Schlumberger

Company: Lamont Doherty

Well: ODP Leg 203 Site1243B

Field: Equatorial Pacific IMO

Country: Panama   Ocean: Pacific

Country: Panama
Field: Equatorial Pacific IMO
Location: Rig...Joides Resolution
Well: ODP Leg 203 Site1243B
Company: Lamont Doherty

Phasor Induction
Natural Gamma Ray
HLDS/APS Porosity

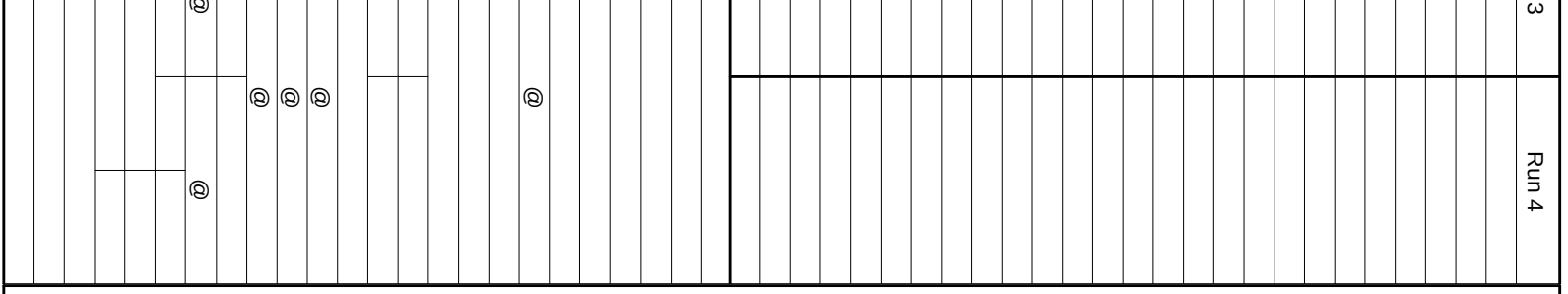
LOCATION

Rig...Joides Resolution	Elev.:	K.B.	11.3 m
Lat: N 5 Deg 18.0551'		G.L.	-3868 m
Long: W 110 Deg 4.2542'		D.F.	11 m
Permanent Datum: MSL	Elev.:	0 m	
Log Measured From: DES	11.3 m	above Perm. Datum	
Drilling Measured From: DES			

API Serial No.	Max. Hole Devi. 0 deg	Longitude	Latitude

	Run 1	Run 2	Run

Logging Date	23-Jun-2002		
Run Number	1		
Depth Driller	4063.2 m		
Schlumberger Depth	4049 m		
Bottom Log Interval	4044 m		
Top Log Interval	3968 m		
Casing Driller Size @ Depth	0.000 in @ 3947 m	@	@
Casing Schlumberger	3950 m		
Bit Size	9.875 in		
Type Fluid In Hole	Sepiolite		
MUD Density / Viscosity	1.1 g/cm3		
MUD Fluid Loss / PH			
MUD Source Of Sample	Mudpit		
RM @ Measured Temperature	0.250 ohm.m @ 30 degC	@	@
RMF @ Measured Temperature	@	@	@
RMC @ Measured Temperature	@	@	@
Source RMF / RMC			
RM @ MRT / RMF @ MRT	@ / @	@ / @	@ / @
Maximum Recorded Temperatures			
Circulation Stopped / Time	23-Jun-2002 / 13:00		
Logger On Bottom / Time	23-Jun-2002 / 20:48		
Unit Number / Location	99 / Houston ODP		
Recorded By	K. Swain		
Witnessed By	A. Buysch		



DISCLAIMER

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OTHER SERVICES1	OTHER SERVICES2
OS1: HLDS/APS/HNGS	OS1:
OS2: FMS/DSST	OS2:
OS3: WST	OS3:
OS4:	OS4:
OS5:	OS5:

REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Hole cored with RCB.	
Sea Floor at 3968 mbrf per HLDS density curve.	
Log measured in meters below rig floor.	
Lamont temperature tool was run but no data was recovered so no official	
bottom hole temperature is given.	
Wireline heave compensator used on all runs.	
Sepiolite mud was used to displace the hole.	
Driller TD=4063mbrf	
Schlumberger TD=4049mbrf	
Drill pipe Schlumberger=3950mbrf.	
HNGS calibration shows a weak stabilization source but does not affect	
calibration or log operation.	

RUN 1

SERVICE ORDER #:
PROGRAM VERSION: 10C0-306
FLUID LEVEL:

LOGGED INTERVAL	START	STOP

RUN 2

SERVICE ORDER #:
PROGRAM VERSION:
FLUID LEVEL:

LOGGED INTERVAL	START	STOP

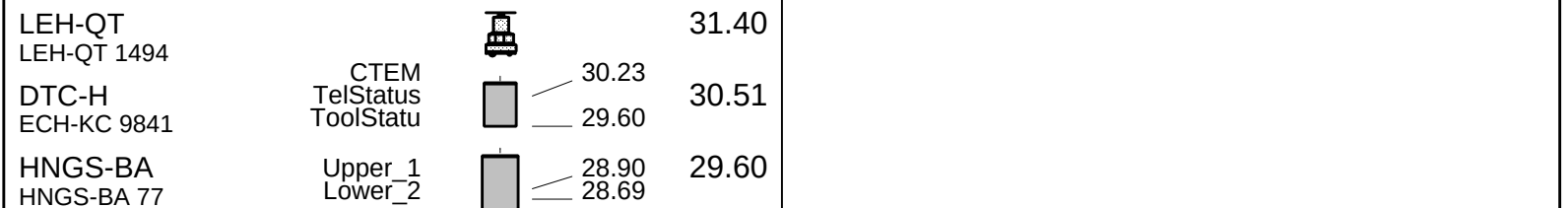
EQUIPMENT DESCRIPTION

RUN 1

SURFACE EQUIPMENT

SFT-281 24
SFT-178 4722
GSR-U 135
WITM (DTS)-A

DOWNHOLE EQUIPMENT



RUN 2

HNSH-BA 79

ILE-D 27.10
ILE-D 25

Status
Minitron
Near TD
Near Arr
Near
Far Arr
Far
Far TD

APS-BA 24.66
APS-BA 22
APH-AC 22
MNTR-F 4185

22.22
22.14
22.01
21.91

NPLC-B 20.72
NPLC-B 79
NPH-B 82

Status 19.49

HLDS 18.27
GSR-Z 1846
HLDV-D 35
HLDS-D 35
HEH-H 35
HLDP-C 35

Caliper
SS LS Status 14.22

DTA-A 13.45
ECH-KE 8455
DTA-A 8261

DIT-E 12.24
DIC-EB 438
MIH-ZA 417
DIS-HB 442

SP 5.86
Deep Ind 5.61
Aux Meas SFL 4.69
Med Ind 4.54

Status 2.71

AH-tap 2.71
AH-tap

DF
Tension HV 0.00

TOOL ZERO

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

Input DLIS Files

DEFAULT	PI_LDL_APS_NGS_007LUP	FN:8	PRODUCER	23-Jun-2002 20:48	4050.8 M	3830.0 M

Output DLIS Files

DEFAULT	PI_LDL_APS_NGS_031PUP	FN:30	PRODUCER	26-Jun-2002 20:57	4050.8 M	3836.1 M
RED2	PI_LDL_APS_NGS_031PUP	FN:31	PRODUCER	26-Jun-2002 20:57	4050.8 M	3836.1 M

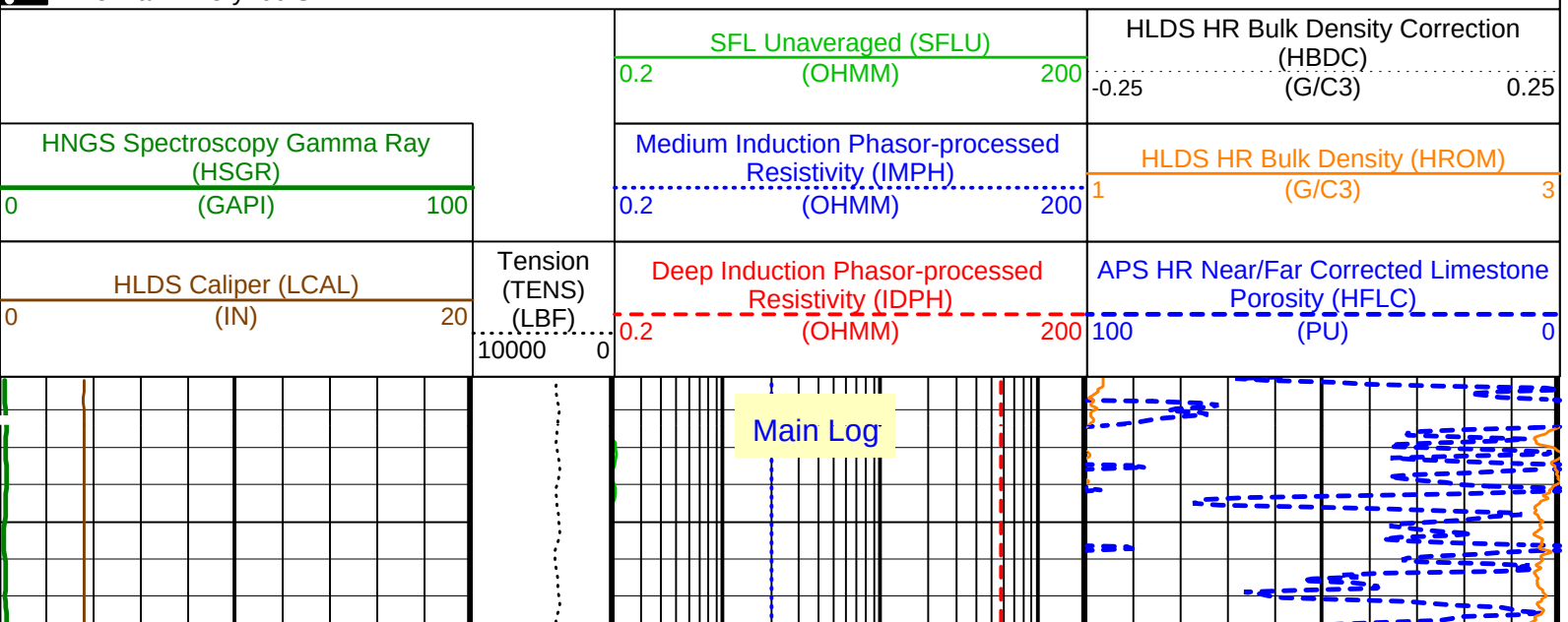
OP System Version: 10C0-306

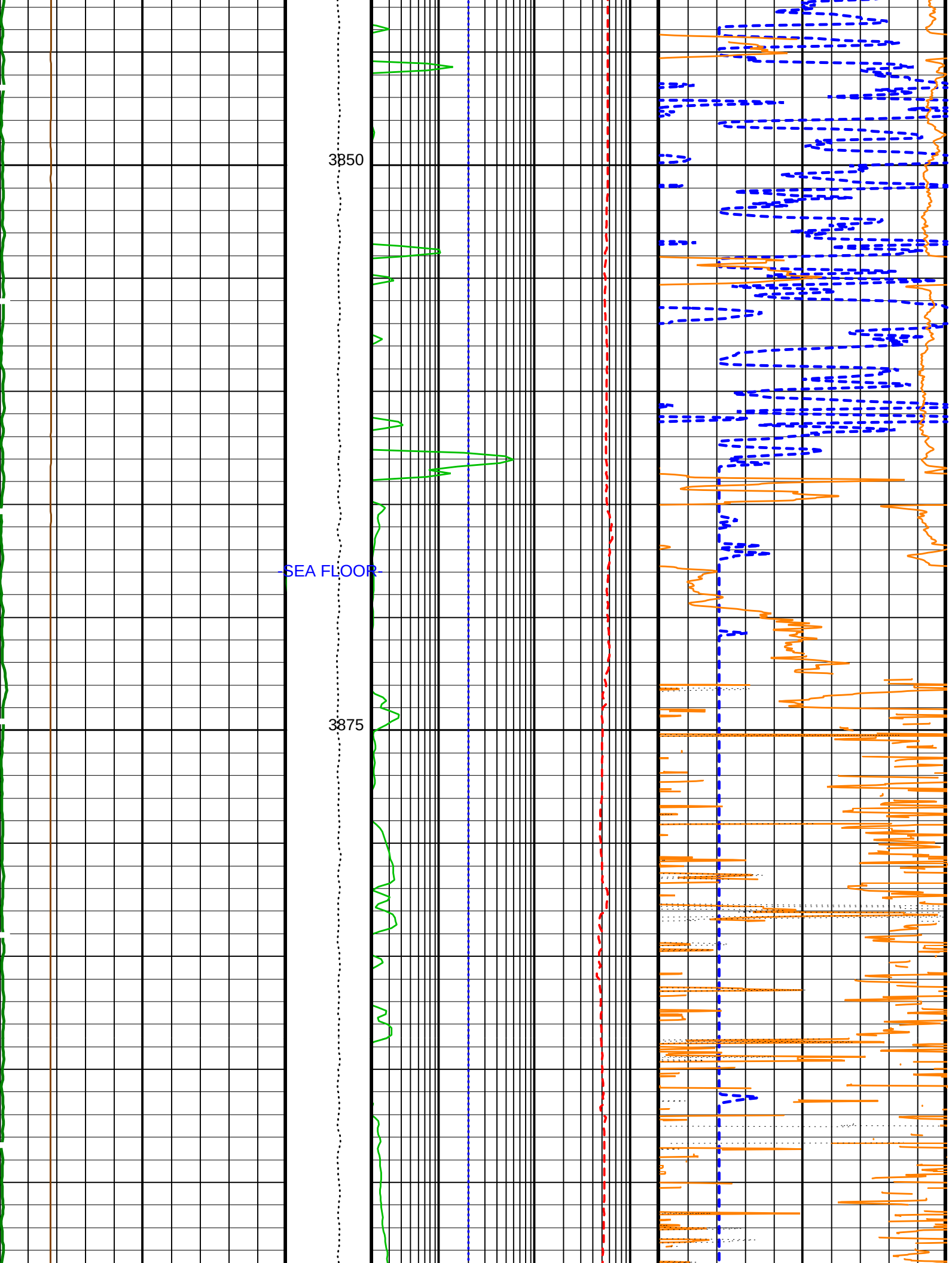
MCM

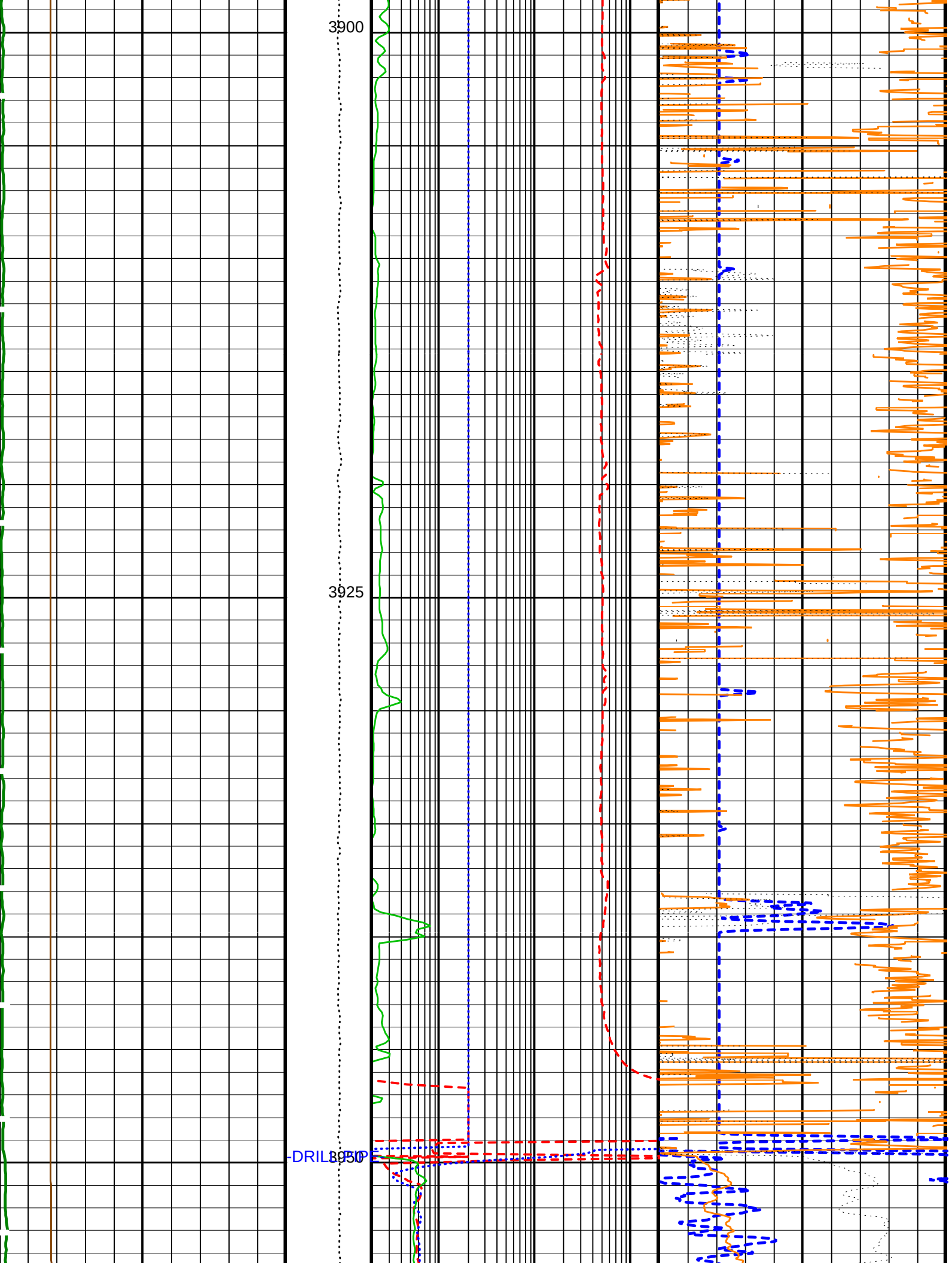
DIT-E	10C0-306	DTA-A	10C0-306
HLDS	OP10-KP1	NPLC-B	OP10-KP1
APS-BA	OP10-KP1	HNGS-BA	OP10-KP1
DTC-H	10C0-306		

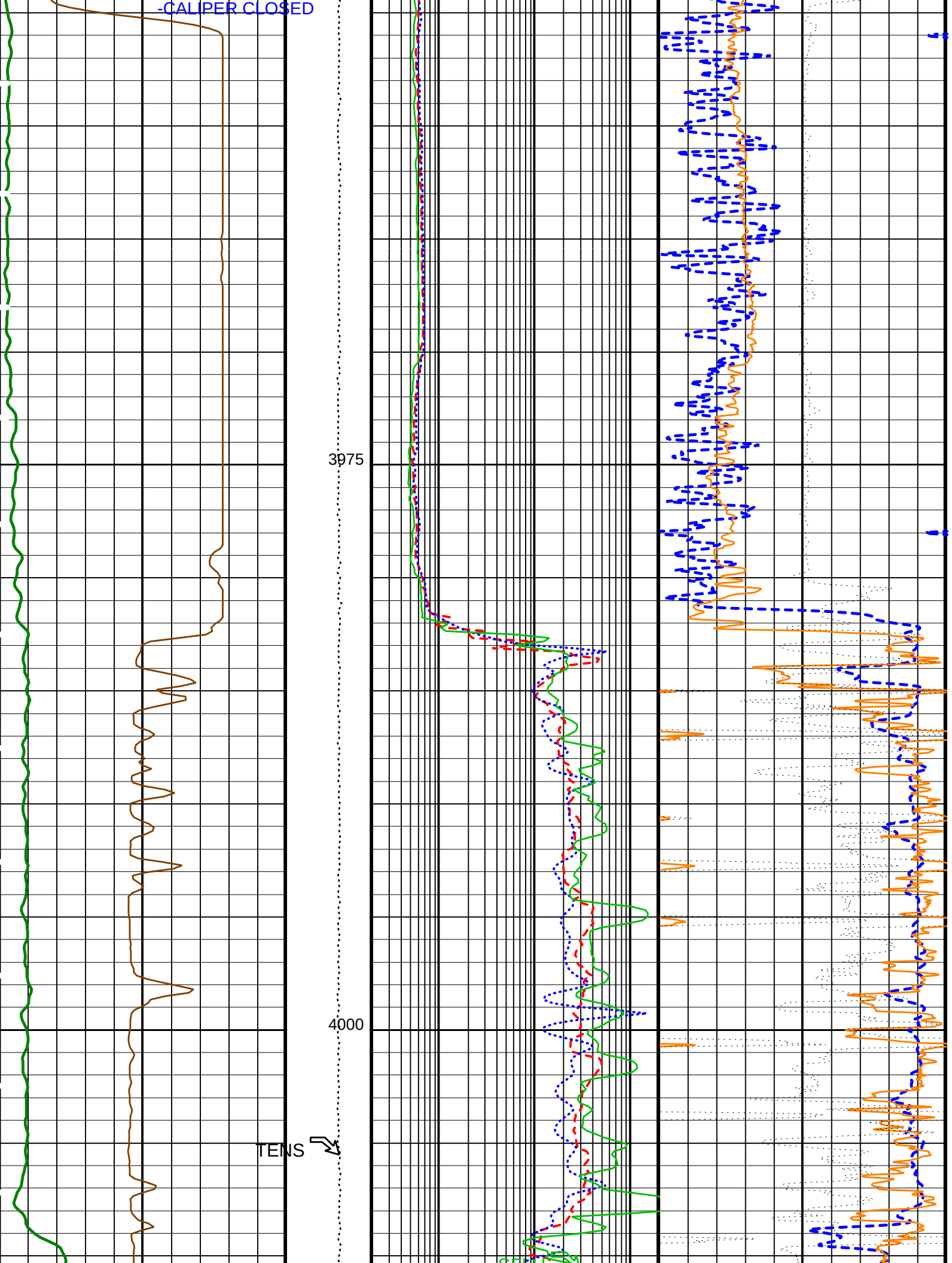
PIP SUMMARY

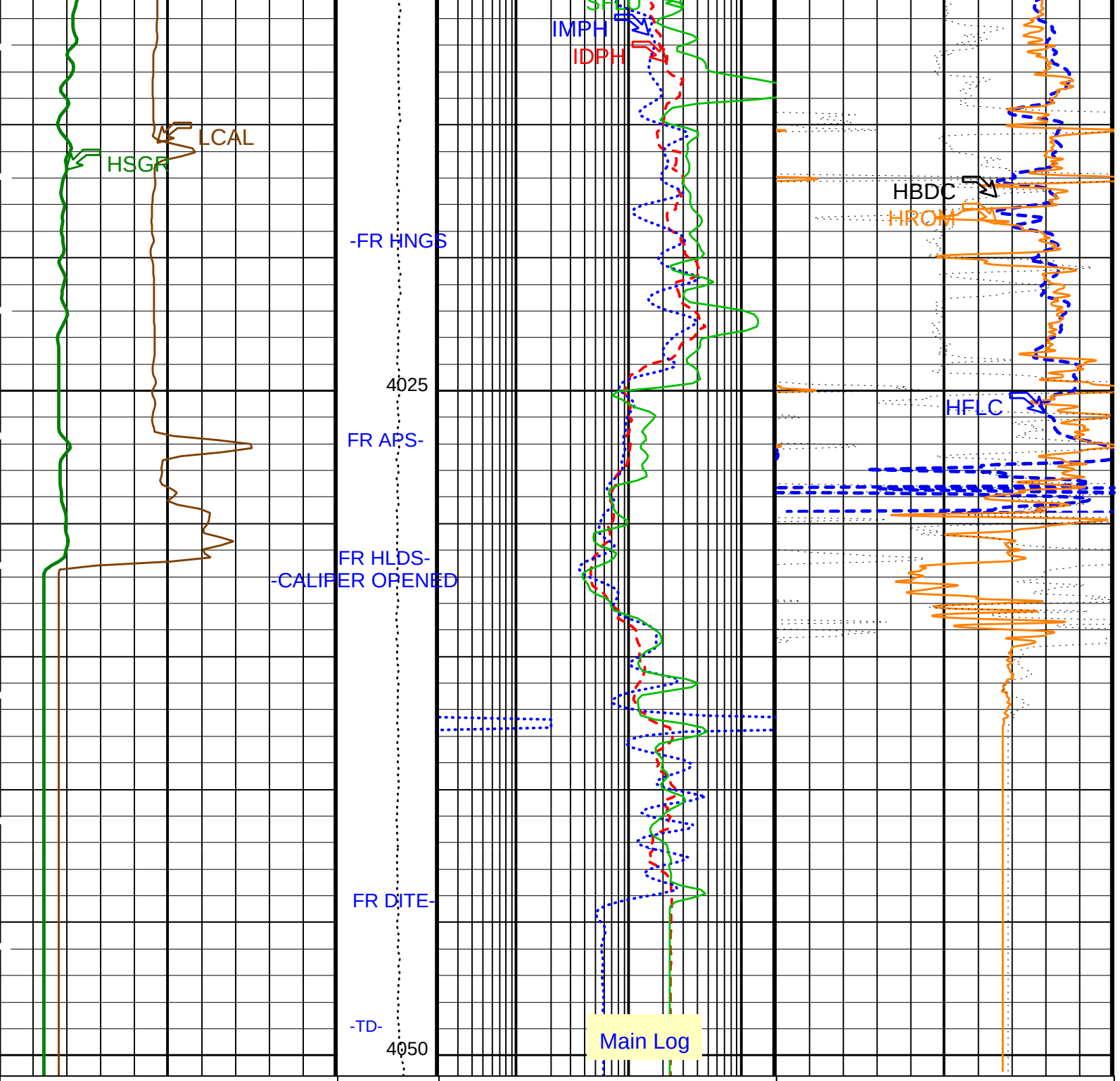
Time Mark Every 60 S




3850
-SEA FLOOR-
3875


3900
3925
3950
DRILL BIT


-CALIPER CLOSED
3975
4000
TENS



HLDS Caliper (LCAL) 0 (IN) 20	Tension (TENS) (LBF) 10000 0	Deep Induction Phasor-processed Resistivity (IDPH) 0.2 (OHMM) 200
HNGS Spectroscopy Gamma Ray (HSGR) 0 (GAPI) 100		Medium Induction Phasor-processed Resistivity (IMPH) 0.2 (OHMM) 200
		SFL Unaveraged (SFLU) 0.2 (OHMM) 200

APS HR Near/Far Corrected Limestone Porosity (HFLC) 100 (PU) 0	
HLDS HR Bulk Density (HROM) 1 (G/C3) 3	
HLDS HR Bulk Density Correction (HBDC) -0.25 (G/C3) 0.25	

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value

	DIT-E: Dual Induction - E		
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	100	DEGC
DGF1	Deep 10 kHz Gain Factor	0.995593	
DGF2	Deep 20 kHz Gain Factor	1.00789	
DGF4	Deep 40 kHz Gain Factor	1.02614	
DPH1	Deep 10 kHz Phase Shift	0.114289	DEG
DPH2	Deep 20 kHz Phase Shift	-0.152394	DEG
DPH4	Deep 40 kHz Phase Shift	-1.42629	DEG
DRE1	Deep Real 10 kHz Sonde Error Correction	44.9501	MM/M
DRE2	Deep Real 20 kHz Sonde Error Correction	16.357	MM/M
DRE4	Deep Real 40 kHz Sonde Error Correction	4.69026	MM/M
DRIM	DIT-E Radial Invasion Mode	Rxo>Rt	
DSR1	Deep Sigma Reference (10 kHz)	7637	MM/M
DSR2	Deep Sigma Reference (20 kHz)	1843	MM/M
DSR4	Deep Sigma Reference (40 kHz)	405	MM/M
DSTA	DIT-E Transversal Standoff	0	IN
DXE1	Deep Quad 10 kHz Sonde Error Correction	108.903	MM/M
DXE2	Deep Quad 20 kHz Sonde Error Correction	64.6326	MM/M
DXE4	Deep Quad 40 kHz Sonde Error Correction	46.096	MM/M
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
IFRS	DIT-E Induction Frequency Selector	20	
IPHA	DIT-E Phasor Processing Mode	ALL	
IPRO	DIT-E Induction Processing Selector	PHASOR	
ITEN	DIT-E Temperature Enable	ENABLE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MGF1	Medium 10 kHz Gain Factor	1.02182	
MGF2	Medium 20 kHz Gain Factor	1.02964	
MGF4	Medium 40 kHz Gain Factor	1.06122	
MPH1	Medium 10 kHz Phase Shift	-0.255819	DEG
MPH2	Medium 20 kHz Phase Shift	-0.933067	DEG
MPH4	Medium 40 kHz Phase Shift	-2.46117	DEG
MRE1	Medium Real 10 kHz Sonde Error Correction	20.7292	MM/M
MRE2	Medium Real 20 kHz Sonde Error Correction	-1.78642	MM/M
MRE4	Medium Real 40 kHz Sonde Error Correction	-10.4594	MM/M
MSR1	Medium Sigma Reference (10 kHz)	13520	MM/M
MSR2	Medium Sigma Reference (20 kHz)	3250	MM/M
MSR4	Medium Sigma Reference (40 kHz)	685	MM/M
MXE1	Medium Quad 10 kHz Sonde Error Correction	-105.752	MM/M
MXE2	Medium Quad 20 kHz Sonde Error Correction	-34.2041	MM/M
MXE4	Medium Quad 40 kHz Sonde Error Correction	11.4521	MM/M
SBR	Shoulder Bed Resistivity Factor	1	OHMM
SFCR	SFL Channel Ratio	1000	
SFLE	SFL Enable	ENABLE	
SHT	Surface Hole Temperature	20	DEGC
SPAE	DIT-E SPARC Processing Enable	ENABLE	
SPNV	SP Next Value	0	MV
	HLDS: Hostile Litho-Density Sonde		
CLCL	HLDS LS Control Loop Controller Mode	AUTO_DEFAULT	
CLCS	HLDS SS Control Loop Controller Mode	AUTO_DEFAULT	
CLLS	HLDS Mode Loop Long Spacing	AUTO	
CLSS	HLDS Mode Loop Short Spacing	AUTO	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
FD	Fluid Density	1	G/C3
LATC	HLDS Activation Correction	ON	
LLDL	HLDS LS Low Level Discriminator DAC	14000	
LLDS	HLDS SS Low Level Discriminator DAC	14000	
LLML	HLDS LS Low Level Discriminator Mode	AUTO	
LLMS	HLDS SS Low Level Discriminator Mode	AUTO	
MDEN	Matrix Density	2.71	G/C3
PHVL	HLDS Long Spacing High Voltage Setting	1000	V
PHVS	HLDS Short Spacing High Voltage Setting	1000	V
PSDL	HLDS LS Pulse Shape Compensation DAC	16000	
PSDS	HLDS SS Pulse Shape Compensation DAC	16000	
PSML	HLDS LS Pulse Shape Compensation Mode	AUTO	
PSMS	HLDS SS Pulse Shape Compensation Mode	AUTO	
	NPLC-B: Nuclear Porosity Lithology Cartridge - B		
NOTS	NPLC Old Temperature Sensor	NO	
	APS-BA: Accelerator-Porosity Tool		
	APS Software Version	5	
AASD	APS Thermal and Array Detectors High Voltage Setting	1968.98	V
ABOS	APS Neutron Burst-Off Background Subtraction Switch	ON	
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2052.03	V
AHCS	APS Holesize Correction Source	GCSE	
AHSS	APS Holesize Correction Switch	ON	
AMTY	APS Environmental Corrections Mud Type	WaterBaseBarite	
ANSD	APS Near Detector High Voltage Setting	1748.3	V
AOTS	APS Old Temperature Sensor Switch	NO	

ASOS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	OFF	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	100	DEGC
DPPM	Density Porosity Processing Mode	HIRS	
FSAL	Formation Salinity	-50000	PPM
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
NARC	APS Near/Array Calibration Ratio	1.06249	
NFRC	APS Near/Far Calibration Ratio	0.899189	
SHT	Surface Hole Temperature	20	DEGC
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	
BHT	Bottom Hole Temperature (used in calculations)	100	DEGC
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	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.00686141	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
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	
SHT	Surface Hole Temperature	20	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.893746	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.35167	
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	0.000	IN
CWEI	Casing Weight	0.00	LB/F
DFD	Drilling Fluid Density	1.10	G/C3
DO	Depth Offset for Playback	0.0	M
MST	Mud Sample Temperature	30.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	4049	M
TDD	Total Depth - Driller	4063.20	M
TDL	Total Depth - Logger	4049.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripleCombo Vertical Scale: 1:200 Graphics File Created: 26-Jun-2002 20:57

OP System Version: 10C0-306

MCM

DIT-E	10C0-306	DTA-A	10C0-306
HLDS	OP10-KP1	NPLC-B	OP10-KP1
APS-BA	OP10-KP1	HNGS-BA	OP10-KP1
DTC-H	10C0-306		

Input DLIS Files

DEFAULT	PI_LDL_APS_NGS_007LUP	FN:8	PRODUCER	23-Jun-2002 20:48	4050.8 M	3830.0 M

Output DLIS Files

DEFAULT	PI_LDL_APS_NGS_031PUP	FN:30	PRODUCER	26-Jun-2002 20:57
RED2	PI_LDL_APS_NGS_031PUP	FN:31	PRODUCER	26-Jun-2002 20:57

Input DLIS Files

DEFAULT	PI_LDL_APS_NGS_008LUP	FN:10	PRODUCER	23-Jun-2002 21:36	4050.8 M	3948.2 M

Output DLIS Files

DEFAULT	PI_LDL_APS_NGS_032PUP	FN:32	PRODUCER	26-Jun-2002 22:56	4050.8 M	3954.9 M
RED2	PI_LDL_APS_NGS_032PUP	FN:33	PRODUCER	26-Jun-2002 22:56	4050.8 M	3954.9 M

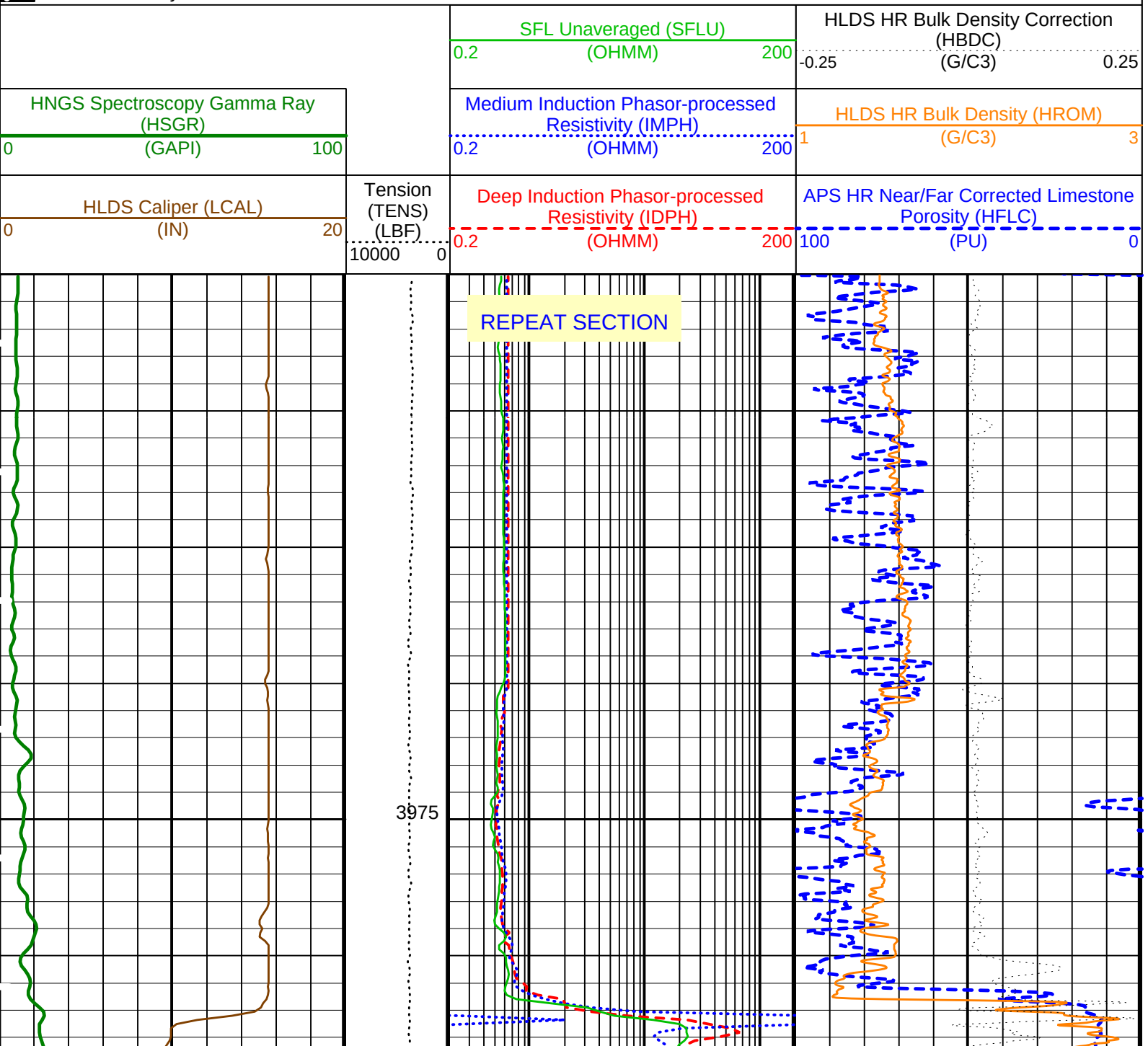
OP System Version: 10C0-306

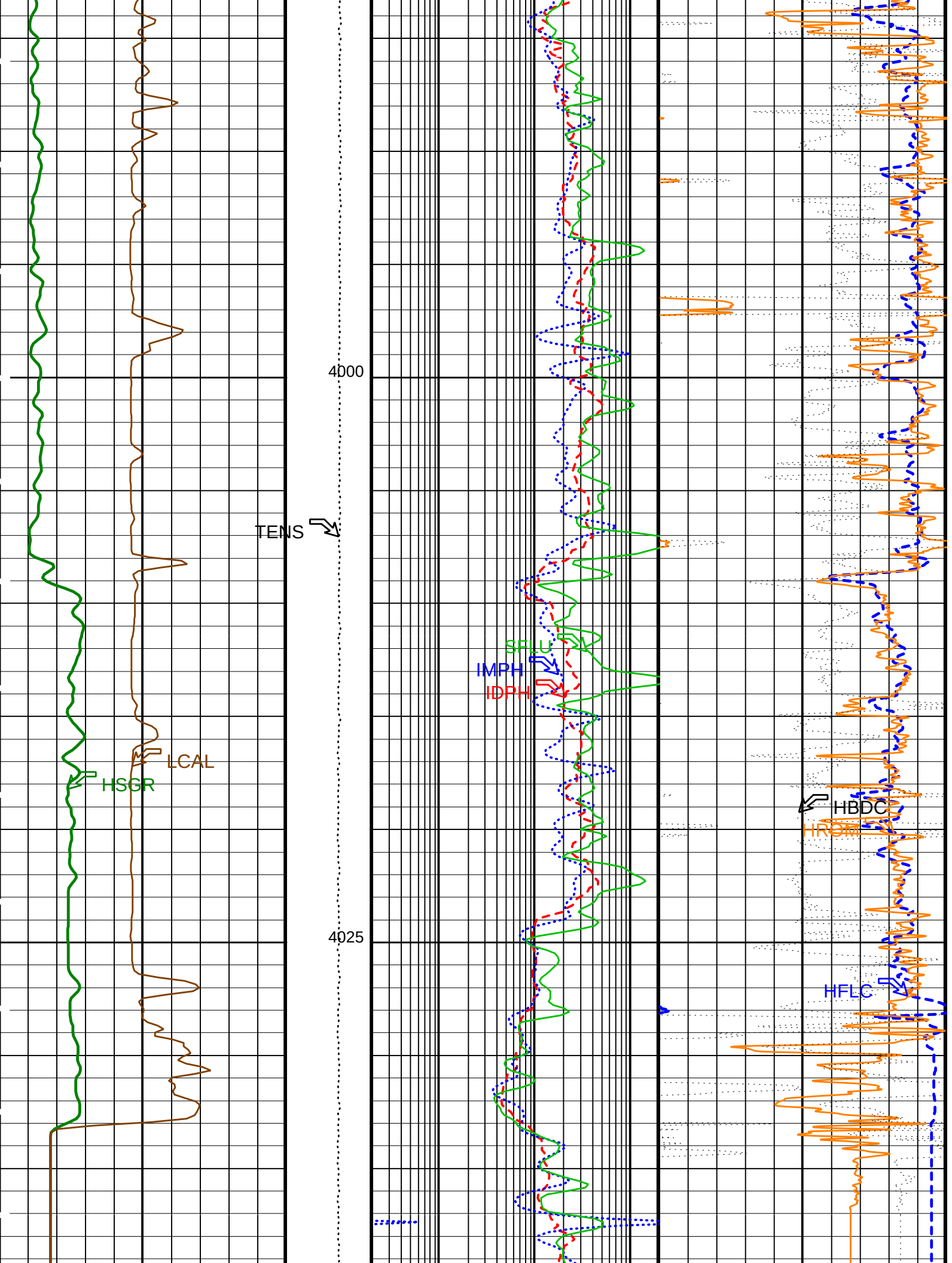
MCM

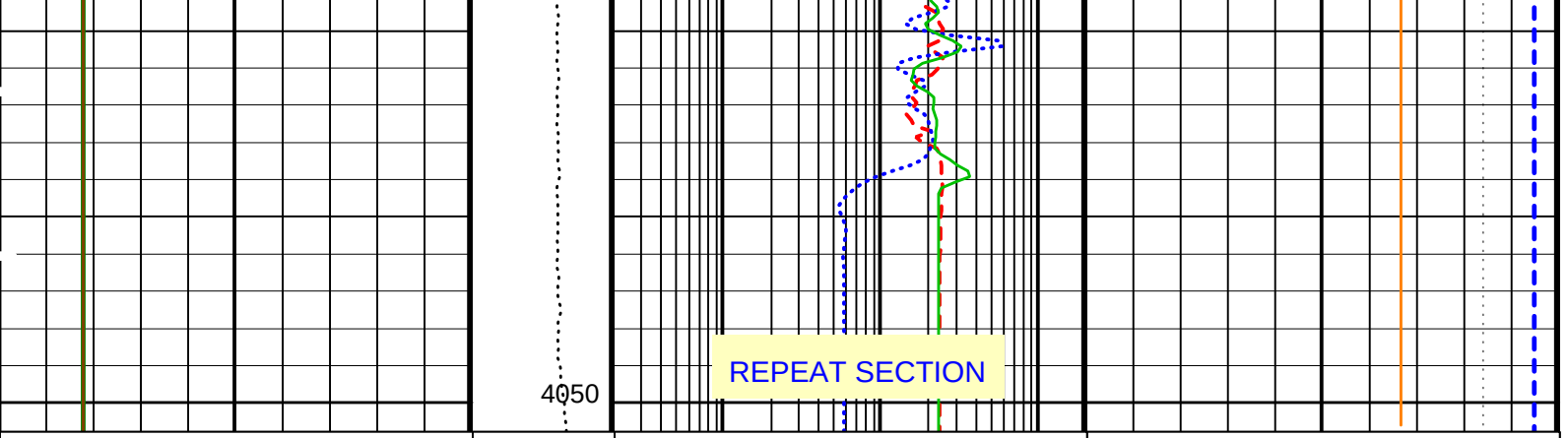
DIT-E	10C0-306	DTA-A	10C0-306
HLDS	OP10-KP1	NPLC-B	OP10-KP1
APS-BA	OP10-KP1	HNGS-BA	OP10-KP1
DTC-H	10C0-306		

PIP SUMMARY

Time Mark Every 60 S




4000
TENS
SFLU
IMPH
IDPH
LCAL
HSGR
HBDC
HROM
4025
HFLC



Parameters

DLIS Name	Description	Value	
	DIT-E: Dual Induction - E		
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	100	DEGC
DGF1	Deep 10 kHz Gain Factor	0.995593	
DGF2	Deep 20 kHz Gain Factor	1.00789	
DGF4	Deep 40 kHz Gain Factor	1.02614	
DPH1	Deep 10 kHz Phase Shift	0.114289	DEG
DPH2	Deep 20 kHz Phase Shift	-0.152394	DEG
DPH4	Deep 40 kHz Phase Shift	-1.42629	DEG
DRE1	Deep Real 10 kHz Sonde Error Correction	44.9501	MM/M
DRE2	Deep Real 20 kHz Sonde Error Correction	16.357	MM/M
DRE4	Deep Real 40 kHz Sonde Error Correction	4.69026	MM/M
DRIM	DIT-E Radial Invasion Mode	Rxo>Rt	
DSR1	Deep Sigma Reference (10 kHz)	7637	MM/M
DSR2	Deep Sigma Reference (20 kHz)	1843	MM/M
DSR4	Deep Sigma Reference (40 kHz)	405	MM/M
DSTA	DIT-E Transversal Standoff	0	IN
DXE1	Deep Quad 10 kHz Sonde Error Correction	108.903	MM/M
DXE2	Deep Quad 20 kHz Sonde Error Correction	64.6326	MM/M
DXE4	Deep Quad 40 kHz Sonde Error Correction	46.096	MM/M
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
IFRS	DIT-E Induction Frequency Selector	20	
IPHA	DIT-E Phasor Processing Mode	ALL	
IPRO	DIT-E Induction Processing Selector	PHASOR	
ITEN	DIT-E Temperature Enable	ENABLE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MGF1	Medium 10 kHz Gain Factor	1.02182	
MGF2	Medium 20 kHz Gain Factor	1.02964	
MGF4	Medium 40 kHz Gain Factor	1.06122	
MPH1	Medium 10 kHz Phase Shift	-0.255819	DEG
MPH2	Medium 20 kHz Phase Shift	-0.933067	DEG
MPH4	Medium 40 kHz Phase Shift	-2.46117	DEG
MRE1	Medium Real 10 kHz Sonde Error Correction	20.7292	MM/M
MRE2	Medium Real 20 kHz Sonde Error Correction	-1.78642	MM/M
MRE4	Medium Real 40 kHz Sonde Error Correction	-10.4594	MM/M
MSR1	Medium Sigma Reference (10 kHz)	13520	MM/M
MSR2	Medium Sigma Reference (20 kHz)	3250	MM/M
MSR4	Medium Sigma Reference (40 kHz)	685	MM/M
MXE1	Medium Quad 10 kHz Sonde Error Correction	-105.752	MM/M

MXE2	Medium Quad 20 kHz Sonde Error Correction	-34.2041	MM/M
MXE4	Medium Quad 40 kHz Sonde Error Correction	11.4521	MM/M
SBR	Shoulder Bed Resistivity Factor	1	OHMM
SFCR	SFL Channel Ratio	1000	
SFLE	SFL Enable	ENABLE	
SHT	Surface Hole Temperature	20	DEGC
SPAE	DIT-E SPARC Processing Enable	ENABLE	
SPNV	SP Next Value	0	MV
HLDS: Hostile Litho-Density Sonde			
CLCL	HLDS LS Control Loop Controller Mode	AUTO_DEFAULT	
CLCS	HLDS SS Control Loop Controller Mode	AUTO_DEFAULT	
CLLS	HLDS Mode Loop Long Spacing	AUTO	
CLSS	HLDS Mode Loop Short Spacing	AUTO	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
FD	Fluid Density	1	G/C3
LATC	HLDS Activation Correction	ON	
LLDL	HLDS LS Low Level Discriminator DAC	14000	
LLDS	HLDS SS Low Level Discriminator DAC	14000	
LLML	HLDS LS Low Level Discriminator Mode	AUTO	
LLMS	HLDS SS Low Level Discriminator Mode	AUTO	
MDEN	Matrix Density	2.71	G/C3
PHVL	HLDS Long Spacing High Voltage Setting	1000	V
PHVS	HLDS Short Spacing High Voltage Setting	1000	V
PSDL	HLDS LS Pulse Shape Compensation DAC	16000	
PSDS	HLDS SS Pulse Shape Compensation DAC	16000	
PSML	HLDS LS Pulse Shape Compensation Mode	AUTO	
PSMS	HLDS SS Pulse Shape Compensation Mode	AUTO	
NPLC-B: Nuclear Porosity Lithology Cartridge - B			
NOTS	NPLC Old Temperature Sensor	NO	
APS-BA: Accelerator-Porosity Tool			
	APS Software Version	5	
AASD	APS Thermal and Array Detectors High Voltage Setting	1968.98	V
ABOS	APS Neutron Burst-Off Background Subtraction Switch	ON	
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2052.03	V
AHCS	APS Holesize Correction Source	GCSE	
AHSS	APS Holesize Correction Switch	ON	
AMTY	APS Environmental Corrections Mud Type	WaterBaseBarite	
ANSD	APS Near Detector High Voltage Setting	1748.3	V
AOTS	APS Old Temperature Sensor Switch	NO	
ASOS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	OFF	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	100	DEGC
DPPM	Density Porosity Processing Mode	HIRS	
FSAL	Formation Salinity	-50000	PPM
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
NARC	APS Near/Array Calibration Ratio	1.06249	
NFRC	APS Near/Far Calibration Ratio	0.899189	
SHT	Surface Hole Temperature	20	DEGC
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	
BHT	Bottom Hole Temperature (used in calculations)	100	DEGC
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	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.00686141	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
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	
SHT	Surface Hole Temperature	20	DEGC
TPOS	Tool Position	ECCE	

VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.893746	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.35167	

System and Miscellaneous

ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	0.000	IN
CWEI	Casing Weight	0.00	LB/F
DFD	Drilling Fluid Density	1.10	G/C3
DO	Depth Offset for Playback	0.0	M
MST	Mud Sample Temperature	30.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	4049	M
TDD	Total Depth - Driller	4063.20	M
TDL	Total Depth - Logger	4049.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripleCombo Vertical Scale: 1:200 Graphics File Created: 26-Jun-2002 22:56

OP System Version: 10C0-306

MCM

DIT-E	10C0-306	DTA-A	10C0-306
HLDS	OP10-KP1	NPLC-B	OP10-KP1
APS-BA	OP10-KP1	HNGS-BA	OP10-KP1
DTC-H	10C0-306		

Input DLIS Files

DEFAULT	PI_LDL_APS_NGS_008LUP	FN:10	PRODUCER	23-Jun-2002 21:36	4050.8 M	3948.2 M

Output DLIS Files

DEFAULT	PI_LDL_APS_NGS_032PUP	FN:32	PRODUCER	26-Jun-2002 22:56
RED2	PI_LDL_APS_NGS_032PUP	FN:33	PRODUCER	26-Jun-2002 22:56

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Hostile Litho-Density Sonde Wellsite Calibration - Background Measurement							
Master: 10-Jun-2002 14:44 Before: 16-Jun-2002 1:29							
SS Cs Resolution Bkg	9.000	8.597	8.483	N/A	N/A	1.800	%
LS Cs Resolution Bkg	9.000	8.877	8.855	N/A	N/A	1.800	%
LSW1 Background	100.0	84.35	83.41	N/A	N/A	3.000	CPS
LSW2 Background	100.0	77.56	77.44	N/A	N/A	3.000	CPS
LSW3 Background	200.0	173.7	172.0	N/A	N/A	6.000	CPS
LSW4 Background	250.0	210.5	208.9	N/A	N/A	7.500	CPS
LSW5 Background	600.0	479.0	478.5	N/A	N/A	18.00	CPS
SSW1 Background	100.0	84.27	84.23	N/A	N/A	3.000	CPS
SSW2 Background	200.0	150.1	150.3	N/A	N/A	6.000	CPS
SSW3 Background	500.0	405.7	401.7	N/A	N/A	15.00	CPS
SSW4 Background	270.0	212.9	215.0	N/A	N/A	8.100	CPS
SSW5 Background	200.0	154.2	157.4	N/A	N/A	6.000	CPS
Hostile Litho-Density Sonde Wellsite Calibration - Aluminum Measurement							
Master: 10-Jun-2002 19:13							
LSW1 Aluminum	600.0	527.6	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	777.6	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	958.6	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	487.5	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	467.5	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2215	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	6437	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	9368	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	4038	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	581.9	N/A	N/A	N/A	N/A	CPS
Hostile Litho-Density Sonde Wellsite Calibration - Lithology Measurement							
Master: 10-Jun-2002 19:08							
LSW1 Iron	400.0	368.0	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	634.5	N/A	N/A	N/A	N/A	CPS

LSW2 Iron	750.0	654.5	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	865.9	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	456.7	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	438.3	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1655	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	5408	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	8603	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3720	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	518.6	N/A	N/A	N/A	N/A	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Caliper Calibration
Before: 16-Jun-2002 1:23

HLDS Caliper Small Ring	12.00	N/A	15.82	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	15.38	N/A	20.89	N/A	N/A	N/A	IN

Accelerator-Porosity Tool Wellsite Calibration - Detector Background
Master: 26-May-2002 23:31 Before: 23-Jun-2002 20:37

Near Det Bkg Cntrate	30.00	31.44	31.62	N/A	N/A	N/A	CPS
Far Det Bkg Cntrate	30.00	32.29	33.97	N/A	N/A	N/A	CPS
Array-1 Det Bkg Cntrate	30.00	28.05	29.84	N/A	N/A	N/A	CPS
Array-2 Det Bkg Cntrate	30.00	30.70	30.52	N/A	N/A	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	31.77	30.80	N/A	N/A	N/A	CPS

Accelerator-Porosity Tool Wellsite Calibration - Calibration Ratios
Master: 26-May-2002 23:32

Near/Far Calibration Ratio	0.9250	0.8992	N/A	N/A	N/A	N/A	
Near/Array Calibration Ratio	1.030	1.062	N/A	N/A	N/A	N/A	
Near/Array Cal Ratio Up/Down	1.000	1.007	N/A	N/A	N/A	N/A	

Accelerator-Porosity Tool Wellsite Calibration - Tank Check
Master: 26-May-2002 23:33

Array-1 Standoff Porosity	11.75	12.00	N/A	N/A	N/A	N/A	PU
Array-2 Standoff Porosity	11.75	11.45	N/A	N/A	N/A	N/A	PU
Average Slowing Down Time	6.000	5.854	N/A	N/A	N/A	N/A	US
Array-1 SDT Ratio Up/Down	1.000	0.9981	N/A	N/A	N/A	N/A	
Array-2 SDT Ratio Up/Down	1.000	0.9978	N/A	N/A	N/A	N/A	
Sigma Formation	27.50	27.57	N/A	N/A	N/A	N/A	CU

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 1 Check
Master: 26-Jun-2002 19:50 Before: 26-Jun-2002 20:00 After: 26-Jun-2002 20:21

Na 511 Peak Loc	40.00	40.53	40.57	40.54	-0.03688	1.000	
Na 511 Peak Res	15.50	16.57	16.35	16.38	0.03455	2.000	%
High Voltage	1150	1202	1203	1203	-0.08899	30.00	V
Na 1785 Peak Loc	142.6	145.8	145.6	145.4	-0.2063	7.000	
Na 1785 Peak Res	8.500	9.282	9.387	9.258	-0.1286	2.000	%
Temperature	15.50	32.17	32.19	32.21	0.01600	N/A	DEGC
Na Count Rate	45.00	35.72	35.35	36.12	0.7698	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 2 Check
Master: 26-Jun-2002 19:50 Before: 26-Jun-2002 20:00 After: 26-Jun-2002 20:21

Na 511 Peak Loc	40.00	40.64	40.57	40.73	0.1571	1.000	
Na 511 Peak Res	15.50	16.86	16.23	16.78	0.5520	2.000	%
High Voltage	1150	1233	1232	1232	-0.2640	30.00	V
Na 1785 Peak Loc	142.6	144.9	144.3	144.5	0.2225	7.000	
Na 1785 Peak Res	8.500	9.410	9.624	10.07	0.4489	2.000	%
Temperature	15.50	31.66	31.72	31.85	0.1242	N/A	DEGC
Na Count Rate	45.00	35.81	35.12	35.81	0.6894	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Ratio Of Detector 1 To Detector 2
Master: 26-Jun-2002 19:50 Before: 26-Jun-2002 20:00 After: 26-Jun-2002 20:21

Coincidence Count Rate Ratio	1.000	0.9971	1.005	1.007	0.001825	0.05000	

Hostile Natural Gamma Ray Sonde Master Calibration - Detector 1 Calibration
Master: 26-Jun-2002 19:36

Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	209.0	--	--	--	--	
Th Peak Res	7.000	7.963	--	--	--	--	%
Background Count Rate	142.5	21.13	--	--	--	--	CPS
Gain Ratio	1.000	0.9809	--	--	--	--	

Hostile Natural Gamma Ray Sonde Master Calibration - Detector 2 Calibration
Master: 26-Jun-2002 19:36

Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	209.8	--	--	--	--	
Th Peak Res	7.000	7.951	--	--	--	--	%
Background Count Rate	142.5	19.47	--	--	--	--	CPS
Gain Ratio	1.000	0.9820	--	--	--	--	

Accelerator-Porosity Tool - Detector Plateau Settings :

Near Detector Plateau Setting ... 1748 V

Near Detector Plateau Setting	1748 V
Far Detector Plateau Setting	2052 V
Array Detector Plateau Setting	1969 V

Dual Induction - E / Equipment Identification

Primary Equipment:		
Dual Induction Sonde	DIS - HB	442
Dual Induction Cartridge	DIC - EB	438
Auxiliary Equipment:		
Mass Isolated Housing	MIH - ZA	417

Hostile Litho-Density Sonde / Equipment Identification

Primary Equipment:		
Hostile Litho Density Sonde	HLDS - D	35
Hostile Litho Density High Voltage	HLDV - D	35
Gamma Source Radioactive	GSR - Z	1846
Auxiliary Equipment:		
Hostile Litho Density Pad	HLDP - C	35
Hostile Litho Density High Voltage Housi	HEH - H	35

Hostile Litho-Density Sonde Wellsite Calibration

Background Measurement

Phase	SS Cs Resolution Bkg %	Value	Phase	LS Cs Resolution Bkg %	Value	Phase	LSW1 Background CPS	Value
Master		8.597	Master		8.877	Master		84.35
Before		8.483	Before		8.855	Before		83.41
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)			7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)			55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)	

Phase	LSW2 Background CPS	Value	Phase	LSW3 Background CPS	Value	Phase	LSW4 Background CPS	Value
Master		77.56	Master		173.7	Master		210.5
Before		77.44	Before		172.0	Before		208.9
	50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)			110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)			140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)	

Phase	LSW5 Background CPS	Value	Phase	SSW1 Background CPS	Value	Phase	SSW2 Background CPS	Value
Master		479.0	Master		84.27	Master		150.1
Before		478.5	Before		84.23	Before		150.3
	330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)			55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)			100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)	

Phase	SSW3 Background CPS	Value	Phase	SSW4 Background CPS	Value	Phase	SSW5 Background CPS	Value
Master		405.7	Master		212.9	Master		154.2
Before		401.7	Before		215.0	Before		157.4
	280.0 (Minimum) 500.0 (Nominal) 700.0 (Maximum)			150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum)			110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum)	

Master: 10-Jun-2002 14:44 Before: 16-Jun-2002 1:29

Hostile Litho-Density Sonde Master Calibration

Detector Background Measurement

Phase	LSW1 Background CPS	Value	Phase	LSW2 Background CPS	Value	Phase	LSW3 Background CPS	Value
Master		84.35	Master		77.56	Master		173.7
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)			50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)			110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)	

Phase	LSW4 Background CPS	Value	Phase	LSW5 Background CPS	Value	Phase	LS Cs Resolution Bkg %	Value
Master		210.5	Master		479.0	Master		8.877
	140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)			330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)			7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)	

Phase	SSW1 Background CPS	Value	Phase	SSW2 Background CPS	Value	Phase	SSW3 Background CPS	Value
Master		84.27	Master		150.1	Master		405.7
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)			100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)			280.0 (Minimum) 500.0 (Nominal) 700.0 (Maximum)	

Phase	SSW4 Background CPS	Value
Master		212.9
150.0 (Minimum)	270.0 (Nominal)	380.0 (Maximum)

Phase	SSW5 Background CPS	Value
Master		154.2
110.0 (Minimum)	200.0 (Nominal)	270.0 (Maximum)

Phase	SS Cs Resolution Bkg %	Value
Master		8.597
7.000 (Minimum)	9.000 (Nominal)	11.00 (Maximum)

Master: 10-Jun-2002 14:44

Hostile Litho-Density Sonde Master Calibration

Detector Aluminum Measurement (bkgd-subtracted)

Phase	LSW1 Aluminum CPS	Value
Master		527.6
420.0 (Minimum)	600.0 (Nominal)	700.0 (Maximum)

Phase	LSW2 Aluminum CPS	Value
Master		777.6
650.0 (Minimum)	900.0 (Nominal)	1050 (Maximum)

Phase	LSW3 Aluminum CPS	Value
Master		958.6
800.0 (Minimum)	1100 (Nominal)	1300 (Maximum)

Phase	LSW4 Aluminum CPS	Value
Master		487.5
410.0 (Minimum)	580.0 (Nominal)	670.0 (Maximum)

Phase	LSW5 Aluminum CPS	Value
Master		467.5
410.0 (Minimum)	570.0 (Nominal)	660.0 (Maximum)

Phase	SSW1 Aluminum CPS	Value
Master		2215
2000 (Minimum)	2800 (Nominal)	3200 (Maximum)

Phase	SSW2 Aluminum CPS	Value
Master		6437
5800 (Minimum)	8000 (Nominal)	9300 (Maximum)

Phase	SSW3 Aluminum CPS	Value
Master		9368
8300 (Minimum)	11600 (Nominal)	13500 (Maximum)

Phase	SSW4 Aluminum CPS	Value
Master		4038
3500 (Minimum)	5000 (Nominal)	5800 (Maximum)

Phase	SSW5 Aluminum CPS	Value
Master		581.9
470.0 (Minimum)	660.0 (Nominal)	770.0 (Maximum)

Master: 10-Jun-2002 19:13

Hostile Litho-Density Sonde Master Calibration

Detector Litholog Measurement (bkgd-subtracted)

Phase	LSW1 Iron CPS	Value
Master		368.0
290.0 (Minimum)	400.0 (Nominal)	470.0 (Maximum)

Phase	LSW2 Iron CPS	Value
Master		634.5
520.0 (Minimum)	730.0 (Nominal)	850.0 (Maximum)

Phase	LSW3 Iron CPS	Value
Master		865.9
720.0 (Minimum)	1000 (Nominal)	1160 (Maximum)

Phase	LSW4 Iron CPS	Value
Master		456.7
370.0 (Minimum)	520.0 (Nominal)	600.0 (Maximum)

Phase	LSW5 Iron CPS	Value
Master		438.3
340.0 (Minimum)	470.0 (Nominal)	550.0 (Maximum)

Phase	SSW1 Iron CPS	Value
Master		1655
1500 (Minimum)	2100 (Nominal)	2400 (Maximum)

Phase	SSW2 Iron CPS	Value
Master		5408
4900 (Minimum)	6800 (Nominal)	7900 (Maximum)

Phase	SSW3 Iron CPS	Value
Master		8603
7800 (Minimum)	10800 (Nominal)	12600 (Maximum)

Phase	SSW4 Iron CPS	Value
Master		3720
3300 (Minimum)	4600 (Nominal)	5400 (Maximum)

Phase	SSW5 Iron CPS	Value
Master		518.6
420.0 (Minimum)	580.0 (Nominal)	680.0 (Maximum)

Master: 10-Jun-2002 19:08

Hostile Litho-Density Sonde Master Calibration

Quality Ratios

Phase	AL CALIBRATION RATIO 1	Value
Master		1.004
0.9000 (Minimum)	1.000 (Nominal)	1.100 (Maximum)

Phase	AL CALIBRATION RATIO 2	Value
Master		2.028
1.800 (Minimum)	2.000 (Nominal)	2.200 (Maximum)

Phase	AL CALIBRATION RATIO 3	Value
Master		0.5525
0.4500 (Minimum)	0.5500 (Nominal)	0.6500 (Maximum)

Phase	AL CALIBRATION RATIO 4	Value
Master		0.4794
0.4000 (Minimum)	0.5000 (Nominal)	0.6000 (Maximum)

Phase	Pad-Wear SS Ratio	Value
Master		0.9931
0.9800 (Minimum)	0.9880 (Nominal)	0.9960 (Maximum)

Phase	Pad-Wear LS Ratio	Value
Master		0.9889
0.9800 (Minimum)	0.9880 (Nominal)	0.9960 (Maximum)

Phase	Pad-Position SS Ratio	Value
Master		1.007
0.9900 (Minimum)	0.9940 (Nominal)	1.015 (Maximum)

Phase	Pad-Position LS Ratio	Value
Master		0.9911
0.9850 (Minimum)	0.9940 (Nominal)	1.010 (Maximum)

Master: 10-Jun-2002 19:00

Nuclear Porosity Lithology Cartridge - B / Equipment Identification

Nuclear Porosity Lithology Cartridge - B / Equipment Identification

Primary Equipment:		
NPLC Cartridge	NPLC - B	79
Auxiliary Equipment:		
NPLC Housing	NPH - B	82

Accelerator-Porosity Tool / Equipment Identification

Primary Equipment:		
Accelerator-Porosity Sonde	APS - BA	22
APS Minitron	MNTR - F	4185
Auxiliary Equipment:		
Accelerator-Porosity Housing	APH - AC	22
APS Calibration Water Tank	SFT - 178	4722
APS Aluminium Calibrator Sleeve	SFT - 281	24

Accelerator-Porosity Tool Wellsite Calibration

Detector Background

Phase	Near Det Bkg Cntrate CPS	Value
Master		31.44
Before		31.62

0 (Minimum) 30.00 (Nominal) 50.00 (Maximum)

Phase	Far Det Bkg Cntrate CPS	Value
Master		32.29
Before		33.97

0 (Minimum) 30.00 (Nominal) 50.00 (Maximum)

Phase	Array-1 Det Bkg Cntrate CPS	Value
Master		28.05
Before		29.84

0 (Minimum) 30.00 (Nominal) 50.00 (Maximum)

Phase	Array-2 Det Bkg Cntrate CPS	Value
Master		30.70
Before		30.52

0 (Minimum) 30.00 (Nominal) 50.00 (Maximum)

Phase	Array Therm Det Bkg Cntrate CPS	Value
Master		31.77
Before		30.80

0 (Minimum) 30.00 (Nominal) 50.00 (Maximum)

Master: 26-May-2002 23:31 Before: 23-Jun-2002 20:37

Accelerator-Porosity Tool Wellsite Calibration

Calibration Ratios

Phase	Near/Far Calibration Ratio	Value
Master		0.8992

0.8000 (Minimum) 0.9250 (Nominal) 1.050 (Maximum)

Phase	Near/Array Calibration Ratio	Value
Master		1.062

0.9000 (Minimum) 1.030 (Nominal) 1.170 (Maximum)

Phase	Near/Array Cal Ratio Up/Down	Value
Master		1.007

0.9700 (Minimum) 1.000 (Nominal) 1.030 (Maximum)

Master: 26-May-2002 23:32

Accelerator-Porosity Tool Wellsite Calibration

Tank Check

Phase	Array-1 Standoff Porosity PU	Value
Master		12.00

9.900 (Minimum) 11.75 (Nominal) 13.60 (Maximum)

Phase	Array-2 Standoff Porosity PU	Value
Master		11.45

9.900 (Minimum) 11.75 (Nominal) 13.60 (Maximum)

Phase	Average Slowing Down Time US	Value
Master		5.854

5.500 (Minimum) 6.000 (Nominal) 6.250 (Maximum)

Phase	Array-1 SDT Ratio Up/Down	Value
Master		0.9981

0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)

Phase	Array-2 SDT Ratio Up/Down	Value
Master		0.9978

0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)

Phase	Sigma Formation CU	Value
Master		27.57

20.00 (Minimum) 27.50 (Nominal) 35.00 (Maximum)

Master: 26-May-2002 23:33

Accelerator-Porosity Tool Master Calibration

Detector Calibration

Phase	Near/Far Calibration Ratio	Value
Master		0.8992

0.8000 (Minimum) 0.9250 (Nominal) 1.050 (Maximum)

Phase	Near/Array Calibration Ratio	Value
Master		1.062

0.9000 (Minimum) 1.030 (Nominal) 1.170 (Maximum)

Phase	Near/Array Cal Ratio Up/Down	Value
Master		1.007

0.9700 (Minimum) 1.000 (Nominal) 1.030 (Maximum)

Master: 26-May-2002 23:32

Accelerator-Porosity Tool Master Calibration

Tank Check

Phase	Array-1 Standoff Porosity PU	Value
Master		12.00

Phase	Array-2 Standoff Porosity PU	Value
Master		11.45

Phase	Average Slowing Down Time US	Value
Master		5.854

	9.900 (Minimum)	11.75 (Nominal)	13.60 (Maximum)

	9.900 (Minimum)	11.75 (Nominal)	13.60 (Maximum)

	5.500 (Minimum)	6.000 (Nominal)	6.250 (Maximum)

Phase	Array-1 SDT Ratio Up/Down	Value
Master		0.9981
	0.9500 (Minimum) / 1.000 (Nominal) / 1.050 (Maximum)	

Phase	Array-2 SDT Ratio Up/Down	Value
Master		0.9978
	0.9500 (Minimum) / 1.000 (Nominal) / 1.050 (Maximum)	

Phase	Sigma Formation CU	Value
Master		27.57
	20.00 (Minimum) / 27.50 (Nominal) / 35.00 (Maximum)	

Master: 26-May-2002 23:33

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:		
HNGS Sonde	HNGS - BA	77
Auxiliary Equipment:		
HNGS Sonde Housing	HNSH - BA	79
Gamma Source Radioactive	GSR - U	135

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 1 Check

Phase	Na 511 Peak Loc	Value
Master		40.53
Before		40.57
After		40.54
	37.50 (Minimum) / 40.00 (Nominal) / 42.50 (Maximum)	

Phase	Na 511 Peak Res %	Value
Master		16.57
Before		16.35
After		16.38
	12.00 (Minimum) / 15.50 (Nominal) / 19.00 (Maximum)	

Phase	High Voltage V	Value
Master		1202
Before		1203
After		1203
	900.0 (Minimum) / 1150 (Nominal) / 1600 (Maximum)	

Phase	Na 1785 Peak Loc	Value
Master		145.8
Before		145.6
After		145.4
	135.0 (Minimum) / 142.6 (Nominal) / 150.3 (Maximum)	

Phase	Na 1785 Peak Res %	Value
Master		9.282
Before		9.387
After		9.258
	7.000 (Minimum) / 8.500 (Nominal) / 11.00 (Maximum)	

Phase	Temperature DEGC	Value
Master		32.17
Before		32.19
After		32.21
	-28.89 (Minimum) / 15.50 (Nominal) / 60.00 (Maximum)	

Phase	Na Count Rate CPS	Value
Master		35.72
Before		35.35
After		36.12
	10.00 (Minimum) / 45.00 (Nominal) / 100.0 (Maximum)	

Master: 26-Jun-2002 19:50 Before: 26-Jun-2002 20:00 After: 26-Jun-2002 20:21

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 2 Check

Phase	Na 511 Peak Loc	Value
Master		40.64
Before		40.57
After		40.73
	37.50 (Minimum) / 40.00 (Nominal) / 42.50 (Maximum)	

Phase	Na 511 Peak Res %	Value
Master		16.86
Before		16.23
After		16.78
	12.00 (Minimum) / 15.50 (Nominal) / 19.00 (Maximum)	

Phase	High Voltage V	Value
Master		1233
Before		1232
After		1232
	900.0 (Minimum) / 1150 (Nominal) / 1600 (Maximum)	

Phase	Na 1785 Peak Loc	Value
Master		144.9
Before		144.3
After		144.5
	135.0 (Minimum) / 142.6 (Nominal) / 150.3 (Maximum)	

Phase	Na 1785 Peak Res %	Value
Master		9.410
Before		9.624
After		10.07
	7.000 (Minimum) / 8.500 (Nominal) / 11.00 (Maximum)	

Phase	Temperature DEGC	Value
Master		31.66
Before		31.72
After		31.85
	-28.89 (Minimum) / 15.50 (Nominal) / 60.00 (Maximum)	

Phase	Na Count Rate CPS	Value
Master		35.81
Before		35.12
After		35.81
	10.00 (Minimum) / 45.00 (Nominal) / 100.0 (Maximum)	

Master: 26-Jun-2002 19:50 Before: 26-Jun-2002 20:00 After: 26-Jun-2002 20:21

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Ratio Of Detector 1 To Detector 2

Phase	Coincidence Count Rate Ratio	Value
Master		0.9971
Before		1.005
After		1.007

0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)

Master: 26-Jun-2002 19:50

Before: 26-Jun-2002 20:00

After: 26-Jun-2002 20:21

Hostile Natural Gamma Ray Sonde Master Calibration

Detector 1 Calibration

Phase	Na 511 Peak Set Point	Value
Master		41.00

38.00 (Minimum) 40.00 (Nominal) 42.00 (Maximum)

Phase	Th Peak Loc	Value
Master		209.0

201.0 (Minimum) 209.6 (Nominal) 218.3 (Maximum)

Phase	Th Peak Res %	Value
Master		7.963

5.000 (Minimum) 7.000 (Nominal) 9.000 (Maximum)

Phase	Background Count Rate CPS	Value
Master		21.13

20.00 (Minimum) 142.5 (Nominal) 265.0 (Maximum)

Phase	Gain Ratio	Value
Master		0.9809

0.9400 (Minimum) 1.000 (Nominal) 1.060 (Maximum)

Master: 26-Jun-2002 19:36

Hostile Natural Gamma Ray Sonde Master Calibration

Detector 2 Calibration

Phase	Na 511 Peak Set Point	Value
Master		41.00

38.00 (Minimum) 40.00 (Nominal) 42.00 (Maximum)

Phase	Th Peak Loc	Value
Master		209.8

201.0 (Minimum) 209.6 (Nominal) 218.3 (Maximum)

Phase	Th Peak Res %	Value
Master		7.951

5.000 (Minimum) 7.000 (Nominal) 9.000 (Maximum)

Phase	Background Count Rate CPS	Value
Master	EXCEEDS LIMIT	19.47

20.00 (Minimum) 142.5 (Nominal) 265.0 (Maximum)

Phase	Gain Ratio	Value
Master		0.9820

0.9400 (Minimum) 1.000 (Nominal) 1.060 (Maximum)

*SEE REMARKS

Master: 26-Jun-2002 19:36

Company: Lamont Doherty

Schlumberger

Well: ODP Leg 203 Site1243B
Field: Equatorial Pacific IMO
Country: Panama
Ocean: Pacific

Phasor Induction
Natural Gamma Ray
HLDS/APS Porosity