

Company		WHITING PETOLEUM	
Well		RAZOR 33M-2804	
Field		WILDCAT	
County		WELD	
State		COLORADO	
Company		WHITING PETOLEUM	
Well		RAZOR 33M-2804	
Field		WILDCAT	
County		WELD	
State		COLORADO	
Location:		API # : 0512339258000	
SEC 33 TWP 10N RGE 58W		Other Services CBL 3.75" GUAGE	
Permanent Datum		GL 4729' Elevation	
Log Measured From		KB (18.5')	
Drilling Measured From		KELLY BUSHING	
		Elevation K.B. 4747.5' D.F. 4746' G.L. 4729'	

Date	25 JAN 2015		
Run Number	TWO		
Depth Driller	5011.9		
Depth Logger	5050'		
Bottom Logged Interval	5148'		
Top Log Interval	0		
Open Hole Size	N/A		
Type Fluid	WATER		
Density / Viscosity	N/A		
Max. Recorded Temp.	N/A		
E stimated Cement Top	N/A		
Time Well Ready	16:15		
Time Logger on Bottom	16:45		
E quipment Number	13033		
Location	BRIGHTON		
Recorded By	J. OSTLER		
Witnessed By			

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record		Size		Wd/ft	Top		Bottom
Surface String		9.625"		36#	0'		1567.6'
rot. String		7"		29#	0'		6170.5'
roduction String							
inner		4.5"		11.6#			13168'

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

WELL WAS LOGGED WITH 1500 PSI AT THE WELL HEAD  
CREW: GILBERTO CAVAZOS, MIKE BINGAHAM, TIM FISHEL

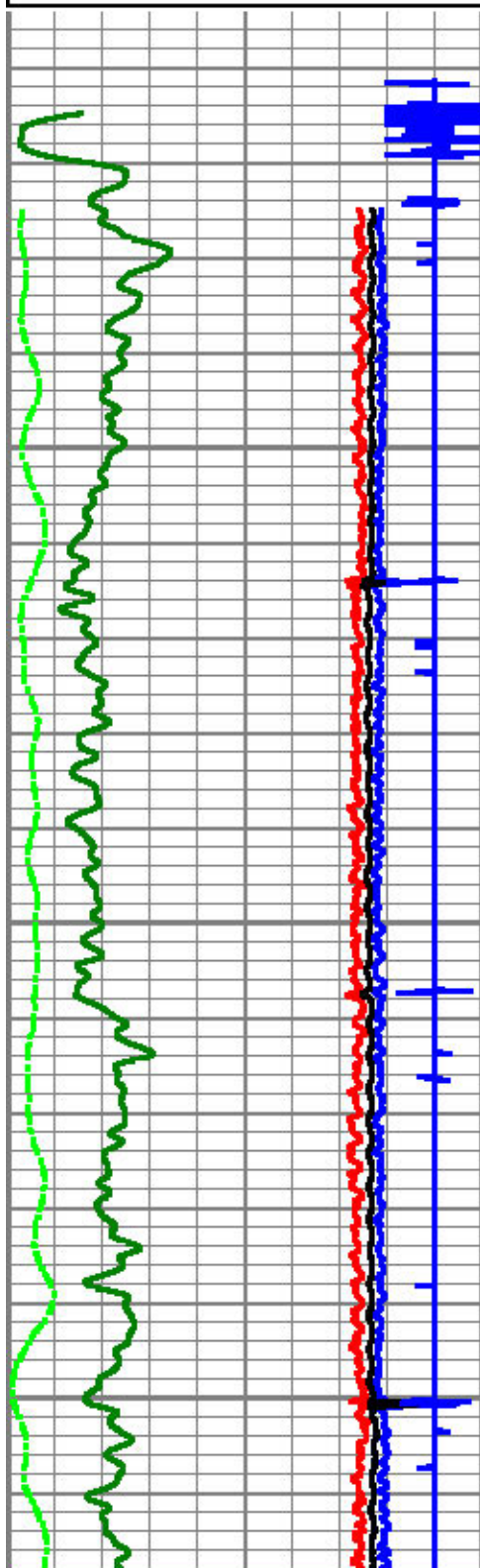


# WIRELINE SERVICES

Database File: 2804.db  
 Dataset Pathname: pass9  
 Presentation Format: psmfc40  
 Dataset Creation: Sun Jan 25 17:14:57 2015 by Log 0  
 Charted by: Depth in Feet scaled 1:240

4.5	IDMX (in)	5.5
4.5	IDMN (in)	5.5
4.5	IDAV (in)	5.5
0	GR (GAPI)	150
9	CCL	-1
0	DEVI (°)	20

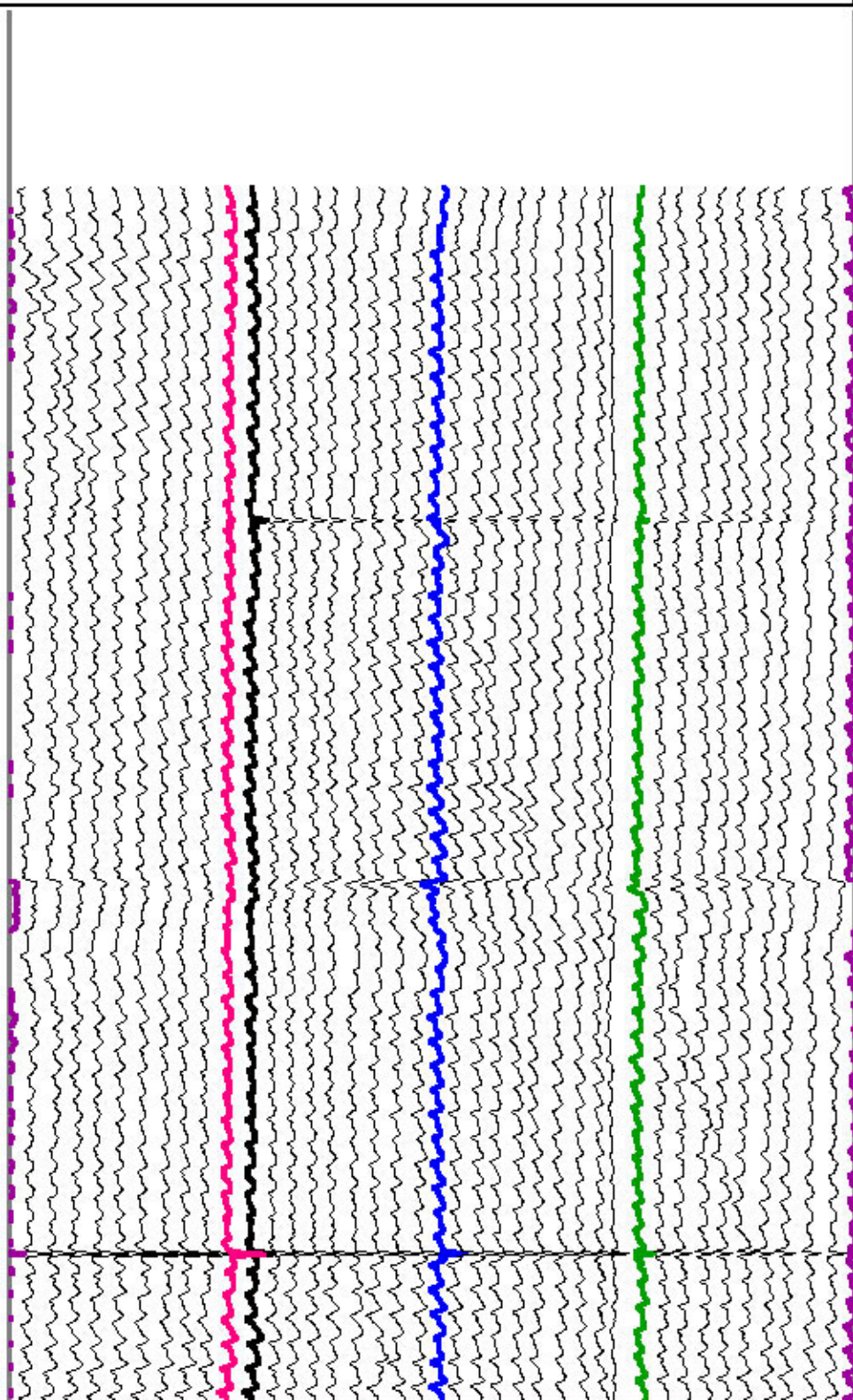
2.4375	R01 (in)	4.9375
1.875	R10 (in)	4.375
1.25	R20 (in)	3.75
0.625	R30 (in)	3.125
0	R40 (in)	2.5



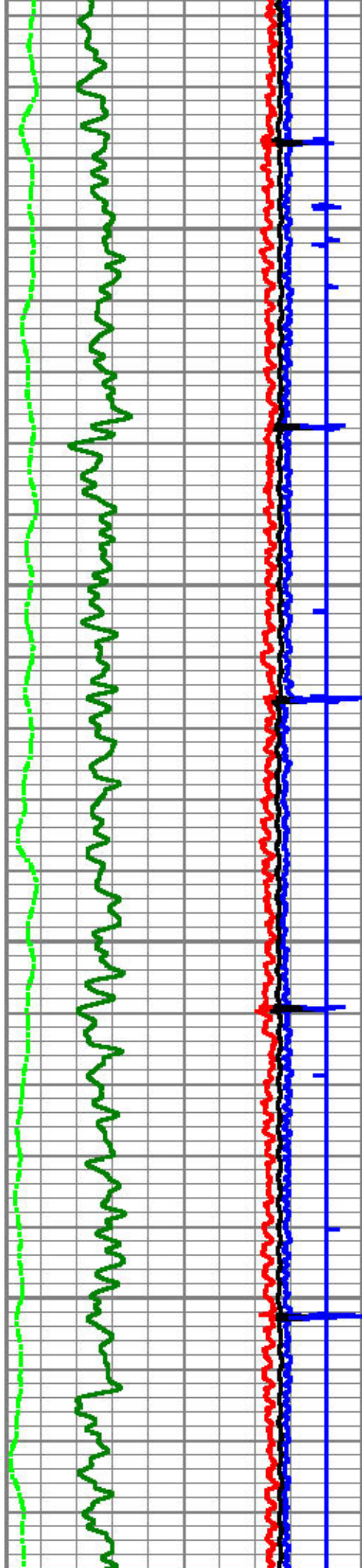
50

100

150





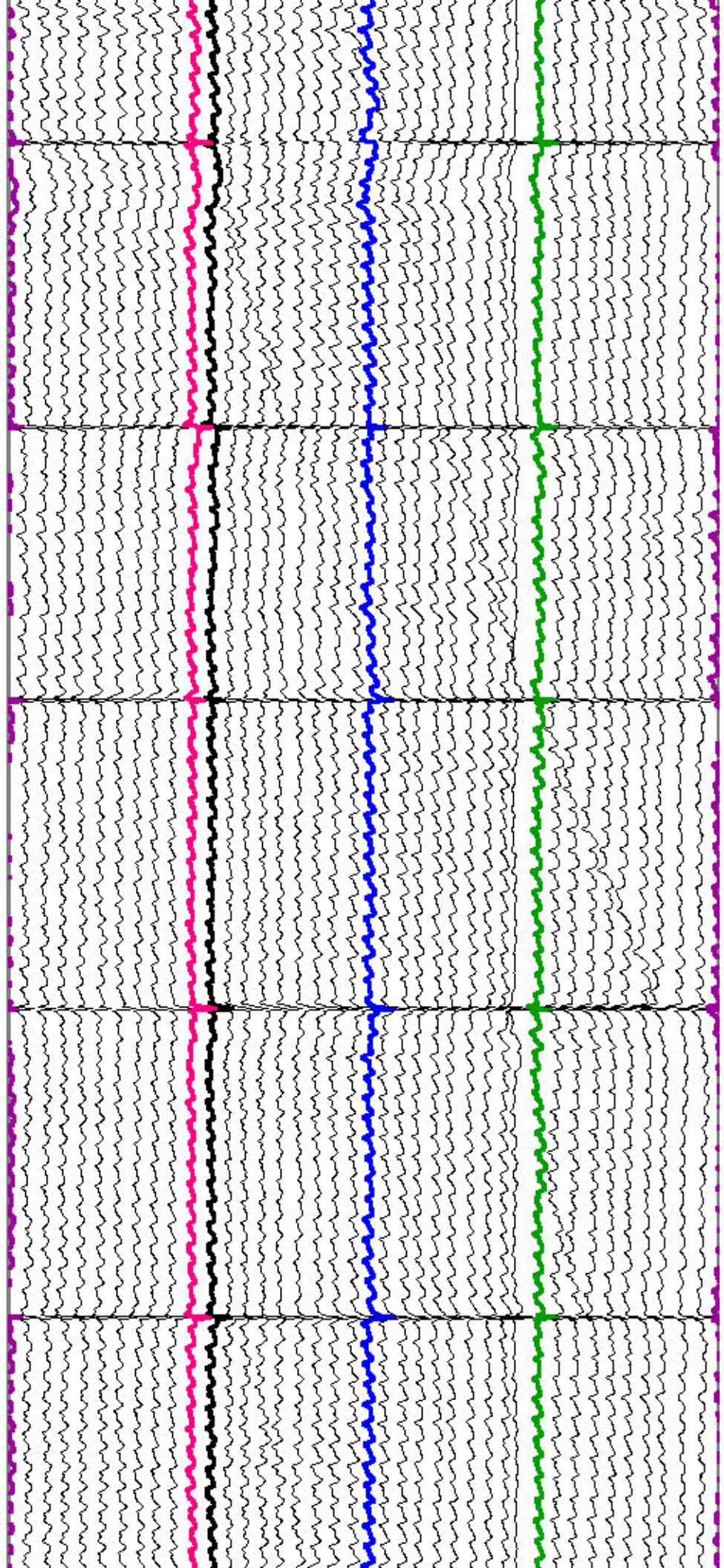


200

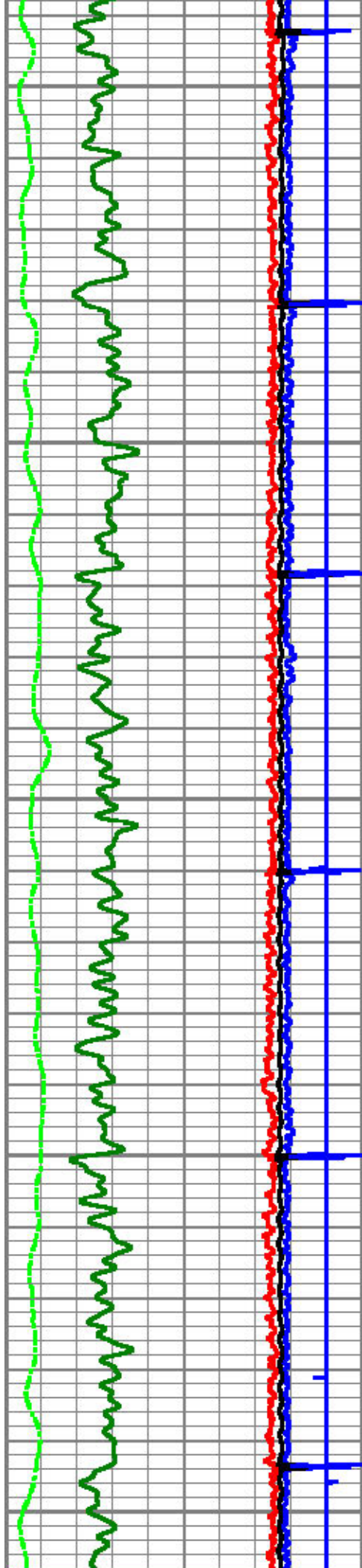
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300

350







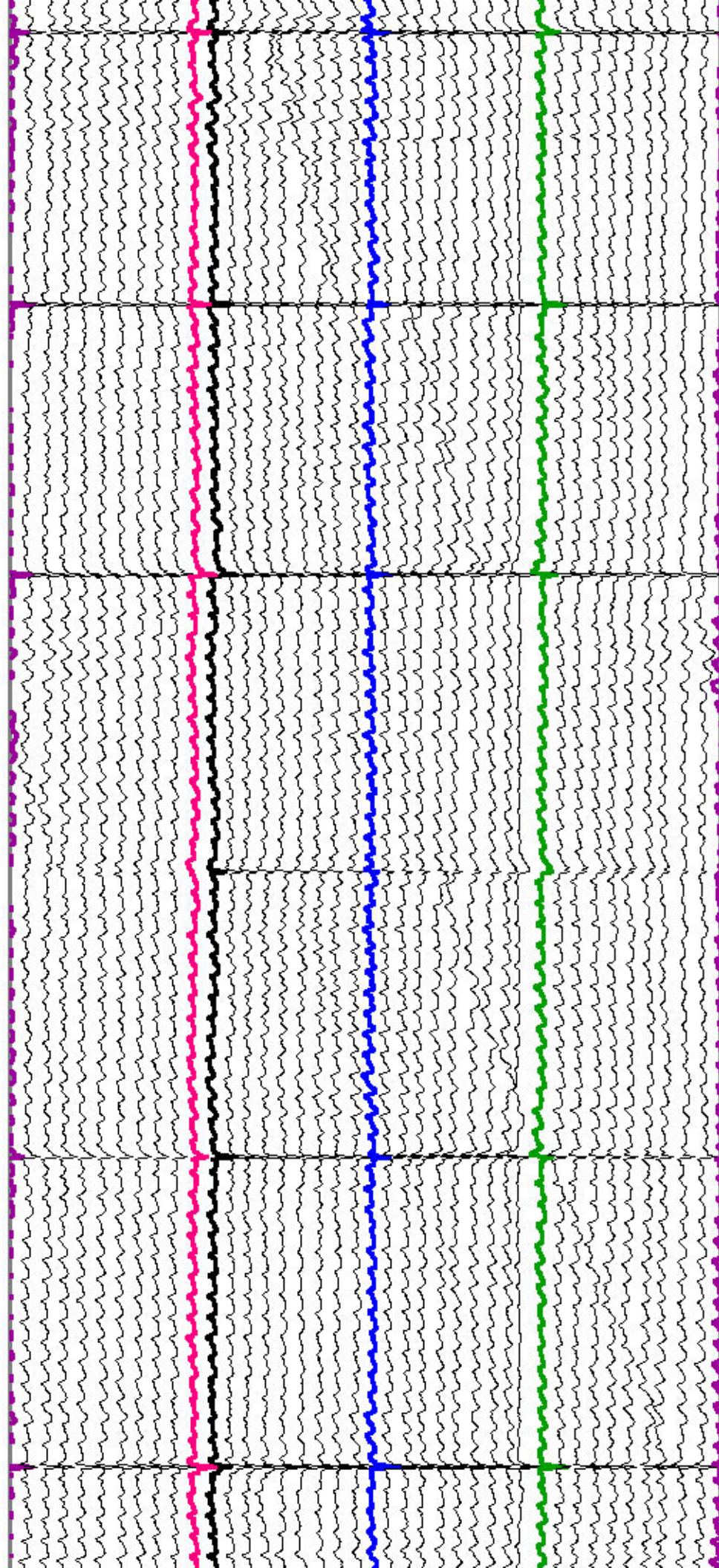
400

450

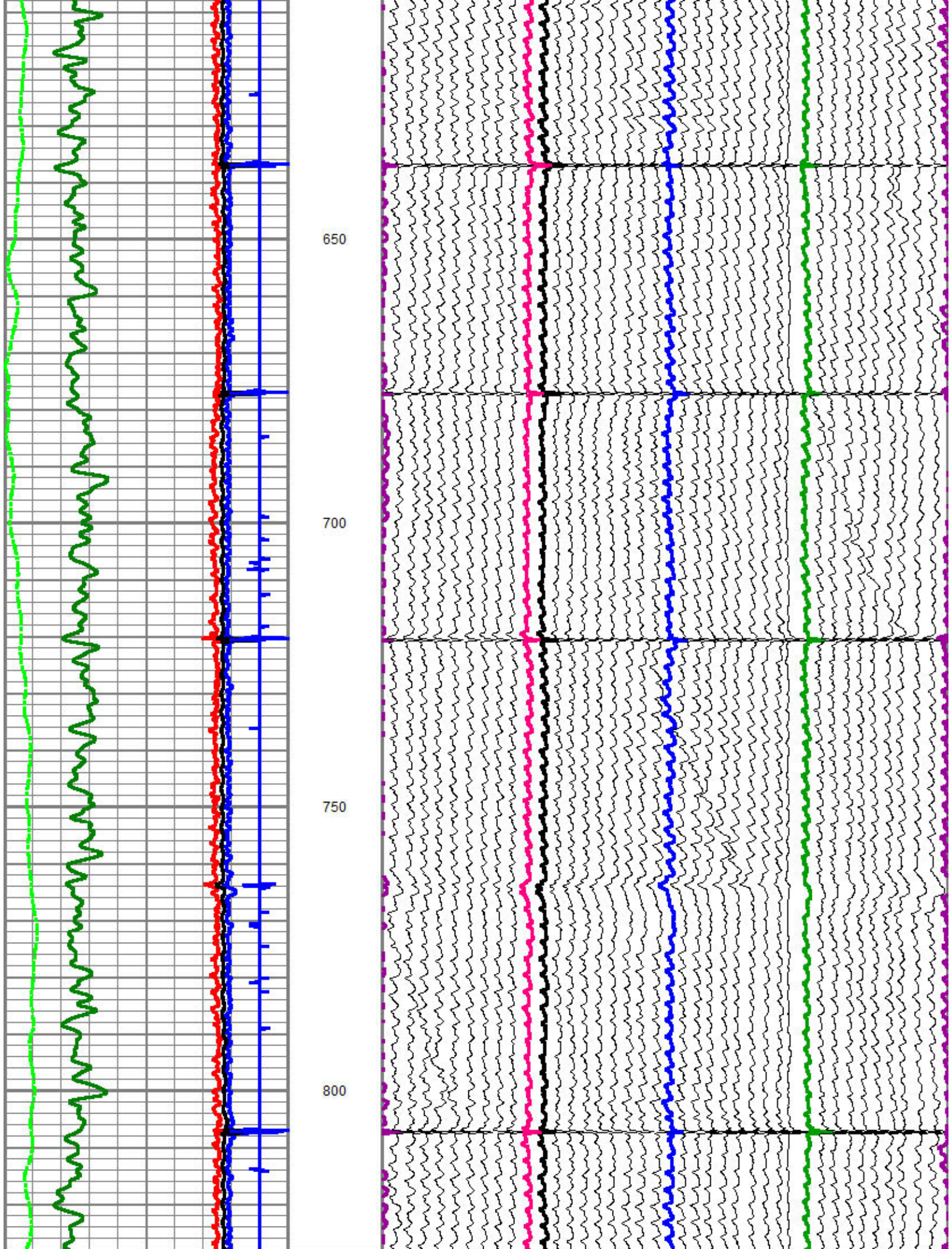
500

550

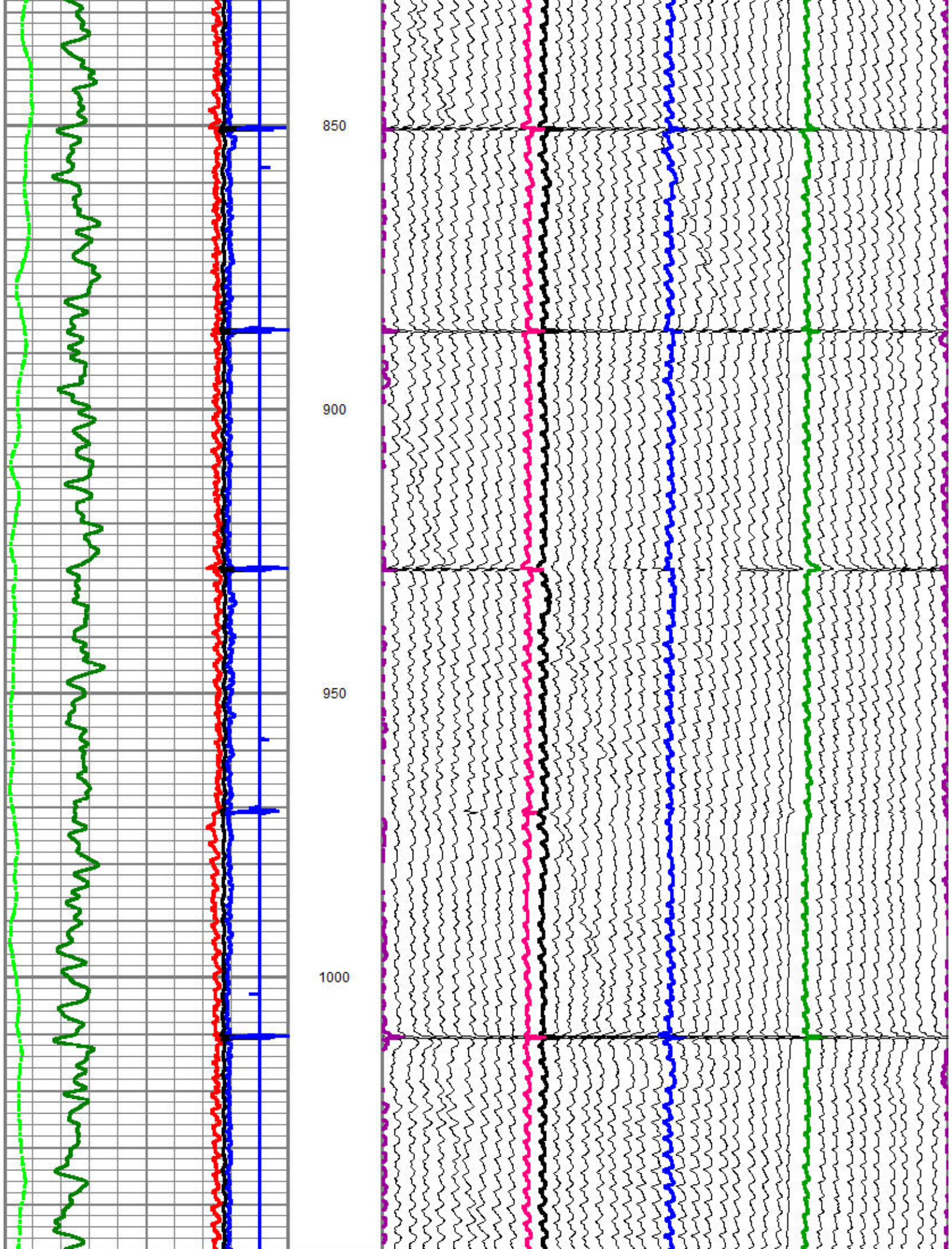
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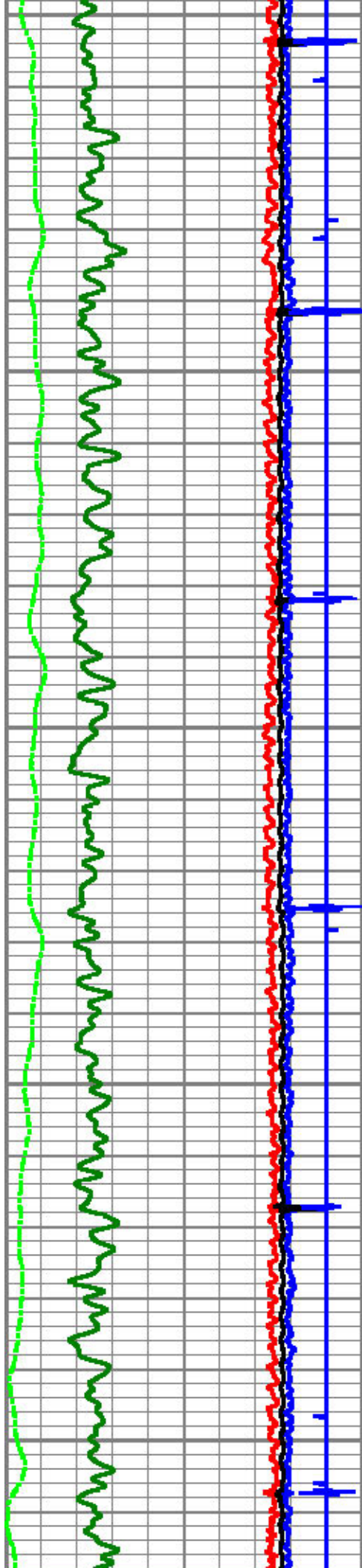












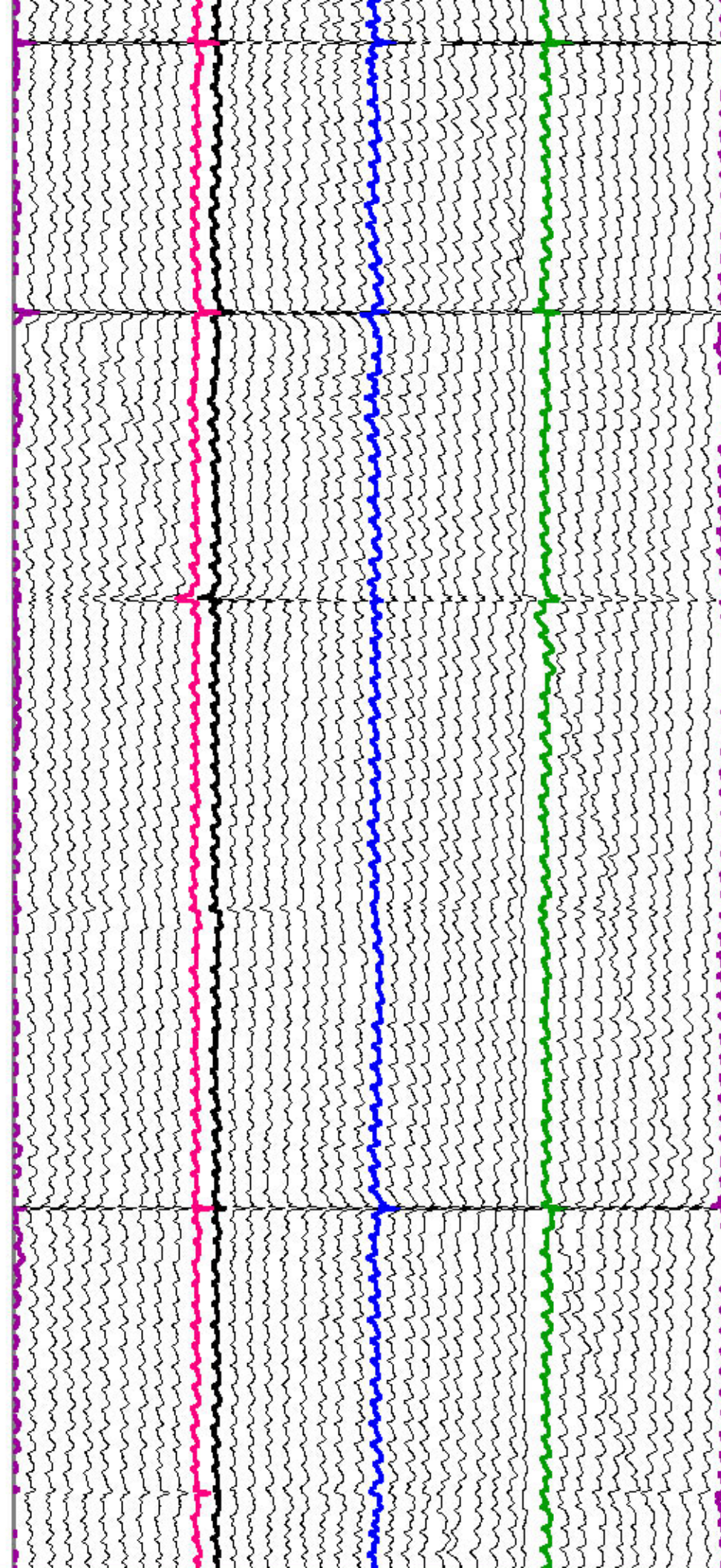
1050

1100

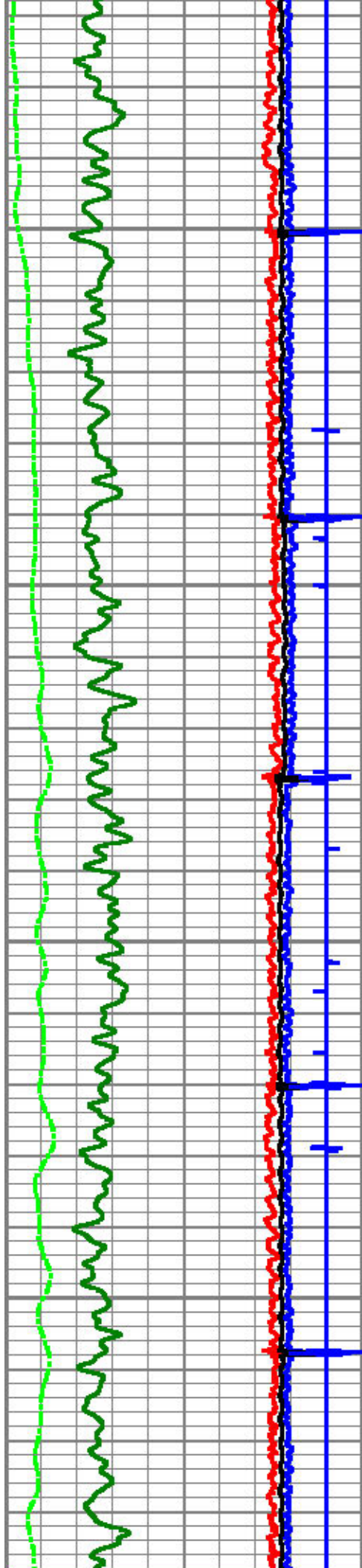
1150

1200

1250





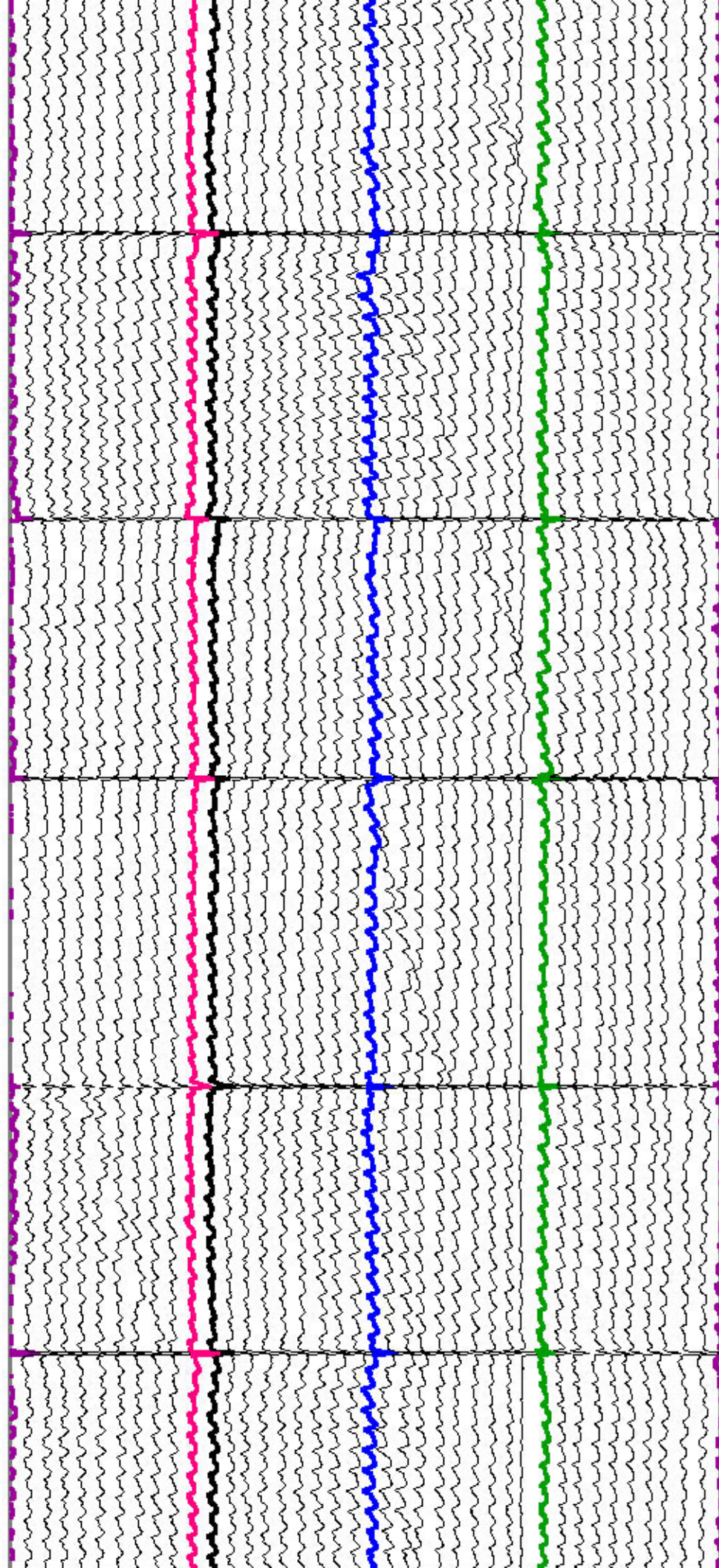


1300

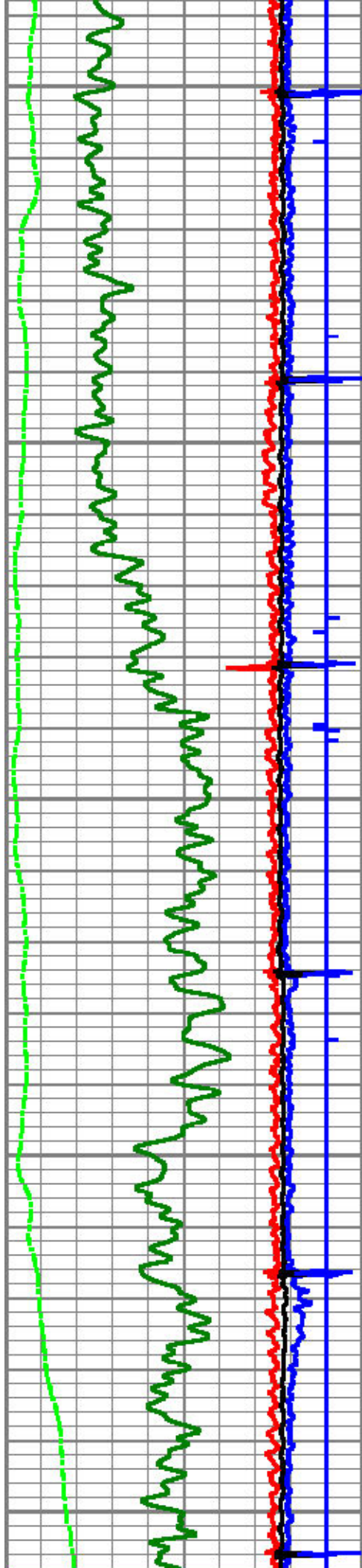
1350

1400

1450







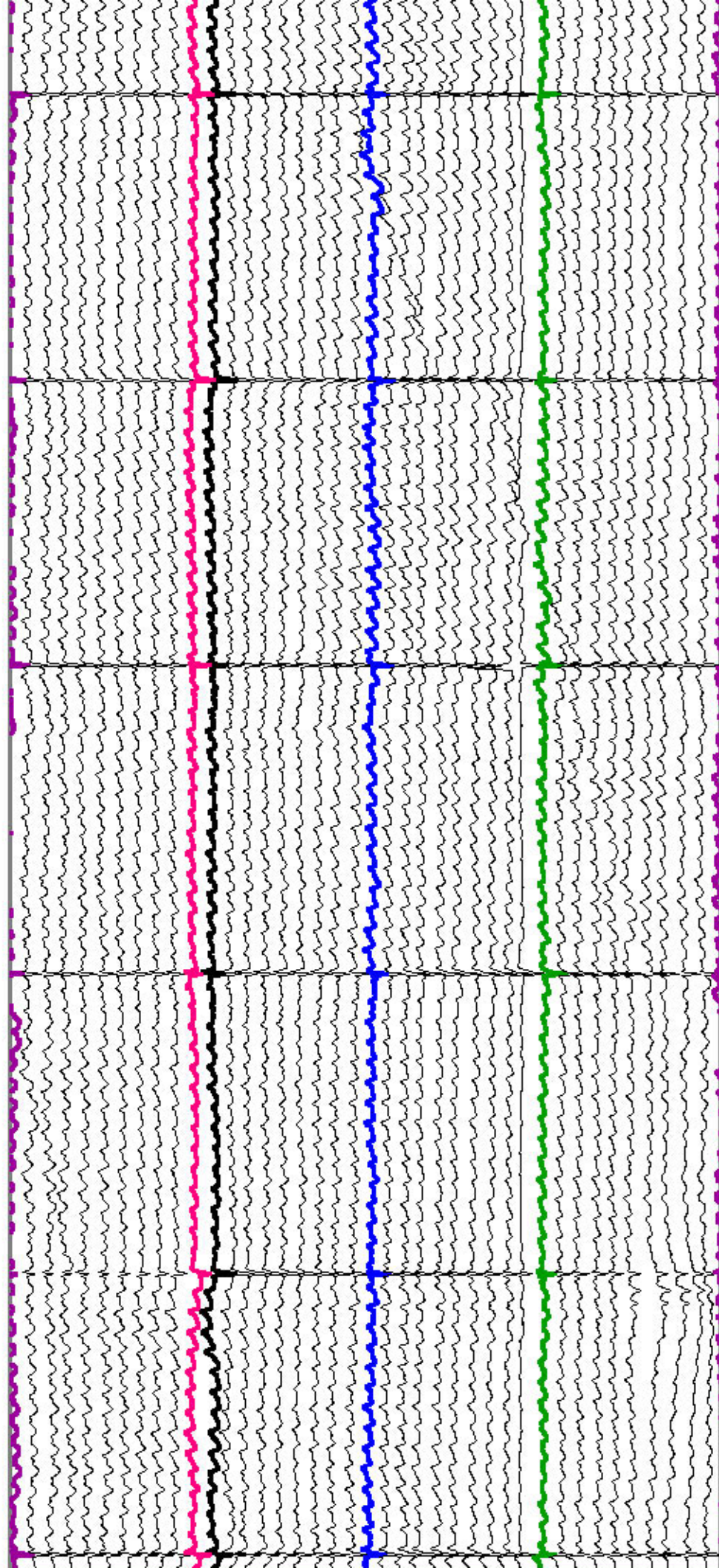
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1550

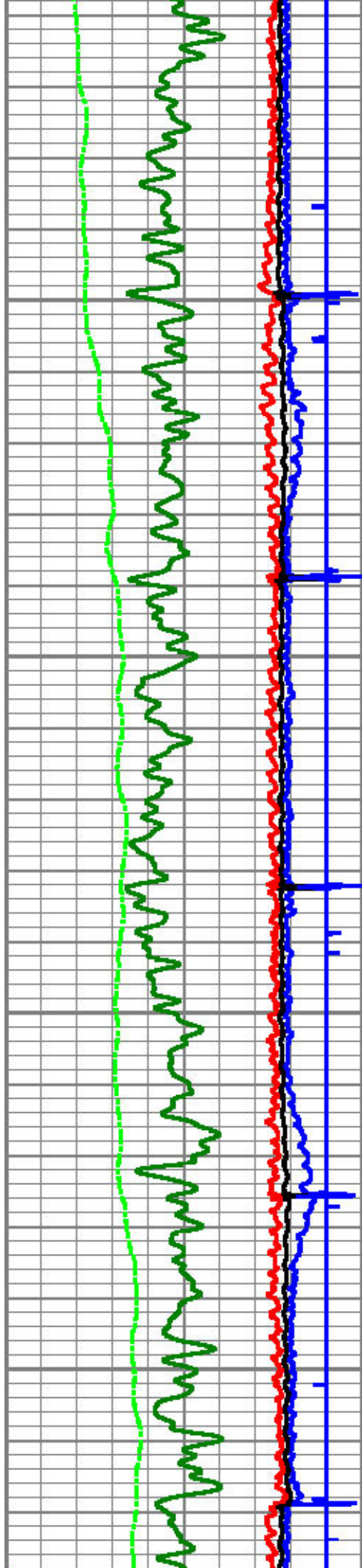
1600

1650

1700





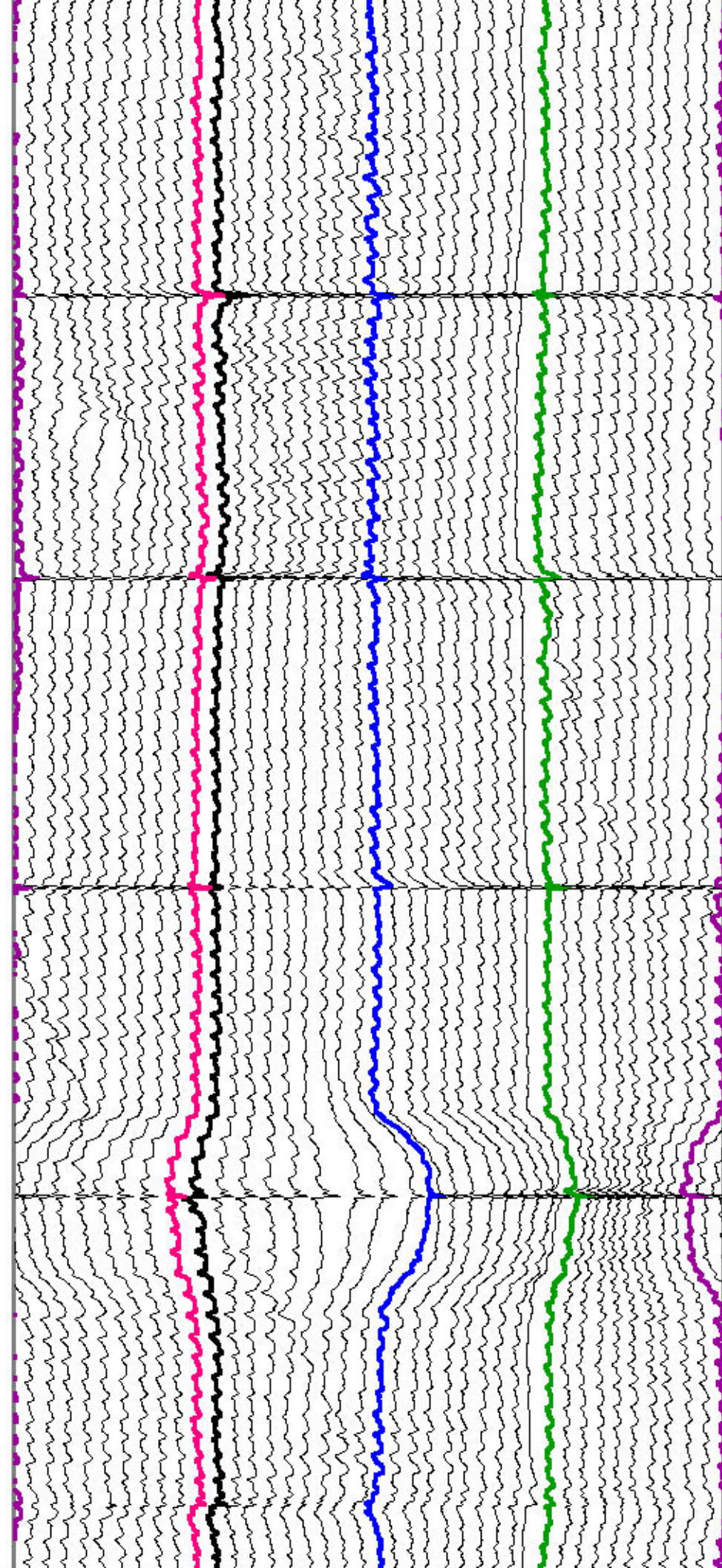


1750

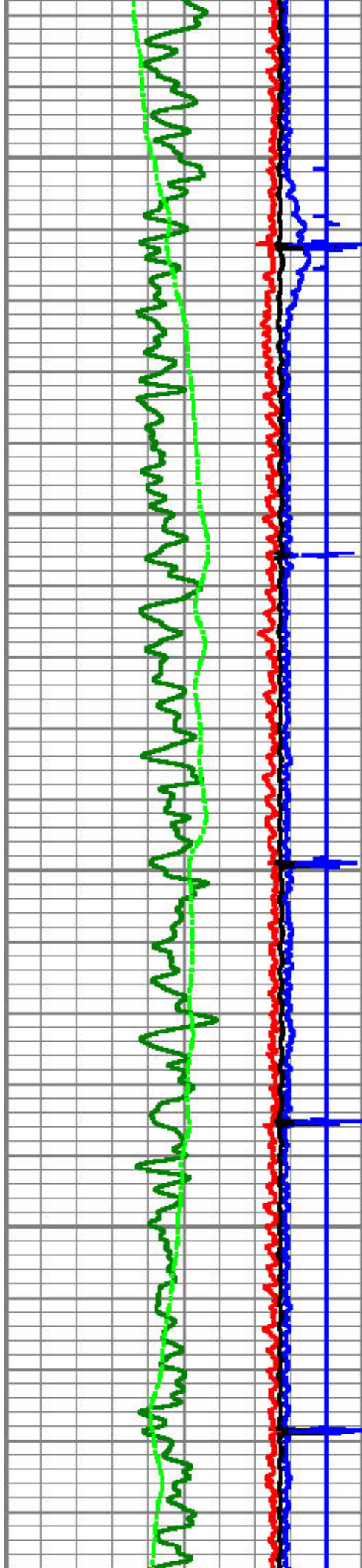
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1850

1900





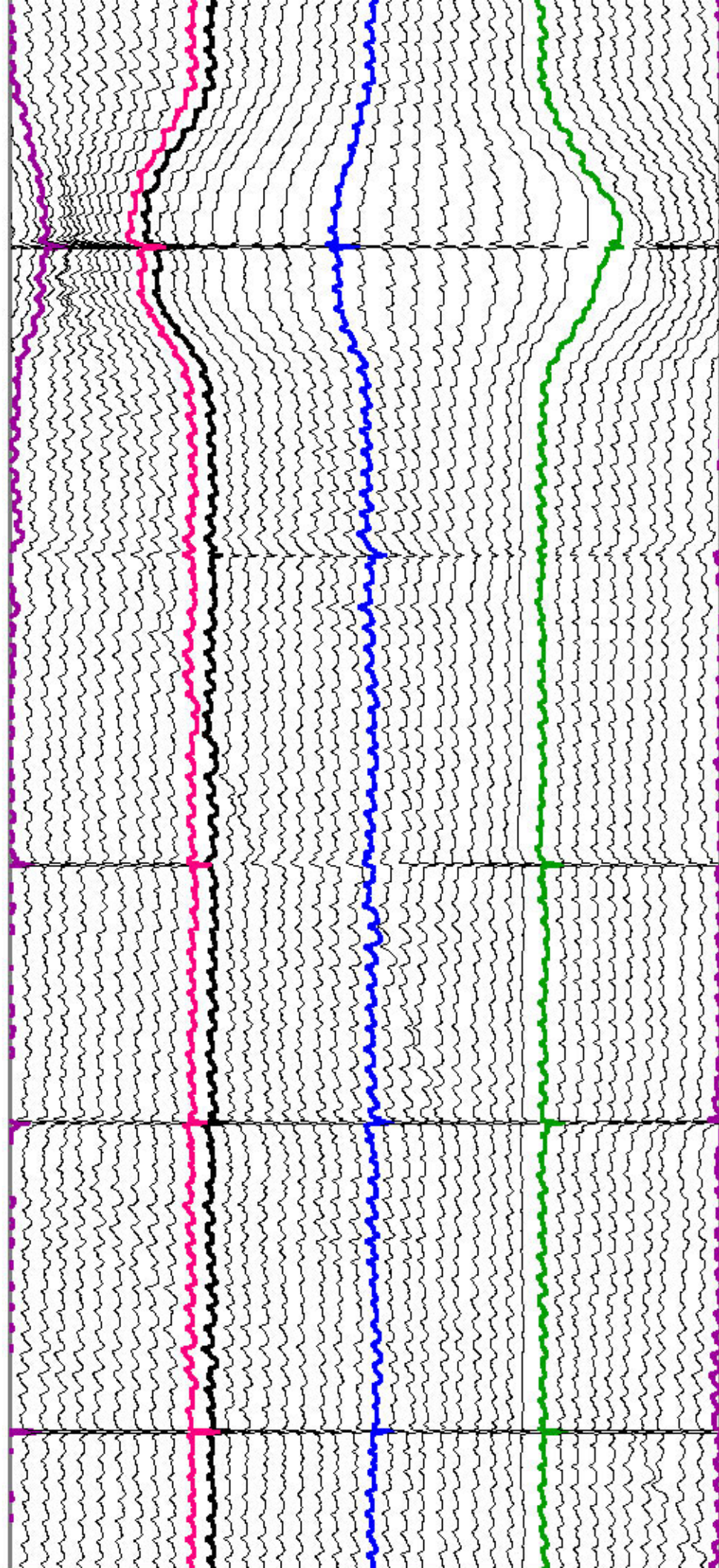


1950

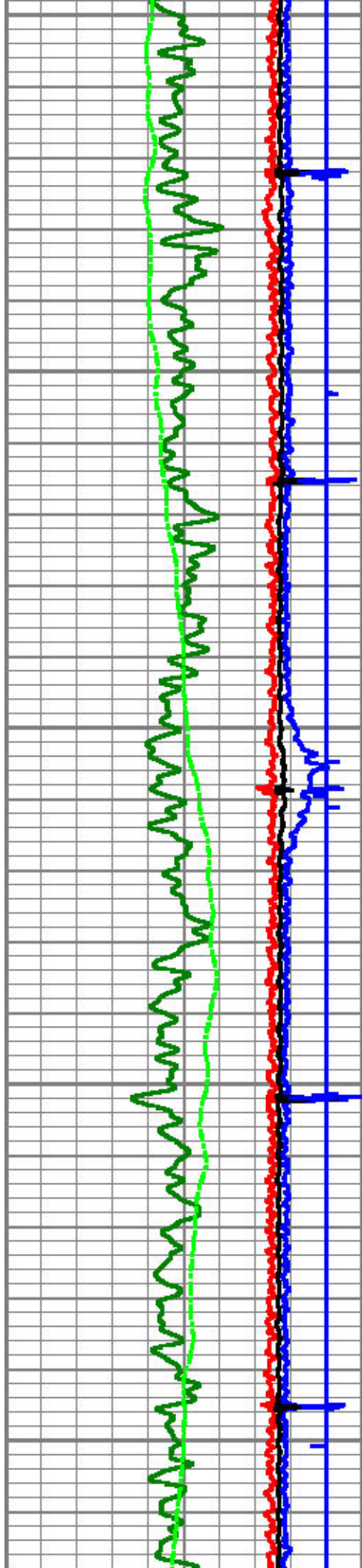
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2050

2100







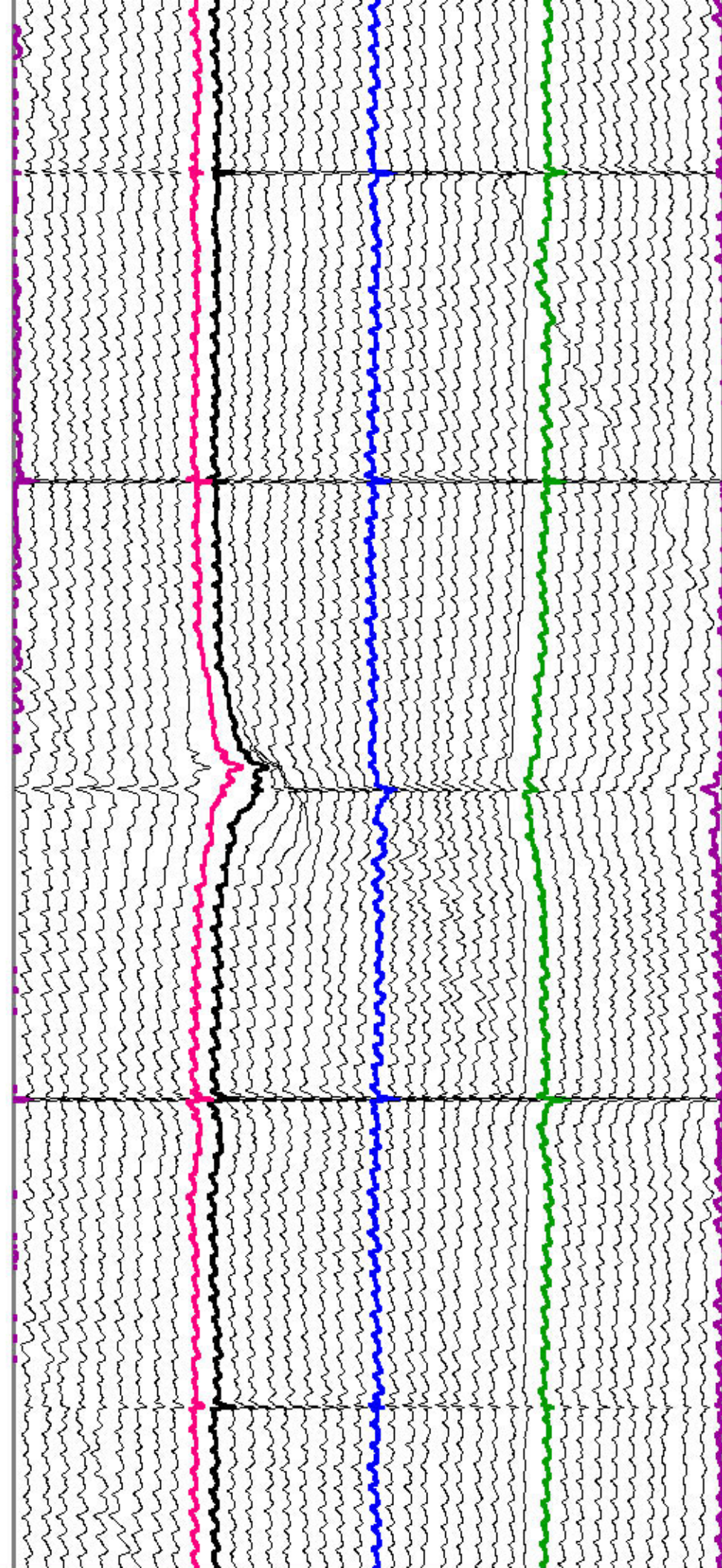
2150

2200

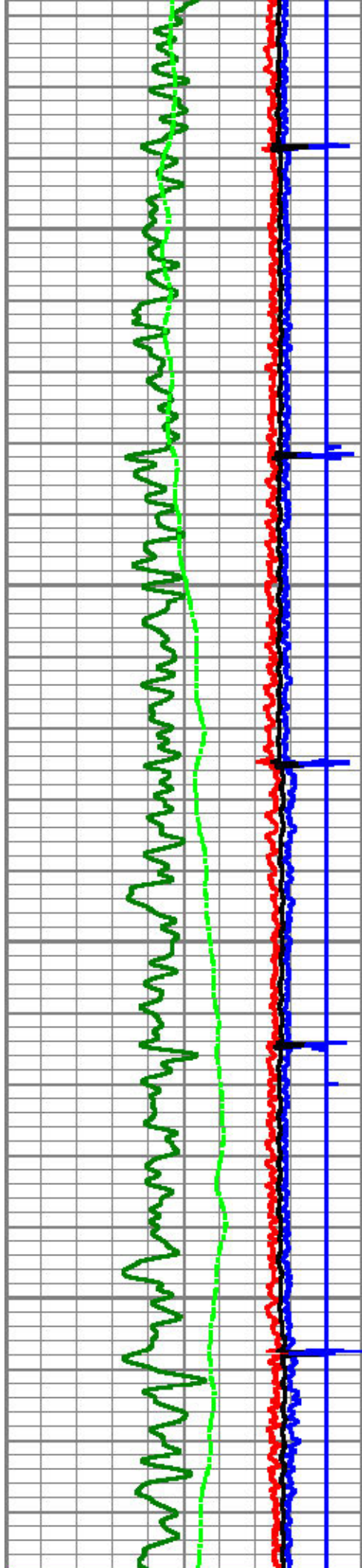
2250

2300

2350





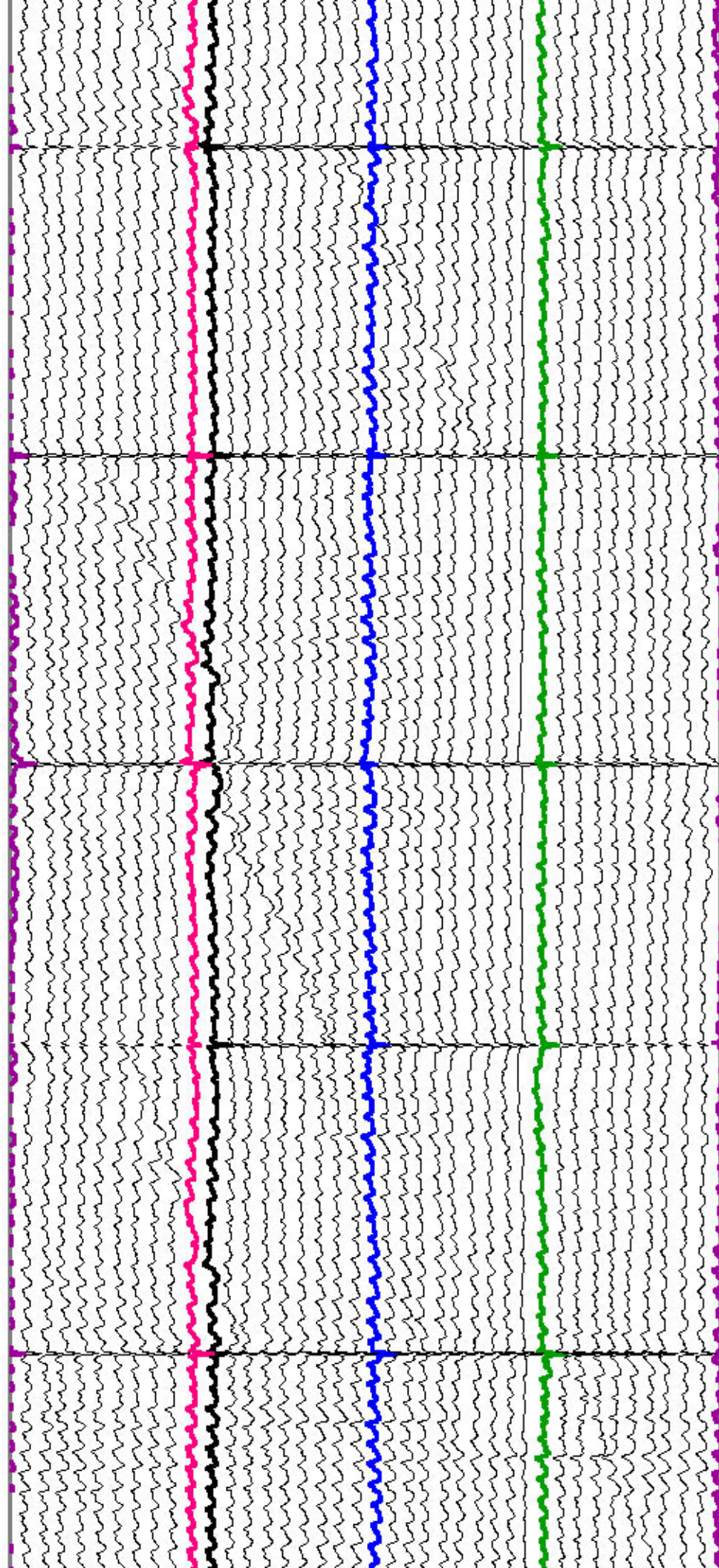


2400

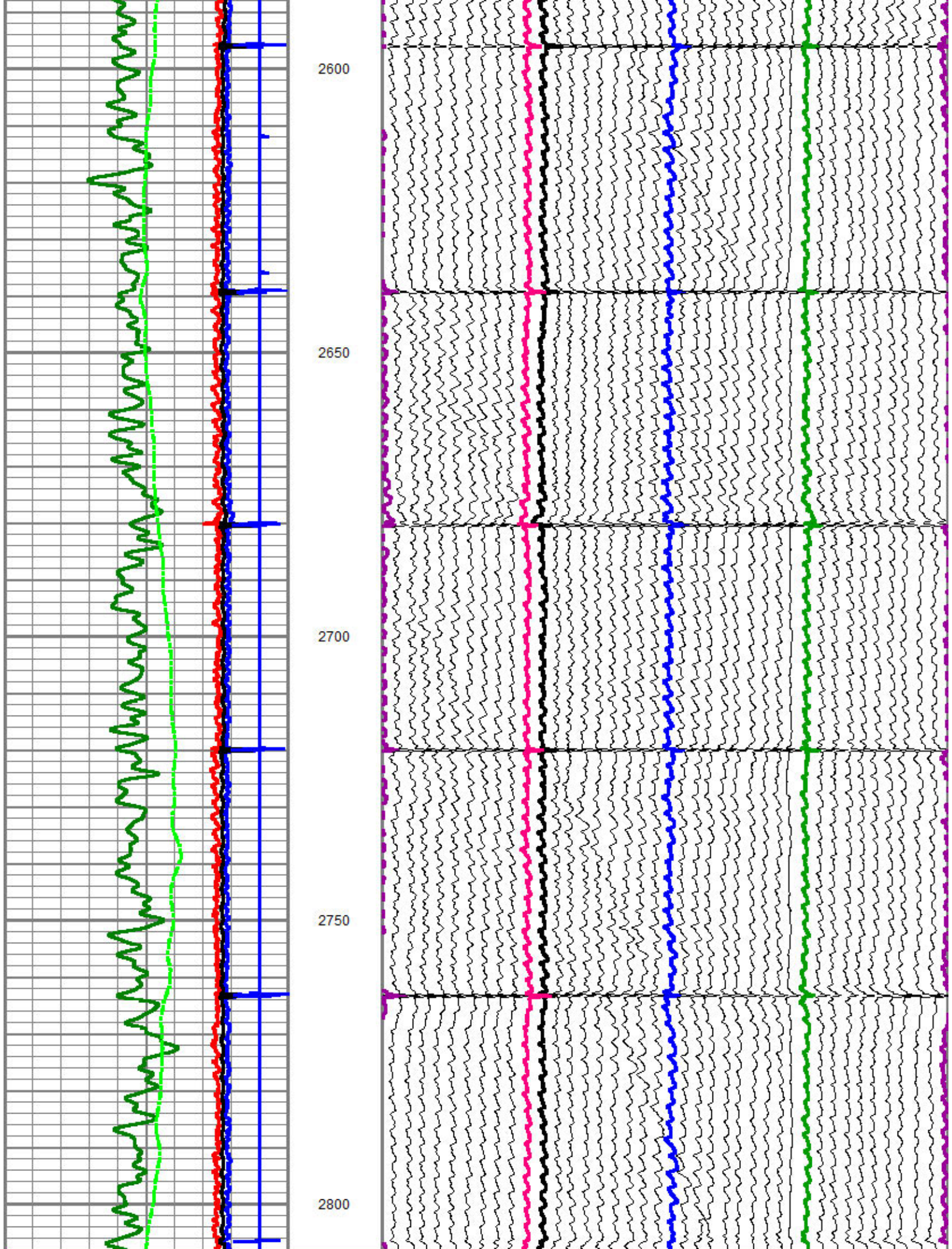
2450

2500

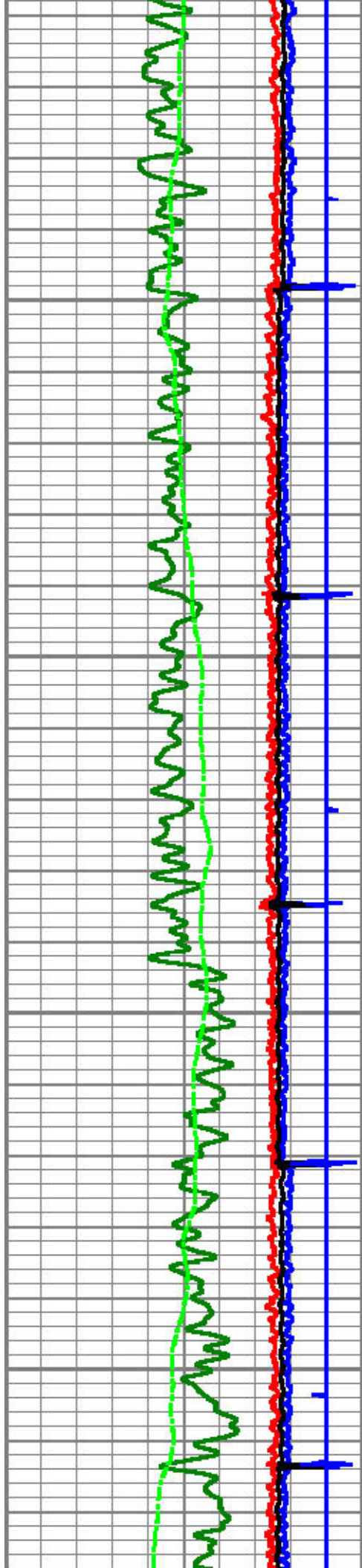
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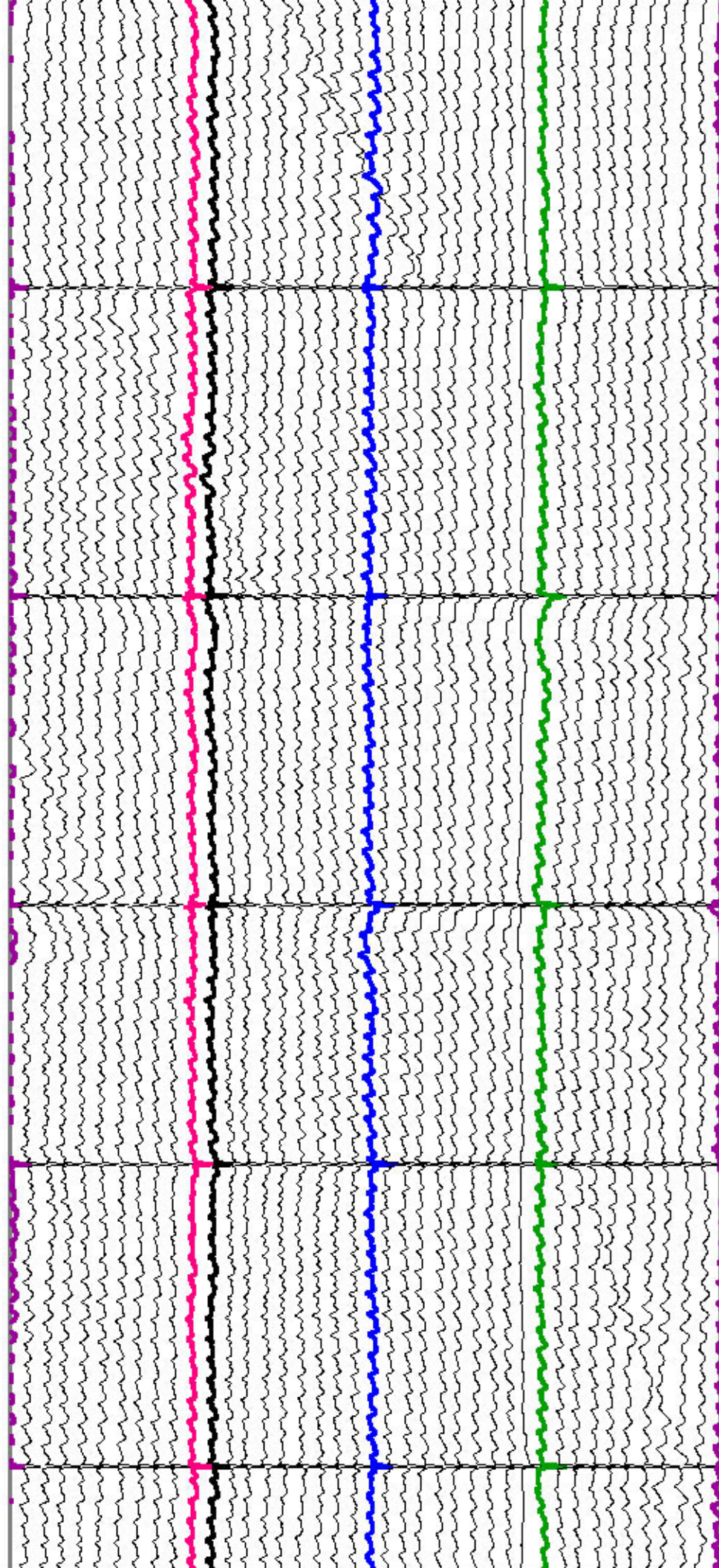


2850

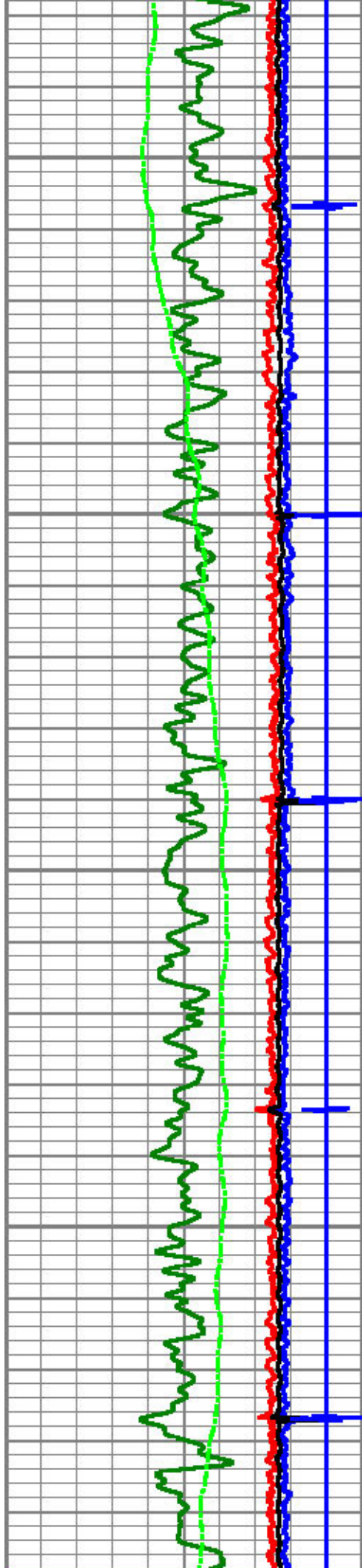
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2950

3000





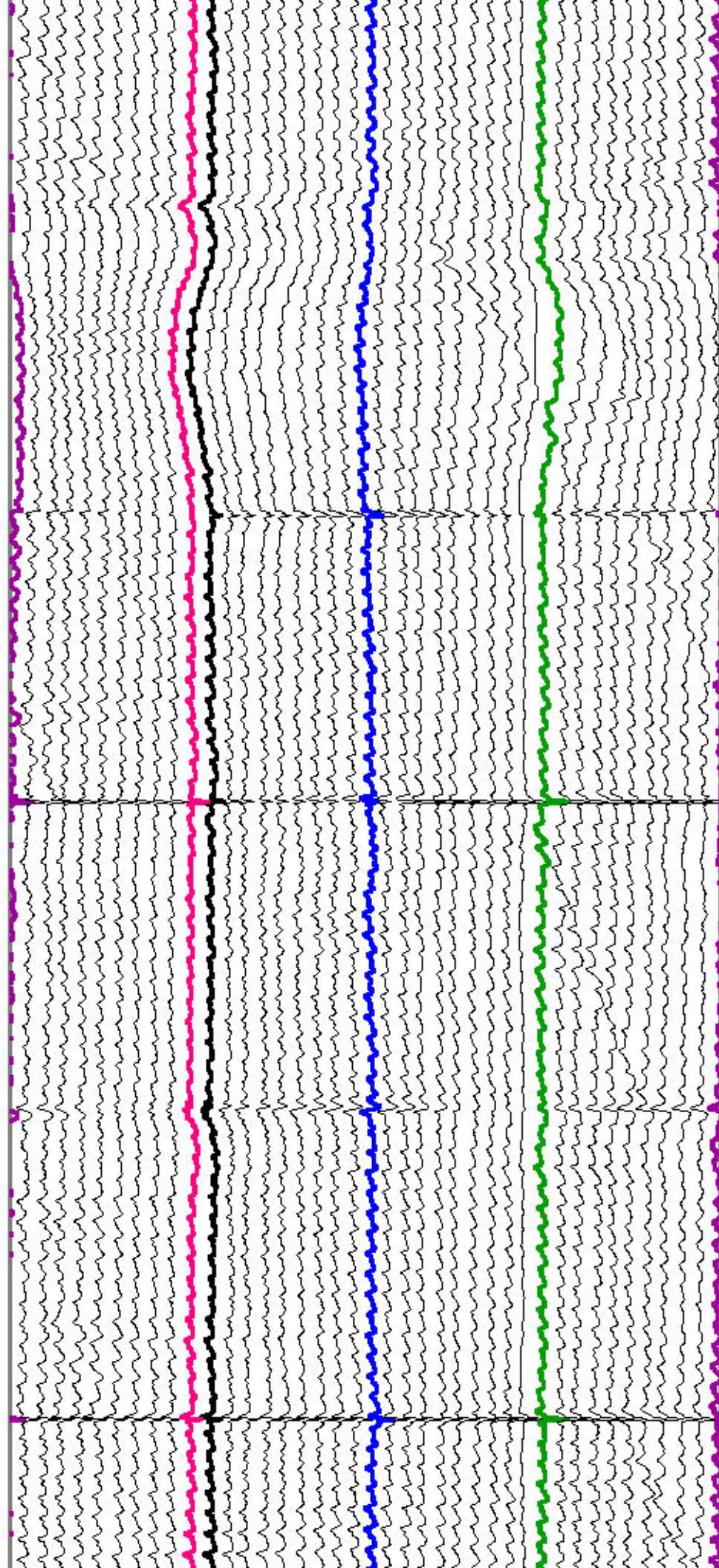


3050

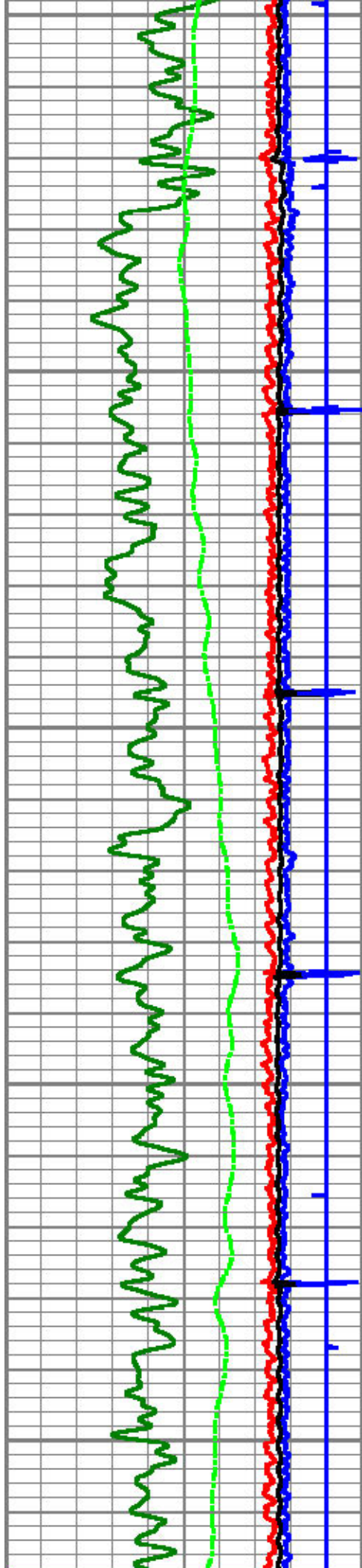
3100

3150

3200







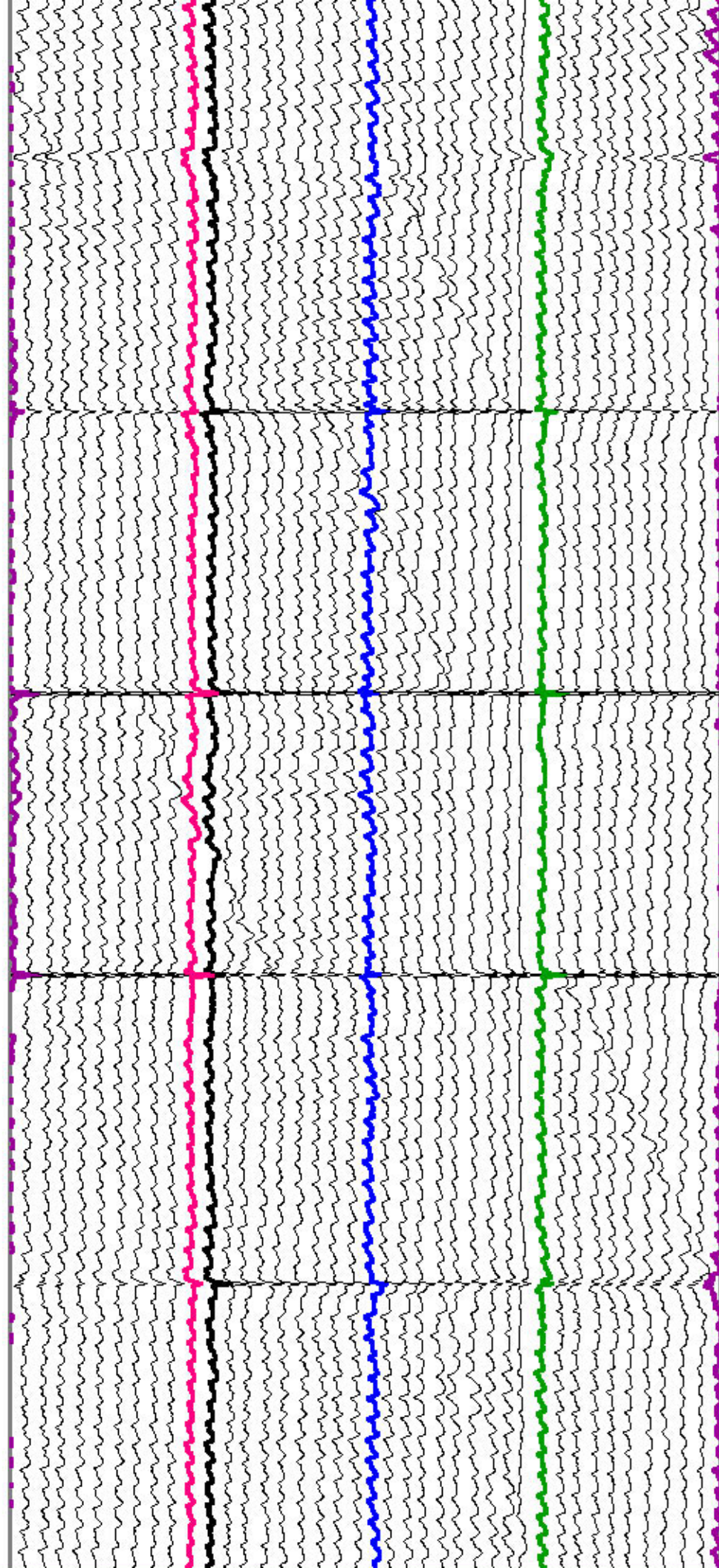
3250

3300

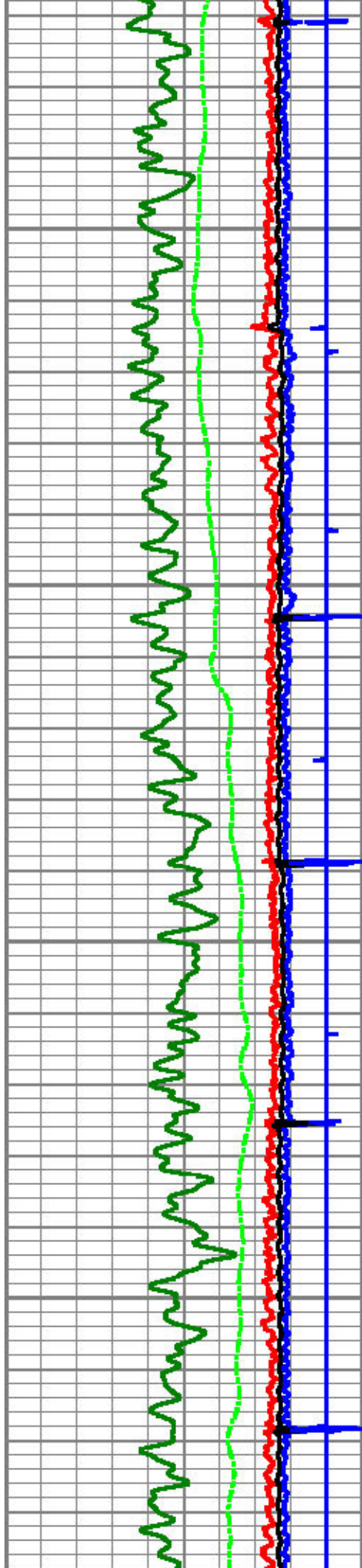
3350

3400

3450





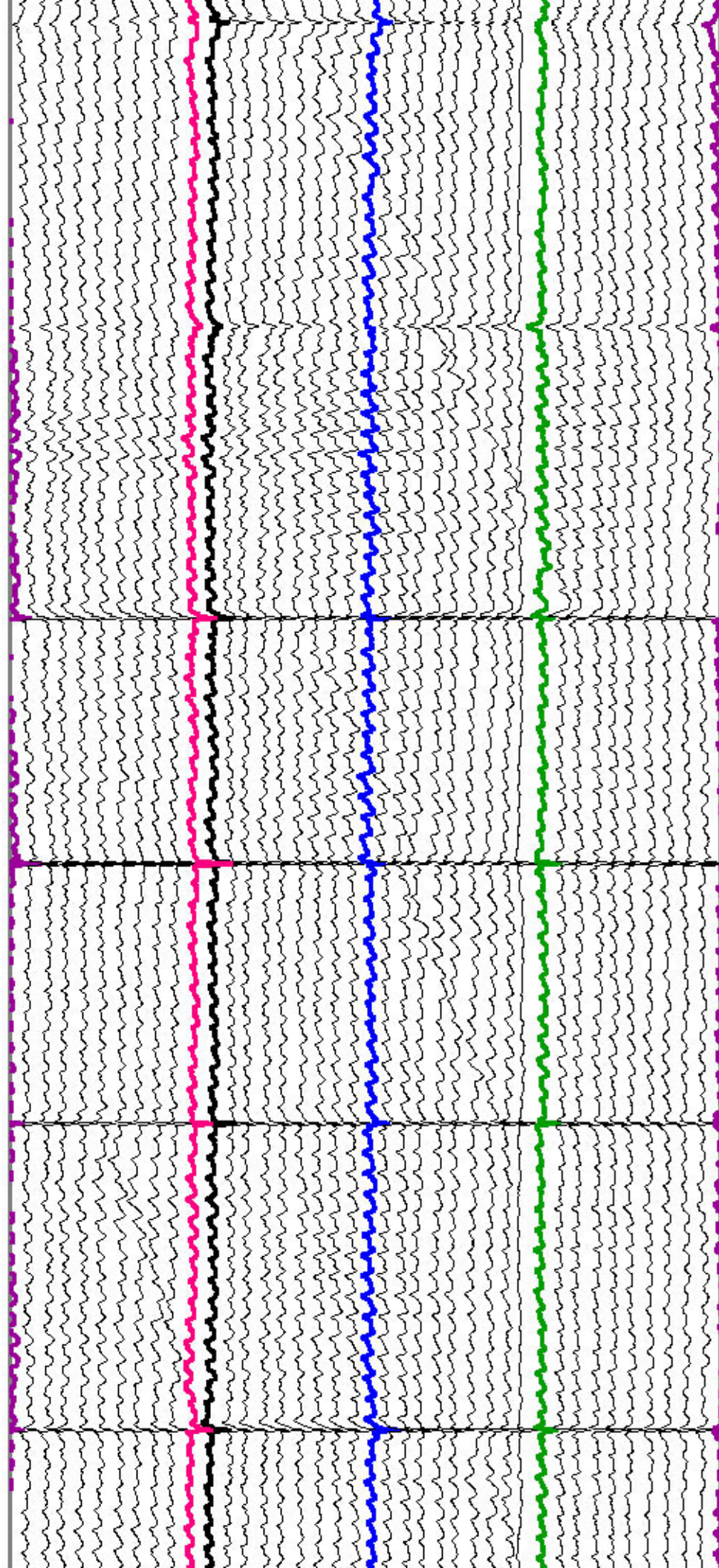


3500

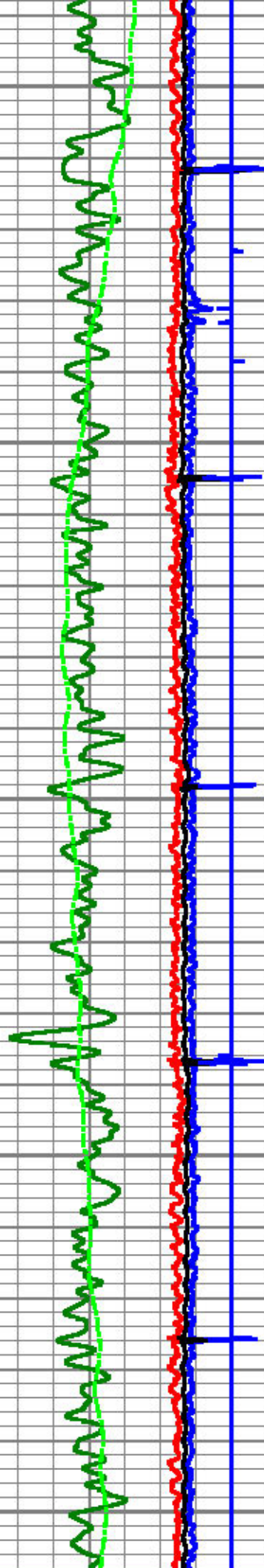
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3600

3650







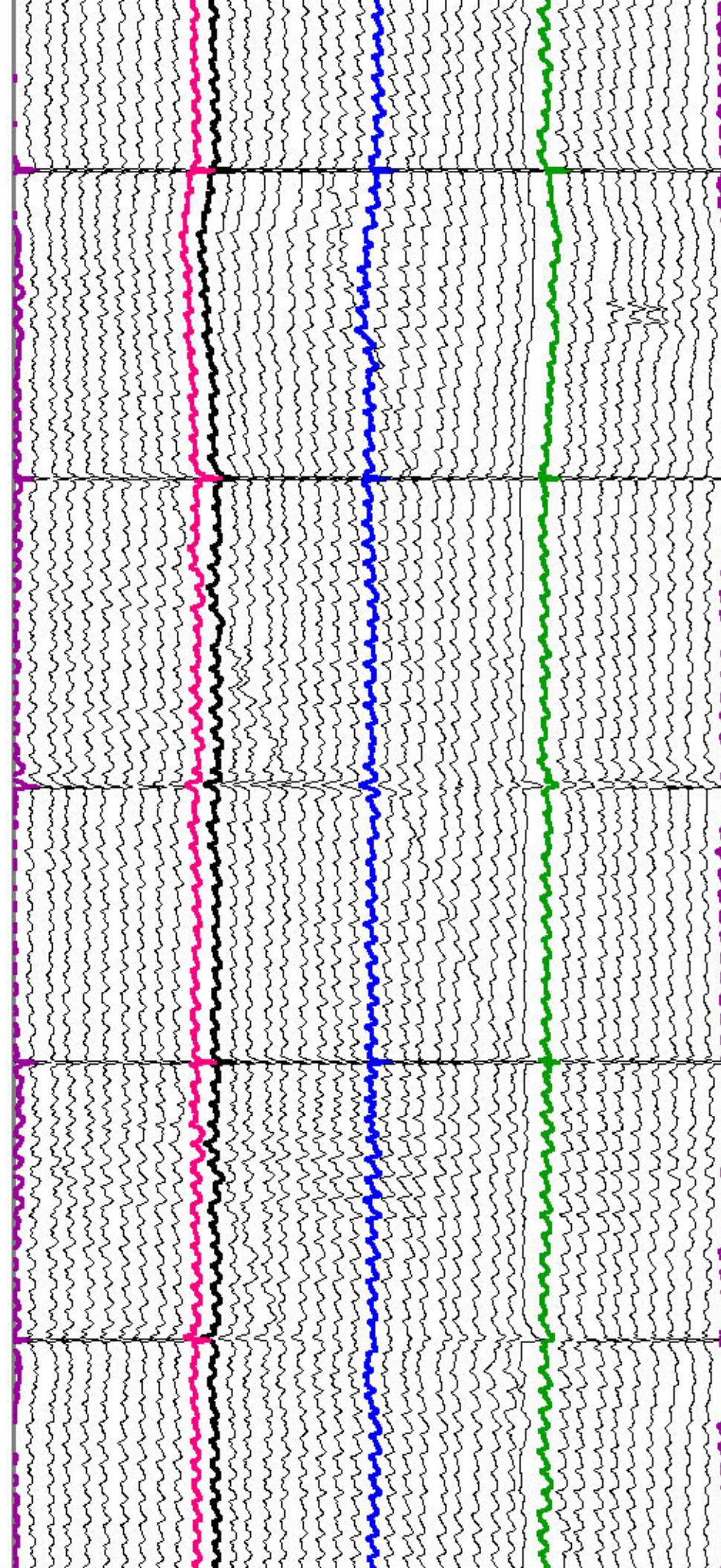
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3750

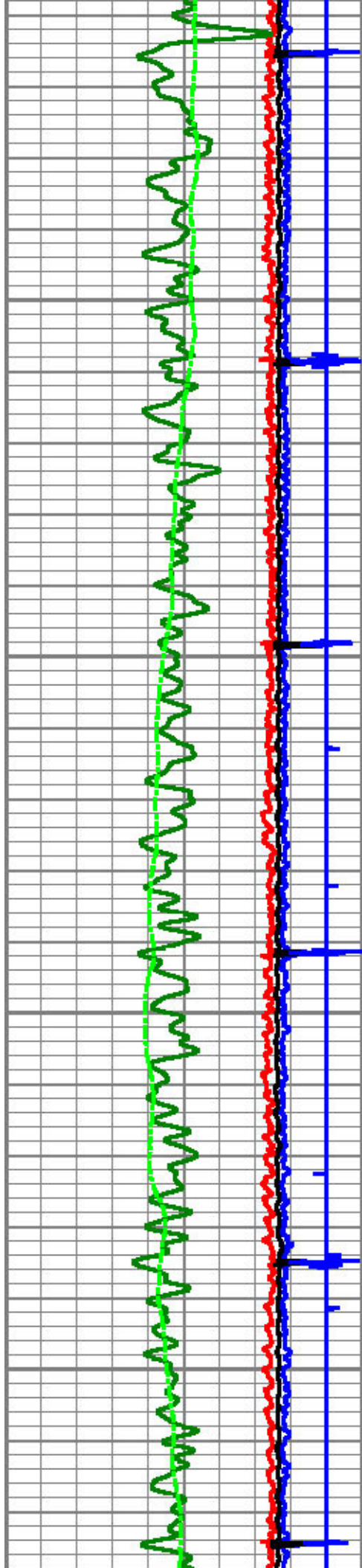
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3850

3900





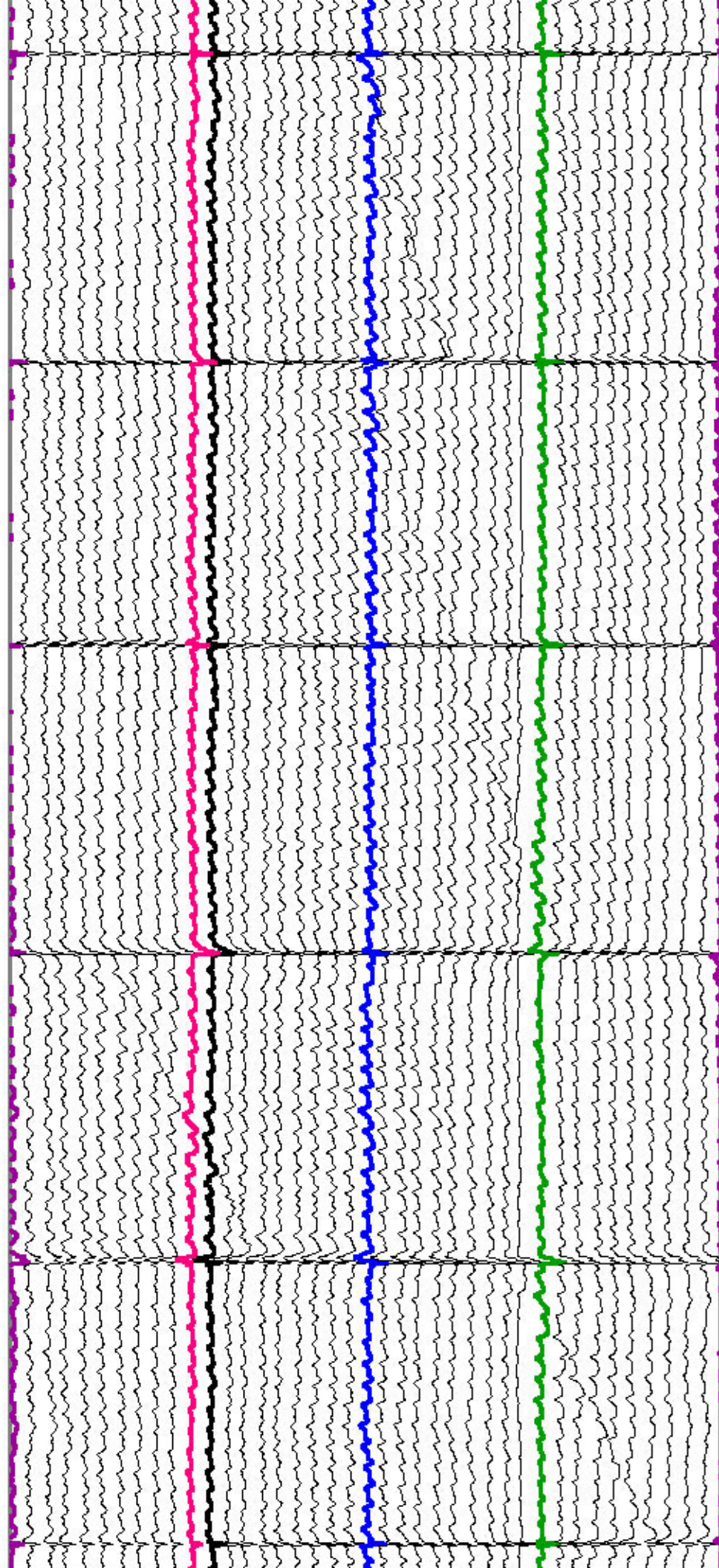


3950

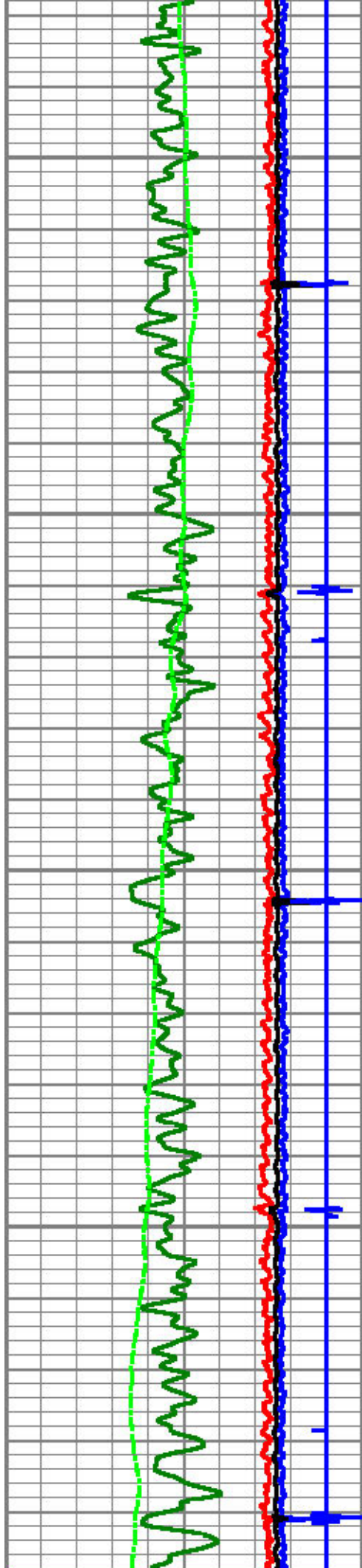
4000

4050

4100





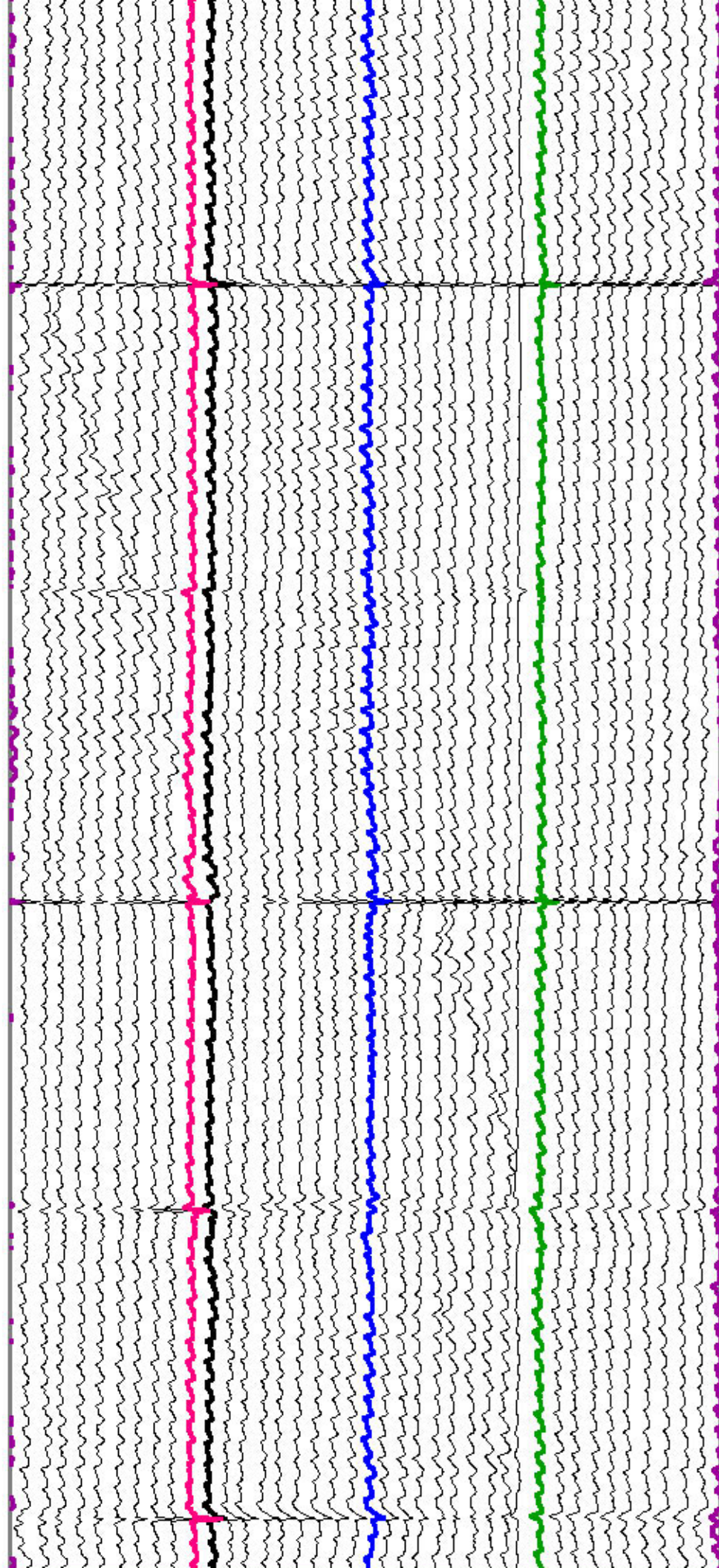


4150

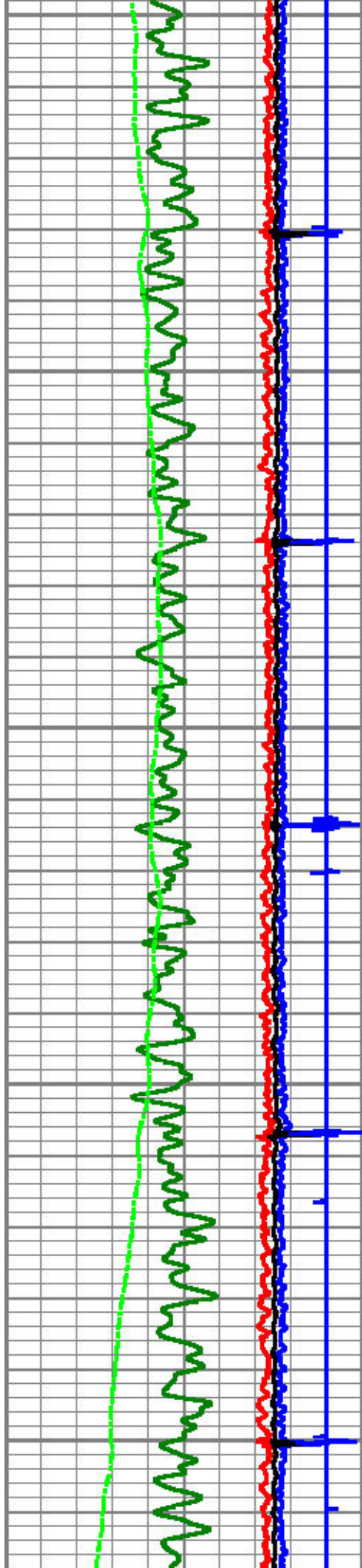
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4250

4300







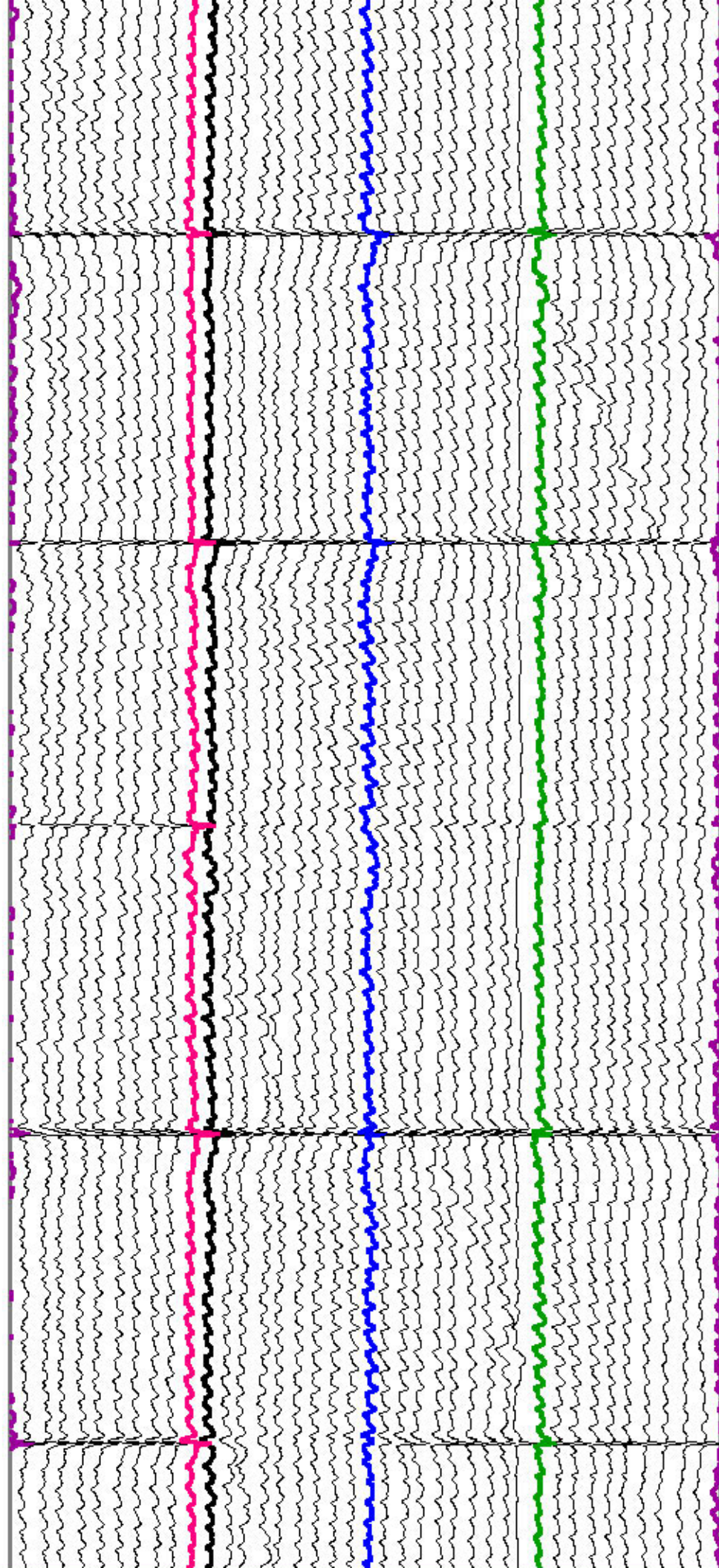
4350

4400

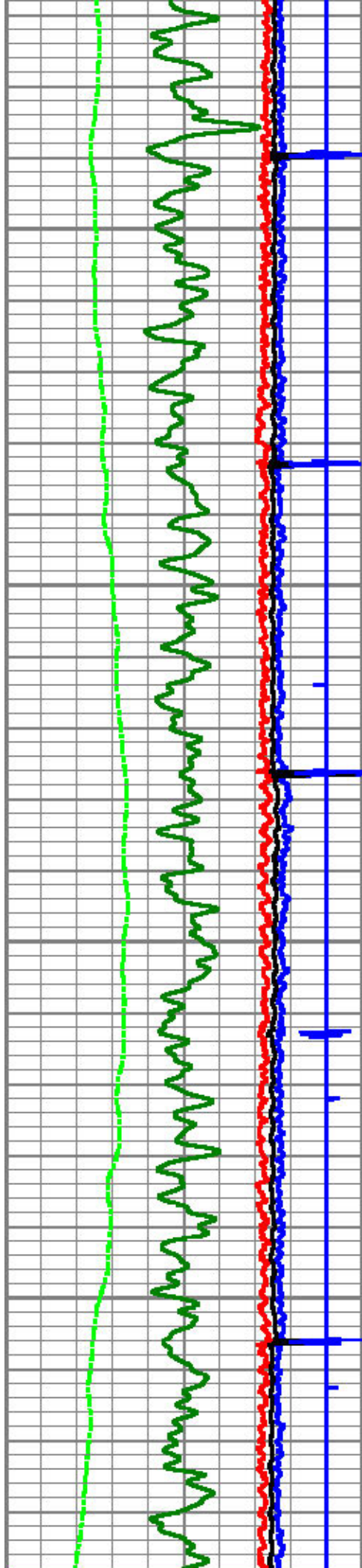
4450

4500

4550





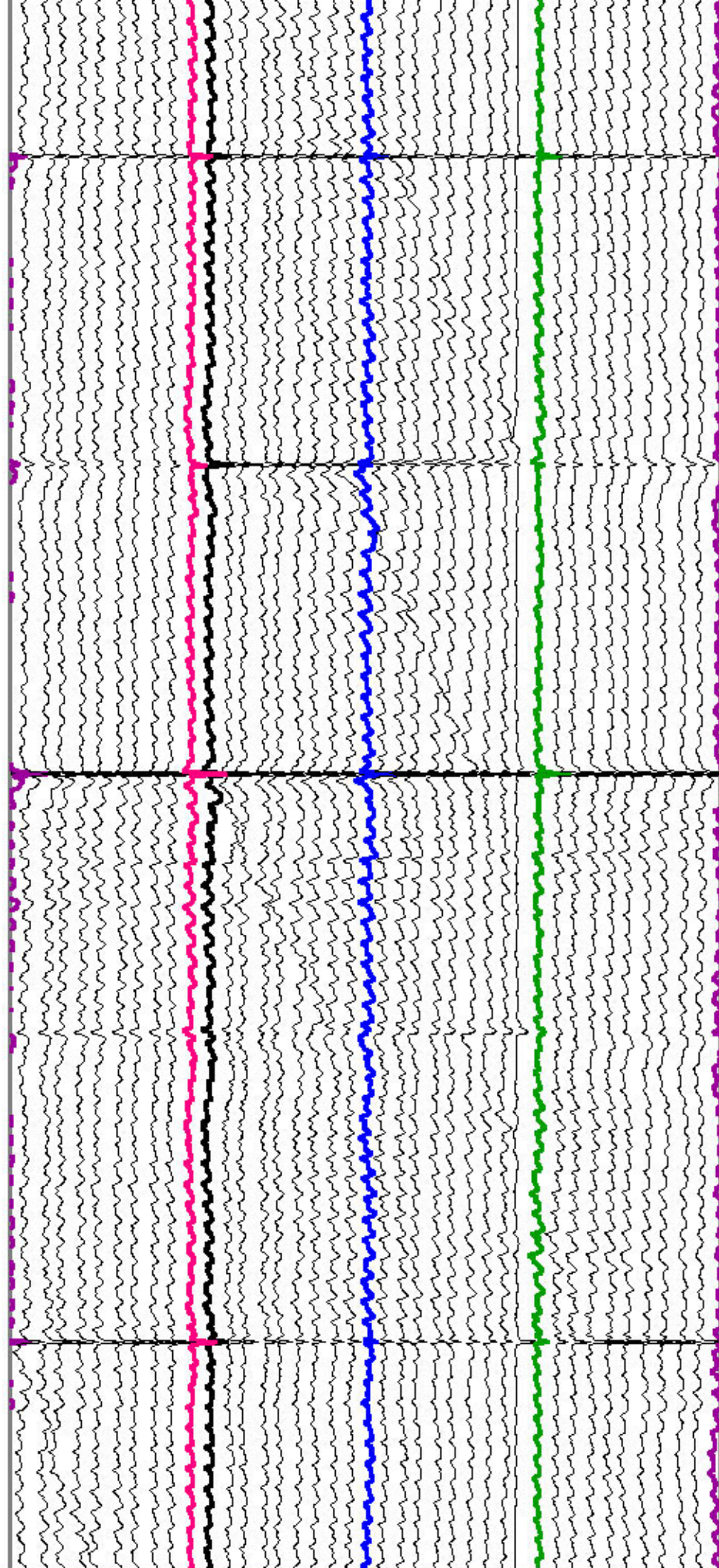


4600

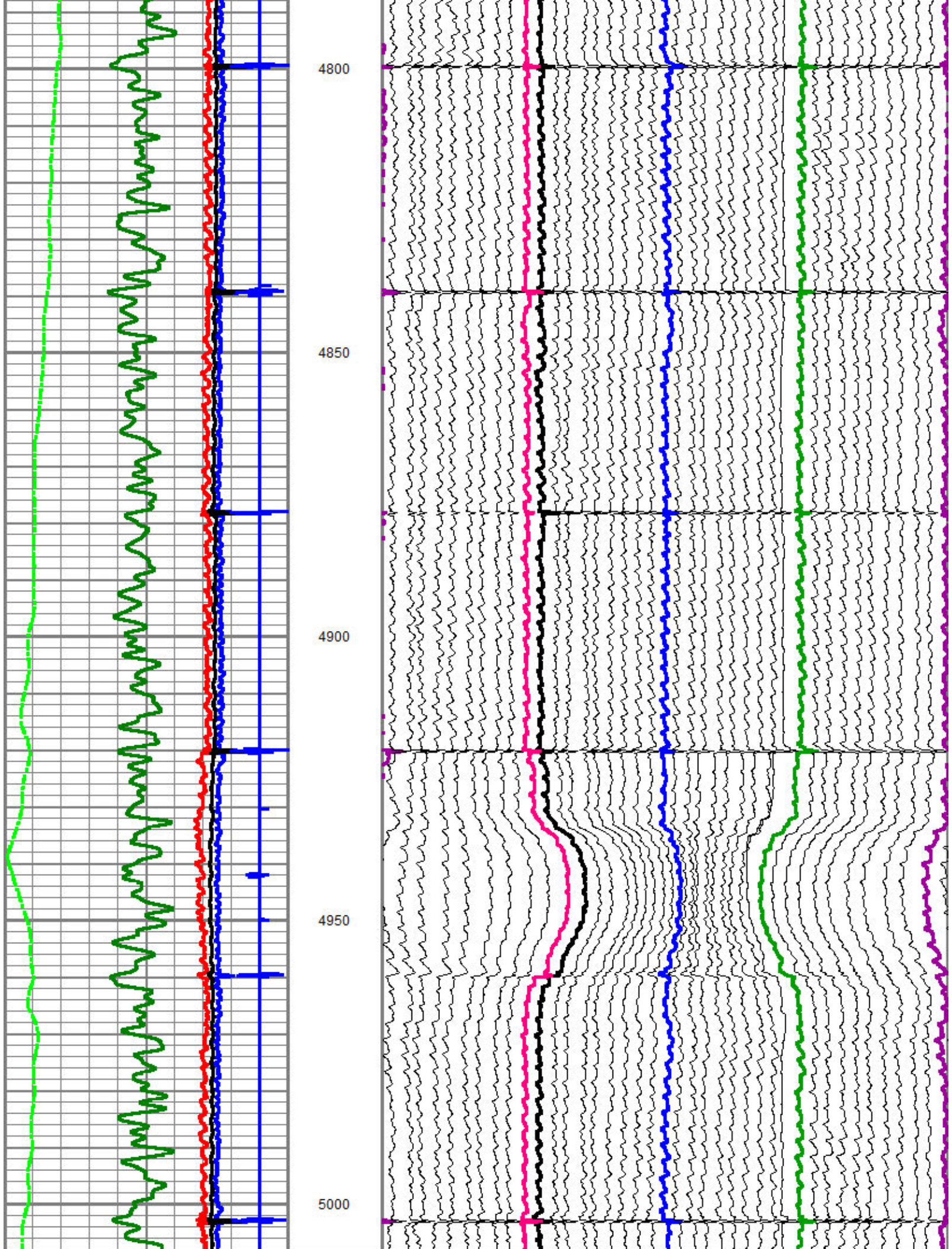
4650

4700

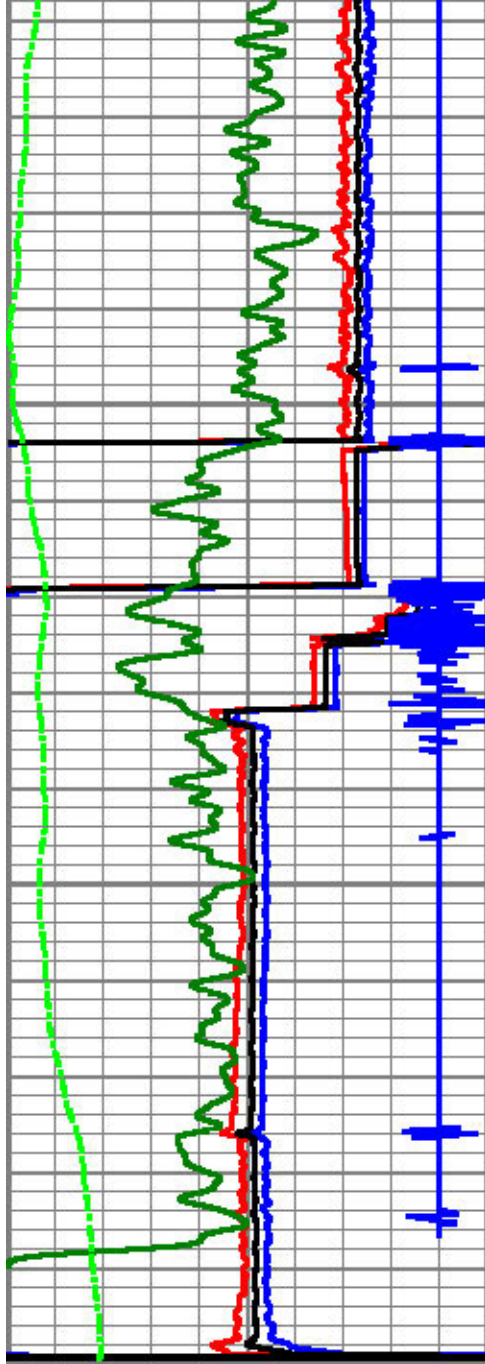
4750









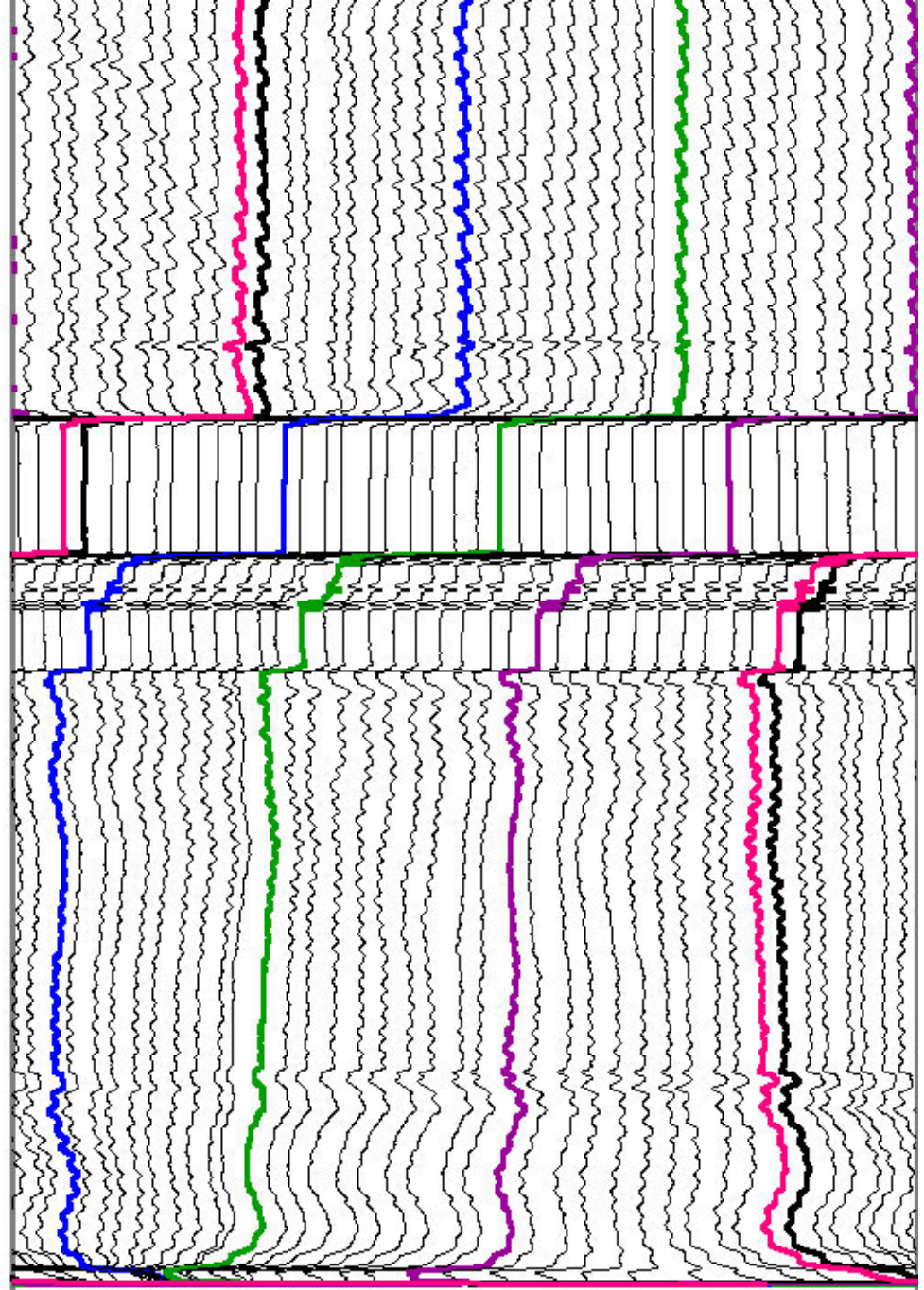


4.5	IDMX (in)	5.5
4.5	IDMN (in)	5.5
4.5	IDAV (in)	5.5
0	GR (GAPI)	150
9	CCL	-1
0	DEVI (°)	20

5050

5100

5150



2.4375	R01 (in)	4.9375
1.875	R10 (in)	4.375
1.25	R20 (in)	3.75
0.625	R30 (in)	3.125
0	R40 (in)	2.5



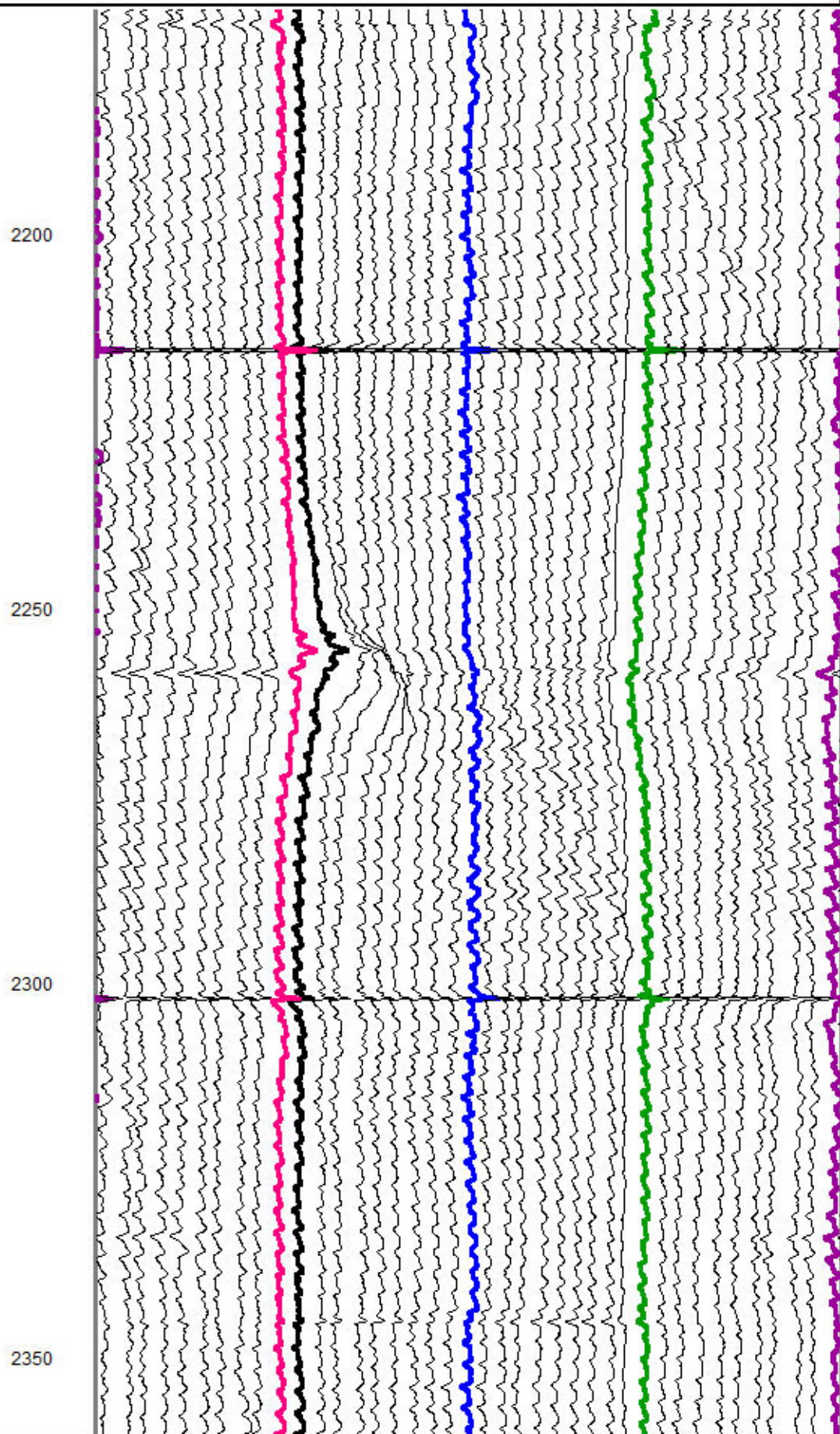
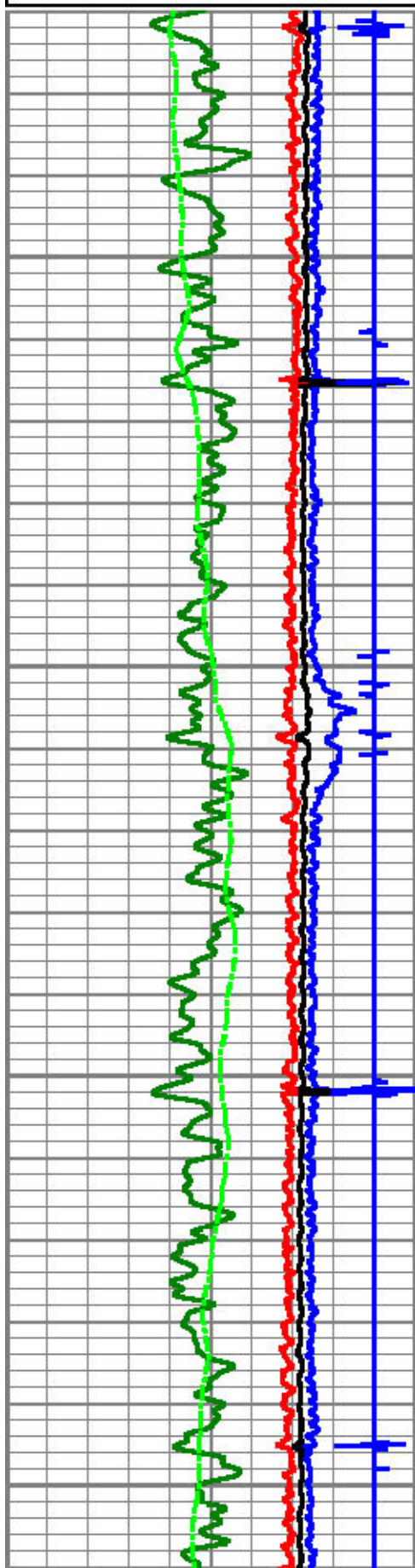
# REPEAT PASS

Database File: 2804.db  
 Dataset Pathname: pass10  
 Presentation Format: ptsnfc40  
 Dataset Creation: Sun Jan 25 19:04:14 2015 by Log 0  
 Charted by: Depth in Feet scaled 1:240

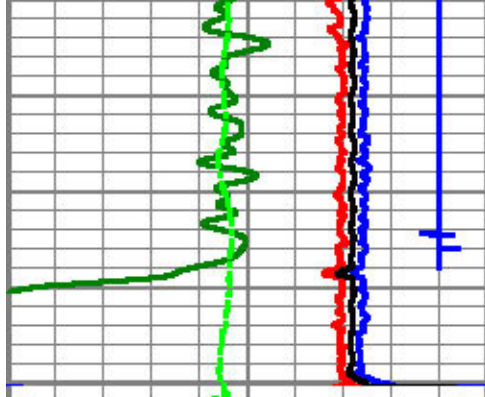


4.5	IDMX (in)	5.5
4.5	IDMN (in)	5.5
4.5	IDAV (in)	5.5
0	GR (GAPI)	150
9	CCL	-1
0	DEVI (°)	20

2.4375	R01 (in)	4.9375
1.875	R10 (in)	4.375
1.25	R20 (in)	3.75
0.625	R30 (in)	3.125
0	R40 (in)	2.5

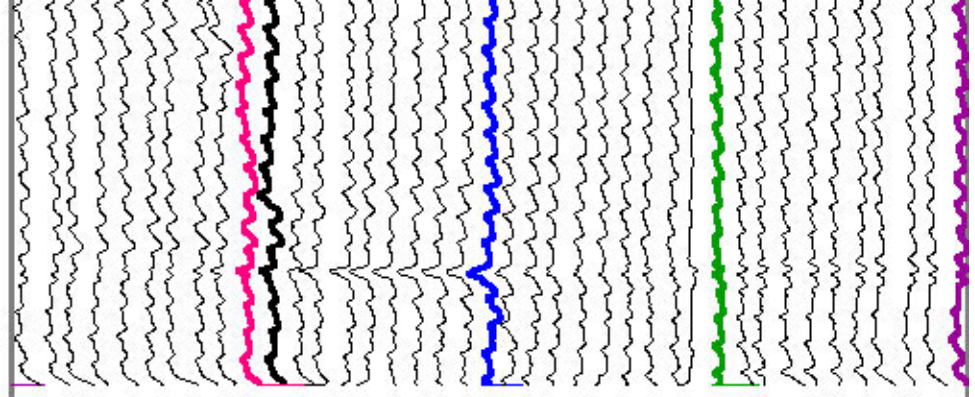






2400

4.5	IDMX (in)	5.5
4.5	IDMN (in)	5.5
4.5	IDAV (in)	5.5
0	GR (GAPI)	150
9	CCL	-1
0	DEVI (°)	20



2.4375	R01 (in)	4.9375
1.875	R10 (in)	4.375
1.25	R20 (in)	3.75
0.625	R30 (in)	3.125
0	R40 (in)	2.5

### Calibration Report

Database File: 2804.db  
 Dataset Pathname: pass9  
 Dataset Creation: Sun Jan 25 17:14:57 2015 by Log 0

### 40 Arm Multi Sensor Caliper Calibration Report

Serial Number: 110814  
 Tool Model: 40incl  
 Performed: Sat Jan 24 17:08:02 2015

Ref ID: (inches)	3.00	4.00	5.00	6.00	7.00
------------------	------	------	------	------	------

Arm1	1.61	2.08	2.58	3.09	3.56
Arm2	1.60	2.08	2.57	3.07	3.56
Arm3	1.60	2.06	2.57	3.08	3.54
Arm4	1.61	2.08	2.57	3.07	3.55
Arm5	1.60	2.08	2.58	3.08	3.54
Arm6	1.61	2.09	2.57	3.07	3.55
Arm7	1.62	2.10	2.58	3.08	3.54
Arm8	1.60	2.08	2.58	3.08	3.53
Arm9	1.59	2.05	2.56	3.06	3.51
Arm10	1.61	2.09	2.58	3.07	3.53
Arm11	1.60	2.07	2.58	3.08	3.52
Arm12	1.60	2.10	2.58	3.06	3.54
Arm13	1.61	2.12	2.61	3.09	3.55
Arm14	1.60	2.10	2.58	3.07	3.54
Arm15	1.59	2.09	2.58	3.07	3.53
Arm16	1.60	2.10	2.59	3.07	3.54
Arm17	1.61	2.11	2.61	3.10	3.55
Arm18	1.59	2.11	2.60	3.08	3.56
Arm19	1.61	2.11	2.61	3.12	3.56
Arm20	1.59	2.10	2.59	3.08	3.55
Arm21	1.60	2.12	2.62	3.10	3.56
Arm22	1.62	2.13	2.63	3.12	3.58
Arm23	1.62	2.13	2.63	3.12	3.58
Arm24	1.61	2.12	2.62	3.11	3.59
Arm25	1.61	2.12	2.63	3.10	3.59
Arm26	1.61	2.12	2.62	3.11	3.59
Arm27	1.61	2.11	2.62	3.12	3.58
Arm28	1.61	2.12	2.62	3.12	3.60
Arm29	1.59	2.09	2.60	3.11	3.58
Arm30	1.61	2.11	2.61	3.11	3.60
Arm31	1.62	2.12	2.62	3.12	3.60
Arm32	1.62	2.12	2.61	3.12	3.59
Arm33	1.63	2.11	2.61	3.11	3.59
Arm34	1.60	2.10	2.60	3.11	3.60



Arm35	1.60	2.07	2.59	3.10	3.57
Arm36	1.60	2.09	2.58	3.09	3.57
Arm37	1.62	2.11	2.60	3.09	3.59
Arm38	1.61	2.09	2.58	3.09	3.58
Arm39	1.61	2.07	2.58	3.09	3.57
Arm40	1.61	2.08	2.57	3.06	3.57

\* = Bad Arm Flag

#### Inclinometer Calibration Report

Performed:	Sat Jan 24 17:34:08 2015				
	Low Read.	High Read.	Low Ref.	High Ref.	
X Accelerometer	-3710.00	3588.00	-1.00	1.00	gee
Y Accelerometer	-3668.00	3670.00	-1.00	1.00	gee
Z Accelerometer	15.38	3636.62	0.00	1.00	gee

#### Gamma Ray Calibration Report

Serial Number:	FW1311-4	
Tool Model:	Probe275	
Performed:	Sat Jan 24 17:41:23 2015	
Calibrator Value:	1022.0	GAPI
Background Reading:	71.7	cps
Calibrator Reading:	1479.2	cps
Sensitivity:	0.7261	GAPI/cps

#### Segmented Cement Bond Log Calibration Report

Serial Number:	FW1408-26	
Tool Model:	RBTC3	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	59.255	ft

Master Calibration, performed Sat Jan 24 17:58:31 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.013	0.929	2.000	71.921	74.222	2.944
CAL	-0.015	1.022				
5'	-0.017	0.934	2.000	71.921	73.574	3.239
SUM						
S1	0.045	0.941	0.000	100.000	120.000	-0.563
S2	-0.011	0.945	0.000	100.000	104.590	1.149
S3	-0.012	0.935	0.000	100.000	105.598	1.275
S4	-0.018	0.929	0.000	100.000	105.666	1.873
S5	-0.016	0.928	0.000	100.000	105.964	1.674
S6	-0.012	0.930	0.000	100.000	106.113	1.269
S7	-0.011	0.931	0.000	100.000	106.117	1.193
S8	-0.017	0.938	0.000	100.000	104.654	1.787

Internal Reference Calibration, performed Wed Dec 31 17:00:00 1969:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset



Zero	Cal	Zero	Cal	Gain	Onset
0.000	0.000	-0.015	1.022	1.000	0.000

Air Zero Calibration, performed Mon Dec 15 09:56:27 2014:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.000	0.000	0.000
5'	0.000	0.000	0.000
SUM			
S1	0.000	0.000	0.000
S2	0.000	0.000	0.000
S3	0.000	0.000	0.000
S4	0.000	0.000	0.000
S5	0.000	0.000	0.000
S6	0.000	0.000	0.000
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000

## Temperature Calibration Report


Serial Number: FW1408-26  
Tool Model: RBTC3  
Performed: Sun Jun 13 13:33:21 1993

	Reference		Reading	
Low Reference:	0.00	degF	0.00	degC
High Reference:	1.00	degF	1.00	degC

Gain:	1.00
Offset:	0.00
Delta Spacing	1

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			PTS275	2.83	2.75	
			RBT-RBTC3 (FW1408-26)	9.25	2.75	100.00
WV3FT	20.80					
WVFCAL	20.80					
WVFS1	20.80					
WVFS2	20.80					
WVFS3	20.80					
WVFS4	20.80					
WVFS5	20.80					
WVFS6	20.80					
WVFS7	20.80					
WVFS8	20.80					
WVF5FT	19.80		PTS275	2.83	2.75	
TEMP	16.55					



CCL	13.59					
GR	12.26		GR-Probe275 (FW1311-4) Probe 2 3/4" Logging Gamma Ray	4.00	2.75	57.00
			PTS275	2.83	2.75	
ACCX	5.00					
ACCY	5.00					
ACCZ	5.00					
			Probe_MFCAL-40incl (110814)	6.89	2.75	50.00
ETEMP	2.00					
Meas	1.25					
Dataset: 2804.db: field/well/run1/pass9						
Total Length: 28.64 ft						
Total Weight: 207.00 lb						
O.D.: 3.71 in						

	Company	WHITING PETOLEUM
	Well	RAZOR 33M-2804
	Field	WILDCAT
	County	WELD
	State	COLORADO