



DUAL INDUCTION LOG

Pioneer Energy Services

Company OUTLAW WELL SERVICE, LLC	
Well	LOWRY #5-13
Field	BRAY
County	ROOKS
State	KANSAS
Location: API #: 15-163-24308-00-00	
330' FSL & 890' FWL	
SEC 20 TWP 8S RGE 19W	
Permanent Datum	GROUND LEVEL Elevation 2001
Log Measured From	KELLY BUSHING
Drilling Measured From	KELLY BUSHING
Other Services CNL/CDL MEL	
Elevation K.B. 2009 D.F. N/A G.L. 2001	
Date	10/27/2015
Run Number	ONE
Depth Driller	3530
Depth Logger	3532
Bottom Logged Interval	3531
Top Log Interval	200
Casing Driller	8.625 @ 221
Casing Logger	222
Bit Size	7.875
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	3200
Density / Viscosity	9.0 63
pH / Fluid Loss	10.5 8.0
Source of Sample	Flowline
Rm @ Meas. Temp	0.68 @ 54
Rmt @ Meas. Temp	0.51 @ 54
Rmc @ Meas. Temp	0.92 @ 54
Source of Rmt / Rmc	Charts
Rm @ BHT	0.33 @ 111
Operating Rig Time	3 HOURS
Max Rec. Temp. F	111
Equipment Number	91
Location	Hays
Recorded By	D. SCHMIDT
Witnessed By	STEVE REED

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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.

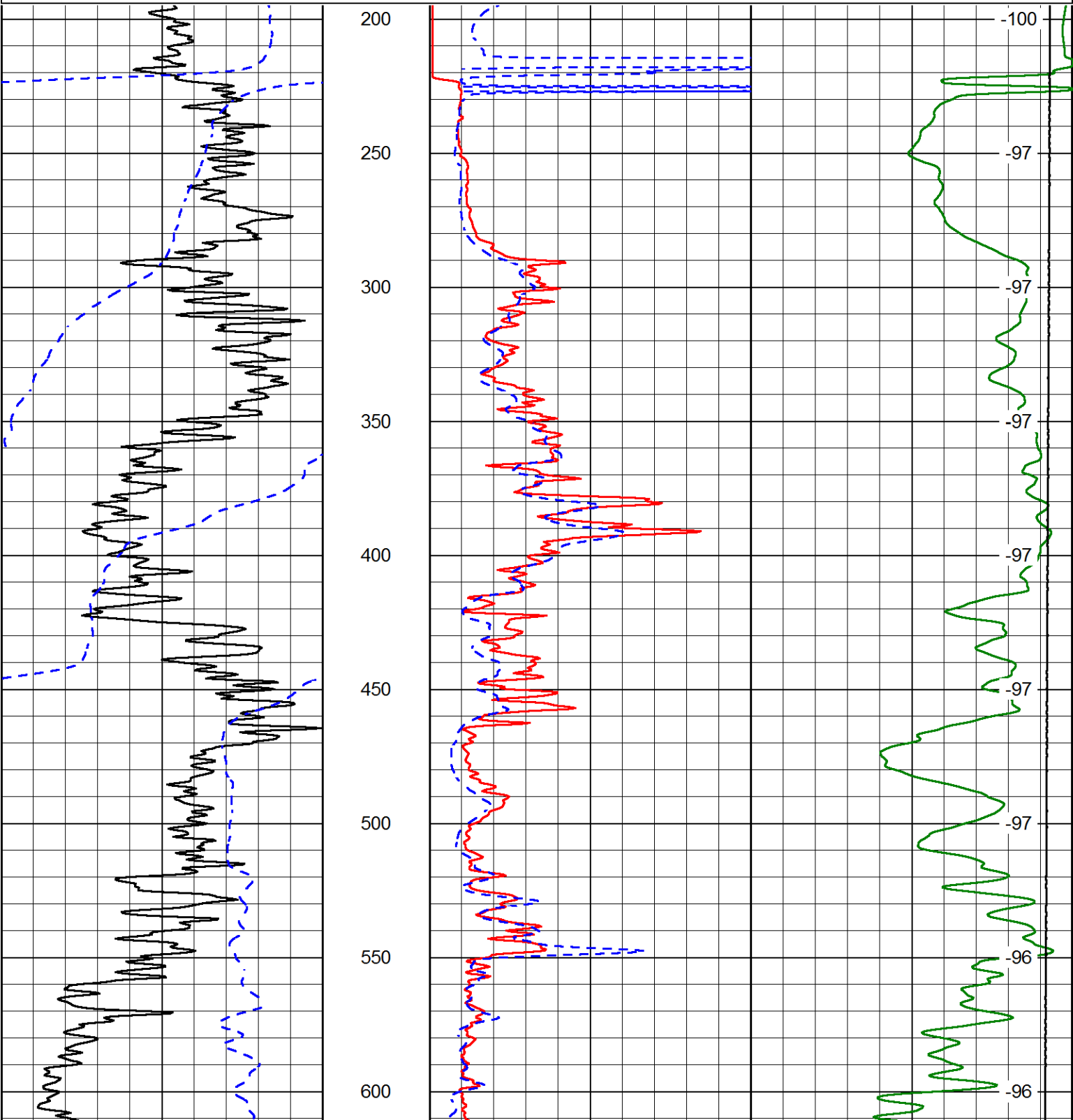
STOCKTON,
WEST TO ROAD 258 (WEBSTER DAM),
6 SOUTH TO Q ROAD, 1 3/4 WEST,
NORTH INTO

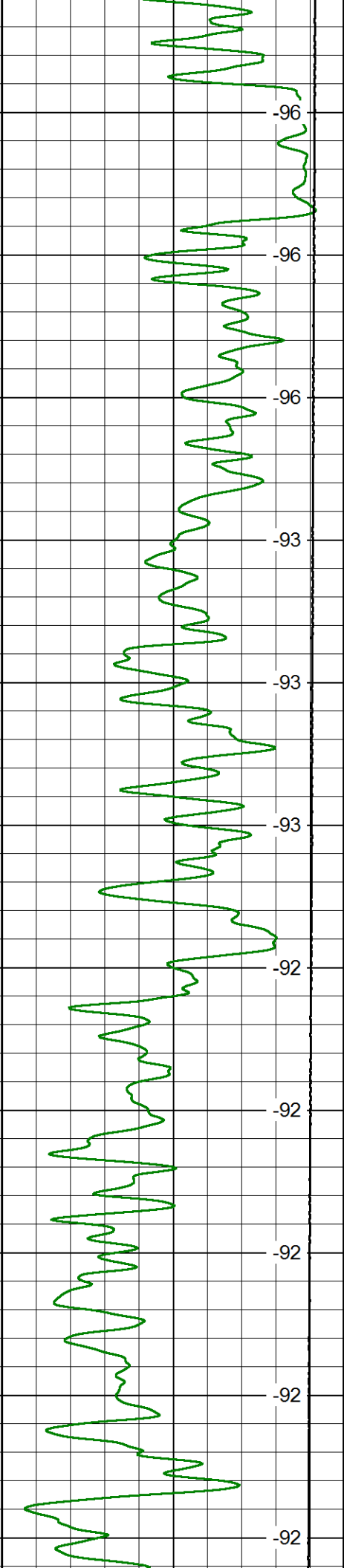
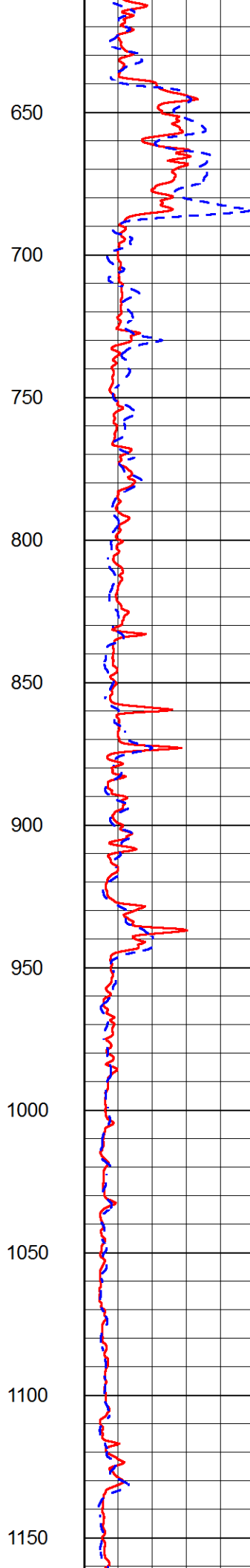
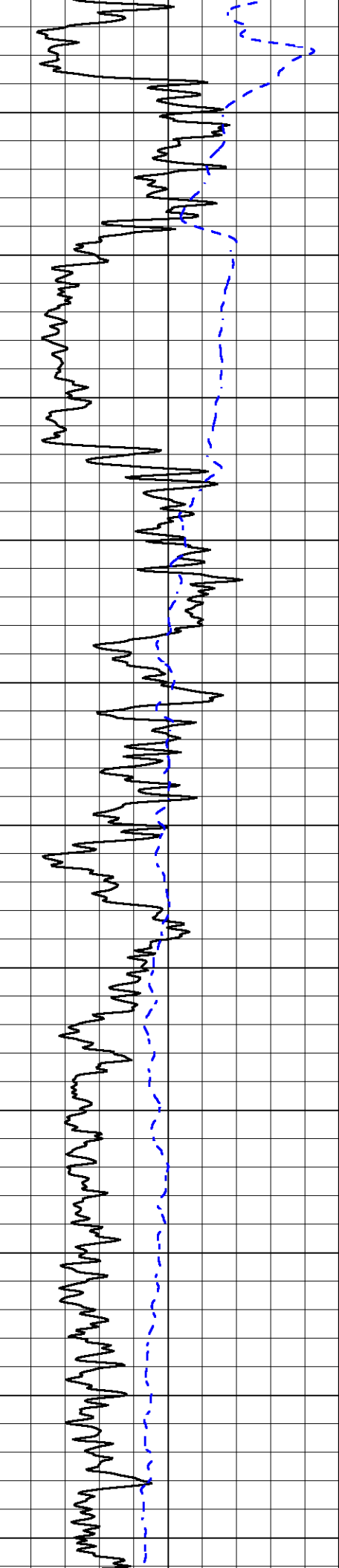
Log Measured From: KELLY BUSHING 8 Ft. Above Permanent Datum

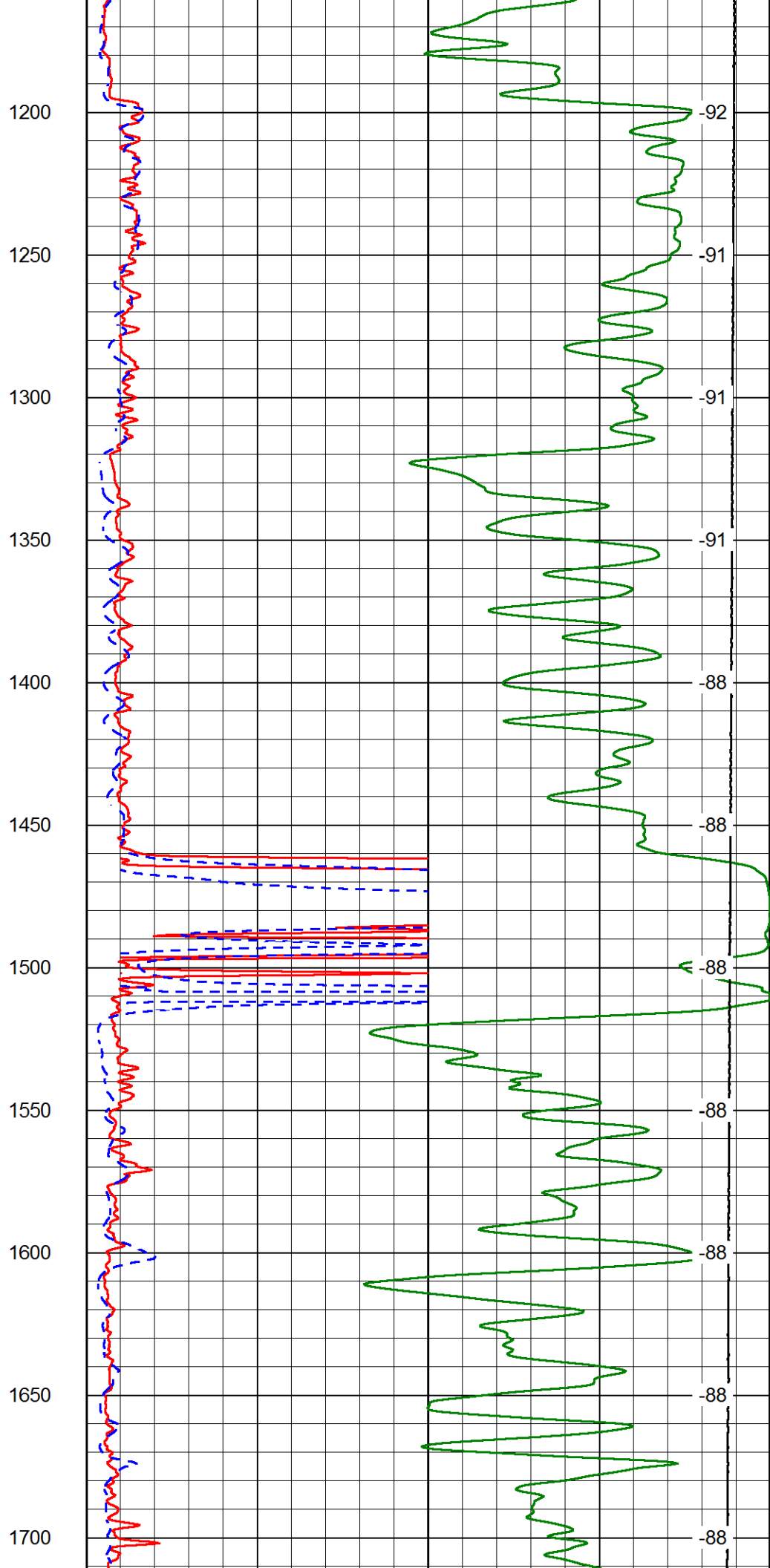
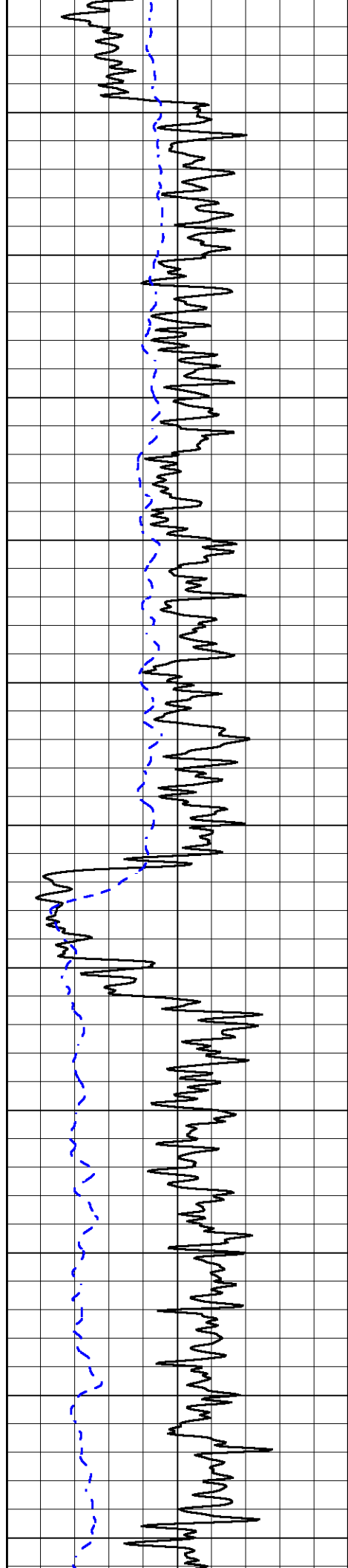
THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneerenergy.com 785-625-3858

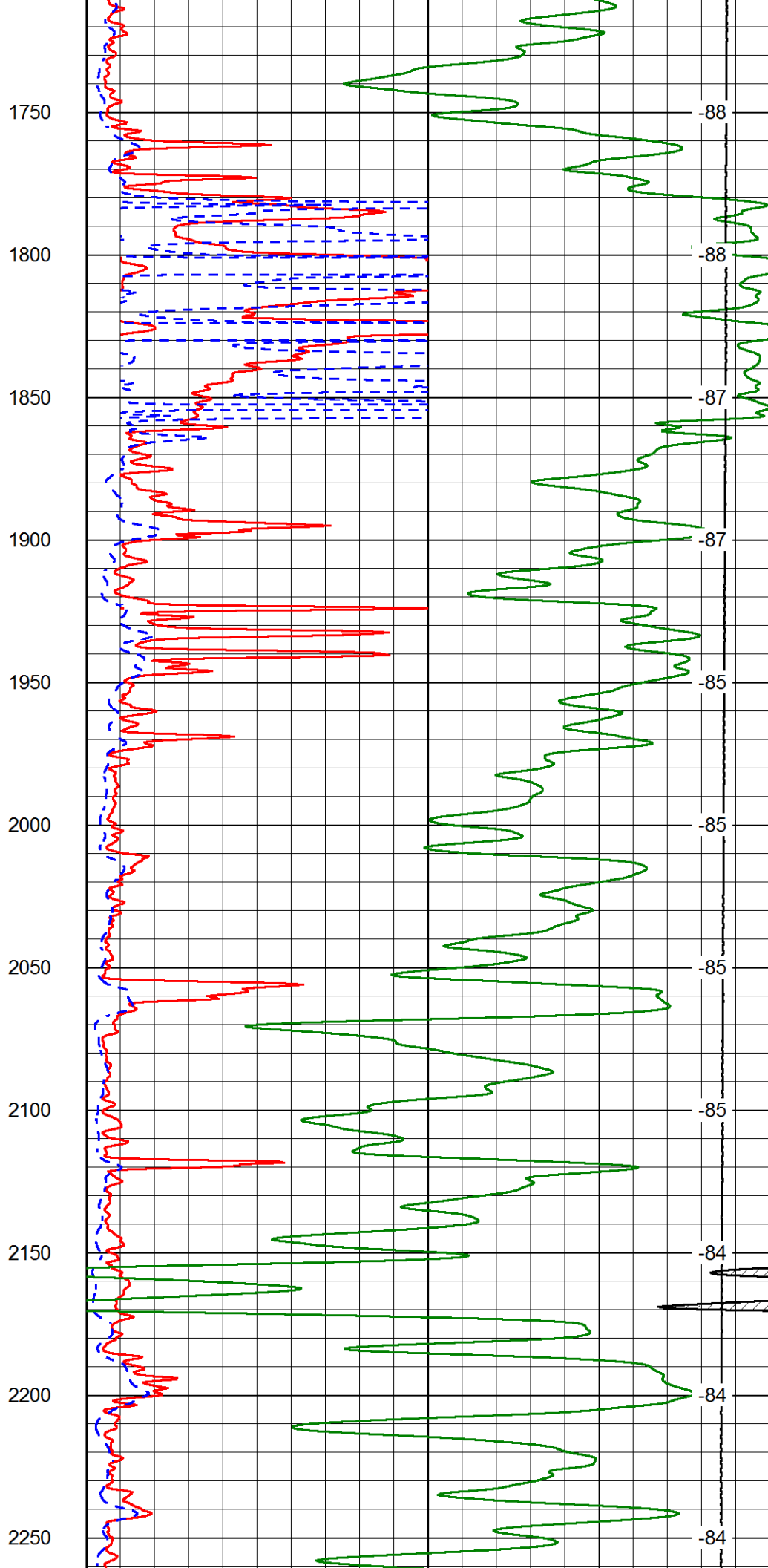
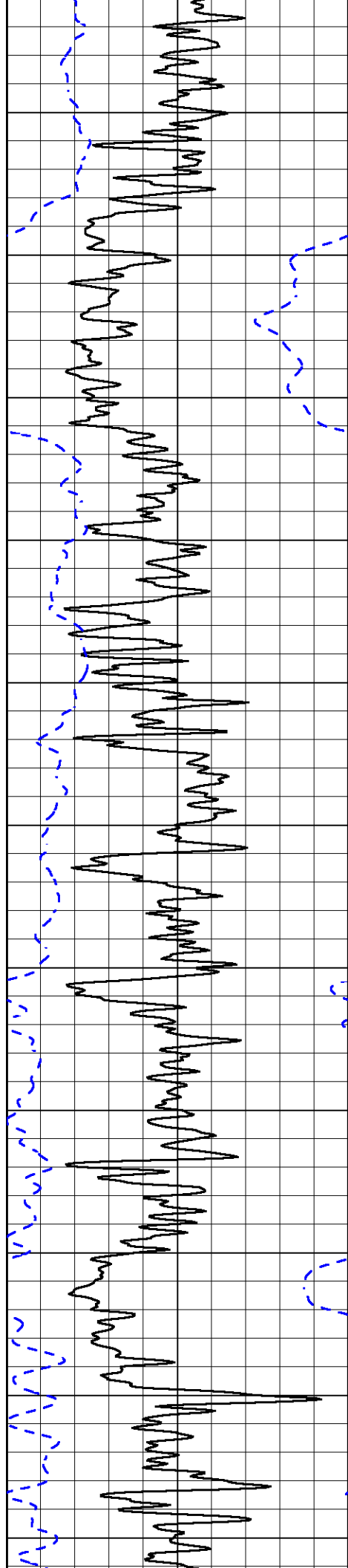
Your Pioneer Energy Services Crew	This Log Record Was Witnessed By
Engineer: D. SCHMIDT	Primary Witness: STEVE REED
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

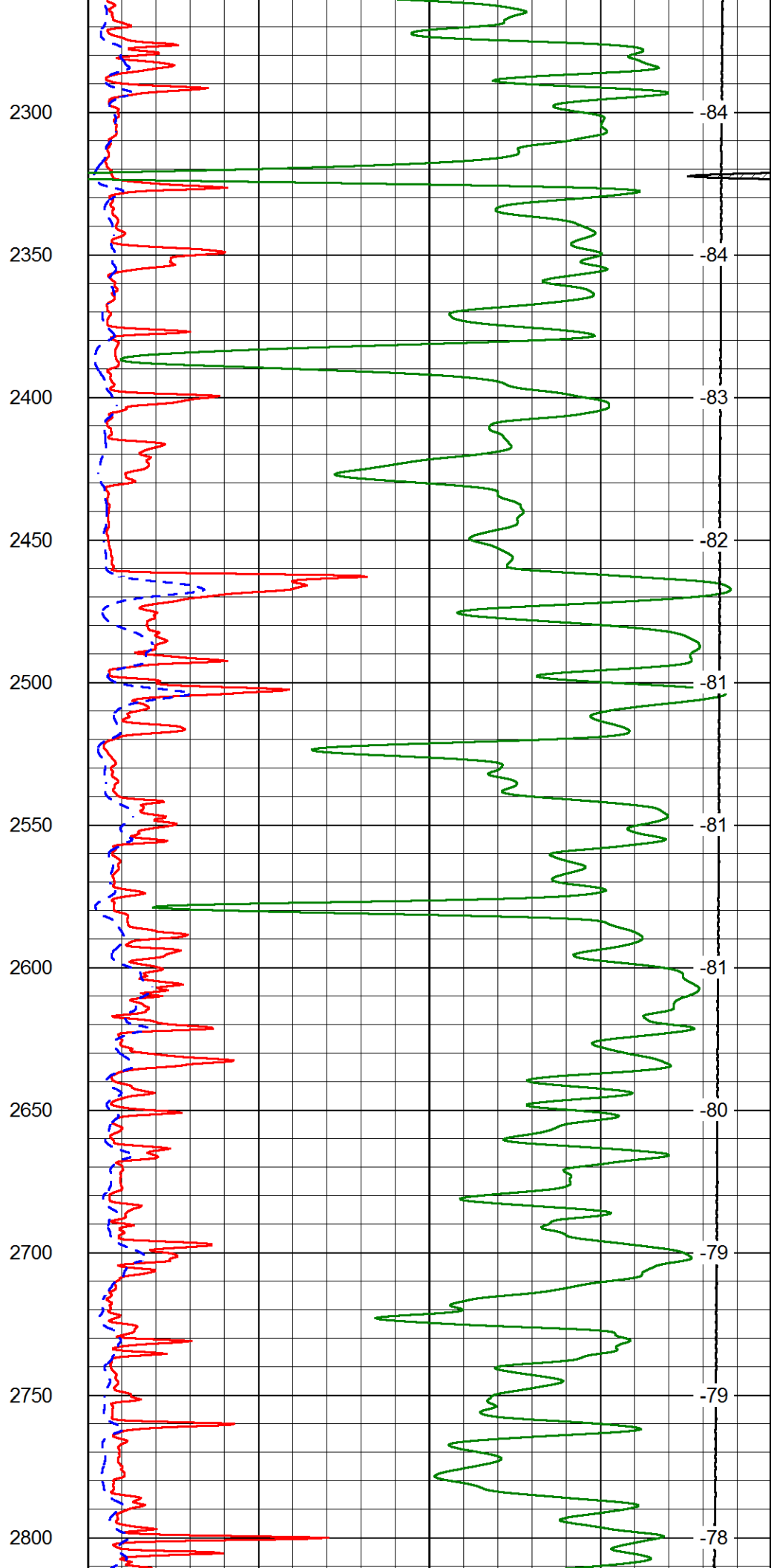
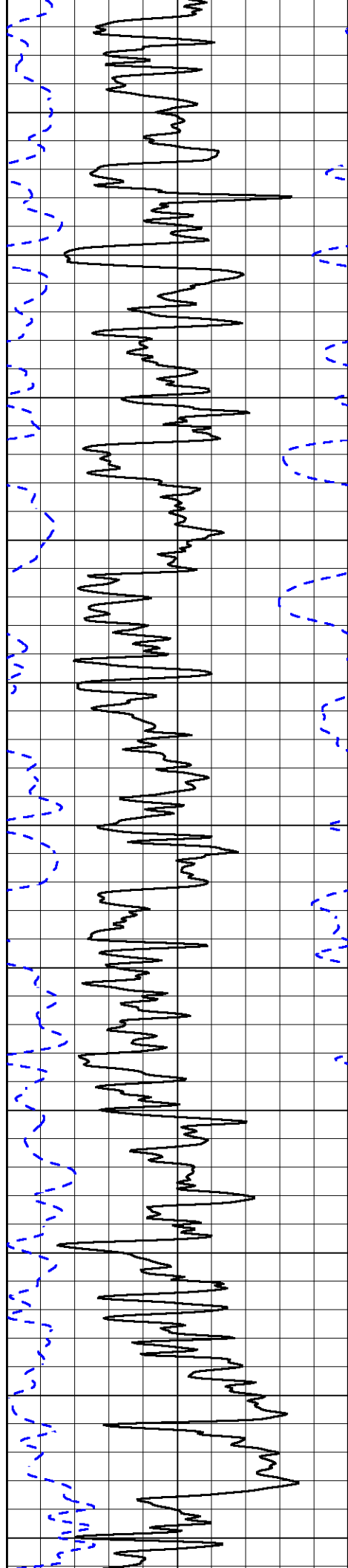
0	Gamma Ray (GAPI)	150	1000	Conductivity	0
-200	SP (mV)	0	15000	Line Tension (lb)	0
			0	Shallow Resistivity (Ohm-m)	50
			0	Deep Resistivity (Ohm-m)	50
			Shallow Resistivity		LSPD (ft/min)
			50	(Ohm-m)	500
			50	Deep Resistivity (Ohm-m)	500

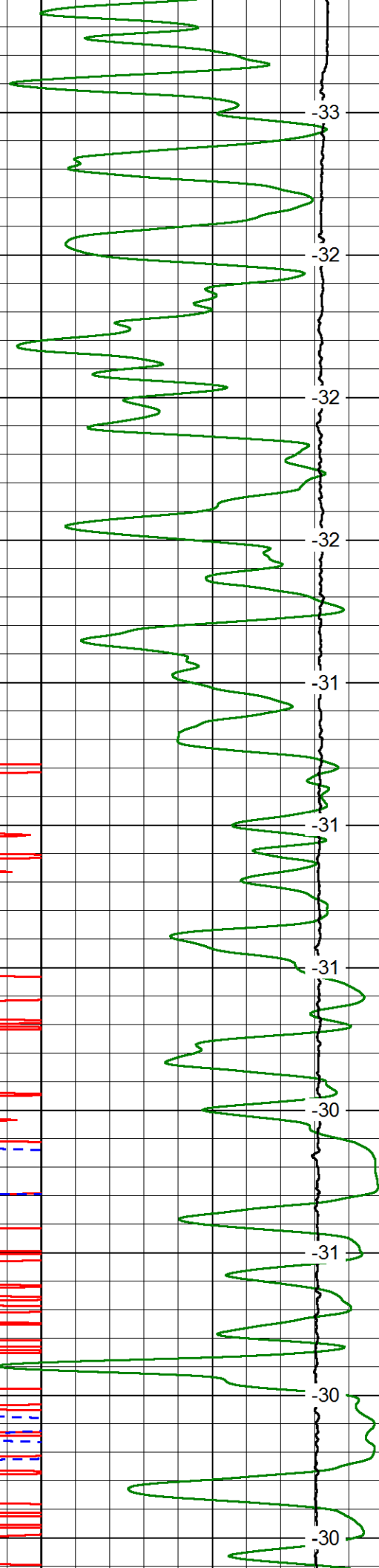
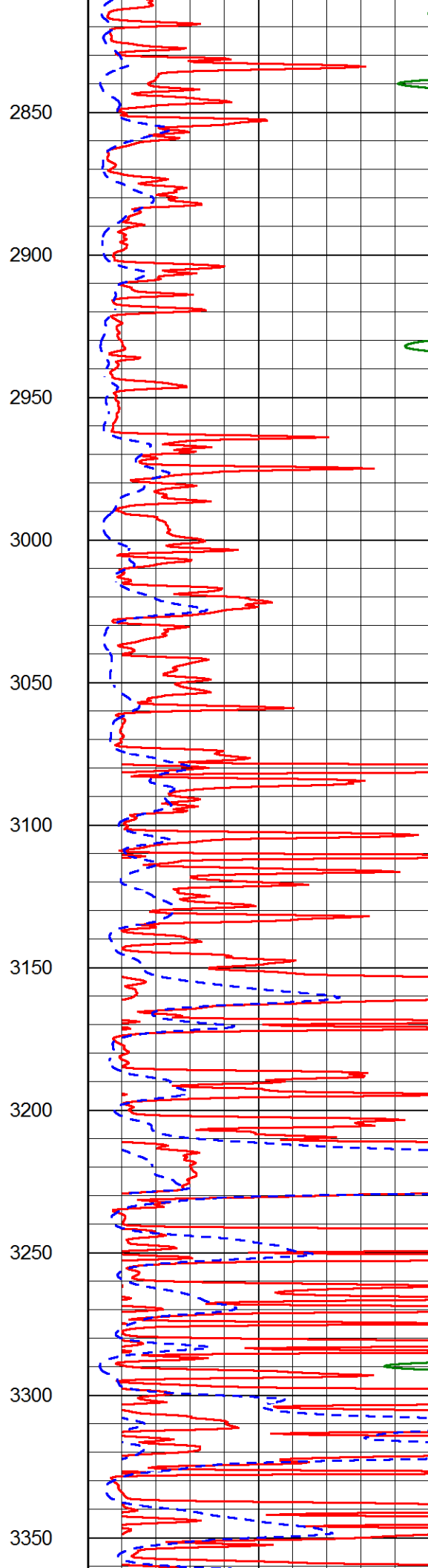
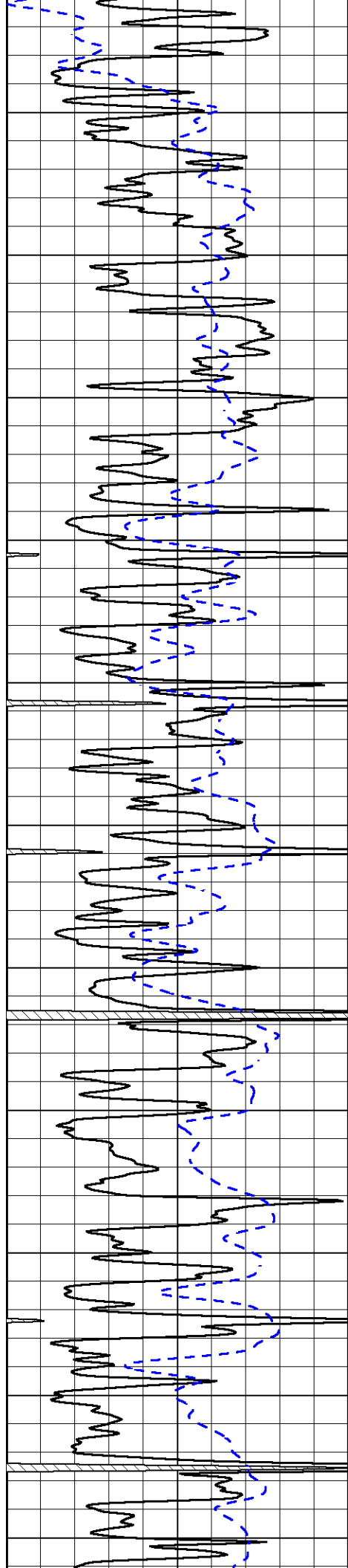


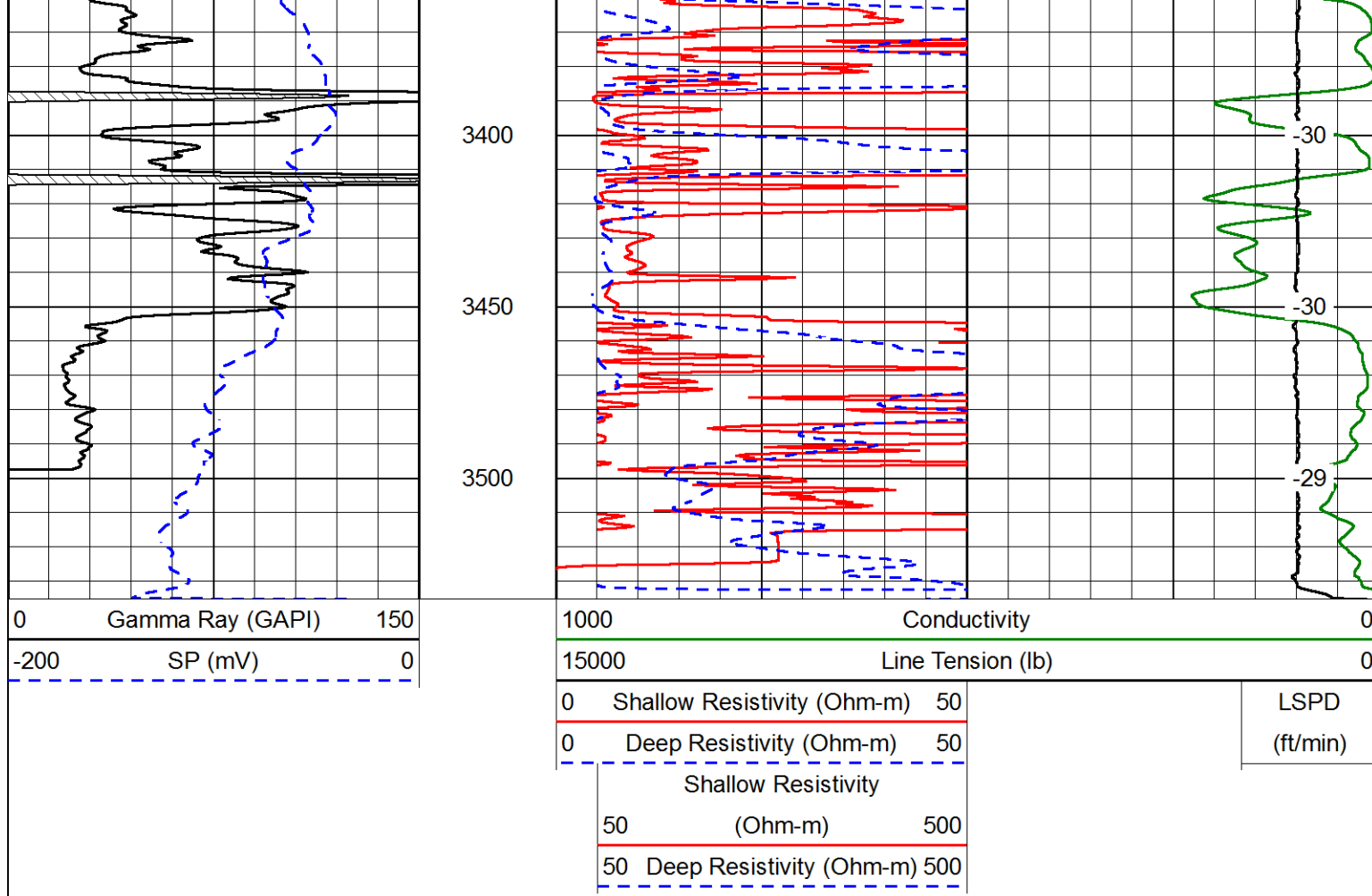




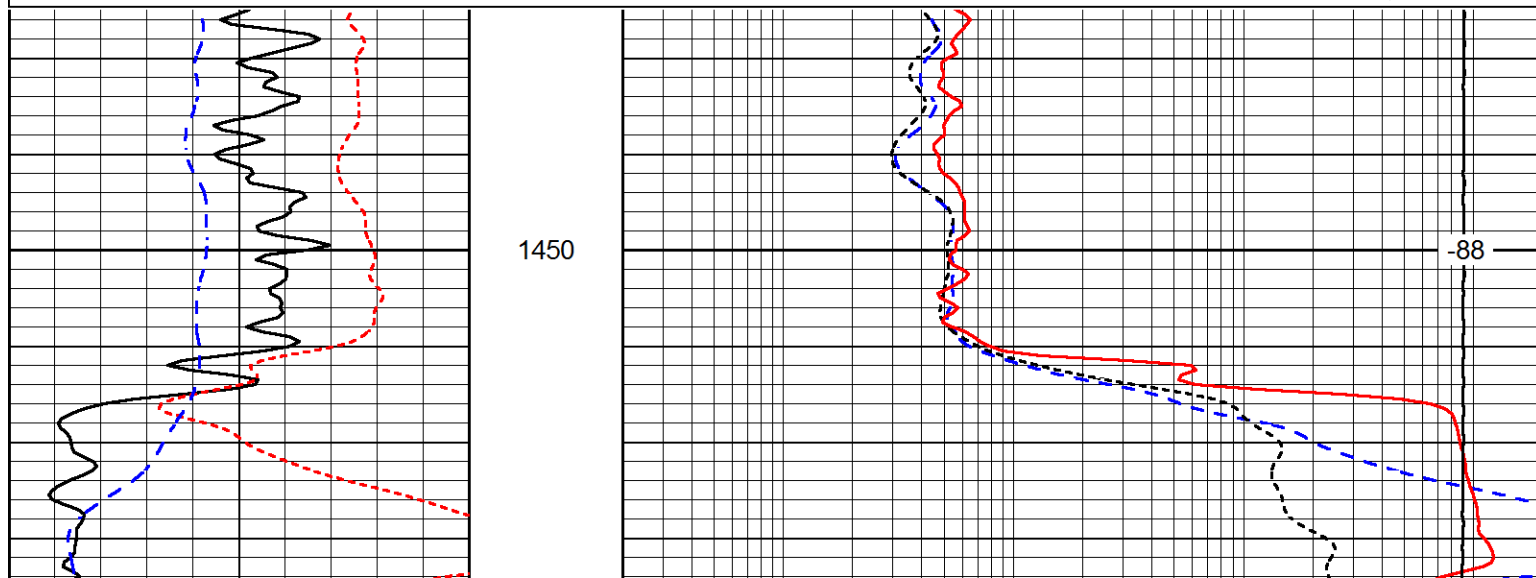
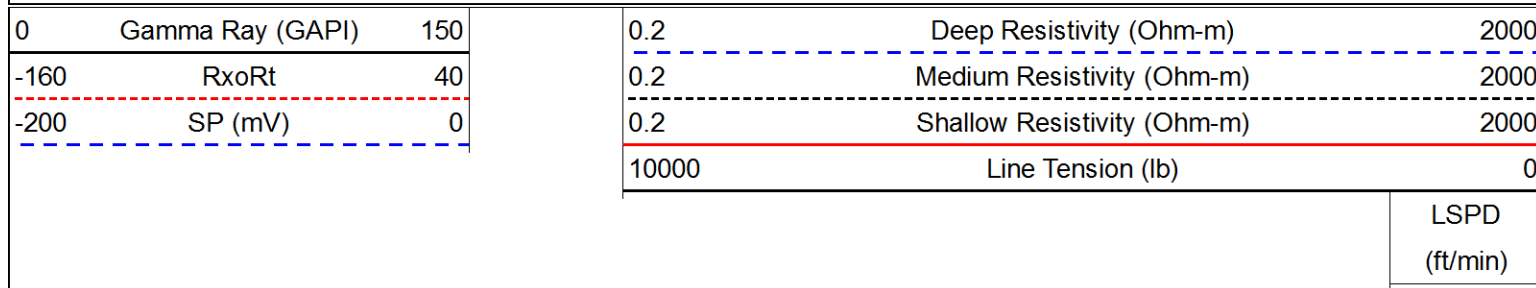


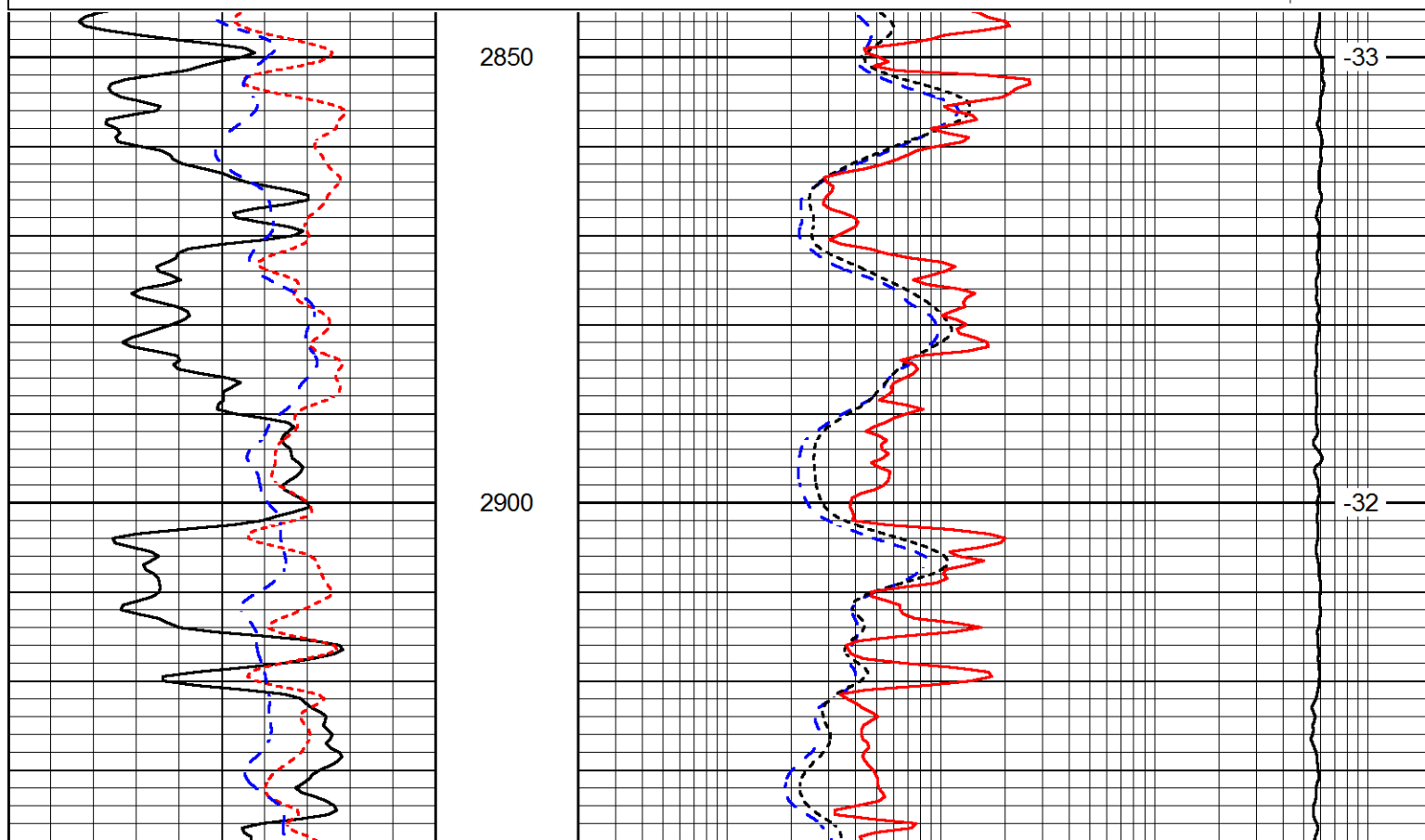
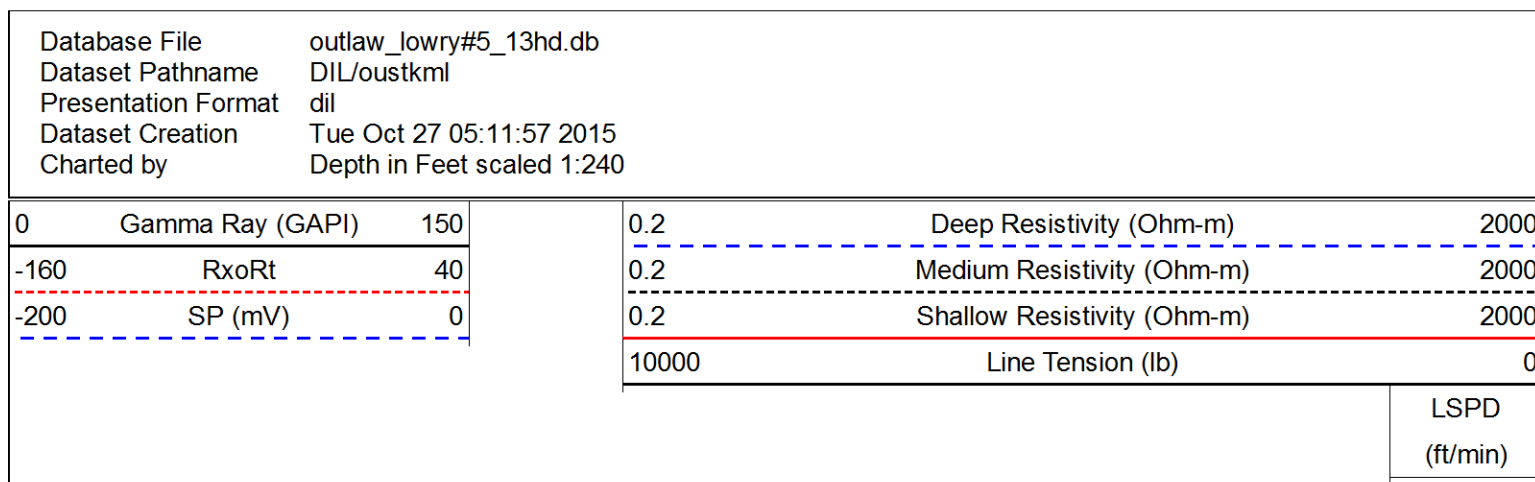
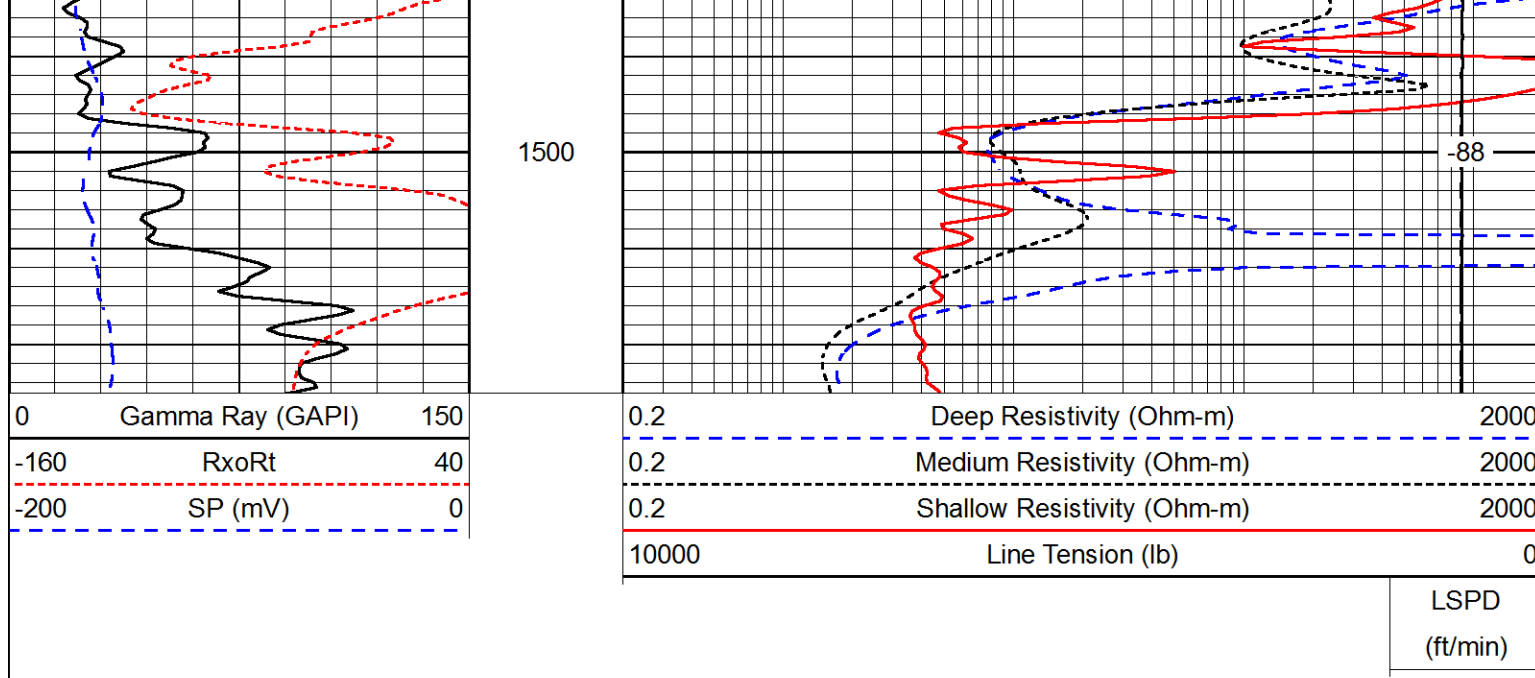


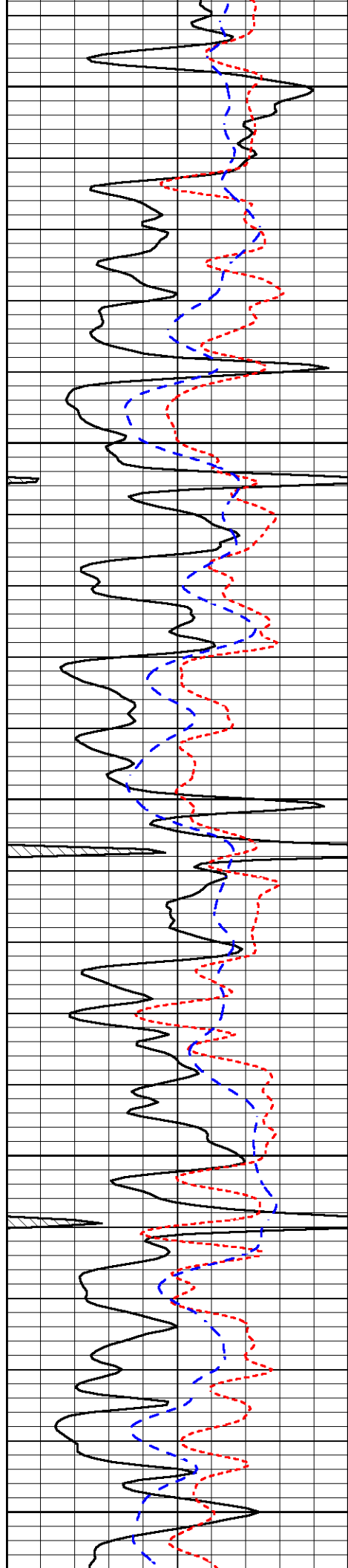




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 Presentation Format dil
 Dataset Creation Tue Oct 27 05:11:57 2015
 Charted by Depth in Feet scaled 1:240







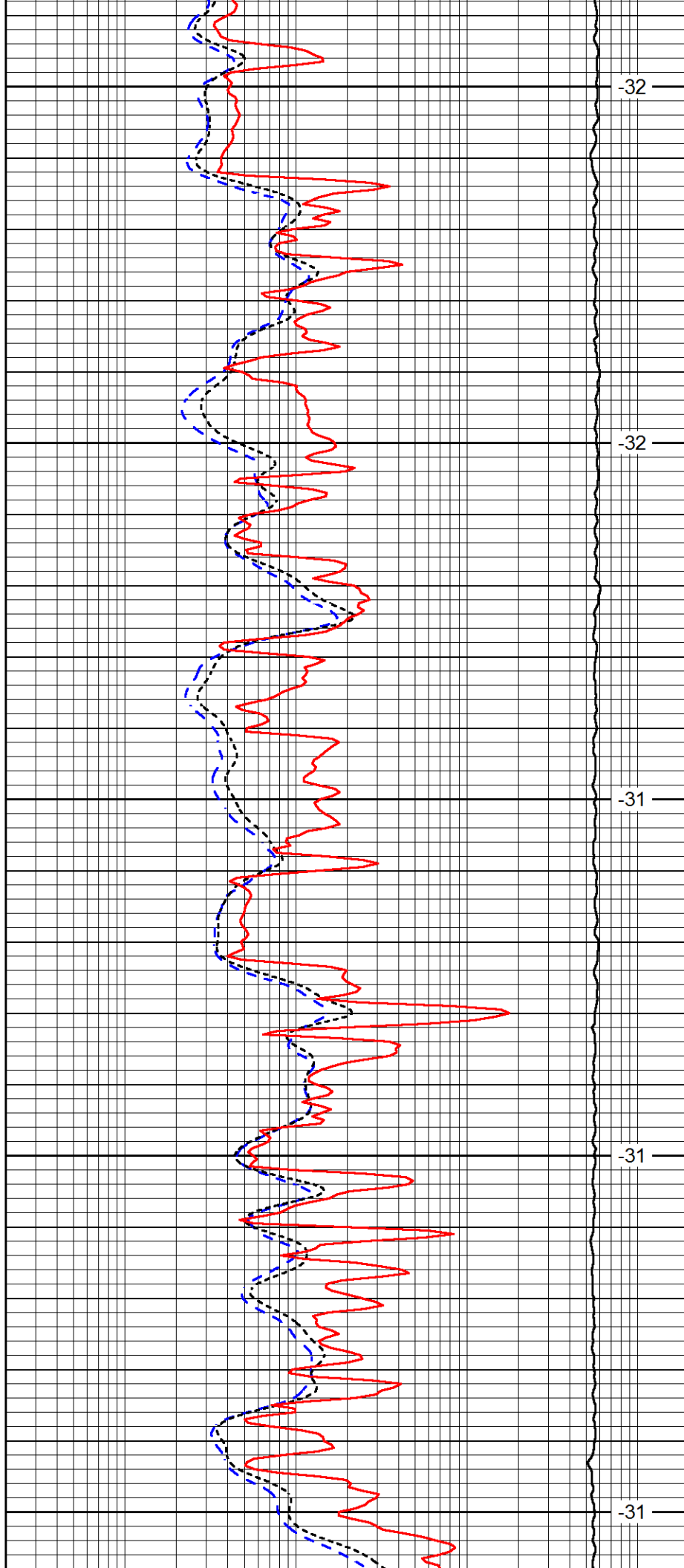
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3000

3050

3100

3150



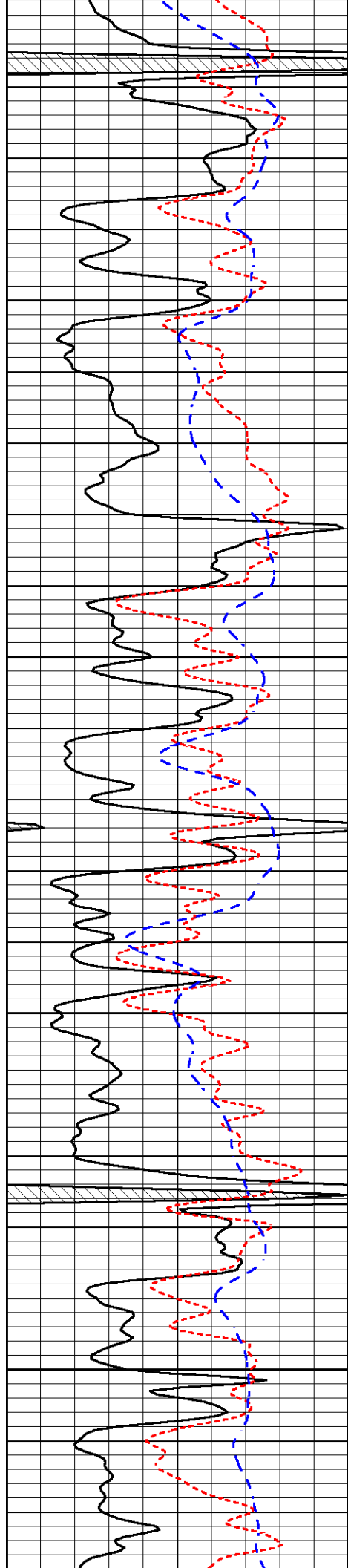
-32

-32

-31

-31

-31

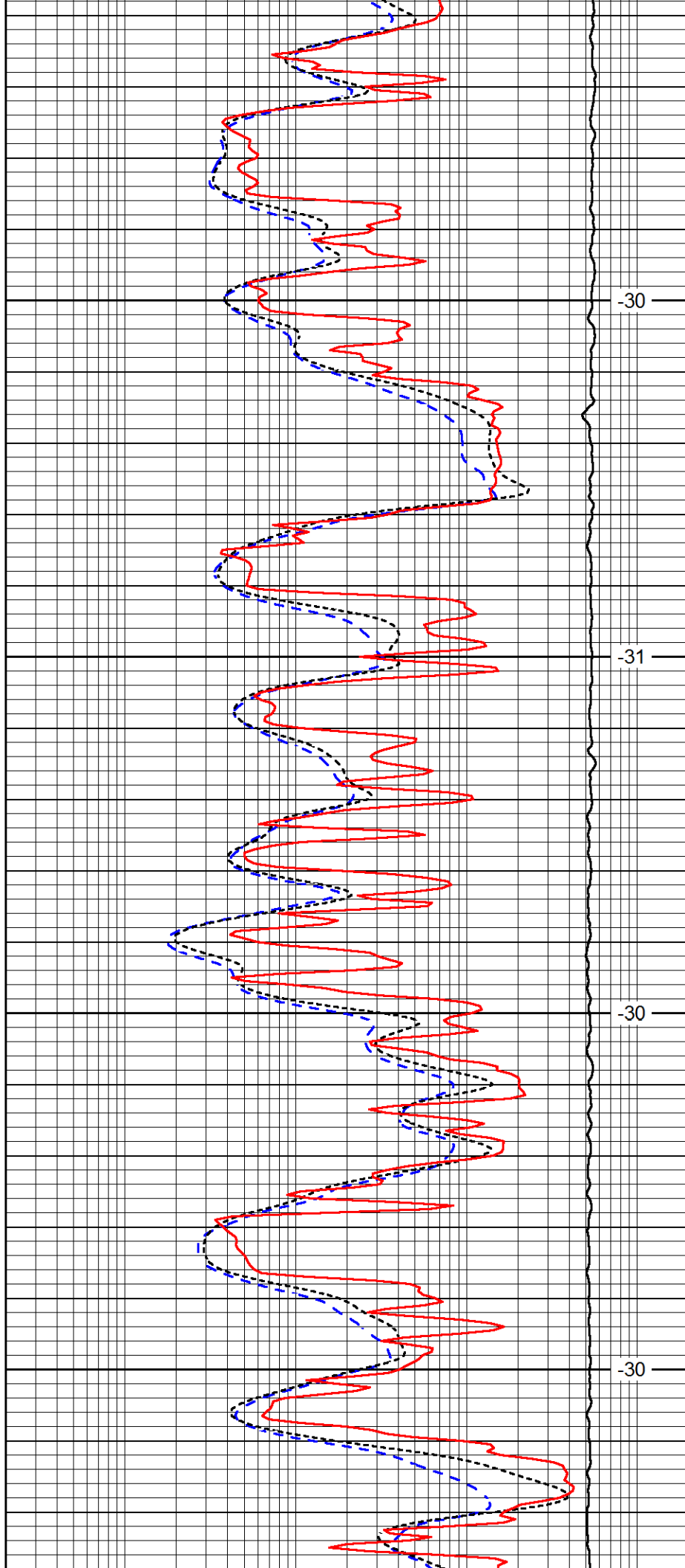


3200

3250

3300

3350

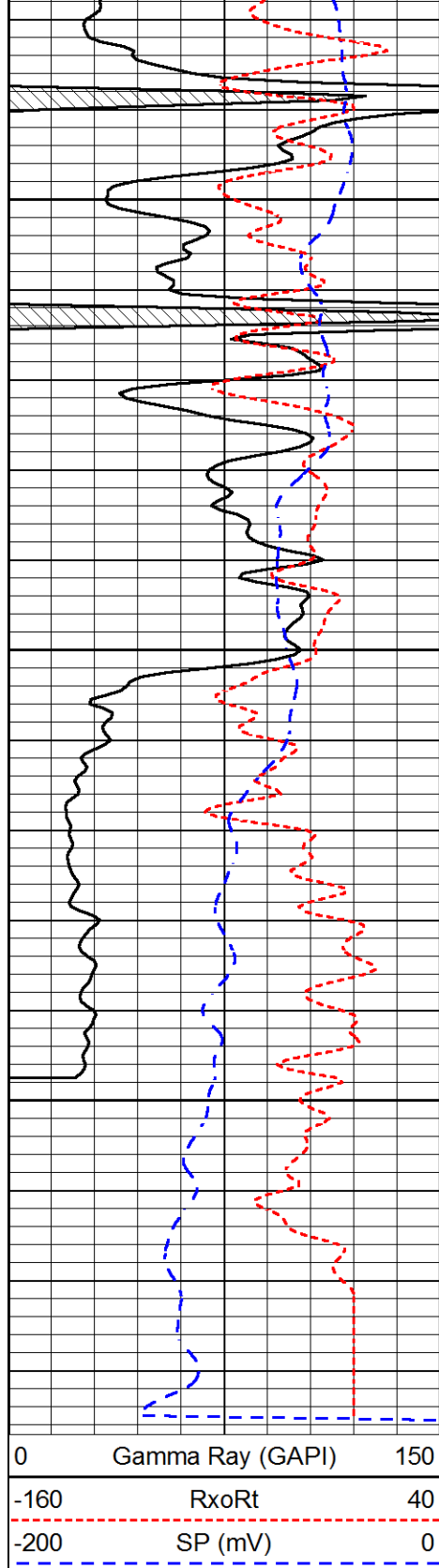


-30

-31

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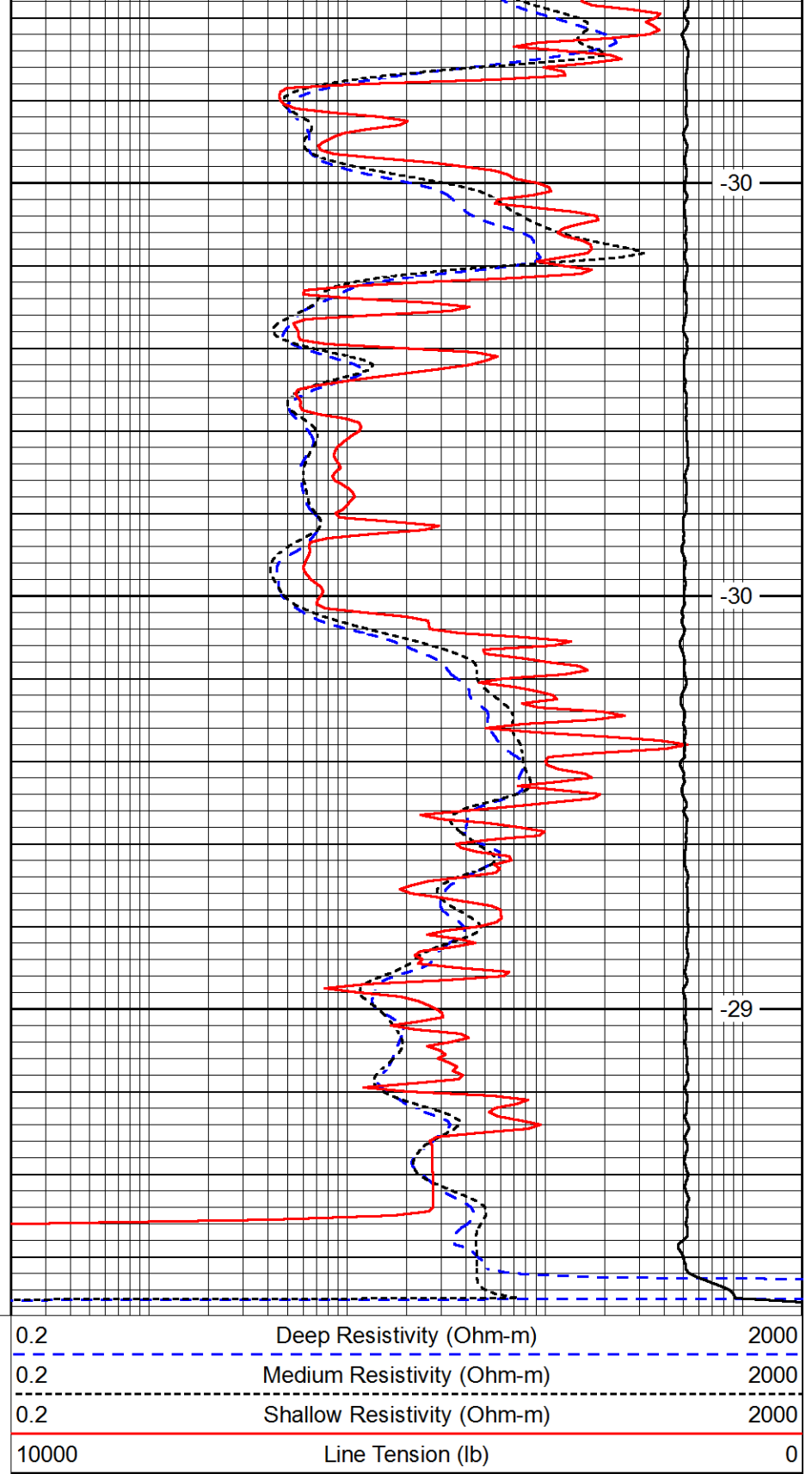
-30



3400

3450

3500



-30

-30

-29

LSPD
(ft/min)