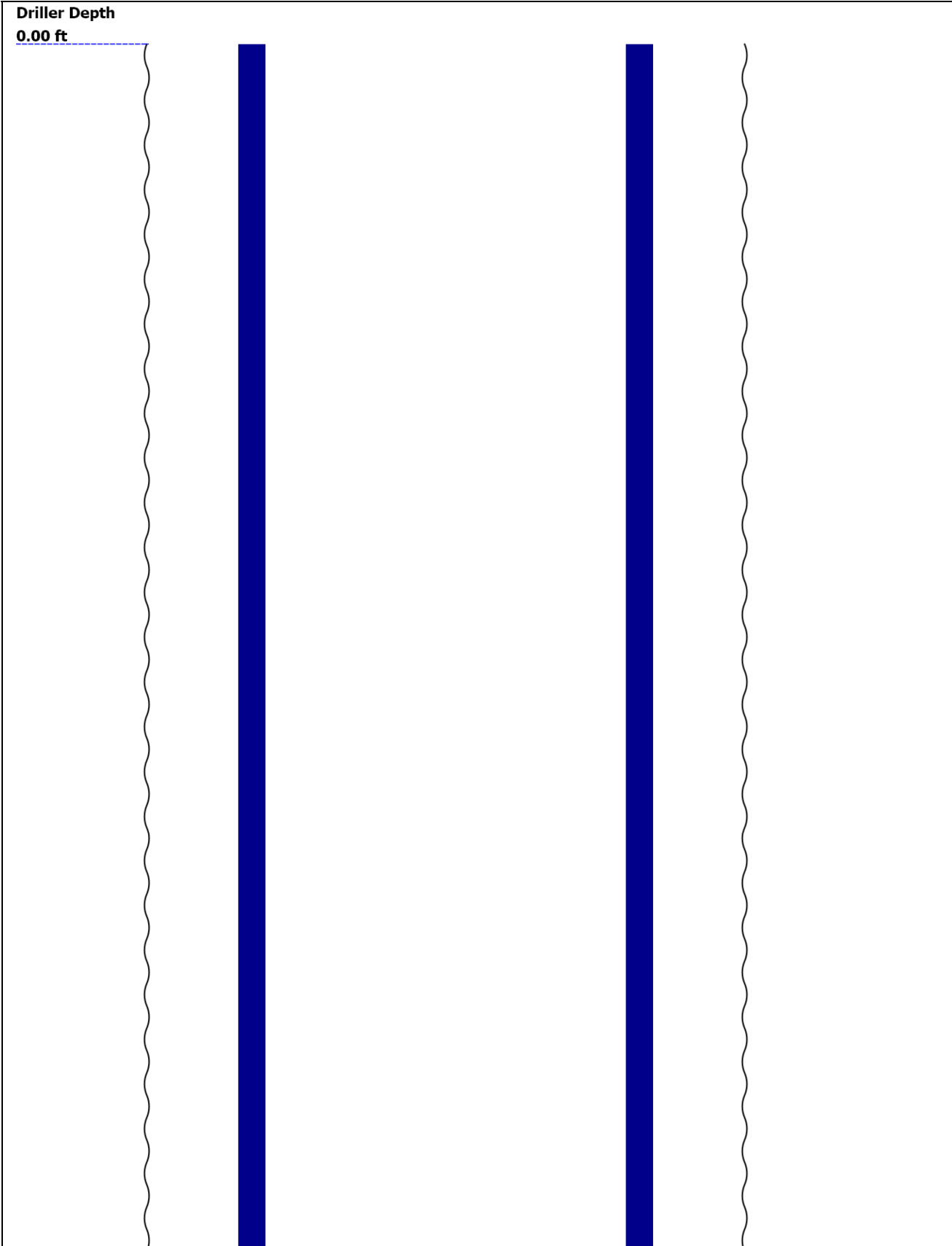
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Well Sketch

Driller Depth

0.00 ft





Borehole Size/Casing/Tubing Record

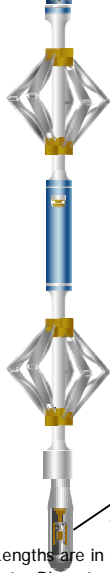
| | | | | | | |
|-----------------------|-------|--|--|--|--|--|
| Bit | | | | | | |
| Bit Size (in) | 7.875 | | | | | |
| Top Driller (ft) | 0 | | | | | |
| Top Logger (ft) | 0 | | | | | |
| Bottom Driller (ft) | 17454 | | | | | |
| Bottom Logger (ft) | 17454 | | | | | |
| Casing | | | | | | |
| Size (in) | 5.5 | | | | | |
| Weight (lbm/ft) | 20 | | | | | |
| Inner Diameter (in) | 4.778 | | | | | |
| Grade | P110 | | | | | |
| Top Driller (ft) | 0 | | | | | |
| Top Logger (ft) | 0 | | | | | |
| Bottom Driller (ft) | 17454 | | | | | |
| Bottom Logger (ft) | 17454 | | | | | |

Remarks and Equipment Summary

| Run 1: Toolstring | | | | Run 1: Remarks | |
|---|---------------------------------------|--|--|----------------|--|
| <div><div><div>Equip name</div><div>Length</div></div><div>LEH-QT:3</div><div>28.97</div><div>067</div><div>LEH-QT:30</div><div>67</div><div>EDTC-B:8</div><div>26.06</div><div>629</div><div>EDTH-B:86</div><div>52</div><div>EDTG-A:7</div><div>7792</div><div>EDTC-B:86</div><div>29</div><div>AH-120:7</div><div>19.56</div><div>29</div><div>AH-184:2</div><div>17.56</div><div>765</div><div>USIT-E:99</div><div>15.56</div><div>2</div><div>ECH-MFA:</div><div>1964</div><div>USAC-A:9</div><div>92</div><div>USIS-A:20</div></div> <div><div>MP name</div><div>Offset</div><div>CTEM</div><div>22.56</div><div>ACCZ</div><div>0.00</div><div>HV</div><div>0.00</div><div>Gamma</div><div>20.69</div><div>Ray</div><div>TelStatu</div><div>19.56</div><div>s</div></div> | All intervals as per clients request. | | | | |
| | Toolstring run as per tool sketch. | | | | |
| | Repeat pass done off bottom. | | | | |
| | | | | | |

Diagram of a blue toolstring with various components labeled with lines pointing to them.

USIS-A:99
9
USSC-B:17
94
USRS-A
USI-SENS
OR



USI Sen 0.37
TOOL_ZERO
nsion

Lengths are in ft
Maximum Outer Diameter = 3.625 in
Line: Sensor Location, Value: Gating Offset
All measurements are relative to TOOL_ZERO

Depth Summary

Run 1

Depth Measuring Device

| | | | |
|--------------------------|-------------|--|--|
| Type | IDW-B | | |
| Serial Number | 6510 | | |
| Calibration Date | 28-Apr-2015 | | |
| Calibrator Serial Number | 33 | | |
| Calibration Cable Type | 7-46A-XS | | |
| Wheel Correction 1 | -4 | | |
| Wheel Correction 2 | -2 | | |

Tension Device

| | | | |
|------------------------------------|-------------|--|--|
| Type | CMTD-B/A | | |
| Serial Number | 171 | | |
| Calibration Date | 18-Aug-2015 | | |
| Calibrator Serial Number | 123 | | |
| Number of Calibration Points | 10 | | |
| Calibration Root Mean Square Error | 28 | | |
| Calibration Peak Error | 59 | | |

Logging Cable

| | | | |
|-----------------|-------------|--|--|
| Type | 7-46A-XS | | |
| Serial Number | U714071 | | |
| Length | 16500.00 ft | | |
| Conveyance Type | Wireline | | |
| Rig Type | | | |

Run 1:Depth Control Parameters

| | | | |
|----------------------------|-----------------------|---|--|
| Log Sequence | First Log In the Well | Depth Control Remarks All Schlumberger depth control procedures were followed. IDW used as primary depth control. Z-Chart used as secondary depth control. | |
| Rig Up Length At Surface | | | |
| Rig Up Length At Bottom | | | |
| Rig Up Length Correction | | | |
| Stretch Correction | 11.00 ft | | |
| Tool Zero Check At Surface | | | |

USI Cement

USIT - Fluid Properties Measurement

| Run Name | Pass Name | Start Depth(ft) | Stop Depth(ft) |
|----------|-----------|-----------------|----------------|
| Run 1 | Log[3]:Up | 7514.54 | 74.54 |

Fluid Velocity = "Automatic".

CFVL equals DFSL channel

| Start Depth(ft) | Stop Depth(ft) | Start Value(us/ft) | End Value(us/ft) |
|-----------------|----------------|--------------------|------------------|
|-----------------|----------------|--------------------|------------------|

Mud Impedance = "Manual".
CZMD uses ZMUD parameter zoned table below

| Start Depth(ft) | Stop Depth(ft) | Start Value(Mrayl) | End Value(Mrayl) |
|-----------------|----------------|--------------------|------------------|
| 0 | 500 | 1.76 | 1.76 |
| 500 | 1000 | 1.77 | 1.77 |
| 1000 | 2000 | 1.78 | 1.78 |
| 2000 | 3000 | 1.79 | 1.79 |
| 3000 | | 1.81 | 1.81 |

Run 1

USI Cement

Log

Company:Extraction Oil & Gas LLC

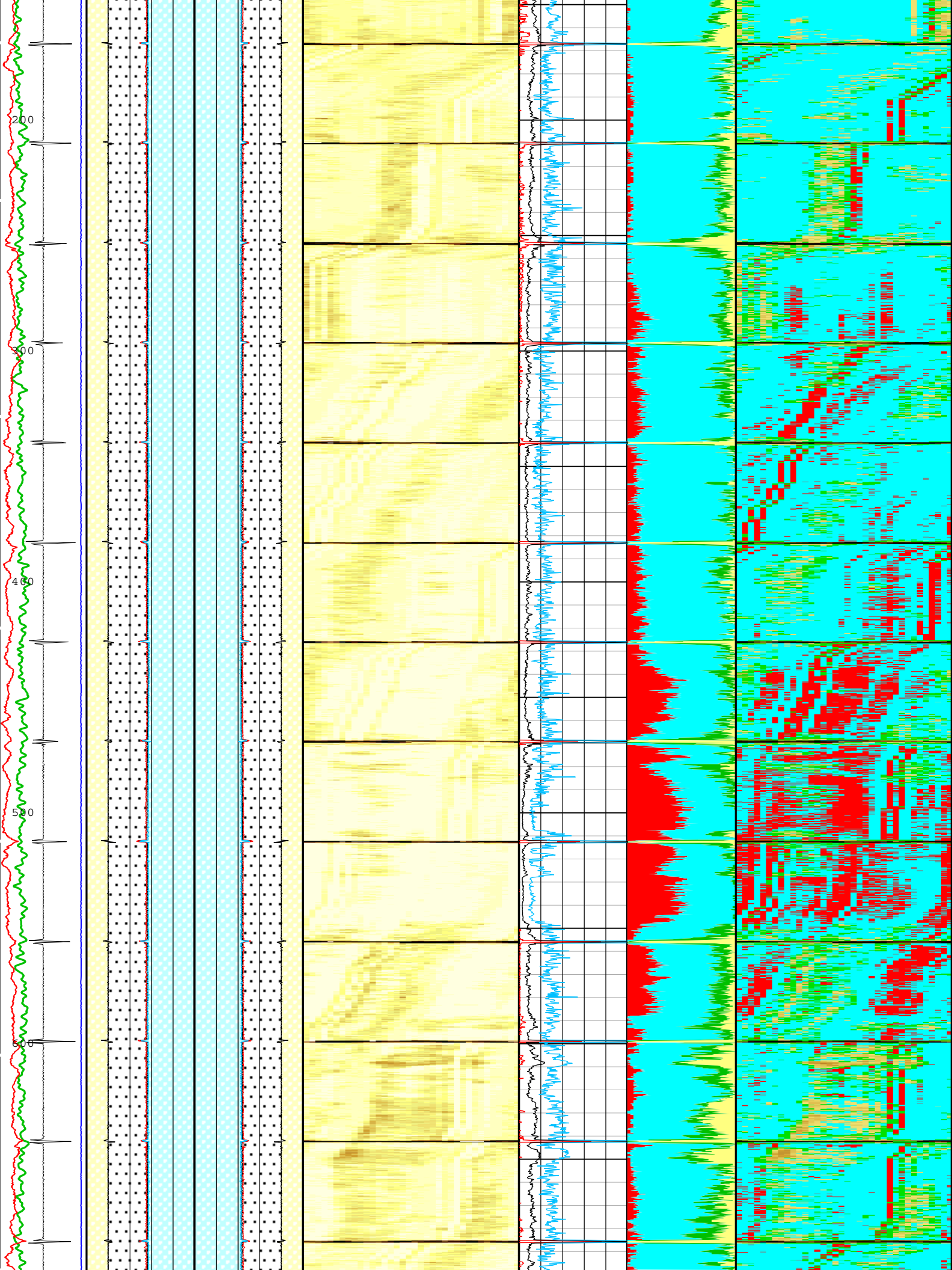
Well:Troudt 3

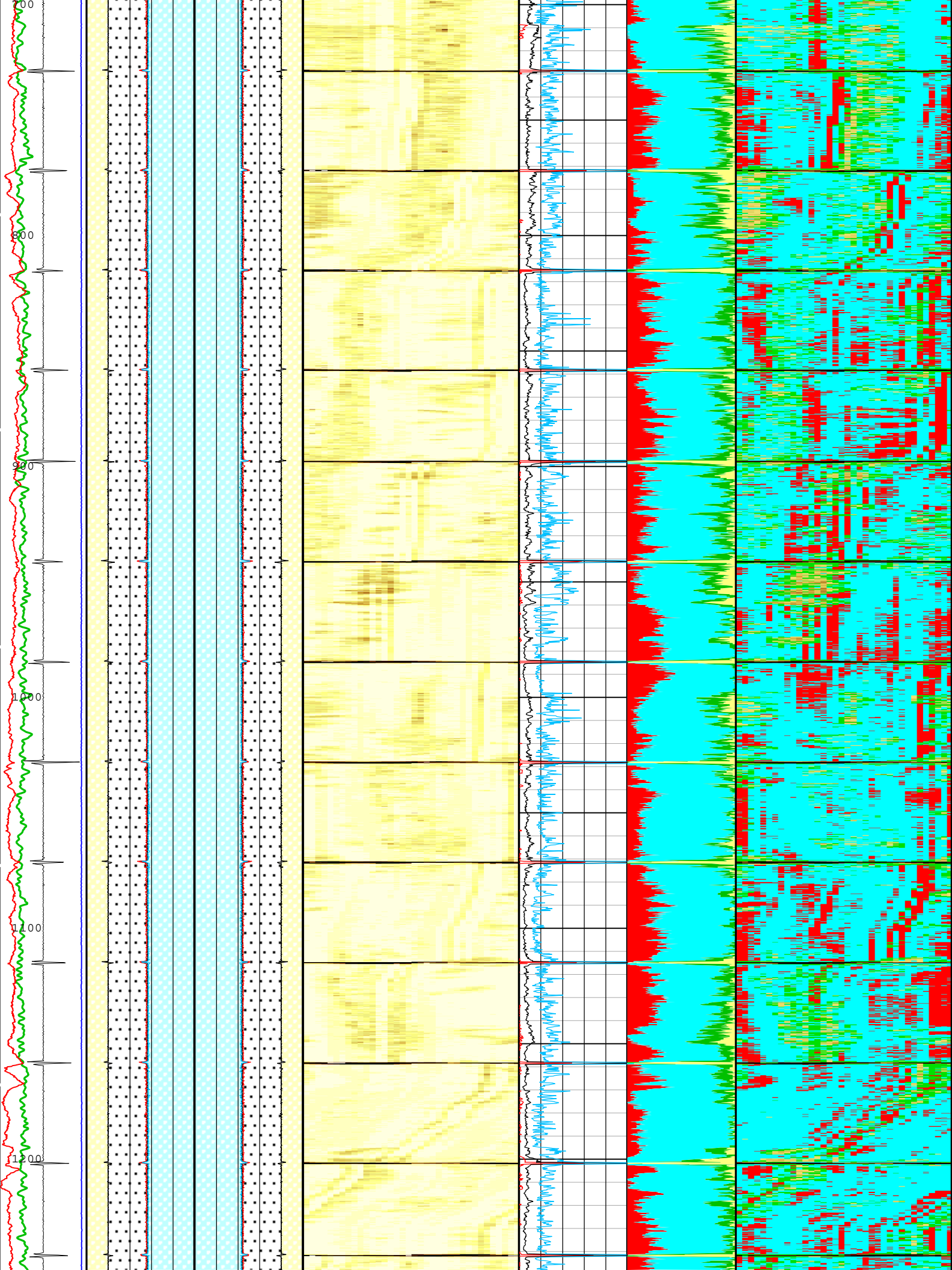
Run 1: Log[3]:Up:S006

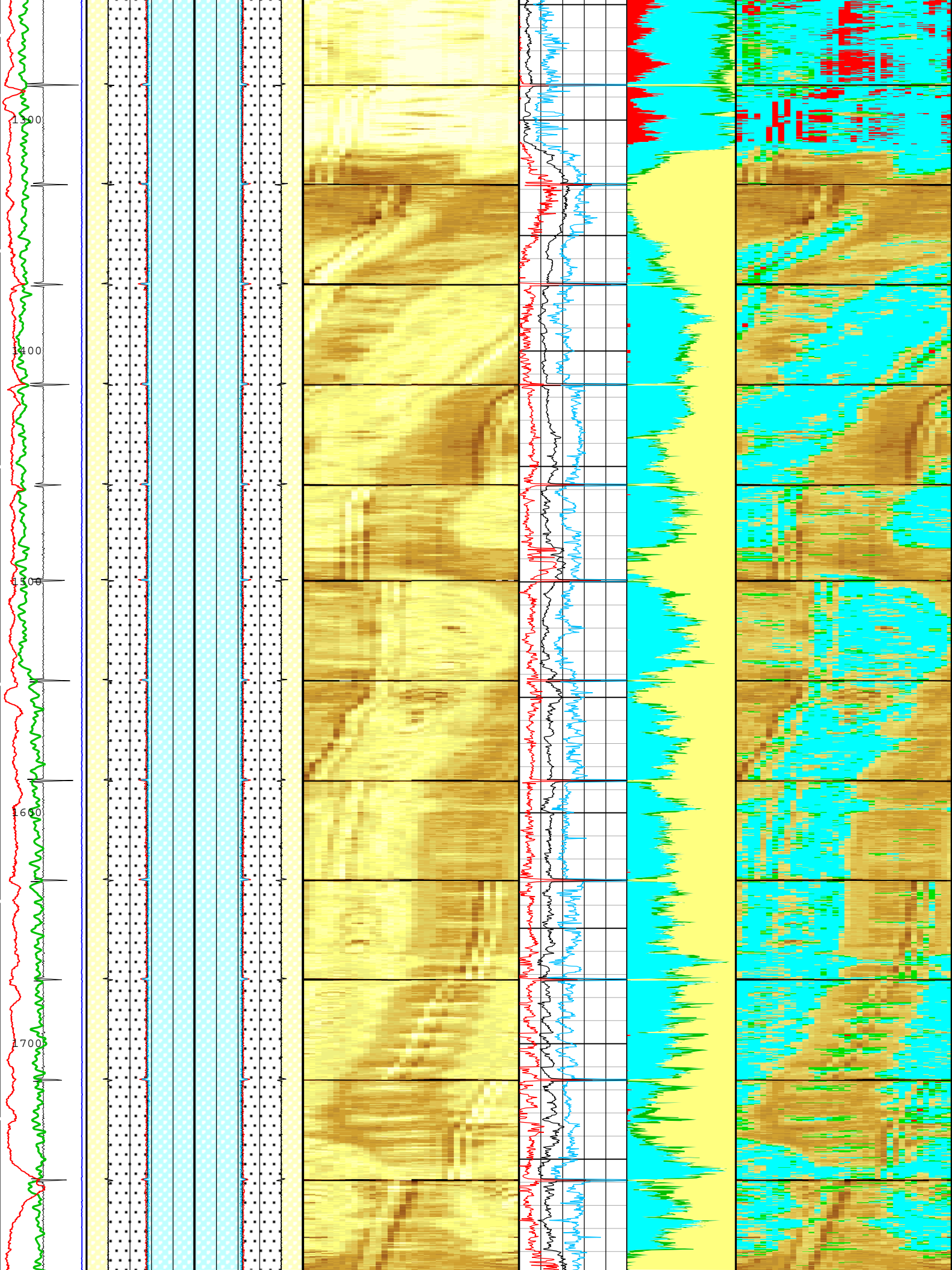
Description: USI Cement Format: USI Cement Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 20-Sep-2015 10:22:39

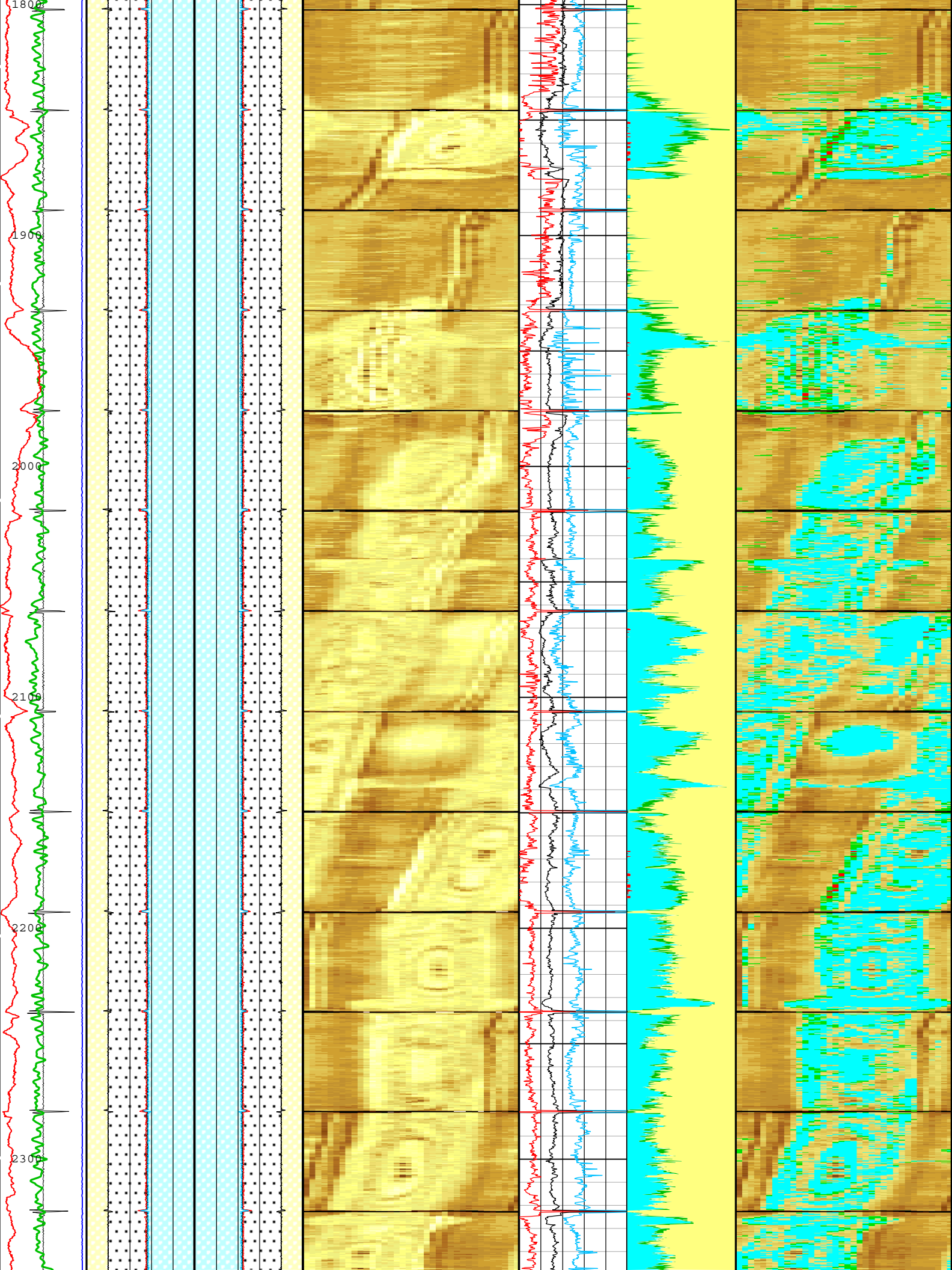
TIME_1900 - Time Marked every 60.00 (s)

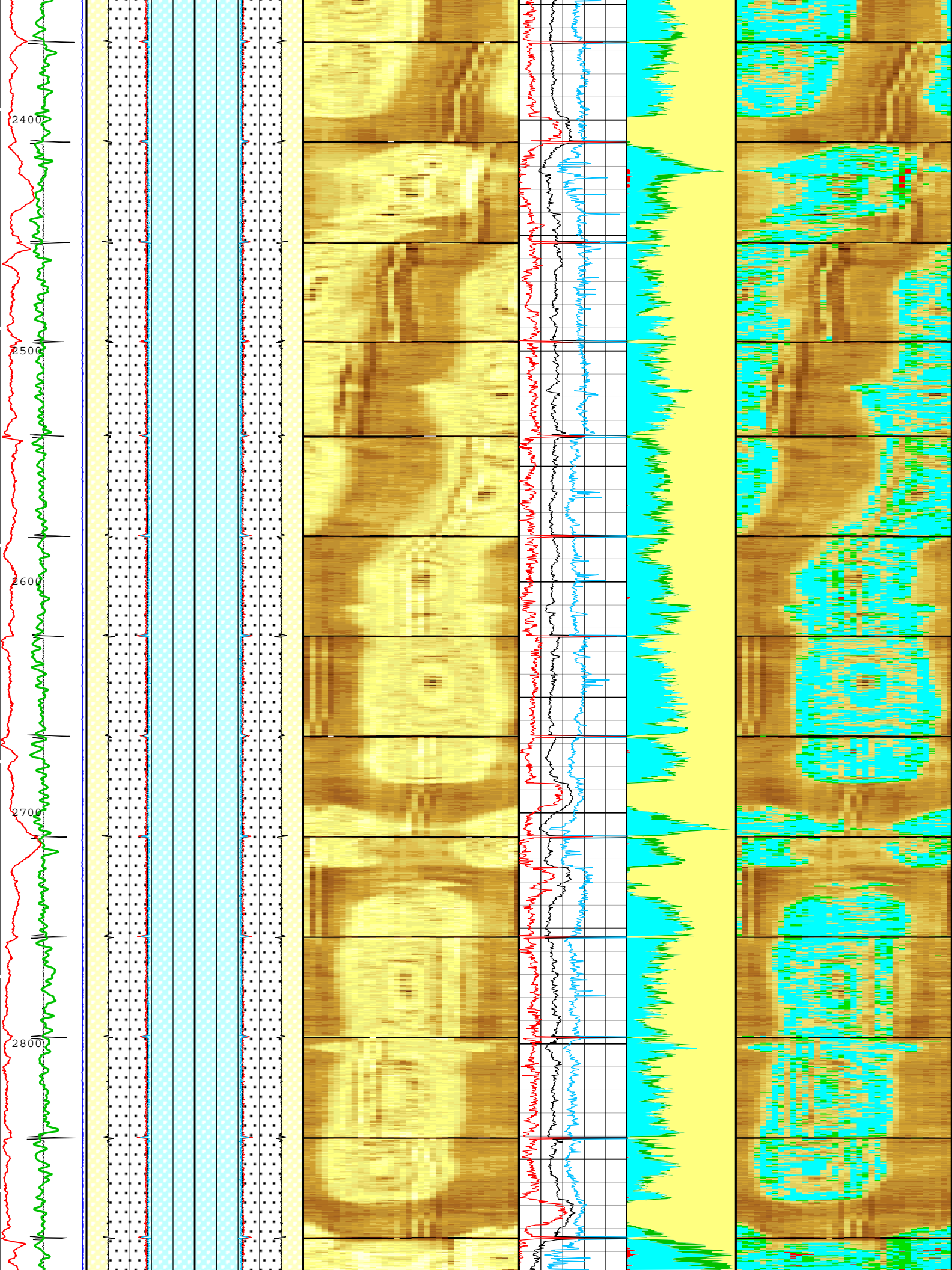
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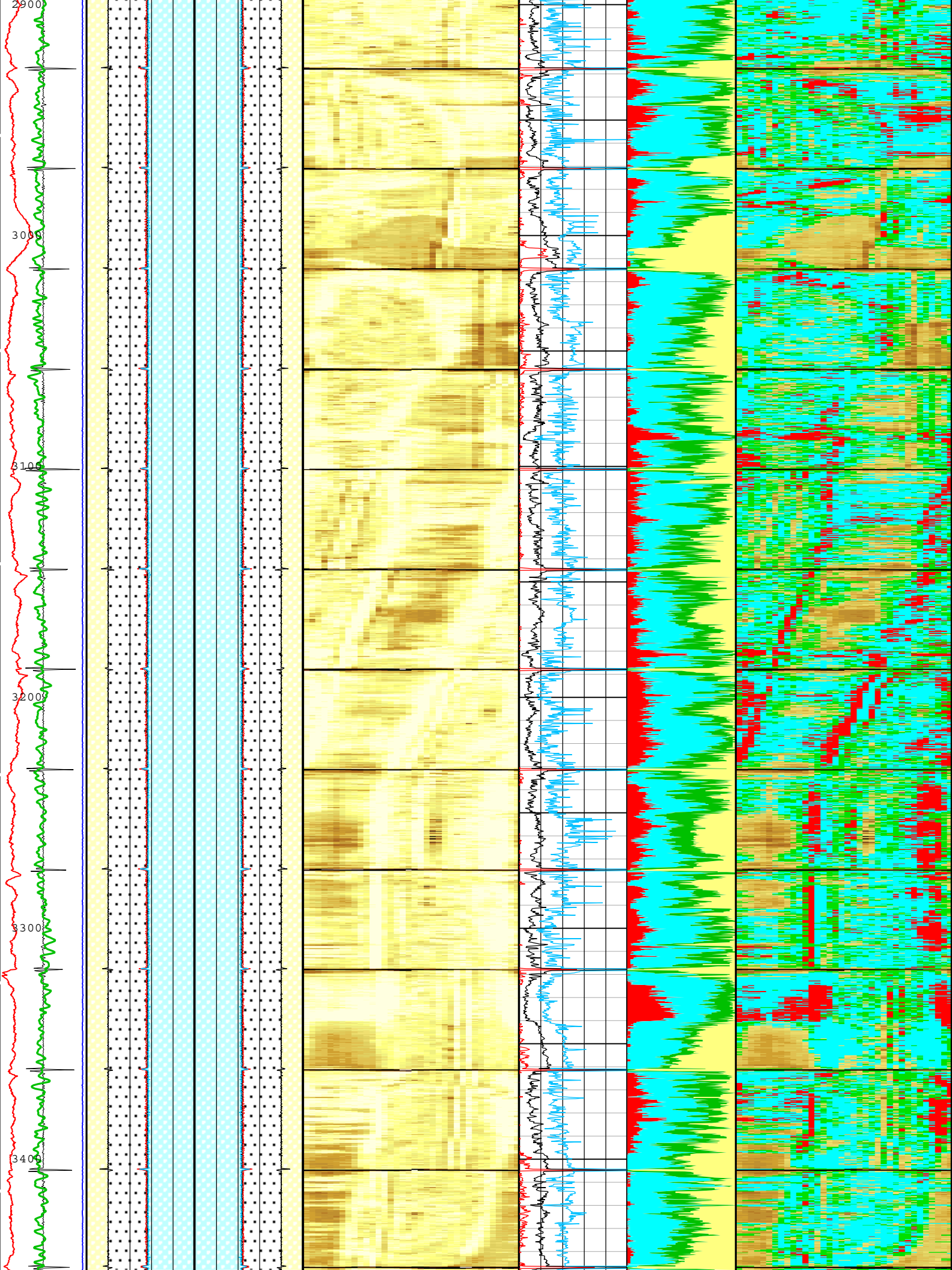


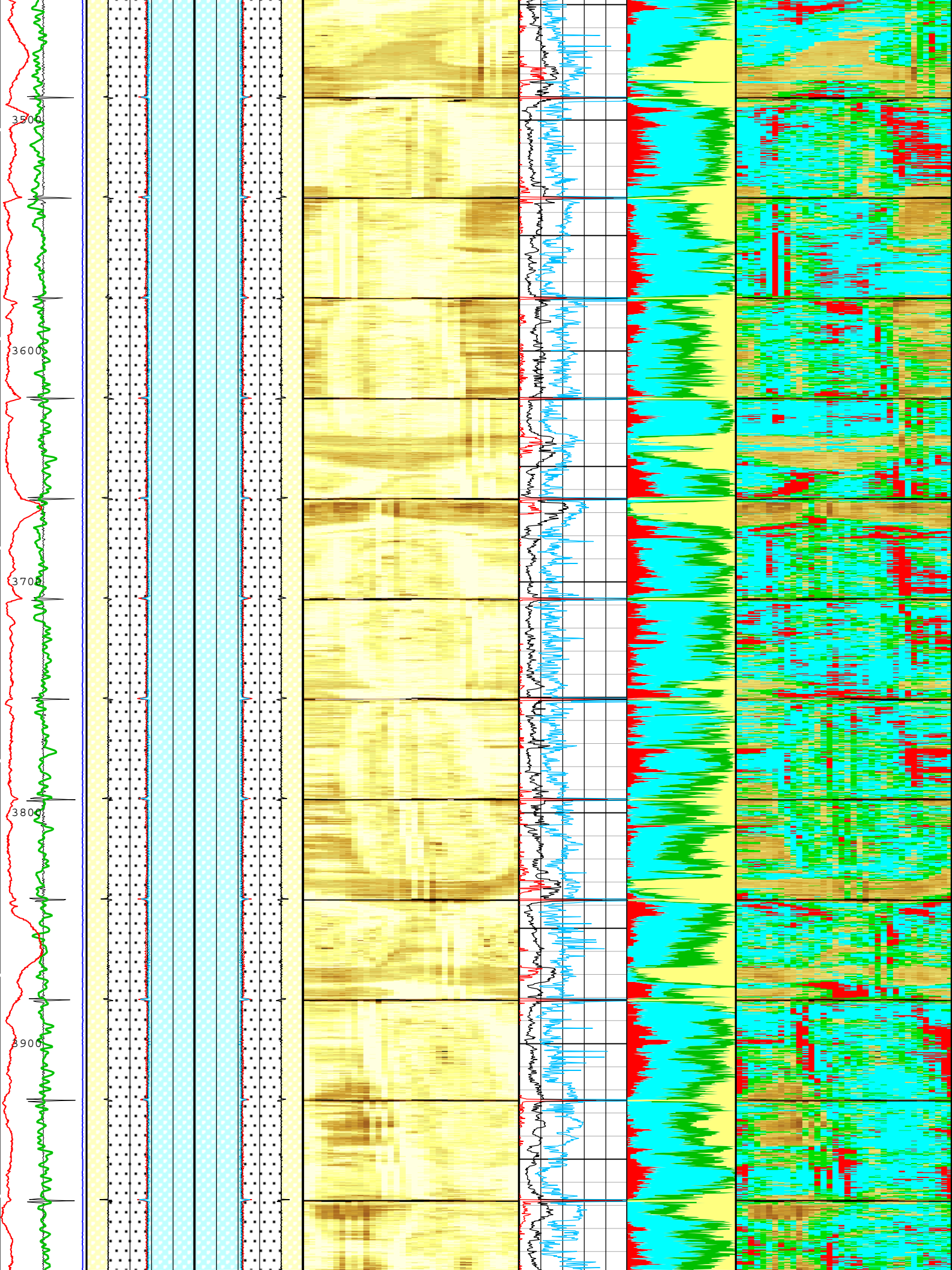


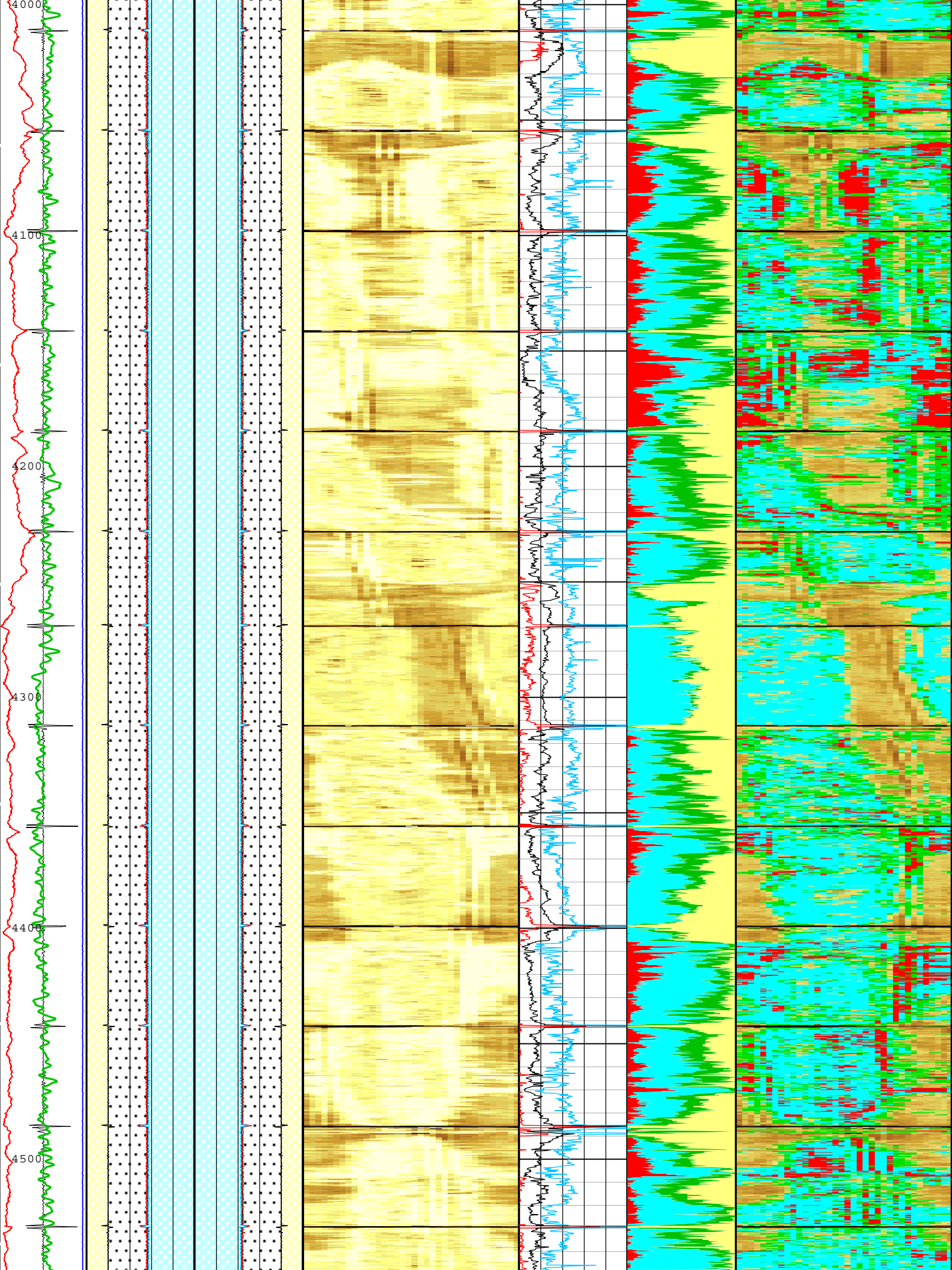


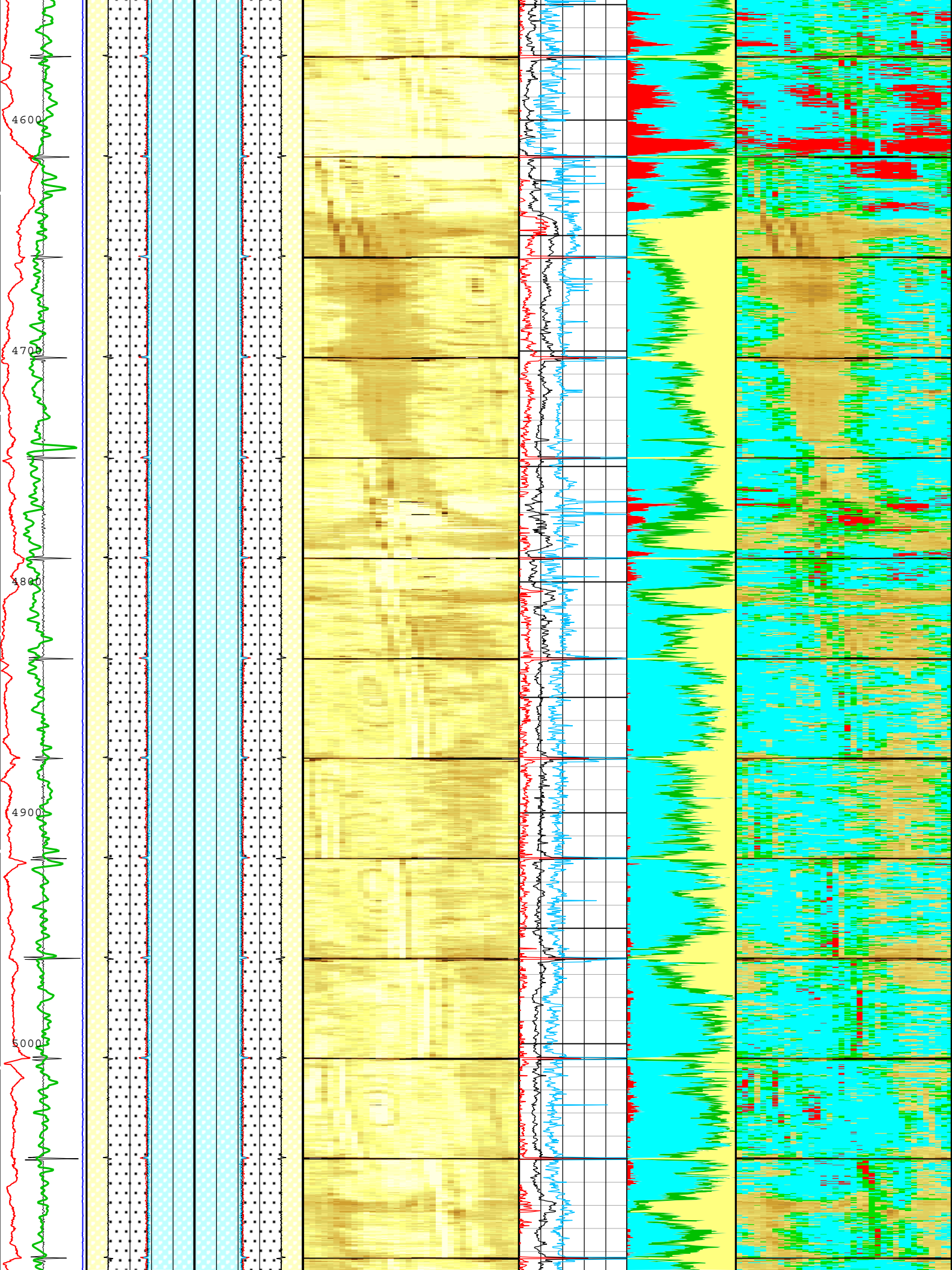


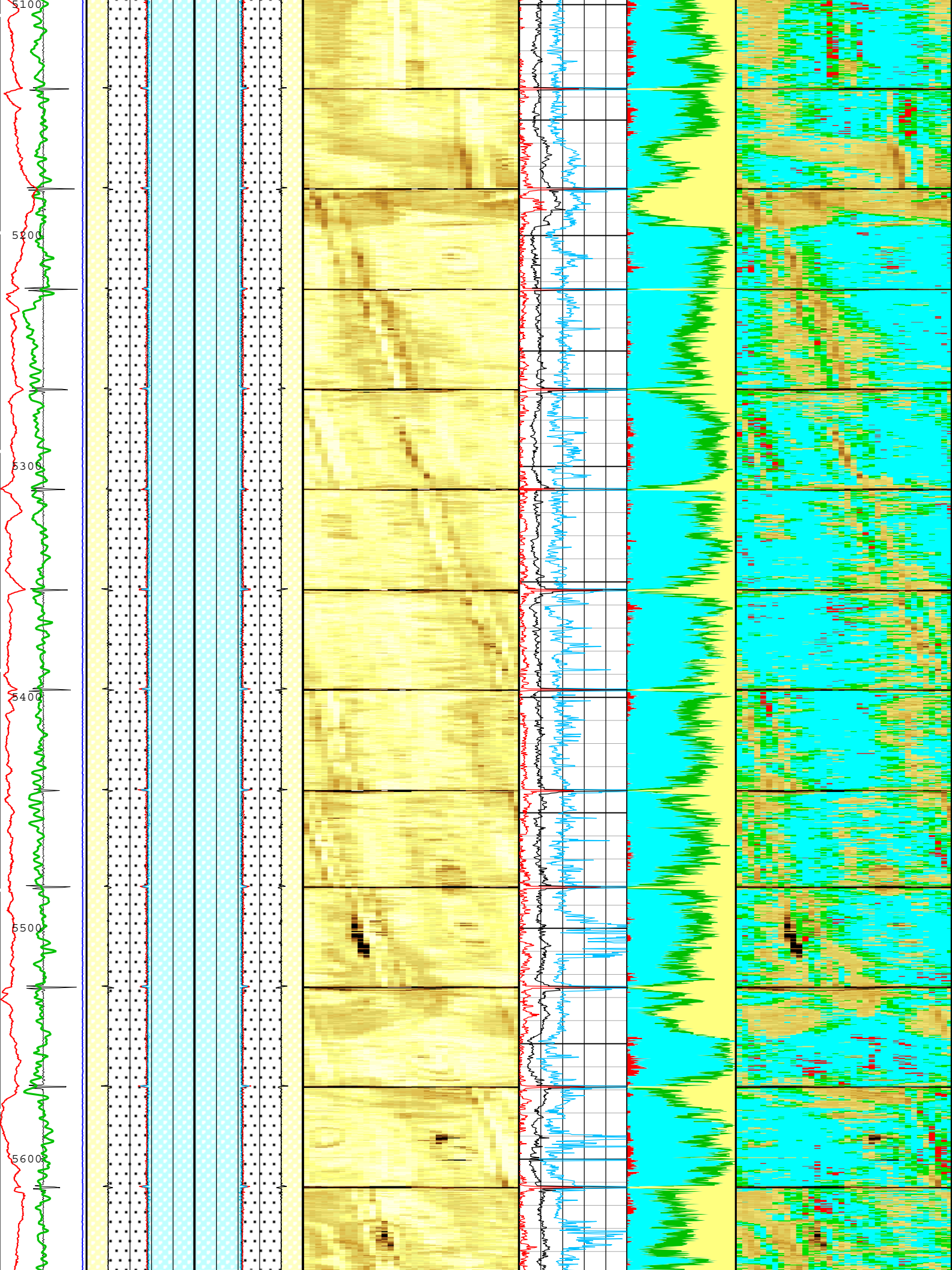


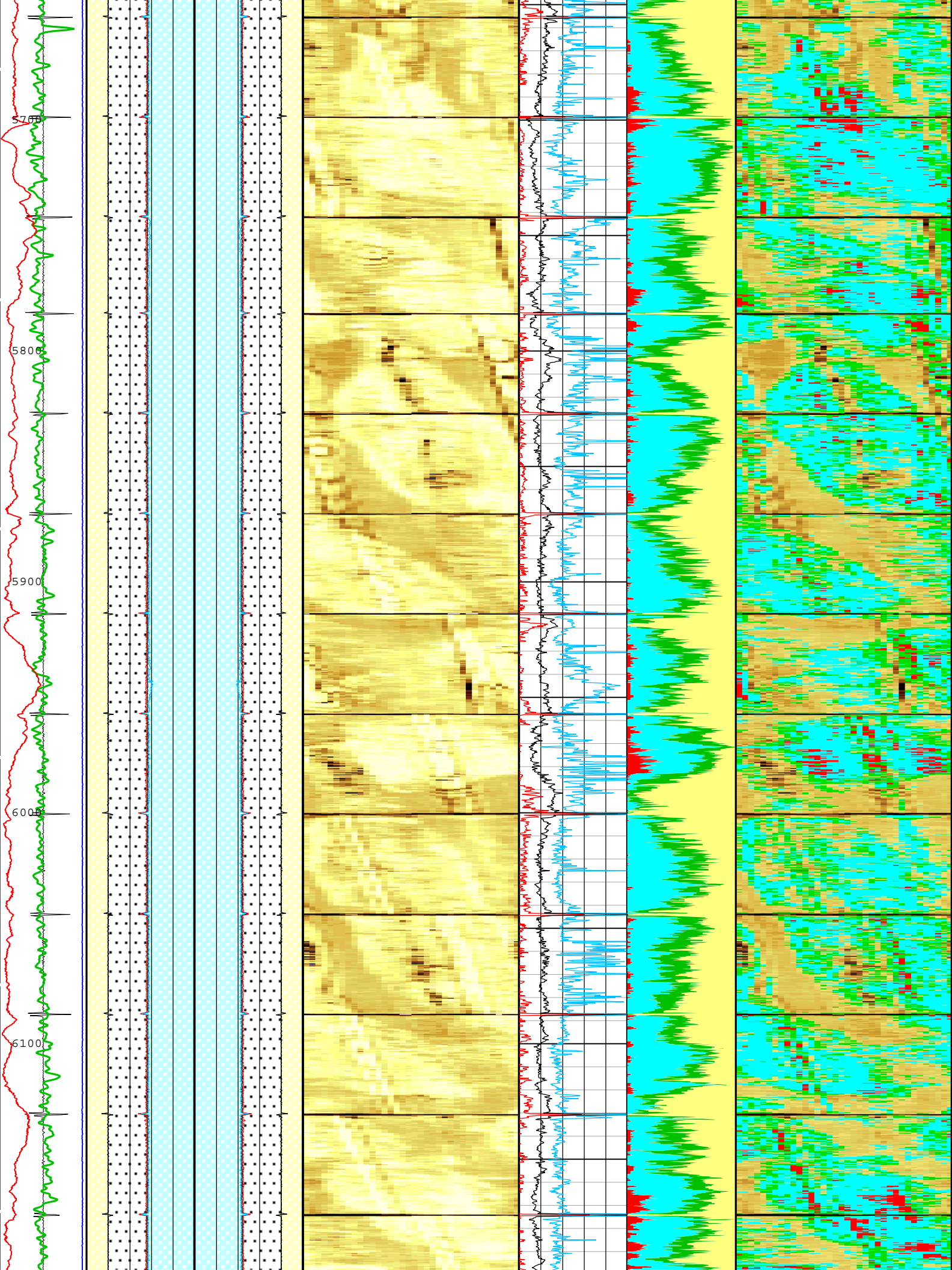


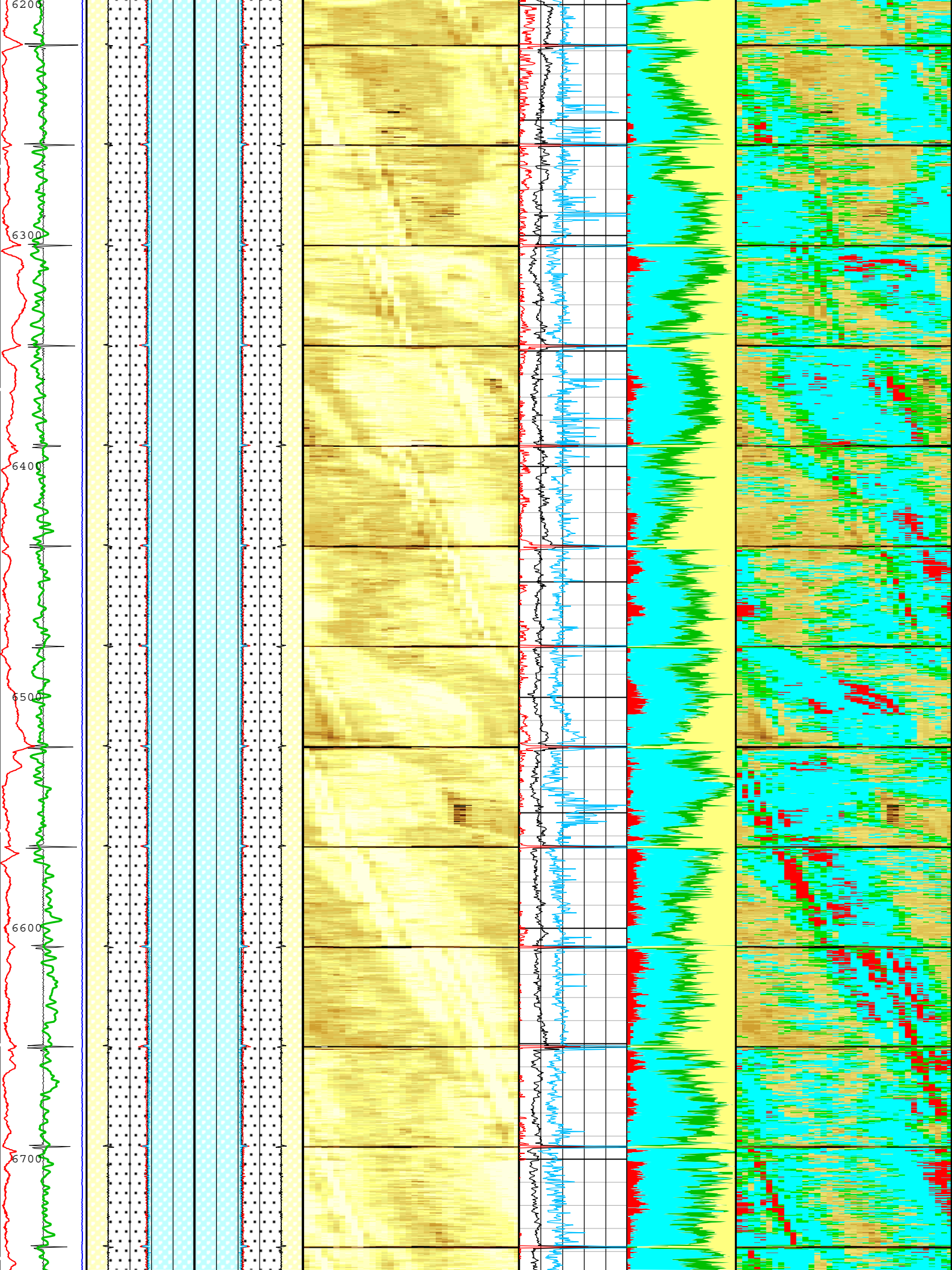


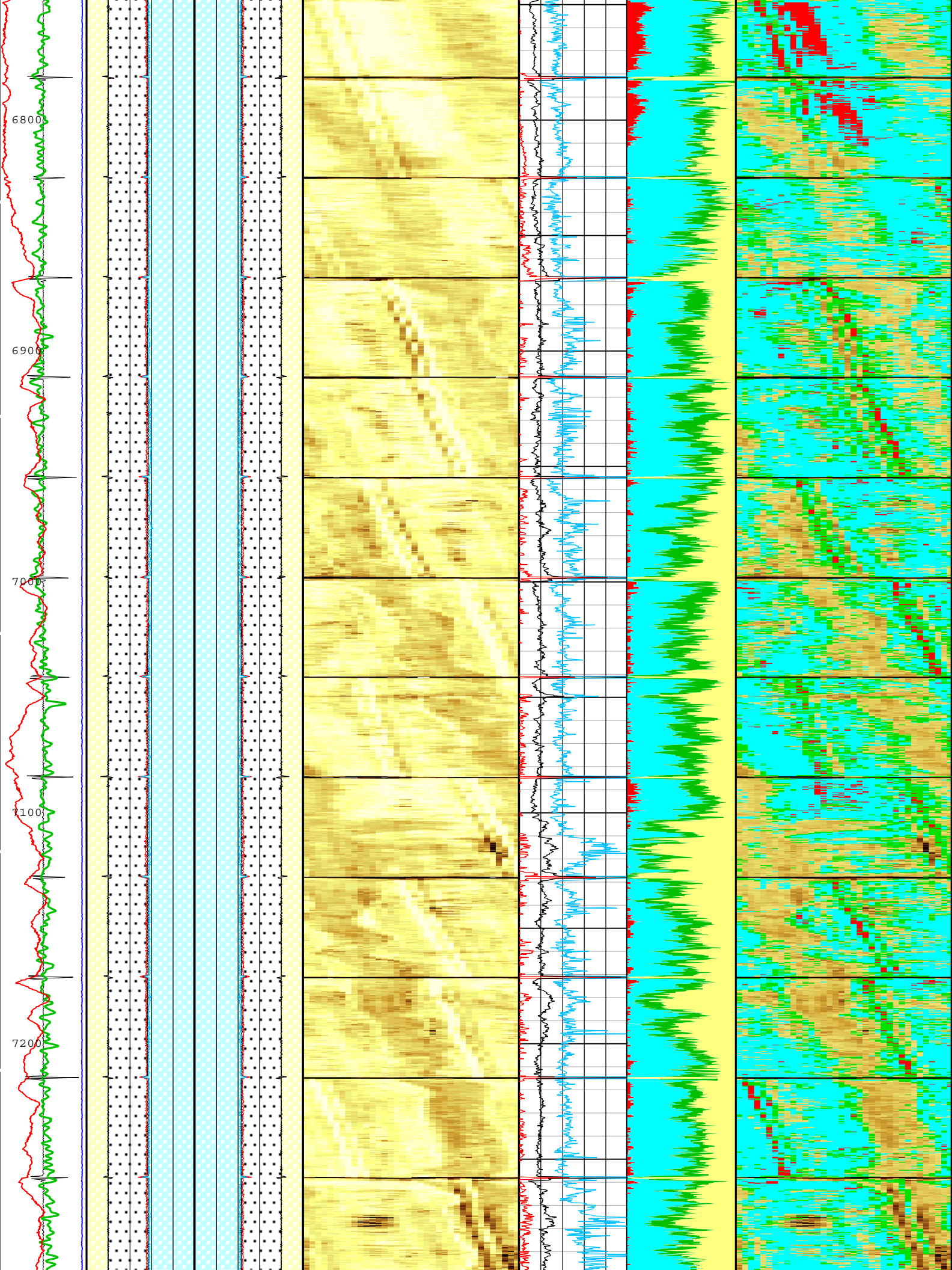


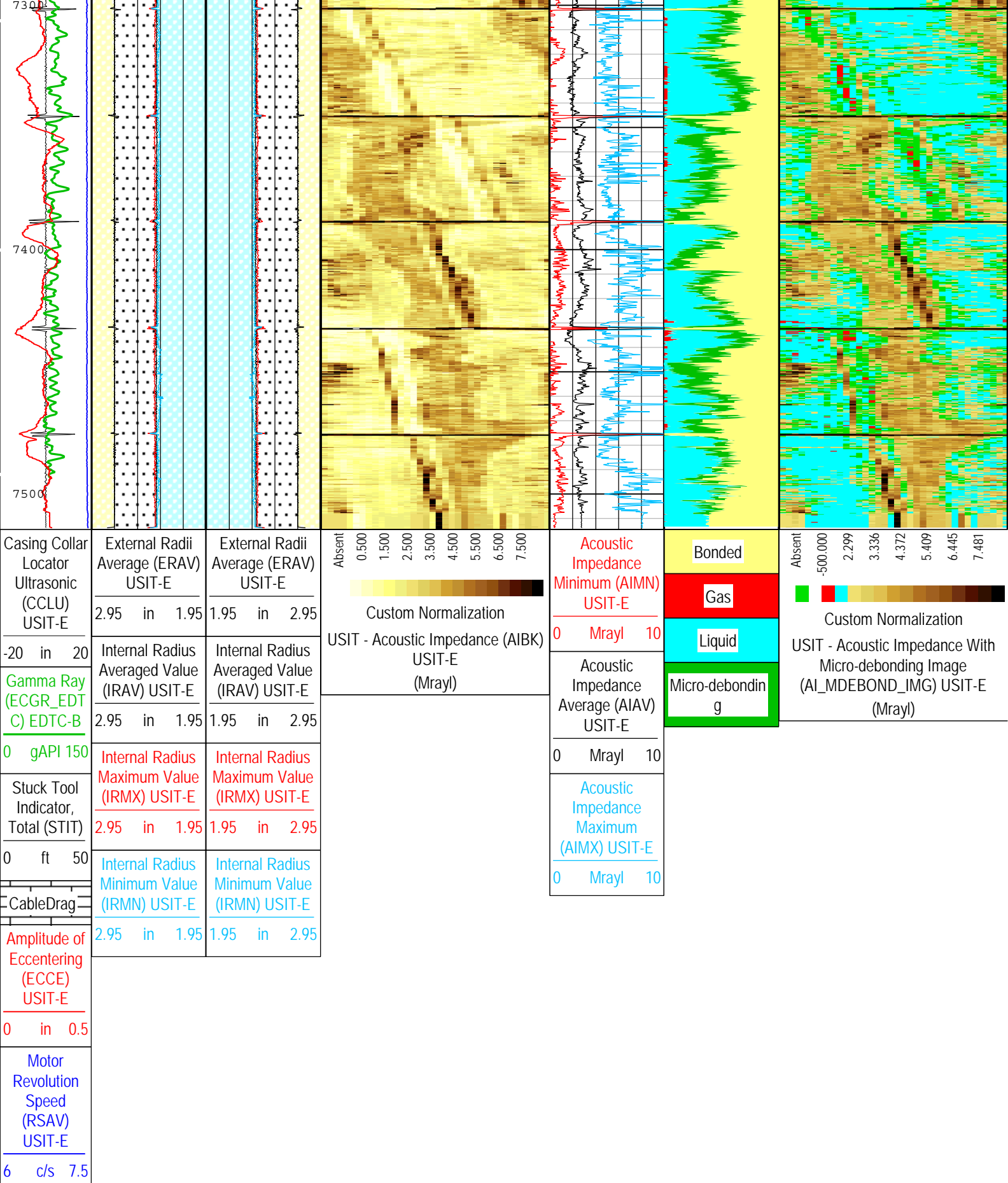












TIME_1900 - Time Marked every 60.00 (s)

Description: USI Cement Format: USI Cement Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 20-Sep-2015 10:22:39

| Channel Processing Parameters | | | | |
|-------------------------------|-------------|------|-------|------|
| Run 1: Parameters | | | | |
| Parameter | Description | Tool | Value | Unit |

| Parameter | Description | Tool | Value | Unit |
|-------------------|---|-----------------|------------------------|---------|
| AFVU | Automatic Fluid Velocity Update | USIT-E | On | |
| ISSBAR | Barite Mud Presence Flag | Borehole | No | |
| BERJ | Bad Echo Rejection | USIT-E | On | |
| BHS | Borehole Status (Open or Cased Hole) | Borehole | Cased | |
| BS | Bit Size | WLSESSION | 7.875 | in |
| CASING_PRATIO | Casing Poisson Ratio | USIT-E | Standard Poisson Ratio | |
| CBLO | Casing Bottom (Logger) | WLSESSION | 17454 | ft |
| CDEN | Cement Density | EDTC-B | 16.69 | lbm/gal |
| CMTY(U-USIT_CEMT) | Cement Type | USIT-E | Regular Cement | |
| THNO | Nominal Casing Thickness - Zoned along logger depths | WLSESSION | 0.361 | in |
| DC_MODE | Depth Correction Mode | DepthCorrection | Real-time | |
| DFD | Drilling Fluid Density | Borehole | 8.4 | lbm/gal |
| DFT | Drilling Fluid Type | Borehole | Water | |
| DTMD | Borehole Fluid Slowness | Borehole | 190 | us/ft |
| FD | Fluid Density | USIT-E | 11 | lbm/gal |
| FDII | FPM Data Interpolation Interval | USIT-E | 0 | ft |
| GCSE_DOWN_PASS | Generalized Caliper Selection for WL Log Down Passes | Borehole | BS | |
| GCSE_UP_PASS | Generalized Caliper Selection for WL Log Up Passes | Borehole | BS | |
| GR_MULTIPLIER | Gamma Ray Multiplier | EDTC-B | 1 | |
| HEMA | Hematite Presence Flag | Borehole | No | |
| ICE_BINPROC | ICE Bin Processing Depth Interval | USIT-E | 0 | ft |
| ICE_PROCESS | ICE Processing | USIT-E | Yes | |
| IMAR | Image Rotation | USIT-E | Off | |
| MEAS_WLEN | Tcube Processing Window Length in Measurement Mode | USIT-E | 22.44 | us |
| MUD_N_FRP | Free Pipe Mud Normalization Factor | USIT-E | 1.31 | |
| MUD_N_THE | Theoretical Mud Normalization Factor | USIT-E | 1 | |
| RAPID_OPTION | Rapid Access Computation Option | USIT-E | Off | |
| RCOD | Reference Calibrator Outer Diameter | USIT-E | 4.5 | in |
| RCSO | Reference Calibrator Standoff | USIT-E | 0.842 | in |
| RCTH | Reference Calibrator Thickness | USIT-E | 0.216 | in |
| SDNV | Number of Vertical Samples used for Micro-debonding Computation | USIT-E | 5 | |
| SDTHOR | Acoustic Impedance STD Horizontal Threshold for Micro-debonding | USIT-E | 0.5 | Mrayl |
| SDTVER | Acoustic Impedance STD Vertical Threshold for Micro-debonding | USIT-E | 0.3 | Mrayl |
| SOCN | Standoff Distance | EDTC-B | 0.125 | in |
| SOCO | Standoff Correction Option | EDTC-B | No | |
| TCUB | T^3 Processing Level | USIT-E | Loop | |
| TD | Total Measured Depth | Borehole | 7500 | ft |
| THDH | Maximum Search Thickness (percentage of nominal) | USIT-E | 130 | % |
| THDL | Minimum Search Thickness (percentage of nominal) | USIT-E | 70 | % |
| TPOS_EDTC | Tool Position: Centered or Eccentered | EDTC-B | Eccentered | |
| U-USIT_DFSZ | Drilling Fluid Specific Acoustic Impedance | USIT-E | 1.8 | Mrayl |
| UFGDE | Fiberglass Density | USIT-E | 16.27 | lbm/gal |
| UFGPS | Fiberglass Processing Selection | USIT-E | No | |
| UFGVL | Fiberglass Velocity | USIT-E | 9678.48 | ft/s |
| USI_FSOD | USIT USI Fluid Slowness Fits Casing Outer Diameter | USIT-E | 0_OFF | |
| USI_FVEL_SEL | USI Fluid Velocity Selection | USIT-E | Automatic | |
| USI_ZMUD_SEL | USI Mud Impedance Selection | USIT-E | Manual | |
| THDP | Thickness Detection Policy | USIT-E | Fundamental | |
| VCAS | Ultrasonic Transversal Velocity in Casing | USIT-E | 51.4 | us/ft |

| | | | | |
|------|---|----------|-------------|-------|
| ZCAS | Acoustic Impedance of Casing | USIT-E | 46.25 | Mrayl |
| ZINI | Initial Estimate of Cement Impedance | USIT-E | -1 | Mrayl |
| ZMUD | Acoustic Impedance of Mud | Borehole | Depth Zoned | Mrayl |
| ZTCM | Acoustic Impedance Threshold for Cement | USIT-E | 2.3 | Mrayl |
| ZTGS | Acoustic Impedance Threshold for Gas | USIT-E | 0.3 | Mrayl |

Depth Zone Parameters

| Parameter | Value | Start (ft) | Stop (ft) |
|-----------|-------|--------------|-------------|
| ZMUD | 1.76 | 54 | 500 |
| ZMUD | 1.77 | 500 | 1000 |
| ZMUD | 1.78 | 1000 | 2000 |
| ZMUD | 1.79 | 2000 | 3000 |
| ZMUD | 1.81 | 3000 | 7514.5 |

All depth are actual.

Tool Control Parameters

Run 1: Parameters

| Parameter | Description | Tool | Value | Unit |
|---------------|--|-----------|----------------------------------|------|
| AGMN | Minimum Gain of Cartridge | USIT-E | -12 | dB |
| AGMX | Maximum Gain of Cartridge | USIT-E | 18 | dB |
| U-USIT_DDT5 | USIC Downhole Decimation for T5 only | USIT-E | 0_NONE | |
| DOT(DOS) | Distance between Opposite Transducer Faces | USIT-E | 1.756 | in |
| EMXV | EMEX Voltage | USIT-E | 60 | V |
| HRES | Horizontal Resolution | USIT-E | 10 deg | |
| MAX_LOG_SPEED | Toolstring Maximum Logging Speed | WLSESSION | 6750 | ft/h |
| MOTOR_PROTECT | Motor Protection | USIT-E | On | |
| TMUC | Type of Mud | USIT-E | BRI | |
| UACLV_PERM | Ultrasonic ACLV Permanent | USIT-E | No | |
| ULOG | Logging Objective | USIT-E | MEASUREMENT | |
| UMFR | Modulation Frequency | USIT-E | 333333 | Hz |
| USFR | Ultrasonic Sampling Frequency | USIT-E | 500000 | Hz |
| UPAT | USIT Emission Pattern | USIT-E | Pattern 375 KHz | |
| UWKM | USIT Working Mode | USIT-E | Uncompressed 10 deg at 3.0 in LF | |
| USIT_DEPTHLOG | Starting Depth Log for Ultrasonics | USIT-E | 7550 | ft |
| USSP | Ultrasonic Service | USIT-E | USI | |
| VRES | Vertical Resolution | USIT-E | 3.0 in | |
| WINB | Window Begin Time | USIT-E | 27.85 | us |
| WINE | Window End Time | USIT-E | 67.85 | us |

USI Goodwin

USIT - Fluid Properties Measurement

| Run Name | Pass Name | Start Depth(ft) | Stop Depth(ft) |
|----------|-----------|-----------------|----------------|
| Run 1 | Log[3]:Up | 7514.54 | 74.54 |

Fluid Velocity = "Automatic".
CFVL equals DFSL channel

| Start Depth(ft) | Stop Depth(ft) | Start Value(us/ft) | End Value(us/ft) |
|-----------------|----------------|--------------------|------------------|
|-----------------|----------------|--------------------|------------------|

Mud Impedance = "Manual".
CZMD uses ZMUD parameter zoned table below

| Start Depth(ft) | Stop Depth(ft) | Start Value(Mrayl) | End Value(Mrayl) |
|-----------------|----------------|--------------------|------------------|
| 0 | 500 | 1.76 | 1.76 |
| 500 | 1000 | 1.77 | 1.77 |
| | | | |

| | | | |
|------|------|------|------|
| 1000 | 2000 | 1.78 | 1.78 |
| 2000 | 3000 | 1.79 | 1.79 |
| 3000 | | 1.81 | 1.81 |

Run 1

Log

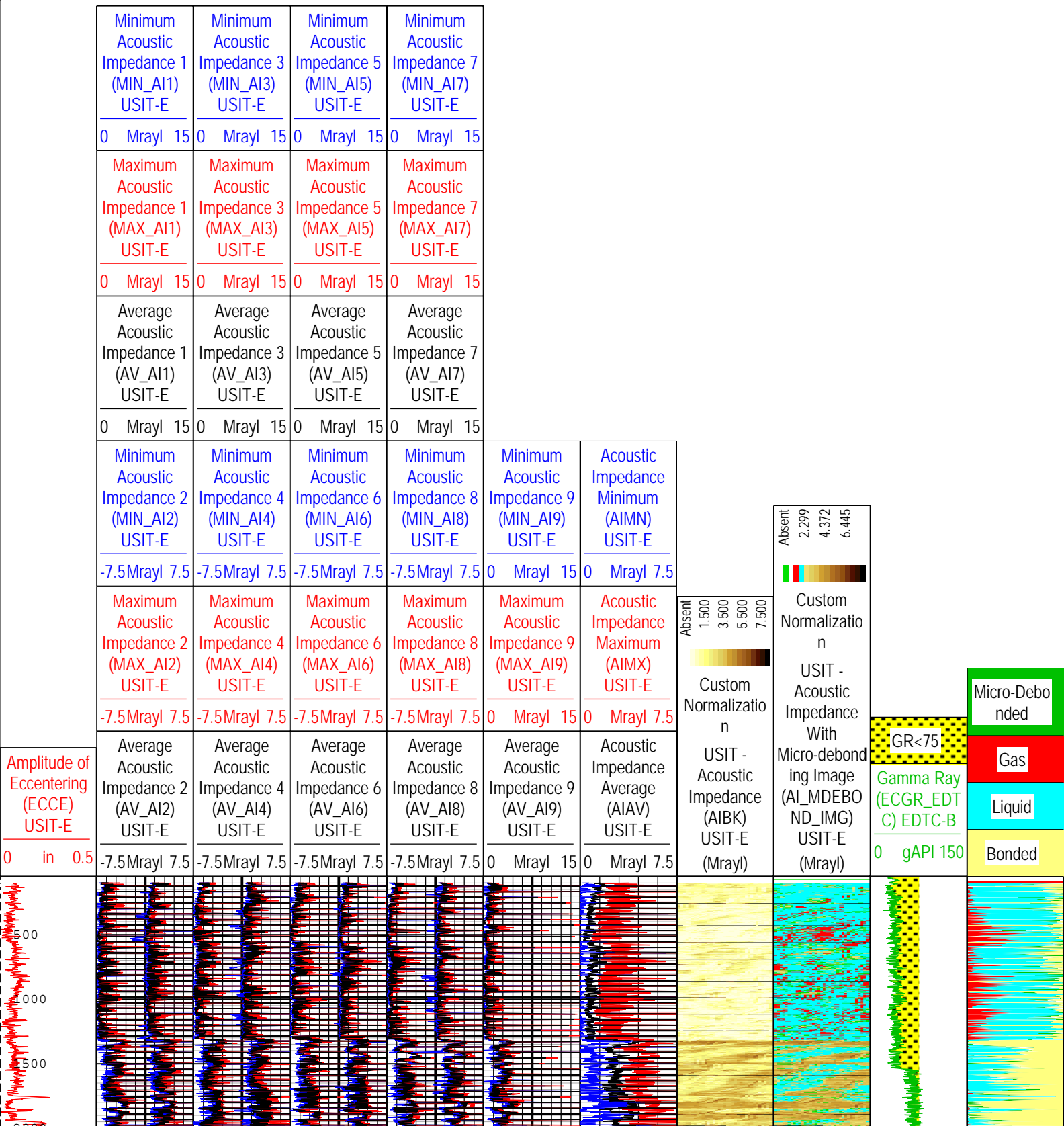
Company:Extraction Oil & Gas LLC

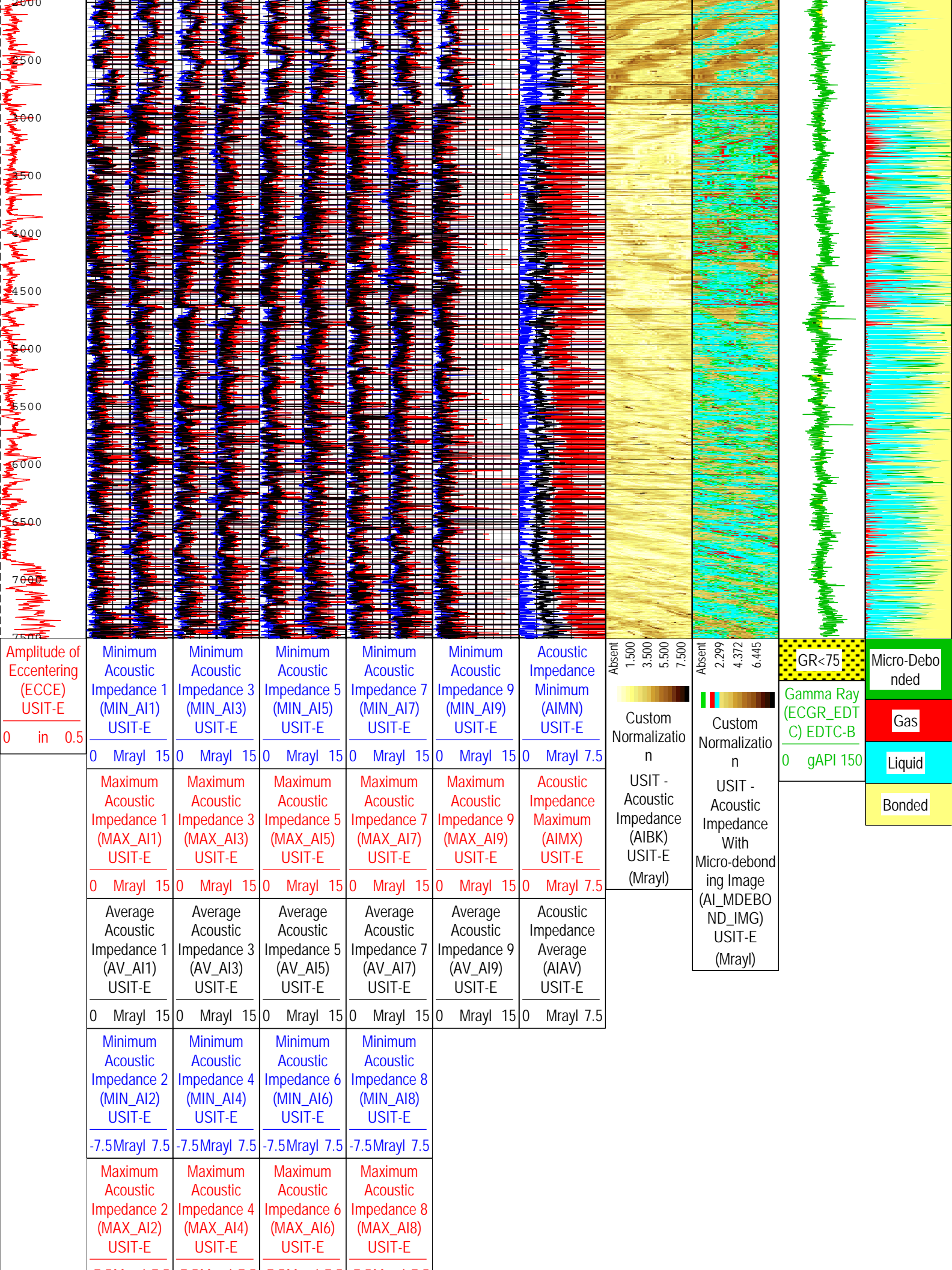
Well:Troudt 3

Run 1: Log[3]:Up:S006

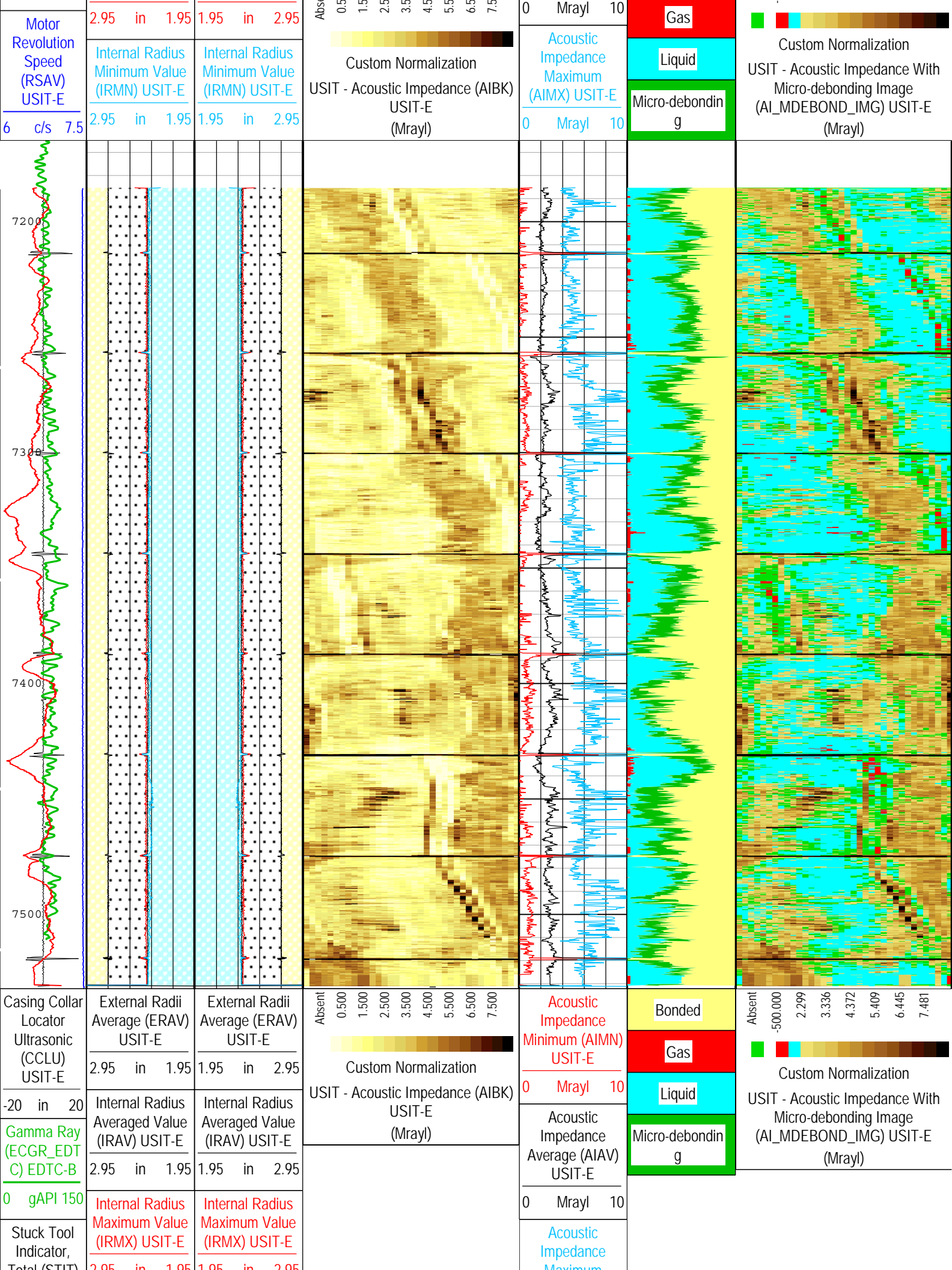
Description: USI Goodwin Format: USI Goodwin Index Scale: 0.1 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 20-Sep-2015 10:22:47

TIME_1900 - Time Marked every 60.00 (s)





[illegible]



| | | | | | | |
|--|------|-----|---|---|------|------|
| Total (STM) | 2.95 | in | 1.95 | 1.95 | in | 2.95 |
| 0 | ft | 50 | Internal Radius Minimum Value (IRMN) USIT-E | Internal Radius Minimum Value (IRMN) USIT-E | | |
| CableDrag | | | 2.95 | in | 1.95 | 1.95 |
| Amplitude of Eccentering (ECCE) USIT-E | | | 2.95 | in | 1.95 | 1.95 |
| 0 | in | 0.5 | | | | |
| Motor Revolution Speed (RSAV) USIT-E | | | | | | |
| 6 | c/s | 7.5 | | | | |

| |
|-----------------------|
| Maximum (AIMX) USIT-E |
| 0Mrayl10 |

TIME_1900 - Time Marked every 60.00 (s)

Description: USI Cement Format: USI Cement Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 20-Sep-2015 10:22:53

| Channel Processing Parameters | | | | |
|-------------------------------|--|-----------------|------------------------|---------|
| Run 1: Parameters | | | | |
| Parameter | Description | Tool | Value | Unit |
| AFVU | Automatic Fluid Velocity Update | USIT-E | On | |
| ISSBAR | Barite Mud Presence Flag | Borehole | No | |
| BERJ | Bad Echo Rejection | USIT-E | On | |
| BHS | Borehole Status (Open or Cased Hole) | Borehole | Cased | |
| BS | Bit Size | WLSESSION | 7.875 | in |
| CASING_PRATIO | Casing Poisson Ratio | USIT-E | Standard Poisson Ratio | |
| CBLO | Casing Bottom (Logger) | WLSESSION | 17454 | ft |
| CDEN | Cement Density | EDTC-B | 16.69 | lbm/gal |
| CMTY(U-USIT_CEMT) | Cement Type | USIT-E | Regular Cement | |
| THNO | Nominal Casing Thickness - Zoned along logger depths | WLSESSION | 0.361 | in |
| DC_MODE | Depth Correction Mode | DepthCorrection | Real-time | |
| DFD | Drilling Fluid Density | Borehole | 8.4 | lbm/gal |
| DFT | Drilling Fluid Type | Borehole | Water | |
| DTMD | Borehole Fluid Slowness | Borehole | 190 | us/ft |
| FD | Fluid Density | USIT-E | 11 | lbm/gal |
| FDII | FPM Data Interpolation Interval | USIT-E | 0 | ft |
| GCSE_DOWN_PASS | Generalized Caliper Selection for WL Log Down Passes | Borehole | BS | |
| GCSE_UP_PASS | Generalized Caliper Selection for WL Log Up Passes | Borehole | BS | |
| GR_MULTIPLIER | Gamma Ray Multiplier | EDTC-B | 1 | |
| HEMA | Hematite Presence Flag | Borehole | No | |
| ICE_BINPROC | ICE Bin Processing Depth Interval | USIT-E | 0 | ft |
| ICE_PROCESS | ICE Processing | USIT-E | Yes | |
| IMAR | Image Rotation | USIT-E | Off | |
| MEAS_WLEN | Tcube Processing Window Length in Measurement Mode | USIT-E | 22.44 | us |
| MUD_N_FRP | Free Pipe Mud Normalization Factor | USIT-E | 1.31 | |
| MUD_N_THE | Theoretical Mud Normalization Factor | USIT-E | 1 | |
| RAPID_OPTION | Rapid Access Computation Option | USIT-E | Off | |
| RCOD | Reference Calibrator Outer Diameter | USIT-E | 4.5 | in |
| RCSO | Reference Calibrator Standoff | USIT-E | 0.842 | in |
| RCTH | Reference Calibrator Thickness | USIT-E | 0.216 | in |

| | | | | |
|--------------|---|----------|-------------|---------|
| SDNV | Number of Vertical Samples used for Micro-debonding Computation | USIT-E | 5 | |
| SDTHOR | Acoustic Impedance STD Horizontal Threshold for Micro-debonding | USIT-E | 0.5 | Mrayl |
| SDTVER | Acoustic Impedance STD Vertical Threshold for Micro-debonding | USIT-E | 0.3 | Mrayl |
| SOCN | Standoff Distance | EDTC-B | 0.125 | in |
| SOCO | Standoff Correction Option | EDTC-B | No | |
| TCUB | T^3 Processing Level | USIT-E | Loop | |
| TD | Total Measured Depth | Borehole | 7500 | ft |
| THDH | Maximum Search Thickness (percentage of nominal) | USIT-E | 130 | % |
| THDL | Minimum Search Thickness (percentage of nominal) | USIT-E | 70 | % |
| TPOS_EDTC | Tool Position: Centered or Eccentered | EDTC-B | Eccentered | |
| U-USIT_DFSZ | Drilling Fluid Specific Acoustic Impedance | USIT-E | 1.8 | Mrayl |
| UFGDE | Fiberglass Density | USIT-E | 16.27 | lbm/gal |
| UFGPS | Fiberglass Processing Selection | USIT-E | No | |
| UFGVL | Fiberglass Velocity | USIT-E | 9678.48 | ft/s |
| USI_FSOD | USIT USI Fluid Slowness Fits Casing Outer Diameter | USIT-E | 0_OFF | |
| USI_FVEL_SEL | USI Fluid Velocity Selection | USIT-E | Automatic | |
| USI_ZMUD_SEL | USI Mud Impedance Selection | USIT-E | Manual | |
| THDP | Thickness Detection Policy | USIT-E | Fundamental | |
| VCAS | Ultrasonic Transversal Velocity in Casing | USIT-E | 51.4 | us/ft |
| ZCAS | Acoustic Impedance of Casing | USIT-E | 46.25 | Mrayl |
| ZINI | Initial Estimate of Cement Impedance | USIT-E | -1 | Mrayl |
| ZMUD | Acoustic Impedance of Mud | Borehole | 1.81 | Mrayl |
| ZTCM | Acoustic Impedance Threshold for Cement | USIT-E | 2.3 | Mrayl |
| ZTGS | Acoustic Impedance Threshold for Gas | USIT-E | 0.3 | Mrayl |

Tool Control Parameters

Run 1: Parameters

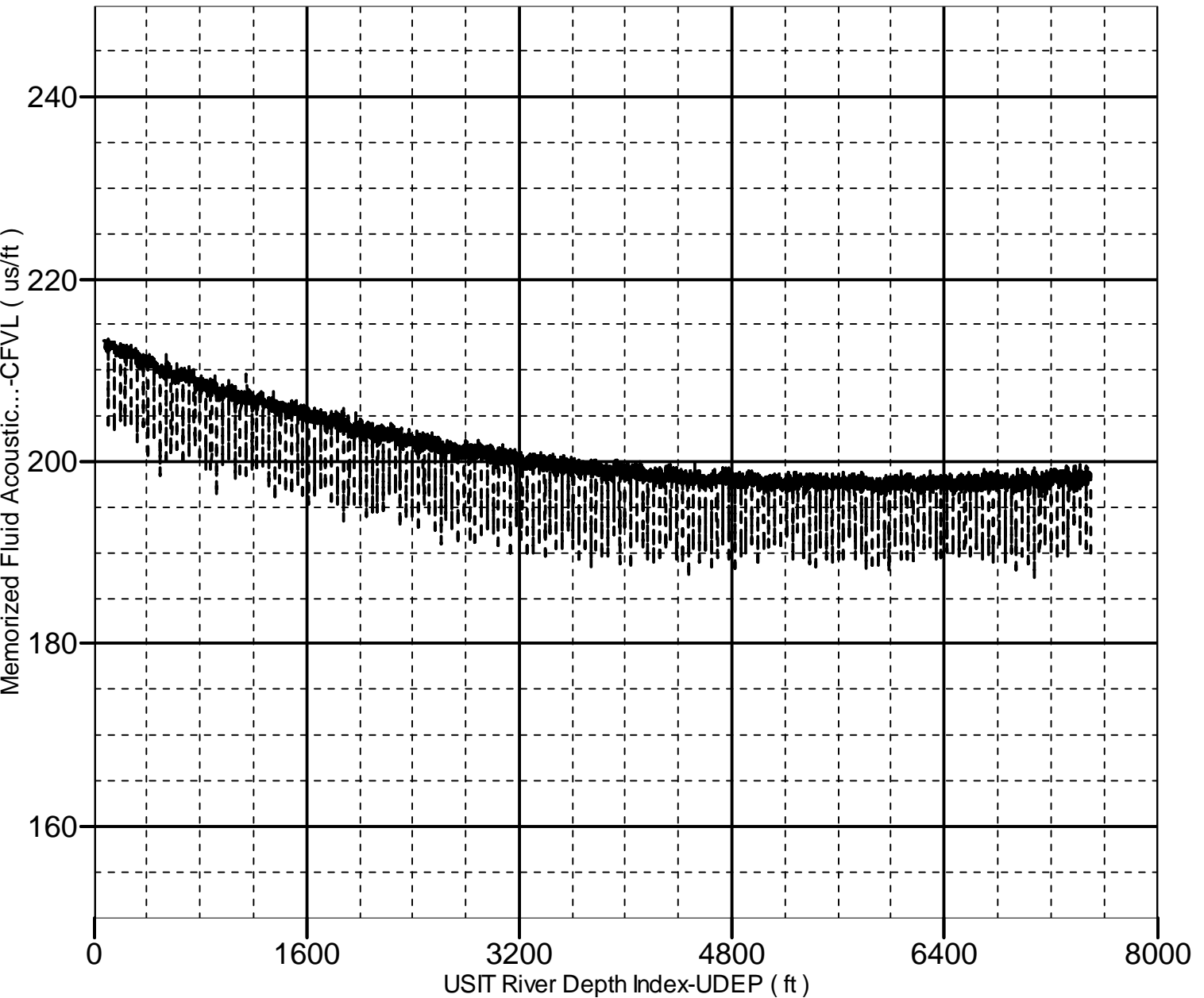
| Parameter | Description | Tool | Value | Unit |
|---------------|--|-----------|----------------------------------|------|
| AGMN | Minimum Gain of Cartridge | USIT-E | -12 | dB |
| AGMX | Maximum Gain of Cartridge | USIT-E | 18 | dB |
| U-USIT_DDT5 | USIC Downhole Decimation for T5 only | USIT-E | 0_NONE | |
| DOT(DOS) | Distance between Opposite Transducer Faces | USIT-E | 1.756 | in |
| EMXV | EMEX Voltage | USIT-E | 60 | V |
| HRES | Horizontal Resolution | USIT-E | 10 deg | |
| MAX_LOG_SPEED | Toolstring Maximum Logging Speed | WLSESSION | 6750 | ft/h |
| MOTOR_PROTECT | Motor Protection | USIT-E | On | |
| TMUC | Type of Mud | USIT-E | BRI | |
| UACLV_PERM | Ultrasonic ACLV Permanent | USIT-E | No | |
| ULOG | Logging Objective | USIT-E | MEASUREMENT | |
| UMFR | Modulation Frequency | USIT-E | 333333 | Hz |
| USFR | Ultrasonic Sampling Frequency | USIT-E | 500000 | Hz |
| UPAT | USIT Emission Pattern | USIT-E | Pattern 375 KHz | |
| UWKM | USIT Working Mode | USIT-E | Uncompressed 10 deg at 3.0 in LF | |
| USIT_DEPTHLOG | Starting Depth Log for Ultrasonics | USIT-E | 7550 | ft |
| USSP | Ultrasonic Service | USIT-E | USI | |
| VRES | Vertical Resolution | USIT-E | 3.0 in | |
| WINB | Window Begin Time | USIT-E | 27.85 | us |
| WINE | Window End Time | USIT-E | 67.85 | us |

Fluid Acoustic Slowness vs Depth

2D Cross Plot

Index Range: From 7514.25 to 74.25 ft

----- UDEP-CFVL



XYZ

Company:Extraction Oil & Gas LLC Well:Troudt 3

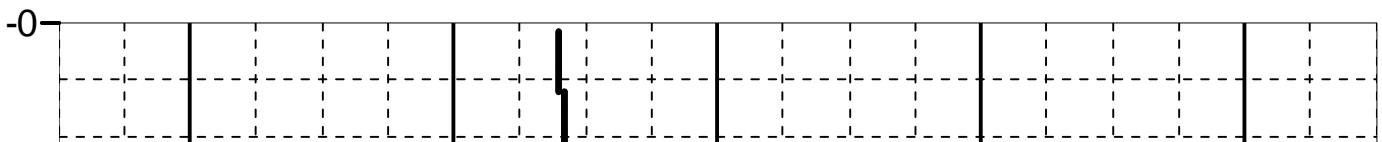
Run 1: Log[3]:Up:S006

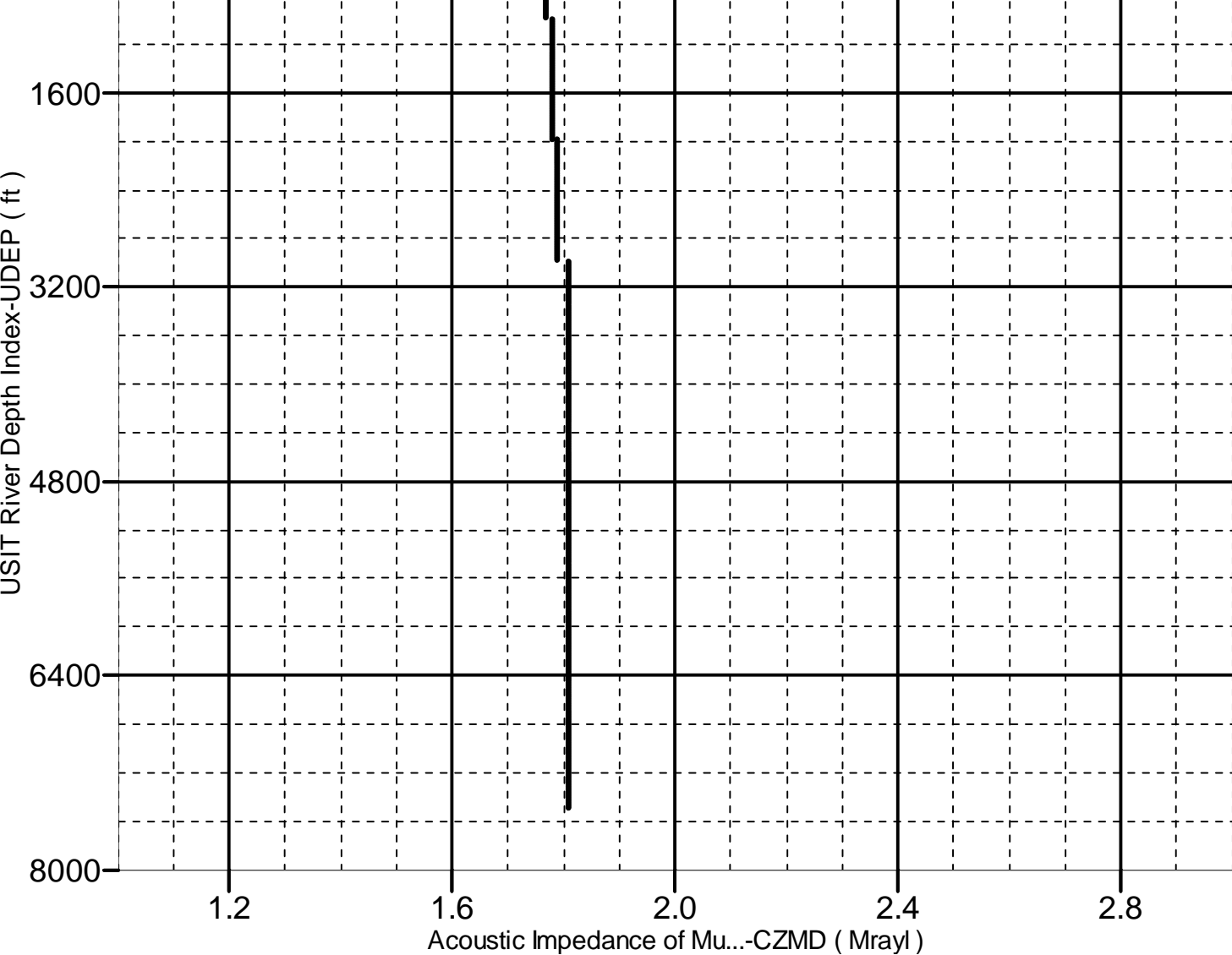
Acoustic Impedance of Mud vs Depth

2D Cross Plot

Index Range: From 7514.25 to 74.25 ft

● CZMD-UDEP





| Calibration Report | | | | | | | | | | | |
|---|-------|--------|---------|-----------|----------|------------|--|--|--|--|--|
| EDTC-B (Enhanced Digital Telemetry Cartridge - Version B) Calibration - Run 1 | | | | | | | | | | | |
| Primary Equipment : | | | | | | | | | | | |
| EDTC-B | | EDTC-B | | | 8629 | | | | | | |
| Calibration Parameter : | | | | | | | | | | | |
| Plus Reference | | | | | | | | | | | |
| EDTC-B Accelerometer Calibration - EDTC-B Accelerometer Calibration | | | | | | | | | | | |
| Before (Measured): 07:46:42 20-Sep-2015 | | | | | | | | | | | |
| Measurement | Unit | Phase | Nominal | Low Limit | Actual | High Limit | <table><tr><td></td><td></td></tr></table> | | | | |
| | | | | | | | | | | | |
| AZ Vertical Measurement | ft/s2 | Before | 32.19 | 31.53 | 32.09 | 32.84 | <table><tr><td></td><td></td><td></td><td></td></tr></table> | | | | |
| | | | | | | | | | | | |
| EDTC-B Memory Data - EDTC-B Memory Data | | | | | | | | | | | |
| Master (EEPROM): 07:34:03 20-Sep-2015 | | | | | | | | | | | |
| Measurement | Unit | Phase | Nominal | Low Limit | Actual | High Limit | <table><tr><td></td><td></td></tr></table> | | | | |
| | | | | | | | | | | | |
| Initial PMT HV | V | Master | | | 1482.000 | | <table><tr><td></td><td></td></tr></table> | | | | |
| | | | | | | | | | | | |
| Accelerometer Serial Number | | Master | | | 696 | | <table><tr><td></td><td></td></tr></table> | | | | |
| | | | | | | | | | | | |
| Accelerometer Coefficients - 0 | | Master | ---- | ---- | 2.987 | ---- | <table><tr><td></td><td></td></tr></table> | | | | |
| | | | | | | | | | | | |
| Accelerometer Coefficients - 1 | | Master | ---- | ---- | 0.000 | ---- | <table><tr><td></td><td></td></tr></table> | | | | |
| | | | | | | | | | | | |
| Accelerometer Coefficients - 2 | | Master | ---- | ---- | 0.000 | ---- | <table><tr><td></td><td></td></tr></table> | | | | |
| | | | | | | | | | | | |
| Accelerometer Coefficients - 3 | | Master | ---- | ---- | 0.000 | ---- | <table><tr><td></td><td></td></tr></table> | | | | |
| | | | | | | | | | | | |
| Accelerometer Coefficients - 4 | | Master | ---- | ---- | 0.000 | ---- | <table><tr><td></td><td></td></tr></table> | | | | |
| | | | | | | | | | | | |
| Accelerometer Coefficients - 5 | | Master | ---- | ---- | 0.000 | ---- | <table><tr><td></td><td></td></tr></table> | | | | |
| | | | | | | | | | | | |
| Accelerometer Coefficients - 6 | | Master | ---- | ---- | 0.000 | ---- | <table><tr><td></td><td></td></tr></table> | | | | |
| | | | | | | | | | | | |
| Accelerometer Coefficients - 7 | | Master | ---- | ---- | -0.007 | ---- | <table><tr><td></td><td></td></tr></table> | | | | |
| | | | | | | | | | | | |
| Accelerometer Coefficients - 8 | | Master | ---- | ---- | 0.000 | ---- | <table><tr><td></td><td></td></tr></table> | | | | |
| | | | | | | | | | | | |

| | | | | | | | |
|----------------------------------|--|--------|-------|-------|-------|-------|--|
| Accelerometer Coefficients - 8 | | Master | ----- | ----- | 0.000 | ----- | |
| Accelerometer Coefficients - 9 | | Master | ----- | ----- | 0.000 | ----- | |
| Accelerometer Coefficients - 10 | | Master | ----- | ----- | 0.000 | ----- | |
| Accelerometer Coefficients - 11 | | Master | ----- | ----- | 0.000 | ----- | |
| Gamma-Ray Detector Serial Number | | Master | | | 7792 | | |

EDTC-B Gamma-Ray Calibration - Gamma Ray Coefficients

| | | | | | | | |
|---|------|--------|---------|-----------|--------|------------|--|
| Before (Measured): 23:24:38 16-Sep-2015 | | | | | | | |
| Measurement | Unit | Phase | Nominal | Low Limit | Actual | High Limit | |
| Gamma Ray Gain - 0 | | Before | ----- | ----- | ----- | ----- | |

EDTC-B Gamma-Ray Calibration - Gamma Ray Accumulations

| | | | | | | | |
|---|------|--------|---------|-----------|--------|------------|--|
| Before (Measured): 23:24:38 16-Sep-2015 | | | | | | | |
| Measurement | Unit | Phase | Nominal | Low Limit | Actual | High Limit | |
| RGR Zero Measurement | gAPI | Before | | 0 | 64.649 | 120.000 | |
| RGR Plus Measurement - 0 | gAPI | Before | ----- | ----- | ----- | ----- | |

| | | |
|---------------------|--------------------------|--------------|
| Company: | Extraction Oil & Gas LLC | Schlumberger |
| Well: | Troudt 3 | |
| Field: | Wattenberg | |
| County: | Weld | |
| State: | Colorado | |
| Ultrasonic Imager | | |
| Cement Evaluation | | |
| Gamma Ray - CCL Log | | |