Schlumberger

Company: Lamont Doherty

Well: Expedition 307 Site U1317D
Field: Porcupine Basin Carbonate Mounds
Rig: Joides Resolution Country: Ireland

Hostile Natural Gamma Ray

Rig: Joides Resolution
Field: Porcupine Basin Carbonate Mou
Location:
Well: Expedition 307 Site U1307D
Company: Lamont Doherty

LOCATION

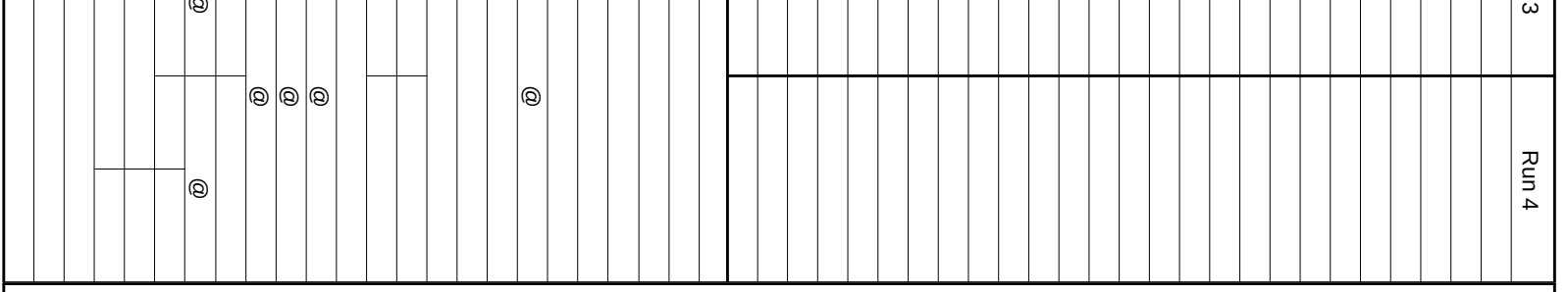
Elev.: K.B. 11.3 m
G.L. -805 m
D.F. 11 m

Permanent Datum: Mean Sea Level Elev.: 0 m
Log Measured From: Drill Floor 11.0 m above Perm. Datum
Drilling Measured From: Drill Floor

Ocean	Max. Well Deviation	Longitude	Latitude
Atlantic		11* 43.09'W	51* 22.83'N

	Run 1	Run 2	Run 3
Logging Date	6-May-2005		
Run Number	One		
Depth Driller	1075 m		
Schlumberger Depth	1075 m		
Bottom Log Interval	1050 m		
Top Log Interval	805 m		
Casing Driller Size @ Depth	0.000 in @ 892 m	@	@
Casing Schlumberger	893 m		
Bit Size	9.875 in		
Type Fluid In Hole	Sepiolite		
MUD Density / Viscosity	1.07 g/cm3		
MUD Fluid Loss / PH			
MUD Source Of Sample			
RM @ Measured Temperature	0.322 ohm.m @ 22 degC	@	@
RMF @ Measured Temperature	@	@	@
RMC @ Measured Temperature	@	@	@
Source RMF / RMC			
RM @ MRT / RMF @ MRT	@ / @	@ / @	@ / @
Maximum Recorded Temperatures			
Circulation Stopped / Time			
Logger On Bottom / Time	6-May-2005 15:07		
Unit Number / Location	2082 Webster, TX		
Recorded By	Javier Espinosa		
Witnessed By	Philippe Gaillot		

	Run 1	Run 2	Run 3
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			
MUD Density / Viscosity			
MUD Fluid Loss / PH			
MUD 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			



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OTHER SERVICES1	OTHER SERVICES2
OS1: HLDS, APS	OS1:
OS2: DITE	OS2:
OS3: DSI	OS3:
OS4: FMS	OS4:
OS5: EST	OS5:

REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Parameters and presentatiosn as per IODP standards	
Tool ran as per tool sketch below	
Hole flushed with sepiolite	
TD not reached due to hole conditions.	

RUN 1

SERVICE ORDER #:
PROGRAM VERSION: 12C0-301
FLUID LEVEL:

LOGGED INTERVAL	START	STOP

RUN 2

SERVICE ORDER #:
PROGRAM VERSION:
FLUID LEVEL:

LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1 RUN 2

SURFACE EQUIPMENT

SFT-281 6250
SFT-178 6250
GSR-U 135
WITM (DTS)-A

DOWNHOLE EQUIPMENT

LEH-QT LEH-QT		33.70
DTC-H ECH-KC	CTEM TelStatus ToolStatu	32.81
HNGS-BA HNGS-BA 77	Upper_1 Lower_2	31.89

HNSH-BA

ILE-D
ILE-D

29.39

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

APS-C
APH-AC 104
APS-C 202
MNTR-F 5124

26.95

24.51
24.43
24.31
24.20

NPLC-B
NPLC-B 79
NPH-B 82

23.01

Status

21.79

HLDS
GSR-Z 2326
HLDV-D 42
HLDS-D 10
HEH-H 44
HLDP-C 10

20.57

Caliper
SS LS Status

16.51

Mud Resis
Mud Tempe

15.57
15.32

EMS-B
EMA-B
RES
EMC-B
ECH-KH

15.75

DTA-A
ECH-KE

13.31

DIT-E
DIC-EB 438
MIH-ZA
DIS-HB 442

12.09

SP
Deep Ind
Aux Meas SFL
Med Ind

5.72
5.46
4.55
4.39

Status

2.57

AH-TAP
AH-TAP

2.57

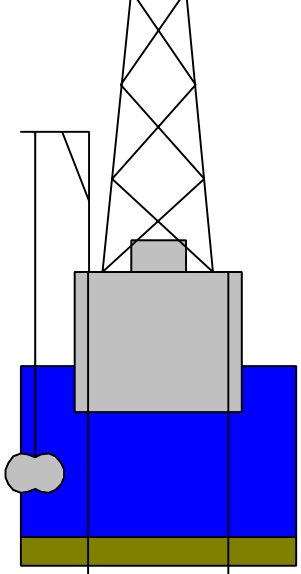
DF
Cartridge HV
Tension

0.00

TOOL ZERO

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

Production String	(in) OD	(in) ID	(m) MD	Well Schematic	(m) MD	(in) OD	(in) ID	Casing String

Kelly Bushing Elevation		11.3				
Derrick Floor Elevation		11.0		0.0	5.000	Casing String
Mean Sea Level		0.0				
Seismic Gun depth below MSL		2.0				
				805.0	9.875	Borehole Segment
				892.0	5.000	Casing Shoe

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MAIN PASS

MAXIS Field Log

Company: Lamont Doherty

Well: Expedition 307 Site U1307D

Output DLIS Files

DEFAULT	PI_EMS_LDL_APS_NGS_019LUP	FN:18	PRODUCER	06-May-2005 15:05	1051.6 M	746.6 M
REDUCED	PI_EMS_LDL_APS_NGS_019LUP	FN:19	PRODUCER	06-May-2005 15:05	1051.6 M	746.6 M

OP System Version: 12C0-301

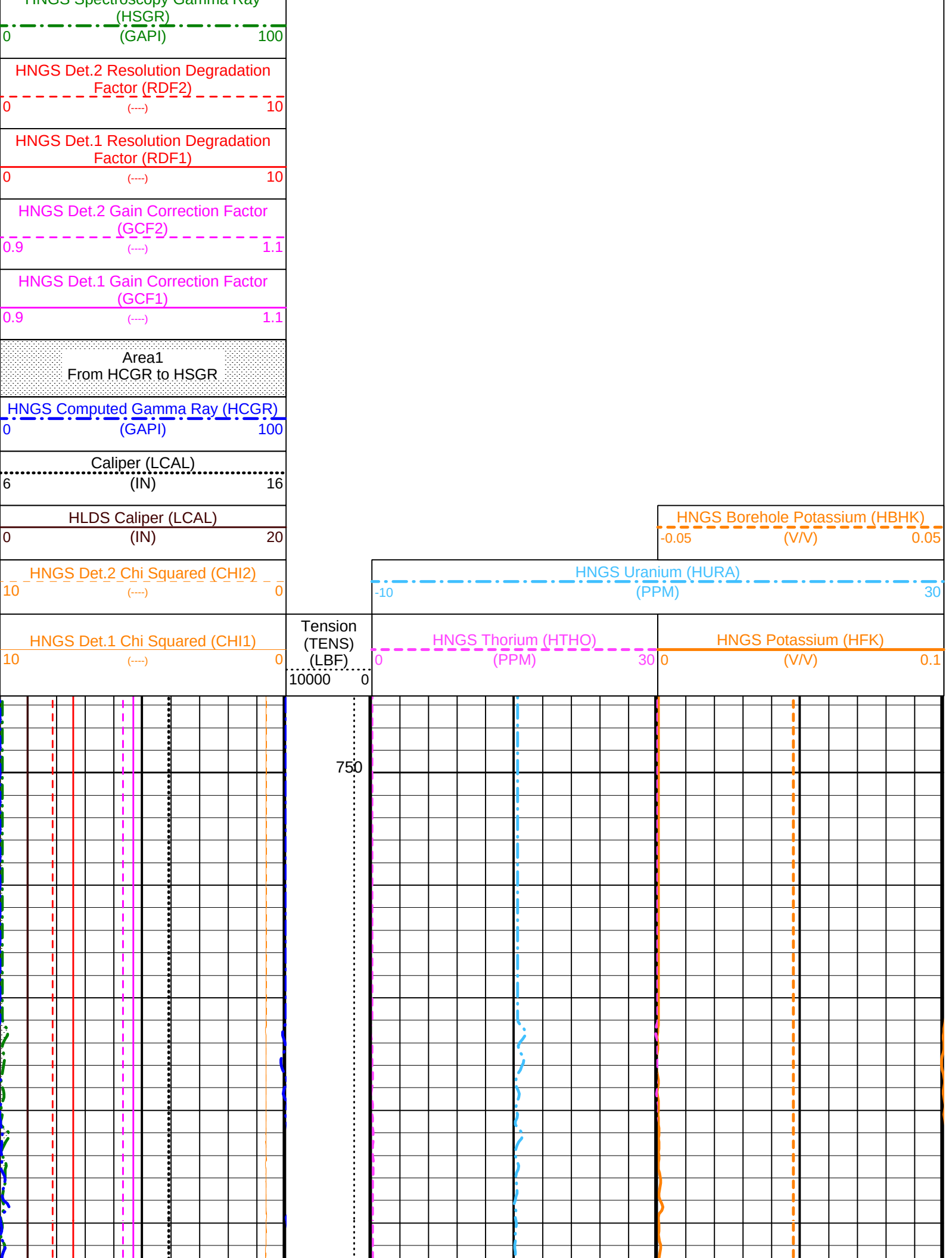
MCM

DIT-E	12C0-301	DTA-A	12C0-301
EMS-B	12C0-301	HLDS	12C0-301
NPLC-B	12C0-301	APS-C	12C0-301
HNGS-BA	12C0-301	DTC-H	12C0-301

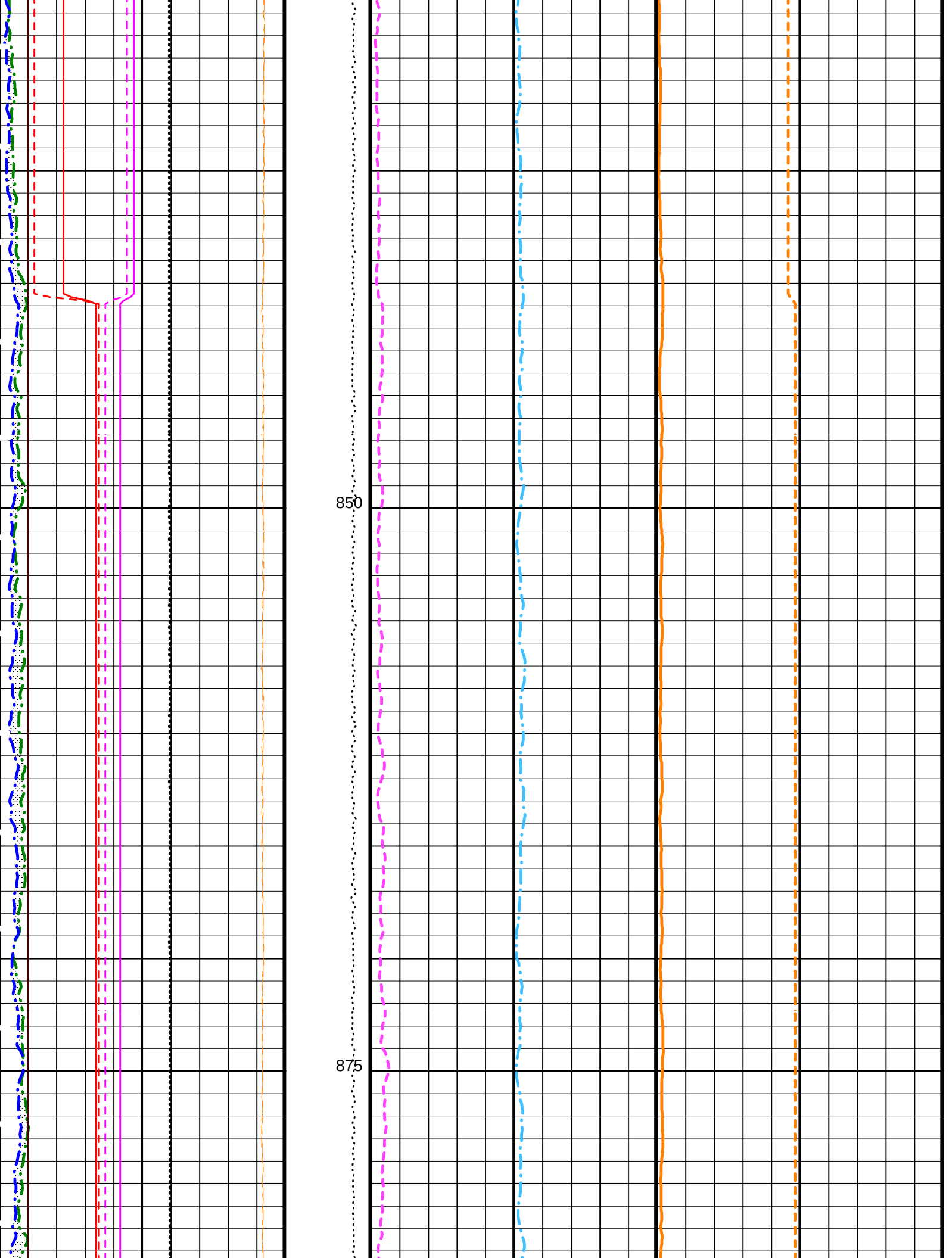
PIP SUMMARY

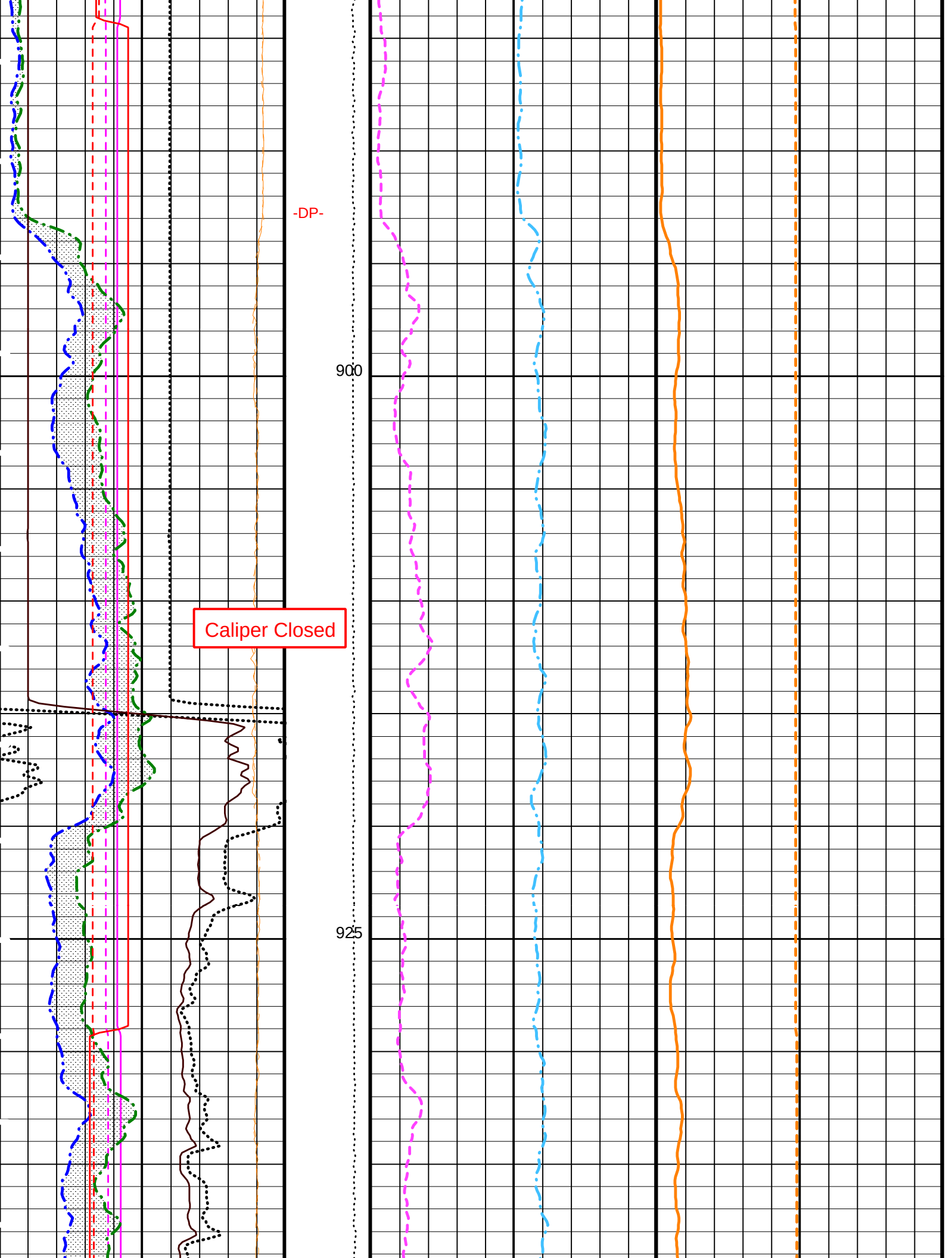
Time Mark Every 60 S

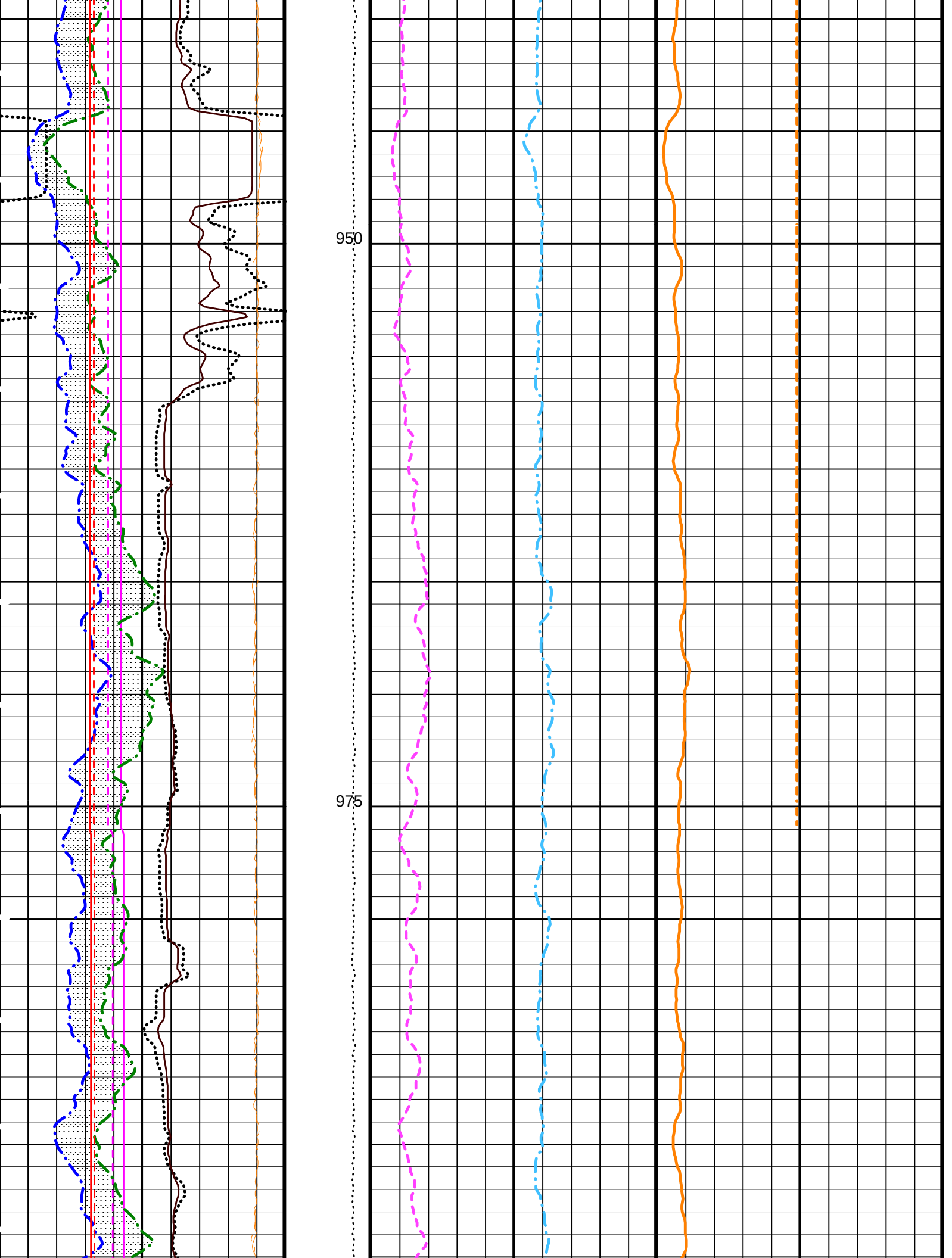
HNGS Spectroscopy Gamma Ray

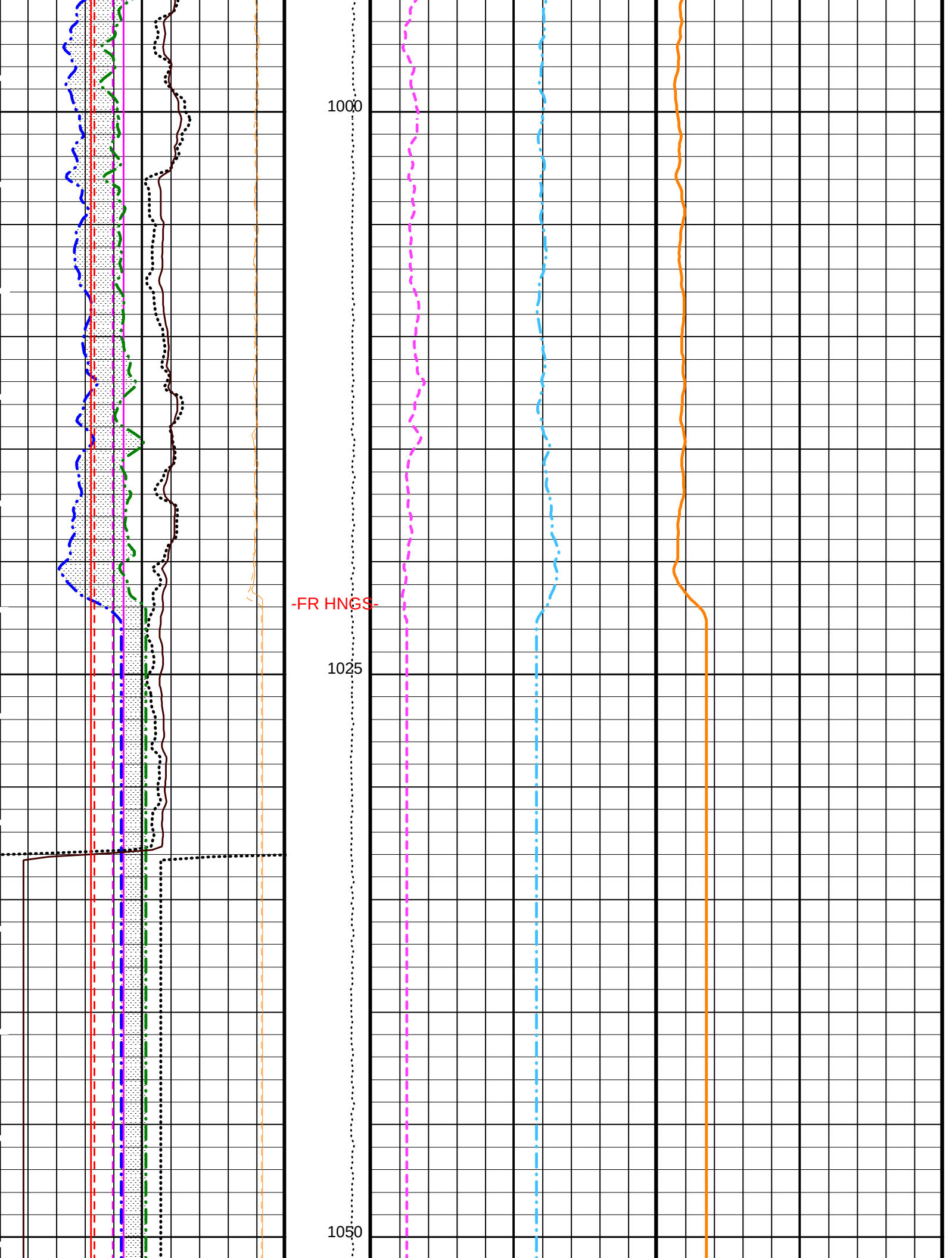

HNGS Spectroscopy Gamma Ray (HSGR)
0
(GAPI)
100
HNGS Det.2 Resolution Degradation Factor (RDF2)
0
(----)
10
HNGS Det.1 Resolution Degradation Factor (RDF1)
0
(----)
10
HNGS Det.2 Gain Correction Factor (GCF2)
0.9
(----)
1.1
HNGS Det.1 Gain Correction Factor (GCF1)
0.9
(----)
1.1
Area1
From HCGR to HSGR
HNGS Computed Gamma Ray (HCGR)
0
(GAPI)
100
Caliper (LCAL)
6
(IN)
16
HLDS Caliper (LCAL)
0
(IN)
20
HNGS Borehole Potassium (HBHK)
-0.05
(V/V)
0.05
HNGS Det.2 Chi Squared (CHI2)
10
(----)
0
HNGS Uranium (HURA)
-10
(PPM)
30
HNGS Det.1 Chi Squared (CHI1)
10
(----)
0
Tension (TENS) (LBF)
10000
0
HNGS Thorium (HTHO)
0
(PPM)
30
HNGS Potassium (HFK)
0
(V/V)
0.1
750

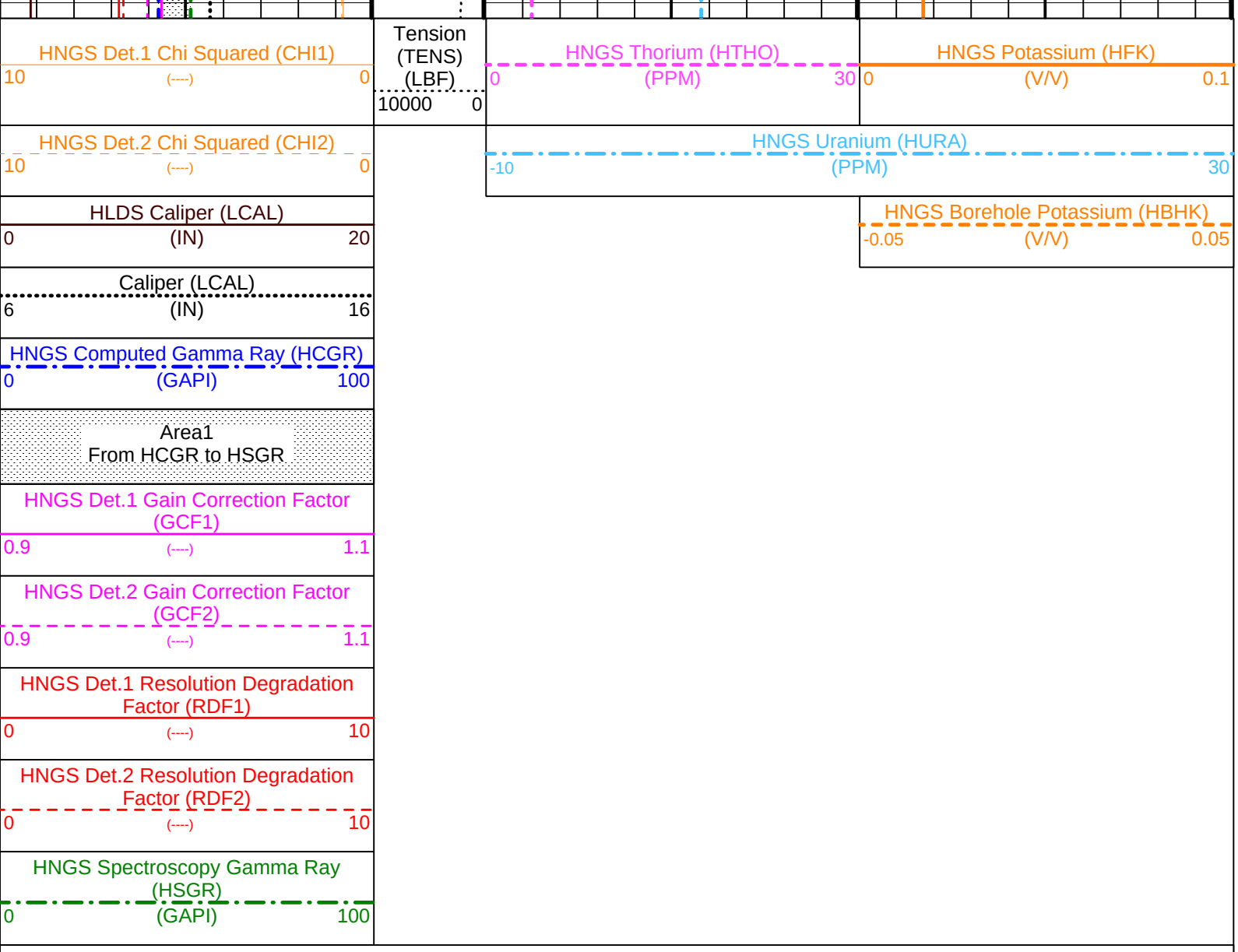

775
800
825


850
875


-DP-
900
Caliper Closed
925


950
975


1000
-FR HNGS-
1025
1050



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	
	EMS-B: Environment Measurement Sonde		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
	APS-C: 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	
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	
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.07	G/C3

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 06-May-2005 15:05

OP System Version: 12C0-301

MCM

DIT-E	12C0-301	DTA-A	12C0-301
EMS-B	12C0-301	HLDS	12C0-301
NPLC-B	12C0-301	APS-C	12C0-301
HNGS-BA	12C0-301	DTC-H	12C0-301

Output DLIS Files

DEFAULT	PI_EMS_LDL_APS_NGS_019LUP	FN:18	PRODUCER	06-May-2005 15:05
REDUCED	PI_EMS_LDL_APS_NGS_019LUP	FN:19	PRODUCER	06-May-2005 15:05

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CALIBRATIONS

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Hostile Litho-Density Sonde Wellsite Calibration - Background Measurement							
Master: 13-Apr-2005 14:57 Before: 4-May-2005 10:16							
SS Cs Resolution Bkg	9.000	8.327	8.278	N/A	N/A	1.800	%
LS Cs Resolution Bkg	9.000	8.844	8.838	N/A	N/A	1.800	%
LSW1 Background	100.0	85.93	84.50	N/A	N/A	3.000	CPS
LSW2 Background	100.0	79.37	78.34	N/A	N/A	3.000	CPS
LSW3 Background	200.0	173.9	172.4	N/A	N/A	6.000	CPS
LSW4 Background	250.0	212.7	211.2	N/A	N/A	7.500	CPS
LSW5 Background	600.0	496.4	493.5	N/A	N/A	18.00	CPS
SSW1 Background	100.0	84.01	84.96	N/A	N/A	3.000	CPS
SSW2 Background	200.0	151.0	153.7	N/A	N/A	6.000	CPS
SSW3 Background	500.0	416.8	414.9	N/A	N/A	15.00	CPS
SSW4 Background	270.0	219.0	219.7	N/A	N/A	8.100	CPS
SSW5 Background	200.0	159.0	158.9	N/A	N/A	6.000	CPS
Hostile Litho-Density Sonde Wellsite Calibration - Aluminum Measurement							
Master: 13-Apr-2005 15:41							
LSW1 Aluminum	600.0	631.9	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	923.0	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	1128	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	571.2	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	531.9	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	3024	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	8390	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	11660	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	4884	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	644.8	N/A	N/A	N/A	N/A	CPS
Hostile Litho-Density Sonde Wellsite Calibration - Lithology Measurement							
Master: 13-Apr-2005 15:35							
LSW1 Iron	400.0	430.0	N/A	N/A	N/A	N/A	CPS

LSW2 Iron	730.0	733.6	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	986.9	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	515.9	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	489.1	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	2212	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	6952	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	10570	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	4424	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	563.2	N/A	N/A	N/A	N/A	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Caliper Calibration
Before: 4-May-2005 10:20

HLDS Caliper Small Ring	8.000	N/A	10.61	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	12.00	N/A	14.67	N/A	N/A	N/A	IN

Accelerator-Porosity Tool Wellsite Calibration - Detector Background
Master: 22-Mar-2005 20:56 Before: 4-May-2005 10:17

Near Det Bkg Cntrate	30.00	25.38	25.71	N/A	N/A	N/A	CPS
Far Det Bkg Cntrate	30.00	25.40	26.37	N/A	N/A	N/A	CPS
Array-1 Det Bkg Cntrate	30.00	28.70	26.09	N/A	N/A	N/A	CPS
Array-2 Det Bkg Cntrate	30.00	25.69	27.22	N/A	N/A	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	25.67	24.20	N/A	N/A	N/A	CPS

Accelerator-Porosity Tool Wellsite Calibration - Calibration Ratios
Master: 22-Mar-2005 20:56

Near/Far Calibration Ratio	0.9250	0.9625	N/A	N/A	N/A	N/A	
Near/Array Calibration Ratio	1.030	0.9914	N/A	N/A	N/A	N/A	
Near/Array Cal Ratio Up/Down	1.000	0.9985	N/A	N/A	N/A	N/A	

Accelerator-Porosity Tool Wellsite Calibration - Tank Check
Master: 22-Mar-2005 20:56

Array-1 Standoff Porosity	11.75	11.97	N/A	N/A	N/A	N/A	PU
Array-2 Standoff Porosity	11.75	11.85	N/A	N/A	N/A	N/A	PU
Average Slowing Down Time	6.000	5.825	N/A	N/A	N/A	N/A	US
Array-1 SDT Ratio Up/Down	1.000	0.9952	N/A	N/A	N/A	N/A	
Array-2 SDT Ratio Up/Down	1.000	1.006	N/A	N/A	N/A	N/A	
Sigma Formation	27.50	27.53	N/A	N/A	N/A	N/A	CU

Accelerator-Porosity Tool Wellsite Calibration - CCR7 signal boxes
Master: 22-Mar-2005 20:56

Near Detector Plateau Setting	1650	1741	N/A	N/A	N/A	N/A	V
Far Detector Plateau Setting	2000	2082	N/A	N/A	N/A	N/A	V
Array Detector Plateau Setting	2000	1973	N/A	N/A	N/A	N/A	V

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 1 Check
Master: 4-May-2005 10:11 Before: 4-May-2005 10:17

Na 511 Peak Loc	40.00	40.62	40.84	N/A	N/A	1.000	
Na 511 Peak Res	15.50	16.96	15.95	N/A	N/A	2.000	%
High Voltage	1150	1255	1255	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	144.8	144.7	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	9.982	9.411	N/A	N/A	2.000	%
Temperature	15.50	18.00	18.01	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	42.26	42.82	N/A	N/A	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 2 Check
Master: 4-May-2005 10:11 Before: 4-May-2005 10:17

Na 511 Peak Loc	40.00	40.54	40.56	N/A	N/A	1.000	
Na 511 Peak Res	15.50	16.66	16.93	N/A	N/A	2.000	%
High Voltage	1150	1274	1275	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	144.2	144.8	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	9.777	9.984	N/A	N/A	2.000	%
Temperature	15.50	17.18	17.20	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	42.45	43.34	N/A	N/A	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Ratio Of Detector 1 To Detector 2
Master: 4-May-2005 10:11 Before: 4-May-2005 10:17

Coincidence Count Rate Ratio	1.000	0.9936	0.9895	N/A	N/A	0.05000	

Hostile Natural Gamma Ray Sonde Master Calibration - Detector 1 Calibration
Master: 4-May-2005 10:06

Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	208.9	--	--	--	--	
Th Peak Res	7.000	8.099	--	--	--	--	%
Background Count Rate	142.5	21.35	--	--	--	--	CPS
Gain Ratio	1.000	0.9786	--	--	--	--	

Hostile Natural Gamma Ray Sonde Master Calibration - Detector 2 Calibration
Master: 4-May-2005 10:06

Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	207.3	--	--	--	--	
Th Peak Res	7.000	8.237	--	--	--	--	%
Background Count Rate	142.5	22.15	--	--	--	--	CPS

Background Count Rate	142.5	22.15	--	--	--	--	CPS
Gain Ratio	1.000	0.9731	--	--	--	--	

Accelerator-Porosity Tool - Detector Plateau Settings :

Near Detector Plateau Setting 1741 V
Far Detector Plateau Setting 2082 V
Array Detector Plateau Setting 1973 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

Dual Induction - E Wellsite Calibration

Induction Electronics (10 kHz)

Phase	ID Elect Real Offset 10 kHz MM/M	Value	Phase	ID Elect Real Gain 10 kHz	Value	Phase	ID Elect Phase 10 kHz DEG	Value
Before		39.56	Before		1.015	Before		8.777
	-260.8 (Minimum) 39.24 (Nominal) 339.2 (Maximum)			0.8596 (Minimum) 1.010 (Nominal) 1.214 (Maximum)			-0.7861 (Minimum) 9.214 (Nominal) 19.21 (Maximum)	
Phase	ID Elect Quad Offset 10 kHz MM/M	Value	Phase	ID Elect Quad Gain 10 kHz	Value	Phase	IM Elect Phase 10 kHz DEG	Value
Before		24.27	Before		1.003	Before		13.38
	-276.2 (Minimum) 23.78 (Nominal) 323.8 (Maximum)			0.8494 (Minimum) 0.9994 (Nominal) 1.199 (Maximum)			3.832 (Minimum) 13.83 (Nominal) 23.83 (Maximum)	
Phase	IM Elect Real Offset 10 kHz MM/M	Value	Phase	IM Elect Real Gain 10 kHz	Value			
Before		98.11	Before		0.9546			
	-453.1 (Minimum) 96.90 (Nominal) 646.9 (Maximum)			0.8089 (Minimum) 0.9589 (Nominal) 1.142 (Maximum)				
Phase	IM Elect Quad Offset 10 kHz MM/M	Value	Phase	IM Elect Quad Gain 10 kHz	Value			
Before		96.48	Before		0.9518			
	-454.8 (Minimum) 95.22 (Nominal) 645.2 (Maximum)			0.8065 (Minimum) 0.9565 (Nominal) 1.139 (Maximum)				

Before: 4-May-2005 10:14

Dual Induction - E Wellsite Calibration

Induction Electronics (20 kHz)

Phase	ID Elect Real Offset 20 kHz MM/M	Value	Phase	ID Elect Real Gain 20 kHz	Value	Phase	ID Elect Phase 20 kHz DEG	Value
Before		15.30	Before		1.020	Before		7.291
	-109.9 (Minimum) 15.07 (Nominal) 140.1 (Maximum)			0.8601 (Minimum) 1.010 (Nominal) 1.214 (Maximum)			-7.449 (Minimum) 7.551 (Nominal) 22.55 (Maximum)	
Phase	ID Elect Quad Offset 20 kHz MM/M	Value	Phase	ID Elect Quad Gain 20 kHz	Value	Phase	IM Elect Phase 20 kHz DEG	Value
Before		9.570	Before		1.008	Before		12.09
	-115.6 (Minimum) 9.373 (Nominal) 134.4 (Maximum)			0.8497 (Minimum) 0.9997 (Nominal) 1.200 (Maximum)			-2.658 (Minimum) 12.34 (Nominal) 27.34 (Maximum)	
Phase	IM Elect Real Offset 20 kHz MM/M	Value	Phase	IM Elect Real Gain 20 kHz	Value			
Before		40.87	Before		1.012			
	-184.8 (Minimum) 40.18 (Nominal) 265.2 (Maximum)			0.8536 (Minimum) 1.004 (Nominal) 1.205 (Maximum)				
Phase	IM Elect Quad Offset 20 kHz MM/M	Value	Phase	IM Elect Quad Gain 20 kHz	Value			
Before		40.29	Before		1.009			
	-185.4 (Minimum) 39.62 (Nominal) 264.6 (Maximum)			0.8510 (Minimum) 1.001 (Nominal) 1.201 (Maximum)				

Before: 4-May-2005 10:15

Dual Induction - E Wellsite Calibration

Induction Electronics (40 kHz)

Phase	ID Elect Real Offset 40 kHz MM/M	Value	Phase	ID Elect Real Gain 40 kHz	Value	Phase	ID Elect Phase 40 kHz DEG	Value
Before		9.904	Before		0.9918	Before		27.05
	-75.27 9.729 94.73			0.8369 0.9869 1.182			7.238 27.24 47.24	

(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)

Phase	ID Elect Quad Offset 40 kHz MM/M	Value	Phase	ID Elect Quad Gain 40 kHz	Value	Phase	IM Elect Phase 40 kHz DEG	Value
Before		6.161	Before		0.9789	Before		31.69
	-78.94 (Minimum) 6.062 (Nominal) 91.06 (Maximum)			0.8259 (Minimum) 0.9759 (Nominal) 1.166 (Maximum)			11.87 (Minimum) 31.87 (Nominal) 51.87 (Maximum)	

Phase	IM Elect Real Offset 40 kHz MM/M	Value	Phase	IM Elect Real Gain 40 kHz	Value
Before		26.63	Before		1.026
	-103.8 (Minimum) 26.23 (Nominal) 156.2 (Maximum)			0.8659 (Minimum) 1.016 (Nominal) 1.222 (Maximum)	

Phase	IM Elect Quad Offset 40 kHz MM/M	Value	Phase	IM Elect Quad Gain 40 kHz	Value
Before		26.34	Before		1.023
	-104.1 (Minimum) 25.93 (Nominal) 155.9 (Maximum)			0.8629 (Minimum) 1.013 (Nominal) 1.218 (Maximum)	

Before: 4-May-2005 10:16

Dual Induction - E Wellsite Calibration

SFL Electronics

Phase	SFL Voltage Offset MV	Value	Phase	SFL Voltage Gain	Value
Before		1.275	Before		1.018
	-15.00 (Minimum) 0 (Nominal) 15.00 (Maximum)			0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)	

Phase	SFL Current Offset MA	Value	Phase	SFL Current Gain	Value
Before		0.007354	Before		0.9952
	-0.6000 (Minimum) 0 (Nominal) 0.6000 (Maximum)			0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)	

Before: 4-May-2005 10:16

Dual Induction - E Master Calibration

Test Loop Calibration: Calibration of Internal Reference to Test Loop Standard

Phase	Deep 10 kHz Gain Factor	Value	Phase	Deep 20 kHz Gain Factor	Value	Phase	Deep 40 kHz Gain Factor	Value
Master		1.009	Master		1.021	Master		1.038
	0.9000 (Minimum) 1.000 (Nominal) 1.100 (Maximum)			0.9000 (Minimum) 1.000 (Nominal) 1.100 (Maximum)			0.9000 (Minimum) 1.000 (Nominal) 1.100 (Maximum)	

Phase	Medium 10 kHz Gain Factor	Value	Phase	Medium 20 kHz Gain Factor	Value	Phase	Medium 40 kHz Gain Factor	Value
Master		1.000	Master		1.000	Master		1.000
	0.9000 (Minimum) 1.000 (Nominal) 1.100 (Maximum)			0.9000 (Minimum) 1.000 (Nominal) 1.100 (Maximum)			0.9000 (Minimum) 1.000 (Nominal) 1.100 (Maximum)	

Phase	Deep 10 kHz Phase Shift	Value	Phase	Deep 20 kHz Phase Shift	Value	Phase	Deep 40 kHz Phase Shift	Value
Master		0.01267	Master		-0.2437	Master		-1.527
	-1.500 (Minimum) 0 (Nominal) 1.500 (Maximum)			-2.000 (Minimum) 0 (Nominal) 2.000 (Maximum)			-4.000 (Minimum) -1.000 (Nominal) 2.000 (Maximum)	

Phase	Medium 10 kHz Phase Shift	Value	Phase	Medium 20 kHz Phase Shift	Value	Phase	Medium 40 kHz Phase Shift	Value
Master		0	Master		0	Master		0
	-1.500 (Minimum) 0 (Nominal) 1.500 (Maximum)			-3.000 (Minimum) -1.000 (Nominal) 1.000 (Maximum)			-5.000 (Minimum) -2.000 (Nominal) 1.000 (Maximum)	

Master: Calibration out of date 8-Apr-2004 10:16

Dual Induction - E Master Calibration

Sonde Error Corrections: Correction for sonde response in zero conductivity environment. (Normalized to 25C).

Phase	Real Deep 10 kHz S.E. Corr.	Value	Phase	Real Deep 20 kHz S.E. Corr.	Value	Phase	Real Deep 40 kHz S.E. Corr.	Value
Master		48.25	Master		16.62	Master		4.700
	-50.00 (Minimum) 0 (Nominal) 125.0 (Maximum)			-30.00 (Minimum) 0 (Nominal) 30.00 (Maximum)			-15.00 (Minimum) 0 (Nominal) 15.00 (Maximum)	

Phase	Quad Deep 10 kHz S.E. Corr.	Value	Phase	Quad Deep 20 kHz S.E. Corr.	Value	Phase	Quad Deep 40 kHz S.E. Corr.	Value
Master		105.0	Master		64.81	Master		46.33
	-250.0 (Minimum) 0 (Nominal) 350.0 (Maximum)			-125.0 (Minimum) 0 (Nominal) 200.0 (Maximum)			-75.00 (Minimum) 0 (Nominal) 125.0 (Maximum)	

Phase	Real Medium 10 kHz S.E. Corr.	Value	Phase	Real Medium 20 kHz S.E. Corr.	Value	Phase	Real Medium 40 kHz S.E. Corr.	Value
Master		17.07	Master		-2.319	Master		-9.445
	-50.00 (Minimum) 0 (Nominal) 140.0 (Maximum)			-50.00 (Minimum) 0 (Nominal) 50.00 (Maximum)			-30.00 (Minimum) 0 (Nominal) 30.00 (Maximum)	

Phase	Quad Medium 10 kHz S.E. Corr.	Value	Phase	Quad Medium 20 kHz S.E. Corr.	Value	Phase	Quad Medium 40 kHz S.E. Corr.	Value
Master		-95.46	Master		-31.90	Master		11.62
	-1300 (Minimum) 0 (Nominal) 1300 (Maximum)			-650.0 (Minimum) 0 (Nominal) 650.0 (Maximum)			-350.0 (Minimum) 0 (Nominal) 350.0 (Maximum)	

Master: Calibration out of date 8-Apr-2004 10:25

Hostile Litho-Density Sonde / Equipment Identification

Primary Equipment:		
Hostile Litho Density Sonde	HLDS - D	10
Hostile Litho Density High Voltage	HLDV - D	42
Gamma Source Radioactive	GSR - Z	2326
Auxiliary Equipment:		
Hostile Litho Density Pad	HLDP - C	10
Hostile Litho Density High Voltage Housi	HEH - H	44

Hostile Litho-Density Sonde Wellsite Calibration

Background Measurement

Phase	SS Cs Resolution Bkg %	Value
Master		8.327
Before		8.278
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)	

Phase	LS Cs Resolution Bkg %	Value
Master		8.844
Before		8.838
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)	

Phase	LSW1 Background CPS	Value
Master		85.93
Before		84.50
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)	

Phase	LSW2 Background CPS	Value
Master		79.37
Before		78.34
	50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)	

Phase	LSW3 Background CPS	Value
Master		173.9
Before		172.4
	110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)	

Phase	LSW4 Background CPS	Value
Master		212.7
Before		211.2
	140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)	

Phase	LSW5 Background CPS	Value
Master		496.4
Before		493.5
	330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)	

Phase	SSW1 Background CPS	Value
Master		84.01
Before		84.96
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)	

Phase	SSW2 Background CPS	Value
Master		151.0
Before		153.7
	100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)	

Phase	SSW3 Background CPS	Value
Master		416.8
Before		414.9
	280.0 (Minimum) 500.0 (Nominal) 700.0 (Maximum)	

Phase	SSW4 Background CPS	Value
Master		219.0
Before		219.7
	150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum)	

Phase	SSW5 Background CPS	Value
Master		159.0
Before		158.9
	110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum)	

Master: 13-Apr-2005 14:57 Before: 4-May-2005 10:16

Hostile Litho-Density Sonde Master Calibration

Detector Background Measurement

Phase	LSW1 Background CPS	Value
Master		85.93
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)	

Phase	LSW2 Background CPS	Value
Master		79.37
	50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)	

Phase	LSW3 Background CPS	Value
Master		173.9
	110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)	

Phase	LSW4 Background CPS	Value
Master		212.7
	140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)	

Phase	LSW5 Background CPS	Value
Master		496.4
	330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)	

Phase	LS Cs Resolution Bkg %	Value
Master		8.844
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)	

Phase	SSW1 Background CPS	Value
Master		84.01
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)	

Phase	SSW2 Background CPS	Value
Master		151.0
	100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)	

Phase	SSW3 Background CPS	Value
Master		416.8
	280.0 (Minimum) 500.0 (Nominal) 700.0 (Maximum)	

Phase	SSW4 Background CPS	Value
Master		219.0
	150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum)	

Phase	SSW5 Background CPS	Value
Master		159.0
	110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum)	

Phase	SS Cs Resolution Bkg %	Value
Master		8.327
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)	

Master: 13-Apr-2005 14:57

Hostile Litho-Density Sonde Master Calibration

Detector Aluminum Measurement (bkgd-subtracted)

Phase	LSW1 Aluminum CPS	Value
Master		631.9
	420.0 (Minimum) 600.0 (Nominal) 700.0 (Maximum)	

Phase	LSW2 Aluminum CPS	Value
Master		923.0
	650.0 (Minimum) 900.0 (Nominal) 1050 (Maximum)	

Phase	LSW3 Aluminum CPS	Value
Master		1128
	800.0 (Minimum) 1100 (Nominal) 1300 (Maximum)	

Phase	LSW4 Aluminum CPS	Value
Master		571.2
410.0 (Minimum)	580.0 (Nominal)	670.0 (Maximum)

Phase	LSW5 Aluminum CPS	Value
Master		531.9
410.0 (Minimum)	570.0 (Nominal)	660.0 (Maximum)

Phase	SSW1 Aluminum CPS	Value
Master		3024
2000 (Minimum)	2800 (Nominal)	3200 (Maximum)

Phase	SSW2 Aluminum CPS	Value
Master		8390
5800 (Minimum)	8000 (Nominal)	9300 (Maximum)

Phase	SSW3 Aluminum CPS	Value
Master		11660
8300 (Minimum)	11600 (Nominal)	13500 (Maximum)

Phase	SSW4 Aluminum CPS	Value
Master		4884
3500 (Minimum)	5000 (Nominal)	5800 (Maximum)

Phase	SSW5 Aluminum CPS	Value
Master		644.8
470.0 (Minimum)	660.0 (Nominal)	770.0 (Maximum)

Master: 13-Apr-2005 15:41

Hostile Litho-Density Sonde Master Calibration

Detector Litholog Measurement (bkgd-subtracted)

Phase	LSW1 Iron CPS	Value
Master		430.0
290.0 (Minimum)	400.0 (Nominal)	470.0 (Maximum)

Phase	LSW2 Iron CPS	Value
Master		733.6
520.0 (Minimum)	730.0 (Nominal)	850.0 (Maximum)

Phase	LSW3 Iron CPS	Value
Master		986.9
720.0 (Minimum)	1000 (Nominal)	1160 (Maximum)

Phase	LSW4 Iron CPS	Value
Master		515.9
370.0 (Minimum)	520.0 (Nominal)	600.0 (Maximum)

Phase	LSW5 Iron CPS	Value
Master		489.1
340.0 (Minimum)	470.0 (Nominal)	550.0 (Maximum)

Phase	SSW1 Iron CPS	Value
Master		2212
1500 (Minimum)	2100 (Nominal)	2400 (Maximum)

Phase	SSW2 Iron CPS	Value
Master		6952
4900 (Minimum)	6800 (Nominal)	7900 (Maximum)

Phase	SSW3 Iron CPS	Value
Master		10570
7800 (Minimum)	10800 (Nominal)	12600 (Maximum)

Phase	SSW4 Iron CPS	Value
Master		4424
3300 (Minimum)	4600 (Nominal)	5400 (Maximum)

Phase	SSW5 Iron CPS	Value
Master		563.2
420.0 (Minimum)	580.0 (Nominal)	680.0 (Maximum)

Master: 13-Apr-2005 15:35

Hostile Litho-Density Sonde Master Calibration

Quality Ratios

Phase	AL CALIBRATION RATIO 1	Value
Master		1.023
0.9000 (Minimum)	1.000 (Nominal)	1.100 (Maximum)

Phase	AL CALIBRATION RATIO 2	Value
Master		2.109
1.900 (Minimum)	2.100 (Nominal)	2.300 (Maximum)

Phase	AL CALIBRATION RATIO 3	Value
Master		0.5728
0.4500 (Minimum)	0.5500 (Nominal)	0.6500 (Maximum)

Phase	AL CALIBRATION RATIO 4	Value
Master		0.5470
0.4500 (Minimum)	0.5500 (Nominal)	0.6500 (Maximum)

Phase	Pad-Wear SS Ratio	Value
Master		0.9845
0.9800 (Minimum)	0.9880 (Nominal)	0.9960 (Maximum)

Phase	Pad-Wear LS Ratio	Value
Master		0.9807
0.9800 (Minimum)	0.9880 (Nominal)	0.9960 (Maximum)

Phase	Pad-Position SS Ratio	Value
Master		1.006
0.9900 (Minimum)	0.9940 (Nominal)	1.015 (Maximum)

Phase	Pad-Position LS Ratio	Value
Master		0.9882
0.9850 (Minimum)	0.9940 (Nominal)	1.010 (Maximum)

Master: 13-Apr-2005 15:22

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
Master		25.38
Before		25.71

1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum)

Phase	Far Det Bkg Cntrate CPS	Value
Master		25.40
Before		26.37

1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum)

Phase	Array-1 Det Bkg Cntrate CPS	Value
Master		28.70
Before		26.09

1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum)

Phase	Array-2 Det Bkg Cntrate CPS	Value
Master		25.69
Before		27.22

1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum)

Phase	Array Therm Det Bkg Cntrate CPS	Value
Master		25.67
Before		24.20

1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum)

Master: 22-Mar-2005 20:56 Before: 4-May-2005 10:17

Accelerator-Porosity Tool Wellsite Calibration

Calibration Ratios

Phase	Near/Far Calibration Ratio	Value
Master		0.9625

0.8000 (Minimum) 0.9250 (Nominal) 1.050 (Maximum)

Phase	Near/Array Calibration Ratio	Value
Master		0.9914

0.9000 (Minimum) 1.030 (Nominal) 1.170 (Maximum)

Phase	Near/Array Cal Ratio Up/Down	Value
Master		0.9985

0.9700 (Minimum) 1.000 (Nominal) 1.030 (Maximum)

Master: 22-Mar-2005 20:56

Accelerator-Porosity Tool Wellsite Calibration

Tank Check

Phase	Array-1 Standoff Porosity PU	Value
Master		11.97

9.900 (Minimum) 11.75 (Nominal) 13.60 (Maximum)

Phase	Array-2 Standoff Porosity PU	Value
Master		11.85

9.900 (Minimum) 11.75 (Nominal) 13.60 (Maximum)

Phase	Average Slowing Down Time US	Value
Master		5.825

5.500 (Minimum) 6.000 (Nominal) 6.250 (Maximum)

Phase	Array-1 SDT Ratio Up/Down	Value
Master		0.9952

0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)

Phase	Array-2 SDT Ratio Up/Down	Value
Master		1.006

0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)

Phase	Sigma Formation CU	Value
Master		27.53

20.00 (Minimum) 27.50 (Nominal) 35.00 (Maximum)

Master: 22-Mar-2005 20:56

Accelerator-Porosity Tool Master Calibration

Detector Calibration

Phase	Near/Far Calibration Ratio	Value
Master		0.9625

0.8000 (Minimum) 0.9250 (Nominal) 1.050 (Maximum)

Phase	Near/Array Calibration Ratio	Value
Master		0.9914

0.9000 (Minimum) 1.030 (Nominal) 1.170 (Maximum)

Phase	Near/Array Cal Ratio Up/Down	Value
Master		0.9985

0.9700 (Minimum) 1.000 (Nominal) 1.030 (Maximum)

Master: 22-Mar-2005 20:56

Accelerator-Porosity Tool Master Calibration

Tank Check

Phase	Array-1 Standoff Porosity PU	Value
Master		11.97

9.900 (Minimum) 11.75 (Nominal) 13.60 (Maximum)

Phase	Array-2 Standoff Porosity PU	Value
Master		11.85

9.900 (Minimum) 11.75 (Nominal) 13.60 (Maximum)

Phase	Average Slowing Down Time US	Value
Master		5.825

5.500 (Minimum) 6.000 (Nominal) 6.250 (Maximum)

Phase	Array-1 SDT Ratio Up/Down	Value
Master		0.9952

0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)

Phase	Array-2 SDT Ratio Up/Down	Value
Master		1.006

0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)

Phase	Sigma Formation CU	Value
Master		27.53

20.00 (Minimum) 27.50 (Nominal) 35.00 (Maximum)

Master: 22-Mar-2005 20:56

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:

HNGS Sonde	HNGS - BA	77

HNGS Sonde	HNGS - BA	77
Auxiliary Equipment:		
HNGS Sonde Housing	HNSH - BA	
Gamma Source Radioactive	GSR - U	135

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 1 Check

Phase	Na 511 Peak Loc	Value
Master		40.62
Before		40.84
	37.50 (Minimum) 40.00 (Nominal) 42.50 (Maximum)	

Phase	Na 511 Peak Res %	Value
Master		16.96
Before		15.95
	12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)	

Phase	High Voltage V	Value
Master		1255
Before		1255
	900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	

Phase	Na 1785 Peak Loc	Value
Master		144.8
Before		144.7
	135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)	

Phase	Na 1785 Peak Res %	Value
Master		9.982
Before		9.411
	7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)	

Phase	Temperature DEGC	Value
Master		18.00
Before		18.01
	-28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)	

Phase	Na Count Rate CPS	Value
Master		42.26
Before		42.82
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)	

Master: 4-May-2005 10:11 Before: 4-May-2005 10:17

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 2 Check

Phase	Na 511 Peak Loc	Value
Master		40.54
Before		40.56
	37.50 (Minimum) 40.00 (Nominal) 42.50 (Maximum)	

Phase	Na 511 Peak Res %	Value
Master		16.66
Before		16.93
	12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)	

Phase	High Voltage V	Value
Master		1274
Before		1275
	900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	

Phase	Na 1785 Peak Loc	Value
Master		144.2
Before		144.8
	135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)	

Phase	Na 1785 Peak Res %	Value
Master		9.777
Before		9.984
	7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)	

Phase	Temperature DEGC	Value
Master		17.18
Before		17.20
	-28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)	

Phase	Na Count Rate CPS	Value
Master		42.45
Before		43.34
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)	

Master: 4-May-2005 10:11 Before: 4-May-2005 10:17

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Ratio Of Detector 1 To Detector 2

Phase	Coincidence Count Rate Ratio	Value
Master		0.9936
Before		0.9895
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)	

Master: 4-May-2005 10:11
Before: 4-May-2005 10:17

Hostile Natural Gamma Ray Sonde Master Calibration

Detector 1 Calibration

Phase	Na 511 Peak Set Point	Value
Master		41.00
	38.00 (Minimum) 40.00 (Nominal) 42.00 (Maximum)	

Phase	Th Peak Loc	Value
Master		208.9
	201.0 (Minimum) 209.6 (Nominal) 218.3 (Maximum)	

Phase	Th Peak Res %	Value
Master		8.099
	5.000 (Minimum) 7.000 (Nominal) 9.000 (Maximum)	

Phase	Background Count Rate CPS	Value
Master		21.35

Phase	Gain Ratio	Value
Master		0.9786

Phase	Na 511 Peak Set Point	Value
Master		41.00
	38.00 (Minimum) 40.00 (Nominal) 42.00 (Maximum)	

Phase	Th Peak Loc	Value
Master		207.3
	201.0 (Minimum) 209.6 (Nominal) 218.3 (Maximum)	

Phase	Th Peak Res %	Value
Master		8.237
	5.000 (Minimum) 7.000 (Nominal) 9.000 (Maximum)	

Phase	Background Count Rate CPS	Value
Master		22.15
	20.00 (Minimum) 142.5 (Nominal) 265.0 (Maximum)	

Phase	Gain Ratio	Value
Master		0.9731
	0.9400 (Minimum) 1.000 (Nominal) 1.060 (Maximum)	

Master: 4-May-2005 10:06

Hostile Natural Gamma Ray Sonde Master Calibration

Detector 2 Calibration

Phase	Na 511 Peak Set Point	Value
Master		41.00
	38.00 (Minimum) 40.00 (Nominal) 42.00 (Maximum)	

Phase	Th Peak Loc	Value
Master		207.3
	201.0 (Minimum) 209.6 (Nominal) 218.3 (Maximum)	

Phase	Th Peak Res %	Value
Master		8.237
	5.000 (Minimum) 7.000 (Nominal) 9.000 (Maximum)	

Phase	Background Count Rate CPS	Value
Master		22.15
	20.00 (Minimum) 142.5 (Nominal) 265.0 (Maximum)	

Phase	Gain Ratio	Value
Master		0.9731
	0.9400 (Minimum) 1.000 (Nominal) 1.060 (Maximum)	

Master: 4-May-2005 10:06

Company: Lamont Doherty

Schlumberger

Well: Expedition 307 Site U1317D

Field: Porcupine Basin Carbonate Mounds

Rig: Joides Resolution

Country: Ireland

Hostile Natural Gamma Ray