

Schlumberger

Company: Lamont Doherty

Well: IODP Exp 305 Site U1309D

Field: Atlantis Massif

Rig: Joides Resolution Ocean: Atlantic Ocean

Hostile Natural Gamma Ray

Rig: Joides Resolution
 Field: Atlantis Massif
 Location: Mid-Atlantic Ridge
 Well: IODP Exp 305 Site U1309D
 Company: Lamont Doherty

Logging Date	24-Feb-2005			
Run Number	Three			
Depth Driller	3071.5 m			
Schlumberger Depth	3070 m			
Bottom Log Interval	3065 m			
Top Log Interval	1850 m			
Casing Driller Size @ Depth	0.000 in @ 1850 m			
Casing Schlumberger	1850 m			
Bit Size	9.875 in			
Type Fluid In Hole	Fresh Water			
Density	1.2 g/cm3			
Fluid Loss	PH			
Source Of Sample				
RM @ Measured Temperature	0.322 ohm.m @ 50 degC			
RMF @ Measured Temperature	@ @			
RMC @ Measured Temperature	@ @			
Source RMF	RMC			
RM @ MRT	0.190 @ 118 @ 118			
Maximum Recorded Temperatures	100 degC @ 118 @ 118			
Circulation Stopped	Time 23-Feb-2005 15:00			
Logger On Bottom	Time 24-Feb-2005 3:47			
Unit Number	2082 Houston			
Recorded By	Javier Espinosa			
Witnessed By	Heike Delius, Margarete Linek			

LOCATION		Elev.:	K.B.	11.3 m
Mid-Atlantic Ridge		G.L.	-1656 m	
		D.F.	11 m	
Permanent Datum:	Mean Sea Level	Elev.:	0 m	
Log Measured From:	Drill Floor	11.3 m above Perm. Datum		
Drilling Measured From:	Drill Floor			

API Serial No.	Max. Hole Devi.	Longitude	Latitude
----------------	-----------------	-----------	----------

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						
Source Of Sample						
RM @ Measured Temperature			@			
RMF @ Measured Temperature			@			
RMC @ Measured Temperature			@			
Source RMF			RMC			
RM @ MRT			@ @ 118			
Maximum Recorded Temperatures			100 degC @ 118 @ 118			
Circulation Stopped			Time 23-Feb-2005 15:00			
Logger On Bottom			Time 24-Feb-2005 3:47			
Unit Number			2082 Houston			
Recorded By			Javier Espinosa			
Witnessed By			Heike Delius, Margarete Linek			

DISCLAIMER

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

OTHER SERVICES1
 OS1: DLT/HLDS/APS
 OS2: MEST/DSI
 OS3: WST
 OS4: UBI
 OS5:

OTHER SERVICES2
 OS1:
 OS2:
 OS3:
 OS4:
 OS5:

REMARKS: RUN NUMBER 1
 Tool ran as per sketch below
 Parameters as per IODP standards
 Fresh water circulated before logging operation

REMARKS: RUN NUMBER 2

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

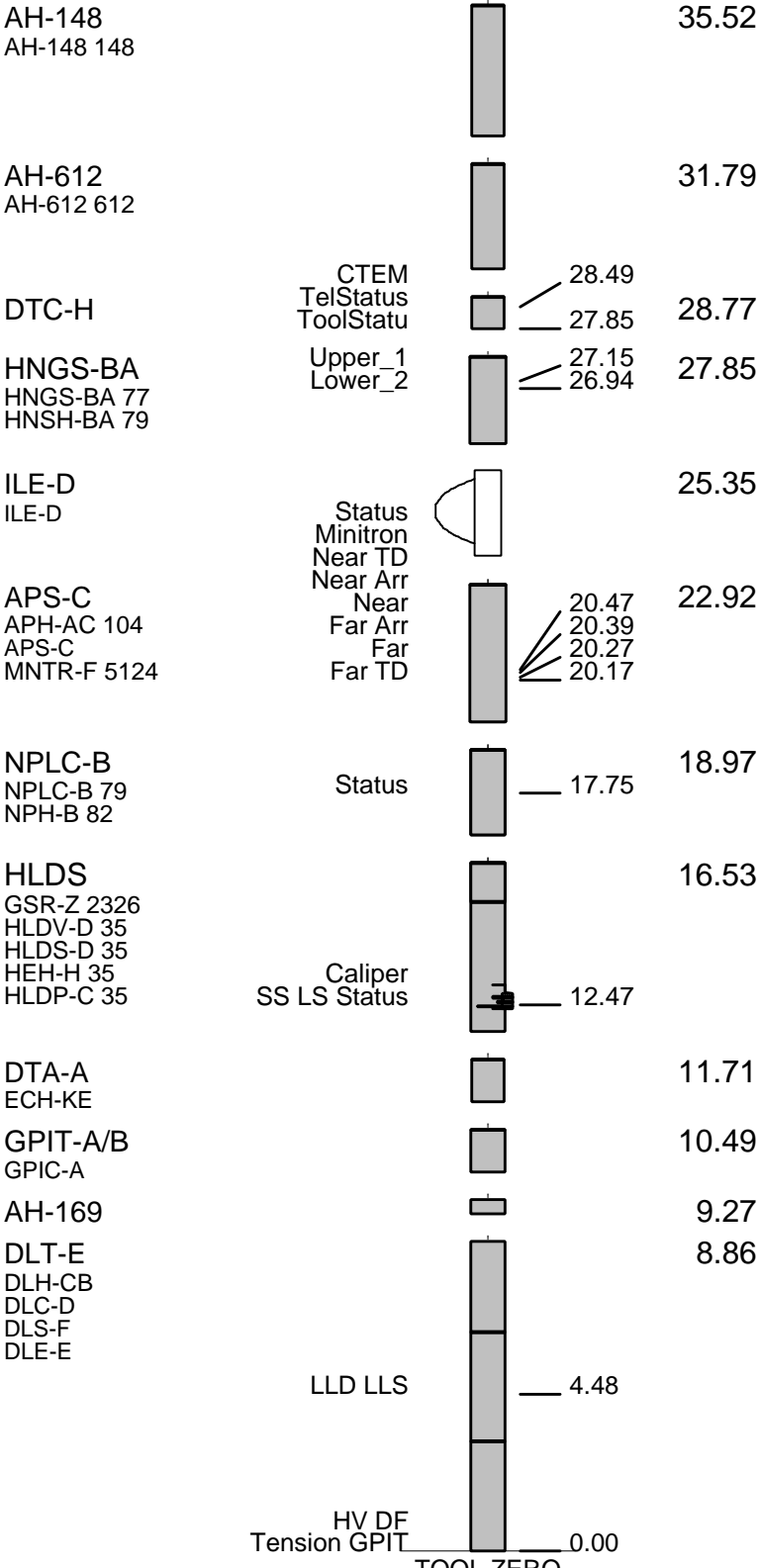
EQUIPMENT DESCRIPTION

RUN 1
SURFACE EQUIPMENT
 WITM (DTS)-A
 LCM-AA
 SFT-281 6250
 SFT-178 6250
 GSR-U 135

RUN 2

DOWNHOLE EQUIPMENT

BSP BRT-S		60.80
SP SPARC		39.74
LEH-QT		36.41



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

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

Kelly Bushing Elevation
Derrick Floor Elevation

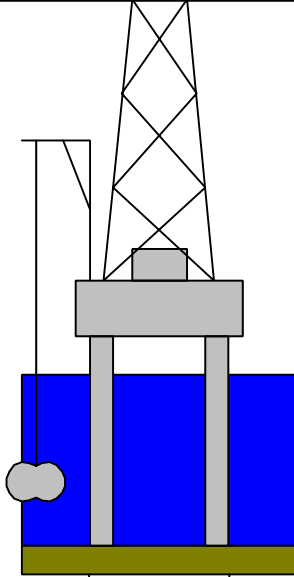
11.3
11.0

Mean Sea Level

0.0

Seismic Gun depth below MSL

2.0



0.0 5.000

Casing String

1656.0 9.875

Borehole Segment

1850.0 5.000

Casing Shoe

Schlumberger

MAIN PASS

MAXIS Field Log

Company: Lamont Doherty

Well: IODP Exp 305 Site U1309D

Output DLIS Files

DEFAULT	DLL_LDL_APS_NGS_020LUP	FN:22	PRODUCER	24-Feb-2005 04:05	3072.4 M	1811.7 M
REDUCED	DLL_LDL_APS_NGS_020LUP	FN:23	PRODUCER	24-Feb-2005 04:05	3072.4 M	1811.7 M

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		

PIP SUMMARY

▶ Time Mark Every 60 S

HNGS Spectroscopy Gamma Ray (HSGR)
(GAPI) 0 15

HNGS Det.2 Resolution Degradation Factor (RDF2)
(---) 0 10

HNGS Det.1 Resolution Degradation Factor (RDF1)
(---) 0 10

HNGS Det.2 Gain Correction Factor (GCF2)
(---) 0.9 1.1

HNGS Det.1 Gain Correction Factor (GCF1)
(---) 0.9 1.1

Area1
From HCGR to HSGR

HNGS Computed Gamma Ray (HCGR)
(GAPI) 0 15

HLDS Caliper (LCAL)
(IN) 0 20

HNGS Borehole Potassium (HBHK)
(V/V) -0.05 0.05

HNGS Det.2 Chi Squared (CHI2)
(---) 10 0

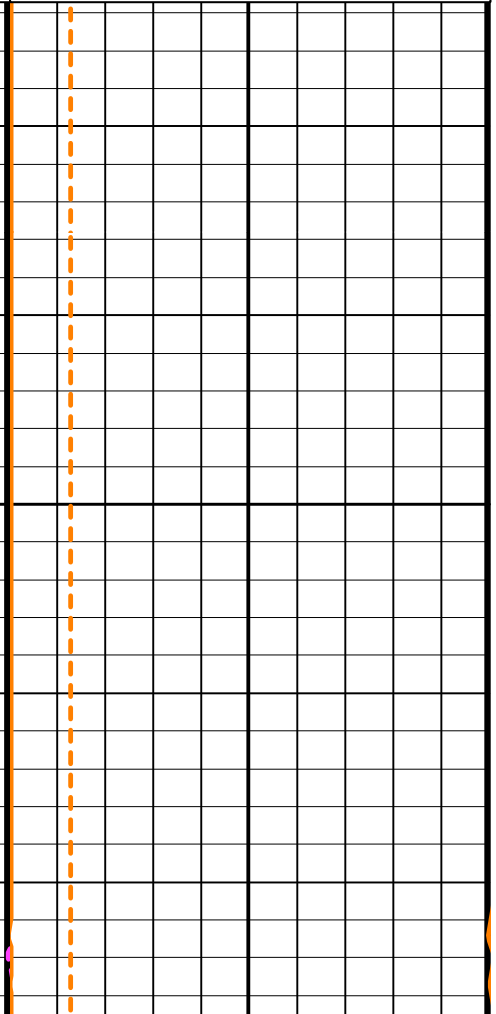
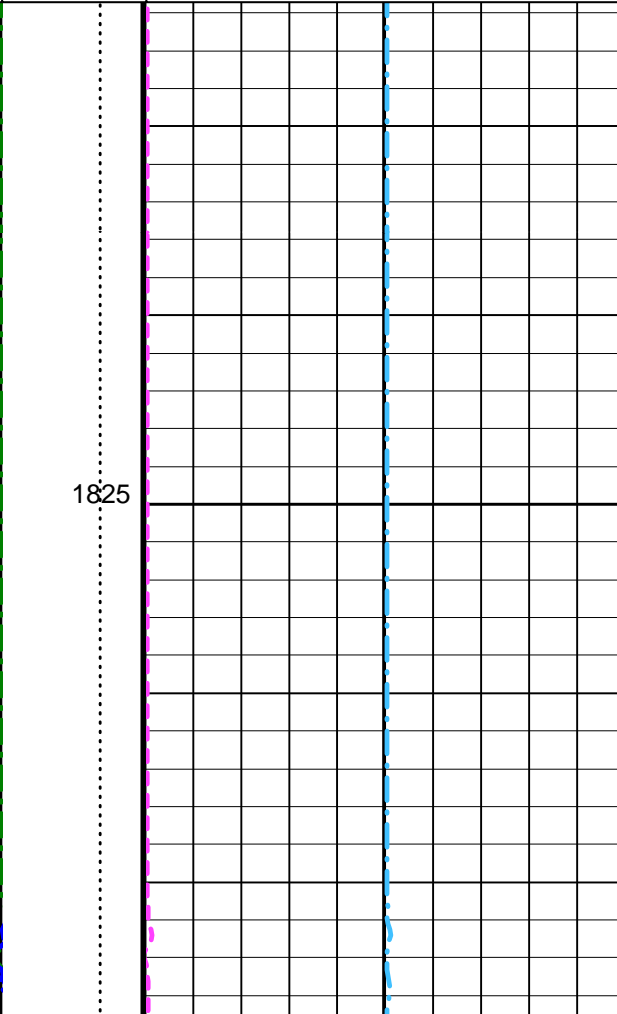
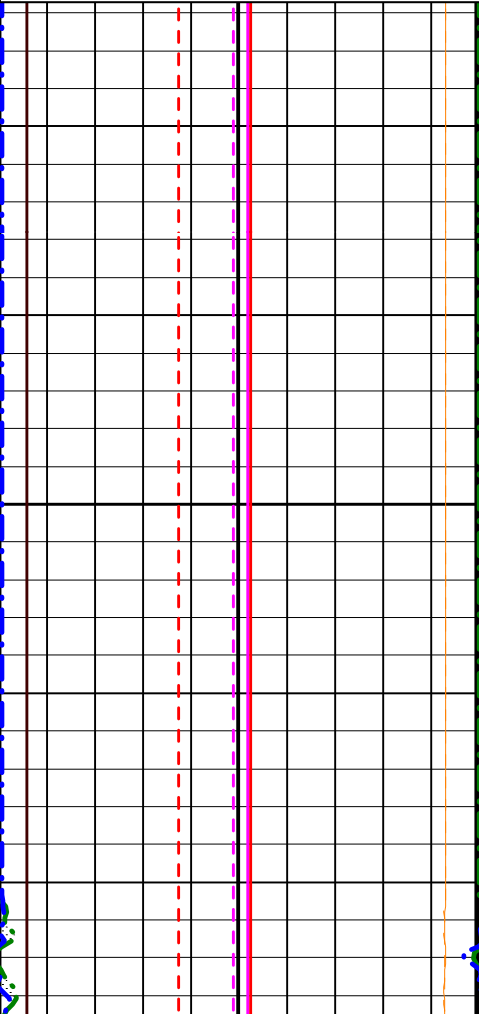
HNGS Uranium (HURA)
(PPM) -10 30

HNGS Det.1 Chi Squared (CHI1)
(---) 10 0

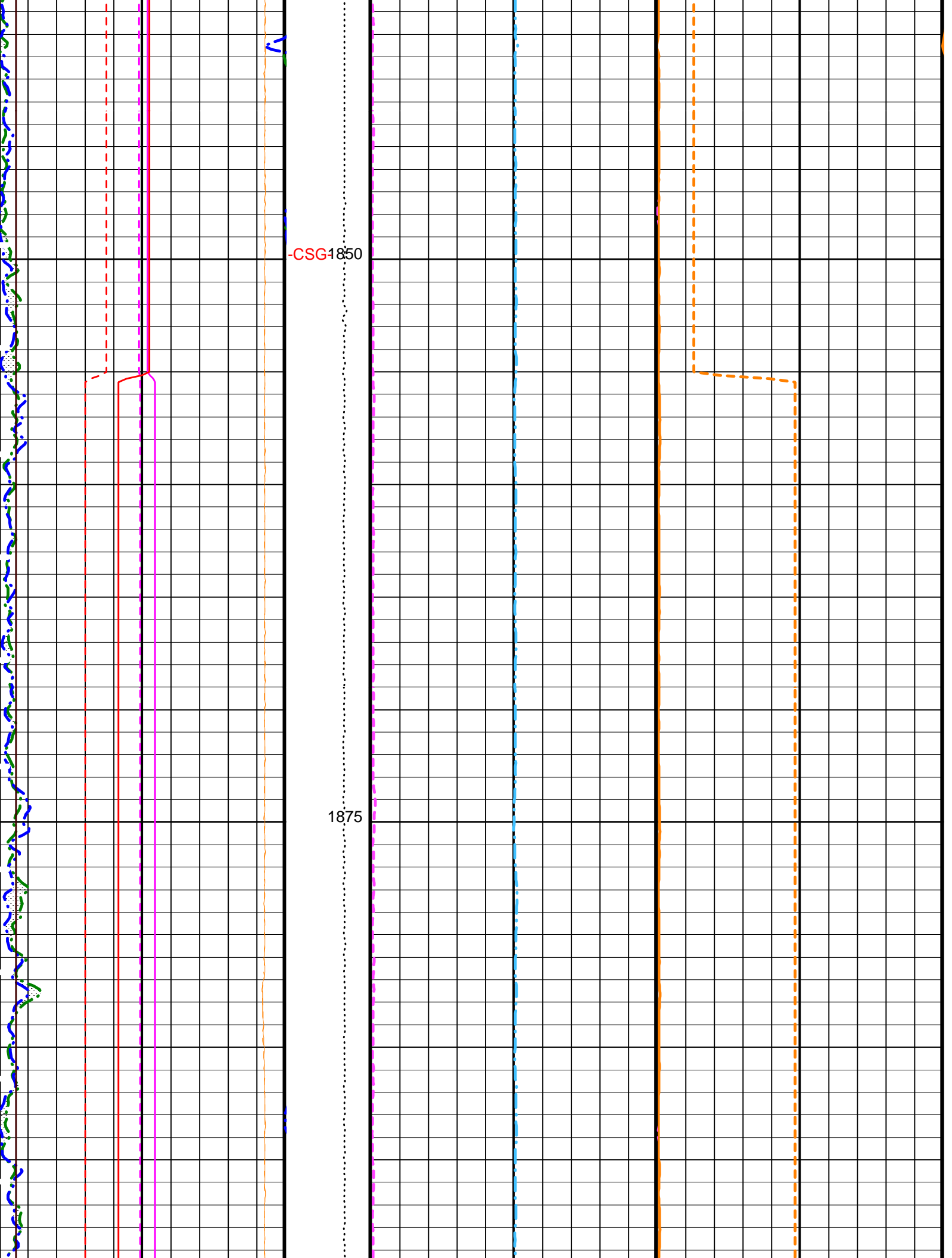
Tension (TENS) (LBF) 10000 0

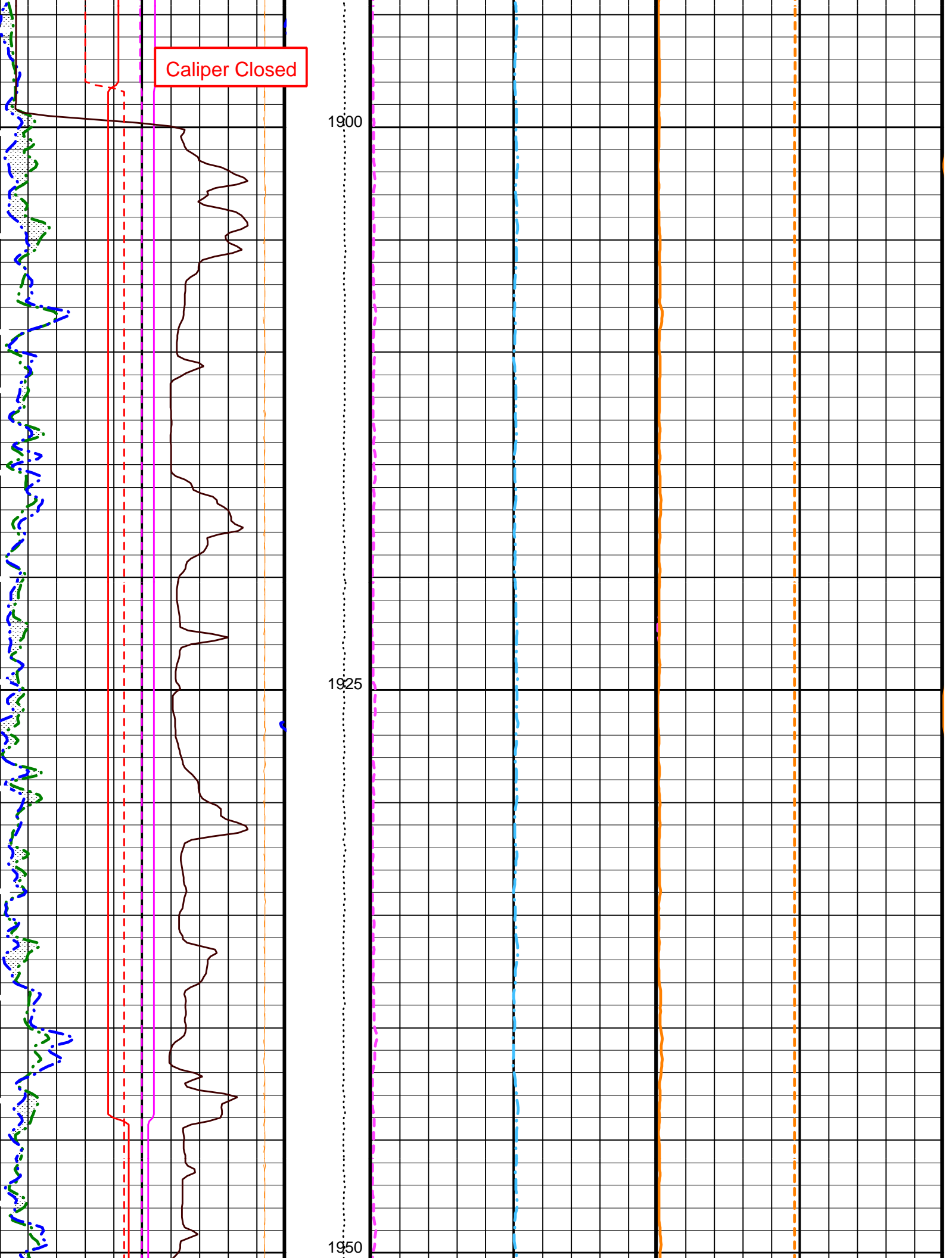
HNGS Thorium (HTHO)
(PPM) 0 30

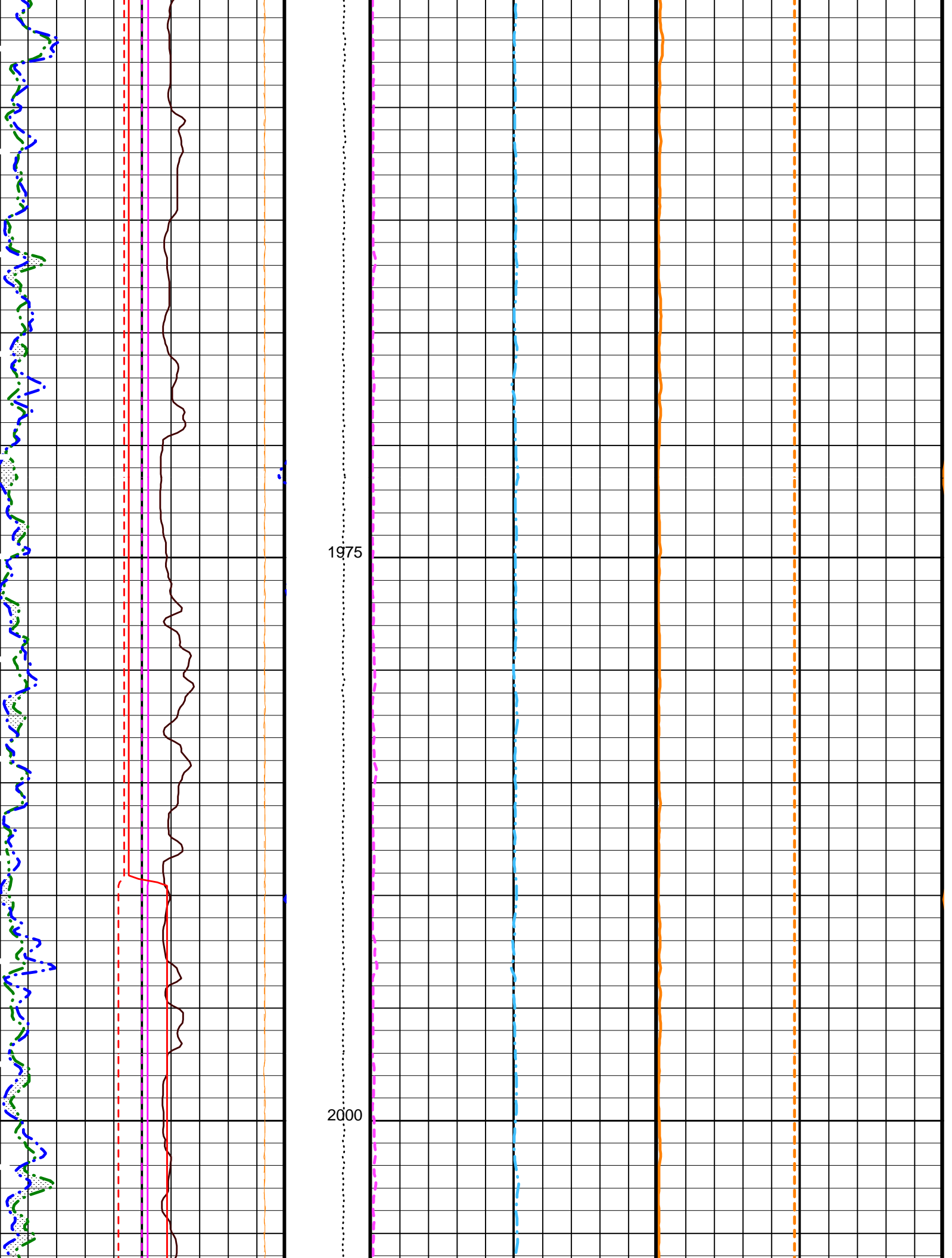
HNGS Potassium (HFK)
(V/V) 0 0.1

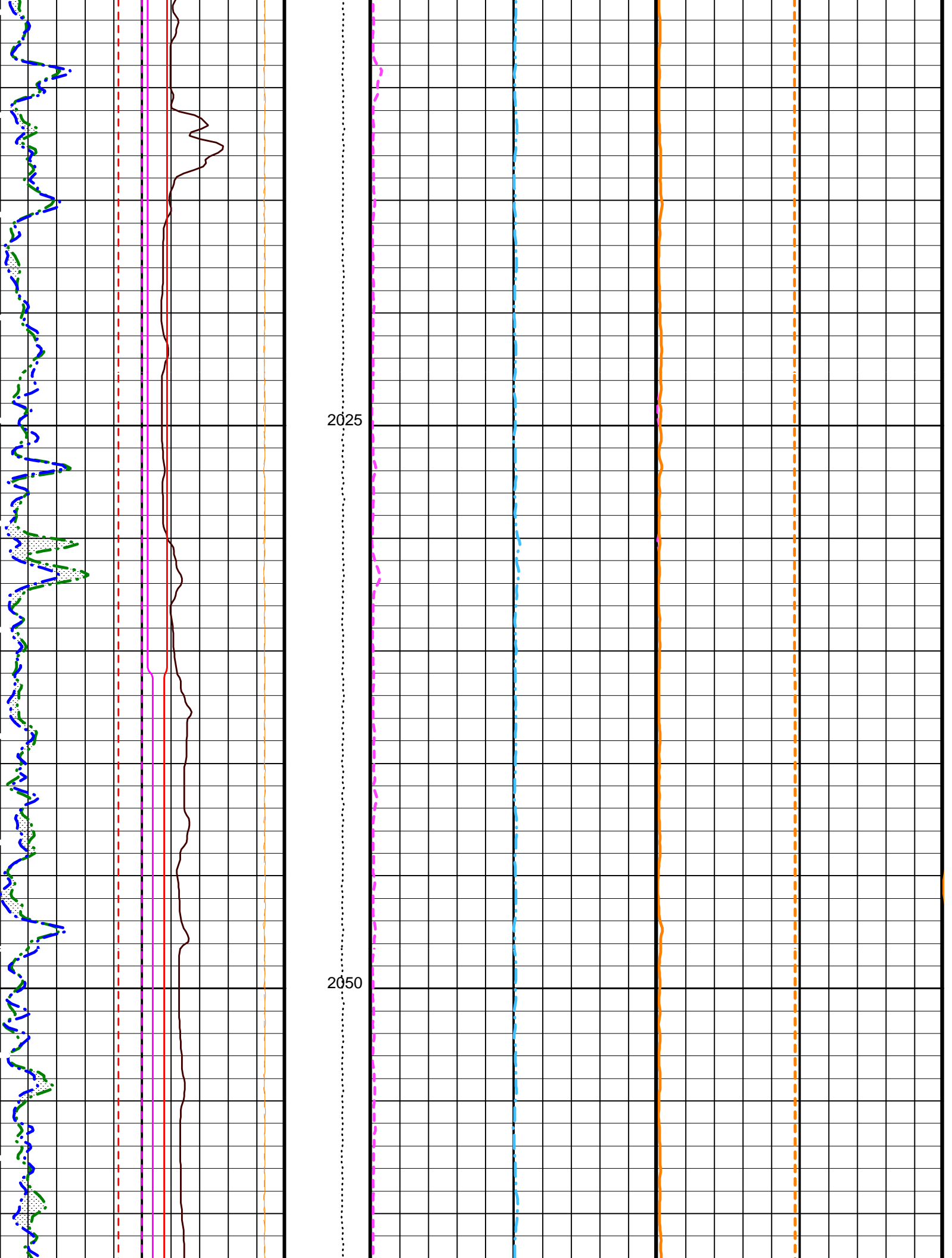


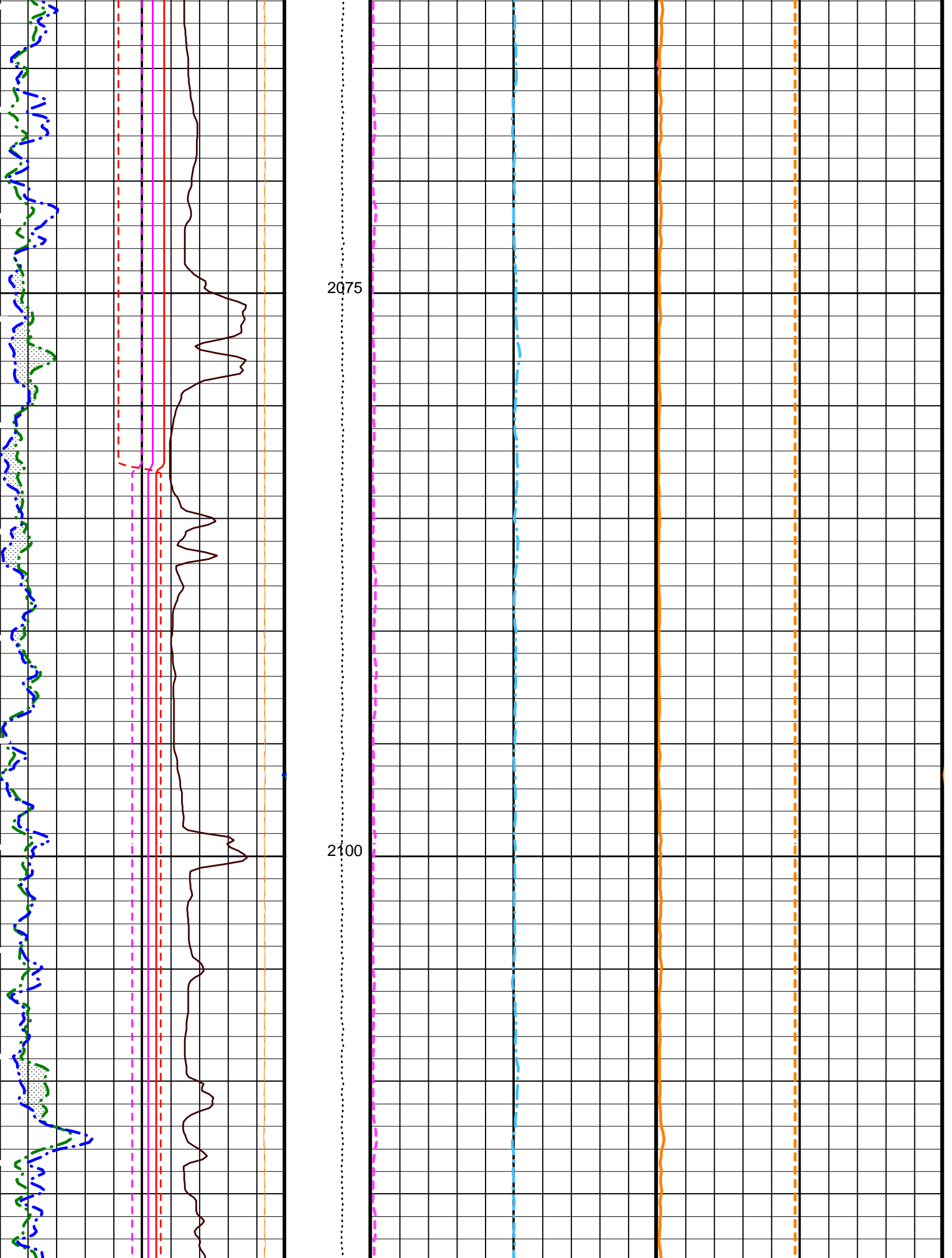
1825

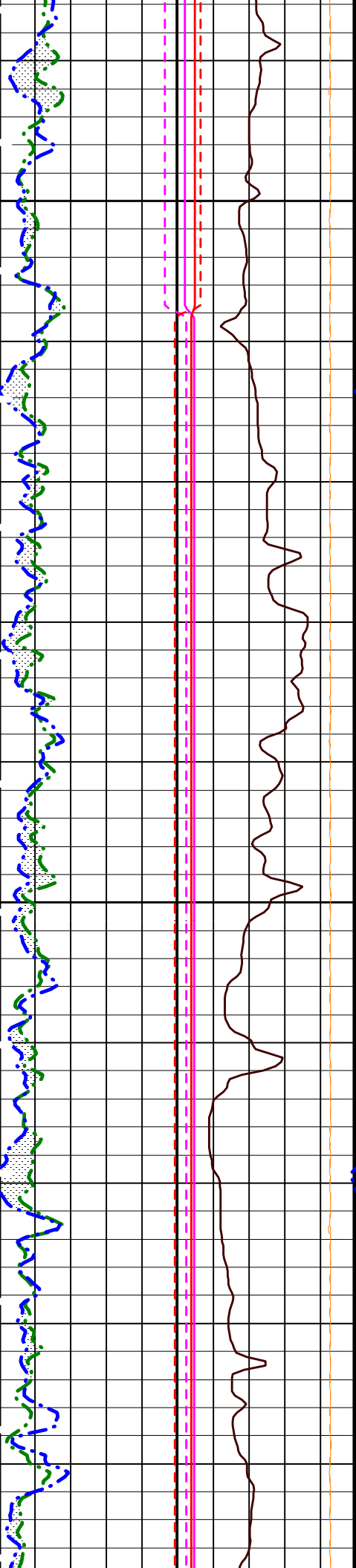






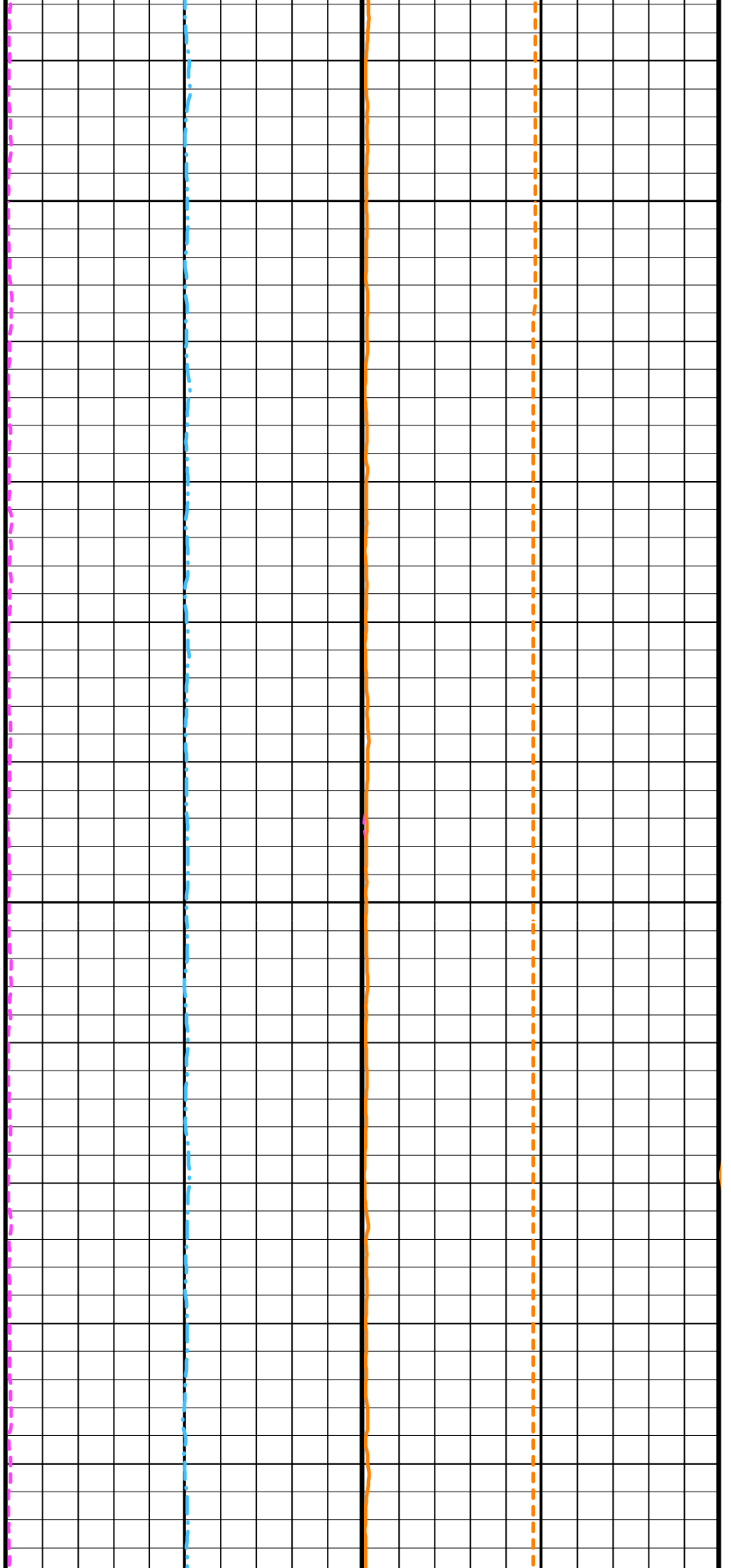


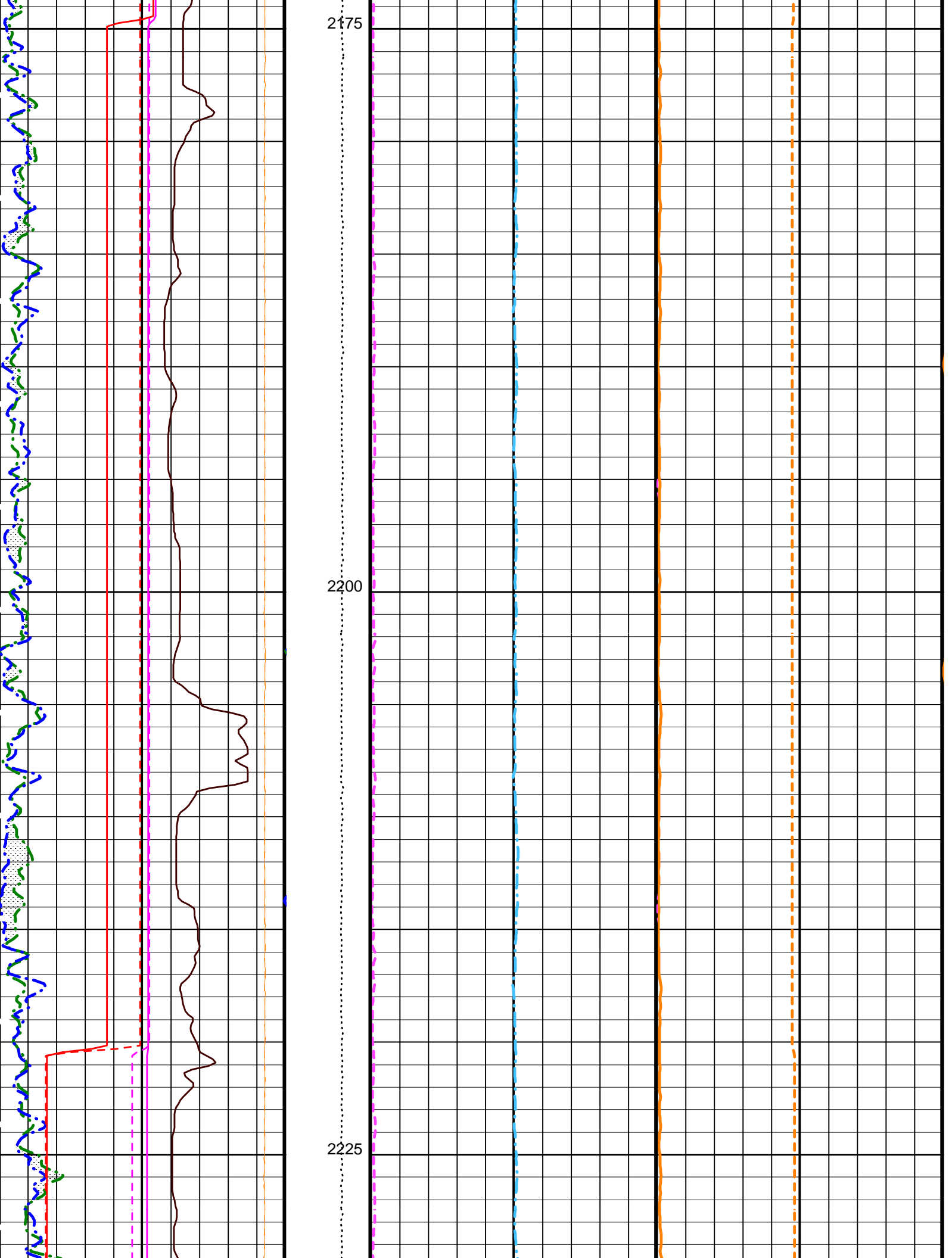


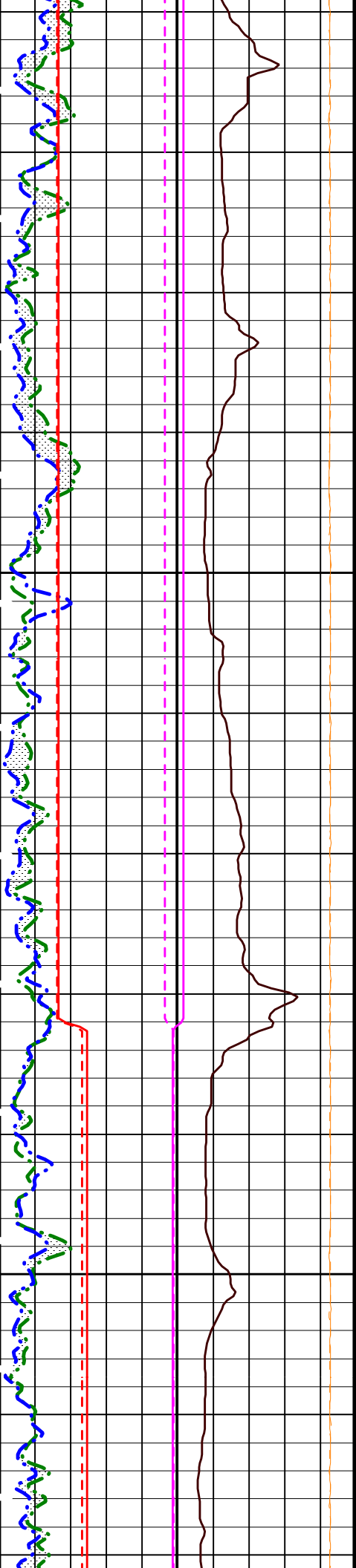


2125

2150

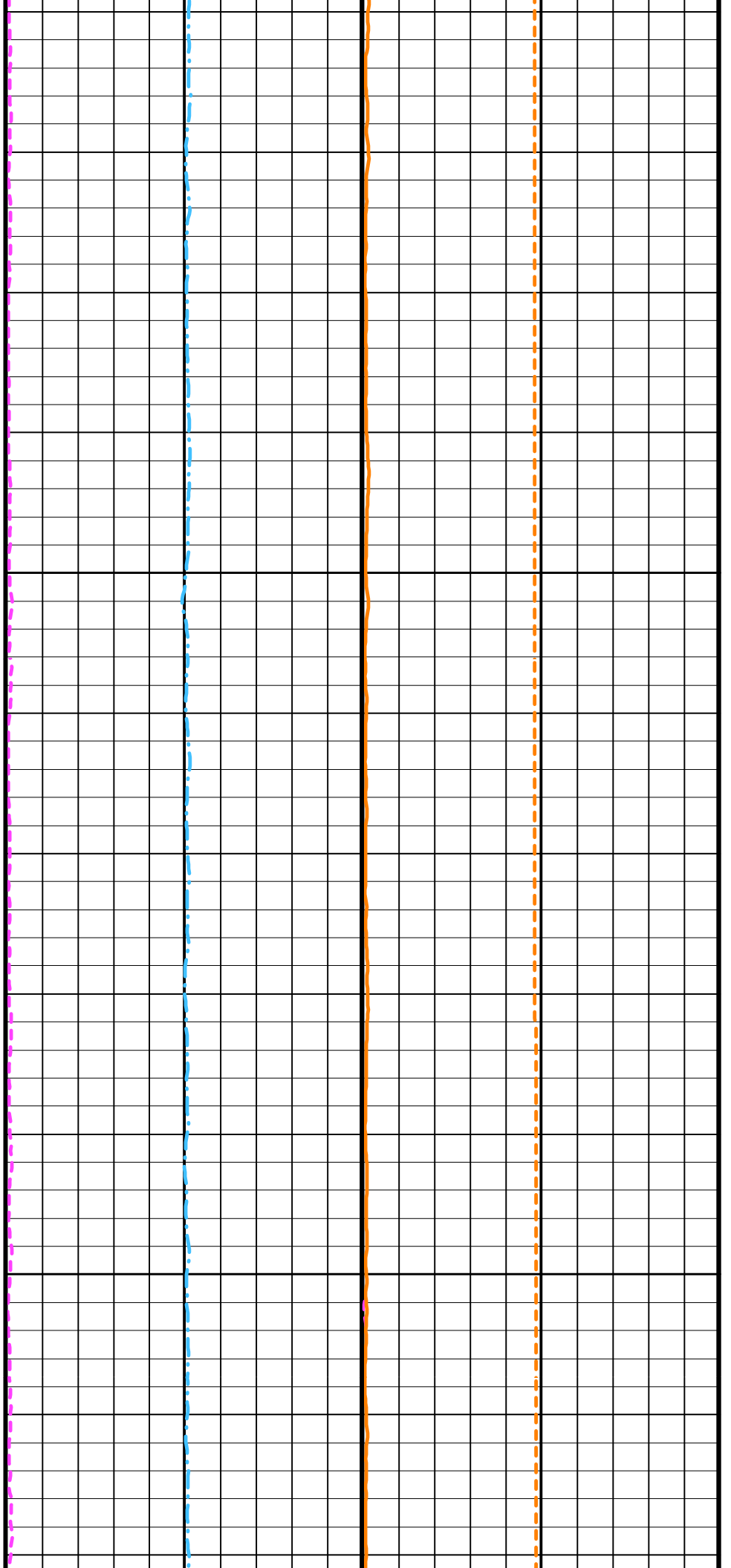


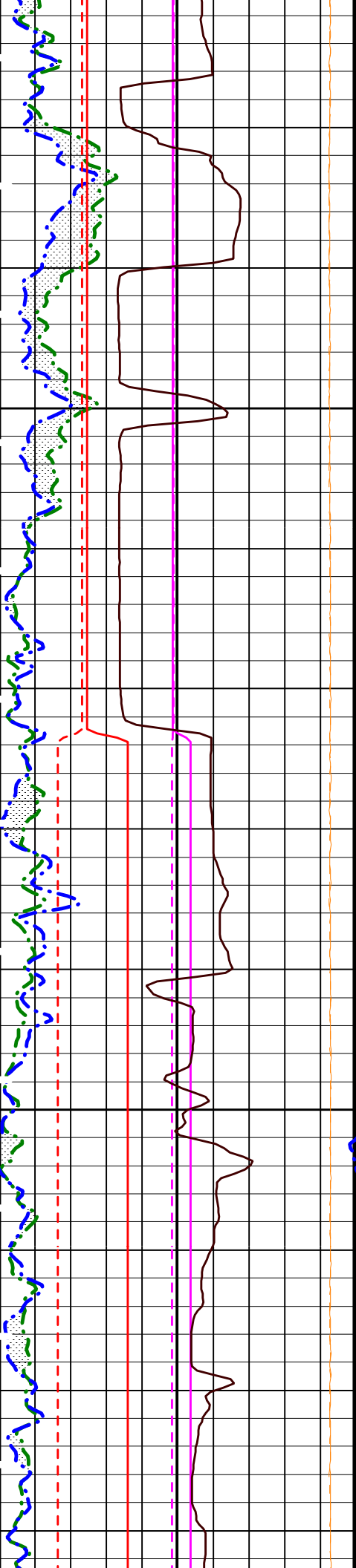




2250

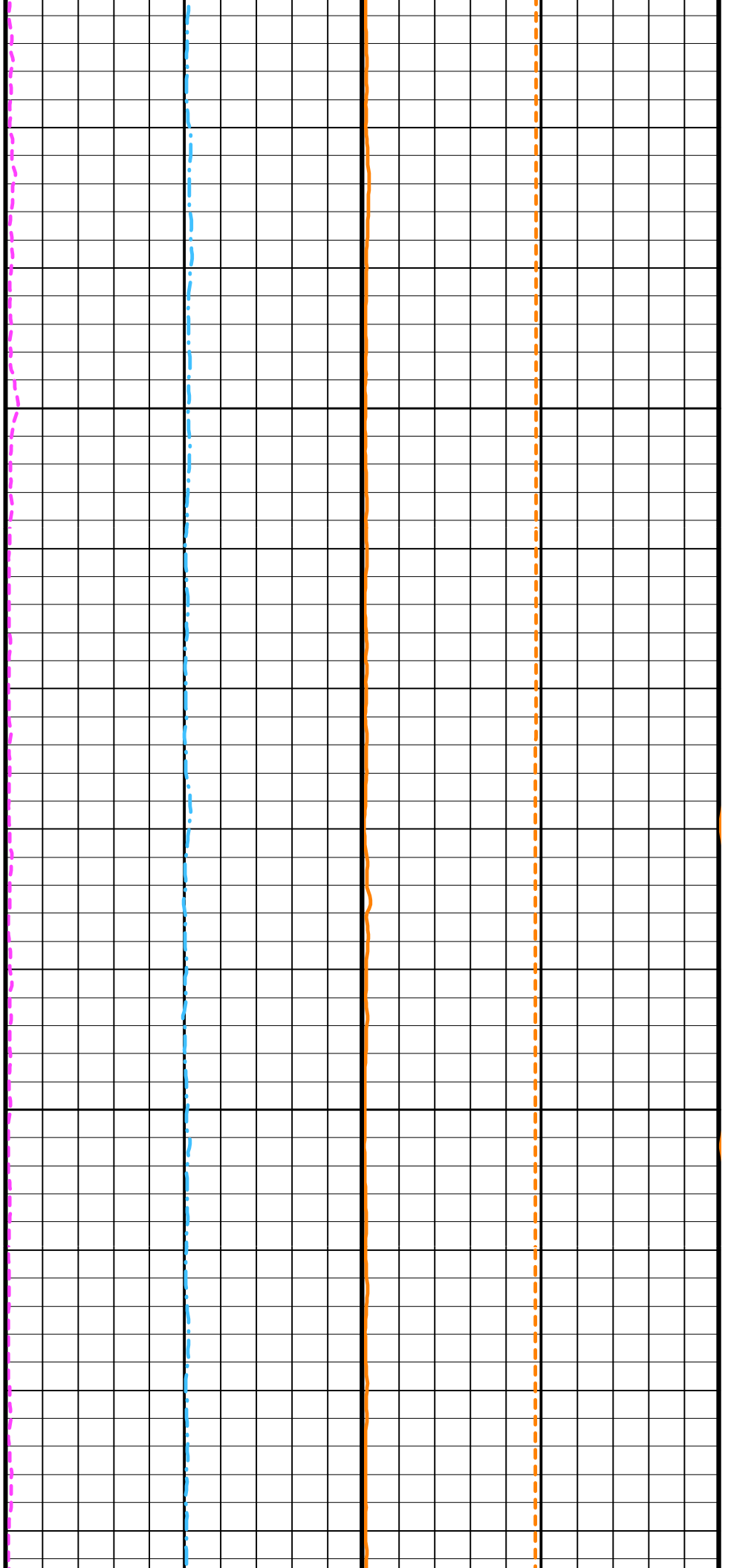
2275

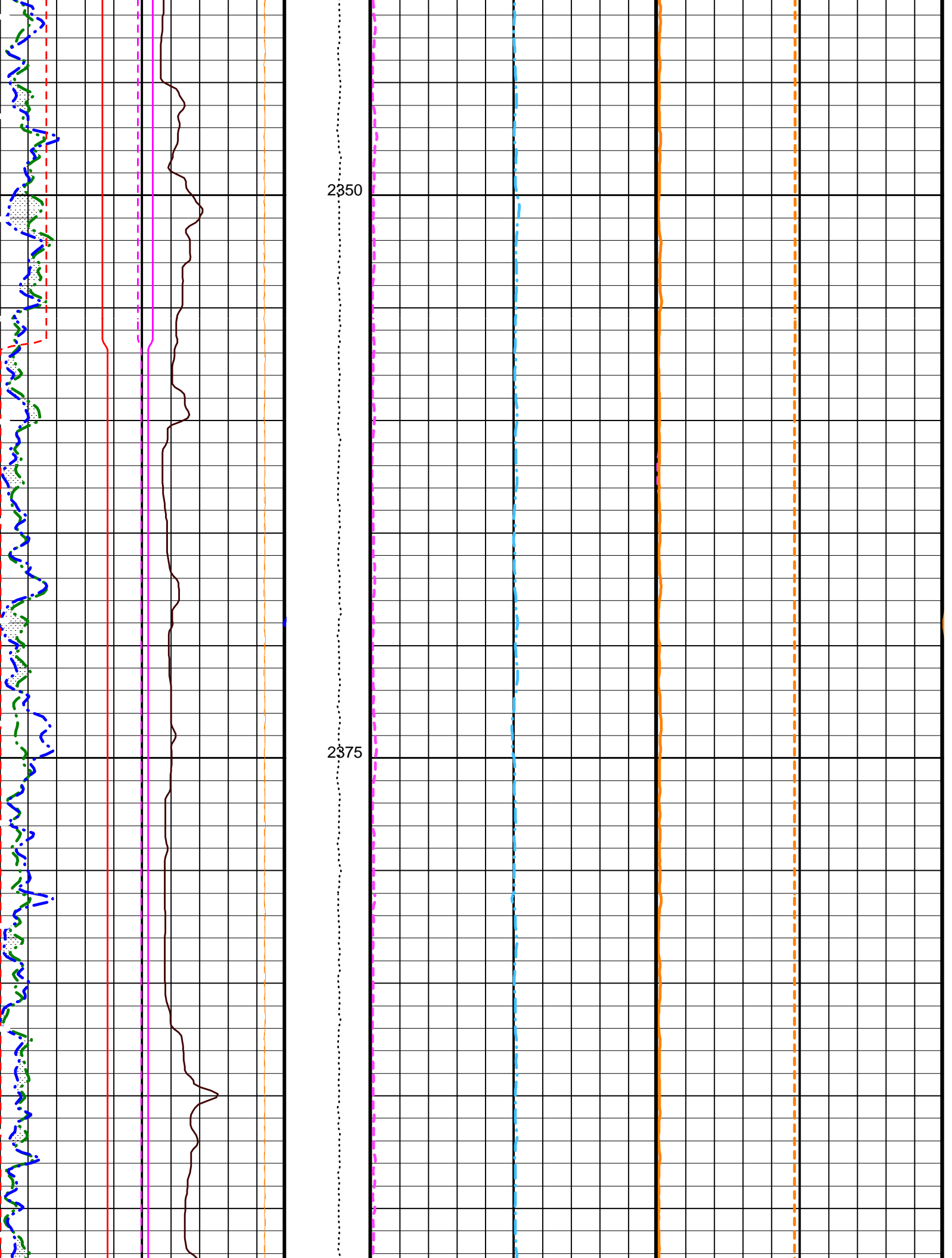


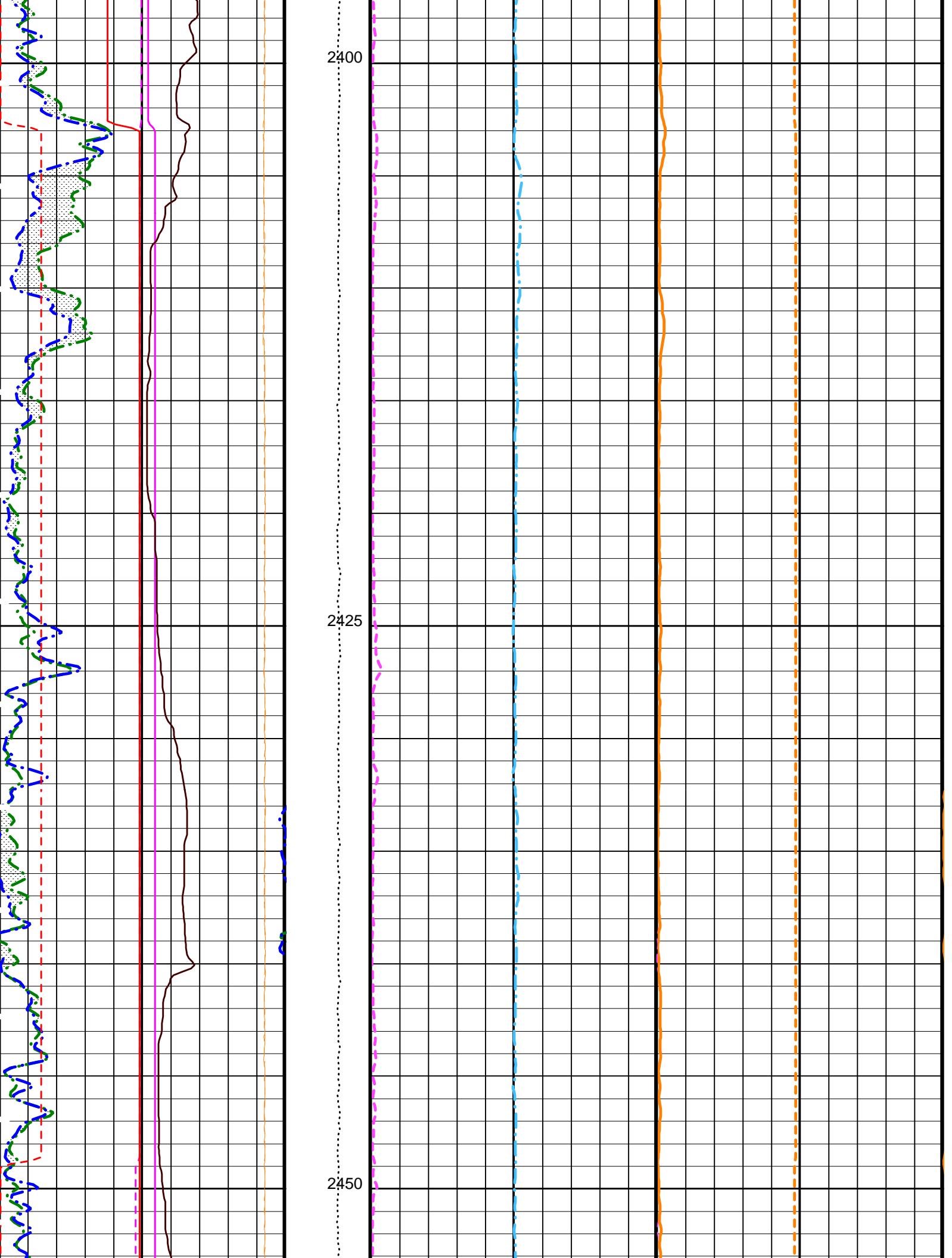


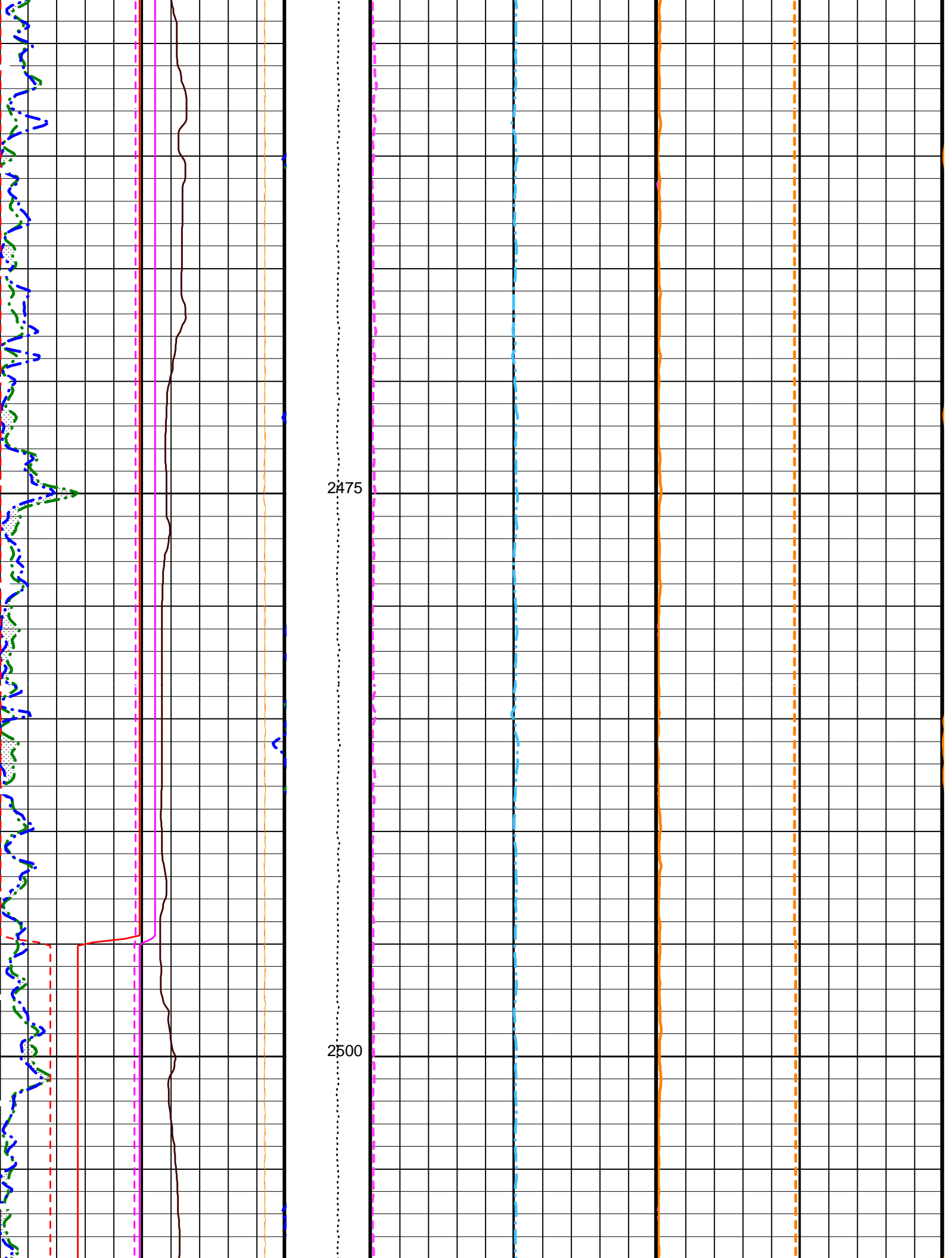
2300

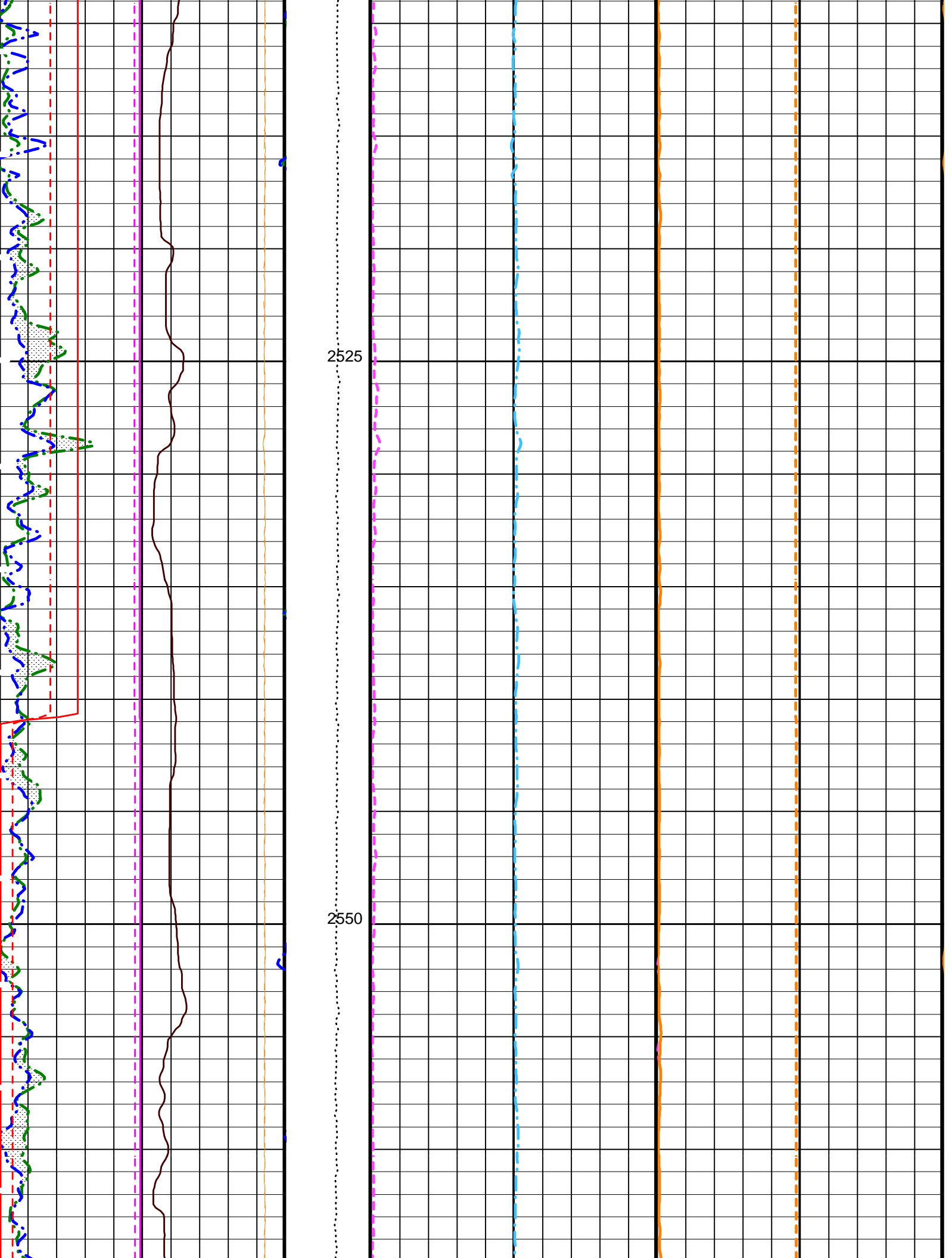
2325

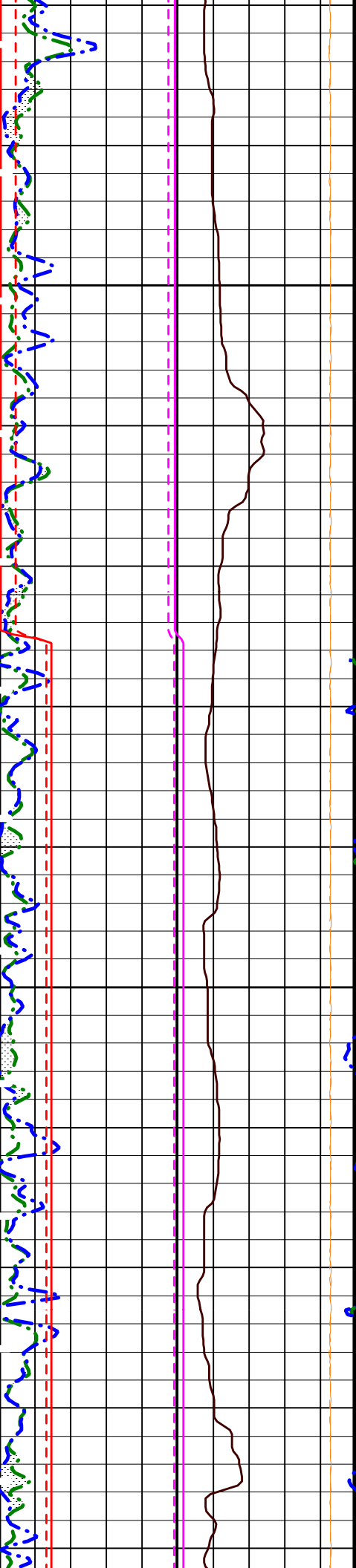






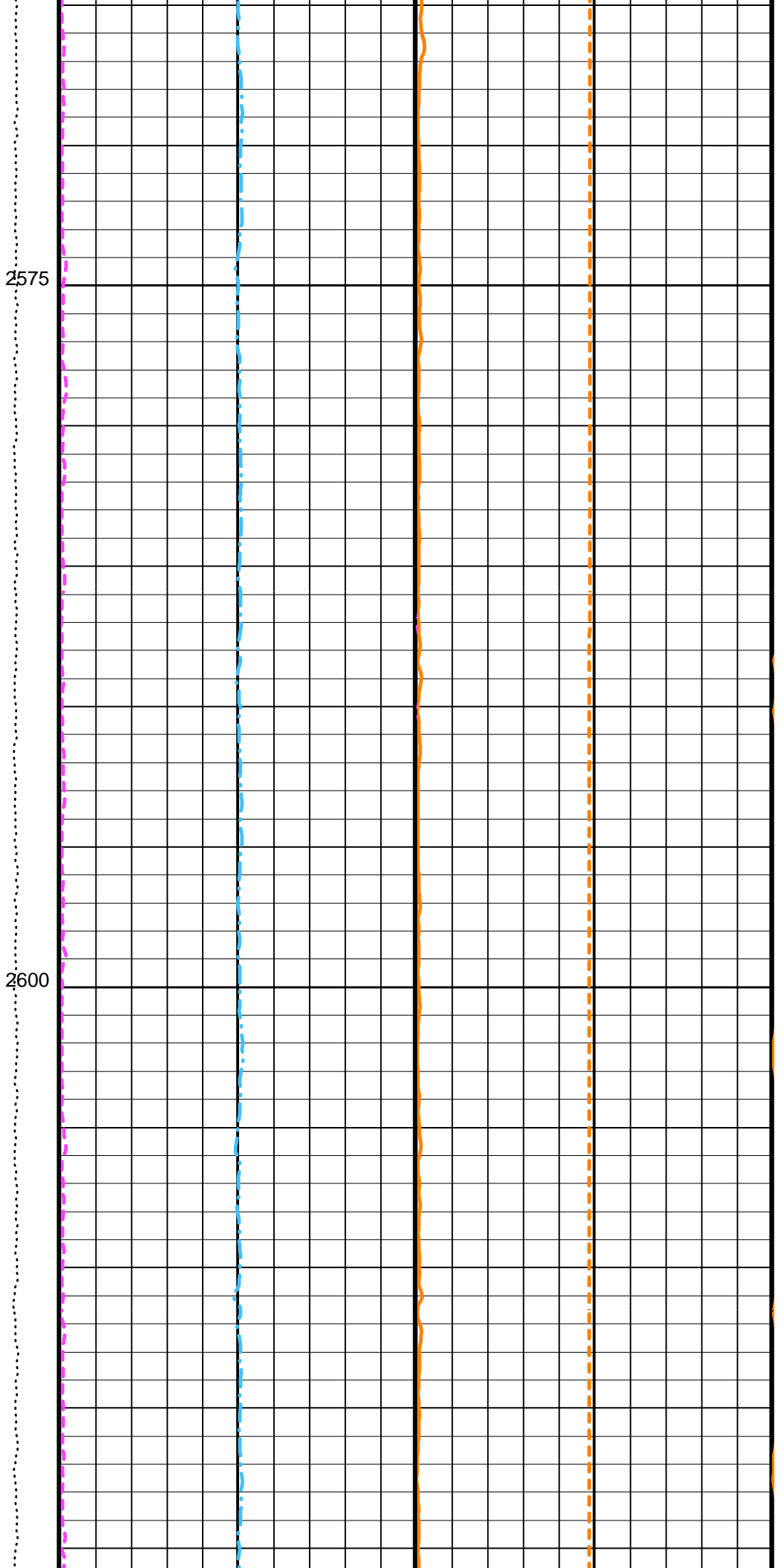


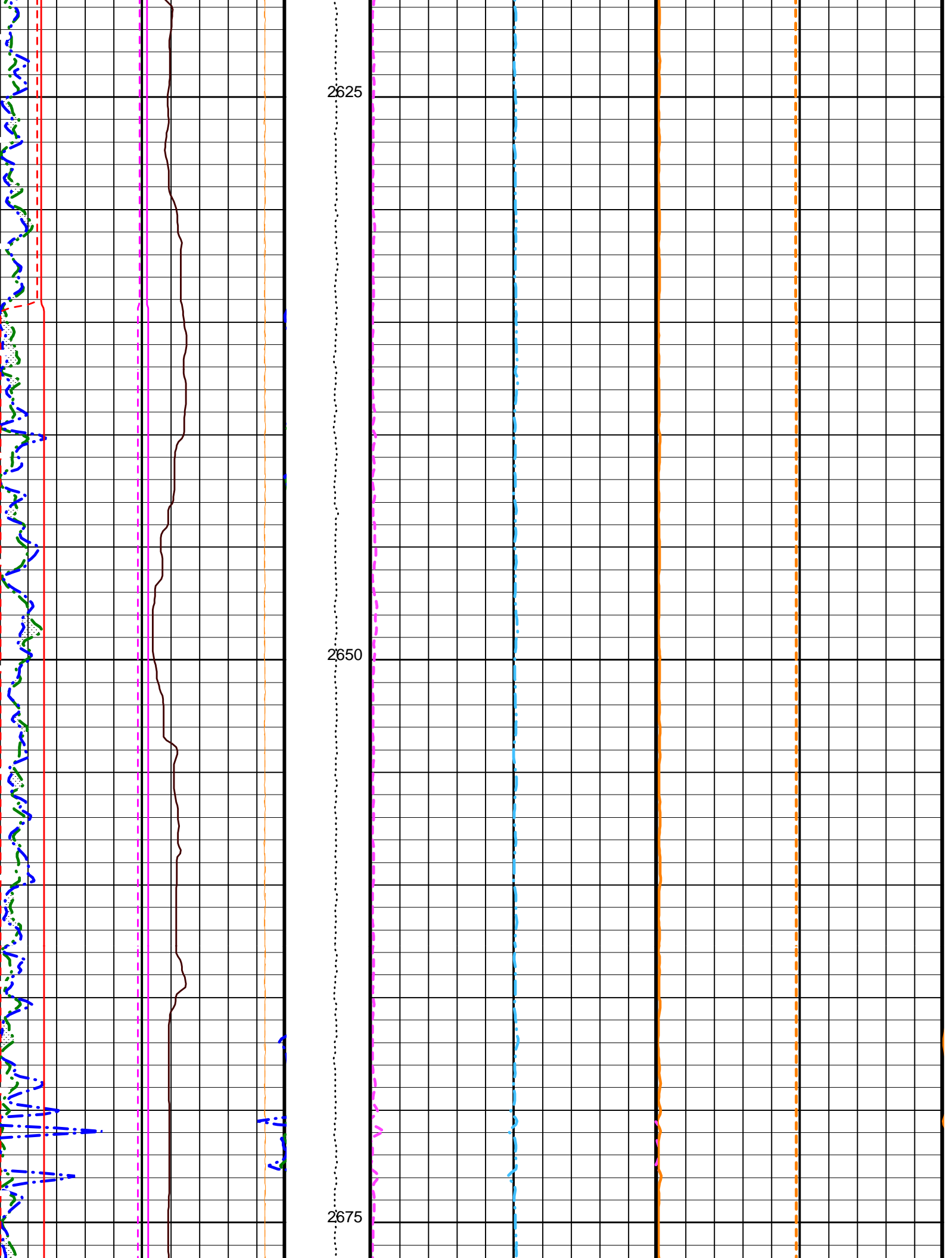


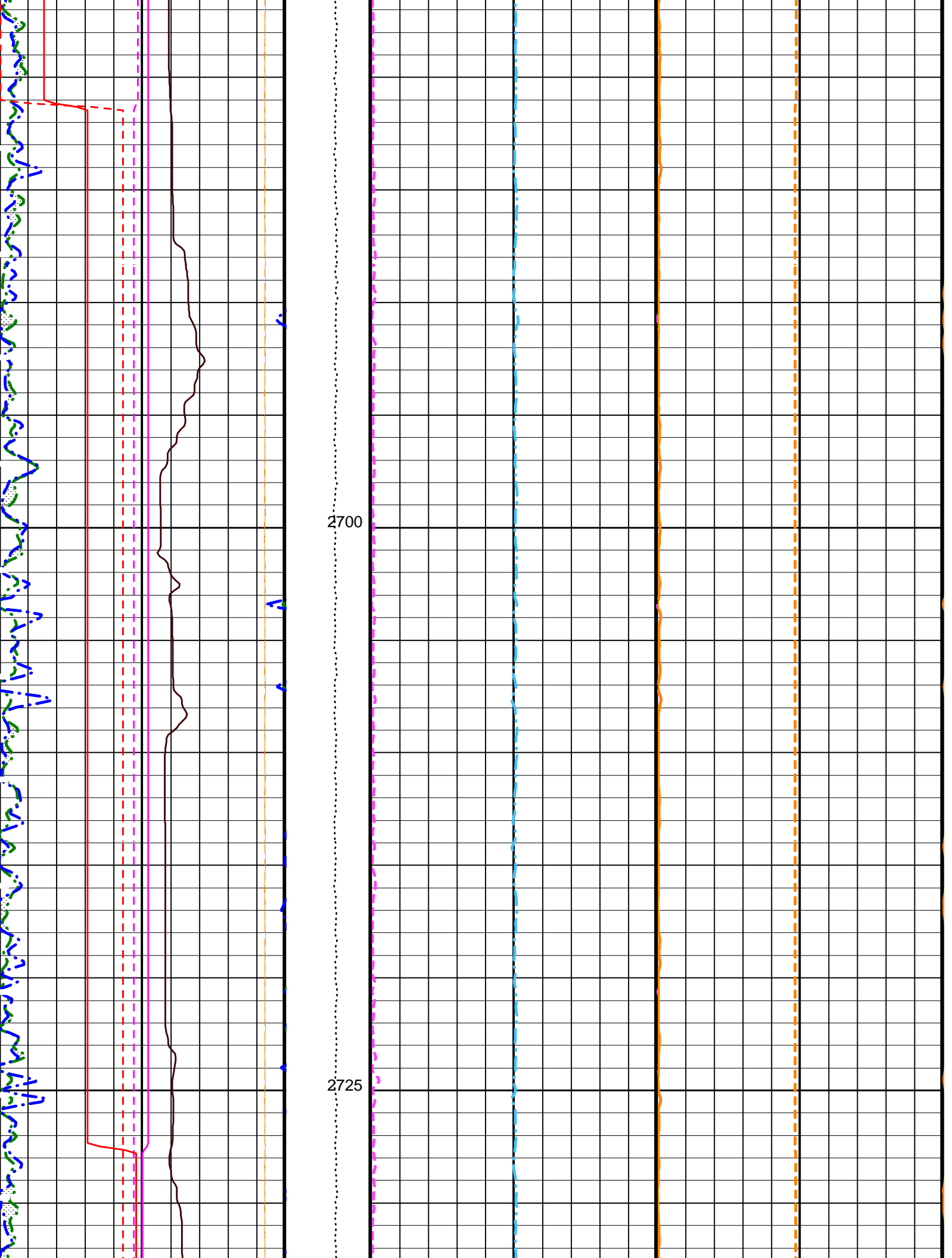


2575

2600

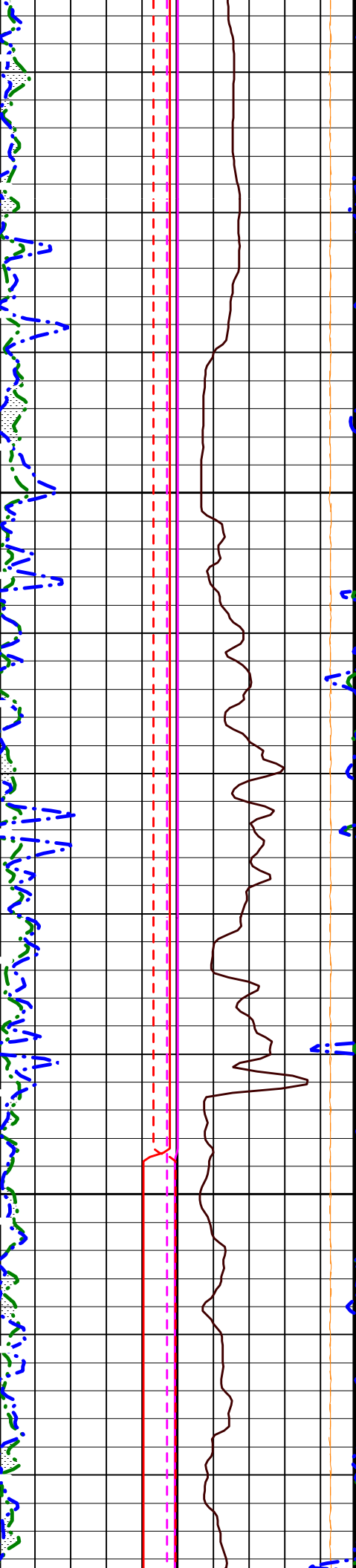






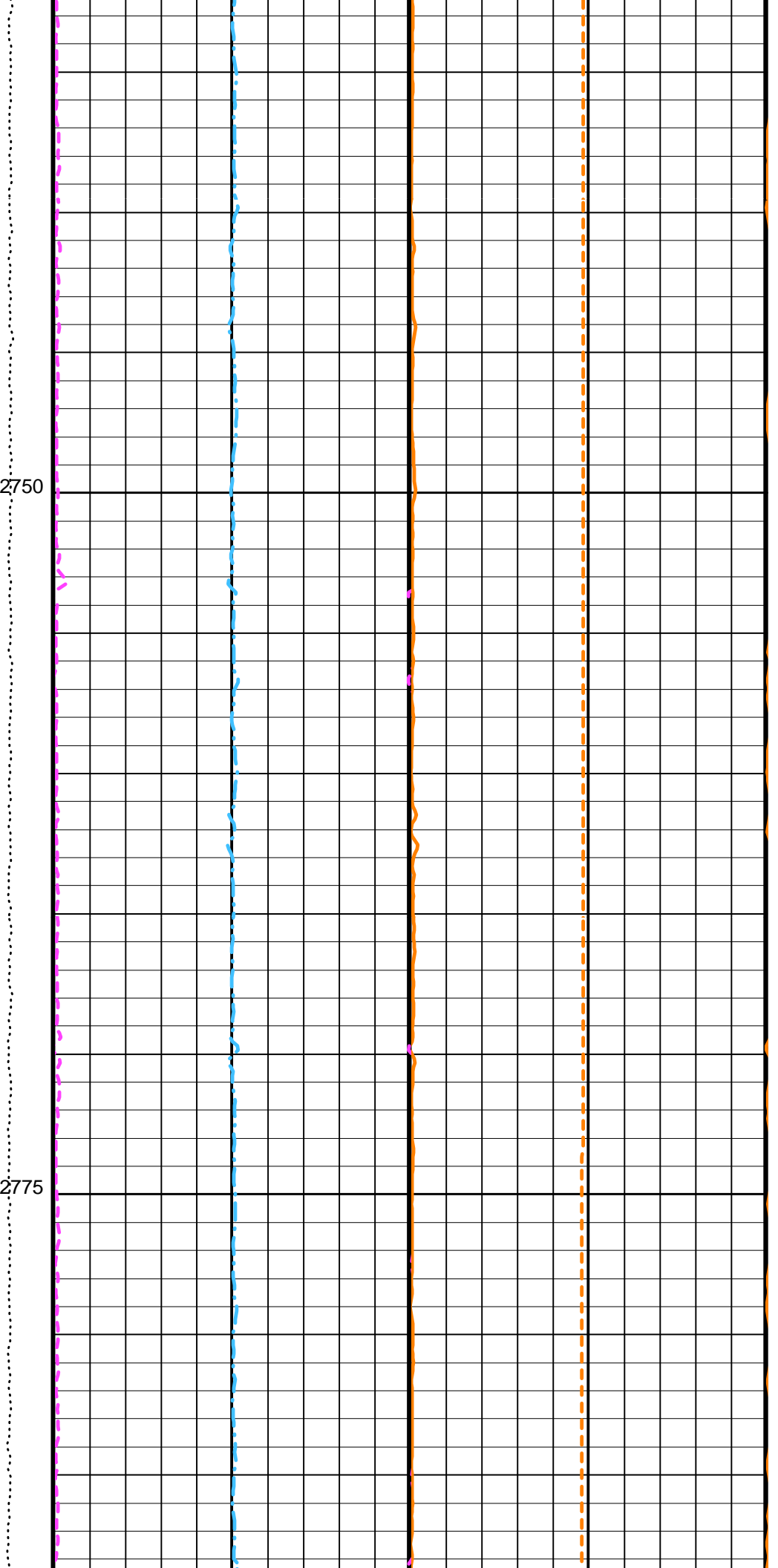
2700

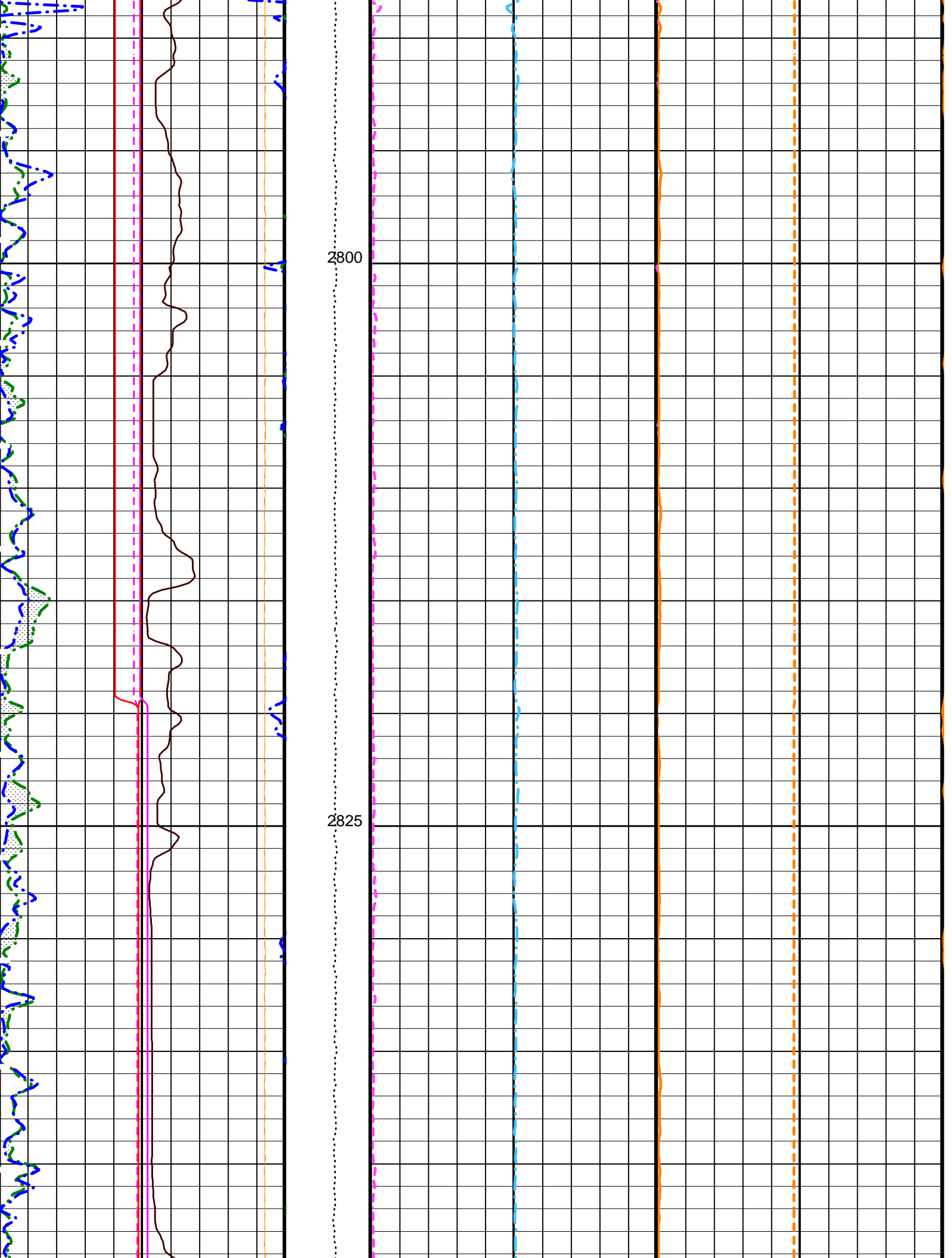
2725

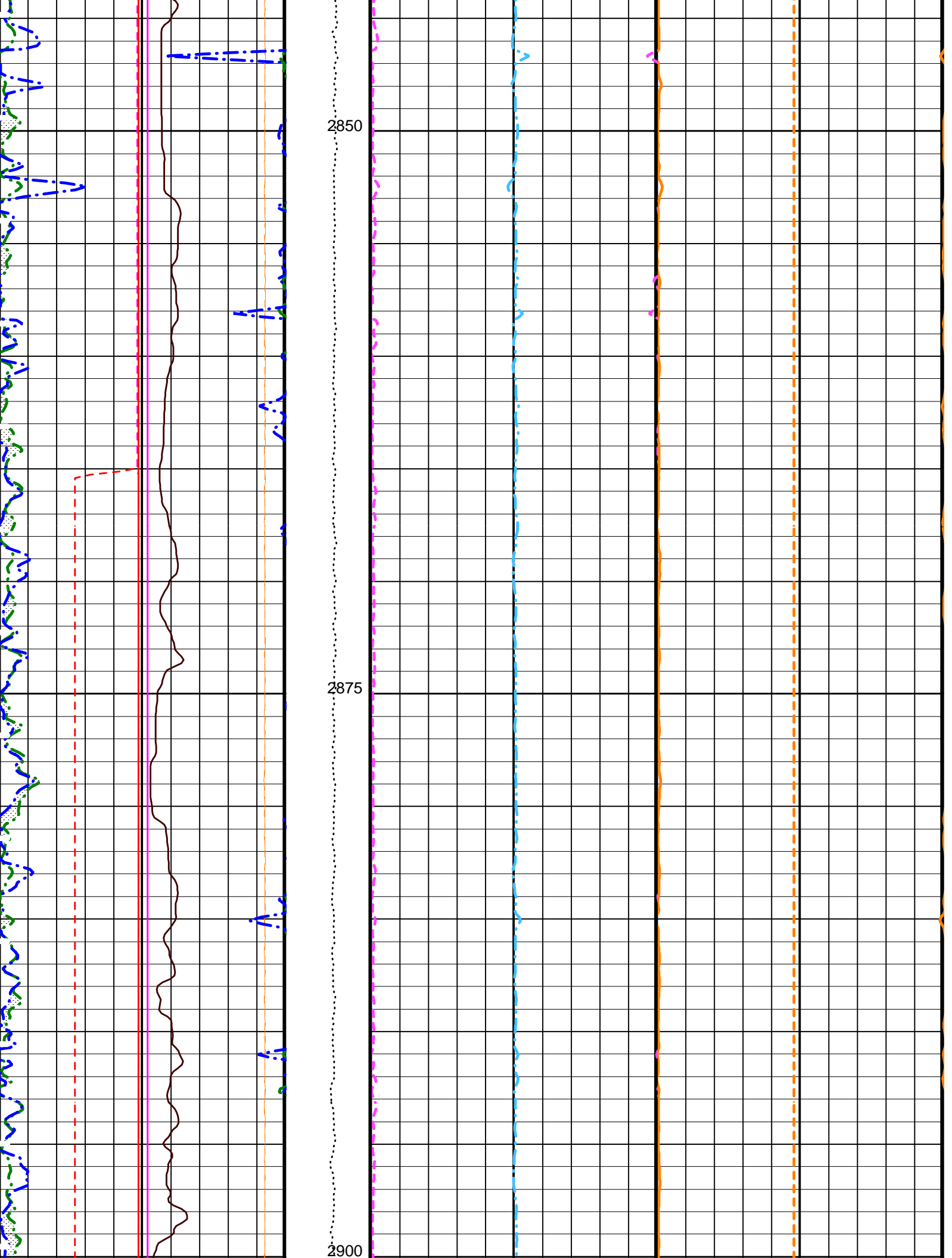


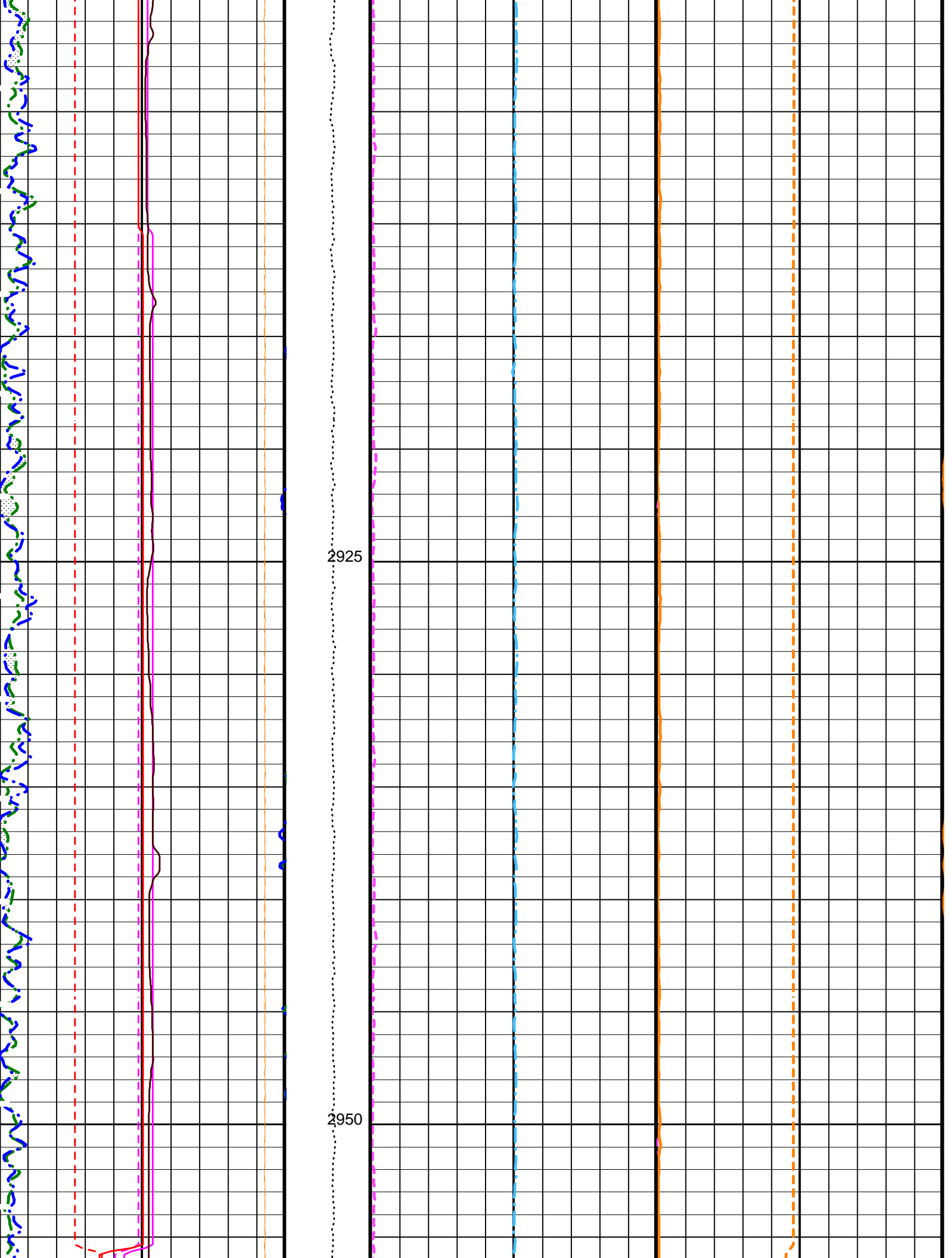
2750

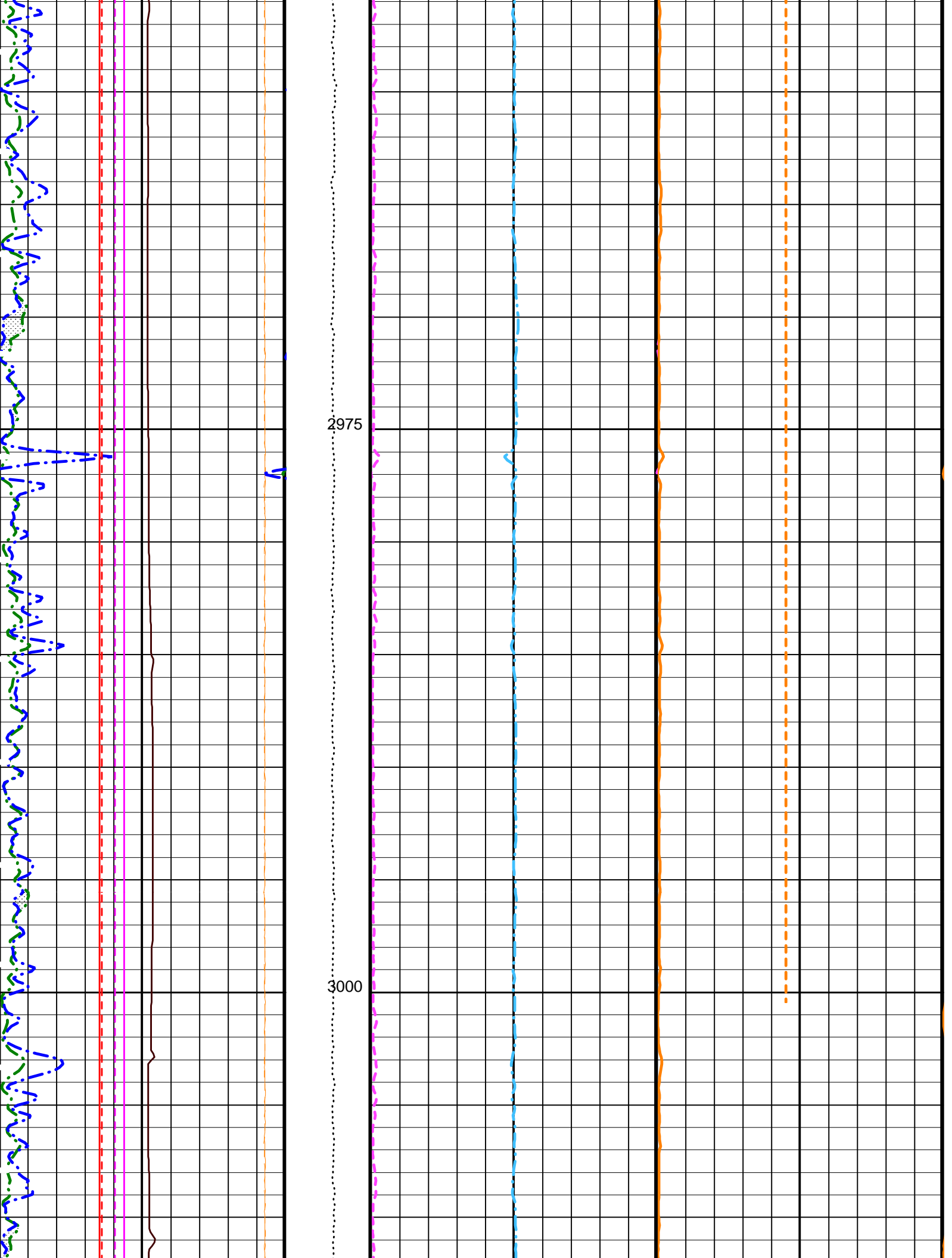
2775

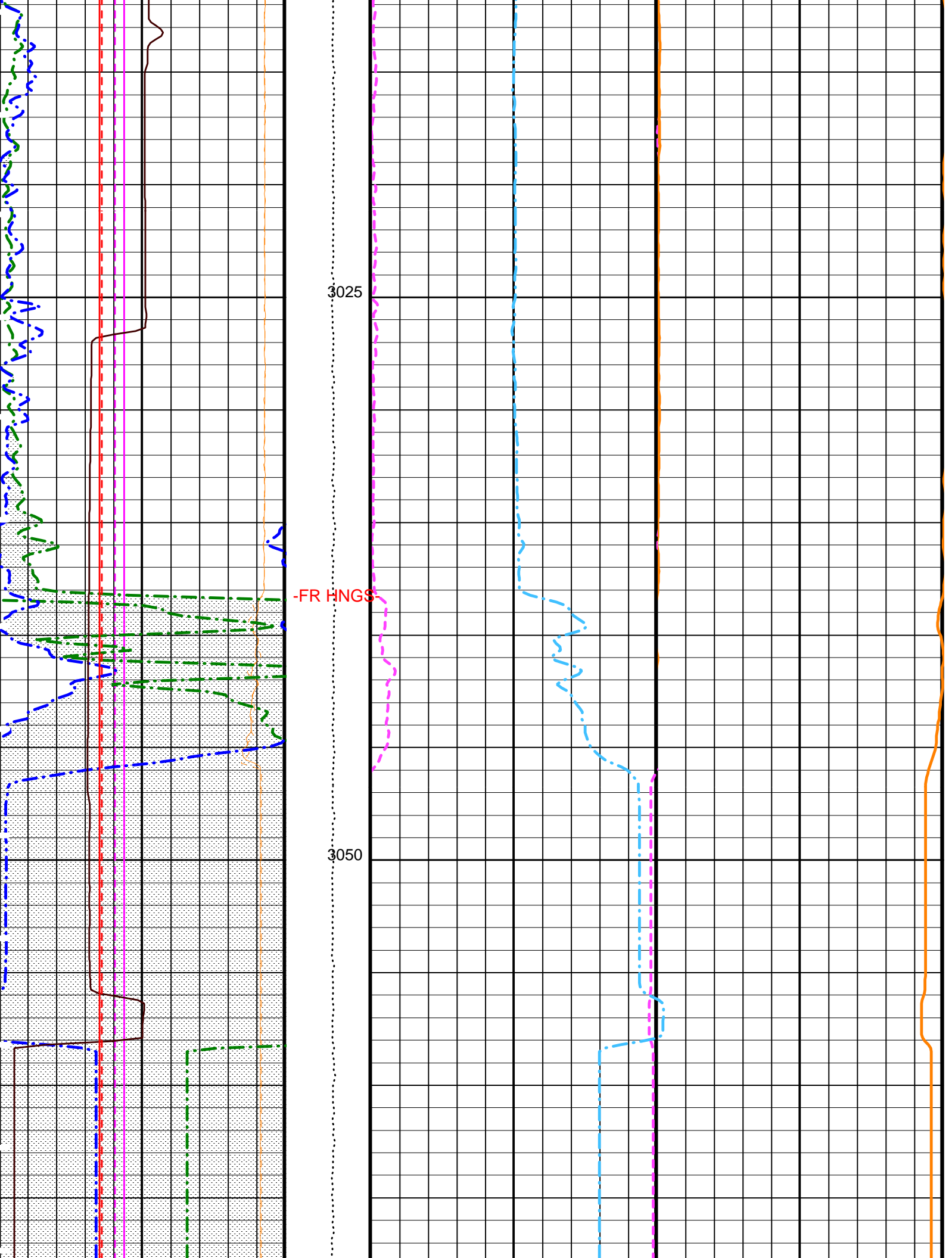


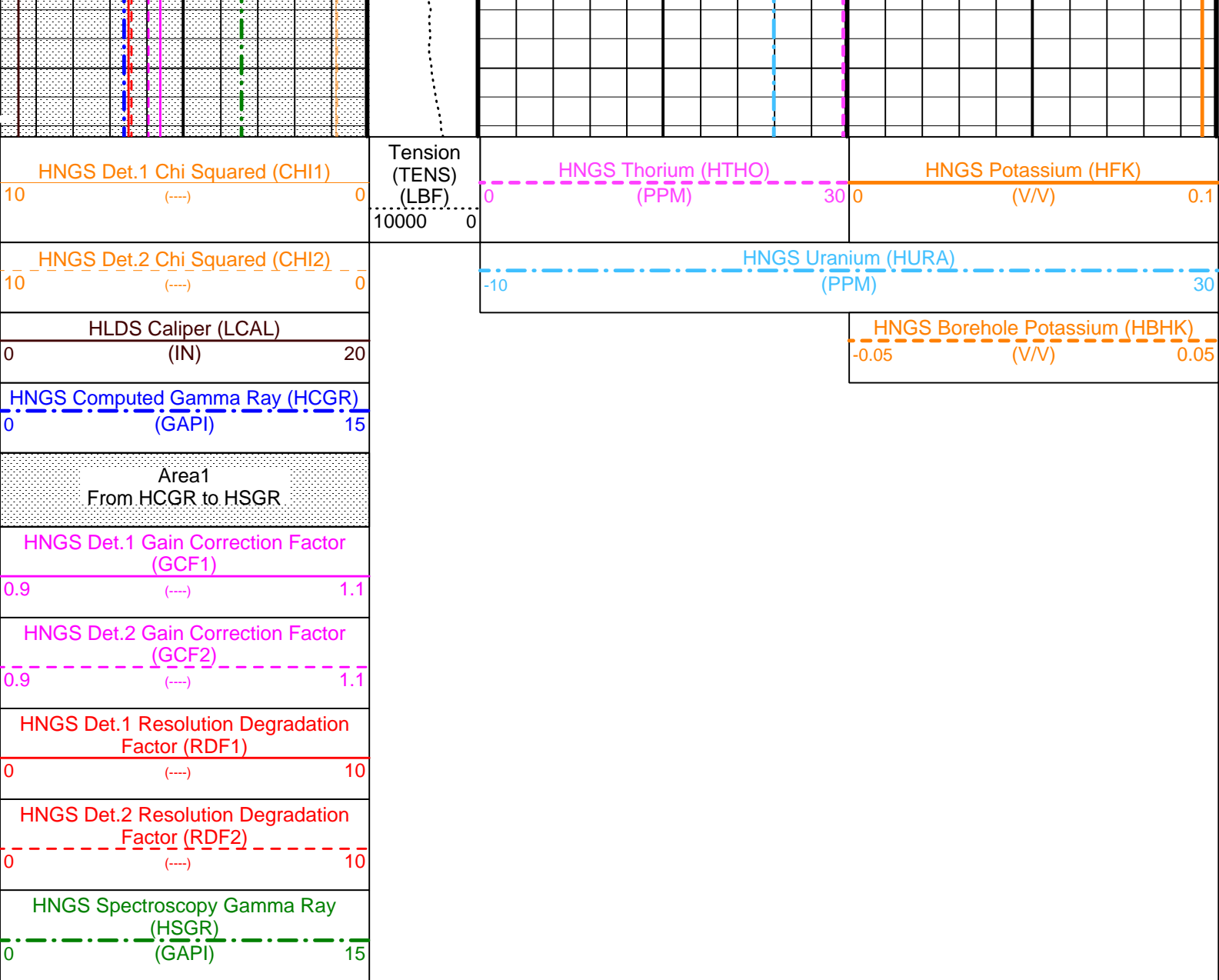












PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
	APS-C: Accelerator-Porosity Tool	
BHS	Borehole Status	OPEN
GCSE	Generalized Caliper Selection	LCAL
	HNGS-BA: Hostile Natural Gamma Ray Sonde	
BAR1	HNGS Detector 1 Barite Constant	1
BAR2	HNGS Detector 2 Barite Constant	1
BHK	HNGS Borehole Potassium Correction Concentration	0
BHS	Borehole Status	OPEN
CSD1	Inner Casing Outer Diameter	0 IN
CSD2	Outer Casing Outer Diameter	0 IN
CSW1	Inner Casing Weight	0 LB/F
CSW2	Outer Casing Weight	0 LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE
GCSE	Generalized Caliper Selection	LCAL
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW
HABK	HNGS Borehole Potassium Running Average	0
HALF	HNGS Alpha Filter Length	60 IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE
HMWM	Mud Weighting Material	NATU
HNPE	HNGS Processing Enable	YES
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3 CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3 CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES
TPOS	Tool Position	ECCE

VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0	
System and Miscellaneous			
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.20	G/C3

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 24-Feb-2005 04:05

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_020LUP	FN:22	PRODUCER	24-Feb-2005 04:05
REDUCED	DLL_LDL_APS_NGS_020LUP	FN:23	PRODUCER	24-Feb-2005 04:05



REPEAT SECTION

MAXIS Field Log

Company: Lamont Doherty Well: IODP Exp 305 Site U1309D

Output DLIS Files

DEFAULT	DLL_LDL_APS_NGS_021LUP	FN:24	PRODUCER	24-Feb-2005 09:03	2939.8 M	2722.5 M
REDUCED	DLL_LDL_APS_NGS_021LUP	FN:25	PRODUCER	24-Feb-2005 09:03	2939.8 M	2722.5 M

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		

PIP SUMMARY

Time Mark Every 60 S

HNGS Spectroscopy Gamma Ray (HSGR)	0	15
(GAPI)		
HNGS Det.2 Resolution Degradation Factor (RDF2)	0	10
(----		
HNGS Det.1 Resolution Degradation Factor (RDF1)	0	10
(----		
HNGS Det.2 Gain Correction Factor (GCF2)	0.9	1.1
(----		
HNGS Det.1 Gain Correction Factor (GCF1)		

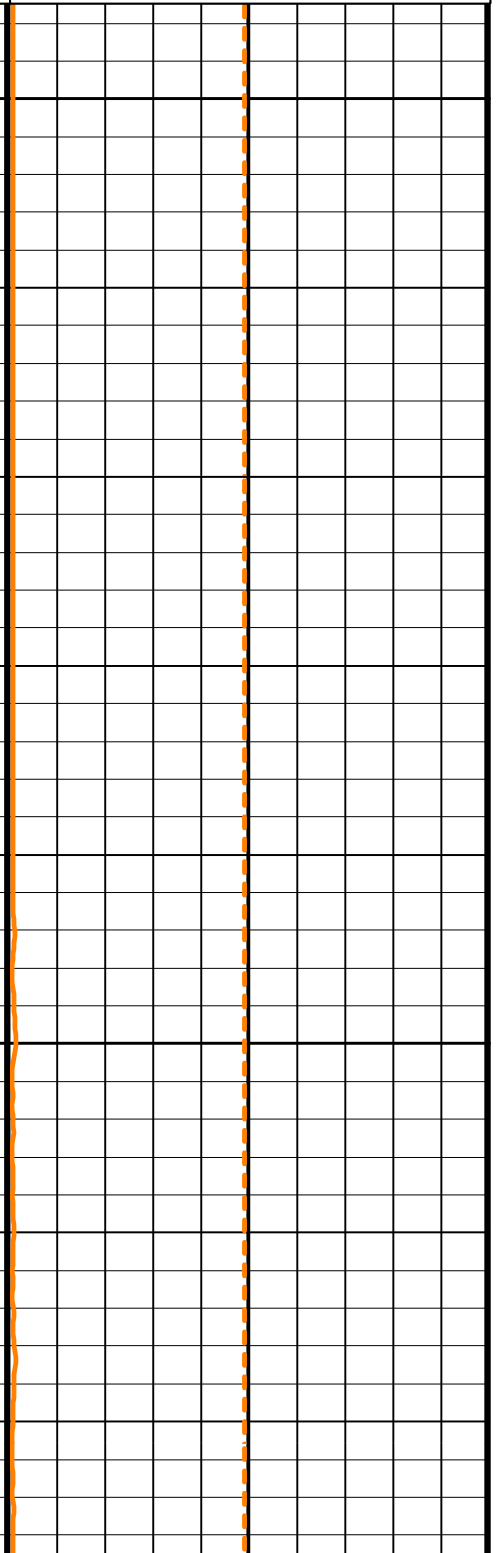
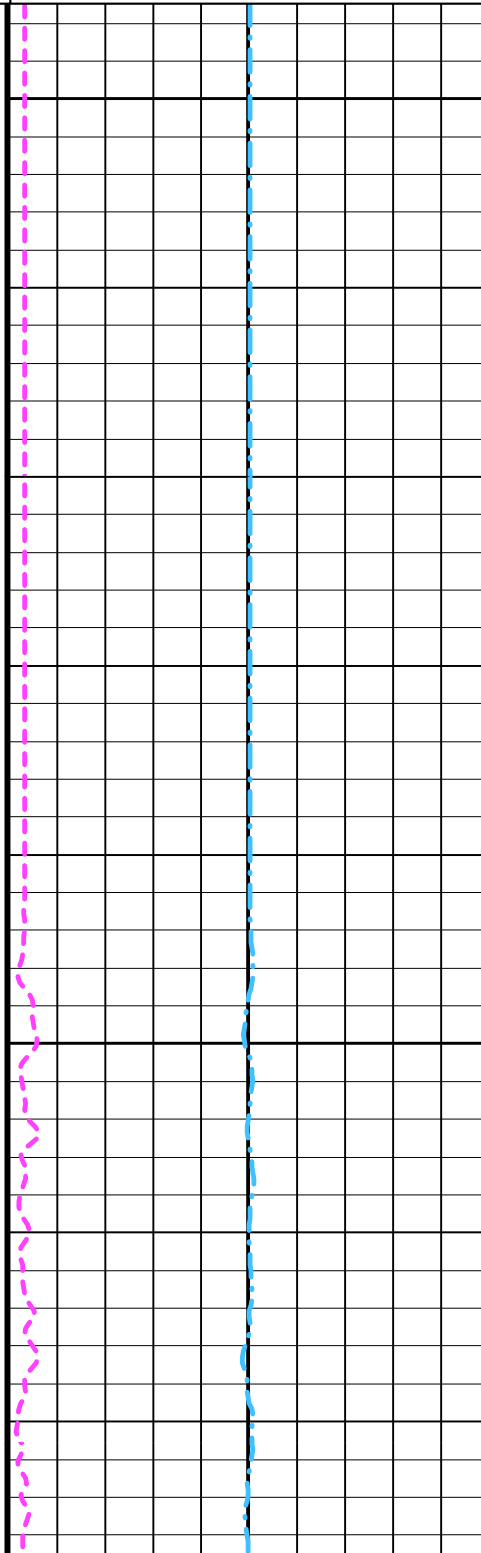
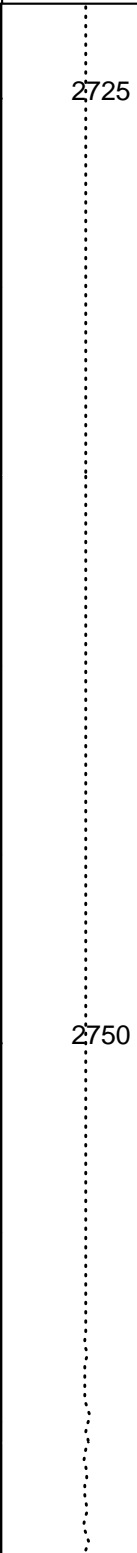
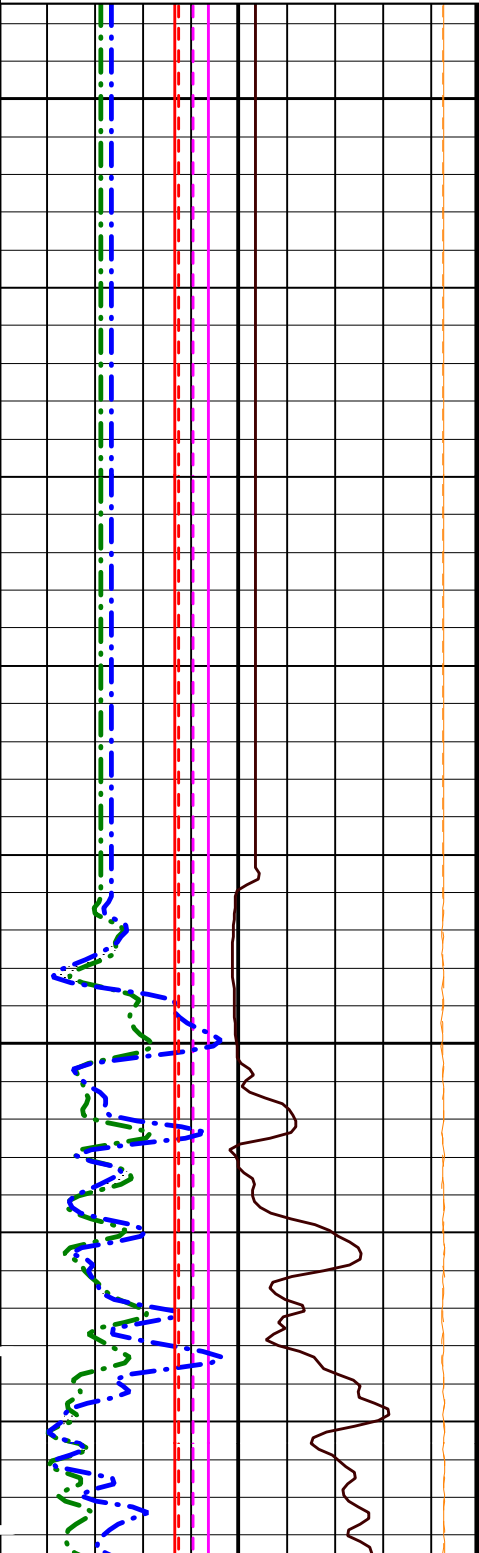
0.9	(---)	1.1
Area1 From HCGR to HSGR		
HNGS Computed Gamma Ray (HCGR) (GAPI)		
0		15
HLDS Caliper (LCAL) (IN)		
0		20
HNGS Det.2 Chi Squared (CHI2) (---)		
10		0
HNGS Det.1 Chi Squared (CHI1) (---)		
10		0

Tension
(TENS)
(LBF)

HNGS Uranium (HURA) (PPM)		
-10		30
HNGS Thorium (HTHO) (PPM)		
0		30

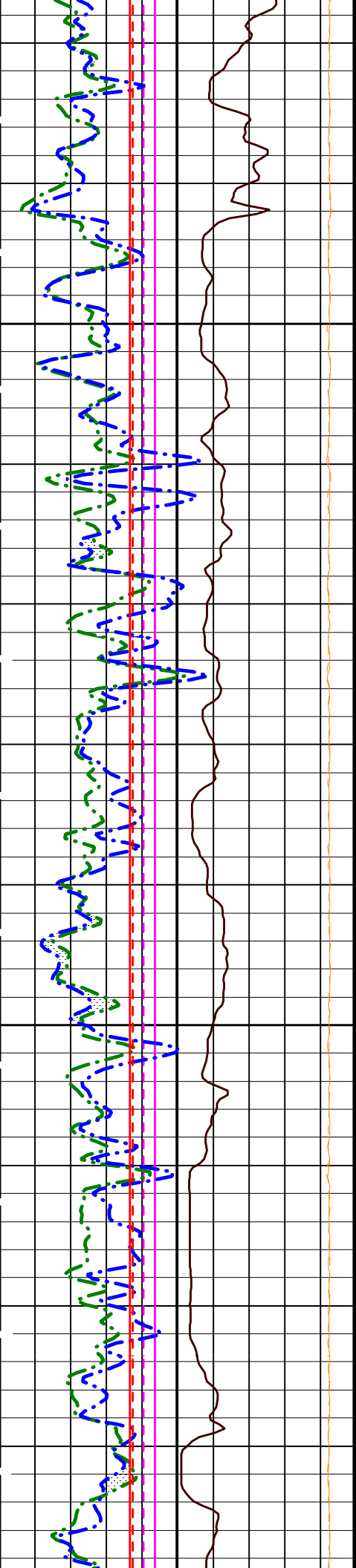
HNGS Borehole Potassium (HBHK) (V/V)		
-0.05		0.05

HNGS Potassium (HFK) (V/V)		
0		0.1



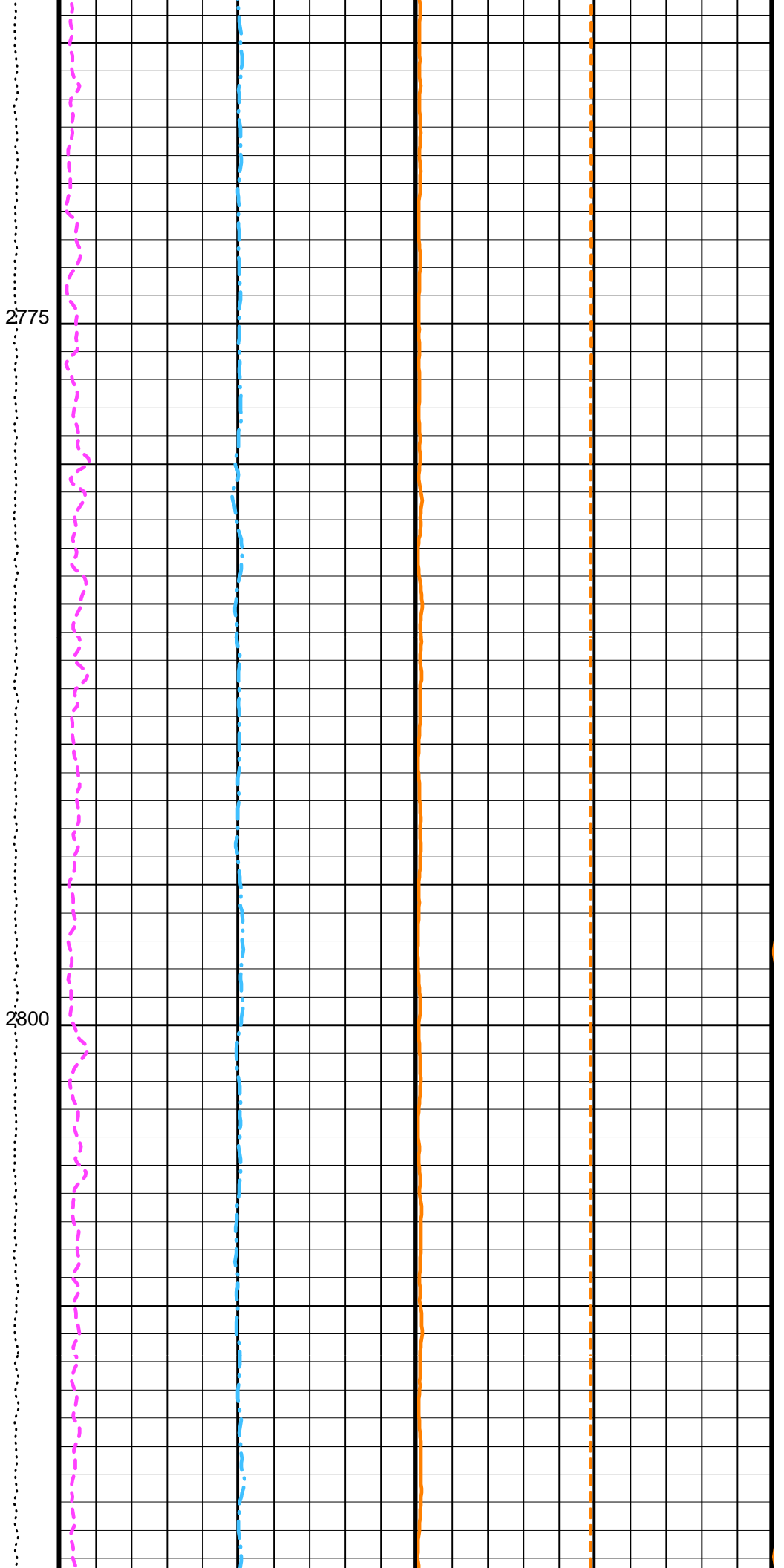
2725

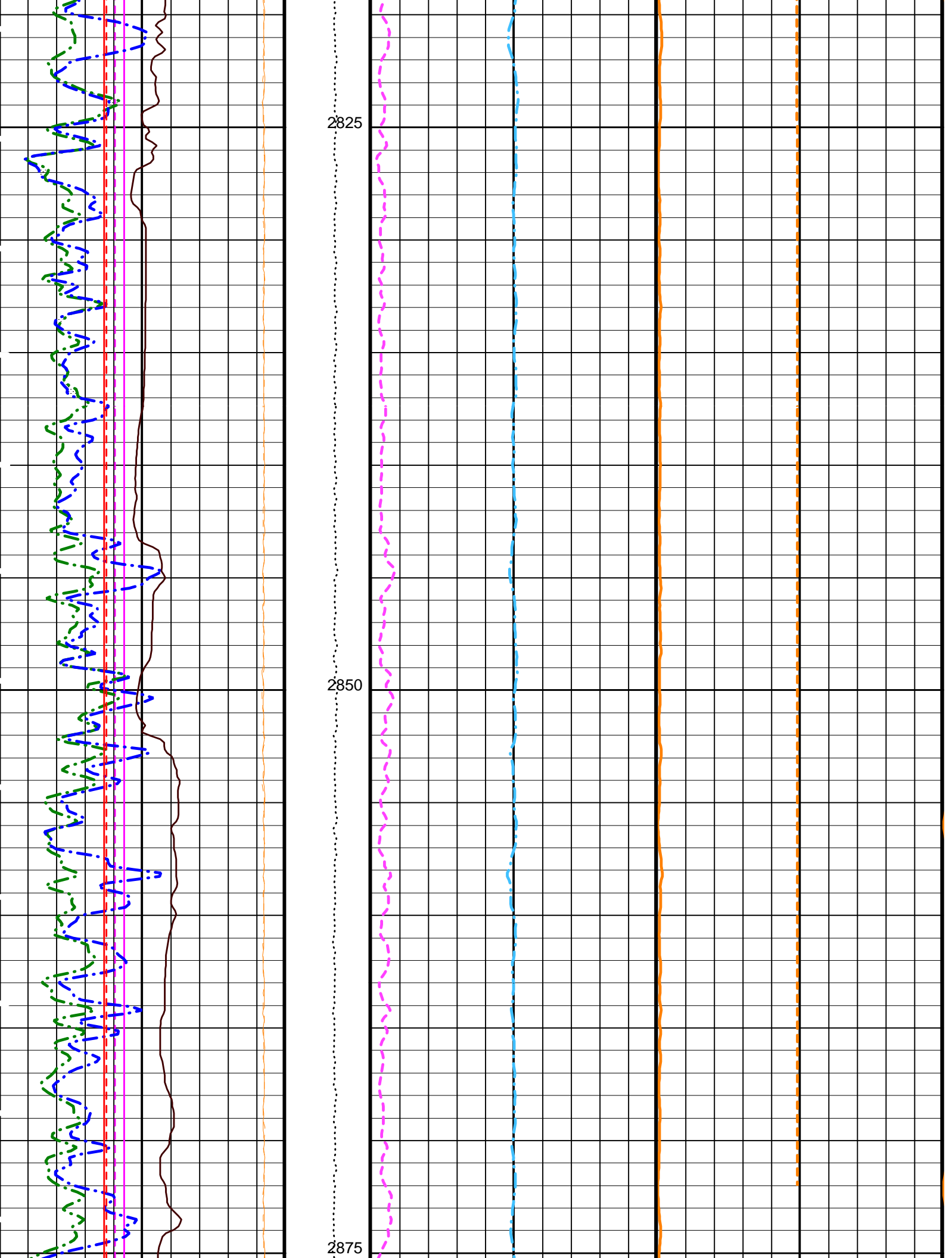
2750

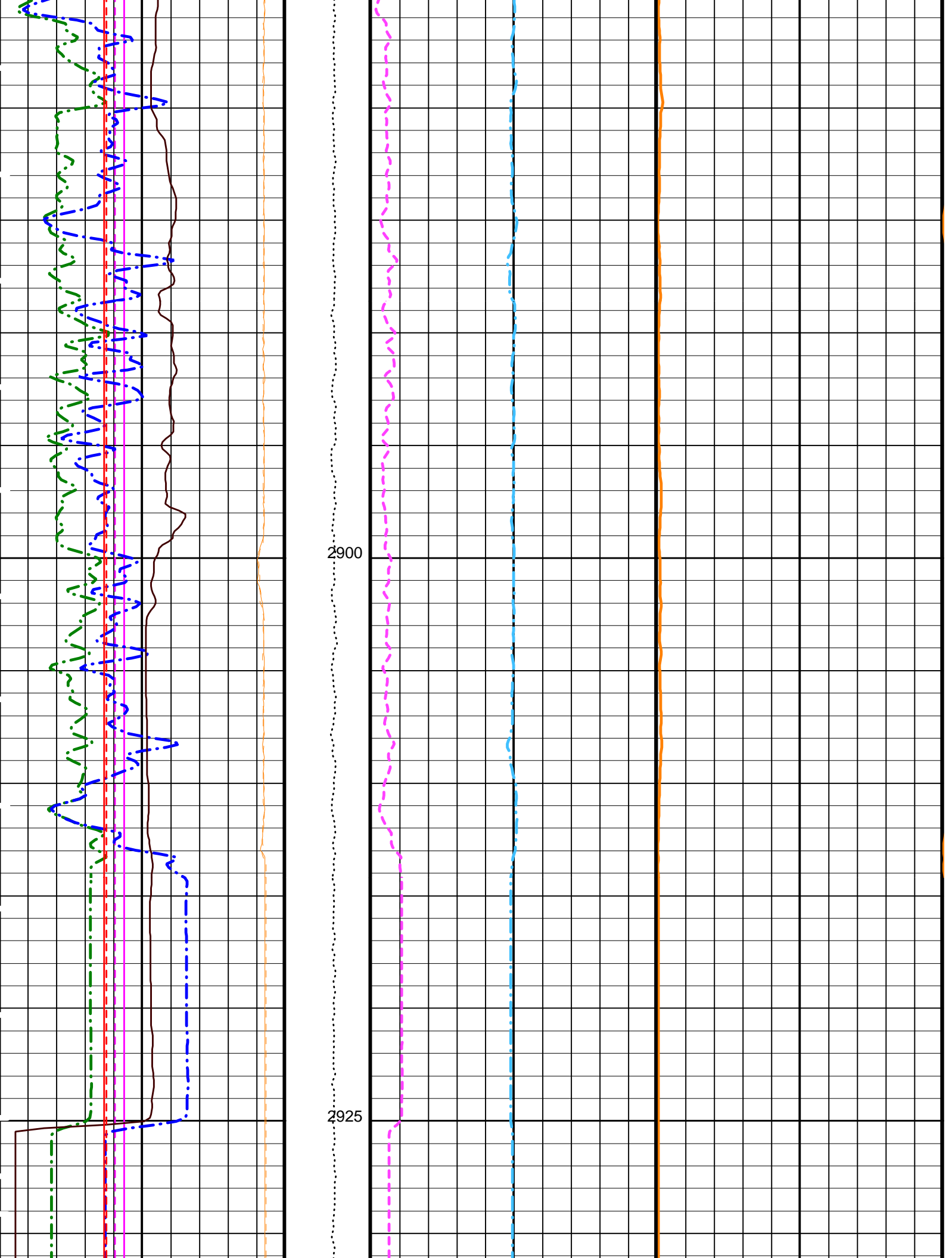


2775

2800







HNGS Det.1 Chi Squared (CHI1) 10 (----) 0	Tension (TENS) (LBF) 10000 0	HNGS Thorium (HTHO) (PPM) 0 30	HNGS Potassium (HFK) (V/V) 0 0.1
HNGS Det.2 Chi Squared (CHI2) 10 (----) 0		HNGS Uranium (HURA) (PPM) -10 30	
HLDS Caliper (LCAL) 0 (IN) 20			HNGS Borehole Potassium (HBHK) (V/V) -0.05 0.05
HNGS Computed Gamma Ray (HCGR) (GAPI) 0 15			
Area1 From HCGR to HSGR			
HNGS Det.1 Gain Correction Factor (GCF1) 0.9 (----) 1.1			
HNGS Det.2 Gain Correction Factor (GCF2) 0.9 (----) 1.1			
HNGS Det.1 Resolution Degradation Factor (RDF1) 0 (----) 10			
HNGS Det.2 Resolution Degradation Factor (RDF2) 0 (----) 10			
HNGS Spectroscopy Gamma Ray (HSGR) (GAPI) 0 15			

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
APS-C: Accelerator-Porosity Tool		
BHS	Borehole Status	OPEN
GCSE	Generalized Caliper Selection	LCAL
HNGS-BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNGS Detector 1 Barite Constant	1
BAR2	HNGS Detector 2 Barite Constant	1
BHK	HNGS Borehole Potassium Correction Concentration	0
BHS	Borehole Status	OPEN
CSD1	Inner Casing Outer Diameter	0
CSD2	Outer Casing Outer Diameter	0
CSW1	Inner Casing Weight	0
CSW2	Outer Casing Weight	0
DBCC	HNGS Barite Constant Correction Flag	NONE
GCSE	Generalized Caliper Selection	LCAL
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW
HABK	HNGS Borehole Potassium Running Average	-0.0037973
HALF	HNGS Alpha Filter Length	60
HCRB	HNGS Apply Borehole Potassium Correction	NONE

HMWB	HNGS Apply Borehole 1 Gamma Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.502	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.02099	
System and Miscellaneous			
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.20	G/C3

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 24-Feb-2005 09:03

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_021LUP	FN:24	PRODUCER	24-Feb-2005 09:03
REDUCED	DLL_LDL_APS_NGS_021LUP	FN:25	PRODUCER	24-Feb-2005 09:03

Company: Lamont Doherty
Well: IODP Exp 305 Site U1309D
Field: Atlantis Massif
Rig: Joides Resolution
Ocean: Atlantic Ocean



Hostile Natural Gamma Ray