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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			

Run 4

Date Created: 7-APR-2010 18:04:03

Logging Cable

Type:	7-39P LXS
Serial Number:	708273
Length:	16760 FT
<hr/>	
Conveyance Method:	Wireline
Rig Type:	LAND

Log Sequence:	First Log In the Well
Rig Up Length At Surface:	0.00 FT
Rig Up Length At Bottom:	0.00 FT
Rig Up Length Correction:	0.00 FT
Stretch Correction:	5.50 FT
Tool Zero Check At Surface:	0.00 FT

1. All Schlumberger depth policy procedures applied
2. This is the primary depth reference
- 3.
- 4.
- 5.
- 6.

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.

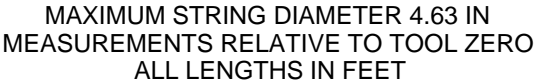
OTHER SERVICES2
OS1:
OS2:
OS3:
OS4:
OS5:

REMARKS: RUN NUMBER 2

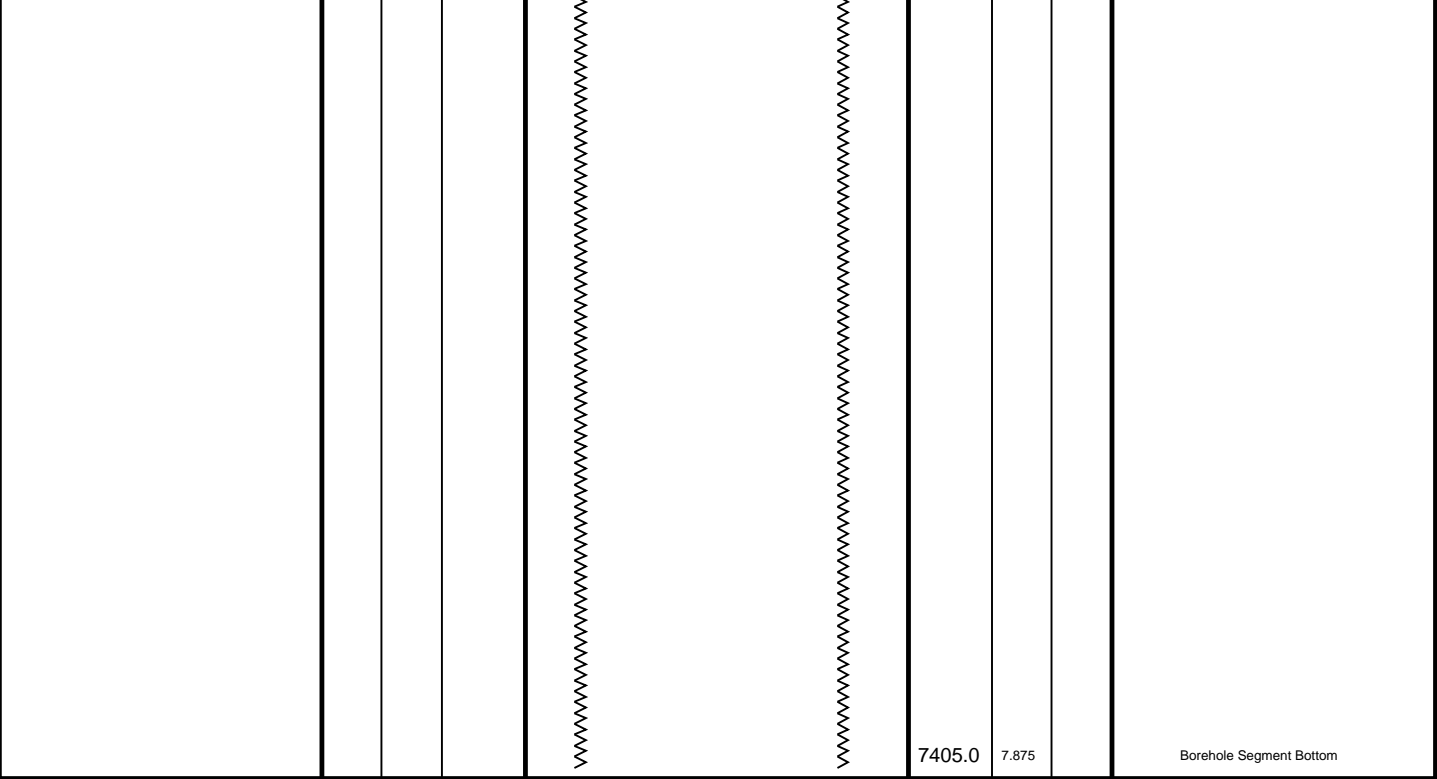
1. This is the first run in hole.
2. Tool run as per tool sketch.
3. Matrix changes are as noted on porosity log.
4. Toolstring run with minimum jewelry.

Rig: Xtreme 11	
Crew: Tim Ludgate & Jay Musgrave	
<div>RUN 1</div> <div> <div>SERVICE ORDER #:</div> <div>PROGRAM VERSION:</div> <div>FLUID LEVEL:</div> </div> <div> <div>BCEK-00017</div> <div>17C0-154</div> </div>	<div>RUN 2</div> <div> <div>SERVICE ORDER #:</div> <div>PROGRAM VERSION:</div> <div>FLUID LEVEL:</div> </div>
<div>LOGGED INTERVAL</div> <div>START</div> <div>STOP</div>	<div>LOGGED INTERVAL</div> <div>START</div> <div>STOP</div>
EQUIPMENT DESCRIPTION	
RUN 1	RUN 2
<div>SURFACE EQUIPMENT</div> <div>WITM (DTS)-A</div> <div> <div>GSR-U/Y</div> <div>NCT-B</div> <div>CNB-AB</div> <div>NCS-VB</div> </div>	
<div>DOWNHOLE EQUIPMENT</div> <div> <div> <div>LEH-QT</div> <div>LEH-QT</div> <div> <div>DTC-H</div> <div>ECH-KC</div> <div>DTCH0-A</div> <div>DTCH1-A</div> </div> <div> <div>HILTB-FTB</div> <div>HGNSD-B</div> <div>HMCA</div> <div>HGNH</div> <div>NLS-KL</div> <div>NSR-F 5068</div> <div>HACCZ 452</div> <div>HCNT</div> <div>HGR</div> <div>HRCC-B</div> <div>HRMS-B</div> <div>HRGD-B</div> <div>GLS-VJ 5416</div> <div>MCFL Device</div> <div>HILT Nucl. LS 42767</div> <div>HILT Nucl. SS 42767</div> <div>HILT Nucl. BS 42767</div> <div>NPV-N</div> </div> <div> <div>CTEM</div> <div> <div>TelStatus</div> <div>ToolStatu</div> </div> <div>HGNS HTEM</div> <div>HMCA</div> <div>HGNS Gamm</div> <div> <div>HGNS Neut</div> <div>HGNS Neut</div> <div>HGNS sens</div> <div>HRCC cart</div> <div> <div>MCFL</div> <div>HILT cali</div> <div>HRDD-LS</div> <div>HRDD-SS</div> <div>HRDD-BS</div> </div> </div> <div> <div>43.6</div> <div> <div>39.7</div> <div>37.6</div> <div>37.6</div> <div>36.9</div> <div>31.1</div> <div>30.6</div> <div>28.2</div> <div>24.2</div> <div>18.8</div> <div>18.3</div> <div>17.9</div> </div> <div>40.6</div> <div>37.6</div> </div> </div> </div></div>	

16.0



Production String	Well Schematic		Casing String	
	OD	ID	MD	ID
			0.0	8.625
			706.0	8.625



7405.0

7.875

Borehole Segment Bottom

All depths are driller's depths

Schlumberger

RESISTIVITY LINEAR 2" = 100'

MAXIS Field Log

Output DLIS Files

DEFAULT AIT_TLD_MCFL_CNL_009LUP FN:8 PRODUCER 07-Apr-2010 17:12 7405.5 FT 687.6 FT

Integrated Hole/Cement Volume Summary

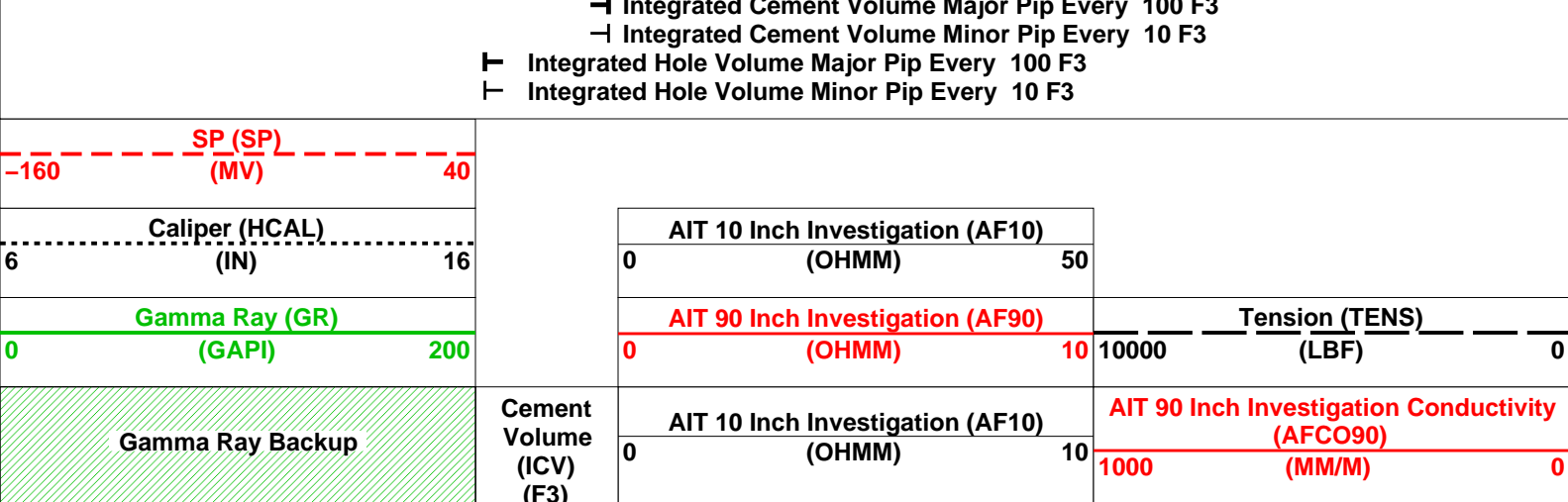
Hole Volume = 2514.18 F3
Cement Volume = 1776.72 F3 (assuming 4.50 IN casing O.D.)
Computed from 7385.0 FT to 708.0 FT using data channel(s) HCAL

OP System Version: 17C0-154

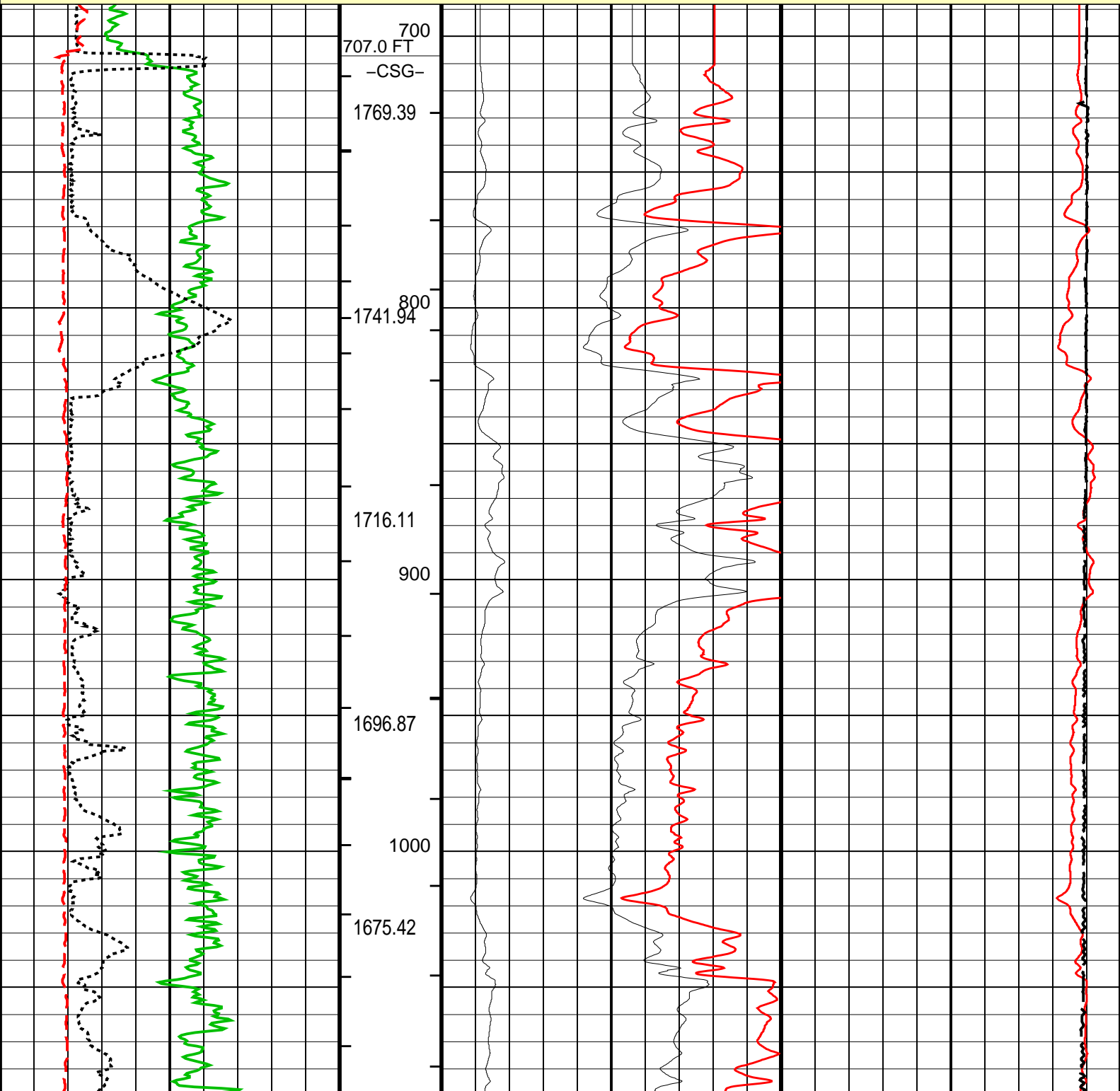
AIT-M 17C0-154 HILTB-FTB 17C0-154
DTC-H 17C0-154

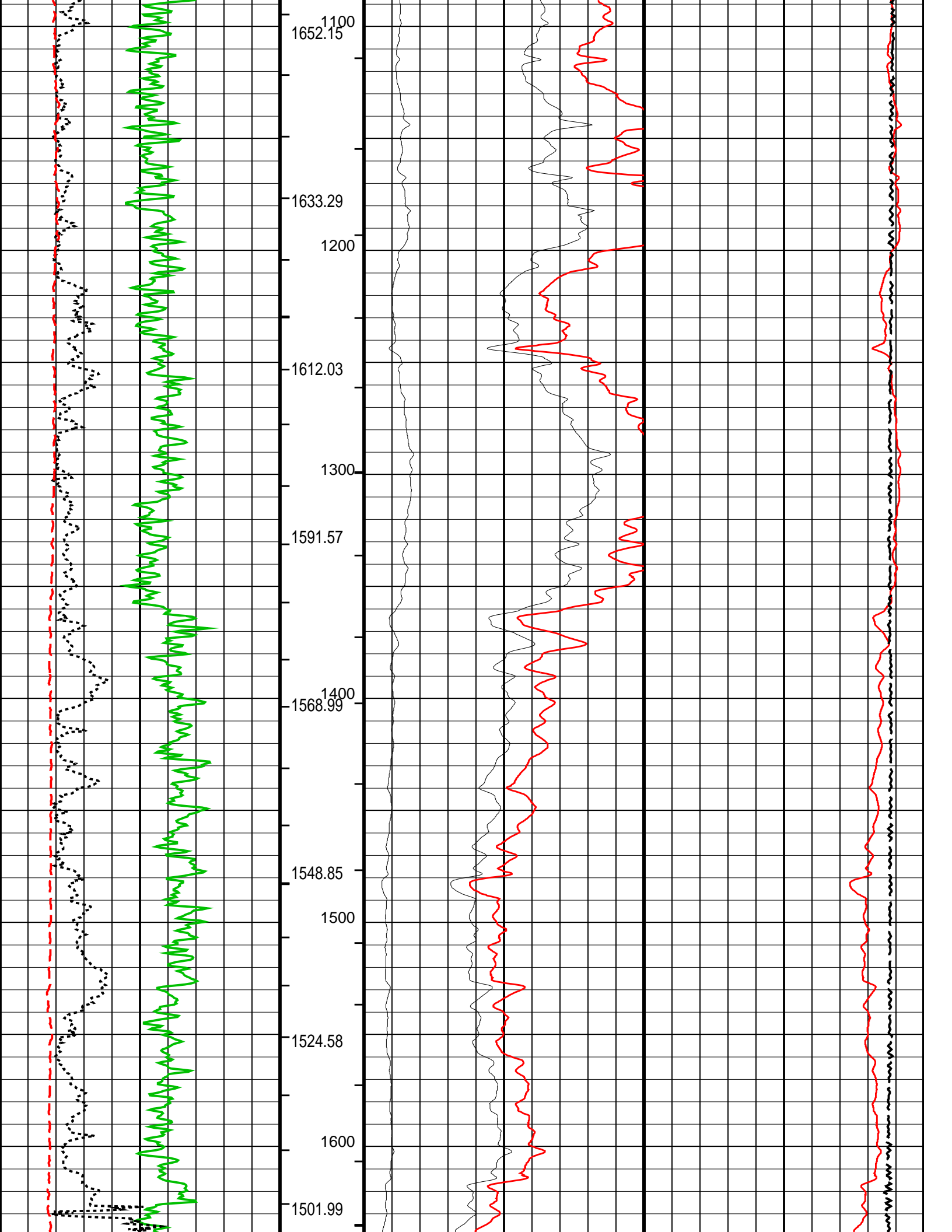
PIP SUMMARY

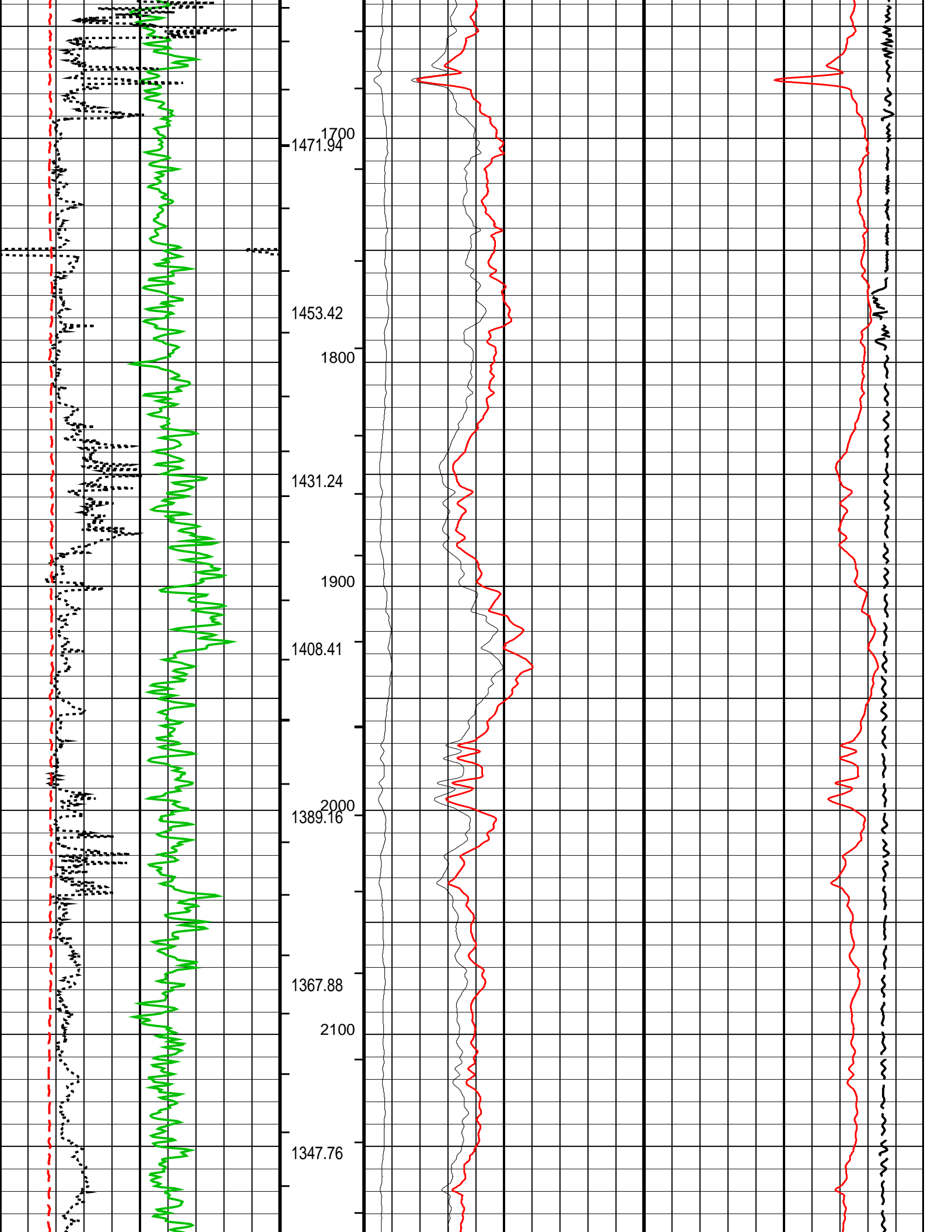
Maximum Log Depth: 7405.5 FT Minimum Log Depth: 708.0 FT

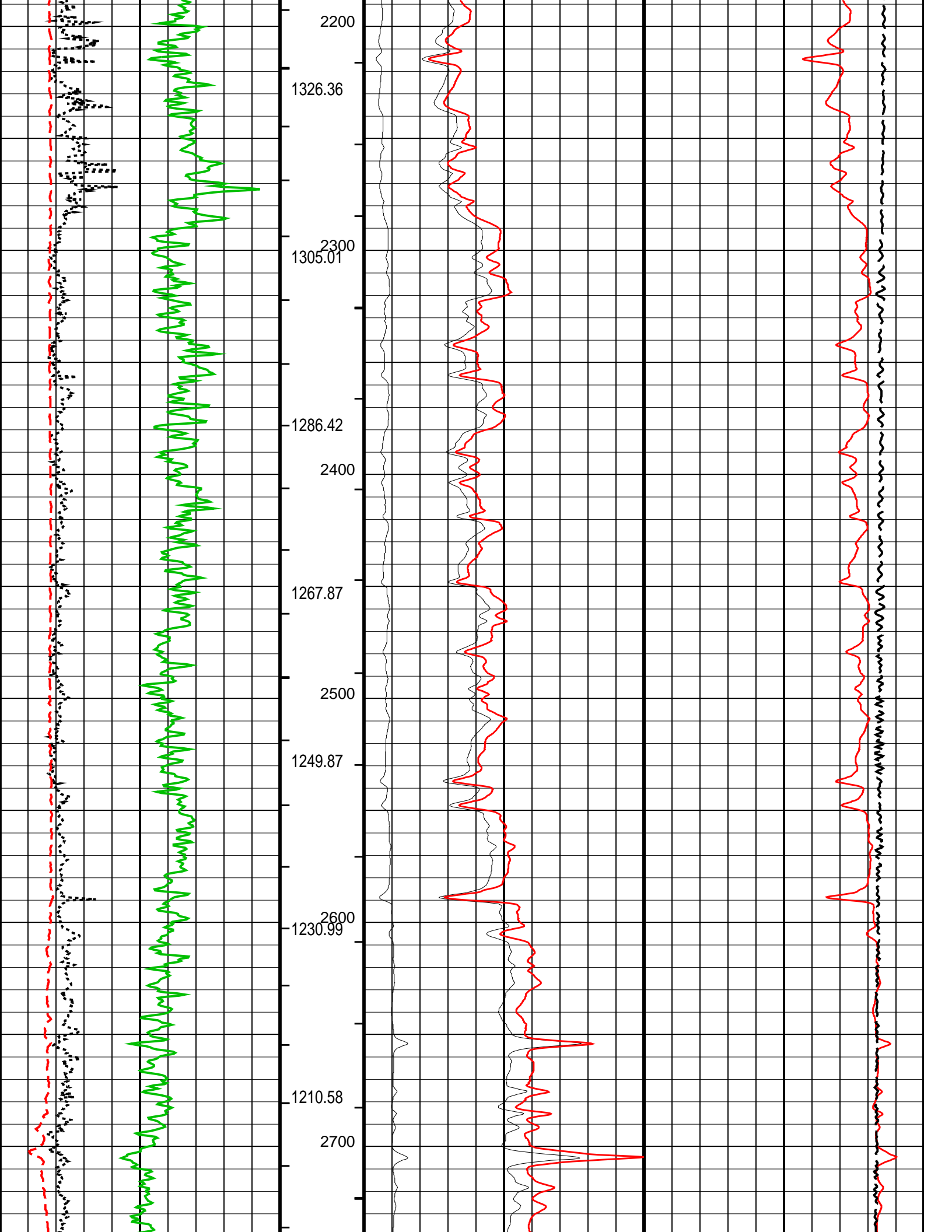


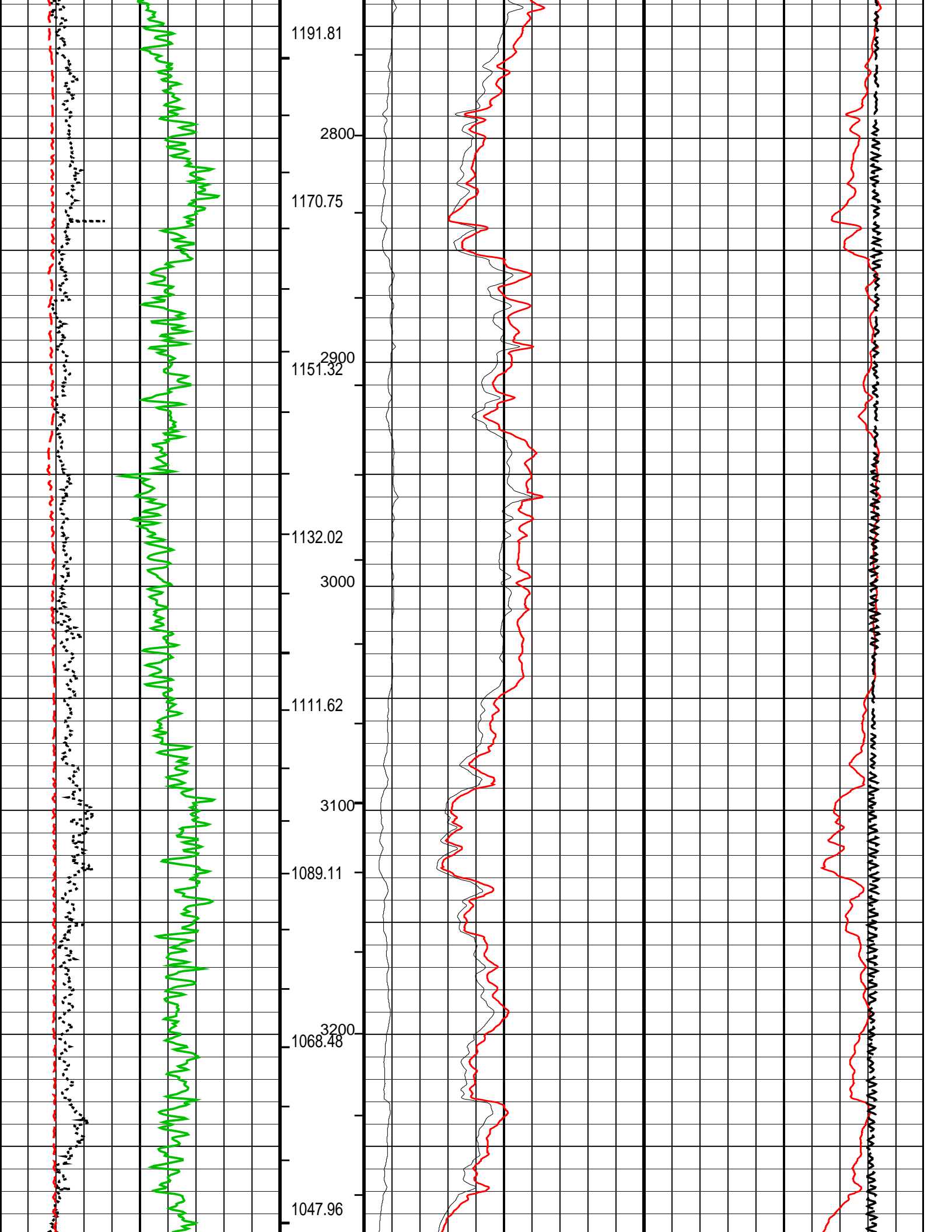
MAIN PASS: *** PLATFORM EXPRESS – ARRAY INDUCTION ***

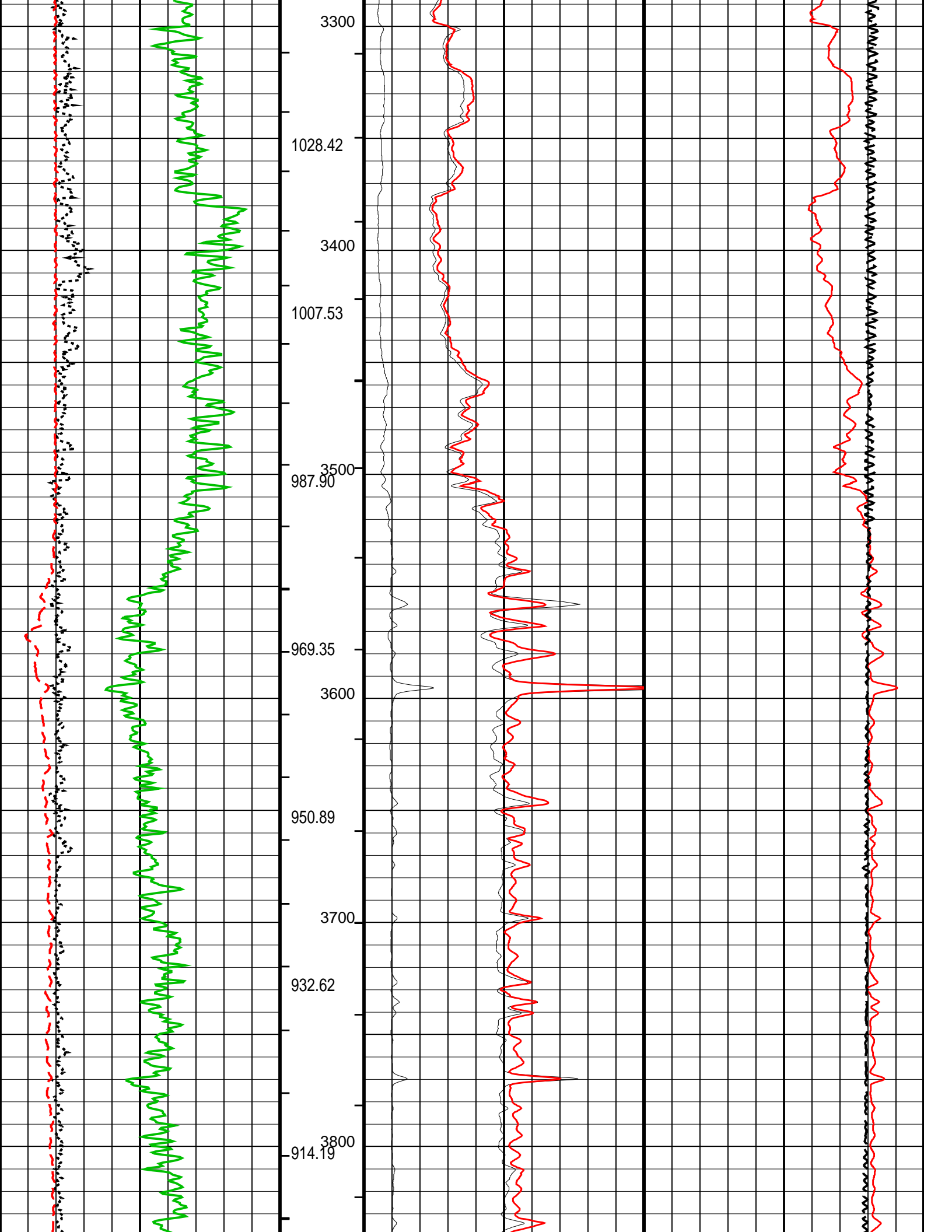


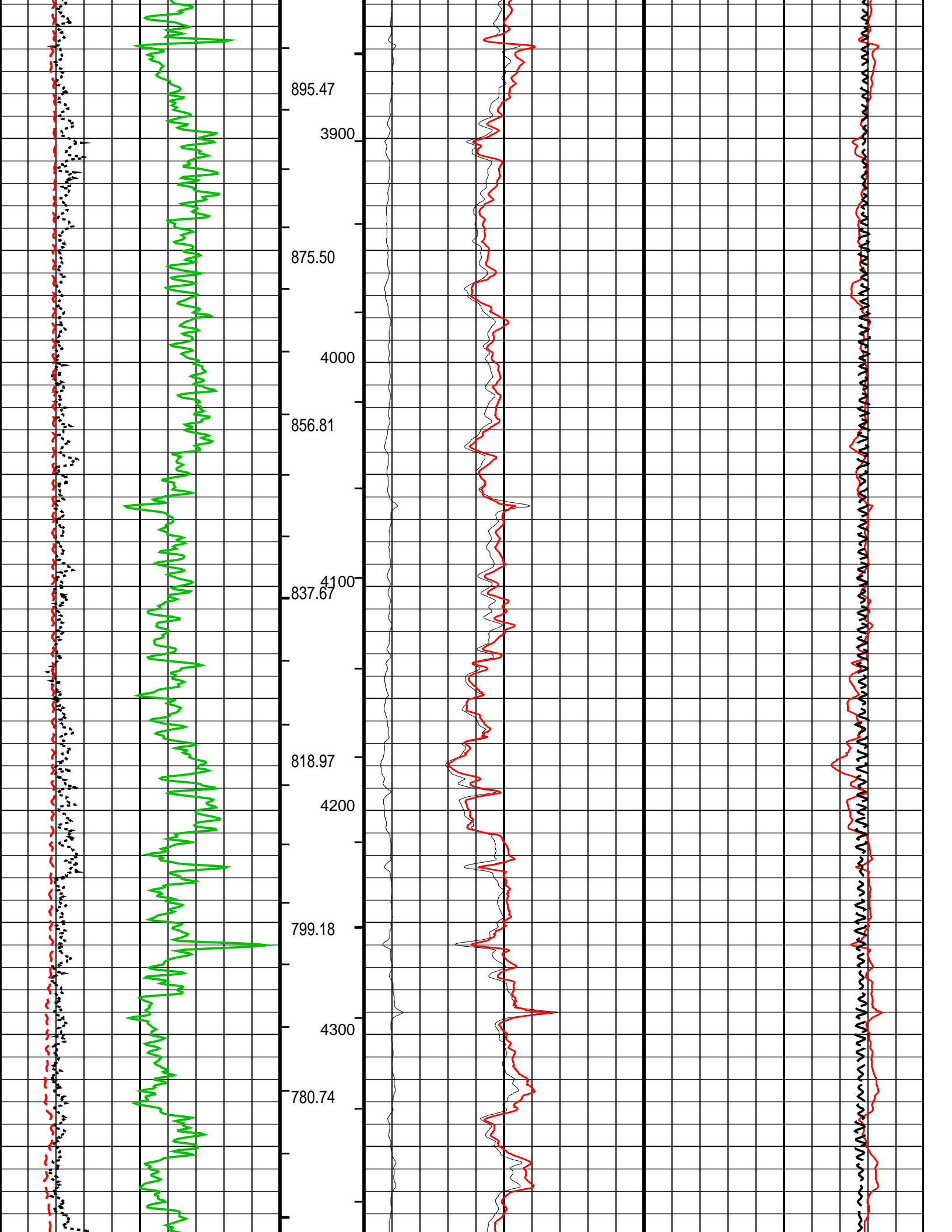


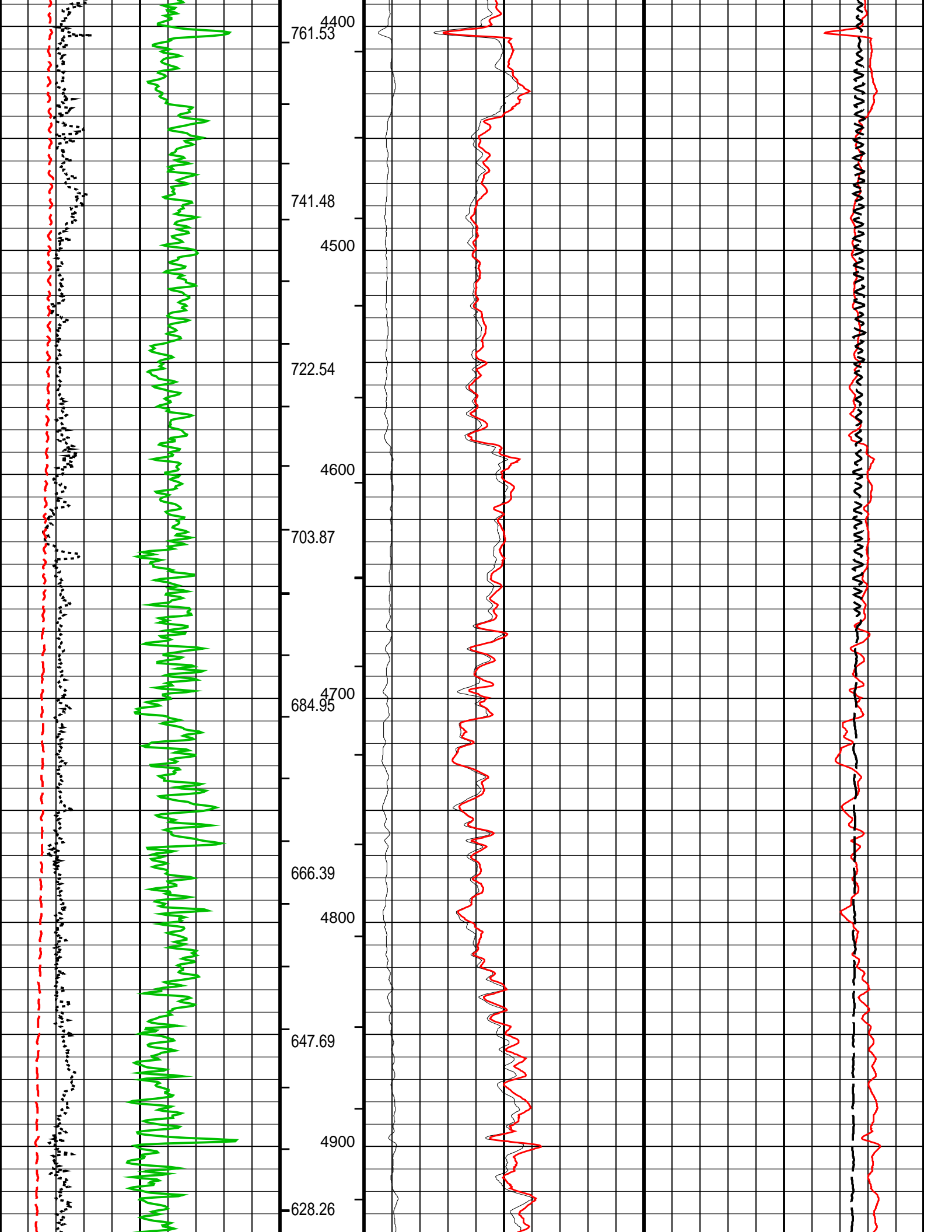


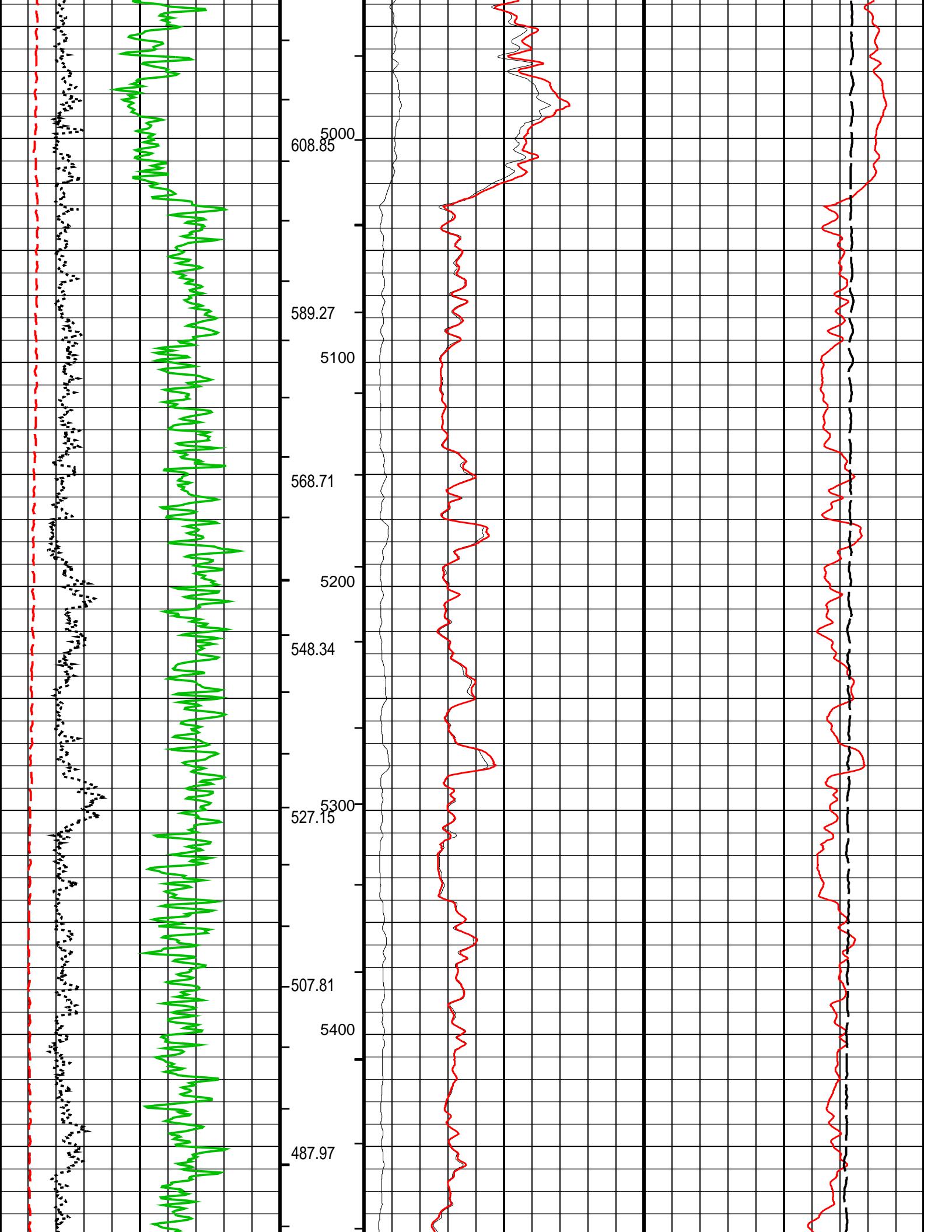


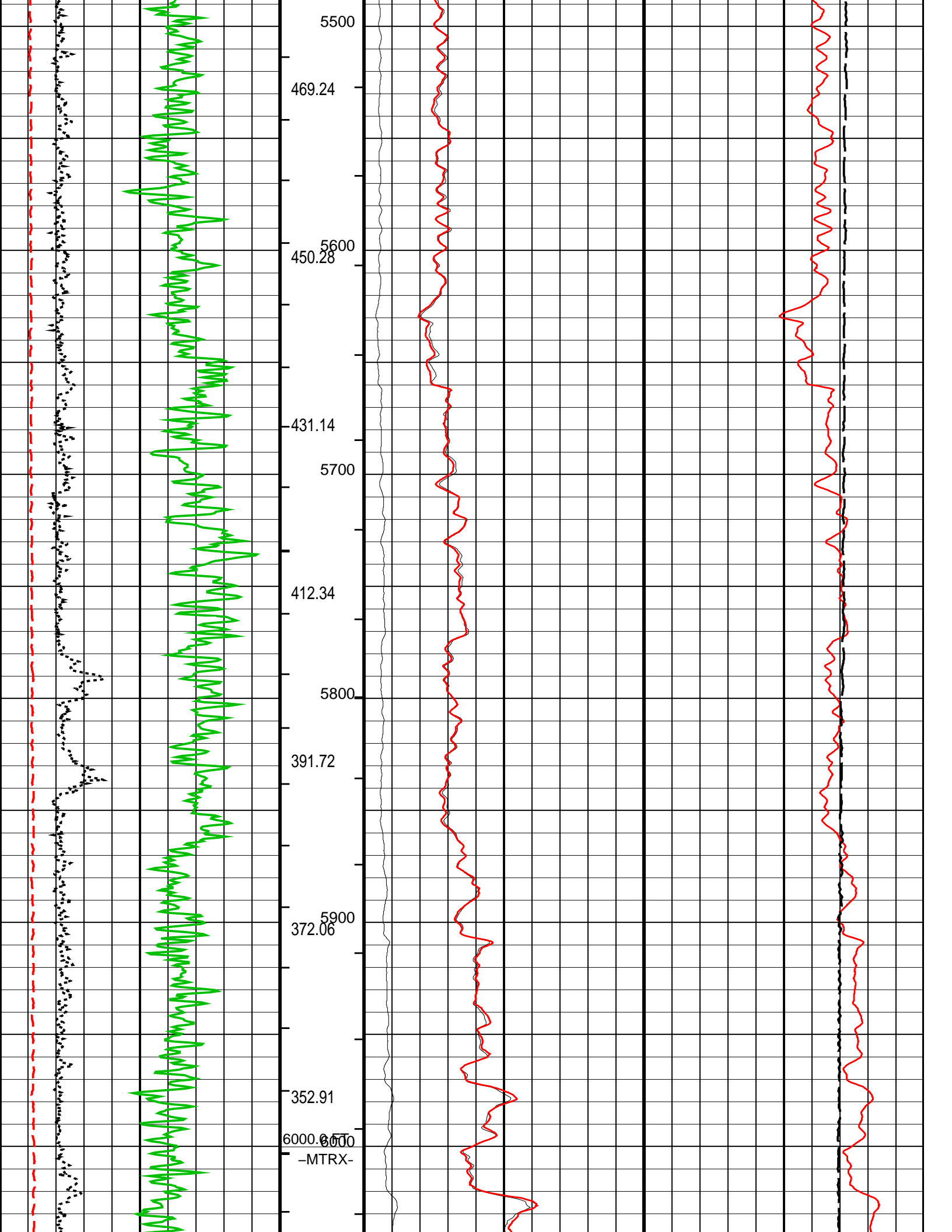


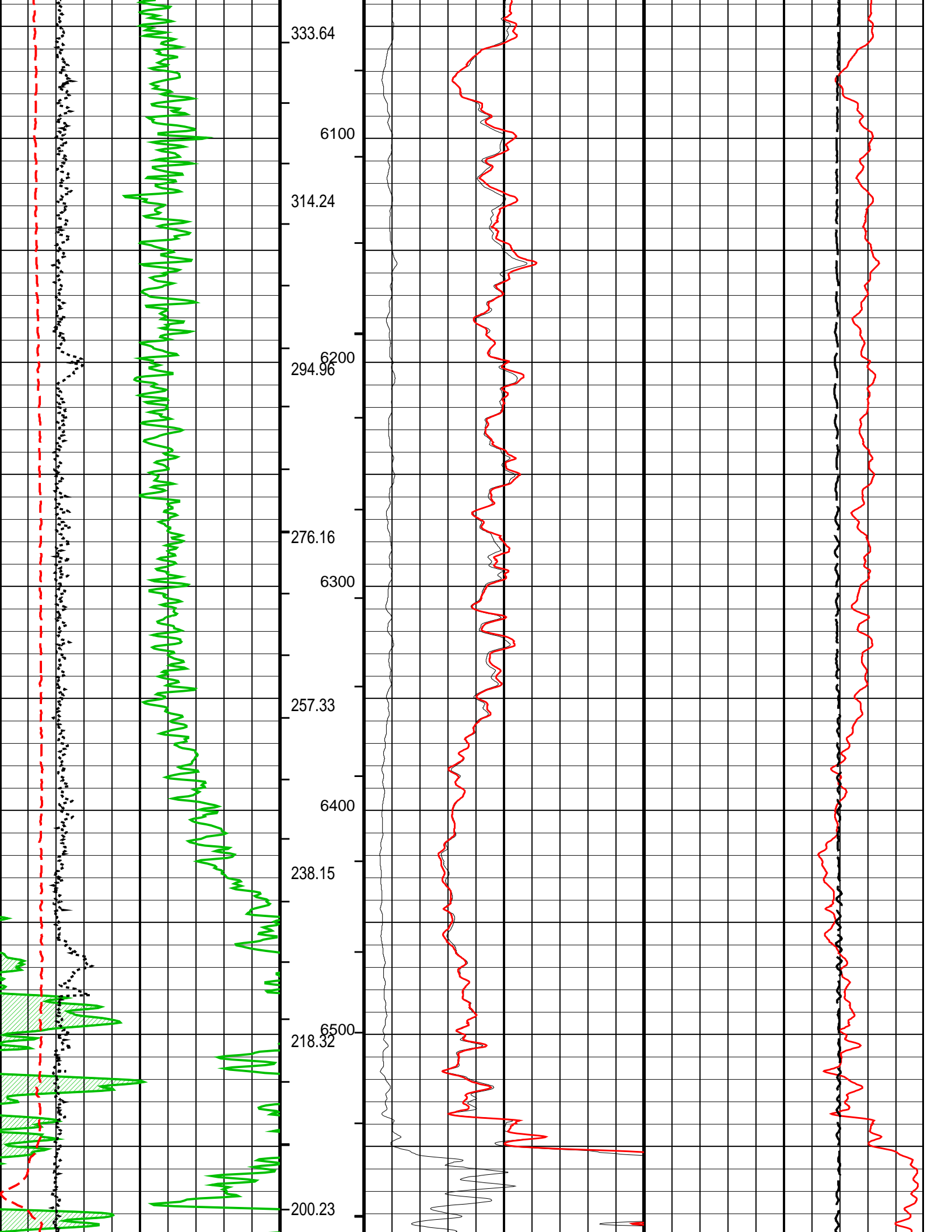


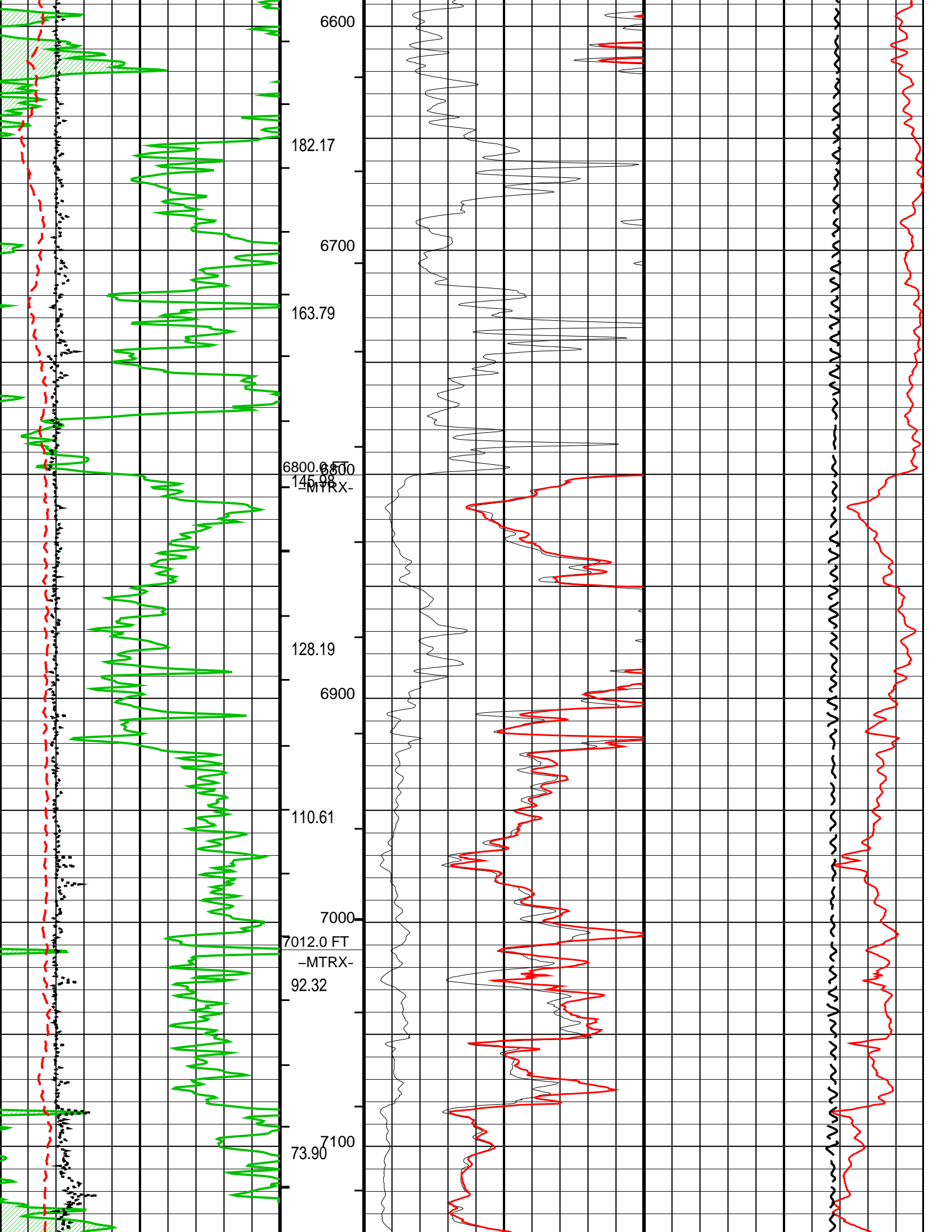


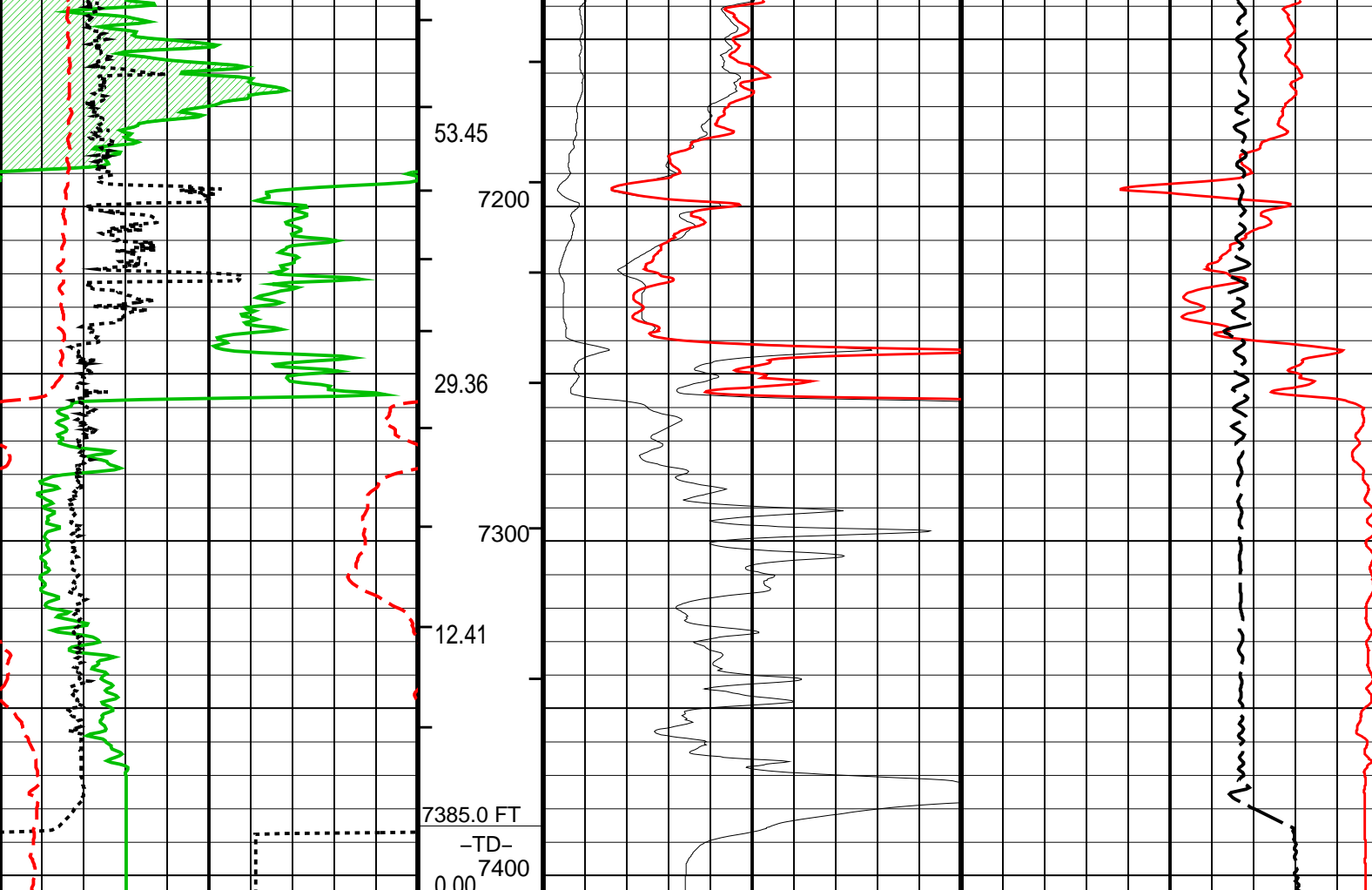












MAIN PASS: *** PLATFORM EXPRESS – ARRAY INDUCTION ***

Gamma Ray Backup		Cement Volume (ICV) (F3)	AIT 10 Inch Investigation (AF10)		AIT 90 Inch Investigation Conductivity (AF90)	
			0	10	1000	0
Gamma Ray (GR)			AIT 90 Inch Investigation (AF90)		Tension (TENS)	
0	200		0	10	10000	0
Caliper (HCAL)			AIT 10 Inch Investigation (AF10)			
6	16		0	50		
SP (SP)						
-160	40					

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	2_ComputeStandoff
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	Yes
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

AORSV	Array Induction Response Set Version for One ft Resolution	41.70.24.20	701	
ARFV	Array Induction Radial Parametrization Code Version Number	232		
ARPV	Array Induction Tool Standoff	0.25		IN
ASTA	Array Induction Response Set Version for Two ft Resolution	41.70.24.20		
ATRSV	Array Induction Temperature Selection(Sonde Error Correction)	Internal		
ATSE	Array Induction User Level Control	Normal		
AULV	Array Induction Response Set Version for Z Resolution	00.10.25.00		
AZRSV	Bottom Hole Temperature (used in calculations)	191		DEGF
BHT	Form Factor Exponent	2		
FEXP	Form Factor Numerator	1		
FNUM	Generalized Caliper Selection	HCAL		
GCSE	Average Angular Deviation of Borehole from Normal	0		DEG
GDEV	Geothermal Gradient	0.01		DF/F
GGRD	Generalized Mud Resistivity Selection	AITM_RESIST		
GRSE	Generalized Temperature Selection	HSTS_HTEM		
GTSE	Surface Hole Temperature	68		DEGF
SHT	SP Next Value	0		MV
SPNV	HILTB-FTB: High resolution Integrated Logging Tool-DTS			
BHT	Bottom Hole Temperature (used in calculations)	191		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	AITM_RESIST		
GTSE	Generalized Temperature Selection	HSTS_HTEM		
SHT	Surface Hole Temperature	68		DEGF
	HOLEV: Integrated Hole/Cement Volume			
BHT	Bottom Hole Temperature (used in calculations)	191		DEGF
FCD	Future Casing (Outer) Diameter	4.5		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	AITM_RESIST		
GTSE	Generalized Temperature Selection	HSTS_HTEM		
HVCS	Integrated Hole Volume Caliper Selection	HCAL		
SHT	Surface Hole Temperature	68		DEGF
	System and Miscellaneous			
BS	Bit Size	7.875		IN
DFD	Drilling Fluid Density	8.20		LB/G
DORL	Depth Offset for Repeat Analysis	0.0		FT
FLEV	Fluid Level	-50000.00		FT
MST	Mud Sample Temperature	86.09		DEGF
TD	Total Depth	7385		FT

Format: ERES_S2 Vertical Scale: 2" per 100' Graphics File Created: 07-Apr-2010 17:12

OP System Version: 17C0-154

AIT-M	17C0-154	HILTB-FTB	17C0-154
DTC-H	17C0-154		

Output DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_009LUP	FN:8	PRODUCER	07-Apr-2010 17:12
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Schlumberger

UPPER RESISTIVITY LOG 5" = 100'

MAXIS Field Log

Input DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_009LUP	FN:8	PRODUCER	07-Apr-2010 17:12	7405.5 FT	0.0 FT
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Integrated Hole/Cement Volume Summary

Hole Volume = 833.39 ft3

Cement Volume = 584.43 ft3 (assuming 4.50 in casing O.D.)
Computed from 4849.5 ft to 2595.5 ft

OP System Version: 17C0-154

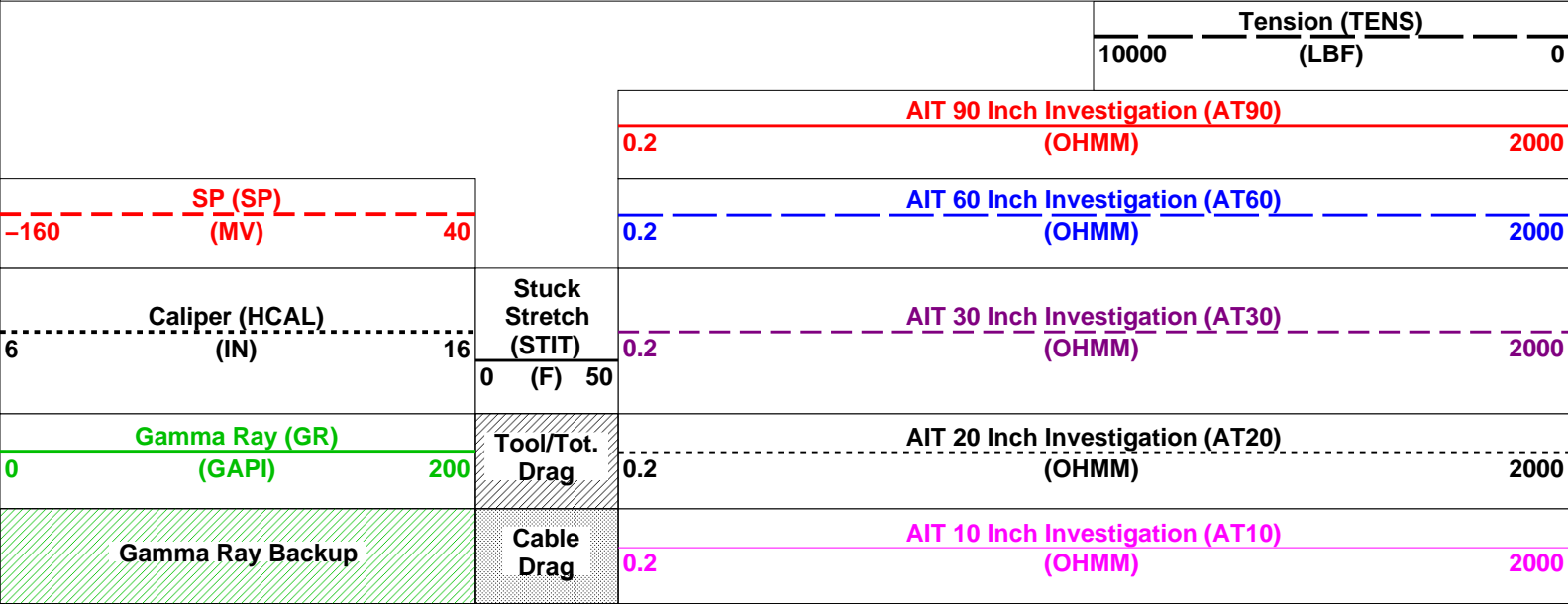
AITM17C0-154HILTD17C0-154

DTCH17C0-154

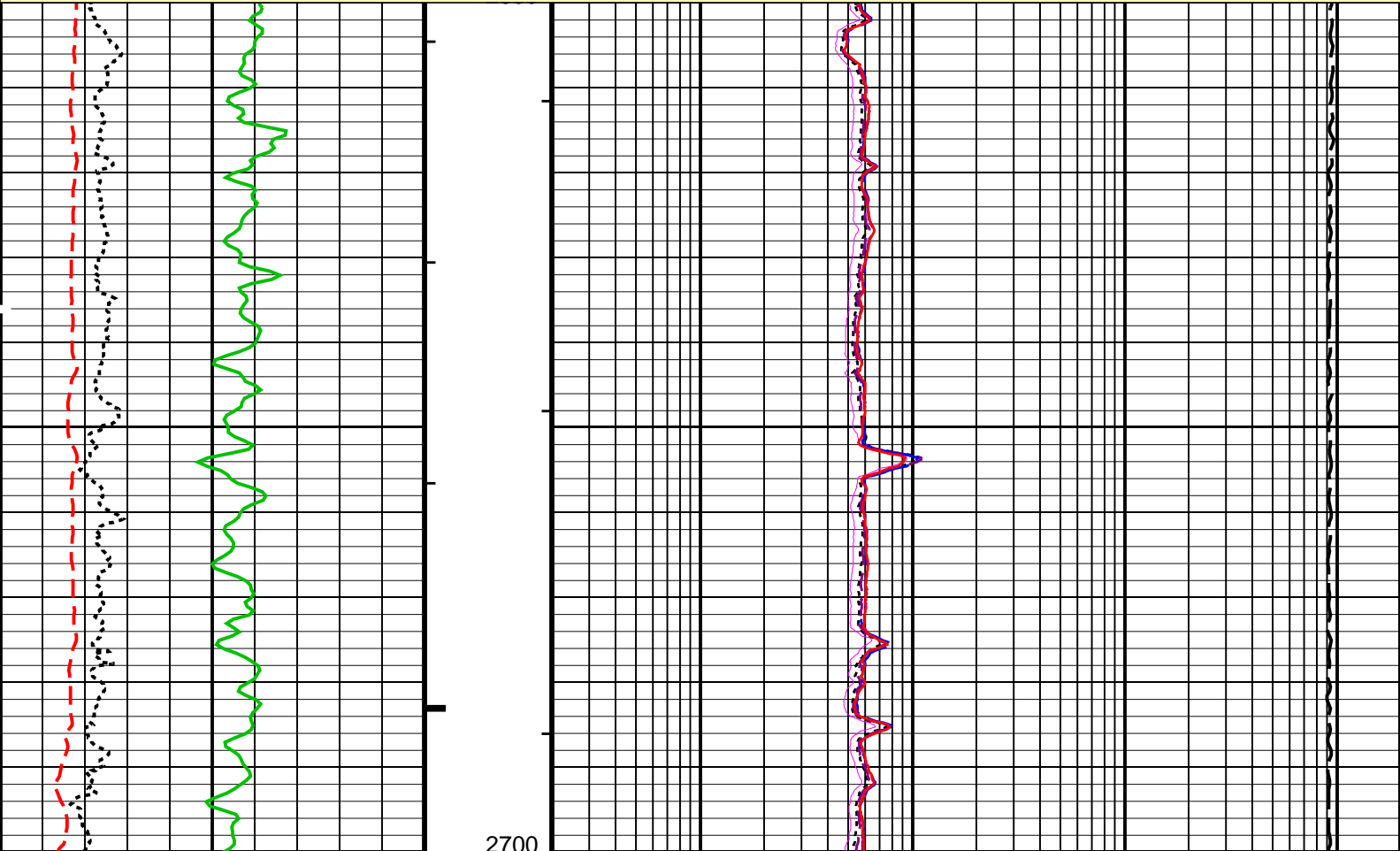
PIP SUMMARY

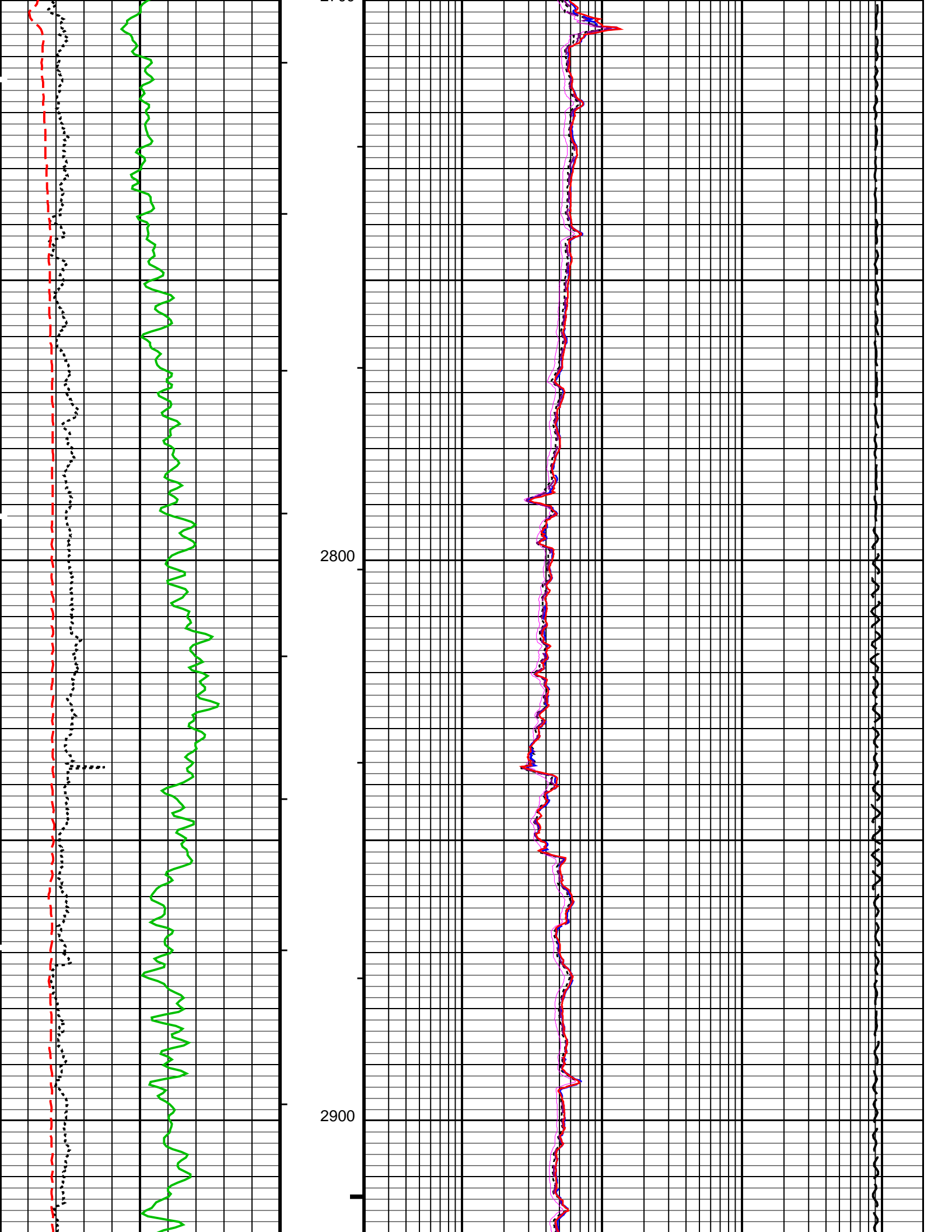
- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
- └ Integrated Cement Volume Minor Pip Every 10 F3
- └ Integrated Cement Volume Major Pip Every 100 F3

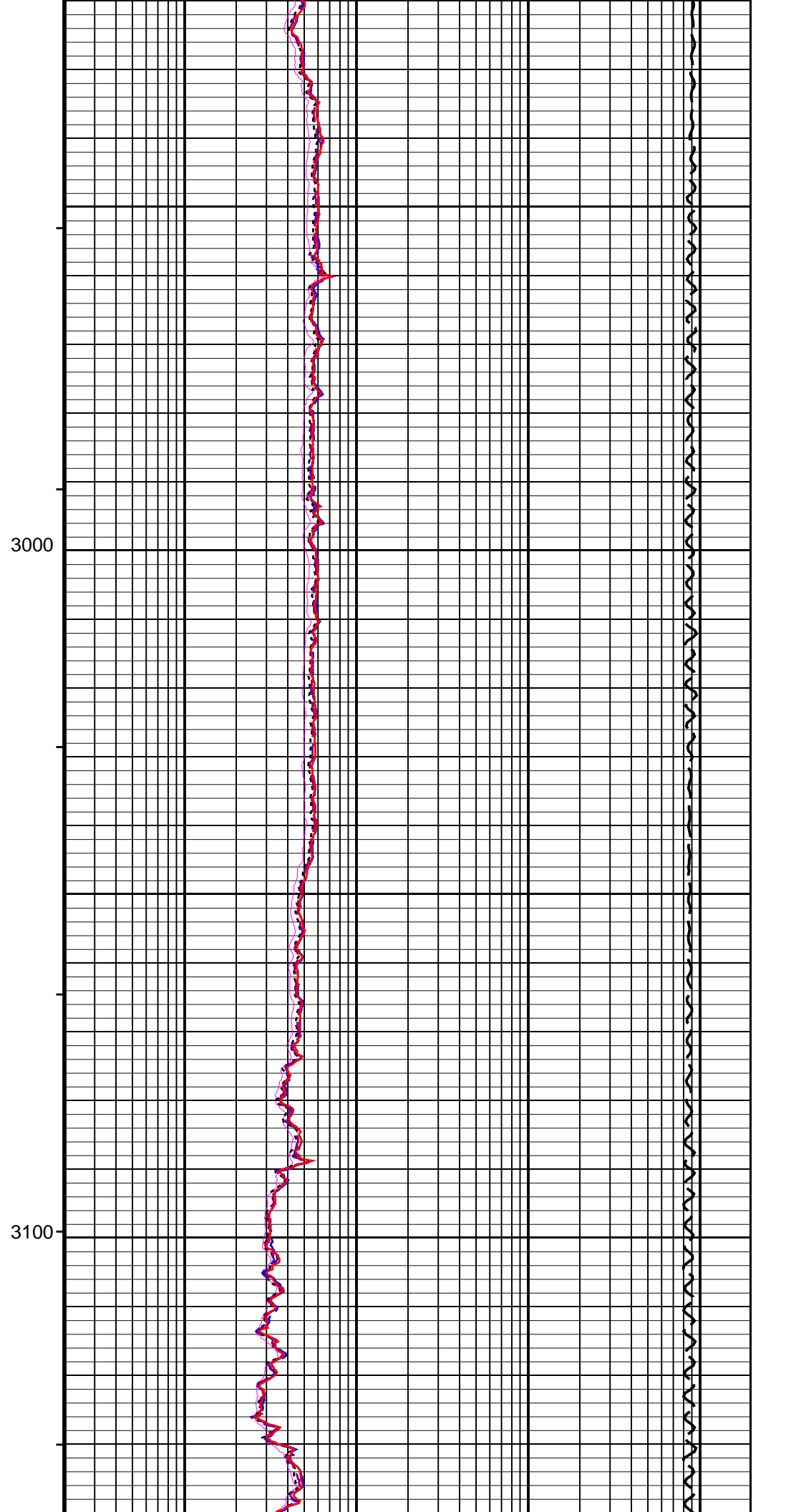
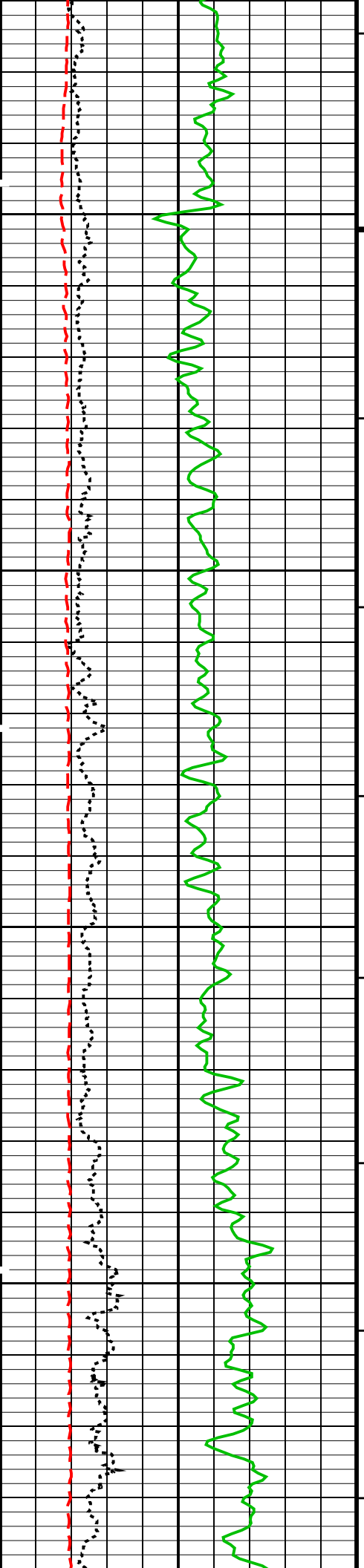
Time Mark Every 60 S

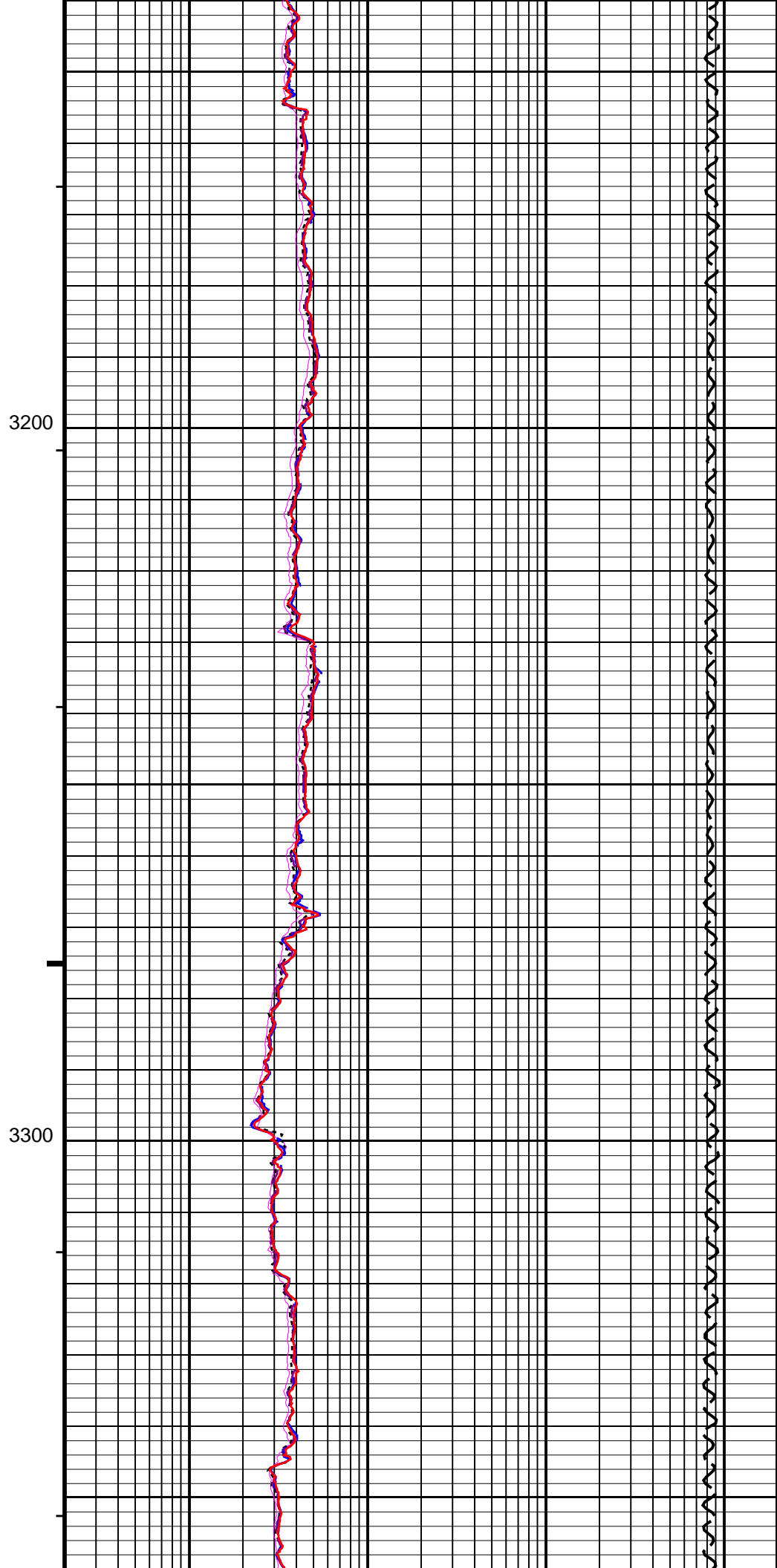
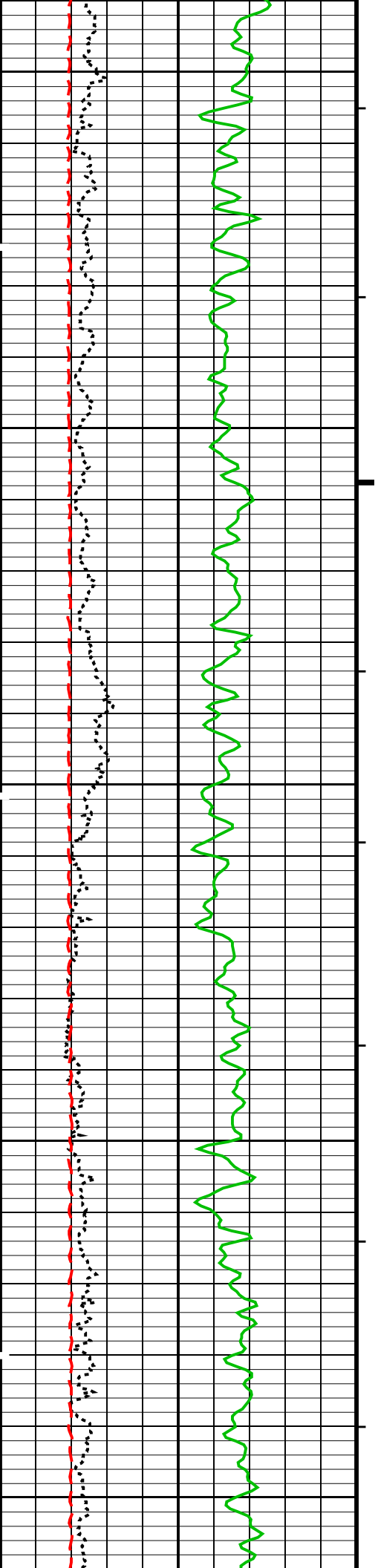


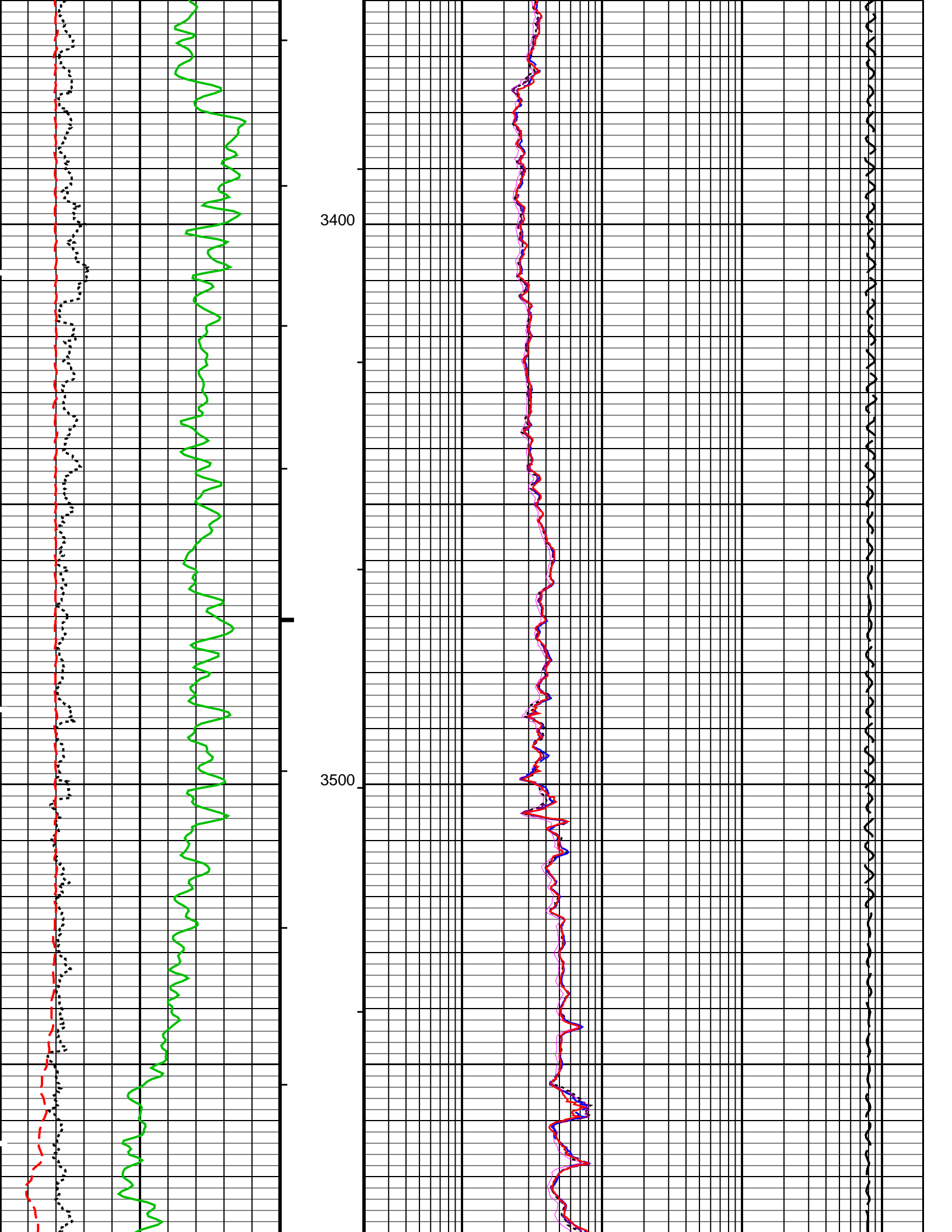
MAIN PASS: *** PLATFORM EXPRESS – ARRAY INDUCTION ***

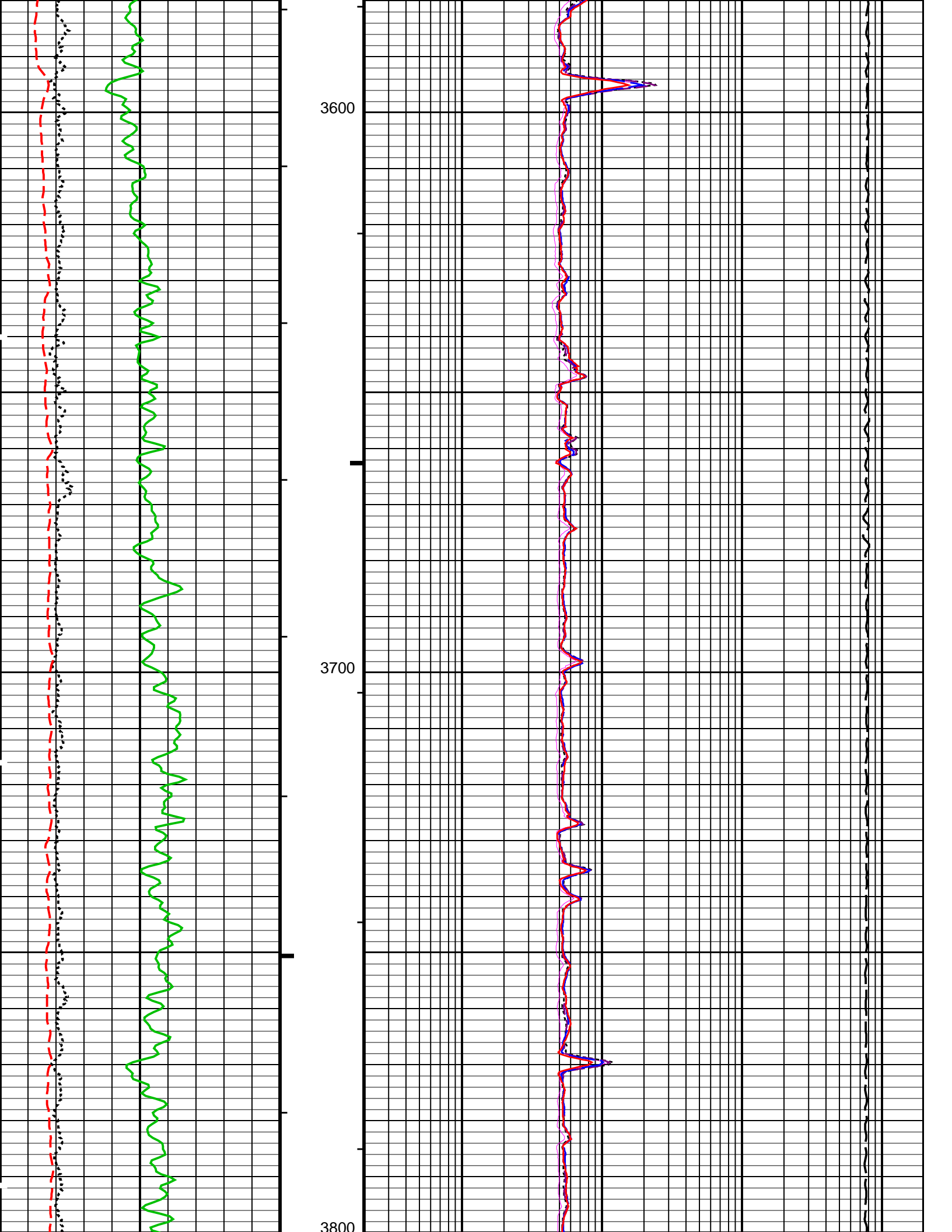


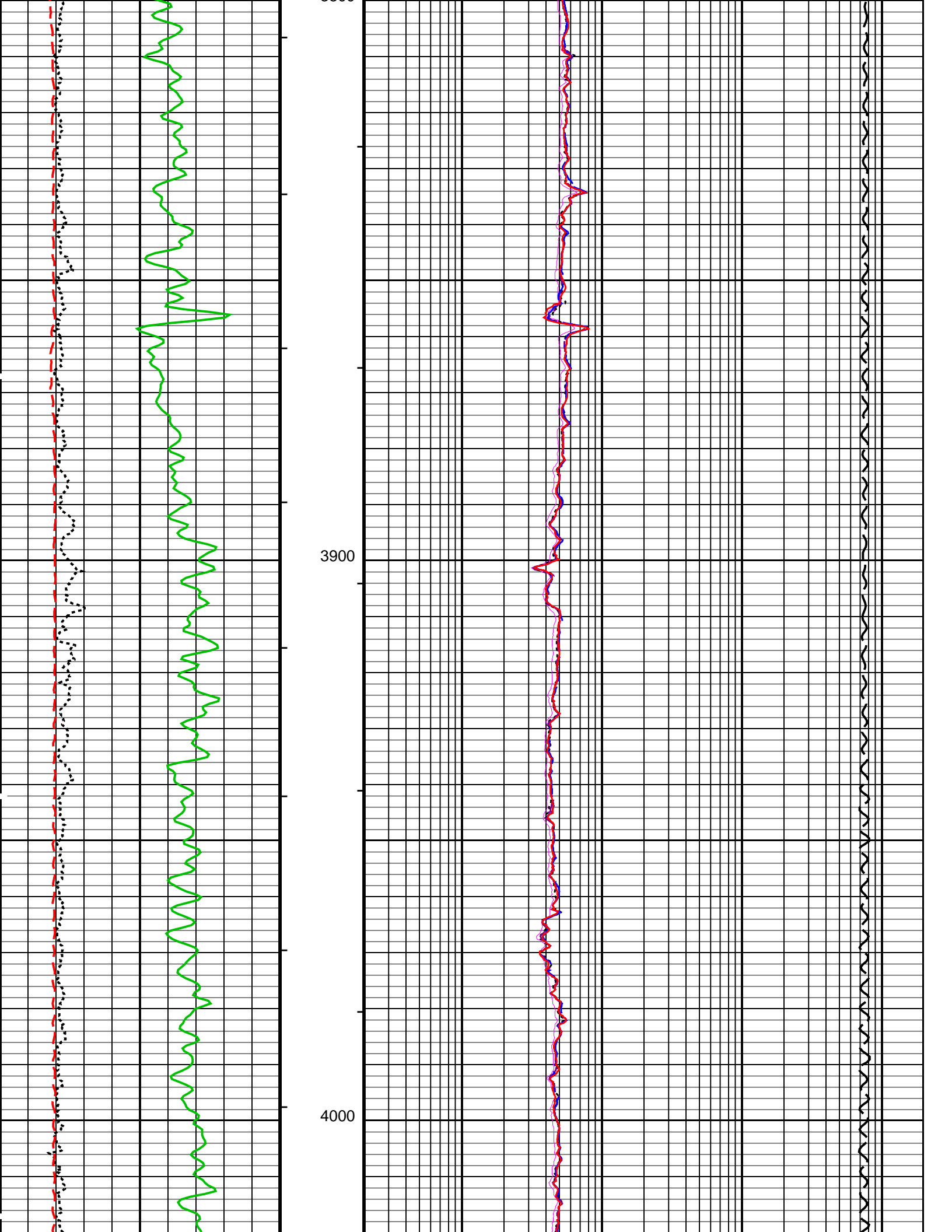


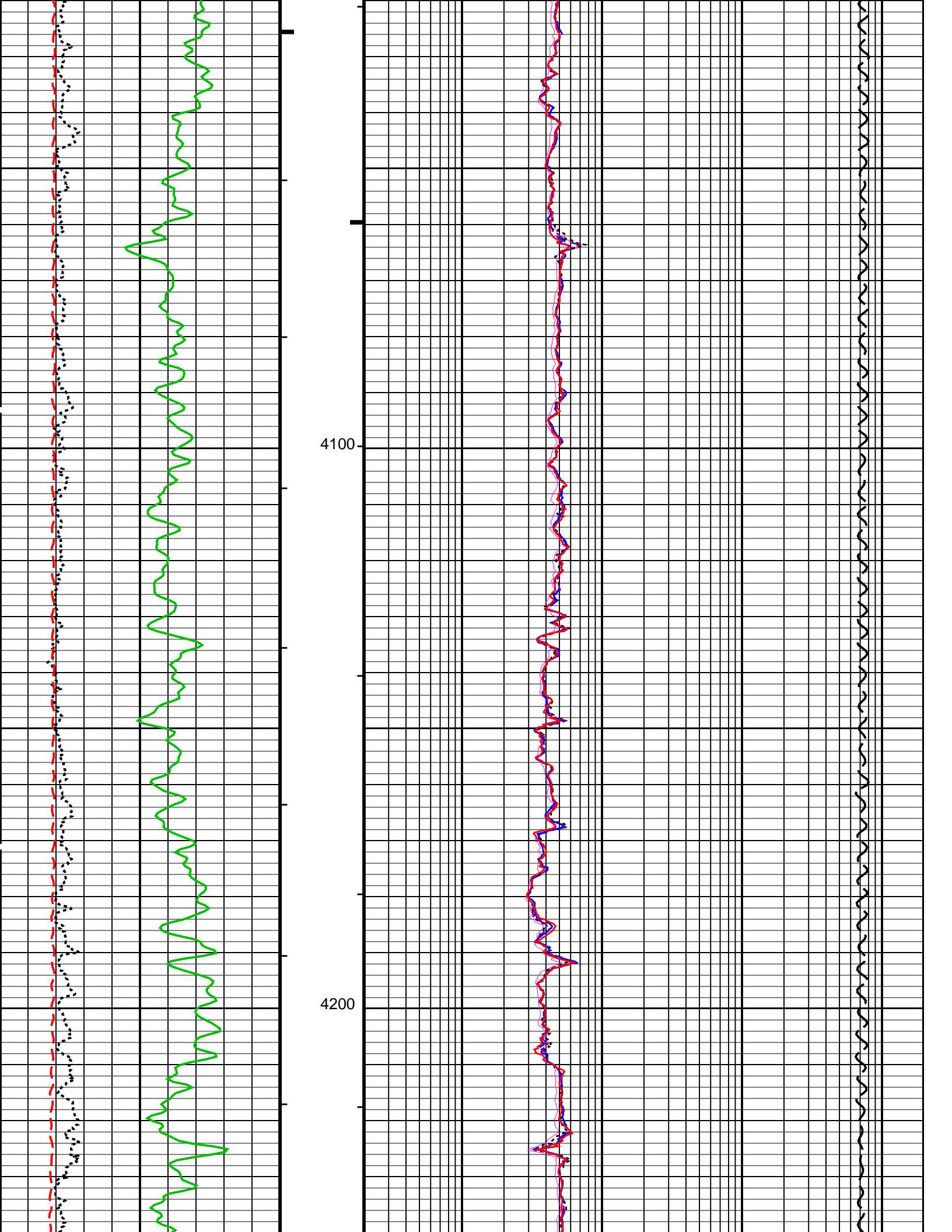


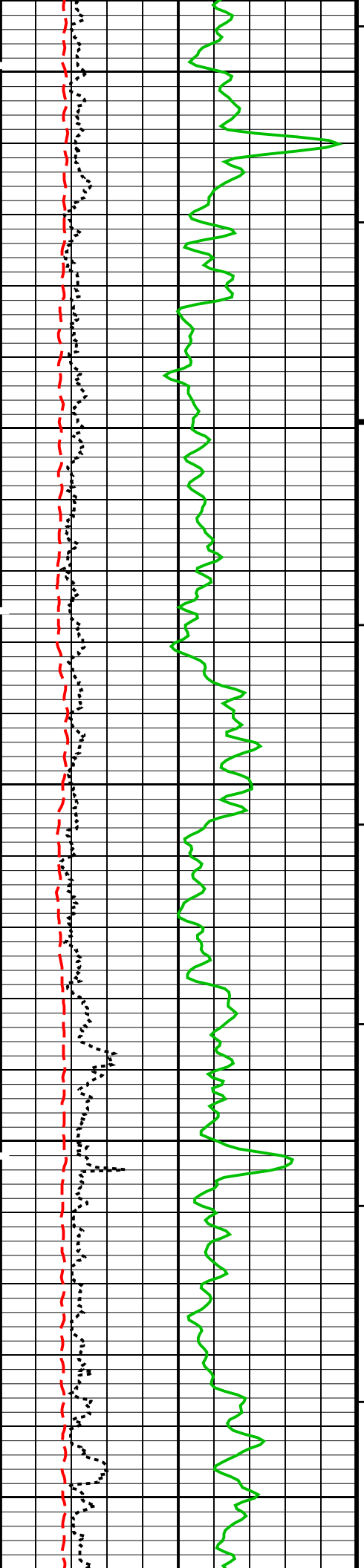






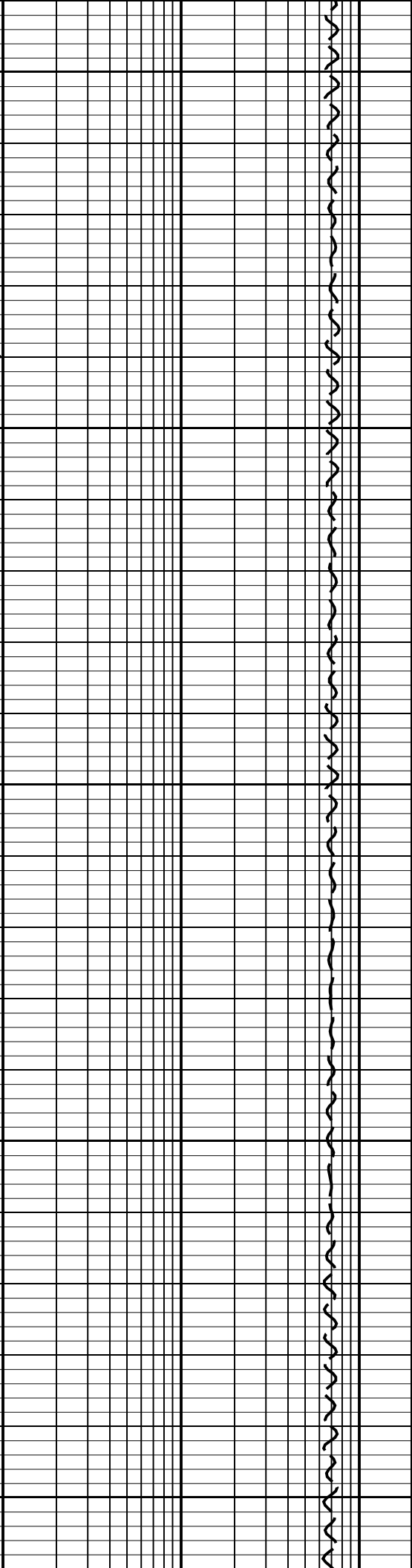
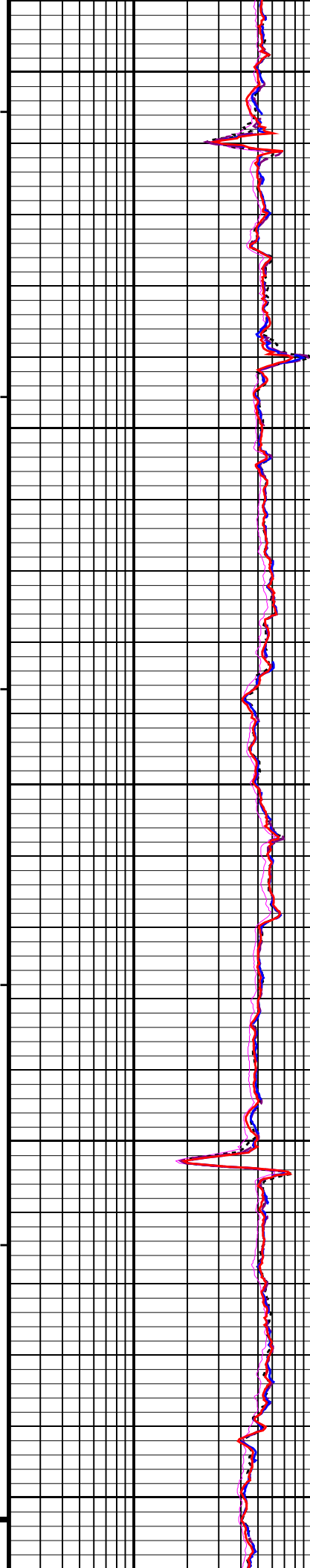


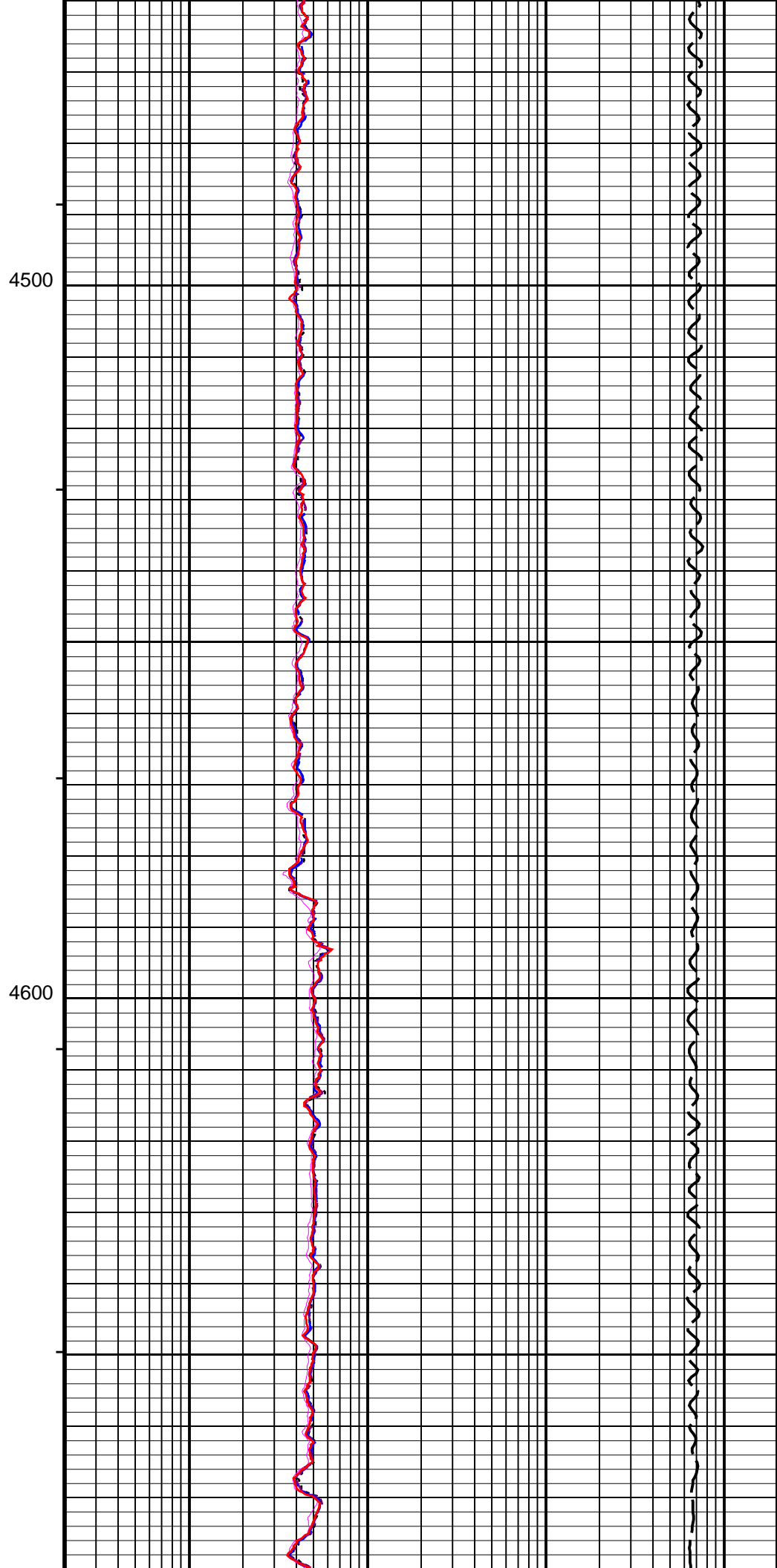
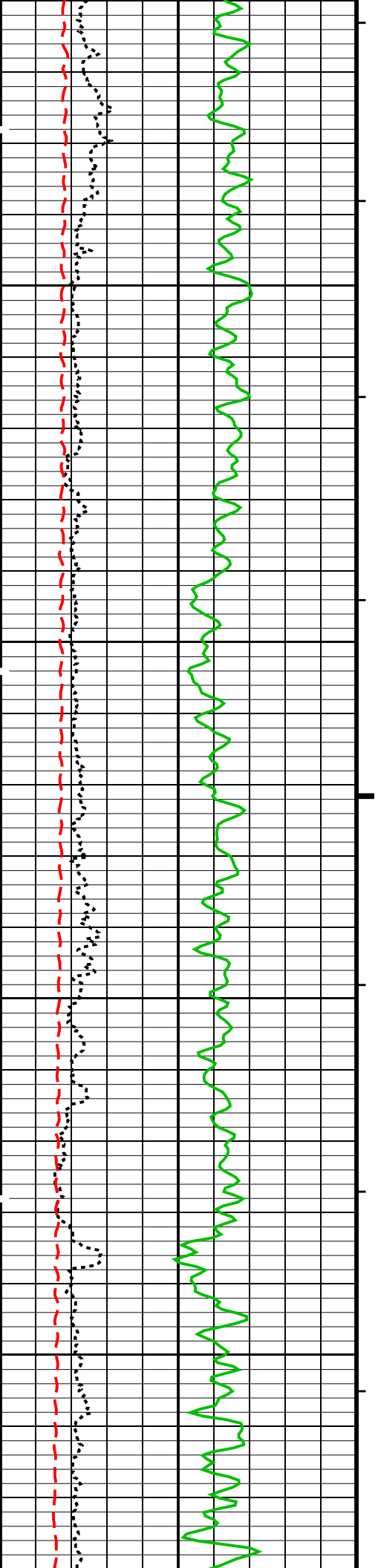


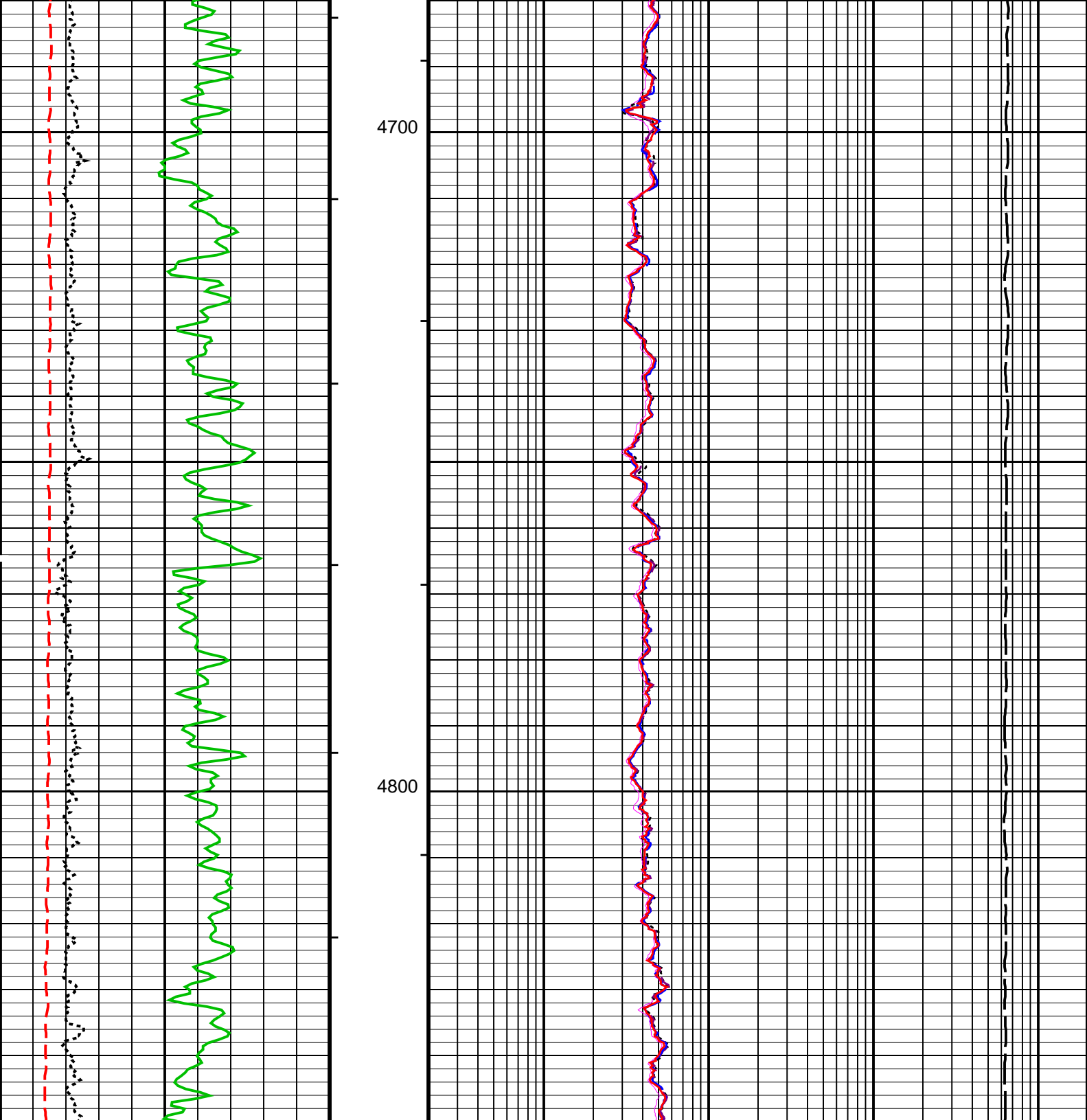


4300

4400







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

Gamma Ray Backup	Cable Drag	0.2	AIT 10 Inch Investigation (AT10) (OHMM)	2000
Gamma Ray (GR) (GAPI)	Tool/Tot. Drag	0.2	AIT 20 Inch Investigation (AT20) (OHMM)	2000
Caliper (HCAL) (IN)	Stuck Stretch (STIT)	0.2	AIT 30 Inch Investigation (AT30) (OHMM)	2000
SP (SP) (MV)	(F) 50	0.2	AIT 60 Inch Investigation (AT60) (OHMM)	2000

		AIT 90 Inch Investigation (AT90)	
0.2		(OHMM)	
		2000	
		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	2_COMPUTESTANDOFF	
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	YES	
ACEN	Array Induction Tool Centering Flag (in Borehole)	ECCENTERED	
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	1.000	
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	
ASAP	Array Induction Suspend Answer Product Processing	0_NOSUSPENSION	
ASPC	Array Induction Sonde Characterization Pressure Coefficients	0.000	
ASTA	Array Induction Tool Standoff	0.250	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)	191.0	degF
FEXP	Form Factor Exponent	2.000	
FNUM	Form Factor Numerator	1.000	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0.000	deg
GGRD	Geothermal Gradient	0.010	degF/ft
GRSE	Generalized Mud Resistivity Selection	AMF_AITM	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68.000	degF
SPDR	SP Drift	0.000	mV/ft
SPNV	SP Next Value	0.000	mV
HILTB-FTB: High resolution Integrated Logging Tool-DTS			
BHT	Bottom Hole Temperature (used in calculations)	191.0	degF
FEXP	Form Factor Exponent	2.000	
FNUM	Form Factor Numerator	1.000	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0.000	deg
GGRD	Geothermal Gradient	0.010	degF/ft
GRSE	Generalized Mud Resistivity Selection	AMF_AITM	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68.000	degF
HOLEV: Integrated Hole/Cement Volume			
BHT	Bottom Hole Temperature (used in calculations)	191.0	degF
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0.000	deg
GGRD	Geothermal Gradient	0.010	degF/ft
GRSE	Generalized Mud Resistivity Selection	AMF_AITM	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68.000	degF
STI: Stuck Tool Indicator			
STKT	STI Stuck Threshold	2.500	ft
TDD	Total Depth - Driller	7405.0	ft
TDL	Total Depth - Logger	7385.0	ft
System and Miscellaneous			
ACSED	Array Induction Casing Shoe Estimated Depth		
BS	Bit Size	7.875	in
DFD	Drilling Fluid Density	8.200	lbm/gal
FLEV	Fluid Level		
MST	Mud Sample Temperature	86.088	degF
TD	Total Depth	7385.0	ft

OP System Version: 17C0-154

AITM	17C0-154	HILTD	17C0-154
DTCH	17C0-154		

Input DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_009LUP	FN:8	PRODUCER	07-Apr-2010 17:12	7405.5 FT	0.0 FT
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Schlumberger

LOWER RESISTIVITY LOG 5" = 100'

MAXIS Field Log

Output DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_009LUP	FN:8	PRODUCER	07-Apr-2010 17:12
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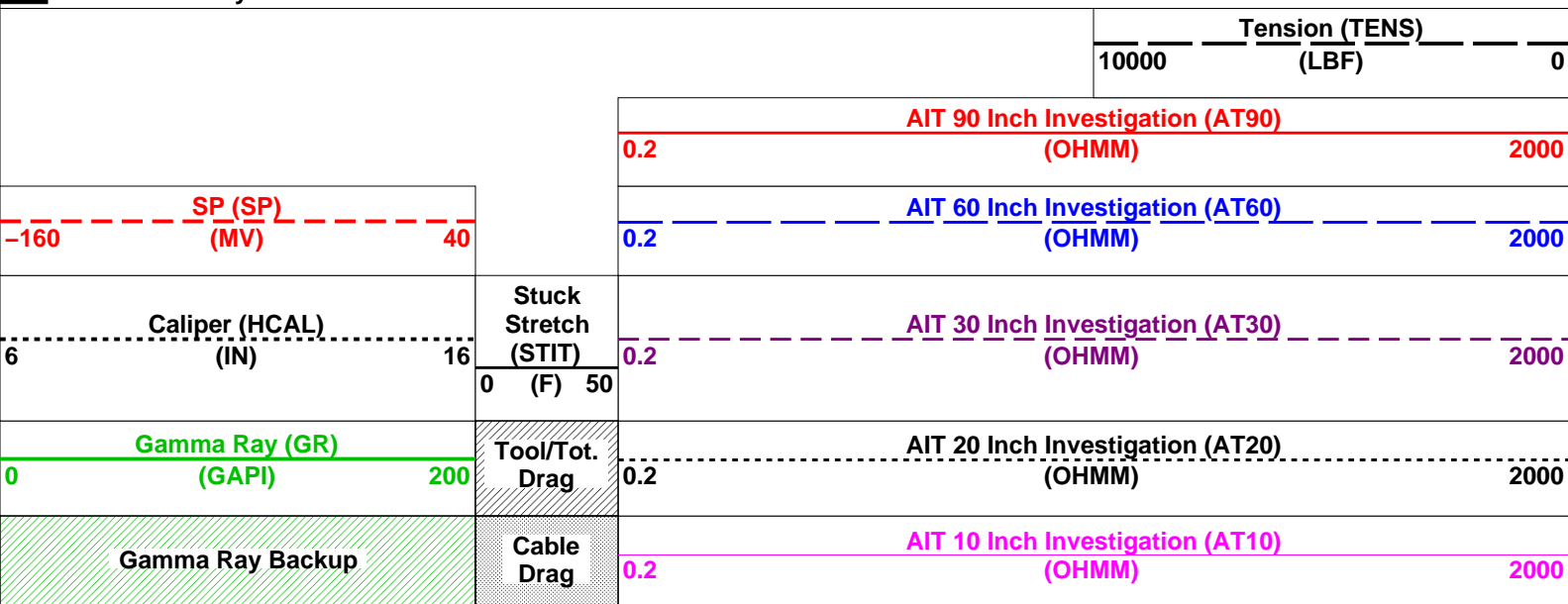
OP System Version: 17C0-154

AIT-M	17C0-154	HILTB-FTB	17C0-154
DTC-H	17C0-154		

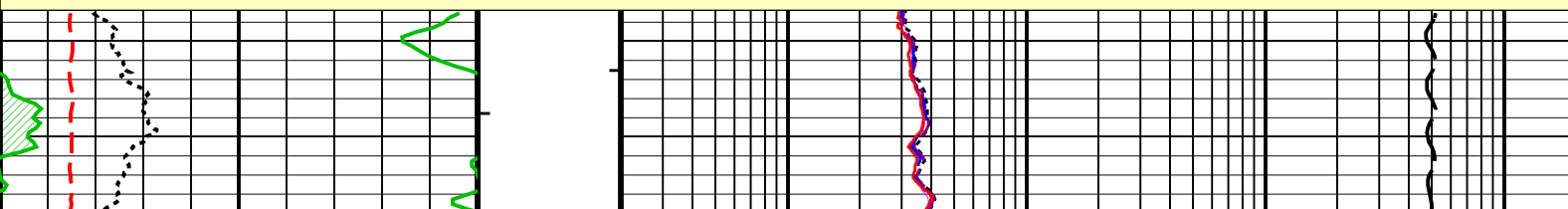
PIP SUMMARY

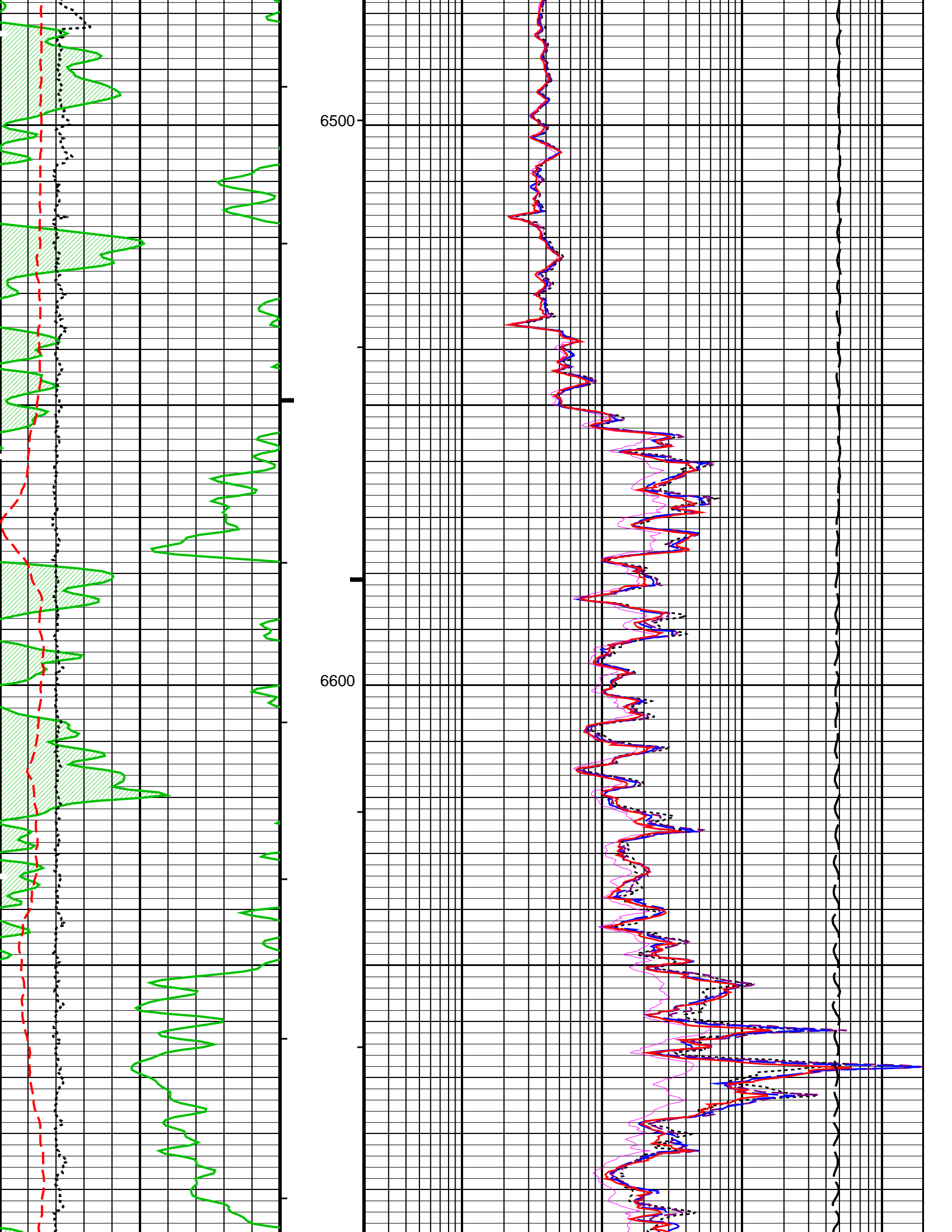
- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
 - └ Integrated Cement Volume Minor Pip Every 10 F3
 - └ Integrated Cement Volume Major Pip Every 100 F3

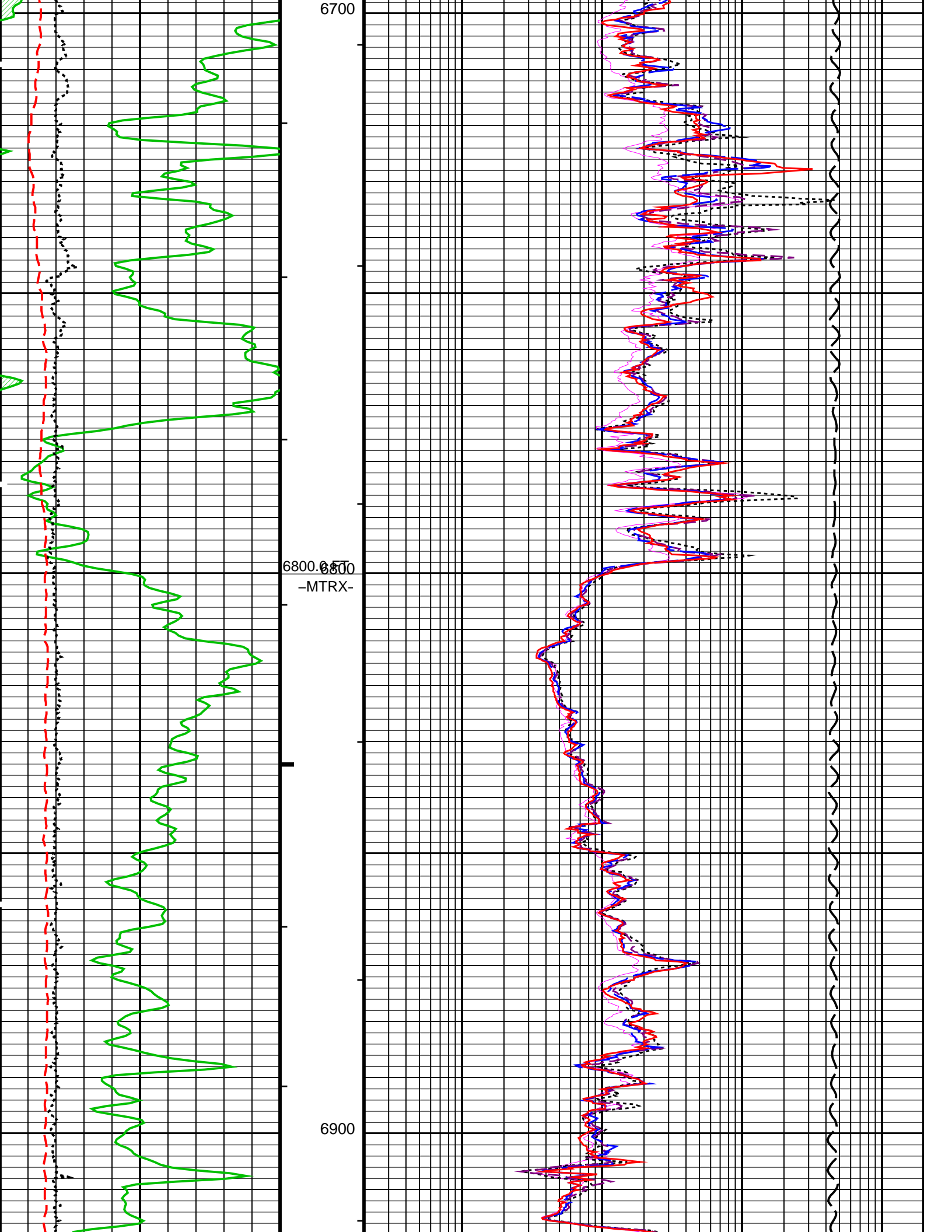
Time Mark Every 60 S

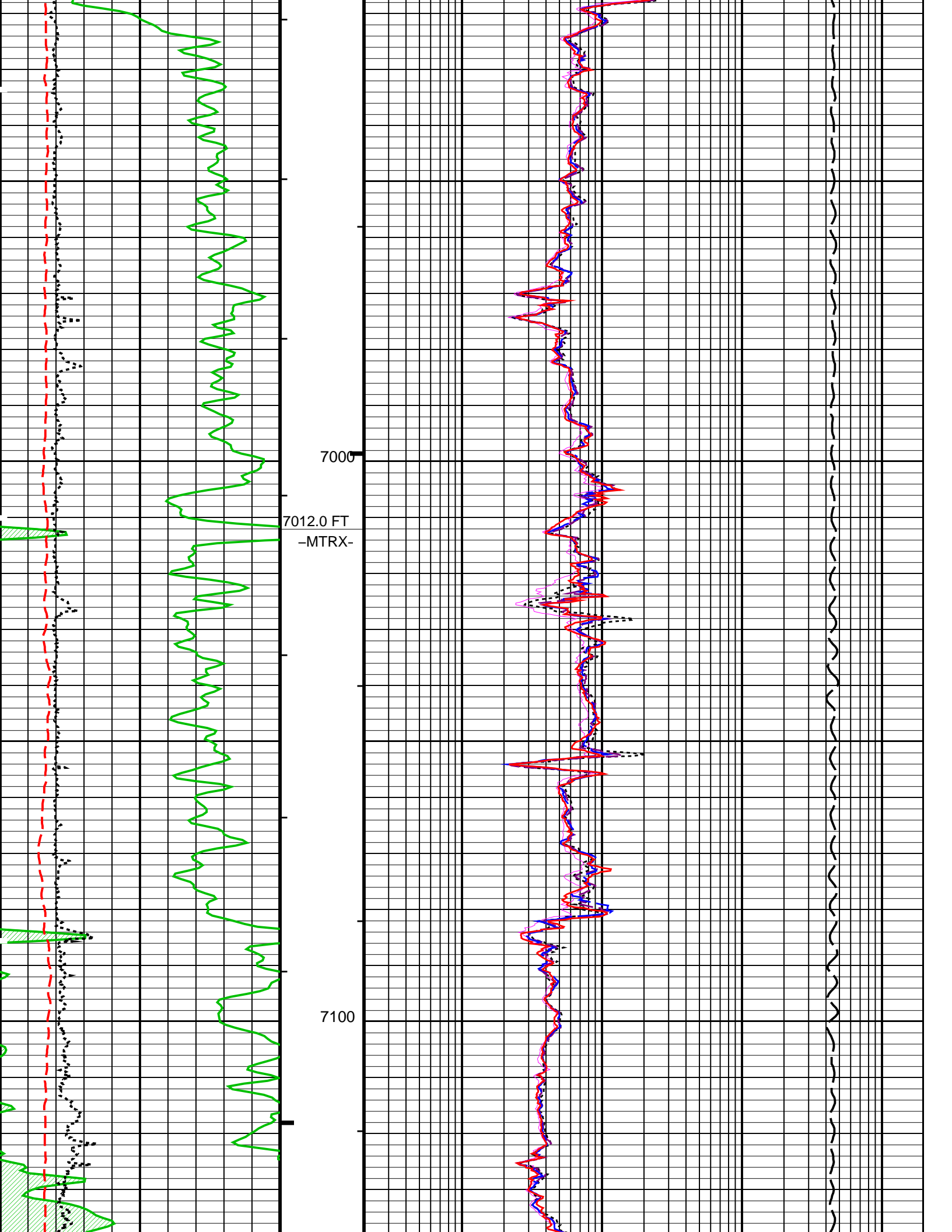


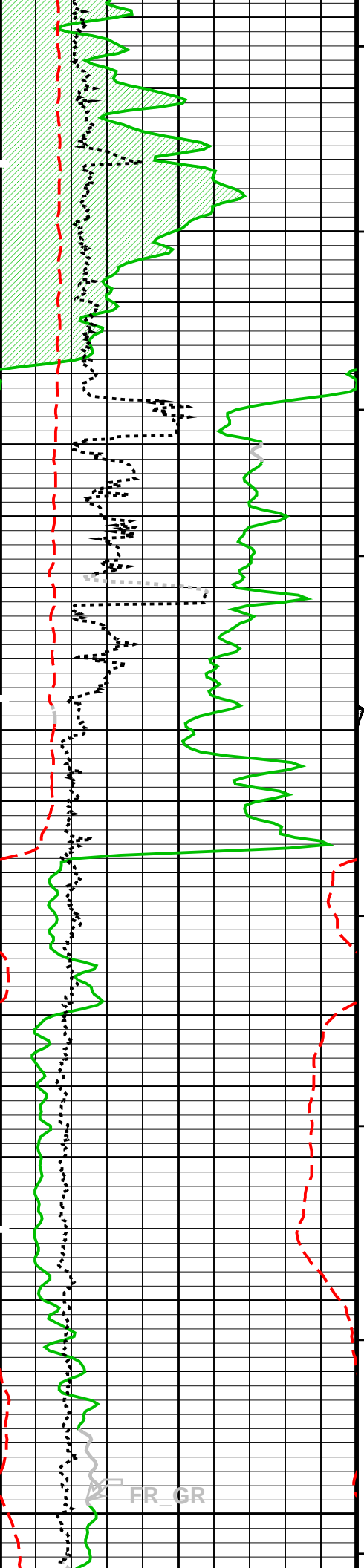
MAIN PASS: *** PLATFORM EXPRESS - ARRAY INDUCTION ***





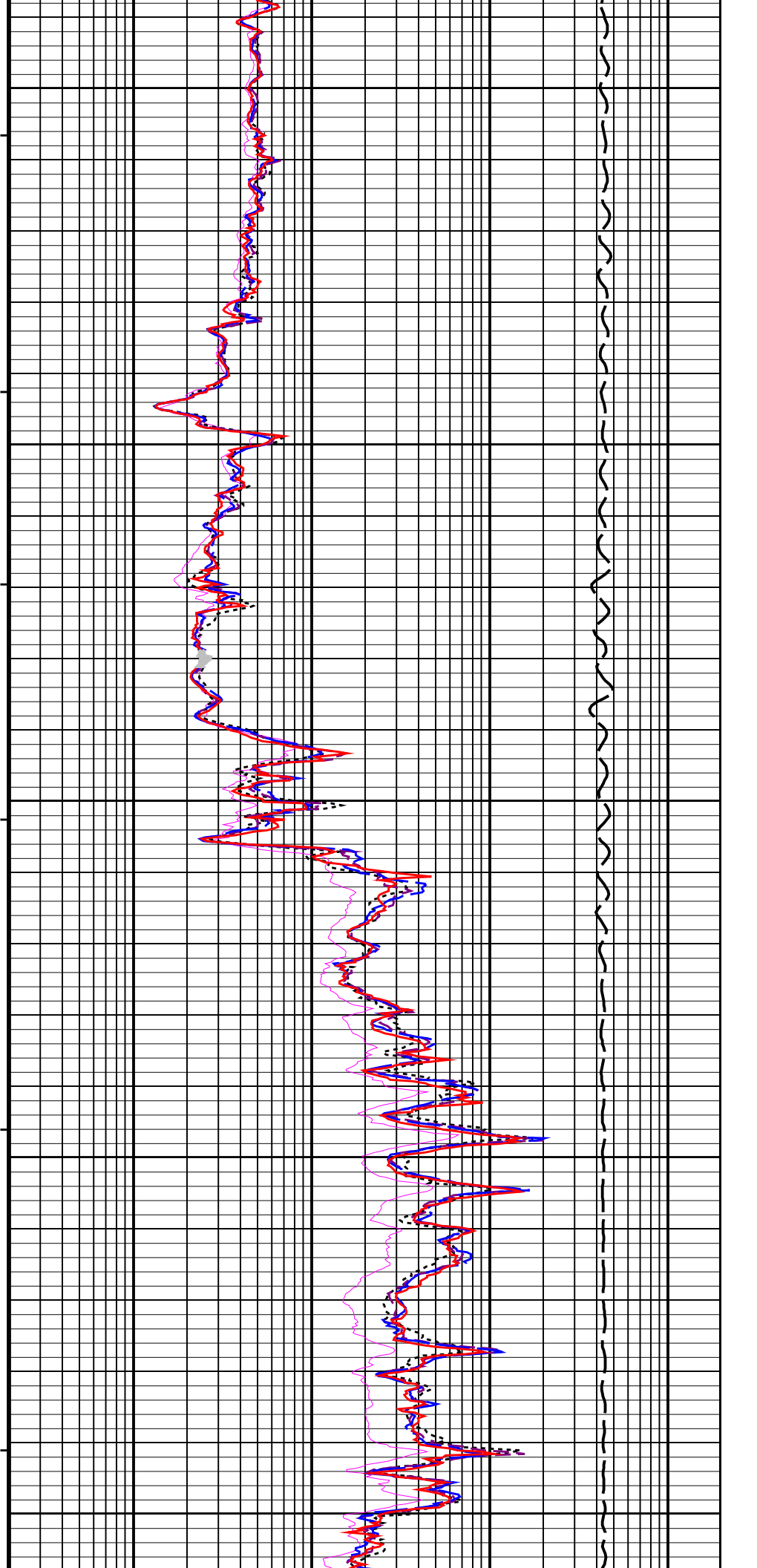




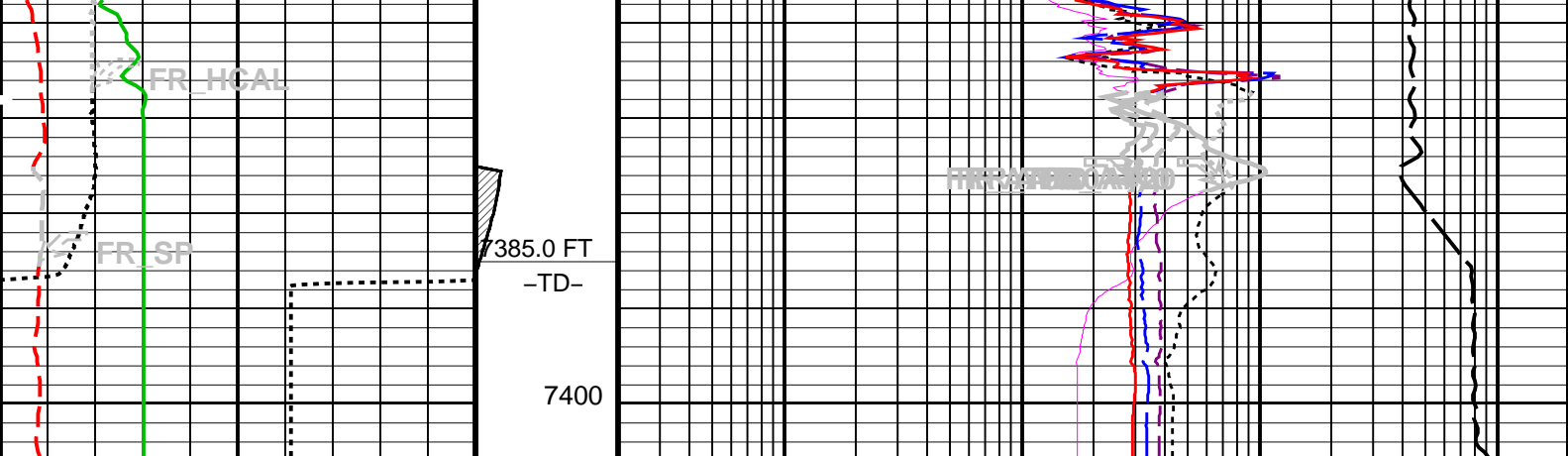


7200

7300



FR_GR



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

Gamma Ray Backup	Cable Drag	0.2	AIT 10 Inch Investigation (AT10) (OHMM)	2000
Gamma Ray (GR) (GAPI)	Tool/Tot. Drag	0.2	AIT 20 Inch Investigation (AT20) (OHMM)	2000
Caliper (HCAL) (IN)	Stuck Stretch (STIT) (F)	0.2	AIT 30 Inch Investigation (AT30) (OHMM)	2000
SP (SP) (MV)		0.2	AIT 60 Inch Investigation (AT60) (OHMM)	2000
		0.2	AIT 90 Inch Investigation (AT90) (OHMM)	2000
		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	2_ComputeStandoff
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	Yes
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)	191 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 DE/F

GRSE	Geothermal Gradient	AITM_RESIST	0.77	
GTSE	Generalized Temperature Selection	HSTS_HTEM	68	DEGF
SHT	Surface Hole Temperature		0	MV
SPNV	SP Next Value			
HILTB-FTB: High resolution Integrated Logging Tool-DTS				
BHT	Bottom Hole Temperature (used in calculations)		191	DEGF
FEXP	Form Factor Exponent		2	
FNUM	Form Factor Numerator		1	
GCSE	Generalized Caliper Selection	HCAL	0	DEG
GDEV	Average Angular Deviation of Borehole from Normal		0.01	DF/F
GGRD	Geothermal Gradient			
GRSE	Generalized Mud Resistivity Selection	AITM_RESIST		
GTSE	Generalized Temperature Selection	HSTS_HTEM	68	DEGF
SHT	Surface Hole Temperature			
HOLEV: Integrated Hole/Cement Volume				
BHT	Bottom Hole Temperature (used in calculations)		191	DEGF
FCD	Future Casing (Outer) Diameter		4.5	IN
GCSE	Generalized Caliper Selection	HCAL	0	DEG
GDEV	Average Angular Deviation of Borehole from Normal		0.01	DF/F
GGRD	Geothermal Gradient			
GRSE	Generalized Mud Resistivity Selection	AITM_RESIST		
GTSE	Generalized Temperature Selection	HSTS_HTEM		
HVCS	Integrated Hole Volume Caliper Selection	HCAL	68	DEGF
SHT	Surface Hole Temperature			
STI: Stuck Tool Indicator				
LBFR	Trigger for MAXIS First Reading Label	TDL	2.5	FT
STKT	STI Stuck Threshold		7405.00	FT
TDD	Total Depth - Driller		7385.00	FT
TDL	Total Depth - Logger			
System and Miscellaneous				
BS	Bit Size		7.875	IN
DFD	Drilling Fluid Density		8.20	LB/G
DORL	Depth Offset for Repeat Analysis		0.0	FT
FLEV	Fluid Level		-50000.00	FT
MST	Mud Sample Temperature		86.09	DEGF
TD	Total Depth		7385	FT

Format: LOWER_GRES

Vertical Scale: 5" per 100'

Graphics File Created: 07-Apr-2010 17:12

OP System Version: 17C0-154			
AIT-M	17C0-154	HILTB-FTB	17C0-154
DTC-H	17C0-154		

Output DLIS Files			
DEFAULT	AIT_TLD_MCFL_CNL_009LUP	FN:8	PRODUCER 07-Apr-2010 17:12

Schlumberger

REPEAT ANALYSIS

MAXIS Field Log

Schlumberger

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: 17-Mar-2010 8:50 Before: 7-Apr-2010 9:08							
Thru Cal Magnitude – 0	0	0.6194	0.6193	N/A	N/A	N/A	V
Thru Cal Magnitude – 1	0	1.269	1.269	N/A	N/A	N/A	V
Thru Cal Magnitude – 2	0	0.6307	0.6306	N/A	N/A	N/A	V
Thru Cal Magnitude – 3	0	0.7118	0.7118	N/A	N/A	N/A	V
Thru Cal Magnitude – 4	0	1.332	1.332	N/A	N/A	N/A	V
Thru Cal Magnitude – 5	0	1.950	1.950	N/A	N/A	N/A	V
Thru Cal Magnitude – 6	0	1.946	1.946	N/A	N/A	N/A	V
Thru Cal Magnitude – 7	0	1.418	1.417	N/A	N/A	N/A	V
Thru Cal Phase – 0	0	180.0	179.9	N/A	N/A	N/A	DEG
Thru Cal Phase – 1	0	178.9	178.8	N/A	N/A	N/A	DEG
Thru Cal Phase – 2	0	175.3	175.2	N/A	N/A	N/A	DEG
Thru Cal Phase – 3	0	174.6	174.5	N/A	N/A	N/A	DEG
Thru Cal Phase – 4	0	168.4	168.3	N/A	N/A	N/A	DEG
Thru Cal Phase – 5	0	166.7	166.6	N/A	N/A	N/A	DEG
Thru Cal Phase – 6	0	166.8	166.7	N/A	N/A	N/A	DEG
Thru Cal Phase – 7	0	165.9	165.8	N/A	N/A	N/A	DEG

Array Induction Tool – M Wellsite Calibration – Electronics Calibration Check – Auxiliary

Master: 17-Mar-2010 8:50 Before: 7-Apr-2010 9:08

Array Induction SPA Plus	991.0	983.6	983.5	N/A	N/A	N/A	MV
Array Induction SPA Zero	0	-0.2001	-0.1952	N/A	N/A	N/A	MV
Array Induction Temperature PI	0.9170	0.9114	0.9113	N/A	N/A	N/A	V
Array Induction Temperature Ze	0	-0.0002014	-0.0001927	N/A	N/A	N/A	V

Array Induction Tool – M Wellsite Calibration – Test Loop Gain Correction

Master: 17-Mar-2010 8:50

Test Loop Gain Correctio – 0	0	1.015	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	1.016	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 3	0	1.012	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 4	0	0.9937	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 5	0	0.9890	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 6	0	0.9937	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	0.3332	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 1	0	0.6161	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 2	0	0.1287	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 3	0	0.1700	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 4	0	0.1124	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 5	0	-0.06042	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 6	0	0.2973	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 7	0	-0.06541	N/A	N/A	N/A	N/A	DEG

Array Induction Tool – M Wellsite Calibration – Sonde Error Correction

Master: 17-Mar-2010 8:50

R Sonde Error Correction – 0	0	-65.75	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 1	0	176.6	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 2	0	119.4	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 3	0	66.51	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 4	0	27.71	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 5	0	12.62	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 6	0	9.430	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 7	0	-1.425	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 0	0	-316.9	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 1	0	108.6	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 2	0	44.39	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 3	0	-31.03	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 4	0	20.82	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 5	0	-16.06	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 6	0	-4.953	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 7	0	-11.76	N/A	N/A	N/A	N/A	MM/M

Array Induction Tool – M Wellsite Calibration – Mud Gain Correction

Master: 17-Mar-2010 8:50

Coarse – Mag, Real, Imag – 0	0	0.8486	N/A	N/A	N/A	N/A	
Coarse – Mag, Real, Imag – 1	0	0.8487	N/A	N/A	N/A	N/A	
Coarse – Mag, Real, Imag – 2	0	0.8487	N/A	N/A	N/A	N/A	
Fine – Mag, Real, Imag – 0	0	0.8511	N/A	N/A	N/A	N/A	
Fine – Mag, Real, Imag – 1	0	0.8512	N/A	N/A	N/A	N/A	
Fine – Mag, Real, Imag – 2	0	0.8512	N/A	N/A	N/A	N/A	

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

Before: 7-Apr-2010 9:03

PS Window Ratio	0.7303	N/A	0.7350	N/A	N/A	N/A	
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BS Window Ratio	0.7392	N/A	0.7359	N/A	N/A	N/A	CPS
BS Window Sum	10690	N/A	10680	N/A	N/A	N/A	
SS Window Ratio	0.4732	N/A	0.4728	N/A	N/A	N/A	
SS Window Sum	10190	N/A	10170	N/A	N/A	N/A	CPS
LS Window Ratio	0.2975	N/A	0.3001	N/A	N/A	N/A	
LS Window Sum	1166	N/A	1162	N/A	N/A	N/A	CPS

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

Before: 7–Apr–2010 9:03

BS PM High Voltage (Command)	1509	N/A	1515	N/A	N/A	N/A	V
SS PM High Voltage (Command)	1777	N/A	1780	N/A	N/A	N/A	V
LS PM High Voltage (Command)	1896	N/A	1900	N/A	N/A	N/A	V

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

Before: 7–Apr–2010 9:03

BS Crystal Resolution	11.23	N/A	11.17	N/A	N/A	N/A	%
SS Crystal Resolution	11.03	N/A	11.14	N/A	N/A	N/A	%
LS Crystal Resolution	9.873	N/A	9.879	N/A	N/A	N/A	%

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

Before: 7–Apr–2010 9:08

Raw B0 Resistivity	3875	N/A	3857	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3810	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3826	N/A	N/A	N/A	OHMM

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

Before: 7–Apr–2010 8:57

HILT Caliper Zero Measurement	8.000	N/A	9.771	N/A	N/A	N/A	IN
HILT Caliper Plus Measurement	12.00	N/A	13.89	N/A	N/A	N/A	IN

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

Before: 7–Apr–2010 8:54

Gamma Ray Background	30.00	N/A	79.26	N/A	N/A	N/A	GAPI
Gamma Ray (Jig – Bkg)	148.5	N/A	148.5	N/A	N/A	13.50	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

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

Master: 20–Mar–2010 17:38 Before: 7–Apr–2010 9:12

CNTC Background	28.30	28.30	28.36	N/A	N/A	4.245	CPS
CFTC Background	26.92	26.92	28.76	N/A	N/A	4.038	CPS

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

Master: 20–Mar–2010 17:38

Thermal Near Corr. (Tank)	5800	5716	N/A	N/A	N/A	N/A	CPS
Thermal Far Corr. (Tank)	2400	2390	N/A	N/A	N/A	N/A	CPS
CNTC/CFTC (Tank)	2.159	2.392	N/A	N/A	N/A	N/A	

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

Before: 7–Apr–2010 16:38

Z–Axis Acceleration	32.19	N/A	31.77	N/A	N/A	N/A	F/S2
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High resolution Integrated Logging Tool–DTS Master Calibration – Inversion results

Master: 22–Mar–2010 21:20

Rho Aluminum	2.596	2.602	--	--	--	--	G/C3
Rho Magnesium	1.686	1.688	--	--	--	--	G/C3
Pe Aluminum	2.570	2.565	--	--	--	--	
Pe Magnesium	2.650	2.609	--	--	--	--	

High resolution Integrated Logging Tool–DTS Master Calibration – Deviation Summary

Master: 22–Mar–2010 21:20

BS Average Deviation	0	0.3292	--	--	--	--	%
BS Max Deviation	0	0.6568	--	--	--	--	%
SS Average Deviation	0	0.4057	--	--	--	--	%
SS Max Deviation	0	1.954	--	--	--	--	%
LS Average Deviation	0	0.8119	--	--	--	--	%
LS Max Deviation	0	1.606	--	--	--	--	%

The GLS–VJ source activity is acceptable.

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

NCT–B Water Temperature 61.6 DEGF.
Thermal Housing Size 3.380 IN.
NSR–F serial number 5068

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	0.6194		0.6100	180.0		197.0
	Before	0.6193			179.9		
1	Master	1.269		1.270	178.9		196.0
	Before	1.269			178.8		
2	Master	0.6307		0.6200	175.3		192.0
	Before	0.6306			175.2		
3	Master	0.7118		0.7000	174.6		191.0
	Before	0.7118			174.5		
4	Master	1.332		1.340	168.4		185.0
	Before	1.332			168.3		
5	Master	1.950		1.960	166.7		182.0
	Before	1.950			166.6		
6	Master	1.946		1.960	166.8		181.0
	Before	1.946			166.7		
7	Master	1.418		1.410	165.9		175.0
	Before	1.417			165.8		
		60.00 % (Minimum)	(Nominal)	140.0 % (Maximum)	Nom -60.00 (Minimum)	(Nominal)	Nom + 60.00 (Maximum)
Master: 17-Mar-2010 8:50				Before: 7-Apr-2010 9:08			





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			983.6	Master			-0.2001
Before			983.5	Before			-0.1952
	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			0.9114	Master			-0.0002014
Before			0.9113	Before			-0.0001927
	0.8710 (Minimum)	0.9170 (Nominal)	0.9630 (Maximum)		-0.05000 (Minimum)	0 (Nominal)	0.05000 (Maximum)
Master: 17-Mar-2010 8:50			Before: 7-Apr-2010 9:08				

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	1.015				0.3332		
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
1	1.012				0.6161		
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
2	1.016				0.1287		
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)

3	1.012		0.1700			
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
4	0.9937		0.1124			
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
5	0.9890		-0.06042			
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
6	0.9937		0.2973			
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
7	1.006		-0.06541			
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
Master: 17-Mar-2010 8:50						

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	-65.75				-316.9		
	-231.0 (Minimum)	-56.00 (Nominal)	119.0 (Maximum)		-2250 (Minimum)	0 (Nominal)	2250 (Maximum)
1	176.6				108.6		
	114.0 (Minimum)	159.0 (Nominal)	204.0 (Maximum)		-625.0 (Minimum)	0 (Nominal)	625.0 (Maximum)
2	119.4				44.39		
	66.00 (Minimum)	111.0 (Nominal)	156.0 (Maximum)		-350.0 (Minimum)	0 (Nominal)	350.0 (Maximum)
3	66.51				-31.03		
	39.00 (Minimum)	64.00 (Nominal)	89.30 (Maximum)		-250.0 (Minimum)	0 (Nominal)	250.0 (Maximum)
4	27.71				20.82		
	15.00 (Minimum)	25.00 (Nominal)	35.00 (Maximum)		-63.00 (Minimum)	0 (Nominal)	63.00 (Maximum)
5	12.62				-16.06		
	4.000 (Minimum)	14.00 (Nominal)	24.00 (Maximum)		-50.00 (Minimum)	0 (Nominal)	50.00 (Maximum)
6	9.430				-4.953		
	5.000 (Minimum)	10.00 (Nominal)	15.00 (Maximum)		-30.00 (Minimum)	0 (Nominal)	30.00 (Maximum)
7	-1.425				-11.76		
	-5.000 (Minimum)	0 (Nominal)	5.000 (Maximum)		-30.00 (Minimum)	0 (Nominal)	30.00 (Maximum)
Master: 17-Mar-2010 8:50							

Array Induction Tool – M Wellsite Calibration							
Mud Gain Correction							
Idx	Value	Coarse – Mag, Real, Imag			Value	Fine – Mag, Real, Imag	
0	0.8486				0.8511		
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal) 1.200 (Maximum)
1	0.8487				0.8512		
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal) 1.200 (Maximum)
2	0.8487				0.8512		
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal) 1.200 (Maximum)
Master: 17–Mar–2010 8:50							

Array Induction Tool – M Master Calibration							
Electronics Calibration Check – Thru Cal Mag. & Phase							
Idx	Phase	Value	Thru Cal Magnitude V	Nominal	Value	Thru Cal Phase DEG	Nominal
0	Master	0.6194		0.6100	180.0		197.0
1	Master	1.269		1.270	178.9		196.0

2	Master	0.6307		0.6200	175.3		192.0
3	Master	0.7118		0.7000	174.6		191.0
4	Master	1.332		1.340	168.4		185.0
5	Master	1.950		1.960	166.7		182.0
6	Master	1.946		1.960	166.8		181.0
7	Master	1.418		1.410	165.9		175.0
		60.00 % (Minimum)	(Nominal)	140.0 % (Maximum)	Nom -60.00 (Minimum)	(Nominal)	Nom + 60.00 (Maximum)







Master: 17-Mar-2010 8:50

Array Induction Tool – M Master Calibration									
Electronics Calibration Check – Auxiliary									
Phase	Array Induction SPA Plus MV			Value	Phase	Array Induction SPA Zero MV			Value
Master	<div><div></div></div>			983.6	Master	<div><div></div></div>			−0.2001
	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	<div><div></div></div>			0.9114	Master	<div><div></div></div>			−0.0002014
	0.8710 (Minimum)	0.9170 (Nominal)	0.9630 (Maximum)			−0.05000 (Minimum)	0 (Nominal)	0.05000 (Maximum)	
Master: 17–Mar–2010 8:50									




Master: 17-Mar-2010 8:50

Array Induction Tool – M Master Calibration								
Test Loop Gain Correction								
Idx	Value	Test Loop Gain Correction Magnitude V			Value	Test Loop Gain Correction Phase DEG		
0	1.015				0.3332			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
1	1.012				0.6161			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
2	1.016				0.1287			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
3	1.012				0.1700			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
4	0.9937				0.1124			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
5	0.9890				-0.06042			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
6	0.9937				0.2973			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
7	1.006				-0.06541			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)




Master: 17-Mar-2010 8:50

Array Induction Tool – M Master Calibration								
Sonde Error Correction								
Idx	Value	R Sonde Error Correction MM/M			Value	X Sonde Error Correction MM/M		
0	-65.75				-316.9			
		-231.0 (Minimum)	-56.00 (Nominal)	119.0 (Maximum)		-2250 (Minimum)	0 (Nominal)	2250 (Maximum)
1	176.6				108.6			
		114.0 (Minimum)	159.0 (Nominal)	204.0 (Maximum)		-625.0 (Minimum)	0 (Nominal)	625.0 (Maximum)
2	119.4				44.39			
		66.00 (Minimum)	111.0 (Nominal)	156.0 (Maximum)		-350.0 (Minimum)	0 (Nominal)	350.0 (Maximum)



Before: 7-Apr-2010 9:03

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			11.17	Before			11.14	Before			9.879
	10.23 (Minimum)	11.23 (Nominal)	12.23 (Maximum)		10.03 (Minimum)	11.03 (Nominal)	12.03 (Maximum)		8.873 (Minimum)	9.873 (Nominal)	10.87 (Maximum)
Before: 7–Apr–2010 9:03											




Before: 7-Apr-2010 9:03

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				3857	Before				3810	Before				3826
	3565 (Minimum)	3875 (Nominal)	4185 (Maximum)		3524 (Minimum)	3830 (Nominal)	4136 (Maximum)		3524 (Minimum)	3830 (Nominal)	4136 (Maximum)			
Before: 7-Apr-2010 9:08														





Before: 7-Apr-2010 9:08

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			9.771	Before			13.89
	6.000 (Minimum)	8.000 (Nominal)	10.00 (Maximum)		9.000 (Minimum)	12.00 (Nominal)	15.00 (Maximum)
Before: 7-Apr-2010 8:57							

Before: 7-Apr-2010 8:57




High resolution Integrated Logging Tool–DTS Wellsite Calibration											
Detector Calibration											
Phase	Gamma Ray Background GAPI		Value	Phase	Gamma Ray (Jig – Bkg) GAPI		Value	Phase	Gamma Ray (Calibrated) GAPI		Value
Before			79.26	Before			148.5	Before			165.0
	0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)		135.0 (Minimum)	148.5 (Nominal)	162.0 (Maximum)		150.0 (Minimum)	165.0 (Nominal)	180.0 (Maximum)
Before: 7–Apr–2010 8:54											

Before: 7-Apr-2010 8:54


High resolution Integrated Logging Tool–DTS Wellsite Calibration								
Zero Measurement								
Phase	CNTC Background CPS		Value	Phase	CFTC Background CPS		Value	
Master			28.30	Master			26.92	
Before			28.36	Before			28.76	
5.000 (Minimum)			28.30 (Nominal)	5.000 (Minimum)			26.92 (Nominal)	40.00 (Maximum)
Master: 20–Mar–2010 17:38				Before: 7–Apr–2010 9:12				

Master: 20-Mar-2010 17:38



Before: 7-Apr-2010 9:12



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				5716	Master				2390	Master				2.392
	4700 (Minimum)	5800 (Nominal)	6900 (Maximum)		1900 (Minimum)	2400 (Nominal)	2900 (Maximum)			2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)		
Master: 20-Mar-2010 17:38														

Master: 20-Mar-2010 17:38

High resolution Integrated Logging Tool-DTS Wellsite Calibration		
Accelerometer Calibration		
Phase	Z-Axis Acceleration F/S2	Value
Before		31.77
	31.53 (Minimum)	32.19 (Nominal)
		32.84 (Maximum)
Before: 7-Apr-2010 16:38		

Before: 7-Apr-2010 16:38



High resolution Integrated Logging Tool-DTS Master Calibration									
Inversion results									
Phase	Rho Aluminum G/C3			Value	Phase	Rho Magnesium G/C3			Value
Master				2.602	Master				1.688
	2.586 (Minimum)	2.596 (Nominal)	2.606 (Maximum)			1.676 (Minimum)	1.686 (Nominal)	1.696 (Maximum)	

2.300 (Minimum)	2.330 (Nominal)	2.600 (Maximum)	Phase	Pe Aluminum	Value
Master		2.565	Phase	Pe Magnesium	Value
2.470 (Minimum)	2.570 (Nominal)	2.670 (Maximum)	Master		2.609
			2.550 (Minimum)	2.650 (Nominal)	2.750 (Maximum)




Master: 22-Mar-2010 21:20

High resolution Integrated Logging Tool-DTS Master Calibration														
Deviation Summary														
Phase	BS Average Deviation %			Value	Phase	SS Average Deviation %			Value	Phase	LS Average Deviation %			Value
Master	<div><div></div></div>			0.3292	Master	<div><div></div></div>			0.4057	Master	<div><div></div></div>			0.8119
-0.6000 (Minimum) 0 (Nominal) 0.6000 (Maximum)					-1.000 (Minimum) 0 (Nominal) 1.000 (Maximum)					-1.500 (Minimum) 0 (Nominal) 1.500 (Maximum)				
Phase	BS Max Deviation %			Value	Phase	SS Max Deviation %			Value	Phase	LS Max Deviation %			Value
Master	<div><div></div></div>			0.6568	Master	<div><div></div></div>			1.954	Master	<div><div></div></div>			1.606
-1.600 (Minimum) 0 (Nominal) 1.600 (Maximum)					-2.500 (Minimum) 0 (Nominal) 2.500 (Maximum)					-3.500 (Minimum) 0 (Nominal) 3.500 (Maximum)				
Master: 22-Mar-2010 21:20														

Master: 22-Mar-2010 21:20

High resolution Integrated Logging Tool—DTS Master Calibration									
Zero Measurement									
Phase	CNTC Background CPS			Value	Phase	CFTC Background CPS			Value
Master				28.30	Master				26.92
	5.000 (Minimum)	28.30 (Nominal)	40.00 (Maximum)			5.000 (Minimum)	26.92 (Nominal)	40.00 (Maximum)	
Master: 20—Mar—2010 17:38									

Master: 20-Mar-2010 17:38

High resolution Integrated Logging Tool–DTS Master Calibration														
Tank Measurement														
Phase	Thermal Near Corr. (Tank) CPS			Value	Phase	Thermal Far Corr. (Tank) CPS			Value	Phase	CNTC/CFTC (Tank)			Value
Master				5716	Master				2390	Master				2.392
	4700 (Minimum)	5800 (Nominal)	6900 (Maximum)		1900 (Minimum)	2400 (Nominal)	2900 (Maximum)			2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)		
Master: 20–Mar–2010 17:38														

Master: 20-Mar-2010 17:38

DTS Telemetry Tool / Equipment Identification

Primary Equipment:

DTC-H Auxiliary Cartridge
DTC-H Telemetry Cartridge

DTCH - A
DTCH - A

Auxiliary Equipment:

DTCH Telemetry Cartridge Housing

ECH - KC

Company: **Kerr McGee Oil and Gas Onshore, LP**

Schlumberger

Well: **KCB 17-14**

Field: **Wattenberg**

County: **Weld**

State: **Colorado**

Platform Express
Array Induction

