Schlumberger

Company: **LAMONT – DOHERTY**

9.875in Section

Well: **GDGH05–A Site 3 Hole A**

Field: **Krishna Godavari Basin**

Rig: **JOIDES Resolution** Country: **India**

Rig: JOIDES Resolution
Field: Krishna Godavari Basin
Location: Offshore Tamil Nadu
Well: GDGH05–A Site 3 Hole A
Company: LAMONT – DOHERTY

GeoVISION
1:200 Measured Depth
Recorded Mode Log

Total depth:	1392.0 m	Elevation K.B.	Top Drive
Spud date:	22–May–06	G.L.	–1087.0 m
Runs:	1 To 1	D.F.	11.0 m

Location

Permanent datum:	Mean Sea Level	Elev.:	0.0 m
Log measured from:	Rotary Table	11.0 m	above Perm. datum
Depth reference:	Driller's Depth		

Service Order no.	WGS84 Zone 44	Longitude	Latitude
06INM0043	X = 596287m	E 81° 53.968	N 15° 53.891

Depth logged:	1087.0 m To 1389.0 m	Mag decl:	–1.32 deg.	Other services:	
Date logged:	22–May–06To 23–May–06	Mag dip:	18.93 deg.	SonicVISION	

Bore hole record			Casing record			
Hole size	from	to	Size	Density	from	to
9.875 in.	1092.0 m	1392.0 m				

Mud record			Borehole deviation record			
Type	from	to	Min	Max	from	to
Sea Water	1092.0 m	1392.0 m				

Surface equipment		Software record			
Unit	OLU–J–N844–1/02	IDEAL Wis	ID10_2C_01		
Depth system	PDA	SPM	hspm10_1c_05		
		LWD	GVR V6.2B Sonic V6.4_B10 DVD V11.0		
		MWD	PUP V90C00		

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 RUN1
Real time APWD Monitoring.
SonicVISION

OTHER SERVICES FOR RUN

OTHER SERVICES FOR RUN

REMARKS: RUN NUMBER 1
Depth reference is Driller's depth
All Data acquired from tool memory while drilling

GR is corrected for bit size, tool size and mud weight.
GVR resistivity is environmentally corrected for mud resistivity and bit size.
EcoSCOPE resistivity is borehole compensated and environmentally corrected.
Density is corrected for standoff by Spin and Ribs plot
Neutron Porosity is corrected for bit size, tool size, mud hydrogen index, temperature, pressure and mud salinity

Maximum Circulating Temperature = 10 degC

Objective: Drill and log 9.875in section from sea floor to TD@1319m
Results: Drilled and logged to section TD.

REMARKS: RUN NUMBER

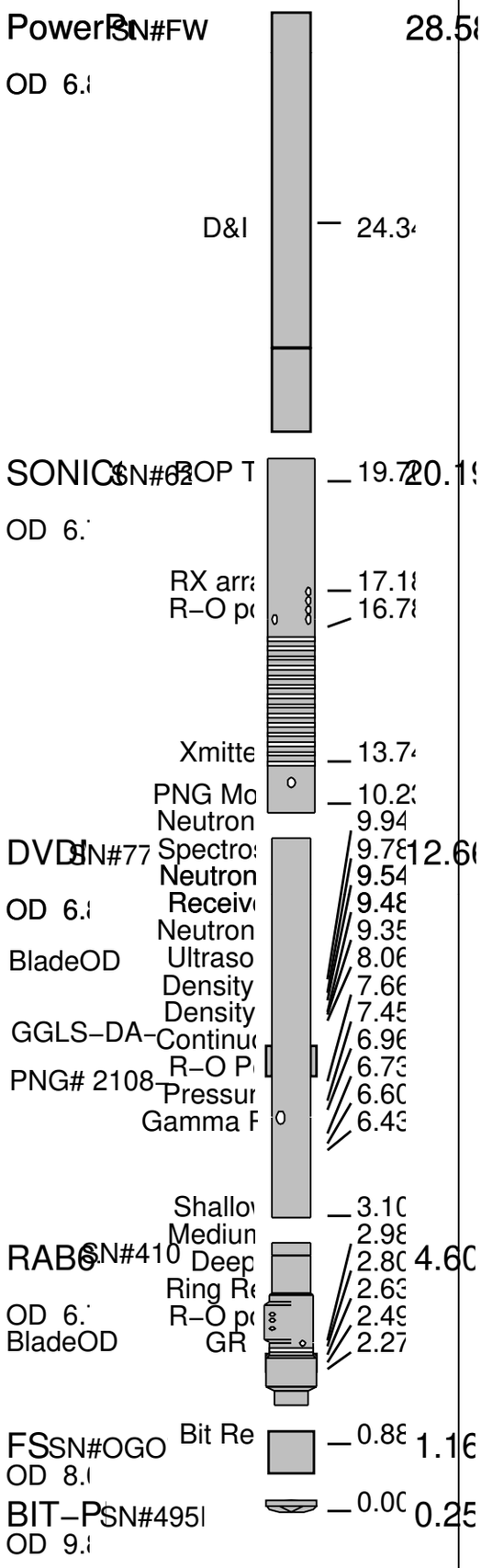
REMARKS: RUN NUMBER

All calibration parameters within tolerance.

EQUIPMENT DESCRIPTION

RUN1	RUN	RUN

DOWNHOLE EQ



Maximum string diame All lengths in I		

Bit Run Summary

Run number		1									
Bit size	in	9.875									
Bit start depth	m	1087									
Bit end depth	m	1392									
Top interval logged	m	1087									
Bottom interval logged	m	1389									
Begin log: time		9:50									
Begin log: date		22–May–06									
End log: time		01:00									
End log: date		23–May–06									
Mud data											
Depth	m	1100									
Type		Sea Water									
Mud weight	ppg	8.665									
Solids	%	0									
Chlorides	ppm	26000									
Rm	ohmm@degC	0.214@27.9									
Rmf	ohmm@degC	0.214@27.9									
Rmc	ohmm@degC	N/A									
Potassium	%	0									
Environmental data											
GR											
Mud weight	ppg	8.665									
Bit size	in	9.875									
Resistivity											
Neutron porosity											
Hole Size	in	9.875									
Mud weight	ppg	8.665									
Temperature	degC	10									
Mud salinity	ppk	26									
Formation salinity	ppk	N/A									
Recording rate 1	SEC	Res @ 2	Nuclear@4								
Recording rate 2	SEC	GVR @ 5									
Filtering GR		3 pts									
Filtering density		3 pts									
Filtering Neutron		3 pts									
Company representative		Stefan M.	Alberto	Ann							
Schlumberger D&M Personnel		Inetimi I.	Abhijeet N.	Ritesh S.	Shivek R.						

Variable Name	Variable Description	Run Name & Value	English Units
Run Number		**1**	
General Information			
BHT_RM	Bottom Hole Temperature (RM)	50.000000	
BSAL_RM	Mud Salinity (RM)	26.000000	
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)	82.219971
MW_RM	Mud Weight (RM)	8.660000
OBMF_RM	Oil Based Mud (RM)	NO
RHOF_RM	Mud Filtrate Density (RM)	1.000000
RHOM_RM	Matrix density (RM)	2.710000
RMS_RM	Resistivity of Mud Sample (RM)	0.214000
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	CARBONATE
RWA_RES_IN	Rwa computation resistivity input	P34H
RWS_RM	Resistivity of Connate Water (RM)	1.000000
SHT_RM	Surface Hole Temperature (RM)	1.400038
TD_RM	Total Measured Depth (RM)	4566.928711
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

RAB

LWD_RM/STATION_FILE/PARAMETER	Station Time–frame file name	Station
RAB/BTN_SLV_SIZE/PARAMETER	RAB: Button Sleeve Diameter	RAB6:
RAB/STAB_SIZE/PARAMETER	RAB: Stabilizer Diameter	RAB6:
BDBHCA	RAB: Button Deep Borehole A Factor	–0.024393
BDBHCB	RAB: Button Deep Borehole B Factor	0.000000
BHA_COEF_V	RAB: BHA Coef Generator Version	62011.000000
BITBHCA	RAB: Bit A Borehole Factor	0.086562
BITBHCB	RAB: Bit B Borehole Factor	0.000000
BIT_K_FACT	RAB: Bit K Factor	3.741030
BMBHCA	RAB: Button Medium Borehole A Factor	0.041775
BMBHCB	RAB: Button Medium Borehole B Factor	0.000000
BSBHCA	RAB: Button Shallow Borehole A Factor	0.074876
BSBHCB	RAB: Button Shallow Borehole B Factor	0.000000
BUT_KIMP_A	RAB: Button Impedance Coeff A	0.000000
BUT_KIMP_B	RAB: Button Impedance Coeff B	0.000000
DBUTTON_K_	RAB: Button Deep K factor	0.004540
DHS_VERSIO	RAB: DownHole Software Version	6.200100
GR_BHC_TOO	RAB: Gamma–Ray Borehole Coeff 1	6.750000
HI_CSDEPTH	RAB: Allow Hi–Resolution CS_DEPTH Image Data Output	NO
HI_DLIS_OU	RAB: Allow Hi–Resolution DLIS Image Data Output	NO
HI_RIVER_O	RAB: Allow Hi–Resolution River for Image Data Output	NO
IMAGE_MAX_	RAB: GR Image Maximum Scale Value	120.000000
IMAGE_MAX_	RAB: Image Maximum Resistivity Value	100.000000
IMAGE_MIN_	RAB: GR Image Minimum Scale Value	20.000000
IMAGE_MIN_	RAB: Image Minimum Resistivity Value	1.000000
JSD_RAB	RAB Acquisition start date	1.000000
MAG_DECL_R	RAB: Magnetic Declination	–1.319980
MAG_INCL_R	RAB: Magnetic Dip	18.930010
MBUTTON_K_	RAB: Button Medium K Factor	0.004809
OBM	RAB: Oil base Mud	NO
ORIENTATIO	Rab Image Orientation	NORTH
RABBDA0	RAB: Button Deep A0 Coeff	–0.043394
RABBDA1	RAB: Button Deep A1 Coeff	0.025723
RABBDA2	RAB: Button Deep A2 Coeff	–0.006998
RABBDA3	RAB: Button Deep A3 Coeff	0.000807
RABBDA4	RAB: Button Deep A4 Coeff	–0.000032
RABBDA5	RAB: Button Deep A5 Coeff	0.000000
RABBDMIN	RAB: Button Deep Minimum Value	0.050462
RABBITA0	RAB: Bit A0 Coeff	0.505326
RABBITA1	RAB: Bit A1 Coeff	–0.367938
RABBITA2	RAB: Bit A2 Coeff	0.168634
RABBITA3	RAB: Bit A3 Coeff	–0.034570
RABBITA4	RAB: Bit A4 Coeff	0.002581
RABBITA5	RAB: Bit A5 Coeff	0.000000
RABBITMIN	RAB: Bit Minimum Value	19.430000
RABBMA0	RAB: Button Medium A0 Coeff	–0.057041
RABBMA1	RAB: Button Medium A1 Coeff	0.033469
RABBMA2	RAB: Button Medium A2 Coeff	–0.009030
RABBMA3	RAB: Button Medium A3 Coeff	0.001030
RABBMA4	RAB: Button Medium A4 Coeff	–0.000041
RABBMA5	RAB: Button Medium A5 Coeff	0.000000
RABBMMIN	RAB: Button Medium Minimum Value	0.056471
RABBSA0	RAB: Button Shallow A0 Coeff	–0.072030
RABBSA1	RAB: Button Shallow A1 Coeff	0.038610
RABBSA2	RAB: Button Shallow A2 Coeff	–0.009805
RABBSA3	RAB: Button Shallow A3 Coeff	0.001067
RABBSA4	RAB: Button Shallow A4 Coeff	–0.000041
RABBSA5	RAB: Button Shallow A5 Coeff	0.000000
RABBSMIN	RAB: Button Shallow Minimum Value	0.078512
RABDHS	RAB Down Hole Software	4.000000

RABEC RAB: Resistivity Env−Cor YES
RABRNGA0 RAB: RING A0 Coeff −0.037998
RABRNGA1 RAB: RING A1 Coeff 0.023666
RABRNGA2 RAB: RING A2 Coeff −0.006599
RABRNGA3 RAB: RING A3 Coeff 0.000774
RABRNGA4 RAB: RING A4 Coeff −0.000032
RABRNGA5 RAB: RING A5 Coeff 0.000000
RABRNGMIN RAB: Ring Minimum Value 1.595930
RAB_BIT_EC Bit Resistivity for ECAL_RAB? YES
RAB_BIT_IN Input Bit Resistivity for Inversion? (Recommended at the bit) YES
RAB_CALIPE Compute ECAL_RAB? YES
RAB_DEEPBT Deep Button Resistivity for ECAL_RAB? YES
RAB_DEEPBT Input Deep Button Resistivity for Inversion? YES
RAB_INVERS Perform Rt Inversion? NO
RAB_INVERS RAB Bit Sensor Weight for Inversion[0,1] 1.000000
RAB_INVERS Ending Depth for GR Cutoff in Zone1 (default through the whole well) 100000.000000
RAB_INVERS Continuity Multiplier[0,1] 0.500000
RAB_INVERS RAB Deep Button Sensor Weight for Inversion[0,1] 1.000000
RAB_INVERS RAB inversion for Dh? YES
RAB_INVERS RAB inversion for Di? YES
RAB_INVERS GR Cutoff for Shale Formation 75.000000
RAB_INVERS GR Cutoff for Shale Formation in Zone1(default through the whole well) 75.000000
RAB_INVERS GR Cutoff in Zone10 75.000000
RAB_INVERS GR Cutoff in Zone2 75.000000
RAB_INVERS GR Cutoff in Zone3 75.000000
RAB_INVERS GR Cutoff in Zone4 75.000000
RAB_INVERS GR Cutoff in Zone5 75.000000
RAB_INVERS GR Cutoff in Zone6 75.000000
RAB_INVERS GR Cutoff in Zone7 75.000000
RAB_INVERS GR Cutoff in Zone8 75.000000
RAB_INVERS GR Cutoff in Zone9 75.000000
RAB_INVERS RAB Medium Button Sensor Weight for Inversion[0,1] 1.000000
RAB_INVERS Resistivity Cutoff for Shale Formation 2.000000
RAB_INVERS Resistive Invasion Allowed NO
RAB_INVERS RAB Ring Sensor Weight for Inversion[0,1] 1.000000
RAB_INVERS RAB inversion for Rmud? NO
RAB_INVERS RAB inversion for Rt? YES
RAB_INVERS Rt to R−deepest separation penalty multiplier[0,1] 0.500000
RAB_INVERS RAB inversion for Rxo? YES
RAB_INVERS RAB Shallow Button Sensor Weight for Inversion[0,1] 1.000000
RAB_INVERS Inversion Threshold[0, 0.3] 0.010000
RAB_INVERS Formation Water Resistivity 0.100000
RAB_INVERS Formation Water Temperature 150.000000
RAB_MEDIUM Medium Button Resistivity for ECAL_RAB? YES
RAB_MEDIUM Input Medium Button Resistivity for Inversion? YES
RAB_QUAD RAB: Process Quadrant data ? YES
RAB_RIGMOD Bit on Bottom? YES
RAB_RING_E Ring Resistivity for ECAL_RAB? YES
RAB_RING_I Imput RING Resistivity for Inversion? YES
RAB_SHALLO Shallow Button Resistivity for ECAL_RAB? YES
RAB_SHALLO Input Shallow Button Resistivity for Inversion? YES
RAB_TAB RAB: Compute TAB ? YES
RAB_TECHLO RAB: Generate Techlog ? YES
RAB_TEMP_S RAB Temperature Selection MEASURED
RAB_TICKS RAB: Generate Ticks ? YES
READOUT_PO RAB: ROP to Bit Face Distance 8.169291
RINGBHCA RAB: Ring Borehole A Factor 0.299659
RINGBHCB RAB: Ring Borehole B Factor 0.000000
RING_KIMP_ RAB: Ring Impedance Coeff A 0.000000
RING_KIMP_ RAB: Ring Impedance Coeff B 0.000000
RING_K_FAC RAB: Ring K Factor 0.151399
SBUTTON_K_ RAB: Button Shallow K Factor 0.006535
SCALE_IMAG RAB: Process Image Data YES
STAB RAB: Run with Stabilizer YES
TFF_OFFSET RAB Time−Frame File Time Offset 0.000000
TIMEFRAME_ RAB: Time Frame File Name 0.000000
TOOLTYPE RAB: Azimuthal Tool YES
TS_VERSION RAB: ToolScope Software Version 0.000000
VRAB6 Rab Tool type (ENP/PILOT) RAB6_C_SERIES
WIN_SIZE_D RAB: Window Size for Scaling Dynamic Image 3.000000

DVD

−−−−−−−−−− −−−−−−−−−−−−−Density Parameter−−−−−−−−−−−−−−−− −−−−−−−−−−−−−Density
−−−−−−−−−− −−−−−−−−−−−−−Neutron Parameter−−−−−−−−−−−−−−−− −−−−−−−−−−−−−Neutron
−−−−−−−−−− −−−−−−−−−−Interpretation Parameter−−−−−−−−−−−− −−−−−−−−−−Interpretation
−−−−−−−−−− −−−−−−−−−−Sigma Parameter−−−−−−−−−−−− −−−−−−−−−−Sigma
A12A ARC Air Cal Attenuation From T1 at 2 MHz 8.231560
A14A ARC Air Cal Attenuation From T1 at 400 KHz 8.289690
A22A ARC Air Cal Attenuation From T2 at 2 MHz 6.180950
A24A ARC Air Cal Attenuation From T2 at 400 KHz 6.148650
A32A ARC Air Cal Attenuation From T3 at 2 MHz 4.832750
A34A ARC Air Cal Attenuation From T3 at 400 KHz 4.884170
A42A ARC Air Cal Attenuation From T4 at 2 MHz 4.587220
A44A ARC Air Cal Attenuation From T4 at 400 KHz 4.539020
A52A ARC Air Cal Attenuation From T5 at 2 MHz 3.392490
A54A ARC Air Cal Attenuation From T5 at 400 KHz 3.445380
ABNT Abnormal Transmitter Indicator No_Tx_Failed
ALPHA_DEN_ Density Enhanced Vertical Resolution Processing Switch YES
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 0.100000
DIELEC_COM Dielectric Computation Option YES
DIPF Formation DIP Angle 0.000000
DVDMDHS 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	2.000000
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	TOH
INCLIN_B0	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	LIMESTONE
MSWS	ARC Wizard Model Switch Window	5.000000
MULTIEFFEC	Multi Effect Option	YES
NEU_DCOR_O	Density Correction Source for Neutron Processing	Bottom
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	2.472670
P14A	ARC Air Cal Phase−Shift From T1 at 400 KHz	−0.535700
P22A	ARC Air Cal Phase−Shift From T2 at 2 MHz	−2.538020
P24A	ARC Air Cal Phase−Shift From T2 at 400 KHz	0.538316
P32A	ARC Air Cal Phase−Shift From T3 at 2 MHz	2.412610
P34A	ARC Air Cal Phase−Shift From T3 at 400 KHz	−0.538400
P42A	ARC Air Cal Phase−Shift From T4 at 2 MHz	−2.561370
P44A	ARC Air Cal Phase−Shift From T4 at 400 KHz	0.492402
P52A	ARC Air Cal Phase−Shift From T5 at 2 MHz	2.441200
P54A	ARC Air Cal Phase−Shift From T5 at 400 KHz	−0.509005
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	9.125000
STOH	Density Top of Hole Sector (Left Boundary)	SECTOR_0
TRNO	Tool Run Number	4566.928711
TSIZ_ARC	ARC Tool Size	6.900000
TSNO	Tool Serial Number	778.000000
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	15.000000

Schlumberger Drilling & Measurements Parameter Insert Header Software version 2.0c

Output DLIS Files

Type:DEFAULT File ID:LWD_021PDP FN:20 23−May−2006 08:10 PRODUCER

IDEAL Version: ID10_2C_01.1SV

IDEAL

RAB6−CA id10_2c_01

Format: LDEO_RABDepthLogImage Vertical Scale: 1:200 Graphics File Created: 23−May−2006 08:10

Parameters

DLIS Name	Description	Value

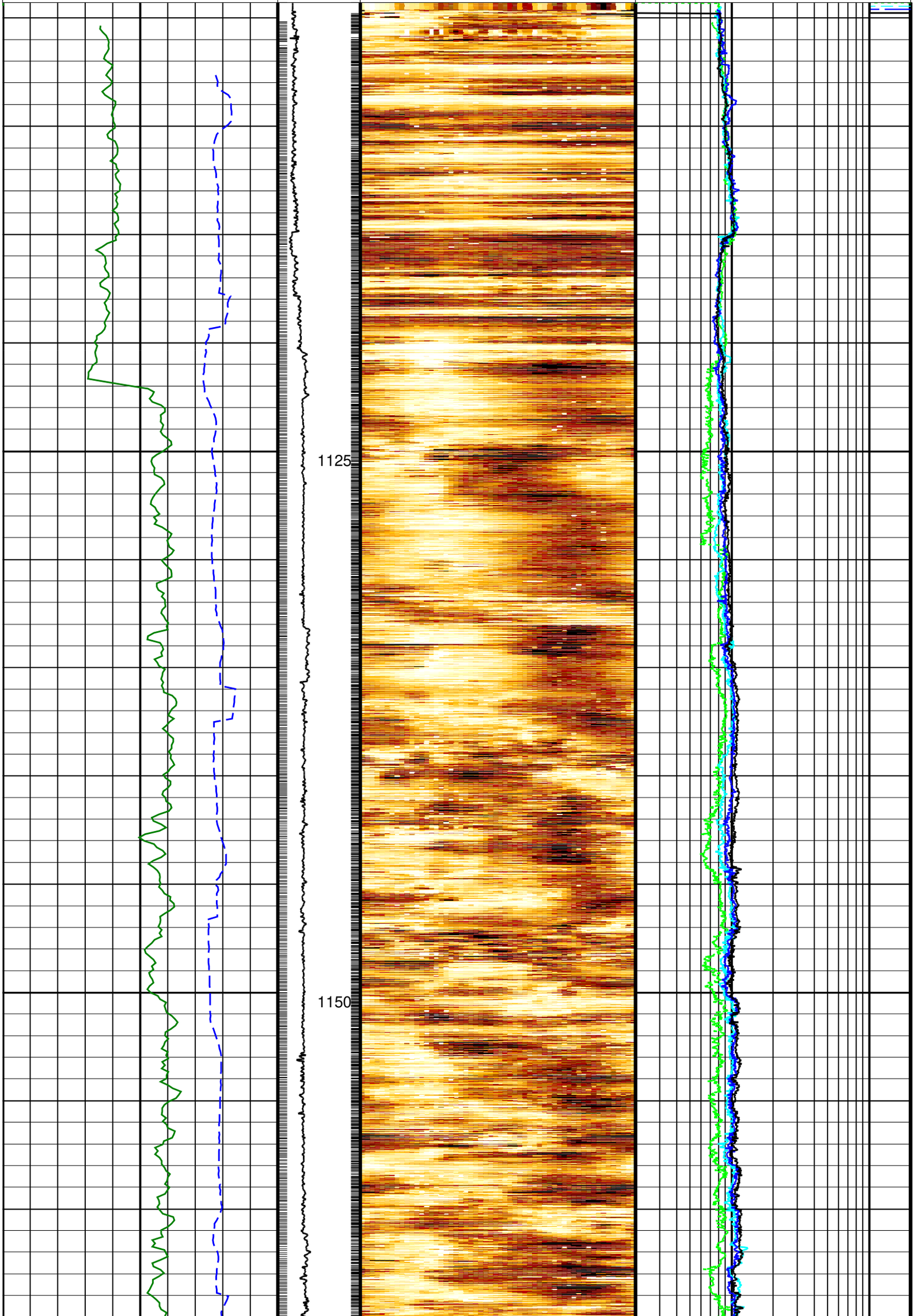
		RAB6–CA: 6.75–in. Resistivity At–the–Bit	
	LWD RM: Default file extension	BIN_DB	
	LWD RM: Default directory	D:\users\ideal\fm\Clients\LDEO\GDGH05–A\LWD001\	
	LWD RM: Depth file name	DEPTH_edited	
	RAB: Stabilizer Diameter	RAB6: 9.25–9.50 IN	
	LWD RM: Flush depth streams?	YES	
	LWD RM: Generate techlog only?	0	–––––
	LWD RM: Log direction	DOWN	
	Station Time–frame file name	NULL	
	RAB: Button Sleeve Diameter	RAB6: 8 1/8 IN	
BDBHCA	RAB: Button Deep Borehole A Factor	–0.0243925	–––––
BDBHCB	RAB: Button Deep Borehole B Factor	0	–––––
BHA_COEF_VER	RAB: BHA Coef Generator Version	62011	–––––
BITBHCA	RAB: Bit A Borehole Factor	0.0865624	–––––
BITBHCB	RAB: Bit B Borehole Factor	0	–––––
BIT_K_FACTOR	RAB: Bit K Factor	3.74103	–––––
BMBHCA	RAB: Button Medium Borehole A Factor	0.0417745	–––––
BMBHCB	RAB: Button Medium Borehole B Factor	0	–––––
BSBHCA	RAB: Button Shallow Borehole A Factor	0.0748757	–––––
BSBHCB	RAB: Button Shallow Borehole B Factor	0	–––––
BS_RM	Bit Size (RM)	9.875	IN
BUT_KIMP_A	RAB: Button Impedance Coeff A	0	–––––
BUT_KIMP_B	RAB: Button Impedance Coeff B	0	–––––
DBUTTON_K_FACTOR	RAB: Button Deep K factor	0.00454029	–––––
DHS_VERSION	RAB: DownHole Software Version	6.2001	–––––
DIPR	magnetic dip	18.93	DEG
IMAGE_MAX_RES	RAB: Image Maximum Resistivity Value	100	OHMM
IMAGE_MIN_RES	RAB: Image Minimum Resistivity Value	1	OHMM
MBUTTON_K_FACTOR	RAB: Button Medium K Factor	0.0048088	–––––
MDCP	magnetic declination	–1.32	DEG
MST_RM	Mud Sample temperature (RM)	27.9	DEGC
MW_RM	Mud Weight (RM)	8.66	LB/G
OBM	RAB: Oil base Mud	NO	
ORIENTATION_RM	Rab Image Orientation	NORTH	
RABEC	RAB: Resistivity Env–Cor	YES	
RAB_TEMP_SELECT	RAB Temperature Selection	MEASURED	
READOUT_PORT_MP	RAB: ROP to Bit Face Distance	2.49	M
RINGBHCA	RAB: Ring Borehole A Factor	0.299659	–––––
RINGBHCB	RAB: Ring Borehole B Factor	0	–––––
RING_KIMP_A	RAB: Ring Impedance Coeff A	0	–––––
RING_KIMP_B	RAB: Ring Impedance Coeff B	0	–––––
RING_K_FACTOR	RAB: Ring K Factor	0.151399	–––––
RMS_RM	Resistivity of Mud Sample (RM)	0.214	OHMM
SBUTTON_K_FACTOR	RAB: Button Shallow K Factor	0.00653489	–––––
STAB	RAB: Run with Stabilizer	YES	
TOOLTYPE	RAB: Azimuthal Tool	YES	
TS_VERSION	RAB: ToolScope Software Version	0	–––––
VRAB6	Rab Tool type (ENP/PILOT)	RAB6_C_SERIES	
WIN_SIZE_DYN_IMAGE	RAB: Window Size for Scaling Dynamic Image	0.9144	M
		CDR: CDR real–time	
		RES_BHCORR_ARC_RT: RT: ARC Borehole Correction	
		ECD_RT: RT:ECD Computation	
		System and Miscellaneous	

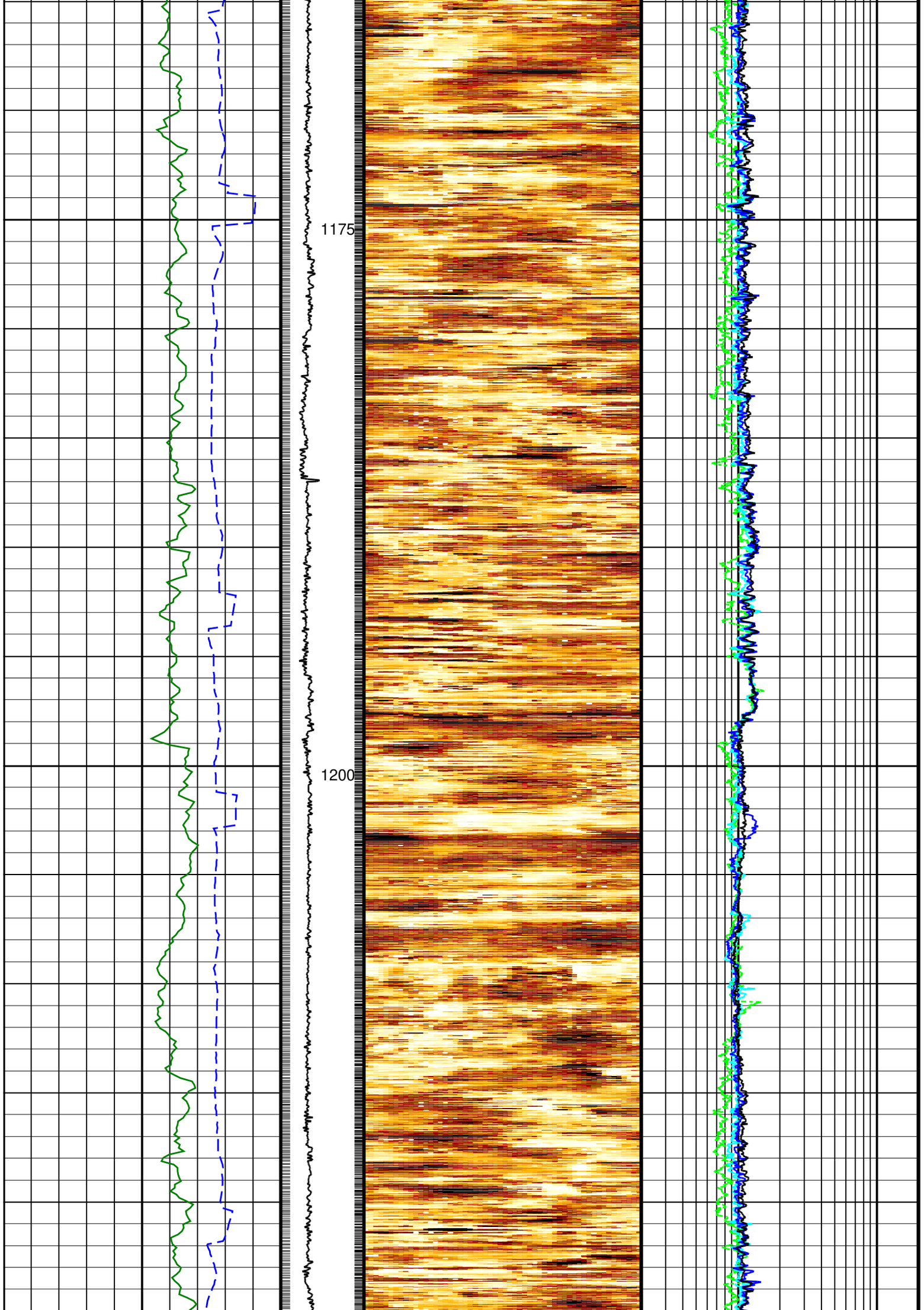
PIP SUMMARY

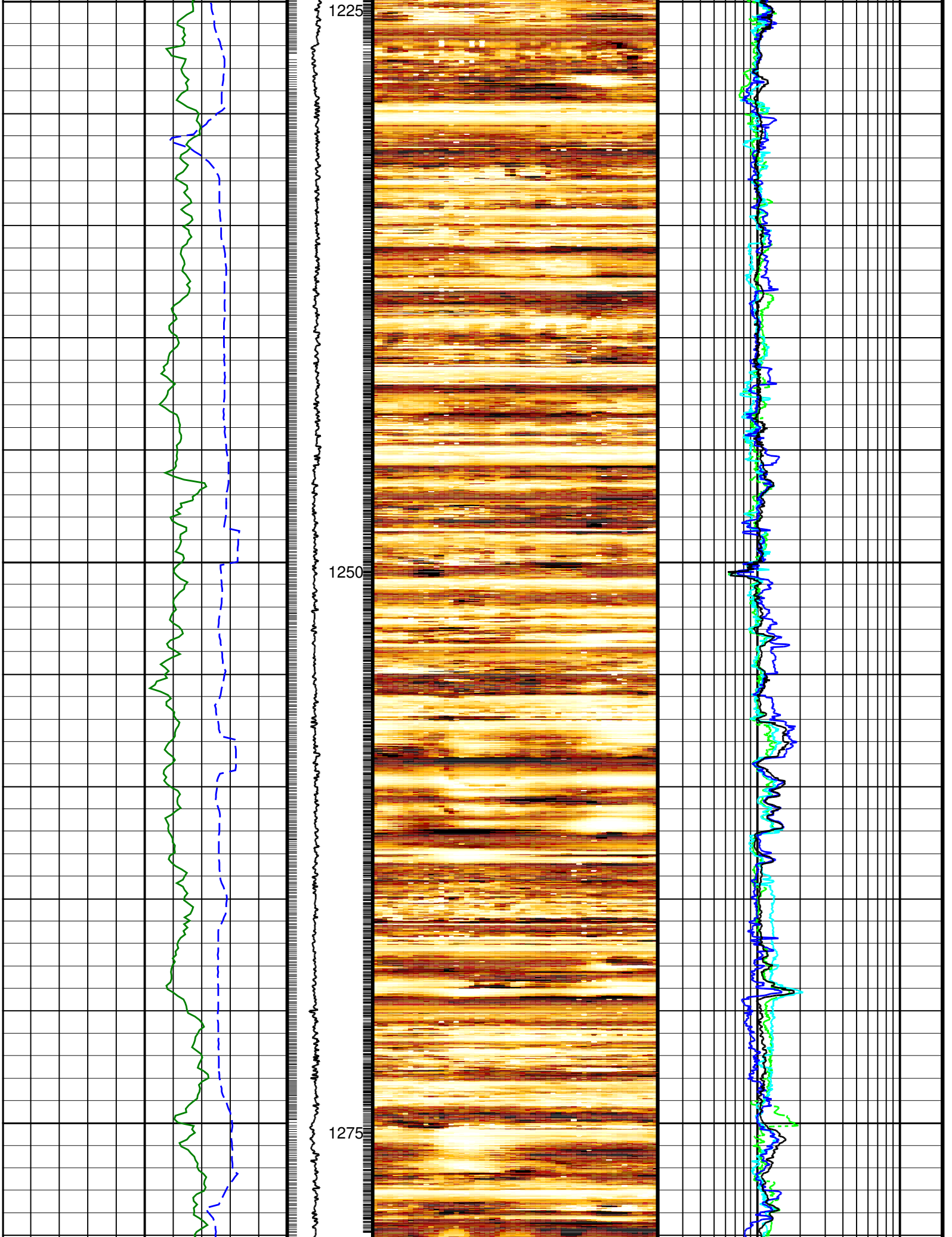
⊣ Ring Samples

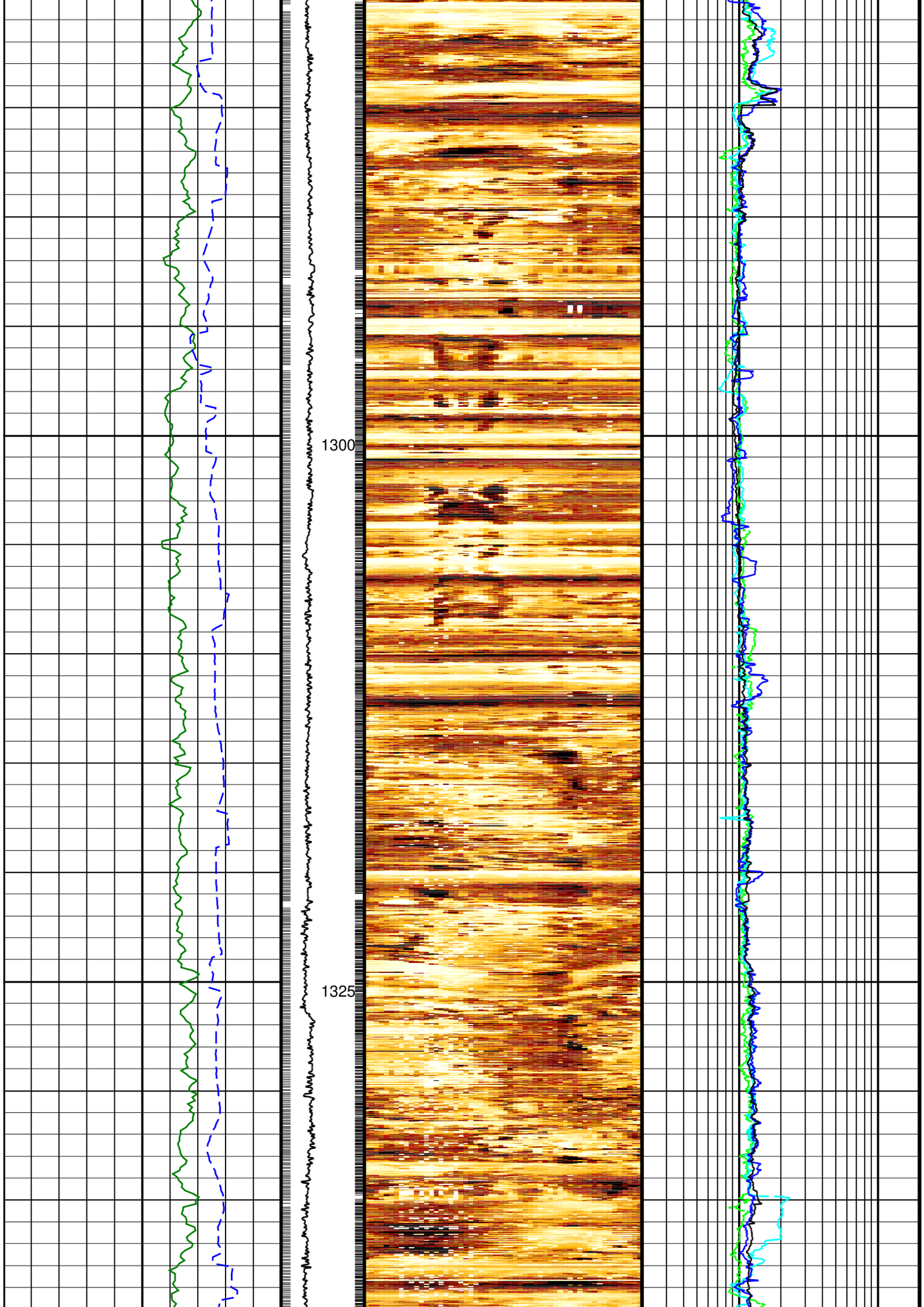
⊢ Gamma Ray Samples

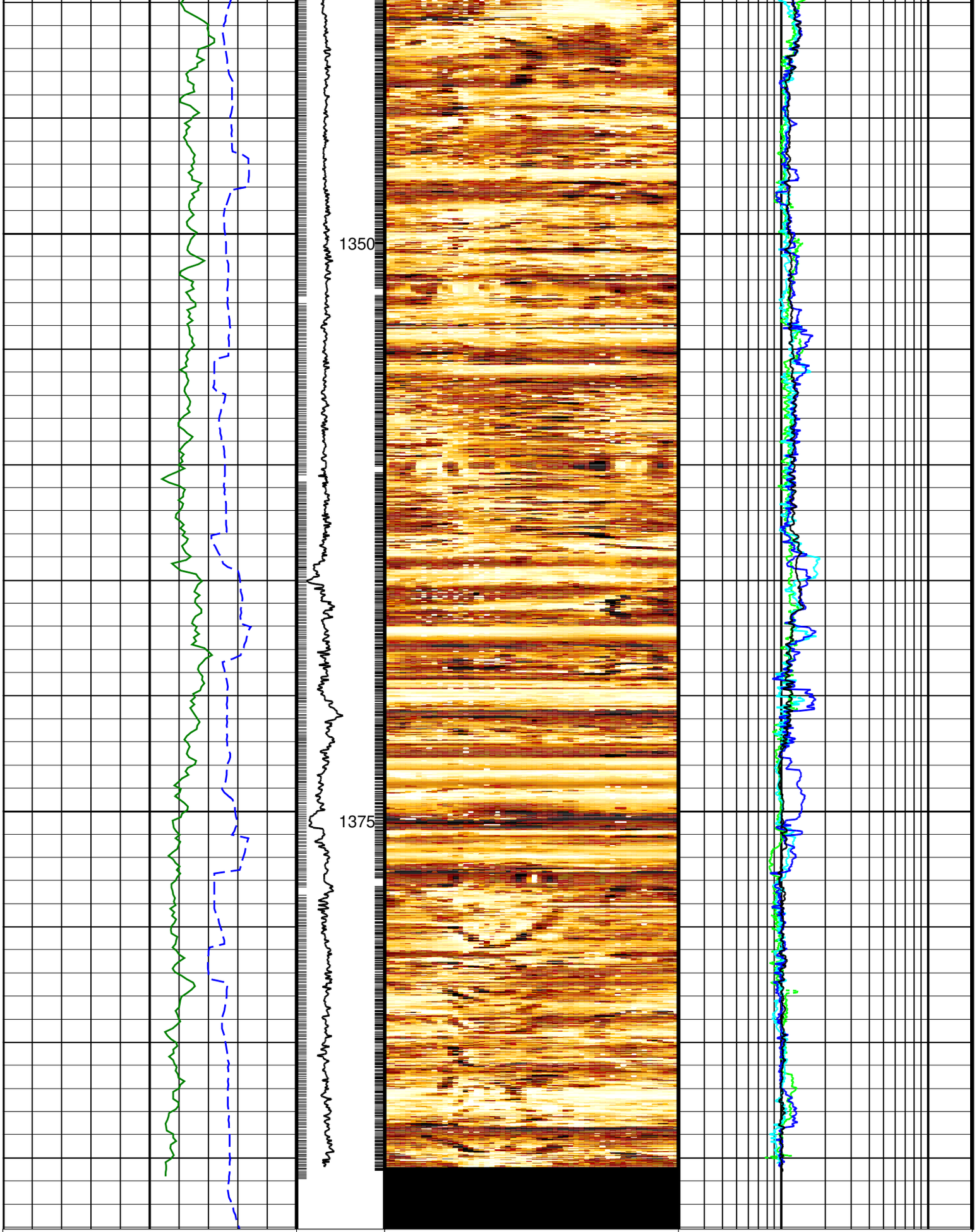
			Ring Resistivity (RES_RING) 0.2 (OHMM) 20
			Deep Button Resistivity (RES_BD) 0.2 (OHMM) 20
ROP: 5 Feet Average (ROP5_RM) 100 (M/HR) 0			Medium Button Resistivity (RES_BM) 0.2 (OHMM) 20
RAB Gamma Ray (GR_RAB) 0 (GAPI) 150	RAB Rotational Speed (RPM_RAB) (RPM) 0 200	Conductive Resistive (R3IM_DYN) (––––)	Shallow Button Resistivity (RES_BS) 0.2 (OHMM) 20


1125
1150


1175
1200


1225
1250
1275


1300
1325



RAB Gamma Ray (GR_RAB)
0 (GAPI) 150

RAB Rotational Speed (RPM_RAB) (RPM)
0 200

Conductive Resistive (R3IM_DYN) (----)

Shallow Button Resistivity (RES_BS)
0.2 (OHMM) 20

ROP: 5 Feet Average (ROP5_RM)
100 (M/HR) 0

Medium Button Resistivity (RES_BM)
0.2 (OHMM) 20

Deep Button Resistivity (RES_BD)		
0.2	(OHMM)	20

Ring Resistivity (RES_RING)		
0.2	(OHMM)	20

PIP SUMMARY

⊣ **Ring Samples**

⊢ **Gamma Ray Samples**

IDEAL Version: ID10_2C_01.1SV

IDEAL

RAB6–CA **id10_2c_01**

Output DLIS Files

Type:DEFAULT **File ID:LWD_021PDP** **FN:20** **23–May–2006 08:10** **PRODUCER** **1104.3 M** **1393.1 M**

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

Primary Equipment:

Tool Name and Serial Number	ECO – 675	778
Calibration Status	–	
Collar Type and Serial Number	ADDC – AA	
Chassis Type and Serial Number	ADSE – EA	
Stabilizer Type and Serial Number	ADCS – CA	
Neutron Logging Source	NSR – M	
Density Logging Source	GSR – J/Z	
Stabilizer Size	9.13 – in.	

Master: 12–May–2006 20:19

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

SSn LSn : Water Tank

Phase	SSn Gain ----	Value	Phase	SSn Offset ----	Value
Master		1.151	Master		0
	0.6000 (Minimum) / 1.000 (Nominal) / 1.400 (Maximum)			–3.000 (Minimum) / 0 (Nominal) / 3.000 (Maximum)	
Phase	LSn Gain ----	Value	Phase	LSn Offset ----	Value
Master		1.166	Master		0
	0.6000 (Minimum) / 1.000 (Nominal) / 1.400 (Maximum)			–3.000 (Minimum) / 0 (Nominal) / 3.000 (Maximum)	

Master: 12–May–2006 20:19

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

Neutron: Water Tank

Phase	Far 2 Gain ----	Value	Phase	Far 2 Offset ----	Value
Master		1.044	Master		1.004
	0.7000 (Minimum) / 1.000 (Nominal) / 1.300 (Maximum)			–3.000 (Minimum) / 0 (Nominal) / 3.000 (Maximum)	
Phase	Far 1 Gain ----	Value	Phase	Far 1 Offset ----	Value
Master		1.076	Master		0.6590
	0.7000 (Minimum) / 1.000 (Nominal) / 1.300 (Maximum)			–3.000 (Minimum) / 0 (Nominal) / 3.000 (Maximum)	
Phase	Thermal Near gain ----	Value	Phase	Thermal Near offset ----	Value
Master		1.140	Master		–15.25
	0.7000 (Minimum) / 1.000 (Nominal) / 1.300 (Maximum)			–500.0 (Minimum) / 0 (Nominal) / 500.0 (Maximum)	
Phase	Epithermal Near gain ----	Value	Phase	Eptithermal Near offset ----	Value
Master		1.124	Master		17.94
	0.7000 (Minimum) / 1.000 (Nominal) / 1.300 (Maximum)			–300.0 (Minimum) / 0 (Nominal) / 300.0 (Maximum)	

Master: 12–May–2006 15:19

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		2013	Master		4858	Master		11410
	1000 (Minimum) / 2000 (Nominal) / 3000 (Maximum)			2500 (Minimum) / 5250 (Nominal) / 8000 (Maximum)			6000 (Minimum) / 12000 (Nominal) / 18000 (Maximum)	

Master: 12–May–2006 15:19

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		372.1	Master		2545	Master		8395
200.0 (Minimum)	400.0 (Nominal)	600.0 (Maximum)	1500 (Minimum)	3000 (Nominal)	4500 (Maximum)	4000 (Minimum)	8500 (Nominal)	13000 (Maximum)

Master: 12–May–2006 15:19

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		66.31	Master		74.12	Master		355.2
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: 12–May–2006 15:19

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		1.030	Master		1.263
0.9000 (Minimum)	1.150 (Nominal)	1.400 (Maximum)	0.9000 (Minimum)	1.150 (Nominal)	1.400 (Maximum)

Master: 12–May–2006 15:19

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		2.473	Master		–2.538	Master		2.413
–4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)	–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		–2.561	Master		2.441	Master		–0.5357
–4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)	–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		0.5383	Master		–0.5384	Master		0.4924
–4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)	–4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)	–4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)
Phase	Phase–Shift T5 at 400KHz	Value						
Master		–0.5090						
–4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)						

Master: 12–May–2006 15:19

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		8.232	Master		6.181	Master		4.833
7.000 (Minimum)	9.000 (Nominal)	11.00 (Maximum)	4.000 (Minimum)	6.000 (Nominal)	8.000 (Maximum)	3.500 (Minimum)	5.500 (Nominal)	7.500 (Maximum)
Phase	Attenuation T4	Value	Phase	Attenuation T5	Value	Phase	Attenuation T1 at 400KHz	Value
Master		4.587	Master		3.392	Master		8.290
2.500 (Minimum)	4.500 (Nominal)	6.500 (Maximum)	2.000 (Minimum)	4.000 (Nominal)	6.000 (Maximum)	7.000 (Minimum)	9.000 (Nominal)	11.00 (Maximum)
Phase	Attenuation T2 at 400KHz	Value	Phase	Attenuation T3 at 400KHz	Value	Phase	Attenuation T4 at 400KHz	Value
Master		6.149	Master		4.884	Master		4.539
4.000 (Minimum)	6.000 (Nominal)	8.000 (Maximum)	3.500 (Minimum)	5.500 (Nominal)	7.500 (Maximum)	2.500 (Minimum)	4.500 (Nominal)	6.500 (Maximum)
Phase	Attenuation T5 at 400KHz	Value						
Master		3.445						
2.000 (Minimum)	4.000 (Nominal)	6.000 (Maximum)						

Master: 12–May–2006 15:19

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)

6.75–in. Resistivity At–the–Bit / Equipment Identification

Primary Equipment:

Tool Name and Serial Number	RAB6 – CA	41018
Calibration Status	–	

Master: 8–May–2006 12:34

6.75–in. Resistivity At–the–Bit Calibration

Resistivity: Fixture

Phase	Ring/T1 factor ----	Value	Phase	Ring/T2 factor ----	Value	Phase	M0/T1 factor ----	Value
Master		1.005	Master		0.9995	Master		0.9971
0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)	0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)	0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)
Phase	M0/T2 factor ----	Value	Phase	M2/T1 factor ----	Value	Phase	M2/T2 factor ----	Value
Master		0.9902	Master		1.004	Master		0.9965
0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)	0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)	0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)
Phase	BTN shallow/T1 factor ----	Value	Phase	BTN shallow/T2 factor ----	Value	Phase	BTN medium/T1 factor ----	Value
Master		1.004	Master		0.9973	Master		0.9992
0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)	0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)	0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)
Phase	BTN medium/T2 factor ----	Value	Phase	BTN deep/T1 factor ----	Value	Phase	BTN deep/T2 factor ----	Value
Master		0.9928	Master		1.008	Master		1.001
0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)	0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)	0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)

Master: 8–May–2006 12:34

6.75–in. Resistivity At–the–Bit Calibration

Gamma Ray: Blanket

Phase	Gamma ray factor ----	Value
Master		0.9072
0.7500 (Minimum)	1.000 (Nominal)	1.250 (Maximum)

Company: **LAMONT – DOHERTY**

Schlumberger

Well: **GDGH05–A Site 3 Hole A**

Field: **Krishna Godavari Basin**

Rig: **JOIDES Resolution** **9.875in Section**

Country: **India**

GeoVISION

1:200 Measured Depth

Recorded Mode Log