

Origin Energy Resources Ltd.

Origin Energy Resources Ltd.

Trefoil-1

Trefoil

ENSCO 102

Country: **Australia**

Rig:

Well:

Field:

Trefoil

GDA94 Zone 55

Well: Trefoil-1

Company: Origin Energy Resources Ltd.

Logging Date

un Number

Depth Driller

Chlumberger D

Bottom Log Interval

Log Interval

Increasing Driller

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Size

Type Fluid In

Density

Fluid Loss

Source Of S

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MF @ Mea

MC @ Mea

source RMF

M @ MRT

Maximum Re

Circulation S

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mit Number

Recorded By

Witnessed By

Run 1

Run 2

Run 3

R554

Date Created: 2-DEC-2004 11:59:18

Logging Cable

| | |
|--------------------|----------------|
| Type: | 7-46ZV-XS |
| Serial Number: | 74172 |
| Length: | 7324.04 M |
| Conveyance Method: | Wireline |
| Rig Type: | Offshore_Fixed |

| | |
|---------------------------|--|
| Log Sequence: | Subsequent Log In the Well |
| Reference Log Name: | SP-HRLA-PEX-CMR-GR Nuclear Resistivity Pri |
| Reference Log Run Number: | Suite-1, Run1 |
| Reference Log Date: | 24-Nov-2004 |

1. Subsequent run in hole. Log correlated to Schlumberger SP-HRLA-PEX-CMR-GR log, dated 24-Nov-0
2. Primary depth reference IDW-E
- 3.
- 4.
- 5.
- 6.

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OS1: SP-HRLA-PEX-CMR-G
OS2: VSI-GR
OS3: MDT-GR
OS4: MSCT-GR
OS5:

| |
|---|
| Subsequent run in hole. Log correlated to Run 1, SP-HRLA-PEX-CMR-GR, 24 November 2004. |
| Toolstring run as per tool sketch, with FMI and DSI centralised using 4 CMEZs. |
| DSI was run in the following modes: |
| Downlog in casing from 280m – P&S in Low Frequency Mode. |
| Downlog in openhole from 2400 to 3450m – P&S, Upper and Lower Dipole (downlogs not presented in final print). |
| Uplong in openhole from 3527m to casing shoe – P&S, Upper and Lower Dipole. |
| The main pass was logged from 3527m to casing shoe; the repeat section was logged from 3485m to 3385m. |
| Uplong in casing from 2400m to 1710m – P&S, Upper and Lower Dipole all in Low Frequency Mode. |
| Compressional delta-T source (DTCO) and shear delta-T source (DTSM) from upper dipole. |

Additional mud data: PV/YP = 49degC/51lbs/100ft2, Gels = 3/4/7 lbs/100ft2, LGS/HGS = 5.0/0.9%.

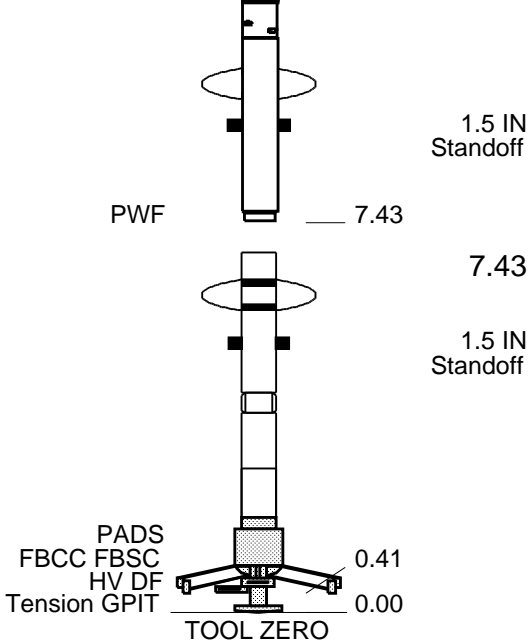
| EQUIPMENT DESCRIPTION | |
|-----------------------|-----|
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SURFACE EQUIPMENT

DOWNHOLE EQUIPMENT

1.5 IN
Standoff

FBST-B
ECH-MRA 4742
FBCC-A 794
AH-185 909
FBSH-A 855
GPIC-AC 735
FBSC-B 858
FBSS-B 830



MAXIMUM STRING DIAMETER 6.63 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

Client: Origin Energy Resources Ltd. Drawing Date: 12/2/2004

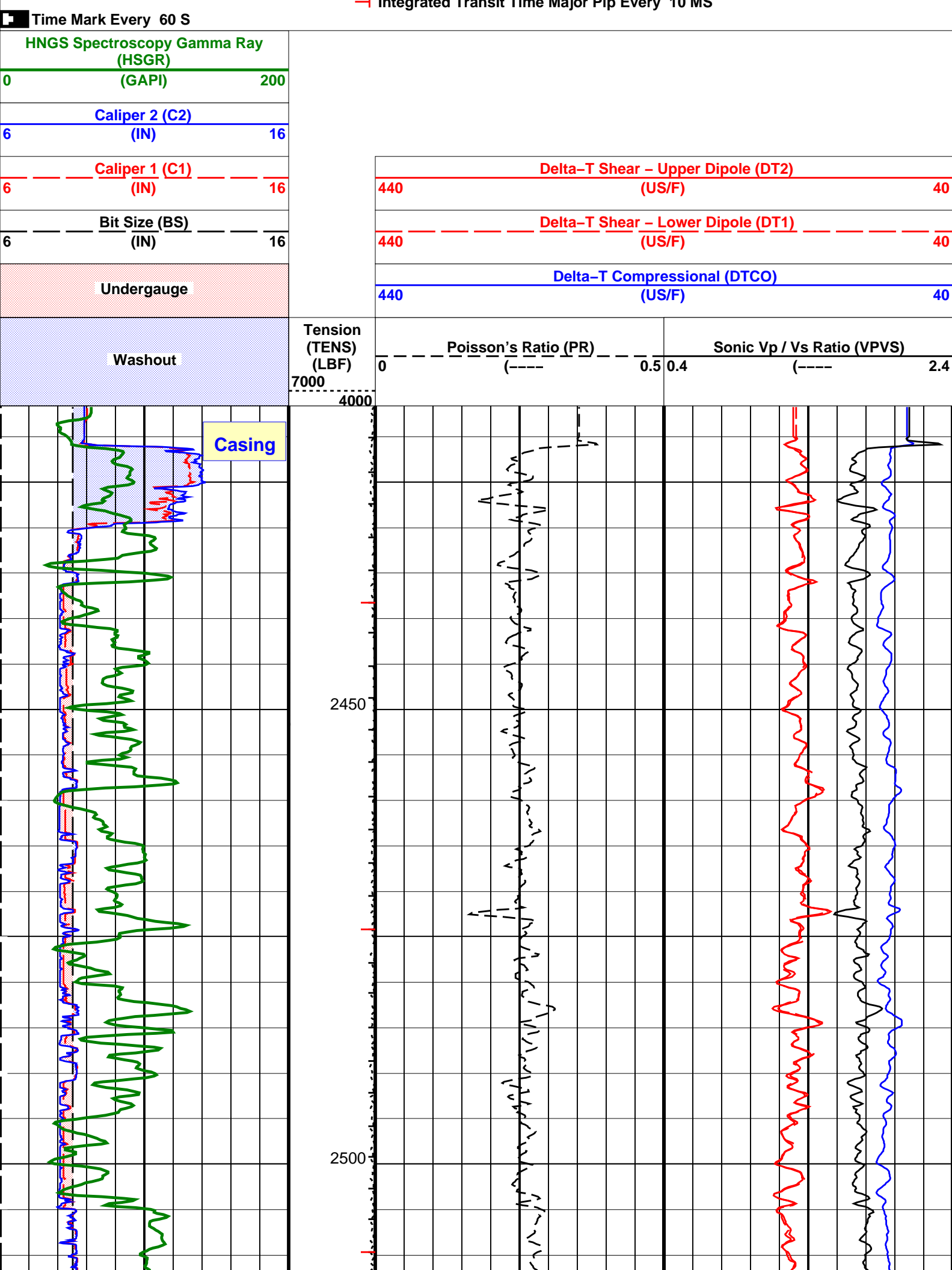
Well: Trefoil-1

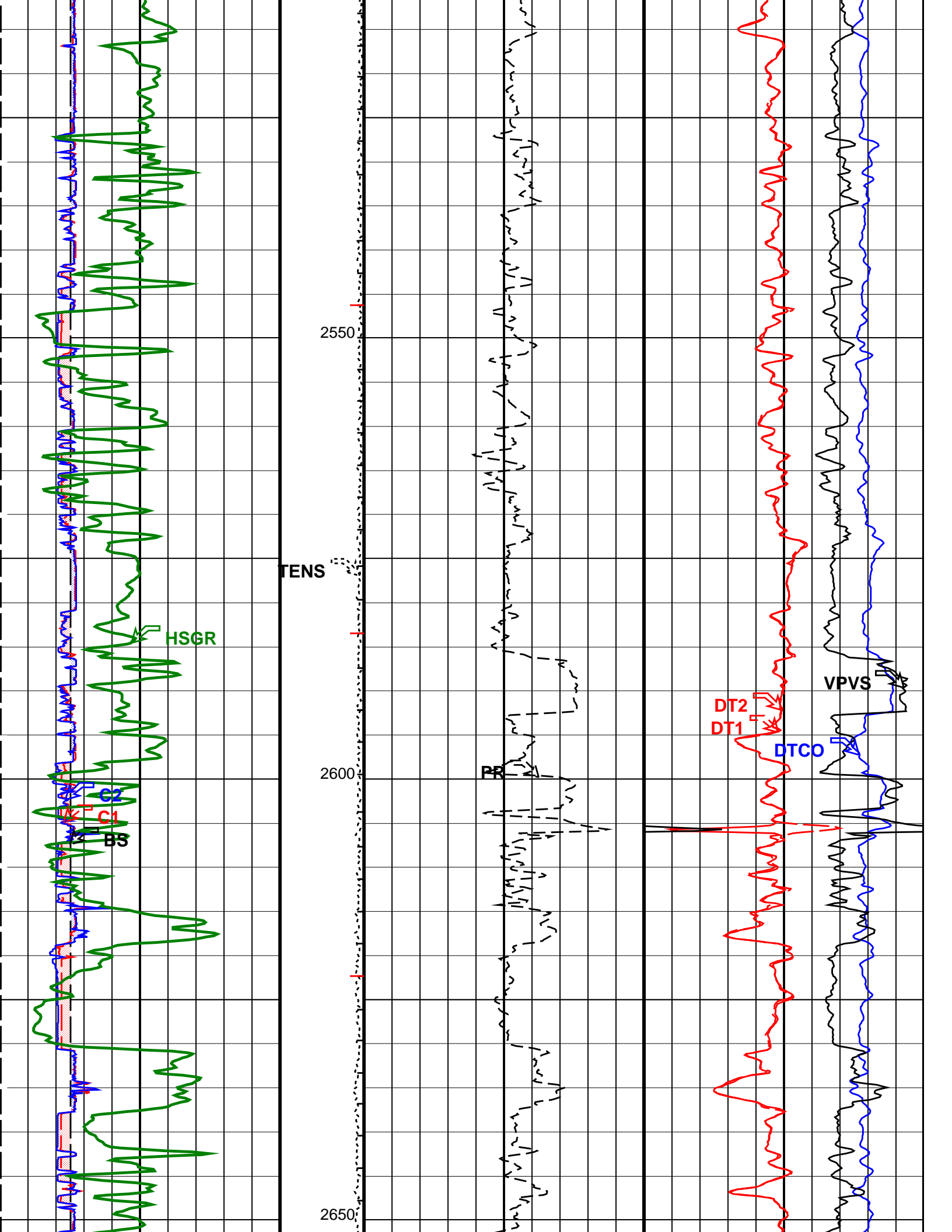
Field: Trefoil Rig Name: ENSCO 102

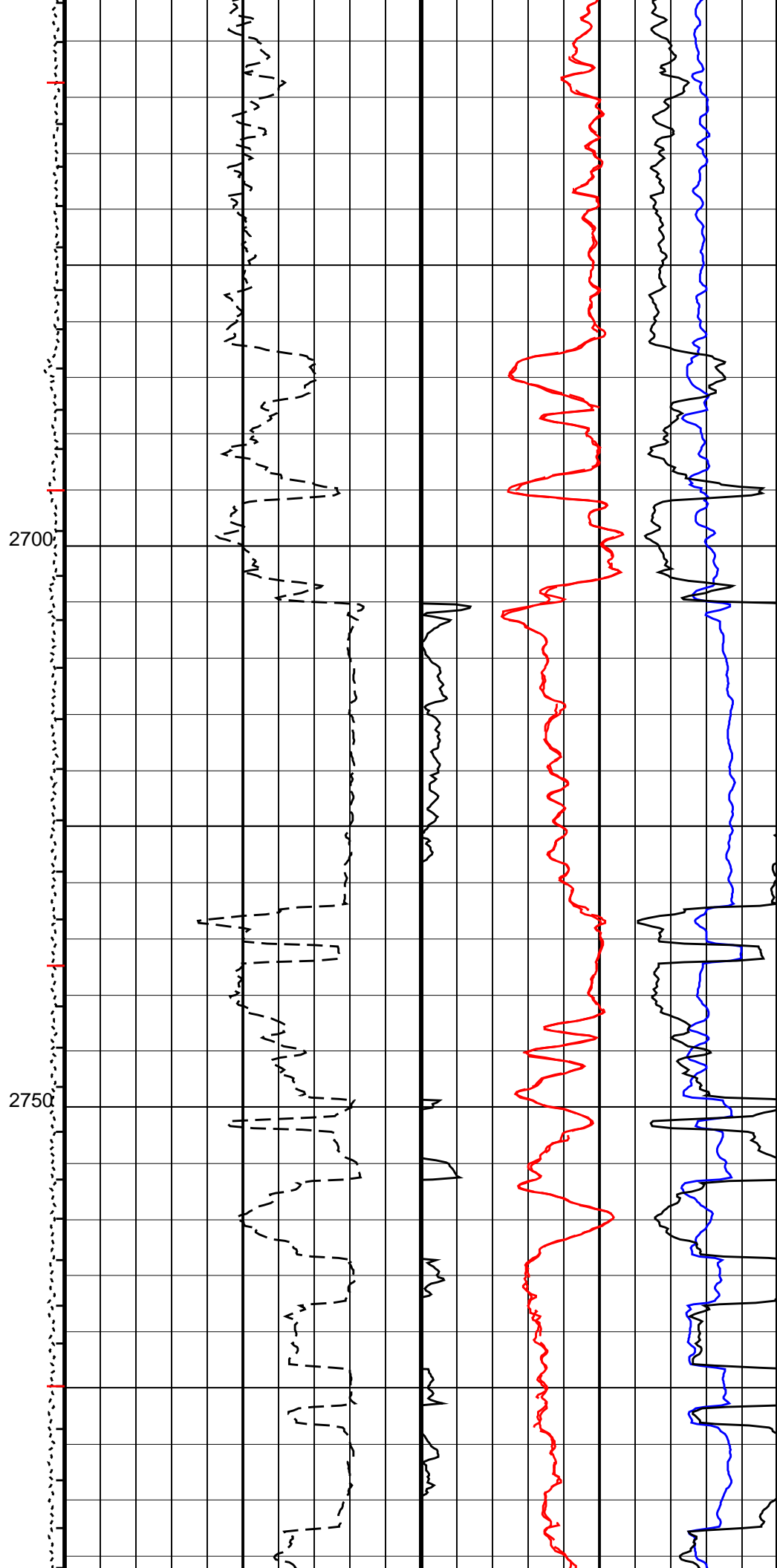
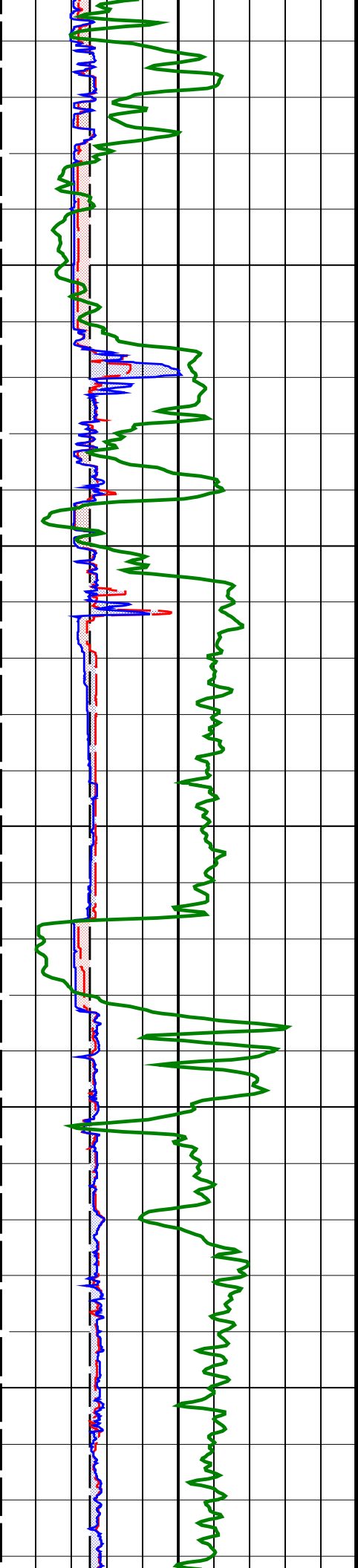
State: Tasmania Reference Datum: Mean Sea Level

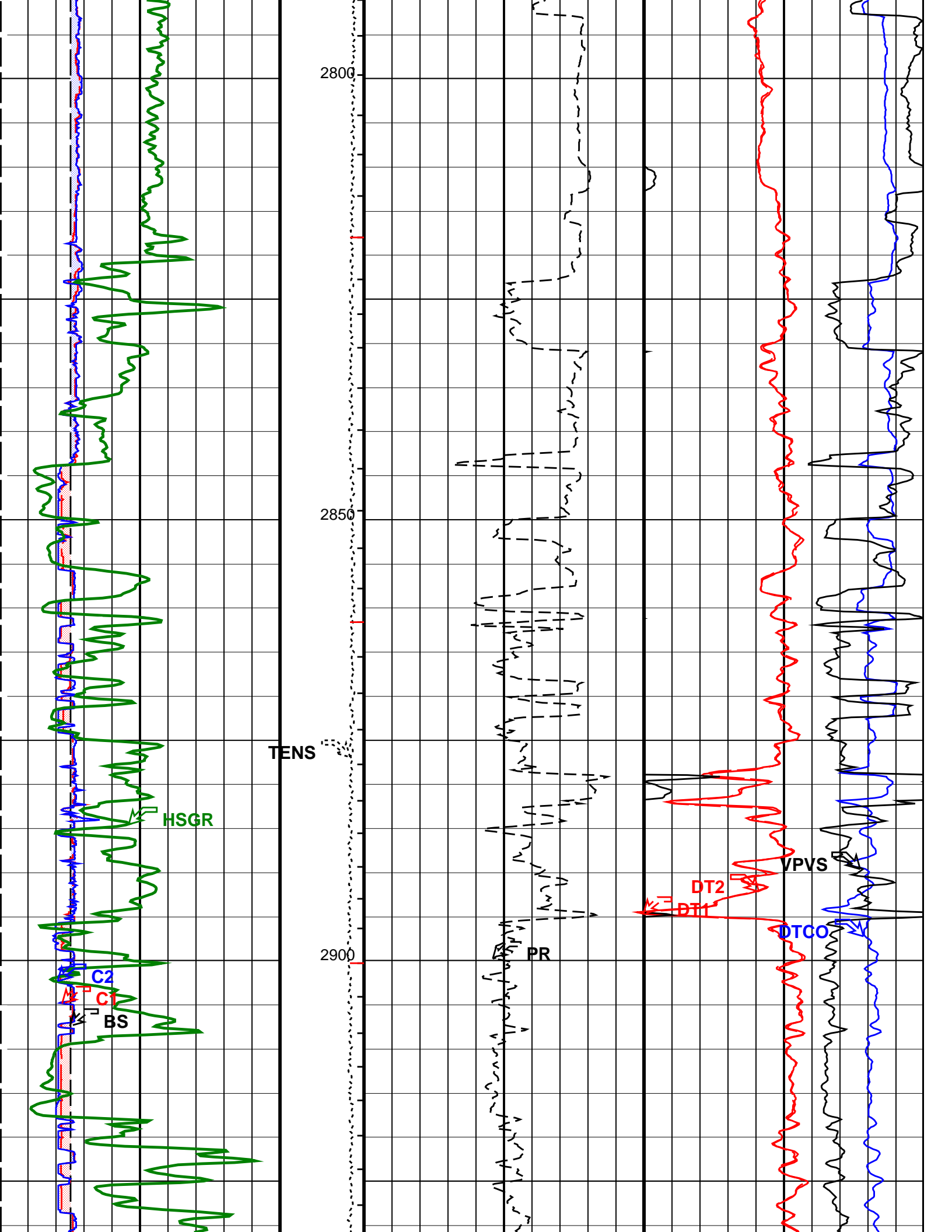
Country: Australia Elevation: 39.6 m

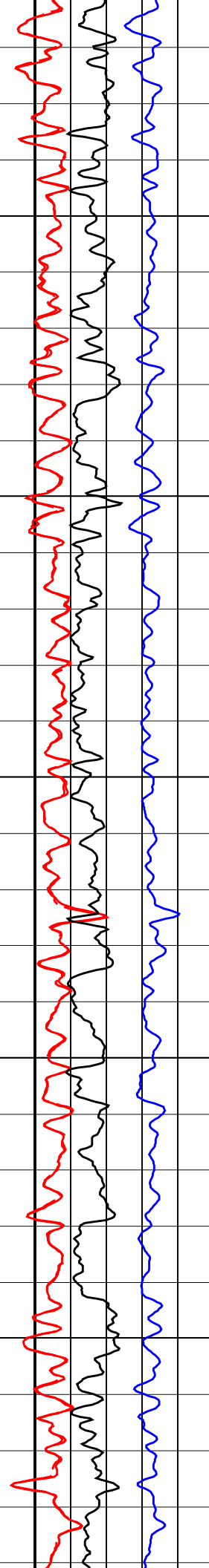
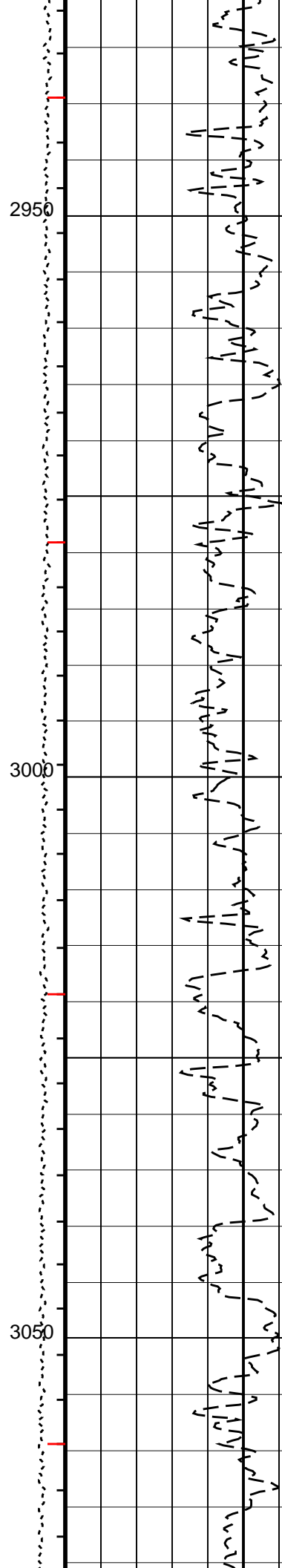
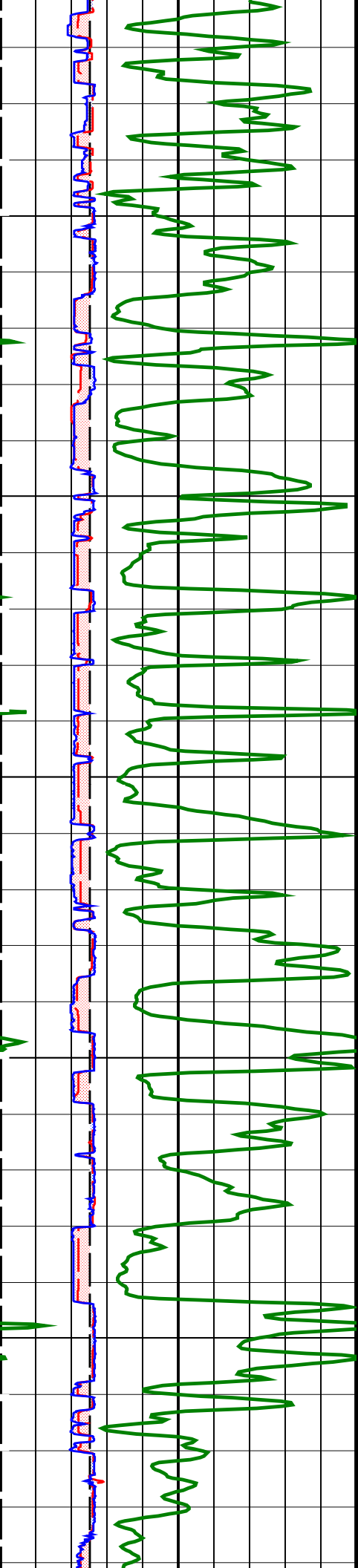
| Production String | (in) | | (m) | Well Schematic | (m) | (in) | | Casing String |
|-------------------|------|----|-----|----------------|-------|--------|----|---------------------------|
| | OD | ID | MD | | MD | OD | ID | |
| | | | | | 0.0 | 36.000 | | Borehole Segment |
| | | | | | 0.0 | 30.000 | | Casing String, 310 lb/ft |
| | | | | | 142.6 | 30.000 | | Casing Shoe |
| | | | | | 142.6 | 26.000 | | Borehole Segment |
| | | | | | 0.0 | 20.000 | | Casing String, 133 lb/ft |
| | | | | | 214.6 | 20.000 | | Casing Shoe |
| | | | | | 214.6 | 16.000 | | Borehole Segment |
| | | | | | 0.0 | 13.375 | | Casing String, 54.5 lb/ft |
| | | | | | 659.6 | 13.375 | | Casing Shoe |
| | | | | | 659.6 | 12.250 | | Borehole Segment |
| | | | | | 0.0 | 9.625 | | Casing String, 43.5 lb/ft |

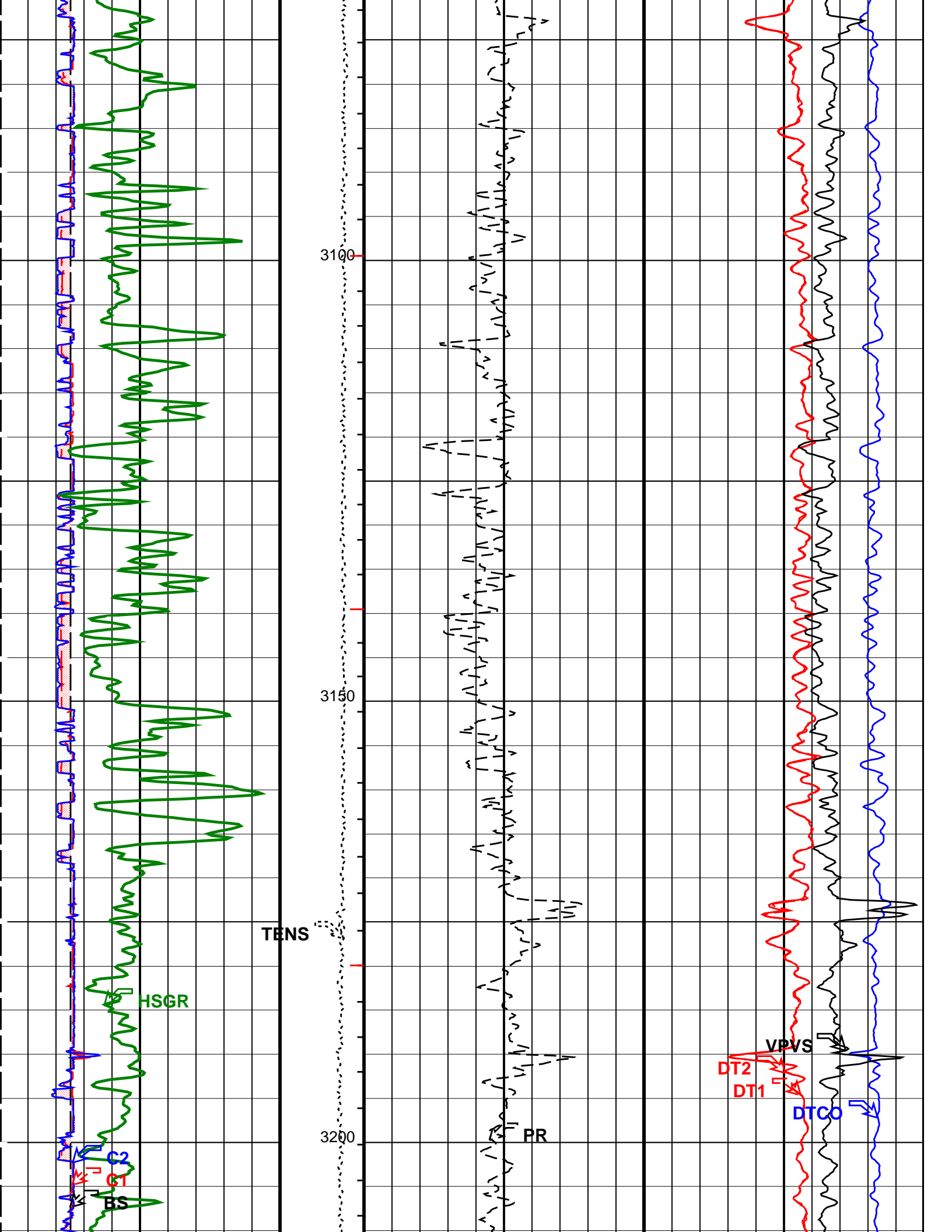


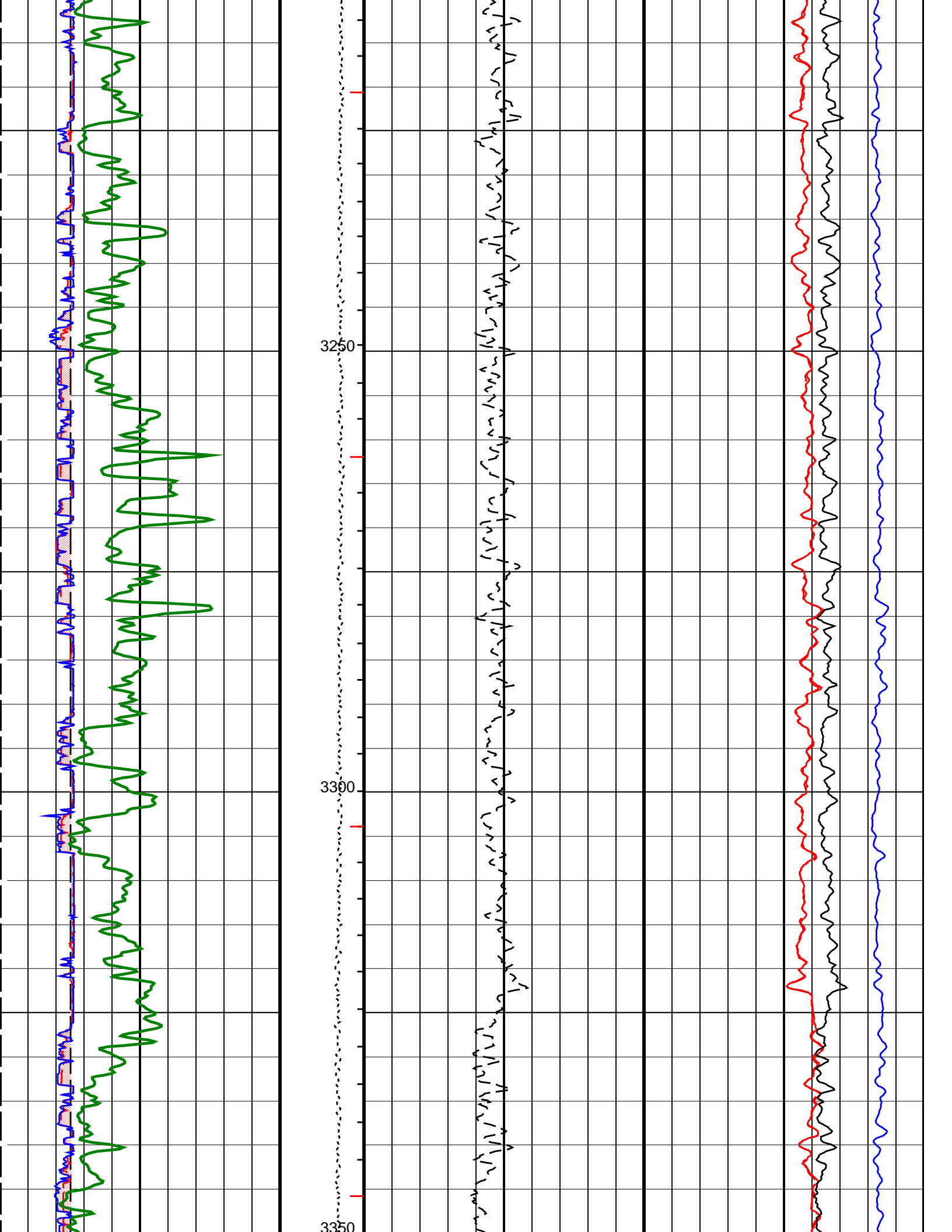


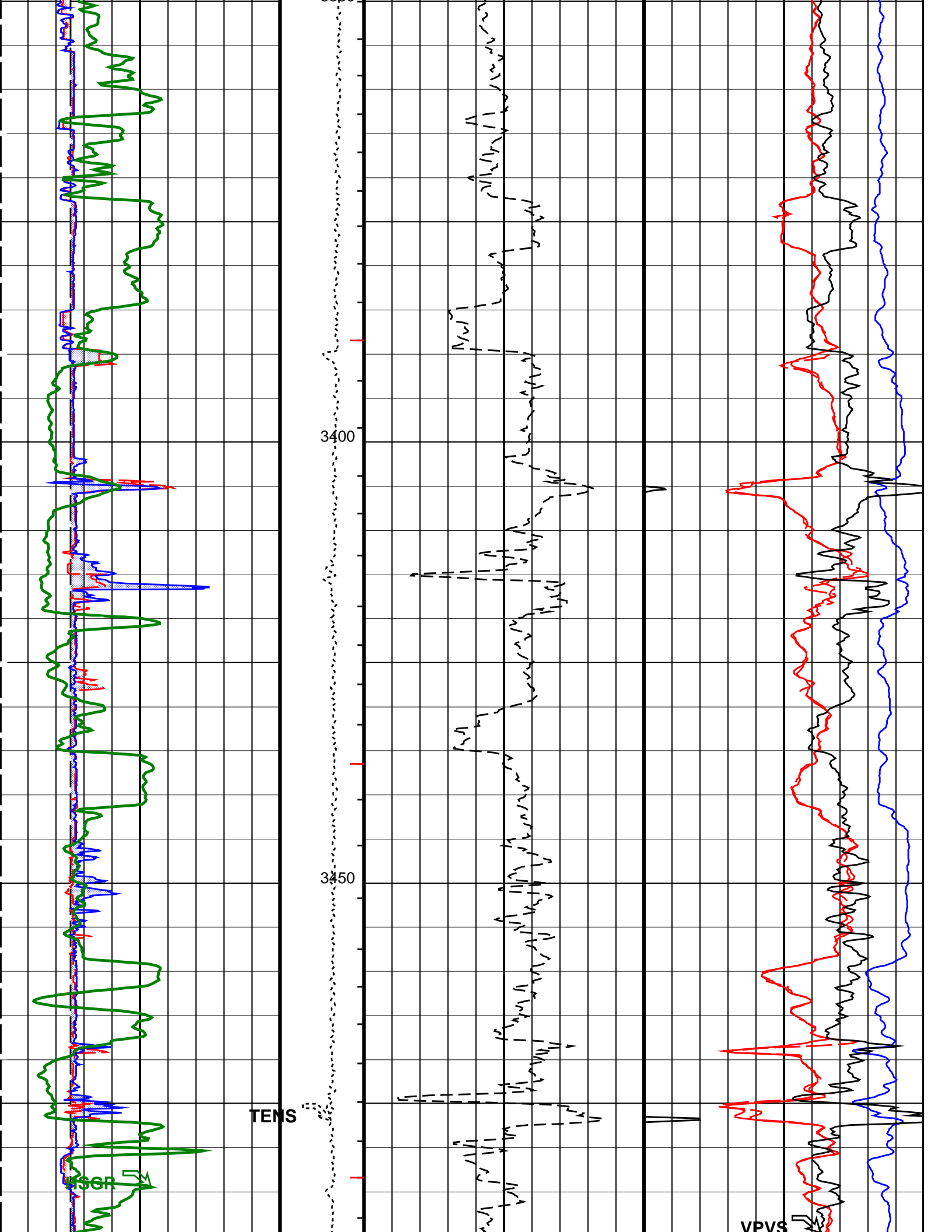


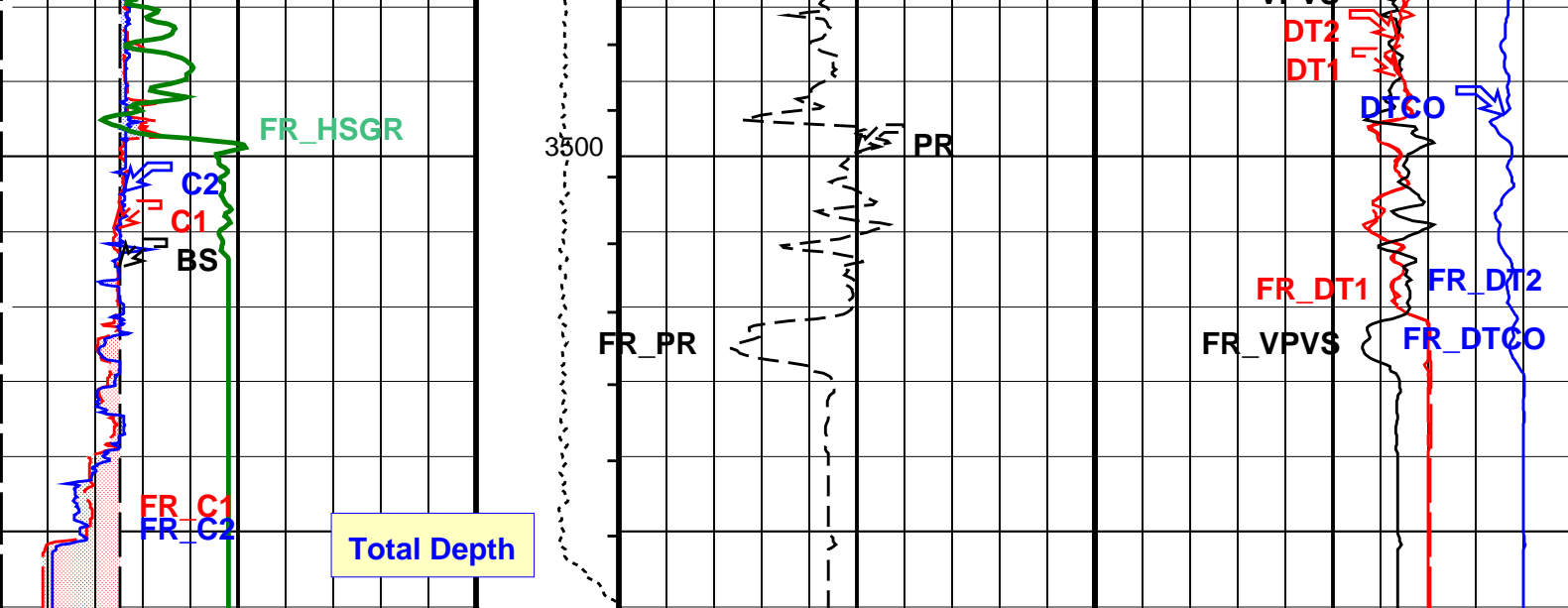












| | | | |
|---------------------------------------|----------------------------|------------------------------------|----------------------------|
| Washout | Tension (TENS) (LBF) | Poisson's Ratio (PR) | Sonic Vp / Vs Ratio (VPVS) |
| | 7000 4000 | 0 ----- 0.5 (-----) | 0.4 ----- 2.4 (-----) |
| Undergauge | | Delta-T Compressional (DTCO) | |
| | | 440 | (US/F) 40 |
| Bit Size (BS) | | Delta-T Shear – Lower Dipole (DT1) | |
| 6 ----- 16 (IN) | | 440 | (US/F) 40 |
| Caliper 1 (C1) | | Delta-T Shear – Upper Dipole (DT2) | |
| 6 ----- 16 (IN) | | 440 | (US/F) 40 |
| Caliper 2 (C2) | | | |
| 6 ----- 16 (IN) | | | |
| HNGS Spectroscopy Gamma Ray (HSGR) | | | |
| 0 ----- 200 (GAPI) | | | |

PIP SUMMARY

- ┆ Integrated Transit Time Minor Pip Every 1 MS
- ┆ Integrated Transit Time Major Pip Every 10 MS

Time Mark Every 60 S

Format: DSI_BCR_500 Vertical Scale: 1:500

Graphics File Created: 04-Dec-2004 17:03

OP System Version: 12C0-301

MCM

| | | | |
|--------|----------|---------|----------|
| FBST-B | 12C0-301 | DSST-B | 12C0-301 |
| HNGC-A | 12C0-301 | HNGS-BA | 12C0-301 |
| DTA-A | 12C0-301 | DTC-H | 12C0-301 |
| DTPC-A | 12C0-301 | | |

Input DLIS Files

| | | | | | | |
|---------|--------------------|--------|----------|-------------------|----------|----------|
| DEFAULT | FMI_DSI_NGS_344LUP | FN:554 | PRODUCER | 02-Dec-2004 10:56 | 3529.6 M | 2380.5 M |
|---------|--------------------|--------|----------|-------------------|----------|----------|

Output DLIS Files

| | | | | | | |
|---------|--------------------|-------|----------|-------------------|--|--|
| DEFAULT | FMI_DSI_NGS_042PUP | FN:41 | PRODUCER | 04-Dec-2004 17:03 | | |
|---------|--------------------|-------|----------|-------------------|--|--|

Company: Origin Energy Resources Ltd. Well: Trefoil-1

Input DLIS Files

DEFAULT FMI_DSI_NGS_344LUP FN:554 PRODUCER 02-Dec-2004 10:56 3529.6 M 2380.5 M

Output DLIS Files

DEFAULT FMI_DSI_NGS_042PUP FN:41 PRODUCER 04-Dec-2004 17:03 3530.3 M 2416.6 M

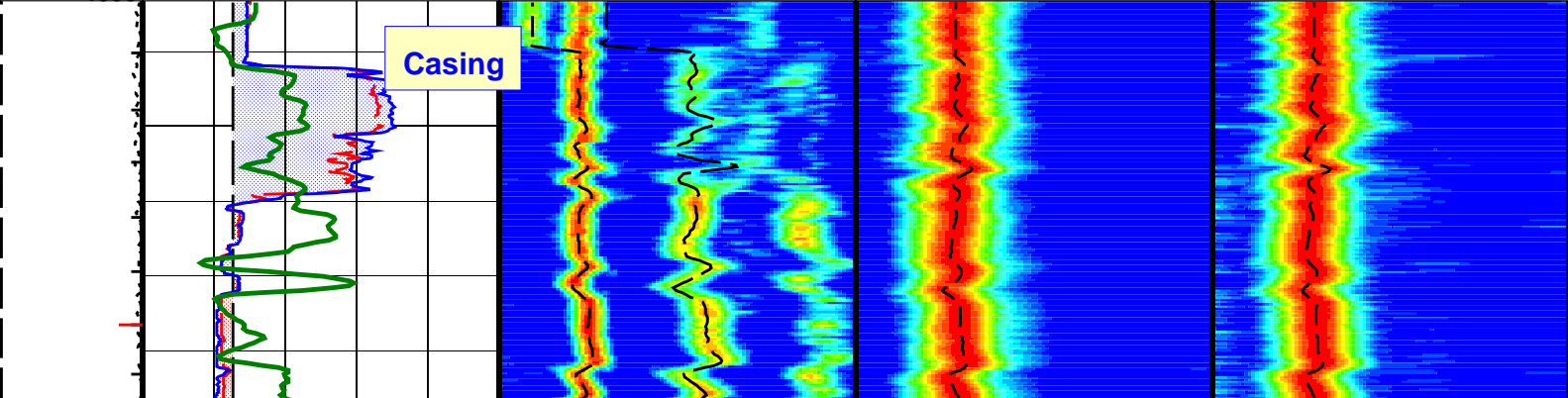
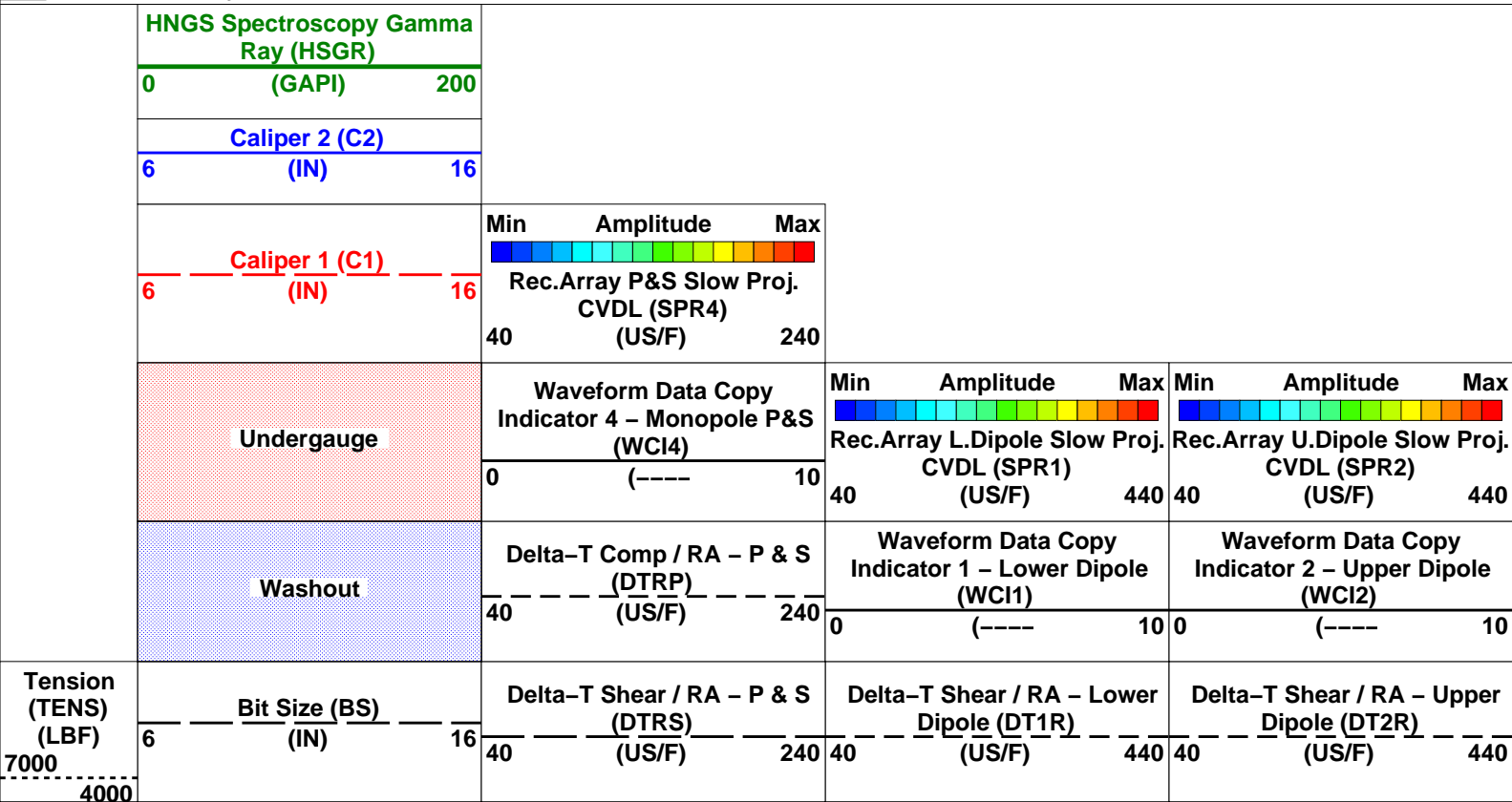
OP System Version: 12C0-301

MCM

| | | | |
|--------|----------|---------|----------|
| FBST-B | 12C0-301 | DSST-B | 12C0-301 |
| HNGC-A | 12C0-301 | HNGS-BA | 12C0-301 |
| DTA-A | 12C0-301 | DTC-H | 12C0-301 |
| DTPC-A | 12C0-301 | | |

PIP SUMMARY

- ⊥ Integrated Transit Time Minor Pip Every 1 MS
- Integrated Transit Time Major Pip Every 10 MS
- Time Mark Every 60 S



2450

2500

2550

TS

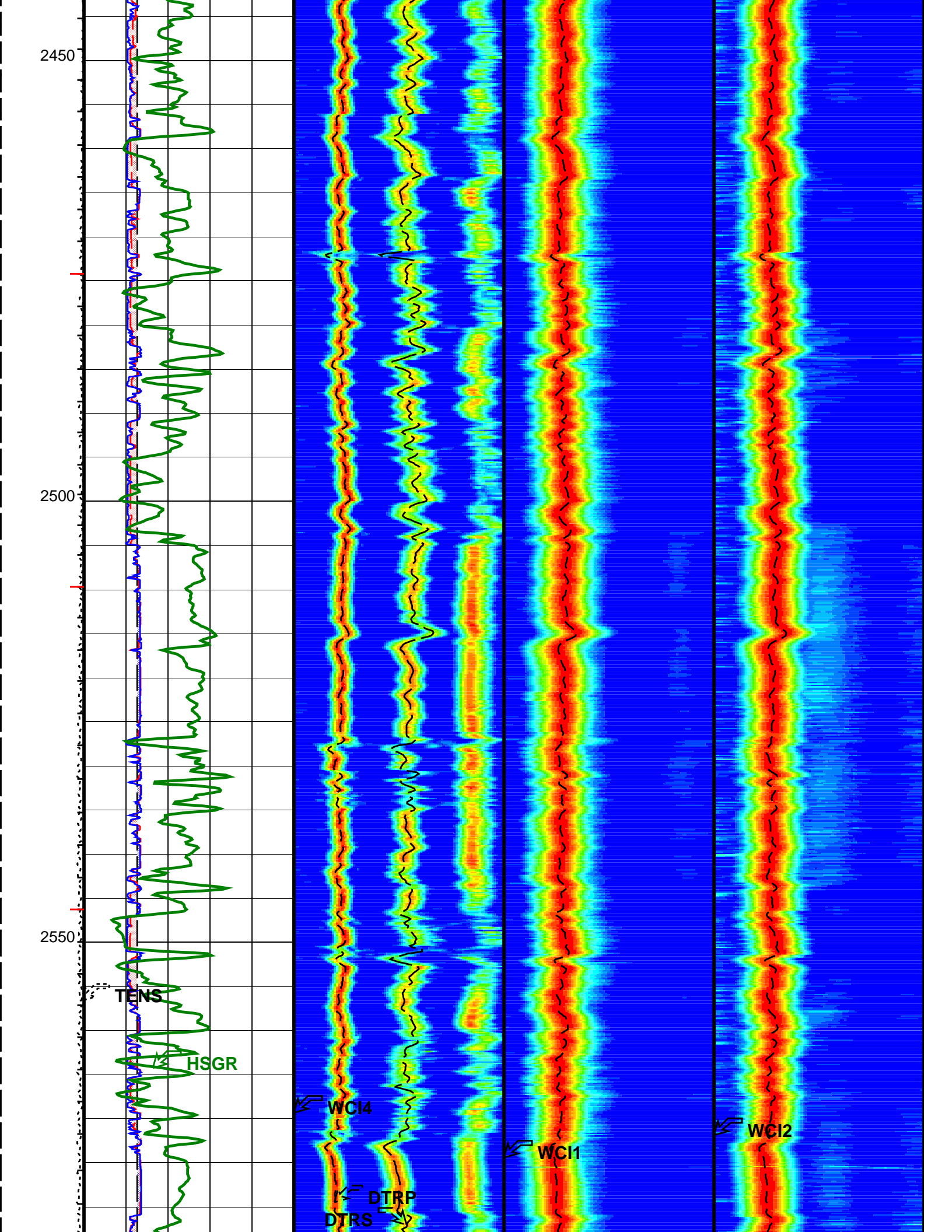
HSGR

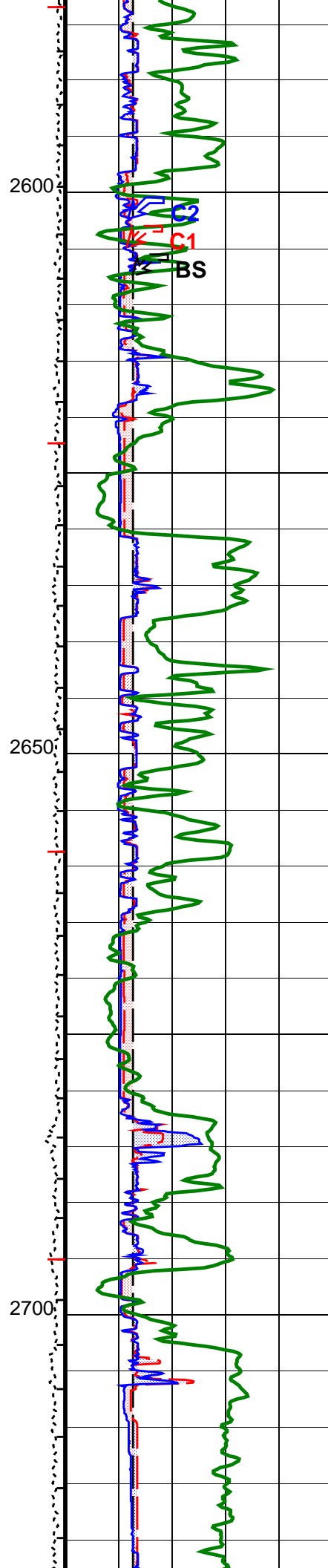
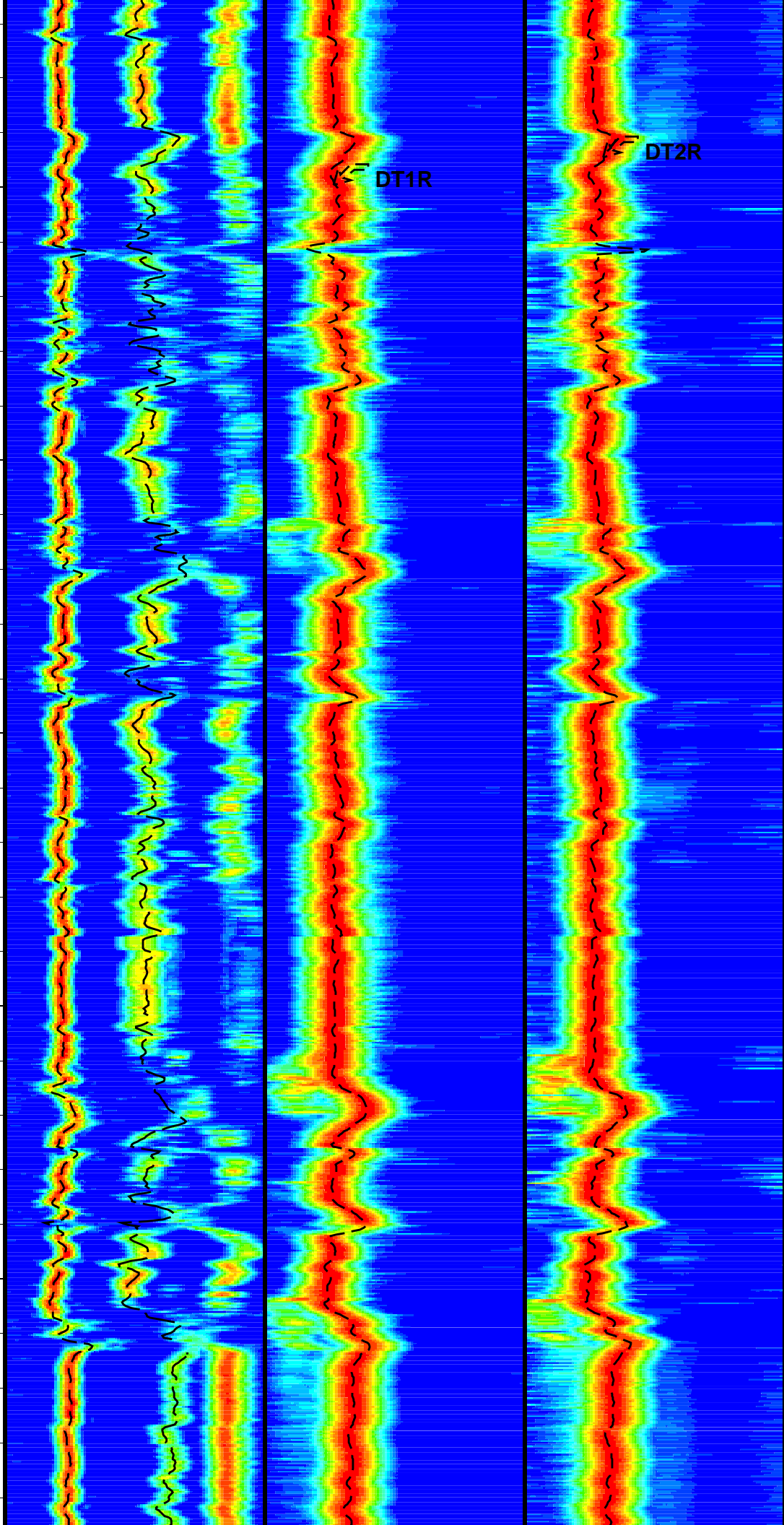
WCI4

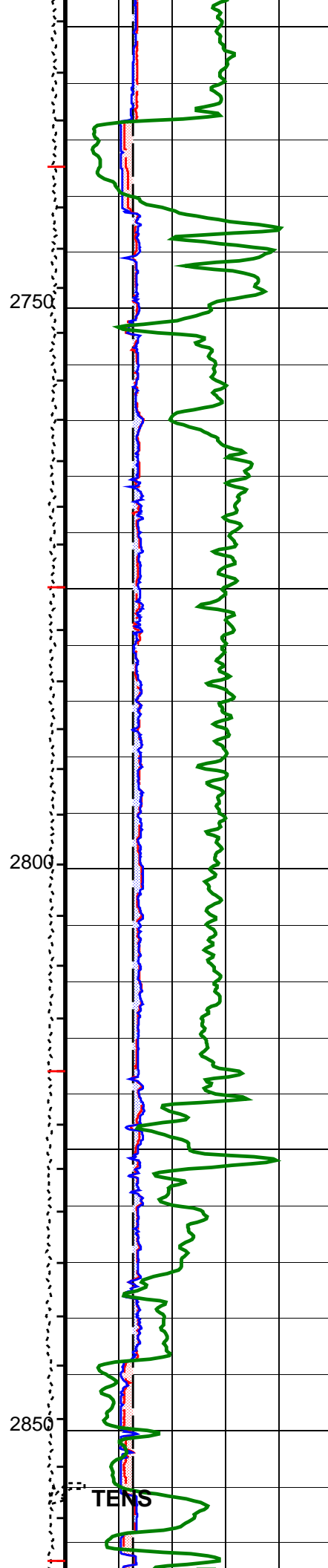
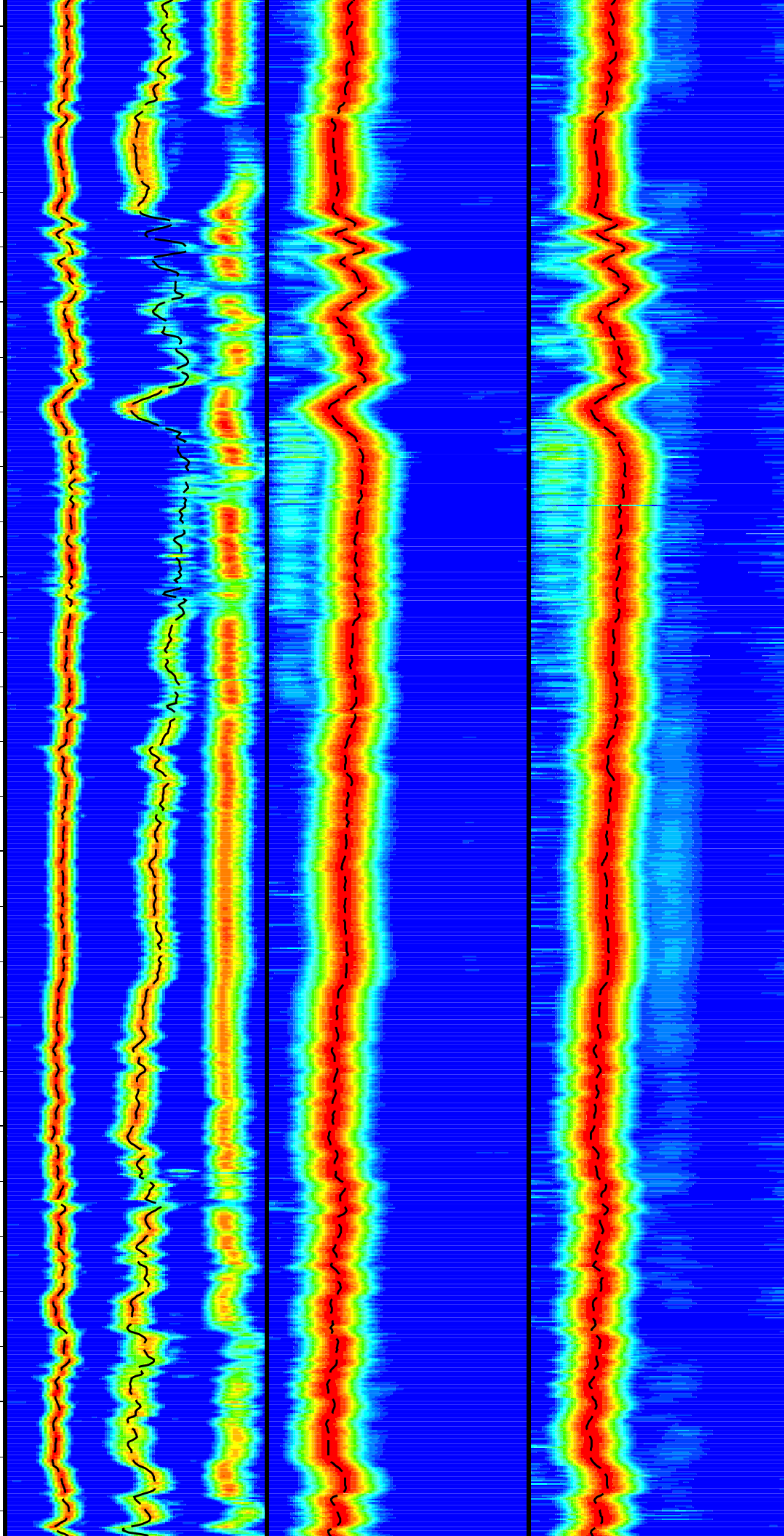
DTRP
DTRS

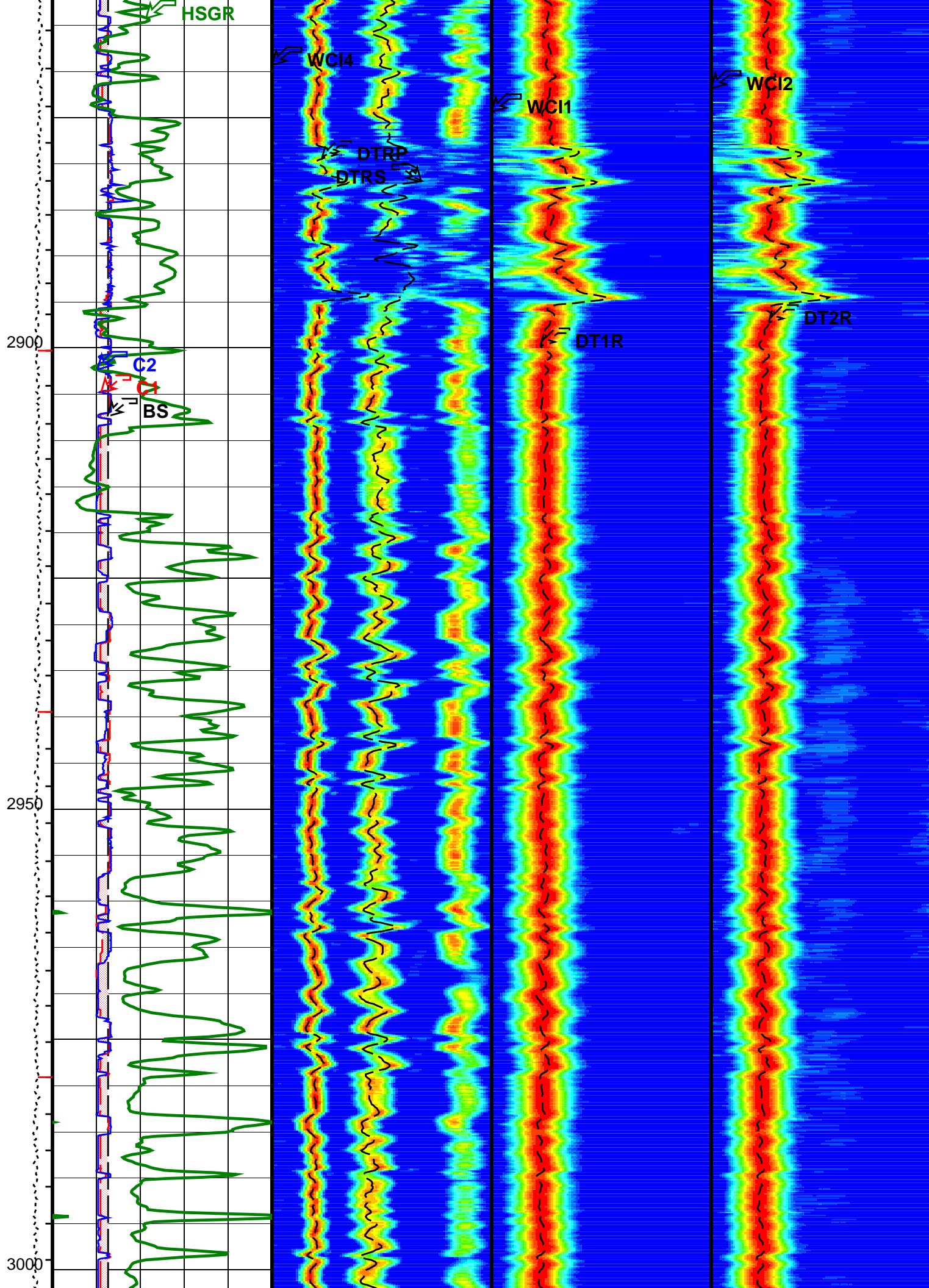
WCI1

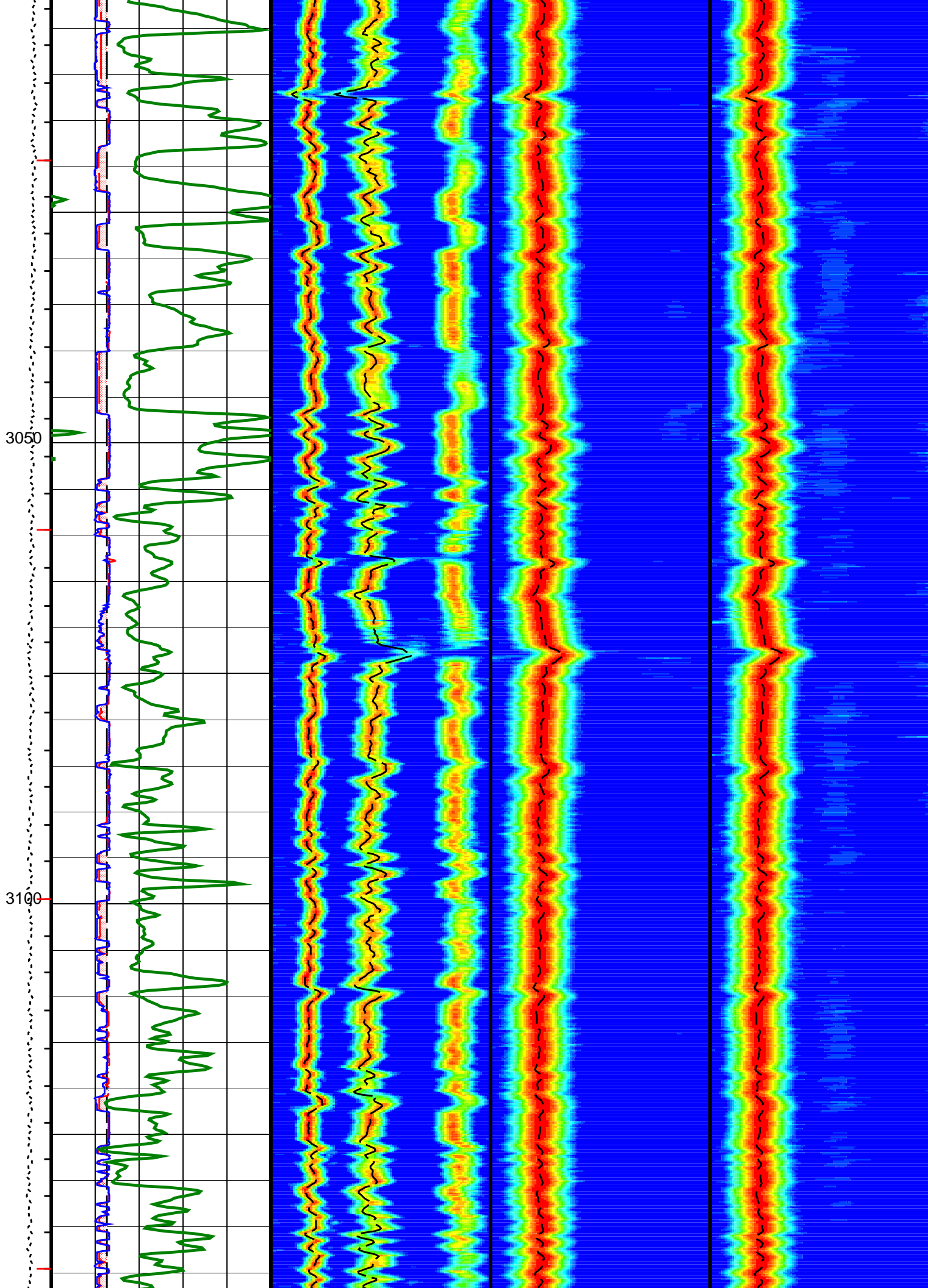
WCI2

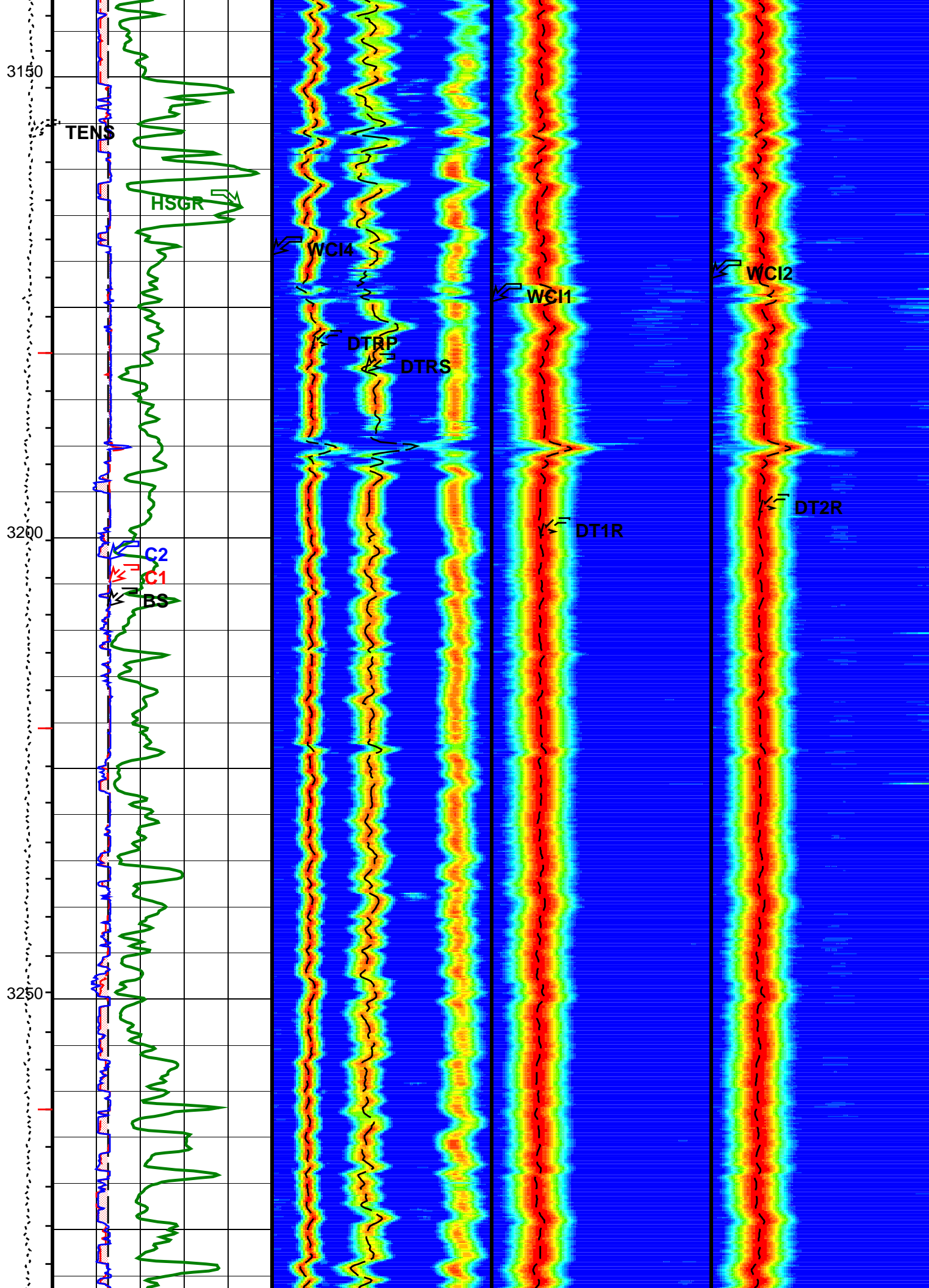


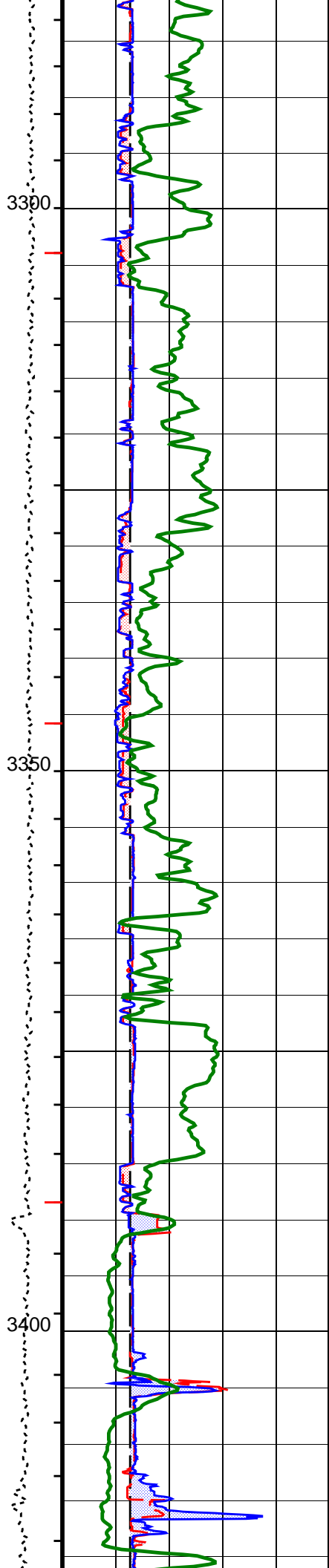
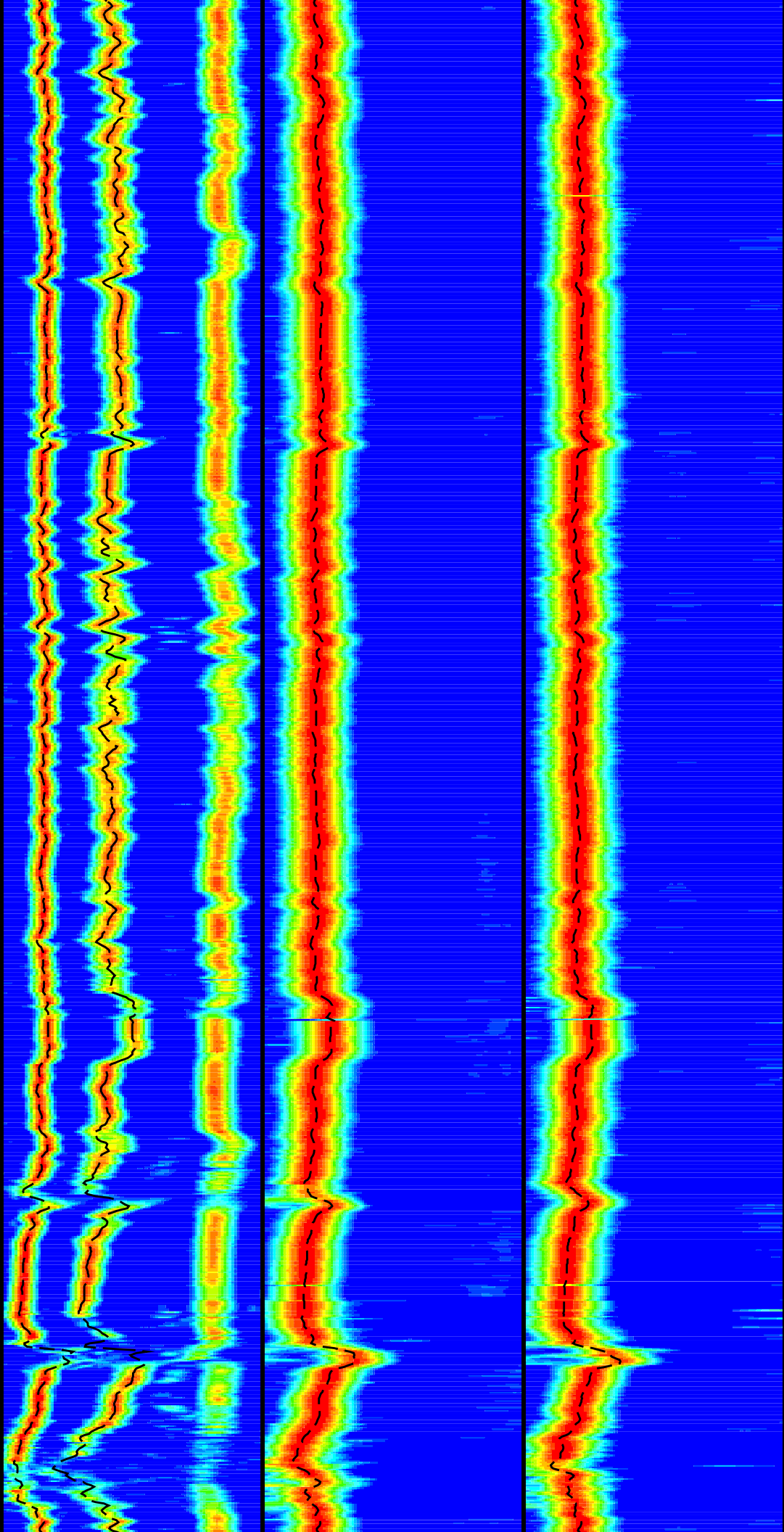


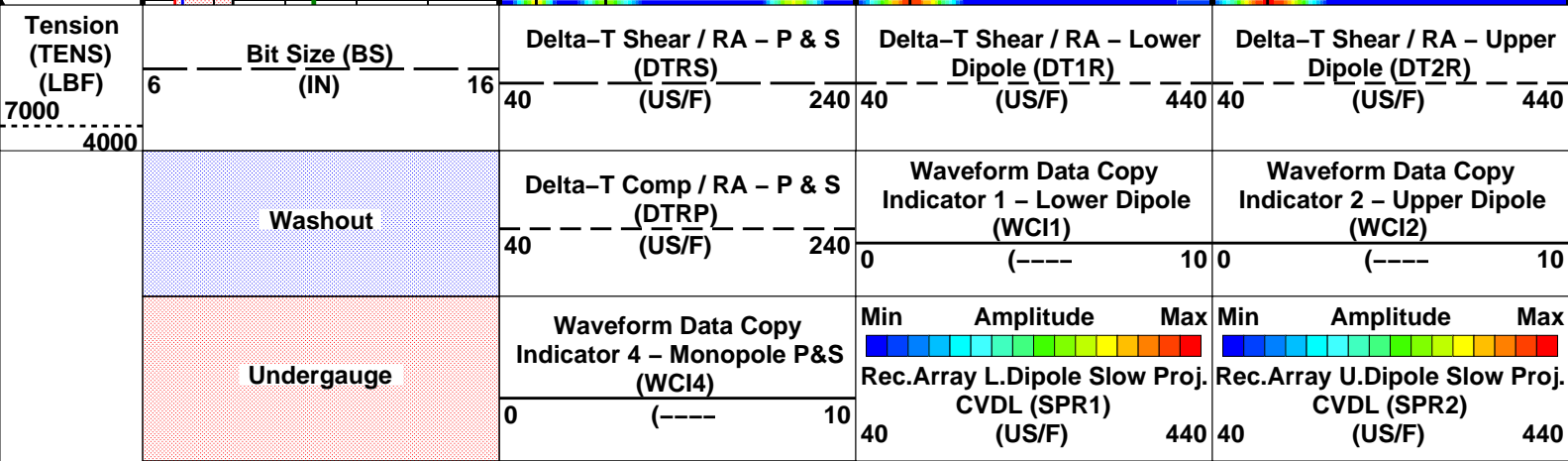
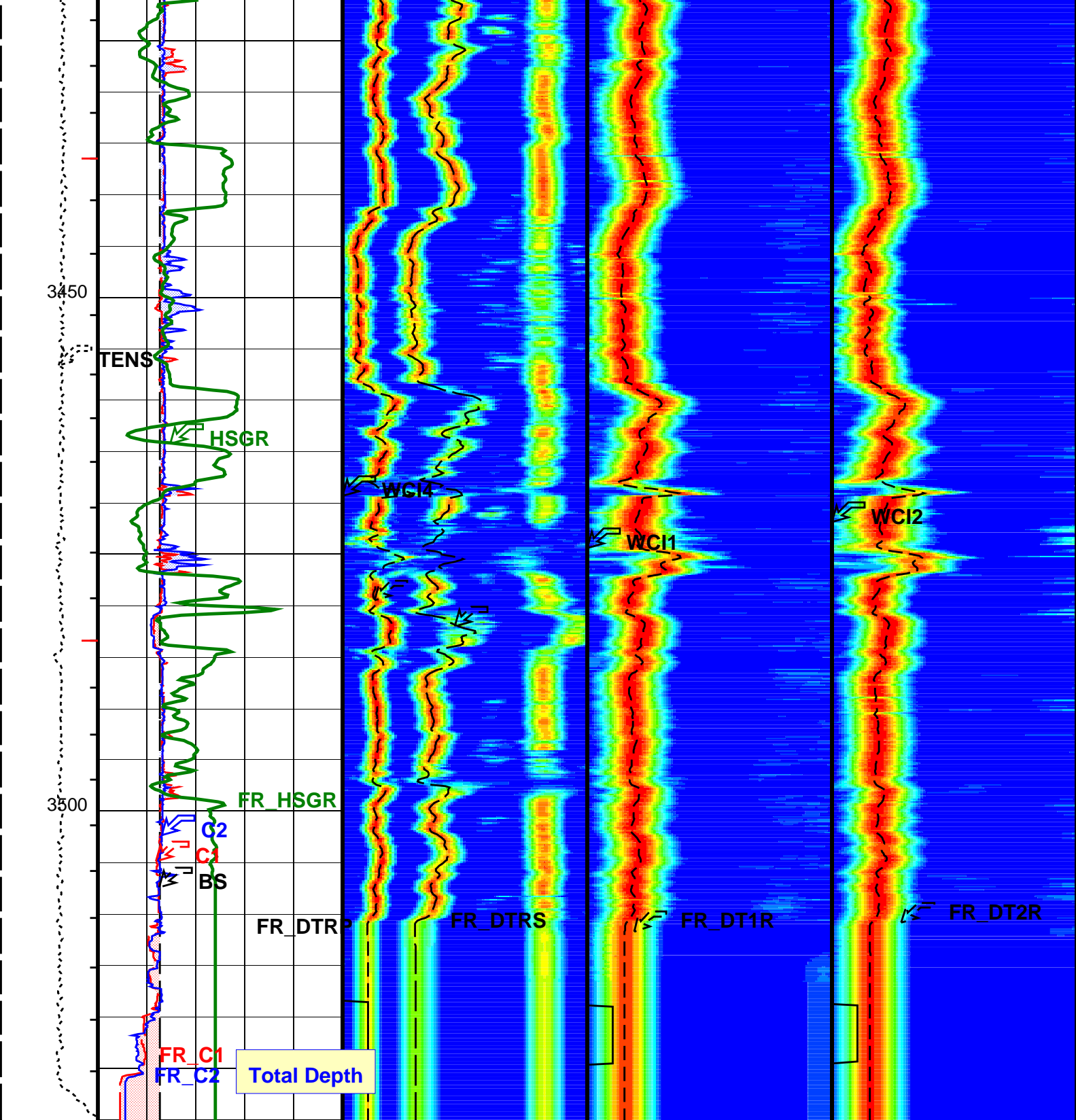












| | | | |
|---|--|--|--|
| <div>Caliper 1 (C1)</div> <div>6 (IN) 16</div> | | | <div><div>MinAmplitudeMax</div><div>Rec.Array P&S Slow Proj.</div><div>CVDL (SPR4)</div><div>(US/F)240</div></div> |
| <div>Caliper 2 (C2)</div> <div>6 (IN) 16</div> | | | |
| <div>HNGS Spectroscopy Gamma Ray (HSGR)</div> <div>0 (GAPI) 200</div> | | | |

| PIP SUMMARY | | |
|-------------|---|-------|
| ⊥ | Integrated Transit Time Minor Pip Every | 1 MS |
| → | Integrated Transit Time Major Pip Every | 10 MS |
| ■ | Time Mark Every | 60 S |

| Parameters | | |
|---------------------------------|--|------------|
| DLIS Name | Description | Value |
| DSST-B: Dipole Shear Imager – B | | |
| BHS | Borehole Status | OPEN |
| CASF | Label Casing Function – Monopole P&S | 50 |
| COLL | Label Slowness Lower Limit – Monopole P&S Compressional | 40 US/F |
| COUL | Label Slowness Upper Limit – Monopole P&S Compressional | 180 US/F |
| DDE1 | Digitizing Delay 1 | 0 US |
| DDE2 | Digitizing Delay 2 | 0 US |
| DDE4 | Digitizing Delay 4 | 0 US |
| DDEX | Digitizing Delay X | 0 US |
| DLCS | Label Compressional Source – Dipole Shear | USE |
| DSHL | Label Slowness Lower Limit – Dipole Shear | 75 US/F |
| DSHU | Label Slowness Upper Limit – Dipole Shear | 775 US/F |
| DSI1 | Digitizer Sample Interval 1 | 40 US |
| DSI2 | Digitizer Sample Interval 2 | 40 US |
| DSI4 | Digitizer Sample Interval 4 | 10 US |
| DSIX | Digitizer Sample Interval X | 40 US |
| DTCS | Compressional Delta-T Source for DTCO Channel | PS_COMP |
| DTF | Delta-T Fluid | 189 US/F |
| DWC1 | Digitizer Word Count 1 | 512 |
| DWC2 | Digitizer Word Count 2 | 512 |
| DWC4 | Digitizer Word Count 4 | 512 |
| DWCX | Digitizer Word Count X | 480 |
| FILG | Label Fill Gap Control – Monopole P&S | COMP_SHEAR |
| GCSE | Generalized Caliper Selection | BS |
| ITTS | Integrated Transit Time Source | DTCO |
| LFC | Label Formation Character – Monopole P&S | DYNAMIC |
| LTXG | Lower Dipole Transmitter Geometry | 156 IN |
| MCS | Mean Casing Slowness | 57 US/F |
| MTXG | Monopole Transmitter Geometry | 186 IN |
| NWI1 | Number Waveform Items 1 | 8 |
| NWI2 | Number Waveform Items 2 | 8 |
| NWI4 | Number Waveform Items 4 | 8 |
| NWIX | Number Waveform Items X | 0 |
| RSMN | Label Shear/Compressional Minimum Ratio – Monopole P&S | 1.4 |
| RSMX | Label Shear/Compressional Maximum Ratio – Monopole P&S | 2.12 |
| RX1G | Receiver 1 Geometry | 294 IN |
| RX2G | Receiver 2 Geometry | 300 IN |
| RX3G | Receiver 3 Geometry | 306 IN |
| RX4G | Receiver 4 Geometry | 312 IN |
| RX5G | Receiver 5 Geometry | 318 IN |
| RX6G | Receiver 6 Geometry | 324 IN |
| RX7G | Receiver 7 Geometry | 330 IN |
| RX8G | Receiver 8 Geometry | 336 IN |
| SAM1 | DSST Sonic Acquisition Mode 1 – Lower Dipole Mode | EVEN |
| SAM2 | DSST Sonic Acquisition Mode 2 – Upper Dipole Mode | ODD |
| SAM4 | DSST Sonic Acquisition Mode 4 – High Frequency Monopole Mode for P&S | EVEN |
| SAMX | DSST Sonic Acquisition Mode X – Both Dipoles or Monopole Mode for Expert | OFF |
| SAS1 | STC Sonic Array Status – Lower Dipole | 255 |
| SAS2 | STC Sonic Array Status – Upper Dipole | 255 |
| SAS4 | STC Sonic Array Status – Monopole P&S | 255 |
| SBO1 | STC Search Band Offset – Lower Dipole | 3000 US |
| SBO2 | STC Search Band Offset – Upper Dipole | 3000 US |
| SBO4 | STC Search Band Offset – Monopole P&S | 500 US |
| SBR4 | STC Baseline Removal – Monopole P&S | ON |
| SBW1 | STC Search Bandwidth – Lower Dipole | 8000 US |
| SBW2 | STC Search Bandwidth – Upper Dipole | 8000 US |
| SBW4 | STC Search Bandwidth – Monopole P&S | 2000 US |

| | | | |
|--|--|-------------|------|
| SBW4 | STC Search Bandwidth – Monopole P&S | 2000 | US |
| SFC1 | STC Formation Character – Lower Dipole | SELECTABLE | |
| SFC2 | STC Formation Character – Upper Dipole | SELECTABLE | |
| SFC4 | STC Formation Character – Monopole P&S | SELECTABLE | |
| SFM1 | STC Filter – Lower Dipole | B1–3K | |
| SFM2 | STC Filter – Upper Dipole | B1–3K | |
| SFM4 | STC Filter – Monopole P&S | B3–20K | |
| SHLL | Label Slowness Lower Limit – Monopole P&S Shear | 75 | US/F |
| SHUL | Label Slowness Upper Limit – Monopole P&S Shear | 180 | US/F |
| SLL1 | STC Slowness Lower Limit – Lower Dipole | 40 | US/F |
| SLL2 | STC Slowness Lower Limit – Upper Dipole | 40 | US/F |
| SLL4 | STC Slowness Lower Limit – Monopole P&S | 40 | US/F |
| SST1 | STC Slowness Step – Lower Dipole | 4 | US/F |
| SST2 | STC Slowness Step – Upper Dipole | 4 | US/F |
| SST4 | STC Slowness Step – Monopole P&S | 2 | US/F |
| SSW1 | STC Source Waveform – Lower Dipole | WF_SAM1 | |
| SSW2 | STC Source Waveform – Upper Dipole | WF_SAM2 | |
| SSW4 | STC Source Waveform – Monopole P&S | WF_SAM4 | |
| STLL | Label Slowness Lower Limit – Monopole Stoneley | 180 | US/F |
| STUL | Label Slowness Upper Limit – Monopole Stoneley | 780 | US/F |
| SUL1 | STC Slowness Upper Limit – Lower Dipole | 775 | US/F |
| SUL2 | STC Slowness Upper Limit – Upper Dipole | 775 | US/F |
| SUL4 | STC Slowness Upper Limit – Monopole P&S | 240 | US/F |
| SWD1 | STC Slowness Width – Lower Dipole | 40 | US/F |
| SWD2 | STC Slowness Width – Upper Dipole | 40 | US/F |
| SWD4 | STC Slowness Width – Monopole P&S | 10 | US/F |
| TBF1 | STC Time for Baseline Fill – Lower Dipole | 0 | US |
| TBF2 | STC Time for Baseline Fill – Upper Dipole | 0 | US |
| TBF4 | STC Time for Baseline Fill – Monopole P&S | 300 | US |
| TLL1 | STC Time Lower Limit – Lower Dipole | 600 | US |
| TLL2 | STC Time Lower Limit – Upper Dipole | 600 | US |
| TLL4 | STC Time Lower Limit – Monopole P&S | 150 | US |
| TST1 | STC Time Step – Lower Dipole | 200 | US |
| TST2 | STC Time Step – Upper Dipole | 200 | US |
| TST4 | STC Time Step – Monopole P&S | 50 | US |
| TUL1 | STC Time Upper Limit – Lower Dipole | 15912.5 | US |
| TUL2 | STC Time Upper Limit – Upper Dipole | 15525 | US |
| TUL4 | STC Time Upper Limit – Monopole P&S | 3660 | US |
| TWD1 | STC Time Width – Lower Dipole | 2000 | US |
| TWD2 | STC Time Width – Upper Dipole | 2000 | US |
| TWD4 | STC Time Width – Monopole P&S | 1000 | US |
| TWI1 | STC Integration Time Window – Lower Dipole | 1600 | US |
| TWI2 | STC Integration Time Window – Upper Dipole | 1600 | US |
| TWI4 | STC Integration Time Window – Monopole P&S | 500 | US |
| TWSX | Transmitter Waveform Select X | 0 | |
| UTXG | Upper Dipole Transmitter Geometry | 162 | IN |
| WFM1 | Waveform Mode 1 | W1 | |
| WFM2 | Waveform Mode 2 | W1 | |
| WFM4 | Waveform Mode 4 | W1 | |
| HNGB–BA: Hostile Natural Gamma Ray Sonde | | | |
| BAR1 | HNGB Detector 1 Barite Constant | 1 | |
| BAR2 | HNGB Detector 2 Barite Constant | 1 | |
| BHK | HNGB Borehole Potassium Correction Concentration | 0 | |
| BHS | Borehole Status | OPEN | |
| CSD1 | Inner Casing Outer Diameter | 9.625 | IN |
| CSD2 | Outer Casing Outer Diameter | 13.375 | IN |
| CSW1 | Inner Casing Weight | 43.5 | LB/F |
| CSW2 | Outer Casing Weight | 54.5 | LB/F |
| DBCC | HNGB Barite Constant Correction Flag | NONE | |
| GCSE | Generalized Caliper Selection | BS | |
| H1P | HNGB Detector 1 Allow/Disallow In Processing | ALLOW | |
| H2P | HNGB Detector 2 Allow/Disallow In Processing | ALLOW | |
| HABK | HNGB Borehole Potassium Running Average | –0.00391936 | |
| HALF | HNGB Alpha Filter Length | 60 | IN |
| HCRB | HNGB Apply Borehole Potassium Correction | NONE | |
| HMWM | Mud Weighting Material | NATU | |
| HNPE | HNGB Processing Enable | YES | |
| S1BI | HNGB Detector 1 Calibration Bismuth Count Rate | 1.3 | CPS |
| S2BI | HNGB Detector 2 Calibration Bismuth Count Rate | 1.3 | CPS |
| SGRC | HNGB Standard Gamma-Ray Correction Flag | YES | |
| TPOS | Tool Position | ECCE | |
| VBA1 | HNGB Detector 1 Variable Barite Factor Running Average | 0.998909 | |
| VBA2 | HNGB Detector 2 Variable Barite Factor Running Average | 1.00683 | |
| HOLEV: Integrated Hole/Cement Volume | | | |
| BHS | Borehole Status | OPEN | |
| GCSE | Generalized Caliper Selection | BS | |
| System and Miscellaneous | | | |
| BS | Bit Size | 8.500 | IN |
| DFD | Drilling Fluid Density | 9.40 | LB/G |
| DO | Depth Offset for Playback | 0.8 | M |
| PP | Playback Processing | RECOMPUTE | |

MCM

FBST-B 12C0-301
 HNGC-A 12C0-301
 DTA-A 12C0-301
 DTPC-A 12C0-301

DSST-B 12C0-301
 HNGS-BA 12C0-301
 DTC-H 12C0-301

Input DLIS Files

DEFAULT FMI_DSI_NGS_344LUP FN:554 PRODUCER 02-Dec-2004 10:56 3529.6 M 2380.5 M

Output DLIS Files

DEFAULT FMI_DSI_NGS_042PUP FN:41 PRODUCER 04-Dec-2004 17:03



**Repeat Analysis
(1:500)**

MAXIS Field Log

Company: Origin Energy Resources Ltd.

Well: Trefoil-1

Input DLIS Files

DEFAULT FMI_DSI_NGS_042PUP FN:41 PRODUCER 04-Dec-2004 17:03 3530.3 M 2416.6 M

Output DLIS Files

DEFAULT FMI_DSI_NGS_050PUP FN:49 PRODUCER 04-Dec-2004 17:38 3488.0 M 3376.6 M

OP System Version: 12C0-301

MCM

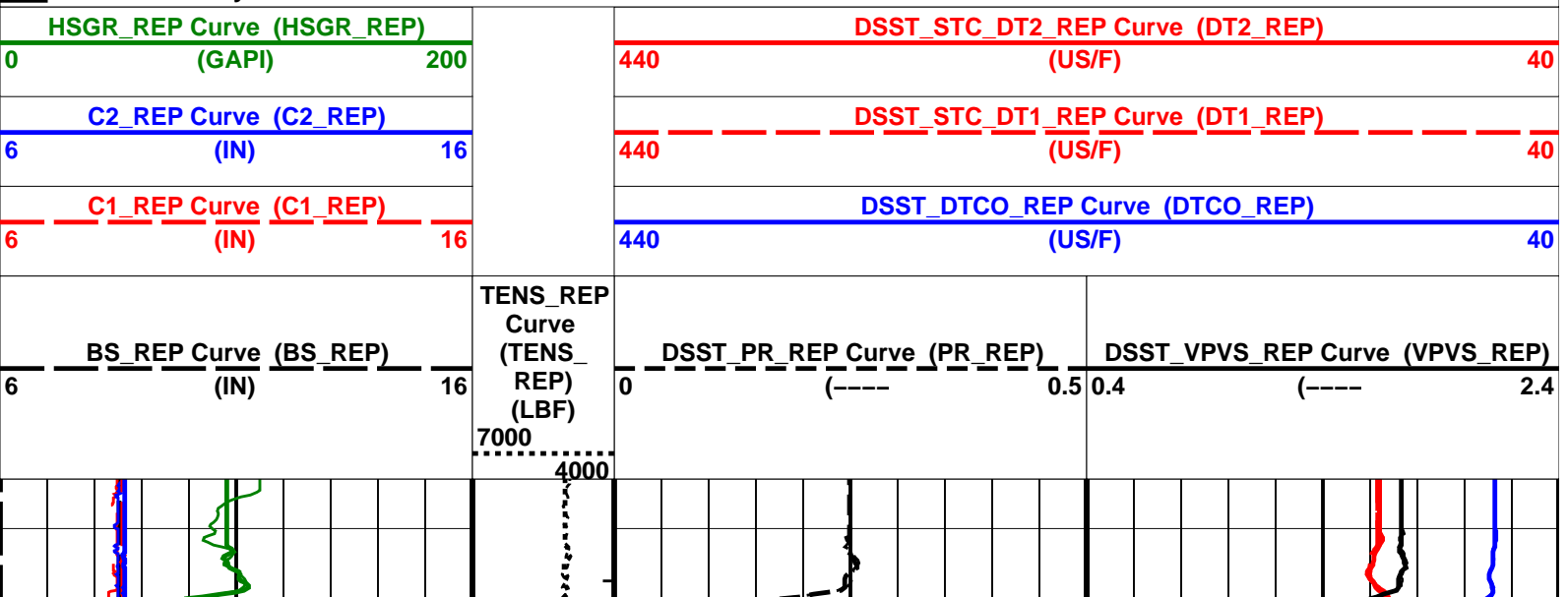
FBST-B 12C0-301
 HNGC-A 12C0-301
 DTA-A 12C0-301
 DTPC-A 12C0-301

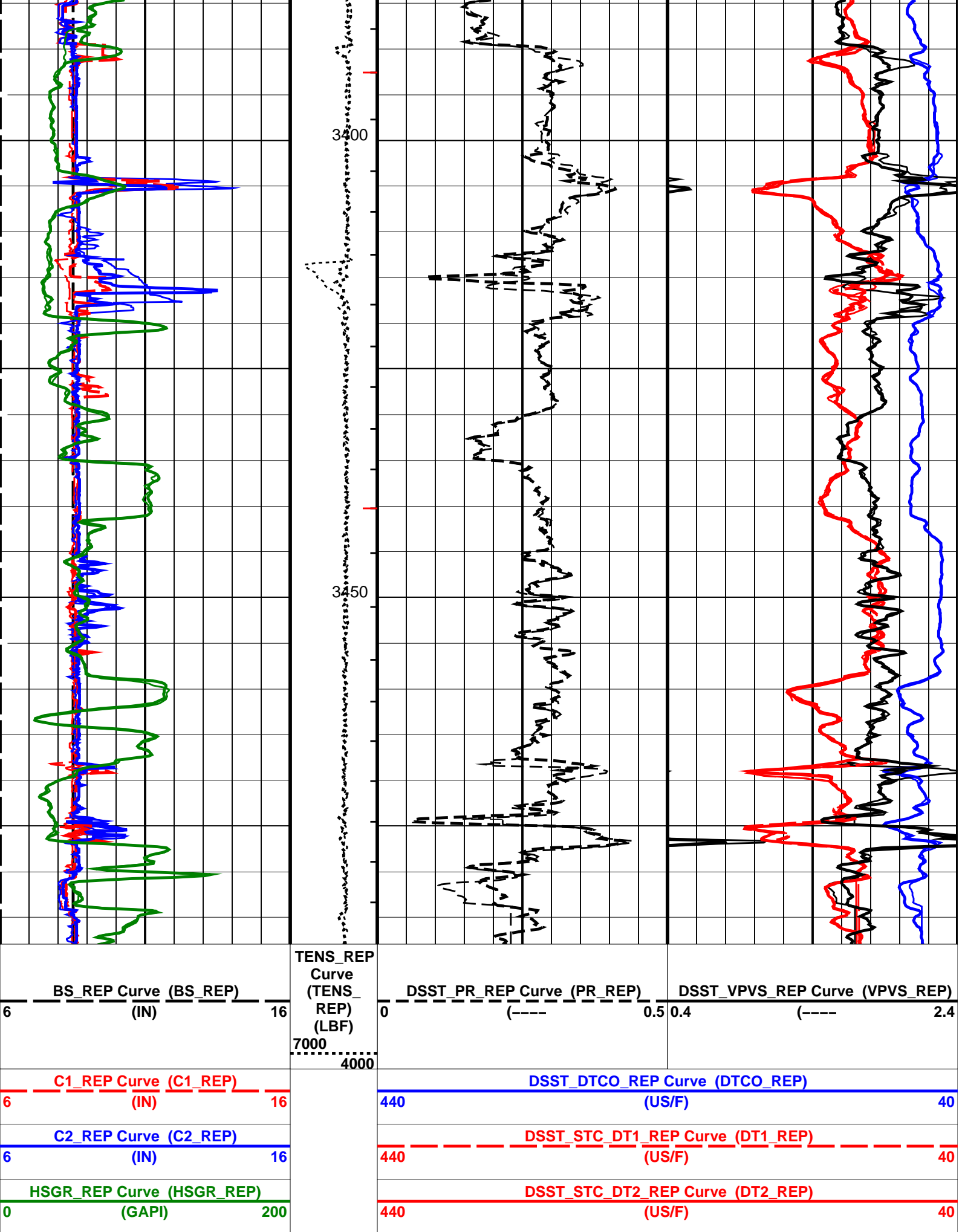
DSST-B 12C0-301
 HNGS-BA 12C0-301
 DTC-H 12C0-301

PIP SUMMARY


↓ Integrated Transit Time Minor Pip Every 1 MS
 → Integrated Transit Time Major Pip Every 10 MS

Time Mark Every 60 S





| | | | | | |
|---------------------------------|--------------------|--|----------|--|-------------------|
| <div>Time Mark Every 60 S</div> | | <div>Integrated Transit Time Major Pip Every 10 MS</div> | | | |
| Format: DSI_BCR_500_REP | | Vertical Scale: 1:500 | | Graphics File Created: 04-Dec-2004 17:38 | |
| OP System Version: 12C0-301 | | | | | |
| MCM | | | | | |
| FBST-B | 12C0-301 | DSST-B | 12C0-301 | | |
| HNGC-A | 12C0-301 | HNGS-BA | 12C0-301 | | |
| DTA-A | 12C0-301 | DTC-H | 12C0-301 | | |
| DTPC-A | 12C0-301 | | | | |
| Input DLIS Files | | | | | |
| DEFAULT | FMI_DSI_NGS_042PUP | FN:41 | PRODUCER | 04-Dec-2004 17:03 | 3530.3 M 2416.6 M |
| Output DLIS Files | | | | | |
| DEFAULT | FMI_DSI_NGS_050PUP | FN:49 | PRODUCER | 04-Dec-2004 17:38 | |

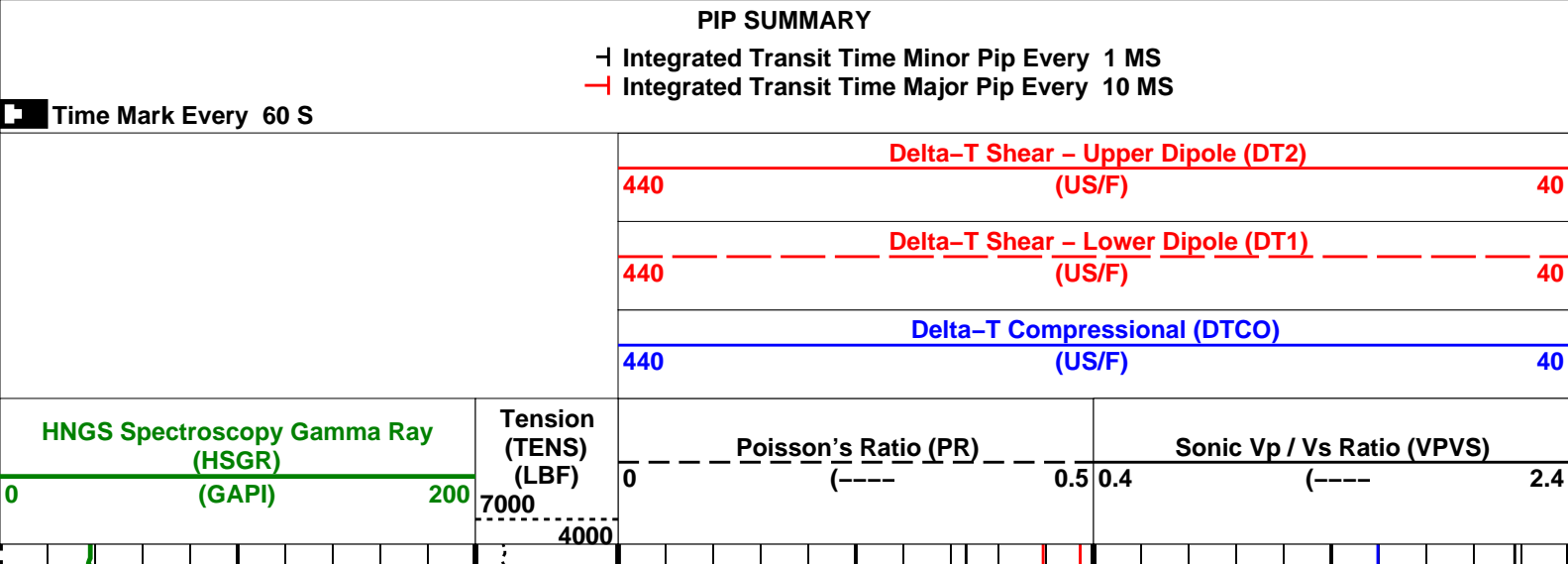


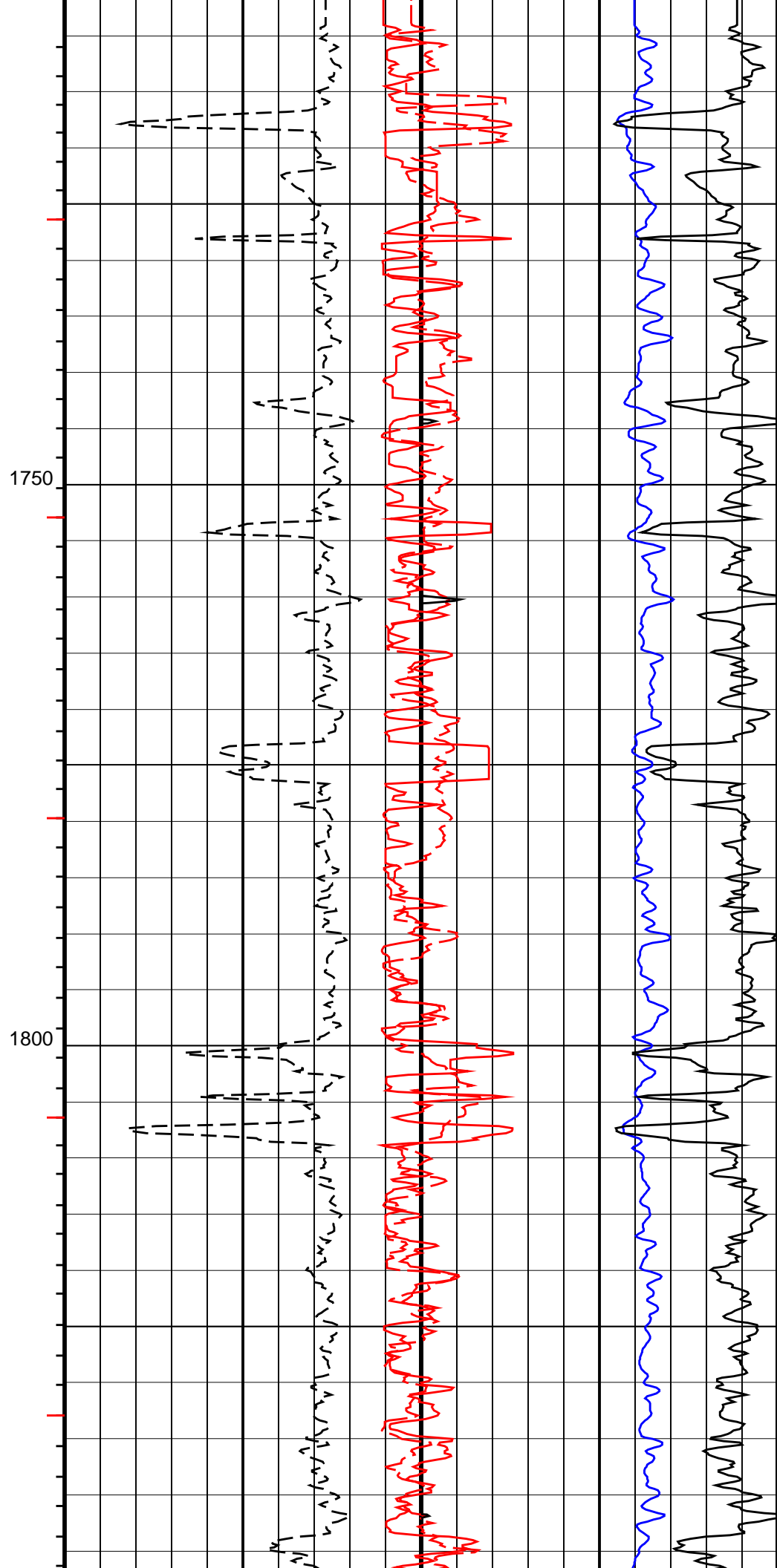
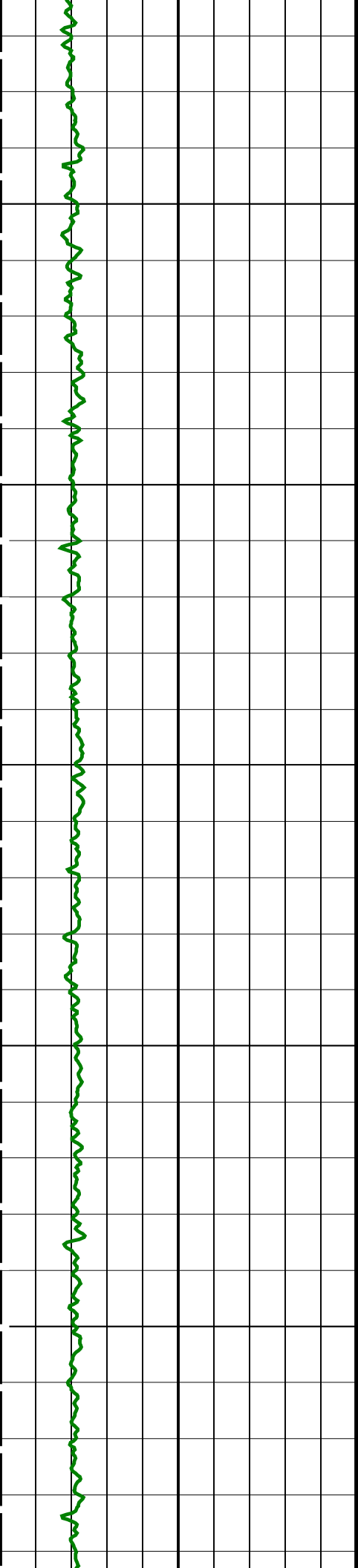
Cased Hole Log

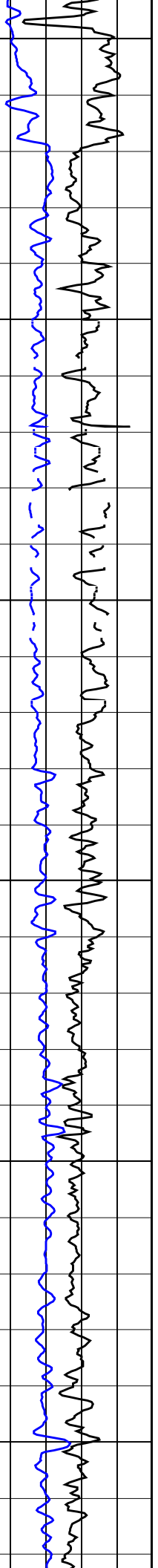
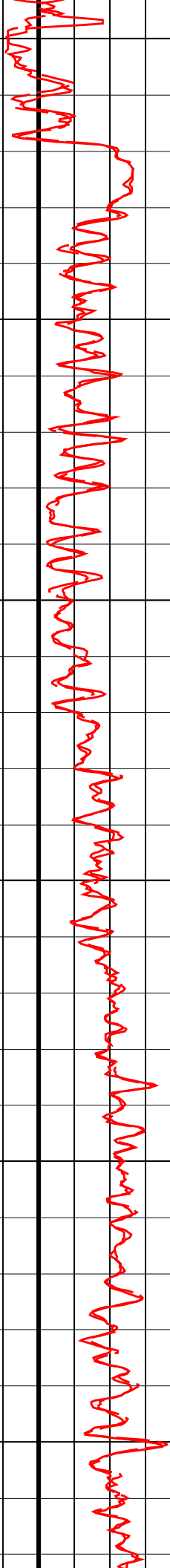
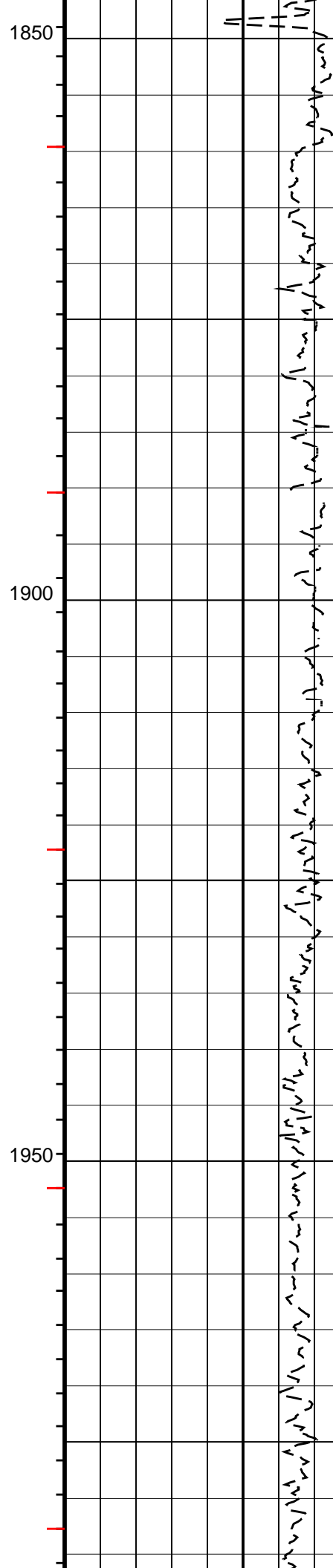
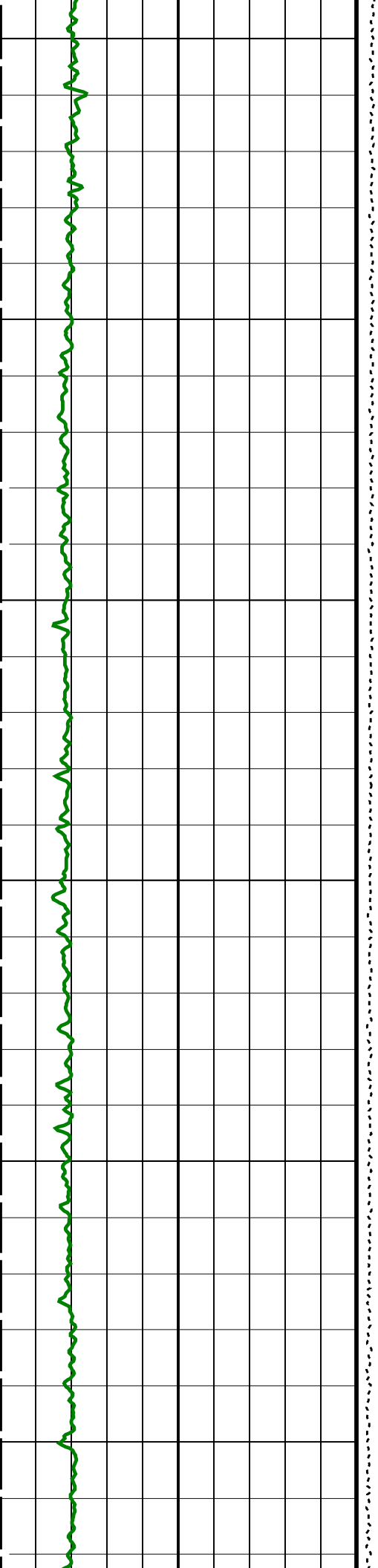
(1:500)

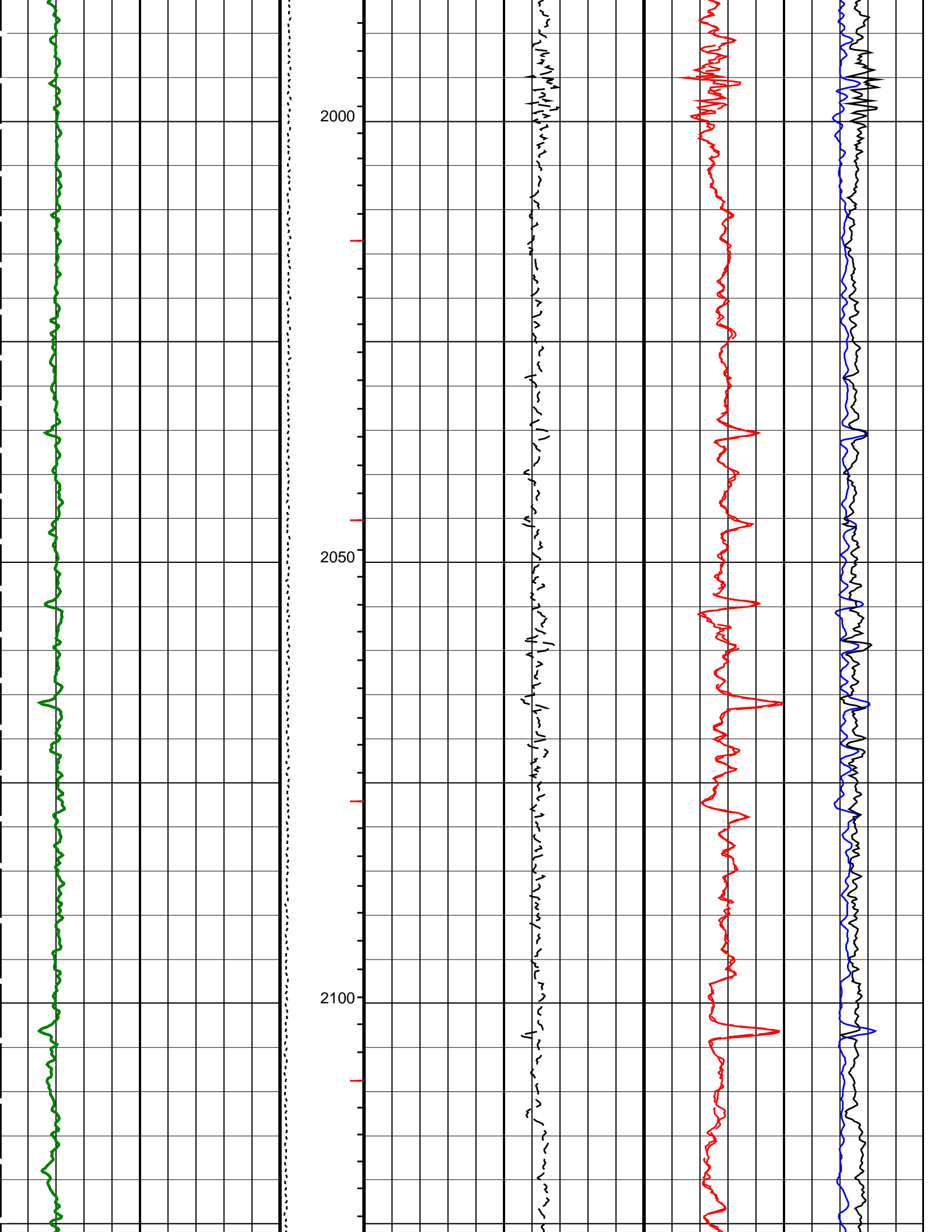
MAXIS Field Log

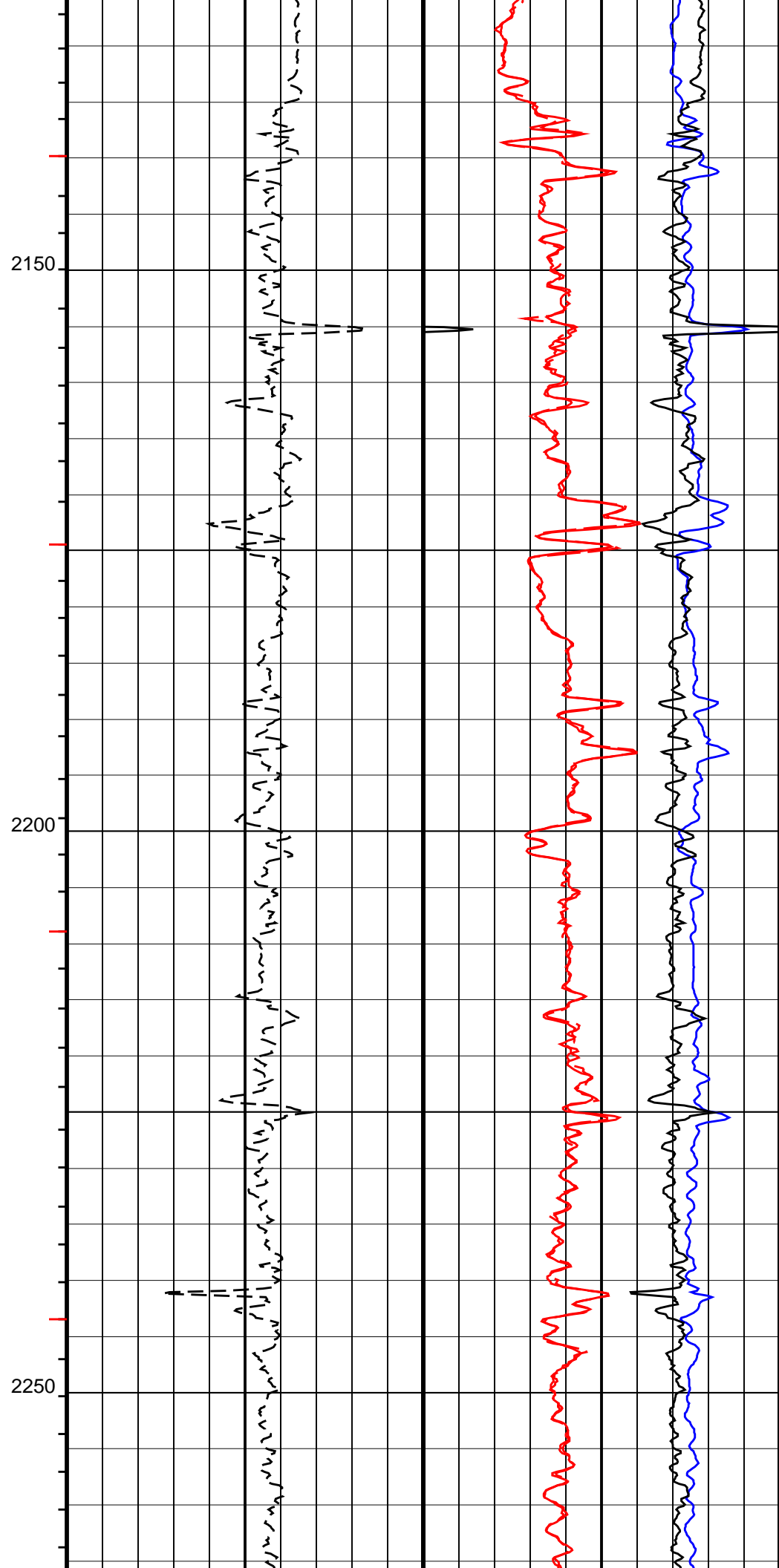
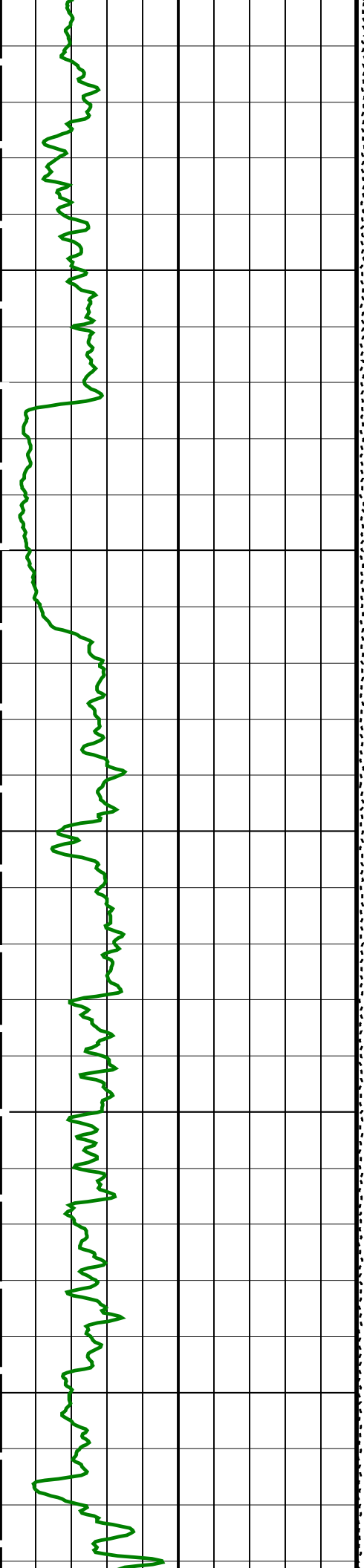
| | | | | | | |
|---------------------------------------|--------------------|---------|----------|-------------------|----------|-----------------|
| Company: Origin Energy Resources Ltd. | | | | | | Well: Trefoil-1 |
| Input DLIS Files | | | | | | |
| DEFAULT | FMI_DSI_NGS_345LUP | FN:556 | PRODUCER | 02-Dec-2004 10:57 | 2416.3 M | 1699.0 M |
| Output DLIS Files | | | | | | |
| DEFAULT | FMI_DSI_NGS_072PUP | FN:71 | PRODUCER | 04-Dec-2004 19:32 | 2416.3 M | 1705.5 M |
| OP System Version: 12C0-301 | | | | | | |
| MCM | | | | | | |
| FBST-B | 12C0-301 | DSST-B | 12C0-301 | | | |
| HNGC-A | 12C0-301 | HNGS-BA | 12C0-301 | | | |
| DTA-A | 12C0-301 | DTC-H | 12C0-301 | | | |
| DTPC-A | 12C0-301 | | | | | |

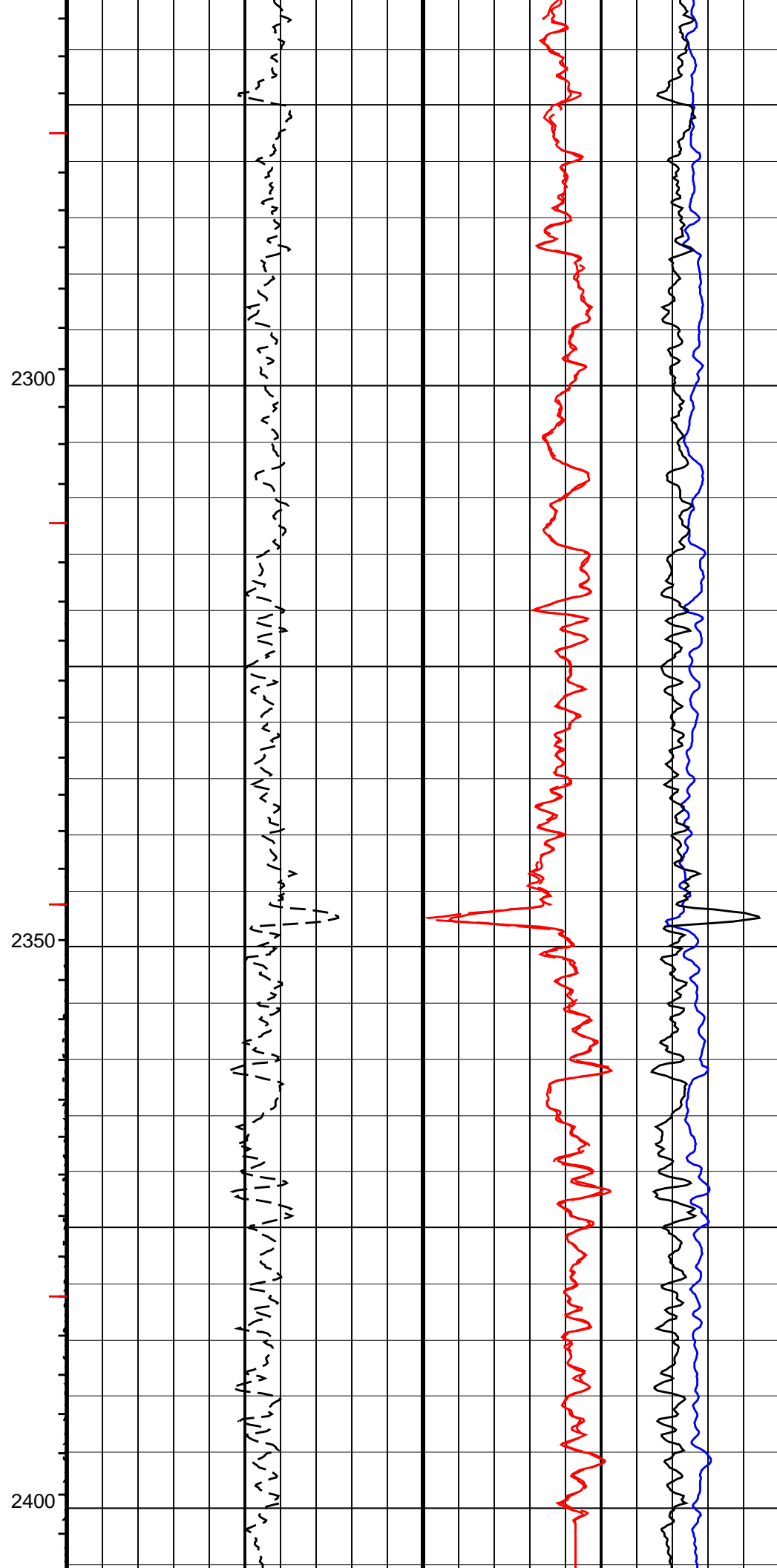
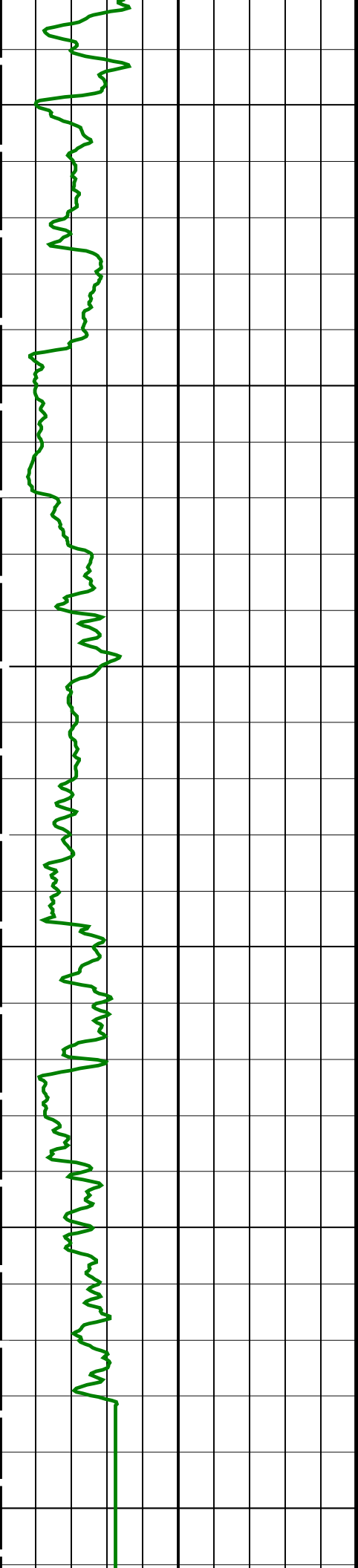


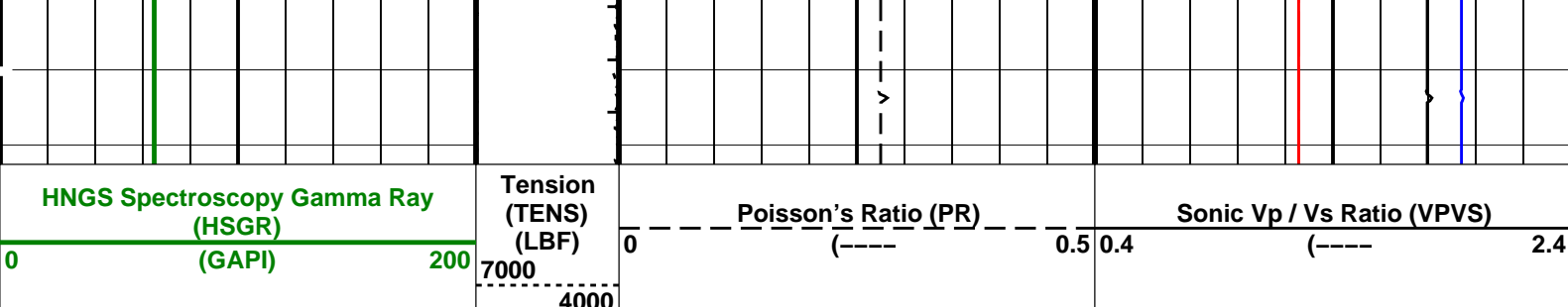












| | | | | |
|---|-----|----------------------------|--|----------------------------|
| HNGS Spectroscopy Gamma Ray (HSGR) (GAPI) | | Tension (TENS) (LBF) | Poisson's Ratio (PR) | Sonic Vp / Vs Ratio (VPVS) |
| 0 | 200 | 7000 4000 | 0 0.5 | 0.4 2.4 |
| | | | Delta-T Compressional (DTCO) (US/F) | 40 |
| | | | Delta-T Shear - Lower Dipole (DT1) (US/F) | 40 |
| | | | Delta-T Shear - Upper Dipole (DT2) (US/F) | 40 |


| | |
|---|--|
| PIP SUMMARY | |
| └ Integrated Transit Time Minor Pip Every 1 MS | |
| └ Integrated Transit Time Major Pip Every 10 MS | |
| Time Mark Every 60 S | |

| Parameters | | |
|--|--|--------------|
| DLIS Name | Description | Value |
| DSST-B: Dipole Shear Imager - B | | |
| BHS | Borehole Status | OPEN |
| DTCS | Compressional Delta-T Source for DTCO Channel | PS_COMP |
| DTSS | Shear Delta-T Source for DTSM Channel | UPPER_DIPOLE |
| GCSE | Generalized Caliper Selection | BS |
| ITTS | Integrated Transit Time Source | DTCO |
| SAS1 | STC Sonic Array Status - Lower Dipole | 255 |
| SAS2 | STC Sonic Array Status - Upper Dipole | 255 |
| SFM1 | STC Filter - Lower Dipole | B1-3K |
| SFM2 | STC Filter - Upper Dipole | B1-3K |
| HNGS-BA: Hostile Natural Gamma Ray Sonde | | |
| BAR1 | HNGS Detector 1 Barite Constant | 1 |
| BAR2 | HNGS Detector 2 Barite Constant | 1 |
| BHK | HNGS Borehole Potassium Correction Concentration | 0 |
| BHS | Borehole Status | OPEN |
| CSD1 | Inner Casing Outer Diameter | 9.625 IN |
| CSD2 | Outer Casing Outer Diameter | 13.375 IN |
| CSW1 | Inner Casing Weight | 43.5 LB/F |
| CSW2 | Outer Casing Weight | 54.5 LB/F |
| DBCC | HNGS Barite Constant Correction Flag | NONE |
| GCSE | Generalized Caliper Selection | BS |
| H1P | HNGS Detector 1 Allow/Disallow In Processing | ALLOW |
| H2P | HNGS Detector 2 Allow/Disallow In Processing | ALLOW |
| HABK | HNGS Borehole Potassium Running Average | -0.00364583 |
| HALF | HNGS Alpha Filter Length | 60 IN |
| HCRB | HNGS Apply Borehole Potassium Correction | NONE |
| HMWM | Mud Weighting Material | NATU |
| HNPE | HNGS Processing Enable | YES |
| S1BI | HNGS Detector 1 Calibration Bismuth Count Rate | 1.3 CPS |
| S2BI | HNGS Detector 2 Calibration Bismuth Count Rate | 1.3 CPS |
| SGRC | HNGS Standard Gamma-Ray Correction Flag | YES |
| TPOS | Tool Position | ECCE |
| VBA1 | HNGS Detector 1 Variable Barite Factor Running Average | 0.956781 |
| VBA2 | HNGS Detector 2 Variable Barite Factor Running Average | 0.971473 |
| HOLEV: Integrated Hole/Cement Volume | | |
| BHS | Borehole Status | OPEN |
| GCSE | Generalized Caliper Selection | BS |
| System and Miscellaneous | | |
| BS | Bit Size | 8.500 IN |
| DFD | Drilling Fluid Density | 9.40 LB/G |
| DO | Depth Offset for Playback | 0.0 M |
| PP | Playback Processing | RECOMPUTE |

Format: DSI_BCR_500 Vertical Scale: 1:500 Graphics File Created: 04-Dec-2004 19:32

| | | | |
|-----------------------------|----------|---------|----------|
| OP System Version: 12C0-301 | | | |
| MCM | | | |
| FBST-B | 12C0-301 | DSST-B | 12C0-301 |
| HNGC-A | 12C0-301 | HNGS-BA | 12C0-301 |

| | | | | | | |
|-------------------|--------------------|--------|----------|-------------------|----------|----------|
| DTA-A | 12C0-301 | DTC-H | | 12C0-301 | | |
| DTPC-A | 12C0-301 | | | | | |
| Input DLIS Files | | | | | | |
| DEFAULT | FMI_DSI_NGS_345LUP | FN:556 | PRODUCER | 02-Dec-2004 10:57 | 2416.3 M | 1699.0 M |
| Output DLIS Files | | | | | | |
| DEFAULT | FMI_DSI_NGS_072PUP | FN:71 | PRODUCER | 04-Dec-2004 19:32 | | |



Cased Hole Image
(1:500)

MAXIS Field Log

Company: Origin Energy Resources Ltd.

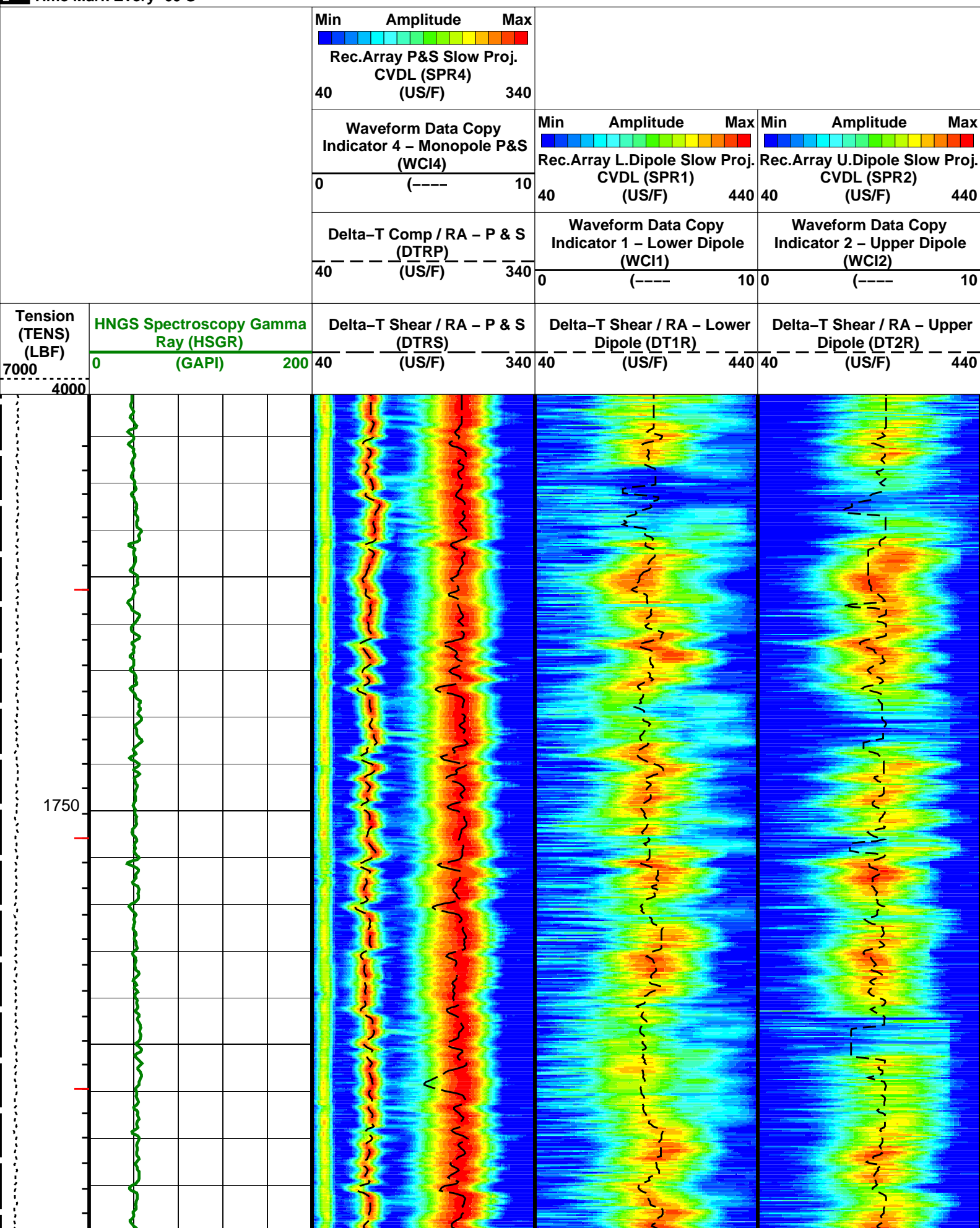
Well: Trefoil-1

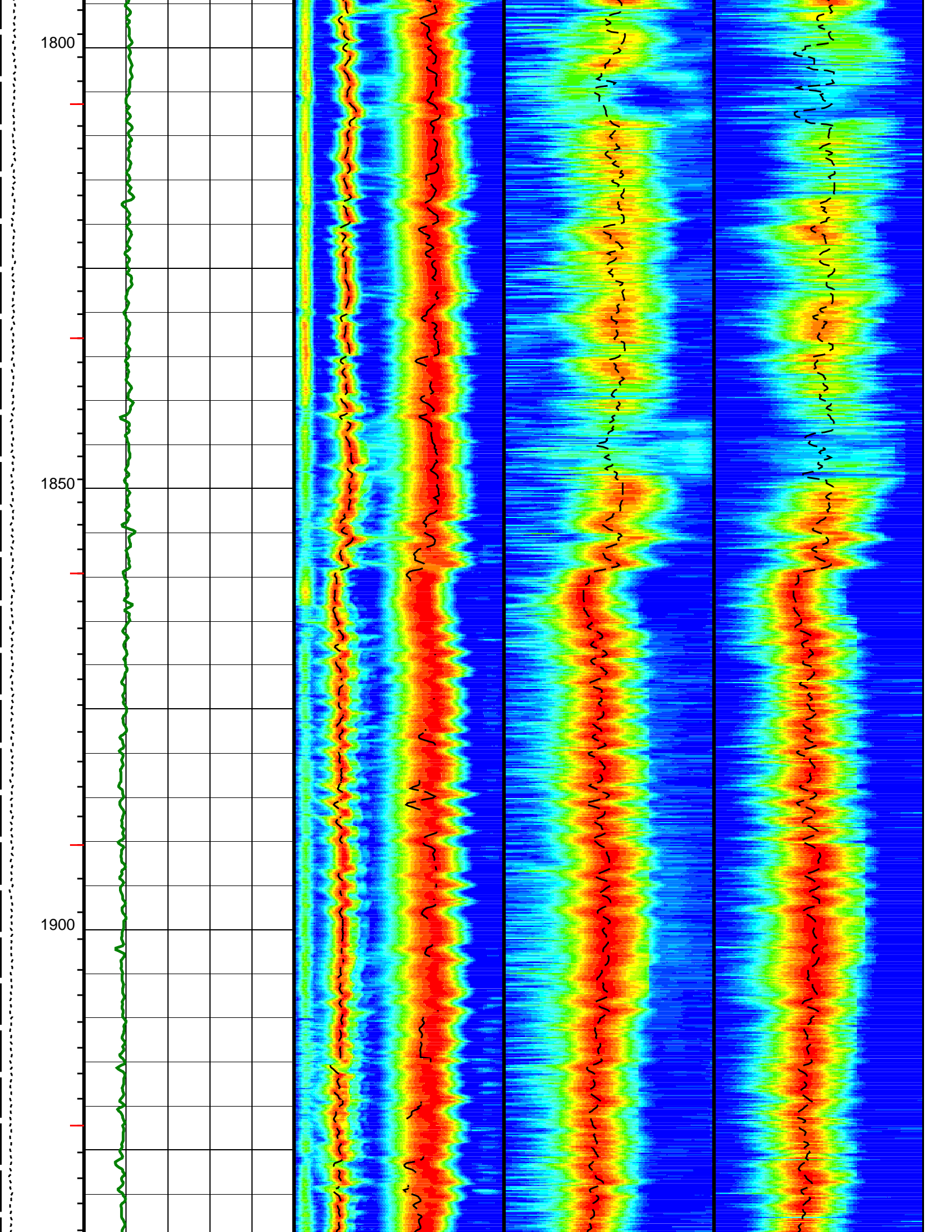
| | | | | | | |
|-------------------|--------------------|--------|----------|-------------------|----------|----------|
| Input DLIS Files | | | | | | |
| DEFAULT | FMI_DSI_NGS_345LUP | FN:556 | PRODUCER | 02-Dec-2004 10:57 | 2416.3 M | 1699.0 M |
| Output DLIS Files | | | | | | |
| DEFAULT | FMI_DSI_NGS_072PUP | FN:71 | PRODUCER | 04-Dec-2004 19:32 | 2416.3 M | 1705.5 M |

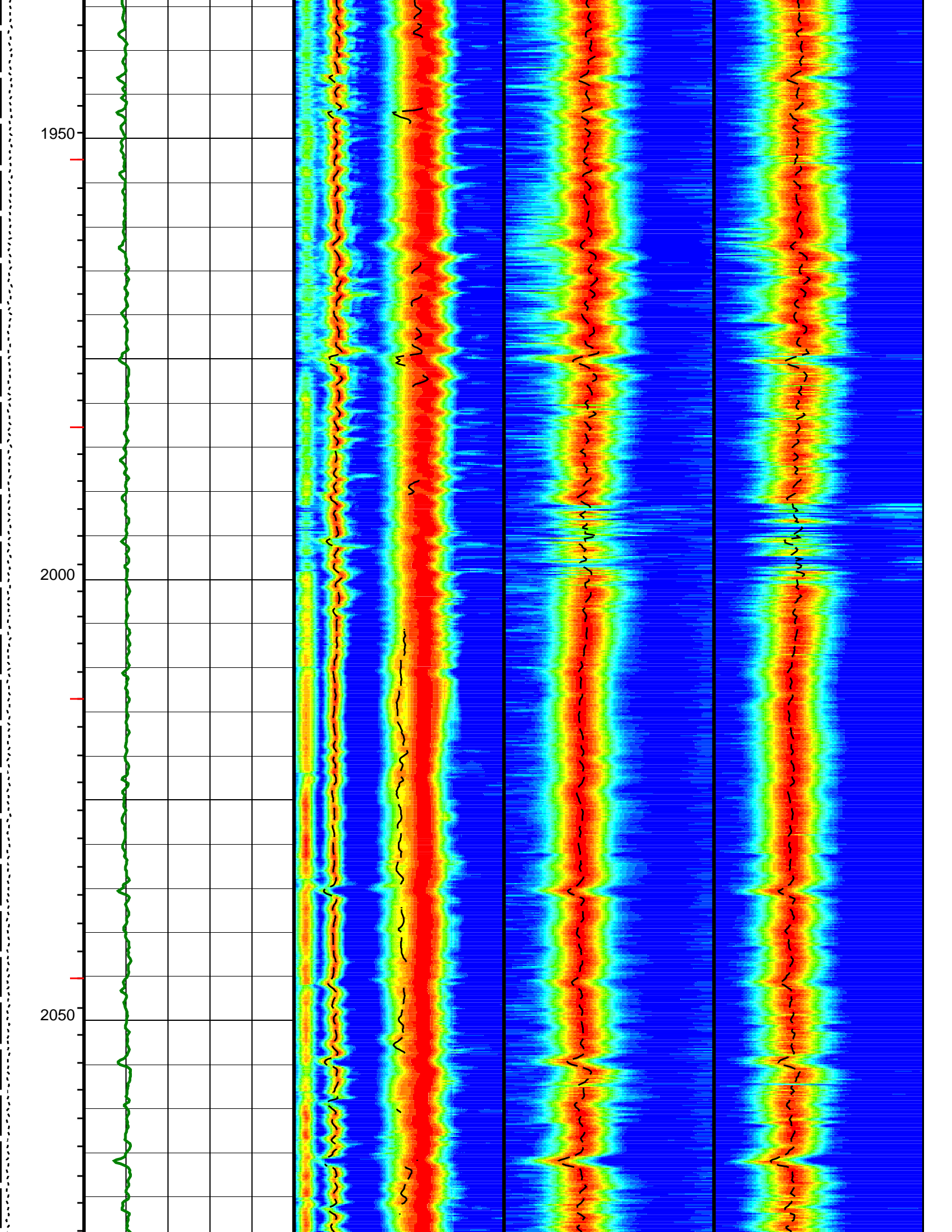
| | | | |
|-----------------------------|----------|---------|----------|
| OP System Version: 12C0-301 | | | |
| MCM | | | |
| FBST-B | 12C0-301 | DSST-B | 12C0-301 |
| HNGC-A | 12C0-301 | HNGS-BA | 12C0-301 |
| DTA-A | 12C0-301 | DTC-H | 12C0-301 |
| DTPC-A | 12C0-301 | | |

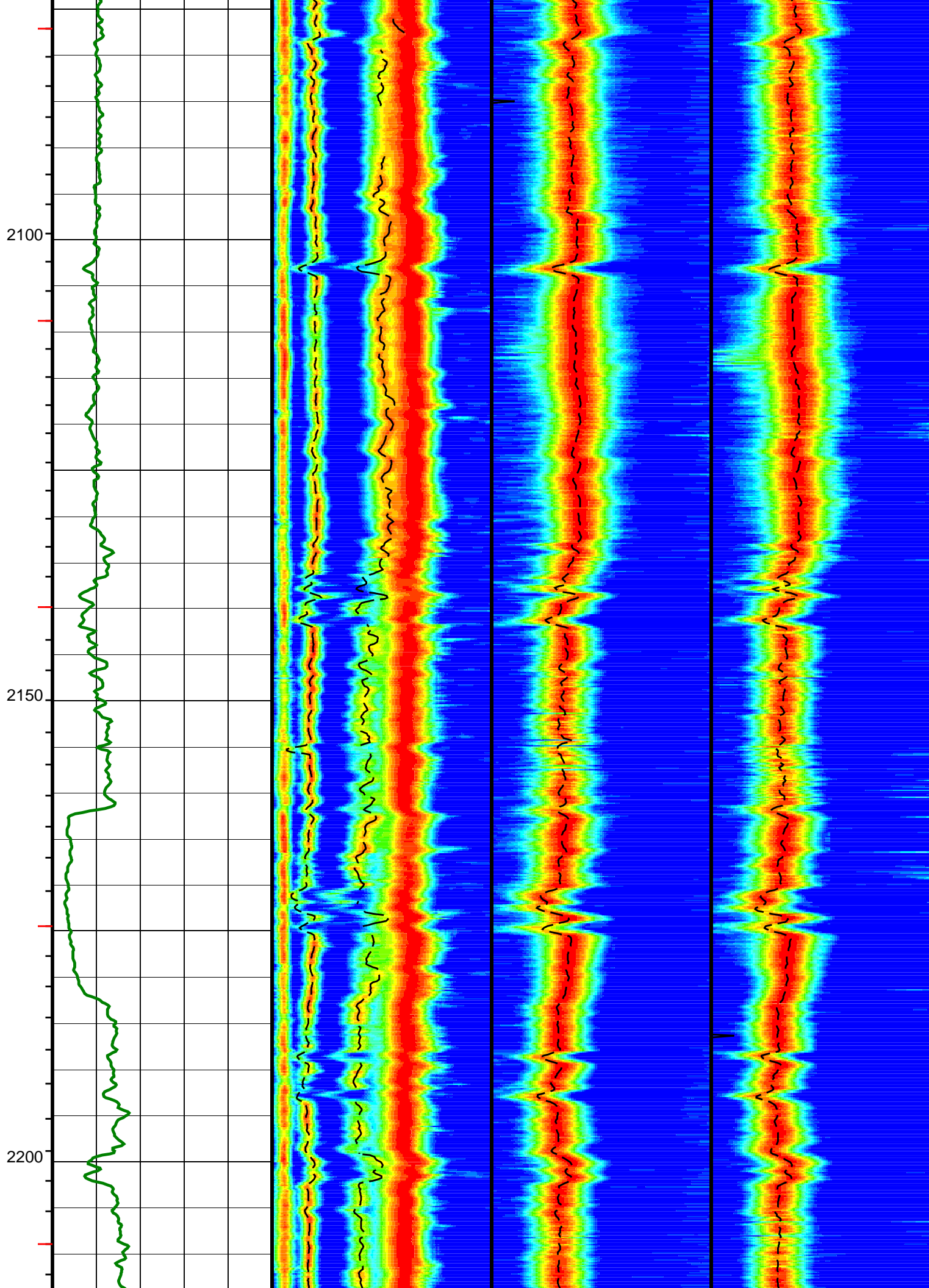
| | | | |
|---------------------------|-----------|------|-----------------------------|
| Changed Parameter Summary | | | |
| DLIS Name | New Value | | Previous Value Depth & Time |
| COLL | 75 | US/F | 75 US/F 2416.3 19:32:34 |
| | 60 | US/F | 75 US/F 2229.9 19:33:14 |
| | 57 | US/F | 60 US/F 2197.0 19:33:20 |
| | 60 | US/F | 57 US/F 2149.9 19:33:30 |
| | 75 | US/F | 60 US/F 2094.9 19:33:41 |
| COUL | 75 | US/F | 75 US/F 1864.9 19:34:34 |
| | 110 | US/F | 140 US/F 2416.3 19:32:34 |
| | 110 | US/F | 110 US/F 2229.9 19:33:14 |
| | 110 | US/F | 110 US/F 2197.0 19:33:20 |
| | 110 | US/F | 110 US/F 2149.9 19:33:30 |
| DSHL | 110 | US/F | 110 US/F 2094.9 19:33:41 |
| | 140 | US/F | 110 US/F 1864.9 19:34:34 |
| | 75 | US/F | 190 US/F 2416.3 19:32:35 |
| DSHU | 190 | US/F | 75 US/F 1864.9 19:34:34 |
| | 775 | US/F | 270 US/F 2416.3 19:32:35 |
| SHLL | 270 | US/F | 775 US/F 1864.9 19:34:34 |
| | 150 | US/F | 180 US/F 2416.3 19:32:34 |
| | 150 | US/F | 150 US/F 2229.9 19:33:14 |
| | 150 | US/F | 150 US/F 2197.0 19:33:20 |
| | 150 | US/F | 150 US/F 2149.9 19:33:30 |
| SHUL | 180 | US/F | 150 US/F 2094.9 19:33:41 |
| | 180 | US/F | 180 US/F 1864.9 19:34:34 |
| | 230 | US/F | 300 US/F 2416.3 19:32:34 |
| | 230 | US/F | 230 US/F 2229.9 19:33:14 |
| | 200 | US/F | 230 US/F 2197.0 19:33:20 |
| | 210 | US/F | 200 US/F 2149.9 19:33:30 |
| | 300 | US/F | 210 US/F 2094.9 19:33:41 |
| | 300 | US/F | 300 US/F 1864.9 19:34:34 |

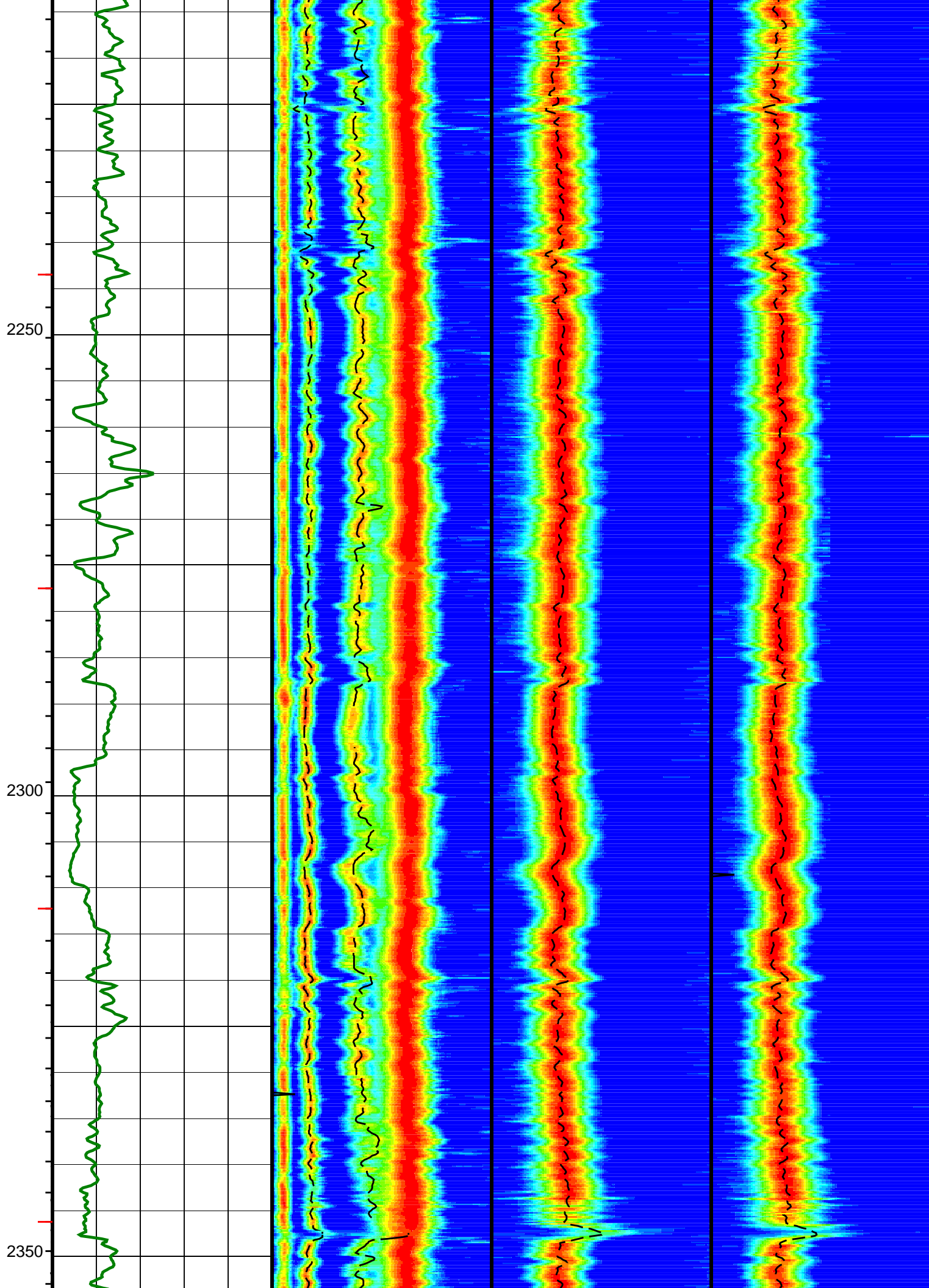
- └ Integrated Transit Time Minor Pip Every 1 MS
- └ Integrated Transit Time Major Pip Every 10 MS
- └ Mark Every 60 S

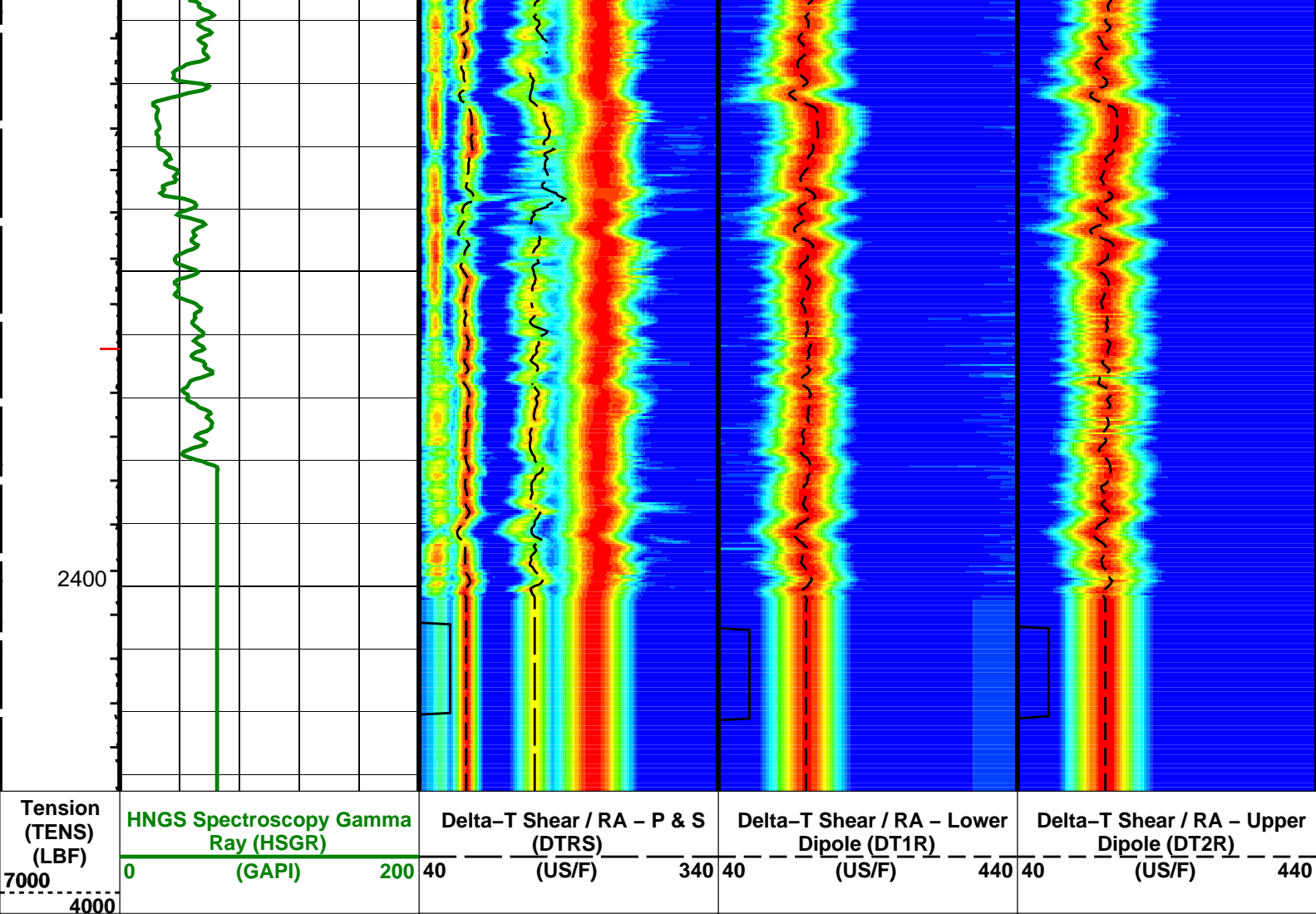












| | | | | | |
|---|--|--|--|--|--|
| Delta-T Shear / RA - P & S (DTRS) (US/F) 40 340 | | Delta-T Shear / RA - Lower Dipole (DT1R) (US/F) 40 440 | | Delta-T Shear / RA - Upper Dipole (DT2R) (US/F) 40 440 | |
| Delta-T Comp / RA - P & S (DTRP) (US/F) 40 340 | | Waveform Data Copy Indicator 1 - Lower Dipole (WCI1) 0 10 | | Waveform Data Copy Indicator 2 - Upper Dipole (WCI2) 0 10 | |
| Waveform Data Copy Indicator 4 - Monopole P&S (WCI4) 0 10 | | Min Amplitude Max Rec.Array L.Dipole Slow Proj. CVDL (SPR1) (US/F) 40 440 | | Min Amplitude Max Rec.Array U.Dipole Slow Proj. CVDL (SPR2) (US/F) 40 440 | |
| Min Amplitude Max Rec.Array P&S Slow Proj. CVDL (SPR4) (US/F) 40 340 | | | | | |

PIP SUMMARY

└ Integrated Transit Time Minor Pip Every 1 MS

└ Integrated Transit Time Major Pip Every 10 MS

Time Mark Every 60 S

| Parameters | | |
|---------------------------------|---|----------|
| DLIS Name | Description | Value |
| DSST-B: Dipole Shear Imager - B | | |
| BHS | Borehole Status | OPEN |
| CASF | Label Casing Function - Monopole P&S | 50 |
| COLL | Label Slowness Lower Limit - Monopole P&S Compressional | 75 US/F |
| COUL | Label Slowness Upper Limit - Monopole P&S Compressional | 140 US/F |
| DDE1 | Digitizing Delay 1 | 0 US |
| DDE2 | Digitizing Delay 2 | 0 US |
| DDE4 | Digitizing Delay 4 | 0 US |
| DDEX | Digitizing Delay X | 0 US |
| DLCS | Label Compressional Source - Dipole Shear | USE |
| PSUL | Label Slowness Lower Limit - Dipole Shear | 100 US/F |

| | | | |
|------|--|------------|------|
| DSHL | Label Slowness Lower Limit – Dipole Shear | 190 | US/F |
| DSHU | Label Slowness Upper Limit – Dipole Shear | 270 | US/F |
| DSI1 | Digitizer Sample Interval 1 | 40 | US |
| DSI2 | Digitizer Sample Interval 2 | 40 | US |
| DSI4 | Digitizer Sample Interval 4 | 10 | US |
| DSIX | Digitizer Sample Interval X | 40 | US |
| DTCS | Compressional Delta-T Source for DTCO Channel | PS_COMP | |
| DTF | Delta-T Fluid | 189 | US/F |
| DWC1 | Digitizer Word Count 1 | 512 | |
| DWC2 | Digitizer Word Count 2 | 512 | |
| DWC4 | Digitizer Word Count 4 | 512 | |
| DWCX | Digitizer Word Count X | 480 | |
| FILG | Label Fill Gap Control – Monopole P&S | COMP_SHEAR | |
| GCSE | Generalized Caliper Selection | BS | |
| ITTS | Integrated Transit Time Source | DTCO | |
| LFC | Label Formation Character – Monopole P&S | DYNAMIC | |
| LTXG | Lower Dipole Transmitter Geometry | 156 | IN |
| MCS | Mean Casing Slowness | 57 | US/F |
| MTXG | Monopole Transmitter Geometry | 186 | IN |
| NWI1 | Number Waveform Items 1 | 8 | |
| NWI2 | Number Waveform Items 2 | 8 | |
| NWI4 | Number Waveform Items 4 | 8 | |
| NWIX | Number Waveform Items X | 0 | |
| RSMN | Label Shear/Compressional Minimum Ratio – Monopole P&S | 1.4 | |
| RSMX | Label Shear/Compressional Maximum Ratio – Monopole P&S | 2.12 | |
| RX1G | Receiver 1 Geometry | 294 | IN |
| RX2G | Receiver 2 Geometry | 300 | IN |
| RX3G | Receiver 3 Geometry | 306 | IN |
| RX4G | Receiver 4 Geometry | 312 | IN |
| RX5G | Receiver 5 Geometry | 318 | IN |
| RX6G | Receiver 6 Geometry | 324 | IN |
| RX7G | Receiver 7 Geometry | 330 | IN |
| RX8G | Receiver 8 Geometry | 336 | IN |
| SAM1 | DSST Sonic Acquisition Mode 1 – Lower Dipole Mode | EVEN | |
| SAM2 | DSST Sonic Acquisition Mode 2 – Upper Dipole Mode | ODD | |
| SAM4 | DSST Sonic Acquisition Mode 4 – High Frequency Monopole Mode for P&S | EVEN | |
| SAMX | DSST Sonic Acquisition Mode X – Both Dipoles or Monopole Mode for Expert | OFF | |
| SAS1 | STC Sonic Array Status – Lower Dipole | 255 | |
| SAS2 | STC Sonic Array Status – Upper Dipole | 255 | |
| SAS4 | STC Sonic Array Status – Monopole P&S | 255 | |
| SBO1 | STC Search Band Offset – Lower Dipole | 3000 | US |
| SBO2 | STC Search Band Offset – Upper Dipole | 3000 | US |
| SBO4 | STC Search Band Offset – Monopole P&S | 500 | US |
| SBR4 | STC Baseline Removal – Monopole P&S | ON | |
| SBW1 | STC Search Bandwidth – Lower Dipole | 8000 | US |
| SBW2 | STC Search Bandwidth – Upper Dipole | 8000 | US |
| SBW4 | STC Search Bandwidth – Monopole P&S | 2000 | US |
| SFC1 | STC Formation Character – Lower Dipole | SELECTABLE | |
| SFC2 | STC Formation Character – Upper Dipole | SELECTABLE | |
| SFC4 | STC Formation Character – Monopole P&S | SELECTABLE | |
| SFM1 | STC Filter – Lower Dipole | B1-3K | |
| SFM2 | STC Filter – Upper Dipole | B1-3K | |
| SFM4 | STC Filter – Monopole P&S | B3-20K | |
| SHLL | Label Slowness Lower Limit – Monopole P&S Shear | 180 | US/F |
| SHUL | Label Slowness Upper Limit – Monopole P&S Shear | 300 | US/F |
| SLL1 | STC Slowness Lower Limit – Lower Dipole | 40 | US/F |
| SLL2 | STC Slowness Lower Limit – Upper Dipole | 40 | US/F |
| SLL4 | STC Slowness Lower Limit – Monopole P&S | 40 | US/F |
| SST1 | STC Slowness Step – Lower Dipole | 4 | US/F |
| SST2 | STC Slowness Step – Upper Dipole | 4 | US/F |
| SST4 | STC Slowness Step – Monopole P&S | 2 | US/F |
| SSW1 | STC Source Waveform – Lower Dipole | WF_SAM1 | |
| SSW2 | STC Source Waveform – Upper Dipole | WF_SAM2 | |
| SSW4 | STC Source Waveform – Monopole P&S | WF_SAM4 | |
| STLL | Label Slowness Lower Limit – Monopole Stoneley | 180 | US/F |
| STUL | Label Slowness Upper Limit – Monopole Stoneley | 780 | US/F |
| SUL1 | STC Slowness Upper Limit – Lower Dipole | 775 | US/F |
| SUL2 | STC Slowness Upper Limit – Upper Dipole | 775 | US/F |
| SUL4 | STC Slowness Upper Limit – Monopole P&S | 340 | US/F |
| SWD1 | STC Slowness Width – Lower Dipole | 40 | US/F |
| SWD2 | STC Slowness Width – Upper Dipole | 40 | US/F |
| SWD4 | STC Slowness Width – Monopole P&S | 10 | US/F |
| TBF1 | STC Time for Baseline Fill – Lower Dipole | 0 | US |
| TBF2 | STC Time for Baseline Fill – Upper Dipole | 0 | US |
| TBF4 | STC Time for Baseline Fill – Monopole P&S | 300 | US |
| TLL1 | STC Time Lower Limit – Lower Dipole | 600 | US |
| TLL2 | STC Time Lower Limit – Upper Dipole | 600 | US |
| TLL4 | STC Time Lower Limit – Monopole P&S | 150 | US |
| TST1 | STC Time Step – Lower Dipole | 200 | US |
| TST2 | STC Time Step – Upper Dipole | 200 | US |
| TST4 | STC Time Step – Monopole P&S | 50 | US |
| TUL1 | STC Time Upper Limit – Lower Dipole | 15912.5 | US |
| TUL2 | STC Time Upper Limit – Upper Dipole | 15525 | US |

| | | | |
|---|---|-------------|------|
| TUL4 | STC Time Upper Limit – Monopole P&S | 4560 | US |
| TWD1 | STC Time Width – Lower Dipole | 2000 | US |
| TWD2 | STC Time Width – Upper Dipole | 2000 | US |
| TWD4 | STC Time Width – Monopole P&S | 1000 | US |
| TWI1 | STC Integration Time Window – Lower Dipole | 1600 | US |
| TWI2 | STC Integration Time Window – Upper Dipole | 1600 | US |
| TWI4 | STC Integration Time Window – Monopole P&S | 500 | US |
| TWSX | Transmitter Waveform Select X | 0 | |
| UTXG | Upper Dipole Transmitter Geometry | 162 | IN |
| WFM1 | Waveform Mode 1 | W1 | |
| WFM2 | Waveform Mode 2 | W1 | |
| WFM4 | Waveform Mode 4 | W1 | |
| HNGBS–BA: Hostile Natural Gamma Ray Sonde | | | |
| BAR1 | HNGBS Detector 1 Barite Constant | 1 | |
| BAR2 | HNGBS Detector 2 Barite Constant | 1 | |
| BHK | HNGBS Borehole Potassium Correction Concentration | 0 | |
| BHS | Borehole Status | OPEN | |
| CSD1 | Inner Casing Outer Diameter | 9.625 | IN |
| CSD2 | Outer Casing Outer Diameter | 13.375 | IN |
| CSW1 | Inner Casing Weight | 43.5 | LB/F |
| CSW2 | Outer Casing Weight | 54.5 | LB/F |
| DBCC | HNGBS Barite Constant Correction Flag | NONE | |
| GCSE | Generalized Caliper Selection | BS | |
| H1P | HNGBS Detector 1 Allow/Disallow In Processing | ALLOW | |
| H2P | HNGBS Detector 2 Allow/Disallow In Processing | ALLOW | |
| HABK | HNGBS Borehole Potassium Running Average | –0.00364583 | |
| HALF | HNGBS Alpha Filter Length | 60 | IN |
| HCRB | HNGBS Apply Borehole Potassium Correction | NONE | |
| HMWM | Mud Weighting Material | NATU | |
| HNPE | HNGBS Processing Enable | YES | |
| S1BI | HNGBS Detector 1 Calibration Bismuth Count Rate | 1.3 | CPS |
| S2BI | HNGBS Detector 2 Calibration Bismuth Count Rate | 1.3 | CPS |
| SGRC | HNGBS Standard Gamma–Ray Correction Flag | YES | |
| TPOS | Tool Position | ECCE | |
| VBA1 | HNGBS Detector 1 Variable Barite Factor Running Average | 0.956781 | |
| VBA2 | HNGBS Detector 2 Variable Barite Factor Running Average | 0.971473 | |
| HOLEV: Integrated Hole/Cement Volume | | | |
| BHS | Borehole Status | OPEN | |
| GCSE | Generalized Caliper Selection | BS | |
| System and Miscellaneous | | | |
| BS | Bit Size | 8.500 | IN |
| DFD | Drilling Fluid Density | 9.40 | LB/G |
| DO | Depth Offset for Playback | 0.0 | M |
| PP | Playback Processing | RECOMPUTE | |

Format: DSI_CH_IMAGE_500 Vertical Scale: 1:500 Graphics File Created: 04–Dec–2004 19:32

OP System Version: 12C0–301

MCM

| | | | |
|--------|----------|----------|----------|
| FBST–B | 12C0–301 | DSST–B | 12C0–301 |
| HNGC–A | 12C0–301 | HNGBS–BA | 12C0–301 |
| DTA–A | 12C0–301 | DTC–H | 12C0–301 |
| DTPC–A | 12C0–301 | | |

Input DLIS Files

DEFAULT FMI_DSI_NGS_345LUP FN:556 PRODUCER 02–Dec–2004 10:57 2416.3 M 1699.0 M

Output DLIS Files

DEFAULT FMI_DSI_NGS_072PUP FN:71 PRODUCER 04–Dec–2004 19:32




Schlumberger

Calibrations

MAXIS Field Log

DSSI Receiver Check – Matching Status

| | R1 | R2 | R3 | R4 | R5 | R6 | R7 | R8 |
|------------------|----|----|----|----|----|----|----|----|
| EVEN Pair | | | | | | | | |
| ODD Pair | | | | | | | | |
| ODD/EVEN | | | | | | | | |

 = Good
  = Marginal
  = Bad

Graphics File Name: RECEIVER_CHK_1.PDS



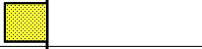
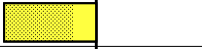
Graphics File Created: 01-Dec-2004 16:13

Calibration and Check Summary

| Measurement | Nominal | Master | Before | After | Change | Limit | Units |
|---|---------|--------|--------|-------|--------|-------|-------|
| Full-Bore Scanner – B Wellsite Calibration – Caliper Calibration | | | | | | | |
| Before: 21-Nov-2004 7:12 | | | | | | | |
| Caliper 1 Small Jig | 8.000 | N/A | 7.026 | N/A | N/A | N/A | IN |
| Caliper 2 Small Jig | 8.000 | N/A | 6.941 | N/A | N/A | N/A | IN |
| Caliper 1 Large Jig | 12.00 | N/A | 11.51 | N/A | N/A | N/A | IN |
| Caliper 2 Large Jig | 12.00 | N/A | 10.94 | N/A | N/A | N/A | IN |
| Full-Bore Scanner – B Wellsite Calibration – CROUZET ACCELEROMETER PROM HAS BEEN READ CORRECTLY | | | | | | | |
| Before: 21-Nov-2004 5:10 | | | | | | | |
| TEMPERATURE REFERENCE : | N/A | N/A | 20 | N/A | N/A | N/A | DEGC |
| YEAR OF CALIBRATION : | N/A | N/A | 95 | N/A | N/A | N/A | |
| MONTH OF CALIBRATION : | N/A | N/A | 6 | N/A | N/A | N/A | |
| SERIAL NUMBER : | N/A | N/A | 292 | N/A | N/A | N/A | |
| Full-Bore Scanner – B Wellsite Calibration – CROUZET MAGNETOMETER PROM HAS BEEN READ CORRECTLY | | | | | | | |
| Before: 21-Nov-2004 5:10 | | | | | | | |
| TEMPERATURE REFERENCE : | N/A | N/A | 31 | N/A | N/A | N/A | DEGC |
| YEAR OF CALIBRATION : | N/A | N/A | 92 | N/A | N/A | N/A | |
| MONTH OF CALIBRATION : | N/A | N/A | 12 | N/A | N/A | N/A | |
| SERIAL NUMBER : | N/A | N/A | 173 | N/A | N/A | N/A | |
| Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 1 Check | | | | | | | |
| Master: 20-Nov-2004 23:57 Before: 21-Nov-2004 7:15 | | | | | | | |
| Na 511 Peak Loc | 40.00 | 40.59 | 40.47 | N/A | N/A | 1.000 | |
| Na 511 Peak Res | 15.50 | 17.06 | 18.36 | N/A | N/A | 2.000 | % |
| High Voltage | 1150 | 1286 | 1288 | N/A | N/A | N/A | V |
| Na 1785 Peak Loc | 142.6 | 145.3 | 146.2 | N/A | N/A | 7.000 | |
| Na 1785 Peak Res | 8.500 | 10.48 | 9.773 | N/A | N/A | 2.000 | % |
| Temperature | 15.50 | 19.43 | 19.78 | N/A | N/A | N/A | DEGC |
| Na Count Rate | 45.00 | 21.72 | 21.01 | N/A | N/A | 8.000 | CPS |

| | | | | | | | | |
|--|-------|--------|--------|-----|-----|---------|------|--|
| Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 2 Check | | | | | | | | |
| Master: 20–Nov–2004 23:57 Before: 21–Nov–2004 7:15 | | | | | | | | |
| Na 511 Peak Loc | 40.00 | 40.58 | 40.62 | N/A | N/A | 1.000 | | |
| Na 511 Peak Res | 15.50 | 16.30 | 16.18 | N/A | N/A | 2.000 | % | |
| High Voltage | 1150 | 1245 | 1247 | N/A | N/A | N/A | V | |
| Na 1785 Peak Loc | 142.6 | 145.2 | 144.8 | N/A | N/A | 7.000 | | |
| Na 1785 Peak Res | 8.500 | 9.098 | 8.969 | N/A | N/A | 2.000 | % | |
| Temperature | 15.50 | 20.06 | 20.28 | N/A | N/A | N/A | DEGC | |
| Na Count Rate | 45.00 | 21.82 | 21.06 | N/A | N/A | 8.000 | CPS | |
| Hostile Natural Gamma Ray Sonde Wellsite Calibration – Ratio Of Detector 1 To Detector 2 | | | | | | | | |
| Master: 20–Nov–2004 23:57 Before: 21–Nov–2004 7:15 | | | | | | | | |
| Coincidence Count Rate Ratio | 1.000 | 0.9940 | 0.9959 | N/A | N/A | 0.05000 | | |
| Hostile Natural Gamma Ray Sonde Master Calibration – Detector 1 Calibration | | | | | | | | |
| Master: 20–Nov–2004 23:57 | | | | | | | | |
| Na 511 Peak Set Point | 40.00 | 42.00 | -- | -- | -- | -- | | |
| Th Peak Loc | 209.6 | 208.8 | -- | -- | -- | -- | | |
| Th Peak Res | 7.000 | 8.378 | -- | -- | -- | -- | % | |
| Background Count Rate | 142.5 | 16.70 | -- | -- | -- | -- | CPS | |
| Gain Ratio | 1.000 | 0.9789 | -- | -- | -- | -- | | |
| Hostile Natural Gamma Ray Sonde Master Calibration – Detector 2 Calibration | | | | | | | | |
| Master: 20–Nov–2004 23:57 | | | | | | | | |
| Na 511 Peak Set Point | 40.00 | 42.00 | -- | -- | -- | -- | | |
| Th Peak Loc | 209.6 | 209.4 | -- | -- | -- | -- | | |
| Th Peak Res | 7.000 | 7.666 | -- | -- | -- | -- | % | |
| Background Count Rate | 142.5 | 15.85 | -- | -- | -- | -- | CPS | |
| Gain Ratio | 1.000 | 0.9815 | -- | -- | -- | -- | | |

| | | |
|--|-----------|------|
| Full-Bore Scanner – B / Equipment Identification | | |
| Primary Equipment: | | |
| FullBore Scanner Sonde | FBSS – B | 830 |
| FullBore Scanner Sonde Upper part | FBSH – A | 855 |
| FullBore Scanner Sonde Cartridge | FBSC – B | 858 |
| GPIT Cartridge – AC | GPIC – AC | 735 |
| Insulating Sub | AH – 185 | 909 |
| FullBore Scanner Control Cartridge | FBCC – A | 794 |
| Auxiliary Equipment: | | |
| Electronics Cartridge Housing | ECH – MRA | 4742 |



| | | | | | |
|--|---|-------|--------|---|-------|
| Full-Bore Scanner – B Wellsite Calibration | | | | | |
| Caliper Calibration | | | | | |
| Phase | Caliper 1 Small Jig IN | Value | Phase | Caliper 2 Small Jig IN | Value |
| Before |  | 7.026 | Before |  | 6.941 |
| | 6.800 (Minimum) 8.000 (Nominal) 9.200 (Maximum) | | | 6.800 (Minimum) 8.000 (Nominal) 9.200 (Maximum) | |
| Phase | Caliper 1 Large Jig IN | Value | Phase | Caliper 2 Large Jig IN | Value |
| Before |  | 11.51 | Before |  | 10.94 |
| | 10.20 (Minimum) 12.00 (Nominal) 13.80 (Maximum) | | | 10.20 (Minimum) 12.00 (Nominal) 13.80 (Maximum) | |
| Before: 21–Nov–2004 7:12 | | | | | |

| | | |
|--|----------|----|
| Hostile Natural Gamma Ray Cartridge – A / Equipment Identification | | |
| Primary Equipment: | | |
| HNGC Cartridge | HNGC – A | 10 |
| Auxiliary Equipment: | | |
| HNGC Housing | HNGH – A | 3 |

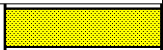




| | | |
|--|-----------|----|
| Hostile Natural Gamma Ray Sonde / Equipment Identification | | |
| Primary Equipment: | | |
| HNGS Sonde | HNGS – BA | 28 |
| Auxiliary Equipment: | | |

| Hostile Natural Gamma Ray Sonde Wellsite Calibration | | | | | | | | | | | | | | |
|--|------------------------|--|--|-------|--|------------------------|--|--|-------|---|------------------------|--|--|-------|
| Detector 1 Check | | | | | | | | | | | | | | |
| Phase | Na 511 Peak Loc | | | Value | Phase | Na 511 Peak Res % | | | Value | Phase | High Voltage V | | | Value |
| Master | <div><div></div></div> | | | 40.59 | Master | <div><div></div></div> | | | 17.06 | Master | <div><div></div></div> | | | 1286 |
| Before | <div><div></div></div> | | | 40.47 | Before | <div><div></div></div> | | | 18.36 | Before | <div><div></div></div> | | | 1288 |
| 37.50 (Minimum)40.00 (Nominal)42.50 (Maximum) | | | | | 12.00 (Minimum)15.50 (Nominal)19.00 (Maximum) | | | | | 900.0 (Minimum)1150 (Nominal)1600 (Maximum) | | | | |
| Phase | Na 1785 Peak Loc | | | Value | Phase | Na 1785 Peak Res % | | | Value | Phase | Temperature DEGC | | | Value |
| Master | <div><div></div></div> | | | 145.3 | Master | <div><div></div></div> | | | 10.48 | Master | <div><div></div></div> | | | 19.43 |
| Before | <div><div></div></div> | | | 146.2 | Before | <div><div></div></div> | | | 9.773 | Before | <div><div></div></div> | | | 19.78 |
| 135.0 (Minimum)142.6 (Nominal)150.3 (Maximum) | | | | | 7.000 (Minimum)8.500 (Nominal)11.00 (Maximum) | | | | | −28.89 (Minimum)15.50 (Nominal)60.00 (Maximum) | | | | |
| Phase | Na Count Rate CPS | | | Value | | | | | | | | | | |
| Master | <div><div></div></div> | | | 21.72 | | | | | | | | | | |
| Before | <div><div></div></div> | | | 21.01 | | | | | | | | | | |
| 10.00 (Minimum)45.00 (Nominal)100.0 (Maximum) | | | | | | | | | | | | | | |
| Master: 20–Nov–2004 23:57 | | | | | Before: 21–Nov–2004 7:15 | | | | | | | | | |

| Hostile Natural Gamma Ray Sonde Wellsite Calibration | | | | | | | | | | | |
|--|------------------------|--|-------|--|------------------------|--|-------|---|------------------------|--|-------|
| Detector 2 Check | | | | | | | | | | | |
| Phase | Na 511 Peak Loc | | Value | Phase | Na 511 Peak Res % | | Value | Phase | High Voltage V | | Value |
| Master | <div><div></div></div> | | 40.58 | Master | <div><div></div></div> | | 16.30 | Master | <div><div></div></div> | | 1245 |
| Before | <div><div></div></div> | | 40.62 | Before | <div><div></div></div> | | 16.18 | Before | <div><div></div></div> | | 1247 |
| 37.50 (Minimum)40.00 (Nominal)42.50 (Maximum) | | | | 12.00 (Minimum)15.50 (Nominal)19.00 (Maximum) | | | | 900.0 (Minimum)1150 (Nominal)1600 (Maximum) | | | |
| Phase | Na 1785 Peak Loc | | Value | Phase | Na 1785 Peak Res % | | Value | Phase | Temperature DEGC | | Value |
| Master | <div><div></div></div> | | 145.2 | Master | <div><div></div></div> | | 9.098 | Master | <div><div></div></div> | | 20.06 |
| Before | <div><div></div></div> | | 144.8 | Before | <div><div></div></div> | | 8.969 | Before | <div><div></div></div> | | 20.28 |
| 135.0 (Minimum)142.6 (Nominal)150.3 (Maximum) | | | | 7.000 (Minimum)8.500 (Nominal)11.00 (Maximum) | | | | −28.89 (Minimum)15.50 (Nominal)60.00 (Maximum) | | | |
| Phase | Na Count Rate CPS | | Value | | | | | | | | |
| Master | <div><div></div></div> | | 21.82 | | | | | | | | |
| Before | <div><div></div></div> | | 21.06 | | | | | | | | |
| 10.00 (Minimum)45.00 (Nominal)100.0 (Maximum) | | | | | | | | | | | |
| Master: 20–Nov–2004 23:57 | | | | Before: 21–Nov–2004 7:15 | | | | | | | |

| Hostile Natural Gamma Ray Sonde Wellsite Calibration | | |
|--|---|--------|
| Ratio Of Detector 1 To Detector 2 | | |
| Phase | Coincidence Count Rate Ratio | Value |
| Master |  | 0.9940 |
| Before |  | 0.9959 |
| 0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum) | | |
| Master: 20–Nov–2004 23:57 | | |
| Before: 21–Nov–2004 7:15 | | |

| Hostile Natural Gamma Ray Sonde Master Calibration | | | | | | | | | | | |
|--|-------------------------------------|--------------------|--------------------|--------|------------------------|--------------------|--------------------|--------|------------------------|--------------------|--------------------|
| Detector 1 Calibration | | | | | | | | | | | |
| Phase | Na 511 Peak Set Point | | Value | Phase | Th Peak Loc | | Value | Phase | Th Peak Res % | | Value |
| Master | <div><div></div></div> | | 42.00 | Master | <div><div></div></div> | | 208.8 | Master | <div><div></div></div> | | 8.378 |
| | 38.00 (Minimum) | 40.00 (Nominal) | 42.00 (Maximum) | | 201.0 (Minimum) | 209.6 (Nominal) | 218.3 (Maximum) | | 5.000 (Minimum) | 7.000 (Nominal) | 9.000 (Maximum) |
| Phase | Background Count Rate CPS | | Value | Phase | Gain Ratio | | Value | | | | |
| Master | <div><div>EXCEEDS LIMIT</div></div> | | 16.70 | Master | <div><div></div></div> | | 0.9789 | | | | |
| | 20.00 (Minimum) | 142.5 (Nominal) | 265.0 (Maximum) | | 0.9400 (Minimum) | 1.000 (Nominal) | 1.060 (Maximum) | | | | |

| | | | | | | | | | | | |
|--|---|--------------------|--------------------|--------|---|--------------------|--------------------|--------|---|--------------------|--------------------|
| Master: 20-Nov-2004 23:57 | | | | | | | | | | | |
| Hostile Natural Gamma Ray Sonde Master Calibration | | | | | | | | | | | |
| Detector 2 Calibration | | | | | | | | | | | |
| Phase | Na 511 Peak Set Point | | Value | Phase | Th Peak Loc | | Value | Phase | Th Peak Res % | Value | |
| Master |  | | 42.00 | Master |  | | 209.4 | Master |  | 7.666 | |
| | 38.00 (Minimum) | 40.00 (Nominal) | 42.00 (Maximum) | | 201.0 (Minimum) | 209.6 (Nominal) | 218.3 (Maximum) | | 5.000 (Minimum) | 7.000 (Nominal) | 9.000 (Maximum) |
| Phase | Background Count Rate CPS | | Value | Phase | Gain Ratio | | Value | | | | |
| Master |  | | 15.85 | Master |  | | 0.9815 | | | | |
| | 20.00 (Minimum) | 142.5 (Nominal) | 265.0 (Maximum) | | 0.9400 (Minimum) | 1.000 (Nominal) | 1.060 (Maximum) | | | | |
| Master: 20-Nov-2004 23:57 | | | | | | | | | | | |

Company:

Origin Energy Resources Ltd.

Well:

Trefoil-1

Field:

Trefoil

Rig:

ENSCO 102

Country:

Australia

Schlumberger

FMI-DSI-HNGS

Dipole Shear Sonic Imager

1:500 Scale