# Schlumberger

Company: **Lamont Doherty Earth Observatory**
**Shell**
Well: **Expedition 344S, U0070A (USC70)**
Field: **Baffin Bay**
Rig: **JOIDES Resolution** Country: **USA**

Rig: JOIDES Resolution
Field: Baffin Bay
Location: Latitude: N 75* 42' 21.85"
Well: Expedition 344S, U0070A (USC7
Company: Lamont Doherty Earth Observato

DSI Sonic Imager
P& S Monopole

LOCATION

Latitude: N 75* 42' 21.85"
Longitude: W 65* 43' 46.32"

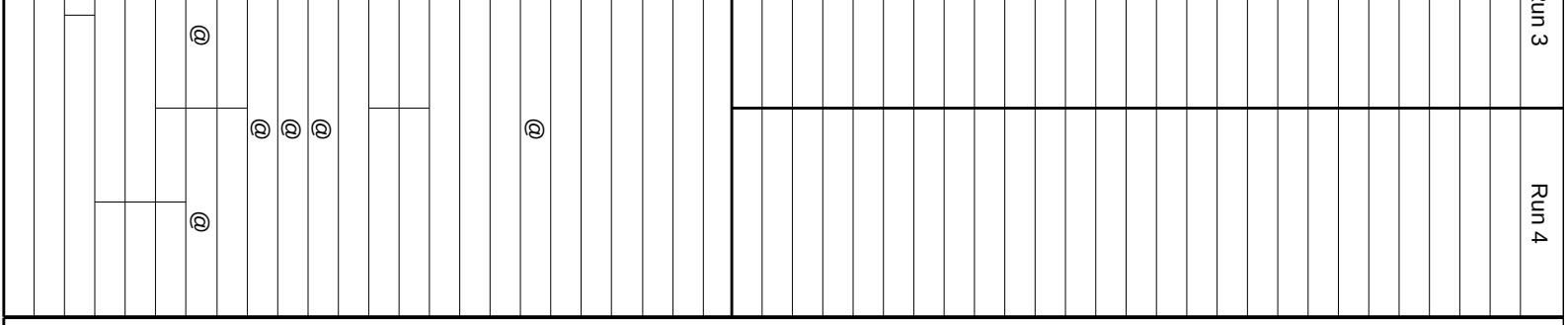
Elev.: K.B. −592.00 m
G.L. −603.00 m
D.F. −592.00 m

Permanent Datum: Mean Sea Level — Elev.: 0.00 m
Log Measured From: Sea Floor — 11.00 m above Perm. Datum
Drilling Measured From: Drill Floor

| Ocean: | Max. Well Deviation | Longitude | Latitude |
|---|---|---|---|
| Atlantic | 0 deg | N 75* 42' 21.85" | W 65* 43' 46.32" |

| | Run 1 | Run 2 | R |
|---|---|---|---|
| Logging Date | 20−Sep−2012 | | |
| Run Number | 1 | | |
| Depth Driller | 303.6 m | | |
| Schlumberger Depth | 258.3 m | | |
| Bottom Log Interval | 236 m | | |
| Top Log Interval | 31 m | | |
| Casing Driller Size @ Depth | 7.000 in @ 33 m | @ | |
| Casing Schlumberger | 31 m | | |
| Bit Size | 9.875 in | | |
| Type Fluid In Hole | Seawater | | |
| MUD Density / Viscosity | 1.05 g/cm3 | | |
| MUD Fluid Loss / PH | | | |
| MUD Source Of Sample | N/A | | |
| RM @ Measured Temperature | @ | @ | |
| RMF @ Measured Temperature | @ | @ | |
| RMC @ Measured Temperature | @ | @ | |
| Source RMF / RMC | N/A / N/A | | |
| RM @ MRT / RMF @ MRT | @ 9 / @ 9 | @ / @ | |
| Maximum Recorded Temperatures | 9 degC | | |
| Circulation Stopped / Time | 20−Sep−2012 / 14:00 | | |
| Logger On Bottom / Time | 20−Sep−2012 / 17:20 | | |
| Unit Number / Location | 625003 / Houston | | |
| Recorded By | C. Furman | | |
| Witnessed By | G. Guerin, H. Evans | | |

| | Run 1 | Run 2 | R |
|---|---|---|---|
| Logging Date | | | |
| Run Number | | | |
| Depth Driller | | | |
| Schlumberger Depth | | | |
| Bottom Log Interval | | | |
| Top Log Interval | | | |
| Casing Driller Size @ Depth | @ | | |
| Casing Schlumberger | | | |
| Bit Size | | | |
| Type Fluid In Hole | | | |
| MUD Density / Viscosity | | | |
| MUD Fluid Loss / PH | | | |
| MUD Source Of Sample | | | |
| RM @ Measured Temperature | @ | | |
| RMF @ Measured Temperature | @ | | |
| RMC @ Measured Temperature | @ | | |
| Source RMF / RMC | | | |
| RM @ MRT / RMF @ MRT | @ | @ | |
| Maximum Recorded Temperatures | | | |
| Circulation Stopped / Time | | | |
| Logger On Bottom / Time | | | |
| Unit Number / Location | | | |
| Recorded By | | | |
| Witnessed By | | | |




DISCLAIMER

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OTHER SERVICES1

OS1: MSS
OS2: HRLA
OS3: HLDS
OS4: FMS
OS5: HNGS

REMARKS: RUN NUMBER 1

Site U0070A, client designation USC 070, was cored for exploration using the RCB system.
***This site is subcontracted to Shell from LDEO, not a standard USIO/IODP site!***
Tools were not able to reach TD due to hole obstruction; maximum depth was 258.5mbsf.
Centralized tools run using modified MCD chasis as inline centralizer, as per tool sketch.
Eccentered / Centered tools decoupled using knuckle joints with a through−wired spacer.
HLDS Caliper used for applicable hole size corrections on up log; bit sized used for downlog.
Tools conveyed to hole on wireline through drill pipe, as is standard for this riser−less operation.
Logs recorded from Drill Floor, but played back with zero reference at sea bed for compatibility with core data.
Original sea bed, as measured from drill floor, was 603.0m uncorrected measured depth below drill floor.
Heave compensation was not required due to exceptionally calm sea state and favorable weather during logging.
DSI Run with typical modes as follows:
− P&S Monopole in Standard Frequency
− Upper Dipole in Low Frequency
− Lower Dipole in Standard Frequency
− Stoneley in Standard Frequency
DSI Centralized using two MCD inline centralizers.

RUN 1

SERVICE ORDER #:
PROGRAM VERSION: 19C0−187
FLUID LEVEL:

| LOGGED INTERVAL | START | STOP |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

RUN 2

SERVICE ORDER #:
PROGRAM VERSION:
FLUID LEVEL:

| LOGGED INTERVAL | START | STOP |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

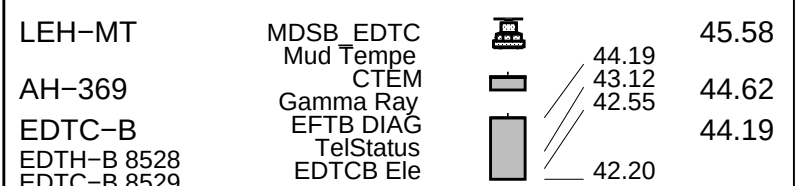
# EQUIPMENT DESCRIPTION

RUN 1

## SURFACE EQUIPMENT

WITM (EDTS)−A

## DOWNHOLE EQUIPMENT




RUN 2

LDTC−B 8529

LDSC−B — LDSC Stat — 41.67 — 42.20

HLDS — 41.14
GSR−Z 8113
HLDV−D 45
HLDS−D 45
HEH−H 47
HLDP−C 45
Caliper
SS LS Status — 37.08

AH−184 — 36.32

AH−ECHMRA — 35.71
AH−ECHMRA 5714

AH−184 — 32.81

AH−MCD_D — 32.20
AH−MCD_D 1663

DSST−B — 29.93
SPAC−B 8194
ECH−SD 8183
SMDR−BD 8070
SSIJ−BA 8204
SMDX−AA 8147

PWF — 14.38

AH−MCD_GB — 14.38
AH−MCD_GB 22

HRLT−B — 12.10
HRUH−B 978
HRUC−B 764
HRLS−B 768
HRLH−B 968
HRLC−B 974
AH−270 1708
High Res. — 8.51

AH−SSIJ — 4.72

MSS_LDEO−A — 3.66
ELIC−A 3
MSS_LDEO−A 3
Hi−Res — 3.36
Dual Coil — 0.39
DF ACCZ
Tension HV — 0.00

TOOL ZERO

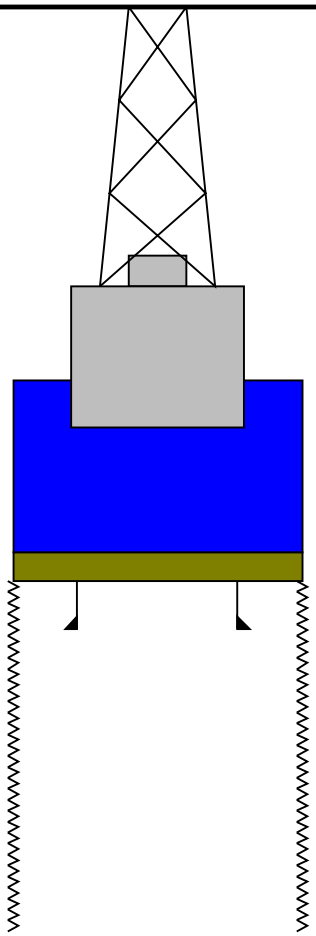
MAXIMUM STRING DIAMETER 4.50 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

Client: LDEO / Shell
Well: USC 70
Field: Baffin Bay
State:
Country: Greenland

Drawing Date: 9/23/2012
API #:

Rig Name: JOIDES Resolution
Reference Datum: Sea Floor
Elevation: −603.0 m

| Production String | (in) OD | (in) ID | (m) MD | Well Schematic | (m) MD | (in) OD | (in) ID | Casing String |
|---|---|---|---|---|---|---|---|---|

| | OD | ID | MD | | MD | OD | ID | |
|---|---|---|---|---|---|---|---|---|
| Kelly Bushing Elevation | | | −603.0 |  | | | | |
| Derrick Floor Elevation | | | −603.0 | | | | | |
| Mean Sea Level | | | −592.0 | | | | | |
| | | | | | 0.0 | | | Sea Floor |
| | | | | | 33.0 | 5.500 | | Pipe Shoe |
| | | | | | 303.6 | 9.875 | | Total Depth − Driller |

Schlumberger

# Up Log

MAXIS Field Log

**Company: Lamont Doherty Earth Observatory** **Well: Expedition 344S, U0080A (USC70)**

## Input DLIS Files

| | | | | | | |
|---|---|---|---|---|---|---|
| DEFAULT | MSS_LDEO_HRLA_DSI_010LUP | FN:11 | PRODUCER | 20−Sep−2012 19:23 | 861.8 M | 591.6 M |

## Output DLIS Files

| | | | | | | |
|---|---|---|---|---|---|---|
| DEFAULT | MSS_LDEO_HRLA_DSI_028PUP | FN:33 | PRODUCER | 23−Sep−2012 02:33 | 259.1 M | −11.4 M |
| CLIENT | MSS_LDEO_HRLA_DSI_028PUC | FN:34 | CUSTOMER | 23−Sep−2012 02:33 | 259.1 M | −11.4 M |

## OP System Version: 19C0−187

| | | | |
|---|---|---|---|
| MSS_LDEO−A | 19C0−187 | HRLT−B | 19C0−187 |
| DSST−B | 19C0−187 | HLDS | 19C0−187 |
| LDSC−B | 19C0−187 | EDTC−B | SKK−5169−EDTCB |

PIP SUMMARY

Time Mark Every 60 S

Peak Coherence / TA − P & S Shear (CHTS)
−1 (−−−−) 9

Peak Coherence / RA − P & S Shear (CHRS)
−1 (−−−−) 9

Delta−T Shear − P & S (DT4S)
440 (US/F) 40

Delta−T Shear / TA − P & S (DTTS)
440 (US/F) 40

Delta−T Shear / RA − P & S (DTRS)
440 (US/F) 40

Delta−T Comp − P & S (DT4P)
440 (US/F) 40

Delta−T Comp / TA − P & S (DTTP)
440 (US/F) 40

Delta−T Comp / RA − P & S (DTRP)
440 (US/F) 40

Min Amplitude Max

Rec.Array P&S Slow Proj. CVDL (SPR4)
40 (US/F) 240

Gamma Ray (GR_EDTC)
0 (GAPI) 150

Peak Coherence / TA − P & S Comp (CHTP)
0 (−−−−) 10

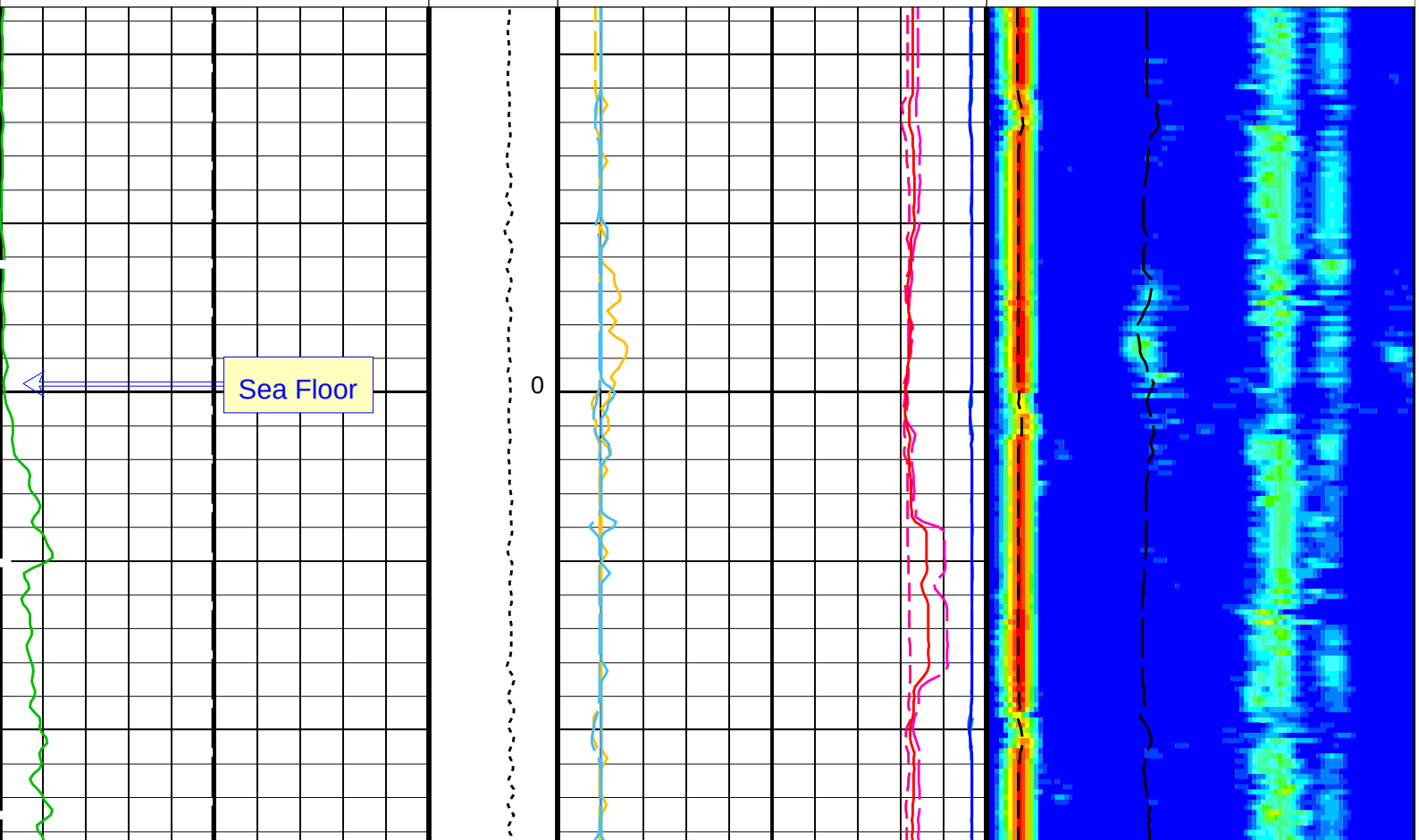
Delta−T Shear / RA − P & S (DTRS)
40 (US/F) 240

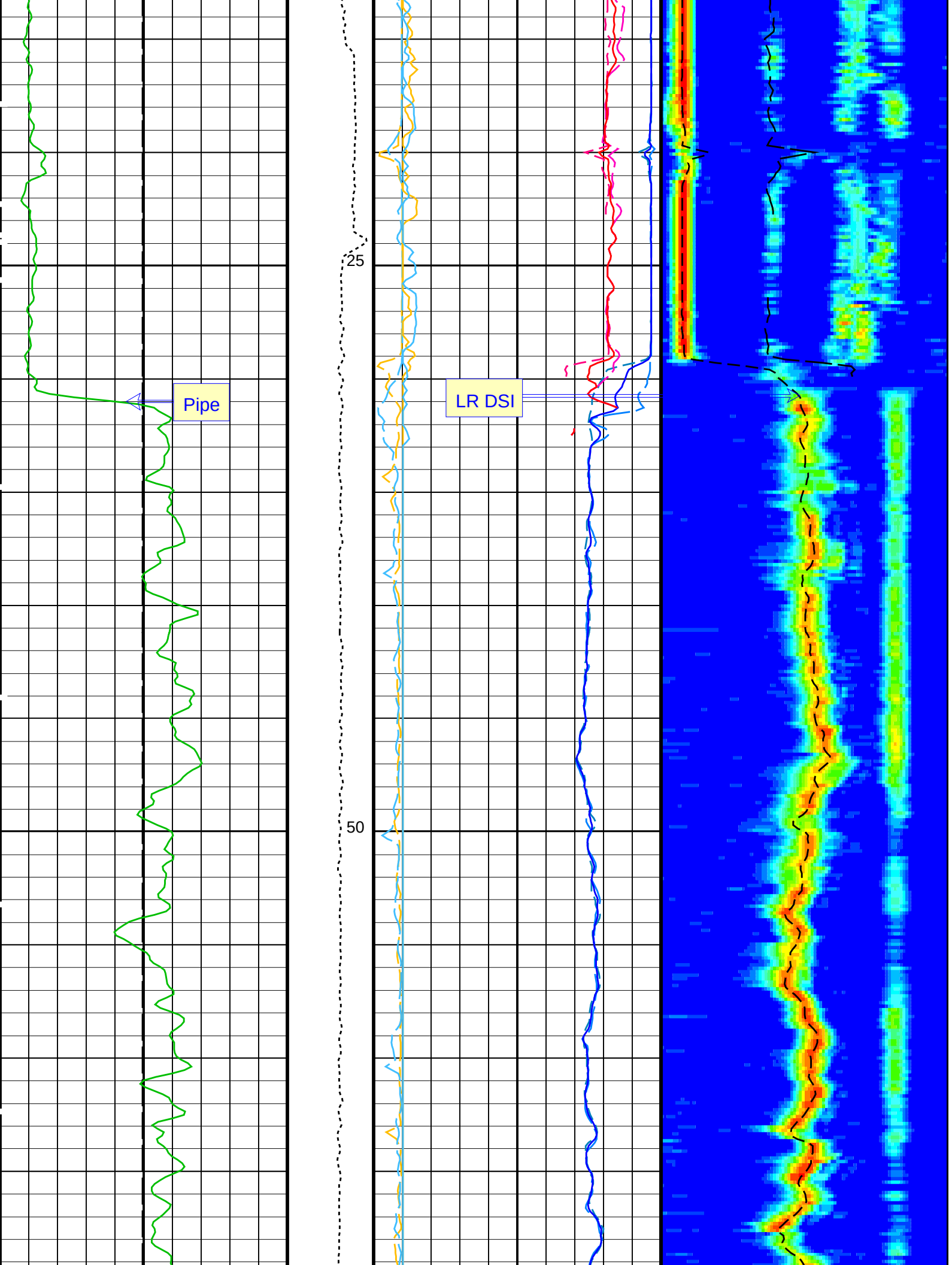
Bit Size (BS)
0 (IN) 20

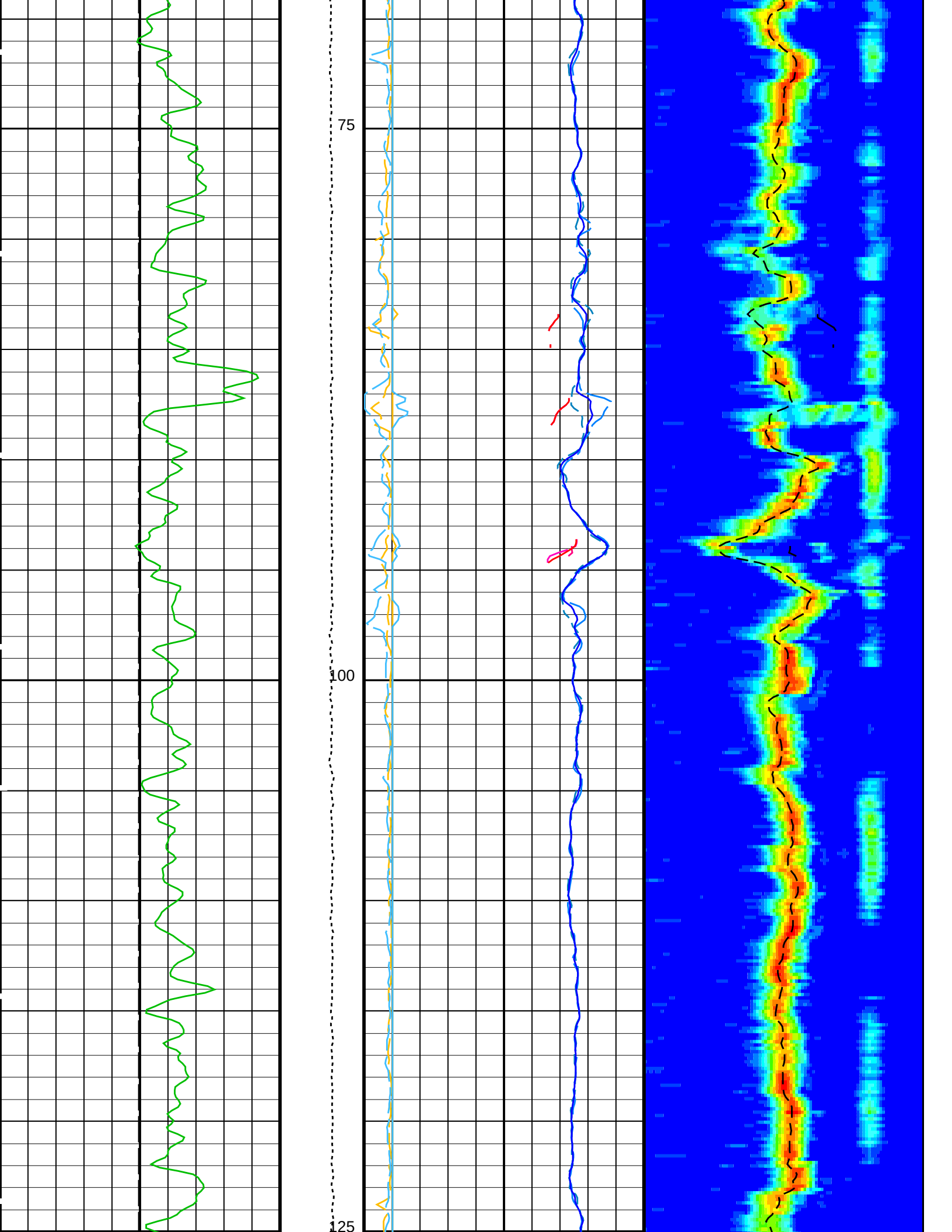
Tension (TENS) (LBF)
0 5000

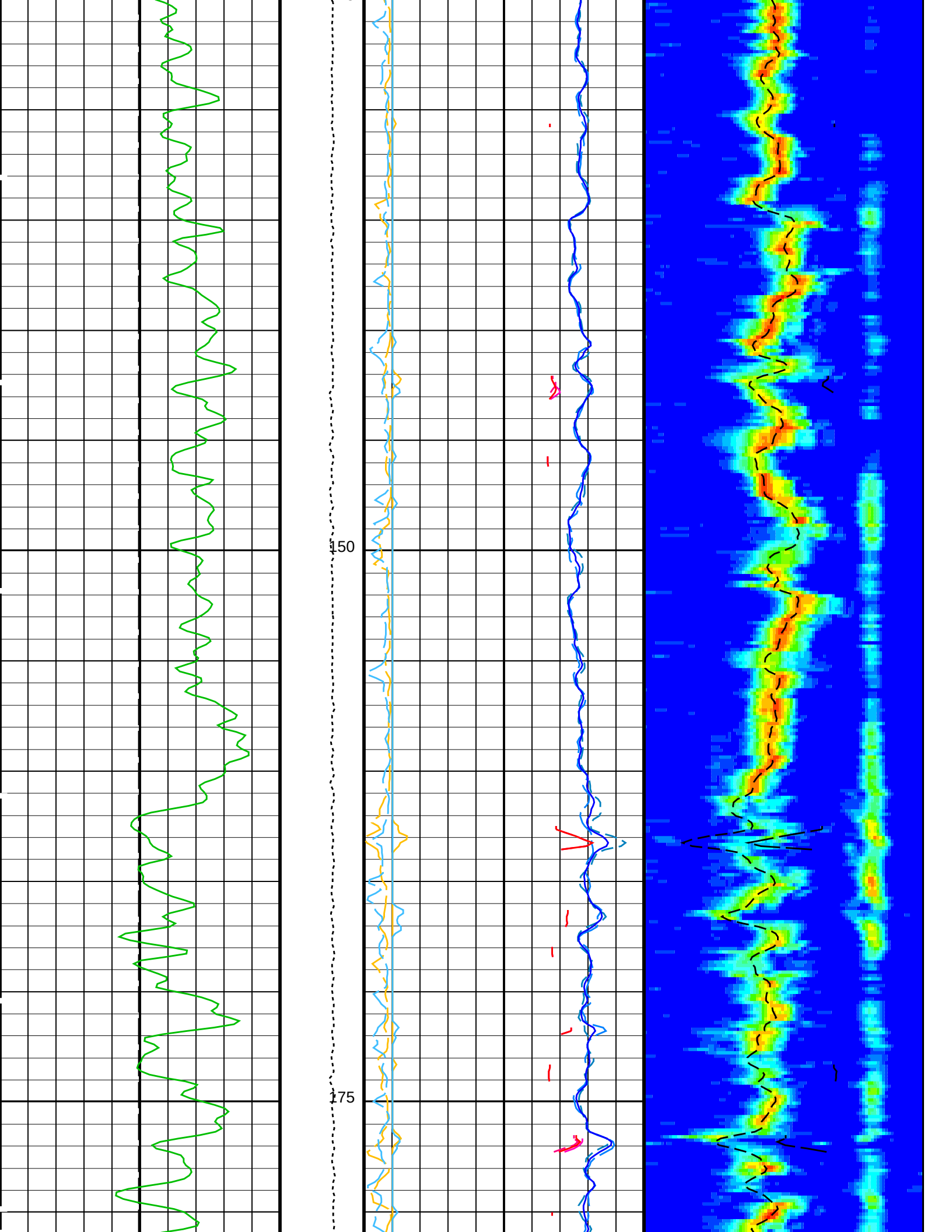
Peak Coherence / RA − P & S Comp (CHRP)
0 (−−−−) 10

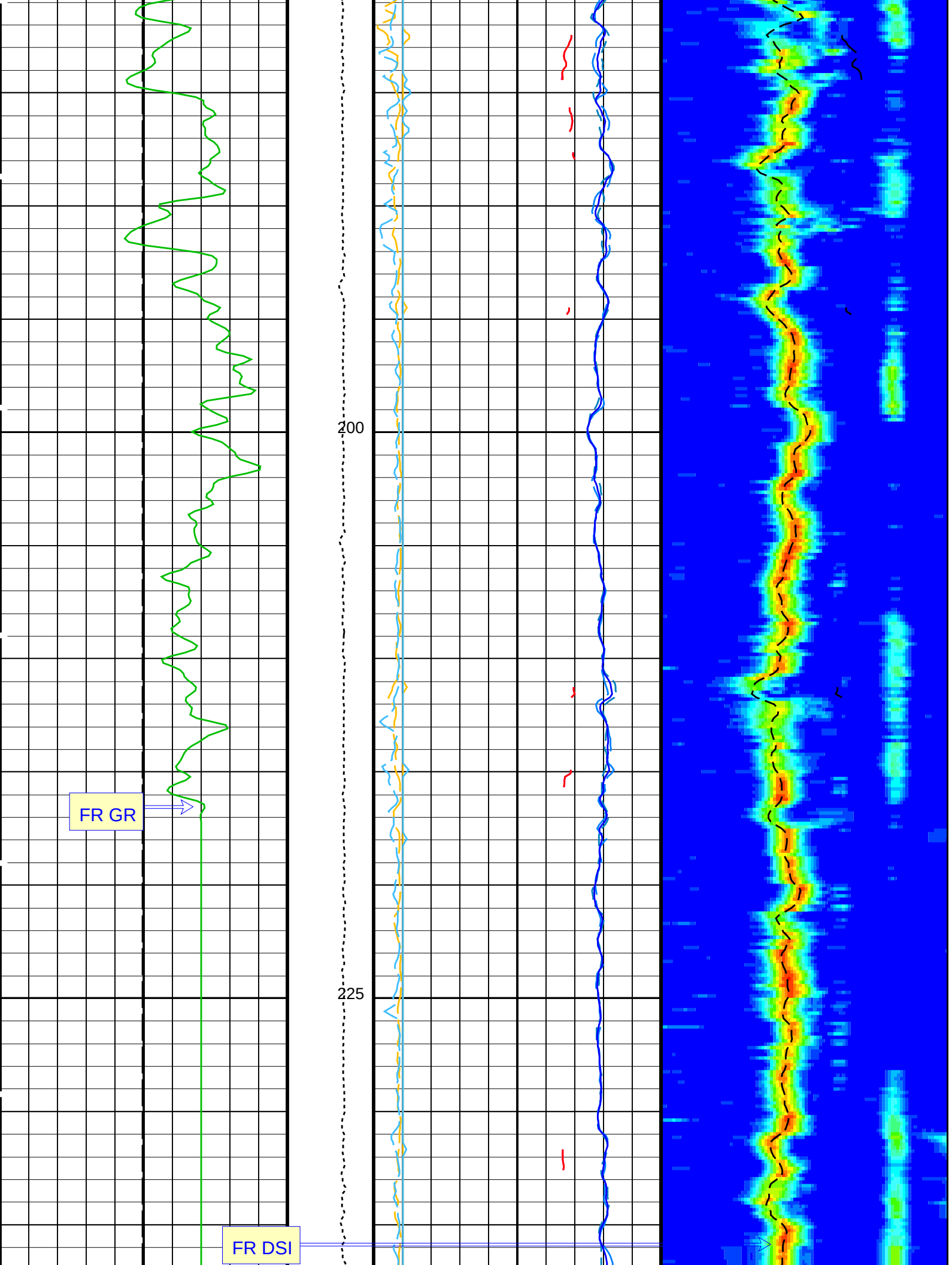
Delta−T Comp / RA − P & S (DTRP)
40 (US/F) 240

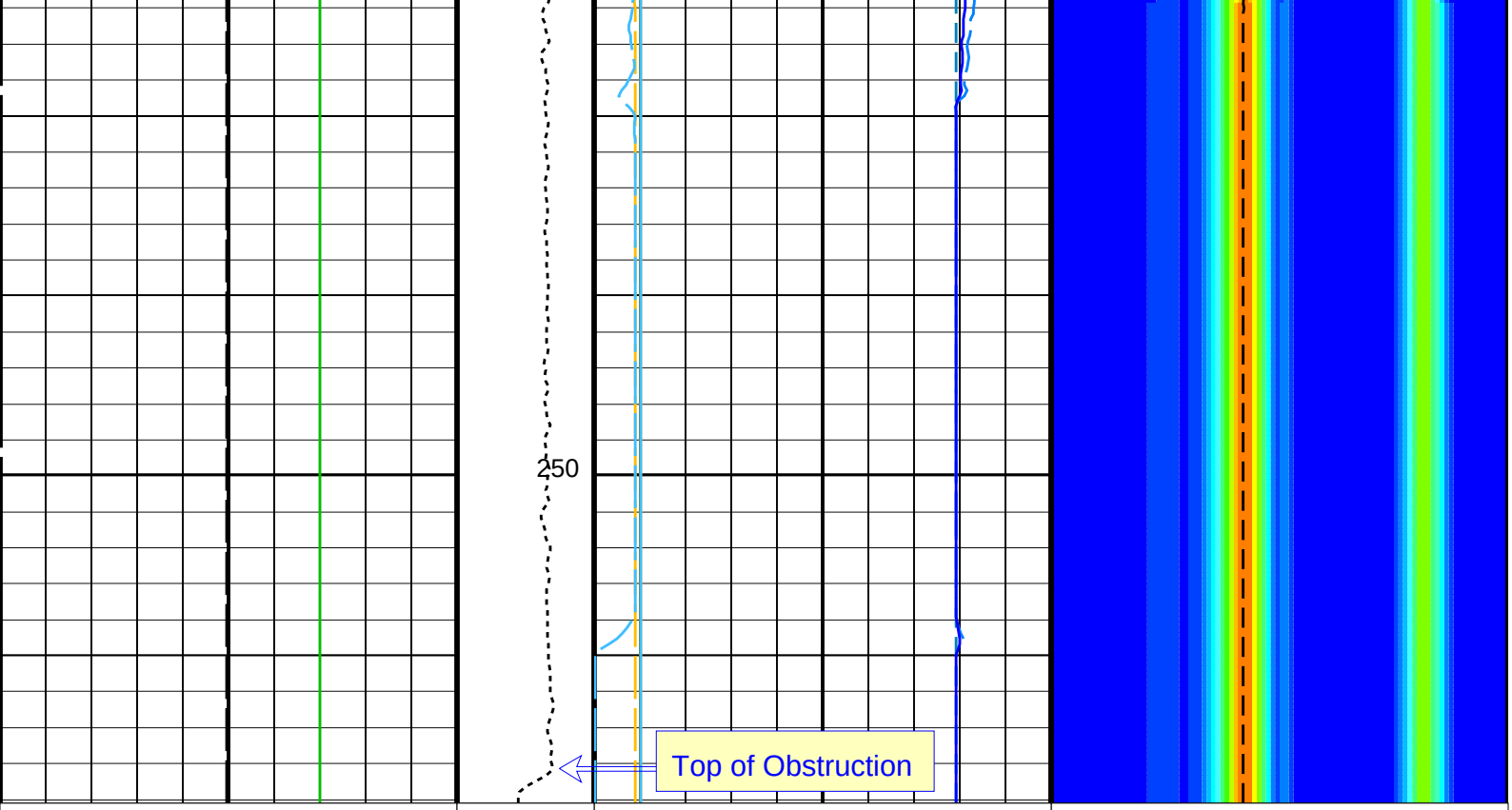



25
50
Pipe
LR DSI


75
100
125


150
175


200
225
FR GR
FR DSI




Bit Size (BS)
0 (IN) 20

Tension (TENS) (LBF)
0 5000

Peak Coherence / RA − P & S Comp (CHRP)
0 (----) 10

Delta−T Comp / RA − P & S (DTRP)
40 (US/F) 240

Gamma Ray (GR_EDTC)
0 (GAPI) 150

Peak Coherence / TA − P & S Comp (CHTP)
0 (----) 10

Delta−T Shear / RA − P & S (DTRS)
40 (US/F) 240

Delta−T Comp / RA − P & S (DTRP)
440 (US/F) 40

Min Amplitude Max

Rec.Array P&S Slow Proj. CVDL (SPR4)
40 (US/F) 240

Delta−T Comp / TA − P & S (DTTP)
440 (US/F) 40

Delta−T Comp − P & S (DT4P)
440 (US/F) 40

Delta−T Shear / RA − P & S (DTRS)
440 (US/F) 40

Delta−T Shear / TA − P & S (DTTS)
440 (US/F) 40

Delta−T Shear − P & S (DT4S)
440 (US/F) 40

Peak Coherence / RA − P & S Shear (CHRS)
−1 (----) 9

Peak Coherence / TA − P & S Shear (CHTS)
−1 (----) 9

PIP SUMMARY

Time Mark Every 60 S

## Parameters

| DLIS Name | Description | Value |
|---|---|---|

| | | | |
|---|---|---|---|
| | **HRLT−B: High Resolution Laterolog Array − B** | | |
| **BHS** | **Borehole Status** | **OPEN** | |
| | **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** |
| **DDE4** | **Digitizing Delay 4** | **0** | **US** |
| **DDEX** | **Digitizing Delay X** | **0** | **US** |
| **DSI4** | **Digitizer Sample Interval 4** | **10** | **US** |
| **DSIX** | **Digitizer Sample Interval X** | **40** | **US** |
| **DTF** | **Delta−T Fluid** | **189** | **US/F** |
| **DWC4** | **Digitizer Word Count 4** | **512** | |
| **DWCX** | **Digitizer Word Count X** | **512** | |
| **FILG** | **Label Fill Gap Control − Monopole P&S** | **COMP_SHEAR** | |
| **LFC** | **Label Formation Character − Monopole P&S** | **DYNAMIC** | |
| **MCS** | **Mean Casing Slowness** | **57** | **US/F** |
| **MTXG** | **Monopole Transmitter Geometry** | **186** | **IN** |
| **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** |
| **SAM4** | **DSST Sonic Acquisition Mode 4 − Monopole Mode for P&S** | **ODD** | |
| **SAMX** | **DSST Sonic Acquisition Mode X − Both Dipoles or Monopole Mode for Expert** | **OFF** | |
| **SAS4** | **STC Sonic Array Status − Monopole P&S** | **255** | |
| **SBO4** | **STC Search Band Offset − Monopole P&S** | **500** | **US** |
| **SBR4** | **STC Baseline Removal − Monopole P&S** | **ON** | |
| **SBW4** | **STC Search Bandwidth − Monopole P&S** | **2000** | **US** |
| **SFC4** | **STC Formation Character − Monopole P&S** | **SELECTABLE** | |
| **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** |
| **SLL4** | **STC Slowness Lower Limit − Monopole P&S** | **40** | **US/F** |
| **SST4** | **STC Slowness Step − Monopole P&S** | **2** | **US/F** |
| **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** |
| **SUL4** | **STC Slowness Upper Limit − Monopole P&S** | **240** | **US/F** |
| **SWD4** | **STC Slowness Width − Monopole P&S** | **10** | **US/F** |
| **TBF4** | **STC Time for Baseline Fill − Monopole P&S** | **300** | **US** |
| **TLL4** | **STC Time Lower Limit − Monopole P&S** | **150** | **US** |
| **TST4** | **STC Time Step − Monopole P&S** | **50** | **US** |
| **TUL4** | **STC Time Upper Limit − Monopole P&S** | **3660** | **US** |
| **TWD4** | **STC Time Width − Monopole P&S** | **1000** | **US** |
| **TWI4** | **STC Integration Time Window − Monopole P&S** | **500** | **US** |
| **TWSX** | **Transmitter Waveform Select X** | **0** | |
| | **EDTC−B: Enhanced DTS Cartridge** | | |
| **BHS** | **Borehole Status** | **OPEN** | |
| | **System and Miscellaneous** | | |
| **BS** | **Bit Size** | **9.875** | **IN** |
| **DO** | **Depth Offset for Playback** | **−603.0** | **M** |
| **PP** | **Playback Processing** | **RECOMPUTE** | |

**Format: DSST_P_S_VDL_COLOR** **Vertical Scale: 1:200** **Graphics File Created: 23−Sep−2012 02:33**

## OP System Version: 19C0−187

| | | | |
|---|---|---|---|
| **MSS_LDEO−A** | **19C0−187** | **HRLT−B** | **19C0−187** |
| **DSST−B** | **19C0−187** | **HLDS** | **19C0−187** |
| **LDSC−B** | **19C0−187** | **EDTC−B** | **SKK−5169−EDTCB** |

## Input DLIS Files

| | | | | | | |
|---|---|---|---|---|---|---|
| **DEFAULT** | **MSS_LDEO_HRLA_DSI_010LUP** | **FN:11** | **PRODUCER** | **20−Sep−2012 19:23** | **861.8 M** | **591.6 M** |

## Output DLIS Files

| | | | | |
|---|---|---|---|---|
| **DEFAULT** | **MSS_LDEO_HRLA_DSI_028PUP** | **FN:33** | **PRODUCER** | **23−Sep−2012 02:33** |
| **CLIENT** | **MSS_LDEO_HRLA_DSI_028PUC** | **FN:34** | **CUSTOMER** | **23−Sep−2012 02:33** |

Schlumberger

# Down Log

MAXIS Field Log

**Company: Lamont Doherty Earth Observatory** | **Well: Expedition 344S, U0080A (USC70)**

## Input DLIS Files

| | | | | | | |
|---|---|---|---|---|---|---|
| DEFAULT | Flip_MSS_LDEO_HRLA_026LUP | | PRODUCER | 23−Sep−2012 02:30 | 862.6 M | 506.7 M |

## Output DLIS Files

| | | | | | | |
|---|---|---|---|---|---|---|
| DEFAULT | MSS_LDEO_HRLA_DSI_029PUP | FN:35 | PRODUCER | 23−Sep−2012 02:41 | 259.2 M | −24.2 M |
| CLIENT | MSS_LDEO_HRLA_DSI_029PUC | FN:36 | CUSTOMER | 23−Sep−2012 02:41 | 259.2 M | −24.2 M |

## OP System Version: 19C0−187

| | | | |
|---|---|---|---|
| MSS_LDEO−A | 19C0−187 | HRLT−B | 19C0−187 |
| DSST−B | 19C0−187 | HLDS | 19C0−187 |
| LDSC−B | 19C0−187 | EDTC−B | SKK−5169−EDTCB |

**PIP SUMMARY**

**Time Mark Every 60 S**

Peak Coherence / TA − P & S Shear (CHTS)
−1 (−−−−) 9

Peak Coherence / RA − P & S Shear (CHRS)
−1 (−−−−) 9

Delta−T Shear − P & S (DT4S)
440 (US/F) 40

Delta−T Shear / TA − P & S (DTTS)
440 (US/F) 40

Delta−T Shear / RA − P & S (DTRS)
440 (US/F) 40

Delta−T Comp − P & S (DT4P)
440 (US/F) 40

Delta−T Comp / TA − P & S (DTTP)
440 (US/F) 40

Delta−T Comp / RA − P & S (DTRP)
440 (US/F) 40

Min Amplitude Max

Rec.Array P&S Slow Proj. CVDL (SPR4)
40 (US/F) 240

Gamma Ray (GR_EDTC)
0 (GAPI) 150

Peak Coherence / TA − P & S Comp (CHTP)
0 (−−−−) 10

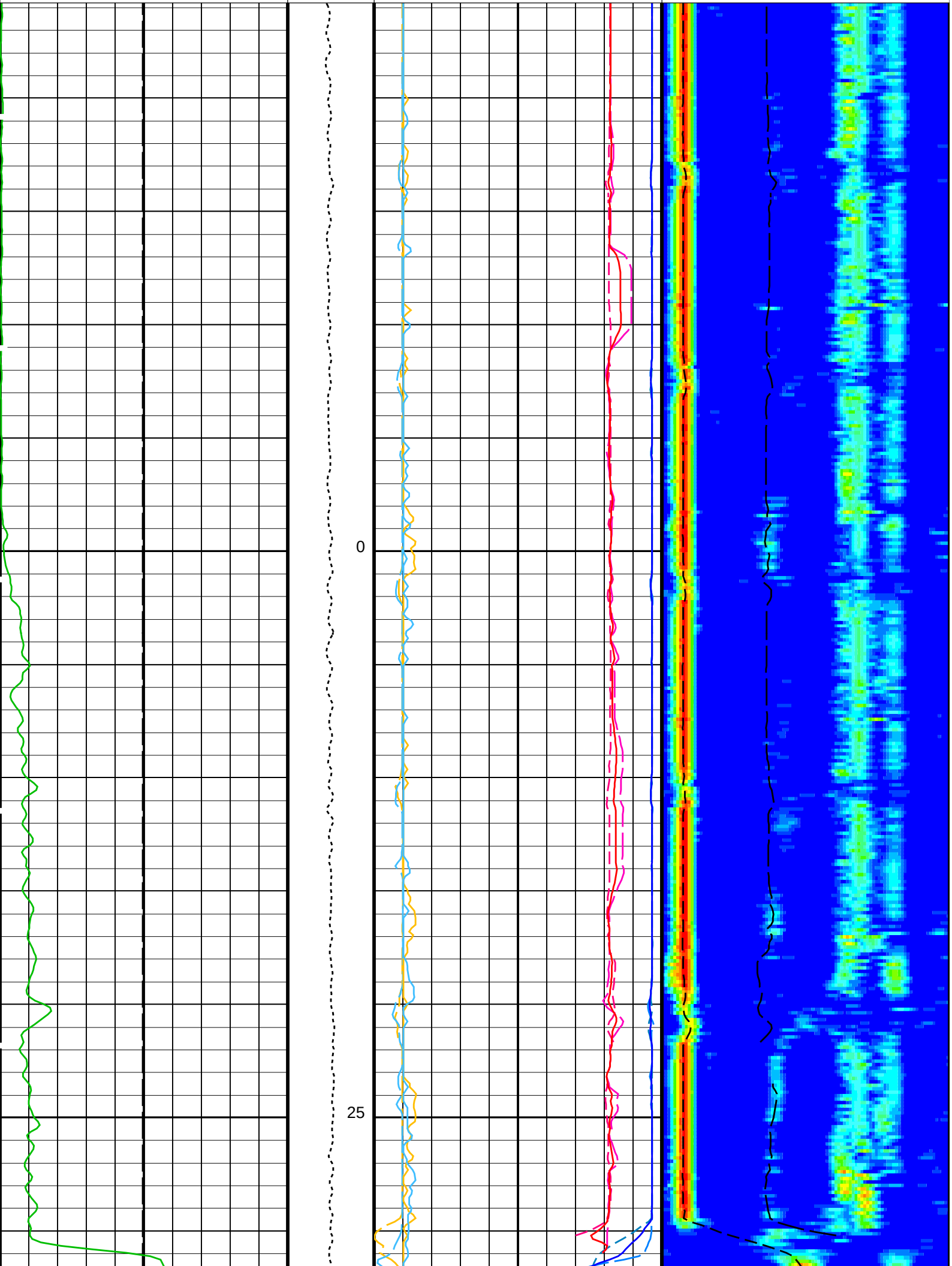
Delta−T Shear / RA − P & S (DTRS)
40 (US/F) 240

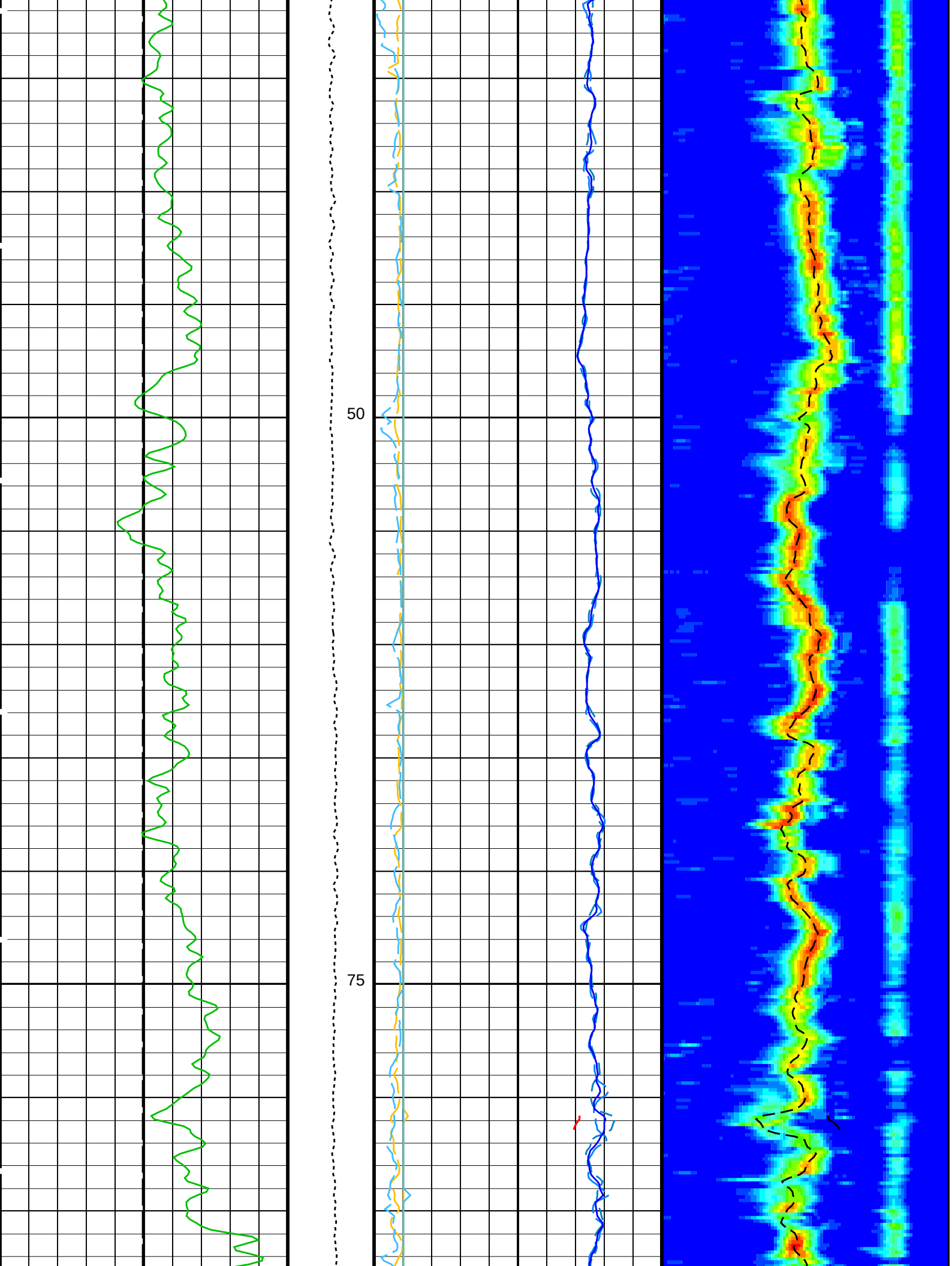
Bit Size (BS)
0 (IN) 20

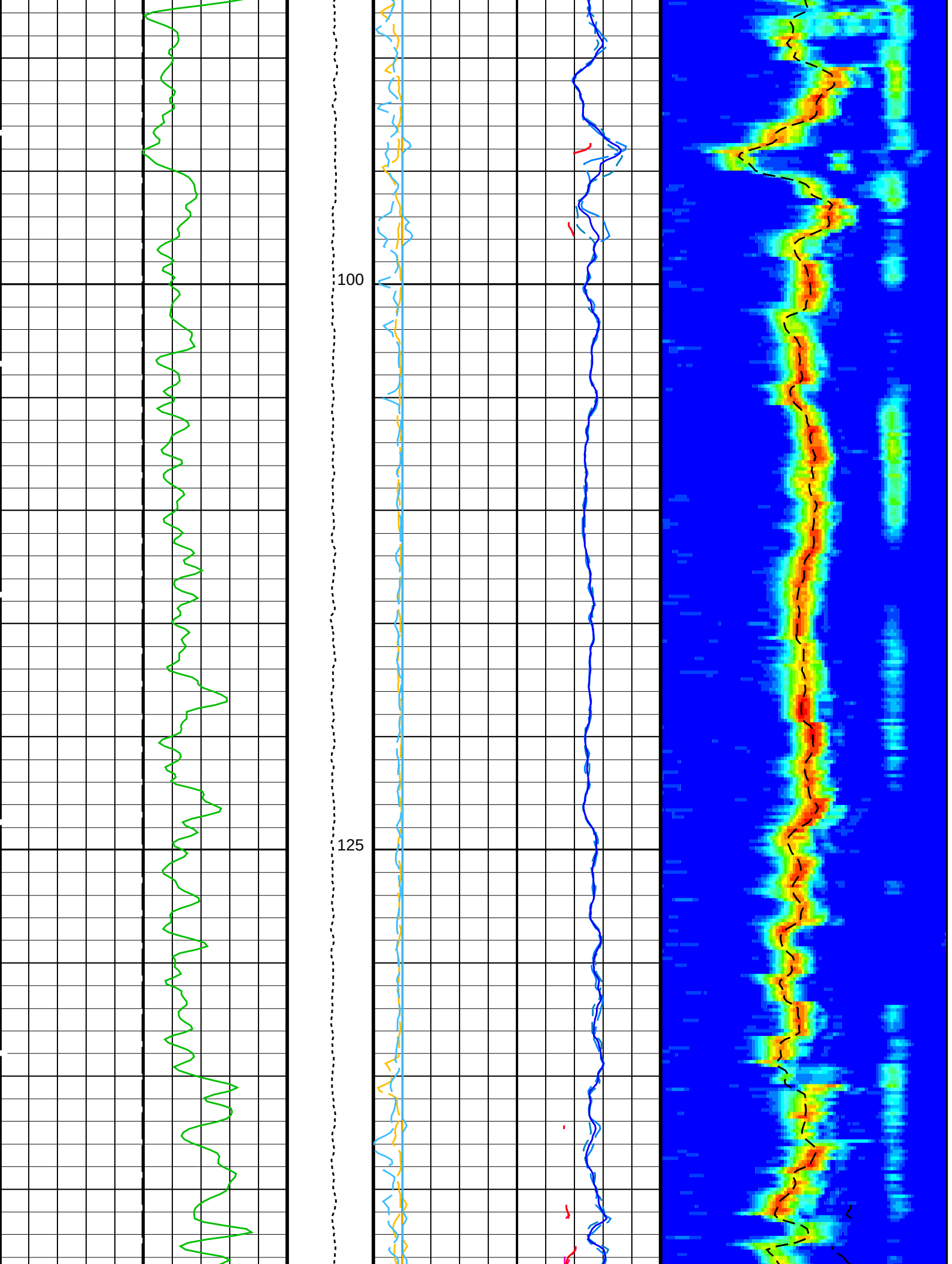
Tension (TENS) (LBF)
0 5000

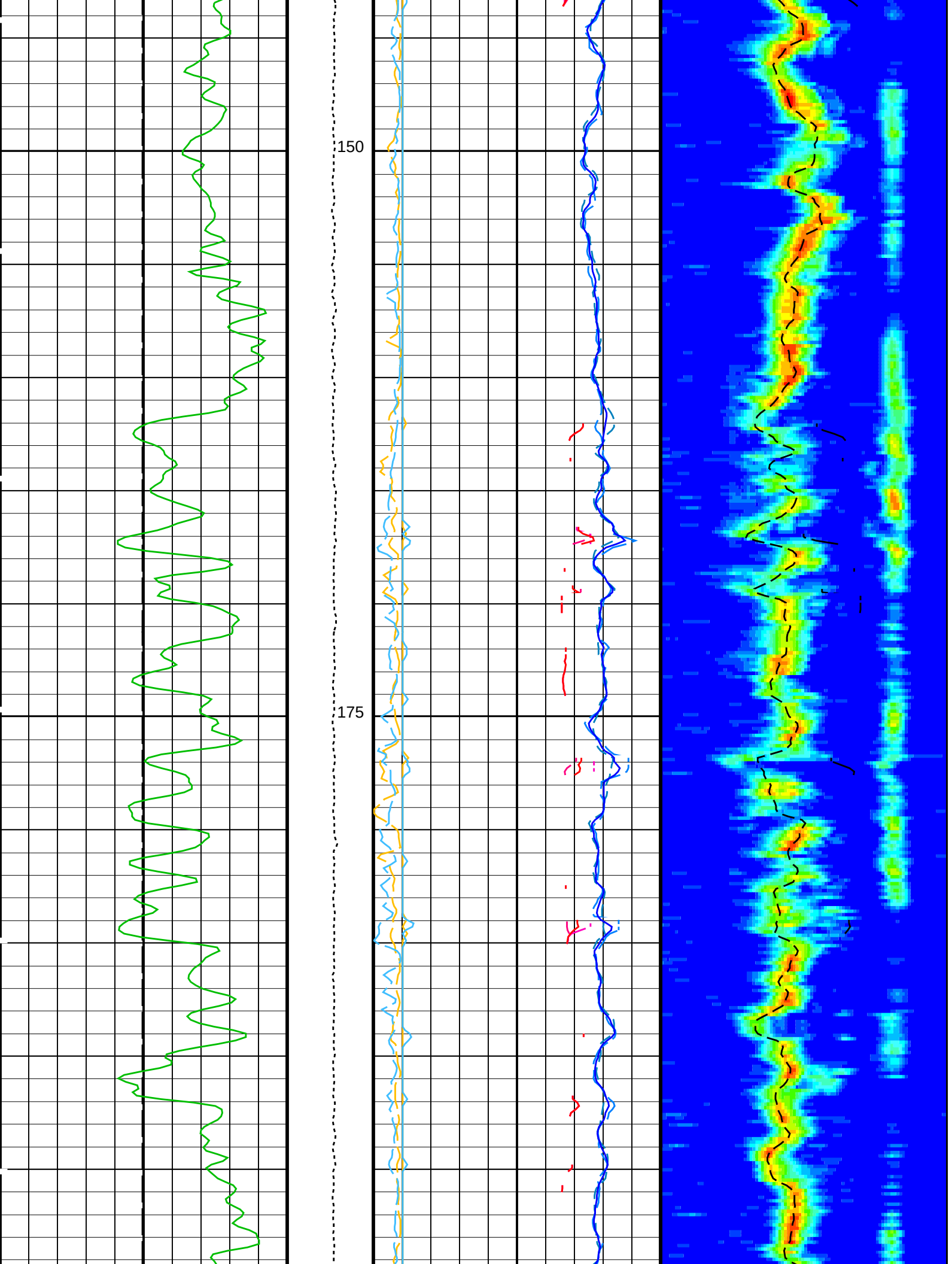
Peak Coherence / RA − P & S Comp (CHRP)
0 (−−−−) 10

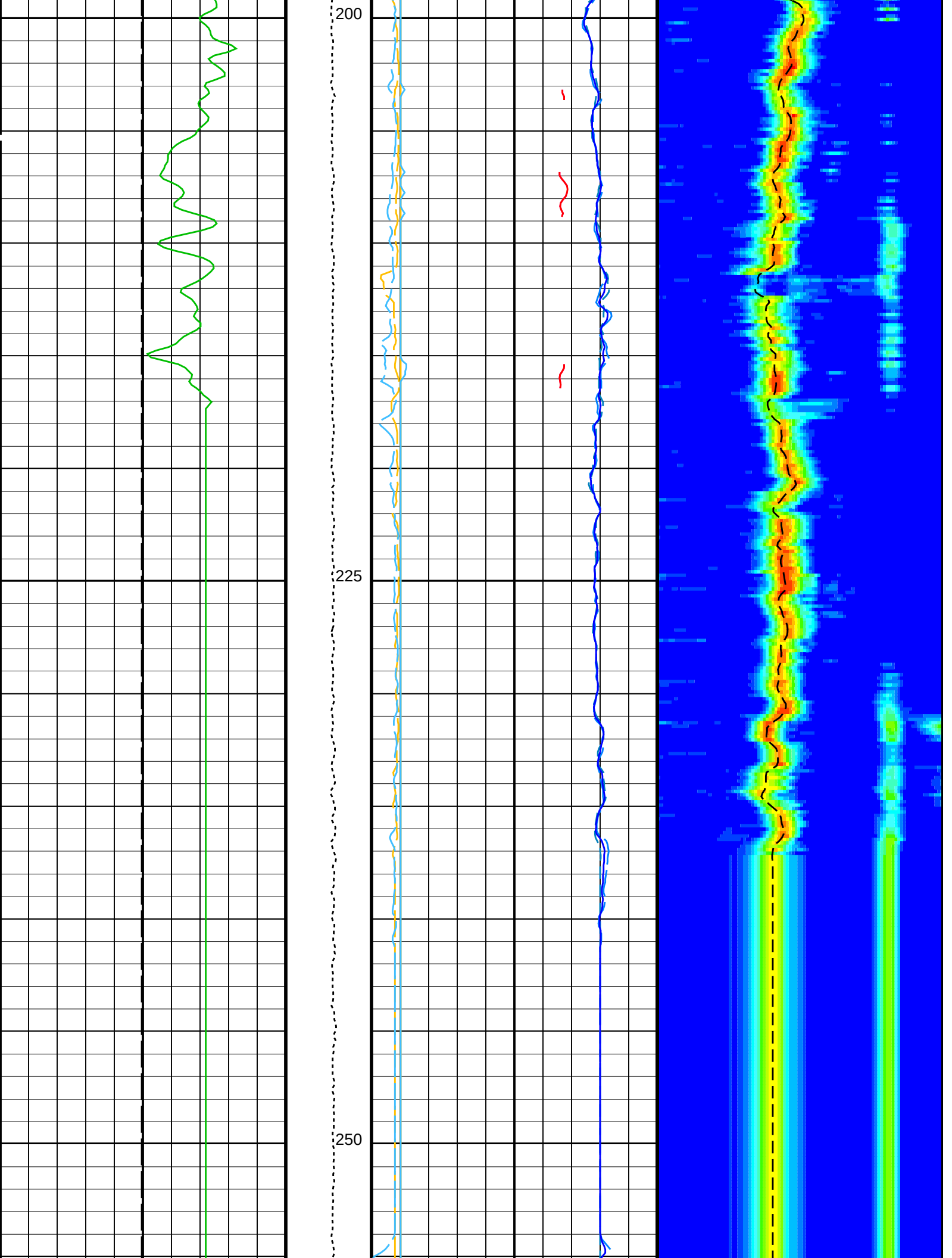
Delta−T Comp / RA − P & S (DTRP)
40 (US/F) 240

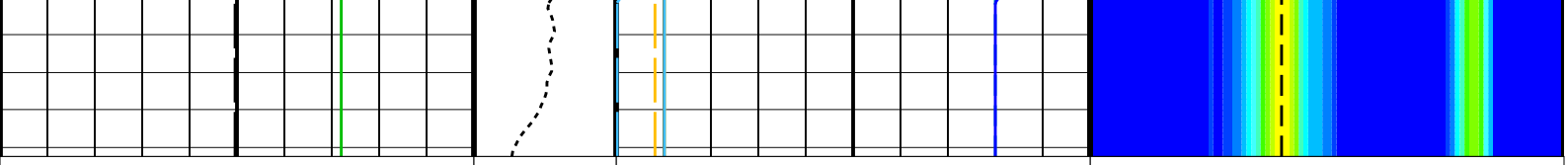

0
25


50
75


100
125


150
175


200
225
250



Bit Size (BS)
0 (IN) 20

Tension (TENS) (LBF)
0 5000

Peak Coherence / RA − P & S Comp (CHRP)
0 (----) 10

Delta−T Comp / RA − P & S (DTRP)
40 (US/F) 240

Gamma Ray (GR_EDTC)
0 (GAPI) 150

Peak Coherence / TA − P & S Comp (CHTP)
0 (----) 10

Delta−T Shear / RA − P & S (DTRS)
40 (US/F) 240

Delta−T Comp / RA − P & S (DTRP)
440 (US/F) 40

Min Amplitude Max

Rec.Array P&S Slow Proj. CVDL (SPR4)
40 (US/F) 240

Delta−T Comp / TA − P & S (DTTP)
440 (US/F) 40

Delta−T Comp − P & S (DT4P)
440 (US/F) 40

Delta−T Shear / RA − P & S (DTRS)
440 (US/F) 40

Delta−T Shear / TA − P & S (DTTS)
440 (US/F) 40

Delta−T Shear − P & S (DT4S)
440 (US/F) 40

Peak Coherence / RA − P & S Shear (CHRS)
−1 (----) 9

Peak Coherence / TA − P & S Shear (CHTS)
−1 (----) 9

PIP SUMMARY

Time Mark Every 60 S

## Parameters

| DLIS Name | Description | Value | |
|---|---|---|---|
| | HRLT−B: High Resolution Laterolog Array − B | | |
| BHS | Borehole Status | OPEN | |
| | 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 |
| DDE4 | Digitizing Delay 4 | 0 | US |
| DDEX | Digitizing Delay X | 0 | US |
| DSI4 | Digitizer Sample Interval 4 | 10 | US |
| DSIX | Digitizer Sample Interval X | 40 | US |
| DTF | Delta−T Fluid | 189 | US/F |
| DWC4 | Digitizer Word Count 4 | 512 | |
| DWCX | Digitizer Word Count X | 512 | |
| FILG | Label Fill Gap Control − Monopole P&S | COMP_SHEAR | |
| LFC | Label Formation Character − Monopole P&S | DYNAMIC | |
| MCS | Mean Casing Slowness | 57 | US/F |
| MTXG | Monopole Transmitter Geometry | 186 | IN |
| 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 |
| SAM4 | DSST Sonic Acquisition Mode 4 − Monopole Mode for P&S | ODD | |
| SAMX | DSST Sonic Acquisition Mode X − Both Dipoles or Monopole Mode for Expert | OFF | |
| SAS4 | STC Sonic Array Status − Monopole P&S | 255 | |
| SBO4 | STC Search Band Offset − Monopole P&S | 500 | US |
| SBR4 | STC Baseline Removal − Monopole P&S | ON | |
| SBW4 | STC Search Bandwidth − Monopole P&S | 2000 | US |
| SFC4 | STC Formation Character − Monopole P&S | SELECTABLE | |
| 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 |
| SLL4 | STC Slowness Lower Limit − Monopole P&S | 40 | US/F |
| SST4 | STC Slowness Step − Monopole P&S | 2 | US/F |
| 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 |
| SUL4 | STC Slowness Upper Limit − Monopole P&S | 240 | US/F |
| SWD4 | STC Slowness Width − Monopole P&S | 10 | US/F |
| TBF4 | STC Time for Baseline Fill − Monopole P&S | 300 | US |
| TLL4 | STC Time Lower Limit − Monopole P&S | 150 | US |
| TST4 | STC Time Step − Monopole P&S | 50 | US |
| TUL4 | STC Time Upper Limit − Monopole P&S | 3660 | US |
| TWD4 | STC Time Width − Monopole P&S | 1000 | US |
| TWI4 | STC Integration Time Window − Monopole P&S | 500 | US |
| TWSX | Transmitter Waveform Select X | 0 | |
| | **EDTC−B: Enhanced DTS Cartridge** | | |
| BHS | Borehole Status | OPEN | |
| | **System and Miscellaneous** | | |
| BS | Bit Size | 9.875 | IN |
| DO | Depth Offset for Playback | −603.4 | M |
| PP | Playback Processing | RECOMPUTE | |

**Format: DSST_P_S_VDL_COLOR** **Vertical Scale: 1:200** **Graphics File Created: 23−Sep−2012 02:41**

## OP System Version: 19C0−187

| | | | |
|---|---|---|---|
| MSS_LDEO−A | 19C0−187 | HRLT−B | 19C0−187 |
| DSST−B | 19C0−187 | HLDS | 19C0−187 |
| LDSC−B | 19C0−187 | EDTC−B | SKK−5169−EDTCB |

## Input DLIS Files

| | | | | | |
|---|---|---|---|---|---|
| DEFAULT | Flip_MSS_LDEO_HRLA_026LUP | PRODUCER | 23−Sep−2012 02:30 | 862.6 M | 506.7 M |

## Output DLIS Files

| | | | | |
|---|---|---|---|---|
| DEFAULT | MSS_LDEO_HRLA_DSI_029PUP | FN:35 | PRODUCER | 23−Sep−2012 02:41 |
| CLIENT | MSS_LDEO_HRLA_DSI_029PUC | FN:36 | CUSTOMER | 23−Sep−2012 02:41 |

Schlumberger

# Calibrations

MAXIS Field Log

Calibration and Check Summary

| Measurement | Nominal | Master | Before | After | Change | Limit | Units |
|---|---|---|---|---|---|---|---|
| High Resolution Laterolog Array − B Wellsite Calibration − HRLT M01 | | | | | | | |
| Before: 20−Sep−2012 18:03 After: 20−Sep−2012 20:45 | | | | | | | |
| HRLT M0_M1 Voltage Plus | 0 | 0 | N/A | 330.1 | 319.3 | 0.7000 | 9.681 | UV |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HRLT M0−M1 Voltage Plus − 0 | 0 | N/A | −320.1 | −319.3 | 0.7999 | 9.681 | UV |
| HRLT M0−M1 Voltage Plus − 1 | 0 | N/A | −341.6 | −338.6 | 2.980 | 9.681 | UV |
| HRLT M0−M1 Voltage Plus − 2 | 0 | N/A | −339.5 | −337.3 | 2.248 | 9.681 | UV |
| HRLT M0−M1 Voltage Plus − 3 | 0 | N/A | −342.4 | −340.5 | 1.922 | 9.681 | UV |
| HRLT M0−M1 Voltage Plus − 4 | 0 | N/A | −328.1 | −327.0 | 1.090 | 9.681 | UV |
| HRLT M0−M1 Voltage Plus − 5 | 0 | N/A | −323.6 | −322.7 | 0.8422 | 9.681 | UV |
| HRLT M0−M1 Voltage Plus − 6 | 0 | N/A | 332.2 | 329.8 | −2.436 | 9.681 | UV |
| HRLT M0−M1 Voltage Plus − 7 | 0 | N/A | −322.7 | −322.7 | 0 | 9.681 | UV |

High Resolution Laterolog Array − B Wellsite Calibration − HRLT M12
Before: 20−Sep−2012 18:03 After: 20−Sep−2012 20:45

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HRLT M1−M2 Voltage Plus − 0 | 0 | N/A | 1758 | 1755 | −2.932 | 53.42 | UV |
| HRLT M1−M2 Voltage Plus − 1 | 0 | N/A | 1876 | 1860 | −16.31 | 53.42 | UV |
| HRLT M1−M2 Voltage Plus − 2 | 0 | N/A | 1860 | 1848 | −11.92 | 53.42 | UV |
| HRLT M1−M2 Voltage Plus − 3 | 0 | N/A | 1876 | 1866 | −9.832 | 53.42 | UV |
| HRLT M1−M2 Voltage Plus − 4 | 0 | N/A | 1799 | 1794 | −5.057 | 53.42 | UV |
| HRLT M1−M2 Voltage Plus − 5 | 0 | N/A | 1776 | 1772 | −3.489 | 53.42 | UV |
| HRLT M1−M2 Voltage Plus − 6 | 0 | N/A | −1832 | −1820 | 12.60 | 53.42 | UV |
| HRLT M1−M2 Voltage Plus − 7 | 0 | N/A | 1781 | 1781 | 0 | 53.42 | UV |

High Resolution Laterolog Array − B Wellsite Calibration − HRLT M23
Before: 20−Sep−2012 18:03 After: 20−Sep−2012 20:45

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HRLT M2−M3 Voltage Plus − 0 | 0 | N/A | 1745 | 1741 | −3.911 | 53.42 | UV |
| HRLT M2−M3 Voltage Plus − 1 | 0 | N/A | 1875 | 1857 | −17.45 | 53.42 | UV |
| HRLT M2−M3 Voltage Plus − 2 | 0 | N/A | 1860 | 1847 | −13.26 | 53.42 | UV |
| HRLT M2−M3 Voltage Plus − 3 | 0 | N/A | 1879 | 1868 | −10.97 | 53.42 | UV |
| HRLT M2−M3 Voltage Plus − 4 | 0 | N/A | 1796 | 1789 | −6.424 | 53.42 | UV |
| HRLT M2−M3 Voltage Plus − 5 | 0 | N/A | 1773 | 1769 | −4.405 | 53.42 | UV |
| HRLT M2−M3 Voltage Plus − 6 | 0 | N/A | −1819 | −1805 | 13.85 | 53.42 | UV |
| HRLT M2−M3 Voltage Plus − 7 | 0 | N/A | 1781 | 1781 | 0 | 53.42 | UV |

High Resolution Laterolog Array − B Wellsite Calibration − HRLT V34
Before: 20−Sep−2012 18:03 After: 20−Sep−2012 20:45

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HRLT A3−A4 Voltage Plus − 0 | 0 | N/A | 68580 | 68470 | −107.9 | 2100 | UV |
| HRLT A3−A4 Voltage Plus − 1 | 0 | N/A | 73460 | 72830 | −631.8 | 2100 | UV |
| HRLT A3−A4 Voltage Plus − 2 | 0 | N/A | 73170 | 72710 | −458.4 | 2100 | UV |
| HRLT A3−A4 Voltage Plus − 3 | 0 | N/A | 74220 | 73830 | −386.3 | 2100 | UV |
| HRLT A3−A4 Voltage Plus − 4 | 0 | N/A | 70890 | 70690 | −197.9 | 2100 | UV |
| HRLT A3−A4 Voltage Plus − 5 | 0 | N/A | 70020 | 69890 | −123.6 | 2100 | UV |
| HRLT A3−A4 Voltage Plus − 6 | 0 | N/A | −70280 | −69810 | 468.9 | 2100 | UV |
| HRLT A3−A4 Voltage Plus − 7 | 0 | N/A | 70000 | 70000 | 0 | 2100 | UV |

High Resolution Laterolog Array − B Wellsite Calibration − HRLT V45
Before: 20−Sep−2012 18:03 After: 20−Sep−2012 20:45

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HRLT A4−A5 Voltage Plus − 0 | 0 | N/A | 68870 | 68760 | −110.4 | 2100 | UV |
| HRLT A4−A5 Voltage Plus − 1 | 0 | N/A | 73860 | 73240 | −616.3 | 2100 | UV |
| HRLT A4−A5 Voltage Plus − 2 | 0 | N/A | 73540 | 73080 | −459.3 | 2100 | UV |
| HRLT A4−A5 Voltage Plus − 3 | 0 | N/A | 74570 | 74180 | −394.7 | 2100 | UV |
| HRLT A4−A5 Voltage Plus − 4 | 0 | N/A | 71190 | 70990 | −199.9 | 2100 | UV |
| HRLT A4−A5 Voltage Plus − 5 | 0 | N/A | 70310 | 70180 | −130.1 | 2100 | UV |
| HRLT A4−A5 Voltage Plus − 6 | 0 | N/A | −70670 | −70200 | 471.5 | 2100 | UV |
| HRLT A4−A5 Voltage Plus − 7 | 0 | N/A | 70000 | 70000 | 0 | 2100 | UV |

High Resolution Laterolog Array − B Wellsite Calibration − HRLT V56
Before: 20−Sep−2012 18:03 After: 20−Sep−2012 20:45

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HRLT A5−A6 Voltage Plus − 0 | 0 | N/A | 68760 | 68650 | −113.5 | 2100 | UV |
| HRLT A5−A6 Voltage Plus − 1 | 0 | N/A | 73580 | 72960 | −610.8 | 2100 | UV |
| HRLT A5−A6 Voltage Plus − 2 | 0 | N/A | 73290 | 72840 | −458.4 | 2100 | UV |
| HRLT A5−A6 Voltage Plus − 3 | 0 | N/A | 74370 | 74000 | −375.0 | 2100 | UV |
| HRLT A5−A6 Voltage Plus − 4 | 0 | N/A | 71050 | 70850 | −198.5 | 2100 | UV |
| HRLT A5−A6 Voltage Plus − 5 | 0 | N/A | 70190 | 70050 | −145.6 | 2100 | UV |
| HRLT A5−A6 Voltage Plus − 6 | 0 | N/A | −70390 | −69900 | 494.1 | 2100 | UV |
| HRLT A5−A6 Voltage Plus − 7 | 0 | N/A | 70000 | 70000 | 0 | 2100 | UV |

High Resolution Laterolog Array − B Wellsite Calibration − HRLT VTP
Before: 20−Sep−2012 18:03 After: 20−Sep−2012 20:45

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HRLT Torpedo−M0 Voltage − 0 | 0 | N/A | −68440 | −68340 | 106.0 | 2100 | UV |
| HRLT Torpedo−M0 Voltage − 1 | 0 | N/A | −73930 | −73290 | 640.7 | 2100 | UV |
| HRLT Torpedo−M0 Voltage − 2 | 0 | N/A | −73610 | −73150 | 462.2 | 2100 | UV |
| HRLT Torpedo−M0 Voltage − 3 | 0 | N/A | −74670 | −74280 | 396.4 | 2100 | UV |
| HRLT Torpedo−M0 Voltage − 4 | 0 | N/A | −71250 | −71050 | 203.0 | 2100 | UV |
| HRLT Torpedo−M0 Voltage − 5 | 0 | N/A | −70360 | −70210 | 147.7 | 2100 | UV |
| HRLT Torpedo−M0 Voltage − 6 | 0 | N/A | 70680 | 70180 | −490.6 | 2100 | UV |
| HRLT Torpedo−M0 Voltage − 7 | 0 | N/A | −70000 | −70000 | 0 | 2100 | UV |

High Resolution Laterolog Array − B Wellsite Calibration − HRLT VBD
Before: 20−Sep−2012 18:03 After: 20−Sep−2012 20:45

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HRLT Bridle#9−M0 Voltage − 0 | 0 | N/A | −68430 | −68320 | 110.2 | 2100 | UV |
| HRLT Bridle#9−M0 Voltage − 1 | 0 | N/A | −73910 | −73280 | 637.2 | 2100 | UV |
| HRLT Bridle#9−M0 Voltage − 2 | 0 | N/A | −73590 | −73130 | 456.7 | 2100 | UV |
| HRLT Bridle#9−M0 Voltage − 3 | 0 | N/A | −74650 | −74260 | 384.8 | 2100 | UV |
| HRLT Bridle#9−M0 Voltage − 4 | 0 | N/A | −71250 | −71040 | 204.3 | 2100 | UV |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HRLT Bridle#9−M0 Voltage − 5 | 0 | N/A | −70340 | −70210 | 134.8 | 2100 | UV |
| HRLT Bridle#9−M0 Voltage − 6 | 0 | N/A | 70650 | 70160 | −490.6 | 2100 | UV |
| HRLT Bridle#9−M0 Voltage − 7 | 0 | N/A | −70000 | −70000 | 0 | 2100 | UV |

High Resolution Laterolog Array − B Wellsite Calibration − HRLT ISO
Before: 20−Sep−2012 18:03 After: 20−Sep−2012 20:45

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HRLT Source Current Plus − 0 | 0 | N/A | 285.3 | 284.9 | −0.3990 | 8.520 | UA |
| HRLT Source Current Plus − 1 | 0 | N/A | 281.1 | 281.1 | 0 | 8.520 | UA |
| HRLT Source Current Plus − 2 | 0 | N/A | 281.1 | 281.1 | 0 | 8.520 | UA |
| HRLT Source Current Plus − 3 | 0 | N/A | 281.1 | 281.1 | 0 | 8.520 | UA |
| HRLT Source Current Plus − 4 | 0 | N/A | 281.1 | 281.1 | 0 | 8.520 | UA |
| HRLT Source Current Plus − 5 | 0 | N/A | 281.1 | 281.1 | 0 | 8.520 | UA |
| HRLT Source Current Plus − 6 | 0 | N/A | 281.1 | 281.1 | 0 | 8.520 | UA |
| HRLT Source Current Plus − 7 | 0 | N/A | 281.1 | 281.1 | 0 | 8.520 | UA |

High Resolution Laterolog Array − B Wellsite Calibration − HRLT MV
Before: 20−Sep−2012 18:03 After: 20−Sep−2012 20:45

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HRLT Vertical Voltage Pl − 0 | 0 | N/A | −322.3 | −321.4 | 0.8523 | 9.681 | UV |
| HRLT Vertical Voltage Pl − 1 | 0 | N/A | −335.6 | −332.5 | 3.175 | 9.681 | UV |
| HRLT Vertical Voltage Pl − 2 | 0 | N/A | −332.8 | −330.4 | 2.353 | 9.681 | UV |
| HRLT Vertical Voltage Pl − 3 | 0 | N/A | −333.9 | −331.9 | 2.034 | 9.681 | UV |
| HRLT Vertical Voltage Pl − 4 | 0 | N/A | −317.3 | −316.2 | 1.169 | 9.681 | UV |
| HRLT Vertical Voltage Pl − 5 | 0 | N/A | −328.1 | −327.2 | 0.9027 | 9.681 | UV |
| HRLT Vertical Voltage Pl − 6 | 0 | N/A | 339.4 | 336.7 | −2.633 | 9.681 | UV |
| HRLT Vertical Voltage Pl − 7 | 0 | N/A | −322.7 | −322.7 | 0 | 9.681 | UV |

Hostile Litho−Density Sonde Wellsite Calibration − Background Measurement
Master: 3−Aug−2012 12:38 Before: 20−Sep−2012 18:06 After: 20−Sep−2012 21:14

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| SS Cs Resolution Bkg | 9.000 | 7.952 | 8.050 | 8.000 | −0.05026 | 1.800 | % |
| LS Cs Resolution Bkg | 9.000 | 8.109 | 8.189 | 8.101 | −0.08724 | 1.800 | % |
| LSW1 Background | 100.0 | 71.68 | 71.68 | 71.86 | 0.1790 | 3.000 | CPS |
| LSW2 Background | 100.0 | 68.54 | 66.66 | 66.34 | −0.3285 | 3.000 | CPS |
| LSW3 Background | 200.0 | 146.7 | 145.5 | 147.5 | 1.967 | 6.000 | CPS |
| LSW4 Background | 250.0 | 177.8 | 179.7 | 178.5 | −1.147 | 7.500 | CPS |
| LSW5 Background | 600.0 | 409.7 | 409.8 | 411.6 | 1.815 | 18.00 | CPS |
| SSW1 Background | 100.0 | 81.22 | 80.50 | 80.07 | −0.4239 | 3.000 | CPS |
| SSW2 Background | 200.0 | 145.7 | 143.5 | 142.3 | −1.204 | 6.000 | CPS |
| SSW3 Background | 500.0 | 389.5 | 388.2 | 387.2 | −0.9963 | 15.00 | CPS |
| SSW4 Background | 270.0 | 200.9 | 200.6 | 199.1 | −1.489 | 8.100 | CPS |
| SSW5 Background | 200.0 | 146.3 | 146.0 | 145.3 | −0.7189 | 6.000 | CPS |

Hostile Litho−Density Sonde Wellsite Calibration − Aluminum Measurement
Master: 3−Aug−2012 13:08

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| LSW1 Aluminum | 600.0 | 531.2 | N/A | N/A | N/A | N/A | CPS |
| LSW2 Aluminum | 900.0 | 759.6 | N/A | N/A | N/A | N/A | CPS |
| LSW3 Aluminum | 1100 | 924.3 | N/A | N/A | N/A | N/A | CPS |
| LSW4 Aluminum | 580.0 | 467.3 | N/A | N/A | N/A | N/A | CPS |
| LSW5 Aluminum | 570.0 | 427.7 | N/A | N/A | N/A | N/A | CPS |
| SSW1 Aluminum | 2800 | 2539 | N/A | N/A | N/A | N/A | CPS |
| SSW2 Aluminum | 8000 | 6810 | N/A | N/A | N/A | N/A | CPS |
| SSW3 Aluminum | 11600 | 9419 | N/A | N/A | N/A | N/A | CPS |
| SSW4 Aluminum | 5000 | 3830 | N/A | N/A | N/A | N/A | CPS |
| SSW5 Aluminum | 660.0 | 469.0 | N/A | N/A | N/A | N/A | CPS |

Hostile Litho−Density Sonde Wellsite Calibration − Lithology Measurement
Master: 3−Aug−2012 13:03

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| LSW1 Iron | 400.0 | 367.3 | N/A | N/A | N/A | N/A | CPS |
| LSW2 Iron | 730.0 | 618.0 | N/A | N/A | N/A | N/A | CPS |
| LSW3 Iron | 1000 | 815.0 | N/A | N/A | N/A | N/A | CPS |
| LSW4 Iron | 520.0 | 424.5 | N/A | N/A | N/A | N/A | CPS |
| LSW5 Iron | 470.0 | 392.6 | N/A | N/A | N/A | N/A | CPS |
| SSW1 Iron | 2100 | 1845 | N/A | N/A | N/A | N/A | CPS |
| SSW2 Iron | 6800 | 5678 | N/A | N/A | N/A | N/A | CPS |
| SSW3 Iron | 10800 | 8586 | N/A | N/A | N/A | N/A | CPS |
| SSW4 Iron | 4600 | 3500 | N/A | N/A | N/A | N/A | CPS |
| SSW5 Iron | 580.0 | 417.1 | N/A | N/A | N/A | N/A | CPS |

Hostile Litho−Density Sonde Wellsite Calibration − Caliper Calibration
Before: 3−Aug−2012 13:28

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HLDS Caliper Small Ring | 12.00 | N/A | 15.62 | N/A | N/A | N/A | IN |
| HLDS Caliper Large Ring | 15.19 | N/A | 19.44 | N/A | N/A | N/A | IN |

Enhanced DTS Cartridge Wellsite Calibration − EDTC Accelerometer Calibration
Before: 20−Sep−2012 18:08

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| EDTC Z−Axis Acceleration | 9.810 | N/A | 9.852 | N/A | N/A | N/A | M/S2 |

Enhanced DTS Cartridge Wellsite Calibration − Detector Calibration
Before: 20−Sep−2012 18:08 After: 20−Sep−2012 21:12

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gamma Ray (Jig − Bkg) | 159.7 | N/A | 159.7 | 162.2 | 2.544 | 14.52 | GAPI |
| Gamma Ray (Calibrated) | 165.0 | N/A | 165.0 | 167.6 | 2.629 | 15.00 | GAPI |

High Resolution Laterolog Array − B / Equipment Identification

| | | |
|---|---|---|
| Primary Equipment: | | |
| HRLT Sonde | HRLS − B | 768 |
| Auxiliary Equipment: | | |
| HRLT lower Housing | HRLH − B | 968 |
| HRLT Lower Cartridge | HRLC − B | 974 |
| HRLT upper Housing | HRUH − B | 978 |
| HRLT Upper Cartridge | HRUC − B | 764 |

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M01

| Idx | Phase | HRLT M0−M1 Voltage Plus UV | Value | Nominal | Maximum | Minimum |
|---|---|---|---|---|---|---|
| 0 | Before | | −320.1 | −322.7 | −280.7 | −379.7 |
| | After | | −319.3 | | | |
| 1 | Before | | −341.6 | −322.7 | −280.7 | −379.7 |
| | After | | −338.6 | | | |
| 2 | Before | | −339.5 | −322.7 | −280.7 | −379.7 |
| | After | | −337.3 | | | |
| 3 | Before | | −342.4 | −322.7 | −280.7 | −379.7 |
| | After | | −340.5 | | | |
| 4 | Before | | −328.1 | −322.7 | −280.7 | −379.7 |
| | After | | −327.0 | | | |
| 5 | Before | | −323.6 | −322.7 | −280.7 | −379.7 |
| | After | | −322.7 | | | |
| 6 | Before | | 332.2 | 322.7 | 379.7 | 280.7 |
| | After | | 329.8 | | | |
| 7 | Before | | −322.7 | −322.7 | −280.7 | −379.7 |
| | After | | −322.7 | | | |
| | | (Minimum) (Nominal) (Maximum) | | | | |

Before: 20−Sep−2012 18:03

After: 20−Sep−2012 20:45

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M12

| Idx | Phase | HRLT M1−M2 Voltage Plus UV | Value | Nominal | Maximum | Minimum |
|---|---|---|---|---|---|---|
| 0 | Before | | 1758 | 1781 | 2095 | 1549 |
| | After | | 1755 | | | |
| 1 | Before | | 1876 | 1781 | 2095 | 1549 |
| | After | | 1860 | | | |
| 2 | Before | | 1860 | 1781 | 2095 | 1549 |
| | After | | 1848 | | | |
| 3 | Before | | 1876 | 1781 | 2095 | 1549 |
| | After | | 1866 | | | |
| 4 | Before | | 1799 | 1781 | 2095 | 1549 |
| | After | | 1794 | | | |
| 5 | Before | | 1776 | 1781 | 2095 | 1549 |
| | After | | 1772 | | | |
| | Before | | −1832 | | | |

| | | | | | |
|---|---|---|---|---|---|
| 6 | Before | −1821 | −1781 | −1549 | −2095 |
| | After | −1820 | | | |
| 7 | Before | 1781 | 1781 | 2095 | 1549 |
| | After | 1781 | | | |
| | (Minimum) (Nominal) (Maximum) | | | | |

Before: 20−Sep−2012 18:03

After: 20−Sep−2012 20:45

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M23

| Idx | Phase | HRLT M2−M3 Voltage Plus UV | Value | Nominal | Maximum | Minimum |
|---|---|---|---|---|---|---|
| 0 | Before | | 1745 | 1781 | 2095 | 1549 |
| | After | | 1741 | | | |
| 1 | Before | | 1875 | 1781 | 2095 | 1549 |
| | After | | 1857 | | | |
| 2 | Before | | 1860 | 1781 | 2095 | 1549 |
| | After | | 1847 | | | |
| 3 | Before | | 1879 | 1781 | 2095 | 1549 |
| | After | | 1868 | | | |
| 4 | Before | | 1796 | 1781 | 2095 | 1549 |
| | After | | 1789 | | | |
| 5 | Before | | 1773 | 1781 | 2095 | 1549 |
| | After | | 1769 | | | |
| 6 | Before | | −1819 | −1781 | −1549 | −2095 |
| | After | | −1805 | | | |
| 7 | Before | | 1781 | 1781 | 2095 | 1549 |
| | After | | 1781 | | | |
| | (Minimum) (Nominal) (Maximum) | | | | | |

Before: 20−Sep−2012 18:03

After: 20−Sep−2012 20:45

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V34

| Idx | Phase | HRLT A3−A4 Voltage Plus UV | Value | Nominal | Maximum | Minimum |
|---|---|---|---|---|---|---|
| 0 | Before | | 68580 | 70000 | 82360 | 60900 |
| | After | | 68470 | | | |
| 1 | Before | | 73460 | 70000 | 82360 | 60900 |
| | After | | 72830 | | | |
| 2 | Before | | 73170 | 70000 | 82360 | 60900 |
| | After | | 72710 | | | |
| 3 | Before | | 74220 | 70000 | 82360 | 60900 |
| | After | | 73830 | | | |
| 4 | Before | | 70890 | 70000 | 82360 | 60900 |
| | After | | 70690 | | | |
| 5 | Before | | 70020 | 70000 | 82360 | 60900 |
| | After | | 69890 | | | |
| 6 | Before | | −70280 | −70000 | −60900 | −82360 |
| | After | | −69810 | | | |
| 7 | Before | | 70000 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 7 | Before | | 70000 | 70000 | 82360 | 60900 |
| | After | | 70000 | | | |
| | (Minimum) | (Nominal) (Maximum) | | | | |

Before: 20−Sep−2012 18:03
After: 20−Sep−2012 20:45

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V45

| Idx | Phase | HRLT A4−A5 Voltage Plus UV | Value | Nominal | Maximum | Minimum |
|---|---|---|---|---|---|---|
| 0 | Before | | 68870 | 70000 | 82360 | 60900 |
| | After | | 68760 | | | |
| 1 | Before | | 73860 | 70000 | 82360 | 60900 |
| | After | | 73240 | | | |
| 2 | Before | | 73540 | 70000 | 82360 | 60900 |
| | After | | 73080 | | | |
| 3 | Before | | 74570 | 70000 | 82360 | 60900 |
| | After | | 74180 | | | |
| 4 | Before | | 71190 | 70000 | 82360 | 60900 |
| | After | | 70990 | | | |
| 5 | Before | | 70310 | 70000 | 82360 | 60900 |
| | After | | 70180 | | | |
| 6 | Before | | −70670 | −70000 | −60900 | −82360 |
| | After | | −70200 | | | |
| 7 | Before | | 70000 | 70000 | 82360 | 60900 |
| | After | | 70000 | | | |
| | (Minimum) | (Nominal) (Maximum) | | | | |

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High Resolution Laterolog Array − B Wellsite Calibration

HRLT V56

| Idx | Phase | HRLT A5−A6 Voltage Plus UV | Value | Nominal | Maximum | Minimum |
|---|---|---|---|---|---|---|
| 0 | Before | | 68760 | 70000 | 82360 | 60900 |
| | After | | 68650 | | | |
| 1 | Before | | 73580 | 70000 | 82360 | 60900 |
| | After | | 72960 | | | |
| 2 | Before | | 73290 | 70000 | 82360 | 60900 |
| | After | | 72840 | | | |
| 3 | Before | | 74370 | 70000 | 82360 | 60900 |
| | After | | 74000 | | | |
| 4 | Before | | 71050 | 70000 | 82360 | 60900 |
| | After | | 70850 | | | |
| 5 | Before | | 70190 | 70000 | 82360 | 60900 |
| | After | | 70050 | | | |
| 6 | Before | | −70390 | −70000 | −60900 | −82360 |
| | After | | −69900 | | | |
| 7 | Before | | 70000 | 70000 | 82360 | 60900 |
| | After | | 70000 | | | |

| | | (Minimum) | (Nominal) | (Maximum) | | | |
|---|---|---|---|---|---|---|---|

Before: 20−Sep−2012 18:03

After: 20−Sep−2012 20:45

High Resolution Laterolog Array − B Wellsite Calibration

HRLT VTP

| Idx | Phase | HRLT Torpedo−M0 Voltage Plus UV | Value | Nominal | Maximum | Minimum |
|---|---|---|---|---|---|---|
| 0 | Before | | −68440 | −70000 | −60900 | −82360 |
| | After | | −68340 | | | |
| 1 | Before | | −73930 | −70000 | −60900 | −82360 |
| | After | | −73290 | | | |
| 2 | Before | | −73610 | −70000 | −60900 | −82360 |
| | After | | −73150 | | | |
| 3 | Before | | −74670 | −70000 | −60900 | −82360 |
| | After | | −74280 | | | |
| 4 | Before | | −71250 | −70000 | −60900 | −82360 |
| | After | | −71050 | | | |
| 5 | Before | | −70360 | −70000 | −60900 | −82360 |
| | After | | −70210 | | | |
| 6 | Before | | 70680 | 70000 | 82360 | 60900 |
| | After | | 70180 | | | |
| 7 | Before | | −70000 | −70000 | −60900 | −82360 |
| | After | | −70000 | | | |
| | | (Minimum) (Nominal) (Maximum) | | | | |

Before: 20−Sep−2012 18:03

After: 20−Sep−2012 20:45

High Resolution Laterolog Array − B Wellsite Calibration

HRLT VBD

| Idx | Phase | HRLT Bridle#9−M0 Voltage Plus UV | Value | Nominal | Maximum | Minimum |
|---|---|---|---|---|---|---|
| 0 | Before | | −68430 | −70000 | −60900 | −82360 |
| | After | | −68320 | | | |
| 1 | Before | | −73910 | −70000 | −60900 | −82360 |
| | After | | −73280 | | | |
| 2 | Before | | −73590 | −70000 | −60900 | −82360 |
| | After | | −73130 | | | |
| 3 | Before | | −74650 | −70000 | −60900 | −82360 |
| | After | | −74260 | | | |
| 4 | Before | | −71250 | −70000 | −60900 | −82360 |
| | After | | −71040 | | | |
| 5 | Before | | −70340 | −70000 | −60900 | −82360 |
| | After | | −70210 | | | |
| 6 | Before | | 70650 | 70000 | 82360 | 60900 |
| | After | | 70160 | | | |
| 7 | Before | | −70000 | −70000 | −60900 | −82360 |
| | After | | −70000 | | | |
| | | (Minimum) (Nominal) (Maximum) | | | | |

Before: 20−Sep−2012 18:03

After: 20−Sep−2012 20:45

High Resolution Laterolog Array − B Wellsite Calibration

HRLT ISO

| Idx | Phase | HRLT Source Current Plus UA | Value | Nominal | Maximum | Minimum |
|---|---|---|---|---|---|---|
| 0 | Before | | 285.3 | 284.0 | 334.1 | 247.0 |
| | After | | 284.9 | | | |
| 1 | Before | | 281.1 | 281.1 | 330.7 | 244.4 |
| | After | | 281.1 | | | |
| 2 | Before | | 281.1 | 281.1 | 330.7 | 244.4 |
| | After | | 281.1 | | | |
| 3 | Before | | 281.1 | 281.1 | 330.7 | 244.4 |
| | After | | 281.1 | | | |
| 4 | Before | | 281.1 | 281.1 | 330.7 | 244.4 |
| | After | | 281.1 | | | |
| 5 | Before | | 281.1 | 281.1 | 330.7 | 244.4 |
| | After | | 281.1 | | | |
| 6 | Before | | 281.1 | 281.1 | 330.7 | 244.4 |
| | After | | 281.1 | | | |
| 7 | Before | | 281.1 | 281.1 | 330.7 | 244.4 |
| | After | | 281.1 | | | |
| | | (Minimum) (Nominal) (Maximum) | | | | |

Before: 20−Sep−2012 18:03

After: 20−Sep−2012 20:45

High Resolution Laterolog Array − B Wellsite Calibration

HRLT MV

| Idx | Phase | HRLT Vertical Voltage Plus UV | Value | Nominal | Maximum | Minimum |
|---|---|---|---|---|---|---|
| 0 | Before | | −322.3 | −322.7 | −280.7 | −379.7 |
| | After | | −321.4 | | | |
| 1 | Before | | −335.6 | −322.7 | −280.7 | −379.7 |
| | After | | −332.5 | | | |
| 2 | Before | | −332.8 | −322.7 | −280.7 | −379.7 |
| | After | | −330.4 | | | |
| 3 | Before | | −333.9 | −322.7 | −280.7 | −379.7 |
| | After | | −331.9 | | | |
| 4 | Before | | −317.3 | −322.7 | −280.7 | −379.7 |
| | After | | −316.2 | | | |
| 5 | Before | | −328.1 | −322.7 | −280.7 | −379.7 |
| | After | | −327.2 | | | |
| 6 | Before | | 339.4 | 322.7 | 379.7 | 280.7 |
| | After | | 336.7 | | | |
| 7 | Before | | −322.7 | −322.7 | −280.7 | −379.7 |
| | After | | −322.7 | | | |
| | | (Minimum) (Nominal) (Maximum) | | | | |

Before: 20−Sep−2012 18:03

After: 20−Sep−2012 20:45

Hostile Litho−Density Sonde / Equipment Identification

Hostile Litho−Density Sonde / Equipment Identification

| | | |
|---|---|---|
| Primary Equipment: | | |
| Hostile Litho Density Sonde | HLDS − D | 45 |
| Hostile Litho Density High Voltage | HLDV − D | 45 |
| Gamma Source Radioactive | GSR − Z | 8113 |
| Auxiliary Equipment: | | |
| Hostile Litho Density Pad | HLDP − C | 45 |
| Hostile Litho Density High Voltage Housi | HEH − H | 47 |

Hostile Litho−Density Sonde Wellsite Calibration

Background Measurement

| Phase | SS Cs Resolution Bkg % | Value |
|---|---|---|
| Master | | 7.952 |
| Before | | 8.050 |
| After | | 8.000 |
| | 7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum) | |

| Phase | LS Cs Resolution Bkg % | Value |
|---|---|---|
| Master | | 8.109 |
| Before | | 8.189 |
| After | | 8.101 |
| | 7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum) | |

| Phase | LSW1 Background CPS | Value |
|---|---|---|
| Master | | 71.68 |
| Before | | 71.68 |
| After | | 71.86 |
| | 55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum) | |

| Phase | LSW2 Background CPS | Value |
|---|---|---|
| Master | | 68.54 |
| Before | | 66.66 |
| After | | 66.34 |
| | 50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum) | |

| Phase | LSW3 Background CPS | Value |
|---|---|---|
| Master | | 146.7 |
| Before | | 145.5 |
| After | | 147.5 |
| | 110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum) | |

| Phase | LSW4 Background CPS | Value |
|---|---|---|
| Master | | 177.8 |
| Before | | 179.7 |
| After | | 178.5 |
| | 140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum) | |

| Phase | LSW5 Background CPS | Value |
|---|---|---|
| Master | | 409.7 |
| Before | | 409.8 |
| After | | 411.6 |
| | 330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum) | |

| Phase | SSW1 Background CPS | Value |
|---|---|---|
| Master | | 81.22 |
| Before | | 80.50 |
| After | | 80.07 |
| | 55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum) | |

| Phase | SSW2 Background CPS | Value |
|---|---|---|
| Master | | 145.7 |
| Before | | 143.5 |
| After | | 142.3 |
| | 100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum) | |

| Phase | SSW3 Background CPS | Value |
|---|---|---|
| Master | | 389.5 |
| Before | | 388.2 |
| After | | 387.2 |
| | 280.0 (Minimum) 500.0 (Nominal) 700.0 (Maximum) | |

| Phase | SSW4 Background CPS | Value |
|---|---|---|
| Master | | 200.9 |
| Before | | 200.6 |
| After | | 199.1 |
| | 150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum) | |

| Phase | SSW5 Background CPS | Value |
|---|---|---|
| Master | | 146.3 |
| Before | | 146.0 |
| After | | 145.3 |
| | 110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum) | |

Master: 3−Aug−2012 12:38 Before: 20−Sep−2012 18:06 After: 20−Sep−2012 21:14

Litho−Density Spectroscopy Cartridge − B / Equipment Identification

| | | |
|---|---|---|
| Primary Equipment: | | |
| LDSC Cartridge | LDSC − B | 521 |
| Auxiliary Equipment: | | |
| LDSC Housing | LDSH − A | 319 |

Enhanced DTS Cartridge / Equipment Identification

| | | |
|---|---|---|
| Primary Equipment: | | |
| EDTC Gamma Ray Detector | EDTG − A/B | 77693 |
| Enhanced DTS Cartridge | EDTC − B | 8529 |
| Auxiliary Equipment: | | |
| EDTC Housing | EDTH − B | 8528 |

Enhanced DTS Cartridge Wellsite Calibration

EDTC Accelerometer Calibration

| Phase | EDTC Z−Axis Acceleration M/S2 | Value |
|---|---|---|
| Before | | 9.852 |
| | 9.610 (Minimum) 9.810 (Nominal) 10.01 (Maximum) | |

(Minimum) (Nominal) (Maximum)

Before: 20−Sep−2012 18:08

Enhanced DTS Cartridge Wellsite Calibration

Detector Calibration

| Phase | Gamma Ray Background GAPI | Value | Phase | Gamma Ray (Jig − Bkg) GAPI | Value | Phase | Gamma Ray (Calibrated) GAPI | Value |
|---|---|---|---|---|---|---|---|---|
| Before | | 4.007 | Before | | 159.7 | Before | | 165.0 |
| After | | 4.426 | After | | 162.2 | After | | 167.6 |
| | 0 (Minimum) 30.00 (Nominal) 120.0 (Maximum) | | | 145.2 (Minimum) 159.7 (Nominal) 174.2 (Maximum) | | | 150.0 (Minimum) 165.0 (Nominal) 180.0 (Maximum) | |

Before: 20−Sep−2012 18:08 After: 20−Sep−2012 21:12

Company: **Lamont Doherty Earth Observatory**
**Shell**

Well: **Expedition 344S, U0070A (USC70)**

Field: **Baffin Bay**

Rig: **JOIDES Resolution**

Country: **USA**

Schlumberger

DSI Sonic Imager
P& S Monopole