COMPANY: Lamont Doherty

WELL: ODP Leg 199, Site 1219 A (PAT-17C)

FIELD:

Ocean: Pacific

Field:
Location: LAT: 7 DEG 48.009' N
Well: ODP Leg 199, Site 1219 A (PAT-
Company: Lamont Doherty

Schlumberger

APS/HLDT Porosity
Natural Gamma Ray

LOCATION

LAT: 7 DEG 48.009' N
LONG: 142 DEG 00.940' W

Elev.: K.B. 11.3 m
G.L. -5075 m
D.F. 11 m

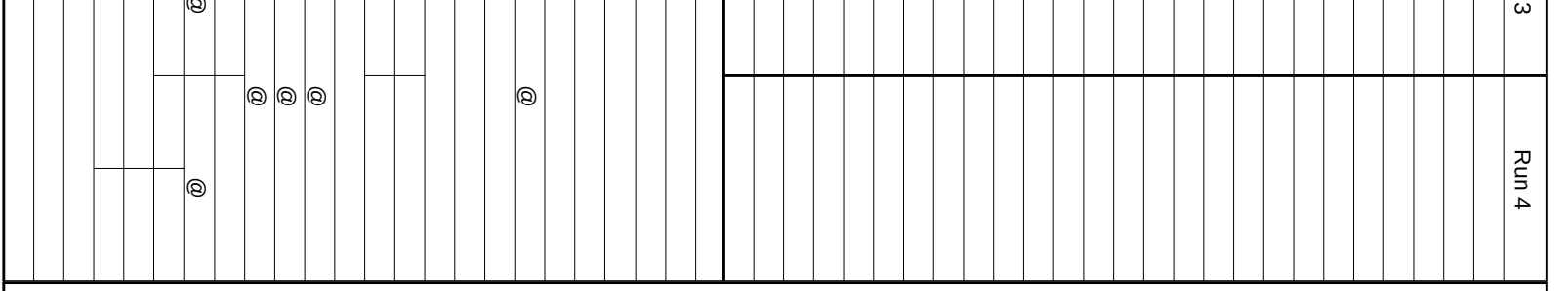
Permanent Datum: MSL — Elev.: 0 m
Log Measured From: RKB — 11.3 m above Perm. Datum
Drilling Measured From: RKB

API Serial No.	Max. Hole Devi. 4 deg	Longitude	Latitude

Logging Date	25-Nov-2001			
Run Number	1			
Depth Driller	5325 m			
Schlumberger Depth	5326 m			
Bottom Log Interval	5312 m			
Top Log Interval	5074 m			
Casing Driller Size @ Depth	0.000 in @ 5156 m		@	
Casing Schlumberger	5159 m			
Bit Size	11.438 in			
Type Fluid In Hole	Sepiolite/Saltwater			
MUD Density / Viscosity	1.066 g/cm3			
MUD Fluid Loss / PH				
MUD Source Of Sample	Mudpit			
RM @ Measured Temperature	0.253 ohm.m @ 32 degC		@	
RMF @ Measured Temperature	@		@	
RMC @ Measured Temperature	@		@	
Source RMF / RMC	none	none		
RM @ MRT / RMF @ MRT	0.480 @ 7	@ 7	@	@
Maximum Recorded Temperatures	7 degC			
Circulation Stopped / Time	25-Nov-2001	6:00		
Logger On Bottom / Time	25-Nov-2001	15:30		
Unit Number / Location	99	Houston, TX		
Recorded By	Kerry M. Swain			
Witnessed By	Philippe Gaillot, Brice Rea			

	Run 1	Run 2	Run

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			
MUD 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: FMS/DSST	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:

REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Hole cored with APC/XCB.	
Log presented in Meters Below Rig Floor (MBRF).	
Lamont Temperature tool (TAP) was run on Triple Combo, Run 1.	
Toolstring-TAP/DITE/HLDT/APS/HNGS/MGT	
Lamont Multi-Sensor Gamma Ray tool (MGT) was run on Triple Combo, Run 1.	
Wireline Heave Compensator (WHC) was used on all runs.	
Sepiolite mud was used to displace the hole during the wiper trip after drilling	
Drillers TD 5325 MBRF, Driller Pipe depth: 5156 MBRF.	
Schlumberger TD 5326 MBRF.	
Drill Pipe Schlumberger 5159 MBRF.	
Low background countrate on HNGS Master Calibration signifies a weak internal	
source used only as a check of the detector and is not used in the calibration.	

RUN 1

SERVICE ORDER #:
PROGRAM VERSION: 9C2-303
FLUID LEVEL:

LOGGED INTERVAL	START	STOP

RUN 2

SERVICE ORDER #:
PROGRAM VERSION:
FLUID LEVEL:

LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1

SURFACE EQUIPMENT

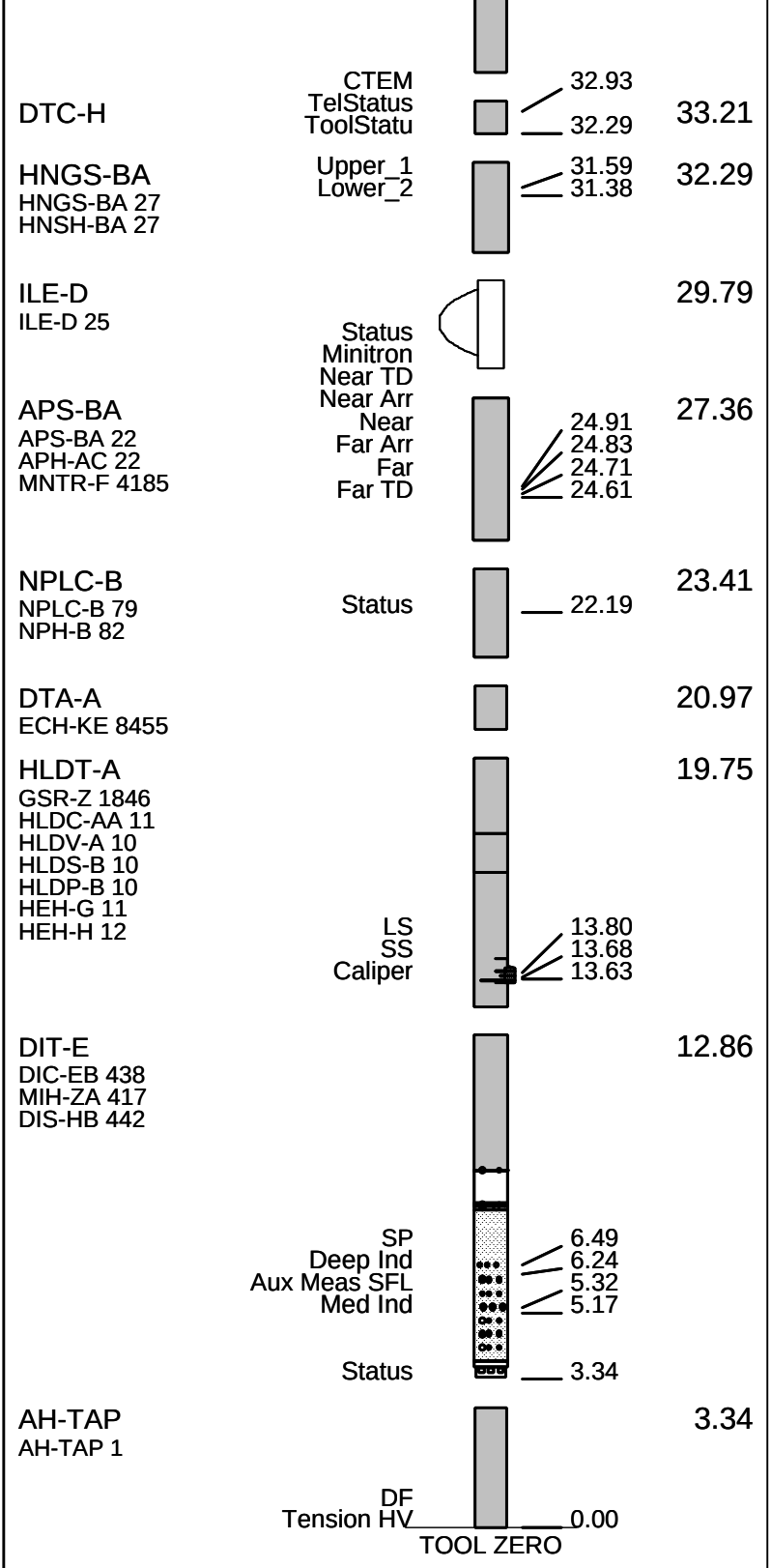
SFT-281 24
SFT-178 4722
GSR-U 135
WITM (DTS)-A

DOWNHOLE EQUIPMENT

LEH-QT 39.75

AH-MGT 38.86
AH-MGT

RUN 2



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

Output DLIS Files

DEFAULT	PI_LDL_APS_HNGS_004LUP	FN:5	PRODUCER	25-Nov-2001 15:29	5328.7 M	5055.3 M
REDUCE	PI_LDL_APS_HNGS_004LUP	FN:6	PRODUCER	25-Nov-2001 15:29	5328.7 M	5055.3 M

OP System Version: 9C2-303

MCM

DIT-E	9C2-303	HLDT-A	9C2-303
DTA-A	9C2-303	NPLC-B	9C2-303
APS-BA	9C2-303	HNGS-BA	9C2-303
DTC-H	9C2-303		

Changed Parameter Summary

DLIS Name	New Value	Previous Value	Depth & Time
GCSE	CALI	BS	5300.7 15:39:30

PIP SUMMARY

Time Mark Every 60 S

HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 100

APS Effective Standoff in Limestone (STOF)
0 (IN) 5

Caliper (CALI)
0 (IN) 20

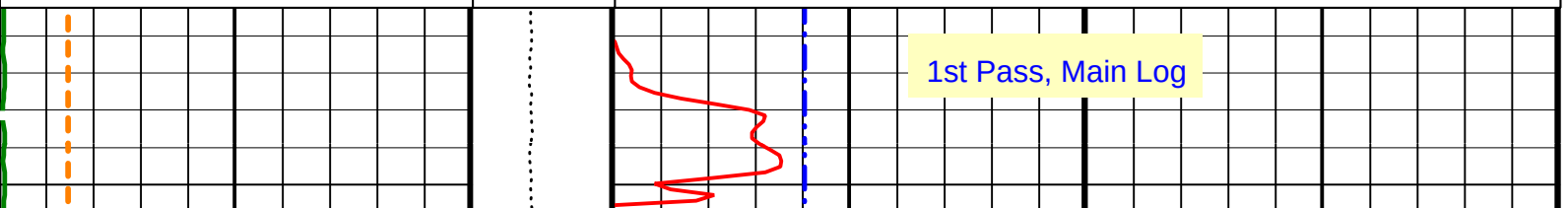
Tension (TENS) (LBF)
10000 0

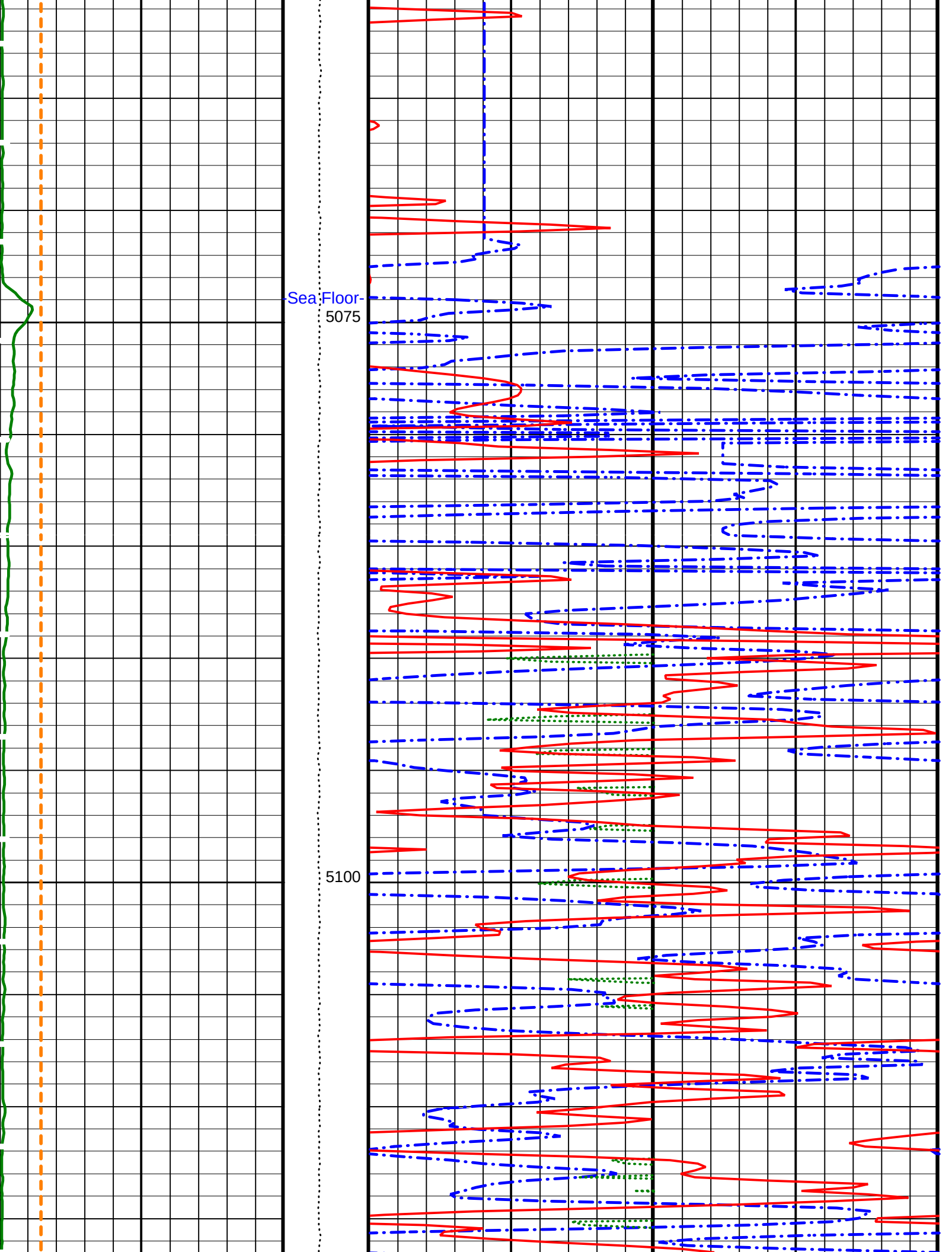
Bulk Density (RHOB)
1.95 (G/C3) 2.95

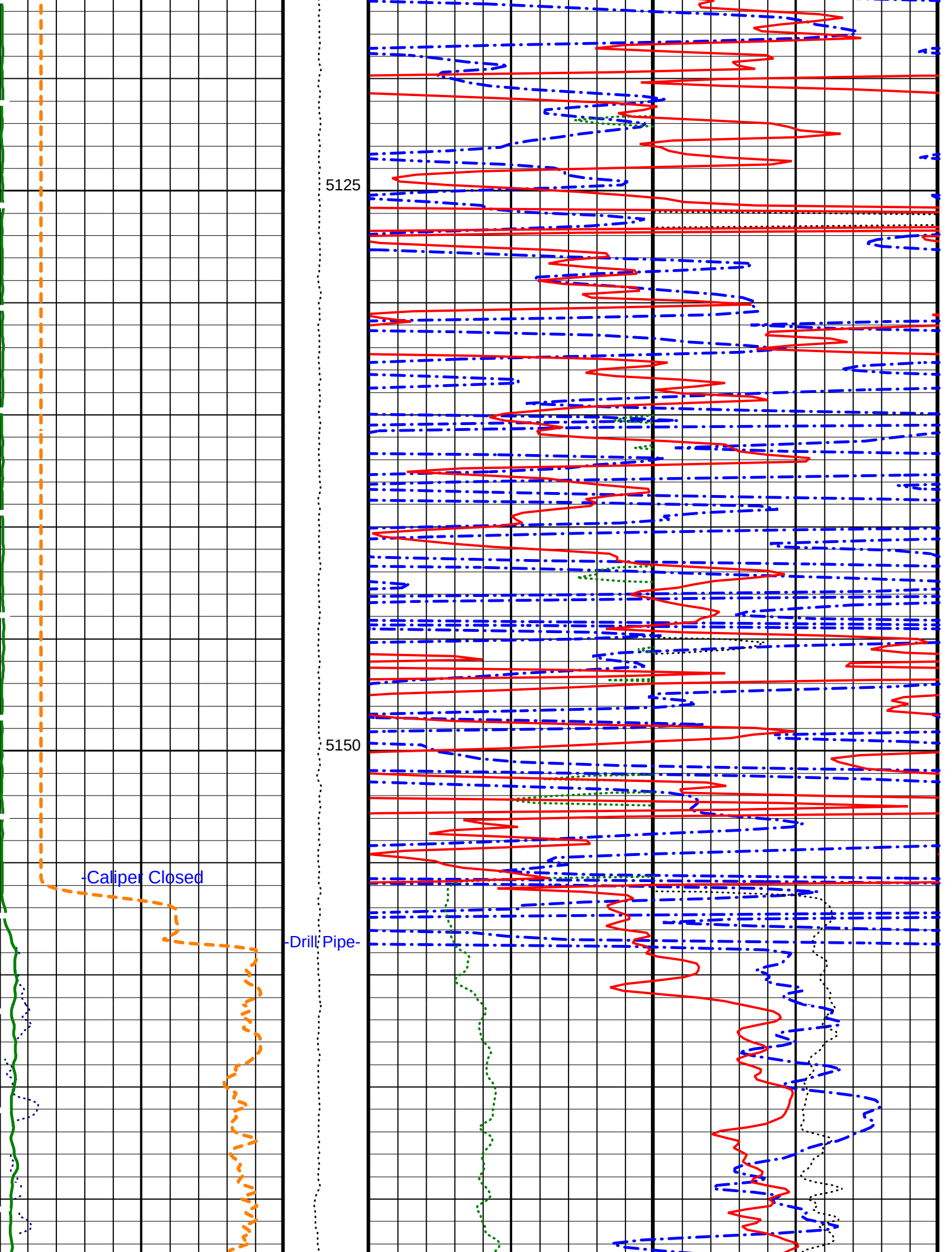
PhotoElectric Factor (PEF)
0 (----) 10

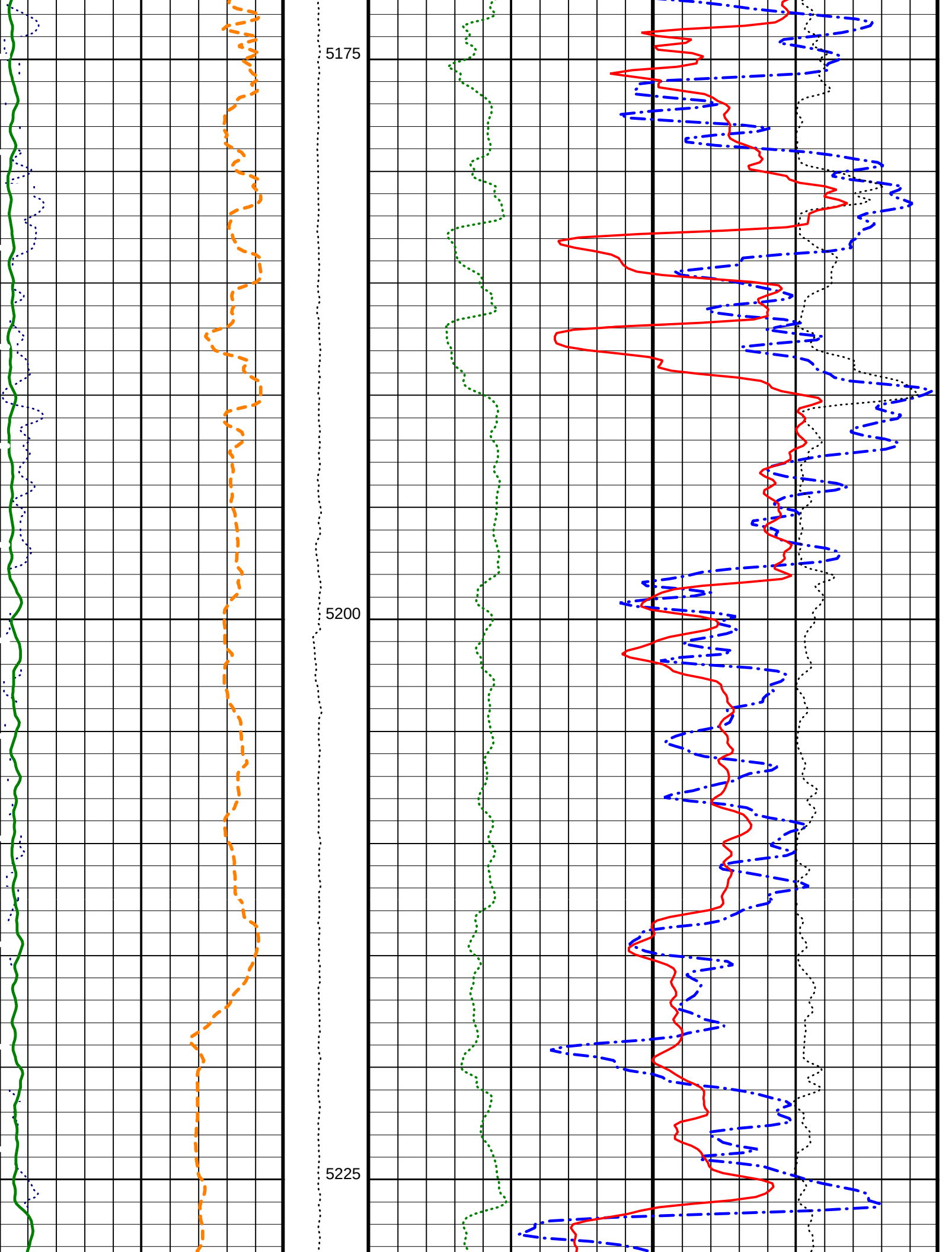
Bulk Density Correction (DRHO)
-0.25 (G/C3) 0.25

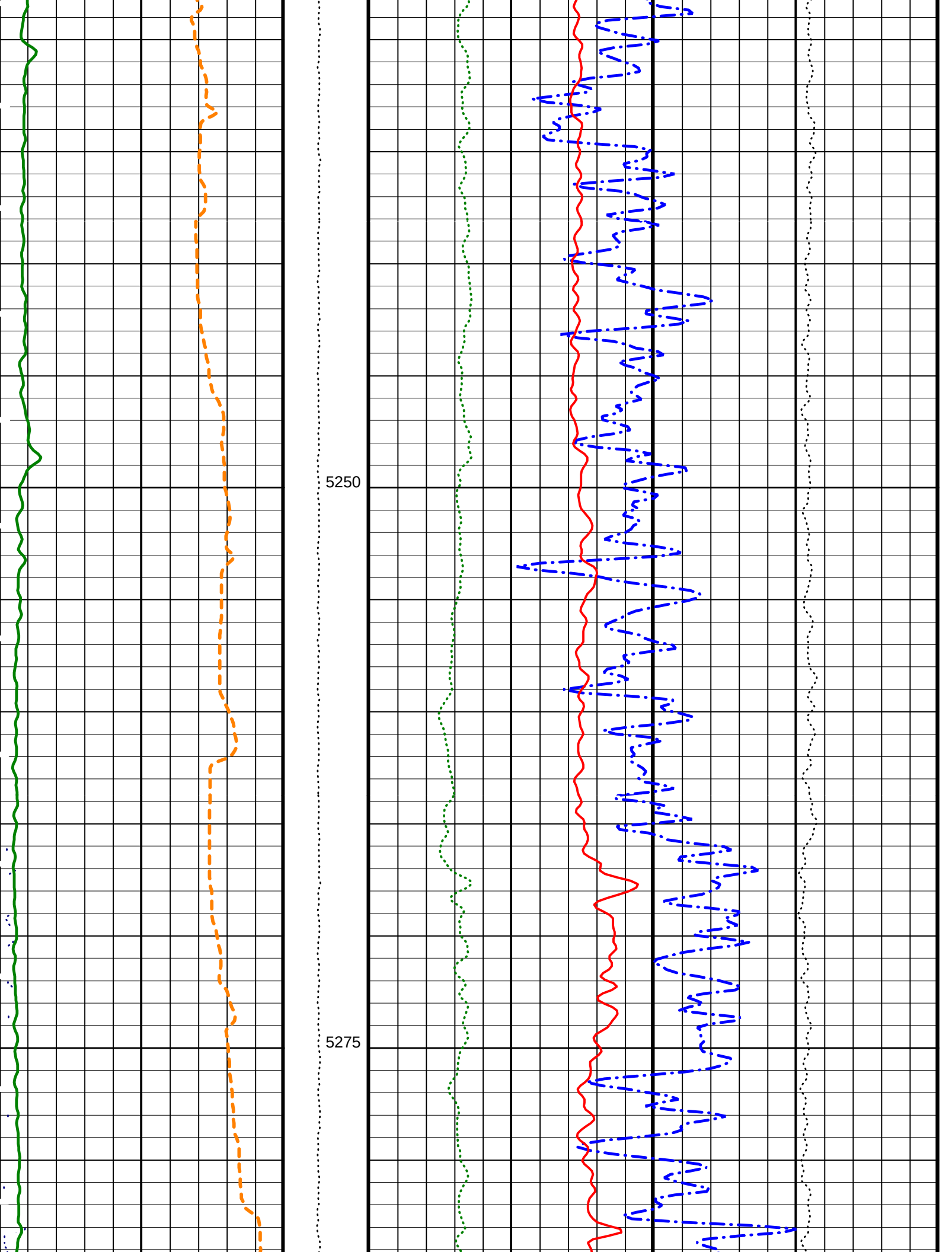
APS Near/Array Corrected Limestone Porosity (APLC)
60 (PU) 0

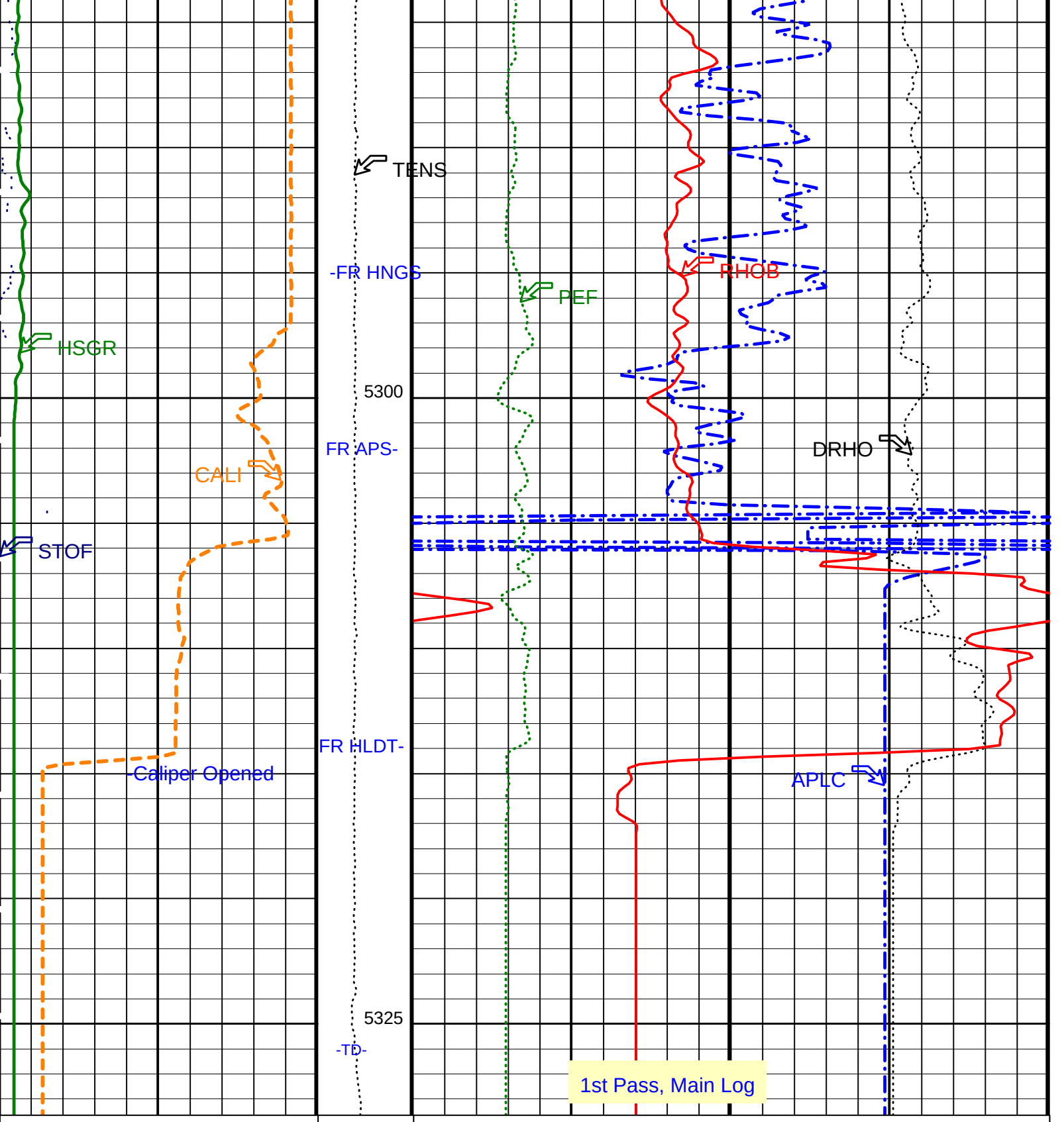



Sea Floor
5075
5100


5125
5150
-Caliper Closed
-Drill Pipe-


5175
5200
5225


5250
5275



Caliper (CALI) 0 (IN) 20	Tension (TENS) (LBF) 10000 0	APS Near/Array Corrected Limestone Porosity (APLC) 60 (PU) 0
APS Effective Standoff in Limestone (STOF) 0 (IN) 5		PhotoElectric Factor (PEF) 0 (----) 10
		Bulk Density Correction (DRHO) -0.25 (G/C3) 0.25
HNGS Spectroscopy Gamma Ray (HSGR) 0 (GAPI) 100		Bulk Density (RHOB) 1.95 (G/C3) 2.95

PIP SUMMARY

Parameters

DLIS Name	Description	Value	
	APS Software Version	5	
	Apparent Thickness of Cement	0	IN
	APS Cement Thickness Source	COMPUTED	
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	
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
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	
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BFM	Borehole Fluid Medium	LIQUID	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	8	DEGC
BKSF	HNGS Borehole Fluid Excluder Sleeve Algorithm Factor	1	
BKSH	HNGS Borehole Fluid Excluder Sleeve Algorithm High Channel	245	
BKSL	HNGS Borehole Fluid Excluder Sleeve Algorithm Low Channel	17	
BS	Bit Size	11.438	IN
BSAL	Borehole Salinity	32000.00	PPM
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSIZ	Current Casing Size	0.000	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
CWEI	Casing Weight	0.00	LB/F
D1PR	HNGS Detector 1 Calibration Thorium Peak Resolution	7.94455	%
D1TC	HNGS Detector 1 Calibration Temperature	31.7278	DEGC
D1TL	HNGS Detector 1 Calibration Thorium Peak Location	210.396	
D2PR	HNGS Detector 2 Calibration Thorium Peak Resolution	7.23028	%
D2TC	HNGS Detector 2 Calibration Temperature	30.9207	DEGC
D2TL	HNGS Detector 2 Calibration Thorium Peak Location	209.461	
DBCC	HNGS Barite Constant Correction Flag	NONE	
DFD	Drilling Fluid Density	1.07	G/C3
DGF1	Deep 10 kHz Gain Factor	0.995593	
DGF2	Deep 20 kHz Gain Factor	1.00789	
DGF4	Deep 40 kHz Gain Factor	1.02614	
DHC	Density Hole Correction	BS	
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
DPPM	Density Porosity Processing Mode	HIRS	
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
FD	Fluid Density	1	G/C3
FSAL	Formation Salinity	32000	PPM
GCF1_START	HNGS Detector 1 GCF Constant	1	
GCF2_START	HNGS Detector 2 GCF Constant	1	
GCSE	Generalized Caliper Selection	BS	
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	-0.00143068	
HALF	HNGS Alpha Filter Length	60	IN
HATIM	HNGS Marquardt Accumulation Time	600	S
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
HSLV	HNGS Borehole Fluid Excluder Sleeve Status	NO	
HSVN	HNGS Spectral Standards Version Number	1.07972e-029	

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	
LSHC	LS Hardware Loop Control	DISALLOW	
MARQ_START	HNGS Marquardt Start-up Mode	INTERNAL	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MDEN	Matrix Density	2.71	G/C3
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
MST	Mud Sample Temperature	32.00	DEGC
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
NARC	APS Near/Array Calibration Ratio	1.06266	
NFRC	APS Near/Far Calibration Ratio	0.900511	
NOTS	NPLC Old Temperature Sensor	NO	
PBVSADP	Use alternate depth channel for playback	NO	
QPPS	Quicklook Processing Pe Select	PEFL	
RDF1_START	HNGS Detector 1 RDF Constant	0	
RDF2_START	HNGS Detector 2 RDF Constant	0	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S1NA	HNGS Detector 1 Calibration Sodium Count Rate	17.94	CPS
S1NG	HNGS Detector 1 Calibration End-On / Side-On Gain Ratio	0.986623	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S2NA	HNGS Detector 2 Calibration Sodium Count Rate	18.0888	CPS
S2NG	HNGS Detector 2 Calibration End-On / Side-On Gain Ratio	0.979243	
SABK	HNGS Statistical Uncertainty in Borehole Potassium Running Average	0.000217619	
SBR	Shoulder Bed Resistivity Factor	1	OHMM
SFCR	SFL Channel Ratio	1000	
SFLE	SFL Enable	ENABLE	
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	30	DEGC
SPAE	DIT-E SPARC Processing Enable	ENABLE	
SPNV	SP Next Value	0	MV
SSHC	SS Hardware Loop Control	DISALLOW	
TD	Total Depth	5114	M
TDD	Total Depth - Driller	5325.00	M
TDL	Total Depth - Logger	5330.00	M
TPOS	Tool Position	ECCE	
TWS	Temperature of Connate Water Sample	37.78	DEGC
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.46857	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.969393	
WMUD	Mud Weight	0.994556	G/C3

Format: APSLiquidPorosity_1 Vertical Scale: 1:200 Graphics File Created: 25-Nov-2001 15:29

OP System Version: 9C2-303

MCM

DIT-E	9C2-303	HLDT-A	9C2-303
DTA-A	9C2-303	NPLC-B	9C2-303
APS-BA	9C2-303	HNGS-BA	9C2-303
DTC-H	9C2-303		

Output DLIS Files

DEFAULT	PI_LDL_APS_HNGS_004LUP	FN:5	PRODUCER	25-Nov-2001 15:29		
REDUCE	PI_LDL_APS_HNGS_004LUP	FN:6	PRODUCER	25-Nov-2001 15:29		

Output DLIS Files

DEFAULT	PI_LDL_APS_HNGS_005LUP	FN:7	PRODUCER	25-Nov-2001 16:35	5328.7 M	5140.3 M
REDUCE	PI_LDL_APS_HNGS_005LUP	FN:8	PRODUCER	25-Nov-2001 16:35	5328.7 M	5140.3 M

OP System Version: 9C2-303

MCM

DIT-E	9C2-303	HLDT-A	9C2-303
DTA-A	9C2-303	NPLC-B	9C2-303
APS-BA	9C2-303	HNGS-BA	9C2-303
DTC-H	9C2-303		

Changed Parameter Summary

DLIS Name	New Value	Previous Value	Depth & Time
GCSE	BS	CALI	5304.1 16:48:00
	CALI	BS	5322.9 16:51:32

PIP SUMMARY

Time Mark Every 60 S

HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 100

APS Effective Standoff in Limestone (STOF)
0 (IN) 5

Caliper (CALI)
0 (IN) 20

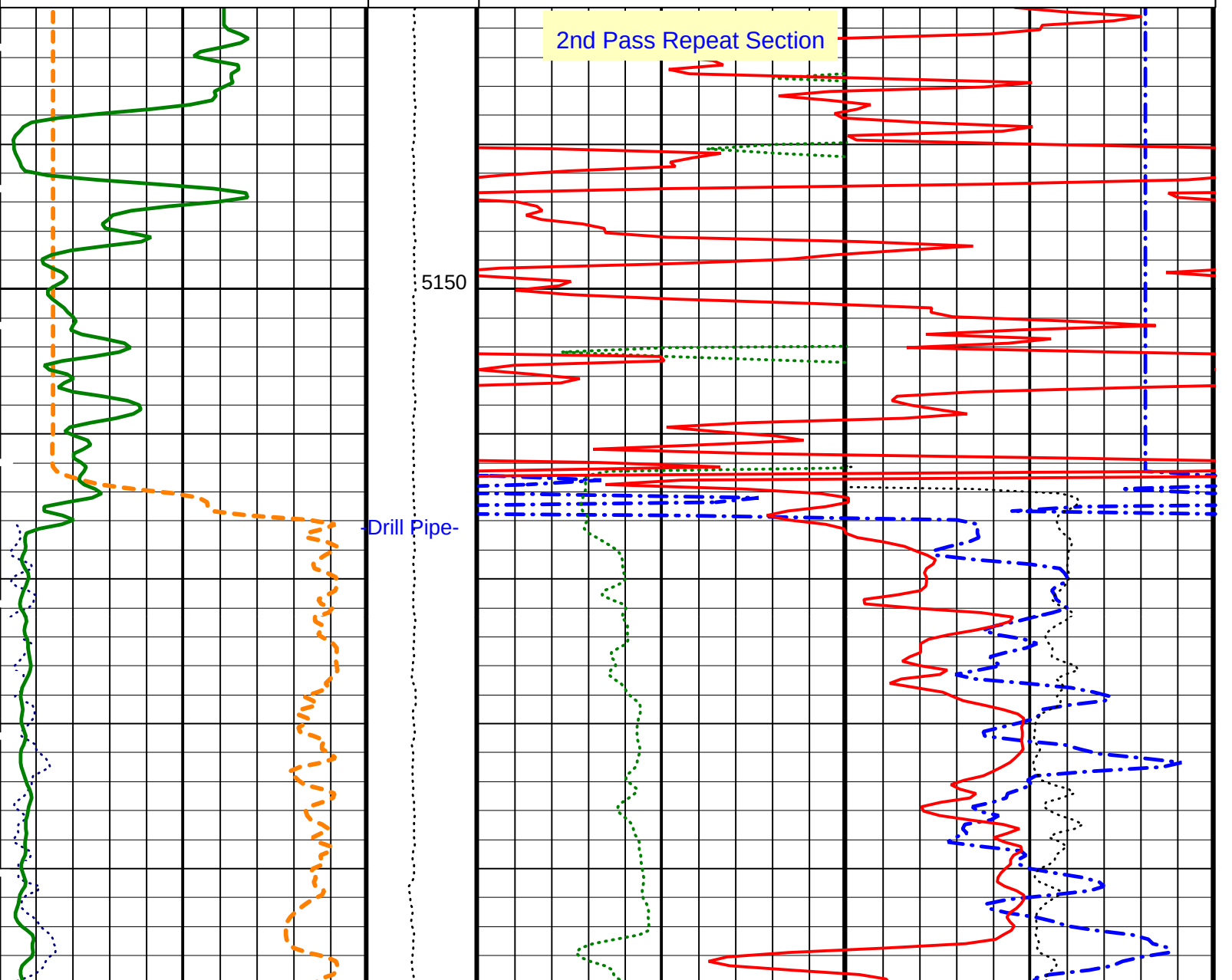
Tension (TENS) (LBF)
10000 0

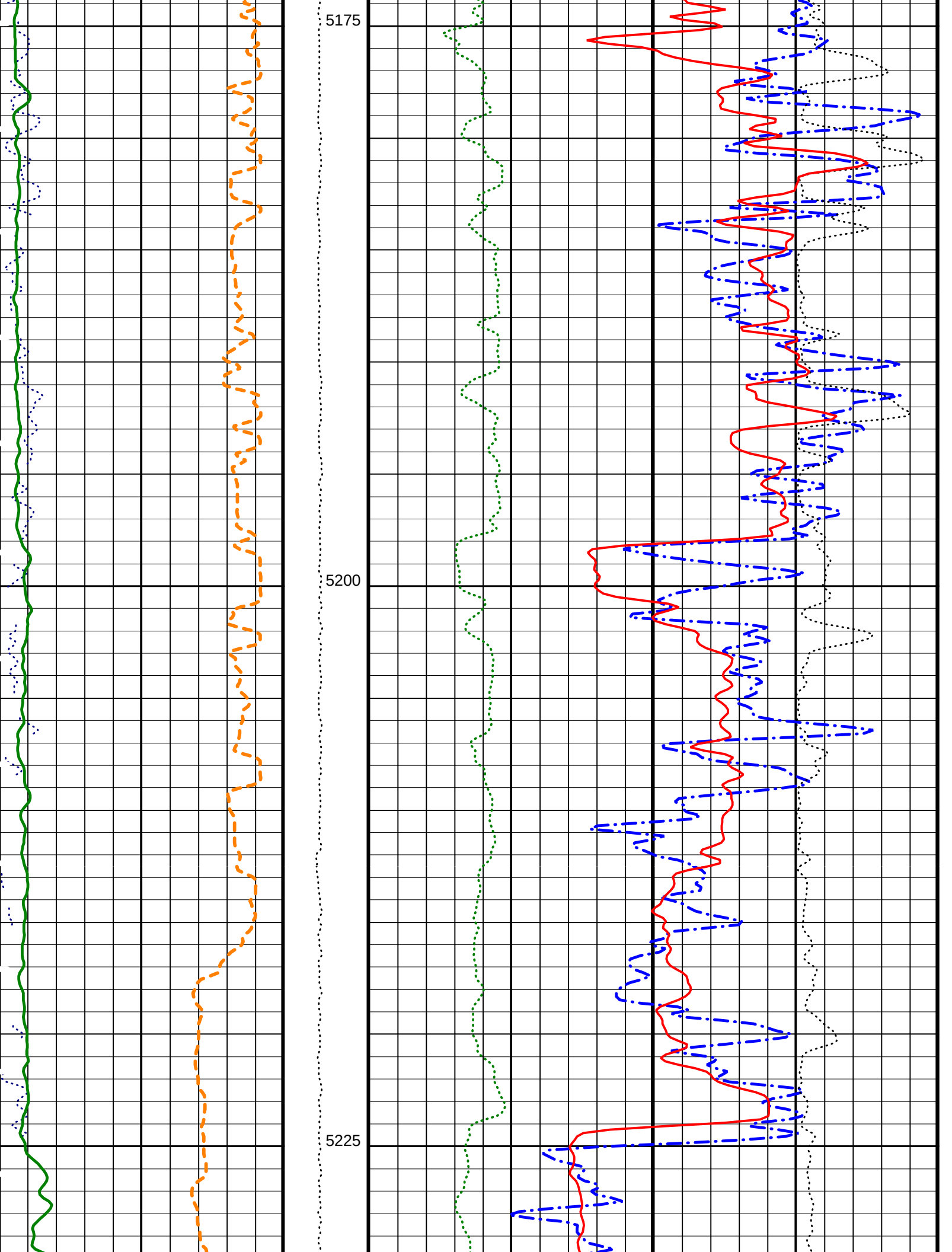
Bulk Density (RHOB)
1.95 (G/C3) 2.95

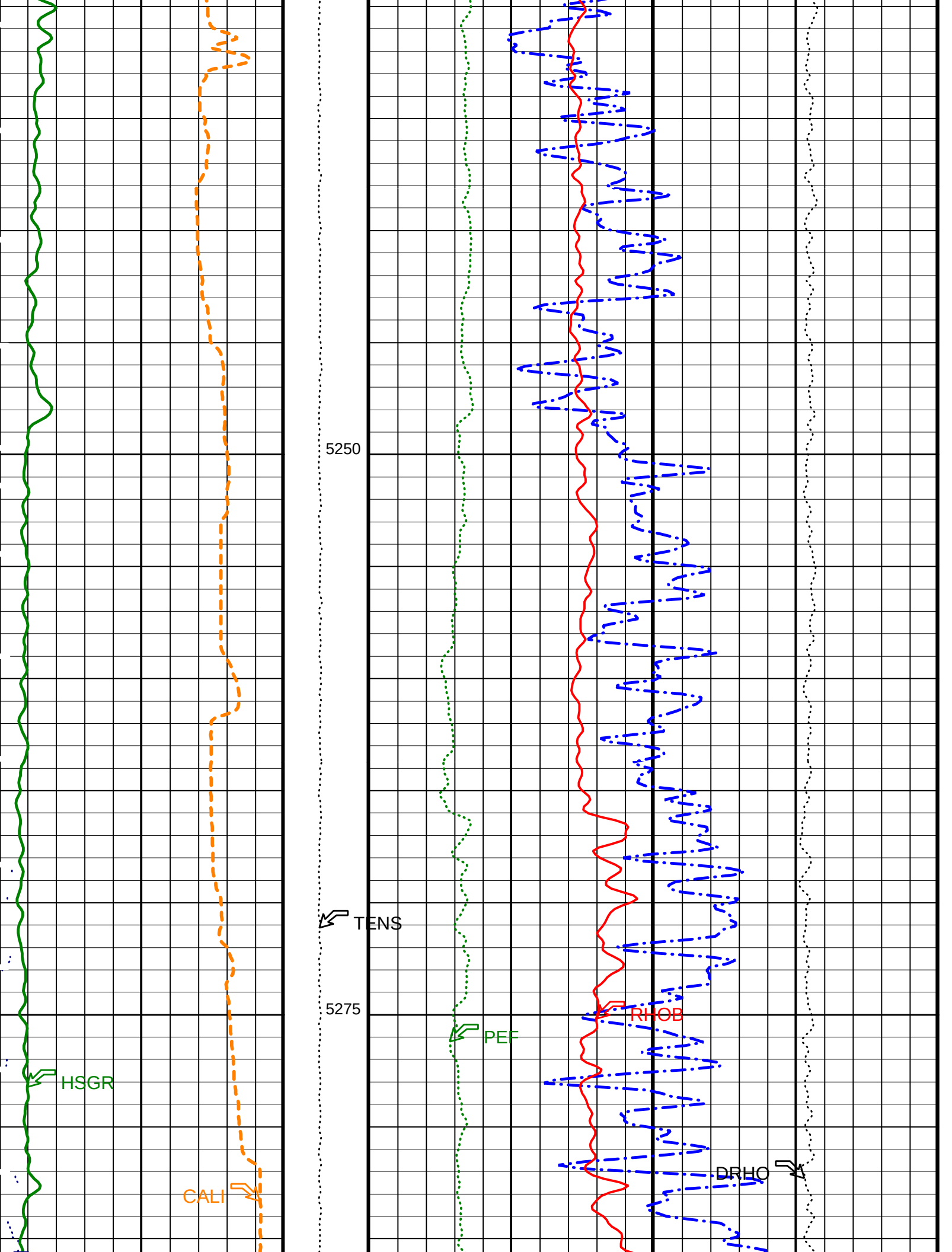
PhotoElectric Factor (PEF)
0 (----) 10

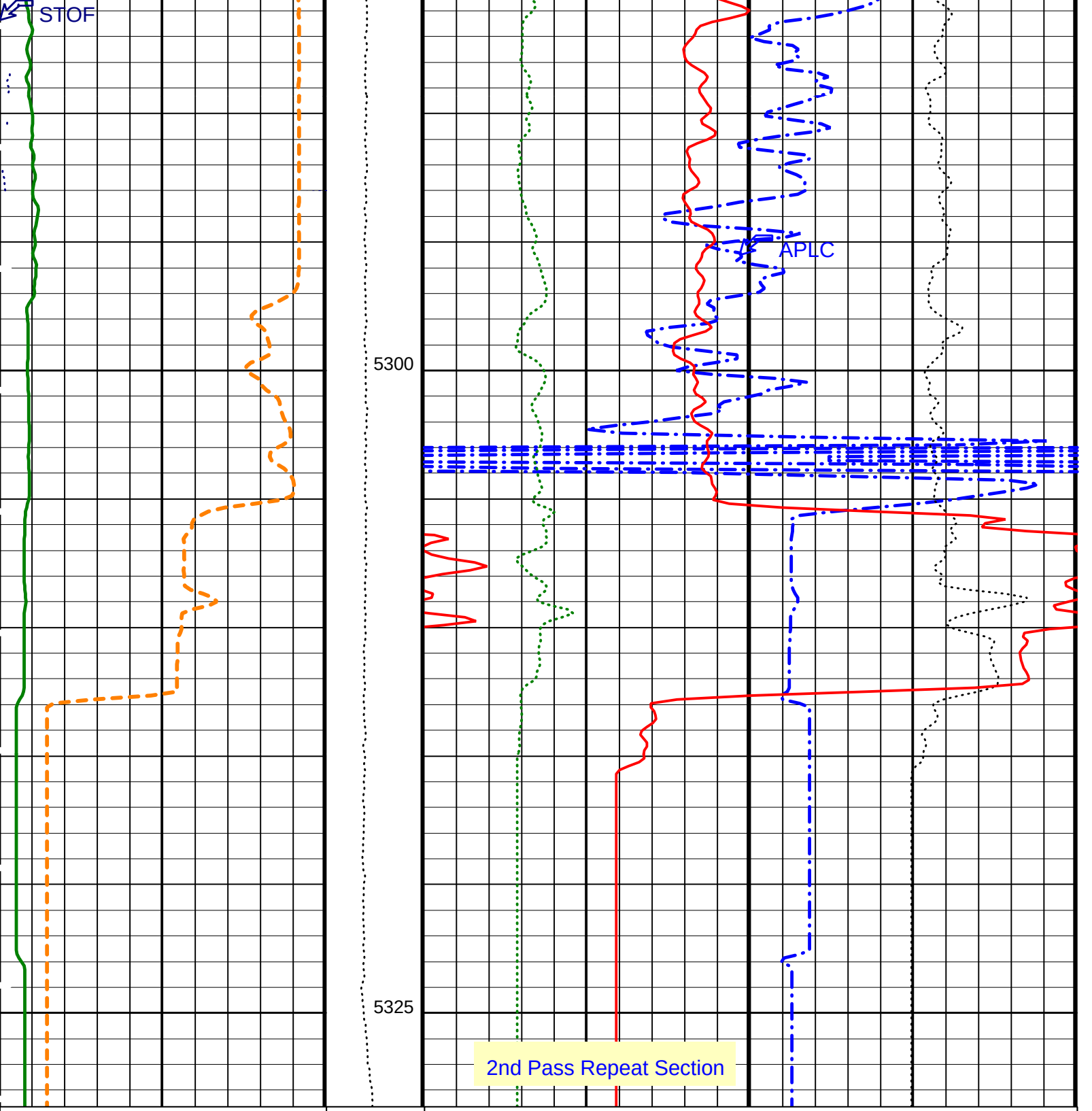
Bulk Density Correction (DRHO)
-0.25 (G/C3) 0.25

APS Near/Array Corrected Limestone Porosity (APLC)
60 (PU) 0




5175
5200
5225


5250
TENS
5275
HSGR
CALI
PEF
RHOB
DRHO



Caliper (CALI)
0 (IN) 20

Tension (TENS) (LBF)
10000 0

APS Near/Array Corrected Limestone Porosity (APLC)
60 (PU) 0

APS Effective Standoff in Limestone (STOF)
0 (IN) 5

PhotoElectric Factor (PEF)
0 (----) 10

Bulk Density Correction (DRHO)
-0.25 (G/C3) 0.25

HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 100

Bulk Density (RHOB)
1.95 (G/C3) 2.95

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	APS Software Version	5	
	Apparent Thickness of Cement	0	IN
	APS Cement Thickness Source	COMPUTED	
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	
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
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	
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BFM	Borehole Fluid Medium	LIQUID	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	8	DEGC
BKSF	HNGS Borehole Fluid Excluder Sleeve Algorithm Factor	1	
BKSH	HNGS Borehole Fluid Excluder Sleeve Algorithm High Channel	245	
BKSL	HNGS Borehole Fluid Excluder Sleeve Algorithm Low Channel	17	
BS	Bit Size	11.438	IN
BSAL	Borehole Salinity	32000.00	PPM
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSIZ	Current Casing Size	0.000	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
CWEI	Casing Weight	0.00	LB/F
D1PR	HNGS Detector 1 Calibration Thorium Peak Resolution	7.94455	%
D1TC	HNGS Detector 1 Calibration Temperature	31.7278	DEGC
D1TL	HNGS Detector 1 Calibration Thorium Peak Location	210.396	
D2PR	HNGS Detector 2 Calibration Thorium Peak Resolution	7.23028	%
D2TC	HNGS Detector 2 Calibration Temperature	30.9207	DEGC
D2TL	HNGS Detector 2 Calibration Thorium Peak Location	209.461	
DBCC	HNGS Barite Constant Correction Flag	NONE	
DFD	Drilling Fluid Density	1.07	G/C3
DGF1	Deep 10 kHz Gain Factor	0.995593	
DGF2	Deep 20 kHz Gain Factor	1.00789	
DGF4	Deep 40 kHz Gain Factor	1.02614	
DHC	Density Hole Correction	BS	
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
DPPM	Density Porosity Processing Mode	HIRS	
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
FD	Fluid Density	1	G/C3
FSAL	Formation Salinity	32000	PPM
GCF1_START	HNGS Detector 1 GCF Constant	1	
GCF2_START	HNGS Detector 2 GCF Constant	1	
GCSE	Generalized Caliper Selection	CALI	
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	-0.00477923	
HALF	HNGS Alpha Filter Length	60	IN
HATIM	HNGS Marquardt Accumulation Time	600	S
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
HSLV	HNGS Borehole Fluid Excluder Sleeve Status	NO	
HSVN	HNGS Spectral Standards Version Number	1.5715e-031	
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	
LSHC	LS Hardware Loop Control	DISALLOW	
MARQ_START	HNGS Marquardt Start-up Mode	INTERNAL	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MDEN	Matrix Density	2.71	G/C3
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
MST	Mud Sample Temperature	32.00	DEGC
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
NARC	APS Near/Array Calibration Ratio	1.06266	
NFRC	APS Near/Far Calibration Ratio	0.900511	
NOTS	NPLC Old Temperature Sensor	NO	
PBVSADP	Use alternate depth channel for playback	NO	
QPPS	Quicklook Processing Pe Select	PEFL	
RDF1_START	HNGS Detector 1 RDF Constant	0	
RDF2_START	HNGS Detector 2 RDF Constant	0	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S1NA	HNGS Detector 1 Calibration Sodium Count Rate	17.94	CPS
S1NG	HNGS Detector 1 Calibration End-On / Side-On Gain Ratio	0.986623	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S2NA	HNGS Detector 2 Calibration Sodium Count Rate	18.0888	CPS
S2NG	HNGS Detector 2 Calibration End-On / Side-On Gain Ratio	0.979243	
SABK	HNGS Statistical Uncertainty in Borehole Potassium Running Average	0.000449435	
SBR	Shoulder Bed Resistivity Factor	1	OHMM
SFCR	SFL Channel Ratio	1000	
SFLE	SFL Enable	ENABLE	
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	30	DEGC
SPAE	DIT-E SPARC Processing Enable	ENABLE	
SPNV	SP Next Value	0	MV
SSHC	SS Hardware Loop Control	DISALLOW	
TD	Total Depth	5326	M
TDD	Total Depth - Driller	5325.00	M
TDL	Total Depth - Logger	5330.00	M
TPOS	Tool Position	ECCE	
TWS	Temperature of Connate Water Sample	37.78	DEGC
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.26775	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.976609	
WMUD	Mud Weight	0.994556	G/C3

Format: APSLiquidPorosity_1 Vertical Scale: 1:200 Graphics File Created: 25-Nov-2001 16:35

OP System Version: 9C2-303

MCM

DIT-E	9C2-303	HLDT-A	9C2-303
DTA-A	9C2-303	NPLC-B	9C2-303
APS-BA	9C2-303	HNGS-BA	9C2-303
DTC-H	9C2-303		

Output DLIS Files

DEFAULT	PI_LDL_APS_HNGS_005LUP	FN:7	PRODUCER	25-Nov-2001 16:35
REDUCE	PI_LDL_APS_HNGS_005LUP	FN:8	PRODUCER	25-Nov-2001 16:35

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units

Hostile Environment Litho Density - A Wellsite Calibration - Background Measurement
Master: Calibration out of date 15-Aug-2001 9:07 Before: 9-Nov-2001 3:27 After: 25-Nov-2001 23:24

LSW1 Background	100.0	89.07	89.07	89.54	0.4666	3.000	CPS
LSW2 Background	105.0	94.00	91.57	93.30	1.732	3.150	CPS
LSW3 Background	210.0	182.5	178.1	187.0	8.980	6.300	CPS
LSW4 Background	290.0	241.3	239.4	241.6	2.172	8.700	CPS
LSW5 Background	610.0	530.0	528.2	523.3	-4.927	18.30	CPS
SSW1 Background	100.0	86.93	86.14	85.70	-0.4395	3.000	CPS
SSW2 Background	200.0	169.9	168.4	167.8	-0.6229	6.000	CPS
SSW3 Background	530.0	449.6	448.8	443.6	-5.202	15.90	CPS
SSW4 Background	280.0	236.6	238.4	238.5	0.1155	8.400	CPS
SSW5 Background	205.0	177.0	177.1	175.6	-1.485	6.150	CPS

Hostile Environment Litho Density - A Wellsite Calibration - Tool Quality Control Information High Voltage
Master: Calibration out of date 15-Aug-2001 9:07 Before: 9-Nov-2001 3:27 After: 25-Nov-2001 23:24

LS Bkg. High Voltage	1134	1134	1131	1130	-0.6169	N/A	V
SS Bkg. High Voltage	1180	1180	1178	1173	-4.383	N/A	V

Hostile Environment Litho Density - A Wellsite Calibration - Detectors Resolution From BKG Measurments
Master: Calibration out of date 15-Aug-2001 9:07 Before: 9-Nov-2001 3:27 After: 25-Nov-2001 23:24

LS Background Resolution	1.000	1.029	1.047	0.9194	-0.1279	N/A	
SS Background Resolution	1.000	0.9496	0.9487	0.9462	-0.002516	N/A	

Hostile Environment Litho Density - A Wellsite Calibration - Caliper Calibration
Before: 9-Nov-2001 3:19

Caliper Small Ring	12.00	N/A	15.92	N/A	N/A	N/A	IN
Caliper Large Ring	18.25	N/A	23.86	N/A	N/A	N/A	IN

Hostile Environment Litho Density - A Master Calibration - Aluminum Measurement
Master: Calibration out of date 15-Aug-2001 9:23

LSW1 Aluminum	648.4	592.4	--	--	--	--	CPS
LSW2 Aluminum	1018	936.8	--	--	--	--	CPS
LSW3 Aluminum	1105	972.2	--	--	--	--	CPS
LSW4 Aluminum	609.5	537.9	--	--	--	--	CPS
LSW5 Aluminum	533.8	479.4	--	--	--	--	CPS
SSW1 Aluminum	2664	2454	--	--	--	--	CPS
SSW2 Aluminum	7731	7177	--	--	--	--	CPS
SSW3 Aluminum	10380	9660	--	--	--	--	CPS
SSW4 Aluminum	4574	4186	--	--	--	--	CPS
SSW5 Aluminum	745.2	676.8	--	--	--	--	CPS

Hostile Environment Litho Density - A Master Calibration - Tool Quality Control Information: High Voltage
Master: Calibration out of date 15-Aug-2001 9:23

LS Alum. High Voltage	1134	1134	--	--	--	--	V
SS Alum. High Voltage	1180	1169	--	--	--	--	V

Hostile Environment Litho Density - A Master Calibration - Detectors Resolution From Aluminum Measurment
Master: Calibration out of date 15-Aug-2001 9:23

LS Aluminum Resolution	1.000	1.049	--	--	--	--	
SS Aluminum Resolution	1.000	1.035	--	--	--	--	

Hostile Environment Litho Density - A Master Calibration - Aluminum Measurement (Window Ratios)
Master: Calibration out of date 15-Aug-2001 9:23

LSW1/(LSW4 + LSW5) Calc.	0.5400	0.5824	--	--	--	--	
LSW3/(LSW4 + LSW5) Calc.	0.9600	0.9557	--	--	--	--	
SSW1/(SSW4 + SSW5) Calc.	0.4600	0.5047	--	--	--	--	
SSW3/(SSW4 + SSW5) Calc.	1.900	1.987	--	--	--	--	

Hostile Environment Litho Density - A Master Calibration - Litholog Measurement
Master: Calibration out of date 15-Aug-2001 10:13

LSW1 Iron	410.0	404.8	--	--	--	--	CPS
LSW2 Iron	870.0	765.5	--	--	--	--	CPS
LSW3 Iron	1030	888.8	--	--	--	--	CPS
LSW4 Iron	590.0	509.7	--	--	--	--	CPS
LSW5 Iron	530.0	449.7	--	--	--	--	CPS
SSW1 Iron	1850	1842	--	--	--	--	CPS
SSW2 Iron	6500	6221	--	--	--	--	CPS
SSW3 Iron	10000	9124	--	--	--	--	CPS
SSW4 Iron	4500	3968	--	--	--	--	CPS
SSW5 Iron	750.0	622.7	--	--	--	--	CPS

Hostile Environment Litho Density - A Master Calibration - Tool Quality Control Information: High Voltage
Master: Calibration out of date 15-Aug-2001 10:13

LS Lith High Voltage	1134	1134	--	--	--	--	V
SS Lith High Voltage	1180	1169	--	--	--	--	V

Hostile Environment Litho Density - A Master Calibration - Detectors Resolution From Litholog Measurment
Master: Calibration out of date 15-Aug-2001 10:13

LS Lith Resolution	1.000	1.040	--	--	--	--	
SS Lith Resolution	1.000	1.024	--	--	--	--	

Accelerator-Porosity Tool Wellsite Calibration - Detector Background
Master: Calibration out of date 5-Aug-2001 9:26 Before: 25-Nov-2001 14:51 After: 25-Nov-2001 20:36

Near Det Bkg Cntrate	30.00	31.20	32.35	32.50	0.1516	N/A	CPS

Near Det Bkg Cntrate	30.00	31.20	32.35	32.50	0.1516	N/A	CPS
Far Det Bkg Cntrate	30.00	34.55	32.27	34.39	2.121	N/A	CPS
Array-1 Det Bkg Cntrate	30.00	30.79	28.53	28.71	0.1856	N/A	CPS
Array-2 Det Bkg Cntrate	30.00	29.57	30.27	31.73	1.461	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	31.99	32.88	33.79	0.9063	N/A	CPS

Accelerator-Porosity Tool Wellsite Calibration - Calibration Ratios
Master: Calibration out of date 5-Aug-2001 9:26

Near/Far Calibration Ratio	0.9250	0.9005	N/A	N/A	N/A	N/A	
Near/Array Calibration Ratio	1.030	1.063	N/A	N/A	N/A	N/A	

Accelerator-Porosity Tool Master Calibration - Tank Check
Master: Calibration out of date 5-Aug-2001 9:26

Array-1 Standoff Porosity	10.25	11.51	--	--	--	--	PU
Array-2 Standoff Porosity	10.25	11.32	--	--	--	--	PU
Sigma Formation	27.50	27.95	--	--	--	--	CU

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 1 Check
Master: 9-Nov-2001 19:27 Before: 9-Nov-2001 19:46 After: 25-Nov-2001 23:25

Na 511 Peak Loc	40.00	40.57	40.58	40.46	-0.1173	1.000	
Na 511 Peak Res	15.50	16.90	17.01	15.79	-1.227	2.000	%
High Voltage	1150	1100	1100	1108	7.925	30.00	V
Na 1785 Peak Loc	142.6	145.1	145.5	145.0	-0.4348	7.000	
Na 1785 Peak Res	8.500	10.15	10.15	10.22	0.07315	2.000	%
Temperature	15.50	31.73	31.73	25.79	-5.938	N/A	DEGC
Na Count Rate	45.00	17.94	17.88	17.94	0.05860	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 2 Check
Master: 9-Nov-2001 19:27 Before: 9-Nov-2001 19:46 After: 25-Nov-2001 23:25

Na 511 Peak Loc	40.00	40.70	40.97	40.71	-0.2515	1.000	
Na 511 Peak Res	15.50	15.14	15.10	15.12	0.01910	2.000	%
High Voltage	1150	1188	1189	1196	7.223	30.00	V
Na 1785 Peak Loc	142.6	144.5	145.9	144.8	-1.051	7.000	
Na 1785 Peak Res	8.500	7.999	7.706	7.556	-0.1500	2.000	%
Temperature	15.50	30.93	31.02	25.45	-5.576	N/A	DEGC
Na Count Rate	45.00	18.09	18.05	18.16	0.1085	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Ratio Of Detector 1 To Detector 2
Master: 9-Nov-2001 19:27 Before: 9-Nov-2001 19:46 After: 25-Nov-2001 23:25

Coincidence Count Rate Ratio	1.000	0.9912	0.9922	0.9877	-0.004501	0.05000	

Hostile Natural Gamma Ray Sonde Master Calibration - Detector 1 Calibration
Master: 9-Nov-2001 19:20

Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	210.4	--	--	--	--	
Th Peak Res	7.000	7.945	--	--	--	--	%
Background Count Rate	142.5	15.50	--	--	--	--	CPS
Gain Ratio	1.000	0.9866	--	--	--	--	

Hostile Natural Gamma Ray Sonde Master Calibration - Detector 2 Calibration
Master: 9-Nov-2001 19:20

Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	209.5	--	--	--	--	
Th Peak Res	7.000	7.230	--	--	--	--	%
Background Count Rate	142.5	17.01	--	--	--	--	CPS
Gain Ratio	1.000	0.9792	--	--	--	--	

Accelerator-Porosity Tool - Detector Plateau Settings :

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 Environment Litho Density - A / Equipment Identification

Primary Equipment:

HOSTILE ENVIRONMENT LITHO DENSITY HIGH V	HLDV - A	10
HOSTILE ENVIRONMENT LITHO DENSITY CARTRI	HLDC - AA	11
Gamma Source Radioactive	GSR - Z	1846

Auxiliary Equipment:

HOSTILE ENVIRONMENT LITHO DENSITY SONDE	HLDS - B	10
HOSTILE ENVIRONMENT ELECTRONICS CARTRIDG	HEH - H	12
HOSTILE ENVIRONMENT ELECTRONICS CARTRIDG	HEH - G	11
HOSTILE ENVIRONMENT LITHO DENSITY PAD	HLDP - B	10

Hostile Environment Litho Density - A Wellsite Calibration

Background Measurement

Phase	LSW1 Background CPS	Value
Master		89.07
Before		89.07
After		89.54

65.00 (Minimum) 100.0 (Nominal) 125.0 (Maximum)

Phase	LSW2 Background CPS	Value
Master		94.00
Before		91.57
After		93.30

70.00 (Minimum) 105.0 (Nominal) 130.0 (Maximum)

Phase	LSW3 Background CPS	Value
Master		182.5
Before		178.1
After		187.0

150.0 (Minimum) 210.0 (Nominal) 250.0 (Maximum)

Phase	LSW4 Background CPS	Value
Master		241.3
Before		239.4
After		241.6

220.0 (Minimum) 290.0 (Nominal) 330.0 (Maximum)

Phase	LSW5 Background CPS	Value
Master		530.0
Before		528.2
After		523.3

430.0 (Minimum) 610.0 (Nominal) 730.0 (Maximum)

Phase	SSW1 Background CPS	Value
Master		86.93
Before		86.14
After		85.70

70.00 (Minimum) 100.0 (Nominal) 120.0 (Maximum)

Phase	SSW2 Background CPS	Value
Master		169.9
Before		168.4
After		167.8

140.0 (Minimum) 200.0 (Nominal) 240.0 (Maximum)

Phase	SSW3 Background CPS	Value
Master		449.6
Before		448.8
After		443.6

380.0 (Minimum) 530.0 (Nominal) 630.0 (Maximum)

Phase	SSW4 Background CPS	Value
Master		236.6
Before		238.4
After		238.5

190.0 (Minimum) 280.0 (Nominal) 340.0 (Maximum)

Phase	SSW5 Background CPS	Value
Master		177.0
Before		177.1
After		175.6

140.0 (Minimum) 205.0 (Nominal) 250.0 (Maximum)

Master: Calibration out of date 15-Aug-2001 9:07 Before: 9-Nov-2001 3:27 After: 25-Nov-2001 23:24

Hostile Environment Litho Density - A Wellsite Calibration

Detectors Resolution From BKG Measurments

Phase	LS Background Resolution	Value
Master		1.029
Before		1.047
After		0.9194

0.7000 (Minimum) 1.000 (Nominal) 1.111 (Maximum)

Phase	SS Background Resolution	Value
Master		0.9496
Before		0.9487
After		0.9462

0.7000 (Minimum) 1.000 (Nominal) 1.111 (Maximum)

Master: Calibration out of date 15-Aug-2001 9:07 Before: 9-Nov-2001 3:27

After: 25-Nov-2001 23:24

Hostile Environment Litho Density - A Master Calibration

Aluminum Measurement

Phase	LSW1 Aluminum CPS	Value
Master		592.4

440.0 (Minimum) 648.4 (Nominal) 840.0 (Maximum)

Phase	LSW2 Aluminum CPS	Value
Master		936.8

840.0 (Minimum) 1018 (Nominal) 1200 (Maximum)

Phase	LSW3 Aluminum CPS	Value
Master		972.2

920.0 (Minimum) 1105 (Nominal) 1280 (Maximum)

Phase	LSW4 Aluminum CPS	Value
Master		537.9

520.0 (Minimum) 609.5 (Nominal) 720.0 (Maximum)

Phase	LSW5 Aluminum CPS	Value
Master		479.4

450.0 (Minimum) 533.8 (Nominal) 670.0 (Maximum)

Phase	SSW1 Aluminum CPS	Value
Master		2454

1850 (Minimum) 2664 (Nominal) 2900 (Maximum)

Phase	SSW2 Aluminum CPS	Value

Phase	SSW3 Aluminum CPS	Value

Phase	SSW4 Aluminum CPS	Value

Phase		Value
Master		7177
	6200 (Minimum) 7731 (Nominal) 8500 (Maximum)	

Phase		Value
Master		9660
	8750 (Minimum) 10380 (Nominal) 11750 (Maximum)	

Phase		Value
Master		4186
	4000 (Minimum) 4574 (Nominal) 5400 (Maximum)	

Phase	SSW5 Aluminum CPS	Value
Master		676.8
	570.0 (Minimum) 745.2 (Nominal) 1110 (Maximum)	

Master: Calibration out of date 15-Aug-2001 9:23

Hostile Environment Litho Density - A Master Calibration
Detectors Resolution From Aluminum Measurment

Phase	LS Aluminum Resolution	Value
Master		1.049
	0.7000 (Minimum) 1.000 (Nominal) 1.111 (Maximum)	

Phase	SS Aluminum Resolution	Value
Master		1.035
	0.7000 (Minimum) 1.000 (Nominal) 1.111 (Maximum)	

Master: Calibration out of date 15-Aug-2001 9:23

Hostile Environment Litho Density - A Master Calibration
Aluminum Measurement (Window Ratios)

Phase	LSW1/(LSW4 + LSW5) Calc.	Value
Master		0.5824
	0.3400 (Minimum) 0.5400 (Nominal) 0.7400 (Maximum)	

Phase	LSW3/(LSW4 + LSW5) Calc.	Value
Master		0.9557
	0.7600 (Minimum) 0.9600 (Nominal) 1.160 (Maximum)	

Phase	SSW1/(SSW4 + SSW5) Calc.	Value
Master		0.5047
	0.3600 (Minimum) 0.4600 (Nominal) 0.5600 (Maximum)	

Phase	SSW3/(SSW4 + SSW5) Calc.	Value
Master		1.987
	1.700 (Minimum) 1.900 (Nominal) 2.100 (Maximum)	

Master: Calibration out of date 15-Aug-2001 9:23

Hostile Environment Litho Density - A Master Calibration
Litholog Measurement

Phase	LSW1 Iron CPS	Value
Master		404.8
	310.0 (Minimum) 410.0 (Nominal) 510.0 (Maximum)	

Phase	LSW2 Iron CPS	Value
Master		765.5
	660.0 (Minimum) 870.0 (Nominal) 980.0 (Maximum)	

Phase	LSW3 Iron CPS	Value
Master		888.8
	810.0 (Minimum) 1030 (Nominal) 1170 (Maximum)	

Phase	LSW4 Iron CPS	Value
Master		509.7
	470.0 (Minimum) 590.0 (Nominal) 670.0 (Maximum)	

Phase	LSW5 Iron CPS	Value
Master		449.7
	400.0 (Minimum) 530.0 (Nominal) 620.0 (Maximum)	

Phase	SSW1 Iron CPS	Value
Master		1842
	1400 (Minimum) 1850 (Nominal) 2120 (Maximum)	

Phase	SSW2 Iron CPS	Value
Master		6221
	5170 (Minimum) 6500 (Nominal) 7270 (Maximum)	

Phase	SSW3 Iron CPS	Value
Master		9124
	8100 (Minimum) 10000 (Nominal) 11000 (Maximum)	

Phase	SSW4 Iron CPS	Value
Master		3968
	3620 (Minimum) 4500 (Nominal) 5020 (Maximum)	

Phase	SSW5 Iron CPS	Value
Master		622.7
	470.0 (Minimum) 750.0 (Nominal) 10100 (Maximum)	

Master: Calibration out of date 15-Aug-2001 10:13

Hostile Environment Litho Density - A Master Calibration
Detectors Resolution From Litholog Measurment

Phase	LS Lith Resolution	Value
Master		1.040
	0.7000 (Minimum) 1.000 (Nominal) 1.111 (Maximum)	

Phase	SS Lith Resolution	Value
Master		1.024
	0.7000 (Minimum) 1.000 (Nominal) 1.111 (Maximum)	

Master: Calibration out of date 15-Aug-2001 10:13

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		31.20
Before		32.35
After		32.50

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

Phase	Far Det Bkg Cntrate CPS	Value
Master		34.55
Before		32.27
After		34.39

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

Phase	Array-1 Det Bkg Cntrate CPS	Value
Master		30.79
Before		28.53
After		28.71

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

Phase	Array-2 Det Bkg Cntrate CPS	Value
Master		29.57
Before		30.27
After		31.73

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

Phase	Array Therm Det Bkg Cntrate CPS	Value
Master		31.99
Before		32.88
After		33.79

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

Master: Calibration out of date 5-Aug-2001 9:26 Before: 25-Nov-2001 14:51 After: 25-Nov-2001 20:36

Accelerator-Porosity Tool Wellsite Calibration

Calibration Ratios

Phase	Near/Far Calibration Ratio	Value
Master		0.9005

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

Phase	Near/Array Calibration Ratio	Value
Master		1.063

0.9000 (Minimum) 1.030 (Nominal) 1.150 (Maximum)

Master: Calibration out of date 5-Aug-2001 9:26

Accelerator-Porosity Tool Master Calibration

Detector Calibration

Phase	Near/Far Calibration Ratio	Value
Master		0.9005

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

Phase	Near/Array Calibration Ratio	Value
Master		1.063

0.9000 (Minimum) 1.030 (Nominal) 1.150 (Maximum)

Master: Calibration out of date 5-Aug-2001 9:26

Accelerator-Porosity Tool Master Calibration

Tank Check

Phase	Array-1 Standoff Porosity PU	Value
Master		11.51

5.500 (Minimum) 10.25 (Nominal) 15.00 (Maximum)

Phase	Array-2 Standoff Porosity PU	Value
Master		11.32

5.500 (Minimum) 10.25 (Nominal) 15.00 (Maximum)

Phase	Sigma Formation CU	Value
Master		27.95

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

Master: Calibration out of date 5-Aug-2001 9:26

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:		
HNGS Sonde	HNGS - BA	27
Auxiliary Equipment:		
HNGS Sonde Housing	HNSH - BA	27
Gamma Source Radioactive	GSR - U	135

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 1 Check

Phase	Na 511 Peak Loc	Value
Master		40.57
Before		40.58
After		40.46
37.50 (Minimum)	40.00 (Nominal)	42.50 (Maximum)

Phase	Na 511 Peak Res %	Value
Master		16.90
Before		17.01
After		15.79
12.00 (Minimum)	15.50 (Nominal)	19.00 (Maximum)

Phase	High Voltage V	Value
Master		1100
Before		1100
After		1108
900.0 (Minimum)	1150 (Nominal)	1600 (Maximum)

Phase	Na 1785 Peak Loc	Value
Master		145.1
Before		145.5
After		145.0
135.0 (Minimum)	142.6 (Nominal)	150.3 (Maximum)

Phase	Na 1785 Peak Res %	Value
Master		10.15
Before		10.15
After		10.22
7.000 (Minimum)	8.500 (Nominal)	11.00 (Maximum)

Phase	Temperature DEGC	Value
Master		31.73
Before		31.73
After		25.79
-28.89 (Minimum)	15.50 (Nominal)	60.00 (Maximum)

Phase	Na Count Rate CPS	Value
Master		17.94
Before		17.88
After		17.94
15.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)

Master: 9-Nov-2001 19:27 Before: 9-Nov-2001 19:46 After: 25-Nov-2001 23:25

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 2 Check

Phase	Na 511 Peak Loc	Value
Master		40.70
Before		40.97
After		40.71
37.50 (Minimum)	40.00 (Nominal)	42.50 (Maximum)

Phase	Na 511 Peak Res %	Value
Master		15.14
Before		15.10
After		15.12
12.00 (Minimum)	15.50 (Nominal)	19.00 (Maximum)

Phase	High Voltage V	Value
Master		1188
Before		1189
After		1196
900.0 (Minimum)	1150 (Nominal)	1600 (Maximum)

Phase	Na 1785 Peak Loc	Value
Master		144.5
Before		145.9
After		144.8
135.0 (Minimum)	142.6 (Nominal)	150.3 (Maximum)

Phase	Na 1785 Peak Res %	Value
Master		7.999
Before		7.706
After		7.556
7.000 (Minimum)	8.500 (Nominal)	11.00 (Maximum)

Phase	Temperature DEGC	Value
Master		30.93
Before		31.02
After		25.45
-28.89 (Minimum)	15.50 (Nominal)	60.00 (Maximum)

Phase	Na Count Rate CPS	Value
Master		18.09
Before		18.05
After		18.16
15.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)

Master: 9-Nov-2001 19:27 Before: 9-Nov-2001 19:46 After: 25-Nov-2001 23:25

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Ratio Of Detector 1 To Detector 2

Phase	Coincidence Count Rate Ratio	Value
Master		0.9912
Before		0.9922
After		0.9877
0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)

Master: 9-Nov-2001 19:27
Before: 9-Nov-2001 19:46
After: 25-Nov-2001 23:25

Hostile Natural Gamma Ray Sonde Master Calibration

Detector 1 Calibration

Phase	Na 511 Peak Set Point	Value

Phase	Th Peak Loc	Value

Phase	Th Peak Res %	Value

Phase	Na 511 Peak Set Point	Value	Phase	Th Peak Loc	Value	Phase	Th Peak Res %	Value
Master		41.00	Master		210.4	Master		7.945
	38.00 (Minimum) 40.00 (Nominal) 42.00 (Maximum)			201.0 (Minimum) 209.6 (Nominal) 218.3 (Maximum)			5.000 (Minimum) 7.000 (Nominal) 9.000 (Maximum)	
Phase	Background Count Rate CPS	Value	Phase	Gain Ratio	Value			
Master	EXCEEDS LIMIT	15.50	Master		0.9866	*		
	20.00 (Minimum) 142.5 (Nominal) 265.0 (Maximum)			0.9400 (Minimum) 1.000 (Nominal) 1.060 (Maximum)				

Master: 9-Nov-2001 19:20

Hostile Natural Gamma Ray Sonde Master Calibration

Detector 2 Calibration

Phase	Na 511 Peak Set Point	Value	Phase	Th Peak Loc	Value	Phase	Th Peak Res %	Value
Master		41.00	Master		209.5	Master		7.230
	38.00 (Minimum) 40.00 (Nominal) 42.00 (Maximum)			201.0 (Minimum) 209.6 (Nominal) 218.3 (Maximum)			5.000 (Minimum) 7.000 (Nominal) 9.000 (Maximum)	
Phase	Background Count Rate CPS	Value	Phase	Gain Ratio	Value			
Master	EXCEEDS LIMIT	17.01	Master		0.9792	*		
	20.00 (Minimum) 142.5 (Nominal) 265.0 (Maximum)			0.9400 (Minimum) 1.000 (Nominal) 1.060 (Maximum)				

Master: 9-Nov-2001 19:20

* Low background cps does not affect actual calibration gain.

COMPANY:	Lamont Doherty	BOTTOM LOG INTERVAL	5312 m
		SCHLUMBERGER DEPTH	5326 m
WELL:	ODP Leg 199, Site 1219 A (PAT-17C)	DEPTH DRILLER	5325 m
FIELD:		KELLY BUSHING	11.3 m
		DRILL FLOOR	11 m
Ocean:	Pacific	GROUND LEVEL	-5075 m

Schlumberger

APS/HLDT Porosity
Natural Gamma Ray