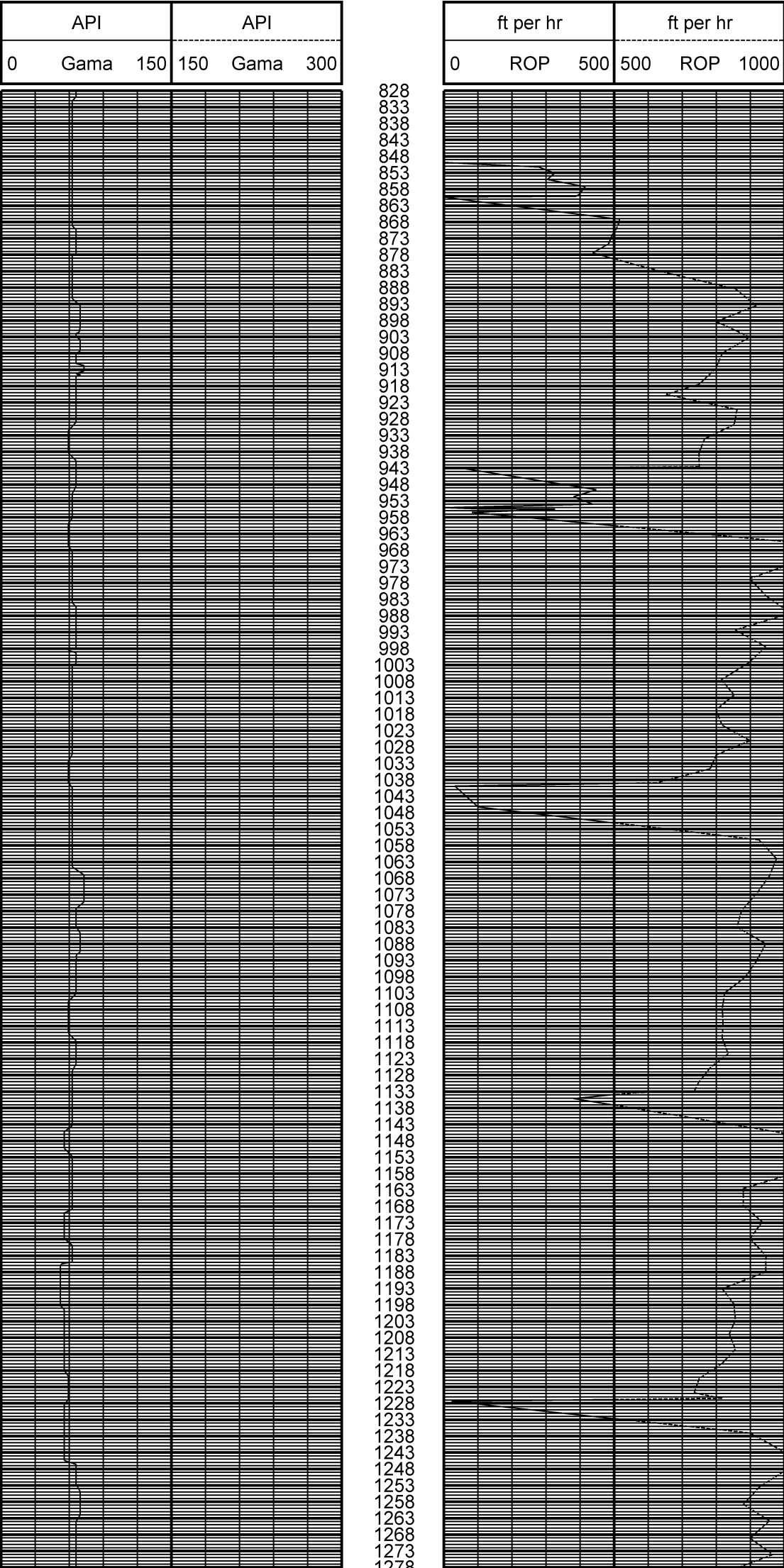


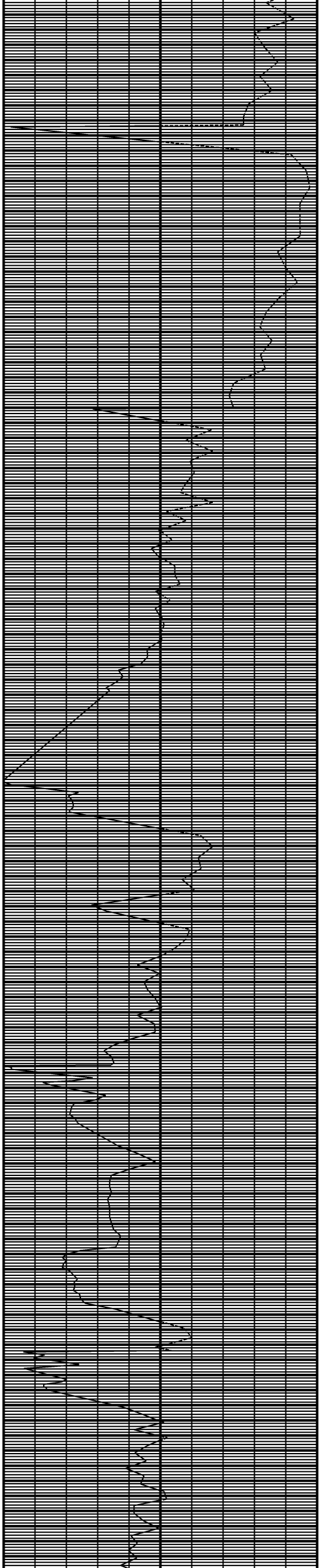
<div>MD</div> <div>1:500</div> <div>Feet</div>	
Client: Total Directional	
Well Name: ANSCHUTZ STATE #5-62-25-1080XBH	
Field: Weld County, Colorado	
Location: SEC 25 T5N R62W 6TH P.	
Country: United States	Company Representative
Prov/State: Colorado	Cecil Crow
County: Weld	
Drilling Rig #: SST 17	Geologist
Latitude: 40.375022	Blue Spikes
Longitude: 104.279972	
UWI/API: 05-123-38353	
License/Permit#: 18336DSI	Directional Drillers
Job No: 13-132	Paul Loehr
Vertical Section Direction: 79.13	Scott Summers
KB: 18	
DF: 0	
GL: 4581	
Permanent Datum: 0	MWD Operator
Drilling Measurement From: 0	Paul Perhonis
Magnetic Declination: 8.26	David Keele
Meg Field: 0.530	
Dip Angle: 67.02	
Spud Date: 12-15-13	
Print Date: 12/25/2013	
Log Start Depth: 0	Leg Name
Log End Depth: 10808	Main Leg
Comments:	
- <div>ZONE DIRECT MWD SERVICES LTD ("ZONE DIRECT") DOES NOT MAKE AND EXPRESSLY DISCLAIMS ALL WARRANTIES, REPRESENTATIONS AND CONDITIONS, WITH RESPECT TO THE INFORMATION CONTAINED IN THIS DOCUMENT, WHETHER ORAL OR WRITTEN, EXPRESS OR IMPLIED OR ARISING FROM CONTRACT OR STATUTE INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY, ACCURACY AND FITNESS FOR A PARTICULAR PURPOSE. ANYONE USING THIS INFORMATION DOES SO AT THEIR OWN RISK AND ACKNOWLEDGES AND AGREES THAT ZONE DIRECT SHALL NOT BE LIABLE FOR ANY ERROR, OMISSION, DEFECT, DEFICIENCY, OR NONCONFORMITY IN THE INFORMATION AND WITHOUT LIMITING THE FOREGOING, ZONE DIRECT DOES NOT WARRANT THAT THE INFORMATION (OR THE USE THEREOF) WILL BE FREE OF ALL ERRORS OR THAT IT DOES NOT INFRINGE ANY THIRD PARTY RIGHTS. ANYONE USING THE INFORMATION AGREES TO INDEMNIFY AND HOLD ZONE DIRECT HARMLESS FROM ALL CLAIMS, ACTIONS, COSTS (INCLUDING LEGAL COSTS ON A SOLICITOR AND HIS OWN CLIENT BASIS) AND LIABILITIES ARISING FROM OR IN CONNECTION WITH THE USE OF THE INFORMATION.</div>	

BitRun:	1	2	3	4
Start Depth:	0	5645	5992	6595
End Depth:	5645	5992	6595	10808.2
Start Date:	2013/12/14	2013/12/19	2013/12/20	2013/12/23
End Date:	2013/12/19	2013/12/20	2013/12/21	2013/12/25
Gamma Scale Factor:	3.5	2.7	2.7	2.25
Survey-to-Bit (PTB):	52	53	53	62
Gamma-to-Bit (GTB):	41	43	43	49
Drill Collar ID/OD:	3.125 / 6.5	2.063/4.5	2.063 / 4.5	2.75 / 4.75
Hole Size:	8.75	8.75	8.75	6.125
Casing Size:	9.625	9.625	9.625	8
Casing Start Depth:	0	0	0	828
Casing End Depth:	800	810	810	6595
Mud Type 1:	Water Base	Water	Water	WBM
Mud Weight 1:	9.15	9.7	10.20	10
Mud Viscosity 1:	41	65	50	49
Mud Type 2:	0	-	-	-
Mud Weight 2:	0	-	-	-
Mud Viscosity 2:	0	-	-	-
Comment:	-	Curve Assembly	Swap MWD Tool String	Lateral Assembly

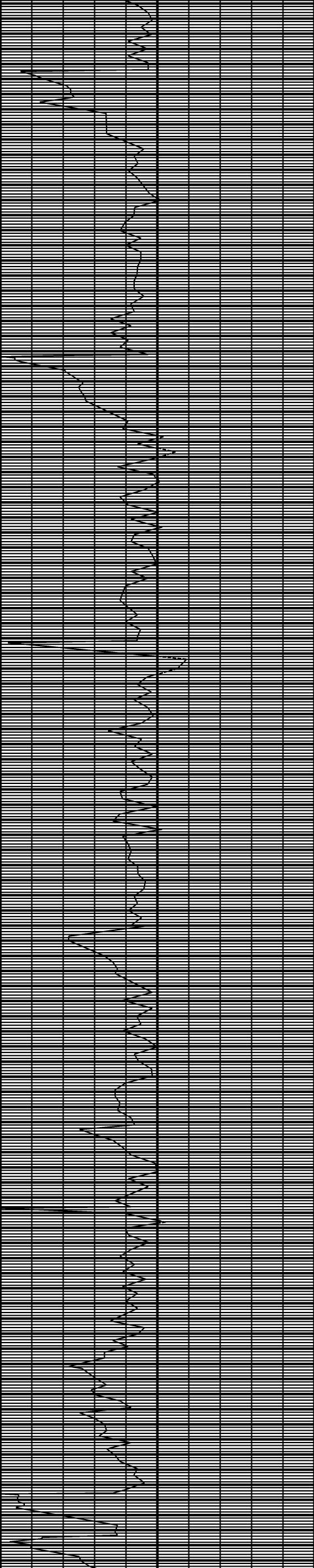
BitRun:				
Start Depth:				
End Depth:				
Start Date:				
End Date:				
Gamma Scale Factor:				
Survey-to-Bit (PTB):				
Gamma-to-Bit (GTB):				
Drill Collar ID/OD:				
Hole Size:				
Casing Size:				
Casing Start Depth:				
Casing End Depth:				
Mud Type 1:				
Mud Weight 1:				
Mud Viscosity 1:				
Mud Type 2:				
Mud Weight 2:				
Mud Viscosity 2:				
Comment:				



1283
1288
1293
1298
1303
1308
1313
1318
1323
1328
1333
1338
1343
1348
1353
1358
1363
1368
1373
1378
1383
1388
1393
1398
1403
1408
1413
1418
1423
1428
1433
1438
1443
1448
1453
1458
1463
1468
1473
1478
1483
1488
1493
1498
1503
1508
1513
1518
1523
1528
1533
1538
1543
1548
1553
1558
1563
1568
1573
1578
1583
1588
1593
1598
1603
1608
1613
1618
1623
1628
1633
1638
1643
1648
1653
1658
1663
1668
1673
1678
1683
1688
1693
1698
1703
1708
1713
1718
1723
1728
1733
1738
1743
1748
1753
1758
1763
1768
1773
1778
1783
1788
1793



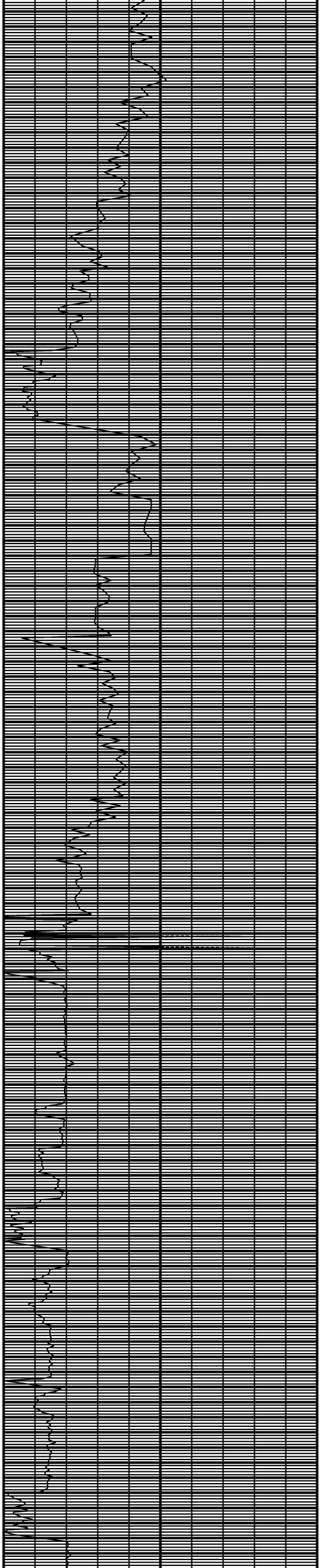
1798
1803
1808
1813
1818
1823
1828
1833
1838
1843
1848
1853
1858
1863
1868
1873
1878
1883
1888
1893
1898
1903
1908
1913
1918
1923
1928
1933
1938
1943
1948
1953
1958
1963
1968
1973
1978
1983
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
2048
2053
2058
2063
2068
2073
2078
2083
2088
2093
2098
2103
2108
2113
2118
2123
2128
2133
2138
2143
2148
2153
2158
2163
2168
2173
2178
2183
2188
2193
2198
2203
2208
2213
2218
2223
2228
2233
2238
2243
2248
2253
2258
2263
2268
2273
2278
2283
2288
2293
2298
2303
2308
2313



2318
2323
2328
2333
2338
2343
2348
2353
2358
2363
2368
2373
2378
2383
2388
2393
2398
2403
2408
2413
2418
2423
2428
2433
2438
2443
2448
2453
2458
2463
2468
2473
2478
2483
2488
2493
2498
2503
2508
2513
2518
2523
2528
2533
2538
2543
2548
2553
2558
2563
2568
2573
2578
2583
2588
2593
2598
2603
2608
2613
2618
2623
2628
2633
2638
2643
2648
2653
2658
2663
2668
2673
2678
2683
2688
2693
2698
2703
2708
2713
2718
2723
2728
2733
2738
2743
2748
2753
2758
2763
2768
2773
2778
2783
2788
2793
2798
2803
2808
2813
2818
2823
2828
2833

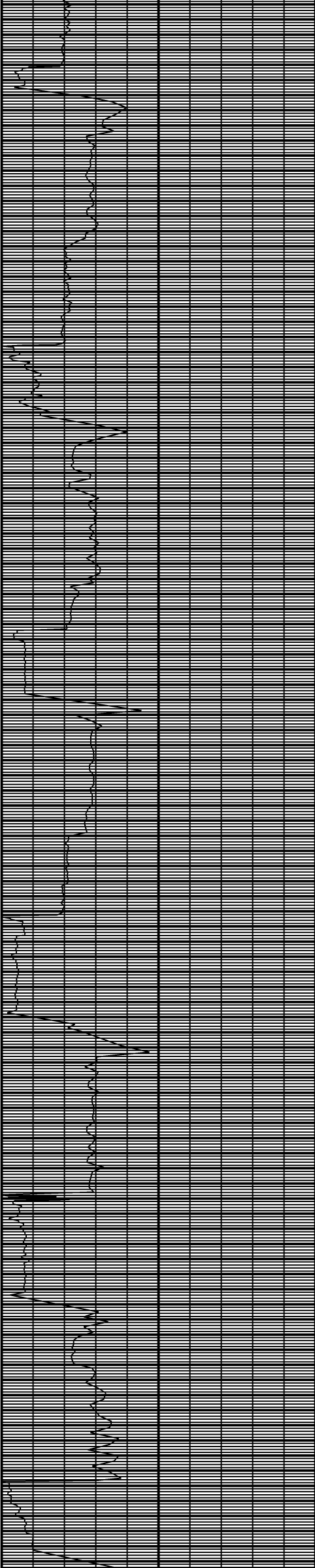


2838
2843
2848
2853
2858
2863
2868
2873
2878
2883
2888
2893
2898
2903
2908
2913
2918
2923
2928
2933
2938
2943
2948
2953
2958
2963
2968
2973
2978
2983
2988
2993
2998
3003
3008
3013
3018
3023
3028
3033
3038
3043
3048
3053
3058
3063
3068
3073
3078
3083
3088
3093
3098
3103
3108
3113
3118
3123
3128
3133
3138
3143
3148
3153
3158
3163
3168
3173
3178
3183
3188
3193
3198
3203
3208
3213
3218
3223
3228
3233
3238
3243
3248
3253
3258
3263
3268
3273
3278
3283
3288
3293
3298
3303
3308
3313
3318
3323
3328
3333
3338
3343
3348
3353



3358
3363
3368
3373
3378
3383
3388
3388
3393
3398
3403
3408
3413
3418
3423
3428
3433
3438
3443
3448
3453
3458
3463
3468
3473
3478
3483
3488
3493
3498
3503
3508
3513
3518
3523
3528
3533
3538
3543
3548
3553
3558
3563
3568
3573
3578
3583
3588
3593
3598
3603
3608
3613
3618
3623
3628
3633
3638
3643
3648
3653
3658
3663
3668
3673
3678
3683
3688
3693
3698
3703
3708
3713
3718
3723
3728
3733
3738
3743
3748
3753
3758
3763
3768
3773
3778
3783
3788
3793
3798
3803
3808
3813
3818
3823
3828
3833
3838
3843
3848
3853
3858
3863
3868

3873
3878
3883
3888
3893
3898
3903
3908
3913
3918
3923
3928
3933
3938
3943
3948
3953
3958
3963
3968
3973
3978
3983
3988
3993
3998
4003
4008
4013
4018
4023
4028
4033
4038
4043
4048
4053
4058
4063
4068
4073
4078
4083
4088
4093
4098
4103
4108
4113
4118
4123
4128
4133
4138
4143
4148
4153
4158
4163
4168
4173
4178
4183
4188
4193
4198
4203
4208
4213
4218
4223
4228
4233
4238
4243
4248
4253
4258
4263
4268
4273
4278
4283
4288
4293
4298
4303
4308
4313
4318
4323
4328
4333
4338
4343
4348
4353
4358
4363
4368
4373
4378
4383
4388



4393
4398
4403
4408
4413
4418
4423
4428
4433
4438
4443
4448
4453
4458
4463
4468
4473
4478
4483
4488
4493
4498
4503
4508
4513
4518
4523
4528
4533
4538
4543
4548
4553
4558
4563
4568
4573
4578
4583
4588
4593
4598
4603
4608
4613
4618
4623
4628
4633
4638
4643
4648
4653
4658
4663
4668
4673
4678
4683
4688
4693
4698
4703
4708
4713
4718
4723
4728
4733
4738
4743
4748
4753
4758
4763
4768
4773
4778
4783
4788
4793
4798
4803
4808
4813
4818
4823
4828
4833
4838
4843
4848
4853
4858
4863
4868
4873
4878
4883
4888
4893
4898
4903
4908

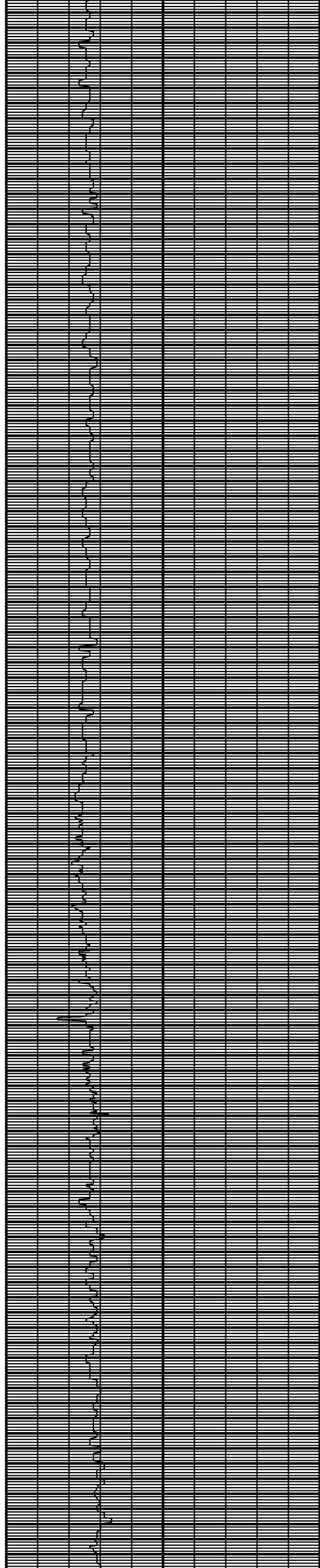
MD: 4496
INC: 1
AZM: 223.8

MD: 4591
INC: 1.6
AZM: 162.5

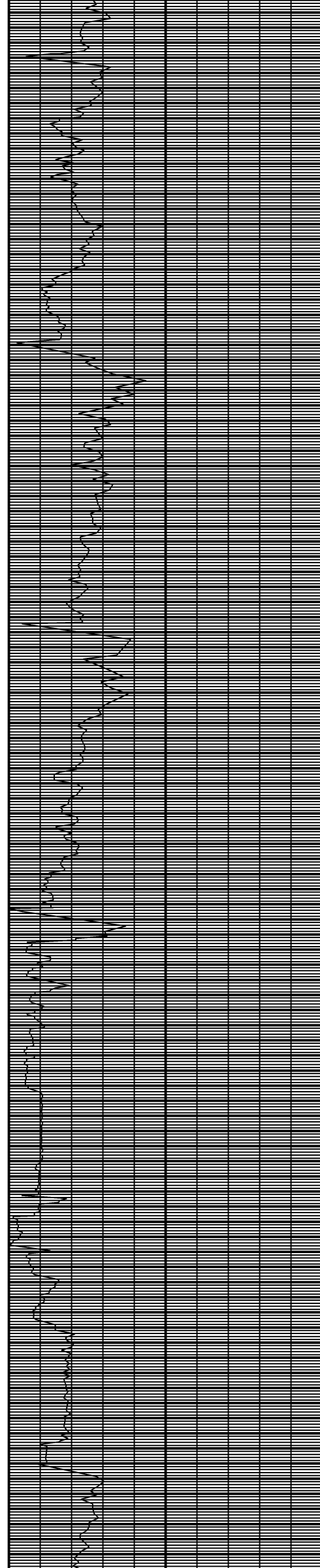
MD: 4685
INC: 1.2
AZM: 155.3

MD: 4779
INC: 1.2
AZM: 156.4

MD: 4872
INC: 2.2
AZM: 181.8



4913
4918
4923
4928
4933
4938
4943
4948
4953
4958
4963
4968
4973
4978
4983
4988
4993
4998
5003
5008
5013
5018
5023
5028
5033
5038
5043
5048
5053
5058
5063
5068
5073
5078
5083
5088
5093
5098
5103
5108
5113
5118
5123
5128
5133
5138
5143
5148
5153
5158
5163
5168
5173
5178
5183
5188
5193
5198
5203
5208
5213
5218
5223
5228
5233
5238
5243
5248
5253
5258
5263
5268
5273
5278
5283
5288
5293
5298
5303
5308
5313
5318
5323
5328
5333
5338
5343
5348
5353
5358
5363
5368
5373
5378
5383
5388
5393
5398
5403
5408
5413
5418
5423
5428



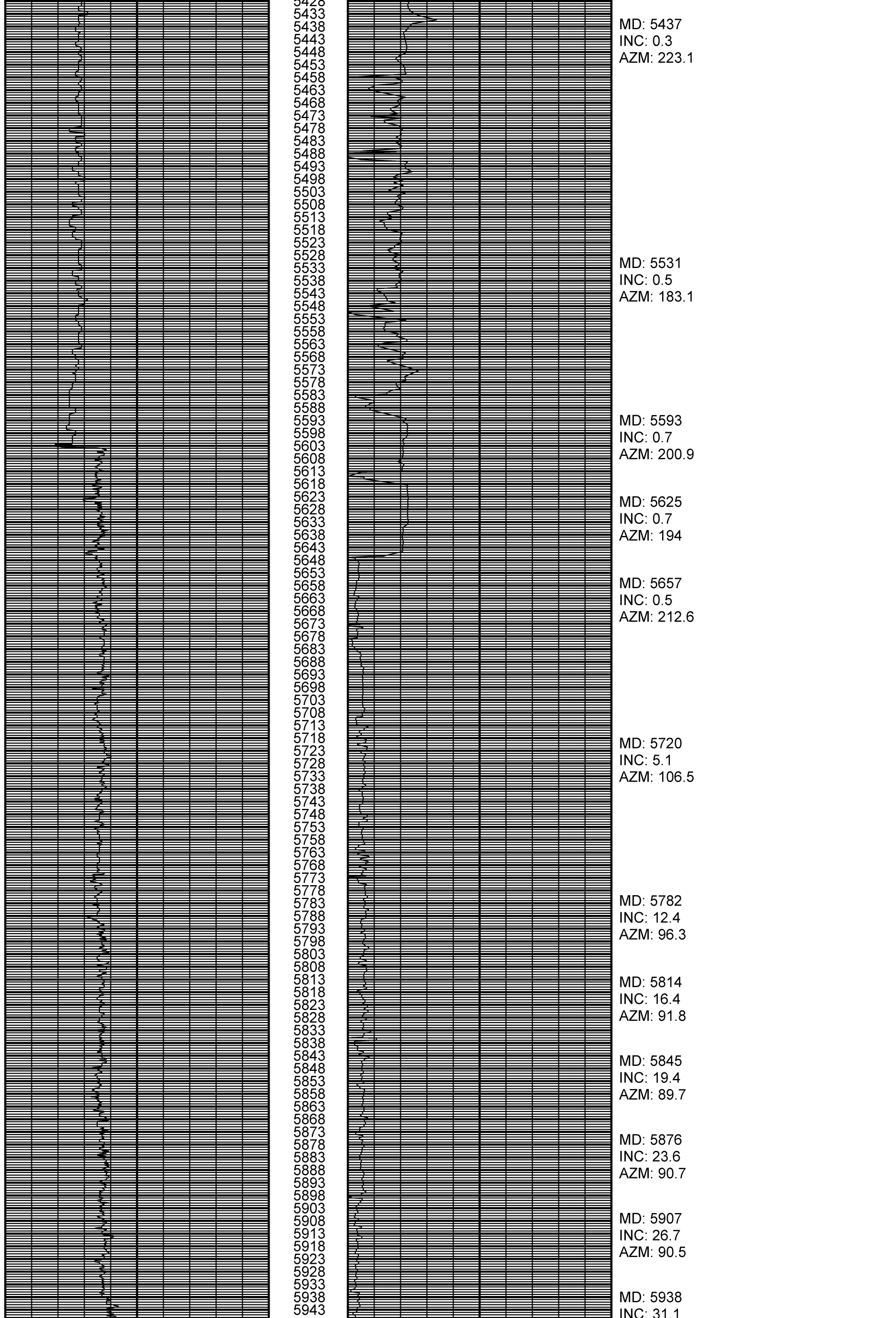
MD: 4966
INC: 1.7
AZM: 176.1

MD: 5061
INC: 1.6
AZM: 177.4

MD: 5155
INC: 1.6
AZM: 163.2

MD: 5248
INC: 1.5
AZM: 164.8

MD: 5342
INC: 0.5
AZM: 230.7



MD: 5437
INC: 0.3
AZM: 223.1

MD: 5531
INC: 0.5
AZM: 183.1

MD: 5593
INC: 0.7
AZM: 200.9

MD: 5625
INC: 0.7
AZM: 194

MD: 5657
INC: 0.5
AZM: 212.6

MD: 5720
INC: 5.1
AZM: 106.5

MD: 5782
INC: 12.4
AZM: 96.3

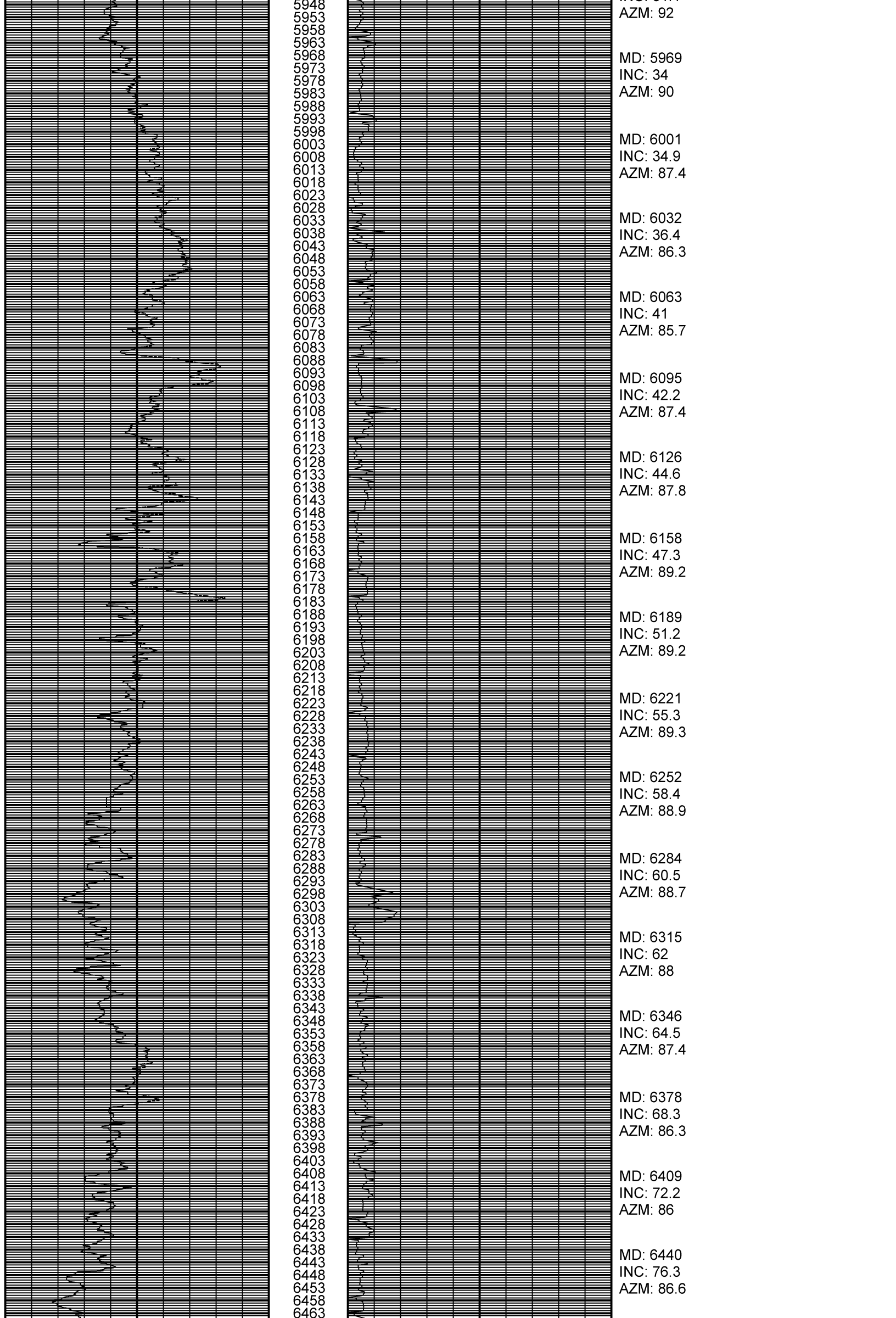
MD: 5814
INC: 16.4
AZM: 91.8

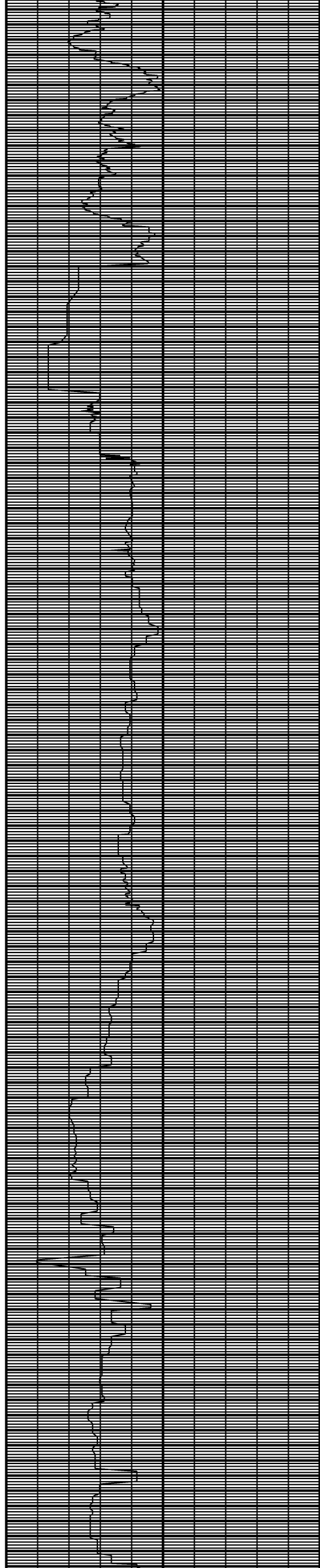
MD: 5845
INC: 19.4
AZM: 89.7

MD: 5876
INC: 23.6
AZM: 90.7

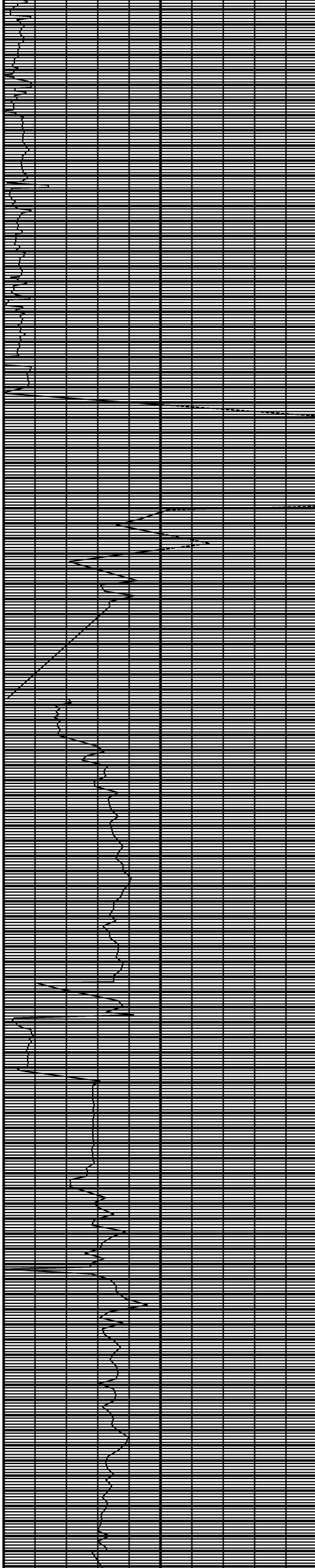
MD: 5907
INC: 26.7
AZM: 90.5

MD: 5938
INC: 31.1





6468
6473
6478
6483
6488
6493
6498
6503
6508
6513
6518
6523
6528
6533
6538
6543
6548
6553
6558
6563
6568
6573
6578
6583
6588
6593
6598
6603
6608
6613
6618
6623
6628
6633
6638
6643
6648
6653
6658
6663
6668
6673
6678
6683
6688
6693
6698
6703
6708
6713
6718
6723
6728
6733
6738
6743
6748
6753
6758
6763
6768
6773
6778
6783
6788
6793
6798
6803
6808
6813
6818
6823
6828
6833
6838
6843
6848
6853
6858
6863
6868
6873
6878
6883
6888
6893
6898
6903
6908
6913
6918
6923
6928
6933
6938
6943
6948
6953
6958
6963
6968
6973
6978
6983



MD: 6471
INC: 79.3
AZM: 86.1

MD: 6502
INC: 81.5
AZM: 86.6

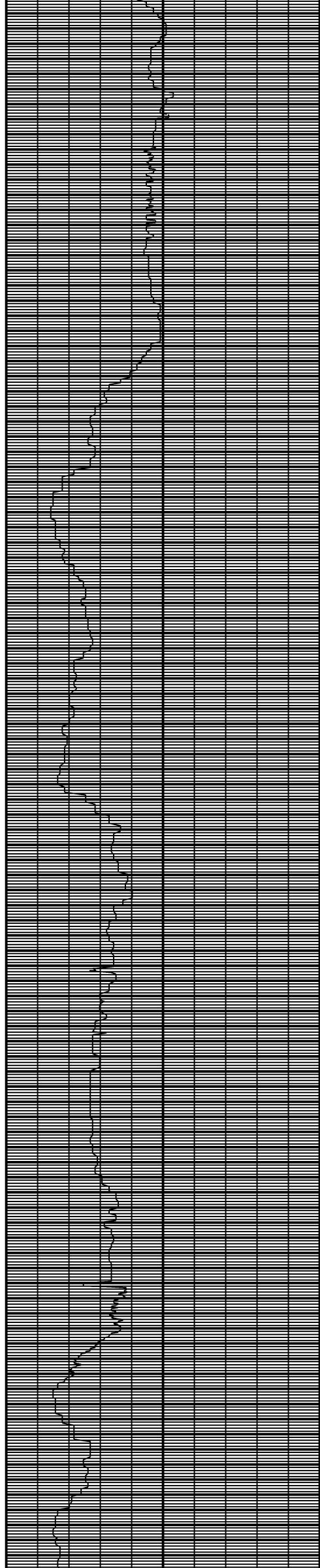
MD: 6533
INC: 82.5
MD: 6542
INC: 85.1
AZM: 85.6

MD: 6633
INC: 90.1
AZM: 86.6

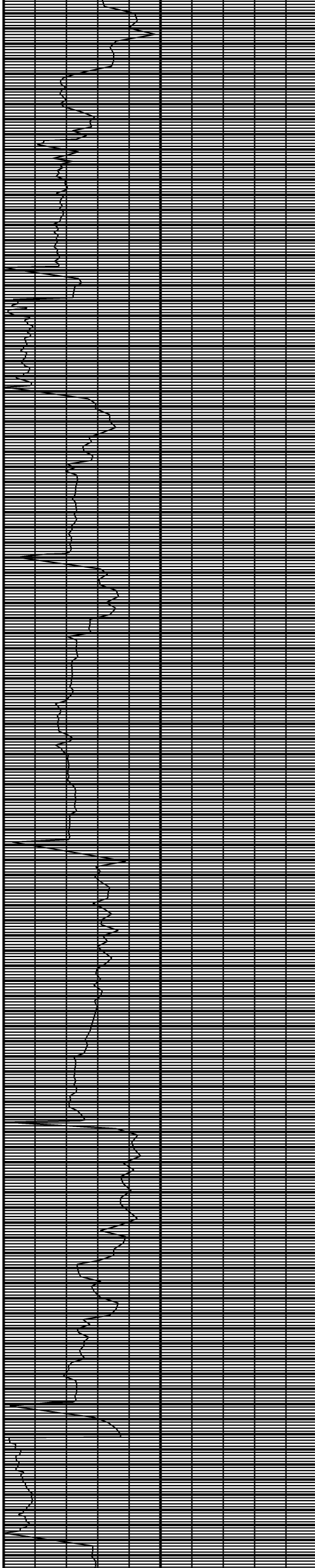
MD: 6728
INC: 90
AZM: 88.5

MD: 6822
INC: 91
AZM: 88.2

MD: 6916
INC: 91.1
AZM: 87.4



6988
6993
6998
7003
7008
7013
7018
7023
7028
7033
7038
7043
7048
7053
7058
7063
7068
7073
7078
7083
7088
7093
7098
7103
7108
7113
7118
7123
7128
7133
7138
7143
7148
7153
7158
7163
7168
7173
7178
7183
7188
7193
7198
7203
7208
7213
7218
7223
7228
7233
7238
7243
7248
7253
7258
7263
7268
7273
7278
7283
7288
7293
7298
7303
7308
7313
7318
7323
7328
7333
7338
7343
7348
7353
7358
7363
7368
7373
7378
7383
7388
7393
7398
7403
7408
7413
7418
7423
7428
7433
7438
7443
7448
7453
7458
7463
7468
7473
7478
7483
7488
7493
7498



MD: 7009
INC: 89.8
AZM: 85.5

MD: 7104
INC: 92.1
AZM: 89.5

MD: 7198
INC: 92.4
AZM: 88.2

MD: 7292
INC: 91.4
AZM: 87.3

MD: 7386
INC: 89.1
AZM: 86.2

MD: 7480
INC: 90.5
AZM: 88.7

7503
7508
7513
7518
7523
7528
7533
7538
7543
7548
7553
7558
7563
7568
7573
7578
7583
7588
7593
7598
7603
7608
7613
7618
7623
7628
7633
7638
7643
7648
7653
7658
7663
7668
7673
7678
7683
7688
7693
7698
7703
7708
7713
7718
7723
7728
7733
7738
7743
7748
7753
7758
7763
7768
7773
7778
7783
7788
7793
7798
7803
7808
7813
7818
7823
7828
7833
7838
7843
7848
7853
7858
7863
7868
7873
7878
7883
7888
7893
7898
7903
7908
7913
7918
7923
7928
7933
7938
7943
7948
7953
7958
7963
7968
7973
7978
7983
7988
7993
7998
8003
8008
8013
8018

MD: 7574
INC: 90.4
AZM: 87

MD: 7668
INC: 90.7
AZM: 87.3

MD: 7763
INC: 91.4
AZM: 88.4

MD: 7857
INC: 94.5
AZM: 89.7

MD: 7951
INC: 94.9
AZM: 88.2

8023
8028
8033
8038
8043
8048
8053
8058
8063
8068
8073
8078
8083
8088
8093
8098
8103
8108
8113
8118
8123
8128
8133
8138
8143
8148
8153
8158
8163
8168
8173
8178
8183
8188
8193
8198
8203
8208
8213
8218
8223
8228
8233
8238
8243
8248
8253
8258
8263
8268
8273
8278
8283
8288
8293
8298
8303
8308
8313
8318
8323
8328
8333
8338
8343
8348
8353
8358
8363
8368
8373
8378
8383
8388
8393
8398
8403
8408
8413
8418
8423
8428
8433
8438
8443
8448
8453
8458
8463
8468
8473
8478
8483
8488
8493
8498
8503
8508
8513
8518
8523
8528
8533
8538

MD: 8045
INC: 93.4
AZM: 90.2

MD: 8139
INC: 93.4
AZM: 90

MD: 8234
INC: 91.8
AZM: 91.7

MD: 8328
INC: 89.6
AZM: 90.9

MD: 8422
INC: 88.7
AZM: 89.7

MD: 8516
INC: 87.3
AZM: 89.6

8543
8548
8553
8558
8563
8568
8573
8578
8583
8588
8593
8598
8603
8608
8613
8618
8623
8628
8633
8638
8643
8648
8653
8658
8663
8668
8673
8678
8683
8688
8693
8698
8703
8708
8713
8718
8723
8728
8733
8738
8743
8748
8753
8758
8763
8768
8773
8778
8783
8788
8793
8798
8803
8808
8813
8818
8823
8828
8833
8838
8843
8848
8853
8858
8863
8868
8873
8878
8883
8888
8893
8898
8903
8908
8913
8918
8923
8928
8933
8938
8943
8948
8953
8958
8963
8968
8973
8978
8983
8988
8993
8998
9003
9008
9013
9018
9023
9028
9033
9038
9043
9048
9053
9058

MD: 8610
INC: 89.3
AZM: 88.9

MD: 8704
INC: 88.3
AZM: 87.4

MD: 8799
INC: 89.4
AZM: 87.1

MD: 8892
INC: 90.2
AZM: 86.8

MD: 8986
INC: 91.7
AZM: 88.3

9063
9068
9073
9078
9083
9088
9093
9098
9103
9108
9113
9118
9123
9128
9133
9138
9143
9148
9153
9158
9163
9168
9173
9178
9183
9188
9193
9198
9203
9208
9213
9218
9223
9228
9233
9238
9243
9248
9253
9258
9263
9268
9273
9278
9283
9288
9293
9298
9303
9308
9313
9318
9323
9328
9333
9338
9343
9348
9353
9358
9363
9368
9373
9378
9383
9388
9393
9398
9403
9408
9413
9418
9423
9428
9433
9438
9443
9448
9453
9458
9463
9468
9473
9478
9483
9488
9493
9498
9503
9508
9513
9518
9523
9528
9533
9538
9543
9548
9553
9558
9563
9568
9573

MD: 9080
INC: 91.8
AZM: 88.6

MD: 9174
INC: 92.3
AZM: 88.9

MD: 9268
INC: 92.5
AZM: 87.9

MD: 9362
INC: 91.7
AZM: 88.2

MD: 9456
INC: 91.5
AZM: 89.6

MD: 9551
INC: 91.9
AZM: 89.4

9578
9583
9588
9593
9598
9603
9608
9613
9618
9623
9628
9633
9638
9643
9648
9653
9658
9663
9668
9673
9678
9683
9688
9693
9698
9703
9708
9713
9718
9723
9728
9733
9738
9743
9748
9753
9758
9763
9768
9773
9778
9783
9788
9793
9798
9803
9808
9813
9818
9823
9828
9833
9838
9843
9848
9853
9858
9863
9868
9873
9878
9883
9888
9893
9898
9903
9908
9913
9918
9923
9928
9933
9938
9943
9948
9953
9958
9963
9968
9973
9978
9983
9988
9993
9998
10003
10008
10013
10018
10023
10028
10033
10038
10043
10048
10053
10058
10063
10068
10073
10078
10083
10088
10093

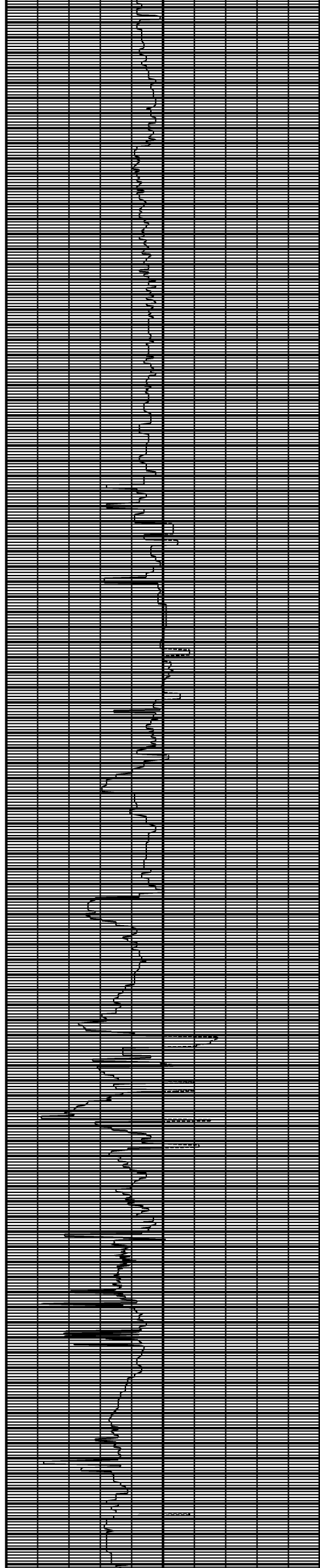
MD: 9645
INC: 90.1
AZM: 89

MD: 9740
INC: 88
AZM: 88.7

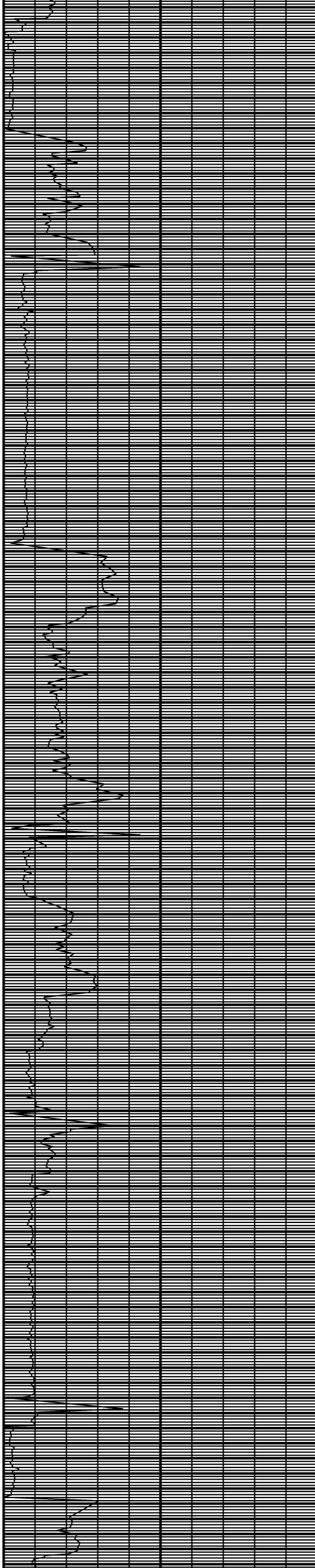
MD: 9834
INC: 86.5
AZM: 88.6

MD: 9928
INC: 87.3
AZM: 87.9

MD: 10022
INC: 88.8
AZM: 87.9



10098
10103
10108
10113
10118
10123
10128
10133
10138
10143
10148
10153
10158
10163
10168
10173
10178
10183
10188
10193
10198
10203
10208
10213
10218
10223
10228
10233
10238
10243
10248
10253
10258
10263
10268
10273
10278
10283
10288
10293
10298
10303
10308
10313
10318
10323
10328
10333
10338
10343
10348
10353
10358
10363
10368
10373
10378
10383
10388
10393
10398
10403
10408
10413
10418
10423
10428
10433
10438
10443
10448
10453
10458
10463
10468
10473
10478
10483
10488
10493
10498
10503
10508
10513
10518
10523
10528
10533
10538
10543
10548
10553
10558
10563
10568
10573
10578
10583
10588
10593
10598
10603
10608
10613



MD: 10117
INC: 90.9
AZM: 86

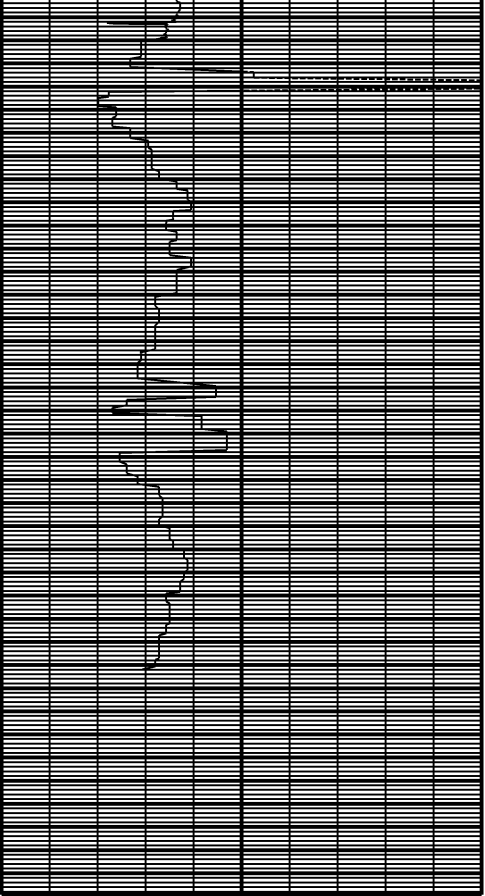
MD: 10211
INC: 92.2
AZM: 86

MD: 10304
INC: 92.3
AZM: 86.7

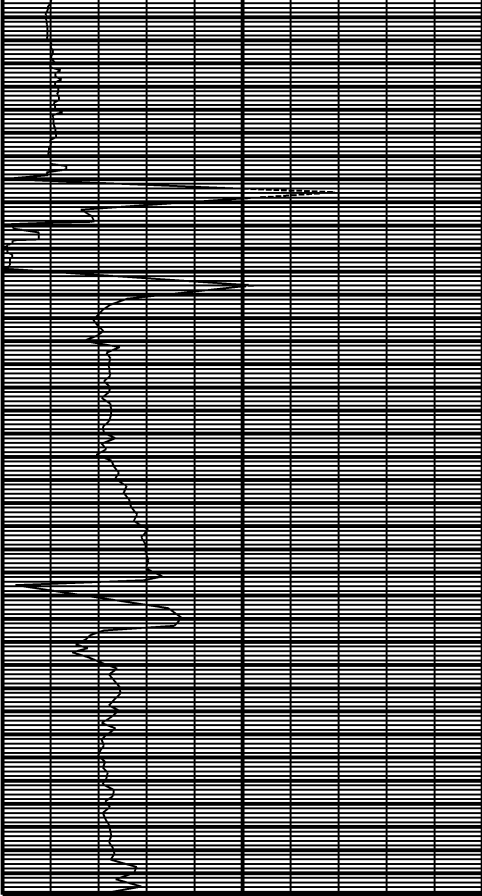
MD: 10399
INC: 93.3
AZM: 85.7

MD: 10493
INC: 95.7
AZM: 84.6

MD: 10588
INC: 93.2
AZM: 84.6



10618
10623
10628
10633
10638
10643
10648
10653
10658
10663
10668
10673
10678
10683
10688
10693
10698
10703
10708
10713
10718
10723
10728
10733
10738
10743
10748
10753
10758
10763
10768
10773
10778
10783
10788
10793
10798
10803
10808



MD: 10680
INC: 92.3
AZM: 85

MD: 10746
INC: 91.7
AZM: 85.2

MD: 10808
INC: 91.7
AZM: 85.2