Schlumberger

Company: **Lamont Doherty**

Well: **Expedition 324 Site U1347A**
Field: **Shatsky Rise**
Rig: **JOIDES Resolution** Ocean: **Pacific**

Rig: JOIDES Resolution
Field: Shatsky Rise
Location: Latitude: N 32* 30.477'
Well: Expedition 324 Site U1347A
Company: Lamont Doherty

Dipole Shear Sonic Imager (DSI)

Natural Gamma Spectroscopy (HNGS)

LOCATION

Latitude: N 32* 30.477'
Longitude: E 159* 14.077'

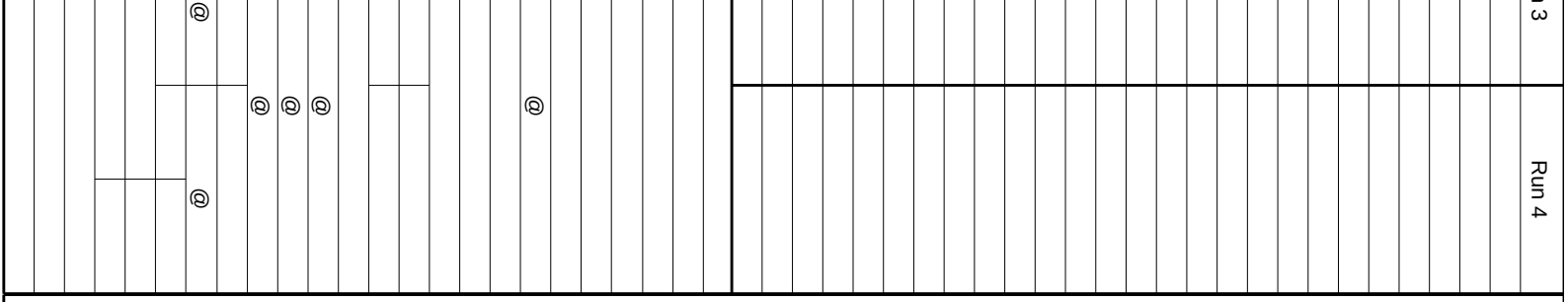
Elev.: K.B. 11.00 m
G.L. 3461.00 m
D.F. 11.00 m

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

API Serial No.	Max. Hole Devi. 0 deg	Longitude	Latitude

	Run 1	Run 2	Run
Logging Date	1−Oct−2009		
Run Number	1		
Depth Driller	3778.5 m		
Schlumberger Depth	3775 m		
Bottom Log Interval	3762 m		
Top Log Interval	3461 m		
Casing Driller Size @ Depth	4.500 in @ 3592.5 m	@	
Casing Schlumberger	3589 m		
Bit Size	9.875 in		
Type Fluid In Hole	Seawater Gel		
MUD Density / Viscosity	1.258 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	@ 4 / @ 4	@ / @	
Maximum Recorded Temperatures	4 degC		
Circulation Stopped / Time	18−Sep−2009 / 18:00		
Logger On Bottom / Time	1−Oct−2009 / 1:00		
Unit Number / Location	625003 / Houston		
Recorded By	K. Swain		
Witnessed By	Gerardo Iturrino, Helen Evans		

	Run 1	Run 2	Run
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

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

OTHER SERVICES1	OTHER SERVICES2
OS1: DITE	OS1:
OS2: GPIT	OS2:
OS3: HLDS/APS	OS3:
OS4: FMS/DSI	OS4:
OS5:	OS5:

REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Logging tools deployed inside drillpipe with wireline.	
BHA consisted of RCB Drilling Bit and collars with mechanical bit release.	
HLDS caliper calibration used 12 inch and 15.19" diameter rings as reference to	
improve large hole size accuracy.	
Depths referenced from drill floor which is 11m above sea level.	
Pipe depth set at 3593 mbsf approximately for duration of logging.	
Ship heave averaged +0.5m to −0.5 m on average (estimate) with occasional	
peaks to +/−1m (2mpeak to peak).	
Uplog 1 Sam1,Sam2,Sam4 standard frequency	
Uplog 2 Sam4 standard frequency and SAMXBCR	

RUN 1

SERVICE ORDER #:
PROGRAM VERSION: 17C0−154
FLUID LEVEL:

LOGGED INTERVAL	START	STOP

RUN 2

SERVICE ORDER #:
PROGRAM VERSION:
FLUID LEVEL:

LOGGED INTERVAL	START	STOP

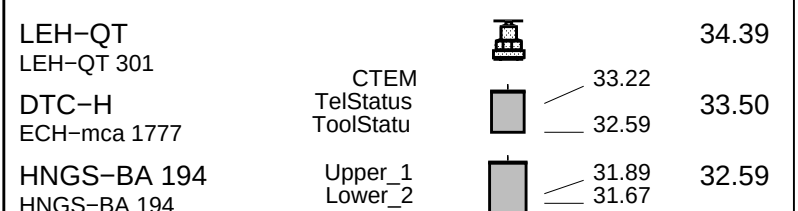
EQUIPMENT DESCRIPTION

RUN 1 RUN 2

SURFACE EQUIPMENT

GSR−U 616008
WITM (DTS)−A

DOWNHOLE EQUIPMENT



HNSH−BA 205

HNGC−B 300 — 30.09
HNGH−A 115

HNGC Stat — 29.55

AH−MCD_Upper — 29.02
AH−MCD_Upper 2

DSST−B — 26.73
SPAC−B 16
ECH−SD 16
SMDR−BD 8070
SSIJ−BA 8127
SMDX−AA 8147

PWF — 11.19

AH−MCD Lower — 11.19
AH−MCD Lower 1

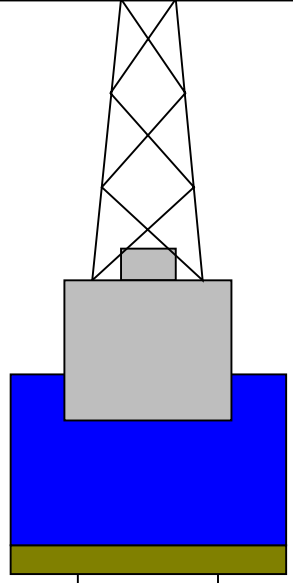
DTA−A — 8.90
ECH−KE 8231

MEST−B — 7.68
MEAH−B 769
MEAC−A 875
MEPH−A 702
GPIC−A 719
MEPC−AB 807
MEDS−B 702

MEDR MEAC
MEPC MEDS−B — 0.46
HV DF
Tension GPIT — 0.00
TOOL ZERO

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

Production String	(in) OD	(in) ID	(M) MD	Well Schematic	(M) MD	(in) OD	(in) ID	Casing String

Kelly Bushing Elevation		11.0				
Derrick Floor Elevation		11.0				
Mean Sea Level		0.0				
				3461	4.20	Sea Floor
				3461	9.875	Borehole Segment
				3592.5	3.80	Open Hole
				3778.5		

Company: Lamont Doherty | Well: Expedition 324 Site U1347A

Output DLIS Files

DEFAULT	FMS_DSI_NGS_022LUP	FN:31	PRODUCER	01−Oct−2009 09:42	3774.2 M	3443.6 M
BACKUPDLIS	FMS_DSI_NGS_022LUP	FN:32	PRODUCER	01−Oct−2009 08:43	3774.2 M	3443.6 M

OP System Version: 17C0−154

MEST−B	SRPC−3870_Q3_2009_OP17_V3_b	DTA−A	17C0−154
DSST−B	17C0−154	HNGC−B	17C0−154
HNGS−BA	17C0−154	DTC−H	17C0−154

Changed Parameter Summary

DLIS Name	New Value	Previous Value	Depth & Time
XVOL	100 V	0 V	3774.9 09:45:24
	0 V	100 V	3588.4 10:26:19

PIP SUMMARY

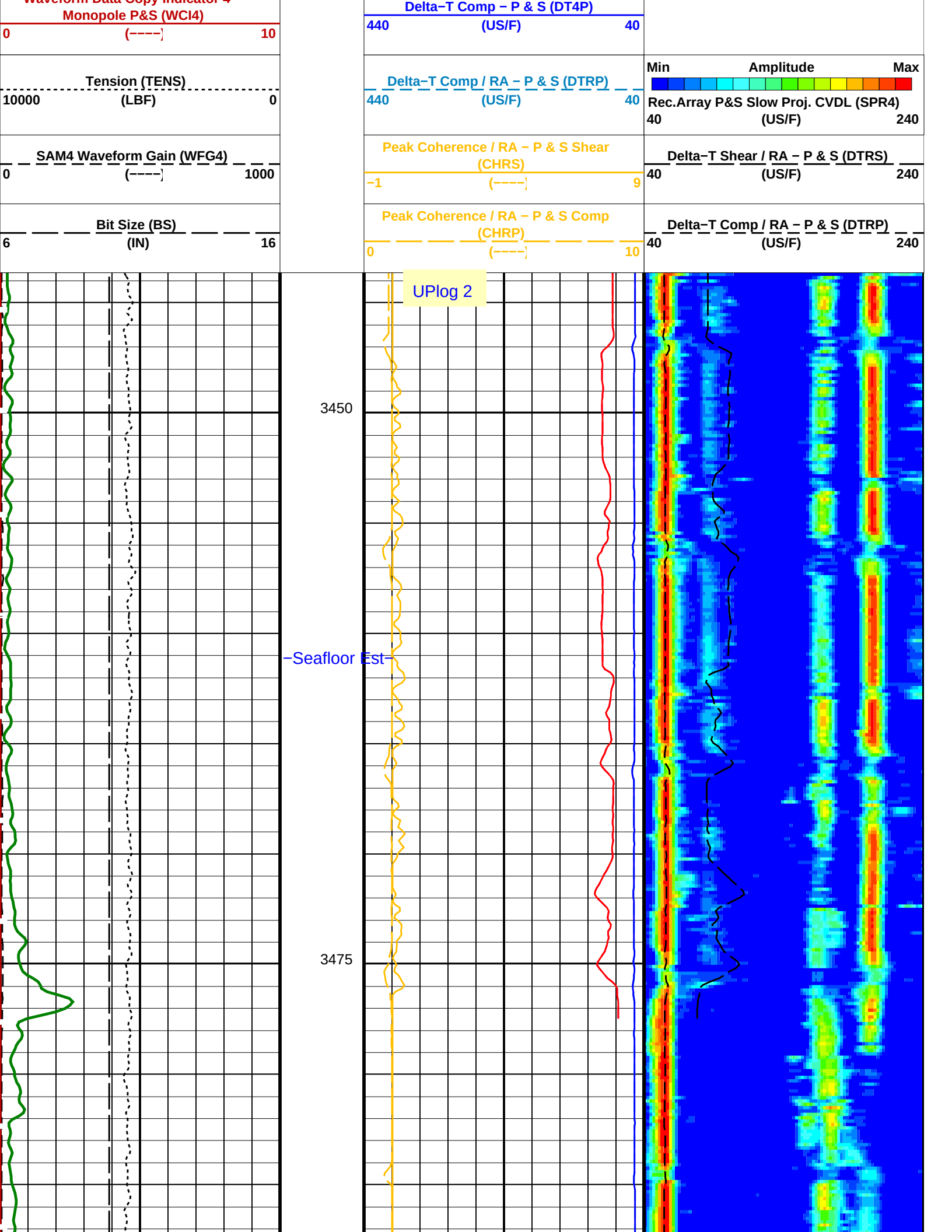
Time Mark Every 60 S

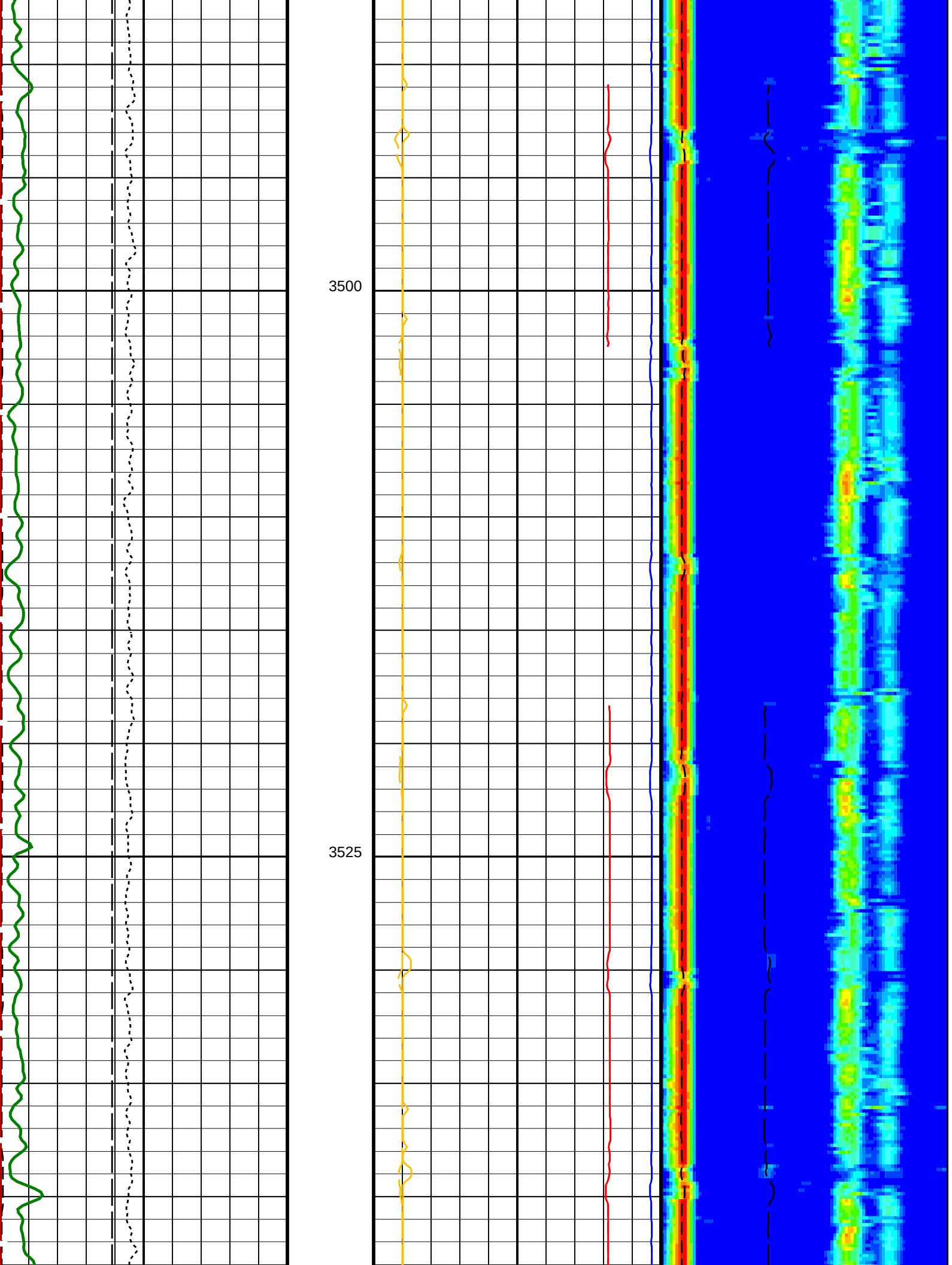
Delta−T Shear − P & S (DT4S)
440 (US/F) 40

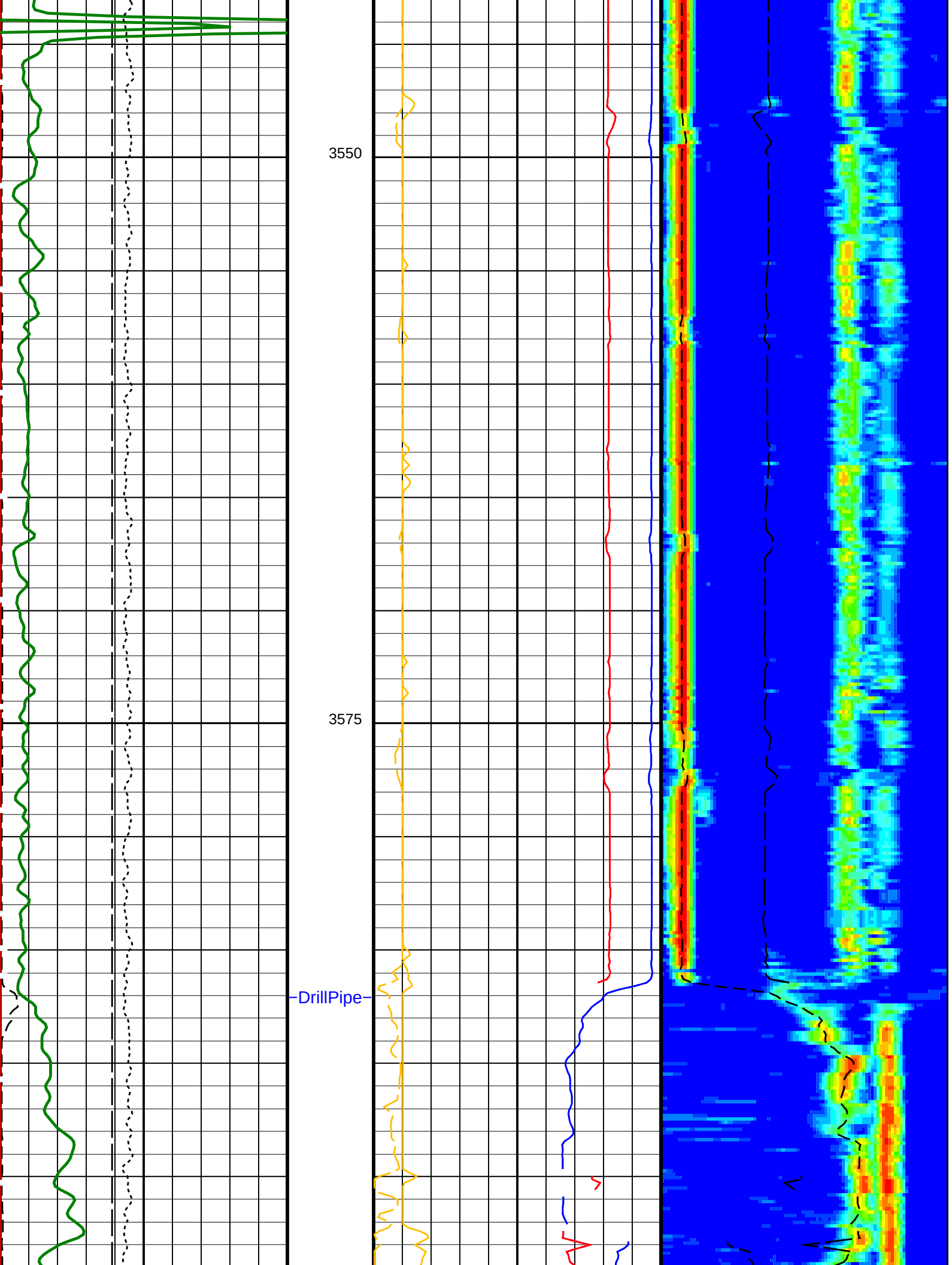
HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 100

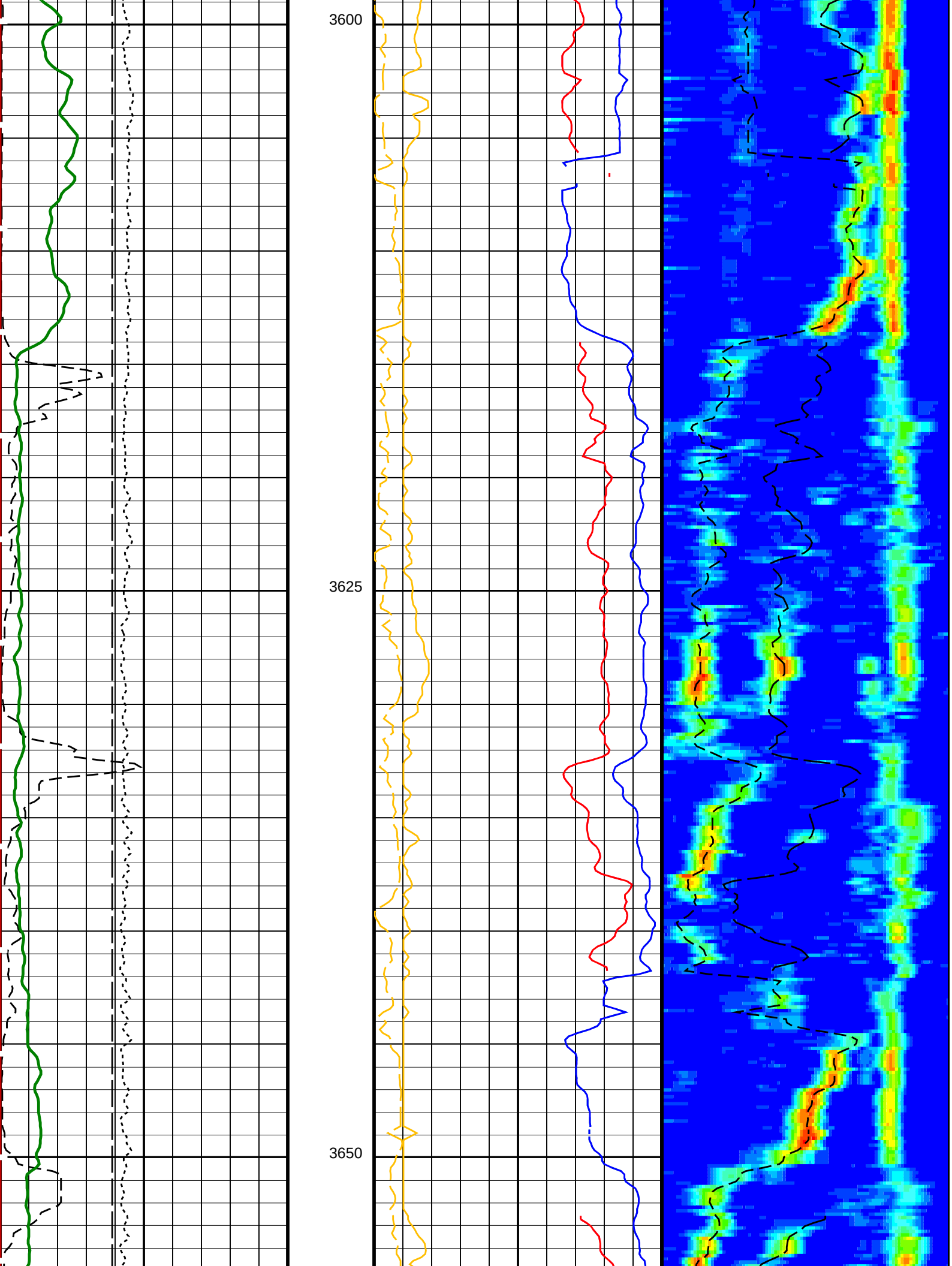
Delta−T Shear / RA − P & S (DTRS)
440 (US/F) 40

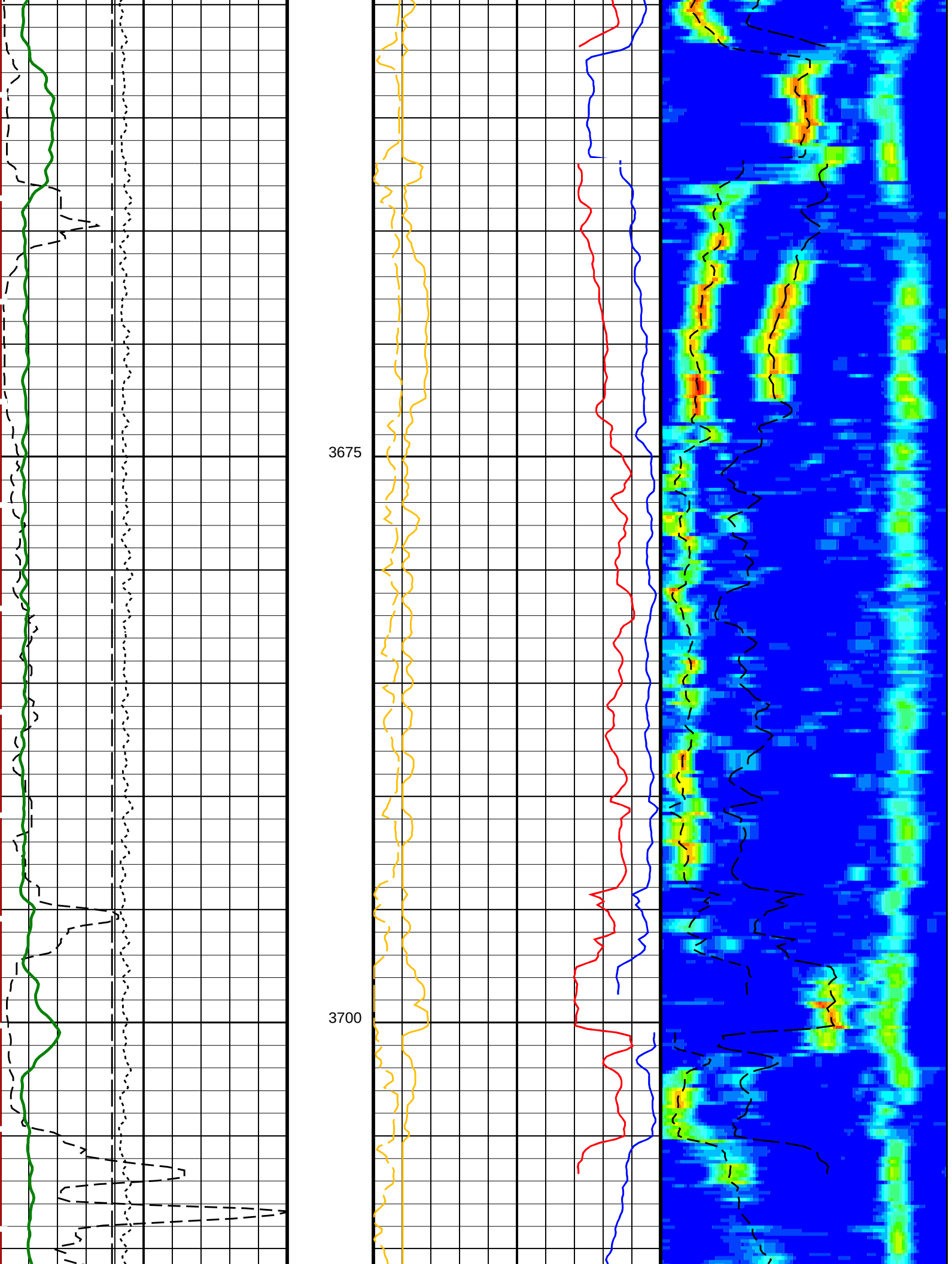
Waveform Data Copy Indicator 4 −

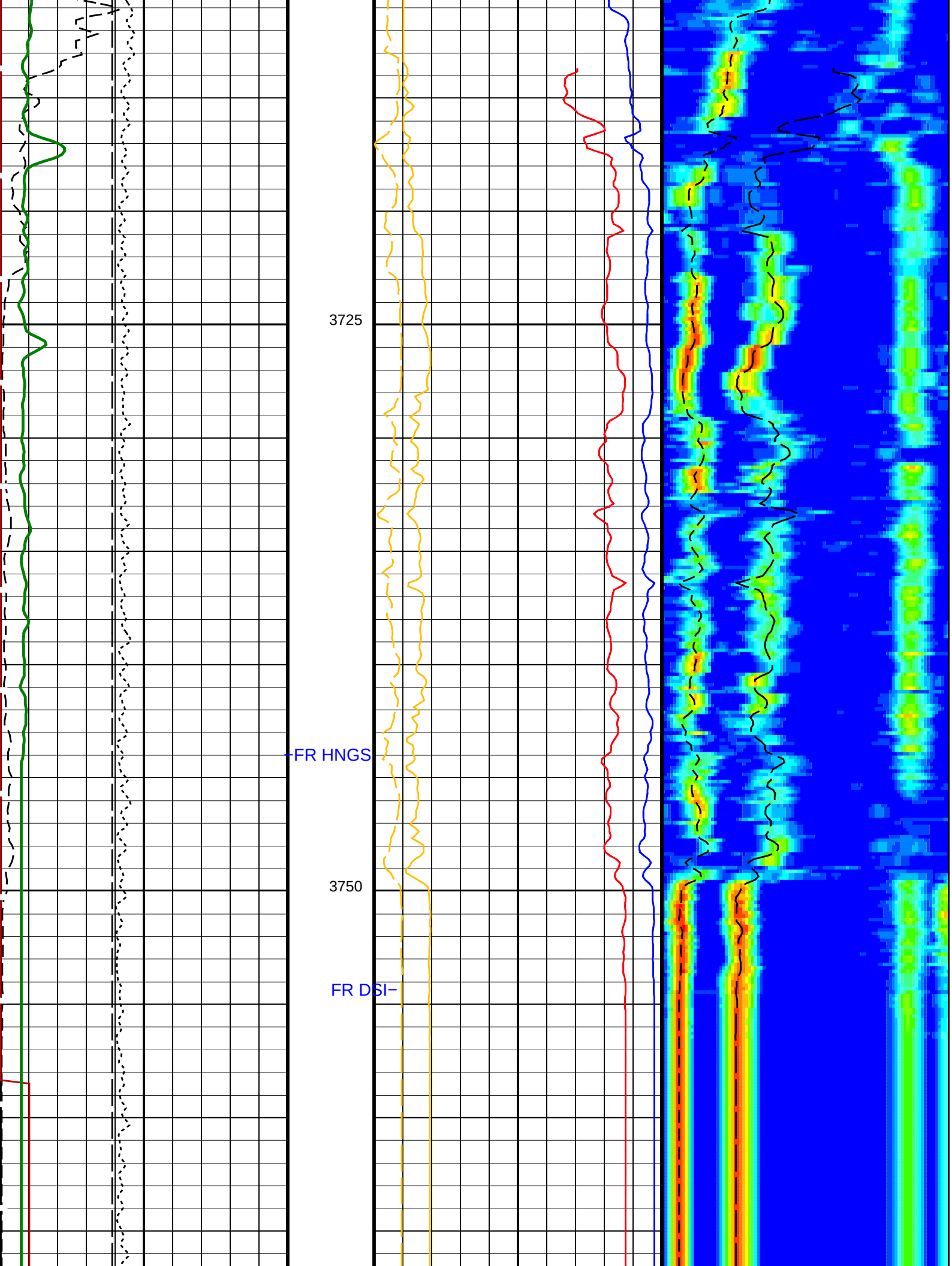

Waveform Data Copy Indicator 4 Monopole P&S (WCI4)
0
(----)
10
Tension (TENS)
10000
(LBF)
0
SAM4 Waveform Gain (WFG4)
0
(----)
1000
Bit Size (BS)
6
(IN)
16
Delta−T Comp − P & S (DT4P)
440
(US/F)
40
Delta−T Comp / RA − P & S (DTRP)
440
(US/F)
40
Peak Coherence / RA − P & S Shear (CHRS)
−1
(----)
9
Peak Coherence / RA − P & S Comp (CHRP)
0
(----)
10
Min
Amplitude
Max
Rec.Array P&S Slow Proj. CVDL (SPR4)
40
(US/F)
240
Delta−T Shear / RA − P & S (DTRS)
40
(US/F)
240
Delta−T Comp / RA − P & S (DTRP)
40
(US/F)
240
UPlog 2
3450
−Seafloor Est−
3475

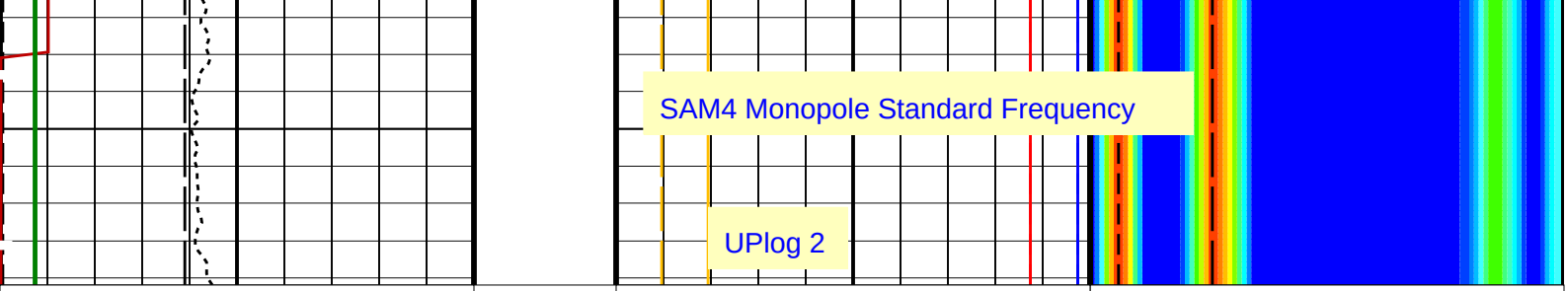

3500
3525


3550
3575
DrillPipe


3600
3625
3650


3675
3700


3725
FR HNGS
3750
FR DSI



Bit Size (BS) 6 (IN) 16	Peak Coherence / RA − P & S Comp (CHRP) 0 (−−−−) 10	Delta−T Comp / RA − P & S (DTRP) 40 (US/F) 240
SAM4 Waveform Gain (WFG4) 0 (−−−−) 1000	Peak Coherence / RA − P & S Shear (CHRS) −1 (−−−−) 9	Delta−T Shear / RA − P & S (DTRS) 40 (US/F) 240
Tension (TENS) 10000 (LBF) 0	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
Waveform Data Copy Indicator 4 − Monopole P&S (WCI4) 0 (−−−−) 10	Delta−T Comp − P & S (DT4P) 440 (US/F) 40	
HNGS Spectroscopy Gamma Ray (HSGR) 0 (GAPI) 100	Delta−T Shear / RA − P & S (DTRS) 440 (US/F) 40	
	Delta−T Shear − P & S (DT4S) 440 (US/F) 40	

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	MEST−B: Micro Electrical Scanner − B (Slim)		
ACPP	Accelerometer PROM Presence	PRESENT	
AFMO	Accelerometer Filtering Mode	MOVING_AVERAGE	
ART	Accelerometer Reference Temperature	20	DEGC
GLM	GPIT Logging Mode	DIPM	
ICMO	Inclinometry Computation Mode	AUTOMATIC_SELECTION	
MAPP	Magnetometer PROM Presence	PRESENT	
MDEC	Magnetic Field Declination	−0.650058	DEG
MLM	MEST Logging Mode	SCAN900	
MRTE	Magneto Reference Temperature	19	DEGC
PTYP	Pad Type − High Resolution or Medium Extended Coverage	HR_SLIM_0_12_IN	
RBS	Resistivity Button Selection	AUTO	
TEMS	GPIT Temperature Sensor Used	BOTH	
U−GPOF	Playback OLD VERSION GPIT FILE (BEFORE OP14 + SRPC−3098−FEB_2006_C) ?	NO	
XGAI	Gain	GAIN_2	
XMOD	Emex Mode	MANUAL	
XOFF	Offset	OFFSET_0	
XVOL	Emex Voltage	0	V
	DSST−B: Dipole Shear Imager − B		
AGC1	Automatic Gain Control 1	ON	
AGC2	Automatic Gain Control 2	ON	
AGC3	Automatic Gain Control 3	ON	
AGC4	Automatic Gain Control 4	ON	
AGC5	Automatic Gain Control 5	ON	
AGCX	Automatic Gain Control X	ON	
BARS_MTR1	Length for Monopole Transmitter to Receiver 1	2.7432	M
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	45	DEGF
CASF	Label Casing Function − Monopole P&S	50	
CDTS	C−Delta−T Shale	100	US/F
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

DDE3	Digitizing Delay 3	0	US
DDE4	Digitizing Delay 4	0	US
DDE5	Digitizing Delay 5	0	US
DDEX	Digitizing Delay X	0	US
DLCS	Label Compressional Source − Dipole Shear	USE	
DLHS	Label Hole Diameter Source for SOBS Channel	AUTO	
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	10	US
DSI2	Digitizer Sample Interval 2	10	US
DSI3	Digitizer Sample Interval 3	10	US
DSI4	Digitizer Sample Interval 4	10	US
DSI5	Digitizer Sample Interval 5	10	US
DSIX	Digitizer Sample Interval X	40	US
DTCS	Compressional Delta−T Source for DTCO Channel	PS_COMP	
DTF	Delta−T Fluid	204.5	US/F
DTM	Delta−T Matrix	56	US/F
DTSS	Shear Delta−T Source for DTSM Channel	UPPER_DIPOLE	
DWC1	Digitizer Word Count 1	512	
DWC2	Digitizer Word Count 2	512	
DWC3	Digitizer Word Count 3	512	
DWC4	Digitizer Word Count 4	512	
DWC5	Digitizer Word Count 5	512	
DWCX	Digitizer Word Count X	512	
FDE1	Firing Delay 1	0	
FDE2	Firing Delay 2	0	
FDE3	Firing Delay 3	0	
FDE4	Firing Delay 4	0	
FDE5	Firing Delay 5	0	
FDEX	Firing Delay X	0	
FGM5	First Motion Gate Moveout 5	40	US/F
FGMX	First Motion Gate Moveout X	40	US/F
FILG	Label Fill Gap Control − Monopole P&S	COMP_SHEAR	
FMG5	First Motion Minimum Gate 5	500	US
FMGX	First Motion Minimum Gate X	500	US
FMLL	Slowness Lower Limit − FMD	40	US/F
FMRC	Restart Control − FMD	CONTINUE	
FMT5	First Motion Threshold 5	UP	
FMTX	First Motion Threshold X	NONE	
FMUL	Slowness Upper Limit − FMD	180	US/F
FNC5	First Motion Noise Counter Input 5	ALO	
FNCX	First Motion Noise Counter Input X	ALO	
FPM	Processing Mode − FMD	NONE	
FTD5	First Motion Threshold Direction 5	UP	
FTDX	First Motion Threshold Direction X	UP	
GAI1	Manual Gain 1	10	
GAI2	Manual Gain 2	10	
GAI3	Manual Gain 3	10	
GAI4	Manual Gain 4	16	
GAI5	Manual Gain 5	16	
GAIX	Manual Gain X	10	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GDT1	Gain Delta−T 1	800	US/F
GDT2	Gain Delta−T 2	800	US/F
GDT3	Gain Delta−T 3	800	US/F
GDT4	Gain Delta−T 4	160	US/F
GDT5	Gain Delta−T 5	160	US/F
GDTX	Gain Delta−T X	800	US/F
GGRD	Geothermal Gradient	0.01	DF/F
GIN1	Gain Interval 1	15360	US
GIN2	Gain Interval 2	15360	US
GIN3	Gain Interval 3	15360	US
GIN4	Gain Interval 4	2560	US
GIN5	Gain Interval 5	1600	US
GINX	Gain Interval X	15360	US
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HPF1	High Pass Filter 1	F80	
HPF2	High Pass Filter 2	F80	
HPF3	High Pass Filter 3	F80	
HPF4	High Pass Filter 4	F8K	
HPF5	High Pass Filter 5	F8K	
HPFX	High Pass Filter X	F80	
ISSBAR	Barite Mud Switch	NOBARITE	
ITTS	Integrated Transit Time Source	DTCO	
LFC	Label Formation Character − Monopole P&S	DYNAMIC	
LPF1	Low Pass Filter 1	F5K	
LPF2	Low Pass Filter 2	F5K	
LPF3	Low Pass Filter 3	F5K	
LPF4	Low Pass Filter 4	F30K	
LPF5	Low Pass Filter 5	F30K	
LPFX	Low Pass Filter X	F5K	
LTXG	Lower Dipole Transmitter Geometry	156	IN
MAI5	Slowness Averaging Interval − FMD	42	IN

MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCS	Mean Casing Slowness	57	US/F
MDS5	Multishot Delta−T Scatter − FMD	20	US
MTXG	Monopole Transmitter Geometry	186	IN
MUX1	Sum Difference Multiplexor Input 1	RR	
MUX2	Sum Difference Multiplexor Input 2	RR	
MUX3	Sum Difference Multiplexor Input 3	RR	
MUX4	Sum Difference Multiplexor Input 4	RR	
MUX5	Sum Difference Multiplexor Input 5	RR	
MUXX	Sum Difference Multiplexor Input X	RR	
NTI5	Number Threshold Items 5	0	
NTIX	Number Threshold Items X	0	
NWI1	Number Waveform Items 1	0	
NWI2	Number Waveform Items 2	0	
NWI3	Number Waveform Items 3	0	
NWI4	Number Waveform Items 4	8	
NWI5	Number Waveform Items 5	0	
NWIX	Number Waveform Items X	32	
NWS1	Number Waveforms Stacked 1	1	
NWS2	Number Waveforms Stacked 2	1	
NWS3	Number Waveforms Stacked 3	1	
NWS4	Number Waveforms Stacked 4	1	
NWS5	Number Waveforms Stacked 5	1	
NWSX	Number Waveforms Stacked X	1	
RATE	Firing Rate	R7	
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	OFF	
SAM2	DSST Sonic Acquisition Mode 2 − Upper Dipole Mode	OFF	
SAM3	DSST Sonic Acquisition Mode 3 − Low Frequency Monopole Mode for Stoneley	OFF	
SAM4	DSST Sonic Acquisition Mode 4 − High Frequency Monopole Mode for P&S	EVEN	
SAM5	DSST Sonic Acquisition Mode 5 − High Frequency Monopole Mode for FMD	OFF	
SAMX	DSST Sonic Acquisition Mode X − Both Dipoles or Monopole Mode for Expert	BCR	
SAS1	STC Sonic Array Status − Lower Dipole	255	
SAS2	STC Sonic Array Status − Upper Dipole	255	
SAS3	STC Sonic Array Status − Monopole Stoneley	255	
SAS4	STC Sonic Array Status − Monopole P&S	255	
SAS5	Sonic Array Status − FMD	255	
SBO1	STC Search Band Offset − Lower Dipole	3000	US
SBO2	STC Search Band Offset − Upper Dipole	3000	US
SBO3	STC Search Band Offset − Monopole Stoneley	2000	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
SBW3	STC Search Bandwidth − Monopole Stoneley	6000	US
SBW4	STC Search Bandwidth − Monopole P&S	2000	US
SFC1	STC Formation Character − Lower Dipole	SELECTABLE	
SFC2	STC Formation Character − Upper Dipole	SELECTABLE	
SFC3	STC Formation Character − Monopole Stoneley	SELECTABLE	
SFC4	STC Formation Character − Monopole P&S	SELECTABLE	
SFM1	STC Filter − Lower Dipole	B1−3K	
SFM2	STC Filter − Upper Dipole	B1−3K	
SFM3	STC Filter − Monopole Stoneley	B.5−1.5K	
SFM4	STC Filter − Monopole P&S	B3−20K	
SHLL	Label Slowness Lower Limit − Monopole P&S Shear	75	US/F
SHT	Surface Hole Temperature	68	DEGF
SHUL	Label Slowness Upper Limit − Monopole P&S Shear	180	US/F
SLL1	STC Slowness Lower Limit − Lower Dipole	75	US/F
SLL2	STC Slowness Lower Limit − Upper Dipole	75	US/F
SLL3	STC Slowness Lower Limit − Monopole Stoneley	180	US/F
SLL4	STC Slowness Lower Limit − Monopole P&S	40	US/F
SPFS	Sonic Porosity Formula	RAYMER_HUNT	
SPSO	Sonic Porosity Source	DTCO	
SST1	STC Slowness Step − Lower Dipole	4	US/F
SST2	STC Slowness Step − Upper Dipole	4	US/F
SST3	STC Slowness Step − Monopole Stoneley	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	
SSW3	STC Source Waveform − Monopole Stoneley	WF_SAM3	
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	1000	US/F
SUL2	STC Slowness Upper Limit − Upper Dipole	1000	US/F
SUL3	STC Slowness Upper Limit − Monopole Stoneley	780	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
SWD3	STC Slowness Width − Monopole Stoneley	40	US/F
SWD4	STC Slowness Width − Monopole P&S	10	US/F
TBDB	Tool String Bottom to DSST Bottom	440.5	IN
TBF1	STC Time for Baseline Fill − Lower Dipole	0	US
TBF2	STC Time for Baseline Fill − Upper Dipole	0	US
TBF3	STC Time for Baseline Fill − Monopole Stoneley	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
TLL3	STC Time Lower Limit − Monopole Stoneley	980	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
TST3	STC Time Step − Monopole Stoneley	200	US
TST4	STC Time Step − Monopole P&S	50	US
TTDB	Tool String Top to DSST Bottom	913.4	IN
TUL1	STC Time Upper Limit − Lower Dipole	18000	US
TUL2	STC Time Upper Limit − Upper Dipole	18000	US
TUL3	STC Time Upper Limit − Monopole Stoneley	13580	US
TUL4	STC Time Upper Limit − Monopole P&S	3660	US
TWA1	Transmitter Waveform Amplitude 1	179	
TWA2	Transmitter Waveform Amplitude 2	179	
TWA3	Transmitter Waveform Amplitude 3	179	
TWA4	Transmitter Waveform Amplitude 4	150	
TWA5	Transmitter Waveform Amplitude 5	150	
TWAX	Transmitter Waveform Amplitude X	179	
TWD1	STC Time Width − Lower Dipole	2000	US
TWD2	STC Time Width − Upper Dipole	2000	US
TWD3	STC Time Width − Monopole Stoneley	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
TWI3	STC Integration Time Window − Monopole Stoneley	1600	US
TWI4	STC Integration Time Window − Monopole P&S	500	US
TWR1	Transmitter Waveform Sample Rate 1	5	US
TWR2	Transmitter Waveform Sample Rate 2	5	US
TWR3	Transmitter Waveform Sample Rate 3	5	US
TWR4	Transmitter Waveform Sample Rate 4	5	US
TWR5	Transmitter Waveform Sample Rate 5	5	US
TWRX	Transmitter Waveform Sample Rate X	5	US
TWS1	Transmitter Waveform Select 1	0	
TWS2	Transmitter Waveform Select 2	0	
TWS3	Transmitter Waveform Select 3	0	
TWS4	Transmitter Waveform Select 4	6	
TWS5	Transmitter Waveform Select 5	6	
TWSX	Transmitter Waveform Select X	0	
UTXG	Upper Dipole Transmitter Geometry	162	IN
WFDTSP1	SAM1 Waveform Delta for Spectrum	0	US/F
WFDTSP2	SAM2 Waveform Delta for Spectrum	0	US/F
WFDTSP3	SAM3 Waveform Delta for Spectrum	0	US/F
WFDTSP4	SAM4 Waveform Delta for Spectrum	0	US/F
WFDTSPX	SAMX Waveform Delta for Spectrum	0	US/F
WFLLSP1	SAM1 Waveform Lower Limit for Spectrum	0	US
WFLLSP2	SAM2 Waveform Lower Limit for Spectrum	0	US
WFLLSP3	SAM3 Waveform Lower Limit for Spectrum	0	US
WFLLSP4	SAM4 Waveform Lower Limit for Spectrum	0	US
WFLLSPX	SAMX Waveform Lower Limit for Spectrum	0	US
WFM1	Waveform Mode 1	W1	
WFM2	Waveform Mode 2	W1	
WFM3	Waveform Mode 3	W1	
WFM4	Waveform Mode 4	W1	
WFM5	Waveform Mode 5	W1	
WFMX	Waveform Mode X	W1	
WFULSP1	SAM1 Waveform Upper Limit for Spectrum	20000	US
WFULSP2	SAM2 Waveform Upper Limit for Spectrum	20000	US
WFULSP3	SAM3 Waveform Upper Limit for Spectrum	20000	US
WFULSP4	SAM4 Waveform Upper Limit for Spectrum	5000	US
WFULSPX	SAMX Waveform Upper Limit for Spectrum	20000	US
XMT1	Transmitter Select 1	NONE	
XMT2	Transmitter Select 2	NONE	
XMT3	Transmitter Select 3	NONE	
XMT4	Transmitter Select 4	MONO	
XMT5	Transmitter Select 5	MONO	
XMTX	Transmitter Select X	DUP	
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	
BHT	Bottom Hole Temperature (used in calculations)	45	DEGF
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	−0.00104014	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
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	
SHT	Surface Hole Temperature	68	DEGF
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.971204	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.950591	
DIP: Dip Computation			
	DIP Tool	SHDT	
CSBL	CSB DIP Number of Levels	2L	
DPAD	Disabled Pad	NONE	
ELRA	Electrical Radius	0.5	IN
INT	Correlation Interval	1.2192	M
SANG	Correlation Search Angle	35	DEG
SBUT	DIP Set of Buttons	MSD	
SDFA	Side−by−Side Distance Factor	0.9	IN
SPAN	DIP Spanning	1/4	
STDA	Structural DIP Azimuth	0	DEG
STDI	Structural DIP Angle	0	DEG
STEP	Correlation Step	0.6096	M
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	−50000.00	PPM
CSIZ	Current Casing Size	4.500	IN
CWEI	Casing Weight	0.00	LB/F
DFD	Drilling Fluid Density	1.26	G/C3
FLEV	Fluid Level	−50000.00	M
MST	Mud Sample Temperature	−50000.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
RMFS	Resistivity of Mud Filtrate Sample	−50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	12401	FT
TDD	Total Depth − Driller	3778.50	M
TDL	Total Depth − Logger	3775.00	M
TWS	Temperature of Connate Water Sample	7.00	DEGC

Format: DSST_P_S_VDL_COLOR Vertical Scale: 1:200 Graphics File Created: 01−Oct−2009 09:42

OP System Version: 17C0−154

MEST−B	SRPC−3870_Q3_2009_OP17_V3_b	DTA−A	17C0−154
DSST−B	17C0−154	HNGC−B	17C0−154
HNGS−BA	17C0−154	DTC−H	17C0−154

Output DLIS Files

DEFAULT	FMS_DSI_NGS_022LUP	FN:31	PRODUCER	01−Oct−2009 09:42		
BACKUPDLIS	FMS_DSI_NGS_022LUP	FN:32	PRODUCER	01−Oct−2009 08:43		

Company: Lamont Doherty Well: Expedition 324 Site U1347A

Output DLIS Files

DEFAULT	FMS_DSI_NGS_021LUP	FN:29	PRODUCER	01−Oct−2009 08:41	3774.2 M	3575.0 M
BACKUPDLIS	FMS_DSI_NGS_021LUP	FN:30	PRODUCER	01−Oct−2009 07:42	3774.2 M	3575.0 M

OP System Version: 17C0−154

MEST−B	SRPC−3870_Q3_2009_OP17_V3_b	DTA−A	17C0−154
DSST−B	17C0−154	HNGC−B	17C0−154
HNGS−BA	17C0−154	DTC−H	17C0−154

PIP SUMMARY

Time Mark Every 60 S

HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 100

Waveform Data Copy Indicator 4 − Monopole P&S (WCI4)
0 (−−−−) 10

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

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

Peak Coherence / RA − Upper Dipole (CHR2)
0 (−−−−) 10

HNGS Computed Gamma Ray (HCGR)
0 (GAPI) 100

Tension (TENS)
10000 (LBF) 0

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

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

Delta−T Shear − Upper Dipole (DT2)
440 (US/F) 40

Bit Size (BS)
0 (IN) 20

Uplog 1

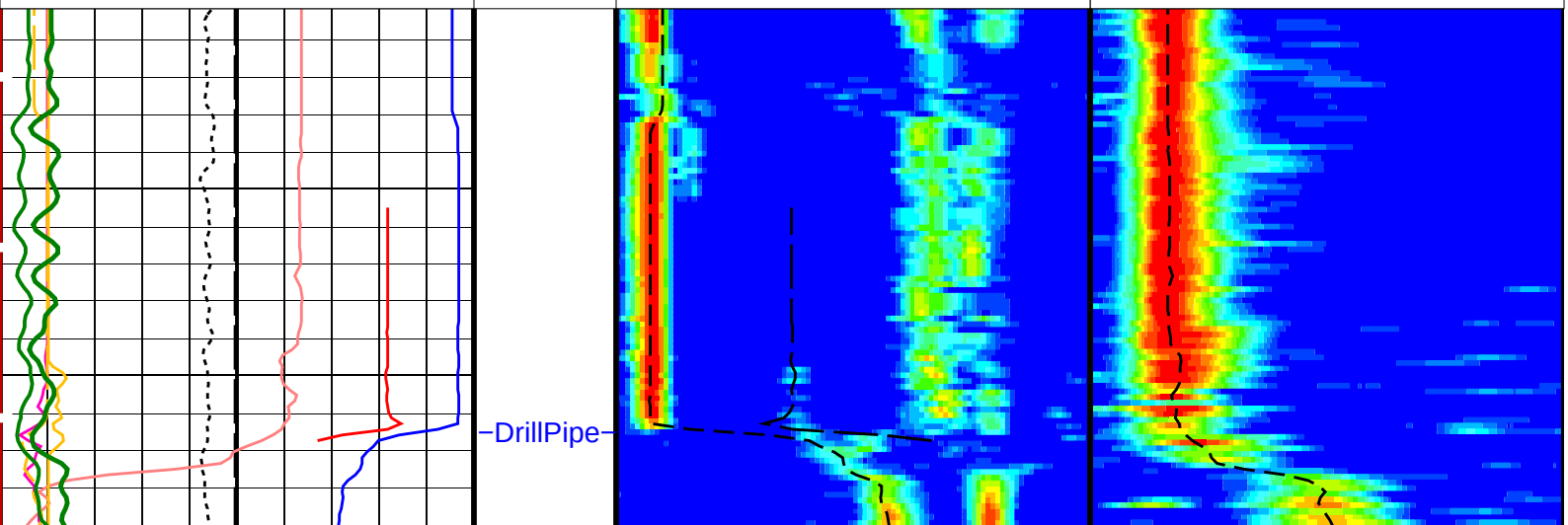
Min Amplitude Max
Rec.Array P&S Slow Proj. CVDL (SPR4)
40 (US/F) 240

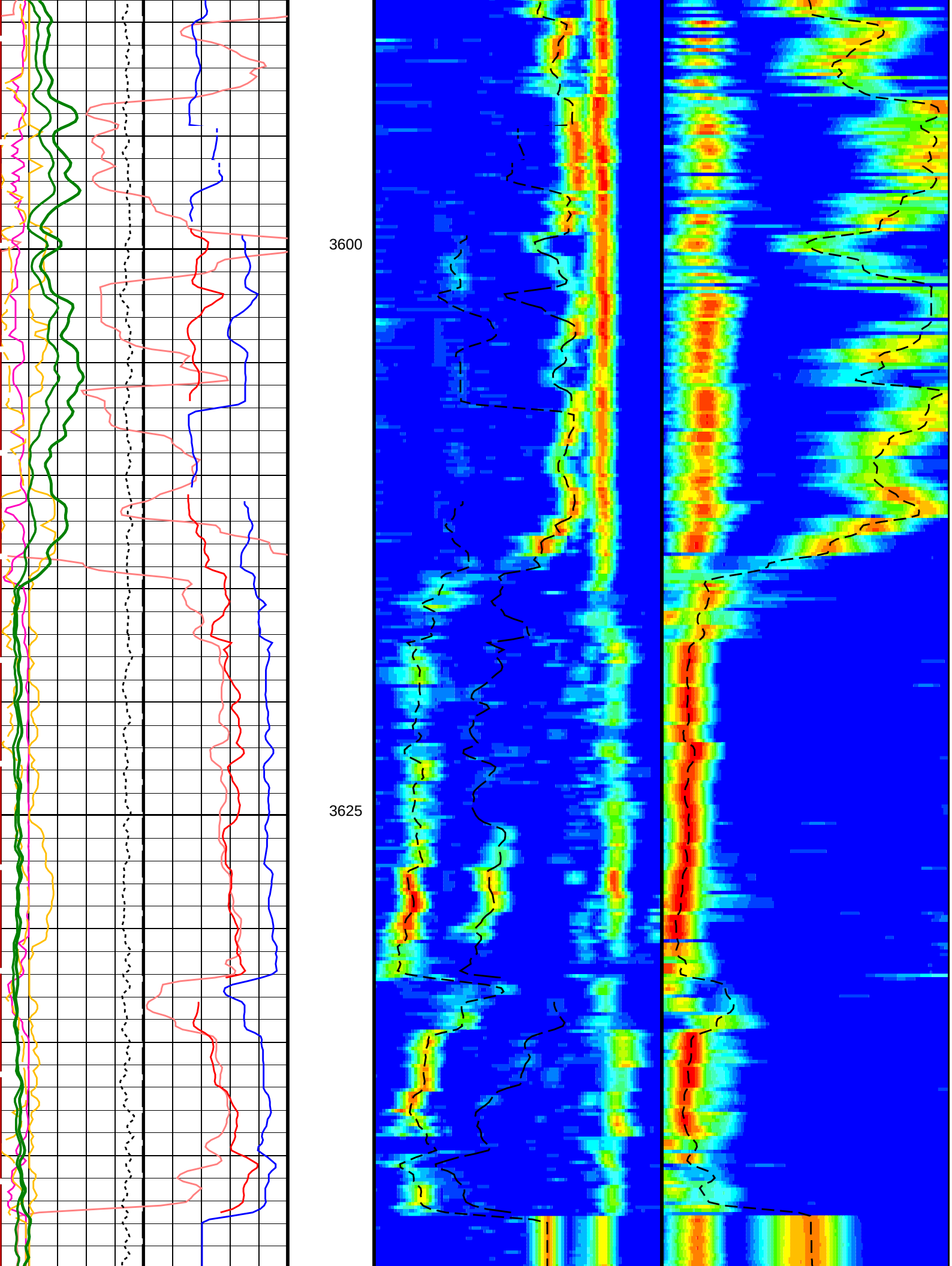
Delta−T Shear / RA − P & S (DTRS)
40 (US/F) 240

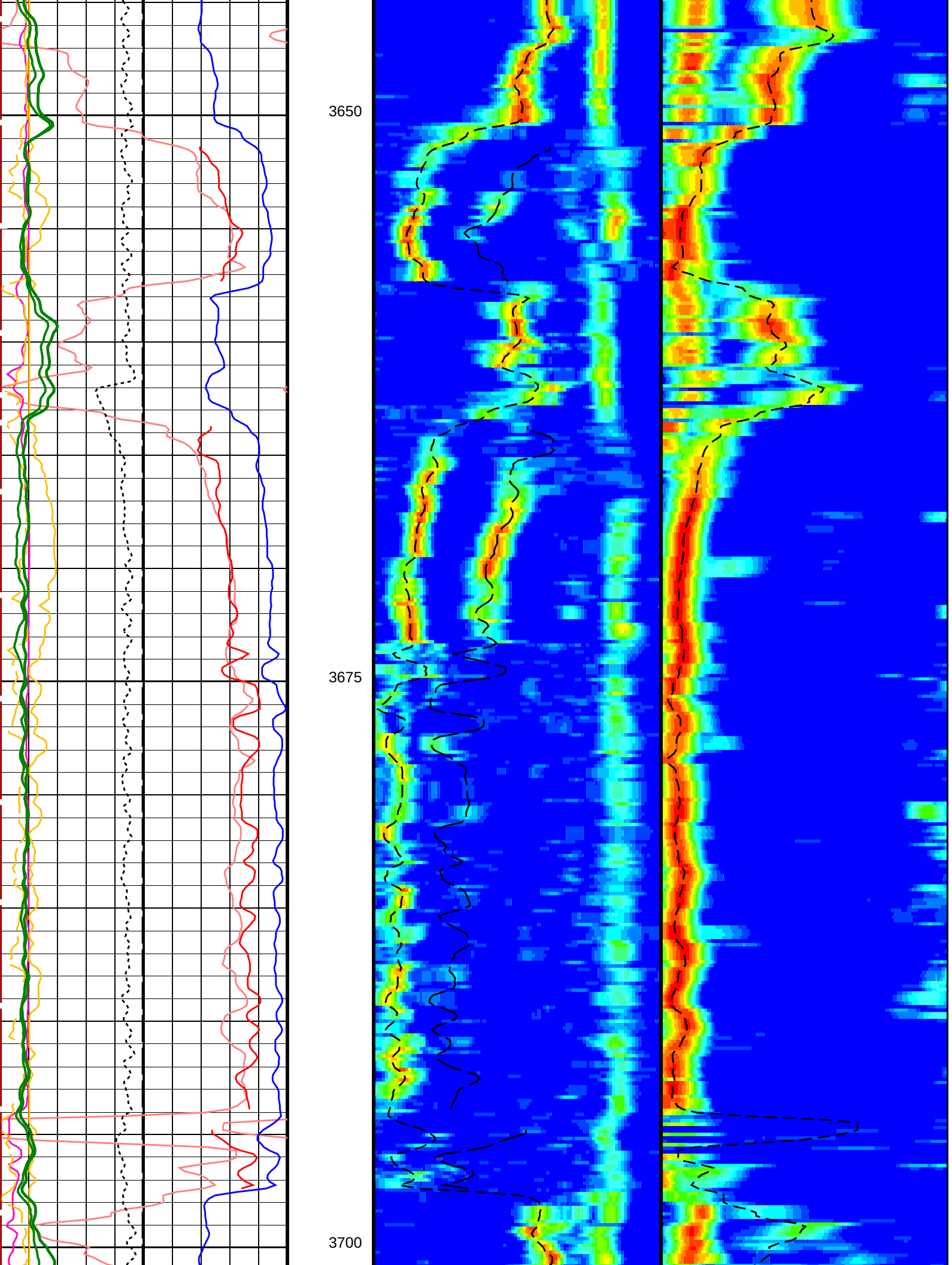
Min Amplitude Max
Rec.Array U.Dipole Slow Proj. CVDL (SPR2)
75 (US/F) 775

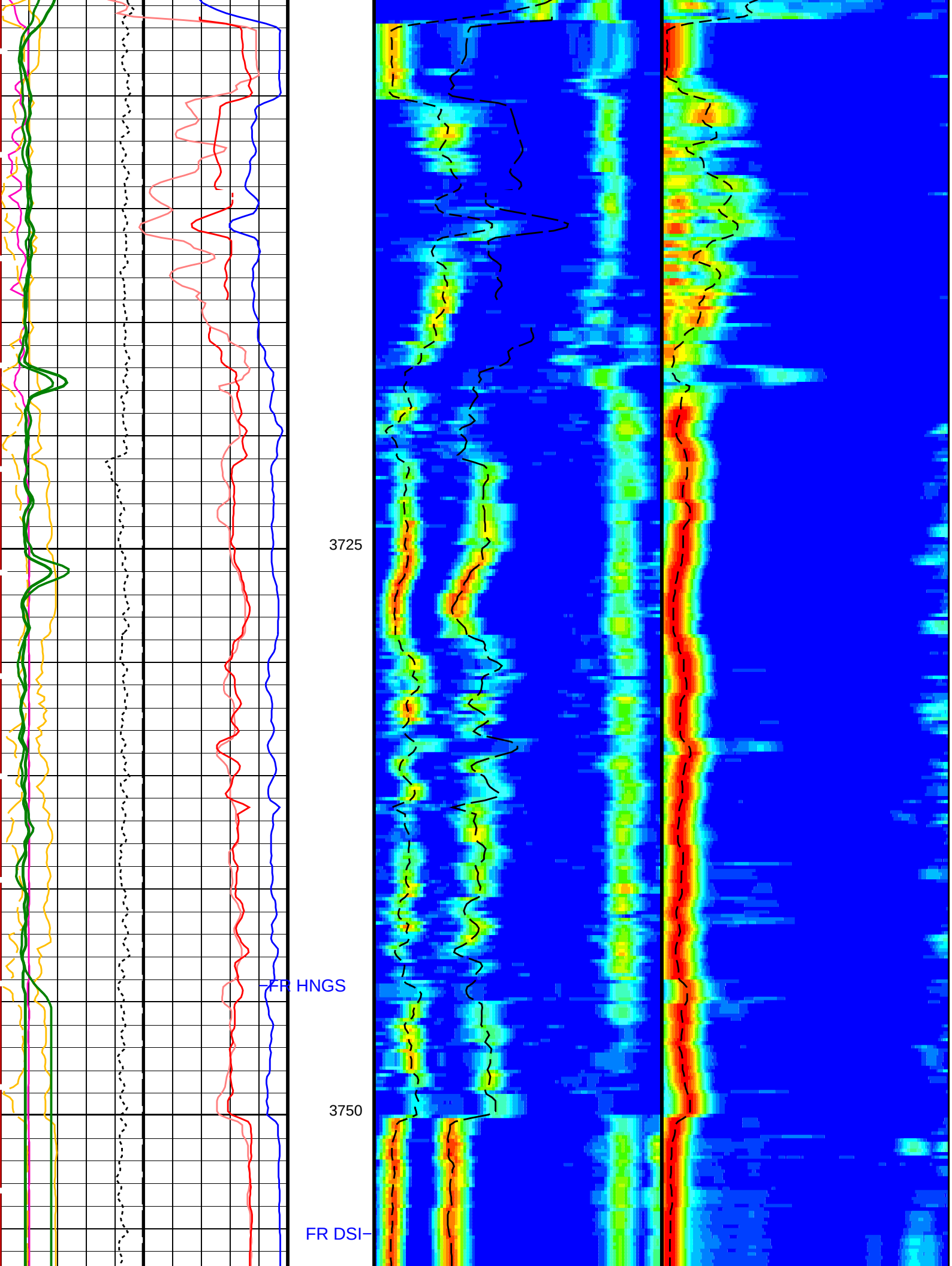
Delta−T Comp / RA − P & S (DTRP)
40 (US/F) 240

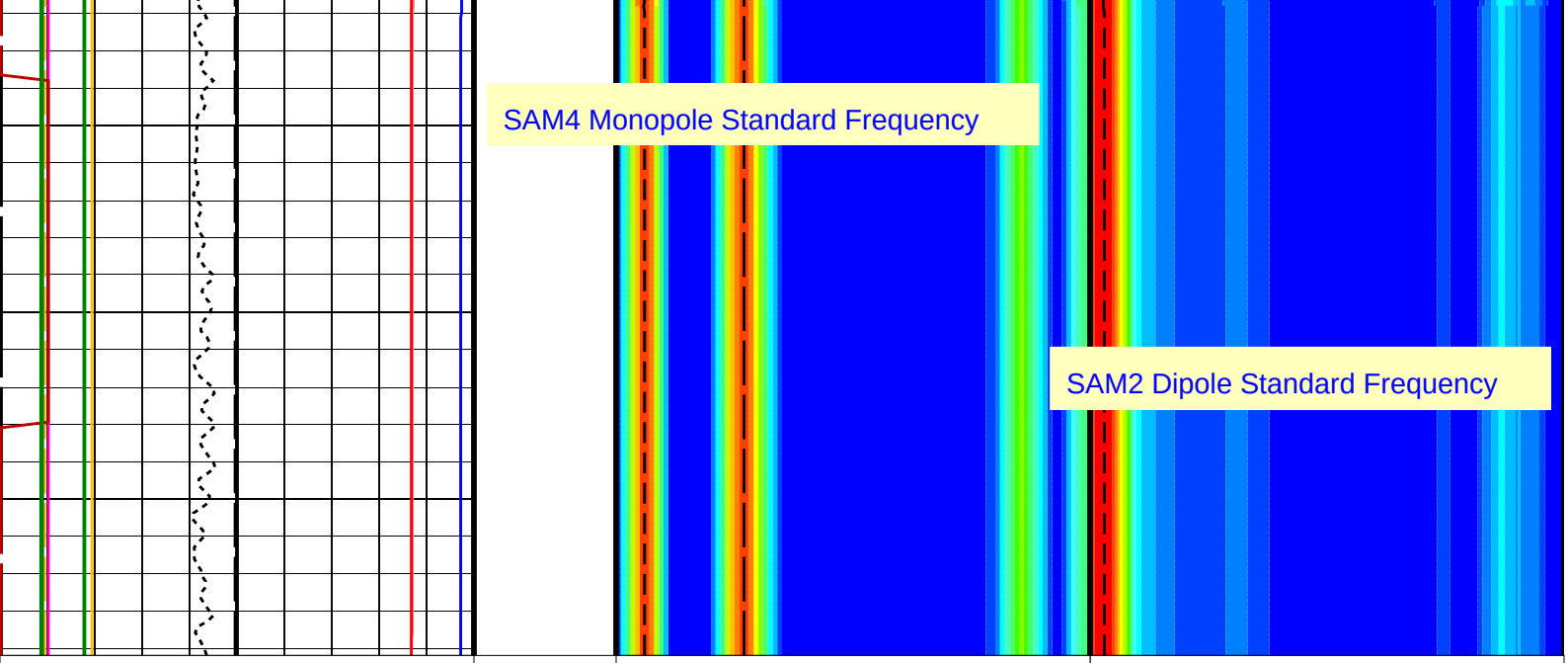
Delta−T Shear / RA − Upper Dipole (DT2R)
75 (US/F) 775




3600
3625


3650
3675
3700


3725
FR HNGS
3750
FR DSI



Bit Size (BS)
0 (IN) 20

Delta−T Shear − Upper Dipole (DT2)
440 (US/F) 40

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

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

Tension (TENS)
10000 (LBF) 0

HNGS Computed Gamma Ray (HCGR)
0 (GAPI) 100

Peak Coherence / RA − Upper Dipole (CHR2)
0 (−−−−) 10

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

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

Waveform Data Copy Indicator 4 − Monopole P&S (WCI4)
0 (−−−−) 10

HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 100

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

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

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

Delta−T Shear / RA − Upper Dipole (DT2R)
75 (US/F) 775

Min Amplitude Max
Rec.Array U.Dipole Slow Proj. CVDL (SPR2)
75 (US/F) 775

Uplog 1

PIP SUMMARY

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
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
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	204.5	US/F
DWC2	Digitizer Word Count 2	512	
DWC4	Digitizer Word Count 4	512	
DWCX	Digitizer Word Count X	512	
FILG	Label Fill Gap Control − Monopole P&S	COMP_SHEAR	
GCSE	Generalized Caliper Selection	BS	
LFC	Label Formation Character − Monopole P&S	DYNAMIC	
MCS	Mean Casing Slowness	57	US/F
MTXG	Monopole Transmitter Geometry	186	IN
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
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	
SAS2	STC Sonic Array Status − Upper Dipole	255	
SAS4	STC Sonic Array Status − Monopole P&S	255	
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	
SBW2	STC Search Bandwidth − Upper Dipole	8000	US
SBW4	STC Search Bandwidth − Monopole P&S	2000	US
SFC2	STC Formation Character − Upper Dipole	SELECTABLE	
SFC4	STC Formation Character − Monopole P&S	SELECTABLE	
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
SLL2	STC Slowness Lower Limit − Upper Dipole	75	US/F
SLL4	STC Slowness Lower Limit − Monopole P&S	40	US/F
SST2	STC Slowness Step − Upper Dipole	4	US/F
SST4	STC Slowness Step − Monopole P&S	2	US/F
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
SUL2	STC Slowness Upper Limit − Upper Dipole	1000	US/F
SUL4	STC Slowness Upper Limit − Monopole P&S	240	US/F
SWD2	STC Slowness Width − Upper Dipole	40	US/F
SWD4	STC Slowness Width − Monopole P&S	10	US/F
TBF2	STC Time for Baseline Fill − Upper Dipole	0	US
TBF4	STC Time for Baseline Fill − Monopole P&S	300	US
TLL2	STC Time Lower Limit − Upper Dipole	600	US
TLL4	STC Time Lower Limit − Monopole P&S	150	US
TST2	STC Time Step − Upper Dipole	200	US
TST4	STC Time Step − Monopole P&S	50	US
TUL2	STC Time Upper Limit − Upper Dipole	18000	US
TUL4	STC Time Upper Limit − Monopole P&S	3660	US
TWD2	STC Time Width − Upper Dipole	2000	US
TWD4	STC Time Width − Monopole P&S	1000	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
WFM4	Waveform Mode 4	W1	
	HNGS−BA: Hostile Natural Gamma Ray Sonde		

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**	**0**	**IN**
CSD2	**Outer Casing Outer Diameter**	**0**	**IN**
CSW1	**Inner Casing Weight**	**0**	**LB/F**
CSW2	**Outer Casing Weight**	**0**	**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**	**−0.00577201**	
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**	**0.885495**	
VBA2	**HNGS Detector 2 Variable Barite Factor Running Average**	**0.894453**	
System and Miscellaneous			
BS	**Bit Size**	**9.875**	**IN**

Format: DSST_P_S_UPPER_VDL_COLOR Vertical Scale: 1:200 Graphics File Created: 01−Oct−2009 08:41

OP System Version: 17C0−154

MEST−B	**SRPC−3870_Q3_2009_OP17_V3_b**	**DTA−A**	**17C0−154**
DSST−B	**17C0−154**	**HNGC−B**	**17C0−154**
HNGS−BA	**17C0−154**	**DTC−H**	**17C0−154**

Output DLIS Files

DEFAULT	**FMS_DSI_NGS_021LUP**	**FN:29**	**PRODUCER**	**01−Oct−2009 08:41**
BACKUPDLIS	**FMS_DSI_NGS_021LUP**	**FN:30**	**PRODUCER**	**01−Oct−2009 07:42**

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Micro Electrical Scanner − B (Slim) Wellsite Calibration − Caliper Calibration							
Before: Calibration out of date 15−Sep−2009 22:04							
Caliper 1 Zero Measurement	12.00	N/A	12.56	N/A	N/A	N/A	IN
Caliper 2 Zero Measurement	12.00	N/A	12.39	N/A	N/A	N/A	IN
Caliper 1 Plus Measurement	15.19	N/A	15.42	N/A	N/A	N/A	IN
Caliper 2 Plus Measurement	15.19	N/A	15.30	N/A	N/A	N/A	IN
Micro Electrical Scanner − B (Slim) Wellsite Calibration − CROUZET ACCELEROMETER PROM HAS BEEN READ CORRECTLY							
Before: Calibration out of date 30−Sep−2009 20:57							
TEMPERATURE REFERENCE :	N/A	N/A	20	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	10	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	448	N/A	N/A	N/A	
Micro Electrical Scanner − B (Slim) Wellsite Calibration − CROUZET MAGNETOMETER PROM HAS BEEN READ CORRECTLY							
Before: Calibration out of date 30−Sep−2009 20:57							
TEMPERATURE REFERENCE :	N/A	N/A	19	N/A	N/A	N/A	DEGC
YEAR OF CALIBRATION :	N/A	N/A	99	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	428	N/A	N/A	N/A	
Hostile Natural Gamma Ray Sonde Wellsite Calibration − Detector 1 Check							
Master: 5−Sep−2009 7:01 Before: 13−Sep−2009 22:15							
Na 511 Peak Loc	40.00	39.55	39.60	N/A	N/A	1.000	
Na 511 Peak Res	15.50	15.65	16.19	N/A	N/A	2.000	%
High Voltage	1150	1146	1180	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	142.8	142.7	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	7.849	8.372	N/A	N/A	2.000	%
Temperature	15.50	14.91	32.53	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	36.92	35.51	N/A	N/A	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration − Detector 2 Check
Master: 5−Sep−2009 7:01 Before: 13−Sep−2009 22:15

Na 511 Peak Loc	40.00	39.62	39.55	N/A	N/A	1.000	
Na 511 Peak Res	15.50	15.06	16.55	N/A	N/A	2.000	%
High Voltage	1150	1080	1113	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	141.3	142.3	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	8.437	9.484	N/A	N/A	2.000	%
Temperature	15.50	15.08	32.86	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	36.97	36.00	N/A	N/A	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration − Ratio Of Detector 1 To Detector 2
Master: 5−Sep−2009 7:01 Before: 13−Sep−2009 22:15

Coincidence Count Rate Ratio	1.000	0.9992	0.9853	N/A	N/A	0.05000	

Hostile Natural Gamma Ray Sonde Master Calibration − Detector 1 Calibration
Master: 5−Sep−2009 7:01

Na 511 Peak Set Point	40.00	41.00	−−	−−	−−	−−	
Th Peak Loc	209.6	210.4	−−	−−	−−	−−	
Th Peak Res	7.000	6.417	−−	−−	−−	−−	%
Background Count Rate	142.5	18.75	−−	−−	−−	−−	CPS
Gain Ratio	1.000	1.012	−−	−−	−−	−−	

Hostile Natural Gamma Ray Sonde Master Calibration − Detector 2 Calibration
Master: 5−Sep−2009 7:01

Na 511 Peak Set Point	40.00	41.00	−−	−−	−−	−−	
Th Peak Loc	209.6	209.5	−−	−−	−−	−−	
Th Peak Res	7.000	7.001	−−	−−	−−	−−	%
Background Count Rate	142.5	18.87	−−	−−	−−	−−	CPS
Gain Ratio	1.000	1.006	−−	−−	−−	−−	

Micro Electrical Scanner − B (Slim) / Equipment Identification

Primary Equipment:		
MEST Sonde − B	MEDS − B	702
MEST Preamplifier Cartridge − AB	MEPC − AB	807
GPIT Cartridge − A	GPIC − A	719
MEST Acquisition Cartridge − A	MEAC − A	875
Auxiliary Equipment:		
MEST−B Preamplifier Cartridge Housing	MEPH − A	702
MEST Acquisition Cartridge Housing (Slim	MEAH − B	769

Hostile Natural Gamma Ray Cartridge − B / Equipment Identification

Primary Equipment:		
HNGC Cartridge	HNGC − B	300
Auxiliary Equipment:		
HNGC Housing	HNGH − A	115

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:		
HNGS Sonde	HNGS − BA	194
Auxiliary Equipment:		
HNGS Sonde Housing	HNSH − BA	205
Gamma Source Radioactive	GSR − U	616008

Hostile Natural Gamma Ray Sonde Wellsite Calibration
Detector 1 Check

Phase	Na 511 Peak Loc	Value
Master		39.55
Before		39.60
	37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)	

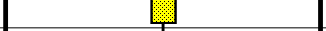
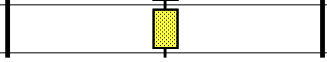
Phase	Na 511 Peak Res %	Value
Master		15.65
Before		16.19
	12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)	

Phase	High Voltage V	Value
Master		1146
Before		1180
	900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	

Phase	Na 1785 Peak Loc	Value

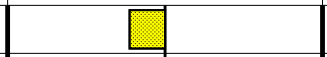
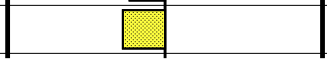
Phase	Na 1785 Peak Res %	Value

Phase	Temperature DEGC	Value

Phase		Value
Master		142.8
Before		142.7
135.0 (Minimum)	142.6 (Nominal)	150.3 (Maximum)

Phase		Value
Master		7.849
Before		8.372
7.000 (Minimum)	8.500 (Nominal)	11.00 (Maximum)

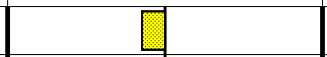
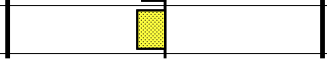
Phase		Value
Master		14.91
Before		32.53
−28.89 (Minimum)	15.50 (Nominal)	60.00 (Maximum)

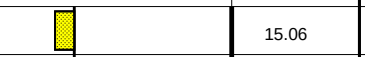
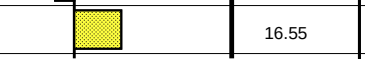
Phase	Na Count Rate CPS	Value
Master		36.92
Before		35.51
10.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)

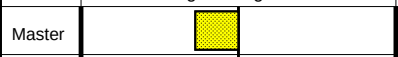
Master: 5−Sep−2009 7:01 Before: 13−Sep−2009 22:15

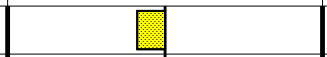
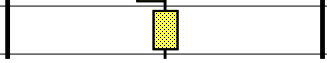
Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 2 Check

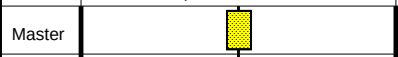
Phase	Na 511 Peak Loc	Value
Master		39.62
Before		39.55
37.50 (Minimum)	40.00 (Nominal)	43.50 (Maximum)

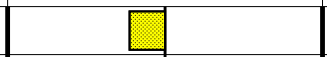
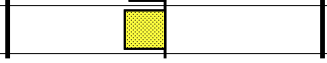
Phase	Na 511 Peak Res %	Value
Master		15.06
Before		16.55
12.00 (Minimum)	15.50 (Nominal)	19.00 (Maximum)

Phase	High Voltage V	Value
Master		1080
Before		1113
900.0 (Minimum)	1150 (Nominal)	1600 (Maximum)

Phase	Na 1785 Peak Loc	Value
Master		141.3
Before		142.3
135.0 (Minimum)	142.6 (Nominal)	150.3 (Maximum)

Phase	Na 1785 Peak Res %	Value
Master		8.437
Before		9.484
7.000 (Minimum)	8.500 (Nominal)	11.00 (Maximum)

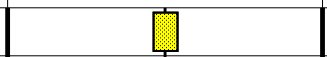
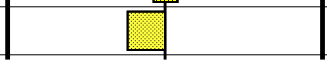
Phase	Temperature DEGC	Value
Master		15.08
Before		32.86
−28.89 (Minimum)	15.50 (Nominal)	60.00 (Maximum)

Phase	Na Count Rate CPS	Value
Master		36.97
Before		36.00
10.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)

Master: 5−Sep−2009 7:01 Before: 13−Sep−2009 22:15

Hostile Natural Gamma Ray Sonde Wellsite Calibration

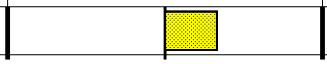
Ratio Of Detector 1 To Detector 2

Phase	Coincidence Count Rate Ratio	Value
Master		0.9992
Before		0.9853
0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)

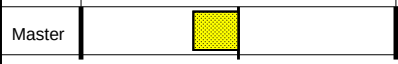
Master: 5−Sep−2009 7:01
Before: 13−Sep−2009 22:15

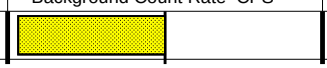
Hostile Natural Gamma Ray Sonde Master Calibration

Detector 1 Calibration

Phase	Na 511 Peak Set Point	Value
Master		41.00
38.00 (Minimum)	40.00 (Nominal)	43.00 (Maximum)

Phase	Th Peak Loc	Value
Master		210.4
201.0 (Minimum)	209.6 (Nominal)	218.3 (Maximum)

Phase	Th Peak Res %	Value
Master		6.417
5.000 (Minimum)	7.000 (Nominal)	9.000 (Maximum)

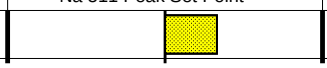
Phase	Background Count Rate CPS	Value
Master		18.75
10.00 (Minimum)	142.5 (Nominal)	265.0 (Maximum)

Phase	Gain Ratio	Value
Master		1.012
0.9400 (Minimum)	1.000 (Nominal)	1.060 (Maximum)

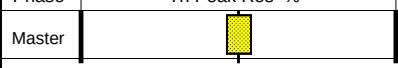
Master: 5−Sep−2009 7:01

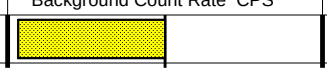
Hostile Natural Gamma Ray Sonde Master Calibration

Detector 2 Calibration

Phase	Na 511 Peak Set Point	Value
Master		41.00
38.00 (Minimum)	40.00 (Nominal)	43.00 (Maximum)

Phase	Th Peak Loc	Value
Master		209.5
201.0 (Minimum)	209.6 (Nominal)	218.3 (Maximum)

Phase	Th Peak Res %	Value
Master		7.001
5.000 (Minimum)	7.000 (Nominal)	9.000 (Maximum)

Phase	Background Count Rate CPS	Value
Master		18.87
10.00 (Minimum)	142.5 (Nominal)	265.0 (Maximum)

Phase	Gain Ratio	Value
Master		1.006
0.9400 (Minimum)	1.000 (Nominal)	1.060 (Maximum)

Master: 5−Sep−2009 7:01

DTS Telemetry Tool / Equipment Identification

Primary Equipment:		
DTC−H Auxiliary Cartridge	DTCH − A	8798
DTC−H Telemetry Cartridge	DTCH − A	8798
Auxiliary Equipment:		
DTCH Telemetry Cartridge Housing	ECH − mca	1777

Company: **Lamont Doherty**

Schlumberger

Well: **Expedition 324 Site U1347A**
Field: **Shatsky Rise**
Rig: **JOIDES Resolution**
Ocean: **Pacific**

Dipole Shear Sonic Imager (DSI)

Natural Gamma Spectroscopy (HNGS)