56 ARM IMAGING CALIPER LOG

Company	SOUTHERN CALIFORNIA GAS COMPANY
Well	PORTER 50B
Field	ALISO CANYON
County	LOS ANGELES
State	CALIFORNIA

Company SOUTHERN CALIFORNIA GAS COMPANY
Well PORTER 50B
Field ALISO CANYON
County LOS ANGELES
State CALIFORNIA

Location: API # :

SEC 27 TWP 3N RGE 16W

Other Services: HRVRT

Permanent Datum	GL	Elevation	1954.0
Log Measured From	KB		
Drilling Measured From	KB		

Elevation
K.B. 1976.5
D.F. 1975.5
G.L. 1954.0

Date	04/15/2016		
Run Number	1		
Depth Driller	6605.0		
Depth Logger	6604.0		
Bottom Logged Interval	6599.0		
Top Log Interval	0.0		
Open Hole Size			
Type Fluid	KCL		
Density / Viscosity	8.6		
Max. Recorded Temp.	158		
Estimated Cement Top			
Time Well Ready	10:00		
Time Logger on Bottom	11:00		
Equipment Number	4243		
Location	OKLAHOMA CITY ,OK		
Recorded By	B. DEAL		
Witnessed By	T. MCMAHON		

Borehole Record				Casing Record			
Run Number	Bit	From	To	Size	Weight	From	To
				9.625	47		

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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.

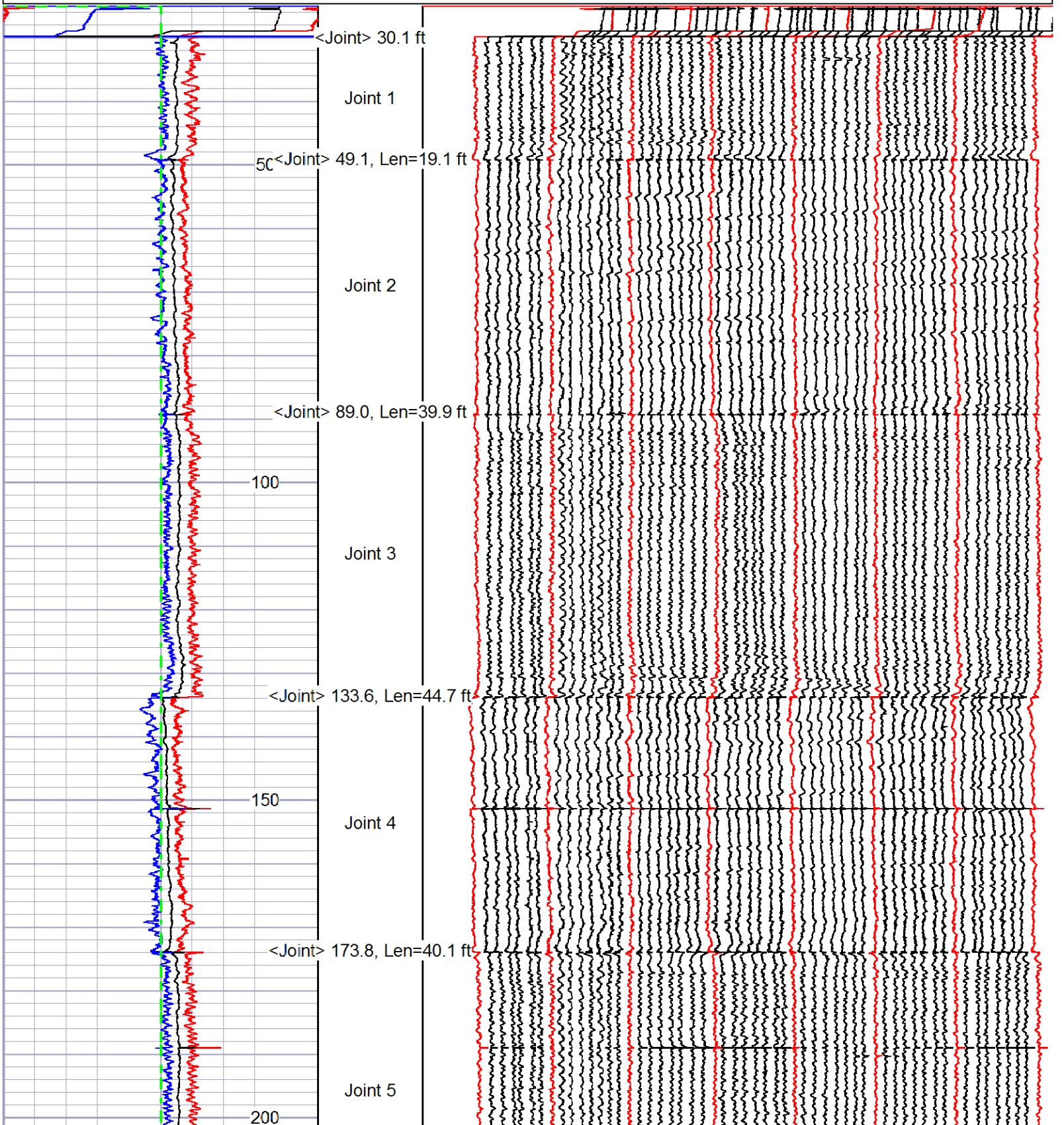
Comments

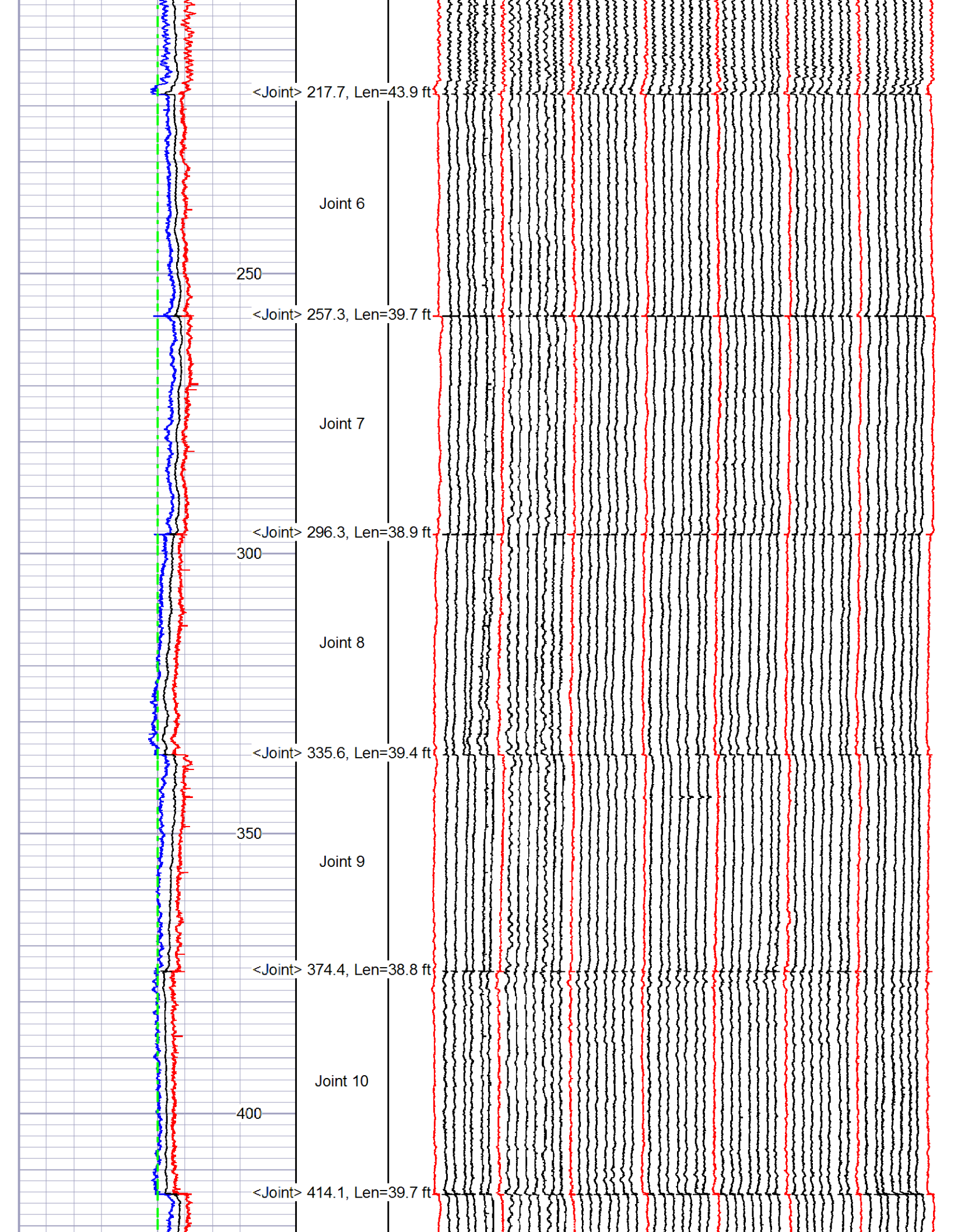
LOG CORRELATED TO SLB USIT LOG DATED 04-14-2016
CONFIRMED ON DEPTH BY TOM MCMAHON
LOGGING SPEED 30 FT/MIN
REPEATED MULTIPLE ZONES DUE TO ABNORMALITIES
SPLICE POINT AT 217'
SYSTEM GLITCH IN CALIBRATION NUMBERING
POST VERIFICATION IS REFERENCED TO 9 INCHES

Main Section

Database File	c:\hotwell_mips\poter 50b\project\processed.db
Dataset Pathname	proc
Presentation Format	56f_47lb_calfor
Dataset Creation	Mon Apr 18 15:56:02 2016
Charted by	Depth in Feet scaled 1:240

8.181	Maximum-Finger (in)	9.181	PTANN	56 FINGER TRACE
8.181	Average-Finger (in)	9.181		
8.181	Minimum-Finger (in)	9.181		
8.181	Nominal ID (in)	9.181		

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Joint 7
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Joint 8
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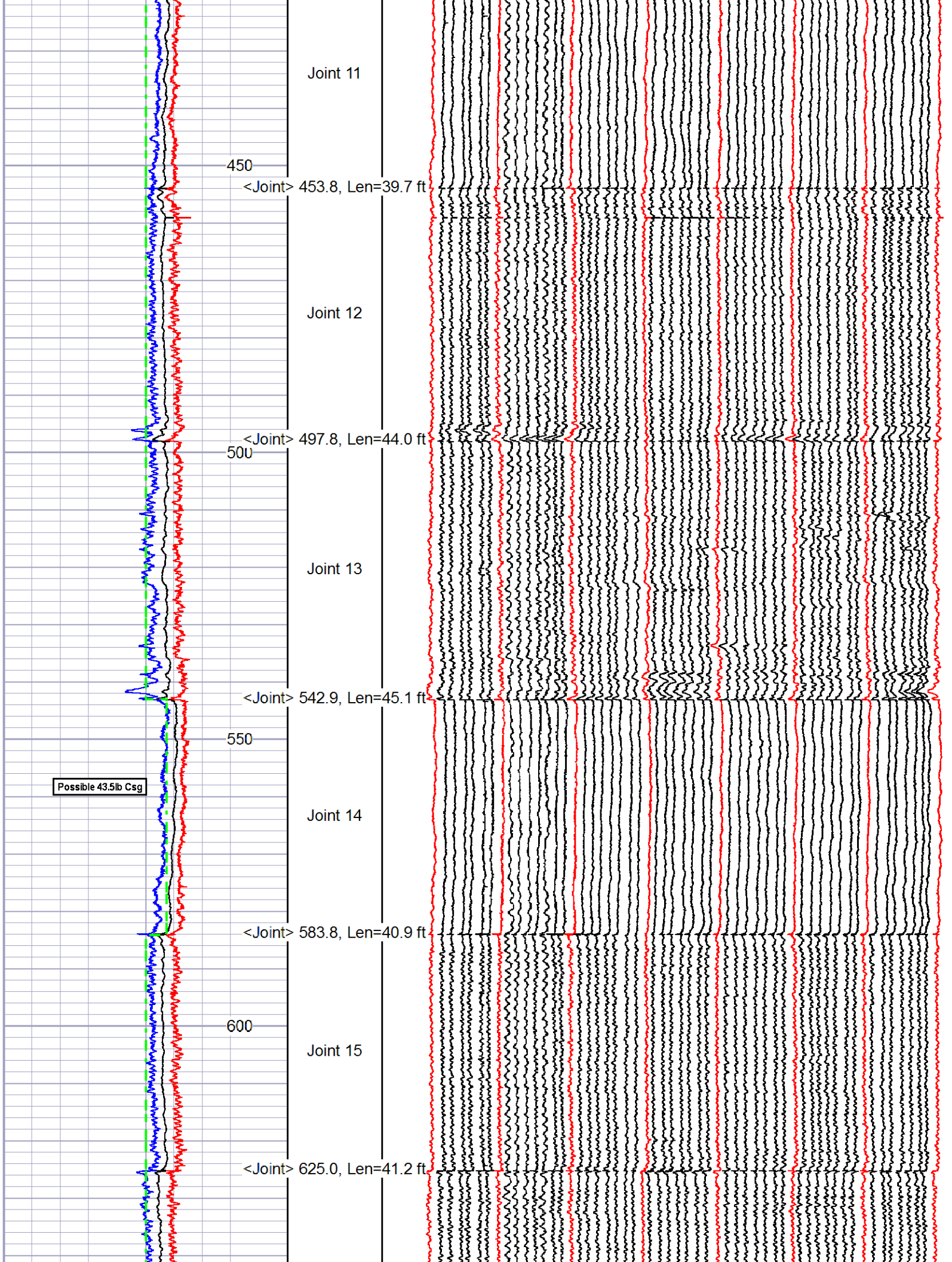
Joint 9
<Joint> 374.4, Len=38.8 ft
Joint 10
400
<Joint> 414.1, Len=39.7 ft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Joint 12
<Joint> 497.8, Len=44.0 ft
500
Joint 13
<Joint> 542.9, Len=45.1 ft
550
Possible 43.5lb Csg
Joint 14
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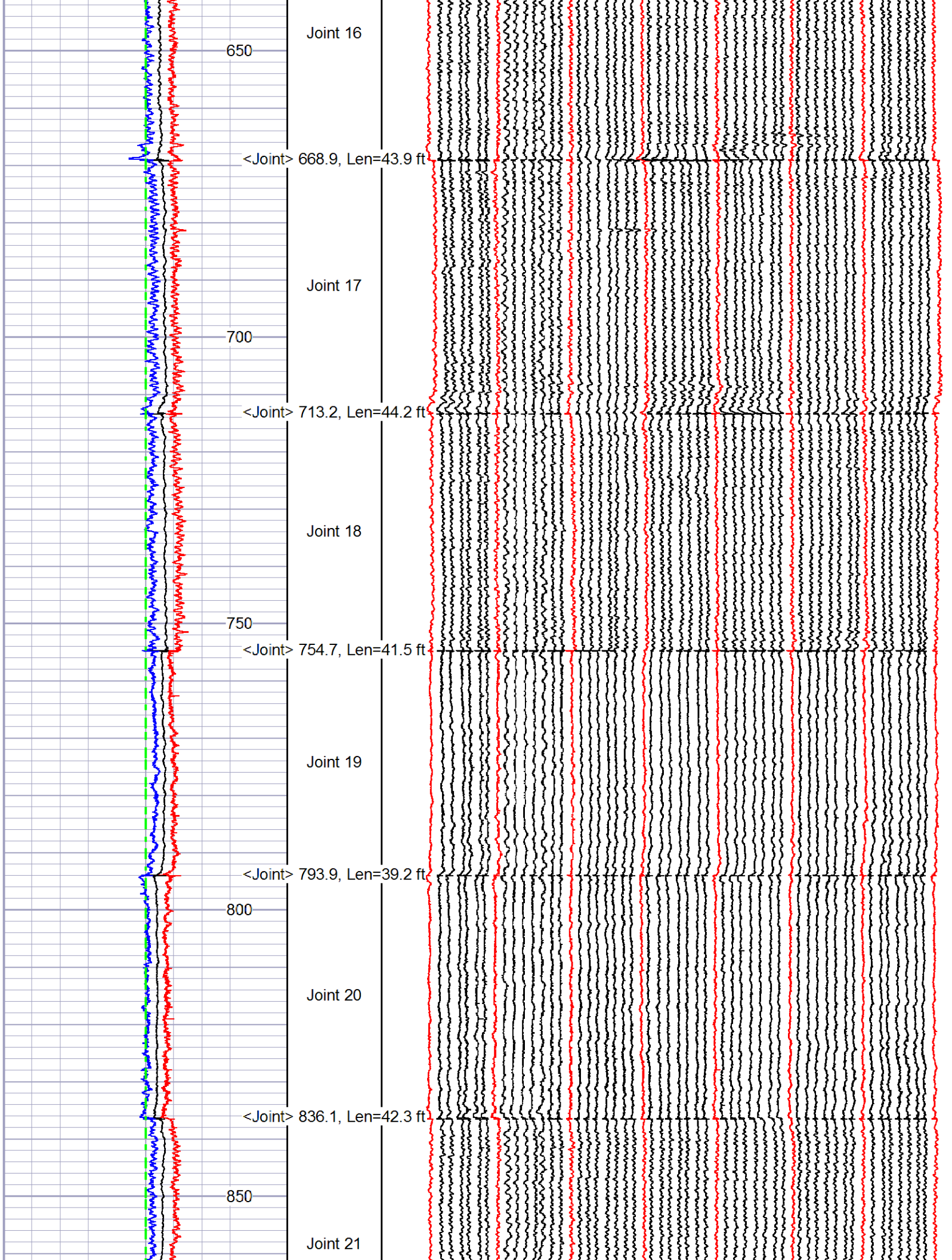
600
Joint 15
<Joint> 625.0, Len=41.2 ft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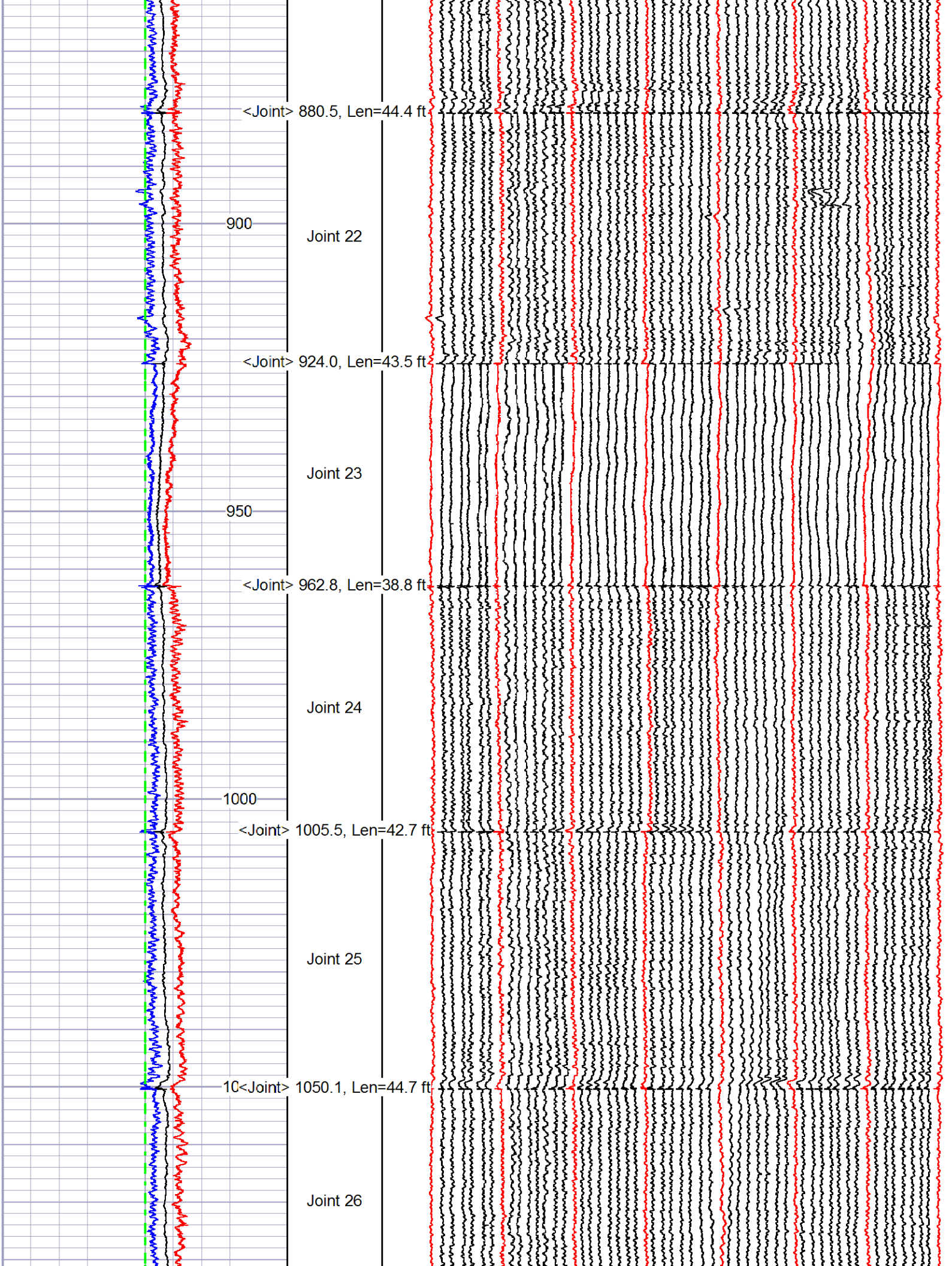
Joint 17
700
<Joint> 713.2, Len=44.2 ft
Joint 18
750
<Joint> 754.7, Len=41.5 ft
Joint 19
<Joint> 793.9, Len=39.2 ft
800
Joint 20
<Joint> 836.1, Len=42.3 ft
850
Joint 21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Joint 22
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Joint 23
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Joint 24
1000
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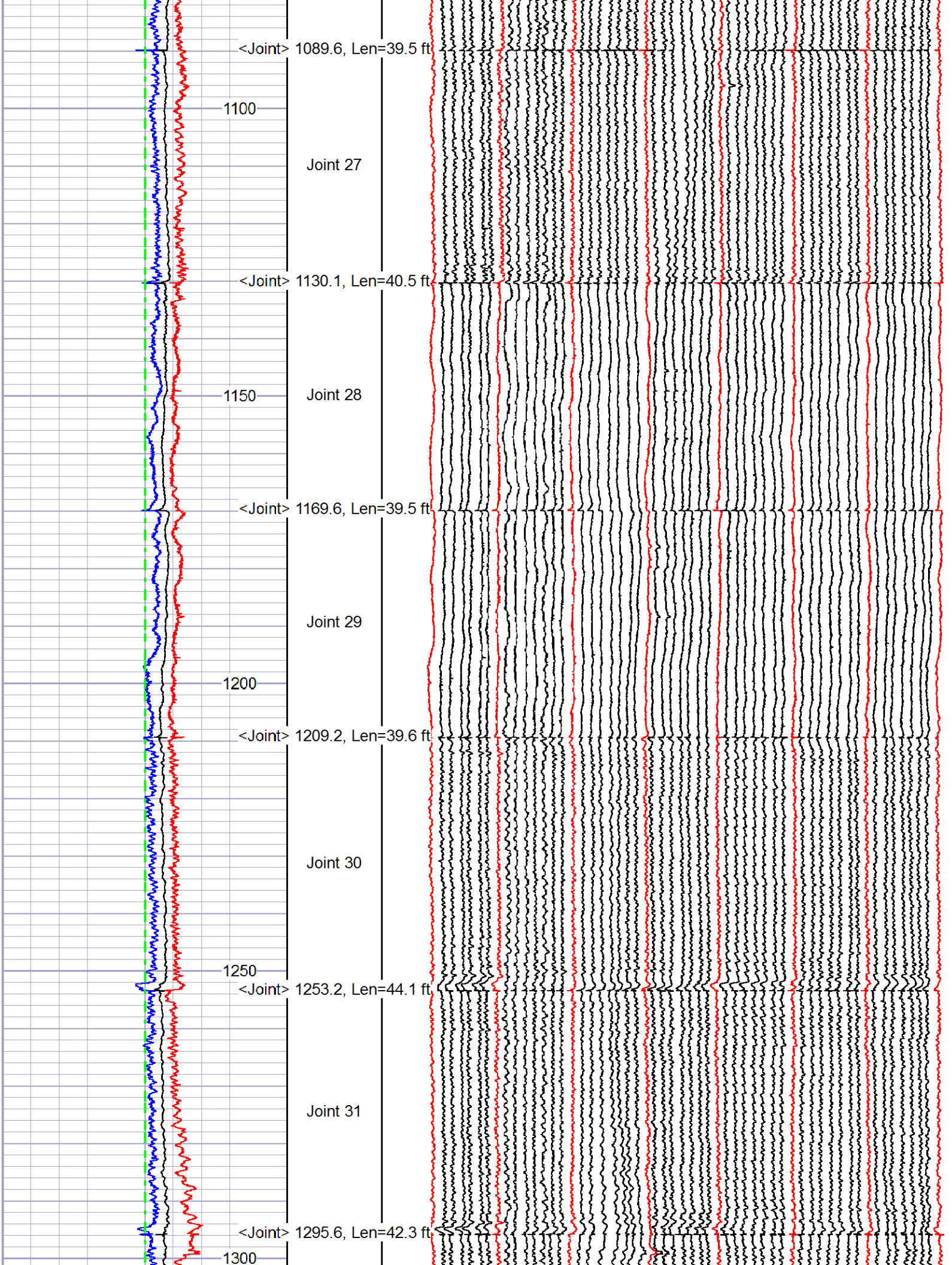
Joint 25
10<Joint> 1050.1, Len=44.7 ft
Joint 26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Joint 27
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Joint 28
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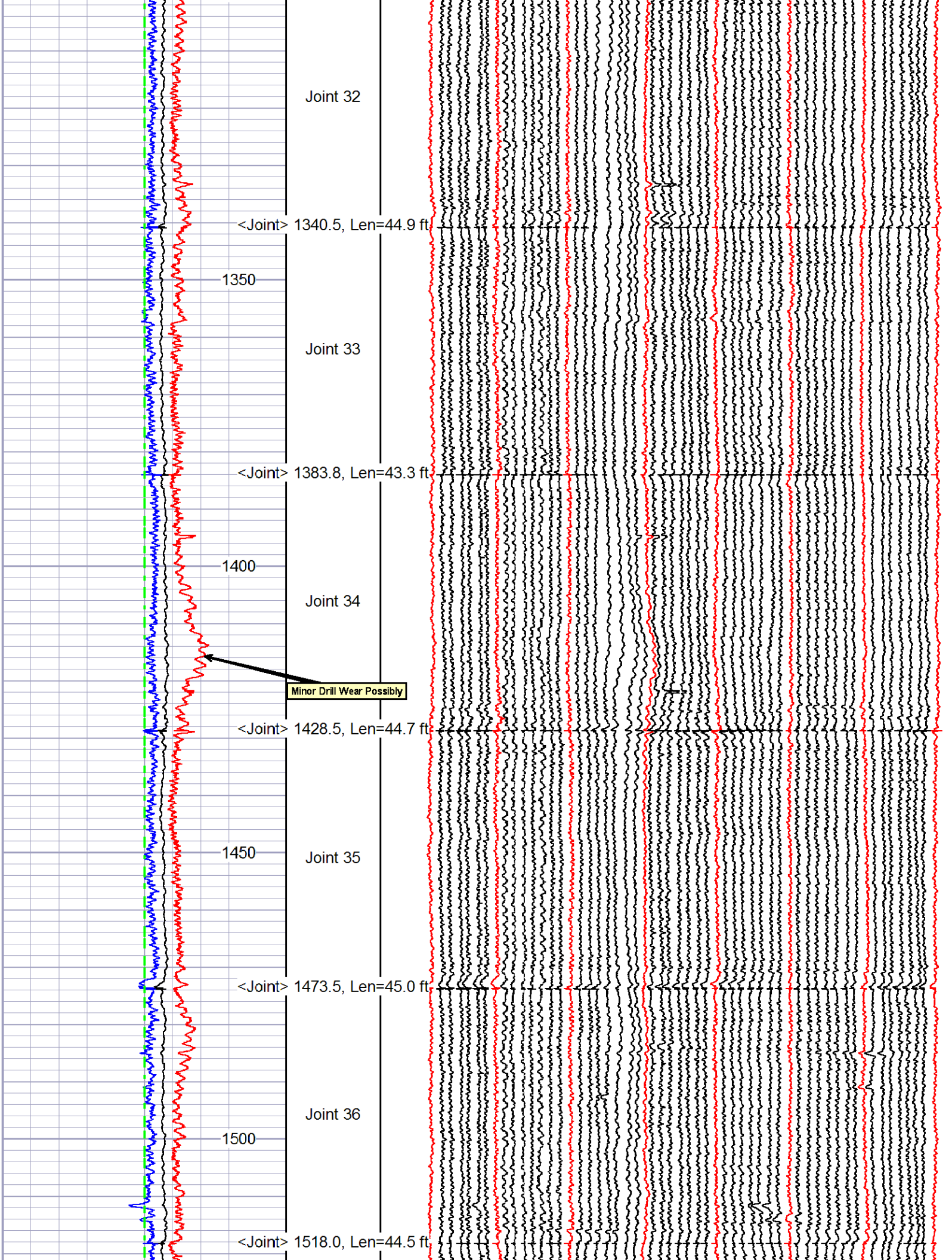
Joint 29
1200
<Joint> 1209.2, Len=39.6 ft
Joint 30
1250
<Joint> 1253.2, Len=44.1 ft
Joint 31
<Joint> 1295.6, Len=42.3 ft
1300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Joint 33
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1400
Joint 34
Minor Drill Wear Possibly
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Joint 35
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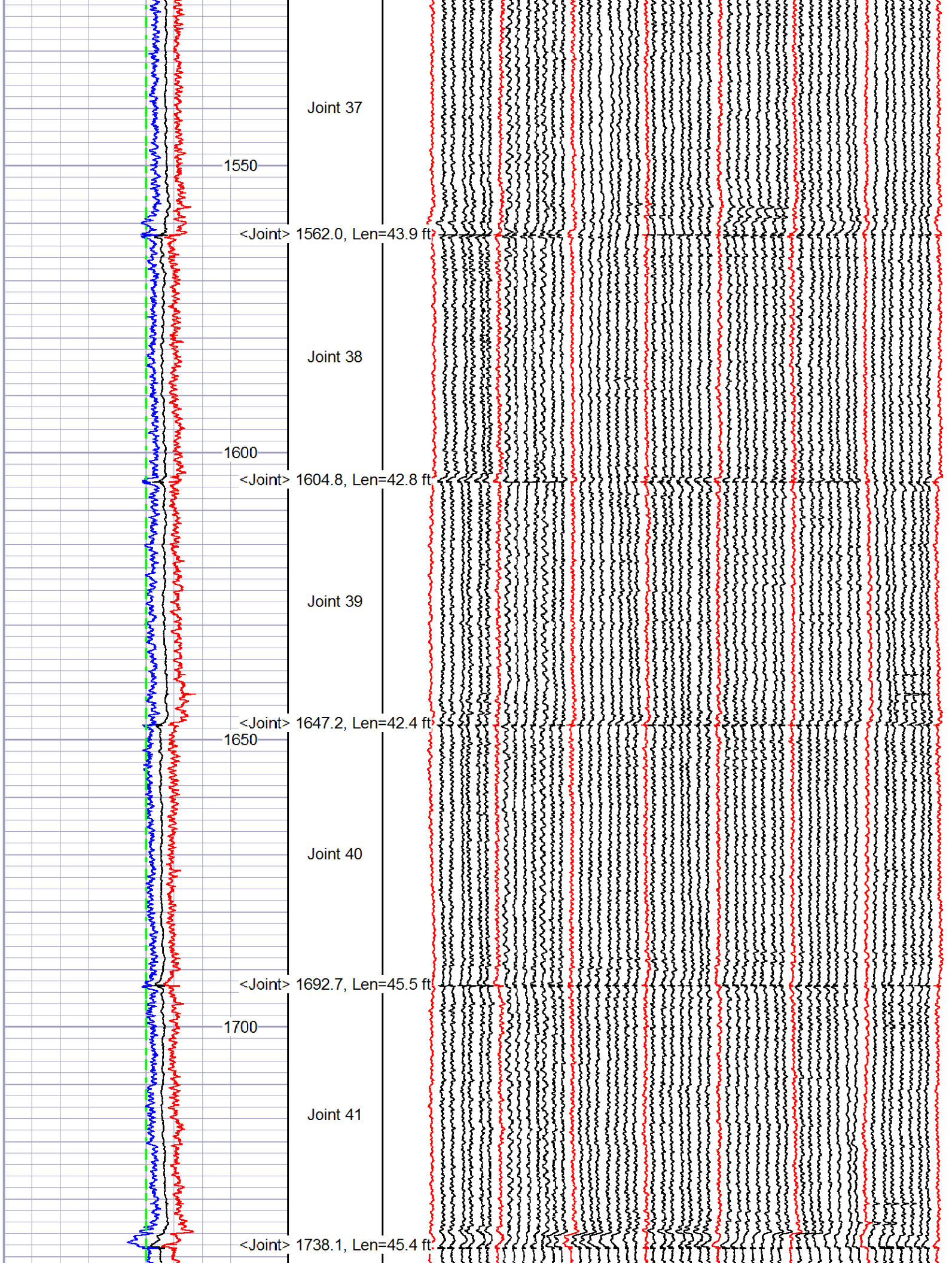
Joint 36
1500
<Joint> 1518.0, Len=44.5 ft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Joint 38
1600
<Joint> 1604.8, Len=42.8 ft
Joint 39
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Joint 40
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Joint 41
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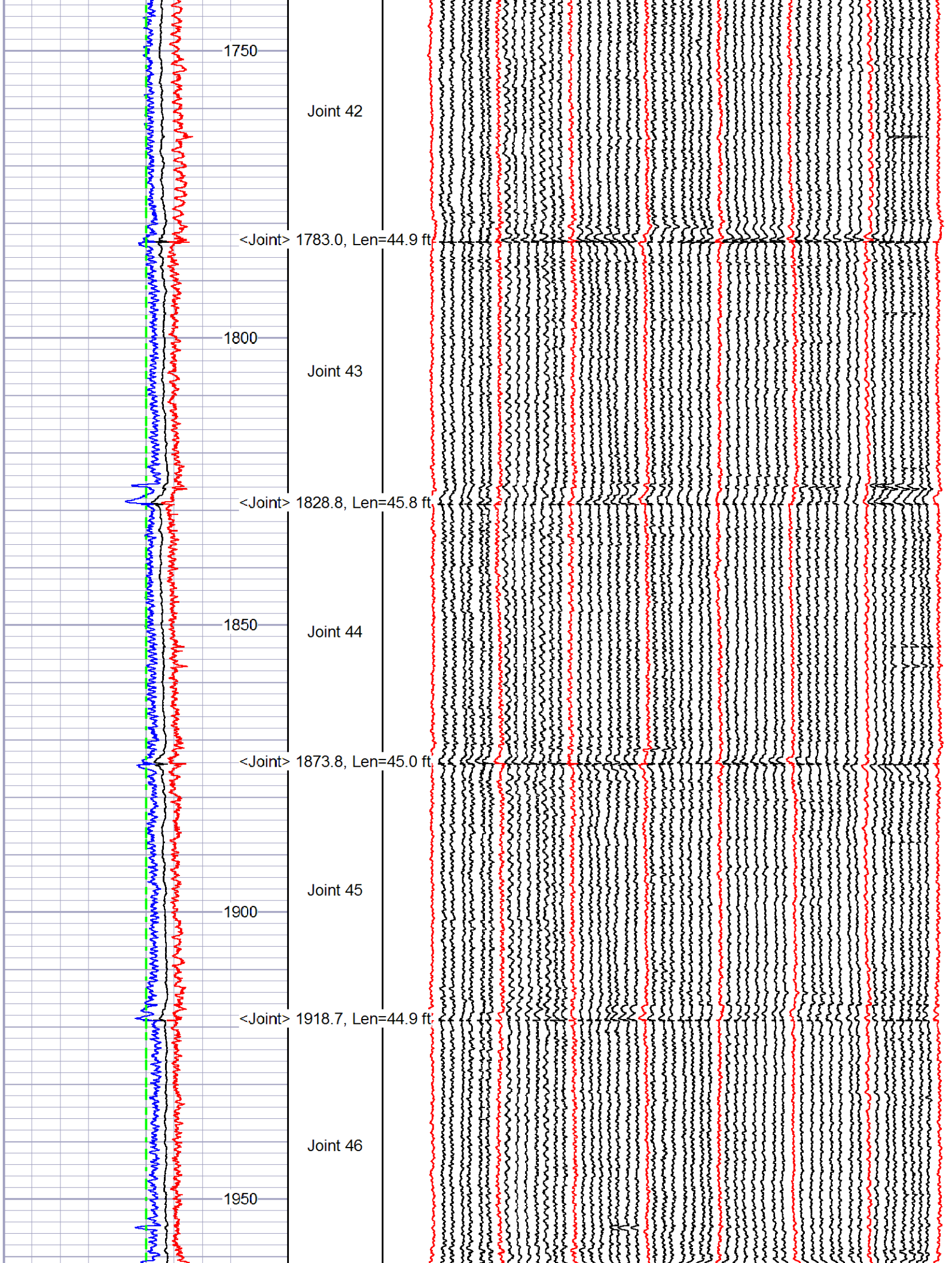
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Joint 43
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Joint 44
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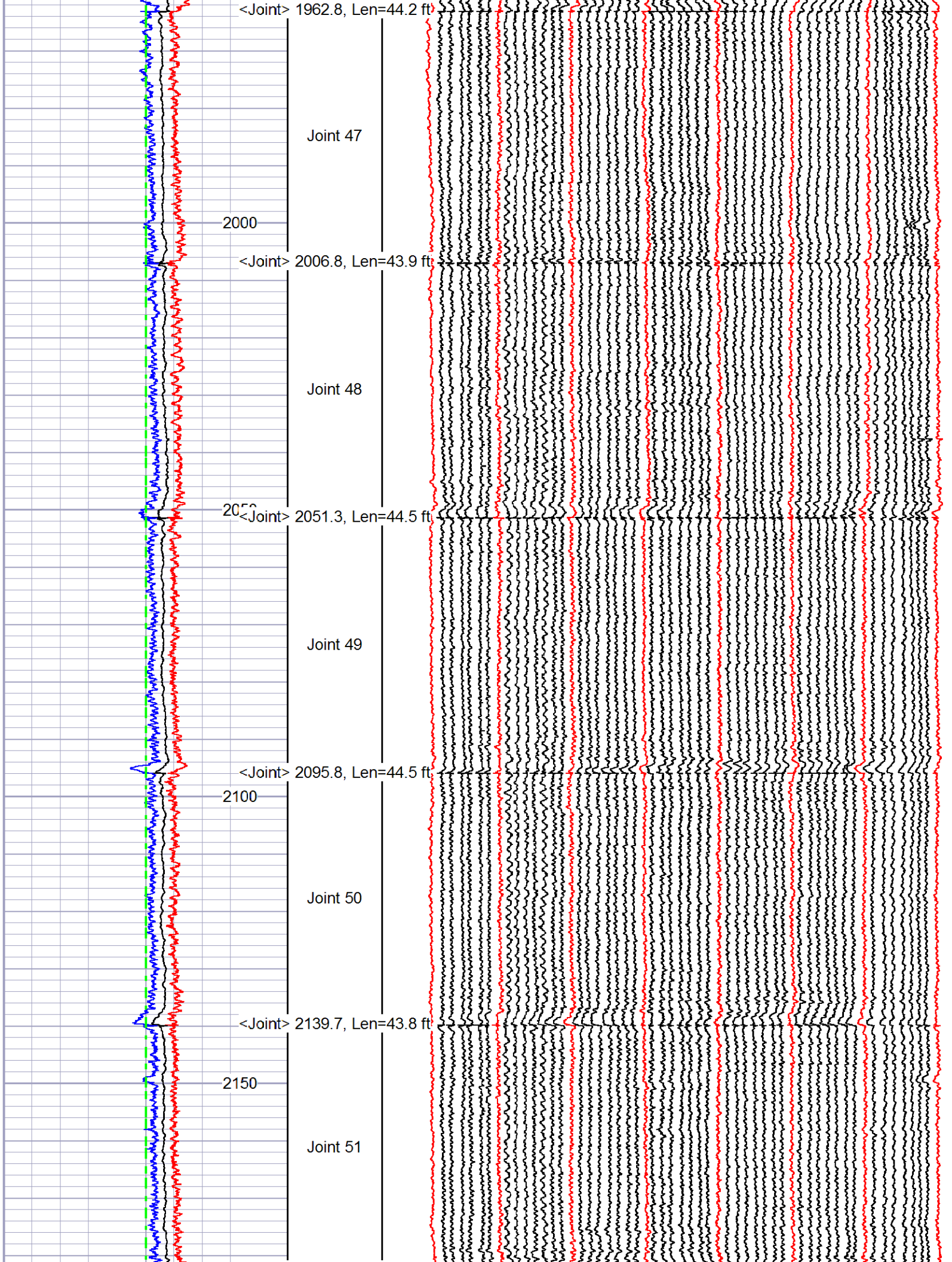
Joint 45
1900
<Joint> 1918.7, Len=44.9 ft
Joint 46
1950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Joint 48
<Joint> 2051.3, Len=44.5 ft
Joint 49
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2100
Joint 50
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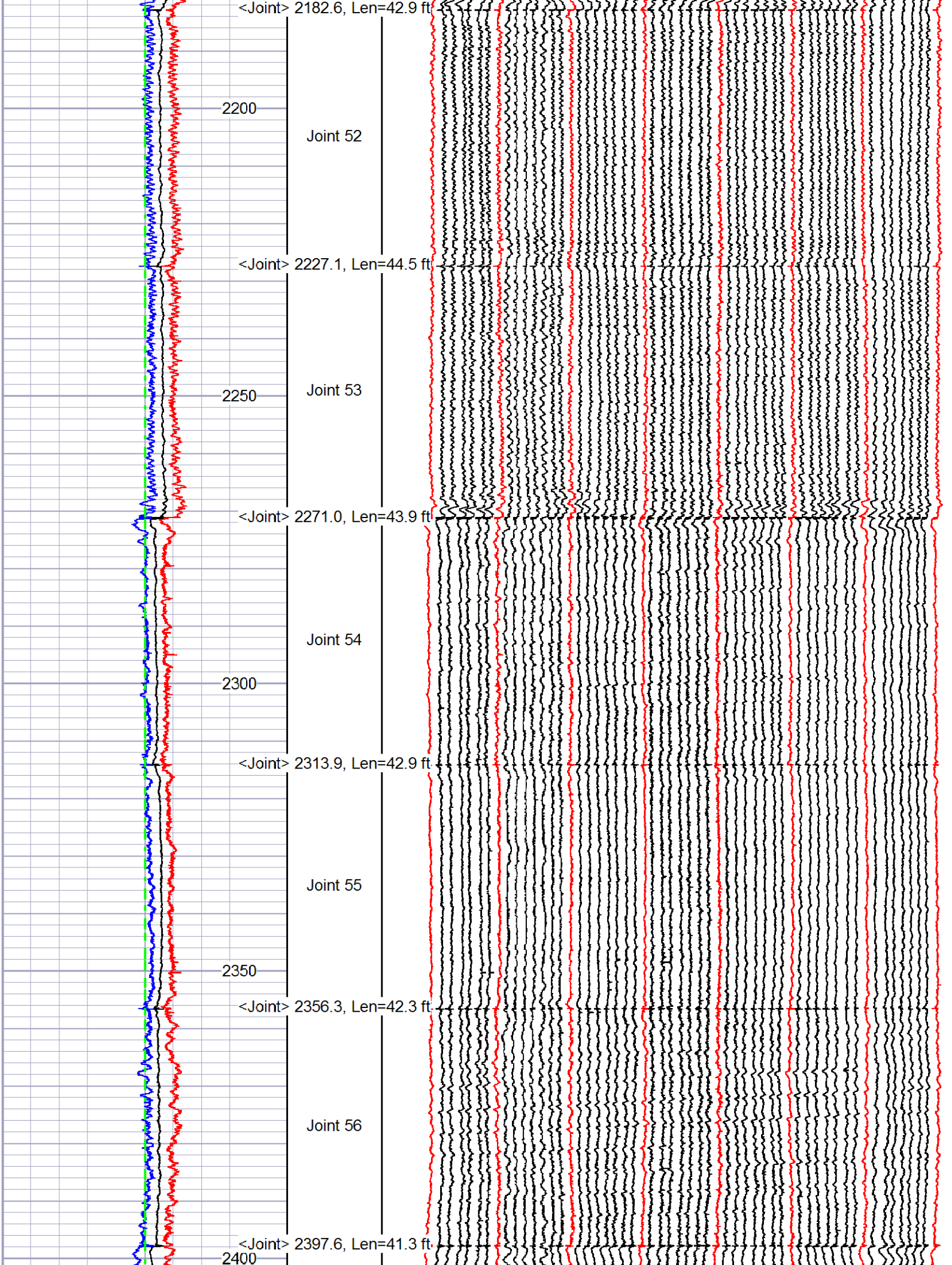
2150
Joint 51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Joint 53
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Joint 54
2300
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Joint 55
2350
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Joint 56
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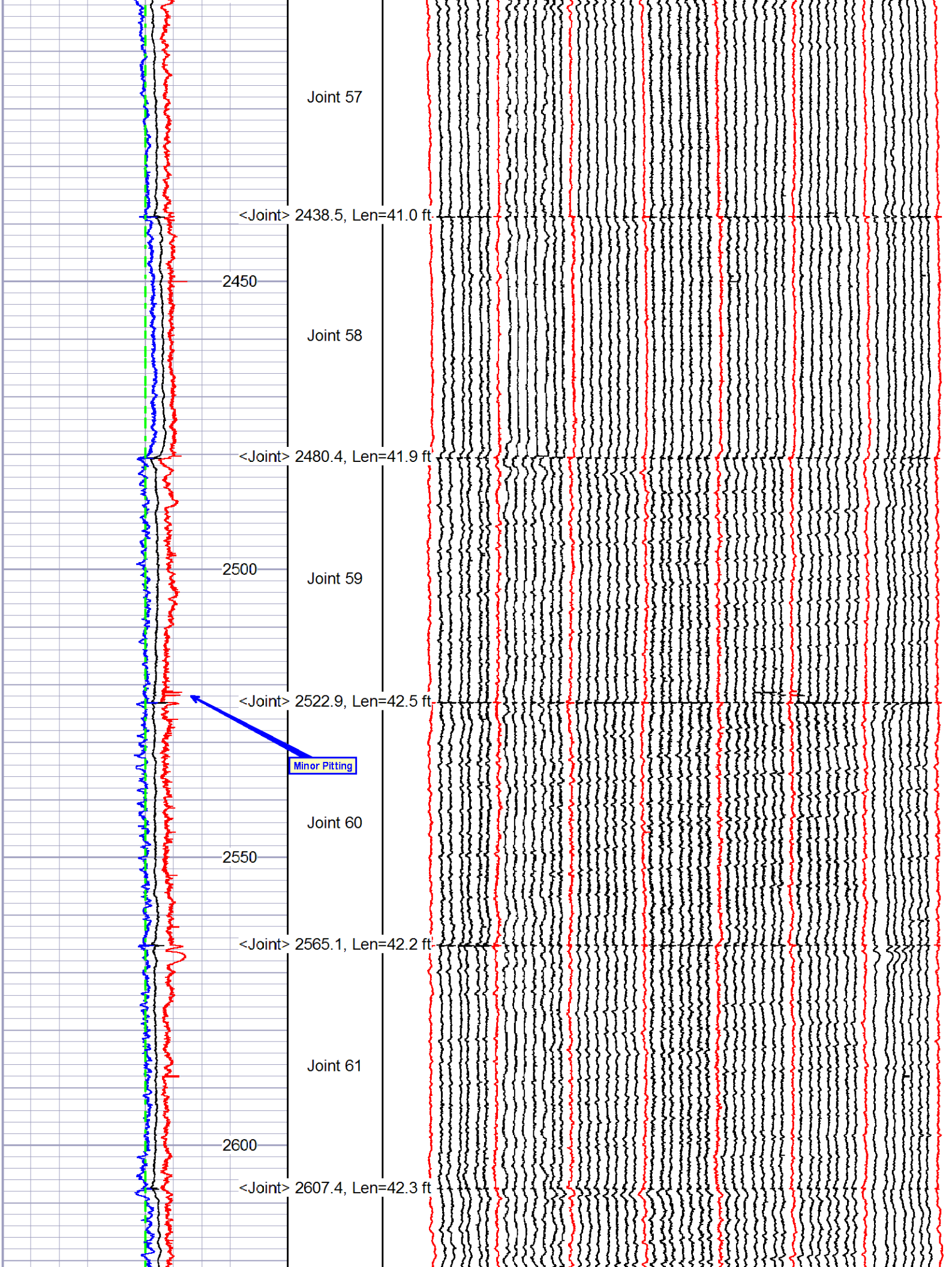
2400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Joint 58
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Joint 59
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Minor Pitting
Joint 60
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Joint 61
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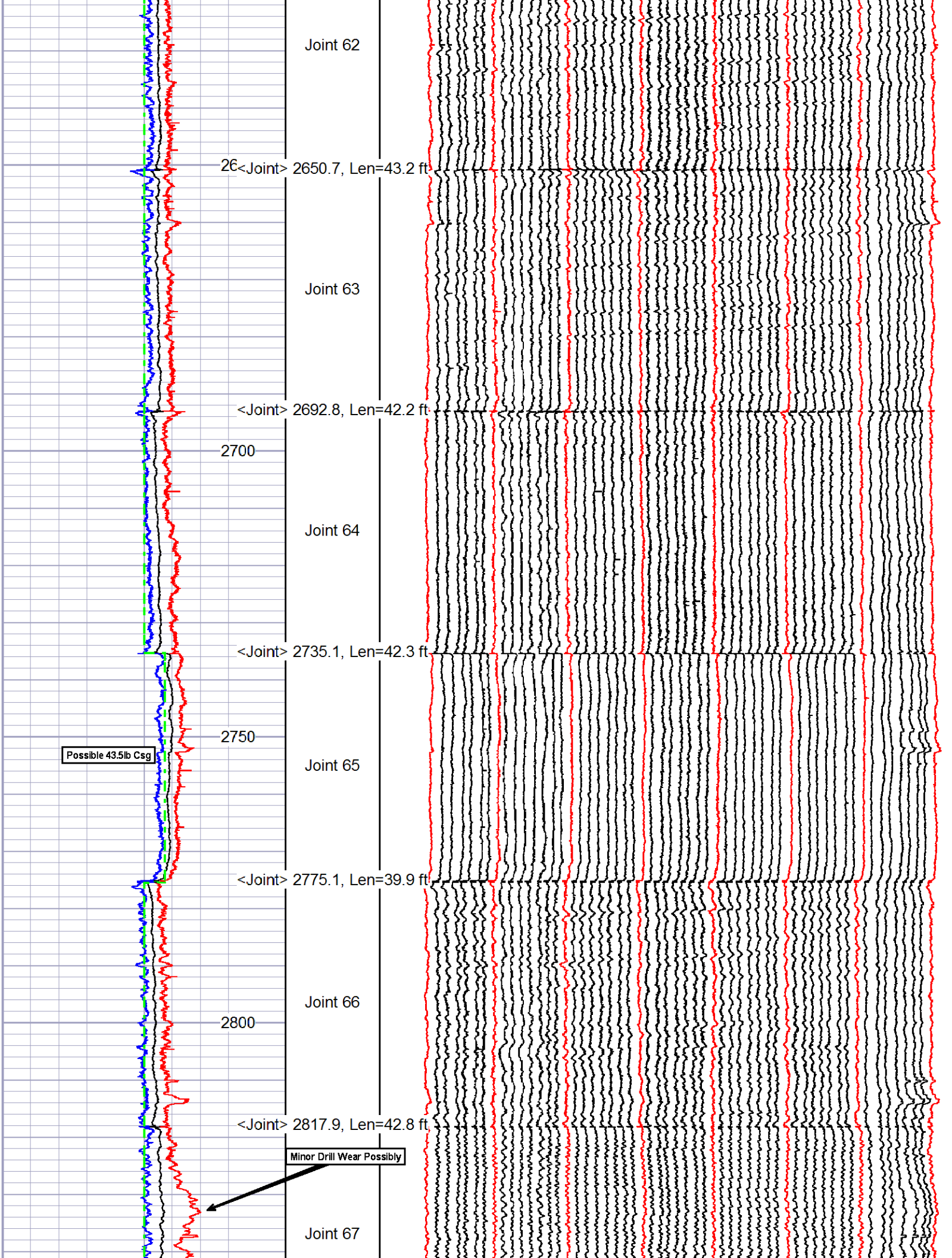
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2650
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2700
Joint 64
<Joint> 2735.1, Len=42.3 ft
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Possible 43.5lb Csg
Joint 65
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Joint 66
2800
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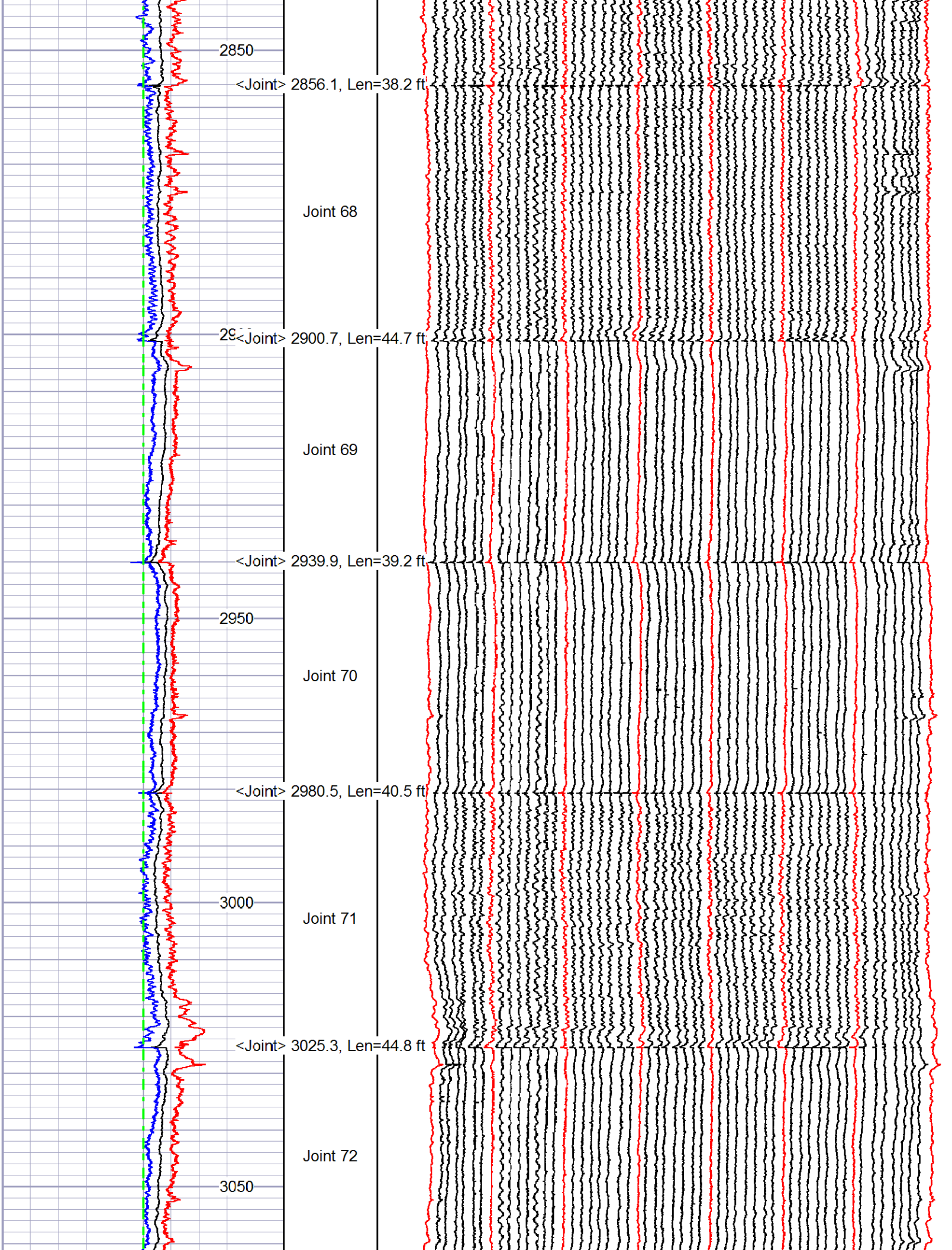
Minor Drill Wear Possibly
Joint 67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Joint 68
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Joint 69
<Joint> 2939.9, Len=39.2 ft
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Joint 70
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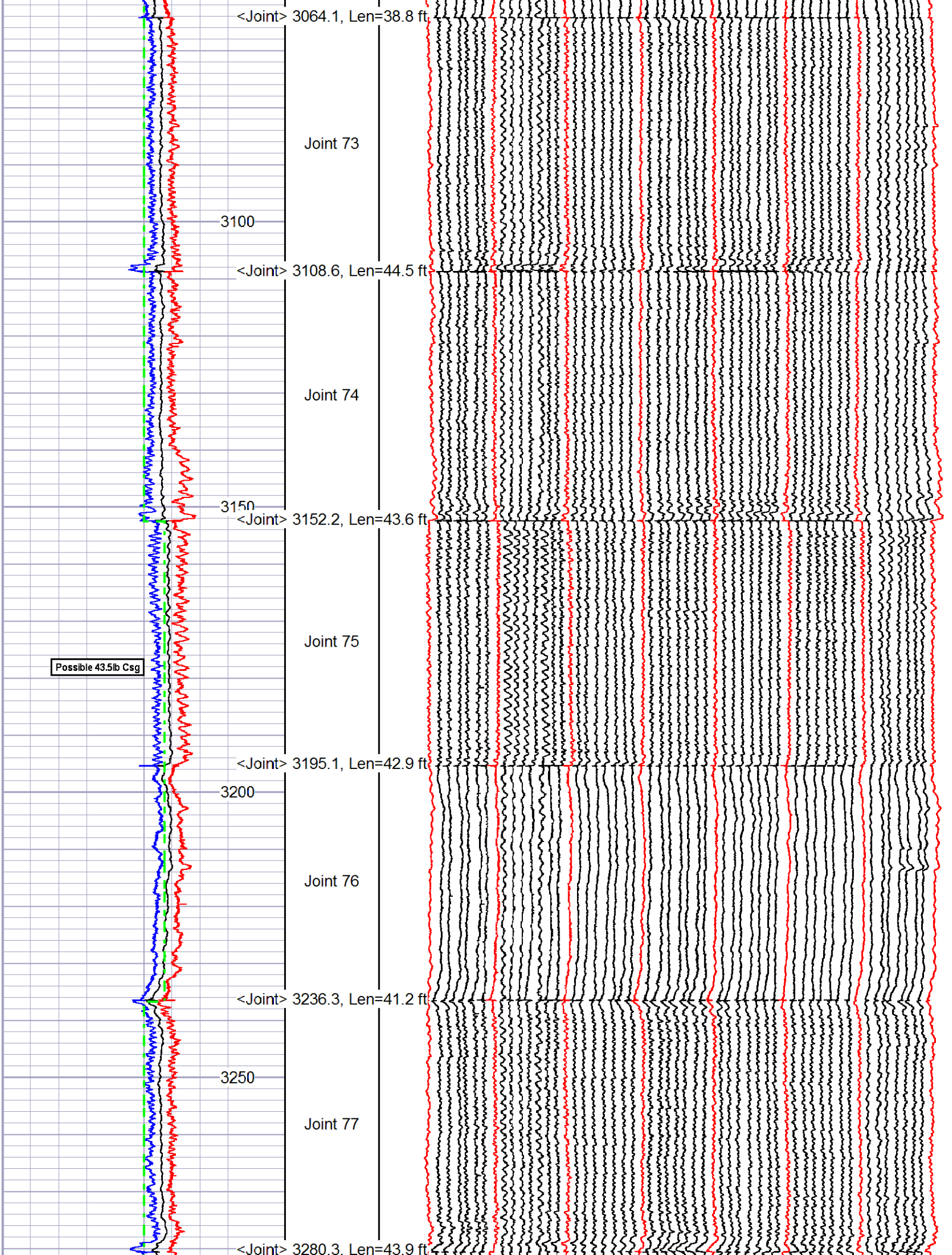
Joint 71
<Joint> 3025.3, Len=44.8 ft
Joint 72
3050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Joint 74
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<Joint> 3152.2, Len=43.6 ft
Joint 75
Possible 43.5lb Csg
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Joint 76
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Joint 77
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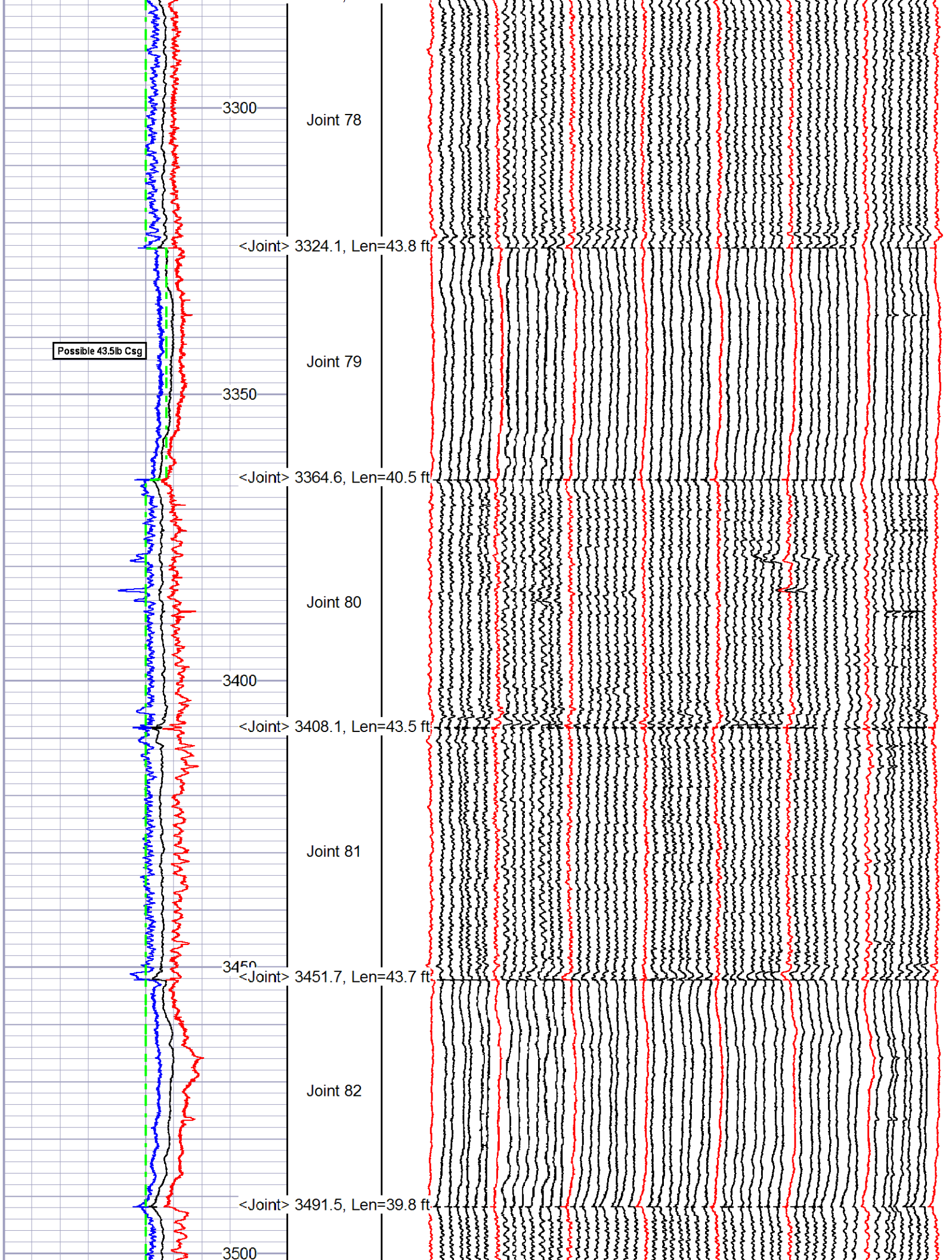
3300
Joint 78
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Possible 43.5lb Csg
Joint 79
3350
<Joint> 3364.6, Len=40.5 ft
Joint 80
3400
<Joint> 3408.1, Len=43.5 ft
Joint 81
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Joint 82
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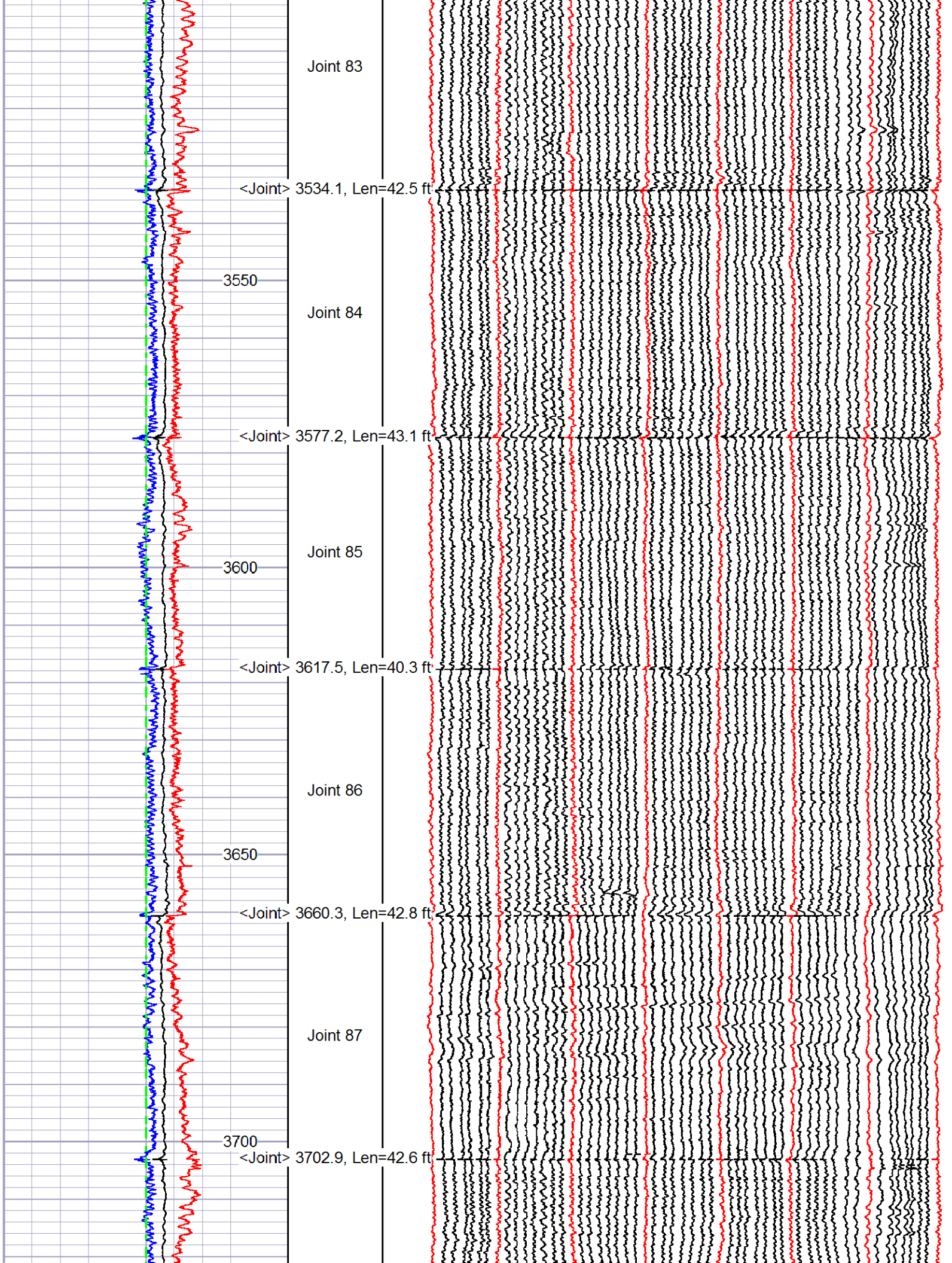
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Joint 84
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Joint 85
3600
<Joint> 3617.5, Len=40.3 ft
Joint 86
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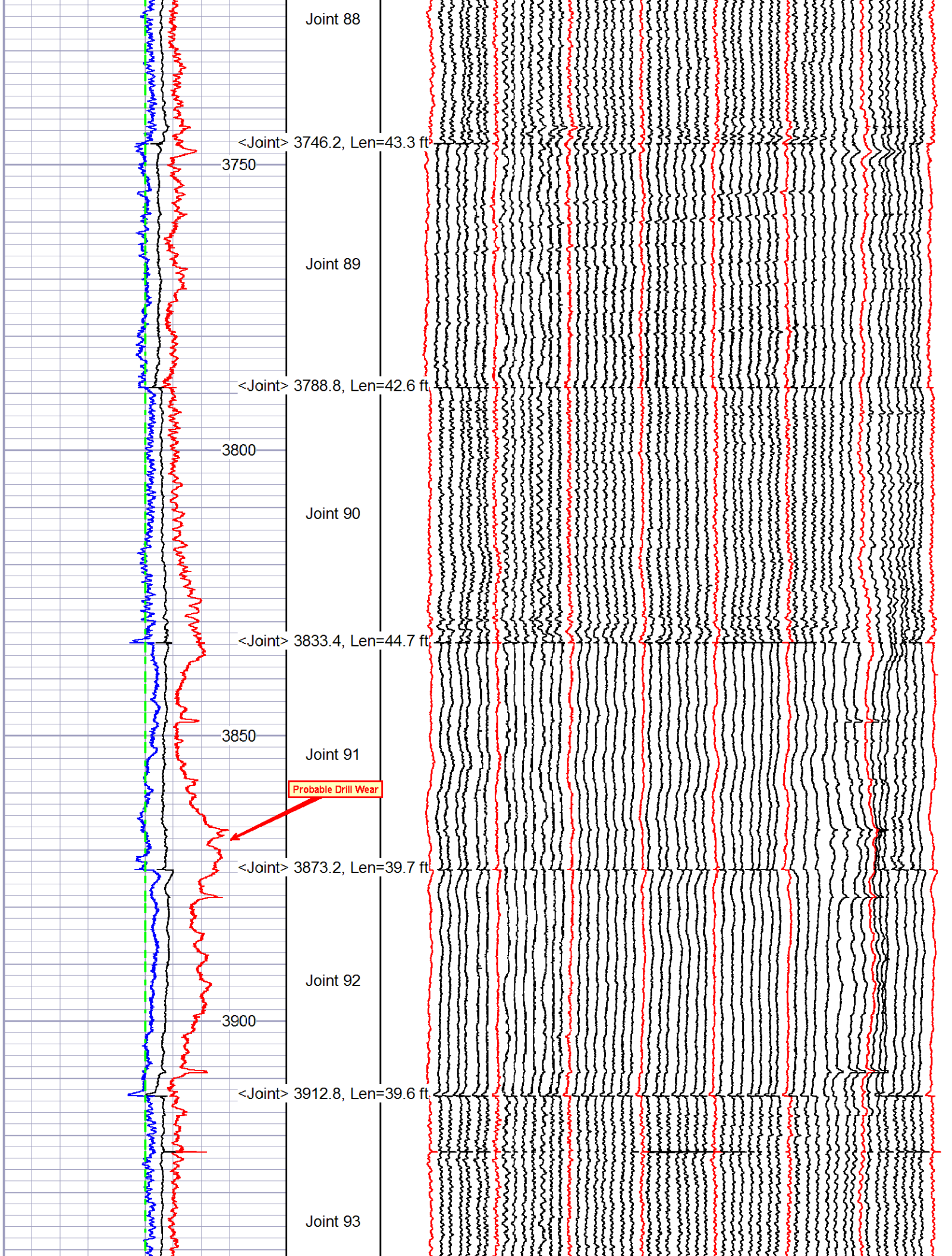
Joint 87
3700
<Joint> 3702.9, Len=42.6 ft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Joint 89
<Joint> 3788.8, Len=42.6 ft
3800
Joint 90
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Joint 91
Probable Drill Wear
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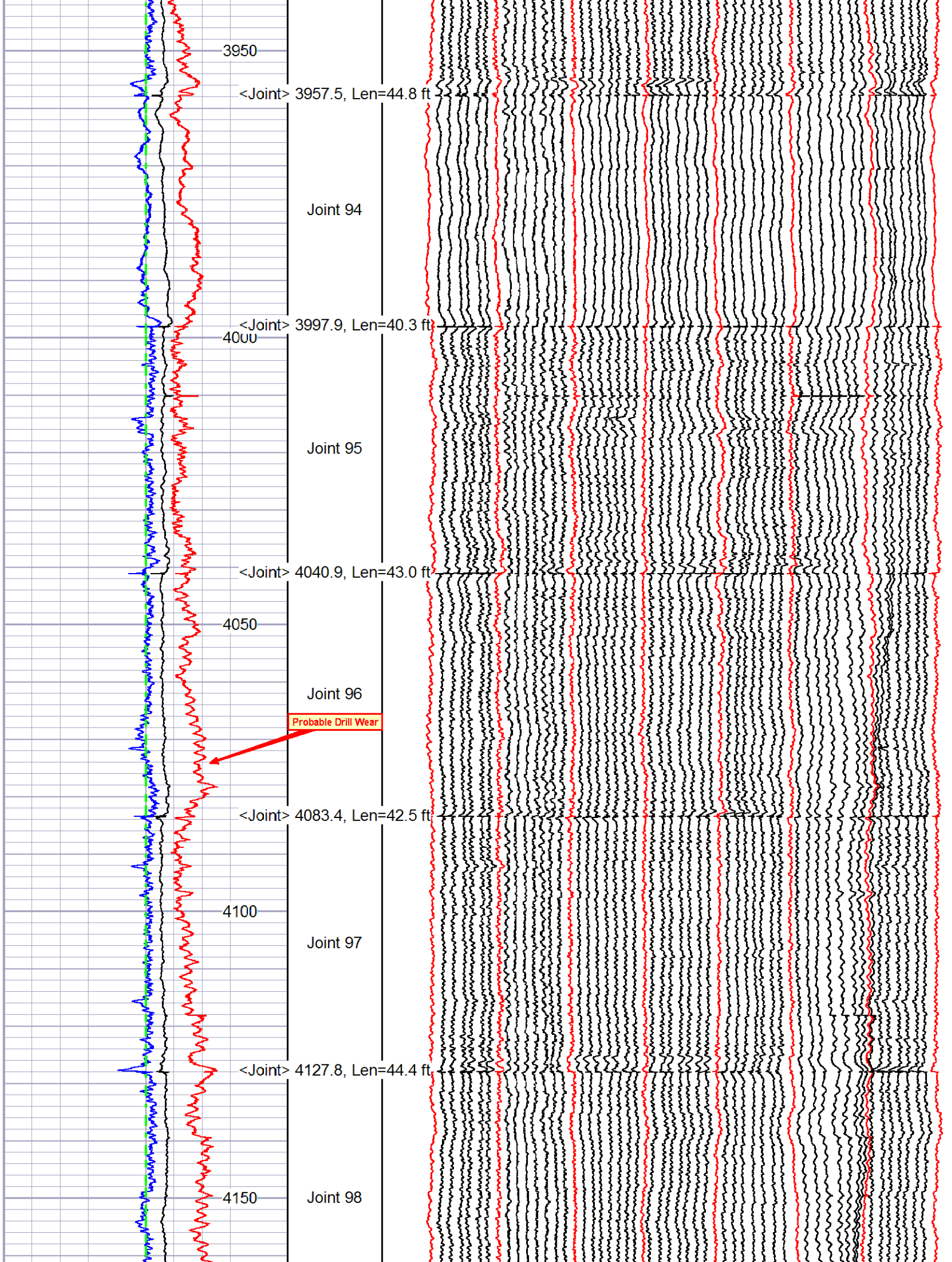
Joint 92
3900
<Joint> 3912.8, Len=39.6 ft
Joint 93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<Joint> 3957.5, Len=44.8 ft
Joint 94
<Joint> 3997.9, Len=40.3 ft
4000
Joint 95
<Joint> 4040.9, Len=43.0 ft
4050
Joint 96
Probable Drill Wear
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Joint 97
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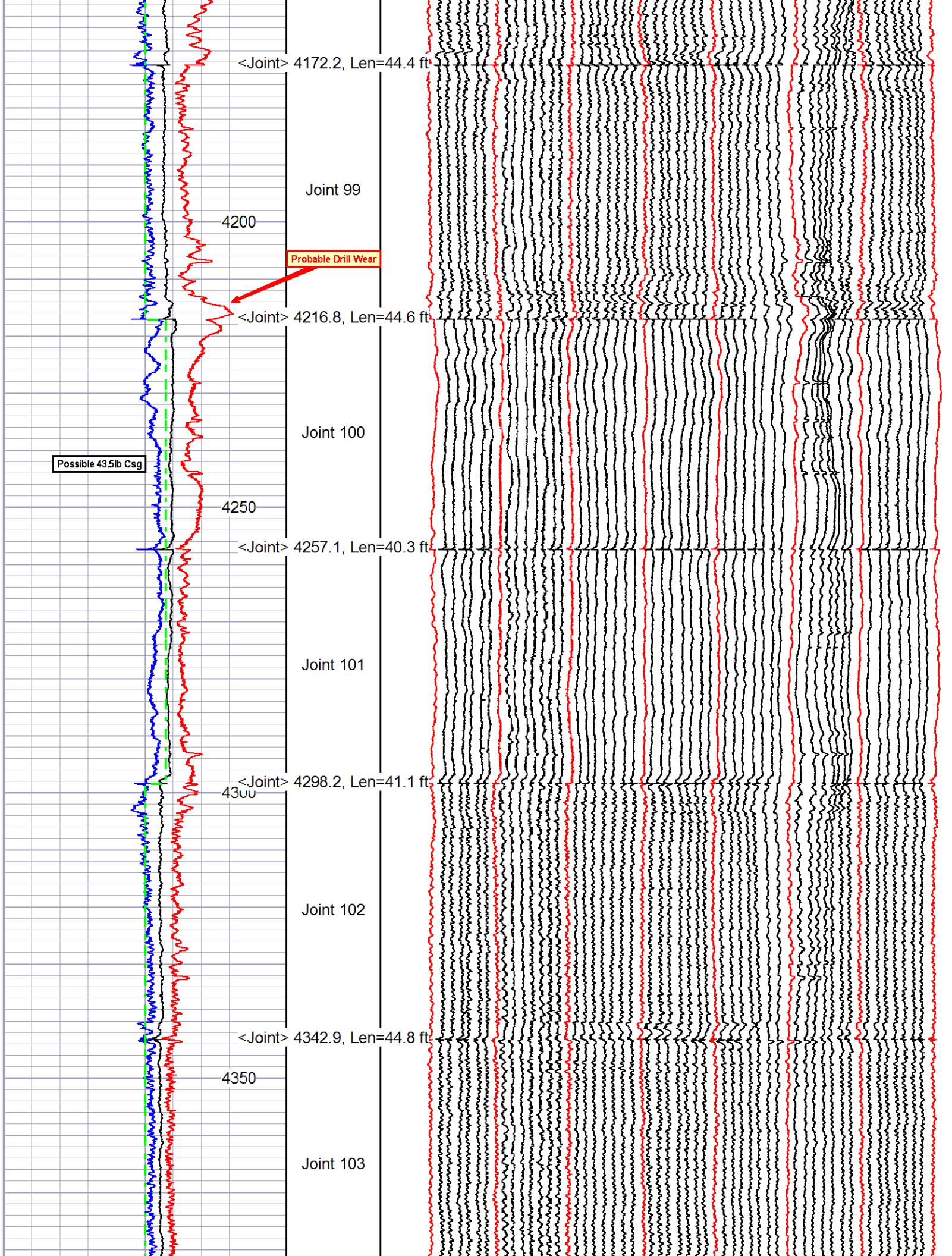
4150
Joint 98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Possible 43.5lb Csg
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Joint 102
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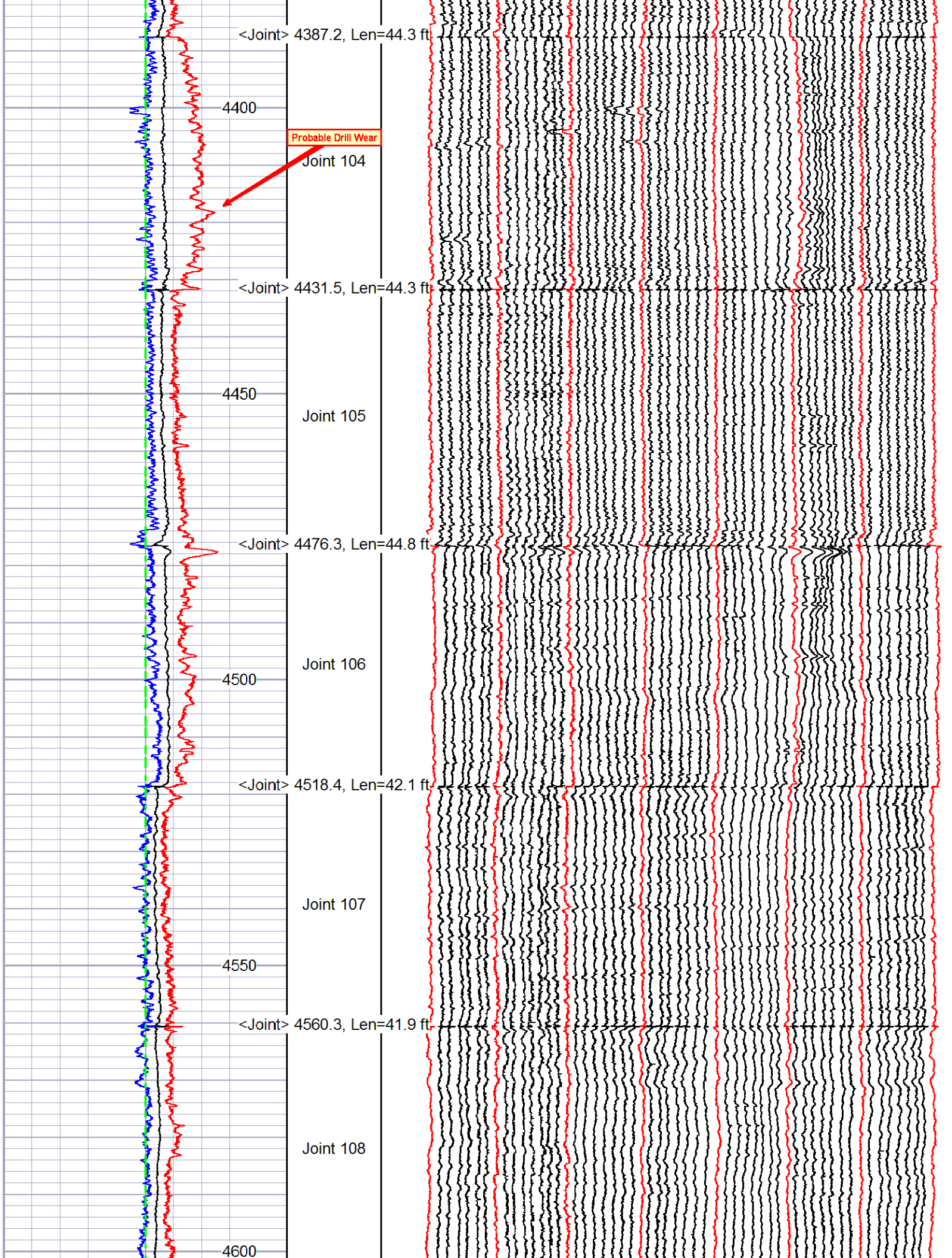
Joint 103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Probable Drill Wear
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Joint 105
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Joint 106
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Joint 107
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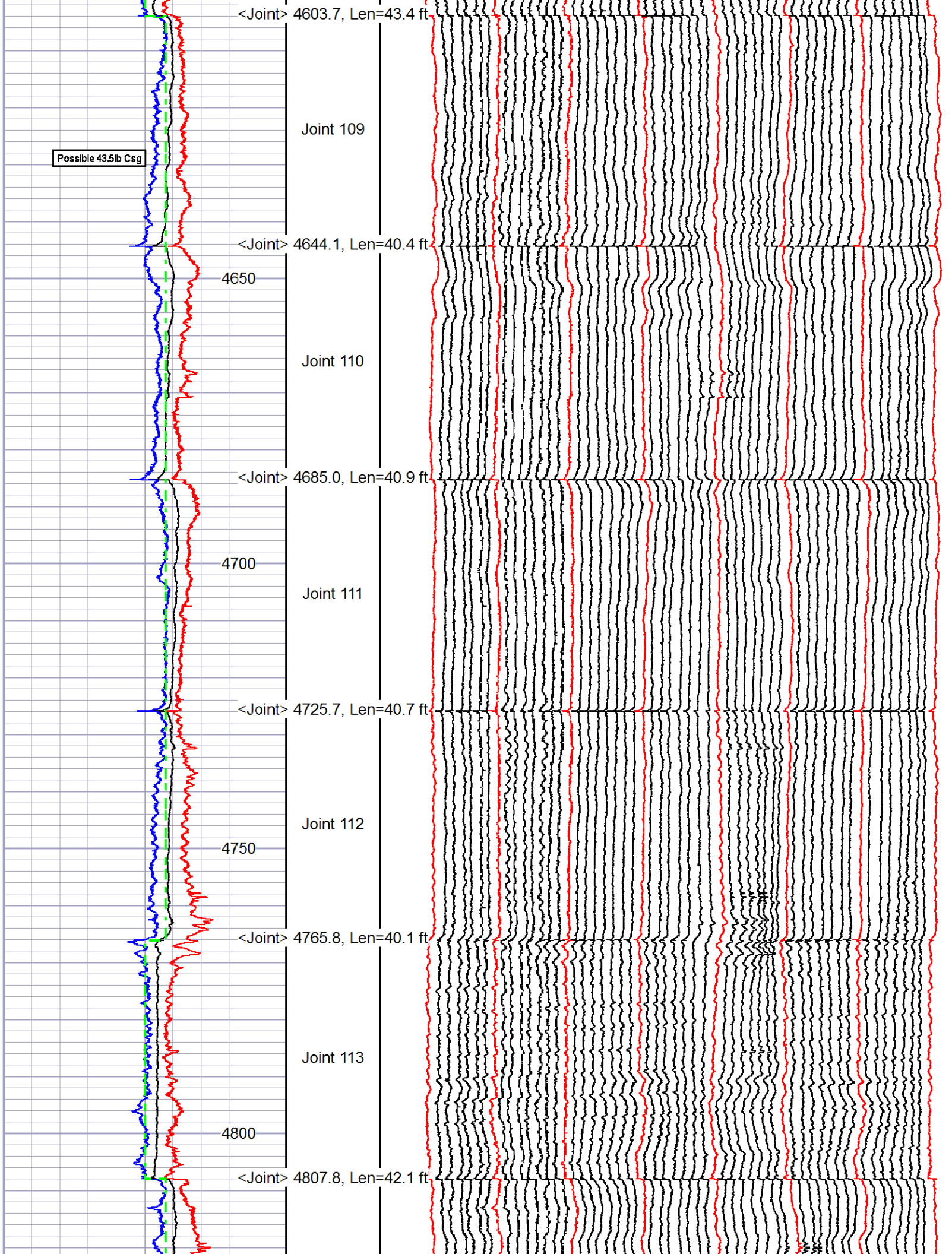
Joint 108
4600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Possible 43.5lb Csg
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Joint 110
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Joint 111
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Joint 112
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Joint 113
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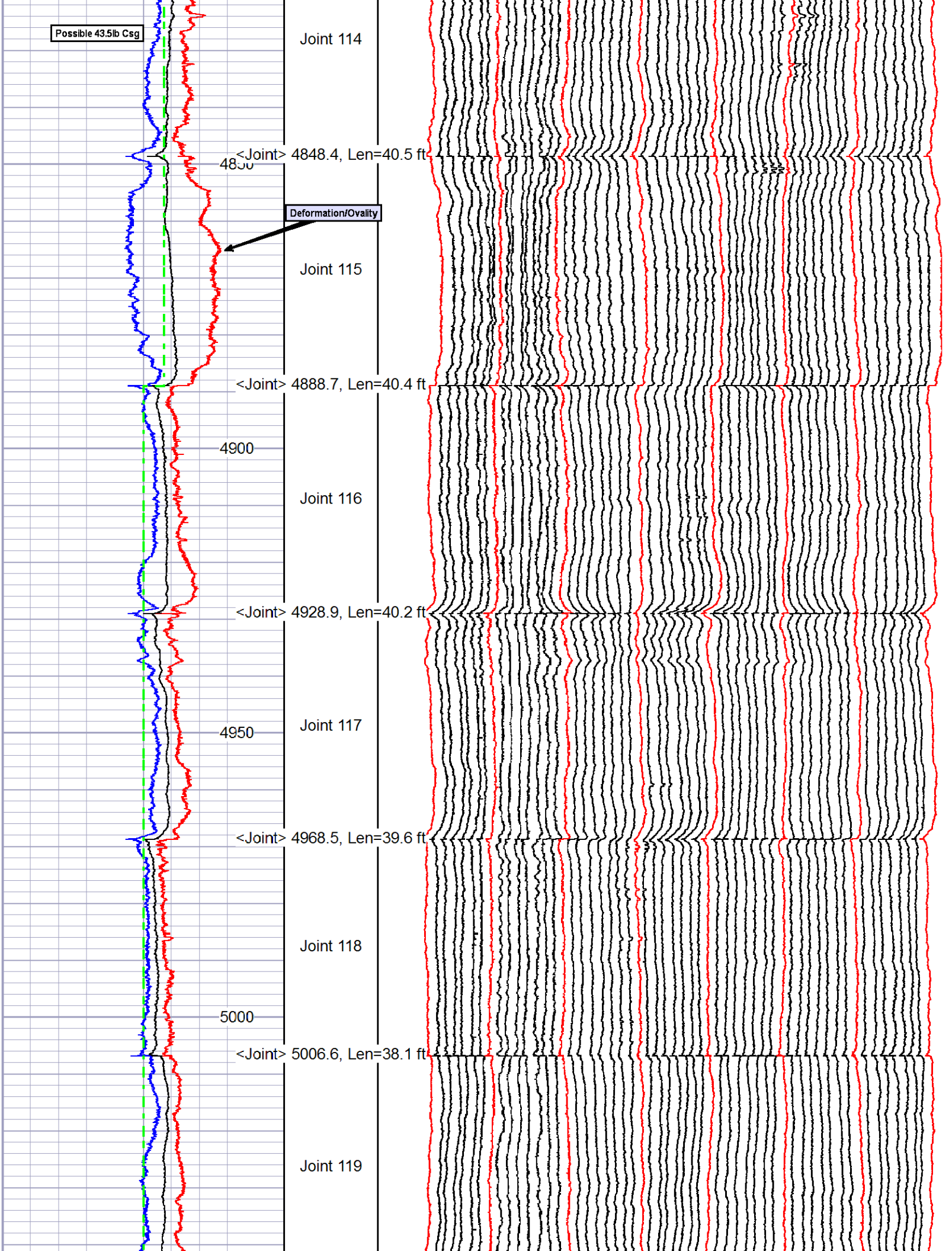
Possible 43.5lb Csg
Joint 114
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Deformation/Ovality
Joint 115
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Joint 116
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Joint 117
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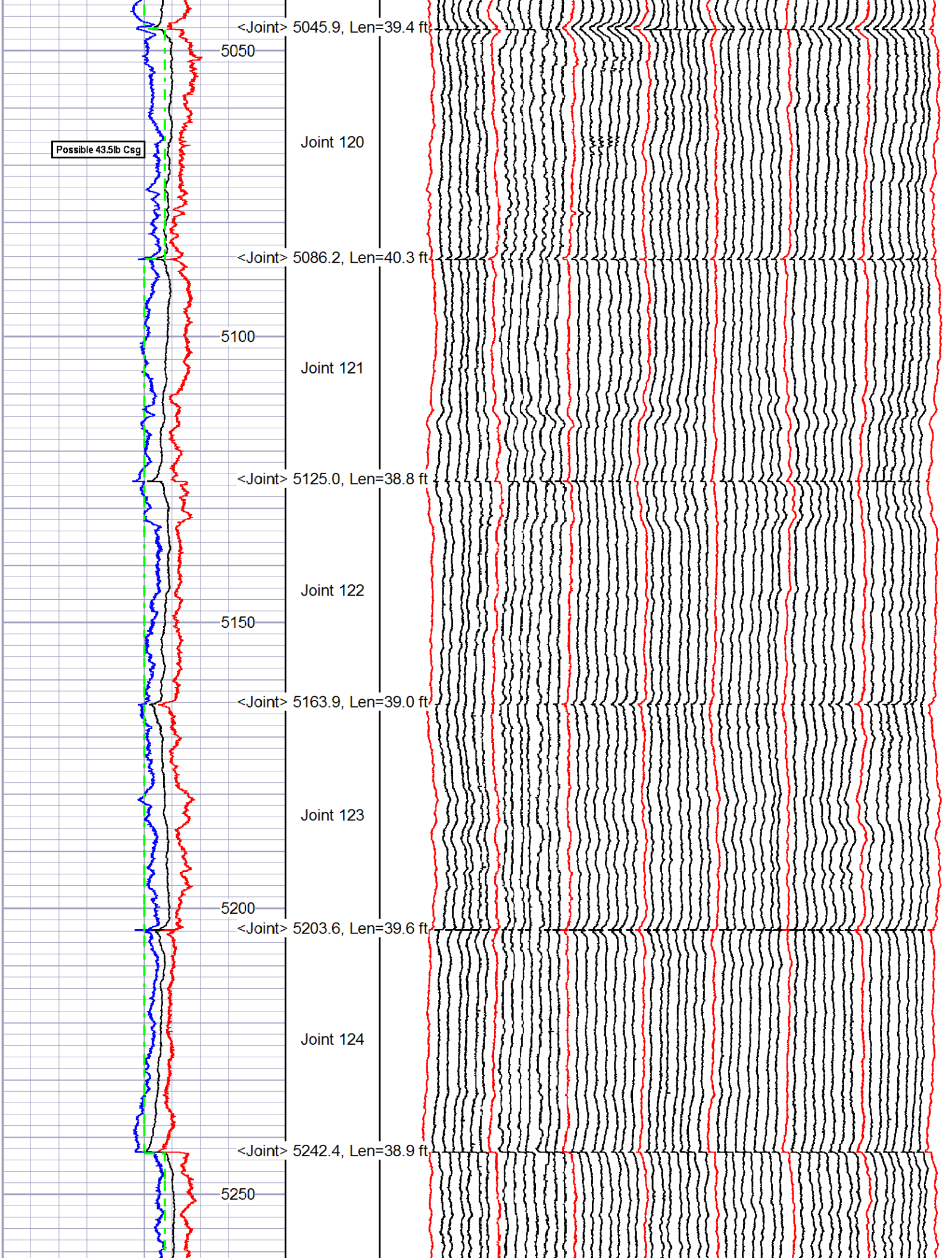
Joint 118
5000
<Joint> 5006.6, Len=38.1 ft
Joint 119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Joint 121
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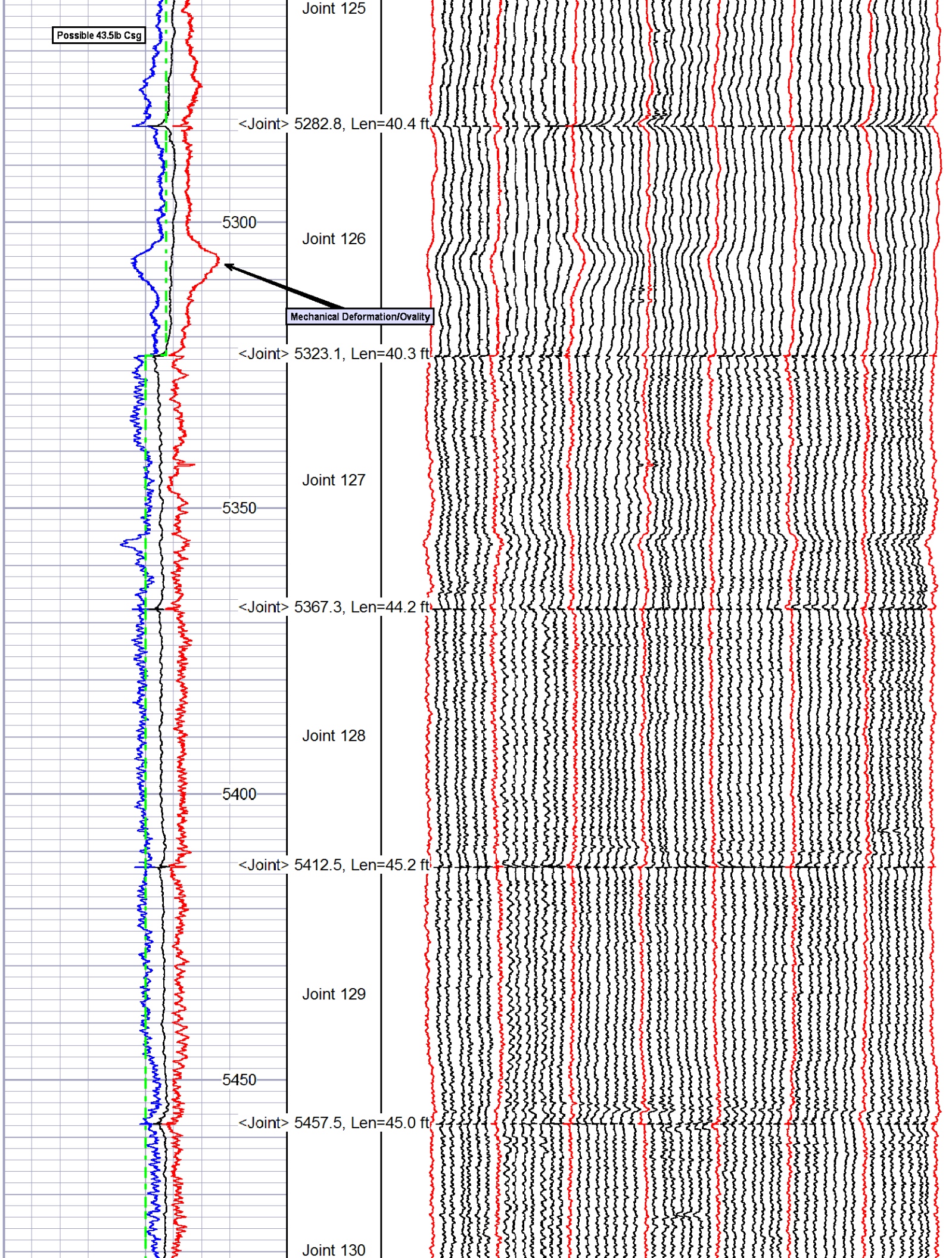
Possible 43.5lb Csg
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Joint 126
Mechanical Deformation/Ovality
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Joint 127
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Joint 128
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Joint 129
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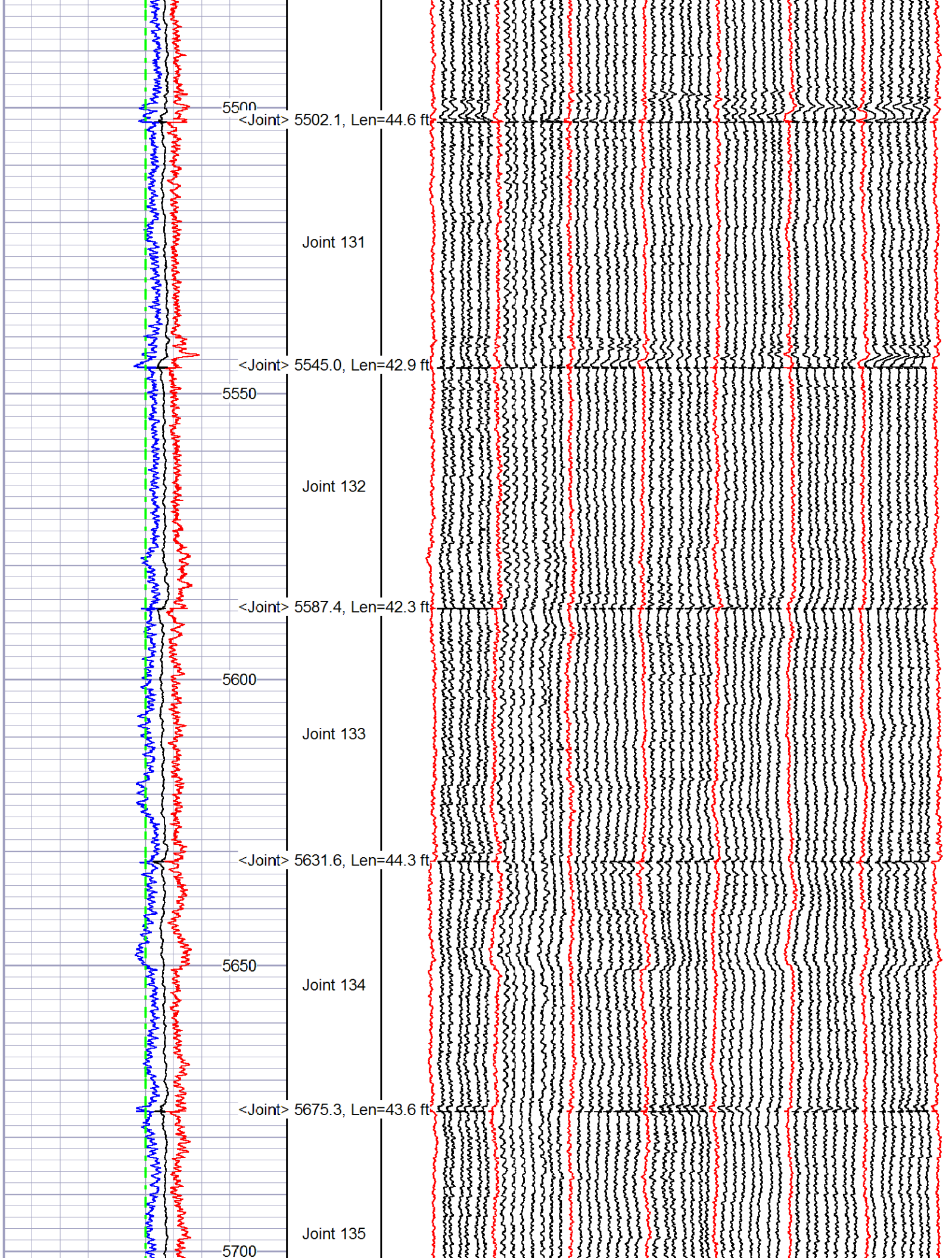
Joint 130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Joint 131
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Joint 132
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Joint 133
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Joint 134
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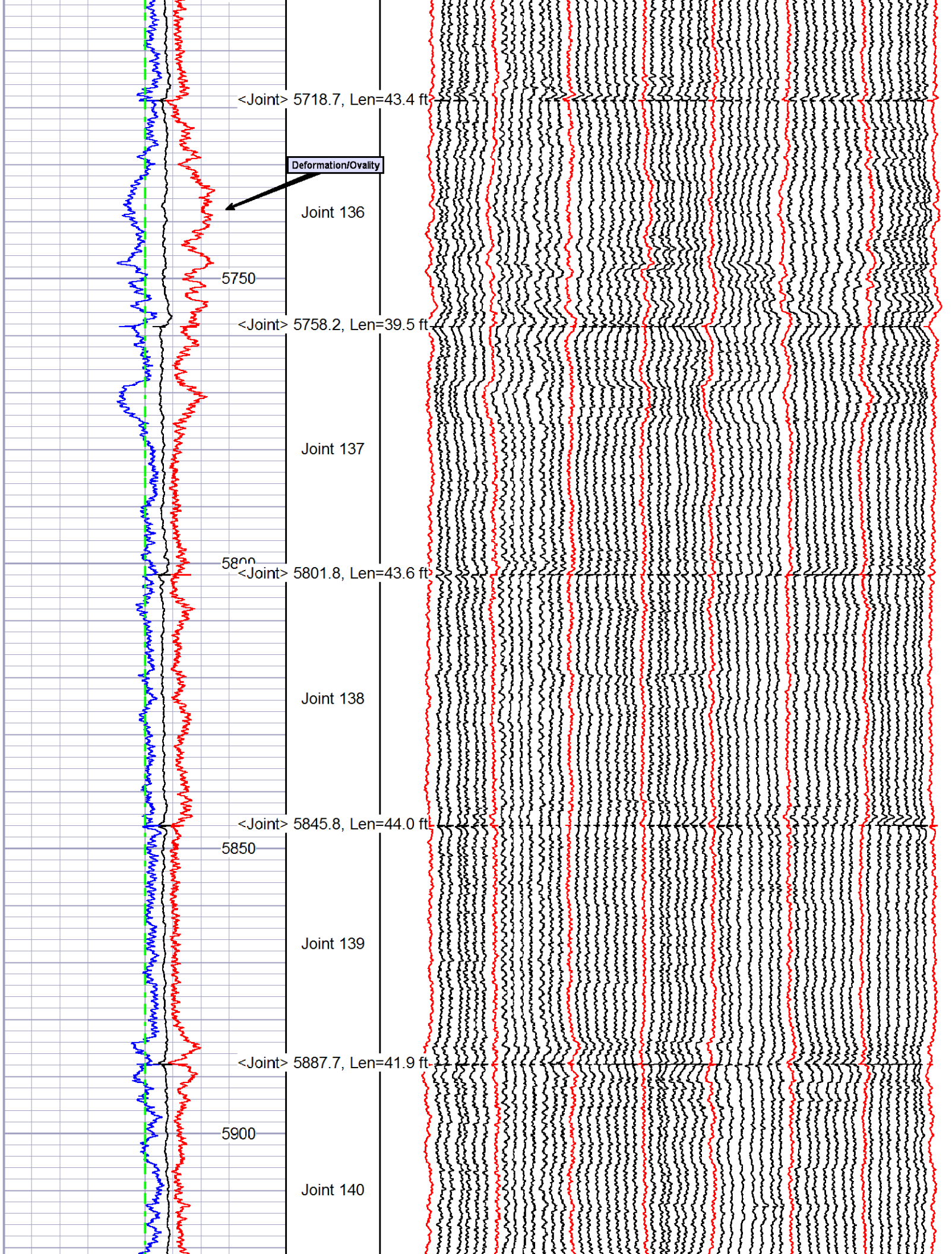
Joint 135
5700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Deformation/Ovality
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Joint 137
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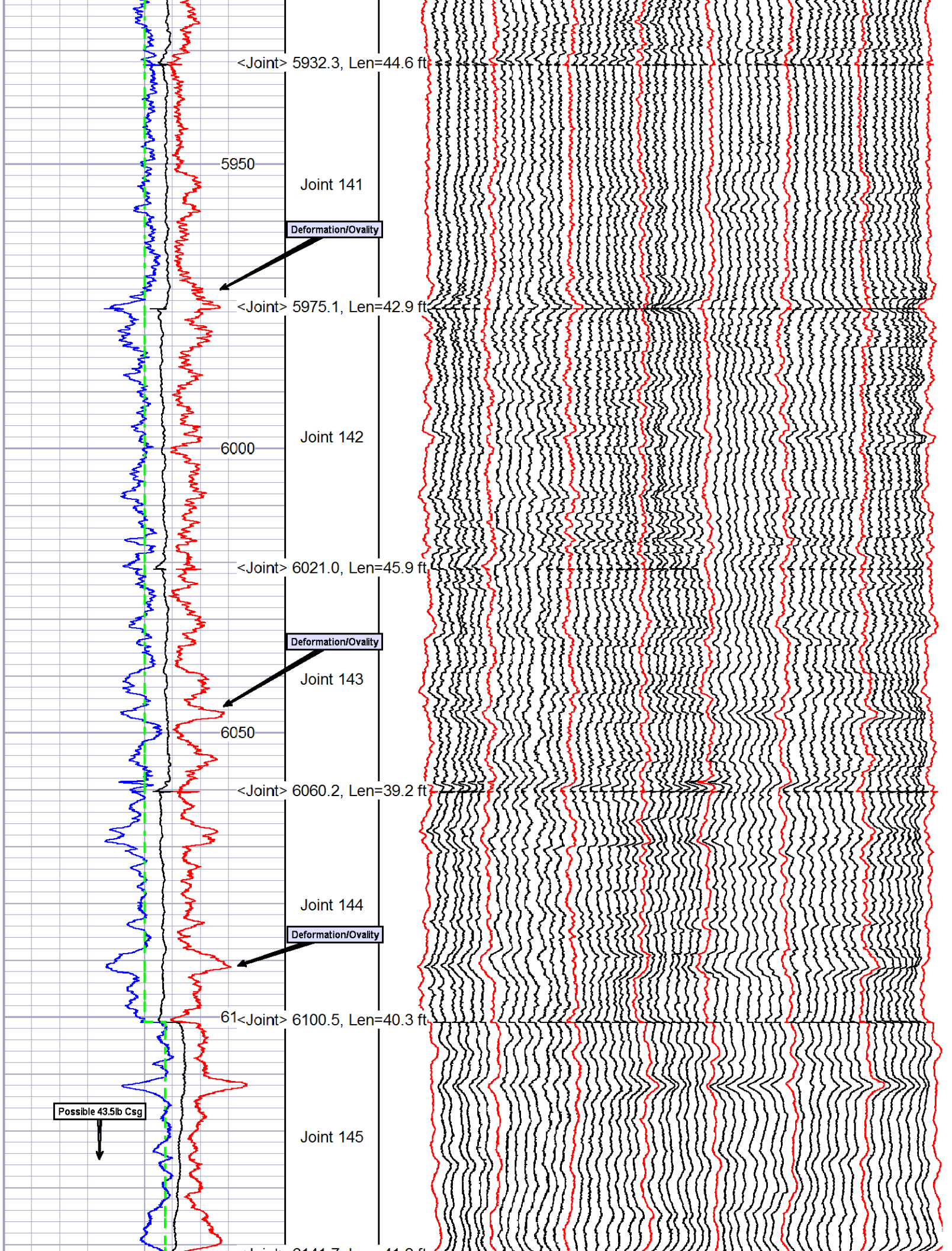
5900
Joint 140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Joint 141
Deformation/Ovality
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Joint 142
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Deformation/Ovality
Joint 143
6050
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Joint 144
Deformation/Ovality
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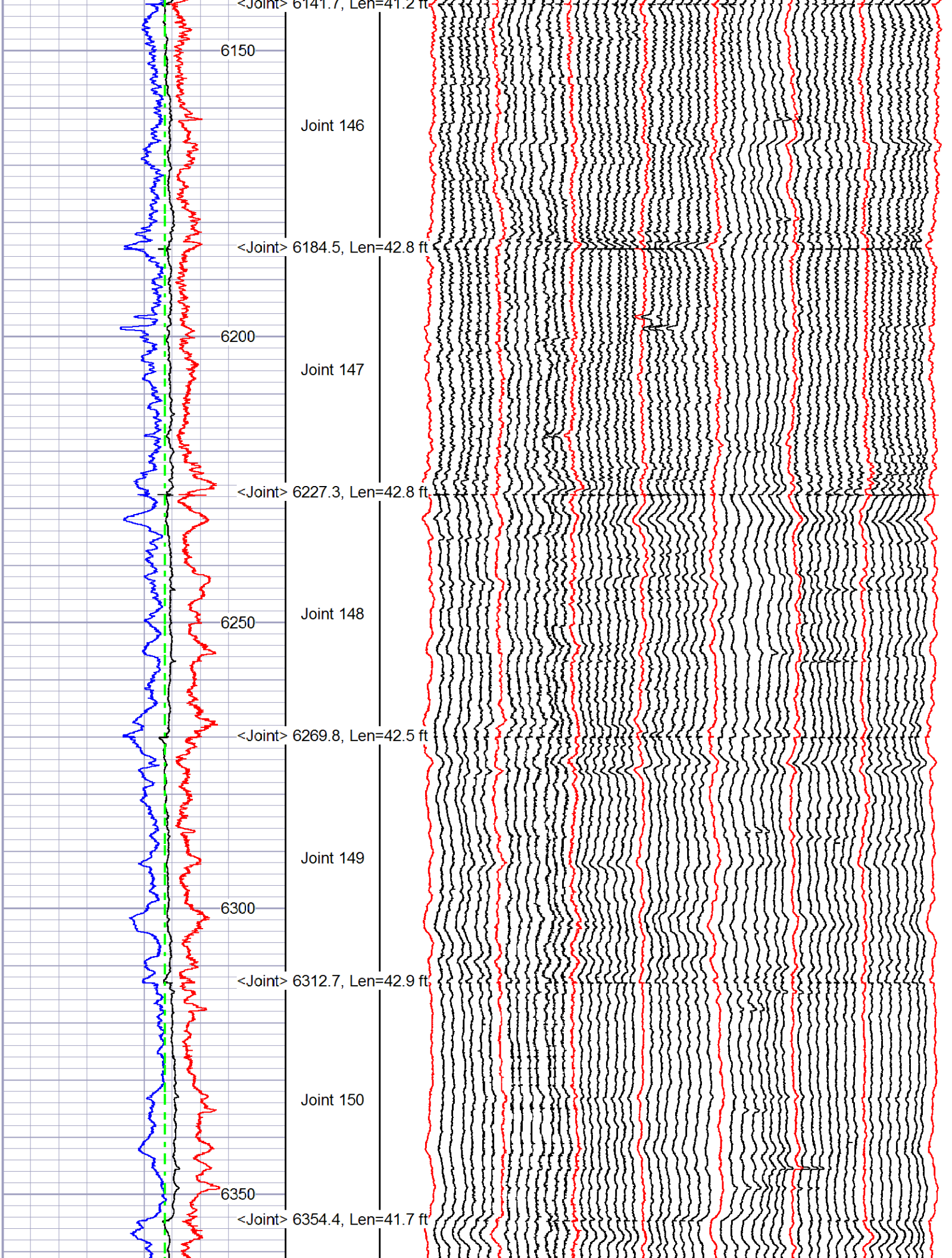
<Joint> 6100.5, Len=40.3 ft
Possible 43.5lb Csg
Joint 145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Joint 146
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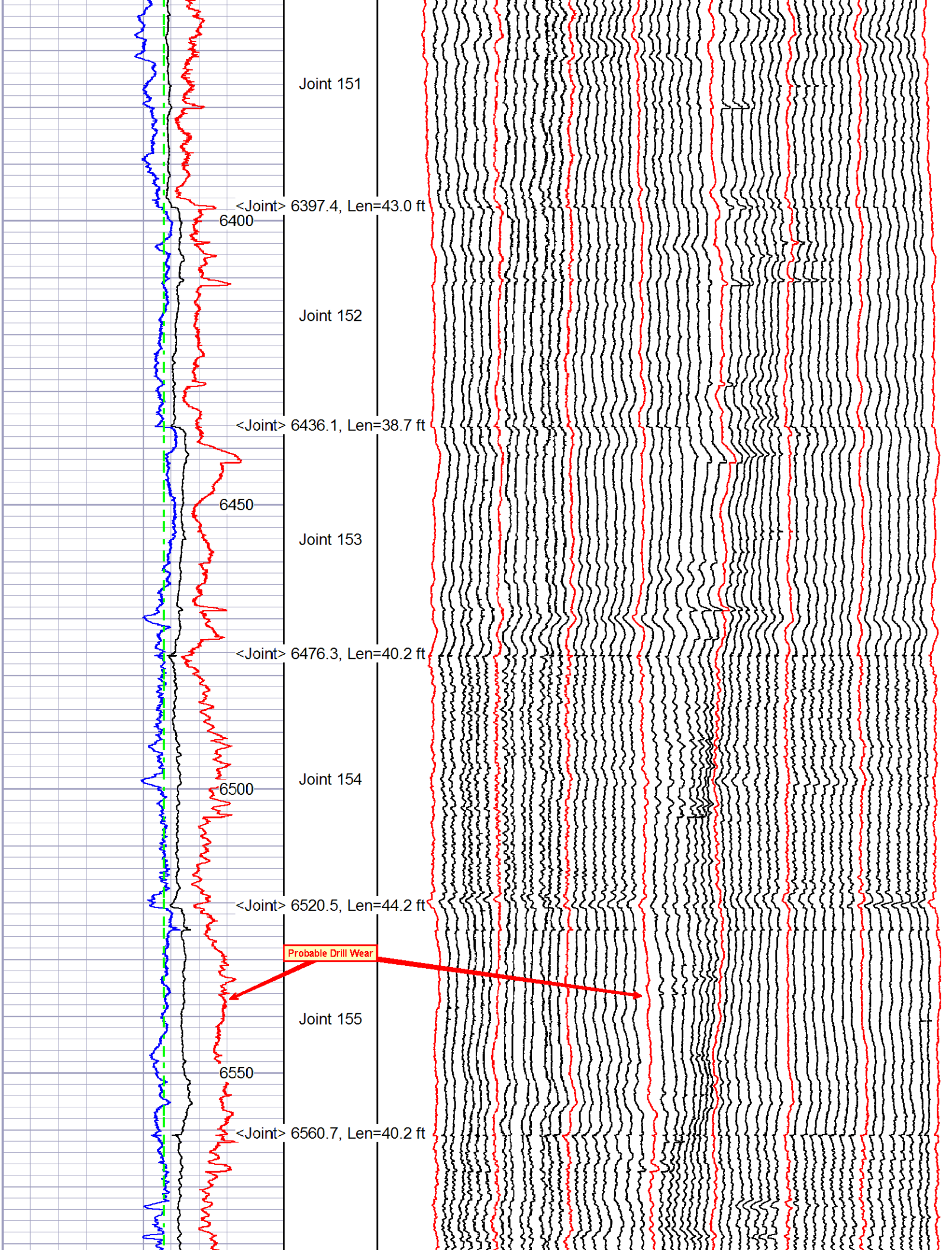
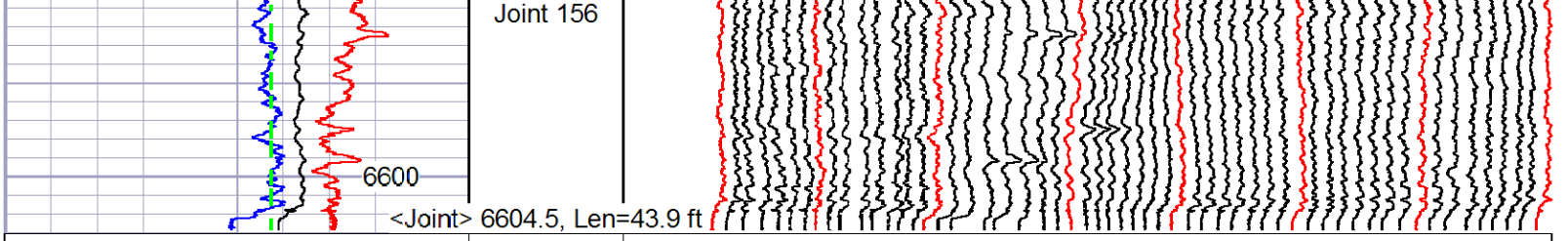
6200
Joint 147
<Joint> 6227.3, Len=42.8 ft
6250
Joint 148
<Joint> 6269.8, Len=42.5 ft
Joint 149
6300
<Joint> 6312.7, Len=42.9 ft
Joint 150
6350
<Joint> 6354.4, Len=41.7 ft


Joint 151
<Joint> 6397.4, Len=43.0 ft
6400
Joint 152
<Joint> 6436.1, Len=38.7 ft
6450
Joint 153
<Joint> 6476.3, Len=40.2 ft
Joint 154
6500
<Joint> 6520.5, Len=44.2 ft
Probable Drill Wear
Joint 155
6550
<Joint> 6560.7, Len=40.2 ft



8.181	Maximum-Finger (in)	9.181	PTANN	56 FINGER TRACE
8.181	Average-Finger (in)	9.181		
8.181	Minimum-Finger (in)	9.181		
8.181	Nominal ID (in)	9.181		

Calibration Report

Database File C:\Hotwell_MIPS\Poter 50B\Raw Data & Info\porter_50b.db
Dataset Pathname pass8
Dataset Creation Fri Apr 15 19:13:44 2016

GOWell 56 Arm Calibration Report

Serial Number: 11148
Tool Model: 56
Performed: Fri Apr 15 10:00:40 2016

Ref ID:	7.00	8.00	9.00	9.25	9.63	Offset	in
Arm1	7.04	8.03	9.01	9.24	9.63	0.00	in
Arm2	6.94	7.92	8.87	9.08	9.46	0.00	in
Arm3	7.03	8.03	9.00	9.23	9.61	0.00	in
Arm4	7.00	8.00	8.98	9.24	9.62	0.00	in
Arm5	7.10	8.08	9.05	9.30	9.67	0.00	in
Arm6	7.09	8.10	9.09	9.33	9.72	0.00	in
Arm7	6.90	7.92	8.89	9.14	9.52	0.00	in
Arm8	7.00	8.02	9.01	9.26	9.63	0.00	in
Arm9	7.02	8.03	9.00	9.24	9.62	0.00	in
Arm10	7.03	8.05	9.05	9.29	9.67	0.00	in
Arm11	7.01	8.00	8.97	9.22	9.59	0.00	in
Arm12	7.04	8.05	9.04	9.28	9.66	0.00	in
Arm13	6.97	7.97	8.94	9.20	9.56	0.00	in
Arm14	7.05	8.06	9.04	9.30	9.66	0.00	in
Arm15	6.98	7.98	8.95	9.21	9.57	0.00	in
Arm16	6.95	7.97	8.95	9.20	9.57	0.00	in
Arm17	6.92	7.93	8.89	9.14	9.49	0.00	in
Arm18	7.04	8.05	9.03	9.28	9.64	0.00	in
Arm19	7.00	7.99	8.94	9.20	9.54	0.00	in
Arm20	7.03	8.04	9.02	9.27	9.62	0.00	in
Arm21	7.02	8.02	8.98	9.23	9.58	0.00	in
Arm22	6.93	7.97	8.95	9.20	9.55	0.00	in
Arm23	7.10	8.10	9.05	9.30	9.63	0.00	in
Arm24	6.99	8.00	8.98	9.24	9.59	0.00	in
Arm25	7.00	7.99	8.96	9.21	9.54	0.00	in
Arm26	6.94	7.94	8.92	9.18	9.53	0.00	in
Arm27	7.02	8.00	8.96	9.20	9.55	0.00	in
Arm28	6.98	7.98	8.96	9.21	9.56	0.00	in
Arm29	7.02	8.00	8.96	9.20	9.54	0.00	in
Arm30	7.03	8.03	9.01	9.25	9.60	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

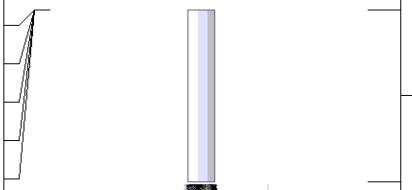
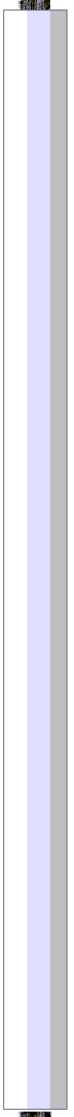
Arm31	7.06	8.05	9.01	9.25	9.59	0.00	in
Arm32	7.08	8.07	9.05	9.30	9.65	0.00	in
Arm33	7.05	8.02	8.99	9.23	9.59	0.00	in
Arm34	7.06	8.06	9.04	9.29	9.65	0.00	in
Arm35	7.04	8.02	8.99	9.23	9.58	0.00	in
Arm36	7.17	8.16	9.13	9.37	9.73	0.00	in
Arm37	7.10	8.08	9.04	9.28	9.63	0.00	in
Arm38	7.04	8.03	9.03	9.27	9.63	0.00	in
Arm39	7.00	7.99	8.96	9.20	9.56	0.00	in
Arm40	6.91	7.92	8.91	9.15	9.52	0.00	in
Arm41	7.01	7.99	8.94	9.18	9.54	0.00	in
Arm42	7.13	8.12	9.11	9.35	9.71	0.00	in
Arm43	7.07	8.05	9.02	9.26	9.63	0.00	in
Arm44	7.01	8.00	9.00	9.23	9.60	0.00	in
Arm45	7.01	7.99	8.95	9.19	9.56	0.00	in
Arm46	6.96	7.96	8.97	9.21	9.55	0.00	in
Arm47	7.00	7.97	8.93	9.18	9.55	0.00	in
Arm48	6.95	7.95	8.97	9.23	9.58	0.00	in
Arm49	7.02	8.01	9.00	9.25	9.63	0.00	in
Arm50	7.02	8.03	9.03	9.28	9.65	0.00	in
Arm51	7.01	7.99	8.97	9.21	9.59	0.00	in
Arm52	7.06	8.05	9.05	9.29	9.68	0.00	in
Arm53	7.03	8.00	8.98	9.22	9.60	0.00	in
Arm54	7.06	8.06	9.06	9.31	9.70	0.00	in
Arm55	7.03	8.02	9.00	9.24	9.62	0.00	in
Arm56	6.97	8.00	9.02	9.24	9.65	0.00	in
Arm57							in
Arm58							in
Arm59							in
Arm60							in

* Bad

GOWell 56 Arm Verification Report

	Pre Verification	Post Verification	Casing Check	
Performed:	Fri Apr 15 10:02:16 2016	Thu Apr 14 17:50:33 2016	Fri Apr 15 10:26:19 2016	
Ref ID:	9.00	0.00	8.68	in
Min.	8.98	0.00	8.73	in
Max.	9.00	0.00	8.79	in
Avg.	8.99	31496417954875855	8.76000000000000000000000000000000000000000000	in
Dia1	8.99	9.01	8.74	in
Dia2	8.98	9.01	8.73	in
Dia3	8.99	9.01	8.74	in
Dia4	9.00	9.00	8.76	in
Dia5	8.99	9.01	8.75	in
Dia6	8.99	9.01	8.76	in
Dia7	9.00	9.01	8.76	in
Dia8	8.99	9.01	8.77	in
Dia9	8.99	9.01	8.77	in
Dia10	8.99	9.01	8.79	in
Dia11	8.99	9.02	8.77	in
Dia12	8.99	9.01	8.77	in
Dia13	8.99	9.01	8.76	in
Dia14	8.99	9.01	8.76	in
Dia15	8.99	9.00	8.76	in
Dia16	8.99	9.01	8.76	in
Dia17	8.99	9.02	8.75	in
Dia18	8.98	9.03	8.75	in
Dia19	9.00	9.02	8.76	in
Dia20	8.98	9.02	8.75	in
Dia21	8.99	9.02	8.75	in
Dia22	8.99	9.03	8.76	in
Dia23	8.99	9.00	8.74	in
Dia24	8.99	9.01	8.75	in

Dia24	8.99	9.00	8.74	in
Dia25	8.99	9.00	8.74	in
Dia26	8.99	9.01	8.75	in
Dia27	8.98	9.01	8.75	in
Dia28	8.98	9.01	8.74	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					

LOCTIM UTCTIM	0.00 0.00		CENT-Hotwell275 2 3/4" Hotwell Centralizer for 40 and 56 ARM	2.71	2.75	30.00

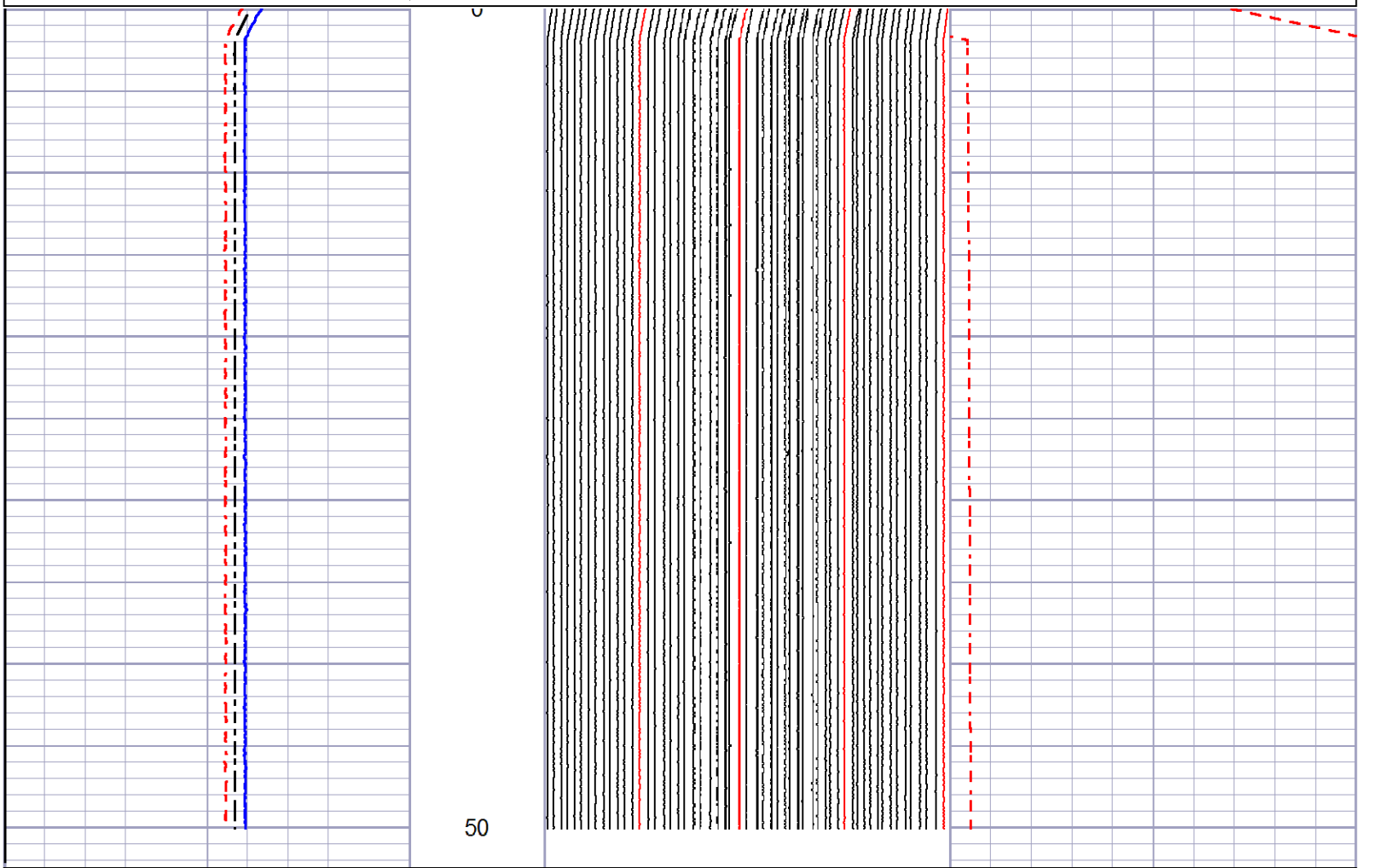
Dataset:	porter_50b.db: field/well/run1/pass8
Total length:	13.03 ft
Total weight:	170.00 lb
O.D.:	3.50 in

BAKER HUGHES

TIME PASS CASING CHECK

Database File	c:\hotwell_mips\poter 50b\raw data & info\porter_50b.db
Dataset Pathname	pass8
Presentation Format	56_958_47
Dataset Creation	Fri Apr 15 19:13:44 2016
Charted by	Time scaled 360/hour

7.681	Max ID (in)	9.681	56 RADII .05" INC.	70	WTEMP (degF)	170
7.681	Min ID (in)	9.681				
7.681	IDAV (in)	9.681				



7.681	Max ID (in)	9.681
7.681	Min ID (in)	9.681
7.681	IDAV (in)	9.681

56 RADII .05" INC.	70	WTEMP (degF)	170

Company	SOUTHERN CALIFORNIA GAS COMPANY
Well	PORTER 50B
Field	ALISO CANYON
County	LOS ANGELES
State	CALIFORNIA