



Weatherford®

HOLE VOLUME

1:500

COMPANY	Santos & Partners				
WELL	Marmbulligan 1				
FIELD	Marmbulligan				
PROVINCE/COUNTY					
COUNTRY/STATE	Northern Territory				
LOCATION	OT Downs Basin				
Latitude	16°11'58.80" S	Other Services		Density Neutron	
Longitude	134°46'18.80" E	Focussed Electric Multichannel Sonic			
Permanent Datum , Elevation 130 metres			Acoustic Scanner		
Log Measured From GL					
Drilling Measured From Surface			Elevations:		
Date	14-SEPT-2016		KB	DF	metres
Run Number	1		GL		177.91 177.91
Service Order					
Depth Driller	674.80	metres			
Depth Logger	675.32	metres			
First Reading	675.20	metres			
Last Reading	106.80	metres			
Casing Driller	106.70	metres			
Casing Logger	106.80	metres			
Bit Size	3.875	inches			
Hole Fluid Type	KCL				
Density / Viscosity	1.08 g/c3	31.00			
PH / Fluid Loss					
Sample Source	TANKS				
Rm @ Measured Temp	0.066 @ 25.0	ohm-m			
Rmf @ Measured Temp	0.061 @ 25.0	ohm-m			
Rmc @ Measured Temp	0.099 @ 25.0	ohm-m			
Source Rmf / Rmc	CALC	CALC			
Rm @ BHT	0.041 @ 56.0	ohm-m			
Time Since Circulation	1 HRS 15 MIN				
Max Recorded Temp	56.00	deg C			
Equipment / Base	377	EMD			
Recorded By	Duncan Hinton		Nick Howlett		
Witnessed By	Paul McGliveray				
STOP CIRC	12:00 14-SEPT-2016				

BOREHOLE RECORD					Last Edited: 15-SEP-2016 02:07
Bit Size inches		Depth From metres		Depth To metres	
8.500		0.00		107.70	
3.780		107.70		674.80	
CASING RECORD					
Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft	
SURFACE	4.500	0.00	106.70	11.42	

REMARKS
RUN NUMBER 1 IS THE PRIMARY DEPTH REFERENCE LOG. ALL OTHER RUNS ARE CORRELATED BACK TO THIS LOG.
CUSTOMER SCALES AND INTERVALS LOGGED
RUN 1: SQD, VO4 - Tool Bridged at 109.7M - POOH and wait on wiper trip
RUN 2: DUMMY - Tool Bridged at 135.1M - POOH and wait on wiper trip
RUN 3: SQD, VO4 - TIME ON BOTTOM 13:30 / 14 SEPT 2016 - VO4/SQD - 341/433 - Calibrated 3 August 2016 - MAX TEMP ON RUN 56 DEG C

RUN 4: RR5
- TIME ON BOTTOM 17:00 / 14 SEPT 2016
- RR5 - 595 - Calibrated 5 Aug 2016

RUN 5: MS2
- TIME ON BOTTOM 19:00 / 14 SEPT 2016
- MS2 - 422
- MAX TEMP ON RUN 56 DEG C

RUN 6: DD6
- TIME ON BOTTOM 22:05 / 14 SEPT 2016
- DD6 - 733 - Calibrated 3 August 2016
- MAX TEMP ON RUN 56 DEG C

RUN 7: NN2
- TIME ON BOTTOM 01:10 / 15 SEPT 2016
- NN2 - 549 - Calibrated 3 August 2016
- MAX TEMP ON RUN 56 DEG C

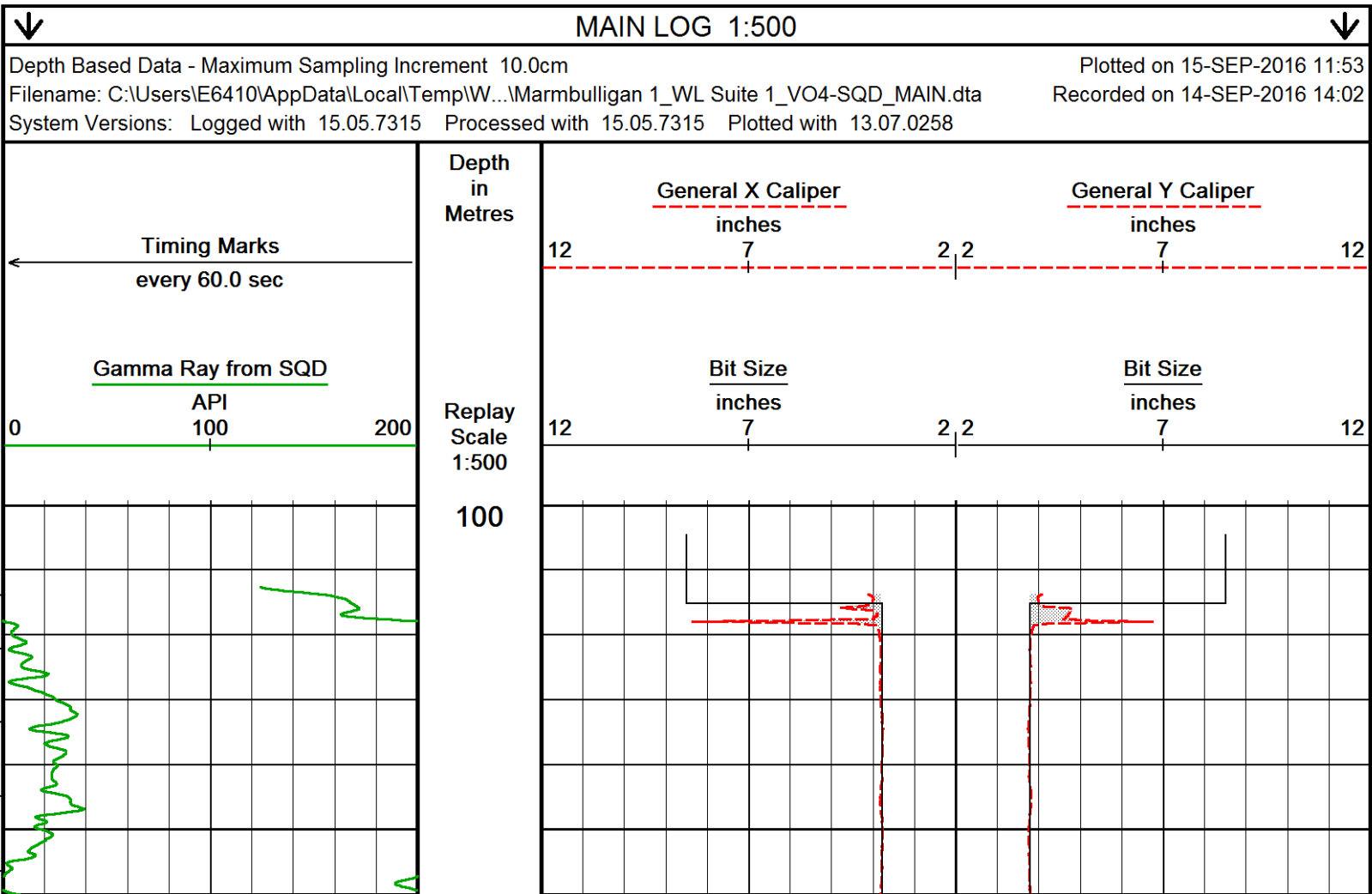
RUN 8: ATV
- TIME ON BOTTOM 04:20 / 15 SEPT 2016
- ATV - 100804

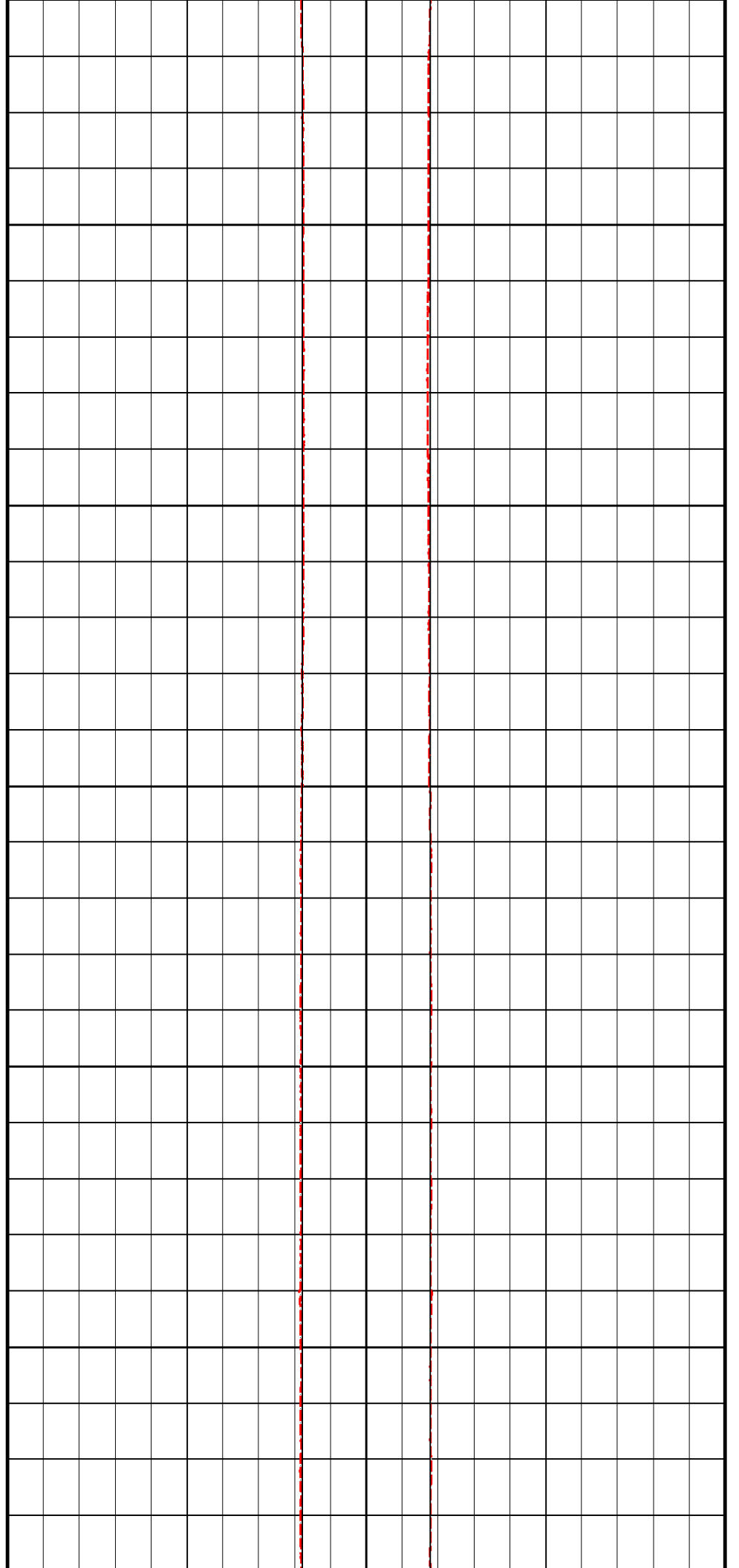
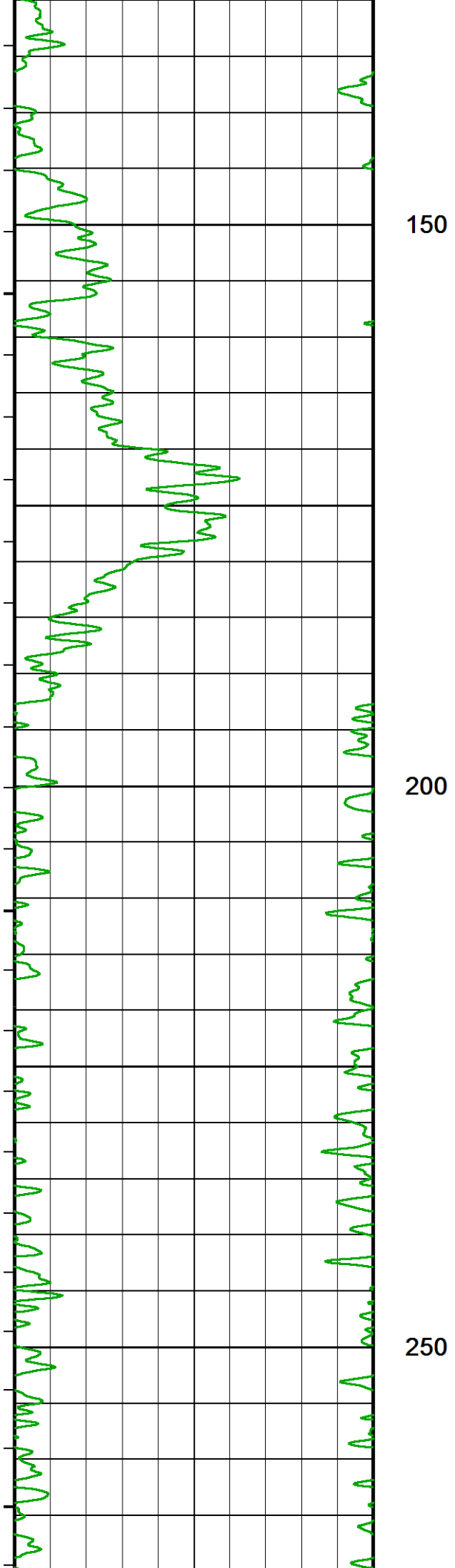
RIG: FORACO 12

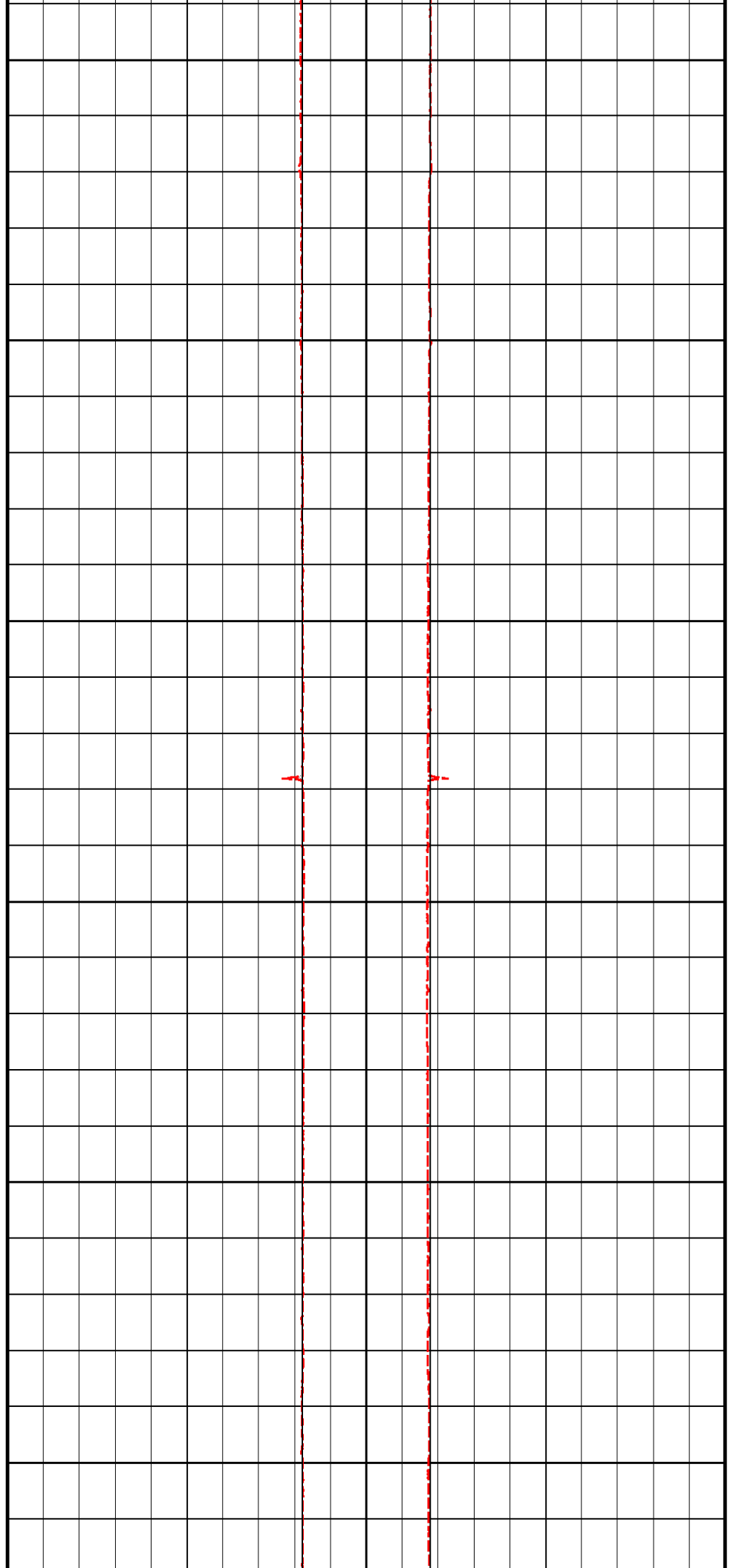
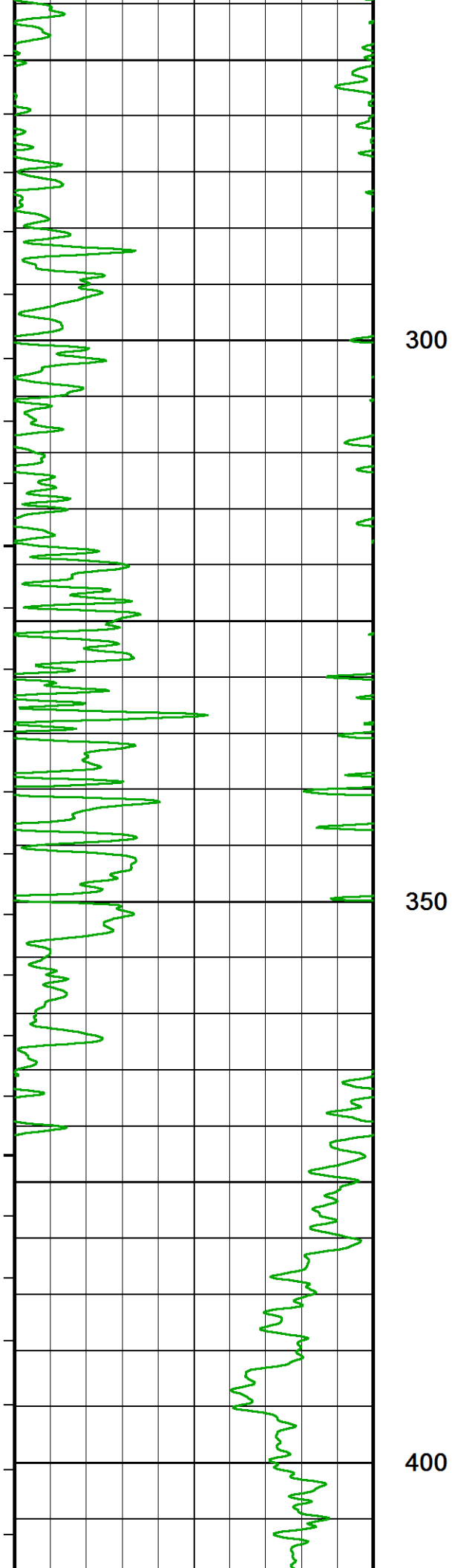
NO REPEAT SECTION LOGGED AS PER CLIENT REQUIRMENT

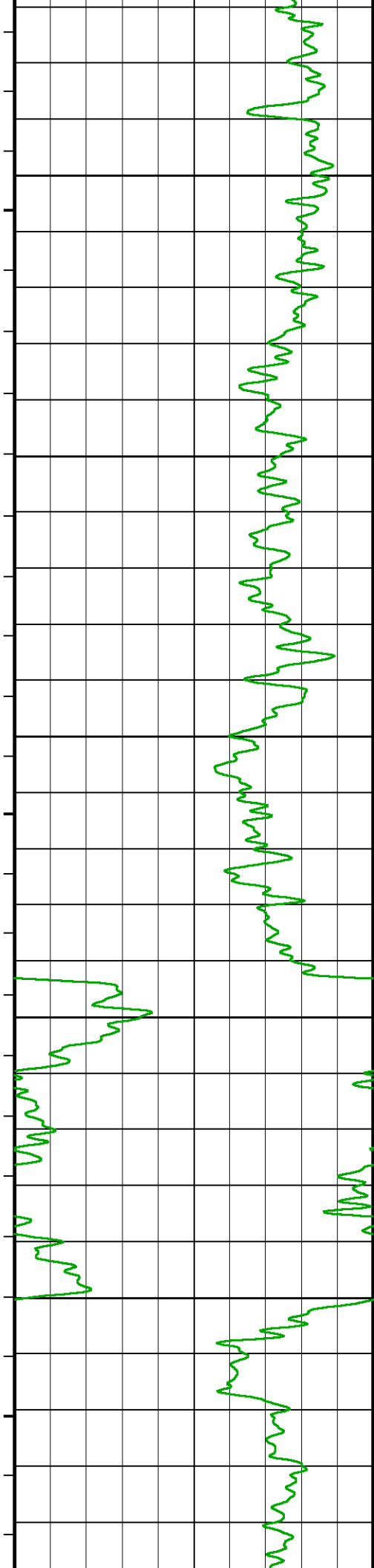
LOGGING CREW: ENGINEER - D. HINTON; N. HOWLETT

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.



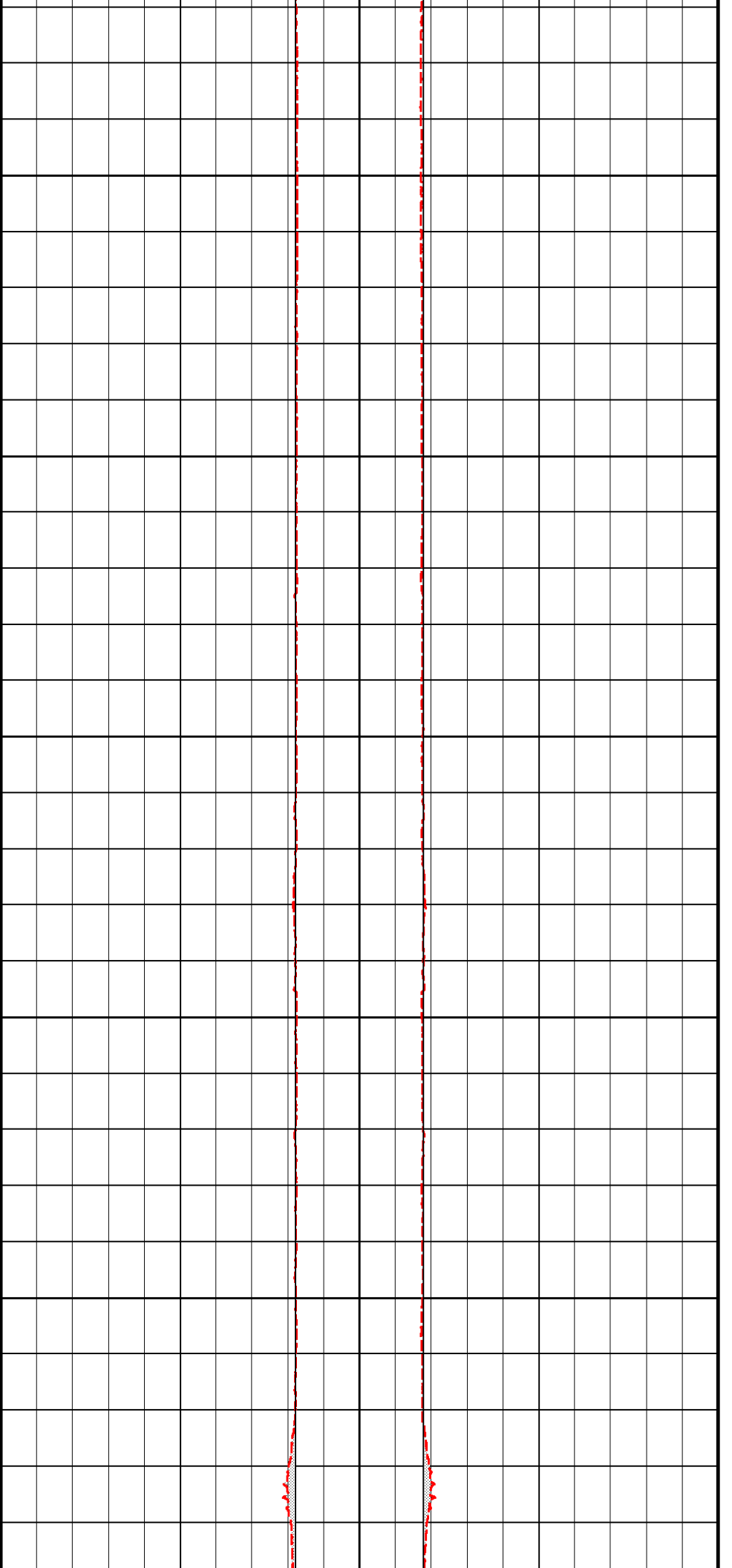


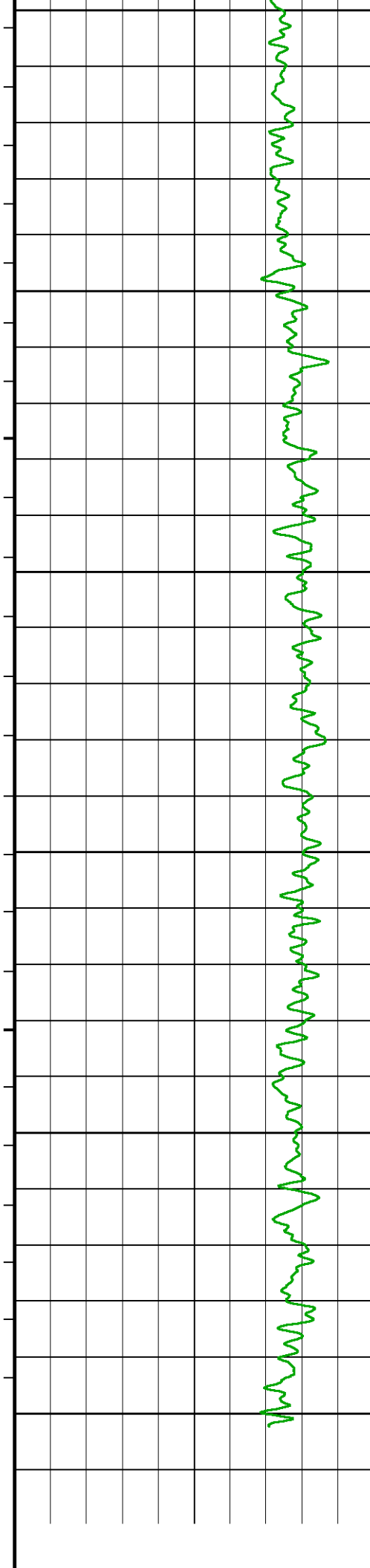




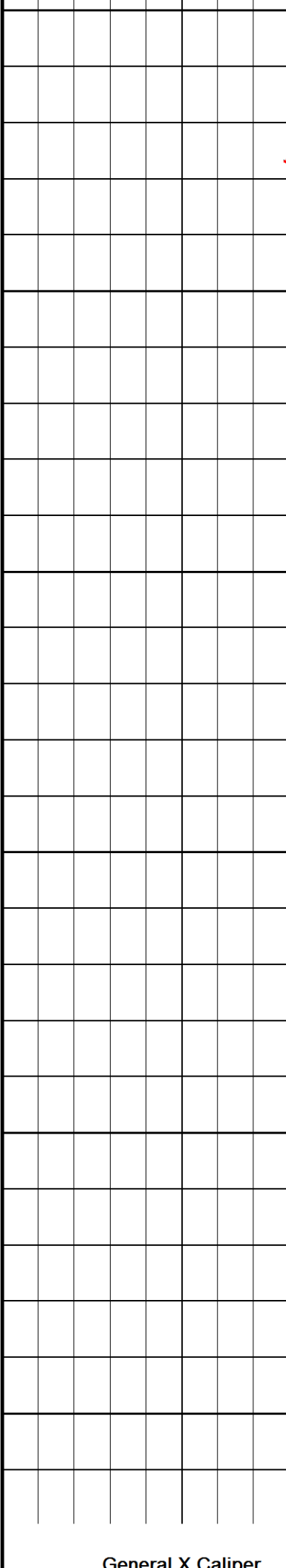
450

500

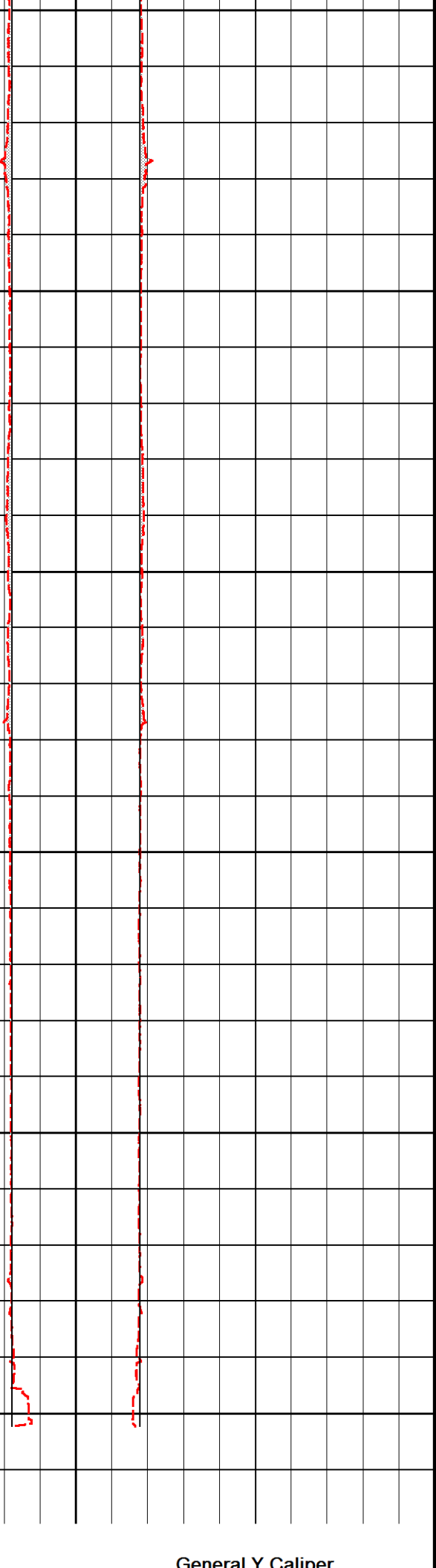




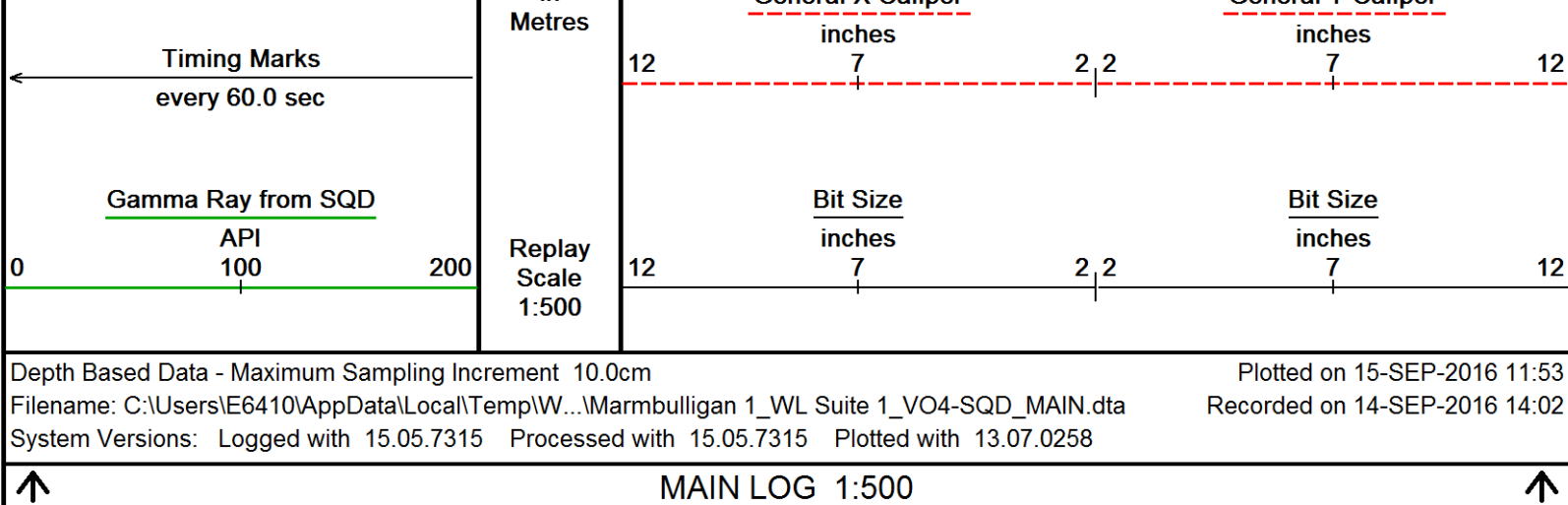
550
600
650
683
Depth
in



General X Caliper



General Y Caliper



BEFORE SURVEY CALIBRATION						
C:\Users\E6410\AppData\Local\Temp\Weatherford PreView0\0\Marmbulligan 1_WL Suite 1_VO4-SQD_MAIN_bad.dta						
General Constants All 000			Last Edited on 14-SEP-2016,13:31			
General Parameters						
Mud Resistivity	0.051		ohm-metres			
Mud Resistivity Temperature	25.000		degrees C			
Water Level	0.000		metres			
Borehole Fluid Processing	Wet Hole					
Hole/Annular Volume and Differential Caliper Parameters						
HVOL Method	Single Caliper					
HVOL Caliper 1	General X Caliper					
HVOL Caliper 2	N/A					
Annular Volume Diameter	3.000	inches				
Caliper for Differential Caliper	None					
Rwa Parameters						
Porosity used	N/A					
Resistivity used	N/A					
RWA Constant A	N/A					
RWA Constant M	N/A					
SW/APOR Tool Source						
Level Cell Calibration V04-A 312						
			Field Calibration on 13-AUG-2016,20:29			
Cell 1 Counts	Cell 2 Counts	Tilt (degrees)	Cell 1 Counts	Cell 2 Counts	Tilt (degrees)	
124.00	124.00	-20.00	0.00	0.00	0.00	
154.00	154.00	-10.00	0.00	0.00	0.00	
180.00	180.00	0.00	0.00	0.00	0.00	
205.00	205.00	10.00	0.00	0.00	0.00	
235.00	235.00	20.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00	
Magnetometer Parameters V04-A 312						
	X Magnetometer	Y Magnetometer	Z Magnetometer			
Maximum	259.000	260.000	219.000			
Minimum	100.000	100.000	139.000			
Borehole Geometry Constants V04-A 312						
			Last Edited on 14-SEP-2016,05:20			
Configuration	Dipmeter					
Magnetic Declination	4.03	degrees	East			
Dipmeter Constants SQD-A 433						
			Last Edited on 22-AUG-2016,01:48			

Sonde Configuration	Dipmeter Mode	
Arm Kit	N/A	
Search Angle	45.00	degrees
Correlation Interval	1.00	metres
Correlation Step	0.20	metres
Caliper used in Calculations	Yes	
Pad Curves Filter Length	1	
Dipmeter Orientation	True North	
Curve used to orient image	Azimuth of Pad 1	
Pseudo image processing	Enabled	

Gamma Calibration SQD-A 433

Field Calibration on 03-AUG-2016 14:22

	Measured	Calibrated (API)
Background	9	40
Calibrator (Gross)	112	495
Calibrator (Net)	103	455

Gamma Constants SQD-A 433

Last Edited on

Gamma Calibrator Number 455

Caliper Calibration SQD-A 433

Base Calibration on 22-AUG-2016,02:08

Base Calibration

Reading No	Measured X	Measured Y	Calibrator Size (in)
1	204	204	3.00
2	343	341	4.00
3	632	629	6.00
4	964	956	8.00
5	1212	1211	10.00
6	0	0	0.00

Reading No	Pad 1 Offset (in)	Pad 2 Offset (in)	Pad 3 Offset (in)	Pad 4 Offset (in)
1	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000

Caliper Constants SQD-A 433

Last Edited on 13-AUG-2016,20:36

Caliper Difference for BRKT 0.120 inches

COMPANY Santos & Partners
WELL Marmbulligan 1
FIELD Marmbulligan
PROVINCE/COUNTY
COUNTRY/STATE Northern Territory

Elevation Kelly Bushing	metres	First Reading	metres
Elevation Drill Floor 175.00	metres	Depth Driller 674.80	metres
Elevation Ground Level 175.00	metres	Depth Logger 675.32	metres



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