

Schlumberger

Company: **Essential Petroleum Resources Limited**

Well: Killarney EPRL 1

Field: PEP 152

Rig: **Hunt Rig #2**
Country: **Australia**

HALS-BHC-PEX-HNG. GR to Surface Scale 1:500			
Rig: Hunt Rig #2		Field: PEP 152	
Location: Datum GDA94 MGA94 Zone 54		Well: Killarney EPRL 1	
Company: Essential Petroleum Resources L			
LOCATION			
Datum GDA94 MGA94 Zone 54		Elev.: K.B. 5.49 m	
Easting 609803.3		G.L. 1.6 m	
Northing 5753917.2		D.F. 5.49 m	
Permanent Datum: <u> </u> AHD		Elev.: <u> </u> 0 m	
Log Measured From: <u> </u> ROTARY TABLE		5.5 m above Perm. Datum	
Drilling Measured From: <u> </u> ROTARY TABLE			
State: Victoria	Max. Well Deviation 2 deg	Longitude 142° 15' 24.22" E	Latitude 38° 21' 22.24" S

[illegible]

Logging Date	18-Jun-2004				
Run Number	1				
Depth Driller	1640 m				
Schlumberger Depth	1634.8 m				
Bottom Log Interval	1632.4 m				
Top Log Interval	255.5 m				
Casing Driller Size @ Depth	9.625 in @ 255.8 m			@	
Casing Schlumberger	255.5 m				
Bit Size	8.500 in				
Type Fluid In Hole	4% KCl-PPHA				
Density	Viscosity	1.128 g/cm3		43 s	
Fluid Loss	PH	6 cm3		8.5	
Source Of Sample	PIT				
RM @ Measured Temperature	0.231 ohm.m			@	13 degC
RMF @ Measured Temperature	0.201 ohm.m			@	12 degC
RMC @ Measured Temperature	0.243 ohm.m			@	13 degC
Source RMF	RMC	PRESS	PRESS		
RM @ MRT	RMF @ MRT	0.093 @ 63	0.080 @ 63	@	@
Maximum Recorded Temperatures	63 degC				
Circulation Stopped	Time	18-Jun-2004		0:00	
Logger On Bottom	Time	18-Jun-2004		16:30	
Unit Number	Location	3170 QEA			
Recorded By	G. Jonsson				
Witnessed By	G. Wakelin-King				

Logging Date				
Run Number				
Depth Driller				
Schlumberger Depth				
Bottom Log Interval				
Top Log Interval				
Casing Driller Size @ Depth		@		
Casing Schlumberger				
Bit Size				
Type Fluid In Hole				
Density	Viscosity			
Fluid Loss	PH			
Source Of Sample				
RM @ Measured Temperature		@		
RMF @ Measured Temperature		@		
RMC @ Measured Temperature		@		
Source RMF	RMC			
RM @ MRT	RMF @ MRT	@	@	@
Maximum Recorded Temperatures				
Circulation Stopped	Time			
Logger On Bottom	Time			
Unit Number	Location			
Recorded By				
Witnessed By				

Run 4

Date Created: 22-JUN-2004 12:26:46

Logging Cable

Type:	7-42V
Serial Number:	78197
Length:	3699.97 M
Conveyance Method:	Wireline
Rig Type:	LAND

Log Sequence:	First Log In the Well
Rig Up Length At Surface:	0.00 M
Rig Up Length At Bottom:	0.00 M
Rig Up Length Correction:	0.00 M
Stretch Correction:	0.80 M
Tool Zero Check At Surface:	0.35 M

1. Depth correlated to downlog.
2. Cable stretch and rig up changes accounted for.
3. IDW wheel corrections set to -2
- 4.
- 5.
- 6.

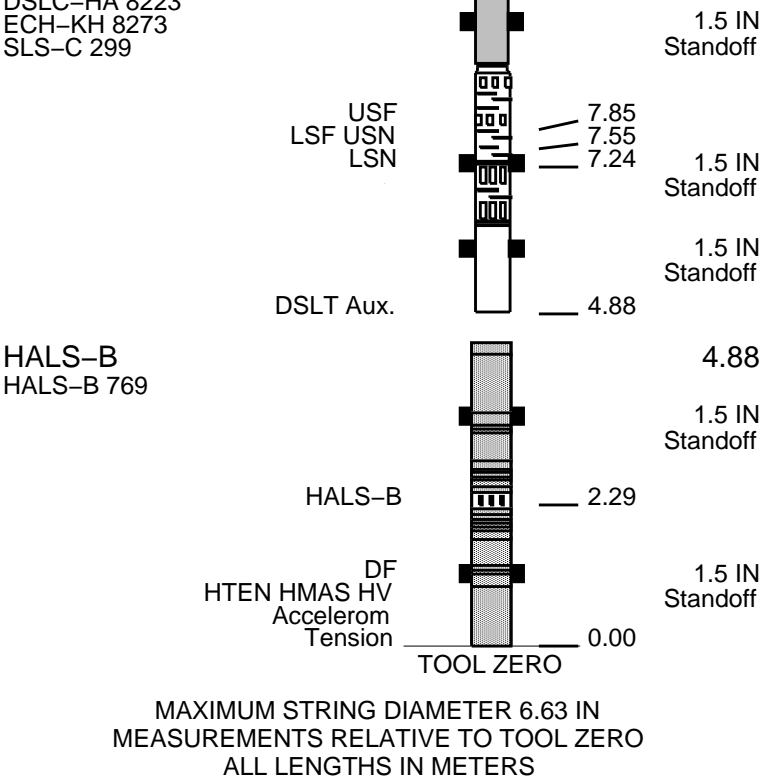
THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (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.

OTHER SERVICES2
OS1:
OS2:
OS3:
OS4:
OS5:

REMARKS: RUN NUMBER 2

Caliper Check in casing reads 8.5364 inch 8.834 expected Corrected for in final (this) log

Instrument	Altitude (m)	Altitude (ft)
BSP	40.84	
BRT-S 22		
SP SPARC	28.73	
LEH-QT 1570	22.56	
LEH-QT 1570		
DTC-H	21.67	
ECH-KC	20.75	
CTEM		
TelStatus		
ToolStatu		
HNGS-BA	20.75	
HNGS-BA 129		
HNSH-BA 3		
Upper_1	20.05	
Lower_2	19.84	
HNGC-A	18.25	
HNGH-A		
HNGC-A 10		
HNGC Stat	17.72	
HGNS HTEM	17.19	
HMCA		
Gamma-Ray	16.96	17.19
HILTB-FTB		
HGNSD-B 1751		
HMCA		
HGNS-H 1775		
NLS-KL		
NSR-F 2111		
HACCZ		
HCNT		
HGR		
HRCC-B 1769		
HRMS-B 1765		
HRGD-B 1760		
GLS-VJ 3739		
MCFL	13.10	
HILT cali	11.44	
HRDD-LS	11.30	
HILT Nucl. LS		
HILT Nucl. SS		
HILT Nucl. BS		
BOW-SPR		
HRDD-SS	11.18	
HRDD-BS		
Neutron F	15.18	
Neutron N	15.03	
HGNS sens	14.32	
DSLT-H	10.59	

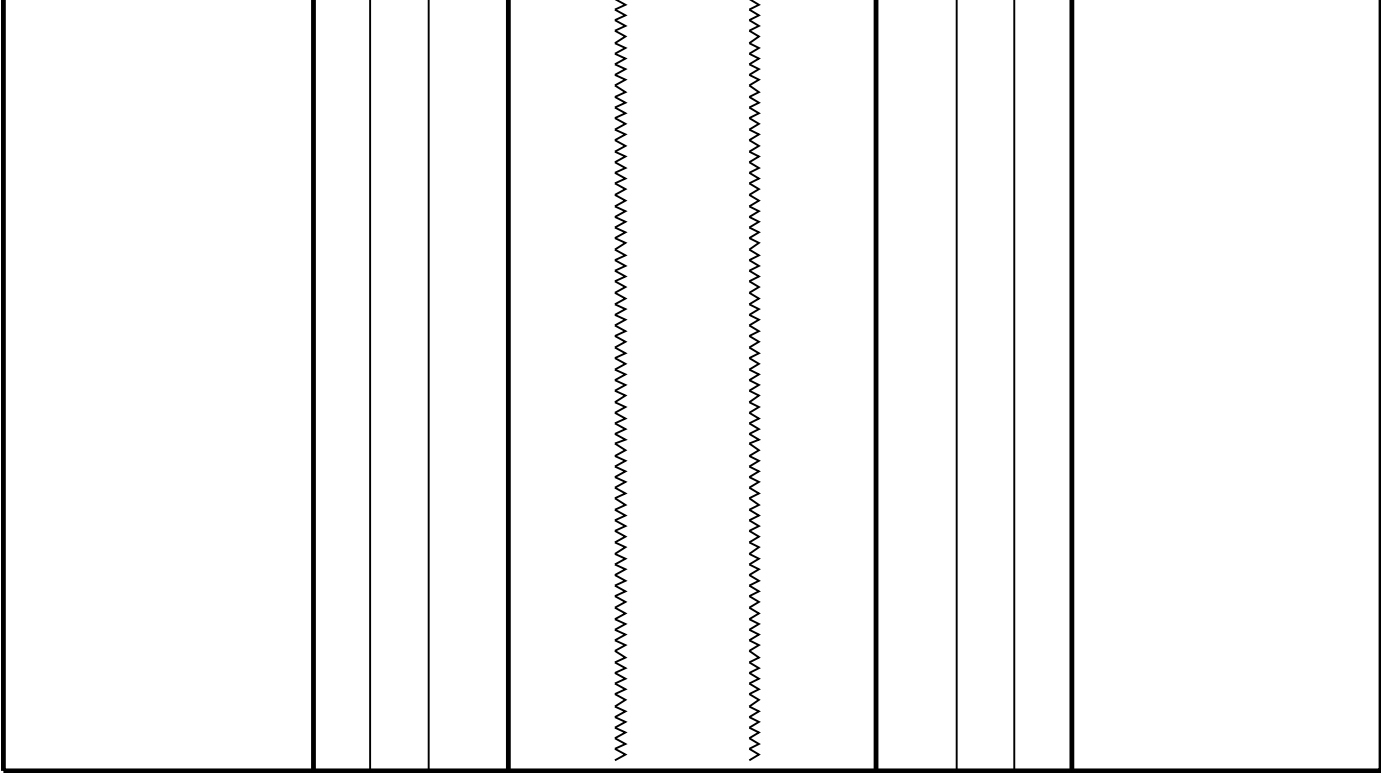


Client: Essential
 Well: Kilarney-1
 Field: Wildcat
 State: Victoria
 Country: Australia

Drawing Date: 6/18/2004
 API #:

Rig Name: Hunt Rig 2
 Reference Datum: KB
 Elevation: 6.9 m

Production String	(in)		(m)	Well Schematic	(m)		(in)		Casing String
	OD	ID	MD		MD	OD	ID		
					0.0	17.500			Borehole Segment Casing String Casing Shoe Borehole Segment Casing String
					0.0	13.375			
					45.6	13.375			
					45.9	12.250			
					0.0	9.625			
									Casing Shoe Borehole Segment
					255.8	9.625			
					258.0	8.500			



Schlumberger

GR– TD to Surface
1:500 Scale

MAXIS Field Log

Input DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_017LUP	FN:16	PRODUCER	21–Jun–2004 14:42	1636.8 M	20.8 M
---------	----------------------------	-------	----------	-------------------	----------	--------

Output DLIS Files

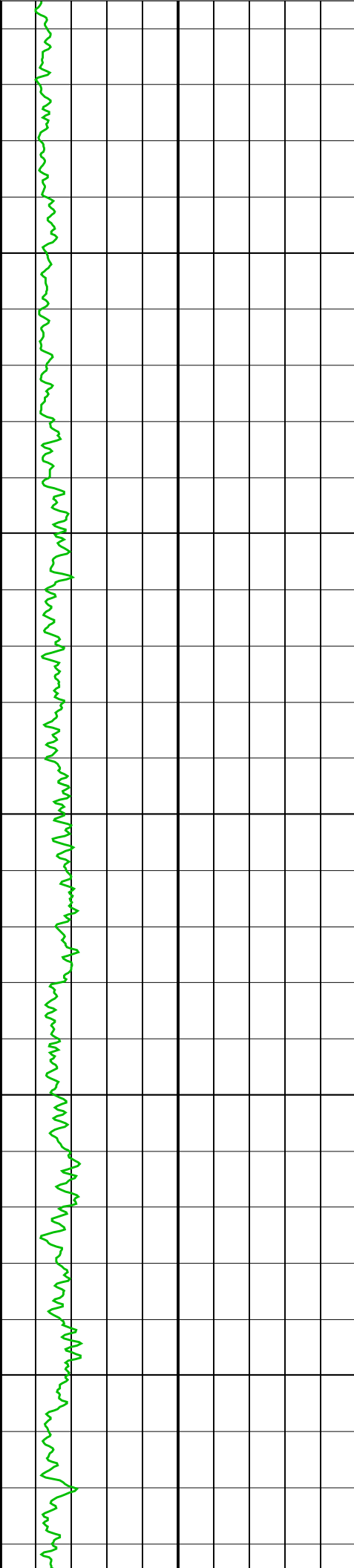
DEFAULT	HALS_SONIC_TLD_MCFL_105PUP	FN:104	PRODUCER	22–Jun–2004 11:44	1636.8 M	27.6 M
---------	----------------------------	--------	----------	-------------------	----------	--------

OP System Version: 10C0–306
MCM

HALS–B	OP10–KP1	DSLT–H	OP10–KP1
HILTB–FTB	OP10–KP1	HNGC–A	OP10–KP1
HNGS–BA	OP10–KP1	DTC–H	10C0–306
BSP	10C0–306		

Gamma Ray (GR)
(GAPI) 150

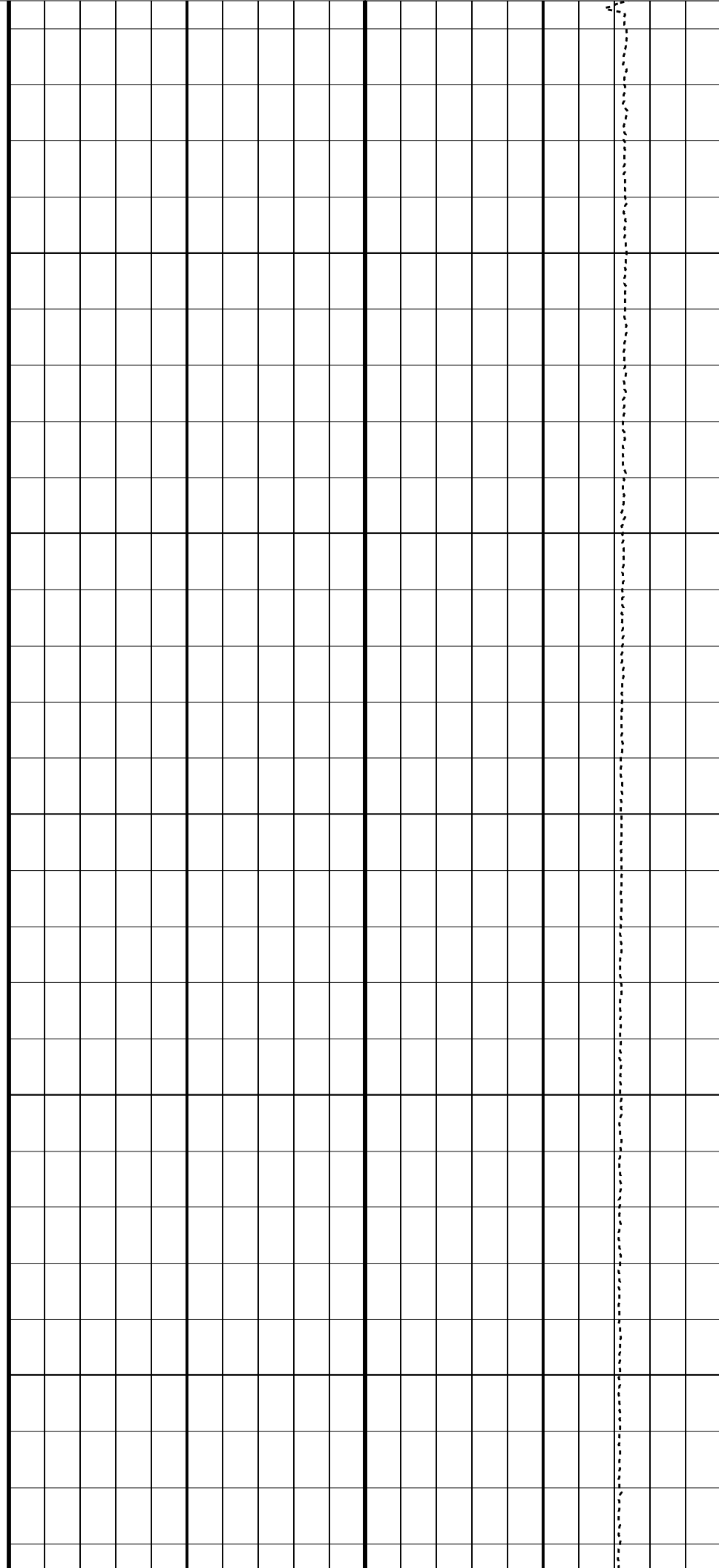
Tension (TENS)
(LBF) 5000 0

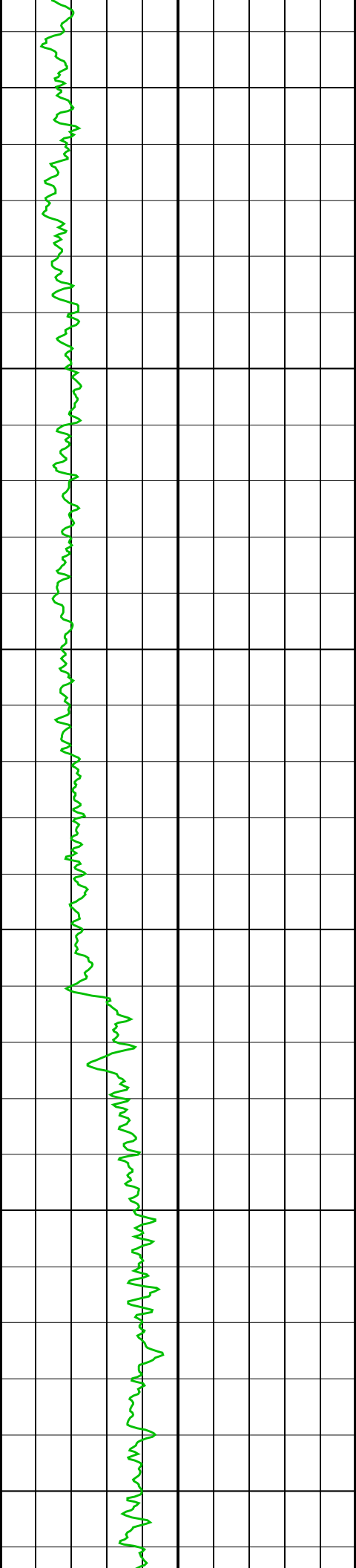


50

100

150

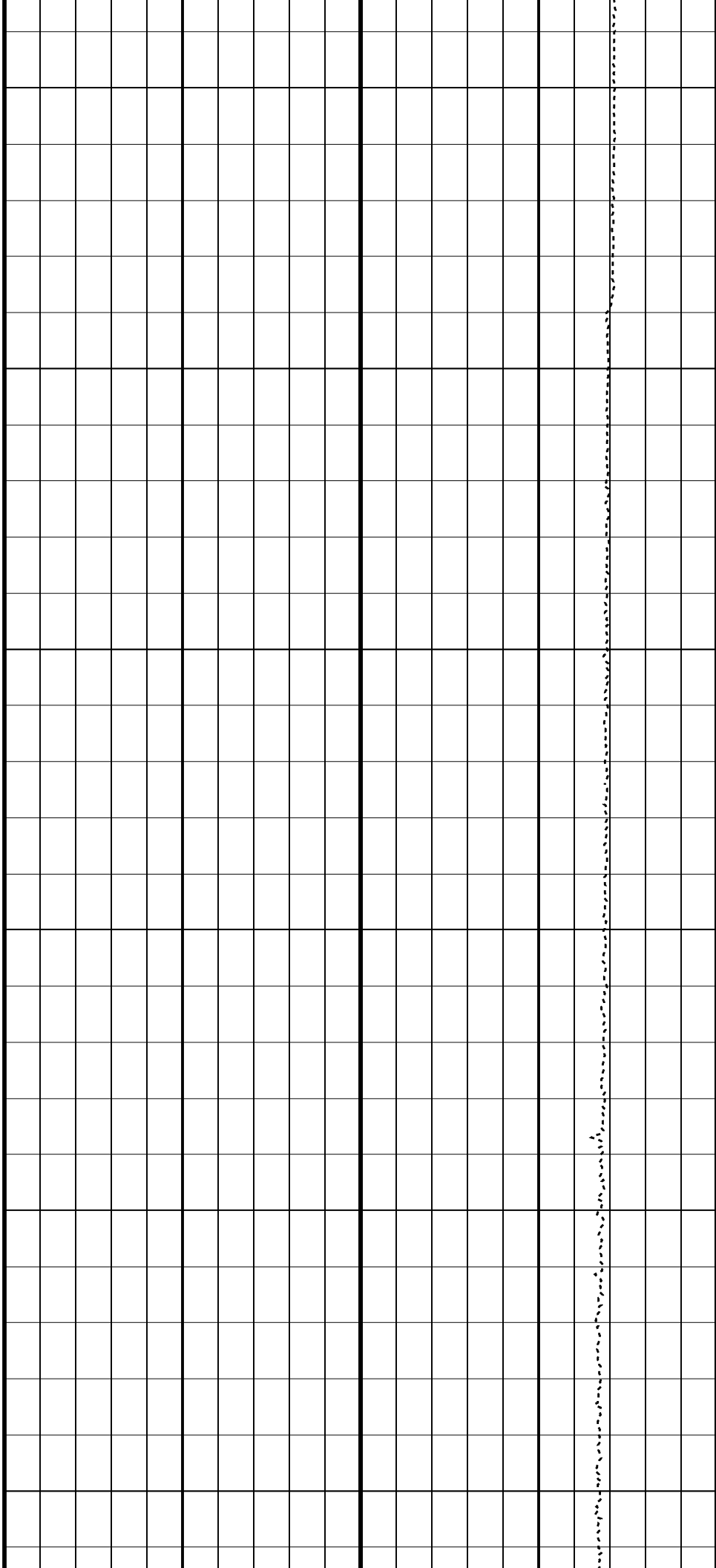


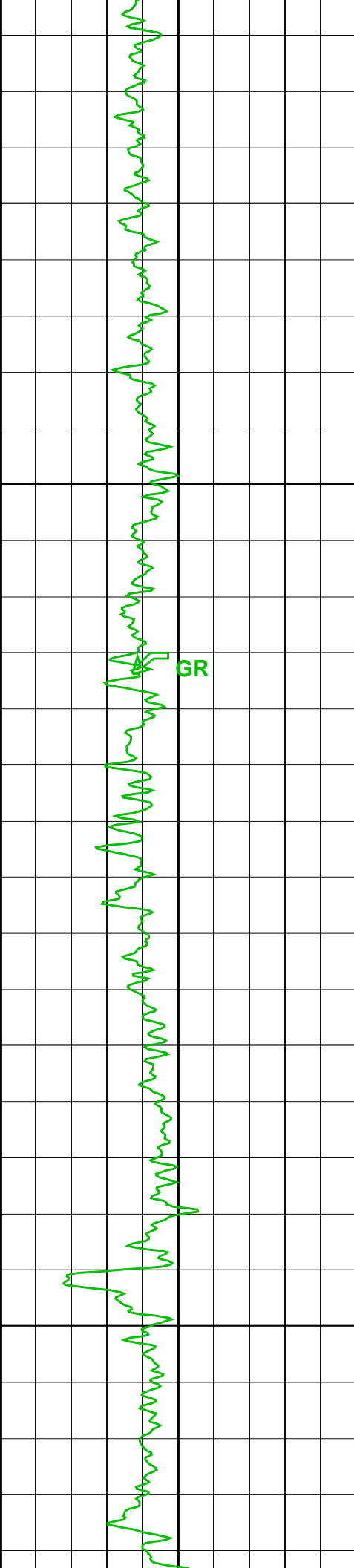


200

250

300

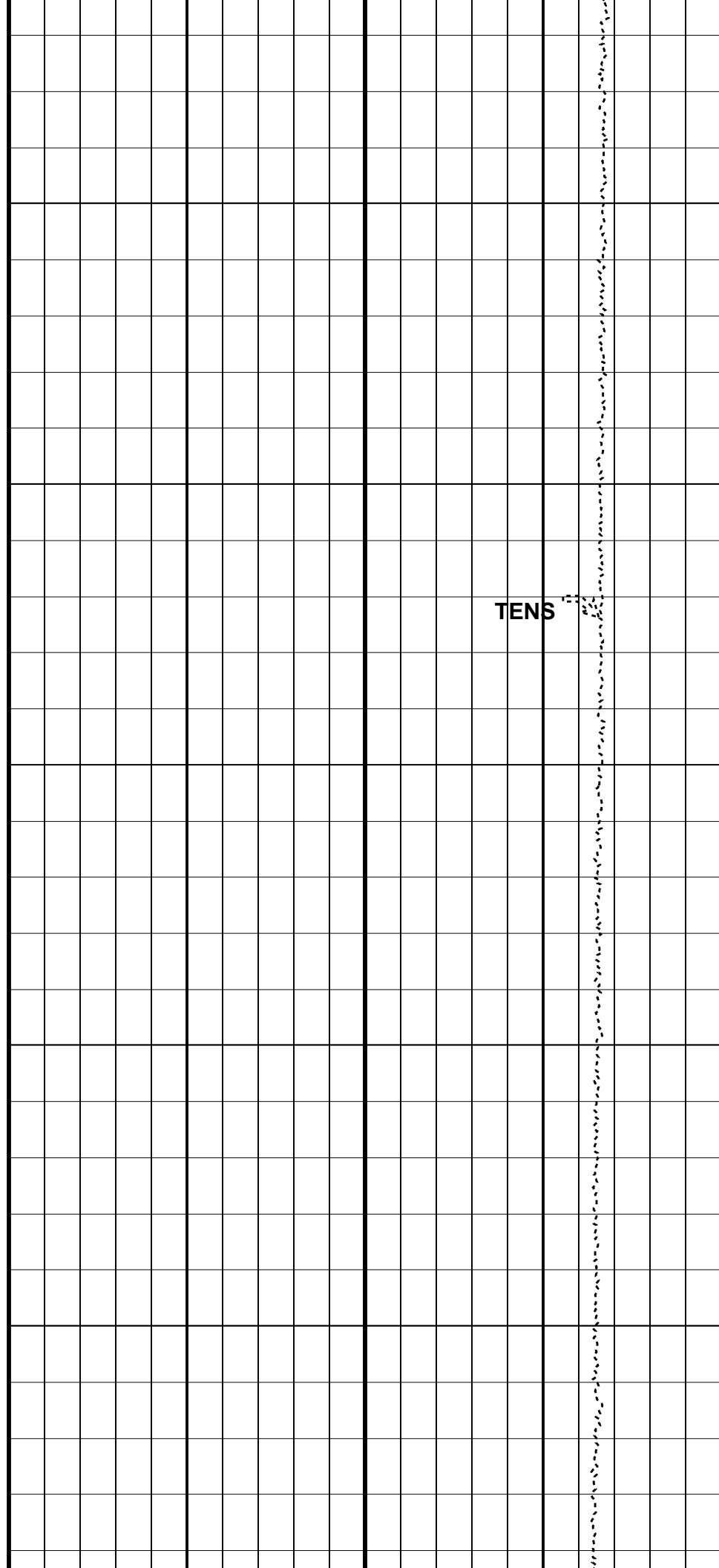


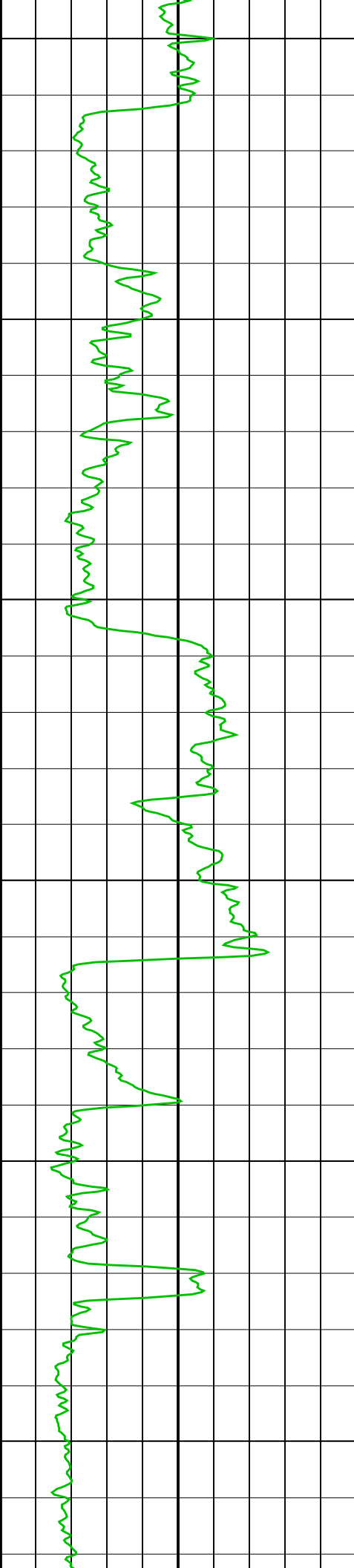


350

400

TENS

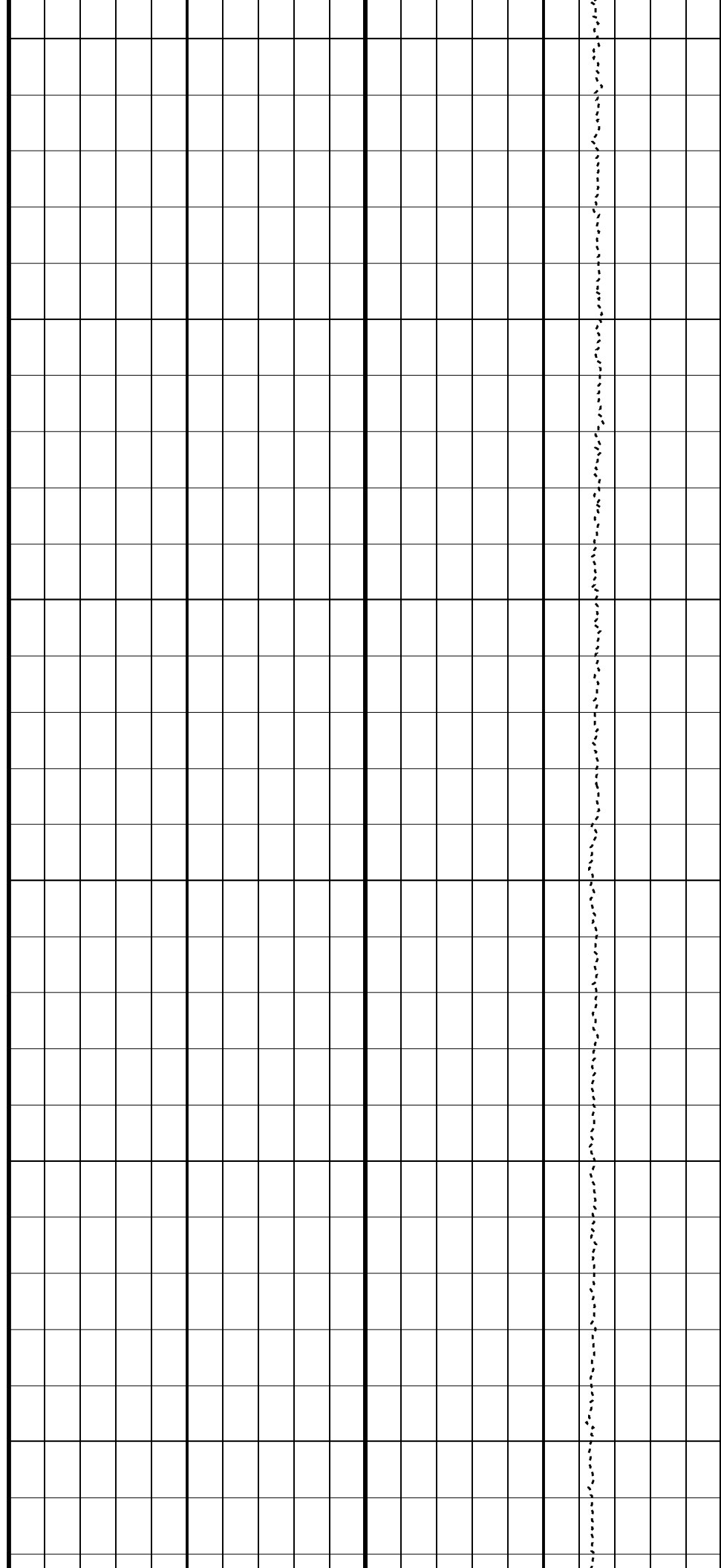


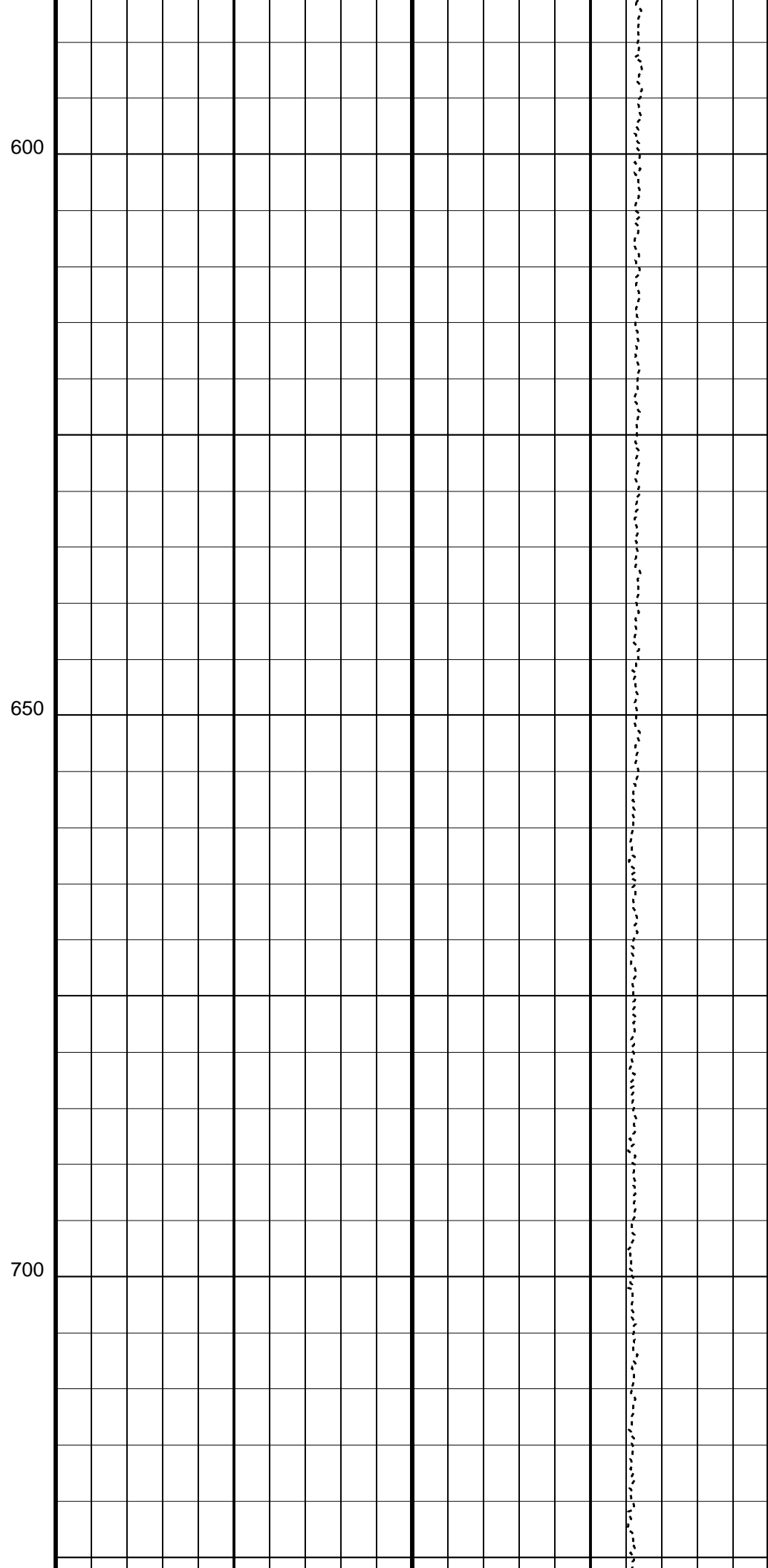
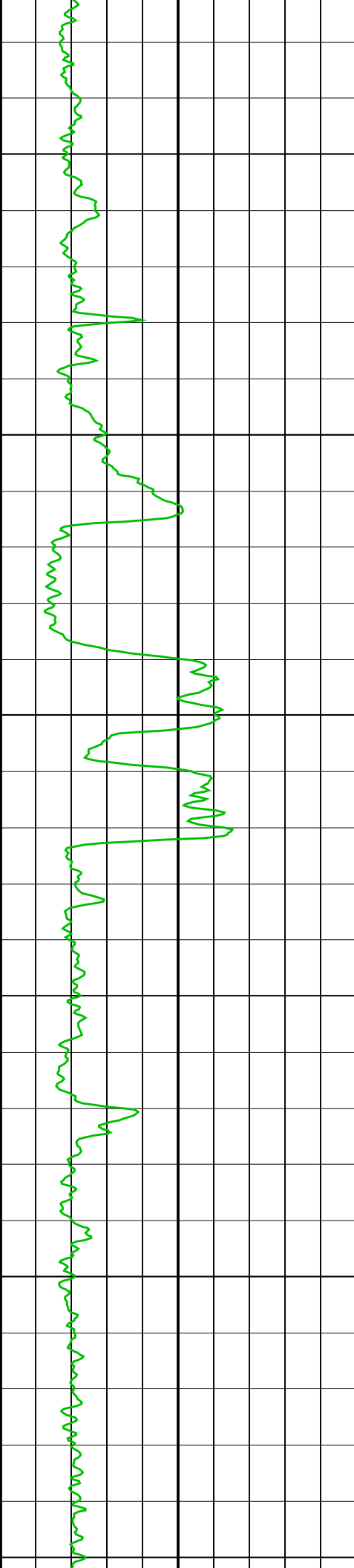


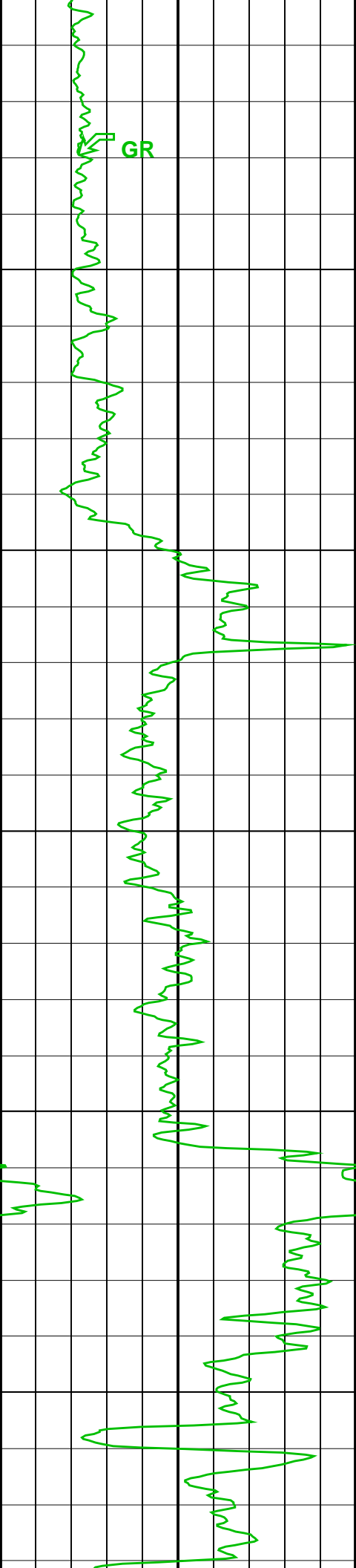
450

500

550





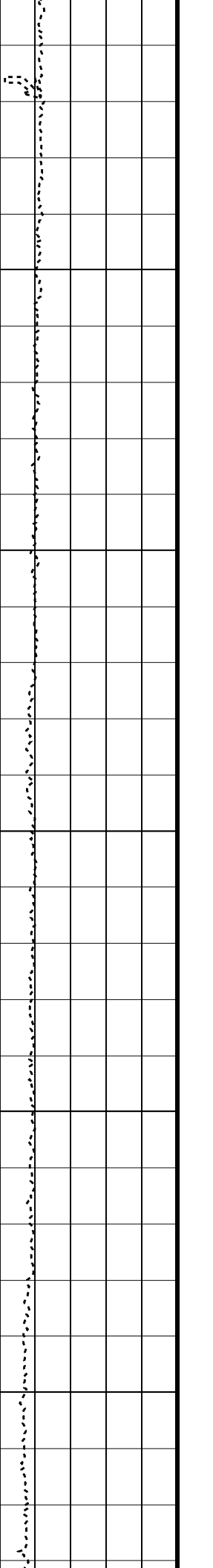


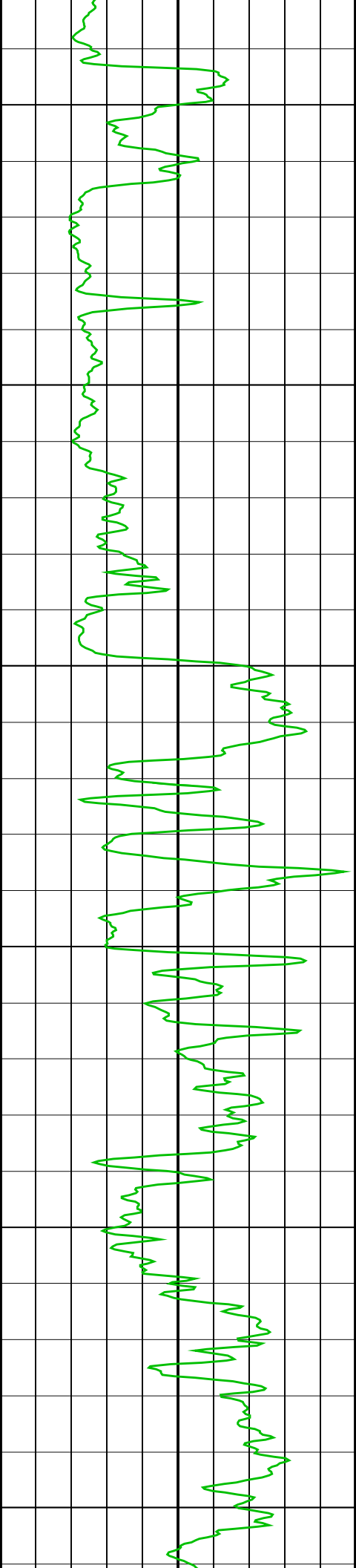
750

800

850

TENS

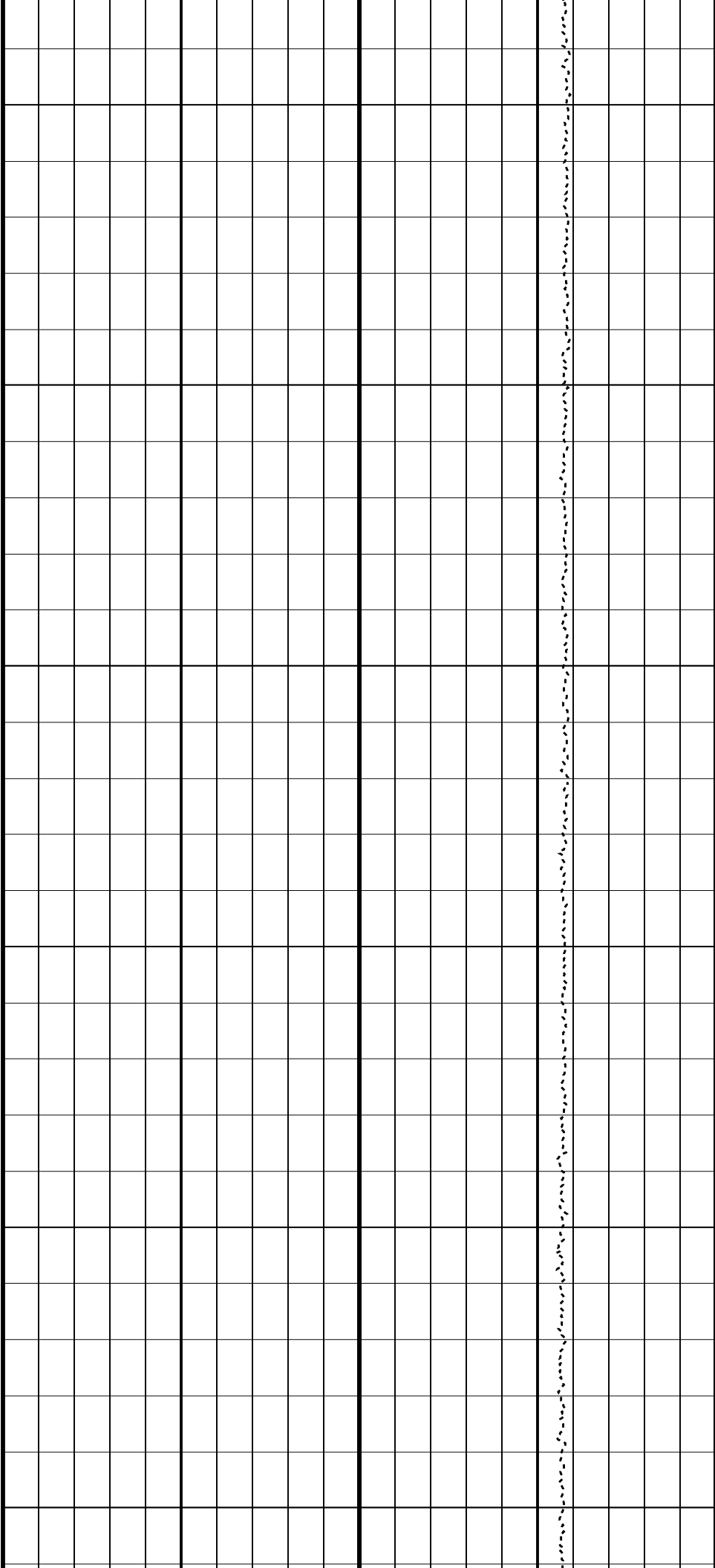


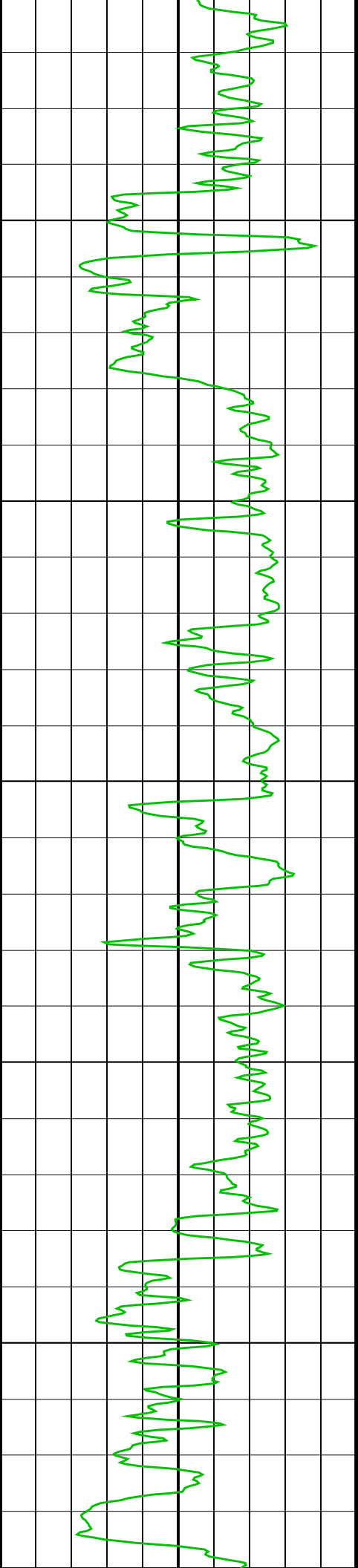


900

950

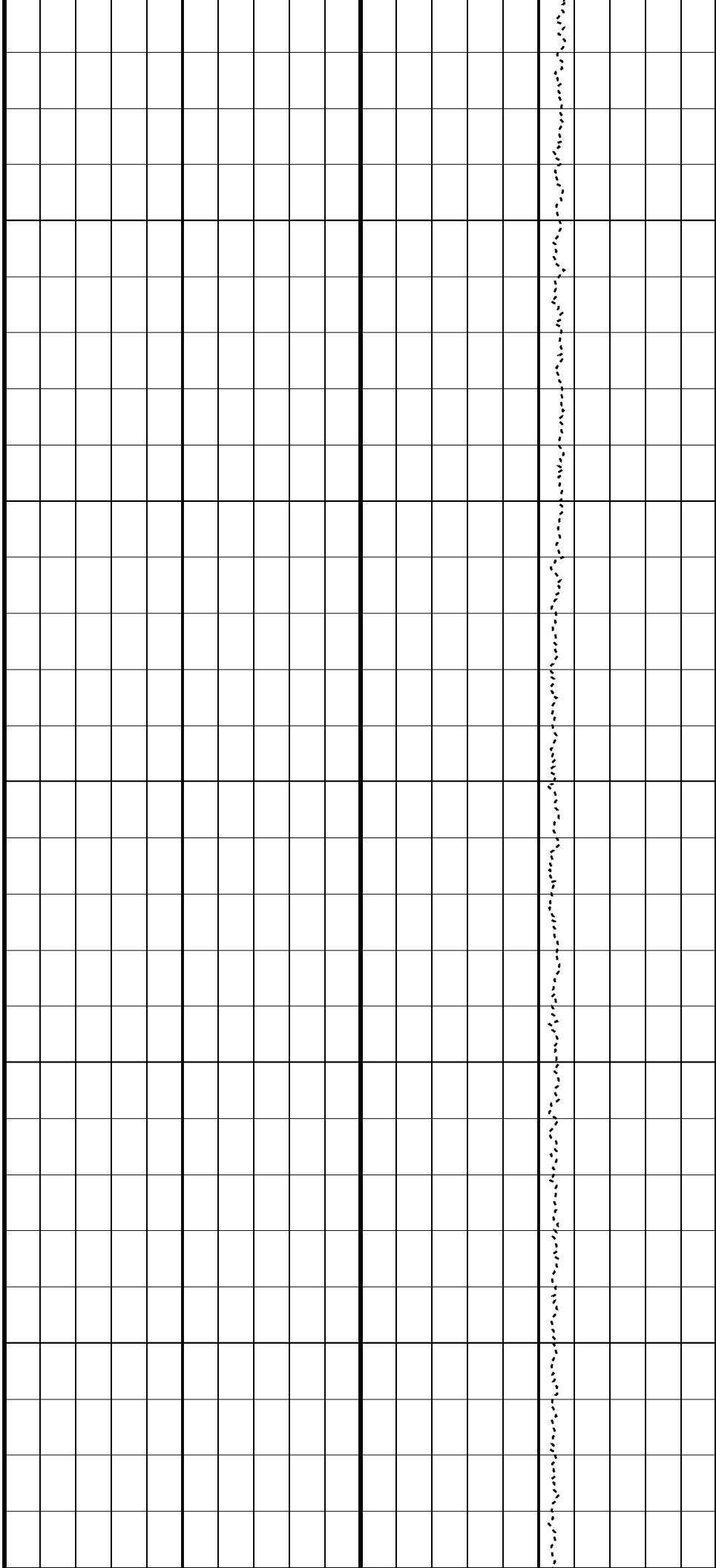
1000

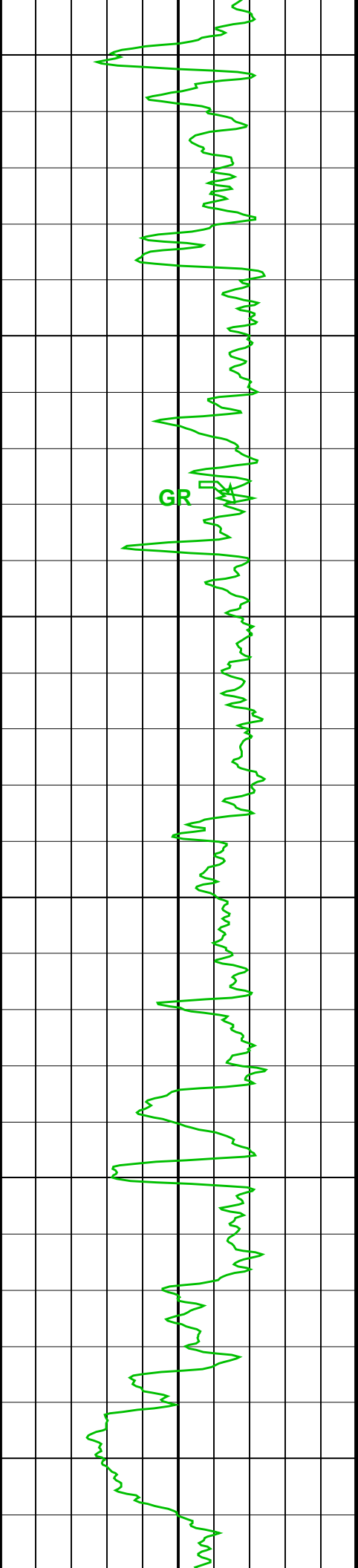




1050

1100



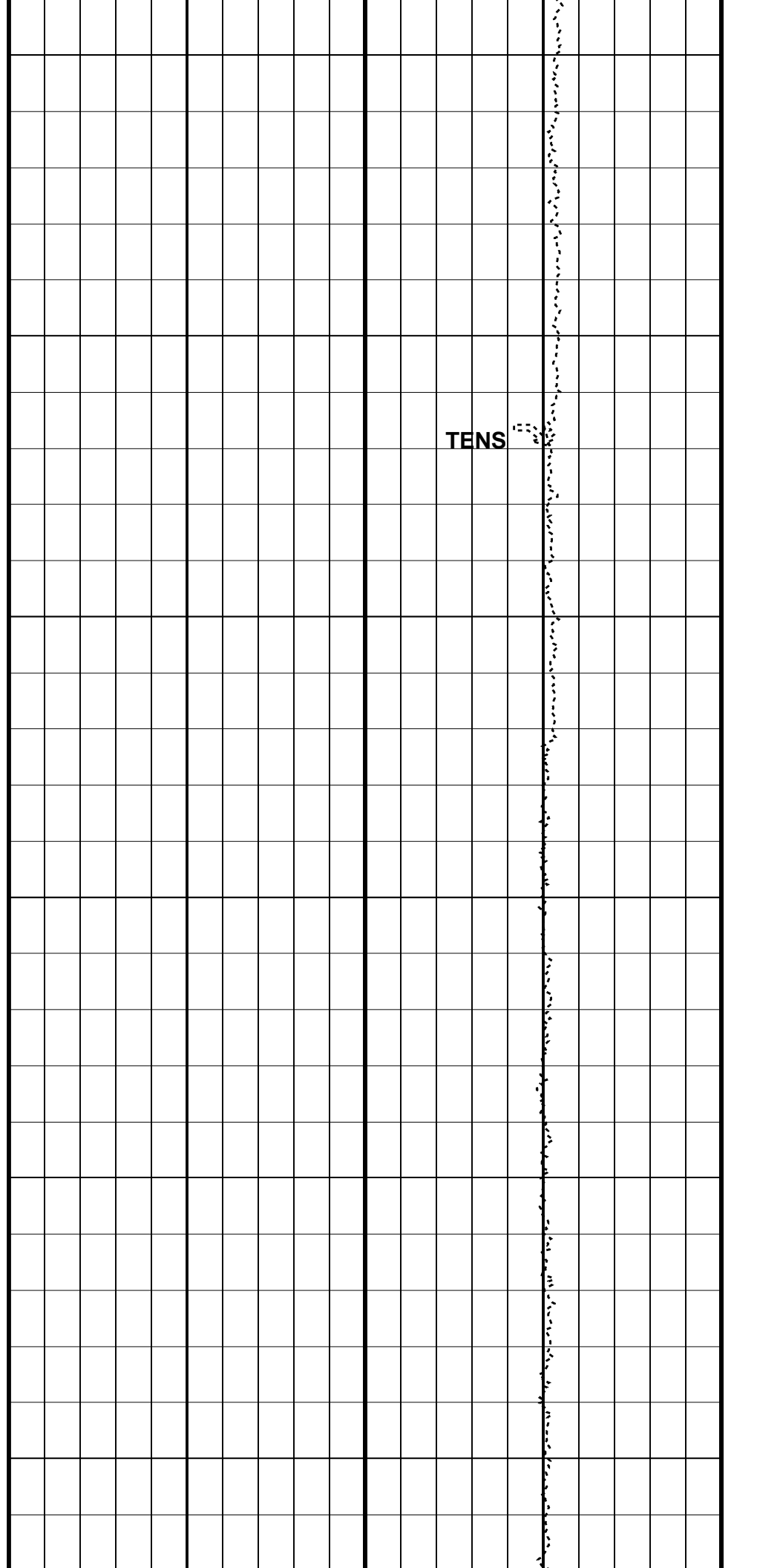


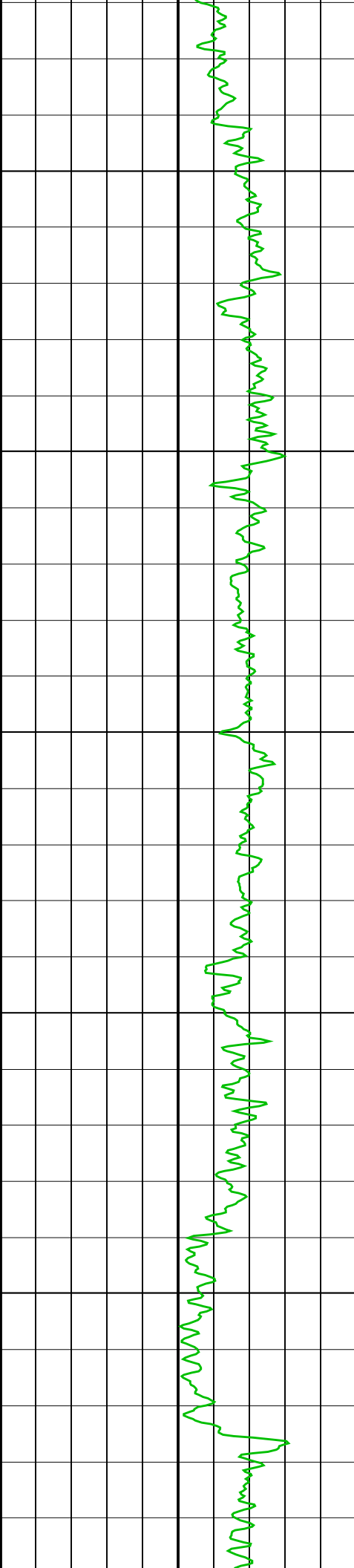
1150

1200

1250

TENS

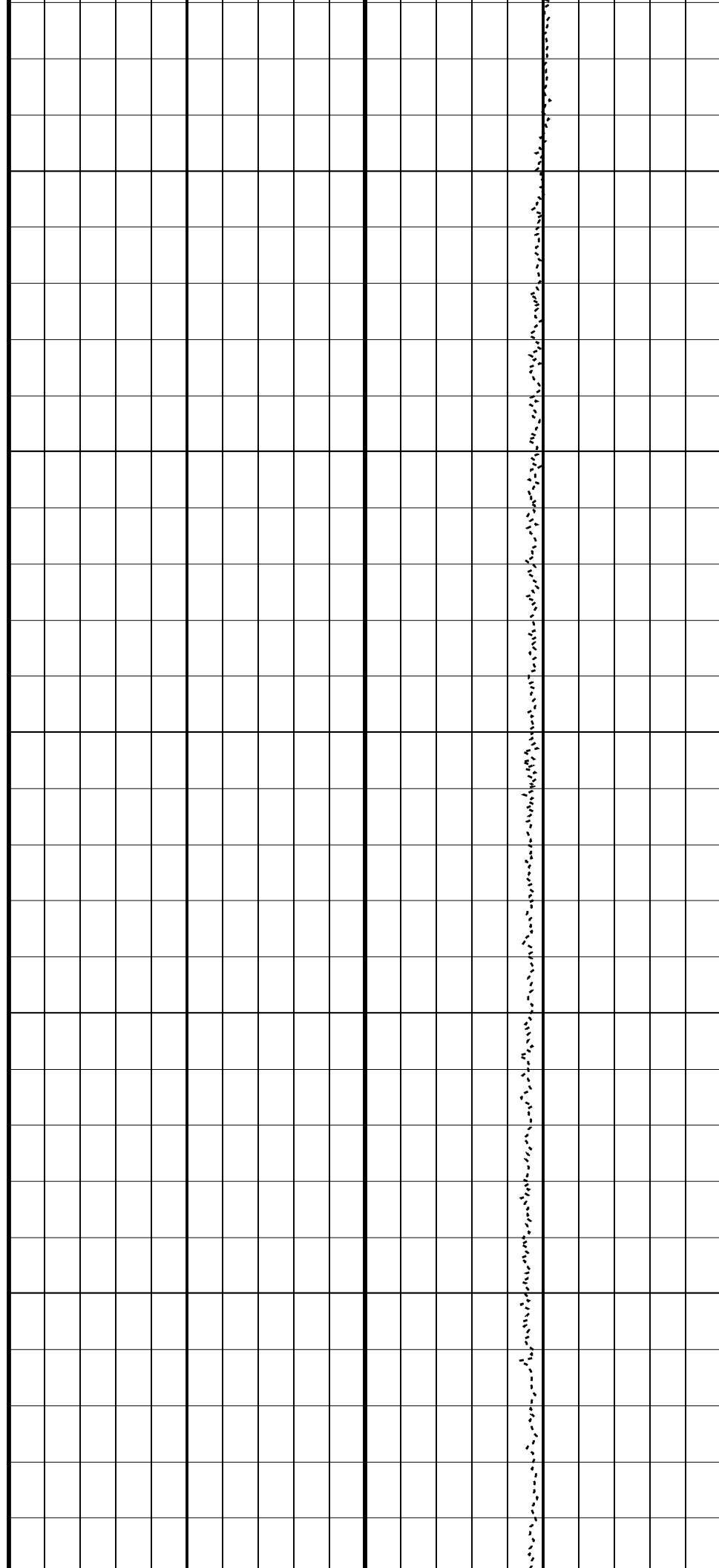


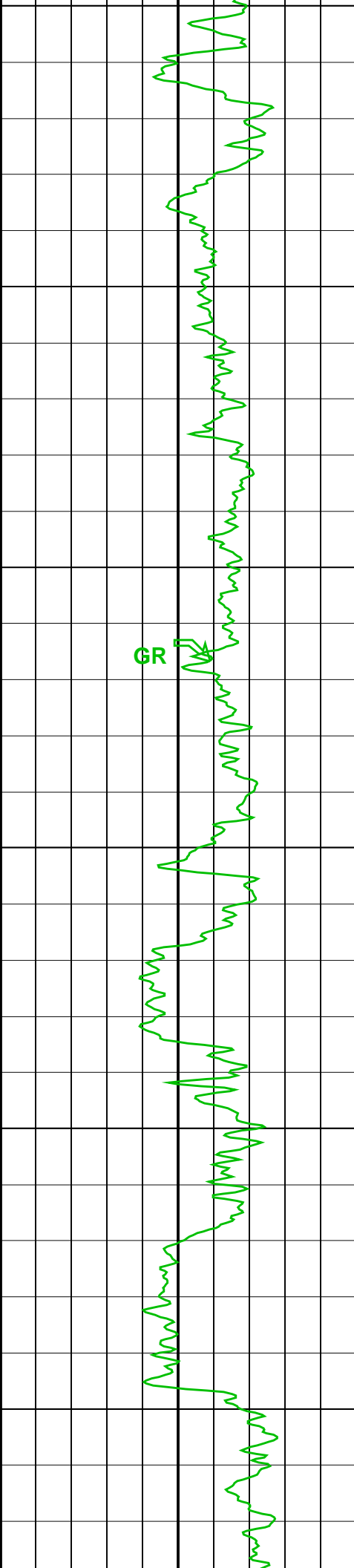


1300

1350

1400

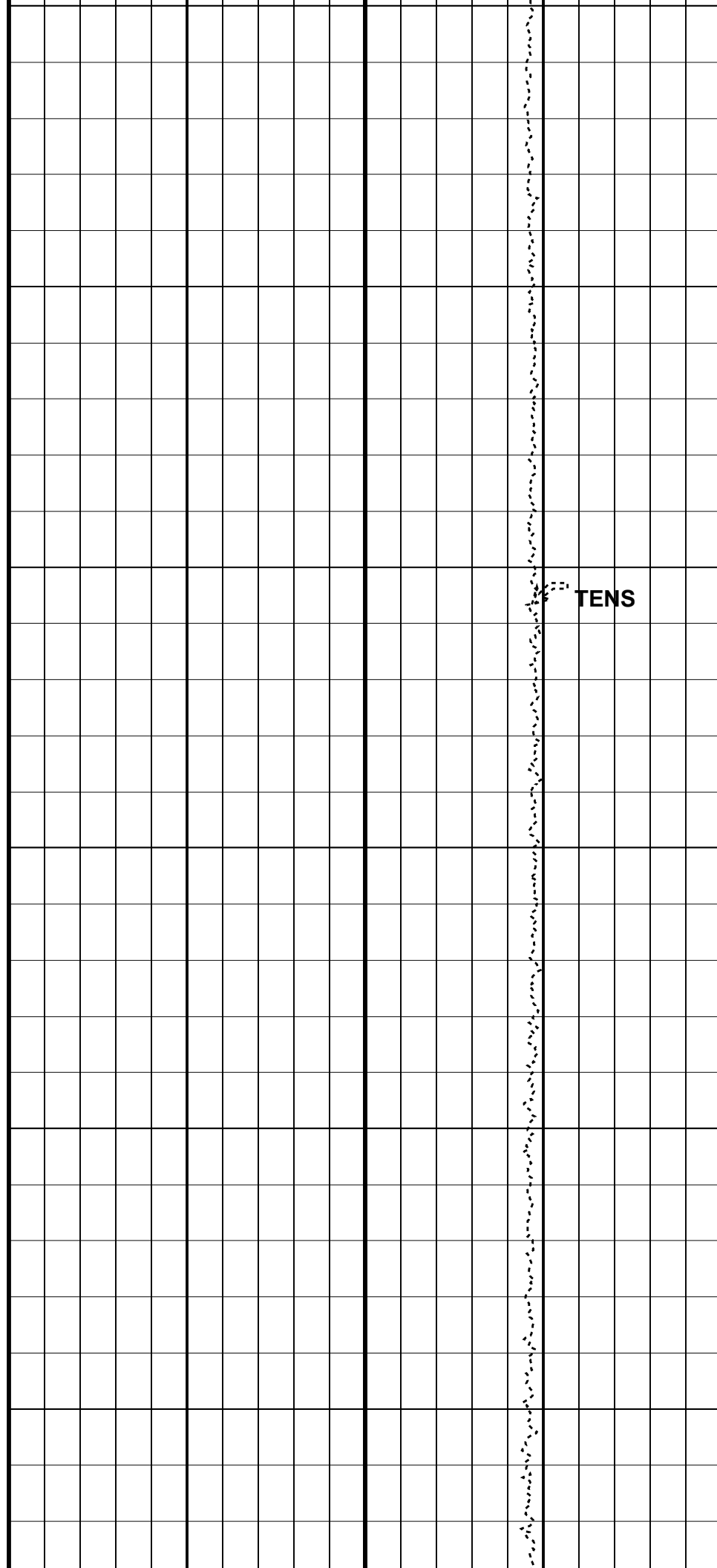


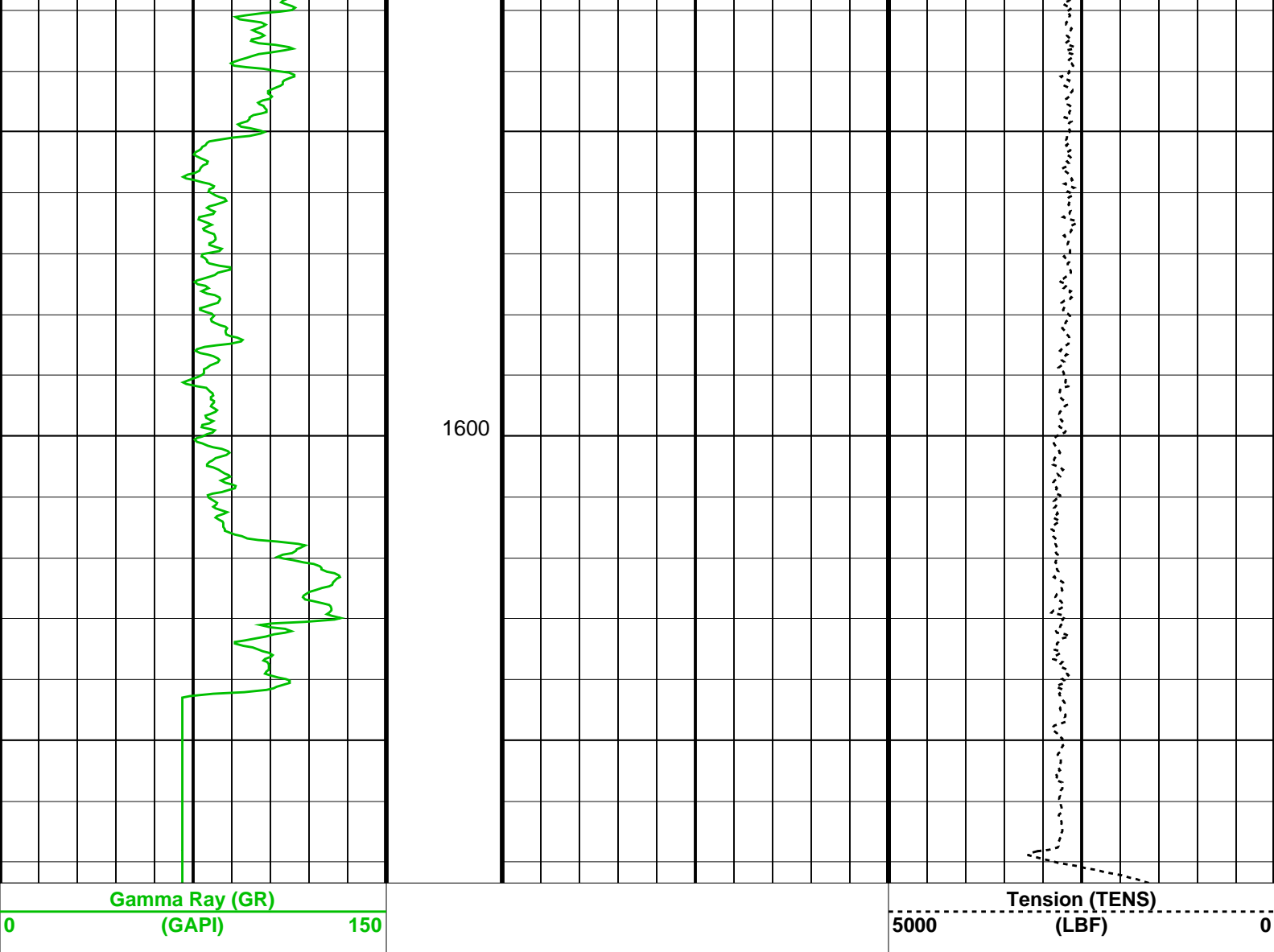


1450

1500

1550





Parameters						
DLIS Name		Description			Value	
System and Miscellaneous						
DO		Depth Offset for Playback			0.0	M
PP		Playback Processing			OFF	
Format: GR_Surf		Vertical Scale: 1:500		Graphics File Created: 22-Jun-2004 11:44		
OP System Version: 10C0-306						
MCM						
HALS-B	OP10-KP1	DSLT-H	OP10-KP1			
HILTB-FTB	OP10-KP1	HNGC-A	OP10-KP1			
HNGS-BA	OP10-KP1	DTC-H	10C0-306			
BSP	10C0-306					
Input DLIS Files						
DEFAULT	HALS_SONIC_TLD_MCFL_017LUP	FN:16	PRODUCER	21-Jun-2004 14:42	1636.8 M	20.8 M
Output DLIS Files						
DEFAULT	HALS_SONIC_TLD_MCFL_105PUP	FN:104	PRODUCER	22-Jun-2004 11:44		

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Total current mode 1							
Before: 18-Jun-2004 13:50							
Itot 1 Gain	1.000	N/A	0.998	N/A	N/A	0.026	MA
Itot 1 Phase	0.000	N/A	0.000	N/A	N/A	0.100	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux current mode 1							
Before: 18-Jun-2004 13:50							
Iaux 1 Gain	1.000	N/A	0.994	N/A	N/A	0.035	MA
Iaux 1 Phase	0.000	N/A	-0.144	N/A	N/A	1.900	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux current mode 2							
Before: 18-Jun-2004 13:50							
Iaux 2 Gain	1.000	N/A	0.975	N/A	N/A	0.048	MA
Iaux 2 Phase	0.000	N/A	0.000	N/A	N/A	0.100	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0 current mode 3A							
Before: 18-Jun-2004 13:50							
I0 3A Gain	1.000	N/A	0.984	N/A	N/A	0.036	UA
I0 3A Phase	0.000	N/A	0.000	N/A	N/A	0.100	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0 current mode 3B							
Before: 18-Jun-2004 13:50							
I0 3B Gain	1.000	N/A	0.979	N/A	N/A	0.036	UA
I0 3B Phase	0.000	N/A	-0.000	N/A	N/A	0.100	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Torpedo Voltage gains							
Before: 18-Jun-2004 13:50							
Zvt 1 Gain	1.000	N/A	0.994	N/A	N/A	0.025	MV
Zvt 2 Gain	1.000	N/A	0.997	N/A	N/A	0.045	MV
Zvt 3 Gain	1.000	N/A	1.004	N/A	N/A	0.045	MV
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Torpedo Voltage Phases							
Before: 18-Jun-2004 13:50							
Zvt 1 Phase	0.000	N/A	-0.098	N/A	N/A	2.300	DEG
Zvt 2 Phase	0.000	N/A	-0.000	N/A	N/A	0.800	DEG
Zvt 3 Phase	0.000	N/A	-0.128	N/A	N/A	0.500	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Upper Bridle Voltage mode 1							
Before: 18-Jun-2004 13:50							
Zvb 1 Gain	1.000	N/A	0.994	N/A	N/A	0.025	MV
Zvb 1 Phase	0.000	N/A	-0.125	N/A	N/A	2.300	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1-M2 Voltage gains							
Before: 18-Jun-2004 13:50							
ZVM 1 Gain	1.000	N/A	0.996	N/A	N/A	0.039	UV
ZVM 2 Gain	1.000	N/A	0.992	N/A	N/A	0.019	UV
ZVM 3 Gain	1.000	N/A	0.991	N/A	N/A	0.019	UV
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1-M2 Voltage Phases							
Before: 18-Jun-2004 13:50							
ZVM 1 Phase	0.000	N/A	0.229	N/A	N/A	3.800	DEG
ZVM 2 Phase	0.000	N/A	1.869	N/A	N/A	1.300	DEG
ZVM 3 Phase	0.000	N/A	1.017	N/A	N/A	1.000	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1-A0* Voltage gains							
Before: 18-Jun-2004 13:50							
ZVH 1 Gain	1.000	N/A	0.997	N/A	N/A	0.013	UV
ZVH 2 Gain	1.000	N/A	0.990	N/A	N/A	0.046	UV
ZVH 3 Gain	1.000	N/A	0.990	N/A	N/A	0.046	UV
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1-A0* Voltage Phases							
Before: 18-Jun-2004 13:50							
ZVH 1 Phase	0.000	N/A	0.111	N/A	N/A	3.800	DEG
ZVH 2 Phase	0.000	N/A	2.000	N/A	N/A	1.300	DEG

ZVH 3 Phase	0.000	N/A	1.019	N/A	N/A	1.000	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux Voltage gains							
Before: 18-Jun-2004 13:50							
ZVA 1 Gain	1.000	N/A	1.086	N/A	N/A	0.032	MV
ZVA 2 Gain	1.000	N/A	1.063	N/A	N/A	0.045	MV
ZVA 3 Gain	1.000	N/A	1.015	N/A	N/A	0.045	MV
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux Voltage Phases							
Before: 18-Jun-2004 13:50							
ZVA 1 Phase	0.000	N/A	0.572	N/A	N/A	2.300	DEG
ZVA 2 Phase	0.000	N/A	0.026	N/A	N/A	0.800	DEG
ZVA 3 Phase	0.000	N/A	0.128	N/A	N/A	0.500	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*-A0** Diff. Voltage mode 1							
Before: 18-Jun-2004 13:50							
ZVD 1 Gain	1.000	N/A	0.997	N/A	N/A	0.047	UV
ZVD 1 Phase	0.000	N/A	0.093	N/A	N/A	3.800	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*-A0** Diff. Voltage mode 2							
Before: 18-Jun-2004 13:50							
ZVD 2 Gain	1.000	N/A	0.983	N/A	N/A	0.056	UV
ZVD 2 Phase	0.000	N/A	1.294	N/A	N/A	1.300	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*-A0** Diff. Voltage mode 3A							
Before: 18-Jun-2004 13:50							
ZVD 3A Gain	1.000	N/A	0.987	N/A	N/A	0.056	UV
ZVD 3A Phase	0.000	N/A	0.601	N/A	N/A	1.000	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*-A0** Diff. Voltage mode 3B							
Before: 18-Jun-2004 13:50							
ZVD 3B Gain	1.000	N/A	1.000	N/A	N/A	0.054	UV
ZVD 3B Phase	0.000	N/A	-0.028	N/A	N/A	1.000	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB vertical Voltage mode 1							
Before: 18-Jun-2004 13:50							
ZVV 1 Gain	1.000	N/A	0.997	N/A	N/A	0.022	UV
ZVV 1 Phase	0.000	N/A	0.164	N/A	N/A	2.800	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB vertical Voltage mode 2							
Before: 18-Jun-2004 13:50							
ZVV 2 Gain	1.000	N/A	0.983	N/A	N/A	0.036	UV
ZVV 2 Phase	0.000	N/A	2.642	N/A	N/A	1.300	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Azimuthal Voltages mode 1							
Before: 18-Jun-2004 13:50							
Az 1 Gain – 0	1.000	N/A	0.999	N/A	N/A	0.047	UV
Az 1 Gain – 1	1.000	N/A	0.998	N/A	N/A	0.047	UV
Az 1 Gain – 2	1.000	N/A	0.999	N/A	N/A	0.047	UV
Az 1 Gain – 3	1.000	N/A	0.994	N/A	N/A	0.047	UV
Az 1 Gain – 4	1.000	N/A	1.000	N/A	N/A	0.047	UV
Az 1 Gain – 5	1.000	N/A	0.999	N/A	N/A	0.047	UV
Az 1 Gain – 6	1.000	N/A	0.997	N/A	N/A	0.047	UV
Az 1 Gain – 7	1.000	N/A	0.999	N/A	N/A	0.047	UV
Az 1 Gain – 8	1.000	N/A	0.997	N/A	N/A	0.047	UV
Az 1 Gain – 9	1.000	N/A	0.997	N/A	N/A	0.047	UV
Az 1 Gain – 10	1.000	N/A	1.001	N/A	N/A	0.047	UV
Az 1 Gain – 11	1.000	N/A	0.997	N/A	N/A	0.047	UV
AZ 1 Phase – 0	0.000	N/A	-0.004	N/A	N/A	3.800	DEG
AZ 1 Phase – 1	0.000	N/A	0.129	N/A	N/A	3.800	DEG
AZ 1 Phase – 2	0.000	N/A	0.100	N/A	N/A	3.800	DEG
AZ 1 Phase – 3	0.000	N/A	0.103	N/A	N/A	3.800	DEG
AZ 1 Phase – 4	0.000	N/A	0.205	N/A	N/A	3.800	DEG
AZ 1 Phase – 5	0.000	N/A	0.089	N/A	N/A	3.800	DEG
AZ 1 Phase – 6	0.000	N/A	0.067	N/A	N/A	3.800	DEG
AZ 1 Phase – 7	0.000	N/A	0.008	N/A	N/A	3.800	DEG
AZ 1 Phase – 8	0.000	N/A	0.122	N/A	N/A	3.800	DEG
AZ 1 Phase – 9	0.000	N/A	0.012	N/A	N/A	3.800	DEG
AZ 1 Phase – 10	0.000	N/A	0.123	N/A	N/A	3.800	DEG
AZ 1 Phase – 11	0.000	N/A	0.102	N/A	N/A	3.800	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Azimuthal Voltages mode 2							
Before: 18-Jun-2004 13:50							
Az 2 Gain – 0	1.000	N/A	0.984	N/A	N/A	0.056	UV
Az 2 Gain – 1	1.000	N/A	0.983	N/A	N/A	0.056	UV
Az 2 Gain – 2	1.000	N/A	0.984	N/A	N/A	0.056	UV
Az 2 Gain – 3	1.000	N/A	0.979	N/A	N/A	0.056	UV
Az 2 Gain – 4	1.000	N/A	0.985	N/A	N/A	0.056	UV
Az 2 Gain – 5	1.000	N/A	0.984	N/A	N/A	0.056	UV
Az 2 Gain – 6	1.000	N/A	0.982	N/A	N/A	0.056	UV
Az 2 Gain – 7	1.000	N/A	0.984	N/A	N/A	0.056	UV
Az 2 Gain – 8	1.000	N/A	0.983	N/A	N/A	0.056	UV

Az 2 Gain – 0	1.000	N/A	0.983	N/A	N/A	0.056	UV
Az 2 Gain – 9	1.000	N/A	0.982	N/A	N/A	0.056	UV
Az 2 Gain – 10	1.000	N/A	0.987	N/A	N/A	0.056	UV
Az 2 Gain – 11	1.000	N/A	0.982	N/A	N/A	0.056	UV
Az 2 Phase – 0	0.000	N/A	1.369	N/A	N/A	1.300	DEG
Az 2 Phase – 1	0.000	N/A	1.320	N/A	N/A	1.300	DEG
Az 2 Phase – 2	0.000	N/A	1.339	N/A	N/A	1.300	DEG
Az 2 Phase – 3	0.000	N/A	1.323	N/A	N/A	1.300	DEG
Az 2 Phase – 4	0.000	N/A	1.353	N/A	N/A	1.300	DEG
Az 2 Phase – 5	0.000	N/A	1.370	N/A	N/A	1.300	DEG
Az 2 Phase – 6	0.000	N/A	1.385	N/A	N/A	1.300	DEG
Az 2 Phase – 7	0.000	N/A	1.386	N/A	N/A	1.300	DEG
Az 2 Phase – 8	0.000	N/A	1.402	N/A	N/A	1.300	DEG
Az 2 Phase – 9	0.000	N/A	1.364	N/A	N/A	1.300	DEG
Az 2 Phase – 10	0.000	N/A	1.409	N/A	N/A	1.300	DEG
Az 2 Phase – 11	0.000	N/A	1.285	N/A	N/A	1.300	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Azimuthal Voltages mode 3A

Before: 18-Jun-2004 13:50

Az 3A Gain – 0	1.000	N/A	0.989	N/A	N/A	0.056	UV
Az 3A Gain – 1	1.000	N/A	0.988	N/A	N/A	0.056	UV
Az 3A Gain – 2	1.000	N/A	0.989	N/A	N/A	0.056	UV
Az 3A Gain – 3	1.000	N/A	0.984	N/A	N/A	0.056	UV
Az 3A Gain – 4	1.000	N/A	0.990	N/A	N/A	0.056	UV
Az 3A Gain – 5	1.000	N/A	0.989	N/A	N/A	0.056	UV
Az 3A Gain – 6	1.000	N/A	0.987	N/A	N/A	0.056	UV
Az 3A Gain – 7	1.000	N/A	0.988	N/A	N/A	0.056	UV
Az 3A Gain – 8	1.000	N/A	0.987	N/A	N/A	0.056	UV
Az 3A Gain – 9	1.000	N/A	0.987	N/A	N/A	0.056	UV
Az 3A Gain – 10	1.000	N/A	0.991	N/A	N/A	0.056	UV
Az 3A Gain – 11	1.000	N/A	0.987	N/A	N/A	0.056	UV
Az 3A Phase – 0	0.000	N/A	0.617	N/A	N/A	1.000	DEG
Az 3A Phase – 1	0.000	N/A	0.607	N/A	N/A	1.000	DEG
Az 3A Phase – 2	0.000	N/A	0.611	N/A	N/A	1.000	DEG
Az 3A Phase – 3	0.000	N/A	0.607	N/A	N/A	1.000	DEG
Az 3A Phase – 4	0.000	N/A	0.640	N/A	N/A	1.000	DEG
Az 3A Phase – 5	0.000	N/A	0.631	N/A	N/A	1.000	DEG
Az 3A Phase – 6	0.000	N/A	0.631	N/A	N/A	1.000	DEG
Az 3A Phase – 7	0.000	N/A	0.623	N/A	N/A	1.000	DEG
Az 3A Phase – 8	0.000	N/A	0.639	N/A	N/A	1.000	DEG
Az 3A Phase – 9	0.000	N/A	0.597	N/A	N/A	1.000	DEG
Az 3A Phase – 10	0.000	N/A	0.650	N/A	N/A	1.000	DEG
Az 3A Phase – 11	0.000	N/A	0.588	N/A	N/A	1.000	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Azimuthal Voltages mode 3B

Before: 18-Jun-2004 13:50

Az 3B Gain – 0	1.000	N/A	1.008	N/A	N/A	0.054	UV
Az 3B Gain – 1	1.000	N/A	1.003	N/A	N/A	0.054	UV
Az 3B Gain – 2	1.000	N/A	1.005	N/A	N/A	0.054	UV
Az 3B Gain – 3	1.000	N/A	0.998	N/A	N/A	0.054	UV
Az 3B Gain – 4	1.000	N/A	1.005	N/A	N/A	0.054	UV
Az 3B Gain – 5	1.000	N/A	1.006	N/A	N/A	0.054	UV
Az 3B Gain – 6	1.000	N/A	1.005	N/A	N/A	0.054	UV
Az 3B Gain – 7	1.000	N/A	1.007	N/A	N/A	0.054	UV
Az 3B Gain – 8	1.000	N/A	1.006	N/A	N/A	0.054	UV
Az 3B Gain – 9	1.000	N/A	1.003	N/A	N/A	0.054	UV
Az 3B Gain – 10	1.000	N/A	1.010	N/A	N/A	0.054	UV
Az 3B Gain – 11	1.000	N/A	0.997	N/A	N/A	0.054	UV
Az 3B Phase – 0	0.000	N/A	0.204	N/A	N/A	1.000	DEG
Az 3B Phase – 1	0.000	N/A	0.090	N/A	N/A	1.000	DEG
Az 3B Phase – 2	0.000	N/A	0.036	N/A	N/A	1.000	DEG
Az 3B Phase – 3	0.000	N/A	0.098	N/A	N/A	1.000	DEG
Az 3B Phase – 4	0.000	N/A	0.050	N/A	N/A	1.000	DEG
Az 3B Phase – 5	0.000	N/A	0.185	N/A	N/A	1.000	DEG
Az 3B Phase – 6	0.000	N/A	0.127	N/A	N/A	1.000	DEG
Az 3B Phase – 7	0.000	N/A	0.255	N/A	N/A	1.000	DEG
Az 3B Phase – 8	0.000	N/A	0.175	N/A	N/A	1.000	DEG
Az 3B Phase – 9	0.000	N/A	0.198	N/A	N/A	1.000	DEG
Az 3B Phase – 10	0.000	N/A	0.193	N/A	N/A	1.000	DEG
Az 3B Phase – 11	0.000	N/A	-0.017	N/A	N/A	1.000	DEG

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Stab Measurement Summary

Before: 17-Jun-2004 22:47

BS Window Ratio	1.011	N/A	1.012	N/A	N/A	N/A	
BS Window Sum	16100	N/A	16100	N/A	N/A	N/A	CPS
SS Window Ratio	0.4808	N/A	0.4798	N/A	N/A	N/A	
SS Window Sum	10970	N/A	10980	N/A	N/A	N/A	CPS
LS Window Ratio	0.2955	N/A	0.2968	N/A	N/A	N/A	
LS Window Sum	1160	N/A	1161	N/A	N/A	N/A	CPS

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Photo-multiplier High Voltages Calibrations

Before: 17-Jun-2004 22:47

BS PM High Voltage (Command)	1495	N/A	1502	N/A	N/A	N/A	V
SS PM High Voltage (Command)	1944	N/A	1945	N/A	N/A	N/A	V
LS PM High Voltage (Command)	1839	N/A	1850	N/A	N/A	N/A	V
High resolution Integrated Logging Tool–DTS Wellsite Calibration – Crystal Quality Resolutions Calibration							
Before: 17–Jun–2004 22:47							
BS Crystal Resolution	12.17	N/A	12.16	N/A	N/A	N/A	%
SS Crystal Resolution	11.48	N/A	11.68	N/A	N/A	N/A	%
LS Crystal Resolution	9.283	N/A	9.321	N/A	N/A	N/A	%
High resolution Integrated Logging Tool–DTS Wellsite Calibration – MCFL Calibration							
Before: 17–Jun–2004 22:27							
Raw B0 Resistivity	3875	N/A	3800	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3774	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3790	N/A	N/A	N/A	OHMM
High resolution Integrated Logging Tool–DTS Wellsite Calibration – HILT Caliper Calibration							
Before: 17–Jun–2004 22:30							
HILT Caliper Zero Measurement	8.000	N/A	8.227	N/A	N/A	N/A	IN
HILT Caliper Plus Measurement	12.00	N/A	12.35	N/A	N/A	N/A	IN
High resolution Integrated Logging Tool–DTS Wellsite Calibration – Detector Calibration							
Before: 17–Jun–2004 22:26							
Gamma Ray Background	30.00	N/A	37.15	N/A	N/A	N/A	GAPI
Gamma Ray (Jig – Bkg)	177.4	N/A	177.4	N/A	N/A	16.12	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI
High resolution Integrated Logging Tool–DTS Wellsite Calibration – Zero Measurement							
Master: 15–Jun–2004 17:21 Before: 17–Jun–2004 22:26							
CNTC Background	32.30	32.30	31.19	N/A	N/A	4.845	CPS
CFTC Background	29.13	29.13	28.55	N/A	N/A	4.370	CPS
High resolution Integrated Logging Tool–DTS Wellsite Calibration – Accelerometer Calibration							
Before: 18–Jun–2004 13:50							
Z–Axis Acceleration	9.810	N/A	9.803	N/A	N/A	N/A	M/S2
High resolution Integrated Logging Tool–DTS Master Calibration – Inversion results							
Master: 15–Jun–2004 11:26							
Rho Aluminum	2.596	2.599	--	--	--	--	G/C3
Rho Magnesium	1.686	1.688	--	--	--	--	G/C3
Pe Aluminum	2.570	2.561	--	--	--	--	
Pe Magnesium	2.650	2.615	--	--	--	--	
High resolution Integrated Logging Tool–DTS Master Calibration – Deviation Summary							
Master: 15–Jun–2004 11:26							
BS Average Deviation	0	0.4141	--	--	--	--	%
BS Max Deviation	0	0.9721	--	--	--	--	%
SS Average Deviation	0	0.2442	--	--	--	--	%
SS Max Deviation	0	1.285	--	--	--	--	%
LS Average Deviation	0	0.4543	--	--	--	--	%
LS Max Deviation	0	0.9733	--	--	--	--	%
High resolution Integrated Logging Tool–DTS Master Calibration – Tank Measurement							
Master: 15–Jun–2004 17:21							
Thermal Near Corr. (Tank)	6031	5825	--	--	--	--	CPS
Thermal Far Corr. (Tank)	2793	2452	--	--	--	--	CPS
CNTC/CFTC (Tank)	2.159	2.376	--	--	--	--	
High resolution Integrated Logging Tool–DTS Master Calibration – Tank Measurement							
Master: 15–Jun–2004 17:21							
Thermal Near Corr. (Tank)	6031	5825	--	--	--	--	CPS
Thermal Far Corr. (Tank)	2793	2452	--	--	--	--	CPS
CNTC/CFTC (Tank)	2.159	2.376	--	--	--	--	
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 1 Check							
Master: 17–Jun–2004 21:58 Before: 18–Jun–2004 13:56							
Na 511 Peak Loc	40.00	40.64	39.66	N/A	N/A	1.000	
Na 511 Peak Res	15.50	16.25	15.12	N/A	N/A	2.000	%
High Voltage	1150	1159	1153	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	145.9	141.9	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	8.737	8.471	N/A	N/A	2.000	%
Temperature	15.50	13.72	13.30	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	42.07	43.20	N/A	N/A	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 2 Check							
Master: 17–Jun–2004 21:58 Before: 18–Jun–2004 13:56							
Na 511 Peak Loc	40.00	39.68	39.55	N/A	N/A	1.000	
Na 511 Peak Res	15.50	14.94	15.66	N/A	N/A	2.000	%
High Voltage	1150	1080	1081	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	143.0	142.3	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	8.683	7.777	N/A	N/A	2.000	%
Temperature	15.50	14.40	13.68	N/A	N/A	N/A	DEGC

Temperature	15.50	14.40	13.68	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	41.97	42.79	N/A	N/A	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Ratio Of Detector 1 To Detector 2							
Master: 17-Jun-2004 21:58 Before: 18-Jun-2004 13:56							
Coincidence Count Rate Ratio	1.000	1.006	1.012	N/A	N/A	0.05000	
Hostile Natural Gamma Ray Sonde Master Calibration – Detector 1 Calibration							
Master: 17-Jun-2004 21:53							
Na 511 Peak Set Point	40.00	42.00	--	--	--	--	
Th Peak Loc	209.6	211.5	--	--	--	--	
Th Peak Res	7.000	7.826	--	--	--	--	%
Background Count Rate	142.5	140.0	--	--	--	--	CPS
Gain Ratio	1.000	0.9901	--	--	--	--	
Hostile Natural Gamma Ray Sonde Master Calibration – Detector 2 Calibration							
Master: 17-Jun-2004 21:53							
Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	207.7	--	--	--	--	
Th Peak Res	7.000	7.127	--	--	--	--	%
Background Count Rate	142.5	133.6	--	--	--	--	CPS
Gain Ratio	1.000	0.9954	--	--	--	--	

The GLS-VJ source activity is acceptable.



The HGNS Neutron Master Calibration was done with the following parameters :



NCT-B Water Temperature 11.1 DEGC.
Thermal Housing Size 3.369 IN.



HILT Azimuthal Laterolog Sonde B / Equipment Identification



Primary Equipment:



Auxiliary Equipment:
Laterolog Control Module LCM – AA 2747



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Total current mode 1					
Itot 1 Gain MA		Value	Itot 1 Phase DEG		Value
		0.998			0.000
0.926	1.000	1.081	-0.100	0.000	0.100
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 18-Jun-2004 13:50					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Aux current mode 1					
Iaux 1 Gain MA		Value	Iaux 1 Phase DEG		Value
		0.994			-0.144
0.854	1.000	1.180	-4.600	0.000	4.600
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 18-Jun-2004 13:50					




HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Aux current mode 2					
Iaux 2 Gain MA		Value	Iaux 2 Phase DEG		Value
		0.975			0.000
0.816	1.000	1.232	-1.000	0.000	0.100
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 18-Jun-2004 13:50					



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB A0 current mode 3A					
IO 3A Gain UA		Value	IO 3A Phase DEG		Value
		0.984			0.000
0.893	1.000	1.114	-1.000	0.000	0.100
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 18-Jun-2004 13:50					




HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB A0 current mode 3B					
IO 3B Gain UA		Value	IO 3B Phase DEG		Value
		0.979			-0.000
0.893	1.000	1.114	-1.000	0.000	0.100
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 18-Jun-2004 13:50					




HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Torpedo Voltage gains					
Zvt 1 Gain MV		Value	Zvt 2 Gain MV		Value
		0.994			0.997
0.925	1.000	1.078	0.865	1.000	1.153
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 18-Jun-2004 13:50					




HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
---	--	--	--	--	--




HILSB Torpedo Voltage Phases					
Zvt 1 Phase DEG	Value	Zvt 2 Phase DEG	Value	Zvt 3 Phase DEG	Value
	-0.098		-0.000		-0.128
-4.400 (Minimum)	0.000 (Nominal)	4.400 (Maximum)	-2.800 (Minimum)	0.000 (Nominal)	2.800 (Maximum)
Before: 18-Jun-2004 13:50					




HILSB Upper Bridle Voltage mode 1			
Zvb 1 Gain MV	Value	Zvb 1 Phase DEG	Value
	0.994		-0.125
0.925 (Minimum)	1.000 (Nominal)	1.078 (Maximum)	-4.400 (Minimum)
Before: 18-Jun-2004 13:50			




HILSB M1-M2 Voltage gains					
ZVM 1 Gain UV	Value	ZVM 2 Gain UV	Value	ZVM 3 Gain UV	Value
	0.996		0.992		0.991
0.895 (Minimum)	1.000 (Nominal)	1.117 (Maximum)	0.943 (Minimum)	1.000 (Nominal)	1.056 (Maximum)
Before: 18-Jun-2004 13:50					



HILSB M1-M2 Voltage Phases					
ZVM 1 Phase DEG	Value	ZVM 2 Phase DEG	Value	ZVM 3 Phase DEG	Value
	0.229		1.869		1.017
-6.500 (Minimum)	0.000 (Nominal)	6.500 (Maximum)	-3.300 (Minimum)	0.000 (Nominal)	2.000 (Maximum)
Before: 18-Jun-2004 13:50					



HILSB M1-A0* Voltage gains					
ZVH 1 Gain UV	Value	ZVH 2 Gain UV	Value	ZVH 3 Gain UV	Value
	0.997		0.990		0.990
0.962 (Minimum)	1.000 (Nominal)	1.039 (Maximum)	0.864 (Minimum)	1.000 (Nominal)	1.154 (Maximum)
Before: 18-Jun-2004 13:50					



HILSB M1-A0* Voltage Phases					
ZVH 1 Phase DEG	Value	ZVH 2 Phase DEG	Value	ZVH 3 Phase DEG	Value
	0.111		2.000		1.019
-6.500 (Minimum)	0.000 (Nominal)	6.500 (Maximum)	-3.300 (Minimum)	0.000 (Nominal)	2.000 (Maximum)
Before: 18-Jun-2004 13:50					



HILSB Aux Voltage gains					
ZVA 1 Gain MV	Value	ZVA 2 Gain MV	Value	ZVA 3 Gain MV	Value
	1.086		1.063		1.015
0.905 (Minimum)	1.000 (Nominal)	1.103 (Maximum)	0.866 (Minimum)	1.000 (Nominal)	1.151 (Maximum)
Before: 18-Jun-2004 13:50					



HILSB Aux Voltage Phases					
ZVA 1 Phase DEG	Value	ZVA 2 Phase DEG	Value	ZVA 3 Phase DEG	Value
	0.572		0.026		0.128
-4.100 (Minimum)	0.000 (Nominal)	4.100 (Maximum)	-2.300 (Minimum)	0.000 (Nominal)	1.000 (Maximum)
Before: 18-Jun-2004 13:50					



HALSB A0*-A0** Diff. Voltage mode 1			
ZVD 1 Gain UV	Value	ZVD 1 Phase DEG	Value
	0.997		0.093
0.874 (Minimum)	1.000 (Nominal)	1.147 (Maximum)	-6.300 (Minimum)
Before: 18-Jun-2004 13:50			

























HALSB A0*-A0** Diff. Voltage mode 2			
ZVD 2 Gain UV	Value	ZVD 2 Phase DEG	Value
	0.983		1.294
0.842 (Minimum)	1.000 (Nominal)	1.187 (Maximum)	-3.300 (Minimum)

























HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB A0*-A0** Diff. Voltage mode 3A			
ZVD 3A Gain UV	Value	ZVD 3A Phase DEG	Value
	0.987		0.601
0.842 (Minimum) 1.000 (Nominal) 1.187 (Maximum)		-2.000 (Minimum) 0.000 (Nominal) 2.000 (Maximum)	
Before: 18-Jun-2004 13:50			

























HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB A0*-A0** Diff. Voltage mode 3B			
ZVD 3B Gain UV	Value	ZVD 3B Phase DEG	Value
	1.000		-0.028
0.845 (Minimum) 1.000 (Nominal) 1.183 (Maximum)		-2.000 (Minimum) 0.000 (Nominal) 2.000 (Maximum)	
Before: 18-Jun-2004 13:50			

























HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB vertical Voltage mode 1			
ZVV 1 Gain UV	Value	ZVV 1 Phase DEG	Value
	0.997		0.164
0.936 (Minimum) 1.000 (Nominal) 1.065 (Maximum)		-4.600 (Minimum) 0.000 (Nominal) 4.600 (Maximum)	
Before: 18-Jun-2004 13:50			

HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB vertical Voltage mode 2			
ZVV 2 Gain UV	Value	ZVV 2 Phase DEG	Value
	0.983		2.642
0.895 (Minimum) 1.000 (Nominal) 1.112 (Maximum)		-2.800 (Minimum) 0.000 (Nominal) 2.800 (Maximum)	
Before: 18-Jun-2004 13:50			

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Azimuthal Voltages mode 1					
Idx	Az 1 Gain UV	Value	Idx	Az 1 Phase DEG	Value
0		0.999	0		-0.004
1		0.998	1		0.129
2		0.999	2		0.100
3		0.994	3		0.103
4		1.000	4		0.205
5		0.999	5		0.089
6		0.997	6		0.067
7		0.999	7		0.008
8		0.997	8		0.122
9		0.997	9		0.012
10		1.001	10		0.123
11		0.997	11		0.102
0.874 (Minimum) 1.000 (Nominal) 1.147 (Maximum)			-6.300 (Minimum) 0.000 (Nominal) 6.300 (Maximum)		
Before: 18-Jun-2004 13:50					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Azimuthal Voltages mode 2					
Idx	Az 2 Gain UV	Value	Idx	Az 2 Phase DEG	Value
0		0.984	0		1.369
1		0.983	1		1.320
2		0.984	2		1.339
3		0.979	3		1.323
4		0.985	4		1.353
5		0.984	5		1.370
6		0.982	6		1.385
7		0.984	7		1.386
8		0.983	8		1.402
9		0.982	9		1.364
10		0.987	10		1.409
11		0.982	11		1.285
0.842 (Minimum) 1.000 (Nominal) 1.187 (Maximum)			-3.300 (Minimum) 0.000 (Nominal) 3.300 (Maximum)		
Before: 18-Jun-2004 13:50					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Azimuthal Voltages mode 3A					
Idx	Az 3A Gain UV	Value	Idx	Az 3A Phase DEG	Value
0		0.989	0		0.617
1		0.988	1		0.607
2		0.989	2		0.611
3		0.984	3		0.607
4		0.990	4		0.640
5		0.989	5		0.631
6		0.987	6		0.631
7		0.988	7		0.623
8		0.987	8		0.639
9		0.987	9		0.597
10		0.991	10		0.650
11		0.987	11		0.588
0.842 (Minimum) 1.000 (Nominal) 1.187 (Maximum)			-2.000 (Minimum) 0.000 (Nominal) 2.000 (Maximum)		
Before: 18-Jun-2004 13:50					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Azimuthal Voltages mode 3B					
Idx	Az 3B Gain UV	Value	Idx	Az 3B Phase DEG	Value
0		1.008	0		0.204
1		1.003	1		0.090
2		1.005	2		0.036
3		0.998	3		0.098
4		1.005	4		0.050
5		1.006	5		0.185
6		1.005	6		0.127
7		1.007	7		0.255
8		1.006	8		0.175
9		1.003	9		0.198
10		1.010	10		0.193
11		0.997	11		-0.017
0.845 (Minimum) 1.000 (Nominal) 1.183 (Maximum)			-2.000 (Minimum) 0.000 (Nominal) 2.000 (Maximum)		
Before: 18-Jun-2004 13:50					

High resolution Integrated Logging Tool–DTS / Equipment Identification

Primary Equipment:







HILT high–Resolution Mechanical Sonde
HILT Rxo Gamma–ray Device
HILT Nuclear Back–Scatter Detector
HILT Nuclear Short–Spacing Detector
HILT Nuclear Long–Spacing Detector
Micro Cylindrically Focused Log Device
GR Logging Source
HILT High Res. Control Cartridge

HRMS – B 1765
HRGD – B 1760
HILT –
HILT –
HILT –
MCFL –
GLS – VJ 3739
HRCC – B 1769

Auxiliary Equipment:

High resolution Integrated Logging Tool–DTS Wellsite Calibration




Stab Measurement Summary

Phase	BS Window Ratio		Value	Phase	SS Window Ratio		Value	Phase	LS Window Ratio		Value
Before			1.012	Before			0.4798	Before			0.2968
	0.9600 (Minimum)	1.011 (Nominal)	1.061 (Maximum)		0.4567 (Minimum)	0.4808 (Nominal)	0.5048 (Maximum)		0.2808 (Minimum)	0.2955 (Nominal)	0.3103 (Maximum)
Phase	BS Window Sum CPS		Value	Phase	SS Window Sum CPS		Value	Phase	LS Window Sum CPS		Value
Before			16100	Before			10980	Before			1161
	15290 (Minimum)	16100 (Nominal)	16900 (Maximum)		10420 (Minimum)	10970 (Nominal)	11520 (Maximum)		1102 (Minimum)	1160 (Nominal)	1218 (Maximum)

Before: 17–Jun–2004 22:47

High resolution Integrated Logging Tool–DTS Wellsite Calibration

Photo–multiplier High Voltages Calibrations

Phase	BS PM High Voltage (Command) V			Value	Phase	SS PM High Voltage (Command) V			Value	Phase	LS PM High Voltage (Command) V			Value
Before				1502	Before				1945	Before				1850
	1395 (Minimum)	1495 (Nominal)	1595 (Maximum)			1844 (Minimum)	1944 (Nominal)	2044 (Maximum)			1739 (Minimum)	1839 (Nominal)	1939 (Maximum)	

Before: 17–Jun–2004 22:47

High resolution Integrated Logging Tool–DTS Wellsite Calibration




Crystal Quality Resolutions Calibration

Phase	BS Crystal Resolution %		Value	Phase	SS Crystal Resolution %		Value	Phase	LS Crystal Resolution %		Value
Before			12.16	Before			11.68	Before			9.321
	11.17 (Minimum)	12.17 (Nominal)	13.17 (Maximum)		10.48 (Minimum)	11.48 (Nominal)	12.48 (Maximum)		8.283 (Minimum)	9.283 (Nominal)	10.28 (Maximum)

Before: 17–Jun–2004 22:47

High resolution Integrated Logging Tool–DTS Wellsite Calibration



MCFL Calibration

Phase	Raw B0 Resistivity OHMM			Value	Phase	Raw B1 Resistivity OHMM			Value	Phase	Raw B2 Resistivity OHMM			Value
Before				3800	Before				3774	Before				3790
	3565 (Minimum)	3875 (Nominal)	4185 (Maximum)		3524 (Minimum)	3830 (Nominal)	4136 (Maximum)			3524 (Minimum)	3830 (Nominal)	4136 (Maximum)		

Before: 17–Jun–2004 22:27

High resolution Integrated Logging Tool–DTS Wellsite Calibration




HILT Caliper Calibration

Phase	HILT Caliper Zero Measurement IN			Value	Phase	HILT Caliper Plus Measurement IN			Value
Before				8.227	Before				12.35
	6.000 (Minimum)	8.000 (Nominal)	10.00 (Maximum)			9.000 (Minimum)	12.00 (Nominal)	15.00 (Maximum)	





Before: 17–Jun–2004 22:30


High resolution Integrated Logging Tool–DTS Wellsite Calibration





Detector Calibration

Before Calibration														
Phase	Gamma Ray Background GAPI			Value	Phase	Gamma Ray (Jig – Bkg) GAPI			Value	Phase	Gamma Ray (Calibrated) GAPI			Value
Before				37.15	Before				177.4	Before				165.0
	0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)			161.2 (Minimum)	177.4 (Nominal)	193.5 (Maximum)			150.0 (Minimum)	165.0 (Nominal)	180.0 (Maximum)	




Before: 17–Jun–2004 22:26

High resolution Integrated Logging Tool–DTS Wellsite Calibration													
Zero Measurement													
Phase	CNTC Background CPS			Value	Phase	CFTC Background CPS			Value				
Master				32.30	Master				29.13				
Before				31.19	Before				28.55				
5.000 (Minimum)				32.30 (Nominal)	40.00 (Maximum)				5.000 (Minimum)		29.13 (Nominal)	40.00 (Maximum)	
Master: 15–Jun–2004 17:21						Before: 17–Jun–2004 22:26							

High resolution Integrated Logging Tool–DTS			
Wellsite Calibration			
Accelerometer Calibration			
Phase	Z–Axis Acceleration M/S2	Value	
Before		9.803	
	9.610 (Minimum)	9.810 (Nominal)	10.01 (Maximum)
Before: 18–Jun–2004 13:50			

High resolution Integrated Logging Tool–DTS Master Calibration									
Inversion results									
Phase	Rho Aluminum G/C3			Value	Phase	Rho Magnesium G/C3			Value
Master				2.599	Master				1.688
	2.586 (Minimum)	2.596 (Nominal)	2.606 (Maximum)			1.676 (Minimum)	1.686 (Nominal)	1.696 (Maximum)	
Phase	Pe Aluminum			Value	Phase	Pe Magnesium			Value
Master				2.561	Master				2.615
	2.470 (Minimum)	2.570 (Nominal)	2.670 (Maximum)			2.550 (Minimum)	2.650 (Nominal)	2.750 (Maximum)	
Master: 15–Jun–2004 11:26									

High resolution Integrated Logging Tool–DTS Master Calibration														
Deviation Summary														
Phase	BS Average Deviation %			Value	Phase	SS Average Deviation %			Value	Phase	LS Average Deviation %			Value
Master	<div><div></div></div>			0.4141	Master	<div><div></div></div>			0.2442	Master	<div><div></div></div>			0.4543
	–0.6000 (Minimum)	0 (Nominal)	0.6000 (Maximum)		–1.000 (Minimum)	0 (Nominal)	1.000 (Maximum)			–1.500 (Minimum)	0 (Nominal)	1.500 (Maximum)		
Phase	BS Max Deviation %			Value	Phase	SS Max Deviation %			Value	Phase	LS Max Deviation %			Value
Master	<div><div></div></div>			0.9721	Master	<div><div></div></div>			1.285	Master	<div><div></div></div>			0.9733
	–1.600 (Minimum)	0 (Nominal)	1.600 (Maximum)		–2.500 (Minimum)	0 (Nominal)	2.500 (Maximum)			–3.500 (Minimum)	0 (Nominal)	3.500 (Maximum)		
Master: 15–Jun–2004 11:26														

High resolution Integrated Logging Tool–DTS Master Calibration											
Tank Measurement											
Phase	Thermal Near Corr. (Tank) CPS		Value	Phase	Thermal Far Corr. (Tank) CPS		Value	Phase	CNTC/CFTC (Tank)		Value
Master			5825	Master			2452	Master			2.376
	5000 (Minimum)	6031 (Nominal)	7200 (Maximum)		2075 (Minimum)	2793 (Nominal)	3125 (Maximum)		2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)
Master: 15–Jun–2004 17:21											

High resolution Integrated Logging Tool–DTS Master Calibration											
Tank Measurement											
Phase	Thermal Near Corr. (Tank) CPS		Value	Phase	Thermal Far Corr. (Tank) CPS		Value	Phase	CNTC/CFTC (Tank)		Value
Master	<div><div></div></div>		5825	Master	<div><div></div></div>		2452	Master	<div><div></div></div>		2.376
	5000 (Minimum)	6031 (Nominal)	7200 (Maximum)		2075 (Minimum)	2793 (Nominal)	3125 (Maximum)		2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)
Master: 15–Jun–2004 17:21											

Hostile Natural Gamma Ray Cartridge – A / Equipment Identification

Primary Equipment:
HNGC Cartridge

HNGC – A

10

Auxiliary Equipment:















Hostile Natural Gamma Ray Sonde / Equipment Identification















Primary Equipment:
HNGS Sonde



HNGS – BA 129

Auxiliary Equipment:
HNGS Sonde Housing
Gamma Source Radioactive

HNSH – BA 3
GSR – U

Hostile Natural Gamma Ray Sonde Wellsite Calibration														
Detector 1 Check														
Phase	Na 511 Peak Loc		Value	Phase	Na 511 Peak Res %		Value	Phase	High Voltage V		Value			
Master			40.64	Master			16.25	Master			1159			
Before			39.66	Before			15.12	Before			1153			
37.50 (Minimum)			40.00 (Nominal)	42.50 (Maximum)			12.00 (Minimum)			15.50 (Nominal)	19.00 (Maximum)			
900.0 (Minimum)			1150 (Nominal)			1600 (Maximum)								
Phase	Na 1785 Peak Loc		Value	Phase	Na 1785 Peak Res %		Value	Phase	Temperature DEGC		Value			
Master			145.9	Master			8.737	Master			13.72			
Before			141.9	Before			8.471	Before			13.30			
135.0 (Minimum)			142.6 (Nominal)	150.3 (Maximum)			7.000 (Minimum)			8.500 (Nominal)	11.00 (Maximum)			
-28.89 (Minimum)			15.50 (Nominal)			60.00 (Maximum)								
Phase	Na Count Rate CPS		Value											
Master			42.07											
Before			43.20											
10.00 (Minimum)			45.00 (Nominal)									100.0 (Maximum)		
Master: 17-Jun-2004 21:58 Before: 18-Jun-2004 13:56														

Hostile Natural Gamma Ray Sonde Wellsite Calibration																										
Detector 2 Check																										
Phase	Na 511 Peak Loc			Value	Phase	Na 511 Peak Res %			Value	Phase	High Voltage V			Value												
Master				39.68	Master				14.94	Master				1080												
Before				39.55	Before				15.66	Before				1081												
37.50 (Minimum)				40.00 (Nominal)	42.50 (Maximum)				12.00 (Minimum)				15.50 (Nominal)	19.00 (Maximum)				900.0 (Minimum)				1150 (Nominal)	1600 (Maximum)			
Phase	Na 1785 Peak Loc			Value	Phase	Na 1785 Peak Res %			Value	Phase	Temperature DEGC			Value												
Master				143.0	Master				8.683	Master				14.40												
Before				142.3	Before				7.777	Before				13.68												
135.0 (Minimum)				142.6 (Nominal)	150.3 (Maximum)				7.000 (Minimum)				8.500 (Nominal)	11.00 (Maximum)				-28.89 (Minimum)				15.50 (Nominal)	60.00 (Maximum)			
Phase	Na Count Rate CPS			Value																						
Master				41.97																						
Before				42.79																						
10.00 (Minimum)				45.00 (Nominal)										100.0 (Maximum)												
Master: 17-Jun-2004 21:58														Before: 18-Jun-2004 13:56												

Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		1.006
Before		1.012
0.9500 (Minimum)		1.000 (Nominal)
		1.050 (Maximum)
Master: 17-Jun-2004 21:58		
Before: 18-Jun-2004 13:56		

Detector 1 Calibration

Phase	Na 511 Peak Set Point			Value	Phase	Th Peak Loc			Value	Phase	Th Peak Res %			Value
Master	<div><div></div></div>			42.00	Master	<div><div></div></div>			211.5	Master	<div><div></div></div>			7.826
38.00 (Minimum)40.00 (Nominal)42.00 (Maximum)					201.0 (Minimum)209.6 (Nominal)218.3 (Maximum)					5.000 (Minimum)7.000 (Nominal)9.000 (Maximum)				
Phase	Background Count Rate CPS			Value	Phase	Gain Ratio			Value					
Master	<div><div></div></div>			140.0	Master	<div><div></div></div>			0.9901					
20.00 (Minimum)142.5 (Nominal)265.0 (Maximum)					0.9400 (Minimum)1.000 (Nominal)1.060 (Maximum)									
Master: 17-Jun-2004 21:53														

Hostile Natural Gamma Ray Sonde Master Calibration

Detector 2 Calibration

Phase	Na 511 Peak Set Point			Value	Phase	Th Peak Loc			Value	Phase	Th Peak Res %			Value
Master	<div><div></div></div>			41.00	Master	<div><div></div></div>			207.7	Master	<div><div></div></div>			7.127
38.00 (Minimum)			40.00 (Nominal)	42.00 (Maximum)	201.0 (Minimum)			209.6 (Nominal)	218.3 (Maximum)	5.000 (Minimum)			7.000 (Nominal)	9.000 (Maximum)
Phase	Background Count Rate CPS			Value	Phase	Gain Ratio			Value					
Master	<div><div></div></div>			133.6	Master	<div><div></div></div>			0.9954					
20.00 (Minimum)			142.5 (Nominal)	265.0 (Maximum)	0.9400 (Minimum)			1.000 (Nominal)	1.060 (Maximum)					
Master: 17-Jun-2004 21:53														

Company: Essential Petroleum Resources Limited

Schlumberger

Well: Killarney EPRL 1

Field: PEP 152

Rig: Hunt Rig #2

Country: Australia

HALS-BHC-PEX-HNG:

GR to Surface

Scale 1:500