

**Company:** Lamont Doherty

**Well:** Expedition 309 Site U1256D

**Field:** Superfast Spreading Crust

**Rig:** Joides Resolution **Ocean:** Pacific Ocean

Accelerator Porosity Sonde  
Hostile Litho-Density Sonde  
Gamma Ray

LOCATION		Elev.:	K.B.	11.3 m
Permanent Datum:		Mean Sea Level		G.L. -3645 m
Log Measured From:	Rig Floor	Elev.: 0 m		D.F. 11 m
Drilling Measured From:	Rig Floor	11.0 m above Perm. Datum		
API Serial No.	Max. Hole Devi.	Longitude	Latitude	
21-Aug-2005		91° 56.0612 W	6° 44.1631 N	

**Rig:** Joides Resolution  
**Field:** Superfast Spreading Crust  
**Location:**  
**Well:** Expedition 309 Site U1256D  
**Company:** Lamont Doherty

Logging Date	21-Aug-2005		
Run Number	Two		
Depth Driller	4900 m		
Schlumberger Depth	4900 m		
Bottom Log Interval	4871 m		
Top Log Interval	4200 m		
Casing Driller Size @ Depth	0.000 in @ 3914 m		
Casing Schlumberger	3914 m @		
Bit Size	9.875 in		
Type Fluid In Hole	Sea water		
Density	Viscosity	1.07 g/cm3	
Fluid Loss	PH		
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	20-Aug-2005 20:00	
Logger On Bottom	Time	21-Aug-2005 16:20	
Unit Number	Location	2082 Webster, TX	
Recorded By	Javier Espinosa		
Witnessed By	Florence Einaudi, Akram Belghoui		

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Fluid Loss	PH					
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	20-Aug-2005 20:00				
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Unit Number	Location	2082 Webster, TX				
Recorded By	Javier Espinosa					
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**DISCLAIMER**




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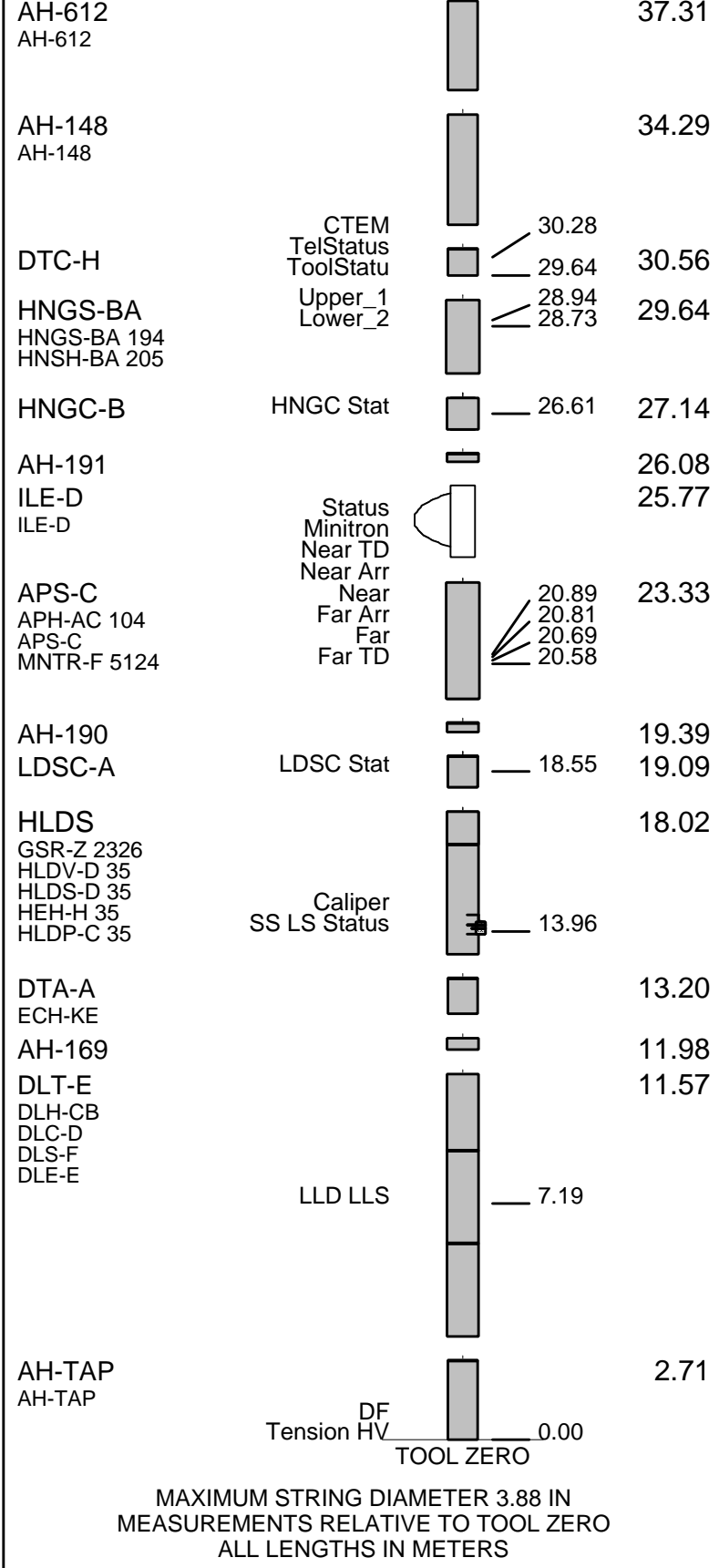
OTHER SERVICES1 OS1: DLT, HNGS OS2: MEST, DSI OS3: TAP OS4: OS5:	OTHER SERVICES2 OS1: OS2: OS3: OS4: OS5:
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REMARKS: RUN NUMBER 1 All parameters and presentations as per IODP standards Tool ran as per tool sketch below. Casing and sea floor depth information provided by IODP TD not reached due to hole conditions Hole top section logged in ODP leg 206 and Exp 309. Log correlated with run One.	REMARKS: RUN NUMBER 2
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RUN 1			RUN 2		
SERVICE ORDER #: PROGRAM VERSION: 12C0-301 FLUID LEVEL:			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 BRT-S		62.59	
SP SPARC		41.53	
LEH-QT		38.20	



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

Kelly Bushing Elevation  
Derrick Floor Elevation

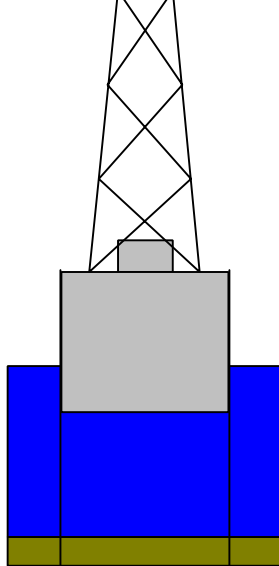
11.8  
11.8

0.0 6.000

Casing String

Mean Sea Level

0.0



3645.0 9.875  
3914.0 6.000

Borehole Segment  
Casing Shoe

**Schlumberger**

MAIN PASS

MAXIS Field Log

Output DLIS Files

DEFAULT	DLL_LDL_APS_NGS_031LUP	FN:32	PRODUCER	21-Aug-2005 16:11	4871.5 M	4165.4 M
REDUCED	DLL_LDL_APS_NGS_031LUP	FN:33	PRODUCER	21-Aug-2005 16:11	4871.5 M	4165.4 M

OP System Version: 12C0-301

MCM

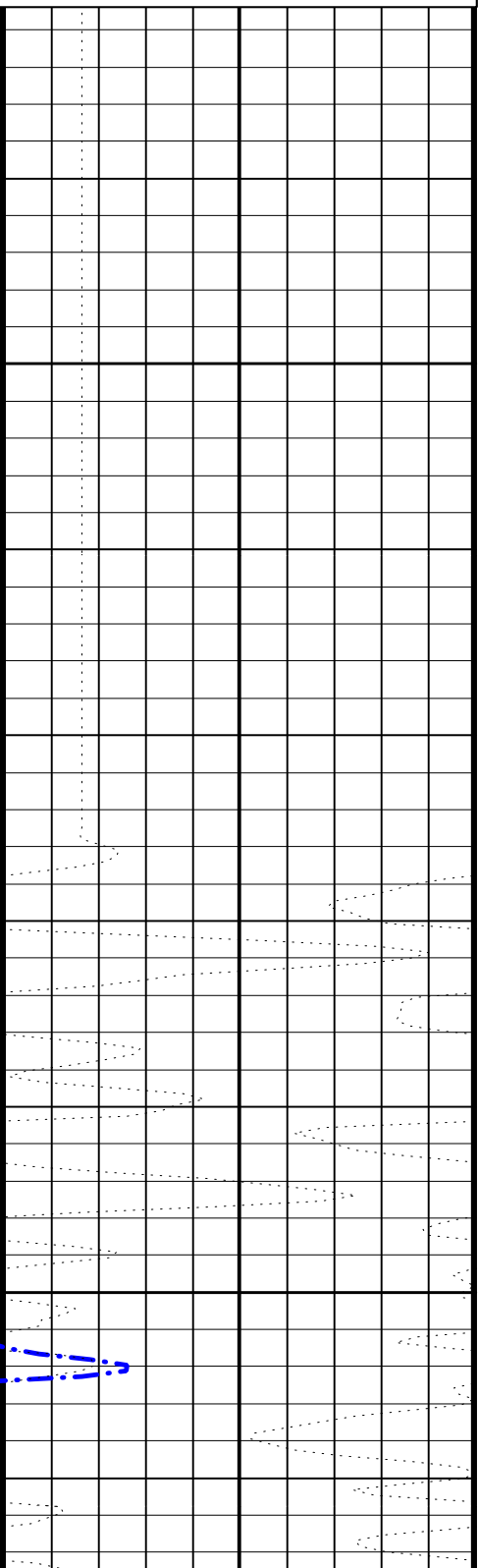
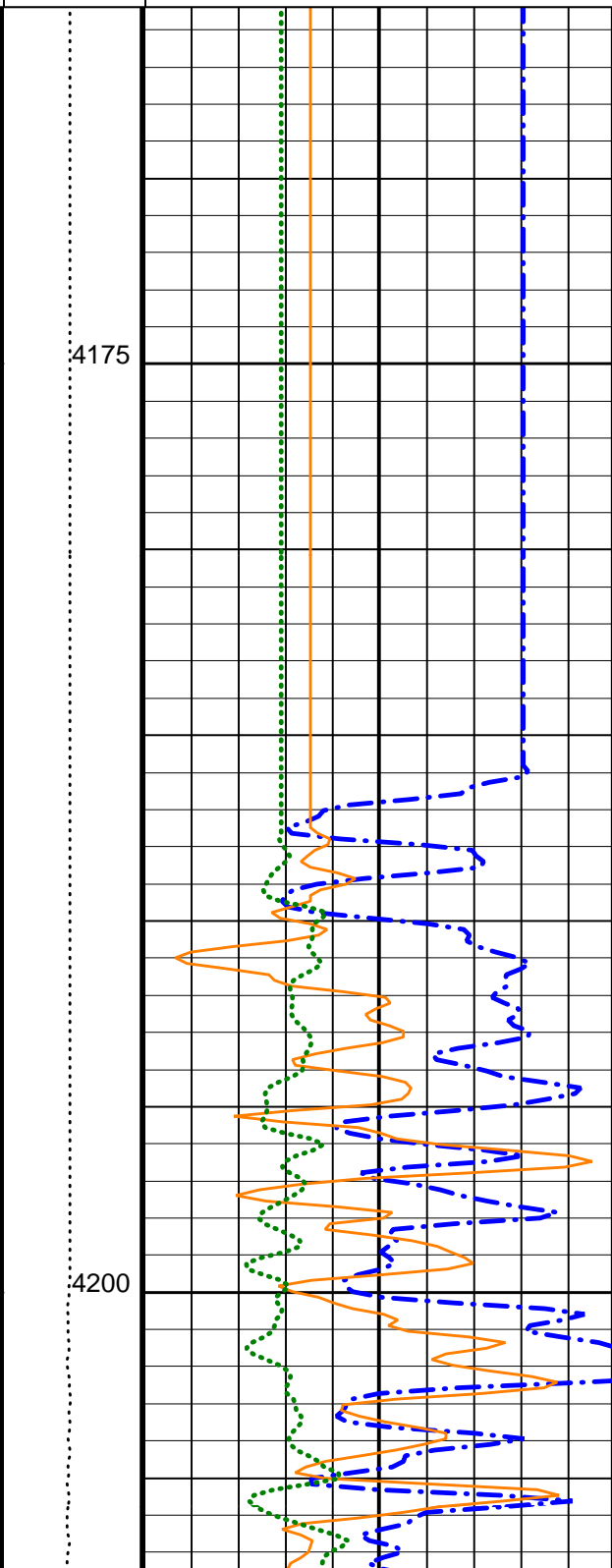
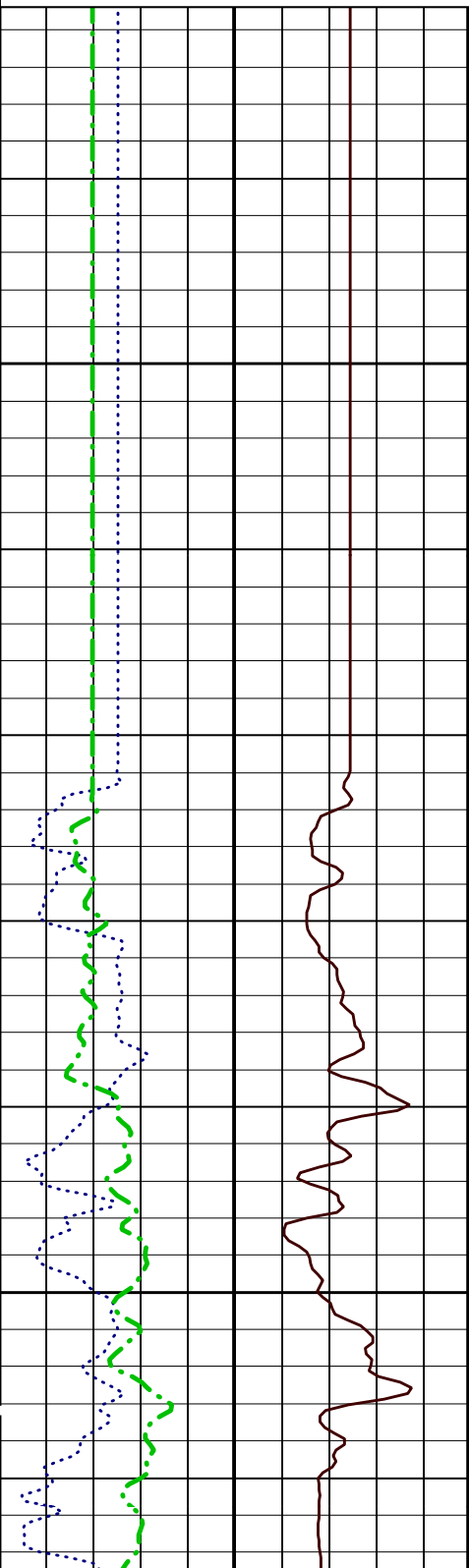
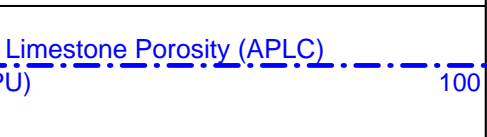
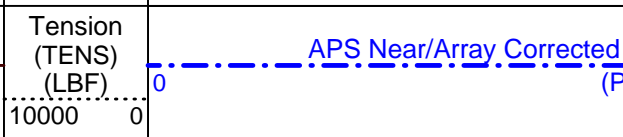
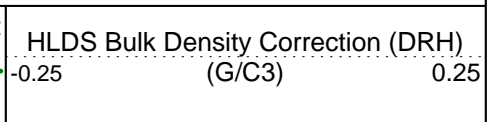
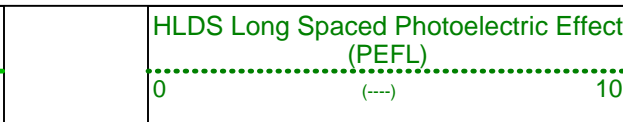
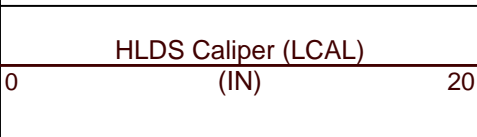
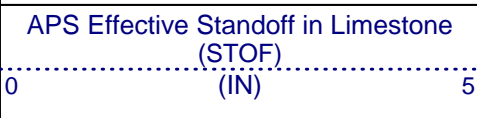
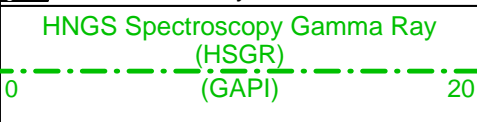
DLT-E	12C0-301	DTA-A	12C0-301
HLDS	SPC-2602-NUCL_b	LDSC-A	SPC-2602-NUCL_b
APS-C	SPC-2602-NUCL_b	HNGC-B	SPC-2602-NUCL_b
HNGS-BA	SPC-2602-NUCL_b	DTC-H	12C0-301
BSP	12C0-301		

Changed Parameter Summary

DLIS Name	New Value	Previous Value	Depth & Time
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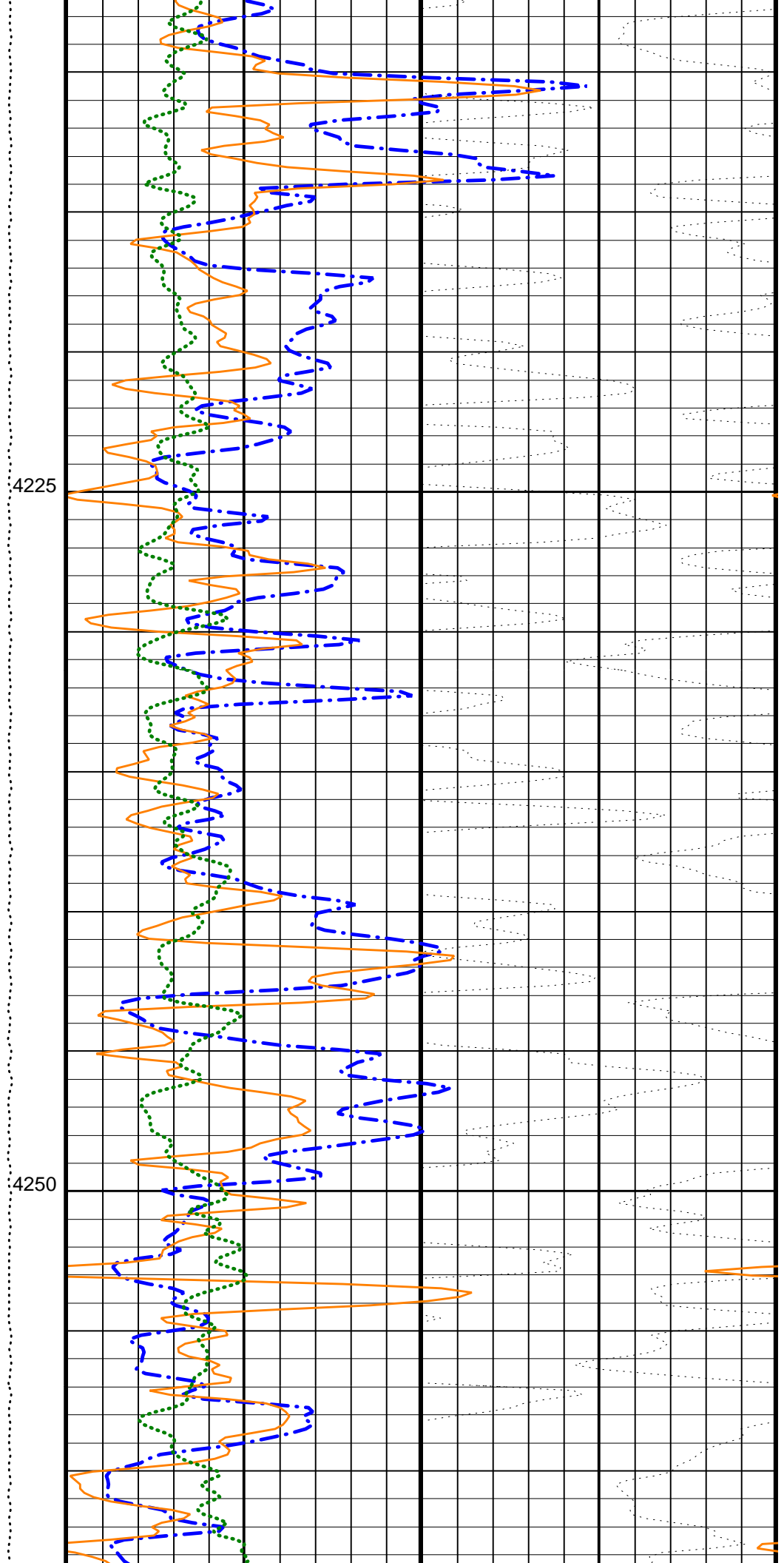
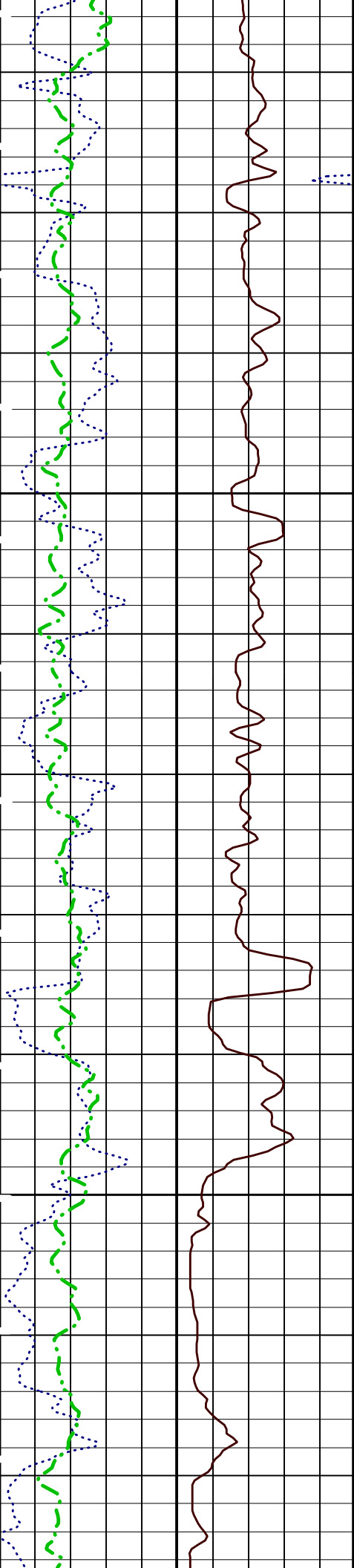
PIP SUMMARY

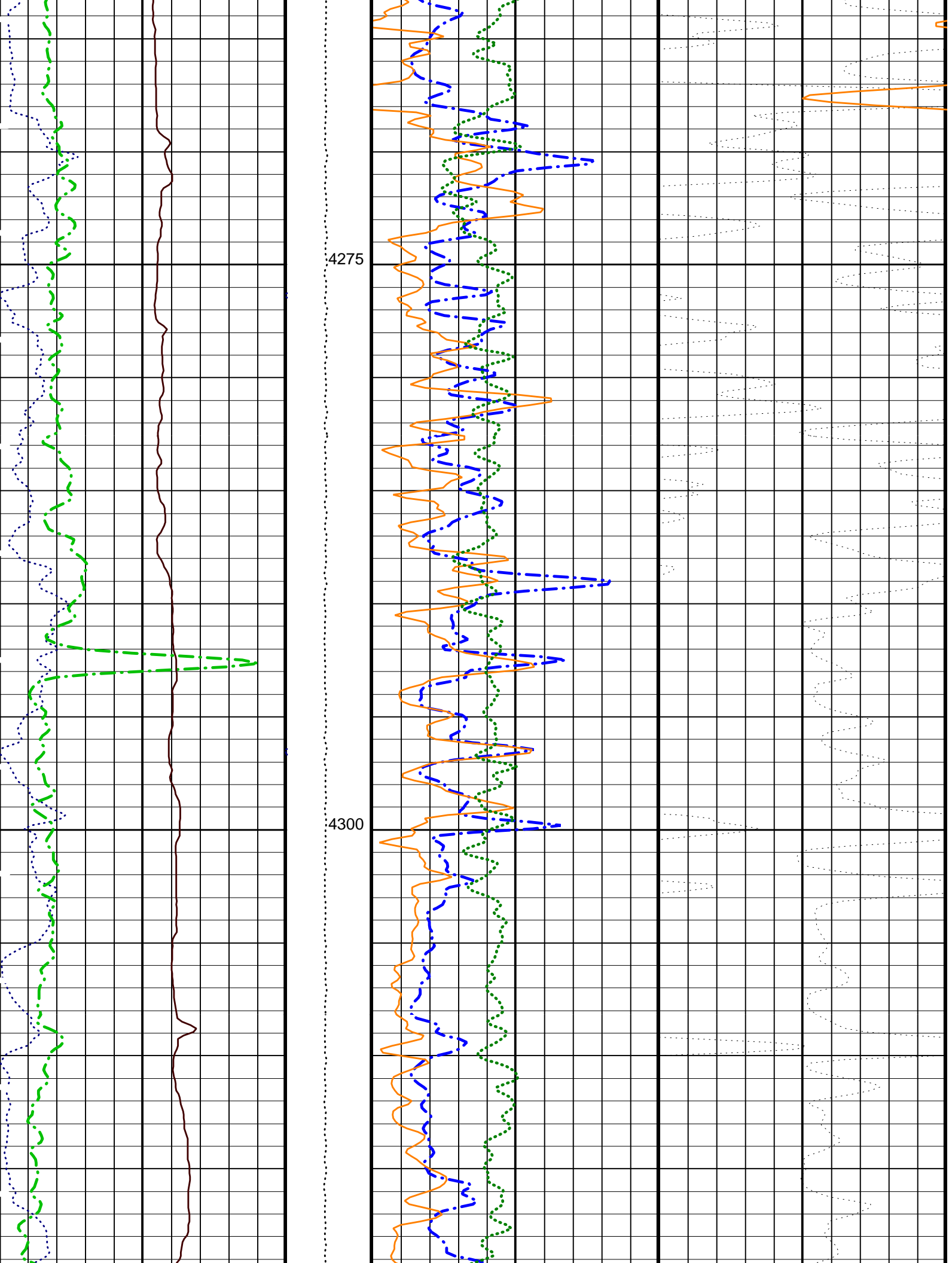
Time Mark Every 60 S



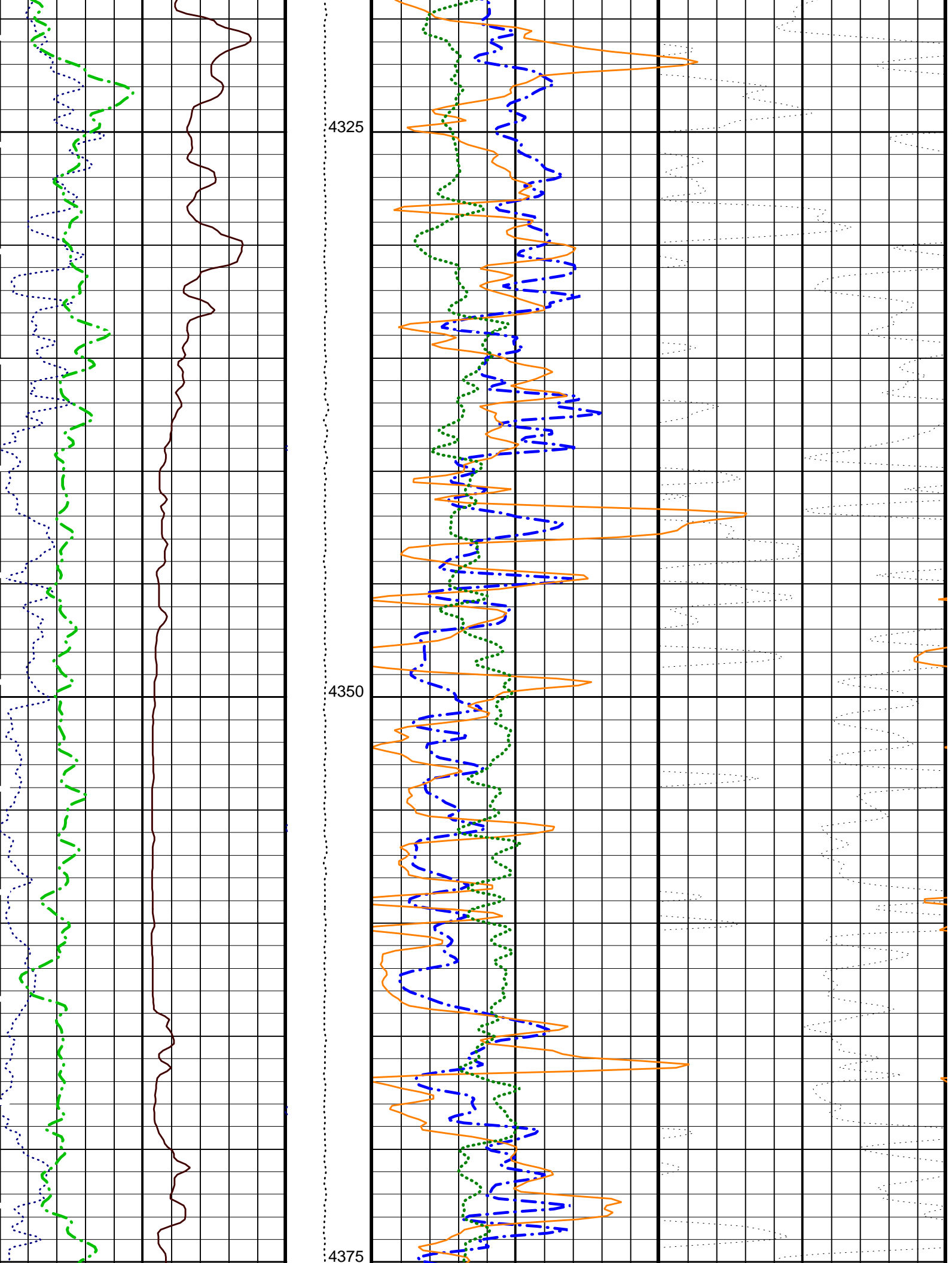
4175

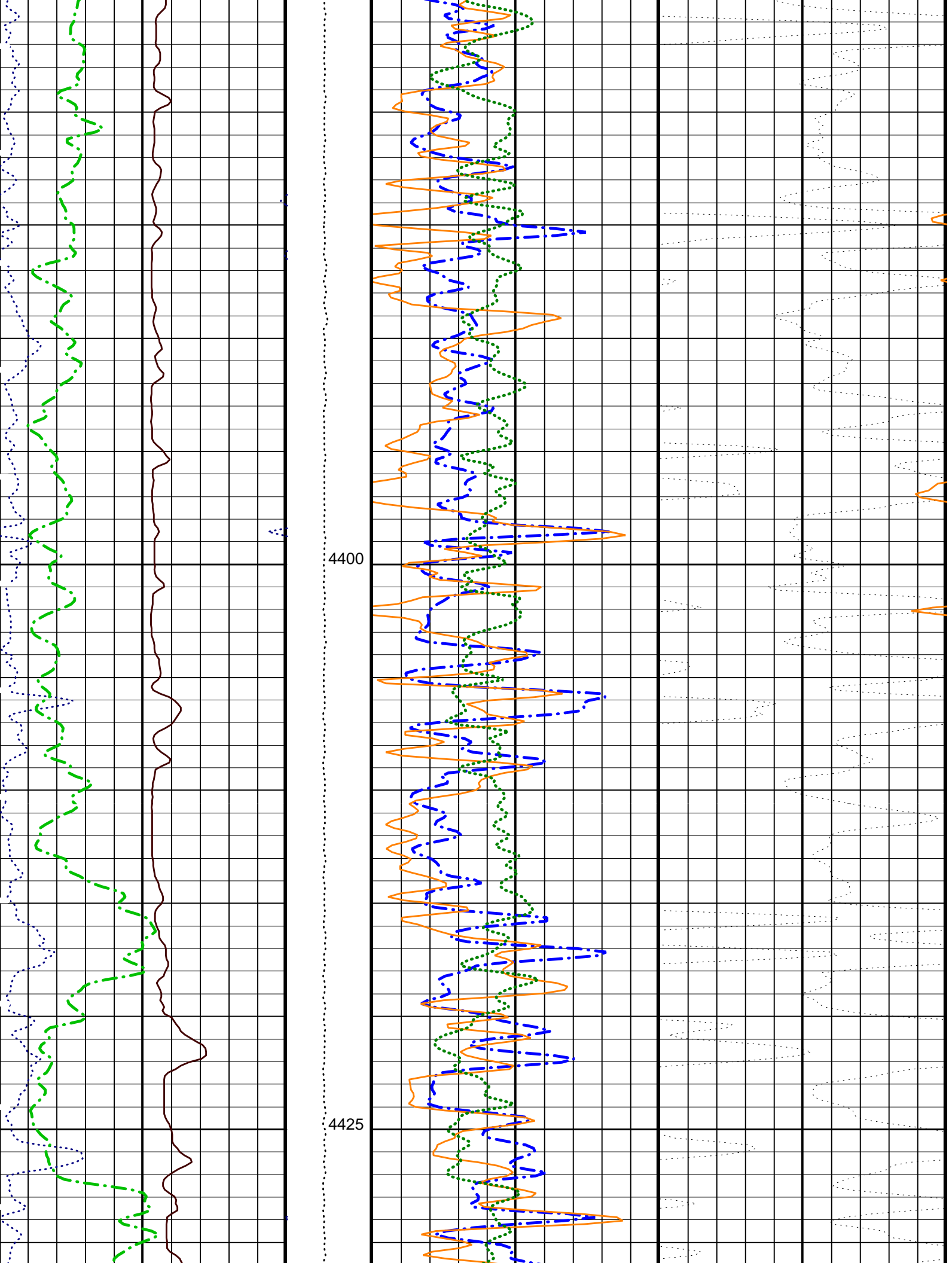
4200

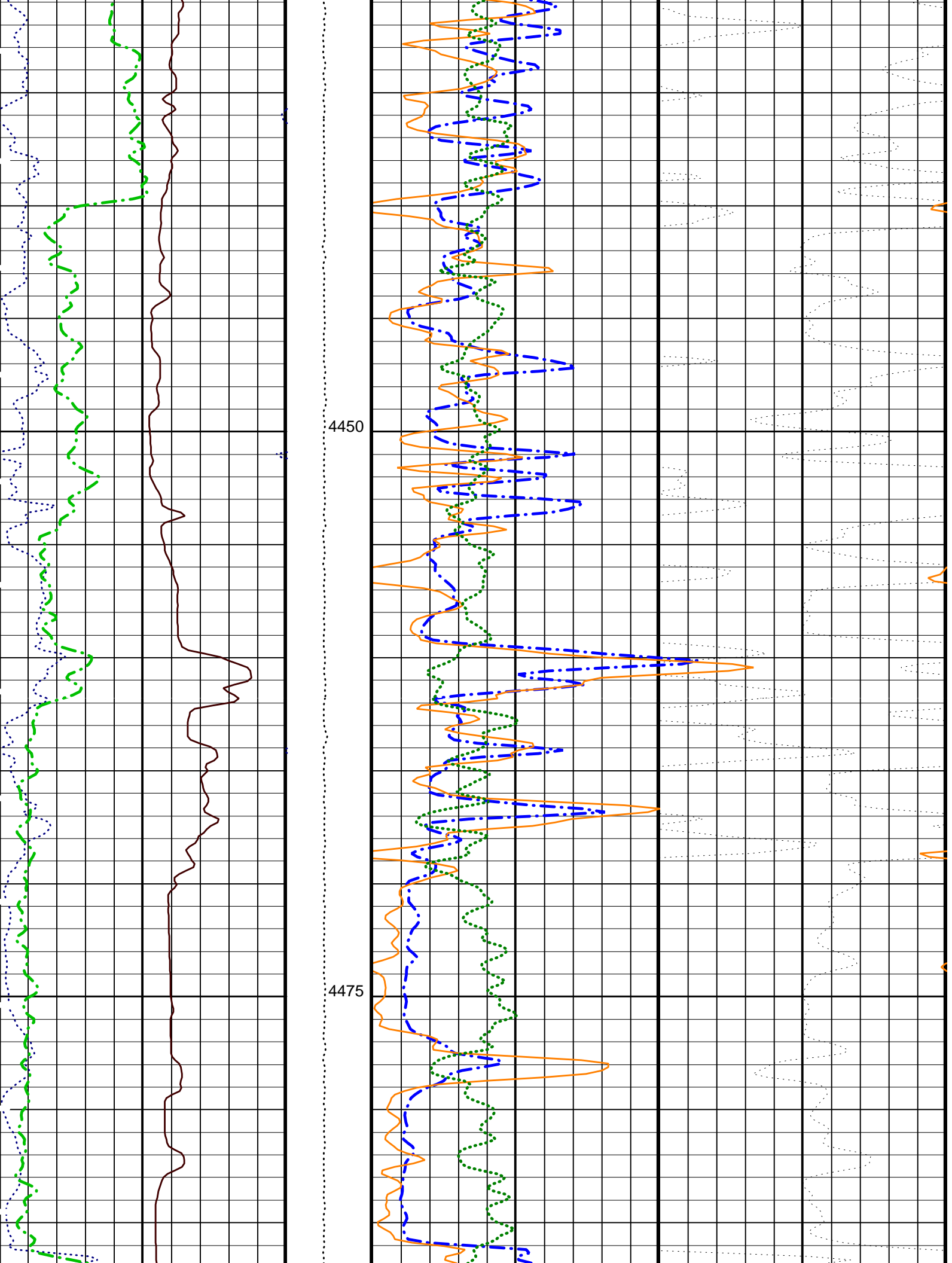


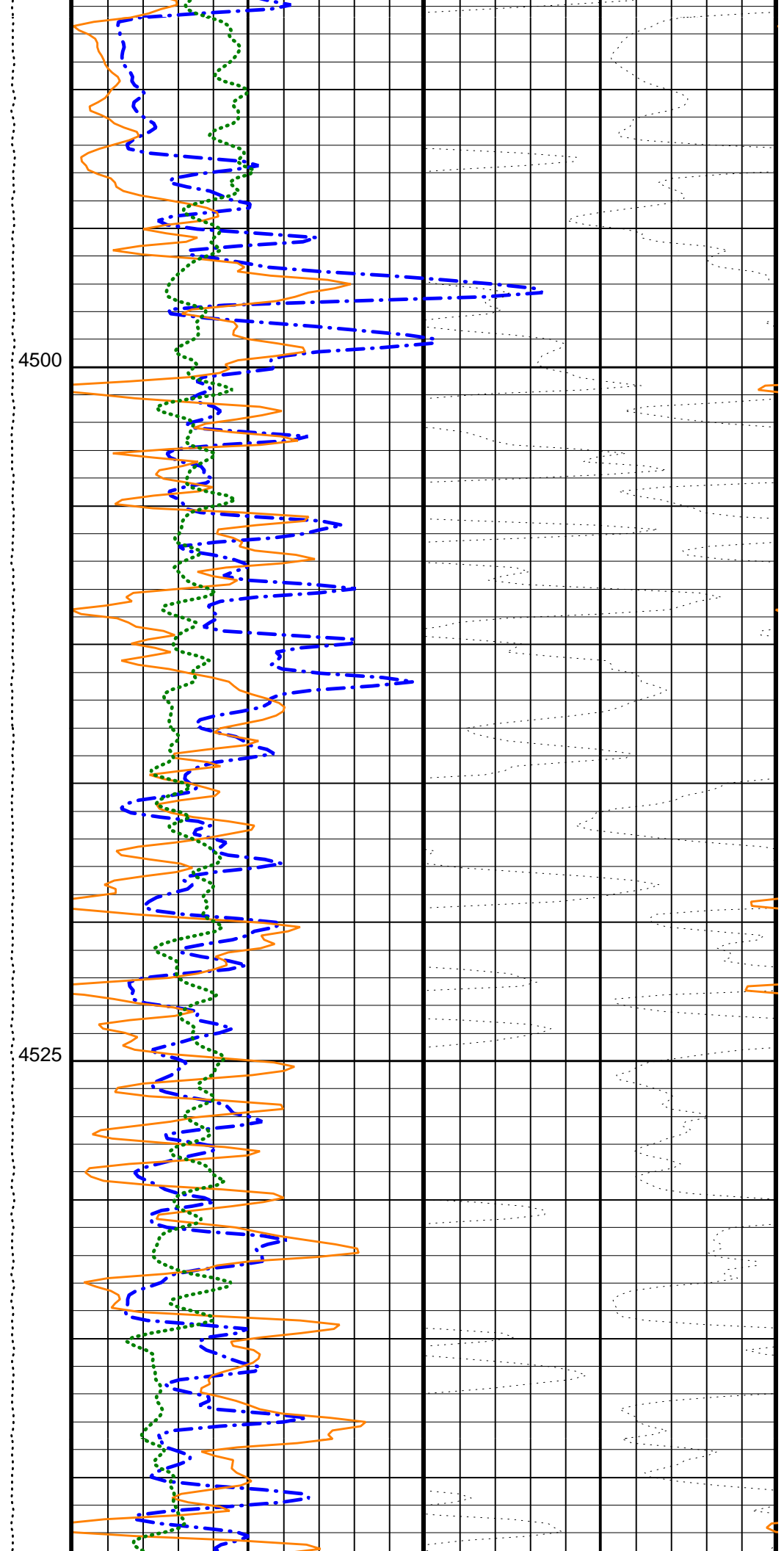
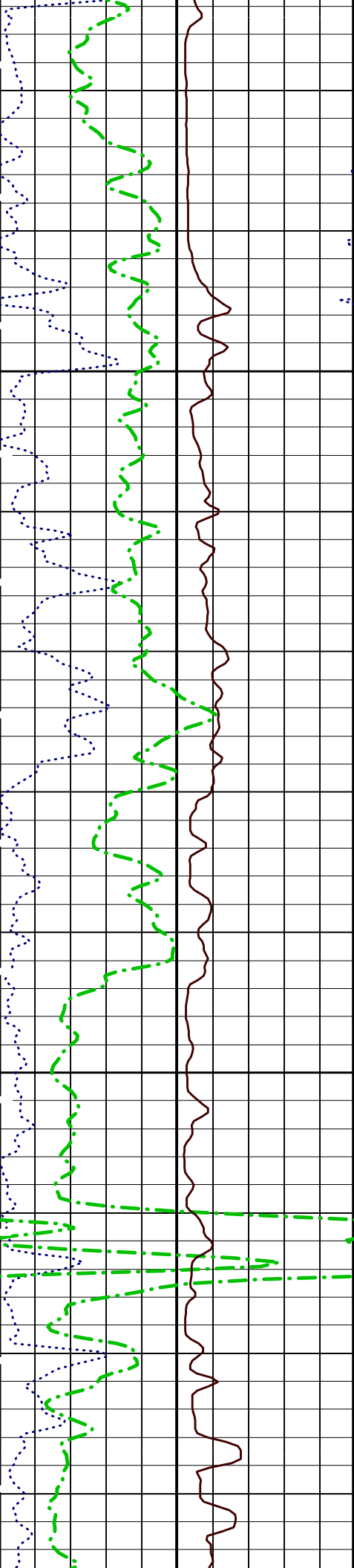


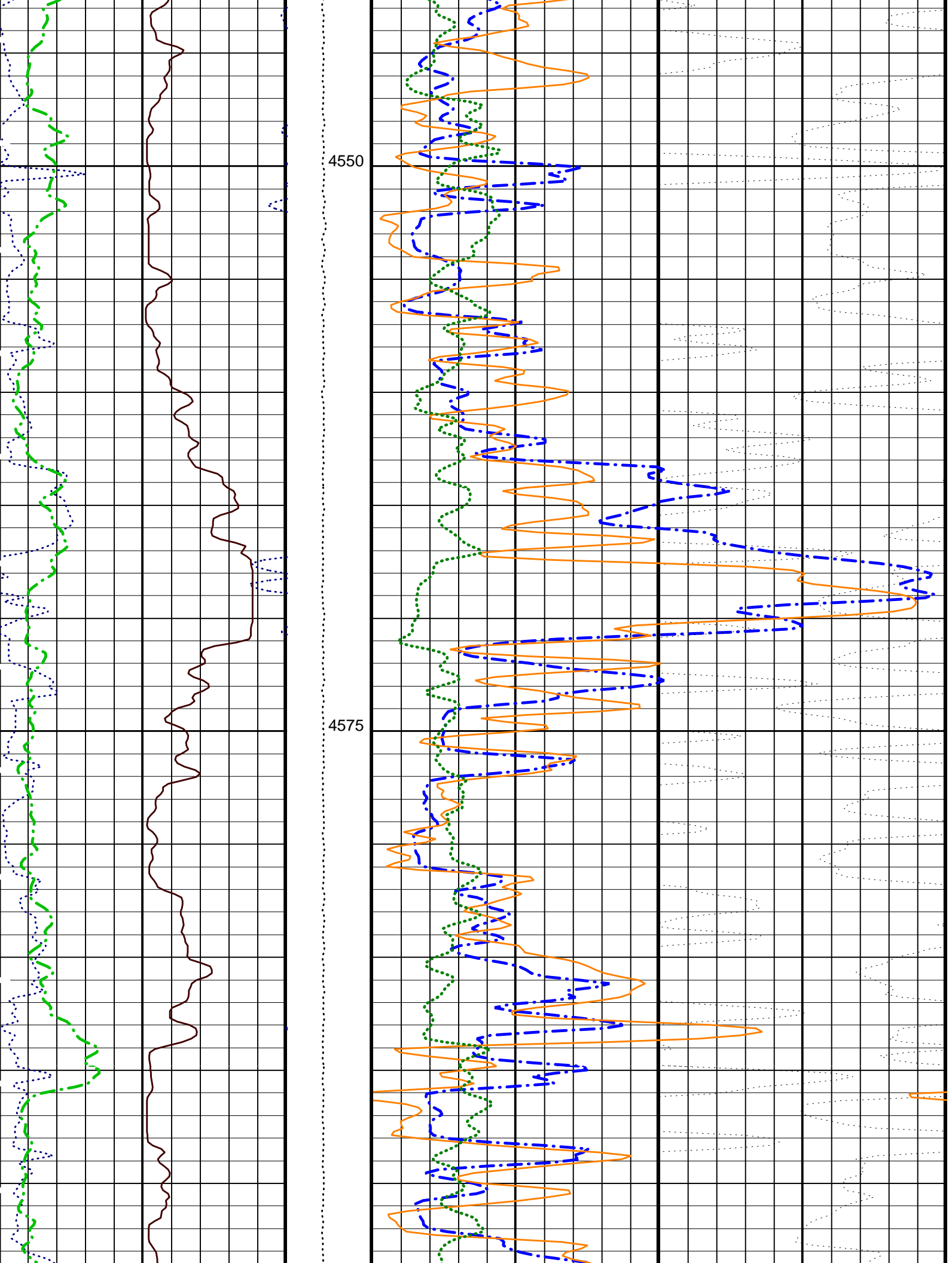


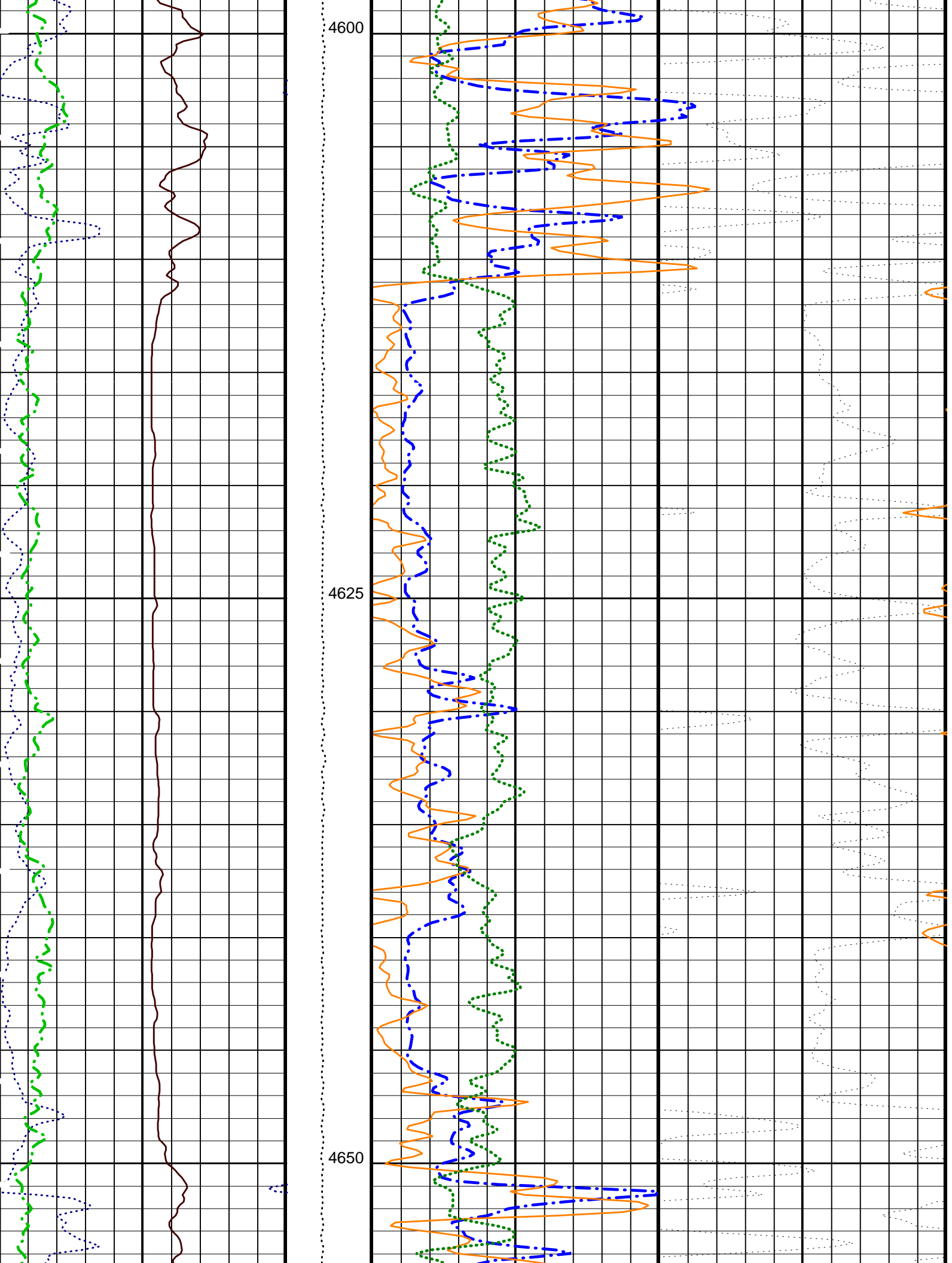


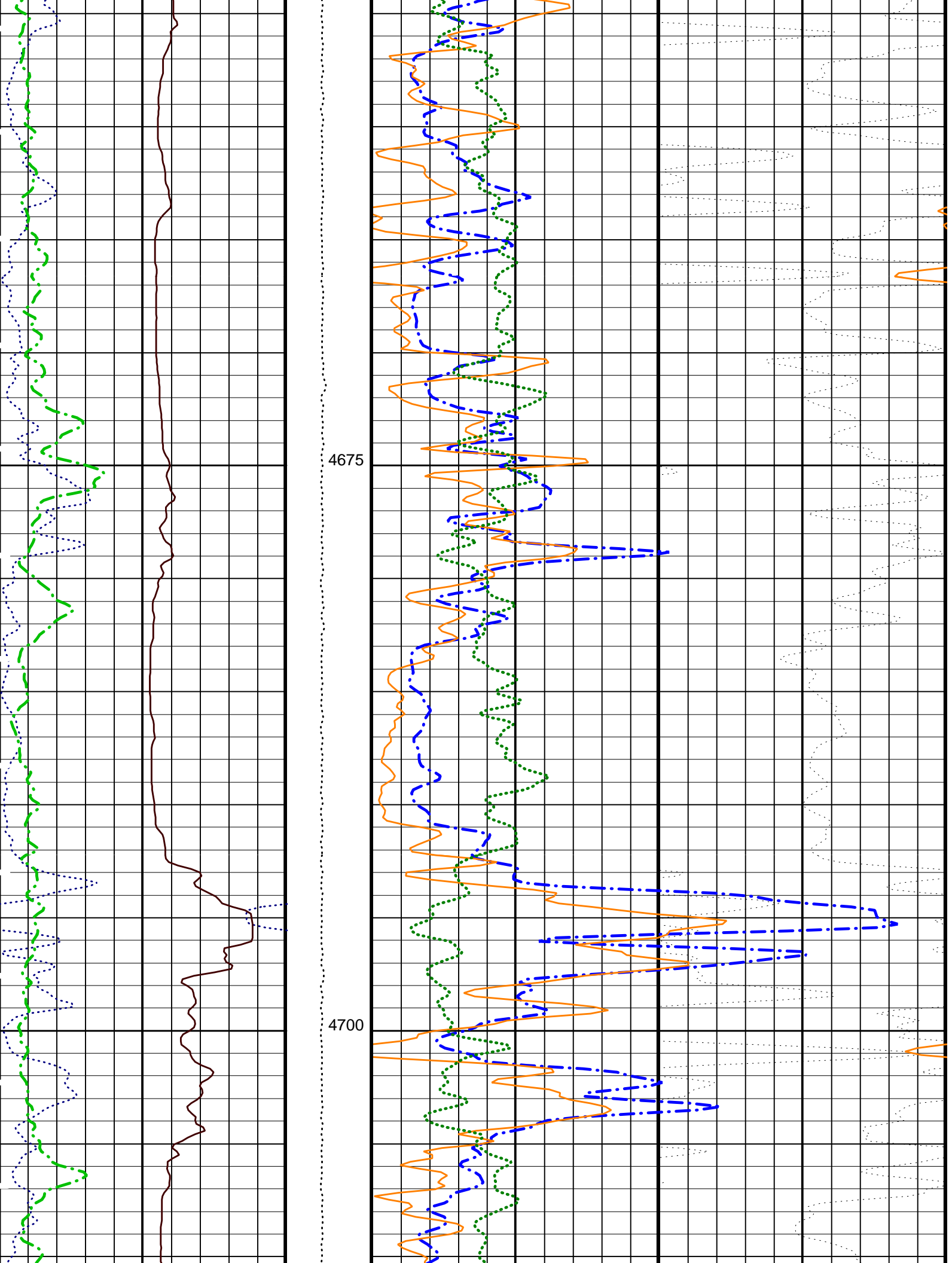


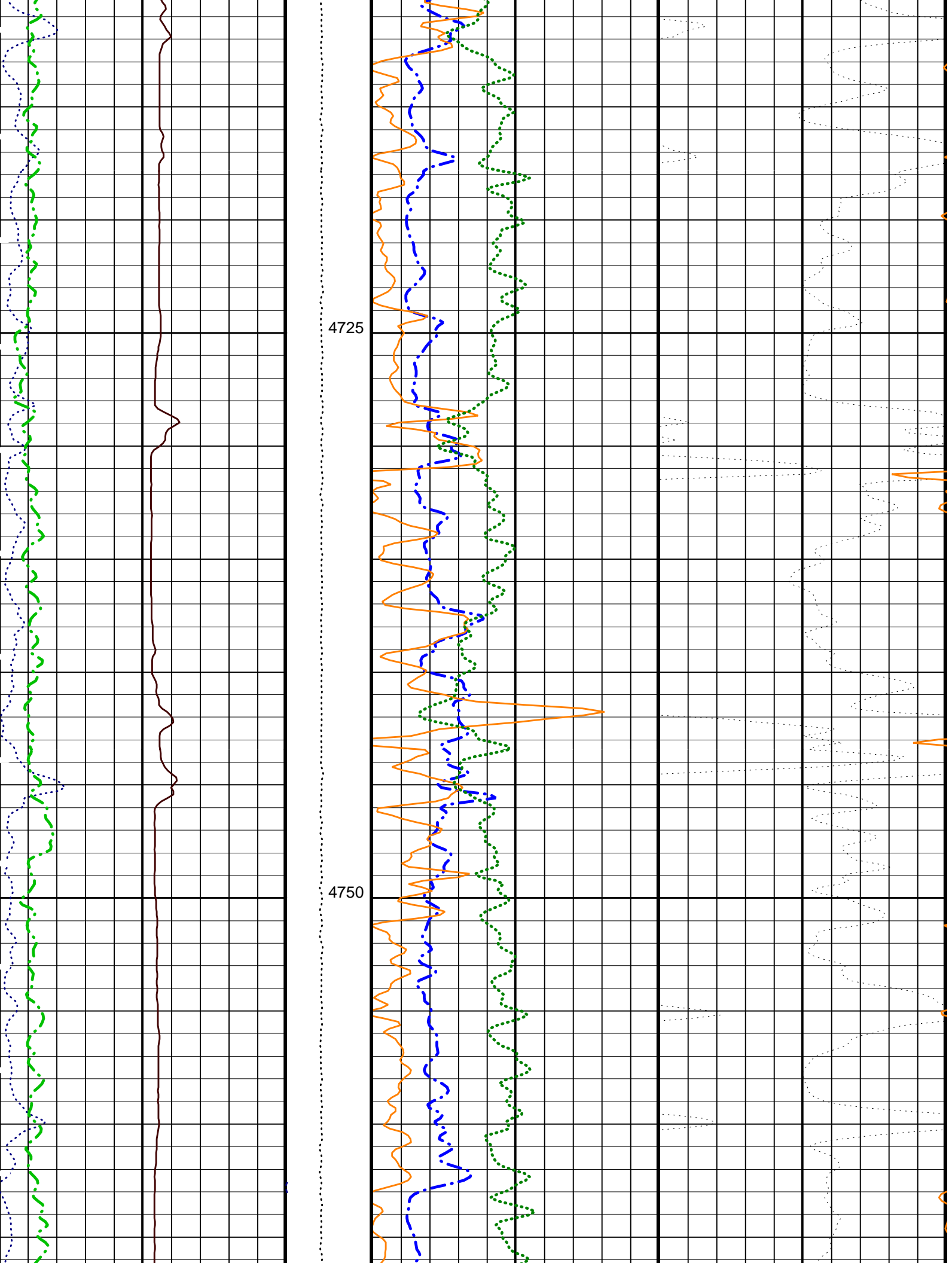




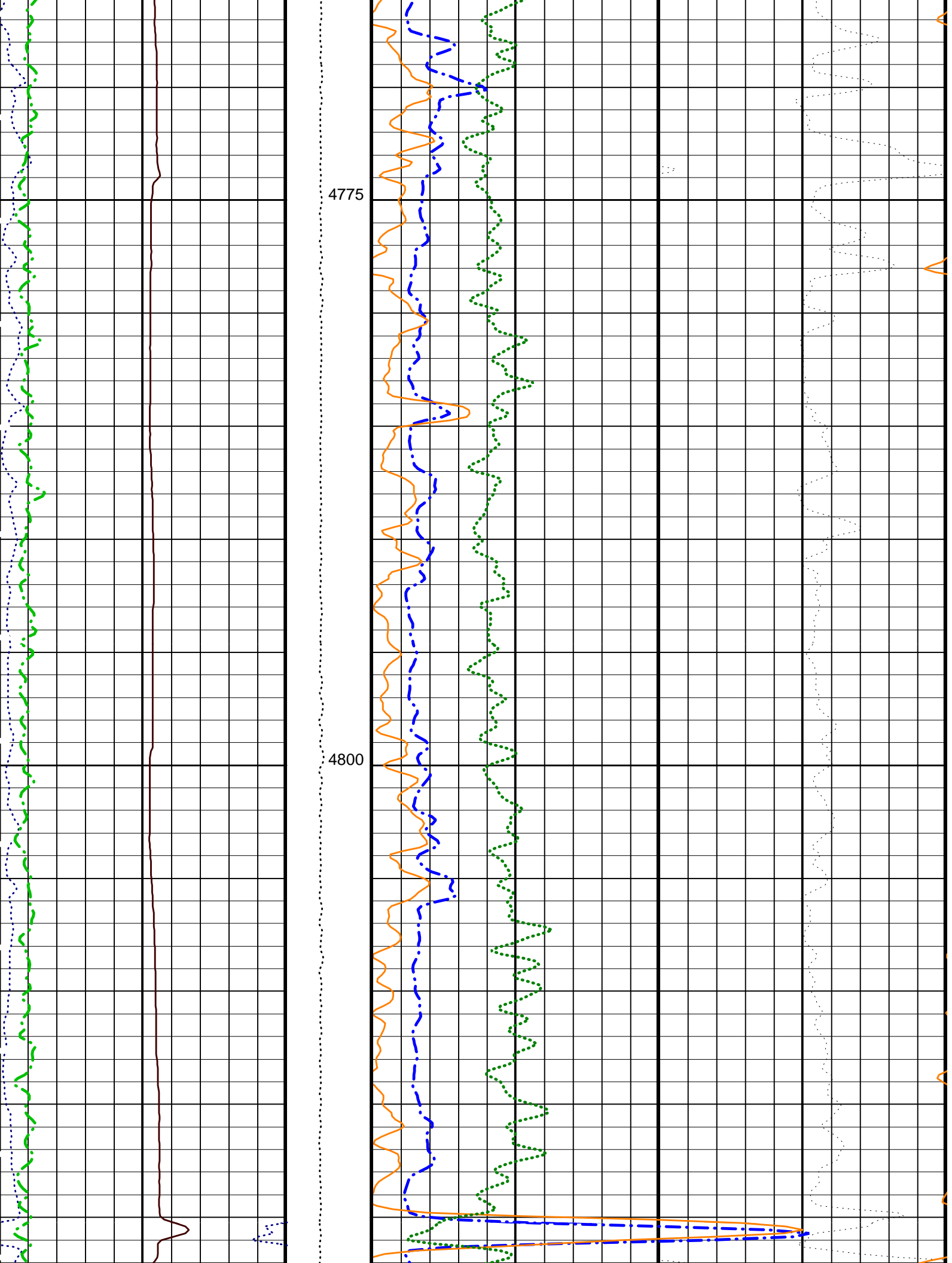


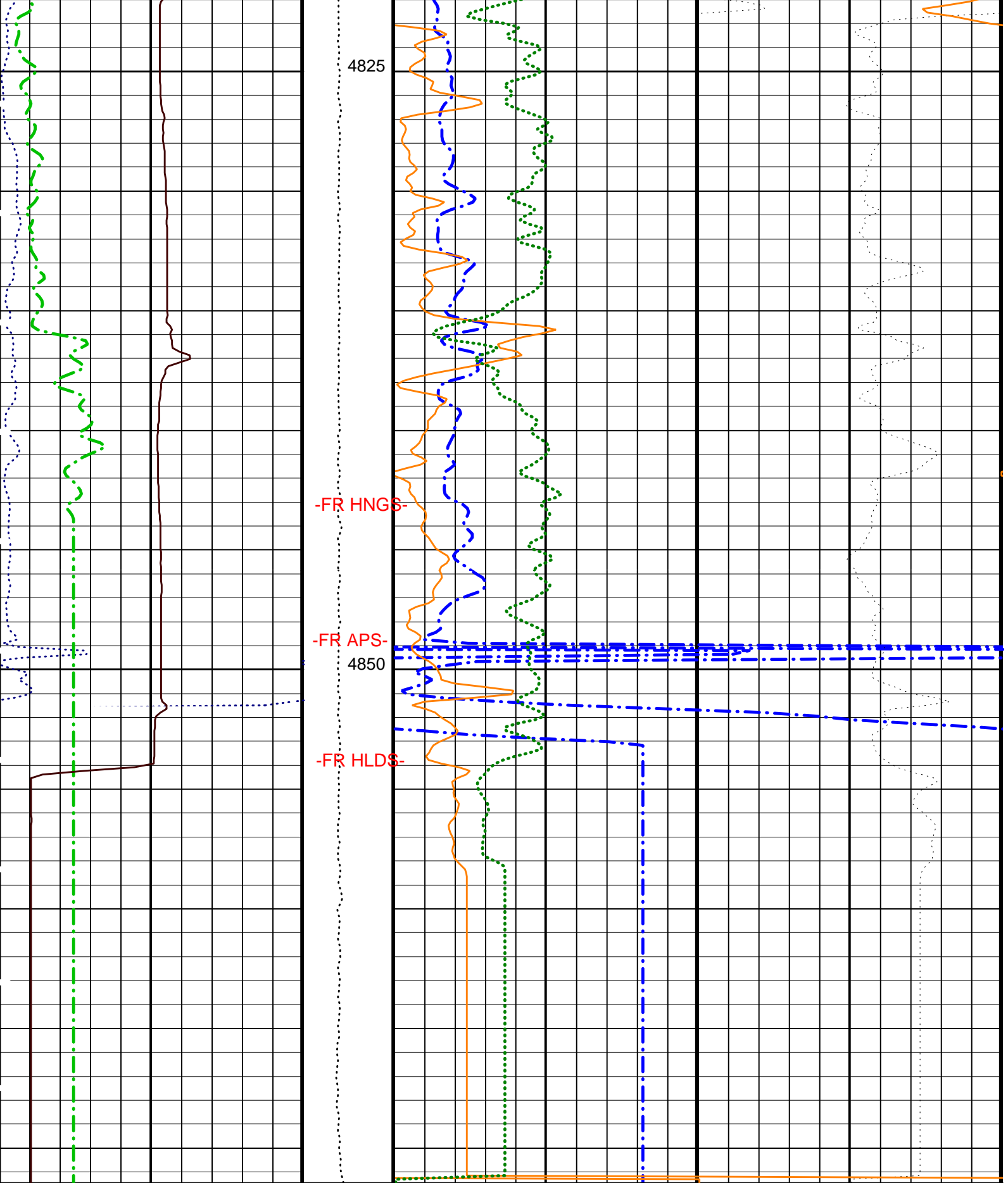












4825

-FR HNGS-

-FR APS-

4850

-FR HLDS-

HLDS Caliper (LCAL)  
(IN) 20

Tension (TENS)  
(LBF) 10000 0

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

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

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

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
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	30000	
PSDS	HLDS SS Pulse Shape Compensation DAC	30000	
PSML	HLDS LS Pulse Shape Compensation Mode	AUTO	
PSMS	HLDS SS Pulse Shape Compensation Mode	AUTO	
APS-C: Accelerator-Porosity Tool			
	APS Software Version	5	
AASD	APS Thermal and Array Detectors High Voltage Setting	1970.11	V
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2083.44	V
AHCS	APS Holesize Correction Source	BS	
AHSS	APS Holesize Correction Switch	ON	
AMTY	APS Environmental Corrections Mud Type	WaterBaseBarite	
ANSD	APS Near Detector High Voltage Setting	1738.26	V
ASOS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	ON	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	120	DEGC
DPPM	Density Porosity Processing Mode	HIRS	
FSAL	Formation Salinity	-50000	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	0.987752	
NFRC	APS Near/Far Calibration Ratio	0.962987	
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)	120	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	-0.00127533	
HALF	HNGS Alpha Filter Length	60	IN
HCBP	HNGS Apply Borehole Potassium Correction	NONE	

TICKS	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	1.10974	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.1427	
BSP: Bridle SP			
SPNV	SP Next Value	0	MV
System and Miscellaneous			
ALTDPCCHAN	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	1.07	G/C3
MST	Mud Sample Temperature	-50000.00	DEGC
PBVADP	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	4900	M
TDD	Total Depth - Driller	4900.00	M
TDL	Total Depth - Logger	4900.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: APS\_HLDS\_PORO    Vertical Scale: 1:200    Graphics File Created: 21-Aug-2005 16:11

### OP System Version: 12C0-301 MCM

DLT-E	12C0-301	DTA-A	12C0-301
HLDS	SPC-2602-NUCL_b	LDSC-A	SPC-2602-NUCL_b
APS-C	SPC-2602-NUCL_b	HNGC-B	SPC-2602-NUCL_b
HNGS-BA	SPC-2602-NUCL_b	DTC-H	12C0-301
BSP	12C0-301		

### Output DLIS Files

DEFAULT	DLL_LDL_APS_NGS_031LUP	FN:32	PRODUCER	21-Aug-2005 16:11
REDUCED	DLL_LDL_APS_NGS_031LUP	FN:33	PRODUCER	21-Aug-2005 16:11



## CALIBRATIONS

### MAXIS Field Log

Calibration and Check Summary								
Measurement	Nominal	Master	Before	After	Change	Limit	Units	
DUAL LATEROLOG - E Wellsite Calibration - DLT ELECTRONICS CALIBRATION Laterolog Measurement								
Before: 21-Aug-2005 15:10								
MEASURED LLD	31.62	N/A	31.91	N/A	N/A	0.9000	OHMM	
MEASURED LLS	31.62	N/A	35.15	N/A	N/A	0.9000	OHMM	
Hostile Litho-Density Sonde Wellsite Calibration - Background Measurement								
Master: 8-Aug-2005 5:15    Before: 19-Aug-2005 14:12								
SS Cs Resolution Bkg	9.000	8.500	8.513	N/A	N/A	1.800	%	
LS Cs Resolution Bkg	9.000	8.161	8.134	N/A	N/A	1.800	%	
LSW1 Background	100.0	82.14	82.13	N/A	N/A	3.000	CPS	
LSW2 Background	100.0	74.99	73.91	N/A	N/A	3.000	CPS	
LSW3 Background	200.0	169.1	165.4	N/A	N/A	6.000	CPS	
LSW4 Background	250.0	207.4	206.5	N/A	N/A	7.500	CPS	

LSW4 Background	230.0	207.4	206.3	N/A	N/A	7.500	CPS
LSW5 Background	600.0	464.2	464.6	N/A	N/A	18.00	CPS
SSW1 Background	100.0	79.48	80.15	N/A	N/A	3.000	CPS
SSW2 Background	200.0	141.1	139.4	N/A	N/A	6.000	CPS
SSW3 Background	500.0	376.6	373.7	N/A	N/A	15.00	CPS
SSW4 Background	270.0	198.6	199.3	N/A	N/A	8.100	CPS
SSW5 Background	200.0	143.3	143.2	N/A	N/A	6.000	CPS
Hostile Litho-Density Sonde Wellsite Calibration - Aluminum Measurement							
Master: 8-Aug-2005 7:18							
LSW1 Aluminum	600.0	547.9	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	848.8	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	1044	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	519.9	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	481.0	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2413	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	6977	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	10160	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	4265	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	578.6	N/A	N/A	N/A	N/A	CPS
Hostile Litho-Density Sonde Wellsite Calibration - Lithology Measurement							
Master: 8-Aug-2005 7:13							
LSW1 Iron	400.0	371.2	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	670.4	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	911.2	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	473.6	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	442.6	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1806	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	5840	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	9264	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3901	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	507.2	N/A	N/A	N/A	N/A	CPS
Hostile Litho-Density Sonde Wellsite Calibration - Caliper Calibration							
Before: 19-Aug-2005 14:15							
HLDS Caliper Small Ring	8.000	N/A	10.80	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	12.00	N/A	15.00	N/A	N/A	N/A	IN
Accelerator-Porosity Tool Wellsite Calibration - Detector Background							
Master: 15-Aug-2005 4:57 Before: 19-Aug-2005 14:13							
Near Det Bkg Cntrate	30.00	25.36	24.74	N/A	N/A	N/A	CPS
Far Det Bkg Cntrate	30.00	26.40	25.53	N/A	N/A	N/A	CPS
Array-1 Det Bkg Cntrate	30.00	27.15	26.46	N/A	N/A	N/A	CPS
Array-2 Det Bkg Cntrate	30.00	26.59	25.96	N/A	N/A	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	26.22	24.09	N/A	N/A	N/A	CPS
Accelerator-Porosity Tool Wellsite Calibration - Calibration Ratios							
Master: 15-Aug-2005 4:57							
Near/Far Calibration Ratio	0.9250	0.9630	N/A	N/A	N/A	N/A	
Near/Array Calibration Ratio	1.030	0.9878	N/A	N/A	N/A	N/A	
Near/Array Cal Ratio Up/Down	1.000	1.011	N/A	N/A	N/A	N/A	
Accelerator-Porosity Tool Wellsite Calibration - Tank Check							
Master: 15-Aug-2005 4:57							
Array-1 Standoff Porosity	11.75	12.31	N/A	N/A	N/A	N/A	PU
Array-2 Standoff Porosity	11.75	11.98	N/A	N/A	N/A	N/A	PU
Average Slowing Down Time	6.000	5.772	N/A	N/A	N/A	N/A	US
Array-1 SDT Ratio Up/Down	1.000	1.001	N/A	N/A	N/A	N/A	
Array-2 SDT Ratio Up/Down	1.000	0.9963	N/A	N/A	N/A	N/A	
Sigma Formation	27.50	27.56	N/A	N/A	N/A	N/A	CU
Accelerator-Porosity Tool Wellsite Calibration - CCR7 signal boxes							
Master: 15-Aug-2005 4:57							
Near Detector Plateau Setting	1650	1738	N/A	N/A	N/A	N/A	V
Far Detector Plateau Setting	2000	2083	N/A	N/A	N/A	N/A	V
Array Detector Plateau Setting	2000	1970	N/A	N/A	N/A	N/A	V
Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 1 Check							
Master: 19-Aug-2005 13:45 Before: 19-Aug-2005 14:13							
Na 511 Peak Loc	40.00	39.55	39.60	N/A	N/A	1.000	
Na 511 Peak Res	15.50	16.41	16.70	N/A	N/A	2.000	%
High Voltage	1150	1122	1123	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	142.5	142.4	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	9.106	8.805	N/A	N/A	2.000	%
Temperature	15.50	34.58	34.64	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	47.00	46.61	N/A	N/A	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 2 Check							
Master: 19-Aug-2005 13:45 Before: 19-Aug-2005 14:13							
Na 511 Peak Loc	40.00	39.60	39.60	N/A	N/A	1.000	
Na 511 Peak Res	15.50	16.71	16.38	N/A	N/A	2.000	%

High Voltage	1150	1200	1201	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	142.6	142.3	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	8.264	8.445	N/A	N/A	2.000	%
Temperature	15.50	33.67	33.88	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	46.77	46.05	N/A	N/A	8.000	CPS

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

Master: 19-Aug-2005 13:45 Before: 19-Aug-2005 14:13

Coincidence Count Rate Ratio	1.000	1.005	1.013	N/A	N/A	0.05000
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Hostile Natural Gamma Ray Sonde Master Calibration - Detector 1 Calibration

Master: 19-Aug-2005 13:45

Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	209.4	--	--	--	--	
Th Peak Res	7.000	7.421	--	--	--	--	%
Background Count Rate	142.5	22.21	--	--	--	--	CPS
Gain Ratio	1.000	1.007	--	--	--	--	

Hostile Natural Gamma Ray Sonde Master Calibration - Detector 2 Calibration

Master: 19-Aug-2005 13:45

Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	209.7	--	--	--	--	
Th Peak Res	7.000	7.313	--	--	--	--	%
Background Count Rate	142.5	20.37	--	--	--	--	CPS
Gain Ratio	1.000	1.007	--	--	--	--	

Accelerator-Porosity Tool - Detector Plateau Settings :

Near Detector Plateau Setting 1738 V  
 Far Detector Plateau Setting 2083 V  
 Array Detector Plateau Setting 1970 V

DUAL LATEROLOG - E / Equipment Identification

Primary Equipment:

Auxiliary Equipment:

Dual Laterolog Electrode	DLE - E
Dual Laterolog Sonde	DLS - F
Dual Laterolog Housing	DLH - CB
Dual Laterolog Cartridge	DLC - D
Laterolog Control Module	LCM - AA

DUAL LATEROLOG - E Wellsite Calibration

DLT ELECTRONICS CALIBRATION Laterolog Measurement

Phase	MEASURED LLD OHMM	Value	Phase	MEASURED LLS OHMM	Value
Before		31.91	Before		35.15
	29.00 (Minimum) 31.62 (Nominal) 40.00 (Maximum)			29.00 (Minimum) 31.62 (Nominal) 40.00 (Maximum)	

Before: 21-Aug-2005 15:10

DUAL LATEROLOG - E Wellsite Calibration

DLT Electronics Calibration Plus Measurement

Phase	Deep Current Plus UA	Value	Phase	Deep Voltage Plus MV	Value	Phase	Groningen Voltage Plus MV	Value
Before		341.5	Before		10.90	Before		11.38
	317.5 (Minimum) 342.5 (Nominal) 367.5 (Maximum)			9.830 (Minimum) 10.83 (Nominal) 11.83 (Maximum)			9.830 (Minimum) 10.83 (Nominal) 11.83 (Maximum)	
Phase	Shallow Current Plus UA	Value	Phase	Shallow Voltage Plus MV	Value			
Before		330.7	Before		11.63			
	317.5 (Minimum) 342.5 (Nominal) 367.5 (Maximum)			9.830 (Minimum) 10.83 (Nominal) 11.83 (Maximum)				

Before: 21-Aug-2005 15:10

DUAL LATEROLOG - E Wellsite Calibration

DLT Electronics Calibration Zero Measurement

Phase	Deep Current Zero UA	Value	Phase	Deep Voltage Zero MV	Value	Phase	Groningen Voltage Zero MV	Value
Before		-0.08586	Before		-0.007697	Before		-0.003849
	-1.000 0 1.000			-0.1000 0 0.1000			-0.1000 0 0.1000	

(Minimum) (Nominal) (Maximum)			(Minimum) (Nominal) (Maximum)		
Phase	Shallow Current Zero UA	Value	Phase	Shallow Voltage Zero MV	Value
Before		-0.08586	Before		0.007697
	-1.000 (Minimum) 0 (Nominal) 1.000 (Maximum)			-0.1000 (Minimum) 0 (Nominal) 0.1000 (Maximum)	

Before: 21-Aug-2005 15:09

Hostile Litho-Density Sonde / Equipment Identification			
<b>Primary Equipment:</b>			
Hostile Litho Density Sonde	HLDS - D	35	
Hostile Litho Density High Voltage	HLDV - D	35	
Gamma Source Radioactive	GSR - Z	2326	
<b>Auxiliary Equipment:</b>			
Hostile Litho Density Pad	HLDP - C	35	
Hostile Litho Density High Voltage Housi	HEH - H	35	

Hostile Litho-Density Sonde Wellsite Calibration										
Background Measurement										
Phase	SS Cs Resolution Bkg %	Value	Phase	LS Cs Resolution Bkg %	Value	Phase	LSW1 Background CPS	Value		
Master		8.500	Master		8.161	Master		82.14		
Before		8.513	Before		8.134	Before		82.13		
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)			7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)			55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)			
Phase	LSW2 Background CPS	Value	Phase	LSW3 Background CPS	Value	Phase	LSW4 Background CPS	Value		
Master		74.99	Master		169.1	Master		207.4		
Before		73.91	Before		165.4	Before		206.5		
	50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)			110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)			140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)			
Phase	LSW5 Background CPS	Value	Phase	SSW1 Background CPS	Value	Phase	SSW2 Background CPS	Value		
Master		464.2	Master		79.48	Master		141.1		
Before		464.6	Before		80.15	Before		139.4		
	330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)			55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)			100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)			
Phase	SSW3 Background CPS	Value	Phase	SSW4 Background CPS	Value	Phase	SSW5 Background CPS	Value		
Master		376.6	Master		198.6	Master		143.3		
Before		373.7	Before		199.3	Before		143.2		
	280.0 (Minimum) 500.0 (Nominal) 700.0 (Maximum)			150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum)			110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum)			

Master: 8-Aug-2005 5:15 Before: 19-Aug-2005 14:12

Hostile Litho-Density Sonde Master Calibration										
Detector Background Measurement										
Phase	LSW1 Background CPS	Value	Phase	LSW2 Background CPS	Value	Phase	LSW3 Background CPS	Value		
Master		82.14	Master		74.99	Master		169.1		
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)			50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)			110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)			
Phase	LSW4 Background CPS	Value	Phase	LSW5 Background CPS	Value	Phase	LS Cs Resolution Bkg %	Value		
Master		207.4	Master		464.2	Master		8.161		
	140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)			330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)			7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)			
Phase	SSW1 Background CPS	Value	Phase	SSW2 Background CPS	Value	Phase	SSW3 Background CPS	Value		
Master		79.48	Master		141.1	Master		376.6		
	55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)			100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)			280.0 (Minimum) 500.0 (Nominal) 700.0 (Maximum)			
Phase	SSW4 Background CPS	Value	Phase	SSW5 Background CPS	Value	Phase	SS Cs Resolution Bkg %	Value		
Master		198.6	Master		143.3	Master		8.500		
	150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum)			110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum)			7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)			

Master: 8-Aug-2005 5:15

Hostile Litho-Density Sonde Master Calibration

**Detector Aluminum Measurement (bkgd-subtracted)**

Phase	LSW1 Aluminum CPS	Value	Phase	LSW2 Aluminum CPS	Value	Phase	LSW3 Aluminum CPS	Value
Master		547.9	Master		848.8	Master		1044
	420.0 (Minimum) 600.0 (Nominal) 700.0 (Maximum)			650.0 (Minimum) 900.0 (Nominal) 1050 (Maximum)			800.0 (Minimum) 1100 (Nominal) 1300 (Maximum)	
Phase	LSW4 Aluminum CPS	Value	Phase	LSW5 Aluminum CPS	Value	Phase	SSW1 Aluminum CPS	Value
Master		519.9	Master		481.0	Master		2413
	410.0 (Minimum) 580.0 (Nominal) 670.0 (Maximum)			410.0 (Minimum) 570.0 (Nominal) 660.0 (Maximum)			2000 (Minimum) 2800 (Nominal) 3200 (Maximum)	
Phase	SSW2 Aluminum CPS	Value	Phase	SSW3 Aluminum CPS	Value	Phase	SSW4 Aluminum CPS	Value
Master		6977	Master		10160	Master		4265
	5800 (Minimum) 8000 (Nominal) 9300 (Maximum)			8300 (Minimum) 11600 (Nominal) 13500 (Maximum)			3500 (Minimum) 5000 (Nominal) 5800 (Maximum)	
Phase	SSW5 Aluminum CPS	Value						
Master		578.6						
	470.0 (Minimum) 660.0 (Nominal) 770.0 (Maximum)							

Master: 8-Aug-2005 7:18

**Hostile Litho-Density Sonde Master Calibration**

**Detector Litholog Measurement (bkgd-subtracted)**

Phase	LSW1 Iron CPS	Value	Phase	LSW2 Iron CPS	Value	Phase	LSW3 Iron CPS	Value
Master		371.2	Master		670.4	Master		911.2
	290.0 (Minimum) 400.0 (Nominal) 470.0 (Maximum)			520.0 (Minimum) 730.0 (Nominal) 850.0 (Maximum)			720.0 (Minimum) 1000 (Nominal) 1160 (Maximum)	
Phase	LSW4 Iron CPS	Value	Phase	LSW5 Iron CPS	Value	Phase	SSW1 Iron CPS	Value
Master		473.6	Master		442.6	Master		1806
	370.0 (Minimum) 520.0 (Nominal) 600.0 (Maximum)			340.0 (Minimum) 470.0 (Nominal) 550.0 (Maximum)			1500 (Minimum) 2100 (Nominal) 2400 (Maximum)	
Phase	SSW2 Iron CPS	Value	Phase	SSW3 Iron CPS	Value	Phase	SSW4 Iron CPS	Value
Master		5840	Master		9264	Master		3901
	4900 (Minimum) 6800 (Nominal) 7900 (Maximum)			7800 (Minimum) 10800 (Nominal) 12600 (Maximum)			3300 (Minimum) 4600 (Nominal) 5400 (Maximum)	
Phase	SSW5 Iron CPS	Value						
Master		507.2						
	420.0 (Minimum) 580.0 (Nominal) 680.0 (Maximum)							

Master: 8-Aug-2005 7:13

**Hostile Litho-Density Sonde Master Calibration**

**Quality Ratios**

Phase	AL CALIBRATION RATIO 1	Value	Phase	AL CALIBRATION RATIO 2	Value	Phase	AL CALIBRATION RATIO 3	Value
Master		1.043	Master		2.098	Master		0.5474
	0.9000 (Minimum) 1.000 (Nominal) 1.100 (Maximum)			1.900 (Minimum) 2.100 (Nominal) 2.300 (Maximum)			0.4500 (Minimum) 0.5500 (Nominal) 0.6500 (Maximum)	
Phase	AL CALIBRATION RATIO 4	Value	Phase	Pad-Wear SS Ratio	Value	Phase	Pad-Wear LS Ratio	Value
Master		0.4982	Master		0.9898	Master		0.9886
	0.4000 (Minimum) 0.5500 (Nominal) 0.6500 (Maximum)			0.9800 (Minimum) 0.9880 (Nominal) 0.9960 (Maximum)			0.9800 (Minimum) 0.9880 (Nominal) 0.9960 (Maximum)	
Phase	Pad-Position SS Ratio	Value	Phase	Pad-Position LS Ratio	Value			
Master		1.002	Master		0.9860			
	0.9900 (Minimum) 0.9940 (Nominal) 1.015 (Maximum)			0.9850 (Minimum) 0.9940 (Nominal) 1.010 (Maximum)				

Master: 8-Aug-2005 7:08

**Litho-Density Spectroscopy Cartridge - A / Equipment Identification**

Primary Equipment:

LDSC Cartridge

LDSC - A

16

Auxiliary Equipment:

LDSC Housing

LDSh - A

52



**Accelerator-Porosity Tool / Equipment Identification**

**Primary Equipment:**

Accelerator-Porosity Sonde  
 APS Minitron

APS - C                    202  
 MNTR - F                5124

**Auxiliary Equipment:**

Accelerator-Porosity Housing  
 APS Calibration Water Tank  
 APS Aluminum Calibrator Sleeve

APH - AC                 104  
 SFT - 178               6250  
 SFT - 281               6250

Accelerator-Porosity Tool Wellsite Calibration														
Detector Background														
Phase	Near Det Bkg Cntrate CPS			Value	Phase	Far Det Bkg Cntrate CPS			Value	Phase	Array-1 Det Bkg Cntrate CPS			Value
Master				25.36	Master				26.40	Master				27.15
Before				24.74	Before				25.53	Before				26.46
	1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)			1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)			1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)	
Phase	Array-2 Det Bkg Cntrate CPS			Value	Phase	Array Therm Det Bkg Cntrate CPS			Value					
Master				26.59	Master				26.22					
Before				25.96	Before				24.09					
	1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)			1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)						

Master: 15-Aug-2005 4:57

Before: 19-Aug-2005 14:13

Accelerator-Porosity Tool Wellsite Calibration														
Calibration Ratios														
Phase	Near/Far Calibration Ratio			Value	Phase	Near/Array Calibration Ratio			Value	Phase	Near/Array Cal Ratio Up/Down			Value
Master				0.9630	Master				0.9878	Master				1.011
	0.8000 (Minimum)	0.9250 (Nominal)	1.050 (Maximum)			0.9000 (Minimum)	1.030 (Nominal)	1.170 (Maximum)			0.9700 (Minimum)	1.000 (Nominal)	1.030 (Maximum)	

Master: 15-Aug-2005 4:57

Accelerator-Porosity Tool Wellsite Calibration														
Tank Check														
Phase	Array-1 Standoff Porosity PU			Value	Phase	Array-2 Standoff Porosity PU			Value	Phase	Average Slowing Down Time US			Value
Master				12.31	Master				11.98	Master				5.772
	9.900 (Minimum)	11.75 (Nominal)	13.60 (Maximum)			9.900 (Minimum)	11.75 (Nominal)	13.60 (Maximum)			5.500 (Minimum)	6.000 (Nominal)	6.250 (Maximum)	
Phase	Array-1 SDT Ratio Up/Down			Value	Phase	Array-2 SDT Ratio Up/Down			Value	Phase	Sigma Formation CU			Value
Master				1.001	Master				0.9963	Master				27.56
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)			0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)			20.00 (Minimum)	27.50 (Nominal)	35.00 (Maximum)	

Master: 15-Aug-2005 4:57

Accelerator-Porosity Tool Master Calibration														
Detector Calibration														
Phase	Near/Far Calibration Ratio			Value	Phase	Near/Array Calibration Ratio			Value	Phase	Near/Array Cal Ratio Up/Down			Value
Master				0.9630	Master				0.9878	Master				1.011
	0.8000 (Minimum)	0.9250 (Nominal)	1.050 (Maximum)			0.9000 (Minimum)	1.030 (Nominal)	1.170 (Maximum)			0.9700 (Minimum)	1.000 (Nominal)	1.030 (Maximum)	

Master: 15-Aug-2005 4:57

Accelerator-Porosity Tool Master Calibration														
Tank Check														
Phase	Array-1 Standoff Porosity PU			Value	Phase	Array-2 Standoff Porosity PU			Value	Phase	Average Slowing Down Time US			Value
Master				12.31	Master				11.98	Master				5.772
	9.900 (Minimum)	11.75 (Nominal)	13.60 (Maximum)			9.900 (Minimum)	11.75 (Nominal)	13.60 (Maximum)			5.500 (Minimum)	6.000 (Nominal)	6.250 (Maximum)	
Phase	Array-1 SDT Ratio Up/Down			Value	Phase	Array-2 SDT Ratio Up/Down			Value	Phase	Sigma Formation CU			Value
Master				1.001	Master				0.9963	Master				27.56
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)			0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)			20.00 (Minimum)	27.50 (Nominal)	35.00 (Maximum)	

Master: 15-Aug-2005 4:57

Hostile Natural Gamma Ray Cartridge - B / Equipment Identification

Primary Equipment:  
HNGC Cartridge

HNGC - B                      300

Auxiliary Equipment:  
HNGC Housing

HNGH - A                      115

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:  
HNGS Sonde

HNGS - BA                      194

Auxiliary Equipment:  
HNGS Sonde Housing  
Gamma Source Radioactive

HNSH - BA                      205  
GSR - U                          135

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 1 Check

Phase	Na 511 Peak Loc	Value	Phase	Na 511 Peak Res %	Value	Phase	High Voltage V	Value
Master		39.55	Master		16.41	Master		1122
Before		39.60	Before		16.70	Before		1123
	37.50 (Minimum)    40.00 (Nominal)    42.50 (Maximum)			12.00 (Minimum)    15.50 (Nominal)    19.00 (Maximum)			900.0 (Minimum)    1150 (Nominal)    1600 (Maximum)	
Phase	Na 1785 Peak Loc	Value	Phase	Na 1785 Peak Res %	Value	Phase	Temperature DEGC	Value
Master		142.5	Master		9.106	Master		34.58
Before		142.4	Before		8.805	Before		34.64
	135.0 (Minimum)    142.6 (Nominal)    150.3 (Maximum)			7.000 (Minimum)    8.500 (Nominal)    11.00 (Maximum)			-28.89 (Minimum)    15.50 (Nominal)    60.00 (Maximum)	
Phase	Na Count Rate CPS	Value						
Master		47.00						
Before		46.61						
	10.00 (Minimum)    45.00 (Nominal)    100.0 (Maximum)							

Master: 19-Aug-2005 13:45

Before: 19-Aug-2005 14:13

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 2 Check

Phase	Na 511 Peak Loc	Value	Phase	Na 511 Peak Res %	Value	Phase	High Voltage V	Value
Master		39.60	Master		16.71	Master		1200
Before		39.60	Before		16.38	Before		1201
	37.50 (Minimum)    40.00 (Nominal)    42.50 (Maximum)			12.00 (Minimum)    15.50 (Nominal)    19.00 (Maximum)			900.0 (Minimum)    1150 (Nominal)    1600 (Maximum)	
Phase	Na 1785 Peak Loc	Value	Phase	Na 1785 Peak Res %	Value	Phase	Temperature DEGC	Value
Master		142.6	Master		8.264	Master		33.67
Before		142.3	Before		8.445	Before		33.88
	135.0 (Minimum)    142.6 (Nominal)    150.3 (Maximum)			7.000 (Minimum)    8.500 (Nominal)    11.00 (Maximum)			-28.89 (Minimum)    15.50 (Nominal)    60.00 (Maximum)	
Phase	Na Count Rate CPS	Value						
Master		46.77						
Before		46.05						
	10.00 (Minimum)    45.00 (Nominal)    100.0 (Maximum)							

Master: 19-Aug-2005 13:45

Before: 19-Aug-2005 14:13

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Ratio Of Detector 1 To Detector 2

Phase	Coincidence Count Rate Ratio	Value
Master		1.005

Before		1.013
0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)
Master: 19-Aug-2005 13:45		
Before: 19-Aug-2005 14:13		

Hostile Natural Gamma Ray Sonde Master Calibration											
Detector 1 Calibration											
Phase	Na 511 Peak Set Point		Value	Phase	Th Peak Loc		Value	Phase	Th Peak Res %		Value
Master			41.00	Master			209.4	Master			7.421
	38.00 (Minimum)	40.00 (Nominal)	42.00 (Maximum)		201.0 (Minimum)	209.6 (Nominal)	218.3 (Maximum)		5.000 (Minimum)	7.000 (Nominal)	9.000 (Maximum)
Phase	Background Count Rate CPS		Value	Phase	Gain Ratio		Value				
Master			22.21	Master			1.007				
	20.00 (Minimum)	142.5 (Nominal)	265.0 (Maximum)		0.9400 (Minimum)	1.000 (Nominal)	1.060 (Maximum)				
Master: 19-Aug-2005 13:45											

Hostile Natural Gamma Ray Sonde Master Calibration											
Detector 2 Calibration											
Phase	Na 511 Peak Set Point		Value	Phase	Th Peak Loc		Value	Phase	Th Peak Res %		Value
Master			41.00	Master			209.7	Master			7.313
	38.00 (Minimum)	40.00 (Nominal)	42.00 (Maximum)		201.0 (Minimum)	209.6 (Nominal)	218.3 (Maximum)		5.000 (Minimum)	7.000 (Nominal)	9.000 (Maximum)
Phase	Background Count Rate CPS		Value	Phase	Gain Ratio		Value				
Master			20.37	Master			1.007				
	20.00 (Minimum)	142.5 (Nominal)	265.0 (Maximum)		0.9400 (Minimum)	1.000 (Nominal)	1.060 (Maximum)				
Master: 19-Aug-2005 13:45											

Company: Lamont Doherty

**Schlumberger**

Well: Expedition 309 Site U1256D

Field: Superfast Spreading Crust

Rig: Joides Resolution

Ocean: Pacific Ocean

Accelerator Porosity Sonde

Hostile Litho-Density Sonde

Gamma Ray