PRODIRECTIONAL

5 Inch MD Gamma Ray Log

(Scale: 5":100' (10'))

Company: Tapstone Energy
Well: Kennedy 14-34-9 #1H
Field: Hibbord
Well ID: 15-077-22162-01-00
Job Number: LKS6120015
Location: Sec.14 Twp. 34 S. R.9 W
Operator 1: J. Treille
Operator 2: S. Winkels

State: KS
County: Harper Co.
Country: US

Elev KB: 1,287'+22'=1,309'
Elev DF: 22'
Elev GL: 1,287'

Comment 1: LAT: 37° 4' 49.28 N
Comment 2: LONG: 98° 16' 0.53 W
Comment 3: Y: 150718.00 / X: 2068030.40
Comment 4: Mud Density (lb/bbl) 8.4 / Funnel Viscosity (sec/qt) 27
Comment 5: Max Temp (DegF) 158° (NAD 1927) Gamma Ray in Reference to Elev. KB (Kansas South)

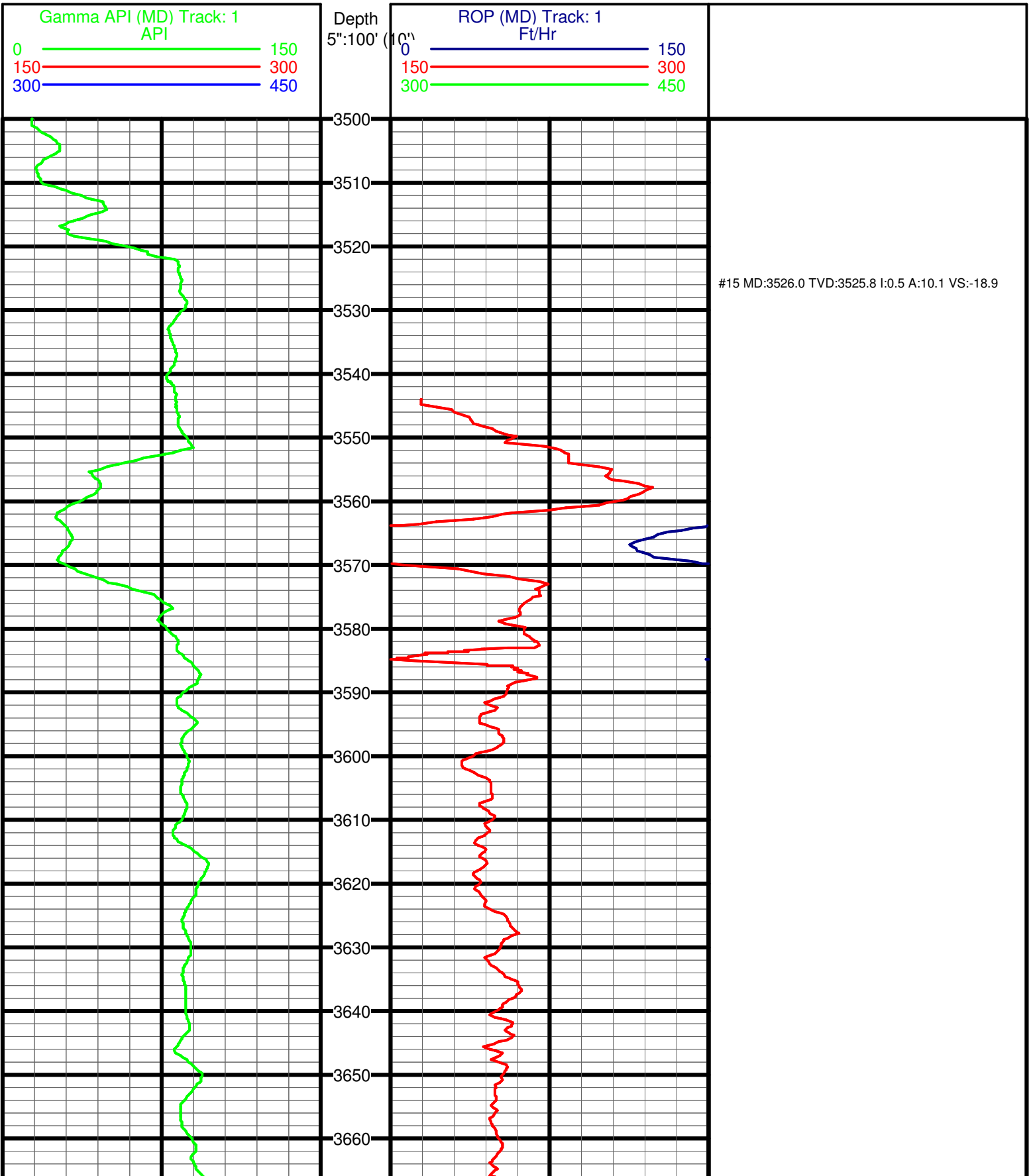
Hole Data			Casing Record		
Size	**From**	**To**	**Size**	**From**	**To**
12 1/4"	0'	838'	9 5/8"	0'	838'
8 3/4"	838'	5,079'	7"	838'	5,077'
6 1/8"	5,079'	9,020'			

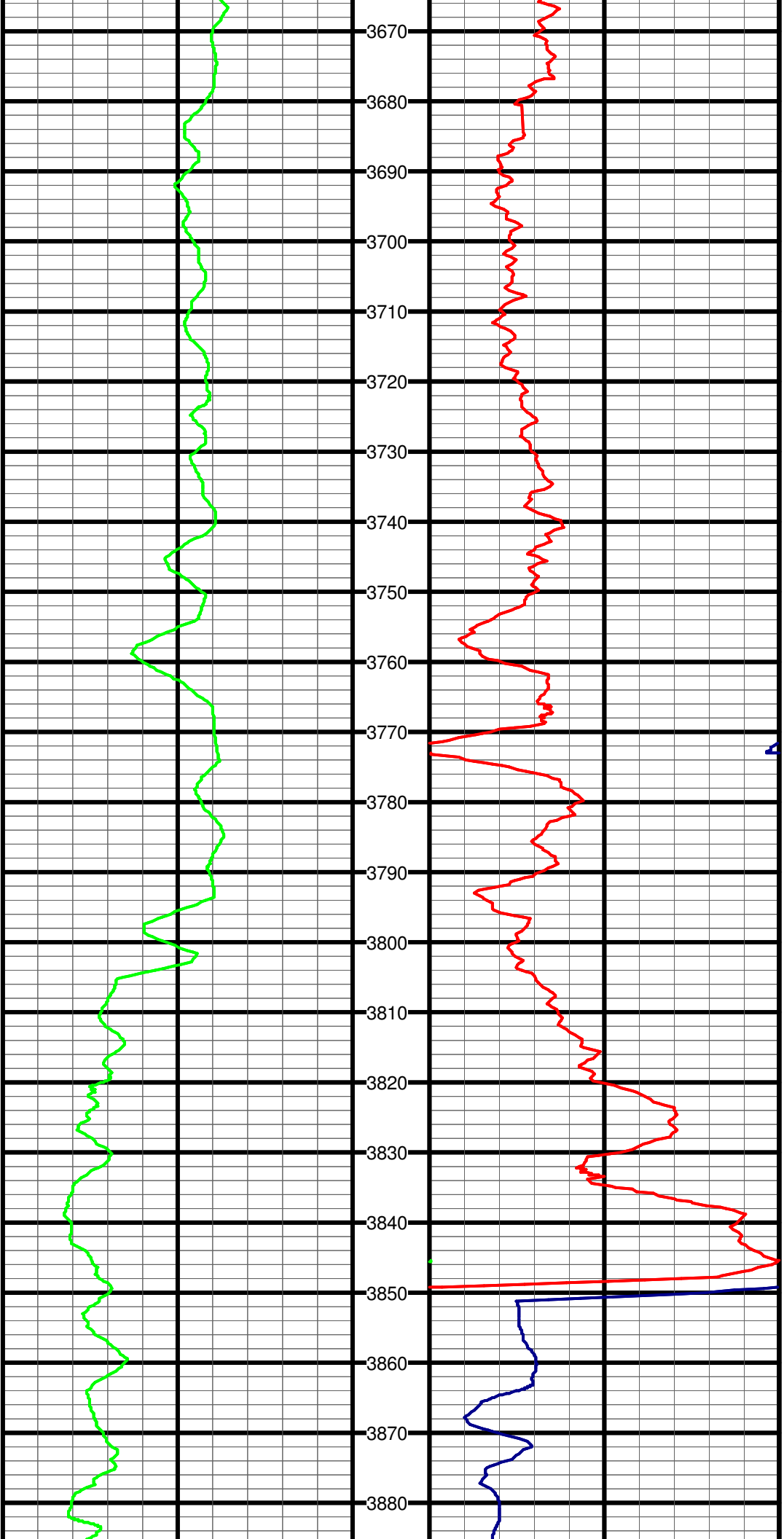
Tool Run Data	Run #1	Run #2	Run #3	Run #4	Run #5
Tool S/N	1711	1962	1505	1962	
Cal Factor	4.56	2.81	2.81	2.81	
Gamma Offset	44'	40'	39'	41'	
Start Depth	3,500'	5,077'	6,971'	8,145'	
Start Date	12/19/2015	12/23/2015	12/26/2015	12/29/2015	
Start Time	17:30	01:00	21:20	03:45	
End Depth	5,077'	6,971'	8,145'	9,020'	
End Date	12/22/2015	12/26/2015	12/28/2015	12/30/2015	
End Time	11:00	13:20	17:20	10:42	

Tool Run Data	Run #6	Run #7	Run #8	Run #9	Run #10
Tool S/N					
Cal Factor					
Offset					
Start Depth					
Start Date					
Start Time					
End Depth					
End Date					
End Time					

Tool Run Data	Run #11	Run #12	Run #13	Run #14	Run #15
Tool S/N					
Cal Factor					
Offset					
Start Depth					
Start Date					
Start Time					
End Depth					

End Date					
End Time					





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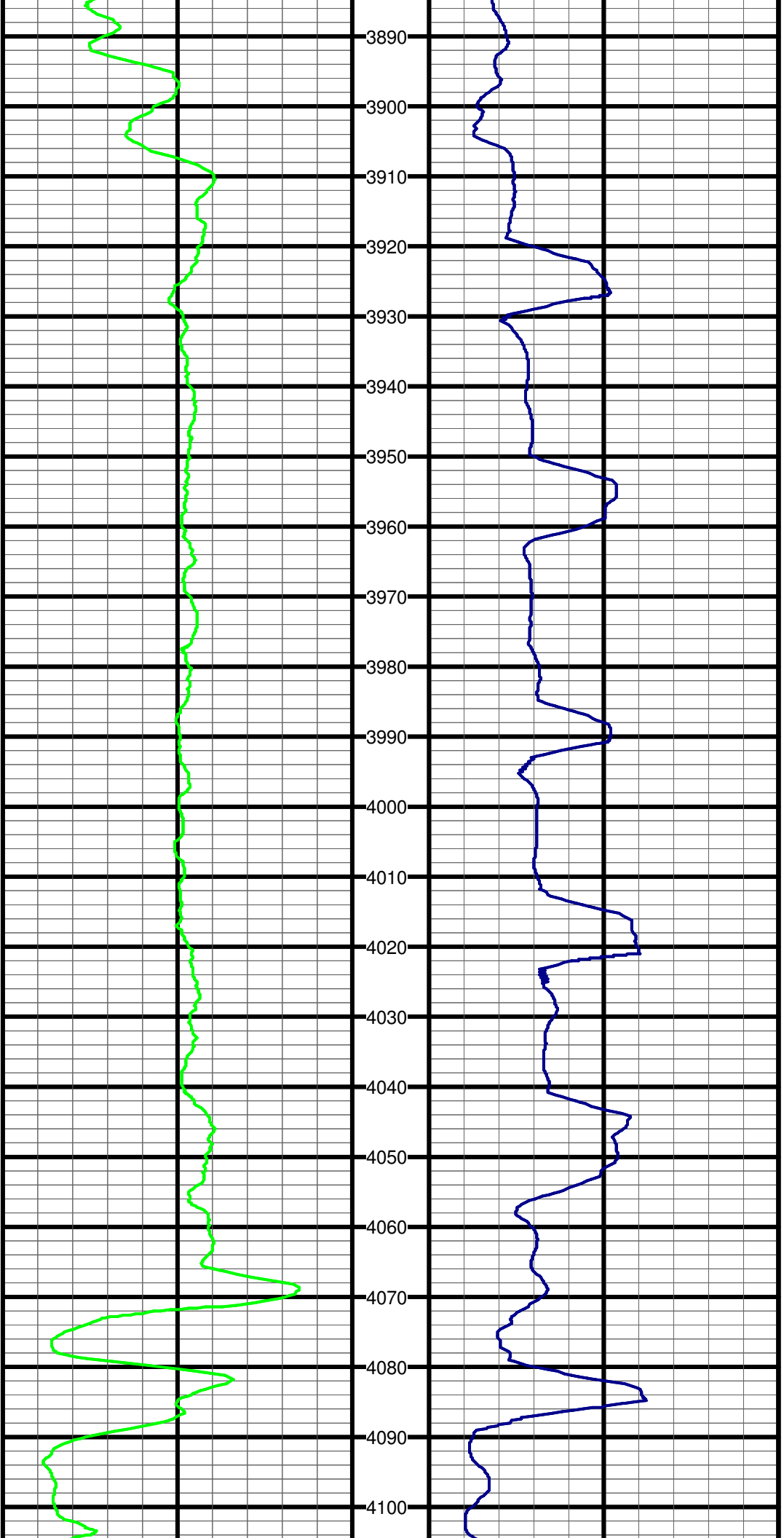
#17 MD:3807.0 TVD:3806.8 I:0.6 A:30.2 VS:-16.4

#18 MD:3838.0 TVD:3837.8 I:1.3 A:9.5 VS:-15.9

#19 MD:3870.0 TVD:3869.8 I:4.0 A:15.0 VS:-14.5



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#21 MD:3933.0 TVD:3932.3 I:9.0 A:5.4 VS:-7.5

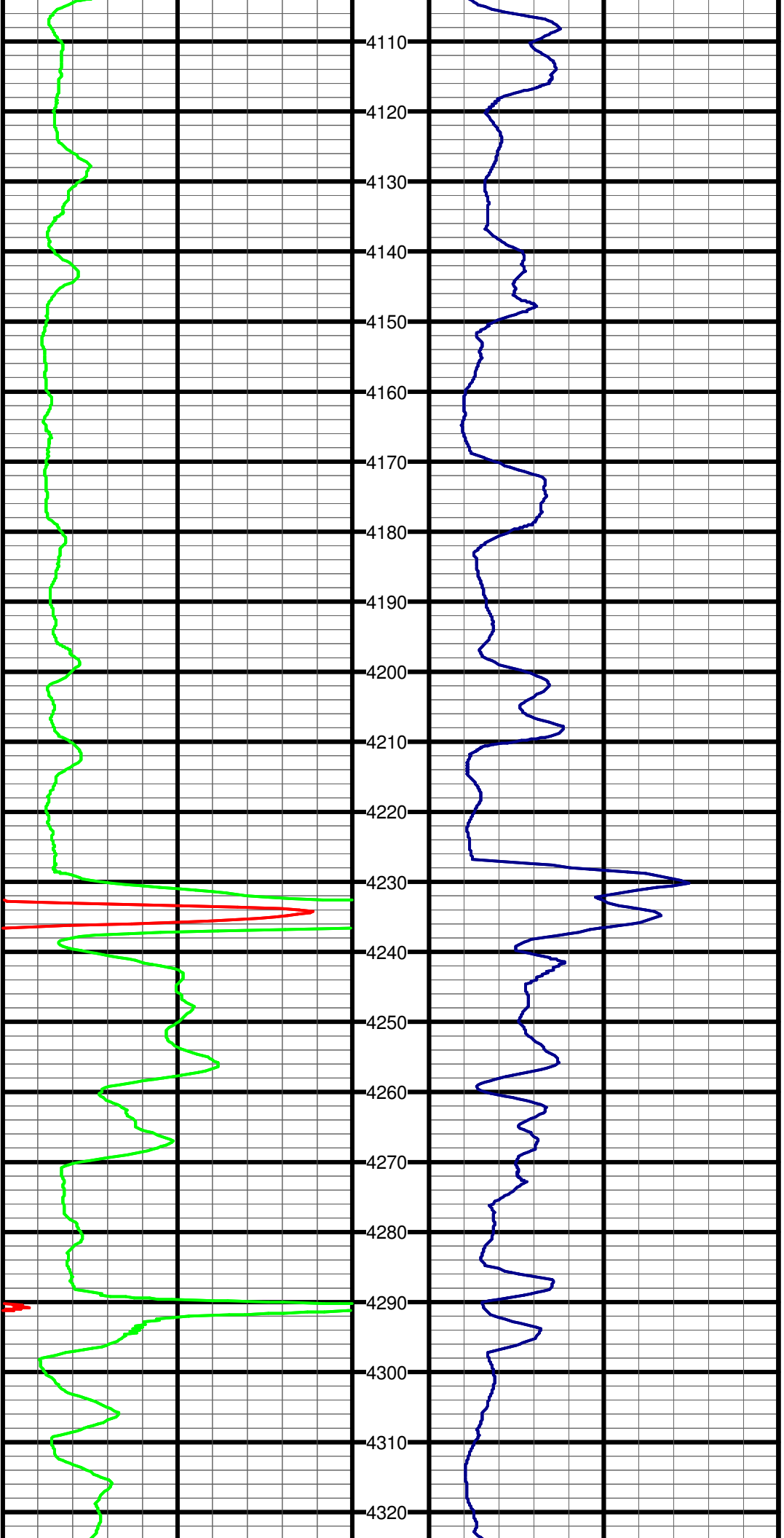
#22 MD:3964.0 TVD:3962.8 I:11.4 A:0.1 VS:-2.1

#23 MD:3996.0 TVD:3994.1 I:13.6 A:359.4 VS:4.8

#24 MD:4028.0 TVD:4025.0 I:15.8 A:358.9 VS:13.0

#25 MD:4059.0 TVD:4054.7 I:17.7 A:357.2 VS:21.9

#26 MD:4091.0 TVD:4085.0 I:19.8 A:358.2 VS:32.2



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#28 MD:4153.0 TVD:4142.2 I:25.4 A:358.8 VS:55.9

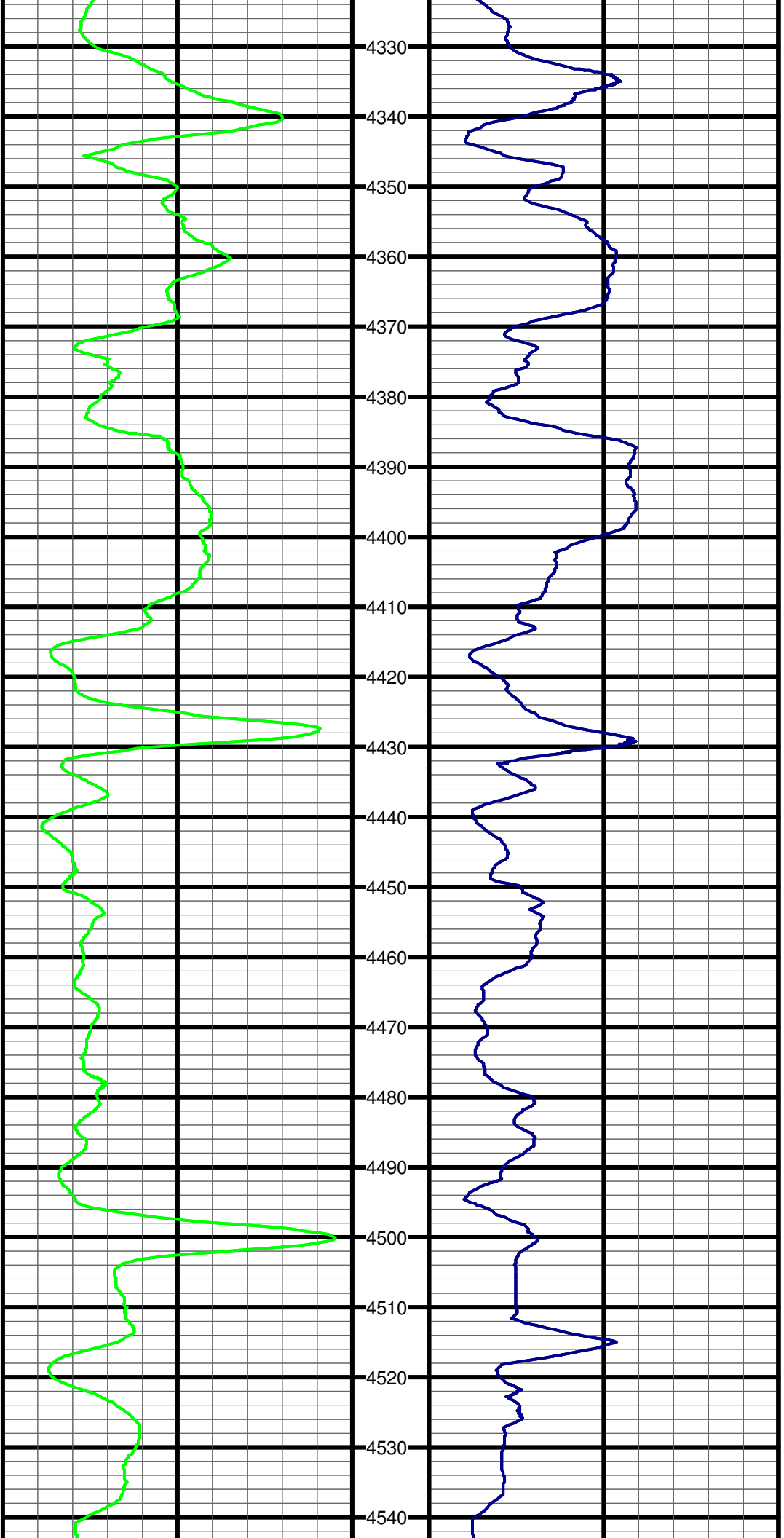
#29 MD:4184.0 TVD:4169.9 I:28.0 A:357.9 VS:69.8

#30 MD:4215.0 TVD:4197.0 I:30.3 A:357.1 VS:84.9

#31 MD:4247.0 TVD:4224.3 I:32.4 A:356.0 VS:101.6

#32 MD:4278.0 TVD:4250.2 I:34.5 A:356.7 VS:118.7

#33 MD:4310.0 TVD:4276.2 I:36.8 A:357.9 VS:137.3



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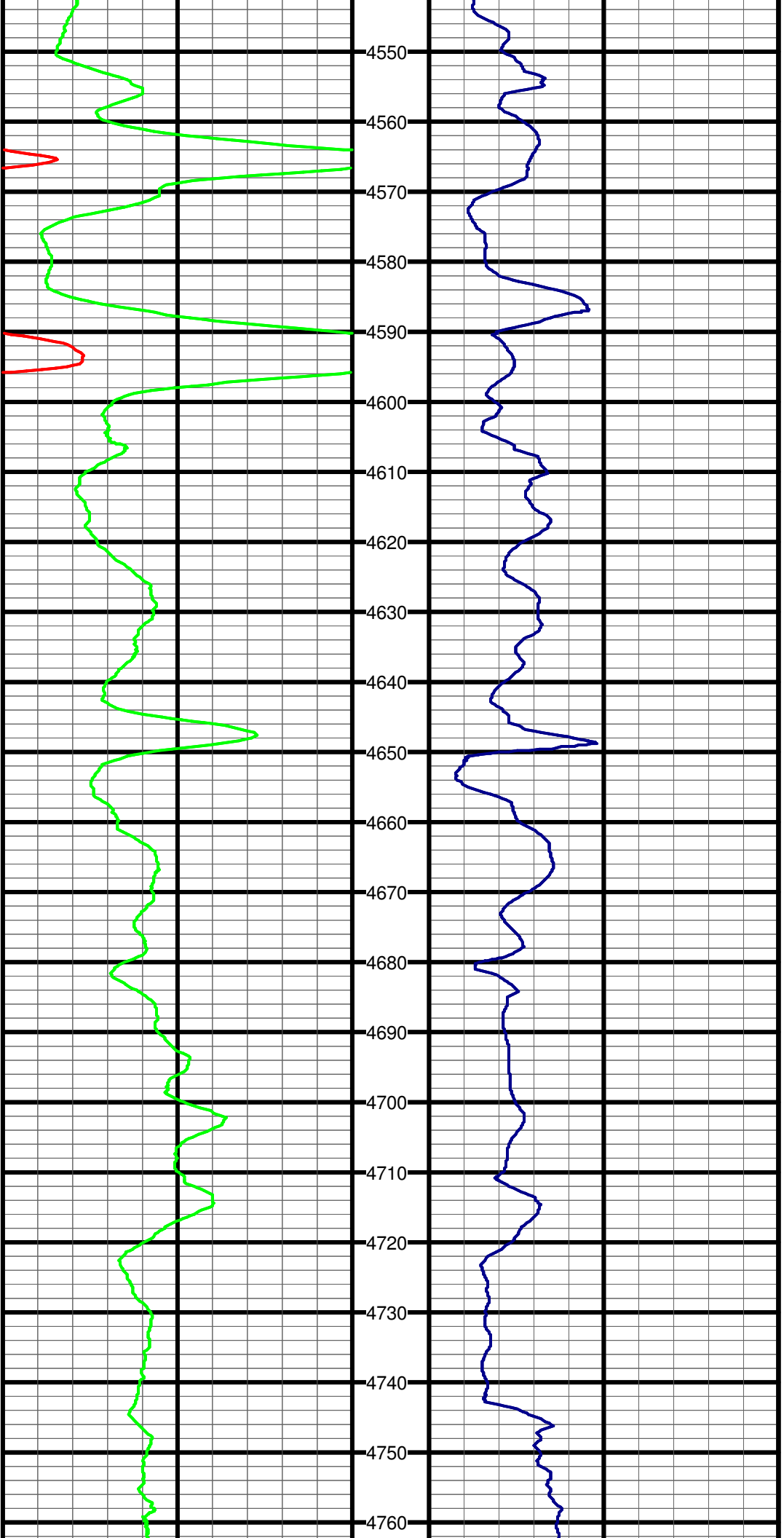
#36 MD:4404.0 TVD:4348.7 I:42.5 A:356.1 VS:197.1

#37 MD:4435.0 TVD:4371.1 I:45.0 A:355.9 VS:218.5

#38 MD:4467.0 TVD:4393.3 I:47.3 A:355.0 VS:241.6

#39 MD:4498.0 TVD:4413.8 I:49.9 A:355.0 VS:264.8

#40 MD:4530.0 TVD:4433.8 I:52.7 A:355.6 VS:289.8



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#44 MD:4654.0 TVD:4500.5 I:60.7 A:355.8 VS:394.1

#45 MD:4685.0 TVD:4515.6 I:61.1 A:355.8 VS:421.2

#46 MD:4716.0 TVD:4530.3 I:62.0 A:356.3 VS:448.5

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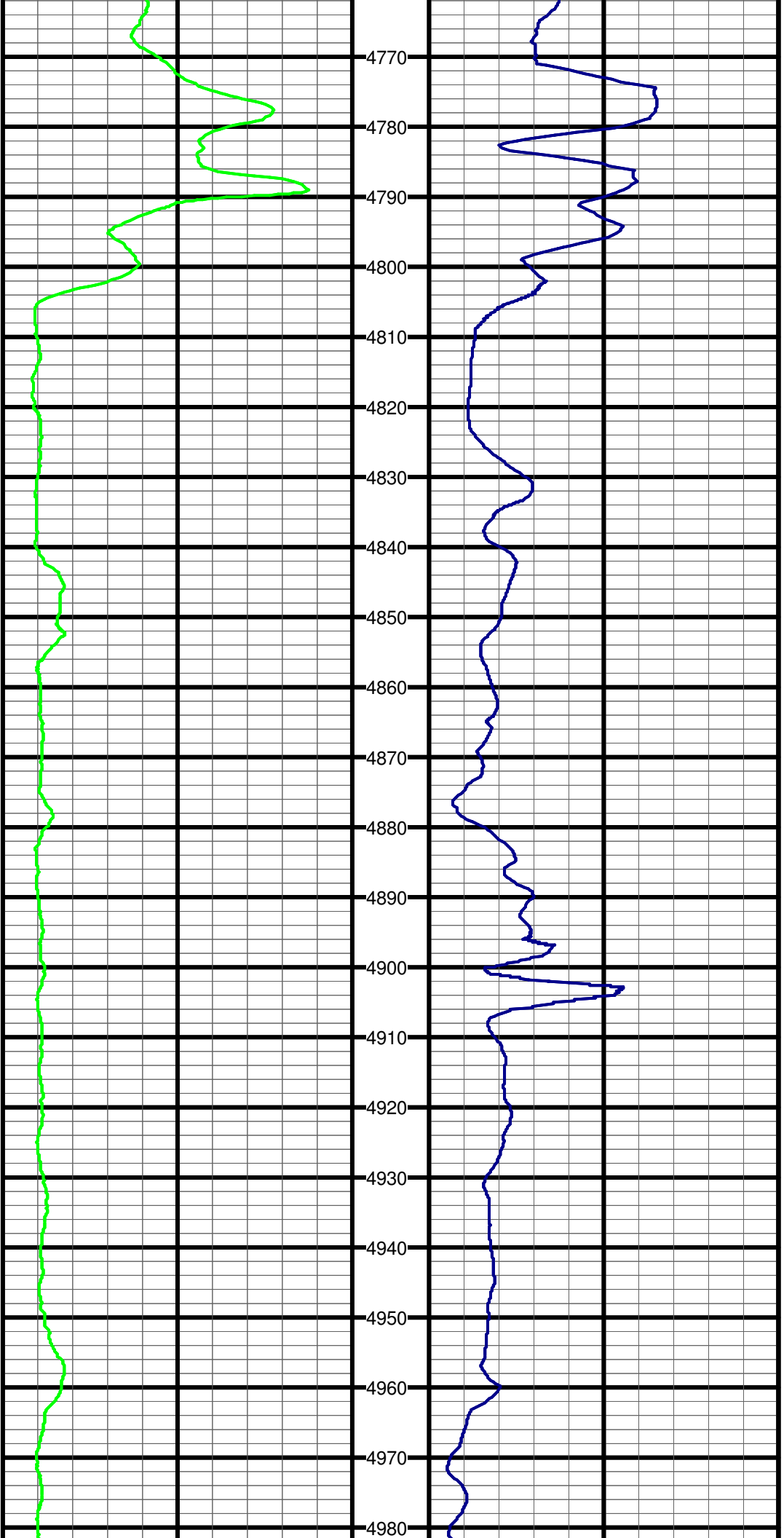

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#50 MD:4840.0 TVD:4586.5 I:64.2 A:356.2 VS:559.0

#51 MD:4871.0 TVD:4599.4 I:66.3 A:356.3 VS:587.2

#52 MD:4902.0 TVD:4611.1 I:69.5 A:356.5 VS:615.9

#53 MD:4932.0 TVD:4620.6 I:73.6 A:356.9 VS:644.4

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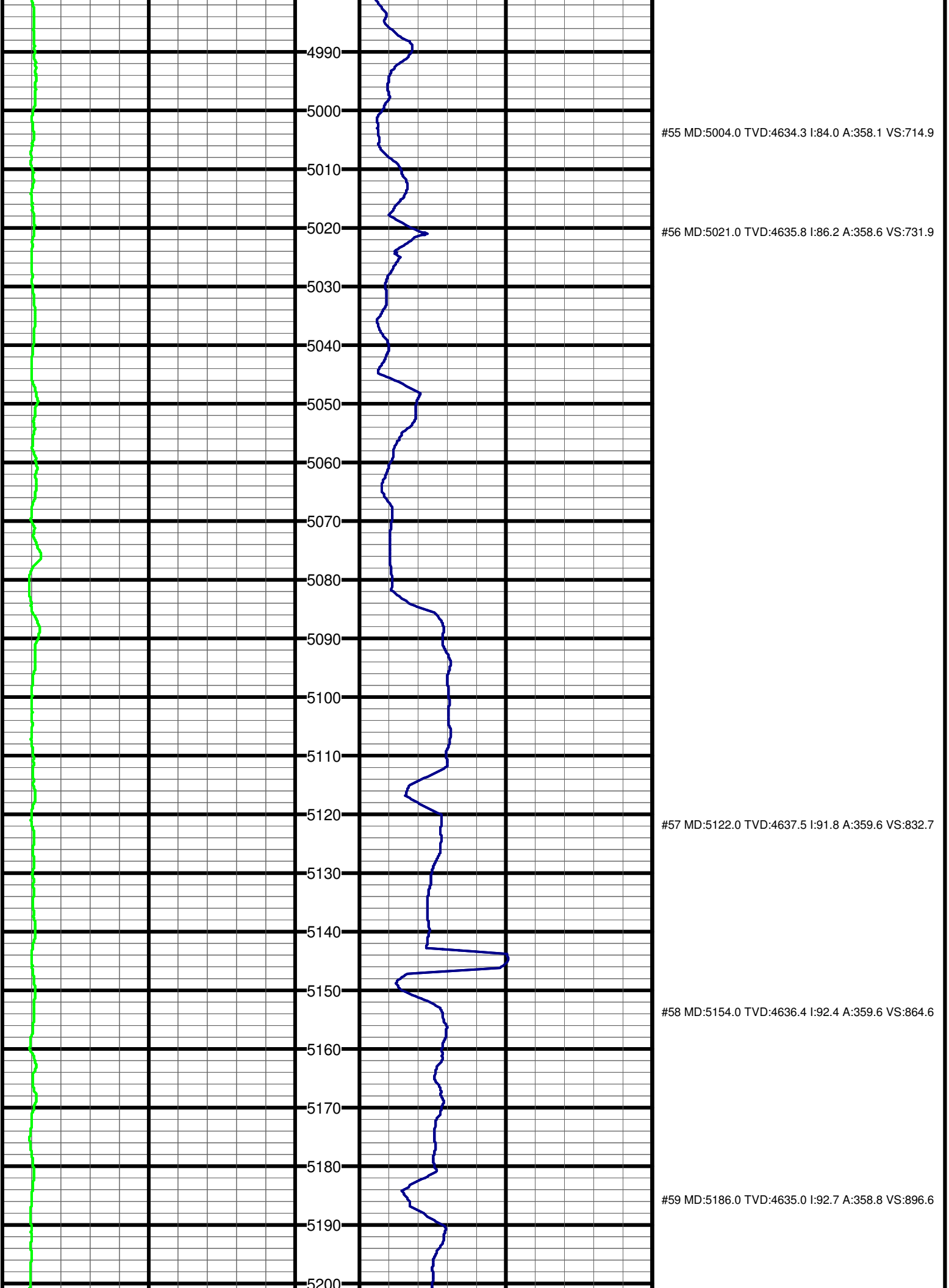
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#56 MD:5021.0 TVD:4635.8 I:86.2 A:358.6 VS:731.9
#57 MD:5122.0 TVD:4637.5 I:91.8 A:359.6 VS:832.7
#58 MD:5154.0 TVD:4636.4 I:92.4 A:359.6 VS:864.6
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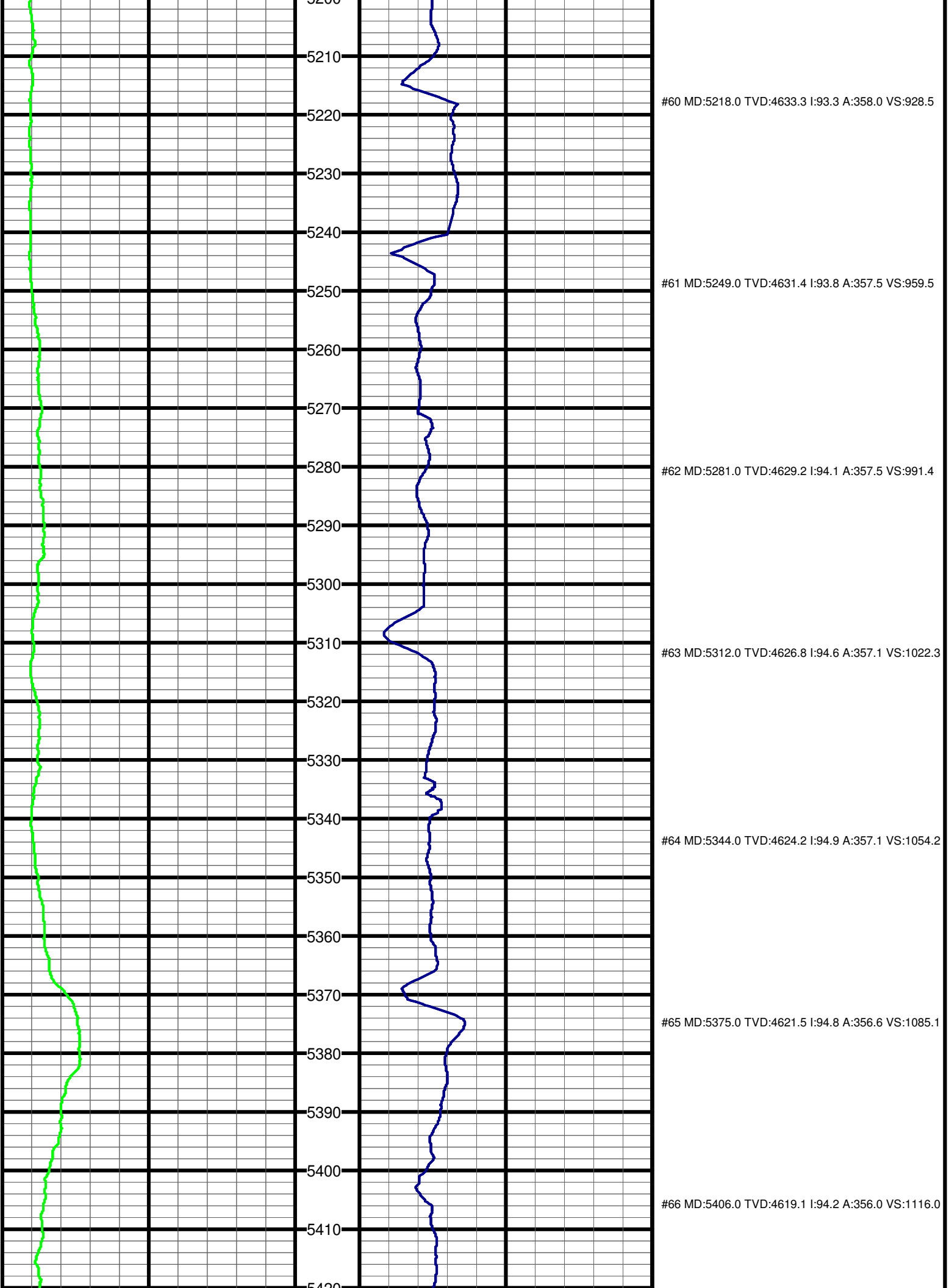
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#62 MD:5281.0 TVD:4629.2 I:94.1 A:357.5 VS:991.4
#63 MD:5312.0 TVD:4626.8 I:94.6 A:357.1 VS:1022.3
#64 MD:5344.0 TVD:4624.2 I:94.9 A:357.1 VS:1054.2
#65 MD:5375.0 TVD:4621.5 I:94.8 A:356.6 VS:1085.1
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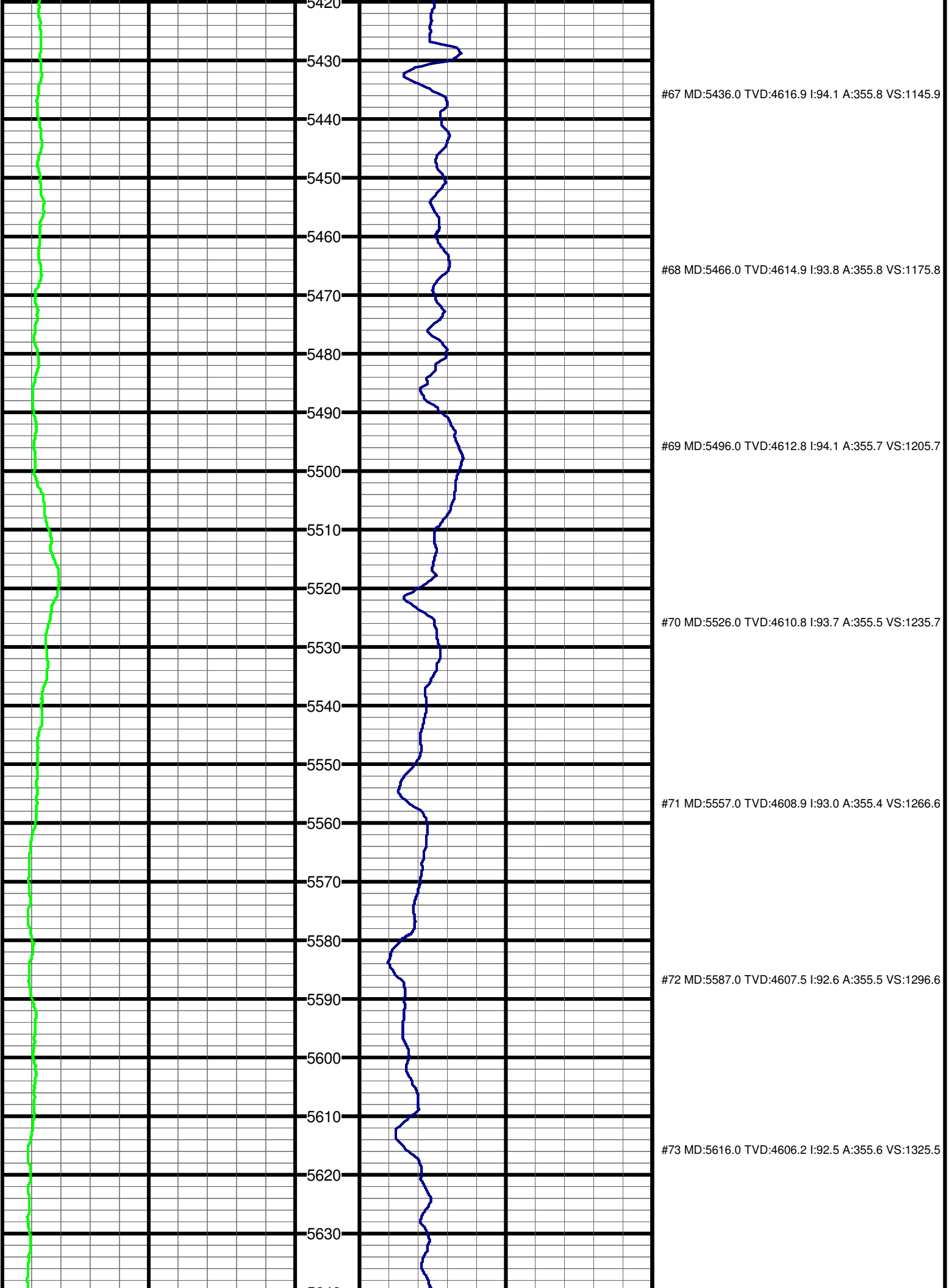
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#70 MD:5526.0 TVD:4610.8 I:93.7 A:355.5 VS:1235.7
#71 MD:5557.0 TVD:4608.9 I:93.0 A:355.4 VS:1266.6
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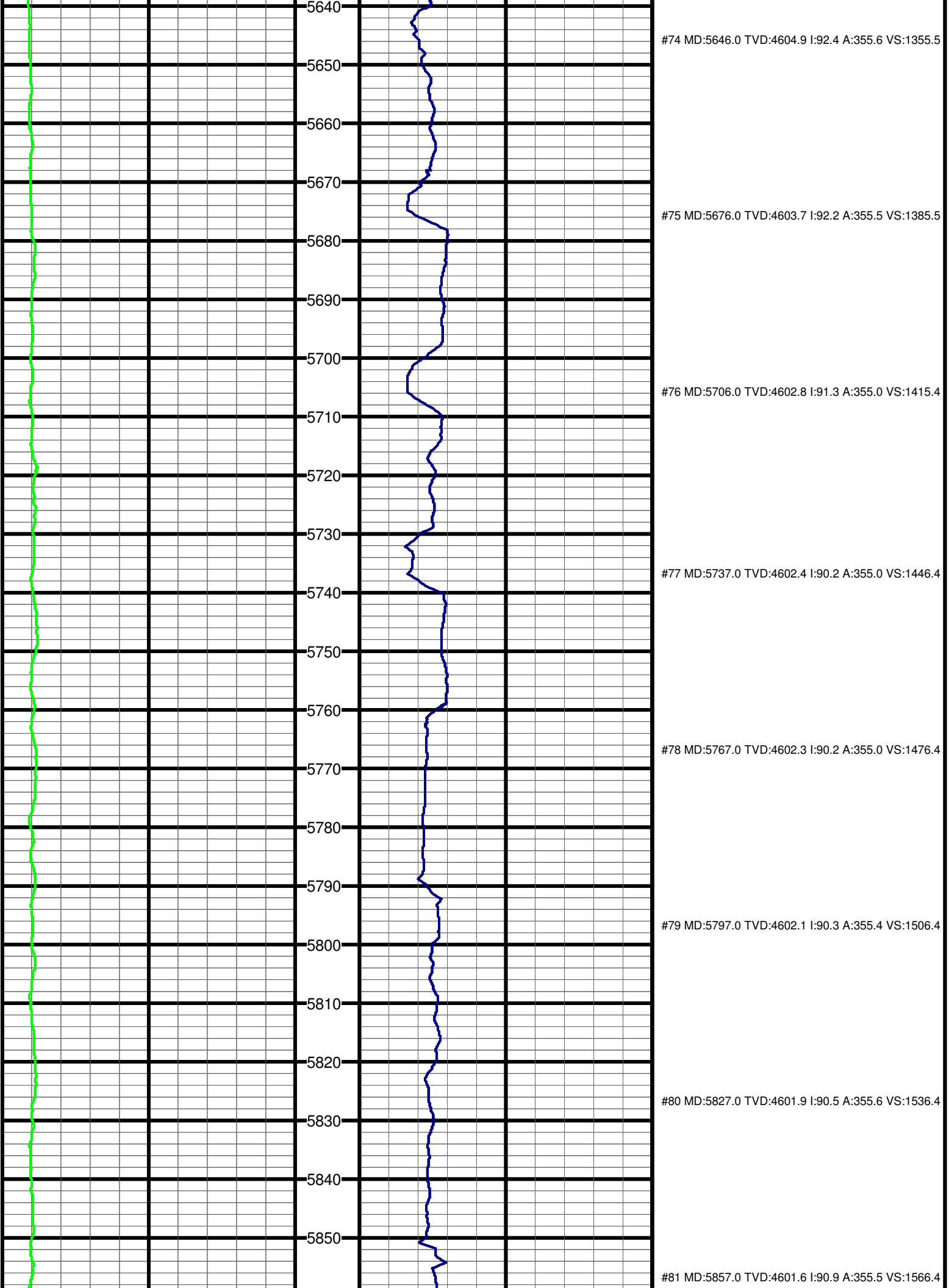
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#76 MD:5706.0 TVD:4602.8 I:91.3 A:355.0 VS:1415.4
#77 MD:5737.0 TVD:4602.4 I:90.2 A:355.0 VS:1446.4
#78 MD:5767.0 TVD:4602.3 I:90.2 A:355.0 VS:1476.4
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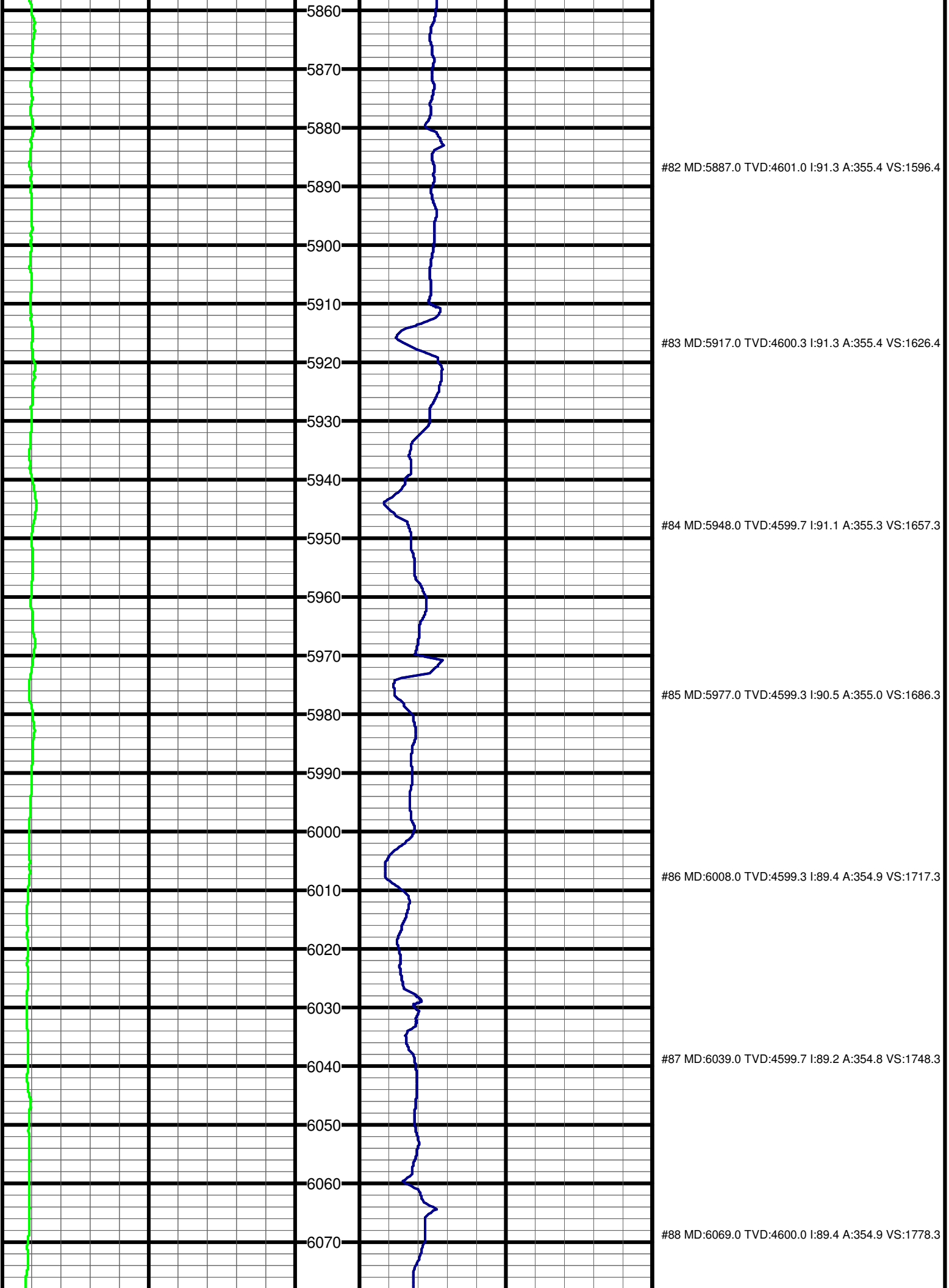
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#84 MD:5948.0 TVD:4599.7 I:91.1 A:355.3 VS:1657.3
#85 MD:5977.0 TVD:4599.3 I:90.5 A:355.0 VS:1686.3
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#87 MD:6039.0 TVD:4599.7 I:89.2 A:354.8 VS:1748.3
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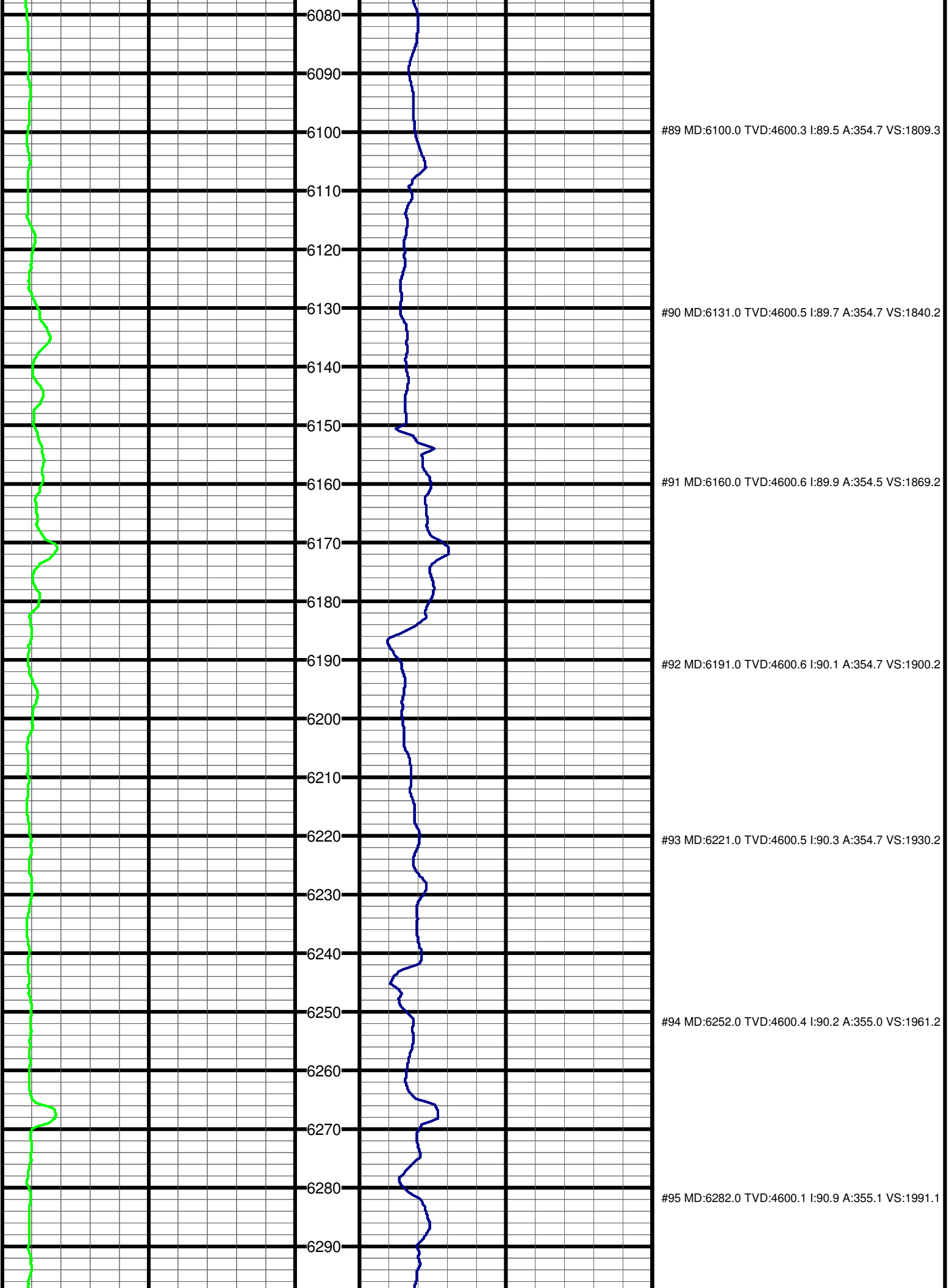
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#93 MD:6221.0 TVD:4600.5 I:90.3 A:354.7 VS:1930.2
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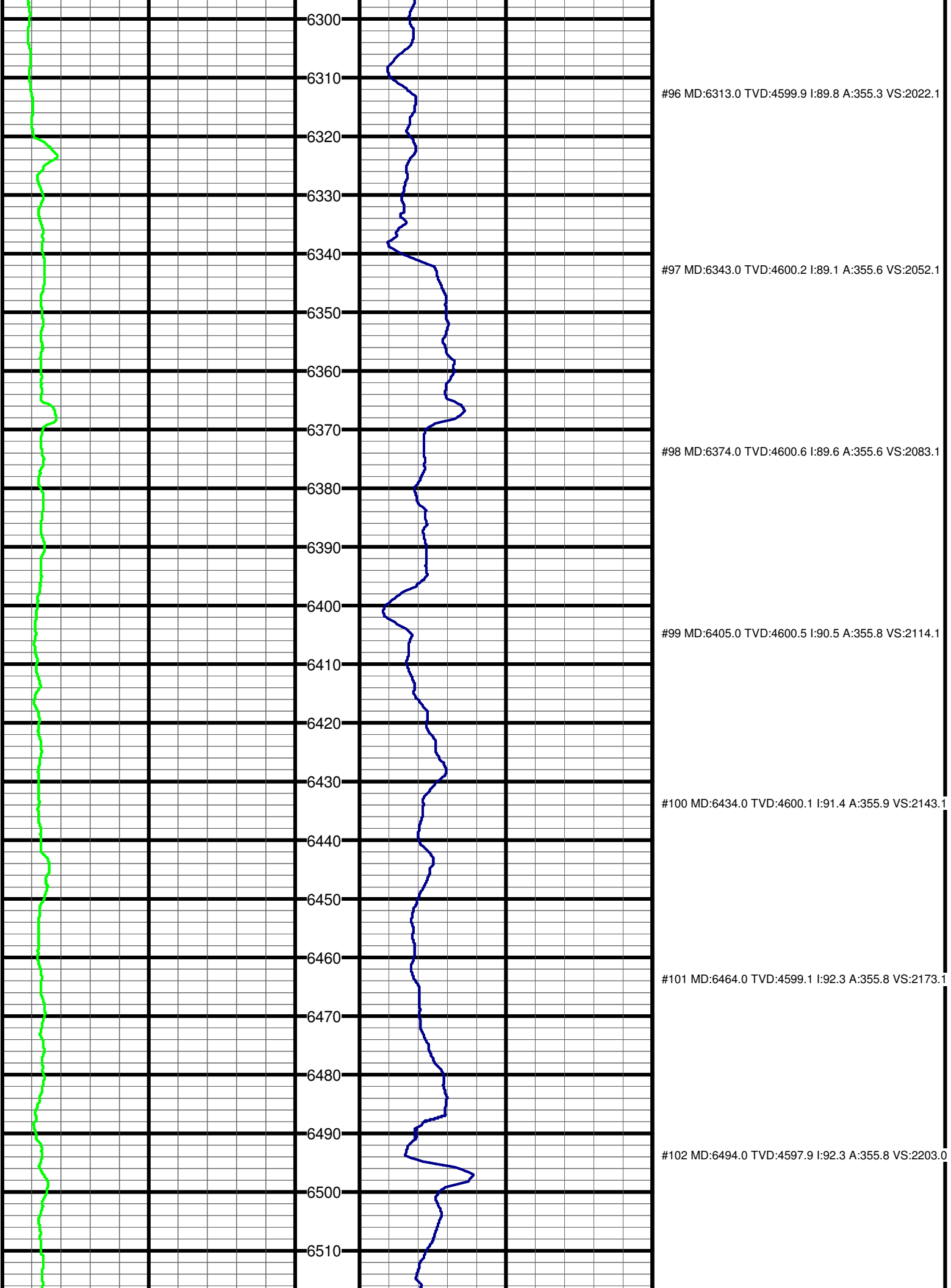
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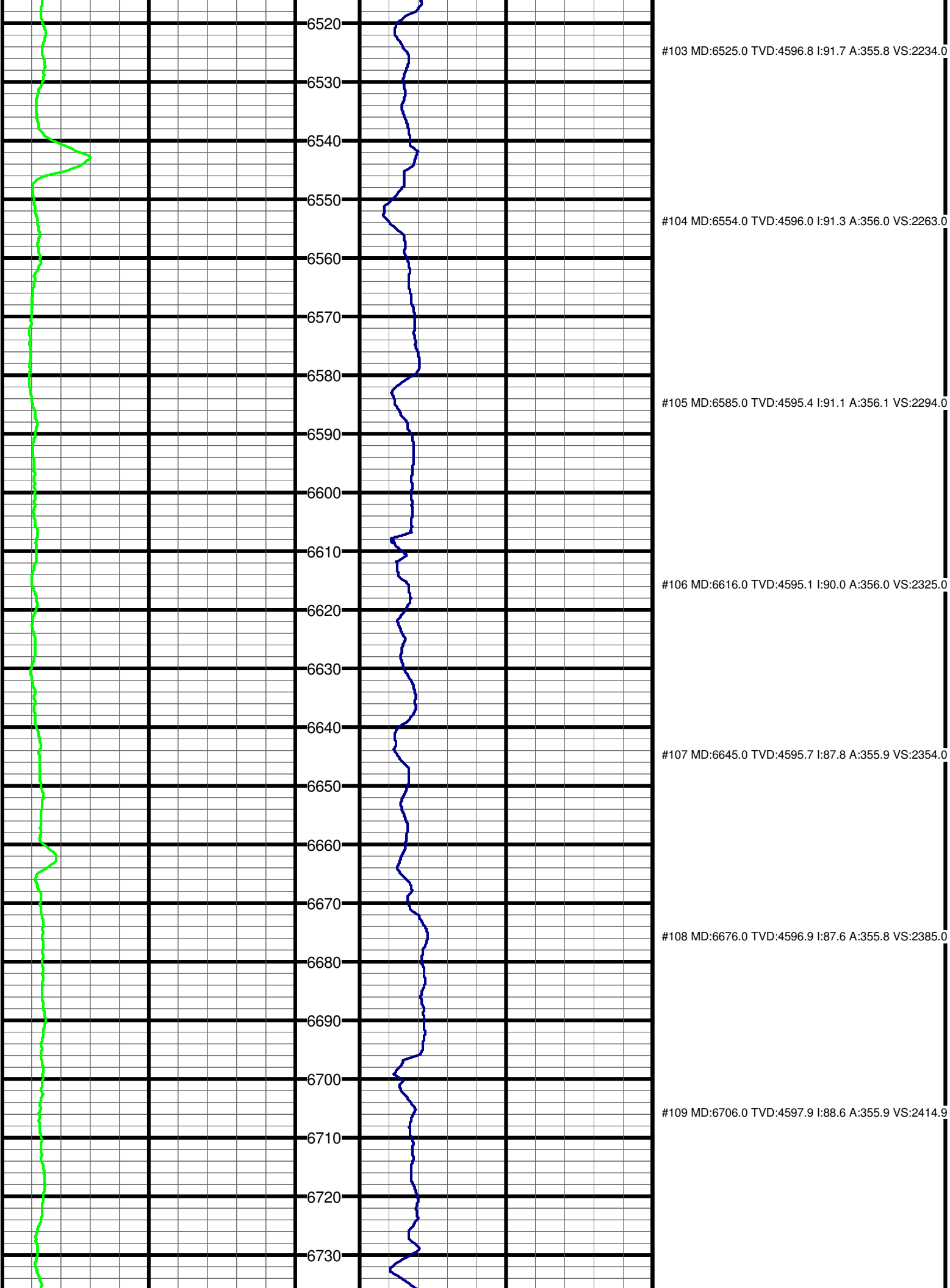
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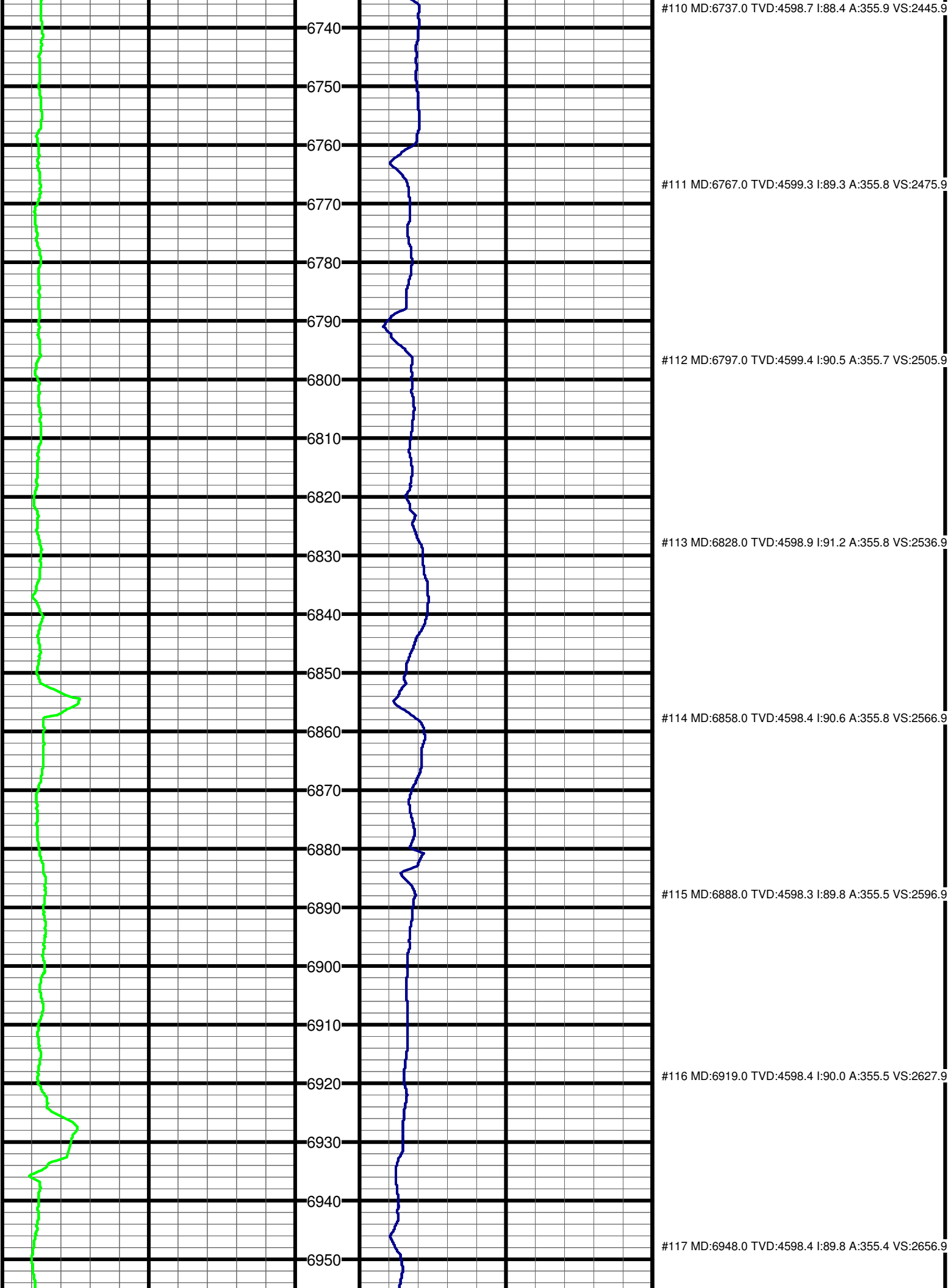
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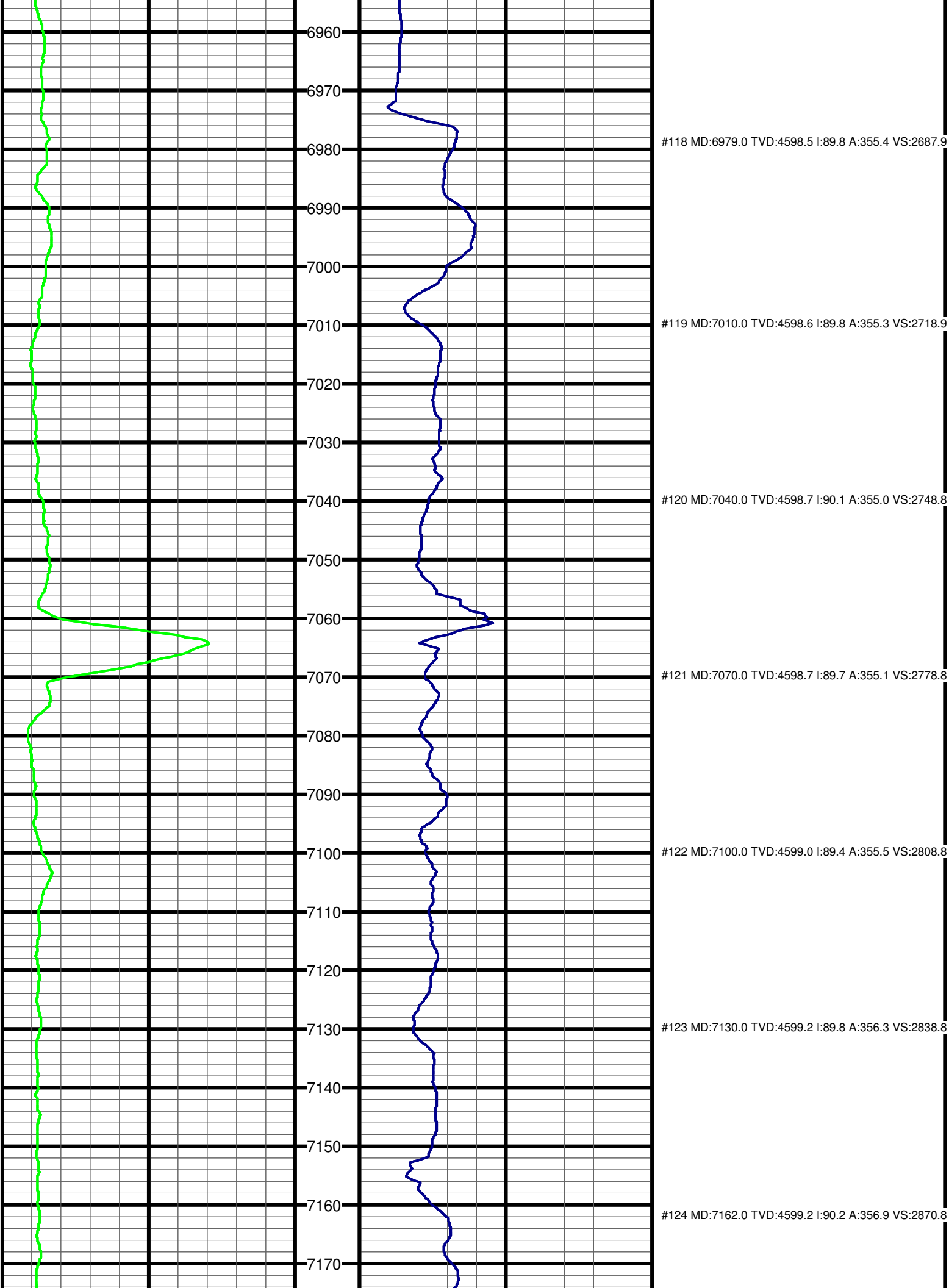
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#123 MD:7130.0 TVD:4599.2 I:89.8 A:356.3 VS:2838.8
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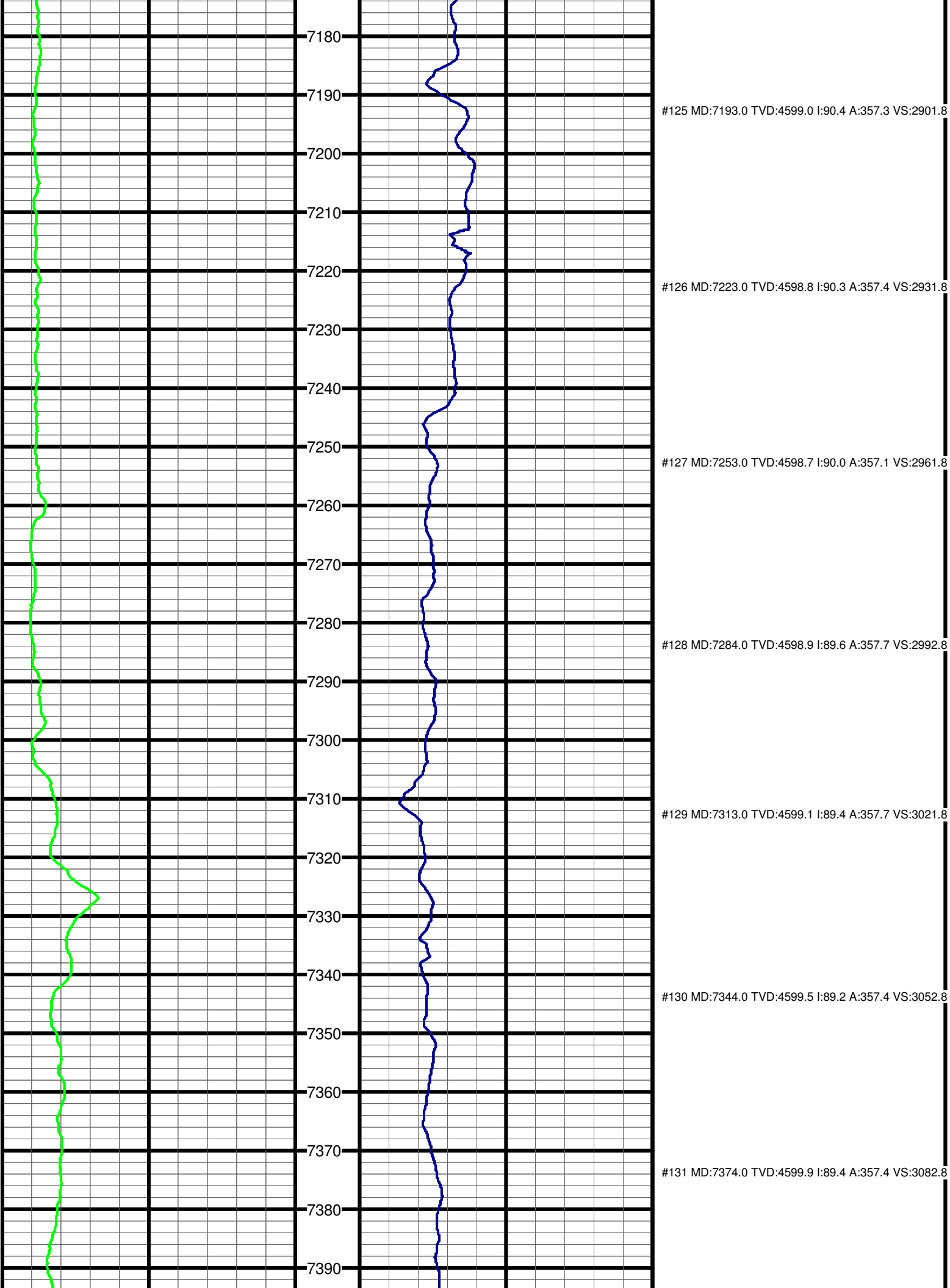
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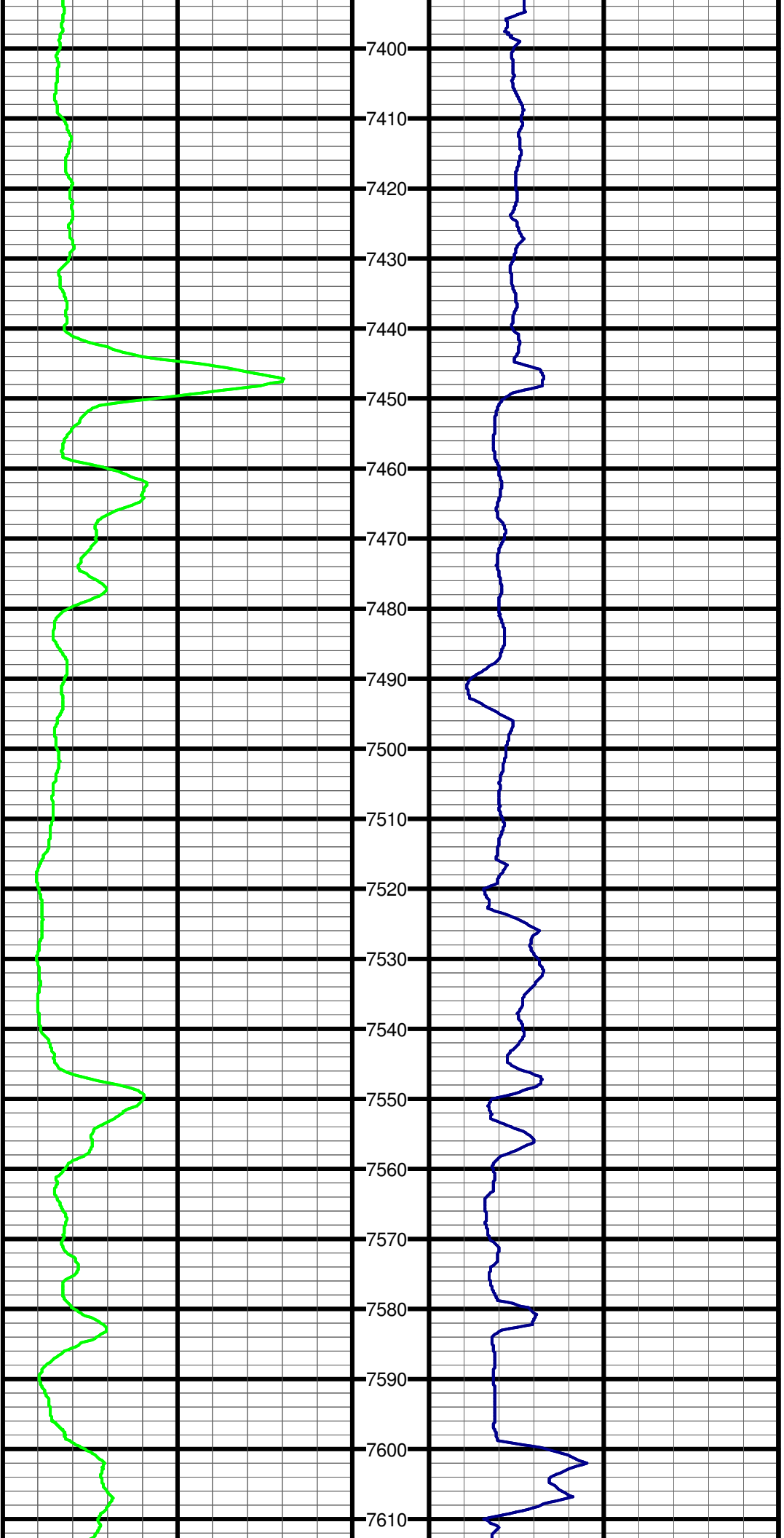
#127 MD:7253.0 TVD:4598.7 I:90.0 A:357.1 VS:2961.8
#128 MD:7284.0 TVD:4598.9 I:89.6 A:357.7 VS:2992.8
#129 MD:7313.0 TVD:4599.1 I:89.4 A:357.7 VS:3021.8
#130 MD:7344.0 TVD:4599.5 I:89.2 A:357.4 VS:3052.8
#131 MD:7374.0 TVD:4599.9 I:89.4 A:357.4 VS:3082.8



#132 MD:7404.0 TVD:4600.1 I:89.7 A:357.3 VS:3112.8

#133 MD:7435.0 TVD:4600.1 I:90.1 A:357.1 VS:3143.8

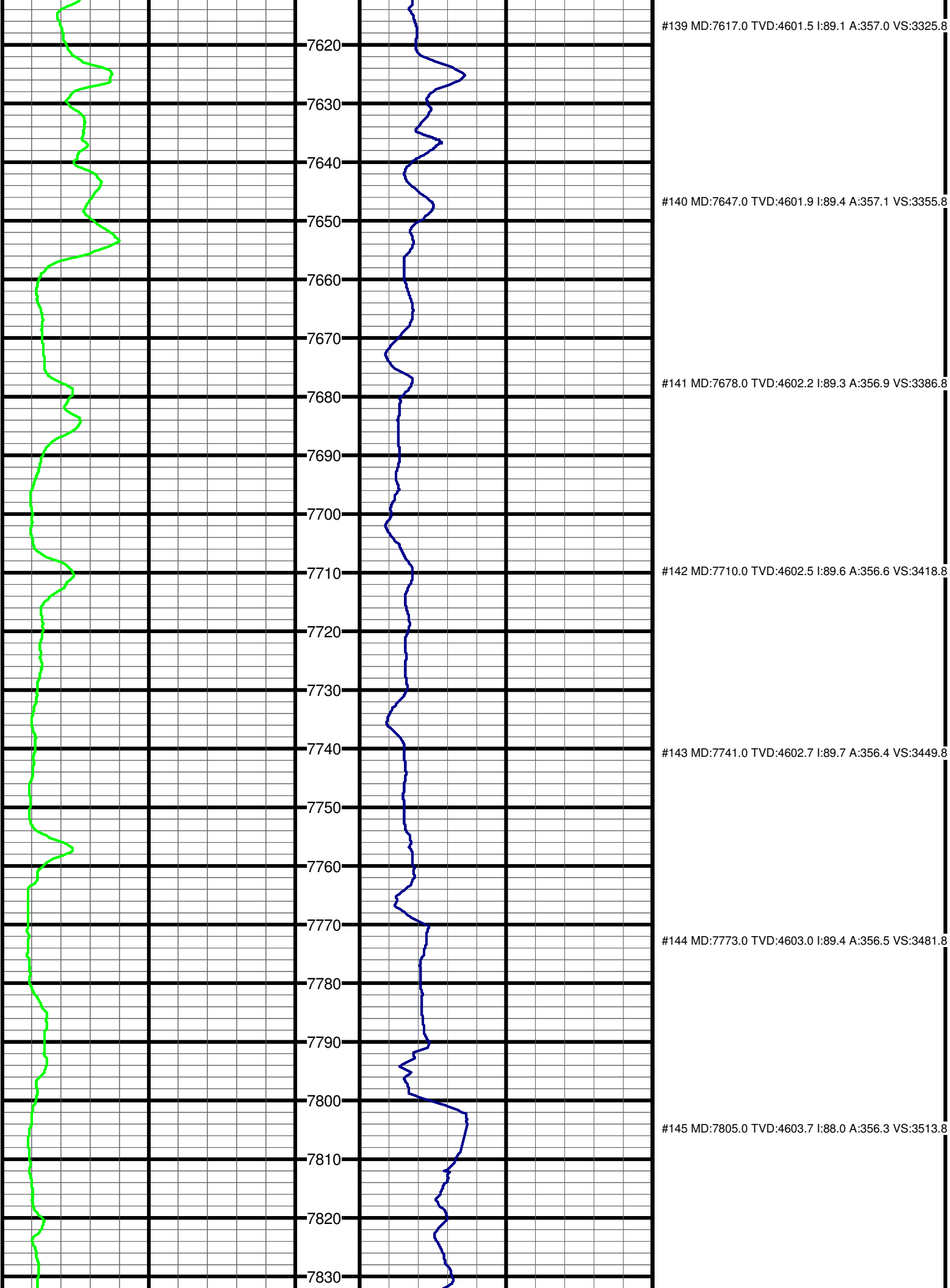
#134 MD:7466.0 TVD:4600.0 I:90.6 A:356.9 VS:3174.8

#135 MD:7495.0 TVD:4599.7 I:90.3 A:356.8 VS:3203.8

#136 MD:7526.0 TVD:4599.8 I:89.3 A:357.3 VS:3234.8

#137 MD:7556.0 TVD:4600.3 I:88.8 A:357.1 VS:3264.8

#138 MD:7587.0 TVD:4601.0 I:88.9 A:357.1 VS:3295.8


#139 MD:7617.0 TVD:4601.5 I:89.1 A:357.0 VS:3325.8
#140 MD:7647.0 TVD:4601.9 I:89.4 A:357.1 VS:3355.8
#141 MD:7678.0 TVD:4602.2 I:89.3 A:356.9 VS:3386.8
#142 MD:7710.0 TVD:4602.5 I:89.6 A:356.6 VS:3418.8
#143 MD:7741.0 TVD:4602.7 I:89.7 A:356.4 VS:3449.8
#144 MD:7773.0 TVD:4603.0 I:89.4 A:356.5 VS:3481.8
#145 MD:7805.0 TVD:4603.7 I:88.0 A:356.3 VS:3513.8
7620
7630
7640
7650
7660
7670
7680
7690
7700
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7720
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7740
7750
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7780
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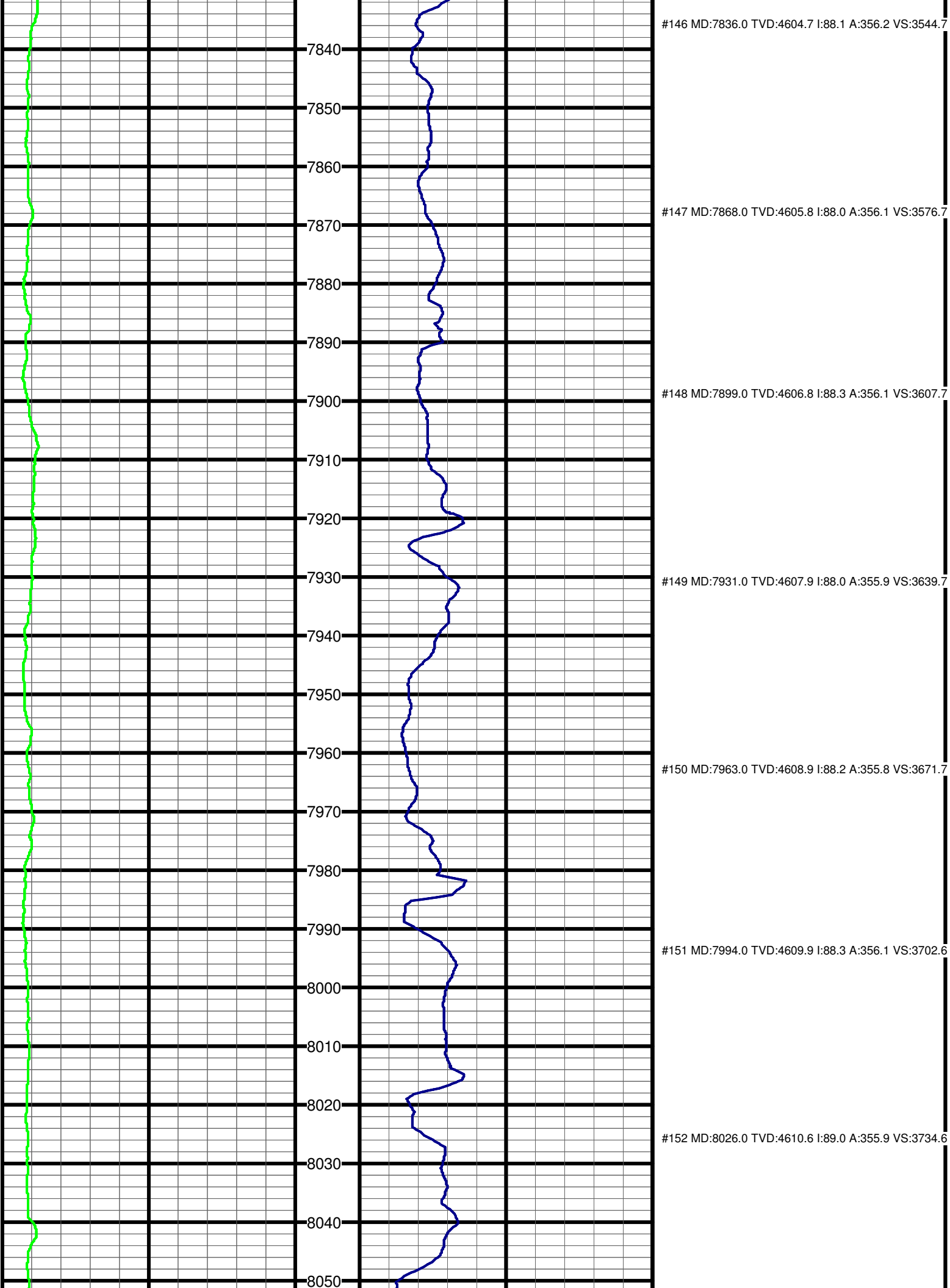
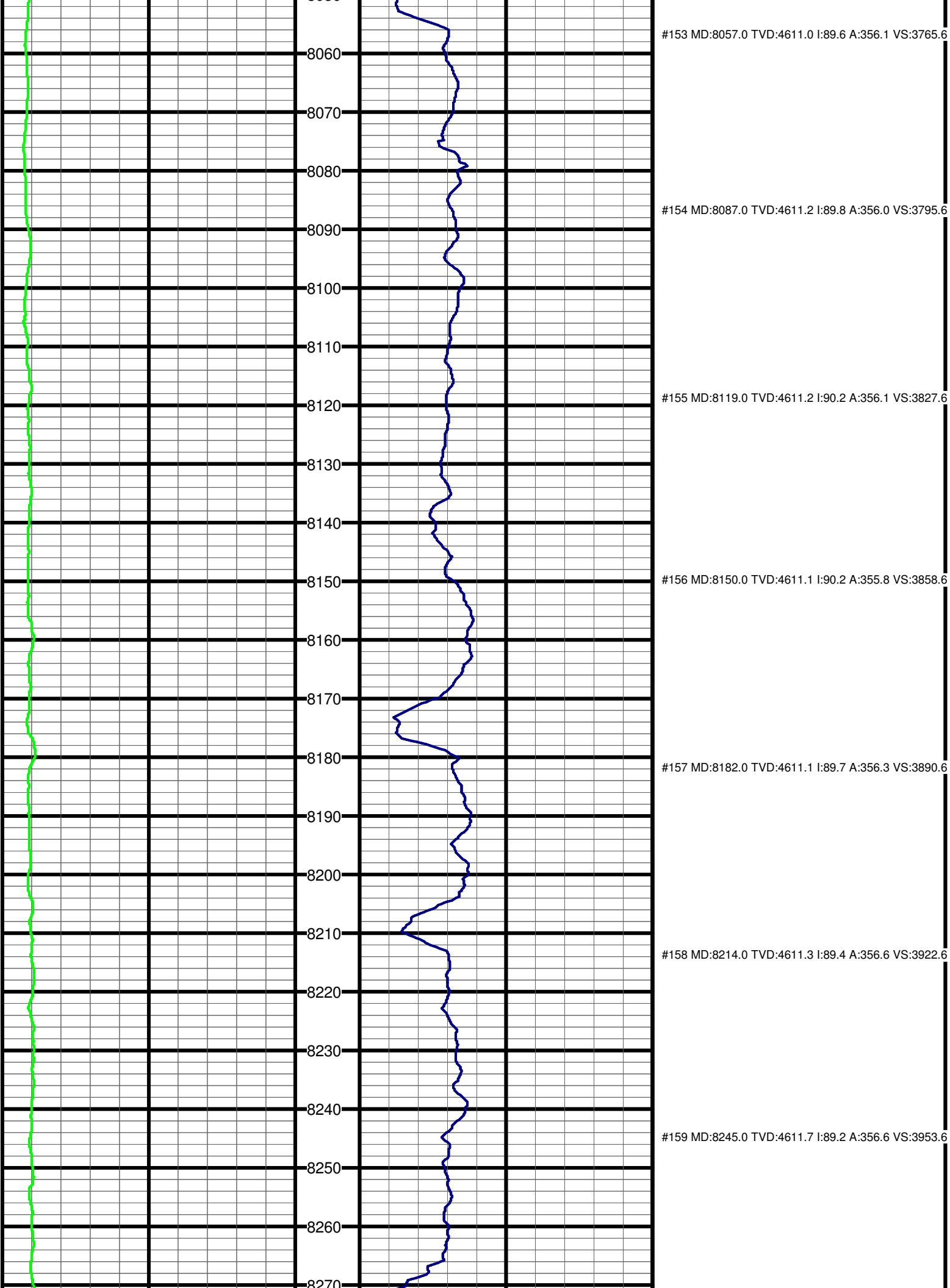
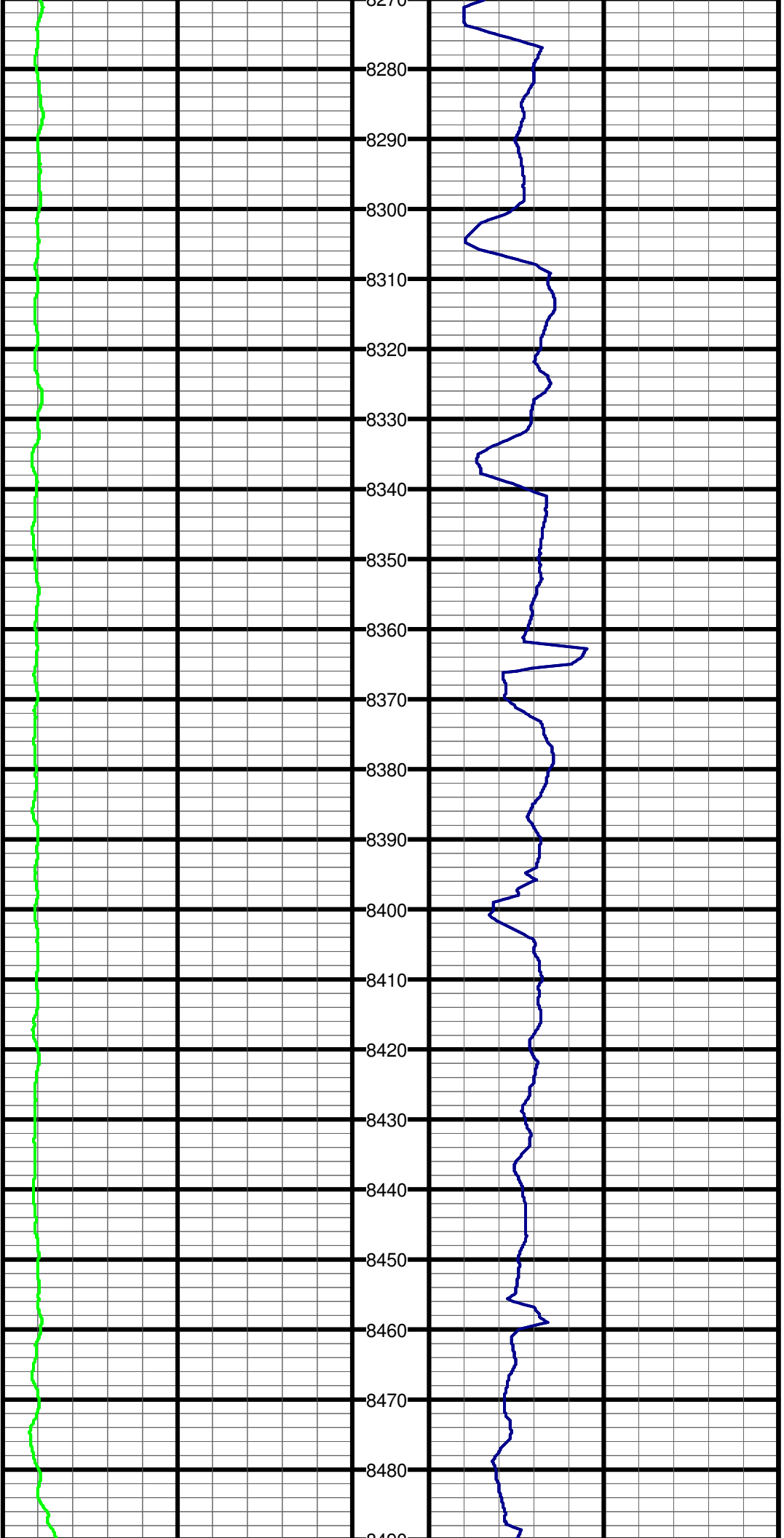

#146 MD:7836.0 TVD:4604.7 I:88.1 A:356.2 VS:3544.7
7840
7850
7860
#147 MD:7868.0 TVD:4605.8 I:88.0 A:356.1 VS:3576.7
7870
7880
7890
#148 MD:7899.0 TVD:4606.8 I:88.3 A:356.1 VS:3607.7
7900
7910
7920
7930
#149 MD:7931.0 TVD:4607.9 I:88.0 A:355.9 VS:3639.7
7940
7950
7960
#150 MD:7963.0 TVD:4608.9 I:88.2 A:355.8 VS:3671.7
7970
7980
7990
#151 MD:7994.0 TVD:4609.9 I:88.3 A:356.1 VS:3702.6
8000
8010
8020
#152 MD:8026.0 TVD:4610.6 I:89.0 A:355.9 VS:3734.6
8030
8040
8050


#153 MD:8057.0 TVD:4611.0 I:89.6 A:356.1 VS:3765.6
8060
8070
8080
#154 MD:8087.0 TVD:4611.2 I:89.8 A:356.0 VS:3795.6
8090
8100
8110
#155 MD:8119.0 TVD:4611.2 I:90.2 A:356.1 VS:3827.6
8120
8130
8140
#156 MD:8150.0 TVD:4611.1 I:90.2 A:355.8 VS:3858.6
8150
8160
8170
#157 MD:8182.0 TVD:4611.1 I:89.7 A:356.3 VS:3890.6
8180
8190
8200
#158 MD:8214.0 TVD:4611.3 I:89.4 A:356.6 VS:3922.6
8210
8220
8230
#159 MD:8245.0 TVD:4611.7 I:89.2 A:356.6 VS:3953.6
8240
8250
8260
8270



#160 MD:8277.0 TVD:4612.2 I:89.0 A:356.9 VS:3985.6

#161 MD:8308.0 TVD:4612.7 I:89.2 A:357.0 VS:4016.6

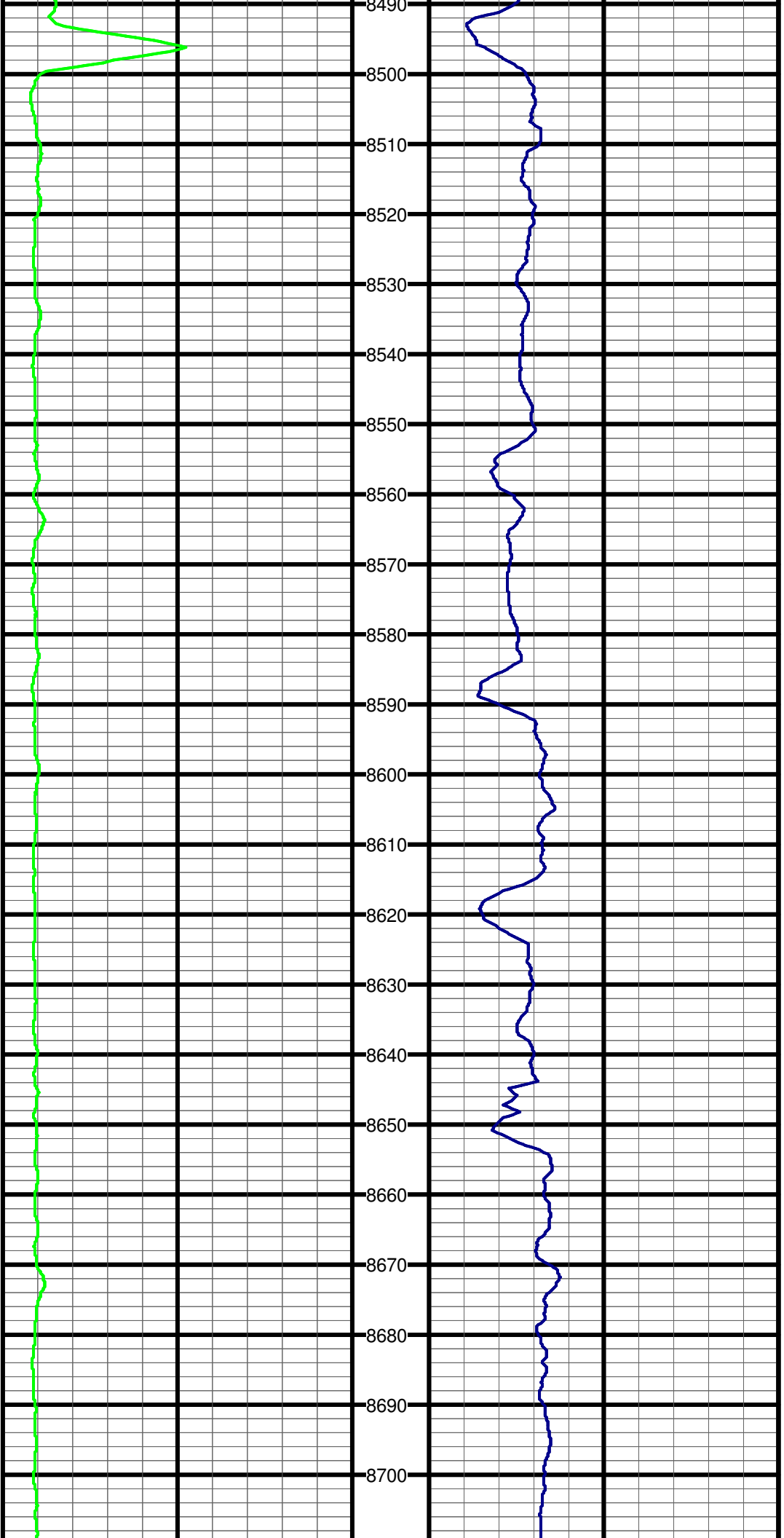
#162 MD:8340.0 TVD:4613.0 I:89.6 A:357.5 VS:4048.6

#163 MD:8371.0 TVD:4613.1 I:90.2 A:358.1 VS:4079.6

#164 MD:8403.0 TVD:4612.8 I:90.8 A:357.7 VS:4111.6

#165 MD:8434.0 TVD:4612.4 I:90.6 A:357.5 VS:4142.6

#166 MD:8465.0 TVD:4612.1 I:90.5 A:357.3 VS:4173.6



#167 MD:8497.0 TVD:4611.9 I:90.5 A:357.5 VS:4205.6

#168 MD:8528.0 TVD:4611.7 I:90.0 A:357.6 VS:4236.6

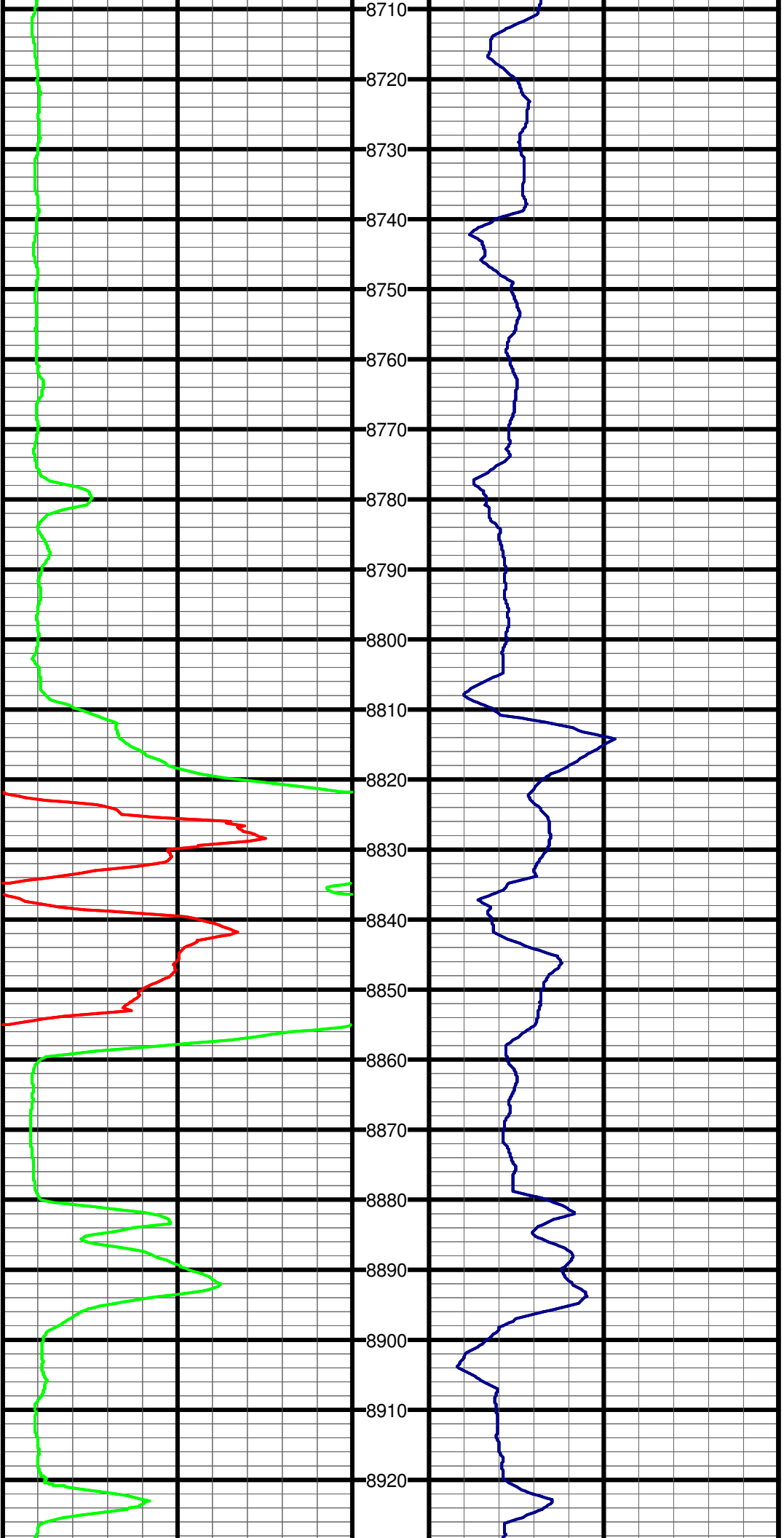
#169 MD:8560.0 TVD:4611.8 I:89.8 A:357.7 VS:4268.6

#170 MD:8592.0 TVD:4611.9 I:89.8 A:358.6 VS:4300.6

#171 MD:8623.0 TVD:4611.9 I:90.2 A:358.8 VS:4331.5

#172 MD:8655.0 TVD:4611.9 I:89.8 A:358.2 VS:4363.5

#173 MD:8686.0 TVD:4612.1 I:89.6 A:358.7 VS:4394.5



#174 MD:8718.0 TVD:4612.4 I:89.3 A:358.6 VS:4426.5

#175 MD:8749.0 TVD:4612.7 I:89.5 A:358.7 VS:4457.5

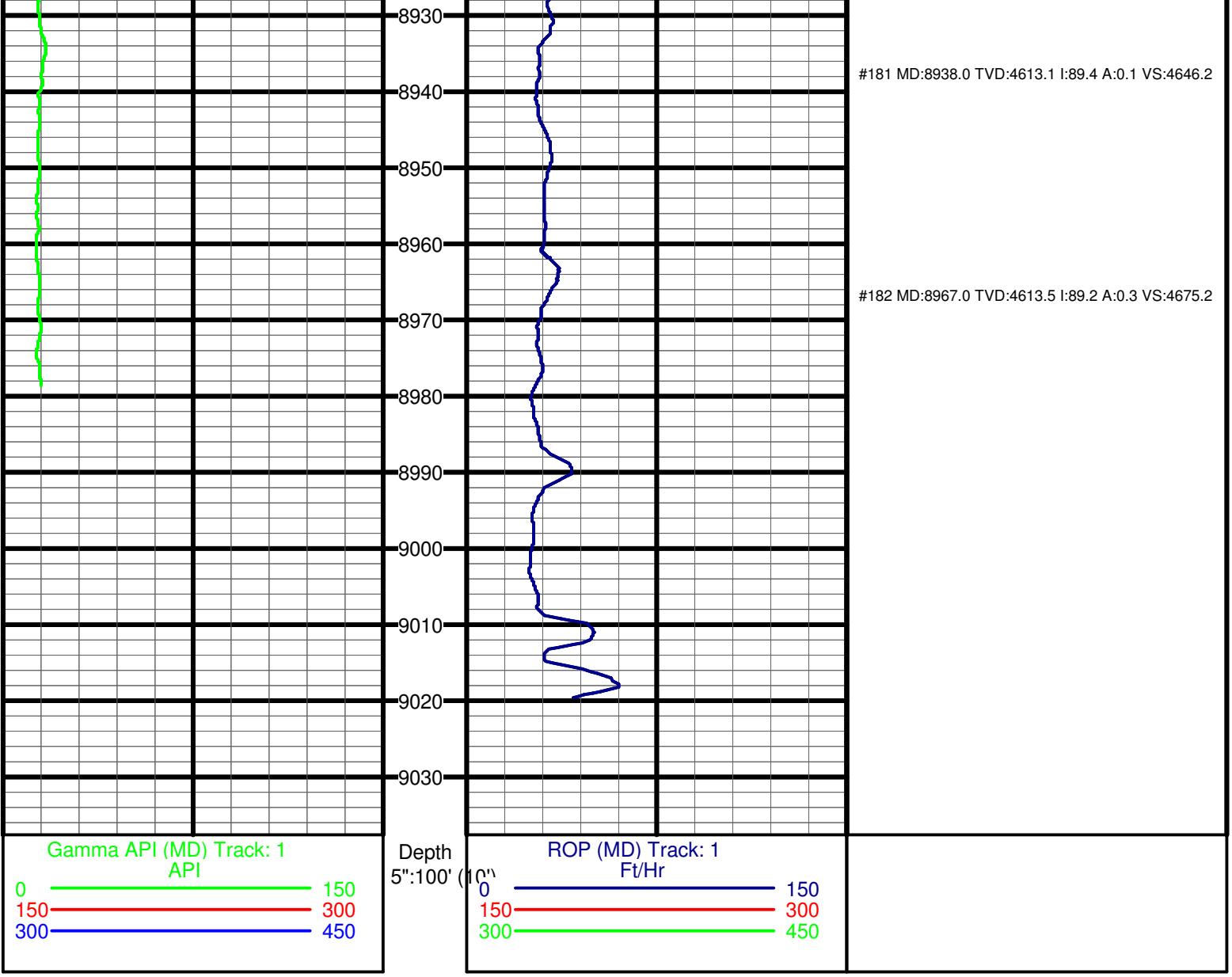
#176 MD:8781.0 TVD:4612.9 I:89.8 A:358.9 VS:4489.4

#177 MD:8813.0 TVD:4612.9 I:90.1 A:359.3 VS:4521.4

#178 MD:8844.0 TVD:4612.8 I:90.4 A:359.4 VS:4552.4

#179 MD:8875.0 TVD:4612.7 I:90.0 A:359.8 VS:4583.3

#180 MD:8907.0 TVD:4612.8 I:89.5 A:359.7 VS:4615.3


8930
8940
8950
8960
8970
8980
8990
9000
9010
9020
9030
#181 MD:8938.0 TVD:4613.1 I:89.4 A:0.1 VS:4646.2
#182 MD:8967.0 TVD:4613.5 I:89.2 A:0.3 VS:4675.2
Gamma API (MD) Track: 1
API
0 150
150 300
300 450
Depth
5":100' (10")
ROP (MD) Track: 1
Ft/Hr
0 150
150 300
300 450