

COMPANY: Lamont Doherty

WELL: ODP Leg 191, Site 1179D (WP-2A)

FIELD: West Pacific ION

COUNTRY: Offshore STATE: Pacific Ocean

**Schlumberger** Hostile  
Natural Gamma Ray

COUNTY: Offshore  
Field: West Pacific ION  
Location: ODP Leg 191, Site 1179D (WP-2A)  
Company: Lamont Doherty

LOCATION  
Permanent Datum: MSL Elev.: K.B. 11.3 m  
Log Measured From: RKB G.L. -5566 m  
Drilling Measured From: RKB D.F. 11 m  
Elev.: 0 m  
11.3 m above Perm. Datum

API Serial No. LATITUDE: 41° 4.8122' N LONGITUDE: 159° 57.7862' E RIG: JOIDES Resolution

Logging Date 5-AUG-2000

Run Number 1

Depth Driller 6052 m

Schlumberger Depth 5873 m

Bottom Log Interval 5842 m

Top Log Interval 5550 m

Casing Driller Size @ Depth 0.000 in @

Casing Schlumberger @

Bit Size 9.875 in

Type Fluid In Hole Salt Water Base

Density Viscosity 8.3 g/cm3

Fluid Loss PH

Source Of Sample Salt Water

RM @ Measured Temperature 0.213 ohm.m @ 20 degC

RMF @ Measured Temperature @ @

RMC @ Measured Temperature @ @

Source RMF RMC @ @

RM @ MRT RMF @ MRT @ @

Maximum Recorded Temperatures

Circulation Stopped Time 5-AUG-2000 5:00

Logger On Bottom Time 5-AUG-2000 17:00

Unit Number 99 Location Houston

Recorded By Kerry M. Swain

Witnessed By Florence Einaldi, Sarah Haggas

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

Density Viscosity

Fluid Loss PH

Source Of Sample

RM @ Measured Temperature @

RMF @ Measured Temperature @ @

RMC @ Measured Temperature @ @

Source RMF RMC @ @

RM @ MRT RMF @ MRT @ @

Maximum Recorded Temperatures

Circulation Stopped Time

Logger On Bottom Time

Unit Number Location

Recorded By

Witnessed By

Run 1

Run 2

Run

**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**  
 OS1: HLDT/APS/HNGS/TAP  
 OS2: LAMONT GR  
 OS3:  
 OS4:  
 OS5:

**OTHER SERVICES2**  
 OS1:  
 OS2:  
 OS3:  
 OS4:  
 OS5:

**REMARKS: RUN NUMBER 1**  
 Lamont Temperature Tool (TAP) run on DITE/HLDT/APS/HNGS only.  
 Sea floor at 5577mbrf.  
 Log presented in meters below rig floor.  
 Wireline heave compensator used on all descents.  
 Sepiolite mud placed in the hole before logging.  
 Drillers TD-6052m, Loggers TD-5873m deepest point reached.  
 Maximum recorded temperature recorded by Lamont TAP tool.  
 Drill pipe set at 5732.5mbrf.  
 Background count rates low for HNGS master cal due to low strength stab. source.

**REMARKS: RUN NUMBER 2**

**RUN 1**  
 SERVICE ORDER #:  
 PROGRAM VERSION: 9C1-303  
 FLUID LEVEL:

**RUN 2**  
 SERVICE ORDER #:  
 PROGRAM VERSION:  
 FLUID LEVEL:

LOGGED INTERVAL	START	STOP




LOGGED INTERVAL	START	STOP

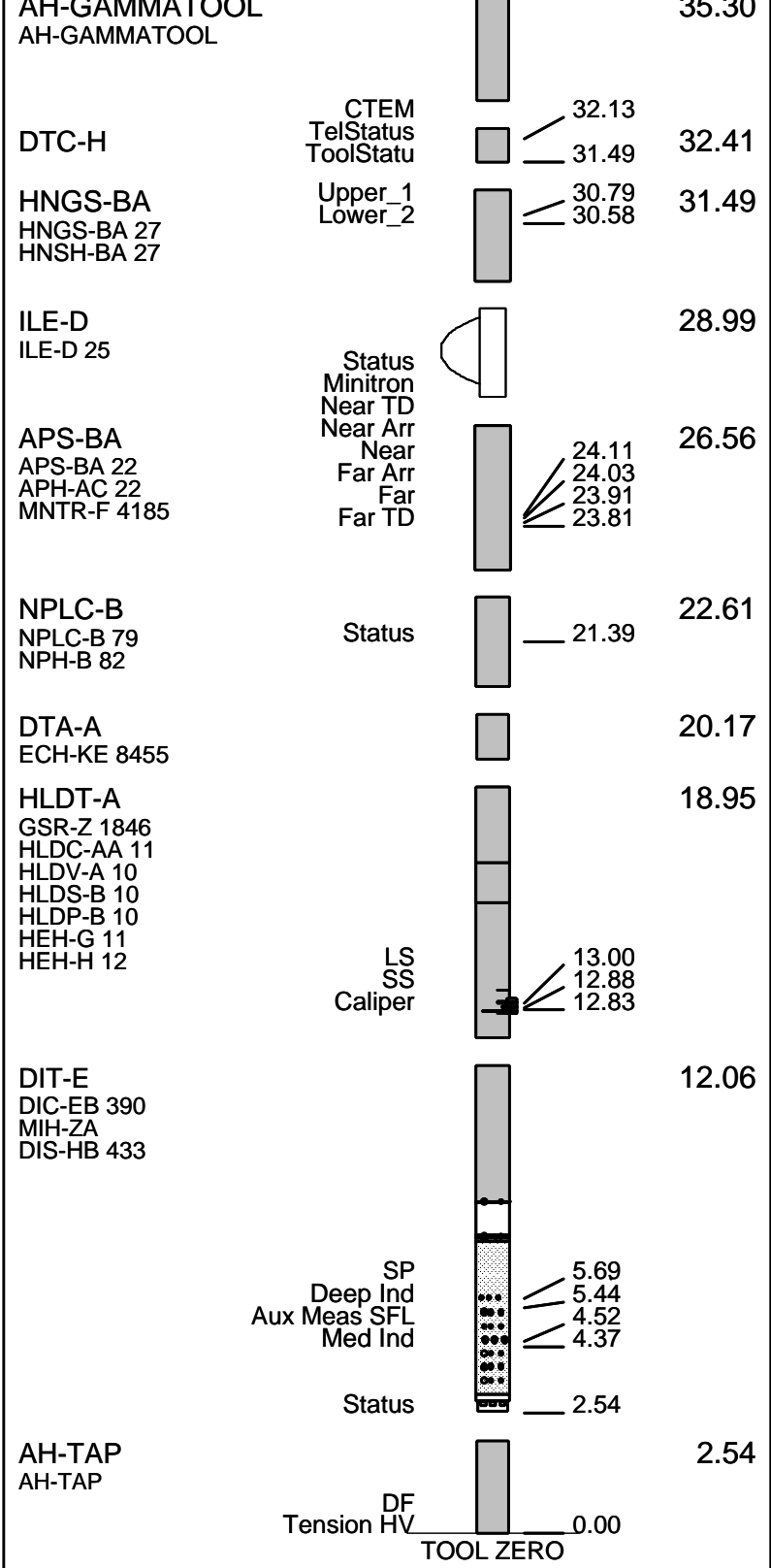
**EQUIPMENT DESCRIPTION**

**RUN 1**  
**SURFACE EQUIPMENT**  
 SFT-281 24  
 SFT-178 4722  
 GSR-U 135  
 WITM (DTS)-A

**RUN 2**

**DOWNHOLE EQUIPMENT**

LEH-QT		38.94
AH-TELEM AH-TELEM		38.05
ALL GAMMATECO		05.00



TOOL ZERO

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

### Input DLIS Files

DEFAULT      DITE .024      FN:13 PRODUCER      05-Aug-2000 17:03      5833.9 M      5550.0 M

### Output DLIS Files

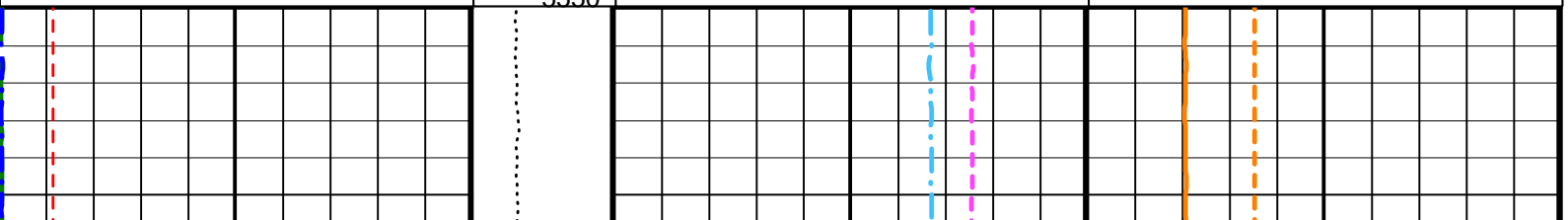
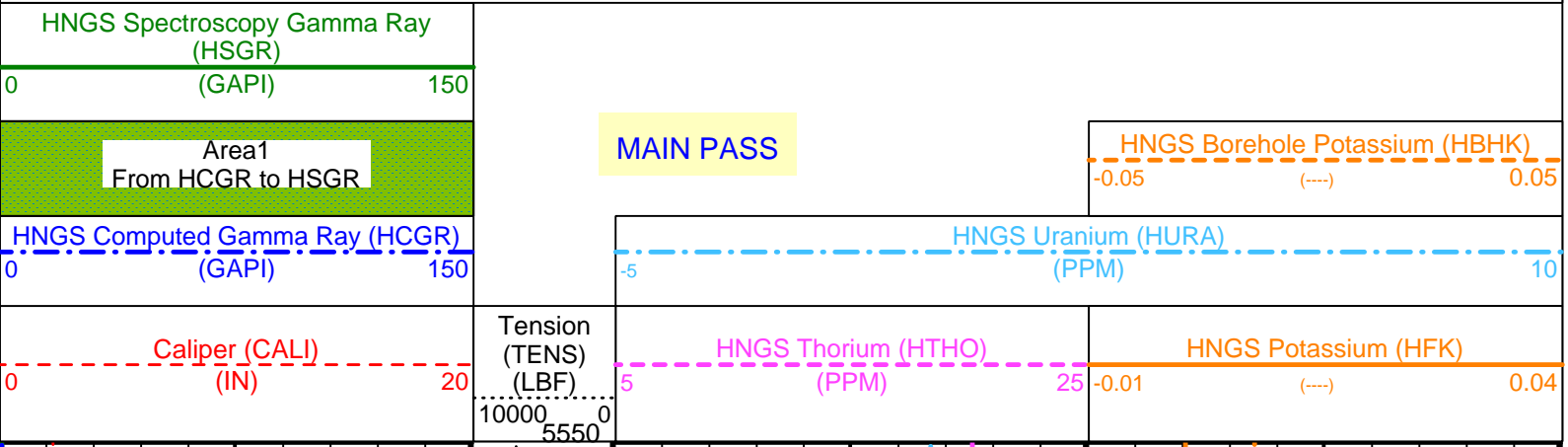
DEFAULT      DITE .064      FN:66 PRODUCER      18-Aug-2000 21:06      5833.9 M      5550.0 M

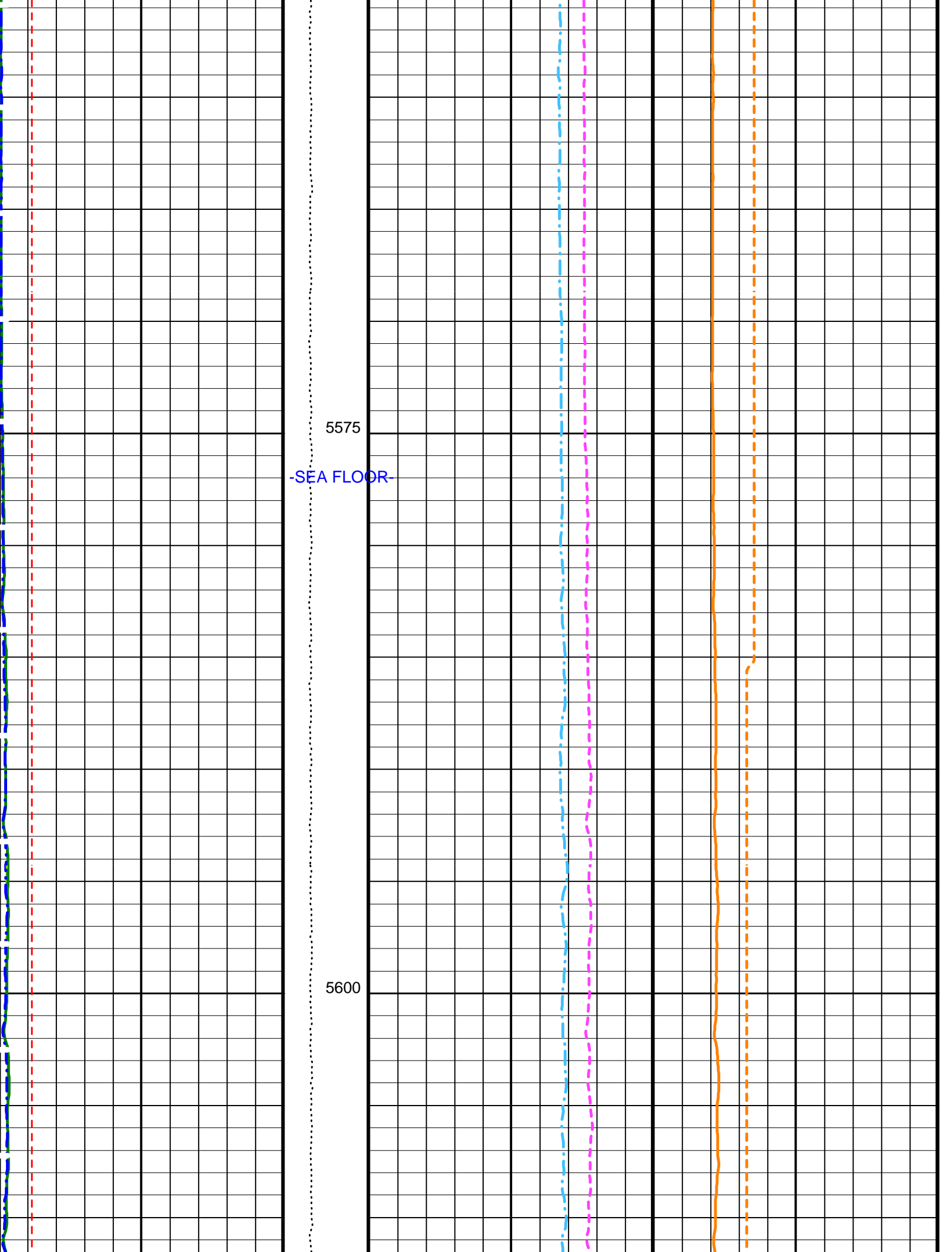
### OP System Version: 9C1-303 MCM

DIT-E	OP91-kp2	HLDT-A	OP91-kp2
DTA-A	OP91-kp2	NPLC-B	OP91-kp2
APS-BA	OP91-kp2	HNGS-BA	OP91-kp2
DTC-H	OP91-kp2		

### PIP SUMMARY

▶ Time Mark Every 60 S

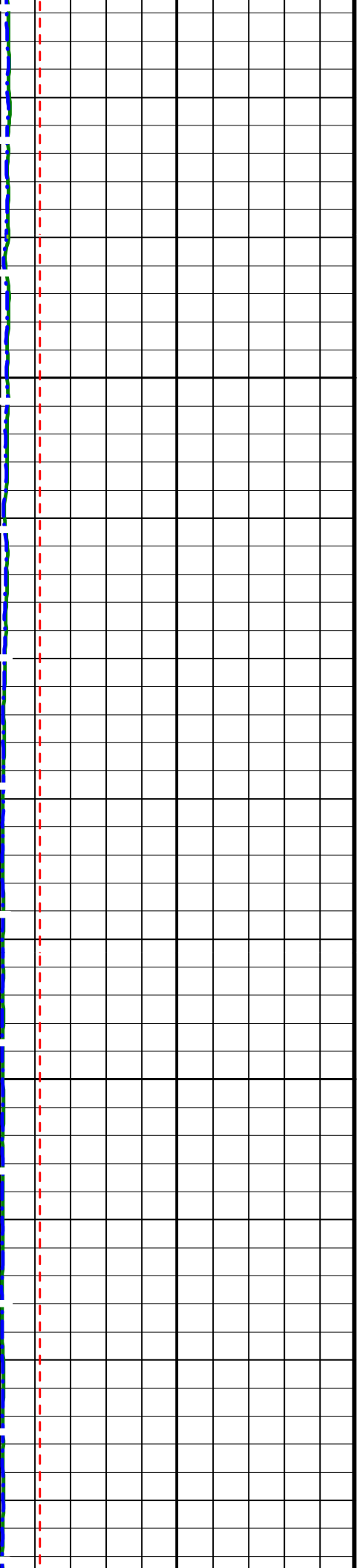




5575

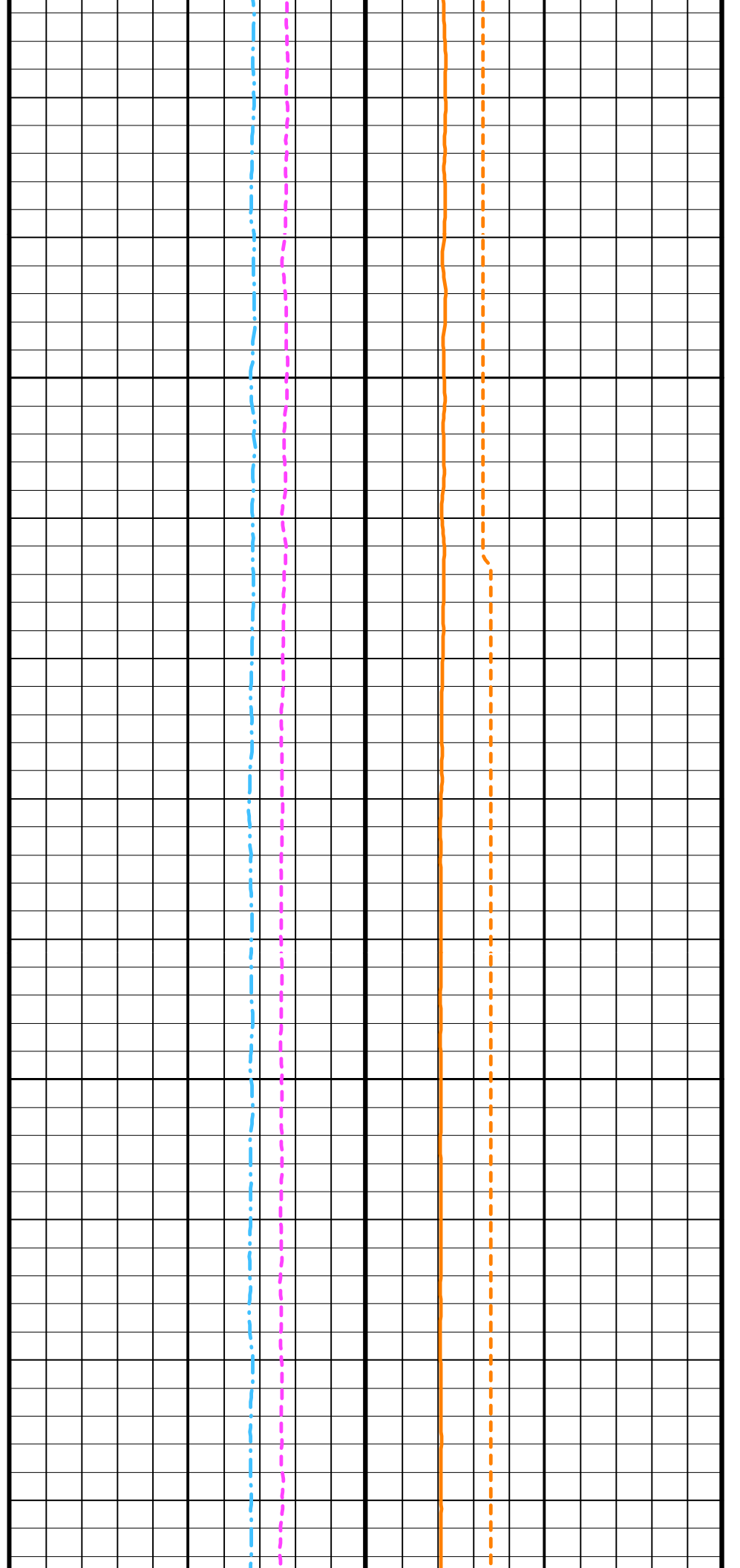
-SEA FLOOR-

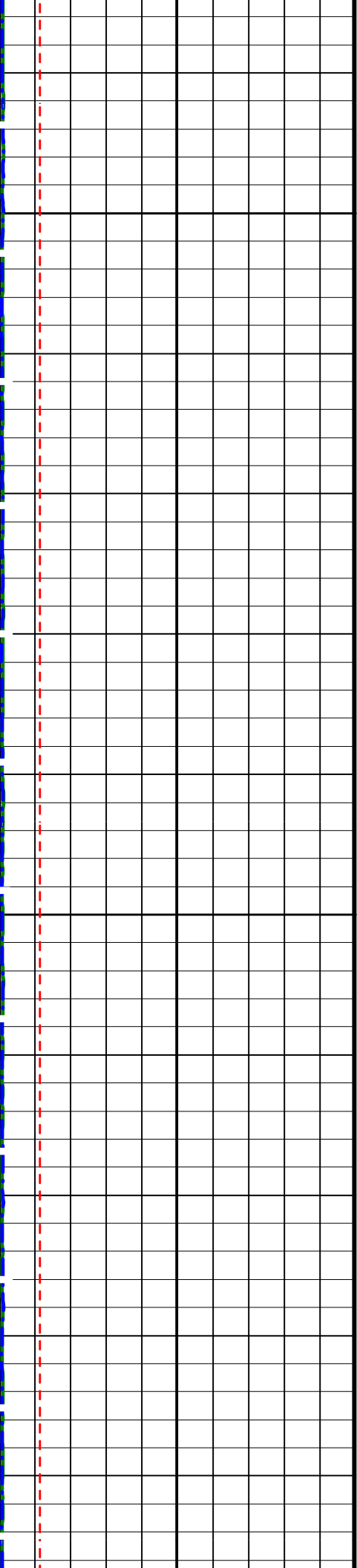
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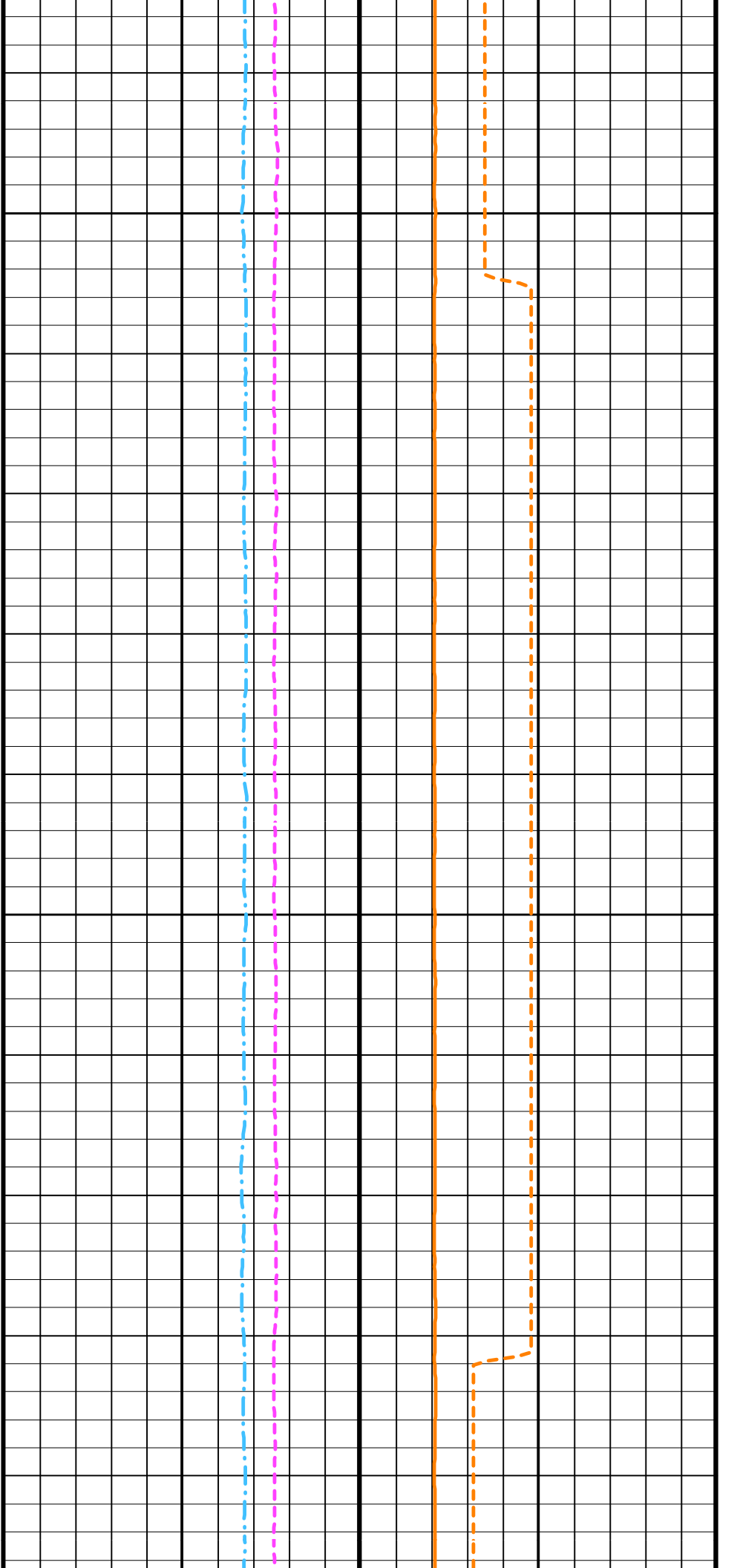
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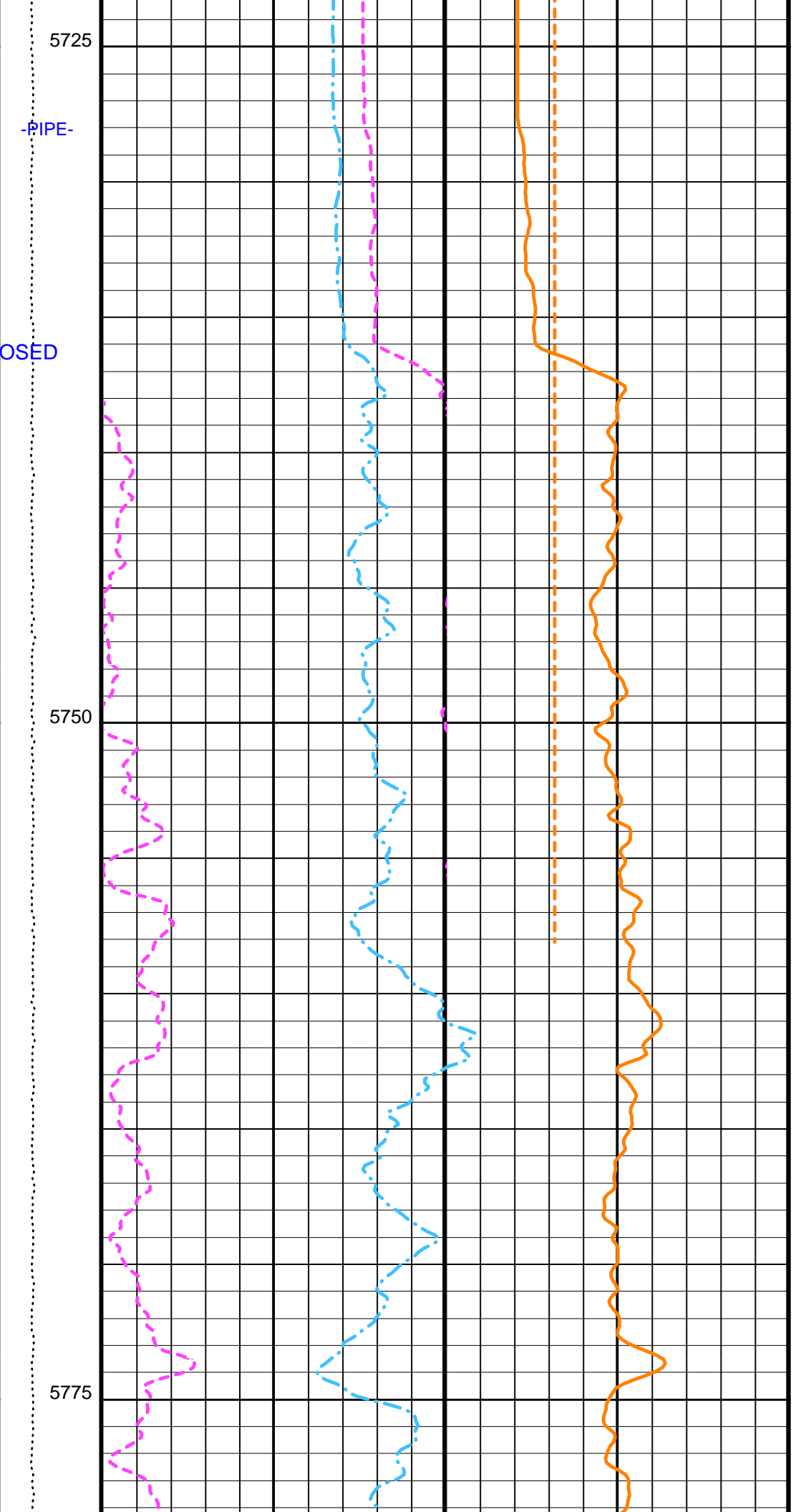
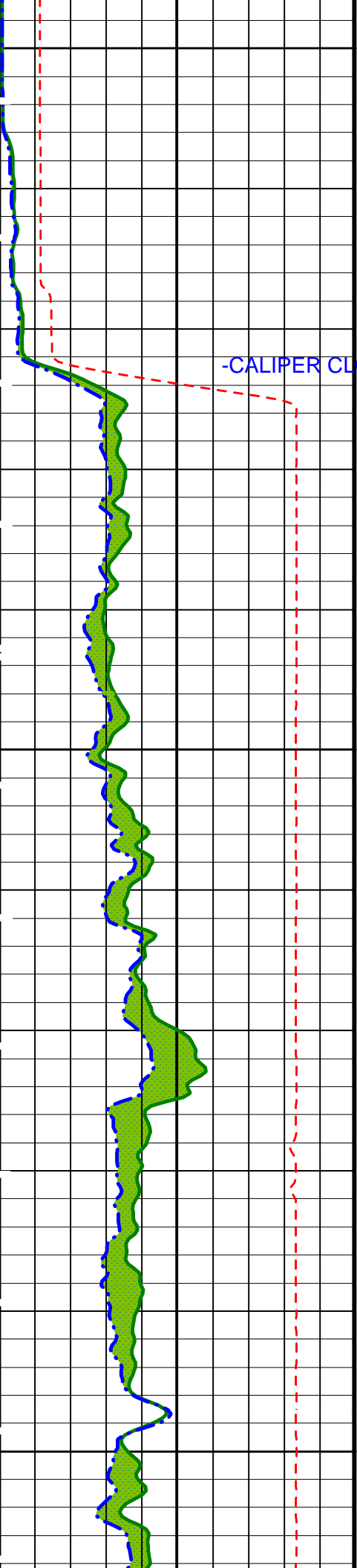




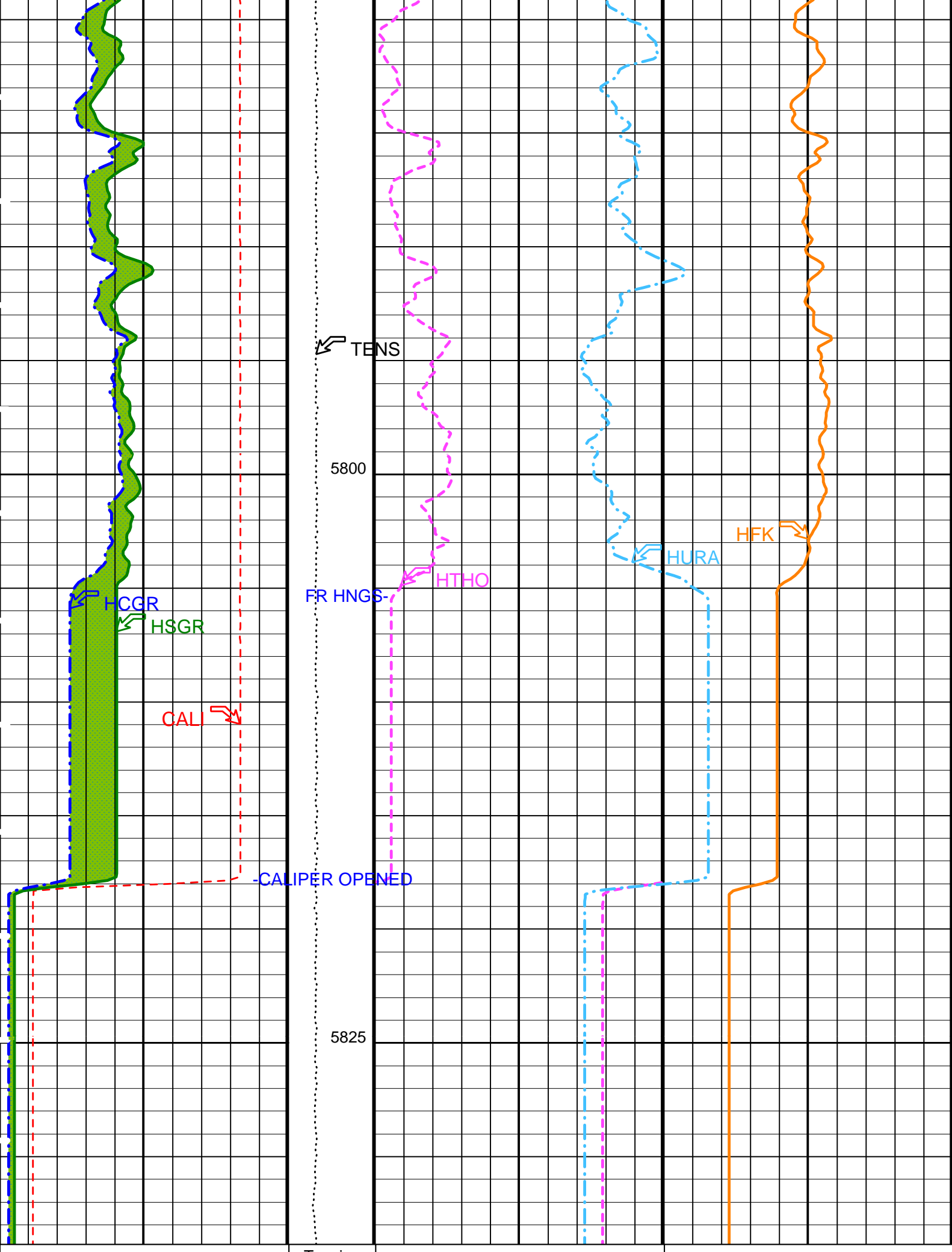
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5700







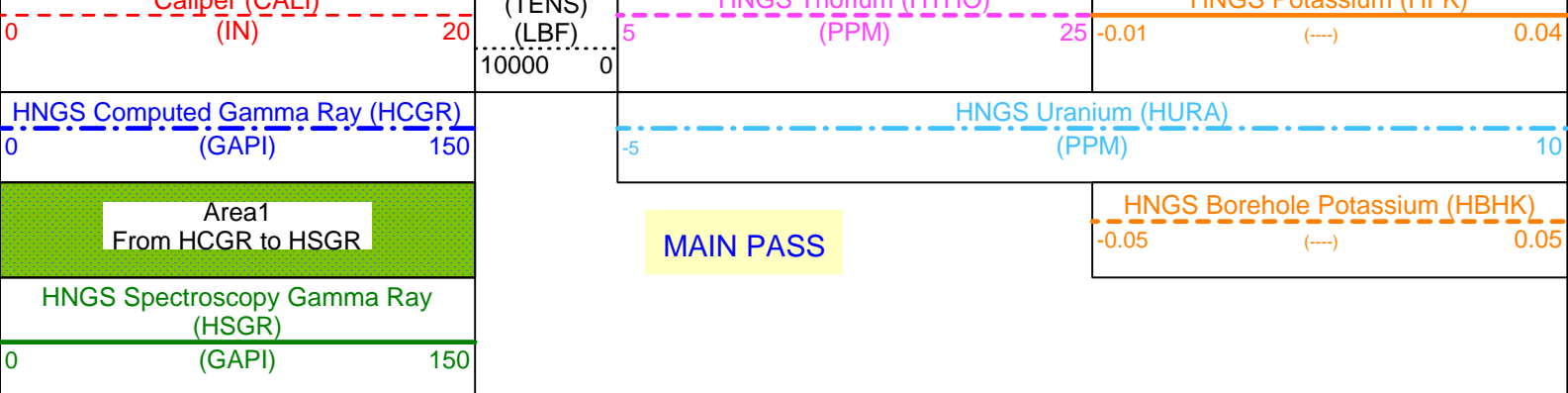


Caliper (CALI)

Tension (TENS)

HNGS Thorium (HTHO)

HNGS Potassium (HEK)



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	
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	8.20815	%
D1TC	HNGS Detector 1 Calibration Temperature	33.3413	DEGC
D1TL	HNGS Detector 1 Calibration Thorium Peak Location	210.189	
D2PR	HNGS Detector 2 Calibration Thorium Peak Resolution	7.0296	%
D2TC	HNGS Detector 2 Calibration Temperature	32.3115	DEGC
D2TL	HNGS Detector 2 Calibration Thorium Peak Location	210.126	
DBCC	HNGS Barite Constant Correction Flag	NONE	
DFD	Drilling Fluid Density	8.30	G/C3
DO	Depth Offset for Logical Unit 1	0.0	M
GCF1_START	HNGS Detector 1 GCF Constant	1	
GCF2_START	HNGS Detector 2 GCF Constant	1	
GCSE	Generalized Caliper Selection	CALI	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.0140165	
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	3.77468e-032	
MARQ_START	HNGS Marquardt Start-up Mode	INTERNAL	
PP	Playback Processing	NORMAL	
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	26.5931	CPS
S1NG	HNGS Detector 1 Calibration End-On / Side-On Gain Ratio	0.986034	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S2NA	HNGS Detector 2 Calibration Sodium Count Rate	26.917	CPS
S2NG	HNGS Detector 2 Calibration End-On / Side-On Gain Ratio	0.983854	
SABK	HNGS Statistical Uncertainty in Borehole Potassium Running Average	0.00217055	
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.01071	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.923111	

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 18-Aug-2000 21:06

OP System Version: 9C1-303

MCM

DIT-E	OP91-kp2	HLDT-A	OP91-kp2
DTA-A	OP91-kp2	NPLC-B	OP91-kp2
APS-BA	OP91-kp2	HNGS-BA	OP91-kp2

### Input DLIS Files

DEFAULT DITE .024 FN:13 PRODUCER 05-Aug-2000 17:03 5833.9 M 5550.0 M

### Output DLIS Files

DEFAULT DITE .064 FN:66 PRODUCER 18-Aug-2000 21:06

### Input DLIS Files

DEFAULT DITE .021 FN:8 PRODUCER 05-Aug-2000 14:05 5875.0 M 5777.0 M

### Output DLIS Files

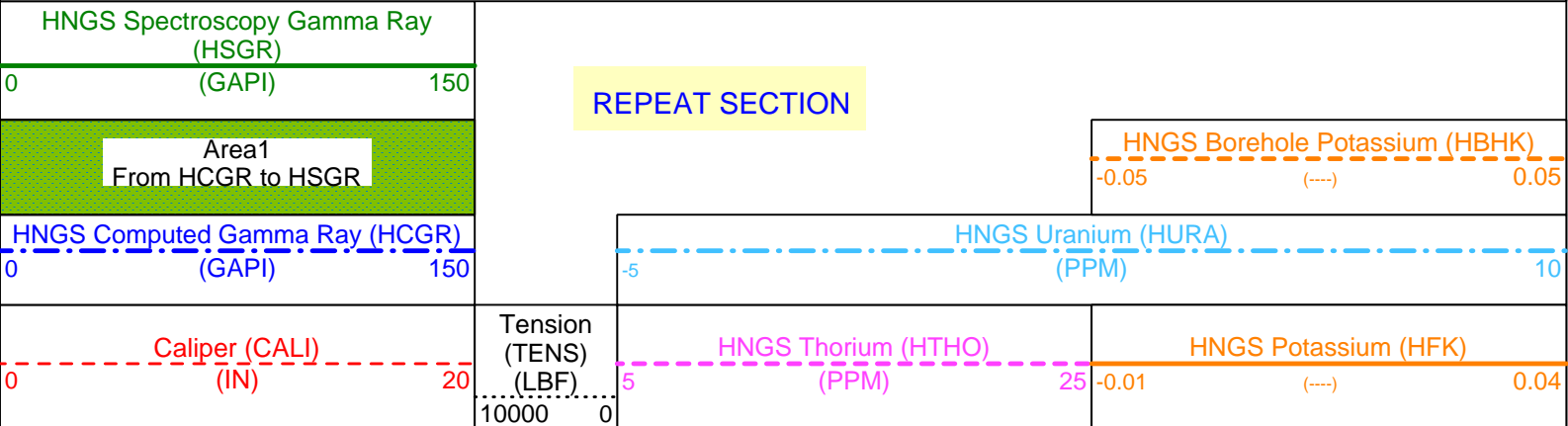
DEFAULT DITE .063 FN:65 PRODUCER 18-Aug-2000 21:01 5875.0 M 5777.0 M

### OP System Version: 9C1-303 MCM

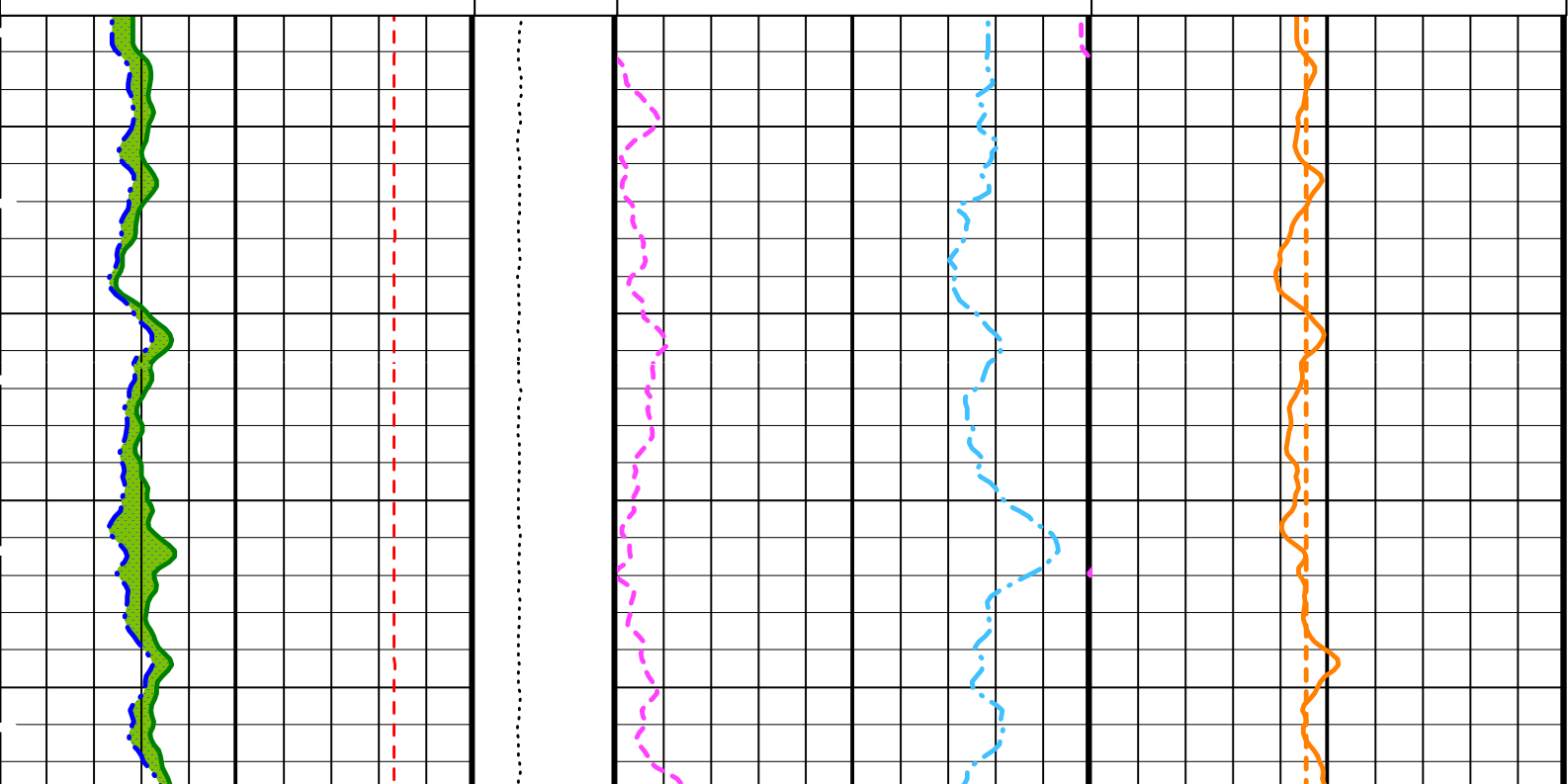
DIT-E	OP91-kp2	HLDT-A	OP91-kp2
DTA-A	OP91-kp2	NPLC-B	OP91-kp2
APS-BA	OP91-kp2	HNGS-BA	OP91-kp2
DTC-H	OP91-kp2		

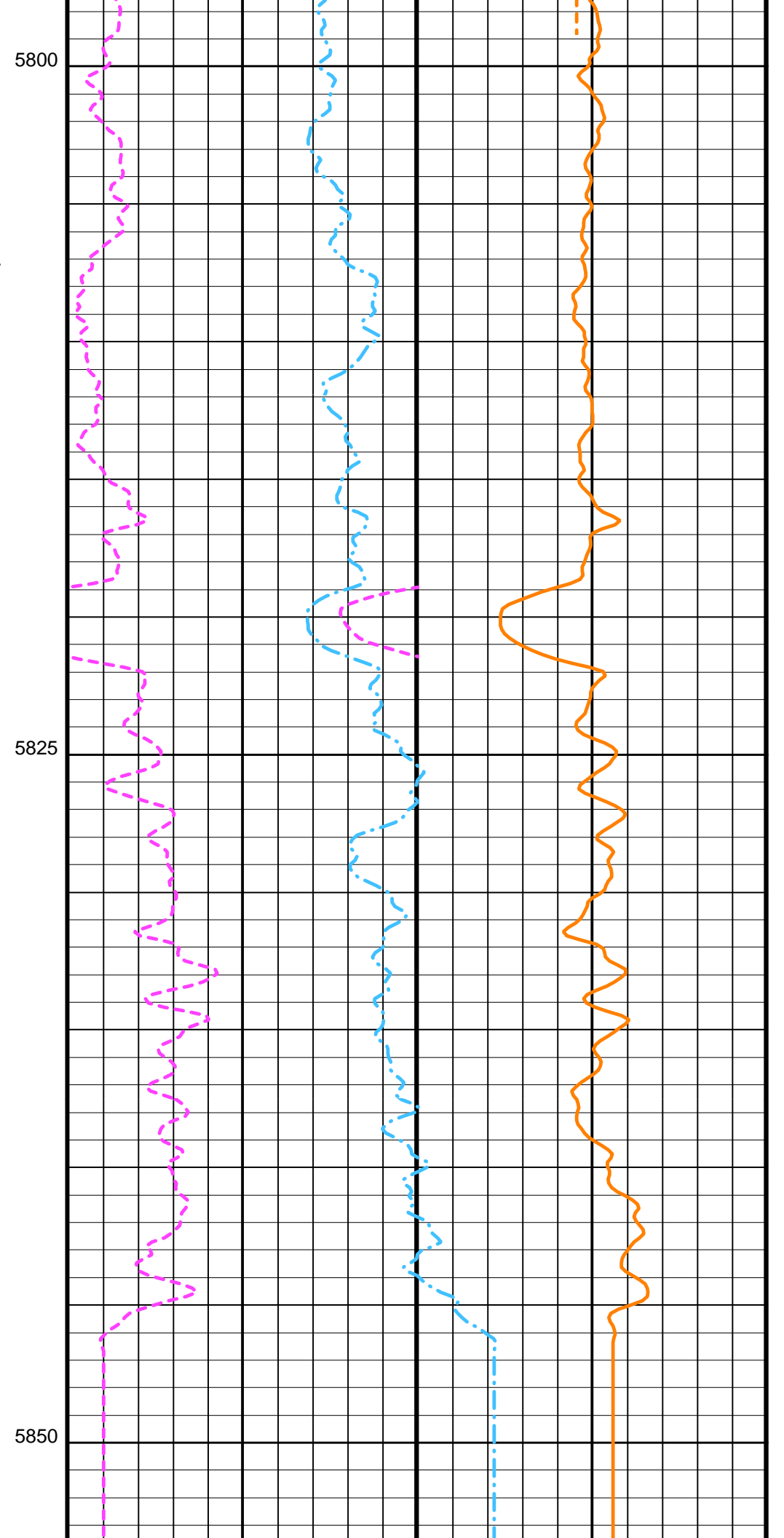
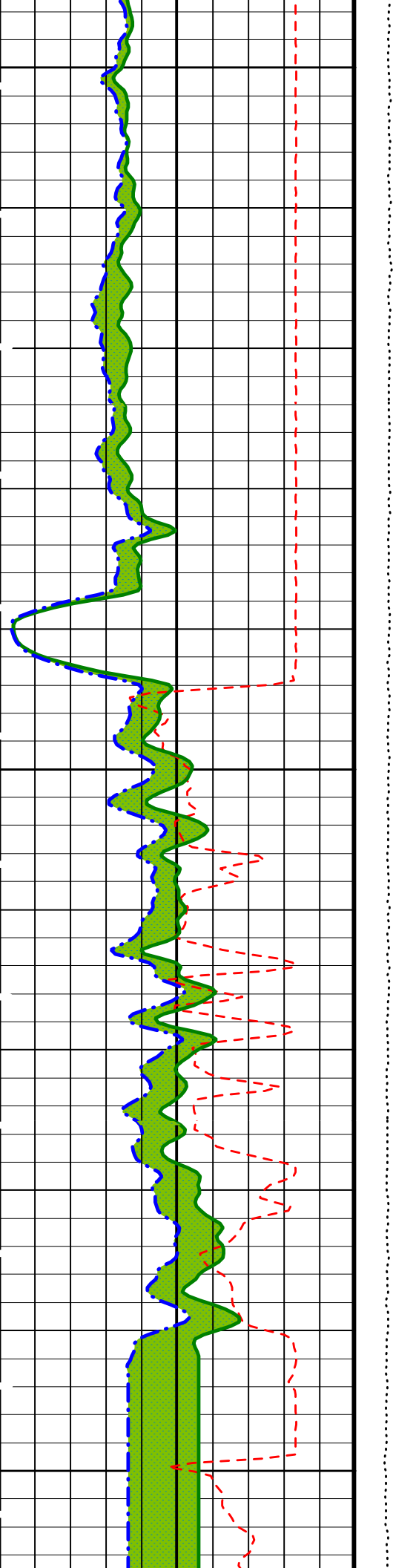
#### PIP SUMMARY

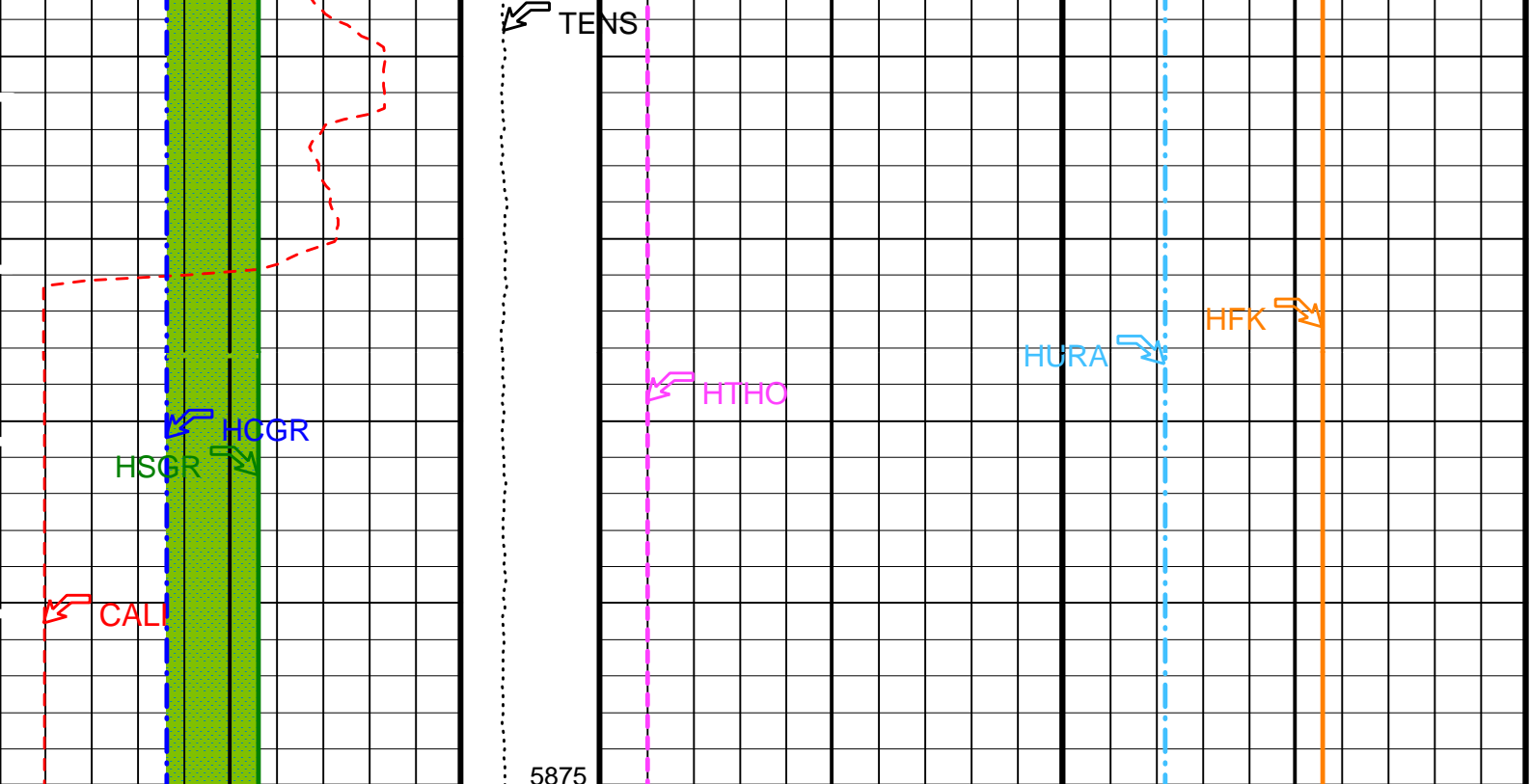
▶ Time Mark Every 60 S



REPEAT SECTION







0	Caliper (CALI) (IN)	20	5875	Tension (TENS) (LBF)	5	HNGS Thorium (HTHO) (PPM)	25	-0.01	HNGS Potassium (HFK) (---)	0.04
0	HNGS Computed Gamma Ray (HCGR) (GAPI)	150	10000	0	-5	HNGS Uranium (HURA) (PPM)	10			
Area1 From HCGR to HSGR			REPEAT SECTION				HNGS Borehole Potassium (HBHK) (---)			
0	HNGS Spectroscopy Gamma Ray (HSGR) (GAPI)	150					-0.05			0.05

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
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	8.20815 %
D1TC	HNGS Detector 1 Calibration Temperature	33.3413 DEGC
D1TL	HNGS Detector 1 Calibration Thorium Peak Location	210.189
D2PR	HNGS Detector 2 Calibration Thorium Peak Resolution	7.0296 %
D2TC	HNGS Detector 2 Calibration Temperature	32.3115 DEGC
D2TL	HNGS Detector 2 Calibration Thorium Peak Location	210.126
DBCC	HNGS Barite Constant Correction Flag	NONE
DFD	Drilling Fluid Density	8.30 G/C3
DO	Depth Offset for Logical Unit 1	0.0 M
GCF1_START	HNGS Detector 1 GCF Constant	1
GCF2_START	HNGS Detector 2 GCF Constant	1
GCSE	Generalized Caliper Selection	CALI
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW

H2P	HNGS Detector 2 Allow/Disallow in Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.0140165	
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	7.7862e-035	
MARQ_START	HNGS Marquardt Start-up Mode	INTERNAL	
PP	Playback Processing	NORMAL	
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	26.5931	CPS
S1NG	HNGS Detector 1 Calibration End-On / Side-On Gain Ratio	0.986034	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S2NA	HNGS Detector 2 Calibration Sodium Count Rate	26.917	CPS
S2NG	HNGS Detector 2 Calibration End-On / Side-On Gain Ratio	0.983854	
SABK	HNGS Statistical Uncertainty in Borehole Potassium Running Average	0.00217055	
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.01071	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.923111	

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 18-Aug-2000 21:01

<b>OP System Version: 9C1-303</b>			
MCM			
DIT-E	OP91-kp2	HLDT-A	OP91-kp2
DTA-A	OP91-kp2	NPLC-B	OP91-kp2
APS-BA	OP91-kp2	HNGS-BA	OP91-kp2
DTC-H	OP91-kp2		

<b>Input DLIS Files</b>					
DEFAULT	DITE .021	FN:8 PRODUCER	05-Aug-2000 14:05	5875.0 M	5777.0 M
<b>Output DLIS Files</b>					
DEFAULT	DITE .063	FN:65 PRODUCER	18-Aug-2000 21:01		

Calibration and Check Summary								
Measurement	Nominal	Master	Before	After	Change	Limit	Units	
Hostile Environment Litho Density - A Wellsite Calibration - Background Measurement								
Master: 1-JUL-2000 6:23 Before: 20-JUL-2000 16:39 After: 5-AUG-2000 22:23								
LSW1 Background	100.0	91.04	91.42	91.07	-0.3508	0.03000	CPS	
LSW2 Background	105.0	95.70	95.75	94.73	-1.017	0.03000	CPS	
LSW3 Background	210.0	182.9	182.9	182.3	-0.6791	0.03000	CPS	
LSW4 Background	290.0	244.7	245.5	246.9	1.405	0.03000	CPS	
LSW5 Background	610.0	548.1	544.9	543.3	-1.574	0.03000	CPS	
SSW1 Background	100.0	88.10	88.76	88.26	-0.4932	0.03000	CPS	
SSW2 Background	200.0	174.3	175.0	172.8	-2.186	0.03000	CPS	
SSW3 Background	530.0	462.1	461.8	458.1	-3.682	0.03000	CPS	
SSW4 Background	280.0	246.3	243.2	241.1	-2.163	0.03000	CPS	
SSW5 Background	205.0	182.3	182.0	181.0	-0.9705	0.03000	CPS	
Hostile Environment Litho Density - A Wellsite Calibration - Tool Quality Control Information High Voltage								
Master: 1-JUL-2000 6:23 Before: 20-JUL-2000 16:39 After: 5-AUG-2000 22:23								
LS Bkg. High Voltage	1129	1129	1130	1131	0.7391	N/A	V	
SS Bkg. High Voltage	1184	1184	1180	1172	-8.083	N/A	V	
Hostile Environment Litho Density - A Wellsite Calibration - Detectors Resolution From BKG Measurements								
Master: 1-JUL-2000 6:23 Before: 20-JUL-2000 16:39 After: 5-AUG-2000 22:23								
LS Background Resolution	1.000	1.041	1.040	1.038	-0.002053	N/A		
SS Background Resolution	1.000	0.9466	0.9420	0.9463	0.004300	N/A		
Hostile Environment Litho Density - A Wellsite Calibration - Caliper Calibration								
Before: 20-JUL-2000 16:23								
Caliper Small Ring	8.000	N/A	13.68	N/A	N/A	N/A	IN	
Caliper Large Ring	12.00	N/A	18.44	N/A	N/A	N/A	IN	

## Accelerator-Porosity Tool Wellsite Calibration - Detector Background

Master: 26-JUN-2000 5:55 Before: 5-AUG-2000 11:38 After: 5-AUG-2000 21:12

Near Det Bkg Cntrate	30.00	32.37	31.53	32.68	1.149	N/A	CPS
Far Det Bkg Cntrate	30.00	32.14	33.48	34.45	0.9748	N/A	CPS
Array-1 Det Bkg Cntrate	30.00	30.09	28.73	30.26	1.525	N/A	CPS
Array-2 Det Bkg Cntrate	30.00	29.18	30.43	30.02	-0.4088	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	32.29	31.35	33.60	2.253	N/A	CPS

## Accelerator-Porosity Tool Wellsite Calibration - Calibration Ratios

Master: 26-JUN-2000 5:55

Near/Far Calibration Ratio	0.9250	0.8939	N/A	N/A	N/A	N/A
Near/Array Calibration Ratio	1.030	1.061	N/A	N/A	N/A	N/A

## Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 1 Check

Master: 25-JUN-2000 7:04 Before: 20-JUL-2000 17:42 After: 5-AUG-2000 22:25

Na 511 Peak Loc	40.00	40.55	40.63	40.61	-0.01223	1.000	
Na 511 Peak Res	15.50	16.38	16.72	16.52	-0.2041	2.000	%
High Voltage	1150	1100	1105	1108	2.834	30.00	V
Na 1785 Peak Loc	142.6	145.7	146.3	145.7	-0.5973	7.000	
Na 1785 Peak Res	8.500	8.530	10.06	8.809	-1.253	2.000	%
Temperature	15.50	33.34	35.19	24.72	-10.48	N/A	DEGC
Na Count Rate	45.00	26.59	25.43	24.87	-0.5634	8.000	CPS

## Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 2 Check

Master: 25-JUN-2000 7:04 Before: 20-JUL-2000 17:42 After: 5-AUG-2000 22:25

Na 511 Peak Loc	40.00	40.64	40.70	40.67	-0.03427	1.000	
Na 511 Peak Res	15.50	15.20	14.66	14.85	0.1898	2.000	%
High Voltage	1150	1189	1195	1196	1.005	30.00	V
Na 1785 Peak Loc	142.6	144.5	145.1	145.2	0.08011	7.000	
Na 1785 Peak Res	8.500	9.442	7.631	7.413	-0.2176	2.000	%
Temperature	15.50	32.31	33.88	24.40	-9.483	N/A	DEGC
Na Count Rate	45.00	26.92	25.69	25.04	-0.6506	8.000	CPS

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

Master: 25-JUN-2000 7:04 Before: 20-JUL-2000 17:42 After: 5-AUG-2000 22:25

Coincidence Count Rate Ratio	1.000	0.9864	0.9894	0.9936	0.004173	0.05000
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## Hostile Natural Gamma Ray Sonde Master Calibration - Detector 1 Calibration

Master: 25-JUN-2000 6:57

Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	210.2	--	--	--	--	
Th Peak Res	7.000	8.208	--	--	--	--	%
Background Count Rate	142.5	17.57	--	--	--	--	CPS
Gain Ratio	1.000	0.9860	--	--	--	--	

## Hostile Natural Gamma Ray Sonde Master Calibration - Detector 2 Calibration

Master: 25-JUN-2000 6:57

Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	210.1	--	--	--	--	
Th Peak Res	7.000	7.030	--	--	--	--	%
Background Count Rate	142.5	18.88	--	--	--	--	CPS
Gain Ratio	1.000	0.9839	--	--	--	--	

## Accelerator-Porosity Tool - Detector Plateau Settings :

Near Detector Plateau Setting 1747 V  
Far Detector Plateau Setting 2073 V  
Array Detector Plateau Setting 1965 V

## 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

## Hostile Environment Litho Density - A / Equipment Identification

## Primary Equipment:

HOSTILE ENVIRONMENT LITHO DENSITY HIGH V HLDV - A 10  
HOSTILE ENVIRONMENT LITHO DENSITY CARTRIDGE HLDV - AA 11

HOSTILE ENVIRONMENT LITHO DENSITY CARTRIDGE  
Gamma Source Radioactive

HLDC - AA 11  
GSR - Z 1846

Auxiliary Equipment:

HOSTILE ENVIRONMENT LITHO DENSITY SONDE  
HOSTILE ENVIRONMENT ELECTRONICS CARTRIDGE  
HOSTILE ENVIRONMENT ELECTRONICS CARTRIDGE  
HOSTILE ENVIRONMENT LITHO DENSITY PAD

HLDS - B 10  
HEH - H 12  
HEH - G 11  
HLDP - B 10

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

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		40.55	Master		16.38	Master		1100
Before		40.63	Before		16.72	Before		1105
After		40.61	After		16.52	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		145.7	Master		8.530	Master		33.34
Before		146.3	Before		10.06	Before		35.19
After		145.7	After		8.809	After		24.72
	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		26.59						
Before		25.43						
After		24.87						
	15.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							
Master: 25-JUN-2000 7:04			Before: 20-JUL-2000 17:42			After: 5-AUG-2000 22:25		

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
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Master		40.64	Master		15.20	Master		1189		
Before		40.70	Before		14.66	Before		1195		
After		40.67	After		14.85	After		1196		
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		144.5	Master		9.442	Master		32.31		
Before		145.1	Before		7.631	Before		33.88		
After		145.2	After		7.413	After		24.40		
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		26.92								
Before		25.69								
After		25.04								
15.00 (Minimum)		45.00 (Nominal)	100.0 (Maximum)							
Master: 25-JUN-2000 7:04			Before: 20-JUL-2000 17:42			After: 5-AUG-2000 22:25				

Hostile Natural Gamma Ray Sonde Wellsite Calibration			
Ratio Of Detector 1 To Detector 2			
Phase	Coincidence Count Rate Ratio	Value	
Master		0.9864	
Before		0.9894	
After		0.9936	
0.9500 (Minimum)		1.000 (Nominal)	1.050 (Maximum)
Master: 25-JUN-2000 7:04			
Before: 20-JUL-2000 17:42			
After: 5-AUG-2000 22:25			

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		
Master		41.00	Master		210.2	Master		8.208		
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	See Remarks				
Master	<b>EXCEEDS LIMIT</b>	17.57	Master		0.9860					
20.00 (Minimum)		142.5 (Nominal)	265.0 (Maximum)	0.9400 (Minimum)					1.000 (Nominal)	1.060 (Maximum)
Master: 25-JUN-2000 6:57										

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		210.1	Master		7.030		
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	See Remarks				
Master	<b>EXCEEDS LIMIT</b>	18.88	Master		0.9839					
20.00 (Minimum)		142.5 (Nominal)	265.0 (Maximum)	0.9400 (Minimum)					1.000 (Nominal)	1.060 (Maximum)
Master: 25-JUN-2000 6:57										

<b>COMPANY:</b> Lamont Doherty  <b>WELL:</b> ODP Leg 191, Site 1179D (WP-2A) <b>FIELD:</b> West Pacific ION <b>COUNTY:</b> Offshore <b>STATE:</b> Pacific Ocean	BOTTOM LOG INTERVAL	5842 m
	SCHLUMBERGER DEPTH	5873 m
	DEPTH DRILLER	6052 m
	KELLY BUSHING	11.3 m
	DRILL FLOOR	11 m
	GROUND LEVEL	-5566 m

**Schlumberger**

Hostile  
Natural Gamma Ray