



# DUAL INDUCTION LOG

Company: **OUTLAW WELL SERVICE LLC**  
 Well: **DON #1**  
 Field: **BRAY**  
 County: **ROOKS**  
 State: **KANSAS**

Company: **OUTLAW WELL SERVICE LLC**  
 Well: **DON #1**  
 Field: **BRAY**  
 County: **ROOKS** State: **KANSAS**

Location: **API #: 15-163-24301-00-00**  
**330' FSL & 1060' FWL**  
**SEC 20 TWP 8S RGE 19W**  
 Permanent Datum: **GROUND LEVEL** Elevation: **2005**  
 Log Measured From: **KELLY BUSHING**  
 Drilling Measured From: **KELLY BUSHING**  
 Other Services: **CNL/CDL MEL**  
 Elevation: **K.B. 2013, D.F. 2012, G.L. 2005**

Date	7/14/2015
Run Number	ONE
Depth Driller	3553
Depth Logger	3545
Bottom Logged Interval	3544
Top Log Interval	200
Casing Driller	8.625 @ 220
Casing Logger	2.19
Bit Size	7.875
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	9000
Density / Viscosity	9.3 50
pH / Fluid Loss	9.5 11.2
Source of Sample	Flowline
Rm @ Meas. Temp	0.63 @ 87
Rmt @ Meas. Temp	0.47 @ 87
Rmc @ Meas. Temp	0.85 @ 87
Source of Rmf / Rmc	Charts
Rm @ BHT	0.49 @ 112
Operating Rig Time	2 HOURS
Max Rec. Temp. F	112
Equipment Number	15
Location	Hays
Recorded By	D.KERR
Witnessed By	MARC DOWNING

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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.  
 ZURICH KS, 7 NORTH TO Q RD,  
 1 3/4 WEST, NORTH AND EAST INTO

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

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[www.pioneerenergy.com](http://www.pioneerenergy.com) 785-625-3858

<b>Your Pioneer Energy Services Crew</b> Engineer: <b>D.KERR</b> Operator: Operator: Operator:	<b>This Log Record Was Witnessed By</b> Primary Witness: <b>MARC DOWNING</b> Secondary Witness: Secondary Witness: Secondary Witness:
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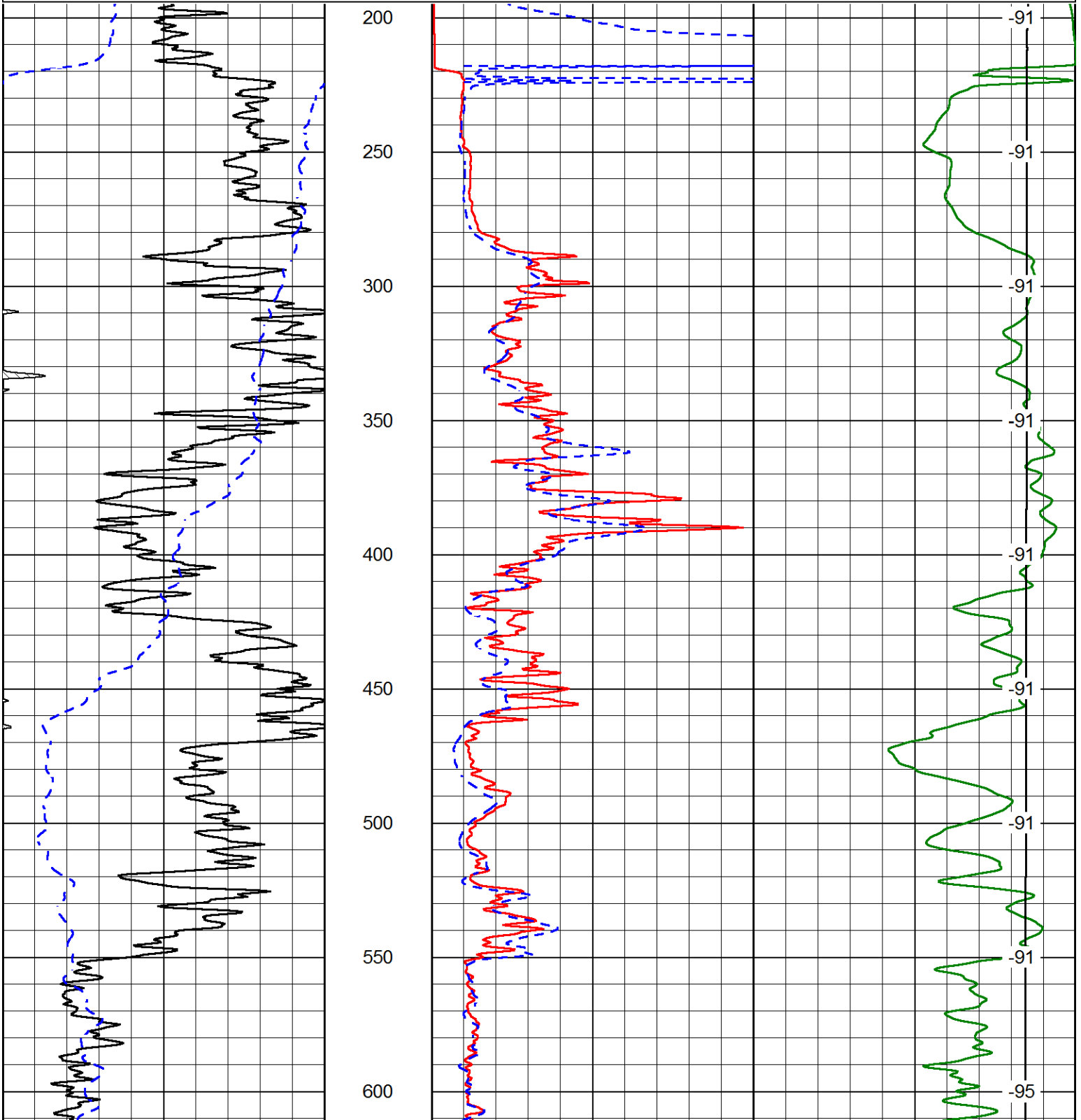
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 Dataset Pathname    DIL/outstkml  
 Presentation Format    dil2in  
 Dataset Creation    Tue Jul 14 05:17:35 2015  
 Charted by    Depth in Feet scaled 1:600

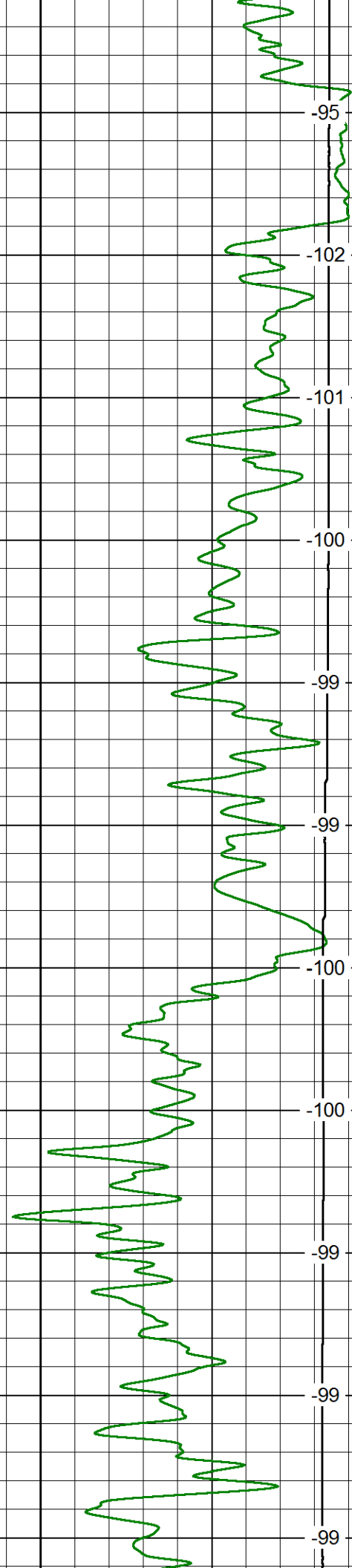
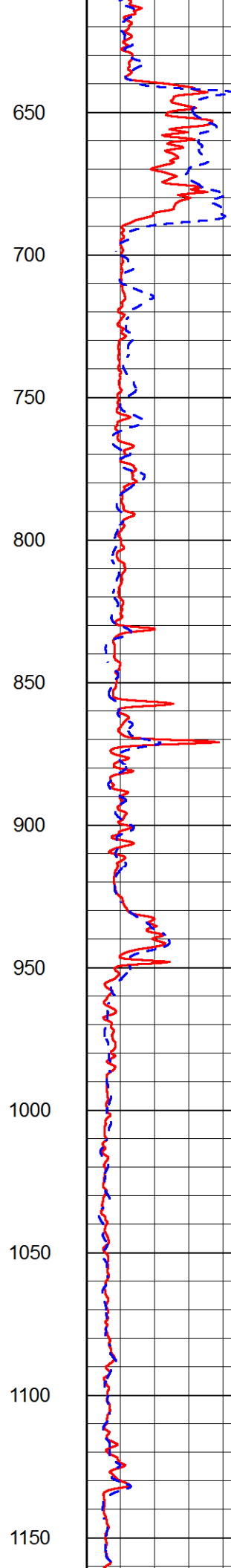
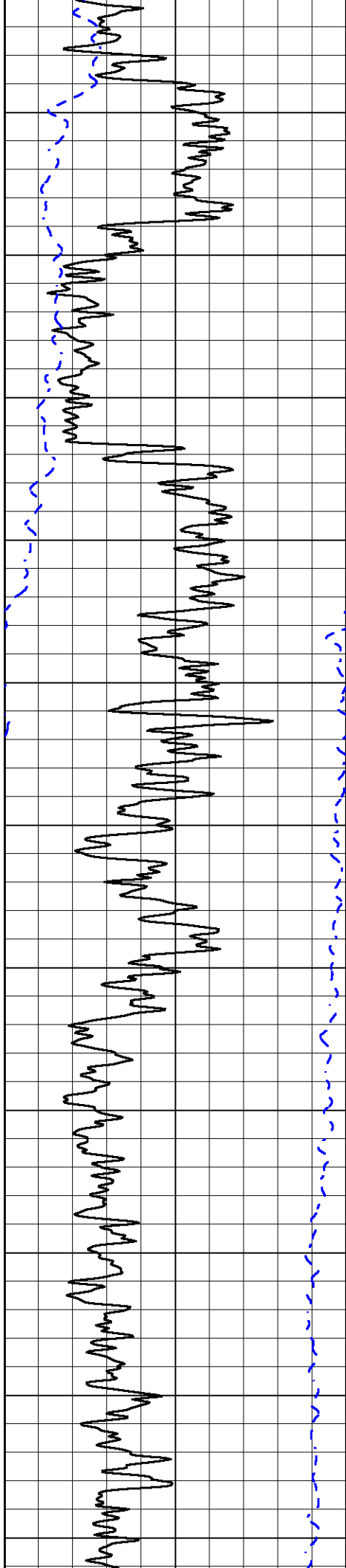
0    Gamma Ray (GAPI)    150  
 -200    SP (mV)    0

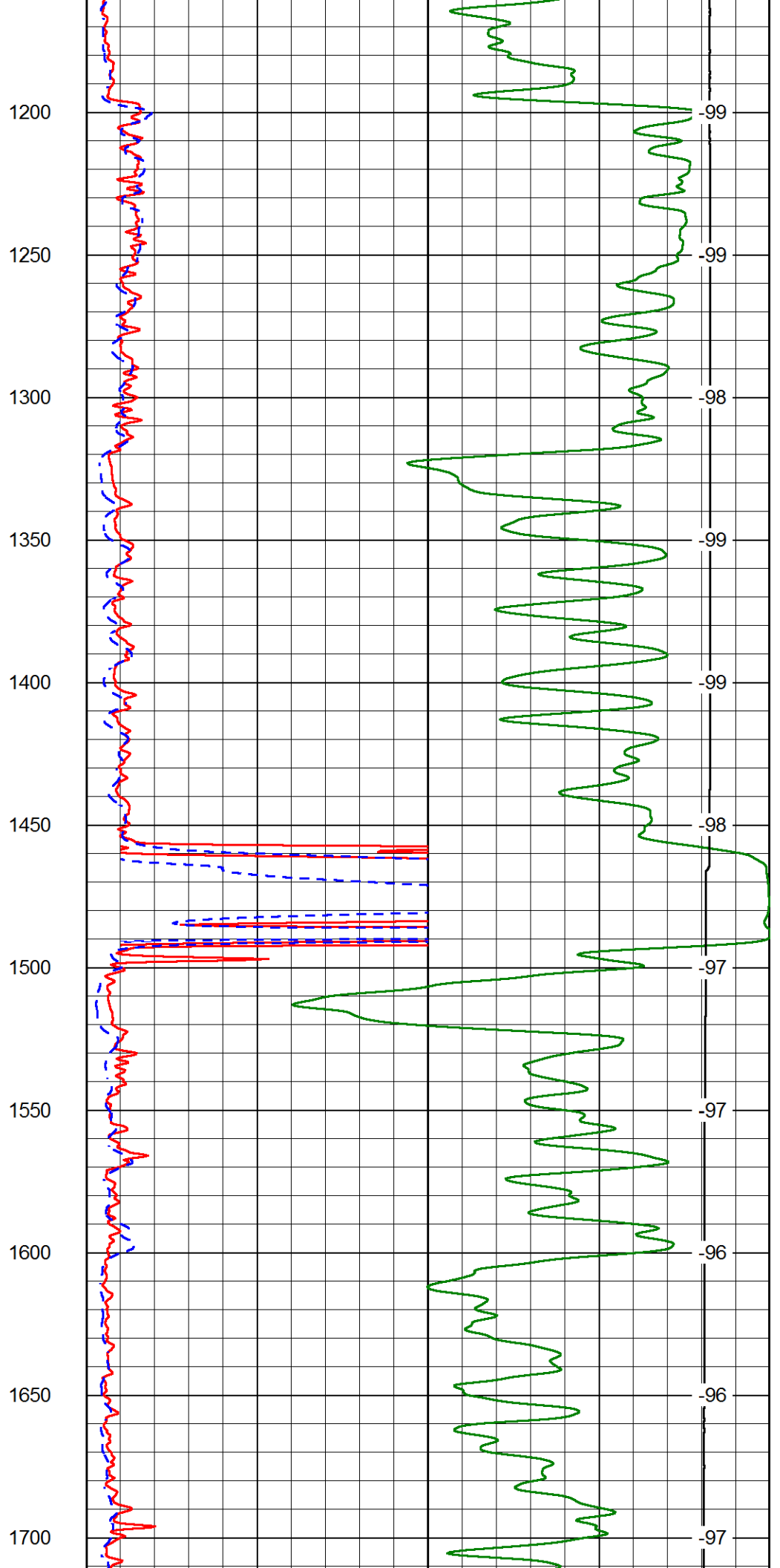
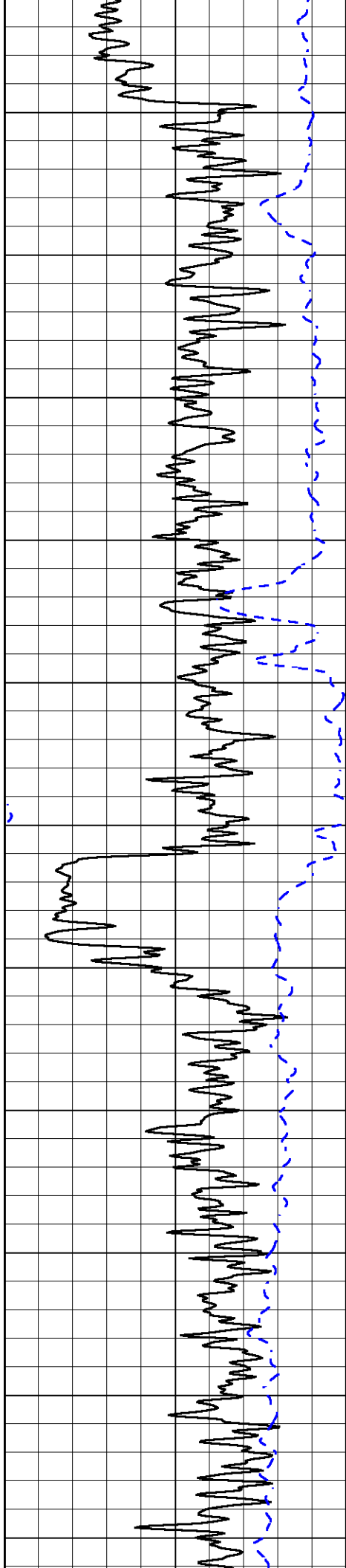
1000    Conductivity    0  
 15000    Line Tension (lb)    0

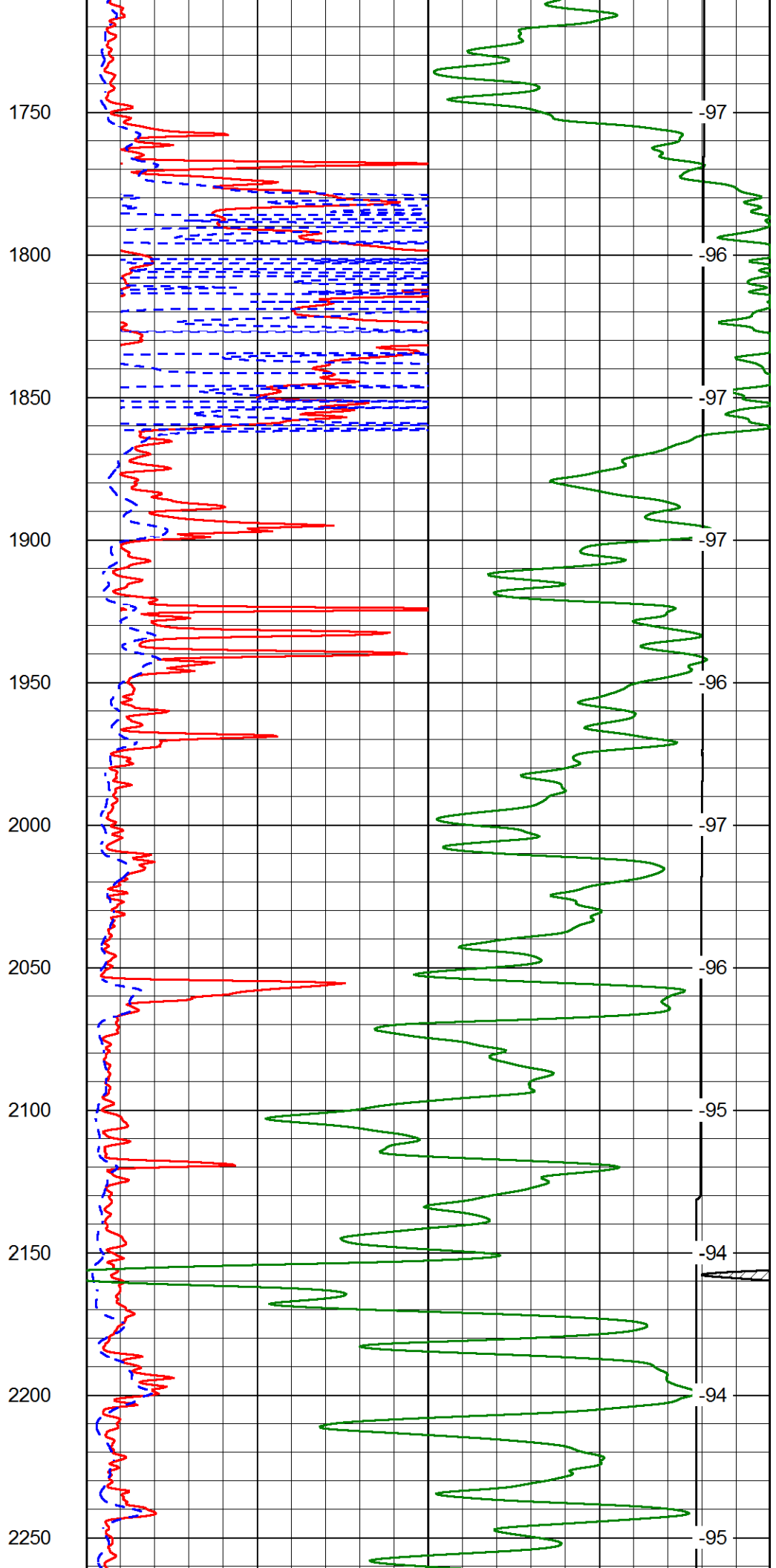
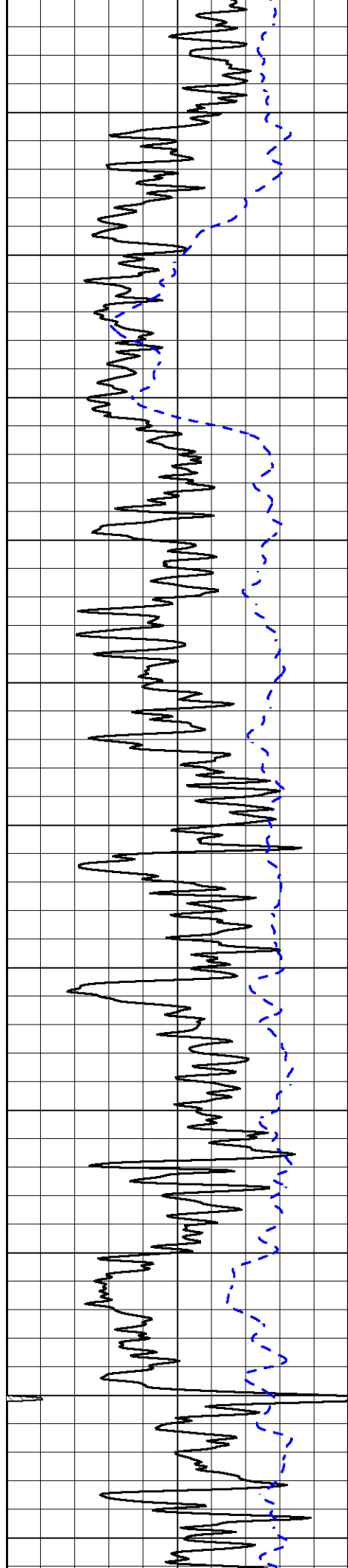
0    Shallow Resistivity (Ohm-m)    50  
 0    Deep Resistivity (Ohm-m)    50  
 Shallow Resistivity  
 50    (Ohm-m)    500  
 50    Deep Resistivity (Ohm-m)    500

LSPD  
 (ft/min)

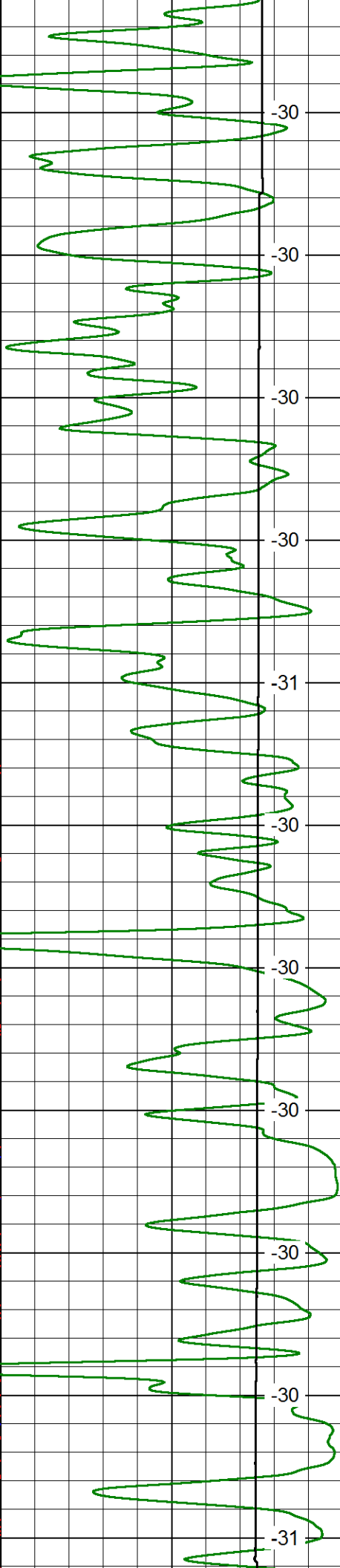
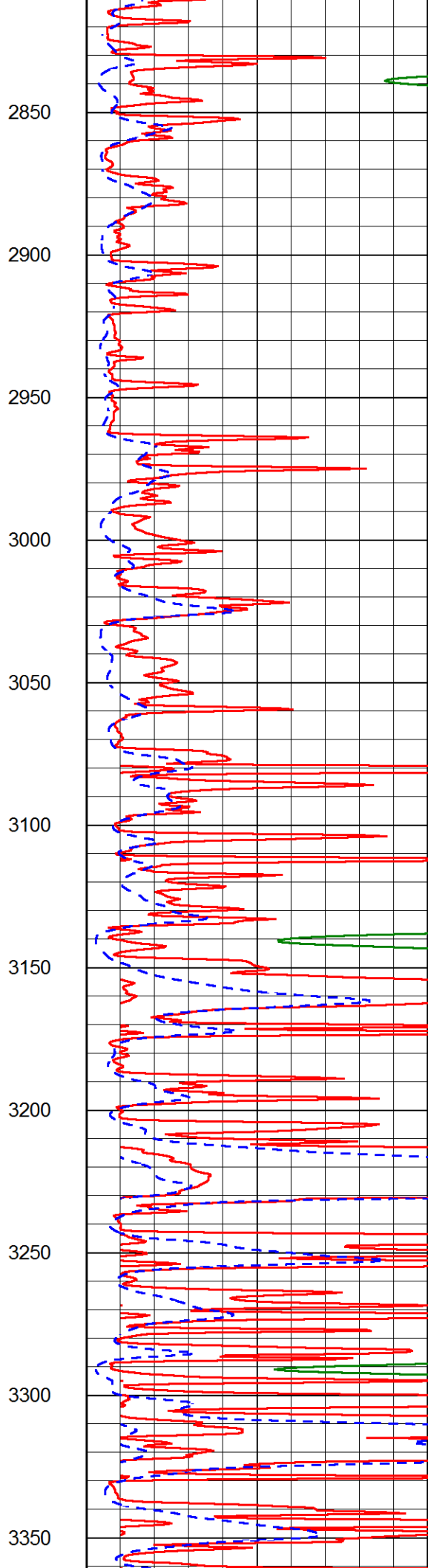
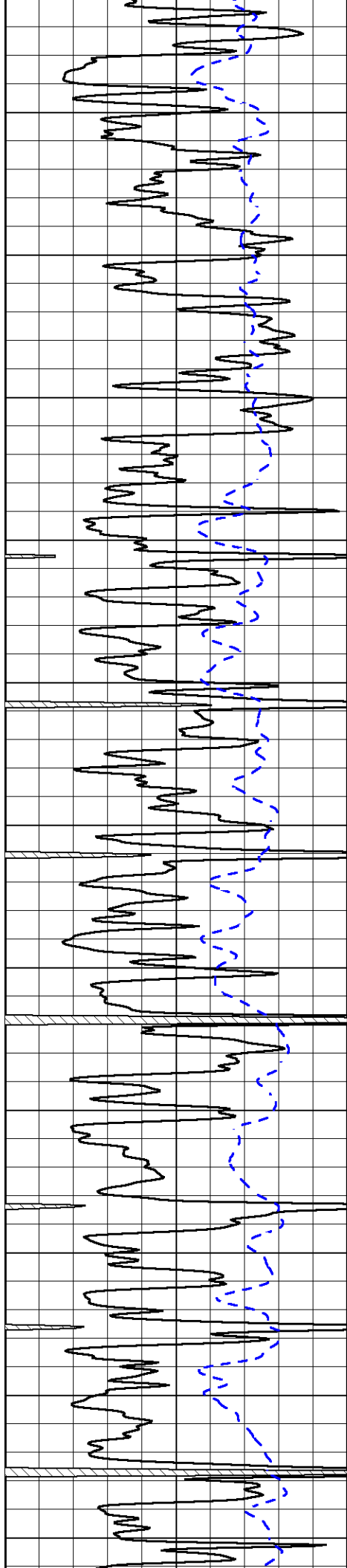


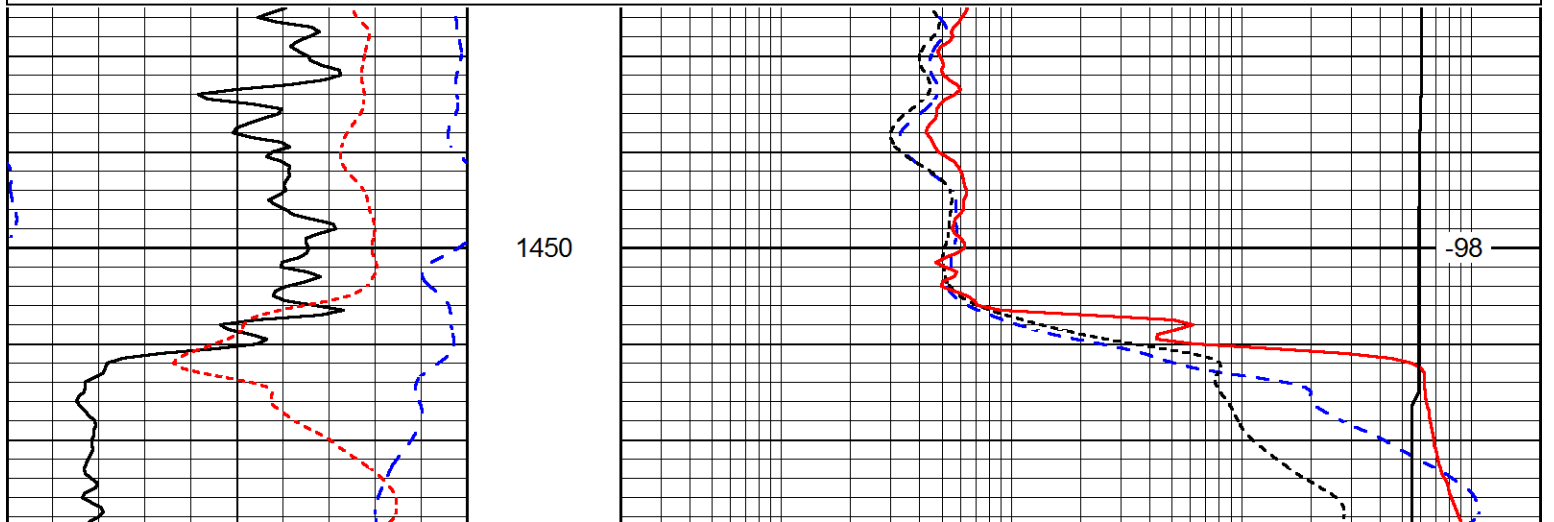
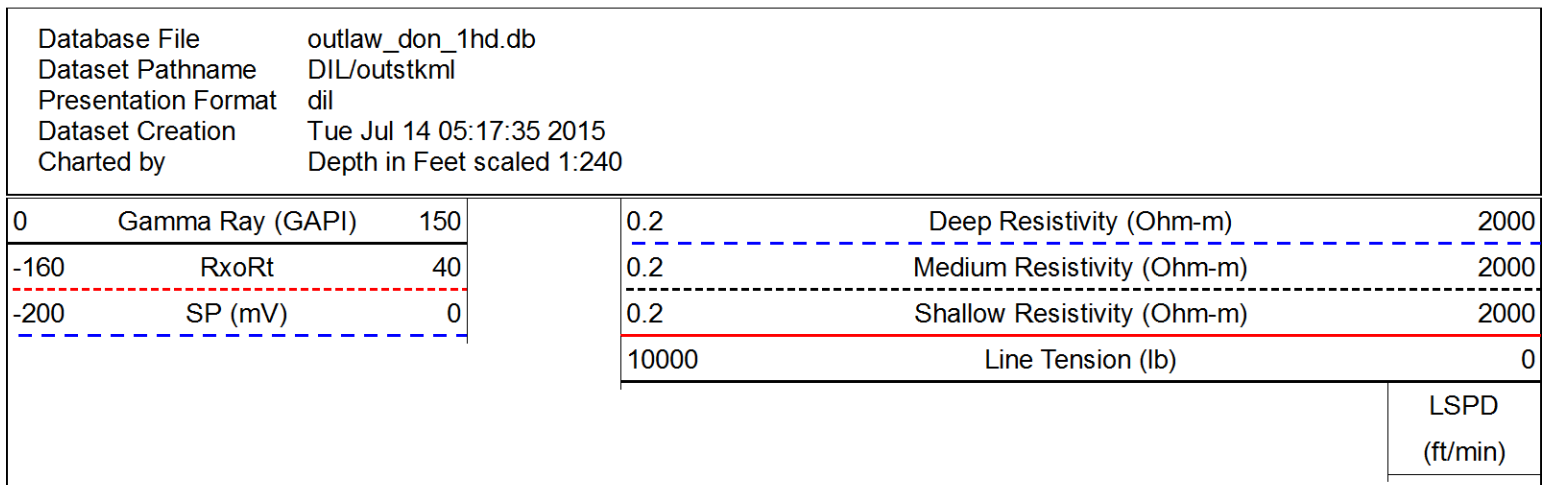
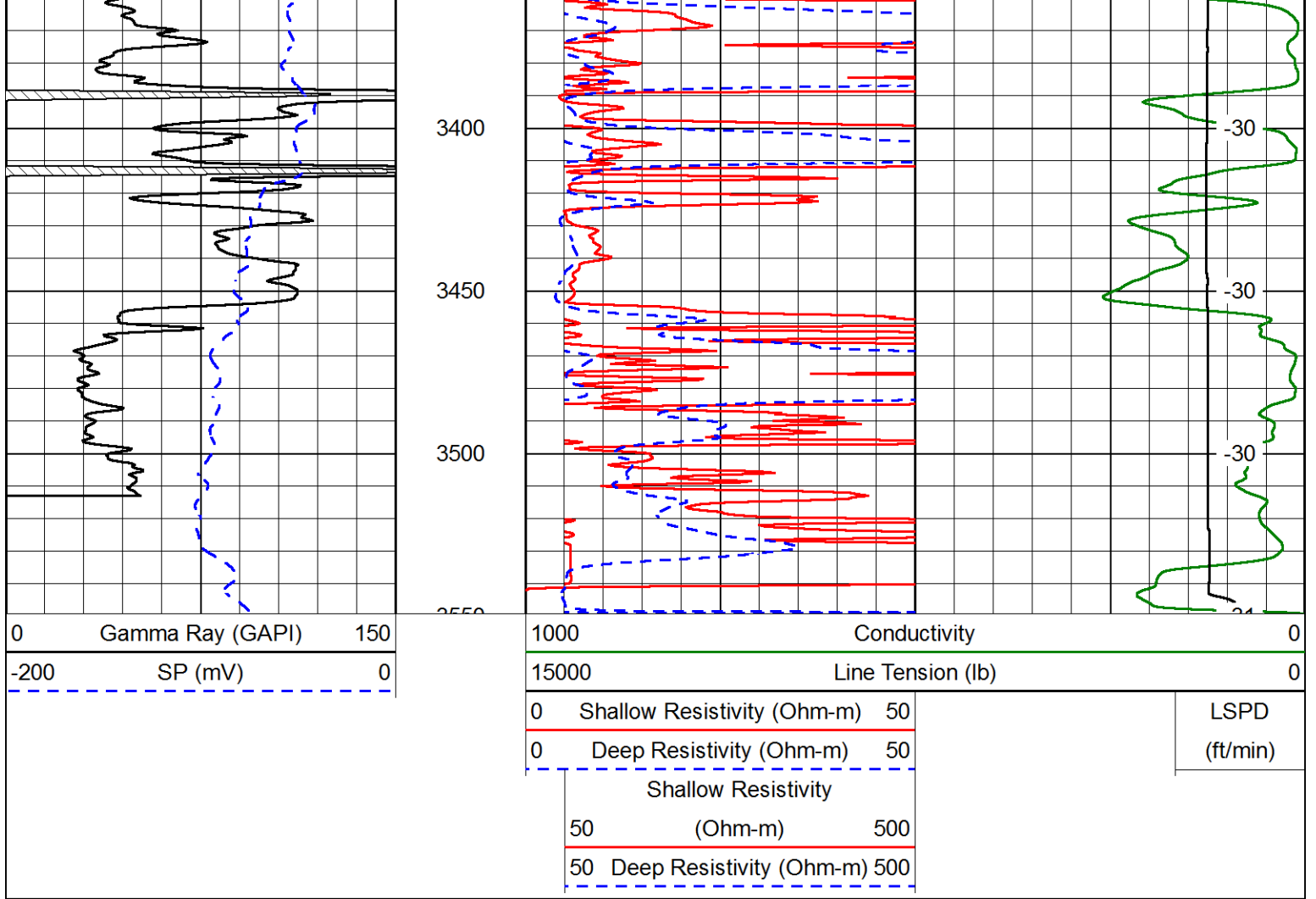


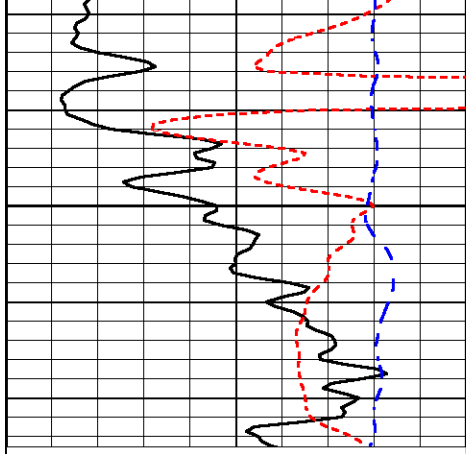




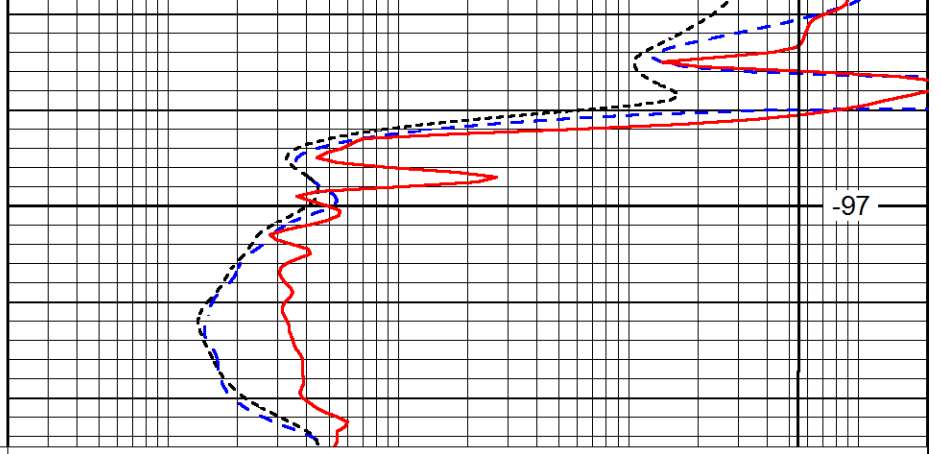








1500



-97

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

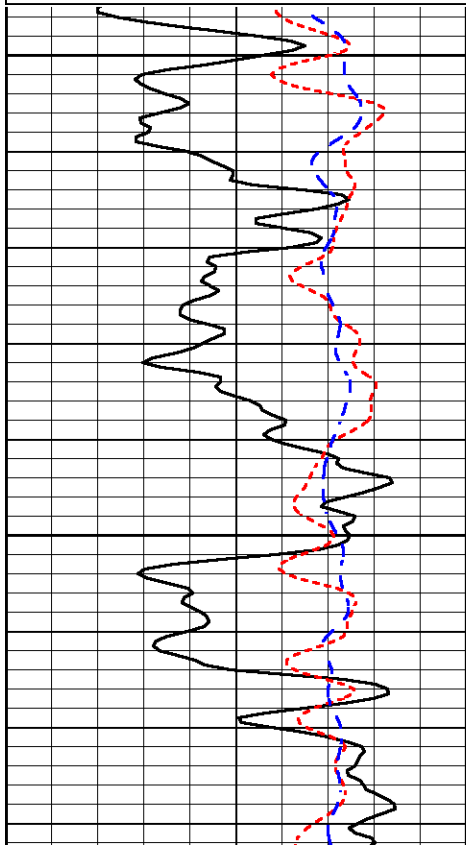
LSPD  
(ft/min)

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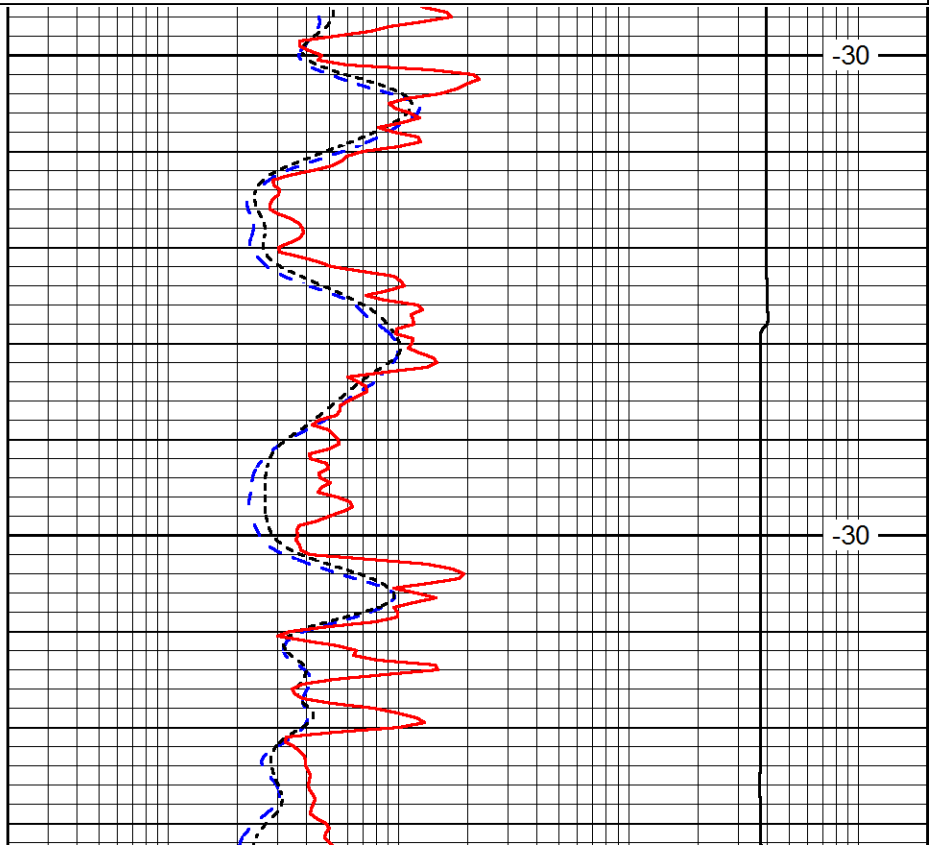
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(ft/min)



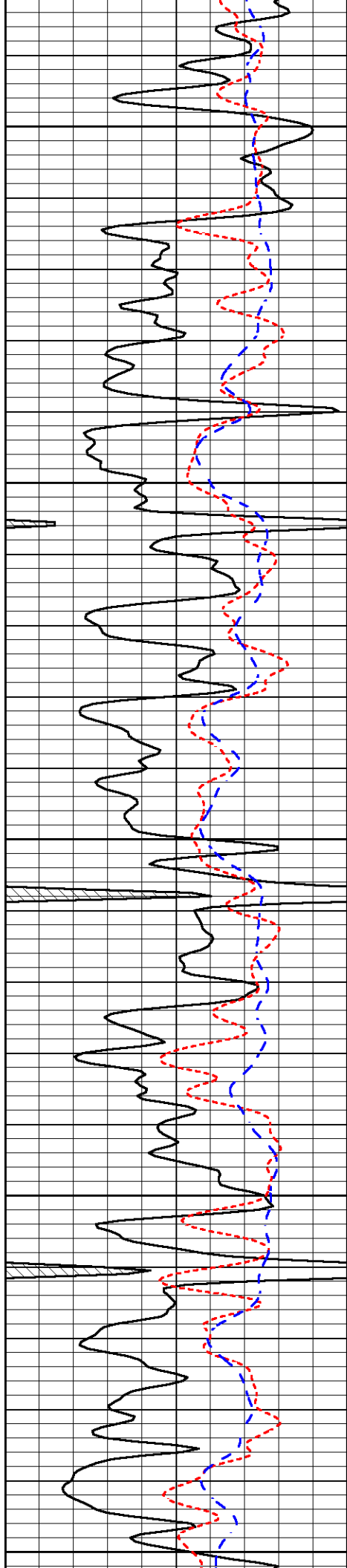
2850



-30

2900

-30



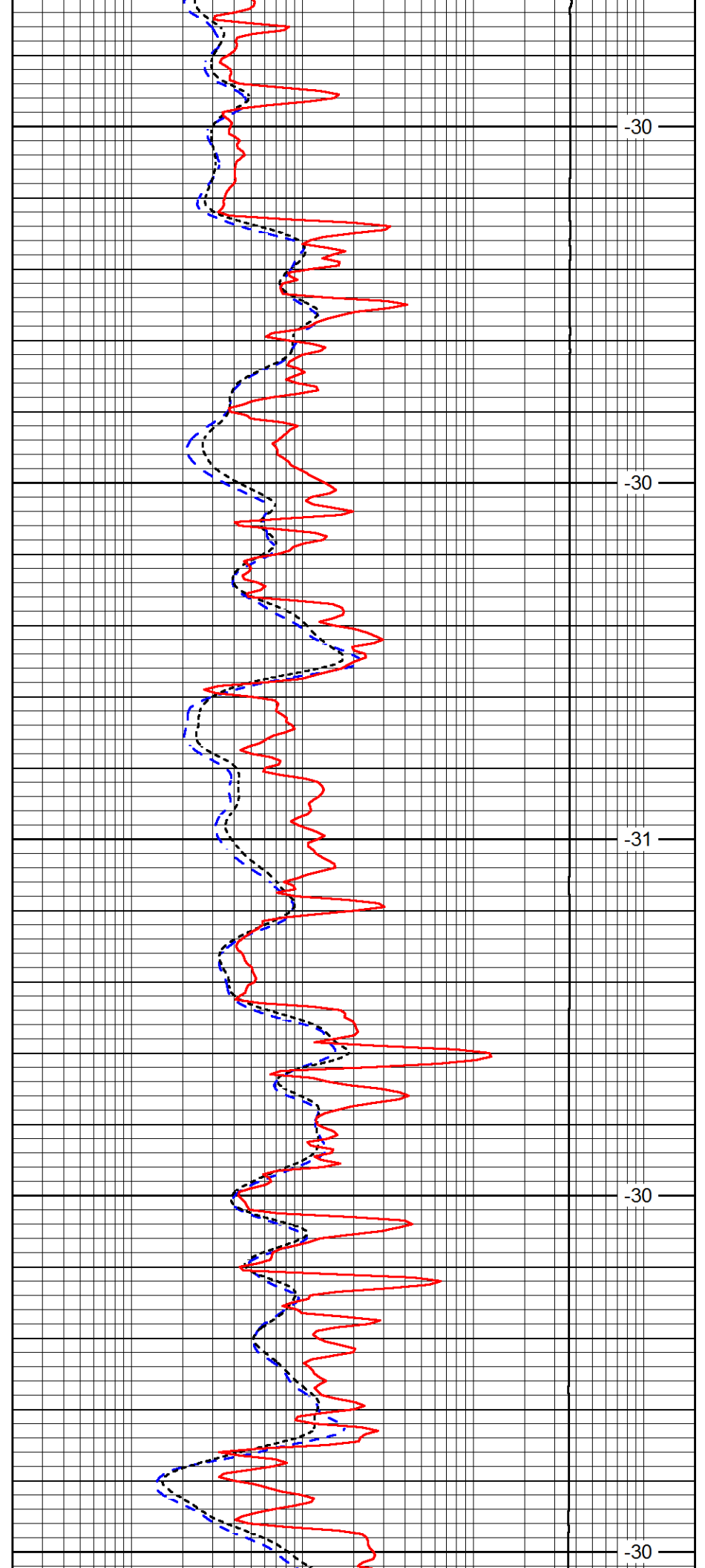
2950

3000

3050

3100

3150



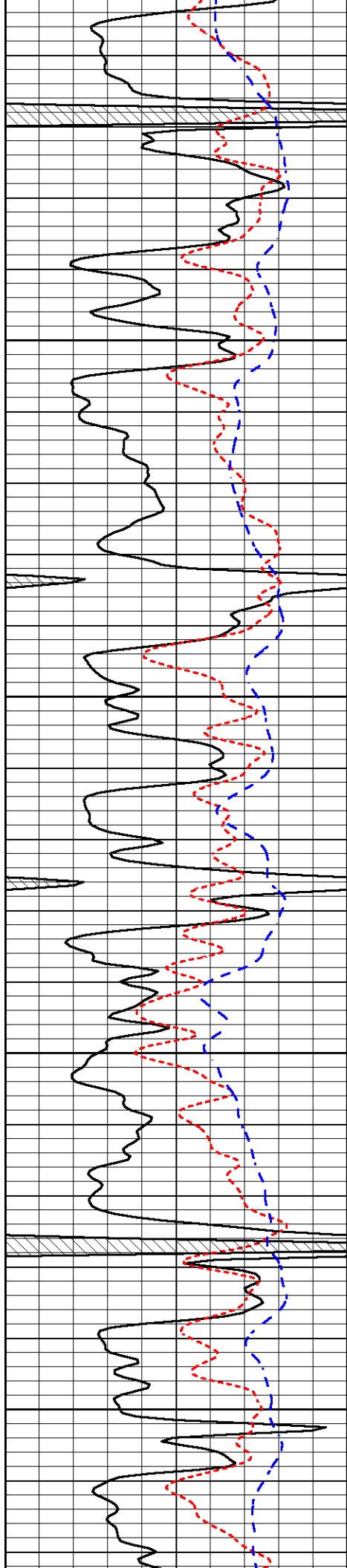
-30

-30

-31

-30

-30

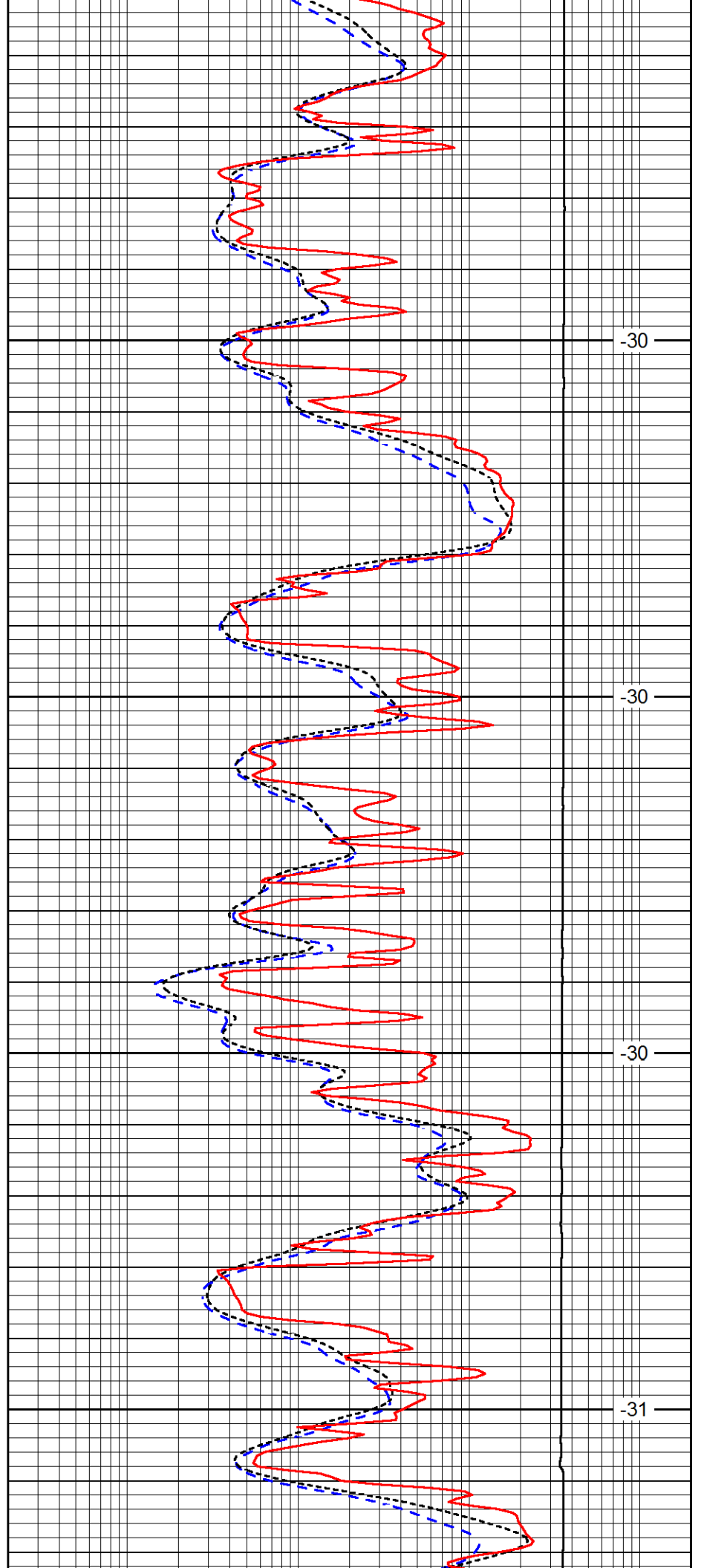


3200

3250

3300

3350

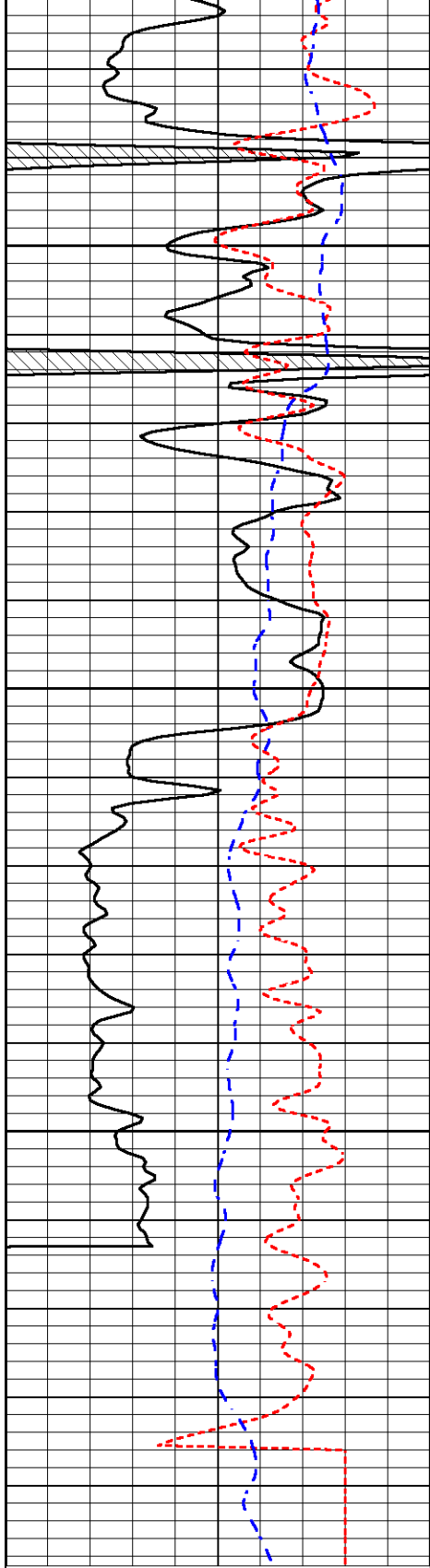


-30

-30

-30

-31

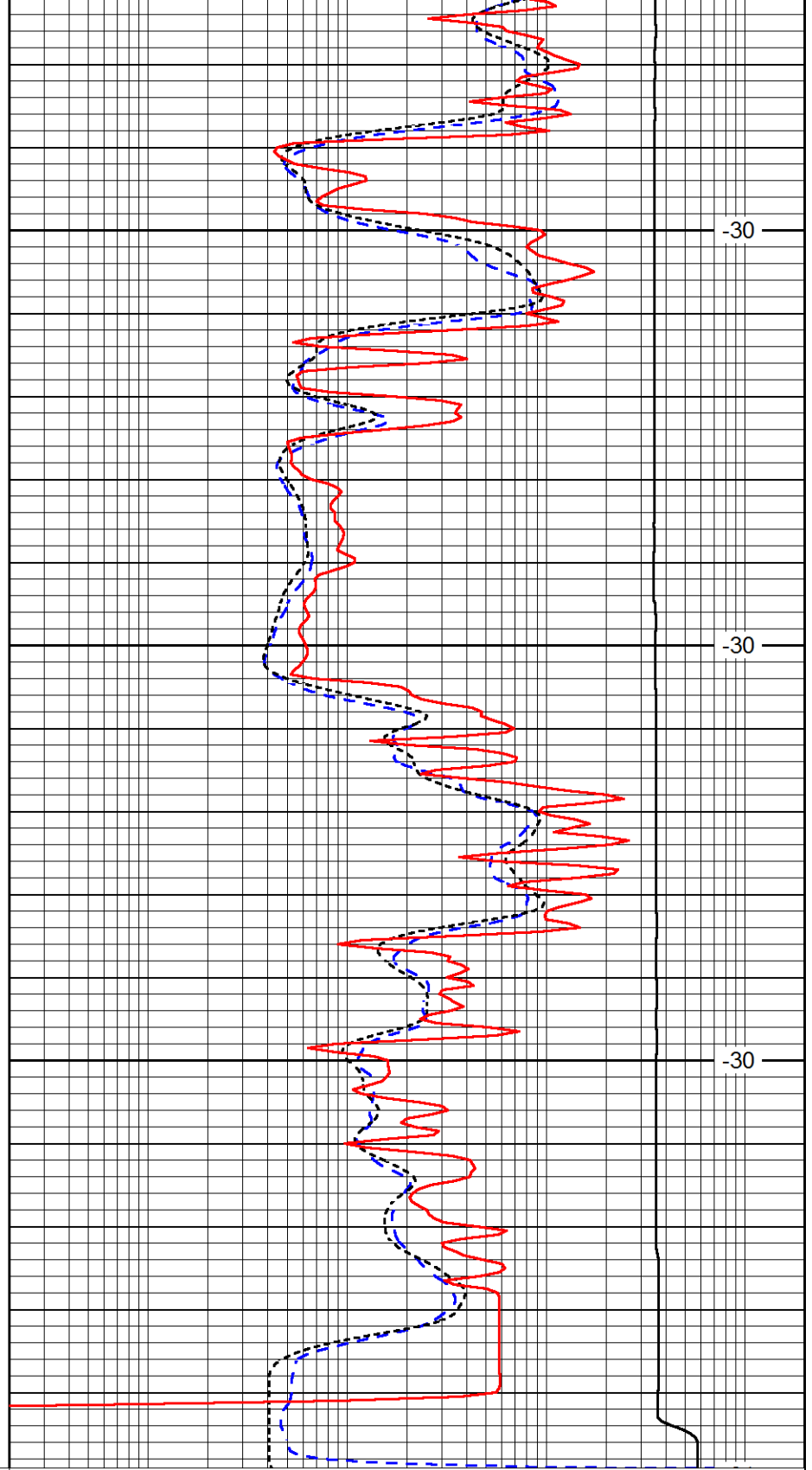


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3450

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