Company: **LAMONT – DOHERTY**

Schlumberger

9.875in Section

Well: **MNGH01–1– Site8 Hole A**
Field: **Maha Nadi Basin**
Rig: **JOIDES Resolution** Country: **India**

GeoVISION – Dynamic Image
1:200 Measured Depth
Recorded Mode Log

Total depth:	2050.0 m	K.B.	Top Drive
Spud date:	29–May–06	G.L.	–1690.5 m
Runs:	1 To 1	D.F.	10.5 m
Permanent datum:	Mean Sea Level	Elev.:	0.0 m
Log measured from:	Rotary Table	10.5 m above Perm. datum	
Depth reference:	Driller's Depth		

Location | Elevation

Company: LAMONT – DOHERTY
Well: MNGH01–1– Site8 Hole A
Location: Offshore Tamil Nadu
Field: Maha Nadi Basin
Rig: JOIDES Resolution

Service Order no.	X = 365551.4m	Longitude	Latitude
06INM0043	Y = 2096569.5m	E 85° 43.379'	N 18° 57.427'

Depth logged:	1701.0 m To 2047.0 m	Mag decl: –0.88 deg.	Other services:
Date logged:	29–May–06To 30–May–06	Mag dip: 25.44 deg.	SonicVISION

Bore hole record / **Casing record**

Hole size	from	to	Size	Density	from	to
9.875 in.	1700 m	2050 m				

Mud record / **Borehole deviation record**

Type	from	to	Min	Max	from	to
Sea Water	1700 m	2050 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	OTHER SERVICES FOR RUN	OTHER SERVICES FOR RUN
Real time APWD Monitoring. SonicVISION		

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 = 7 degC

Objective: Drill and log 9.875in section from sea floor to TD@2050m
Results: Drilled and logged to section TD.

All calibration parameters within tolerance.

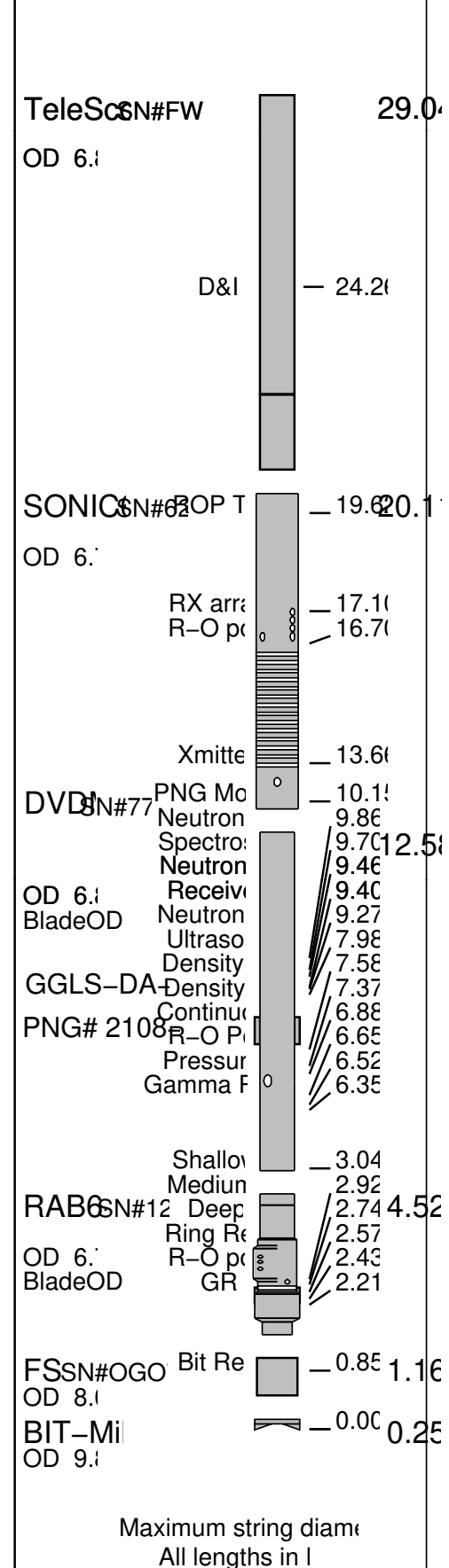
REMARKS: RUN NUMBER

REMARKS: RUN NUMBER

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	1700									
Bit end depth m	2050									
Top interval logged m	1701									
Bottom interval logged m	2047									
Begin log: time	21:20									
Begin log: date	29–May–06									
End log: time	15:39									
End log: date	30–May–06									
Mud data										
Depth m	1710									
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	7									
Mud salinity ppk	26									
Formation salinity ppk	N/A									
Recording rate 1 SEC	2									
Recording rate 2 SEC	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.						

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Variable   Variable                                                   Run Name     English Units
 Name      Description                                                 & Value

   Run Number                                                             1

   General Information
BHT_RM      Bottom Hole Temperature (RM)                    44.600002
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)                           8.665000
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)                 3.200037
TD_RM      Total Measured Depth (RM)                   6725.721680
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/PARAMETERStation Time–frame file name                               Station
RAB/BTN_SLV_SIZE/PARAMETERRAB: Button Sleeve Diameter                               RAB6:
RAB/STAB_SIZE/PARAMETERRAB: Stabilizer Diameter                               RAB6:
BDBHCA      RAB: Button Deep Borehole A Factor               –0.025010
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                0.085619
BITBHCB     RAB: Bit B Borehole Factor                0.000000
BIT_K_FACT   RAB: Bit K Factor                    3.651910
BMBHCA      RAB: Button Medium Borehole A Factor               0.041085
BMBHCB      RAB: Button Medium Borehole B Factor               0.000000
BSBHCA      RAB: Button Shallow Borehole A Factor              0.073936
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                   0.004549
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                  –0.880000
MAG_INCL_R   RAB: Magnetic Dip                     25.439997
MBUTTON_K_   RAB: Button Medium K Factor                  0.004817
OBM      RAB: Oil base Mud                        NO
ORIENTATIO   Rab Image Orientation                      NORTH
RABBDA0     RAB: Button Deep A0 Coeff                  –0.040578
RABBDA1     RAB: Button Deep A1 Coeff                   0.023611
RABBDA2     RAB: Button Deep A2 Coeff                  –0.006379
RABBDA3     RAB: Button Deep A3 Coeff                   0.000733
RABBDA4     RAB: Button Deep A4 Coeff                  –0.000029
RABBDA5     RAB: Button Deep A5 Coeff                   0.000000
RABBDMIN     RAB: Button Deep Minimum Value                 0.050526
RABBITA0     RAB: Bit A0 Coeff                    0.500230
RABBITA1     RAB: Bit A1 Coeff                   –0.368524
RABBITA2     RAB: Bit A2 Coeff                    0.168660
RABBITA3     RAB: Bit A3 Coeff                   –0.034414
RABBITA4     RAB: Bit A4 Coeff                    0.002550
RABBITA5     RAB: Bit A5 Coeff                    0.000000
RABBITMIN    RAB: Bit Minimum Value                    19.196400
RABBMA0     RAB: Button Medium A0 Coeff                 –0.054082
RABBMA1     RAB: Button Medium A1 Coeff                  0.031168
RABBMA2     RAB: Button Medium A2 Coeff                 –0.008354
RABBMA3     RAB: Button Medium A3 Coeff                  0.000950
RABBMA4     RAB: Button Medium A4 Coeff                 –0.000038
RABBMA5     RAB: Button Medium A5 Coeff                  0.000000
RABBMMIN     RAB: Button Medium Minimum Value                 0.056537
RABBSA0     RAB: Button Shallow A0 Coeff                –0.069850
RABBSA1     RAB: Button Shallow A1 Coeff                 0.037221
RABBSA2     RAB: Button Shallow A2 Coeff                –0.009448
RABBSA3     RAB: Button Shallow A3 Coeff                 0.001028
RABBSA4     RAB: Button Shallow A4 Coeff                –0.000039
RABBSA5     RAB: Button Shallow A5 Coeff                 0.000000
RABBSMIN     RAB: Button Shallow Minimum Value                0.078603
RABDHS      RAB Down Hole Software                   4.000000
RABEC      RAB: Resistivity Env–Cor                     YES
RABRNGA0     RAB: RING A0 Coeff                     –0.035222
RABRNGA1     RAB: RING A1 Coeff                      0.021599
RABRNGA2     RAB: RING A2 Coeff                     –0.005992
RABRNGA3     RAB: RING A3 Coeff                      0.000701
RABRNGA4     RAB: RING A4 Coeff                     –0.000029
RABRNGA5     RAB: RING A5 Coeff                      0.000000
RABRNGMIN    RAB: Ring Minimum Value                    1.598150
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?                         NO
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   Input 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                  7.972441
RINGBHCA     RAB: Ring Borehole A Factor                0.298889
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                    0.151723
SBUTTON_K_   RAB: Button Shallow K Factor                  0.006545
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          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                    0.100000
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              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       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                      6725.721680
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
```

IDEAL Version: ID10_2C_01.1SV
IDF

Format: LDEO_RABRESBDDYNImage **Vertical Scale: 1:200** **Graphics File Created: 30–May–2006 21:08**

IDEAL Version: ID10_2C_01.1SV
IDF

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

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

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

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

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	50.00 (Minimum) / 70.00 (Nominal) / 90.00 (Maximum)	66.31	Master	50.00 (Minimum) / 75.00 (Nominal) / 100.0 (Maximum)	74.12	Master	270.0 (Minimum) / 370.0 (Nominal) / 470.0 (Maximum)	355.2

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

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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	–4.000 (Minimum) / 0 (Nominal) / 4.000 (Maximum)	2.473	Master	–4.000 (Minimum) / 0 (Nominal) / 4.000 (Maximum)	–2.538	Master	–4.000 (Minimum) / 0 (Nominal) / 4.000 (Maximum)	2.413
Phase	**Phase–Shift T4**	**Value**	**Phase**	**Phase–Shift T5**	**Value**	**Phase**	**Phase–Shift T1 at 400KHz**	**Value**
Master	–4.000 (Minimum) / 0 (Nominal) / 4.000 (Maximum)	–2.561	Master	–4.000 (Minimum) / 0 (Nominal) / 4.000 (Maximum)	2.441	Master	–4.000 (Minimum) / 0 (Nominal) / 4.000 (Maximum)	–0.5357
Phase	**Phase–Shift T2 at 400KHz**	**Value**	**Phase**	**Phase–Shift T3 at 400KHz**	**Value**	**Phase**	**Phase–Shift T4 at 400KHz**	**Value**
Master	–4.000 (Minimum) / 0 (Nominal) / 4.000 (Maximum)	0.5383	Master	–4.000 (Minimum) / 0 (Nominal) / 4.000 (Maximum)	–0.5384	Master	–4.000 (Minimum) / 0 (Nominal) / 4.000 (Maximum)	0.4924
Phase	**Phase–Shift T5 at 400KHz**	**Value**						
Master	–4.000 (Minimum) / 0 (Nominal) / 4.000 (Maximum)	–0.5090						

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

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EcoScope Integrated Logging–While–Drilling Tool – 6.75 inch
Calibration
Gamma Ray: Blanket

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

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

Primary Equipment:		
Tool Name and Serial Number	RAB6 – CA	127
Calibration Status	–	

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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	0.9750 (Minimum) / 1.000 (Nominal) / 1.025 (Maximum)	1.006	Master	0.9750 (Minimum) / 1.000 (Nominal) / 1.025 (Maximum)	1.010	Master	0.9750 (Minimum) / 1.000 (Nominal) / 1.025 (Maximum)	0.9952
Phase	**M0/T2 factor**	**Value**	**Phase**	**M2/T1 factor**	**Value**	**Phase**	**M2/T2 factor**	**Value**
Master	0.9750 (Minimum) / 1.000 (Nominal) / 1.025 (Maximum)	0.9989	Master	0.9750 (Minimum) / 1.000 (Nominal) / 1.025 (Maximum)	1.006	Master	0.9750 (Minimum) / 1.000 (Nominal) / 1.025 (Maximum)	1.010
Phase	**BTN shallow/T1 factor**	**Value**	**Phase**	**BTN shallow/T2 factor**	**Value**	**Phase**	**BTN medium/T1 factor**	**Value**
Master	0.9750 (Minimum) / 1.000 (Nominal) / 1.025 (Maximum)	1.005	Master	0.9750 (Minimum) / 1.000 (Nominal) / 1.025 (Maximum)	1.008	Master	0.9750 (Minimum) / 1.000 (Nominal) / 1.025 (Maximum)	1.001
Phase	**BTN medium/T2 factor**	**Value**	**Phase**	**BTN deep/T1 factor**	**Value**	**Phase**	**BTN deep/T2 factor**	**Value**
Master	0.9750 (Minimum) / 1.000 (Nominal) / 1.025 (Maximum)	1.004	Master	0.9750 (Minimum) / 1.000 (Nominal) / 1.025 (Maximum)	1.004	Master	0.9750 (Minimum) / 1.000 (Nominal) / 1.025 (Maximum)	1.008

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6.75–in. Resistivity At–the–Bit Calibration
Gamma Ray: Blanket

Phase	Gamma ray factor	Value
Master	0.7500 (Minimum) / 1.000 (Nominal) / 1.250 (Maximum)	0.9227

Company: **LAMONT – DOHERTY**

Schlumberger

Well: **MNGH01–1– Site8 Hole A**
Field: **Maha Nadi Basin**
Rig: **JOIDES Resolution** **9.875in Section**
Country: **India**

GeoVISION – Dynamic Image
1:200 Measured Depth
Recorded Mode Log