

TOOL ZERO

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

Output DLIS Files

DEFAULT	PI_LDL_APS_NGS_005LUP	FN:6	PRODUCER	17-Aug-2002 18:36	1456.2 M	1200.2 M
REDUCE	PI_LDL_APS_NGS_005LUP	FN:7	PRODUCER	17-Aug-2002 18:36		

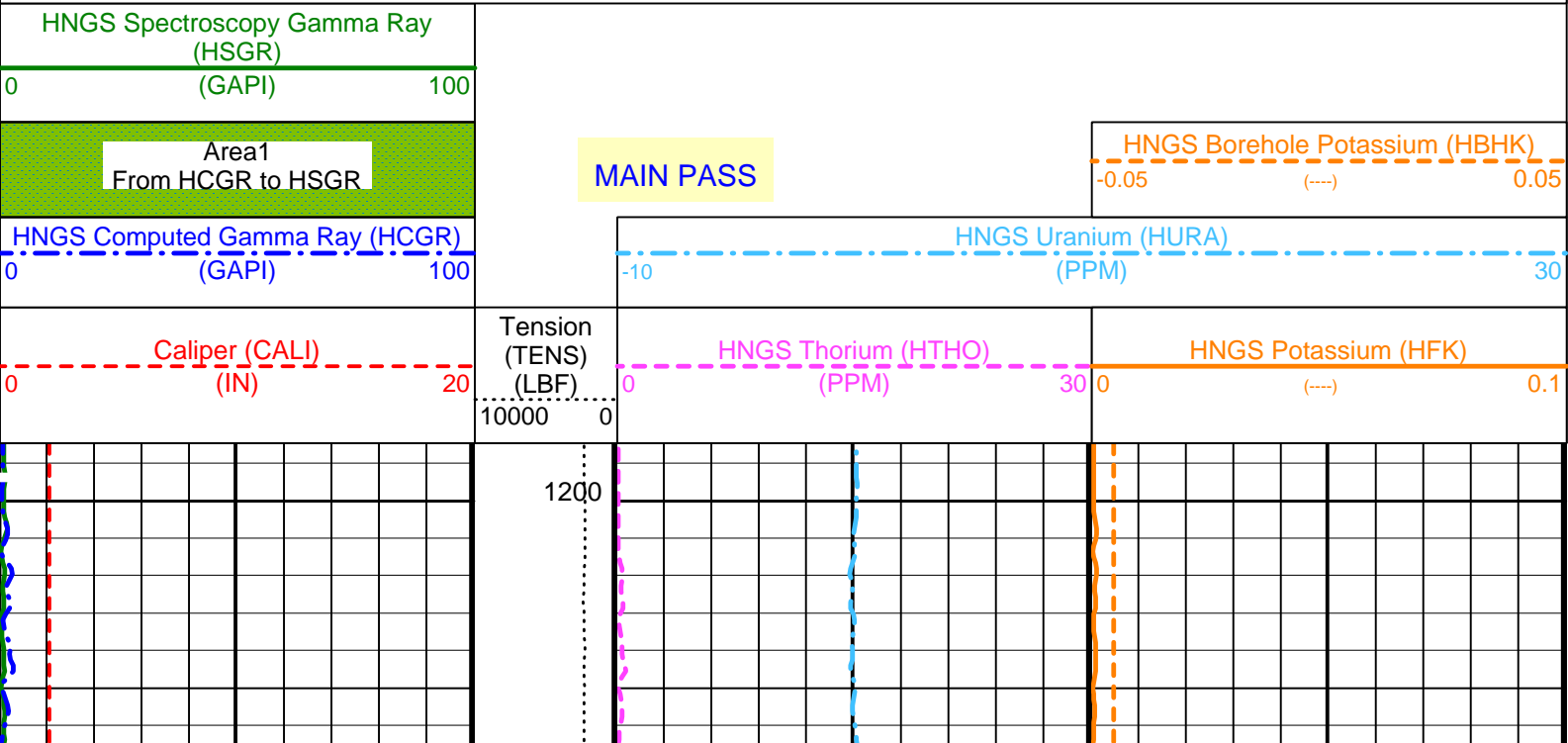
OP System Version: 10C0-306

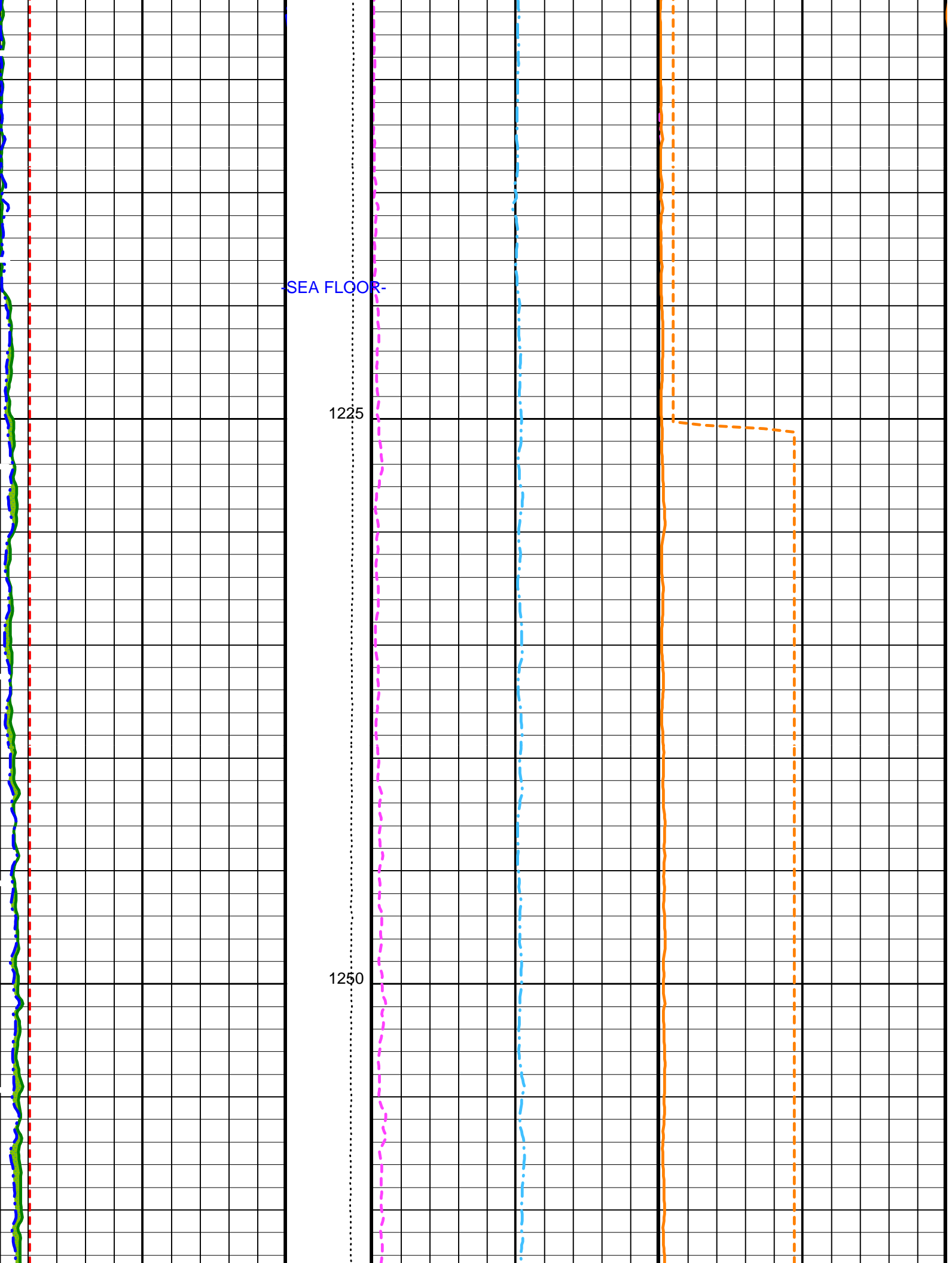
MCM

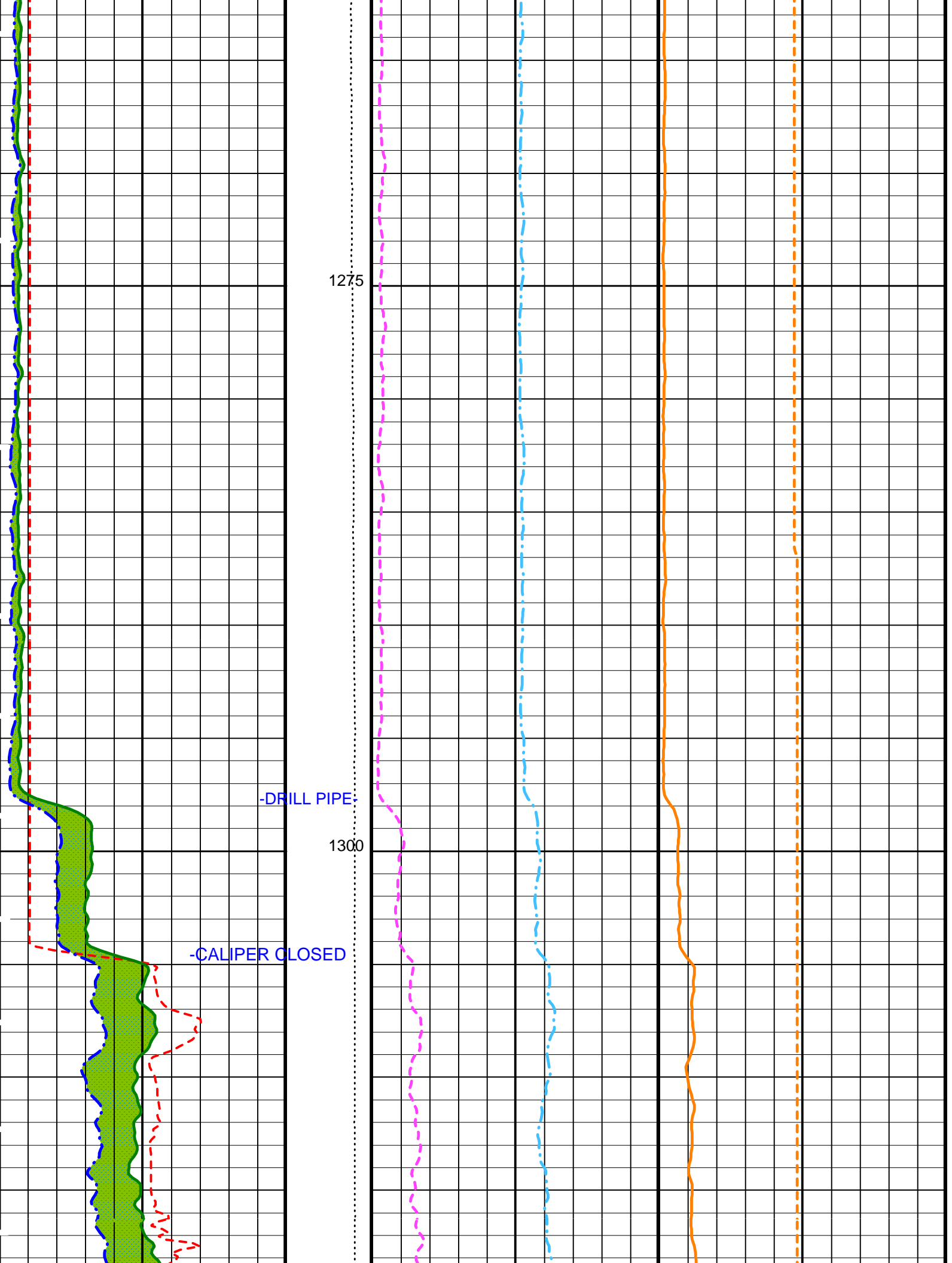
DIT-E	10C0-306	HLDT-A	10C0-306
DTA-A	10C0-306	NPLC-B	OP10-KP1
APS-BA	OP10-KP1	HNGS-BA	OP10-KP1
DTC-H	10C0-306		

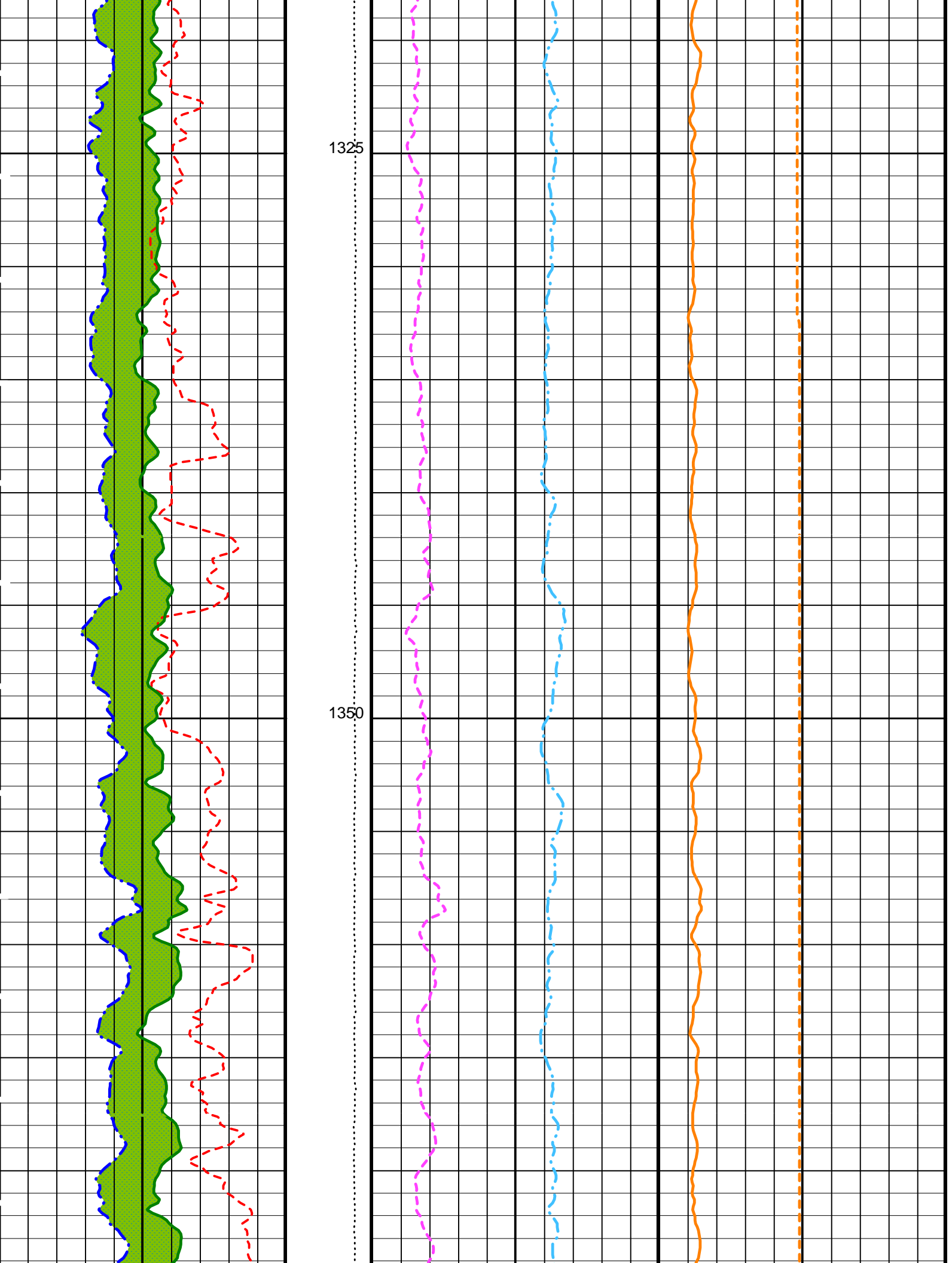
PIP SUMMARY

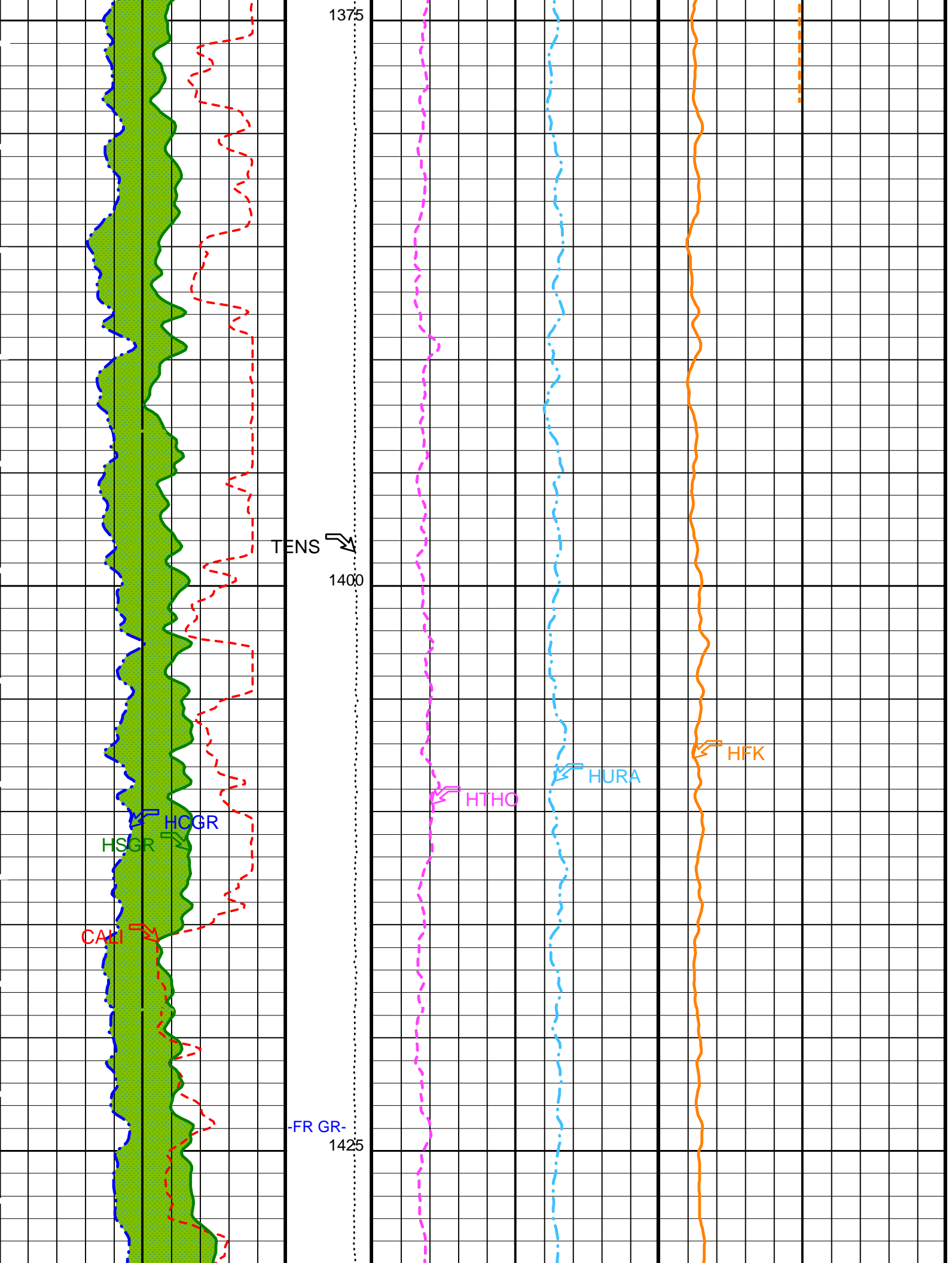
▶ Time Mark Every 60 S

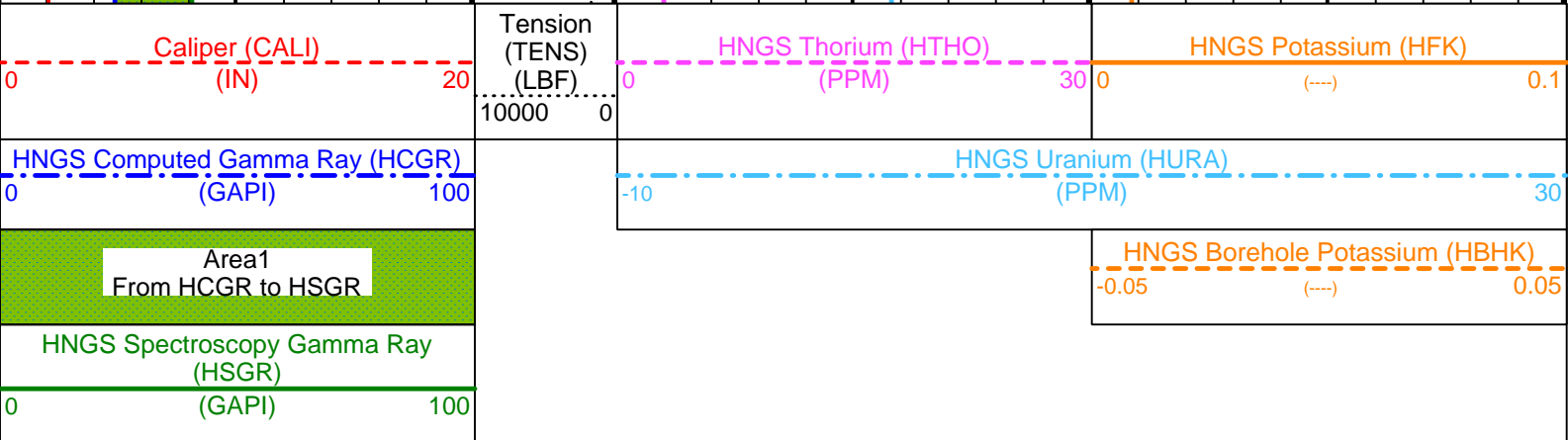
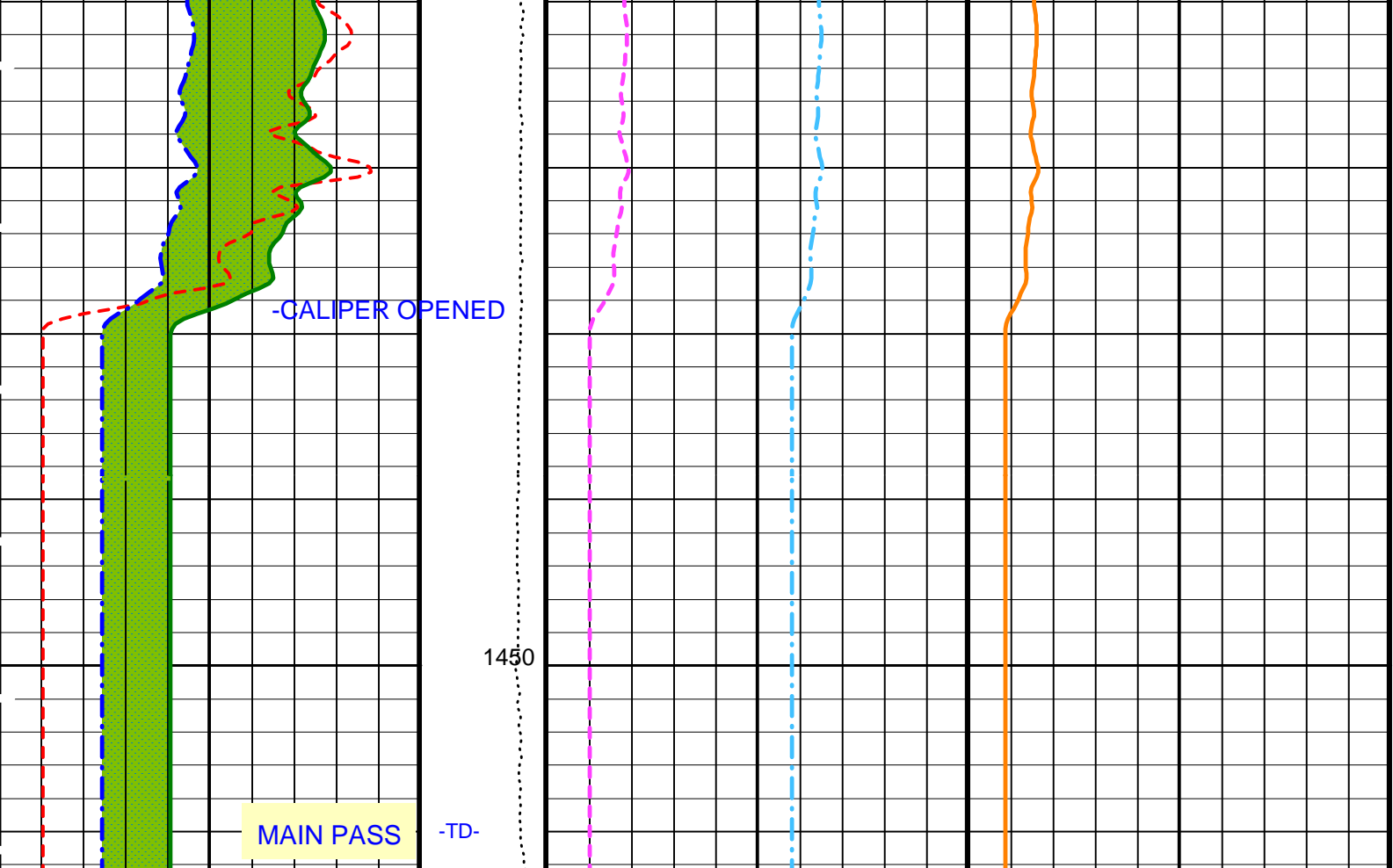












PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
BHS	DIT-E: Dual Induction - E	
GCSE	Borehole Status	OPEN
	Generalized Caliper Selection	CALI
BHS	APS-BA: Accelerator-Porosity Tool	
GCSE	Borehole Status	OPEN
	Generalized Caliper Selection	CALI
BAR1	HNGS-BA: Hostile Natural Gamma Ray Sonde	
BAR2	HNGS Detector 1 Barite Constant	1
BHK	HNGS Detector 2 Barite Constant	1
BHS	HNGS Borehole Potassium Correction Concentration	0
CSD1	Borehole Status	OPEN
CSD2	Inner Casing Outer Diameter	0
CSW1	Outer Casing Outer Diameter	0
CSW2	Inner Casing Weight	0
DBCC	Outer Casing Weight	0
GCSE	HNGS Barite Constant Correction Flag	NONE
H1P	Generalized Caliper Selection	CALI
H2P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW
	HNGS Detector 2 Allow/Disallow In Processing	ALLOW

H2P	HNGS Detector 2 Allow/Disallow in Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.00302511	
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	0.979098	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.987736	
System and Miscellaneous			
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.10	G/C3

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 17-Aug-2002 18:36

OP System Version: 10C0-306			
MCM			
DIT-E	10C0-306	HLDT-A	10C0-306
DTA-A	10C0-306	NPLC-B	OP10-KP1
APS-BA	OP10-KP1	HNGS-BA	OP10-KP1
DTC-H	10C0-306		

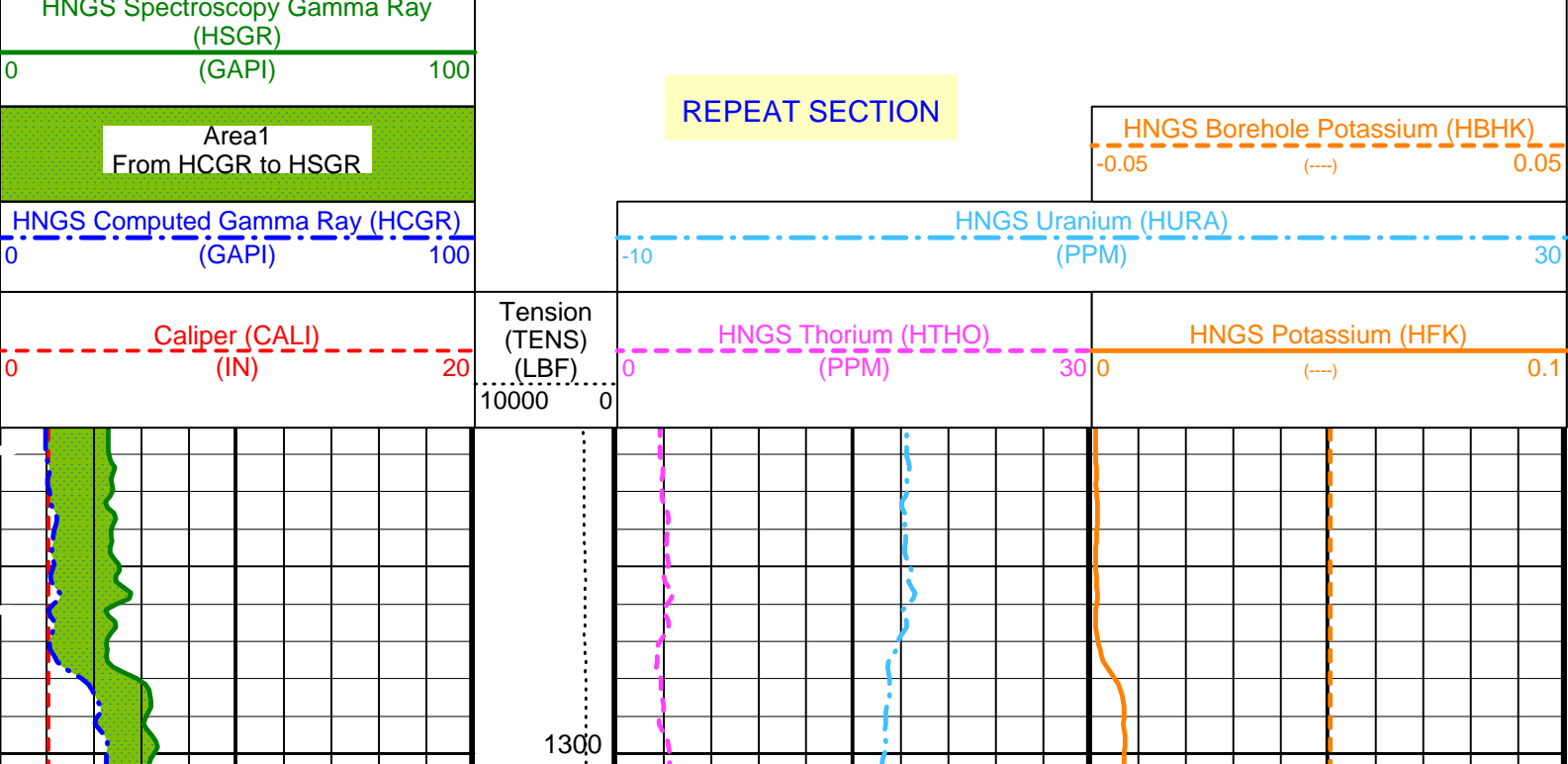
Output DLIS Files			
DEFAULT	PI_LDL_APS_NGS_005LUP	FN:6	PRODUCER 17-Aug-2002 18:36
REDUCE	PI_LDL_APS_NGS_005LUP	FN:7	PRODUCER 17-Aug-2002 18:36

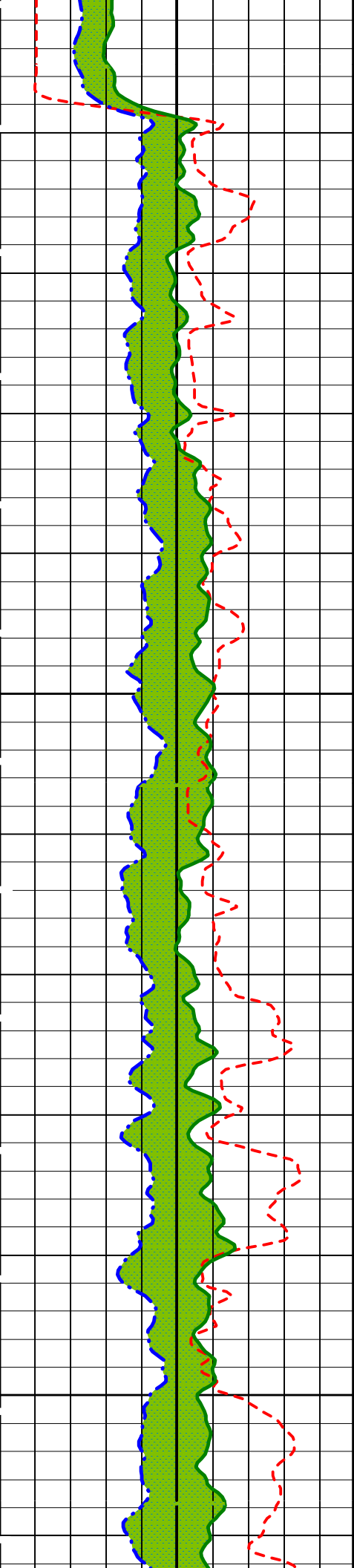
Output DLIS Files			
DEFAULT	PI_LDL_APS_NGS_008LUP	FN:10	PRODUCER 17-Aug-2002 20:13 1442.5 M 1291.6 M
REDUCE	PI_LDL_APS_NGS_008LUP	FN:11	PRODUCER 17-Aug-2002 20:13 1442.5 M 1291.2 M

OP System Version: 10C0-306			
MCM			
DIT-E	10C0-306	HLDT-A	10C0-306
DTA-A	10C0-306	NPLC-B	OP10-KP1
APS-BA	OP10-KP1	HNGS-BA	OP10-KP1
DTC-H	10C0-306		

PIP SUMMARY

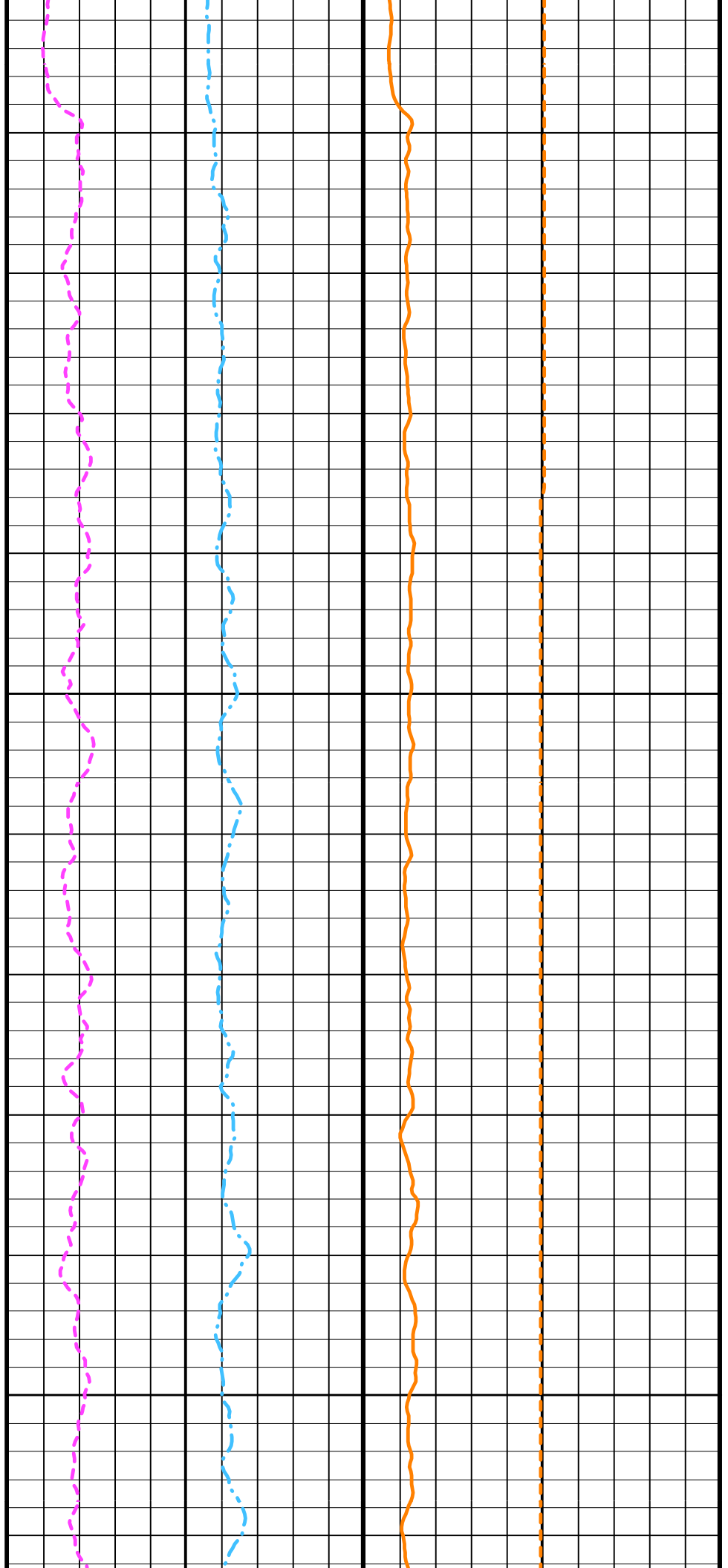
Time Mark Every 60 S

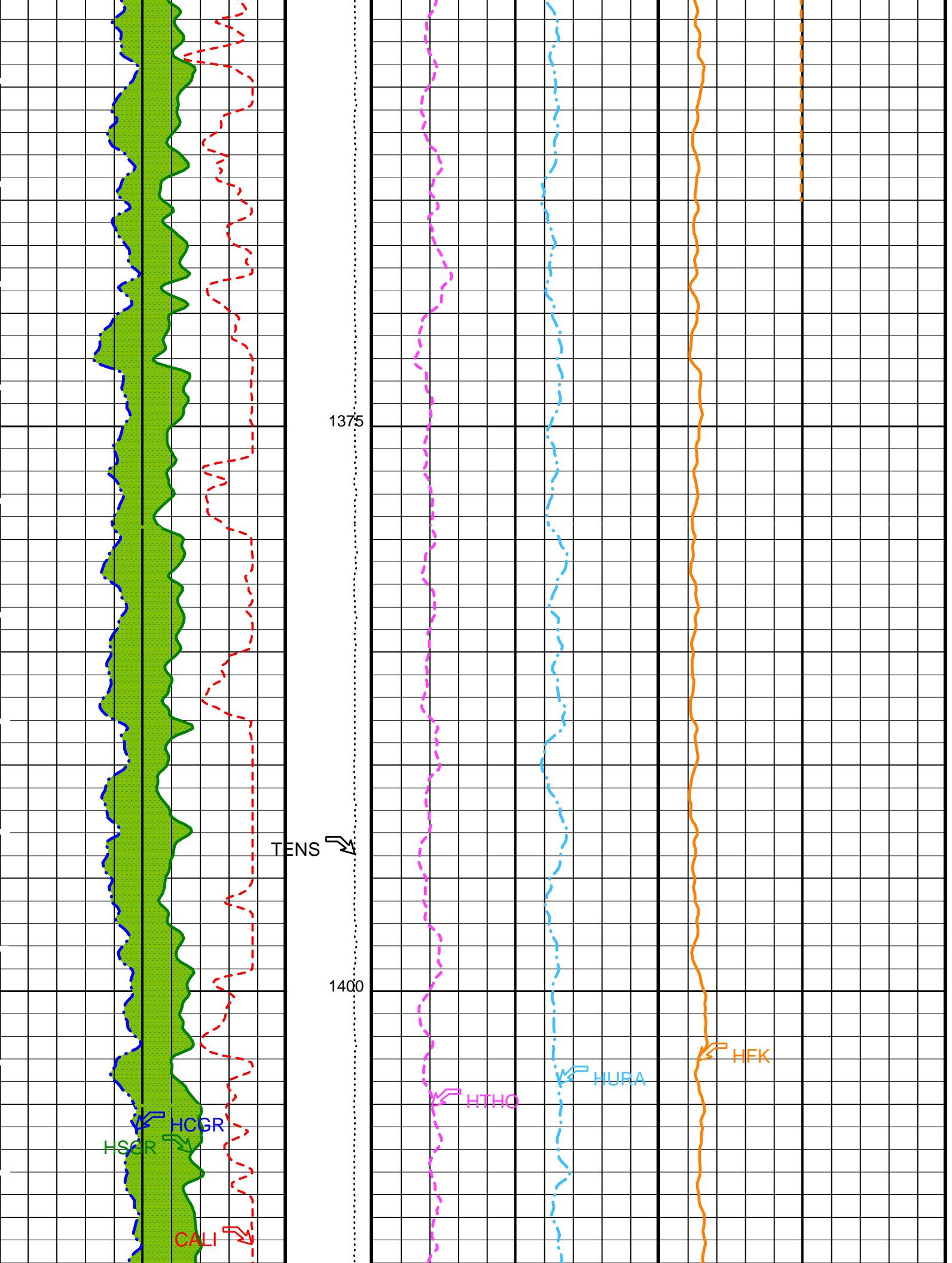


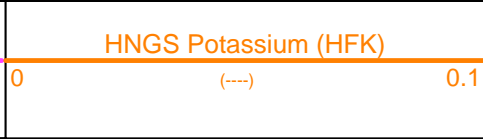
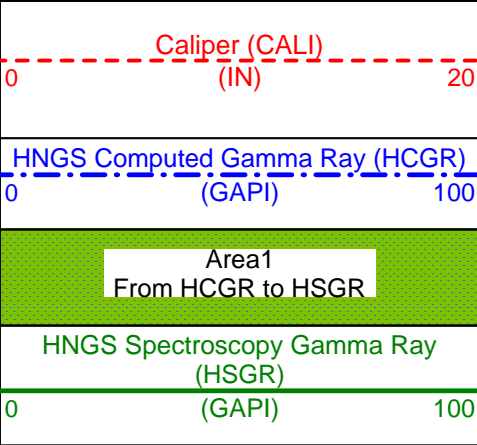
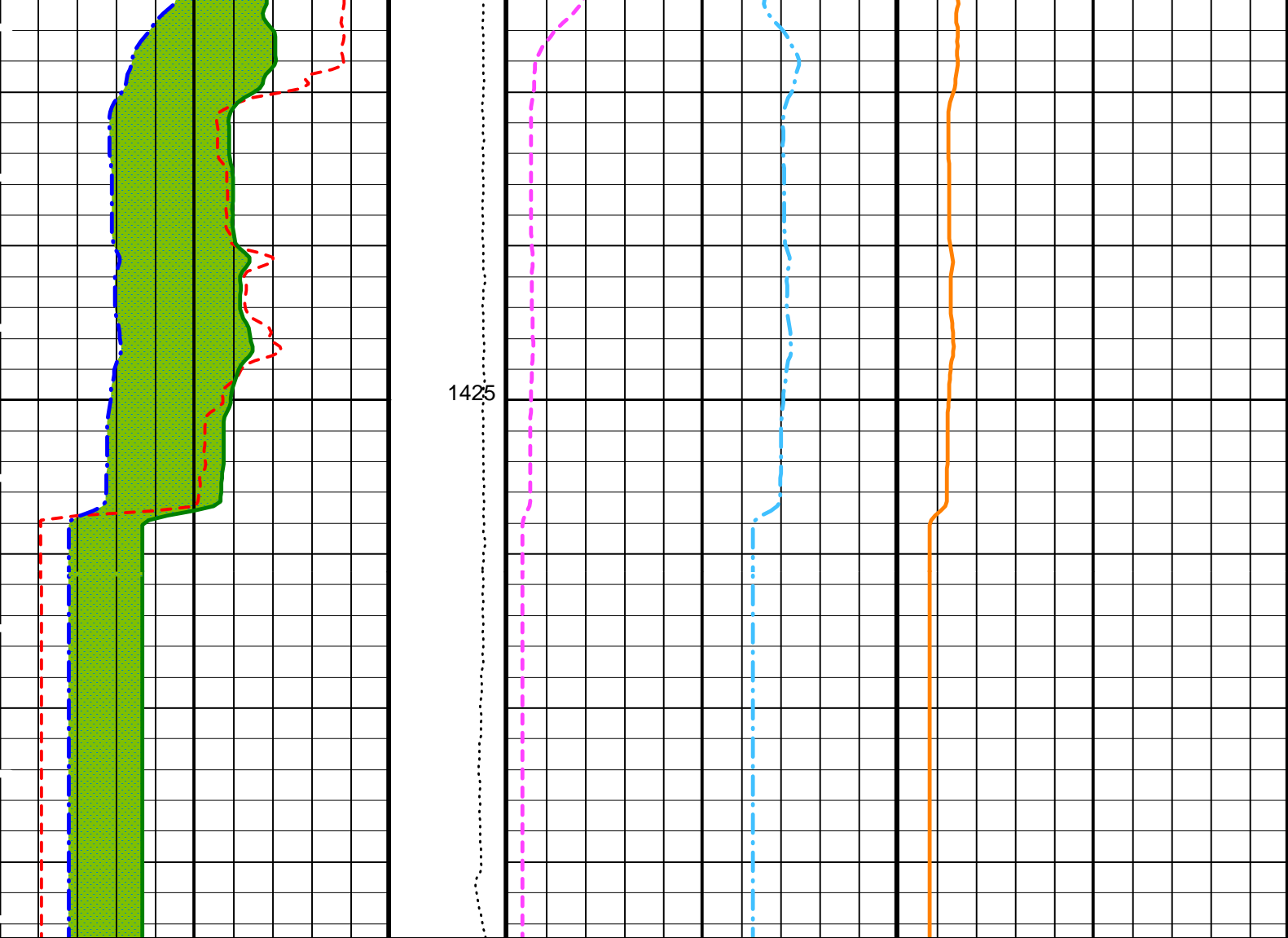


1325

1350







REPEAT SECTION

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
BHS	DIT-E: Dual Induction - E	
GCSE	Borehole Status	OPEN
	Generalized Caliper Selection	CALI
BHS	APS-BA: Accelerator-Porosity Tool	
GCSE	Borehole Status	OPEN
	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	-0.0132519	
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	0.940387	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.946835	
System and Miscellaneous			
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.10	G/C3

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 17-Aug-2002 20:13

OP System Version: 10C0-306

MCM

DIT-E	10C0-306	HLDT-A	10C0-306
DTA-A	10C0-306	NPLC-B	OP10-KP1
APS-BA	OP10-KP1	HNGS-BA	OP10-KP1
DTC-H	10C0-306		

Output DLIS Files

DEFAULT	PI_LDL_APS_NGS_008LUP	FN:10	PRODUCER	17-Aug-2002 20:13
REDUCE	PI_LDL_APS_NGS_008LUP	FN:11	PRODUCER	17-Aug-2002 20:13

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Hostile Environment Litho Density - A Wellsite Calibration - Background Measurement							
Master: 11-Jun-2002 19:31 Before: 24-Jul-2002 12:39 After: 17-Aug-2002 22:47							
LSW1 Background	100.0	88.67	86.74	87.00	0.2697	0.03000	CPS
LSW2 Background	105.0	93.18	91.70	92.27	0.5778	0.03000	CPS
LSW3 Background	210.0	177.4	176.2	178.4	2.285	0.03000	CPS
LSW4 Background	290.0	236.8	236.6	234.4	-2.134	0.03000	CPS
LSW5 Background	610.0	518.0	517.3	519.6	2.307	0.03000	CPS
SSW1 Background	100.0	83.02	84.95	83.23	-1.720	0.03000	CPS
SSW2 Background	200.0	165.1	166.3	165.4	-0.9567	0.03000	CPS
SSW3 Background	530.0	440.7	439.6	439.0	-0.6002	0.03000	CPS
SSW4 Background	280.0	232.4	232.4	232.4	-0.07803	0.03000	CPS
SSW5 Background	205.0	174.0	173.3	174.2	0.8656	0.03000	CPS
Hostile Environment Litho Density - A Wellsite Calibration - Tool Quality Control Information High Voltage							
Master: 11-Jun-2002 19:31 Before: 24-Jul-2002 12:39 After: 17-Aug-2002 22:47							
LS Bkg. High Voltage	1133	1133	1130	1132	2.423	N/A	V
SS Bkg. High Voltage	1177	1177	1171	1173	2.729	N/A	V
Hostile Environment Litho Density - A Wellsite Calibration - Detectors Resolution From BKG Measurements							
Master: 11-Jun-2002 19:31 Before: 24-Jul-2002 12:39 After: 17-Aug-2002 22:47							
LS Background Resolution	1.000	1.032	1.032	1.045	0.01232	N/A	
SS Background Resolution	1.000	0.9430	0.9416	0.9470	0.005421	N/A	
Hostile Environment Litho Density - A Wellsite Calibration - Caliper Calibration							
Before: 24-Jul-2002 12:38							
Caliper Small Ring	12.00	N/A	17.14	N/A	N/A	N/A	IN
Caliper Large Ring	15.25	N/A	21.07	N/A	N/A	N/A	IN
Accelerator-Porosity Tool Wellsite Calibration - Detector Background							
Master: 24-Jul-2002 4:08 Before: 17-Aug-2002 19:06 After: 17-Aug-2002 21:56							
Near Det Bkg Cntrate	30.00	32.30	33.05	31.37	-1.683	N/A	CPS
Far Det Bkg Cntrate	30.00	33.62	31.89	33.37	1.480	N/A	CPS
Array-1 Det Bkg Cntrate	30.00	28.88	30.35	28.94	-1.405	N/A	CPS
Array-2 Det Bkg Cntrate	30.00	29.64	30.48	31.60	1.119	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	32.75	32.38	34.07	2.589	N/A	CPS

Array Memm Det Bkg Chtrate	30.00	32.73	32.38	34.97	2.389	N/A	CPS
Accelerator-Porosity Tool Wellsite Calibration - Calibration Ratios							
Master: 24-Jul-2002 4:08							
Near/Far Calibration Ratio	0.9250	0.9076	N/A	N/A	N/A	N/A	
Near/Array Calibration Ratio	1.030	1.066	N/A	N/A	N/A	N/A	
Near/Array Cal Ratio Up/Down	1.000	1.006	N/A	N/A	N/A	N/A	
Accelerator-Porosity Tool Wellsite Calibration - Tank Check							
Master: 24-Jul-2002 4:09							
Array-1 Standoff Porosity	11.75	11.51	N/A	N/A	N/A	N/A	PU
Array-2 Standoff Porosity	11.75	11.19	N/A	N/A	N/A	N/A	PU
Average Slowing Down Time	6.000	5.884	N/A	N/A	N/A	N/A	US
Array-1 SDT Ratio Up/Down	1.000	0.9901	N/A	N/A	N/A	N/A	
Array-2 SDT Ratio Up/Down	1.000	0.9732	N/A	N/A	N/A	N/A	
Sigma Formation	27.50	27.88	N/A	N/A	N/A	N/A	CU

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 1 Check							
Master: 12-Jul-2002 22:08 Before: 24-Jul-2002 7:59 After: 17-Aug-2002 22:42							
Na 511 Peak Loc	40.00	40.59	40.60	40.60	0.001640	1.000	
Na 511 Peak Res	15.50	16.79	16.89	16.43	-0.4574	2.000	%
High Voltage	1150	1224	1220	1220	0.04187	30.00	V
Na 1785 Peak Loc	142.6	145.1	146.3	145.2	-1.068	7.000	
Na 1785 Peak Res	8.500	10.40	8.694	9.013	0.3196	2.000	%
Temperature	15.50	24.98	22.43	20.67	-1.759	N/A	DEGC
Na Count Rate	45.00	50.31	49.89	49.45	-0.4335	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 2 Check							
Master: 12-Jul-2002 22:08 Before: 24-Jul-2002 7:59 After: 17-Aug-2002 22:42							
Na 511 Peak Loc	40.00	40.58	40.59	40.64	0.05220	1.000	
Na 511 Peak Res	15.50	16.72	16.53	16.53	0.0008736	2.000	%
High Voltage	1150	1253	1250	1247	-2.899	30.00	V
Na 1785 Peak Loc	142.6	144.7	144.3	144.9	0.6215	7.000	
Na 1785 Peak Res	8.500	9.766	9.897	9.235	-0.6618	2.000	%
Temperature	15.50	24.15	21.87	20.92	-0.9464	N/A	DEGC
Na Count Rate	45.00	50.19	49.39	49.20	-0.1973	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Ratio Of Detector 1 To Detector 2							
Master: 12-Jul-2002 22:08 Before: 24-Jul-2002 7:59 After: 17-Aug-2002 22:42							
Coincidence Count Rate Ratio	1.000	1.004	1.010	1.005	-0.004628	0.05000	

Hostile Natural Gamma Ray Sonde Master Calibration - Detector 1 Calibration							
Master: 12-Jul-2002 22:01							
Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	208.9	--	--	--	--	
Th Peak Res	7.000	8.227	--	--	--	--	%
Background Count Rate	142.5	24.67	--	--	--	--	CPS
Gain Ratio	1.000	0.9793	--	--	--	--	

Hostile Natural Gamma Ray Sonde Master Calibration - Detector 2 Calibration							
Master: 12-Jul-2002 22:01							
Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	208.8	--	--	--	--	
Th Peak Res	7.000	8.191	--	--	--	--	%
Background Count Rate	142.5	22.68	--	--	--	--	CPS
Gain Ratio	1.000	0.9792	--	--	--	--	

Accelerator-Porosity Tool - Detector Plateau Settings :							
Near Detector Plateau Setting	1748 V						
Far Detector Plateau Setting	2052 V						
Array Detector Plateau Setting	1969 V						

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

Hostile Environment Litho Density - A / Equipment Identification		
---	--	--

Primary Equipment:		
HOSTILE ENVIRONMENT LITHO DENSITY HIGH V	HLDV - A	10
HOSTILE ENVIRONMENT LITHO DENSITY CARTRI	HLDC - AA	11
Gamma Source Radioactive	GSR - Z	1846
Auxiliary Equipment:		
HOSTILE ENVIRONMENT LITHO DENSITY SONDE	HLDS - B	10
HOSTILE ENVIRONMENT ELECTRONICS CARTRIDG	HEH - H	12
HOSTILE ENVIRONMENT ELECTRONICS CARTRIDG	HEH - G	11
HOSTILE ENVIRONMENT LITHO DENSITY PAD	HLDP - B	10

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		40.59	Master		16.79	Master		1224
Before		40.60	Before		16.89	Before		1220
After		40.60	After		16.43	After		1220
	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		145.1	Master		10.40	Master		24.98
Before		146.3	Before		8.694	Before		22.43
After		145.2	After		9.013	After		20.67
	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		50.31						
Before		49.89						
After		49.45						
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							

Master: 12-Jul-2002 22:08

Before: 24-Jul-2002 7:59

After: 17-Aug-2002 22:42

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		40.58	Master		16.72	Master		1253	
Before		40.59	Before		16.53	Before		1250	
After		40.64	After		16.53	After		1247	
	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		144.7	Master		9.766	Master		24.15	
Before		144.3	Before		9.897	Before		21.87	
After		144.9	After		9.235	After		20.92	
	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		50.19							
Before		49.39							
After		49.20							
	10.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)						
Master: 12-Jul-2002 22:08			Before: 24-Jul-2002 7:59			After: 17-Aug-2002 22:42			

Hostile Natural Gamma Ray Sonde Wellsite Calibration			
Ratio Of Detector 1 To Detector 2			
Phase	Coincidence Count Rate Ratio	Value	
Master		1.004	
Before		1.010	
After		1.005	
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)
Master: 12-Jul-2002 22:08			
Before: 24-Jul-2002 7:59			
After: 17-Aug-2002 22:42			

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		208.9	Master		8.227	
	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		24.67	Master		0.9793				
	20.00 (Minimum)	142.5 (Nominal)	265.0 (Maximum)	0.9400 (Minimum)	1.000 (Nominal)	1.060 (Maximum)			
Master: 12-Jul-2002 22:01									

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		208.8	Master		8.191	
	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		22.68	Master		0.9792				
	20.00 (Minimum)	142.5 (Nominal)	265.0 (Maximum)	0.9400 (Minimum)	1.000 (Nominal)	1.060 (Maximum)			
Master: 12-Jul-2002 22:01									

Company: Lamont Doherty

Schlumberger

Well: ODP Leg 204, Site 1251H

Field: Hydrate Ridge

Ocean: Pacific

State: Oregon

Natural Gamma Ray
Spectroscopy