56-ARM CALIPER LOG

Company SOUTHERN CALIFORNIA GAS COMPANY
Well PORTER 24B
Field ALISO CANYON
County LOS ANGELES
State CALIFORNIA

Company SOUTHERN CALIFORNIA GAS COMPANY

Well PORTER 24B

Field ALISO CANYON

County LOS ANGELES **State** CALIFORNIA

Location: API # : 037-24144

SEC 27 TWP 3N RGE 16W

Other Services
HRVRT

Permanent Datum	GL	Elevation	2205.5'
Log Measured From	KB 23.5' ABOVE PD		
Drilling Measured From	KB		

Elevation
K.B. 2229.0'
D.F. 2228.0'
G.L. 2205.5'

Date	16-MAY-2016		
Run Number	1		
Depth Driller	7645'		
Depth Logger	6909.5'		
Bottom Logged Interval	6904'		
Top Log Interval	0'		
Open Hole Size			
Type Fluid	KCL		
Density / Viscosity	8.5 G/CC		
Max. Recorded Temp.	161 DEGF		
Estimated Cement Top	N/A		
Time Well Ready	1200		
Time Logger on Bottom	1400		
Equipment Number	4243		
Location	SHAFTER, CA.		
Recorded By	J. STEPHENS		
Witnessed By	MR. MCMAHON		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
	13.375"	54.5#	0'	827'
	9.625"	47#	0'	7030'

<<< Fold Here >>>

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

NO REFERENCE LOG - WIRELINE DEPTH MEASUREMENTS REFERENCED TO 23.5' KB.

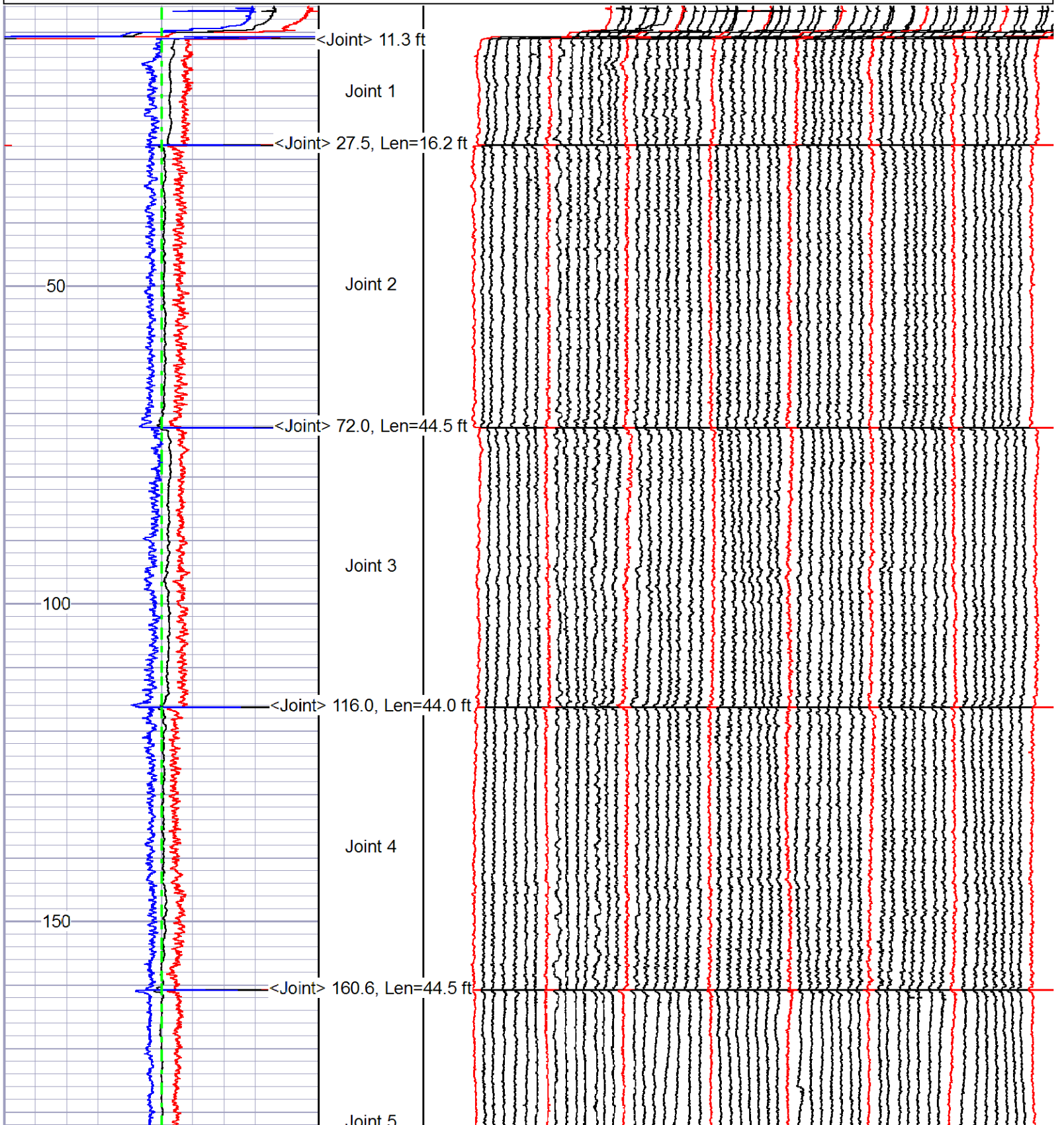
Main Section

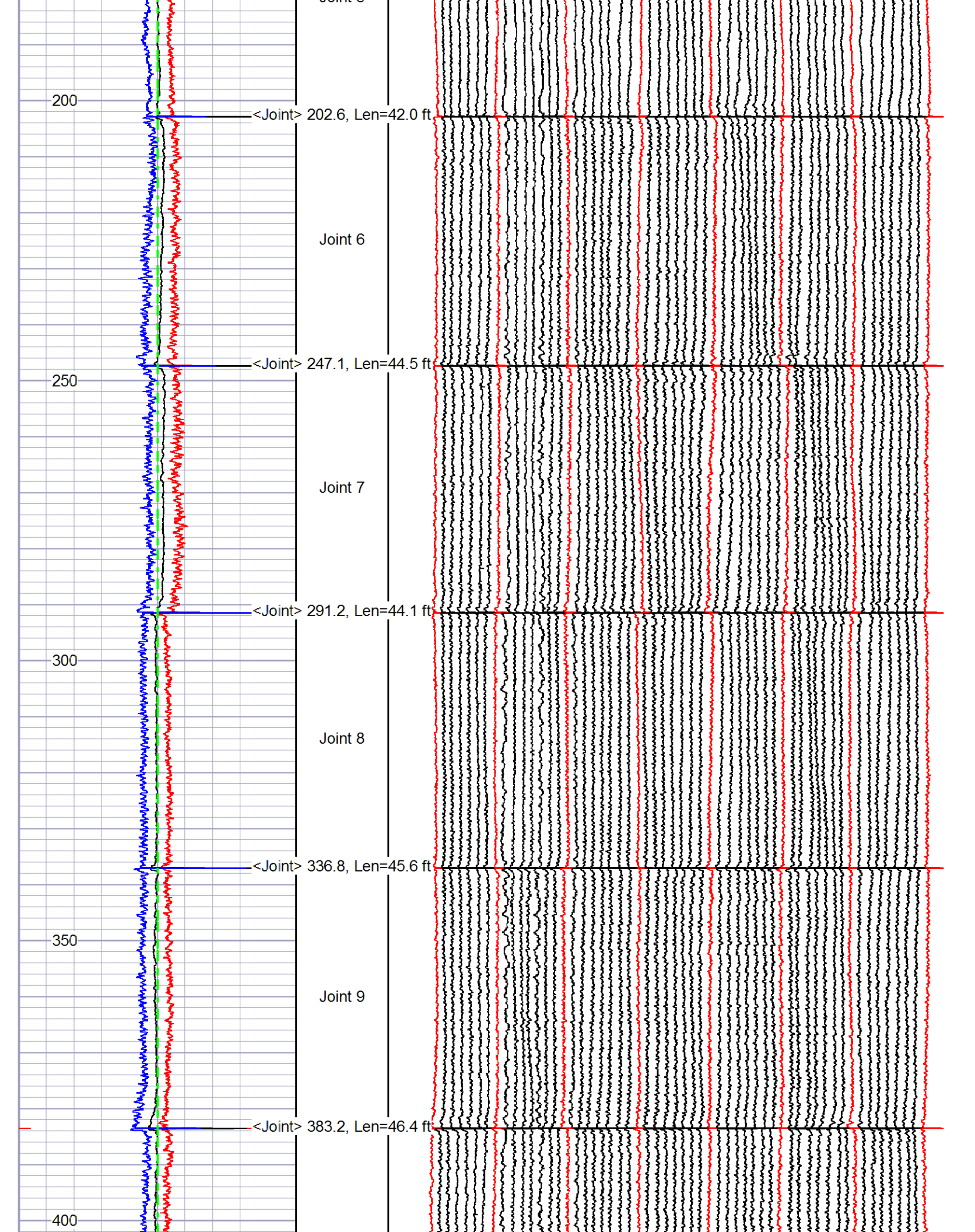
1" Span

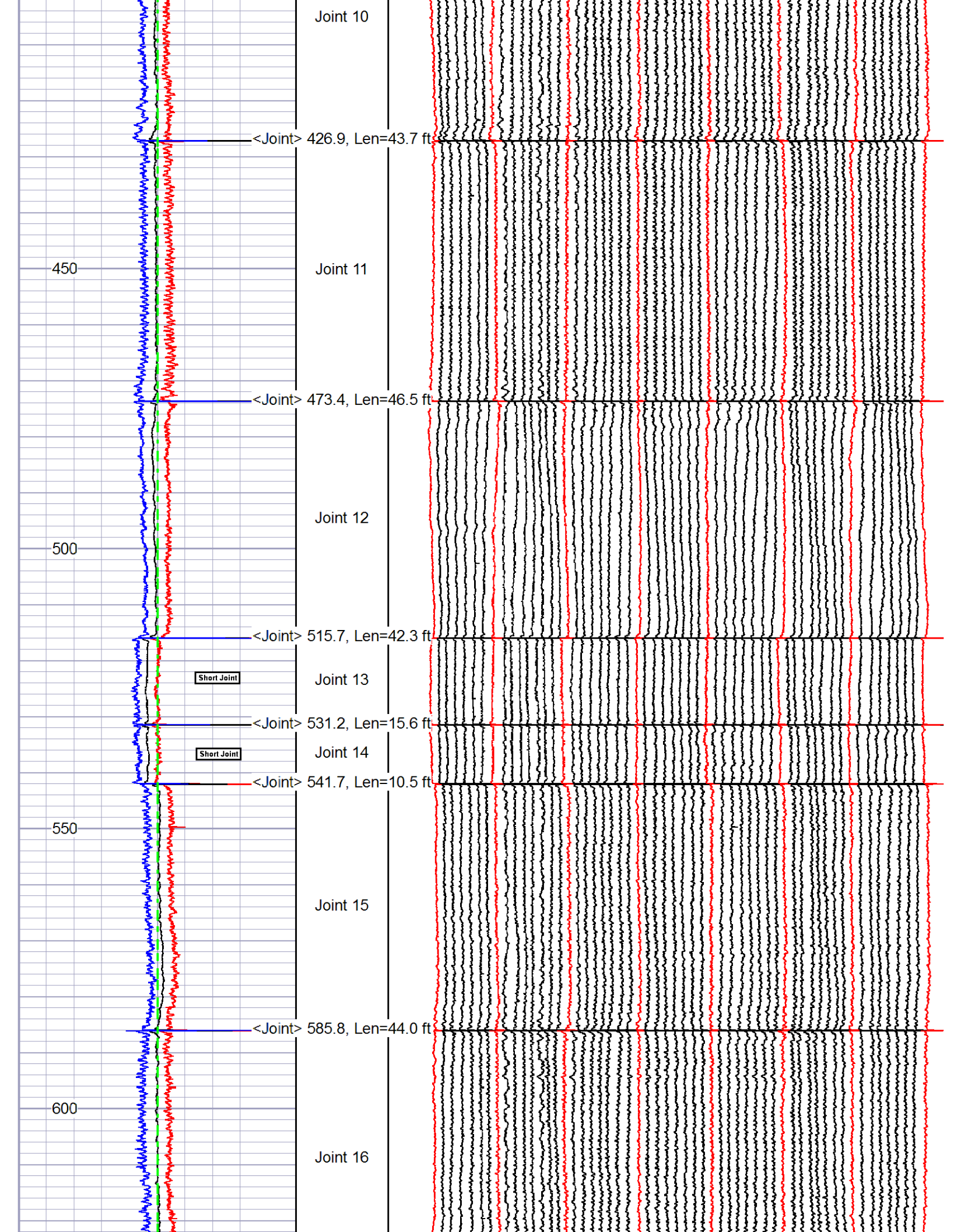
Max-Ave-Min

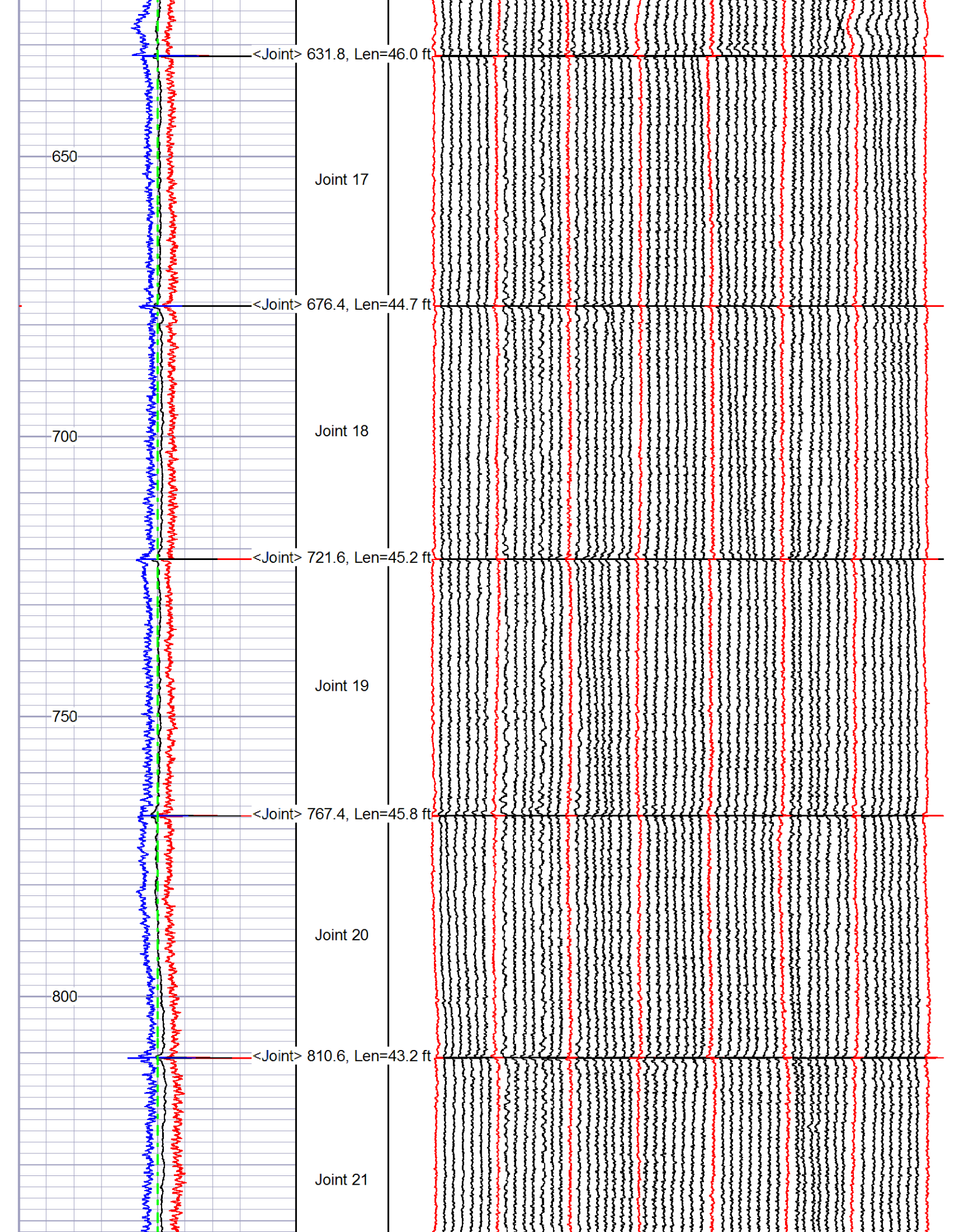
Database File	c:\hotwell_mips\porter 24b\project\processed.db
Dataset Pathname	proc
Presentation Format	56f_43_5lb_califor
Dataset Creation	Fri May 20 10:59:51 2016
Charted by	Depth in Feet scaled 1:240

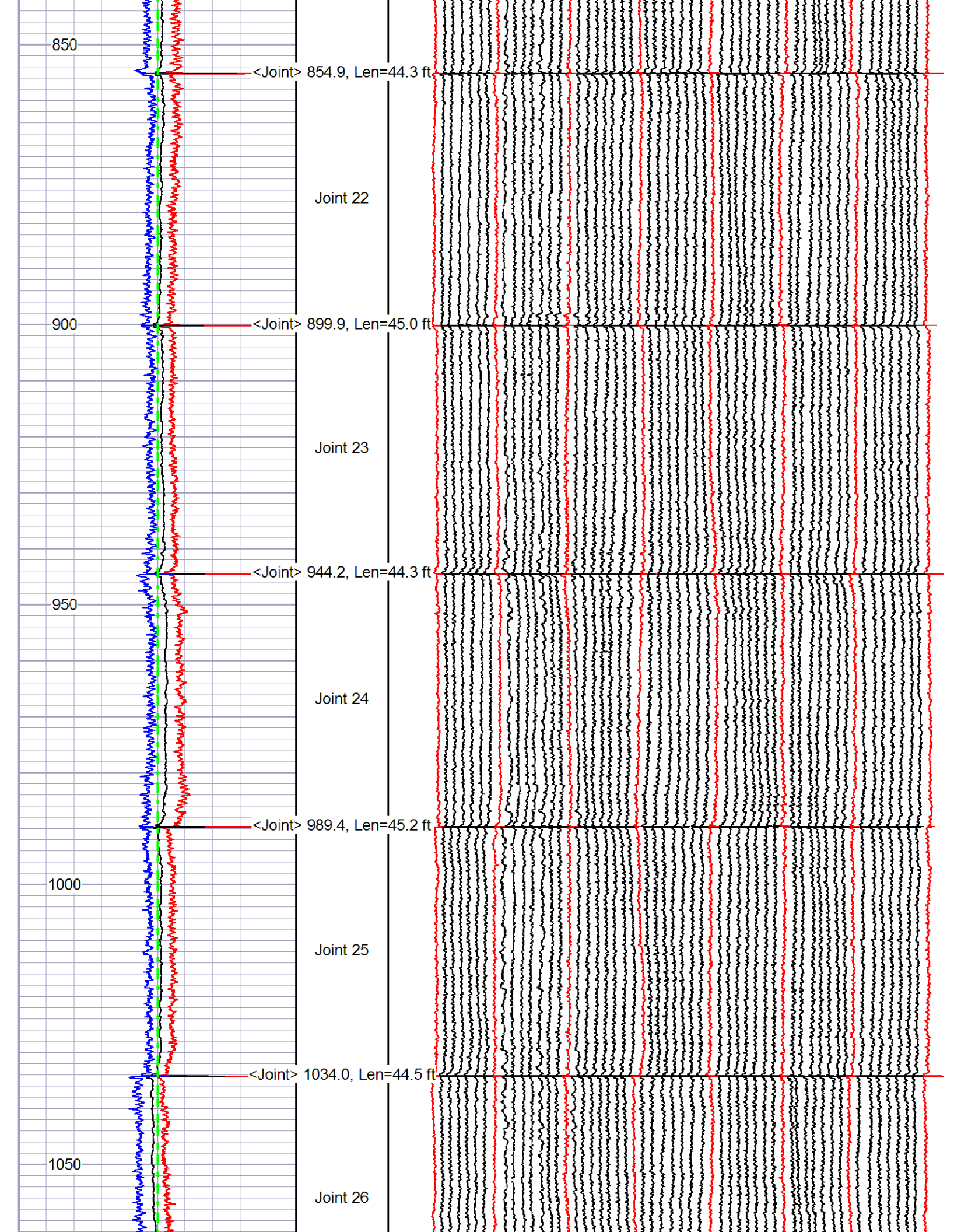
8.255	Maximum-Finger (in)	9.255	PTANN	56 FINGER TRACE
8.255	Average-Finger (in)	9.255		
8.255	Minimum-Finger (in)	9.255		
8.255	Nominal ID (in)	9.255		

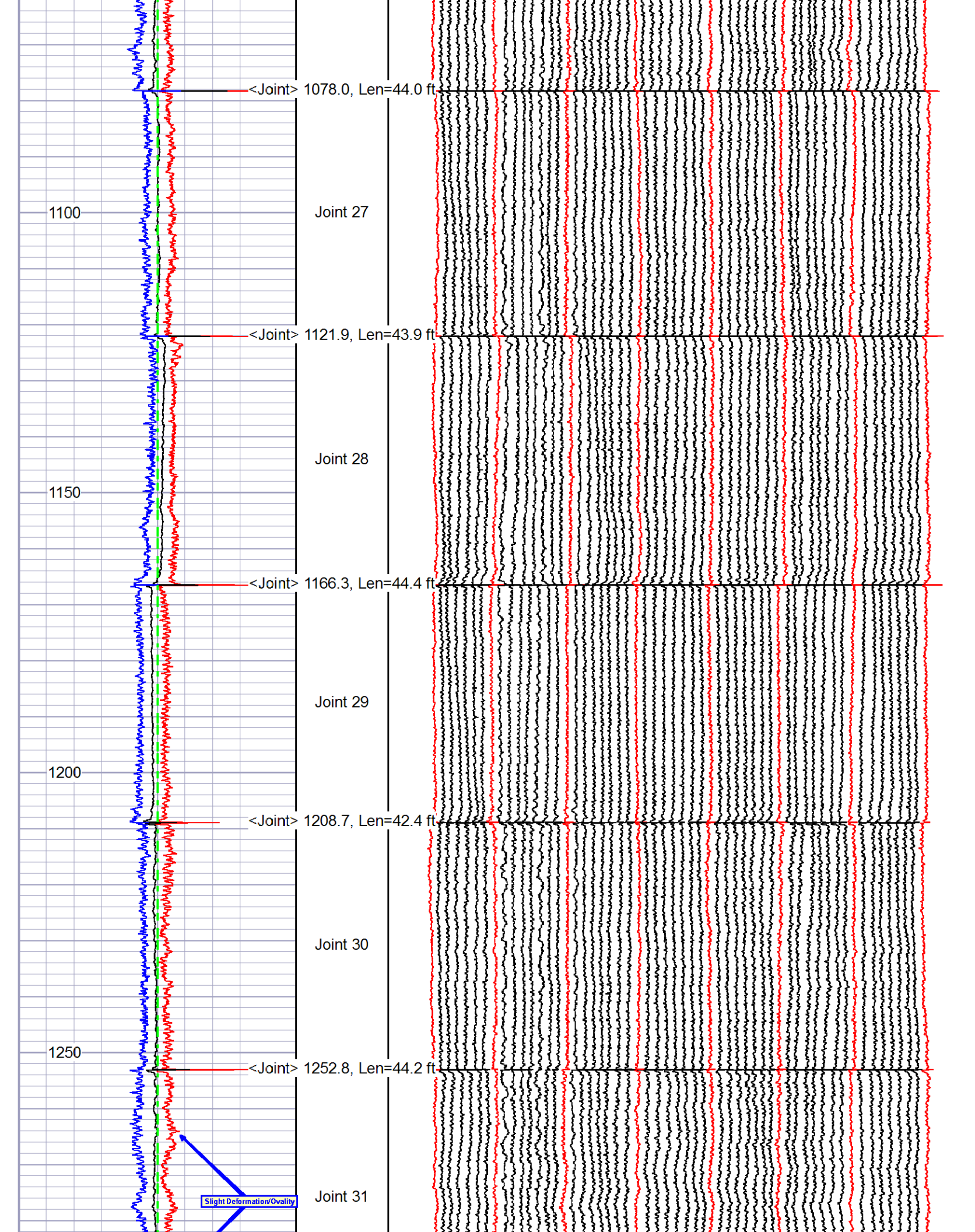


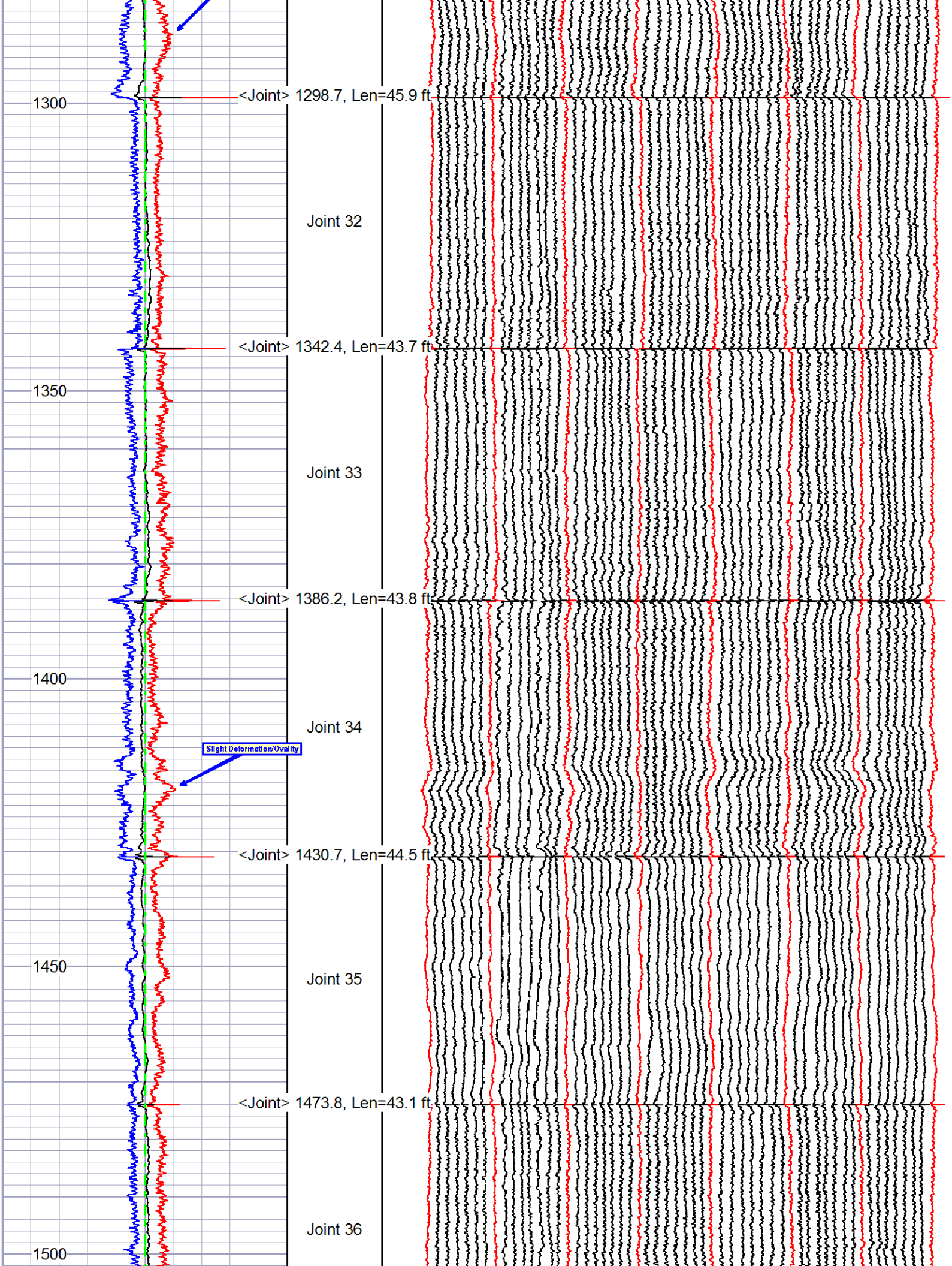

200
<Joint> 202.6, Len=42.0 ft
Joint 6
<Joint> 247.1, Len=44.5 ft
250
Joint 7
<Joint> 291.2, Len=44.1 ft
300
Joint 8
<Joint> 336.8, Len=45.6 ft
350
Joint 9
<Joint> 383.2, Len=46.4 ft
400

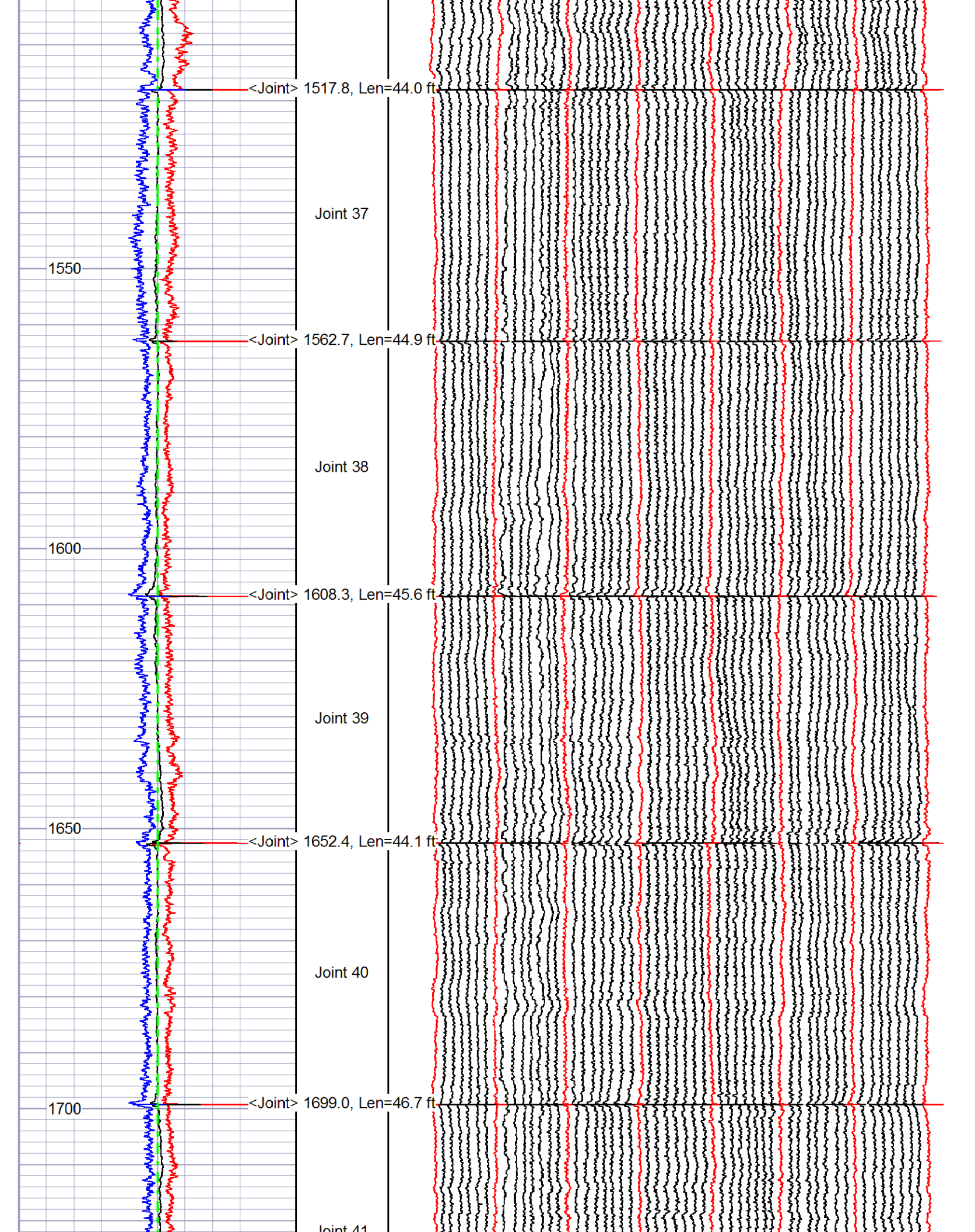

Joint 10
<Joint> 426.9, Len=43.7 ft
450
Joint 11
<Joint> 473.4, Len=46.5 ft
Joint 12
500
<Joint> 515.7, Len=42.3 ft
Short Joint
Joint 13
<Joint> 531.2, Len=15.6 ft
Short Joint
Joint 14
<Joint> 541.7, Len=10.5 ft
550
Joint 15
<Joint> 585.8, Len=44.0 ft
600
Joint 16

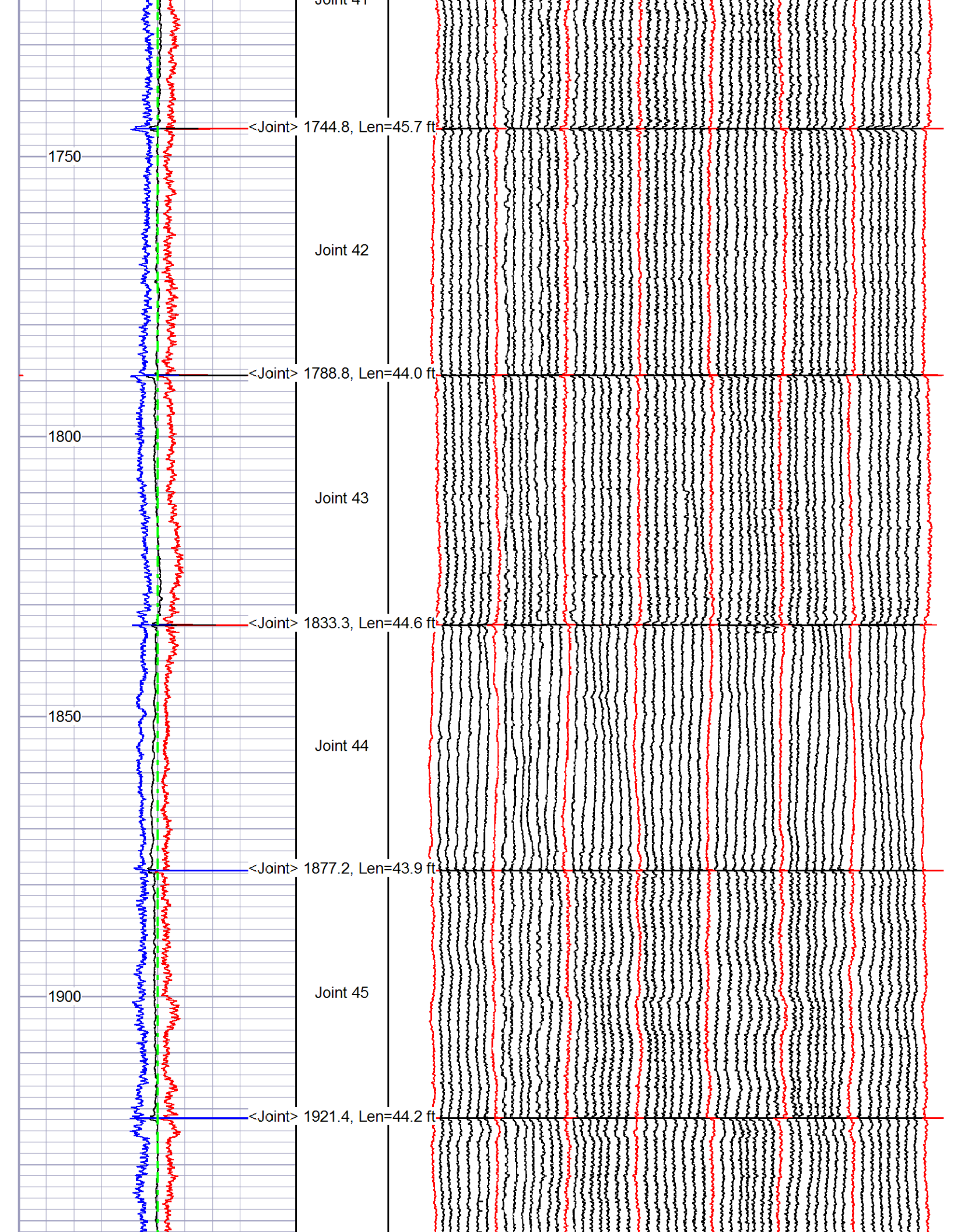

<Joint> 631.8, Len=46.0 ft
650
Joint 17
<Joint> 676.4, Len=44.7 ft
700
Joint 18
<Joint> 721.6, Len=45.2 ft
Joint 19
750
<Joint> 767.4, Len=45.8 ft
Joint 20
800
<Joint> 810.6, Len=43.2 ft
Joint 21

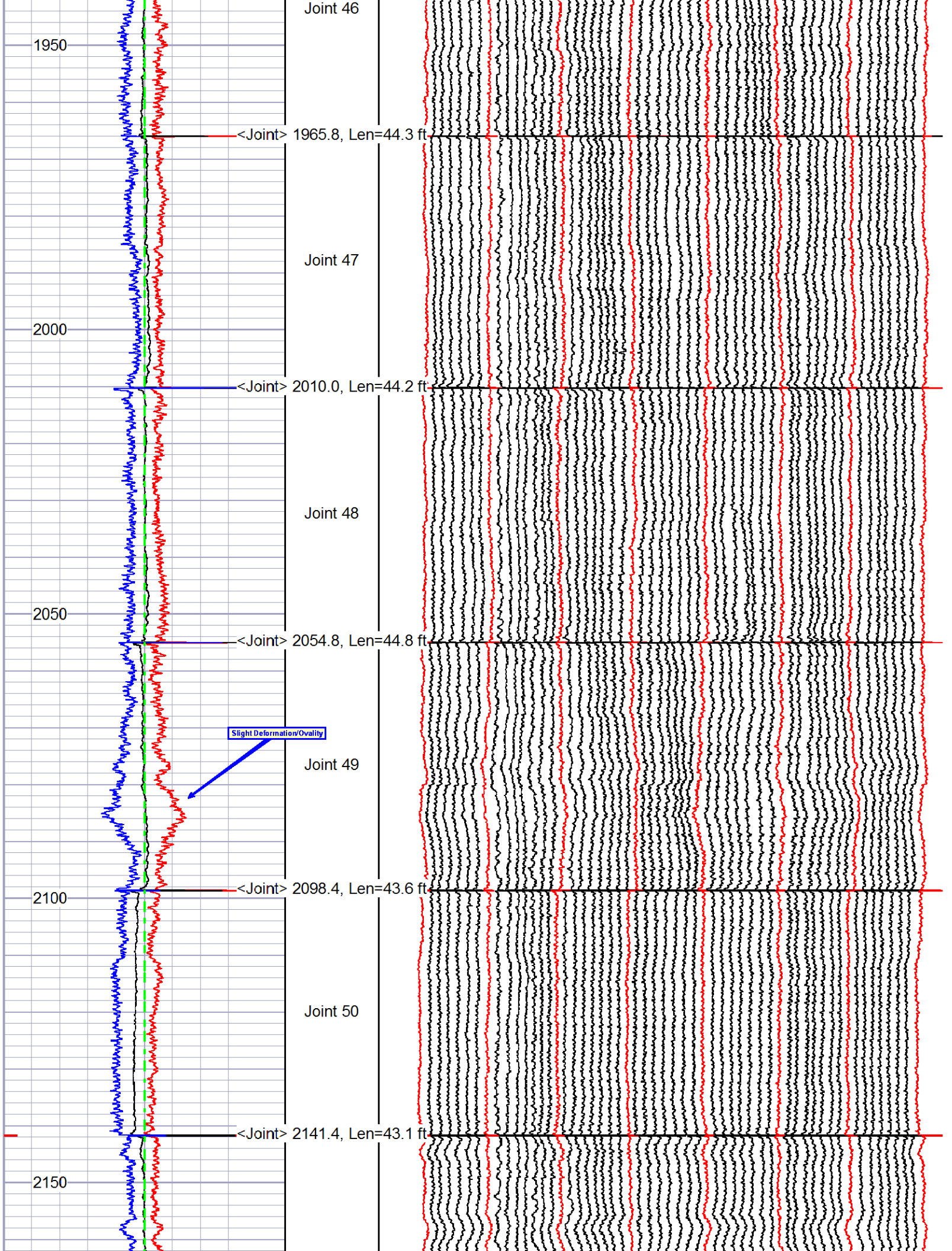

850
<Joint> 854.9, Len=44.3 ft
Joint 22
900
<Joint> 899.9, Len=45.0 ft
Joint 23
<Joint> 944.2, Len=44.3 ft
950
Joint 24
<Joint> 989.4, Len=45.2 ft
1000
Joint 25
<Joint> 1034.0, Len=44.5 ft
1050
Joint 26

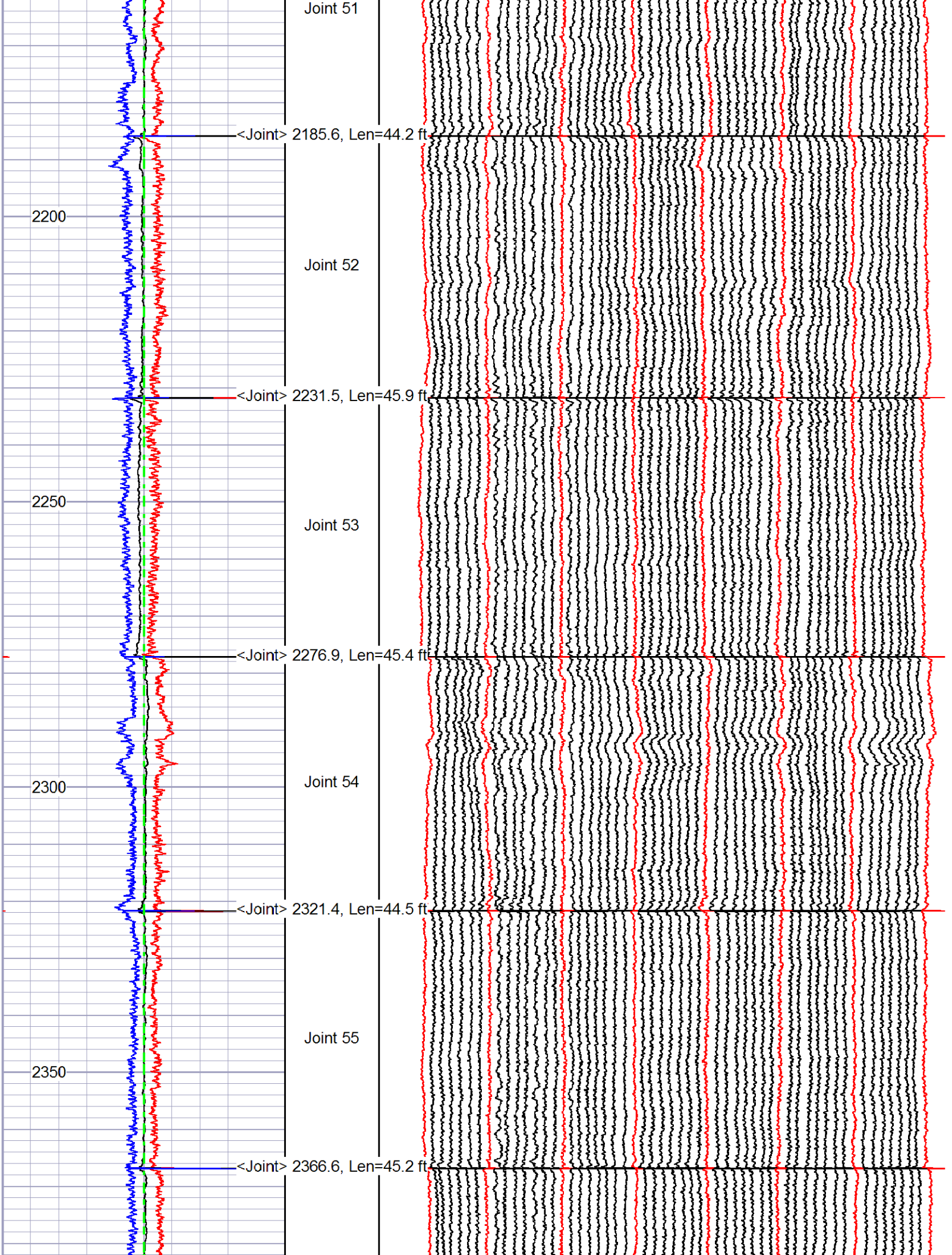

<Joint> 1078.0, Len=44.0 ft
1100
Joint 27
<Joint> 1121.9, Len=43.9 ft
Joint 28
1150
<Joint> 1166.3, Len=44.4 ft
Joint 29
1200
<Joint> 1208.7, Len=42.4 ft
Joint 30
1250
<Joint> 1252.8, Len=44.2 ft
Slight Deformation/Ovality
Joint 31

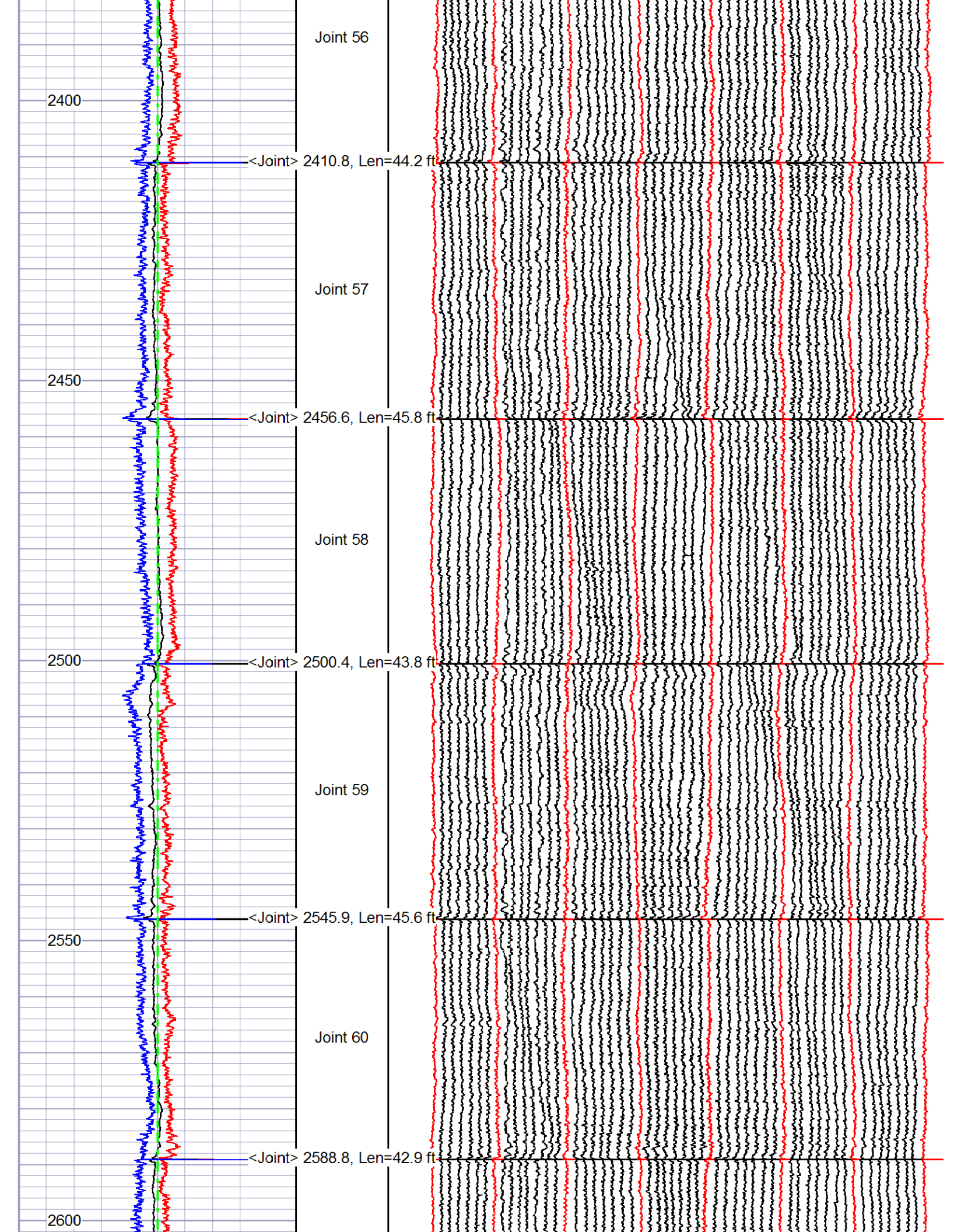

1300
<Joint> 1298.7, Len=45.9 ft
Joint 32
<Joint> 1342.4, Len=43.7 ft
1350
Joint 33
<Joint> 1386.2, Len=43.8 ft
1400
Joint 34
Slight Deformation/Ovality
<Joint> 1430.7, Len=44.5 ft
1450
Joint 35
<Joint> 1473.8, Len=43.1 ft
Joint 36
1500

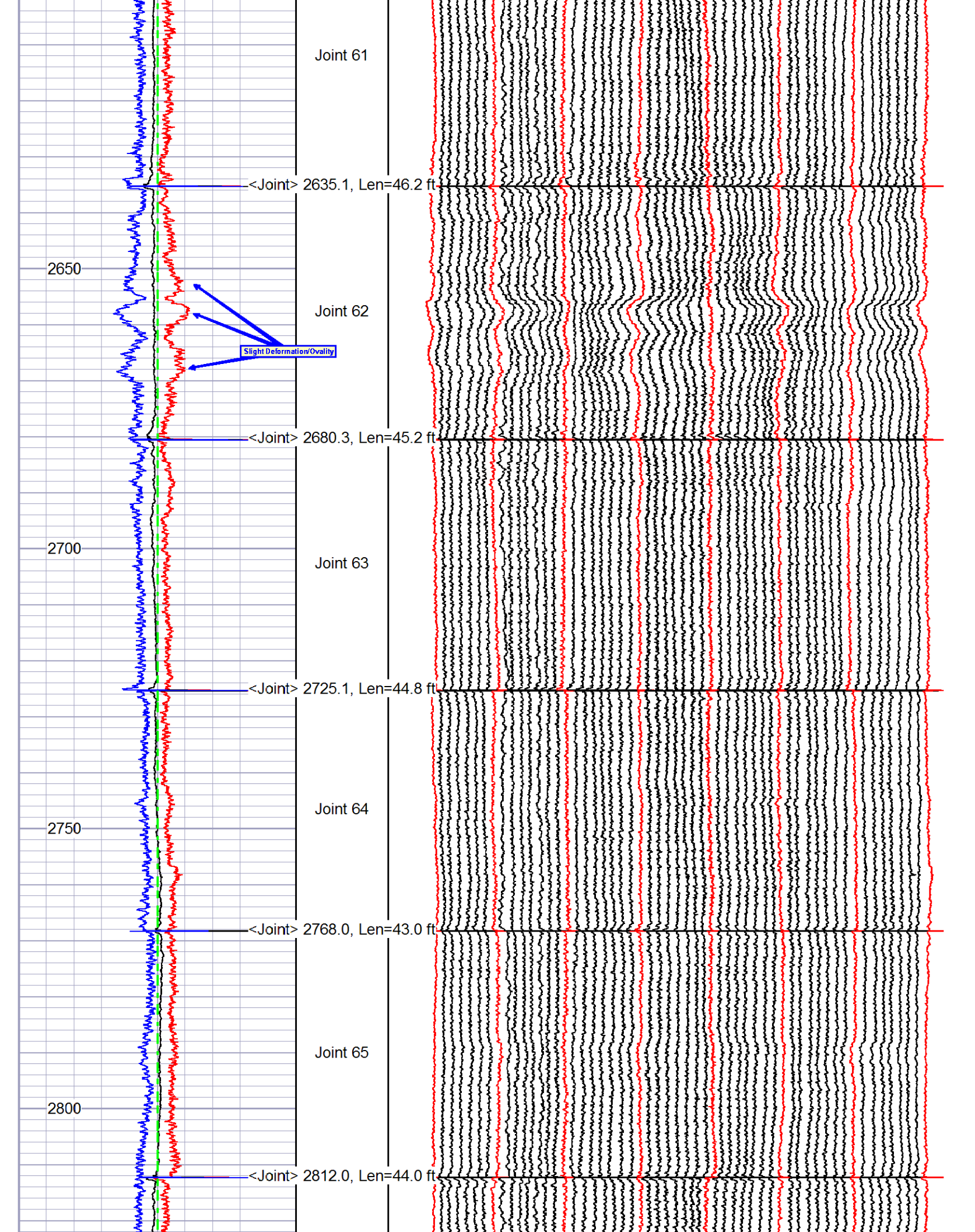

<Joint> 1517.8, Len=44.0 ft
Joint 37
1550
<Joint> 1562.7, Len=44.9 ft
Joint 38
1600
<Joint> 1608.3, Len=45.6 ft
Joint 39
1650
<Joint> 1652.4, Len=44.1 ft
Joint 40
1700
<Joint> 1699.0, Len=46.7 ft
Joint 41

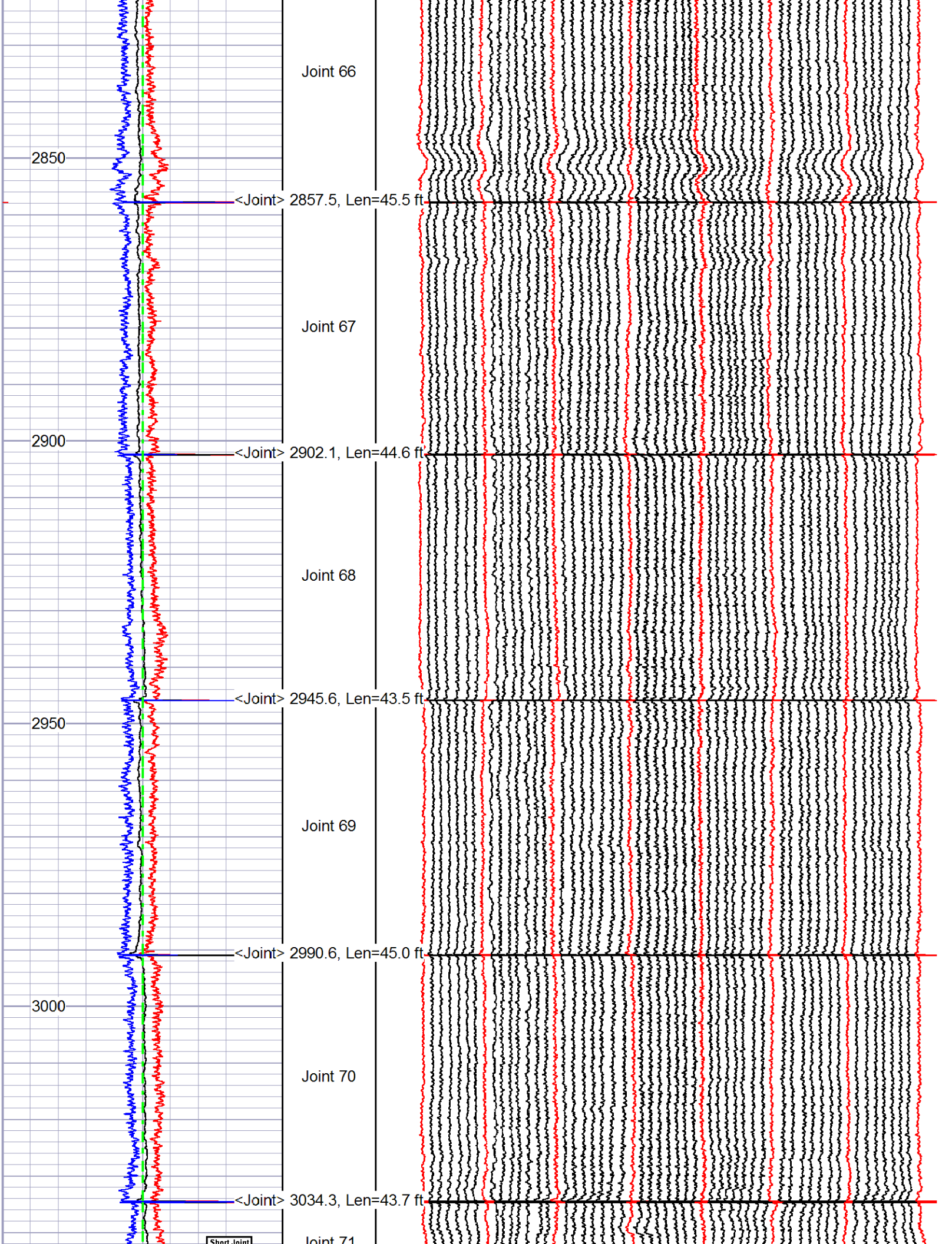

Joint 41
<Joint> 1744.8, Len=45.7 ft
1750
Joint 42
<Joint> 1788.8, Len=44.0 ft
1800
Joint 43
<Joint> 1833.3, Len=44.6 ft
1850
Joint 44
<Joint> 1877.2, Len=43.9 ft
1900
Joint 45
<Joint> 1921.4, Len=44.2 ft

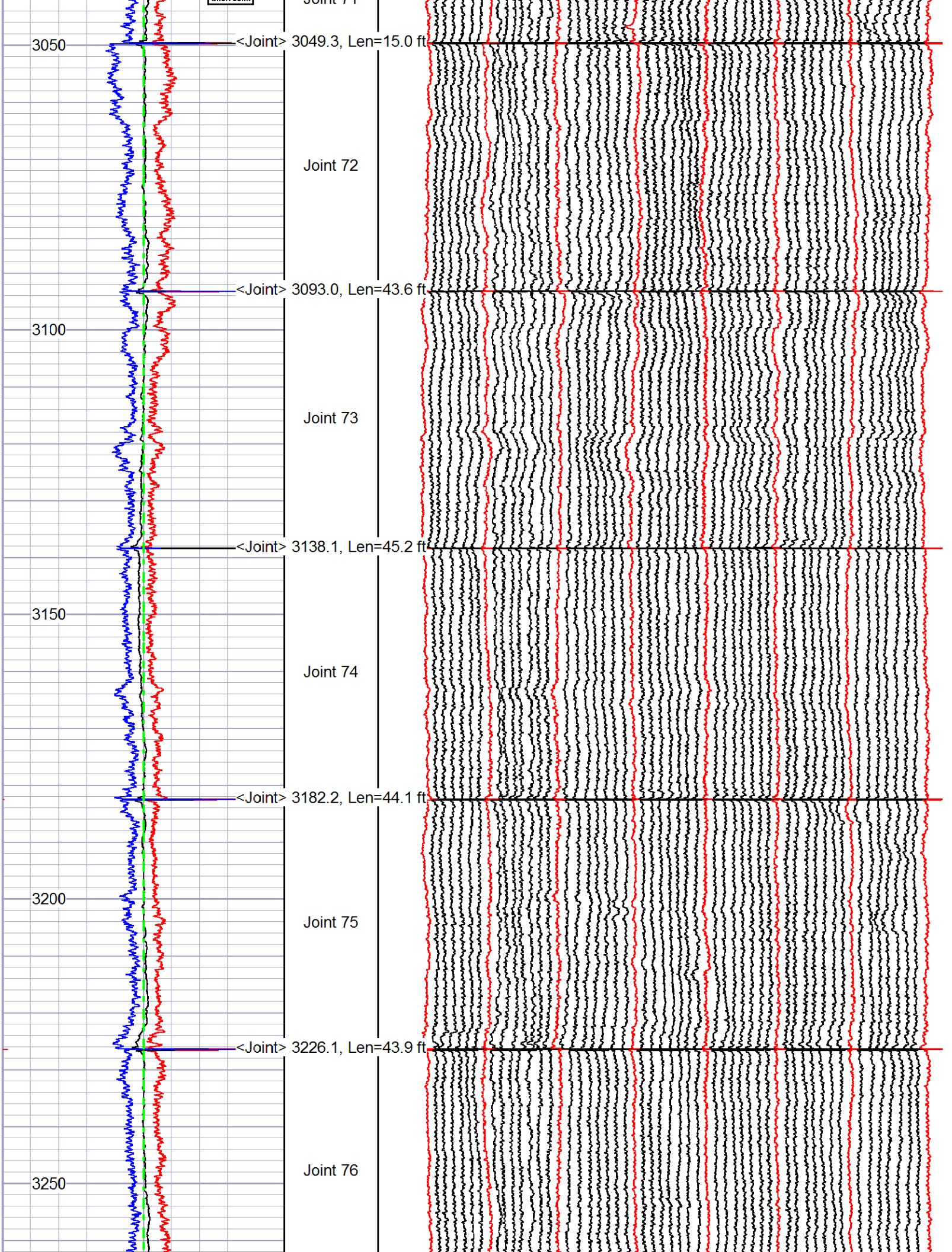

Joint 46
1950
<Joint> 1965.8, Len=44.3 ft
Joint 47
2000
<Joint> 2010.0, Len=44.2 ft
Joint 48
2050
<Joint> 2054.8, Len=44.8 ft
Slight Deformation/Ovality
Joint 49
<Joint> 2098.4, Len=43.6 ft
2100
Joint 50
<Joint> 2141.4, Len=43.1 ft
2150

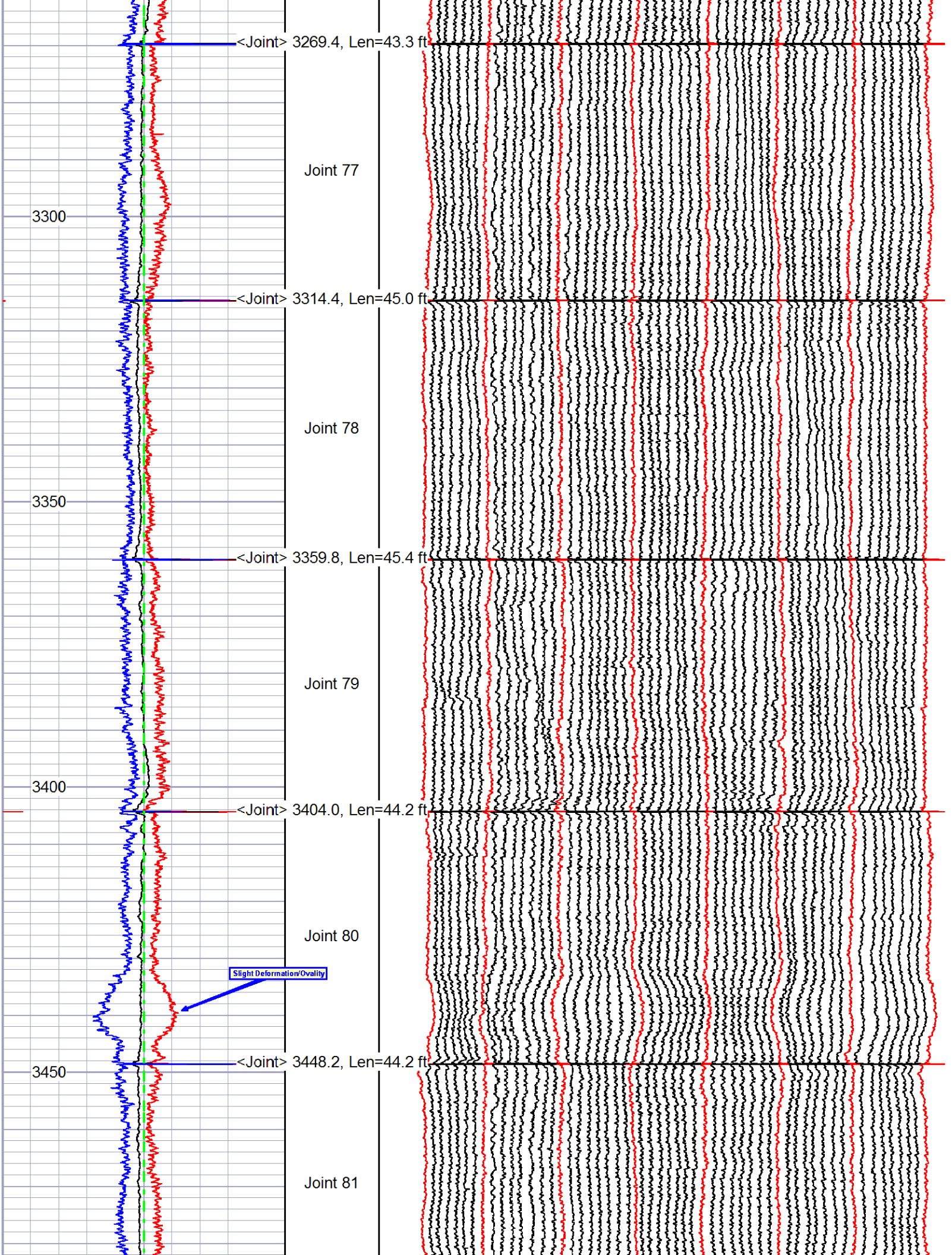

Joint 51
<Joint> 2185.6, Len=44.2 ft
2200
Joint 52
<Joint> 2231.5, Len=45.9 ft
2250
Joint 53
<Joint> 2276.9, Len=45.4 ft
2300
Joint 54
<Joint> 2321.4, Len=44.5 ft
Joint 55
2350
<Joint> 2366.6, Len=45.2 ft

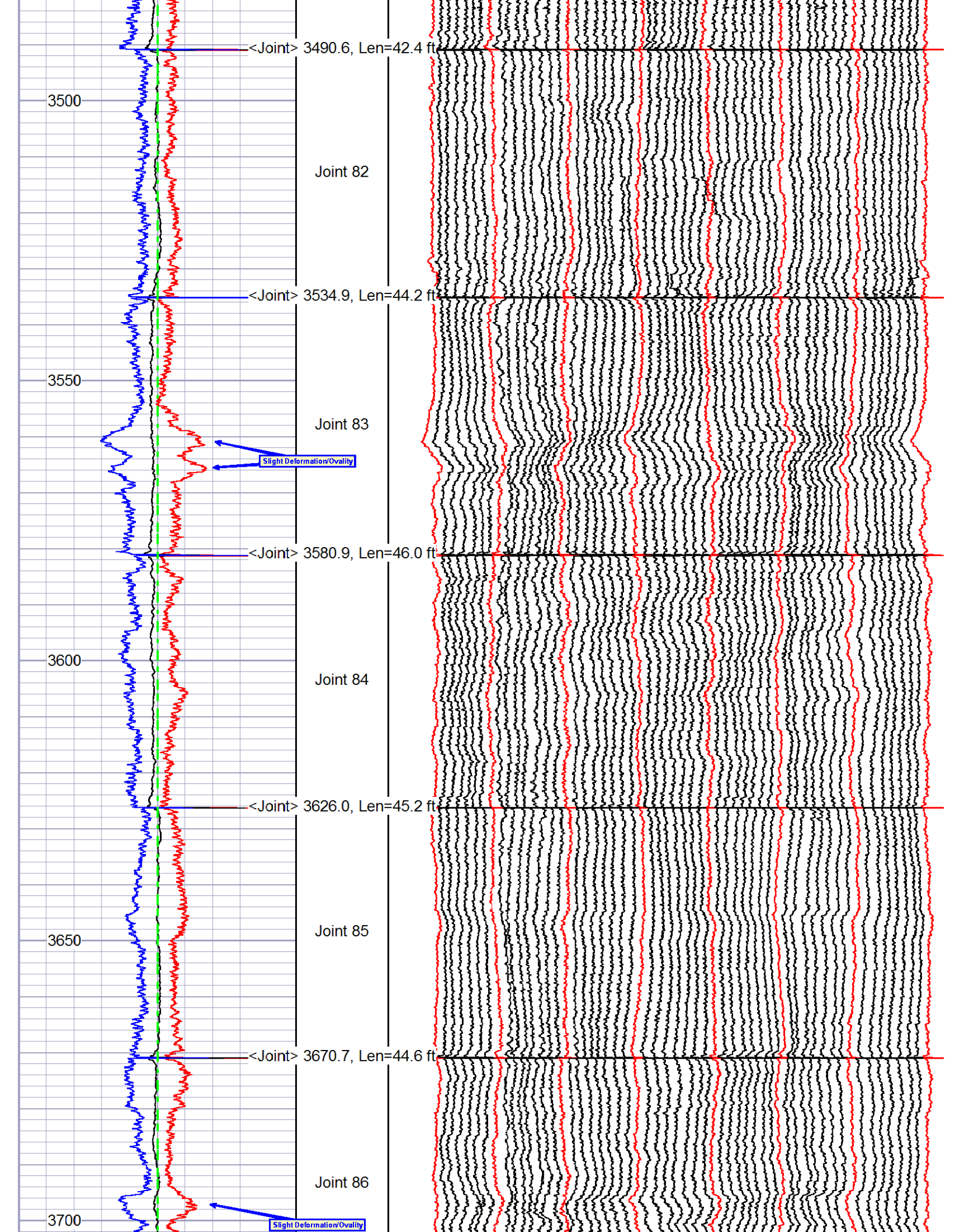

Joint 56
2400
<Joint> 2410.8, Len=44.2 ft
Joint 57
2450
<Joint> 2456.6, Len=45.8 ft
Joint 58
2500
<Joint> 2500.4, Len=43.8 ft
Joint 59
<Joint> 2545.9, Len=45.6 ft
2550
Joint 60
<Joint> 2588.8, Len=42.9 ft
2600

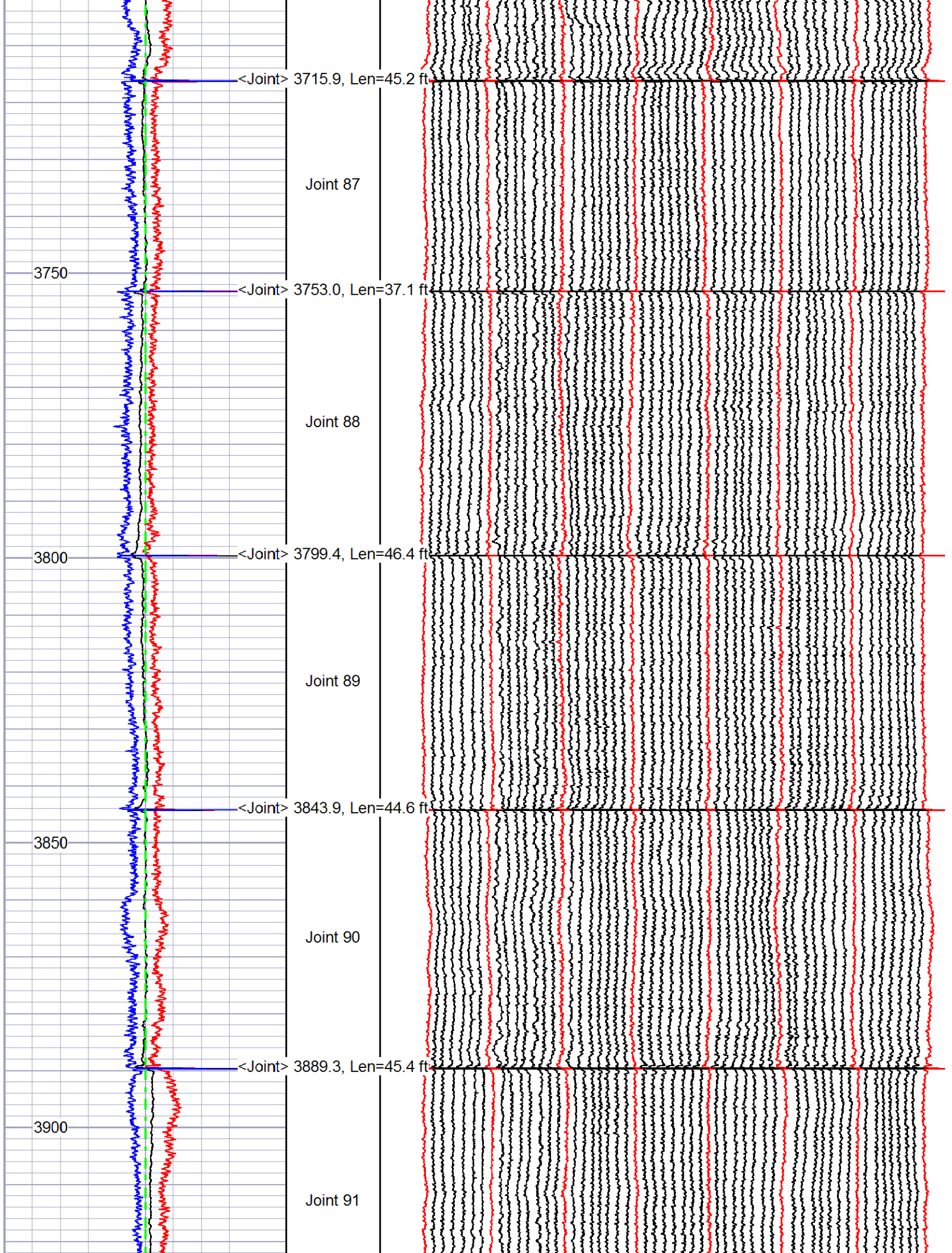

Joint 61
<Joint> 2635.1, Len=46.2 ft
2650
Joint 62
Slight Deformation/Ovality
<Joint> 2680.3, Len=45.2 ft
2700
Joint 63
<Joint> 2725.1, Len=44.8 ft
Joint 64
2750
<Joint> 2768.0, Len=43.0 ft
Joint 65
2800
<Joint> 2812.0, Len=44.0 ft

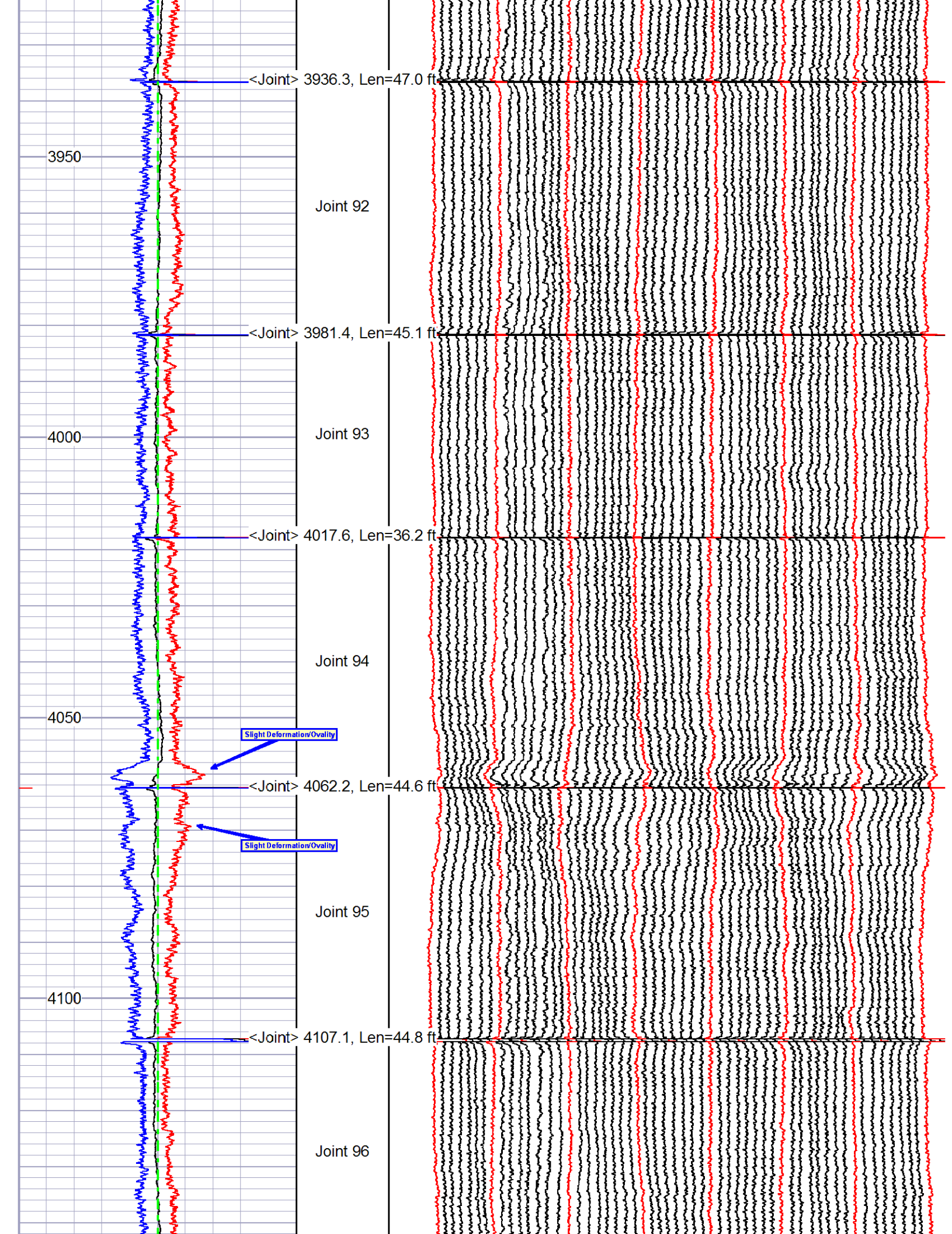

Joint 66
2850
<Joint> 2857.5, Len=45.5 ft
Joint 67
2900
<Joint> 2902.1, Len=44.6 ft
Joint 68
<Joint> 2945.6, Len=43.5 ft
2950
Joint 69
<Joint> 2990.6, Len=45.0 ft
3000
Joint 70
<Joint> 3034.3, Len=43.7 ft
Short Joint
Joint 71

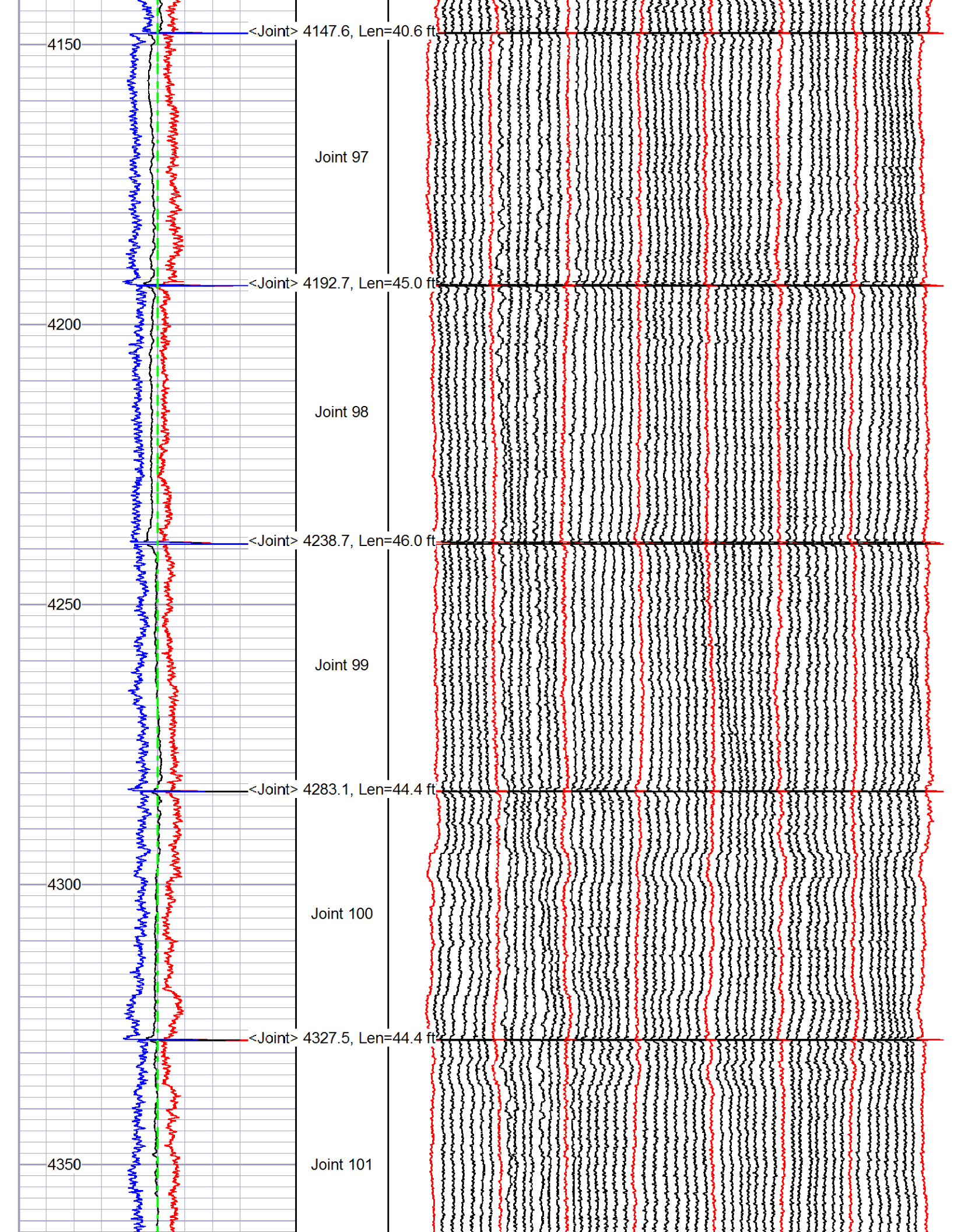

3050
<Joint> 3049.3, Len=15.0 ft
Joint 72
<Joint> 3093.0, Len=43.6 ft
3100
Joint 73
<Joint> 3138.1, Len=45.2 ft
3150
Joint 74
<Joint> 3182.2, Len=44.1 ft
3200
Joint 75
<Joint> 3226.1, Len=43.9 ft
Joint 76
3250

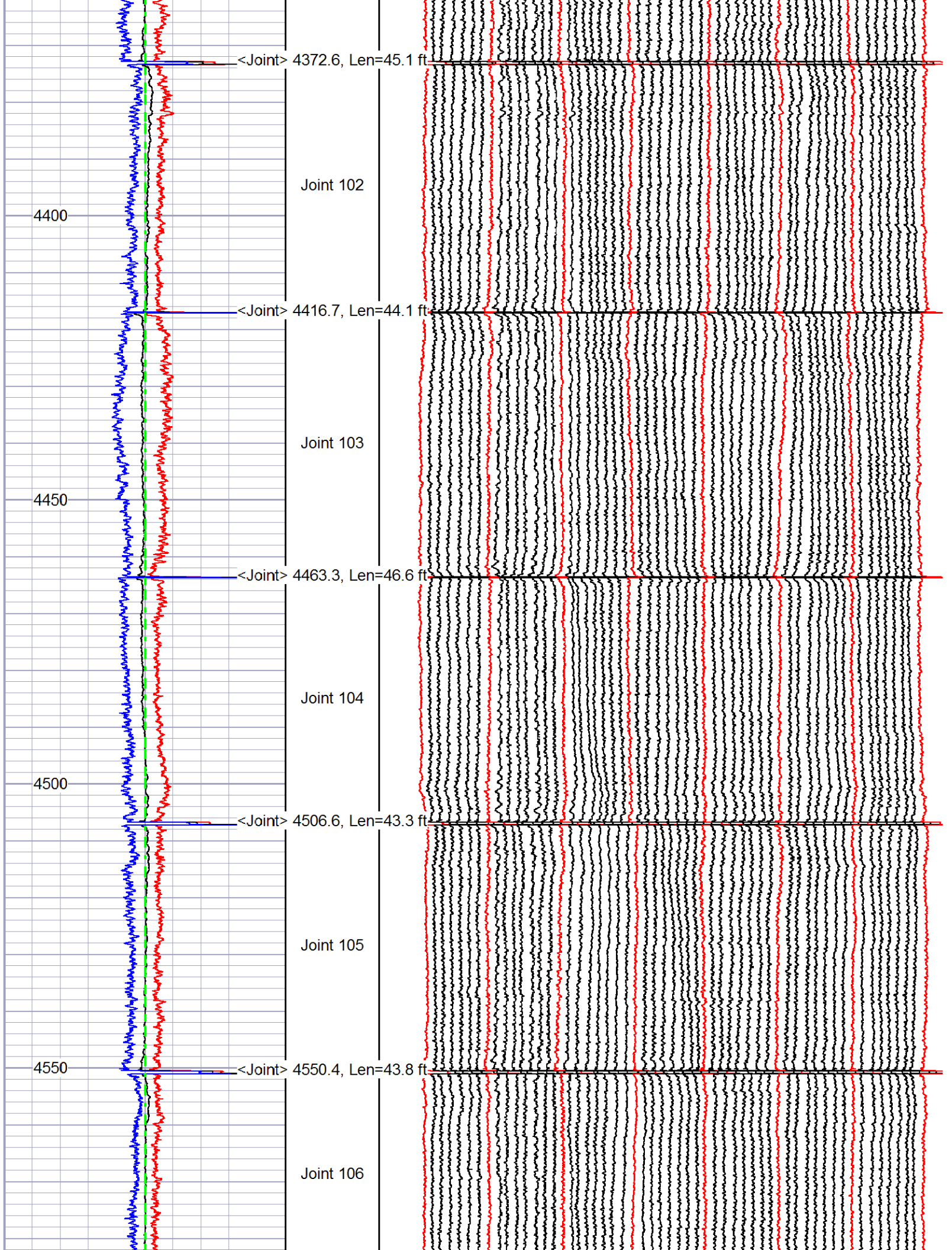

<Joint> 3269.4, Len=43.3 ft
Joint 77
3300
<Joint> 3314.4, Len=45.0 ft
Joint 78
3350
<Joint> 3359.8, Len=45.4 ft
Joint 79
3400
<Joint> 3404.0, Len=44.2 ft
Joint 80
Slight Deformation/Ovality
<Joint> 3448.2, Len=44.2 ft
3450
Joint 81

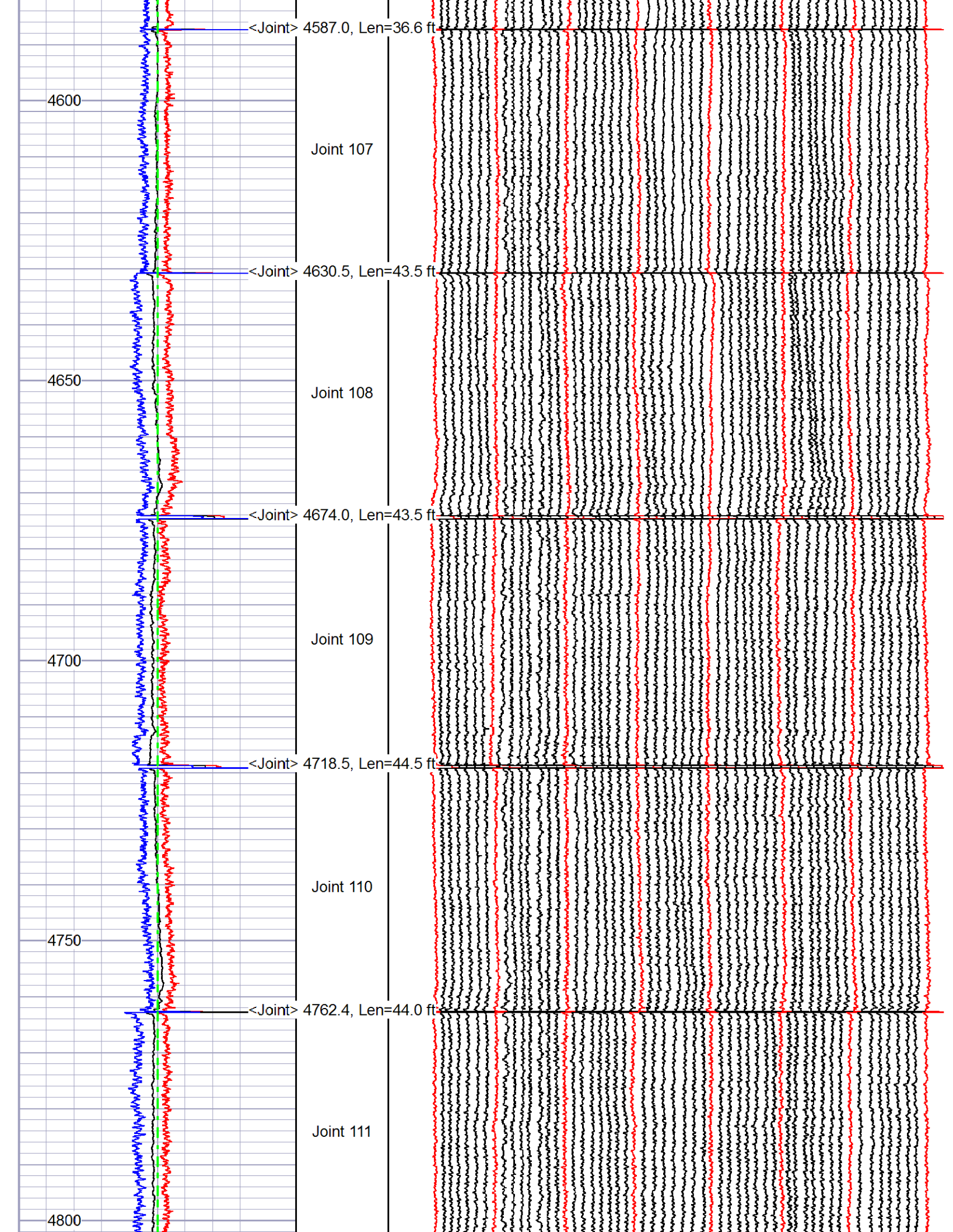

<Joint> 3490.6, Len=42.4 ft
3500
Joint 82
<Joint> 3534.9, Len=44.2 ft
3550
Joint 83
Slight Deformation/Ovality
<Joint> 3580.9, Len=46.0 ft
3600
Joint 84
<Joint> 3626.0, Len=45.2 ft
3650
Joint 85
<Joint> 3670.7, Len=44.6 ft
Joint 86
3700
Slight Deformation/Ovality

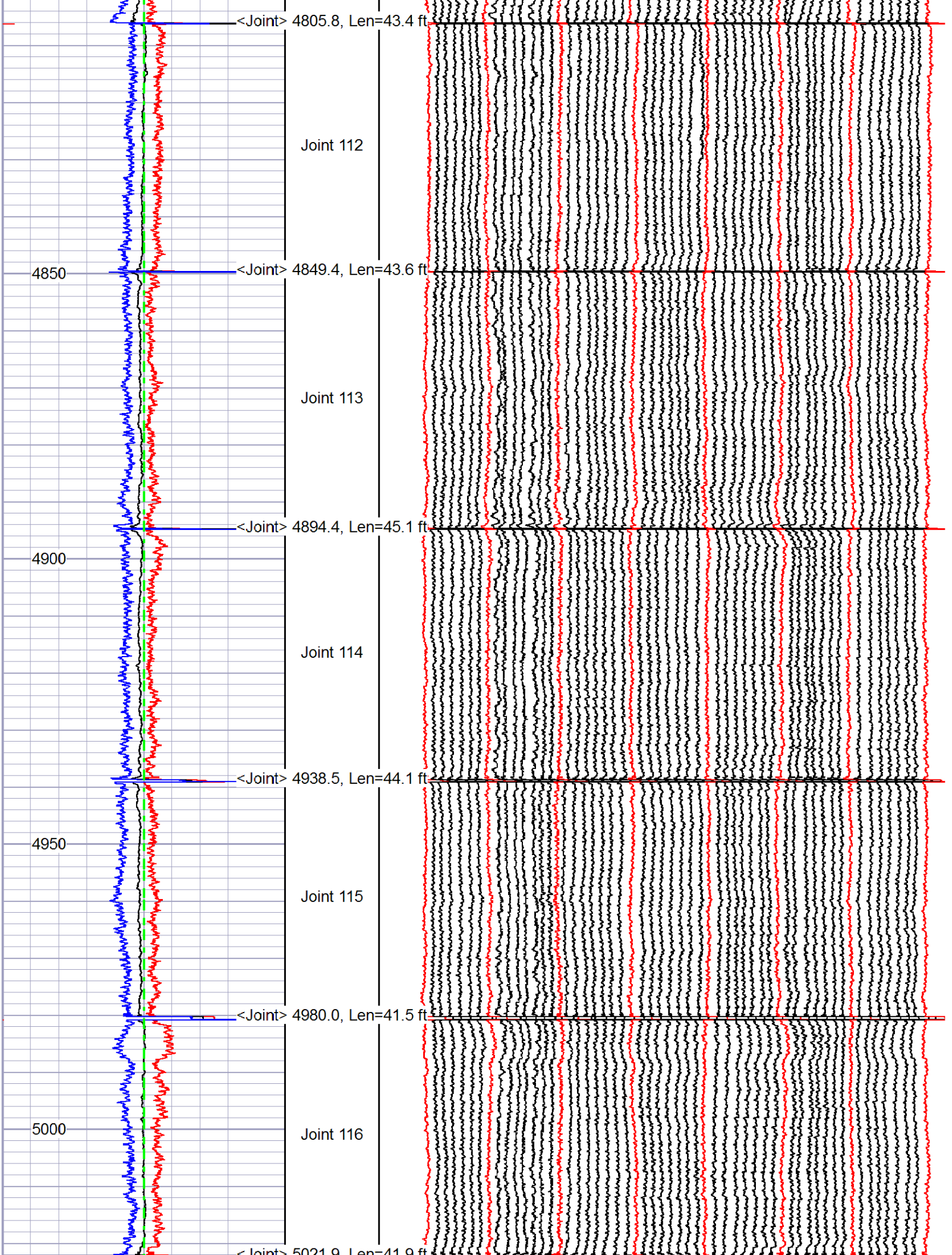

<Joint> 3715.9, Len=45.2 ft
Joint 87
3750
<Joint> 3753.0, Len=37.1 ft
Joint 88
3800
<Joint> 3799.4, Len=46.4 ft
Joint 89
<Joint> 3843.9, Len=44.6 ft
3850
Joint 90
<Joint> 3889.3, Len=45.4 ft
3900
Joint 91

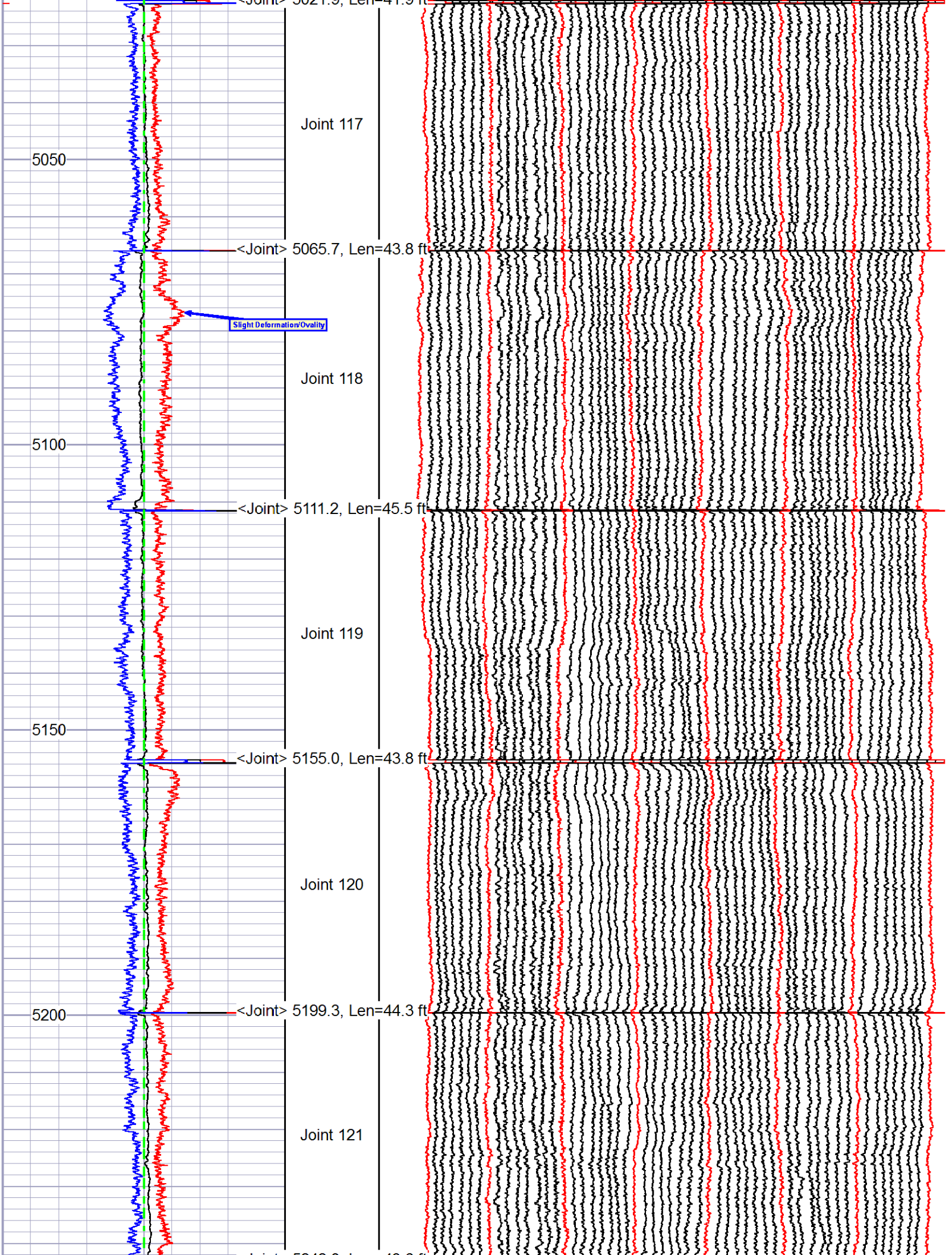

<Joint> 3936.3, Len=47.0 ft
3950
Joint 92
<Joint> 3981.4, Len=45.1 ft
4000
Joint 93
<Joint> 4017.6, Len=36.2 ft
Joint 94
4050
Slight Deformation/Ovality
<Joint> 4062.2, Len=44.6 ft
Slight Deformation/Ovality
Joint 95
4100
<Joint> 4107.1, Len=44.8 ft
Joint 96

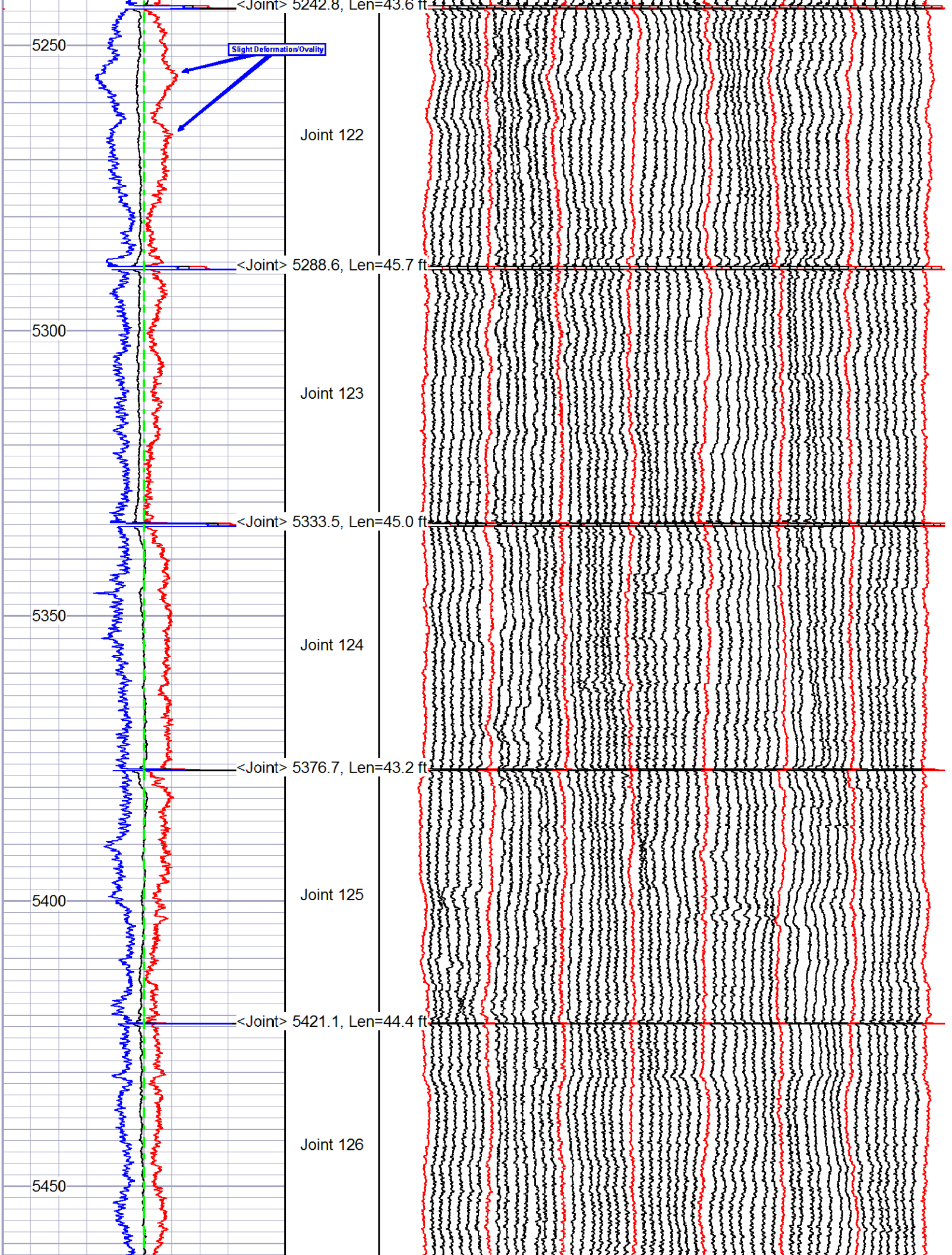

<Joint> 4147.6, Len=40.6 ft
4150
Joint 97
<Joint> 4192.7, Len=45.0 ft
4200
Joint 98
<Joint> 4238.7, Len=46.0 ft
4250
Joint 99
<Joint> 4283.1, Len=44.4 ft
4300
Joint 100
<Joint> 4327.5, Len=44.4 ft
4350
Joint 101

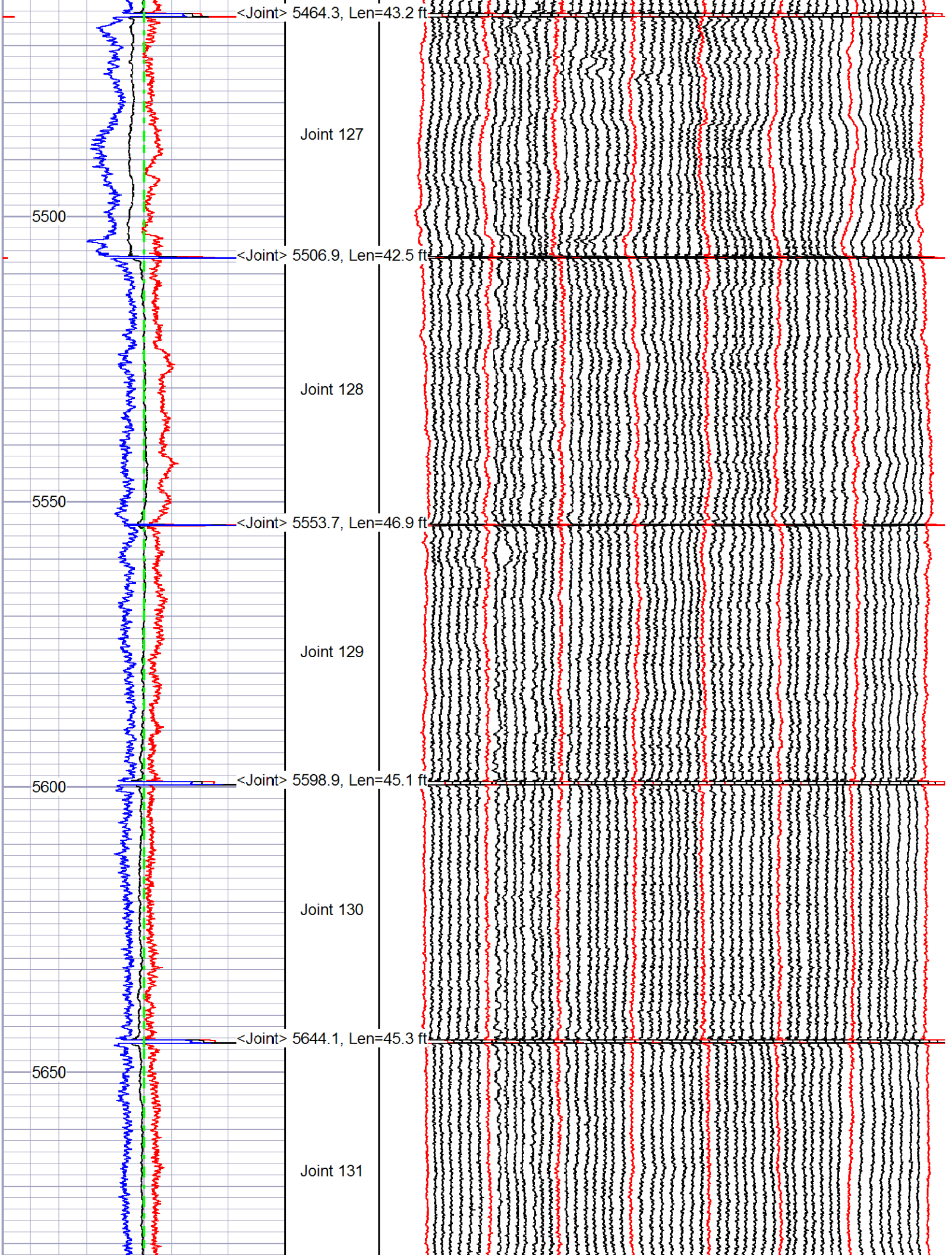

<Joint> 4372.6, Len=45.1 ft
Joint 102
4400
<Joint> 4416.7, Len=44.1 ft
Joint 103
4450
<Joint> 4463.3, Len=46.6 ft
Joint 104
4500
<Joint> 4506.6, Len=43.3 ft
Joint 105
4550
<Joint> 4550.4, Len=43.8 ft
Joint 106

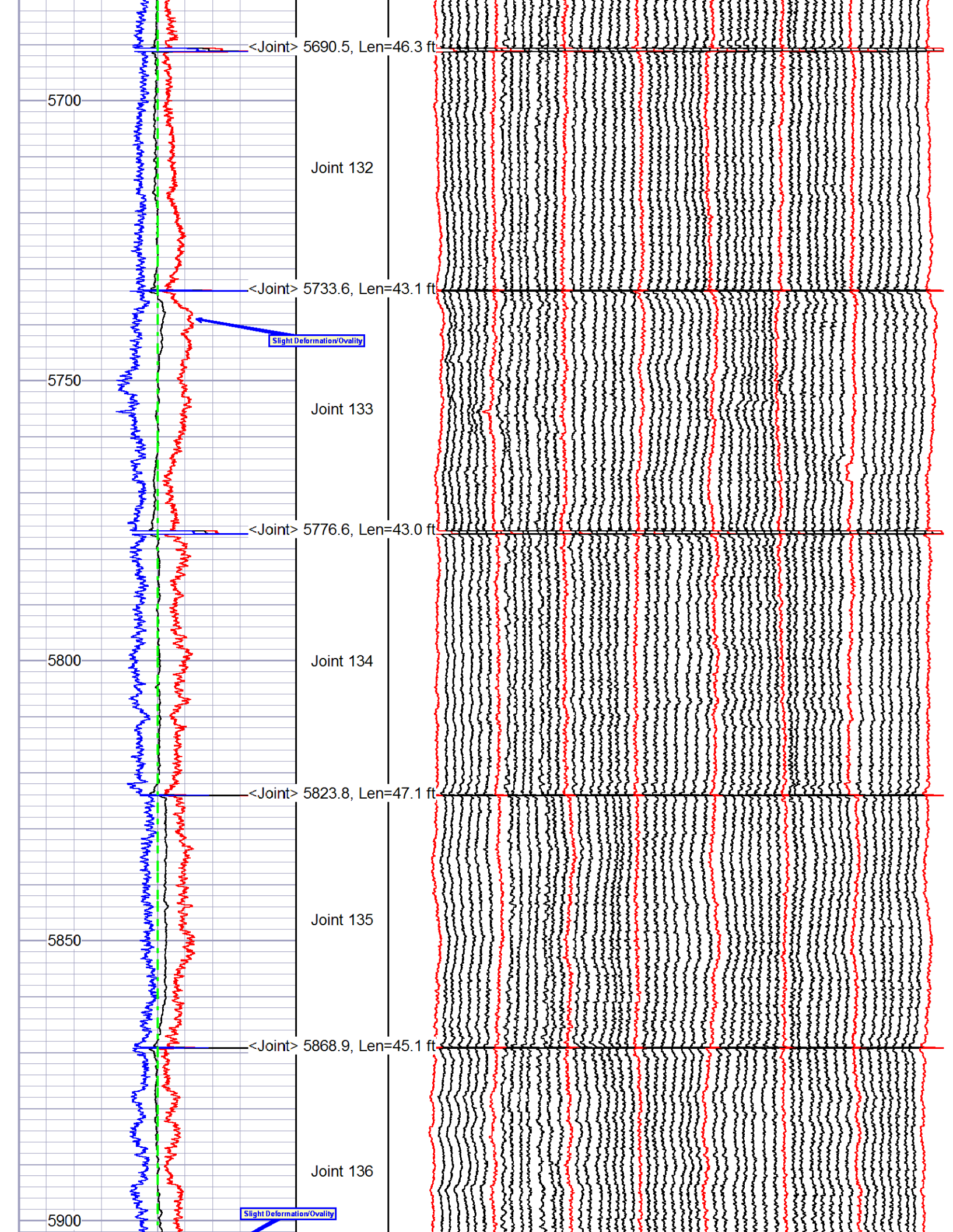

<Joint> 4587.0, Len=36.6 ft
4600
Joint 107
<Joint> 4630.5, Len=43.5 ft
4650
Joint 108
<Joint> 4674.0, Len=43.5 ft
Joint 109
4700
<Joint> 4718.5, Len=44.5 ft
Joint 110
4750
<Joint> 4762.4, Len=44.0 ft
Joint 111
4800

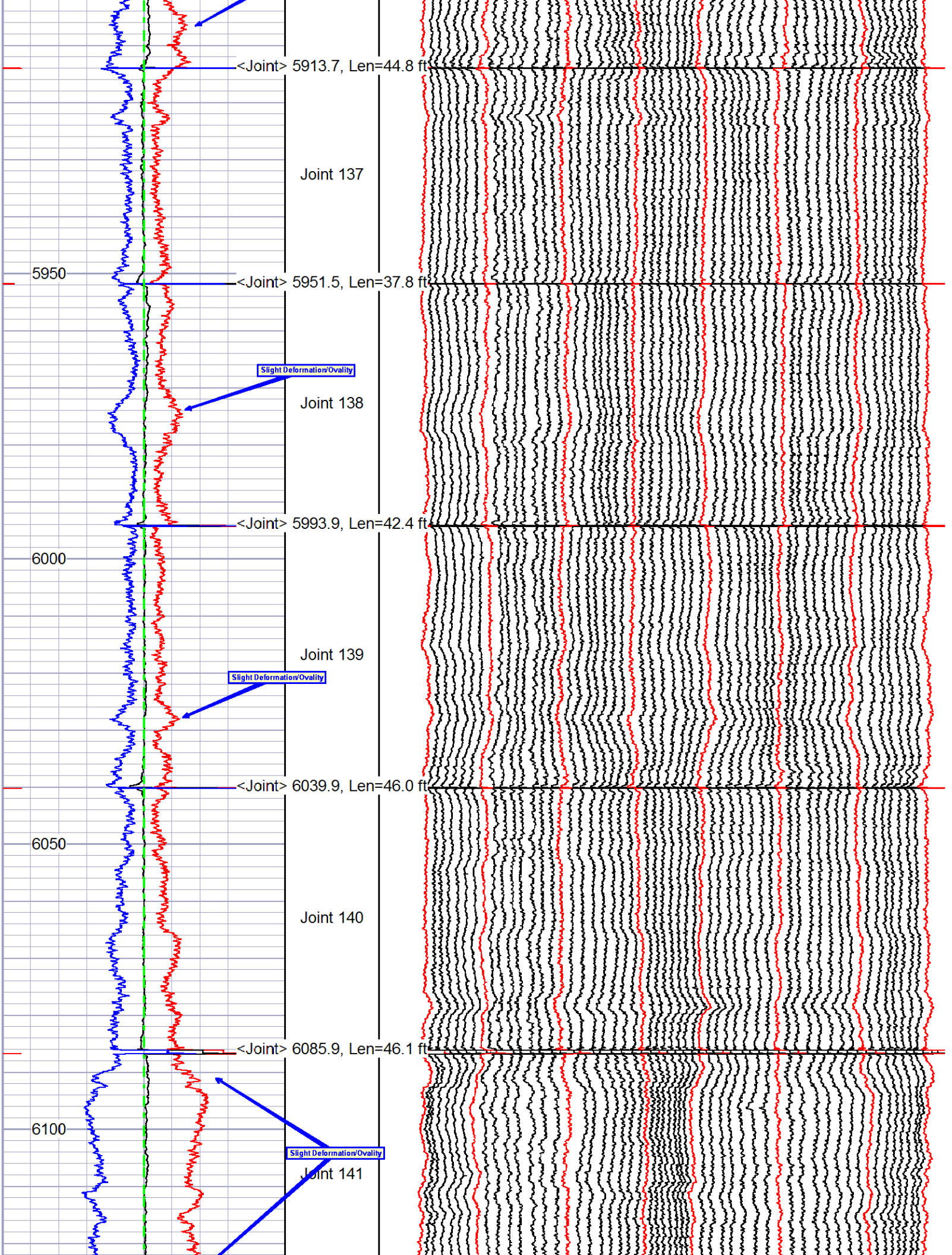

<Joint> 4805.8, Len=43.4 ft
Joint 112
4850
<Joint> 4849.4, Len=43.6 ft
Joint 113
<Joint> 4894.4, Len=45.1 ft
4900
Joint 114
<Joint> 4938.5, Len=44.1 ft
4950
Joint 115
<Joint> 4980.0, Len=41.5 ft
5000
Joint 116

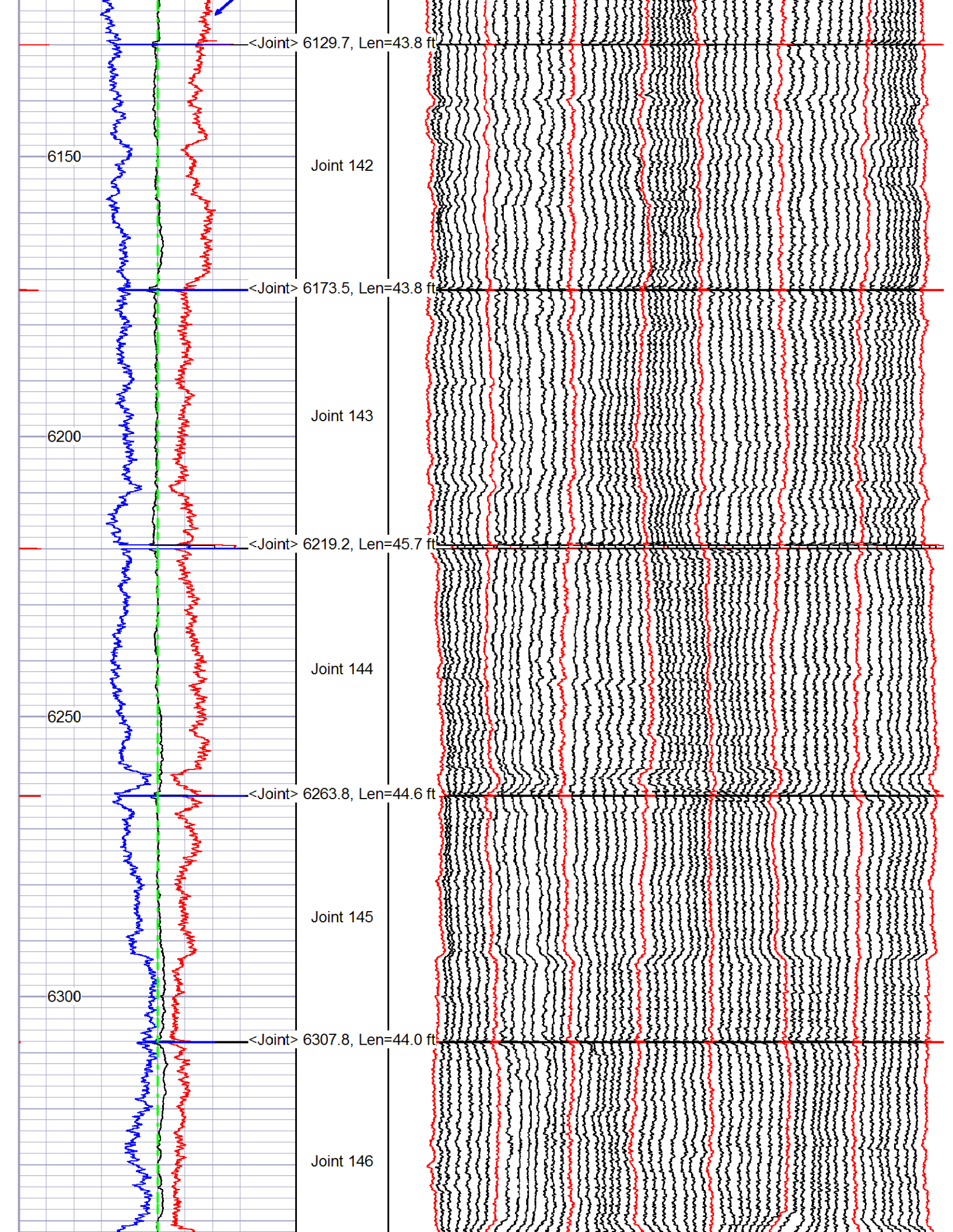

<Joint> 5021.9, Len=41.9 ft
Joint 117
5050
<Joint> 5065.7, Len=43.8 ft
Slight Deformation/Ovality
Joint 118
5100
<Joint> 5111.2, Len=45.5 ft
Joint 119
5150
<Joint> 5155.0, Len=43.8 ft
Joint 120
5200
<Joint> 5199.3, Len=44.3 ft
Joint 121

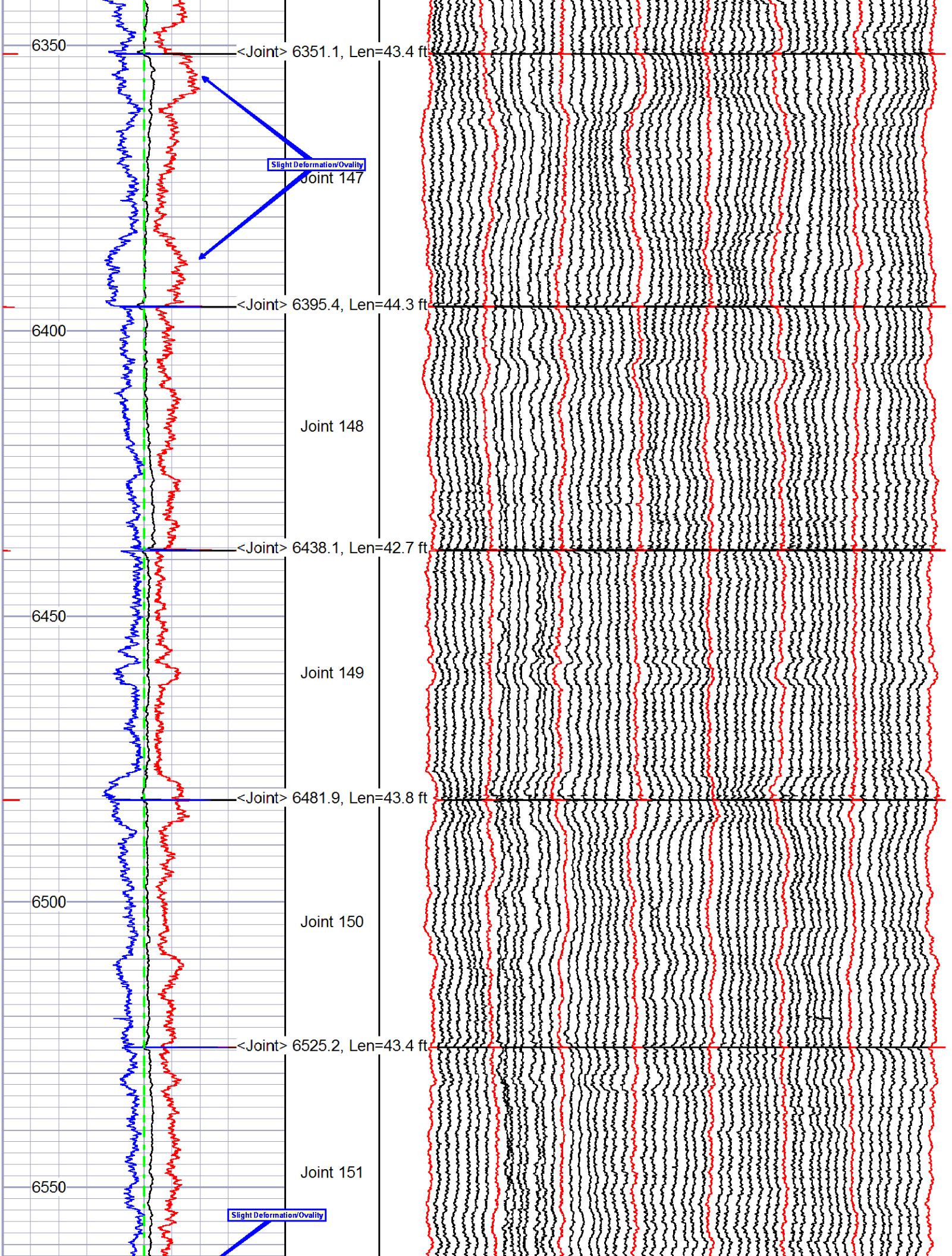

<Joint> 5242.8, Len=43.6 ft
5250
Slight Deformation/Ovality
Joint 122
<Joint> 5288.6, Len=45.7 ft
5300
Joint 123
<Joint> 5333.5, Len=45.0 ft
5350
Joint 124
<Joint> 5376.7, Len=43.2 ft
5400
Joint 125
<Joint> 5421.1, Len=44.4 ft
Joint 126
5450

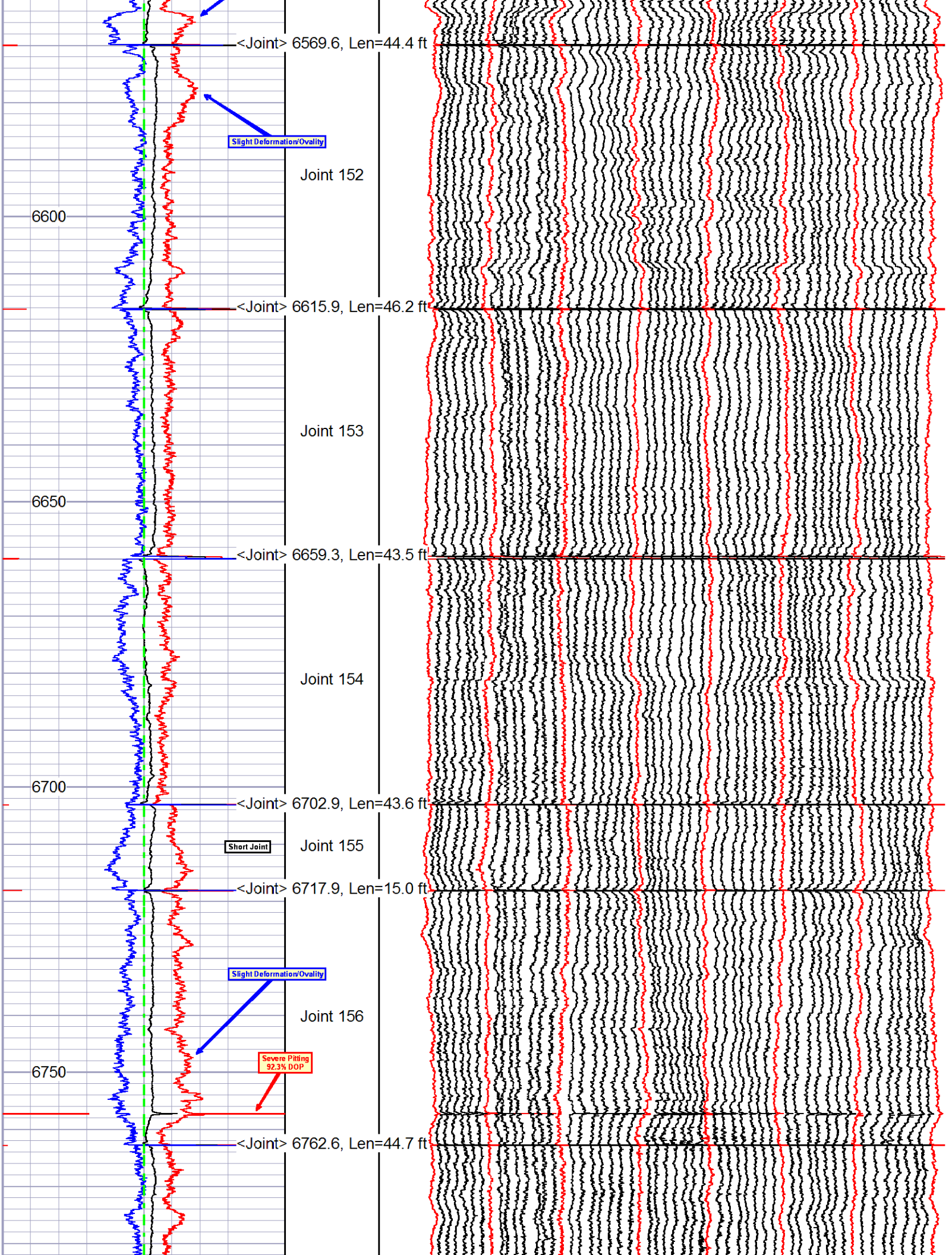

<Joint> 5464.3, Len=43.2 ft
Joint 127
5500
<Joint> 5506.9, Len=42.5 ft
Joint 128
5550
<Joint> 5553.7, Len=46.9 ft
Joint 129
<Joint> 5598.9, Len=45.1 ft
5600
Joint 130
<Joint> 5644.1, Len=45.3 ft
5650
Joint 131

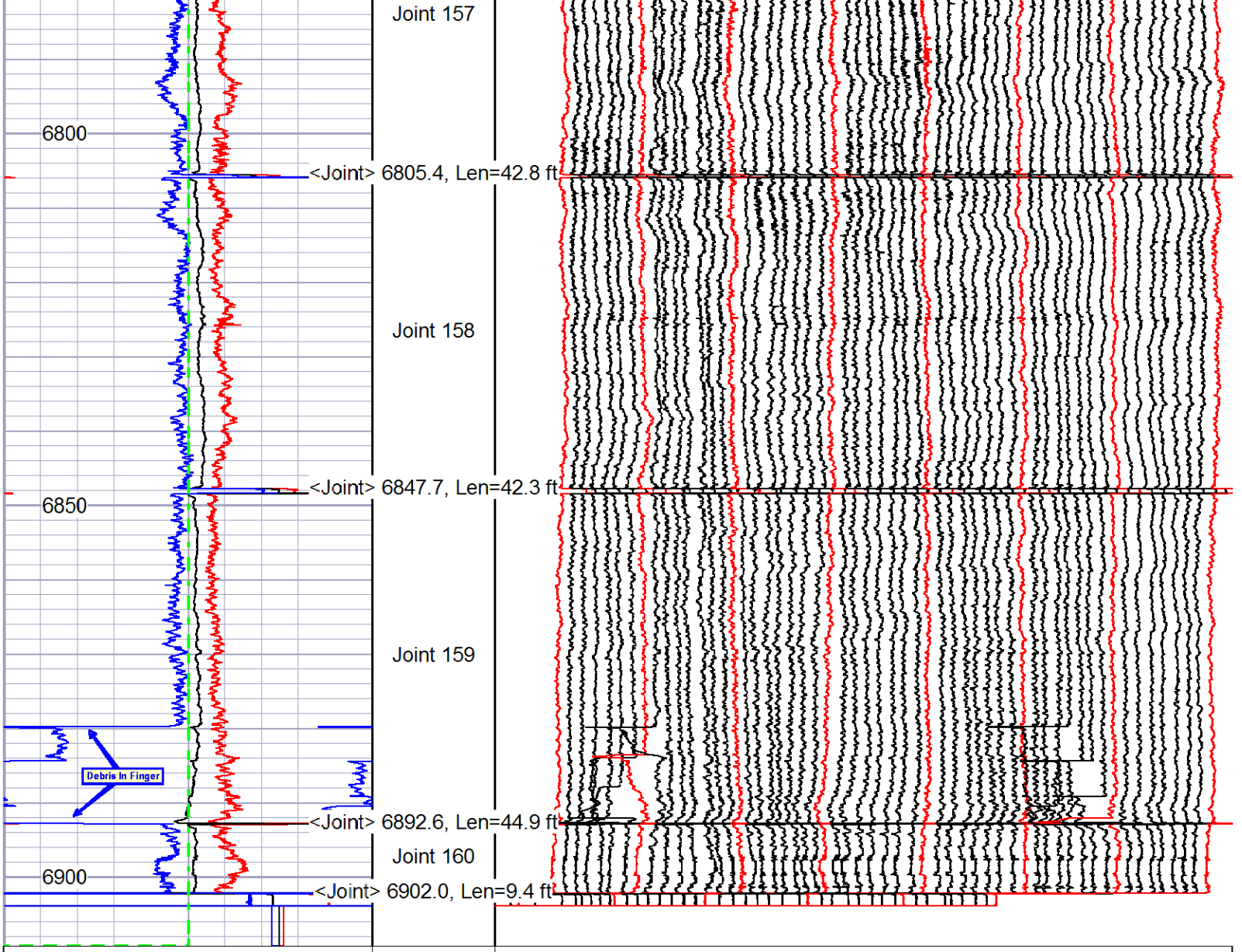

<Joint> 5690.5, Len=46.3 ft
5700
Joint 132
<Joint> 5733.6, Len=43.1 ft
Slight Deformation/Ovality
5750
Joint 133
<Joint> 5776.6, Len=43.0 ft
5800
Joint 134
<Joint> 5823.8, Len=47.1 ft
Joint 135
5850
<Joint> 5868.9, Len=45.1 ft
Joint 136
Slight Deformation/Ovality
5900


<Joint> 5913.7, Len=44.8 ft
Joint 137
5950
<Joint> 5951.5, Len=37.8 ft
Slight Deformation/Ovality
Joint 138
<Joint> 5993.9, Len=42.4 ft
6000
Joint 139
Slight Deformation/Ovality
<Joint> 6039.9, Len=46.0 ft
6050
Joint 140
<Joint> 6085.9, Len=46.1 ft
6100
Slight Deformation/Ovality
Joint 141


<Joint> 6129.7, Len=43.8 ft
6150
Joint 142
<Joint> 6173.5, Len=43.8 ft
6200
Joint 143
<Joint> 6219.2, Len=45.7 ft
Joint 144
6250
<Joint> 6263.8, Len=44.6 ft
Joint 145
6300
<Joint> 6307.8, Len=44.0 ft
Joint 146


6350
<Joint> 6351.1, Len=43.4 ft
Slight Deformation/Ovality
Joint 147
<Joint> 6395.4, Len=44.3 ft
6400
Joint 148
<Joint> 6438.1, Len=42.7 ft
6450
Joint 149
<Joint> 6481.9, Len=43.8 ft
6500
Joint 150
<Joint> 6525.2, Len=43.4 ft
Joint 151
6550
Slight Deformation/Ovality


<Joint> 6569.6, Len=44.4 ft
Slight Deformation/Ovality
Joint 152
6600
<Joint> 6615.9, Len=46.2 ft
Joint 153
6650
<Joint> 6659.3, Len=43.5 ft
Joint 154
6700
<Joint> 6702.9, Len=43.6 ft
Short Joint
Joint 155
<Joint> 6717.9, Len=15.0 ft
Slight Deformation/Ovality
Joint 156
Severe Pitting
92.3% DOP
6750
<Joint> 6762.6, Len=44.7 ft



8.255	Maximum-Finger (in)	9.255	PTANN	56 FINGER TRACE
8.255	Average-Finger (in)	9.255		
8.255	Minimum-Finger (in)	9.255		
8.255	Nominal ID (in)	9.255		

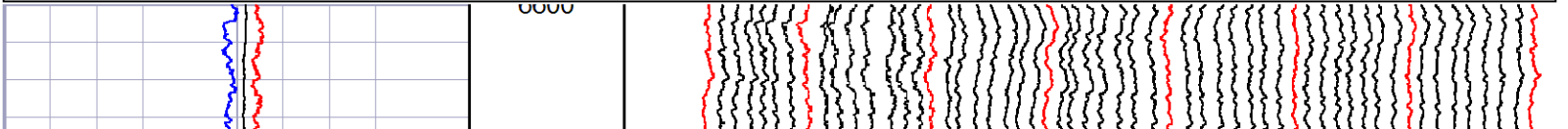
BAKER HUGHES

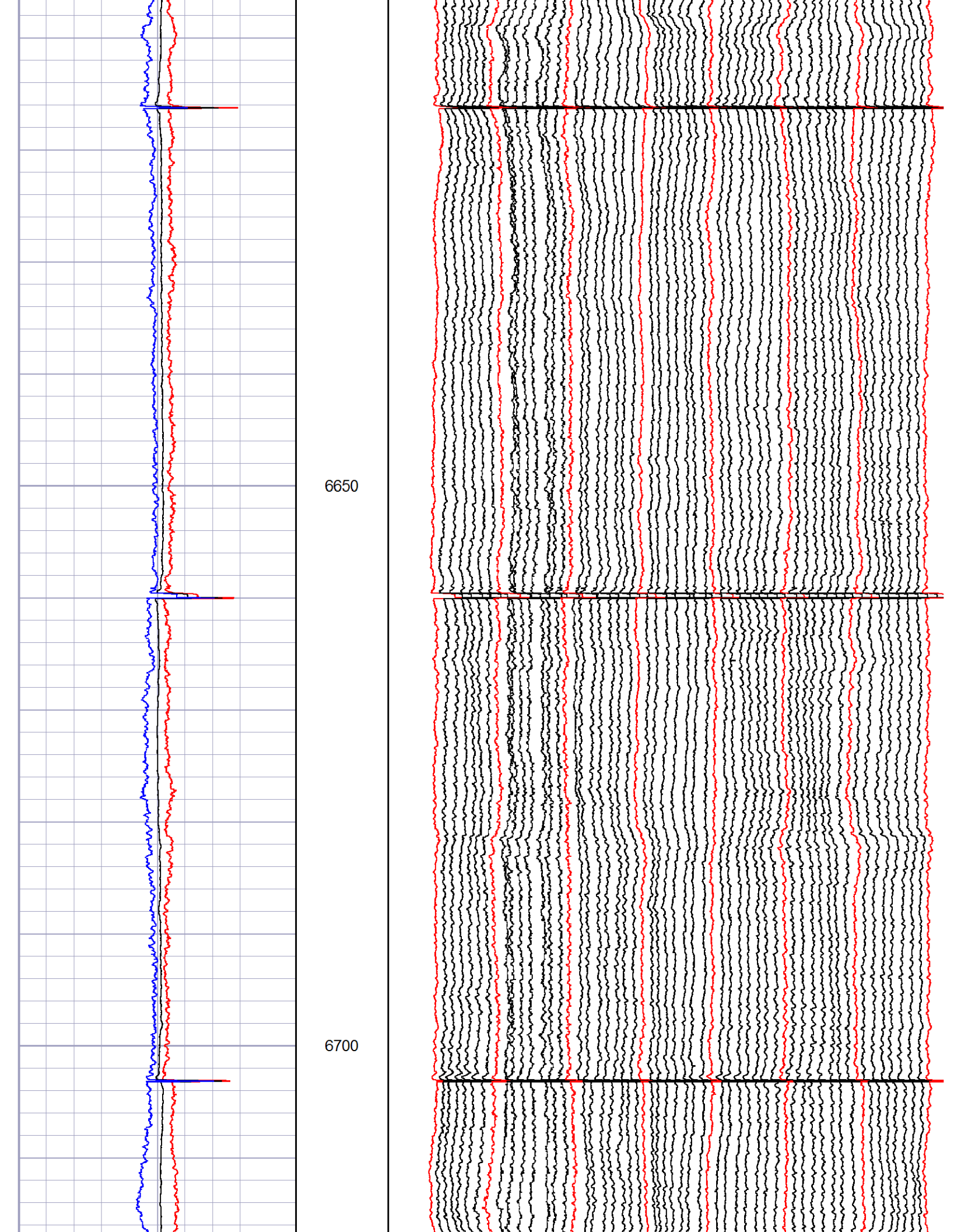
Main Section

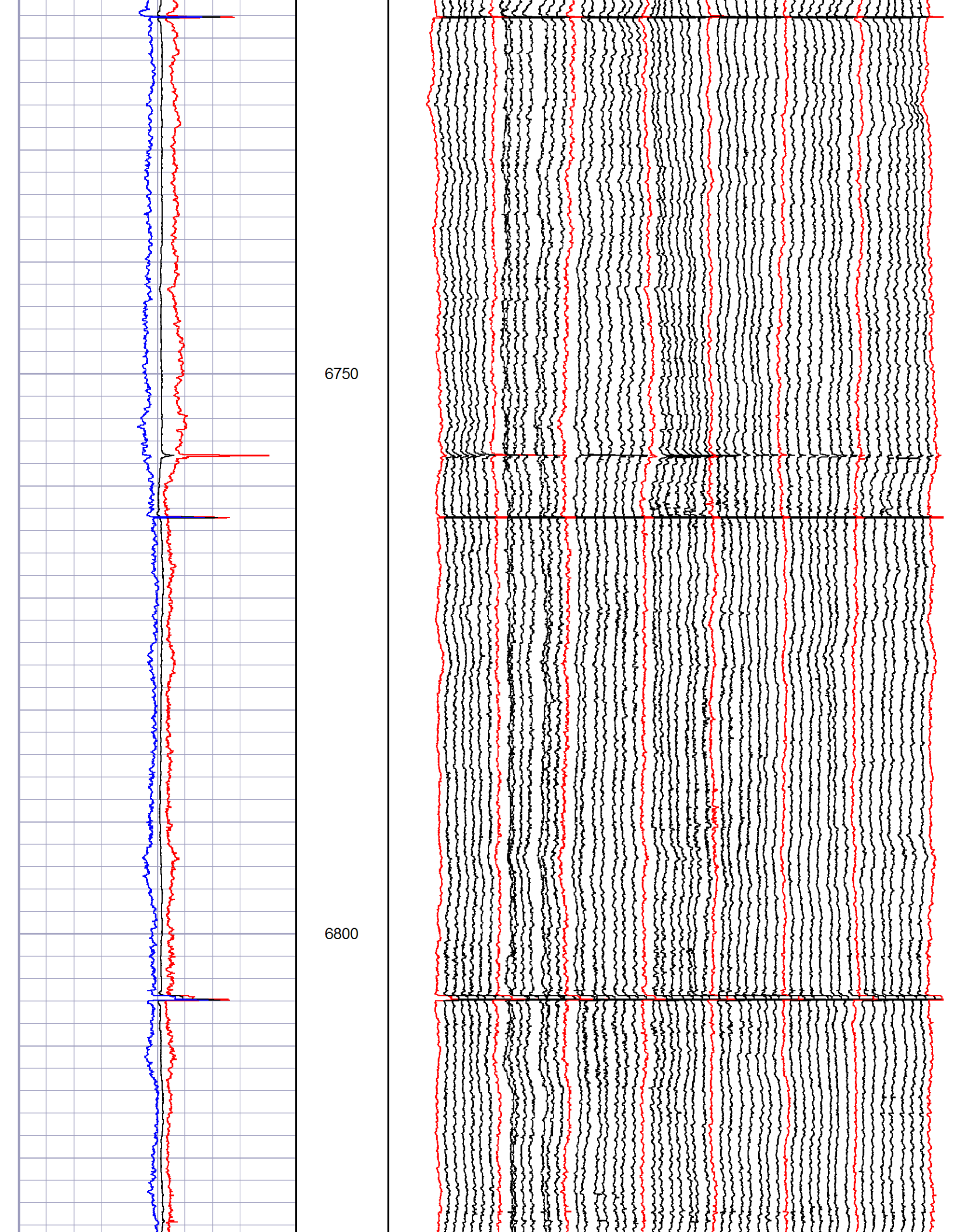
2" Span
Max-Ave-Min

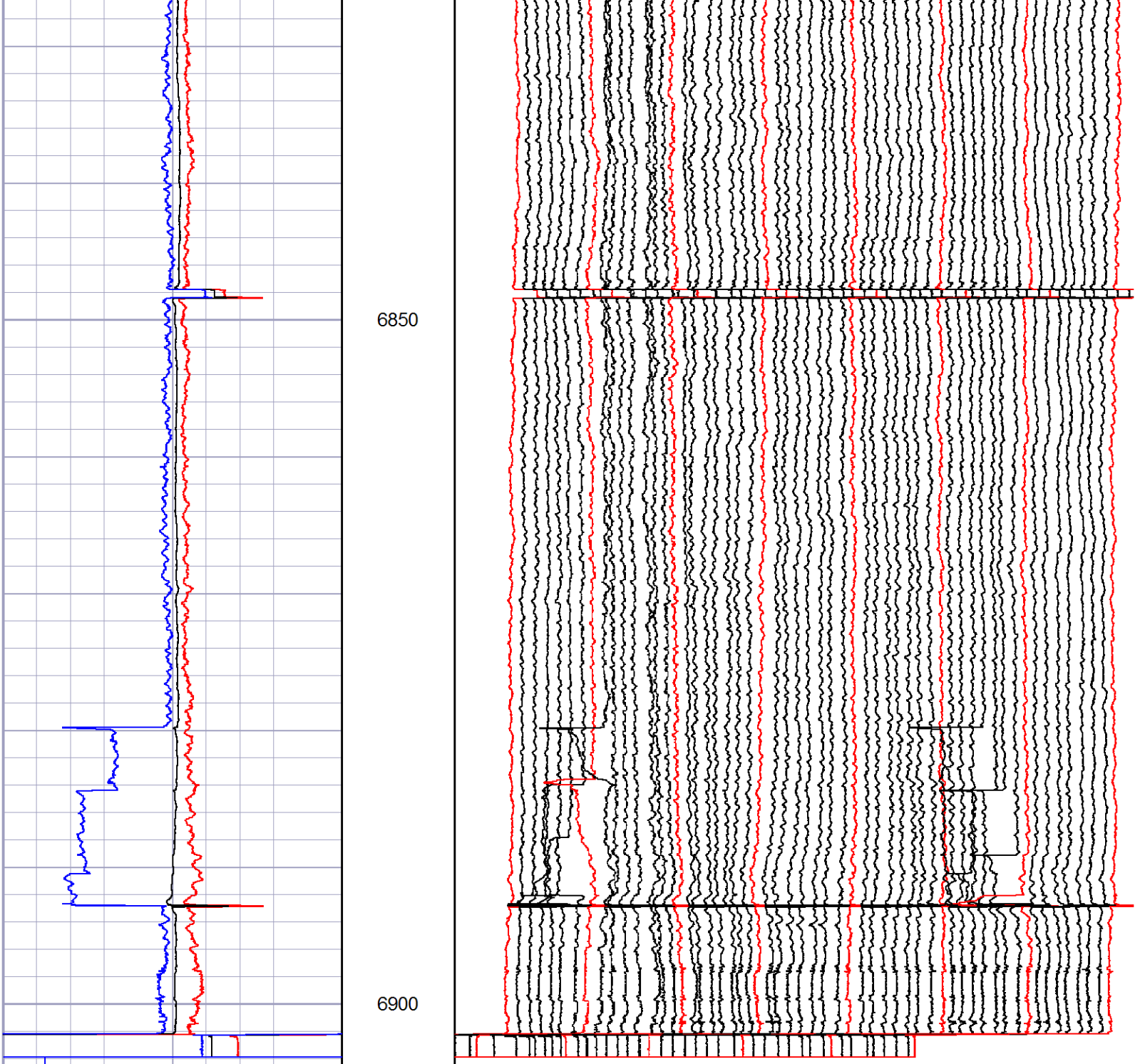
Database File	c:\hotwell_mips\porter 25b\project\processed.db
Dataset Pathname	proc
Presentation Format	56f_43_5lb
Dataset Creation	Thu May 19 15:26:25 2016
Charted by	Depth in Feet scaled 1:120

7.755	Maximum-Finger (in)	9.755	56 FINGER TRACE
7.755	Average-Finger (in)	9.755	
7.755	Minimum-Finger (in)	9.755	




6650
6700


6750
6800



7.755	Maximum-Finger (in)	9.755
7.755	Average-Finger (in)	9.755
7.755	Minimum-Finger (in)	9.755

56 FINGER TRACE

Calibration Report

Database File	c:\hotwell_mips\porter 25b\raw data & info\107369_socal_porter24b.db
Dataset Pathname	aliso_canyon/porter_24b/run1/pass3
Dataset Creation	Mon May 16 20:02:15 2016

GOWell 56 Arm Calibration Report

Serial Number:	11148
Tool Model:	56
Performed:	Mon May 16 17:04:35 2016

Ref ID:	7.00	8.00	9.00	9.25	9.63	Offset	in
Arm1	7.06	8.01	8.98	9.25	9.59	0.00	in
Arm2	6.94	7.87	8.81	9.07	9.39	0.00	in
Arm3	7.05	7.99	8.96	9.23	9.58	0.00	in
Arm4	7.01	7.92	8.95	9.22	9.59	0.00	in
Arm5	7.11	8.04	9.02	9.30	9.65	0.00	in
Arm6	7.09	8.05	9.03	9.33	9.68	0.00	in
Arm7	6.92	7.88	8.85	9.13	9.46	0.00	in
Arm8	7.02	7.99	8.96	9.26	9.60	0.00	in
Arm9	7.03	8.00	8.94	9.24	9.59	0.00	in
Arm10	7.04	8.02	8.99	9.28	9.62	0.00	in
Arm11	7.02	7.99	8.93	9.23	9.58	0.00	in
Arm12	7.05	8.02	8.98	9.28	9.63	0.00	in
Arm13	6.98	7.95	8.90	9.18	9.55	0.00	in
Arm14	7.06	8.05	8.99	9.28	9.62	0.00	in
Arm15	6.99	7.98	8.92	9.20	9.57	0.00	in
Arm16	6.97	7.97	8.91	9.20	9.57	0.00	in
Arm17	6.96	7.96	8.87	9.16	9.52	0.00	in
Arm18	7.06	8.06	9.00	9.27	9.65	0.00	in
Arm19	7.02	8.02	8.94	9.21	9.57	0.00	in
Arm20	7.06	8.08	9.00	9.28	9.64	0.00	in
Arm21	7.04	8.06	8.98	9.25	9.58	0.00	in
Arm22	6.97	8.01	8.94	9.21	9.58	0.00	in
Arm23	7.13	8.15	9.06	9.33	9.66	0.00	in
Arm24	7.01	8.05	8.99	9.26	9.62	0.00	in
Arm25	7.03	8.07	8.98	9.25	9.59	0.00	in
Arm26	6.96	8.01	8.95	9.20	9.57	0.00	in
Arm27	7.04	8.09	9.01	9.26	9.57	0.00	in
Arm28	7.01	8.06	9.00	9.25	9.61	0.00	in
Arm29	7.04	8.08	9.02	9.25	9.56	0.00	in
Arm30	7.06	8.11	9.05	9.29	9.61	0.00	in

* Bad

GOWell 56 Arm Calibration Report

Serial Number:
Tool Model:
Performed:

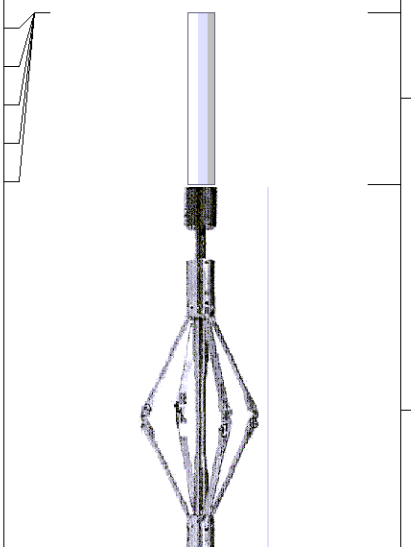
Ref ID:	7.00	8.00	9.00	9.25	9.63	Offset	in
Arm31	7.09	8.13	9.08	9.30	9.61	0.00	in
Arm32	7.10	8.15	9.10	9.33	9.65	0.00	in
Arm33	7.08	8.11	9.06	9.29	9.63	0.00	in
Arm34	7.09	8.14	9.09	9.30	9.68	0.00	in
Arm35	7.07	8.10	9.06	9.27	9.61	0.00	in
Arm36	7.20	8.23	9.20	9.40	9.71	0.00	in
Arm37	7.14	8.17	9.13	9.33	9.64	0.00	in
Arm38	7.06	8.11	9.10	9.31	9.65	0.00	in
Arm39	7.03	8.06	9.04	9.25	9.59	0.00	in
Arm40	6.95	8.01	8.99	9.24	9.55	0.00	in
Arm41	7.04	8.06	9.03	9.23	9.51	0.00	in
Arm42	7.08	8.11	9.11	9.32	9.63	0.00	in
Arm43	7.10	8.09	9.09	9.30	9.66	0.00	in
Arm44	7.03	8.05	9.04	9.29	9.57	0.00	in
Arm45	7.04	8.02	9.00	9.23	9.51	0.00	in
Arm46	6.97	8.01	8.99	9.24	9.47	0.00	in
Arm47	7.03	7.99	8.99	9.21	9.52	0.00	in
Arm48	6.97	8.01	8.97	9.22	9.50	0.00	in
Arm49	7.05	8.03	9.03	9.28	9.60	0.00	in
Arm50	7.05	8.04	9.06	9.30	9.55	0.00	in
Arm51	7.03	7.99	8.99	9.23	9.52	0.00	in
Arm52	7.08	8.04	9.06	9.31	9.60	0.00	in
Arm53	7.05	8.01	9.00	9.24	9.52	0.00	in
Arm54	7.07	8.04	9.06	9.32	9.64	0.00	in
Arm55	7.05	8.01	8.99	9.26	9.57	0.00	in

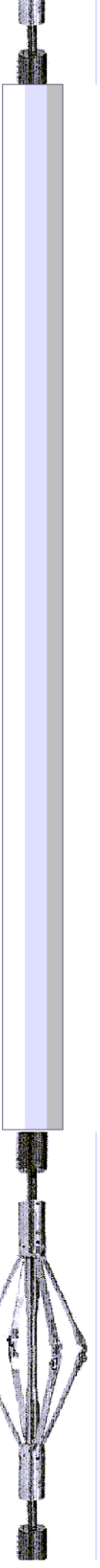
Arm56	6.99	7.98	8.97	9.24	9.57	0.00	in
Arm57							in
Arm58							in
Arm59							in
Arm60							in

* Bad

GOWell 56 Arm Verification Report

	Pre Verification	Post Verification	Casing Check	
Performed:	Mon May 16 17:06:41 2016	Fri Apr 29 11:29:25 2016	Thu Apr 28 14:13:22 2016	
Ref ID:	9.00	0.00	0.00	in
Min.	8.99	107374224.03	0.00	in
Max.	9.01	0.00	42229792241784174000000000000000000000000000	
Avg.	9.00	0.00	0.00	in
Dia1	9.00	7.99	0.00	in
Dia2	9.00	7.99	0.00	in
Dia3	9.00	8.00	0.00	in
Dia4	9.00	8.00	0.00	in
Dia5	9.00	8.00	0.00	in
Dia6	9.00	8.00	0.00	in
Dia7	9.00	8.00	0.00	in
Dia8	9.00	8.00	0.00	in
Dia9	9.00	8.00	0.00	in
Dia10	9.00	8.00	0.00	in
Dia11	9.00	8.00	0.00	in
Dia12	9.00	7.99	0.00	in
Dia13	9.00	8.00	0.00	in
Dia14	9.00	7.99	0.00	in
Dia15	9.00	8.00	0.00	in
Dia16	9.00	7.98	0.00	in
Dia17	9.00	7.99	0.00	in
Dia18	9.00	7.98	0.00	in
Dia19	9.00	8.00	0.00	in
Dia20	9.00	7.97	0.00	in
Dia21	9.00	7.99	0.00	in
Dia22	9.00	7.99	0.00	in
Dia23	9.00	8.00	0.00	in
Dia24	9.00	8.00	0.00	in
Dia25	9.00	7.98	0.00	in
Dia26	9.00	8.00	0.00	in
Dia27	9.00	7.99	0.00	in
Dia28	9.00	7.98	0.00	in

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
BPRES	13.03					
PPRES	13.03					
TOTBBL	13.03		CHD-STNDRD Standard Cable Head	1.03	1.45	10.00
PRATE	13.03					
LTENUSR	13.03					
			CENT-Hotwell275 2 3/4" Hotwell Centralizer for 40 and 56 ARM	2.71	2.75	30.00



		XIPEMAC-56 (11148) Hotwell 56 Arm caliper	6.58	3.50	100.00
Meas	5.38				
Aux1	2.71	CENT-Hotwell275 2 3/4" Hotwell Centralizer for 40 and 56 ARM	2.71	2.75	30.00
LOCTIM	0.00				
UTCTIM	0.00				

Dataset: 107369_socal_porter24b.db: aliso_canyon/porter_24b/run1/pass3
Total length: 13.03 ft
Total weight: 170.00 lb
O.D.: 3.50 in

BAKER HUGHES

Company	SOUTHERN CALIFORNIA GAS COMPANY
Well	PORTER 24B
Field	ALISO CANYON
County	LOS ANGELES

State	CALIFORNIA