

COMPANY: Lamont Doherty

WELL: ODP Leg 189, Site 1170 (WSTR-2A)

FIELD: Tasmanian Seaway, West Tasmania Site

COUNTY: Offshore STATE: Indian Ocean



Dipole Sonic Upper Dipole
Shear, Gamma Ray

COUNTY: Offshore
Field: Tasmanian Seaway, West Tasm
Location:
Well: ODP Leg 189, Site 1170 (WSTR-
Company: Lamont Doherty

LOCATION		Elev.:	K.B.	11.2 M
Permanent Datum:	MSL		G.L.	-2716 M
Log Measured From:	RKB		D.F.	10.9 M
Drilling Measured From:	RKB	Elev.:	0 ft	
			11.2 M	above Perm. Datum
API Serial No.	LATITUDE:	47° 9.06' S	LONGITUDE:	146° 2.98' E
			RIG:	JOIDES Resolution

Logging Date	Run Number	Run 1	Run 2	Run
10-APR-2000	One			
Depth Driller	3496 M			
Schlumberger Depth	3497.5 M			
Bottom Log Interval	3470 M			
Top Log Interval	3245 M			
Casing Driller Size @ Depth	0.000 in @ 3249 M			
Casing Schlumberger	3245 M			
Bit Size	9.875 in			
Type Fluid In Hole	Salt Water Base			
Density	8.51234 lbm/gal			
Fluid Loss	PH			
Source Of Sample	Salt water			
RM @ Measured Temperature	0.230 ohm.m @ 60 degF			
RMF @ Measured Temperature	@ @			
RMC @ Measured Temperature	@ @			
Source RMF	RMC			
RM @ MRT	2.268 @ 0 @ 0			
Maximum Recorded Temperatures	25.8 degC			
Circulation Stopped	9-APR-2000 16:00			
Logger On Bottom	10-APR-2000 13:20			
Unit Number	99 Houston OS			
Recorded By	Kerry M. Swain			
Witnessed By	Patrick Fothergill, Ulysses S. Ninnemann			

Logging Date	10-APR-2000			
Run Number	One			
Depth Driller	3496 M			
Schlumberger Depth	3497.5 M			
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Density	8.51234 lbm/gal			
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Source Of Sample	Salt water			
RM @ Measured Temperature	0.230 ohm.m @ 60 degF			
RMF @ Measured Temperature	@ @			
RMC @ Measured Temperature	@ @			
Source RMF	RMC			
RM @ MRT	2.268 @ 0 @ 0			
Maximum Recorded Temperatures	25.8 degC			
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Bit Size	9.875 in			
Type Fluid In Hole	Salt Water Base			
Density	8.51234 lbm/gal			
Fluid Loss	PH			
Source Of Sample	Salt water			
RM @ Measured Temperature	0.230 ohm.m @ 60 degF			
RMF @ Measured Temperature	@ @			
RMC @ Measured Temperature	@ @			
Source RMF	RMC			
RM @ MRT	2.268 @ 0 @ 0			
Maximum Recorded Temperatures	25.8 degC			
Circulation Stopped	9-APR-2000 16:00			
Logger On Bottom	10-APR-2000 13:20			
Unit Number	99 Houston OS			
Recorded By	Kerry M. Swain			
Witnessed By	Patrick Fothergill, Ulysses S. Ninnemann			

ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS AND WE CANNOT, AND DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATIONS, AND WE SHALL NOT, EXCEPT IN THE CASE OF GROSS OR WILLFUL NEGLIGENCE ON OUR PART, BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COSTS, DAMAGES OR EXPENSES INCURRED OR SUSTAINED BY ANYONE RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR OFFICERS, AGENTS OR EMPLOYEES. THESE INTERPRETATIONS ARE ALSO SUBJECT TO CLAUSE 4 OF OUR GENERAL TERMS AND CONDITIONS AS SET OUT IN OUR CURRENT PRICE SCHEDULE.

OTHER SERVICES1

OS1: DSI/FMS
OS2: DITE/HLDS/APS/HNGS
OS3:
OS4:
OS5:

OTHER SERVICES2

OS1:
OS2:
OS3:
OS4:
OS5:

REMARKS: RUN NUMBER 1

Hole cored with APC/XCB.
Sea Floor at 2715.8 MBRF (Driller), Logger depth of sea floor not found.
Log presented in meters below rig floor.
Lamont Temperature Tool (TAP) run on DITE/HLDS/APS/HNGS only.
Toolstring -GHMT/NGTC/DSST
Wireline heave compensator (WHC) used on all descents.
Sepiolite mud was used to displace the borehole.
Drillers TD- 3496 mbrf.
Loggers TD- 3497.5 mbrf.
Drill pipe Logger- 3245 mbrf.
Drill pipe Driller - 3249 mbrf.
DSI centralized with 2 CME-AY centralizers.
Low Frequency Lower Dipole operating mode.

REMARKS: RUN NUMBER 2

RUN 1		
SERVICE ORDER #:		
PROGRAM VERSION:	9C1-303	
FLUID LEVEL:		
LOGGED INTERVAL	START	STOP

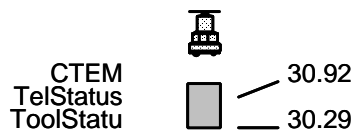
RUN 2		
SERVICE ORDER #:		
PROGRAM VERSION:		
FLUID LEVEL:		
LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1	
SURFACE EQUIPMENT	
GSR-U WITM (DTS)-A	

DOWNHOLE EQUIPMENT	
LEH-QT	32.09
LEH-QT	
DTC-H ECH-KC 8253	31.20
AH-CMEAY AH-CMEAY 765	30.29

RUN 2	



DSST-B 29.00
 SPAC-B 18
 ECH-SD 18
 SMDR-BD 8070
 SSIJ-BA 65
 SMDX-AA 8026

PWF 13.45

AH-CMEAY 13.45
 AH-CMEAY 764

DTA-A 12.16
 ECH-KE 8261
 DTA-A 8261

Detector 10.94
 NGT-C 10.56
 NGD-A 1736
 NGH-B 3
 NGC-C 1921
 NGCH-A 752

GHMT-A 8.33
 GHMC-B 701
 ECH-MBA 701
 NMTE-C 703
 SUMS-B 702
 NMRS-C 702

SUMS 4.08

NMRS 1.07

STATUS HV DF Tension 0.00

BNS-CCS 0.14
 TOOL ZERO

MAXIMUM STRING DIAMETER 4.00 IN
 MEASUREMENTS RELATIVE TO TOOL ZERO
 ALL LENGTHS IN METERS



Output DLIS Files

DEFAULT	GHMT .025	FN:22 PRODUCER	10-Apr-2000 06:57	3493.2 M	3225.1 M
GHMTDSI_CUST	GHMT .025	FN:23 PRODUCER	10-Apr-2000 06:57	3493.2 M	3225.0 M

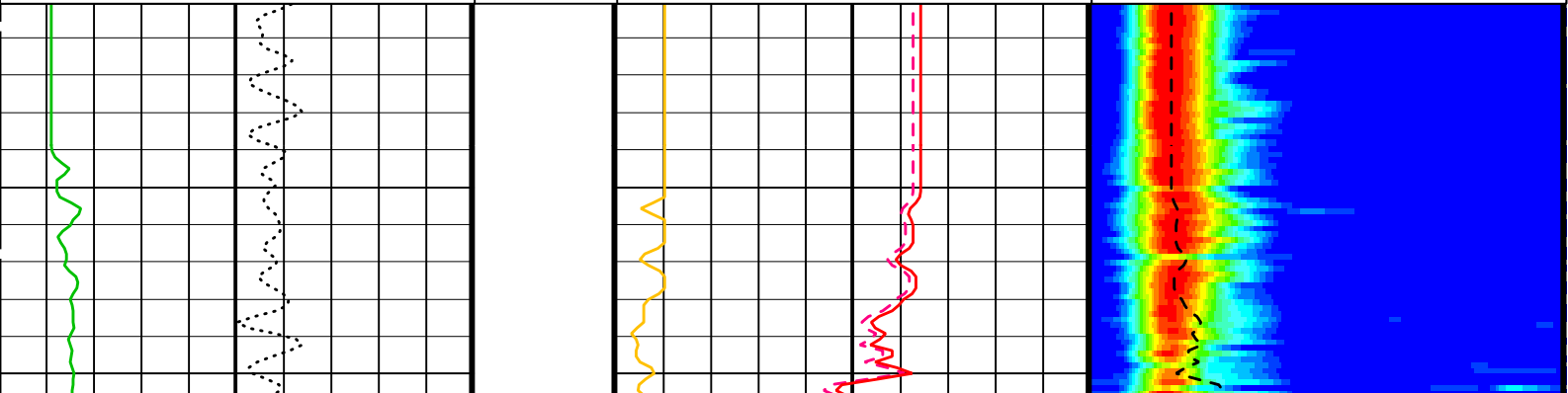
OP System Version: 9C1-303 MCM

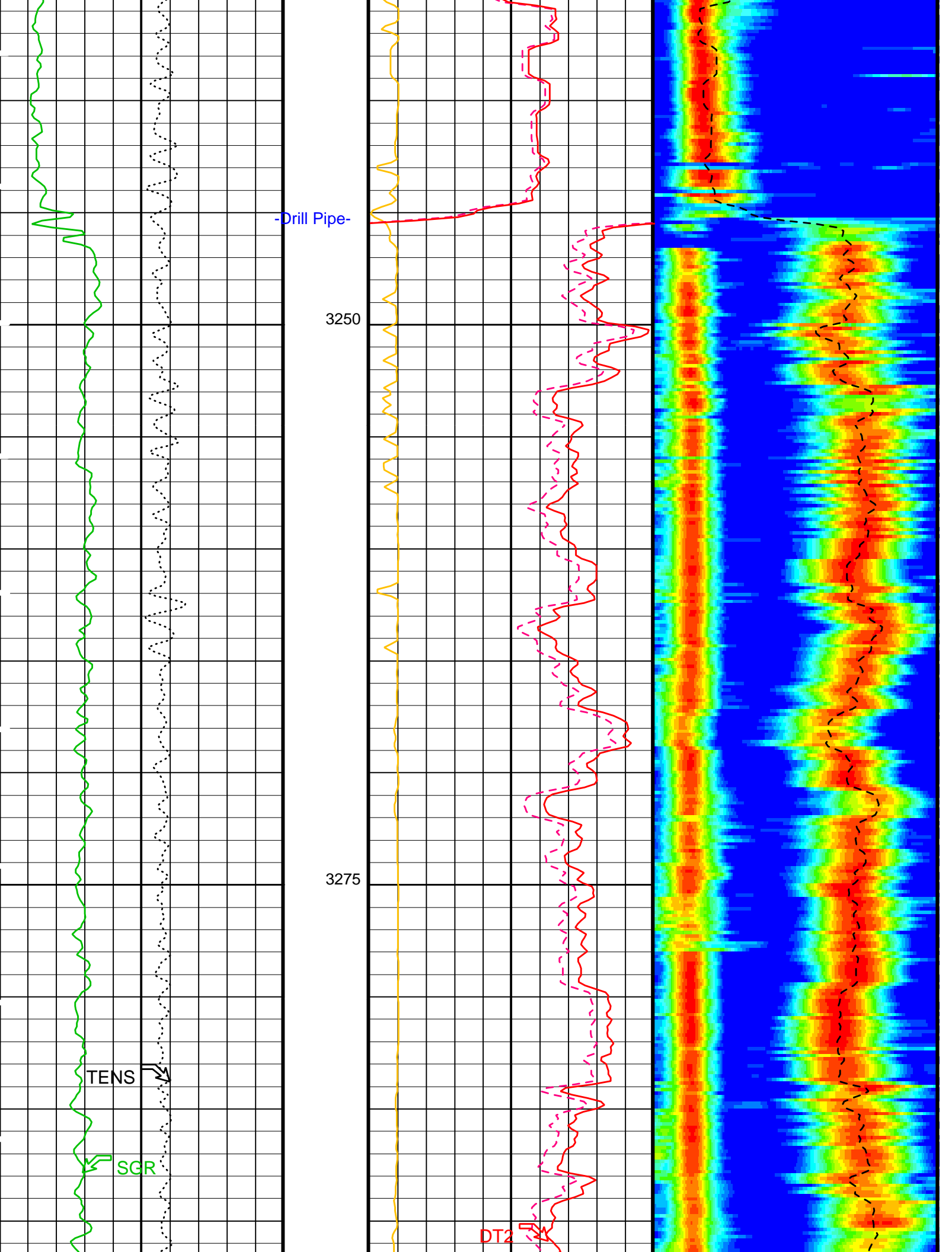
GHMT-A	9C1-303	NGT-C	9C1-303
DTA-A	9C1-303	DSST-B	9C1-303
DTC-H	9C1-303		

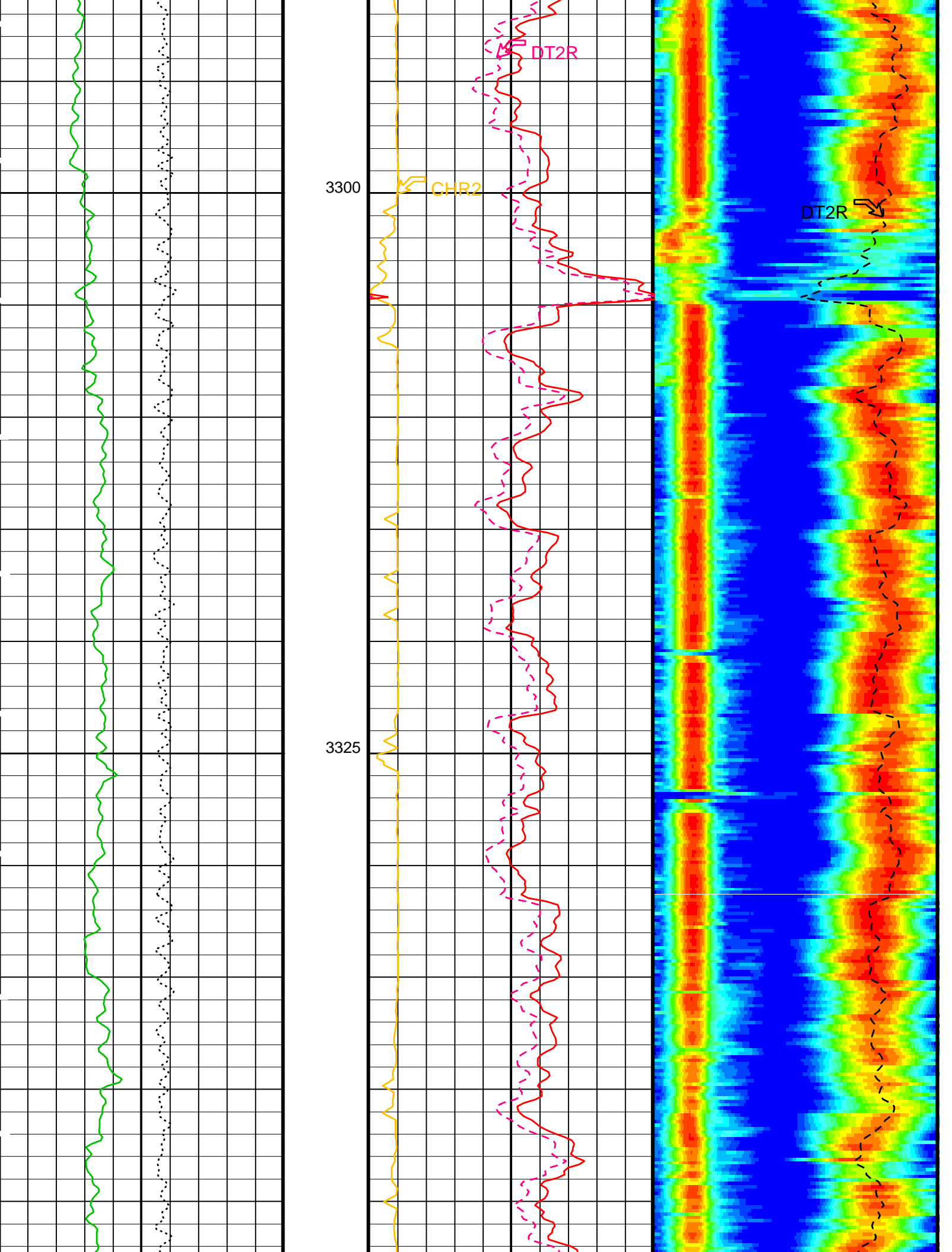
PIP SUMMARY

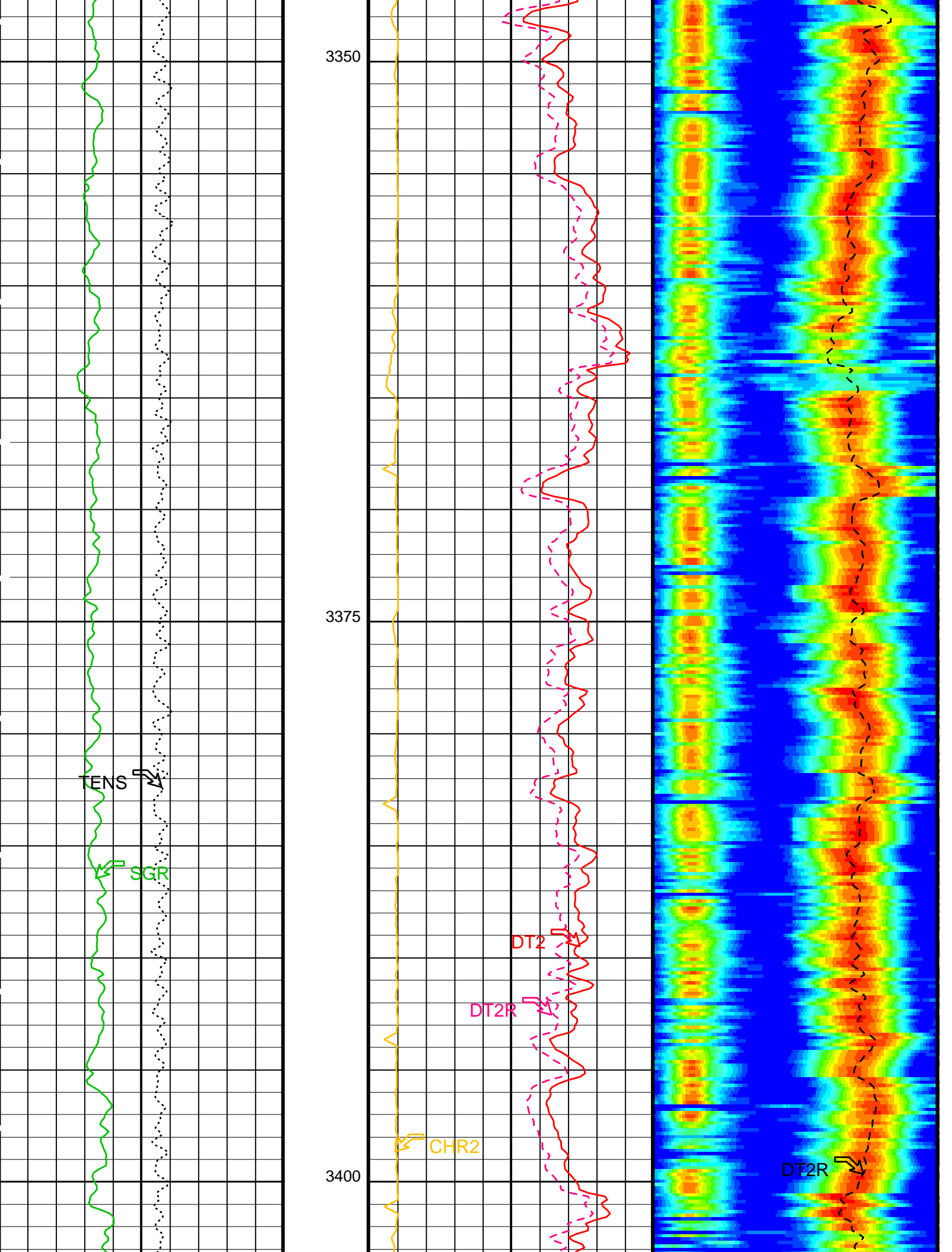
Time Mark Every 60 S

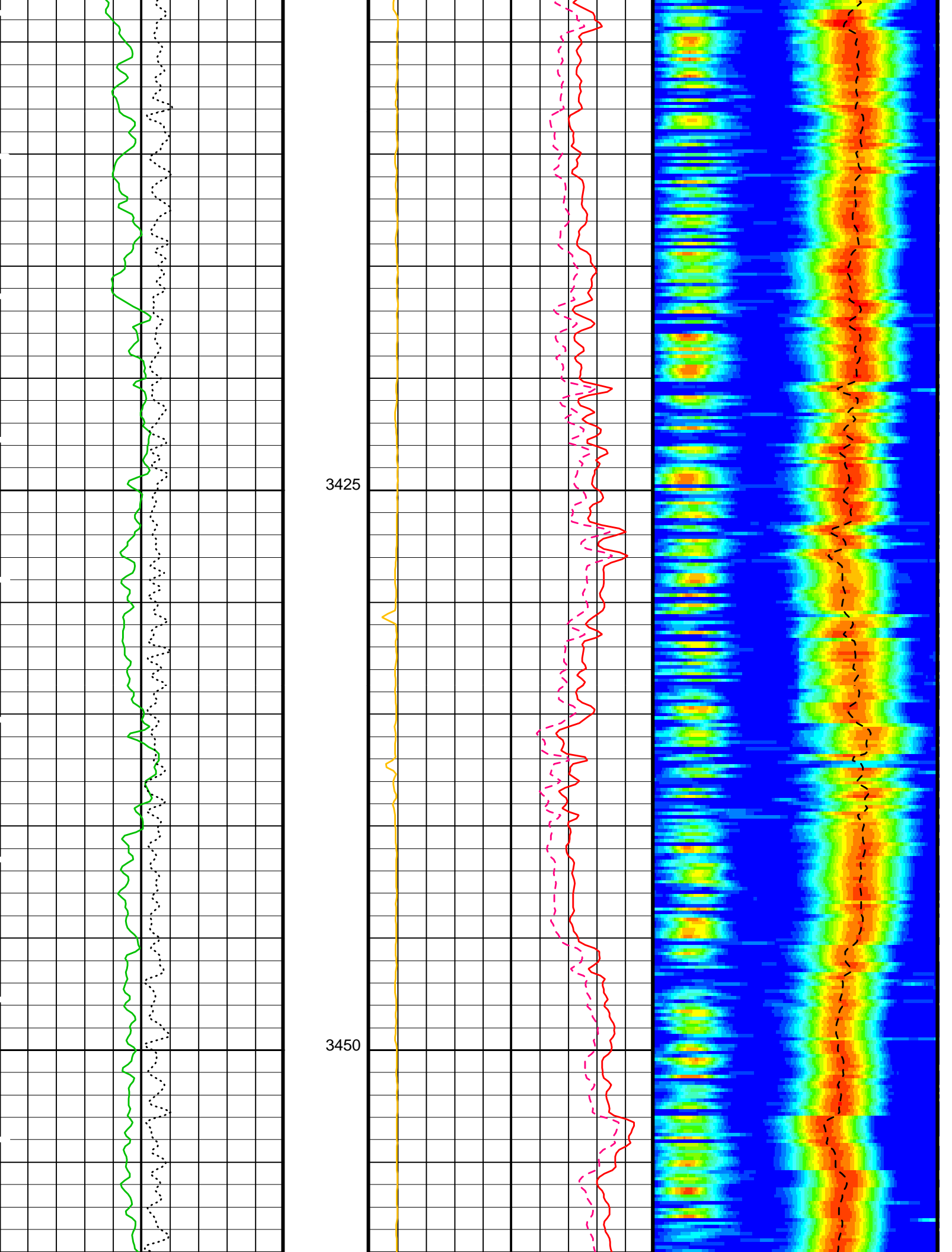
	Main Log	Delta-T Shear - Upper Dipole (DT2) 440 (US/F) 40	
Tension (TENS) (LBF)		Delta-T Shear / RA - Upper Dipole (DT2R) 440 (US/F) 40	Min Amplitude Max 75 775 Rec.Array U.Dipole Slow Proj. CVDL (SPR2) (US/F)
Spectroscopy Gamma Ray (SGR) (GAPI)		Peak Coherence / RA - Upper Dipole (CHR2) 0 (---) 10	Delta-T Shear / RA - Upper Dipole (DT2R) (US/F) 75 775

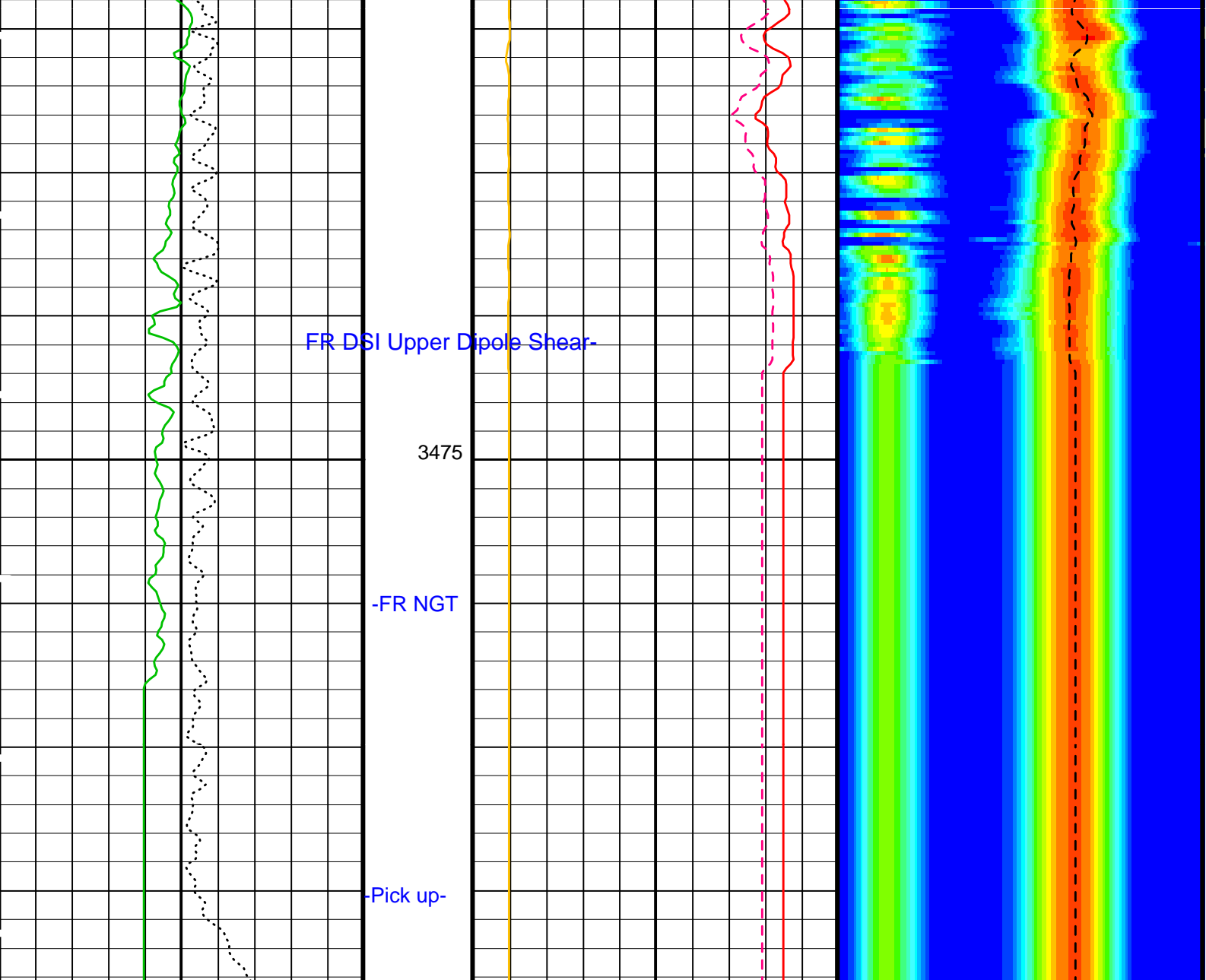












Spectroscopy Gamma Ray (SGR) (GAPI)	Peak Coherence / RA - Upper Dipole (CHR2)	Delta-T Shear / RA - Upper Dipole (DT2R)
0 150	0 10	75 775
Tension (TENS) (LBF)	Delta-T Shear / RA - Upper Dipole (DT2R)	Min Amplitude Max Rec.Array U.Dipole Slow Proj. CVDL (SPR2)
10000 0	440 40	75 775
Main Log	Delta-T Shear - Upper Dipole (DT2)	
	440 40	

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
BS	Bit Size	9.875 IN
CBAR	Constant Barite	1
CGMI	Spectro Computed Gamma Ray Minimum	0 GAPI
CGSH	Spectro Computed Gamma Ray Shale	100 GAPI
DDE2	Digitizing Delay 2	0 US
DDEX	Digitizing Delay X	0 US
DFD	Drilling Fluid Density	8.51 LB/G
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
DSIX	Digitizer Sample Interval X	40	US
DTCS	Compressional Delta-T Source for DTCS Channel	PS_COMP	
DWC2	Digitizer Word Count 2	512	
DWCX	Digitizer Word Count X	512	
KMIN	Potassium Minimum	0	
KSHA	Potassium Shale	0.02	
NFO	NGT Filtering Option	KALMAN	
PMUD	Potassium Mud	0	%
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	
SAMX	DSST Sonic Acquisition Mode X - Both Dipoles or Monopole Mode for Expert	OFF	
SAS2	STC Sonic Array Status - Upper Dipole	255	
SBO2	STC Search Band Offset - Upper Dipole	3000	US
SBW2	STC Search Bandwidth - Upper Dipole	8000	US
SFC2	STC Formation Character - Upper Dipole	SELECTABLE	
SFM2	STC Filter - Upper Dipole	B1-3K	
SGMI	Spectro Gamma Ray Minimum	0	GAPI
SGSH	Spectro Gamma Ray Shale	100	GAPI
SLL2	STC Slowness Lower Limit - Upper Dipole	75	US/F
SST2	STC Slowness Step - Upper Dipole	4	US/F
SSW2	STC Source Waveform - Upper Dipole	WF_SAM2	
SUL2	STC Slowness Upper Limit - Upper Dipole	775	US/F
SWD2	STC Slowness Width - Upper Dipole	40	US/F
TBF2	STC Time for Baseline Fill - Upper Dipole	0	US
TLL2	STC Time Lower Limit - Upper Dipole	600	US
TMIN	Thorium Minimum	0	PPM
TSHA	Thorium Shale	12	PPM
TST2	STC Time Step - Upper Dipole	200	US
TUL2	STC Time Upper Limit - Upper Dipole	15525	US
TWD2	STC Time Width - Upper Dipole	2000	US
TWI2	STC Integration Time Window - Upper Dipole	1600	US
TWSX	Transmitter Waveform Select X	0	
UMIN	Uranium Minimum	0	PPM
USHA	Uranium Shale	3	PPM
UTXG	Upper Dipole Transmitter Geometry	162	IN

Format: DSST_UPPER_DIPOLE_VDL_COLOR Vertical Scale: 1:200 Graphics File Created: 10-Apr-2000 06:57

OP System Version: 9C1-303
MCM

GHMT-A	9C1-303	NGT-C	9C1-303
DTA-A	9C1-303	DSST-B	9C1-303
DTC-H	9C1-303		

Output DLIS Files

DEFAULT	GHMT .025	FN:22	PRODUCER	10-Apr-2000 06:57
GHMTDSI_CUST	GHMT .025	FN:23	PRODUCER	10-Apr-2000 06:57

Output DLIS Files

DEFAULT	GHMT .026	FN:24	PRODUCER	10-Apr-2000 07:53	3345.2 M	3230.7 M
GHMTDSI_CUST	GHMT .026	FN:25	PRODUCER	10-Apr-2000 07:53	3345.2 M	3230.7 M

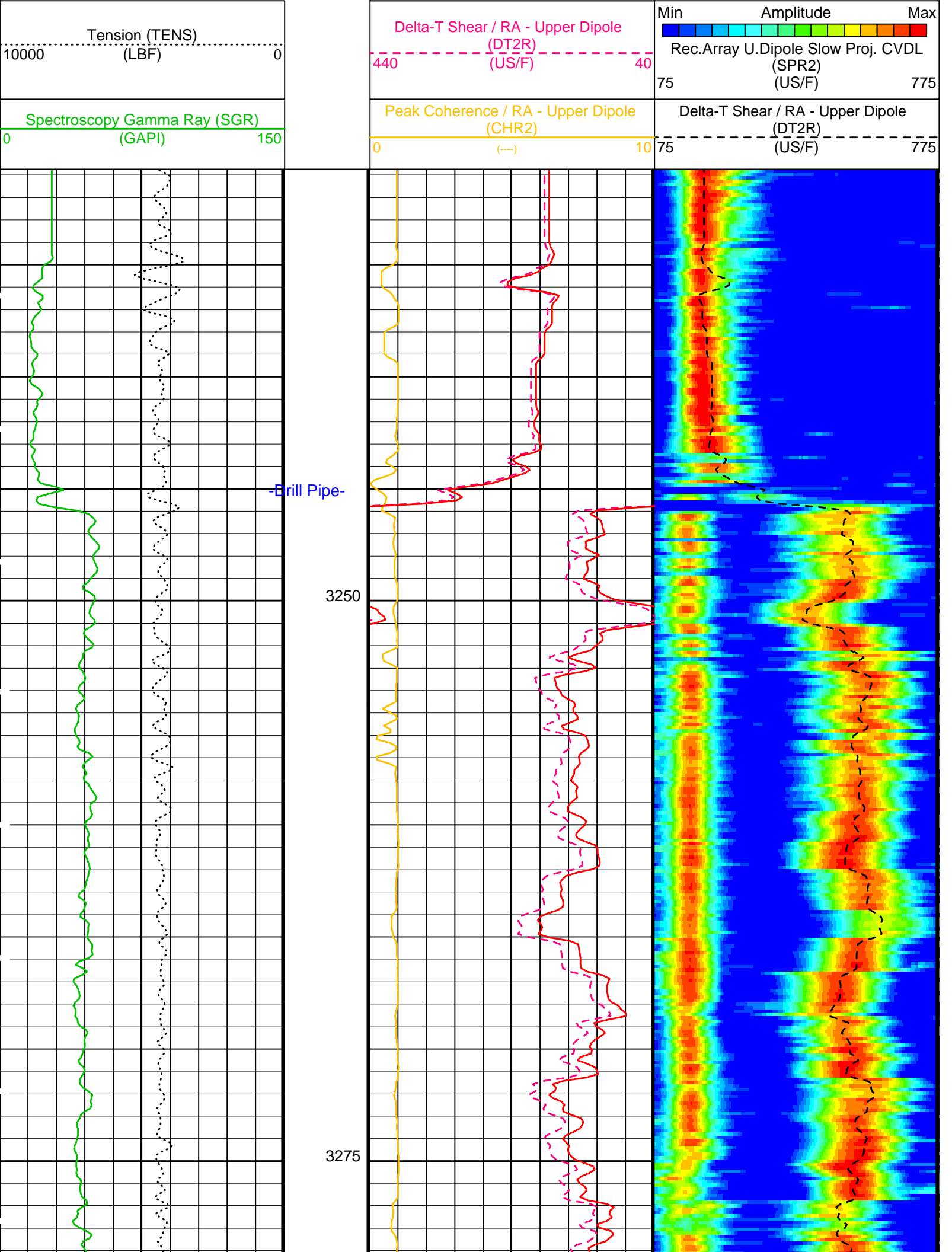
OP System Version: 9C1-303
MCM

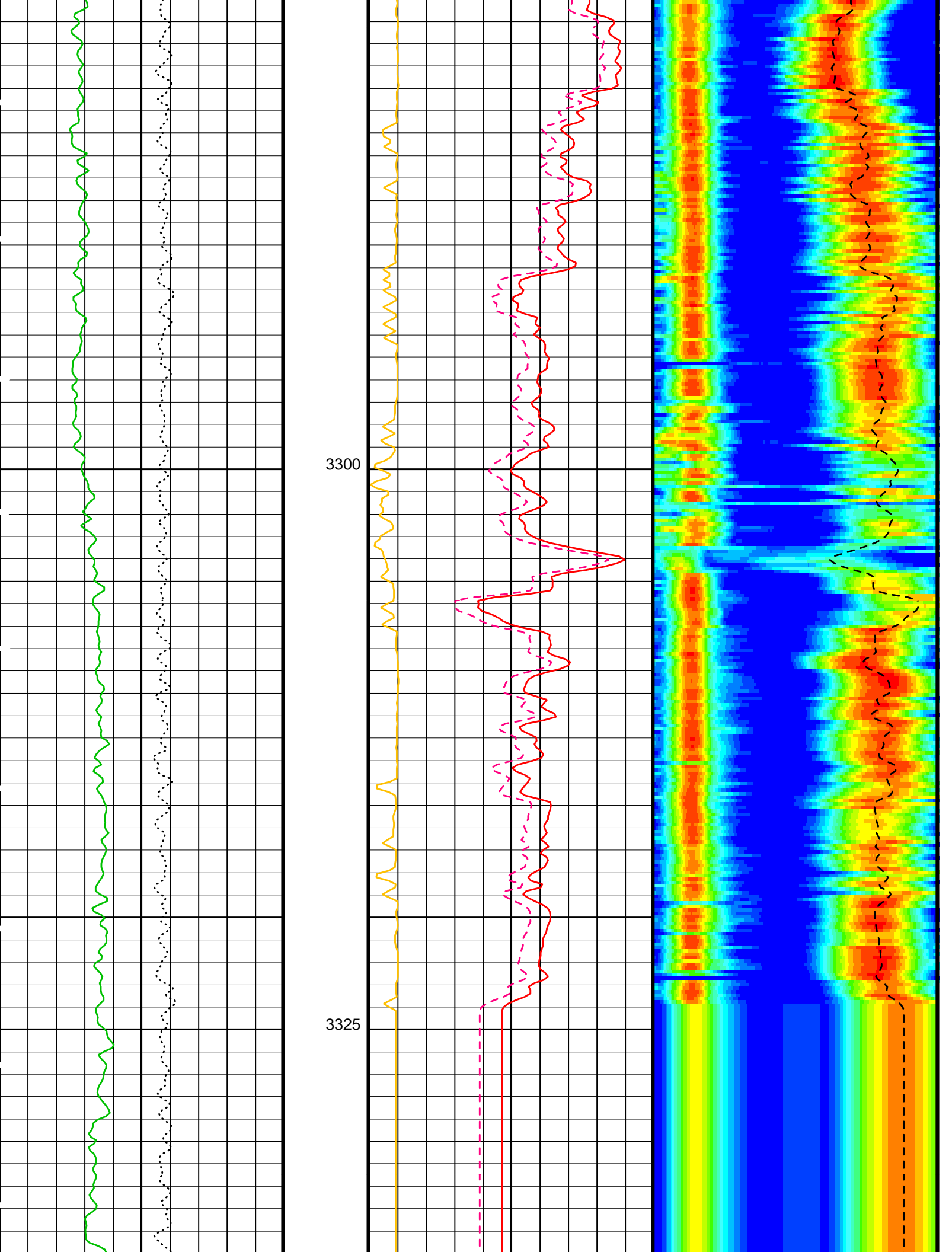
GHMT-A	9C1-303	NGT-C	9C1-303
DTA-A	9C1-303	DSST-B	9C1-303
DTC-H	9C1-303		

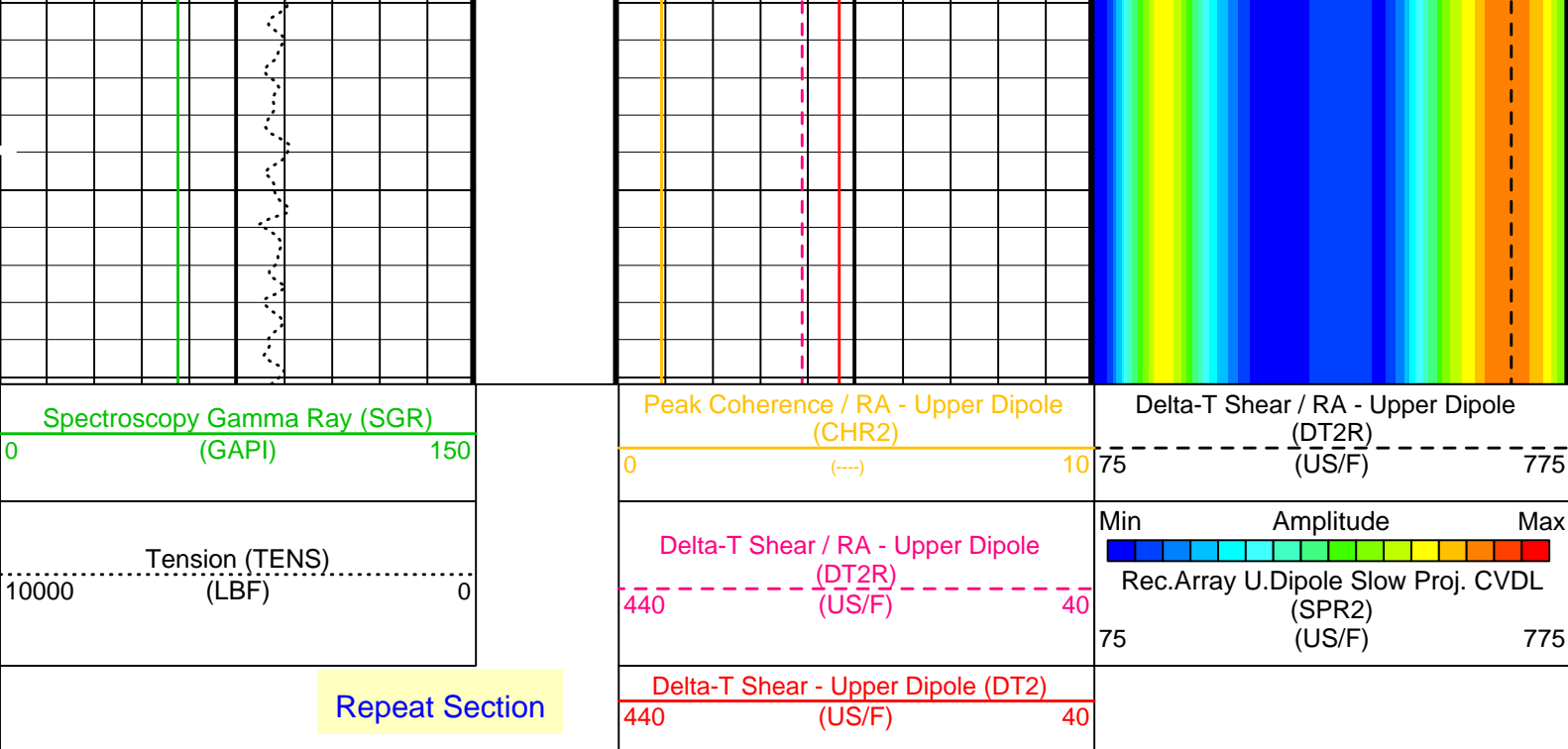
PIP SUMMARY

Time Mark Every 60 S

Repeat Section	Delta-T Shear - Upper Dipole (DT2)	
	440	(US/F) 40







Repeat Section

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
BS	Bit Size	9.875	IN
CBAR	Constant Barite	1	
CGMI	Spectro Computed Gamma Ray Minimum	0	GAPI
CGSH	Spectro Computed Gamma Ray Shale	100	GAPI
DDE2	Digitizing Delay 2	0	US
DDEX	Digitizing Delay X	0	US
DFD	Drilling Fluid Density	8.51	LB/G
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
DSIX	Digitizer Sample Interval X	40	US
DTCS	Compressional Delta-T Source for DT2R Channel	PS_COMP	
DWC2	Digitizer Word Count 2	512	
DWCX	Digitizer Word Count X	512	
KMIN	Potassium Minimum	0	
KSHA	Potassium Shale	0.02	
NFO	NGT Filtering Option	KALMAN	
PMUD	Potassium Mud	0	%
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	
SAMX	DSST Sonic Acquisition Mode X - Both Dipoles or Monopole Mode for Expert	OFF	
SAS2	STC Sonic Array Status - Upper Dipole	255	
SBO2	STC Search Band Offset - Upper Dipole	3000	US
SBW2	STC Search Bandwidth - Upper Dipole	8000	US
SFC2	STC Formation Character - Upper Dipole	SELECTABLE	
SFM2	STC Filter - Upper Dipole	B1-3K	
SGMI	Spectro Gamma Ray Minimum	0	GAPI
SGSH	Spectro Gamma Ray Shale	100	GAPI
SLL2	STC Slowness Lower Limit - Upper Dipole	75	US/F
SST2	STC Slowness Step - Upper Dipole	4	US/F
SSW2	STC Source Waveform - Upper Dipole	WF_SAM2	
SUL2	STC Slowness Upper Limit - Upper Dipole	775	US/F
SWD2	STC Slowness Width - Upper Dipole	40	US/F
TBF2	STC Time for Baseline Fill - Upper Dipole	0	US
TLL2	STC Time Lower Limit - Upper Dipole	600	US
TMIN	Thorium Minimum	0	PPM
TSHA	Thorium Shale	10	PPM

USHA	Uranium Shale	12	PPM
TST2	STC Time Step - Upper Dipole	200	US
TUL2	STC Time Upper Limit - Upper Dipole	15525	US
TWD2	STC Time Width - Upper Dipole	2000	US
TWI2	STC Integration Time Window - Upper Dipole	1600	US
TWSX	Transmitter Waveform Select X	0	
UMIN	Uranium Minimum	0	PPM
USHA	Uranium Shale	3	PPM
UTXG	Upper Dipole Transmitter Geometry	162	IN

Format: DSST_UPPER_DIPOLE_VDL_COLOR Vertical Scale: 1:200 Graphics File Created: 10-Apr-2000 07:53

OP System Version: 9C1-303
MCM

GHMT-A	9C1-303	NGT-C	9C1-303
DTA-A	9C1-303	DSST-B	9C1-303
DTC-H	9C1-303		

Output DLIS Files

DEFAULT	GHMT .026	FN:24 PRODUCER	10-Apr-2000 07:53
GHMTDSI_CUST	GHMT .026	FN:25 PRODUCER	10-Apr-2000 07:53

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Natural Gamma Spectroscopy - C Wellsite Calibration - Background Measurement							
Master: Calibration out of date	6-JAN-2000 4:01	Before: 18-MAR-2000 8:16					
WINDOW 1 Background	100.0	11.24	12.46	N/A	N/A	100.0	CPS
WINDOW 2 Background	50.00	2.775	3.522	N/A	N/A	50.00	CPS
WINDOW 3 Background	10.00	0.8498	0.9159	N/A	N/A	10.00	CPS
WINDOW 4 Background	6.000	0.3150	0.3186	N/A	N/A	6.000	CPS
WINDOW 5 Background	10.00	0.4801	0.4875	N/A	N/A	10.00	CPS
SGR Background	30.00	4.096	4.631	N/A	N/A	N/A	GAPI
Natural Gamma Spectroscopy - C Wellsite Calibration - Normalized Jig Measurement							
Master: Calibration out of date	6-JAN-2000 3:55	Before: 18-MAR-2000 8:21					
WINDOW 1 Jig	376.0	383.7	380.7	N/A	N/A	22.56	CPS
WINDOW 2 Jig	167.0	168.9	168.6	N/A	N/A	10.02	CPS
WINDOW 3 Jig	24.00	23.84	23.73	N/A	N/A	1.440	CPS
WINDOW 4 Jig	14.00	13.72	13.77	N/A	N/A	2.800	CPS
WINDOW 5 Jig	22.50	22.02	22.83	N/A	N/A	4.500	CPS
SGR Jig	160.0	160.7	160.0	N/A	N/A	7.000	GAPI
Natural Gamma Spectroscopy - C Master Calibration - Master Quality Control Values							
Master: Calibration out of date	6-JAN-2000 3:52						
Photomultiplier Res. CARC3	8.000	9.090	--	--	--	--	
APU WINDOW Jig	1350	963.1	--	--	--	--	CPS
APL WINDOW Jig	1350	962.8	--	--	--	--	CPS

The NGT PCSL Value is set to 83.674 KEV

Natural Gamma Spectroscopy - C / Equipment Identification

Primary Equipment:		
NGT Cartridge	NGC - C	1921
NGT Sonde	NGD - A	1736
Auxiliary Equipment:		
NGT Cartridge Housing	NGCH - A	752
NGT Sonde Housing	NGH - B	3
Gamma Source Radioactive	GSR - U	

Natural Gamma Spectroscopy - C Wellsite Calibration

Background Measurement

Phase	WINDOW 1 Background CPS	Value	Phase	WINDOW 2 Background CPS	Value	Phase	WINDOW 3 Background CPS	Value
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Master		11.24	Master		2.775	Master		0.8498
Before		12.46	Before		3.522	Before		0.9159
0 (Minimum) 100.0 (Nominal) 400.0 (Maximum)			0 (Minimum) 50.00 (Nominal) 200.0 (Maximum)			0 (Minimum) 10.00 (Nominal) 40.00 (Maximum)		
Phase	WINDOW 4 Background CPS	Value	Phase	WINDOW 5 Background CPS	Value	Phase	SGR Background GAPI	Value
Master		0.3150	Master		0.4801	Master		4.096
Before		0.3186	Before		0.4875	Before		4.631
0 (Minimum) 6.000 (Nominal) 24.00 (Maximum)			0 (Minimum) 10.00 (Nominal) 40.00 (Maximum)			0 (Minimum) 30.00 (Nominal) 120.0 (Maximum)		
Master: Calibration out of date 6-JAN-2000 4:01			Before: 18-MAR-2000 8:16					

Natural Gamma Spectroscopy - C Wellsite Calibration								
Normalized Jig Measurement								
Phase	WINDOW 1 Jig CPS	Value	Phase	WINDOW 2 Jig CPS	Value	Phase	WINDOW 3 Jig CPS	Value
Master		383.7	Master		168.9	Master		23.84
Before		380.7	Before		168.6	Before		23.73
354.0 (Minimum) 376.0 (Nominal) 398.0 (Maximum)			155.0 (Minimum) 167.0 (Nominal) 179.0 (Maximum)			21.50 (Minimum) 24.00 (Nominal) 26.50 (Maximum)		
Phase	WINDOW 4 Jig CPS	Value	Phase	WINDOW 5 Jig CPS	Value	Phase	SGR Jig GAPI	Value
Master		13.72	Master		22.02	Master		160.7
Before		13.77	Before		22.83	Before		160.0
12.50 (Minimum) 14.00 (Nominal) 15.50 (Maximum)			20.00 (Minimum) 22.50 (Nominal) 25.00 (Maximum)			148.0 (Minimum) 160.0 (Nominal) 172.0 (Maximum)		
Master: Calibration out of date 6-JAN-2000 3:55			Before: 18-MAR-2000 8:21					

Natural Gamma Spectroscopy - C Wellsite Calibration					
Quality Control Values					
Phase	DHVF Jig V	Value	Phase	Quality Windows Ratio Jig	Value
Master		1503	Master		2.272
Before		1516	Before		2.258
1088 (Minimum) 1450 (Nominal) 1813 (Maximum)			2.150 (Minimum) 2.240 (Nominal) 2.330 (Maximum)		
Master: Calibration out of date 6-JAN-2000 3:55			Before: 18-MAR-2000 8:21		

Natural Gamma Spectroscopy - C Wellsite Calibration		
Quality Control Values Check		
Phase	Thorium peak Form Factor Jig	Value
Before		-0.03137
-0.2000 (Minimum) 0 (Nominal) 0.2000 (Maximum)		
Before: 18-MAR-2000 8:21		

Natural Gamma Spectroscopy - C Master Calibration								
Master Quality Control Values								
Phase	Photomultiplier Res. CARC3	Value	Phase	APU WINDOW Jig CPS	Value	Phase	APL WINDOW Jig CPS	Value
Master		9.090	Master		963.1	Master		962.8
4.500 (Minimum) 8.000 (Nominal) 11.50 (Maximum)			700.0 (Minimum) 1350 (Nominal) 1600 (Maximum)			700.0 (Minimum) 1350 (Nominal) 1600 (Maximum)		
Phase	Thorium peak Form Factor Jig	Value						
Master		-0.05460						
-0.1000 (Minimum) 0 (Nominal) 0.1000 (Maximum)								
Master: Calibration out of date 6-JAN-2000 3:52								

COMPANY: Lamont Doherty

WELL: ODP Leg 189, Site 1170 (WSTR-2A)
FIELD: Tasmanian Seaway, West Tasmania Site
COUNTY: Offshore
STATE: Indian Ocean

BOTTOM LOG INTERVAL	3471 M
SCHLUMBERGER DEPTH	3497.5
DEPTH DRILLER	3496 M
KELLY BUSHING	11.2 M
DRILL FLOOR	10.9 M
GROUND LEVEL	-2716 M



Dipole Sonic Upper Dipole
Shear, Gamma Ray