

COMPANY: Lamont Doherty

WELL: ODP Leg 190, Site 1173A

FIELD: Nankai Trough

Country: Japan Ocean: Pacific



Phasor Induction-Natural GR

Country: Japan
Field: Nankai Trough
Location: Rig: Joides Resolution
Well: ODP Leg 190, Site 1173A
Company: Lamont Doherty

LOCATION		Elev.:	
Rig: Joides Resolution		K.B.	11.3 m
Nankai Trough		G.L.	-4801.9 m
		D.F.	11 m
Permanent Datum:	MSL	Elev.:	
Log Measured From:	DES		above Perm. Datum
Drilling Measured From:	DES		
API Serial No.	SECTION	TOWNSHIP	RANGE

Logging Date	Run 1	Run 2	Run
Run Number			
Depth Driller			
Schlumberger Depth			
Bottom Log Interval			
Top Log Interval			
Casing Driller Size @ Depth			
Casing Schlumberger			
Bit Size			
Type Fluid In Hole			
Density			
Fluid Loss			
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	Steve Kittredge		
Witnessed By	Harold Tobin		

Logging Date	June-5-2000		
Run Number	1		
Depth Driller	5536.2 m		
Schlumberger Depth	5239.5 m		
Bottom Log Interval	5237 m		
Top Log Interval	4790.7 m		
Casing Driller Size @ Depth	0.000 in	@	4881 m
Casing Schlumberger	4877 m		
Bit Size	9.875 in		
Type Fluid In Hole	Sepiolite		
Density	1.03 g/cm3		
Fluid Loss	PH		
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	Steve Kittredge		
Witnessed By	Harold Tobin		

Logging Date	June-5-2000		
Run Number	1		
Depth Driller	5536.2 m		
Schlumberger Depth	5239.5 m		
Bottom Log Interval	5237 m		
Top Log Interval	4790.7 m		
Casing Driller Size @ Depth	0.000 in	@	4881 m
Casing Schlumberger	4877 m		
Bit Size	9.875 in		
Type Fluid In Hole	Sepiolite		
Density	1.03 g/cm3		
Fluid Loss	PH		
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	Steve Kittredge		
Witnessed By	Harold Tobin		


ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS AND WE CANNOT, AND DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATIONS, AND WE SHALL NOT, EXCEPT IN THE CASE OF GROSS OR WILLFUL NEGLIGENCE ON OUR PART, BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COSTS, DAMAGES OR EXPENSES INCURRED OR SUSTAINED BY ANYONE RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR OFFICERS, AGENTS OR EMPLOYEES. THESE INTERPRETATIONS ARE ALSO SUBJECT TO CLAUSE 4 OF OUR GENERAL TERMS AND CONDITIONS AS SET OUT IN OUR CURRENT PRICE SCHEDULE.

OTHER SERVICES1 OS1: MESTB/DSI/NGTC OS2: OS3: OS4: OS5:	OTHER SERVICES2 OS1: OS2: OS3: OS4: OS5:
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REMARKS: RUN NUMBER 1 Hole Cored with APC/XCB Toolstring- DITE/HLDS/APS/HNGS. Log Measured in Meters Below Rig Floor (MBRF). Total Depth Logger- 5239.5 MBRF. Log is split in two sections due to ledge at 5140 MBRF. Bottom section does not overlap upper section. Tool set down at 5240 on bottom section. WHC used on all runs. Drill pipe set at 4881 MBRF for upper section Drill pipe set at 5126 MBRF for lower section. Had problems getting in and out of pipe in lower section. Did not log below 5239.5 MBRF with this tool.	REMARKS: RUN NUMBER 2
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RUN 1			RUN 2		
SERVICE ORDER #:			SERVICE ORDER #:		
PROGRAM VERSION:	9C1-303		PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1		RUN 2	
SURFACE EQUIPMENT			
SFT-281 24 SFT-178 4722 GSR-U 135 WITM (DTS)-A			
DOWNHOLE EQUIPMENT			
LEH-QT		28.69	
LEH-QT			
DTC-H	CTEM	27.52	
ECH-KC 9349	TelStatus	27.80	
	ToolStatu	26.89	
HNGS-BA	Upper_1	26.19	26.89
HNGS BA 27	Lower_2	25.98	

HNSG-BA 27
HNSH-BA 27

Lower_2

23.95

ILE-D
ILE-D

24.39

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

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

21.95

19.51
19.43
19.30
19.20

NPLC-B
NPLC-B 79
NPH-B 82

Status

18.01

16.78

HLDS
GSR-Z 1846
HLDV-D 35
HLDS-D 35
HEH-H 35
HLDP-C 12

Caliper
SS LS Status

15.56

11.51

DTA-A
ECH-KE 8231
DTA-A 8231

10.74

DIT-E
DIC-EB 390
MIH-ZA 397
DIS-HB 433

9.52

SP
Deep Ind
Aux Meas SFL
Med Ind
Status HV DF
Tension

3.15
2.90
1.98
1.83
0.00

TOOL ZERO

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

Output DLIS Files

DEFAULT	DITE .021	FN:22 PRODUCER	05-Jun-2000 21:25	5239.5 M	5154.9 M
IPLT_CUST	DITE .021	FN:23 PRODUCER	05-Jun-2000 21:25	5239.5 M	5154.6 M

OP System Version: 9C1-303 MCM

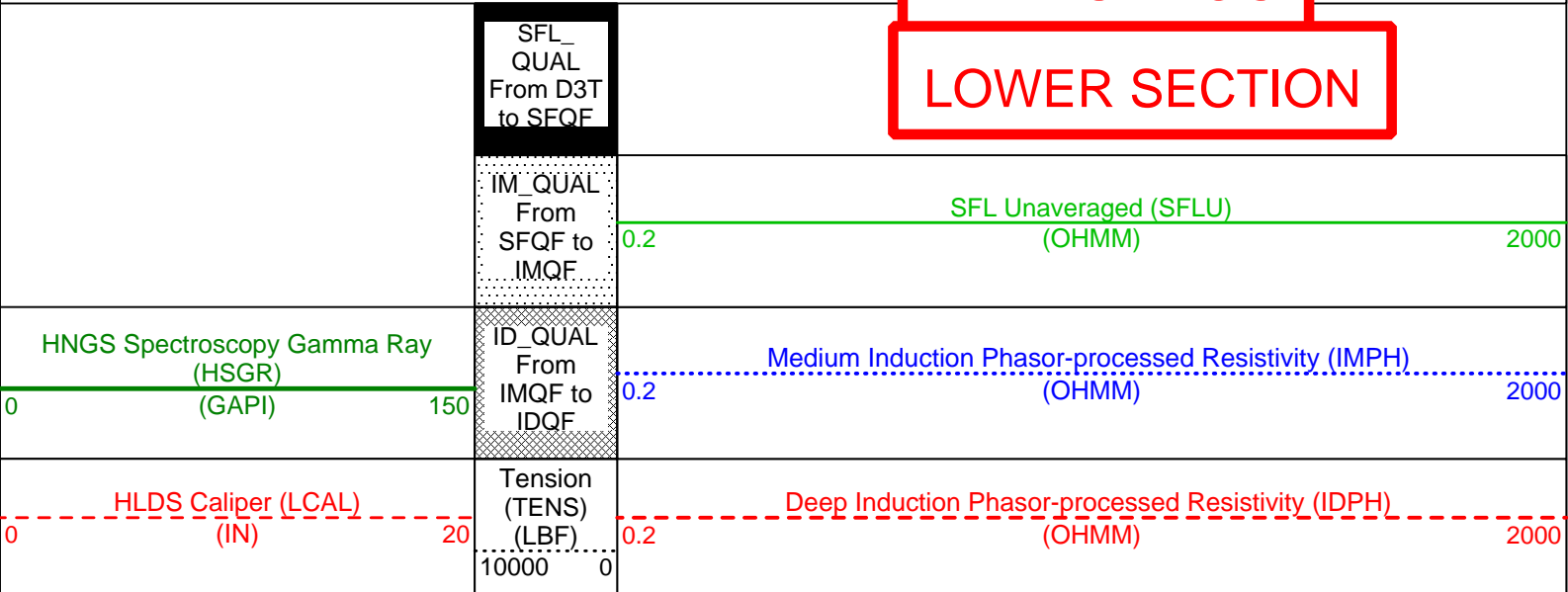
DIT-E	9C1-303	DTA-A	9C1-303
HLDS	9C1-303	NPLC-B	9C1-303
APS-BA	9C1-303	HNGS-BA	9C1-303
DTC-H	9C1-303		

PIP SUMMARY

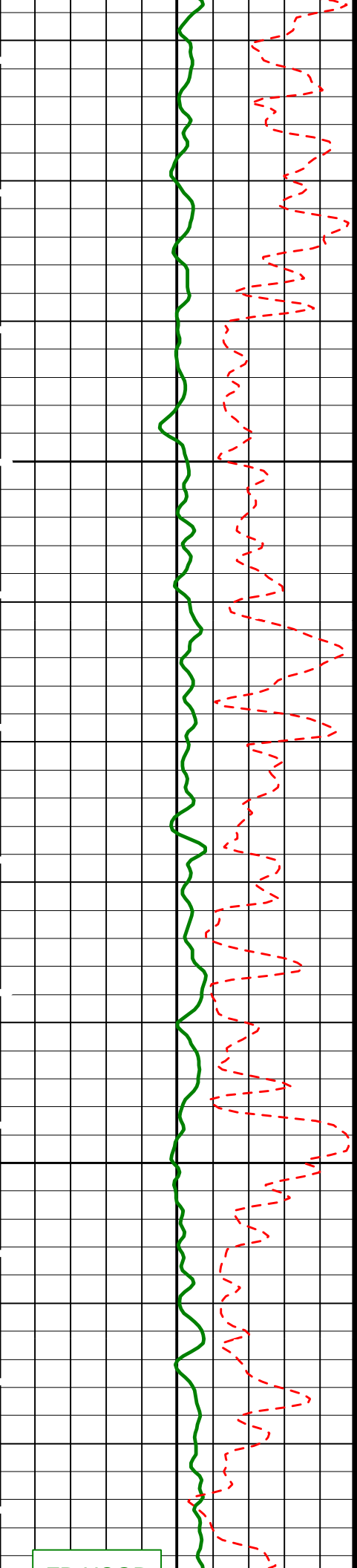
Time Mark Every 60 S

MAIN UP LOG

LOWER SECTION

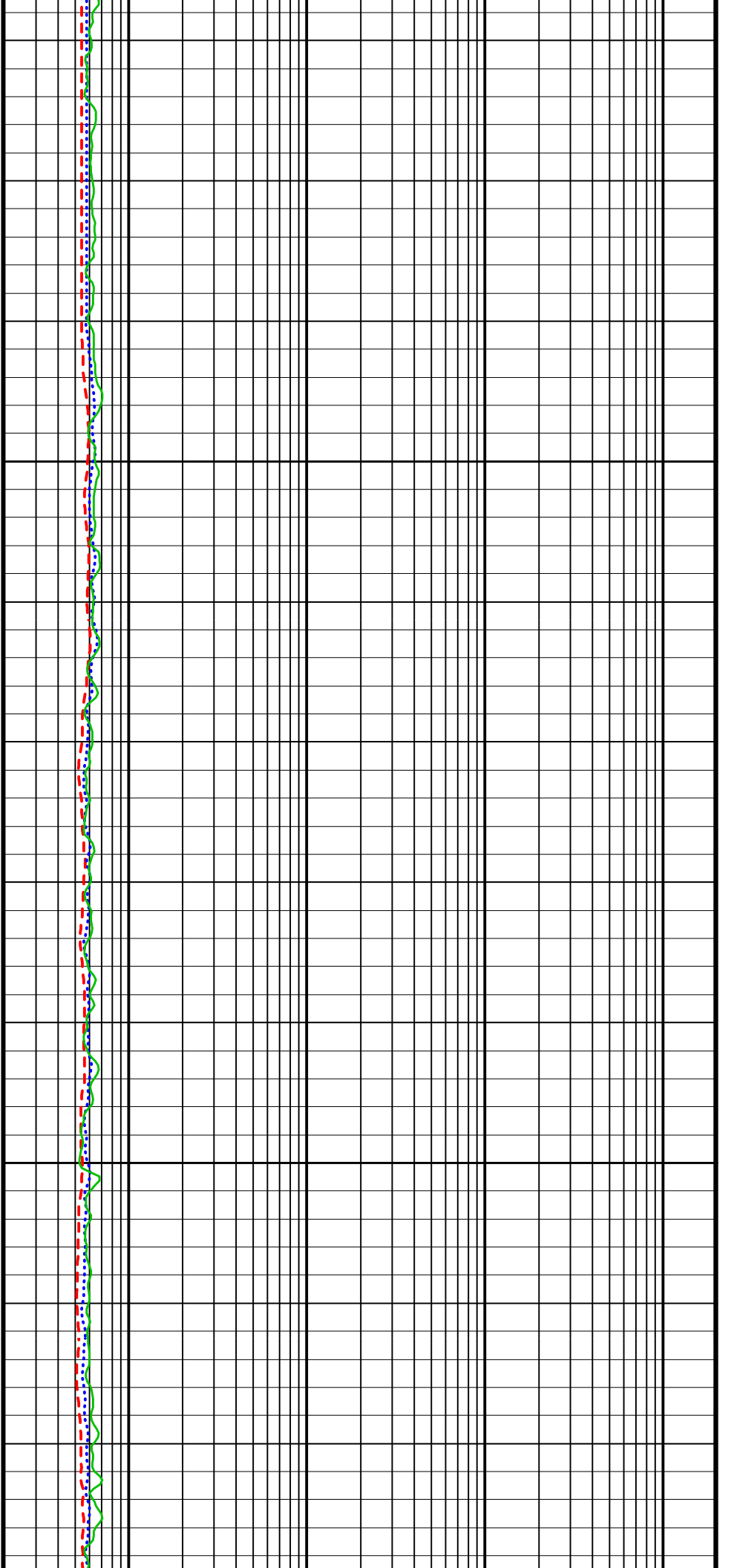


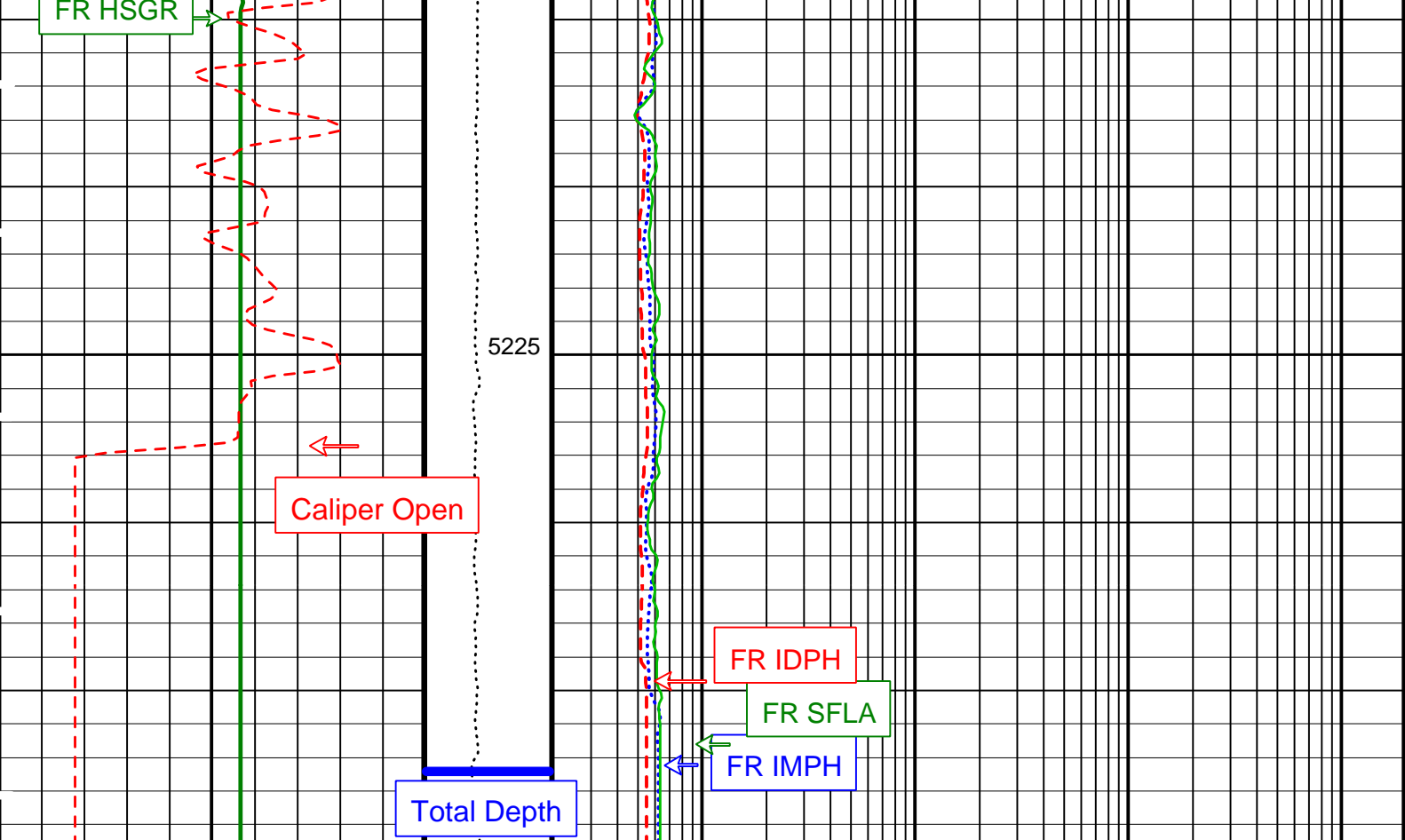
Last Reading



5175

5200





0	HLDS Caliper (LCAL) (IN)	20	Tension (TENS) (LBF)	0.2	Deep Induction Phasor-processed Resistivity (IDPH) (OHMM)	2000
10000			0			
0	HNGS Spectroscopy Gamma Ray (HSGR) (GAPI)	150	ID_QUAL From IMQF to IDQF	0.2	Medium Induction Phasor-processed Resistivity (IMPH) (OHMM)	2000
			IM_QUAL From SFQF to IMQF	0.2	SFL Unaveraged (SFLU) (OHMM)	2000
			SFL_QUAL From D3T to SFQF			

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
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)	65 DEGF
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	9.875 IN
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
D1PR	HNGS Detector 1 Calibration Thorium Peak Resolution	7.03834 %

D1TC	HNGS Detector 1 Calibration Thorium Peak Location	59.2921	DEGF
D1TL	HNGS Detector 1 Calibration Thorium Peak Location	210.324	
D2PR	HNGS Detector 2 Calibration Thorium Peak Resolution	7.10236	%
D2TC	HNGS Detector 2 Calibration Temperature	57.3948	DEGF
D2TL	HNGS Detector 2 Calibration Thorium Peak Location	209.925	
DBCC	HNGS Barite Constant Correction Flag	NONE	
DFD	Drilling Fluid Density	1.03	G/C3
DGF2	Deep 20 kHz Gain Factor	1.00874	
DPH2	Deep 20 kHz Phase Shift	0.00879421	DEG
DRE2	Deep Real 20 kHz Sonde Error Correction	12.3905	MM/M
DSR2	Deep Sigma Reference (20 kHz)	1843	MM/M
DXE2	Deep Quad 20 kHz Sonde Error Correction	71.6226	MM/M
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	0.01	DF/F
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	0.000509433	
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	9.54467e-036	
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	
MARQ_START	HNGS Marquardt Start-up Mode	INTERNAL	
MGF2	Medium 20 kHz Gain Factor	1.04679	
MPH2	Medium 20 kHz Phase Shift	-1.13903	DEG
MRE2	Medium Real 20 kHz Sonde Error Correction	9.79671	MM/M
MSR2	Medium Sigma Reference (20 kHz)	3250	MM/M
MXE2	Medium Quad 20 kHz Sonde Error Correction	117.114	MM/M
RDF1_START	HNGS Detector 1 RDF Constant	0	
RDF2_START	HNGS Detector 2 RDF Constant	0	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S1NA	HNGS Detector 1 Calibration Sodium Count Rate	26.8307	CPS
S1NG	HNGS Detector 1 Calibration End-On / Side-On Gain Ratio	0.986846	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S2NA	HNGS Detector 2 Calibration Sodium Count Rate	27.2589	CPS
S2NG	HNGS Detector 2 Calibration End-On / Side-On Gain Ratio	0.984706	
SABK	HNGS Statistical Uncertainty in Borehole Potassium Running Average	0.000253594	
SFCR	SFL Channel Ratio	1000	
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	95	DEGF
TD	Total Depth	-50000	M
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.975294	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.951327	

Format: DITE_LogPhasor Vertical Scale: 1:200 Graphics File Created: 05-Jun-2000 21:25

OP System Version: 9C1-303			
MCM			
DIT-E	9C1-303	DTA-A	9C1-303
HLDS	9C1-303	NPLC-B	9C1-303
APS-BA	9C1-303	HNGS-BA	9C1-303
DTC-H	9C1-303		

Output DLIS Files				
DEFAULT	DITE .021	FN:22 PRODUCER	05-Jun-2000 21:25	
IPLT_CUST	DITE .021	FN:23 PRODUCER	05-Jun-2000 21:25	

Output DLIS Files					
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IPLT_CUST	DITE .020	FN:21 PRODUCER	05-Jun-2000 10:10	5145.8 M	4790.5 M

OP System Version: 9C1-303			
MCM			

DIT-E 9C1-303
 HLDS 9C1-303
 APS-BA 9C1-303
 DTC-H 9C1-303

DTA-A 9C1-303
 NPLC-B 9C1-303
 HNGS-BA 9C1-303

Changed Parameter Summary

DLIS Name	New Value	Previous Value	Depth & Time
GCSE	BS	LCAL	4879.5 11:15:21

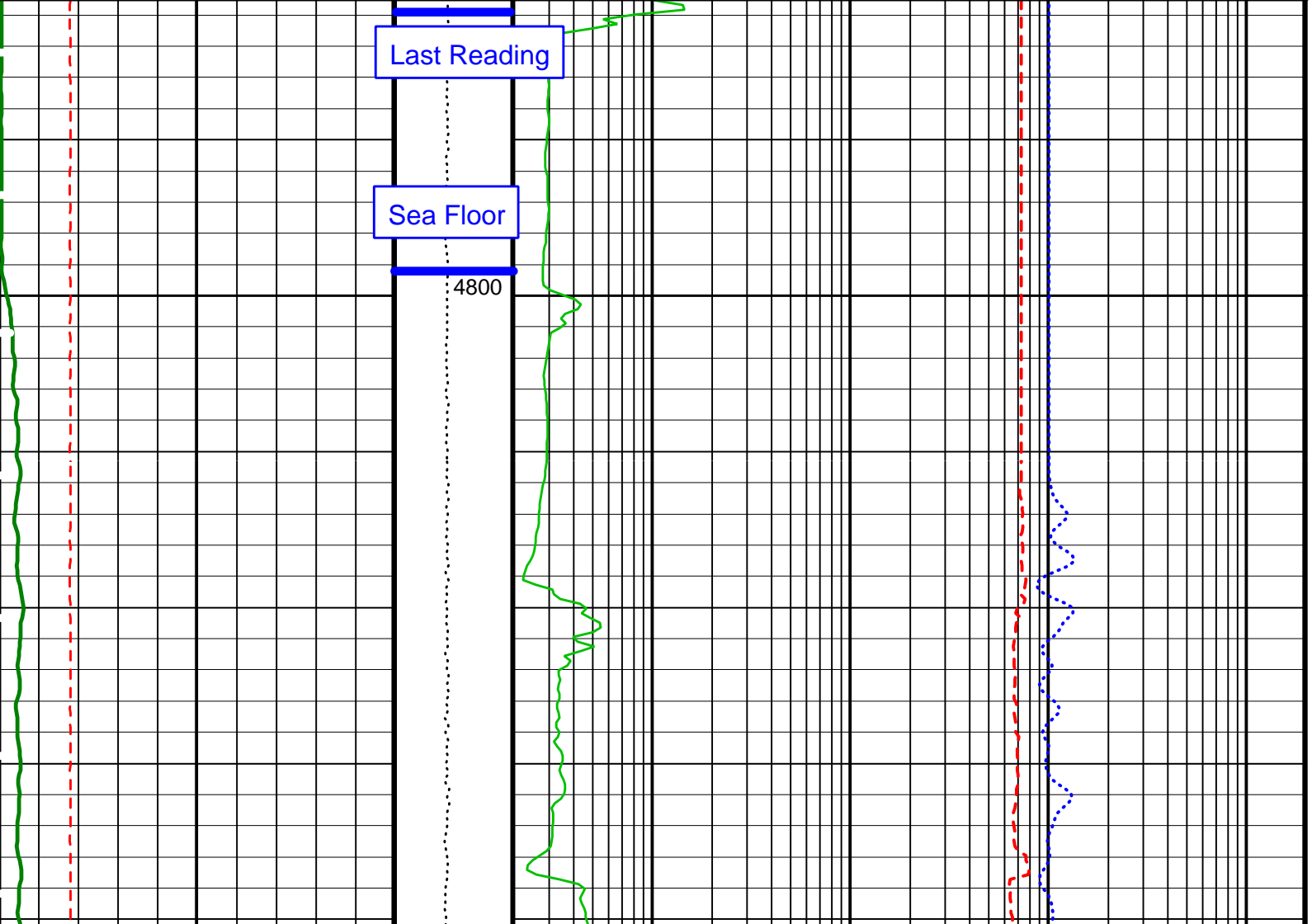
PIP SUMMARY

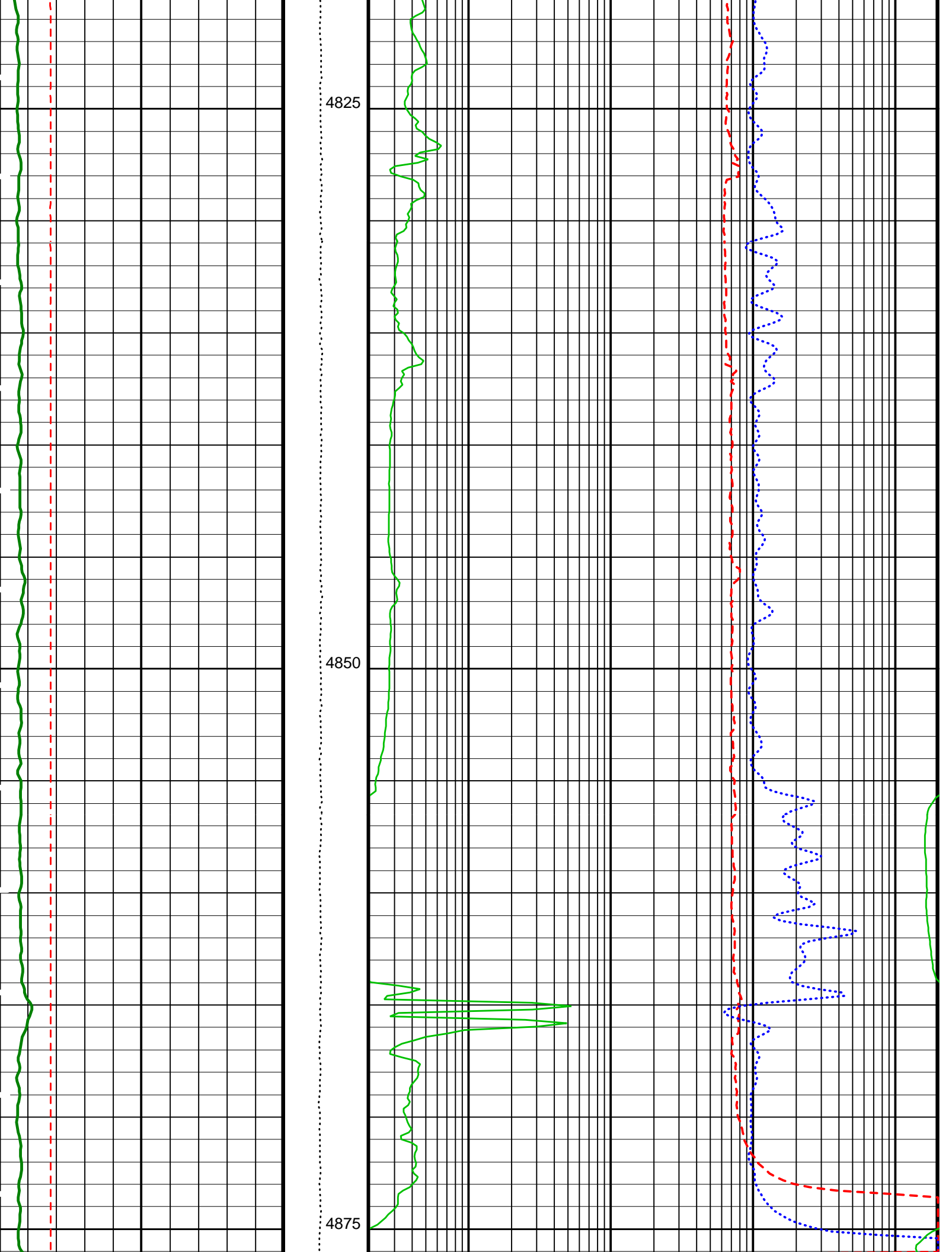
Time Mark Every 60 S

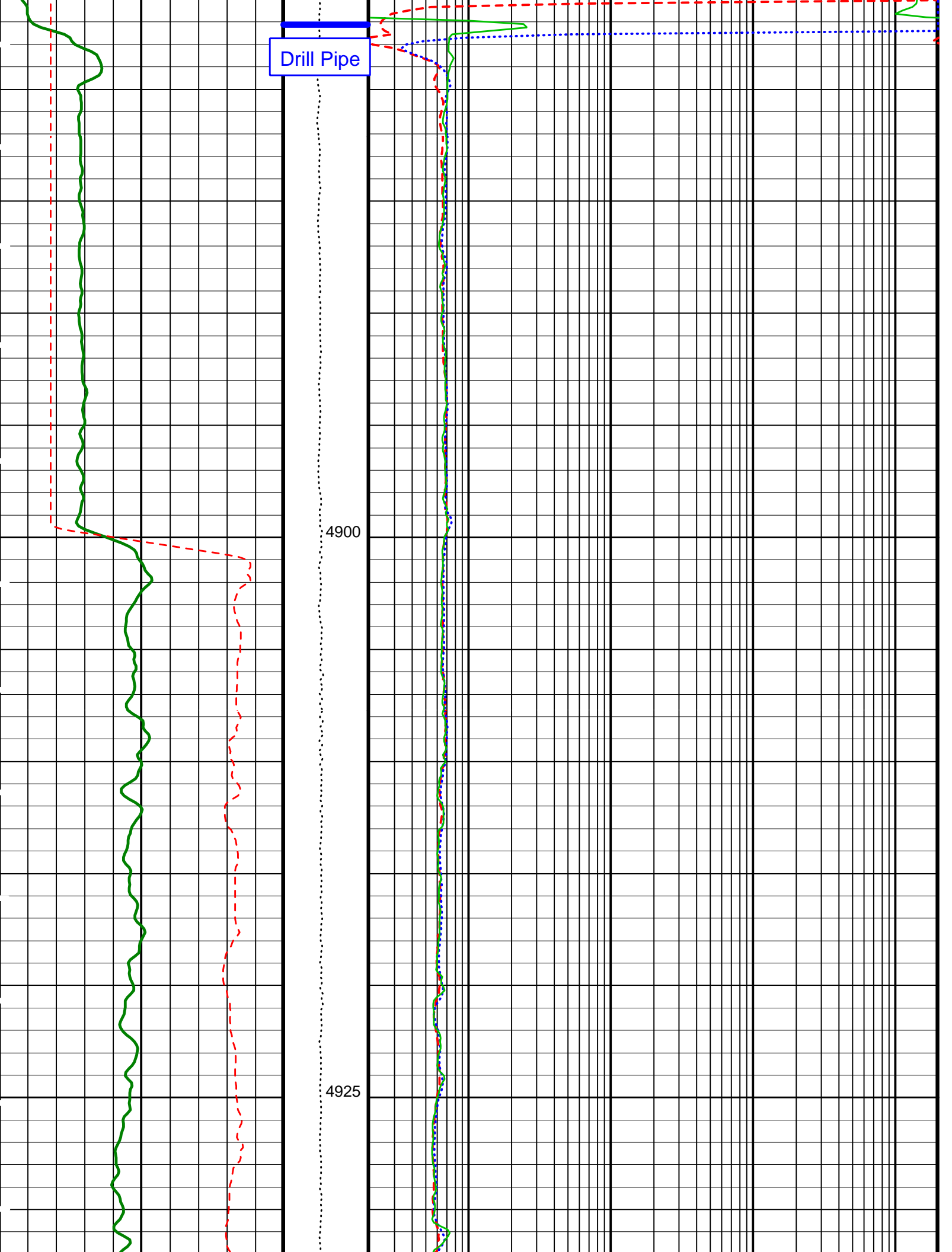
MAIN UP LOG

UPPER SECTION

	SFL_QUAL From D3T to SFQF		
	IM_QUAL From SFQF to IMQF	0.2	SFL Unaveraged (SFLU) (OHMM) 2000
HNGS Spectroscopy Gamma Ray (HSGR) (GAPI) 0 150	ID_QUAL From IMQF to IDQF	0.2	Medium Induction Phasor-processed Resistivity (IMPH) (OHMM) 2000
HLDS Caliper (LCAL) (IN) 0 20	Tension (TENS) (LBF) 10000 0	0.2	Deep Induction Phasor-processed Resistivity (IDPH) (OHMM) 2000



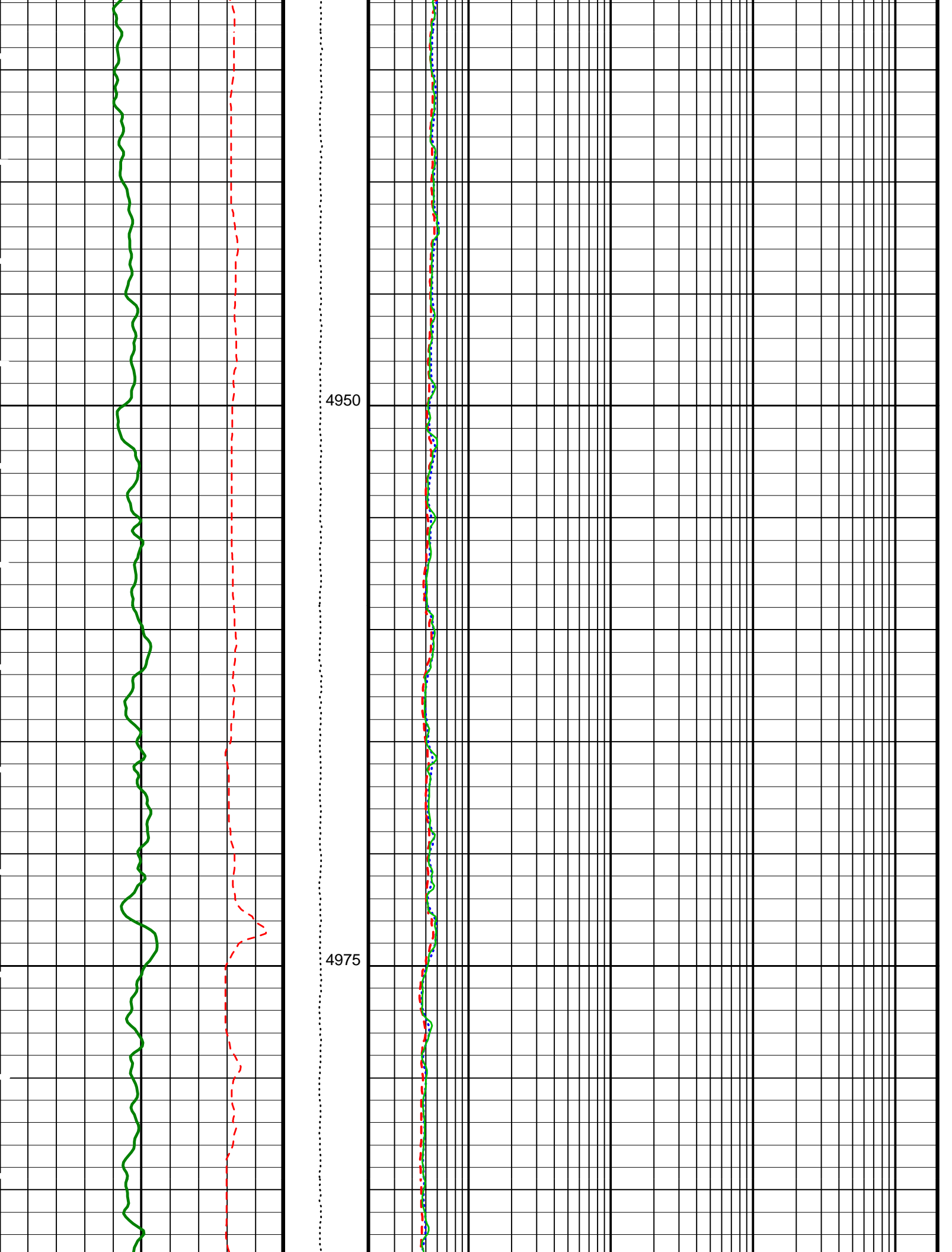


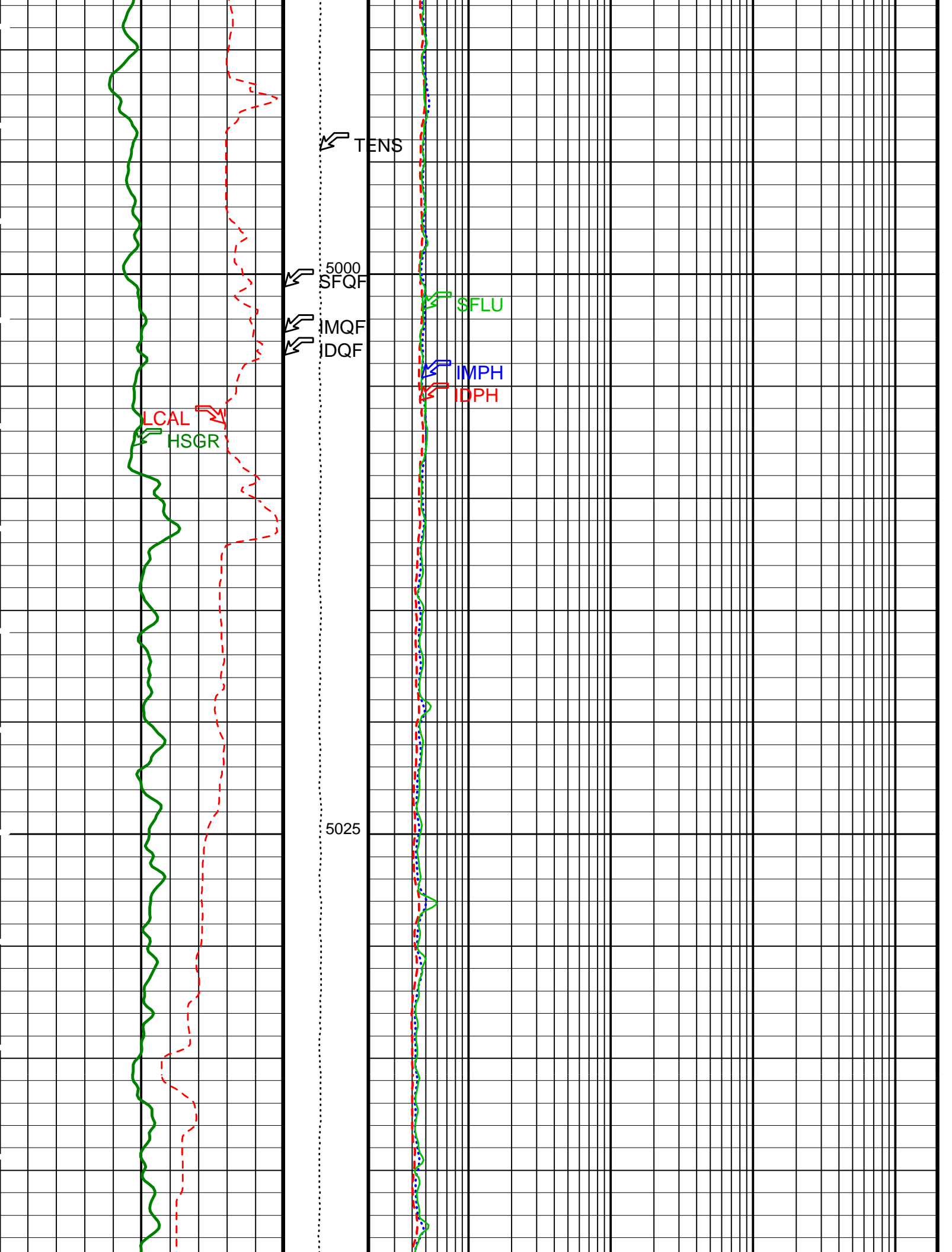


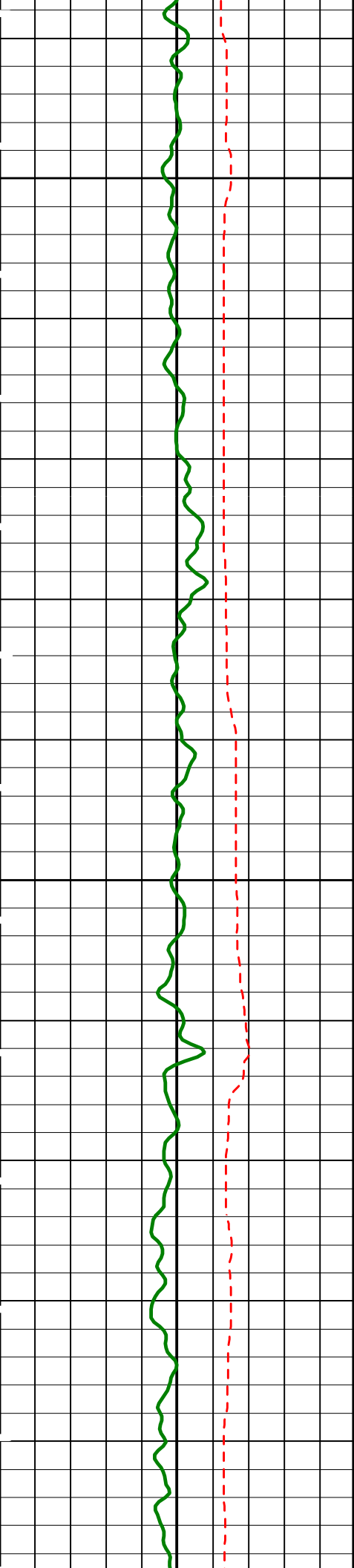
Drill Pipe

4900

4925



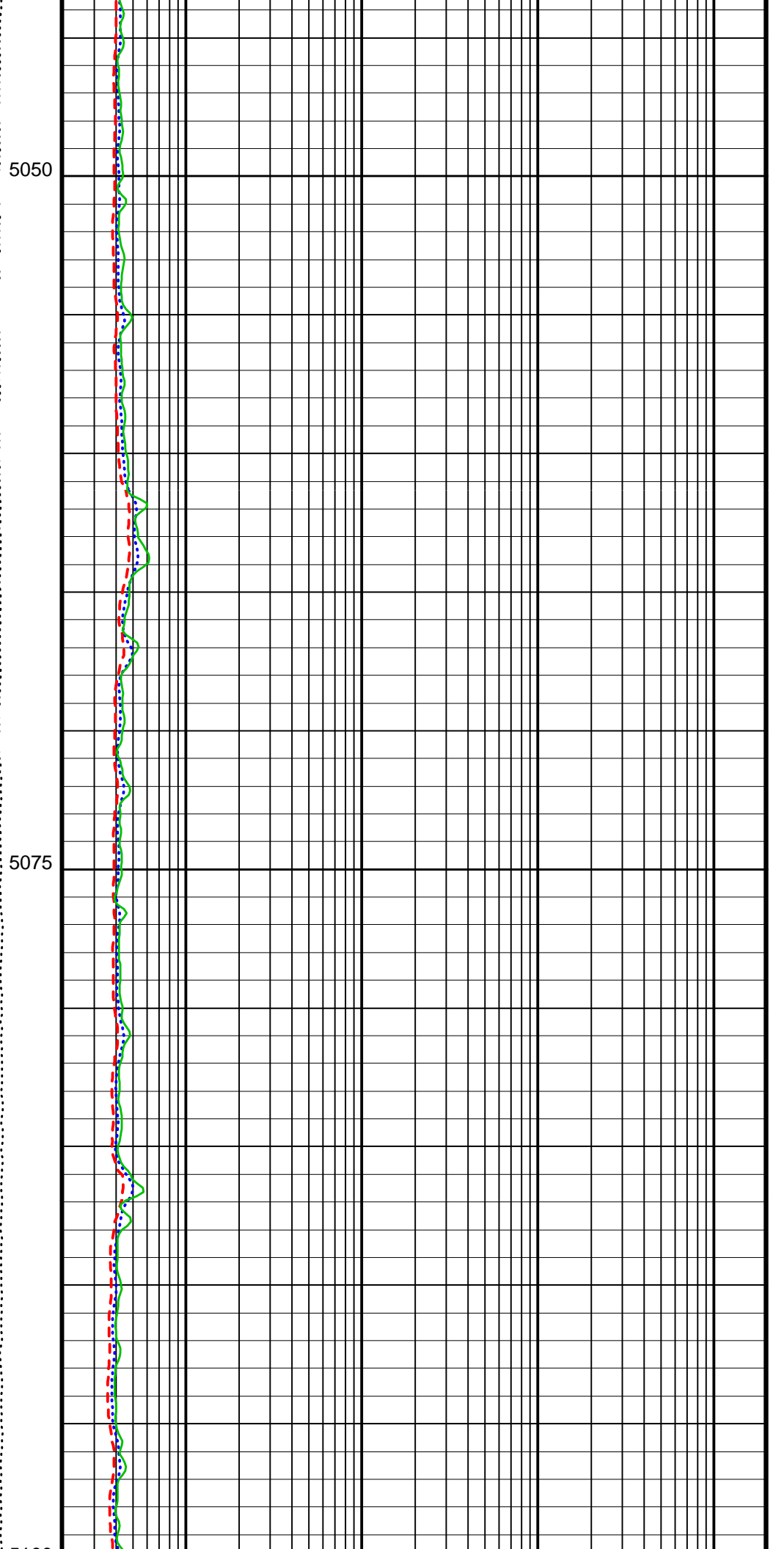


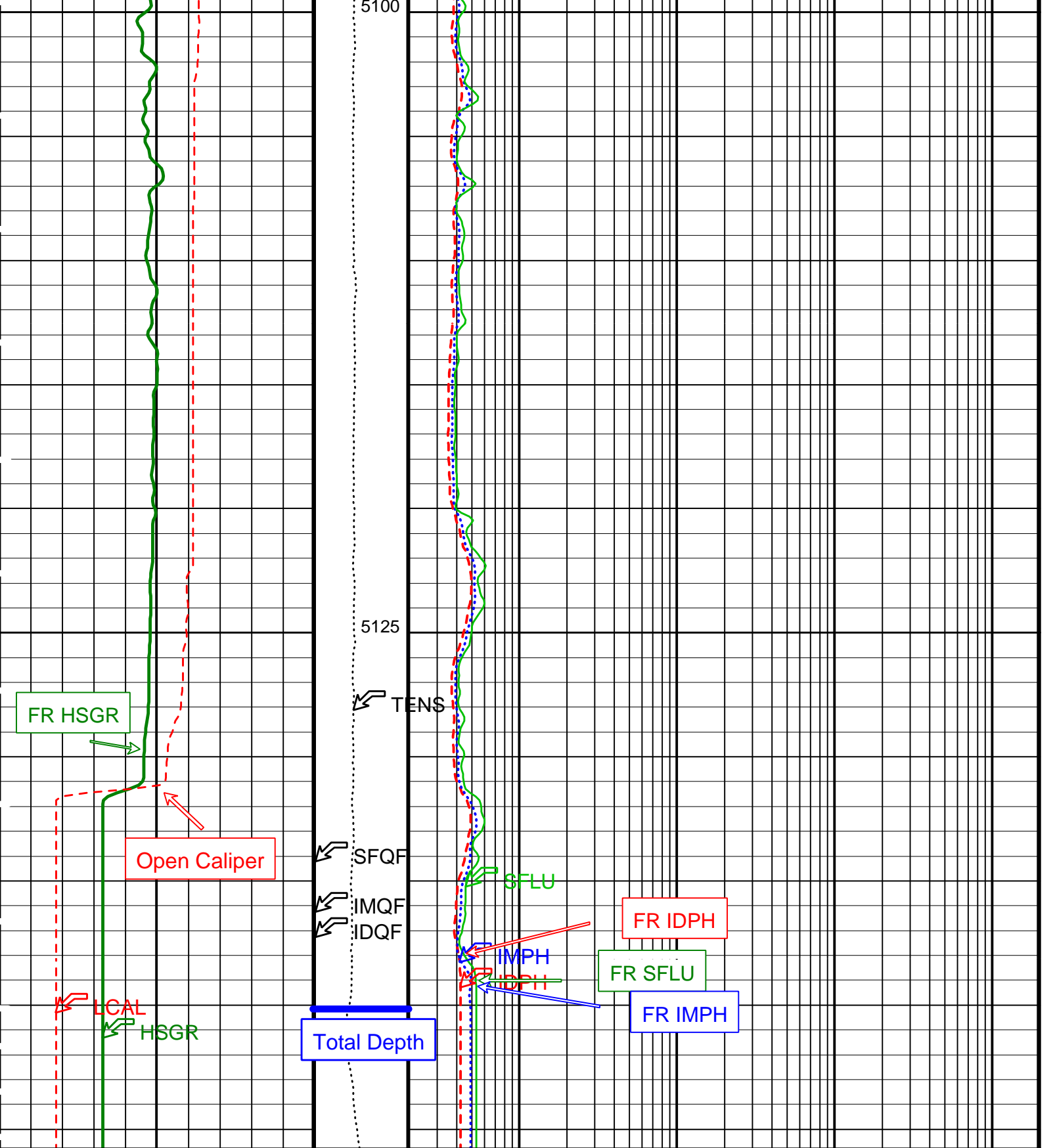


5050

5075

5100





<p>HLDS Caliper (LCAL) (IN)</p> <p>0 20</p>	<p>Tension (TENS) (LBF)</p> <p>10000 0</p>	<p>Deep Induction Phasor-processed Resistivity (IDPH) (OHMM)</p> <p>0.2 2000</p>
<p>HNGS Spectroscopy Gamma Ray (HSGR) (GAPI)</p> <p>0 150</p>	<p>ID_QUAL From IMQF to IDQF</p>	<p>Medium Induction Phasor-processed Resistivity (IMPH) (OHMM)</p> <p>0.2 2000</p>
	<p>IM_QUAL From</p>	<p>SFL Unaveraged (SFLU)</p>

SFL_
QUAL
From D3T
to SFQF

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
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)	65	DEGF
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	9.875	IN
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
D1PR	HNGS Detector 1 Calibration Thorium Peak Resolution	7.03834	%
D1TC	HNGS Detector 1 Calibration Temperature	59.2921	DEGF
D1TL	HNGS Detector 1 Calibration Thorium Peak Location	210.324	
D2PR	HNGS Detector 2 Calibration Thorium Peak Resolution	7.10236	%
D2TC	HNGS Detector 2 Calibration Temperature	57.3948	DEGF
D2TL	HNGS Detector 2 Calibration Thorium Peak Location	209.925	
DBCC	HNGS Barite Constant Correction Flag	NONE	
DFD	Drilling Fluid Density	1.03	G/C3
DGF2	Deep 20 kHz Gain Factor	1.00874	
DPH2	Deep 20 kHz Phase Shift	0.00879421	DEG
DRE2	Deep Real 20 kHz Sonde Error Correction	12.3905	MM/M
DSR2	Deep Sigma Reference (20 kHz)	1843	MM/M
DXE2	Deep Quad 20 kHz Sonde Error Correction	71.6226	MM/M
GCF1_START	HNGS Detector 1 GCF Constant	1	
GCF2_START	HNGS Detector 2 GCF Constant	1	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
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	
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	8.70492e-032	
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	
MARQ_START	HNGS Marquardt Start-up Mode	INTERNAL	
MGF2	Medium 20 kHz Gain Factor	1.04679	
MPH2	Medium 20 kHz Phase Shift	-1.13903	DEG
MRE2	Medium Real 20 kHz Sonde Error Correction	9.79671	MM/M
MSR2	Medium Sigma Reference (20 kHz)	3250	MM/M
MXE2	Medium Quad 20 kHz Sonde Error Correction	117.114	MM/M
RDF1_START	HNGS Detector 1 RDF Constant	0	
RDF2_START	HNGS Detector 2 RDF Constant	0	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S1NA	HNGS Detector 1 Calibration Sodium Count Rate	26.8307	CPS
S1NG	HNGS Detector 1 Calibration End-On / Side-On Gain Ratio	0.986846	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S2NA	HNGS Detector 2 Calibration Sodium Count Rate	27.2589	CPS
S2NG	HNGS Detector 2 Calibration End-On / Side-On Gain Ratio	0.984706	
SABK	HNGS Statistical Uncertainty in Borehole Potassium Running Average	0	
SFCR	SFL Channel Ratio	1000	
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	95	DEGF
TD	Total Depth	-50000	M
TPOS	Tool Position	ECCE	
VPA1	HNGS Detector 1 Variable Barite Factor Running Average	0	

OP System Version: 9C1-303
MCM

DIT-E	9C1-303	DTA-A	9C1-303
HLDS	9C1-303	NPLC-B	9C1-303
APS-BA	9C1-303	HNGS-BA	9C1-303
DTC-H	9C1-303		

Output DLIS Files

DEFAULT	DITE .020	FN:20 PRODUCER	05-Jun-2000 10:10
IPLT_CUST	DITE .020	FN:21 PRODUCER	05-Jun-2000 10:10

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
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Hostile Litho-Density Sonde Wellsite Calibration - Background Measurement

Master: 12-MAY-2000 19:36 Before: 26-MAY-2000 15:54 After: 6-JUN-2000 2:05

SS Total Countrate Bkg	1645	1442	1439	1437	-1.365	80.00	CPS
SS HV Measured Bkg	1100	1067	1060	1065	4.954	80.00	V
SS Cs Centroid Bkg	661.0	661.4	661.2	661.2	-0.002380	1.500	KEV
SS Cs Resolution Bkg	9.000	8.481	8.578	8.634	0.05610	1.800	%
LS Total Countrate Bkg	1645	1473	1462	1463	1.095	80.00	CPS
LS HV Measured Bkg	1100	1185	1181	1183	2.221	80.00	V
LS Cs Centroid Bkg	661.0	661.3	661.2	661.2	-0.02094	1.500	KEV
LS Cs Resolution Bkg	9.000	8.764	8.729	8.881	0.1514	1.800	%

Hostile Litho-Density Sonde Wellsite Calibration - Caliper Calibration

Before: 26-MAY-2000 16:02

HLDS Caliper Small Ring	3.500	N/A	1.955	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	19.50	N/A	21.26	N/A	N/A	N/A	IN

Accelerator-Porosity Tool Wellsite Calibration - Detector Background

Master: 15-MAY-2000 1:57 Before: 26-MAY-2000 15:10 After: 6-JUN-2000 2:07

Near Det Bkg Cntrate	30.00	33.17	31.99	32.62	0.6339	N/A	CPS
Far Det Bkg Cntrate	30.00	33.59	32.57	33.63	1.054	N/A	CPS
Array-1 Det Bkg Cntrate	30.00	29.83	29.09	30.08	0.9888	N/A	CPS
Array-2 Det Bkg Cntrate	30.00	29.16	29.79	29.70	-0.09269	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	32.46	32.29	31.35	-0.9338	N/A	CPS

Accelerator-Porosity Tool Wellsite Calibration - Detector Plateau Settings

Master: 15-MAY-2000 0:30

Near Detector Plateau Setting	1650	1750	N/A	N/A	N/A	N/A	V
Far Detector Plateau Setting	2000	2077	N/A	N/A	N/A	N/A	V
Array Detector Plateau Setting	2000	1977	N/A	N/A	N/A	N/A	V

Accelerator-Porosity Tool Wellsite Calibration - Calibration Ratios

Master: 15-MAY-2000 1:58

Near/Far Calibration Ratio	0.9250	0.8936	N/A	N/A	N/A	N/A
Near/Array Calibration Ratio	1.030	1.063	N/A	N/A	N/A	N/A

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 1 Check

Master: 17-APR-2000 15:39 Before: 26-MAY-2000 18:05 After: 6-JUN-2000 2:07

Na 511 Peak Loc	40.00	40.54	40.63	40.47	-0.1676	1.000
Na 511 Peak Res	15.50	16.04	17.03	16.28	-0.7512	2.000
High Voltage	1150	1110	1103	1108	4.966	30.00
Na 1785 Peak Loc	142.6	146.3	144.7	147.0	2.267	7.000
Na 1785 Peak Res	8.500	8.987	9.422	9.426	0.004189	2.000
Temperature	15.50	15.16	34.48	26.70	-7.774	N/A
Na Count Rate	45.00	26.83	26.69	26.15	-0.5394	8.000

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 2 Check

Master: 17-APR-2000 15:39 Before: 26-MAY-2000 18:05 After: 6-JUN-2000 2:07

Na 511 Peak Loc	40.00	40.57	40.52	40.64	0.1210	1.000
Na 511 Peak Res	15.50	13.85	16.06	14.63	-1.436	2.000
High Voltage	1150	1196	1191	1195	4.042	30.00
Na 1785 Peak Loc	142.6	144.4	144.8	145.7	0.9135	7.000
Na 1785 Peak Res	8.500	8.601	8.893	8.310	-0.5832	2.000
Temperature	15.50	14.11	33.38	26.92	-6.458	N/A
Na Count Rate	45.00	27.00	27.00	26.00	-0.999	8.000

Na Count Rate	45.00	27.26	27.05	26.20	-0.8519	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration - Ratio Of Detector 1 To Detector 2							
Master: 17-APR-2000 15:39 Before: 26-MAY-2000 18:05 After: 6-JUN-2000 2:07							
Coincidence Count Rate Ratio 1.000 0.9852 0.9899 0.9942 0.004372 0.05000							

Dual Induction - E / Equipment Identification

Primary Equipment:		
Dual Induction Sonde	DIS - HB	433
Dual Induction Cartridge	DIC - EB	390
Auxiliary Equipment:		
Mass Isolated Housing	MIH - ZA	397

Dual Induction - E Wellsite Calibration

Induction Electronics (10 kHz)

Phase	ID Elect Real Offset 10 kHz	MM/M	Value	Phase	ID Elect Real Gain 10 kHz	Value	Phase	ID Elect Phase 10 kHz	DEG	Value	
Before			64.70	Before		0.9625	Before			10.58	
	-232.1 (Minimum)	67.89 (Nominal)	367.9 (Maximum)		0.8124 (Minimum)	0.9624 (Nominal)	1.147 (Maximum)		0.4776 (Minimum)	10.48 (Nominal)	20.48 (Maximum)
Phase	ID Elect Quad Offset 10 kHz	MM/M	Value	Phase	ID Elect Quad Gain 10 kHz	Value	Phase	IM Elect Phase 10 kHz	DEG	Value	
Before			17.30	Before		0.9360	Before			12.44	
	-278.9 (Minimum)	21.06 (Nominal)	321.1 (Maximum)		0.7902 (Minimum)	0.9402 (Nominal)	1.116 (Maximum)		2.360 (Minimum)	12.36 (Nominal)	22.36 (Maximum)
Phase	IM Elect Real Offset 10 kHz	MM/M	Value	Phase	IM Elect Real Gain 10 kHz	Value					
Before			45.73	Before		1.135					
	-497.4 (Minimum)	52.56 (Nominal)	602.6 (Maximum)		0.9617 (Minimum)	1.112 (Nominal)					1.358 (Maximum)
Phase	IM Elect Quad Offset 10 kHz	MM/M	Value	Phase	IM Elect Quad Gain 10 kHz	Value					
Before			45.21	Before		1.135					
	-499.2 (Minimum)	50.80 (Nominal)	600.8 (Maximum)		0.9612 (Minimum)	1.111 (Nominal)	1.357 (Maximum)				

Before: 5-JUN-2000 10:25

Dual Induction - E Wellsite Calibration

Induction Electronics (20 kHz)

Phase	ID Elect Real Offset 20 kHz	MM/M	Value	Phase	ID Elect Real Gain 20 kHz	Value	Phase	ID Elect Phase 20 kHz	DEG	Value	
Before			25.38	Before		0.9674	Before			8.454	
	-98.27 (Minimum)	26.73 (Nominal)	151.7 (Maximum)		0.8188 (Minimum)	0.9688 (Nominal)	1.156 (Maximum)		-5.628 (Minimum)	9.372 (Nominal)	24.37 (Maximum)
Phase	ID Elect Quad Offset 20 kHz	MM/M	Value	Phase	ID Elect Quad Gain 20 kHz	Value	Phase	IM Elect Phase 20 kHz	DEG	Value	
Before			6.754	Before		0.9406	Before			8.988	
	-116.7 (Minimum)	8.274 (Nominal)	133.3 (Maximum)		0.7962 (Minimum)	0.9462 (Nominal)	1.124 (Maximum)		-5.198 (Minimum)	9.802 (Nominal)	24.80 (Maximum)
Phase	IM Elect Real Offset 20 kHz	MM/M	Value	Phase	IM Elect Real Gain 20 kHz	Value					
Before			18.55	Before		1.179					
	-203.6 (Minimum)	21.41 (Nominal)	246.4 (Maximum)		1.002 (Minimum)	1.152 (Nominal)					1.414 (Maximum)
Phase	IM Elect Quad Offset 20 kHz	MM/M	Value	Phase	IM Elect Quad Gain 20 kHz	Value					
Before			18.54	Before		1.179					
	-204.1 (Minimum)	20.86 (Nominal)	245.9 (Maximum)		1.001 (Minimum)	1.151 (Nominal)	1.413 (Maximum)				

Before: 5-JUN-2000 10:26

Dual Induction - E Wellsite Calibration

Induction Electronics (40 kHz)

Phase	ID Elect Real Offset 40 kHz	MM/M	Value	Phase	ID Elect Real Gain 40 kHz	Value	Phase	ID Elect Phase 40 kHz	DEG	Value	
Before			16.55	Before		0.9410	Before			25.01	
	-67.39 (Minimum)	17.61 (Nominal)	102.6 (Maximum)		0.8039 (Minimum)	0.9539 (Nominal)	1.135 (Maximum)		8.600 (Minimum)	28.60 (Nominal)	48.60 (Maximum)
Phase	ID Elect Quad Offset 40 kHz	MM/M	Value	Phase	ID Elect Quad Gain 40 kHz	Value	Phase	IM Elect Phase 40 kHz	DEG	Value	
Before			4.390	Before		0.9139	Before			22.96	
	-79.60 (Minimum)	5.400 (Nominal)	90.40 (Maximum)		0.7808 (Minimum)	0.9308 (Nominal)	1.102 (Maximum)		6.414 (Minimum)	26.41 (Nominal)	46.41 (Maximum)

(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Phase	IM Elect Real Offset 40 kHz MM/M	Value	Phase	IM Elect Real Gain 40 kHz	Value
Before		11.82	Before		1.162
-116.3 (Minimum)	13.70 (Nominal)	143.7 (Maximum)	0.9945 (Minimum)	1.145 (Nominal)	1.404 (Maximum)
Phase	IM Elect Quad Offset 40 kHz MM/M	Value	Phase	IM Elect Quad Gain 40 kHz	Value
Before		11.85	Before		1.162
-116.6 (Minimum)	13.37 (Nominal)	143.4 (Maximum)	0.9938 (Minimum)	1.144 (Nominal)	1.403 (Maximum)

Before: 5-JUN-2000 10:27

Dual Induction - E Wellsite Calibration					
SFL Electronics					
Phase	SFL Voltage Offset MV	Value	Phase	SFL Voltage Gain	Value
Before		-0.1772	Before		0.9765
-15.00 (Minimum)	0 (Nominal)	15.00 (Maximum)	0.8500 (Minimum)	1.000 (Nominal)	1.200 (Maximum)
Phase	SFL Current Offset MA	Value	Phase	SFL Current Gain	Value
Before		0.07868	Before		0.9929
-0.6000 (Minimum)	0 (Nominal)	0.6000 (Maximum)	0.8500 (Minimum)	1.000 (Nominal)	1.200 (Maximum)

Before: 5-JUN-2000 10:28

Dual Induction - E Wellsite Calibration								
Electronics Calibration Changes Files/Depth Intervals:								
Phase	ID (R > 27 OHM-M) MM/M	Value	Phase	ID (R < 27 OHM-M) %	Value	Phase	SFL (R < 1 OHM-M) OHMM	Value
After		0	After		0	After		0
0 (Minimum)	0 (Nominal)	0.7500 (Maximum)	0 (Minimum)	0 (Nominal)	2.000 (Maximum)	0 (Minimum)	0 (Nominal)	0.02000 (Maximum)
Phase	IM (R > 27 OHM-M) MM/M	Value	Phase	IM (R < 27 OHM-M) %	Value			
After		0	After		0			
0 (Minimum)	0 (Nominal)	0.7500 (Maximum)	0 (Minimum)	0 (Nominal)	2.000 (Maximum)			
Phase	SFL (R > 27 OHM-M) MM/M	Value	Phase	SFL (R < 27 OHM-M) %	Value			
After		0	After		0			
0 (Minimum)	0 (Nominal)	0.7500 (Maximum)	0 (Minimum)	0 (Nominal)	2.000 (Maximum)			

After: 12-JUN-2000 5:53

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	12
Hostile Litho Density High Voltage Housi	HEH - H	35

Hostile Litho-Density Sonde Wellsite Calibration								
Background Measurement								
Phase	SS Total Countrate Bkg CPS	Value	Phase	SS HV Measured Bkg V	Value	Phase	SS PSC DAC Value Bkg	Value
Master		1442	Master		1067	Master		16160
Before		1439	Before		1060	Before		16720
After		1437	After		1065	After		16910
1000 (Minimum)	1645 (Nominal)	2290 (Maximum)	800.0 (Minimum)	1100 (Nominal)	1400 (Maximum)	14100 (Minimum)	16000 (Nominal)	20000 (Maximum)
Phase	SS Cs Centroid Bkg KEV	Value	Phase	SS Cs Resolution Bkg %	Value	Phase	LS Total Countrate Bkg CPS	Value
Master		661.4	Master		8.481	Master		1473
Before		661.2	Before		8.578	Before		1462
After		661.2	After		8.634	After		1463

LS HV Measured Bkg V			LS PSC DAC Value Bkg			LS Cs Centroid Bkg KEV		
Phase	Value		Phase	Value		Phase	Value	
Master	1185		Master	17640		Master	661.3	
Before	1181		Before	18250		Before	661.2	
After	1183		After	18540		After	661.2	
800.0 (Minimum) 1100 (Nominal) 1400 (Maximum)			14100 (Minimum) 16000 (Nominal) 20000 (Maximum)			656.0 (Minimum) 661.0 (Nominal) 666.0 (Maximum)		
LS Cs Resolution Bkg %			LSW1 Background CPS			LSW2 Background CPS		
Master	8.764		Master	87.51		Master	81.74	
Before	8.729		Before	87.48		Before	81.13	
After	8.881		After	86.95		After	79.33	
7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)			55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)			50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)		
LSW3 Background CPS			LSW4 Background CPS			LSW5 Background CPS		
Master	182.6		Master	222.0		Master	504.7	
Before	179.0		Before	218.8		Before	502.2	
After	180.1		After	219.7		After	502.4	
110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)			140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)			330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)		
SSW1 Background CPS			SSW2 Background CPS			SSW3 Background CPS		
Master	89.17		Master	158.4		Master	418.6	
Before	89.08		Before	155.6		Before	418.1	
After	87.27		After	155.3		After	419.5	
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)		
SSW4 Background CPS			SSW5 Background CPS					
Master	225.9		Master	161.8				
Before	224.5		Before	163.0				
After	222.8		After	163.1				
150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum)			110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum)					

Master: 12-MAY-2000 19:36 Before: 26-MAY-2000 15:54 After: 6-JUN-2000 2:05

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

Near Det Bkg Cntrate CPS		Far Det Bkg Cntrate CPS		Array-1 Det Bkg Cntrate CPS	
Phase	Value	Phase	Value	Phase	Value
Master	33.17	Master	33.59	Master	29.83
Before	31.99	Before	32.57	Before	29.09
After	32.62	After	33.63	After	30.08

After			Before			After		
0 (Minimum)	30.00 (Nominal)	50.00 (Maximum)	0 (Minimum)	30.00 (Nominal)	50.00 (Maximum)	0 (Minimum)	30.00 (Nominal)	50.00 (Maximum)
Phase	Array-2 Det Bkg Cntrate CPS	Value	Phase	Array Therm Det Bkg Cntrate CPS	Value			
Master		29.16	Master		32.46			
Before		29.79	Before		32.29			
After		29.70	After		31.35			
0 (Minimum)	30.00 (Nominal)	50.00 (Maximum)	0 (Minimum)	30.00 (Nominal)	50.00 (Maximum)			

Master: 15-MAY-2000 1:57 Before: 26-MAY-2000 15:10 After: 6-JUN-2000 2:07

Accelerator-Porosity Tool Wellsite Calibration								
Detector Plateau Settings								
Phase	Near Detector Plateau Setting V	Value	Phase	Far Detector Plateau Setting V	Value	Phase	Array Detector Plateau Setting V	Value
Master		1750	Master		2077	Master		1977
1400 (Minimum)	1650 (Nominal)	1900 (Maximum)	1750 (Minimum)	2000 (Nominal)	2250 (Maximum)	1750 (Minimum)	2000 (Nominal)	2250 (Maximum)

Master: 15-MAY-2000 0:30

Accelerator-Porosity Tool Wellsite Calibration					
Calibration Ratios					
Phase	Near/Far Calibration Ratio	Value	Phase	Near/Array Calibration Ratio	Value
Master		0.8936	Master		1.063
0.8000 (Minimum)	0.9250 (Nominal)	1.050 (Maximum)	0.9000 (Minimum)	1.030 (Nominal)	1.150 (Maximum)

Master: 15-MAY-2000 1:58

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	Phase	Na 511 Peak Res %	Value	Phase	High Voltage V	Value
Master		40.54	Master		16.04	Master		1110
Before		40.63	Before		17.03	Before		1103
After		40.47	After		16.28	After		1108
37.50 (Minimum)	40.00 (Nominal)	42.50 (Maximum)	12.00 (Minimum)	15.50 (Nominal)	19.00 (Maximum)	900.0 (Minimum)	1150 (Nominal)	1600 (Maximum)
Phase	Na 1785 Peak Loc	Value	Phase	Na 1785 Peak Res %	Value	Phase	Temperature DEGC	Value
Master		146.3	Master		8.987	Master		15.16
Before		144.7	Before		9.422	Before		34.48
After		147.0	After		9.426	After		26.70
135.0 (Minimum)	142.6 (Nominal)	150.3 (Maximum)	7.000 (Minimum)	8.500 (Nominal)	11.00 (Maximum)	-28.89 (Minimum)	15.50 (Nominal)	60.00 (Maximum)
Phase	Na Count Rate CPS	Value						
Master		26.83						
Before		26.69						
After		26.15						
15.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)						

Master: 17-APR-2000 15:39 Before: 26-MAY-2000 18:05 After: 6-JUN-2000 2:07

Hostile Natural Gamma Ray Sonde Wellsite Calibration								
Detector 2 Check								
Phase	Na 511 Peak Loc	Value	Phase	Na 511 Peak Res %	Value	Phase	High Voltage V	Value
Master			Master			Master		

Master		40.57	Master		13.85	Master		1196
Before		40.52	Before		16.06	Before		1191
After		40.64	After		14.63	After		1195
37.50 (Minimum) 40.00 (Nominal) 42.50 (Maximum)			12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)			900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)		
Phase	Na 1785 Peak Loc	Value	Phase	Na 1785 Peak Res %	Value	Phase	Temperature DEGC	Value
Master		144.4	Master		8.601	Master		14.11
Before		144.8	Before		8.893	Before		33.38
After		145.7	After		8.310	After		26.92
135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)			7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)			-28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)		
Phase	Na Count Rate CPS	Value						
Master		27.26						
Before		27.05						
After		26.20						
15.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)								
Master: 17-APR-2000 15:39			Before: 26-MAY-2000 18:05			After: 6-JUN-2000 2:07		

Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		0.9852
Before		0.9899
After		0.9942
0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)		
Master: 17-APR-2000 15:39		
Before: 26-MAY-2000 18:05		
After: 6-JUN-2000 2:07		

COMPANY:	Lamont Doherty	BOTTOM LOG INTERVAL	5237 m
WELL:	ODP Leg 190, Site 1173A	SCHLUMBERGER DEPTH	5239.5 m
FIELD:	Nankai Trough	DEPTH DRILLER	5536.2 m
Country:	Japan	KELLY BUSHING	11.3 m
Ocean:	Pacific	DRILL FLOOR	11 m
		GROUND LEVEL	-4801.9 m

Schlumberger

Phasor Induction-Natural GR