



Company: **SANDRIDGE ENERGY**

Well: NONA 3204 1-23H

Field: **YARNELL NORTHEAST**

County: **SUMNER**

State: **KANSAS**

ARRAY INDUCTION

GAMMA RAY

MEMORY LOG

200' FSL & 1380' FEL		Elev.:	K.B.	1241.00 ft
			G.L.	1223.00 ft
			D.F.	1241.00 ft
Permanent Datum:	GROUND LEVEL		Elev.:	1223.00 ft
Log Measured From:	D.F.		18.00 ft	above Perm. Datum
Drilling Measured From:	D.F.			
API Serial No. 15191227190100	Section 23	Township 32S	Range 4W	

SUMNER

YARNELL NORTHEAST

Location: 200' FSL & 1380' FEL

NONA 3204 1-23H

Company: SANDRIDGE ENERGY

5-Mar-2014	1	8572 ft			
Depth		8570 ft			
Sal		8560 ft			
		4823 ft			
Size @ Depth		7.000 in	@	4828 ft	@
Driller		4823 ft			
		6.125 in			
Tool		WBM			
Viscosity		8.7 lbm/gal	29 s		
PH		60 cm3	9		
Tool		MUD SENSOR			
Temperature		0.520 ohm.m	@	65 degF	@
Temperature		0.470 ohm.m	@	65 degF	@
Temperature		0.580 ohm.m	@	65 degF	@
RMC		CALCULATED	CALCULATED		
RMF @ MRT		0.367 @ 95	0.331 @ 95		@
Temperature		95 degF			@
Time		5-Mar-2014		14:44	
Time		5-Mar-2014		15:58	
Location		4 OKC			
		C.PARKER			
		B.TORBELL			

[illegible]

DISCLAIMER

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

OTHER SERVICES1

OS1: TBI-TBD-TBN-TMG

OS2:

OS3:

OS4:

OS5:

OTHER SERVICES2

OS1:

OS2:

OS3:

OS4:

OS5:

REMARKS: RUN NUMBER 1

REMARKS: RUN NUMBER 2

SERVICE:HORIZONTAL PUMP DOWN MEMORY BIT DEPTH: 8495' LOGGED TO: 2100'

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 40

CREW: C.PARKER J.DOTY K.REED

RUN 1

SERVICE ORDER #:
PROGRAM VERSION:
FLUID LEVEL:

2625
19C2-270
0 ft

LOGGED INTERVAL

START

STOP

RUN 2

SERVICE ORDER #:
PROGRAM VERSION:
FLUID LEVEL:

LOGGED

LOGGED INTERVAL

START

STOP

EQUIPMENT	DESCRIPTION
1	...
2	...
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6	...
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8	...
9	...
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100	...

RUN 1

RUN 2

SURFACE EQUIPMENT

WITM (Thrubit)

DOWNHOLE EQUIPMENT

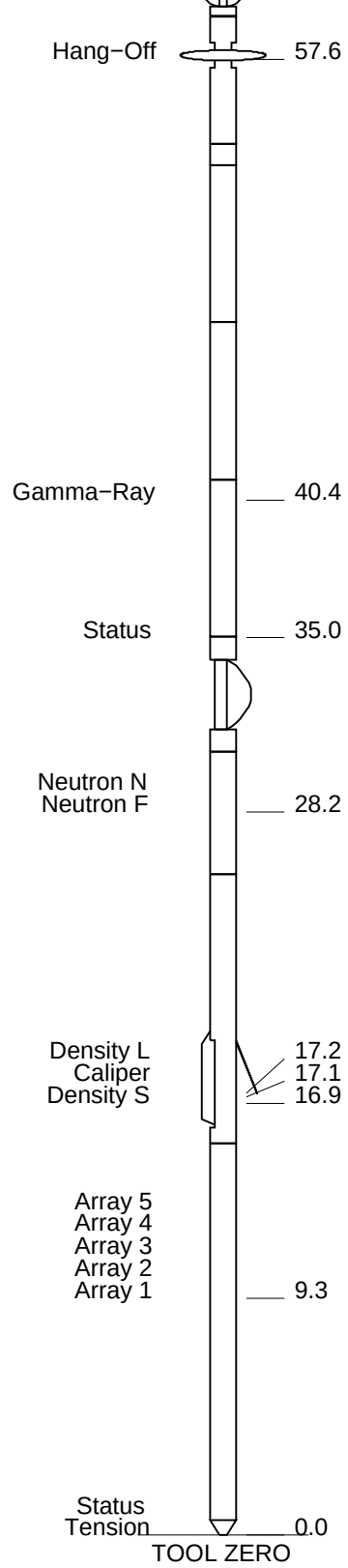
TBT-A
THEAD
CCL
BDOT-B 6
THOT 29
T10_1
TBAT1 13
TBAT2 35

CCL

64.2

67.1

TMG-A 10
TBEX-A
TBN-A 2
NNLS-EWA 3390
TBD-A 41
GGLS-FZ 3366
TBI-A 7



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: NONA 3204 1-23H

Input DLIS Files						
DEFAULT	ThruBit_008PUP	FN:7	PRODUCER	05-Mar-2014 22:54	8573.0 FT	2045.0 FT

OP System Version: 19C2-270	
TBT	SRPC-5287-ThruBit

Relative Bearing (RB)
0 (DEG) 940

gr wrap4
From LHT1 to GR4

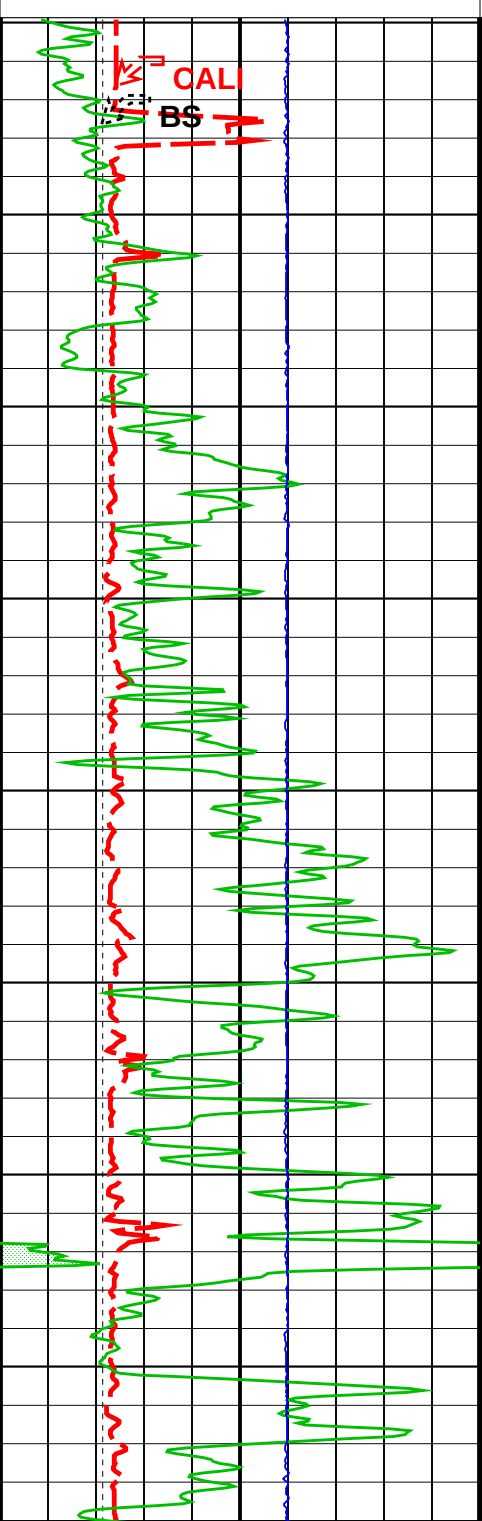
gr wrap3
From LHT1 to GR3

gr wrap2
From LHT1 to GR2

gr wrap1
From LHT1 to GR1

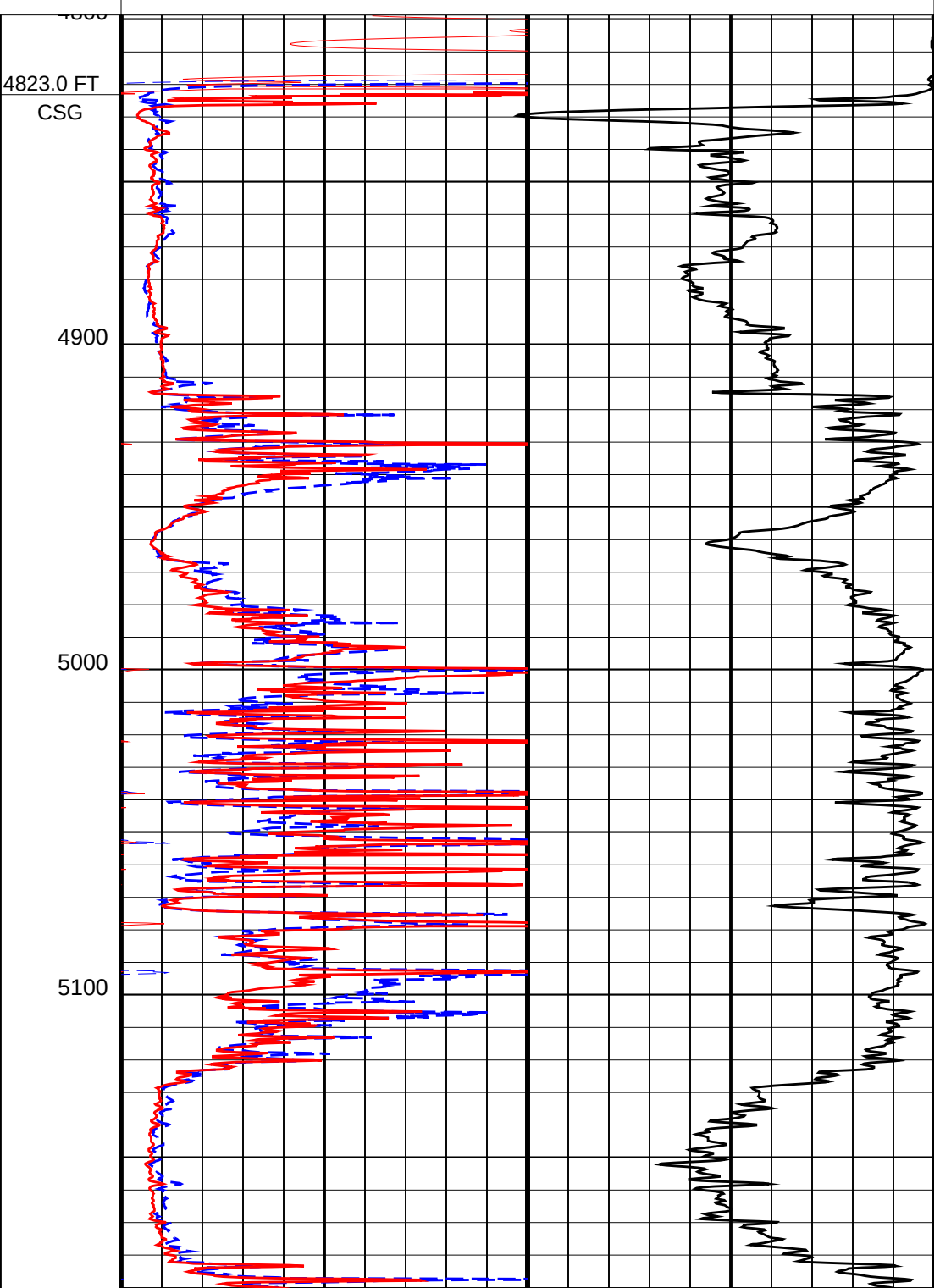
Galiner (GAL)

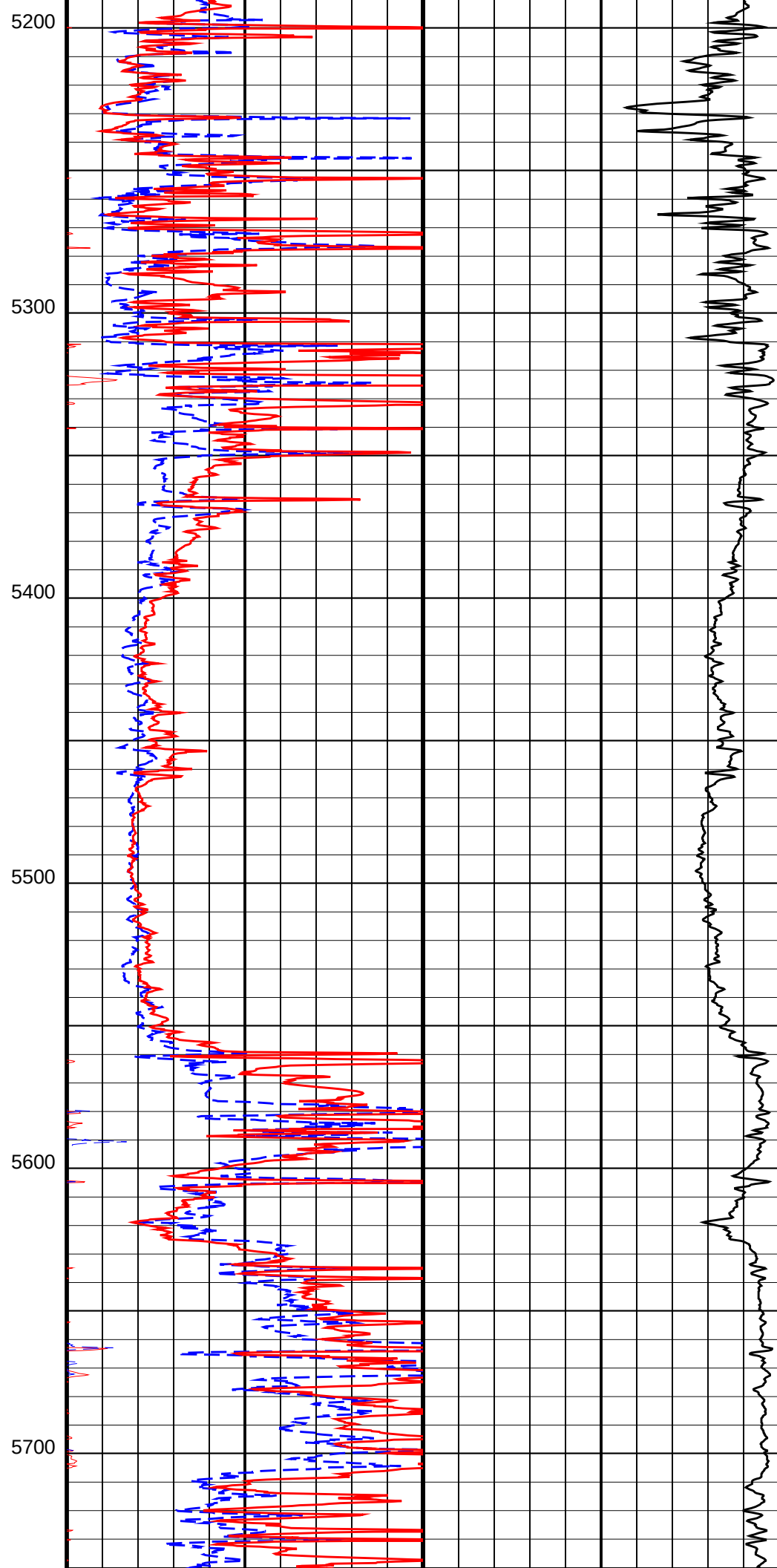
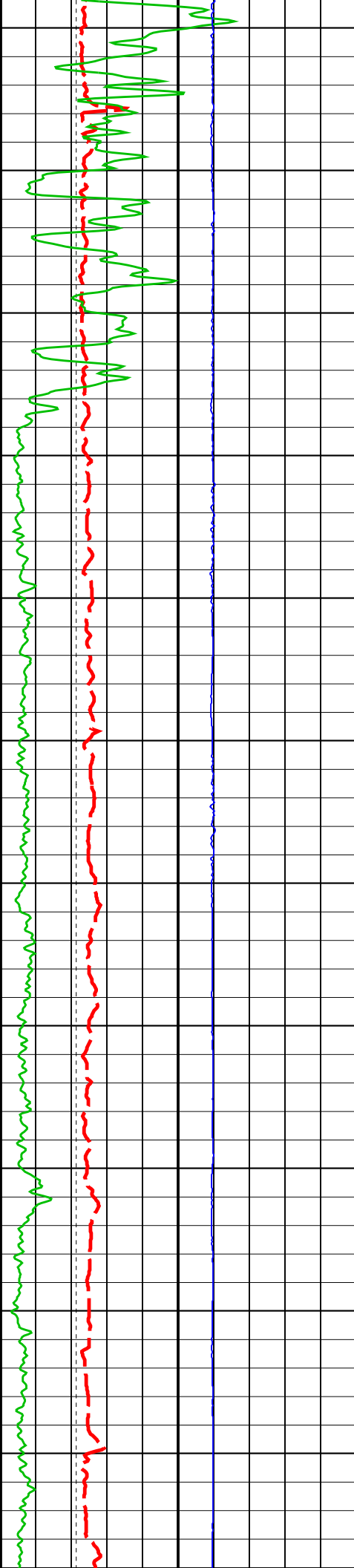
4	Caliper (CAL) (IN)	14
Gamma Ray 4 (GR) (GAPI)		
600		750
Gamma Ray 3 (GR) (GAPI)		
450		600
Gamma Ray 2 (GR) (GAPI)		
300		450
Gamma Ray 1 (GR) (GAPI)		
150		300
Gamma Ray (GR) (GAPI)		
0		150
Bit Size (BS) (IN)		
4		14

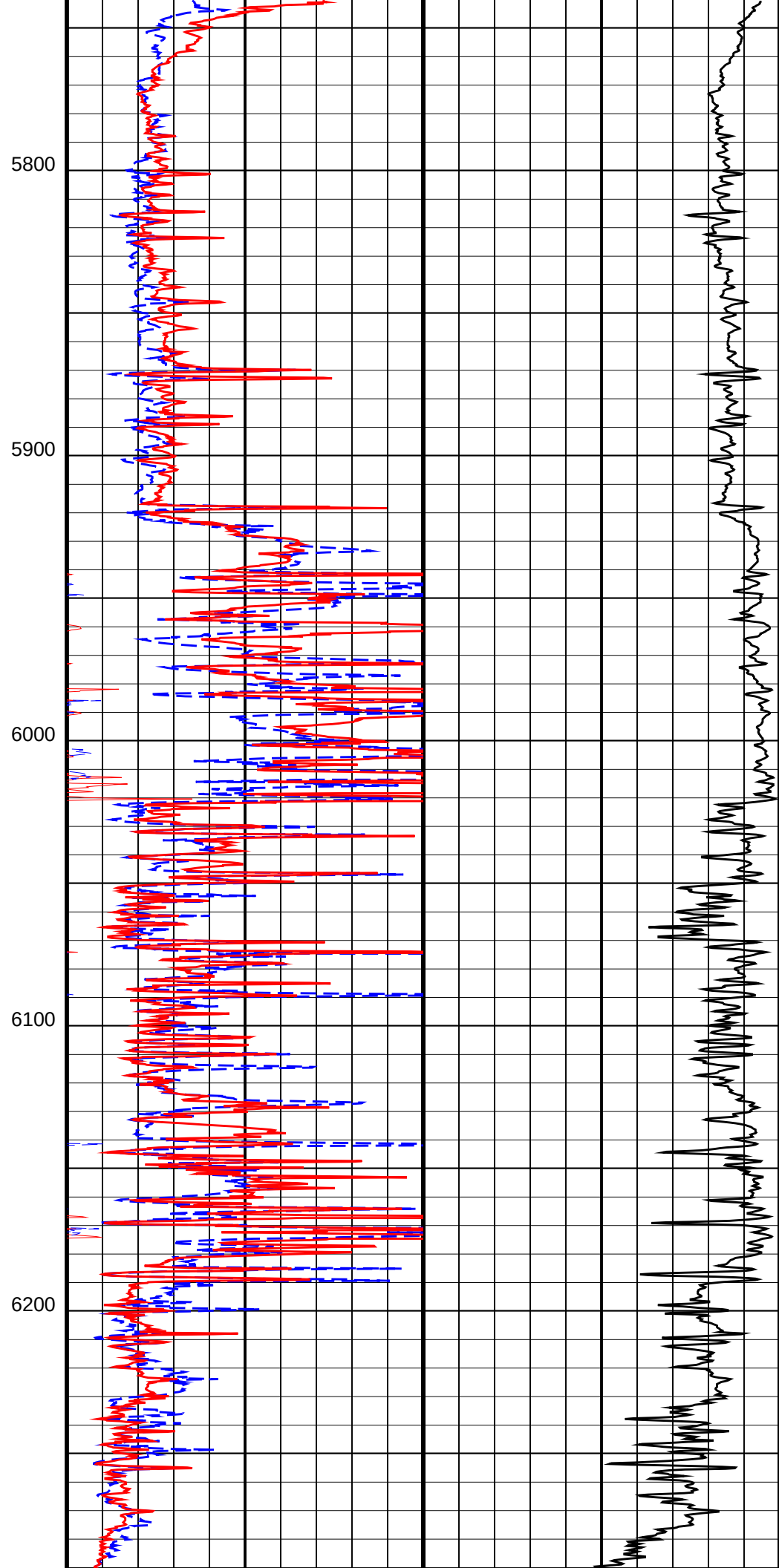
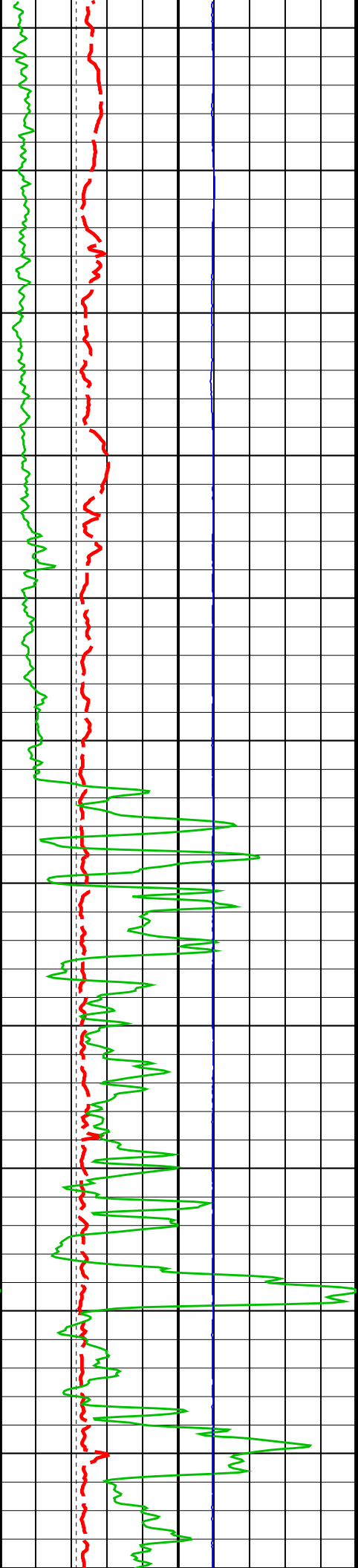


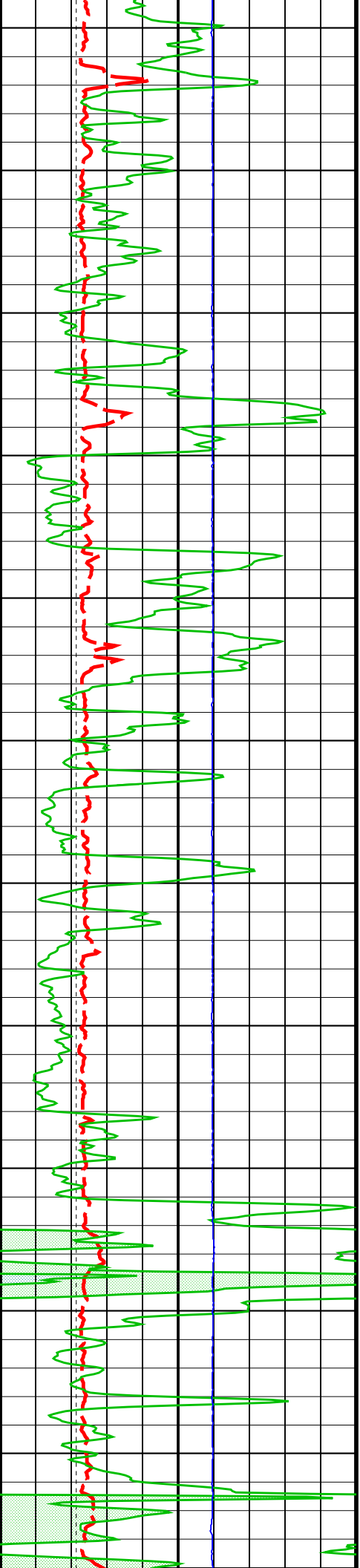
50	TBI 20 Inch Investigation (TBIT20) (OHMM)	500
50	TBI 90 Inch Investigation (TBIT90) (OHMM)	500
0	TBI 90 Inch Investigation (TBIT90) (OHMM)	50
0	TBI 20 Inch Investigation (TBIT20) (OHMM)	50

TBI 60 Inch Conductivity (ATCO90) (MM/M)		
1000		0

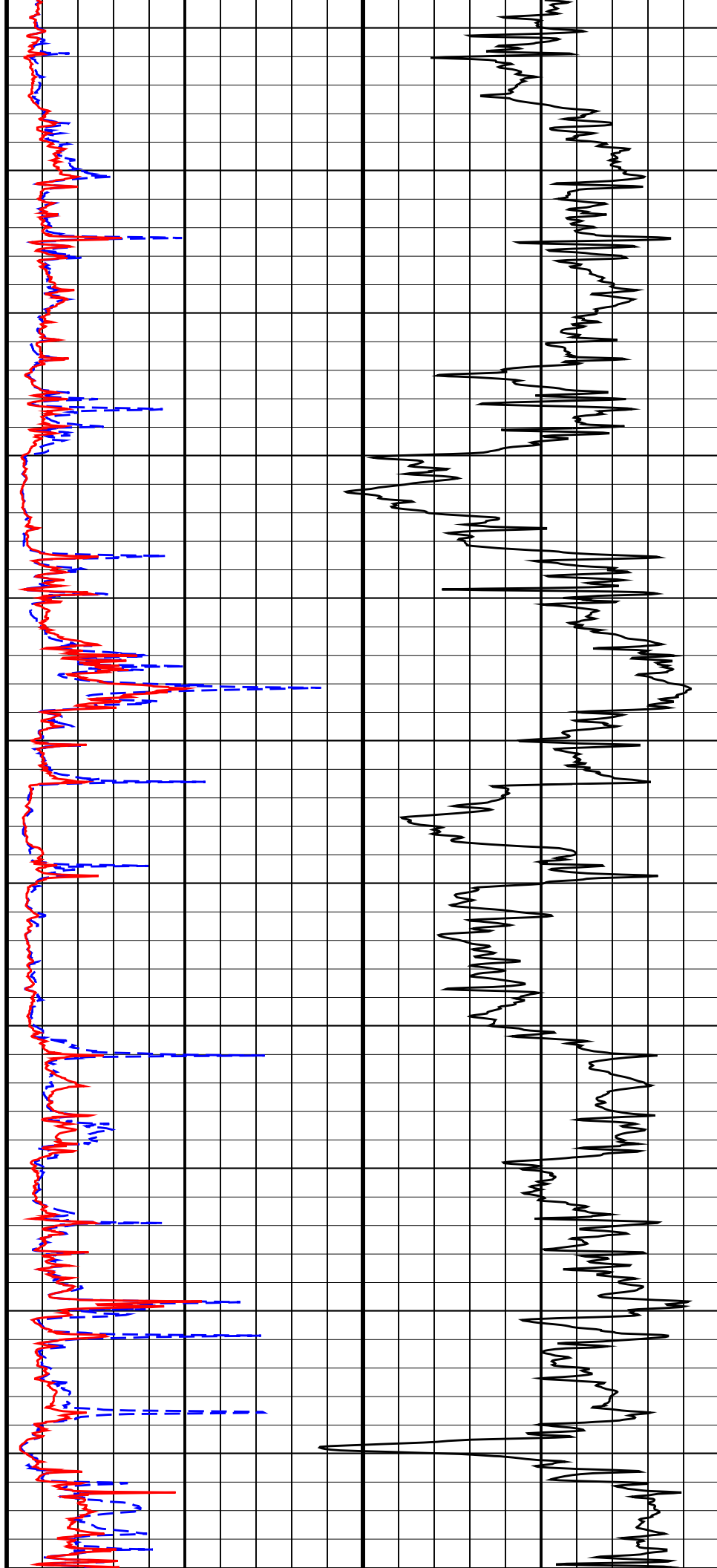


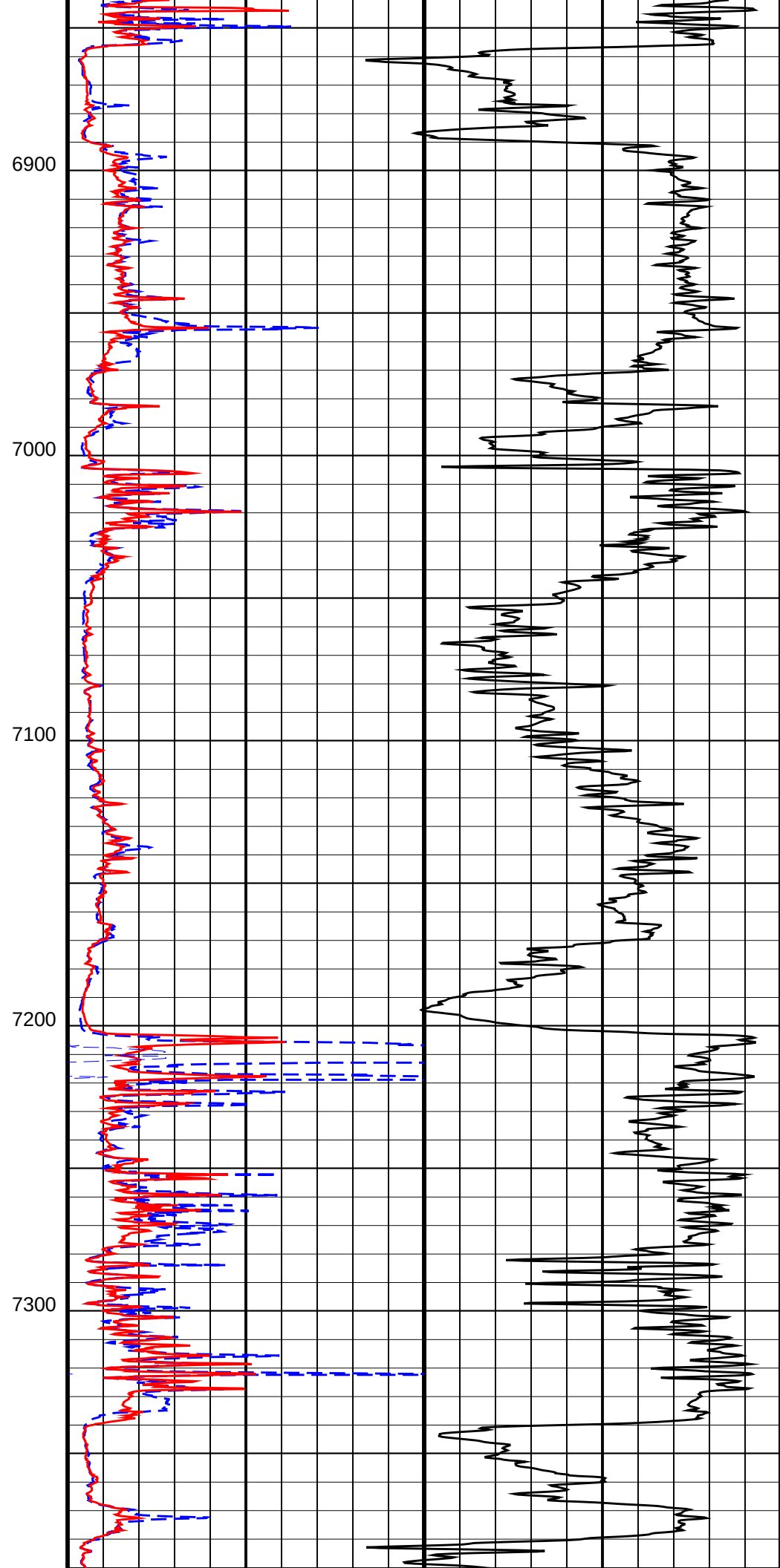
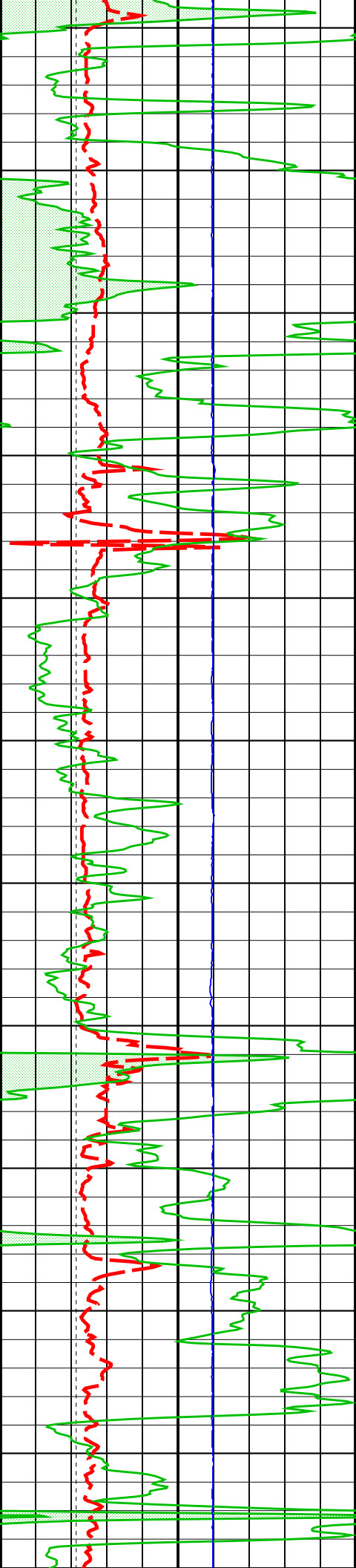


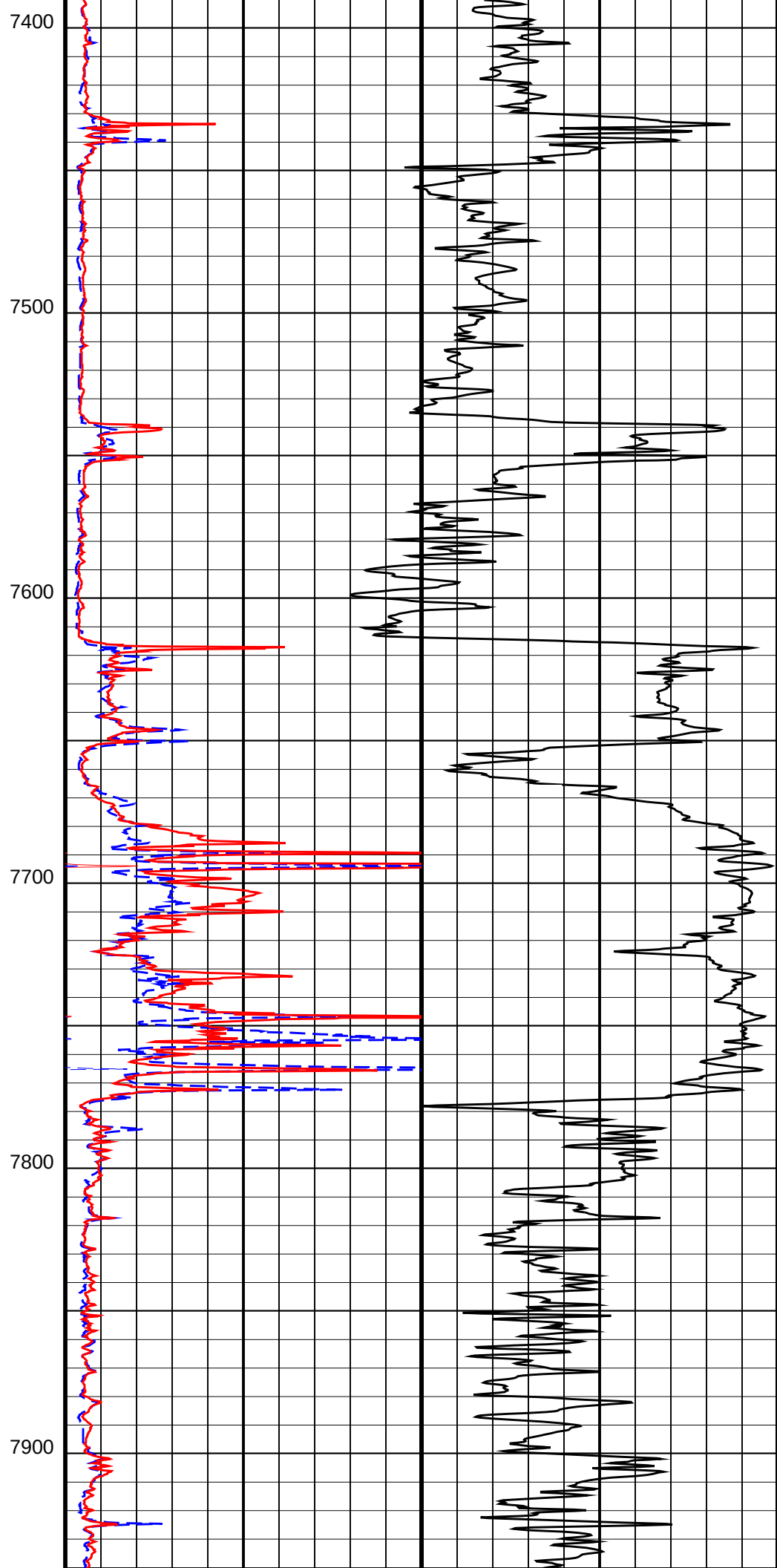
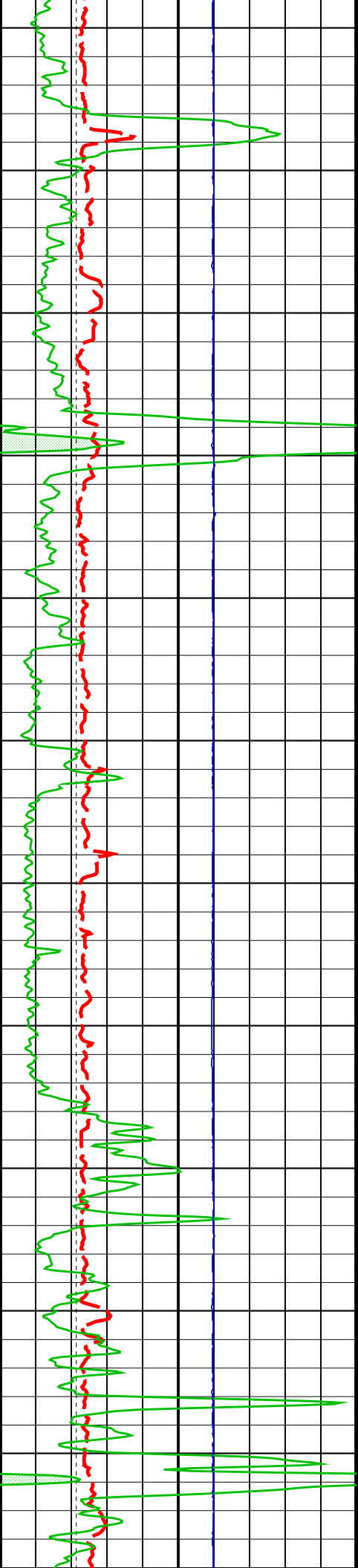


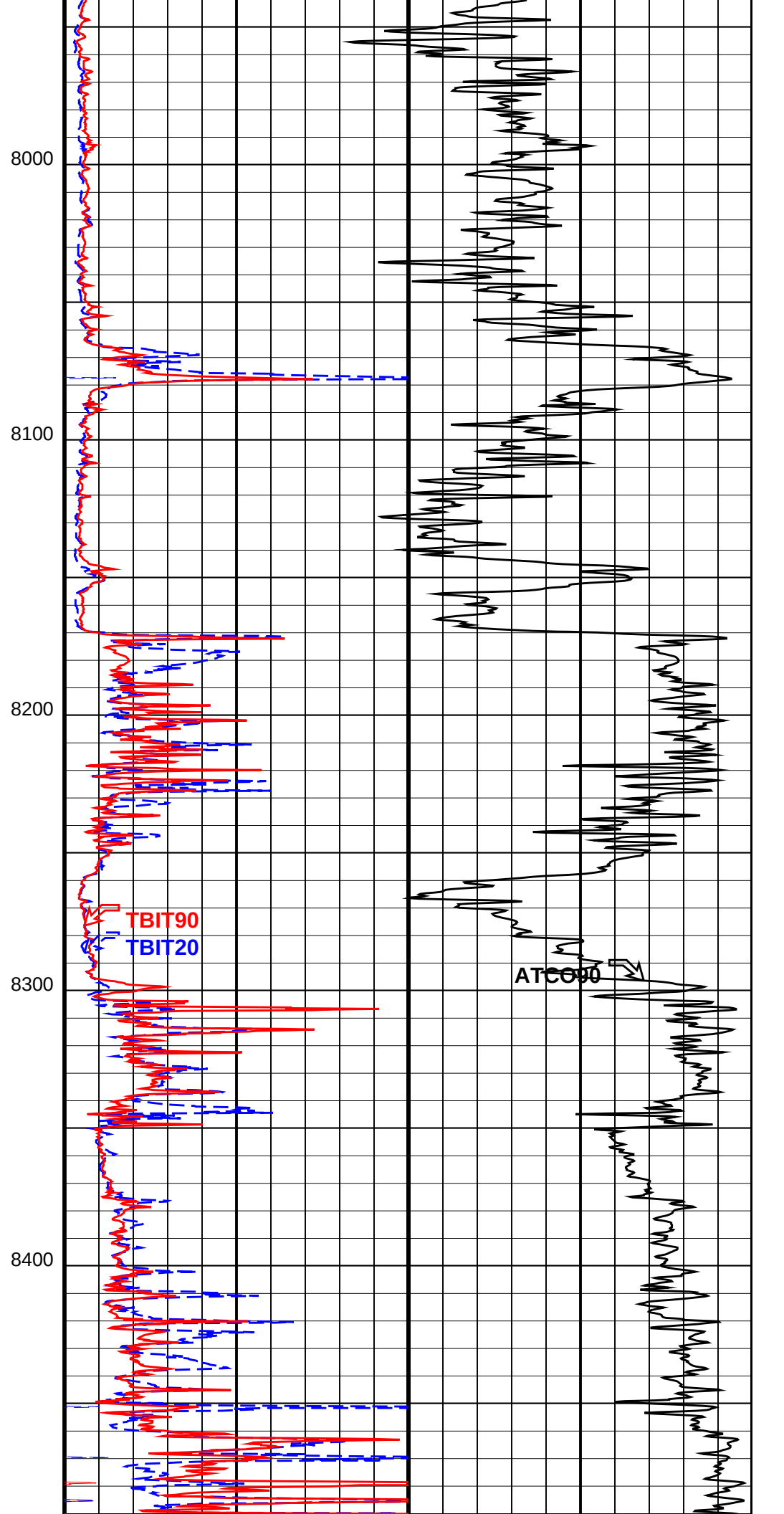
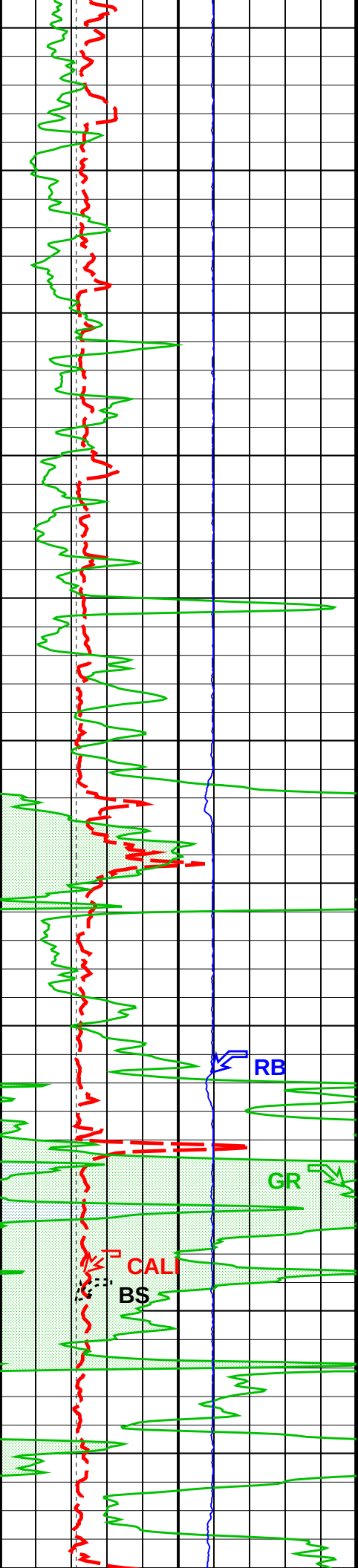


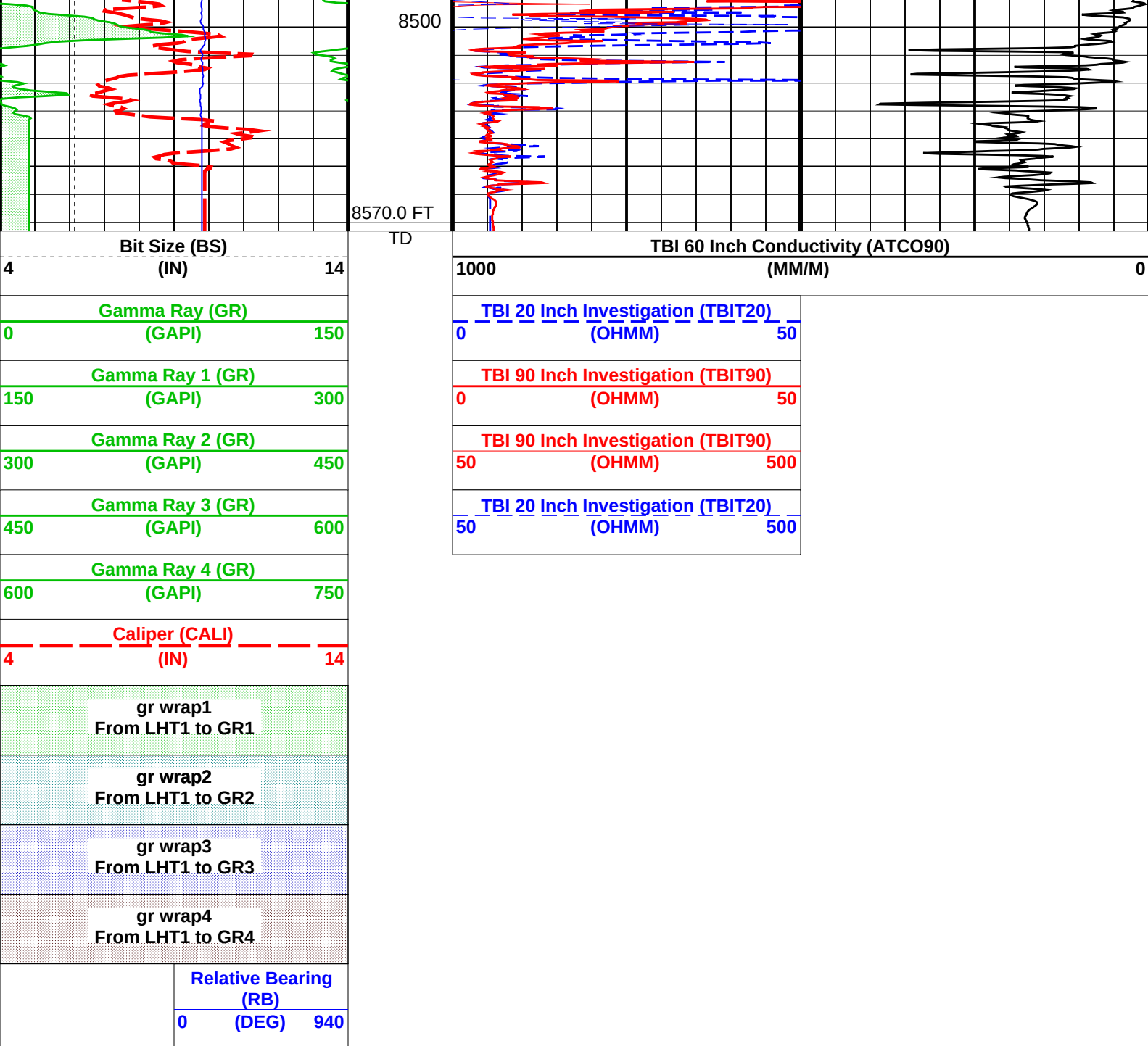
6300
6400
6500
6600
6700
6800











Parameters		
DLIS Name	Description	Value
TBT-A: ThruBit String		
MT	Mud Type (for TBN and TBI correction)	WBM
RB_OFFSET	Additional RB offset (degrees)	0.000 deg
TBI_ALGO	TBI Algorithm Selection	AIT
TBI_BHC_OP	Borehole Correction Option (for TBI)	CALIPER
TBI_CALTYP	TBI Mastercal Type	THRUBIT
TBI_REPL_ARRAY_DEST	TBI: Replace This Array	NONE
TBI_REPL_ARRAY_SOURCE	TBI: With This Array	NONE
TBI_TC_OP	Induction Temperature Correction Option	LOWER
System and Miscellaneous		
BS	Bit Size	6.125 in

Format: TB_2INCH_RESISTIVITY Vertical Scale: 2" per 100' Graphics File Created: 05-Mar-2014 23:04

OP System Version: 19C2-270

TBT SRPC-5287-ThruBit

Input DLIS Files



MAIN PASS

MAXIS Field Log

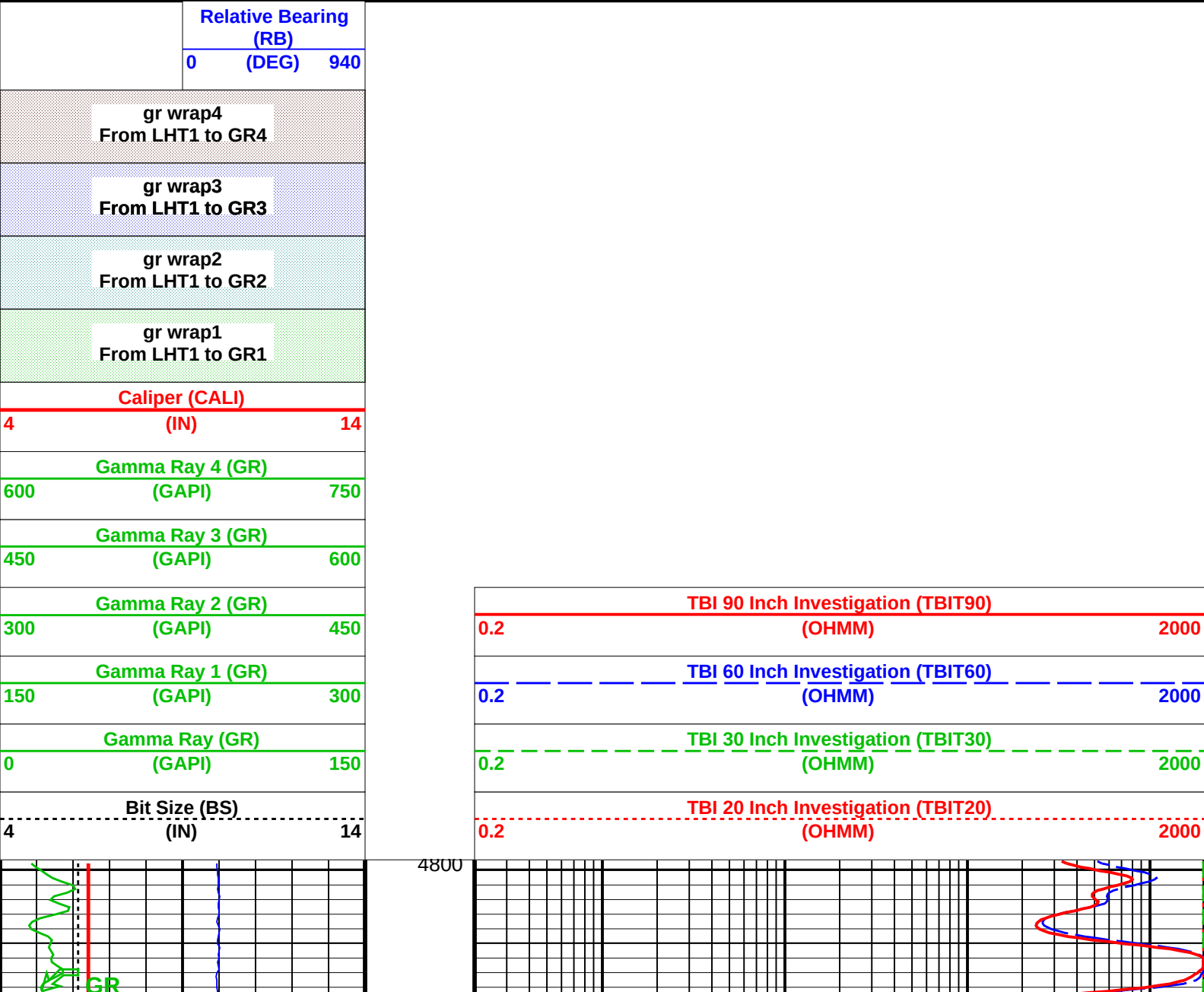
Company: SANDRIDGE ENERGYWell: NONA 3204 1-23H

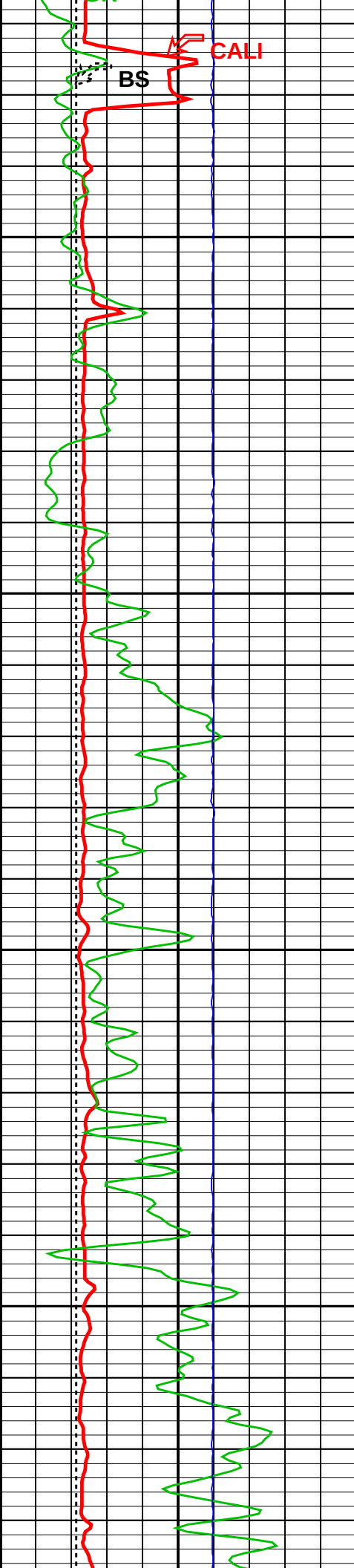
Input DLIS Files

DEFAULTThrubit_008PUPFN:7PRODUCER05-Mar-2014 22:548573.0 FT2045.0 FT

OP System Version: 19C2-270

TBTSRPC-5287-ThruBit

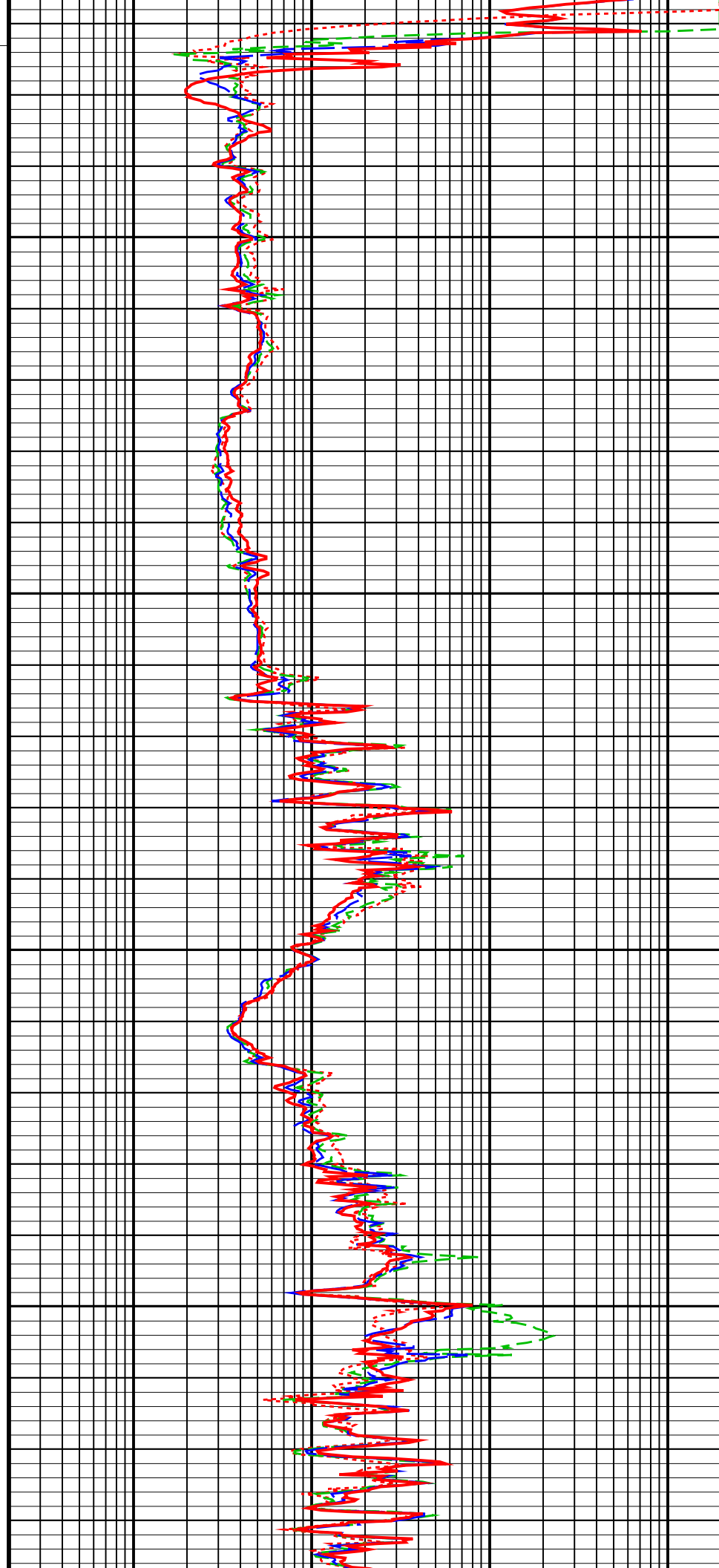


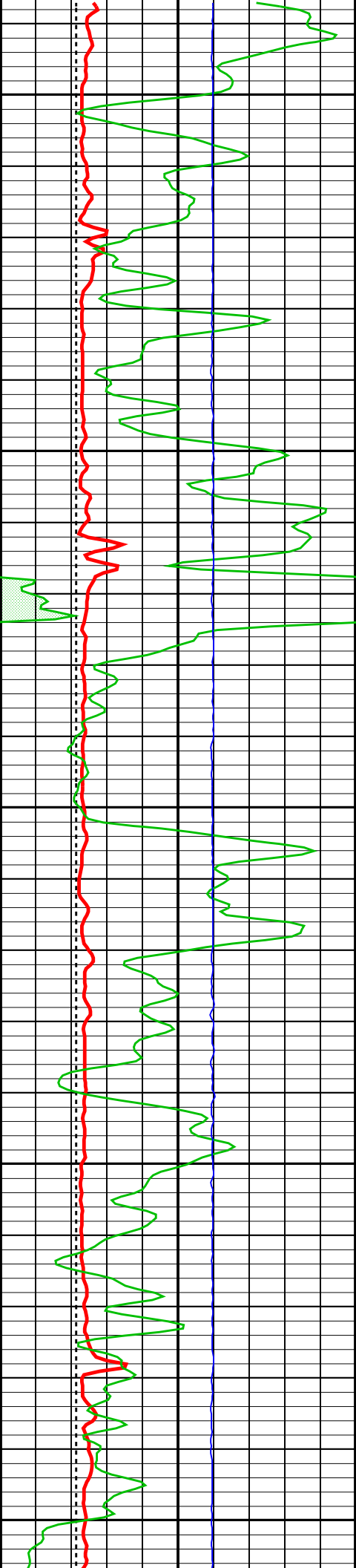


4823.0 FT
CSG

4900

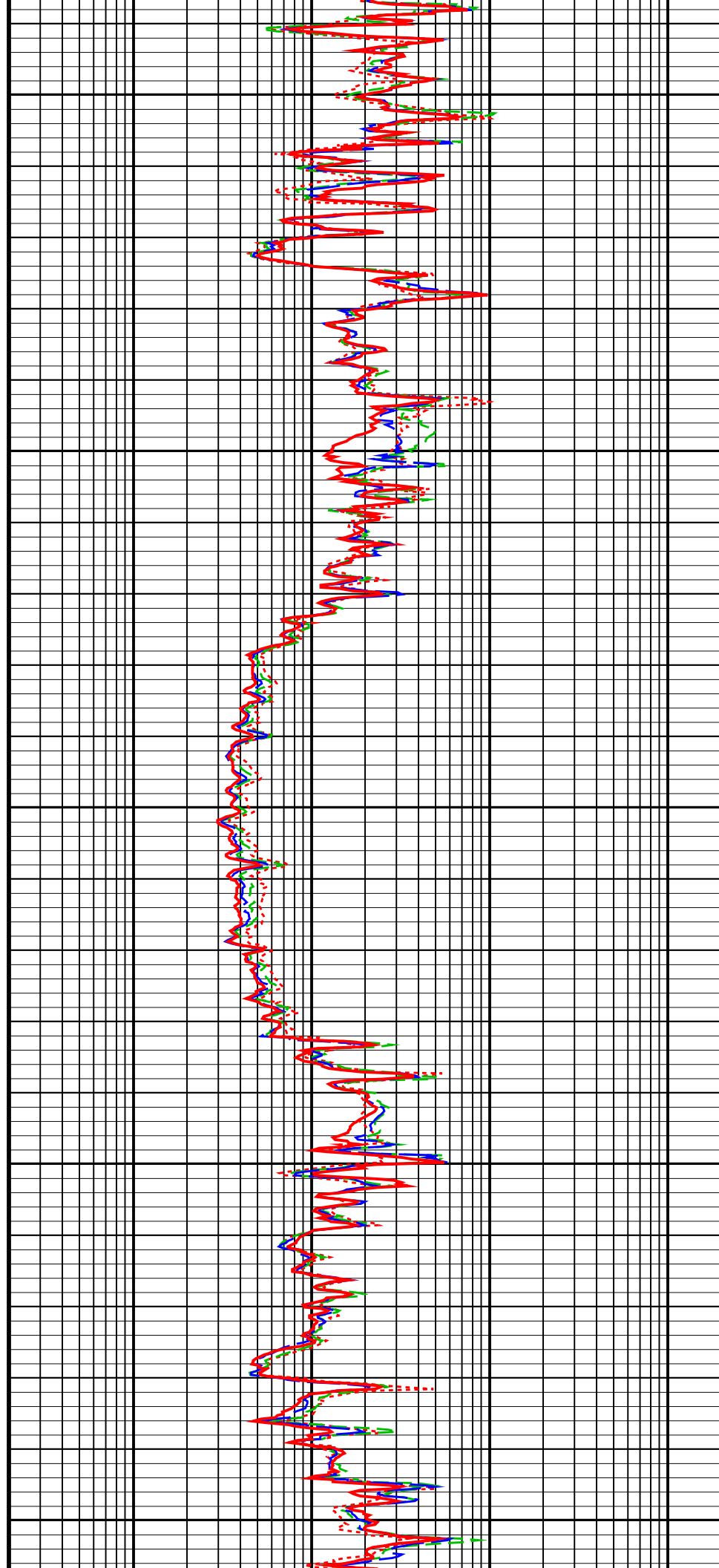
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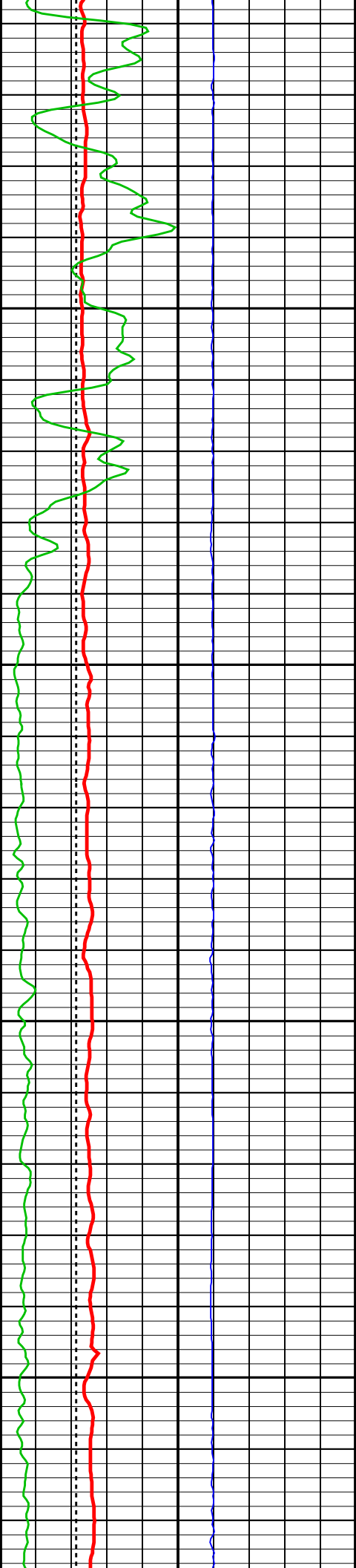




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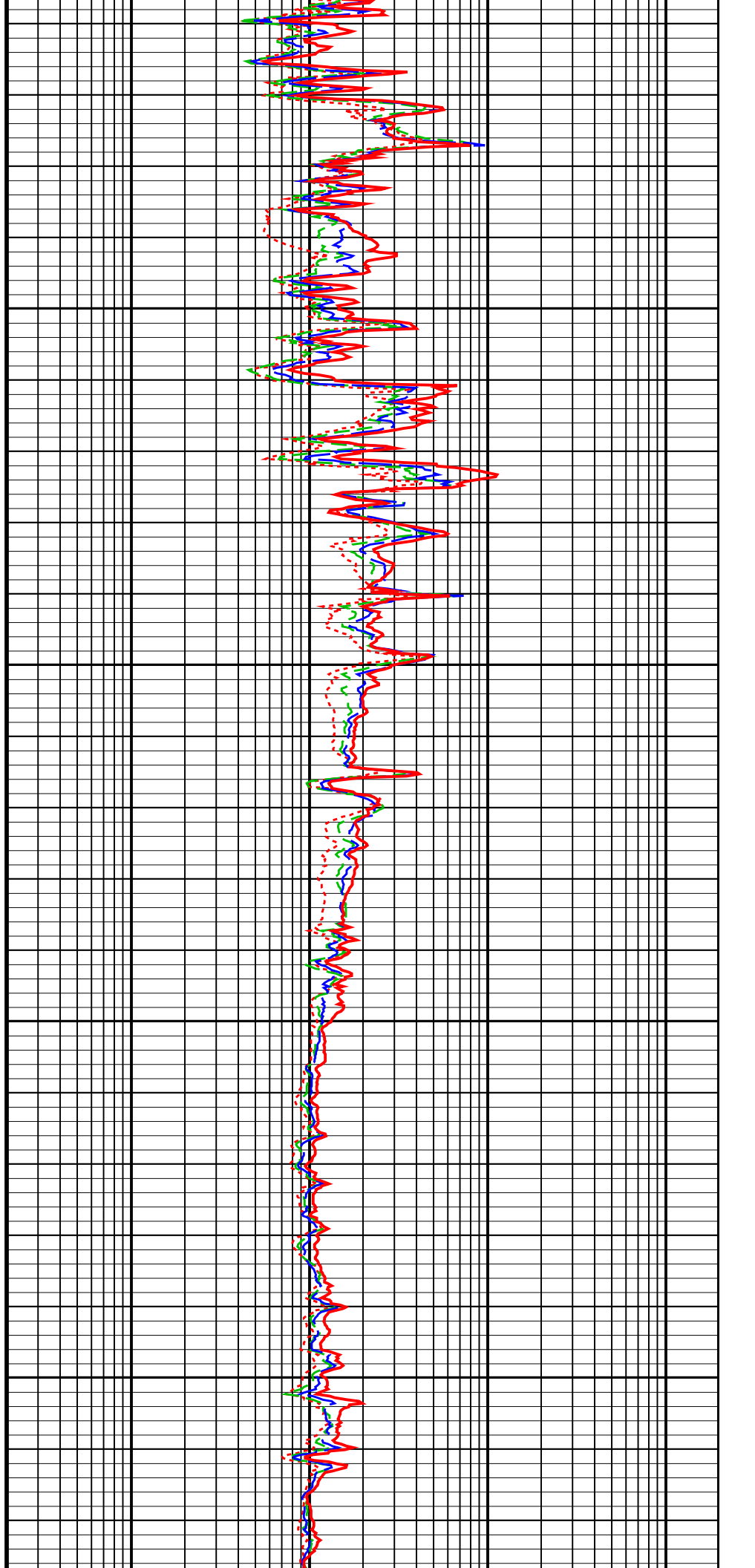
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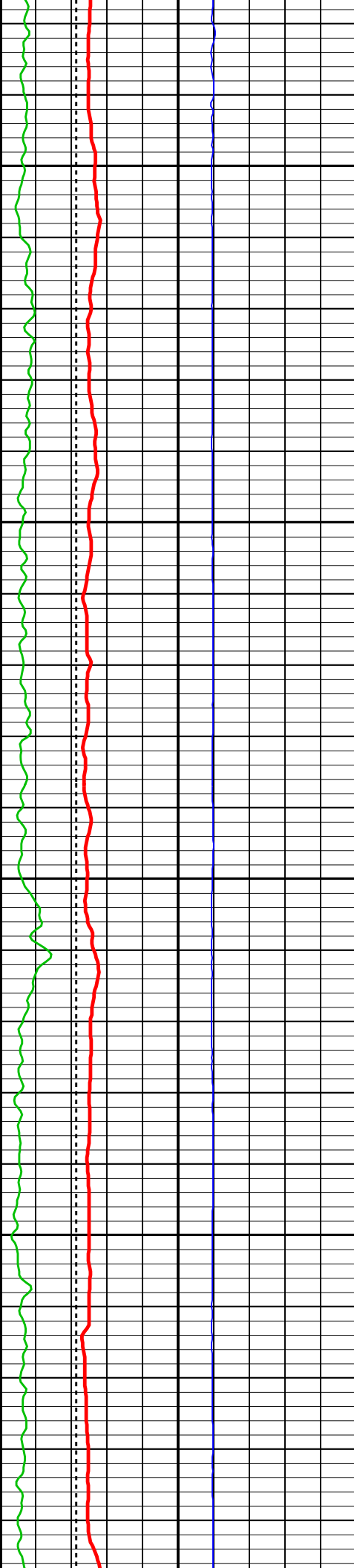




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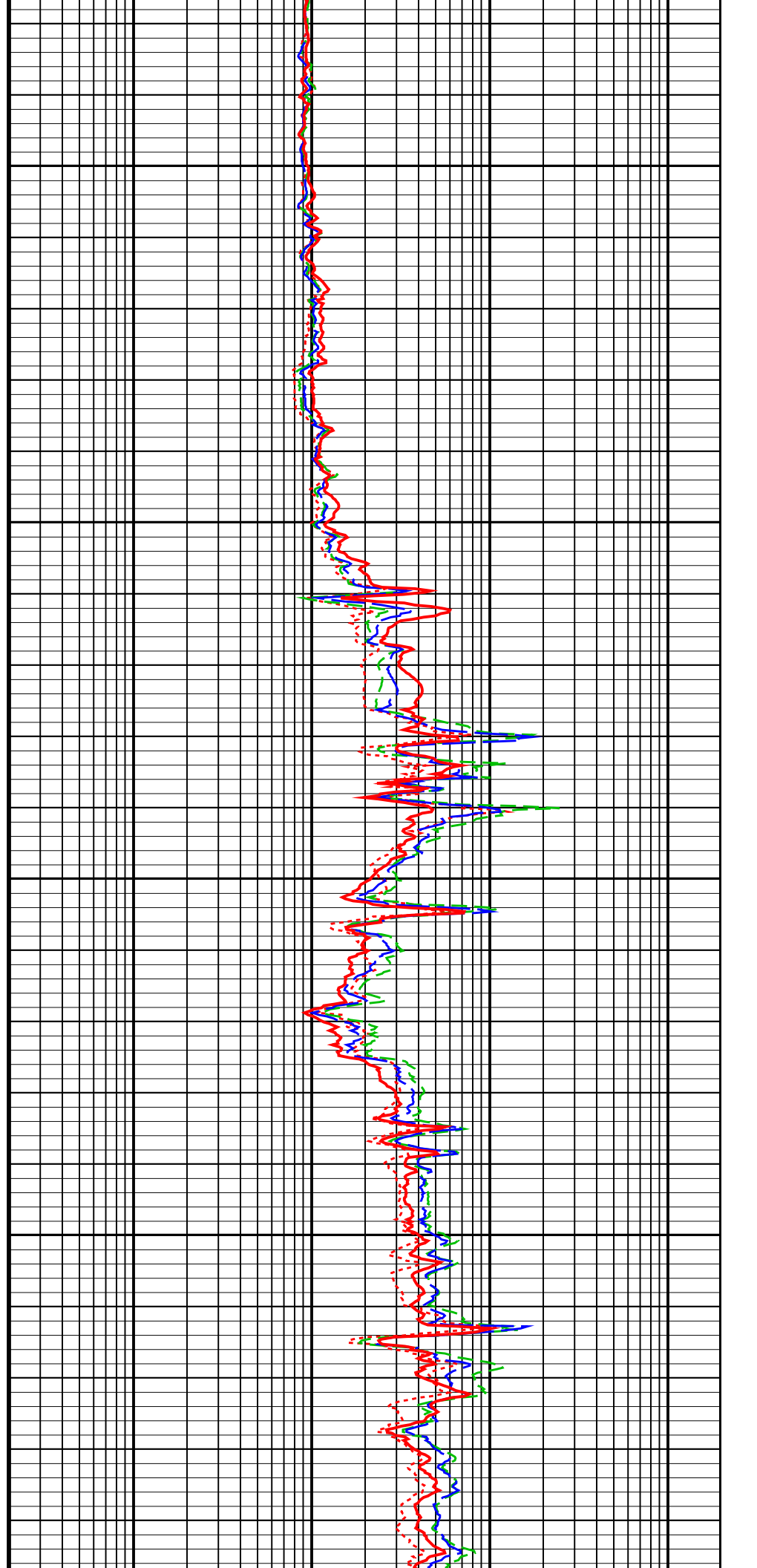
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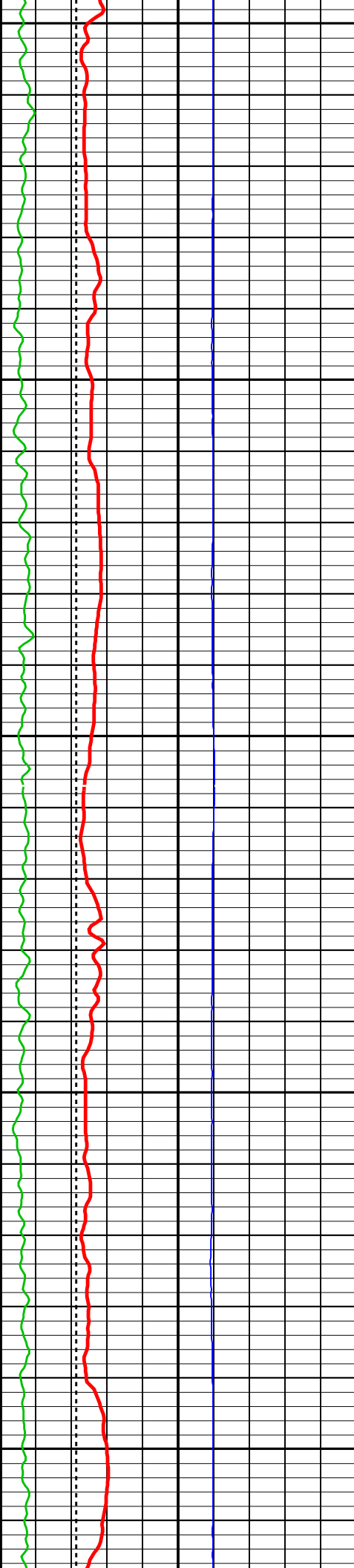




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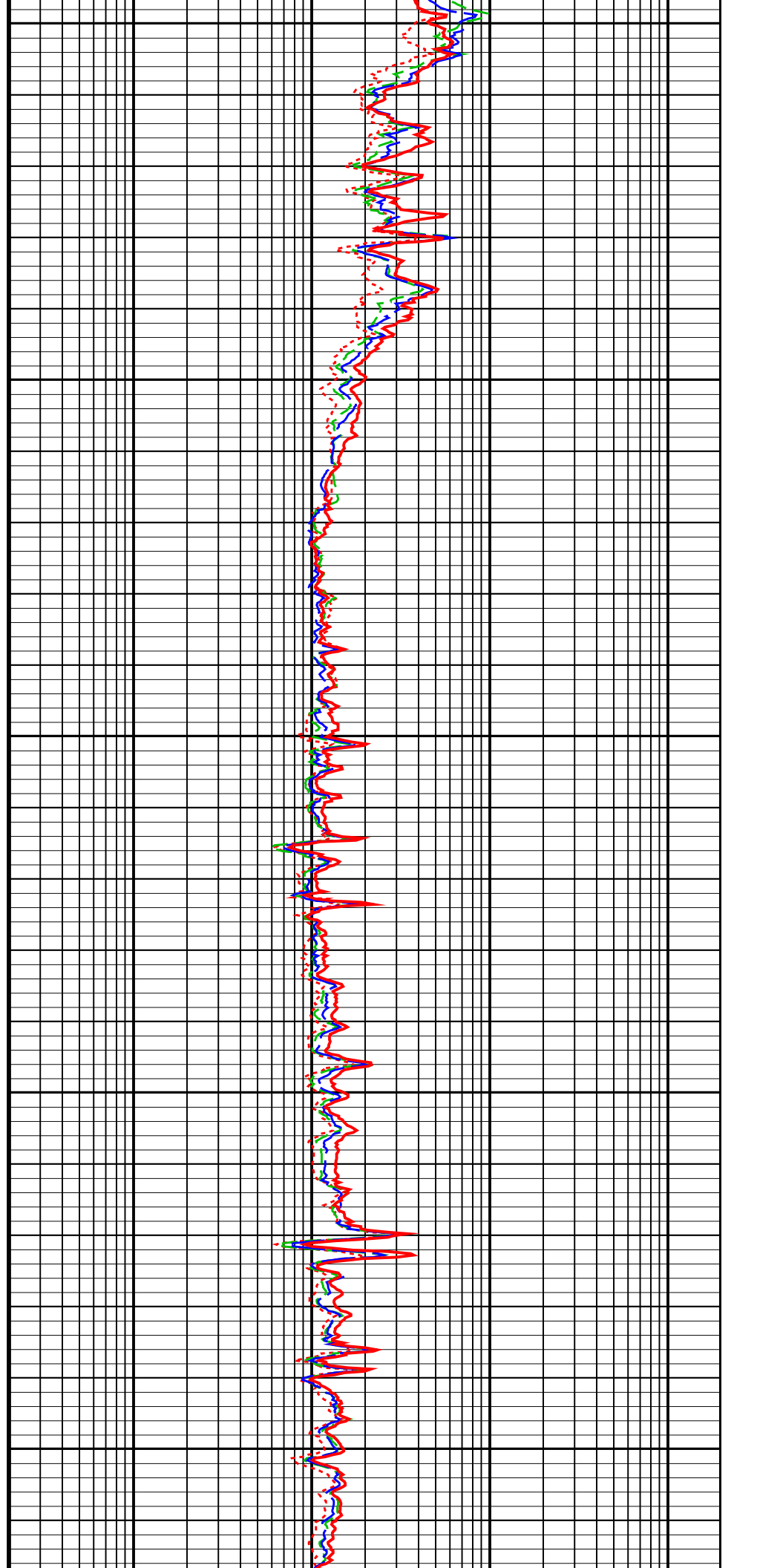


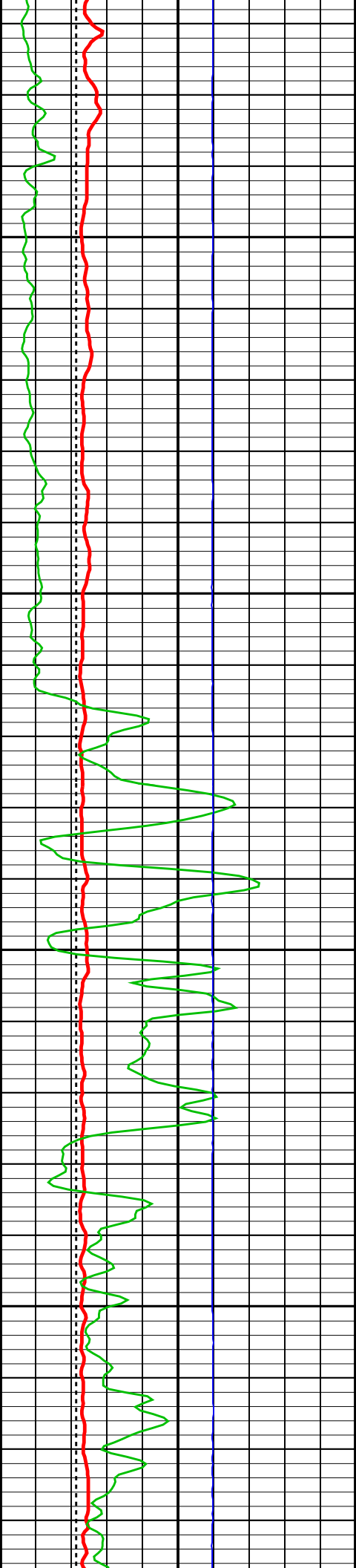


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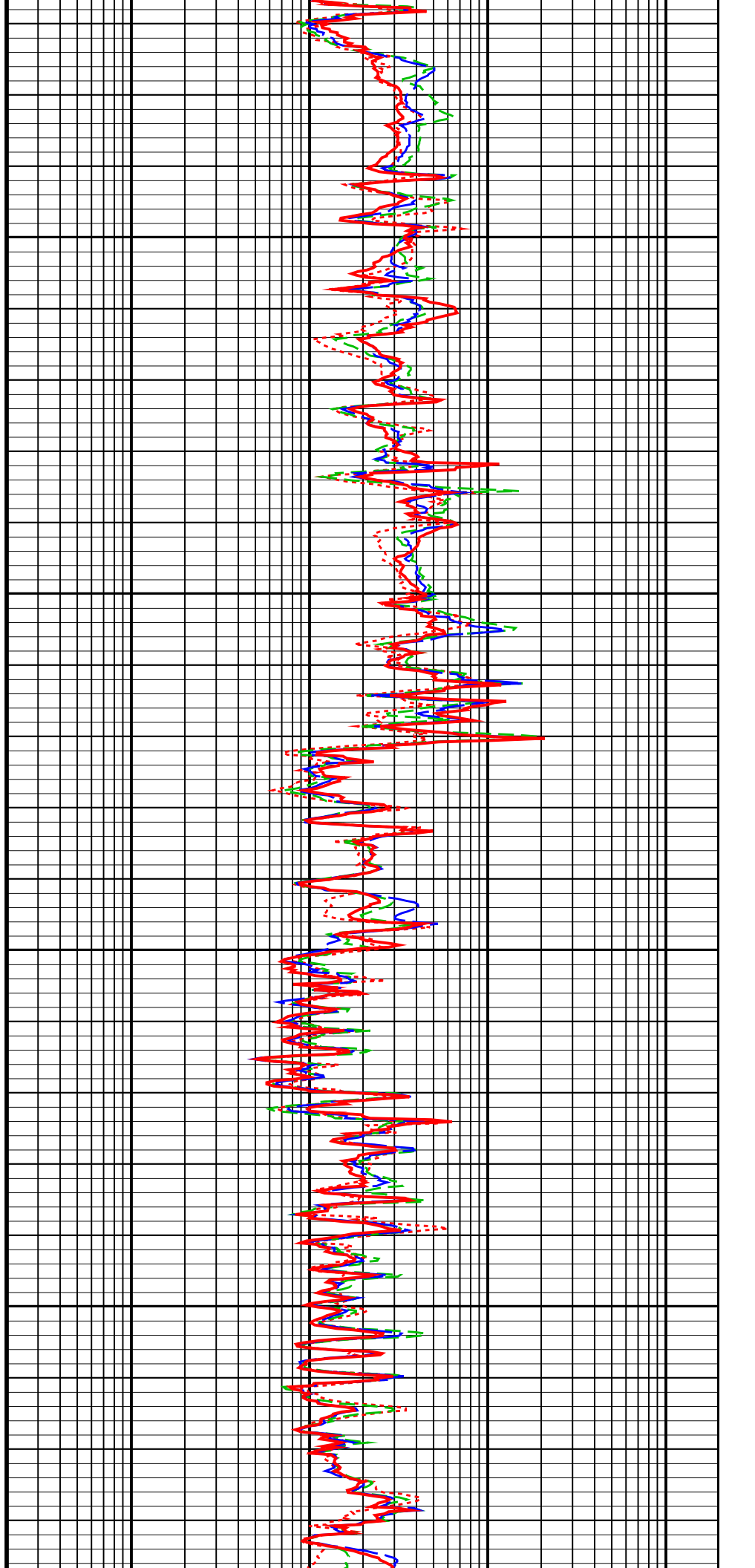
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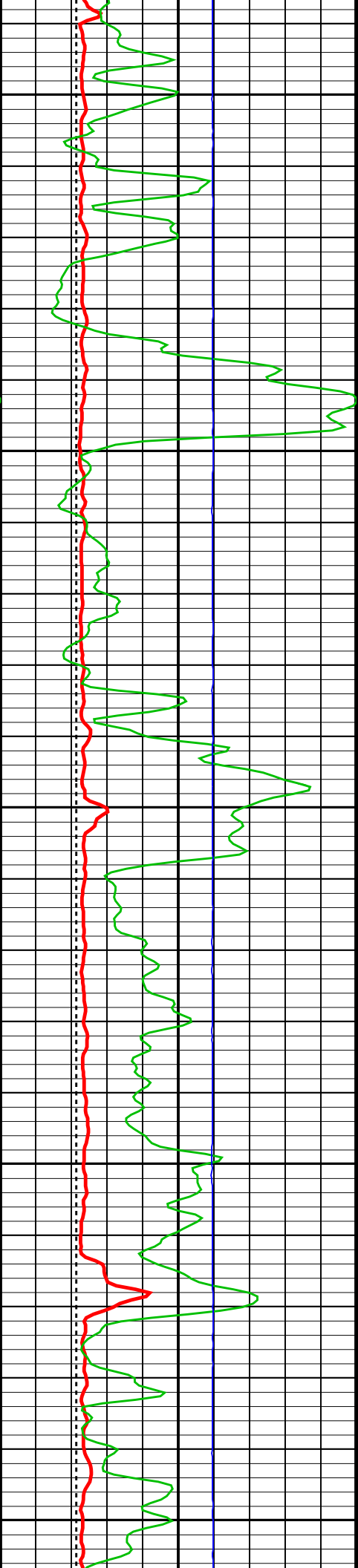




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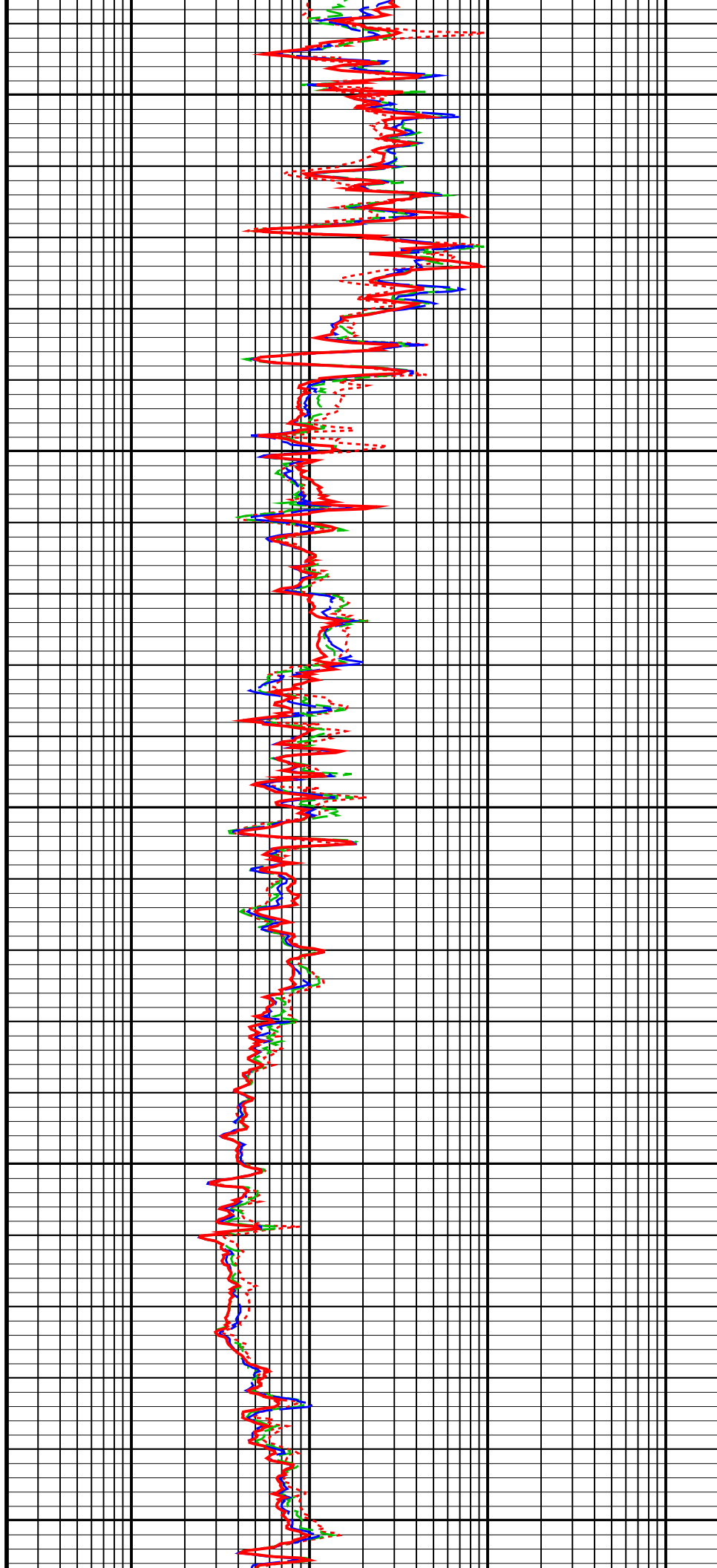
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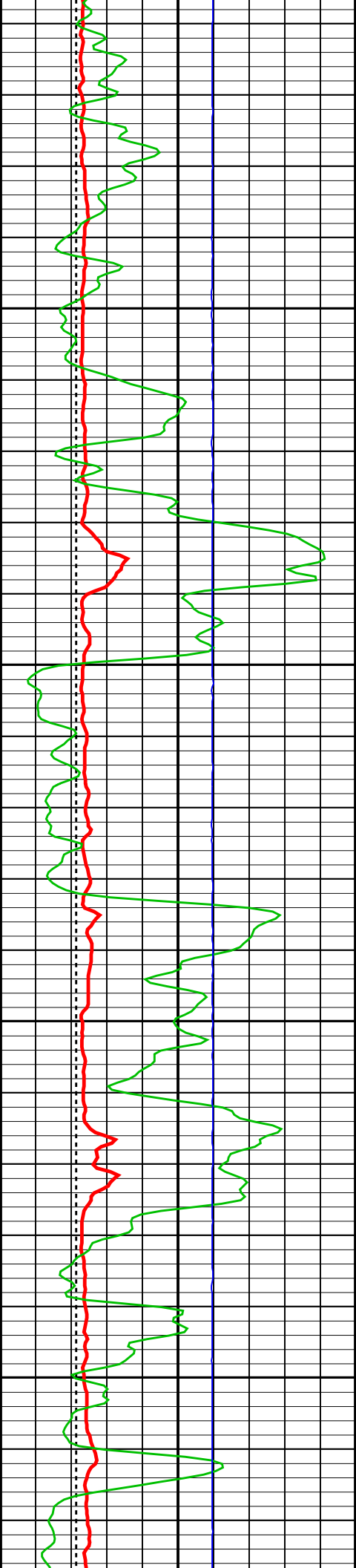




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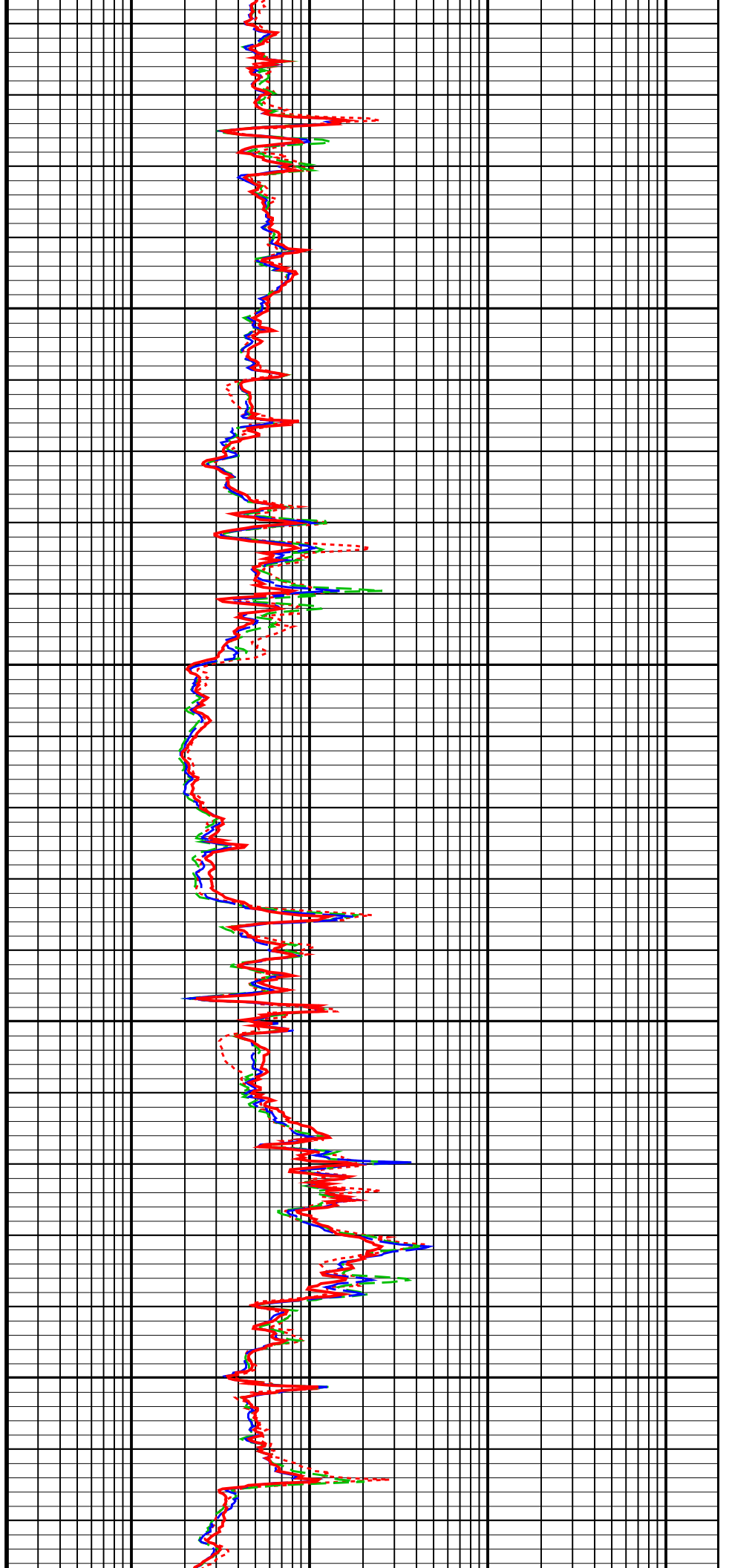
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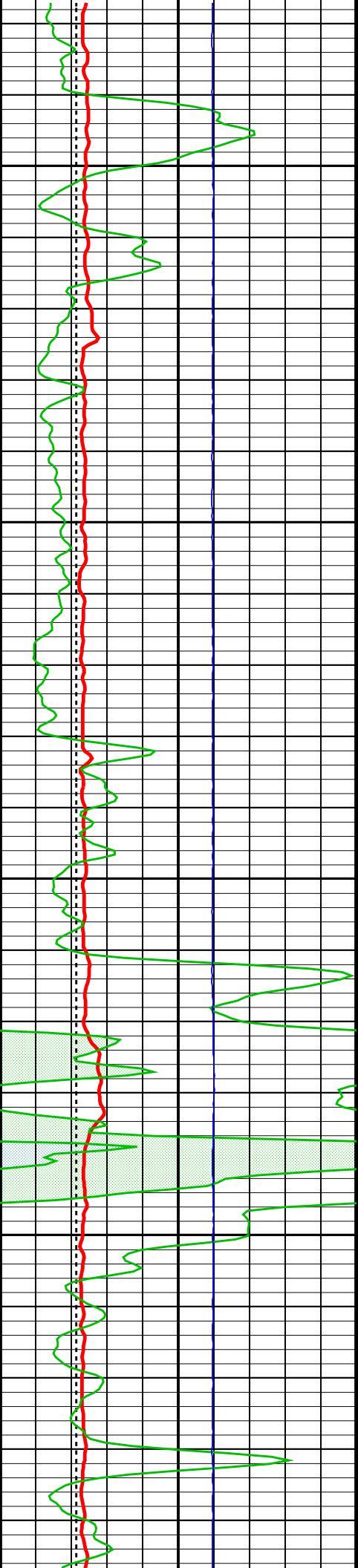




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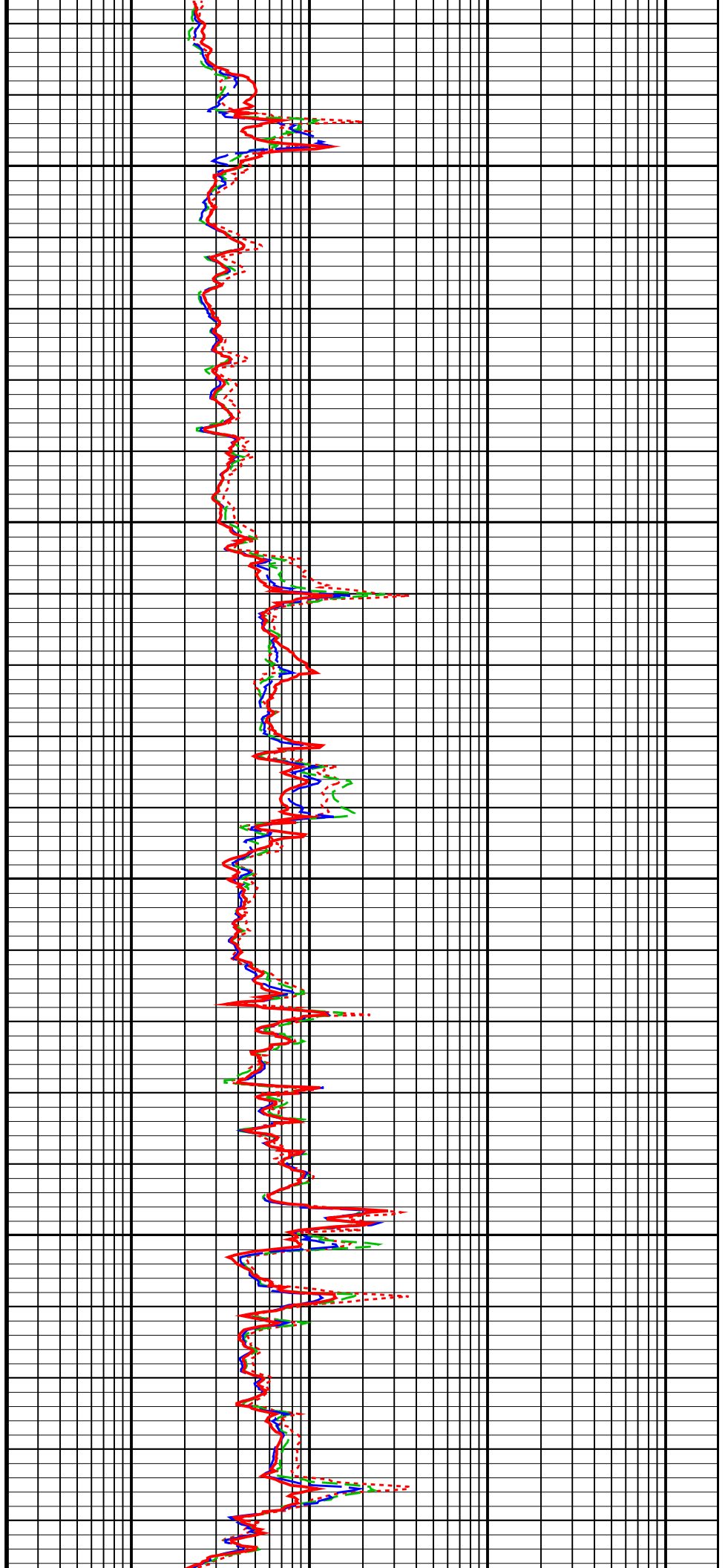
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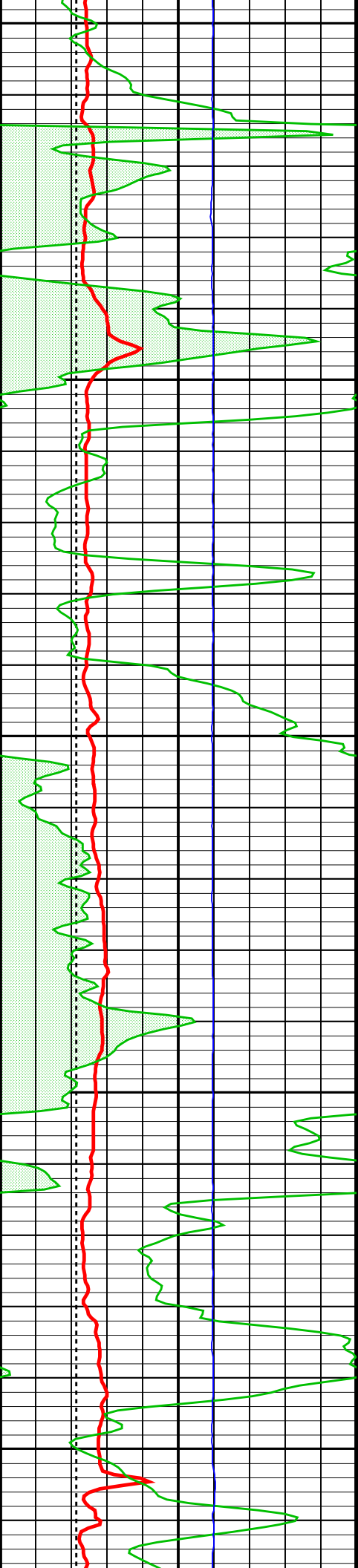




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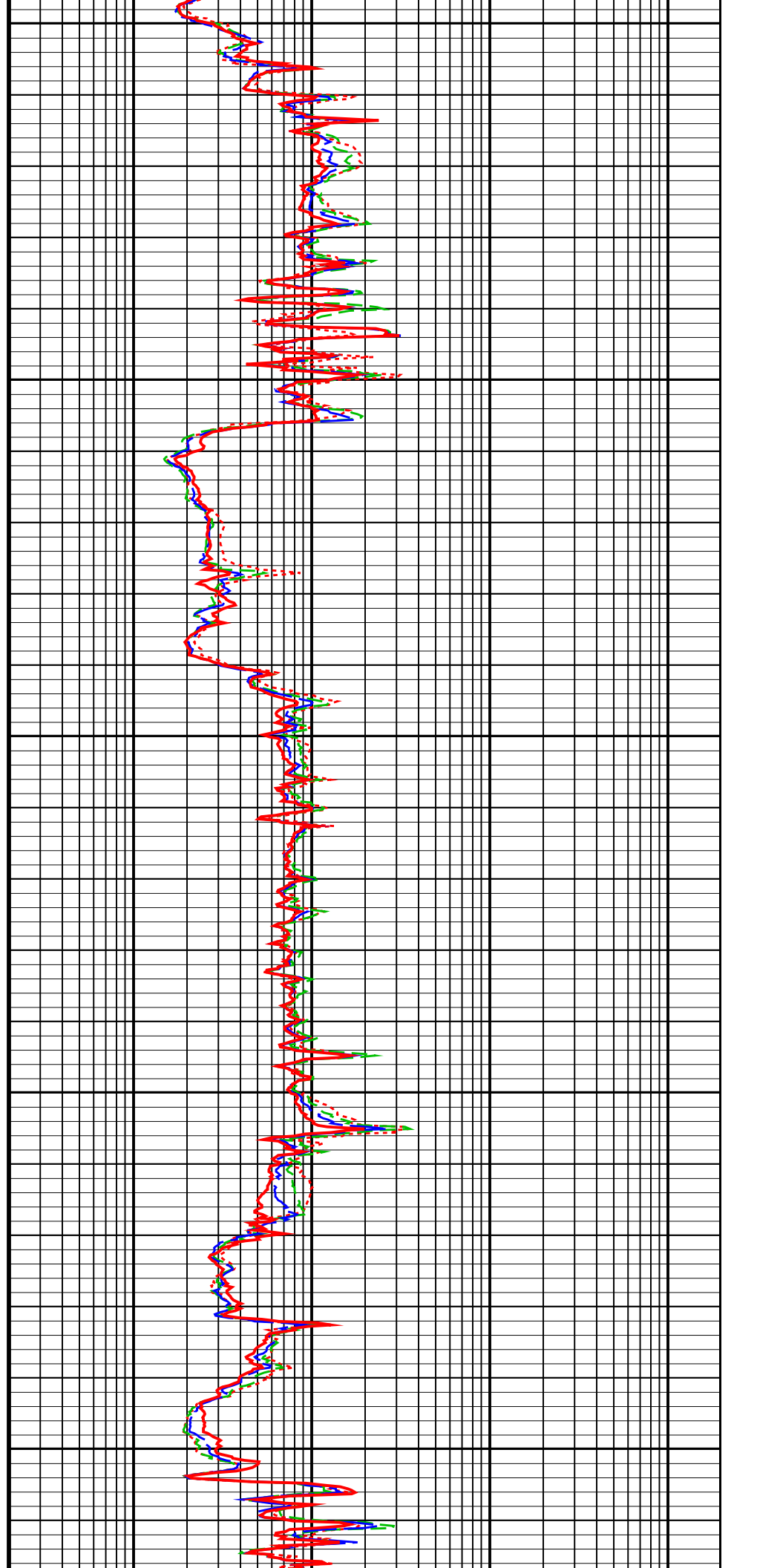


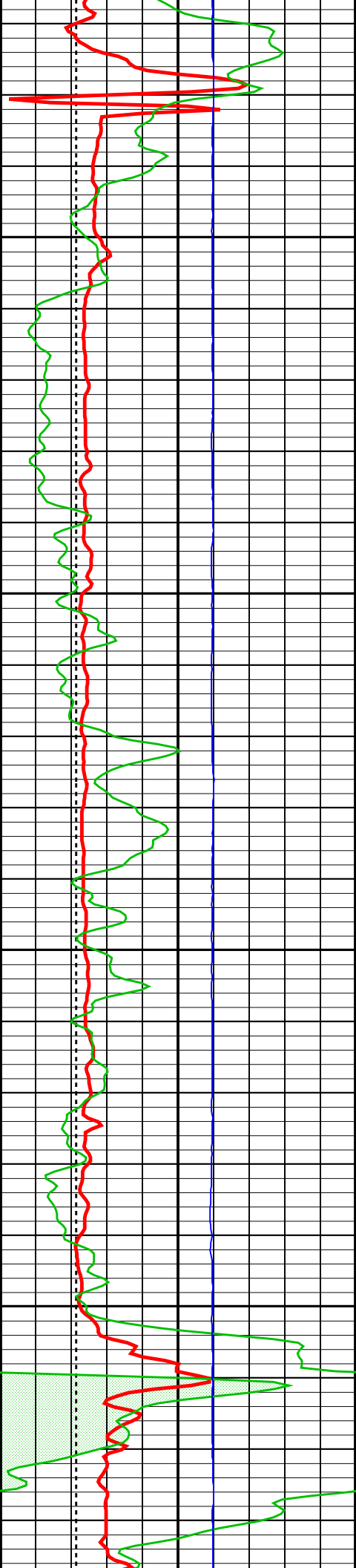


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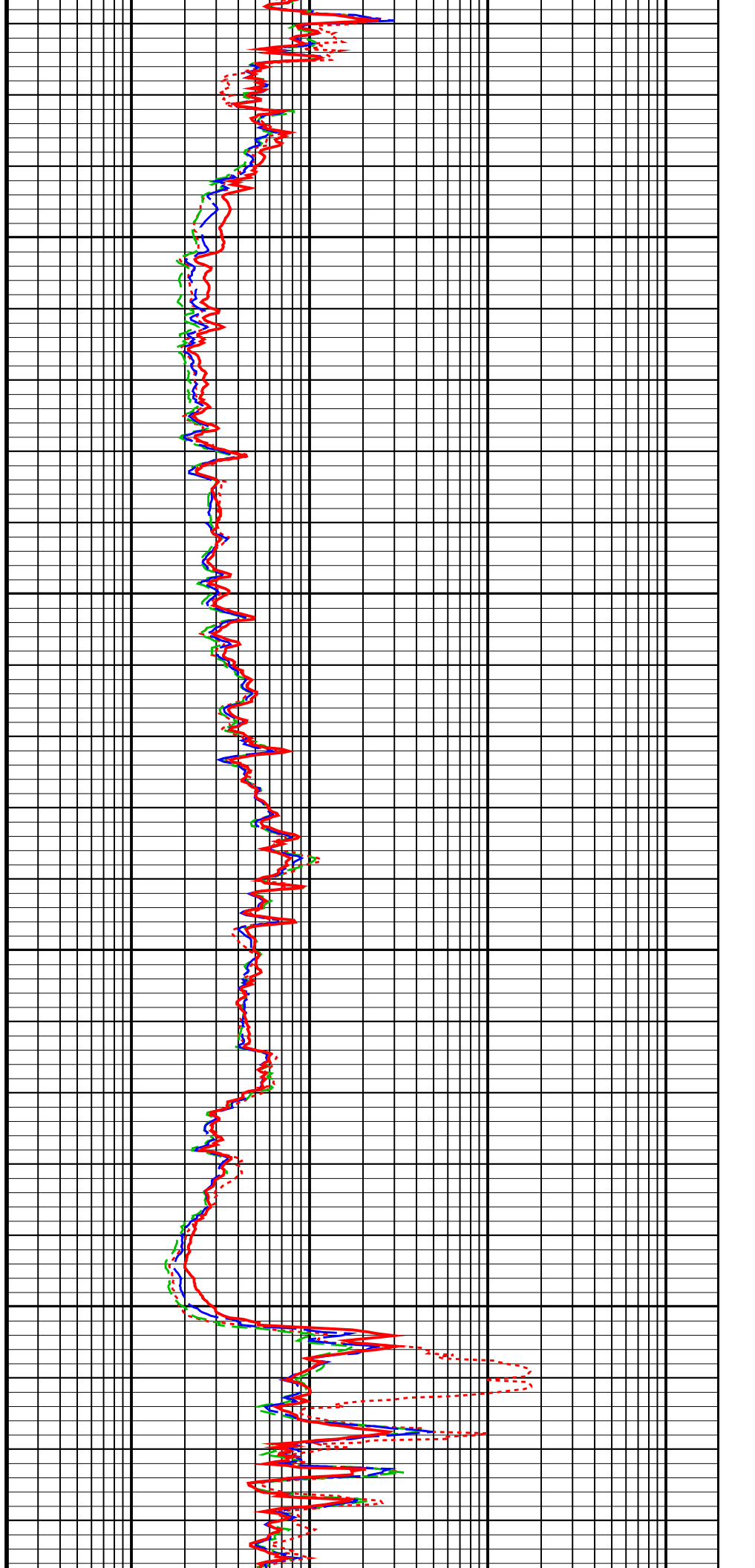
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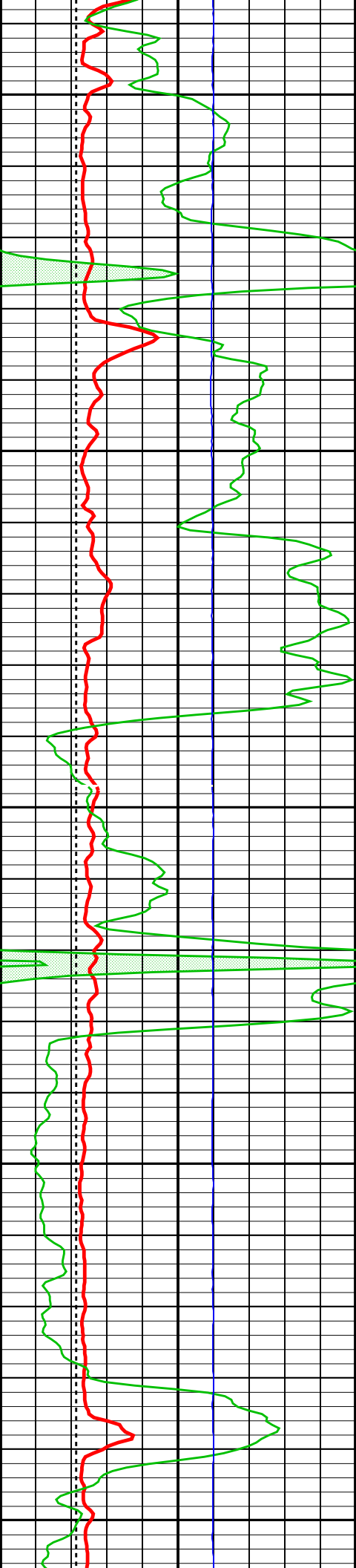




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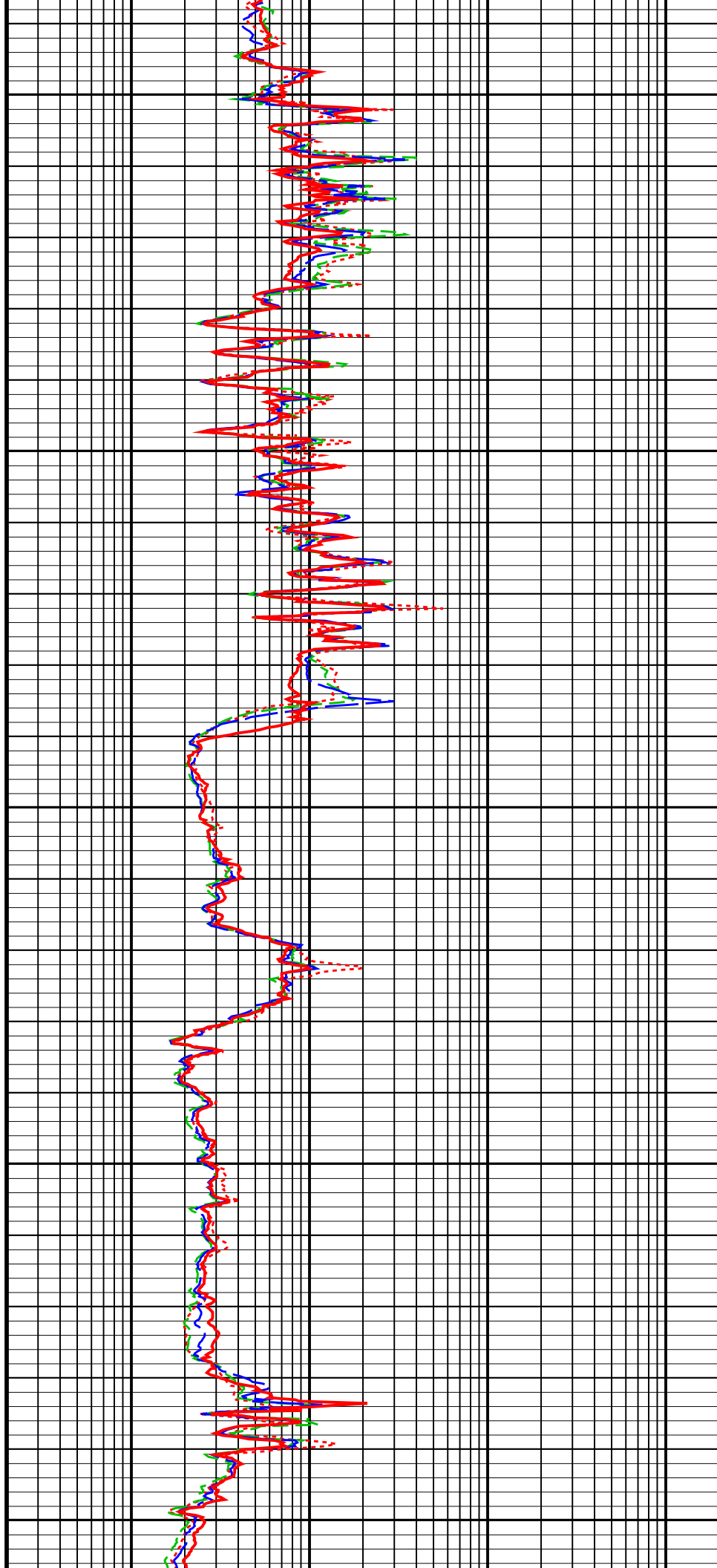
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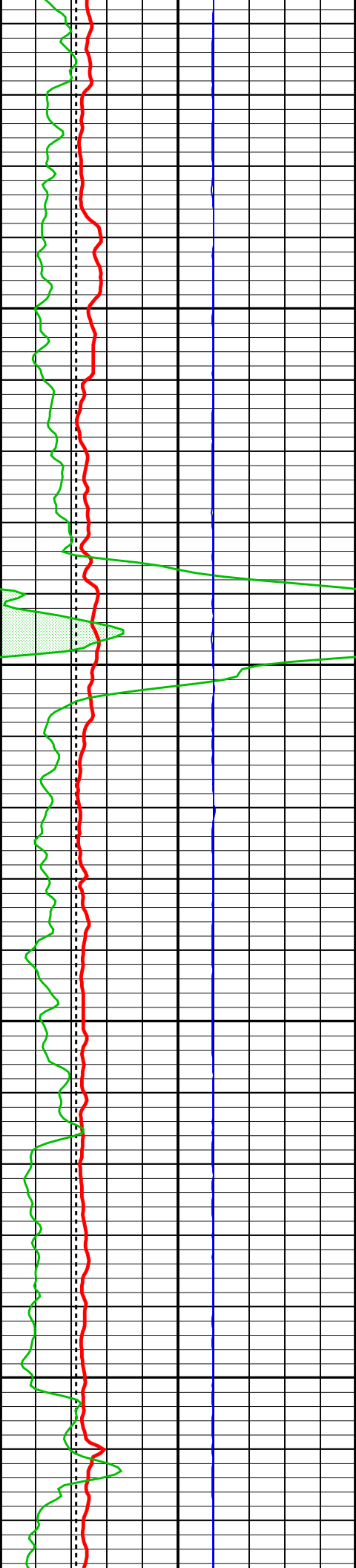




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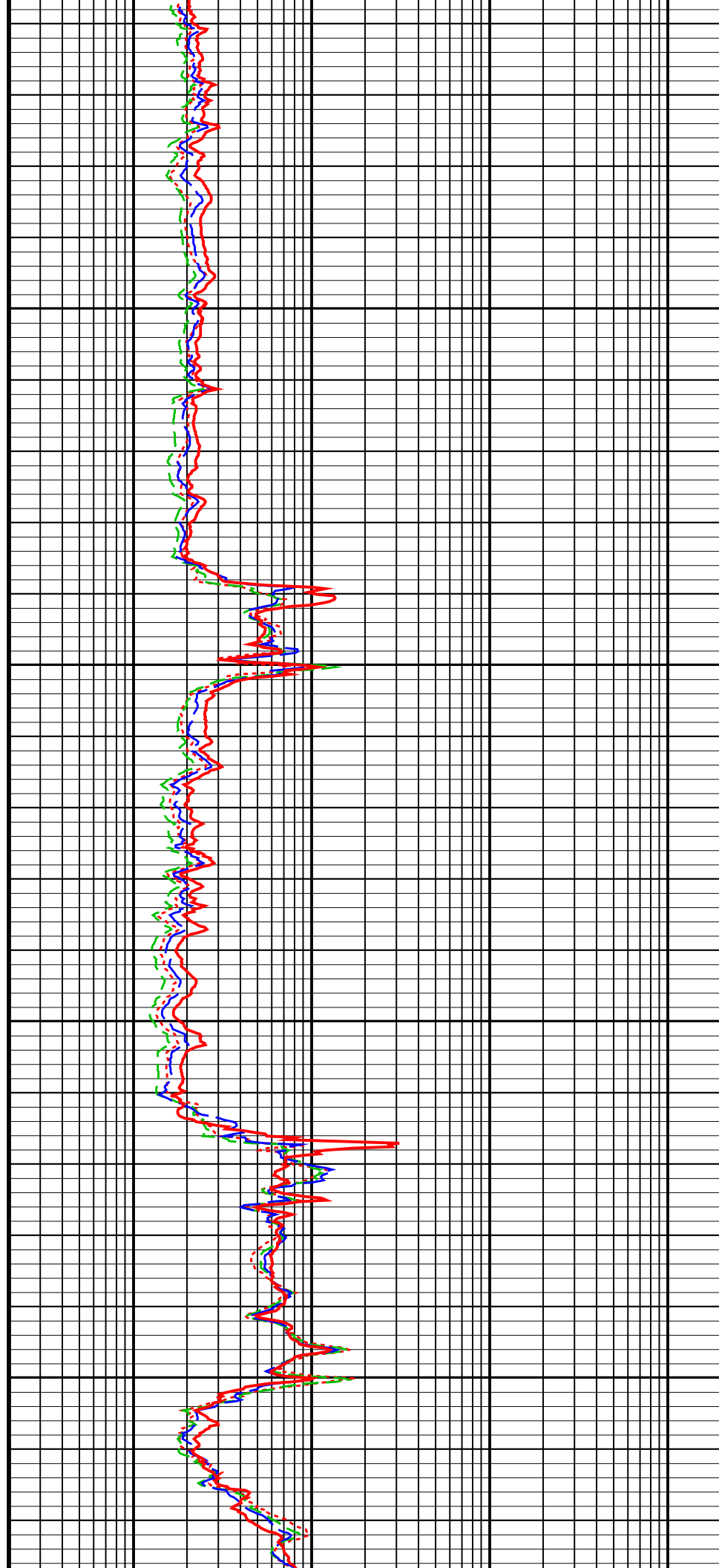
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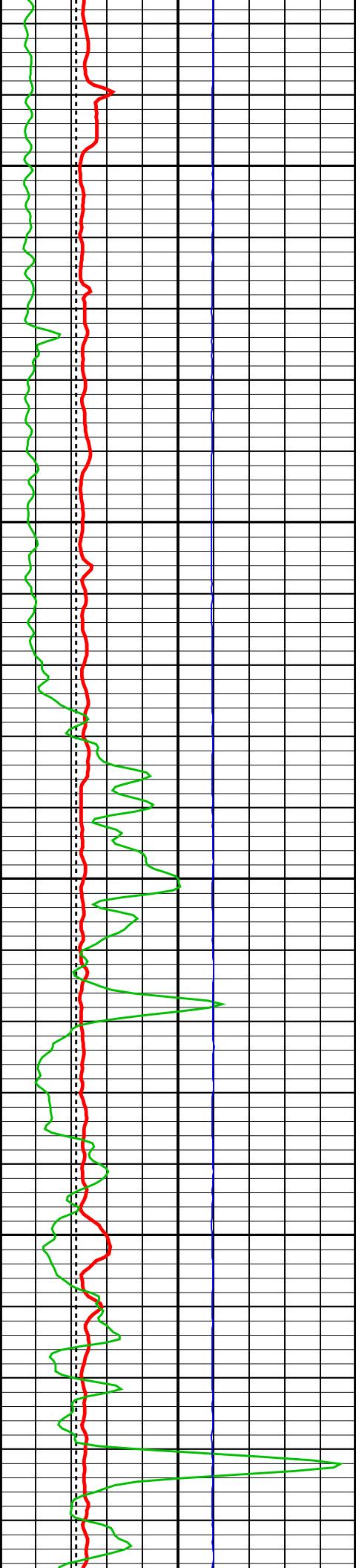




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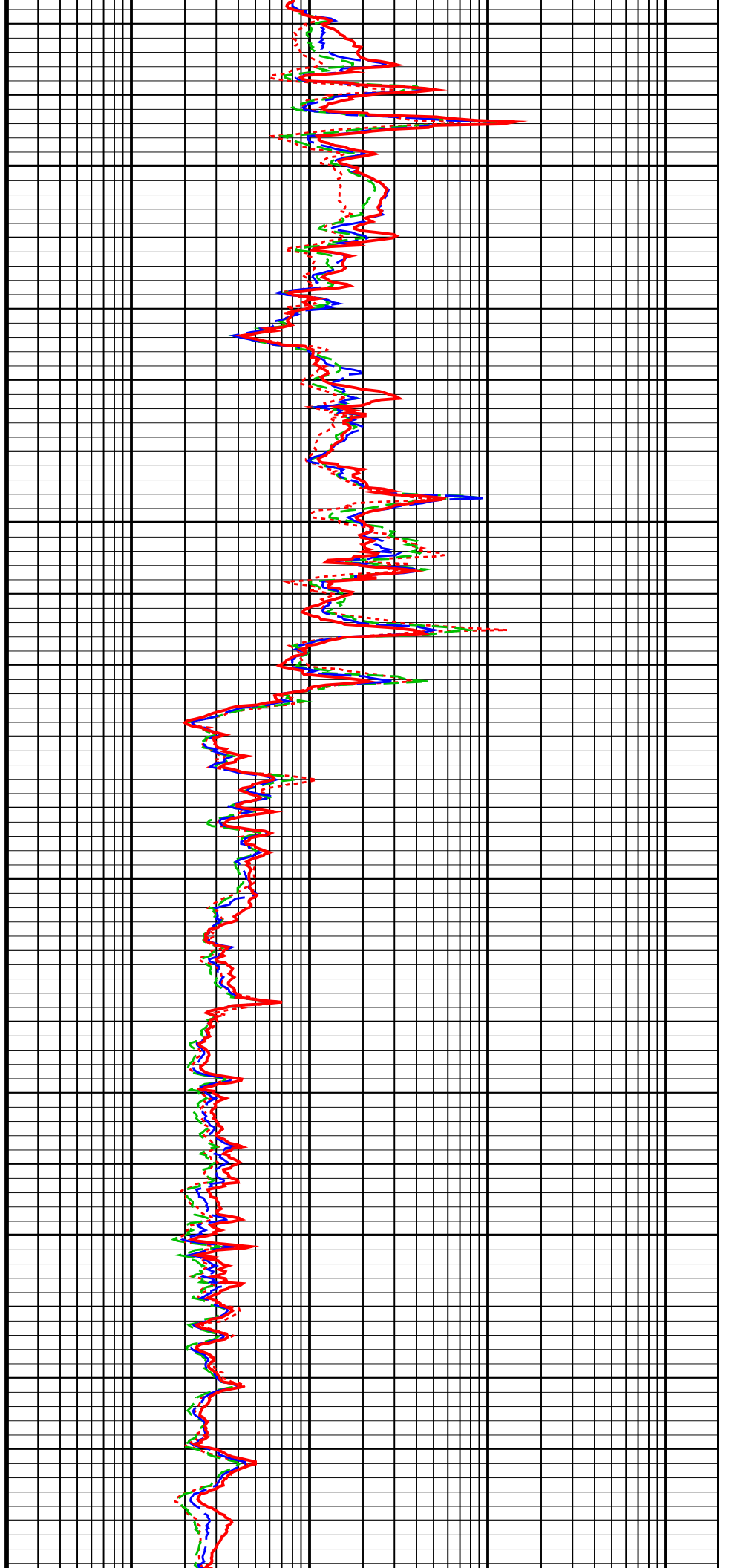
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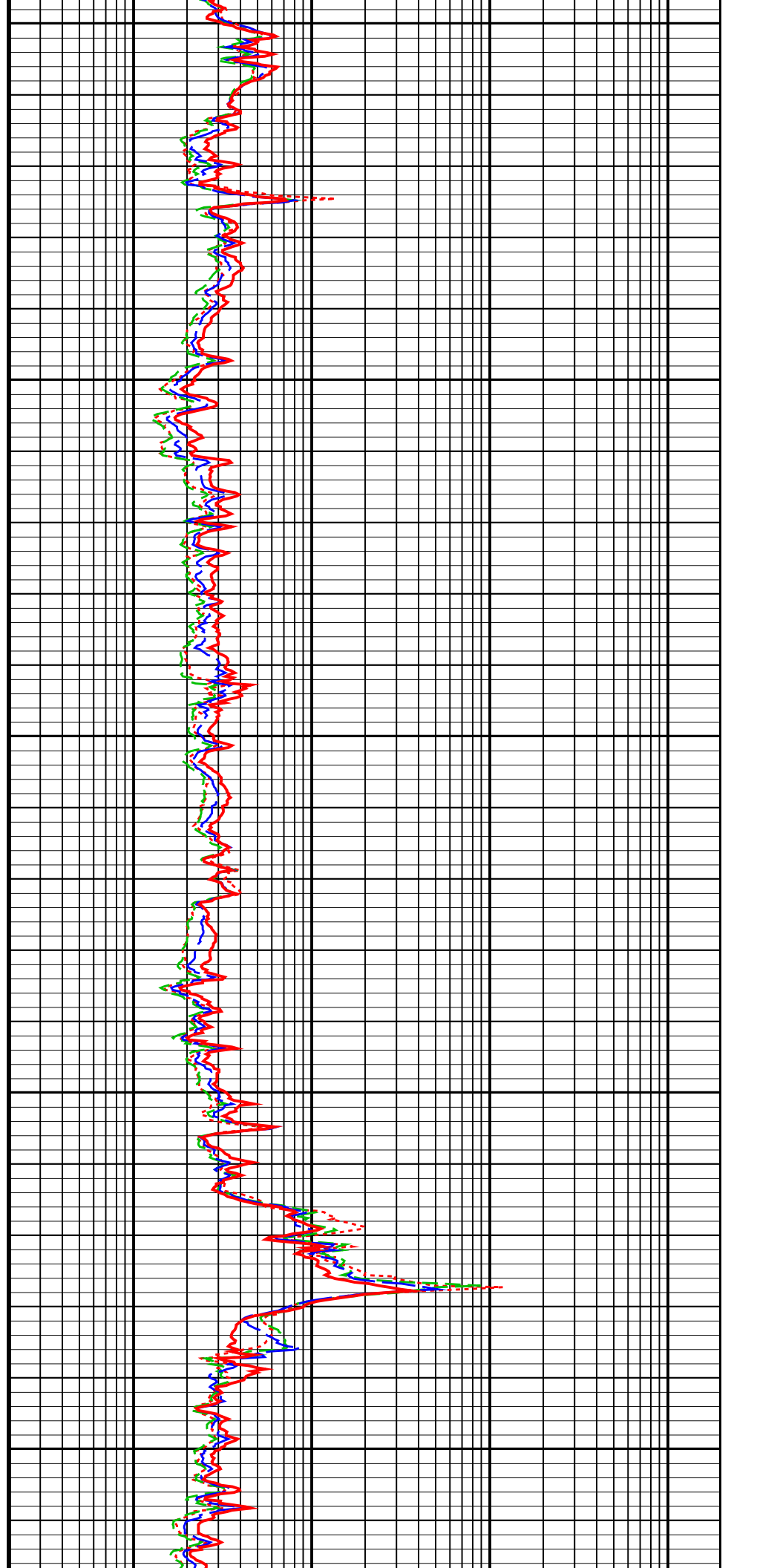
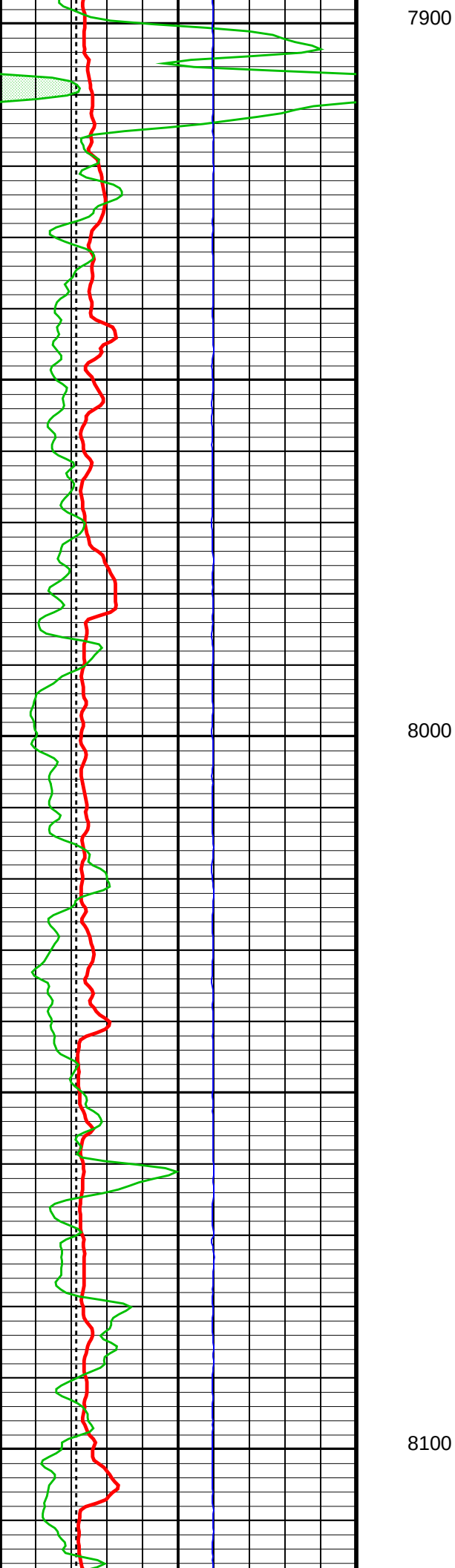


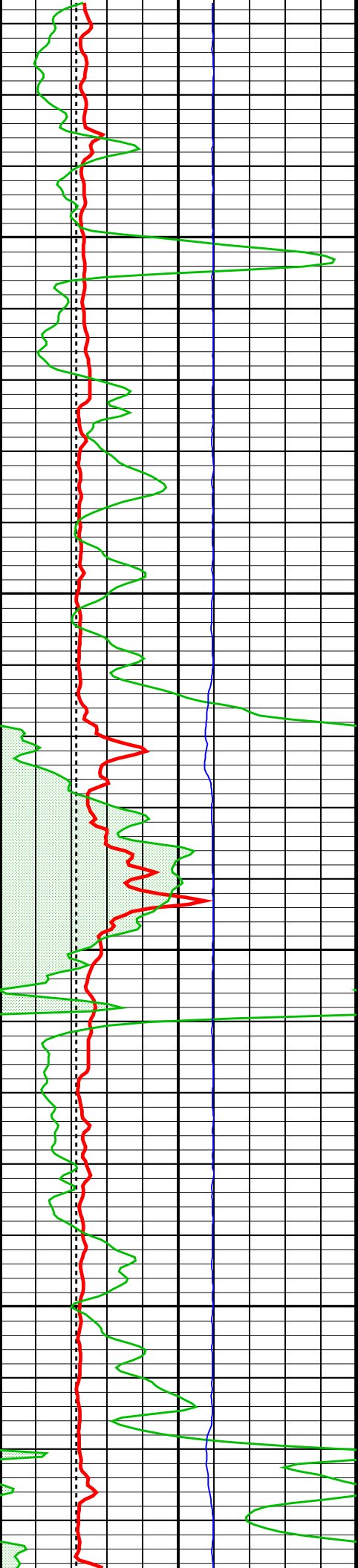


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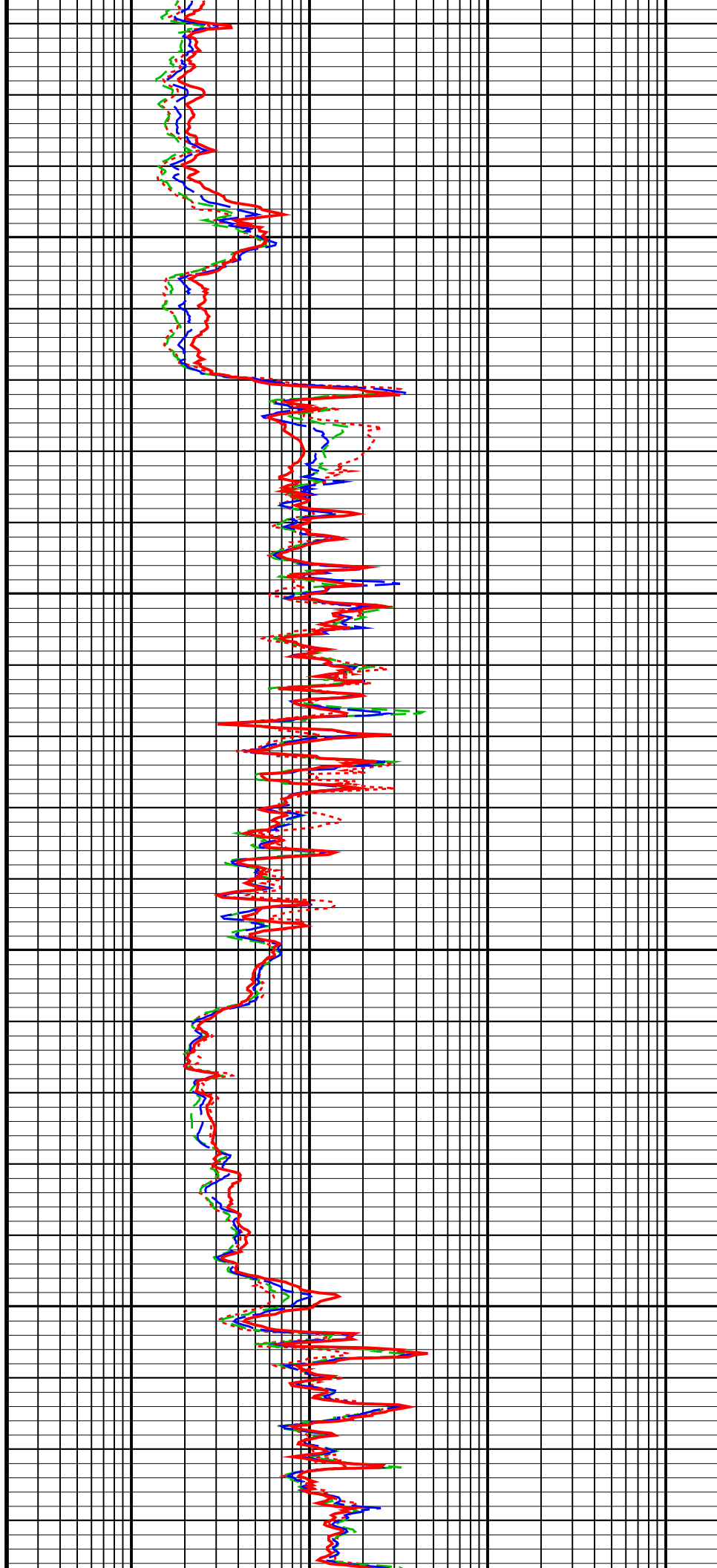


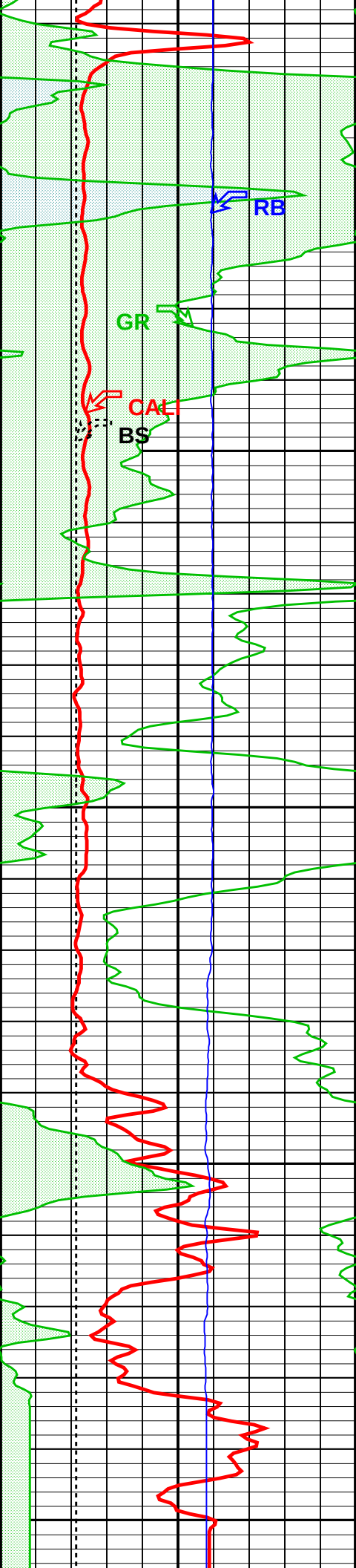




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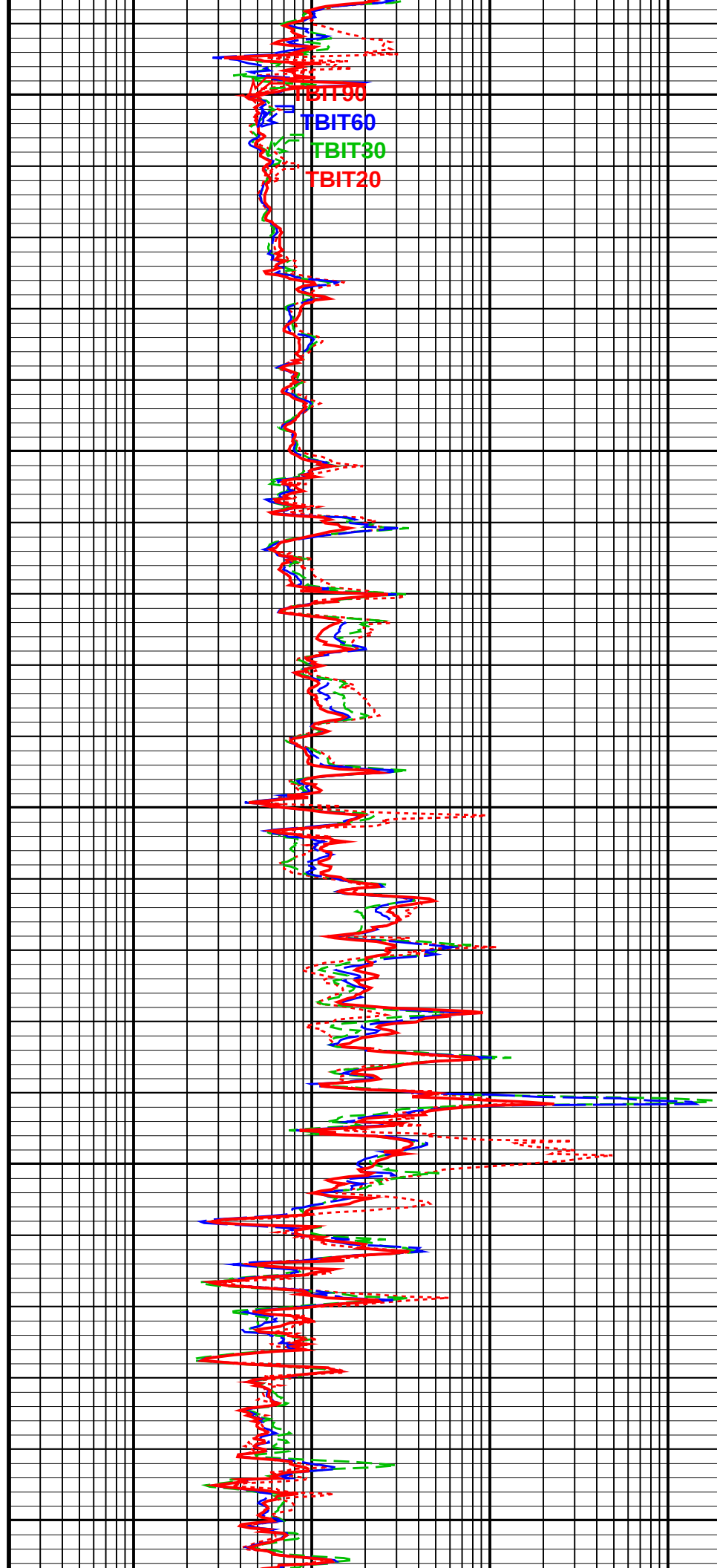
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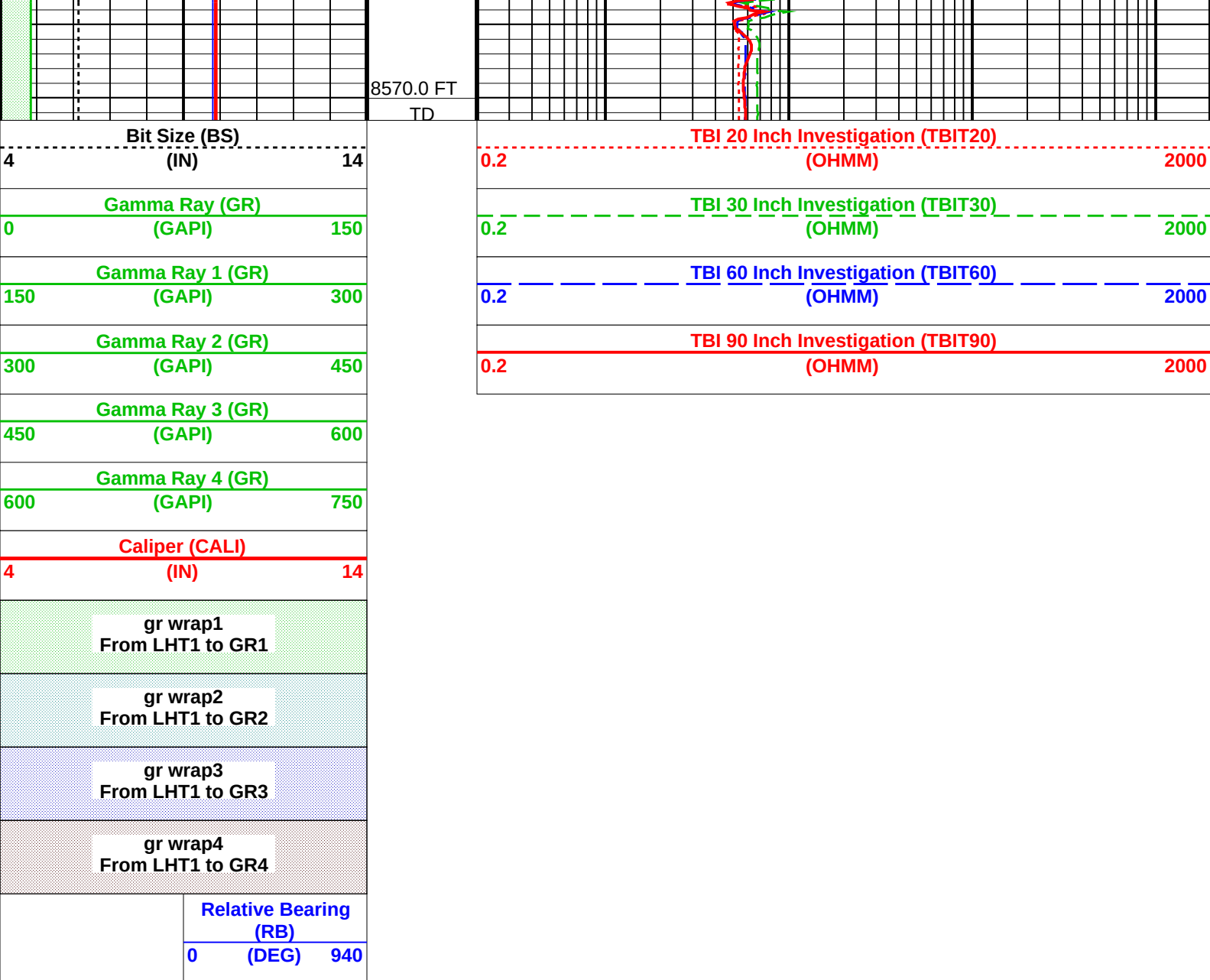




8400

8500





Parameters			
DLIS Name	Description	Value	
TBT-A: ThruBit String			
MT	Mud Type (for TBN and TBI correction)	WBM	
RB_OFFSET	Additional RB offset (degrees)	0.000	deg
TBI_ALGO	TBI Algorithm Selection	AIT	
TBI_BHC_OP	Borehole Correction Option (for TBI)	CALIPER	
TBI_CALTYP	TBI Mastercal Type	THRUBIT	
TBI_REPL_ARRAY_DEST	TBI: Replace This Array	NONE	
TBI_REPL_ARRAY_SOURCE	TBI: With This Array	NONE	
TBI_TC_OP	Induction Temperature Correction Option	LOWER	
System and Miscellaneous			
BS	Bit Size	6.125	in
Format: TB_5INCH_RESISTIVITY Vertical Scale: 5" per 100' Graphics File Created: 05-Mar-2014 23:04			
OP System Version: 19C2-270			
TBT	SRPC-5287-ThruBit		
Input DLIS Files			
DEFAULT	ThruBit_008PUP	FN:7	PRODUCER 05-Mar-2014 22:54 8573.0 FT 2045.0 FT

MAXIS Field Log

Thurbit String / Equipment Identification

Primary Equipment:

Induction Resistivity

Density

Gamma-Ray Logging Source

Thermal Neutron

Neutron Logging Source

Telemetry Memory GR

Battery

Battery

TBI - A

7

TBD - A

41

GGLS - FZ

3366

TBN - A

2

NNLS - EWA

3390

TMG - A

10

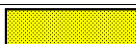
TBAT -

35

TBAT -

13

Auxiliary Equipment:

Thurbit String Master Calibration					
TBI Master Calibration Sonde Errors					
Freq 1, A1, R	Value	Nominal	Freq 1, A1, X	Value	Nominal
	-476.822	-457.000		23.1290	300.000
-536.000 (Minimum)	-387.000 (Maximum)		-500.000 (Minimum)	1100.00 (Maximum)	
Freq 1, A2, R	Value	Nominal	Freq 1, A2, X	Value	Nominal
	-145.310	-141.000		56.9489	320.000
-162.000 (Minimum)	-120.000 (Maximum)		-75.0000 (Minimum)	700.000 (Maximum)	
Freq 1, A3, R	Value	Nominal	Freq 1, A3, X	Value	Nominal
	-30.3168	-28.0000		-62.3144	50.0000
-38.0000 (Minimum)	-18.0000 (Maximum)		-375.000 (Minimum)	475.000 (Maximum)	
Freq 1, A4, R	Value	Nominal	Freq 1, A4, X	Value	Nominal
	-18.3534	-16.0000		186.165	300.000
-24.0000 (Minimum)	-8.00000 (Maximum)		25.0000 (Minimum)	575.000 (Maximum)	
Freq 1, A5, R	Value	Nominal	Freq 1, A5, X	Value	Nominal
	-17.0720	-14.0000		106.327	150.000
-21.0000 (Minimum)	-7.00000 (Maximum)		25.0000 (Minimum)	275.000 (Maximum)	
Freq 2, A1, R	Value	Nominal	Freq 2, A1, X	Value	Nominal
	-252.387	-237.000		-13.4198	150.000
-293.000 (Minimum)	-186.000 (Maximum)		-375.000 (Minimum)	675.000 (Maximum)	
Freq 2, A2, R	Value	Nominal	Freq 2, A2, X	Value	Nominal
	-93.4293	-92.0000		7.53882	160.000
-106.000 (Minimum)	-76.0000 (Maximum)		-100.000 (Minimum)	425.000 (Maximum)	
Freq 2, A3, R	Value	Nominal	Freq 2, A3, X	Value	Nominal
	-21.8192	-21.0000		-93.6066	-20.0000
-28.0000 (Minimum)	-13.0000 (Maximum)		-325.000 (Minimum)	250.000 (Maximum)	
Freq 2, A4, R	Value	Nominal	Freq 2, A4, X	Value	Nominal
	-22.2329	-20.0000		29.4197	100.000
-28.0000 (Minimum)	-10.0000 (Maximum)		-75.0000 (Minimum)	275.000 (Maximum)	
Freq 2, A5, R	Value	Nominal	Freq 2, A5, X	Value	Nominal
	-22.4310	-20.0000		-29.8463	-25.0000
-28.0000 (Minimum)	-10.0000 (Maximum)		-28.0000 (Minimum)	-10.0000 (Maximum)	

-27.0000 (Minimum)	(Nominal)	-10.0000 (Maximum)		-125.000 (Minimum)	(Nominal)	75.0000 (Maximum)	
Freq 3, A1, R		Value	Nominal	Freq 3, A1, X		Value	Nominal
		-159.906	-149.000			-81.0778	25.0000
-193.000 (Minimum)	(Nominal)	-108.000 (Maximum)		-375.000 (Minimum)	(Nominal)	425.000 (Maximum)	
Freq 3, A2, R		Value	Nominal	Freq 3, A2, X		Value	Nominal
		-70.5465	-70.0000			-37.5699	70.0000
-81.0000 (Minimum)	(Nominal)	-57.0000 (Maximum)		-125.000 (Minimum)	(Nominal)	250.000 (Maximum)	
Freq 3, A3, R		Value	Nominal	Freq 3, A3, X		Value	Nominal
		-17.4337	-17.0000			-129.222	-90.0000
-23.0000 (Minimum)	(Nominal)	-11.0000 (Maximum)		-300.000 (Minimum)	(Nominal)	125.000 (Maximum)	
Freq 3, A4, R		Value	Nominal	Freq 3, A4, X		Value	Nominal
		-24.2383	-22.0000			-79.8366	-50.0000
-31.0000 (Minimum)	(Nominal)	-11.0000 (Maximum)		-200.000 (Minimum)	(Nominal)	100.000 (Maximum)	
Freq 3, A5, R		Value	Nominal	Freq 3, A5, X		Value	Nominal
		-25.3244	-22.0000			-132.476	-110.000
-32.0000 (Minimum)	(Nominal)	-11.0000 (Maximum)		-250.000 (Minimum)	(Nominal)	-25.0000 (Maximum)	
Freq 4, A1, R		Value	Nominal	Freq 4, A1, X		Value	Nominal
		-87.5015	-80.0000			-208.339	-190.000
-108.000 (Minimum)	(Nominal)	-54.0000 (Maximum)		-450.000 (Minimum)	(Nominal)	75.0000 (Maximum)	
Freq 4, A2, R		Value	Nominal	Freq 4, A2, X		Value	Nominal
		-51.2393	-50.0000			-110.737	-75.0000
-60.0000 (Minimum)	(Nominal)	-41.0000 (Maximum)		-200.000 (Minimum)	(Nominal)	50.0000 (Maximum)	
Freq 4, A3, R		Value	Nominal	Freq 4, A3, X		Value	Nominal
		-13.9024	-14.0000			-196.130	-190.000
-19.0000 (Minimum)	(Nominal)	-8.00000 (Maximum)		-350.000 (Minimum)	(Nominal)	-25.0000 (Maximum)	
Freq 4, A4, R		Value	Nominal	Freq 4, A4, X		Value	Nominal
		-28.9253	-25.0000			-247.102	-235.000
-37.0000 (Minimum)	(Nominal)	-11.0000 (Maximum)		-400.000 (Minimum)	(Nominal)	-75.0000 (Maximum)	
Freq 4, A5, R		Value	Nominal	Freq 4, A5, X		Value	Nominal
		-32.5762	-28.0000			-306.766	-300.000
-43.0000 (Minimum)	(Nominal)	-12.0000 (Maximum)		-475.000 (Minimum)	(Nominal)	-125.000 (Maximum)	
Master: 25-Feb-2014 10:33							

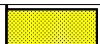
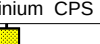
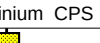
ThruBit String Master Calibration							
TBI Master Calibration COMPLEX GAINS							
Freq 1, R		Value	Nominal	Freq 1, X		Value	Nominal
		0.9960	1.000			-0.004744	0
		0.9908	1.000			0.003126	0
		0.9992	1.000			-0.003562	0
		0.9909	1.000			0.005601	0
		0.9961	1.000			0.001499	0
0.9500 (Minimum)	(Nominal)	1.050 (Maximum)		-0.05000 (Minimum)	(Nominal)	0.05000 (Maximum)	
Freq 2, R		Value	Nominal	Freq 2, X		Value	Nominal
		0.9916	1.000			-0.01282	0
		0.9852	1.000			-0.006507	0
		0.9877	1.000			-0.006171	0
		0.9858	1.000			-0.004235	0
		0.9923	1.000			-0.008520	0
0.9500 (Minimum)	(Nominal)	1.050 (Maximum)		-0.05000 (Minimum)	(Nominal)	0.05000 (Maximum)	

0.9500 (Minimum)	(Nominal)	1.050 (Maximum)		-0.05000 (Minimum)	(Nominal)	0.05000 (Maximum)	
Freq 3, R			Value	Nominal	Freq 3, X		
			0.9942	1.000			
			0.9880	1.000			
			0.9902	1.000			
			0.9868	1.000			
			0.9966	1.000			
0.9500 (Minimum)	(Nominal)	1.050 (Maximum)			-0.05000 (Minimum)	(Nominal)	0.05000 (Maximum)
Freq 4, R			Value	Nominal	Freq 4, X		
			1.004	1.000			
			0.9971	1.000			
			1.001	1.000			
			0.9940	1.000			
			1.014	1.000			
0.9300 (Minimum)	(Nominal)	1.070 (Maximum)			-0.05000 (Minimum)	(Nominal)	0.05000 (Maximum)

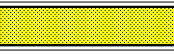
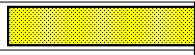
Master: 25-Feb-2014 10:33

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
	1853.8	1949.8		2024.8	2096.7		2189.3	2285.7
1799.8 (Minimum)	(Nominal)	2099.8 (Maximum)		1946.7 (Minimum)	(Nominal)	2246.7 (Maximum)		
						2135.7 (Minimum)	(Nominal)	2435.7 (Maximum)

Master: 28-Jan-2014 13:30

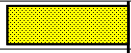
ThruBit String Master Calibration						
TBD Density Master Calibration. Ti Window, ThruBit blocks						
LS1 Background CPS	Value	Nominal	SS1 Background CPS	Value	Nominal	
	159.02	143.00		146.03	143.00	
100.00 (Minimum)	(Nominal)	186.00 (Maximum)		100.00 (Minimum)	(Nominal)	186.00 (Maximum)
LS2 Background CPS	Value	Nominal	SS2 Background CPS	Value	Nominal	
	41.9782	37.0000		38.6234	38.0000	
26.0000 (Minimum)	(Nominal)	48.0000 (Maximum)		27.0000 (Minimum)	(Nominal)	50.0000 (Maximum)
LS3 Background CPS	Value	Nominal	SS3 Background CPS	Value	Nominal	
	24.4179	22.0000		23.3168	23.0000	
15.0000 (Minimum)	(Nominal)	29.0000 (Maximum)		16.0000 (Minimum)	(Nominal)	30.0000 (Maximum)
LS4 Background CPS	Value	Nominal	SS4 Background CPS	Value	Nominal	
	31.99	30.00		32.4145	31.0000	
20.00 (Minimum)	(Nominal)	40.00 (Maximum)		22.0000 (Minimum)	(Nominal)	40.0000 (Maximum)
LS1 Aluminium CPS	Value	Nominal	SS1 Aluminium CPS	Value	Nominal	
	1257.9	1210.0		7477.58	7850.00	
850.00 (Minimum)	(Nominal)	1570.0 (Maximum)		5500.00 (Minimum)	(Nominal)	10200.0 (Maximum)
LS2 Aluminium CPS	Value	Nominal	SS2 Aluminium CPS	Value	Nominal	
	1126.77	1110.00		3863.74	4000.00	
780.000 (Minimum)	(Nominal)	1440.00 (Maximum)		2800.00 (Minimum)	(Nominal)	5200.00 (Maximum)
LS3 Aluminium CPS	Value	Nominal	SS3 Aluminium CPS	Value	Nominal	
	998.929	1010.00		3276.36	3350.00	
710.000 (Minimum)	(Nominal)	1300.00 (Maximum)		2350.00 (Minimum)	(Nominal)	4360.00 (Maximum)
LS4 Aluminium CPS	Value	Nominal	SS4 Aluminium CPS	Value	Nominal	
	696.61	760.00		3147.7131	3230.0000	
530.00 (Minimum)	(Nominal)	990.00 (Maximum)		2260.0000 (Minimum)	(Nominal)	4200.0000 (Maximum)

LS1 Al + Sleeve CPS			Value	Nominal	SS1 Al + Sleeve CPS			Value	Nominal
			1107.5	970.00				6436.84	6160.00
680.00 (Minimum)	(Nominal)		1260.0 (Maximum)		4300.00 (Minimum)	(Nominal)		8000.00 (Maximum)	
LS2 Al + Sleeve CPS			Value	Nominal	SS2 Al + Sleeve CPS			Value	Nominal
			927.245	830.000				3174.44	3050.00
580.000 (Minimum)	(Nominal)		1080.00 (Maximum)		2130.00 (Minimum)	(Nominal)		4000.00 (Maximum)	
LS3 Al + Sleeve CPS			Value	Nominal	SS3 Al + Sleeve CPS			Value	Nominal
			691.553	650.000				2298.11	2190.00
460.000 (Minimum)	(Nominal)		850.000 (Maximum)		1533.00 (Minimum)	(Nominal)		2850.00 (Maximum)	
LS4 Al + Sleeve CPS			Value	Nominal	SS4 Al + Sleeve CPS			Value	Nominal
			418.74	420.00				1803.82	1700.00
300.00 (Minimum)	(Nominal)		550.00 (Maximum)		1190.00 (Minimum)	(Nominal)		2200.00 (Maximum)	
LS1 Magnesium CPS			Value	Nominal	SS1 Magnesium CPS			Value	Nominal
			8117.47	8100.00				11998.5	12740.0
5670.00 (Minimum)	(Nominal)		10530.0 (Maximum)		8920.00 (Minimum)	(Nominal)		16560.0 (Maximum)	
LS2 Magnesium CPS			Value	Nominal	SS2 Magnesium CPS			Value	Nominal
			7603.82	7650.00				6359.52	6670.00
5360.00 (Minimum)	(Nominal)		9950.00 (Maximum)		4670.00 (Minimum)	(Nominal)		8670.00 (Maximum)	
LS3 Magnesium CPS			Value	Nominal	SS3 Magnesium CPS			Value	Nominal
			6604.34	6800.00				5236.42	5400.00
4760.00 (Minimum)	(Nominal)		8840.00 (Maximum)		3780.00 (Minimum)	(Nominal)		7020.00 (Maximum)	
LS4 Magnesium CPS			Value	Nominal	SS4 Magnesium CPS			Value	Nominal
			4406.11	4850.00				5065.27	5240.00
3400.00 (Minimum)	(Nominal)		6300.00 (Maximum)		3670.00 (Minimum)	(Nominal)		6810.00 (Maximum)	
Master: 26-Feb-2014 14:59									

Therbit String Master Calibration							
Thermal Neutron Master Calibration							
TNF, Background CPS		Value	Nominal	TNN, Background CPS		Value	Nominal
		0.11	1.0			0.067	1.0
0 (Minimum)	(Nominal)	2.0 (Maximum)		0 (Minimum)	(Nominal)	2.0 (Maximum)	
TNF, Tank CPS		Value	Nominal	TNN, Tank CPS		Value	Nominal
		72.66	96.00			2213.7	2860.0
25.00 (Minimum)	(Nominal)	200.0 (Maximum)		750.00 (Minimum)	(Nominal)	5700.0 (Maximum)	
TNF, Tank + Al Sleeve CPS		Value	Nominal	TNN, Tank + Al Sleeve CPS		Value	Nominal
		2315.4	3040.0			25011.2	32350.0
727.00 (Minimum)	(Nominal)	6080.0 (Maximum)		8000.00 (Minimum)	(Nominal)	64700.0 (Maximum)	
Tank + Al Sleeve Ratio		Value	Nominal	Tank + Al Sleeve Porosity PU		Value	Nominal
		10.976	10.797			14.46	14.40
10.300 (Minimum)	(Nominal)	11.300 (Maximum)		13.40 (Minimum)	(Nominal)	15.40 (Maximum)	
Tank, Ratio		Value	Nominal	Tank, Temperature DEGF		Value	Nominal
		30.467	30.958			58.4	70.0
28.000 (Minimum)	(Nominal)	34.000 (Maximum)		20.0 (Minimum)	(Nominal)	120 (Maximum)	
Master: 28-Feb-2014 14:17							

Thrubit String Master Calibration							
TMG Accelerometer Calibration							
Minimum Ax, m/s2		Value	Nominal	Maximum Ax, m/s2		Value	Nominal
NOT DONE		N/A	-9.810	NOT DONE		N/A	9.810
-10.81 (Minimum)	(Nominal)	-8.810 (Maximum)		8.810 (Minimum)	(Nominal)	10.81 (Maximum)	

Minimum Ay, m/s2			Value	Nominal	Maximum Ay, m/s2			Value	Nominal
NOT DONE			N/A	-9.810	NOT DONE			N/A	9.810
-10.81 (Minimum)	(Nominal)	-8.810 (Maximum)			8.810 (Minimum)	(Nominal)	10.81 (Maximum)		
Minimum Az, m/s2			Value	Nominal	Maximum Az, m/s2			Value	Nominal
NOT DONE			N/A	0	NOT DONE			N/A	9.810
-1.000 (Minimum)	(Nominal)	1.000 (Maximum)			8.810 (Minimum)	(Nominal)	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	
			26.94	30.00	
0 (Minimum)	(Nominal)	120.0 (Maximum)			
GR Jig-Background GAPI			Value	Nominal	
			150.0	170.8	
136.6 (Minimum)	(Nominal)	205.0 (Maximum)			
Master: 15-Oct-2013 12:57					

Company: **SANDRIDGE ENERGY**

Well: **NONA 3204 1-23H**
Field: **YARNELL NORTHEAST**
County: **SUMNER**
State: **KANSAS**



ARRAY INDUCTION
GAMMA RAY
MEMORY LOG

Schlumberger

MAIN PASS

MAXIS Field Log

Company: SANDRIDGE ENERGY

Well: NONA 3204 1-23H

Input DLIS Files

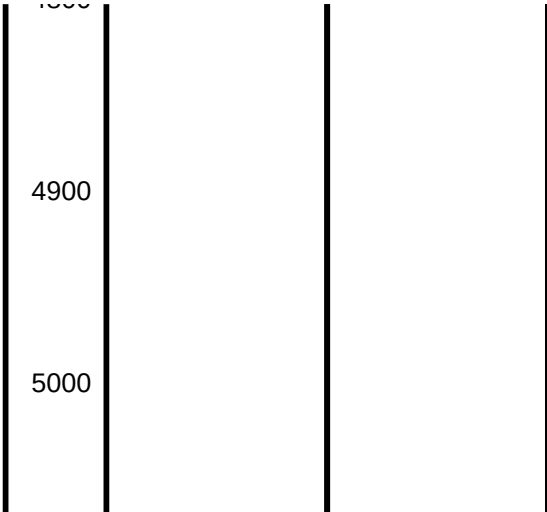
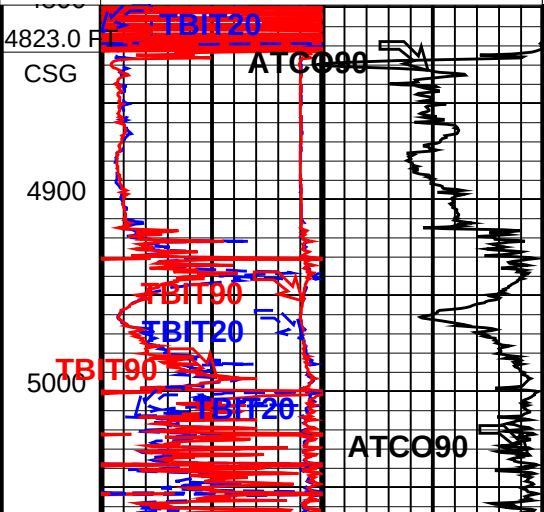
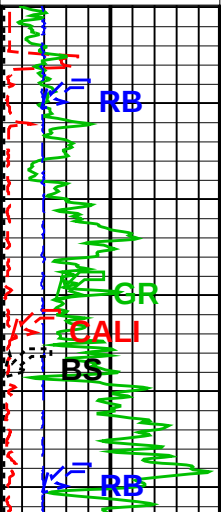
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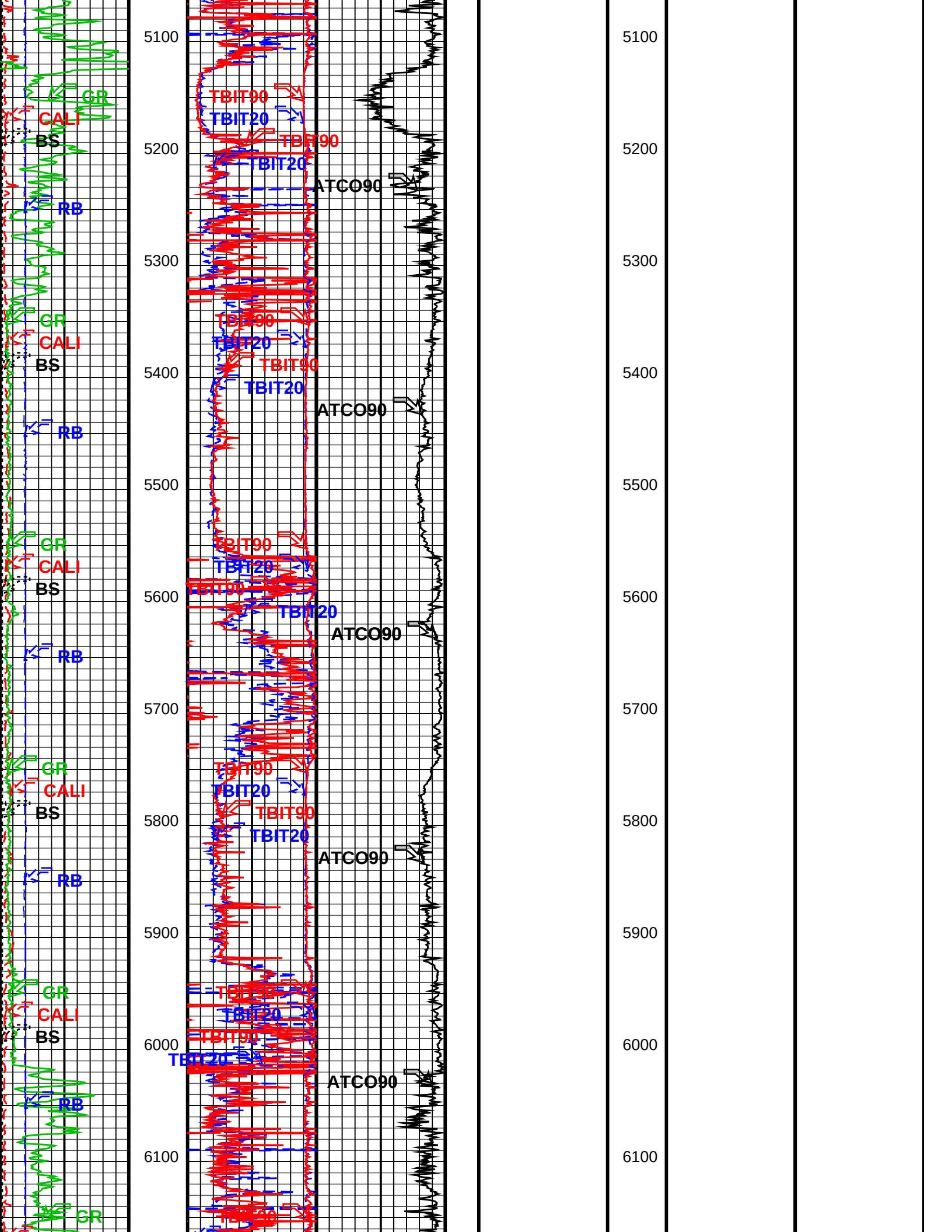
OP System Version: 19C2-270

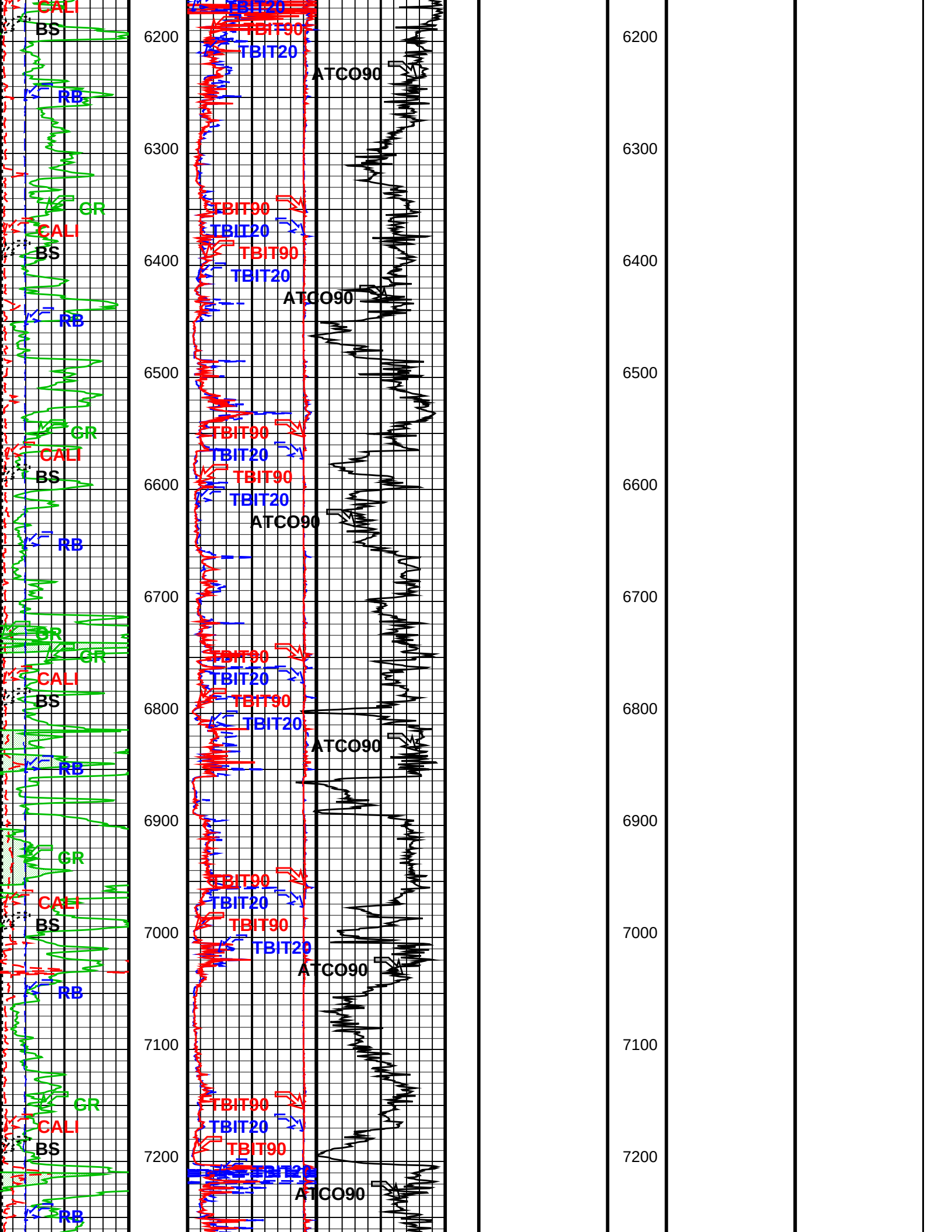
gr wrap4 From T1A to GR4
gr wrap 3 From T1A to GR3
gr wrap2 From T1A to GR2
gr wrap1 From T1A to GR1
Gamma Ray 4 (GR)
600 (GAPI) 750
Gamma Ray 3 (GR)
450 (GAPI) 600
Gamma Ray 2 (GR)
300 (GAPI) 450
Gamma Ray 1 (GR)
150 (GAPI) 300
Relative Bearing (RB)
0 (DEG) 940
Gamma Ray (GR)
0 (GAPI) 150
Caliper (CALI)
6 (IN) 16
Bit Size (BS)
6 (IN) 16

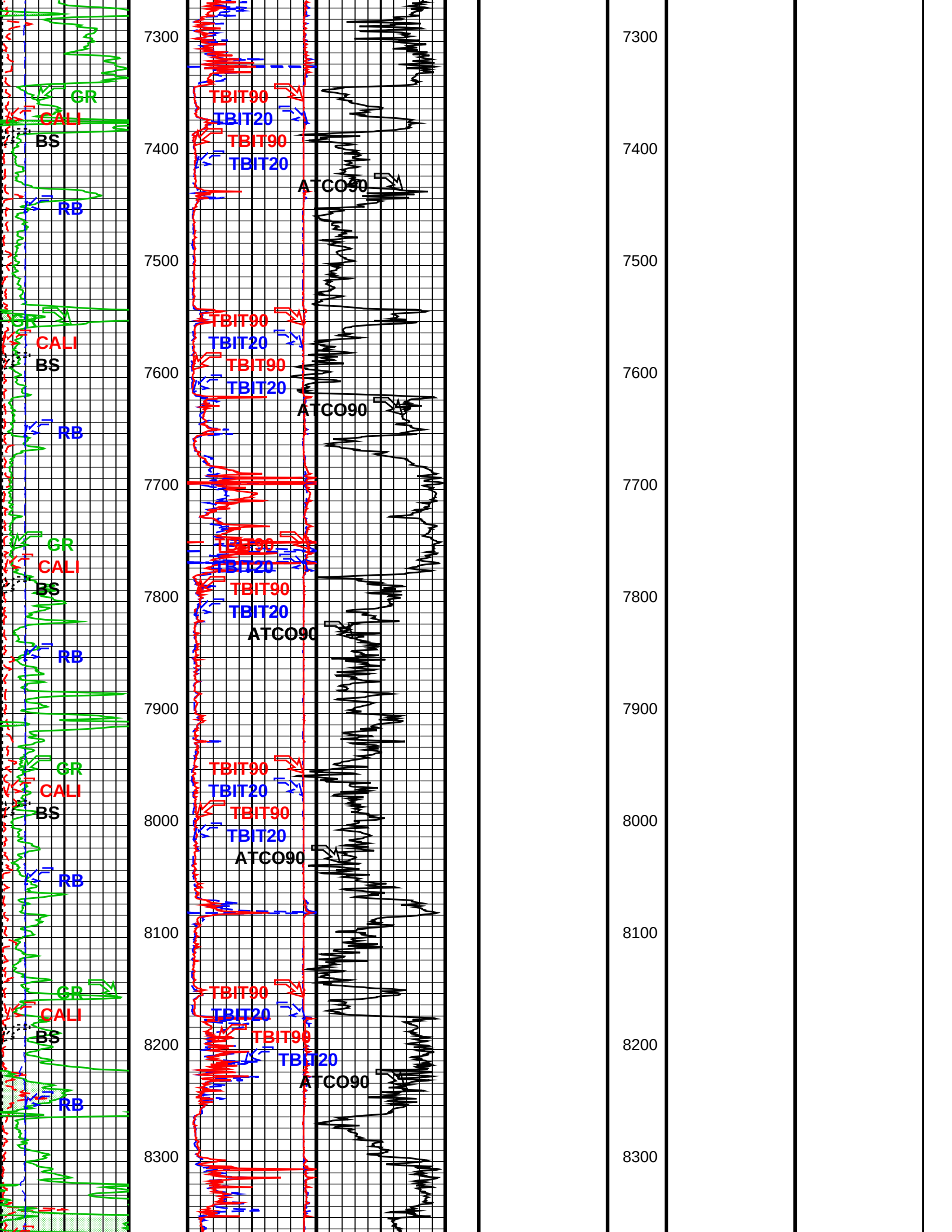
TBI 90 Inch Investigation (TBIT90)
50 (OHMM) 500
TBI 20 Inch Investigation (TBIT20)
50 (OHMM) 500
TBI 90 Inch Investigation (TBIT90)
0 (OHMM) 50
TBI 20 Inch Investigation (TBIT20)
0 (OHMM) 50

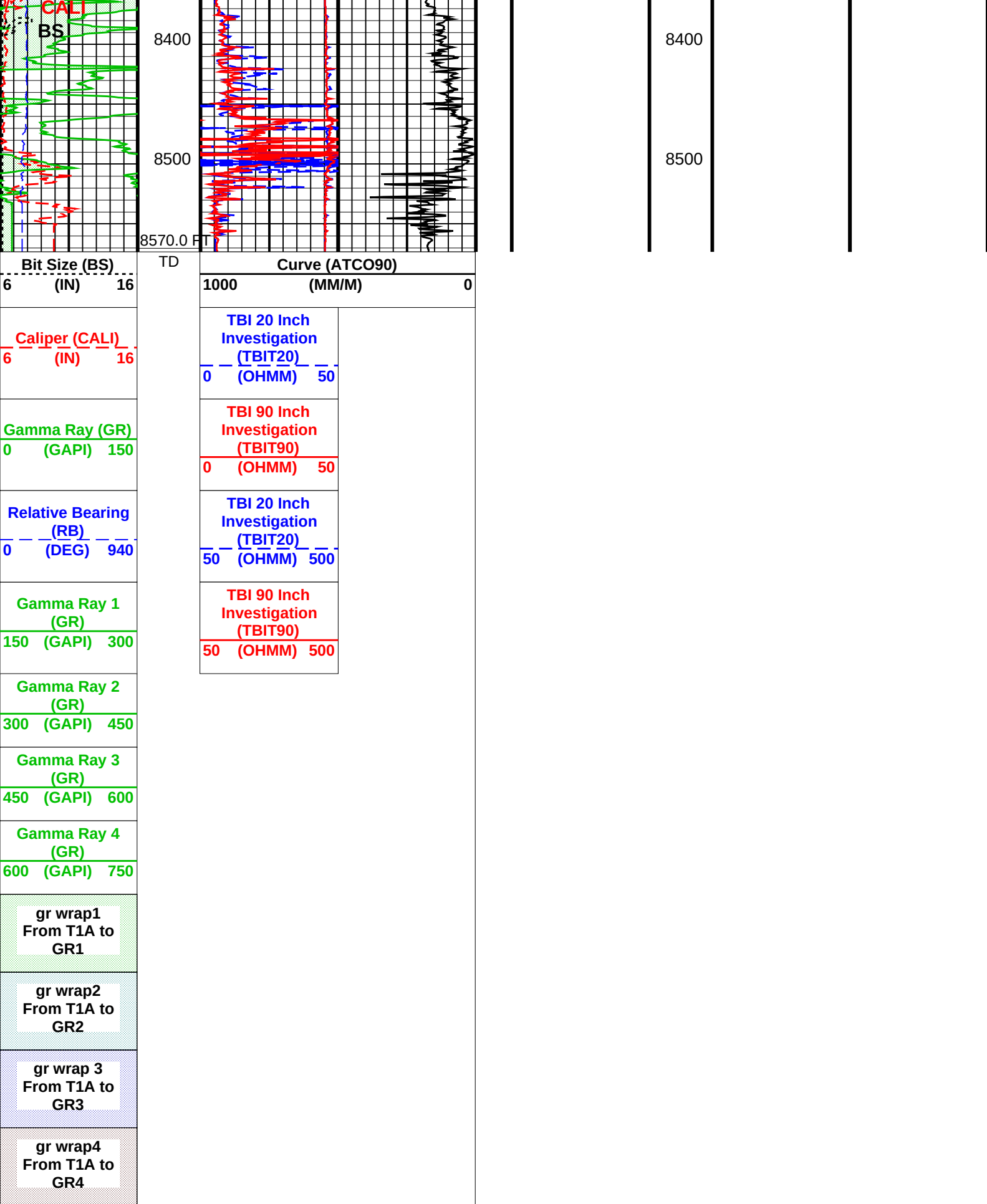
Curve (ATCO90)
1000 (MM/M) 0











Parameters		
DLIS Name	Description	Value
TBT-A: Thru-bit String		
BUS	Barrel Status	OPEN

BHS	Borehole Status	OPEN	degF
BHT	Bottom Hole Temperature (used in calculations)	95.000	
CCLG	Casing Collar Locator Gain	1.000	
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
FEXP	Form Factor Exponent	2.000	
FNUM	Form Factor Numerator	1.000	
FPHI	Form Factor Porosity Source	DPHI	
FSAL	Formation Salinity	0.000	ppm
GCSE	Generalized Caliper Selection	CALI	
GDEV	Average Angular Deviation of Borehole from Normal	0.000	deg
GGRD	Geothermal Gradient	0.010	degF/ft
GRSE	Generalized Mud Resistivity Selection	GEN9	
GTSE	Generalized Temperature Selection	TEMP	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIME	
MDEN	Matrix Density	2.710	g/cm3
MT	Mud Type (for TBN and TBI correction)	WBM	
RB_OFFSET	Additional RB offset (degrees)	0.000	deg
SHT	Surface Hole Temperature	68.000	degF
SOFF	TBN Standoff	0.000	in
TBD_CAL_BLOCK	TBD Calibration Block Type	THRUBIT	
TBI_ALGO	TBI Algorithm Selection	AIT	
TBI_BHC_OP	Borehole Correction Option (for TBI)	CALIPER	
TBI_CALTYP	TBI Mastercal Type	THRUBIT	
TBI_REPL_ARRAY_DEST	TBI: Replace This Array	NONE	
TBI_REPL_ARRAY_SOURCE	TBI: With This Array	NONE	
TBI_TC_ID	Induction Temperature Coefficient Tool ID	000PS07R	
TBI_TC_OP	Induction Temperature Correction Option	LOWER	
TBN_BHC_OP	Borehole Correction Option (for TBN)	CALIPER	
TBN_CAL_TANK	TBN Calibration Tank Type	THRUBIT	
TBT_BARI	Barite Mud Presence Flag	NO	
TB_CORR_CH_1	Correlation Channel	GR (API)	
TOJI	Time Of Job Initialization	1392530400	s
WMUD	Mud Weight	8.500	lbm/gal
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	95.000	degF
CD	Casing Shoe Depth	4828.0	ft
FCD	Future Casing (Outer) Diameter	4.500	in
GCSE	Generalized Caliper Selection	CALI	
GDEV	Average Angular Deviation of Borehole from Normal	0.000	deg
GGRD	Geothermal Gradient	0.010	degF/ft
GRSE	Generalized Mud Resistivity Selection	GEN9	
GTSE	Generalized Temperature Selection	TEMP	
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC	
IHVC	Integrated Hole Volume Control	SNAP	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIME	
SHT	Surface Hole Temperature	68.000	degF
VCEM	Cumulated Cement Volume	457.4	ft3
VHOL	Cumulated Hole Volume	870.9	ft3
STI: Stuck Tool Indicator			
LBFR	Trigger for MAXIS First Reading Label	STI	
STKT	STI Stuck Threshold	2.500	ft
TDD	Total Depth - Driller	8572.0	ft
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	SPEEDCORRECTEDDEPTH	
AMD	Azimuth of Maximum Deviation	0.000	deg
APD	Above Permanent Datum	18.000	ft
APIN	API Serial Number	15191227190100	
BG	Gas Formation Volume Factor, Bg		
BLI	Bottom Log Interval		
BO	Oil Formation Volume Factor, Bo		
BPP	Bubble Point Pressure		
BPT	Bubble Point Temperature		
BS	Bit Size	6.125	in
BSAL	Borehole Salinity	36000.0	ppm
BSDF	Bit Size Depth From		
BSDT	Bit Size Depth To		
BW	Water Formation Volume Factor, Bw		
CADD	Cement Additives		
CADT	Casing Depth To		
CASG	Casing Grade		
CASN	Casing String Number		
CBDR	Casing Bottom of Driller	4828.0	ft
CBLO	Casing Bottom of Logger		
CDEN	Cement Density		
CDF	Casing Depth From		
CJT	Cement Job Type	Primary	
CLAB	County/Rig Label	County:	
CN	Company Name	SANDRIDGE ENERGY	
CN1	Company Name Line 1		

CONT	Continent		
CONTP	Conveyance Type		
COUN	County or Rig Name	WIRELINE	
CSIZ	Current Casing Size	SUMNER	
CTOP	Estimated Cement Top	7.000	in
CWEI	Casing Weight		
CWLO	Cement Water Loss	0.000	lbm/ft
DATE	Date as Month-Day-Year	5-Mar-2014	
DCS	Date Circulation Stopped	5-Mar-2014	
DEPREM1	Depth Remark 1		
DEPREM2	Depth Remark 2		
DEPREM3	Depth Remark 3		
DEPREM4	Depth Remark 4		
DEPREM5	Depth Remark 5		
DEPREM6	Depth Remark 6		
DFD	Drilling Fluid Density	8.700	lbm/gal
DFL	Drilling Fluid Loss	60.000	cm3
DFPH	Drilling Fluid PH	9.000	
DFT	Drilling Fluid Type	WBM	
DFV	Drilling Fluid Viscosity	29.000	s
DIFF	Maximum Permitted Depth Difference	1.000	ft
DLAB	Date Logger At Bottom	5-Mar-2014	
DMF	Drilling Measured From	D.F.	
EDF	Elevation of Derrick Floor	1241.0	ft
EGL	Elevation of Ground Level	1223.0	ft
EKB	Elevation of Kelly Bushing	1241.0	ft
ELZ	Elevation of Log Zero	1241.0	ft
ENGI	Engineer's Name	C.PARKER	
ENVI	Acquisition Environment	ANALOG	
EPD	Elevation of Permanent Datum	1223.0	ft
EWAFE_VER	eWAFE Version		
EWTEST	eWAFE Power API Test command	OFF	
FL	Field Location	200' FSL & 1380' FEL	
FL1	Field Location Line 1		
FL2	Field Location Line 2		
FLEV	Fluid Level	0.000	ft
FLSHSTRM	Flush depth-delayed streams to output at end	DOWNLOG_ONLY	
FN	Field Name	YARNELL NORTHEAST	
GGRA	Gas Gravity		
HID1	Header Identifier Line 1	DUAL SPACED NEUTRON	
HID2	Header Identifier Line 2	MEMORY LOG	
HIDE	Header Identifier	SPECTRAL DENSITY	
HLD	Header Legal Disclaimer	INCLUDE	
IBG	1/Gas Formation Volume Factor, 1/Bg		
IDWCD	IDW Calibration Date (dd-mmm-yyyy)		
IDWCSN	IDW Calibrator Serial Number		
IDWLCN	IDW Calibration Cable Type	7-46P	
IDWSN	IDW Serial Number		
IDWTYP	IDW Type	IDW-B	
IDWWC1	IDW Wheel Correction 1		
IDWWC2	IDW Wheel Correction 2		
ILL1	Instrumentation Logo Line 1		
ILL2	Instrumentation Logo Line 2		
JETA	Job Events Auto Save	ALLOW	
LATI	Latitude		
LCC	Logging Company Code	440	
LCL	Logging Cable Length	24000	ft
LCMT	Lead Cement Type		
LCN	Logging Cable Name (Type)	7-46P	
LCSN	Logging Cable Serial Number		
LCVO	Lead Cement Volume		
LLAB	Section Label	Section	
LMF	Log Measured From	D.F.	
LOGMODE	Depth Logging Mode	MEASURED_DEPTH	
LOGSEQ	Log Sequence	FIRST_LOG_IN_WELL	
LONG	Longitude		
LUL	Logging Unit Location	OKC	
LUN	Logging Unit Number	4	
MCSS	Mud Cake Sample Source	CALCULATED	
MCST	Mud Cake Sample Temperature	65.000	degF
MFSS	Mud Filtrate Sample Source	CALCULATED	
MFST	Mud Filtrate Sample Temperature	65.000	degF
MHD	Maximum Hole Deviation	93.710	deg
MMDU	Magnetic Mark Depth Units	FEET	
MRT	Maximum Recorded Temperature	95.000	degF
MRT1	Maximum Recorded Temperature 1	95.000	degF
MRT2	Maximum Recorded Temperature 2		
MRT3	Maximum Recorded Temperature 3		
MSS	Mud Sample Source	MUD SENSOR	
MST	Mud Sample Temperature	65.000	degF
NATI	Nation		
NLS	Nominal Logging Speed		
ODEN	Oil Density		
OPER	Operator's Code	600121	
OS1	Other Services Line 1	TRI-TBD-TBN-TMC	

OS1	Other Services Line 1			
OS2	Other Services Line 2			
OS3	Other Services Line 3			
OS4	Other Services Line 4			
OS5	Other Services Line 5			
PBVSADP	Use alternate depth channel for playback		NO	
PDAT	Permanent Datum		GROUND LEVEL	
PVER	Program Version		19C2-270	
R1	Remark Line 1			
	SERVICE:HORIZONTAL PUMP DOWN MEMORY BIT DEPTH: 9000' LOGGED TO: 2100'			
R10	Remark Line 10			
R11	Remark Line 11		CREW: C.PARKER J.DOTY K.REED	
R12	Remark Line 12			
R13	Remark Line 13			
R14	Remark Line 14			
R15	Remark Line 15			
R16	Remark Line 16			
R17	Remark Line 17			
R2	Remark Line 2			
	ALL SCALES AND PRESENTATIONS PER CLIENT REQUEST			
R3	Remark Line 3			
	LIMESTONE MATRIX 2.71 g/cc USED FOR POROSITY MEASUREMENTS			
R4	Remark Line 4			
	TOOLSTRING RAN WITH SWIVEL AND SMALL DE-CENTRALIZE			
R5	Remark Line 5		TBHV REPRESENTS TOTAL BOREHOLE VOLUME, ft3	
R6	Remark Line 6			
	ABHV REPRESENTS ANNULAR HOLE COLUME, CALCULATED FOR 4.5" CSG, ft3			
R7	Remark Line 7		HSPM USED TO ACQUIRE LOG DEPTH	
R8	Remark Line 8		LOG CORRELATED TO MWD GR	
R9	Remark Line 9		RIG: LARIAT 40	
RANG	Range		4W	
RIGTYP	Rig Type			
RLAB	Range Label		Range	
RLDT	Reference Log Date (dd-mmm-yyyy)			
RLNM	Reference Log Name			
RLRN	Reference Log Run Number			
RMB	Resistivity of Mud - BHT	0.367	ohm.m	
RMCS	Resistivity of Mud Cake Sample	0.580	ohm.m	
RMFB	Resistivity of Mud Filtrate - BHT	0.331	ohm.m	
RMFS	Resistivity of Mud Filtrate Sample	0.470	ohm.m	
RMS	Resistivity of Mud Sample	0.520	ohm.m	
RULB	Rig Up Length at Bottom	0.000	ft	
RULS	Rig Up Length at Surface	0.000	ft	
RUN	Run Number	1		
RW	Resistivity of Connate Water	1.000	ohm.m	
SCD_ACCEL	Accelerometer driving Speed Corrected Depth	NONE		
SCORR	Stretch Correction			
SECT	Section	23		
SGOR	Solution Gas Oil Ratio			
SIMULATE_DELAY	Simulate Acquisition Delay	-99999.000		
SLAB	State/Province Label	State:		
SON	Service Order Number	2625		
SPEE	Simulated Logging Speed	1800	ft/h	
STAT	State or Province	KANSAS		
STDLC	Subsequent Trip Down Log Correction			
STEM	Surface Temperature	65.000	degF	
TCA	Tail Cement Additives			
TCDE	Tail Cement Density			
TCS	Time Circulation Stopped	14:44		
TCTY	Tail Cement Type			
TCV	Tail Cement Volume			
TCWL	Tail Cement Water Loss			
TD	Total Depth	8572.0	ft	
TDL	Total Depth - Logger			
TLAB	Time Logger At Bottom	15:58		
TLI	Top Log Interval	2100.0	ft	
TLLAB	Township Label	Township		
TNDALPTS	Number of Tension Calibration Points	0		
TNDCD	Tension Device Calibration Date (dd-mmm-yyyy)			
TNDCSN	Tension Device Calibrator Serial Number			
TNDGN	Tension Device Gain			
TNDOFF	Tension Device Offset			
TNDPE	Tension Device Calibration Peak Error			
TNDRMS	Tension Device Calibration RMS			
TNDSN	Tension Device Serial Number			
TNDTYP	Tension Device	CMTD-B/A		
TOWN	Township	32S		
TREF	Reference Tension of the Cable	1000.0	lbf	
TWS	Temperature of Connate Water Sample	100.0	degF	
UWID	Unique Well Identification Number	15191227190100		
WITN	Witness's Name	B.TORBELL		
WN	Well Name	NONA 3204 1-23H		
ZRCS	Tool Zero Reference Check at Surface			

TBT SRPC-5287-ThruBit

Input DLIS Files

DEFAULT	Thrubit_008PUP	FN:7	PRODUCER	05-Mar-2014 22:54	8573.0 FT	2045.0 FT
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