

# Schlumberger

**Company:** Lamont Doherty

**Well:** IODP EXP 304 Site 1309A

**Field:** Atlantis Massis

**Country:** Mid Atlantic Ridge Ocean: Atlantic Ocean

## HLDS/APS Porosity Log

Country: Mid Atlantic Ridge		Elev.: K.B. 11.3 m	
Field: Atlantis Massis		G.L. -1653.4 m	
Location: Rig- Joides Resolution		D.F. 11 m	
Well: IODP EXP 304 Site 1309A		Elev.: 0 m	
Company: Lamont Doherty		11.3 m above Perm. Datum	
<b>LOCATION</b>			
Rig- Joides Resolution			
Permanent Datum: _____		GROUND LEVEL _____	
Log Measured From: _____		DES _____	
Drilling Measured From: _____		DES _____	
API Serial No. _____		Max. Hole Devi. _____	
		Longitude 42.11865 W	
		Latitude 30.16847 N	

Logging Date	Run 1	Run 2	Run 3
Run Number			
Depth Driller			
Schlumberger Depth			
Bottom Log Interval			
Top Log Interval			
Casing Driller Size @ Depth			
Casing Schlumberger			
Bit Size			
Type Fluid In Hole			
Density			
Fluid Loss			
PH			
Source Of Sample			
RM @ Measured Temperature			
RMF @ Measured Temperature			
RMC @ Measured Temperature			
Source RMF			
RM @ MRT			
RMF @ MRT			
Maximum Recorded Temperatures			
Circulation Stopped			
Time			
Logger On Bottom			
Time			
Unit Number			
Location			
Recorded By			
Steve Kittredge			
Witnessed By			
Florence Einaudi			

Logging Date	
Run Number	1
Depth Driller	1755.2 m
Schlumberger Depth	1746.5 m
Bottom Log Interval	1744 m
Top Log Interval	1593 m
Casing Driller Size @ Depth	0.000 in @ 1675 m
Casing Schlumberger	1674 m
Bit Size	9.875 in
Type Fluid In Hole	Sepiolite
Density	1.066 g/cm3
Fluid Loss	0 cm3
PH	
Source Of Sample	
RM @ Measured Temperature	0.322 ohm.m @ 23 degC
RMF @ Measured Temperature	@ @
RMC @ Measured Temperature	@ @
Source RMF	
RM @ MRT	0.362 @ 18 @ 18
RMF @ MRT	
Maximum Recorded Temperatures	18 degC
Circulation Stopped	11/30/04
Time	0400
Logger On Bottom	11/30/04
Time	See Log
Unit Number	99
Location	Houston
Recorded By	Steve Kittredge
Witnessed By	Florence Einaudi

Logging Date	Run 1	Run 2	Run 3
Run Number			
Depth Driller			
Schlumberger Depth			
Bottom Log Interval			
Top Log Interval			
Casing Driller Size @ Depth			
Casing Schlumberger			
Bit Size			
Type Fluid In Hole			
Density			
Fluid Loss			
PH			
Source Of Sample			
RM @ Measured Temperature			
RMF @ Measured Temperature			
RMC @ Measured Temperature			
Source RMF			
RM @ MRT			
RMF @ MRT			
Maximum Recorded Temperatures			
Circulation Stopped			
Time			
Logger On Bottom			
Time			
Unit Number			
Location			
Recorded By			
Steve Kittredge			
Witnessed By			
Florence Einaudi			

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## OTHER SERVICES1

OS1: MESTB/DSI/SGTN  
OS2:  
OS3:  
OS4:  
OS5:

## OTHER SERVICES2

OS1:  
OS2:  
OS3:  
OS4:  
OS5:

## REMARKS: RUN NUMBER 1

Hole Cored with RCB  
All depths in Meters Below Rig Floor (MBRF).  
Hole flushed with Sepiolite  
Sea Floor Driller: 1653.4 MBRF  
Sea Floor Logger: 1653.4 MBRF  
Total Depth Driller: 1755.2 MBRF  
Total Depth Logger: 1746.5  
Casing Bottom Driller: 1675 MBRF  
Casing Bottom Logger: 1674  
APS minitrons off on repeat pass.

## REMARKS: RUN NUMBER 2

## RUN 1

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

## RUN 2

SERVICE ORDER #:  
PROGRAM VERSION:  
FLUID LEVEL:

LOGGED INTERVAL

START

STOP

LOGGED INTERVAL

START

STOP

## EQUIPMENT DESCRIPTION

## RUN 1

## RUN 2

## SURFACE EQUIPMENT

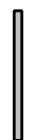
LCM-AA  
SFT-281 6250  
SFT-178 6250  
GSR-U 135

WITM (DTS)-A

## DOWNHOLE EQUIPMENT

BSP 60.80  
BRT-S

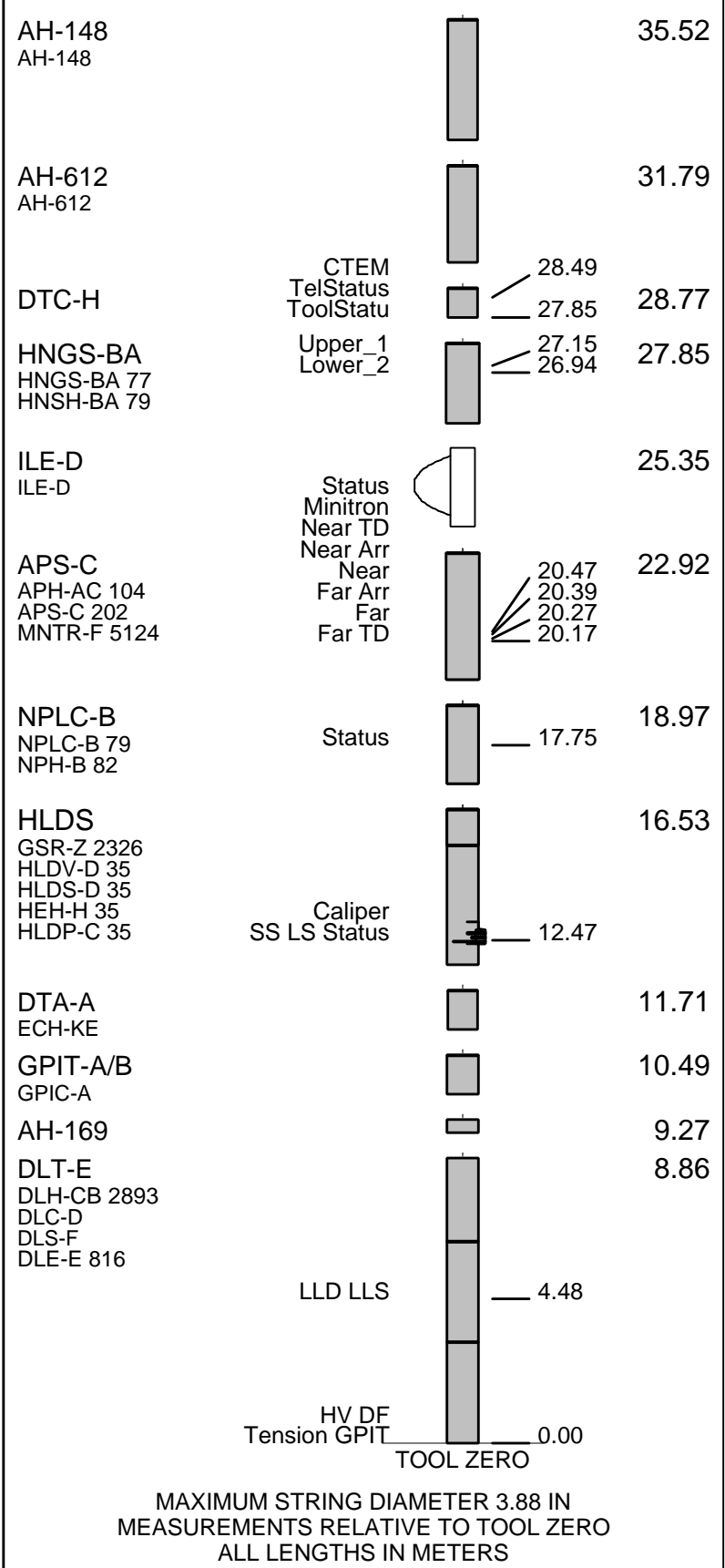
SP SPARC



39.74

LEH-QT 36.41





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

### Output DLIS Files

DEFAULT DLL\_LDL\_APS\_NGS\_042LUP FN:41 PRODUCER 30-Nov-2004 12:10 1746.5 M 1593.0 M

OP System Version: 12C0-301  
MCM

Main Up Log

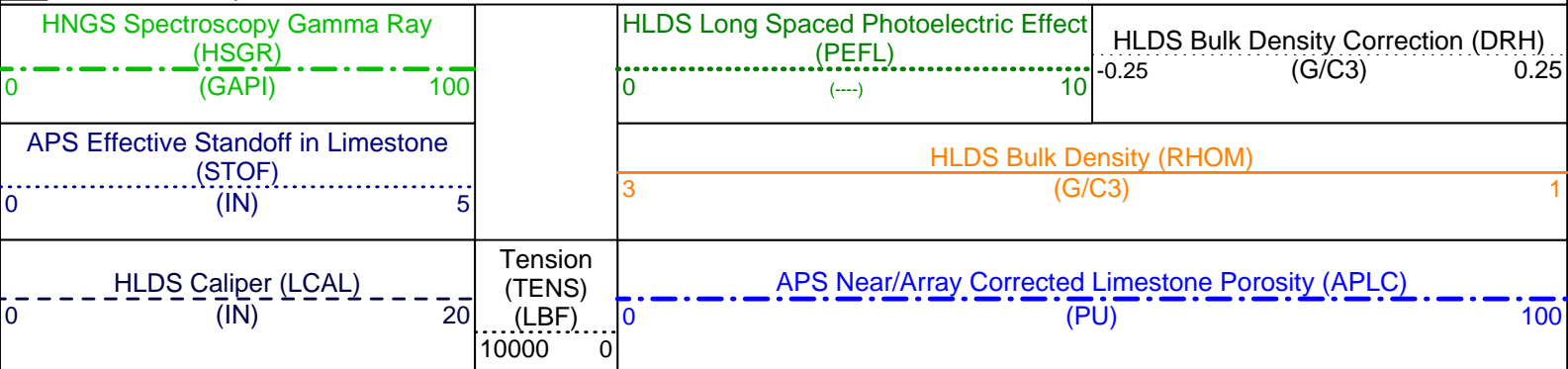
DLT-E	12C0-301	GPIT-A/B	12C0-301
DTA-A	12C0-301	HLDS	12C0-301
NPLC-B	12C0-301	APS-C	12C0-301
HNGS-BA	12C0-301	DTC-H	12C0-301
BSP	12C0-301		

### Changed Parameter Summary

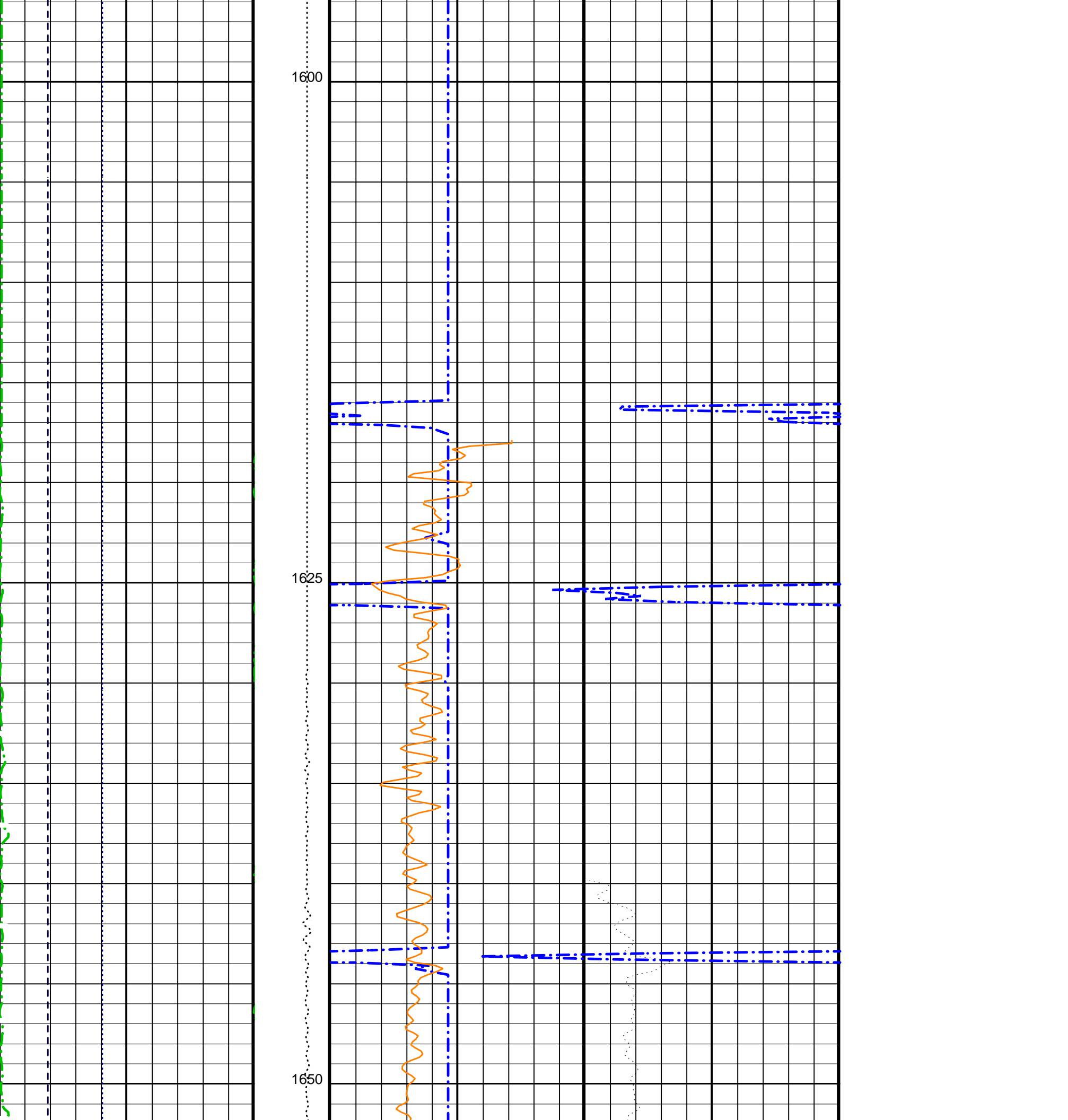
DLIS Name	New Value	Previous Value	Depth & Time
LLOO	OFF	BOTH	1748.7 12:11:56
	BOTH	OFF	1748.7 12:12:16
	OFF	BOTH	1713.5 12:20:33
	BOTH	OFF	1712.7 12:21:09
	OFF	BOTH	1666.9 12:31:39

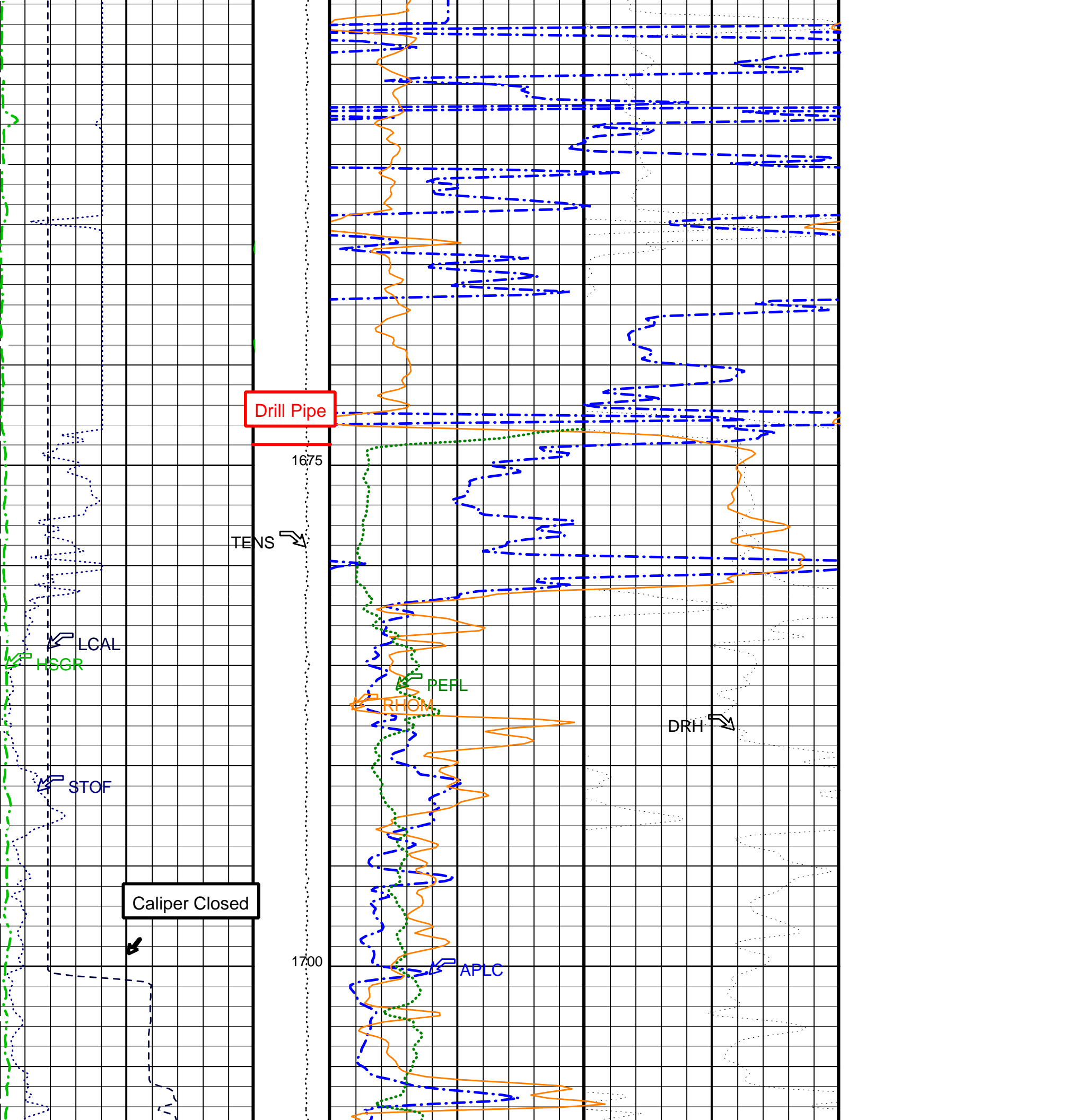
### PIP SUMMARY

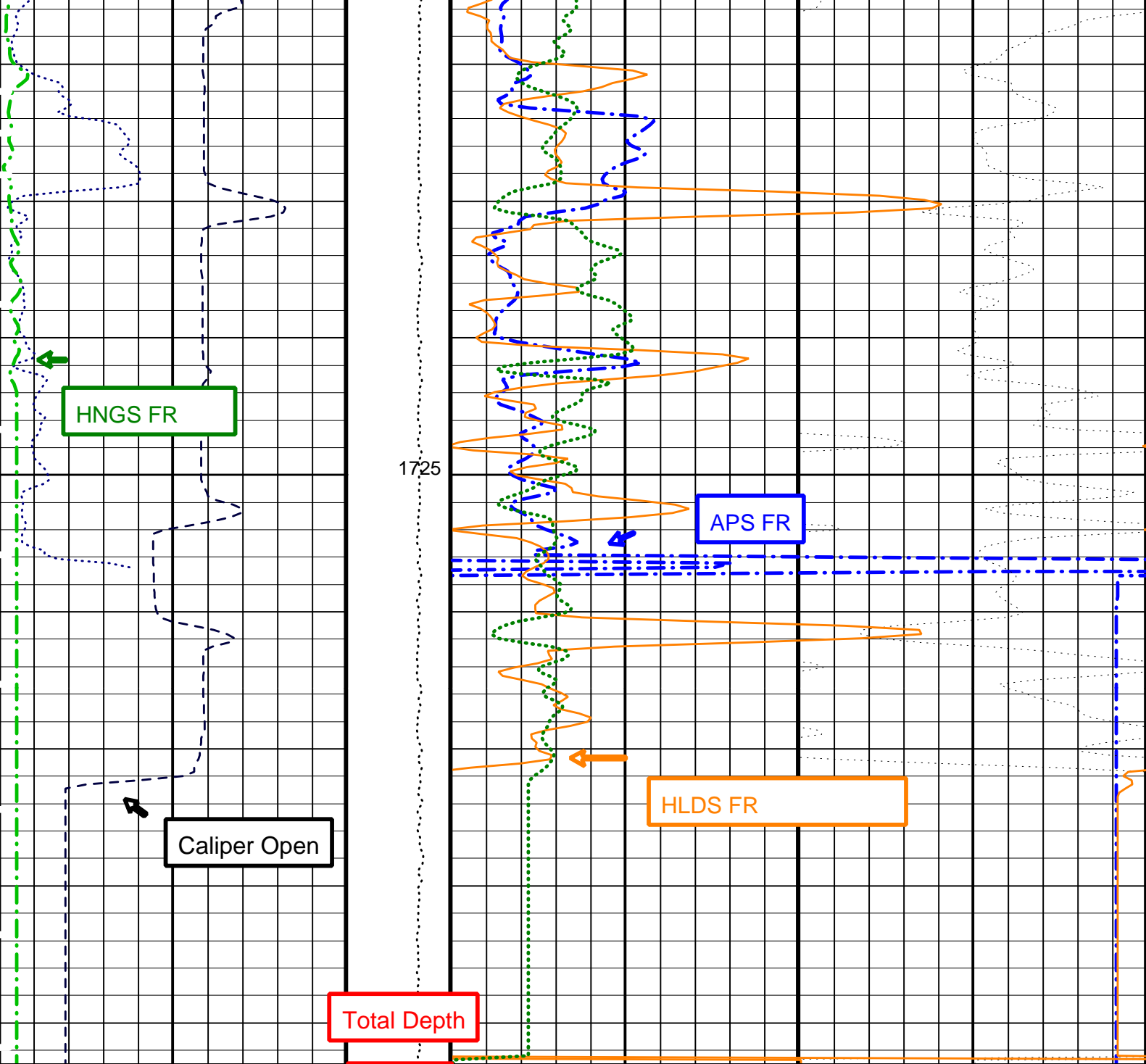
Time Mark Every 60 S



Last Reading







HLDS Caliper (LCAL) (IN)	0 20	Tension (TENS) (LBF)	10000 0	APS Near/Array Corrected Limestone Porosity (APLC) (PU)	0 100
APS Effective Standoff in Limestone (STOF) (IN)	0 5			HLDS Bulk Density (RHOM) (G/C3)	3 1
HNGS Spectroscopy Gamma Ray (HSGR) (GAPI)	0 100			HLDS Long Spaced Photoelectric Effect (PEFL) (---)	0 10
				HLDS Bulk Density Correction (DRH) (G/C3)	-0.25 0.25

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
DPRF	DLT-E: DUAL LATEROLOG - E DEEP REFERENCE POWER	550 NW

KFAC	K FACTOR	SOND	
LLOO	LATEROLOG LOOP	BOTH	
PLRM	POWER LOOP REFERENCE MODE	DEEP	
SPRF	SHALLOW REFERENCE POWER	550	NW
	GPIT-A/B: General Purpose Inclinometer		
ACPP	Accelerometer PROM Presence	PRESENT	
AFMO	Accelerometer Filtering Mode	MOVING_AVERAGE	
ART	Accelerometer Reference Temperature	20	DEGC
GLM	GPIT Logging Mode	DIPM	
ICMO	Inclinometry Computation Mode	AUTOMATIC_SELECTION	
MAPP	Magnetometer PROM Presence	PRESENT	
MDEC	Magnetic Field Declination	-15.6914	DEG
MRTE	Magneto Reference Temperature	25	DEGC
TEMS	GPIT Temperature Sensor Used	BOTH	
	HLDS: Hostile Litho-Density Sonde		
CLCL	HLDS LS Control Loop Controller Mode	AUTO_DEFAULT	
CLCS	HLDS SS Control Loop Controller Mode	AUTO_DEFAULT	
CLLS	HLDS Mode Loop Long Spacing	AUTO	
CLSS	HLDS Mode Loop Short Spacing	AUTO	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
FD	Fluid Density	1	G/C3
LATC	HLDS Activation Correction	ON	
LLDL	HLDS LS Low Level Discriminator DAC	14000	
LLDS	HLDS SS Low Level Discriminator DAC	14000	
LLML	HLDS LS Low Level Discriminator Mode	AUTO	
LLMS	HLDS SS Low Level Discriminator Mode	AUTO	
MDEN	Matrix Density	2.71	G/C3
PHVL	HLDS Long Spacing High Voltage Setting	1000	V
PHVS	HLDS Short Spacing High Voltage Setting	1000	V
PSDL	HLDS LS Pulse Shape Compensation DAC	16000	
PSDS	HLDS SS Pulse Shape Compensation DAC	16000	
PSML	HLDS LS Pulse Shape Compensation Mode	AUTO	
PSMS	HLDS SS Pulse Shape Compensation Mode	AUTO	
	NPLC-B: Nuclear Porosity Lithology Cartridge - B		
NOTS	NPLC Old Temperature Sensor	NO	
	APS-C: Accelerator-Porosity Tool		
	APS Software Version	5	
AASD	APS Thermal and Array Detectors High Voltage Setting	1971.68	V
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2078.39	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	1740.46	V
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)	100	DEGC
DPPM	Density Porosity Processing Mode	HIRS	
FSAL	Formation Salinity	35000	PPM
GCSE	Generalized Caliper Selection	BS	
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	0.991528	
NFRC	APS Near/Far Calibration Ratio	0.963658	
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)	100	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	BS	
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	
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



STBI	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	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0	
BSP: Bridle SP			
SPNV	SP Next Value	0	MV
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	100	DEGC
FCD	Future Casing (Outer) Diameter	0	IN
GCSE	Generalized Caliper Selection	BS	
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	
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
SHT	Surface Hole Temperature	20	DEGC
STI: Stuck Tool Indicator			
LBFR	Trigger for MAXIS First Reading Label	STI	
STKT	STI Stuck Threshold	0.762	M
TDD	Total Depth - Driller	55.00	M
TDL	Total Depth - Logger	55.00	M
System and Miscellaneous			
ALTDPCCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	35000.00	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	5.00	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	120	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: APS\_HLDS\_PORO Vertical Scale: 1:200 Graphics File Created: 30-Nov-2004 12:11

### OP System Version: 12C0-301

MCM

DLT-E	12C0-301	GPIT-A/B	12C0-301
DTA-A	12C0-301	HLDS	12C0-301
NPLC-B	12C0-301	APS-C	12C0-301
HNGS-BA	12C0-301	DTC-H	12C0-301
BSP	12C0-301		

### Output DLIS Files

DEFAULT DLL\_LDL\_APS\_NGS\_042LUP FN:41 PRODUCER 30-Nov-2004 12:10

### Output DLIS Files

DEFAULT DLL\_LDL\_APS\_NGS\_040LUP FN:39 PRODUCER 30-Nov-2004 11:31 1746.5 M 1632.2 M

### OP System Version: 12C0-301

MCM

Repeat Up Log

DLT-E	12C0-301	GPIT-A/B	12C0-301
DTA-A	12C0-301	HLDS	12C0-301
NPLC-B	12C0-301	APS-C	12C0-301
HNGS-BA	12C0-301	DTC-H	12C0-301
BSP	12C0-301		

### Changed Parameter Summary

DLIS Name	New Value	Previous Value	Depth & Time
LLOO	OFF	BOTH	1748.7 11:33:27
	BOTH	OFF	1747.8 11:34:01
	OFF	BOTH	1747.7 11:34:05
	BOTH	OFF	1747.1 11:34:28
	OFF	BOTH	1729.9 11:38:58
	BOTH	OFF	1729.2 11:39:41

PIP SUMMARY

Time Mark Every 60 S

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

APS Effective Standoff in Limestone  
(STOF)  
(IN) 0 5

HLDS Caliper (LCAL)  
(IN) 0 20

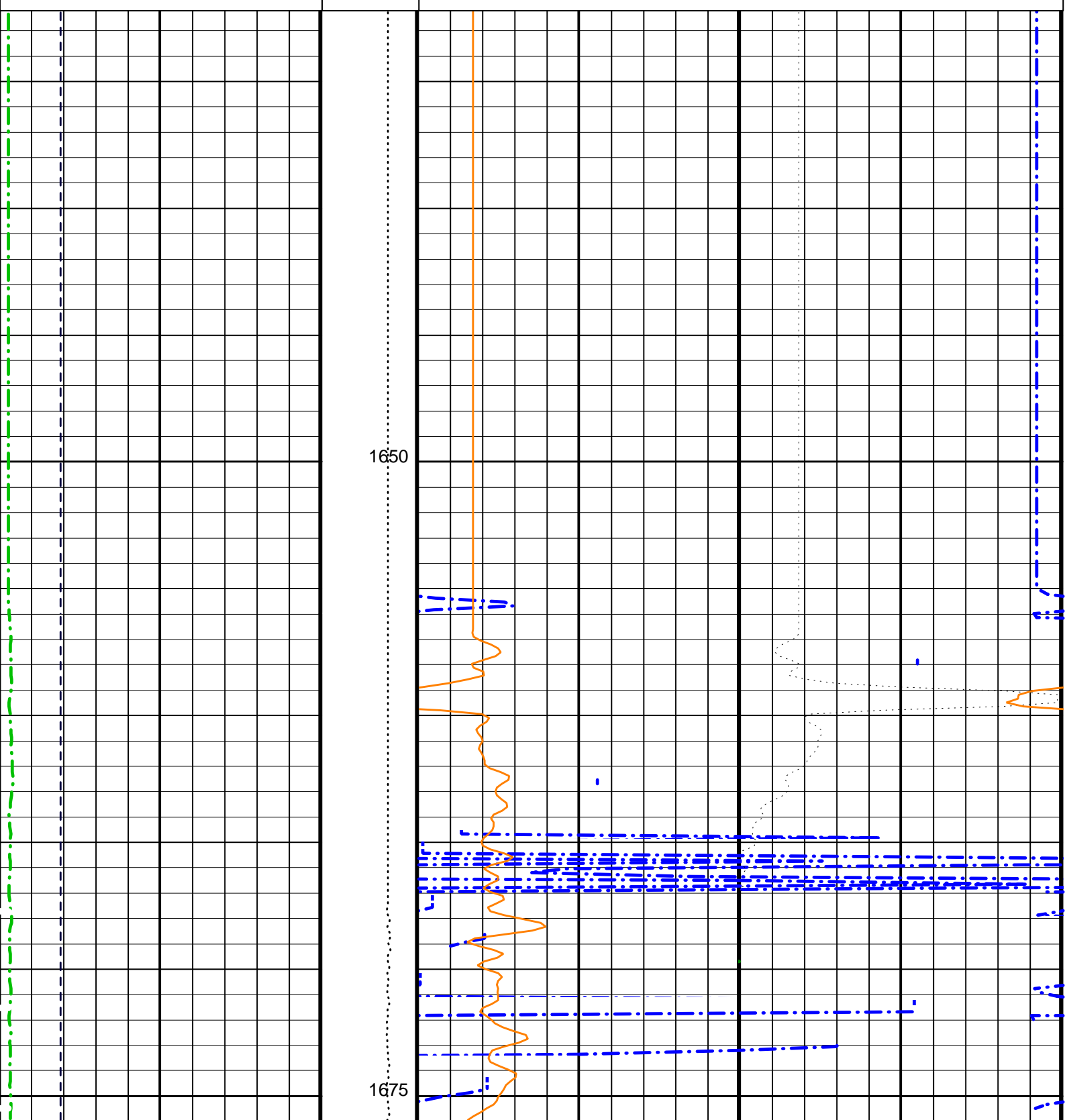
HLDS Long Spaced Photoelectric Effect  
(PEFL)  
(---) 0 10

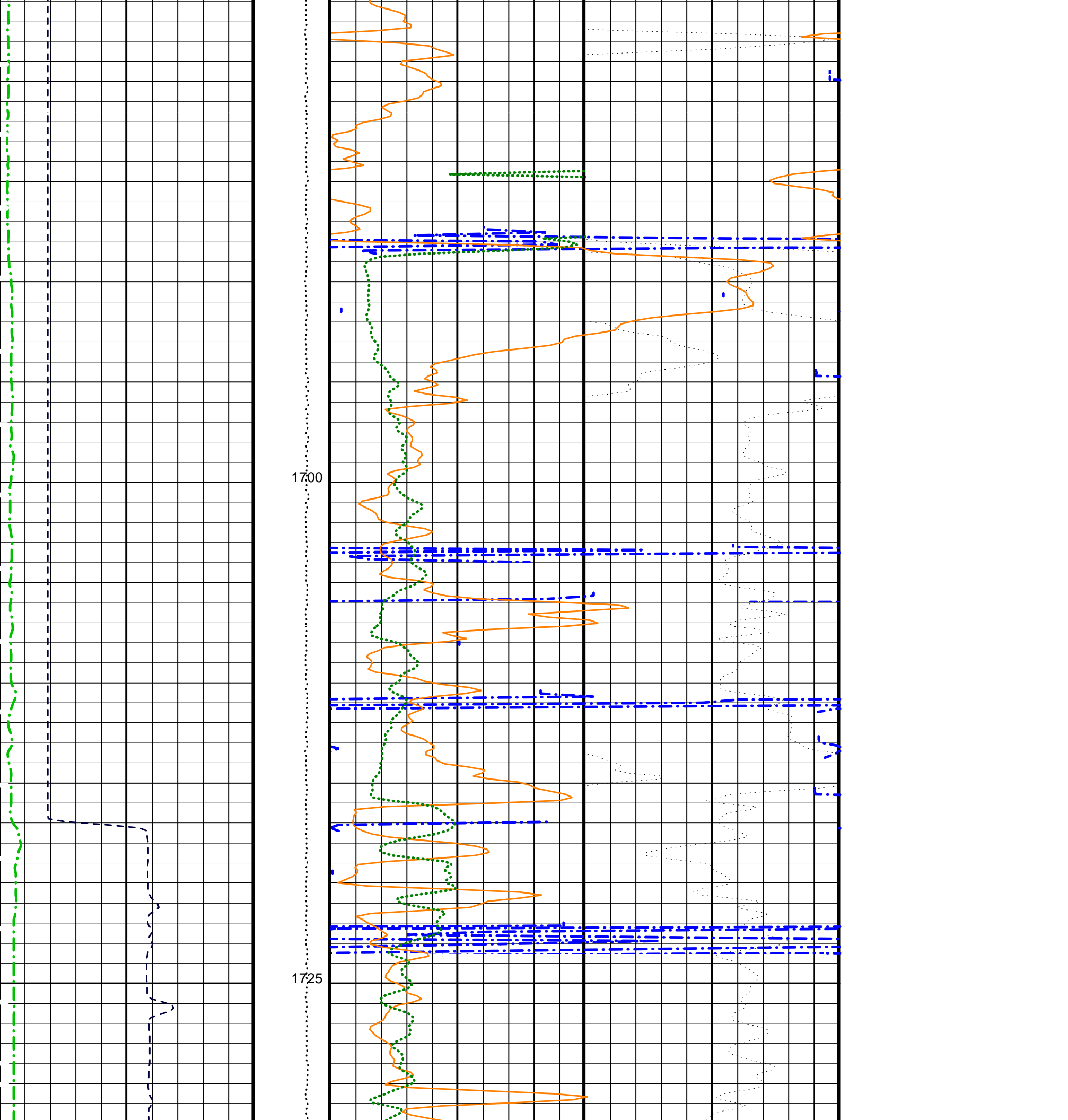
HLDS Bulk Density Correction (DRH)  
(G/C3) -0.25 0.25

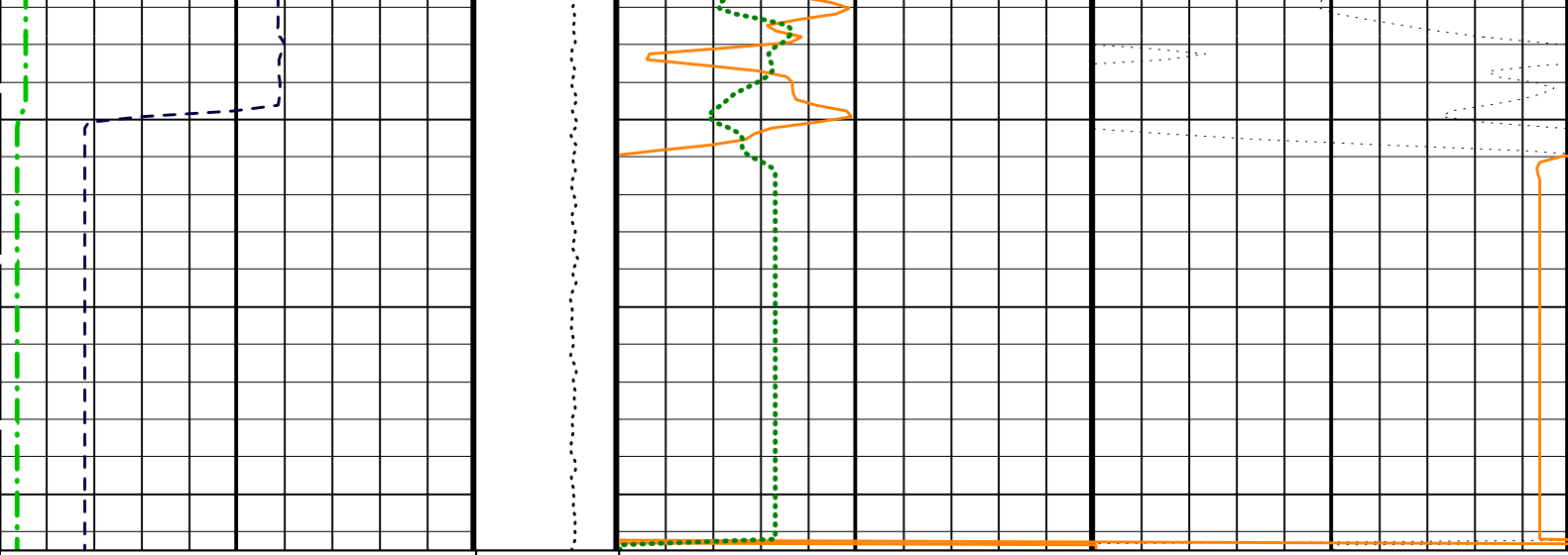
HLDS Bulk Density (RHOM)  
(G/C3) 3 1

Tension (TENS) (LBF) 10000 0

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







HLDS Caliper (LCAL) (IN)	0	20	Tension (TENS) (LBF)	0	10000	APS Near/Array Corrected Limestone Porosity (APLC) (PU)	0	100
APS Effective Standoff in Limestone (STOF) (IN)	0	5				HLDS Bulk Density (RHOM) (G/C3)	3	1
HNGS Spectroscopy Gamma Ray (HSGR) (GAPI)	0	100				HLDS Long Spaced Photoelectric Effect (PEFL) (---)	0	10
						HLDS Bulk Density Correction (DRH) (G/C3)	-0.25	0.25

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
DLT-E: DUAL LATEROLOG - E		
DPRF	DEEP REFERENCE POWER	550 NW
KFAC	K FACTOR	SOND
LLOO	LATEROLOG LOOP	BOTH
PLRM	POWER LOOP REFERENCE MODE	DEEP
SPRF	SHALLOW REFERENCE POWER	550 NW
GPIT-A/B: General Purpose Inclinometer		
ACPP	Accelerometer PROM Presence	PRESENT
AFMO	Accelerometer Filtering Mode	MOVING_AVERAGE
ART	Accelerometer Reference Temperature	20 DEGC
GLM	GPIT Logging Mode	DIPM
ICMO	Inclinometry Computation Mode	AUTOMATIC_SELECTION
MAPP	Magnetometer PROM Presence	PRESENT
MDEC	Magnetic Field Declination	-15.6914 DEG
MRTE	Magneto Reference Temperature	25 DEGC
TEMS	GPIT Temperature Sensor Used	BOTH
HLDS: Hostile Litho-Density Sonde		
CLCL	HLDS LS Control Loop Controller Mode	AUTO_DEFAULT
CLCS	HLDS SS Control Loop Controller Mode	AUTO_DEFAULT
CLLS	HLDS Mode Loop Long Spacing	AUTO
CLSS	HLDS Mode Loop Short Spacing	AUTO
DHC	Density Hole Correction	BS
DPPM	Density Porosity Processing Mode	HIRS
FD	Fluid Density	1 G/C3
LATC	HLDS Activation Correction	ON
LLDL	HLDS LS Low Level Discriminator DAC	14000
LLDS	HLDS SS Low Level Discriminator DAC	14000
LLML	HLDS LS Low Level Discriminator Mode	AUTO
LLMS	HLDS SS Low Level Discriminator Mode	AUTO
MDEN	Matrix Density	2.71 G/C3
PHVL	HLDS Long Spacing High Voltage Setting	1000 V
PHVS	HLDS Short Spacing High Voltage Setting	1000 V
PSDL	HLDS LS Pulse Shape Compensation DAC	16000
PSDS	HLDS SS Pulse Shape Compensation DAC	16000
PSML	HLDS LS Pulse Shape Compensation Mode	AUTO
PSMS	HLDS SS Pulse Shape Compensation Mode	AUTO
NPLC-B: Nuclear Porosity Lithology Cartridge - B		
NOTS	NPLC Old Temperature Sensor	NO
APS-C: Accelerator Porosity Tool		

	APS Software Version	5	
AASD	APS Thermal and Array Detectors High Voltage Setting	1971.68	V
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2078.39	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	1740.46	V
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)	100	DEGC
DPPM	Density Porosity Processing Mode	HIRS	
FSAL	Formation Salinity	35000	PPM
GCSE	Generalized Caliper Selection	LCAL	
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	0.991528	
NFRC	APS Near/Far Calibration Ratio	0.963658	
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)	100	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	LCAL	
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	
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	0.1	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	0.1	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	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0	
	BSP: Bridle SP		
SPNV	SP Next Value	0	MV
	HOLEV: Integrated Hole/Cement Volume		
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	100	DEGC
FCD	Future Casing (Outer) Diameter	0	IN
GCSE	Generalized Caliper Selection	LCAL	
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	
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
SHT	Surface Hole Temperature	20	DEGC
	STI: Stuck Tool Indicator		
LBFR	Trigger for MAXIS First Reading Label	STI	
STKT	STI Stuck Threshold	0.762	M
TDD	Total Depth - Driller	55.00	M
TDL	Total Depth - Logger	55.00	M
	System and Miscellaneous		
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	35000.00	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	5.00	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	120	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: APS\_HLDS\_PORO      Vertical Scale: 1:200      Graphics File Created: 30-Nov-2004 11:31

OP System Version: 12C0-301  
MCM

DLT-E	12C0-301	GPIT-A/B	12C0-301
DTA-A	12C0-301	HLDS	12C0-301
NPLC-B	12C0-301	APS-C	12C0-301
HNGS-BA	12C0-301	DTC-H	12C0-301
BSP	12C0-301		

Output DLIS Files

DEFAULT      DLL\_LDL\_APS\_NGS\_040LUP      FN:39      PRODUCER      30-Nov-2004 11:31

Company: Lamont Doherty

Well: IODP EXP 304 Site 1309A

Field: Atlantis Massis

Country: Mid Atlantic Ridge

Ocean: Atlantic Ocean

**Schlumberger**

HLDS/APS Porosity Log