



DUAL INDUCTION LOG

Company: SPSS OIL COMPANY
 Well: LL JONES SWD NO.1
 Field: PLYMELL
 County: FINNEY
 State: KANSAS

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Location: API #: 15-055-22467-00-00
 366' FSL & 918' FEL
 SEC 30 TWP 25S RGE 33W
 Permanent Datum: GROUND LEVEL Elevation 2945'
 Log Measured From: KELLY BUSHING
 Drilling Measured From: KELLY BUSHING
 Other Services: CNL/CDL
 Elevation: K.B. 2956', D.F. N/A, G.L. 2945'

Date	10/31/2017
Run Number	ONE
Depth Driller	2040'
Depth Logger	2040'
Bottom Logged Interval	2039'
Top Log Interval	00
Casing Driller	8.625" @ 942'
Casing Logger	942'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	550
Density / Viscosity	8.6 65
pH / Fluid Loss	10.5 N/A
Source of Sample	FLOWLINE
Rm @ Meas. Temp	1.20 @ 52
Rmt @ Meas. Temp	.90 @ 52
Rmc @ Meas. Temp	1.62 @ 52
Source of Rmf / Rmc	CHARTS
Rm @ BHT	.65 @ 96
Operating Rig Time	2 HOURS
Max Rec. Temp. F	96 DEG/F
Equipment Number	108
Location	HAYS
Recorded By	J. HENRICKSON
Witnessed By	KEN MCGUIRE

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All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not 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.

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.
 GARDEN CITY
 SOUTH TO PARALLEL ROAD, 5 1/2 WEST, NORTH INTO

Log Measured From: KELLY BUSHING 11 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES
 www.pioneerenergy.com 785-625-3858

Your Pioneer Energy Services Crew Engineer: J. HENRICKSON Operator: Operator: Operator:	This Log Record Was Witnessed By Primary Witness: KEN MCGUIRE Secondary Witness: Secondary Witness: Secondary Witness:
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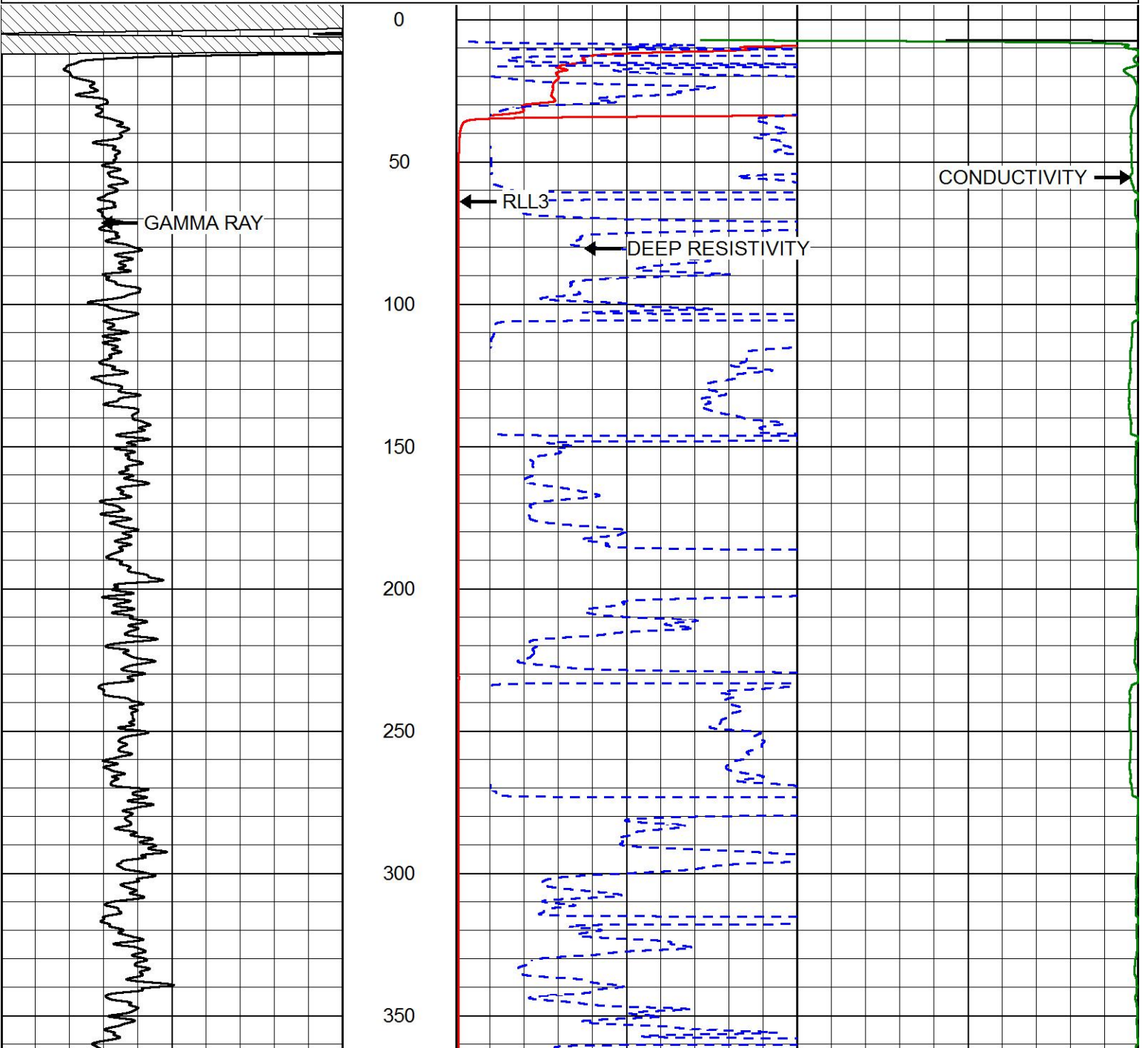
Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	33.00		GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC CNSSC	29.90 29.15		CNT-M&W (tk10-MW)	5.50	3.50	100.00
LSD DCAL SSD	20.85 20.83 20.35		CDL-M&W (168-986)	8.50	4.00	250.00
RLL3F RLL3	15.80 15.80		DIL-PSI HIGH TEMP (PSI 216 HT)	18.50	3.50	220.00
CILD	8.00		CILD	8.00		
CILM	4.70		CILM	4.70		
SP	0.20		SP	0.20		

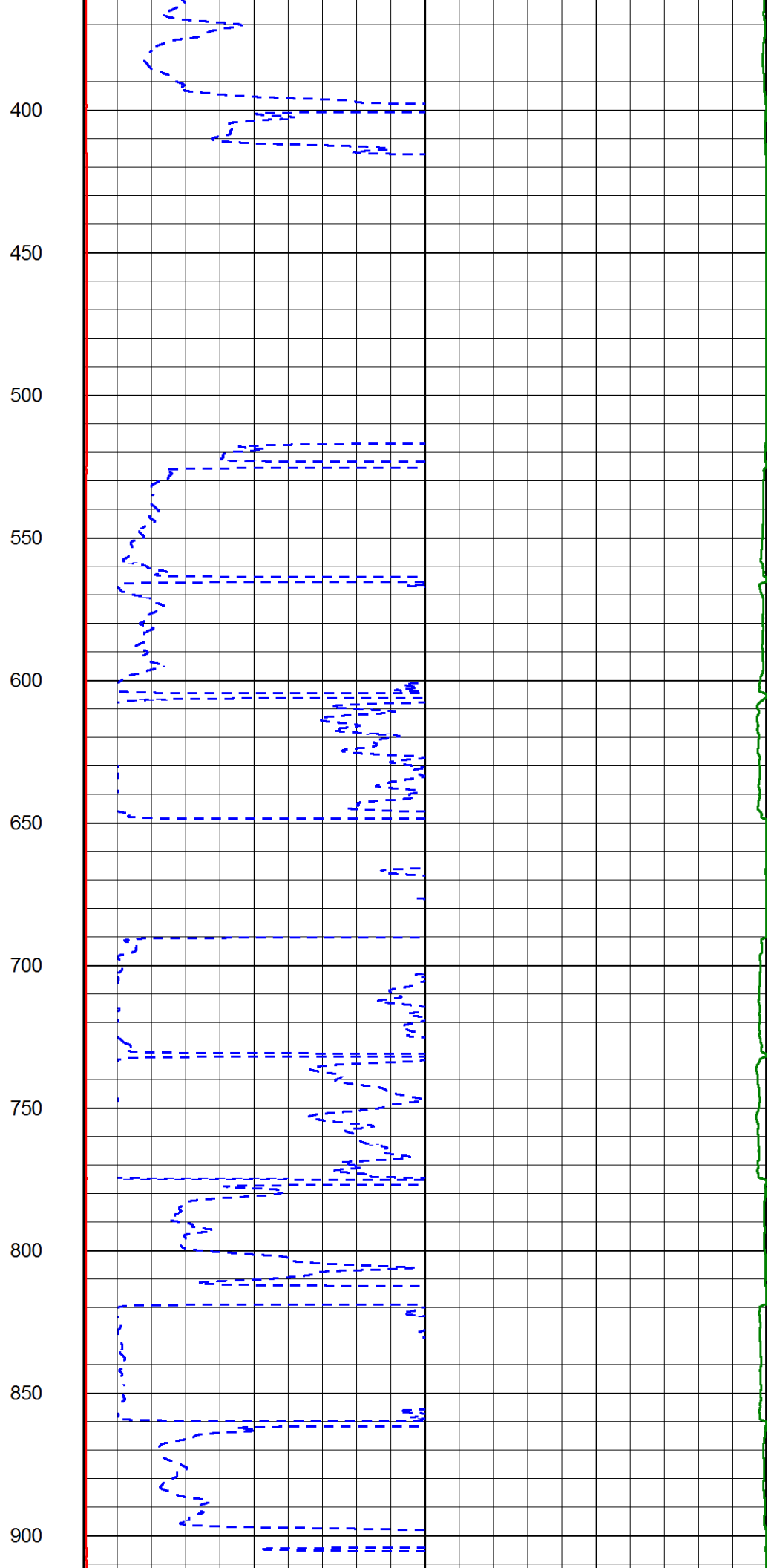
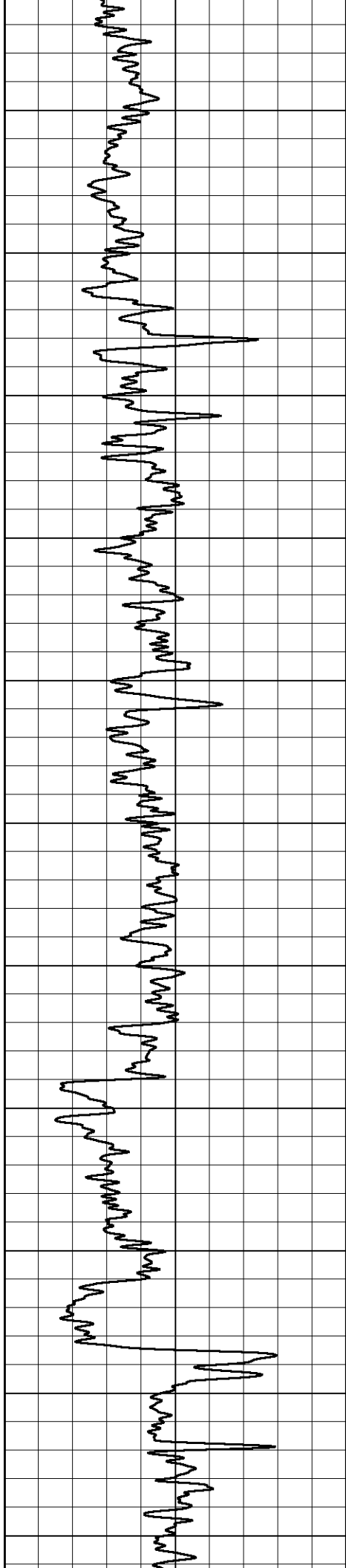
Dataset: spess_ll_jones_swd_1.db: field/well/stack/pass3.1
 Total length: 35.50 ft
 Total weight: 620.00 lb
 O.D.: 4.00 in

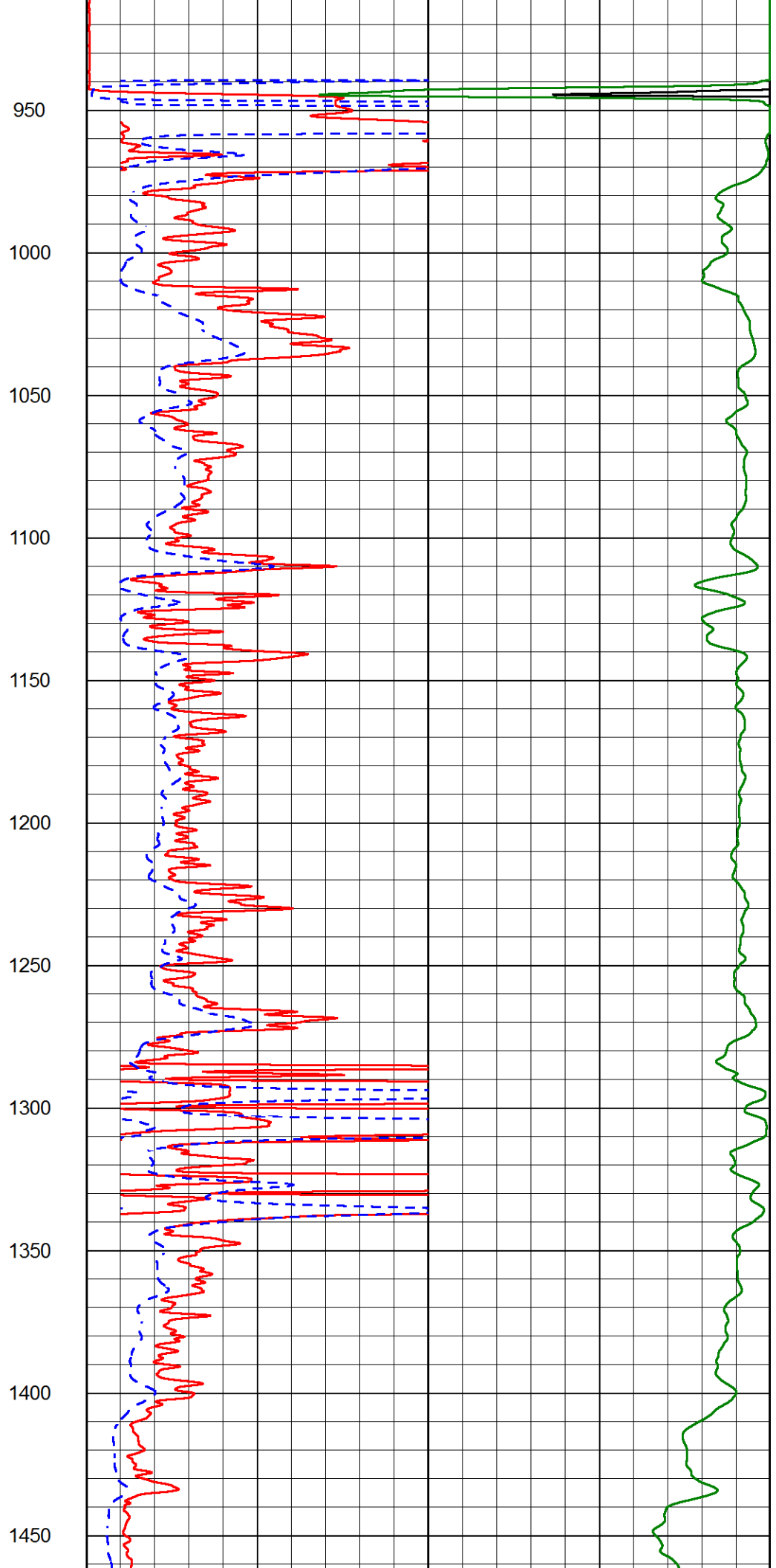
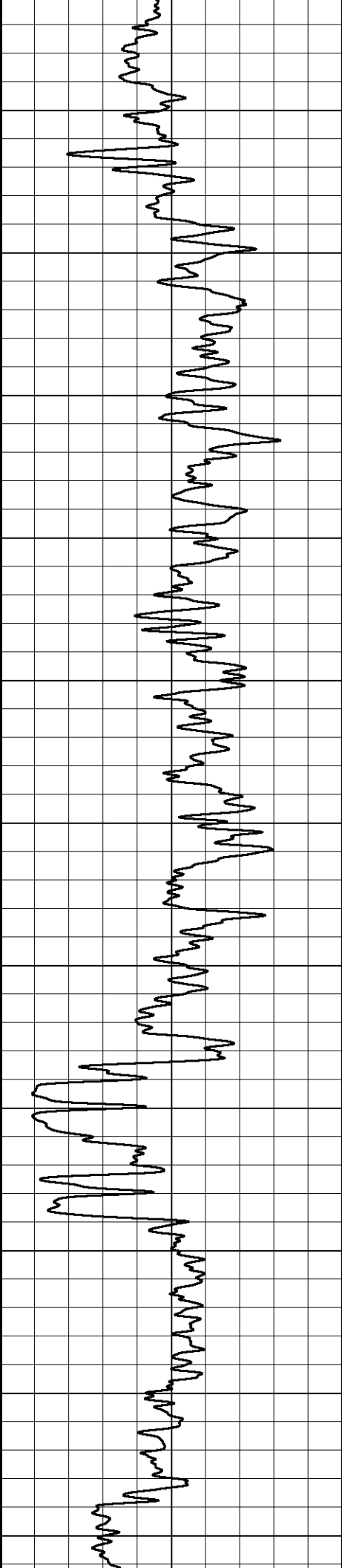
MAIN PASS

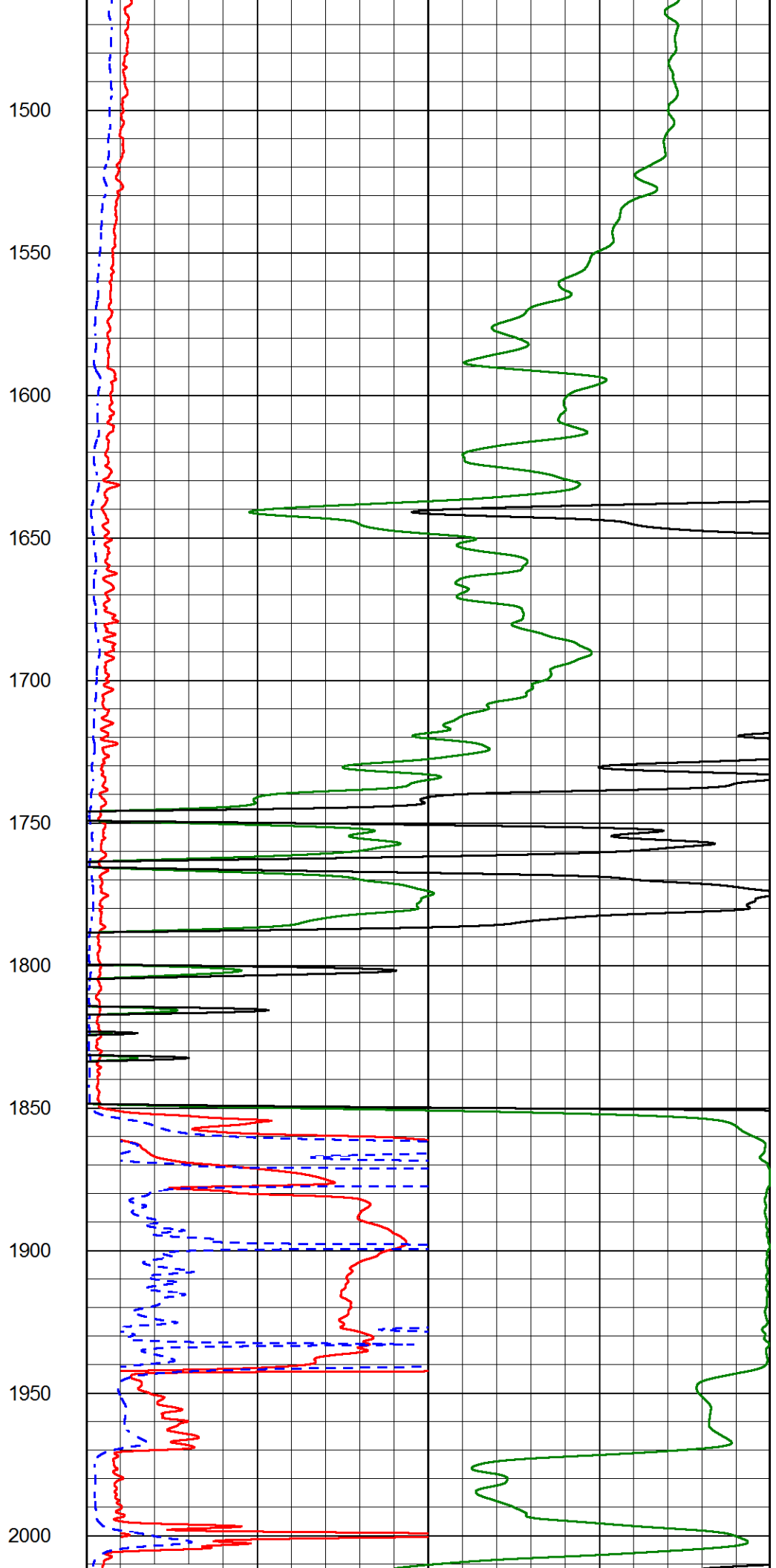
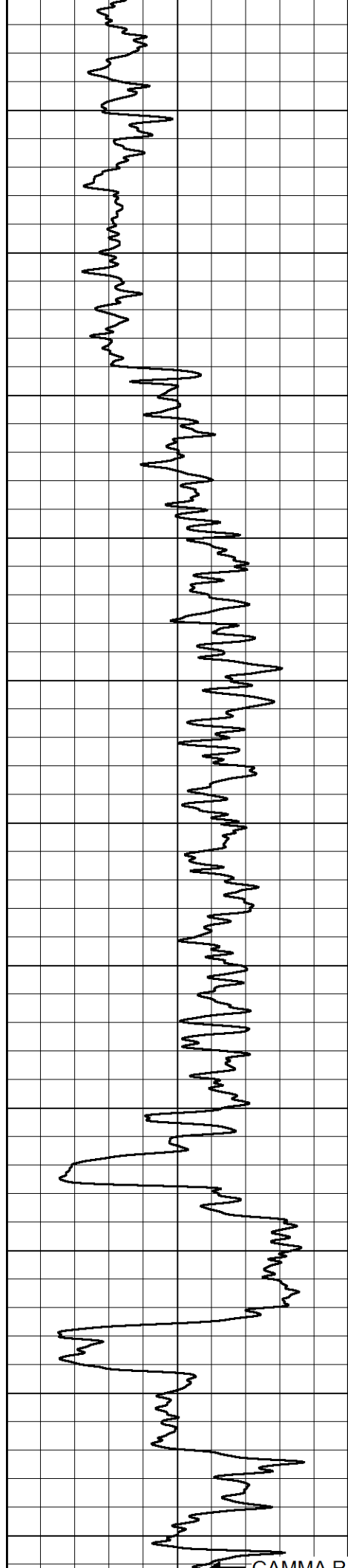
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 Dataset Pathname stack/pass3.1
 Presentation Format dil2in
 Dataset Creation Tue Oct 31 11:12:43 2017
 Charted by Depth in Feet scaled 1:600

0	GAMMA RAY (GAPI)	150	2000	CONDUCTIVITY (mmho/m)	0
0			RLL3 (Ohm-m)	50	
0			DEEP RESISTIVITY (Ohm-m)	50	
50			RLL3 (Ohm-m)	500	
			DEEP RESISTIVITY		
50			(Ohm-m)	500	

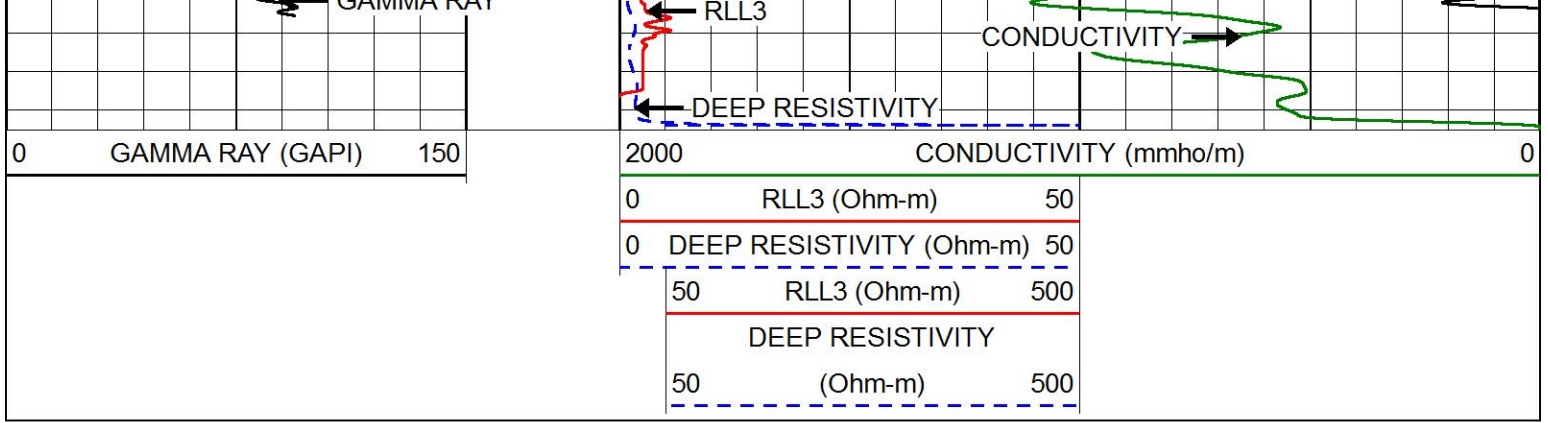








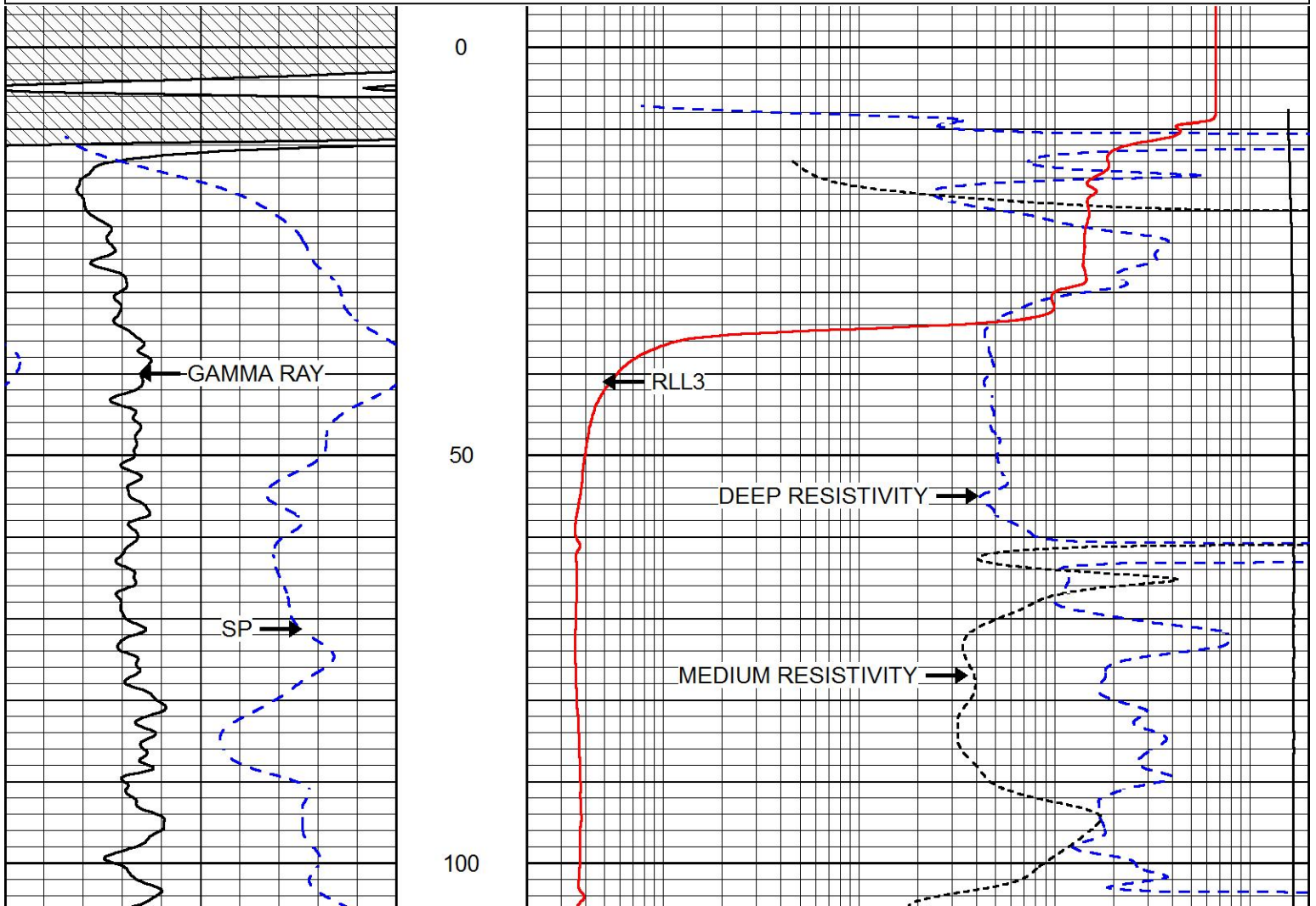
CAMMA BAY

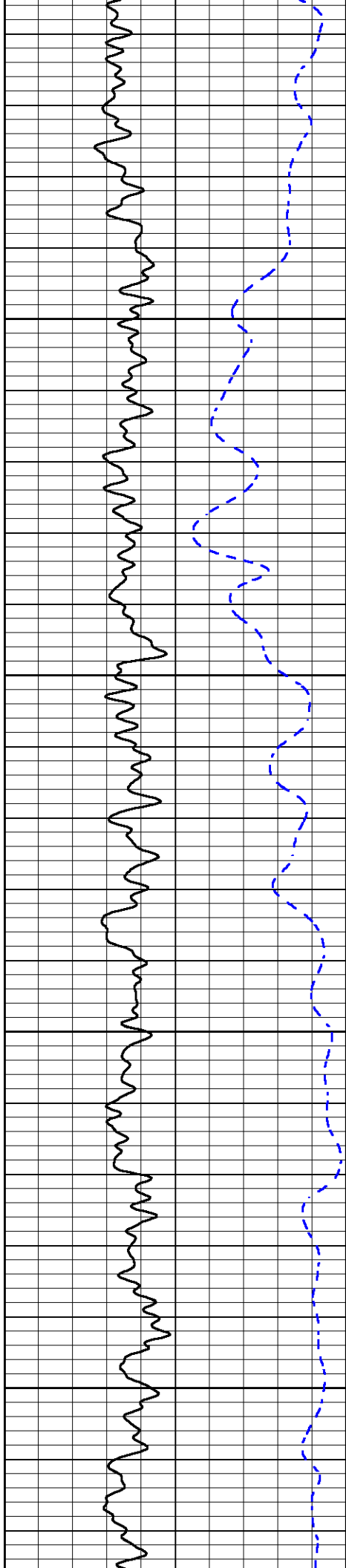


MAIN PASS

Database File spess_ll_jones_swd_1.db
 Dataset Pathname stack/pass3.1
 Presentation Format dil
 Dataset Creation Tue Oct 31 11:12:43 2017
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	0.2	DEEP RESISTIVITY (Ohm-m)	2000
-200	SP (mV)	0	0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
			0.2	RLL3 (Ohm-m)	2000
			15000	LINE TENSION (lb)	0



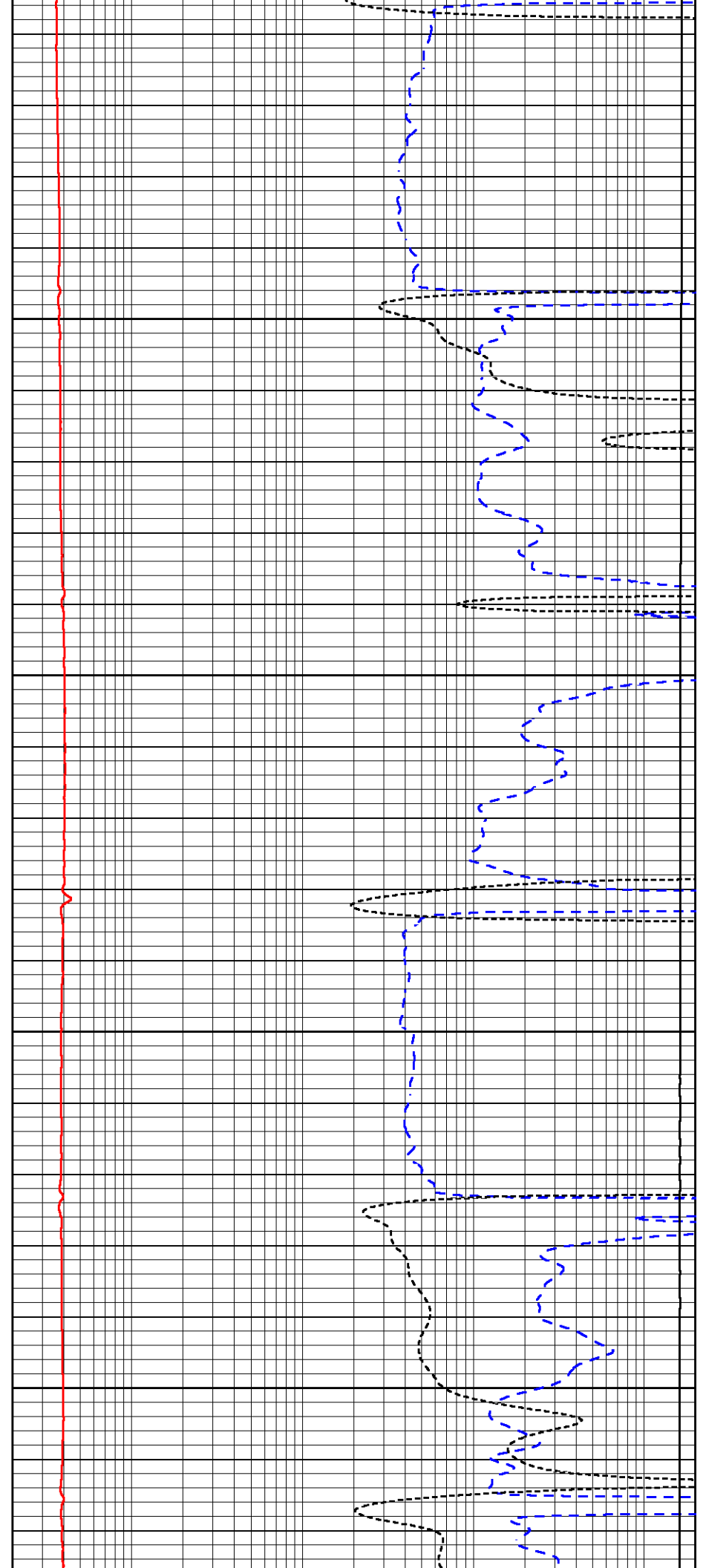


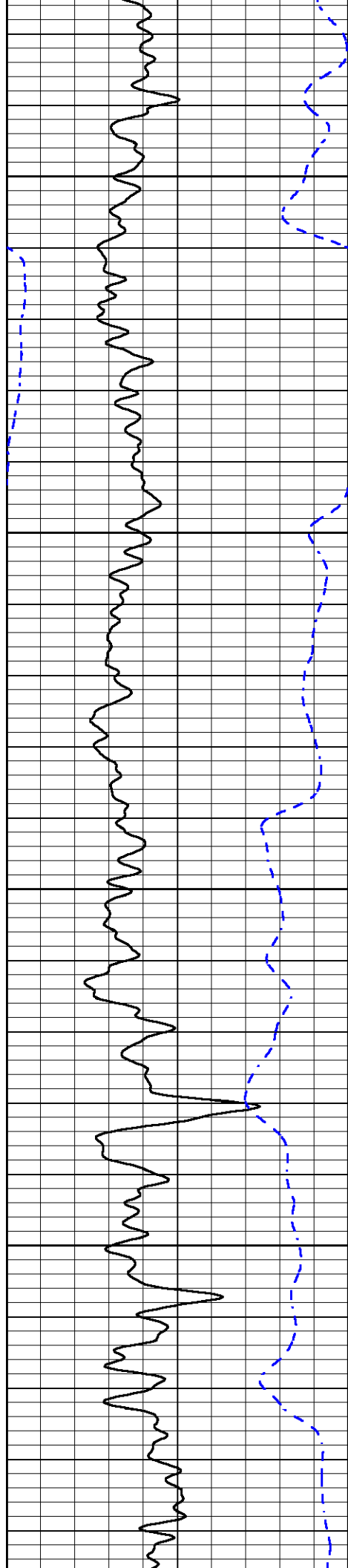
150

200

250

300



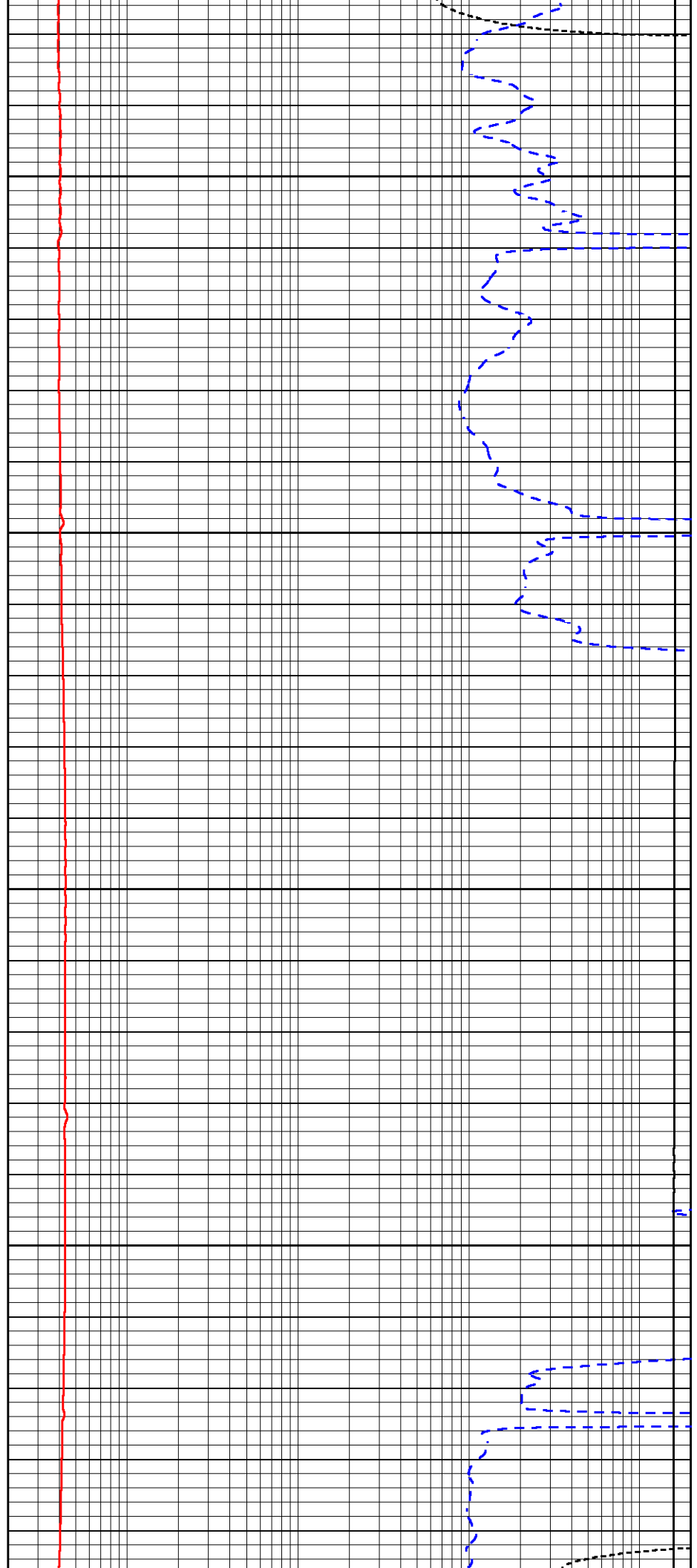


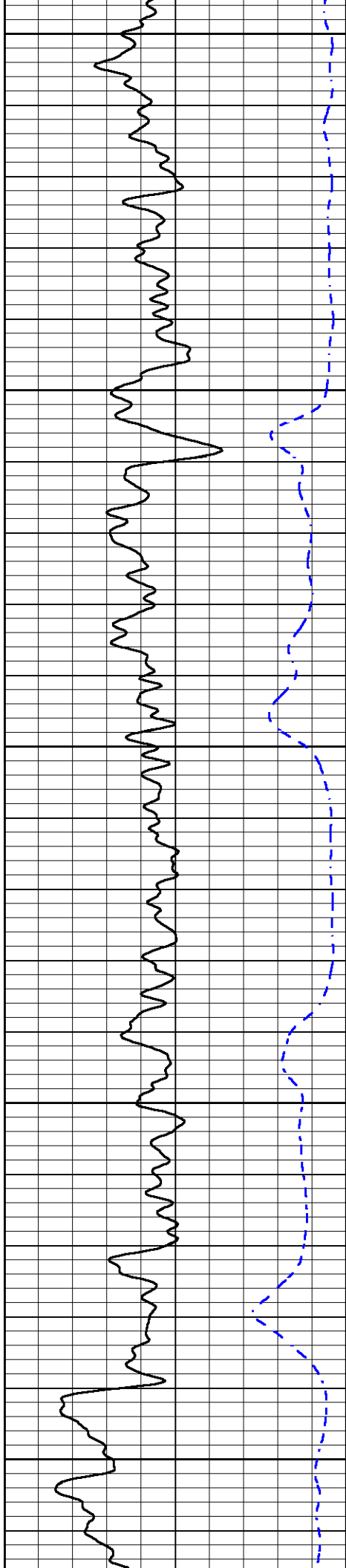
350

400

450

500





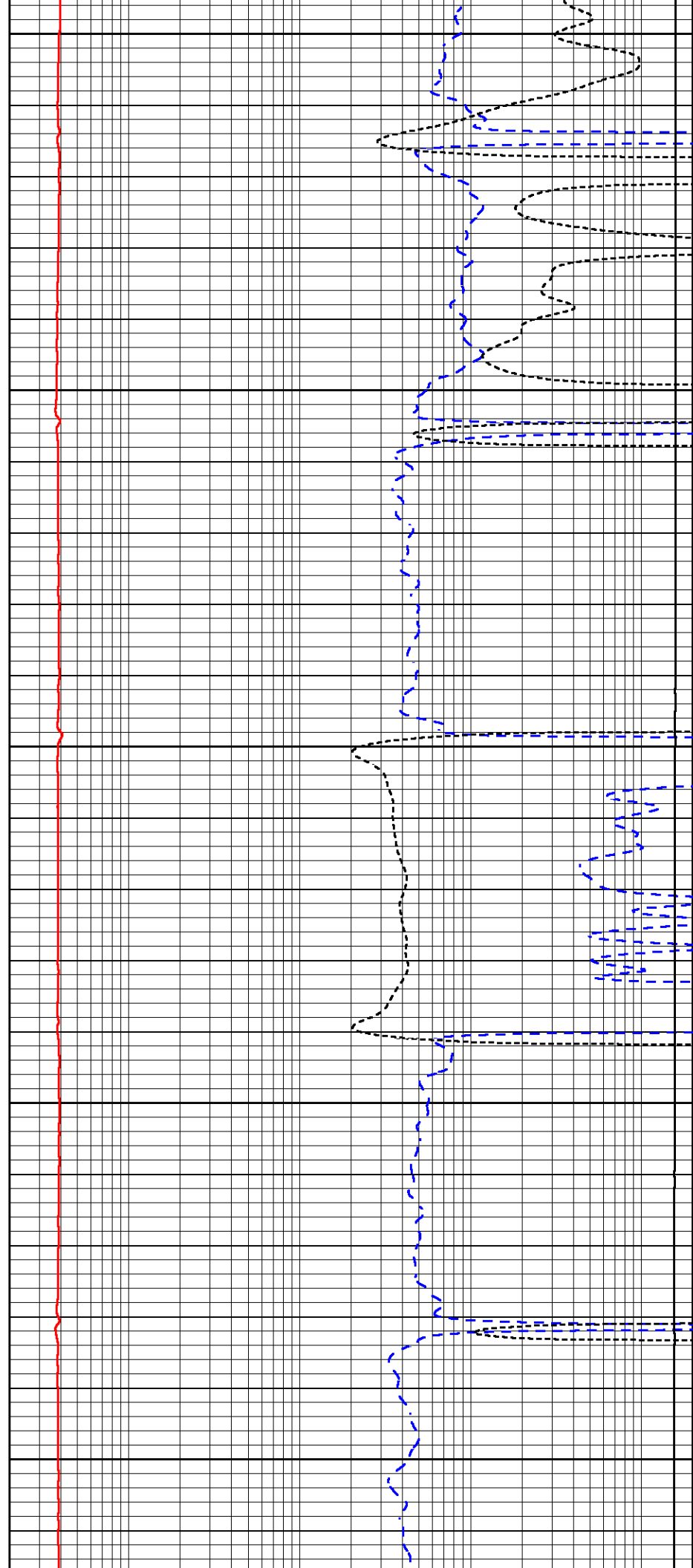
550

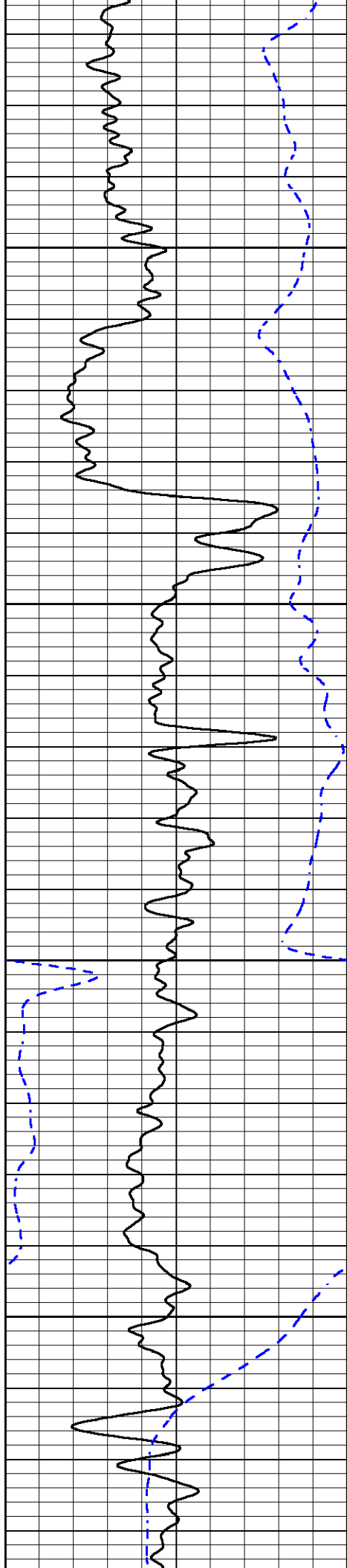
600

650

700

750



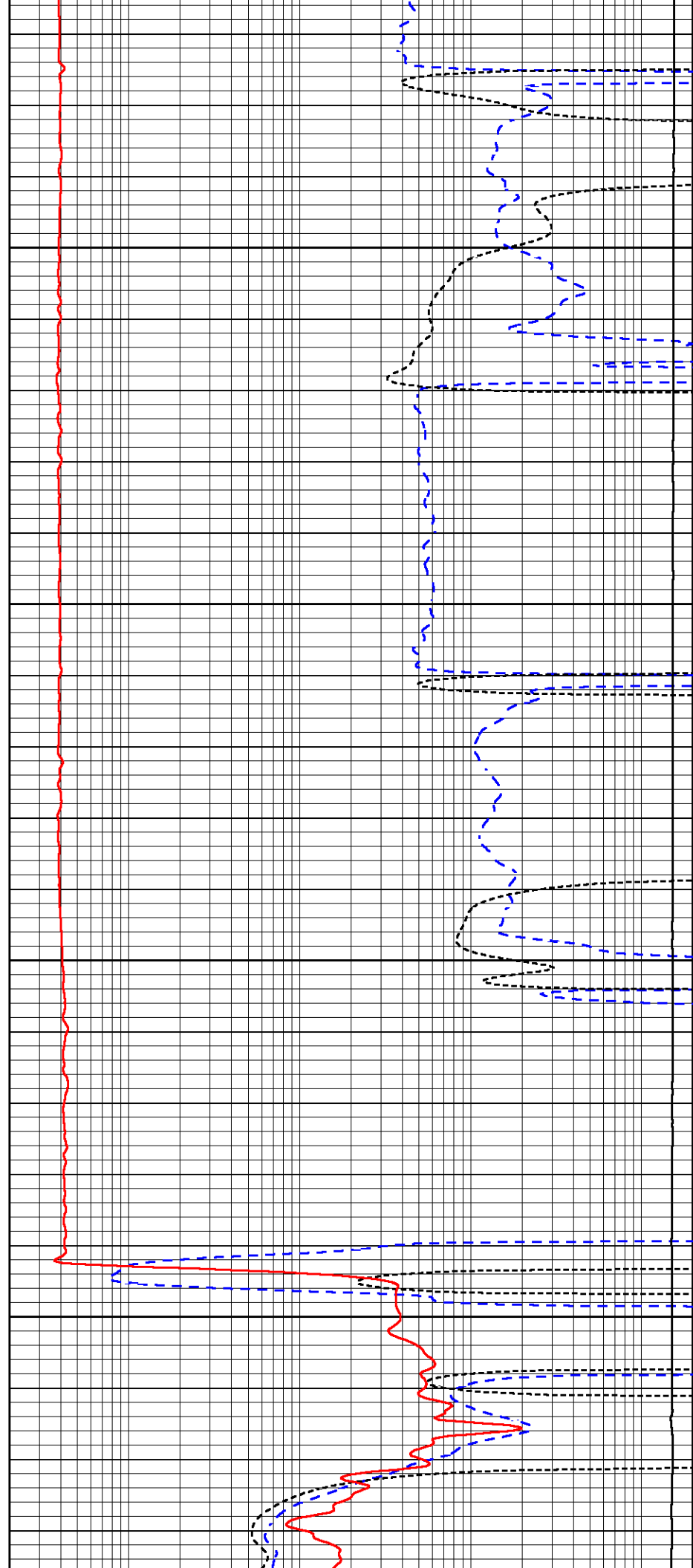


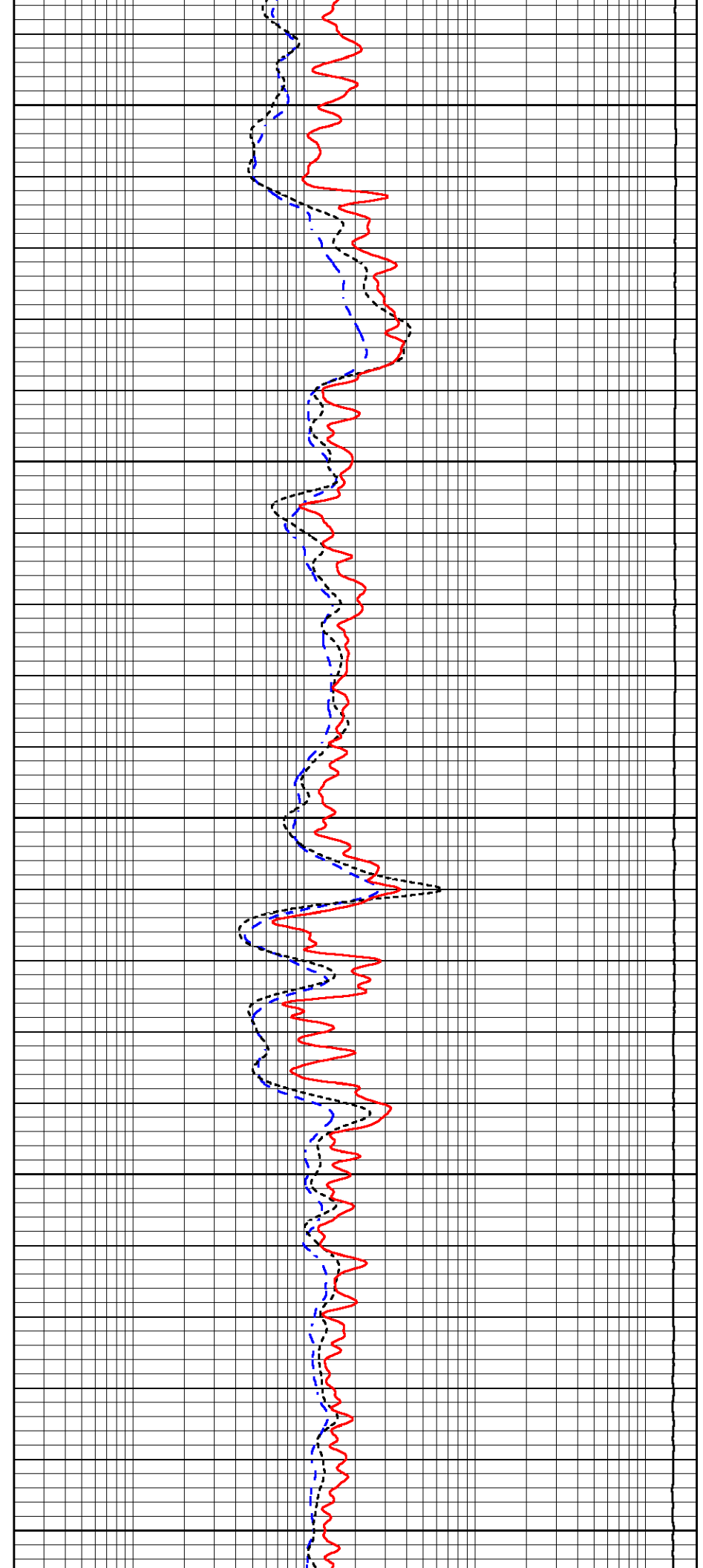
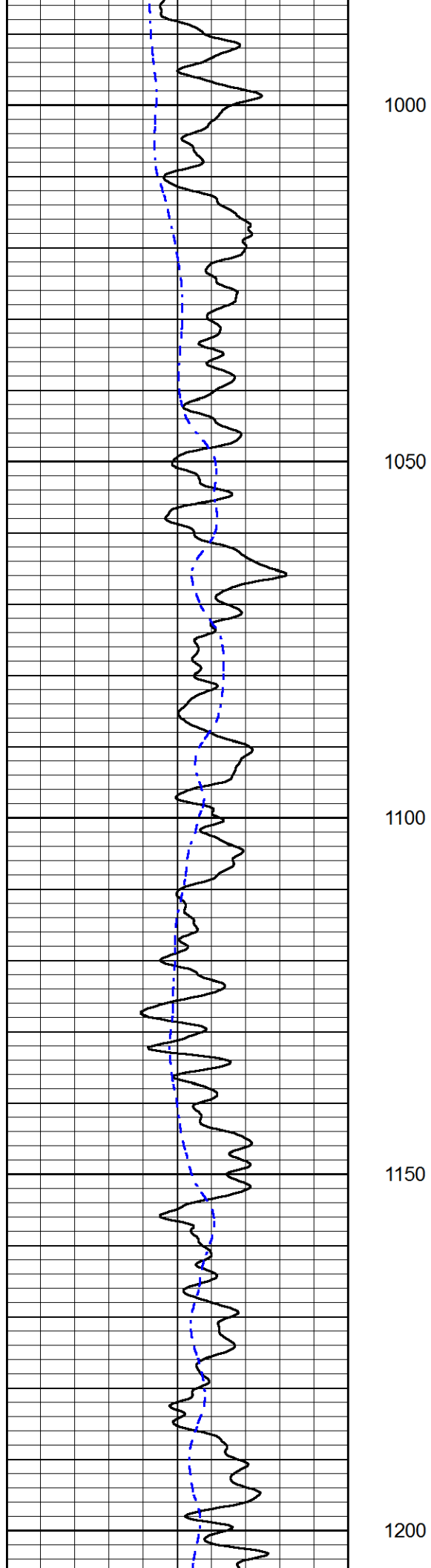
800

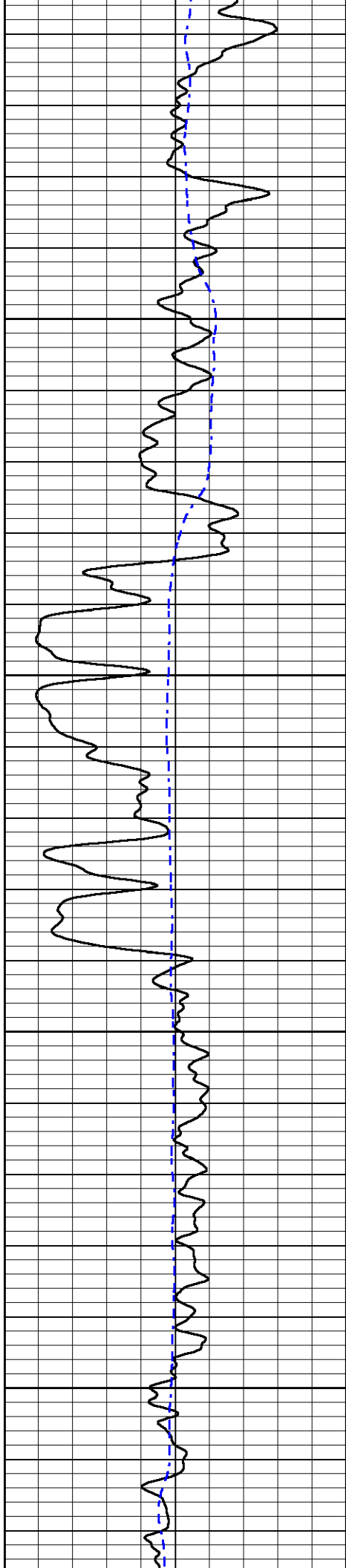
850

900

950





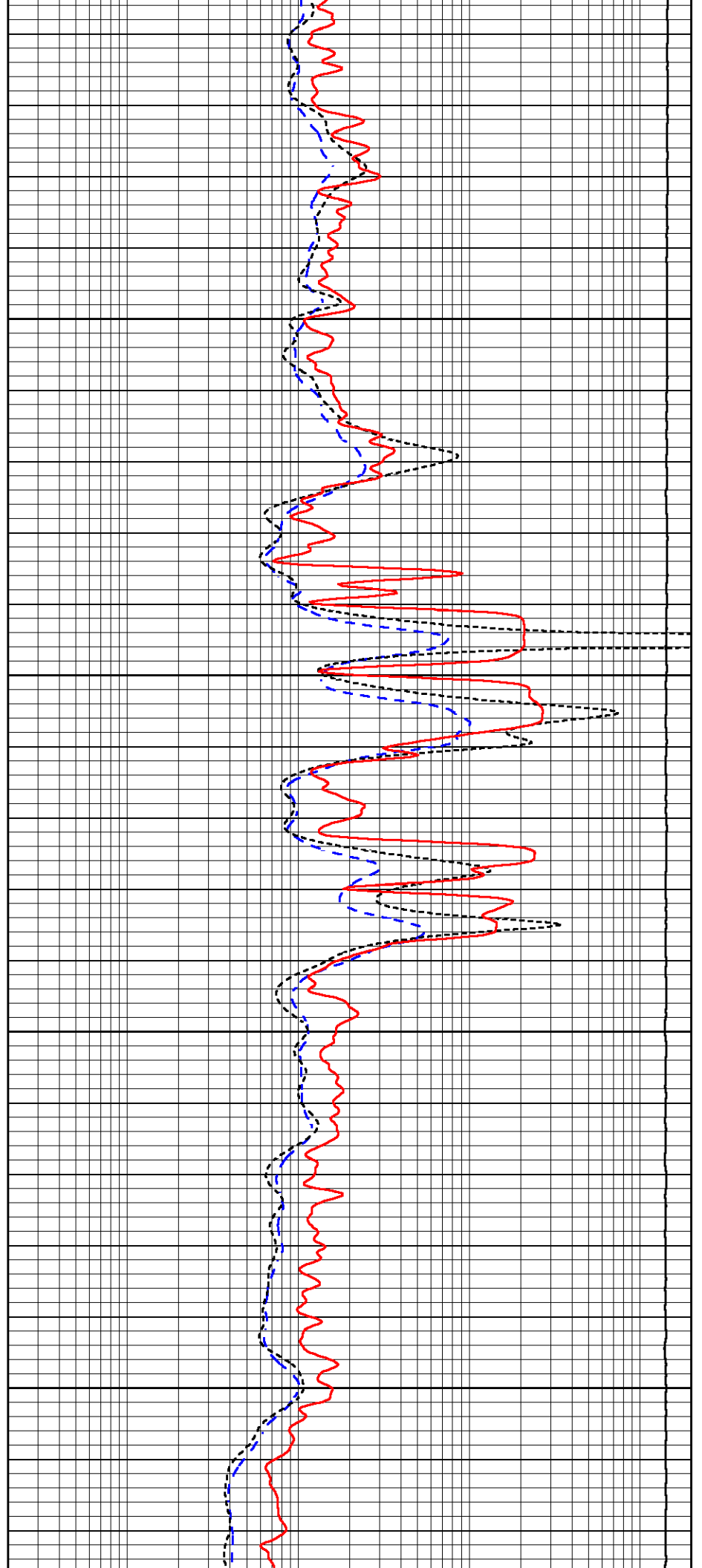


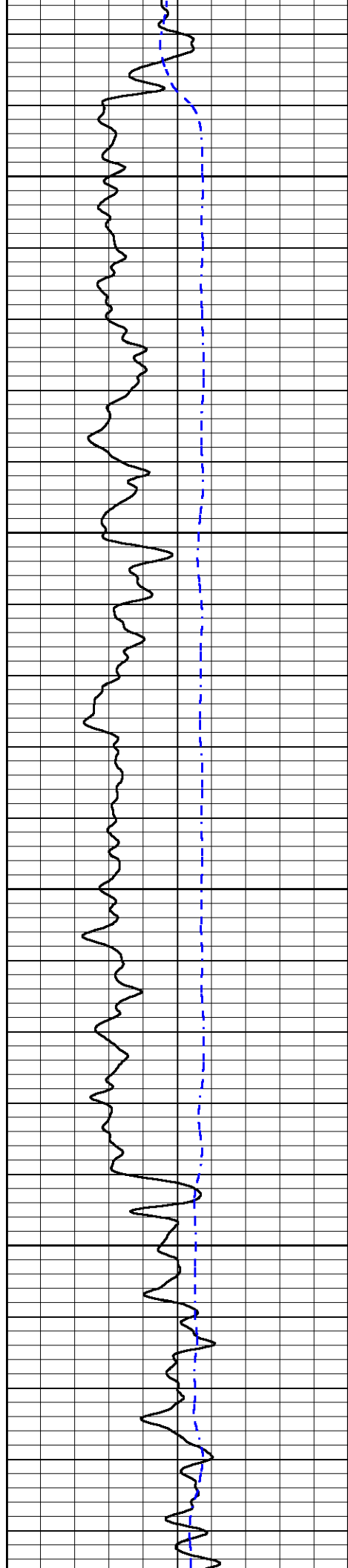
1250

1300

1350

1400



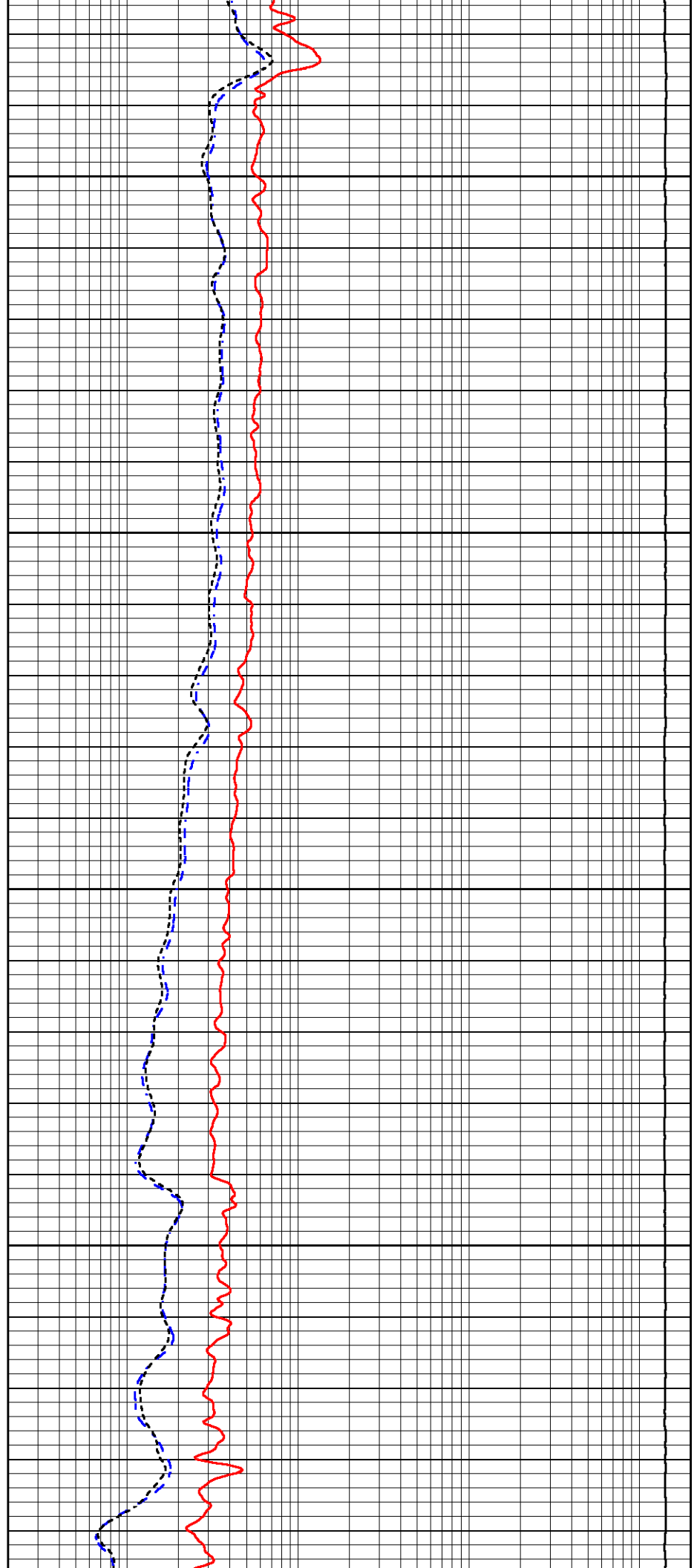


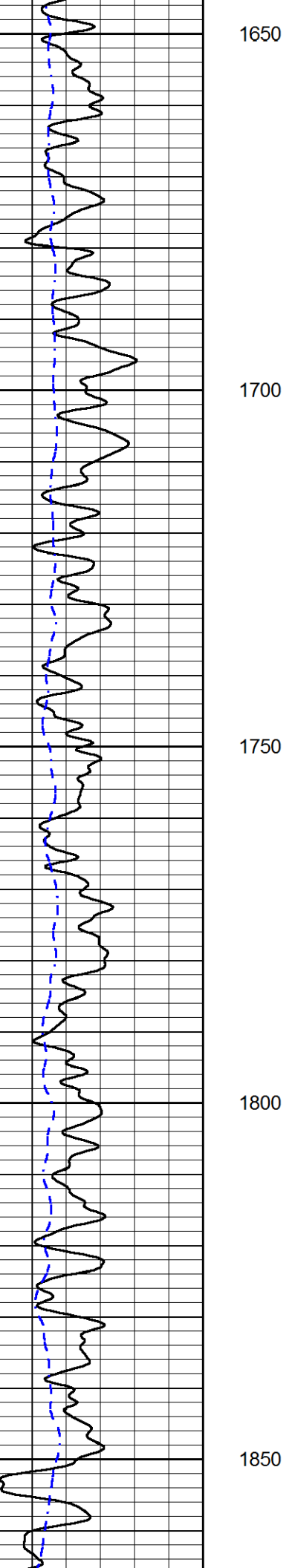
1450

1500

1550

1600





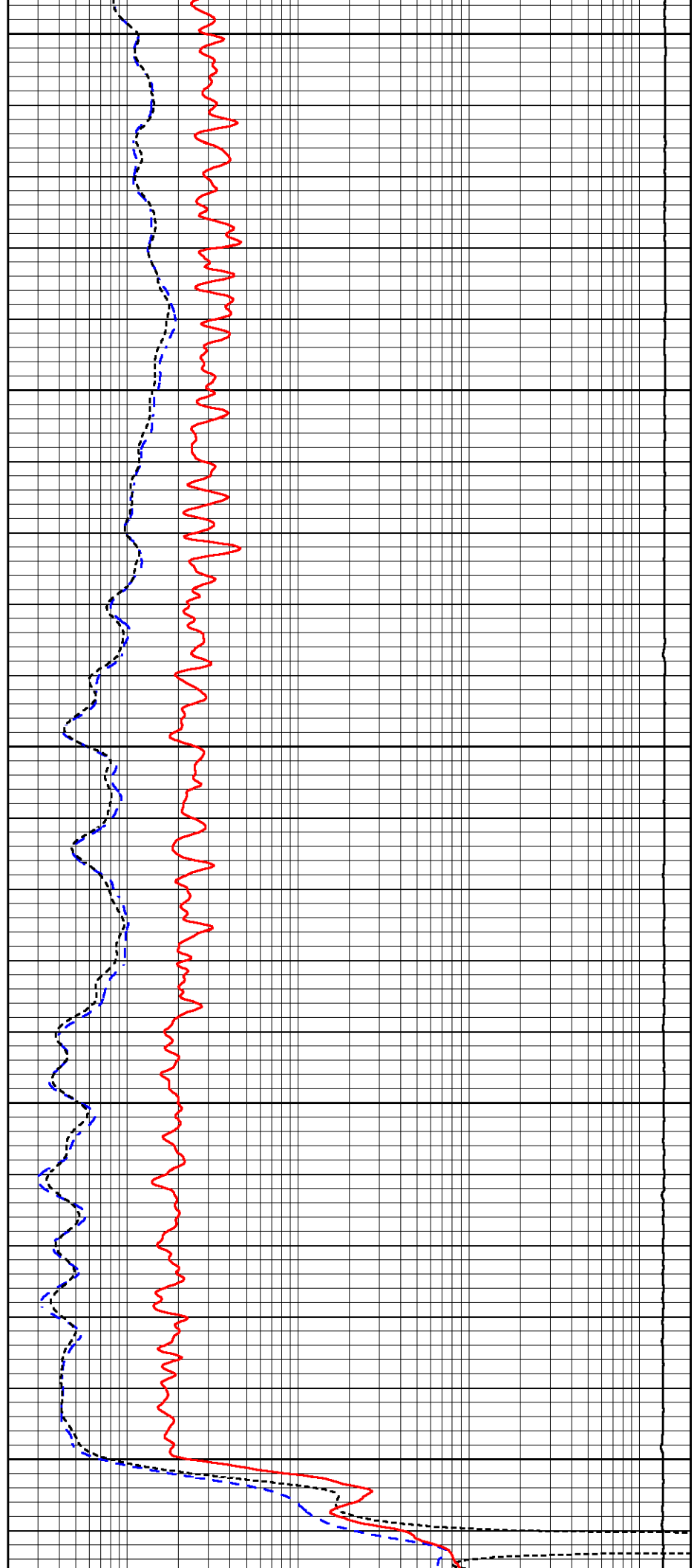
1650

1700

1750

1800

1850



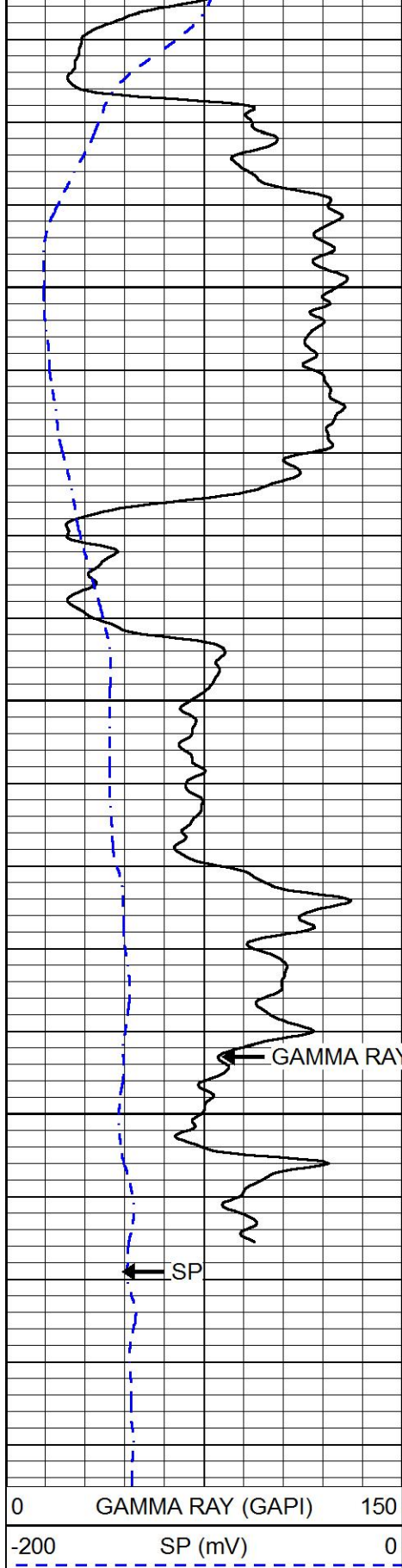
1650

1700

1750

1800

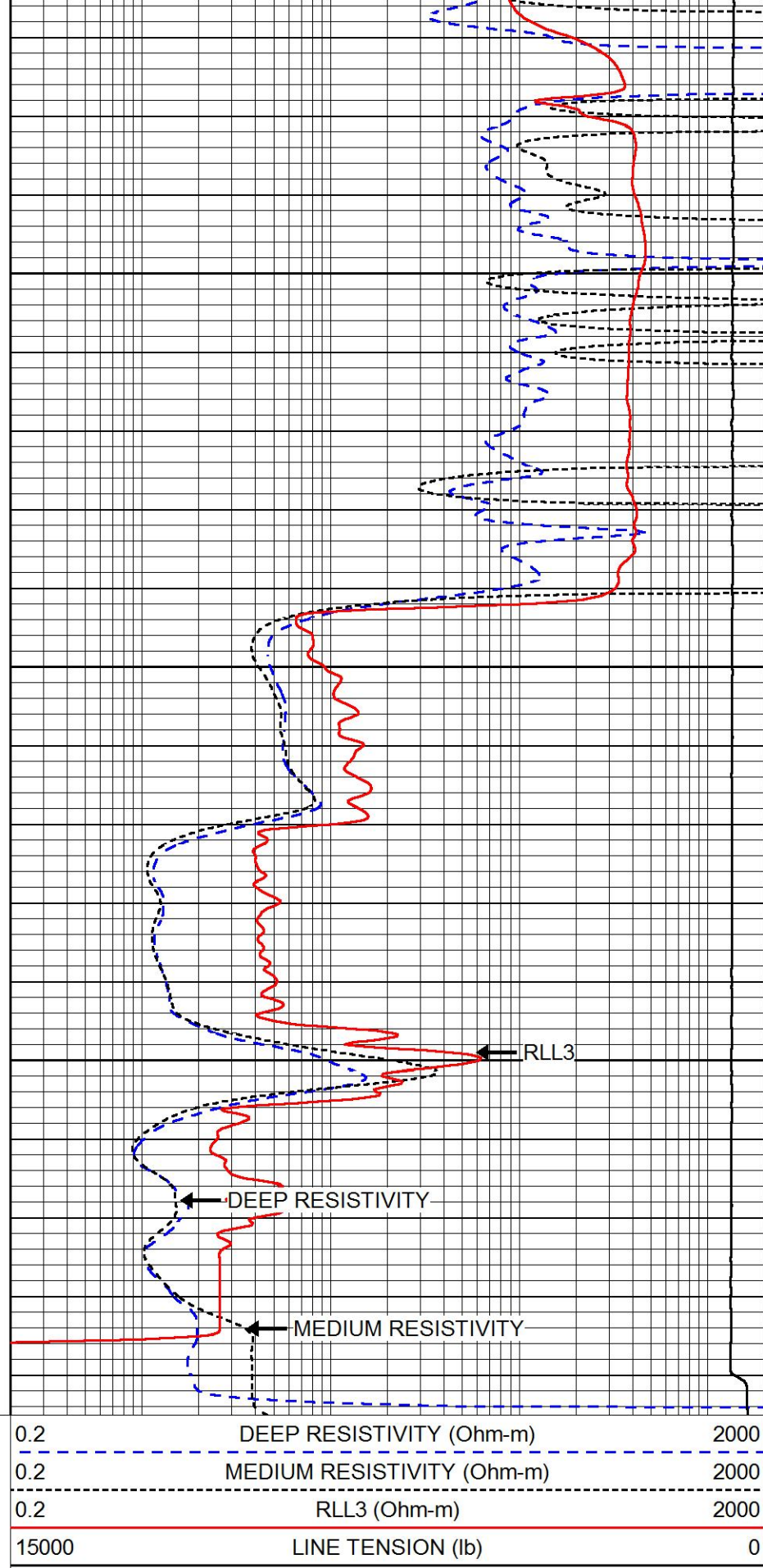
1850



1900

1950

2000

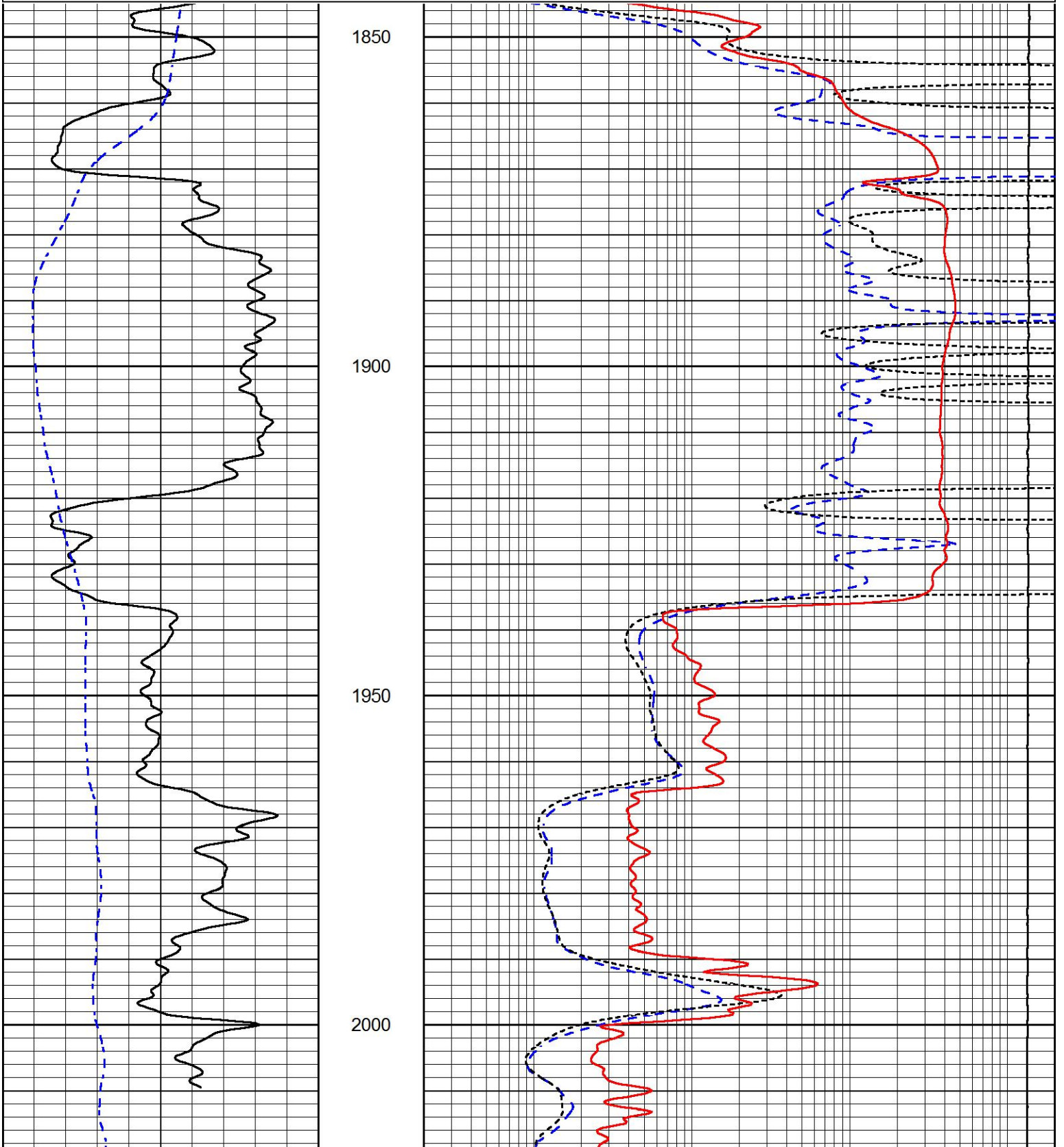


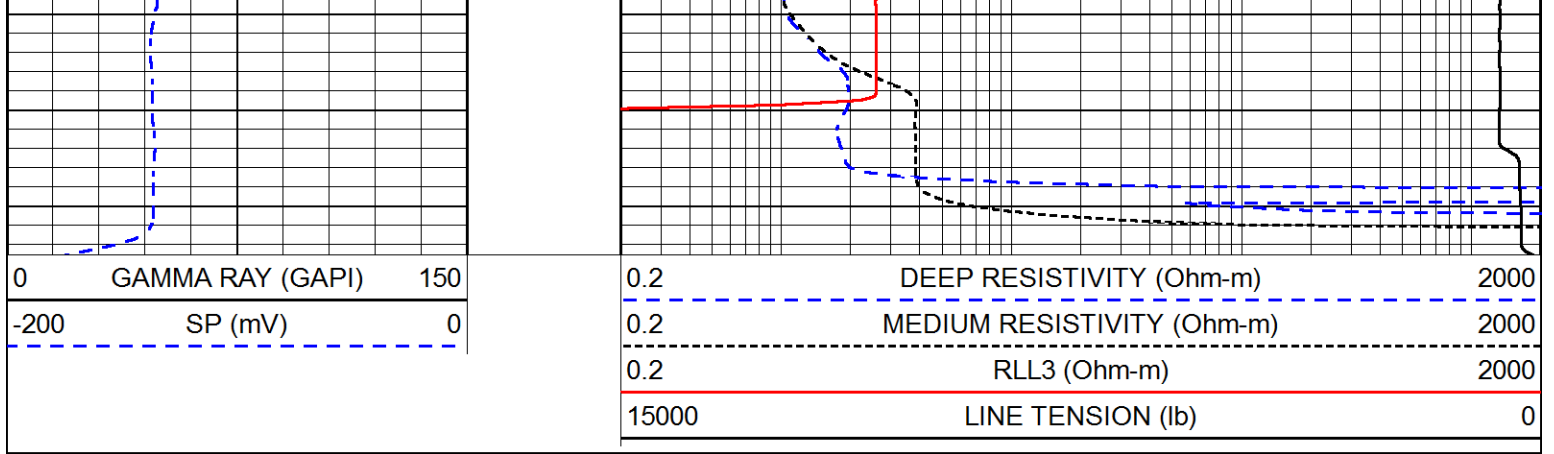
REPEAT SECTION

Database File spess_ll_jones_swd_1.db
 Dataset Pathname stack/pass2.1
 Presentation Format dil
 Dataset Creation Tue Oct 31 11:13:20 2017
 Charted by Depth in Feet scaled 1:240

0 GAMMA RAY (GAPI) 150
 -200 SP (mV) 0

0.2 DEEP RESISTIVITY (Ohm-m) 2000
 0.2 MEDIUM RESISTIVITY (Ohm-m) 2000
 0.2 RLL3 (Ohm-m) 2000
 15000 LINE TENSION (lb) 0





Calibration Report

Database File spess_ll_jones_swd_1.db
Dataset Pathname stack/pass3.1
Dataset Creation Tue Oct 31 11:12:43 2017

Dual Induction Calibration Report

Serial-Model: PSI 216 HT-PSI HIGH TEMP
Calibration Performed: Thu Aug 24 03:44:32 2017

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	75.411	495.929	4.000	250.000	mmho/m	0.750	-40.115
Medium	75.269	470.661	10.000	100.000	mmho/m	0.628	-22.133

Compensated Density Calibration Report

Serial-Model: 168-986-M&W
Source / Verifier: /
Master Calibration Performed: Tue Apr 11 16:07:47 2017

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4691.86	4818.19	cps
Aluminum	2.675	g/cc	859.57	3020.22	cps
Spine Angle = 74.61			Density/Spine Ratio = 0.523		
	Size		Reading		
Small Ring	4.00	in	1.03		
Large Ring	14.00	in	1.23		

Compensated Neutron Calibration Report

Serial Number: tk10-MW
Tool Model: M&W
Calibration Performed: Wed Nov 16 11:21:36 2016

Detector	Readings	Target	Normalization
Short Space	6240.00 cps	1000.00 cps	1.6025

Short Space
Long Space

6240.00 cps
460.00 cps

1000.00 cps
1000.00 cps

1.0025
1.9500

Gamma Ray Calibration Report

Serial Number:	89-M&W	
Tool Model:	M&W	
Calibration Performed:	Tue Apr 11 16:08:01 2017	
Calibrator Value:	1000.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	6.2	cps
Sensitivity:	0.5200	GAPI/cps



PIONEER
Pioneer Energy Services

Company	SPESS OIL COMPANY
Well	LL JONES SWD NO.1
Field	PLYMELL
County	FINNEY
State	KANSAS