Schlumberger

Company: Lamont Doherty

Well: Expedition 312 Site 1256D
Field: Superfast Spreading Crust III
Rig: Joides Resolution   Ocean: Pacific Ocean

Rig: Joides Resolution
Field: Superfast Spreading Crust III
Location:
Well: Expedition 312 Site 1256D
Company: Lamont Doherty

Accelerator Porosity Sonde
Hostile Litho-Density Sonde
Gamma Ray

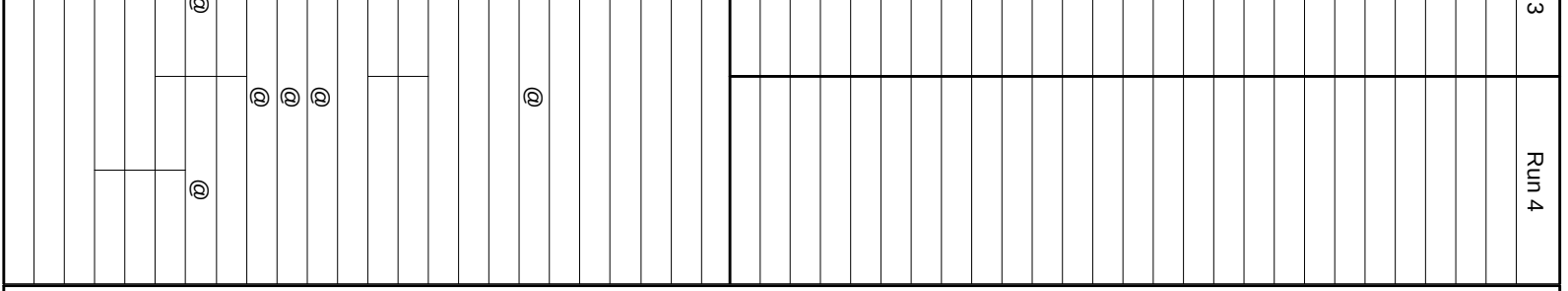
LOCATION

		Elev.:	K.B. 11.3 m G.L. -3645 m D.F. 11 m
Permanent Datum:	Mean Sea Level	Elev.:	0 m
Log Measured From:	Rig Floor	11.0 m	above Perm. Datum
Drilling Measured From:	Rig Floor		

API Serial No.	Max. Hole Devi.	Longitude	Latitude
		91* 56.0612 W	6* 44.1631 N

Logging Date		20-Dec-2005		
Run Number		One		
Depth Driller		5152 m		
Schlumberger Depth		5085 m		
Bottom Log Interval		5085 m		
Top Log Interval		3934 m		
Casing Driller Size @ Depth		0.000 in @ 3934 m	@	
Casing Schlumberger		3934 m		
Bit Size		9.875 in		
Type Fluid In Hole		Sea water		
MUD 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	19-Dec-2005	2:00	
Logger On Bottom	Time	20-Dec-2005	7:46	
Unit Number	Location	2082	Webster, TX	
Recorded By		Javier Espinosa		
Witnessed By		Marc Reichow		

	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			
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			
Logger On Bottom / Time			
Unit Number / Location			
Recorded By			
Witnessed By			



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OTHER SERVICES1	OTHER SERVICES2
OS1: DLT, HNGS	OS1:
OS2: MEST, DSI	OS2:
OS3: TAP	OS3:
OS4: UBI	OS4:
OS5:	OS5:

REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
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 IODP Exp 309.	
Caliper closed when cable head is 10m. below drill pipe.	

RUN 1

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

LOGGED INTERVAL	START	STOP

RUN 2

SERVICE ORDER #:
PROGRAM VERSION:
FLUID LEVEL:

LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

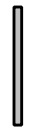
RUN 1

SURFACE EQUIPMENT

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

WITM (DTS)-A

DOWNHOLE EQUIPMENT

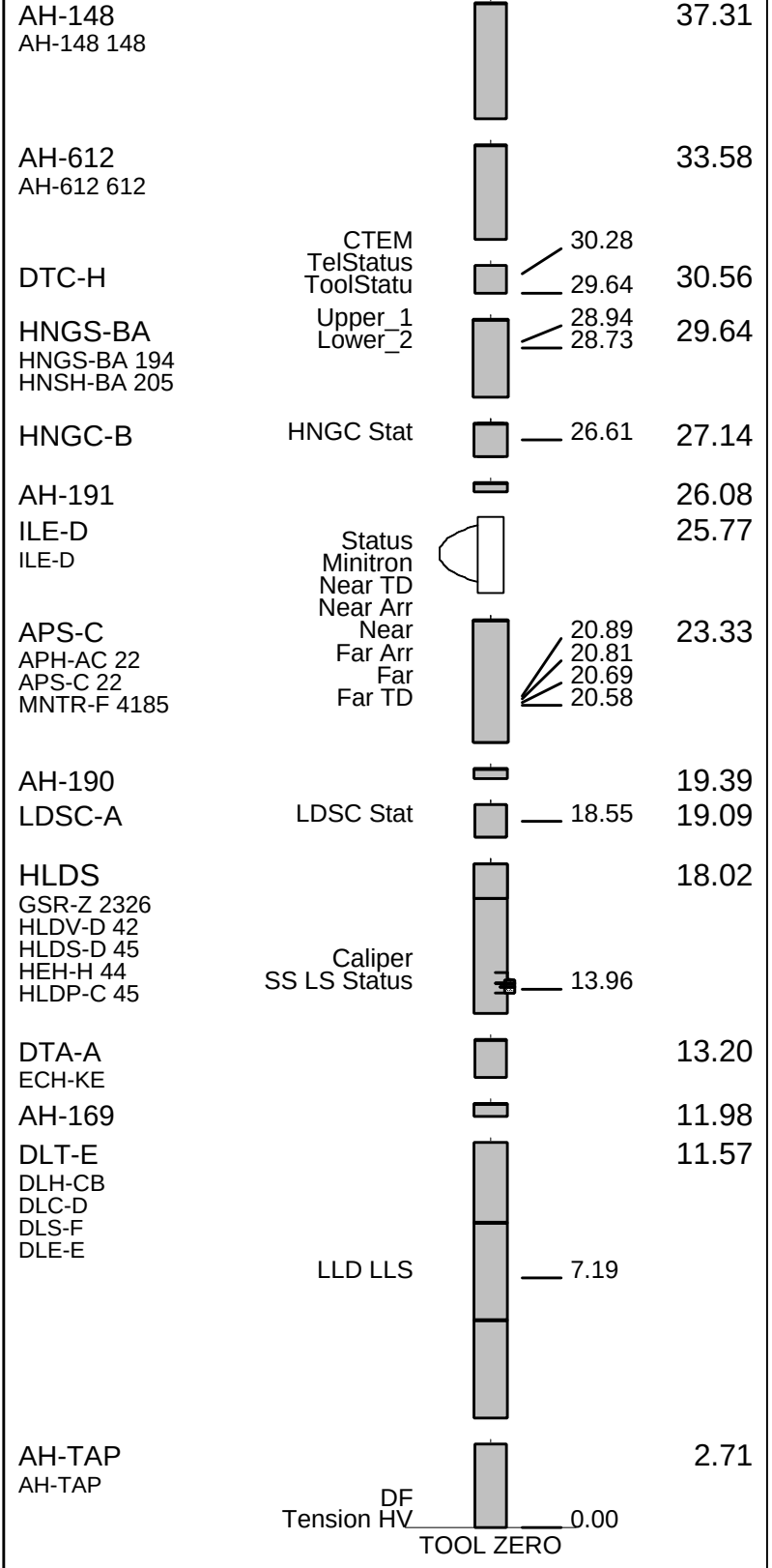


BSP 62.66
BRT-S

SP SPARC — 41.60

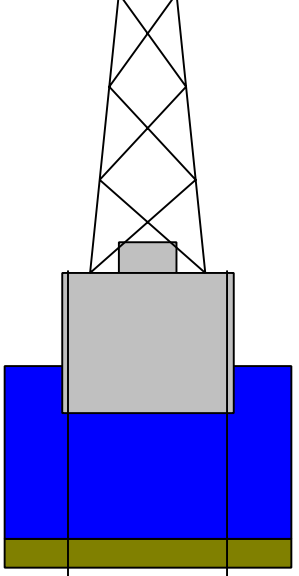
LEH-MT 38.27

RUN 2



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

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

Kelly Bushing Elevation		11.3				
Derrick Floor Elevation		11.0		11.0	5.500	Casing String
Mean Sea Level		0.0				
				3645.0	9.875	Borehole Segment
				3934.0	5.500	Casing Shoe

Schlumberger

MAIN PASS

MAXIS Field Log

Input DLIS Files

DEFAULT	DLL_LDL_APS_NGS_051LUP	FN:54	PRODUCER	20-Dec-2005 07:49	5084.1 M	3894.0 M

Output DLIS Files

DEFAULT	DLL_LDL_APS_NGS_054PUP	FN:57	PRODUCER	20-Dec-2005 14:21	5084.1 M	3864.3 M
REDUCED	DLL_LDL_APS_NGS_054PUP	FN:58	PRODUCER	20-Dec-2005 14:21	5084.1 M	3864.3 M

OP System Version: 12C0-301

MCM

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

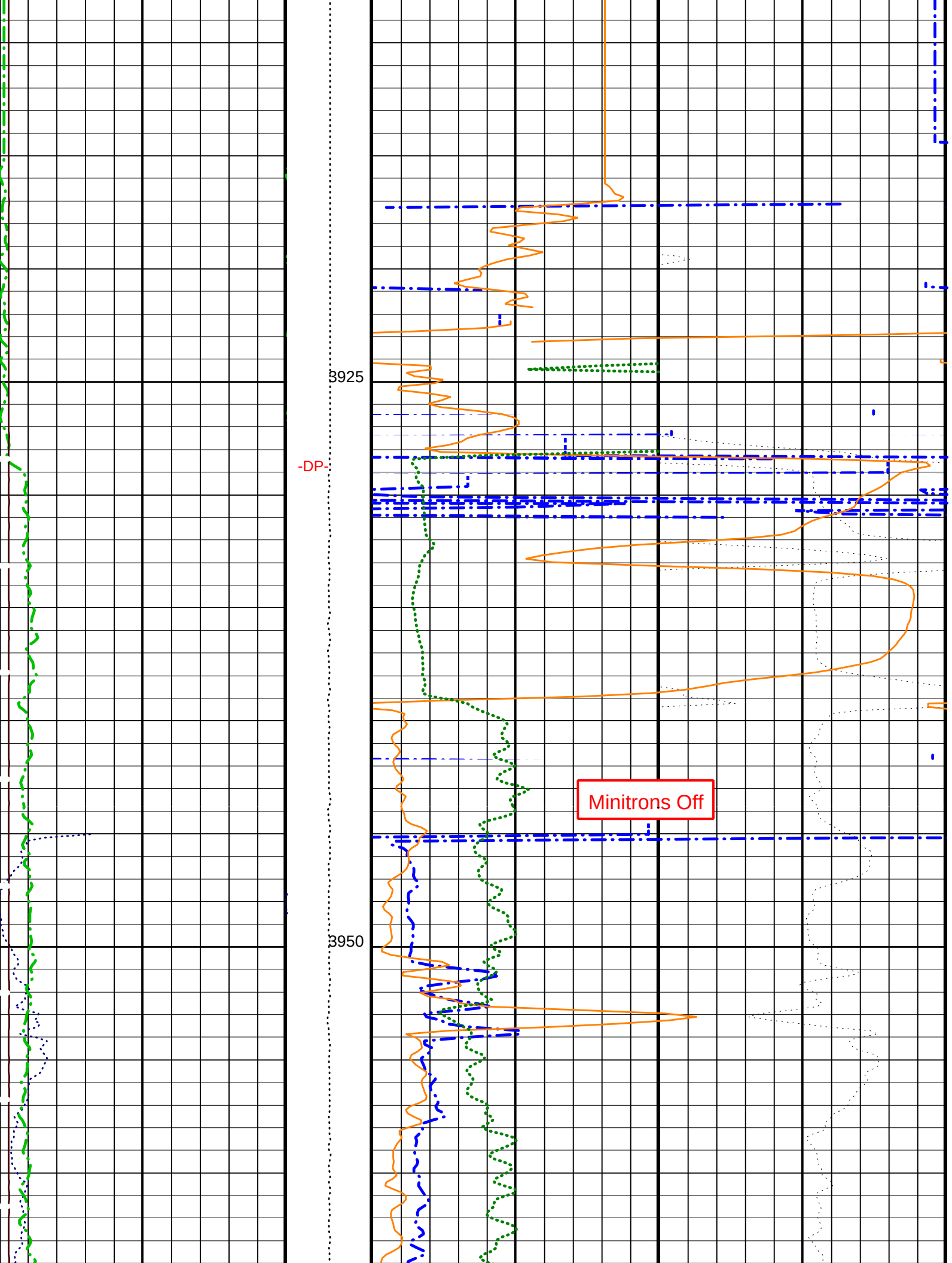
PIP SUMMARY

Time Mark Every 60 S

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

3875

3900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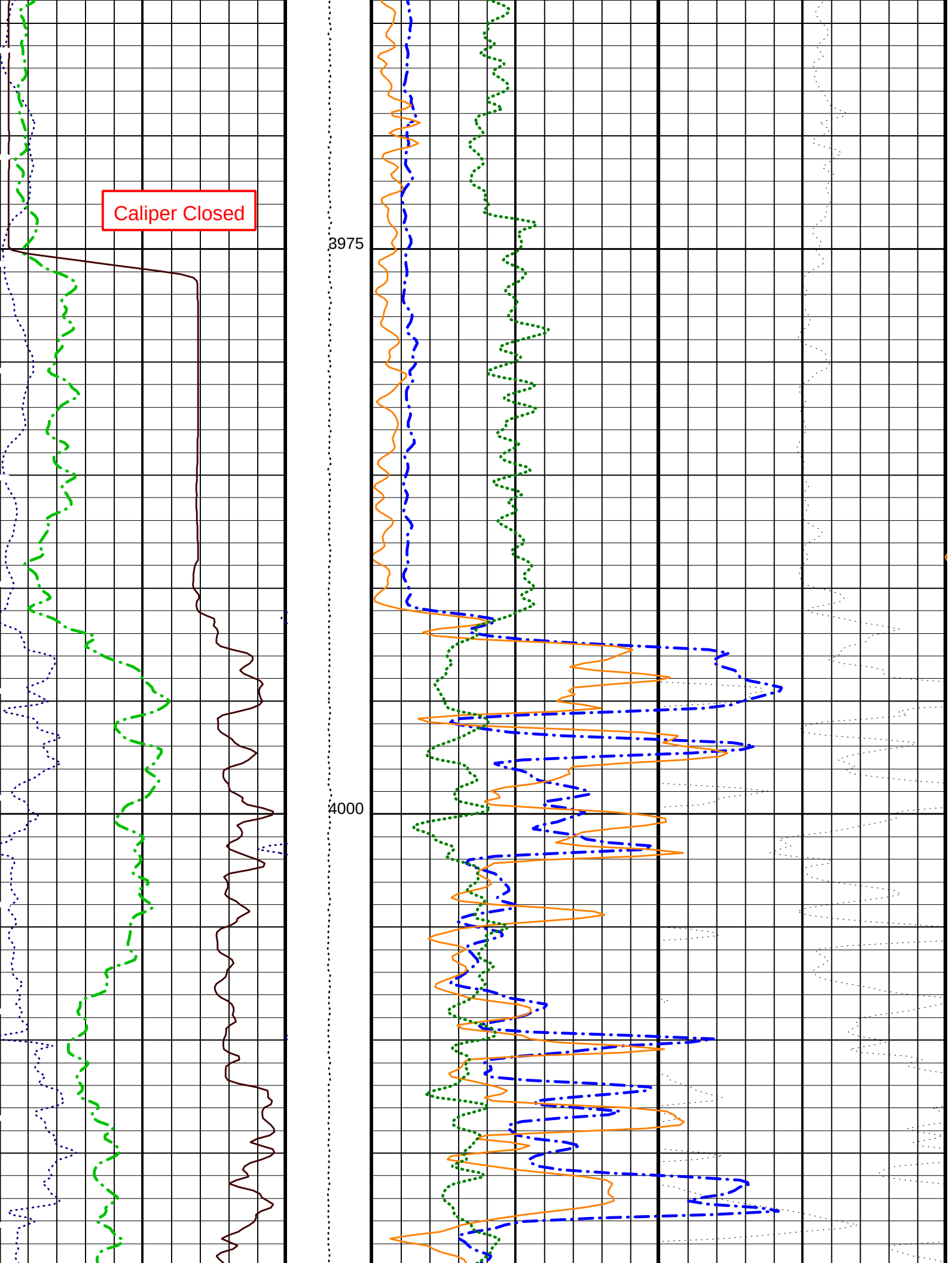
-DP-
Minitrons Off
3950


Caliper Closed
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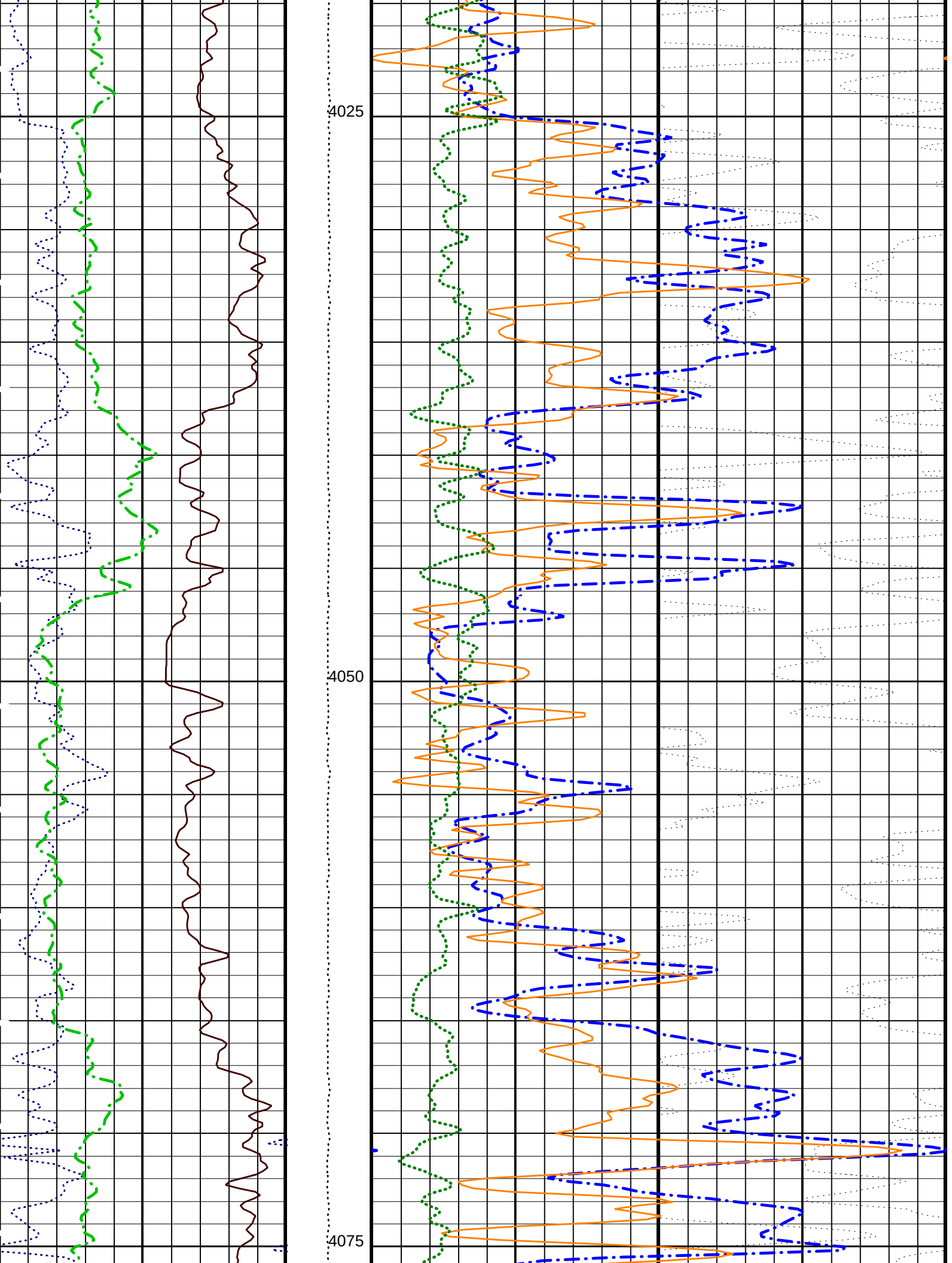
4000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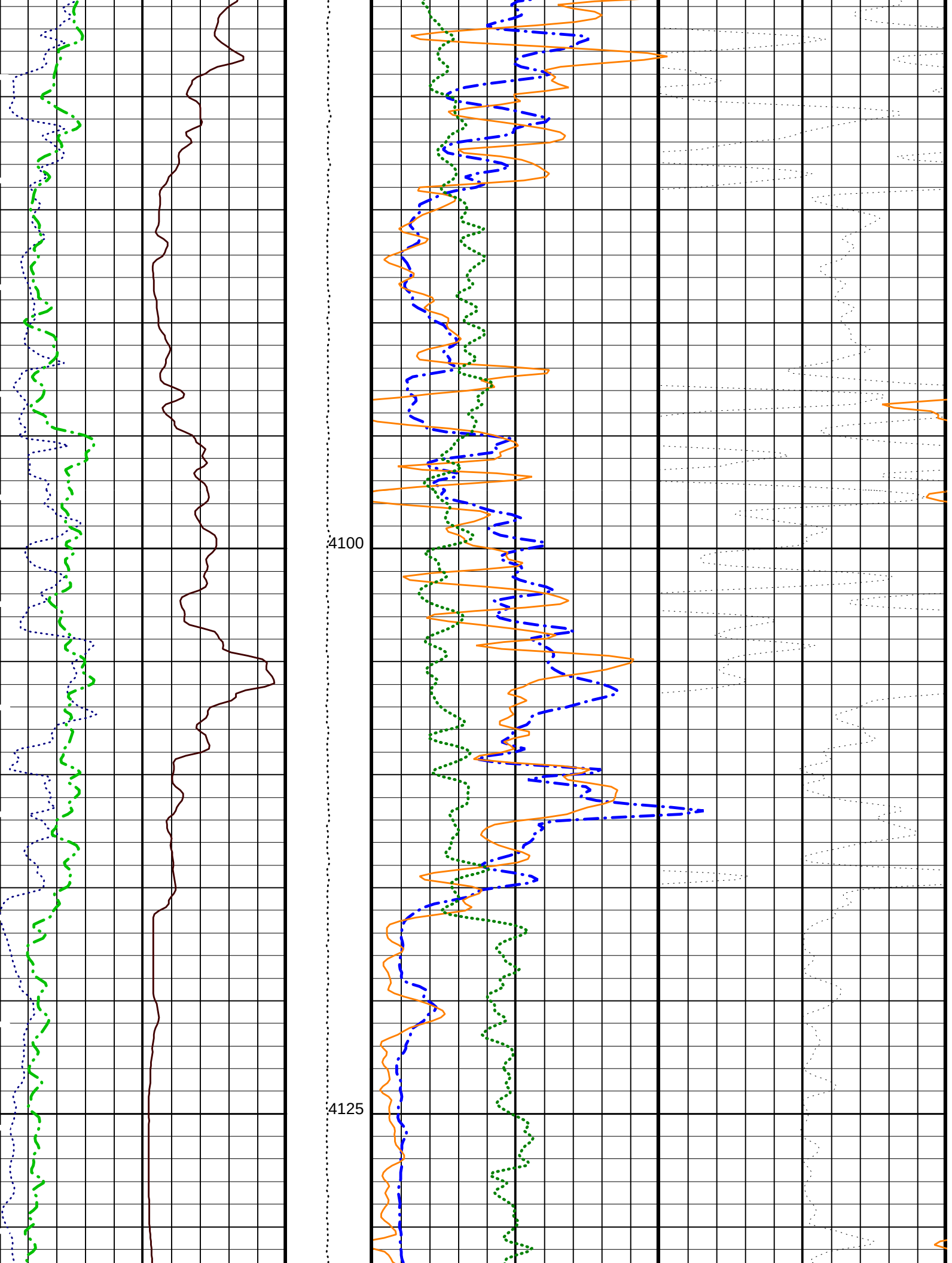
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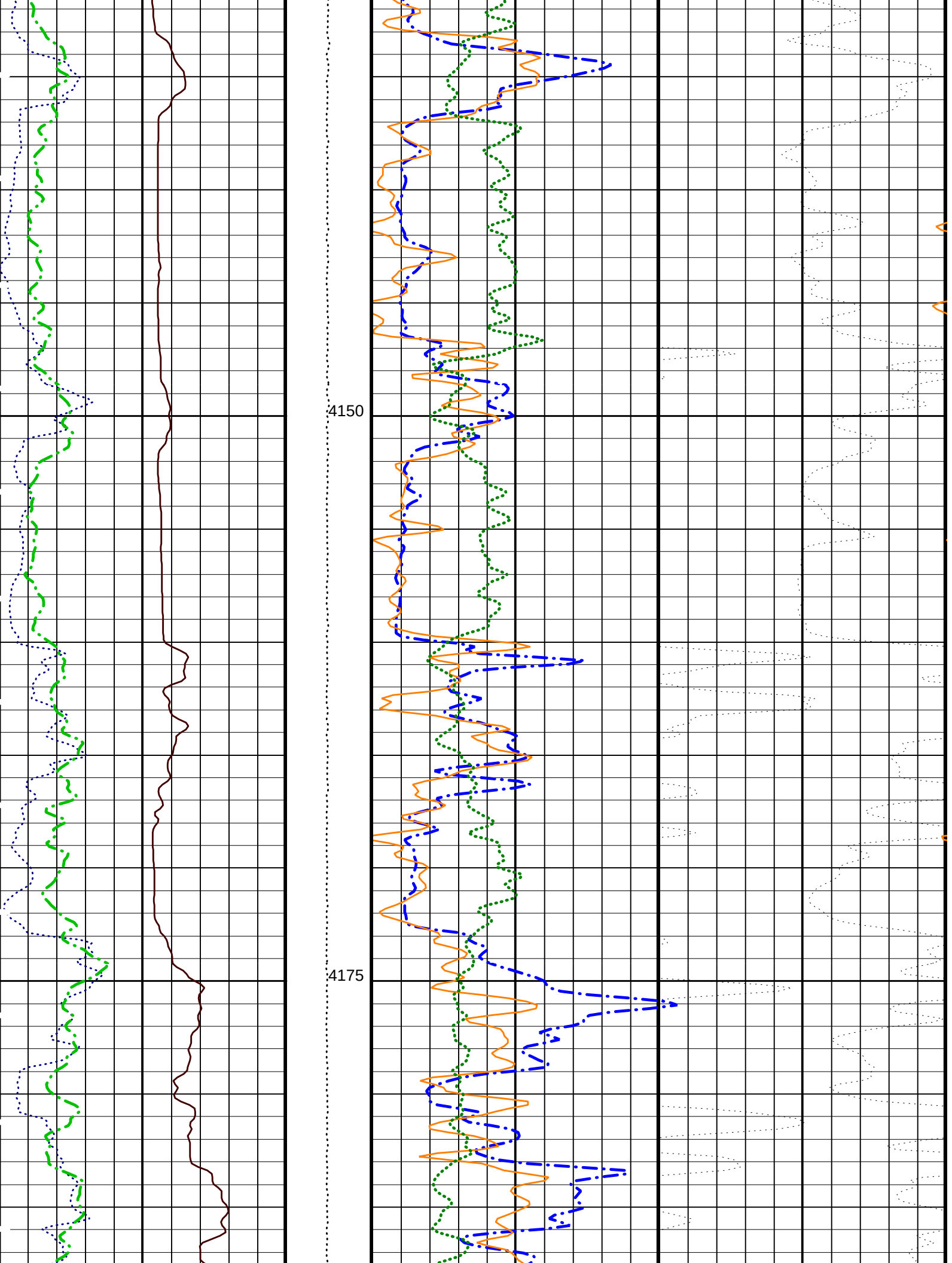
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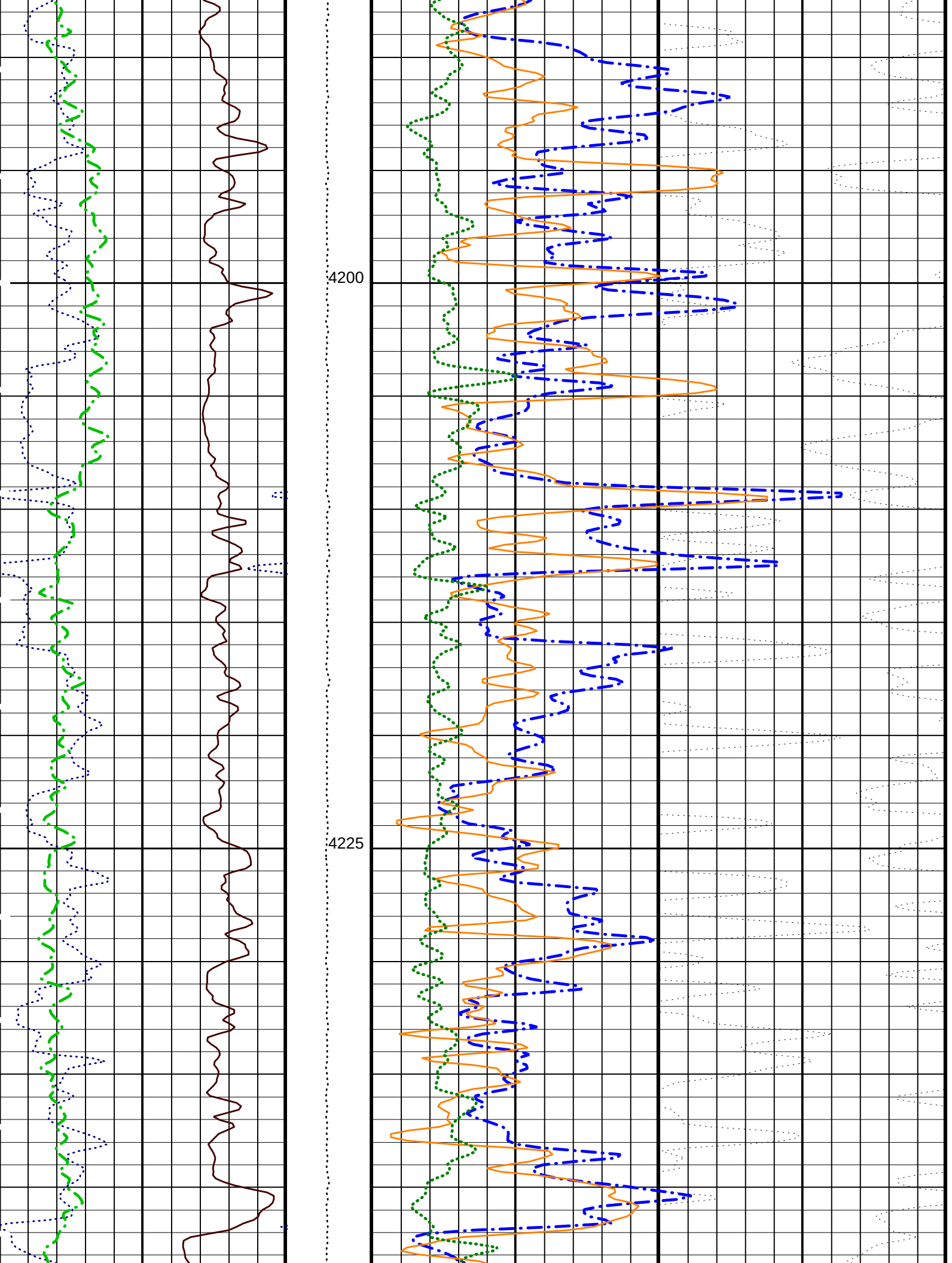
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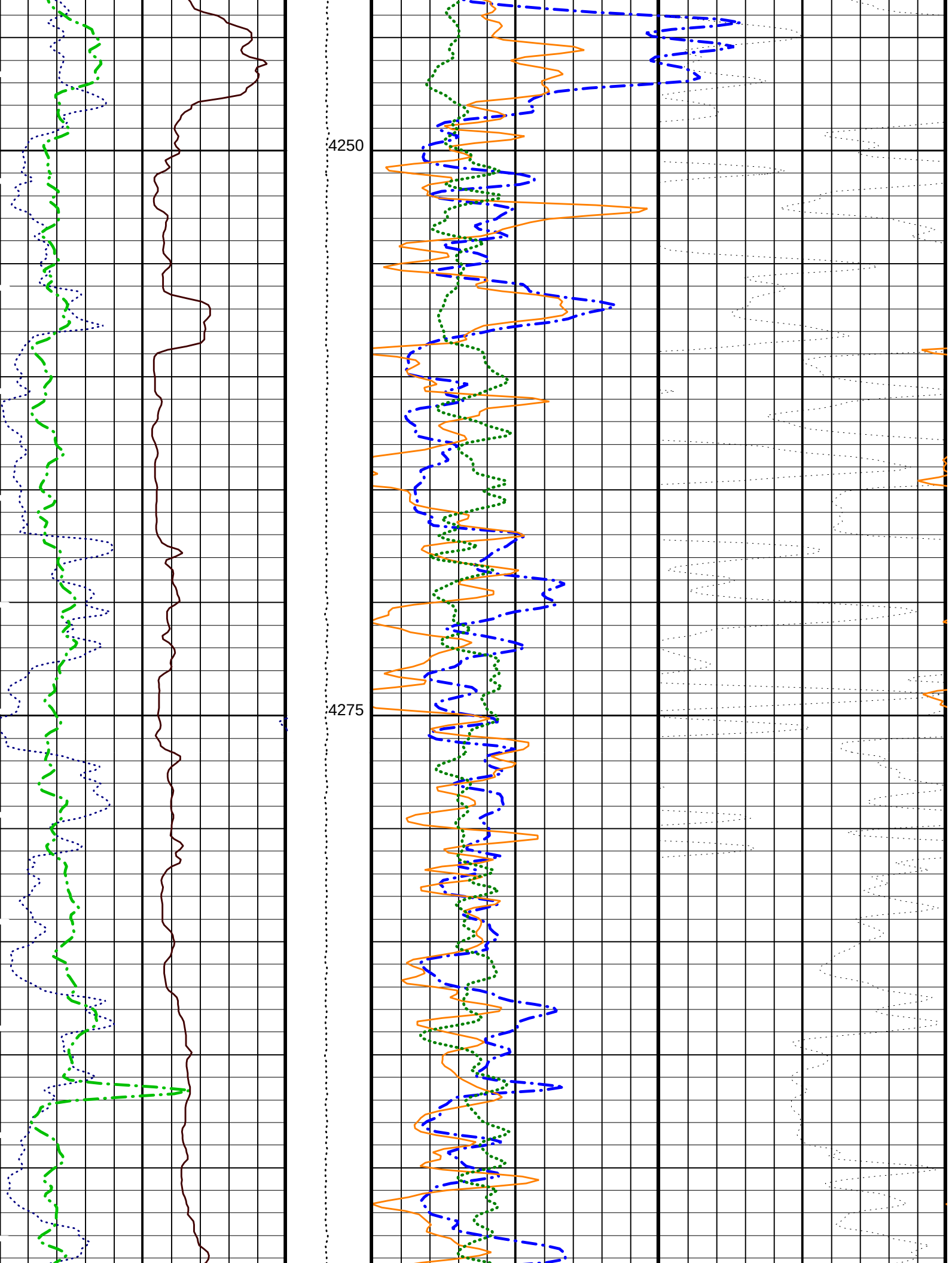
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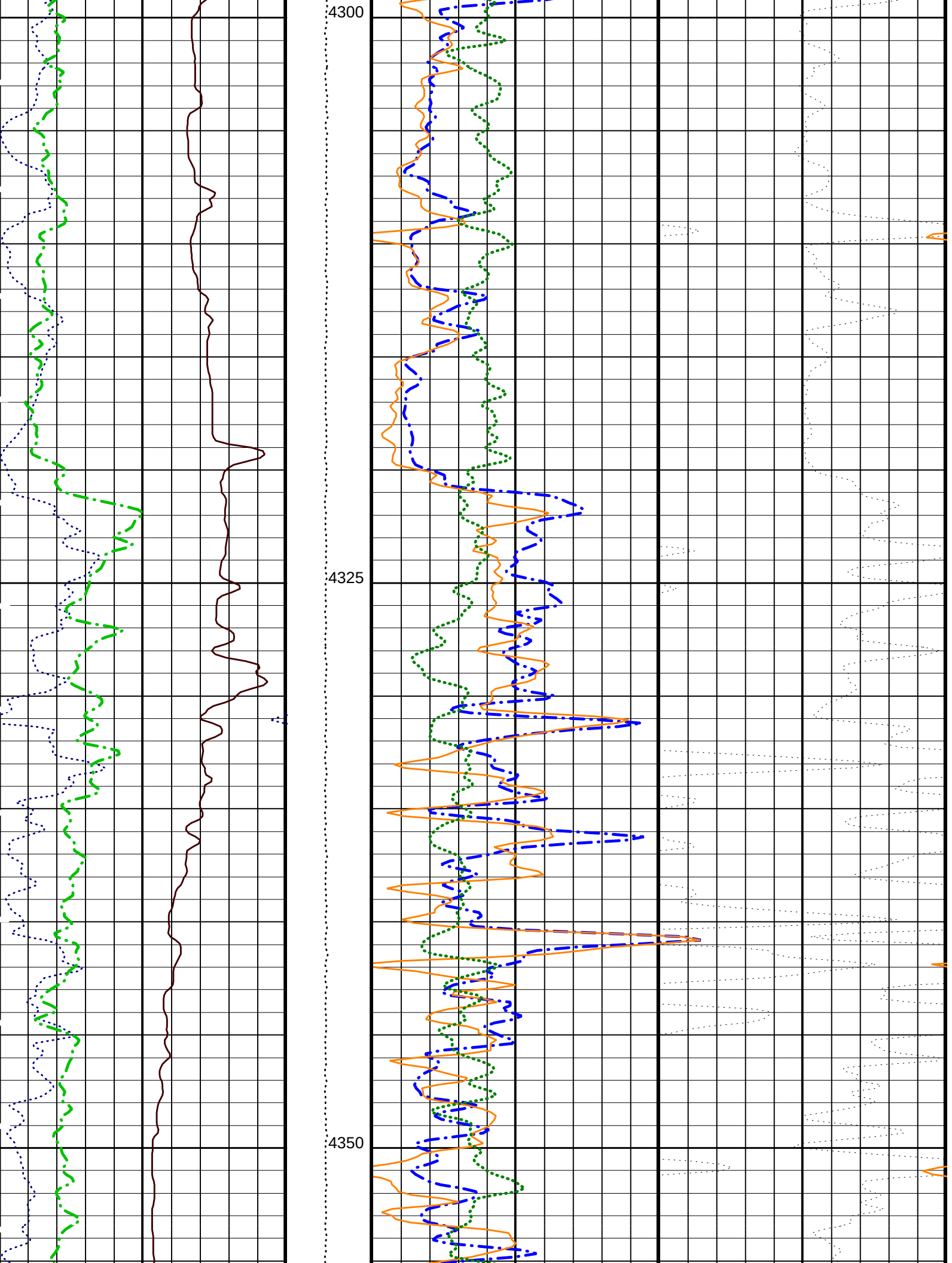
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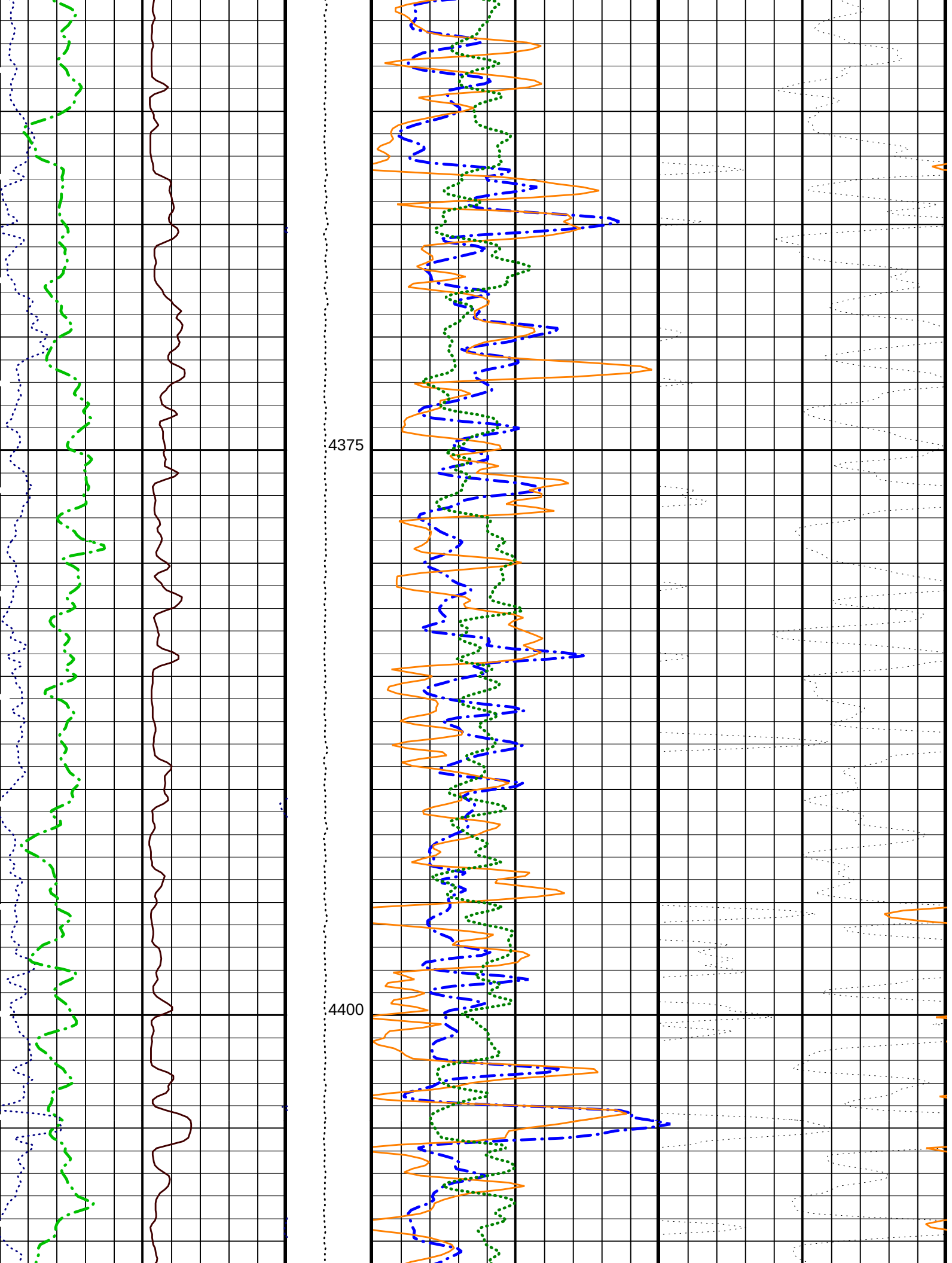
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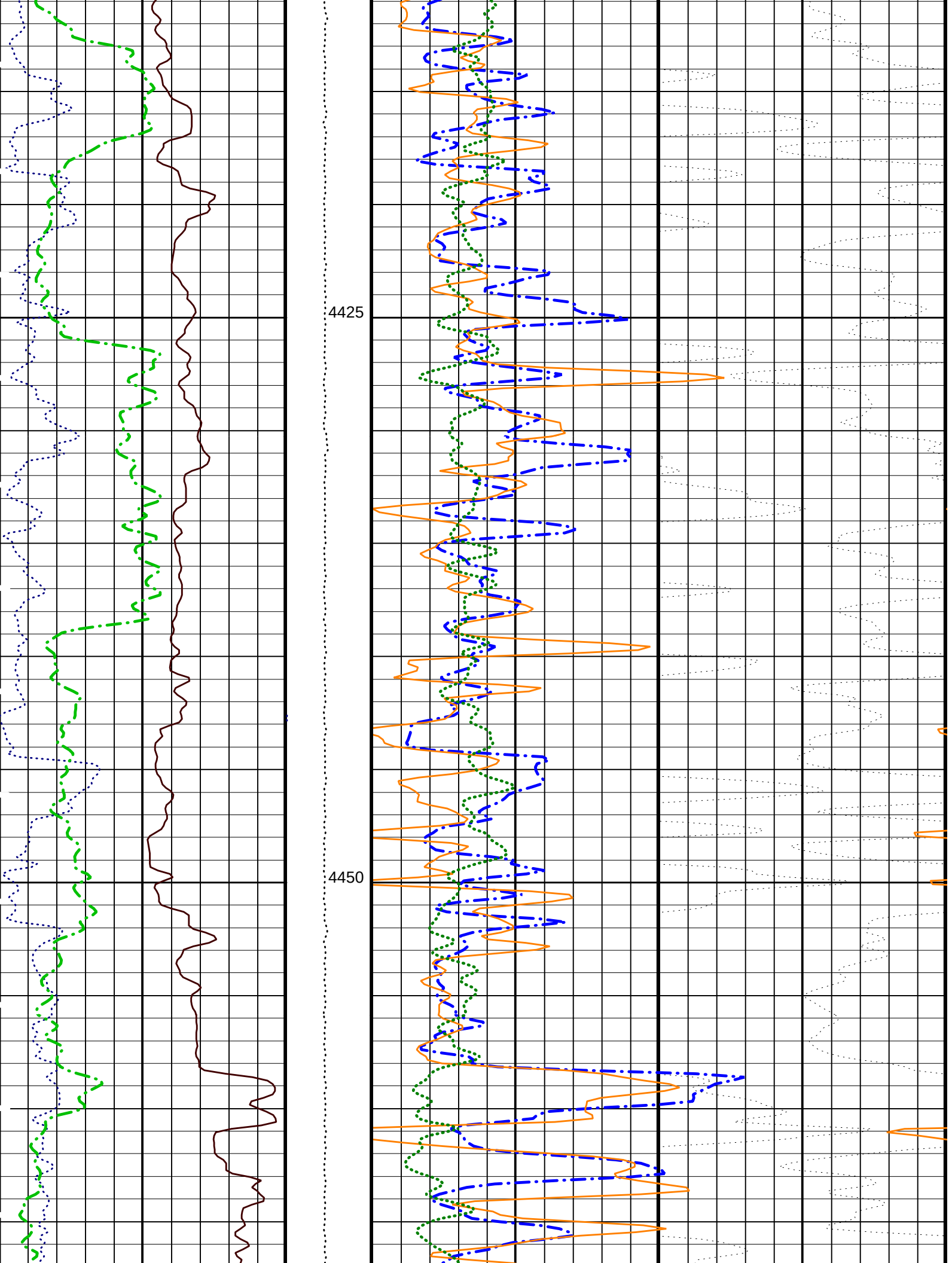
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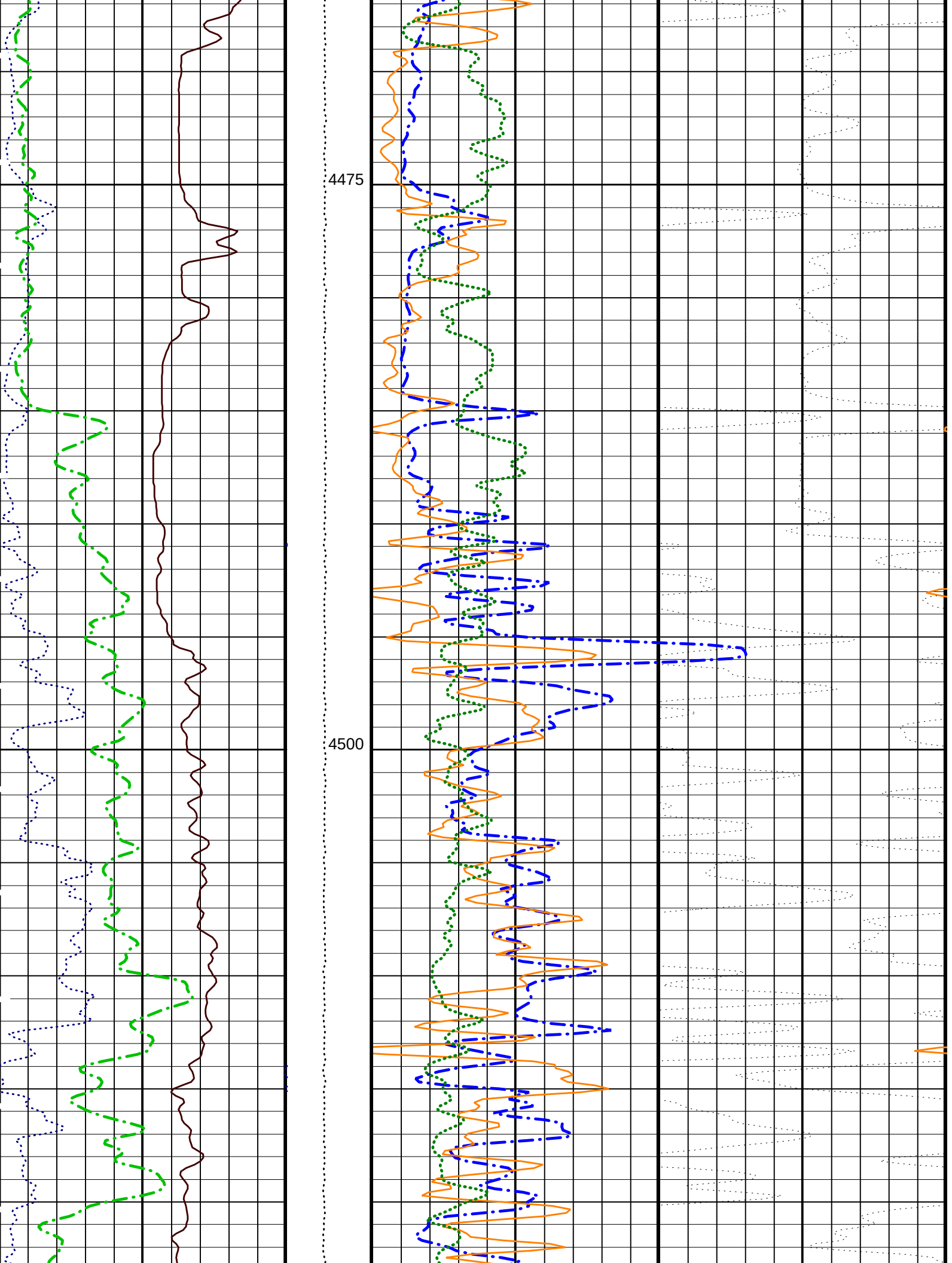
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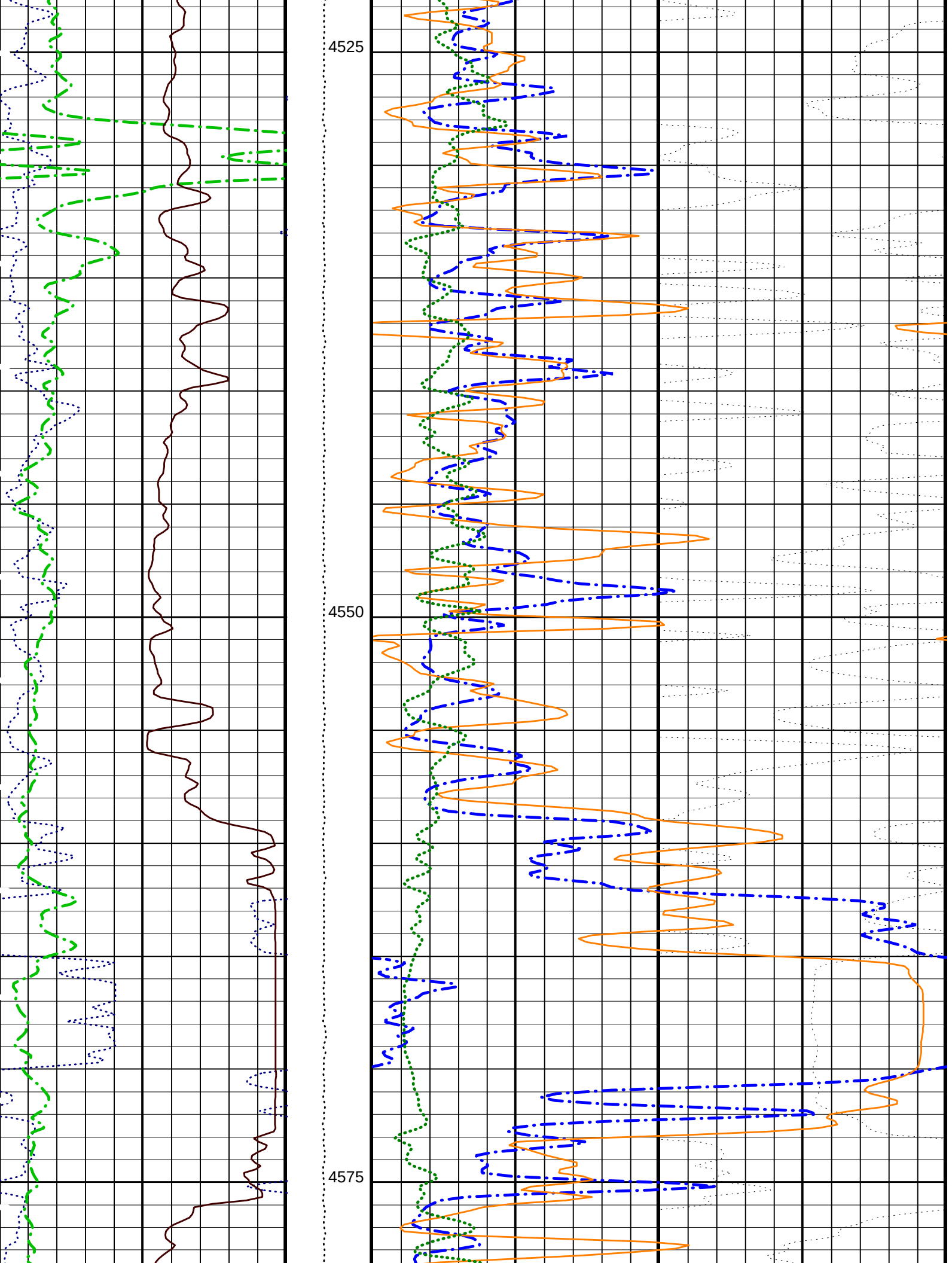
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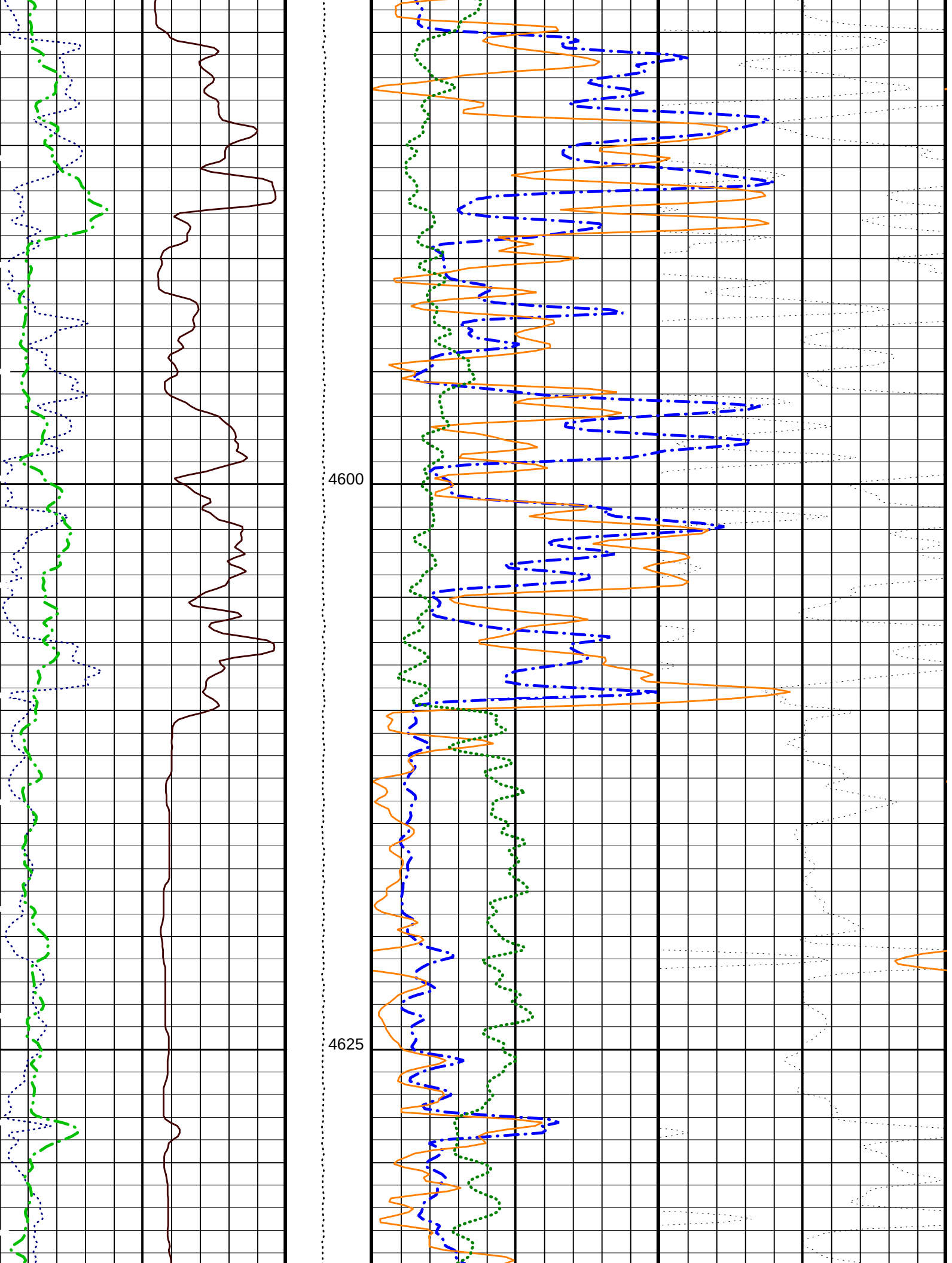
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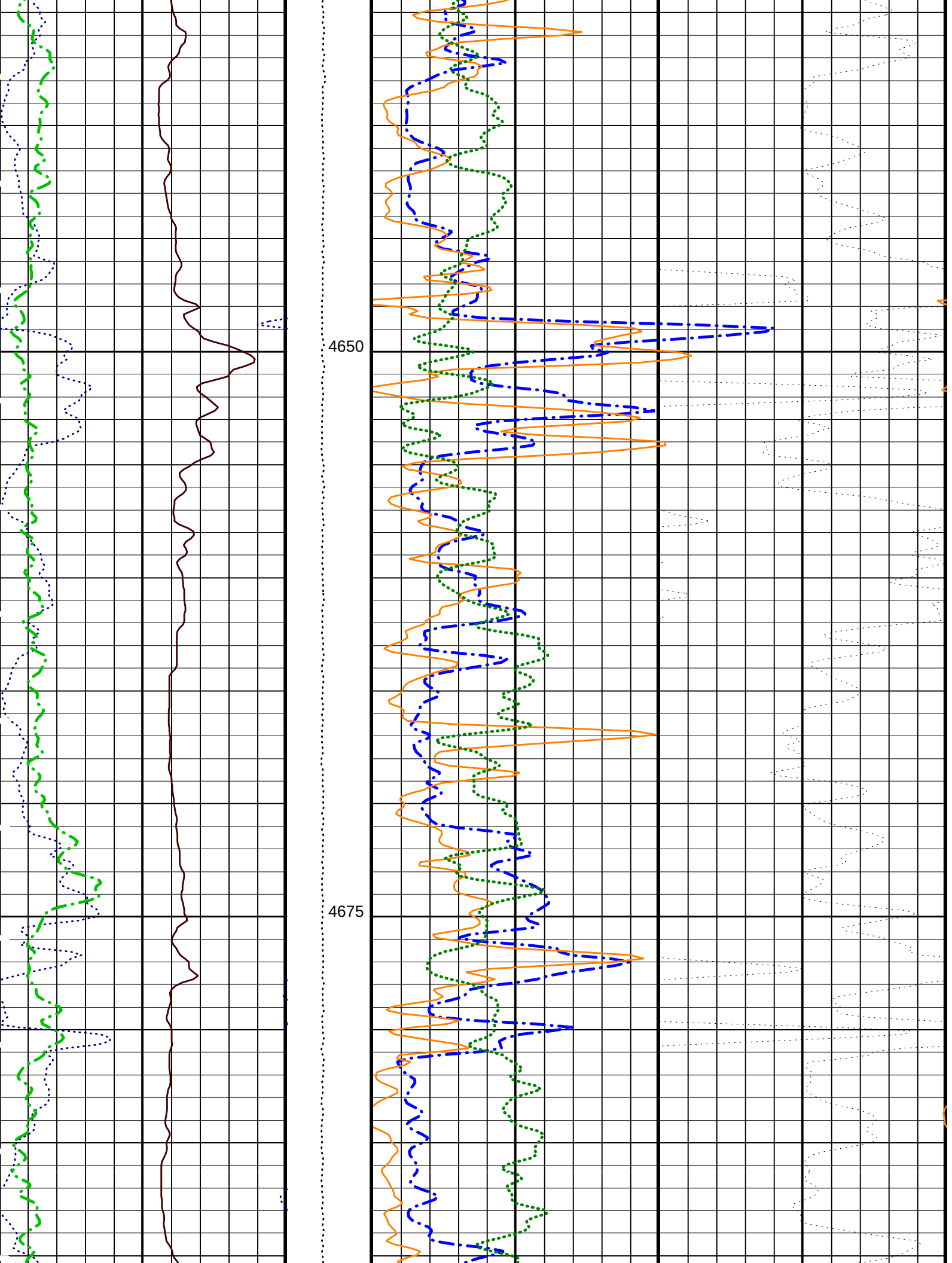
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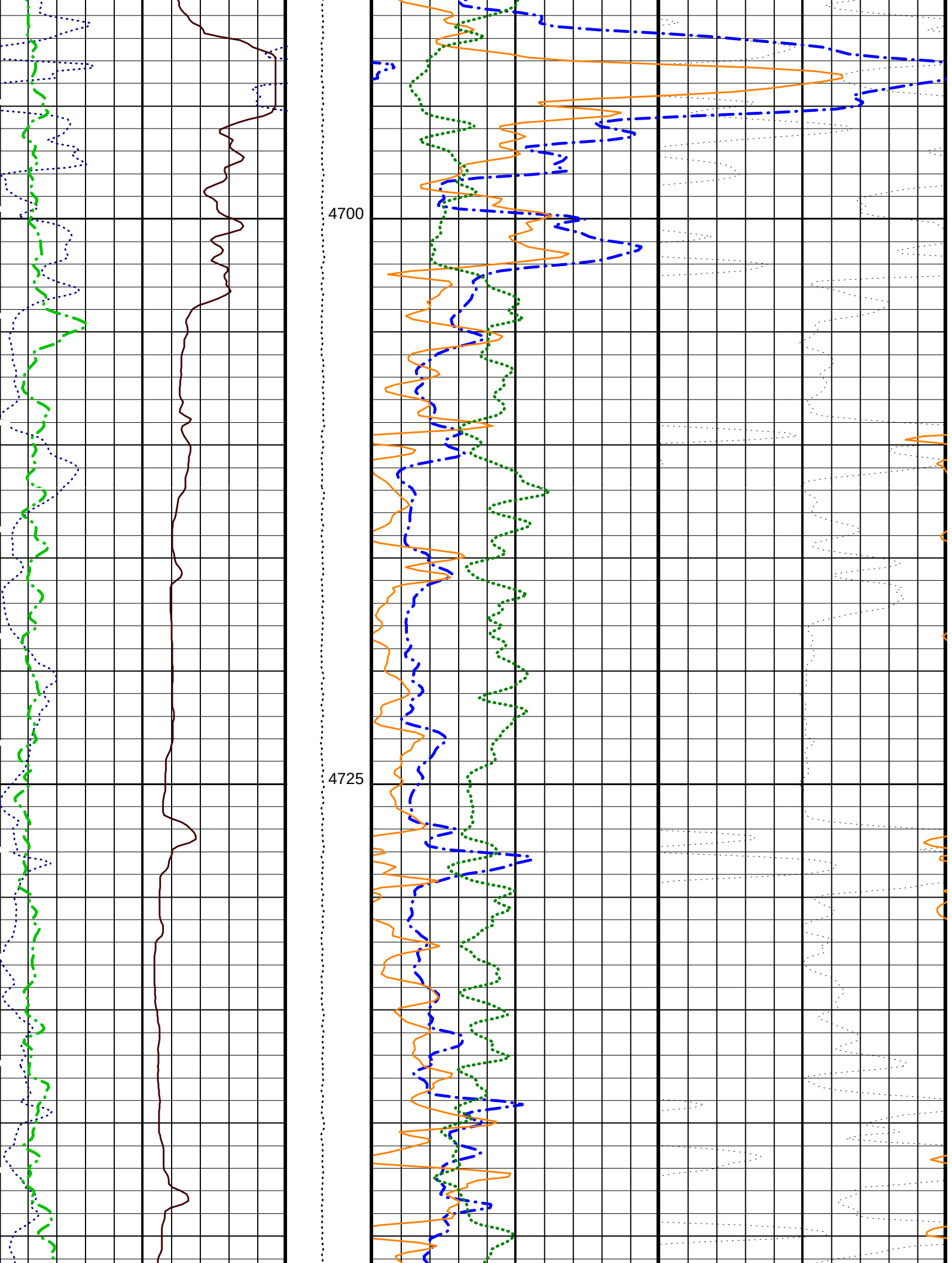
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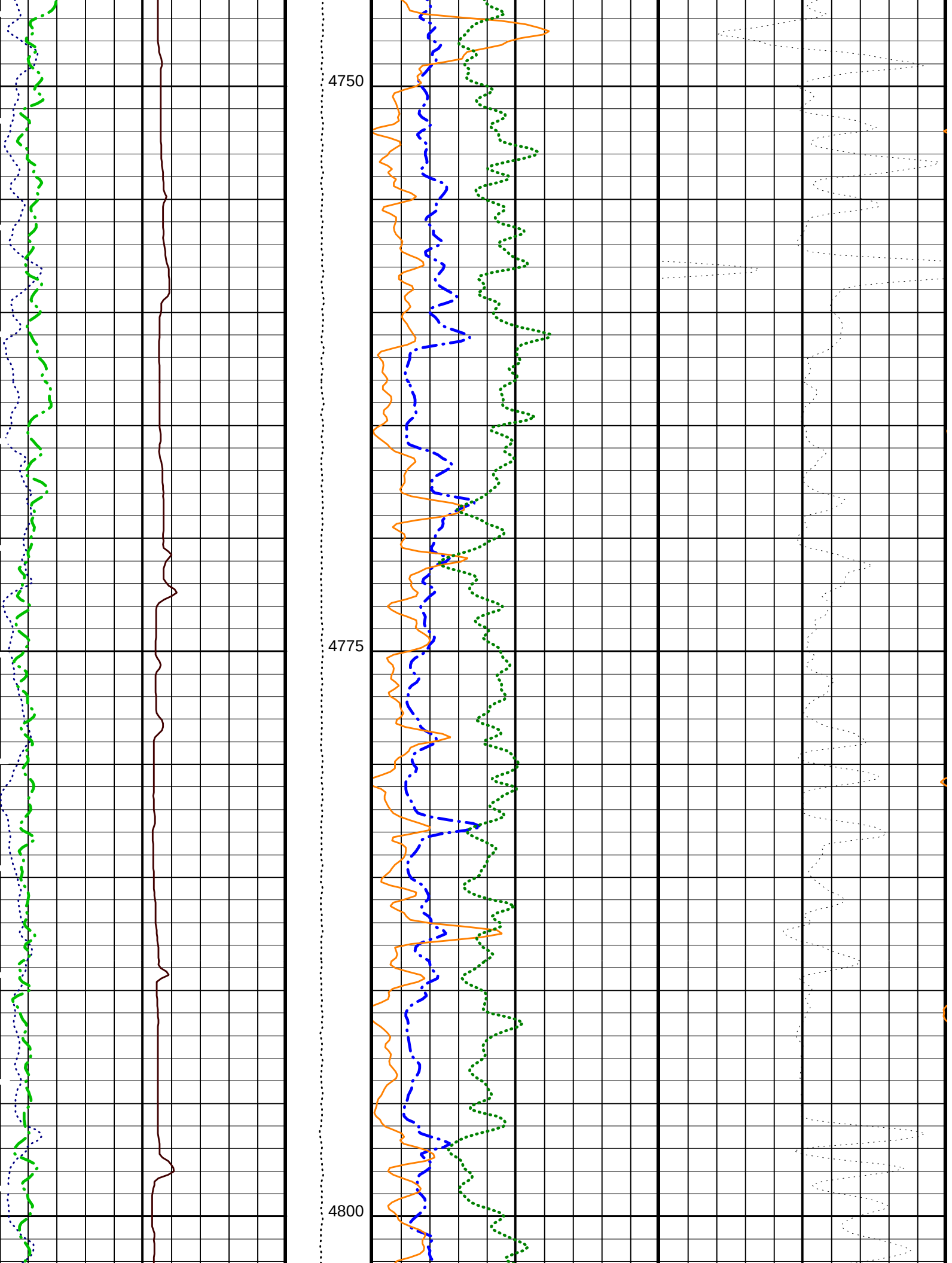
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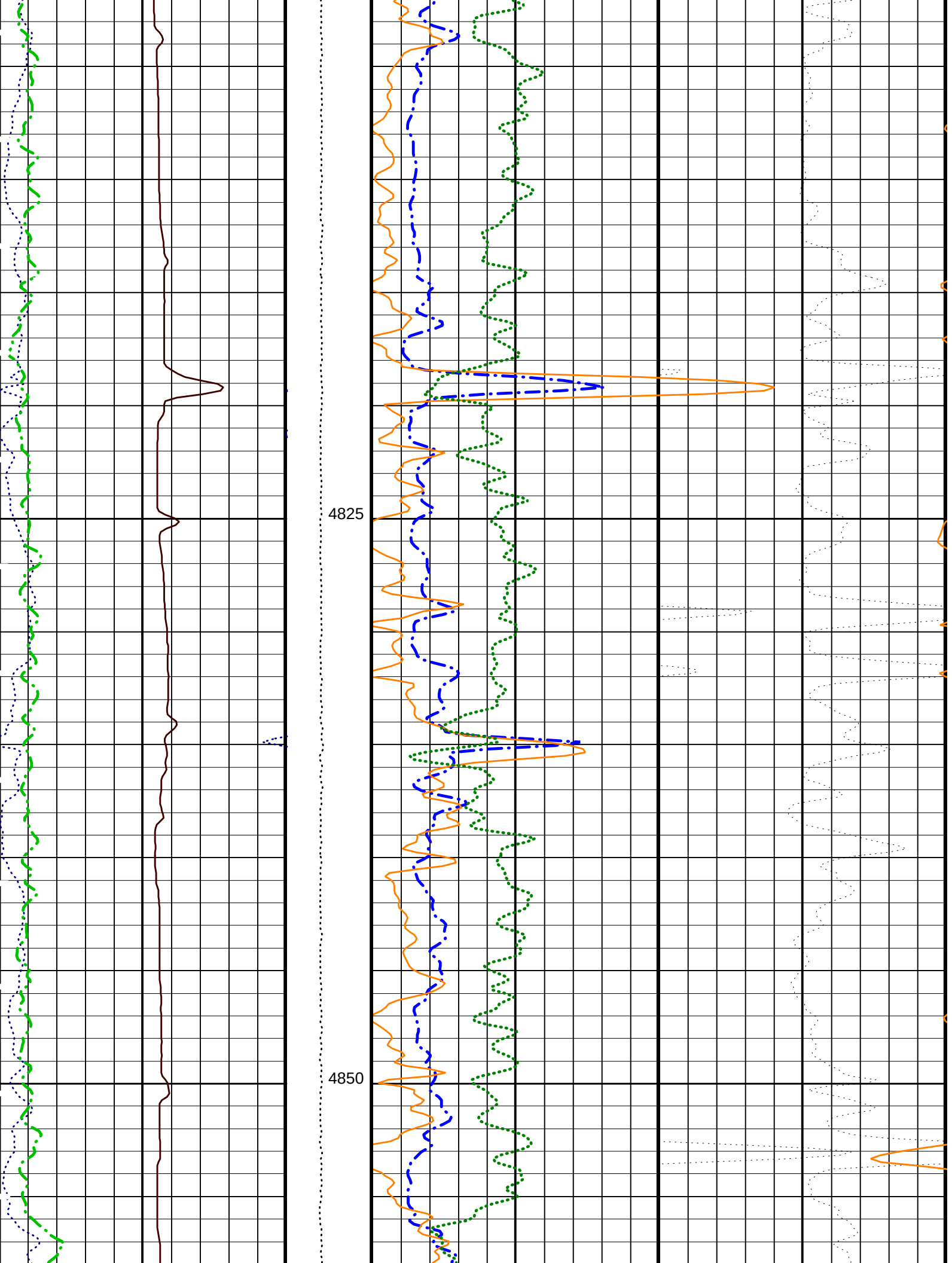
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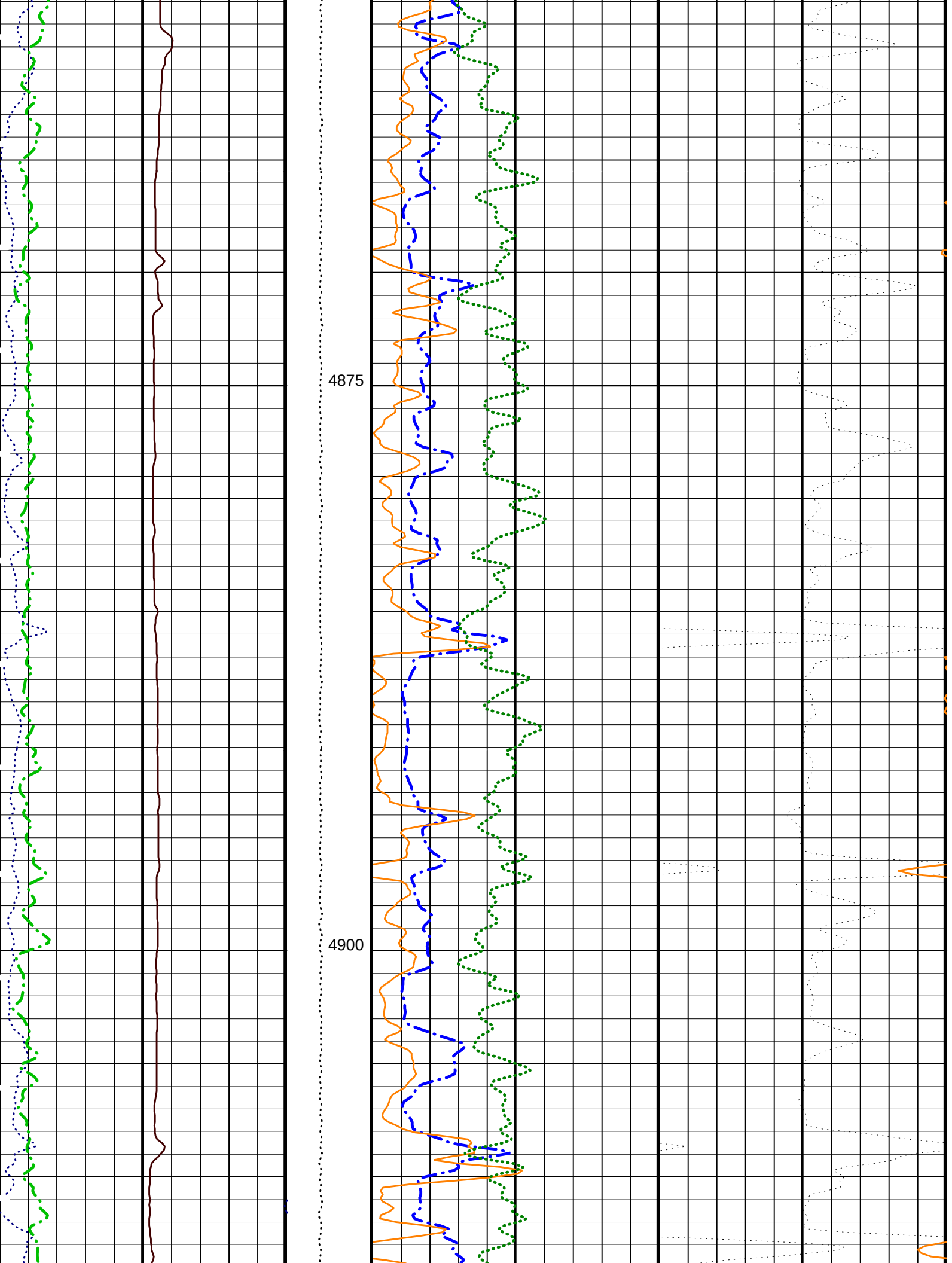
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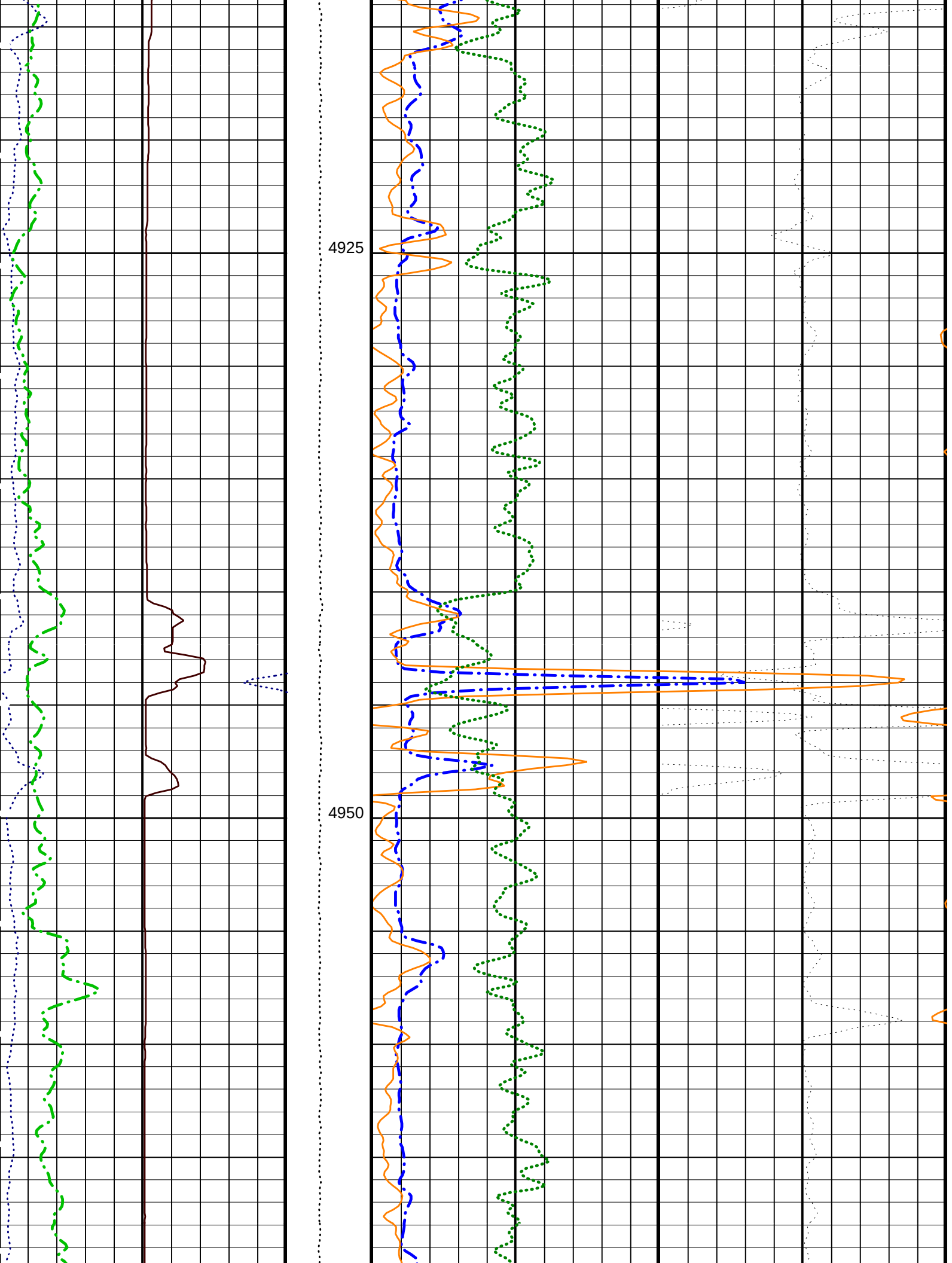
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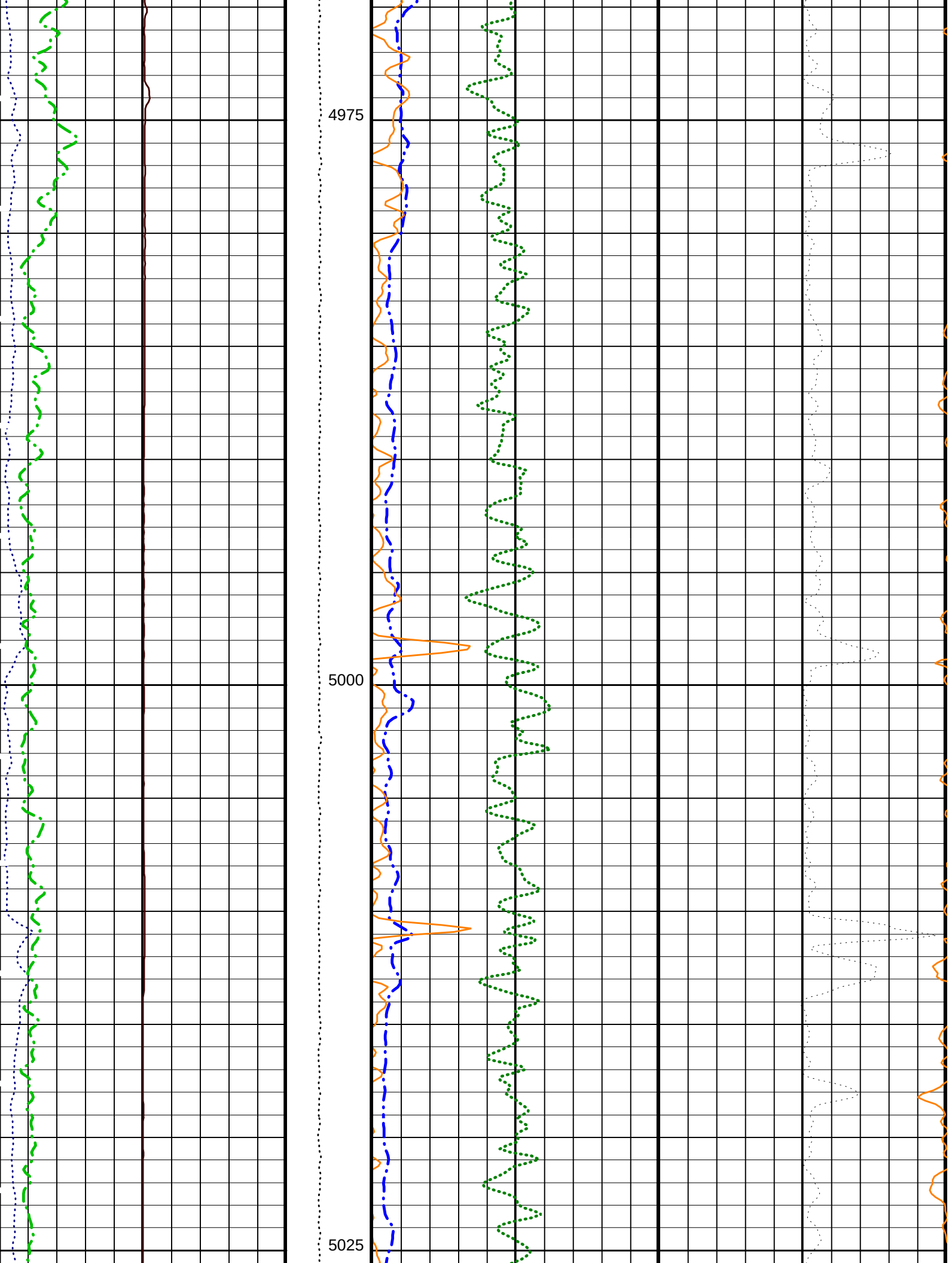
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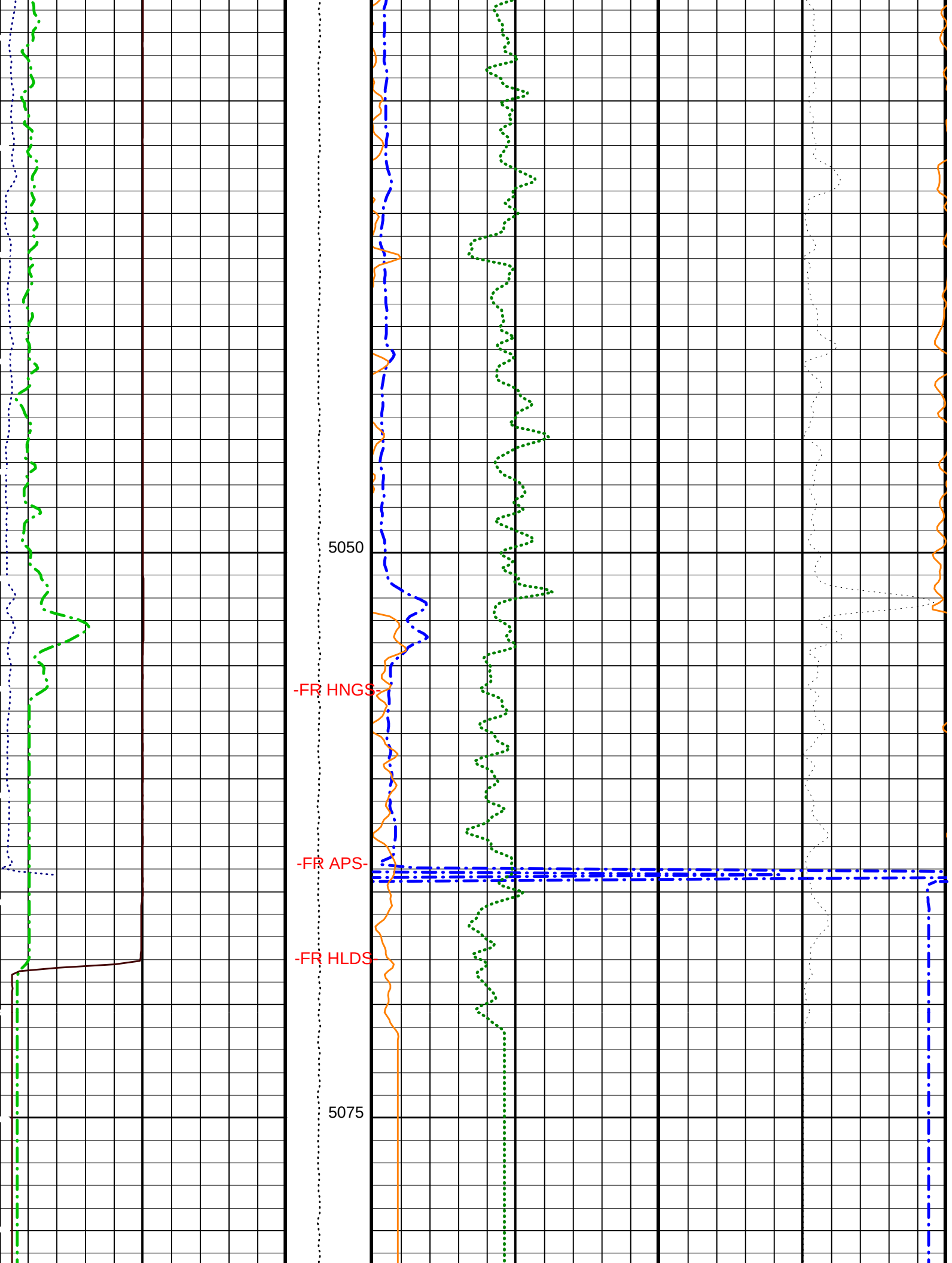
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-FR HNGS-
-FR APS-
-FR HLDS-
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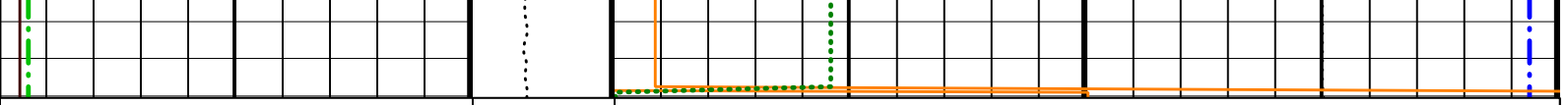


HLDS Caliper (LCAL)	Tension (TENS)	APS Near/Array Corrected Limestone Porosity (APLC)
0 (IN) 20	10000 (LBF) 0	0 (PU) 100
APS Effective Standoff in Limestone (STOF)		HLDS Bulk Density (RHOM)
0 (IN) 5		3 (G/C3) 1
HNGS Spectroscopy Gamma Ray (HSGR)		HLDS Long Spaced Photoelectric Effect (PEFL) / HLDS Bulk Density Correction (DRH)
0 (GAPI) 20		0 (----) 10 / -0.25 (G/C3) 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	OFF	
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	1966.03	V
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2098.58	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	1731.81	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)	100	DEGC
DPPM	Density Porosity Processing Mode	HIRS	
FSAL	Formation Salinity	-50000	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	1.05777	
NFRC	APS Near/Far Calibration Ratio	0.890545	
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	-0.0010471	
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	1.02532	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.03512	
BSP: Bridle SP			
SPNV	SP Next Value	0	MV
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	1.07	G/C3
DO	Depth Offset for Playback	0.0	M
MST	Mud Sample Temperature	-50000.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	NORMAL	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	5152	M
TDD	Total Depth - Driller	5152.00	M
TDL	Total Depth - Logger	5087.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: APS_HLDS_PORO Vertical Scale: 1:200 Graphics File Created: 20-Dec-2005 14:21

OP System Version: 12C0-301

MCM

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

Input DLIS Files

DEFAULT	DLL_LDL_APS_NGS_051LUP	FN:54	PRODUCER	20-Dec-2005 07:49	5084.1 M	3894.0 M

Output DLIS Files

DEFAULT	DLL_LDL_APS_NGS_054PUP	FN:57	PRODUCER	20-Dec-2005 14:21
REDUCED	DLL_LDL_APS_NGS_054PUP	FN:58	PRODUCER	20-Dec-2005 14:21

Schlumberger

REPEAT SECTION

MAXIS Field Log

Input DLIS Files

DEFAULT	DLL_LDL_APS_NGS_053LUP	FN:56	PRODUCER	20-Dec-2005 12:59	5081.8 M	4704.7 M

Output DLIS Files

DEFAULT	DLL_LDL_APS_NGS_055PUP	FN:59	PRODUCER	20-Dec-2005 14:24	5081.8 M	4675.0 M
REDUCED	DLL_LDL_APS_NGS_055PUP	FN:60	PRODUCER	20-Dec-2005 14:24	5081.8 M	4675.0 M

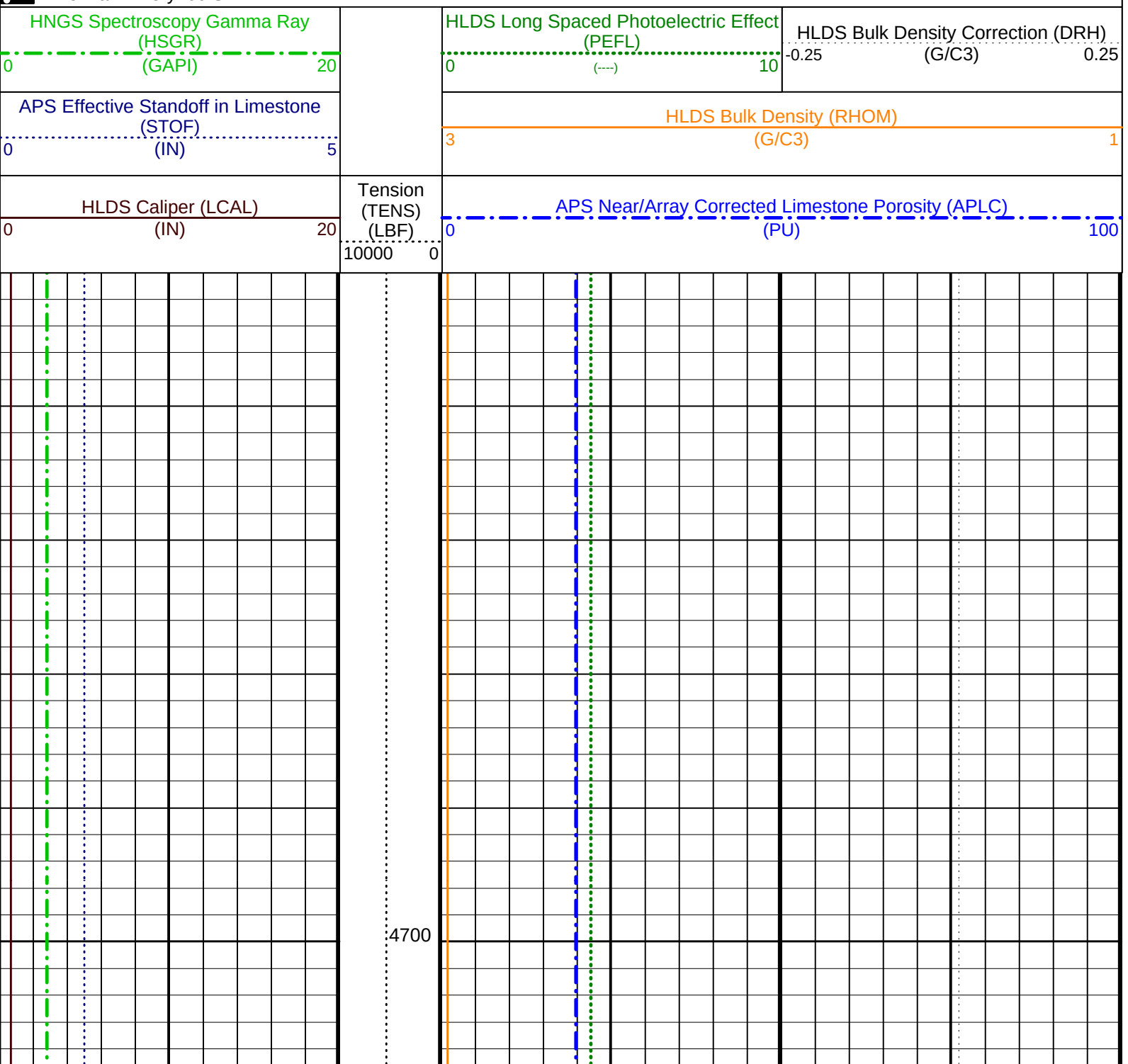
OP System Version: 12C0-301

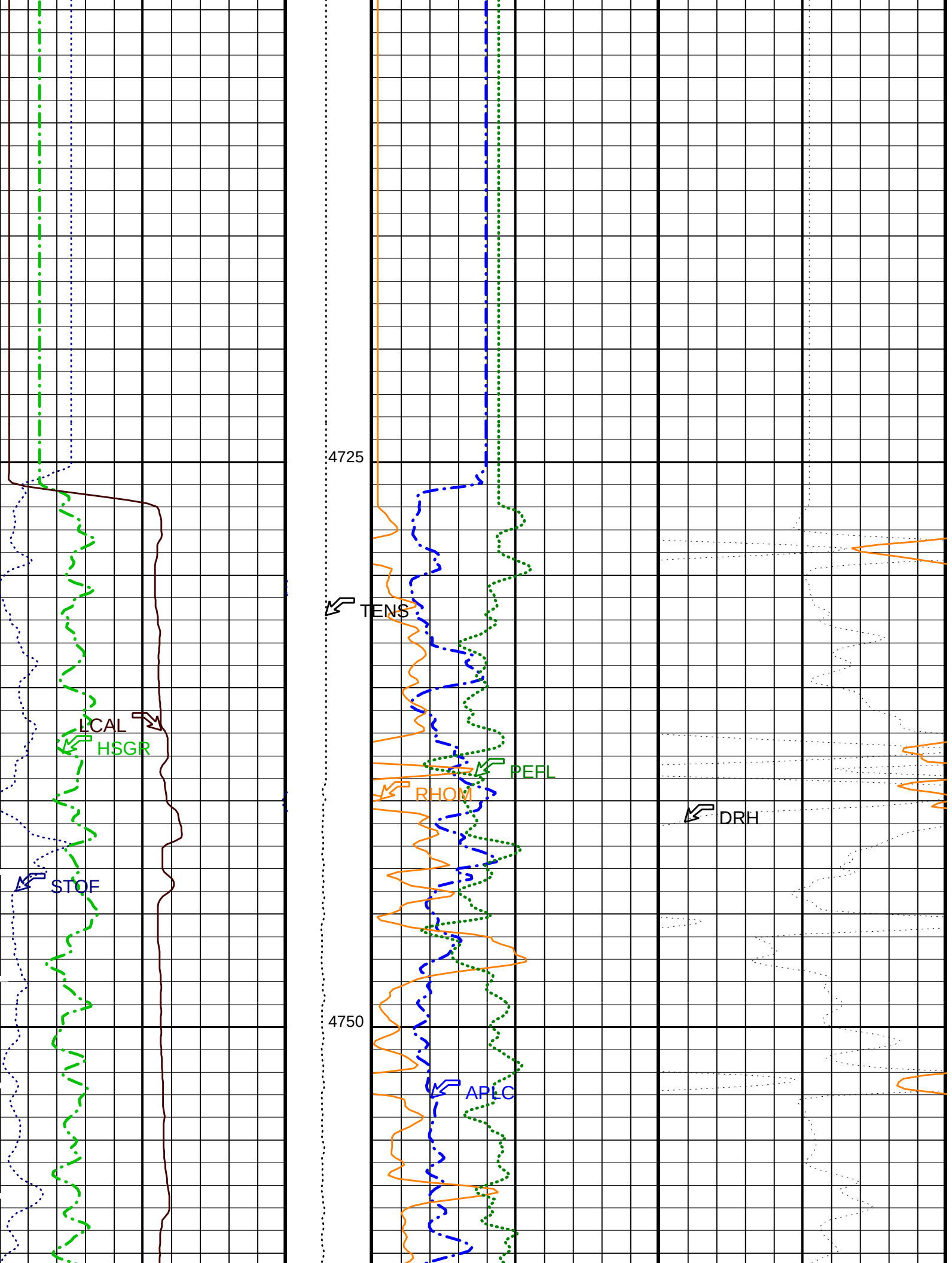
MCM

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

PIP SUMMARY

Time Mark Every 60 S

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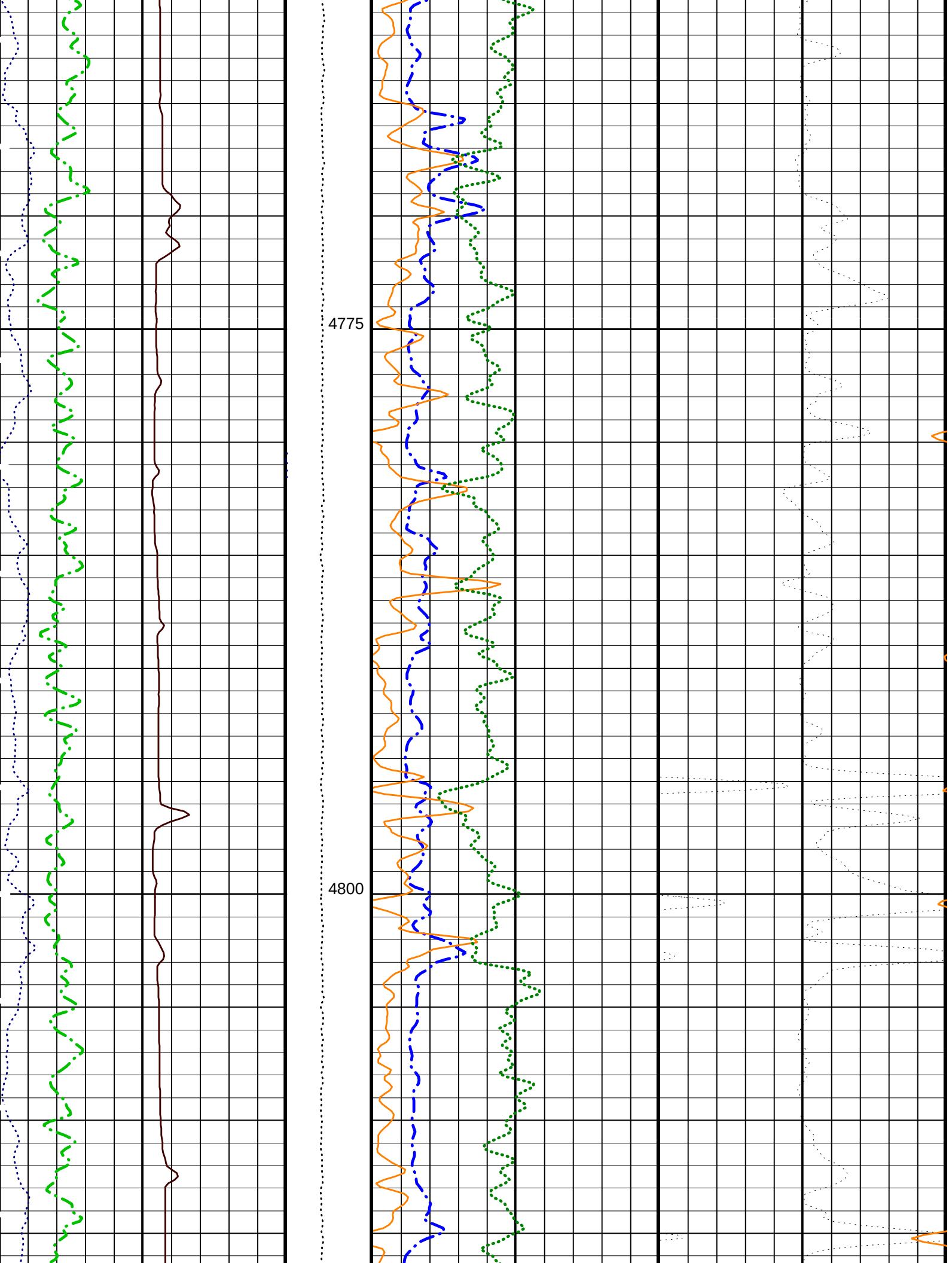
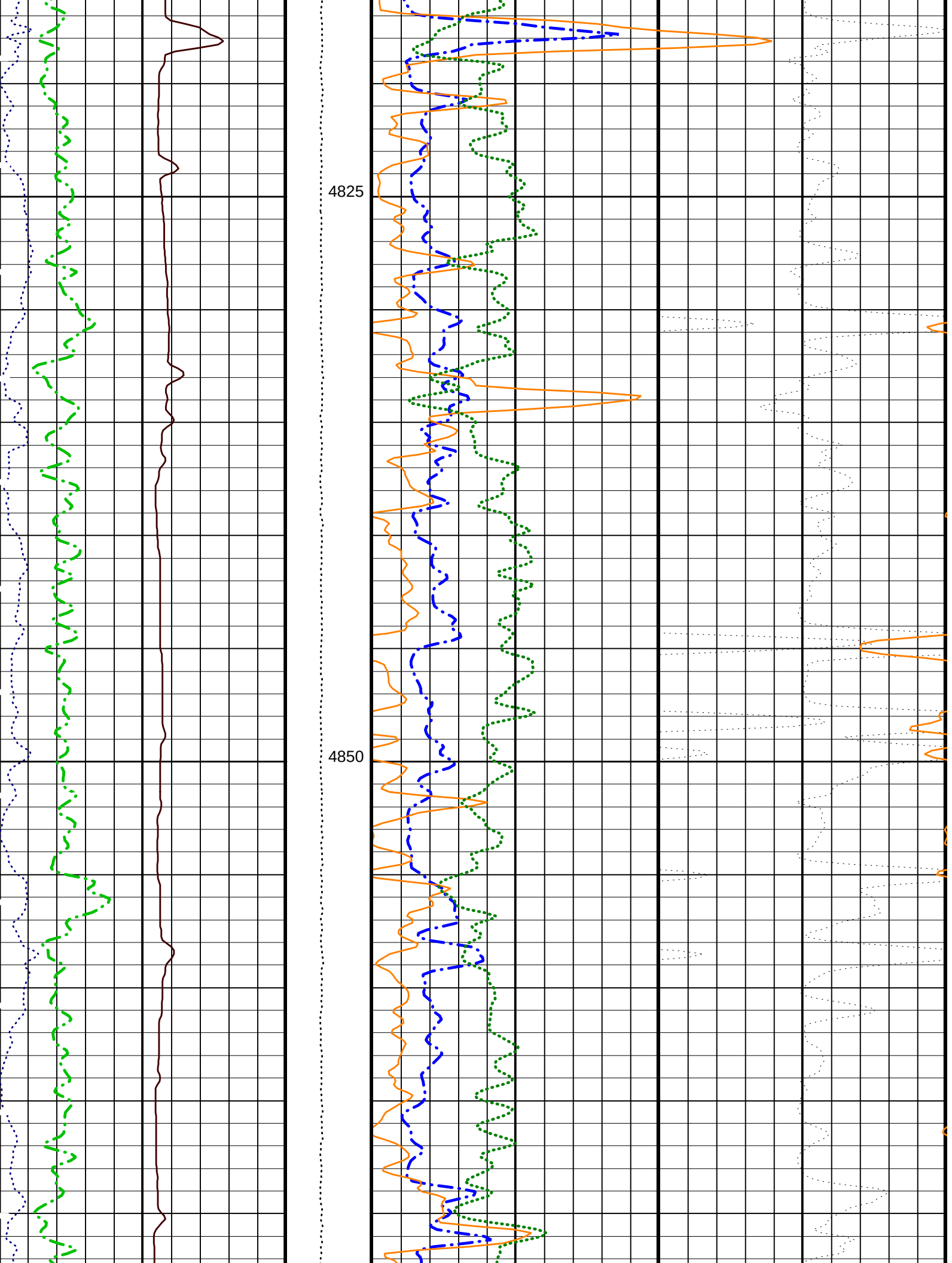
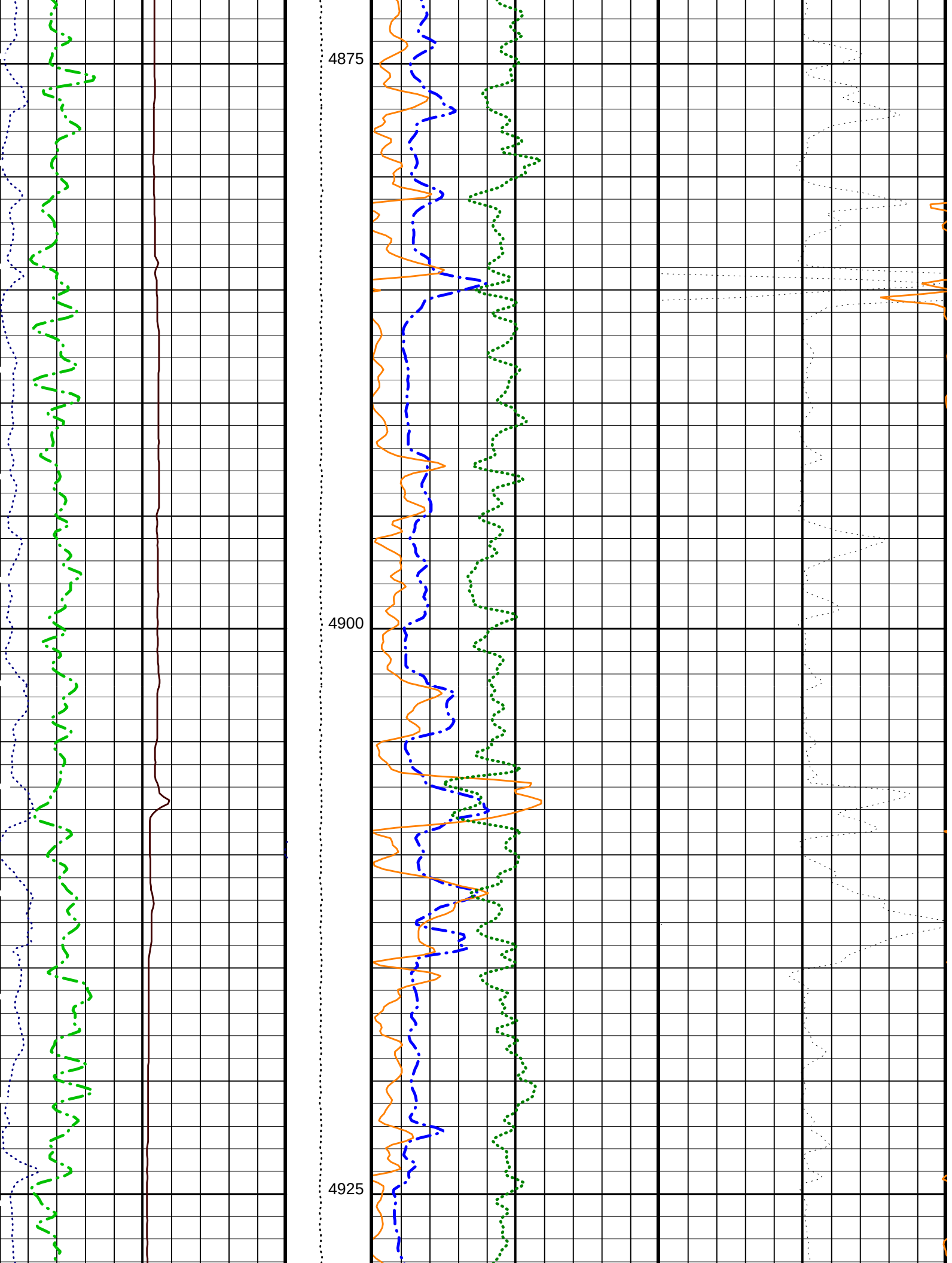
TENS
LCAL
HSGR
PEFL
RHOM
DRH
STOF
4750
APLC


4775
4800


4825
4850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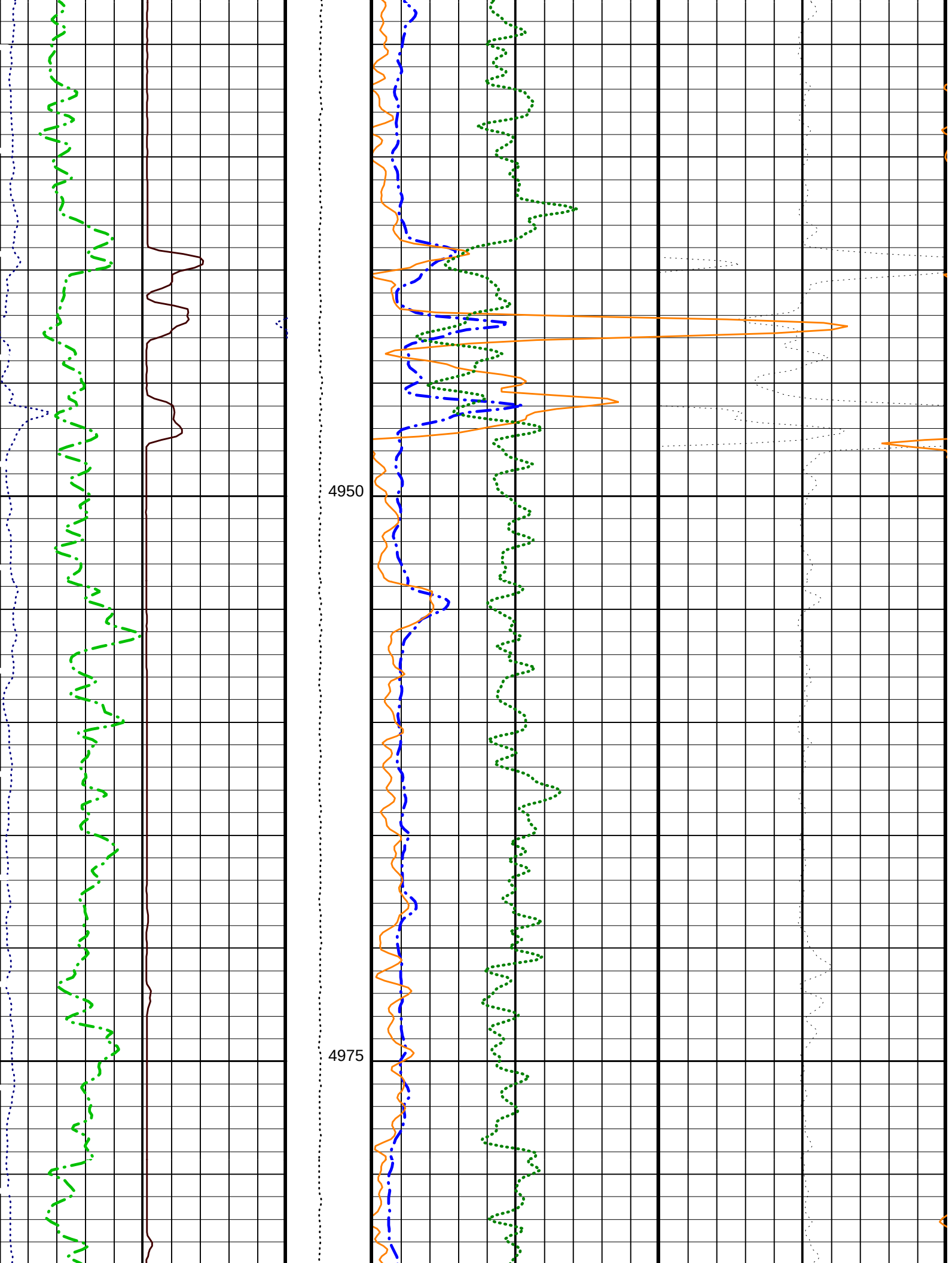
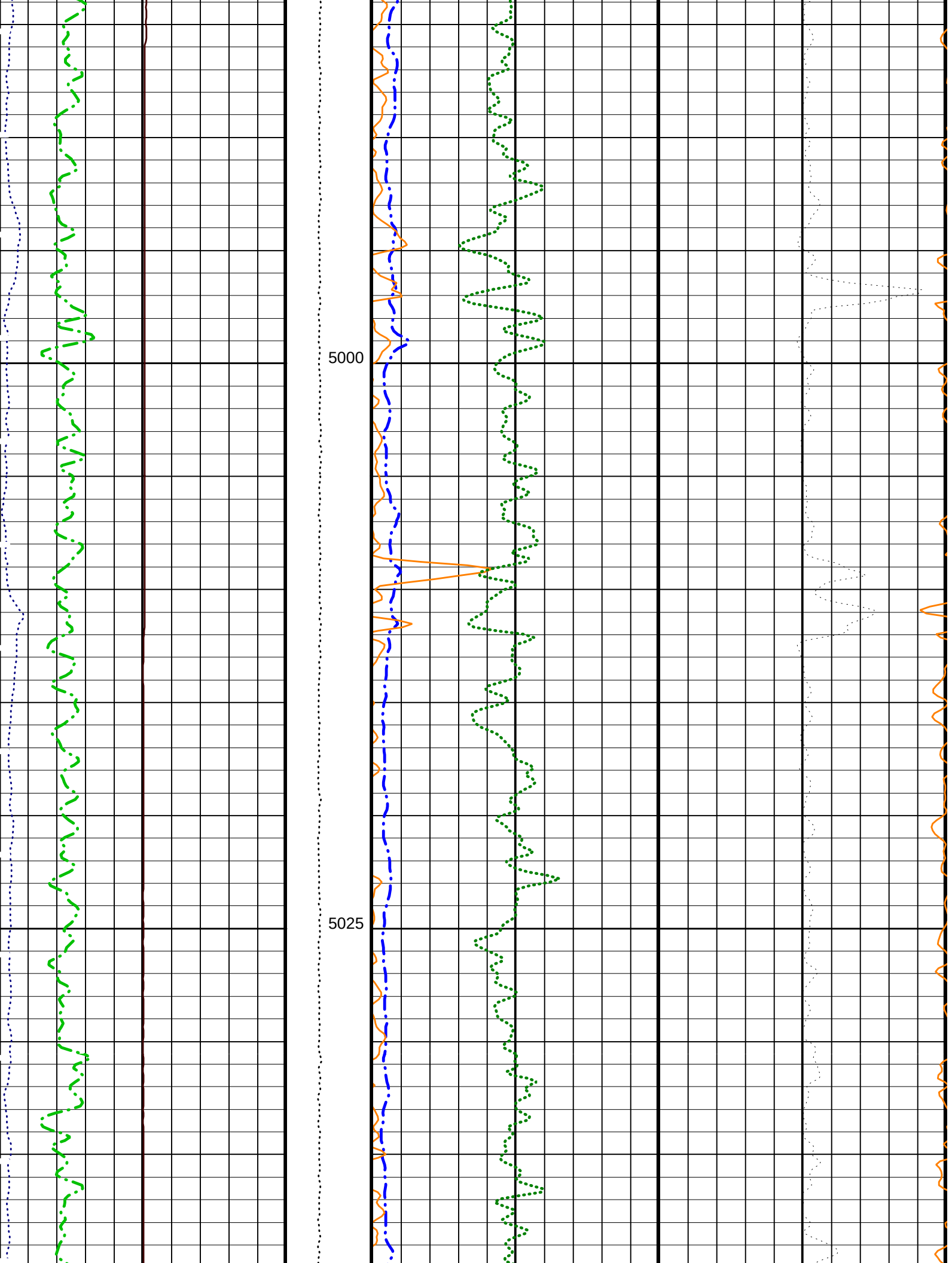
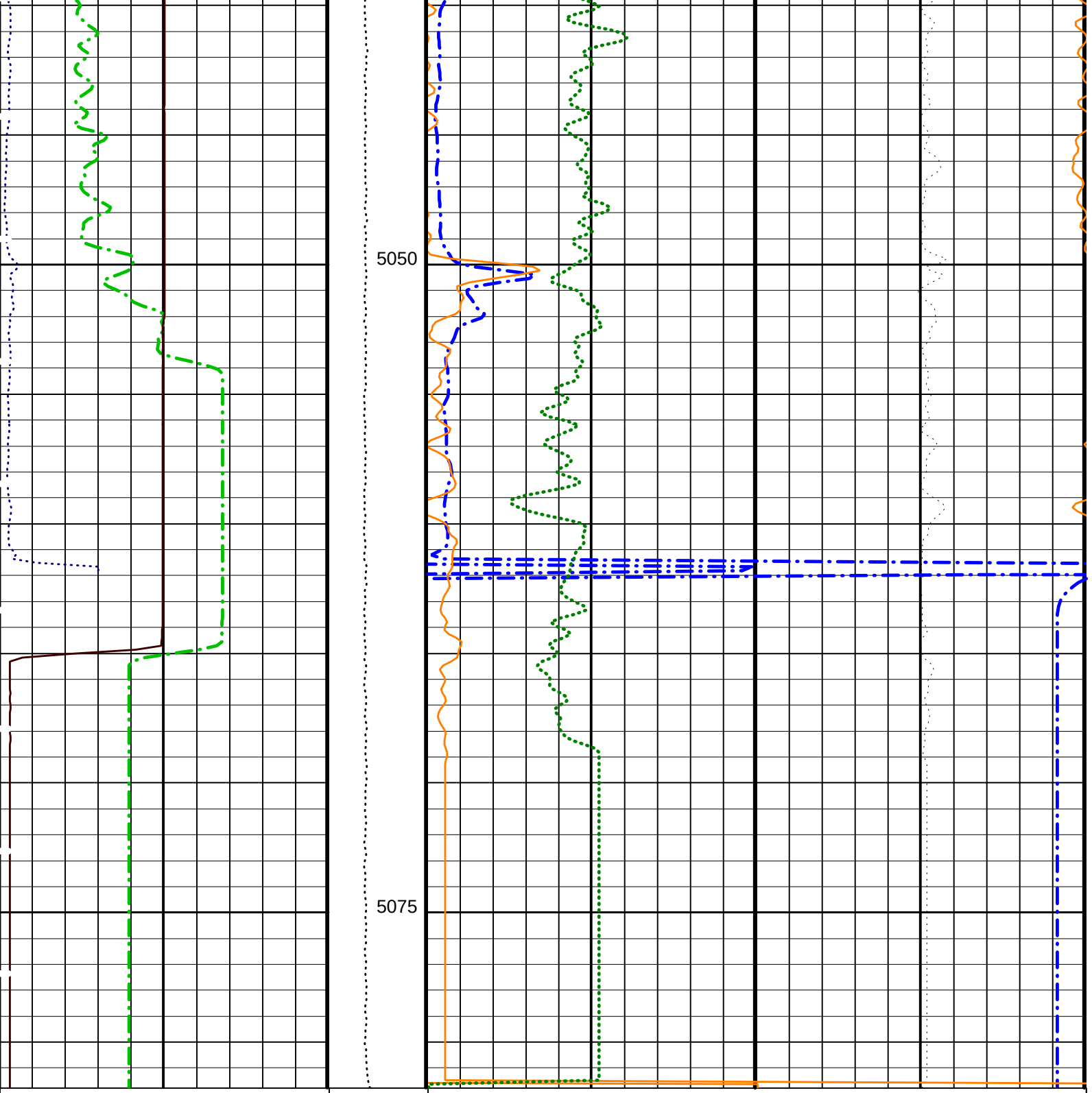
4900
4925


4950
4975


5000
5025



HLDS Caliper (LCAL)
0 (IN) 20

Tension (TENS) (LBF)
10000 0

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

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

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

HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 20

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

HLDS Bulk Density Correction (DRH)
-0.25 (G/C3) 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	OFF	
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	1966.03	V
ADSO	APS Array Detectors Data Source Switch	Both	
AFSD	APS Far Detector High Voltage Setting	2098.58	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	1731.81	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)	100	DEGC
DPPM	Density Porosity Processing Mode	HIRS	
FSAL	Formation Salinity	-50000	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	1.05777	
NFRC	APS Near/Far Calibration Ratio	0.890545	
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	-0.0010471	
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	1.02532	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.03512	
	BSP: Bridle SP		

SPNV	SP Next Value	0	MV

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	1.07	G/C3
DO	Depth Offset for Playback	0.0	M
MST	Mud Sample Temperature	-50000.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	NORMAL	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	5152	M
TDD	Total Depth - Driller	5152.00	M
TDL	Total Depth - Logger	5087.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: APS_HLDS_PORO Vertical Scale: 1:200 Graphics File Created: 20-Dec-2005 14:24

OP System Version: 12C0-301

MCM

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

Input DLIS Files

DEFAULT	DLL_LDL_APS_NGS_053LUP	FN:56	PRODUCER	20-Dec-2005 12:59	5081.8 M	4704.7 M

Output DLIS Files

DEFAULT	DLL_LDL_APS_NGS_055PUP	FN:59	PRODUCER	20-Dec-2005 14:24
REDUCED	DLL_LDL_APS_NGS_055PUP	FN:60	PRODUCER	20-Dec-2005 14:24

Schlumberger

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: Calibration not done							
MEASURED LLD	31.62	N/A	0	N/A	N/A	0.9000	OHMM
MEASURED LLS	31.62	N/A	0	N/A	N/A	0.9000	OHMM
Hostile Litho-Density Sonde Wellsite Calibration - Background Measurement							
Master: 26-Nov-2005 17:48 Before: 17-Dec-2005 12:49							
SS Cs Resolution Bkg	9.000	8.065	7.945	N/A	N/A	1.800	%
LS Cs Resolution Bkg	9.000	8.155	8.148	N/A	N/A	1.800	%
LSW1 Background	100.0	82.91	82.77	N/A	N/A	3.000	CPS
LSW2 Background	100.0	77.00	75.90	N/A	N/A	3.000	CPS
LSW3 Background	200.0	169.0	168.1	N/A	N/A	6.000	CPS
LSW4 Background	250.0	207.2	206.8	N/A	N/A	7.500	CPS
LSW5 Background	600.0	473.3	472.8	N/A	N/A	18.00	CPS
SSW1 Background	100.0	92.34	91.07	N/A	N/A	3.000	CPS
SSW2 Background	200.0	165.1	164.6	N/A	N/A	6.000	CPS
SSW3 Background	500.0	450.1	447.7	N/A	N/A	15.00	CPS

SSW3 Background	500.0	450.1	447.7	N/A	N/A	15.00	CPS
SSW4 Background	270.0	229.8	227.0	N/A	N/A	8.100	CPS
SSW5 Background	200.0	164.6	163.5	N/A	N/A	6.000	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Aluminum Measurement
Master: 26-Nov-2005 18:16

LSW1 Aluminum	600.0	603.1	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	870.7	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	1046	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	528.2	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	478.3	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2778	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	7548	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	10540	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	4254	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	524.4	N/A	N/A	N/A	N/A	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Lithology Measurement
Master: 26-Nov-2005 18:10

LSW1 Iron	400.0	409.3	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	694.8	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	921.3	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	476.7	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	435.7	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	2024	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	6257	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	9563	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3859	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	457.3	N/A	N/A	N/A	N/A	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Caliper Calibration
Before: 17-Dec-2005 12:57

HLDS Caliper Small Ring	8.000	N/A	9.531	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	12.00	N/A	13.55	N/A	N/A	N/A	IN

Accelerator-Porosity Tool Wellsite Calibration - Detector Background
Master: 13-Oct-2005 17:54 Before: 17-Dec-2005 12:56

Near Det Bkg Cntrate	30.00	31.38	31.45	N/A	N/A	N/A	CPS
Far Det Bkg Cntrate	30.00	33.49	33.05	N/A	N/A	N/A	CPS
Array-1 Det Bkg Cntrate	30.00	30.21	31.19	N/A	N/A	N/A	CPS
Array-2 Det Bkg Cntrate	30.00	28.25	28.93	N/A	N/A	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	33.45	33.09	N/A	N/A	N/A	CPS

Accelerator-Porosity Tool Wellsite Calibration - Calibration Ratios
Master: 13-Oct-2005 17:54

Near/Far Calibration Ratio	0.9250	0.8905	N/A	N/A	N/A	N/A	
Near/Array Calibration Ratio	1.030	1.058	N/A	N/A	N/A	N/A	
Near/Array Cal Ratio Up/Down	1.000	1.004	N/A	N/A	N/A	N/A	

Accelerator-Porosity Tool Wellsite Calibration - Tank Check
Master: 13-Oct-2005 17:54

Array-1 Standoff Porosity	11.75	11.54	N/A	N/A	N/A	N/A	PU
Array-2 Standoff Porosity	11.75	11.93	N/A	N/A	N/A	N/A	PU
Average Slowing Down Time	6.000	5.836	N/A	N/A	N/A	N/A	US
Array-1 SDT Ratio Up/Down	1.000	0.9826	N/A	N/A	N/A	N/A	
Array-2 SDT Ratio Up/Down	1.000	1.002	N/A	N/A	N/A	N/A	
Sigma Formation	27.50	27.08	N/A	N/A	N/A	N/A	CU

Accelerator-Porosity Tool Wellsite Calibration - CCR7 signal boxes
Master: 13-Oct-2005 17:54

Near Detector Plateau Setting	1650	1732	N/A	N/A	N/A	N/A	V
Far Detector Plateau Setting	2000	2099	N/A	N/A	N/A	N/A	V
Array Detector Plateau Setting	2000	1966	N/A	N/A	N/A	N/A	V

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 1 Check
Master: 17-Dec-2005 12:43 Before: 17-Dec-2005 12:50

Na 511 Peak Loc	40.00	39.69	39.59	N/A	N/A	1.000	
Na 511 Peak Res	15.50	15.57	16.23	N/A	N/A	2.000	%
High Voltage	1150	1112	1113	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	142.0	142.2	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	9.001	8.723	N/A	N/A	2.000	%
Temperature	15.50	30.76	30.77	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	43.80	44.27	N/A	N/A	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 2 Check
Master: 17-Dec-2005 12:43 Before: 17-Dec-2005 12:50

Na 511 Peak Loc	40.00	39.62	39.54	N/A	N/A	1.000	
Na 511 Peak Res	15.50	14.94	16.14	N/A	N/A	2.000	%
High Voltage	1150	1192	1193	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	141.3	141.7	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	8.839	8.795	N/A	N/A	2.000	%
Temperature	15.50	30.03	30.01	N/A	N/A	N/A	DEGC

Na Count Rate	45.00	43.60	43.98	N/A	N/A	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Ratio Of Detector 1 To Detector 2
Master: 17-Dec-2005 12:43 Before: 17-Dec-2005 12:50

Coincidence Count Rate Ratio	1.000	1.006	1.009	N/A	N/A	0.05000	

Hostile Natural Gamma Ray Sonde Master Calibration - Detector 1 Calibration
Master: 17-Dec-2005 12:38

Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	208.2	--	--	--	--	
Th Peak Res	7.000	7.029	--	--	--	--	%
Background Count Rate	142.5	26.12	--	--	--	--	CPS
Gain Ratio	1.000	0.9980	--	--	--	--	

Hostile Natural Gamma Ray Sonde Master Calibration - Detector 2 Calibration
Master: 17-Dec-2005 12:38

Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	209.8	--	--	--	--	
Th Peak Res	7.000	7.025	--	--	--	--	%
Background Count Rate	142.5	26.22	--	--	--	--	CPS
Gain Ratio	1.000	1.008	--	--	--	--	

Accelerator-Porosity Tool - Detector Plateau Settings :

Near Detector Plateau Setting 1732 V
Far Detector Plateau Setting 2099 V
Array Detector Plateau Setting 1966 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	EXCEEDS LIMIT	0	Before	EXCEEDS LIMIT	0
	29.00 (Minimum) 31.62 (Nominal) 40.00 (Maximum)			29.00 (Minimum) 31.62 (Nominal) 40.00 (Maximum)	

Before: Calibration not done

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	NOT DONE	N/A	Before	NOT DONE	N/A	Before	NOT DONE	N/A
	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	NOT DONE	N/A	Before	NOT DONE	N/A
	317.5 (Minimum) 342.5 (Nominal) 367.5 (Maximum)			9.830 (Minimum) 10.83 (Nominal) 11.83 (Maximum)	

Before: Calibration not done

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	Before		0.003849	Before		0.003798
	-1.000 (Minimum) 0 (Nominal) 1.000 (Maximum)			-0.1000 (Minimum) 0 (Nominal) 0.1000 (Maximum)			-0.1000 (Minimum) 0 (Nominal) 0.1000 (Maximum)	

Phase	Shallow Current Zero UA	Value	Phase	Shallow Voltage Zero MV	Value
Before		-0.1276	Before		-0.007697

-1.000 (Minimum)	0 (Nominal)	1.000 (Maximum)	-0.1000 (Minimum)	0 (Nominal)	0.1000 (Maximum)

Before: 17-Dec-2005 12:45

Hostile Litho-Density Sonde / Equipment Identification

Primary Equipment:		
Hostile Litho Density Sonde	HLDS - D	45
Hostile Litho Density High Voltage	HLDV - D	42
Gamma Source Radioactive	GSR - Z	2326
Auxiliary Equipment:		
Hostile Litho Density Pad	HLDP - C	45
Hostile Litho Density High Voltage Housi	HEH - H	44

Hostile Litho-Density Sonde Wellsite Calibration

Background Measurement

Phase	SS Cs Resolution Bkg %	Value
Master		8.065
Before		7.945

7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)

Phase	LS Cs Resolution Bkg %	Value
Master		8.155
Before		8.148

7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)

Phase	LSW1 Background CPS	Value
Master		82.91
Before		82.77

55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)

Phase	LSW2 Background CPS	Value
Master		77.00
Before		75.90

50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)

Phase	LSW3 Background CPS	Value
Master		169.0
Before		168.1

110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)

Phase	LSW4 Background CPS	Value
Master		207.2
Before		206.8

140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)

Phase	LSW5 Background CPS	Value
Master		473.3
Before		472.8

330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)

Phase	SSW1 Background CPS	Value
Master		92.34
Before		91.07

55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)

Phase	SSW2 Background CPS	Value
Master		165.1
Before		164.6

100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)

Phase	SSW3 Background CPS	Value
Master		450.1
Before		447.7

280.0 (Minimum) 500.0 (Nominal) 700.0 (Maximum)

Phase	SSW4 Background CPS	Value
Master		229.8
Before		227.0

150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum)

Phase	SSW5 Background CPS	Value
Master		164.6
Before		163.5

110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum)

Master: 26-Nov-2005 17:48 Before: 17-Dec-2005 12:49

Hostile Litho-Density Sonde Master Calibration

Detector Background Measurement

Phase	LSW1 Background CPS	Value
Master		82.91

55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)

Phase	LSW2 Background CPS	Value
Master		77.00

50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)

Phase	LSW3 Background CPS	Value
Master		169.0

110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)

Phase	LSW4 Background CPS	Value
Master		207.2

140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)

Phase	LSW5 Background CPS	Value
Master		473.3

330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)

Phase	LS Cs Resolution Bkg %	Value
Master		8.155

7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)

Phase	SSW1 Background CPS	Value
Master		92.34

55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)

Phase	SSW2 Background CPS	Value
Master		165.1

100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)

Phase	SSW3 Background CPS	Value
Master		450.1

280.0 (Minimum) 500.0 (Nominal) 700.0 (Maximum)

Phase	SSW4 Background CPS	Value
Master		229.8

150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum)

Phase	SSW5 Background CPS	Value
Master		164.6

110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum)

Phase	SS Cs Resolution Bkg %	Value
Master		8.065

7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)

Master: 26-Nov-2005 17:48

Hostile Litho-Density Sonde Master Calibration

Detector Aluminum Measurement (bkgd-subtracted)

Phase	LSW1 Aluminum CPS	Value
Master		603.1

Phase	LSW2 Aluminum CPS	Value
Master		870.7

Phase	LSW3 Aluminum CPS	Value
Master		1046

Phase	LSW4 Aluminum CPS	Value
Master		528.2
410.0 (Minimum)	580.0 (Nominal)	670.0 (Maximum)

Phase	LSW5 Aluminum CPS	Value
Master		478.3
410.0 (Minimum)	570.0 (Nominal)	660.0 (Maximum)

Phase	SSW1 Aluminum CPS	Value
Master		2778
2000 (Minimum)	2800 (Nominal)	3200 (Maximum)

Phase	SSW2 Aluminum CPS	Value
Master		7548
5800 (Minimum)	8000 (Nominal)	9300 (Maximum)

Phase	SSW3 Aluminum CPS	Value
Master		10540
8300 (Minimum)	11600 (Nominal)	13500 (Maximum)

Phase	SSW4 Aluminum CPS	Value
Master		4254
3500 (Minimum)	5000 (Nominal)	5800 (Maximum)

Phase	SSW5 Aluminum CPS	Value
Master		524.4
470.0 (Minimum)	660.0 (Nominal)	770.0 (Maximum)

Master: 26-Nov-2005 18:16

Hostile Litho-Density Sonde Master Calibration

Detector Litholog Measurement (bkgd-subtracted)

Phase	LSW1 Iron CPS	Value
Master		409.3
290.0 (Minimum)	400.0 (Nominal)	470.0 (Maximum)

Phase	LSW2 Iron CPS	Value
Master		694.8
520.0 (Minimum)	730.0 (Nominal)	850.0 (Maximum)

Phase	LSW3 Iron CPS	Value
Master		921.3
720.0 (Minimum)	1000 (Nominal)	1160 (Maximum)

Phase	LSW4 Iron CPS	Value
Master		476.7
370.0 (Minimum)	520.0 (Nominal)	600.0 (Maximum)

Phase	LSW5 Iron CPS	Value
Master		435.7
340.0 (Minimum)	470.0 (Nominal)	550.0 (Maximum)

Phase	SSW1 Iron CPS	Value
Master		2024
1500 (Minimum)	2100 (Nominal)	2400 (Maximum)

Phase	SSW2 Iron CPS	Value
Master		6257
4900 (Minimum)	6800 (Nominal)	7900 (Maximum)

Phase	SSW3 Iron CPS	Value
Master		9563
7800 (Minimum)	10800 (Nominal)	12600 (Maximum)

Phase	SSW4 Iron CPS	Value
Master		3859
3300 (Minimum)	4600 (Nominal)	5400 (Maximum)

Phase	SSW5 Iron CPS	Value
Master		457.3
420.0 (Minimum)	580.0 (Nominal)	680.0 (Maximum)

Master: 26-Nov-2005 18:10

Hostile Litho-Density Sonde Master Calibration

Quality Ratios

Phase	AL CALIBRATION RATIO 1	Value
Master		1.039
0.9000 (Minimum)	1.000 (Nominal)	1.100 (Maximum)

Phase	AL CALIBRATION RATIO 2	Value
Master		2.205
1.900 (Minimum)	2.100 (Nominal)	2.300 (Maximum)

Phase	AL CALIBRATION RATIO 3	Value
Master		0.5992
0.4500 (Minimum)	0.5500 (Nominal)	0.6500 (Maximum)

Phase	AL CALIBRATION RATIO 4	Value
Master		0.5814
0.4000 (Minimum)	0.5500 (Nominal)	0.6500 (Maximum)

Phase	Pad-Wear SS Ratio	Value
Master		0.9923
0.9800 (Minimum)	0.9880 (Nominal)	0.9960 (Maximum)

Phase	Pad-Wear LS Ratio	Value
Master		0.9844
0.9800 (Minimum)	0.9880 (Nominal)	0.9960 (Maximum)

Phase	Pad-Position SS Ratio	Value
Master		1.003
0.9900 (Minimum)	0.9940 (Nominal)	1.015 (Maximum)

Phase	Pad-Position LS Ratio	Value
Master		0.9868
0.9850 (Minimum)	0.9940 (Nominal)	1.010 (Maximum)

Master: 26-Nov-2005 18:04

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 - C	22
APS Minitron	MNTR - F	4185
Auxiliary Equipment:		
Accelerator-Porosity Housing	APH - AC	22
APS Calibration Water Tank	SFT - 178	6250
APS Aluminum Calibrator Sleeve	SFT - 281	6250

Accelerator-Porosity Tool Wellsite Calibration

Detector Background

Phase	Near Det Bkg Cntrate CPS	Value
Master		31.38
Before		31.45

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

Phase	Far Det Bkg Cntrate CPS	Value
Master		33.49
Before		33.05

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

Phase	Array-1 Det Bkg Cntrate CPS	Value
Master		30.21
Before		31.19

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

Phase	Array-2 Det Bkg Cntrate CPS	Value
Master		28.25
Before		28.93

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

Phase	Array Therm Det Bkg Cntrate CPS	Value
Master		33.45
Before		33.09

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

Master: 13-Oct-2005 17:54 Before: 17-Dec-2005 12:56

Accelerator-Porosity Tool Wellsite Calibration

Calibration Ratios

Phase	Near/Far Calibration Ratio	Value
Master		0.8905

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

Phase	Near/Array Calibration Ratio	Value
Master		1.058

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

Phase	Near/Array Cal Ratio Up/Down	Value
Master		1.004

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

Master: 13-Oct-2005 17:54

Accelerator-Porosity Tool Wellsite Calibration

Tank Check

Phase	Array-1 Standoff Porosity PU	Value
Master		11.54

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

Phase	Array-2 Standoff Porosity PU	Value
Master		11.93

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

Phase	Average Slowing Down Time US	Value
Master		5.836

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

Phase	Array-1 SDT Ratio Up/Down	Value
Master		0.9826

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

Phase	Array-2 SDT Ratio Up/Down	Value
Master		1.002

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

Phase	Sigma Formation CU	Value
Master		27.08

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

Master: 13-Oct-2005 17:54

Accelerator-Porosity Tool Master Calibration

Detector Calibration

Phase	Near/Far Calibration Ratio	Value
Master		0.8905

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

Phase	Near/Array Calibration Ratio	Value
Master		1.058

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

Phase	Near/Array Cal Ratio Up/Down	Value
Master		1.004

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

Master: 13-Oct-2005 17:54

Accelerator-Porosity Tool Master Calibration

Tank Check

Phase	Array-1 Standoff Porosity PU	Value
Master		11.54

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

Phase	Array-2 Standoff Porosity PU	Value
Master		11.93

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

Phase	Average Slowing Down Time US	Value
Master		5.836

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

Phase	Array-1 SDT Ratio Up/Down	Value
Master		0.9826

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

Phase	Array-2 SDT Ratio Up/Down	Value
Master		1.002

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

Phase	Sigma Formation CU	Value
Master		27.08

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

Master: 13-Oct-2005 17:54

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	HNSH - BA	205
Gamma Source Radioactive	GSR - U	135

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 1 Check

Phase	Na 511 Peak Loc	Value
Master		39.69
Before		39.59
	37.50 (Minimum) 40.00 (Nominal) 42.50 (Maximum)	

Phase	Na 511 Peak Res %	Value
Master		15.57
Before		16.23
	12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)	

Phase	High Voltage V	Value
Master		1112
Before		1113
	900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	

Phase	Na 1785 Peak Loc	Value
Master		142.0
Before		142.2
	135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)	

Phase	Na 1785 Peak Res %	Value
Master		9.001
Before		8.723
	7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)	

Phase	Temperature DEGC	Value
Master		30.76
Before		30.77
	-28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)	

Phase	Na Count Rate CPS	Value
Master		43.80
Before		44.27
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)	

Master: 17-Dec-2005 12:43 Before: 17-Dec-2005 12:50

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 2 Check

Phase	Na 511 Peak Loc	Value
Master		39.62
Before		39.54
	37.50 (Minimum) 40.00 (Nominal) 42.50 (Maximum)	

Phase	Na 511 Peak Res %	Value
Master		14.94
Before		16.14
	12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)	

Phase	High Voltage V	Value
Master		1192
Before		1193
	900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	

Phase	Na 1785 Peak Loc	Value
Master		141.3
Before		141.7
	135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)	

Phase	Na 1785 Peak Res %	Value
Master		8.839
Before		8.795
	7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)	

Phase	Temperature DEGC	Value
Master		30.03
Before		30.01
	-28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)	

Phase	Na Count Rate CPS	Value
Master		43.60
Before		43.98
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)	

Master: 17-Dec-2005 12:43 Before: 17-Dec-2005 12:50

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Ratio Of Detector 1 To Detector 2

Phase	Coincidence Count Rate Ratio	Value
Master		1.006
Before		1.009
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)	

Master: 17-Dec-2005 12:43

Before: 17-Dec-2005 12:50

Hostile Natural Gamma Ray Sonde Master Calibration

Detector 1 Calibration

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

Phase	Th Peak Loc	Value
Master		208.2
	201.0 (Minimum) 209.6 (Nominal) 218.3 (Maximum)	

Phase	Th Peak Res %	Value
Master		7.029
	5.000 (Minimum) 7.000 (Nominal) 9.000 (Maximum)	

Phase	Background Count Rate CPS	Value
Master		26.12
	20.00 (Minimum) 142.5 (Nominal) 265.0 (Maximum)	

Phase	Gain Ratio	Value
Master		0.9980
	0.9400 (Minimum) 1.000 (Nominal) 1.060 (Maximum)	

Master: 17-Dec-2005 12:38

Hostile Natural Gamma Ray Sonde Master Calibration

Detector 2 Calibration

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

Phase	Th Peak Loc	Value
Master		209.8
	201.0 (Minimum) 209.6 (Nominal) 218.3 (Maximum)	

Phase	Th Peak Res %	Value
Master		7.025
	5.000 (Minimum) 7.000 (Nominal) 9.000 (Maximum)	

Phase	Background Count Rate CPS	Value
Master		26.22
	20.00 (Minimum) 142.5 (Nominal) 265.0 (Maximum)	

Phase	Gain Ratio	Value
Master		1.008
	0.9400 (Minimum) 1.000 (Nominal) 1.060 (Maximum)	

Master: 17-Dec-2005 12:38

Company: Lamont Doherty

Schlumberger

Well: Expedition 312 Site 1256D
Field: Superfast Spreading Crust III
Rig: Joides Resolution
Ocean: Pacific Ocean

Accelerator Porosity Sonde
Hostile Litho-Density Sonde
Gamma Ray