

Depth logged:	1123.0 m To 2326.0 m	Mag decl:	13.06 deg.	Other services:
Date logged:	12-Oct-05 To 17-Oct-05	Mag dip:	-69.03 deg.	Directional Drilling, D&I

# Bit Run Summary

Run number		1	2							
Bit size	in.	8.5	8.5							
Bit start depth	m	1123.0	1123.0							
Bit end depth	m	1193.0	2326.0							
Top interval logged	m	1123.0	1123.0							
Bottom interval logged	m	1174.1	2307.1							
Begin log: time		12:50	15:05							
Begin log: date		12-Oct-05	14-Oct-05							
End log: time		15:20	16:55							
End log: date		12-Oct-05	17-Oct -05							
<b>Mud data</b>										
Depth	m	1193.0	2326.0							
Type		KCl/PHPA/Gly.	KCl/PHPA/Gly.							
Mud weight	ppg	9.6	10.10							
Solids	%	4.9	7.4							
Chlorides	mg/l	38,500	56,000							
Rm		N/A	N/A							
Rmf		N/A	N/A							
Rmc		N/A	N/A							

Potassium	%	1.1	1.2								
<b>Environmental data</b>											
<b>GR</b>											
Mud weight	ppg	9.6	10.10								
Bit size	in.	8.5	8.5								
<b>Resistivity</b>											
<b>Neutron porosity</b>											
Hole Size		N/A	N/A								
Mud weight		N/A	N/A								
Temperature		N/A	N/A								
Mud salinity		N/A	N/A								
Formation salinity		N/A	N/A								
Recording rate 1	SEC	3.83	3.83								
Recording rate 2	SEC	N/A	N/A								
Filtering GR		3 pt.	3 pt.								
Filtering density		N/A	N/A								
Filtering Neutron		N/A	N/A								
Company representative		B. Davis	W. Westman	G. Campbell							
Schlumberger D&M Personnel		R. Borjas	B. Pattarakorn	C. Soper	L. Muskett						

<p style="text-align: center;"><b>DISCLAIMER</b></p> <p>THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.</p>		
<b>OTHER SERVICES FOR RUN1</b> Directional Drilling Directional Surveys D&I	<b>OTHER SERVICES FOR RUN2</b> Directional Drilling Directional Surveys D&I	<b>OTHER SERVICES FOR RUN</b>
<b>REMARKS: RUN NUMBER 1</b> Depth is referenced to driller's depth  Gamma Ray corrected for Tool Size, Bit Size and Mud weight  Gamma Ray not corrected for Potasium  Mud type is KCl/PHPA/Glycol.  8-1/2 in. hole was drilled from 1123.0m to 1193.0m  POOH due to bad cement condition.	<b>REMARKS: RUN NUMBER 2</b> Depth is referenced to driller's depth  Gamma Ray corrected for Tool Size, Bit Size and Mud weight  Gamma Ray not corrected for Potasium  Mud type is KCl/PHPA/Glycol.  8-1/2 in. hole was drilled from 1123.0m to 2326.0m  POOH due to TD of BMA A20A	<b>REMARKS: RUN NUMBER</b>

<b>EQUIPMENT DESCRIPTION</b>		
RUN1	RUN2	RUN
<p>DOWNHOLE F/</p>	<p>DOWNHOLE F/</p>	

DOWNHOLE E

6-3/4 in. Pov

MDC: 4C  
MEC: 1  
MDI: 1!  
MGR: '   
DHS: V8.

D&I

GR

— 19.5

— 18.9

6-5/8 in. NI  
S/N: ASS'

6-5/8 in. NI  
S/N: ANA-

6-5/8 in. NM Ro  
S/N: GU

7 in. PowerPa

A700GT  
S/N: N07  
1.5 deg. Bent  
8-3/8 in. Motr

Smith PD

OD: 8-1

S73PX S/N: .

— 0.0(

0.2%

Maximum string diar  
All lengths in

DOWNHOLE E

6-3/4 in. Pov

MDC: 4C  
MEC: 1  
MDI: 1!  
MGR: '   
DHS: V8.

D&I

GR

— 19.5

— 18.9

6-5/8 in. NI  
S/N: ASS'

6-5/8 in. NI  
S/N: ANA-

6-5/8 in. NM Ro  
S/N: GU

7 in. PowerPa

A700GT  
S/N: N07  
1.5 deg. Bent  
8-3/8 in. Motr

Smith PD

OD: 8-1

S73PX S/N: .

— 0.0(

0.2%

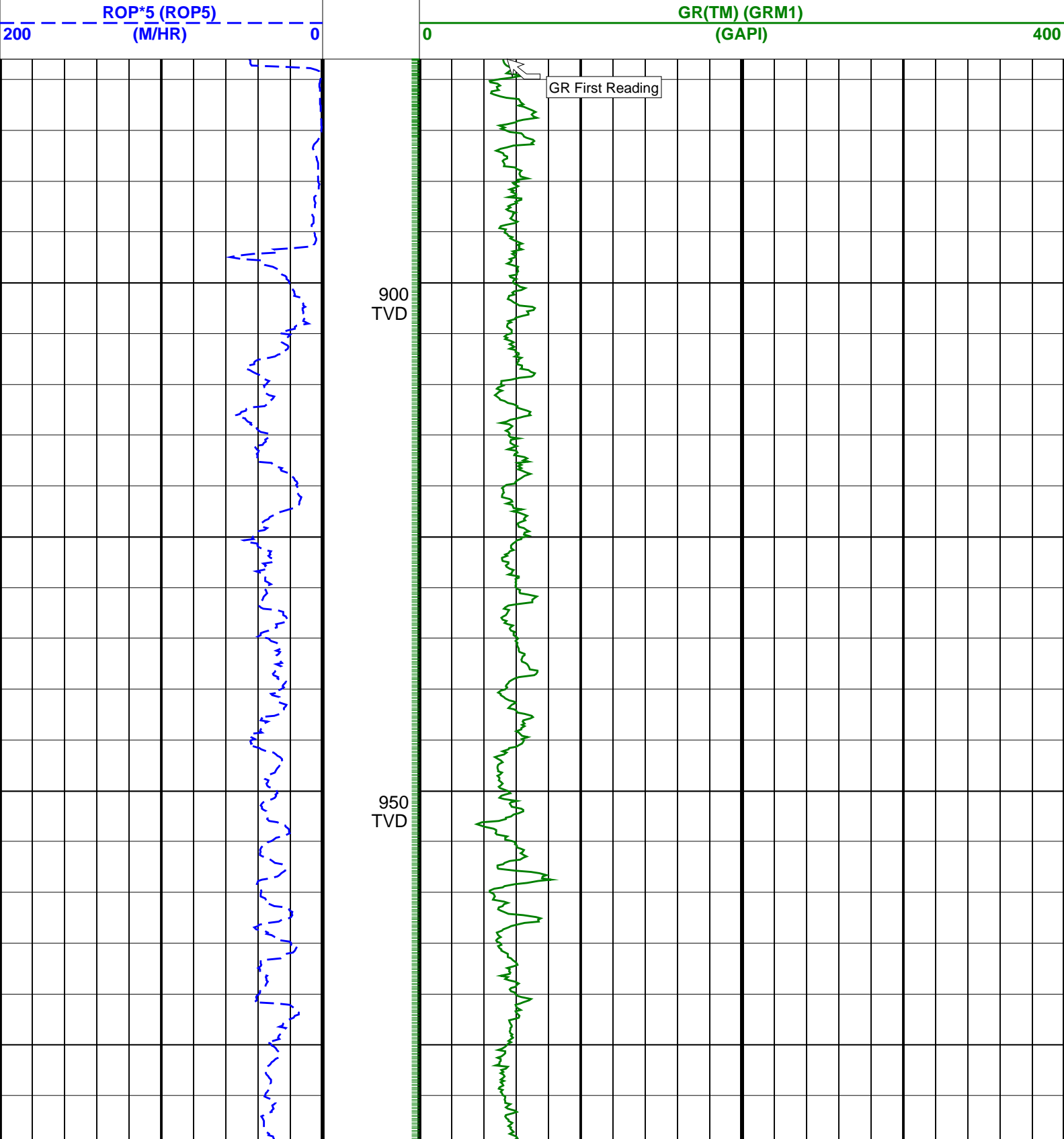
Maximum string diar  
All lengths in

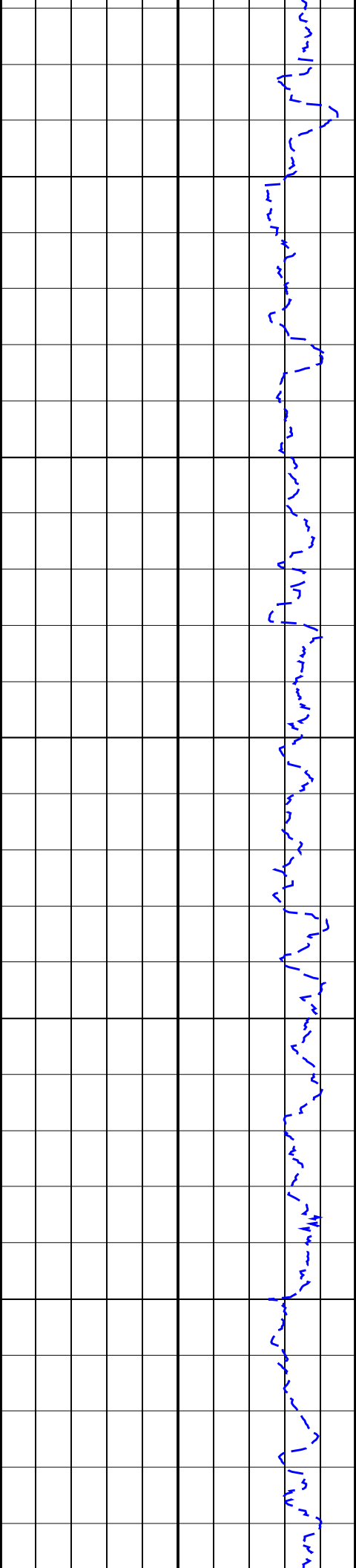
# BMA A20A RT 1:500 TVD

IDEAL Version: ID10\_2C\_01 <TVD> Vertical Scale: 1:500 Graphics File Created: 17-Oct-2005 19:43

## PIP SUMMARY

GR(TM) PIP

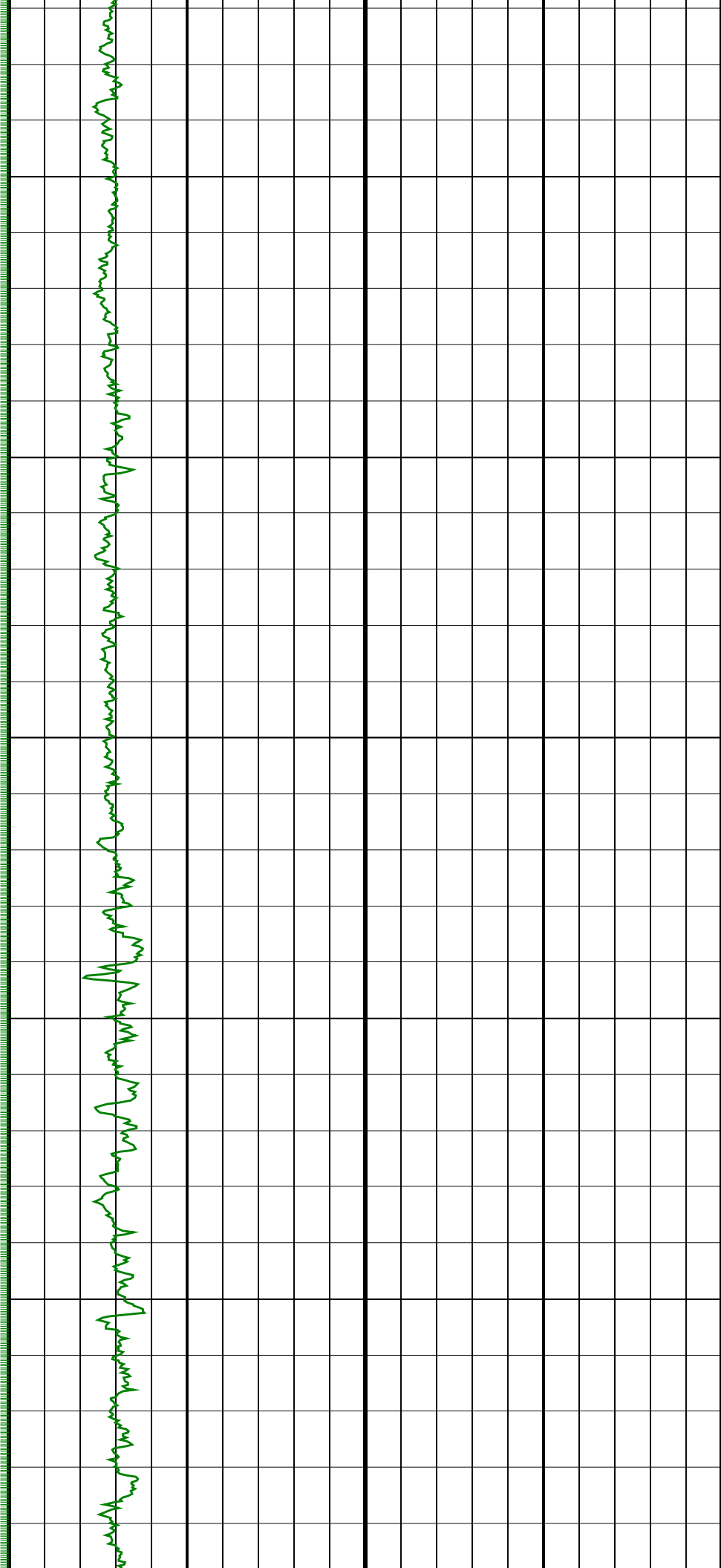


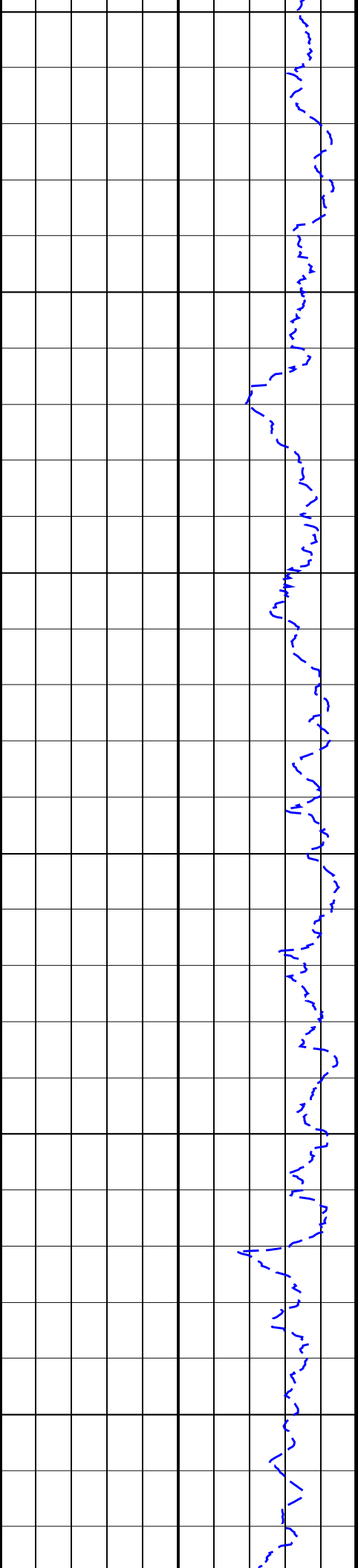


1000  
TVD

1050  
TVD

1100  
TVD

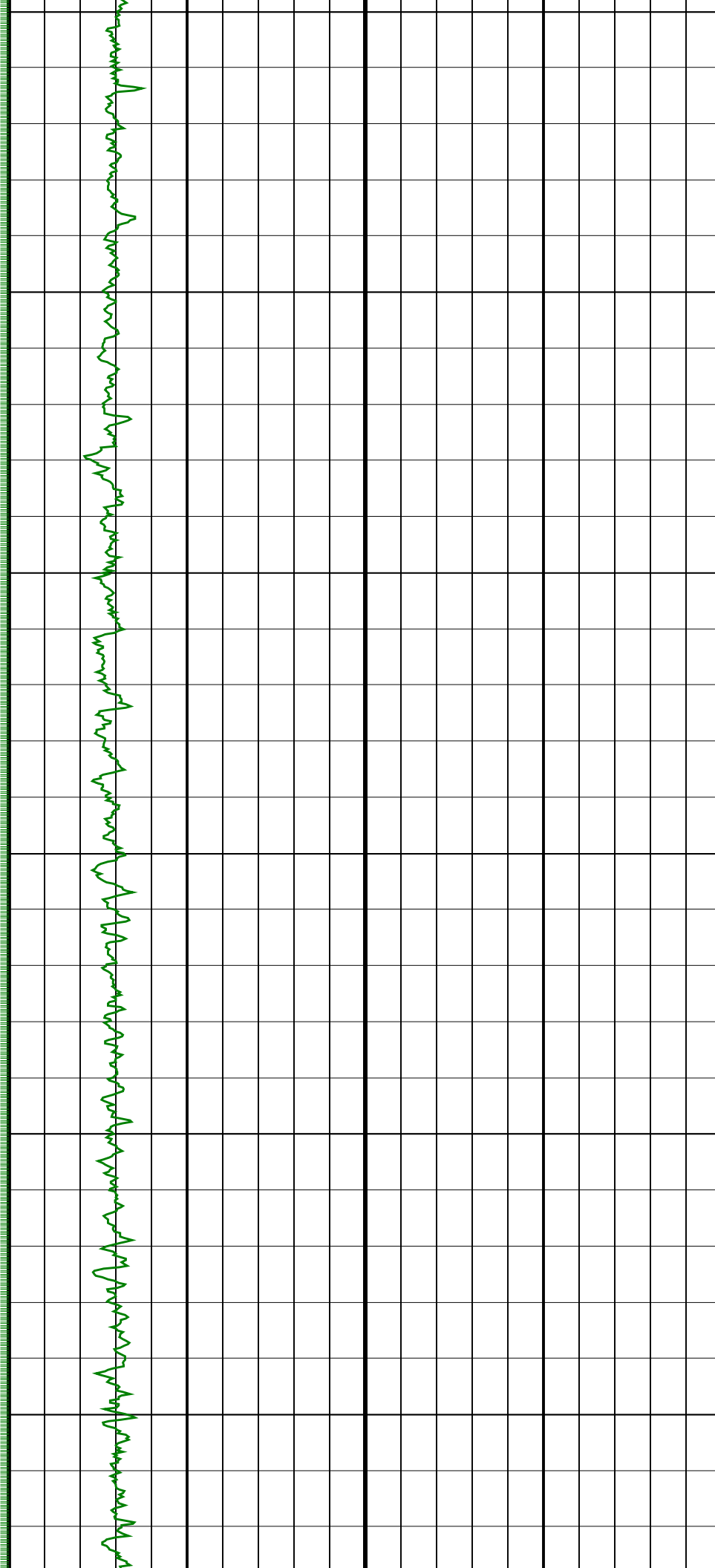


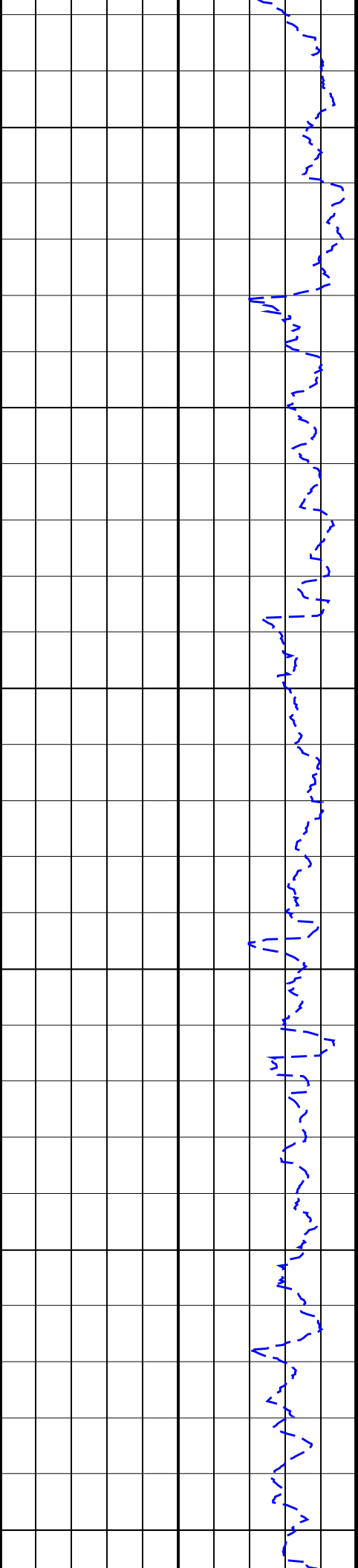


1150  
TVD

1200  
TVD

1250  
TVD

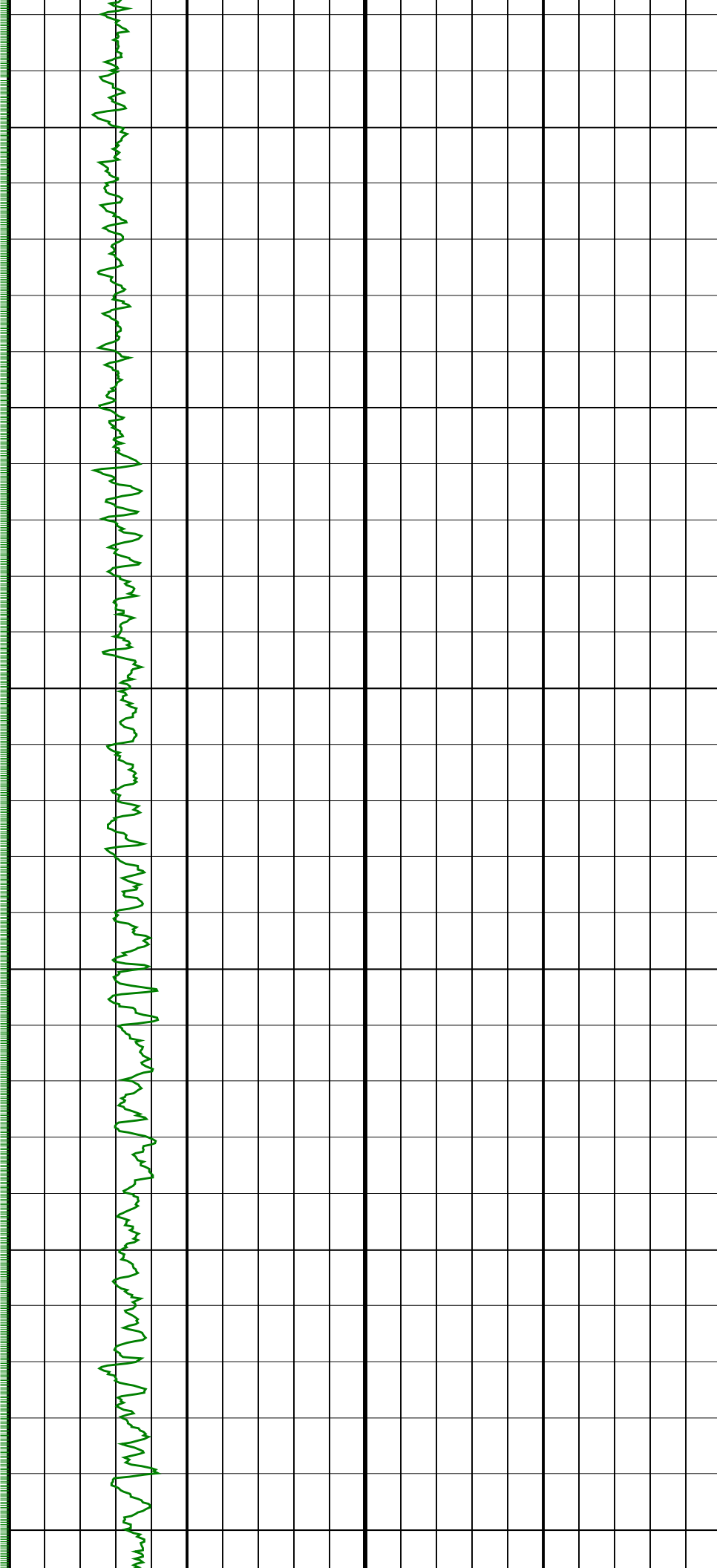


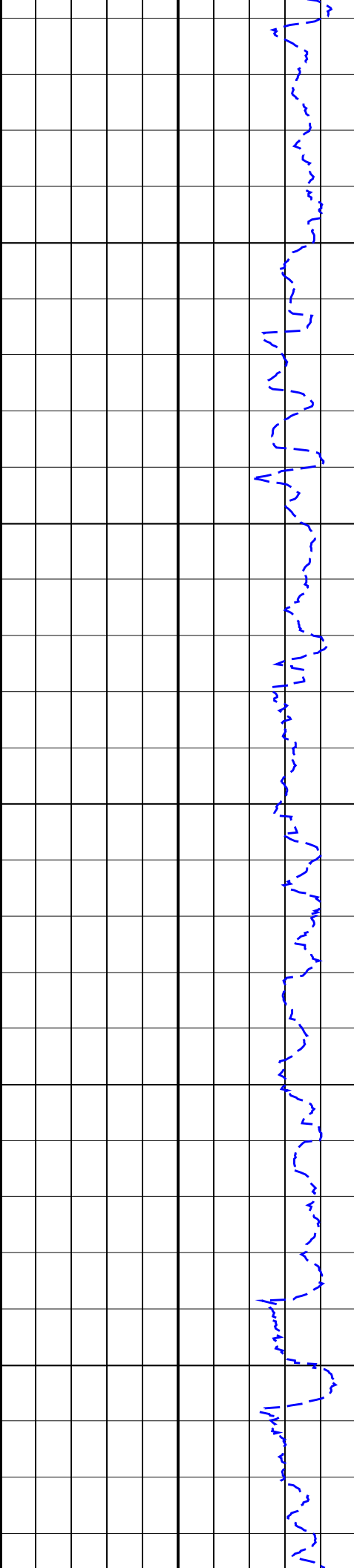


1300  
TVD

1350  
TVD

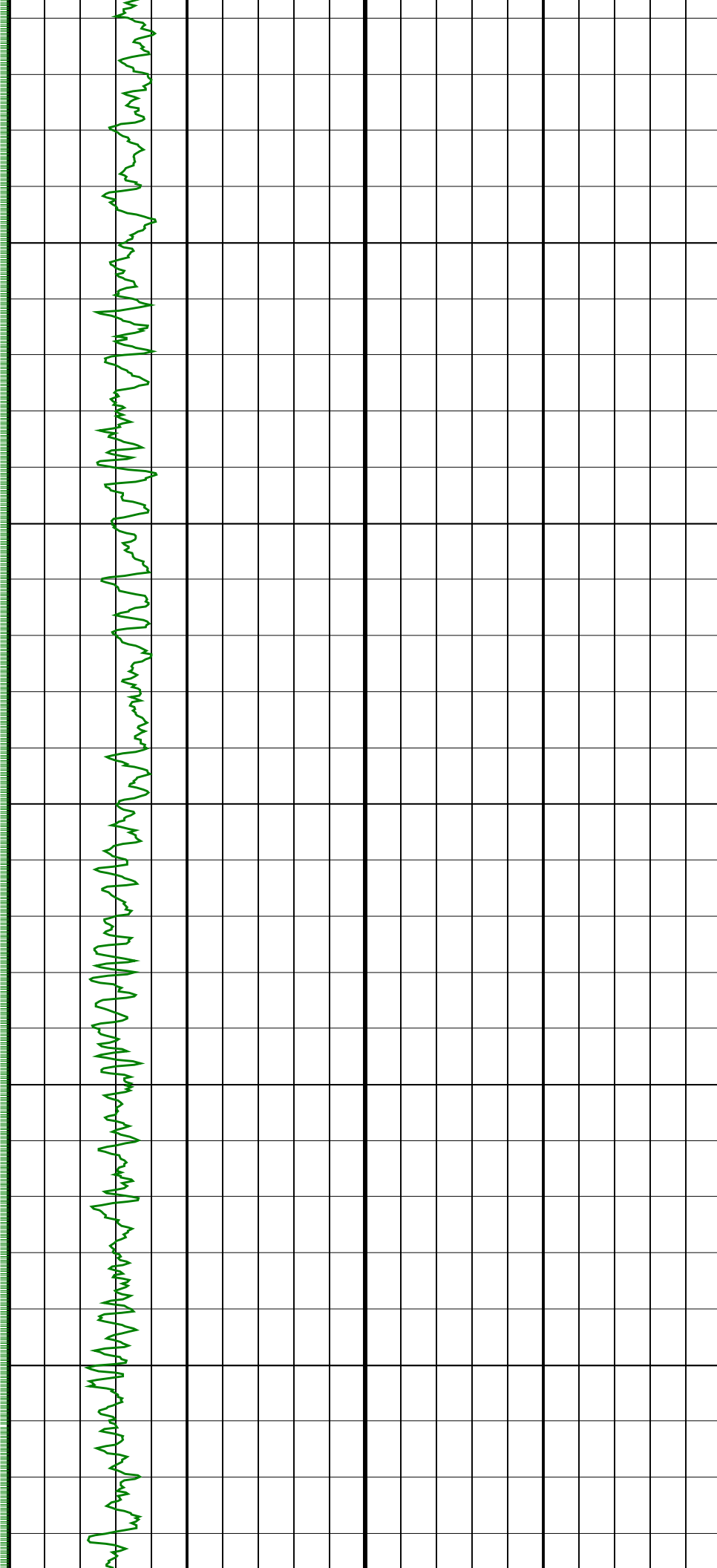
1400  
TVD



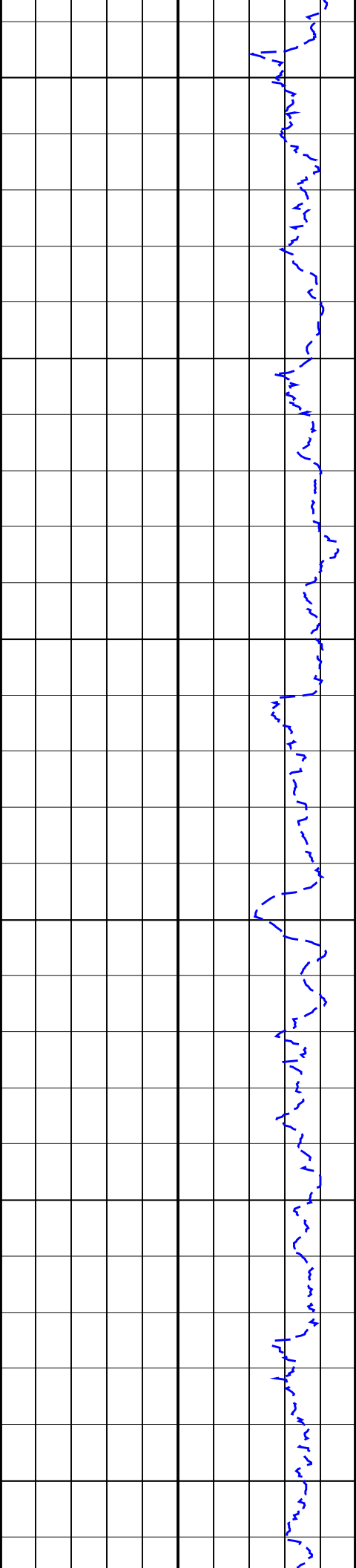


1450  
TVD

1500  
TVD



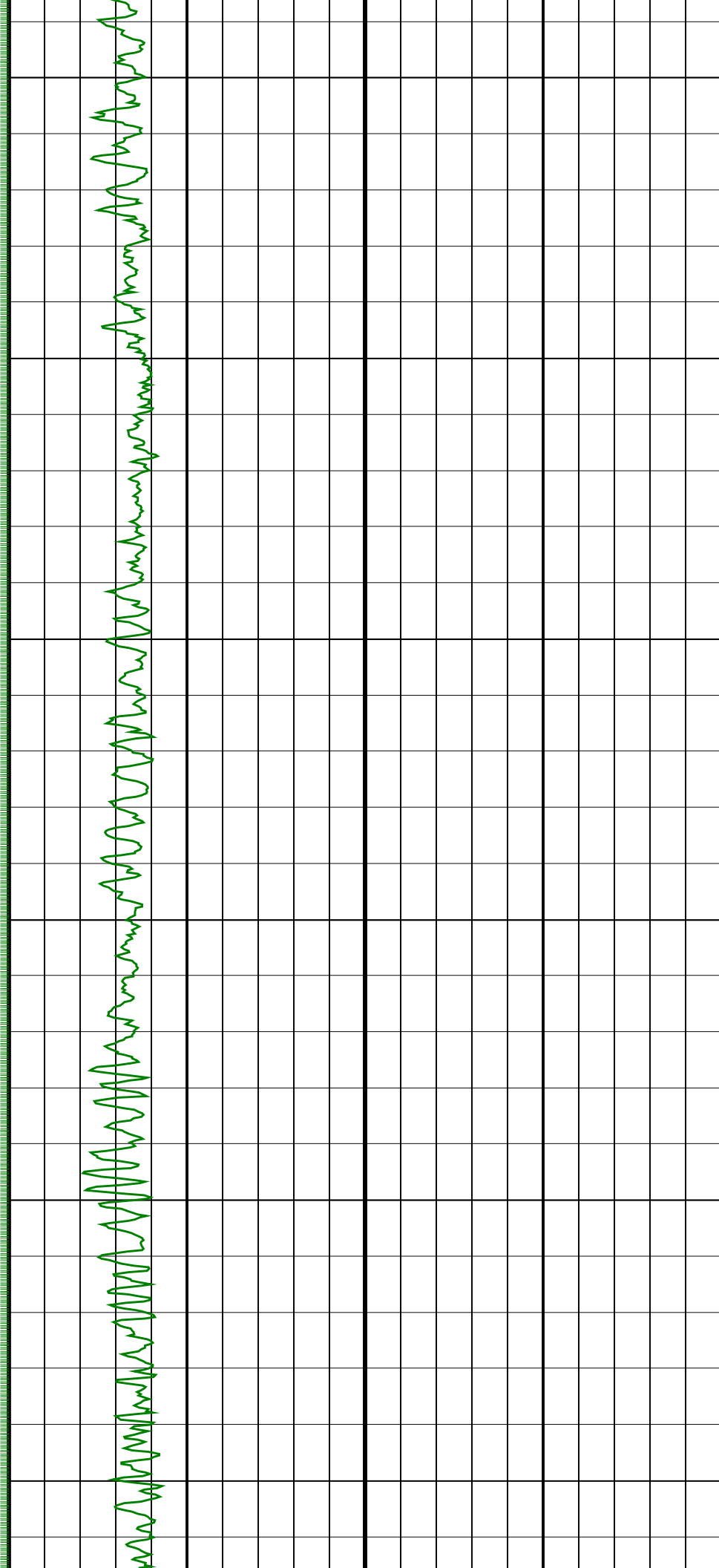


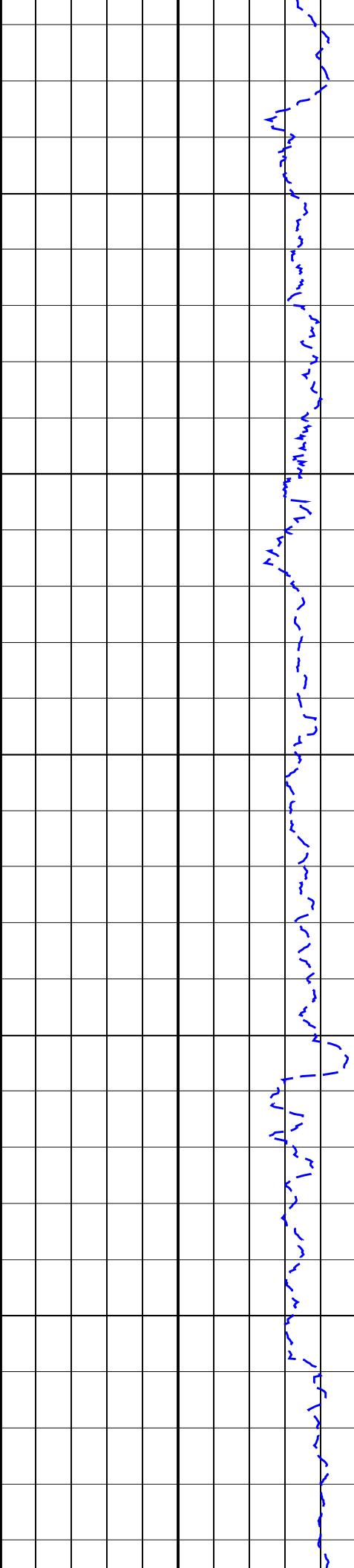


1550  
TVD

1600  
TVD

1650  
TVD

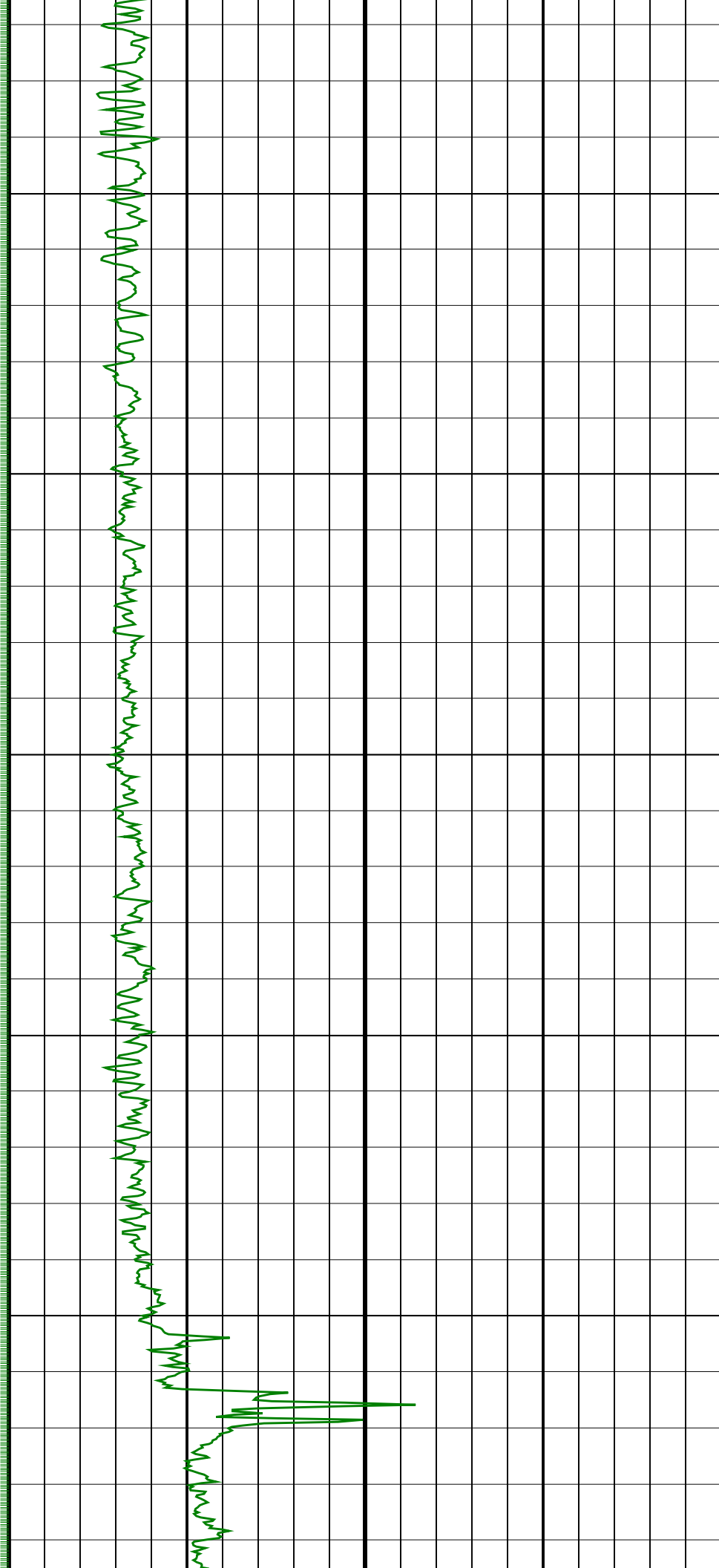


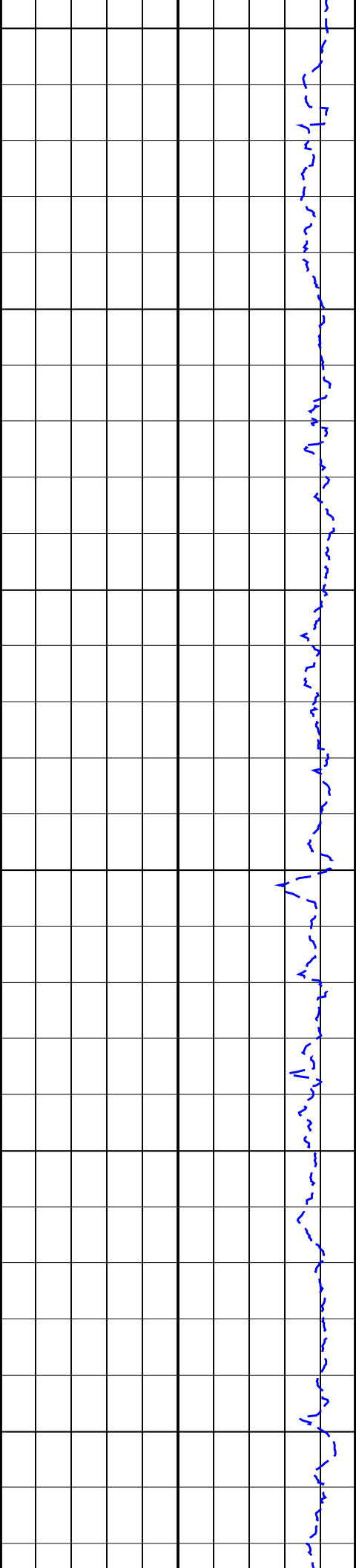


1700  
TVD

1750  
TVD

1800  
TVD

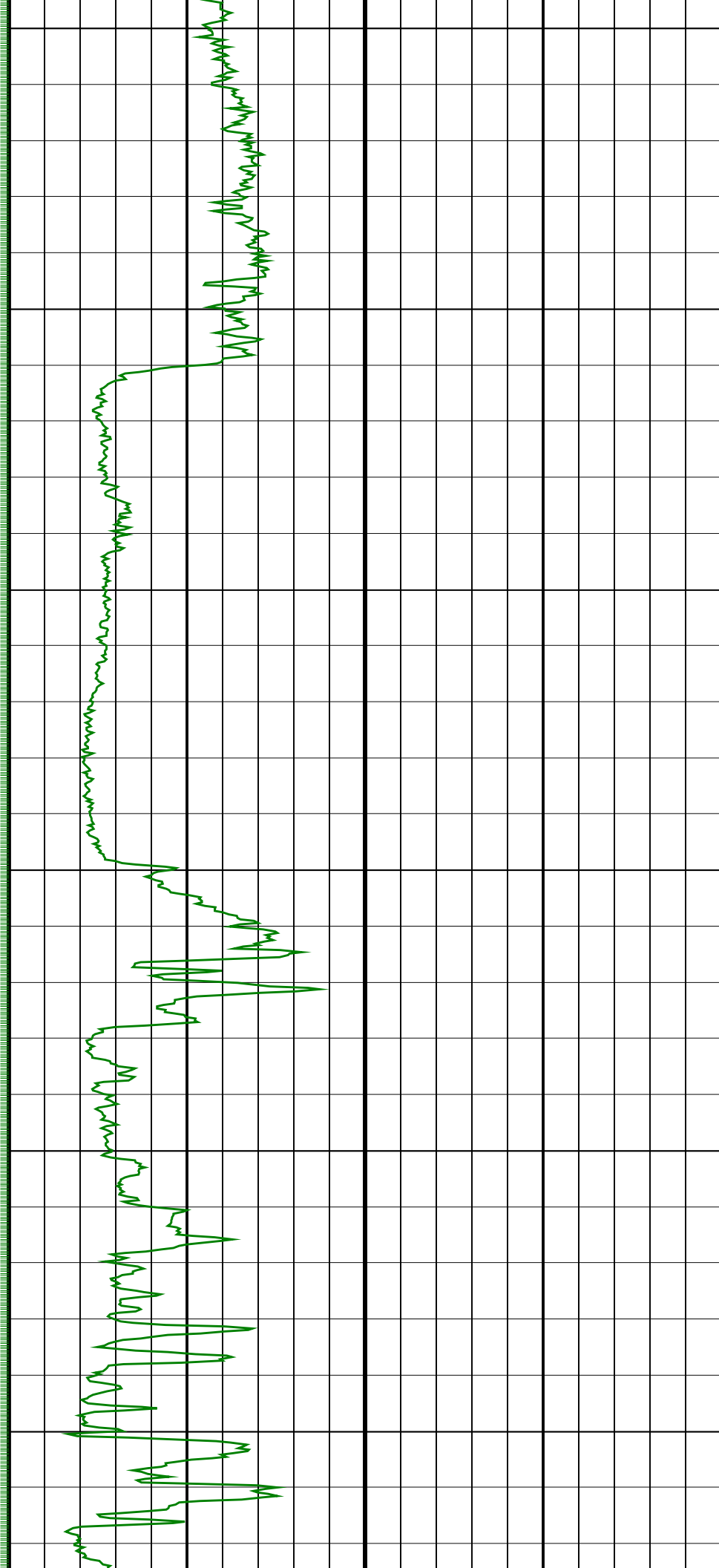


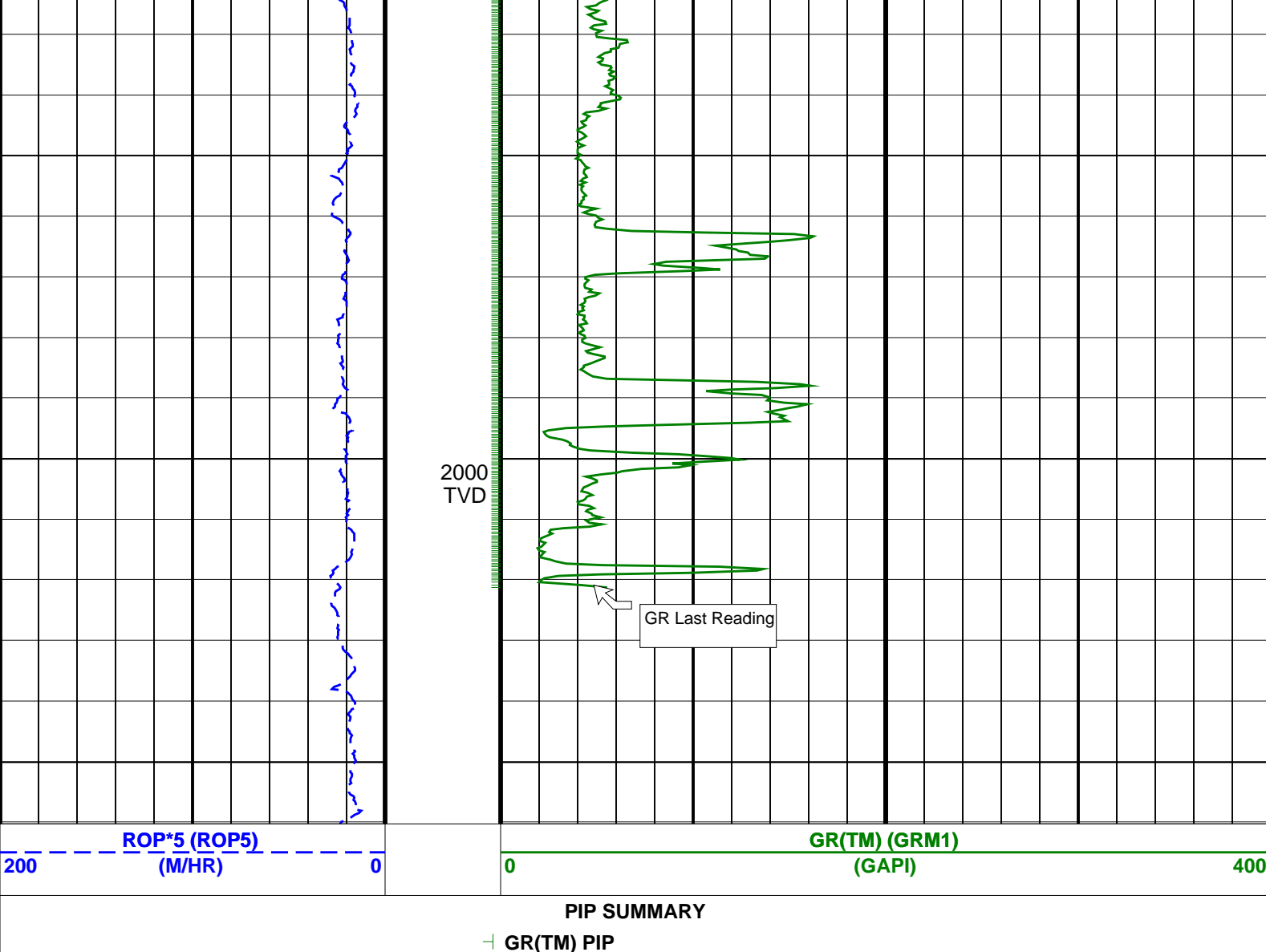


1850  
TVD

1900  
TVD

1950  
TVD





SCHLUMBERGER

Survey report

18-Oct-2005 05:08:33

Page 1 of 3

Client..... ESSO Australia Pty. Ltd.  
Field..... Bream A

Well..... BMA A20A  
API number.....  
Engineer..... R. Borjas, B. Pattarakorn

Rig..... ISDL 453  
STATE..... Victoria

Spud date..... 12-Oct-05  
Last survey date..... 17-Oct-05  
Total accepted surveys... 44  
MD of first survey..... 1123.20 m  
MD of last survey..... 2326.00 m

----- Survey calculation methods-----  
Method for positions..... Minimum curvature  
Method for DLS..... Mason & Taylor

----- Depth reference -----  
Permanent datum..... Mean Sea Level  
Depth reference..... Driller's Depth  
GL above permanent..... -59.40 m  
KB above permanent..... 32.82 m  
DF above permanent..... 32.82 m

----- Vertical section origin-----  
Latitude (+N/S-)..... -4.44 m  
Departure (+E/W-)..... 1.75 m

Azimuth from Vsect Origin to target: 230.92 degrees

----- Geomagnetic data -----  
Magnetic model..... BGM version 2005  
Magnetic date..... 10-Oct-2005  
Magnetic field strength... 1202.80 HCNT  
Magnetic dec (+E/W-)..... 13.06 degrees  
Magnetic dip..... -69.03 degrees

----- MWD survey Reference Criteria -----  
Reference G..... 1000.05 mGal  
Reference H..... 1202.80 HCNT  
Reference Dip..... -69.03 degrees  
Tolerance of G..... (+/-) 2.50 mGal  
Tolerance of H..... (+/-) 6.00 HCNT  
Tolerance of Dip..... (+/-) 0.45 degrees

----- Corrections -----  
Magnetic dec (+E/W-)..... 13.06 degrees  
Grid convergence (+E/W-).. -0.48 degrees  
Total az corr (+E/W-)..... 13.54 degrees  
(Total az corr = magnetic dec - grid conv)  
Survey Correction Type ...:  
I=Sag Corrected Inclination  
M=Schlumberger Magnetic Correction  
S=Shell Magnetic Correction  
F=Failed Axis Correction  
R=Magnetic Resonance Tool Correction  
D=Dmag Magnetic Correction

Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (m)	At Azim (deg)	DLS (deg/100f)	Srvy tool type	Tool Corr (deg)
1	1123.20	50.12	222.56	0.00	877.72	592.09	-407.56	-433.62	595.09	226.77	0.00	TIP	None
2	1130.05	47.49	222.04	6.85	882.23	597.19	-411.37	-437.09	600.23	226.74	0.39	MWD	None
3	1158.55	41.35	225.01	28.50	902.58	616.95	-425.84	-450.80	620.13	226.63	0.23	MWD	None
4	1186.68	36.10	227.21	28.13	924.52	634.48	-438.05	-463.46	637.72	226.61	0.19	MWD	None
5	1215.77	35.19	227.08	29.09	948.16	651.39	-449.58	-475.89	654.67	226.63	0.03	MWD	None
6	1244.76	33.70	227.07	28.99	972.06	667.75	-460.75	-487.89	671.07	226.64	0.05	MWD	None
7	1273.63	30.94	226.91	28.87	996.46	683.15	-471.28	-499.18	686.50	226.65	0.10	MWD	None
8	1302.40	29.31	226.75	28.77	1021.34	697.55	-481.15	-509.71	700.94	226.65	0.06	MWD	None
9	1331.20	25.98	228.95	28.80	1046.85	710.89	-490.13	-519.60	714.29	226.67	0.12	MWD	None
10	1359.76	21.86	230.77	28.56	1072.95	722.47	-497.60	-528.44	725.85	226.72	0.15	MWD	None
11	1388.77	19.17	232.97	29.01	1100.12	732.63	-503.89	-536.43	735.98	226.79	0.10	MWD	None
12	1417.07	15.02	239.52	28.24	1127.11	740.88	-508.54	-543.29	744.16	226.89	0.16	MWD	None
13	1445.36	10.81	249.92	28.35	1154.74	747.03	-511.32	-548.96	750.20	227.03	0.17	MWD	None
14	1474.78	9.02	260.03	29.42	1183.72	751.66	-512.66	-553.82	754.68	227.21	0.08	MWD	None
15	1502.94	7.99	258.30	28.16	1211.57	755.32	-513.44	-557.91	758.21	227.38	0.04	MWD	None
16	1531.72	7.61	252.76	28.78	1240.09	758.87	-514.41	-561.69	761.65	227.52	0.03	MWD	None
17	1560.64	7.50	256.14	28.92	1268.76	762.35	-515.43	-565.35	765.05	227.64	0.02	MWD	None
18	1588.81	7.68	254.24	28.17	1296.68	765.75	-516.39	-568.95	768.35	227.77	0.01	MWD	None
19	1617.61	7.60	252.84	28.80	1325.22	769.28	-517.47	-572.62	771.80	227.90	0.01	MWD	None
20	1646.36	7.28	251.97	28.75	1353.73	772.74	-518.59	-576.17	775.18	228.01	0.01	MWD	None
21	1675.14	7.18	253.68	28.78	1382.28	776.10	-519.66	-579.63	778.47	228.12	0.01	MWD	None
22	1703.77	6.89	255.33	28.63	1410.70	779.32	-520.60	-583.01	781.62	228.24	0.01	MWD	None
23	1733.18	6.64	254.42	29.41	1439.90	782.48	-521.51	-586.35	784.71	228.35	0.01	MWD	None
24	1761.59	6.22	258.30	28.41	1468.13	785.36	-522.26	-589.44	787.52	228.46	0.02	MWD	None
25	1790.90	6.07	260.30	29.31	1497.28	788.12	-522.84	-592.52	790.22	228.57	0.01	MWD	None
26	1819.91	5.75	257.97	29.01	1526.13	790.75	-523.40	-595.46	792.79	228.68	0.01	MWD	None
27	1848.48	5.62	256.99	28.57	1554.56	793.28	-524.02	-598.22	795.27	228.78	0.01	MWD	None
28	1877.30	5.53	257.37	28.82	1583.24	795.79	-524.64	-600.95	797.74	228.88	0.00	MWD	None
29	1906.02	5.55	256.59	28.72	1611.83	798.28	-525.26	-603.65	800.18	228.97	0.00	MWD	None
30	1934.96	5.39	257.55	28.94	1640.64	800.76	-525.88	-606.34	802.62	229.06	0.01	MWD	None

Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (m)	At Azim (deg)	DLS (deg/100f)	Srvy tool type	Tool Corr (deg)
31	1963.74	5.23	257.27	28.78	1669.29	803.14	-526.46	-608.94	804.96	229.15	0.01	MWD	None
32	1993.31	5.19	255.69	29.57	1698.74	805.56	-527.09	-611.55	807.35	229.24	0.01	MWD	None
33	2020.70	5.03	254.63	27.39	1726.02	807.79	-527.71	-613.91	809.54	229.32	0.01	MWD	None
34	2049.27	5.09	254.20	28.57	1754.48	810.10	-528.39	-616.33	811.83	229.39	0.00	MWD	None
35	2077.81	5.37	254.60	28.54	1782.90	812.48	-529.09	-618.84	814.19	229.47	0.01	MWD	None
36	2106.43	5.47	255.61	28.62	1811.40	814.95	-529.78	-621.45	816.62	229.55	0.00	MWD	None
37	2134.94	5.59	253.27	28.51	1839.77	817.47	-530.52	-624.10	819.12	229.63	0.01	MWD	None
38	2163.87	5.60	251.38	28.93	1868.57	820.09	-531.38	-626.79	821.72	229.71	0.01	MWD	None
39	2192.89	6.08	250.96	29.02	1897.43	822.87	-532.33	-629.58	824.47	229.78	0.02	MWD	None
40	2221.62	6.23	249.36	28.73	1926.00	825.77	-533.38	-632.48	827.36	229.86	0.01	MWD	None
41	2250.35	6.42	249.94	28.73	1954.55	828.77	-534.48	-635.44	830.33	229.93	0.01	MWD	None
42	2278.98	6.58	249.35	28.63	1983.00	831.84	-535.60	-638.48	833.39	230.01	0.01	MWD	None
43	2305.83	6.41	248.34	26.85	2009.68	834.73	-536.70	-641.32	836.26	230.07	0.01	MWD	None
44	2326.00	6.35	248.00	20.17	2029.72	836.87	-537.53	-643.40	838.39	230.12	0.00	Proj.	to TD

Company: **ESSO Australia Pty. Ltd.**

Well: **BMA A20A**  
Field: **Bream A**  
Rig: **ISDL 453**  
State: **Victoria**

**Schlumberger**

**Gamma Ray Service**  
**1:500 True Vertical Depth**  
**Real Time Log**

