

Company : Santos Ltd.

Well : Mt Kitty 1

Field : Wildcat

Date : 12-Apr-2014

Time : 16:45



GAMMA-RAY

1 : 200

METERS MD

COMPANY : Santos Ltd.
WELL : Mt Kitty 1
FIELD : Wildcat
COUNTY :
STATE : NT
COUNTRY : AUSTRALIA
API WELL No. :

WELL LOCATION

LAT:25°30'22"S LON:132°47'48"E
X: 278555.720m Y: 7177161.523m
SEC: TWP: RANGE:

OTHER SERVICES

DIRECTIONAL
ROP

DEPTH REF. : ROTARY TABLE

ELEVATION : 482.06 m (ROTARY TABLE - GROUND LEVEL)

WATER DEPTH : 476.91 m (GROUND LEVEL - MEAN SEA LEVEL)

BOREHOLE RECORD

DEVIATION RECORD

HOLE SIZE in	FROM m	TO m	INCLINATION deg	FROM m	TO m
12 1/4	0	788	00-06	0	2295
8 1/2	788	2295			
CASING RECORD					
CASING SIZE in	FROM m	TO m			
9 5/8	0	785			

DRILLING CO.: ENSIGN

RIG : 918

LWD UNIT No.: 001 DISTRICT : ROMA

SPUD DATE : 13-SEP-13

LWD START DATE : 02-APR-14 DEPTH : 784 m

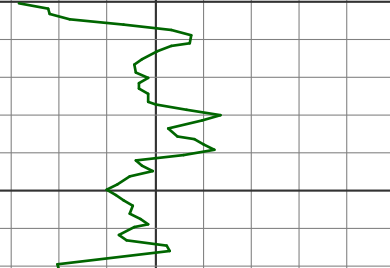
LWD END DATE : 12-APR-14 DEPTH : 2295 m

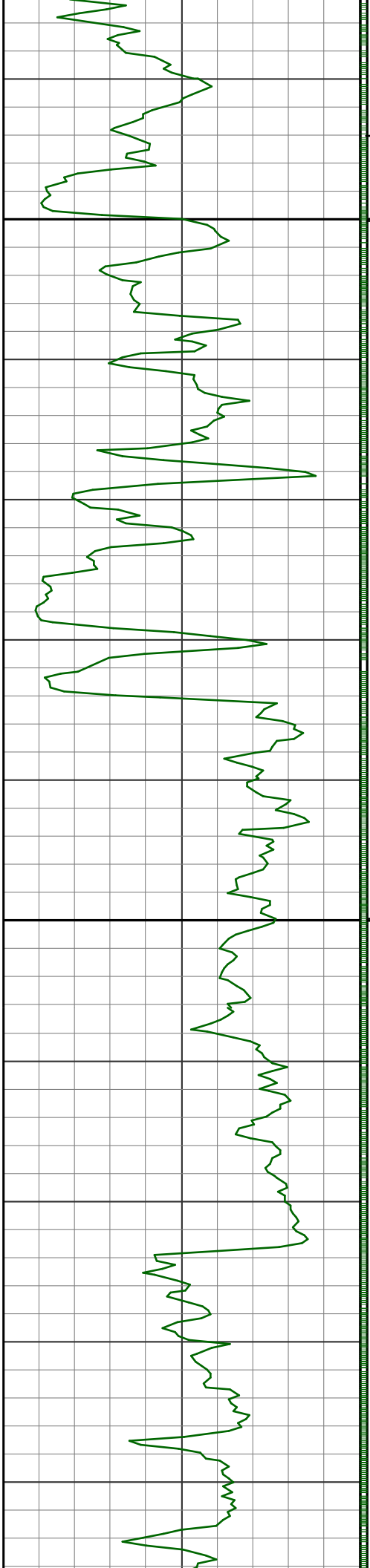
TOTAL DEPTH : 2295 m

RUN DATA

RUN NUMBER	1	2	3			
START DATE	02-APR-14	05-APR-14	09-APR-14			
START TIME	18:15	15:00	20:00			
END DATE	05-APR-14	08-APR-14	12-APR-14			
END TIME	14:00	02:58	23:45			
DEPTH IN m	797	1326	1964			
DEPTH OUT m	1326	1964	2295			
LOG TOP m	785	1314	1952			
LOG BOTTOM m	1314	1952	2258			
HOLE SIZE in	8 1/2	8 1/2	8 1/2			
MUD DATA @ m	850	1450	2000			
MUD TYPE	AIR/FOAM	AIR/FOAM	AIR/FOAM			
DENSITY lb/gal	0.01	0.01	0.01			
VISCOSITY s/qt						
pH						
FLUID LOSS cm3/30						
SALINITY ppm						
Rm ohmm @ deg C	@	@	@			
Rmf ohmm @ deg C	@	@	@			

REMARKS
*** FIELD PRINT ONLY ***
SANTOS LTD.
PATHFINDER - A SCHLUMBERGER COMPANY: JOB NO. 14AUS0039
ALL DATA IS REALTIME UNLESS STATED OTHERWISE.
ALL REFERENCE TO LOG TOP, LOG BOTTOM OR LOGGING TOOL DEPTH REFER TO GAMMA-RAY SENSOR UNLESS STATED OTHERWISE. SENSOR OFFSETS FOR THE LOGGING TOOLS ARE SHOWN IN THE BHA REPORT ON THE TRAILER.
ALL ANNOTATIONS IN THE DEPTH TRACK ARE REFERENCED TO THE BIT DEPTH.
RUN #1: 6 3/4" XEM / GAMMA-RAY LOGGING RUN.
RUN #2: 6 3/4" XEM / GAMMA-RAY LOGGING RUN.
RUN #3: 6 3/4" XEM / GAMMA-RAY LOGGING RUN.
REMARK #1: GAMMA-RAY HAS NOT BEEN EVIROMENTALLY CORRECTED FOR BOREHOLE.
REMARK #2: GAMMA-RAY UNAVAILABLE FROM 1830-1900m MD (1826-1896m TVD)
REMARK #3: GAMMA-RAY UNAVAILABLE FROM 2144-2149m MD (2139-2234m TVD)
REMARK #4: GAMMA-RAY UNAVAILABLE FROM 2258-2279m MD (2253-2274m TVD)
NOTICE - All interpretations are opinions based on inferences from electrical or other measurements and we do not guarantee the accuracy or correctness of any interpretations. We shall not, except in the case of gross or willful negligence on our part, be liable or responsible for loss, costs, damages or expenses incurred or sustained by anyone as a result of any interpretations made by one of our officers, agents or employees. These interpretations are also subject to our General Terms and Conditions as set out in our current Price Schedule.
PATHFINDER - A Schlumberger Company
Version No : RX5 V6.05 Release 20Sep2013
Plot Time : 12-Apr-2014 16:44

0	GRC_X AAPI	200	DEPTH	150	Time Based ROP m/hr	0	COMMENTS
avg = 15 cm			MD m	avg = 30 cm		inc azi	
SLIDE (BIT)			1m = 200m			# TVD	
			SHOES				
			9 5/8"				
			CASING				
			SHOE				
							



800

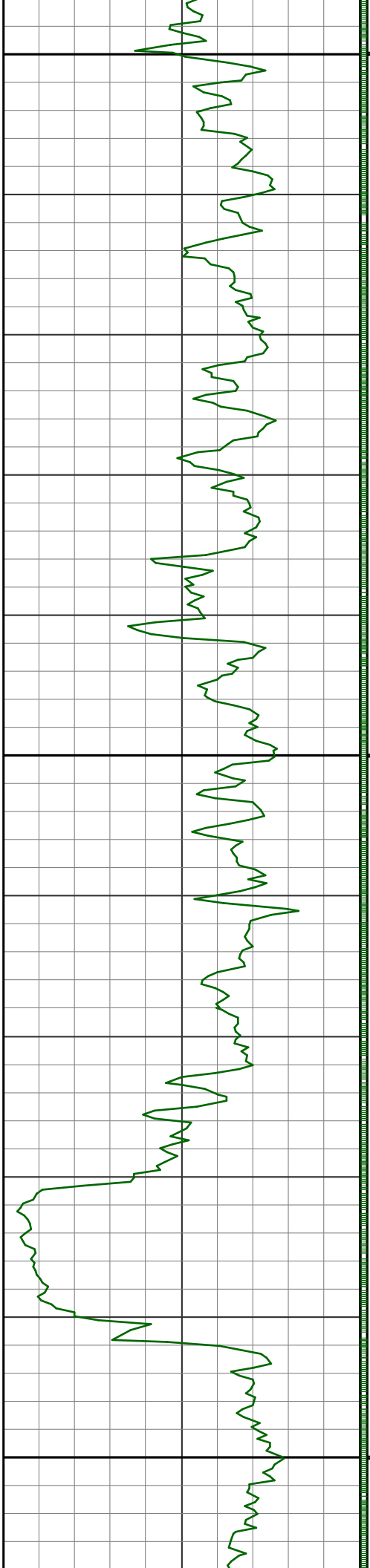
R
U
N

1

825

3.3 278.4
S 1 794.6

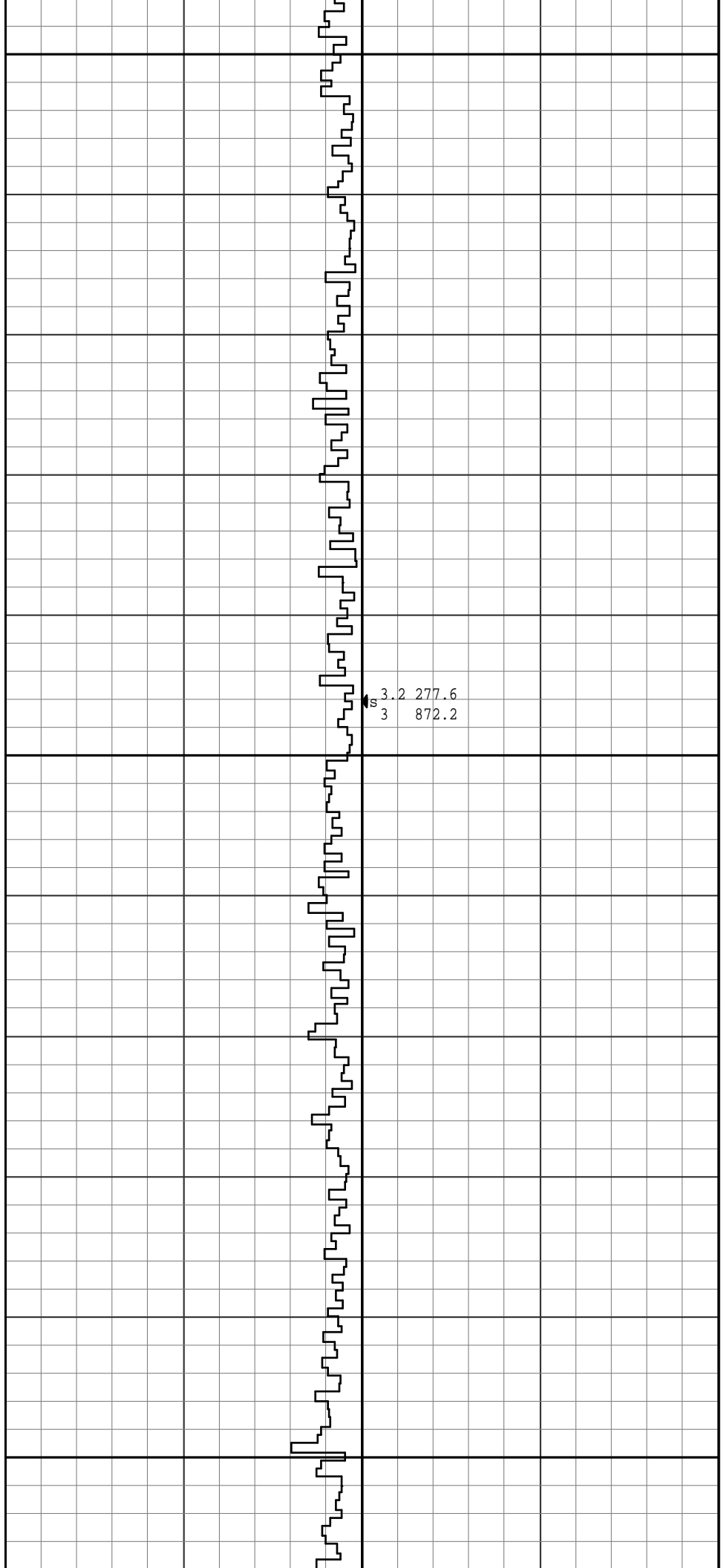
3.3 275.8
S 2 833.4



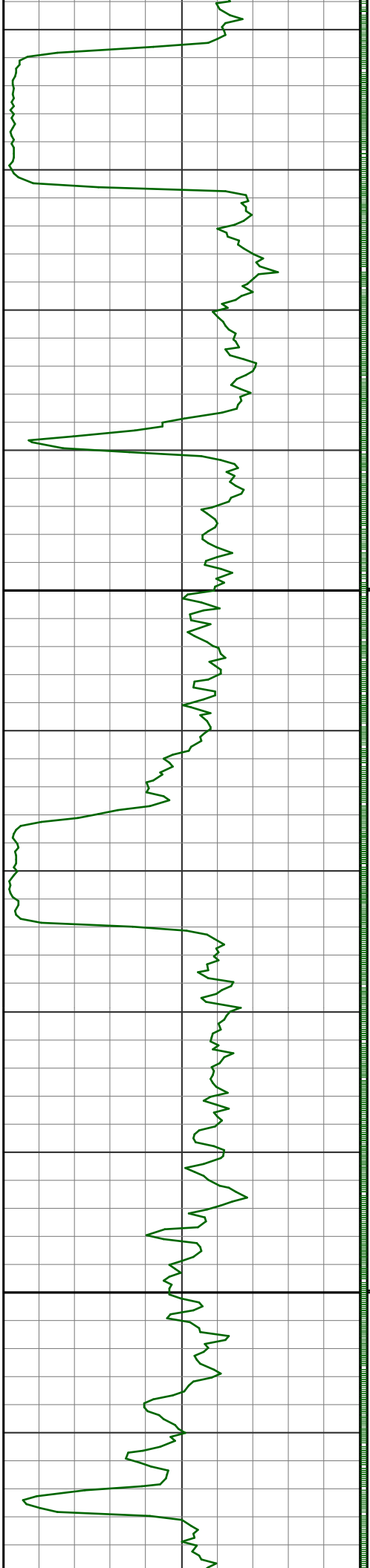
850

875

900

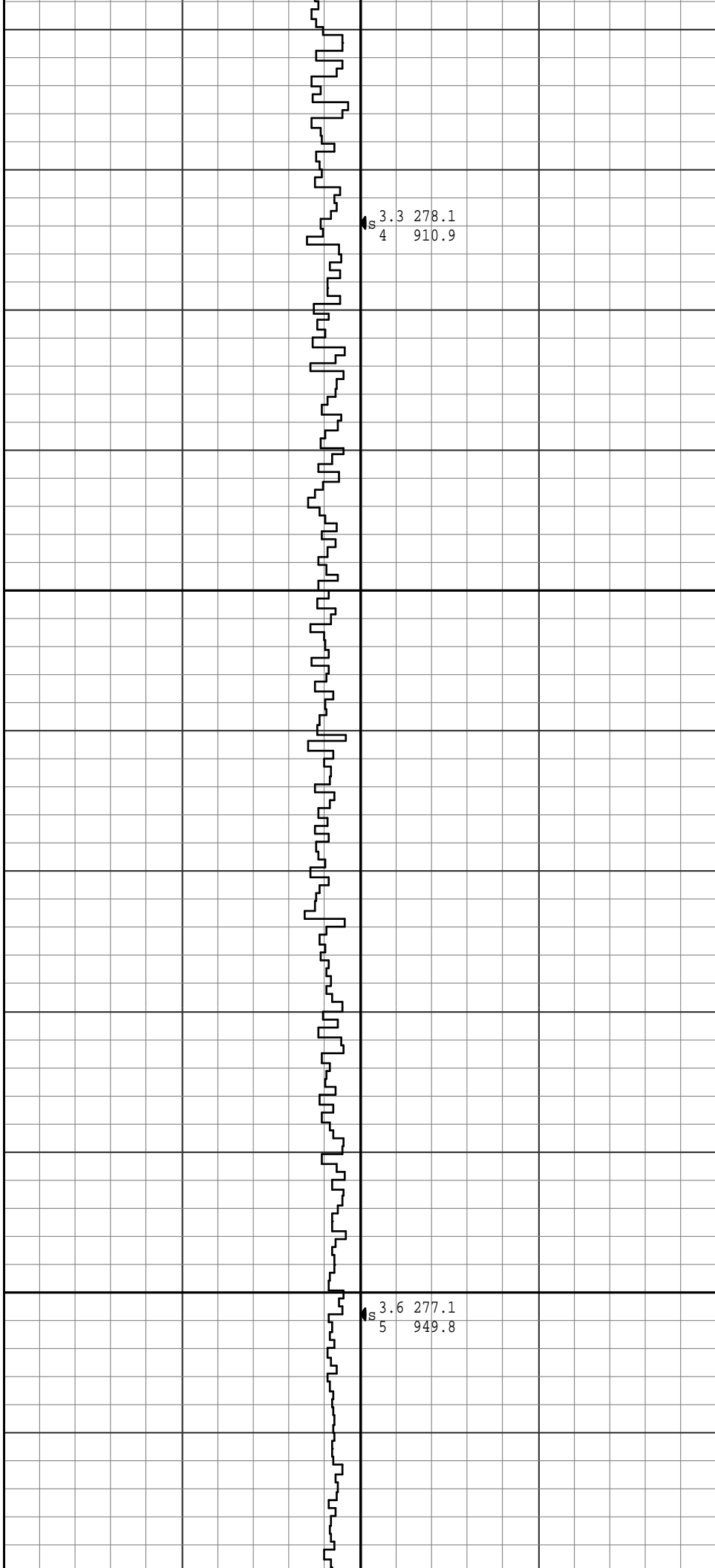


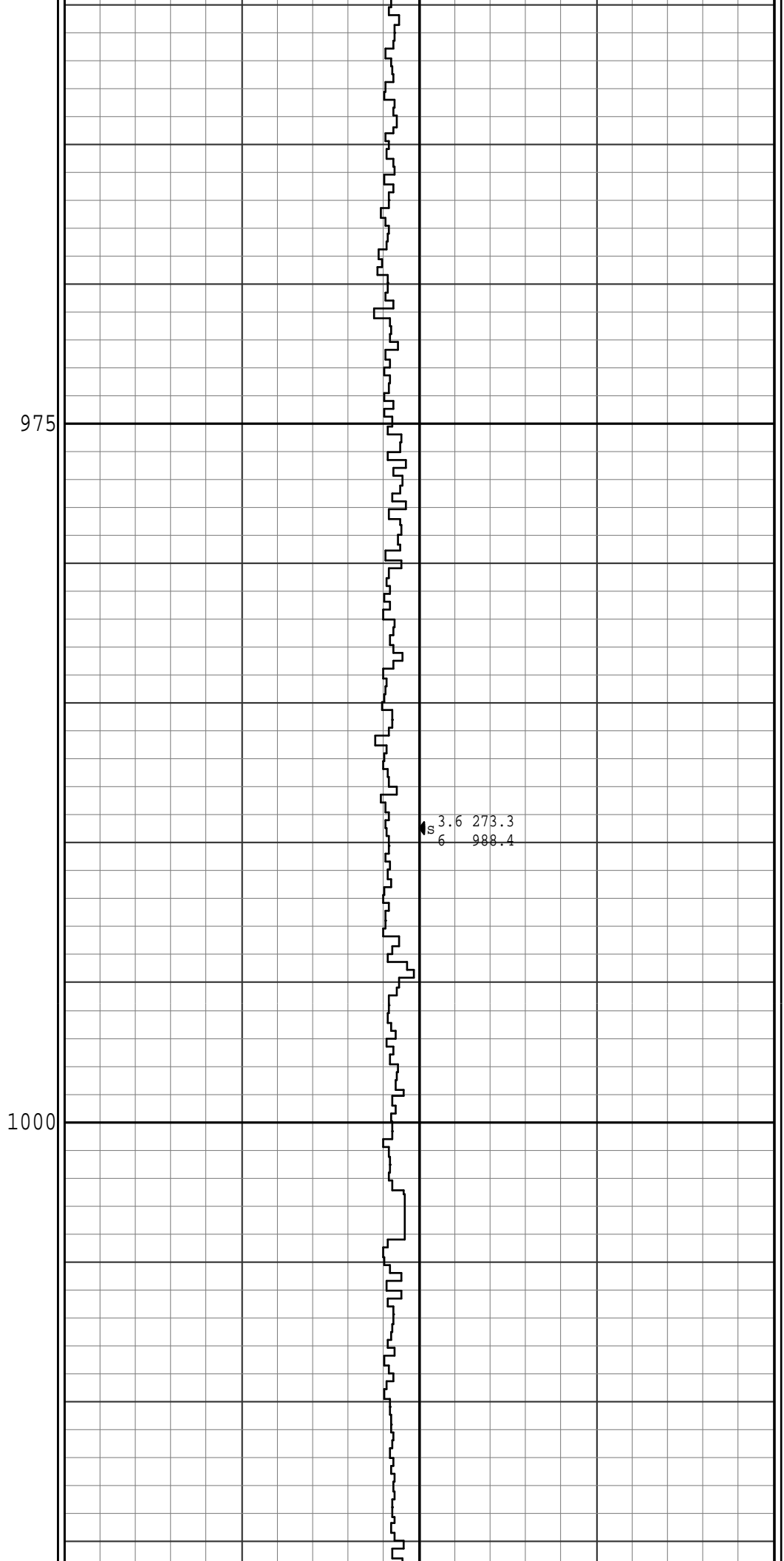
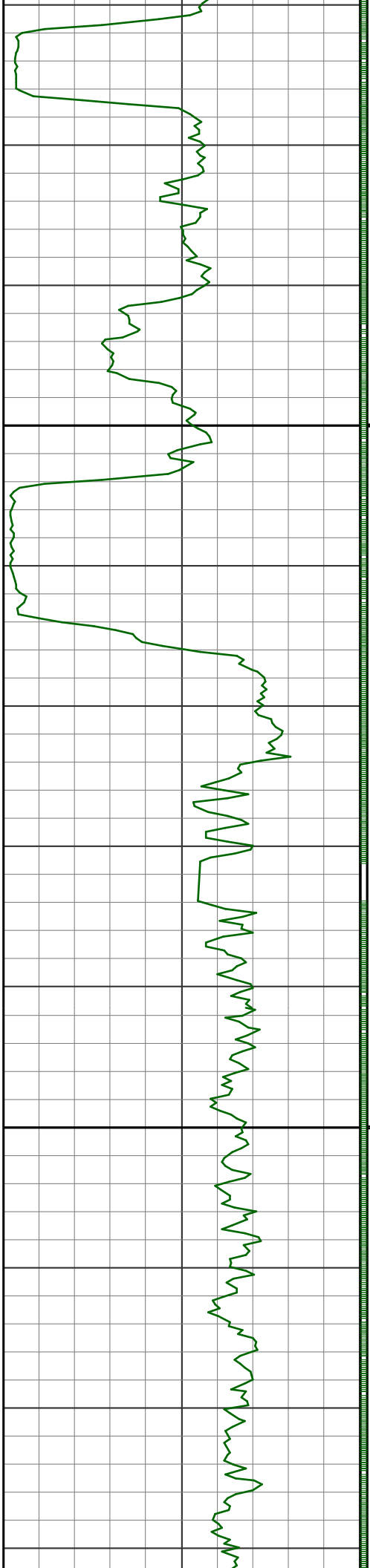
3.2 277.6
3 872.2

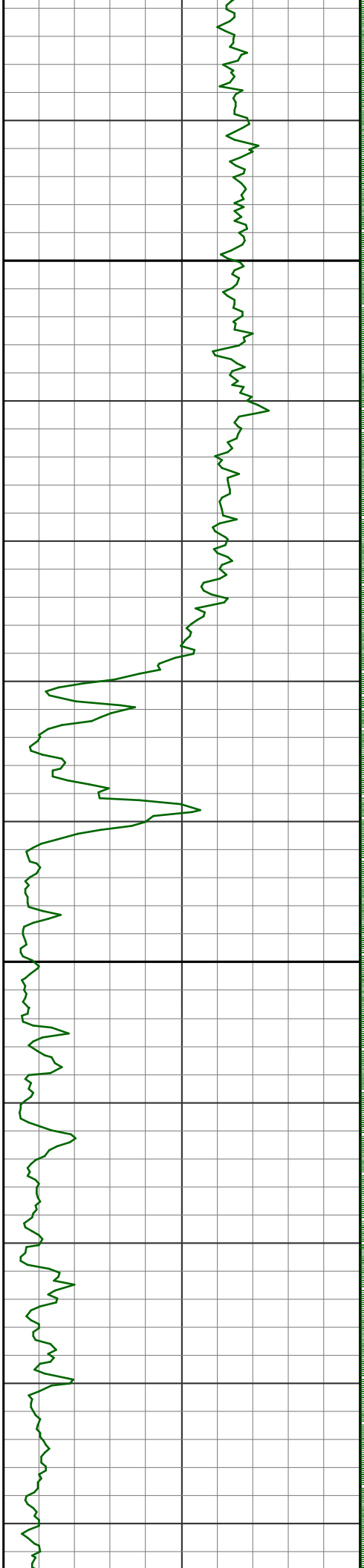


925

950





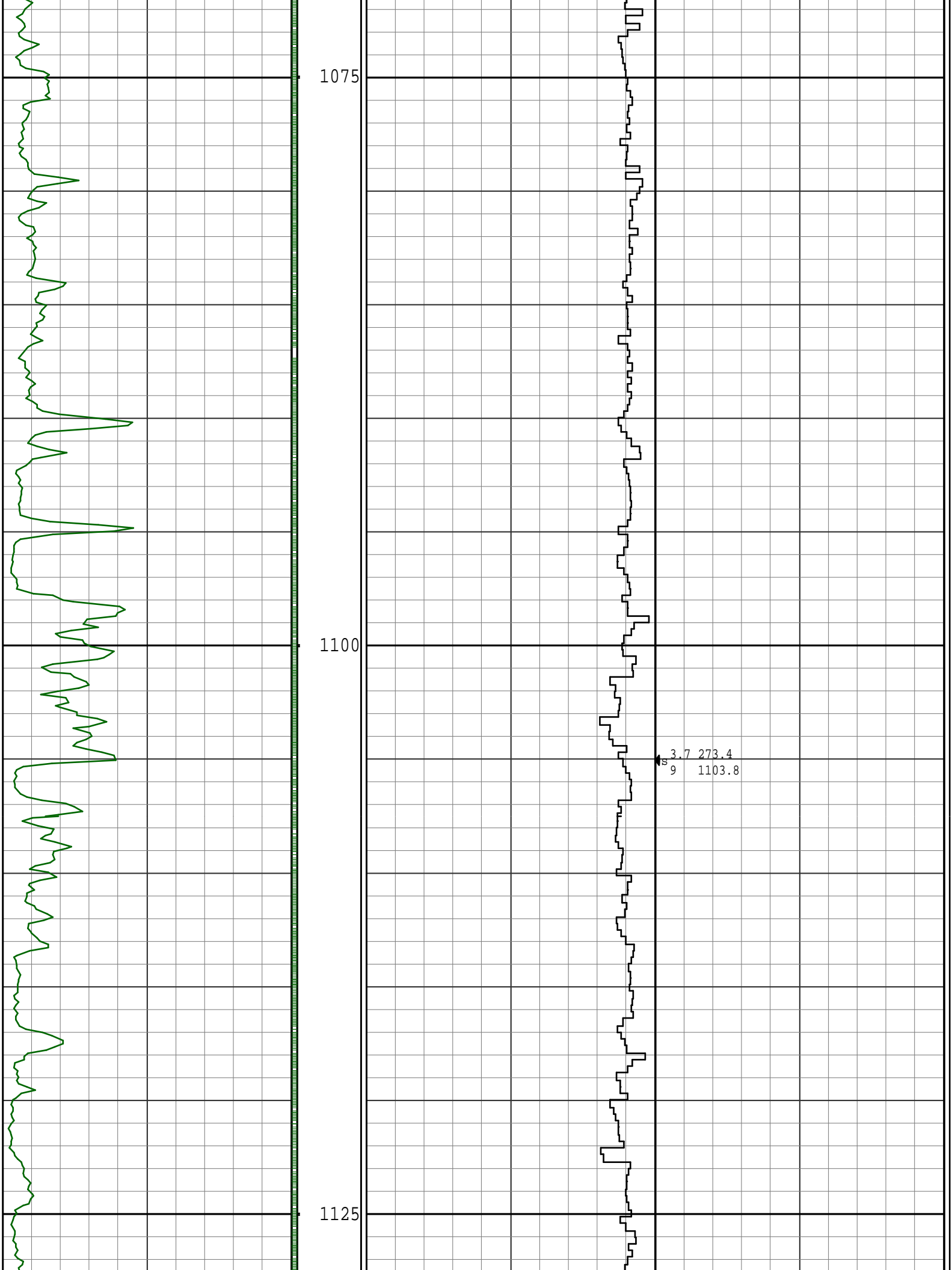


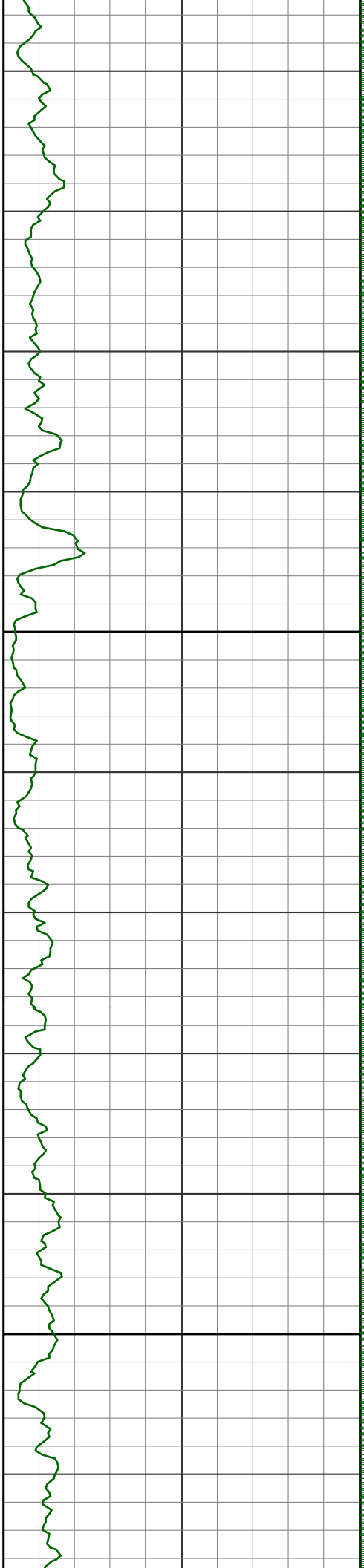
1025

1050

3.5 275.1
7 1026.8

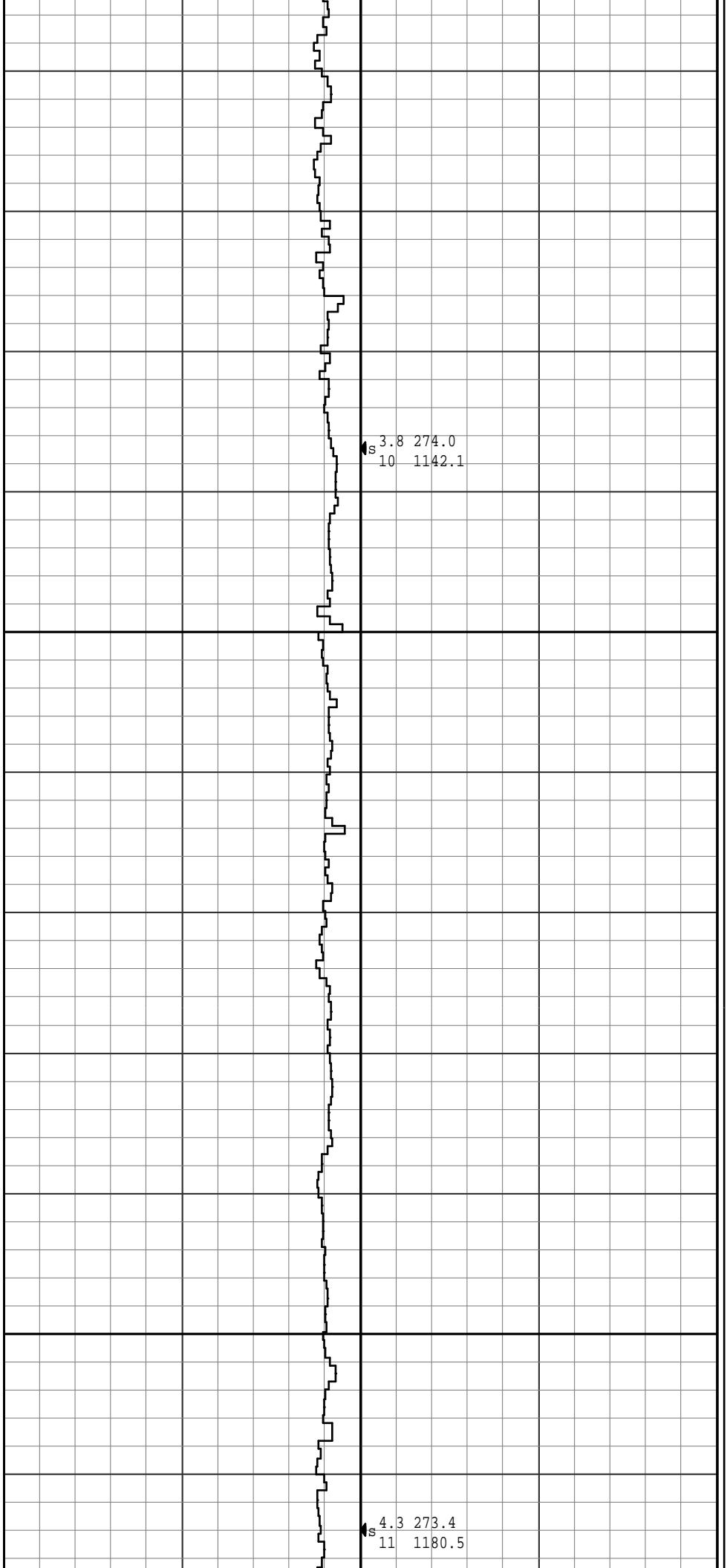
3.7 274.7
8 1065.3

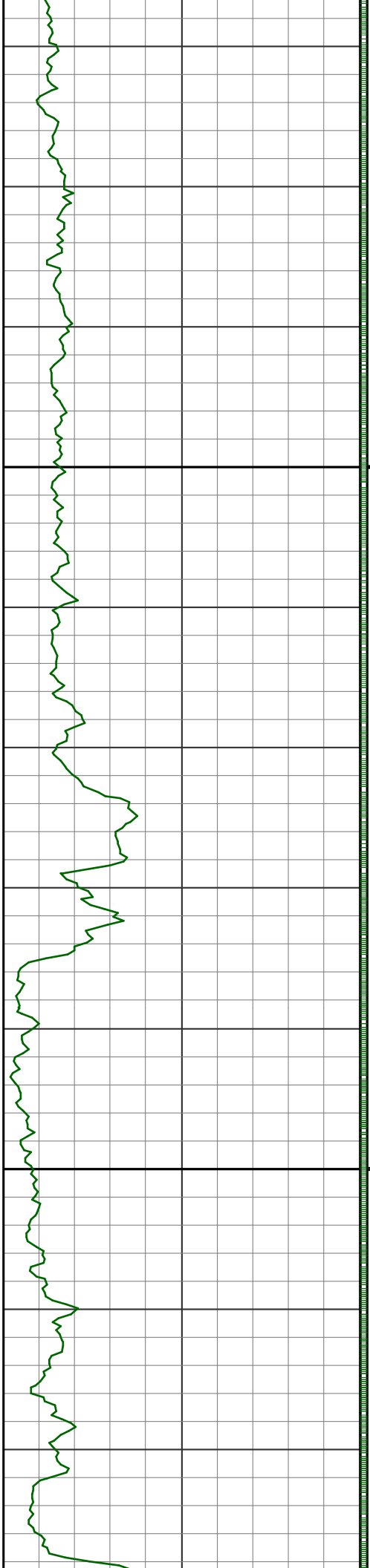




1150

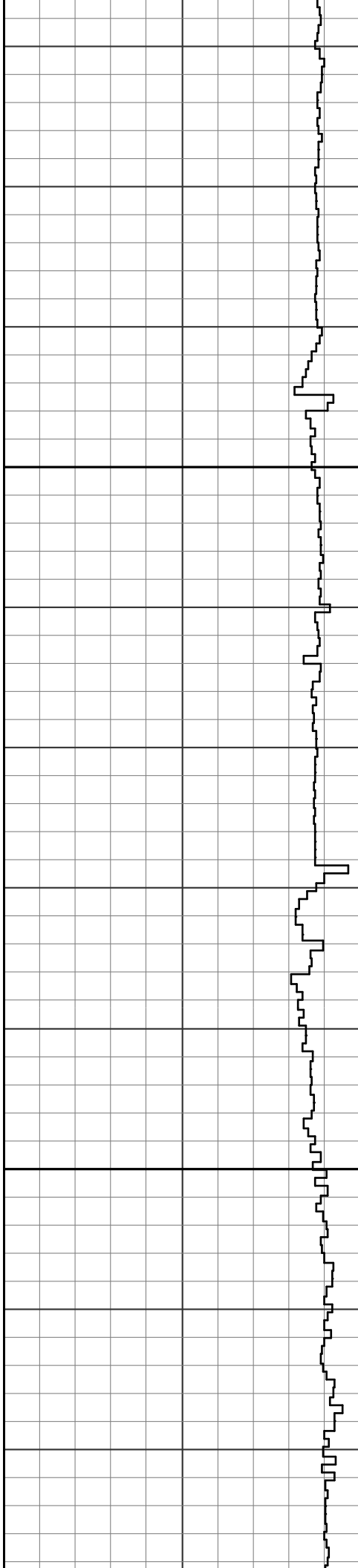
1175



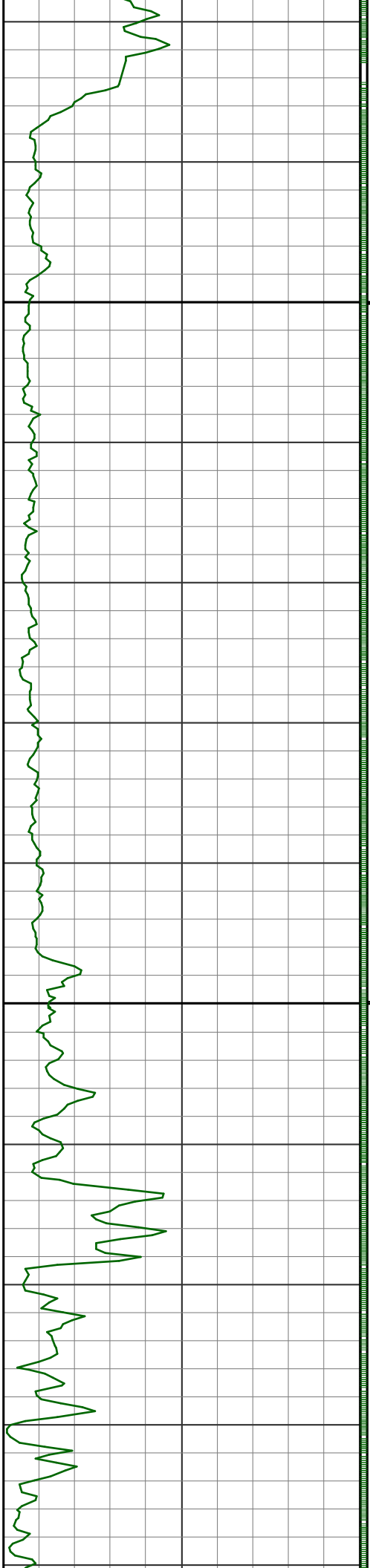


1200

1225

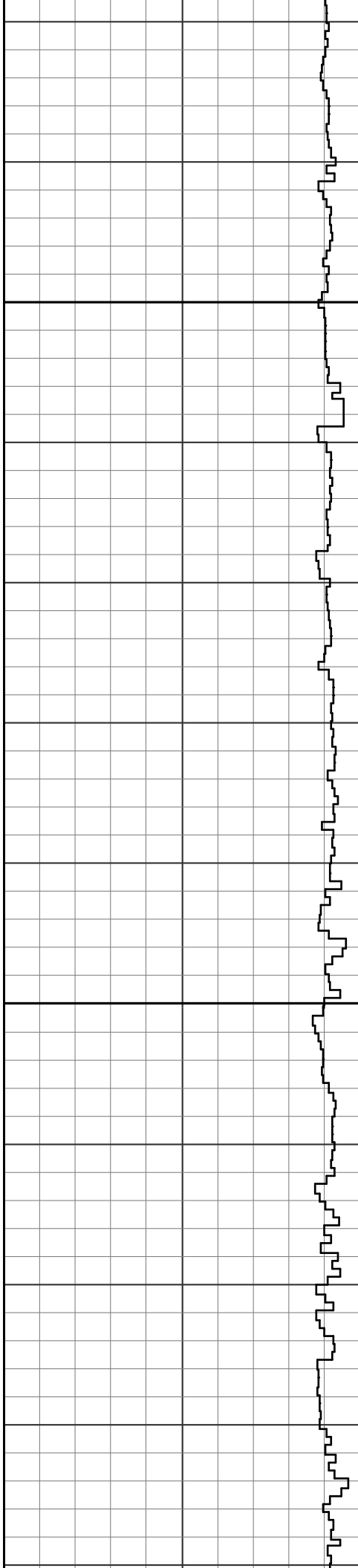


4.2 274.9
12 1218.9

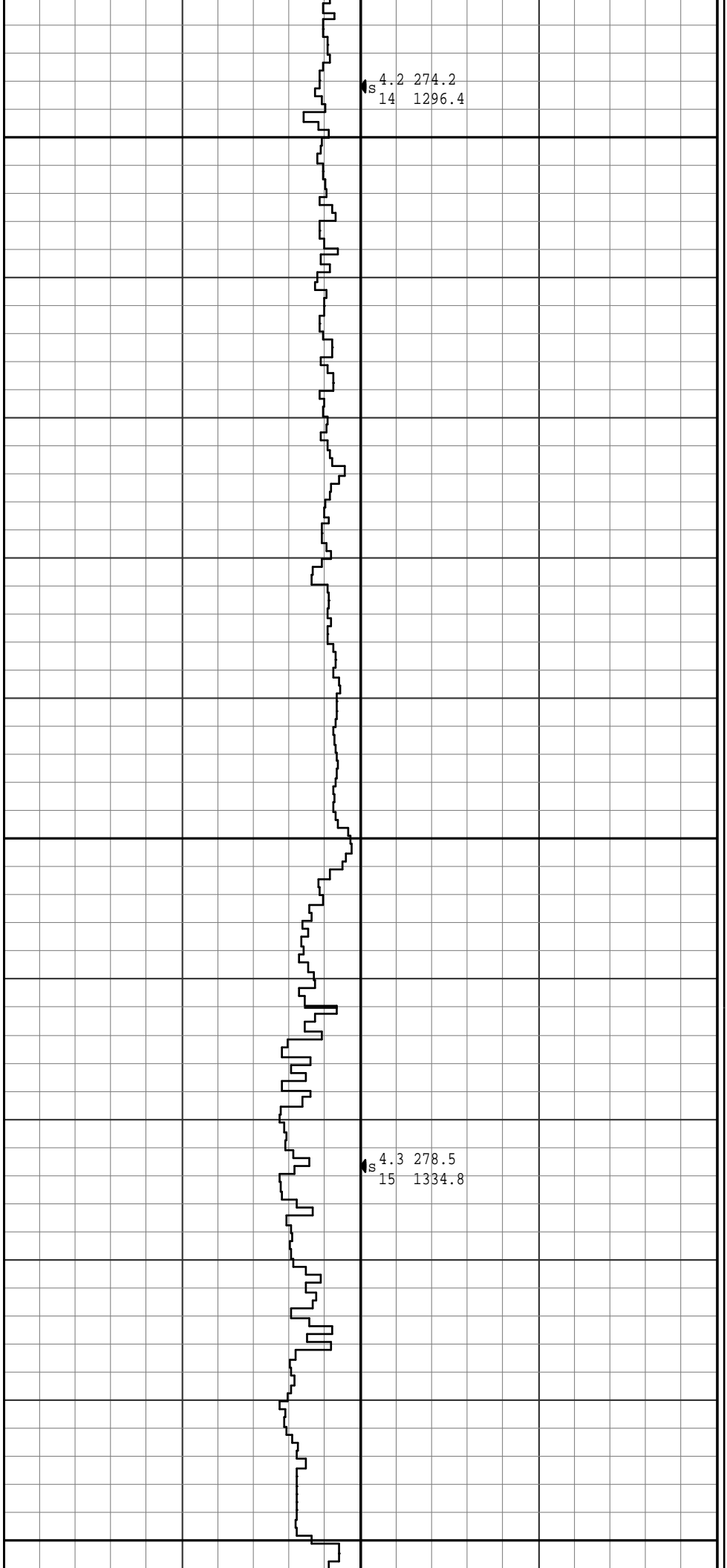
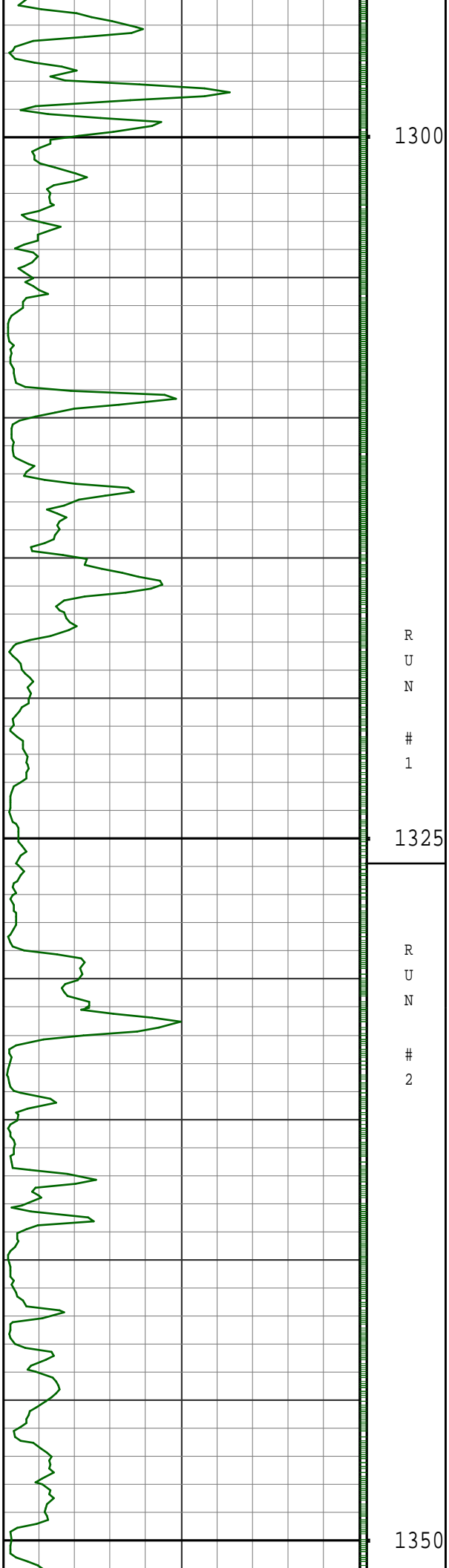


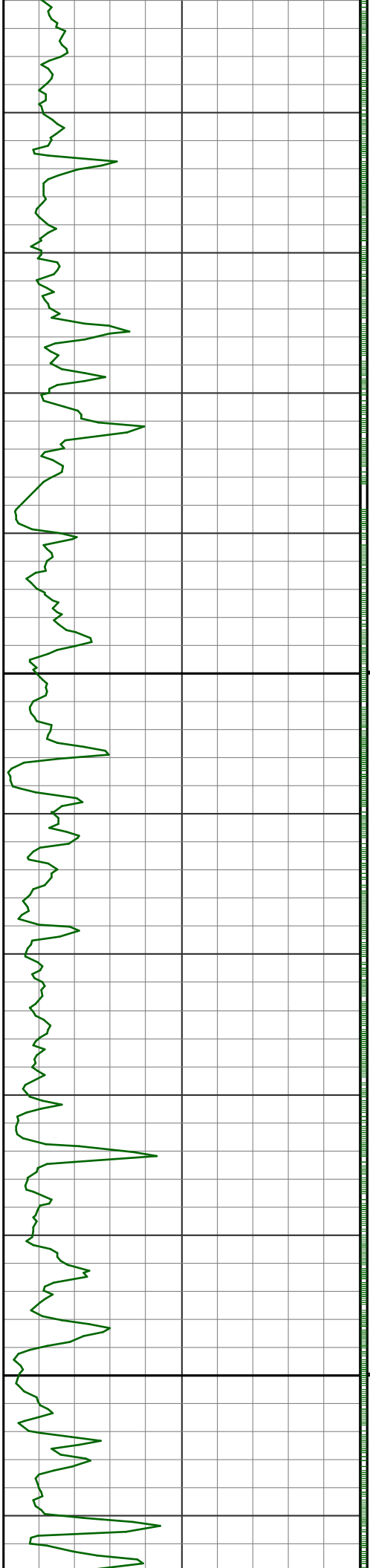
1250

1275



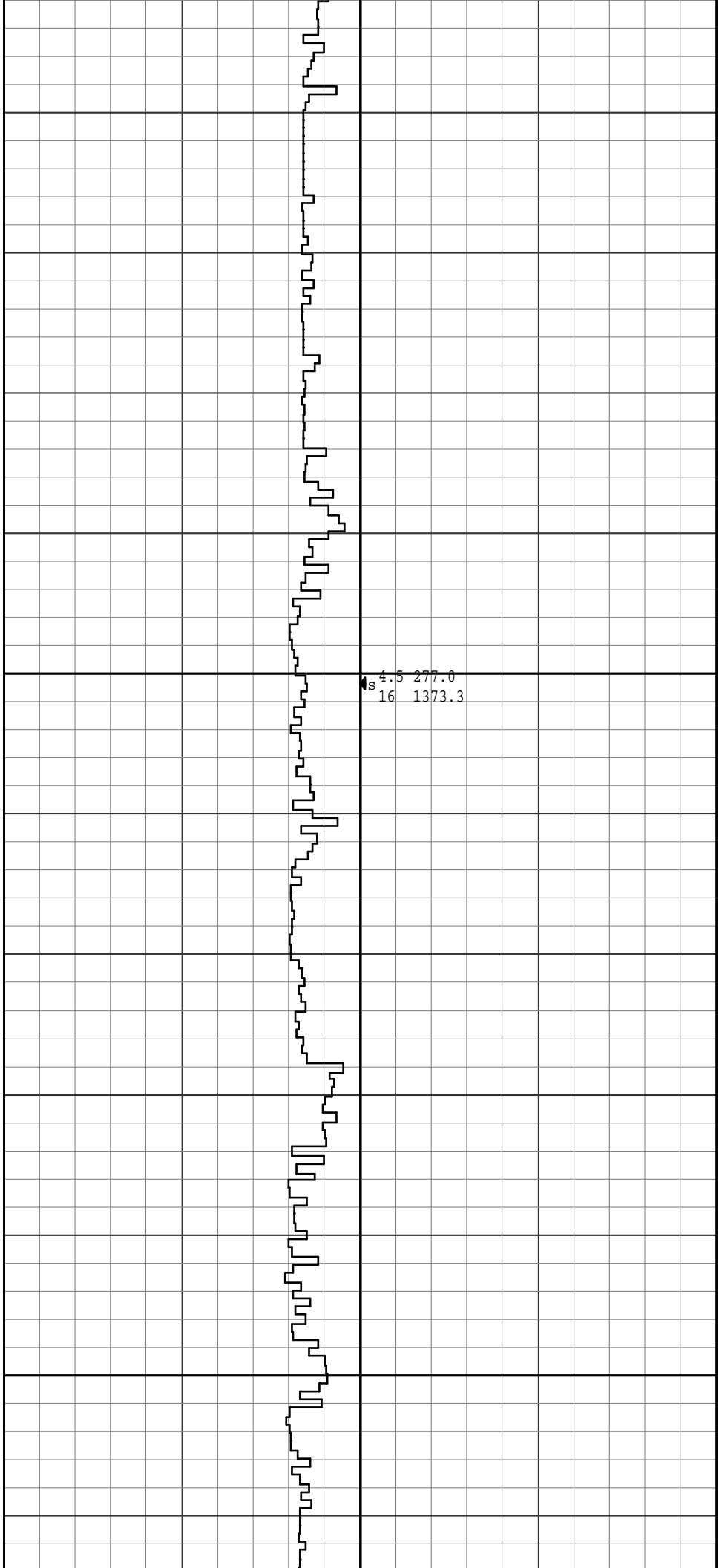
4.4 275.9
13 1257.3

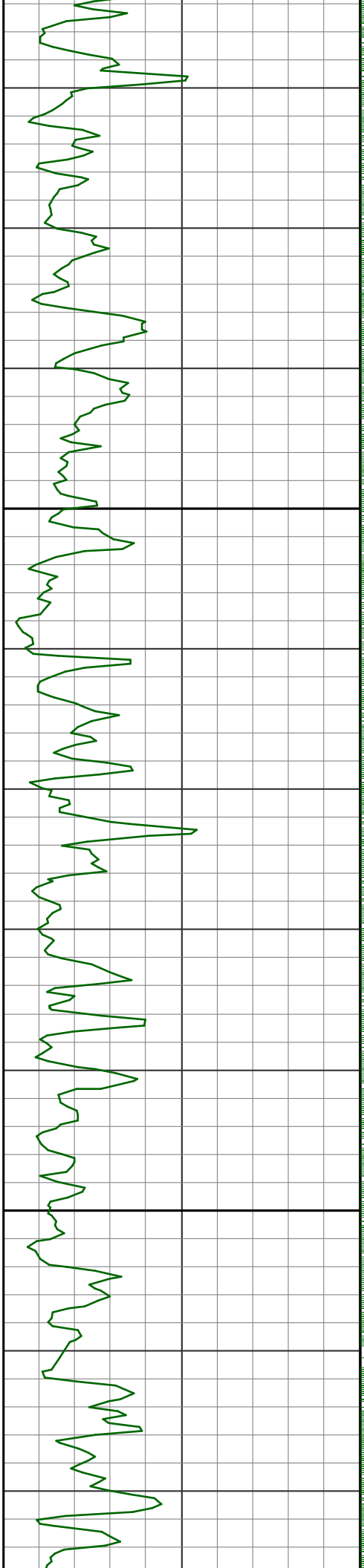




1375

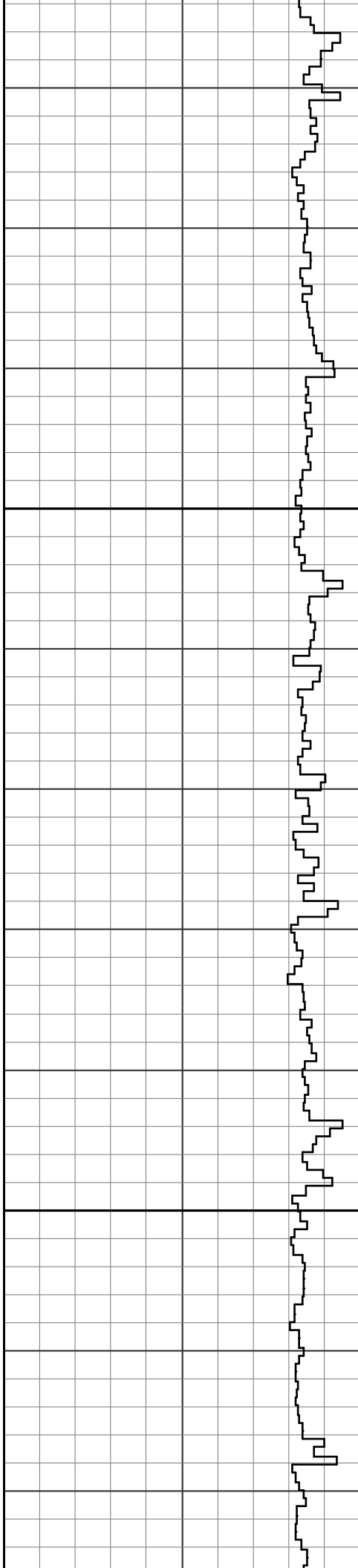
1400





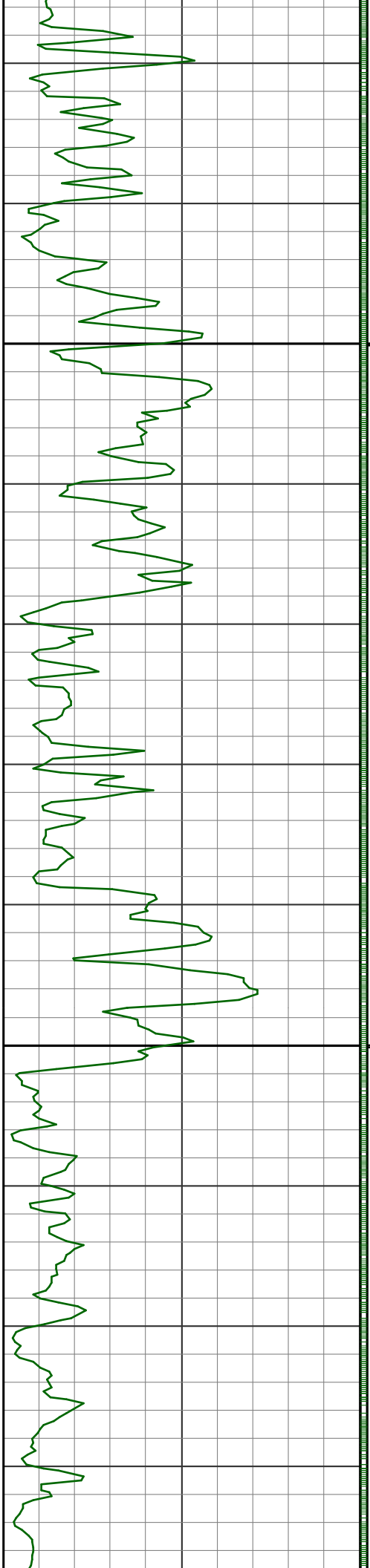
1425

1450



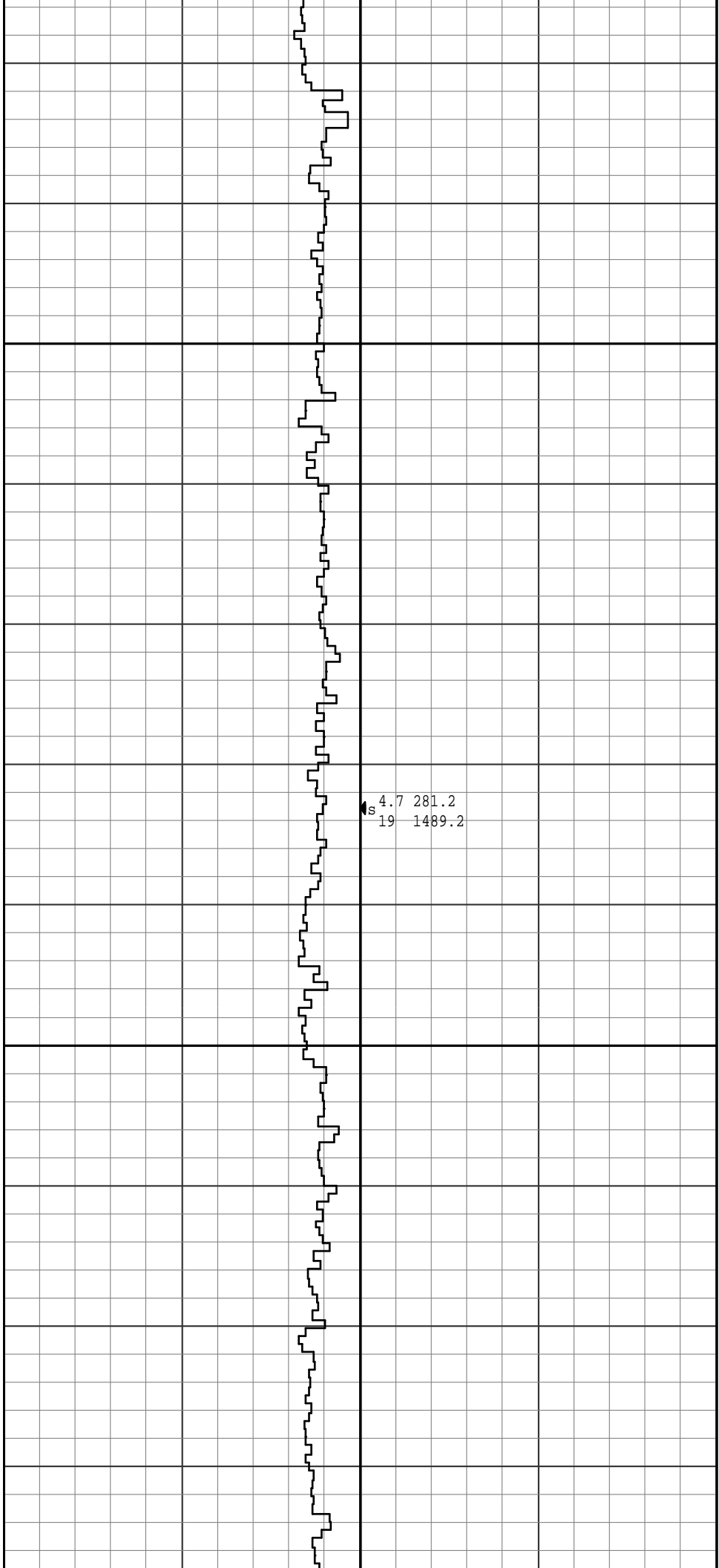
4.4 277.4
17 1411.1

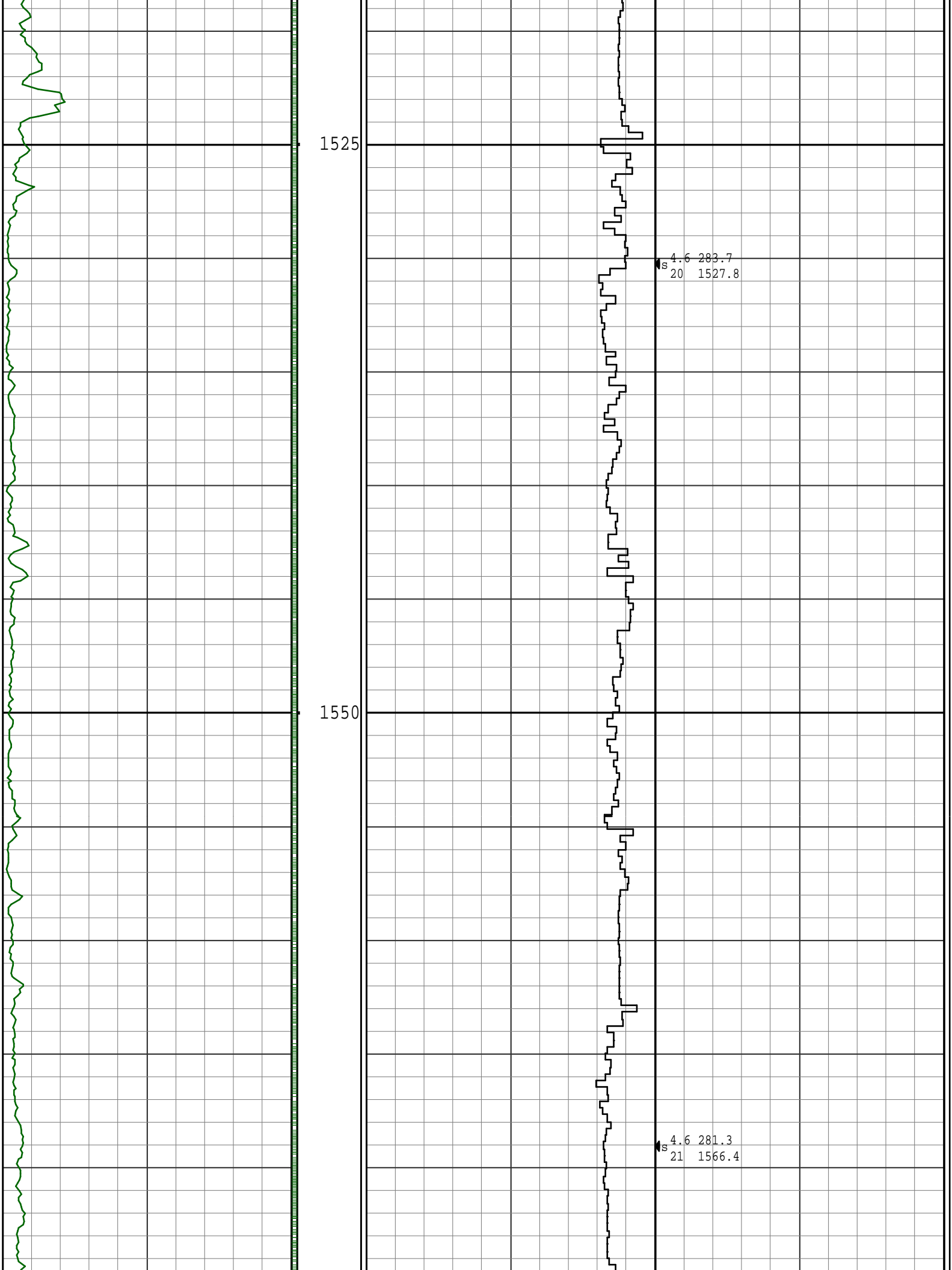
4.6 279.5
18 1450.8

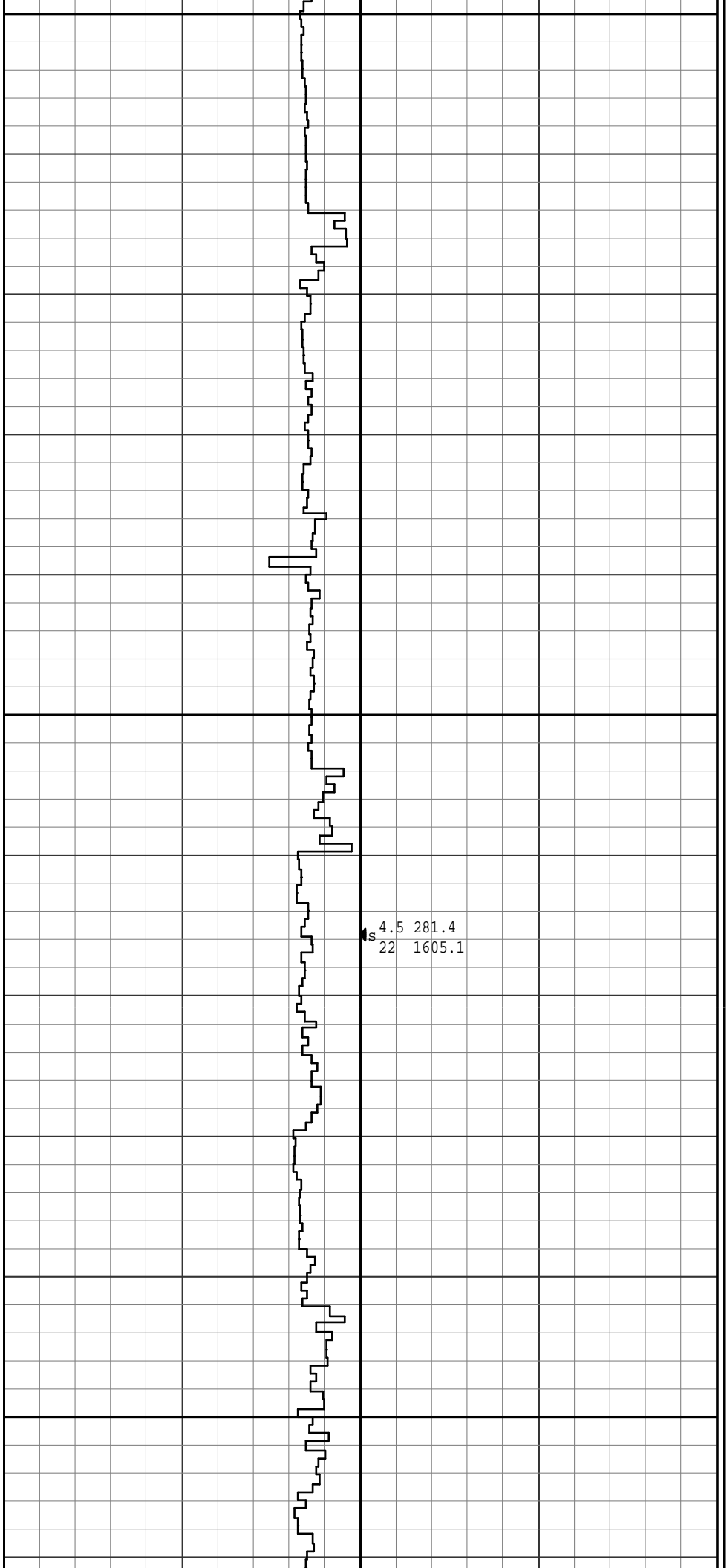
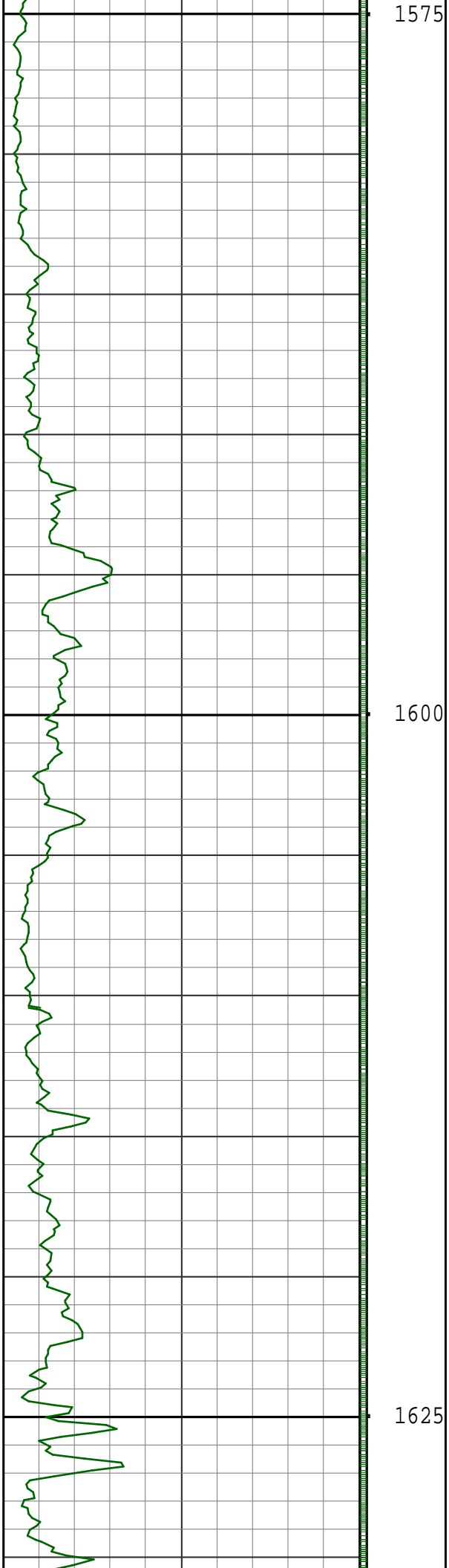


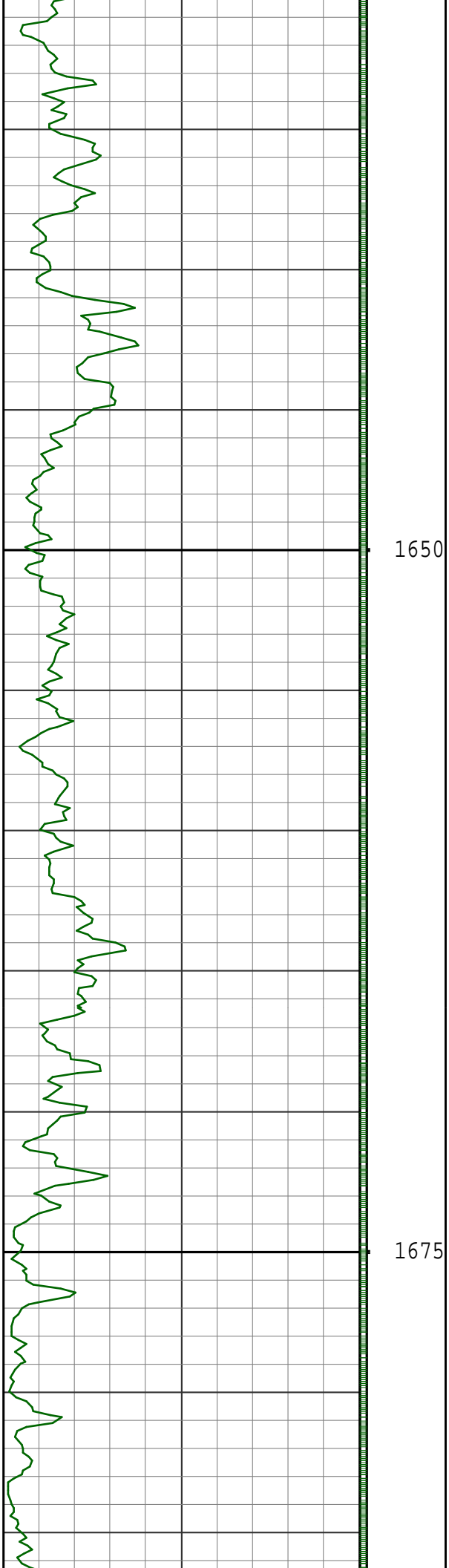
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1500



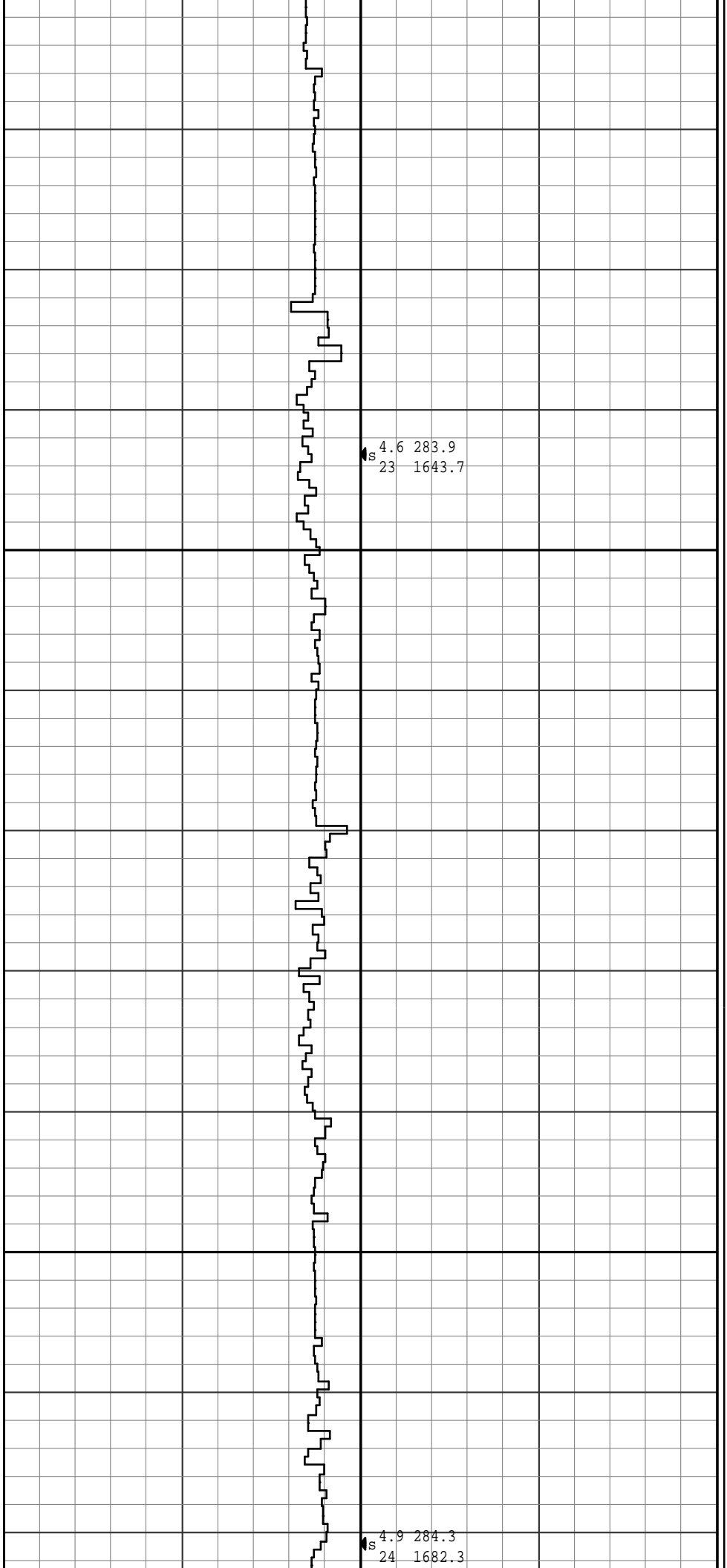






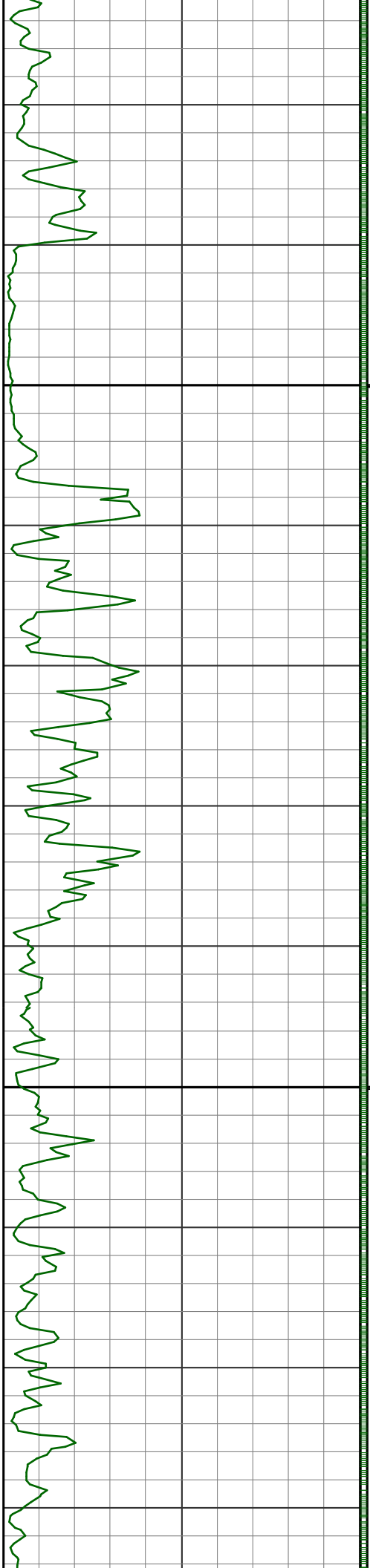
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1675



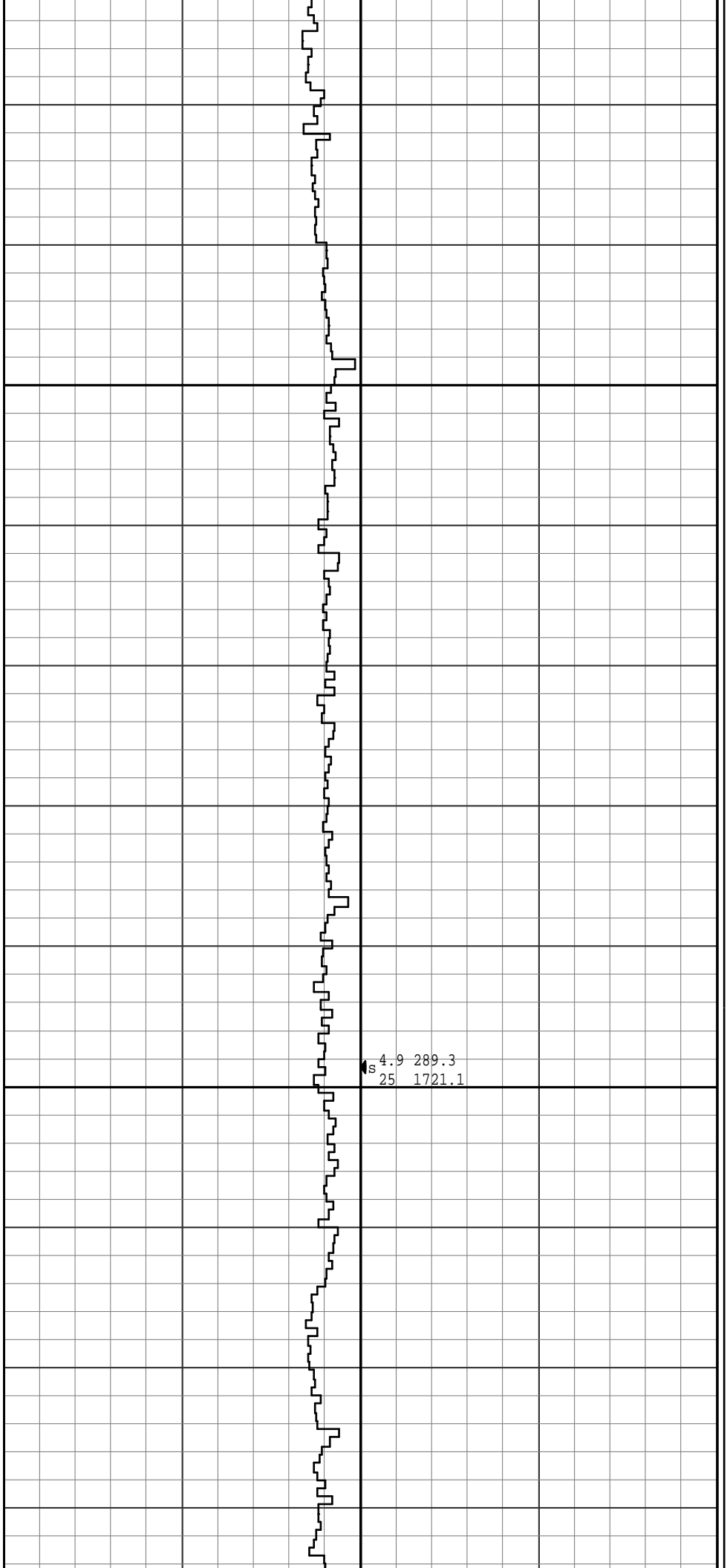
S 4.6 283.9
23 1643.7

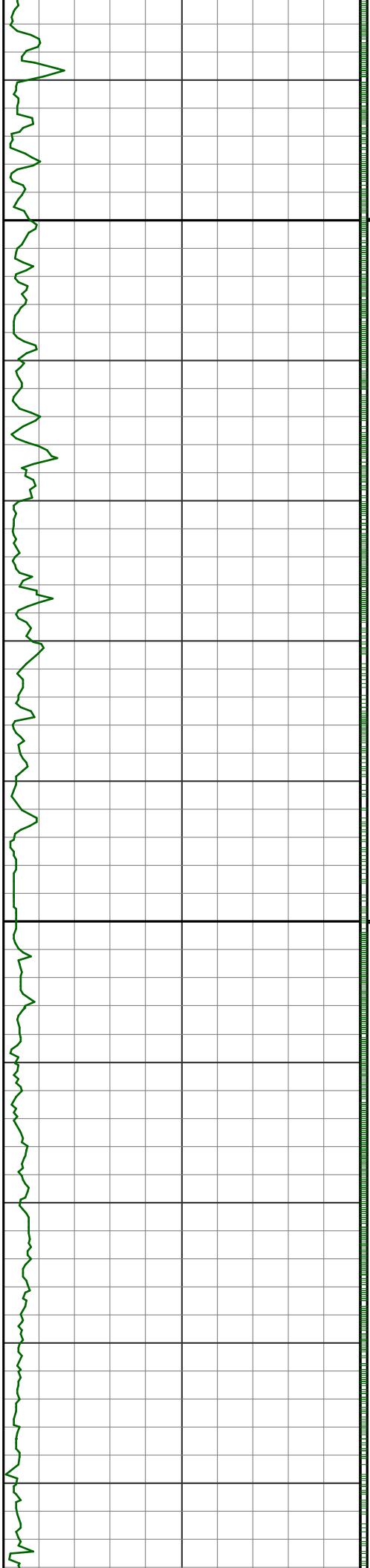
S 4.9 284.3
24 1682.3



1700

1725



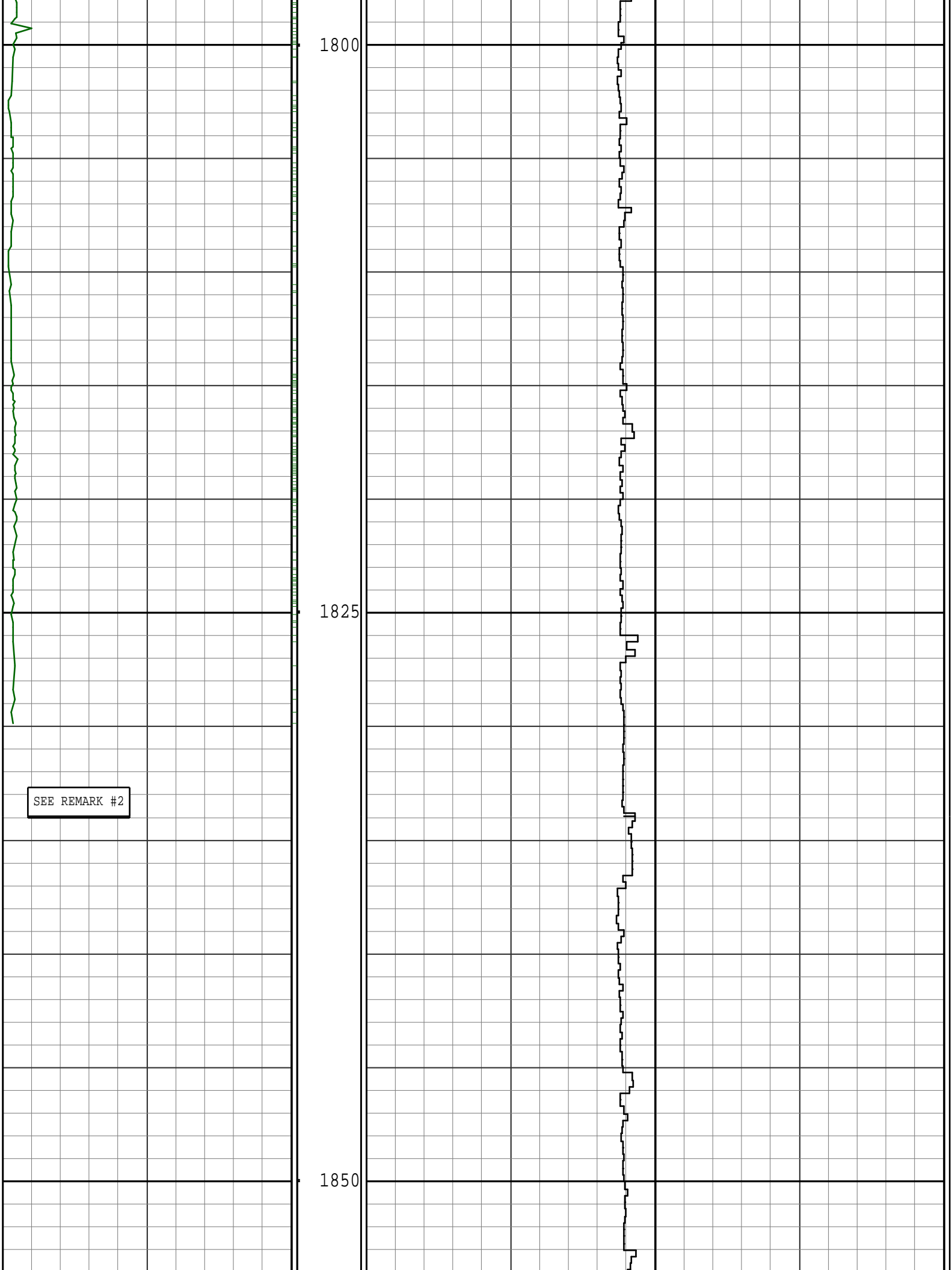


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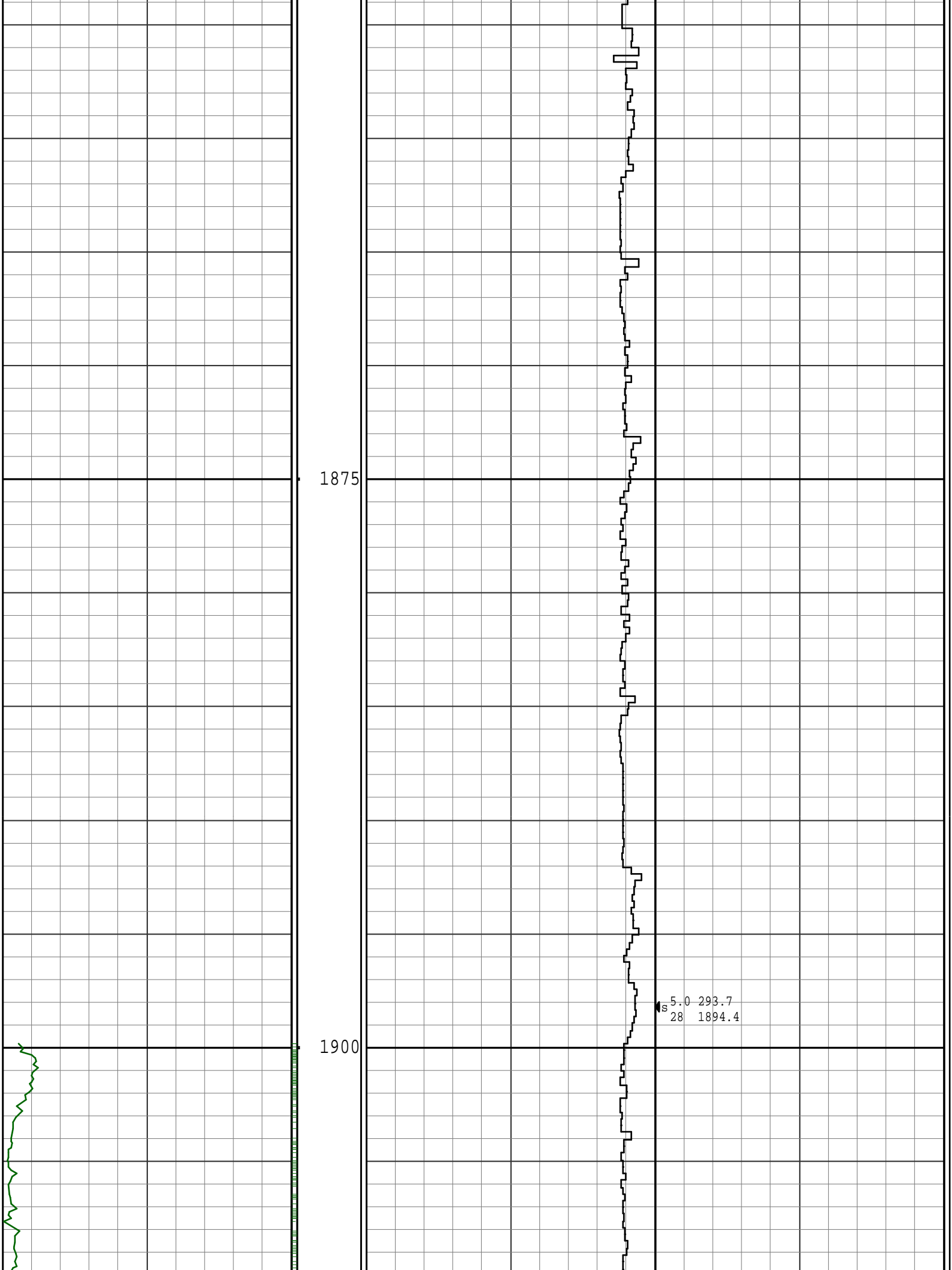
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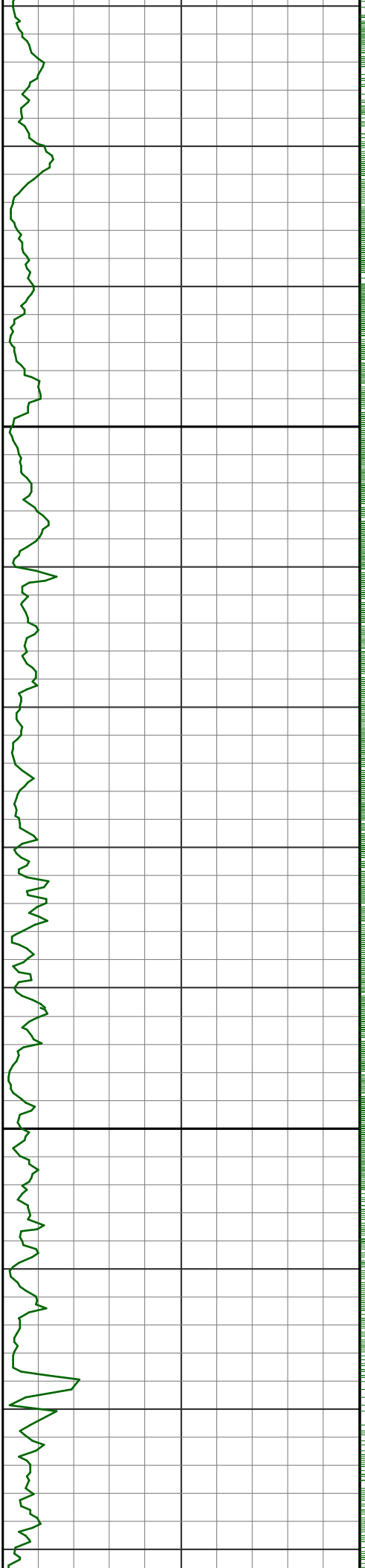
4.8 290.5
s 26 1759.5

4.7 286.8
s 27 1778.6



SEE REMARK #2



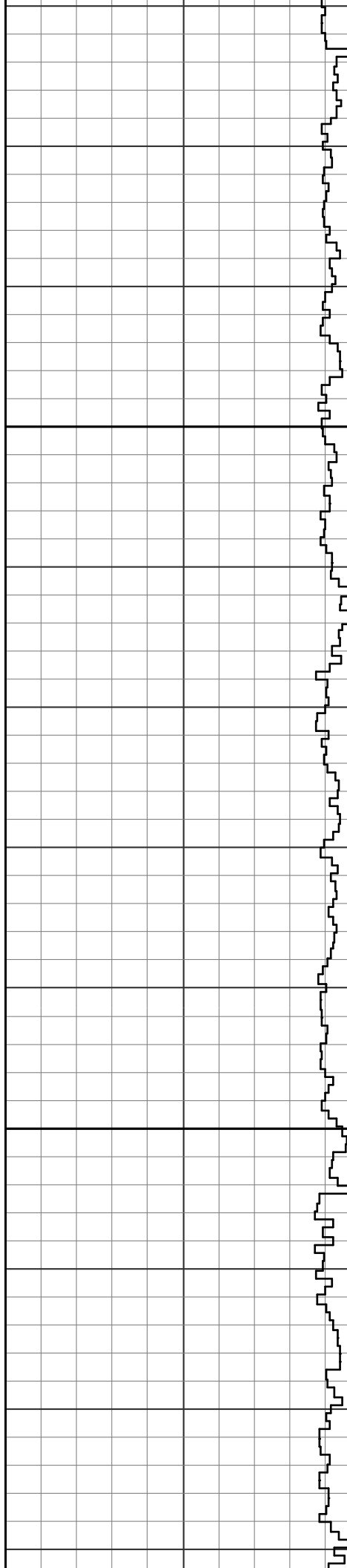


1925

1950

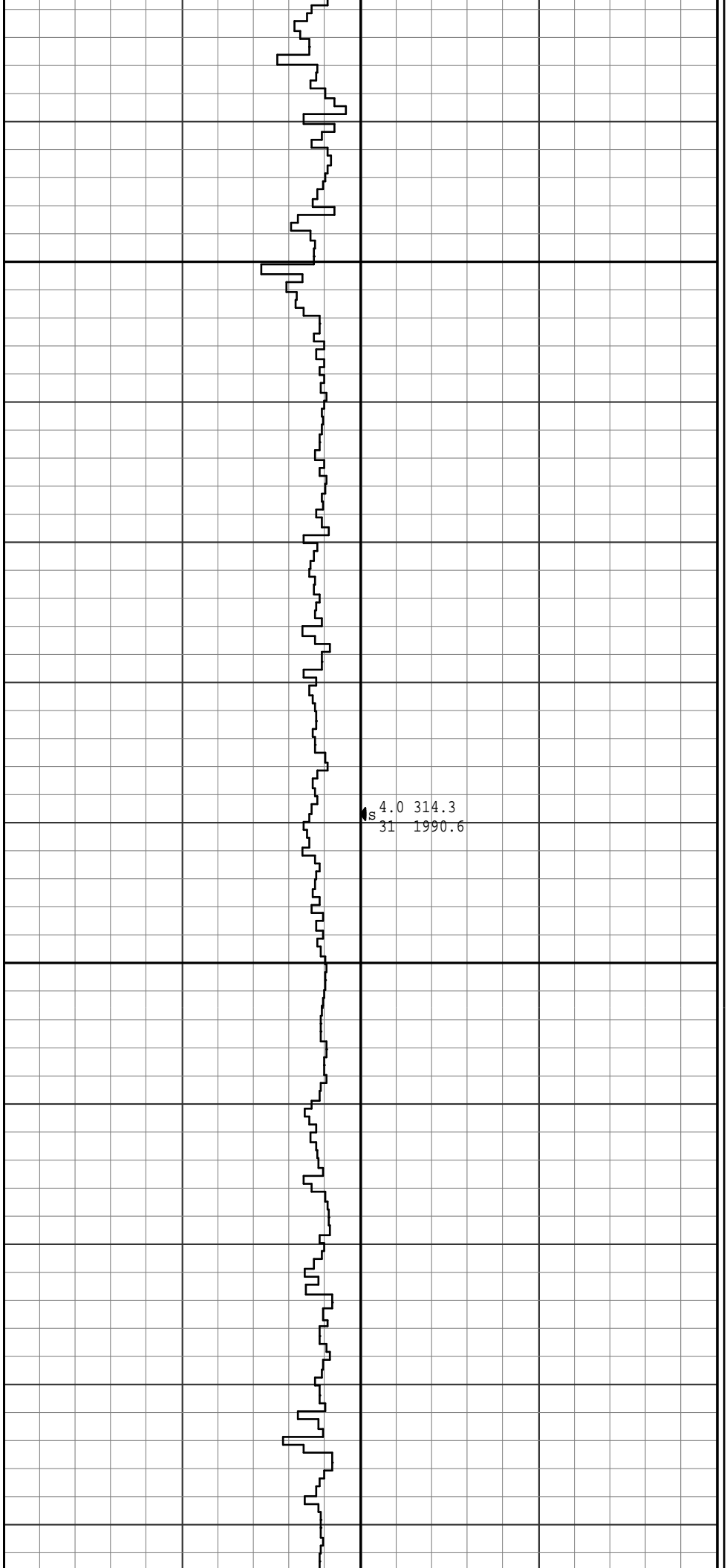
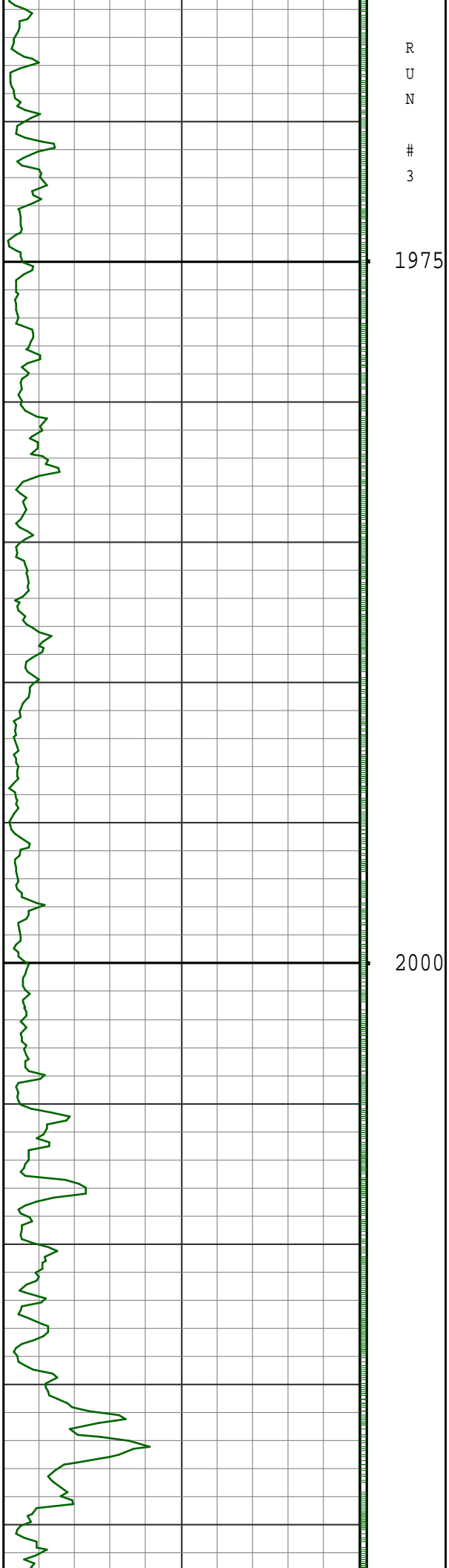
R
U
N

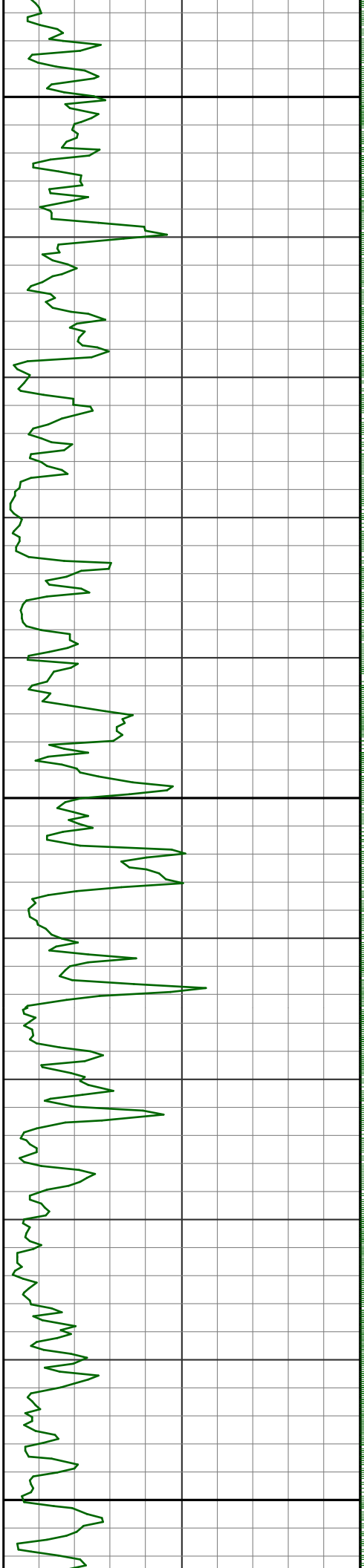
2



4.9 296.3
S 29 1932.7

4.5 297.9
S 30 1952.2

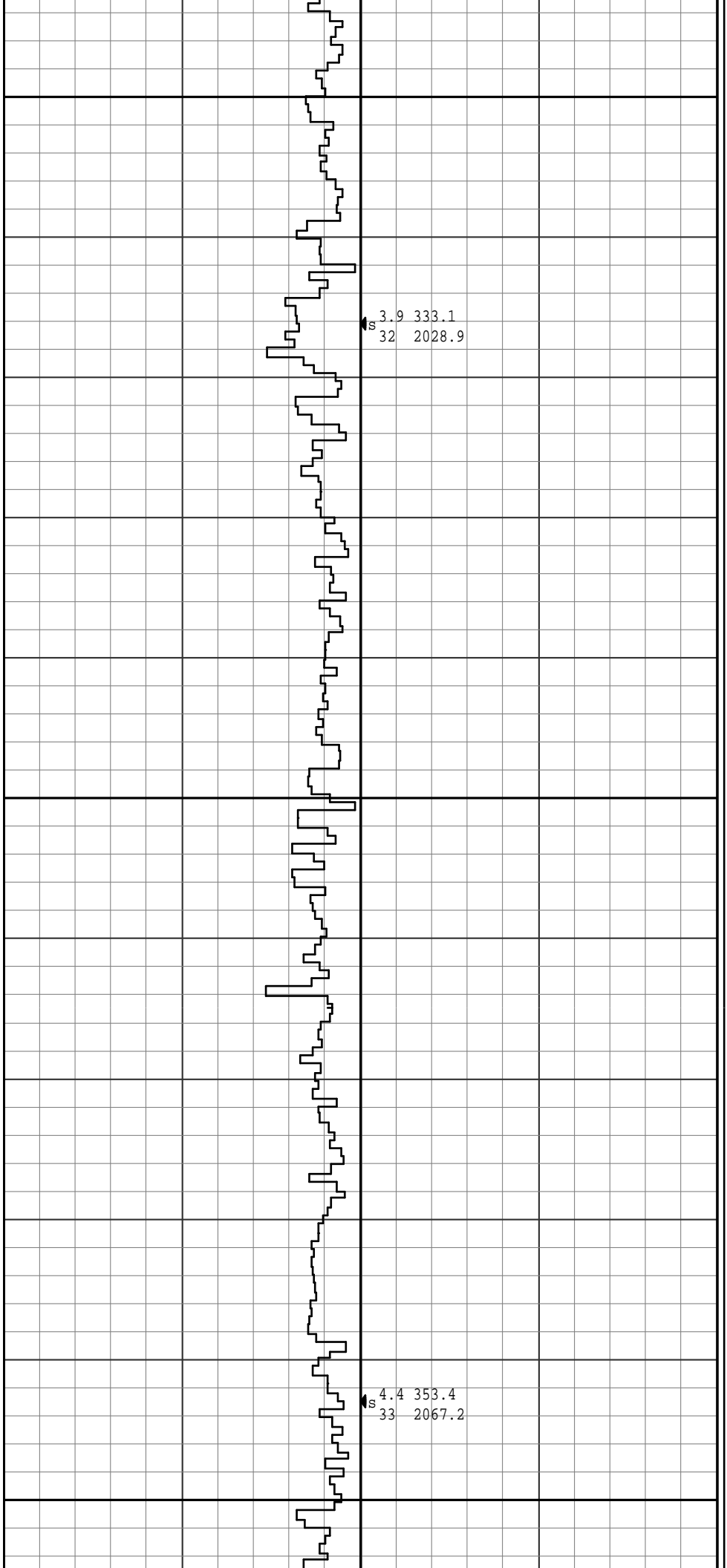


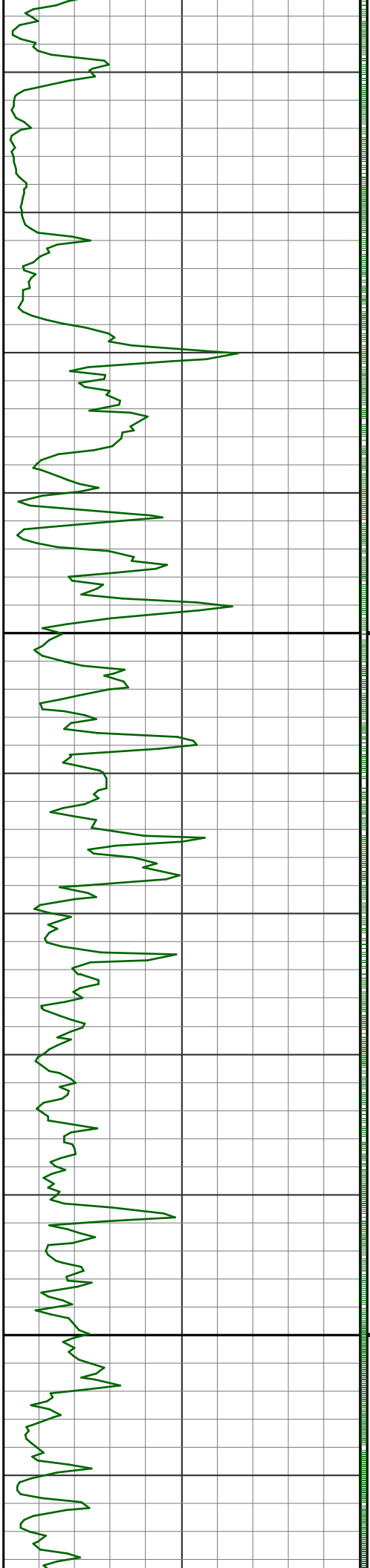


2025

2050

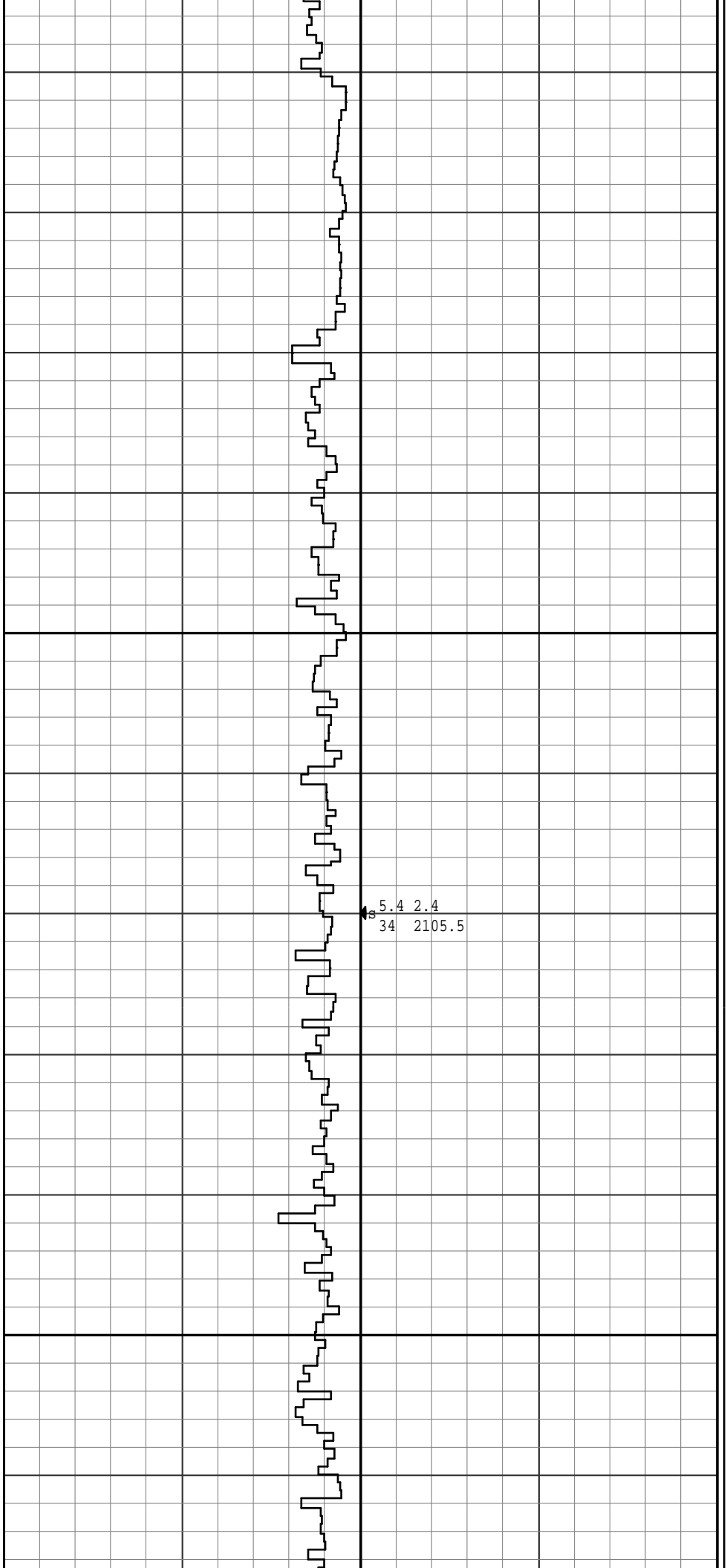
2075



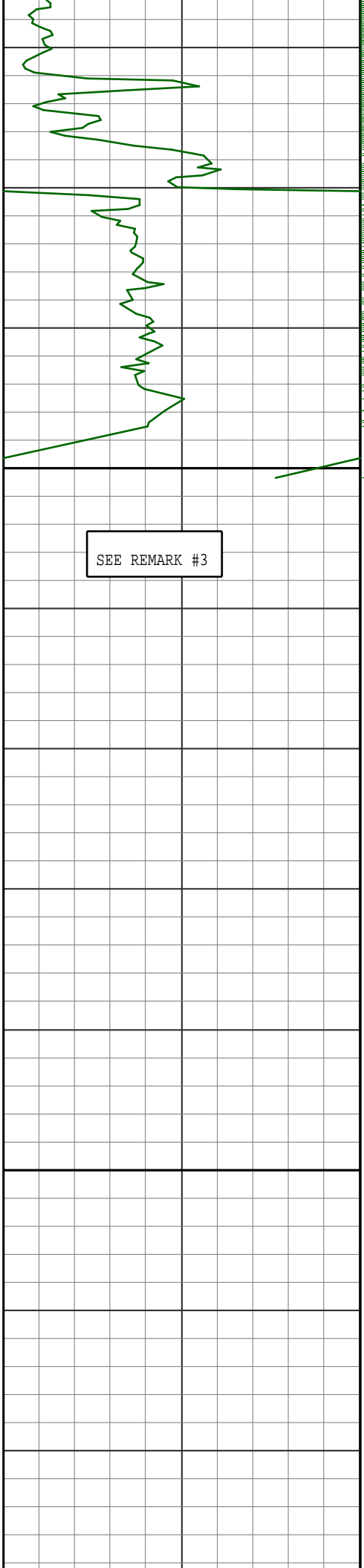


2100

2125



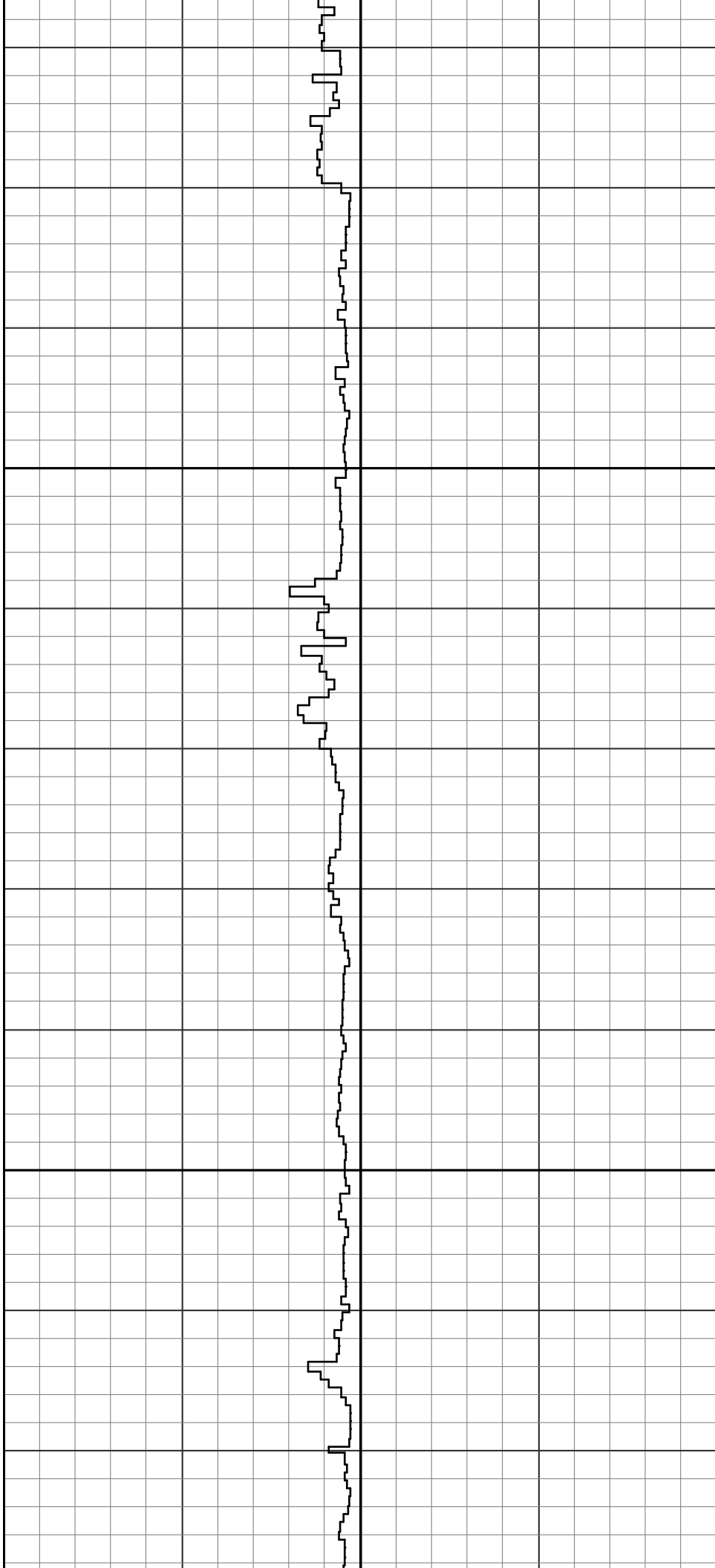
5.4 2.4
34 2105.5

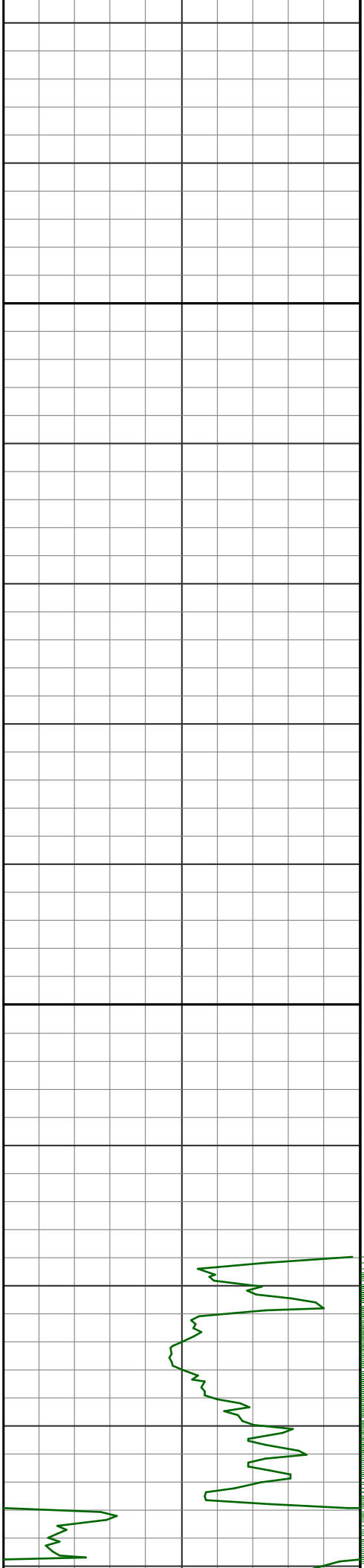


SEE REMARK #3

2150

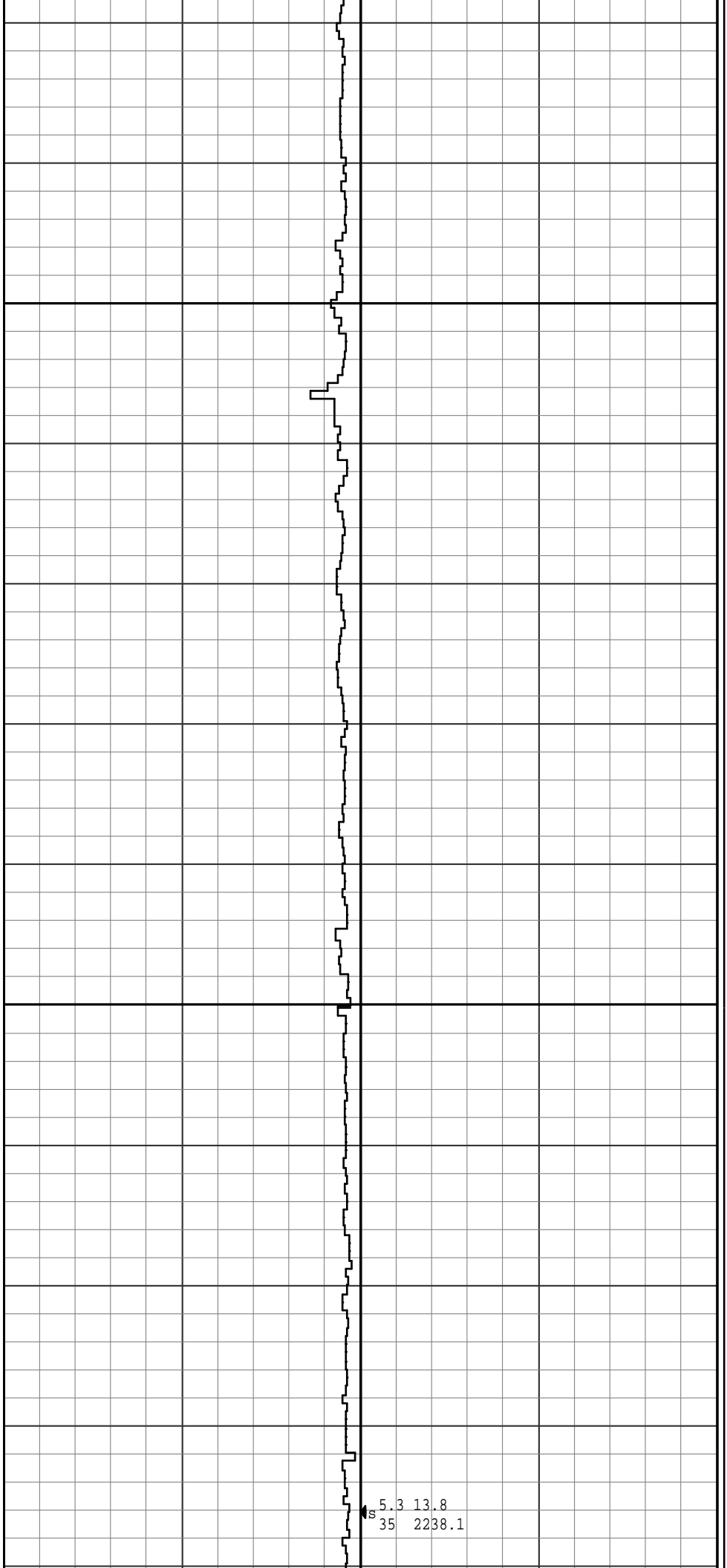
2175



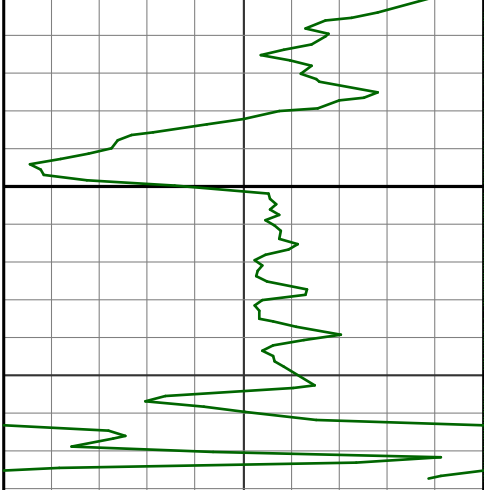


2200

2225



5.3 13.8
35 2238.1



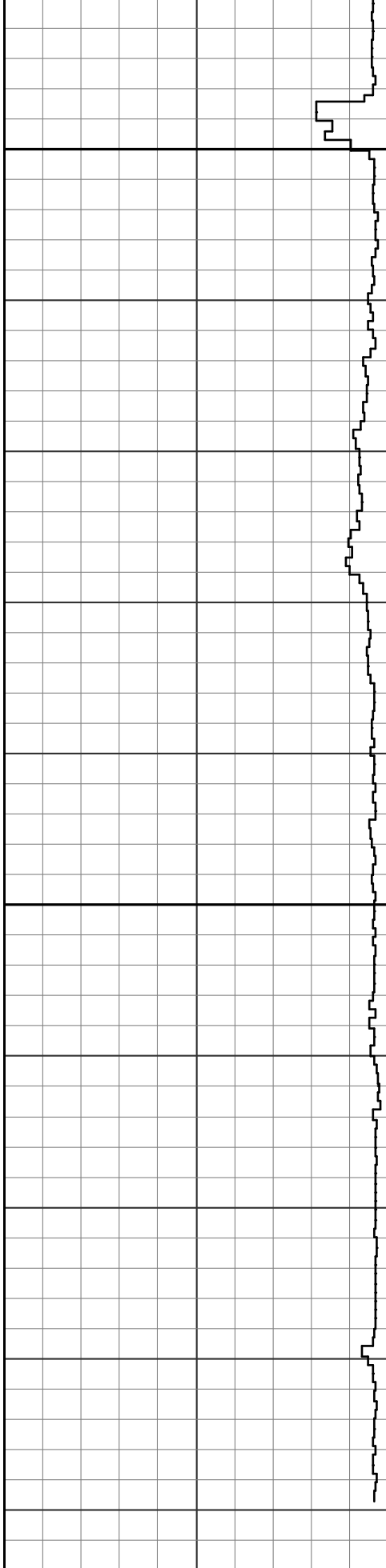
SEE REMARK #4

2250

2275

R
U
N

3



5.4 16.6
36 2256.9

5.4 16.6
37 2289.7

PROJECTION TO TD

0 GRC_X AAPI 200

avg = 15 cm

SLIDE (BIT)

DEPTH
MD m

1m = 200m

SHOES

150 Time Based ROP m/hr 0

avg = 30 cm

COMMENTS

inc azi
TVD

Survey Report											
Vertical Section Plane: 0.00°						Total Correction: 3.62° East to Grid					
Calculation Method: Minimum Curvature						Survey Reference: Wellhead					
North Aligned to: Grid North						Well: Mt Kitty 1					
Measured Depth (m)	Inclination (deg)	Azimuth (deg)	TVD (m)	Course Length (m)	Vertical Section (m)	Rect Co-ord North (m)	Rect Co-ord East (m)	Closure Distance (m)	Closure Direction (deg)	Dog-leg Severity (dg/30m)	Temp (deg C)
TIED INTO EXTERNAL SURVEYS AT 770m MD											
770.00	3.11	318.04	769.27		22.17	22.17 N	19.80 W	29.72	318.23		
THE FOLLOWING ARE PATHFINDER MWD SURVEYS											
795.40	3.30	278.41	794.63	25.40	22.79	22.79 N	20.98 W	30.98	317.36	2.57	
834.20	3.30	275.82	833.37	38.80	23.07	23.07 N	23.20 W	32.71	314.83	0.12	
873.10	3.21	277.62	872.21	38.90	23.32	23.32 N	25.39 W	34.48	312.57	0.10	
911.90	3.30	278.10	910.94	38.80	23.63	23.63 N	27.58 W	36.31	310.59	0.07	
950.80	3.60	277.14	949.77	38.90	23.93	23.93 N	29.90 W	38.30	308.68	0.24	
989.50	3.60	273.31	988.40	38.70	24.16	24.16 N	32.31 W	40.35	306.78	0.19	
1028.00	3.52	275.11	1026.82	38.50	24.33	24.33 N	34.70 W	42.38	305.04	0.11	
1066.60	3.69	274.72	1065.35	38.60	24.54	24.54 N	37.12 W	44.49	303.47	0.13	
1105.10	3.69	273.40	1103.77	38.50	24.71	24.71 N	39.59 W	46.67	301.98	0.07	
1143.50	3.78	274.02	1142.08	38.40	24.88	24.88 N	42.08 W	48.89	300.59	0.08	
1182.00	4.31	273.40	1180.49	38.50	25.05	25.05 N	44.79 W	51.32	299.22	0.41	
1220.50	4.22	274.94	1218.88	38.50	25.26	25.26 N	47.65 W	53.93	297.93	0.11	
1259.00	4.39	275.91	1257.27	38.50	25.53	25.53 N	50.53 W	56.61	296.81	0.14	
1298.20	4.22	274.24	1296.36	39.20	25.79	25.79 N	53.46 W	59.35	295.76	0.16	
1336.70	4.31	278.54	1334.76	38.50	26.11	26.11 N	56.30 W	62.06	294.88	0.26	
1375.40	4.48	277.00	1373.34	38.70	26.51	26.51 N	59.24 W	64.90	294.11	0.16	
1413.30	4.39	277.40	1411.13	37.90	26.88	26.88 N	62.15 W	67.71	293.39	0.08	
1453.10	4.61	279.51	1450.81	39.80	27.34	27.34 N	65.23 W	70.73	292.74	0.21	
1491.60	4.70	281.22	1489.18	38.50	27.90	27.90 N	68.31 W	73.79	292.22	0.13	
1530.30	4.61	283.73	1527.75	38.70	28.58	28.58 N	71.37 W	76.88	291.82	0.17	
1569.10	4.61	281.31	1566.43	38.80	29.26	29.26 N	74.42 W	79.96	291.46	0.15	
1607.90	4.48	281.40	1605.10	38.80	29.86	29.86 N	77.43 W	82.99	291.09	0.10	
1646.60	4.61	283.90	1643.68	38.70	30.53	30.53 N	80.42 W	86.02	290.79	0.18	
1685.40	4.92	284.30	1682.35	38.80	31.32	31.32 N	83.55 W	89.23	290.55	0.24	
1724.30	4.92	289.31	1721.11	38.90	32.28	32.28 N	86.74 W	92.55	290.41	0.33	
1762.80	4.79	290.54	1759.47	38.50	33.39	33.39 N	89.80 W	95.81	290.40	0.13	
1782.00	4.70	286.76	1778.60	19.20	33.90	33.90 N	91.31 W	97.40	290.37	0.51	
1898.20	5.01	293.70	1894.39	116.20	37.31	37.31 N	100.51 W	107.21	290.37	0.17	
1936.70	4.92	296.34	1932.74	38.50	38.72	38.72 N	103.53 W	110.53	290.51	0.19	
1956.20	4.48	297.92	1952.18	19.50	39.45	39.45 N	104.95 W	112.12	290.60	0.70	
1994.70	4.00	314.31	1990.57	38.50	41.09	41.09 N	107.24 W	114.84	290.97	1.01	
2033.10	3.91	333.12	2028.88	38.40	43.20	43.20 N	108.79 W	117.05	291.66	1.01	
2071.50	4.39	353.42	2067.18	38.40	45.82	45.82 N	109.55 W	118.75	292.70	1.20	
2110.00	5.41	2.43	2105.54	38.50	49.10	49.10 N	109.64 W	120.14	294.12	0.99	
2243.10	5.32	13.82	2238.06	133.10	61.36	61.36 N	107.90 W	124.13	299.63	0.24	
2262.00	5.41	16.63	2256.88	18.90	63.07	63.07 N	107.44 W	124.58	300.41	0.44	
PROJECTION TO TD AT 2295m MD											
2295.00	5.41	16.63	2289.73	33.00	66.05	66.05 N	106.55 W	125.36	301.79	0.00	

BOTTOM HOLE ASSEMBLY RECORD							
RUN #1		m	RUN #2		m	RUN #3	
8 1/2" HAMMER BT		0.10	8 1/2" HAMMER BT		0.10	8 1/2" INSERT BT	0.24
7" HAMMER		1.37	7" HAMMER		1.37	6 3/4" G2 MOTOR	9.54
8 1/2" NB STAB		1.48	8 1/2" NB STAB		1.48	6 3/4" FLOAT SUB	0.91
6 1/2" X/O		0.81	6 1/2" X/O		0.81	8 3/8" HI TOOL	1.19
6 3/4" PONY		3.44	6 3/4" PONY		3.44	6 3/4" NM PONY	2.87
8 3/8" HI TOOL		1.19	8 3/8" HI TOOL		1.19	6 3/4" XEM NMDC	9.25
6 3/4" NM PONY		2.87	6 3/4" NM PONY		2.87	6 1/2" GAP SUB	1.11
6 3/4" XEM NMDC		9.25	6 3/4" XEM NMDC		9.25	8 3/8" STAB	1.71
6 1/2" GAP SUB		1.11	6 1/2" GAP SUB		1.11	6 3/4" NMDC	9.03
8 3/8" STAB		1.71	8 3/8" STAB		1.71	6 3/4" FILTER SB	0.98
6 3/4" NMDC		9.03	6 3/4" NMDC		9.03	6 1/2" X/O	1.09
6 1/2" X/O		1.09	6 1/2" X/O		1.09		
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TOTAL BHA LENGTH		33.45	TOTAL BHA LENGTH		33.45	TOTAL BHA LENGTH	37.92

SENSOR OFFSETS:		SENSOR OFFSETS:		SENSOR OFFSETS:			
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DIRECTIONAL	13.44	DIRECTIONAL	13.44	DIRECTIONAL	16.93		
GAMMA-RAY	12.05	GAMMA-RAY	12.05	GAMMA-RAY	15.54		



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