

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 OS2: DITE OS3: OS4: OS5:	OTHER SERVICES2 OS1: OS2: OS3: OS4: OS5:
--	---

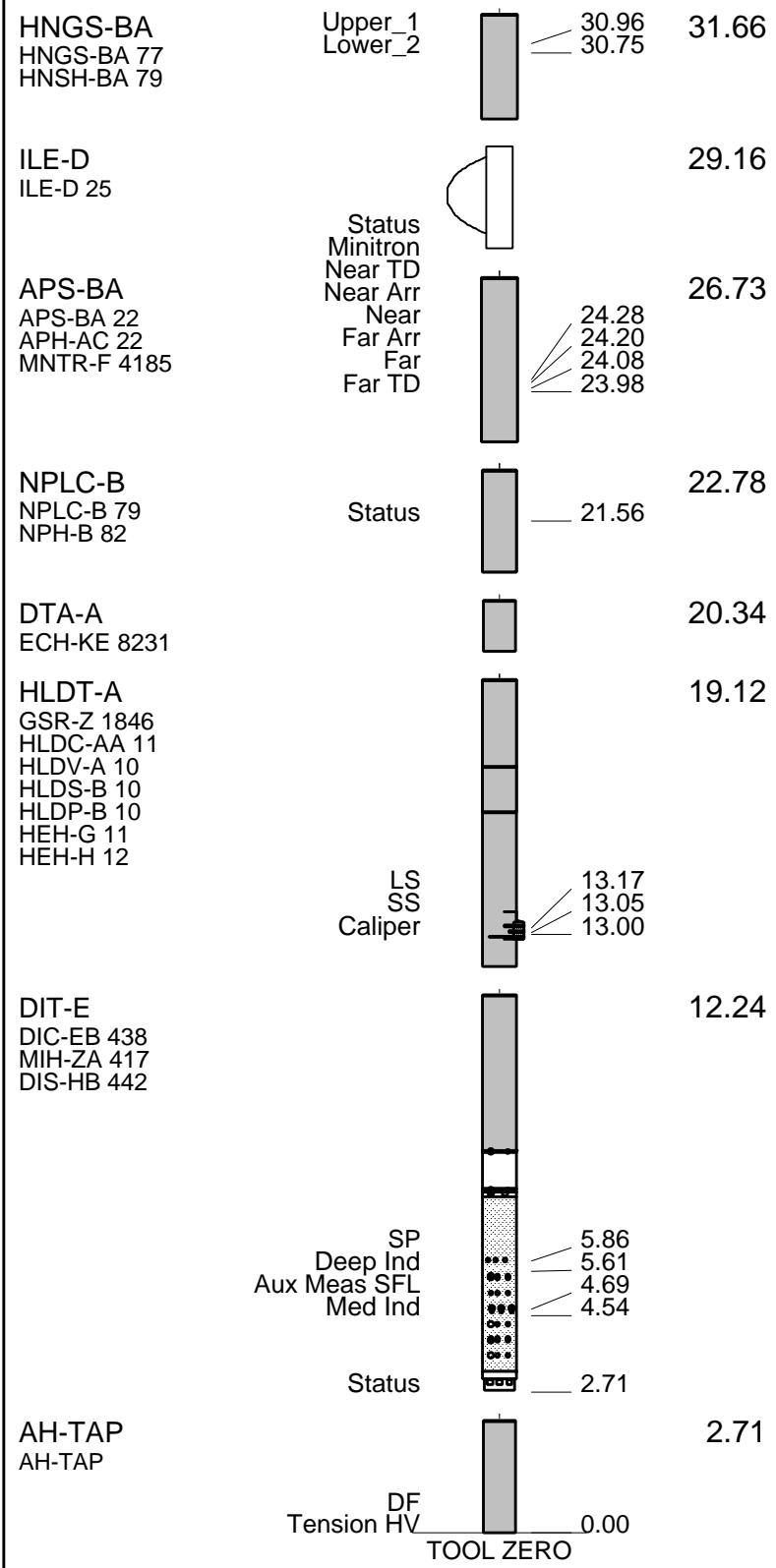
REMARKS: RUN NUMBER 1 Hole cored with APC, XCB, BCS. Log presented in meters below rig floor. Lamont Temperature tool (TAP) was run on Triple Combo. Wireline Heave Compensator (WHC) was used on all descents. Sepiolite mud was used to displace the hole during the wiper trip after drillin Drillers TD 4091 mbrf, Driller pipe depth: 3852 mbrf, Sea Floor: 3772 mbrf. Schlumberger TD 4092 mbrf. Drill Pipe Schlumberger 3852 mbrf. Sea Floor Schlumberger 3772 mbrf.	REMARKS: RUN NUMBER 2
Software bug shows APS calibration not done for part of calibration. Low background countrate on HNGS master calibration signifies a weak internal source used for check of detector and not used in calibration.	

RUN 1			RUN 2		
SERVICE ORDER #:	PROGRAM VERSION: 10C0-306		SERVICE ORDER #:	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 GSR-U/Y WITM (DTS)-A			

DOWNHOLE EQUIPMENT			
LEH-QT			35.14
LEH-QT 1726			
DTC-H	CTEM		33.98
ECH-KC 9343	TelStatus ToolStatu		34.25
SGT-N	Gamma Ray		33.34
SGH-K 2448			
SCC TR 0582			



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

Output DLIS Files

DEFAULT	PI_LDL_APS_NGS_016LUP	FN:15	PRODUCER	11-Feb-2002 05:19	4091.9 M	3751.3 M
REDUCE	PI_LDL_APS_NGS_016LUP	FN:16	PRODUCER	11-Feb-2002 05:19	4091.9 M	3749.3 M

OP System Version: 10C0-306

MCM

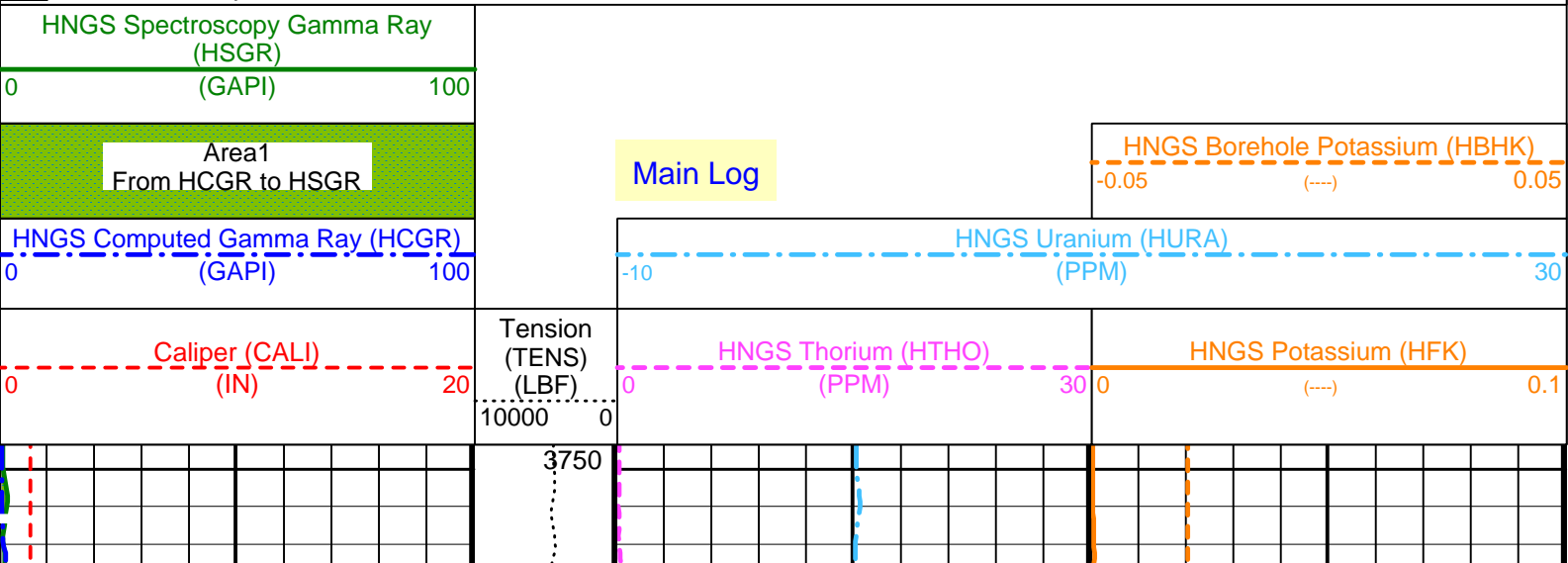
DIT-E	10C0-306	HLDT-A	10C0-306
DTA-A	10C0-306	NPLC-B	10C0-306
APS-BA	10C0-306	HNGS-BA	10C0-306
SGT-N	10C0-306	DTC-H	10C0-306

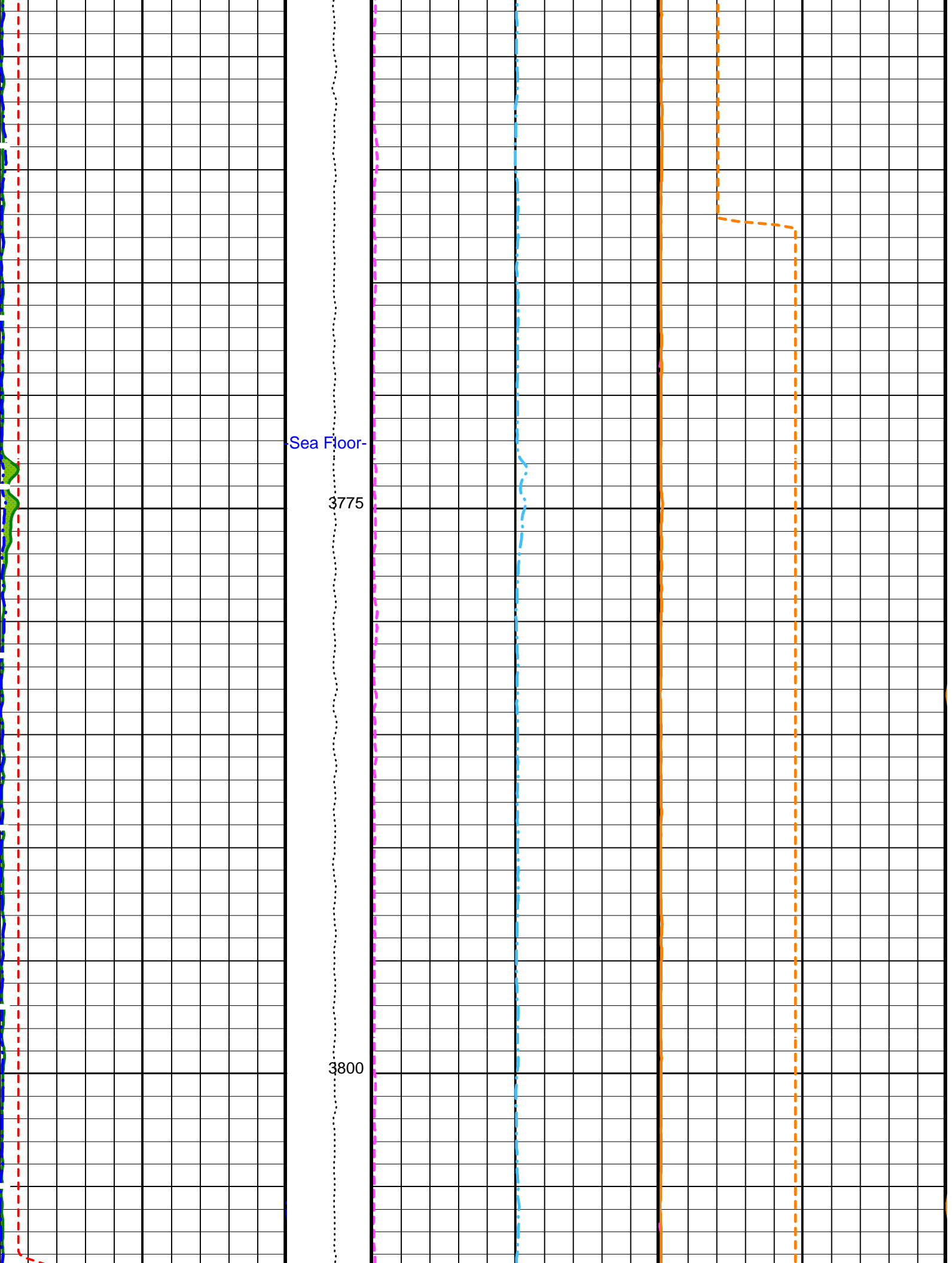
Changed Parameter Summary

DLIS Name	New Value	Previous Value	Depth & Time
GCSE	CALI	BS	4089.1 05:22:33

PIP SUMMARY

Time Mark Every 60 S

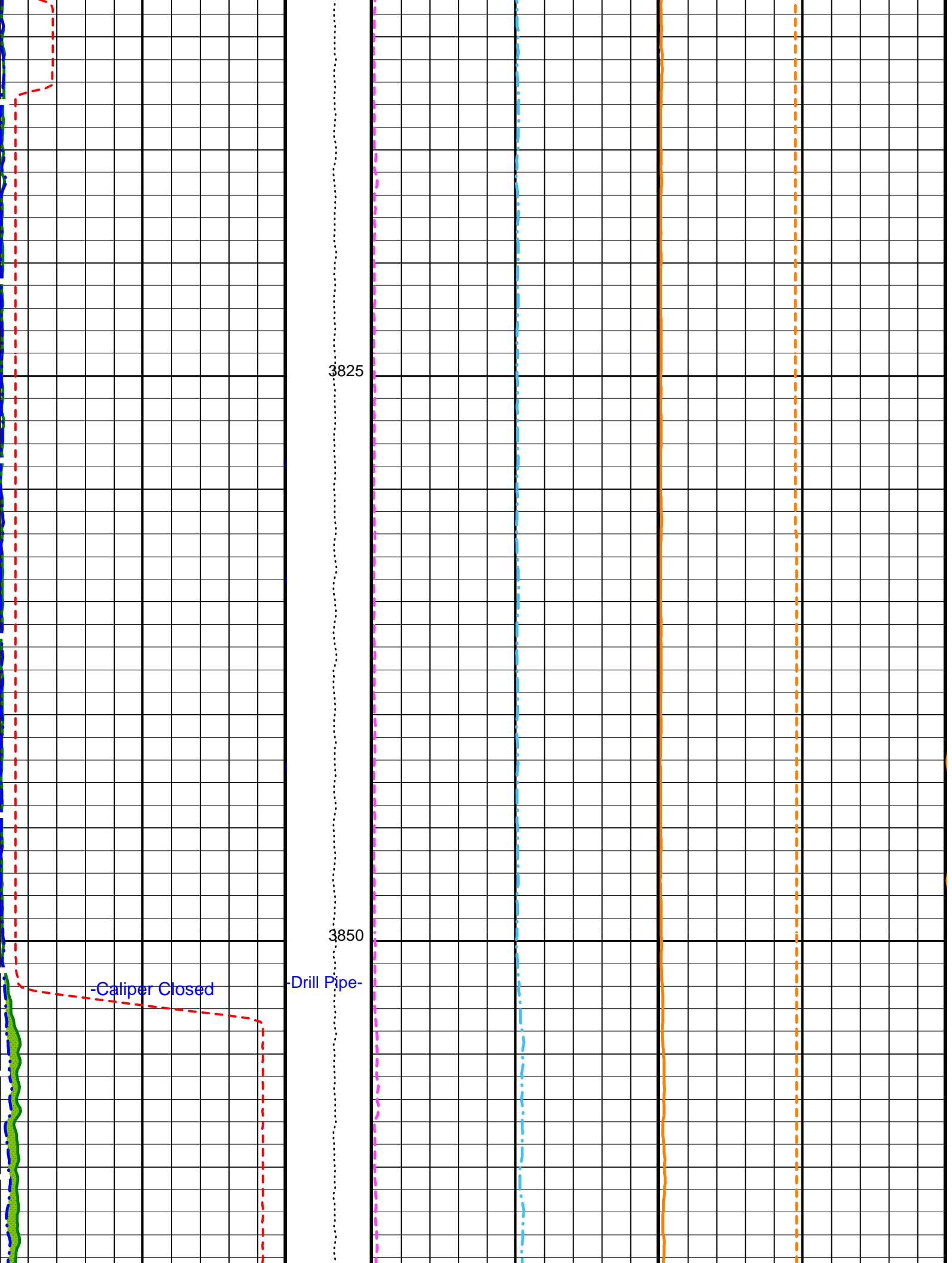


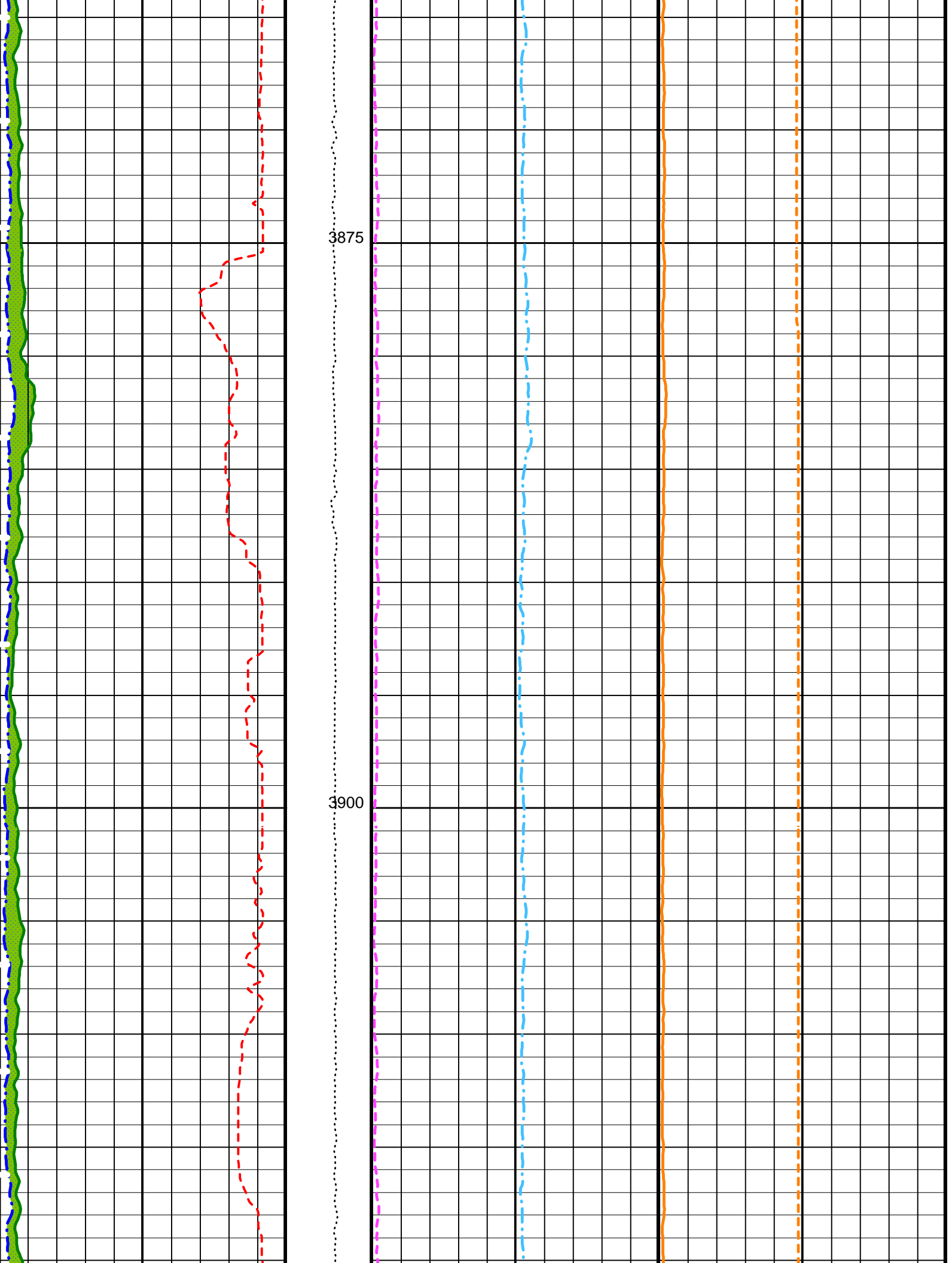


Sea Floor-

3775

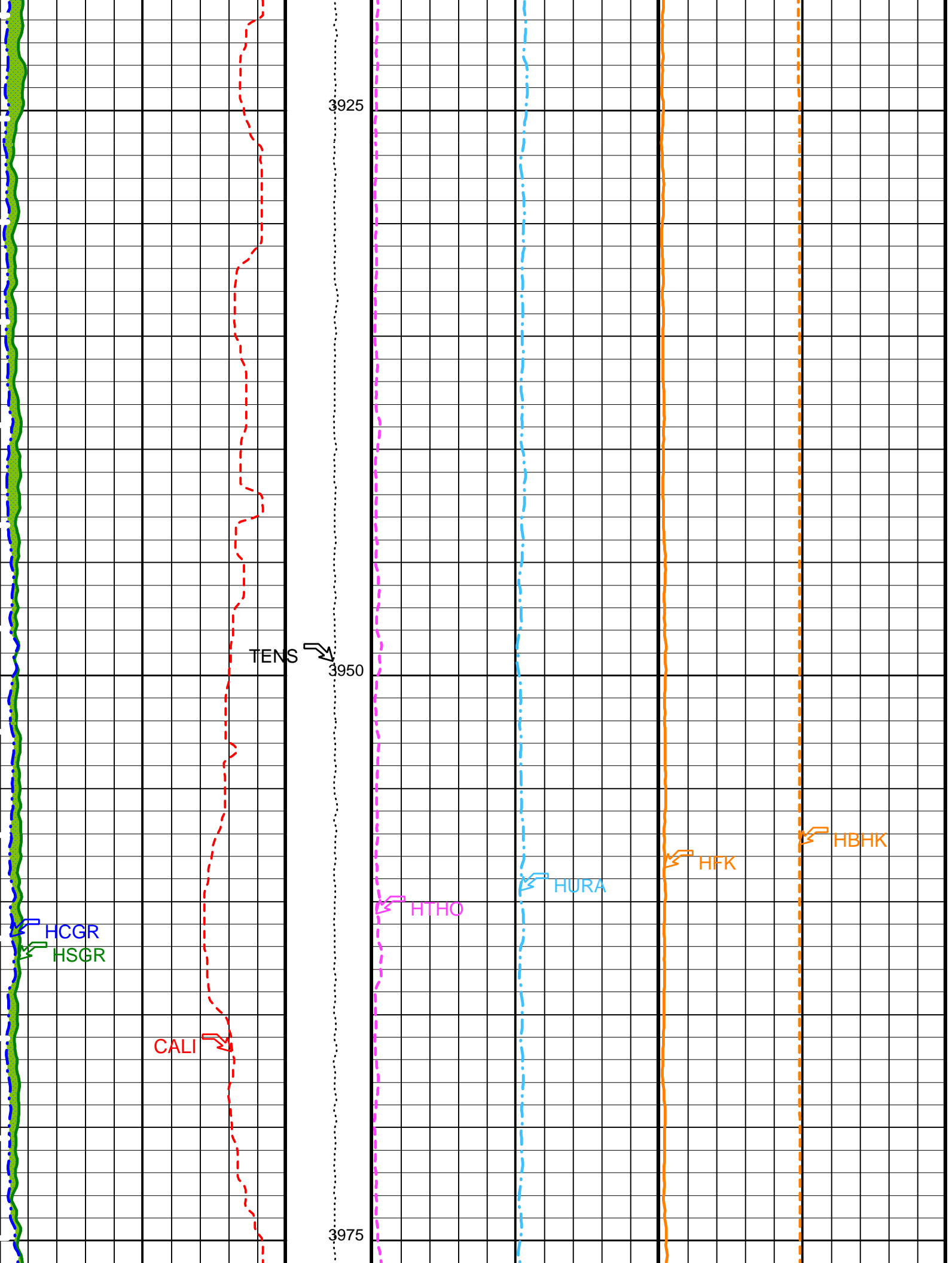
3800

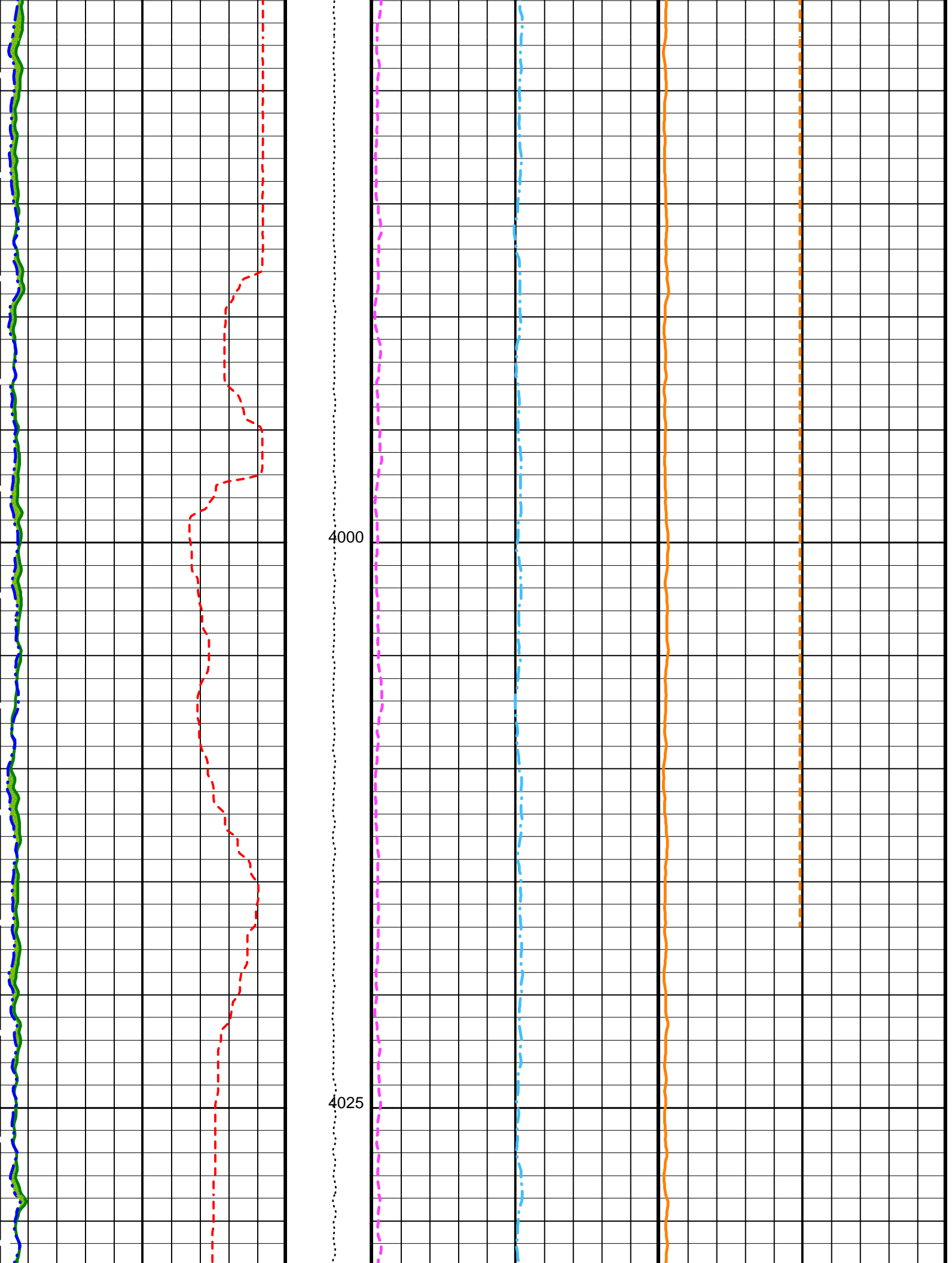


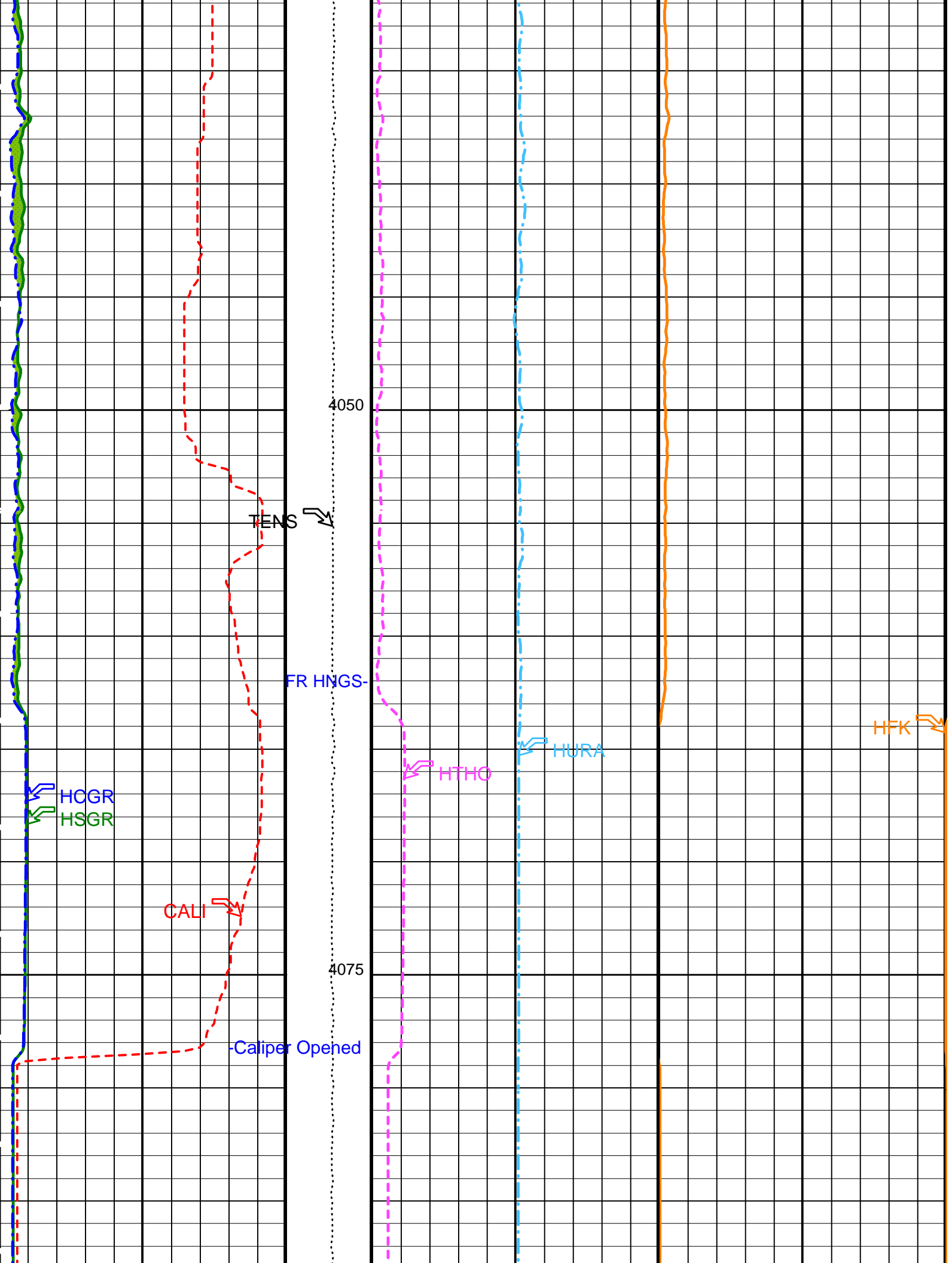


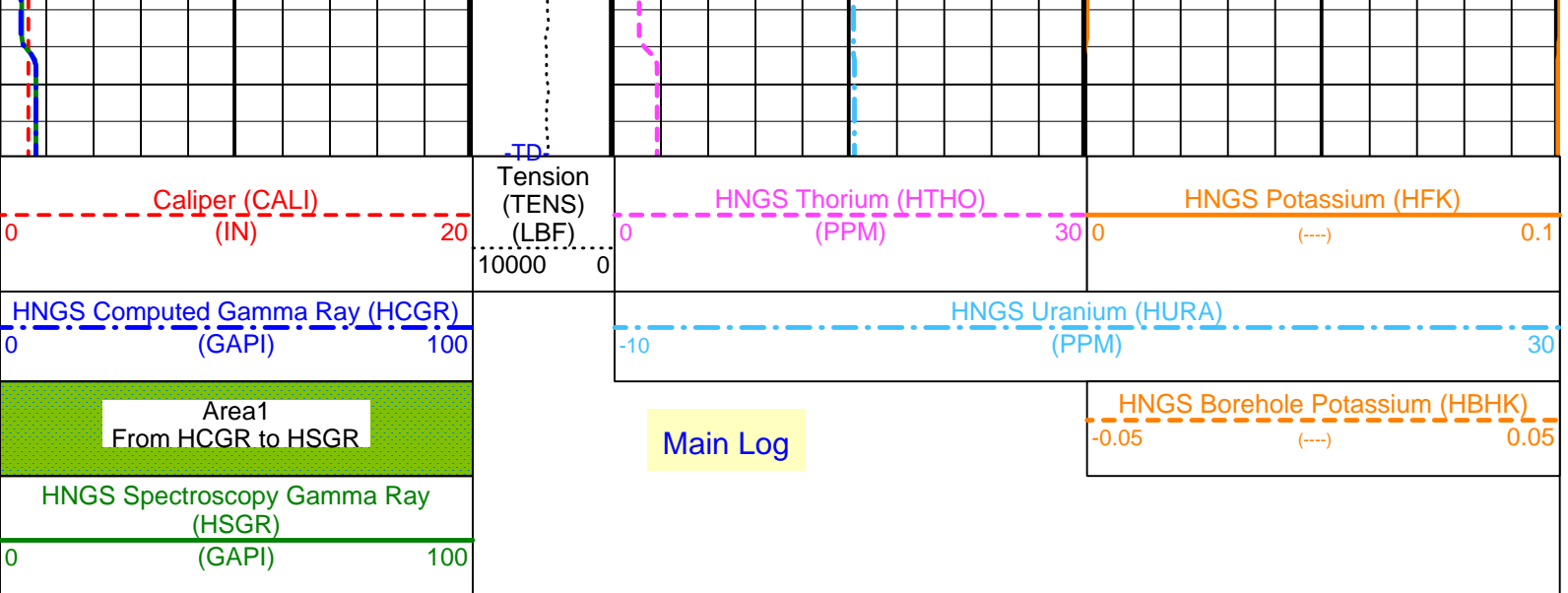
3875

3900









PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
DIT-E: Dual Induction - E			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
APS-BA: Accelerator-Porosity Tool			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
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	BS	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.001858	
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	1.01514	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.08847	
SGT-N: Scintillation Gamma-Ray - N			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
System and Miscellaneous			
BS	Bit Size	11.438	IN
DFD	Drilling Fluid Density	1.07	G/C3

Format: HNGSYields

Vertical Scale: 1:200

Graphics File Created: 11-Feb-2002 05:19

OP System Version: 10C0-306

MCM

DIT-E	10C0-306	HLDT-A	10C0-306
DTA-A	10C0-306	NPLC-B	10C0-306
APS-BA	10C0-306	HNGS-BA	10C0-306
SGT-N	10C0-306	DTC-H	10C0-306

Output DLIS Files

DEFAULT PIP.DL APS NGS 016.LUP EN:15 PRODUCER 11-Feb-2002 05:19

Output DLIS Files

DEFAULT	PI_LDL_APS_NGS_017LUP	FN:17	PRODUCER	11-Feb-2002 06:40	4094.2 M	3929.6 M
REDUCE	PI_LDL_APS_NGS_017LUP	FN:18	PRODUCER	11-Feb-2002 06:40	4094.2 M	3927.7 M

OP System Version: 10C0-306

MCM

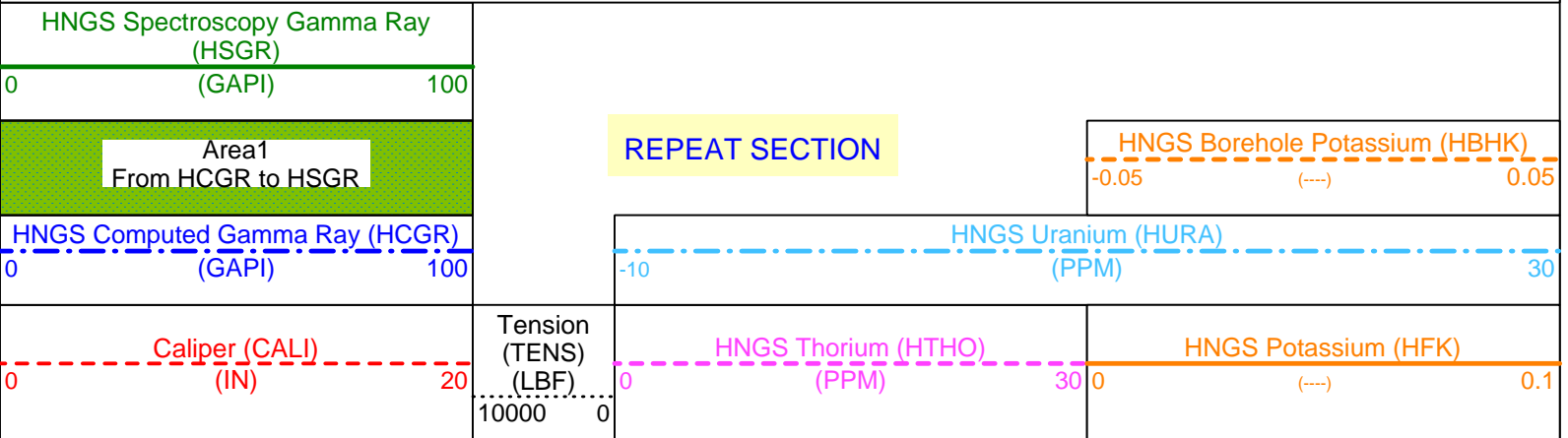
DIT-E	10C0-306	HLDT-A	10C0-306
DTA-A	10C0-306	NPLC-B	10C0-306
APS-BA	10C0-306	HNGS-BA	10C0-306
SGT-N	10C0-306	DTC-H	10C0-306

Changed Parameter Summary

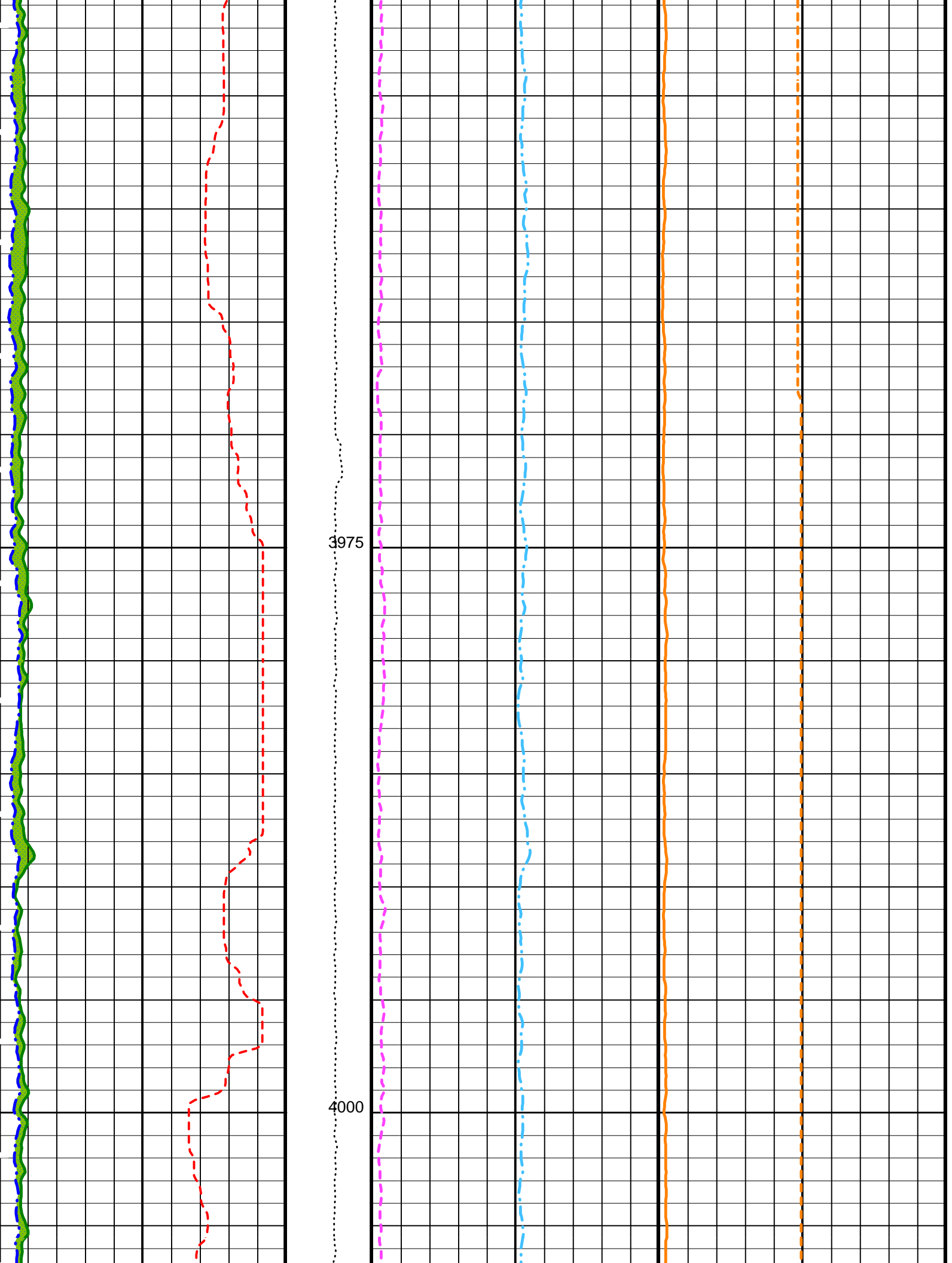
DLIS Name	New Value	Previous Value	Depth & Time
GCSE	BS CALI	CALI BS	3916.3 06:41:24 4089.5 06:51:49

PIP SUMMARY

Time Mark Every 60 S

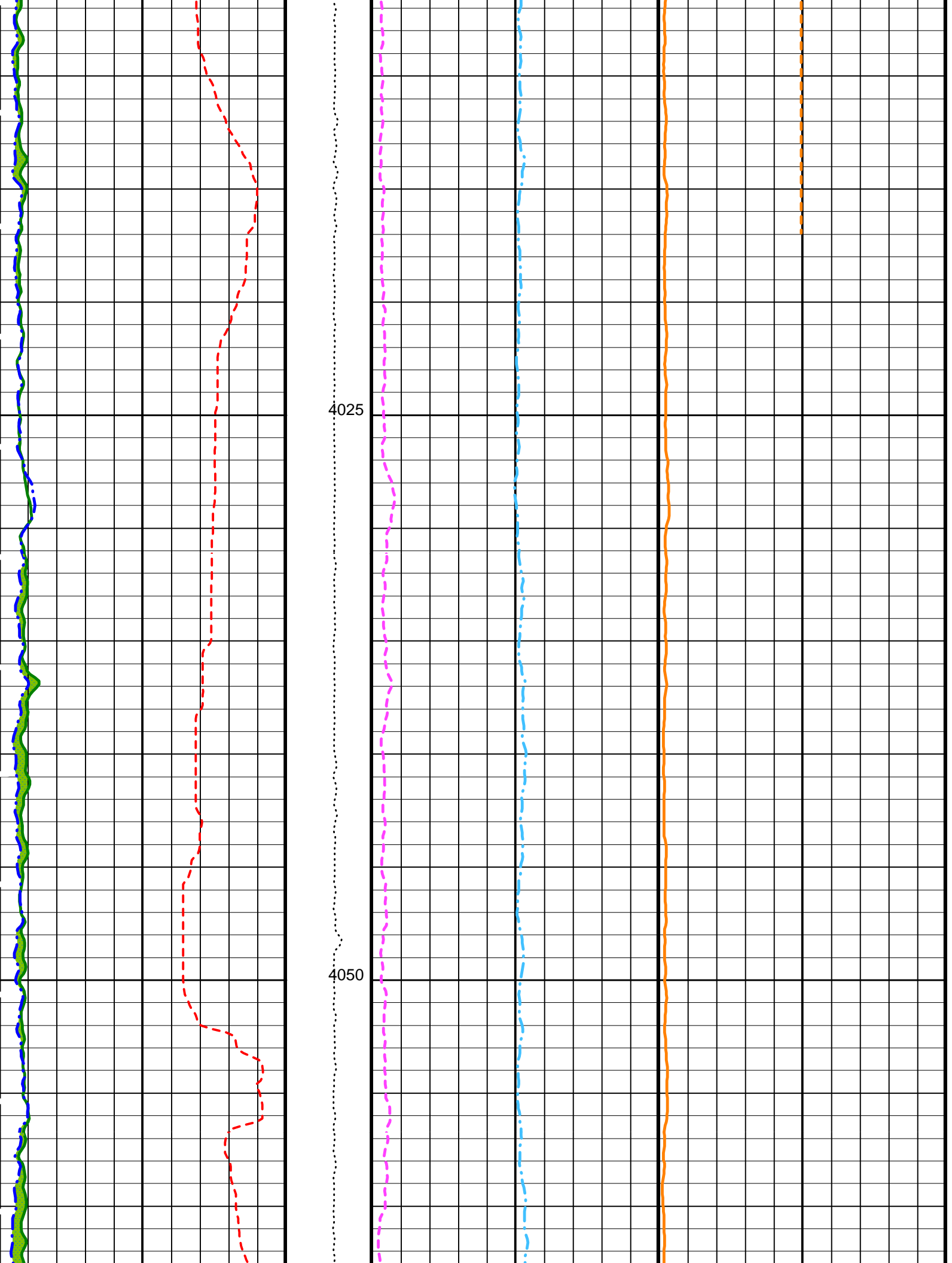


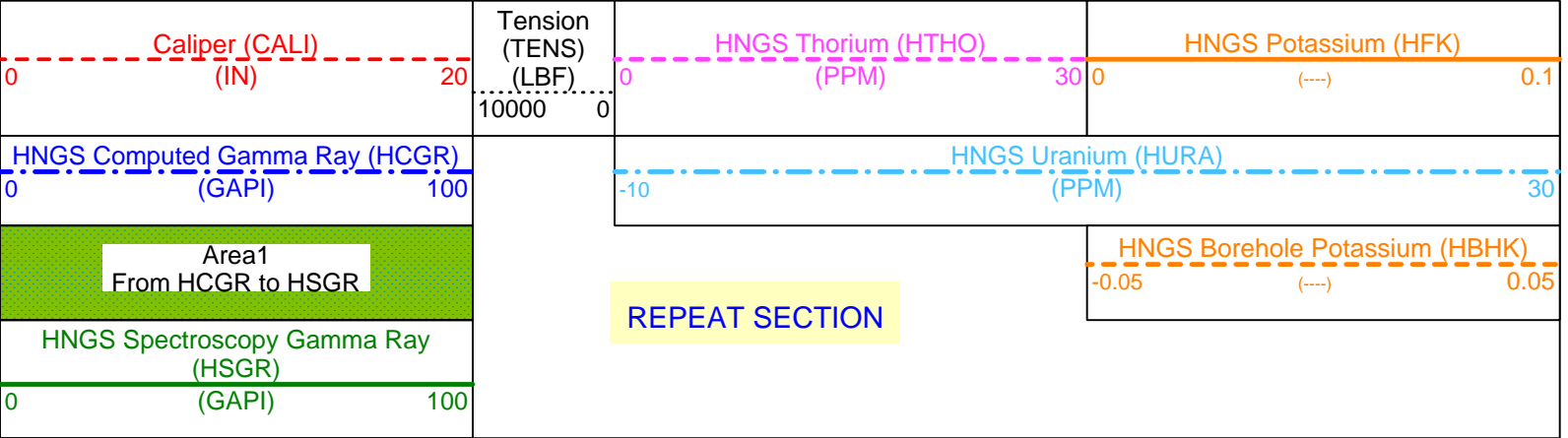
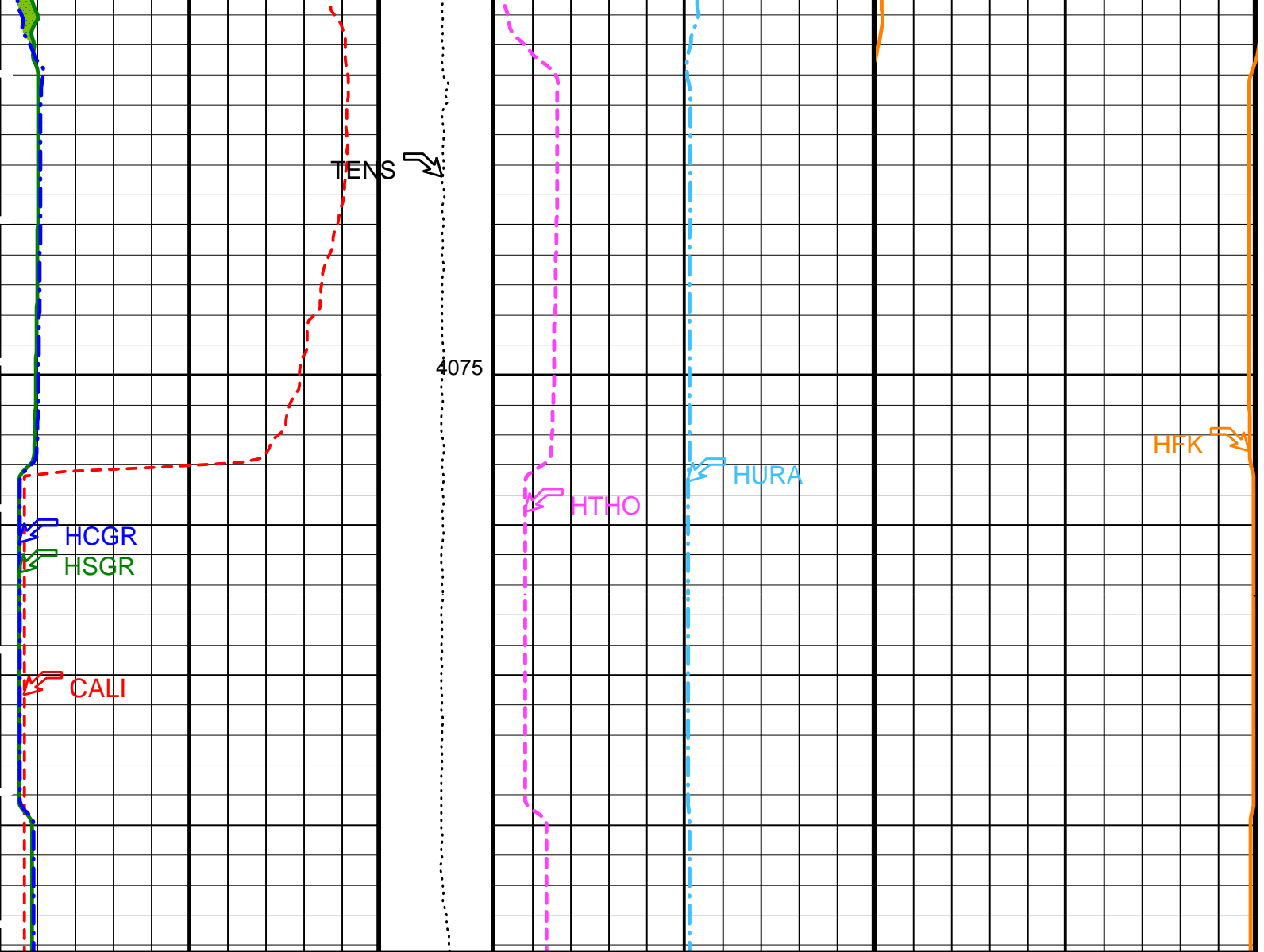
3950



3975

4000





PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
DIT-E: Dual Induction - E		
BHS	Borehole Status	OPEN
GCSE	Generalized Caliper Selection	CALI
APS-BA: Accelerator-Porosity Tool		
BHS	Borehole Status	OPEN
GCSE	Generalized Caliper Selection	CALI
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	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	-0.00675083	
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	0.998744	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.16884	
SGT-N: Scintillation Gamma-Ray - N			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	CALI	
System and Miscellaneous			
BS	Bit Size	11.438	IN
DFD	Drilling Fluid Density	1.07	G/C3

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 11-Feb-2002 06:40

OP System Version: 10C0-306

MCM

DIT-E	10C0-306	HLDT-A	10C0-306
DTA-A	10C0-306	NPLC-B	10C0-306
APS-BA	10C0-306	HNGS-BA	10C0-306
SGT-N	10C0-306	DTC-H	10C0-306

Output DLIS Files

DEFAULT	PI_LDL_APS_NGS_017LUP	FN:17	PRODUCER	11-Feb-2002 06:40
REDUCE	PI_LDL_APS_NGS_017LUP	FN:18	PRODUCER	11-Feb-2002 06:40

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Hostile Environment Litho Density - A Wellsite Calibration - Background Measurement							
Master: 25-Jan-2002 14:22 Before: 7-Feb-2002 0:58 After: 11-Feb-2002 9:52							
LSW1 Background	100.0	89.06	87.47	89.64	2.167	0.03000	CPS
LSW2 Background	105.0	93.23	91.17	92.99	1.817	0.03000	CPS
LSW3 Background	210.0	180.0	176.6	182.0	5.359	0.03000	CPS
LSW4 Background	290.0	237.9	239.0	237.2	-1.791	0.03000	CPS
LSW5 Background	610.0	529.6	526.4	521.4	-4.967	0.03000	CPS
SSW1 Background	100.0	85.18	85.40	85.92	0.5192	0.03000	CPS
SSW2 Background	200.0	166.8	166.6	167.4	0.8174	0.03000	CPS
SSW3 Background	530.0	446.5	442.1	446.0	3.897	0.03000	CPS
SSW4 Background	280.0	235.8	234.6	234.8	0.2077	0.03000	CPS
SSW5 Background	205.0	176.3	175.3	174.5	-0.8091	0.03000	CPS
Hostile Environment Litho Density - A Wellsite Calibration - Tool Quality Control Information High Voltage							
Master: 25-Jan-2002 14:22 Before: 7-Feb-2002 0:58 After: 11-Feb-2002 9:52							
LS Bkg. High Voltage	1129	1129	1134	1132	-2.350	N/A	V
SS Bkg. High Voltage	1173	1173	1179	1177	-1.431	N/A	V
Hostile Environment Litho Density - A Wellsite Calibration - Detectors Resolution From BKG Measurements							
Master: 25-Jan-2002 14:22 Before: 7-Feb-2002 0:58 After: 11-Feb-2002 9:52							
LS Background Resolution	1.000	1.042	1.040	0.9556	-0.08410	N/A	
SS Background Resolution	1.000	0.9530	0.9559	0.9384	-0.01746	N/A	
Hostile Environment Litho Density - A Wellsite Calibration - Caliper Calibration							
Before: 7-Feb-2002 1:47							
Caliper Small Ring	12.00	N/A	16.99	N/A	N/A	N/A	IN
Caliper Large Ring	18.25	N/A	23.87	N/A	N/A	N/A	IN

Accelerator-Porosity Tool Wellsite Calibration - Detector Background

Master: 25-Jan-2002 18:34 Before: 11-Feb-2002 3:57 After: 11-Feb-2002 7:56

Near Det Bkg Cntrate	30.00	32.90	31.70	33.22	1.518	N/A	CPS
Far Det Bkg Cntrate	30.00	34.46	33.01	33.68	0.6677	N/A	CPS
Array-1 Det Bkg Cntrate	30.00	28.56	29.66	30.21	0.5505	N/A	CPS
Array-2 Det Bkg Cntrate	30.00	30.78	29.65	29.56	-0.08341	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	32.89	28.53	30.92	2.393	N/A	CPS

Accelerator-Porosity Tool Wellsite Calibration - Calibration Ratios

Master: 25-Jan-2002 18:35

Near/Far Calibration Ratio	0.9250	0.9022	N/A	N/A	N/A	N/A
Near/Array Calibration Ratio	1.030	1.063	N/A	N/A	N/A	N/A
Near/Array Cal Ratio Up/Down	1.000	1.007	N/A	N/A	N/A	N/A

Accelerator-Porosity Tool Wellsite Calibration - Tank Check

Master: Calibration not done

Array-1 Standoff Porosity	11.10	11.94	N/A	N/A	N/A	N/A	PU
Array-2 Standoff Porosity	11.10	11.71	N/A	N/A	N/A	N/A	PU
Average Slowing Down Time	6.000	N/A	N/A	N/A	N/A	N/A	US
Array-1 SDT Ratio Up/Down	1.000	N/A	N/A	N/A	N/A	N/A	
Array-1 SDT Ratio Up/Down	1.000	N/A	N/A	N/A	N/A	N/A	
Sigma Formation	27.50	27.64	N/A	N/A	N/A	N/A	CU

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 1 Check

Master: 23-Jan-2002 11:37 Before: 7-Feb-2002 1:13 After: 11-Feb-2002 9:48

Na 511 Peak Loc	40.00	40.51	40.71	40.59	-0.1251	1.000	
Na 511 Peak Res	15.50	15.75	17.24	16.93	-0.3119	2.000	%
High Voltage	1150	1203	1207	1209	2.906	30.00	V
Na 1785 Peak Loc	142.6	144.6	146.2	145.6	-0.6078	7.000	
Na 1785 Peak Res	8.500	9.254	9.073	8.861	-0.2121	2.000	%
Temperature	15.50	21.86	29.34	28.89	-0.4552	N/A	DEGC
Na Count Rate	45.00	39.29	40.56	40.16	-0.3936	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 2 Check

Master: 23-Jan-2002 11:37 Before: 7-Feb-2002 1:13 After: 11-Feb-2002 9:48

Na 511 Peak Loc	40.00	40.54	40.54	40.61	0.07089	1.000	
Na 511 Peak Res	15.50	16.19	16.67	16.58	-0.08610	2.000	%
High Voltage	1150	1233	1236	1240	4.142	30.00	V
Na 1785 Peak Loc	142.6	143.9	144.1	144.6	0.4818	7.000	
Na 1785 Peak Res	8.500	9.453	8.968	9.434	0.4660	2.000	%
Temperature	15.50	21.24	29.04	29.55	0.5074	N/A	DEGC
Na Count Rate	45.00	39.11	40.36	39.62	-0.7354	8.000	CPS

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

Master: 23-Jan-2002 11:37 Before: 7-Feb-2002 1:13 After: 11-Feb-2002 9:48

Coincidence Count Rate Ratio	1.000	1.004	1.005	1.013	0.007621	0.05000
------------------------------	-------	-------	-------	-------	----------	---------

Scintillation Gamma-Ray - N Wellsite Calibration - Detector Calibration

Before: 7-Feb-2002 1:09 After: Calibration not done

Gamma Ray (Jig - Bkg)	167.5	N/A	167.5	N/A	N/A	0.09091	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

Accelerator-Porosity Tool - Detector Plateau Settings :

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

Dual Induction - E / Equipment Identification

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

Hostile Environment Litho Density - A / Equipment Identification

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

Auxiliary Equipment:

HOSTILE ENVIRONMENT LITHO DENSITY SONDE	HLDS - B	10
HOSTILE ENVIRONMENT ELECTRONICS CARTRIDGE	HEH - H	12
HOSTILE ENVIRONMENT ELECTRONICS CARTRIDGE	HEH - G	11
HOSTILE ENVIRONMENT LITHO DENSITY PAD	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	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		40.51	Master		15.75	Master		1203
Before		40.71	Before		17.24	Before		1207
After		40.59	After		16.93	After		1209
	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		144.6	Master		9.254	Master		21.86
Before		146.2	Before		9.073	Before		29.34
After		145.6	After		8.861	After		28.89
	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		39.29						
Before		40.56						
After		40.16						
	15.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							
Master: 23-Jan-2002 11:37			Before: 7-Feb-2002 1:13			After: 11-Feb-2002 9:48		

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		40.54	Master		16.19	Master		1233

Before		40.54	Before		16.67	Before		1236
After		40.61	After		16.58	After		1240
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		143.9	Master		9.453	Master		21.24
Before		144.1	Before		8.968	Before		29.04
After		144.6	After		9.434	After		29.55
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		39.11						
Before		40.36						
After		39.62						
15.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)								
Master: 23-Jan-2002 11:37			Before: 7-Feb-2002 1:13			After: 11-Feb-2002 9:48		

Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		1.004
Before		1.005
After		1.013
0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)		
Master: 23-Jan-2002 11:37		
Before: 7-Feb-2002 1:13		
After: 11-Feb-2002 9:48		

Scintillation Gamma-Ray - N / Equipment Identification

Primary Equipment:

Scintillation Gamma Cartridge
Scintillation Gamma Detector

SGC - TB 9582
SGD - TAA

Auxiliary Equipment:

Scintillation Gamma Housing
Gamma Source Radioactive

SGH - K 2448
GSR - U/Y

Company: Lamont Doherty

Schlumberger

Well: ODP Leg 201, Site 1225A EQP-2A

Field: Equatorial Pacific

Rig: JOIDES Resolution

Ocean: Pacific

Natural Spectroscopy
Gamma Ray

