



Company: SANDRIDGE ENERGY

Well: MARSHA 3306 2-11H

Field: STOHRVILLE

County: HARPER

State: KANSAS

**SPECTRAL DENSITY
DUAL SPACED NEUTRON
MEMORY LOG**

County: HARPER
Field: STOHRVILLE
Location: 265' FNL & 1290' FEL
Well: MARSHA 3306 2-11H
Company: SANDRIDGE ENERGY

LOCATION		265' FNL & 1290' FEL	Elev.: K.B. 1346.00 ft
Permanent Datum:	GROUND LEVEL		G.L. 1328.00 ft
Log Measured From:	D.F.	18.00 ft above Perm. Datum	D.F. 1346.00 ft
Drilling Measured From:	D.F.		
API Serial No.	Section	Township	Range
15077220360100	11	33S	6W

Logging Date	1-May-2014
Run Number	1
Depth Driller	8712 ft
Schlumberger Depth	8661 ft
Bottom Log Interval	8641 ft
Top Log Interval	3000 ft
Casing Driller Size @ Depth	7.000 in @ 5122 ft
Casing Schlumberger	5113 ft
Bit Size	6.125 in
Type Fluid In Hole	WBM
Density	8.5 lbm/gal
Fluid Loss	99 cm3
Source Of Sample	MUD SENSOR
RM @ Measured Temperature	1.300 ohm.m @ 65 degF
RMF @ Measured Temperature	1.100 ohm.m @ 65 degF
RMC @ Measured Temperature	1.490 ohm.m @ 65 degF
Source RMF	CALCULATED
RM @ MRT	0.658 @ 135
RMF @ MRT	0.557 @ 135
Maximum Recorded Temperatures	135 degF
Circulation Stopped	1-May-2014 2:40
Logger On Bottom	1-May-2014 3:40
Unit Number	5 OKC
Recorded By	C.PARKER
Witnessed By	B.TORBETT

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	Fluid Loss	Source Of Sample	RM @ Measured Temperature	RMF @ Measured Temperature	RMC @ Measured Temperature	Source RMF	RM @ MRT	RMF @ MRT	Maximum Recorded Temperatures	Circulation Stopped	Logger On Bottom	Unit Number	Recorded By	Witnessed By	Run 1	Run 2	Run
1-May-2014	1	8712 ft	8661 ft	8641 ft	3000 ft	7.000 in @ 5122 ft	5113 ft	6.125 in	WBM	8.5 lbm/gal	99 cm3	MUD SENSOR	1.300 ohm.m @ 65 degF	1.100 ohm.m @ 65 degF	1.490 ohm.m @ 65 degF	CALCULATED	0.658 @ 135	0.557 @ 135	135 degF	1-May-2014 2:40	1-May-2014 3:40	5 OKC	C.PARKER	B.TORBETT			

DISCLAIMER
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OTHER SERVICES1
 OS1: TBI-TBD-TBN-TMC
 OS2: SGR
 OS3:
 OS4:
 OS5:

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

REMARKS: RUN NUMBER 1
 SERVICE:HORIZONTAL PUMP DOWN MEMORY BIT DEPTH: 8591' LOGGED TO: 3000'
 ALL SCALES AND PRESENTATIONS PER CLIENT REQUEST
 LIMESTONE MATRIX 2.71 g/cc USED FOR POROSITY MEASUREMENTS
 TOOLSTRING RAN WITH SWIVEL AND SMALL DE-CENTRALIZE
 TBHV REPRESENTS TOTAL BOREHOLE VOLUME, ft3
 ABHV REPRESENTS ANNULAR HOLE COLUME, CALCULATED FOR 4.5" CSG, ft3
 HSPM USED TO ACQUIRE LOG DEPTH
 LOG CORRELATED TO MWD GR
 RIG:LARIAT 45
 CREW: C.PARKER R.CRESSWELL R.WILSON

REMARKS: RUN NUMBER 2
 LOGGED TO: 3000'
 ALL SCALES AND PRESENTATIONS PER CLIENT REQUEST
 LIMESTONE MATRIX 2.71 g/cc USED FOR POROSITY MEASUREMENTS
 TOOLSTRING RAN WITH SWIVEL AND SMALL DE-CENTRALIZE
 TBHV REPRESENTS TOTAL BOREHOLE VOLUME, ft3
 ABHV REPRESENTS ANNULAR HOLE COLUME, CALCULATED FOR 4.5" CSG, ft3
 HSPM USED TO ACQUIRE LOG DEPTH
 LOG CORRELATED TO MWD GR
 RIG:LARIAT 45
 CREW: C.PARKER R.CRESSWELL R.WILSON

RUN 1		
SERVICE ORDER #:	2809	
PROGRAM VERSION:	19C2-270	
FLUID LEVEL:	0 ft	
LOGGED INTERVAL	START	STOP

RUN 2		
SERVICE ORDER #:	2809	
PROGRAM VERSION:	19C2-270	
FLUID LEVEL:	0 ft	
LOGGED INTERVAL	START	STOP

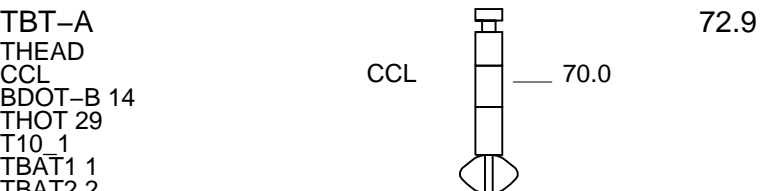
EQUIPMENT DESCRIPTION

RUN 1

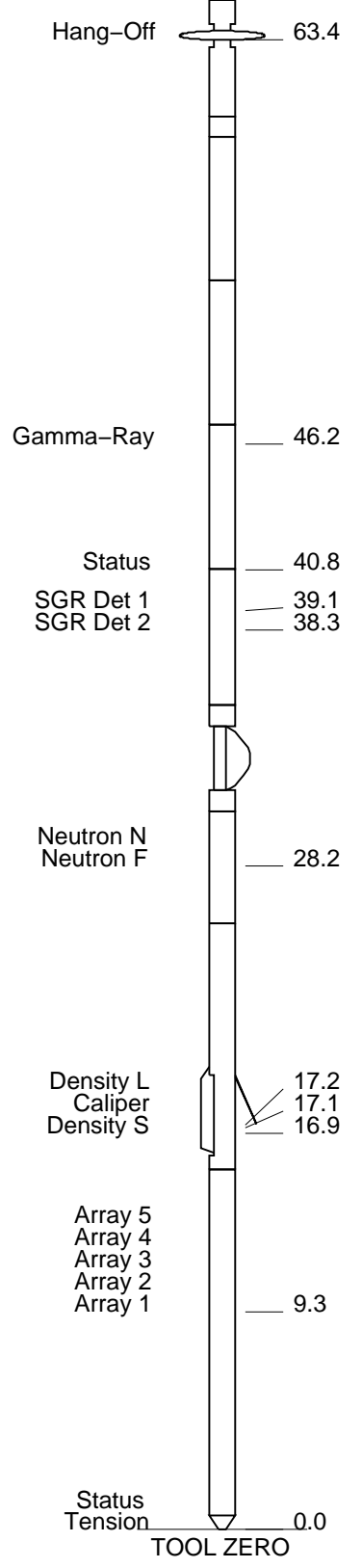
SURFACE EQUIPMENT
 WITM (ThruBit)

RUN 2

DOWNHOLE EQUIPMENT



TMG-A 27
 TBSG-A 12
 TILE-A
 TBN-A 5
 NNLS-EWA 4484
 TBD-A 28
 GGLS-FZ 3216
 TBI-A 48



MAXIMUM STRING DIAMETER 2.13 IN
 MEASUREMENTS RELATIVE TO TOOL ZERO
 ALL LENGTHS IN FEET

Schlumberger

MAIN PASS

MAXIS Field Log

Company: SANDRIDGE ENERGY

Well: MARSHA 3306 2-11H

Input DLIS Files

ThruBit_006PUP

FN:5

01-May-2014 10:14 8657.2 FT

2953.4 FT

OP System Version: 19C2-270

TBT SRPC-5298-ThruBit_b

Relative Bearing
(RB)

0 (DEG) 940

gr wrap4
From LHT1 to GR4

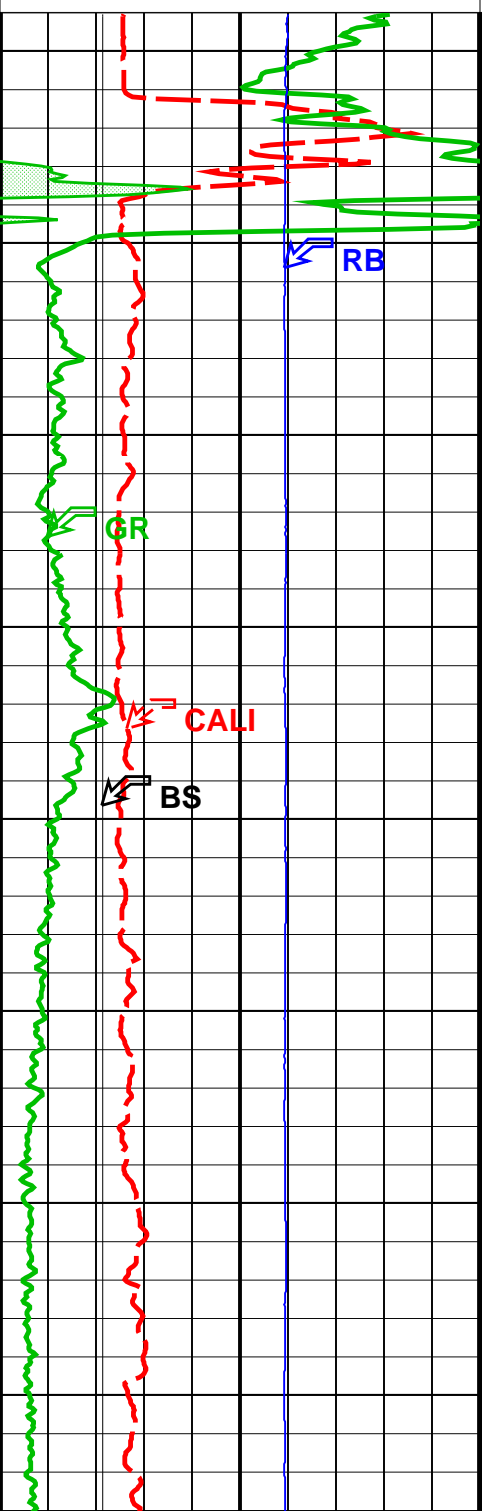
gr wrap3
From LHT1 to GR3

gr wrap2
From LHT1 to GR2

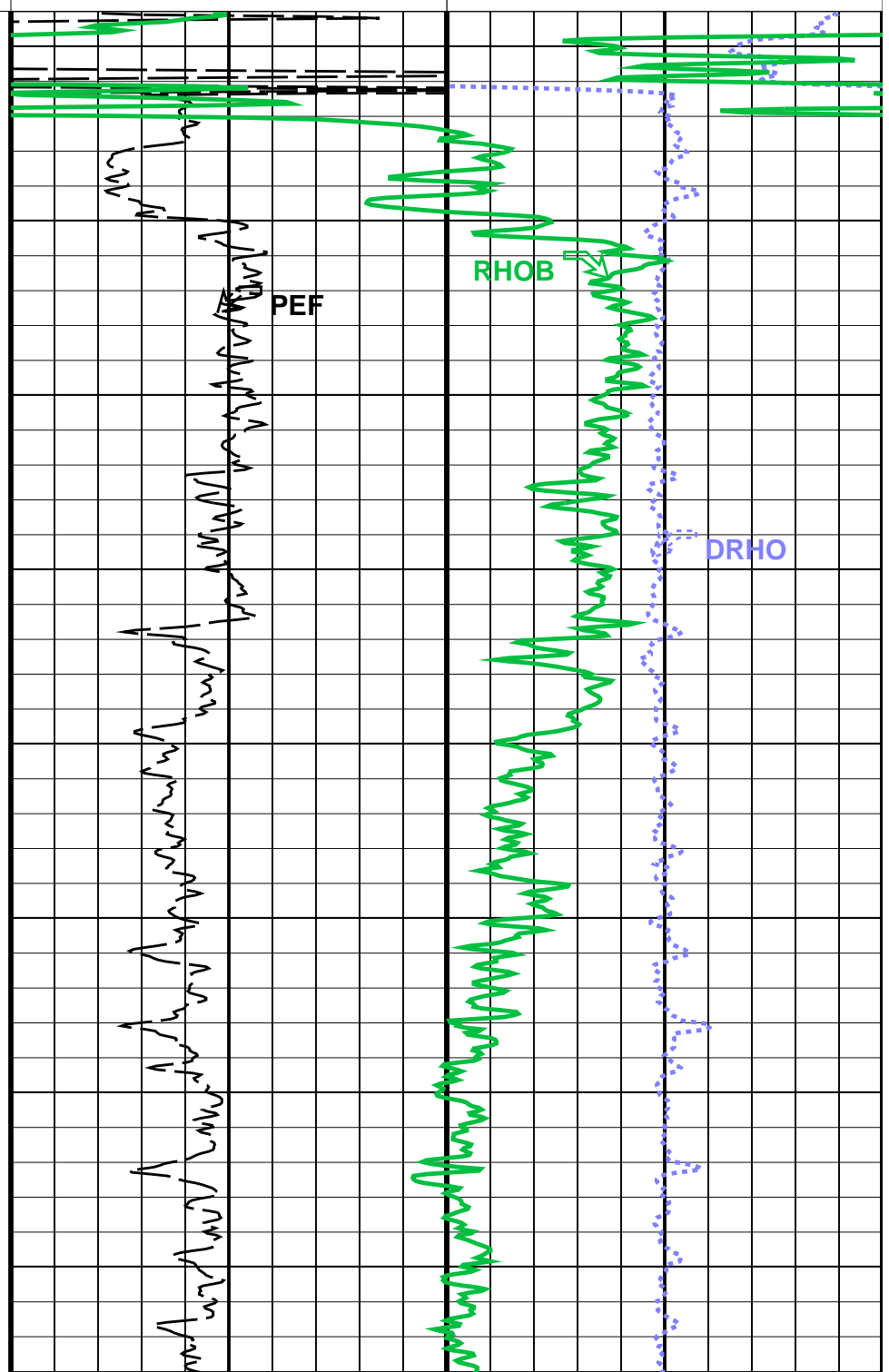
gr wrap1
From LHT1 to GR1

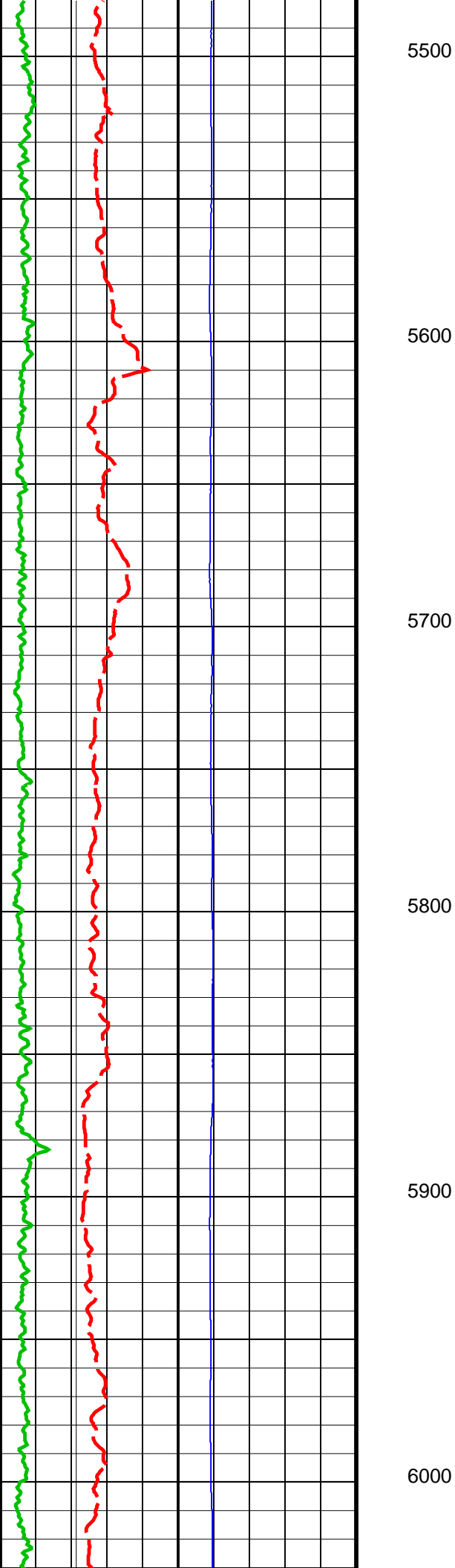
Gamma Ray (GR)

Gamma Ray (GR)		
0	(GAPI)	150
Caliper (CALI)		
4	(IN)	14
Gamma Ray 4 (GR)		
600	(GAPI)	750
Gamma Ray 3 (GR)		
450	(GAPI)	600
Gamma Ray 2 (GR)		
300	(GAPI)	450
Gamma Ray 1 (GR)		
150	(GAPI)	300
Bit Size (BS)		
4	(IN)	14

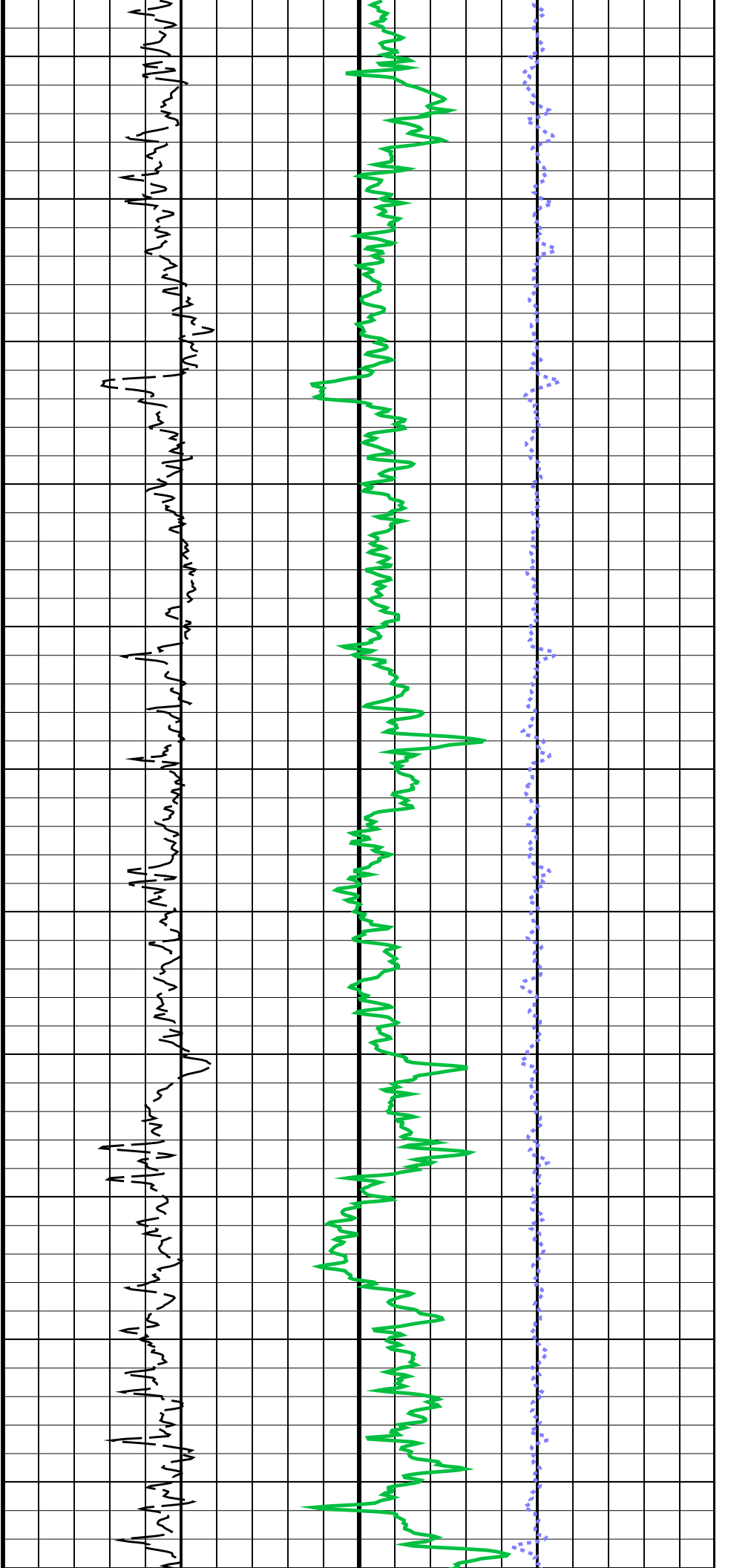


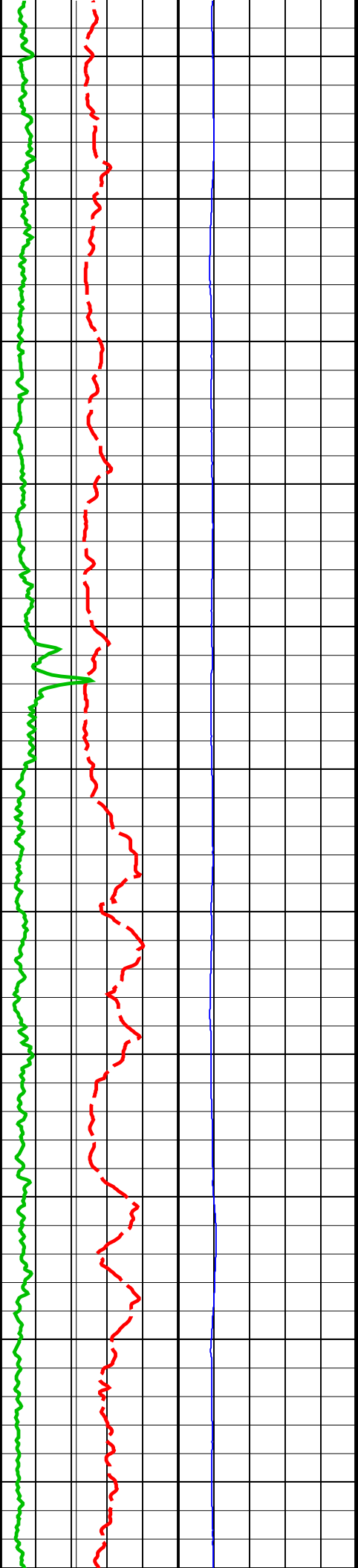
RHOB (RHOB)					
2	(G/C3)	3			
PEF (PEF)		DRHO (DRHO)			
0	(---	10	-0.5	(G/C3)	0.5





5500
5600
5700
5800
5900
6000





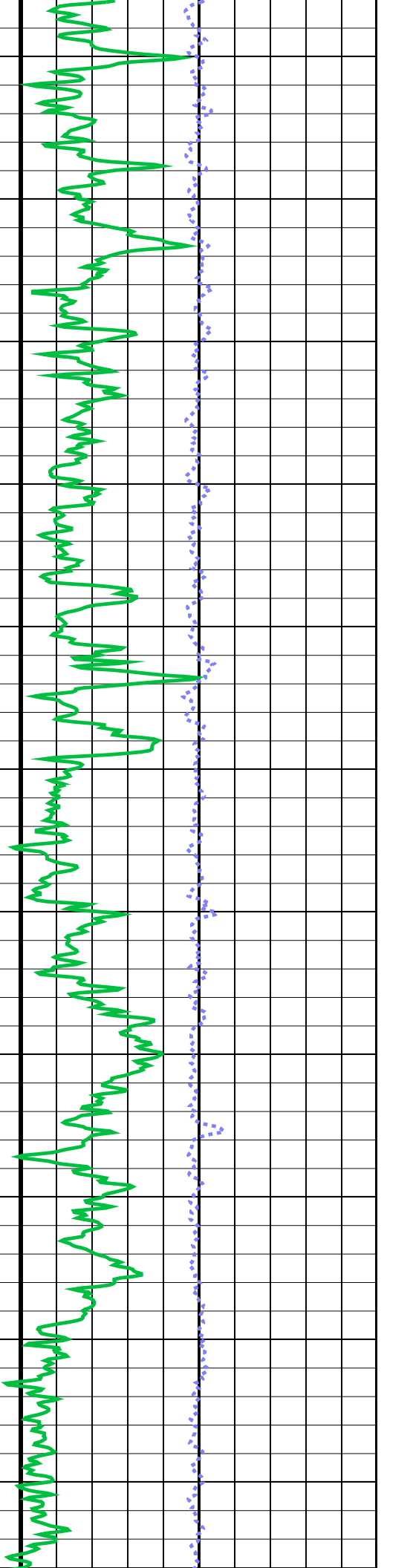
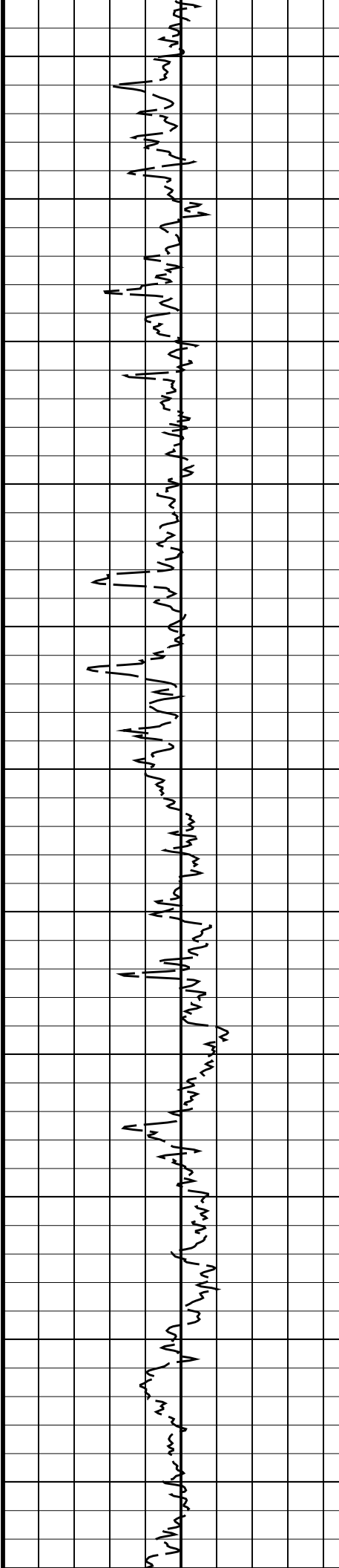
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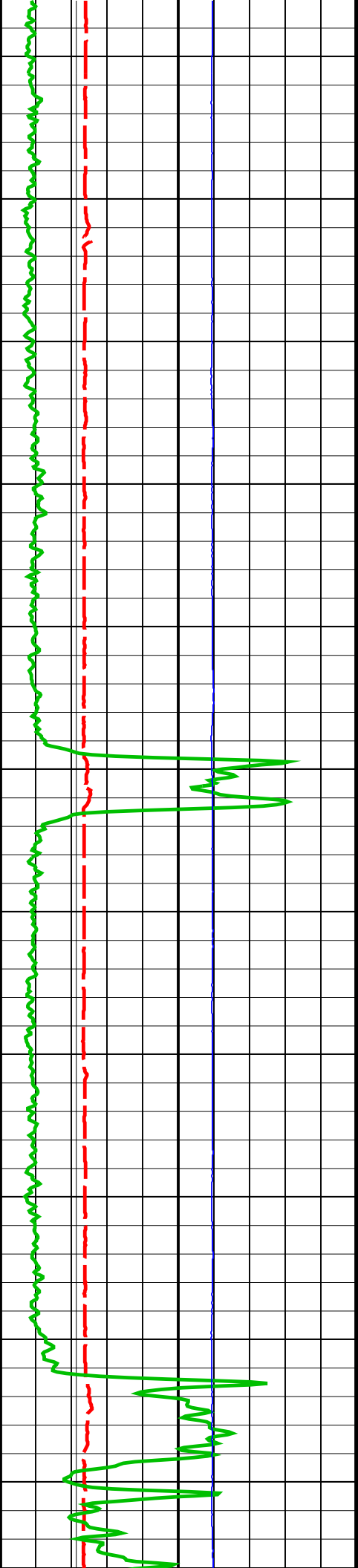
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6300

6400

6500





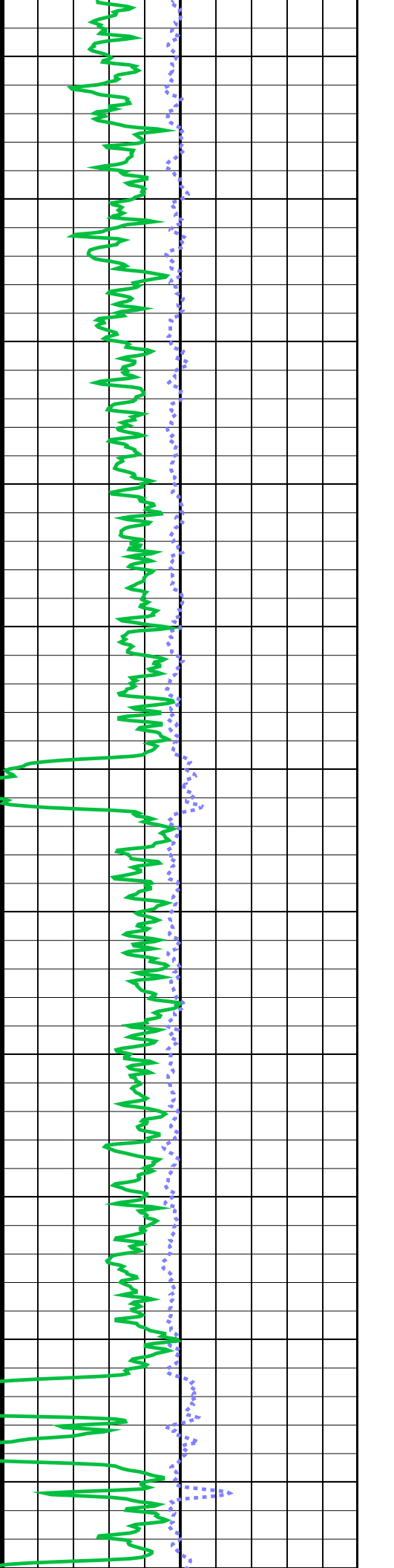
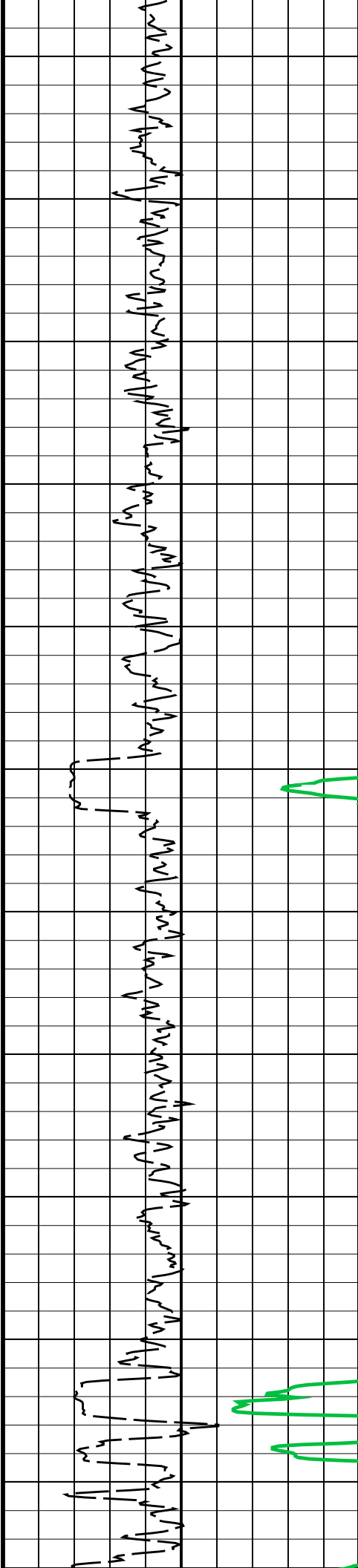
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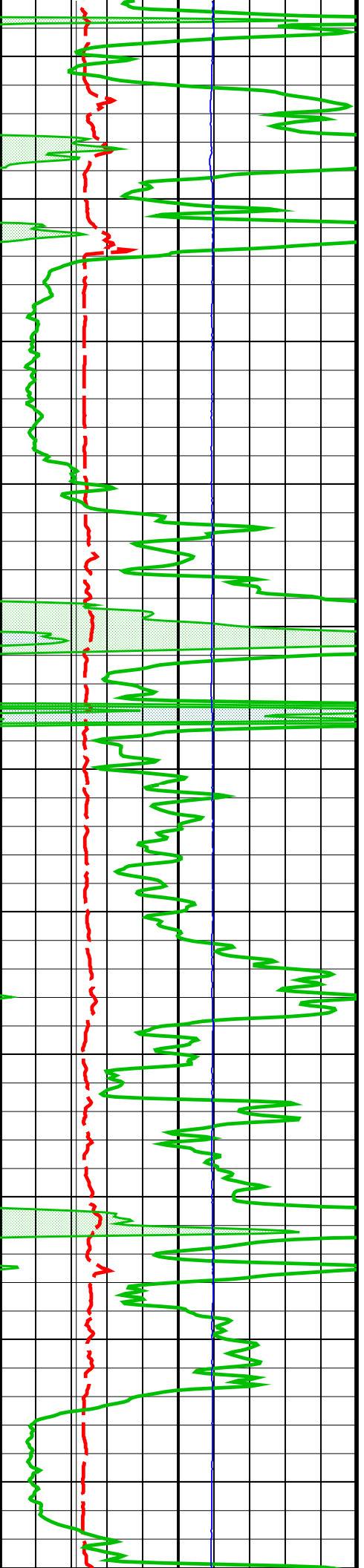
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7400

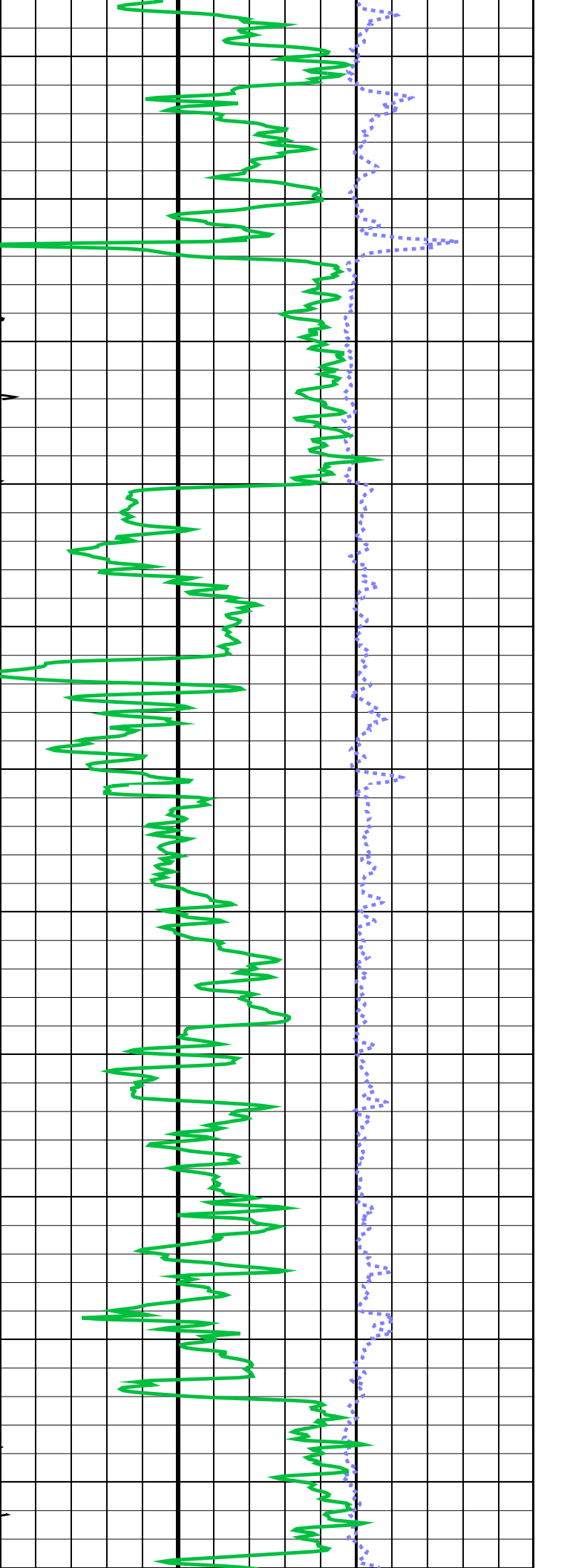
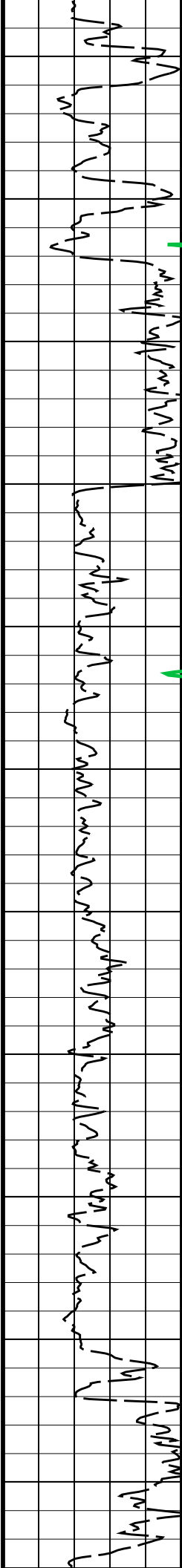
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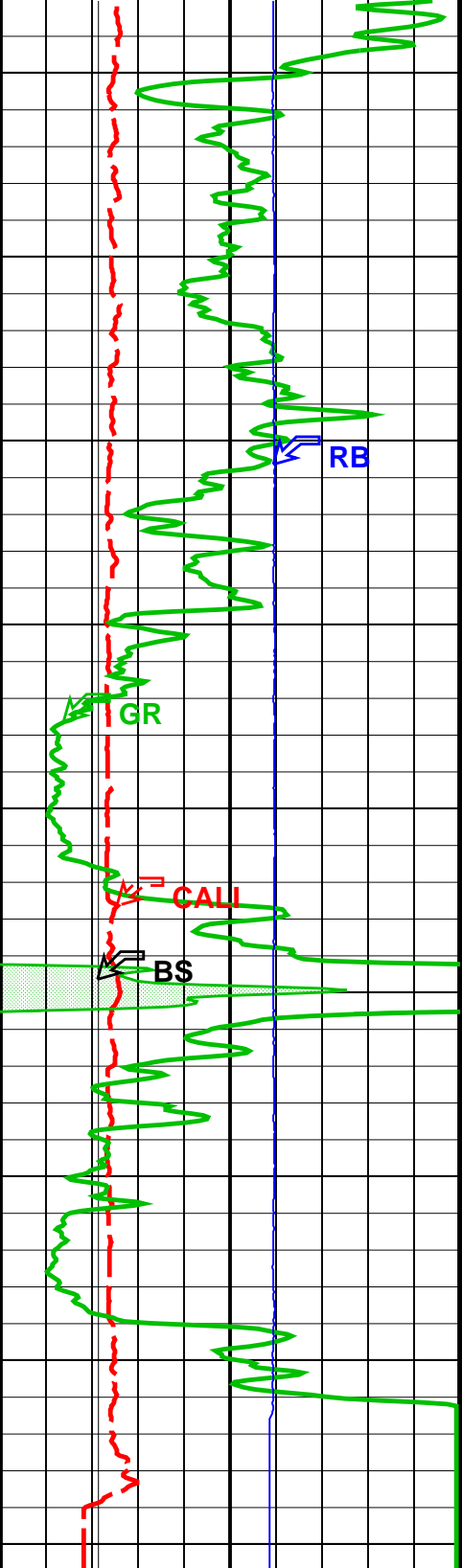
7600





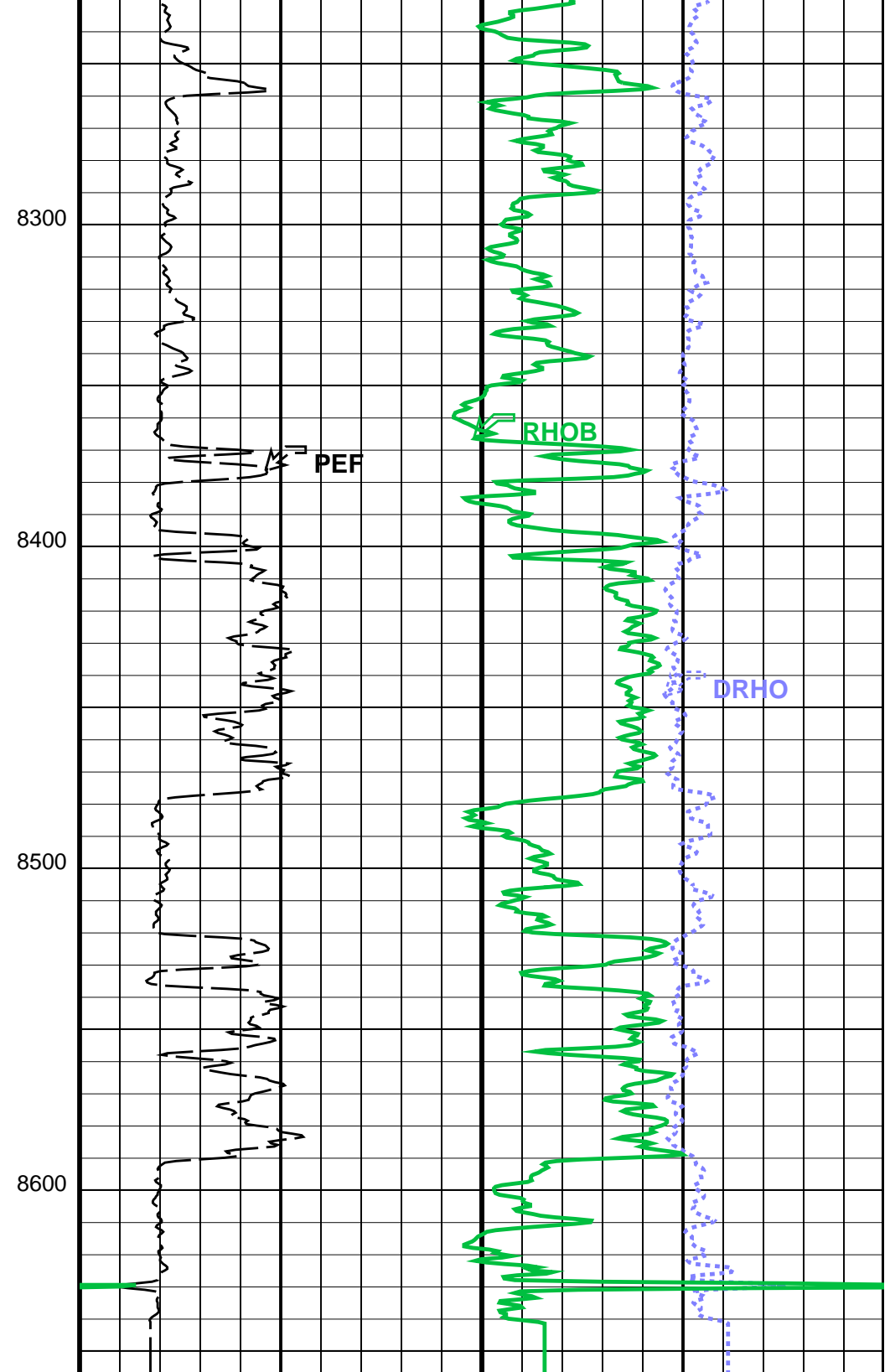
7700
7800
7900
8000
8100
8200





Bit Size (BS)
(IN)

150	Gamma Ray 1 (GR) (GAPI)	300
300	Gamma Ray 2 (GR) (GAPI)	450
450	Gamma Ray 3 (GR) (GAPI)	600
600	Gamma Ray 4 (GR) (GAPI)	750
	Caliper (CALI)	



PEF (PEF)
(---)

DRHO (DRHO)
(G/C3)

2	RHOB (RHOB) (G/C3)	3
---	-----------------------	---

4	Caliper (CAL)	14
	(IN)	
	Gamma Ray (GR)	
0	(GAPI)	150
	gr wrap1 From LHT1 to GR1	
	gr wrap2 From LHT1 to GR2	
	gr wrap3 From LHT1 to GR3	
	gr wrap4 From LHT1 to GR4	
	Relative Bearing (RB)	
0	(DEG)	940

Parameters

DLIS Name	Description	Value
TBT-A: ThruBit String		
DHC	Density Hole Correction	CALIPER
RB_OFFSET	Additional RB offset (degrees)	0.000 deg
TBD_CAL_BLOCK	TBD Calibration Block Type	THRUBIT
TBD_SPIKE_REJECT	TBD Spike Detection Option	DETECT
TBD_SPIKE_THRESHOLD	TBD Attenuation Change Threshold for Spike Detection	5.000 %
WMUD	Mud Weight	8.500 lbm/gal
System and Miscellaneous		
BS	Bit Size	6.125 in

Format: TB_2INCH_NUCLEAR Vertical Scale: 2" per 100' Graphics File Created: 01-May-2014 10:21

OP System Version: 19C2-270

TBT SRPC-5298-ThruBit_b

Input DLIS Files

ThruBit_006PUP FN:5 01-May-2014 10:14 8657.2 FT 2953.4 FT

MAIN PASS

MAXIS Field Log

Company: SANDRIDGE ENERGY

Well: MARSHA 3306 2-11H

Input DLIS Files

ThruBit_006PUP FN:5 01-May-2014 10:14 8657.2 FT 2953.4 FT

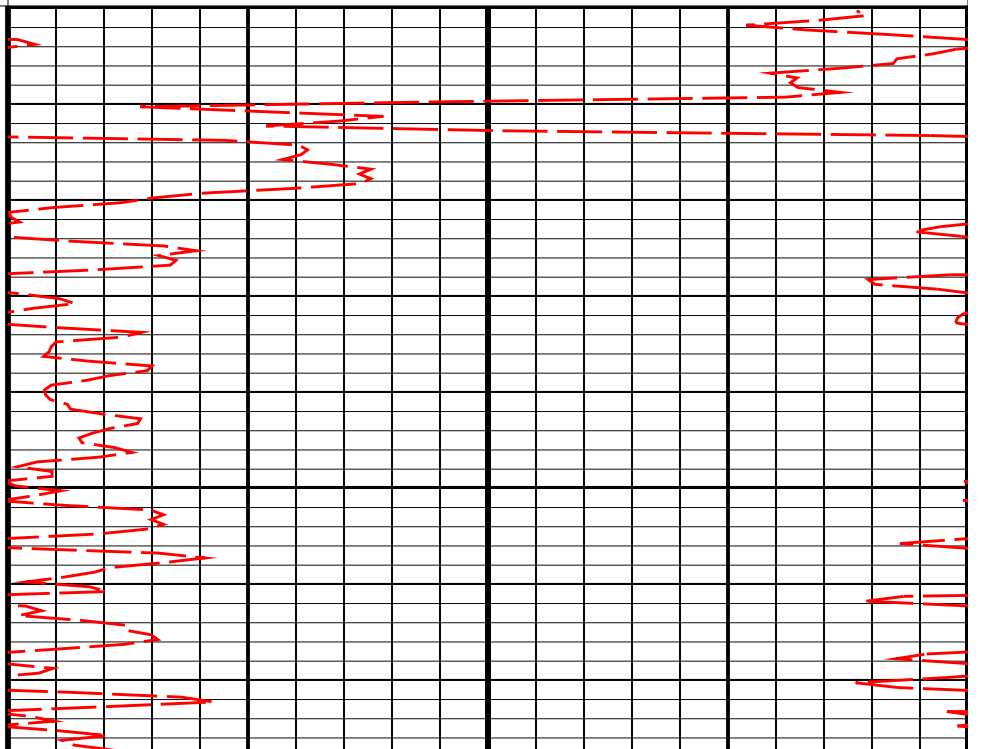
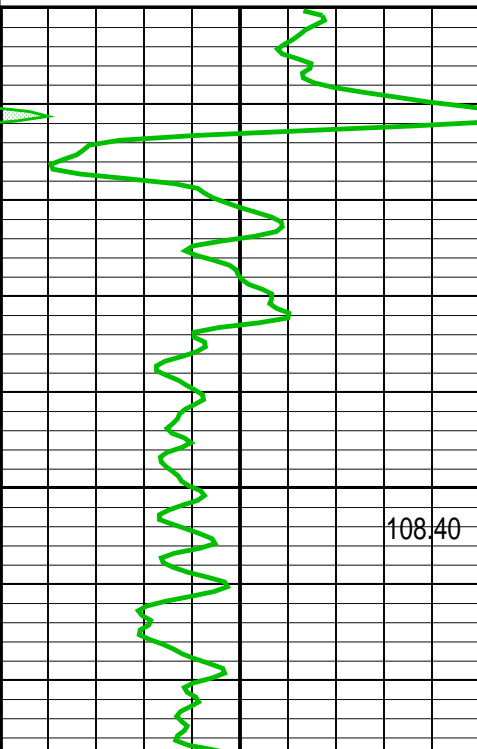
OP System Version: 19C2-270

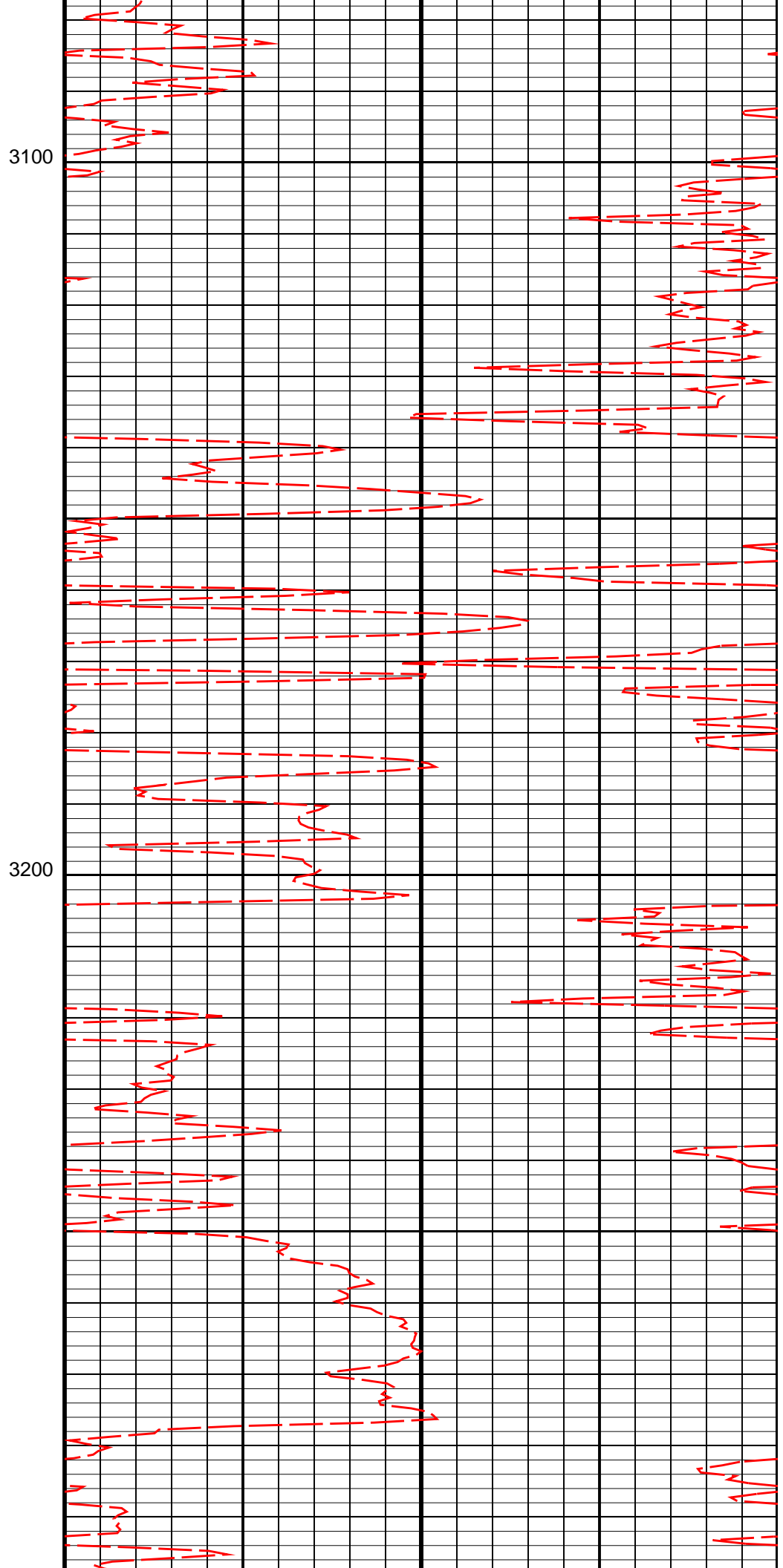
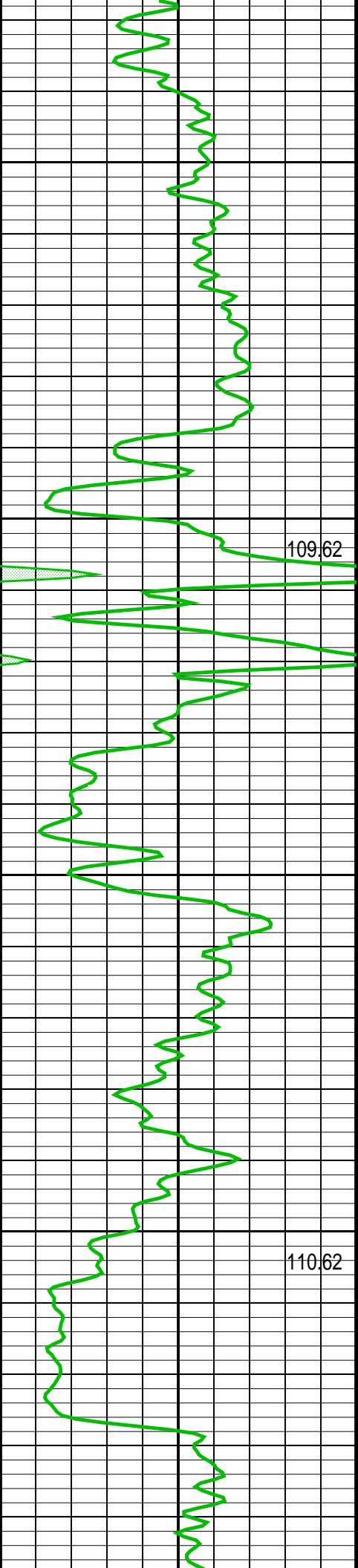
TBT SRPC-5298-ThruBit_b

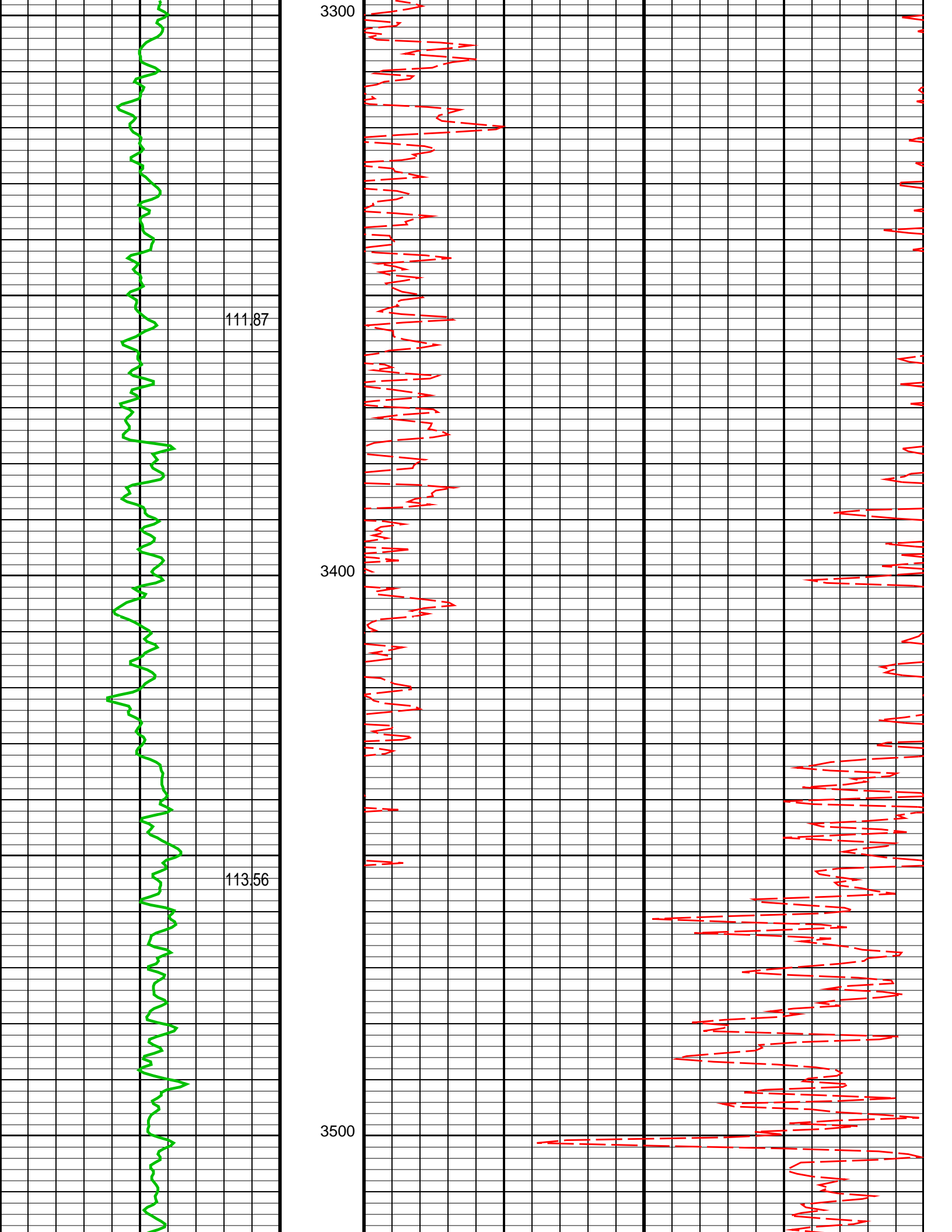
- └ Integrated Cement Volume Major Pip Every 100 F3
- └ Integrated Cement Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
- └ Integrated Hole Volume Minor Pip Every 10 F3

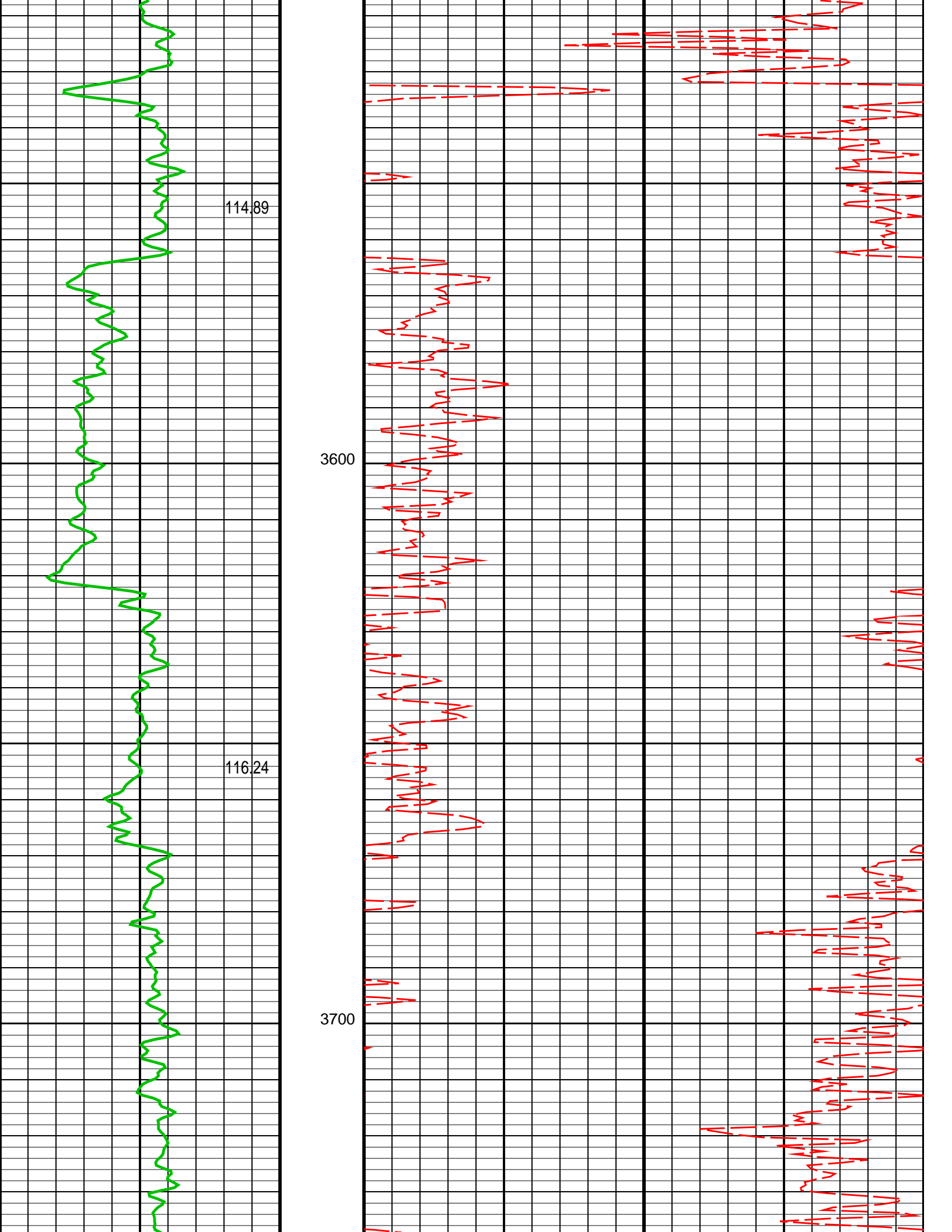
		Relative Bearing (RB)	
		0	940
		(DEG)	
gr wrap4 From LHT1 to GR4			
gr wrap3 From LHT1 to GR3			
gr wrap2 From LHT1 to GR2			
gr wrap1 From LHT1 to GR1			
Gamma Ray (GR)			
0	(GAPI)		150
Caliper (CALI)			
4	(IN)		14
Gamma Ray 4 (GR)			
600	(GAPI)		750
Gamma Ray 3 (GR)			
450	(GAPI)		600
Gamma Ray 2 (GR)			
300	(GAPI)		450
Gamma Ray 1 (GR)			
150	(GAPI)		300
Bit Size (BS)			
4	(IN)		14
GR Temp (WTEP) (DEGF)			

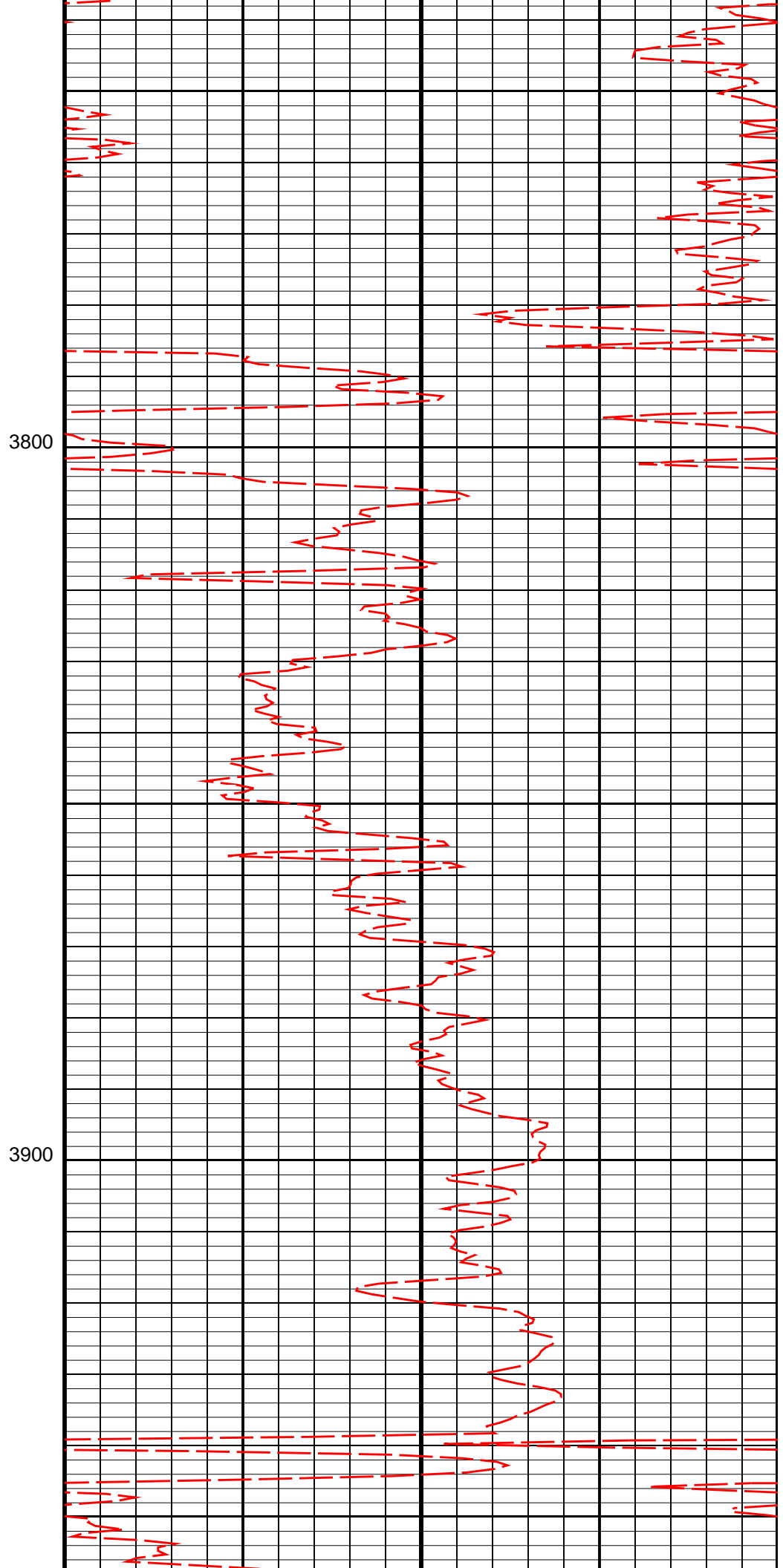
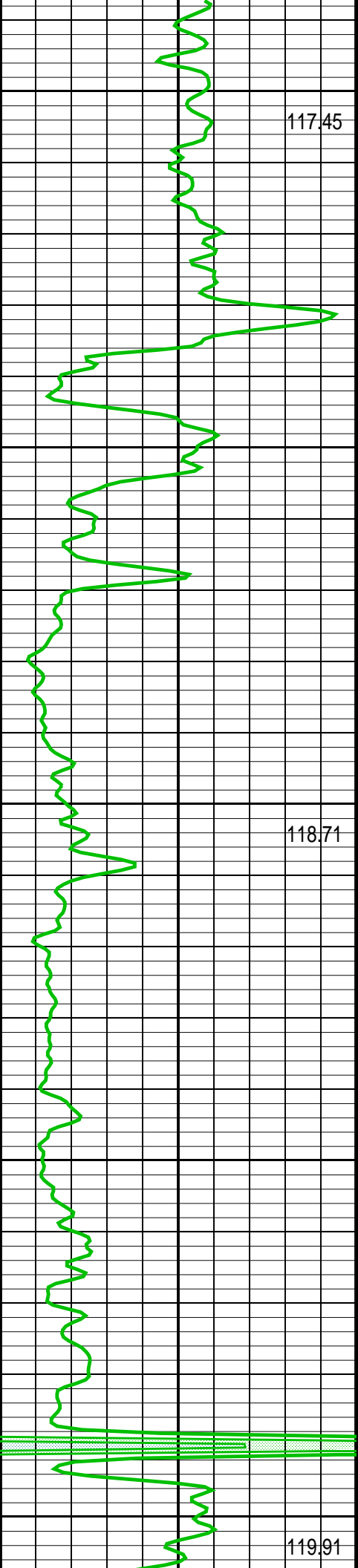
		TNPH (TNPH)	
		30	-10
		(%)	
		PEF (PEF)	
0	(----		10
		DRHO (DRHO)	
		-0.5	0.5
		(G/C3)	
DPHI (DPHI)			
		30	-10
		(PU)	

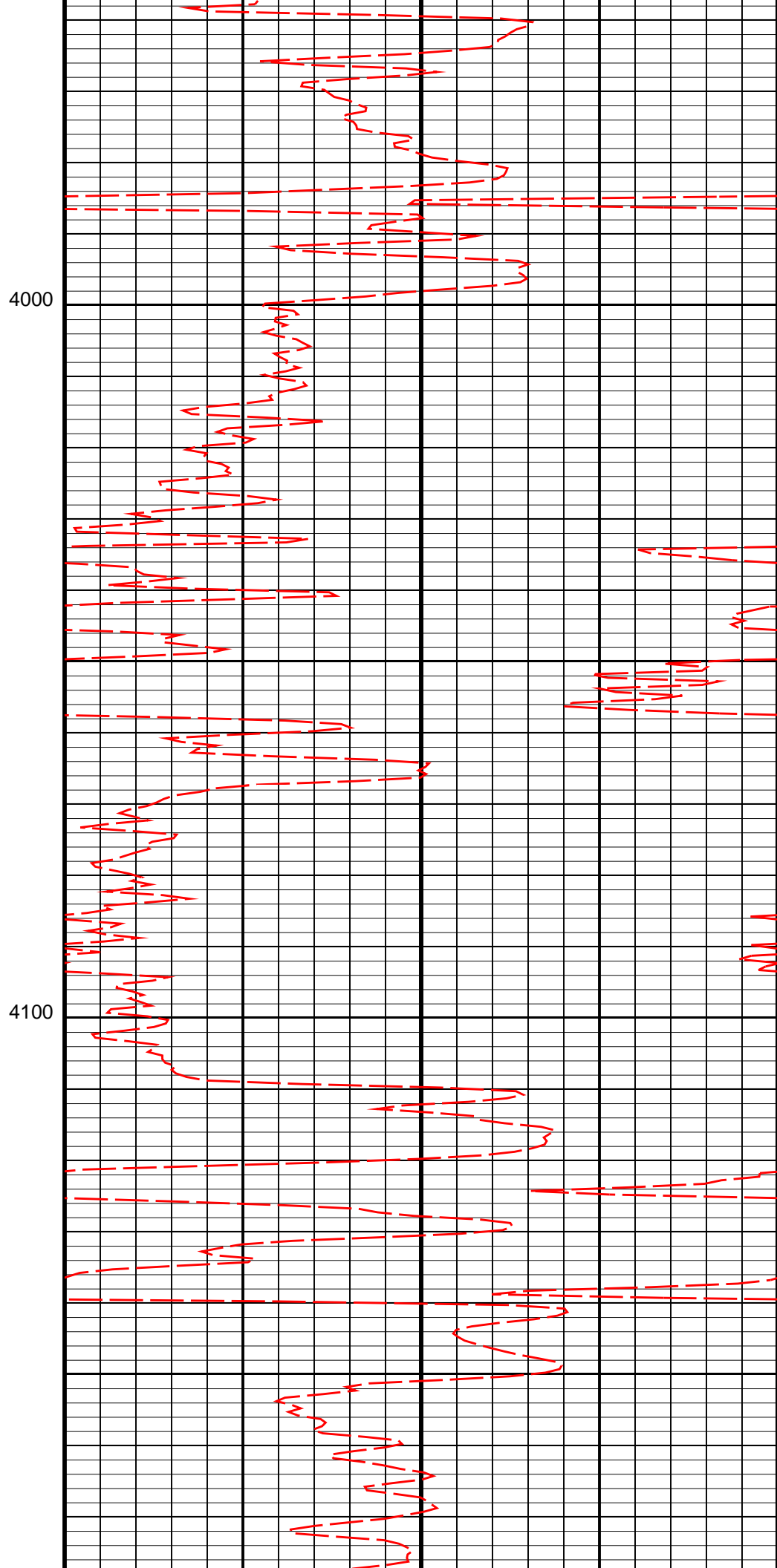
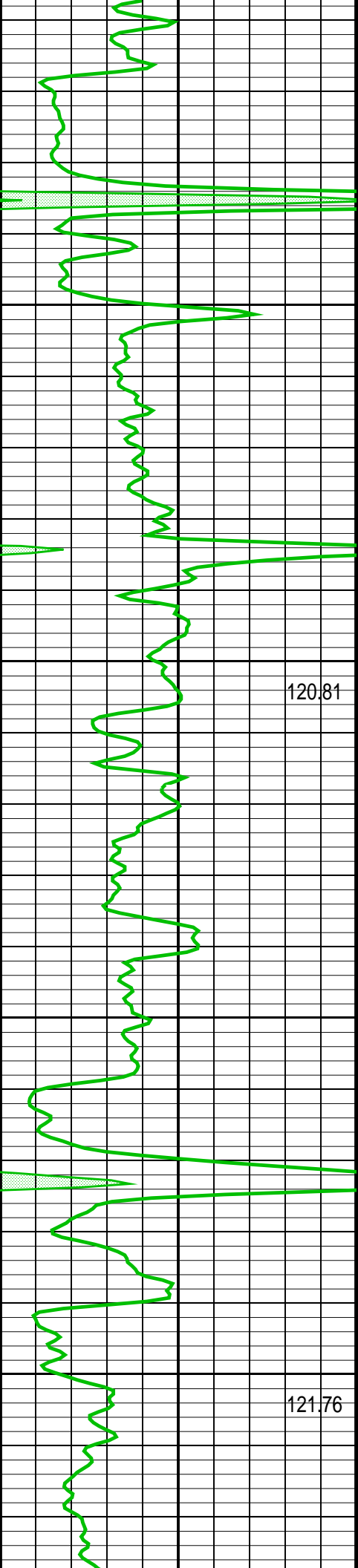


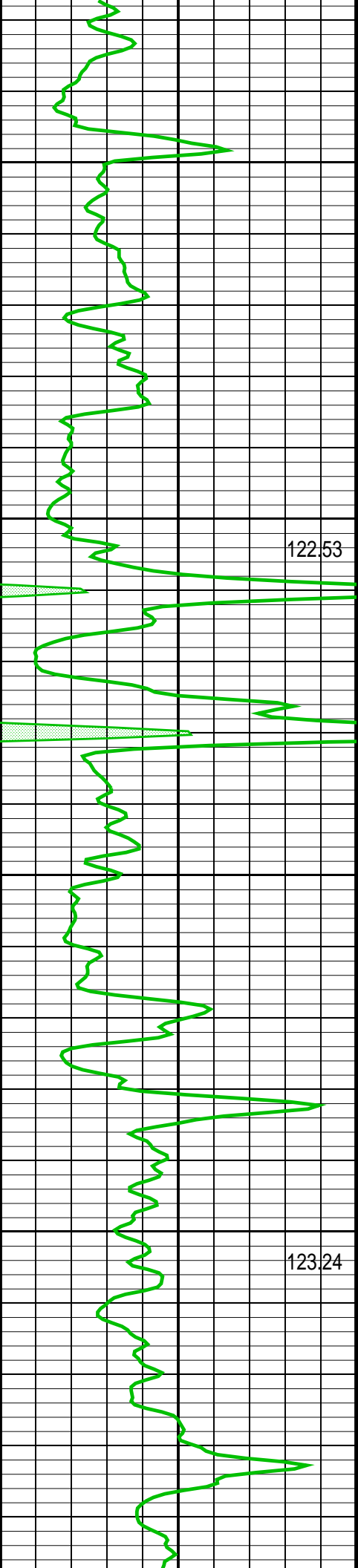










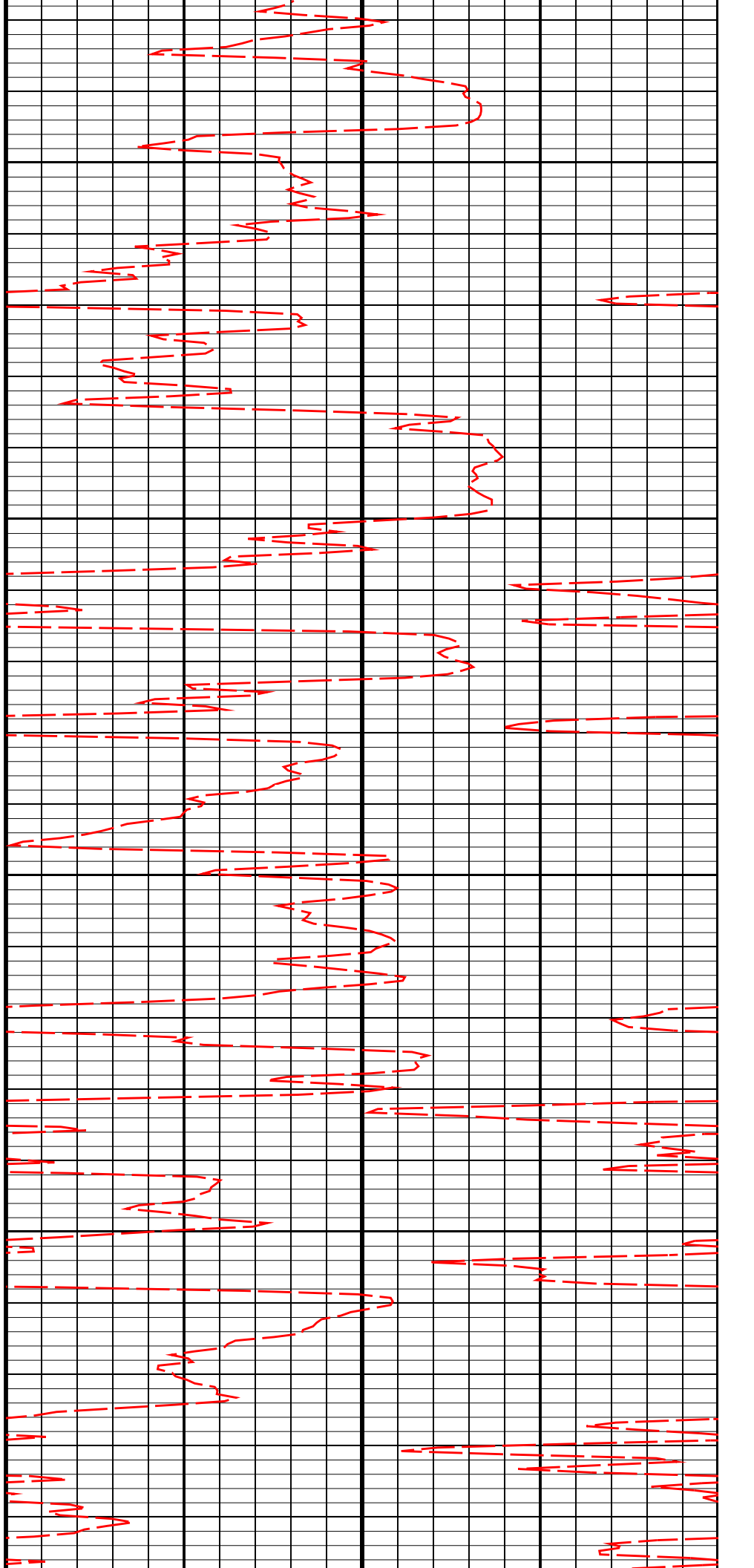


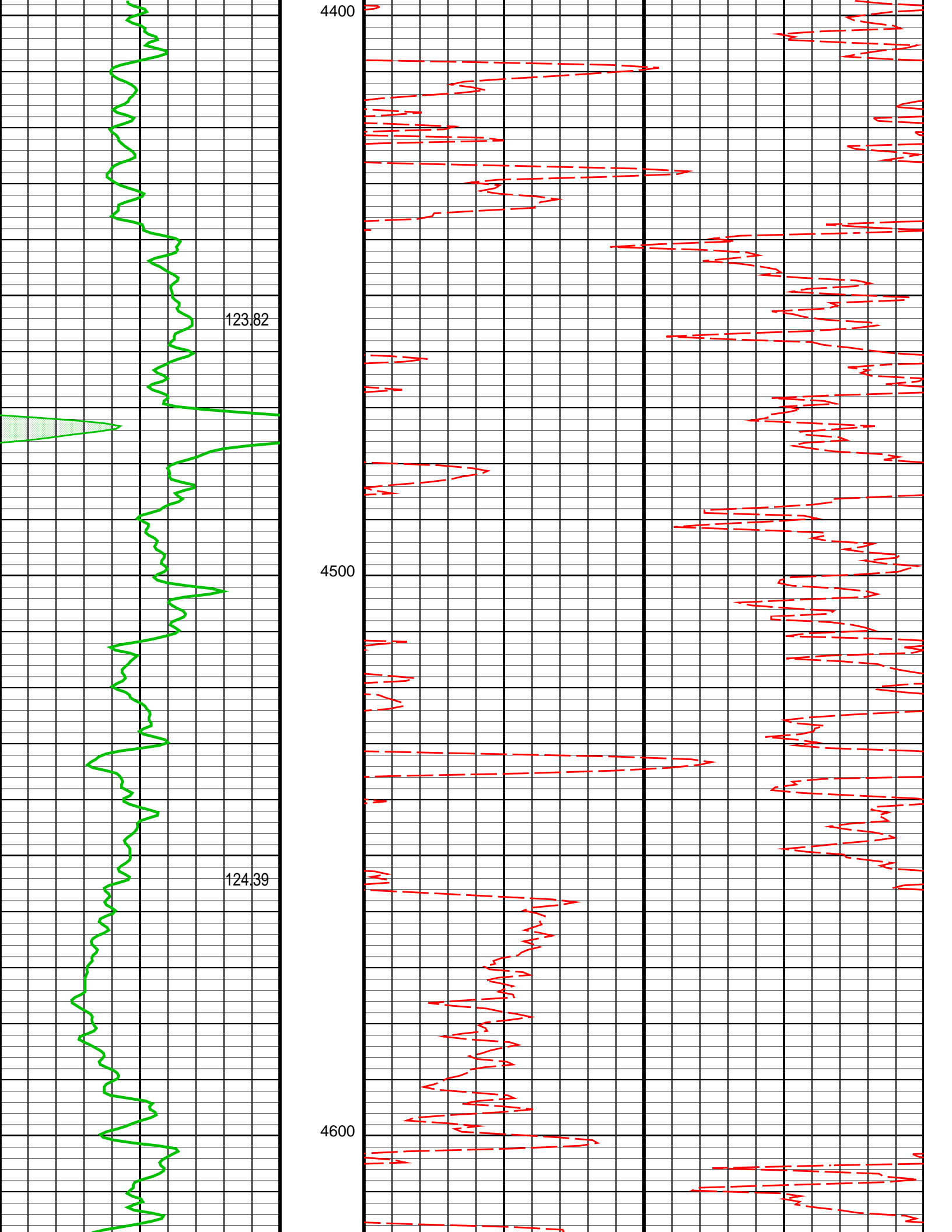
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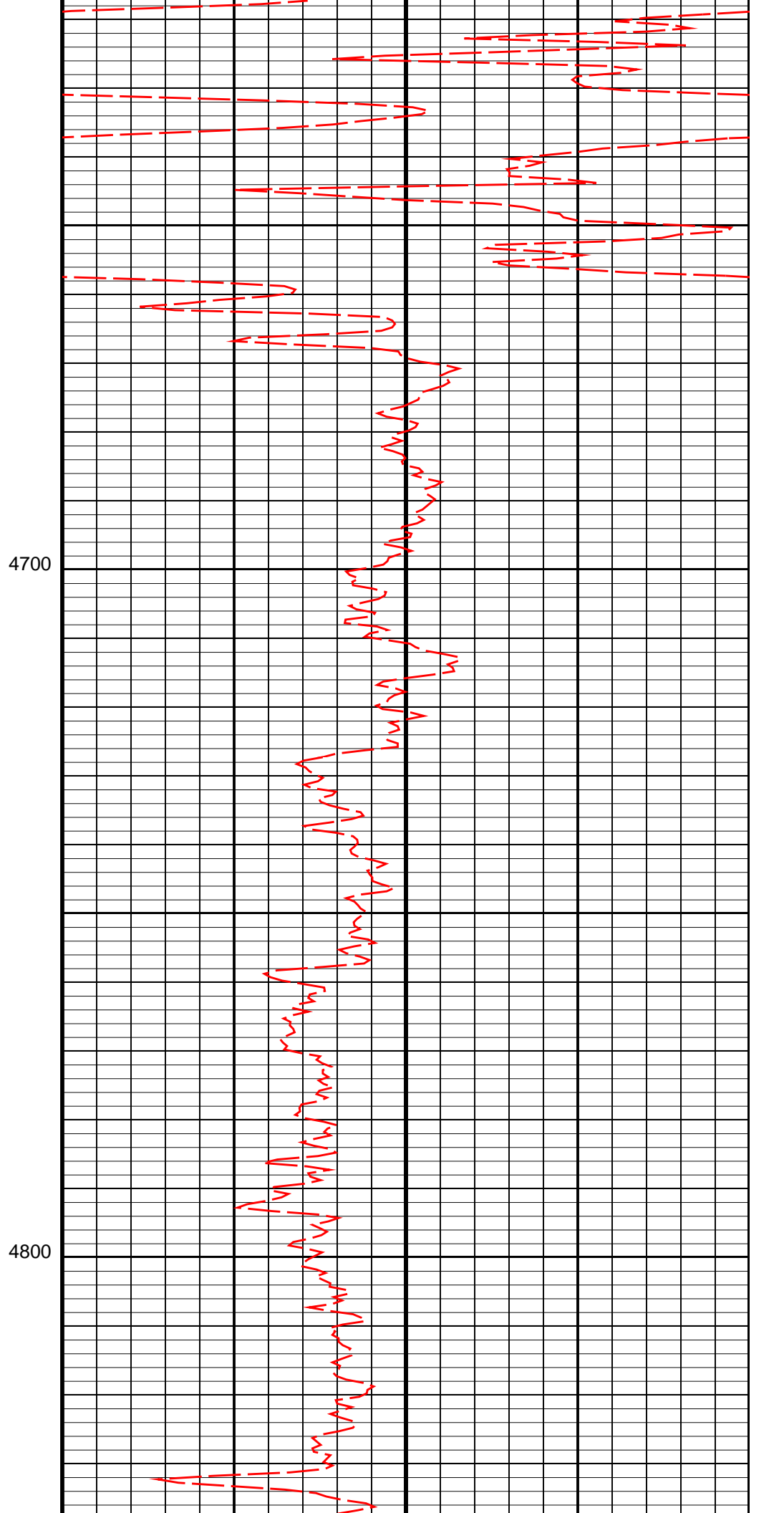
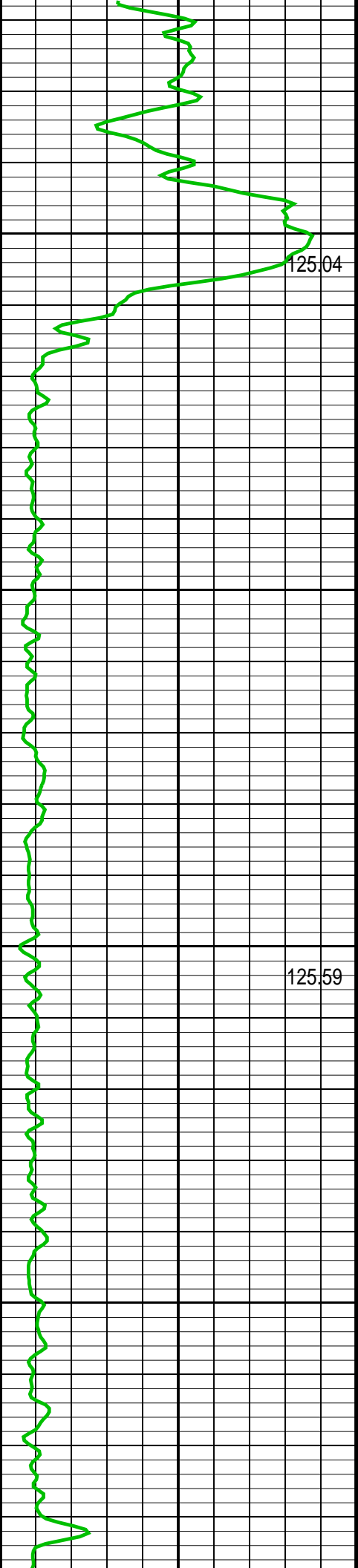
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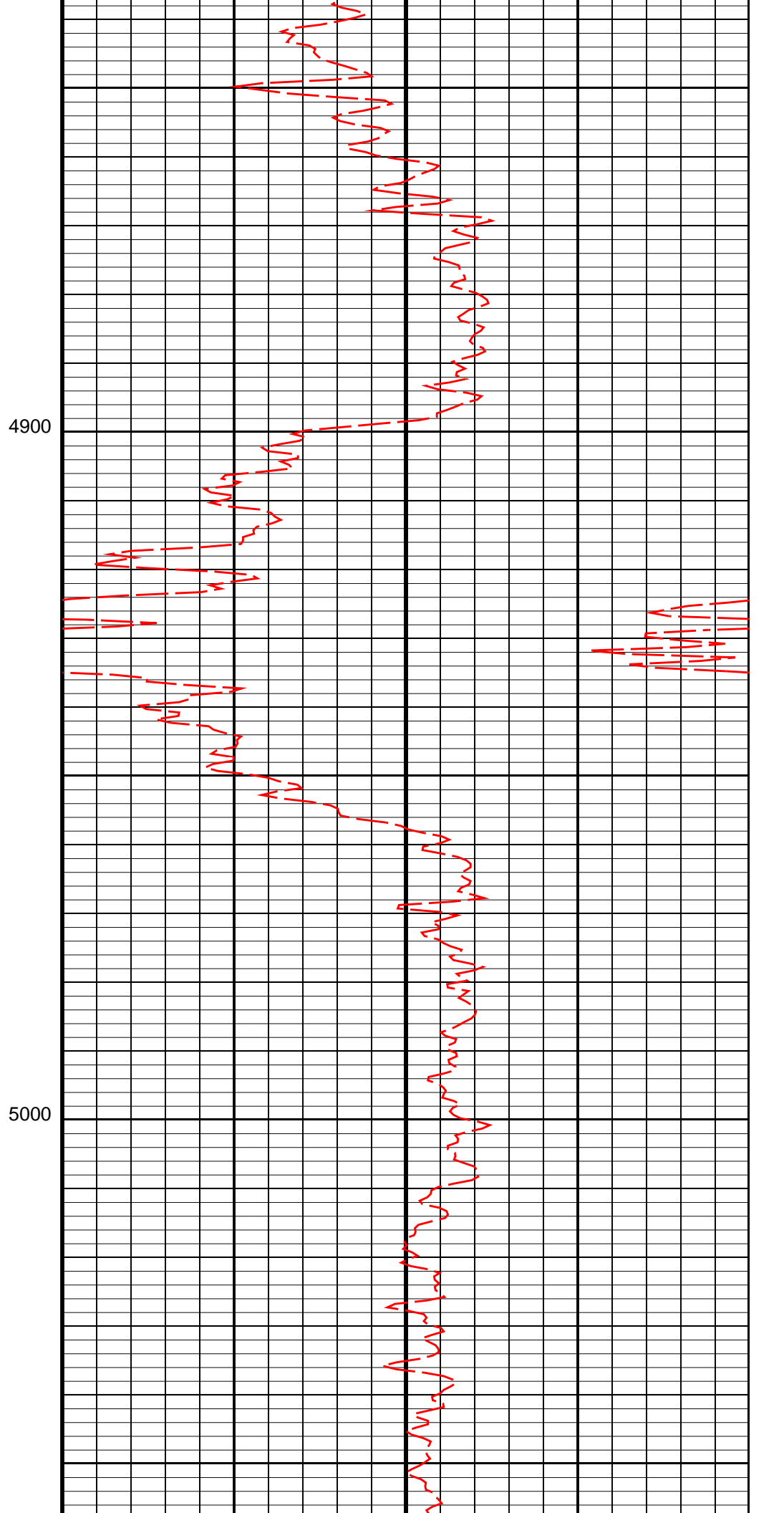
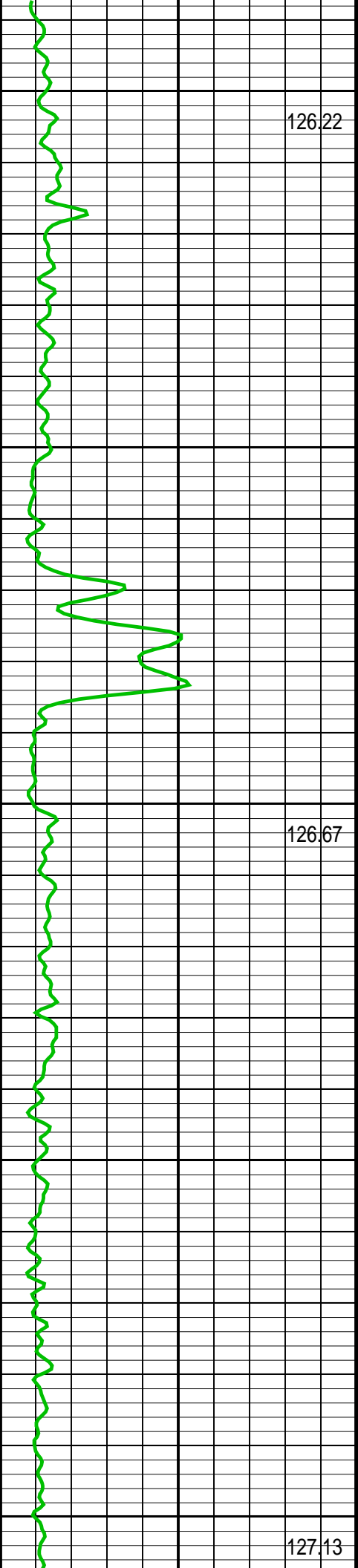
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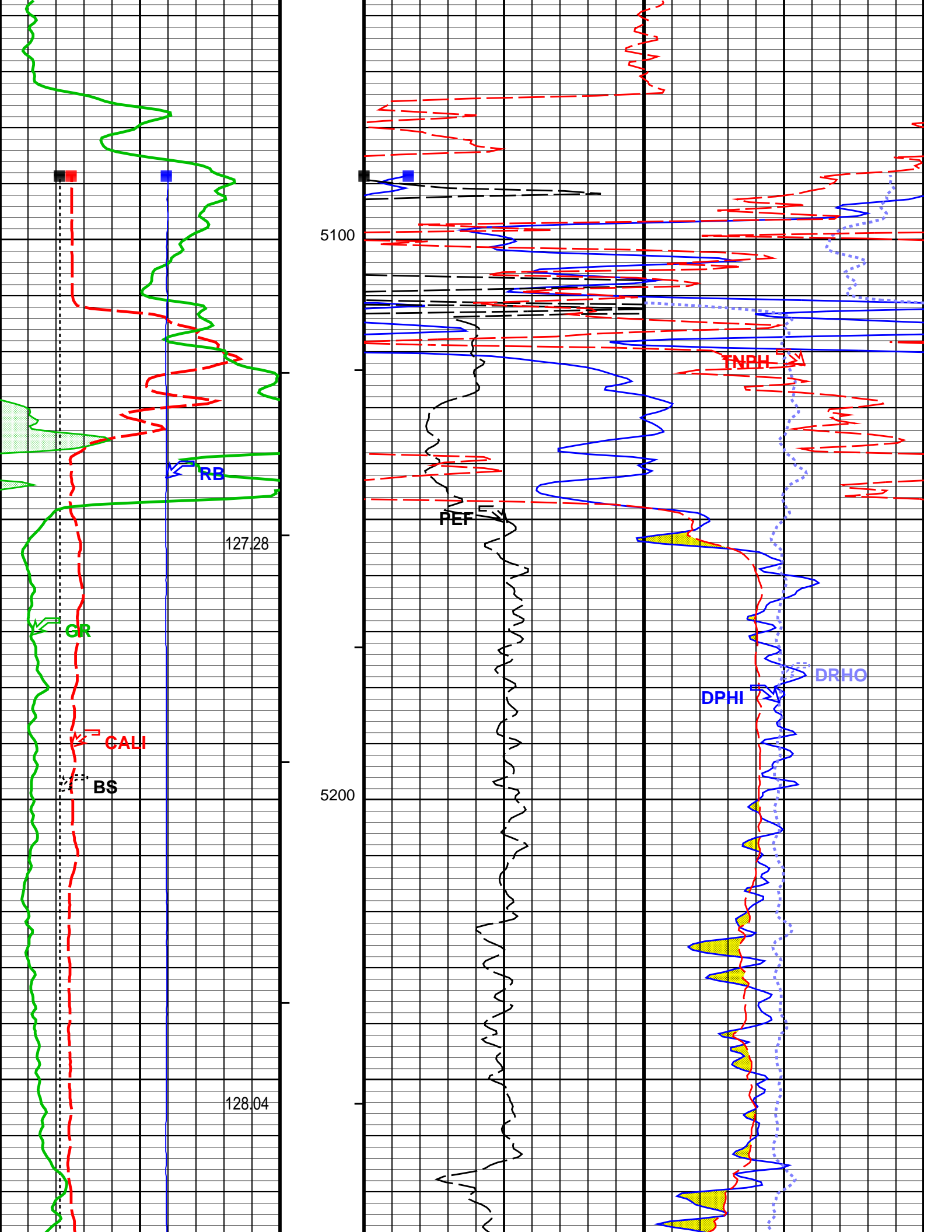
123.24











5100

127.28

5200

128.04

GR

GALI

BS

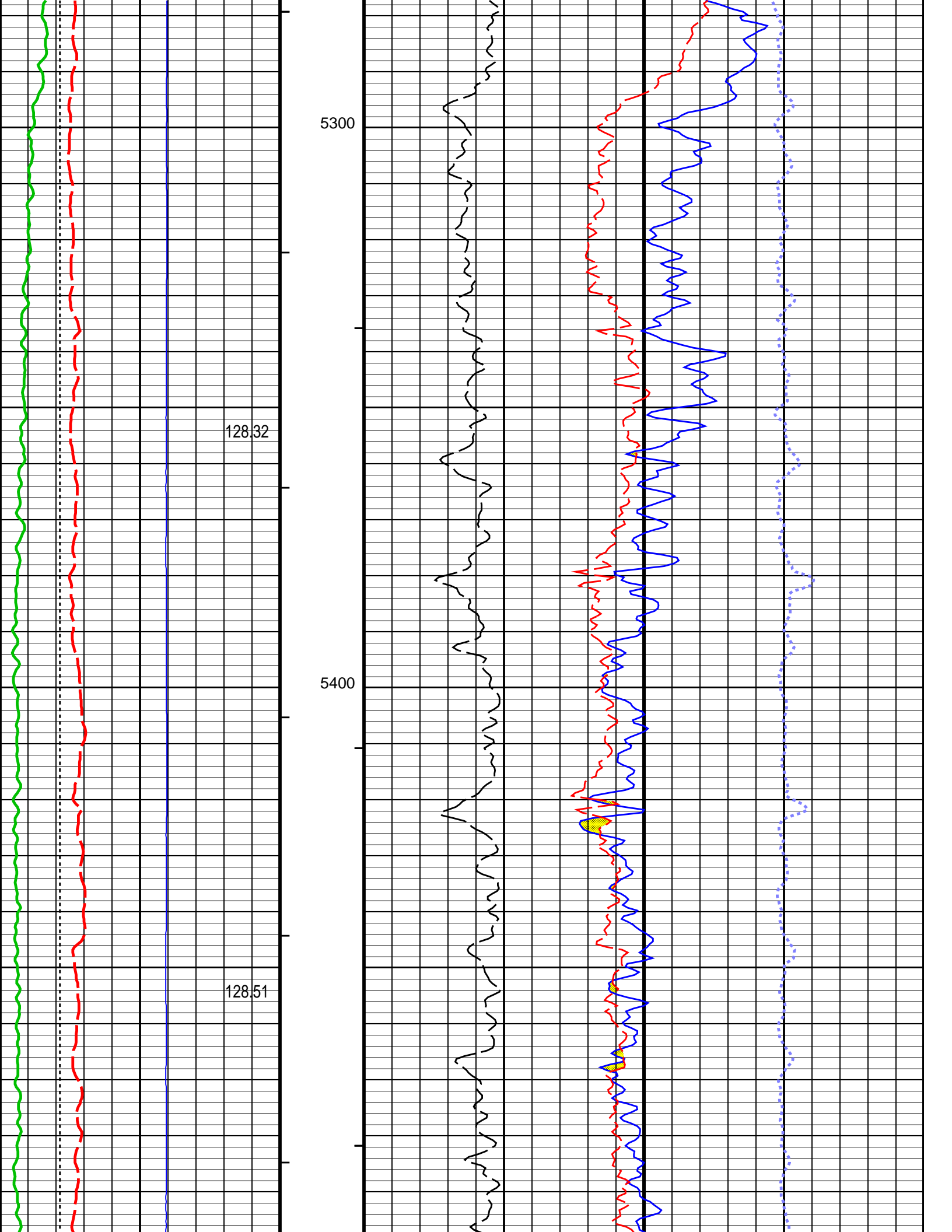
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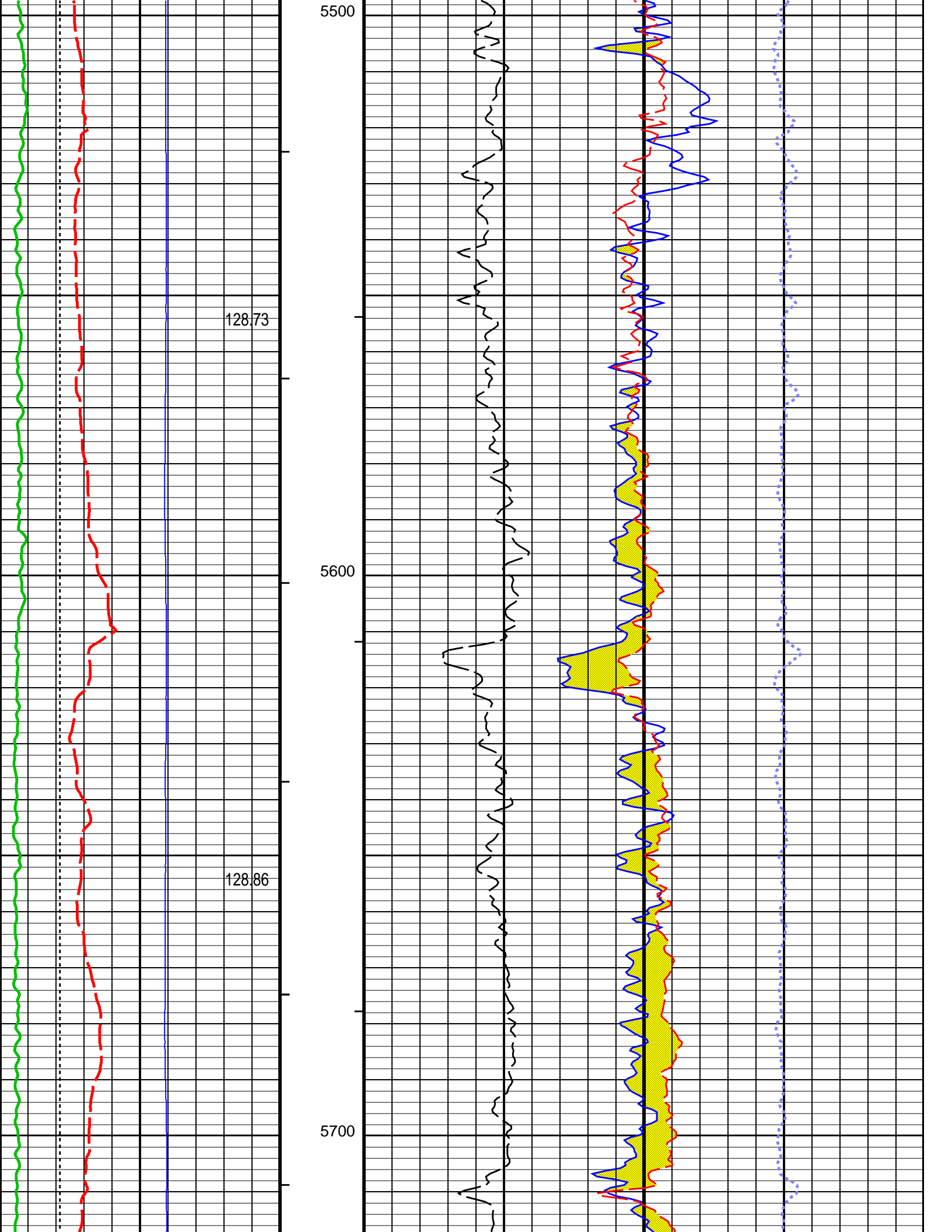
PEF

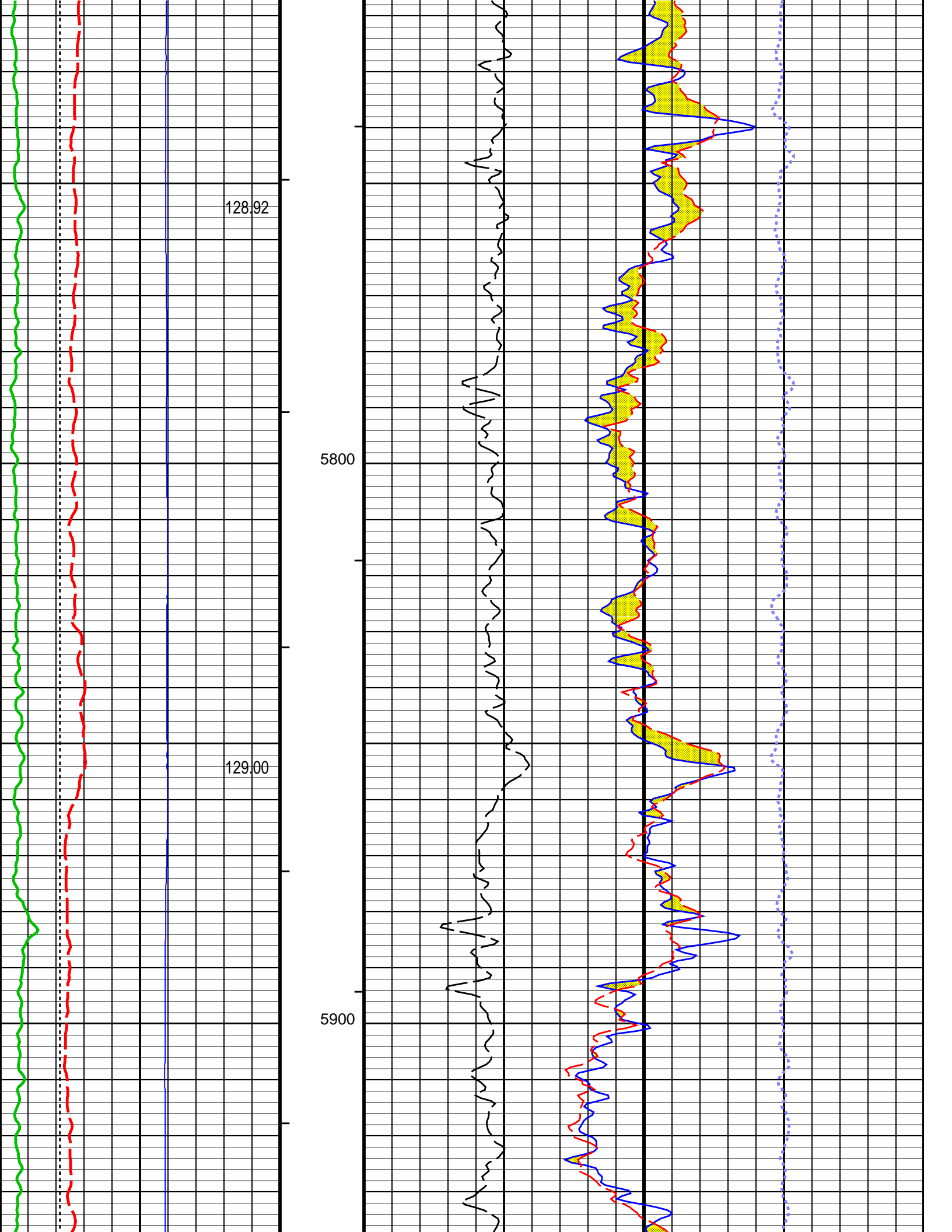
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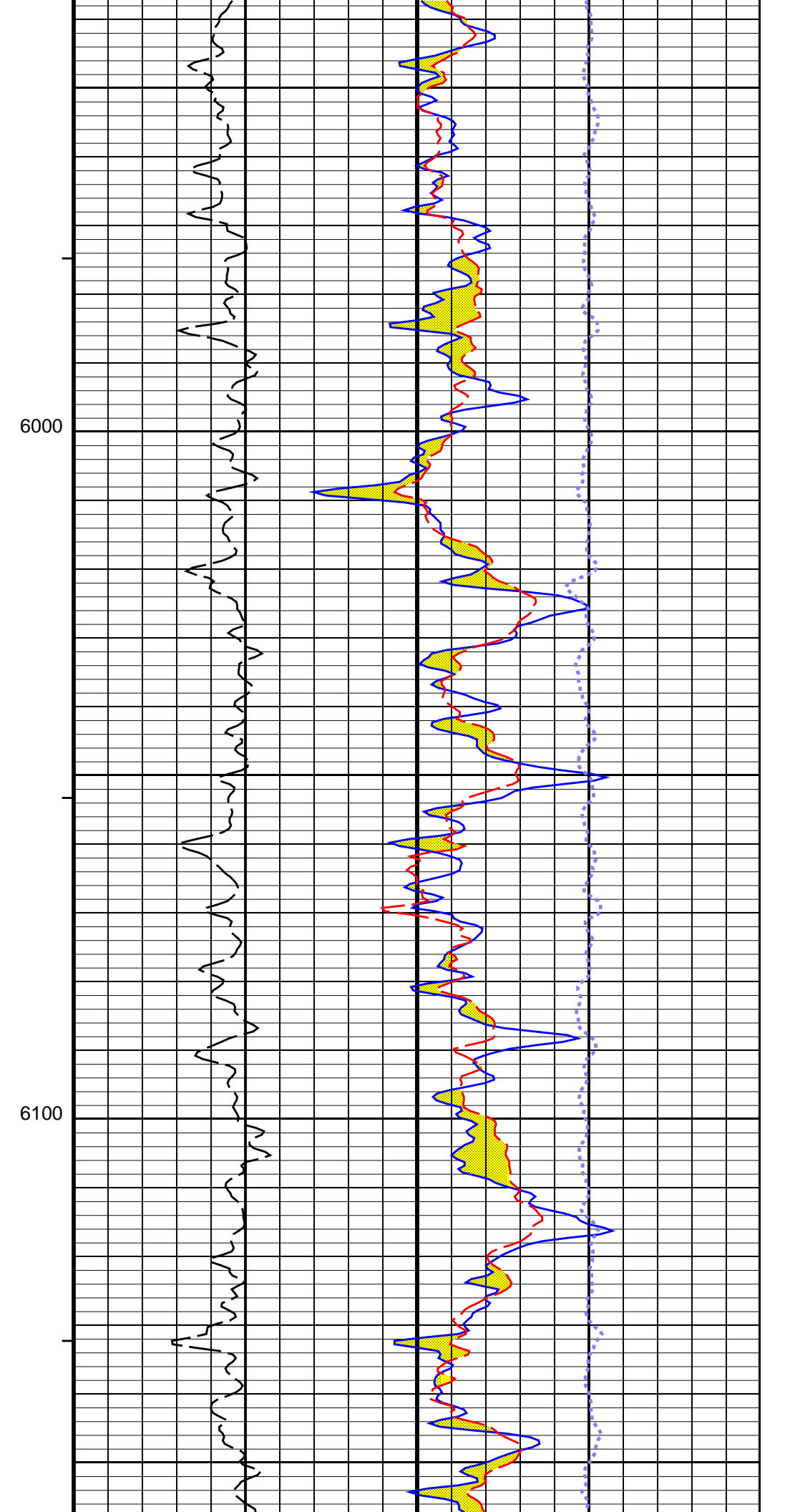
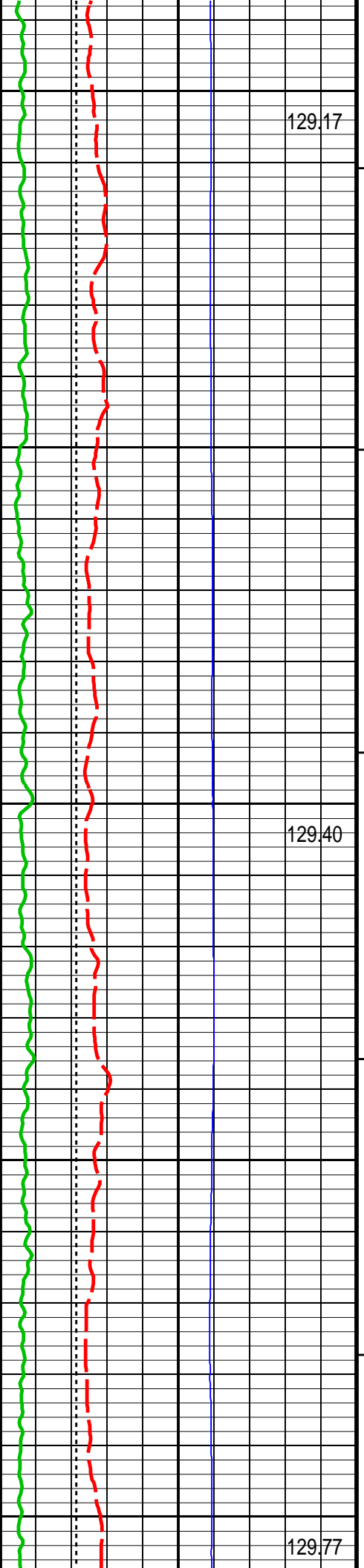
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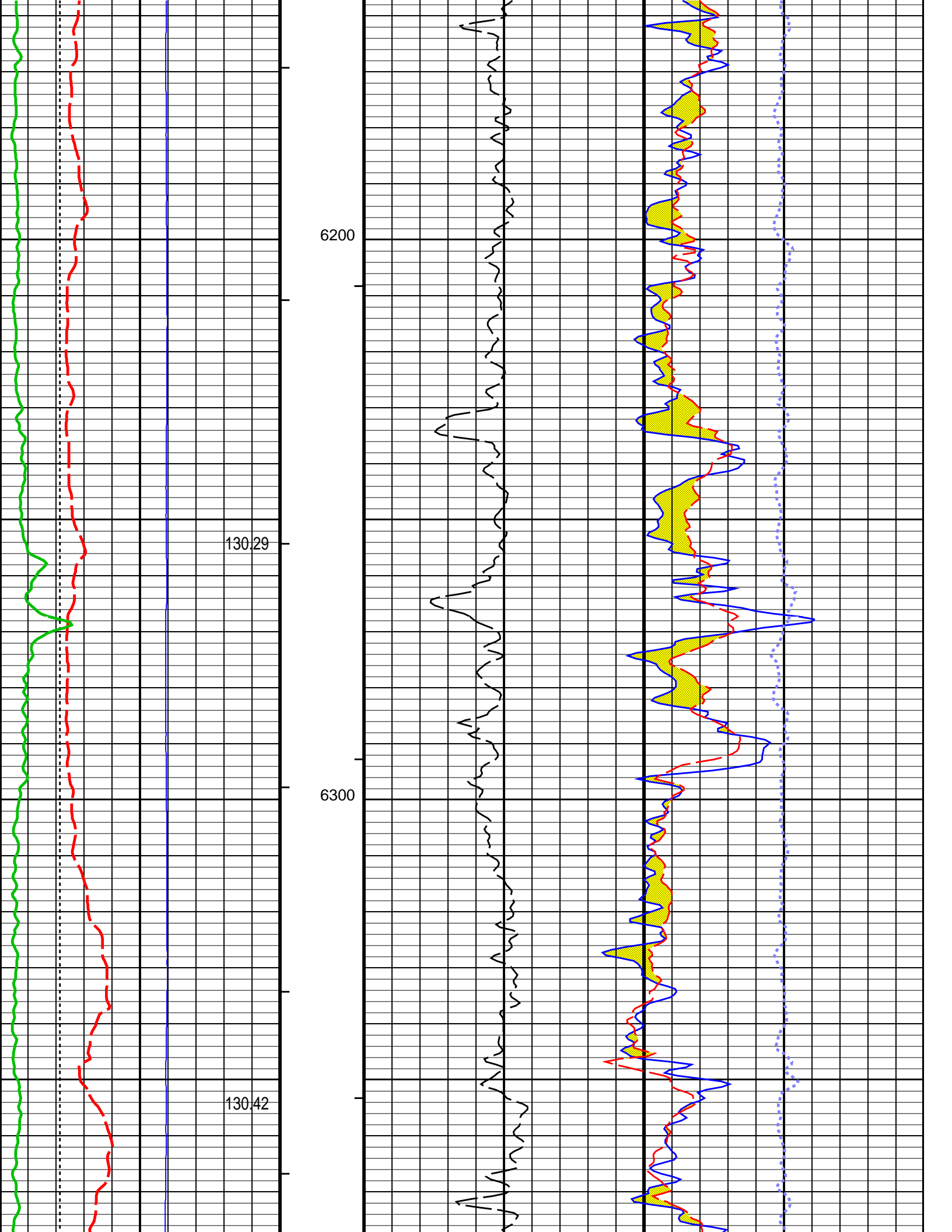
DRHO

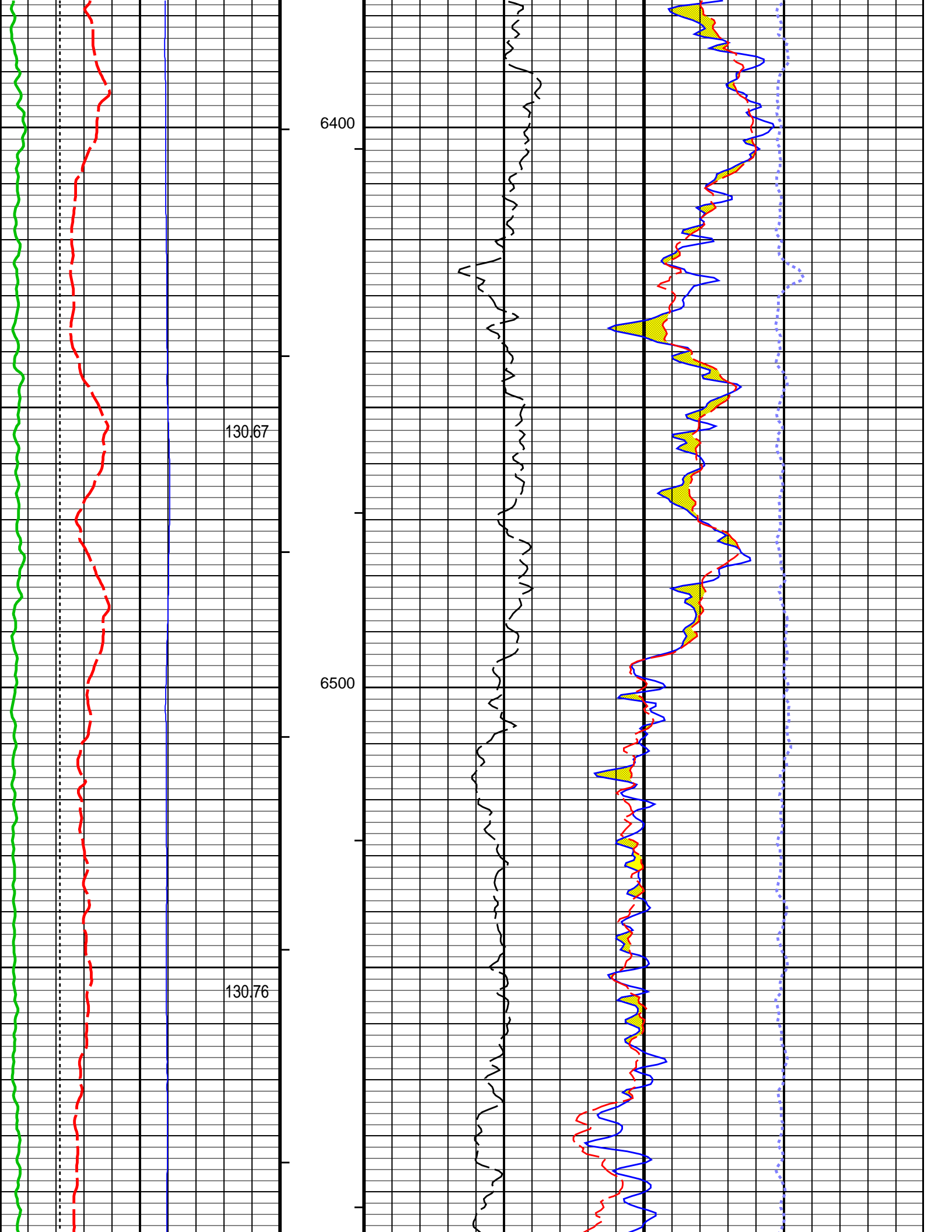


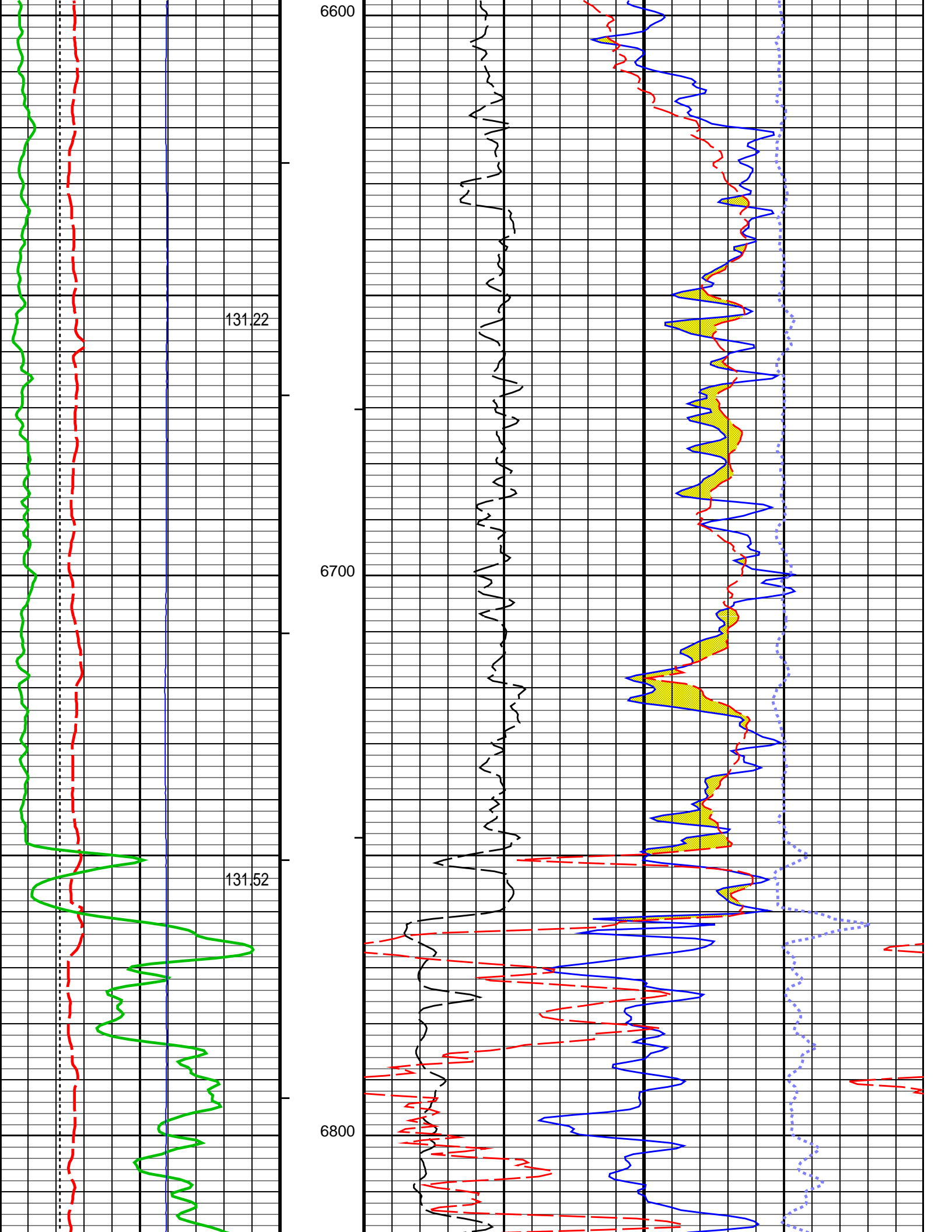


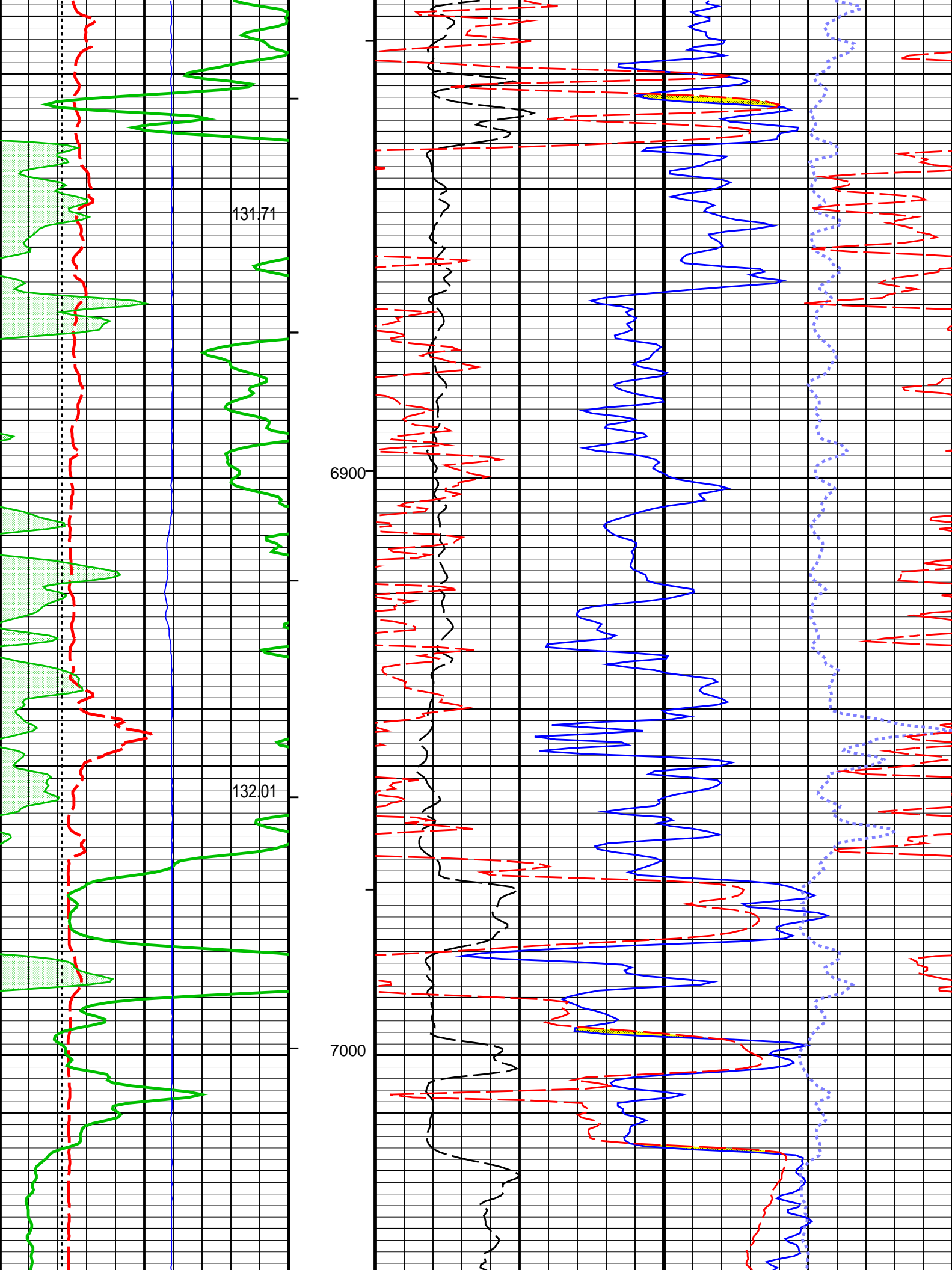


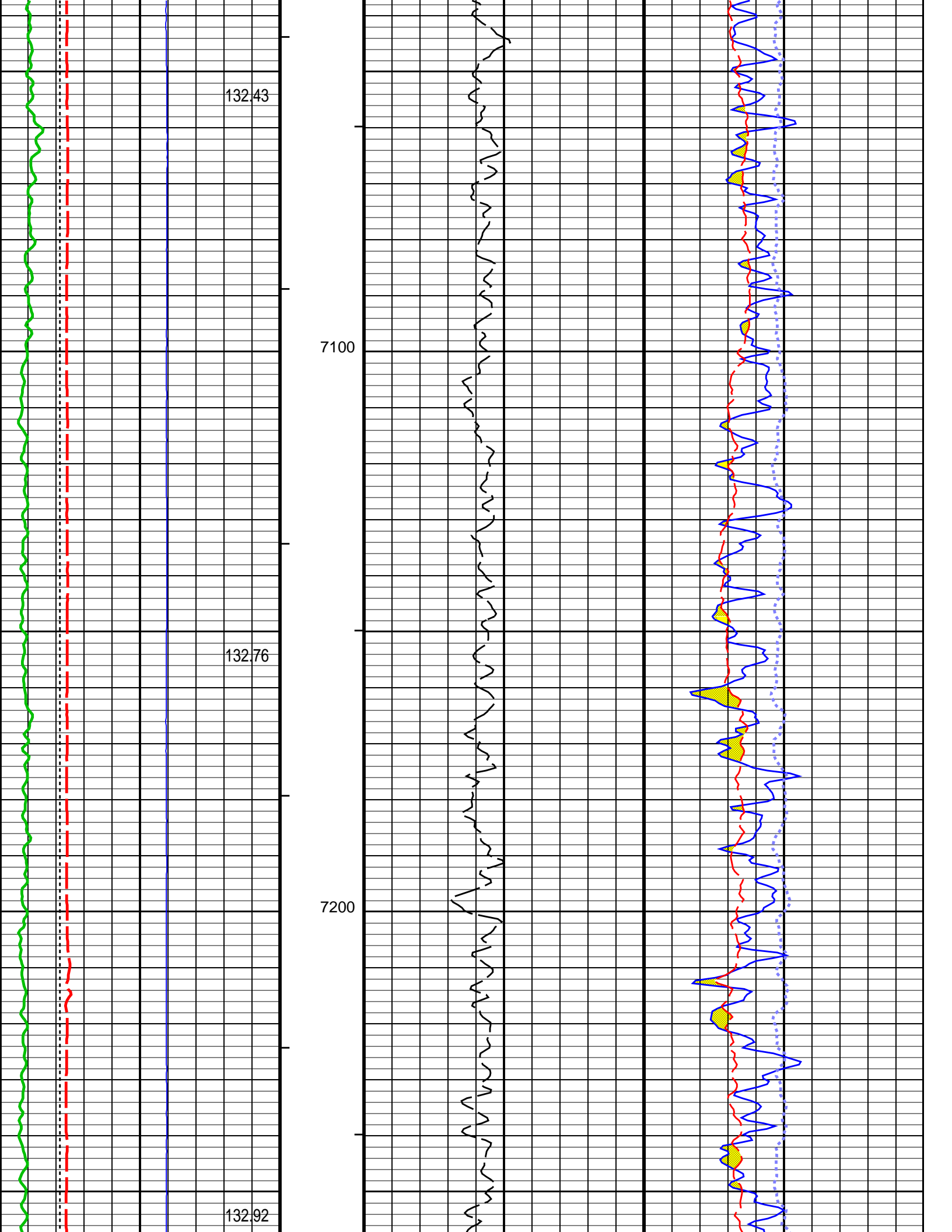


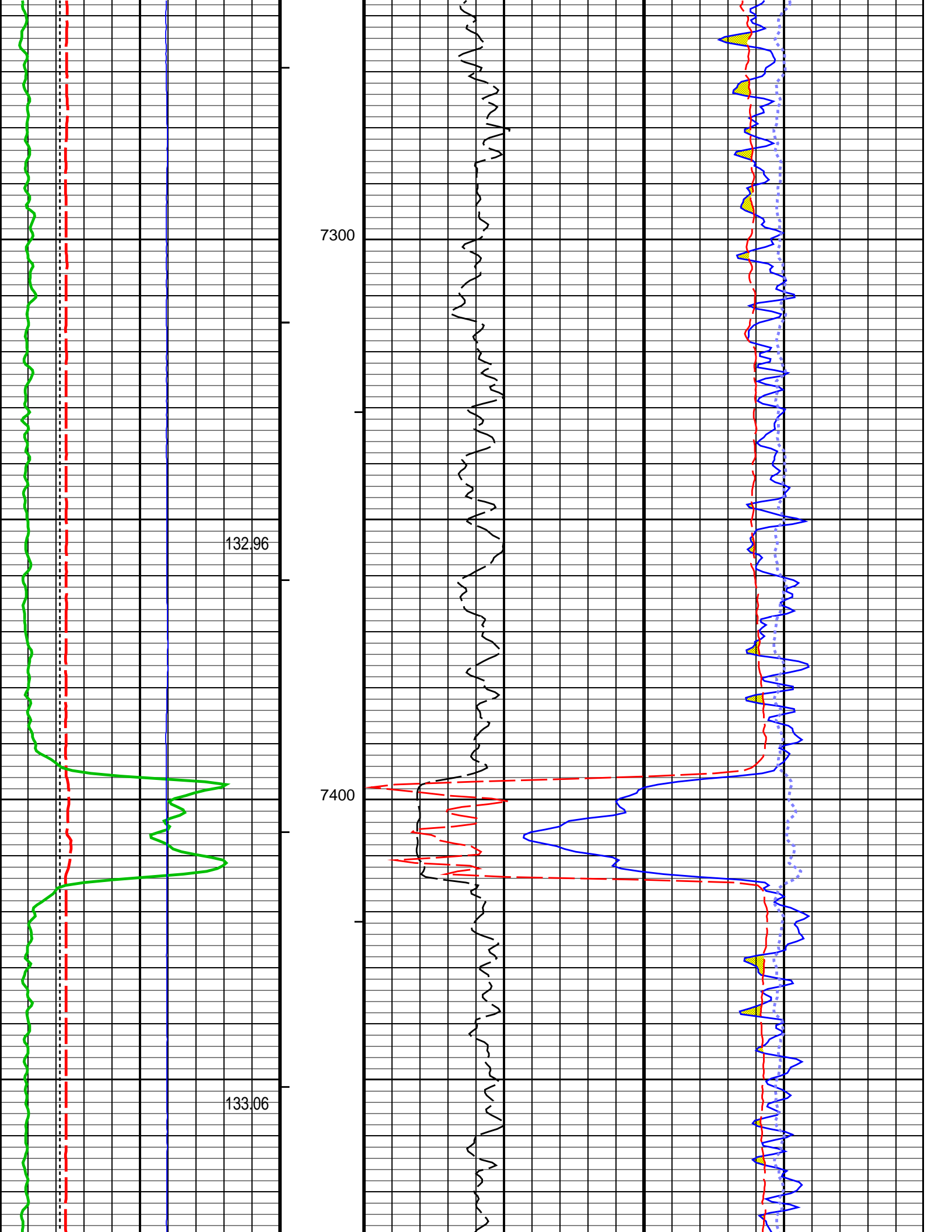


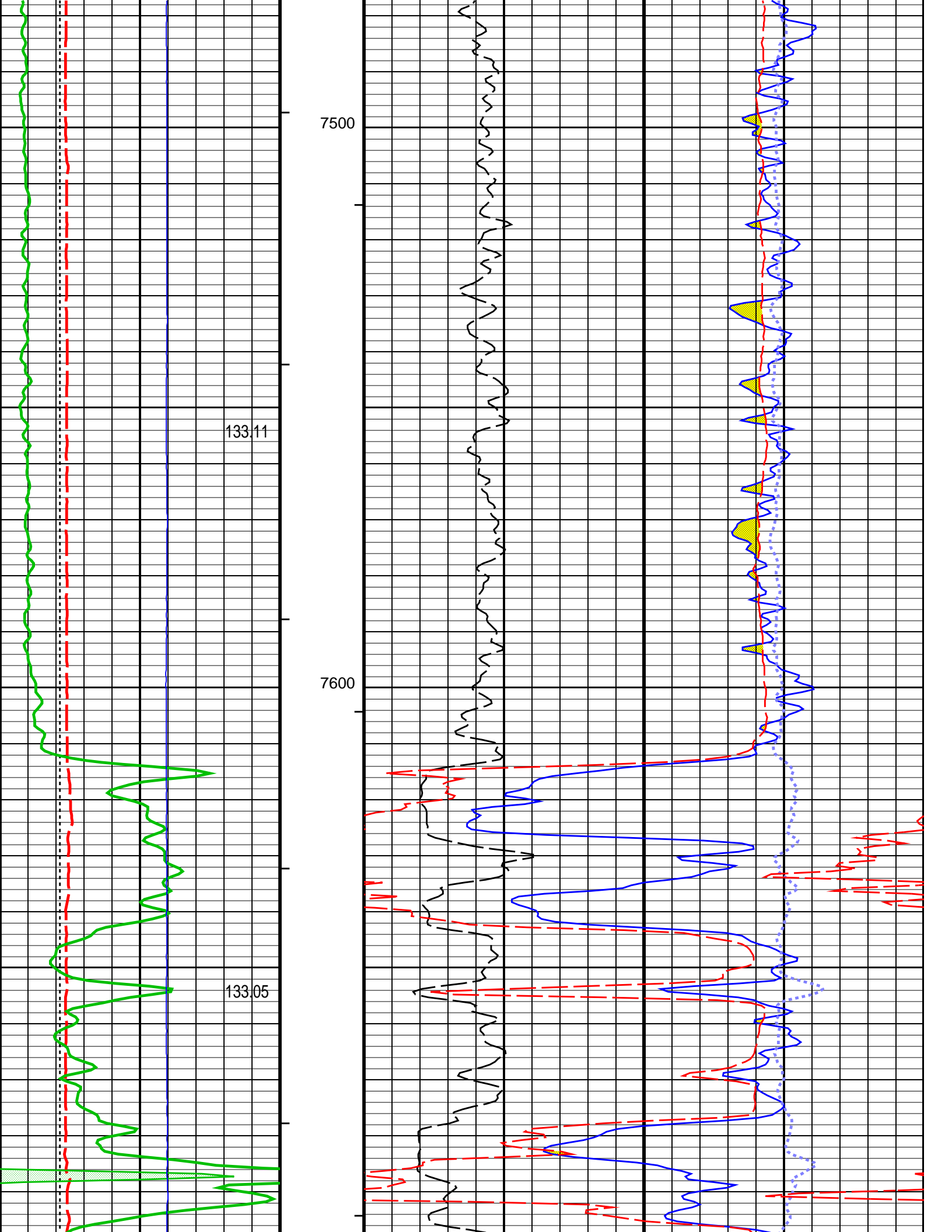


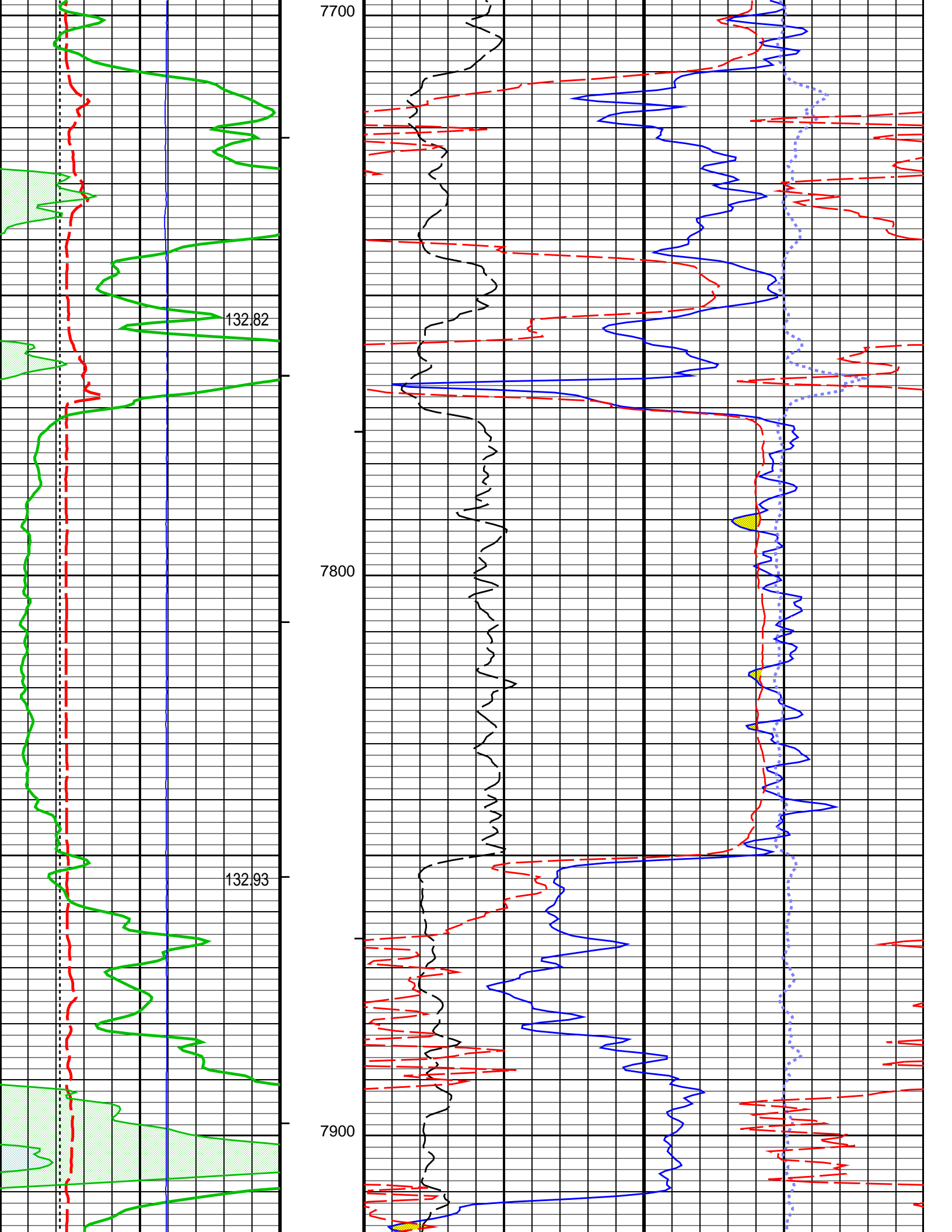


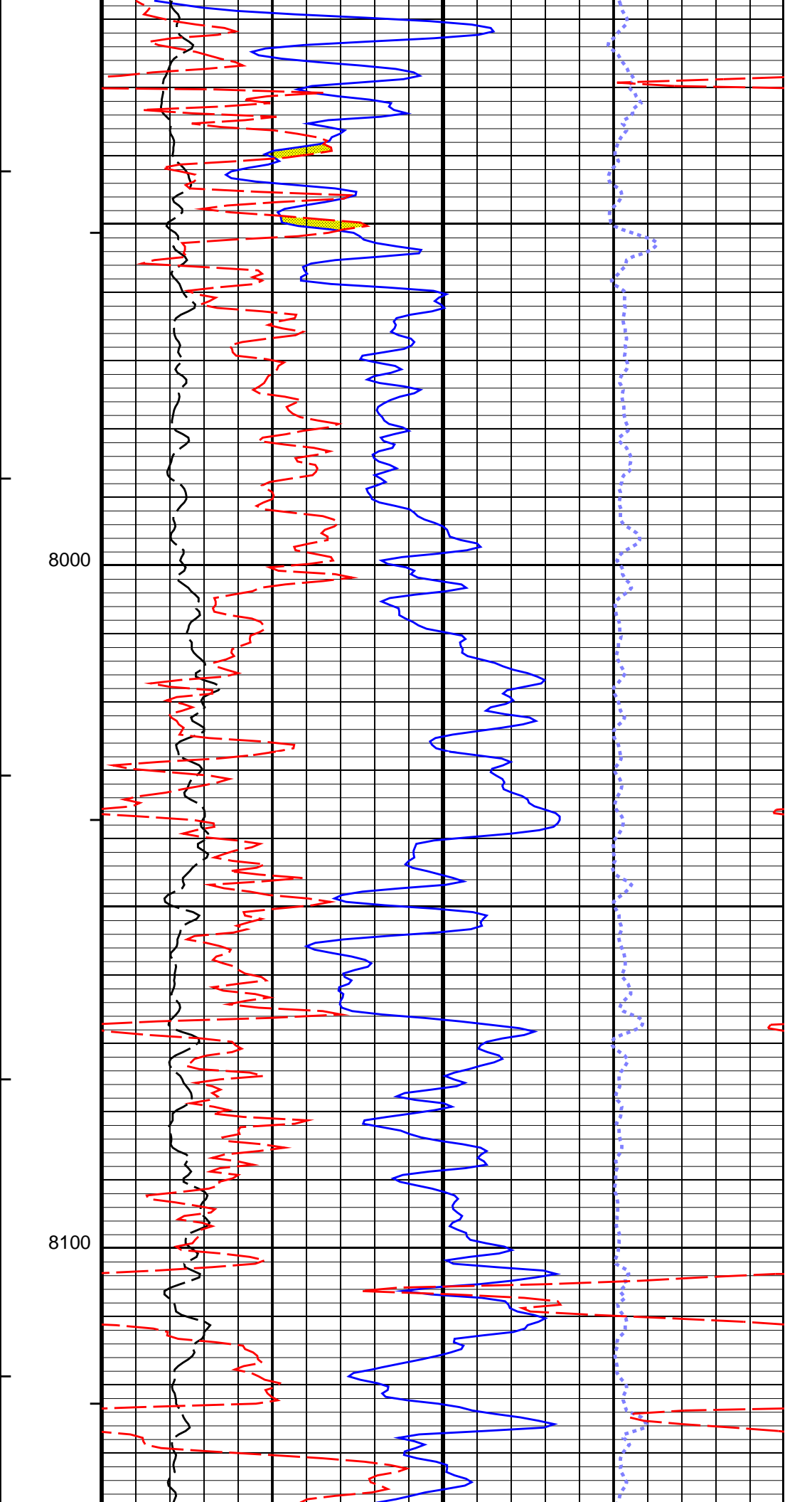
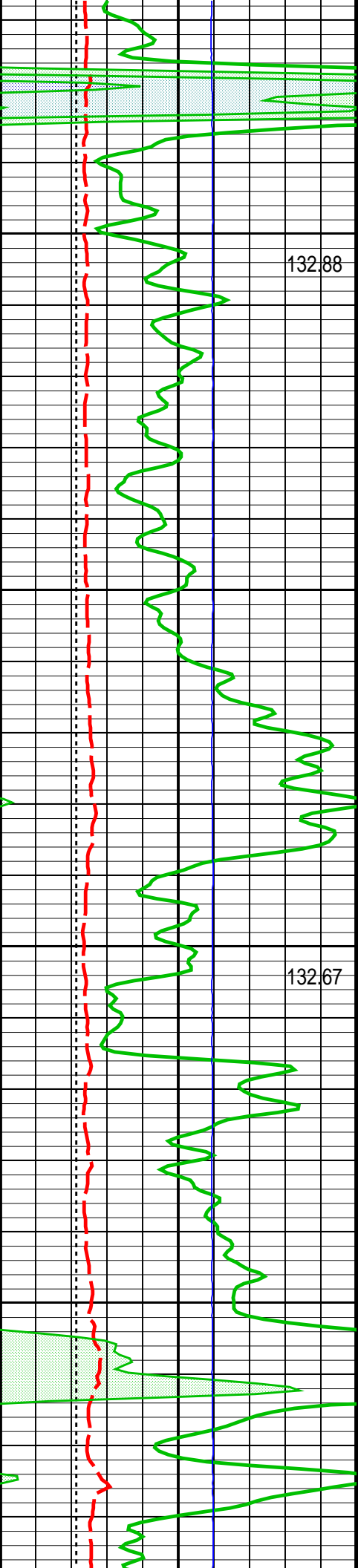


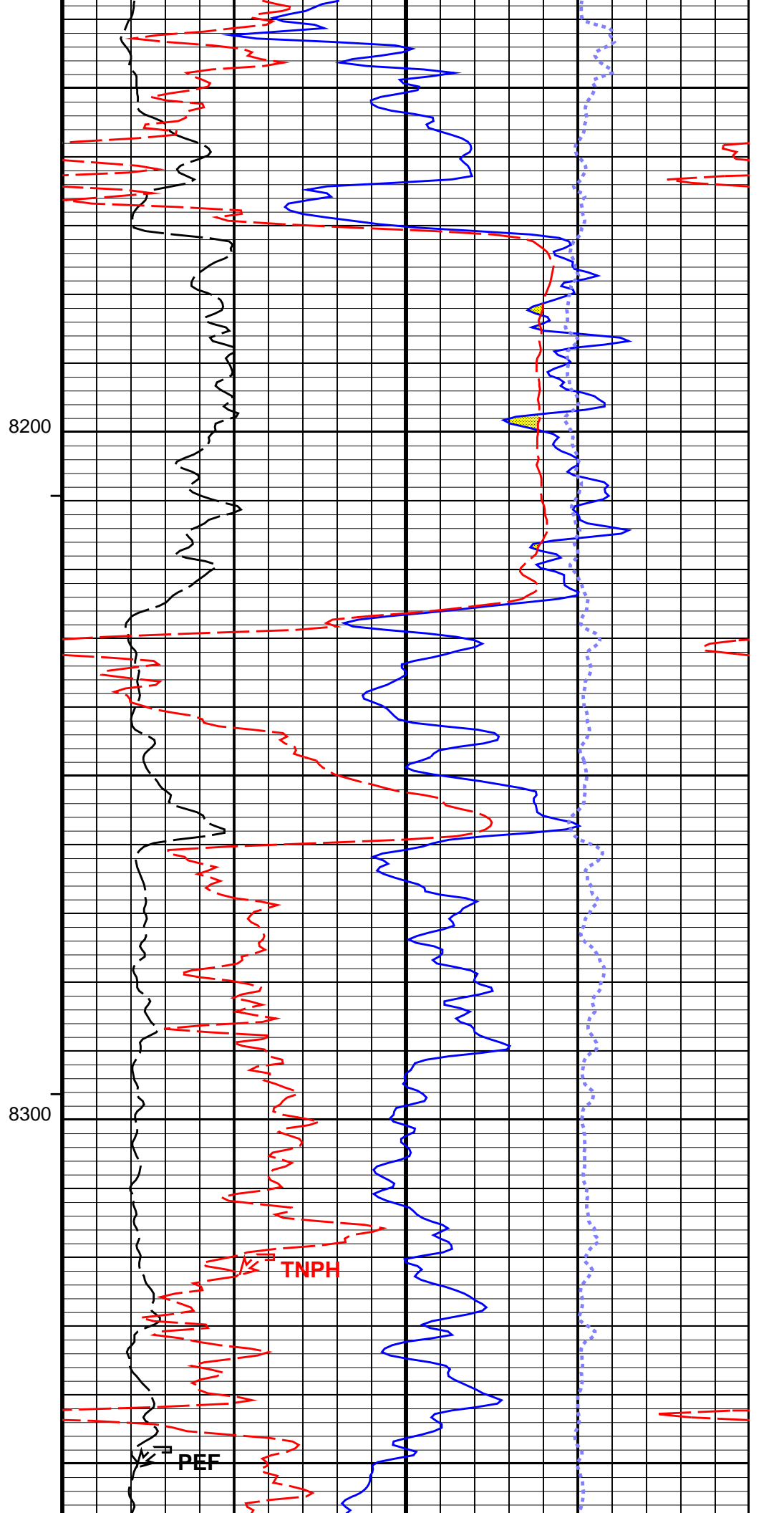
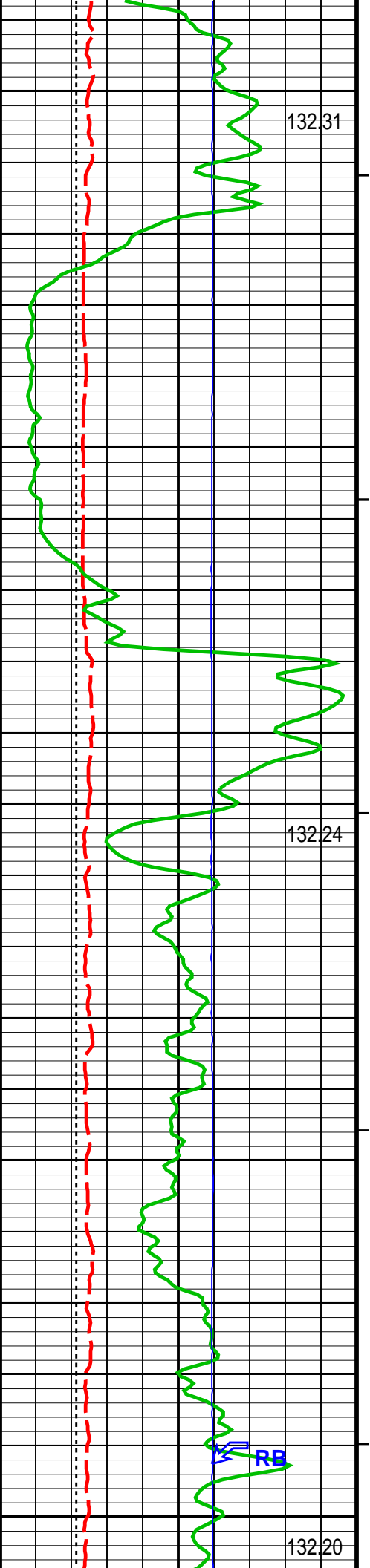


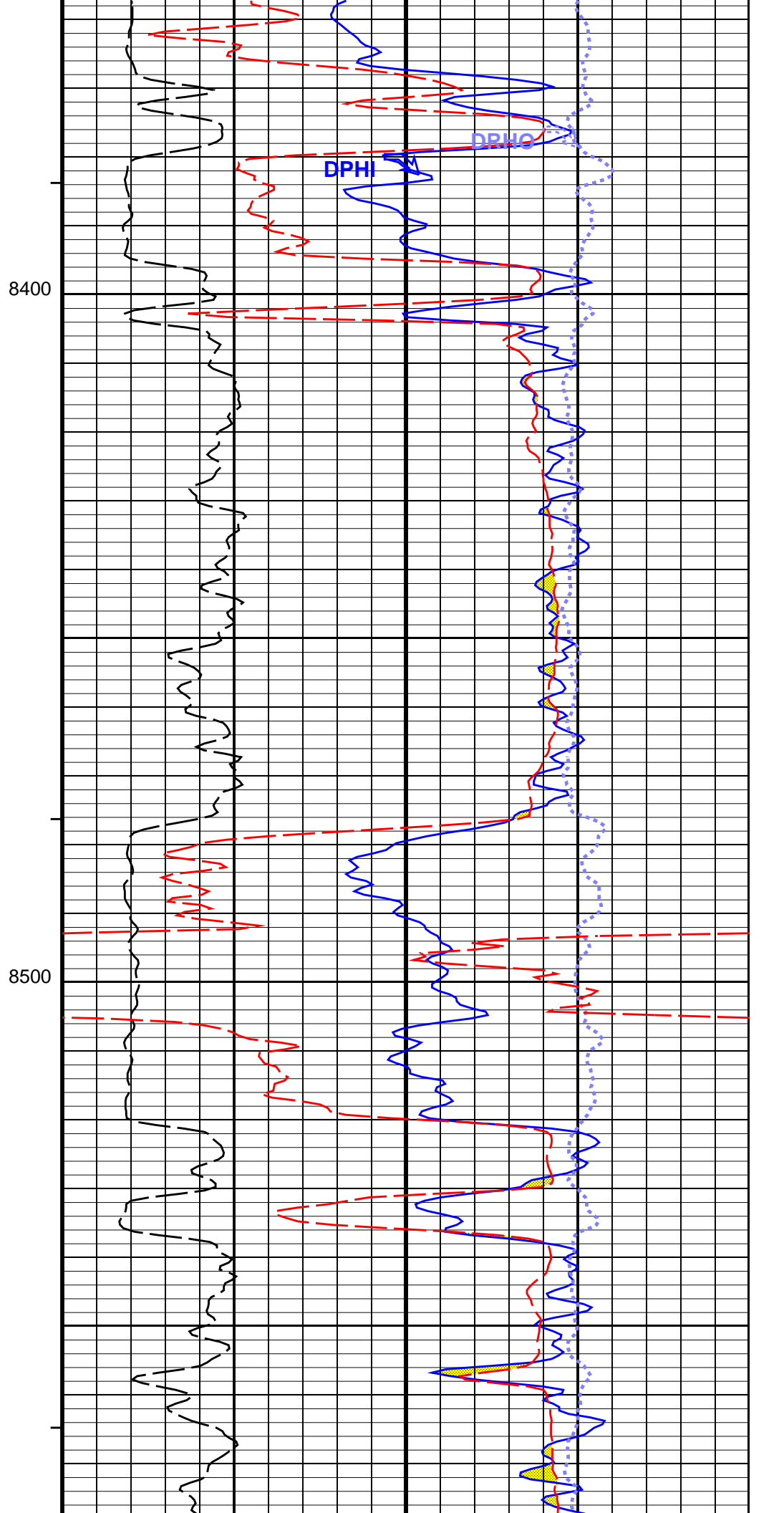
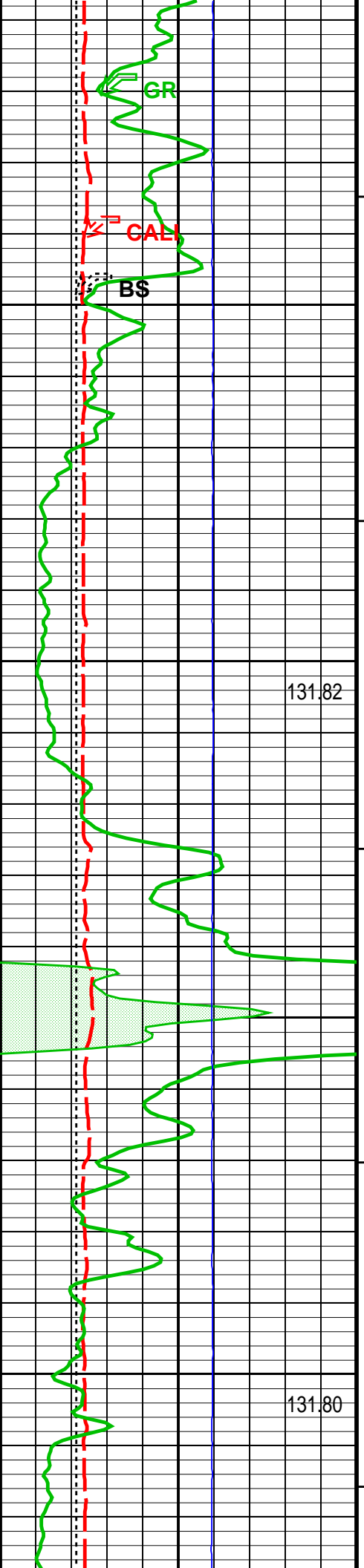


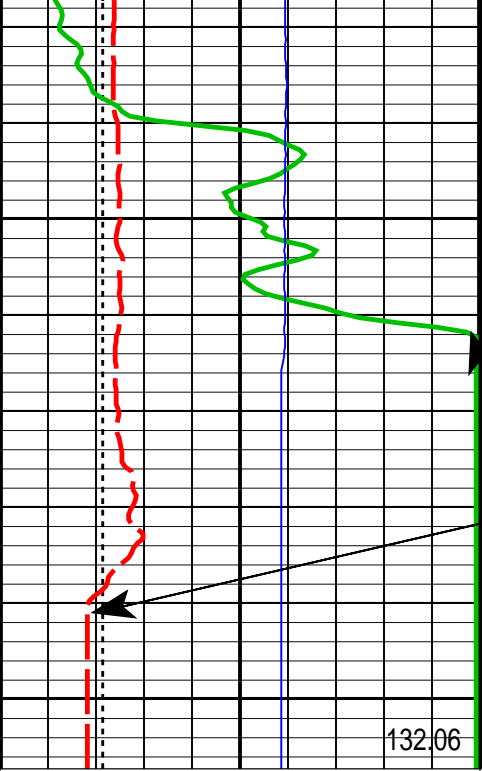




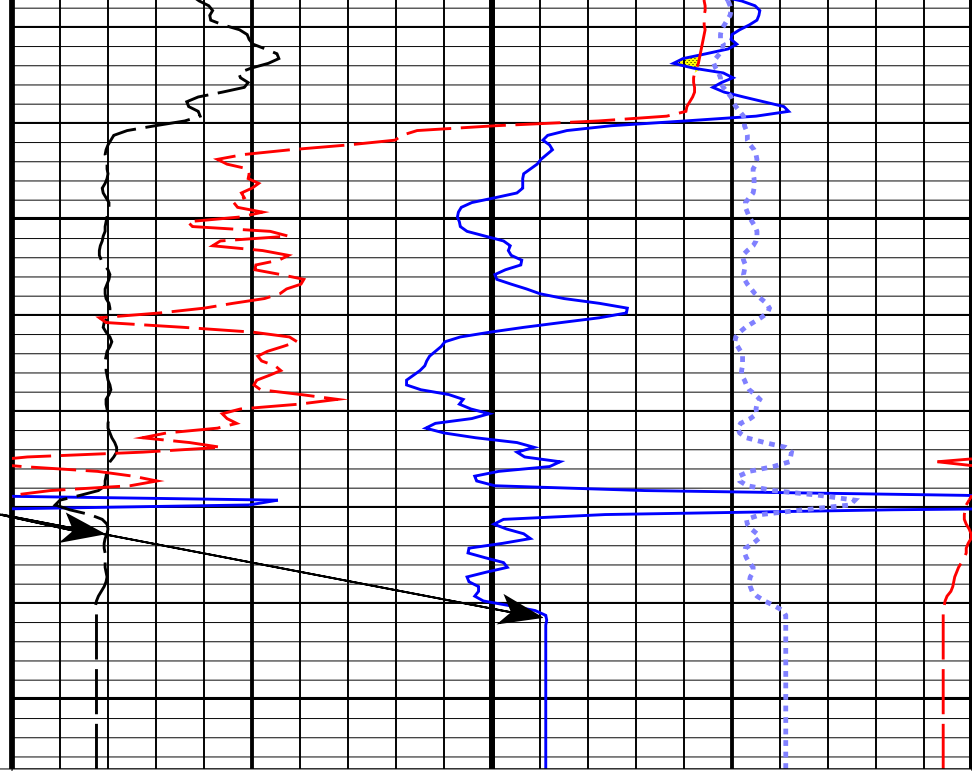








FR



GR Temp (WTEP) (DEGF)	
Bit Size (BS) (IN)	
4	14
Gamma Ray 1 (GR) (GAPI)	
150	300
Gamma Ray 2 (GR) (GAPI)	
300	450
Gamma Ray 3 (GR) (GAPI)	
450	600
Gamma Ray 4 (GR) (GAPI)	
600	750
Caliper (CALI) (IN)	
4	14
Gamma Ray (GR) (GAPI)	
0	150
gr wrap1 From LHT1 to GR1	
gr wrap2 From LHT1 to GR2	
gr wrap3 From LHT1 to GR3	
gr wrap4 From LHT1 to GR4	
Relative Bearing (RB)	
0	940
(DEG)	

DPHI (DPHI) (PU)		30	-10
PEF (PEF) (---		0	10
DRHO (DRHO) (G/C3)		-0.5	0.5
TNPH (TNPH) (%)		30	-10

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

Parameters

DLIS Name	Description	Value	
TBT-A: ThruBit String			
BHS	Borehole Status	OPEN	
CSAL	Cement Salinity	0.000	ppm
CSID	Casing Size I.D.	6.500	in
DHC	Density Hole Correction	CALIPER	
FD	Fluid Density	1.000	g/cm3
FSAL	Formation Salinity	0.000	ppm
FSCO	Formation Salinity Correction Enabled? (for TBN)	NO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIME	
MDEN	Matrix Density	2.710	g/cm3
MT	Mud Type (for TBN and TBI correction)	WBM	
MWCO	Mud-Weight Correction Enabled? (for TBN)	NO	
RB_OFFSET	Additional RB offset (degrees)	0.000	deg
SOCO	Stand-Off Correction Enabled? (for TBN)	NO	
SOFF	TBN Standoff	0.000	in
TBD_CAL_BLOCK	TBD Calibration Block Type	THRUBIT	
TBD_SPIKE_REJECT	TBD Spike Detection Option	DETECT	
TBD_SPIKE_THRESHOLD	TBD Attenuation Change Threshold for Spike Detection	5.000	%
TBN_BHC_OP	Borehole Correction Option (for TBN)	CALIPER	
TBN_CAL_TANK	TBN Calibration Tank Type	THRUBIT	
TBN_PRES_OP	Pressure Correction Enabled? (for TBN)	NO	
TBN_TEMP_OP	Temperature Correction Enabled? (for TBN)	NO	
TBN_WPRE	Well Pressure (for TBN)	14.696	psi
WMUD	Mud Weight	8.500	lbm/gal
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
MATR	Rock Matrix for Neutron Porosity Corrections	LIME	
System and Miscellaneous			
BS	Bit Size	6.125	in
BSAL	Borehole Salinity	6000.0	ppm
CSIZ	Current Casing Size	7.000	in

Format: TB_5INCH_NUCLEAR Vertical Scale: 5" per 100' Graphics File Created: 01-May-2014 10:22

OP System Version: 19C2-270

TBT SRPC-5298-ThruBit_b

Input DLIS Files

ThruBit_006PUP FN:5 01-May-2014 10:14 8657.2 FT 2953.4 FT



CALIBRATIONS




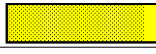



















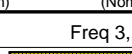






MAXIS Field Log

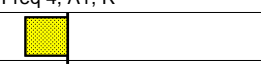
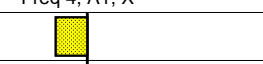
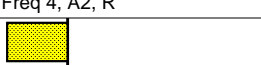
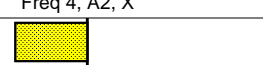
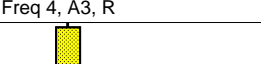
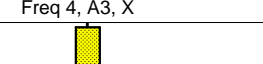
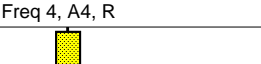
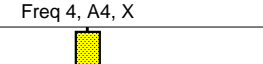
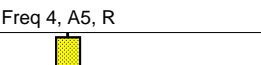
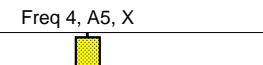
ThruBit String / Equipment Identification

Primary Equipment:

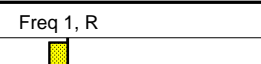
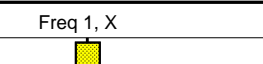





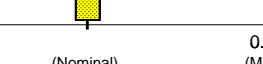

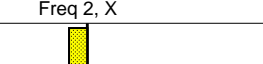




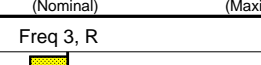
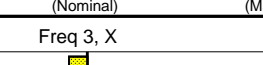




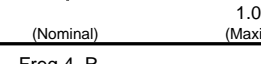
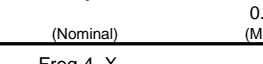


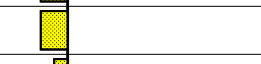
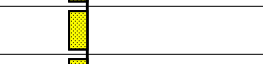
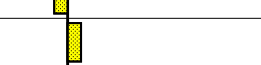
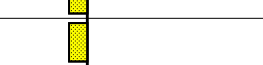
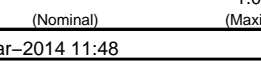
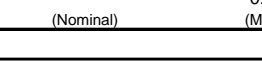
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Density	TBD - A	28
Gamma-Ray Logging Source	GGLS - FZ	3216
Thermal Neutron	TBN - A	5
Neutron Logging Source	NNLS - EWA	4484
Spectral GR	TBSG - A	12
Telemetry Memory GR	TMG - A	27
Battery	TBAT -	2

Auxiliary Equipment:

ThruBit String Master Calibration					
TBI Master Calibration Sonde Errors					
Freq 1, A1, R		Value	Nominal	Freq 1, A1, X	
		-475.662	-457.000		300.000
-536.000 (Minimum)	(Nominal)	-387.000 (Maximum)		-500.000 (Minimum)	1100.00 (Maximum)
Freq 1, A2, R		Value	Nominal	Freq 1, A2, X	
		-148.883	-141.000		320.000
-162.000 (Minimum)	(Nominal)	-120.000 (Maximum)		-75.0000 (Minimum)	700.000 (Maximum)
Freq 1, A3, R		Value	Nominal	Freq 1, A3, X	
		-30.2273	-28.0000		50.0000
-38.0000 (Minimum)	(Nominal)	-18.0000 (Maximum)		-375.000 (Minimum)	475.000 (Maximum)
Freq 1, A4, R		Value	Nominal	Freq 1, A4, X	
		-16.8583	-16.0000		300.000
-24.0000 (Minimum)	(Nominal)	-8.00000 (Maximum)		25.0000 (Minimum)	575.000 (Maximum)
Freq 1, A5, R		Value	Nominal	Freq 1, A5, X	
		-14.8593	-14.0000		150.000
-21.0000 (Minimum)	(Nominal)	-7.00000 (Maximum)		25.0000 (Minimum)	275.000 (Maximum)
Freq 2, A1, R		Value	Nominal	Freq 2, A1, X	
		-246.838	-237.000		150.000
-293.000 (Minimum)	(Nominal)	-186.000 (Maximum)		-375.000 (Minimum)	675.000 (Maximum)
Freq 2, A2, R		Value	Nominal	Freq 2, A2, X	
		-96.6990	-92.0000		160.000
-106.000 (Minimum)	(Nominal)	-76.0000 (Maximum)		-100.000 (Minimum)	425.000 (Maximum)
Freq 2, A3, R		Value	Nominal	Freq 2, A3, X	
		-21.8469	-21.0000		-20.0000
-28.0000 (Minimum)	(Nominal)	-13.0000 (Maximum)		-325.000 (Minimum)	250.000 (Maximum)
Freq 2, A4, R		Value	Nominal	Freq 2, A4, X	
		-19.8901	-20.0000		100.000
-28.0000 (Minimum)	(Nominal)	-10.0000 (Maximum)		-75.0000 (Minimum)	275.000 (Maximum)
Freq 2, A5, R		Value	Nominal	Freq 2, A5, X	
		-19.6387	-20.0000		-25.0000
-27.0000 (Minimum)	(Nominal)	-10.0000 (Maximum)		-125.000 (Minimum)	75.0000 (Maximum)
Freq 3, A1, R		Value	Nominal	Freq 3, A1, X	
		-156.728	-149.000		25.0000
-193.000 (Minimum)	(Nominal)	-108.000 (Maximum)		-375.000 (Minimum)	425.000 (Maximum)
Freq 3, A2, R		Value	Nominal	Freq 3, A2, X	
		-73.8182	-70.0000		70.0000
-81.0000 (Minimum)	(Nominal)	-57.0000 (Maximum)		-125.000 (Minimum)	250.000 (Maximum)
Freq 3, A3, R		Value	Nominal	Freq 3, A3, X	
		-17.9160	-17.0000		-90.0000
-23.0000 (Minimum)	(Nominal)	-11.0000 (Maximum)		-300.000 (Minimum)	125.000 (Maximum)
Freq 3, A4, R		Value	Nominal	Freq 3, A4, X	
		-21.5775	-22.0000		-50.0000
-31.0000 (Minimum)	(Nominal)	-11.0000 (Maximum)		-200.000 (Minimum)	100.000 (Maximum)
Freq 3, A5, R		Value	Nominal	Freq 3, A5, X	
		-22.3506	-22.0000		-110.000
-32.0000 (Minimum)	(Nominal)	-11.0000 (Maximum)		-250.000 (Minimum)	-25.0000 (Maximum)
Freq 4 A1 R		Value	Nominal	Freq 4 A1 X	

	-86.0029	-80.0000		-232.020	-190.000
-108.0000 (Minimum)	(Nominal)	-54.0000 (Maximum)	-450.0000 (Minimum)	(Nominal)	75.0000 (Maximum)
Freq 4, A2, R	Value	Nominal	Freq 4, A2, X	Value	Nominal
	-53.0604	-50.0000		-120.146	-75.0000
-60.0000 (Minimum)	(Nominal)	-41.0000 (Maximum)	-200.0000 (Minimum)	(Nominal)	50.0000 (Maximum)
Freq 4, A3, R	Value	Nominal	Freq 4, A3, X	Value	Nominal
	-14.2016	-14.0000		-189.359	-190.000
-19.0000 (Minimum)	(Nominal)	-8.00000 (Maximum)	-350.0000 (Minimum)	(Nominal)	-25.0000 (Maximum)
Freq 4, A4, R	Value	Nominal	Freq 4, A4, X	Value	Nominal
	-24.7660	-25.0000		-225.323	-235.000
-37.0000 (Minimum)	(Nominal)	-11.0000 (Maximum)	-400.0000 (Minimum)	(Nominal)	-75.0000 (Maximum)
Freq 4, A5, R	Value	Nominal	Freq 4, A5, X	Value	Nominal
	-28.0152	-28.0000		-306.098	-300.000
-43.0000 (Minimum)	(Nominal)	-12.0000 (Maximum)	-475.0000 (Minimum)	(Nominal)	-125.000 (Maximum)

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ThruBit String Master Calibration					
TBI Master Calibration COMPLEX GAINS					
Freq 1, R	Value	Nominal	Freq 1, X	Value	Nominal
	0.9931	1.000		-0.003803	0
	0.9901	1.000		0.0002989	0
	0.9938	1.000		-0.006371	0
	0.9947	1.000		0.001656	0
	0.9990	1.000		0.001395	0
0.9500 (Minimum)	(Nominal)	1.050 (Maximum)	-0.05000 (Minimum)	(Nominal)	0.05000 (Maximum)
Freq 2, R	Value	Nominal	Freq 2, X	Value	Nominal
	0.9886	1.000		-0.009418	0
	0.9847	1.000		-0.005867	0
	0.9828	1.000		-0.005264	0
	0.9903	1.000		-0.004911	0
	0.9954	1.000		-0.005778	0
0.9500 (Minimum)	(Nominal)	1.050 (Maximum)	-0.05000 (Minimum)	(Nominal)	0.05000 (Maximum)
Freq 3, R	Value	Nominal	Freq 3, X	Value	Nominal
	0.9894	1.000		-0.006061	0
	0.9858	1.000		-0.002992	0
	0.9836	1.000		-0.002560	0
	0.9902	1.000		-0.002742	0
	0.9972	1.000		-0.002038	0
0.9500 (Minimum)	(Nominal)	1.050 (Maximum)	-0.05000 (Minimum)	(Nominal)	0.05000 (Maximum)
Freq 4, R	Value	Nominal	Freq 4, X	Value	Nominal
	0.9918	1.000		-0.008870	0
	0.9876	1.000		-0.006815	0
	0.9875	1.000		-0.008579	0
	0.9922	1.000		-0.007446	0
	1.006	1.000		-0.006792	0
0.9300 (Minimum)	(Nominal)	1.070 (Maximum)	-0.05000 (Minimum)	(Nominal)	0.05000 (Maximum)

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ThruBit String Master Calibration

TBD Caliper Master Calibration

Caliper 12in Ring IN	Value	Nominal	Caliper 9in Ring IN	Value	Nominal	Caliper 6in Ring IN	Value	Nominal
	1923.0	1949.8		2053.2	2096.7		2208.3	2285.7
1799.8 (Minimum) (Nominal)	2099.8 (Maximum)		1946.7 (Minimum) (Nominal)	2246.7 (Maximum)		2135.7 (Minimum) (Nominal)	2435.7 (Maximum)	

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ThruBit String Master Calibration

TBD Density Master Calibration. PEEK Window, ThruBit blocks

Aluminium Density G/C3	Value	Nominal	Magnesium Density G/C3	Value	Nominal
	2.607	2.607		1.752	1.752
2.557 (Minimum) (Nominal)	2.657 (Maximum)		1.702 (Minimum) (Nominal)	1.802 (Maximum)	
LS1 Background CPS	Value	Nominal	SS1 Background CPS	Value	Nominal
	137.44	140.00		124.37	140.00
100.00 (Minimum) (Nominal)	187.00 (Maximum)		100.00 (Minimum) (Nominal)	185.00 (Maximum)	
LS4 Background CPS	Value	Nominal	SS1 Aluminium CPS	Value	Nominal
	30.27	29.00		4995.56	4850.00
20.00 (Minimum) (Nominal)	38.00 (Maximum)		4076.00 (Minimum) (Nominal)	5613.00 (Maximum)	
LS1 Aluminium CPS	Value	Nominal	SS1 Magnesium CPS	Value	Nominal
	862.33	870.00		8166.22	8000.00
750.00 (Minimum) (Nominal)	982.00 (Maximum)		6695.00 (Minimum) (Nominal)	9269.00 (Maximum)	
LS4 Aluminium CPS	Value	Nominal			
	1051.9	955.00			
796.00 (Minimum) (Nominal)	1169.0 (Maximum)				
LS1 Al + Sleeve CPS	Value	Nominal			
	776.88	725.00			
650.00 (Minimum) (Nominal)	838.00 (Maximum)				
LS4 Al + Sleeve CPS	Value	Nominal			
	517.37	426.50			
382.00 (Minimum) (Nominal)	638.00 (Maximum)				
LS1 Magnesium CPS	Value	Nominal			
	5566.05	5800.00			
5158.00 (Minimum) (Nominal)	6486.00 (Maximum)				
SS Slope	Value	Nominal			
	1.685	1.645			
1.520 (Minimum) (Nominal)	1.770 (Maximum)				
LS Slope	Value	Nominal			
	0.4215	0.4150			
0.3800 (Minimum) (Nominal)	0.4500 (Maximum)				
Pef K Factor	Value	Nominal			
	5.184	4.840			
3.510 (Minimum) (Nominal)	6.170 (Maximum)				
Pef B Factor	Value	Nominal			
	-0.6798	-0.5550			
-0.7000 (Minimum) (Nominal)	-0.4100 (Maximum)				

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ThruBit String Master Calibration

Thermal Neutron Master Calibration

TNF, Background CPS	Value	Nominal	TNN, Background CPS	Value	Nominal
	0.21	1.0		0.100	1.0

0 (Minimum)	(Nominal)	2.0 (Maximum)		0 (Minimum)	(Nominal)	2.0 (Maximum)	
TNF, Tank CPS			Value	Nominal	TNN, Tank CPS		
			92.36	96.00			
25.00 (Minimum)	(Nominal)	200.0 (Maximum)		750.00 (Minimum)	(Nominal)	5700.0 (Maximum)	
TNF, Tank + AI Sleeve CPS			Value	Nominal	TNN, Tank + AI Sleeve CPS		
			3043.9	3040.0			
727.00 (Minimum)	(Nominal)	6080.0 (Maximum)		8000.00 (Minimum)	(Nominal)	64700.0 (Maximum)	
Tank + AI Sleeve Ratio			Value	Nominal	Tank + AI Sleeve Porosity PU		
			11.252	10.797			
10.300 (Minimum)	(Nominal)	11.300 (Maximum)		13.40 (Minimum)	(Nominal)	15.40 (Maximum)	
Tank, Ratio			Value	Nominal	Tank, Temperature DEGF		
			30.479	30.958			
28.000 (Minimum)	(Nominal)	34.000 (Maximum)		20.0 (Minimum)	(Nominal)	120 (Maximum)	
Master: 15-Apr-2014 8:58							

ThruBit String Master Calibration					
TMG Accelerometer Calibration					
Minimum Ax, m/s2		Value	Nominal	Maximum Ax, m/s2	
		N/A	-9.810		
-10.81 (Minimum)	(Nominal)	-8.810 (Maximum)		8.810 (Minimum)	10.81 (Maximum)
Minimum Ay, m/s2		Value	Nominal	Maximum Ay, m/s2	
		N/A	-9.810		
-10.81 (Minimum)	(Nominal)	-8.810 (Maximum)		8.810 (Minimum)	10.81 (Maximum)
Minimum Az, m/s2		Value	Nominal	Maximum Az, m/s2	
		N/A	0		
-1.000 (Minimum)	(Nominal)	1.000 (Maximum)		8.810 (Minimum)	10.81 (Maximum)
RB Offset, degrees		Value	Nominal		
		-17.00	0		
-360.0 (Minimum)	(Nominal)	360.0 (Maximum)			
Master: Calibration not done					

ThruBit String Master Calibration					
TMG Gamma-Ray Calibration					
GR Background GAPI		Value	Nominal	GR Jig-Background GAPI	
		28.95	30.00		
0 (Minimum)	(Nominal)	120.0 (Maximum)		136.6 (Minimum)	205.0 (Maximum)
Master: Calibration out of date 15-Oct-2013 12:57					

Company: **SANDRIDGE ENERGY**

Well: **MARSHA 3306 2-11H**

Field: **STOHRVILLE**

County: **HARPER**



State: **KANSAS**

SPECTRAL DENSITY
DUAL SPACED NEUTRON
MEMORY LOG