

Company: Lamont-Doherty Borehole Research
Well: IODP Expedition 311 CAS-06A
Field: Cascadia Margin
Rig: JOIDES Resolution State: Pacific Ocean

Rig: JOIDES Resolution
 Field: Cascadia Margin
 Location: Vancouver Island
 Well: IODP Expedition 311 CAS-06A
 Company: Lamont-Doherty Borehole Research

sonicVISION - STC - Projection (Fluid Arrival)
1:240 Measured Depth
Recorded Mode Log

Location	
Total depth:	1579 m
Spud date:	24-Sep-2005
Runs:	1 To 1
Permanent datum:	MEAN SEA LEVEL
Log measured from:	Kelly Bushing
Depth reference:	Driller's Depth

Service Order no. NAD 27 UTM Zone 10 N Longitude Latitude
 40012416 W 126.85088 N 48.66750

Depth logged: 1279 m To 1573 m Mag decl: 18.82 deg. Other services:
 Date logged: 24-Sep-05 To 25-Sep-05 Mag dip: 69.22 deg. geoVISION, provision

Bore hole record

Hole size	from	to	Size	Density	from	to
9.875 in.	1279 m	1579 m				

Casing record

Type	Mud record from	to	Min	Max	Borehole deviation record from	to
Seawater	1279 m	1579 m				

Surface equipment

Software record

Unit	TWIS	IDEAL Wis	ID10_2C_01
Depth system	Geograph	SPM	hspm10_1c_05
		LWD	See Remarks
		MWD	9.0_C03

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 SERVICES FOR RUN 1 Real Time STC Projection Annular Pressure While Drilling	OTHER SERVICES FOR RUN	OTHER SERVICES FOR RUN
REMARKS: RUN NUMBER 1 Run Objective: Drill and log sites CAS-06A to select the coring point. Source of data: Recorded Mode Reason POOH: To change batteries before start drilling the next sites. EcoScope gamma ray is not environmentally corrected. EcoScope resistivity is borehole compensated and is environmentally corrected for bit size and mud resistivity. Barite was not present in the mud. sonicVISION Delta T is borehole compensated. Delta T data is processed and labeled based on fluid arrival.	REMARKS: RUN NUMBER	REMARKS: RUN NUMBER

Tool Record Rates:
 EcoScope Res, Density & Neutron @ 2 sec
 sonicVISION Delta T @ 10 sec

Tool Software Version:
 TeleScope: 9.0_C03 EcoScope: 11
 sonicVISION: 6.4_B10
 Crew: L. Loh and D. Buster

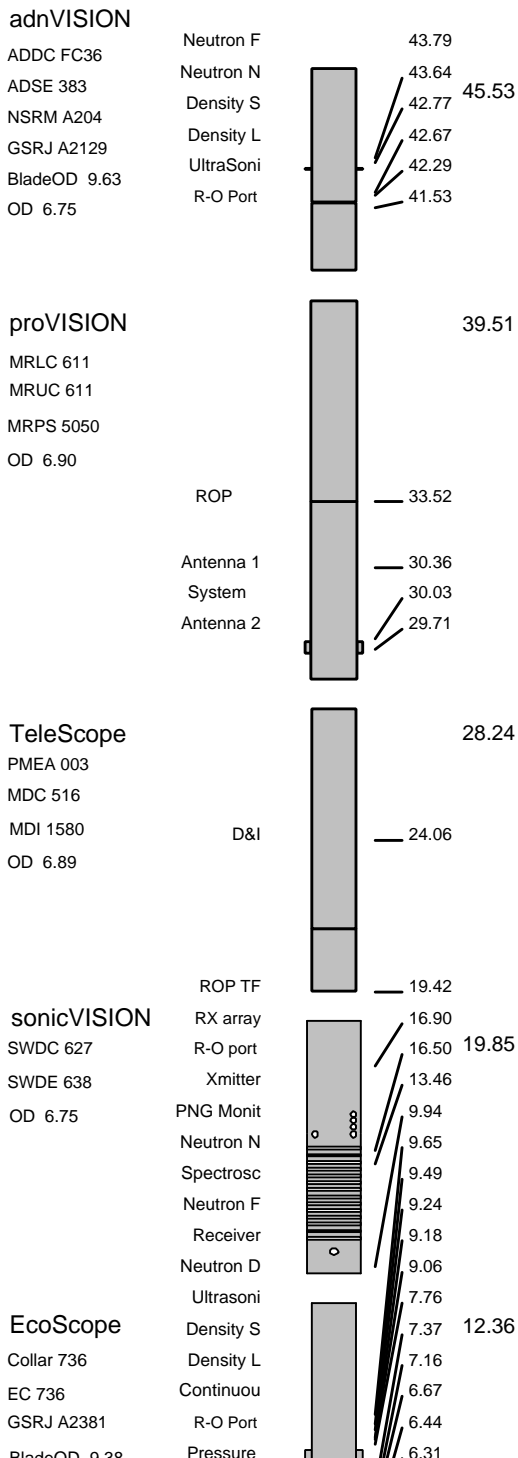
EQUIPMENT DESCRIPTION

RUN1

RUN

RUN

DOWNHOLE EQUIPMENT



Variable Name	Variable Description	Run Name & Value
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Run Number

1

General Information

BHT_RM	Bottom Hole Temperature (RM)	41.000000
BSAL_RM	Mud Salinity (RM)	0.000000
BS_RM	Bit Size (RM)	9.875000
COEF_M	User Defined FEXP in Clean Sand	1.650000
C_WS	Overpressure correction to Sw and M	1.000000
FEXP	Formation Factor Exponent(RM)	2.000000
FNUM	Formation Factor Enumerator(RM)	1.000000
FPHI_RM	Formation Factor Porosity Source (RM)	XPLOT
MST_RM	Mud Sample temperature (RM)	75.000000
MW_RM	Mud Weight (RM)	8.500000
OBMF_RM	Oil Based Mud (RM)	NO
RHOF_RM	Mud Filtrate Density (RM)	1.000000
RHOM_RM	Matrix density (RM)	2.650000
RMS_RM	Resistivity of Mud Sample (RM)	1.000000
RWA_COMP_M	Rwa computation model	BASIC
RWA_DEN_AD	Rwa Density Input ADN	RHOB
RWA_DEN_CD	Rwa Density Input CDN	RHOB
RWA_DEN_IN	Rwa Density Input	RHOB
RWA_FORM_M	Rwa computation formation model	CLASTIC
RWA_RES_IN	Rwa computation resistivity input	RT
RWS_RM	Resistivity of Connate Water (RM)	1.000000
SHT_RM	Surface Hole Temperature (RM)	15.000000
TD_RM	Total Measured Depth (RM)	5180.430176
TWS_RM	Temperature of Connate Water (RM)	75.000000
VF_ILLI	Fraction of illite in shales	0.500000
VF_KAOL	Fraction of kaolinite in shales	0.500000
VF_MONT	Fraction of montmorillonite in shales	0.000000
XPDM_RM	Cross plot density porosity multiplier	0.675000
XPNM_RM	Cross plot neutron porosity multiplier	0.325000

ISONIC

FP_SD	First Sample delay	600.00
STC_CF	Center frequency of Filter	13.00
STC_BW	Bandwidth (kHz)	3.125 kHz
STC_RWI	Receiver waveform ignored	None
PM_TOFF	Tool Time offset from surface system	0.00
DT_COH	Delta-T Coherence Cutoff Value	0.70
PPC_PF	Porosity Formula	Raymer-Hunt
PPC_PS	Sonic Porosity Source	DTRA
PPC_MDT	Matrix Delta-T	55.50
PPC_FDT	Fluid Delta-T	189.00

DVD

LWD_RM/STATION_FILE/PARAMETER	Station Time-frame file name	Station
-----	Density Parameter-----	Density
-----	Neutron Parameter-----	Neutron
-----	Interpretation Parameter-----	Interpretation
-----	Sigma Parameter-----	Sigma
A12A	ARC Air Cal Attenuation From T1 at 2 MHz	8.096470
A14A	ARC Air Cal Attenuation From T1 at 400 KHz	8.154540
A22A	ARC Air Cal Attenuation From T2 at 2 MHz	6.357980
A24A	ARC Air Cal Attenuation From T2 at 400 KHz	6.313930
A32A	ARC Air Cal Attenuation From T3 at 2 MHz	4.697780
A34A	ARC Air Cal Attenuation From T3 at 400 KHz	4.754960
A42A	ARC Air Cal Attenuation From T4 at 2 MHz	4.759350
A44A	ARC Air Cal Attenuation From T4 at 400 KHz	4.713040
A52A	ARC Air Cal Attenuation From T5 at 2 MHz	3.258230
A54A	ARC Air Cal Attenuation From T5 at 400 KHz	3.315620
ABNT	Abnormal Transmitter Indicator	No_Tx_Failed
ALPHA_DEN	Density Enhanced Vertical Resolution Processing Switch	NO
ANISO_COMP	Anisotropy Computation Option	YES
ATMP_ARC	ARC Select Temperature Channel	Annulus_Temp
AZMF	Formation DIP Azimuth	0.000000
BH_COMPUTE	Borehole Inversion Computation Option	YES
CALG	DVDM Gamma Ray Cal Gain Factor	-1.000000
CDPTH_ARC	Process Start Depth	100.000000
DEVI	Well Section Deviation	0.200000
DIELEC_COM	Dielectric Computation Option	YES
DIPF	Formation DIP Angle	0.000000
DVDMDS	DVDM Down Hole Software Version	0.000000
DYN_IMAGE	Generate Dynamic Normalized Image?	YES
EDPTH	Wizard Process Stop Depth	50000
EN_WIZARD	Enable ARC Wizard Processing	NO
ERRCT	Percentage Error Cutoff	4.500000
EVRL	EVR Process averaging number of samples (RM)	49
FWVN	Firmware Version Number	1.100000
GCSE	Generalized Caliper Selection	BS
GRBC	RM: DVDM Gamma Ray Blanket (CPS)	75.000000
GRSH	GR Shale (Invasion Computation Cutoff)	1000.000000
GR_CF	Gamma Ray Correction Factor	2.250000
HIGH_BLEND	High Resistivity Threshold for Blending	2.000000
IDQT	Image Derived Quality Threshold	1.000000
IMAGE_MAX	Image Density Caliper Right Scale	8.000000
IMAGE_MAX	Image Density Quality Right Scale	1.000000
IMAGE_MAX	Image PEF(Segment) Right Scale	6.000000
IMAGE_MAX	Image RHOB(Segment) Right Scale	2.650000
IMAGE_MIN	Image Density Caliper Left Scale	2.000000

IMAGE_MIN_ Image Density Quality Left Scale 0.000000
 IMAGE_MIN_ Image PEF(Segment) Left Scale 2.000000
 IMAGE_MIN_ Image RHOB(Segment) Left Scale 2.050000
 IMAGE_ORIE Image Orientation Options, e.g. Top of Hole or True North NORTH
 INCLIN_BO ARC Bias Constant (mg) 0.000000
 INCLIN_B1 ARC Bias First-order Coefficient (mg/degC) 0.000000
 INCLIN_B2 ARC Bias Secod-order Coeeficient (mg/degC) 0.000000
 INCLIN_B3 ARC Bias Third-order Coeeficient (mg/degC) 0.000000
 INCLIN_C0 ARC Current Scale Factor Constant (mA/g) 1.000000
 INCLIN_C1 ARC Scale First-order Coeeficient (mA/g/degC) 0.000000
 INCLIN_C2 ARC Scale Second-order Coeeficient (mA/g/degC) 0.000000
 INCLIN_C3 ARC Scale Third-order Coeeficient (mA/g/degC) 0.000000
 INVAS_COMP Invasion Computation Option YES
 JSD Acquisition start date YES
 JSD_ARC ARC Acquisition start date YES
 LOW_BLEND Low Resistivity Threshold for Blending 1.000000
 MATR Rock Matrix for Neutron Porosity Corrections SANDSTONE
 MSWS ARC Wizard Model Switch Window 5.000000
 MULTIEFFEC Multi Effect Option YES
 NEU_DCOR_O Density Correction Source for Neutron Processing Average
 NEU_FTUBE_ Far Thermal Tube Selection Both
 NTIK_SEL Neutron Tick Channel Name FAZ1
 OACF O2 Activation Correction Factor (RM) 0.000000
 P12A ARC Air Cal Phase-Shift From T1 at 2 MHz 1.143270
 P14A ARC Air Cal Phase-Shift From T1 at 400 KHz 1.838910
 P22A ARC Air Cal Phase-Shift From T2 at 2 MHz -1.152680
 P24A ARC Air Cal Phase-Shift From T2 at 400 KHz -1.826430
 P32A ARC Air Cal Phase-Shift From T3 at 2 MHz 1.064520
 P34A ARC Air Cal Phase-Shift From T3 at 400 KHz 1.835500
 P42A ARC Air Cal Phase-Shift From T4 at 2 MHz -1.202580
 P44A ARC Air Cal Phase-Shift From T4 at 400 KHz -1.845070
 P52A ARC Air Cal Phase-Shift From T5 at 2 MHz 1.092880
 P54A ARC Air Cal Phase-Shift From T5 at 400 KHz 1.844270
 PMUD Potassium Concentration in Mud 0.000000
 POFFSET Pressure Offset 0.000000
 PRTD Preferred Resistivity Log for Rt Display while Multi-Effects P34B
 PSOF_ADJ_T ARC: User Input Phase offset 0.000000
 RESTIK ARC resistivity tick source Phase
 SDPTH Wizard Process Start Depth 100
 SIG_PCOR_O Porosity Correction Source for Sigma Processing Best
 SPEC_CSG_D Casing Depth for Spectroscopy Processing 100.000000
 SPL_CLAY_M SpectroLith Clay Model ARENITE
 SPL_COAL_O SpectroLith Coal Processing Option NONE
 SPL_SULFUR SpectroLith Sulfur Mineral Option ANHYDRITE
 STAB_SIZE Stabilizer Size 9.375000
 STOHI Density Top of Hole Sector (Left Boundary) SECTOR_0
 TRNO Tool Run Number 5180.430176
 TSIZ_ARC ARC Tool Size 6.900000
 TSNO Tool Serial Number 6.900000
 UNIFORM_CO Uniform Rock Option YES
 VERS_ARC ARC Down hole software version Number 1.100000
 WRK Way to Report Potassium Concentration K_by_Wgt_%
 WSDI Window Size of Dynamic Normalization Image 50.000000

IDEAL Version: ID10_2B_08
IDF

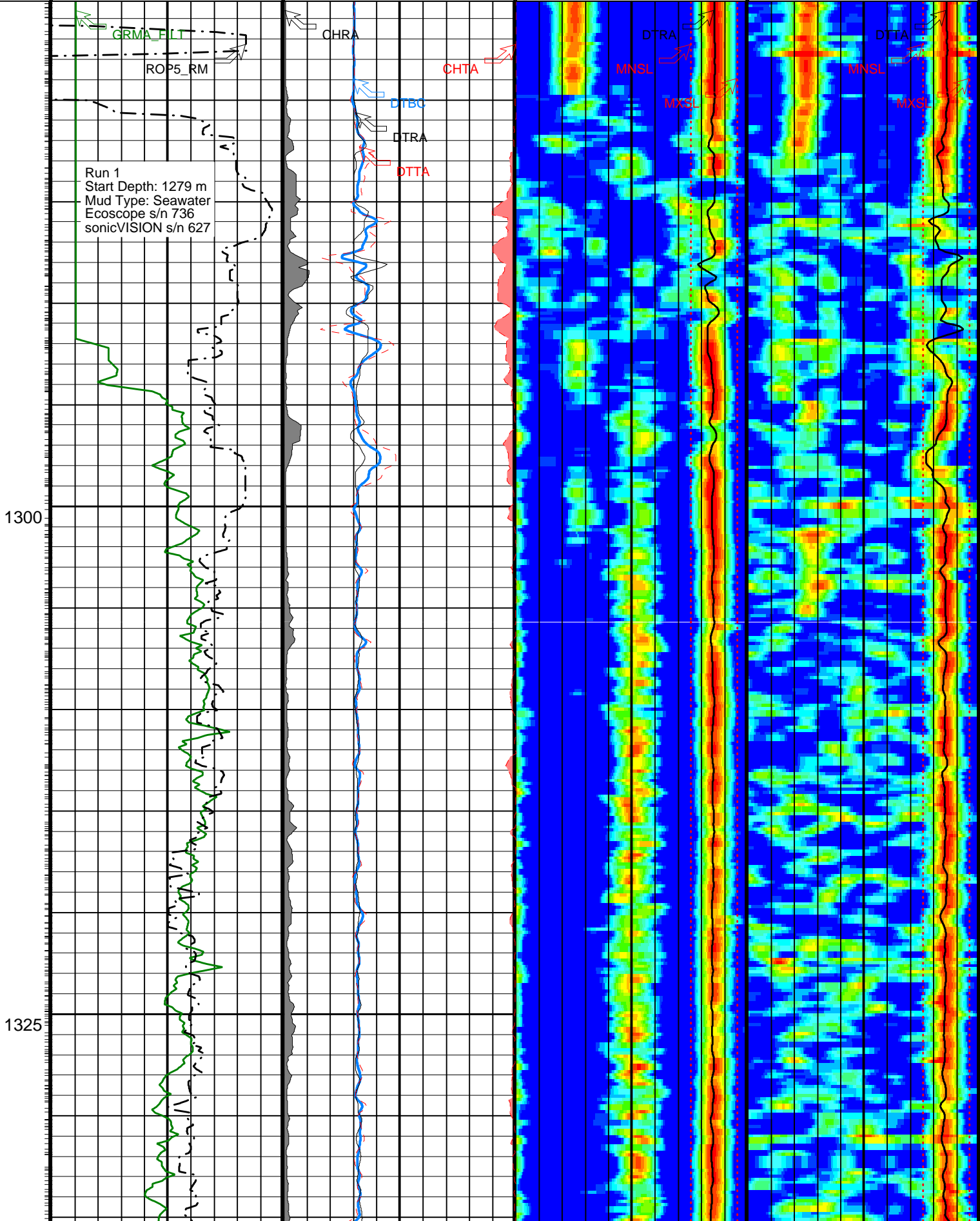
Format: 5 MD ISONIC RECV/TRSM Vertical Scale: 1:240 Graphics File Created: 05-Oct-2005 14:42

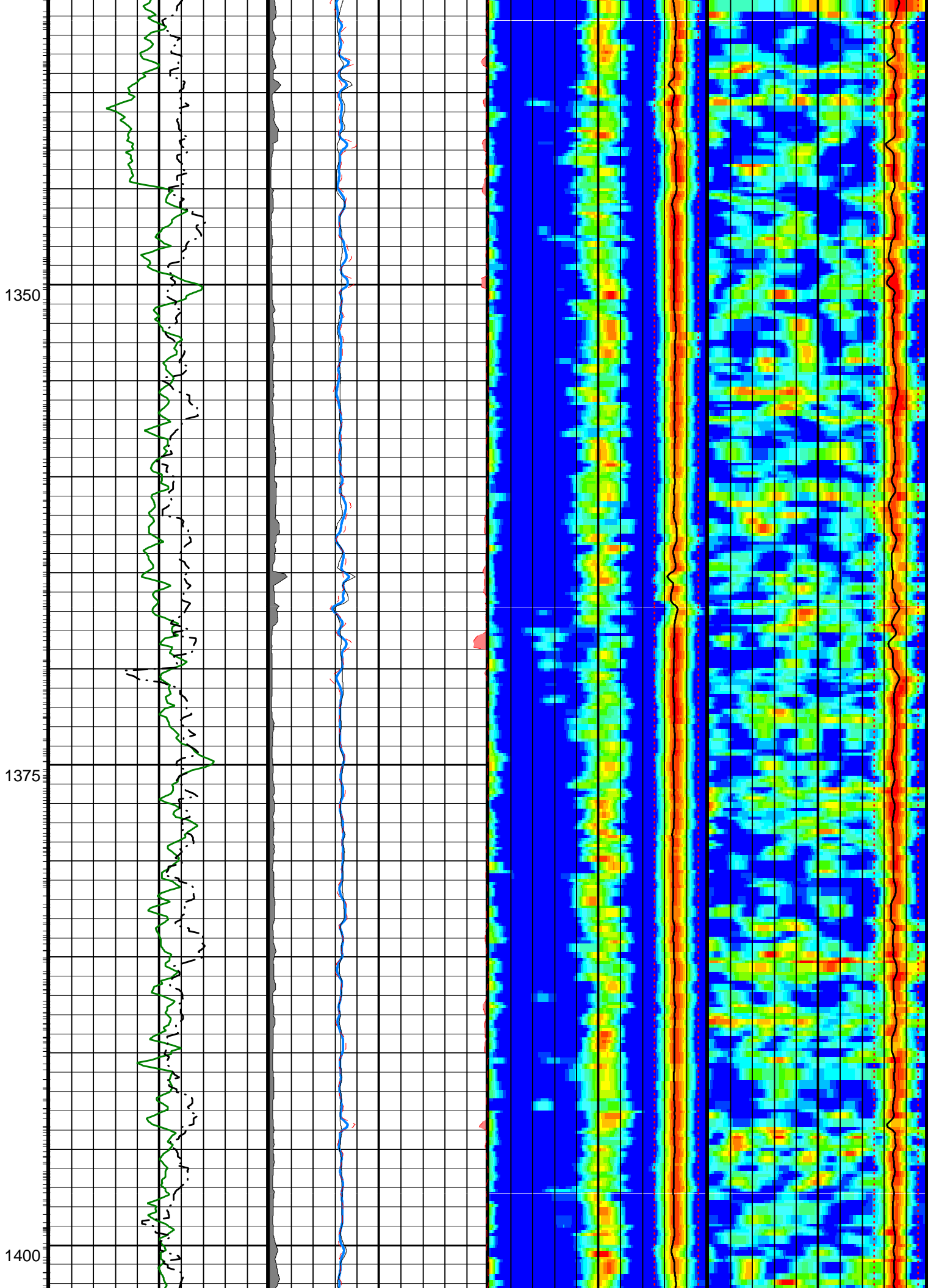
PIP SUMMARY

- └ ISONIC Integrated Transit Time Every 1 MS
- └ ISONIC Integrated Transit Time Every 10 MS
- └ ISONIC Samples

	Delta-T Compressional Borehole Compensated (Depth Derived) (DTBC)		
	240 (US/F) 140		
	Delta-T Compressional from Transmitter Array (DTTA)	Min Amplitude Max 0 RCVR Projection 1	Min Amplitude Max 0 TRSM Projection 1
	240 (US/F) 140	40 (US/F) 240	40 (US/F) 240
	Delta-T Compressional from Receiver Array (DTRA)	Maximum Labeling Slowness, Compressional (MXSL)	Maximum Labeling Slowness, Compressional (MXSL)
	240 (US/F) 140	40 (US/F) 240	40 (US/F) 240
Gamma Ray, Calibrated and Filtered, Average (GRMA_	Coherence at Compressional Peak for the Transmitter Array	Minimum Labeling Slowness, Compressional (MNSL)	Minimum Labeling Slowness, Compressional (MNSL)

0	FILI (GAPI)	150	-4	(CHTA) (---)	1	40	(US/F)	240	40	(US/F)	240
Rate of Penetration, Averaged over Last 5ft (ROP5_RM)			Coherence at Compressional Peak for the Receiver Array (CHRA)			Delta-T Compressional from Receiver Array (DTRA)			Delta-T Compressional from Transmitter Array (DTTA)		
100	(M/HR)	0	1	(---)	-4	40	(US/F)	240	40	(US/F)	240





1425

GRMA_FIT
ROP5_RM

GHRA

CHTA

DTBC

DTRA

DITTA

DTRA

MNSL

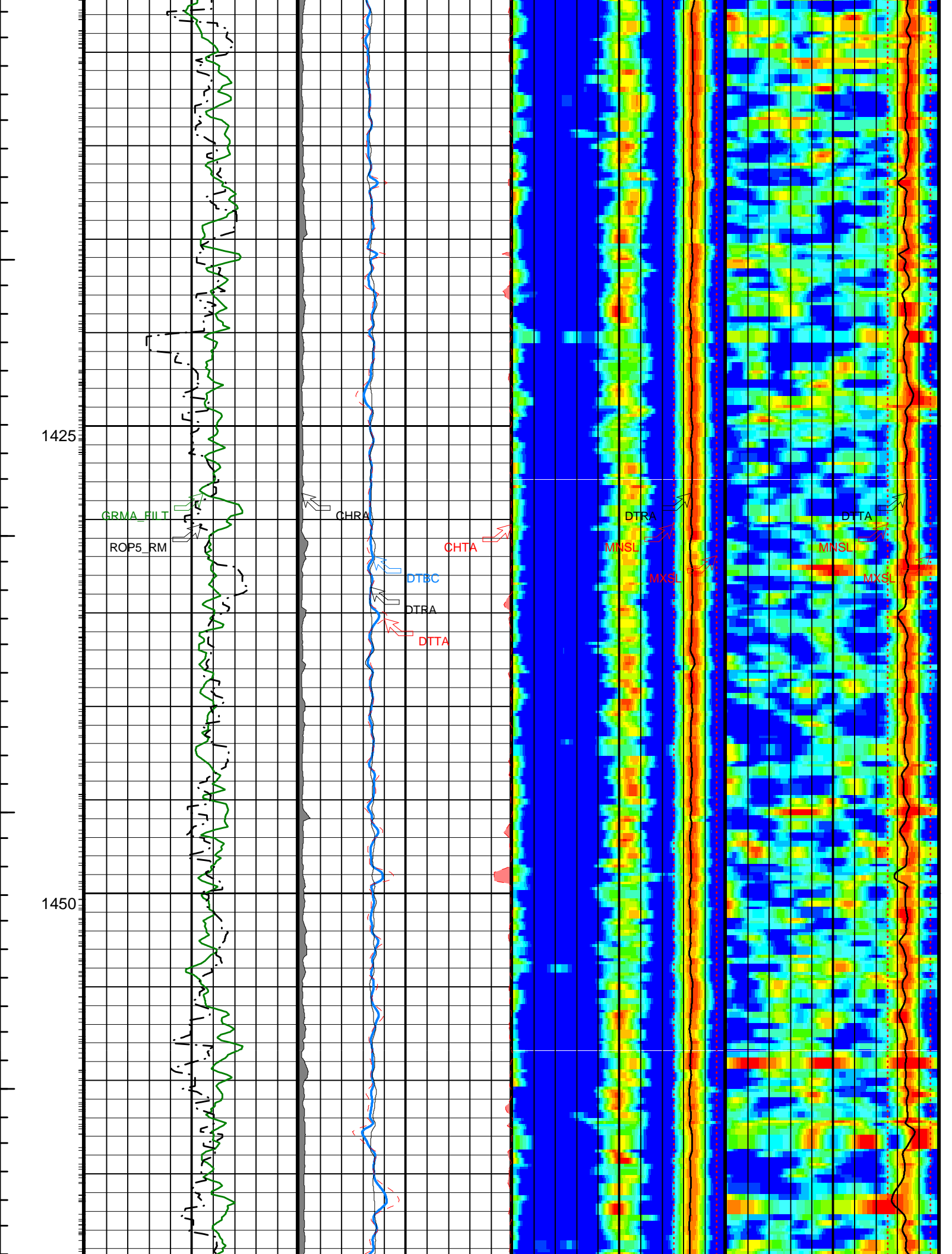
MXSL

DTTA

MNSL

MXSL

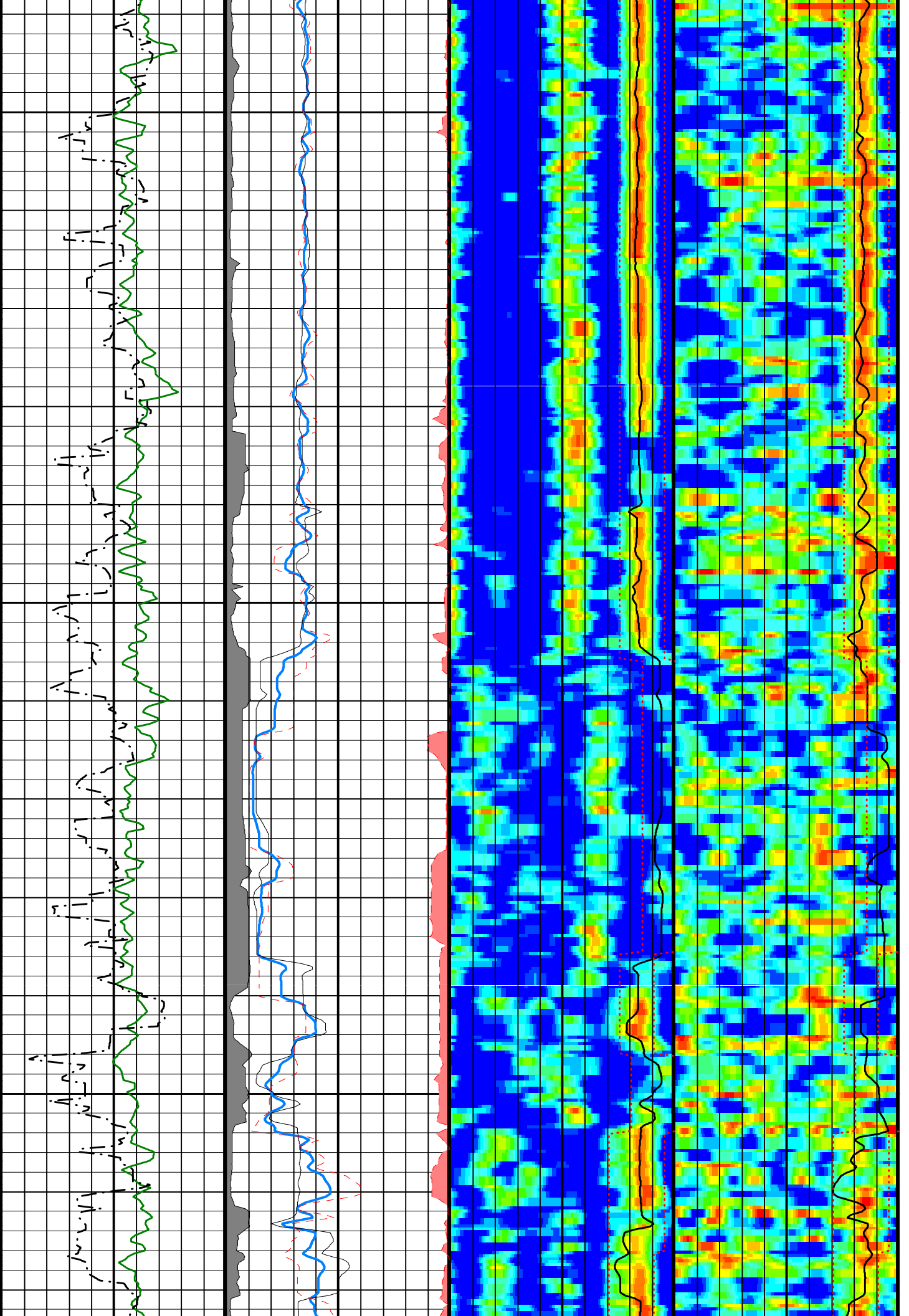
1450

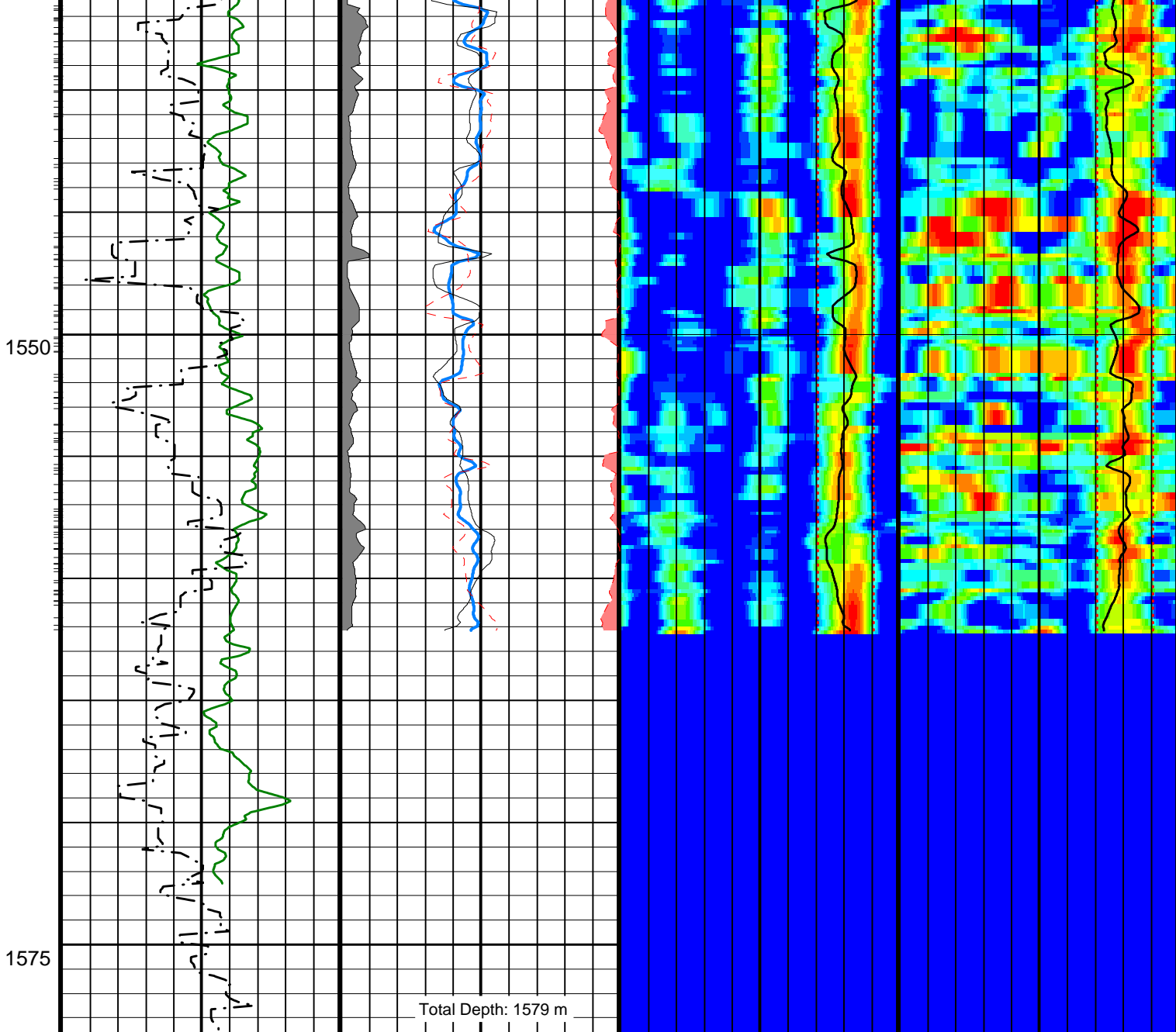


1475

1500

1525





Total Depth: 1579 m

Rate of Penetration, Averaged over Last 5ft (ROP5_RM) 100 (M/HR) 0	Coherence at Compressional Peak for the Receiver Array (CHRA) 1 (----) -4	Delta-T Compressional from Receiver Array (DTRA) 40 (US/F) 240	Delta-T Compressional from Transmitter Array (DTTA) 40 (US/F) 240
Gamma Ray, Calibrated and Filtered, Average (GRMA_FILT) 0 (GAPI) 150	Coherence at Compressional Peak for the Transmitter Array (CHTA) -4 (----) 1	Minimum Labeling Slowness, Compressional (MNSL) 40 (US/F) 240	Minimum Labeling Slowness, Compressional (MNSL) 40 (US/F) 240
	Delta-T Compressional from Receiver Array (DTRA) 240 (US/F) 140	Maximum Labeling Slowness, Compressional (MXSL) 40 (US/F) 240	Maximum Labeling Slowness, Compressional (MXSL) 40 (US/F) 240
	Delta-T Compressional from Transmitter Array (DTTA) 240 (US/F) 140	Min Amplitude Max 0 RCVR Projection 1 (US/F) (US/F)	Min Amplitude Max 0 TRSM Projection 1 (US/F) (US/F)
	Delta-T Compressional Borehole Compensated (Depth Derived) (DTBC) 240 (US/F) 140		

PIP SUMMARY

IDEAL Version: ID10_2B_08
 IDF

EcoScope Integrated Logging-While-Drilling Tool - 6.75 inch / Equipment Identification

Primary Equipment:	ECO - 675	736
Tool Name and Serial Number	ADDC - AA	
Calibration Status	ADSE - EA	
Collar Type and Serial Number	ADCS - CA	
Chassis Type and Serial Number	NSR - M	
Stabilizer Type and Serial Number	GSR - J/Z	
Neutron Logging Source	9.38 - in.	
Density Logging Source		
Stabilizer Size		

Master: 22-Jul-2005 12:37

EcoScope Integrated Logging-While-Drilling Tool - 6.75 inch Calibration

SSn LSn : Water Tank

Phase	SSn Gain	Value	Phase	SSn Offset	Value
Master		1.000	Master		0
	0.6000 (Minimum)			-3.000 (Minimum)	
	1.000 (Nominal)			0 (Nominal)	
	1.400 (Maximum)			3.000 (Maximum)	
Phase	LSn Gain	Value	Phase	LSn Offset	Value
Master		1.000	Master		0
	0.6000 (Minimum)			-3.000 (Minimum)	
	1.000 (Nominal)			0 (Nominal)	
	1.400 (Maximum)			3.000 (Maximum)	

Master: 22-Jul-2005 12:37

EcoScope Integrated Logging-While-Drilling Tool - 6.75 inch Calibration

Neutron: Water Tank

Phase	Far 2 Gain	Value	Phase	Far 2 Offset	Value
Master		1.056	Master		-0.7620
	0.7000 (Minimum)			-3.000 (Minimum)	
	1.000 (Nominal)			0 (Nominal)	
	1.300 (Maximum)			3.000 (Maximum)	
Phase	Far 1 Gain	Value	Phase	Far 1 Offset	Value
Master		1.055	Master		-0.4690
	0.7000 (Minimum)			-3.000 (Minimum)	
	1.000 (Nominal)			0 (Nominal)	
	1.300 (Maximum)			3.000 (Maximum)	
Phase	Thermal Near gain	Value	Phase	Thermal Near offset	Value
Master		1.155	Master		-137.6
	0.7000 (Minimum)			-500.0 (Minimum)	
	1.000 (Nominal)			0 (Nominal)	
	1.300 (Maximum)			500.0 (Maximum)	
Phase	Epithermal Near gain	Value	Phase	Epithermal Near offset	Value
Master		1.221	Master		-13.57
	0.7000 (Minimum)			-300.0 (Minimum)	
	1.000 (Nominal)			0 (Nominal)	
	1.300 (Maximum)			300.0 (Maximum)	

Master: Calibration out of date 11-Apr-2005 19:14

EcoScope Integrated Logging-While-Drilling Tool - 6.75 inch Calibration

Gamma Density: Magnesium Block

Phase	LS window 3 - Mg CPS	Value	Phase	SS window 1 - Mg CPS	Value	Phase	SS window 3 - Mg CPS	Value
Master		2041	Master		5077	Master		11910
	1000 (Minimum)			2500 (Minimum)			6000 (Minimum)	
	2000 (Nominal)			5250 (Nominal)			12000 (Nominal)	
	3000 (Maximum)			8000 (Maximum)			18000 (Maximum)	

Master: Calibration out of date 11-Apr-2005 19:14

EcoScope Integrated Logging-While-Drilling Tool - 6.75 inch Calibration

Gamma Density: Aluminum Block

Phase	LS window 3 - Al CPS	Value	Phase	SS window 1 - Al CPS	Value	Phase	SS window 3 - Al CPS	Value
Master		372.3	Master		2692	Master		8750
	200.0 (Minimum)			1500 (Minimum)			4000 (Minimum)	
	400.0 (Nominal)			3000 (Nominal)			8500 (Nominal)	
	600.0 (Maximum)			4500 (Maximum)			13000 (Maximum)	

Master: Calibration date not found

EcoScope Integrated Logging-While-Drilling Tool - 6.75 inch Calibration

Gamma Density: Background

Phase	LS window 3 - Background	CPS	Value	Phase	SS window 1 - Background	CPS	Value	Phase	SS window 3 - Background	CPS	Value
Master			57.82	Master			85.68	Master			413.0
	50.00 (Minimum)	70.00 (Nominal)	90.00 (Maximum)		50.00 (Minimum)	75.00 (Nominal)	100.0 (Maximum)		270.0 (Minimum)	370.0 (Nominal)	470.0 (Maximum)

Master: Calibration date not found

EcoScope Integrated Logging-While-Drilling Tool - 6.75 inch Calibration

Gamma Density: Water Block Check

Phase	Long spacing water density	G/C3	Value	Phase	Short spacing water density	G/C3	Value
Master			1.047	Master			1.262
	0.9000 (Minimum)	1.150 (Nominal)	1.400 (Maximum)		0.9000 (Minimum)	1.150 (Nominal)	1.400 (Maximum)

Master: Calibration date not found

EcoScope Integrated Logging-While-Drilling Tool - 6.75 inch Calibration

Resistivity: Air

Phase	Phase-Shift T1	Value	Phase	Phase-Shift T2	Value	Phase	Phase-Shift T3	Value		
Master		1.143	Master		-1.153	Master		1.065		
	-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)		-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)			
Phase	Phase-Shift T4	Value	Phase	Phase-Shift T5	Value	Phase	Phase-Shift T1 at 400KHz	Value		
Master		-1.203	Master		1.093	Master		1.839		
	-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)		-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)			
Phase	Phase-Shift T2 at 400KHz	Value	Phase	Phase-Shift T3 at 400KHz	Value	Phase	Phase-Shift T4 at 400KHz	Value		
Master		-1.826	Master		1.836	Master		-1.845		
	-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)		-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)			
Phase	Phase-Shift T5 at 400KHz	Value						Phase	Phase-Shift T4 at 400KHz	Value
Master		1.844						Master		-1.845
	-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)							

Master: Calibration date not found

EcoScope Integrated Logging-While-Drilling Tool - 6.75 inch Calibration

Resistivity: Air

Phase	Attenuation T1	Value	Phase	Attenuation T2	Value	Phase	Attenuation T3	Value		
Master		8.096	Master		6.358	Master		4.698		
	7.000 (Minimum)	9.000 (Nominal)	11.00 (Maximum)		4.000 (Minimum)	6.000 (Nominal)	8.000 (Maximum)			
Phase	Attenuation T4	Value	Phase	Attenuation T5	Value	Phase	Attenuation T1 at 400KHz	Value		
Master		4.759	Master		3.258	Master		8.155		
	2.500 (Minimum)	4.500 (Nominal)	6.500 (Maximum)		2.000 (Minimum)	4.000 (Nominal)	6.000 (Maximum)			
Phase	Attenuation T2 at 400KHz	Value	Phase	Attenuation T3 at 400KHz	Value	Phase	Attenuation T4 at 400KHz	Value		
Master		6.314	Master		4.755	Master		4.713		
	4.000 (Minimum)	6.000 (Nominal)	8.000 (Maximum)		3.500 (Minimum)	5.500 (Nominal)	7.500 (Maximum)			
Phase	Attenuation T5 at 400KHz	Value						Phase	Attenuation T4 at 400KHz	Value
Master		3.316						Master		4.713
	2.000 (Minimum)	4.000 (Nominal)	6.000 (Maximum)							

Master: Calibration date not found

EcoScope Integrated Logging-While-Drilling Tool - 6.75 inch Calibration

Gamma Ray: Blanket

Phase	Gamma ray factor	Value	
Master		2.250	
	2.000 (Minimum)	2.500 (Nominal)	3.000 (Maximum)

Well: IODP Expedition 311 CAS-06A
 Field: Cascadia Margin
 Rig: JOIDES Resolution
 State: Pacific Ocean

sonicVISION - STC - Projection (Fluid Arrival)
 1:240 Measured Depth
 Recorded Mode Log

Geomarket	NGC	Location	Vancouver Island
Job Date	24-SEP-2005	Customer	Lamont-Doherty Borehole Research
Rig	JOIDES Resolution	Field/Well	Cascadia Margin/CAS-06A
Engineer	Lake Loh	Job Number	40012416

Type of

Res GR

Operation

Presentation

Description of Well - Names, Geometry, Services, Location and References; General Content Header, user of trademarks, directional data, well plot, order of components, spelling and style, units sensor to toolface angle recorded

Equipment and Software Description

Tool sketch, equipment numbers, software versions, data rates, filtering weights

Processing Traceability and Environment Description

Acquisition environment, parameters and key constants for each run or zone, complete and relevant remarks

Annotations, Presented Formats, QC Curves, Print Quality

Documented splice points; data gap explanations; mud changes, movement indicator, color selection

Calibration and Verifications

Calibration / Before survey verification / After survey verification

Validity, completeness (includes equipment number), timeliness, unedited, discrepancy explained

Operating Procedures

Depth Control
 Comparison with driller's depth, other logs, other bit runs, between RT and RM, Depth summary listing

Logging speed and sampling rates

As recommended in reference manual or job planner. No loss of data or spatial resolution

Data Comparison

Between runs and passes, with data from nearby wells, other conveyance, mud log and markers

Operating Anomalies/Failure/Missing Data/Sensor Orientation/Transmission Losses

Absence of noise and spurious variations, anomaly repeated, corrected, reported or explained.

Digital Delivery

Digital Products

Labeled, verification listing with complete digital record, backup for archival; record matches hard copy.

Job Quality Rating (JQR)
 Number of boxes without number X 10

Environmental effects

Irregular Operation	1	1
Excessive ROP or speed, high deviation, shocks, vibrations, sticking conditions		
Borehole Geometry	2	
Shape (caves, etc), rugosity, spiralled hole, mud induced fractures. Casing, tubing conditions		
Borehole Fluid		
Barite, KCl, salinity, additives, gas cut, unstable		
Interferences		
External noise, nearby casing or drillpipe, debris, unusual formation composition		
Operation Outside Tool Specifications		
Geomarkertemperature, pressure, hole size, hole deviation, dog-leg severity, flow rate, rpm, solids value of parameter		
Environmental Quality Rating (EQR) Number of boxes without number X 20	60	90

Data Quality Report

When data does not meet standards, put a number in the column corresponding to the measurement with a corresponding number and remark below. Use additional pages for remarks
Positive remarks are welcome, do not append them with a number.

Remarks

1. Correcting the resistivity data by assuming mud resistivity as 1 ohmm @ 75 degF.
2. Depth is not compensated for heave. The heave cause the spikes of ROP and this eventually cause the low data density and distortion on the image. The heave also cause the curves (gamma ray, resistivity, and Delta T) do not correlate to each other very well and cause the resistivity curves blocky.

DQR Header Utility ver 1.1c

Schlumberger Drilling & Measurements

Revised January 2002

Geonmarkel	NGC	Location	Vancouver Island
Job Date	24-SEP-2005	Customer	Lamont-Doherty Borehole Research
Rig	JOIDES Resolution	FieldWell	Cascadia Margin/CAS-06A
Engineer	Lake Loh	Job Number	40012416

Res	GR
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Operation

Presentation
Description of Well - Names, Geometry, Services, Location and References, General Content Header, user of trademarks, directional data, well plot, order of components, spelling and style, units sensor to toolface angle recorded
Equipment and Software Description
Tool sketch, equipment numbers, software versions, data rates, filtering weights
Processing Traceability and Environment Description
Acquisition environment, parameters and key constants for each run or zone, complete and relevant remarks
Annotations, Presented Formats, QC Curves, Print Quality
Documented splice points: data gap explanations, mud changes, movement indicator, color selection

Calibration and Verifications

Calibration / Before survey verification / After survey verification
Validity, completeness (includes equipment number), timeliness, unedited, discrepancy explained

Operating Procedures

Depth Control
Comparison with driller's depth, other logs, other bit runs, between RT and RM, Depth summary listing
Logging speed and sampling rates
As recommended in reference manual or job planner. No loss of data or spatial resolution
Data Comparison
Between runs and passes, with data from nearby wells, other conveyance, mud log and markers
Operating Anomalies/Failure/Missing Data/Sensor Orientation/Transmission Losses
Absence of noise and spurious variations, anomaly repeated, corrected, reported or explained.

Digital Delivery

Digital Products
Labeled, verification listing with complete digital record, backup for archival, record matches hard copy.

Job Quality Rating (JQR)
Number of boxes without number X 10

Environmental effects

Irregular Operation
Excessive ROP or speed, high deviation, shocks, vibrations, sticking conditions
Borehole Geometry
Shape (caves, etc), rugosity, spiralled hole, mud induced fractures. Casing, tubing conditions
Borehole Fluid
Barite, KCl, salinity, additives, gas cut, unstable
Interferences
External noise, nearby casing or drillpipe, debris, unusual formation composition
Operation Outside Tool Specifications
GeonmarkelTemperature, pressure, hole size, hole deviation, dog-leg severity, flow rate, rpm, solids value of parameter
Environmental Quality Rating (EQR)
Number of boxes without number X 20

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- Excessive ROP is causing low data density.
- Borehole washouts cause the resistivity curves separation.
- Existing of gas in the borehole attenuate the sonic signal.

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60		

Cell Manager: Lake Loh FSM: View Moras

Data Quality Report

Delta

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When data does not meet standards, put a number in the column corresponding to the measurement with a corresponding number and remark below. Use additional pages for remarks
Positive remarks are welcome; do not append them with a number.

Remarks

Cell Manager: _____ Lake Loh _____ FSM: _____ Vijay Moras _____

