Schlumberger

Company:	**Lamont Doherty**
Well:	**NGHP-01-14A**
Field:	
RIG	**Joides Resolution**
Ocean	**Bengal Bay**

Hostile Natural Gamma-Ray Tool

RIG	Joides Resolution
Field:	
Location:	
Well:	NGHP-01-14A
Company:	Lamont Doherty

LOCATION

Permanent Datum:	Mean Sea Level	Elev.: 0 m
Log Measured From:	Drill Floor	11.3 m above Perm. Datum
Drilling Measured From:	Drill FLoor	
API Serial No.	Latitude 16° 03.5577' N	Longitude 82° 05.6218' E

Elev.: K.B. 11.3 m; G.L. -906 m; D.F. 11.3 m

Logging Date	12-Jul-2006	
Run Number	One	
Depth Driller	1086 m	
Schlumberger Depth	1087 m	
Bottom Log Interval	1087 m	
Top Log Interval	909 m	
Casing Driller Size @ Depth	0.000 in @ 974 m	
Casing Schlumberger	976 m	
Bit Size	11.438 in	
Type Fluid In Hole	Sepiolite	
MUD Density / Viscosity	1.06645 g/cm3	
MUD Fluid Loss / PH		
Source Of Sample		
RM @ Measured Temperature	@	
RMF @ Measured Temperature	@	
RMC @ Measured Temperature	@	
Source RMF / RMC		
RM @ MRT / RMF @ MRT	@	@
Maximum Recorded Temperatures		
Circulation Stopped / Time	11-Jul-2006	21:00
Logger On Bottom / Time	12-Jul-2006	6:08
Unit Number / Location	2082	Webster, TX
Recorded By	Javier Espinosa	
Witnessed By	Gilles Guerin, Golam Sarker	

	Run 1	Run 2	Run 3	Run 4
Logging Date				
Run Number				
Depth Driller				
Schlumberger Depth				
Bottom Log Interval				
Top Log Interval				
Casing Driller Size @ Depth	@	@	@	@
Casing Schlumberger				
Bit Size				
Type Fluid In Hole				
MUD Density / Viscosity				
MUD Fluid Loss / PH				
Source Of Sample				
RM @ Measured Temperature	@	@	@	@
RMF @ Measured Temperature	@	@	@	@
RMC @ Measured Temperature	@	@	@	@
Source RMF / RMC				
RM @ MRT / RMF @ MRT	@	@	@	@
Maximum Recorded Temperatures				
Circulation Stopped / Time				
Logger On Bottom / Time				
Unit Number / Location				
Recorded By				
Witnessed By				

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

OTHER SERVICES1	OTHER SERVICES2
OS1: DITE	OS1:
OS2: HLDS	OS2:
OS3: APS	OS3:
OS4:	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
All parameters and presentations as per client request	
Tool ran as per tool sketch below	
HLDS caliper closed at 1002 mbrf to avoid tool damage	

RUN 1			RUN 2		
SERVICE ORDER #:			SERVICE ORDER #:		
PROGRAM VERSION: 12C0-301			PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1 — RUN 2

SURFACE EQUIPMENT

SFT-281 6250
SFT-178 6250
GSR-U 135
WITM (DTS)-A

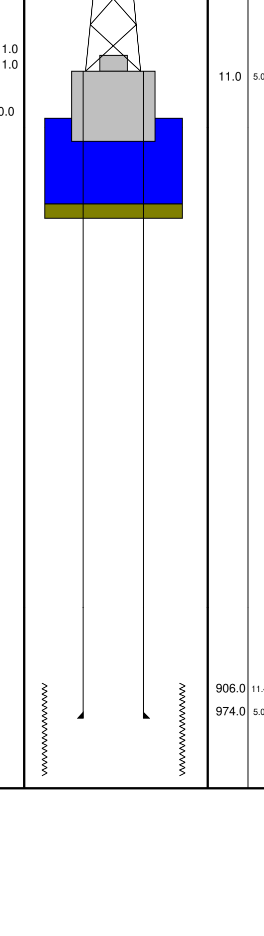
DOWNHOLE EQUIPMENT

Tool	Sensors	Offset	Length
LEH-QT / LEH-QT			28.99
DTC-H / ECH-KC	CTEM; TelStatus; ToolStatu	27.82; 27.19	28.10
HNGS-BA / HNGS-BA 194 / HNSH-BA 204	Upper_1; Lower_2	26.49; 26.27	27.19
HNGC-B / HNGH-A 115	HNGC Stat	24.15	24.69
AH-191			23.62
ILE-D / ILE-D			23.32
APS-C / APH-AC 22 / APS-C 22 / MNTR-F 4185	Status; Minitron; Near TD; Near Arr; Near; Far Arr; Far; Far TD	18.43; 18.36; 18.23; 18.13	20.88
AH-190			16.93
LDSC-B / LDSH-A 333	LDSC Stat	16.10	16.63
HLDS / GSR-Z 2326 / HLDV-D 35 / HLDS-D 45 / HEH-H 35 / HLDP-C 45	Caliper; SS LS Status	11.51	15.56
DTA-A / ECH-KE / DTA-A			10.74
DIT-E / DIC-EB 335 / MIH-ZA 342 / DIS-HB 129	SP; Deep Ind; Aux Meas SFL; Med Ind; Status HV DF; Tension	3.15; 2.90; 1.98; 1.83; 0.00	9.52

TOOL ZERO

MAXIMUM STRING DIAMETER 3.88 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

Production String	OD (in)	ID	MD (m)	Well Schematic	MD (m)	OD (in)	ID	Casing String
Kelly Bushing Elevation			11.0					
Derrick Floor Elevation			11.0		11.0	5.000		Casing String
Mean Sea Level			0.0					
					906.0	11.438		Sea Floor
					974.0	5.000		Drill Pipe



Schlumberger

MAIN PASS

MAXIS Field Log

Company: Lamont Doherty — Well: NGHP-01-14A

Output DLIS Files

DEFAULT	PI_LDL_APS_NGS_006LUP	FN:6	PRODUCER	12-Jul-2006 06:03	1088.1 M	862.4 M
REDUCED	PI_LDL_APS_NGS_006LUP	FN:7	PRODUCER	12-Jul-2006 06:03	1088.1 M	862.4 M

OP System Version: 12C0-301

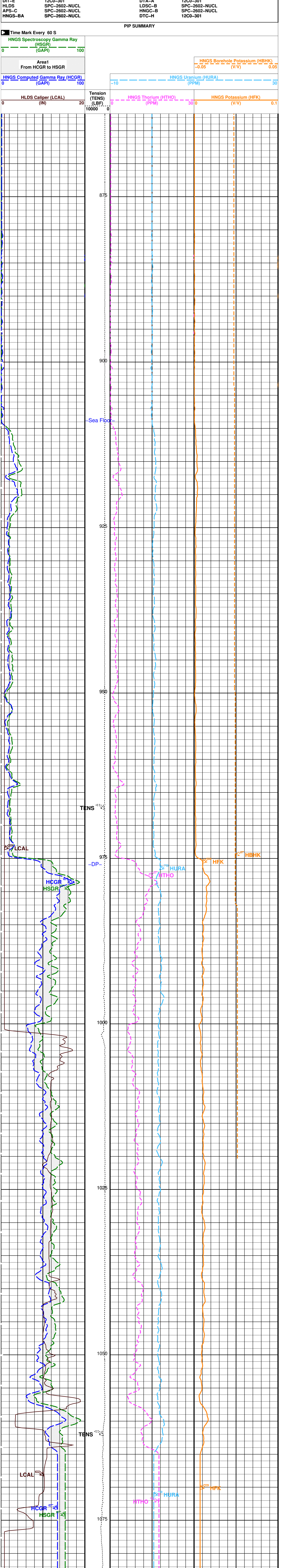
MCM

DIT-E	12C0-301	DTA-A	12C0-301
HLDS	SPC-2602-NUCL	LDSC-B	SPC-2602-NUCL
APS-C	SPC-2602-NUCL	HNGC-B	SPC-2602-NUCL
HNGS-BA	SPC-2602-NUCL	DTC-H	12C0-301

PIP SUMMARY

Time Mark Every 60 S

HNGS Spectroscopy Gamma Ray (HSGR) 0 (GAPI) 100
Area1 From HCGR to HSGR
HNGS Computed Gamma Ray (HCGR) 0 (GAPI) 100
HLDS Caliper (LCAL) 0 (IN) 20
Tension (TENS) (LBF) 10000 0
HNGS Borehole Potassium (HBHK) -0.05 (V/V) 0.05
HNGS Uranium (HURA) -10 (PPM) 30
HNGS Thorium (HTHO) 0 (PPM) 30
HNGS Potassium (HFK) 0 (V/V) 0.1



HLDS Caliper (LCAL) 0 (IN) 20
Tension (TENS) (LBF) 10000 0
HNGS Thorium (HTHO) 0 (PPM) 30
HNGS Potassium (HFK) 0 (V/V) 0.1
HNGS Computed Gamma Ray (HCGR) 0 (GAPI) 100
HNGS Uranium (HURA) -10 (PPM) 30
Area1 From HCGR to HSGR
HNGS Borehole Potassium (HBHK) -0.05 (V/V) 0.05
HNGS Spectroscopy Gamma Ray (HSGR) 0 (GAPI) 100

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	DIT-E: Dual Induction - E		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
	APS-C: Accelerator-Porosity Tool		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
	HNGS-BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	BS	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.00240838	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.883382	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.918483	
	System and Miscellaneous		
BS	Bit Size	11.438	IN
DFD	Drilling Fluid Density	1.07	G/C3

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 12-Jul-2006 06:03

OP System Version: 12C0-301

MCM

DIT-E	12C0-301	DTA-A	12C0-301
HLDS	SPC-2602-NUCL	LDSC-B	SPC-2602-NUCL
APS-C	SPC-2602-NUCL	HNGC-B	SPC-2602-NUCL
HNGS-BA	SPC-2602-NUCL	DTC-H	12C0-301

Output DLIS Files

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REDUCED	PI_LDL_APS_NGS_006LUP	FN:7	PRODUCER	12-Jul-2006 06:03

Company: Lamont Doherty
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RIG Joides Resolution
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