



PIONEER
Pioneer Energy Services

**DUAL INDUCTION
LOG**

Company **AMERICAN WARRIOR, INC.**
Well **BRANDA #1-29**
Field **STOLTENBERG**
County **ELLSWORTH**
State **KANSAS**

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County **ELLSWORTH** State **KANSAS**

Location: API #: 15-053-21347-00-00

Other Services

SEC 29 TWP 15S RGE 10W
837' FSL & 1516' FWL

Permanent Datum **GROUND LEVEL** Elevation **1816'**
Log Measured From **KELLY BUSHING**
Drilling Measured From **KELLY BUSHING**

Elevation
K.B. 1824'
D.F. N/A
G.L. 1816'

Date	5/22/2016		
Run Number	ONE		
Depth Driller	3500'		
Depth Logger	3485'		
Bottom Logged Interval	3484'		
Top Log Interval	350'		
Casing Driller	8.625" @ 396'		
Casing Logger	398'		
Bit Size	7.875"		
Type Fluid in Hole	CHEMICAL		
Salinity, ppm CL	6500		
Density / Viscosity	9.2 52		
pH / Fluid Loss	10.0 9.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.42 @ 74		
Rmt @ Meas. Temp	0.32 @ 74		
Rmc @ Meas. Temp	0.57 @ 74		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	0.28 @ 111		
Operating Rig Time	3 HOURS		
Max Rec. Temp. F	111		
Equipment Number	91		
Location	COLBY		
Recorded By	D. SCHMIDT		
Witnessed By	LUKE THOMPSON		

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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.

WILSON,
7 SOUTH TO K RD, 2 EAST,
1 SOUTH, 1/2 WEST,
NORTH INTO

Log Measured From: KELLY BUSHING 8 Ft. Above Permanent Datum

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

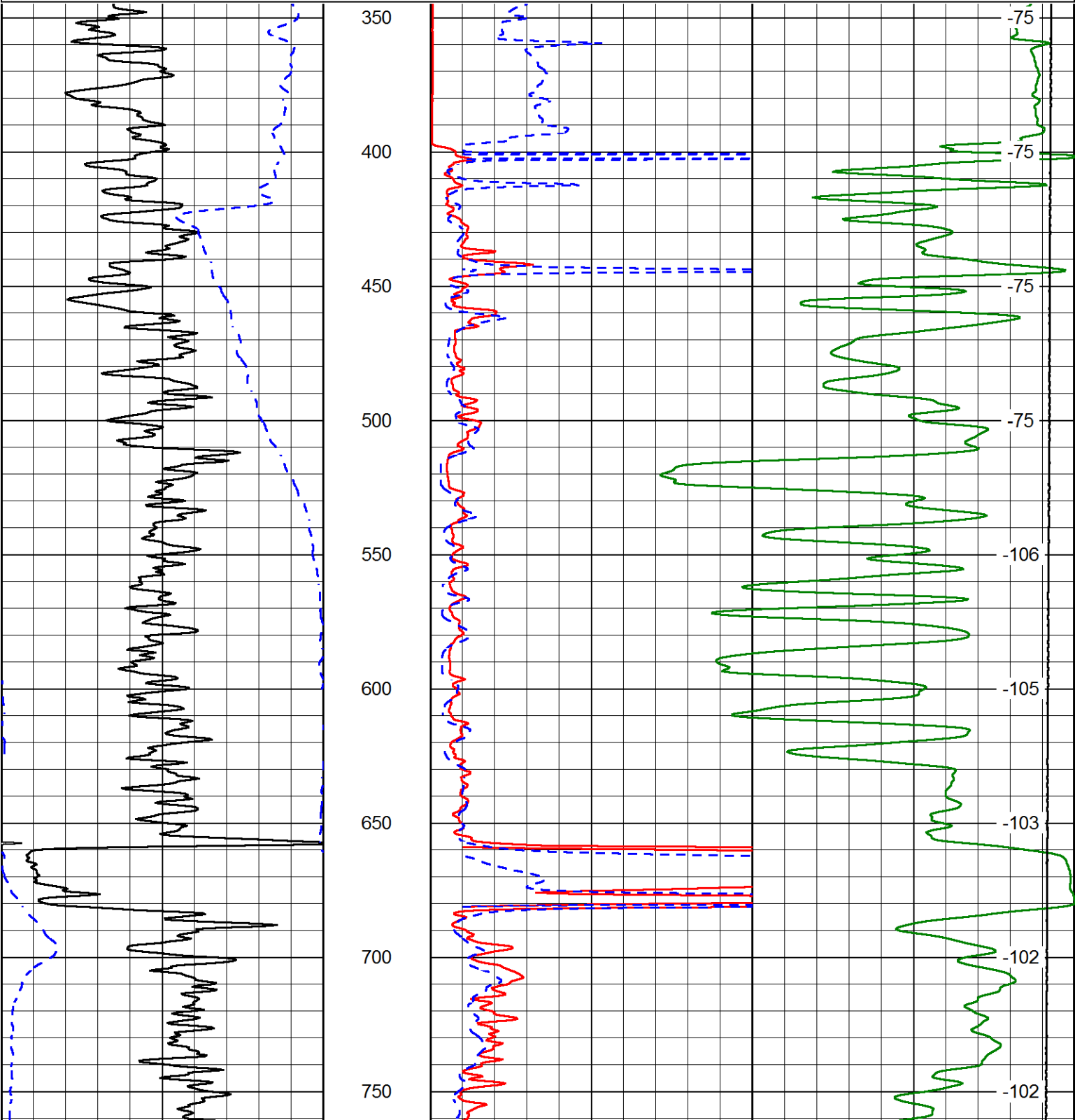
Your Pioneer Energy Services Crew

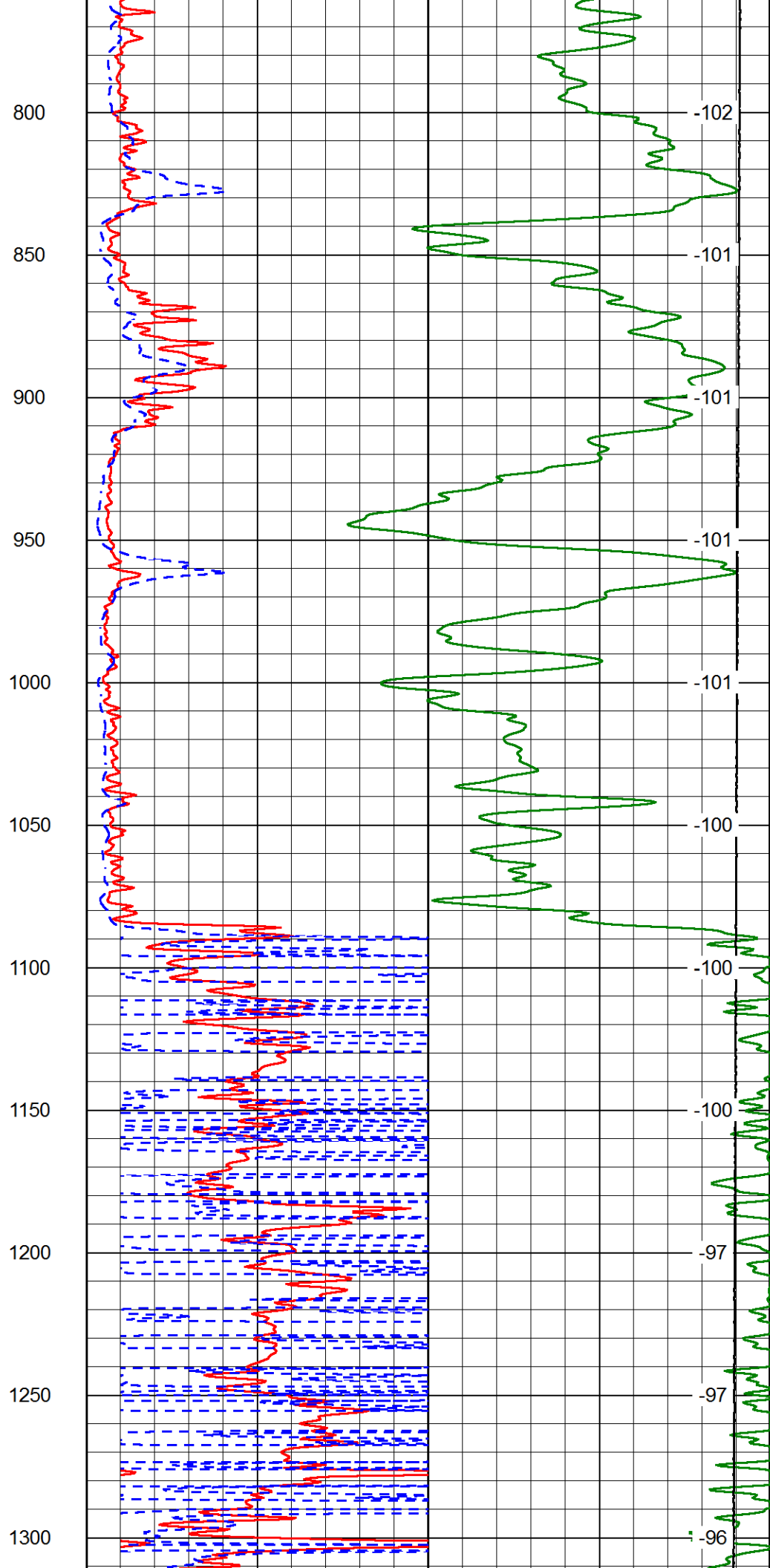
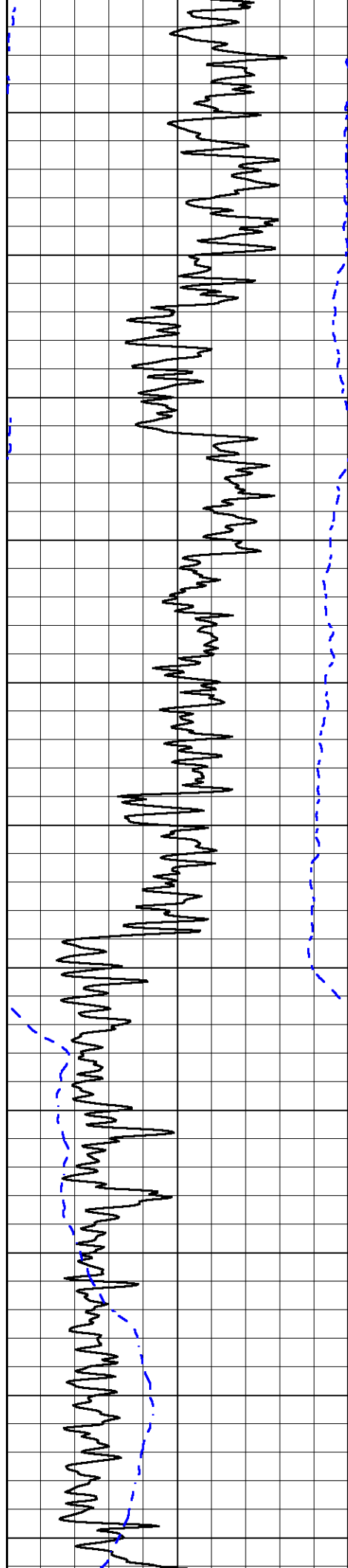
Engineer: D. SCHMIDT
Operator:
Operator:
Operator:

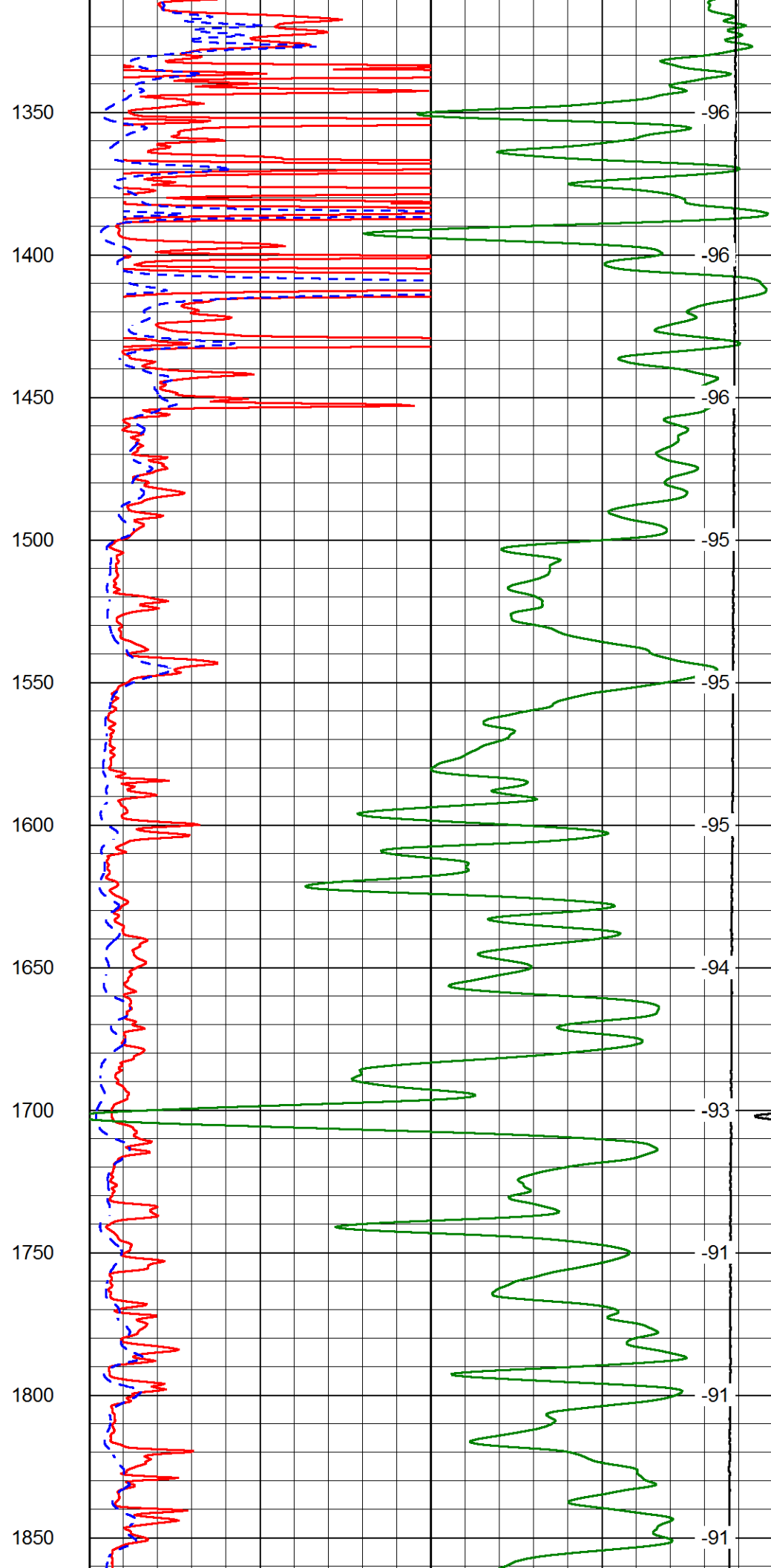
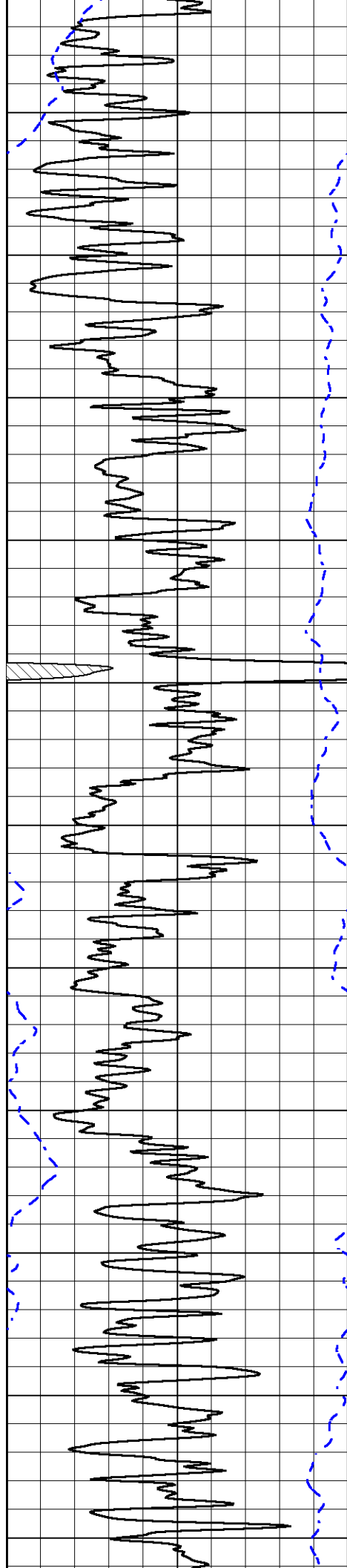
This Log Record Was Witnessed By

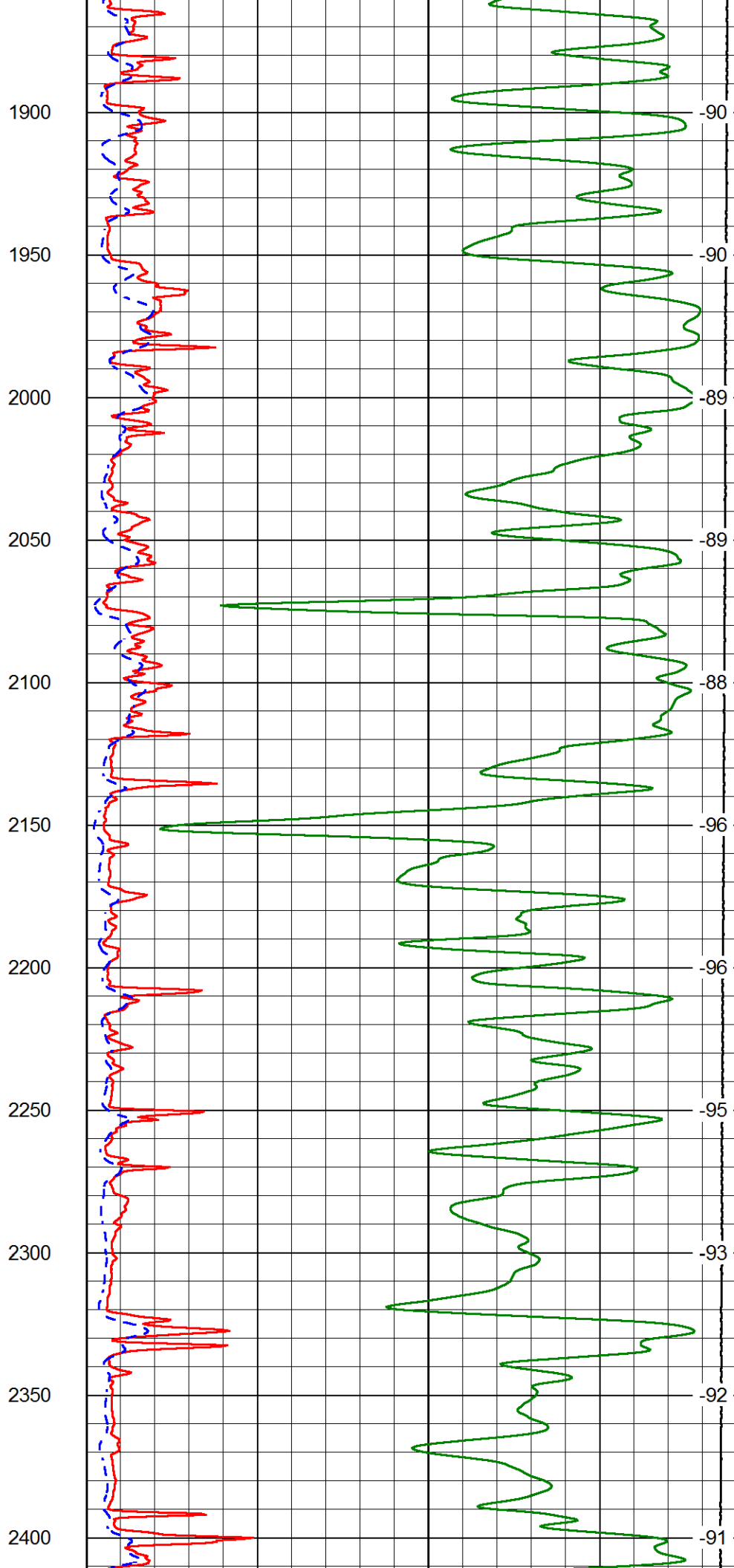
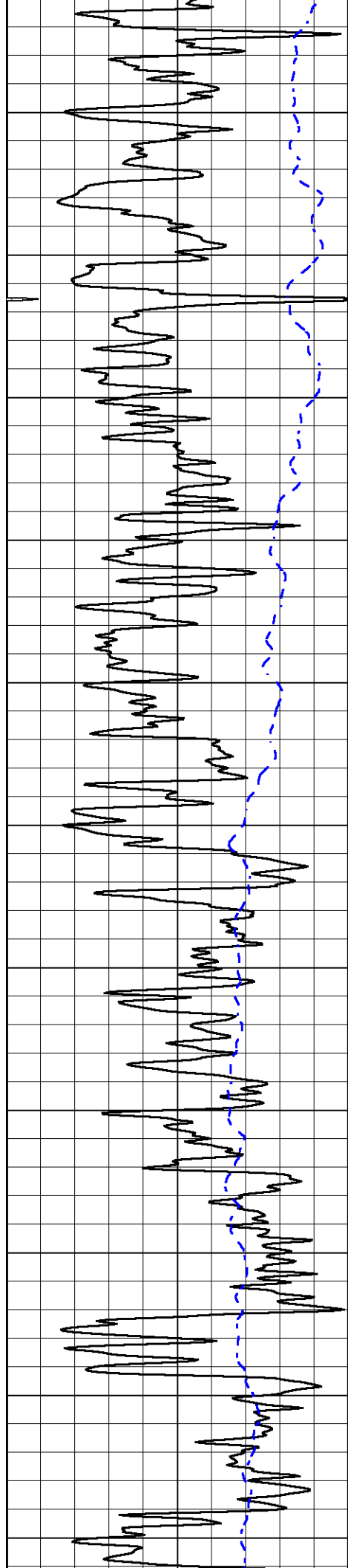
Primary Witness: LUKE THOMPSON
Secondary Witness:
Secondary Witness:
Secondary Witness:

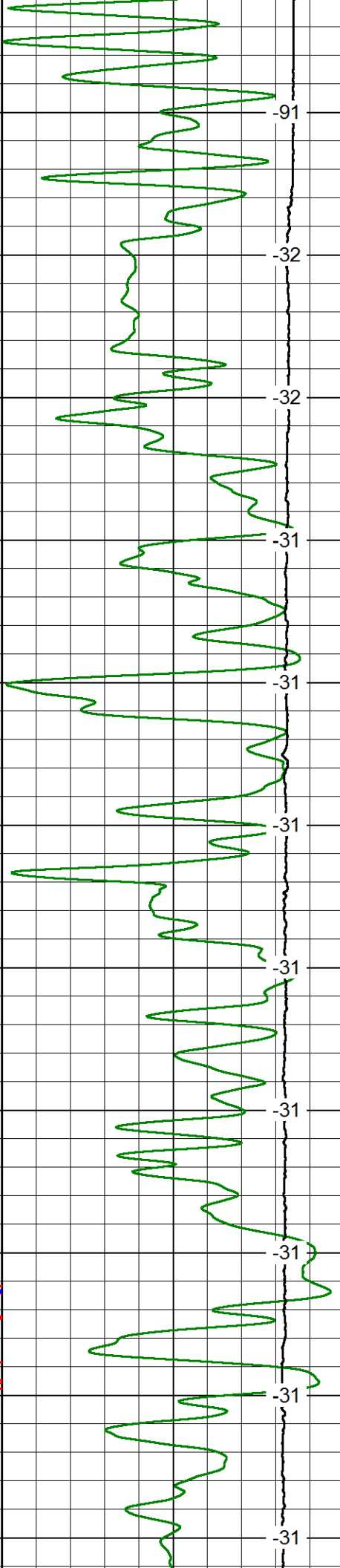
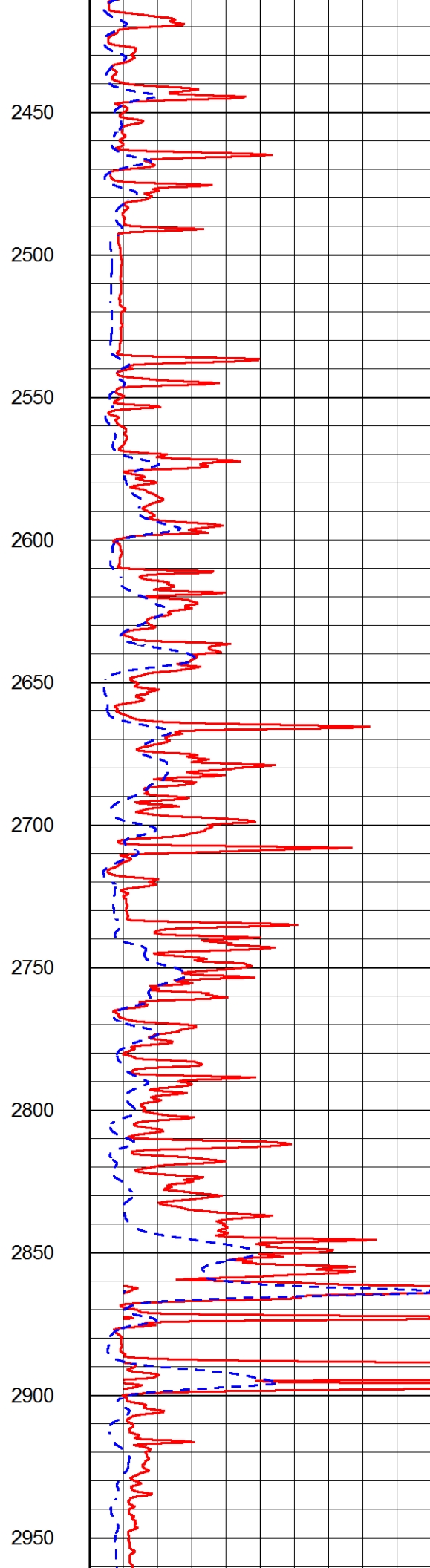
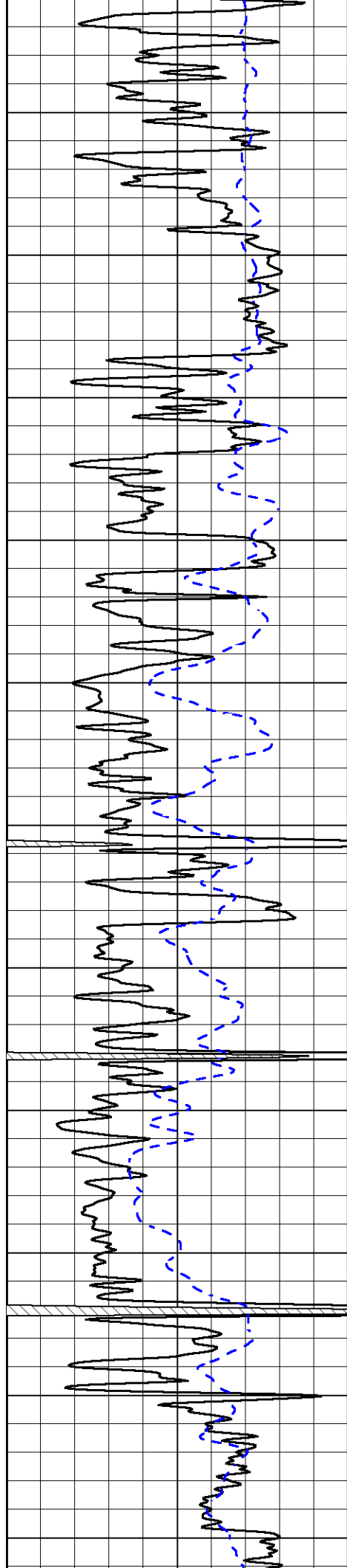
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-200	SP (mV)	0	15000	Line Tension (lb)	0
			0	Shallow Resistivity (Ohm-m)	50
			0	Deep Resistivity (Ohm-m)	50
			Shallow Resistivity		LSPD
			(Ohm-m)		(ft/min)
			50	500	
			50	Deep Resistivity (Ohm-m)	500

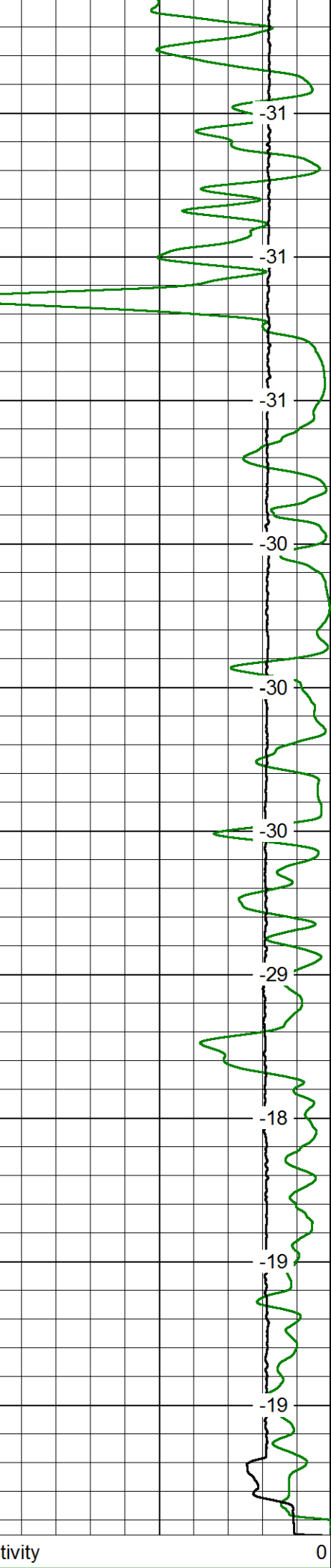
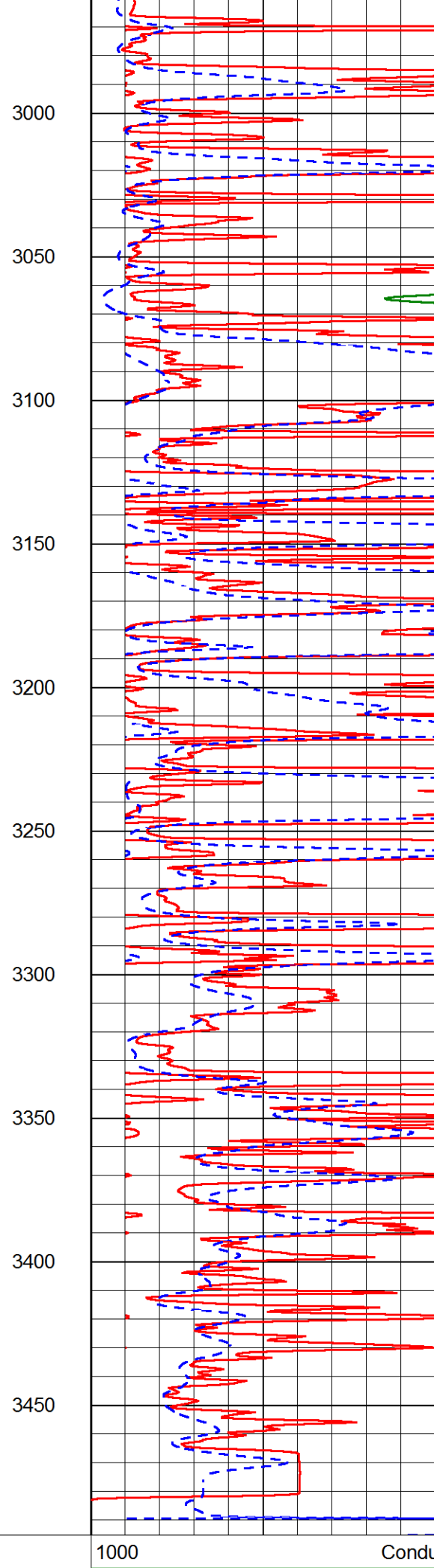
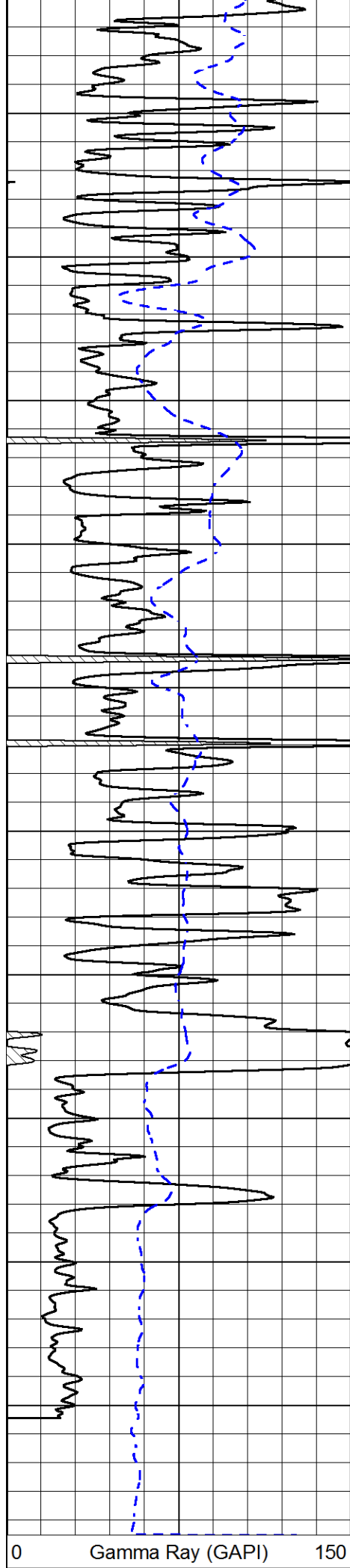








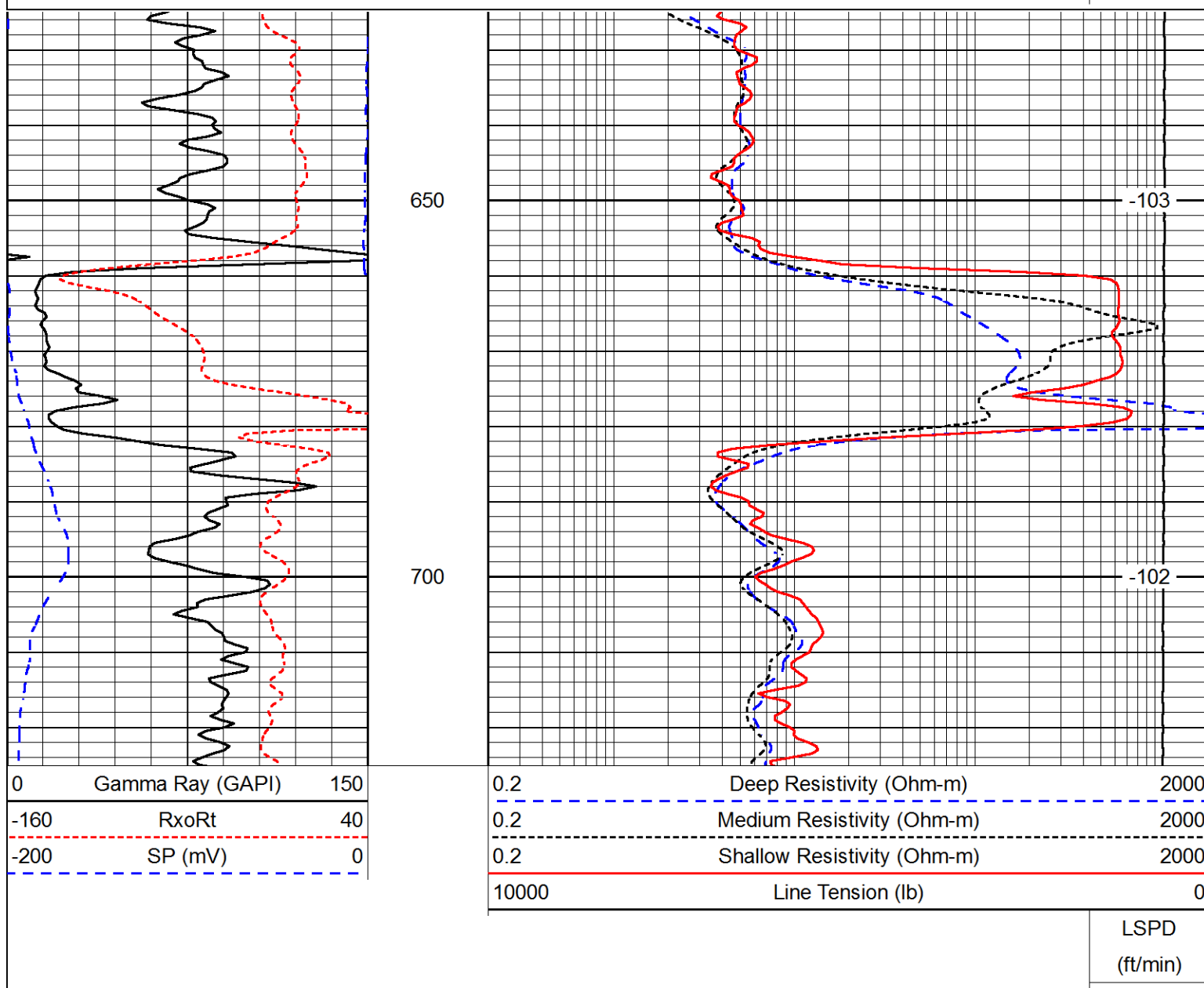




-200	SP (mV)	0	15000	Line Tension (lb)	0
0	Shallow Resistivity (Ohm-m)	50			LSPD
0	Deep Resistivity (Ohm-m)	50			(ft/min)
	Shallow Resistivity				
50	(Ohm-m)	500			
50	Deep Resistivity (Ohm-m)	500			

Database File	american warrior_branda_1-29hd.db
Dataset Pathname	DIL/awstkml
Presentation Format	dil
Dataset Creation	Mon May 23 03:18:40 2016
Charted by	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150	0.2	Deep Resistivity (Ohm-m)	2000
-160	RxoRt	40	0.2	Medium Resistivity (Ohm-m)	2000
-200	SP (mV)	0	0.2	Shallow Resistivity (Ohm-m)	2000
			10000	Line Tension (lb)	0
					LSPD
					(ft/min)

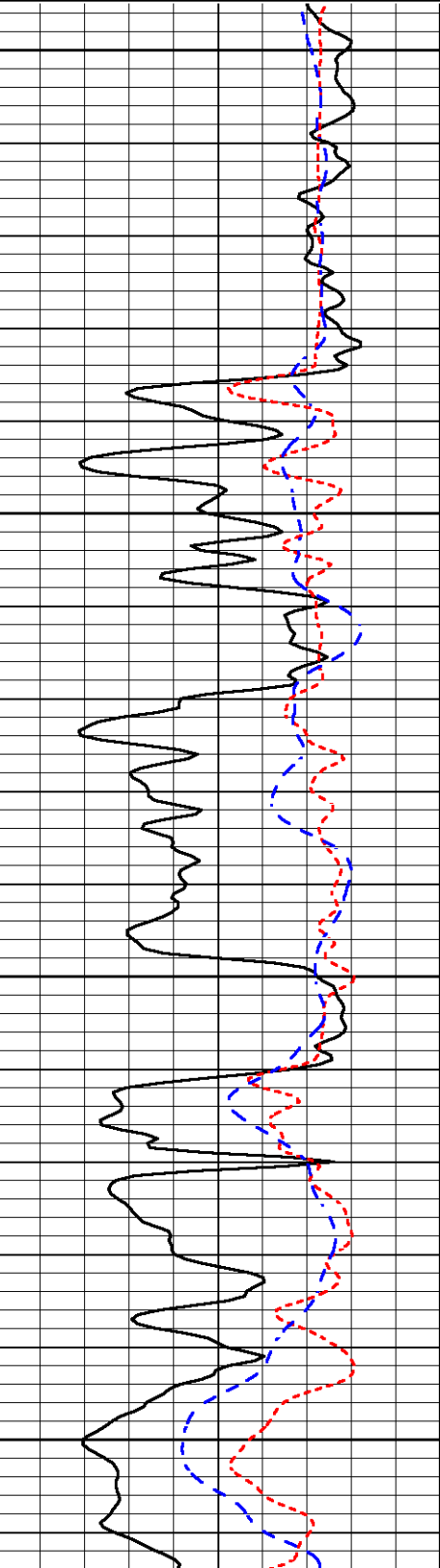


Database File american_warrior_branda_1-29hd.db
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Presentation Format dil
Dataset Creation Mon May 23 03:18:40 2016
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0	Gamma Ray (GAPI)	150
-160	RxoRt	40
-200	SP (mV)	0

0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0

LSPD
(ft/min)

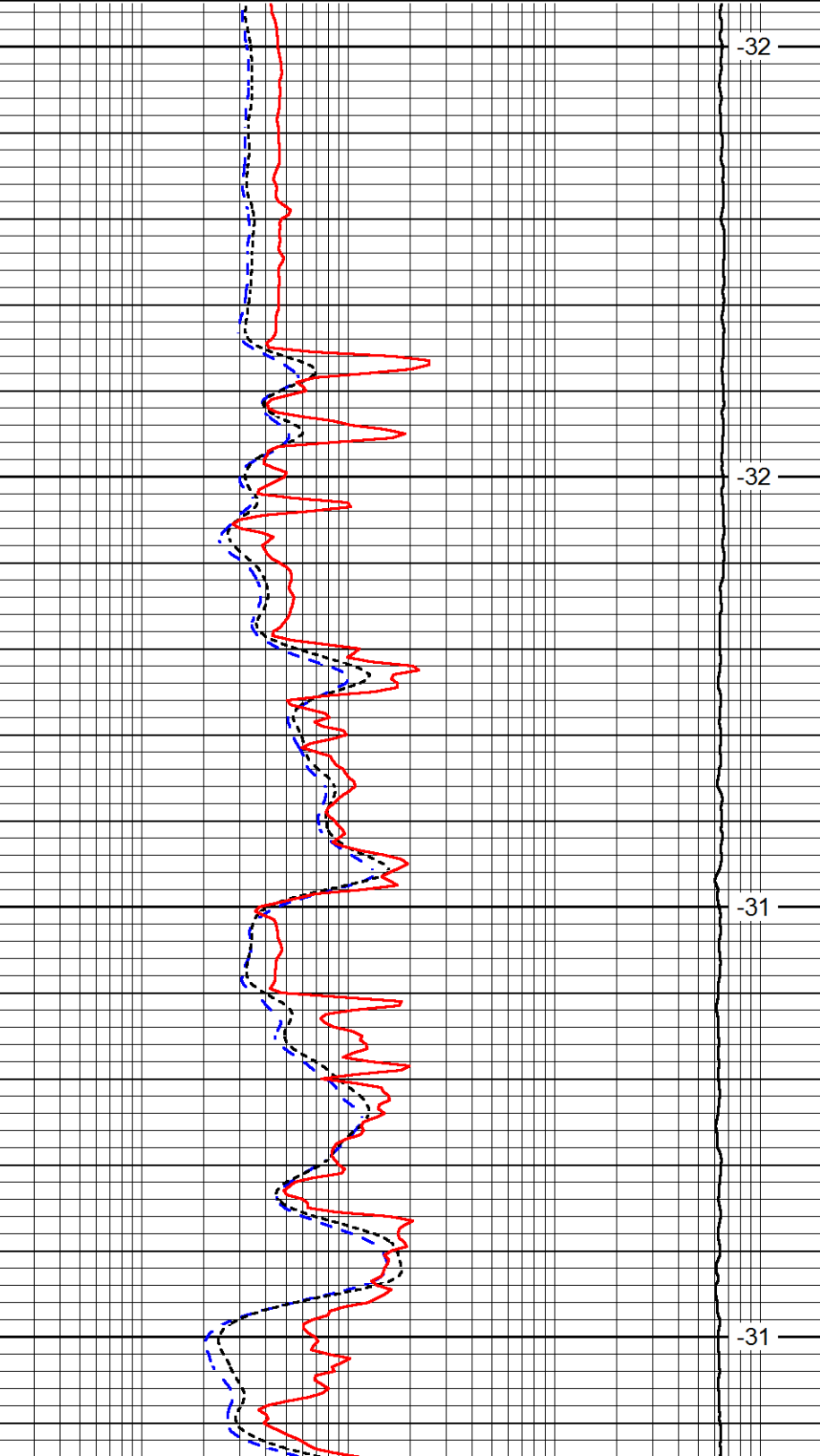


2500

2550

2600

2650

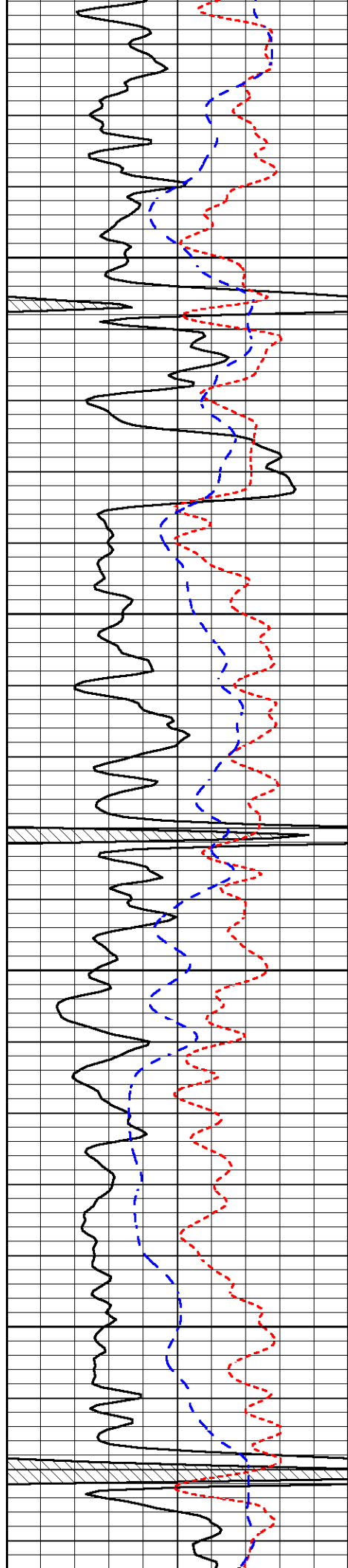


32

32

31

31

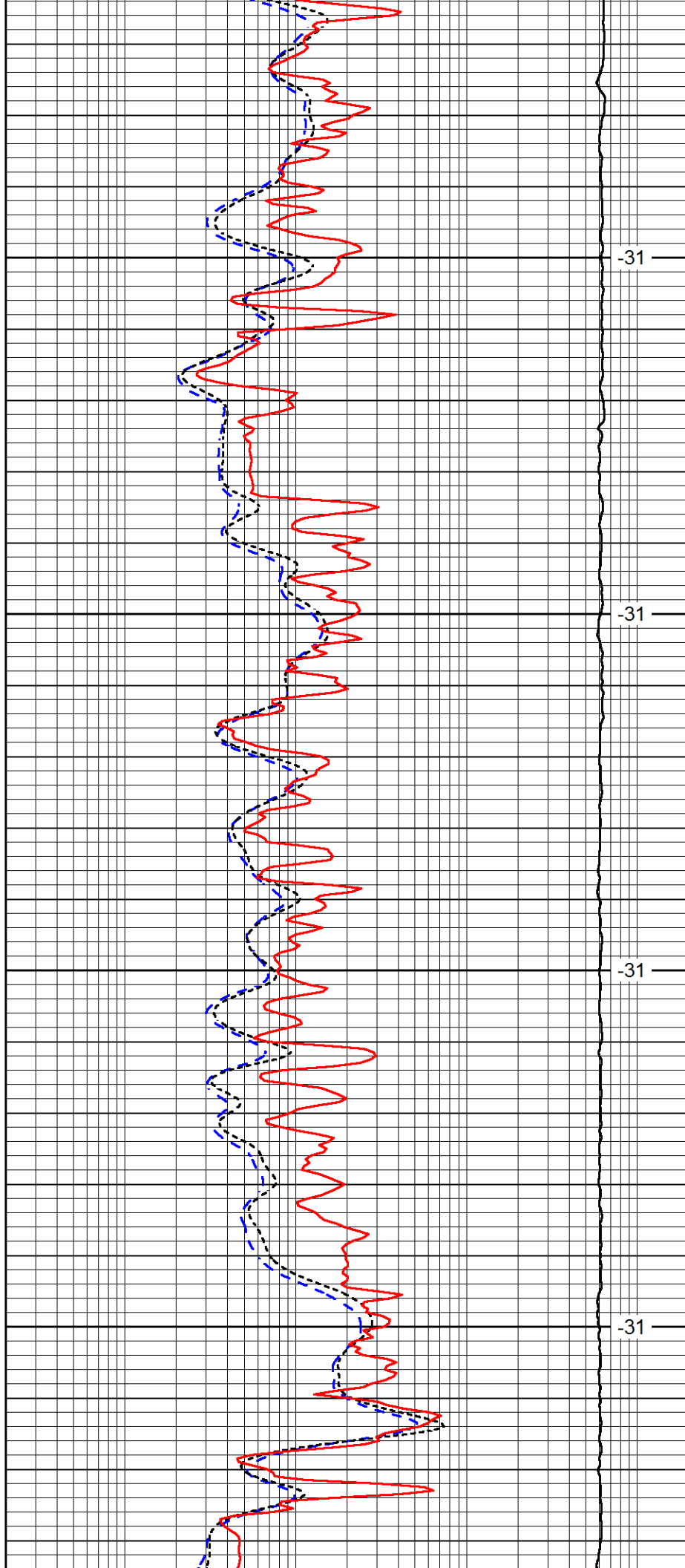


2700

2750

2800

2850

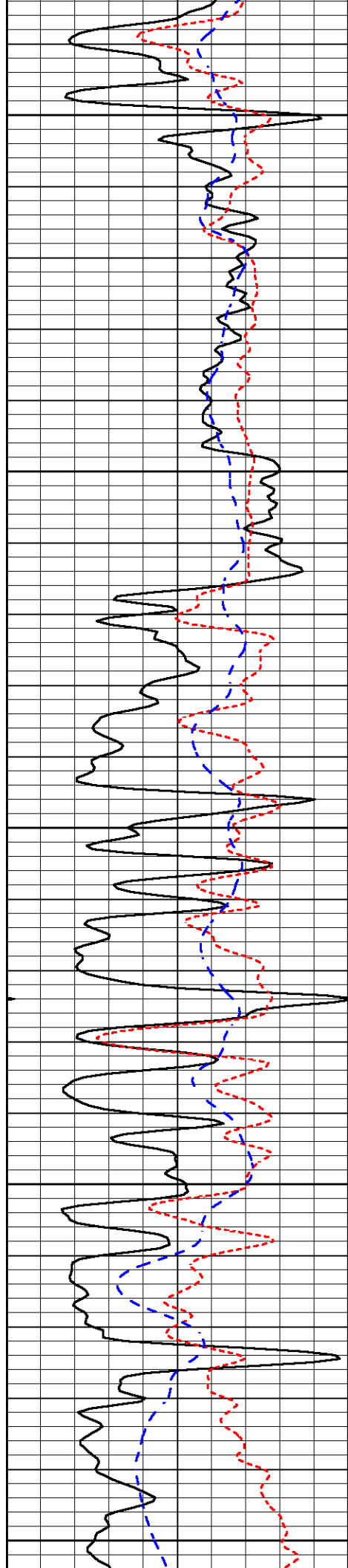


-31

-31

-31

-31



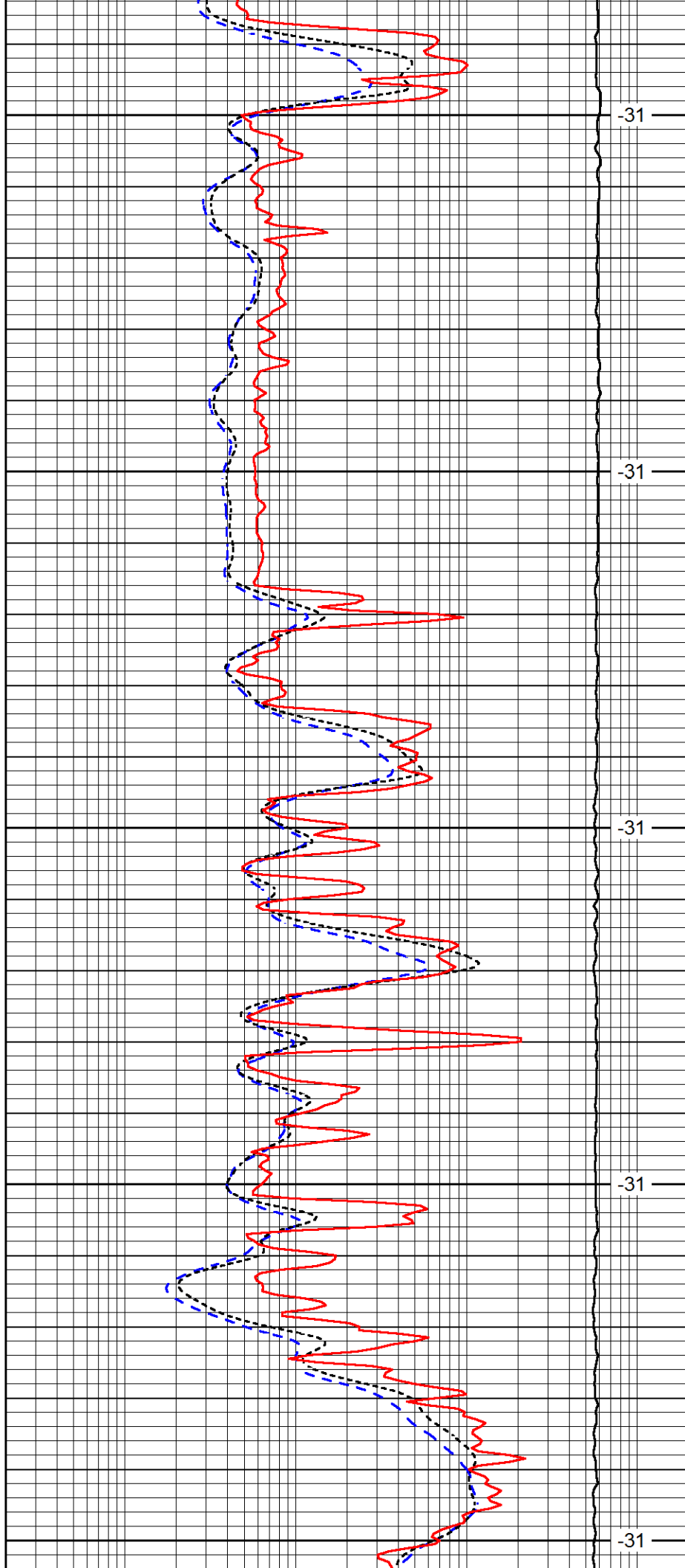
2900

2950

3000

3050

3100



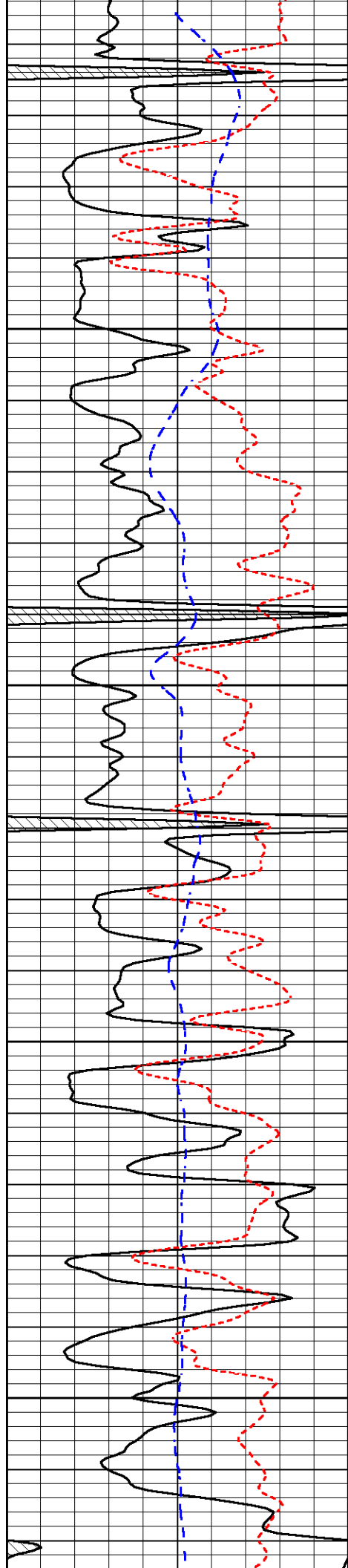
-31

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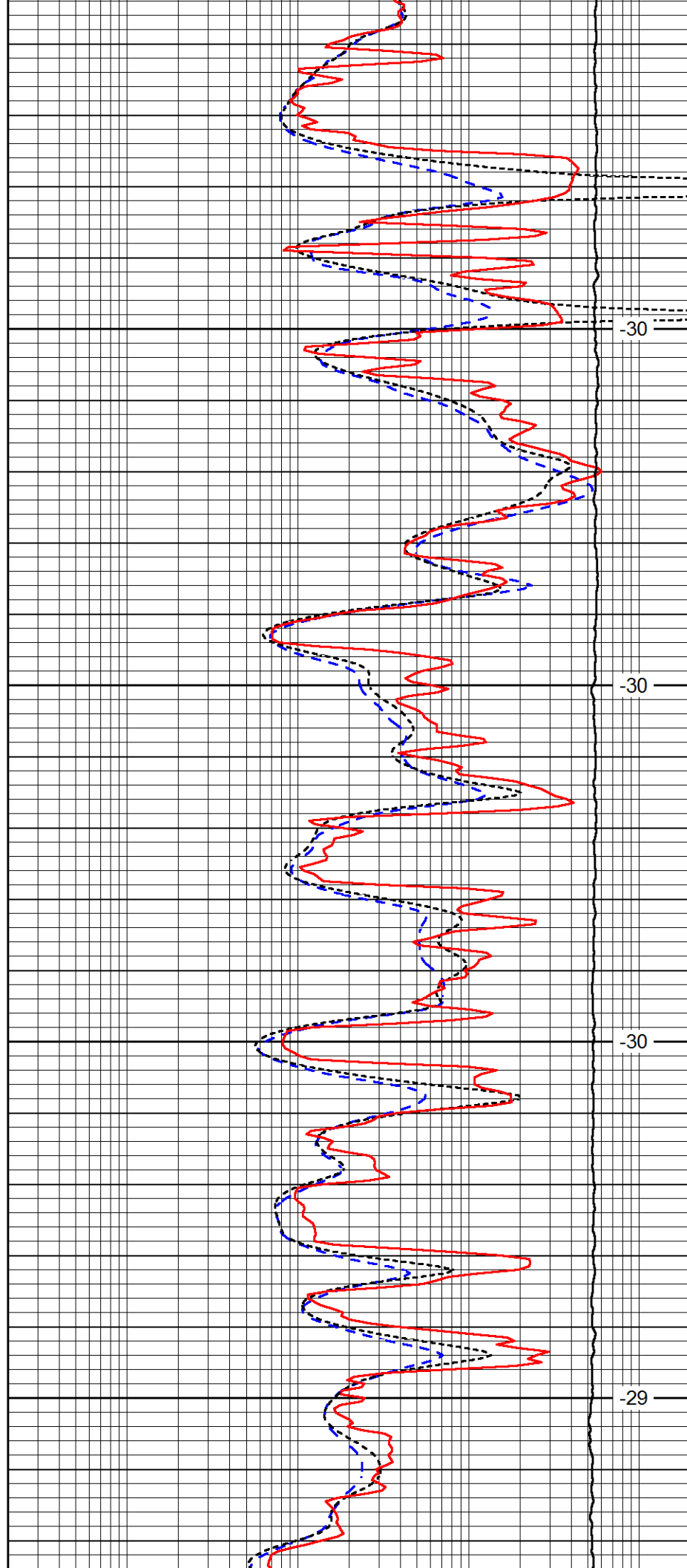


3150

3200

3250

3300

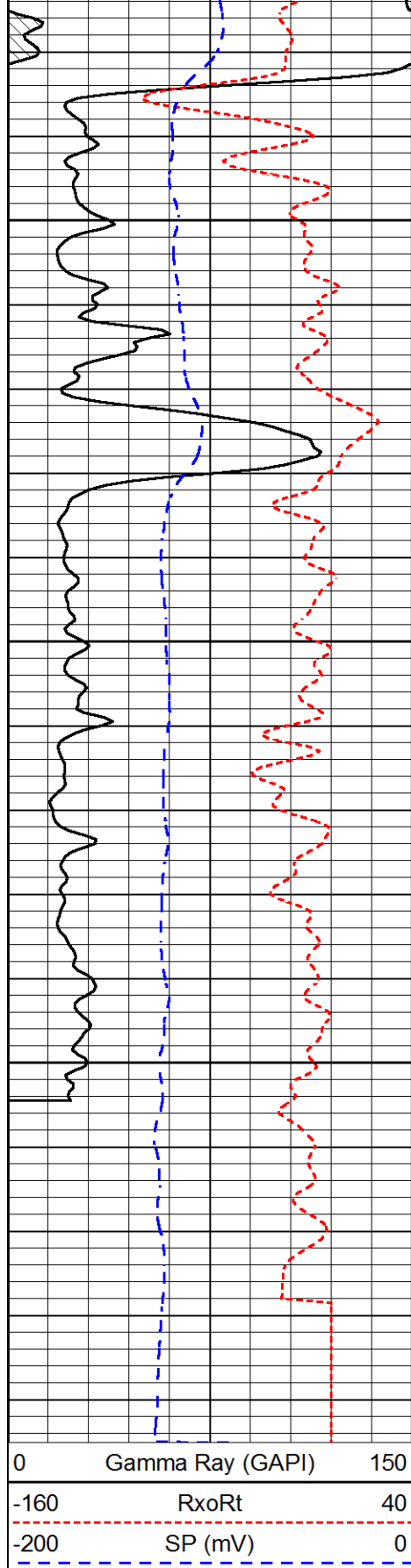


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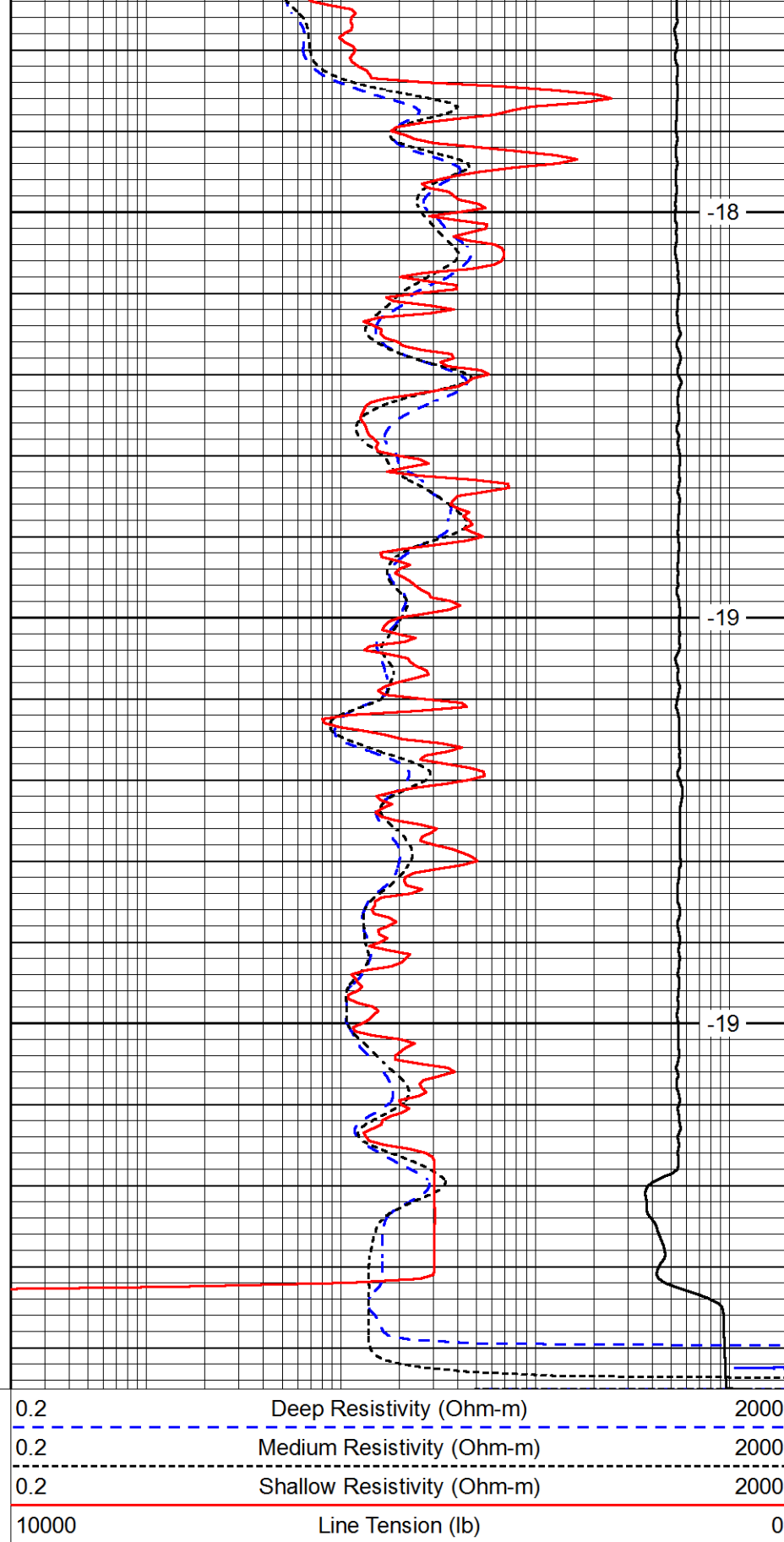
-29



3350

3400

3450



-18

-19

-19

LSPD
(ft/min)