Schlumberger

Company: Lamont Doherty

Well: ODP Leg 204, Site 1245 E
Field: Hydrate Ridge
Ocean: Pacific State: Oregon

Ocean: Pacific
Field: Hydrate Ridge
Location: N 44* 35.1708'
Well: ODP Leg 204, Site 1245 E
Company: Lamont Doherty

HLDT/APS
Porosity
Natural Gamma Ray

LOCATION

N 44* 35.1708'
W 125* 8.9627'

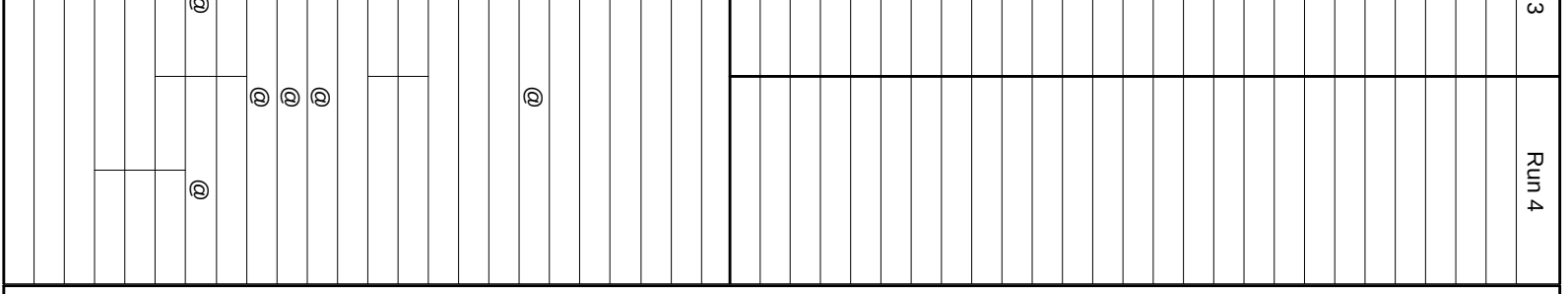
Elev.: K.B. 11.3 m
G.L. -882 m
D.F. 11 m

Permanent Datum: MSL — Elev.: 0 m
Log Measured From: RKB — 11.3 m above Perm. Datum
Drilling Measured From: RKB

API Serial No.	Max. Hole Devi.	Longitude	Latitude

	Run 1	Run 2	Run
Logging Date	14-Aug-2002		
Run Number	1		
Depth Driller	1421 m		
Schlumberger Depth	1201 m		
Bottom Log Interval	1188 m		
Top Log Interval	883 m		
Casing Driller Size @ Depth	0.000 in @ 956 m	@	
Casing Schlumberger	956 m		
Bit Size	9.875 in		
Type Fluid In Hole	Salt water/ Sepiolite		
MUD Density / Viscosity	1.1 g/cm3		
MUD Fluid Loss / PH			
MUD Source Of Sample	Mudpit		
RM @ Measured Temperature	0.322 ohm.m @ 27 degC	@	
RMF @ Measured Temperature	@	@	
RMC @ Measured Temperature	@	@	
Source RMF / RMC			
RM @ MRT / RMF @ MRT	0.402 @ 17	@ 17 @	@
Maximum Recorded Temperatures	17 degC		
Circulation Stopped / Time	14-Aug-2002	18:00	
Logger On Bottom / Time	14-Aug-2002	21:53	
Unit Number / Location	99 Houston		
Recorded By	K. Swain		
Witnessed By	G. Guerin, S. Barr, T. Collett		

	Run 1	Run 2	Run
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			



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	OTHER SERVICES2
OS1: IPL	OS1:
OS2: FMS/DSST	OS2:
OS3: VSI	OS3:
OS4:	OS4:
OS5:	OS5:

REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Depths in meters below rig floor, mbrf.	
Rig stuck at 1232 mbrf but became free, logging TD at 1201 mbrf.	
Drill pipe SLB at 956 mbrf.	
Sea floor SLB at 883 mbrf.	

RUN 1

SERVICE ORDER #:
PROGRAM VERSION: 10C0-306
FLUID LEVEL:

LOGGED INTERVAL	START	STOP

RUN 2

SERVICE ORDER #:
PROGRAM VERSION:
FLUID LEVEL:

LOGGED INTERVAL	START	STOP

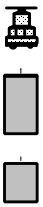
EQUIPMENT DESCRIPTION

RUN 1

SURFACE EQUIPMENT

SFT-281 24
SFT-178 4722
GSR-U 135
WITM (DTS)-A

DOWNHOLE EQUIPMENT



LEH-QT 34.84
LEH-QT 1497

AH-QSST 33.95
AH-QSST 12

DTC-H 32.58
ECH-KC 9841
CTEM
TelStatus 32.30
ToolStatu 31.66

RUN 2

ECH-KC 9841

HNGS-BA 31.66
HNGS-BA 77
HNSH-BA 79
Upper_1 30.96
Lower_2 30.75

ILE-D 29.16
ILE-D 25
Status
Minitron
Near TD

APS-BA 26.73
APS-BA 22
APH-AC 22
MNTR-F 4185
Near Arr
Near 24.28
Far Arr 24.20
Far 24.08
Far TD 23.98

NPLC-B 22.78
NPLC-B 79
NPH-B 82
Status 21.56

DTA-A 20.34
ECH-KE 8231

HLDT-A 19.12
GSR-Z 1846
HLDC-AA 11
HLDV-A 10
HLDS-B 10
HLDP-B 10
HEH-G 11
HEH-H 12
LS 13.17
SS 13.05
Caliper 13.00

DIT-E 12.24
DIC-EB 438
MIH-ZA 417
DIS-HB 442
SP 5.86
Deep Ind 5.61
Aux Meas SFL 4.69
Med Ind 4.54
Status 2.71

AH-TAP 2.71
AH-TAP
DF
Tension HV 0.00

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_008LUP	FN:9	PRODUCER	14-Aug-2002 21:49	1202.4 M	858.6 M
REDUCE	PI_LDL_APS_NGS_008LUP	FN:10	PRODUCER	14-Aug-2002 21:49	1202.4 M	858.6 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

HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 100

APS Effective Standoff in Limestone (STOF)
-1 (IN) 4

Bulk Density (RHOB)
3 (G/C3) 1

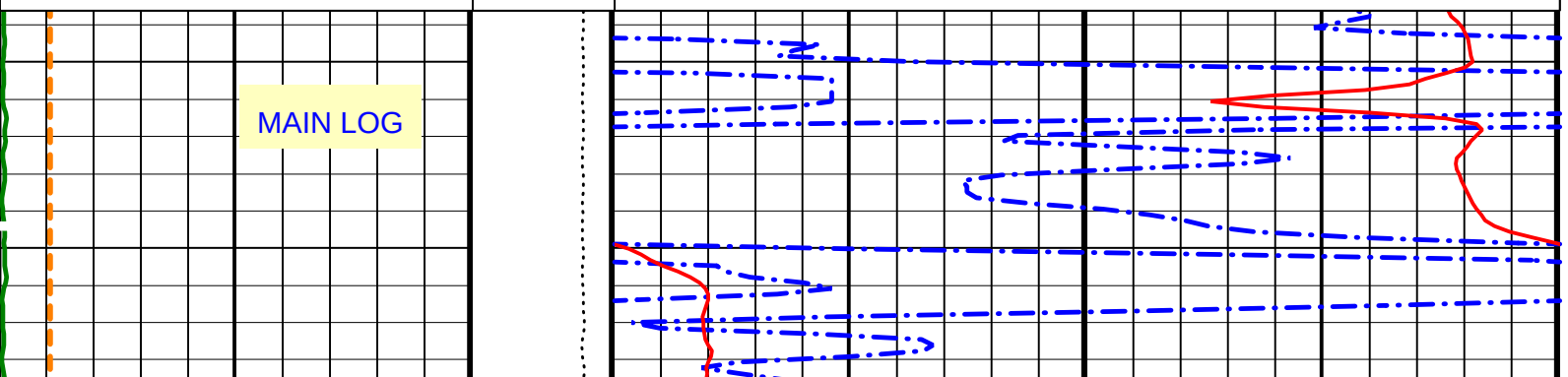
PhotoElectric Factor (PEF)
0 (---) 10

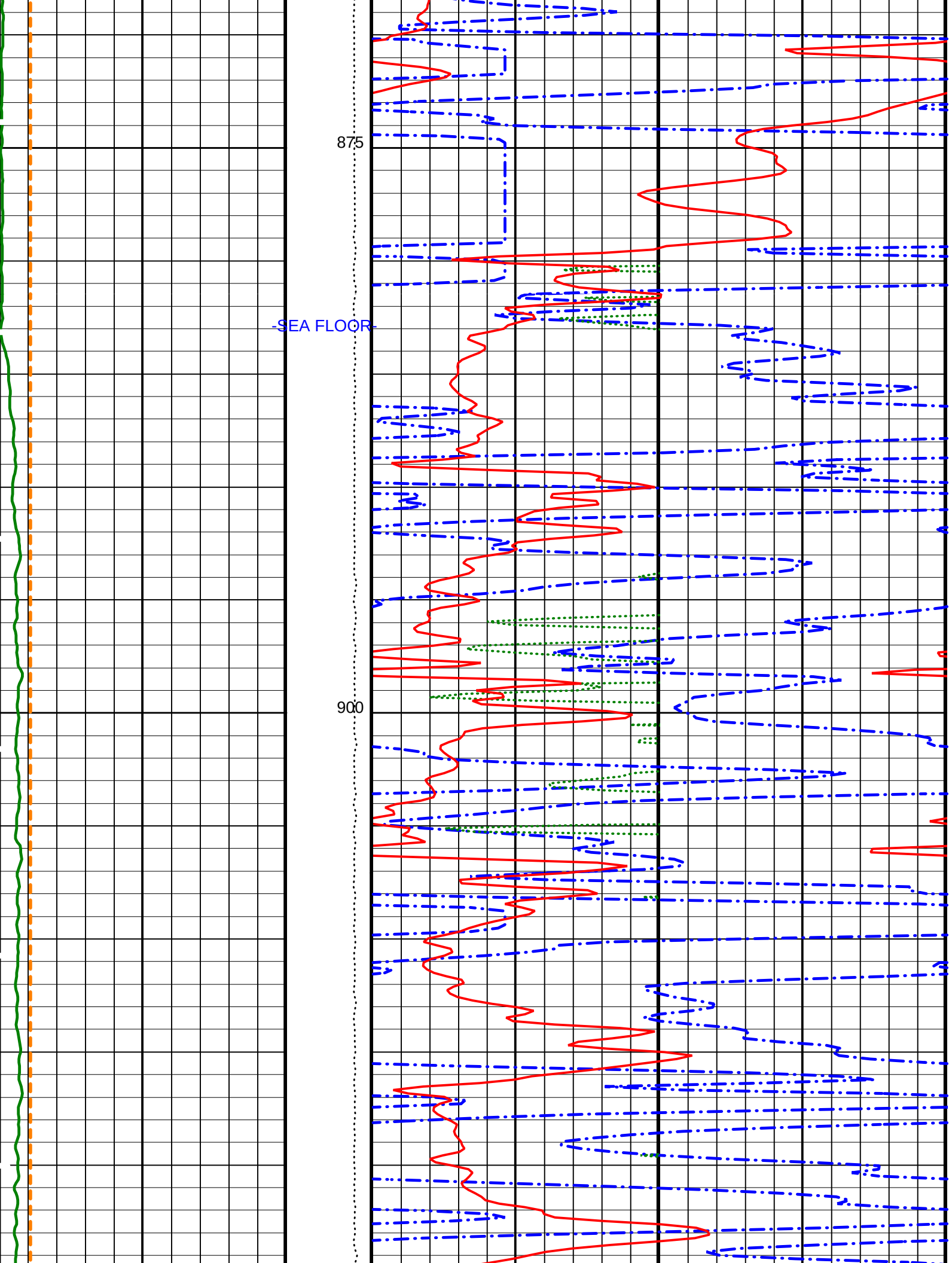
Bulk Density Correction (DRHO)
-0.25 (G/C3) 0.25

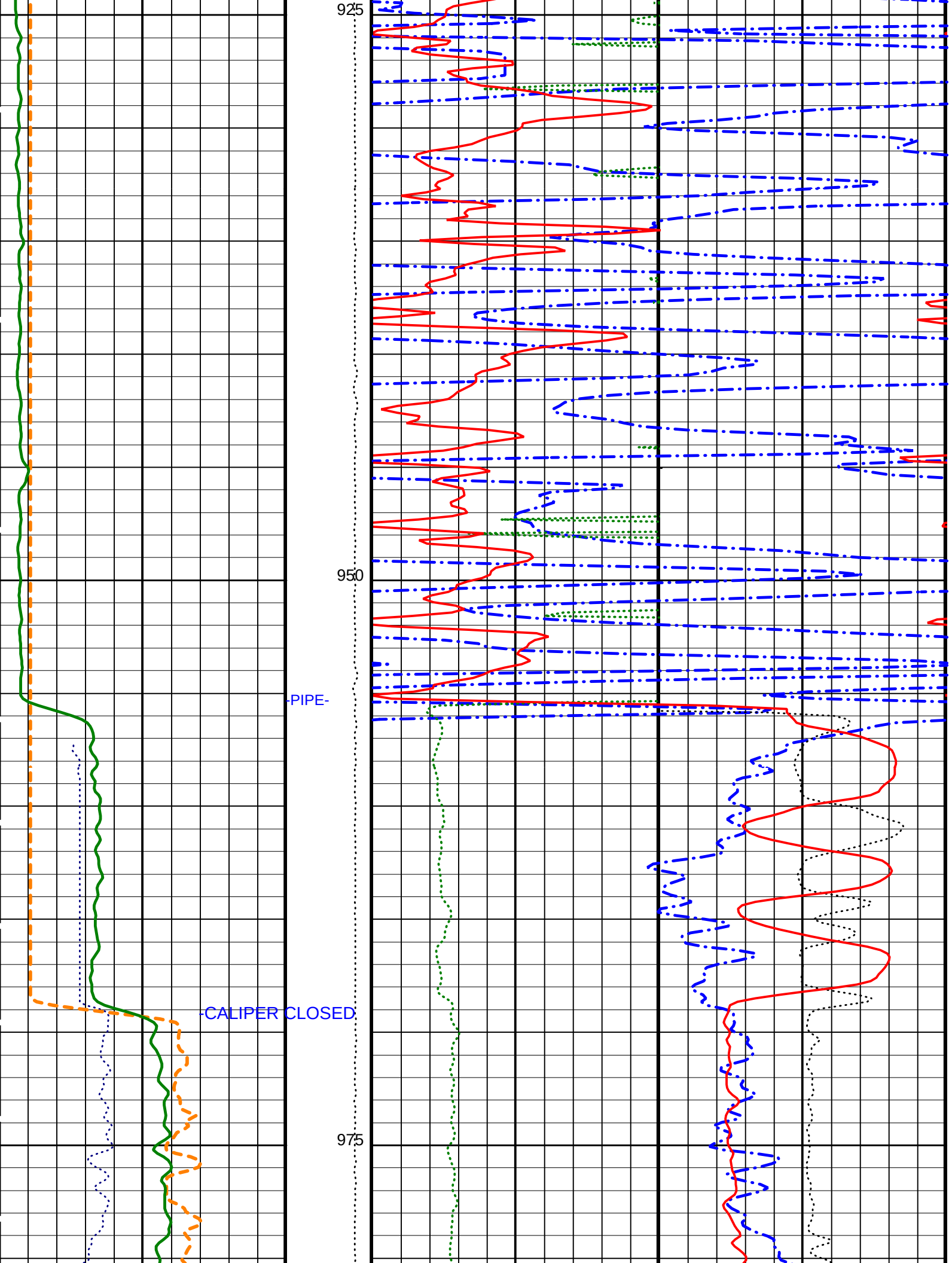
Caliper (CALI)
0 (IN) 20

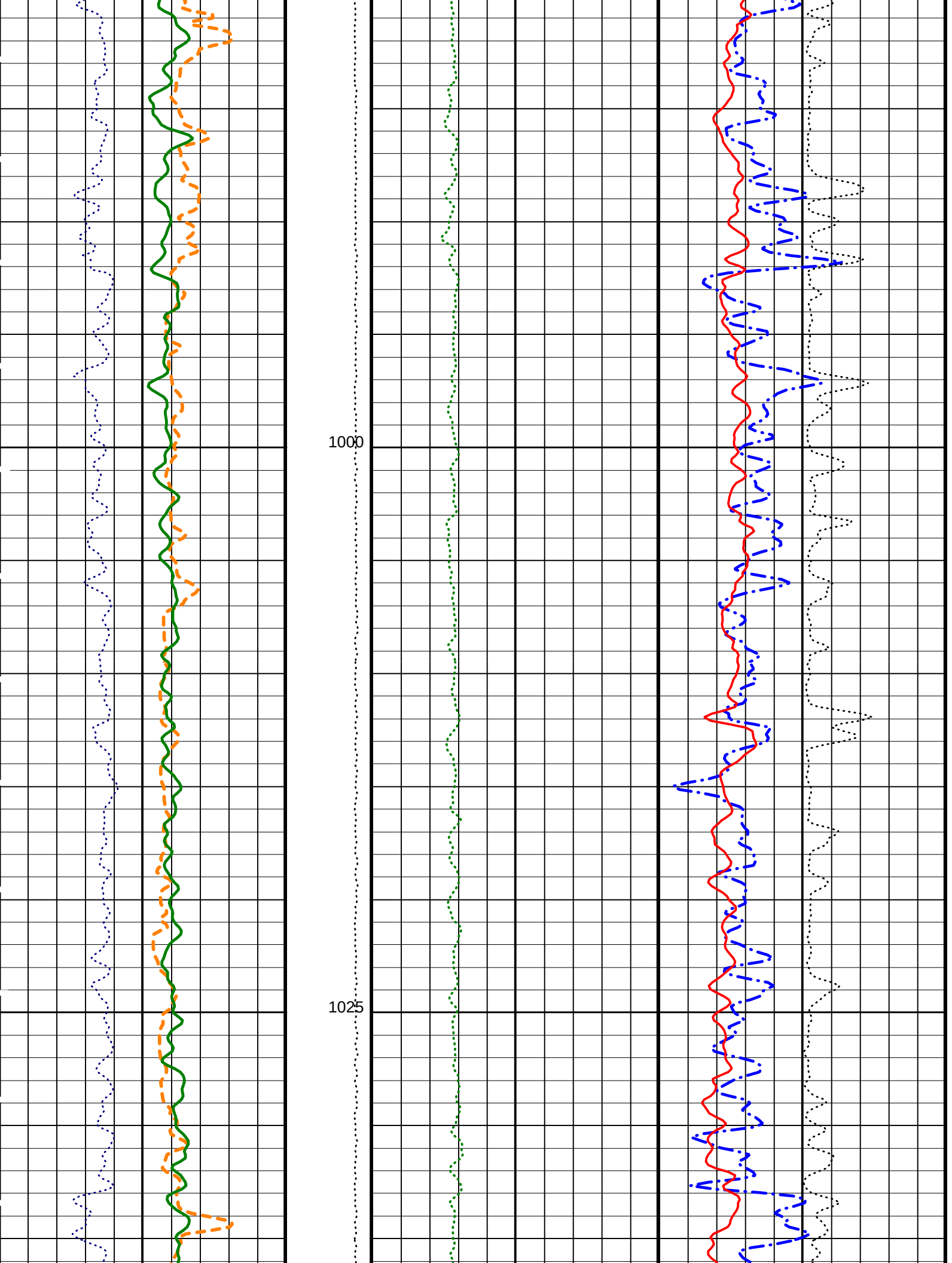
Tension (TENS) (LBF)
10000 0

APS Near/Array Corrected Limestone Porosity (APLC)
0 (PU) 100




875
-SEA FLOOR-
900


925
950
975
-PIPE-
-CALIPER CLOSED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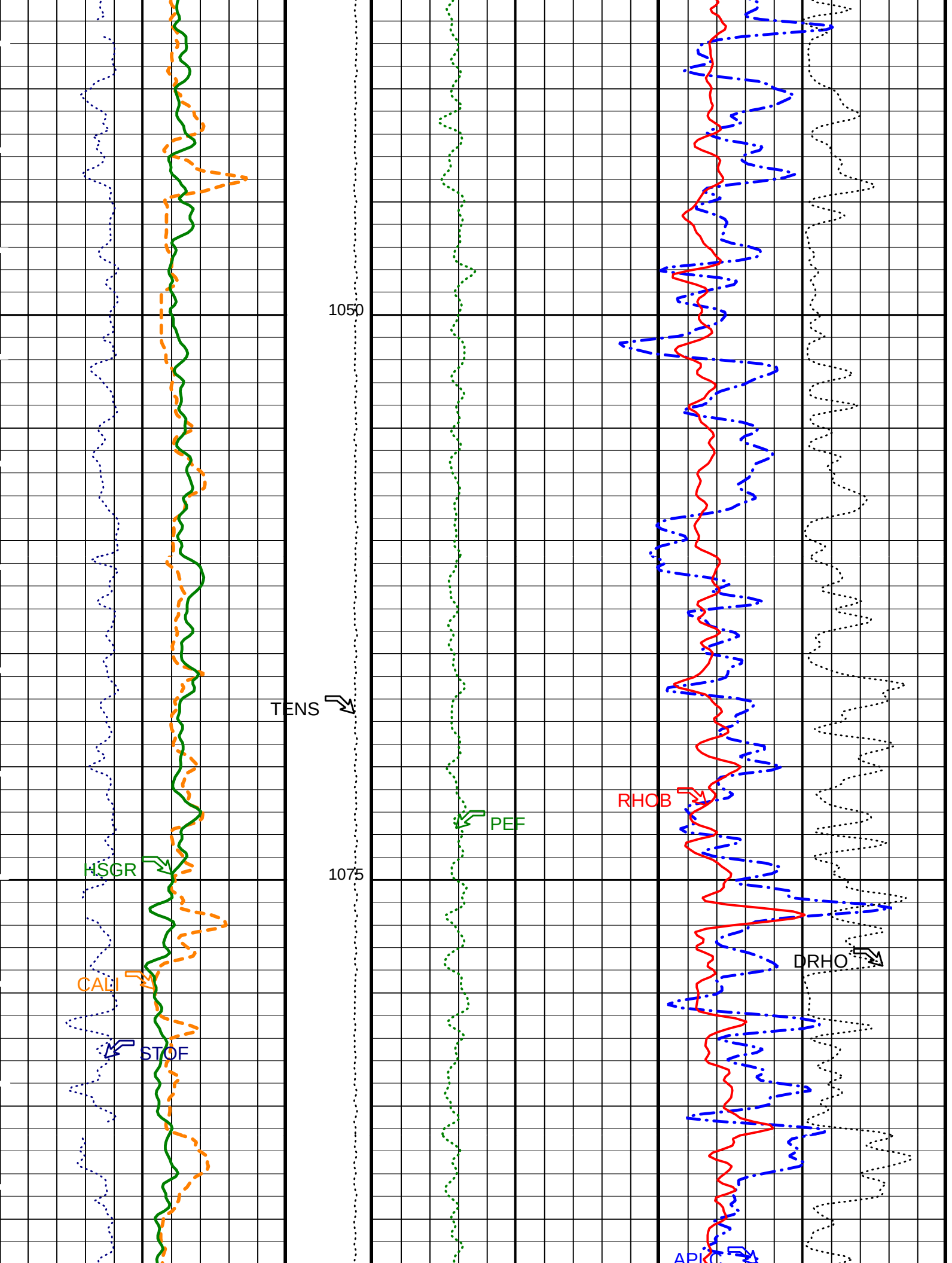
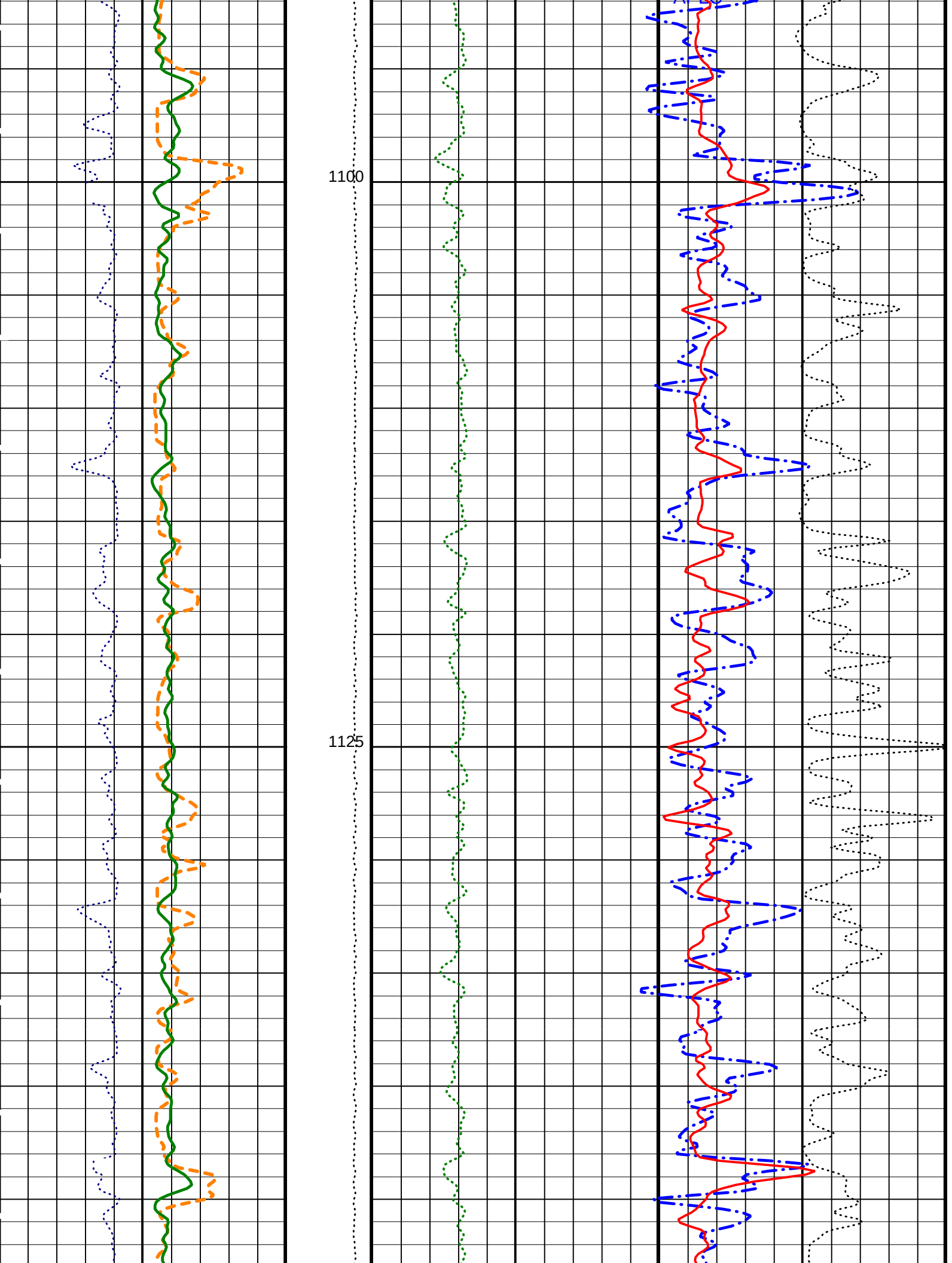
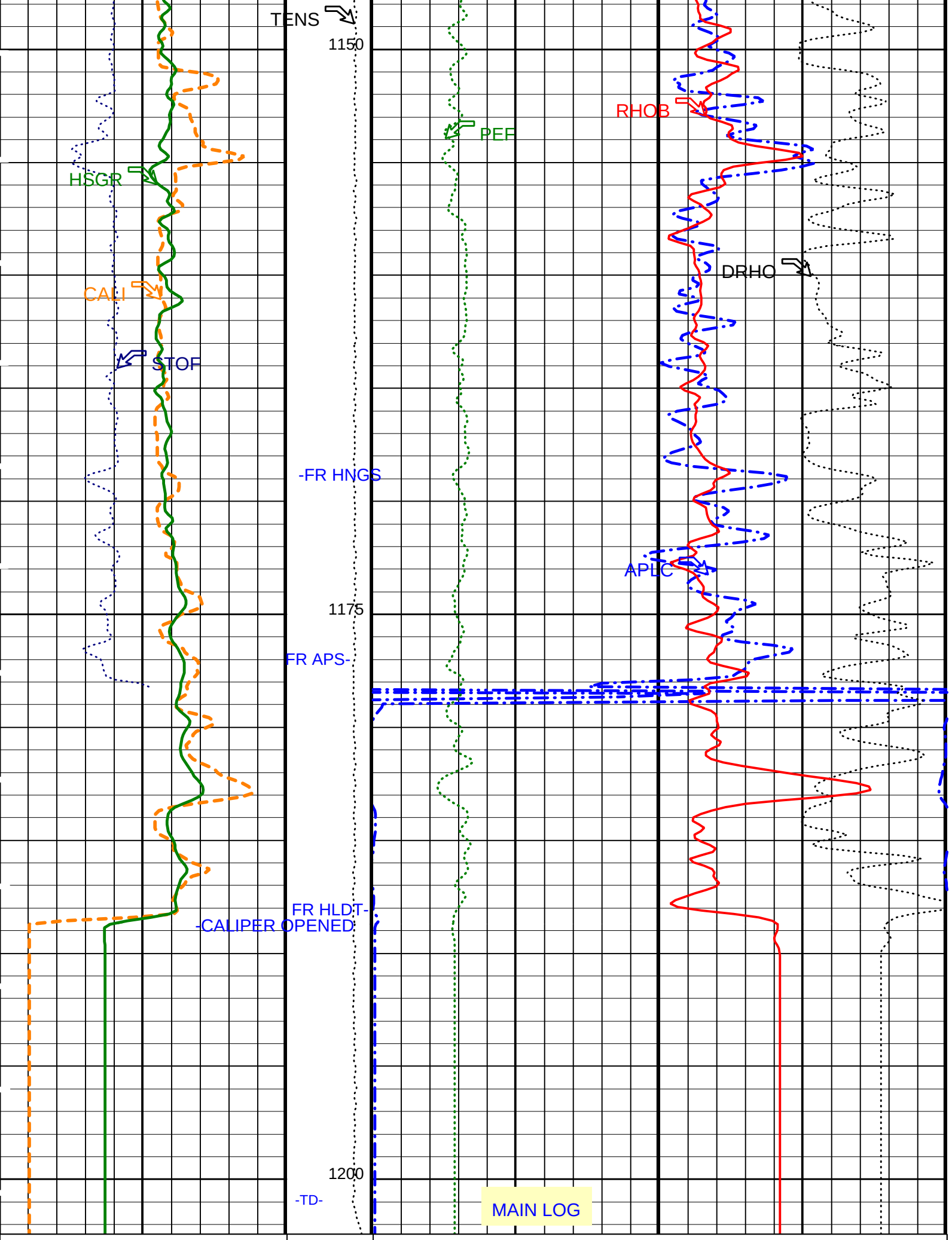
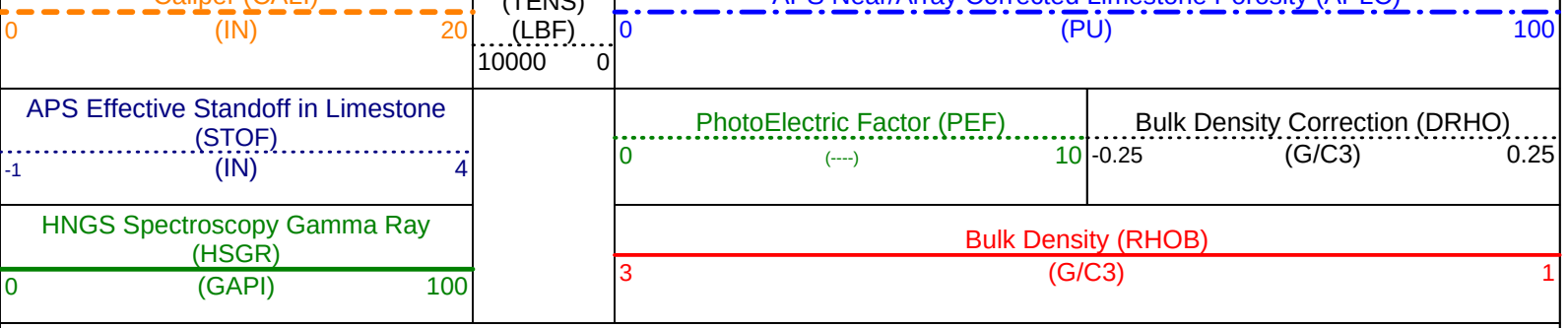

1050
TENS
PEF
RHOB
HSGR
1075
DRHO
CALI
STOF


1100
1125


TENS
1150
RHOB
PEF
HSGR
DRHO
CALI
STOF
-FR HNGS
APLC
1175
FR APS-
FR HLDT-
-CALIPER OPENED-
1200
-TD-
MAIN LOG
Caliper (CALI)
Tension
(TENS)
APS Near/Array Corrected Limestone Porosity (APLC)



Parameters

DLIS Name	Description	Value	
	DIT-E: Dual Induction - E		
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	12	DEGC
DGF1	Deep 10 kHz Gain Factor	0.995593	
DGF2	Deep 20 kHz Gain Factor	1.00789	
DGF4	Deep 40 kHz Gain Factor	1.02614	
DPH1	Deep 10 kHz Phase Shift	0.114289	DEG
DPH2	Deep 20 kHz Phase Shift	-0.152394	DEG
DPH4	Deep 40 kHz Phase Shift	-1.42629	DEG
DRE1	Deep Real 10 kHz Sonde Error Correction	44.9501	MM/M
DRE2	Deep Real 20 kHz Sonde Error Correction	16.357	MM/M
DRE4	Deep Real 40 kHz Sonde Error Correction	4.69026	MM/M
DRIM	DIT-E Radial Invasion Mode	Rxo>Rt	
DSR1	Deep Sigma Reference (10 kHz)	7637	MM/M
DSR2	Deep Sigma Reference (20 kHz)	1843	MM/M
DSR4	Deep Sigma Reference (40 kHz)	405	MM/M
DSTA	DIT-E Transversal Standoff	0	IN
DXE1	Deep Quad 10 kHz Sonde Error Correction	108.903	MM/M
DXE2	Deep Quad 20 kHz Sonde Error Correction	64.6326	MM/M
DXE4	Deep Quad 40 kHz Sonde Error Correction	46.096	MM/M
GCSE	Generalized Caliper Selection	CALI	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
IFRS	DIT-E Induction Frequency Selector	20	
IPHA	DIT-E Phasor Processing Mode	ALL	
IPRO	DIT-E Induction Processing Selector	PHASOR	
ITEN	DIT-E Temperature Enable	ENABLE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MGF1	Medium 10 kHz Gain Factor	1.02182	
MGF2	Medium 20 kHz Gain Factor	1.02964	
MGF4	Medium 40 kHz Gain Factor	1.06122	
MPH1	Medium 10 kHz Phase Shift	-0.255819	DEG
MPH2	Medium 20 kHz Phase Shift	-0.933067	DEG
MPH4	Medium 40 kHz Phase Shift	-2.46117	DEG
MRE1	Medium Real 10 kHz Sonde Error Correction	20.7292	MM/M
MRE2	Medium Real 20 kHz Sonde Error Correction	-1.78642	MM/M
MRE4	Medium Real 40 kHz Sonde Error Correction	-10.4594	MM/M
MSR1	Medium Sigma Reference (10 kHz)	13520	MM/M
MSR2	Medium Sigma Reference (20 kHz)	3250	MM/M
MSR4	Medium Sigma Reference (40 kHz)	685	MM/M
MXE1	Medium Quad 10 kHz Sonde Error Correction	-105.752	MM/M
MXE2	Medium Quad 20 kHz Sonde Error Correction	-34.2041	MM/M
MXE4	Medium Quad 40 kHz Sonde Error Correction	11.4521	MM/M
SBR	Shoulder Bed Resistivity Factor	1	OHMM
SFCR	SFL Channel Ratio	1000	
SFLE	SFL Enable	ENABLE	
SHT	Surface Hole Temperature	20	DEGC
SPAE	DIT-E SPARC Processing Enable	ENABLE	
SPNV	SP Next Value	0	MV
	HLDT-A: Hostile Environment Litho Density - A		
BFM	Borehole Fluid Medium	LIQUID	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
FD	Fluid Density	1	G/C3
LSHC	LS Hardware Loop Control	DISALLOW	
MDEN	Matrix Density	2.71	G/C3
QPPS	Quicklook Processing Pe Select	PEFL	
SSHC	SS Hardware Loop Control	DISALLOW	
WMUD	Mud Weight	1.1	G/C3
	NPLC-B: Nuclear Porosity Lithology Cartridge - B		
NOTS	NPLC Old Temperature Sensor	NO	

NOTS	NPLC Old Temperature Sensor	NO	
APS-BA: Accelerator-Porosity Tool			
	APS Software Version	5	
AASD	APS Thermal and Array Detectors High Voltage Setting	1968.98	V
ABOS	APS Neutron Burst-Off Background Subtraction Switch	ON	
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2052.03	V
AHCS	APS Holesize Correction Source	GCSE	
AHSS	APS Holesize Correction Switch	ON	
AMTY	APS Environmental Corrections Mud Type	WaterBaseBarite	
ANSD	APS Near Detector High Voltage Setting	1748.3	V
AOTS	APS Old Temperature Sensor Switch	NO	
ASOS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	OFF	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	12	DEGC
DPPM	Density Porosity Processing Mode	HIRS	
FSAL	Formation Salinity	-50000	PPM
GCSE	Generalized Caliper Selection	CALI	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
NARC	APS Near/Array Calibration Ratio	1.06555	
NFRC	APS Near/Far Calibration Ratio	0.907568	
SHT	Surface Hole Temperature	20	DEGC
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	
BHT	Bottom Hole Temperature (used in calculations)	12	DEGC
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	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.00234174	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
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	
SHT	Surface Hole Temperature	20	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.96881	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.969517	
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	0.000	IN
CWEI	Casing Weight	0.00	LB/F
DFD	Drilling Fluid Density	1.10	G/C3
MST	Mud Sample Temperature	27.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	-50000	M
TDD	Total Depth - Driller	1421.00	M
TDL	Total Depth - Logger	-50000.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: APSLiquidPorosity_1 Vertical Scale: 1:200 Graphics File Created: 14-Aug-2002 21:49

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

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REDUCE	PI_LDL_APS_NGS_008LUP	FN:10	PRODUCER	14-Aug-2002 21:49	

Output DLIS Files

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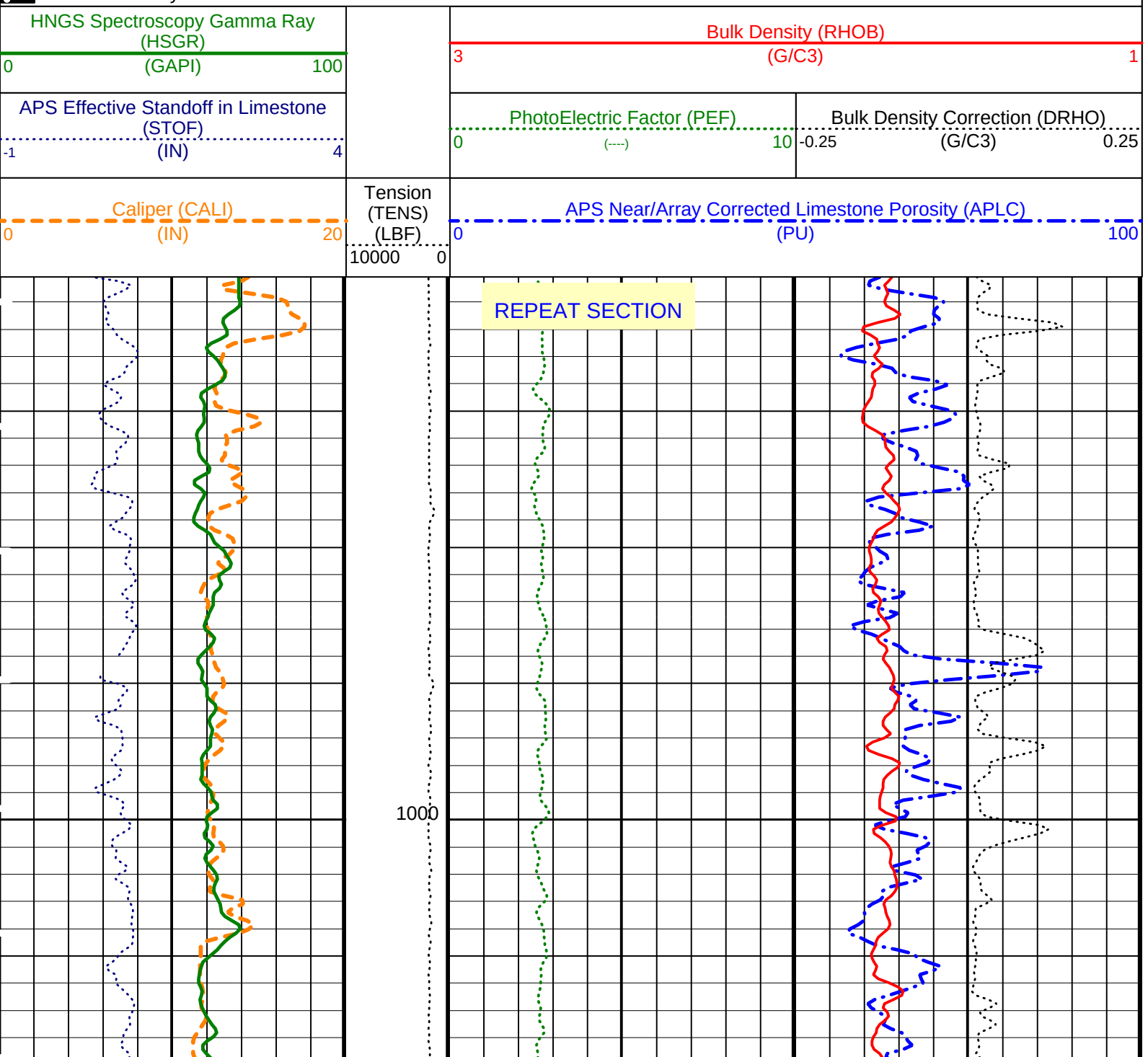
OP System Version: 10C0-306

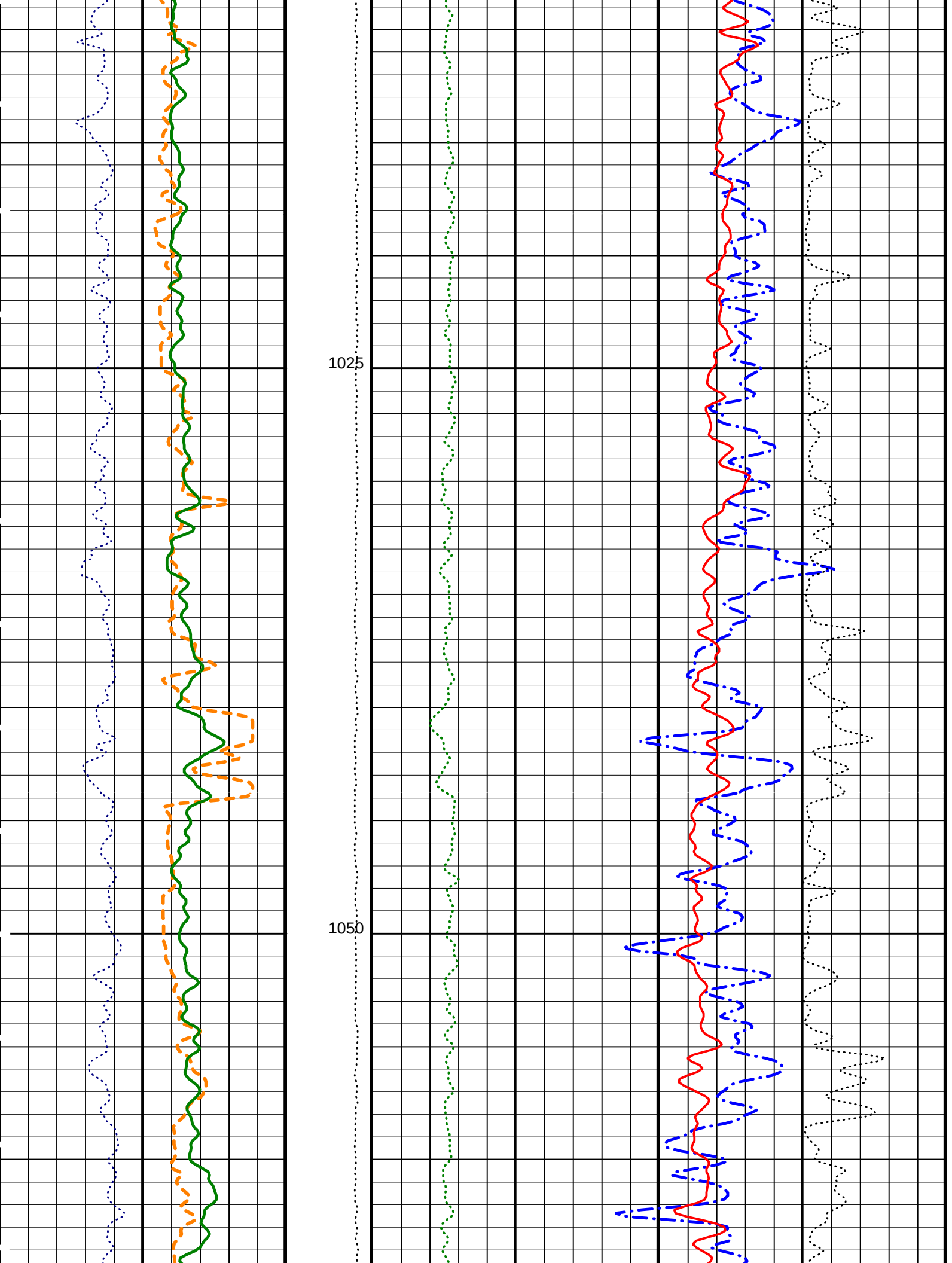
MCM

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

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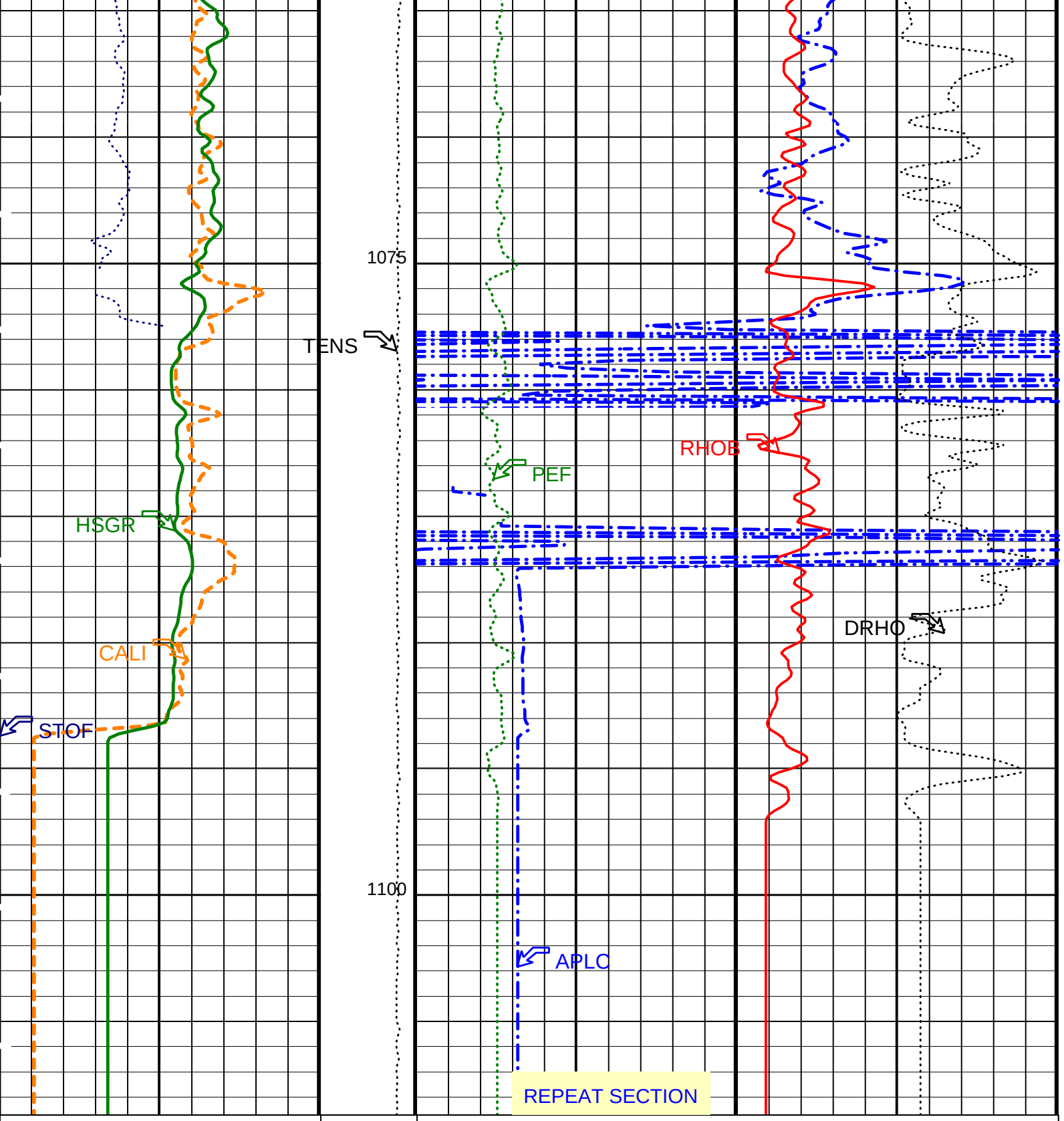

Caliper (CALI)
0 (IN) 20

Tension (TENS) (LBF)
10000 0

APS Near/Array Corrected Limestone Porosity (APLC)
0 (PU) 100

APS Effective Standoff in Limestone (STOF)
-1 (IN) 4

PhotoElectric Factor (PEF)
0 (----) 10

Bulk Density Correction (DRHO)
-0.25 (G/C3) 0.25

HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 100

Bulk Density (RHOB)
3 (G/C3) 1

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	DIT-E: Dual Induction - E		
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	12	DEGC
DGF1	Deep 10 kHz Gain Factor	0.995593	
DGF2	Deep 20 kHz Gain Factor	1.00789	
DGF4	Deep 40 kHz Gain Factor	1.02614	
DPH1	Deep 10 kHz Phase Shift	0.114289	DEG
DPH2	Deep 20 kHz Phase Shift	-0.152394	DEG
DPH4	Deep 40 kHz Phase Shift	-1.42629	DEG
DRE1	Deep Real 10 kHz Sonde Error Correction	44.9501	MM/M
DRE2	Deep Real 20 kHz Sonde Error Correction	16.357	MM/M
DRE4	Deep Real 40 kHz Sonde Error Correction	4.69026	MM/M
DRIM	DIT-E Radial Invasion Mode	Rxo>Rt	
DSR1	Deep Sigma Reference (10 kHz)	7637	MM/M
DSR2	Deep Sigma Reference (20 kHz)	1843	MM/M
DSR4	Deep Sigma Reference (40 kHz)	405	MM/M
DSTA	DIT-E Transversal Standoff	0	IN
DXE1	Deep Quad 10 kHz Sonde Error Correction	108.903	MM/M
DXE2	Deep Quad 20 kHz Sonde Error Correction	64.6326	MM/M
DXE4	Deep Quad 40 kHz Sonde Error Correction	46.096	MM/M
GCSE	Generalized Caliper Selection	CALI	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
IFRS	DIT-E Induction Frequency Selector	20	
IPHA	DIT-E Phasor Processing Mode	ALL	
IPRO	DIT-E Induction Processing Selector	PHASOR	
ITEN	DIT-E Temperature Enable	ENABLE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MGF1	Medium 10 kHz Gain Factor	1.02182	
MGF2	Medium 20 kHz Gain Factor	1.02964	
MGF4	Medium 40 kHz Gain Factor	1.06122	
MPH1	Medium 10 kHz Phase Shift	-0.255819	DEG
MPH2	Medium 20 kHz Phase Shift	-0.933067	DEG
MPH4	Medium 40 kHz Phase Shift	-2.46117	DEG
MRE1	Medium Real 10 kHz Sonde Error Correction	20.7292	MM/M
MRE2	Medium Real 20 kHz Sonde Error Correction	-1.78642	MM/M
MRE4	Medium Real 40 kHz Sonde Error Correction	-10.4594	MM/M
MSR1	Medium Sigma Reference (10 kHz)	13520	MM/M
MSR2	Medium Sigma Reference (20 kHz)	3250	MM/M
MSR4	Medium Sigma Reference (40 kHz)	685	MM/M
MXE1	Medium Quad 10 kHz Sonde Error Correction	-105.752	MM/M
MXE2	Medium Quad 20 kHz Sonde Error Correction	-34.2041	MM/M
MXE4	Medium Quad 40 kHz Sonde Error Correction	11.4521	MM/M
SBR	Shoulder Bed Resistivity Factor	1	OHMM
SFCR	SFL Channel Ratio	1000	
SFLE	SFL Enable	ENABLE	
SHT	Surface Hole Temperature	20	DEGC
SPAE	DIT-E SPARC Processing Enable	ENABLE	
SPNV	SP Next Value	0	MV
	HLDT-A: Hostile Environment Litho Density - A		
BFM	Borehole Fluid Medium	LIQUID	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
FD	Fluid Density	1	G/C3
LSHC	LS Hardware Loop Control	DISALLOW	
MDEN	Matrix Density	2.71	G/C3
QPPS	Quicklook Processing Pe Select	PEFL	
SSHC	SS Hardware Loop Control	DISALLOW	
WMUD	Mud Weight	1.1	G/C3
	NPLC-B: Nuclear Porosity Lithology Cartridge - B		
NOTS	NPLC Old Temperature Sensor	NO	
	APS-BA: Accelerator-Porosity Tool		
	APS Software Version	5	
AASD	APS Thermal and Array Detectors High Voltage Setting	1968.98	V
ABOS	APS Neutron Burst-Off Background Subtraction Switch	ON	
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2052.03	V
AHCS	APS Holesize Correction Source	GCSE	
AHSS	APS Holesize Correction Switch	ON	
AMTY	APS Environmental Corrections Mud Type	WaterBaseBarite	
ANSD	APS Near Detector High Voltage Setting	1748.3	V
AOTS	APS Old Temperature Sensor Switch	NO	
ASOS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	OFF	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	12	DEGC
DPPM	Density Porosity Processing Mode	HIRS	

DPPM	Density Porosity Processing Mode	HIRS	
FSAL	Formation Salinity	-50000	PPM
GCSE	Generalized Caliper Selection	CALI	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
NARC	APS Near/Array Calibration Ratio	1.06555	
NFRC	APS Near/Far Calibration Ratio	0.907568	
SHT	Surface Hole Temperature	20	DEGC
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	
BHT	Bottom Hole Temperature (used in calculations)	12	DEGC
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	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.00989776	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
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	
SHT	Surface Hole Temperature	20	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.949044	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.95209	
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	0.000	IN
CWEI	Casing Weight	0.00	LB/F
DFD	Drilling Fluid Density	1.10	G/C3
MST	Mud Sample Temperature	27.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	-50000	M
TDD	Total Depth - Driller	1421.00	M
TDL	Total Depth - Logger	-50000.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: APSLiquidPorosity_1 Vertical Scale: 1:200 Graphics File Created: 15-Aug-2002 00:38

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_021LUP	FN:23	PRODUCER	15-Aug-2002 00:38
REDUCE	PI_LDL_APS_NGS_021LUP	FN:24	PRODUCER	15-Aug-2002 00:38

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Hostile Environment Litho Density - A Wellsite Calibration - Background Measurement							

Hostile Environment Litho Density - A Wellsite Calibration - Background Measurement
Master: 10-Aug-2002 14:41 Before: 10-Aug-2002 18:55 After: 15-Aug-2002 2:56

LSW1 Background	100.0	87.71	86.31	87.71	1.398	3.000	CPS
LSW2 Background	105.0	92.23	90.58	91.79	1.215	3.150	CPS
LSW3 Background	210.0	178.9	175.1	178.6	3.453	6.300	CPS
LSW4 Background	290.0	237.2	235.2	234.3	-0.9699	8.700	CPS
LSW5 Background	610.0	515.8	517.0	519.4	2.378	18.30	CPS
SSW1 Background	100.0	85.59	83.89	84.14	0.2507	3.000	CPS
SSW2 Background	200.0	165.7	167.5	166.4	-1.033	6.000	CPS
SSW3 Background	530.0	437.0	438.4	438.7	0.2879	15.90	CPS
SSW4 Background	280.0	232.7	231.4	232.2	0.7736	8.400	CPS
SSW5 Background	205.0	174.6	172.9	175.0	2.156	6.150	CPS

Hostile Environment Litho Density - A Wellsite Calibration - Tool Quality Control Information High Voltage
Master: 10-Aug-2002 14:41 Before: 10-Aug-2002 18:55 After: 15-Aug-2002 2:56

LS Bkg. High Voltage	1131	1131	1134	1131	-3.002	N/A	V
SS Bkg. High Voltage	1175	1175	1176	1172	-4.523	N/A	V

Hostile Environment Litho Density - A Wellsite Calibration - Detectors Resolution From BKG Measurments
Master: 10-Aug-2002 14:41 Before: 10-Aug-2002 18:55 After: 15-Aug-2002 2:56

LS Background Resolution	1.000	1.033	1.043	1.028	-0.01519	N/A	
SS Background Resolution	1.000	0.9460	0.9414	0.9424	0.0009627	N/A	

Hostile Environment Litho Density - A Wellsite Calibration - Caliper Calibration
Before: 10-Aug-2002 19:49

Caliper Small Ring	12.00	N/A	17.12	N/A	N/A	N/A	IN
Caliper Large Ring	15.30	N/A	21.12	N/A	N/A	N/A	IN

Hostile Environment Litho Density - A Master Calibration - Aluminum Measurement
Master: 10-Aug-2002 15:00

LSW1 Aluminum	648.4	570.7	--	--	--	--	CPS
LSW2 Aluminum	1018	918.2	--	--	--	--	CPS
LSW3 Aluminum	1105	980.5	--	--	--	--	CPS
LSW4 Aluminum	609.5	545.9	--	--	--	--	CPS
LSW5 Aluminum	533.8	491.9	--	--	--	--	CPS
SSW1 Aluminum	2664	2470	--	--	--	--	CPS
SSW2 Aluminum	7731	7217	--	--	--	--	CPS
SSW3 Aluminum	10380	9702	--	--	--	--	CPS
SSW4 Aluminum	4574	4233	--	--	--	--	CPS
SSW5 Aluminum	745.2	702.7	--	--	--	--	CPS

Hostile Environment Litho Density - A Master Calibration - Tool Quality Control Information: High Voltage
Master: 10-Aug-2002 15:00

LS Alum. High Voltage	1131	1131	--	--	--	--	V
SS Alum. High Voltage	1175	1165	--	--	--	--	V

Hostile Environment Litho Density - A Master Calibration - Detectors Resolution From Aluminum Measurment
Master: 10-Aug-2002 15:00

LS Aluminum Resolution	1.000	1.052	--	--	--	--	
SS Aluminum Resolution	1.000	1.027	--	--	--	--	

Hostile Environment Litho Density - A Master Calibration - Aluminum Measurement (Window Ratios)
Master: 10-Aug-2002 15:00

LSW1/(LSW4 + LSW5) Calc.	0.5400	0.5499	--	--	--	--	
LSW3/(LSW4 + LSW5) Calc.	0.9600	0.9448	--	--	--	--	
SSW1/(SSW4 + SSW5) Calc.	0.4600	0.5004	--	--	--	--	
SSW3/(SSW4 + SSW5) Calc.	1.900	1.966	--	--	--	--	

Hostile Environment Litho Density - A Master Calibration - Litholog Measurement
Master: 10-Aug-2002 15:09

LSW1 Iron	410.0	396.5	--	--	--	--	CPS
LSW2 Iron	870.0	759.6	--	--	--	--	CPS
LSW3 Iron	1030	893.2	--	--	--	--	CPS
LSW4 Iron	590.0	509.0	--	--	--	--	CPS
LSW5 Iron	530.0	459.6	--	--	--	--	CPS
SSW1 Iron	1850	1829	--	--	--	--	CPS
SSW2 Iron	6500	6168	--	--	--	--	CPS
SSW3 Iron	10000	9026	--	--	--	--	CPS
SSW4 Iron	4500	3956	--	--	--	--	CPS
SSW5 Iron	750.0	628.4	--	--	--	--	CPS

Hostile Environment Litho Density - A Master Calibration - Tool Quality Control Information: High Voltage
Master: 10-Aug-2002 15:09

LS Lith High Voltage	1131	1131	--	--	--	--	V
SS Lith High Voltage	1175	1164	--	--	--	--	V

Hostile Environment Litho Density - A Master Calibration - Detectors Resolution From Litholog Measurment
Master: 10-Aug-2002 15:09

LS Lith Resolution	1.000	1.039	--	--	--	--	
SS Lith Resolution	1.000	1.013	--	--	--	--	

Accelerator-Porosity Tool Wellsite Calibration - Detector Background

Master: 24-Jul-2002 3:08 Before: 14-Aug-2002 22:54 After: 15-Aug-2002 2:20

Near Det Bkg Cntrate	30.00	32.30	33.22	32.70	-0.5201	N/A	CPS
Far Det Bkg Cntrate	30.00	33.62	33.08	33.29	0.2117	N/A	CPS
Array-1 Det Bkg Cntrate	30.00	28.88	29.55	29.79	0.2428	N/A	CPS
Array-2 Det Bkg Cntrate	30.00	29.64	31.18	29.71	-1.475	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	32.75	35.03	33.48	-1.550	N/A	CPS

Accelerator-Porosity Tool Wellsite Calibration - Calibration Ratios

Master: 24-Jul-2002 3:08

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 3:09

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 21:08 Before: 24-Jul-2002 6:59 After: 15-Aug-2002 3:01

Na 511 Peak Loc	40.00	40.59	40.60	40.56	-0.03789	1.000	
Na 511 Peak Res	15.50	16.79	16.89	16.56	-0.3257	2.000	%
High Voltage	1150	1224	1220	1219	-1.032	30.00	V
Na 1785 Peak Loc	142.6	145.1	146.3	145.7	-0.5972	7.000	
Na 1785 Peak Res	8.500	10.40	8.694	8.617	-0.07694	2.000	%
Temperature	15.50	24.98	22.43	22.28	-0.1454	N/A	DEGC
Na Count Rate	45.00	50.31	49.89	49.07	-0.8164	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 2 Check

Master: 12-Jul-2002 21:08 Before: 24-Jul-2002 6:59 After: 15-Aug-2002 3:01

Na 511 Peak Loc	40.00	40.58	40.59	40.53	-0.06694	1.000	
Na 511 Peak Res	15.50	16.72	16.53	16.72	0.1935	2.000	%
High Voltage	1150	1253	1250	1245	-4.557	30.00	V
Na 1785 Peak Loc	142.6	144.7	144.3	144.5	0.1626	7.000	
Na 1785 Peak Res	8.500	9.766	9.897	8.738	-1.159	2.000	%
Temperature	15.50	24.15	21.87	22.37	0.5064	N/A	DEGC
Na Count Rate	45.00	50.19	49.39	48.82	-0.5724	8.000	CPS

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

Master: 12-Jul-2002 21:08 Before: 24-Jul-2002 6:59 After: 15-Aug-2002 3:01

Coincidence Count Rate Ratio	1.000	1.004	1.010	1.006	-0.003504	0.05000	

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

Hostile Environment Litho Density - A Wellsite Calibration

Background Measurement

Phase	LSW1 Background CPS	Value
Master		87.71
Before		86.31
After		87.71

65.00 (Minimum) 100.0 (Nominal) 125.0 (Maximum)

Phase	LSW2 Background CPS	Value
Master		92.23
Before		90.58
After		91.79

70.00 (Minimum) 105.0 (Nominal) 130.0 (Maximum)

Phase	LSW3 Background CPS	Value
Master		178.9
Before		175.1
After		178.6

150.0 (Minimum) 210.0 (Nominal) 250.0 (Maximum)

Phase	LSW4 Background CPS	Value
Master		237.2
Before		235.2
After		234.3

220.0 (Minimum) 290.0 (Nominal) 330.0 (Maximum)

Phase	LSW5 Background CPS	Value
Master		515.8
Before		517.0
After		519.4

430.0 (Minimum) 610.0 (Nominal) 730.0 (Maximum)

Phase	SSW1 Background CPS	Value
Master		85.59
Before		83.89
After		84.14

70.00 (Minimum) 100.0 (Nominal) 120.0 (Maximum)

Phase	SSW2 Background CPS	Value
Master		165.7
Before		167.5
After		166.4

140.0 (Minimum) 200.0 (Nominal) 240.0 (Maximum)

Phase	SSW3 Background CPS	Value
Master		437.0
Before		438.4
After		438.7

380.0 (Minimum) 530.0 (Nominal) 630.0 (Maximum)

Phase	SSW4 Background CPS	Value
Master		232.7
Before		231.4
After		232.2

190.0 (Minimum) 280.0 (Nominal) 340.0 (Maximum)

Phase	SSW5 Background CPS	Value
Master		174.6
Before		172.9
After		175.0

140.0 (Minimum) 205.0 (Nominal) 250.0 (Maximum)

Master: 10-Aug-2002 14:41 Before: 10-Aug-2002 18:55 After: 15-Aug-2002 2:56

Hostile Environment Litho Density - A Wellsite Calibration

Detectors Resolution From BKG Measurments

Phase	LS Background Resolution	Value
Master		1.033
Before		1.043
After		1.028

0.7000 (Minimum) 1.000 (Nominal) 1.111 (Maximum)

Phase	SS Background Resolution	Value
Master		0.9460
Before		0.9414
After		0.9424

0.7000 (Minimum) 1.000 (Nominal) 1.111 (Maximum)

Master: 10-Aug-2002 14:41 Before: 10-Aug-2002 18:55

After: 15-Aug-2002 2:56

Hostile Environment Litho Density - A Master Calibration

Aluminum Measurement

Phase	LSW1 Aluminum CPS	Value
Master		570.7

440.0 (Minimum) 648.4 (Nominal) 840.0 (Maximum)

Phase	LSW2 Aluminum CPS	Value
Master		918.2

840.0 (Minimum) 1018 (Nominal) 1200 (Maximum)

Phase	LSW3 Aluminum CPS	Value
Master		980.5

920.0 (Minimum) 1105 (Nominal) 1280 (Maximum)

Phase	LSW4 Aluminum CPS	Value
Master		545.9

520.0 (Minimum) 609.5 (Nominal) 720.0 (Maximum)

Phase	LSW5 Aluminum CPS	Value
Master		491.9

450.0 (Minimum) 533.8 (Nominal) 670.0 (Maximum)

Phase	SSW1 Aluminum CPS	Value
Master		2470

1850 (Minimum) 2664 (Nominal) 2900 (Maximum)

Phase	SSW2 Aluminum CPS	Value
Master		7217

6200 (Minimum) 7731 (Nominal) 8500 (Maximum)

Phase	SSW3 Aluminum CPS	Value
Master		9702

8750 (Minimum) 10380 (Nominal) 11750 (Maximum)

Phase	SSW4 Aluminum CPS	Value
Master		4233

4000 (Minimum) 4574 (Nominal) 5400 (Maximum)

Phase	SSW5 Aluminum CPS	Value
Master		702.7

570.0 (Minimum) 745.2 (Nominal) 1110 (Maximum)

Master: 10-Aug-2002 15:00

Hostile Environment Litho Density - A Master Calibration
Detectors Resolution From Aluminum Measurment

Phase	LS Aluminum Resolution	Value	Phase	SS Aluminum Resolution	Value
Master		1.052	Master		1.027
	0.7000 (Minimum) 1.000 (Nominal) 1.111 (Maximum)			0.7000 (Minimum) 1.000 (Nominal) 1.111 (Maximum)	

Master: 10-Aug-2002 15:00

Hostile Environment Litho Density - A Master Calibration
Aluminum Measurement (Window Ratios)

Phase	LSW1/(LSW4 + LSW5) Calc.	Value	Phase	LSW3/(LSW4 + LSW5) Calc.	Value
Master		0.5499	Master		0.9448
	0.3400 (Minimum) 0.5400 (Nominal) 0.7400 (Maximum)			0.7600 (Minimum) 0.9600 (Nominal) 1.160 (Maximum)	
Phase	SSW1/(SSW4 + SSW5) Calc.	Value	Phase	SSW3/(SSW4 + SSW5) Calc.	Value
Master		0.5004	Master		1.966
	0.3600 (Minimum) 0.4600 (Nominal) 0.5600 (Maximum)			1.700 (Minimum) 1.900 (Nominal) 2.100 (Maximum)	

Master: 10-Aug-2002 15:00

Hostile Environment Litho Density - A Master Calibration
Litholog Measurement

Phase	LSW1 Iron CPS	Value	Phase	LSW2 Iron CPS	Value	Phase	LSW3 Iron CPS	Value
Master		396.5	Master		759.6	Master		893.2
	310.0 (Minimum) 410.0 (Nominal) 510.0 (Maximum)			660.0 (Minimum) 870.0 (Nominal) 980.0 (Maximum)			810.0 (Minimum) 1030 (Nominal) 1170 (Maximum)	
Phase	LSW4 Iron CPS	Value	Phase	LSW5 Iron CPS	Value	Phase	SSW1 Iron CPS	Value
Master		509.0	Master		459.6	Master		1829
	470.0 (Minimum) 590.0 (Nominal) 670.0 (Maximum)			400.0 (Minimum) 530.0 (Nominal) 620.0 (Maximum)			1400 (Minimum) 1850 (Nominal) 2120 (Maximum)	
Phase	SSW2 Iron CPS	Value	Phase	SSW3 Iron CPS	Value	Phase	SSW4 Iron CPS	Value
Master		6168	Master		9026	Master		3956
	5170 (Minimum) 6500 (Nominal) 7270 (Maximum)			8100 (Minimum) 10000 (Nominal) 11000 (Maximum)			3620 (Minimum) 4500 (Nominal) 5020 (Maximum)	
Phase	SSW5 Iron CPS	Value						
Master		628.4						
	470.0 (Minimum) 750.0 (Nominal) 10100 (Maximum)							

Master: 10-Aug-2002 15:09

Hostile Environment Litho Density - A Master Calibration
Detectors Resolution From Litholog Measurment

Phase	LS Lith Resolution	Value	Phase	SS Lith Resolution	Value
Master		1.039	Master		1.013
	0.7000 (Minimum) 1.000 (Nominal) 1.111 (Maximum)			0.7000 (Minimum) 1.000 (Nominal) 1.111 (Maximum)	

Master: 10-Aug-2002 15:09

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

Accelerator-Porosity Housing	APH - AC	22
APS Calibration Water Tank	SFT - 178	4722
APS Aluminium Calibrator Sleeve	SFT - 281	24

Accelerator-Porosity Tool Wellsite Calibration

Detector Background

Phase	Near Det Bkg Cntrate CPS	Value
Master		32.30
Before		33.22
After		32.70
0 (Minimum)	30.00 (Nominal)	50.00 (Maximum)

Phase	Far Det Bkg Cntrate CPS	Value
Master		33.62
Before		33.08
After		33.29
0 (Minimum)	30.00 (Nominal)	50.00 (Maximum)

Phase	Array-1 Det Bkg Cntrate CPS	Value
Master		28.88
Before		29.55
After		29.79
0 (Minimum)	30.00 (Nominal)	50.00 (Maximum)

Phase	Array-2 Det Bkg Cntrate CPS	Value
Master		29.64
Before		31.18
After		29.71
0 (Minimum)	30.00 (Nominal)	50.00 (Maximum)

Phase	Array Therm Det Bkg Cntrate CPS	Value
Master		32.75
Before		35.03
After		33.48
0 (Minimum)	30.00 (Nominal)	50.00 (Maximum)

Master: 24-Jul-2002 3:08 Before: 14-Aug-2002 22:54 After: 15-Aug-2002 2:20

Accelerator-Porosity Tool Wellsite Calibration

Calibration Ratios

Phase	Near/Far Calibration Ratio	Value
Master		0.9076
0.8000 (Minimum)	0.9250 (Nominal)	1.050 (Maximum)

Phase	Near/Array Calibration Ratio	Value
Master		1.066
0.9000 (Minimum)	1.030 (Nominal)	1.170 (Maximum)

Phase	Near/Array Cal Ratio Up/Down	Value
Master		1.006
0.9700 (Minimum)	1.000 (Nominal)	1.030 (Maximum)

Master: 24-Jul-2002 3:08

Accelerator-Porosity Tool Wellsite Calibration

Tank Check

Phase	Array-1 Standoff Porosity PU	Value
Master		11.51
9.900 (Minimum)	11.75 (Nominal)	13.60 (Maximum)

Phase	Array-2 Standoff Porosity PU	Value
Master		11.19
9.900 (Minimum)	11.75 (Nominal)	13.60 (Maximum)

Phase	Average Slowing Down Time US	Value
Master		5.884
5.500 (Minimum)	6.000 (Nominal)	6.250 (Maximum)

Phase	Array-1 SDT Ratio Up/Down	Value
Master		0.9901
0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)

Phase	Array-2 SDT Ratio Up/Down	Value
Master		0.9732
0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)

Phase	Sigma Formation CU	Value
Master		27.88
20.00 (Minimum)	27.50 (Nominal)	35.00 (Maximum)

Master: 24-Jul-2002 3:09

Accelerator-Porosity Tool Master Calibration

Detector Calibration

Phase	Near/Far Calibration Ratio	Value
Master		0.9076
0.8000 (Minimum)	0.9250 (Nominal)	1.050 (Maximum)

Phase	Near/Array Calibration Ratio	Value
Master		1.066
0.9000 (Minimum)	1.030 (Nominal)	1.170 (Maximum)

Phase	Near/Array Cal Ratio Up/Down	Value
Master		1.006
0.9700 (Minimum)	1.000 (Nominal)	1.030 (Maximum)

Master: 24-Jul-2002 3:08

Accelerator-Porosity Tool Master Calibration

Tank Check

Phase	Array-1 Standoff Porosity PU	Value
Master		11.51
9.900 (Minimum)	11.75 (Nominal)	13.60 (Maximum)

Phase	Array-2 Standoff Porosity PU	Value
Master		11.19
9.900 (Minimum)	11.75 (Nominal)	13.60 (Maximum)

Phase	Average Slowing Down Time US	Value
Master		5.884
5.500 (Minimum)	6.000 (Nominal)	6.250 (Maximum)

Phase	Array-1 SDT Ratio Up/Down	Value
Master		0.9901
0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)

Phase	Array-2 SDT Ratio Up/Down	Value
Master		0.9732
0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)

Phase	Sigma Formation CU	Value
Master		27.88
20.00 (Minimum)	27.50 (Nominal)	35.00 (Maximum)

Master: 24-Jul-2002 3:09

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

Company: Lamont Doherty

Schlumberger

Well: ODP Leg 204, Site 1245 E
Field: Hydrate Ridge
Ocean: Pacific
State: Oregon

HLDT/APS
Porosity
Natural Gamma Ray