

DISCLAIMER

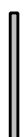


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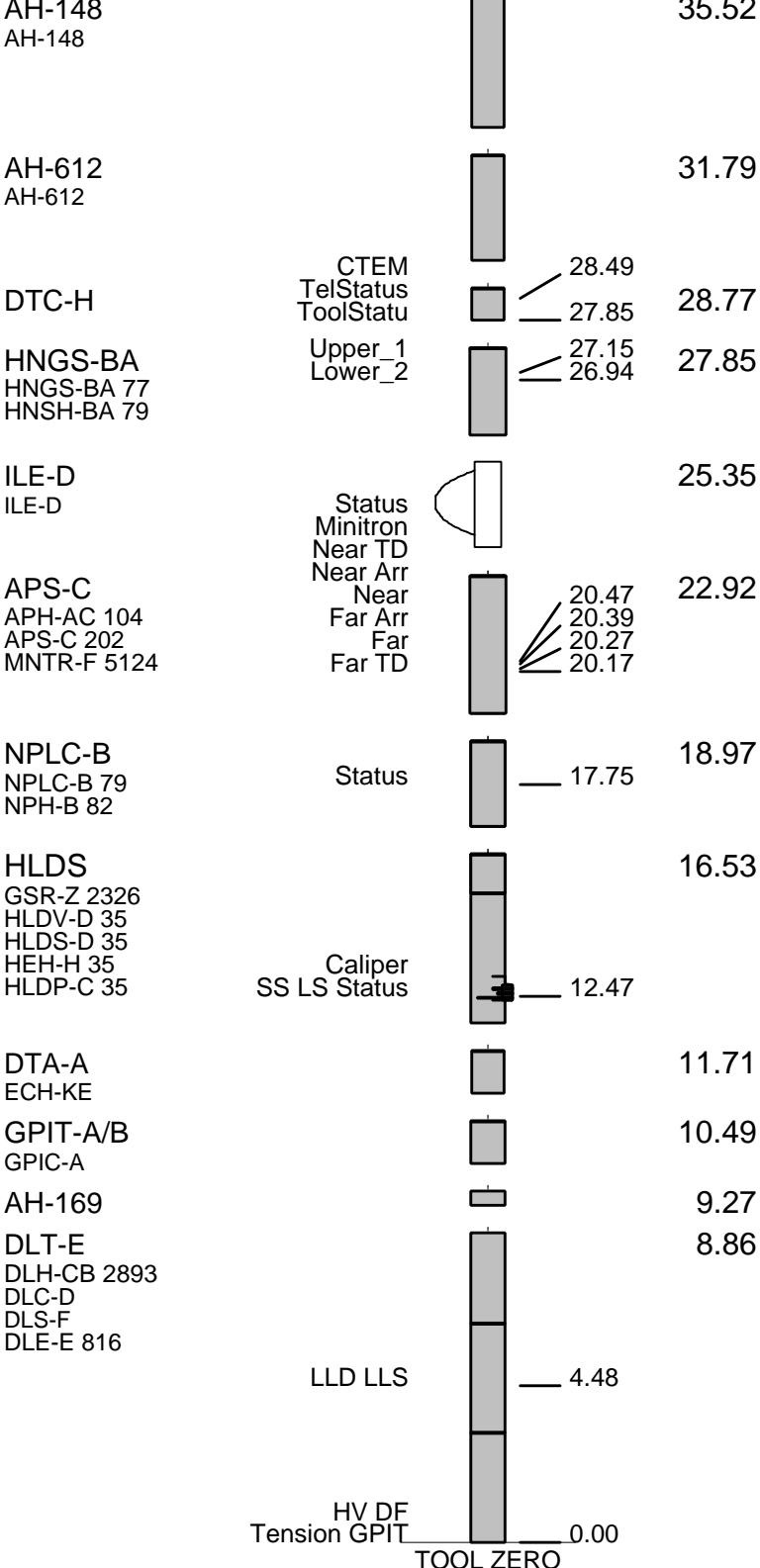
OTHER SERVICES1 OS1: MESTB/DSI/SGTN OS2: OS3: OS4: OS5:	OTHER SERVICES2 OS1: OS2: OS3: OS4: OS5:
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REMARKS: RUN NUMBER 1 Hole Cored with RCB All depths in Meters Below Rig Floor (MBRF). HOLE FLUSHED WITH FRESH WATER. Sea Floor Driller- 1656 MBRF. Sea Floor Logger- 1656 MBRF. Total Depth Driller- 2057.3 MBRF. Total Depth Logger- 2057 MBRF. Casing Bottom Driller- 1710 MBRF. Casing Bottom Logger- 1710 MBRF.	REMARKS: RUN NUMBER 2
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RUN 1			RUN 2		
SERVICE ORDER #:	12C0-301		SERVICE ORDER #:		
PROGRAM VERSION:			PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1		RUN 2	
SURFACE EQUIPMENT LCM-AA SFT-281 6250 SFT-178 6250 GSR-U 135 WITM (DTS)-A			
DOWNHOLE EQUIPMENT			
BSP BRT-S		60.80	
SP SPARC		39.74	
LEH-QT		36.41	



TOOL ZERO

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

Output DLIS Files

DEFAULT DLL_LDL_APS_NGS_030LUP FN:22 PRODUCER 02-Jan-2005 11:02 2057.4 M 1690.4 M

OP System Version: 12C0-301
MCM

Main Up Log

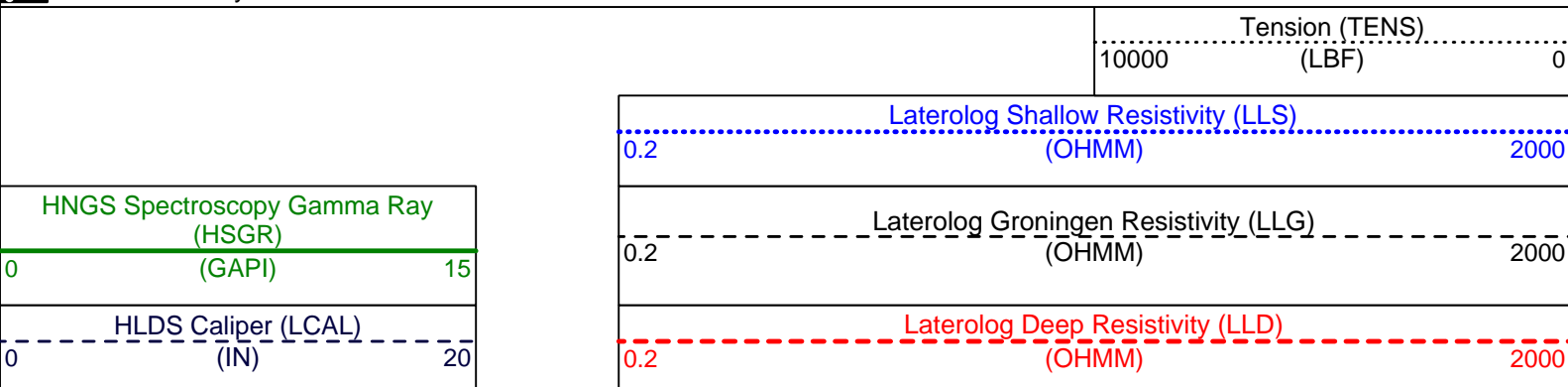
DLT-E	12C0-301	GPIT-A/B	12C0-301
DTA-A	12C0-301	HLDS	12C0-301
NPLC-B	12C0-301	APS-C	12C0-301
HNGS-BA	12C0-301	DTC-H	12C0-301
BSP	12C0-301		

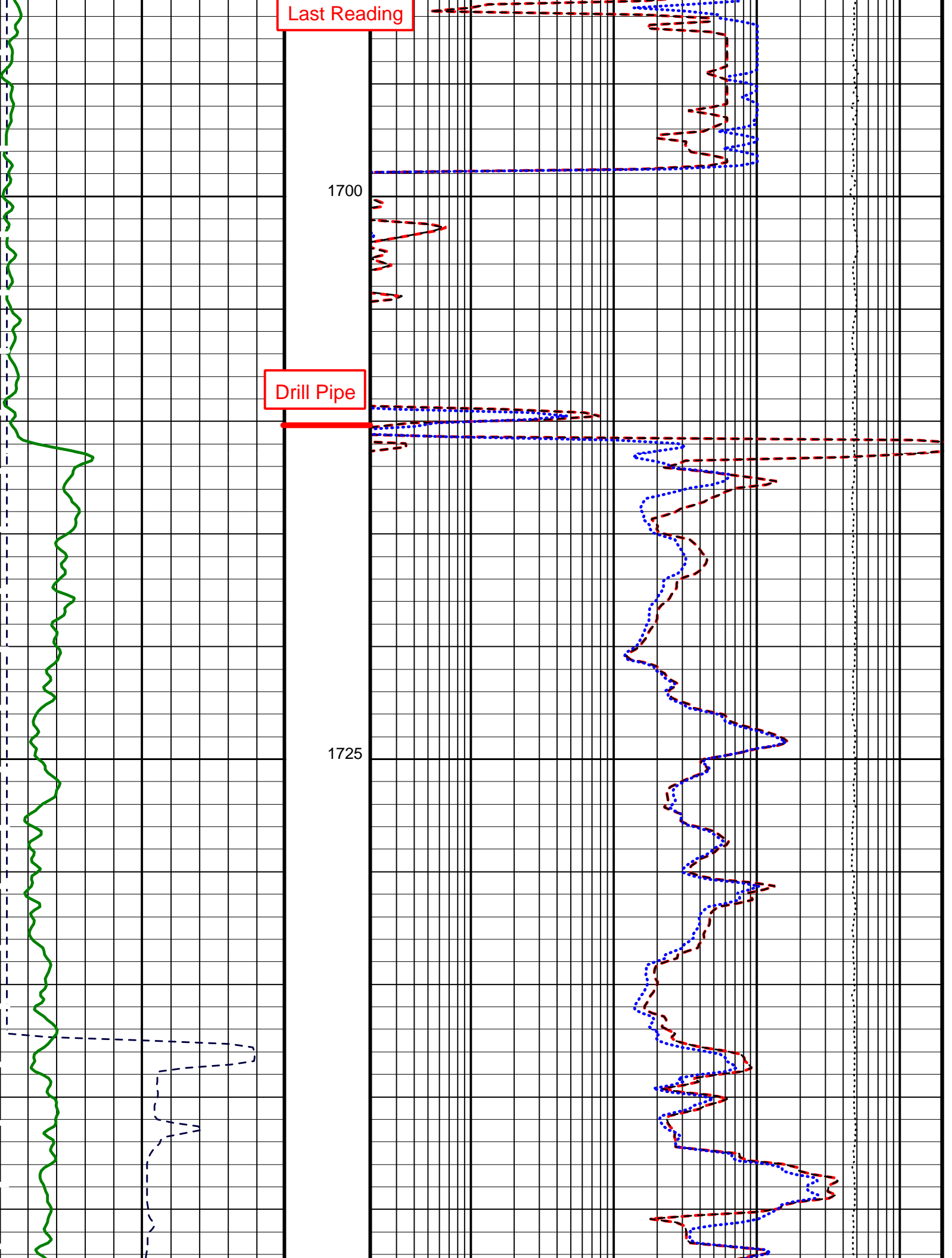
Changed Parameter Summary

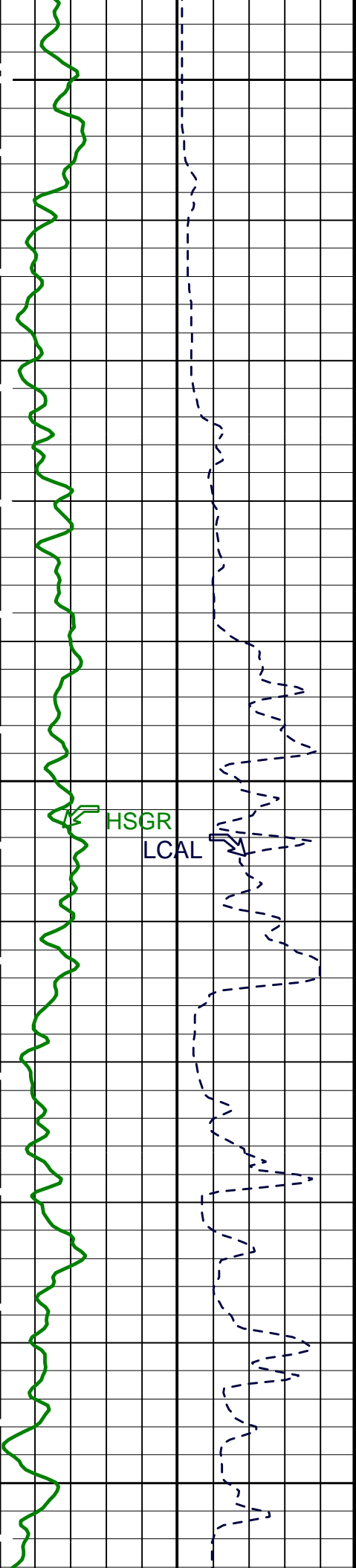
DLIS Name	New Value	Previous Value	Depth & Time
GCSE	BS	LCAL	1750.0 12:20:54
LLOO	OFF	BOTH	2057.2 11:06:06
	BOTH	OFF	2056.8 11:06:27
	OFF	BOTH	1750.2 12:20:40
	BOTH	OFF	1749.8 12:21:31
	OFF	BOTH	1703.3 12:39:12

PIP SUMMARY

Time Mark Every 60 S



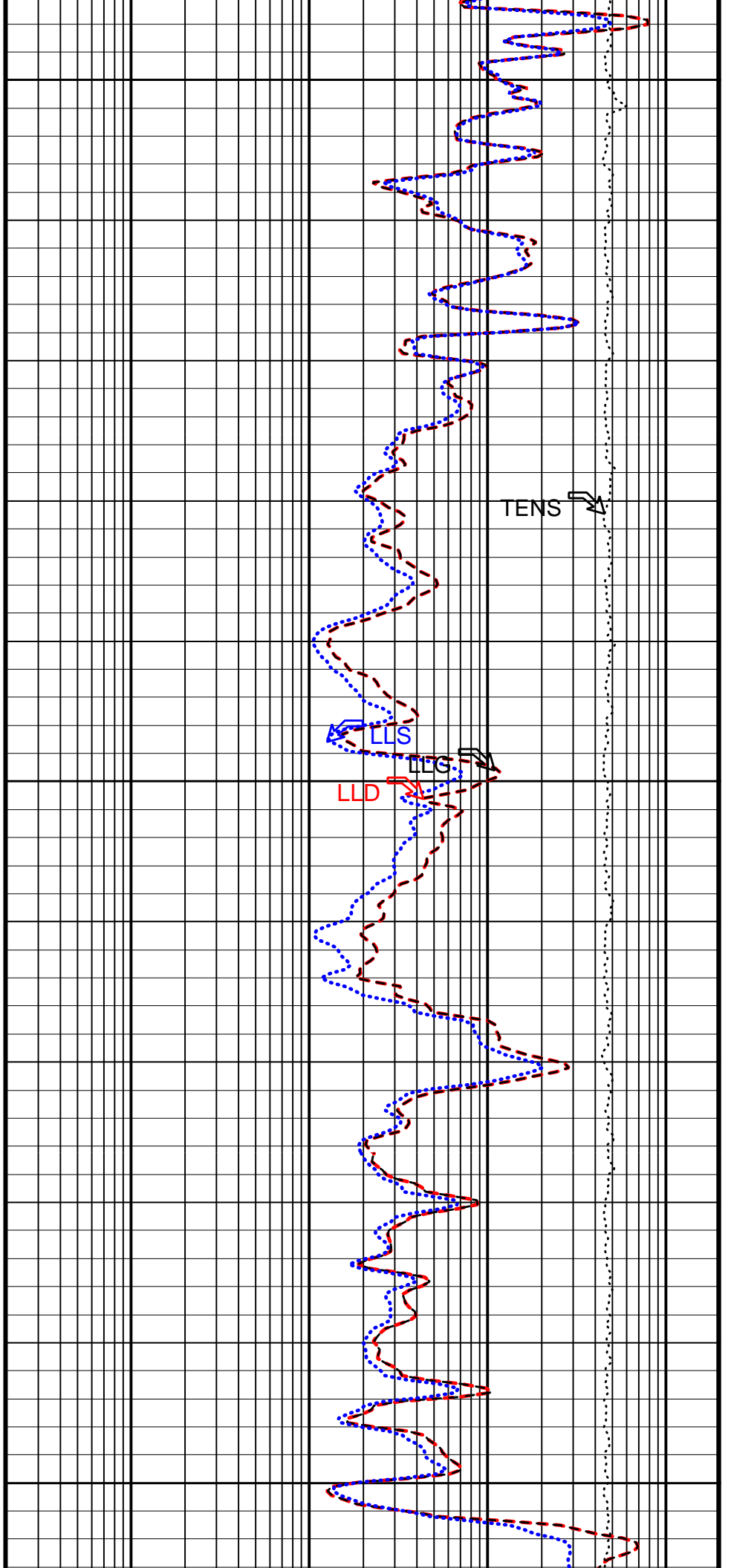




1750

1775

1800

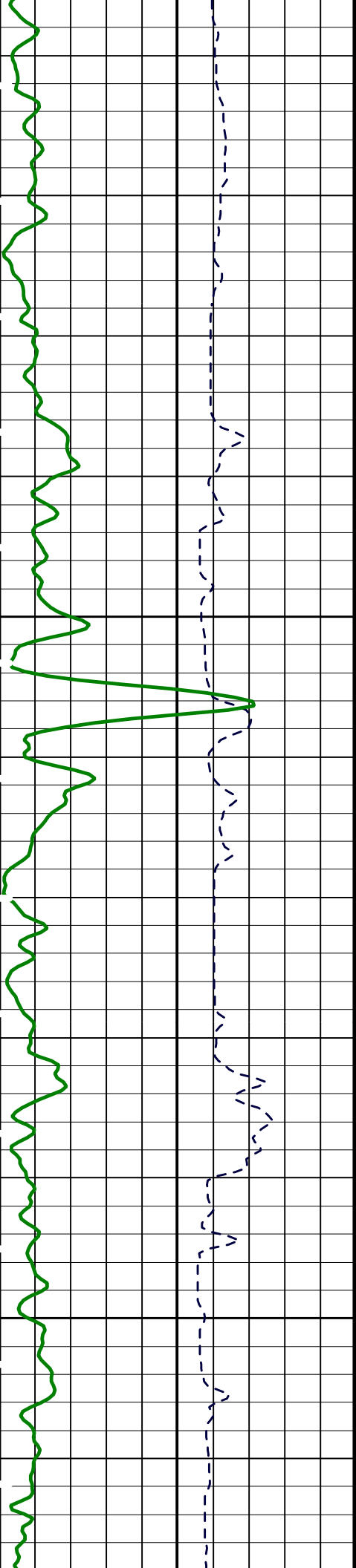


TENS

LLS

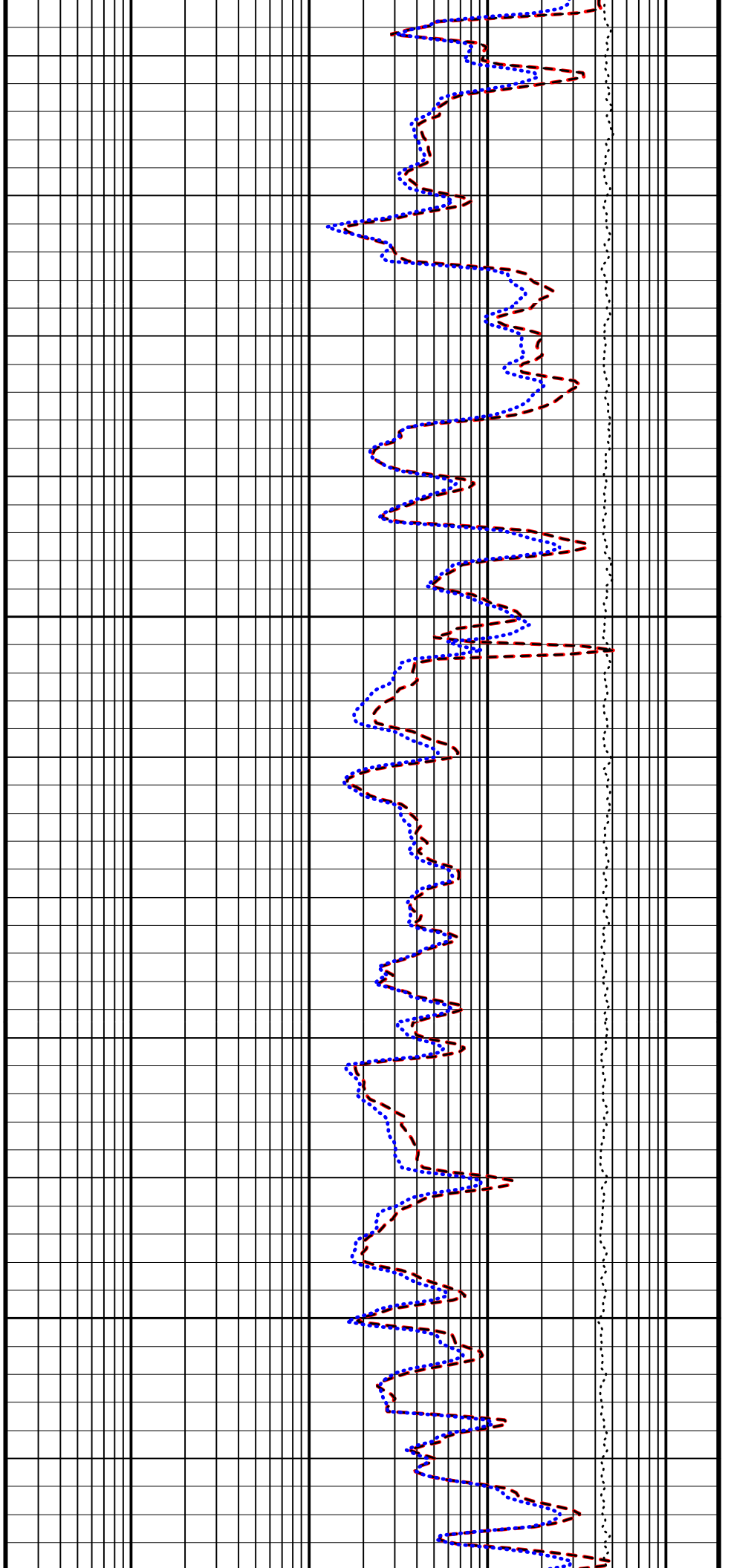
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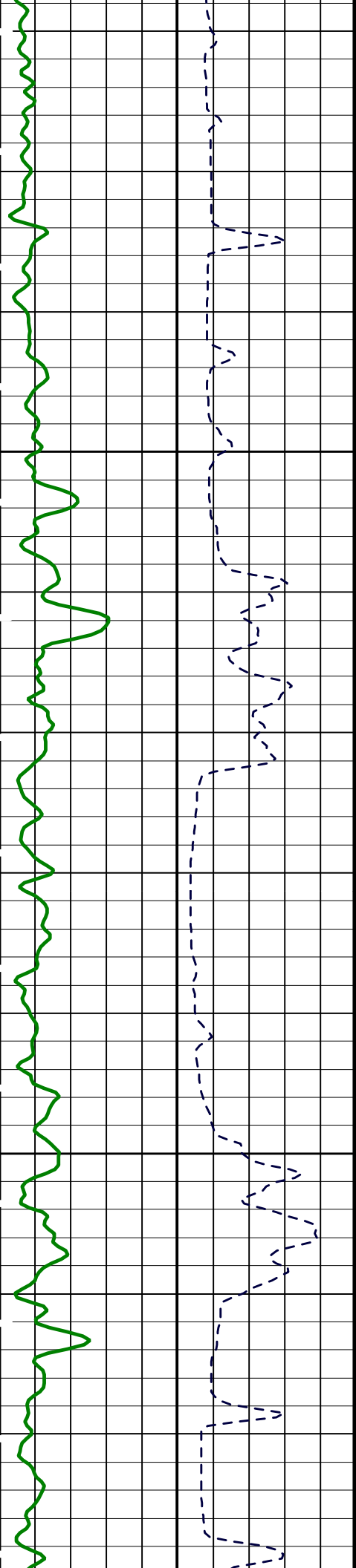
LLG



1825

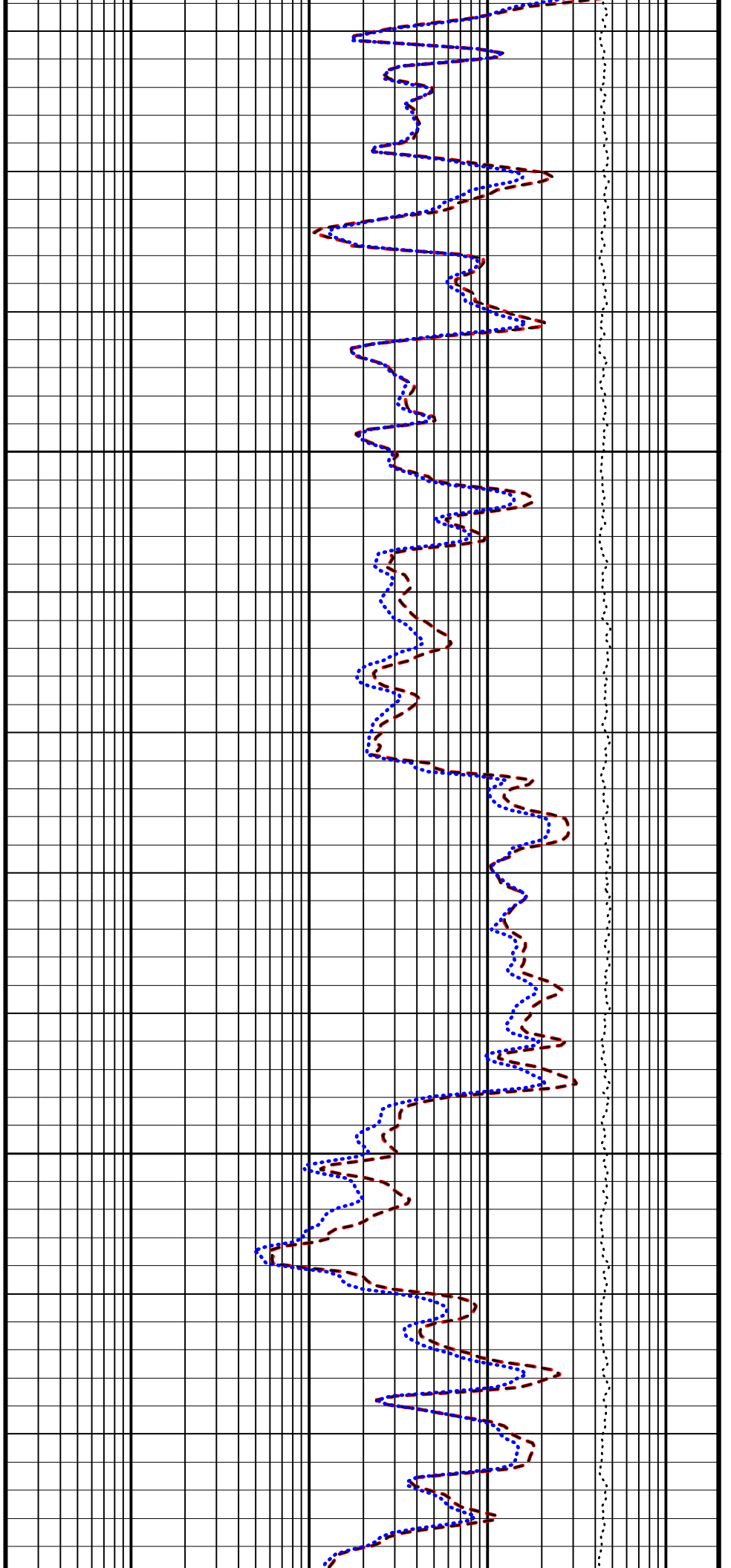
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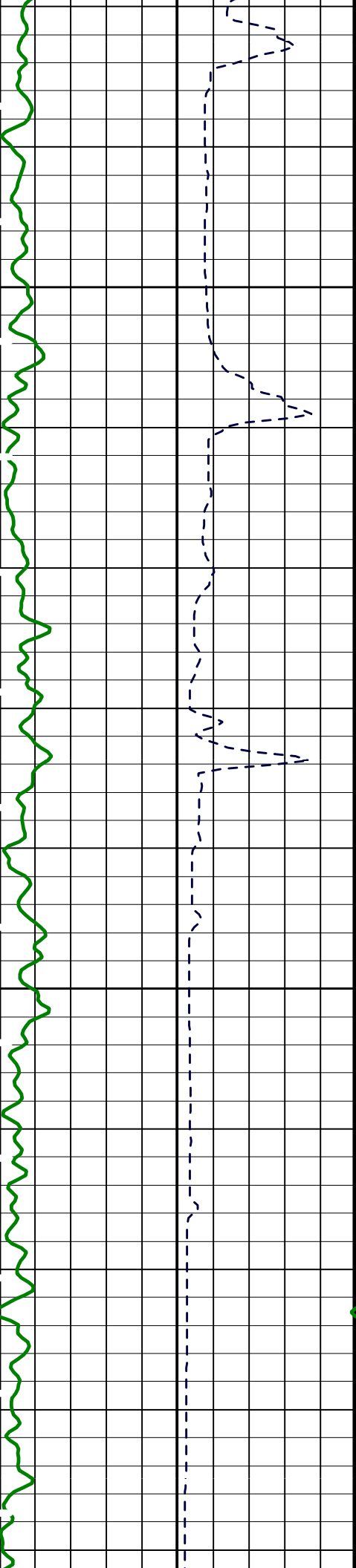




1875

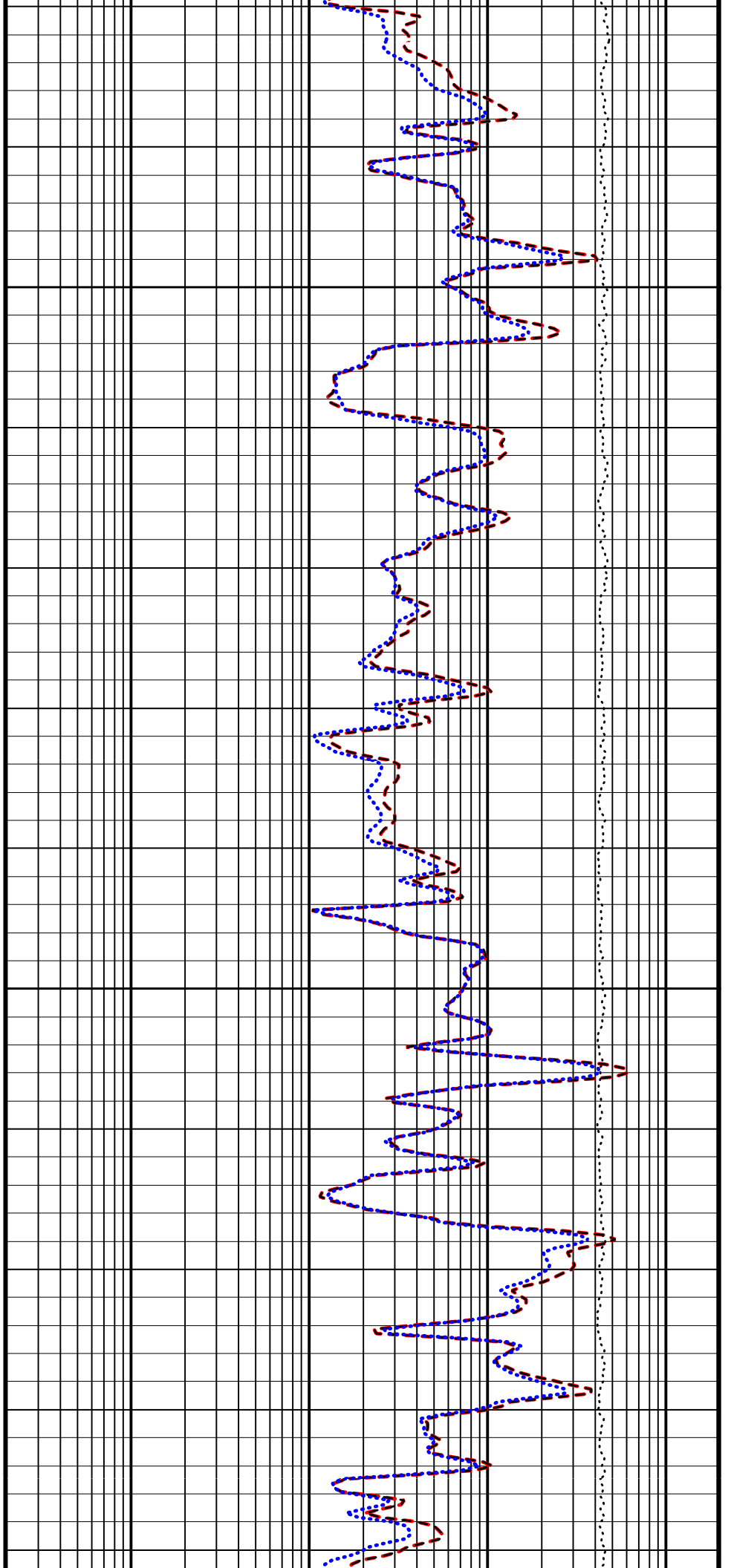
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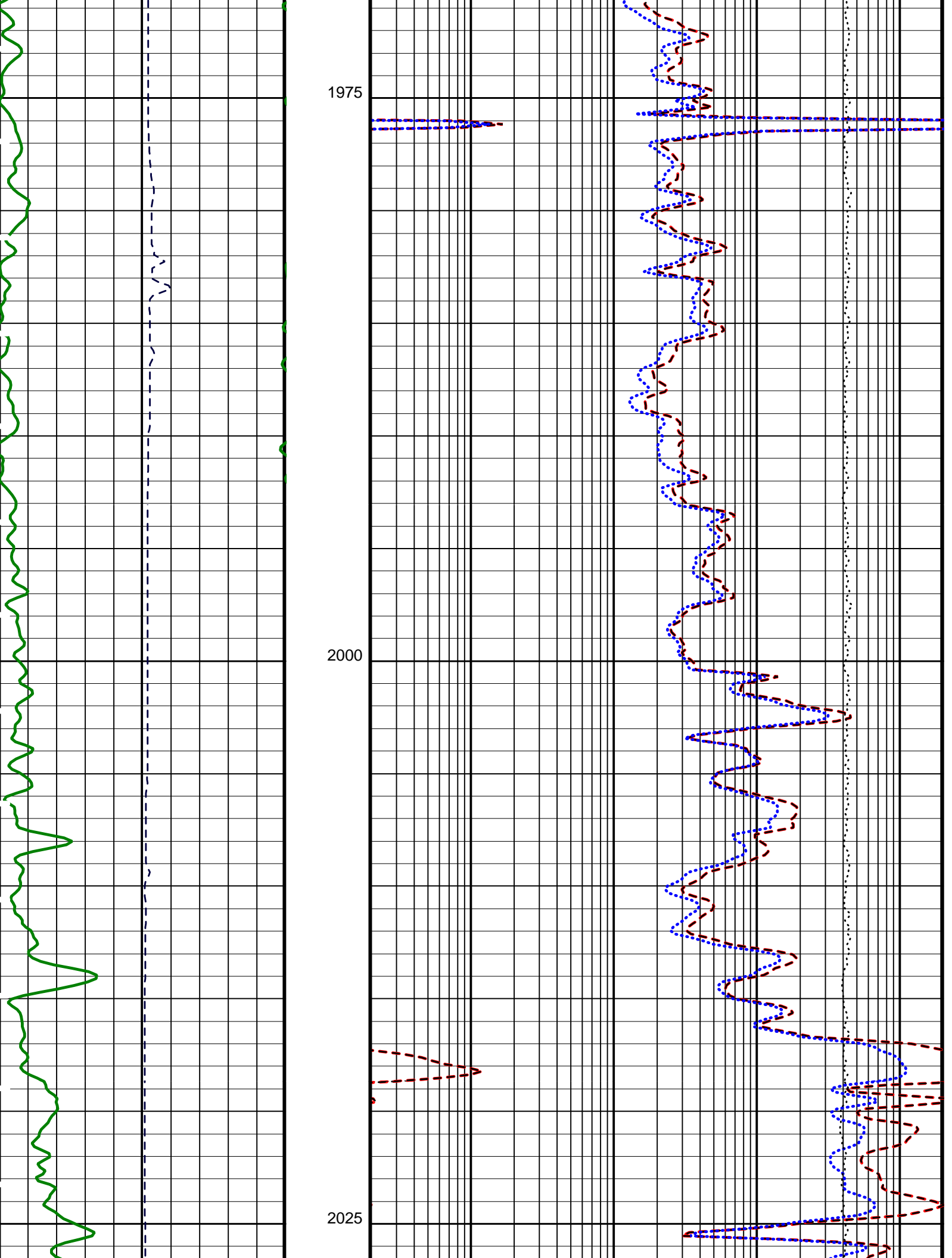


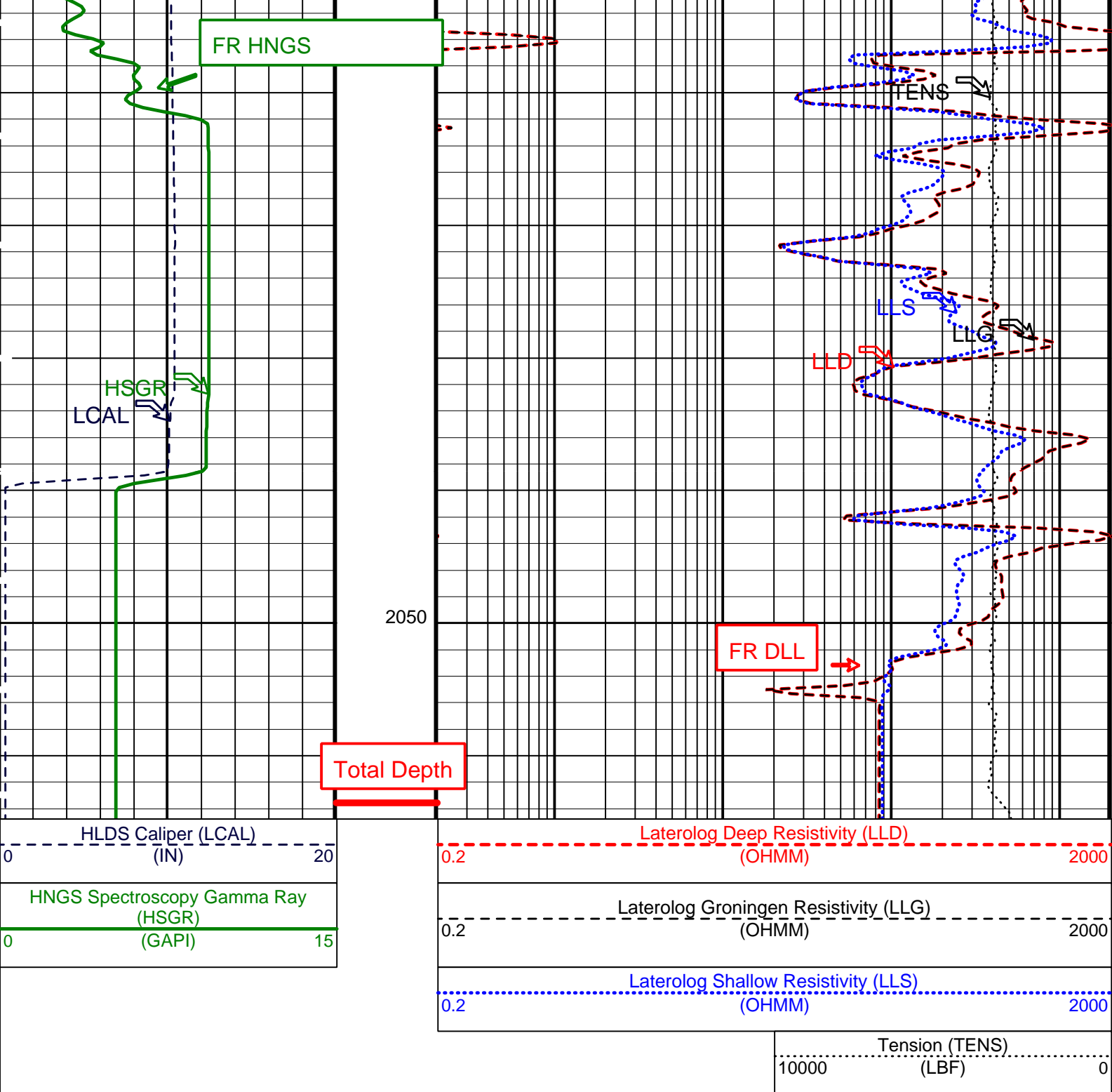


1925

1950







HLDS Caliper (LCAL)	(IN)	0	20
HNGS Spectroscopy Gamma Ray (HSGR)	(GAPI)	0	15

Laterolog Deep Resistivity (LLD)	(OHMM)	0.2	2000
Laterolog Groningen Resistivity (LLG)	(OHMM)	0.2	2000
Laterolog Shallow Resistivity (LLS)	(OHMM)	0.2	2000
Tension (TENS)	(LBF)	10000	0

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
DLT-E: DUAL LATEROLOG - E		
DPRF	DEEP REFERENCE POWER	550 NW
KFAC	K FACTOR	SOND
LLOO	LATEROLOG LOOP	BOTH
PLRM	POWER LOOP REFERENCE MODE	DEEP
SPRF	SHALLOW REFERENCE POWER	550 NW
APS-C: Accelerator-Porosity Tool		
BHS	Borehole Status	OPEN
GCSE	Generalized Caliper Selection	LCAL
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
BHIC	Borehole Status	OPEN

BHS	Borehole Status	OPEN	0	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
DBCC	HNGS Barite Constant Correction Flag	NONE		
GCSE	Generalized Caliper Selection	LCAL		
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
HCRB	HNGS Apply Borehole Potassium Correction	NONE		
HMWM	Mud Weighting Material	NATU		
HNPE	HNGS Processing Enable	YES		
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate		1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate		1.3	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES		
TPOS	Tool Position	ECCE		
VBA1	HNGS Detector 1 Variable Barite Factor Running Average		0	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average		0	
	HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN		
GCSE	Generalized Caliper Selection	LCAL		
	System and Miscellaneous			
BS	Bit Size		9.875	IN
DFD	Drilling Fluid Density		1.07	G/C3

Format: DLT_DST Vertical Scale: 1:200 Graphics File Created: 02-Jan-2005 11:02

OP System Version: 12C0-301			
MCM			
DLT-E	12C0-301	GPIT-A/B	12C0-301
DTA-A	12C0-301	HLDS	12C0-301
NPLC-B	12C0-301	APS-C	12C0-301
HNGS-BA	12C0-301	DTC-H	12C0-301
BSP	12C0-301		

Output DLIS Files					
DEFAULT	DLL_LDL_APS_NGS_030LUP	FN:22	PRODUCER	02-Jan-2005 11:02	

Company: Lamont Doherty Well: IODP EXP 304 Site 1309D

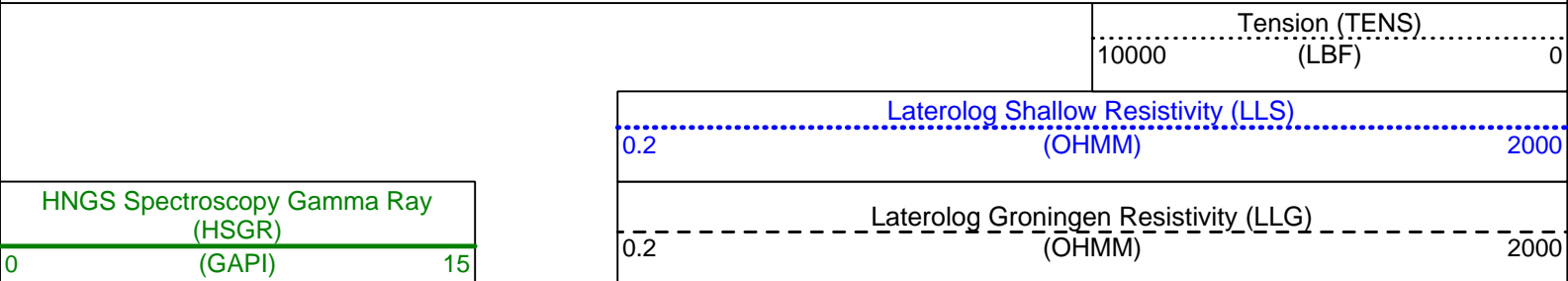
Output DLIS Files					
DEFAULT	DLL_LDL_APS_NGS_031LUP	FN:23	PRODUCER	02-Jan-2005 12:51	2057.4 M 1942.8 M

OP System Version: 12C0-301			
MCM			
DLT-E	12C0-301	GPIT-A/B	12C0-301
DTA-A	12C0-301	HLDS	12C0-301
NPLC-B	12C0-301	APS-C	12C0-301
HNGS-BA	12C0-301	DTC-H	12C0-301
BSP	12C0-301		

Repeat Up Log

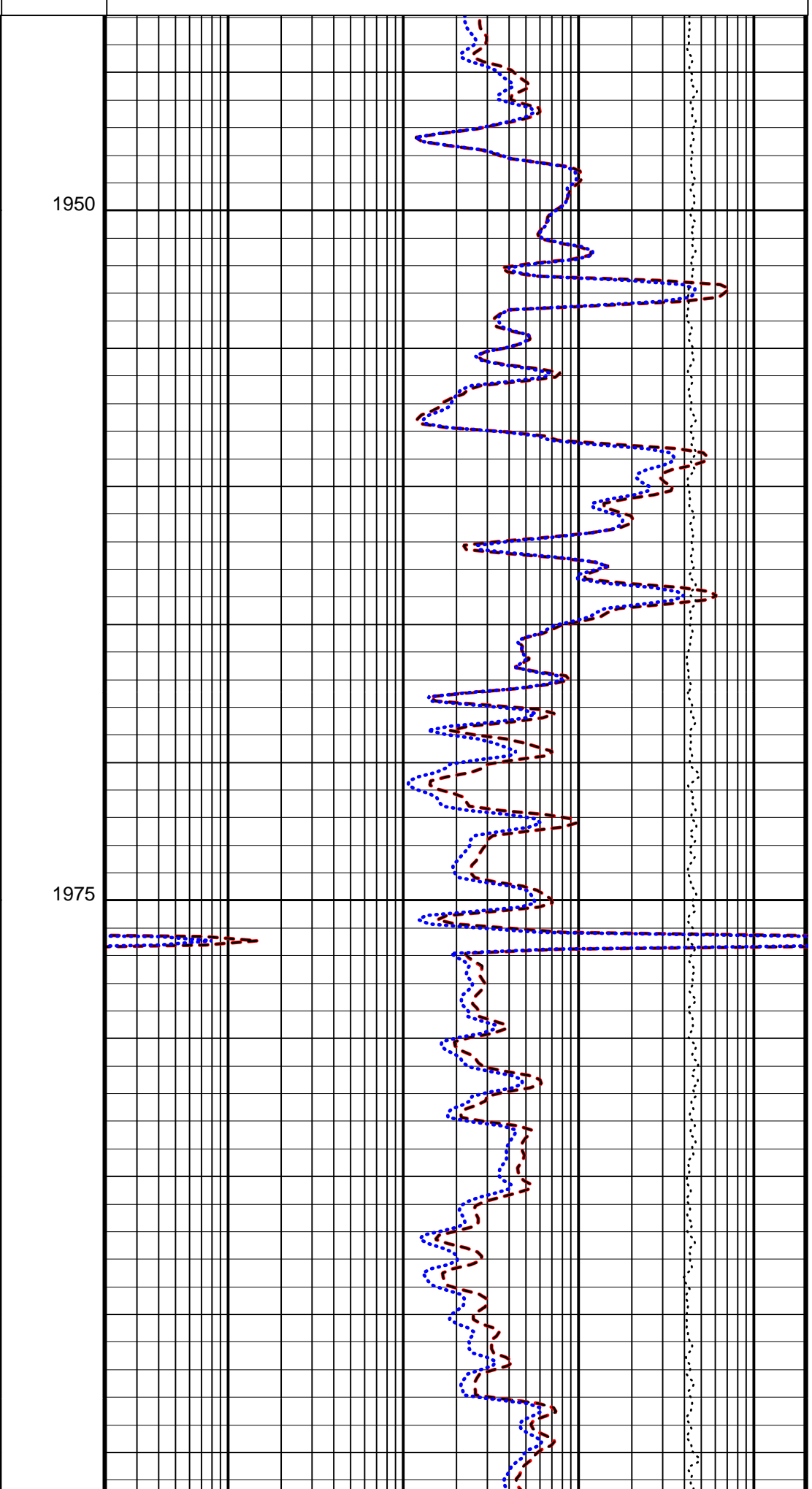
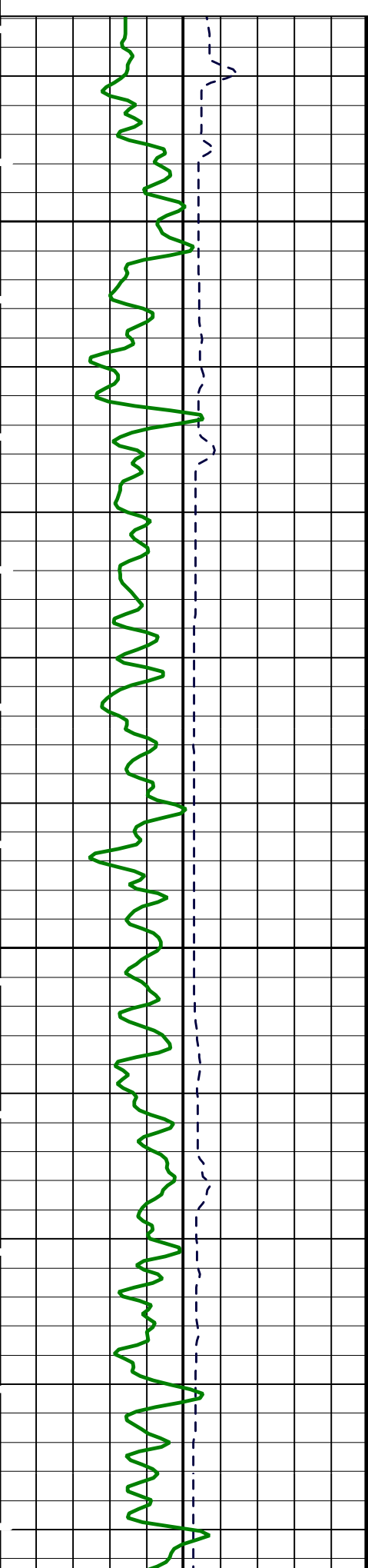
Changed Parameter Summary			
DLIS Name	New Value	Previous Value	Depth & Time
LLOO	OFF BOTH	BOTH OFF	2056.7 12:58:59 2056.0 12:59:44

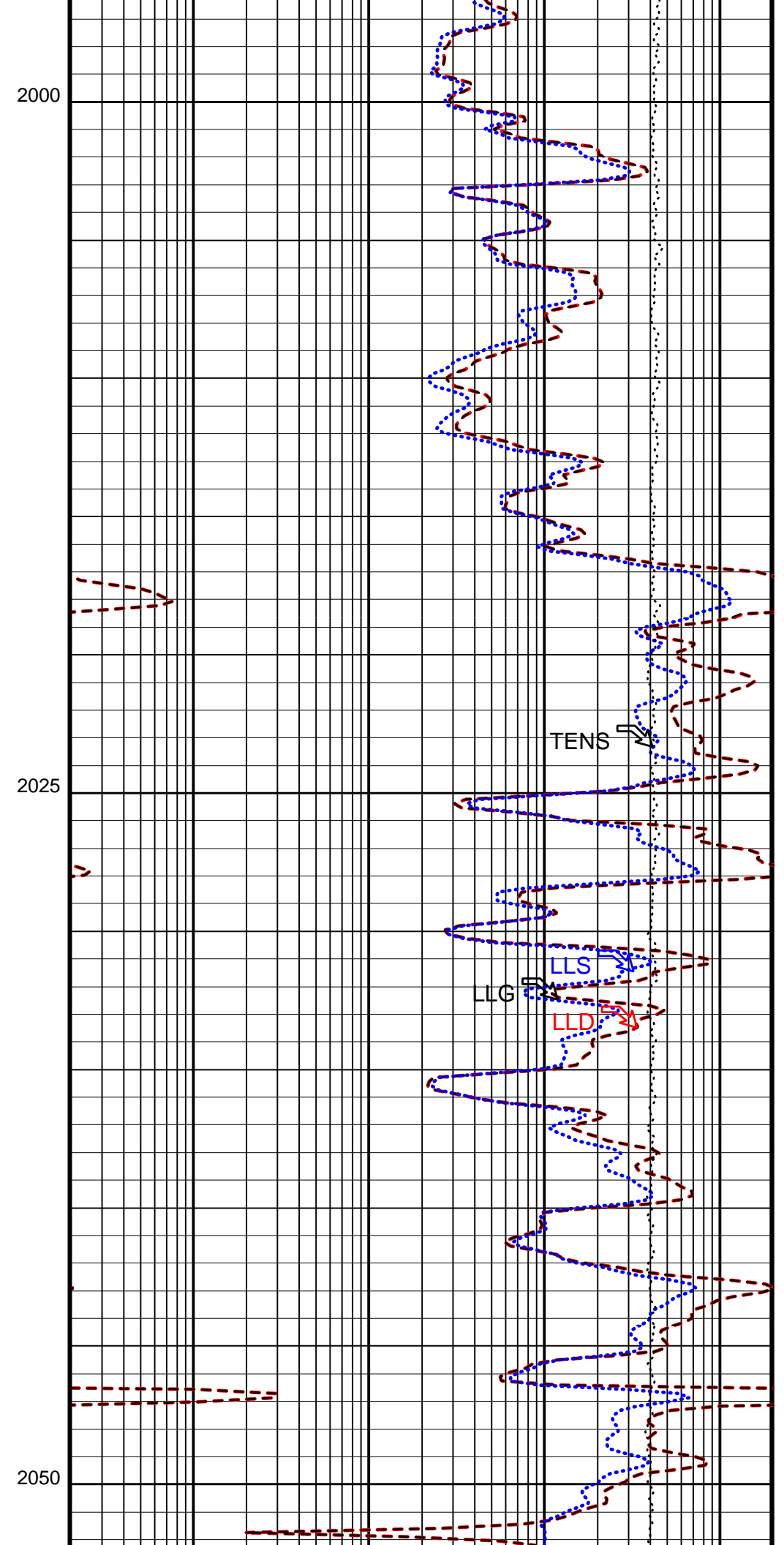
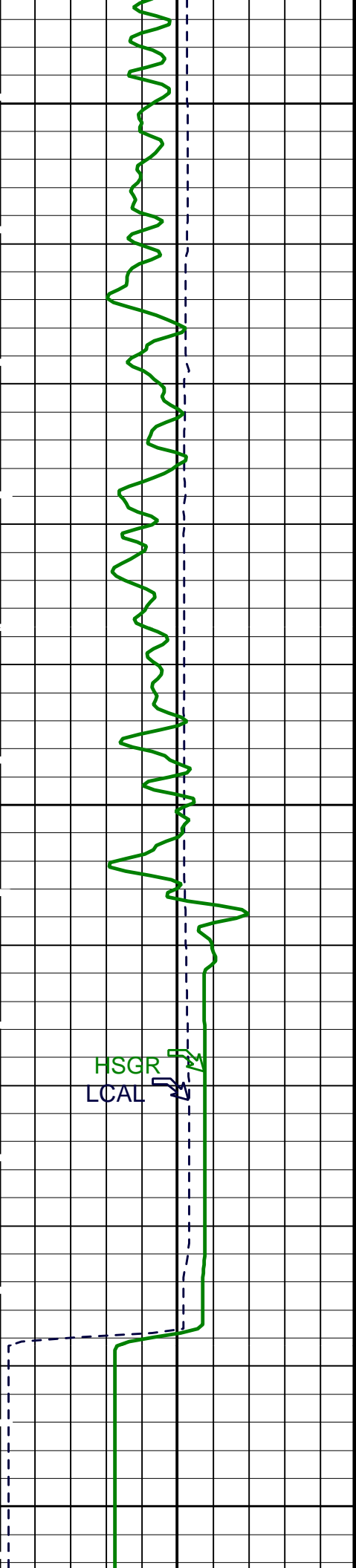
PIP SUMMARY

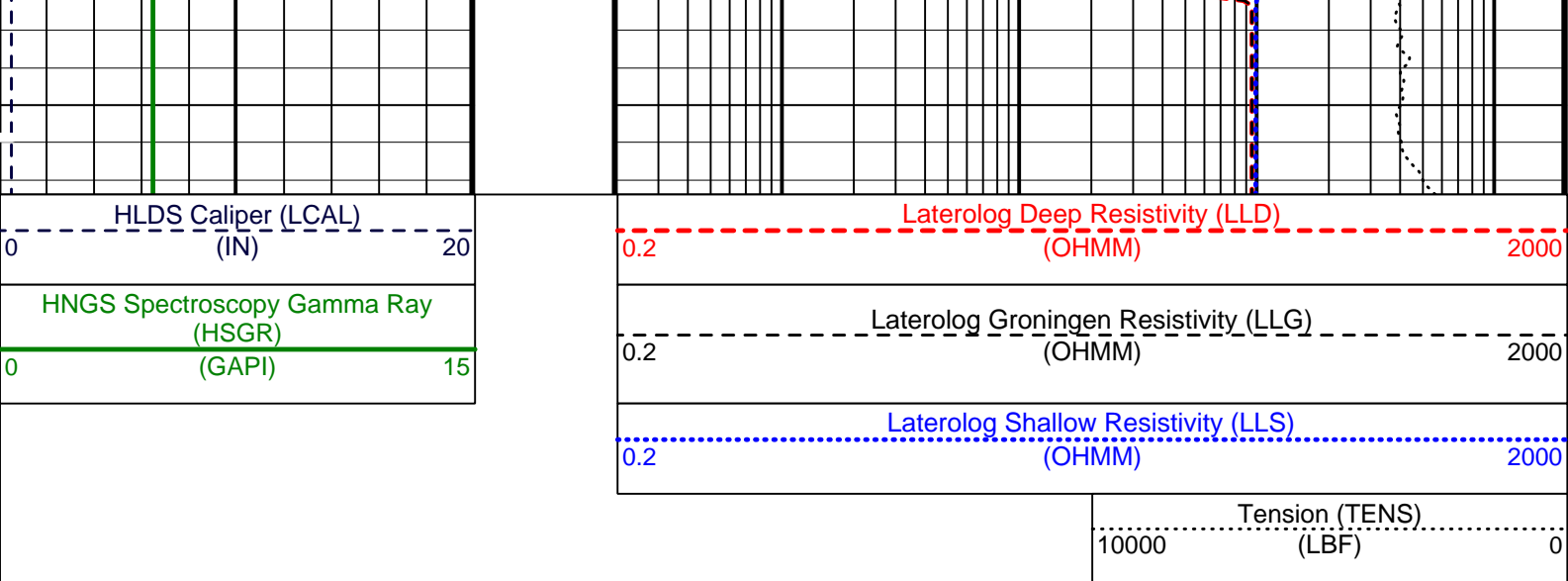


HLDS Caliper (LCAL)
(IN) 0 20

Laterolog Deep Resistivity (LLD)
(OHMM) 0.2 2000







PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
DLT-E: DUAL LATEROLOG - E		
DPRF	DEEP REFERENCE POWER	550 NW
KFAC	K FACTOR	SOND
LLOO	LATEROLOG LOOP	BOTH
PLRM	POWER LOOP REFERENCE MODE	DEEP
SPRF	SHALLOW REFERENCE POWER	550 NW
APS-C: Accelerator-Porosity Tool		
BHS	Borehole Status	OPEN
GCSE	Generalized Caliper Selection	LCAL
HNGS-BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNGS Detector 1 Barite Constant	1
BAR2	HNGS Detector 2 Barite Constant	1
BHK	HNGS Borehole Potassium Correction Concentration	0
BHS	Borehole Status	OPEN
CSD1	Inner Casing Outer Diameter	0 IN
CSD2	Outer Casing Outer Diameter	0 IN
CSW1	Inner Casing Weight	0 LB/F
CSW2	Outer Casing Weight	0 LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE
GCSE	Generalized Caliper Selection	LCAL
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW
HABK	HNGS Borehole Potassium Running Average	-0.00244928
HALF	HNGS Alpha Filter Length	60 IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE
HMWM	Mud Weighting Material	NATU
HNPE	HNGS Processing Enable	YES
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3 CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3 CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES
TPOS	Tool Position	ECCE
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	-2.20901
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.21428
HOLEV: Integrated Hole/Cement Volume		
BHS	Borehole Status	OPEN
GCSE	Generalized Caliper Selection	LCAL
System and Miscellaneous		
BS	Bit Size	9.875 IN
DFD	Drilling Fluid Density	1.07 G/C3

Format: DLT_DST Vertical Scale: 1:200 Graphics File Created: 02-Jan-2005 12:51

OP System Version: 12C0-301
MCM

DLT-E	12C0-301	GPIT-A/B	12C0-301
DTA-A	12C0-301	HLDS	12C0-301
NPLC-B	12C0-301	APS-C	12C0-301
HNGS-BA	12C0-301	DTC-H	12C0-301
BSP	12C0-301		

Output DLIS Files

DEFAULT DLL_LDL_APS_NGS_031LUP FN:23 PRODUCER 02-Jan-2005 12:51

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
DUAL LATEROLOG - E Wellsite Calibration - DLT ELECTRONICS CALIBRATION Laterolog Measurement							
Before: 2-Jan-2005 11:24 After: 2-Jan-2005 14:37							
MEASURED LLD	31.62	N/A	31.97	31.97	0.002937	0.9000	OHMM
MEASURED LLS	31.62	N/A	31.27	31.27	0.002924	0.9000	OHMM
General Purpose Inclinometer Wellsite Calibration - CROUZET ACCELEROMETER PROM HAS BEEN READ CORRECTLY							
Before: Calibration out of date 30-Nov-2004 10:29							
TEMPERATURE REFERENCE :	N/A	N/A	20	N/A	N/A	N/A	DEGC
YEAR OF CALIBRATION :	N/A	N/A	99	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	3	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	743	N/A	N/A	N/A	
General Purpose Inclinometer Wellsite Calibration - CROUZET MAGNETOMETER PROM HAS BEEN READ CORRECTLY							
Before: Calibration out of date 30-Nov-2004 10:29							
TEMPERATURE REFERENCE :	N/A	N/A	25	N/A	N/A	N/A	DEGC
YEAR OF CALIBRATION :	N/A	N/A	91	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	5	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	98	N/A	N/A	N/A	
Hostile Litho-Density Sonde Wellsite Calibration - Background Measurement							
Master: Calibration out of date 30-Sep-2004 21:56 Before: 21-Nov-2004 14:36 After: 2-Jan-2005 14:43							
SS Cs Resolution Bkg	9.000	8.329	8.426	8.424	-0.001281	1.800	%
LS Cs Resolution Bkg	9.000	8.007	8.060	8.020	-0.03951	1.800	%
LSW1 Background	100.0	81.66	82.11	80.20	-1.907	3.000	CPS
LSW2 Background	100.0	75.32	75.20	75.38	0.1765	3.000	CPS
LSW3 Background	200.0	169.8	170.1	168.0	-2.061	6.000	CPS
LSW4 Background	250.0	211.0	209.7	208.7	-0.9896	7.500	CPS
LSW5 Background	600.0	472.0	471.9	469.8	-2.020	18.00	CPS
SSW1 Background	100.0	80.12	79.12	79.72	0.6016	3.000	CPS
SSW2 Background	200.0	142.7	141.7	141.7	-0.003021	6.000	CPS
SSW3 Background	500.0	380.2	379.4	381.5	2.112	15.00	CPS
SSW4 Background	270.0	204.2	202.5	201.7	-0.8335	8.100	CPS
SSW5 Background	200.0	148.3	149.0	147.7	-1.286	6.000	CPS
Hostile Litho-Density Sonde Wellsite Calibration - Aluminum Measurement							
Master: Calibration out of date 30-Sep-2004 23:50							
LSW1 Aluminum	600.0	545.3	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	836.3	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	1030	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	523.0	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	489.9	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2448	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	7149	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	10380	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	4420	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	606.6	N/A	N/A	N/A	N/A	CPS
Hostile Litho-Density Sonde Wellsite Calibration - Lithology Measurement							
Master: Calibration out of date 30-Sep-2004 23:27							
LSW1 Iron	400.0	378.7	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	680.1	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	913.1	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	474.1	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	445.7	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1808	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	5916	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	9378	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3977	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	530.0	N/A	N/A	N/A	N/A	CPS
Hostile Litho-Density Sonde Wellsite Calibration - Caliper Calibration							
Before: 27-Dec-2004 14:12							
HLDS Caliper Small Ring	8.000	N/A	10.68	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	12.00	N/A	14.61	N/A	N/A	N/A	IN
Accelerator-Porosity Tool Wellsite Calibration - Detector Background							
Master: Calibration out of date 4-Oct-2004 2:49 Before: 21-Nov-2004 16:28 After: 2-Jan-2005 14:41							
Near Det Bkg Cntrate	30.00	25.75	24.51	25.45	0.9363	N/A	CPS

Far Det Bkg Cntrate	30.00	26.19	26.56	26.92	0.3610	N/A	CPS
Array-1 Det Bkg Cntrate	30.00	28.51	26.42	26.04	-0.3736	N/A	CPS
Array-2 Det Bkg Cntrate	30.00	25.90	25.42	25.46	0.03924	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	26.41	24.41	23.75	-0.6673	N/A	CPS

Accelerator-Porosity Tool Wellsite Calibration - Calibration Ratios

Master: Calibration out of date 4-Oct-2004 2:49

Near/Far Calibration Ratio	0.9250	0.9637	N/A	N/A	N/A	N/A
Near/Array Calibration Ratio	1.030	0.9915	N/A	N/A	N/A	N/A
Near/Array Cal Ratio Up/Down	1.000	1.001	N/A	N/A	N/A	N/A

Accelerator-Porosity Tool Wellsite Calibration - Tank Check

Master: Calibration out of date 4-Oct-2004 2:49

Array-1 Standoff Porosity	11.75	12.56	N/A	N/A	N/A	N/A	PU
Array-2 Standoff Porosity	11.75	12.06	N/A	N/A	N/A	N/A	PU
Average Slowing Down Time	6.000	5.739	N/A	N/A	N/A	N/A	US
Array-1 SDT Ratio Up/Down	1.000	1.010	N/A	N/A	N/A	N/A	
Array-2 SDT Ratio Up/Down	1.000	0.9869	N/A	N/A	N/A	N/A	
Sigma Formation	27.50	27.15	N/A	N/A	N/A	N/A	CU

Accelerator-Porosity Tool Wellsite Calibration - CCR7 signal boxes

Master: Calibration out of date 4-Oct-2004 1:46

Near Detector Plateau Setting	1650	1740	N/A	N/A	N/A	N/A	V
Far Detector Plateau Setting	2000	2078	N/A	N/A	N/A	N/A	V
Array Detector Plateau Setting	2000	1972	N/A	N/A	N/A	N/A	V

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 1 Check

Master: Calibration out of date 1-Oct-2004 13:17 Before: Calibration out of date 1-Oct-2004 13:23 After: 2-Jan-2005 14:44

Na 511 Peak Loc	40.00	40.65	40.64	40.57	-0.07292	1.000	
Na 511 Peak Res	15.50	16.58	16.95	18.51	1.560	2.000	%
High Voltage	1150	1253	1253	1256	2.550	N/A	V
Na 1785 Peak Loc	142.6	145.0	145.4	145.4	0.03003	7.000	
Na 1785 Peak Res	8.500	10.28	9.865	10.41	0.5409	2.000	%
Temperature	15.50	15.77	15.80	23.84	8.046	N/A	DEGC
Na Count Rate	45.00	49.79	50.40	46.22	-4.184	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 2 Check

Master: Calibration out of date 1-Oct-2004 13:17 Before: Calibration out of date 1-Oct-2004 13:23 After: 2-Jan-2005 14:44

Na 511 Peak Loc	40.00	40.59	40.56	40.68	0.1198	1.000	
Na 511 Peak Res	15.50	16.82	16.90	17.00	0.1049	2.000	%
High Voltage	1150	1273	1274	1276	2.792	N/A	V
Na 1785 Peak Loc	142.6	144.9	144.9	144.6	-0.3041	7.000	
Na 1785 Peak Res	8.500	10.50	9.293	10.68	1.389	2.000	%
Temperature	15.50	14.93	14.94	24.14	9.200	N/A	DEGC
Na Count Rate	45.00	49.97	50.71	46.00	-4.718	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Ratio Of Detector 1 To Detector 2

Master: Calibration out of date 1-Oct-2004 13:17 Before: Calibration out of date 1-Oct-2004 13:23 After: 2-Jan-2005 14:44

Coincidence Count Rate Ratio	1.000	0.9965	0.9939	1.004	0.01010	0.05000
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Hostile Natural Gamma Ray Sonde Master Calibration - Detector 1 Calibration

Master: Calibration out of date 1-Oct-2004 13:11

Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	209.1	--	--	--	--	
Th Peak Res	7.000	8.176	--	--	--	--	%
Background Count Rate	142.5	24.77	--	--	--	--	CPS
Gain Ratio	1.000	0.9785	--	--	--	--	

Hostile Natural Gamma Ray Sonde Master Calibration - Detector 2 Calibration

Master: Calibration out of date 1-Oct-2004 13:11

Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	207.0	--	--	--	--	
Th Peak Res	7.000	8.013	--	--	--	--	%
Background Count Rate	142.5	28.03	--	--	--	--	CPS
Gain Ratio	1.000	0.9701	--	--	--	--	

Accelerator-Porosity Tool - Detector Plateau Settings :

Near Detector Plateau Setting	1740 V
Far Detector Plateau Setting	2078 V
Array Detector Plateau Setting	1972 V

DUAL LATEROLOG - E / Equipment Identification

Primary Equipment:

Auxiliary Equipment:
 Dual Laterolog Electrode
 Dual Laterolog Sonde
 Dual Laterolog Housing
 Dual Laterolog Cartridge
 Laterolog Control Module

DLE - E 816
 DLS - F
 DLH - CB 2893
 DLC - D
 LCM - AA

DUAL LATEROLOG - E Wellsite Calibration					
DLT ELECTRONICS CALIBRATION Laterolog Measurement					
Phase	MEASURED LLD OHMM	Value	Phase	MEASURED LLS OHMM	Value
Before		31.97	Before		31.27
After		31.97	After		31.27
	29.00 (Minimum)	31.62 (Nominal)	40.00 (Maximum)	29.00 (Minimum)	31.62 (Nominal)
Before: 2-Jan-2005 11:24			After: 2-Jan-2005 14:37		

DUAL LATEROLOG - E Wellsite Calibration									
DLT Electronics Calibration Plus Measurement									
Phase	Deep Current Plus UA	Value	Phase	Deep Voltage Plus MV	Value	Phase	Groningen Voltage Plus MV	Value	
Before		341.3	Before		10.91	Before		11.39	
After		345.9	After		11.06	After		11.54	
	317.5 (Minimum)	342.5 (Nominal)	367.5 (Maximum)	9.830 (Minimum)	10.83 (Nominal)	11.83 (Maximum)	9.830 (Minimum)	10.83 (Nominal)	11.83 (Maximum)
Phase	Shallow Current Plus UA	Value	Phase	Shallow Voltage Plus MV	Value				
Before		343.9	Before		10.75				
After		343.7	After		10.75				
	317.5 (Minimum)	342.5 (Nominal)	367.5 (Maximum)	9.830 (Minimum)	10.83 (Nominal)	11.83 (Maximum)			
Before: 2-Jan-2005 11:24			After: 2-Jan-2005 14:37						

DUAL LATEROLOG - E Wellsite Calibration									
DLT Electronics Calibration Zero Measurement									
Phase	Deep Current Zero UA	Value	Phase	Deep Voltage Zero MV	Value	Phase	Groningen Voltage Zero MV	Value	
Before		-0.1251	Before		-0.01121	Before		-0.006601	
After		-0.05629	After		-0.007723	After		-0.003849	
	-1.000 (Minimum)	0 (Nominal)	1.000 (Maximum)	-0.1000 (Minimum)	0 (Nominal)	0.1000 (Maximum)	-0.1000 (Minimum)	0 (Nominal)	0.1000 (Maximum)
Phase	Shallow Current Zero UA	Value	Phase	Shallow Voltage Zero MV	Value				
Before		-0.1259	Before		-0.01111				
After		-0.05743	After		-0.003517				
	-1.000 (Minimum)	0 (Nominal)	1.000 (Maximum)	-0.1000 (Minimum)	0 (Nominal)	0.1000 (Maximum)			
Before: 2-Jan-2005 11:23			After: 2-Jan-2005 14:36						

General Purpose Inclinator / Equipment Identification

Primary Equipment:
 GPIT Cartridge - A GPIC - A
 Auxiliary Equipment:
 GPIT Housing GPIH - A 860

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 2326
 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		8.329	Master		8.007	Master		81.66
Before		8.426	Before		8.060	Before		82.11
After		8.424	After		8.020	After		80.20
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		75.32	Master		169.8	Master		211.0
Before		75.20	Before		170.1	Before		209.7
After		75.38	After		168.0	After		208.7
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		472.0	Master		80.12	Master		142.7
Before		471.9	Before		79.12	Before		141.7
After		469.8	After		79.72	After		141.7
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		380.2	Master		204.2	Master		148.3
Before		379.4	Before		202.5	Before		149.0
After		381.5	After		201.7	After		147.7
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: Calibration out of date 30-Sep-2004 21:56			Before: 21-Nov-2004 14:36			After: 2-Jan-2005 14:43		

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		81.66	Master		75.32	Master		169.8
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		211.0	Master		472.0	Master		8.007
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		80.12	Master		142.7	Master		380.2
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	Phase	SSW5 Background CPS	Value	Phase	SS Cs Resolution Bkg %	Value
Master		204.2	Master		148.3	Master		8.329
150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum)			110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum)			7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)		
Master: Calibration out of date 30-Sep-2004 21:56								

Hostile Litho-Density Sonde Master Calibration

Detector Aluminum Measurement (bkgd-subtracted)

Phase	LSW1 Aluminum CPS	Value	Phase	LSW2 Aluminum CPS	Value	Phase	LSW3 Aluminum CPS	Value
Master		545.3	Master		836.3	Master		1030
420.0 (Minimum) 600.0 (Nominal) 700.0 (Maximum)			650.0 (Minimum) 900.0 (Nominal) 1050 (Maximum)			800.0 (Minimum) 1100 (Nominal) 1300 (Maximum)		
Phase	LSW4 Aluminum CPS	Value	Phase	LSW5 Aluminum CPS	Value	Phase	SSW1 Aluminum CPS	Value
Master		523.0	Master		489.9	Master		2448
410.0 (Minimum) 580.0 (Nominal) 670.0 (Maximum)			410.0 (Minimum) 570.0 (Nominal) 660.0 (Maximum)			2000 (Minimum) 2800 (Nominal) 3200 (Maximum)		
Phase	SSW2 Aluminum CPS	Value	Phase	SSW3 Aluminum CPS	Value	Phase	SSW4 Aluminum CPS	Value
Master		744.0	Master		1030.0	Master		1100.0
420.0 (Minimum) 600.0 (Nominal) 700.0 (Maximum)			650.0 (Minimum) 900.0 (Nominal) 1050 (Maximum)			800.0 (Minimum) 1100 (Nominal) 1300 (Maximum)		

Master	5800 (Minimum)	8000 (Nominal)	9300 (Maximum)	7149	Master	8300 (Minimum)	11600 (Nominal)	13500 (Maximum)	10380	Master	3500 (Minimum)	5000 (Nominal)	5800 (Maximum)	4420
Phase	SSW5 Aluminum CPS			Value										
Master				606.6										
	470.0 (Minimum)	660.0 (Nominal)	770.0 (Maximum)											

Master: Calibration out of date 30-Sep-2004 23:50

Hostile Litho-Density Sonde Master Calibration														
Detector Litholog Measurement (bkqg-subtracted)														
Phase	LSW1 Iron CPS			Value	Phase	LSW2 Iron CPS			Value	Phase	LSW3 Iron CPS			Value
Master				378.7	Master				680.1	Master				913.1
	290.0 (Minimum)	400.0 (Nominal)	470.0 (Maximum)		520.0 (Minimum)	730.0 (Nominal)	850.0 (Maximum)		720.0 (Minimum)	1000 (Nominal)	1160 (Maximum)			
Phase	LSW4 Iron CPS			Value	Phase	LSW5 Iron CPS			Value	Phase	SSW1 Iron CPS			Value
Master				474.1	Master				445.7	Master				1808
	370.0 (Minimum)	520.0 (Nominal)	600.0 (Maximum)		340.0 (Minimum)	470.0 (Nominal)	550.0 (Maximum)		1500 (Minimum)	2100 (Nominal)	2400 (Maximum)			
Phase	SSW2 Iron CPS			Value	Phase	SSW3 Iron CPS			Value	Phase	SSW4 Iron CPS			Value
Master				5916	Master				9378	Master				3977
	4900 (Minimum)	6800 (Nominal)	7900 (Maximum)		7800 (Minimum)	10800 (Nominal)	12600 (Maximum)		3300 (Minimum)	4600 (Nominal)	5400 (Maximum)			
Phase	SSW5 Iron CPS			Value										
Master				530.0										
	420.0 (Minimum)	580.0 (Nominal)	680.0 (Maximum)											

Master: Calibration out of date 30-Sep-2004 23:27

Hostile Litho-Density Sonde Master Calibration														
Quality Ratios														
Phase	AL CALIBRATION RATIO 1			Value	Phase	AL CALIBRATION RATIO 2			Value	Phase	AL CALIBRATION RATIO 3			Value
Master				1.017	Master				2.064	Master				0.5384
	0.9000 (Minimum)	1.000 (Nominal)	1.100 (Maximum)		1.900 (Minimum)	2.100 (Nominal)	2.300 (Maximum)		0.4500 (Minimum)	0.5500 (Nominal)	0.6500 (Maximum)			
Phase	AL CALIBRATION RATIO 4			Value	Phase	Pad-Wear SS Ratio			Value	Phase	Pad-Wear LS Ratio			Value
Master				0.4870	Master				0.9862	Master				0.9849
	0.4500 (Minimum)	0.5500 (Nominal)	0.6500 (Maximum)		0.9800 (Minimum)	0.9880 (Nominal)	0.9960 (Maximum)		0.9800 (Minimum)	0.9880 (Nominal)	0.9960 (Maximum)			
Phase	Pad-Position SS Ratio			Value	Phase	Pad-Position LS Ratio			Value					
Master				0.9965	Master				0.9925					
	0.9900 (Minimum)	0.9940 (Nominal)	1.015 (Maximum)		0.9850 (Minimum)	0.9940 (Nominal)	1.010 (Maximum)							

Master: Calibration out of date 30-Sep-2004 23:20

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 - C 202
	APS Minitron	MNTR - F 5124
Auxiliary Equipment:	Accelerator-Porosity Housing	APH - AC 104
	APS Calibration Water Tank	SFT - 178 6250
	APS Aluminum Calibrator Sleeve	SFT - 281 6250

Accelerator-Porosity Tool Wellsite Calibration

Detector Background														
Phase	Near Det Bkg Cntrate CPS			Value	Phase	Far Det Bkg Cntrate CPS			Value	Phase	Array-1 Det Bkg Cntrate CPS			Value
Master				25.75	Master				26.19	Master				28.51
Before				24.51	Before				26.56	Before				26.42
After				25.45	After				26.92	After				26.04
	1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)			1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)			1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)	
Phase	Array-2 Det Bkg Cntrate CPS			Value	Phase	Array Therm Det Bkg Cntrate CPS			Value					
Master				25.90	Master				26.41					
Before				25.42	Before				24.41					
After				25.46	After				23.75					
	1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)			1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)						
Master: Calibration out of date 4-Oct-2004 2:49				Before: 21-Nov-2004 16:28				After: 2-Jan-2005 14:41						

Accelerator-Porosity Tool Wellsite Calibration														
Calibration Ratios														
Phase	Near/Far Calibration Ratio			Value	Phase	Near/Array Calibration Ratio			Value	Phase	Near/Array Cal Ratio Up/Down			Value
Master				0.9637	Master				0.9915	Master				1.001
	0.8000 (Minimum)	0.9250 (Nominal)	1.050 (Maximum)			0.9000 (Minimum)	1.030 (Nominal)	1.170 (Maximum)			0.9700 (Minimum)	1.000 (Nominal)	1.030 (Maximum)	
Master: Calibration out of date 4-Oct-2004 2:49														

Accelerator-Porosity Tool Wellsite Calibration														
Tank Check														
Phase	Array-1 Standoff Porosity PU			Value	Phase	Array-2 Standoff Porosity PU			Value	Phase	Average Slowing Down Time US			Value
Master				12.56	Master				12.06	Master				5.739
	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	Phase	Array-2 SDT Ratio Up/Down			Value	Phase	Sigma Formation CU			Value
Master				1.010	Master				0.9869	Master				27.15
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)			0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)			20.00 (Minimum)	27.50 (Nominal)	35.00 (Maximum)	
Master: Calibration out of date 4-Oct-2004 2:49														

Accelerator-Porosity Tool Master Calibration														
Detector Calibration														
Phase	Near/Far Calibration Ratio			Value	Phase	Near/Array Calibration Ratio			Value	Phase	Near/Array Cal Ratio Up/Down			Value
Master				0.9637	Master				0.9915	Master				1.001
	0.8000 (Minimum)	0.9250 (Nominal)	1.050 (Maximum)			0.9000 (Minimum)	1.030 (Nominal)	1.170 (Maximum)			0.9700 (Minimum)	1.000 (Nominal)	1.030 (Maximum)	
Master: Calibration out of date 4-Oct-2004 2:49														

Accelerator-Porosity Tool Master Calibration														
Tank Check														
Phase	Array-1 Standoff Porosity PU			Value	Phase	Array-2 Standoff Porosity PU			Value	Phase	Average Slowing Down Time US			Value
Master				12.56	Master				12.06	Master				5.739
	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	Phase	Array-2 SDT Ratio Up/Down			Value	Phase	Sigma Formation CU			Value
Master				1.010	Master				0.9869	Master				27.15
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)			0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)			20.00 (Minimum)	27.50 (Nominal)	35.00 (Maximum)	
Master: Calibration out of date 4-Oct-2004 2:49														

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




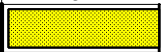

Hostile Natural Gamma Ray Sonde Wellsite Calibration									
Detector 1 Check									
Phase	Na 511 Peak Loc	Value	Phase	Na 511 Peak Res %	Value	Phase	High Voltage V	Value	
Master		40.65	Master		16.58	Master		1253	
Before		40.64	Before		16.95	Before		1253	
After		40.57	After		18.51	After		1256	
	37.50 (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		145.0	Master		10.28	Master		15.77	
Before		145.4	Before		9.865	Before		15.80	
After		145.4	After		10.41	After		23.84	
	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		49.79							
Before		50.40							
After		46.22							
	10.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)						
Master: Calibration out of date 1-Oct-2004 13:17 Before: Calibration out of date 1-Oct-2004 13:23 After: 2-Jan-2005 14:44									

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		40.59	Master		16.82	Master		1273	
Before		40.56	Before		16.90	Before		1274	
After		40.68	After		17.00	After		1276	
	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		144.9	Master		10.50	Master		14.93	
Before		144.9	Before		9.293	Before		14.94	
After		144.6	After		10.68	After		24.14	
	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		49.97							
Before		50.71							
After		46.00							
	10.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)						
Master: Calibration out of date 1-Oct-2004 13:17 Before: Calibration out of date 1-Oct-2004 13:23 After: 2-Jan-2005 14:44									

Hostile Natural Gamma Ray Sonde Wellsite Calibration			
Ratio Of Detector 1 To Detector 2			
Phase	Coincidence Count Rate Ratio	Value	
Master		0.9965	
Before		0.9939	
After		1.004	
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)
Master: Calibration out of date 1-Oct-2004 13:17			
Before: Calibration out of date 1-Oct-2004 13:23			
After: 2-Jan-2005 14:44			




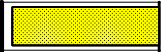

Hostile Natural Gamma Ray Sonde Master Calibration

Detector 1 Calibration

Phase	Na 511 Peak Set Point	Value	Phase	Th Peak Loc	Value	Phase	Th Peak Res %	Value
Master		41.00	Master		209.1	Master		8.176
	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		24.77	Master		0.9785			
	20.00 (Minimum) 142.5 (Nominal) 265.0 (Maximum)			0.9400 (Minimum) 1.000 (Nominal) 1.060 (Maximum)				
Master: Calibration out of date 1-Oct-2004 13:11								

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		207.0	Master		8.013
	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		28.03	Master		0.9701			
	20.00 (Minimum) 142.5 (Nominal) 265.0 (Maximum)			0.9400 (Minimum) 1.000 (Nominal) 1.060 (Maximum)				
Master: Calibration out of date 1-Oct-2004 13:11								

Company: Lamont Doherty

Schlumberger

Well: IODP EXP 304 Site 1309D

Field: Atlantis Massif

Country: Mid Atlantic Ridge

Ocean: Atlantic Ocean

Dual Laterlog