

Schlumberger

Company: **Conoco Phillips Company**

Well: **State of Colorado 36-1P**

Field: **Wildcat**

County: **Adams**

State: **Colorado**

Well: **State of Colorado 36-1P**
Field: **Wildcat**
County: **Adams**
State: **Colorado**

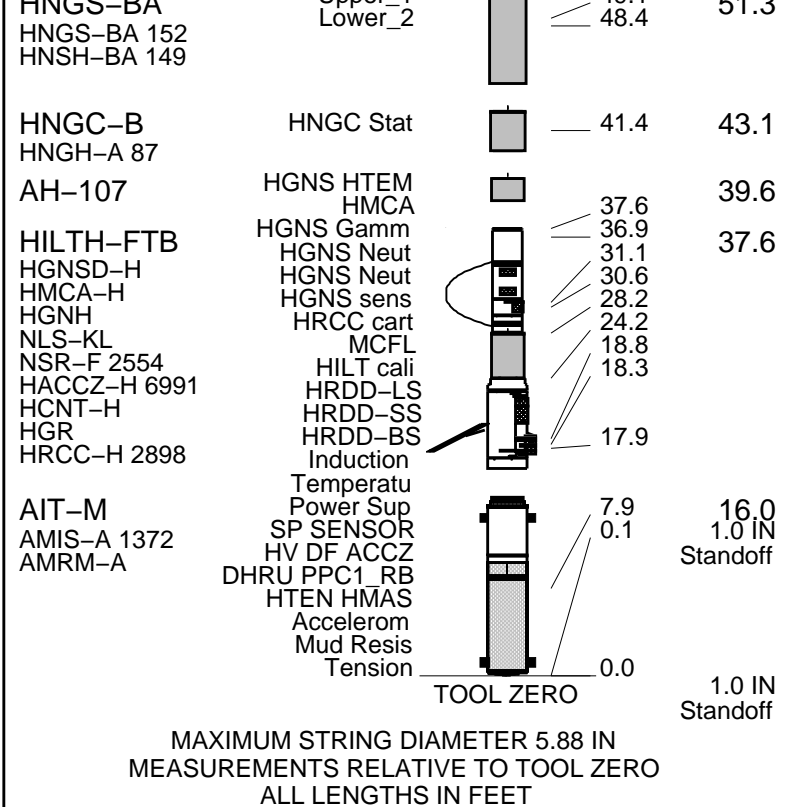
Field: **Wildcat**
County: **Adams**
State: **Colorado**

County: **Adams** State: **Colorado**

[illegible]

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			
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			

OTHER SERVICES1	OTHER SERVICES2
OS1: MSIP	OS1:
OS2: HNGS	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
This is the first run in hole.	
Toolstring run as per tool sketch.	
Matrix: Limestone (2.71g/cc)	



Schlumberger

MAIN RESISTIVITY LOG 2" = 100'

MAXIS Field Log

Input DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_IS_017PUP	FN:16	PRODUCER	09-Jan-2013 03:36	7717.5 FT	1767.5 FT
---------	----------------------------	-------	----------	-------------------	-----------	-----------

Output DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_IS_019PUP	FN:18	PRODUCER	09-Jan-2013 03:46	7717.5 FT	1767.5 FT
---------	----------------------------	-------	----------	-------------------	-----------	-----------

Integrated Hole/Cement Volume Summary

Hole Volume = 302.65 F3

Cement Volume = 102.35 F3 (assuming 7.00 IN casing O.D.)

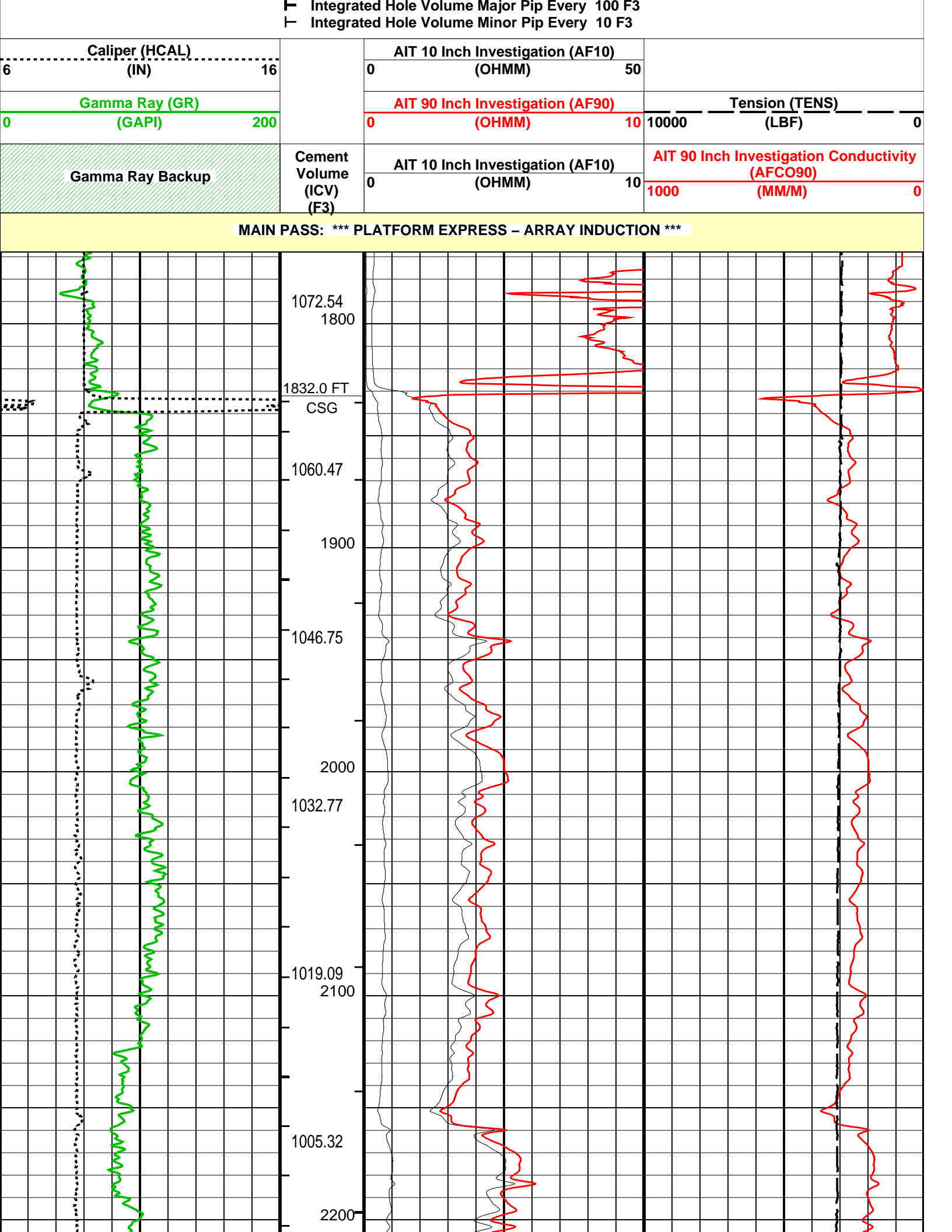
Computed from 7705.5 FT to 6956.5 FT using data channel(s) CRD1_PPC1 CRD2_PPC1 CRD3_PPC1 CRD4_PPC1

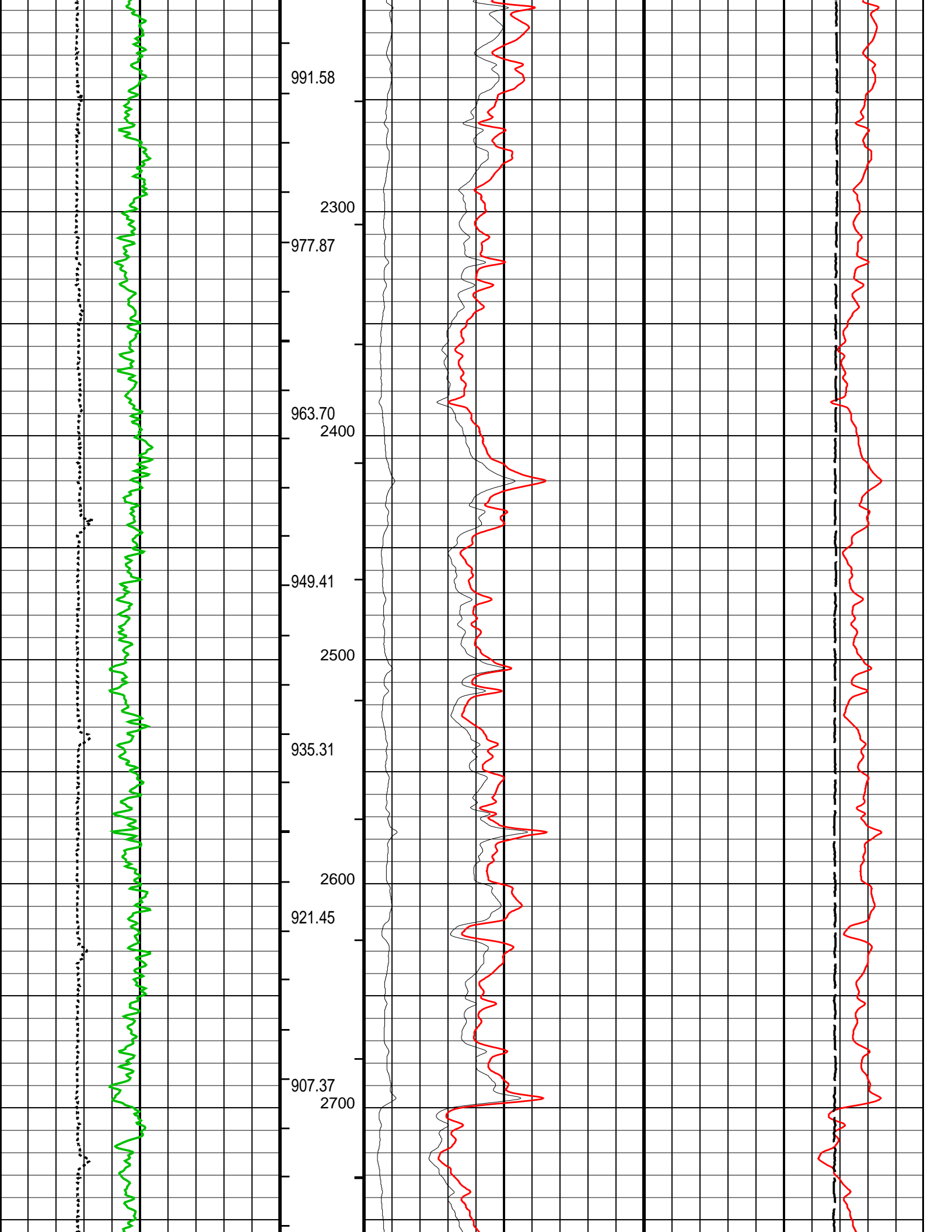
OP System Version: 19C1-222

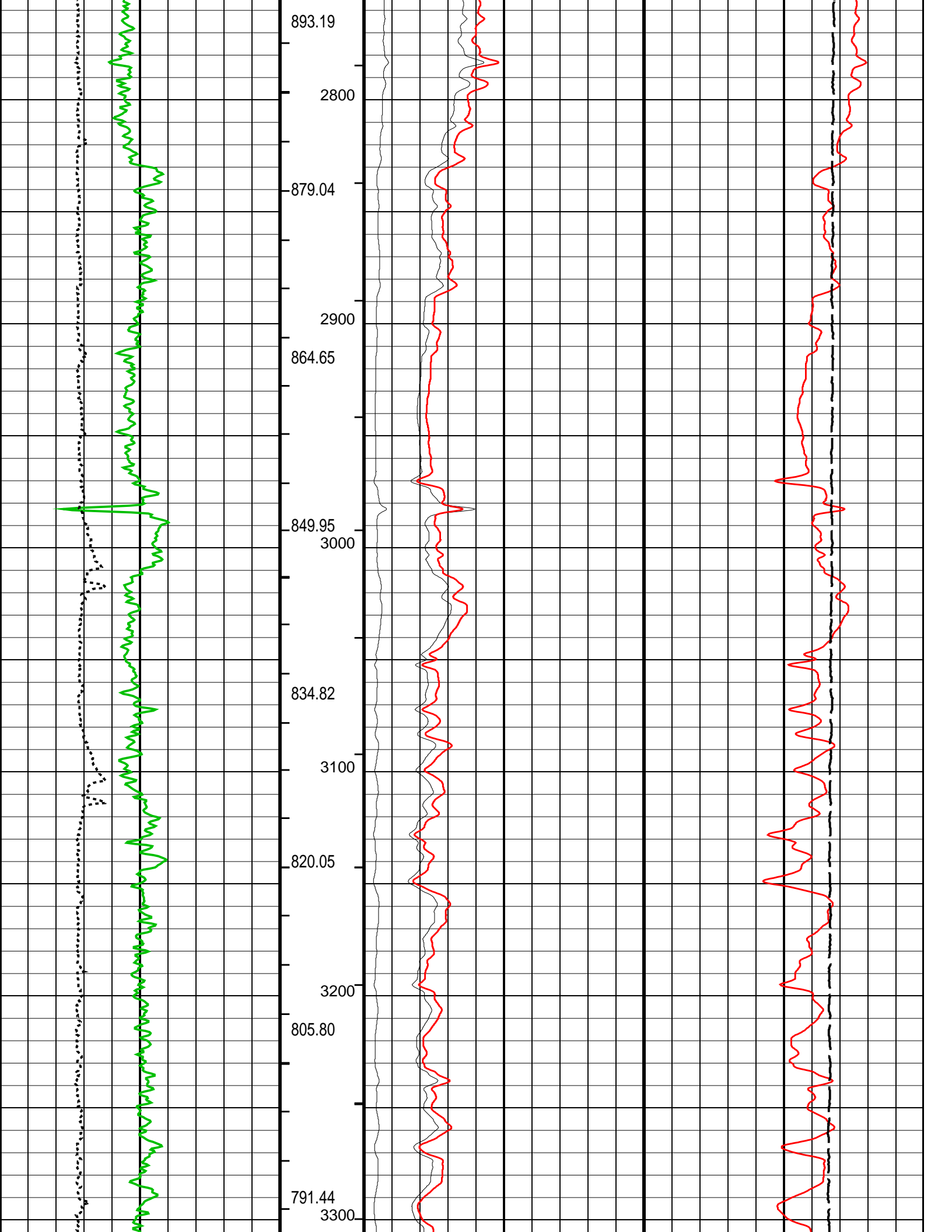
AIT-M	19C1-222	HILTH-FTB	19C1-222
HNGC-B	HFE-5203-OP19.1-NUCL	HNGS-BA	HFE-5203-OP19.1-NUCL
GPIT-F	19C1-222	PPC1	19C1-222
MAXS-B	19C1-222	MAPC-B	19C1-222
EDTC-B	19C1-222		

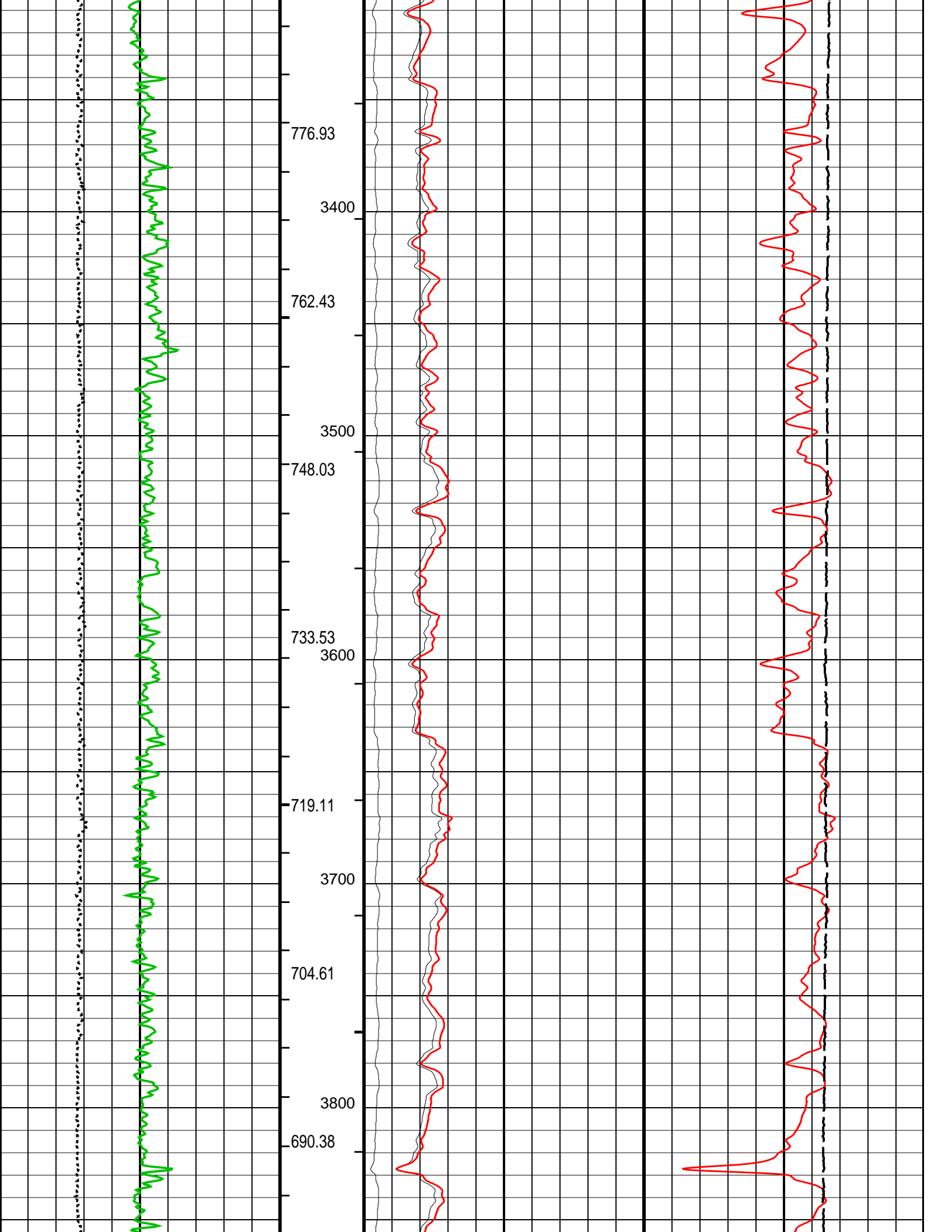
PIP SUMMARY

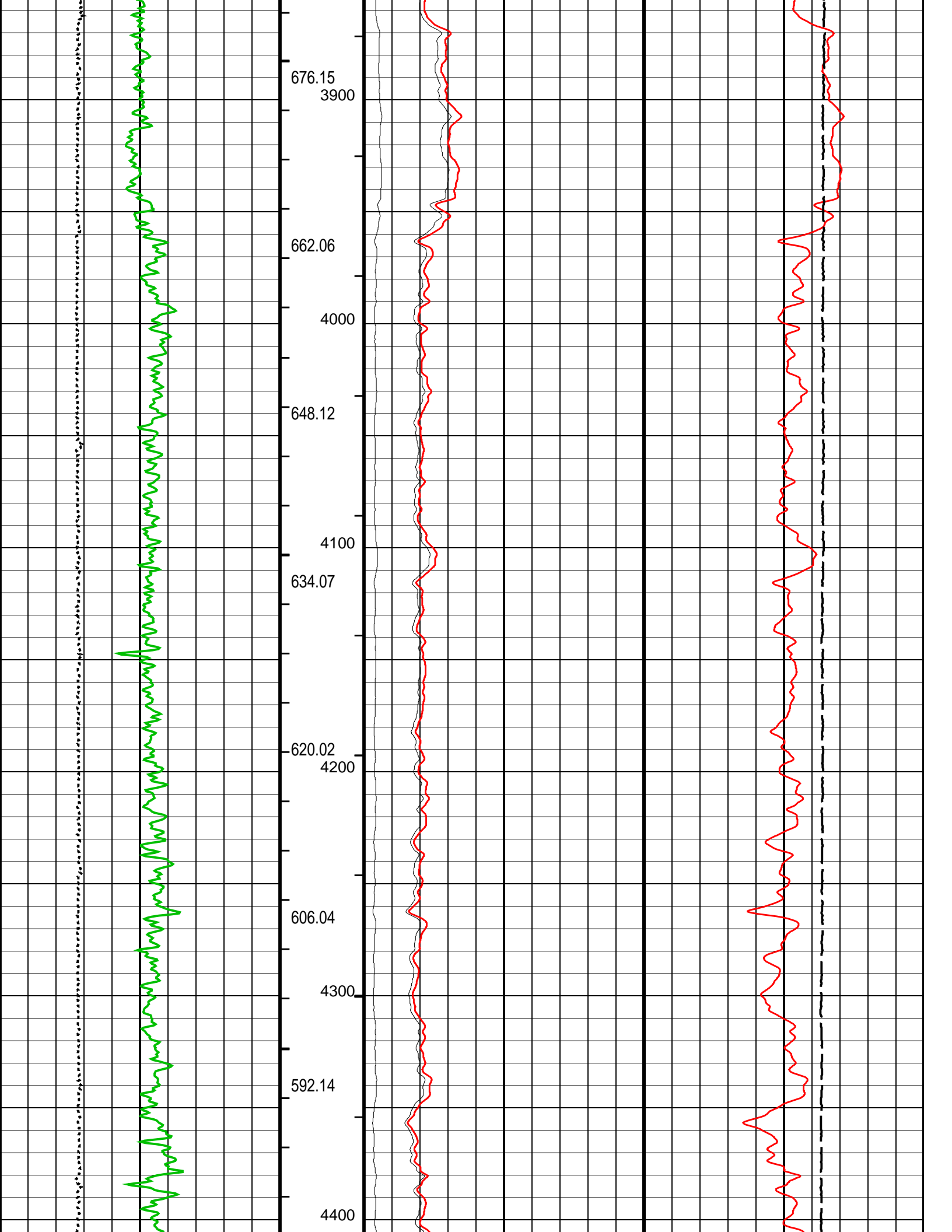
→ Integrated Cement Volume Major Pip Every 100 F3
→ Integrated Cement Volume Minor Pip Every 10 F3

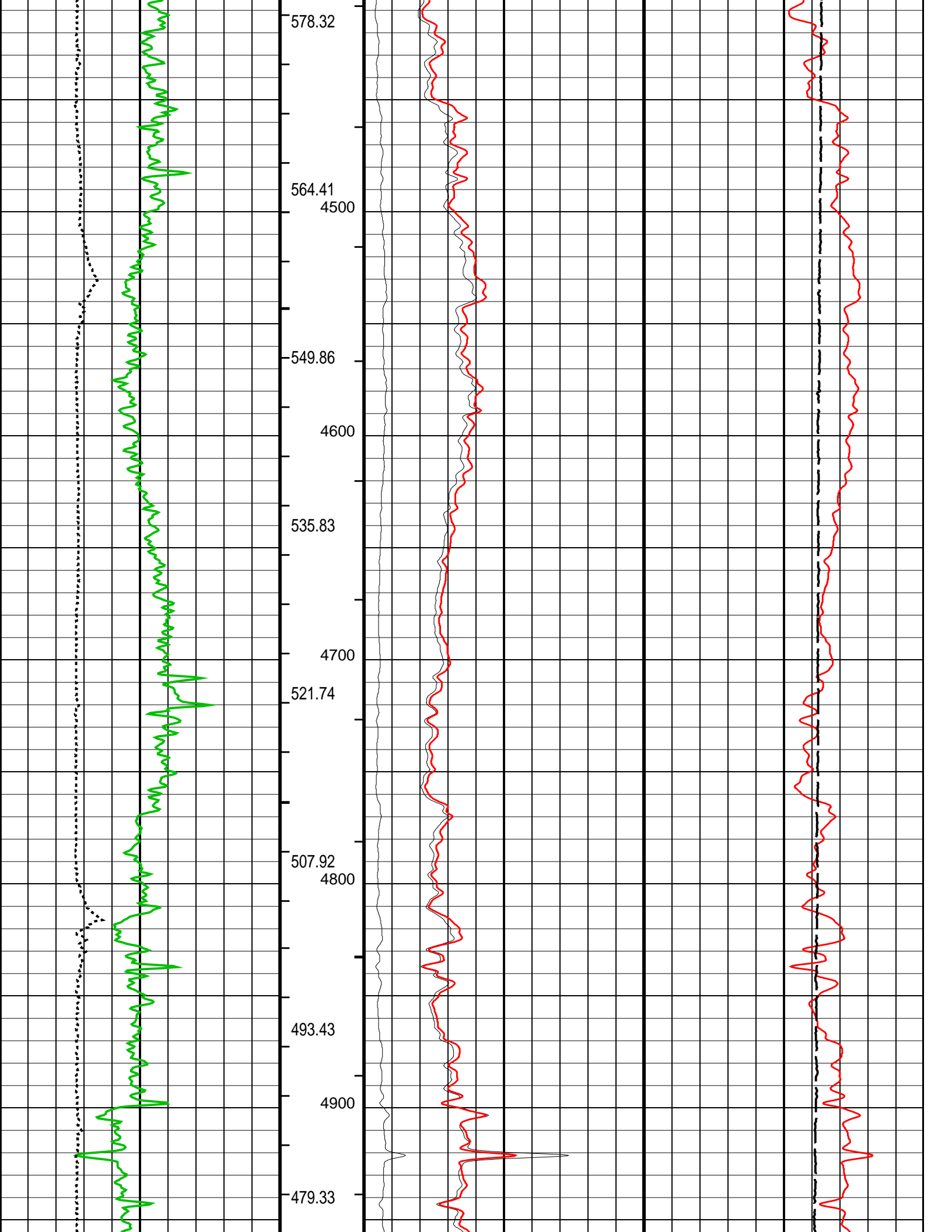


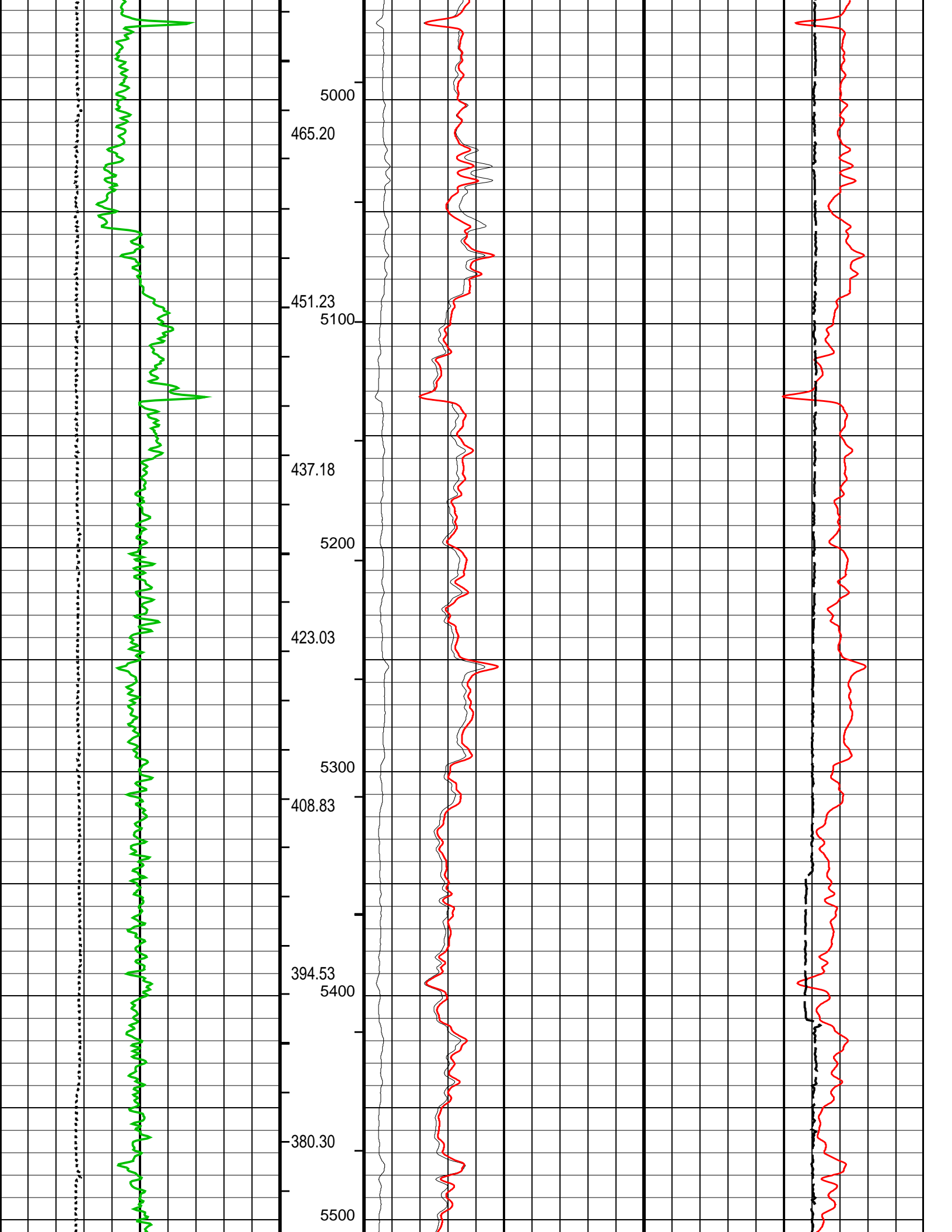


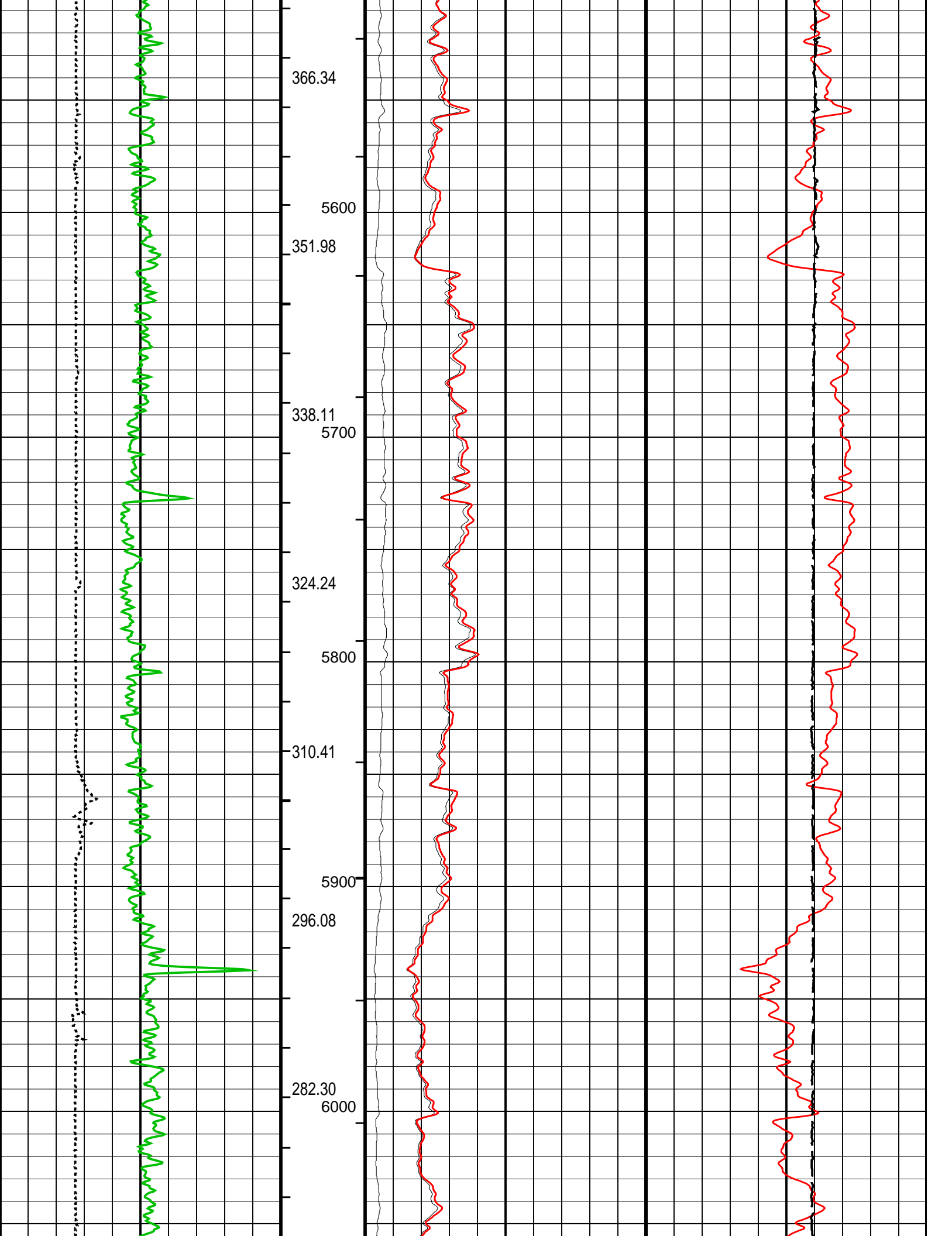


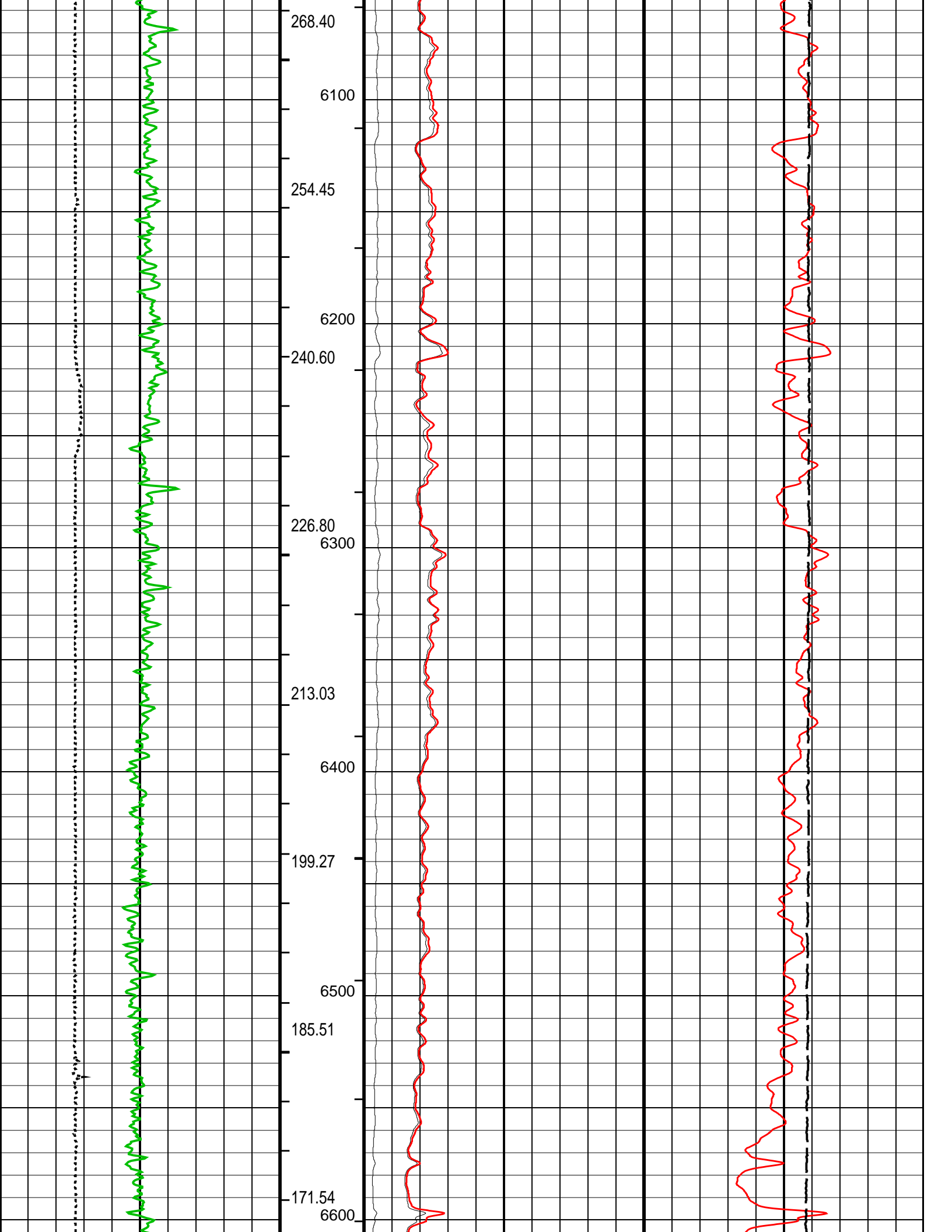


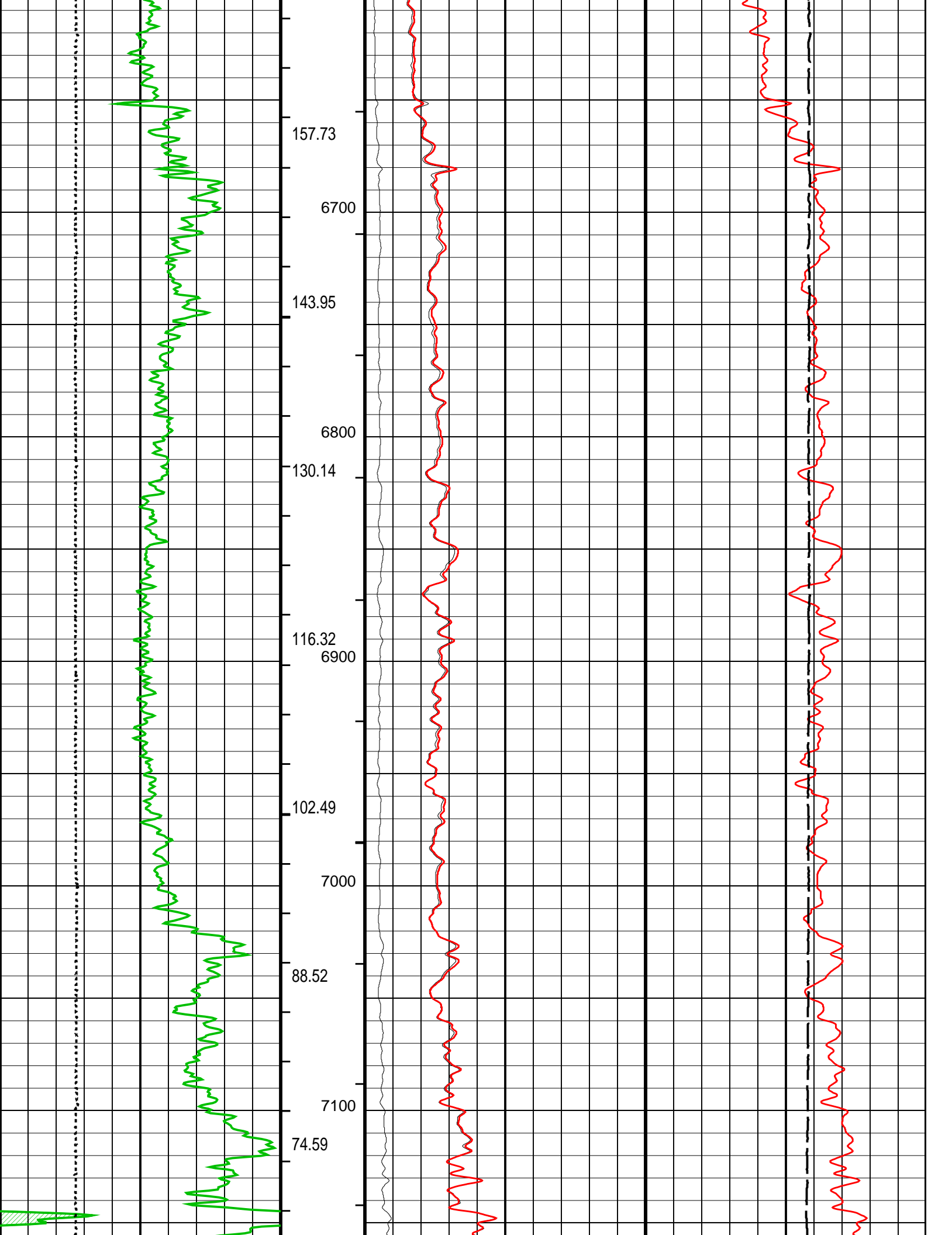


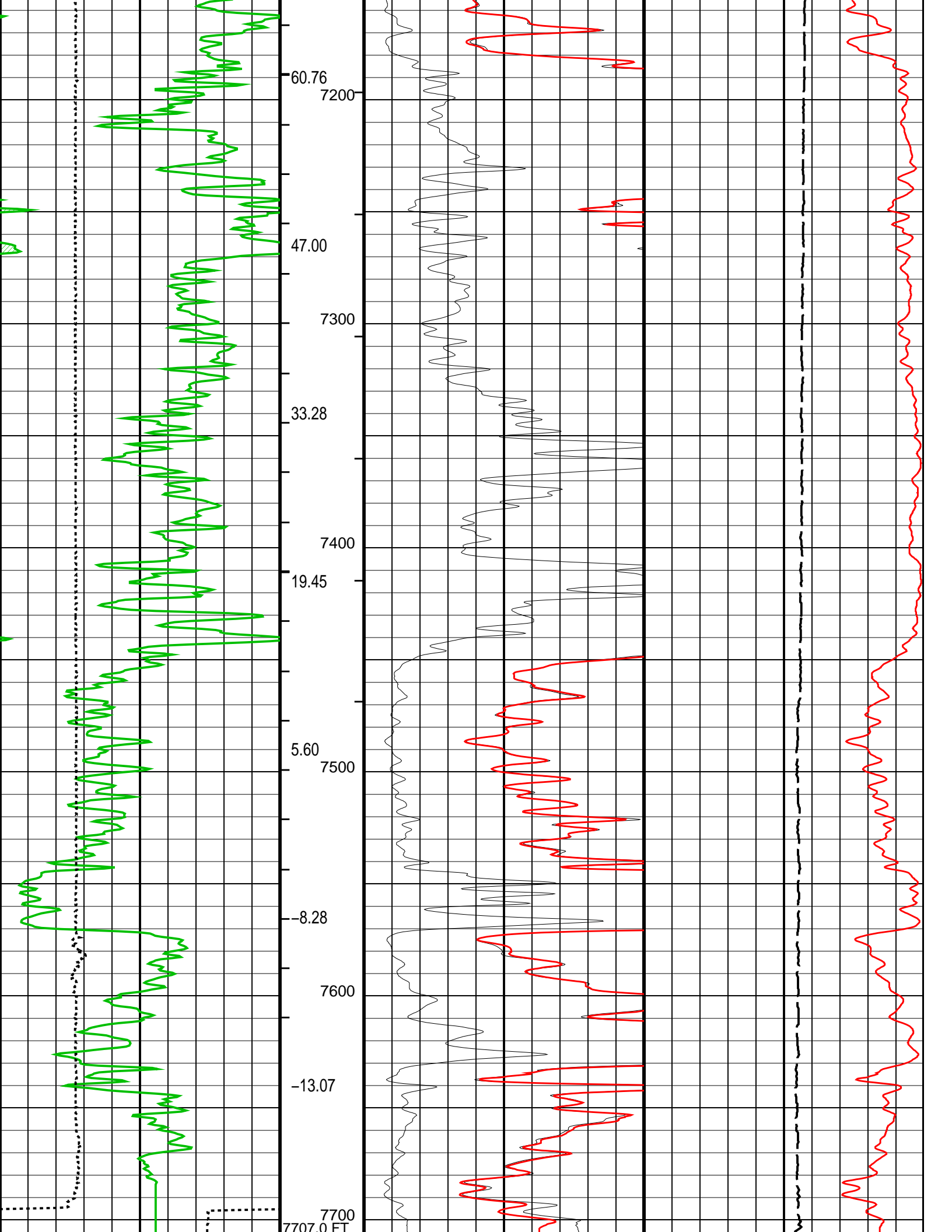












MAIN PASS: *** PLATFORM EXPRESS – ARRAY INDUCTION ***

Gamma Ray Backup	Cement Volume (ICV) (F3)	AIT 10 Inch Investigation (AF10)		AIT 90 Inch Investigation Conductivity (AFCO90)	
		0	10	1000	0
		(OHMM)		(MM/M)	
Gamma Ray (GR) (GAPI)		AIT 90 Inch Investigation (AF90)		Tension (TENS)	
0	200	0	10	10000	0
		(OHMM)		(LBF)	
Caliper (HCAL) (IN)		AIT 10 Inch Investigation (AF10)			
6	16	0	50		
		(OHMM)			

PIP SUMMARY

- ➔ Integrated Cement Volume Major Pip Every 100 F3
- ➔ Integrated Cement Volume Minor Pip Every 10 F3
- ➔ Integrated Hole Volume Major Pip Every 100 F3
- ➔ Integrated Hole Volume Minor Pip Every 10 F3

Parameters

DLIS Name	Description	Value	
AIT-M: Array Induction Tool – M			
ABHM	Array Induction Borehole Correction Mode	0_ComputeMudResistivity	
ABHV	Array Induction Borehole Correction Code Version Number	900	
ABLM	Array Induction Basic Logs Mode	6_One_Two_and_Four	
ABLV	Array Induction Basic Logs Code Version Number	223	
ACDE	Array Induction Casing Detection Enable	No	
ACEN	Array Induction Tool Centering Flag (in Borehole)	Eccentered	
ACSED	Array Induction Casing Shoe Estimated Depth	-50000	FT
AETP	Array Induction Enable Sonde Error Temp&Pres Corr	Yes	
AFRSV	Array Induction Response Set Version for Four ft Resolution	41.70.24.20	
AIGS	Array Induction Select Akima Interpolation Gating	On	
AMRF	Array Induction Mud Resistivity Factor	1	
AORSV	Array Induction Response Set Version for One ft Resolution	41.70.24.20	
ARFV	Array Induction Radial Profiling Code Version Number	701	
ARPV	Array Induction Radial Parametrization Code Version Number	232	
ASTA	Array Induction Tool Standoff	0.25	IN
ATRSV	Array Induction Response Set Version for Two ft Resolution	41.70.24.20	
ATSE	Array Induction Temperature Selection(Sonde Error Correction)	Internal	
AULV	Array Induction User Level Control	Normal	
AZRSV	Array Induction Response Set Version for Z Resolution	00.10.25.00	
BHT	Bottom Hole Temperature (used in calculations)	208	DEGF
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68	DEGF
HILTH-FTB: High resolution Integrated Logging Tool-DTS			
BHT	Bottom Hole Temperature (used in calculations)	208	DEGF
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68	DEGF
HNGBS-BA: Hostile Natural Gamma Ray Sonde			
BHT	Bottom Hole Temperature (used in calculations)	208	DEGF
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68	DEGF
MAPC-B: Multimode Array Sonic Power Cartridge			
BHT	Bottom Hole Temperature (used in calculations)	208	DEGF
BS	Bit Size	8.750	IN
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68	DEGF

SHT	EDTC-B: Enhanced DTS Cartridge	Surface Hole Temperature	68	DEGF
BHT		Bottom Hole Temperature (used in calculations)	208	DEGF
GCSE		Generalized Caliper Selection	HCAL	
GDEV		Average Angular Deviation of Borehole from Normal	0	DEG
GGRD		Geothermal Gradient	0.01	DF/F
GRSE		Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE		Generalized Temperature Selection	HSTS_HTEM	
SHT		Surface Hole Temperature	68	DEGF
	DIR: Directional Survey Computation			
SPVD		TVD of Starting Point	0	FT
TIMD		Along-hole depth of Tie-in Point	0	FT
TIVD		TVD of Tie-in Point	0	FT
	DIRPLOT: Enhanced Directional Plots			
BHT		Bottom Hole Temperature (used in calculations)	208	DEGF
GCSE		Generalized Caliper Selection	HCAL	
GDEV		Average Angular Deviation of Borehole from Normal	0	DEG
GGRD		Geothermal Gradient	0.01	DF/F
GRSE		Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE		Generalized Temperature Selection	HSTS_HTEM	
SHT		Surface Hole Temperature	68	DEGF
	FEQL: Formation Evaluation Quick Look			
FEXP		Form Factor Exponent	2	
FNUM		Form Factor Numerator	1	
	HOLEV: Integrated Hole/Cement Volume			
BHT		Bottom Hole Temperature (used in calculations)	208	DEGF
FCD		Future Casing (Outer) Diameter	7	IN
GCSE		Generalized Caliper Selection	HCAL	
GDEV		Average Angular Deviation of Borehole from Normal	0	DEG
GGRD		Geothermal Gradient	0.01	DF/F
GRSE		Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE		Generalized Temperature Selection	HSTS_HTEM	
HVCS		Integrated Hole Volume Caliper Selection	AUTOMATIC	
SHT		Surface Hole Temperature	68	DEGF
	PERT: Preliminary Evaluation – Real Time			
BHT		Bottom Hole Temperature (used in calculations)	208	DEGF
FEXP		Form Factor Exponent	2	
FNUM		Form Factor Numerator	1	
GCSE		Generalized Caliper Selection	HCAL	
GDEV		Average Angular Deviation of Borehole from Normal	0	DEG
GGRD		Geothermal Gradient	0.01	DF/F
GRSE		Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE		Generalized Temperature Selection	HSTS_HTEM	
SHT		Surface Hole Temperature	68	DEGF
	System and Miscellaneous			
DFD		Drilling Fluid Density	9.20	LB/G
DO		Depth Offset for Playback	0.0	FT
DORL		Depth Offset for Repeat Analysis	0.0	FT
FLEV		Fluid Level	-50000.00	FT
MST		Mud Sample Temperature	-50000.00	DEGF
PP		Playback Processing	OFF	
TD		Total Depth	7707	FT

Format: ERES_S2 Vertical Scale: 2" per 100' Graphics File Created: 09-Jan-2013 03:46

OP System Version: 19C1-222

AIT-M	19C1-222	HILTH-FTB	19C1-222
HNGC-B	HFE-5203-OP19.1-NUCL	HNGS-BA	HFE-5203-OP19.1-NUCL
GPIT-F	19C1-222	PPC1	19C1-222
MAXS-B	19C1-222	MAPC-B	19C1-222
EDTC-B	19C1-222		

Input DLIS Files

DEFAULT AIT_TLD_MCFL_CNL_IS_017PUP FN:16 PRODUCER 09-Jan-2013 03:36 7717.5 FT 1767.5 FT

Output DLIS Files

DEFAULT AIT_TLD_MCFL_CNL_IS_019PUP FN:18 PRODUCER 09-Jan-2013 03:46

Input DLIS Files

DEFAULT AIT_TLD_MCFL_CNL_IS_017PUP FN:16 PRODUCER 09-Jan-2013 03:36 7717.5 FT 1767.5 FT

Output DLIS Files

DEFAULT AIT_TLD_MCFL_CNL_IS_019PUP FN:18 PRODUCER 09-Jan-2013 03:46 7717.5 FT 1767.5 FT

Integrated Hole/Cement Volume Summary

Hole Volume = 302.65 F3
Cement Volume = 102.35 F3 (assuming 7.00 IN casing O.D.)
Computed from 7705.5 FT to 6956.5 FT using data channel(s) CRD1_PPC1 CRD2_PPC1 CRD3_PPC1 CRD4_PPC1

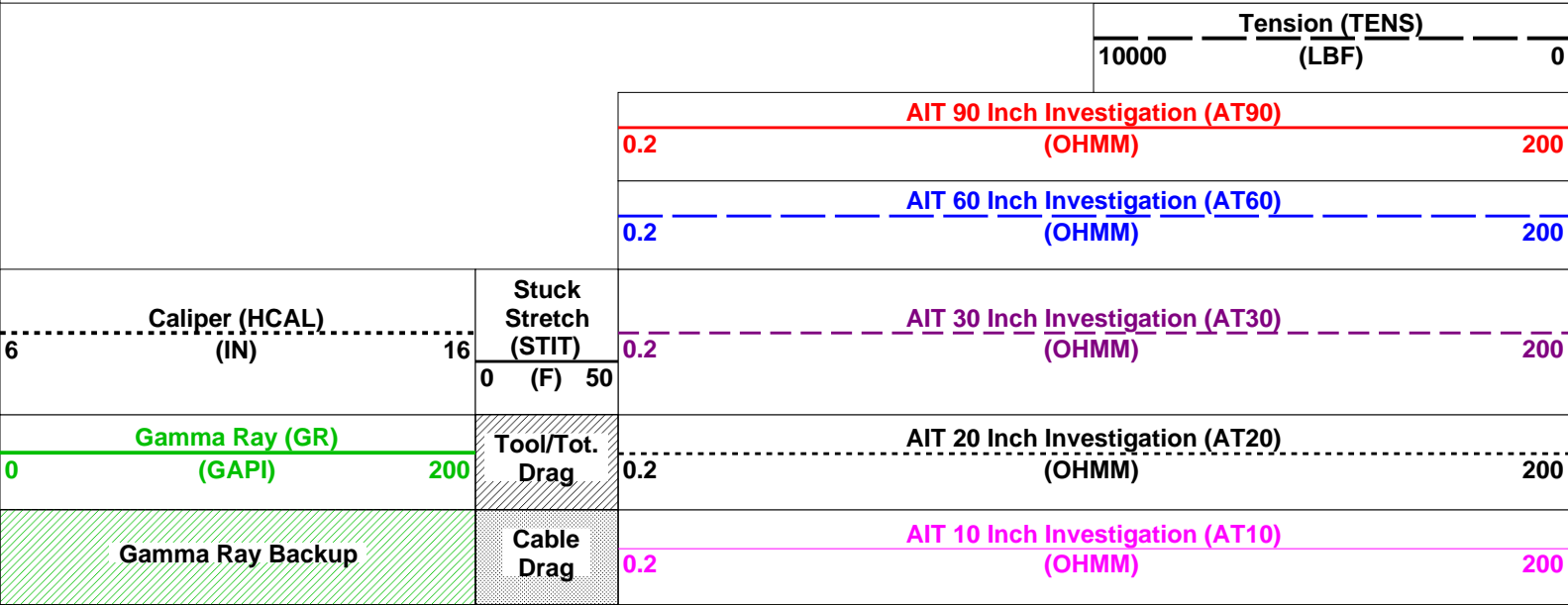
OP System Version: 19C1-222

AIT-M	19C1-222	HILTH-FTB	19C1-222
HNGC-B	HFE-5203-OP19.1-NUCL	HNGS-BA	HFE-5203-OP19.1-NUCL
GPIT-F	19C1-222	PPC1	19C1-222
MAXS-B	19C1-222	MAPC-B	19C1-222
EDTC-B	19C1-222		

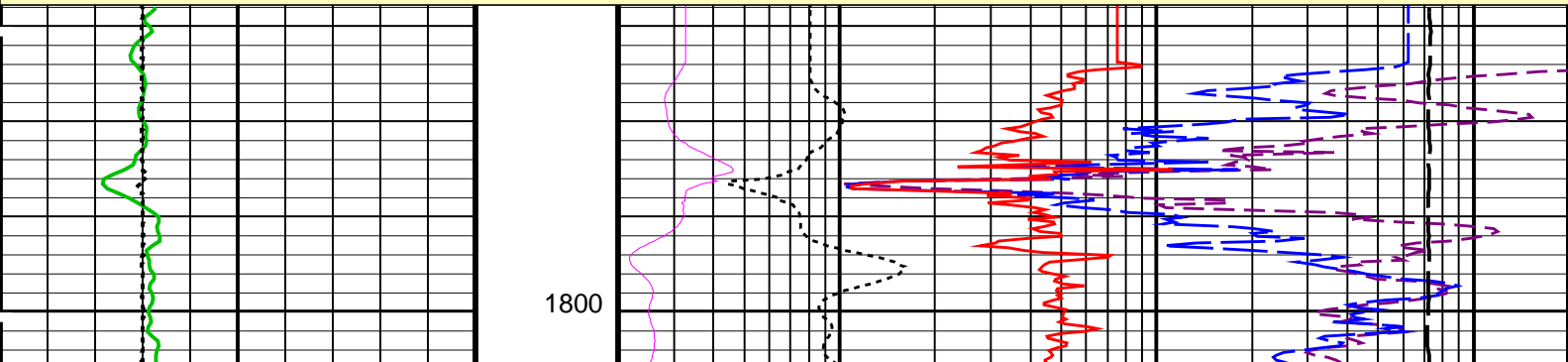
PIP SUMMARY

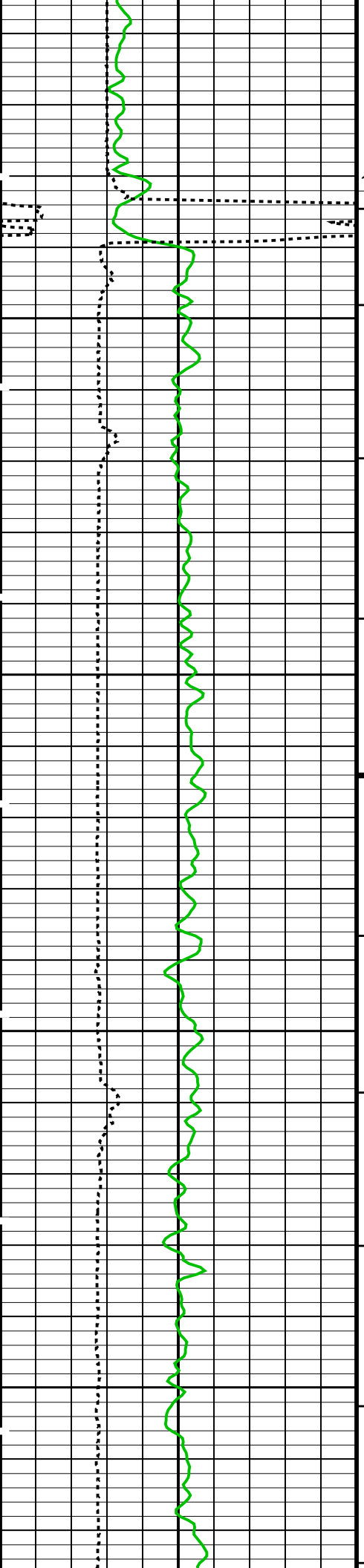
- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
- └ Integrated Cement Volume Minor Pip Every 10 F3
- └ Integrated Cement Volume Major Pip Every 100 F3

Time Mark Every 60 S



MAIN PASS: *** PLATFORM EXPRESS – ARRAY INDUCTION ***

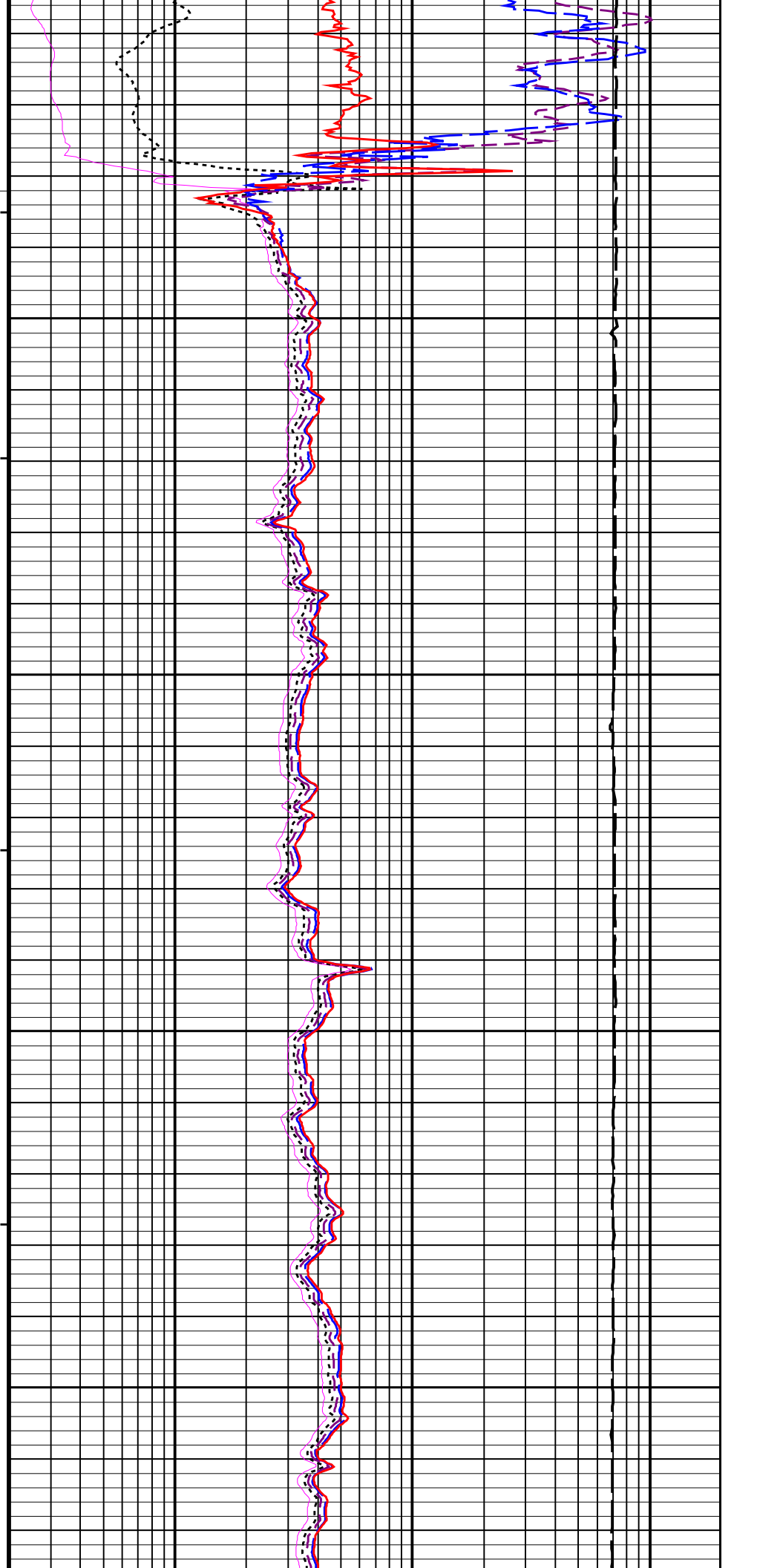


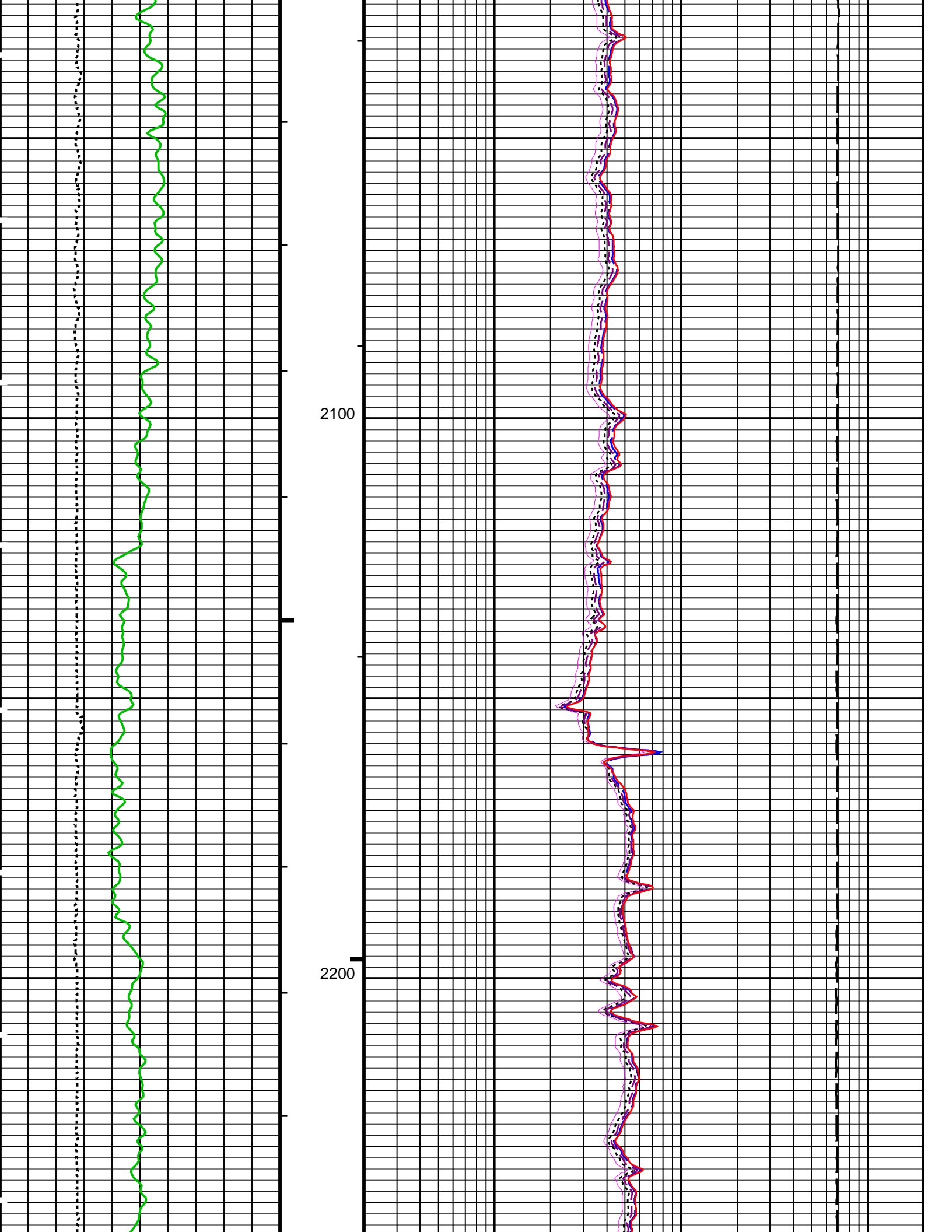


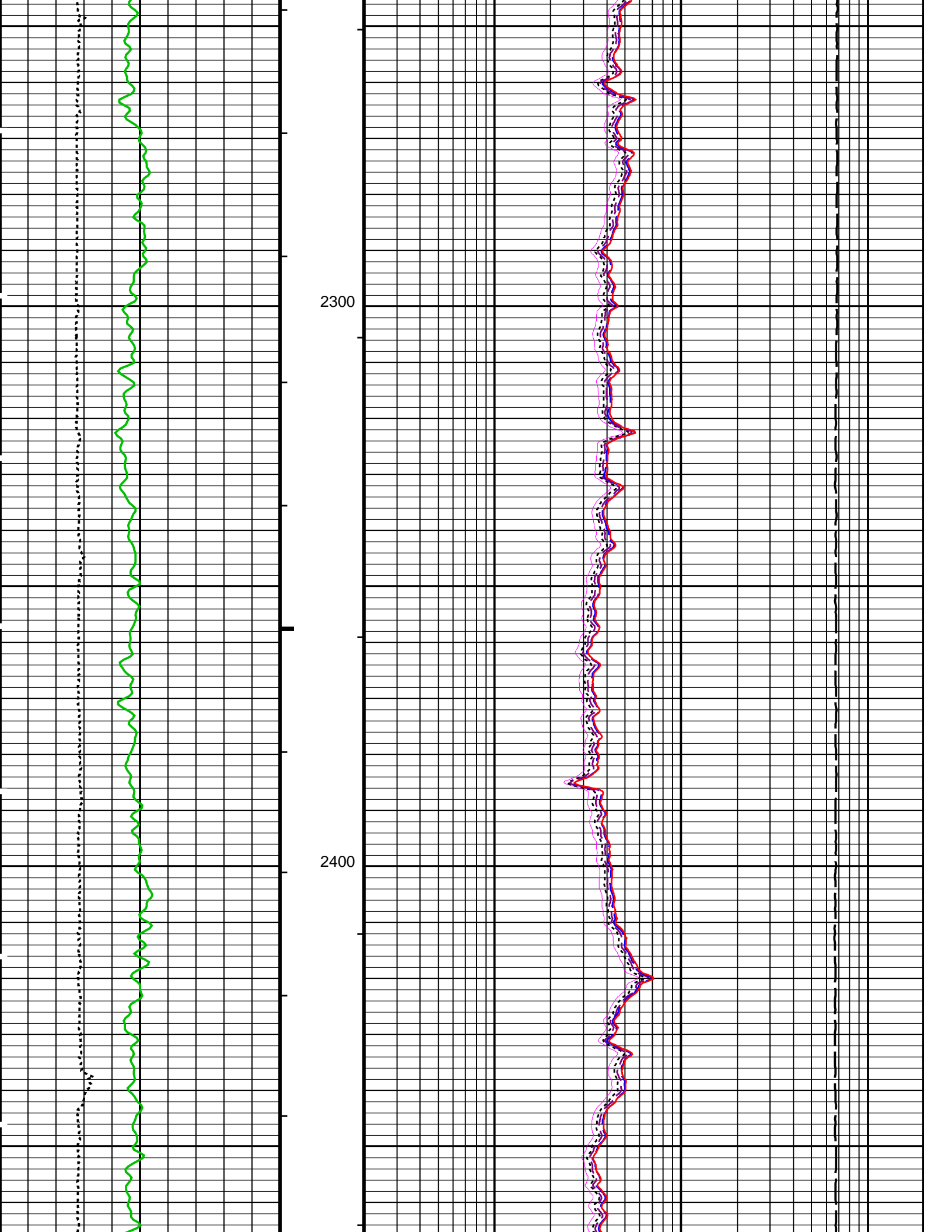
1832.0 FT
CSG

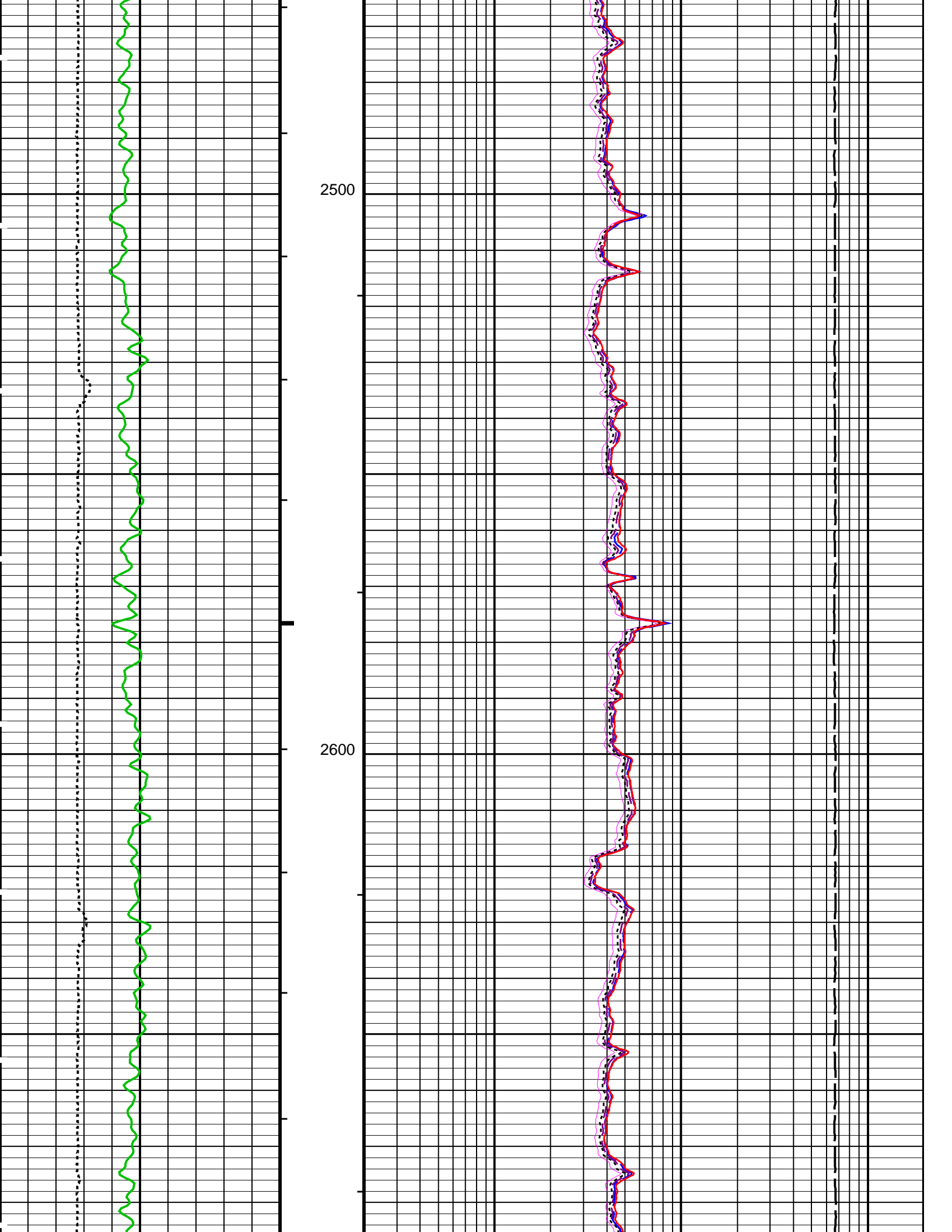
1900

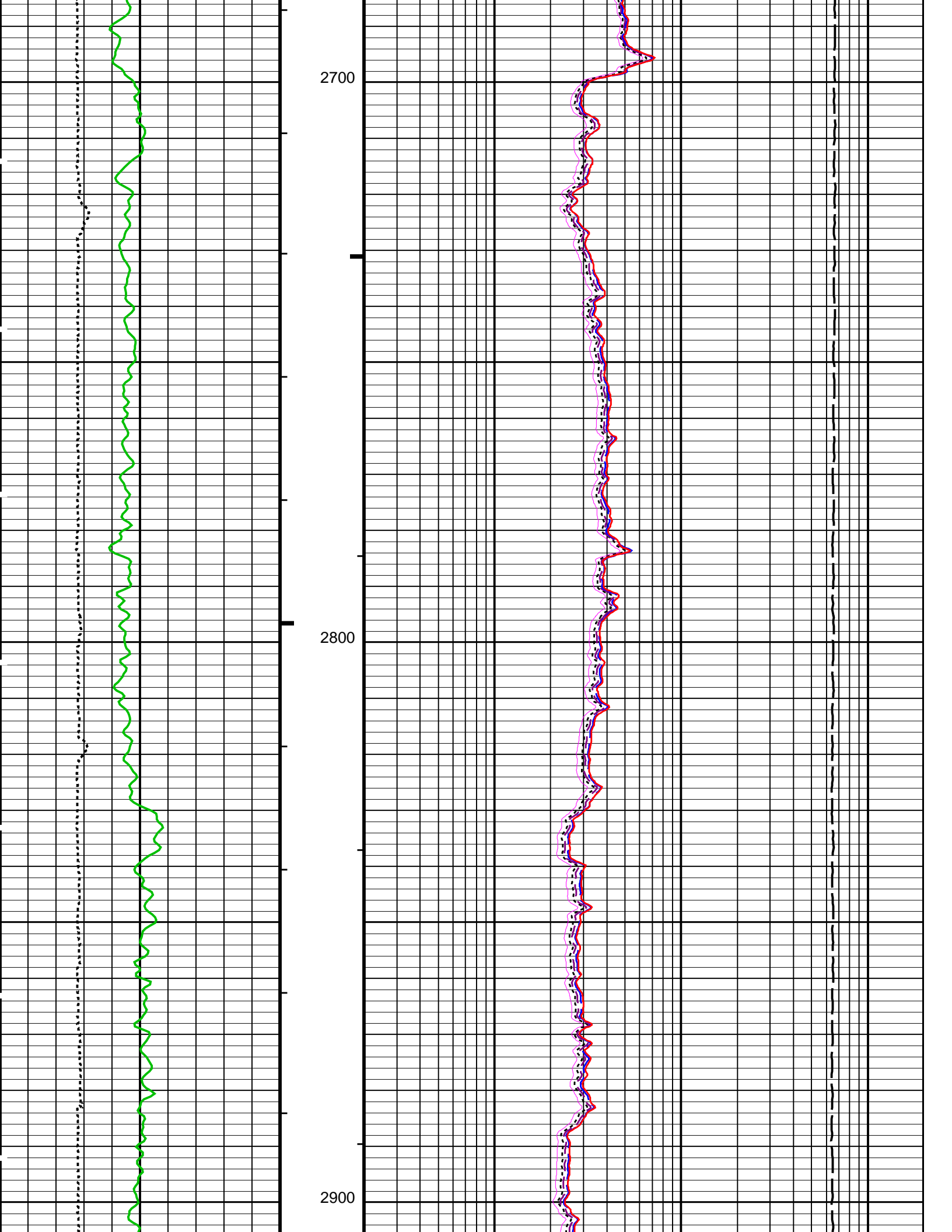
2000

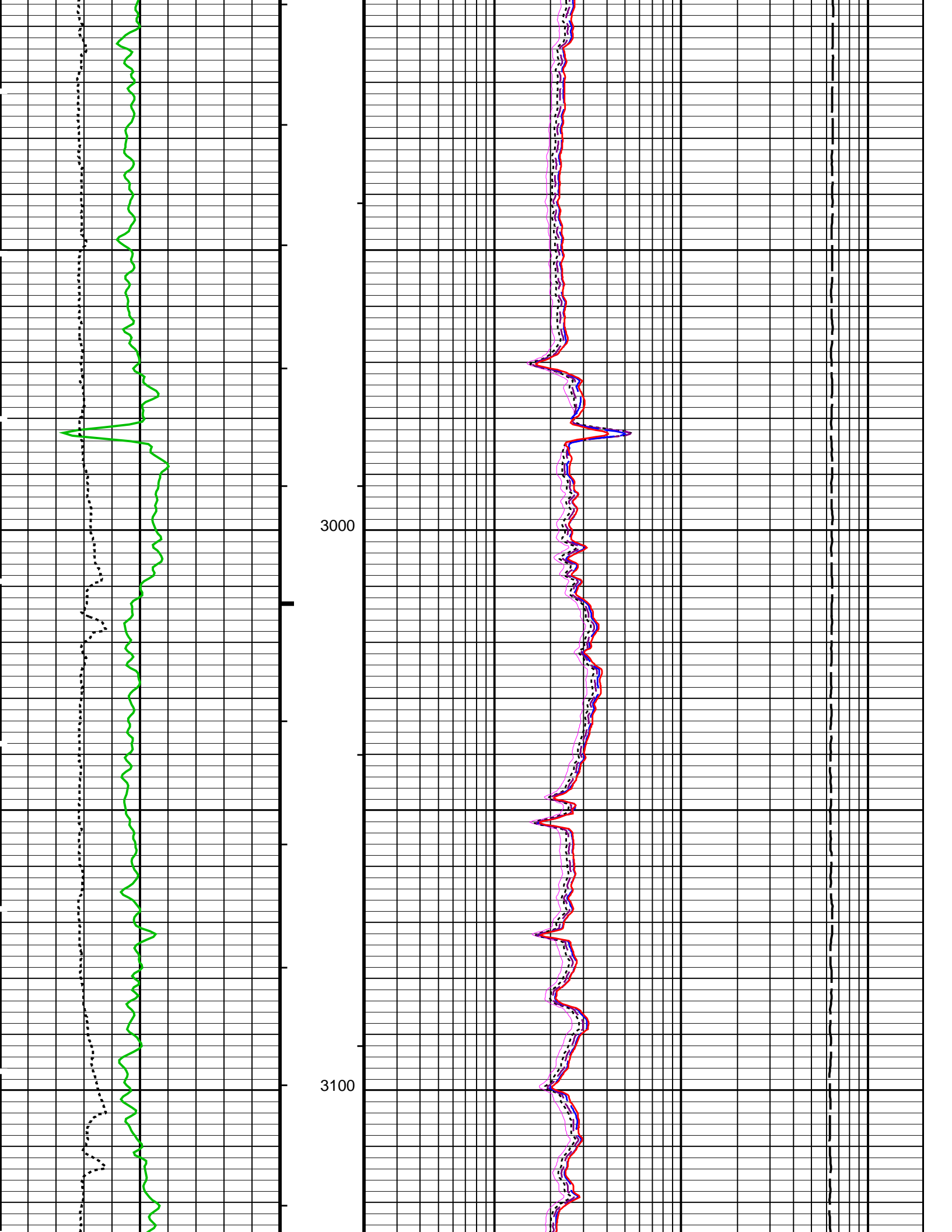


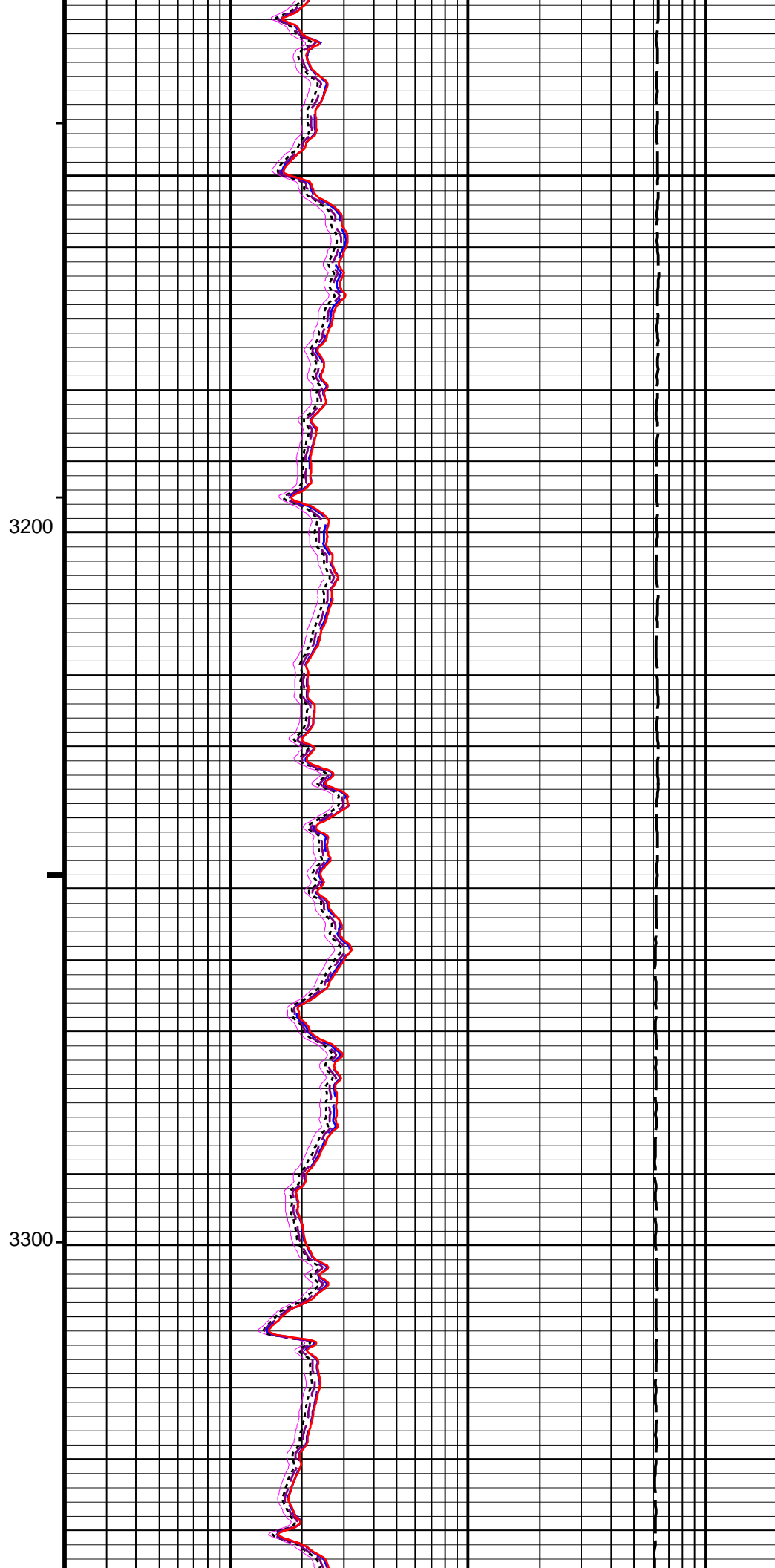
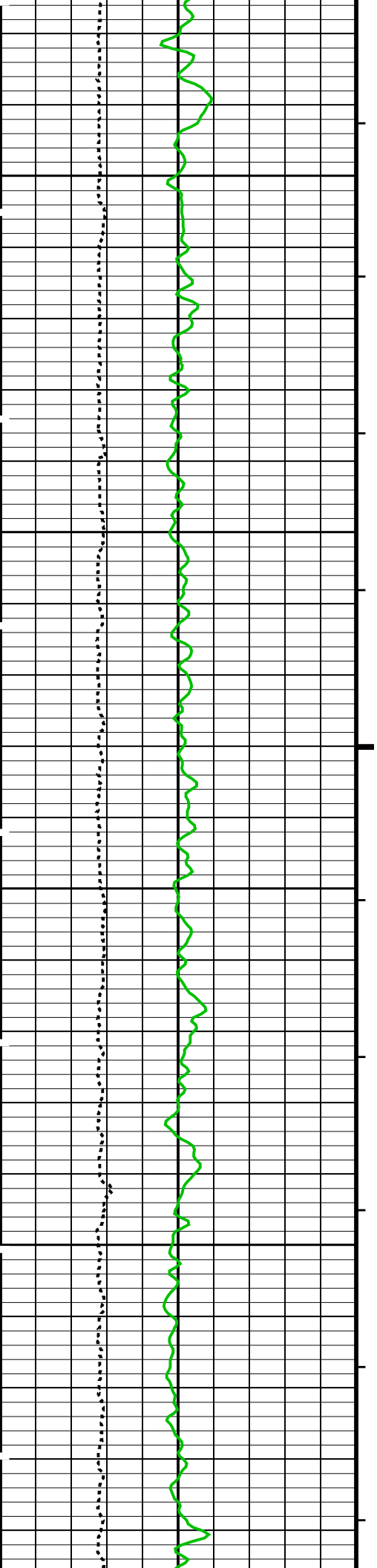


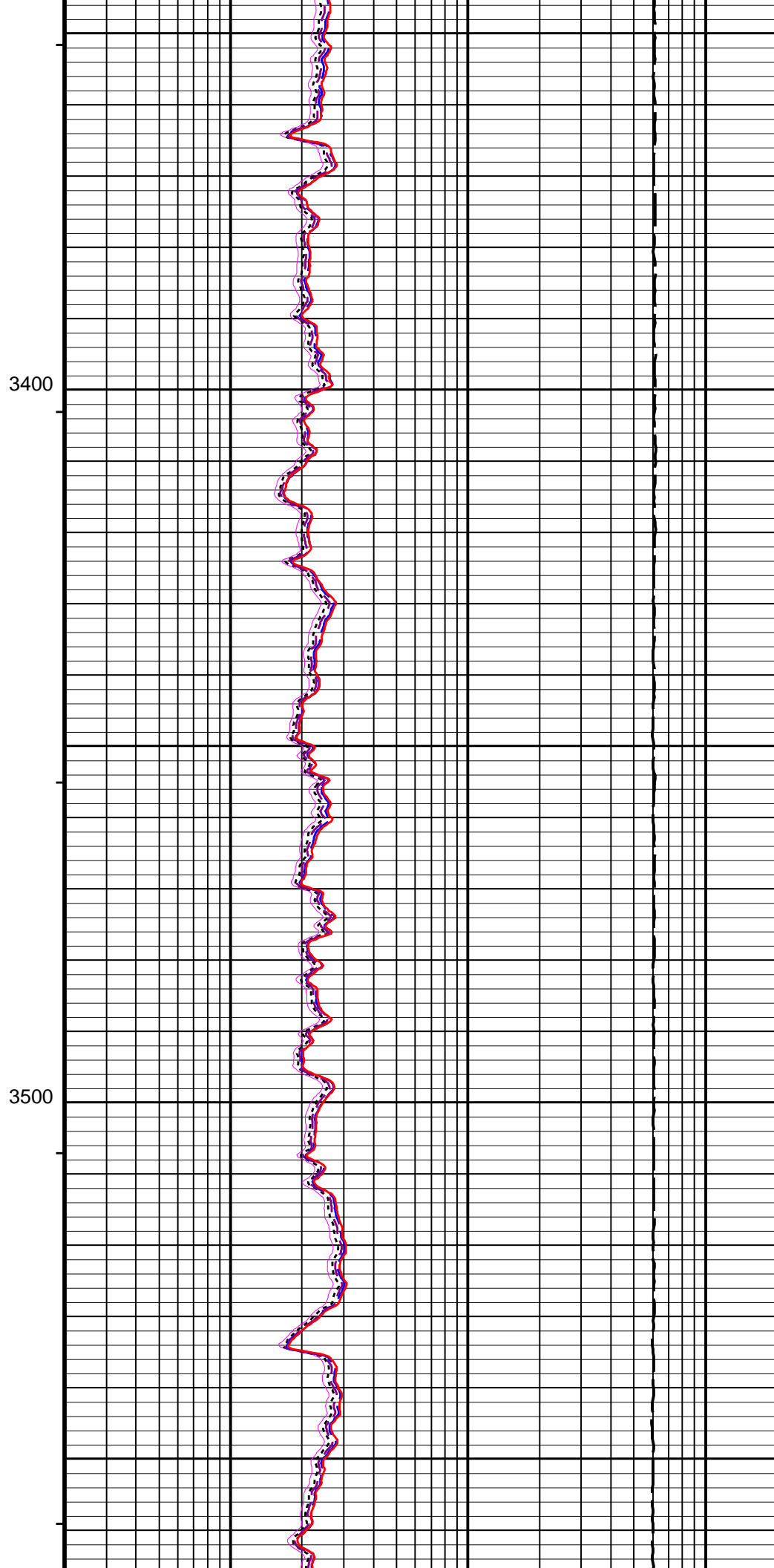
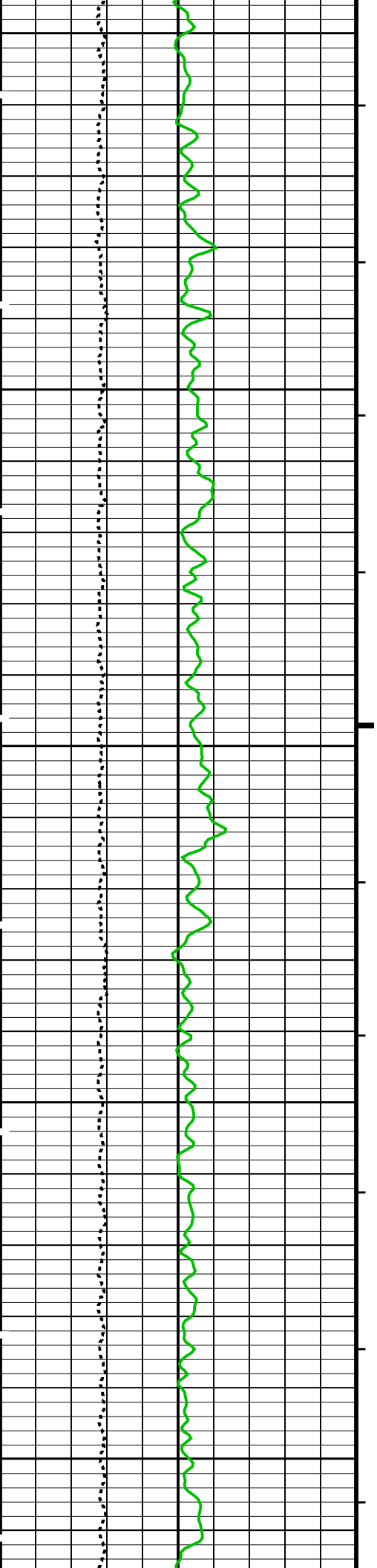


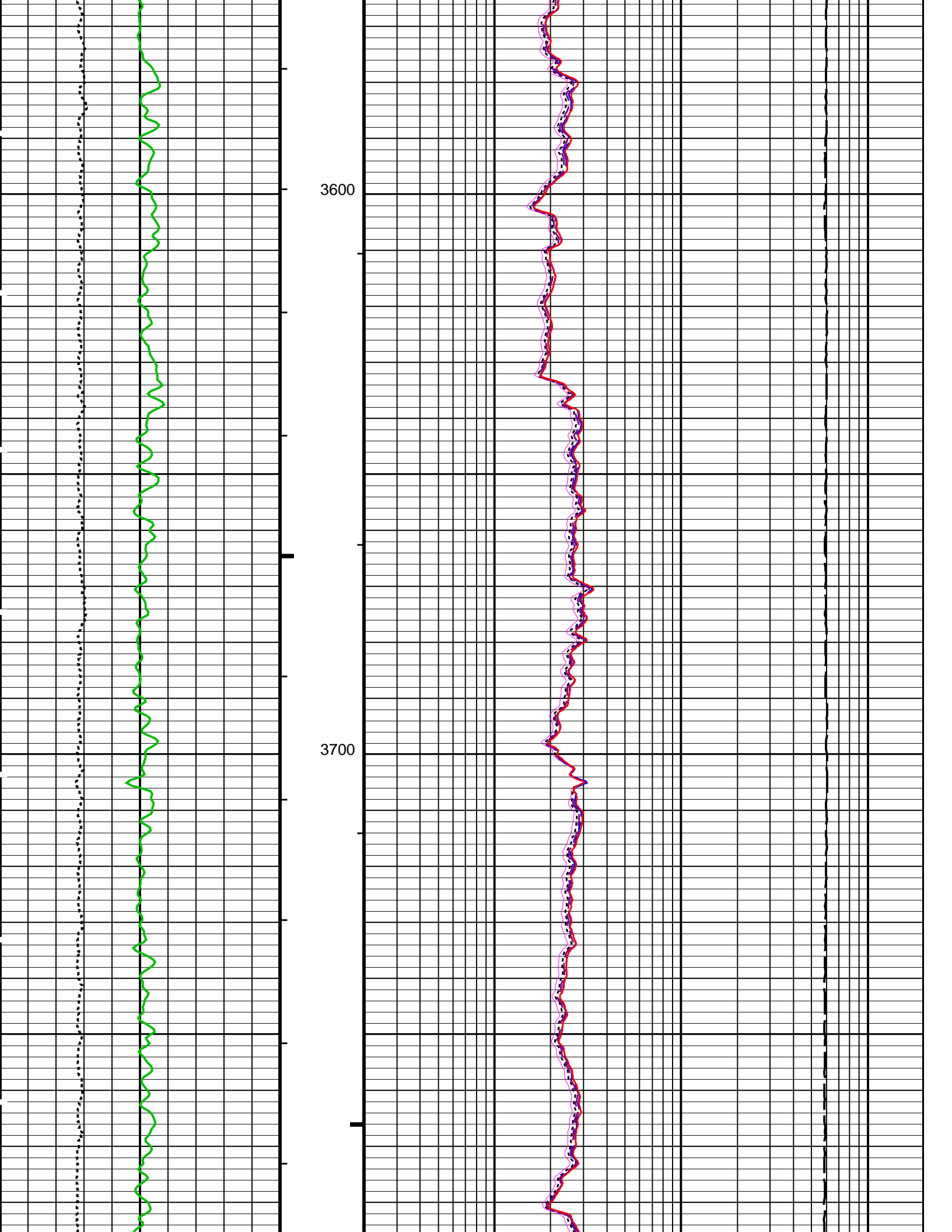


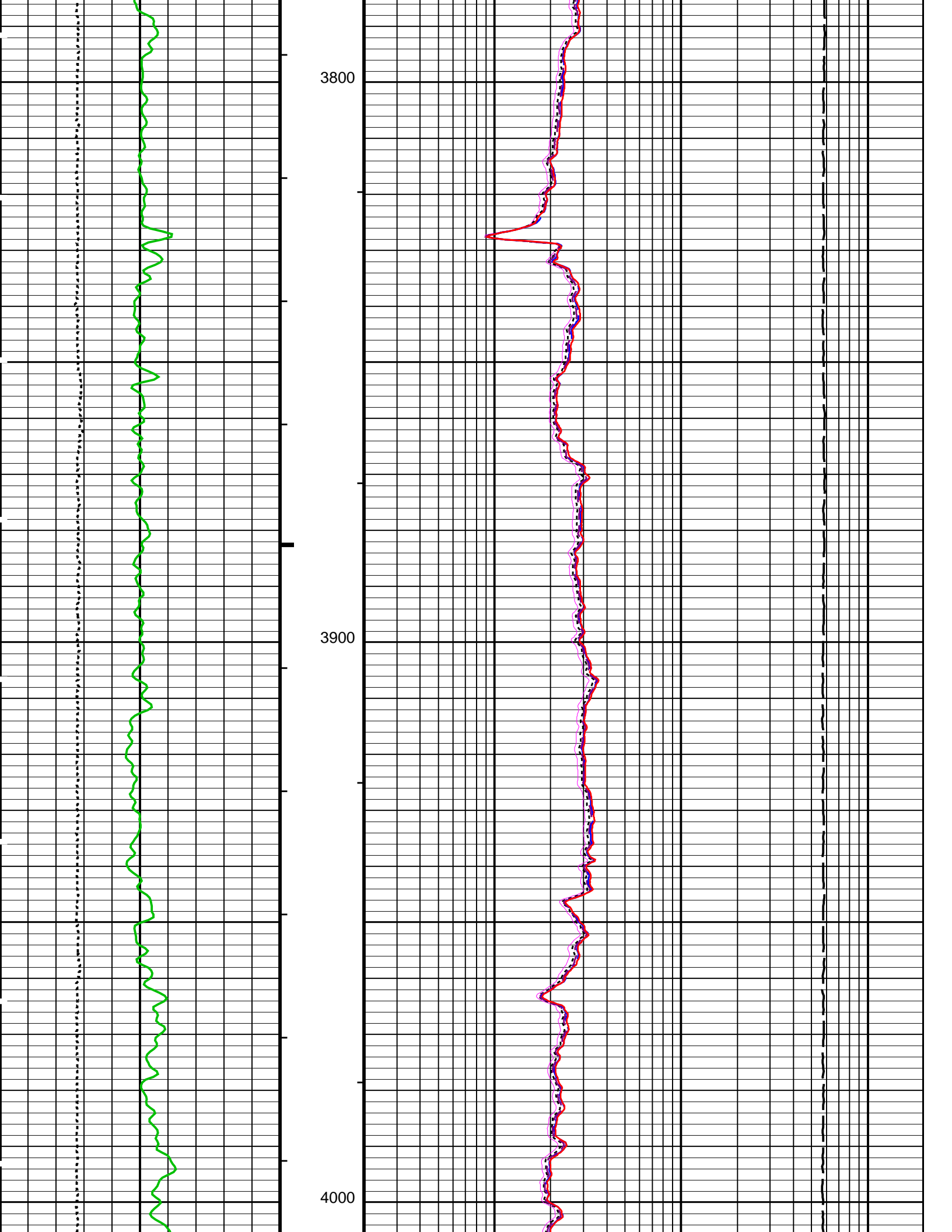


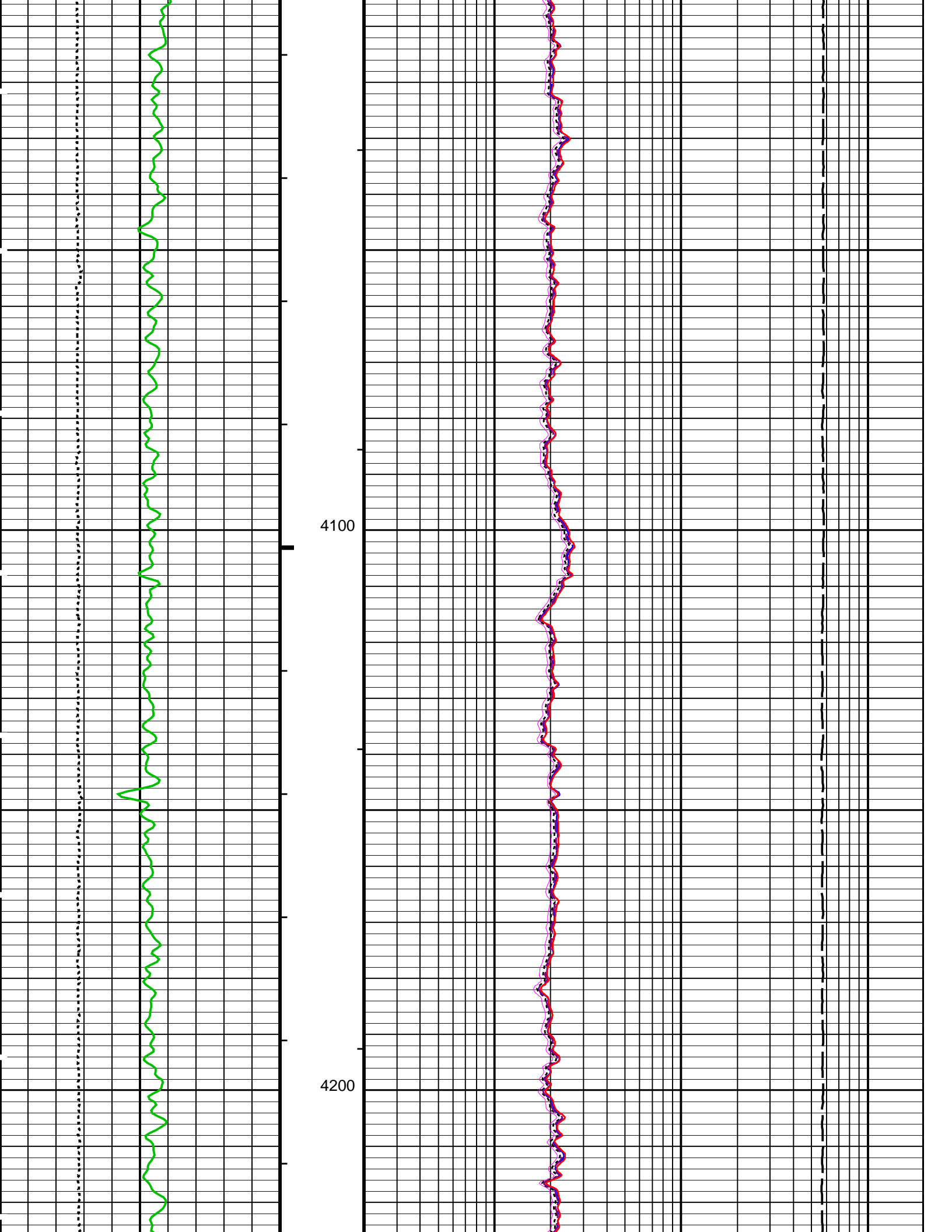


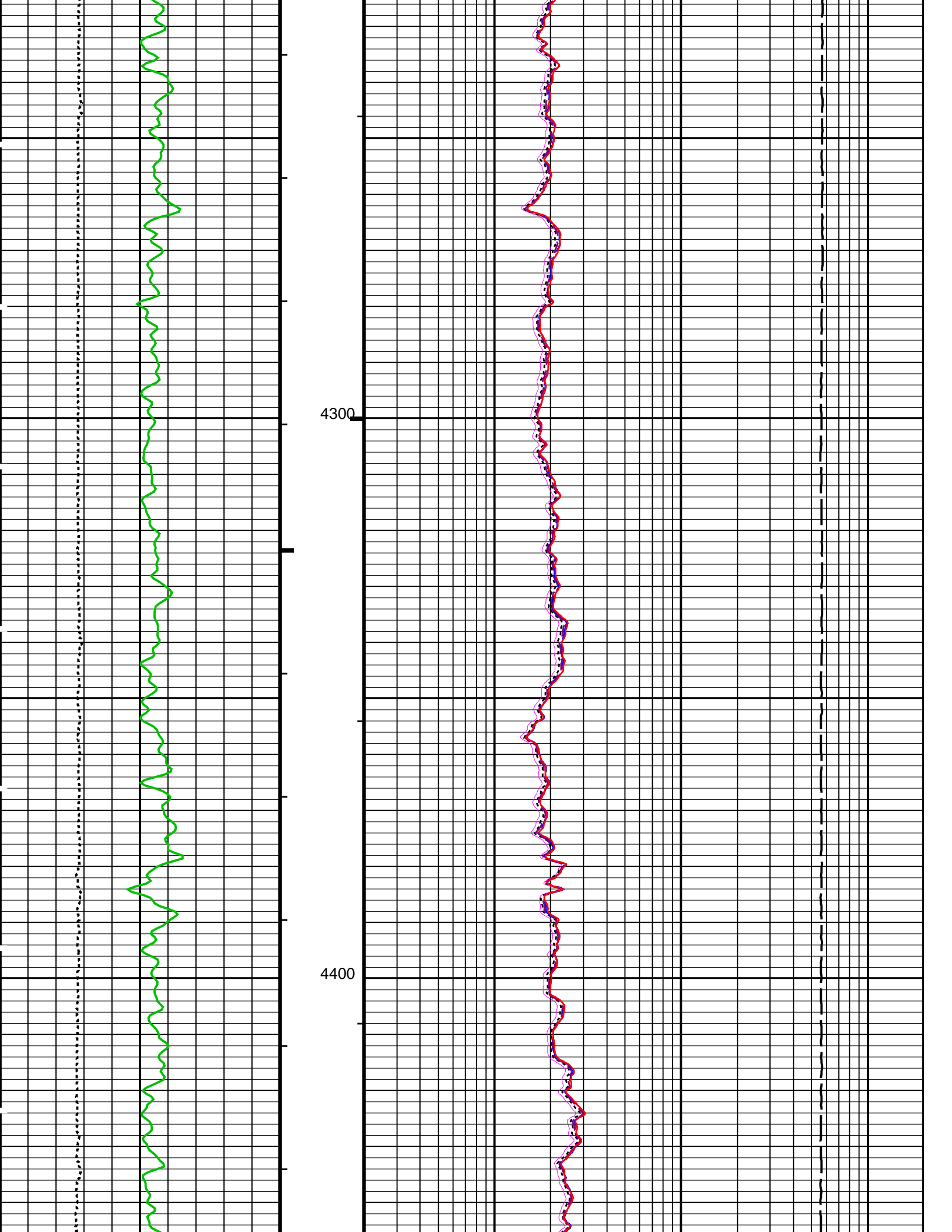


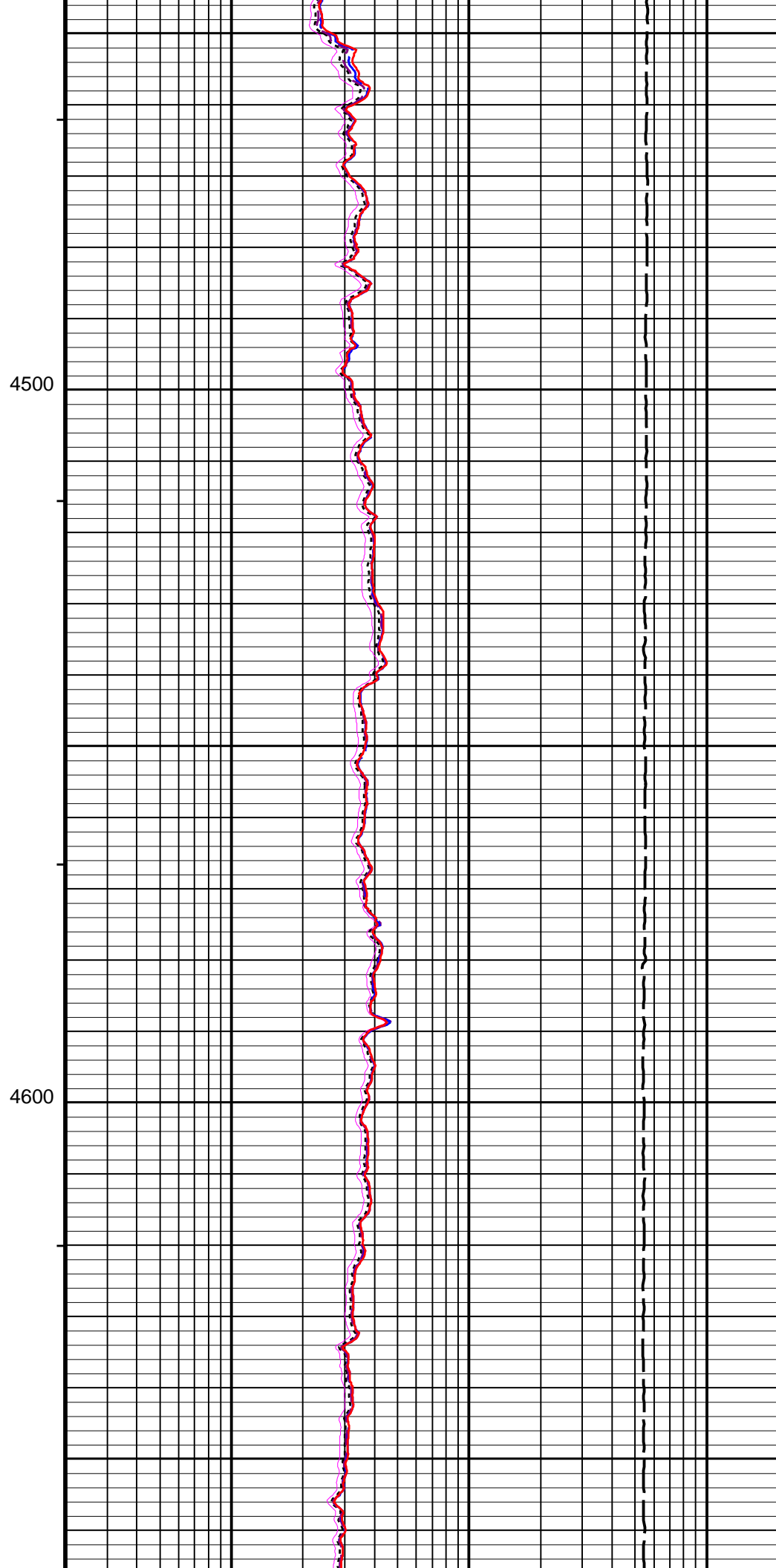
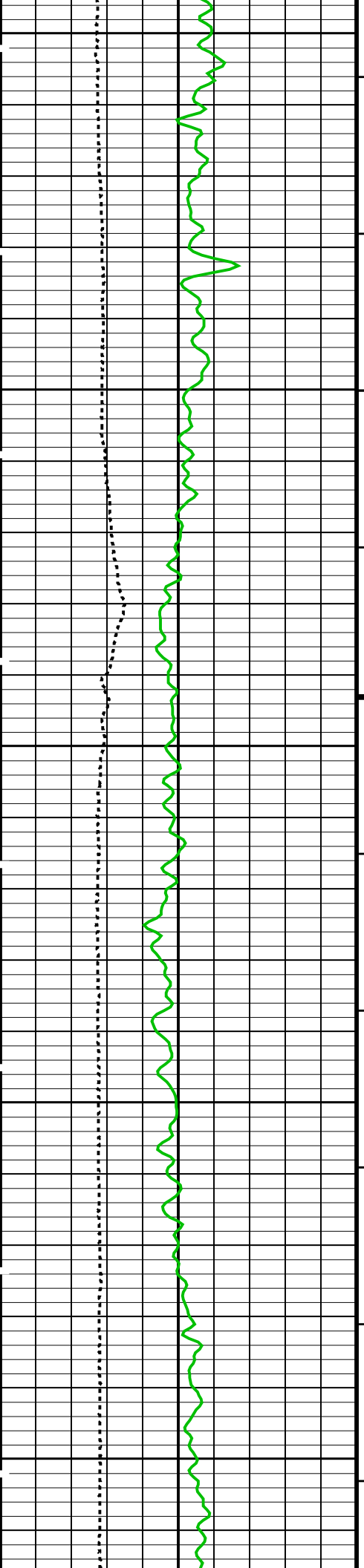


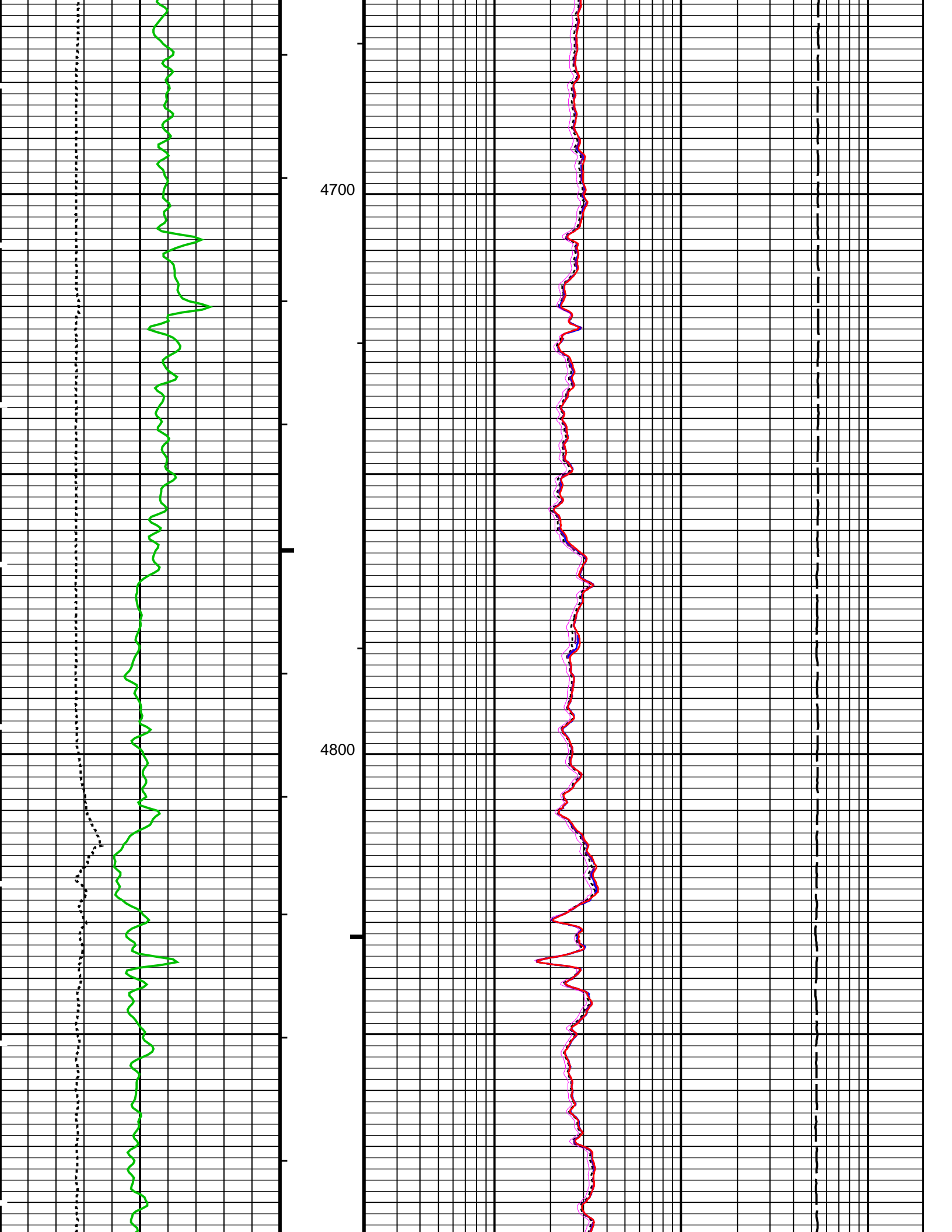


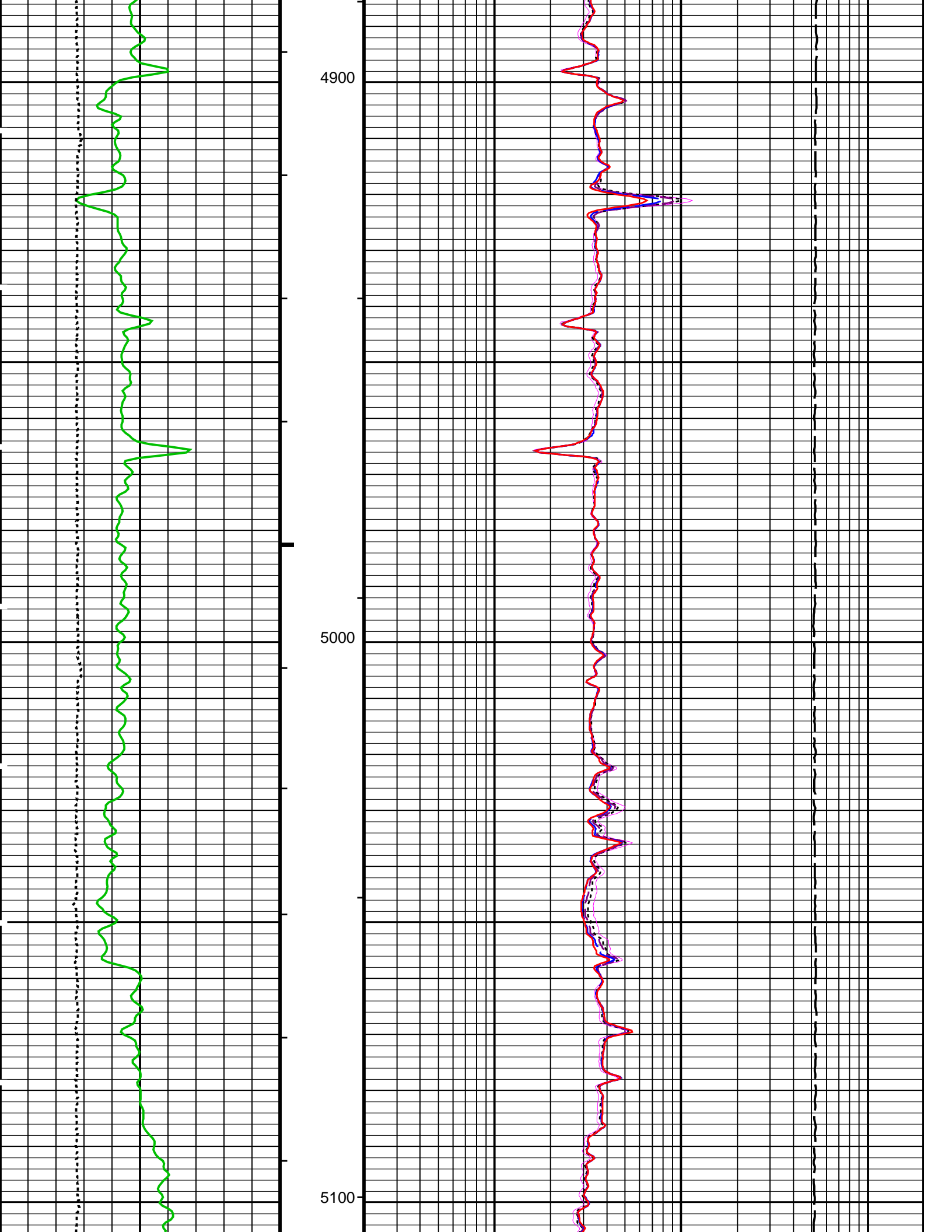


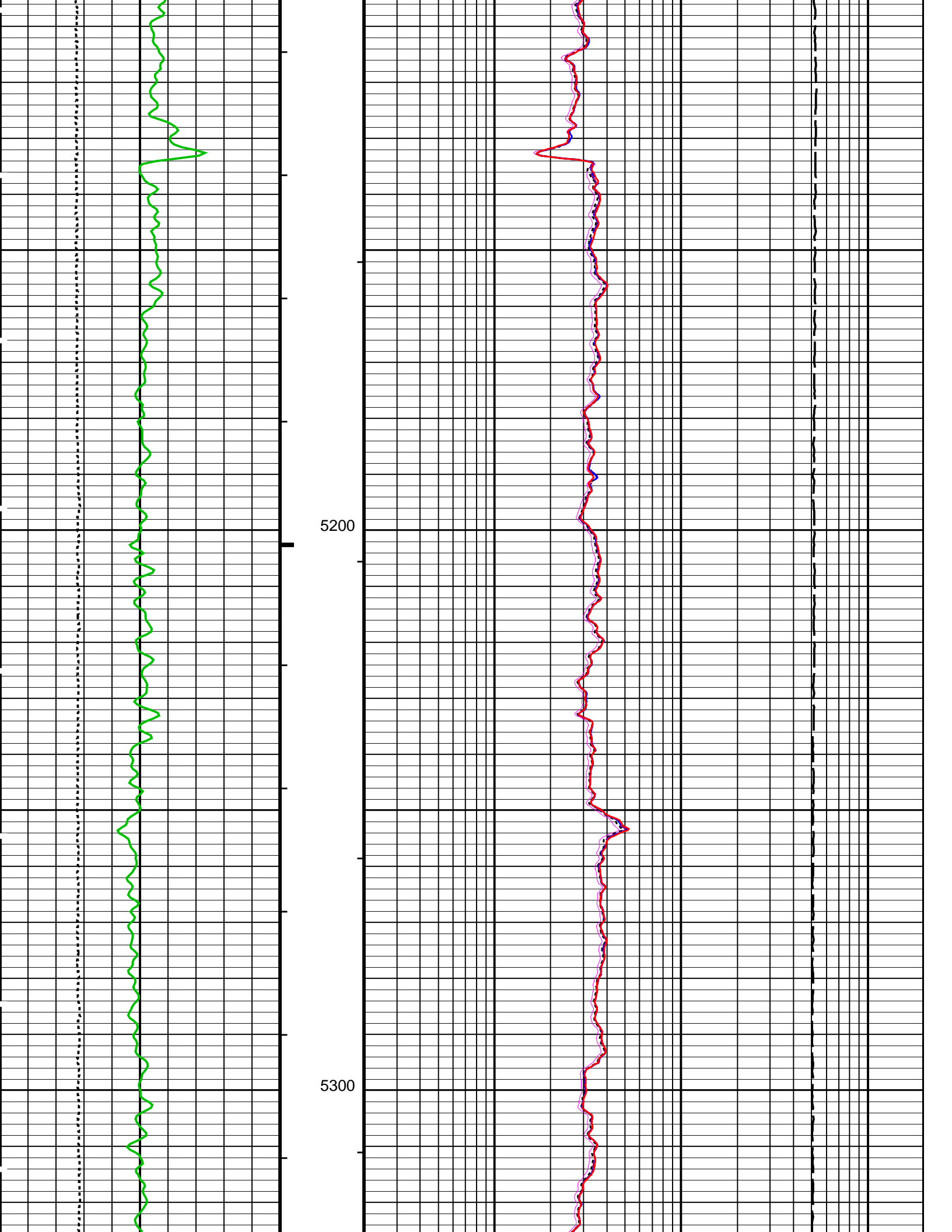


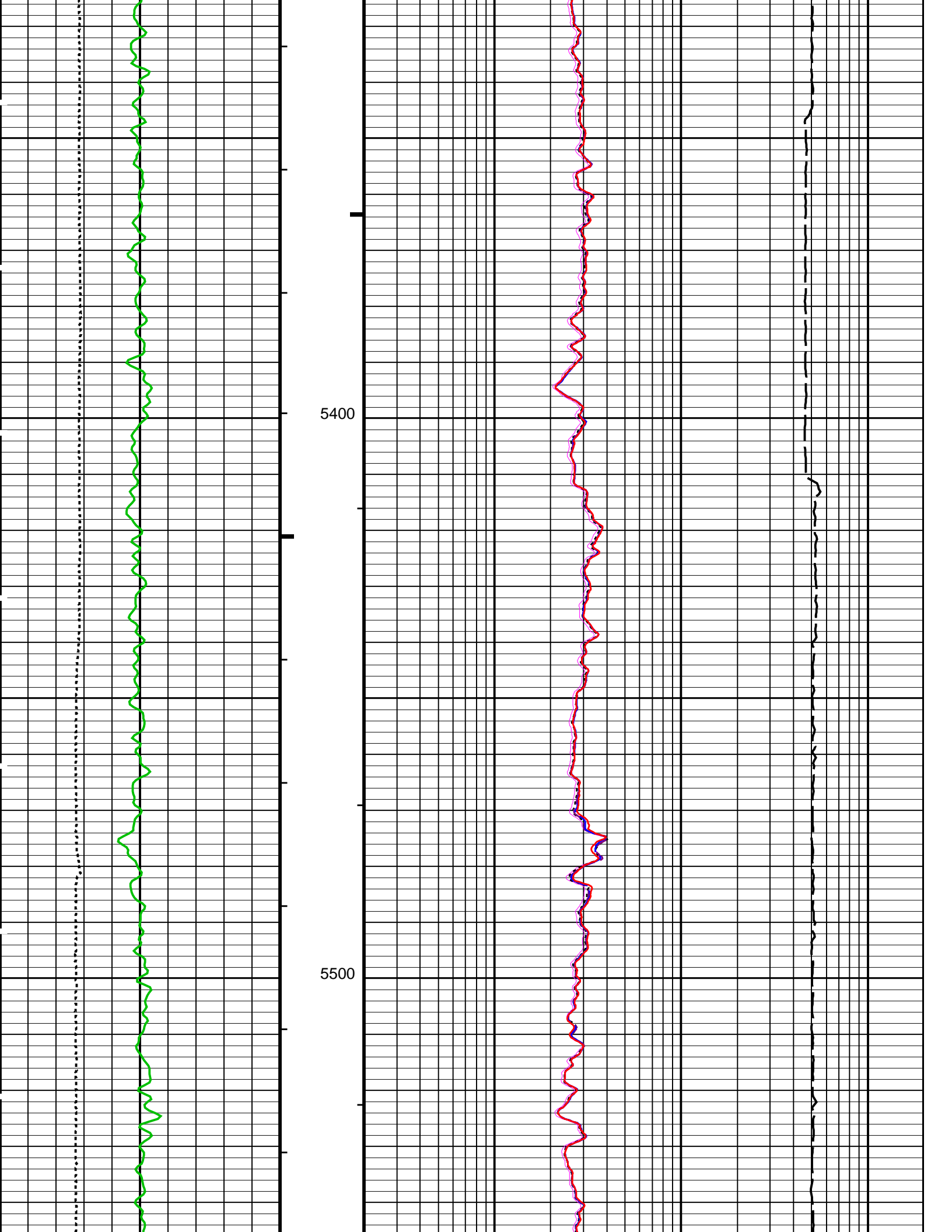


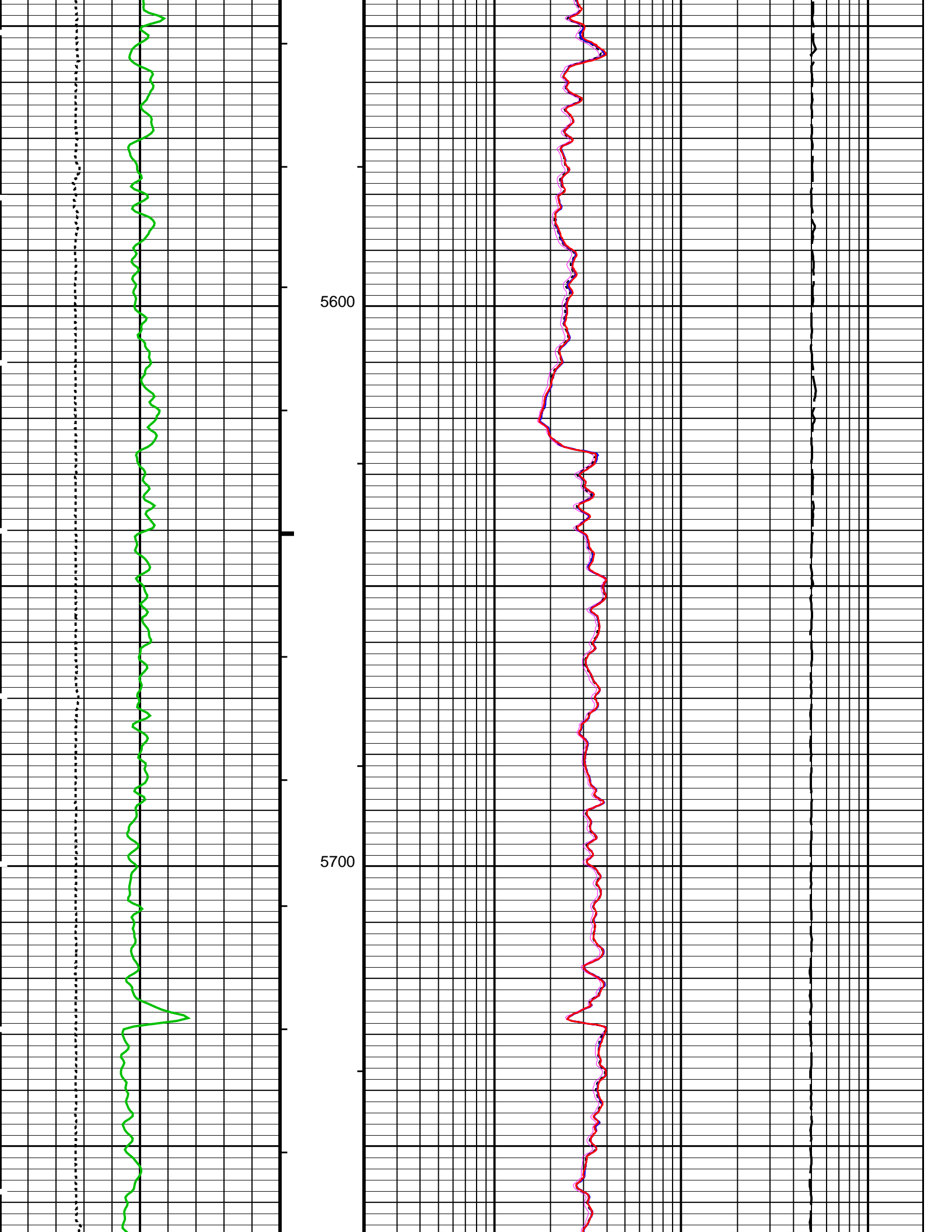


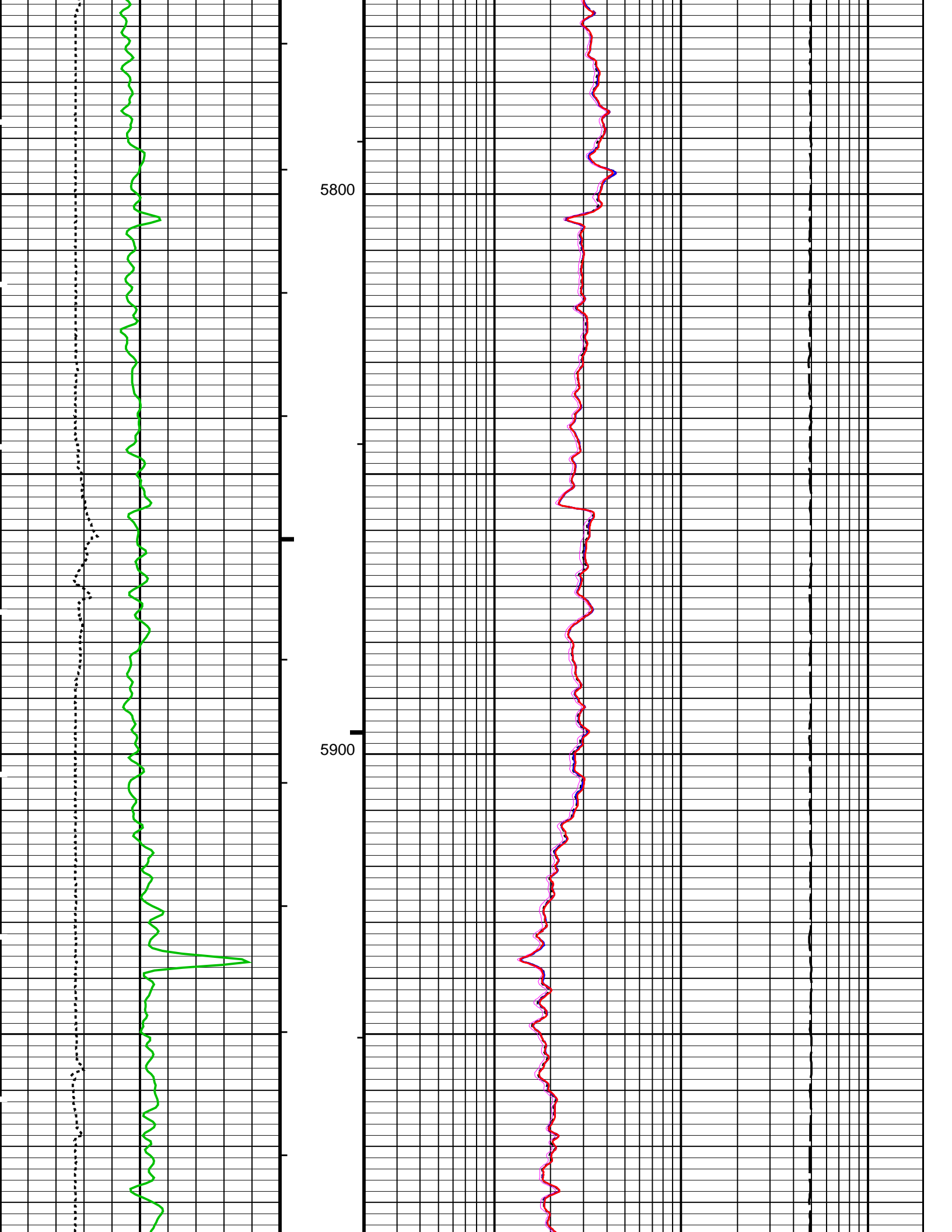


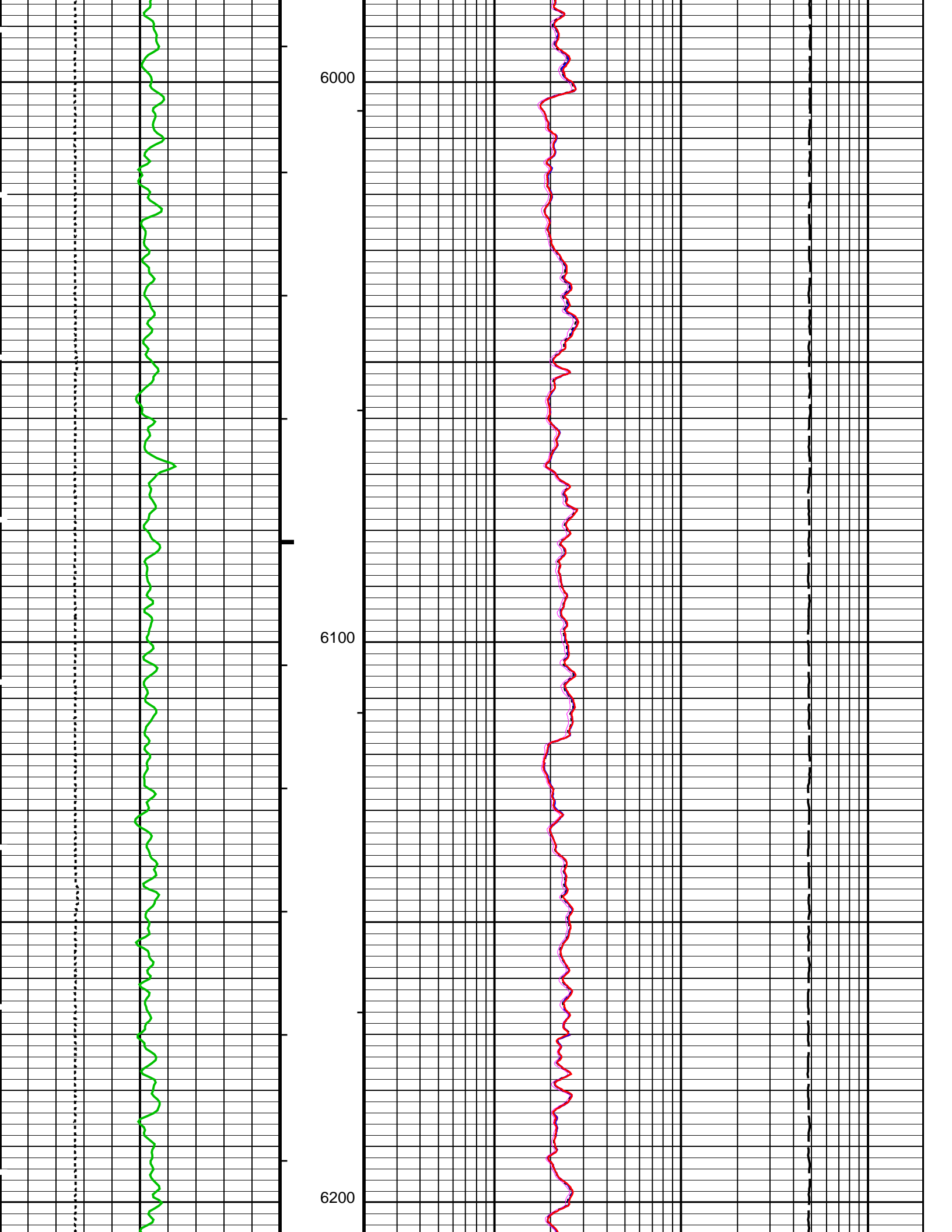


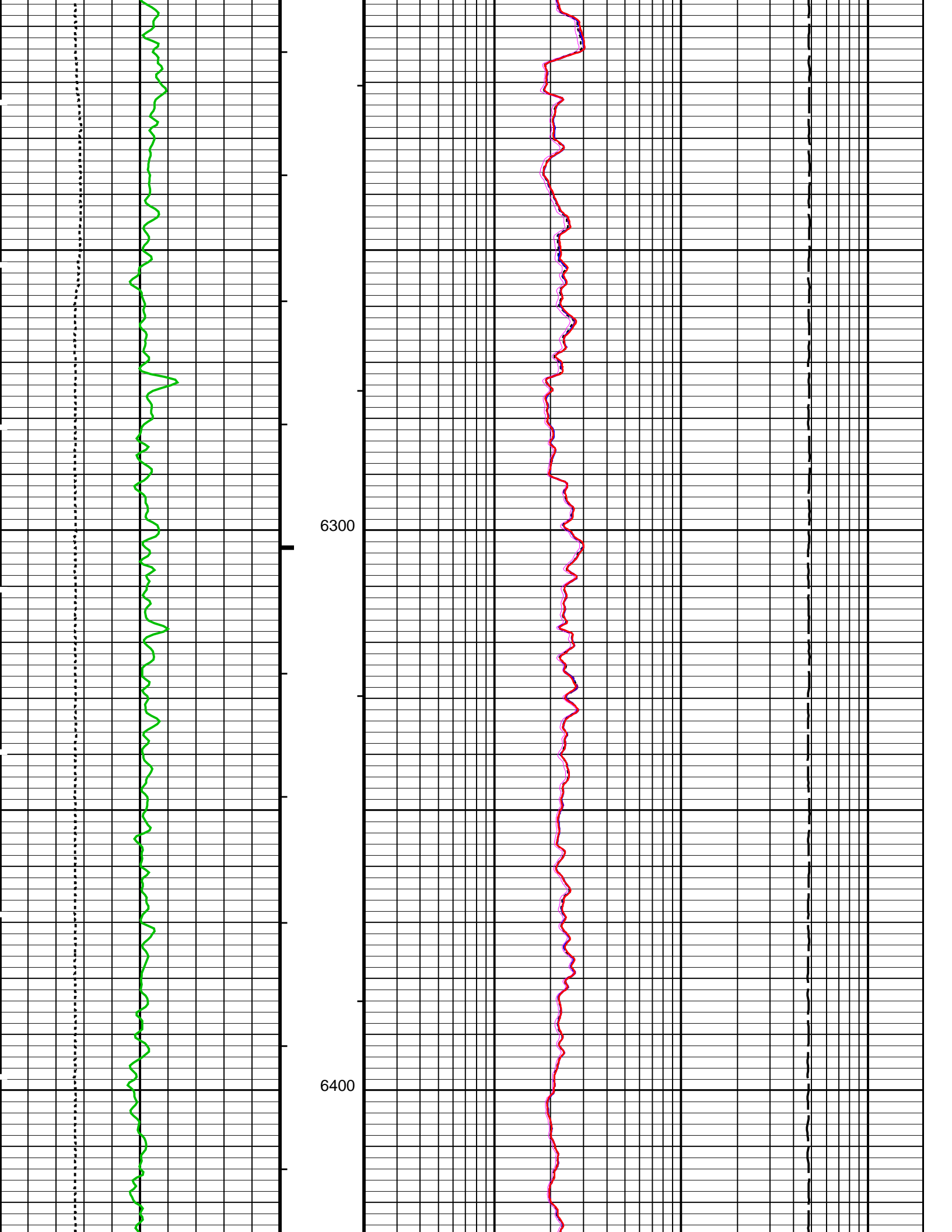


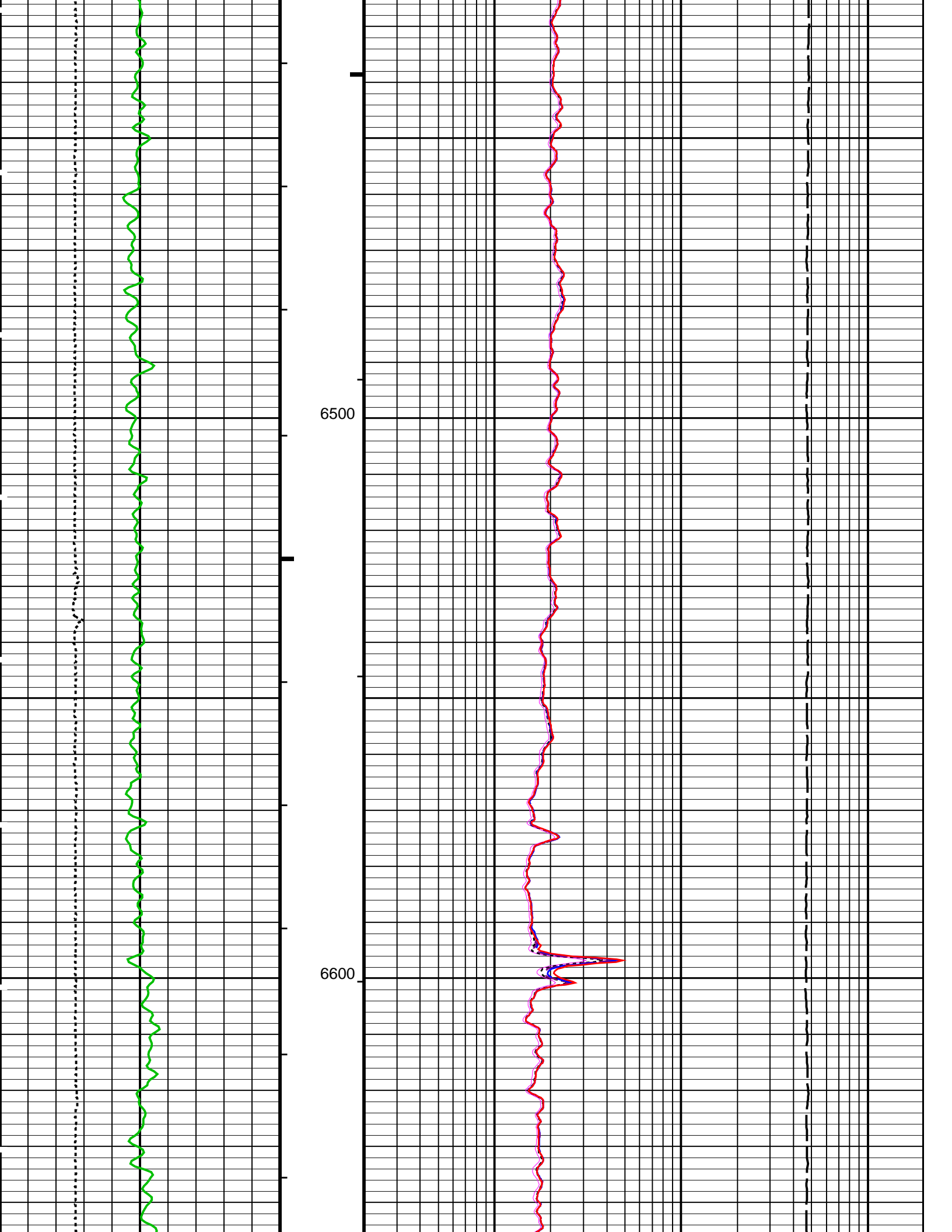


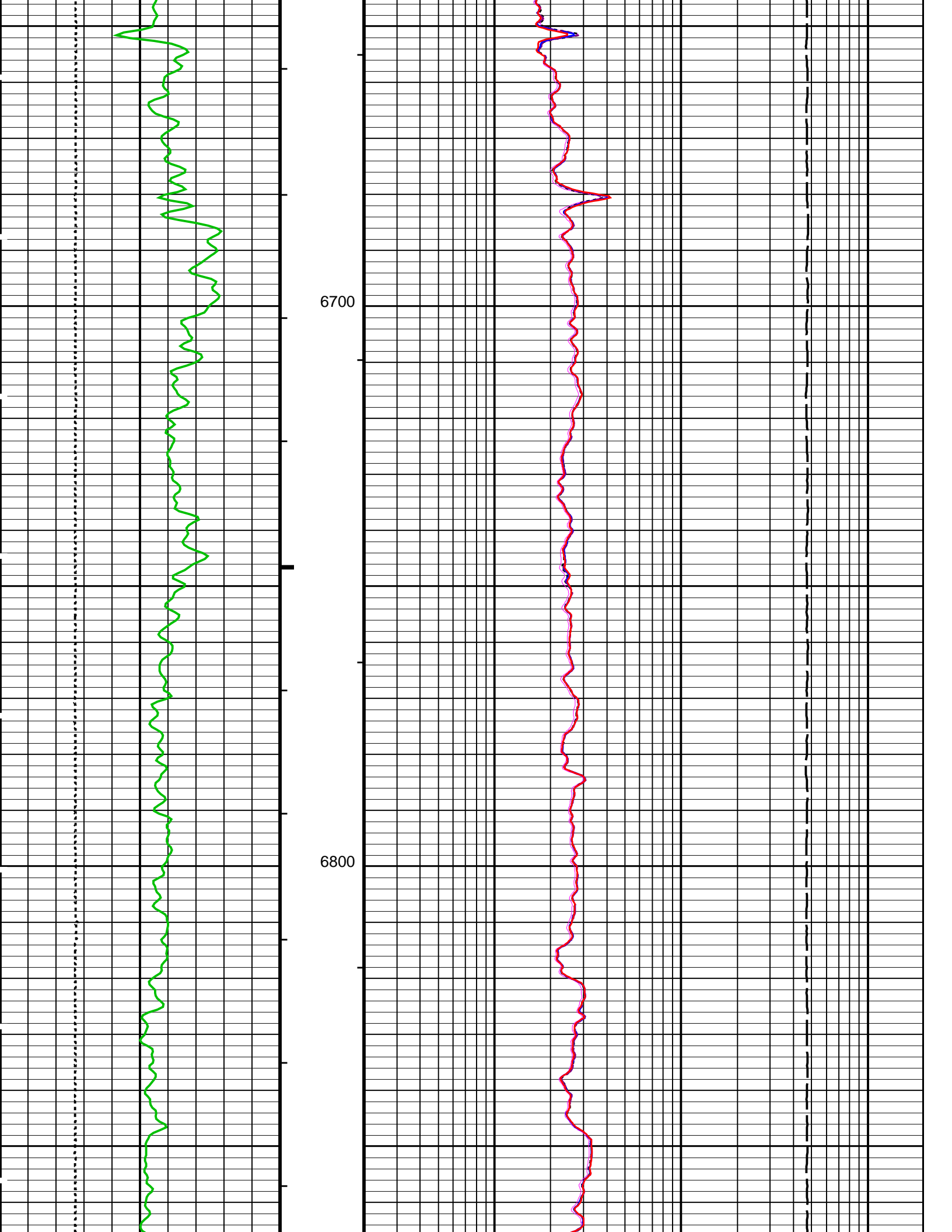


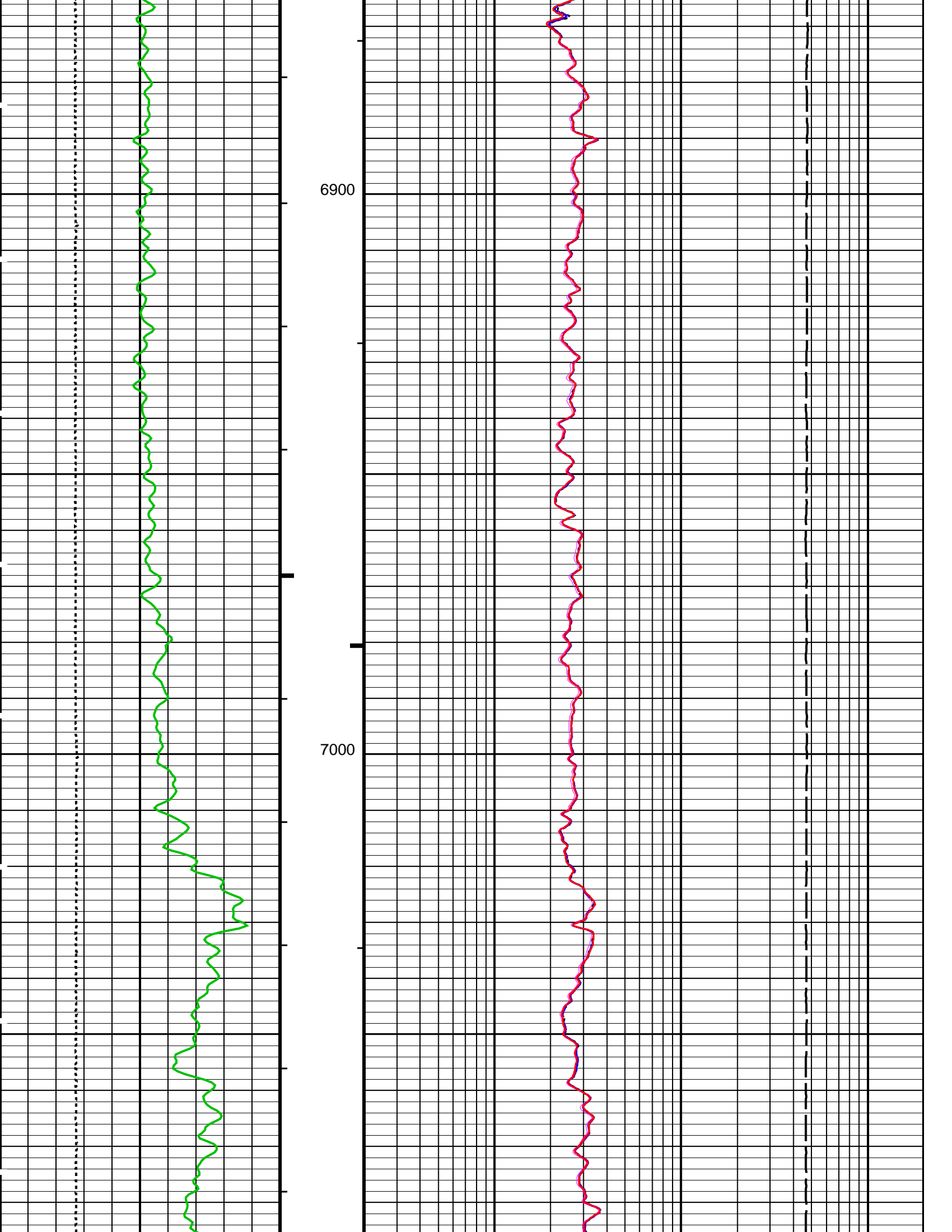


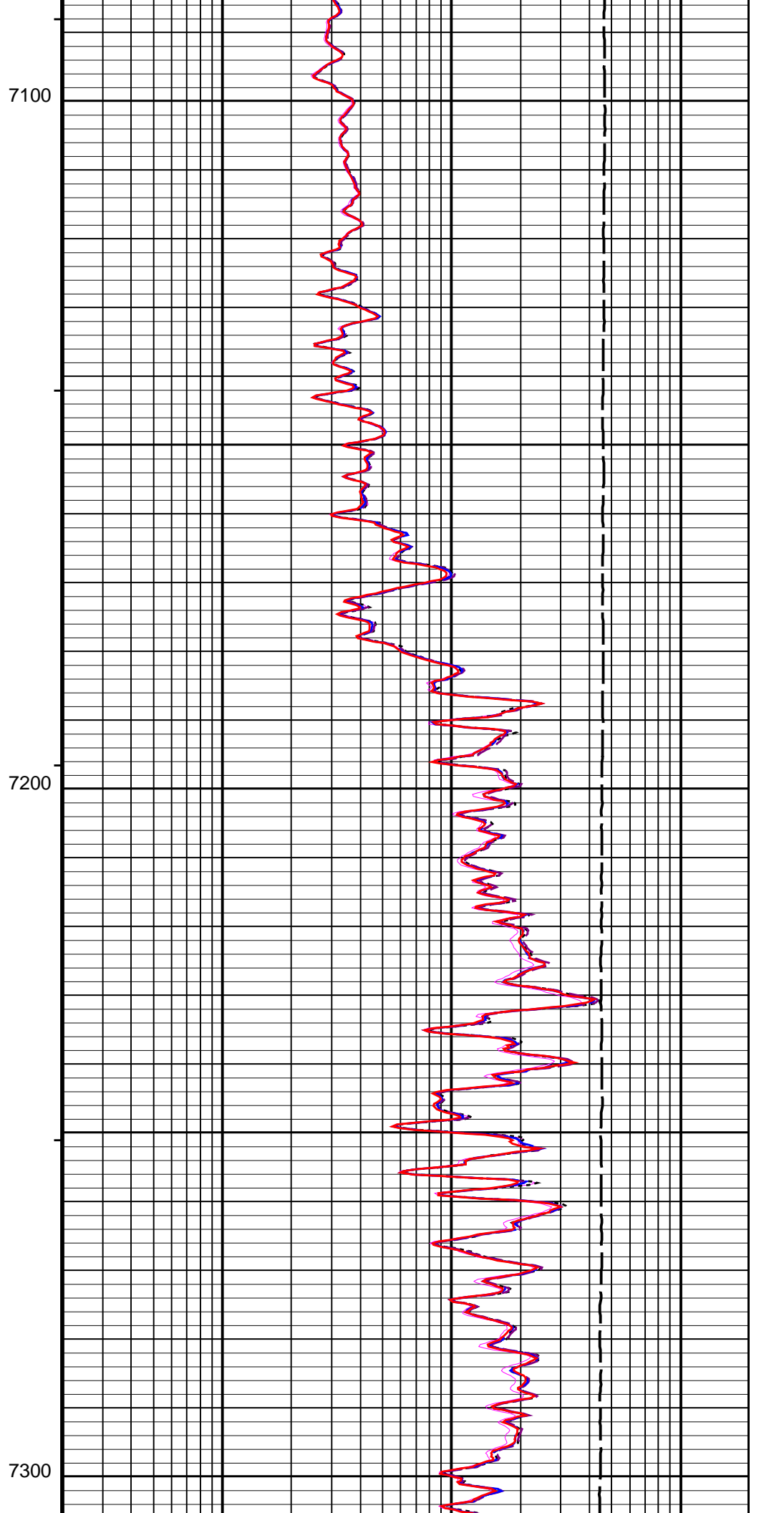
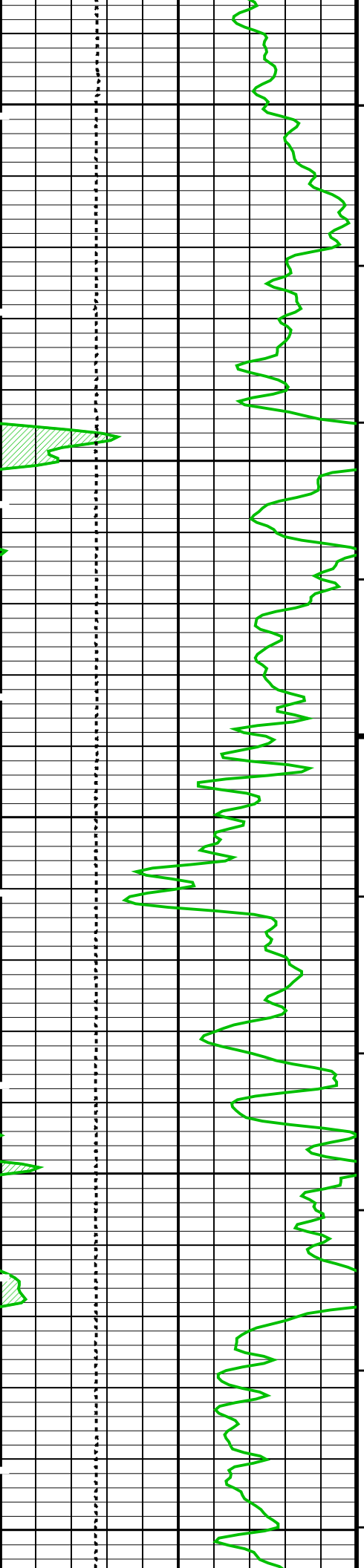


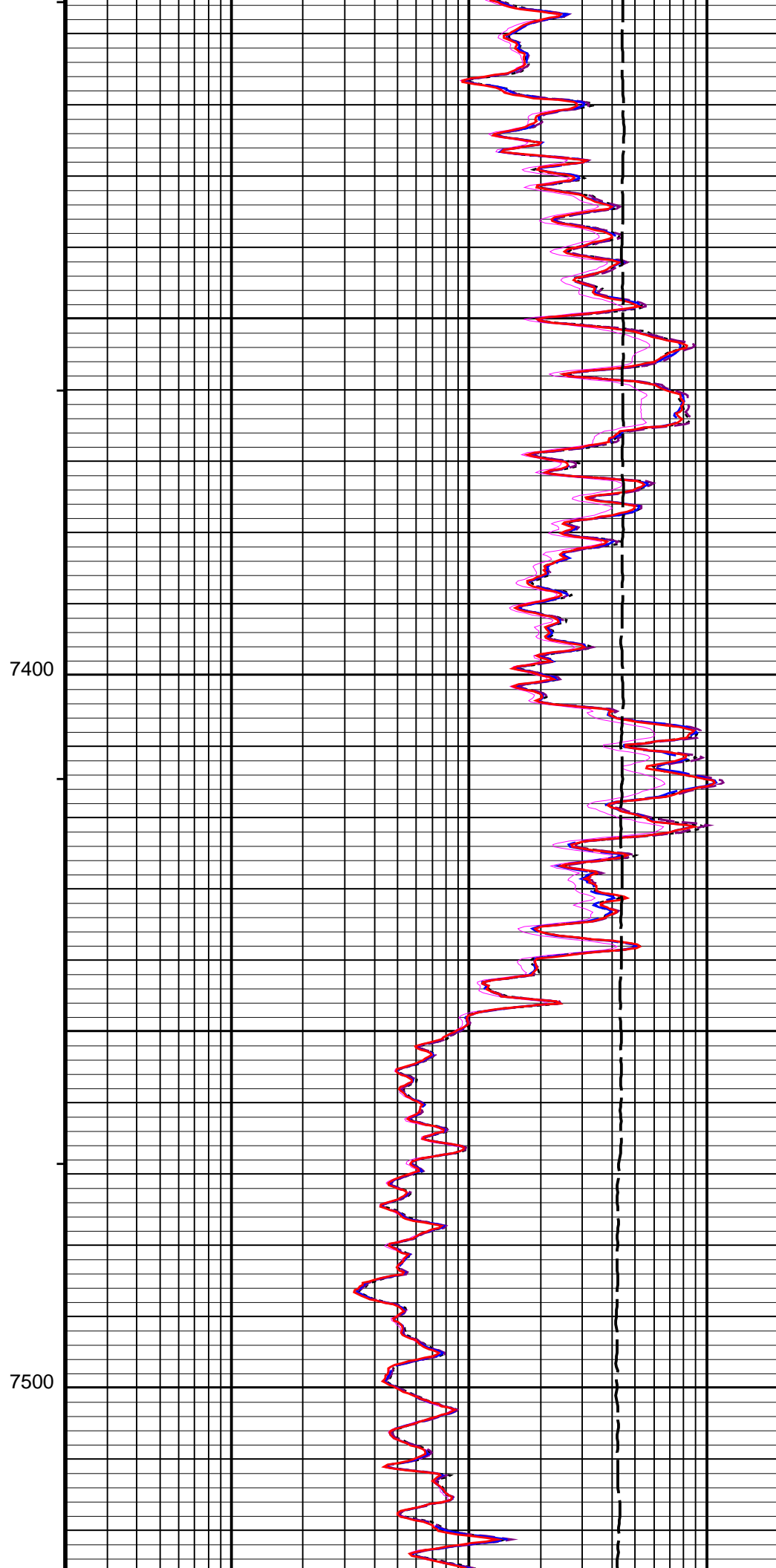
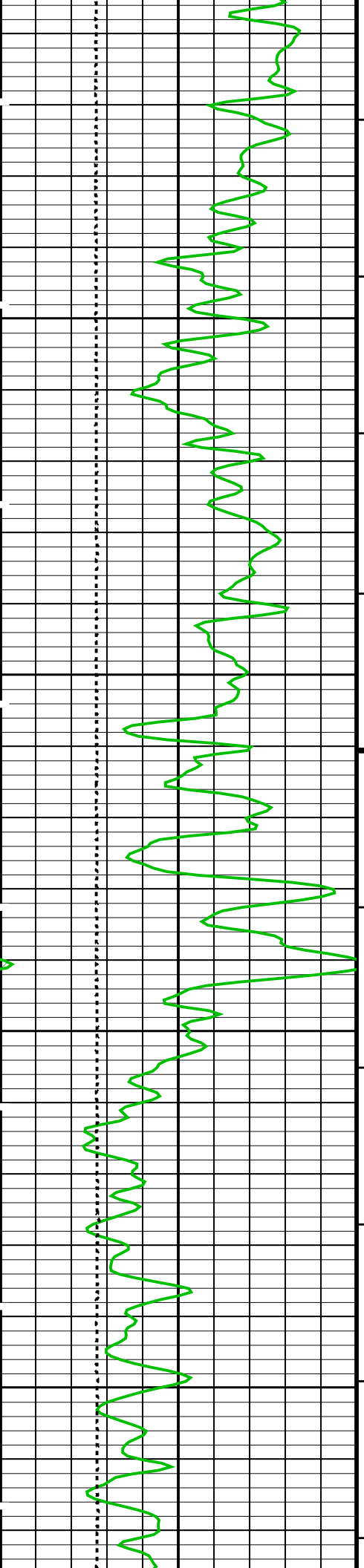


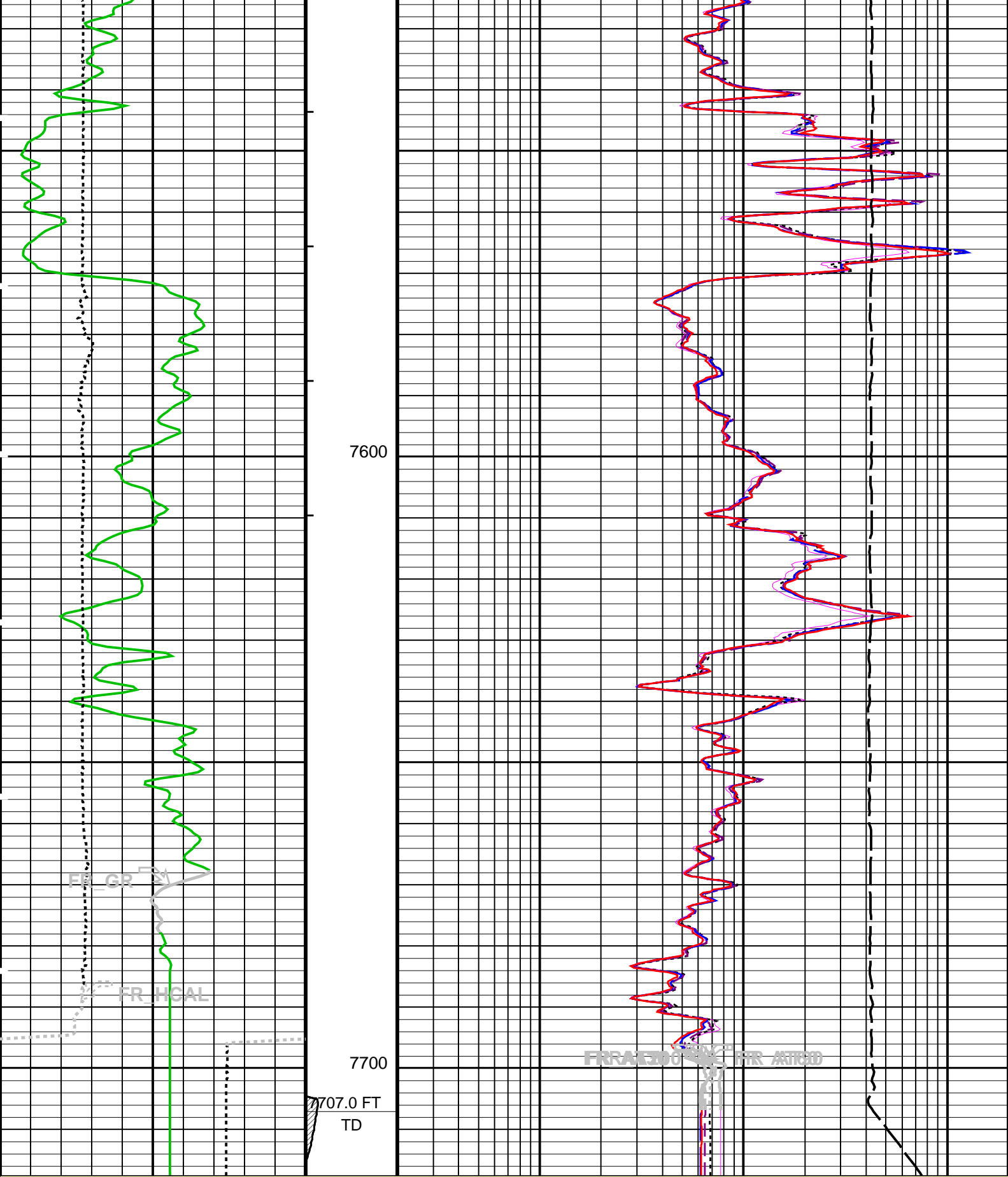












MAIN PASS: *** PLATFORM EXPRESS – ARRAY INDUCTION ***

Gamma Ray Backup	Cable Drag	AIT 10 Inch Investigation (AT10) (OHMM) 200
Gamma Ray (GR) (GAPI) 0 200	Tool/Tot. Drag 0.2	AIT 20 Inch Investigation (AT20) (OHMM) 200

6	Caliper (HCAL) (IN)	16	Stuck Stretch (STIT) 0 (F) 50	AIT 30 Inch Investigation (AT30) (OHMM)				
				0.2		200		
				AIT 60 Inch Investigation (AT60) (OHMM)				
				0.2		200		
				AIT 90 Inch Investigation (AT90) (OHMM)				
				0.2		200		
				Tension (TENS) (LBF)				
				10000	0			

PIP SUMMARY

- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
- └ Integrated Cement Volume Minor Pip Every 10 F3
- └ Integrated Cement Volume Major Pip Every 100 F3

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
AIT-M: Array Induction Tool - M			
ABHM	Array Induction Borehole Correction Mode	0_ComputeMudResistivity	
ABHV	Array Induction Borehole Correction Code Version Number	900	
ABLM	Array Induction Basic Logs Mode	6_One_Two_and_Four	
ABLV	Array Induction Basic Logs Code Version Number	223	
ACDE	Array Induction Casing Detection Enable	No	
ACEN	Array Induction Tool Centering Flag (in Borehole)	Eccentered	
ACSED	Array Induction Casing Shoe Estimated Depth	-50000	FT
AETP	Array Induction Enable Sonde Error Temp&Pres Corr	Yes	
AFRSV	Array Induction Response Set Version for Four ft Resolution	41.70.24.20	
AIGS	Array Induction Select Akima Interpolation Gating	On	
AMRF	Array Induction Mud Resistivity Factor	1	
AORSV	Array Induction Response Set Version for One ft Resolution	41.70.24.20	
ARFV	Array Induction Radial Profiling Code Version Number	701	
ARPV	Array Induction Radial Parametrization Code Version Number	232	
ASTA	Array Induction Tool Standoff	0.25	IN
ATRSV	Array Induction Response Set Version for Two ft Resolution	41.70.24.20	
ATSE	Array Induction Temperature Selection(Sonde Error Correction)	Internal	
AULV	Array Induction User Level Control	Normal	
AZRSV	Array Induction Response Set Version for Z Resolution	00.10.25.00	
BHT	Bottom Hole Temperature (used in calculations)	208	DEGF
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68	DEGF
HILTH-FTB: High resolution Integrated Logging Tool-DTS			
BHT	Bottom Hole Temperature (used in calculations)	208	DEGF
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68	DEGF
HNGS-BA: Hostile Natural Gamma Ray Sonde			
BHT	Bottom Hole Temperature (used in calculations)	208	DEGF
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68	DEGF
MAPC-B: Multimode Array Sonic Power Cartridge			
BHT	Bottom Hole Temperature (used in calculations)	208	DEGF
BS	Bit Size	8.750	IN
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	

SHT	EDTC-B: Enhanced DTS Cartridge	Surface Hole Temperature	68	DEGF
BHT		Bottom Hole Temperature (used in calculations)	208	DEGF
GCSE		Generalized Caliper Selection	HCAL	
GDEV		Average Angular Deviation of Borehole from Normal	0	DEG
GGRD		Geothermal Gradient	0.01	DF/F
GRSE		Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE		Generalized Temperature Selection	HSTS_HTEM	
SHT		Surface Hole Temperature	68	DEGF
	DIR: Directional Survey Computation			
SPVD		TVD of Starting Point	0	FT
TIMD		Along-hole depth of Tie-in Point	0	FT
TIVD		TVD of Tie-in Point	0	FT
	DIRPLOT: Enhanced Directional Plots			
BHT		Bottom Hole Temperature (used in calculations)	208	DEGF
GCSE		Generalized Caliper Selection	HCAL	
GDEV		Average Angular Deviation of Borehole from Normal	0	DEG
GGRD		Geothermal Gradient	0.01	DF/F
GRSE		Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE		Generalized Temperature Selection	HSTS_HTEM	
SHT		Surface Hole Temperature	68	DEGF
	FEQL: Formation Evaluation Quick Look			
FEXP		Form Factor Exponent	2	
FNUM		Form Factor Numerator	1	
	HOLEV: Integrated Hole/Cement Volume			
BHT		Bottom Hole Temperature (used in calculations)	208	DEGF
FCD		Future Casing (Outer) Diameter	7	IN
GCSE		Generalized Caliper Selection	HCAL	
GDEV		Average Angular Deviation of Borehole from Normal	0	DEG
GGRD		Geothermal Gradient	0.01	DF/F
GRSE		Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE		Generalized Temperature Selection	HSTS_HTEM	
HVCS		Integrated Hole Volume Caliper Selection	AUTOMATIC	
SHT		Surface Hole Temperature	68	DEGF
	PERT: Preliminary Evaluation - Real Time			
BHT		Bottom Hole Temperature (used in calculations)	208	DEGF
FEXP		Form Factor Exponent	2	
FNUM		Form Factor Numerator	1	
GCSE		Generalized Caliper Selection	HCAL	
GDEV		Average Angular Deviation of Borehole from Normal	0	DEG
GGRD		Geothermal Gradient	0.01	DF/F
GRSE		Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE		Generalized Temperature Selection	HSTS_HTEM	
SHT		Surface Hole Temperature	68	DEGF
	STI: Stuck Tool Indicator			
LBFR		Trigger for MAXIS First Reading Label	TDL	
STKT		STI Stuck Threshold	2.5	FT
TDD		Total Depth - Driller	7700.00	FT
TDL		Total Depth - Logger	7707.00	FT
	System and Miscellaneous			
DFD		Drilling Fluid Density	9.20	LB/G
DO		Depth Offset for Playback	0.0	FT
DORL		Depth Offset for Repeat Analysis	0.0	FT
FLEV		Fluid Level	-50000.00	FT
MST		Mud Sample Temperature	-50000.00	DEGF
PP		Playback Processing	OFF	
TD		Total Depth	7707	FT

Format: GRES Vertical Scale: 5" per 100' Graphics File Created: 09-Jan-2013 03:46

OP System Version: 19C1-222

AIT-M	19C1-222	HILTH-FTB	19C1-222
HNGC-B	HFE-5203-OP19.1-NUCL	HNGS-BA	HFE-5203-OP19.1-NUCL
GPIT-F	19C1-222	PPC1	19C1-222
MAXS-B	19C1-222	MAPC-B	19C1-222
EDTC-B	19C1-222		

Input DLIS Files

DEFAULT AIT_TLD_MCFL_CNL_IS_017PUP FN:16 PRODUCER 09-Jan-2013 03:36 7717.5 FT 1767.5 FT

Output DLIS Files

DEFAULT AIT_TLD_MCFL_CNL_IS_019PUP FN:18 PRODUCER 09-Jan-2013 03:46

MAXIS Field Log

Input DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_IS_018PUP	FN:17	PRODUCER	09-Jan-2013 03:43	7705.5 FT	6956.5 FT
DEFAULT	AIT_TLD_MCFL_CNL_IS_017PUP	FN:16	PRODUCER	09-Jan-2013 03:36	7717.5 FT	1767.5 FT

Output DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_IS_019PUP	FN:18	PRODUCER	09-Jan-2013 03:46
---------	----------------------------	-------	----------	-------------------

Integrated Hole/Cement Volume Summary

Hole Volume = 302.65 F3

Cement Volume = 102.35 F3 (assuming 7.00 IN casing O.D.)

Computed from 7705.5 FT to 6956.5 FT using data channel(s) CRD1_PPC1 CRD2_PPC1 CRD3_PPC1 CRD4_PPC1

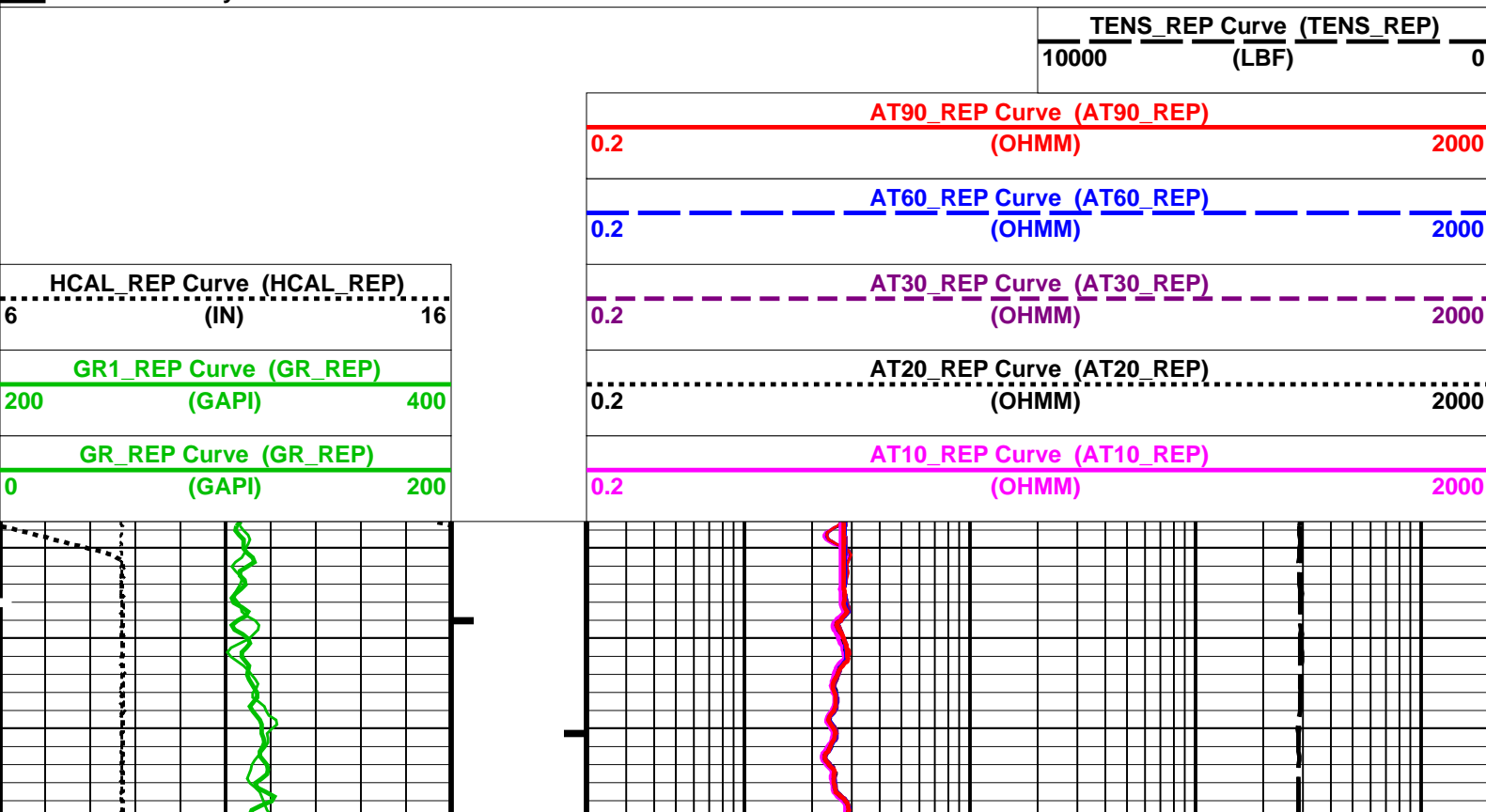
OP System Version: 19C1-222

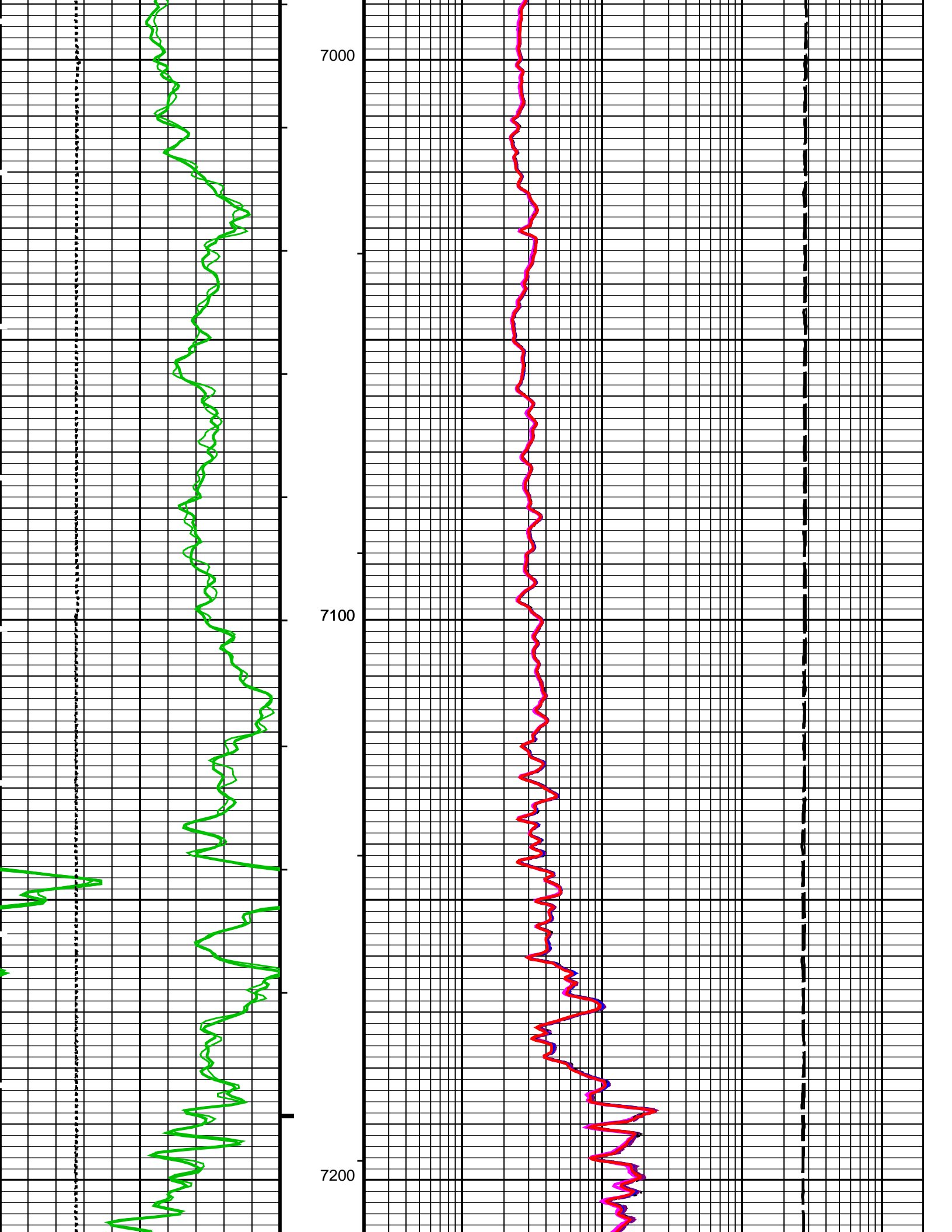
AIT-M	19C1-222	HILTH-FTB	19C1-222
HNGC-B	HFE-5203-OP19.1-NUCL	HNGS-BA	HFE-5203-OP19.1-NUCL
GPIT-F	19C1-222	PPC1	19C1-222
MAXS-B	19C1-222	MAPC-B	19C1-222
EDTC-B	19C1-222		

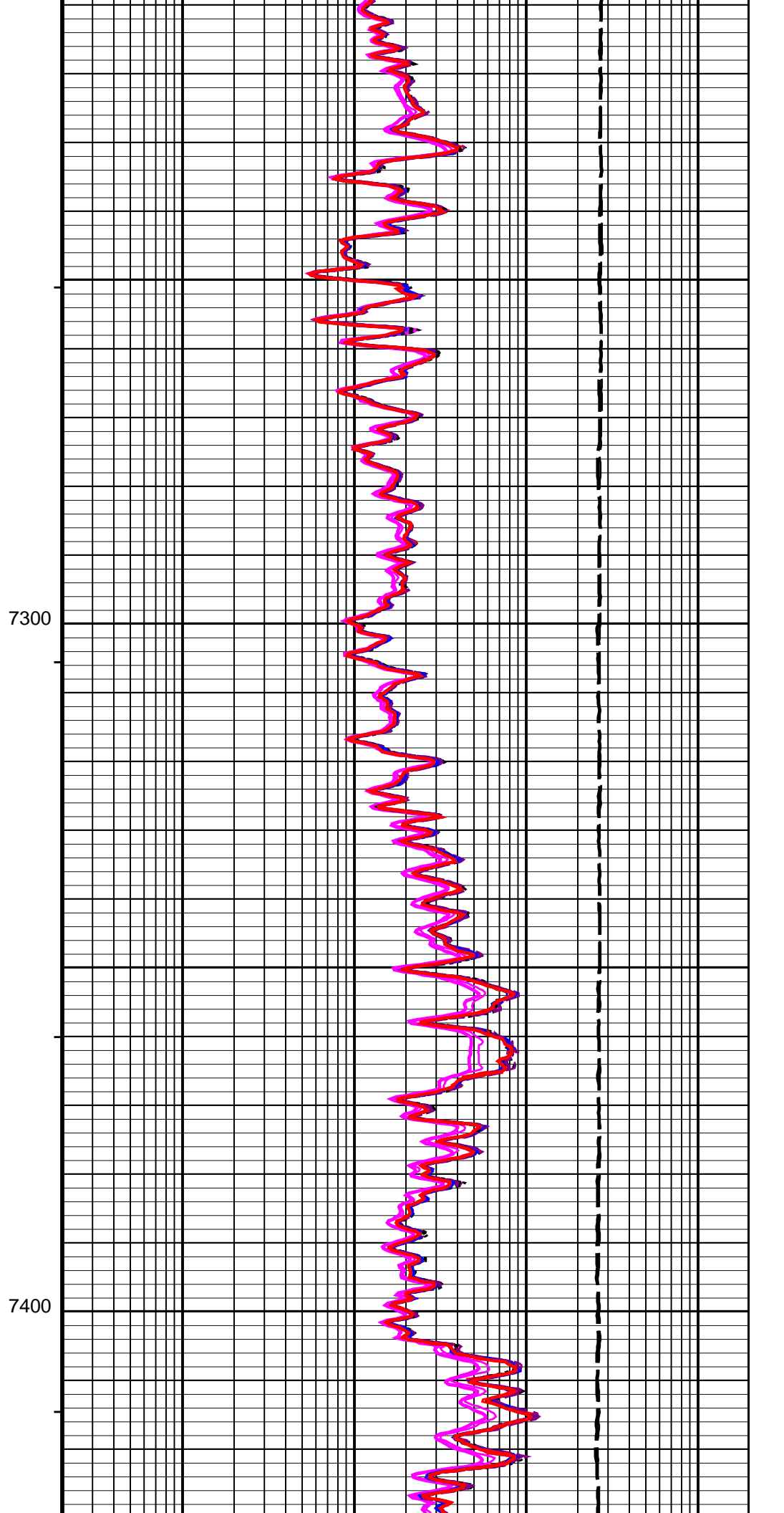
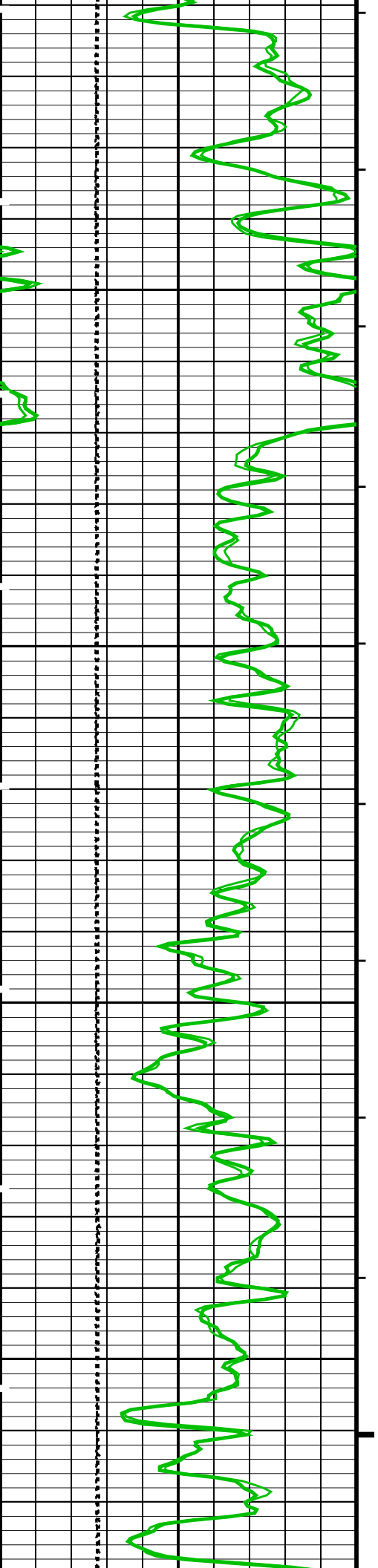
PIP SUMMARY

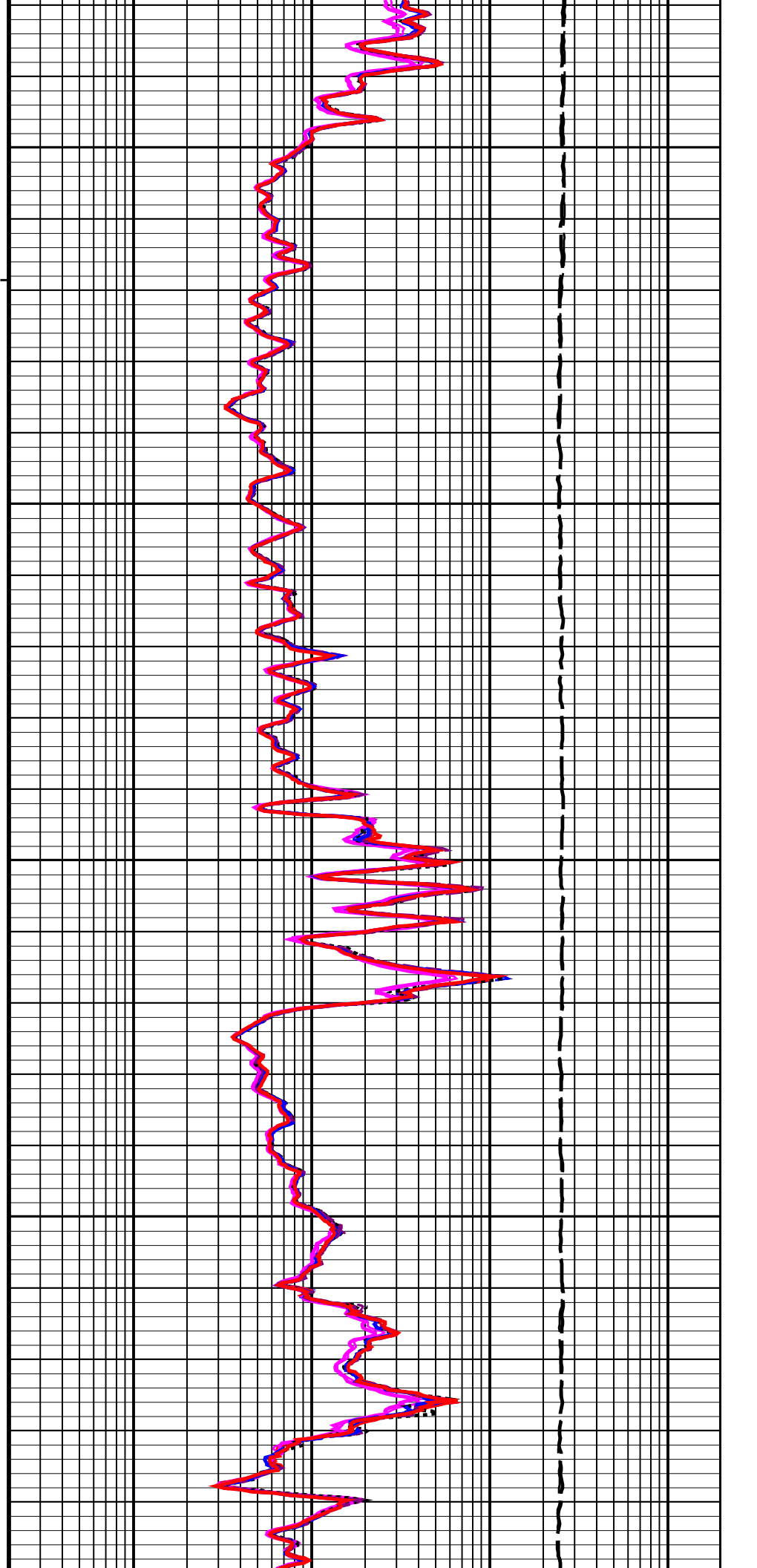
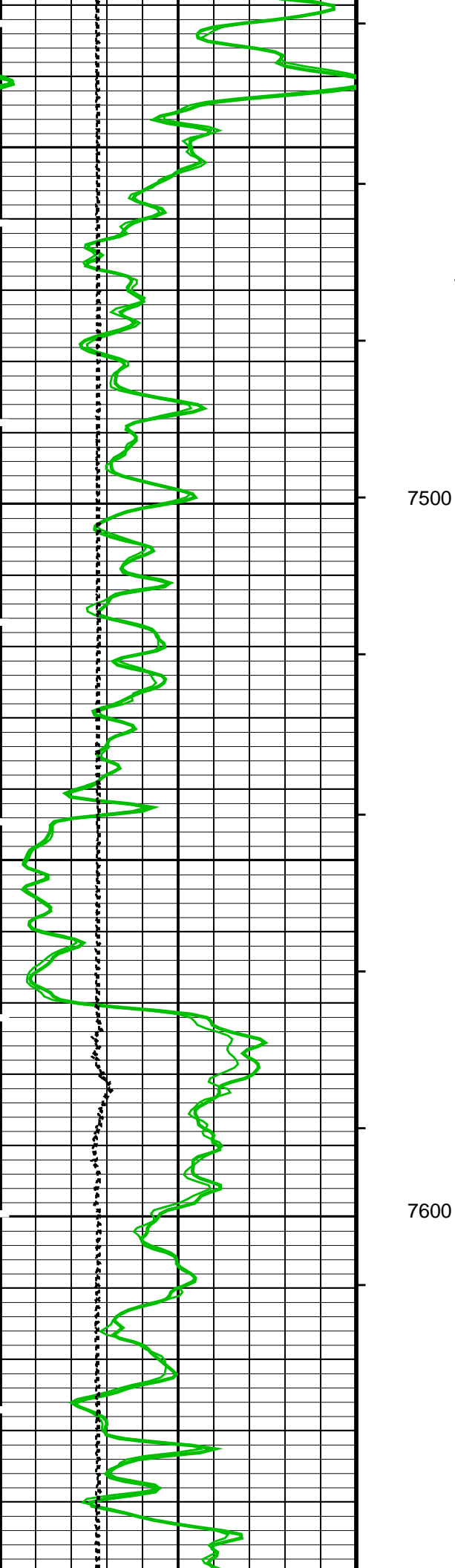
- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
- └ Integrated Cement Volume Minor Pip Every 10 F3
- └ Integrated Cement Volume Major Pip Every 100 F3

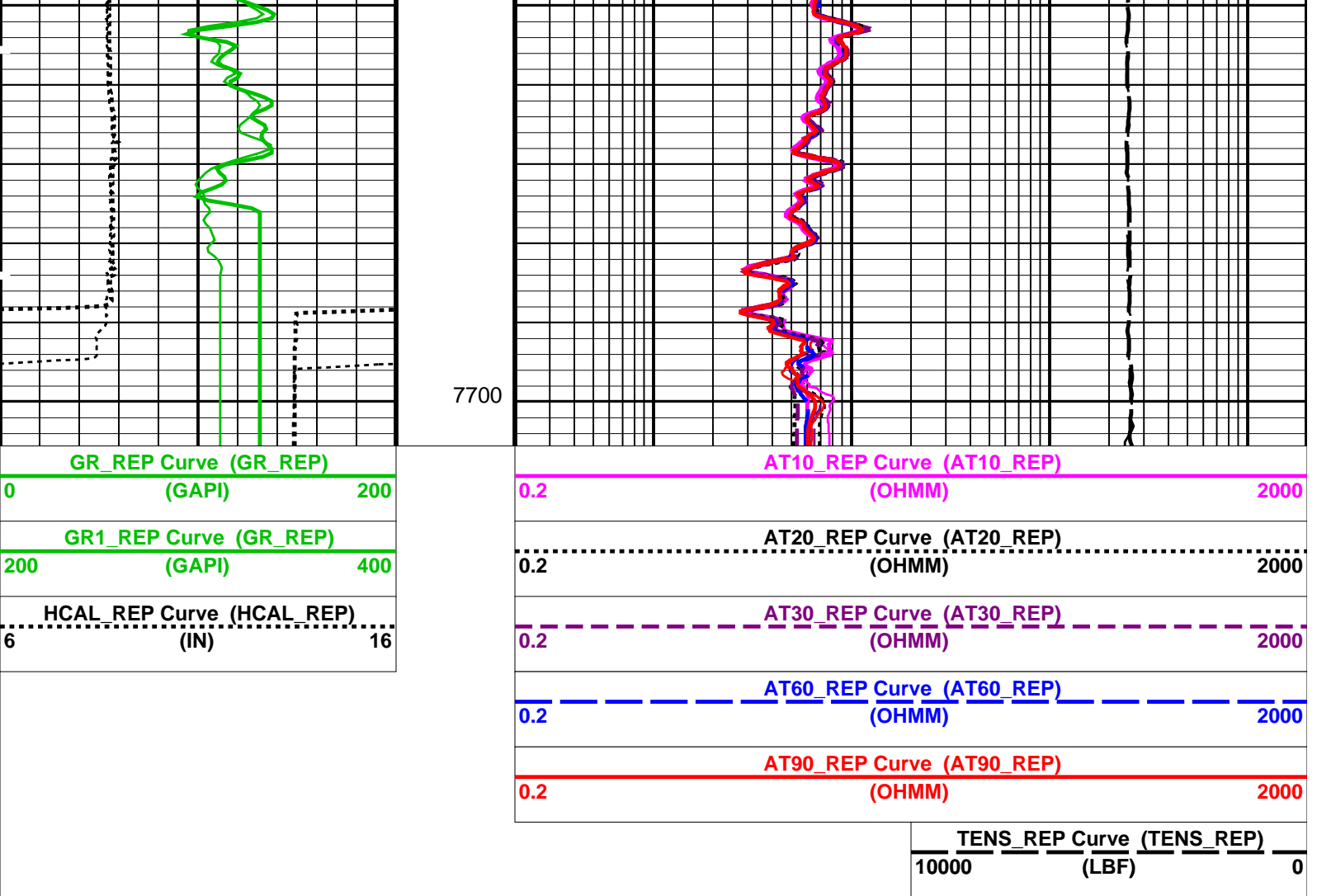
Time Mark Every 60 S











PIP SUMMARY

- ┌ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
- ┌ Integrated Cement Volume Minor Pip Every 10 F3
- └ Integrated Cement Volume Major Pip Every 100 F3

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
AIT-M: Array Induction Tool - M			
ABHM	Array Induction Borehole Correction Mode	0_ComputeMudResistivity	
ABHV	Array Induction Borehole Correction Code Version Number	900	
ABLM	Array Induction Basic Logs Mode	6_One_Two_and_Four	
ABLV	Array Induction Basic Logs Code Version Number	223	
ACDE	Array Induction Casing Detection Enable	No	
ACEN	Array Induction Tool Centering Flag (in Borehole)	Eccentered	
ACSED	Array Induction Casing Shoe Estimated Depth	-50000	FT
AETP	Array Induction Enable Sonde Error Temp&Pres Corr	Yes	
AFRSV	Array Induction Response Set Version for Four ft Resolution	41.70.24.20	
AIGS	Array Induction Select Akima Interpolation Gating	On	
AMRF	Array Induction Mud Resistivity Factor	1	
AORSV	Array Induction Response Set Version for One ft Resolution	41.70.24.20	
ARFV	Array Induction Radial Profiling Code Version Number	701	
ARPV	Array Induction Radial Parametrization Code Version Number	232	
ASTA	Array Induction Tool Standoff	0.25	IN
ATRSV	Array Induction Response Set Version for Two ft Resolution	41.70.24.20	
ATSE	Array Induction Temperature Selection(Sonde Error Correction)	Internal	
AULV	Array Induction User Level Control	Normal	
AZRSV	Array Induction Response Set Version for Z Resolution	00.10.25.00	
BHT	Bottom Hole Temperature (used in calculations)	208	DEGF
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	

STGE	Generalized Temperature Selection	HSTS_HTEM	68	DEGF
SHT	Surface Hole Temperature			
HILTH-FTB: High resolution Integrated Logging Tool-DTS				
BHT	Bottom Hole Temperature (used in calculations)		208	DEGF
FEXP	Form Factor Exponent		2	
FNUM	Form Factor Numerator		1	
GCSE	Generalized Caliper Selection		HCAL	
GDEV	Average Angular Deviation of Borehole from Normal		0	DEG
GGRD	Geothermal Gradient		0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9		
GTSE	Generalized Temperature Selection	HSTS_HTEM		
SHT	Surface Hole Temperature		68	DEGF
HNCS-BA: Hostile Natural Gamma Ray Sonde				
BHT	Bottom Hole Temperature (used in calculations)		208	DEGF
GCSE	Generalized Caliper Selection		HCAL	
GDEV	Average Angular Deviation of Borehole from Normal		0	DEG
GGRD	Geothermal Gradient		0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9		
GTSE	Generalized Temperature Selection	HSTS_HTEM		
SHT	Surface Hole Temperature		68	DEGF
MAPC-B: Multimode Array Sonic Power Cartridge				
BHT	Bottom Hole Temperature (used in calculations)		208	DEGF
BS	Bit Size		8.750	IN
GCSE	Generalized Caliper Selection		HCAL	
GDEV	Average Angular Deviation of Borehole from Normal		0	DEG
GGRD	Geothermal Gradient		0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9		
GTSE	Generalized Temperature Selection	HSTS_HTEM		
SHT	Surface Hole Temperature		68	DEGF
EDTC-B: Enhanced DTS Cartridge				
BHT	Bottom Hole Temperature (used in calculations)		208	DEGF
GCSE	Generalized Caliper Selection		HCAL	
GDEV	Average Angular Deviation of Borehole from Normal		0	DEG
GGRD	Geothermal Gradient		0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9		
GTSE	Generalized Temperature Selection	HSTS_HTEM		
SHT	Surface Hole Temperature		68	DEGF
DIR: Directional Survey Computation				
SPVD	TVD of Starting Point		0	FT
TIMD	Along-hole depth of Tie-in Point		0	FT
TIVD	TVD of Tie-in Point		0	FT
DIRPLOT: Enhanced Directional Plots				
BHT	Bottom Hole Temperature (used in calculations)		208	DEGF
GCSE	Generalized Caliper Selection		HCAL	
GDEV	Average Angular Deviation of Borehole from Normal		0	DEG
GGRD	Geothermal Gradient		0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9		
GTSE	Generalized Temperature Selection	HSTS_HTEM		
SHT	Surface Hole Temperature		68	DEGF
FEQL: Formation Evaluation Quick Look				
FEXP	Form Factor Exponent		2	
FNUM	Form Factor Numerator		1	
HOLEV: Integrated Hole/Cement Volume				
BHT	Bottom Hole Temperature (used in calculations)		208	DEGF
FCD	Future Casing (Outer) Diameter		7	IN
GCSE	Generalized Caliper Selection		HCAL	
GDEV	Average Angular Deviation of Borehole from Normal		0	DEG
GGRD	Geothermal Gradient		0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9		
GTSE	Generalized Temperature Selection	HSTS_HTEM		
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC		
SHT	Surface Hole Temperature		68	DEGF
PERT: Preliminary Evaluation - Real Time				
BHT	Bottom Hole Temperature (used in calculations)		208	DEGF
FEXP	Form Factor Exponent		2	
FNUM	Form Factor Numerator		1	
GCSE	Generalized Caliper Selection		HCAL	
GDEV	Average Angular Deviation of Borehole from Normal		0	DEG
GGRD	Geothermal Gradient		0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9		
GTSE	Generalized Temperature Selection	HSTS_HTEM		
SHT	Surface Hole Temperature		68	DEGF
System and Miscellaneous				
DFD	Drilling Fluid Density		9.20	LB/G
DO	Depth Offset for Playback		0.0	FT
DORL	Depth Offset for Repeat Analysis		0.0	FT
FLEV	Fluid Level		-50000.00	FT
MST	Mud Sample Temperature		-50000.00	DEGF
PP	Playback Processing		OFF	
TD	Total Depth		7707	FT

AIT-M	19C1-222	HILTH-FTB	19C1-222
HNGC-B	HFE-5203-OP19.1-NUCL	HNGS-BA	HFE-5203-OP19.1-NUCL
GPIT-F	19C1-222	PPC1	19C1-222
MAXS-B	19C1-222	MAPC-B	19C1-222
EDTC-B	19C1-222		

Input DLIS Files						
DEFAULT	AIT_TLD_MCFL_CNL_IS_018PUP	FN:17	PRODUCER	09-Jan-2013 03:43	7705.5 FT	6956.5 FT
DEFAULT	AIT_TLD_MCFL_CNL_IS_017PUP	FN:16	PRODUCER	09-Jan-2013 03:36	7717.5 FT	1767.5 FT

Output DLIS Files						
DEFAULT	AIT_TLD_MCFL_CNL_IS_019PUP	FN:18	PRODUCER	09-Jan-2013 03:46		



BEFORE CALIBRATIONS

MAXIS Field Log

Calibration and Check Summary							
Measurement	Nominal	Master	Before	After	Change	Limit	Units
Array Induction Tool – M Wellsite Calibration – Electronics Calibration Check – Thru Cal Mag. & Phase							
Master: 19-Nov-2012 15:21 Before: 7-Jan-2013 16:55							
Thru Cal Magnitude – 0	0	0.6205	0.6202	N/A	N/A	N/A	V
Thru Cal Magnitude – 1	0	1.271	1.271	N/A	N/A	N/A	V
Thru Cal Magnitude – 2	0	0.6319	0.6316	N/A	N/A	N/A	V
Thru Cal Magnitude – 3	0	0.7133	0.7130	N/A	N/A	N/A	V
Thru Cal Magnitude – 4	0	1.335	1.334	N/A	N/A	N/A	V
Thru Cal Magnitude – 5	0	1.955	1.954	N/A	N/A	N/A	V
Thru Cal Magnitude – 6	0	1.951	1.950	N/A	N/A	N/A	V
Thru Cal Magnitude – 7	0	1.423	1.423	N/A	N/A	N/A	V
Thru Cal Phase – 0	0	180.7	180.4	N/A	N/A	N/A	DEG
Thru Cal Phase – 1	0	179.6	179.4	N/A	N/A	N/A	DEG
Thru Cal Phase – 2	0	176.0	175.8	N/A	N/A	N/A	DEG
Thru Cal Phase – 3	0	175.3	175.0	N/A	N/A	N/A	DEG
Thru Cal Phase – 4	0	169.1	168.9	N/A	N/A	N/A	DEG
Thru Cal Phase – 5	0	167.4	167.2	N/A	N/A	N/A	DEG
Thru Cal Phase – 6	0	167.5	167.2	N/A	N/A	N/A	DEG
Thru Cal Phase – 7	0	166.7	166.4	N/A	N/A	N/A	DEG
Array Induction Tool – M Wellsite Calibration – Electronics Calibration Check – Auxiliary							
Master: 19-Nov-2012 15:21 Before: 7-Jan-2013 16:55							
Array Induction SPA Plus	991.0	991.9	992.0	N/A	N/A	N/A	MV
Array Induction SPA Zero	0	0.1681	0.2254	N/A	N/A	N/A	MV
Array Induction Temperature PI	0.9170	0.9188	0.9188	N/A	N/A	N/A	V
Array Induction Temperature Ze	0	0.0001712	0.0001620	N/A	N/A	N/A	V
Array Induction Tool – M Wellsite Calibration – Test Loop Gain Correction							
Master: 19-Nov-2012 15:21							
Test Loop Gain Correctio – 0	0	1.017	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 1	0	1.012	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 2	0	1.015	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 3	0	1.011	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 4	0	0.9926	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 5	0	0.9879	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 6	0	1.004	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 7	0	1.006	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 0	0	0.5584	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 1	0	0.5864	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 2	0	0.03871	N/A	N/A	N/A	N/A	DEG

Test Loop Gain Correctio – 3	0	0.1097	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 4	0	0.08555	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 5	0	-0.1304	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 6	0	0.2583	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 7	0	-0.05734	N/A	N/A	N/A	N/A	DEG

Array Induction Tool – M Wellsite Calibration – Sonde Error Correction

Master: 19–Nov–2012 15:21

R Sonde Error Correction – 0	0	-68.09	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 1	0	173.0	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 2	0	118.0	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 3	0	64.68	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 4	0	26.07	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 5	0	11.33	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 6	0	9.470	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 7	0	-0.3643	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 0	0	-545.4	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 1	0	62.32	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 2	0	21.21	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 3	0	-45.12	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 4	0	10.81	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 5	0	-17.56	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 6	0	-7.318	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 7	0	-14.17	N/A	N/A	N/A	N/A	MM/M

Array Induction Tool – M Wellsite Calibration – Mud Gain Correction

Master: 19–Nov–2012 15:21

Coarse – Mag, Real, Imag – 0	0	0.8211	N/A	N/A	N/A	N/A
Coarse – Mag, Real, Imag – 1	0	1.126	N/A	N/A	N/A	N/A
Coarse – Mag, Real, Imag – 2	0	0.8211	N/A	N/A	N/A	N/A
Fine – Mag, Real, Imag – 0	0	0.8235	N/A	N/A	N/A	N/A
Fine – Mag, Real, Imag – 1	0	1.125	N/A	N/A	N/A	N/A
Fine – Mag, Real, Imag – 2	0	0.8236	N/A	N/A	N/A	N/A

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Stab Measurement Summary

Before: 7–Jan–2013 16:56

BS Window Ratio	0.7386	N/A	0.7395	N/A	N/A	N/A	
BS Window Sum	24580	N/A	24680	N/A	N/A	N/A	CPS
SS Window Ratio	0.4926	N/A	0.4922	N/A	N/A	N/A	
SS Window Sum	14040	N/A	14030	N/A	N/A	N/A	CPS
LS Window Ratio	0.3017	N/A	0.3027	N/A	N/A	N/A	
LS Window Sum	1264	N/A	1257	N/A	N/A	N/A	CPS

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Photo–multiplier High Voltages Calibrations

Before: 7–Jan–2013 16:56

BS PM High Voltage (Command)	1572	N/A	1593	N/A	N/A	N/A	V
SS PM High Voltage (Command)	1666	N/A	1679	N/A	N/A	N/A	V
LS PM High Voltage (Command)	1323	N/A	1329	N/A	N/A	N/A	V

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Crystal Quality Resolutions Calibration

Before: 7–Jan–2013 16:56

BS Crystal Resolution	11.19	N/A	11.27	N/A	N/A	N/A	%
SS Crystal Resolution	10.38	N/A	10.48	N/A	N/A	N/A	%
LS Crystal Resolution	7.934	N/A	8.181	N/A	N/A	N/A	%

High resolution Integrated Logging Tool–DTS Wellsite Calibration – MCFL Calibration

Before: 7–Jan–2013 16:57

Raw B0 Resistivity	3875	N/A	3910	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3858	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3869	N/A	N/A	N/A	OHMM

High resolution Integrated Logging Tool–DTS Wellsite Calibration – HILT Caliper Calibration

Before: 7–Jan–2013 16:52

HILT Caliper Zero Measurement	8.000	N/A	7.832	N/A	N/A	N/A	IN
HILT Caliper Plus Measurement	12.00	N/A	12.16	N/A	N/A	N/A	IN

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Detector Calibration

Before: 7–Jan–2013 16:51

Gamma Ray Background	30.00	N/A	74.78	N/A	N/A	N/A	GAPI
Gamma Ray (Jig – Bkgd)	165.0	N/A	184.1	N/A	N/A	15.00	GAPI

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Zero Measurement

Master: 29–Oct–2012 12:30 Before: 7–Jan–2013 16:54

CNTC Background	28.19	28.19	27.09	N/A	N/A	4.229	CPS
CFTC Background	28.82	28.82	27.31	N/A	N/A	4.323	CPS

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Ratio Measurement

Master: 29–Oct–2012 12:30

Thermal Near Corr. (Tank)	5800	5780	N/A	N/A	N/A	N/A	CPS
Thermal Far Corr. (Tank)	2400	2407	N/A	N/A	N/A	N/A	CPS
CNTC/CFTC (Tank)	2.159	2.401	N/A	N/A	N/A	N/A	

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Accelerometer Calibration

Before: 8–Jan–2013 21:41							
Z–Axis Acceleration	32.19	N/A	32.09	N/A	N/A	N/A	F/S2
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 1 Check							
Master: 7–Jan–2013 17:22 Before: 7–Jan–2013 17:30							
Na 511 Peak Loc	40.00	38.55	38.53	N/A	N/A	1.000	
Na 511 Peak Res	15.50	14.07	14.00	N/A	N/A	2.000	%
High Voltage	1150	1046	1046	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	139.2	139.1	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	8.556	8.058	N/A	N/A	2.000	%
Temperature	59.90	70.09	70.02	N/A	N/A	N/A	DEGF
Na Count Rate	45.00	12.47	12.69	N/A	N/A	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 2 Check							
Master: 7–Jan–2013 17:22 Before: 7–Jan–2013 17:30							
Na 511 Peak Loc	40.00	39.40	39.87	N/A	N/A	1.000	
Na 511 Peak Res	15.50	17.15	16.01	N/A	N/A	2.000	%
High Voltage	1150	990.2	990.9	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	141.8	142.4	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	7.696	8.722	N/A	N/A	2.000	%
Temperature	59.90	75.78	75.79	N/A	N/A	N/A	DEGF
Na Count Rate	45.00	12.44	12.73	N/A	N/A	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Ratio Of Detector 1 To Detector 2							
Master: 7–Jan–2013 17:22 Before: 7–Jan–2013 17:30							
Coincidence Count Rate Ratio	1.000	0.9991	0.9932	N/A	N/A	0.05000	
Enhanced DTS Cartridge Wellsite Calibration – EDTC Accelerometer Calibration							
Before: 8–Jan–2013 21:41							
EDTC Z–Axis Acceleration	32.19	N/A	32.14	N/A	N/A	N/A	F/S2
Enhanced DTS Cartridge Wellsite Calibration – Detector Calibration							
Before: 7–Jan–2013 16:52							
Gamma Ray (Jig – Bkg)	154.7	N/A	154.7	N/A	N/A	14.06	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

The GLS–VJ source activity is acceptable.

















The HGNS Neutron Master Calibration was done with the following parameters :

NCT–B Water Temperature 57.2 DEGF.
Thermal Housing Size 3.375 IN.
NSR–F serial number 2554

Array Induction Tool – M / Equipment Identification

Primary Equipment:
Rm/SP Bottom Nose
Array Induction Sonde
AMRM – A
AMIS – A
1372





Auxiliary Equipment:

Array Induction Tool – M Wellsite Calibration							
Electronics Calibration Check – Thru Cal Mag. & Phase							
Idx	Phase	Value	Thru Cal Magnitude V	Nominal	Value	Thru Cal Phase DEG	Nominal
0	Master	0.6205		0.6100	180.7		197.0
	Before	0.6202			180.4		
1	Master	1.271		1.270	179.6		196.0
	Before	1.271			179.4		
2	Master	0.6319		0.6200	176.0		192.0
	Before	0.6316			175.8		
3	Master	0.7133		0.7000	175.3		191.0
	Before	0.7130			175.0		

4	Master	1.335		1.340	169.1		185.0
5	Before	1.334		1.960	168.9		182.0
	Master	1.955			167.4		
6	Before	1.954		1.960	167.2		181.0
	Master	1.951			167.5		
7	Before	1.950		1.410	167.2		175.0
	Master	1.423			166.7		
	Before	1.423			166.4		
		60.00 % (Minimum)	(Nominal)	140.0 % (Maximum)	Nom -60.00 (Minimum)	(Nominal)	Nom + 60.00 (Maximum)
Master: 19-Nov-2012 15:21				Before: 7-Jan-2013 16:55			

Array Induction Tool – M Wellsite Calibration							
Electronics Calibration Check – Auxiliary							
Phase	Array Induction SPA Plus MV		Value	Phase	Array Induction SPA Zero MV		Value
Master			991.9	Master			0.1681
Before			992.0	Before			0.2254
941.0 (Minimum)			991.0 (Nominal)	1040 (Maximum)			
				-50.00 (Minimum)			0 (Nominal)
							50.00 (Maximum)
Phase	Array Induction Temperature Plus V		Value	Phase	Array Induction Temperature Zero V		Value
Master			0.9188	Master			0.0001712
Before			0.9188	Before			0.0001620
0.8710 (Minimum)			0.9170 (Nominal)	-0.05000 (Minimum)			0 (Nominal)
			0.9630 (Maximum)				0.05000 (Maximum)
Master: 19–Nov–2012 15:21				Before: 7–Jan–2013 16:55			

Array Induction Tool – M Wellsite Calibration								
Test Loop Gain Correction								
Idx	Value	Test Loop Gain Correction Magnitude V			Value	Test Loop Gain Correction Phase DEG		
0	1.017				0.5584			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
1	1.012				0.5864			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
2	1.015				0.03871			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
3	1.011				0.1097			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
4	0.9926				0.08555			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
5	0.9879				-0.1304			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
6	1.004				0.2583			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
7	1.006				-0.05734			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
Master: 19-Nov-2012 15:21								

Array Induction Tool – M Wellsite Calibration								
Sonde Error Correction								
Idx	Value	R Sonde Error Correction MM/M			Value	X Sonde Error Correction MM/M		
0	-68.09				-545.4			
		-231.0 (Minimum)	-56.00 (Nominal)	119.0 (Maximum)		-2250 (Minimum)	0 (Nominal)	2250 (Maximum)
1	-175.6				-88.62			




Master: 19-Nov-2012 15:21

Master: 19-Nov-2012 15:21

HGNS Housing	HGNH -
--------------	--------

Before: 7-Jan-2013 16:56




Photo-multiplier High Voltages Calibrations

Phase	BS PM High Voltage (Command) V			Value	Phase	SS PM High Voltage (Command) V			Value	Phase	LS PM High Voltage (Command) V			Value
Before				1593	Before				1679	Before				1329
	1472 (Minimum)	1572 (Nominal)	1672 (Maximum)			1566 (Minimum)	1666 (Nominal)	1766 (Maximum)			1223 (Minimum)	1323 (Nominal)	1423 (Maximum)	

Before: 7-Jan-2013 16:56

High resolution Integrated Logging Tool-DTS Wellsite Calibration




Crystal Quality Resolutions Calibration

Phase	BS Crystal Resolution %			Value	Phase	SS Crystal Resolution %			Value	Phase	LS Crystal Resolution %			Value
Before				11.27	Before				10.48	Before				8.181
	10.19 (Minimum)	11.19 (Nominal)	12.19 (Maximum)			9.376 (Minimum)	10.38 (Nominal)	11.38 (Maximum)			6.934 (Minimum)	7.934 (Nominal)	8.934 (Maximum)	

Before: 7-Jan-2013 16:56

High resolution Integrated Logging Tool-DTS Wellsite Calibration



MCFL Calibration

Phase	Raw B0 Resistivity OHMM			Value	Phase	Raw B1 Resistivity OHMM			Value	Phase	Raw B2 Resistivity OHMM			Value
Before				3910	Before				3858	Before				3869
	3565 (Minimum)	3875 (Nominal)	4185 (Maximum)			3524 (Minimum)	3830 (Nominal)	4136 (Maximum)			3524 (Minimum)	3830 (Nominal)	4136 (Maximum)	

Before: 7-Jan-2013 16:57

High resolution Integrated Logging Tool-DTS Wellsite Calibration



HILT Caliper Calibration

Phase	HILT Caliper Zero Measurement IN			Value	Phase	HILT Caliper Plus Measurement IN			Value
Before				7.832	Before				12.16
	6.000 (Minimum)	8.000 (Nominal)	10.00 (Maximum)			9.000 (Minimum)	12.00 (Nominal)	15.00 (Maximum)	

Before: 7-Jan-2013 16:52

High resolution Integrated Logging Tool-DTS Wellsite Calibration





Detector Calibration

Phase	Gamma Ray Background GAPI			Value	Phase	Gamma Ray (Jig - Bkgd) GAPI			Value
Before				74.78	Before				184.1
	0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)			157.1 (Minimum)	165.0 (Nominal)	206.3 (Maximum)	

Before: 7-Jan-2013 16:51

High resolution Integrated Logging Tool-DTS Wellsite Calibration

Zero Measurement



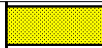
Phase	CNTC Background CPS			Value	Phase	CFTC Background CPS			Value
Master				28.19	Master				28.82
Before				27.09	Before				27.31
	5.000 (Minimum)	28.19 (Nominal)	40.00 (Maximum)			5.000 (Minimum)	28.82 (Nominal)	40.00 (Maximum)	

Master: 29-Oct-2012 12:30

Before: 7-Jan-2013 16:54

High resolution Integrated Logging Tool-DTS Wellsite Calibration


Ratio Measurement

Phase	Thermal Near Corr. (Tank) CPS			Value	Phase	Thermal Far Corr. (Tank) CPS			Value	Phase	CNTC/CFTC (Tank)			Value
Master				5780	Master				2407	Master				2.401
	4700 (Minimum)	5800 (Nominal)	6900 (Maximum)			1900 (Minimum)	2400 (Nominal)	2900 (Maximum)			2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)	

Master: 29-Oct-2012 12:30

High resolution Integrated Logging Tool-DTS
Wellsite Calibration

Accelerometer Calibration

Phase	Z-Axis Acceleration F/S2			Value
Before				32.09
	31.53 (Minimum)	32.19 (Nominal)	32.84 (Maximum)	

Before: 8-Jan-2013 21:41

Hostile Natural Gamma Ray Cartridge – B / Equipment Identification

Primary Equipment:
HNGC Cartridge

HNGC – B 250

Auxiliary Equipment:
HNGC Housing

HNGH – A 87

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:
HNGS Sonde

HNGS – BA 152

Auxiliary Equipment:
HNGS Sonde Housing
Gamma Source Radioactive

HNSH – BA 149
GSR – U 599

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		38.55	Master		14.07	Master		1046
Before		38.53	Before		14.00	Before		1046
	37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)			12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)			850.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	
Phase	Na 1785 Peak Loc	Value	Phase	Na 1785 Peak Res %	Value	Phase	Temperature DEGF	Value
Master		139.2	Master		8.556	Master		70.09
Before		139.1	Before		8.058	Before		70.02
	135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)			7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)			-20.00 (Minimum) 59.90 (Nominal) 140.0 (Maximum)	
Phase	Na Count Rate CPS	Value						
Master		12.47						
Before		12.69						
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							

Master: 7-Jan-2013 17:22

Before: 7-Jan-2013 17:30

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		39.40	Master		17.15	Master		990.2
Before		39.87	Before		16.01	Before		990.9
	37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)			12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)			850.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	
Phase	Na 1785 Peak Loc	Value	Phase	Na 1785 Peak Res %	Value	Phase	Temperature DEGF	Value
Master		141.8	Master		7.696	Master		75.78
Before		142.4	Before		8.722	Before		75.79
	135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)			7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)			-20.00 (Minimum) 59.90 (Nominal) 140.0 (Maximum)	
Phase	Na Count Rate CPS	Value						
Master		12.44						
Before		12.73						
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							

Master: 7-Jan-2013 17:22

Before: 7-Jan-2013 17:30


Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		0.9991
Before		0.9932




General Purpose Inclinometer / Equipment Identification	
Primary Equipment:	
GPIT Cartridge – F	GPIC – F
Auxiliary Equipment:	
GPIT Housing – F	GPIH – B

Powered Positioning Device/Caliper 1 / Equipment Identification	
Primary Equipment:	
PPC Powered Positioning Device/Caliper	PPC1 – B
PPC1 Caliper Standard	PPC_ –
Auxiliary Equipment:	

Multimode Array Sonic Power Cartridge / Equipment Identification	
Primary Equipment:	
Multimode Array Sonic Minimum Service So	MAMS – BA
Multimode Array Sonic Control Cartridge	MAPC – BA
Auxiliary Equipment:	
Electronics Cartridge Housing	ECH – SF

Enhanced DTS Cartridge / Equipment Identification	
Primary Equipment:	
EDTC Gamma Ray Detector	EDTG – A/B
Enhanced DTS Cartridge	EDTC – B
Auxiliary Equipment:	
EDTC Housing	EDTH – B

Enhanced DTS Cartridge Wellsite Calibration		
EDTC Accelerometer Calibration		
Phase	EDTC Z-Axis Acceleration F/S2	Value
Before		32.14
	31.53 (Minimum) 32.19 (Nominal) 32.84 (Maximum)	
Before: 8-Jan-2013 21:41		

Enhanced DTS Cartridge Wellsite Calibration																	
Detector Calibration																	
Phase	Gamma Ray Background			GAPI	Value	Phase	Gamma Ray (Jig – Bkg)			GAPI	Value	Phase	Gamma Ray (Calibrated)			GAPI	Value
Before					77.86	Before					154.7	Before					165.0
	0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)				140.6 (Minimum)	154.7 (Nominal)	168.8 (Maximum)				150.0 (Minimum)	165.0 (Nominal)	180.0 (Maximum)		
Before: 7-Jan-2013 16:52																	

Company: Conoco Phillips Company

Schlumberger

Well: State of Colorado 36-1P

Field: Wildcat

County: Adams

State: Colorado

Platform Express

Array Induction

Linear Correlation