



DUAL INDUCTION LOG

Company TDI, INC.		Company TDI, INC.	
Well KEITH NO. 1		Well KEITH NO. 1	
Field WILDCAT		Field WILDCAT	
County ELLIS		County ELLIS	
State KANSAS		State KANSAS	
Location: API #: 15-051-26,792-00-00		Other Services	
2,600' FNL & 2,310' FEL		CNL/CDL	
SEC 12 TWP 12S RGE 19W			
Permanent Datum	GROUND LEVEL	Elevation	2187'
Log Measured From	KELLY BUSHING	K.B.	2197'
Drilling Measured From	KELLY BUSHING	D.F.	N/A
		G.L.	2187'
Date	7/27/2015		
Run Number	ONE		
Depth Driller	3900'		
Depth Logger	3902		
Bottom Logged Interval	3901		
Top Log Interval	200'		
Casing Driller	8,625 @ 214'		
Casing Logger	213'		
Bit Size	7.875"		
Type Fluid in Hole	CHEMICAL		
Salinity, ppm CL	4000		
Density / Viscosity	9.5 60		
pH / Fluid Loss	10.5 7.8		
Source of Sample	Flowline		
Rm @ Meas. Temp	.75 @ 80		
Rmt @ Meas. Temp	.56 @ 80		
Rmc @ Meas. Temp	1.01 @ 80		
Source of Rmt / Rmc	Charts		
Rm @ BHT	.52 @ 115		
Operating Rig Time	3 1/2 HOURS		
Max Rec. Temp. F	115		
Equipment Number	108		
Location	Hays		
Recorded By	J. LONG		
Witnessed By	TOM DENNING	HERB DEINES	

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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.
HAYS, NORTH TO BUCKEYE ROAD, 4 WEST, 1 NORTH, EAST INTO

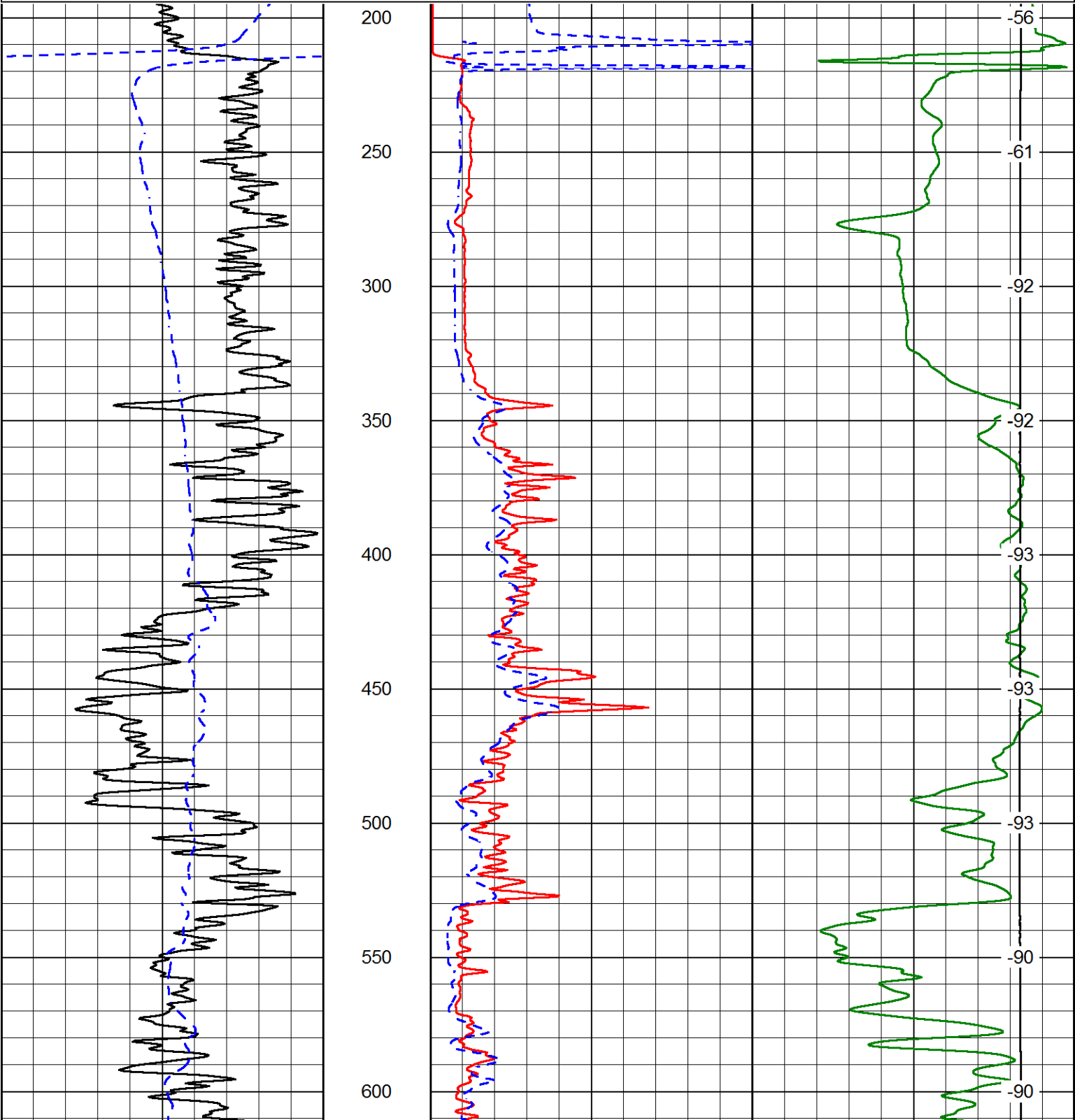
Log Measured From: KELLY BUSHING 10 Ft. Above Permanent Datum

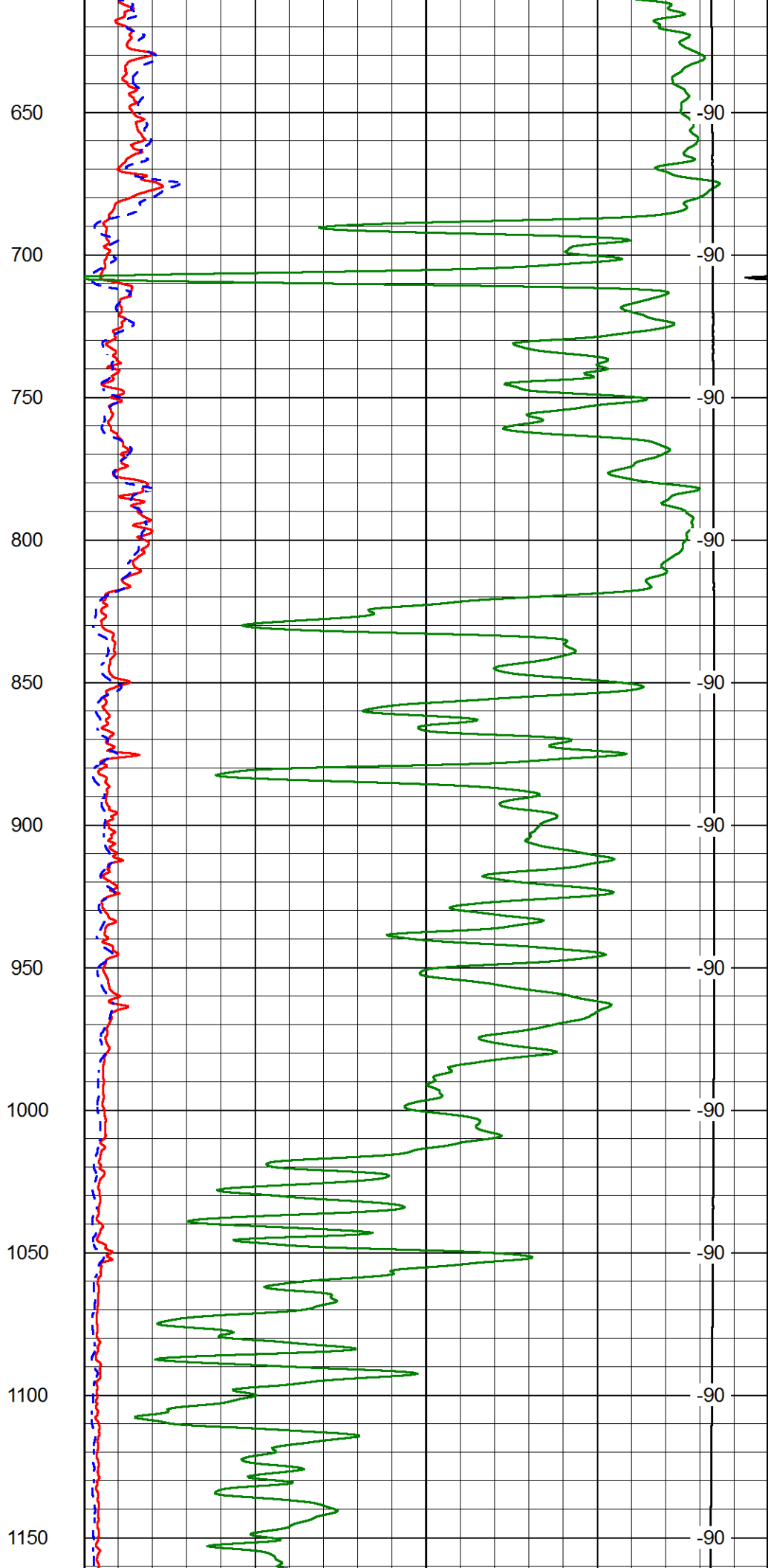
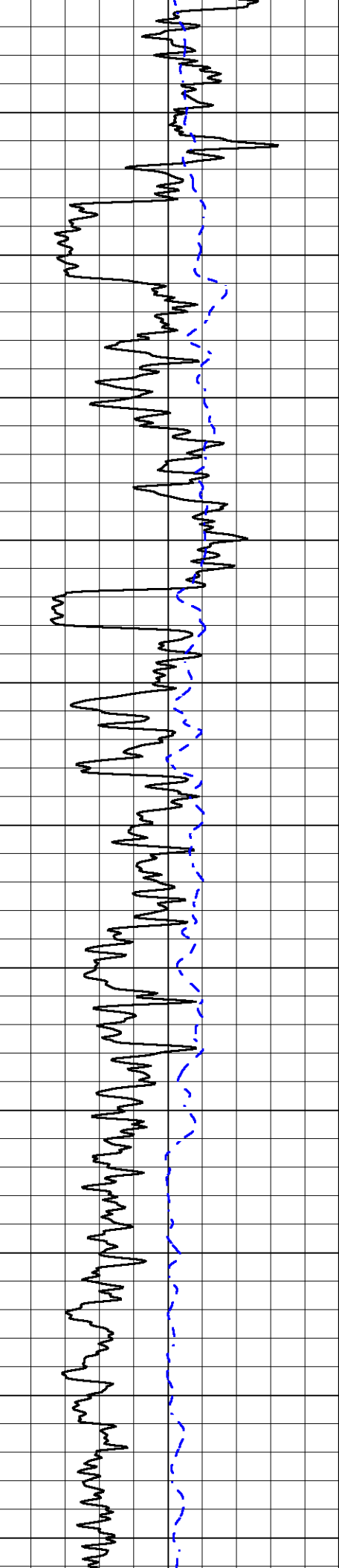
THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneerenergy.com 785-625-3858

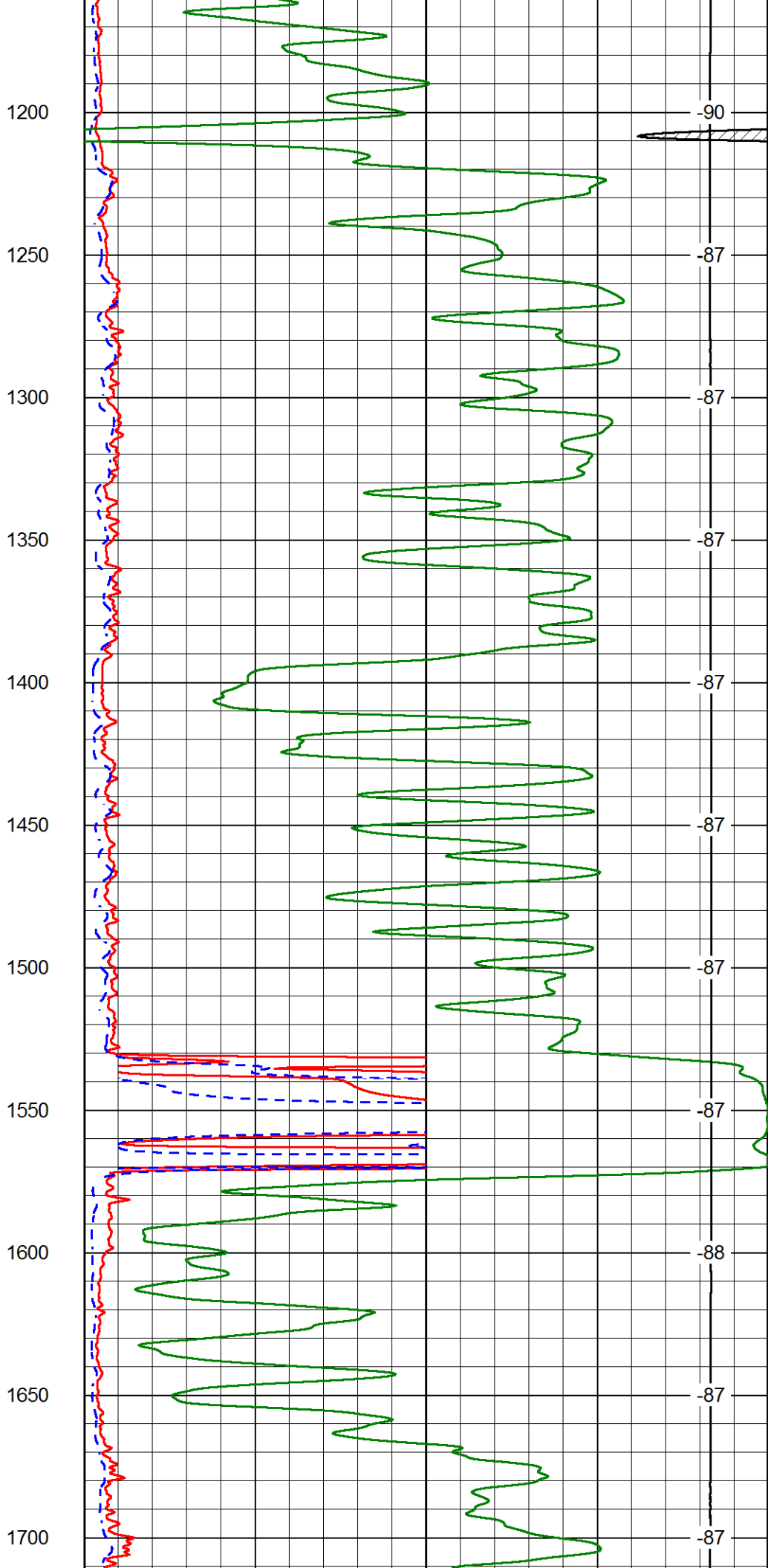
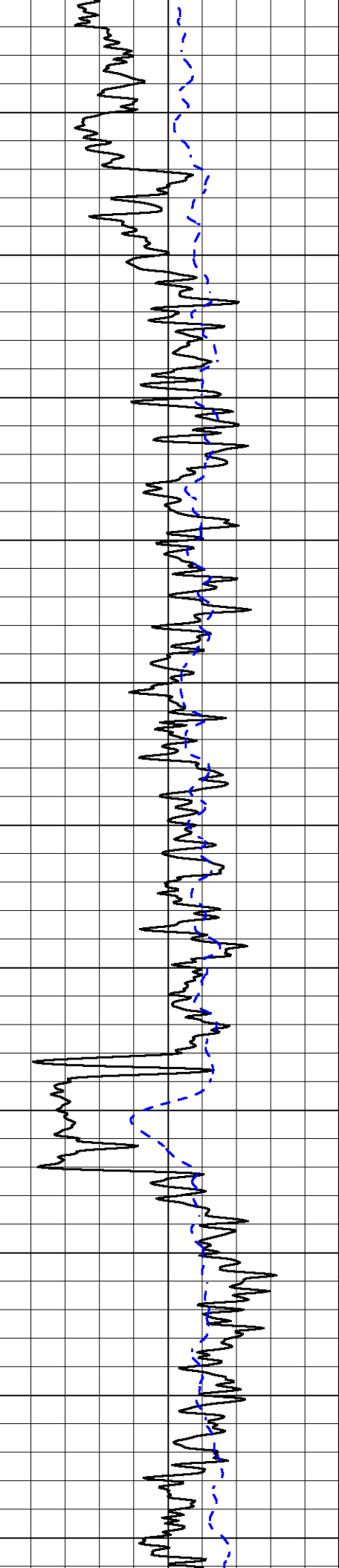
Your Pioneer Energy Services Crew		This Log Record Was Witnessed By	
Engineer: J. LONG		Primary Witness: TOM DENNING	
Operator:		Secondary Witness: HERB DEINES	
Operator:		Secondary Witness:	
Operator:		Secondary Witness:	

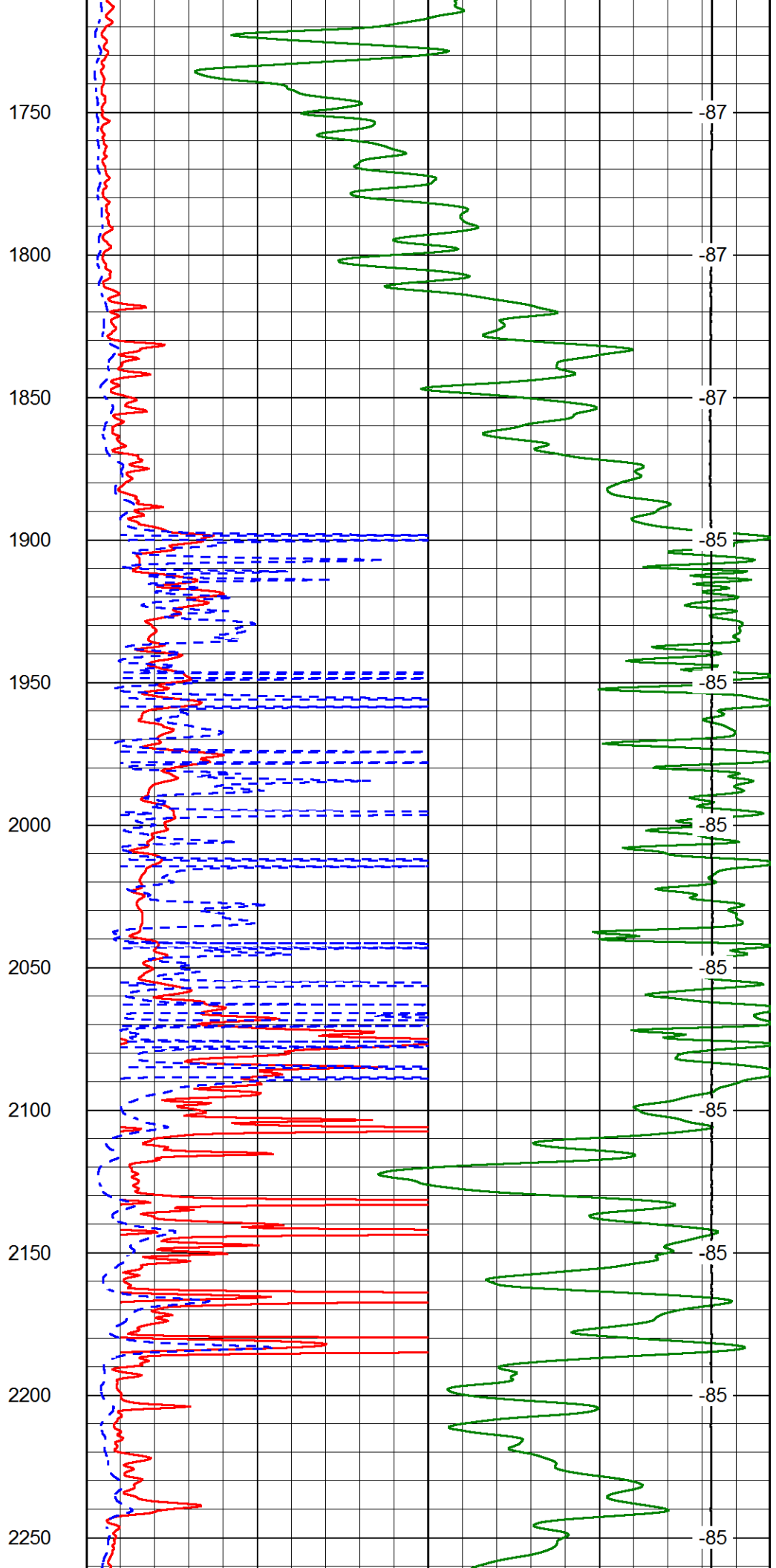
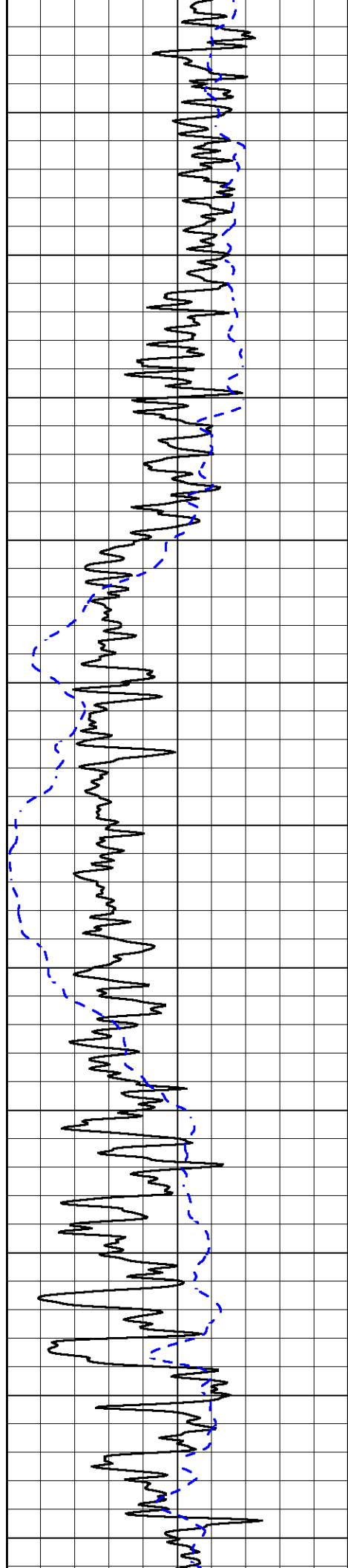
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Presentation Format	dil2in
Dataset Creation	Mon Jul 27 15:44:55 2015
Charted by	Depth in Feet scaled 1:600

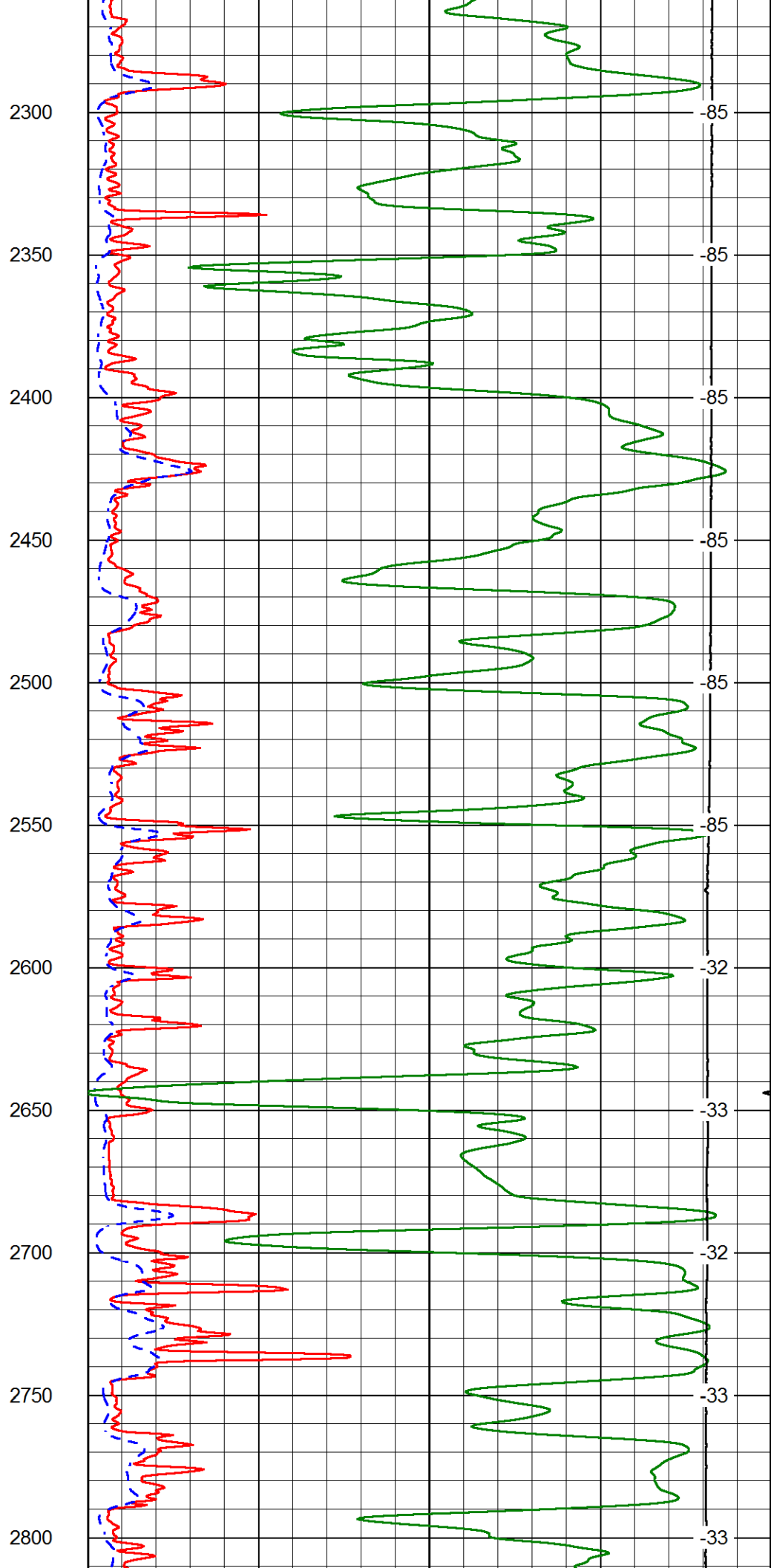
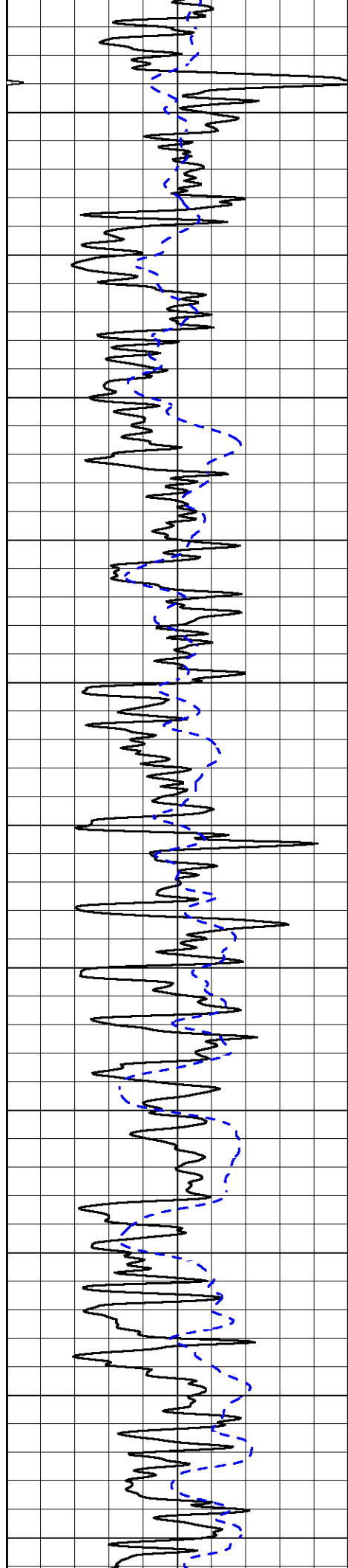
0	Gamma Ray (GAPI)	150	1000	Conductivity	0
-200	SP (mV)	0	15000	Line Tension (lb)	0
			0	Shallow Resistivity (Ohm-m)	50
			0	Deep Resistivity (Ohm-m)	50
			Shallow Resistivity		LSPD (ft/min)
			50	(Ohm-m)	500
			50	Deep Resistivity (Ohm-m)	500

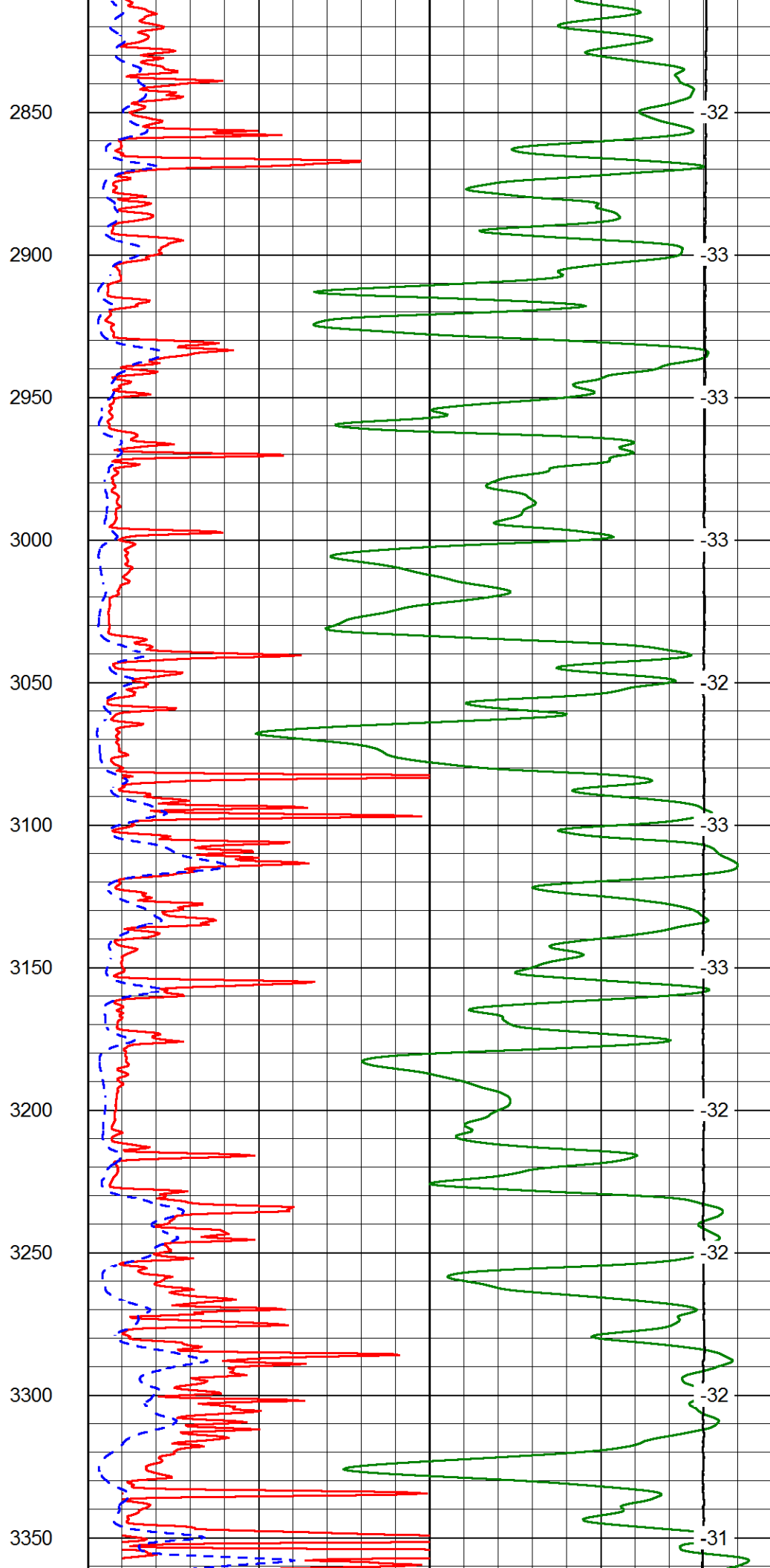
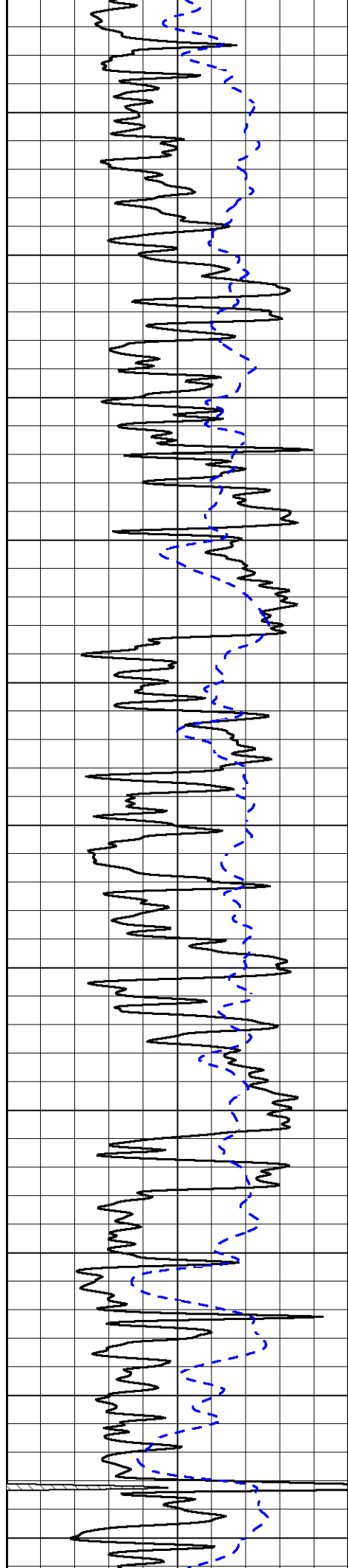


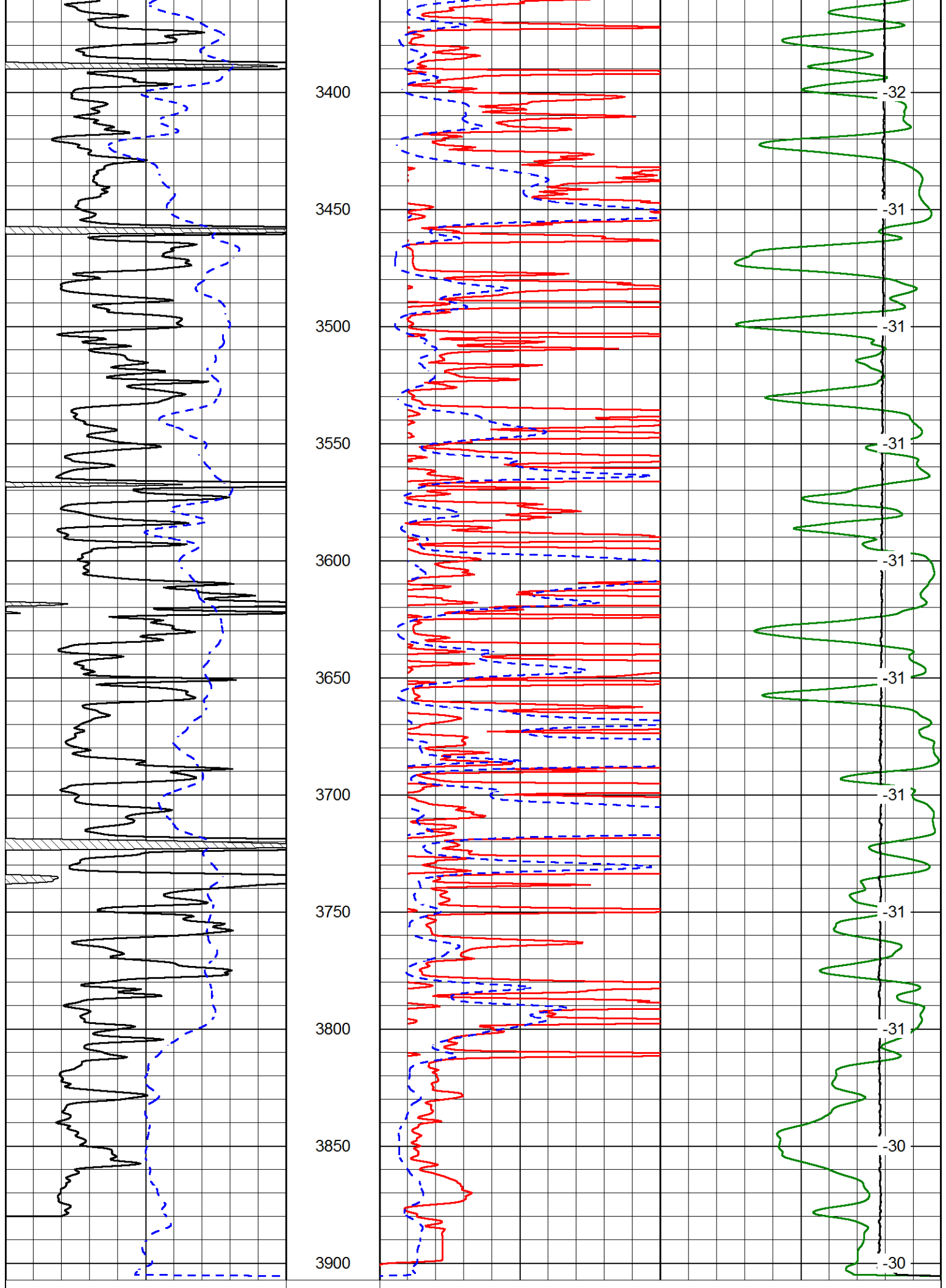












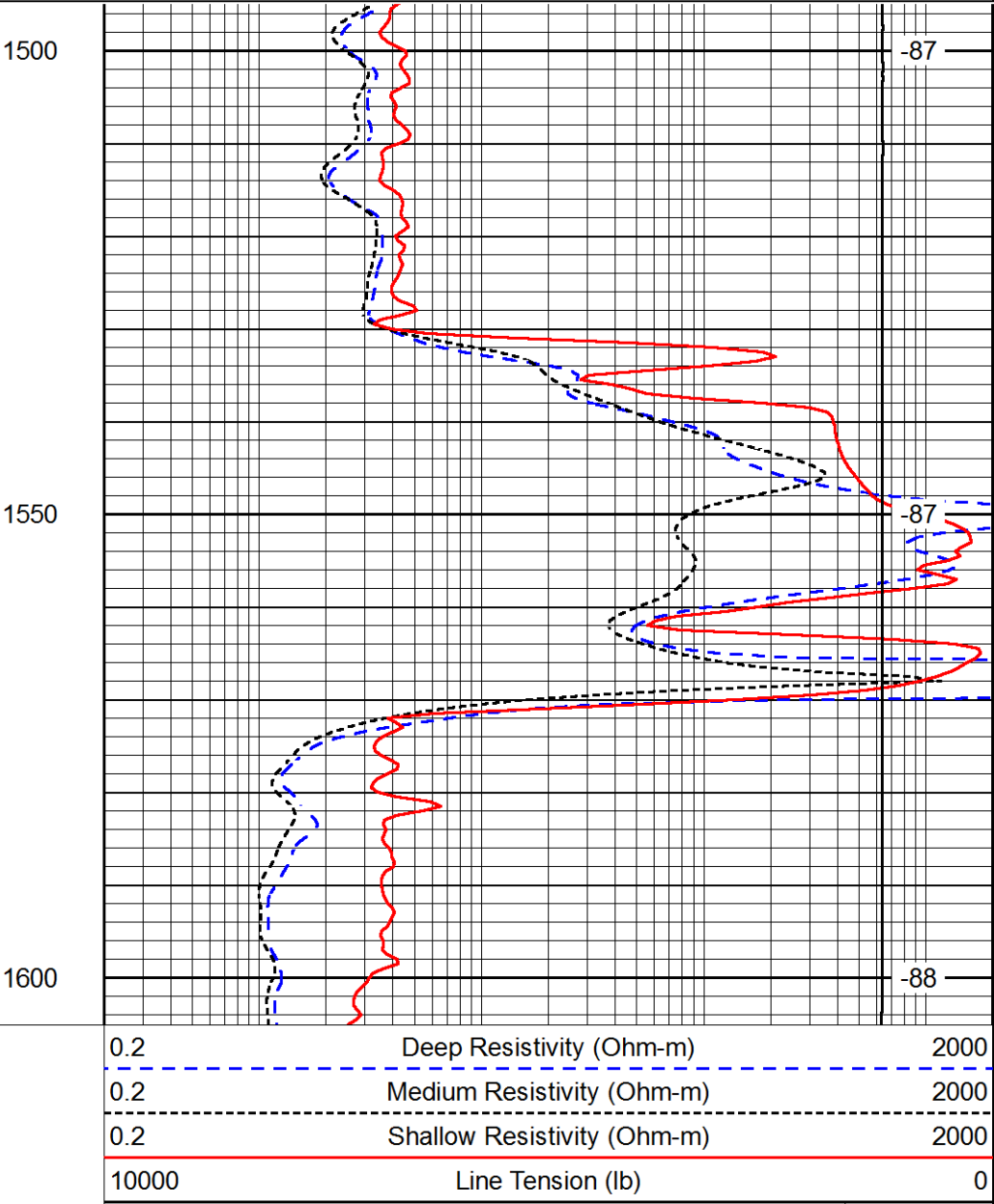
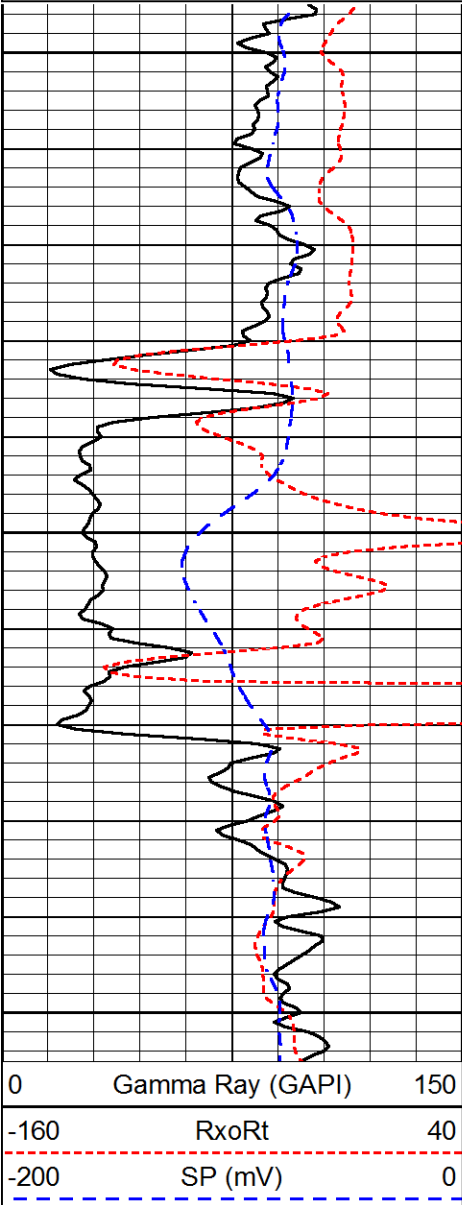
0	Gamma Ray (GAPI)	150
-200	SP (mV)	0

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

Database File	tdi_keith_1hd.db
Dataset Pathname	DIL/tdistck
Presentation Format	dil
Dataset Creation	Mon Jul 27 15:44:55 2015
Charted by	Depth in Feet scaled 1:240

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-160	RxoRt	40
-200	SP (mV)	0

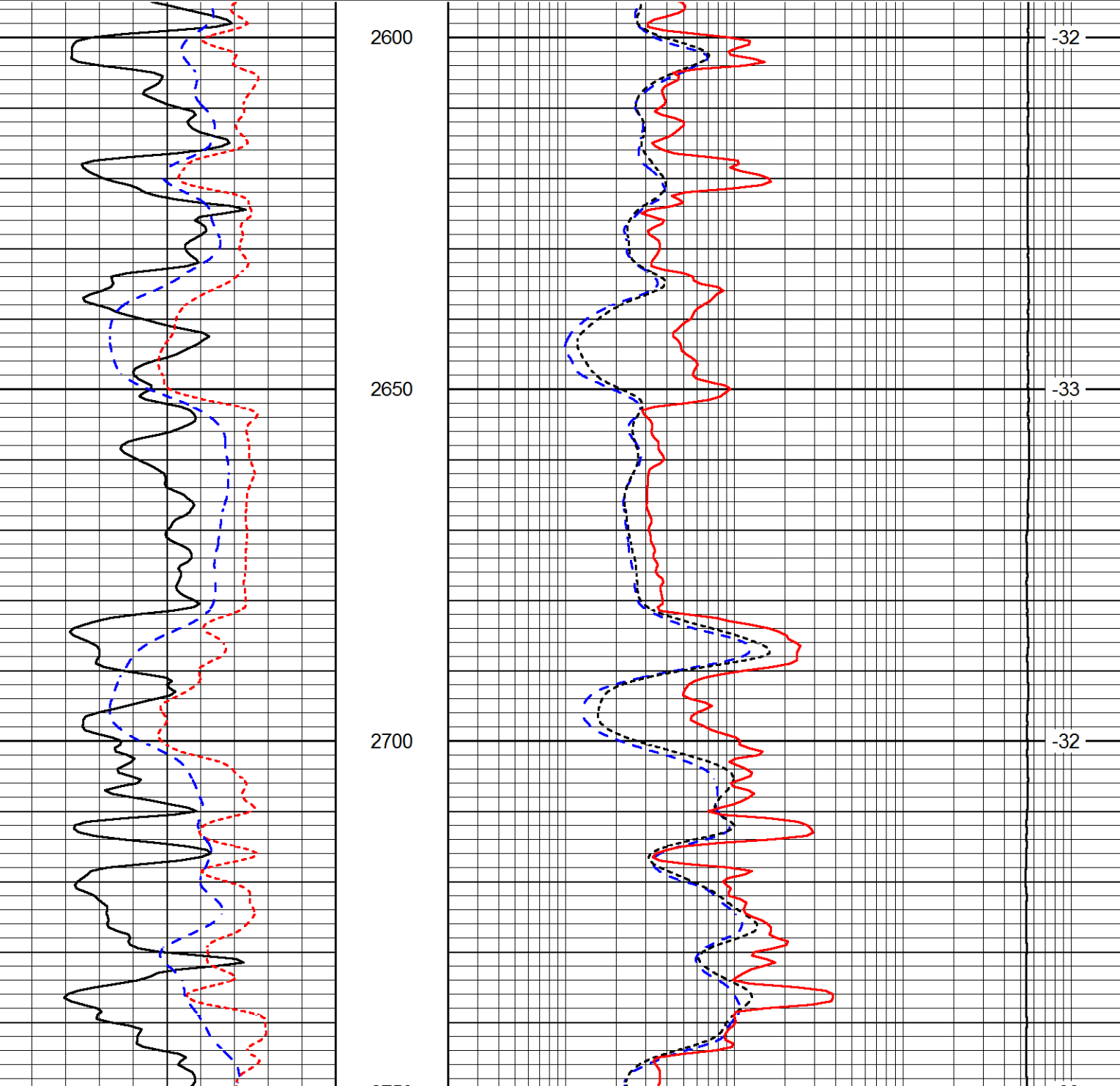
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0
LSPD (ft/min)		

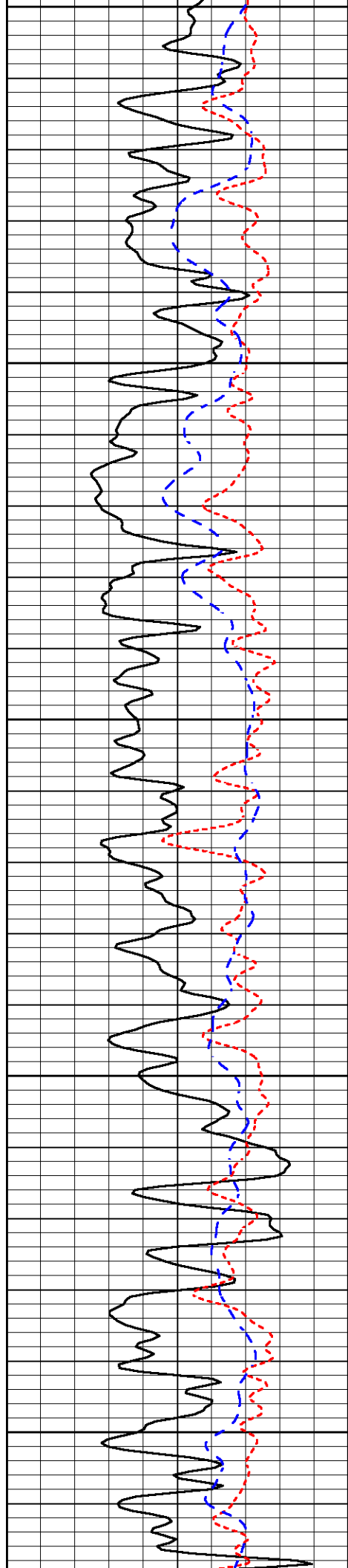


Database File tdi_keith_1hd.db
Dataset Pathname DIL/tdistck
Presentation Format dil
Dataset Creation Mon Jul 27 15:44:55 2015
Charted by Depth in Feet scaled 1:240

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





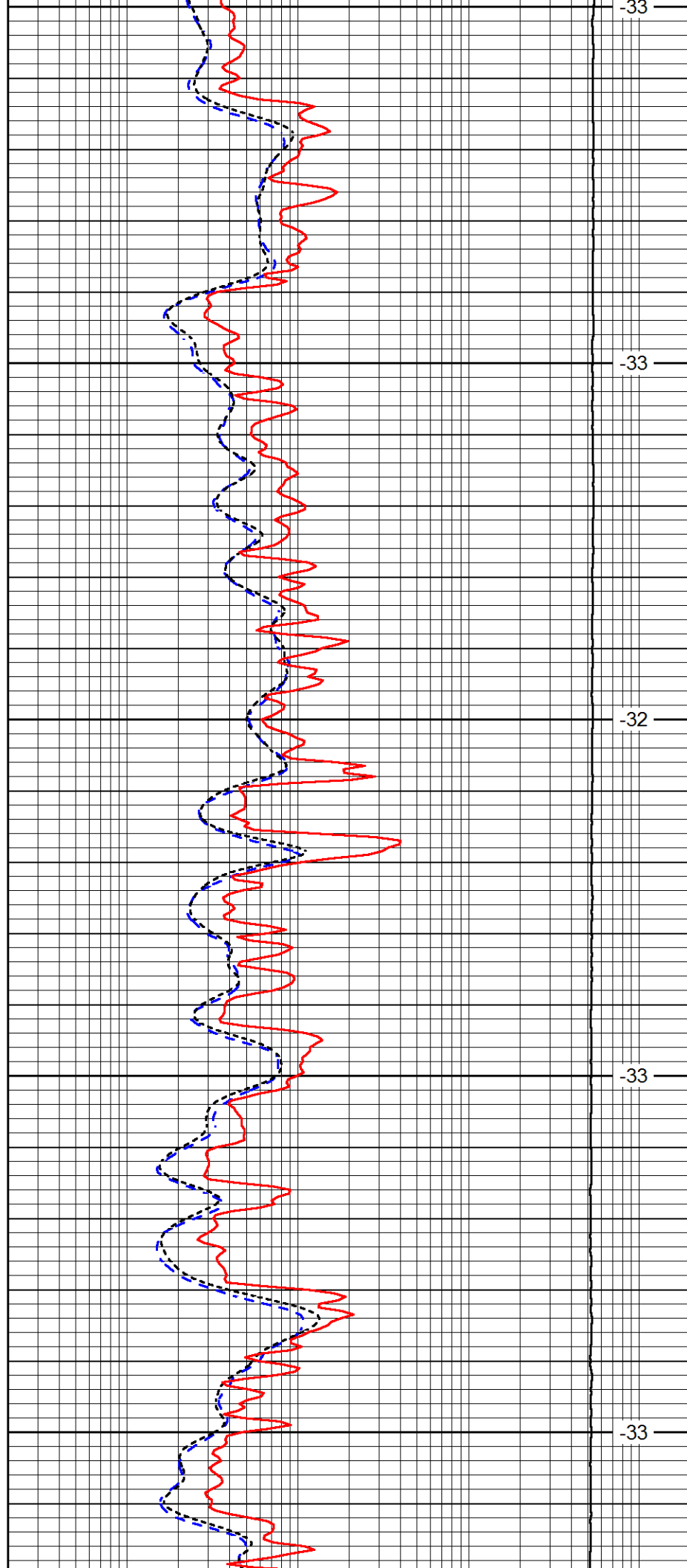
2750

2800

2850

2900

2950



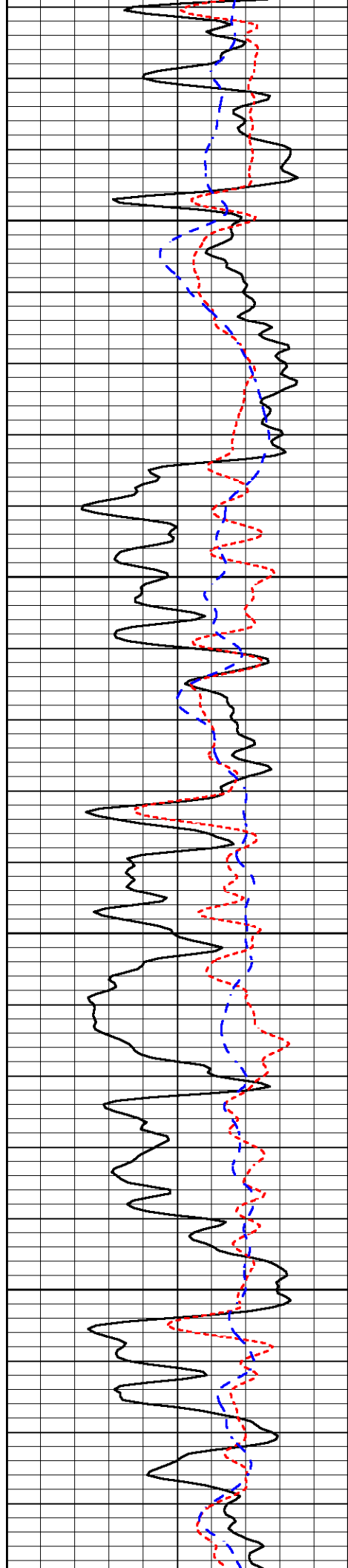
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-33

-32

-33

-33

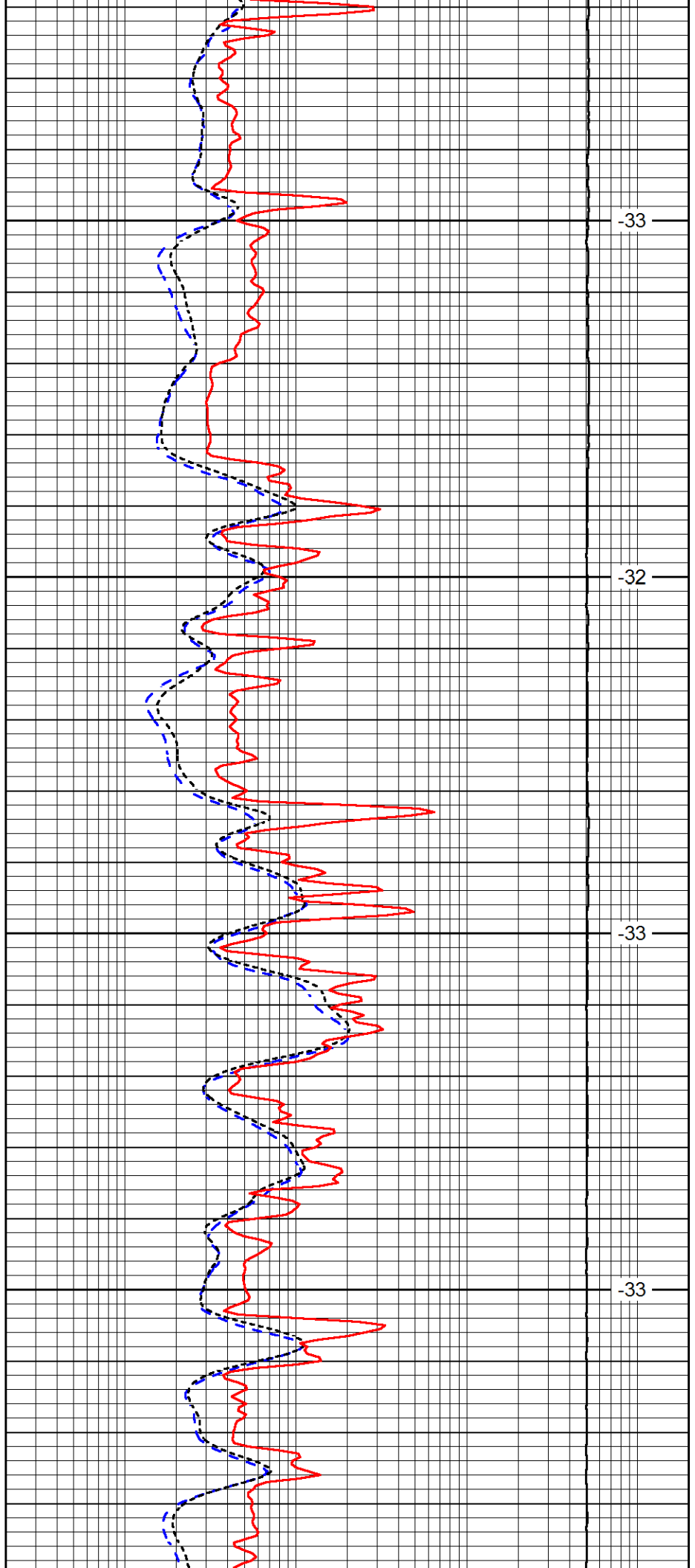


3000

3050

3100

3150

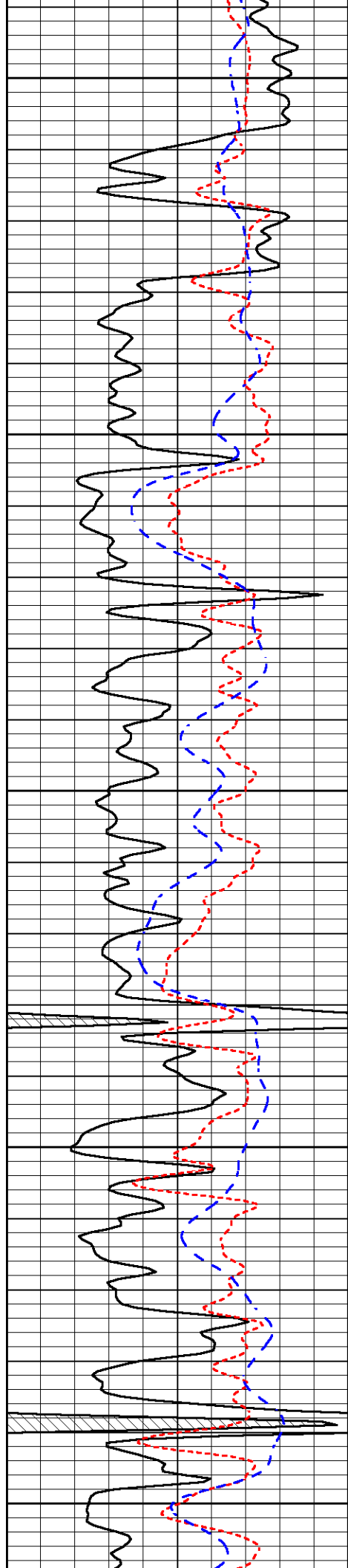


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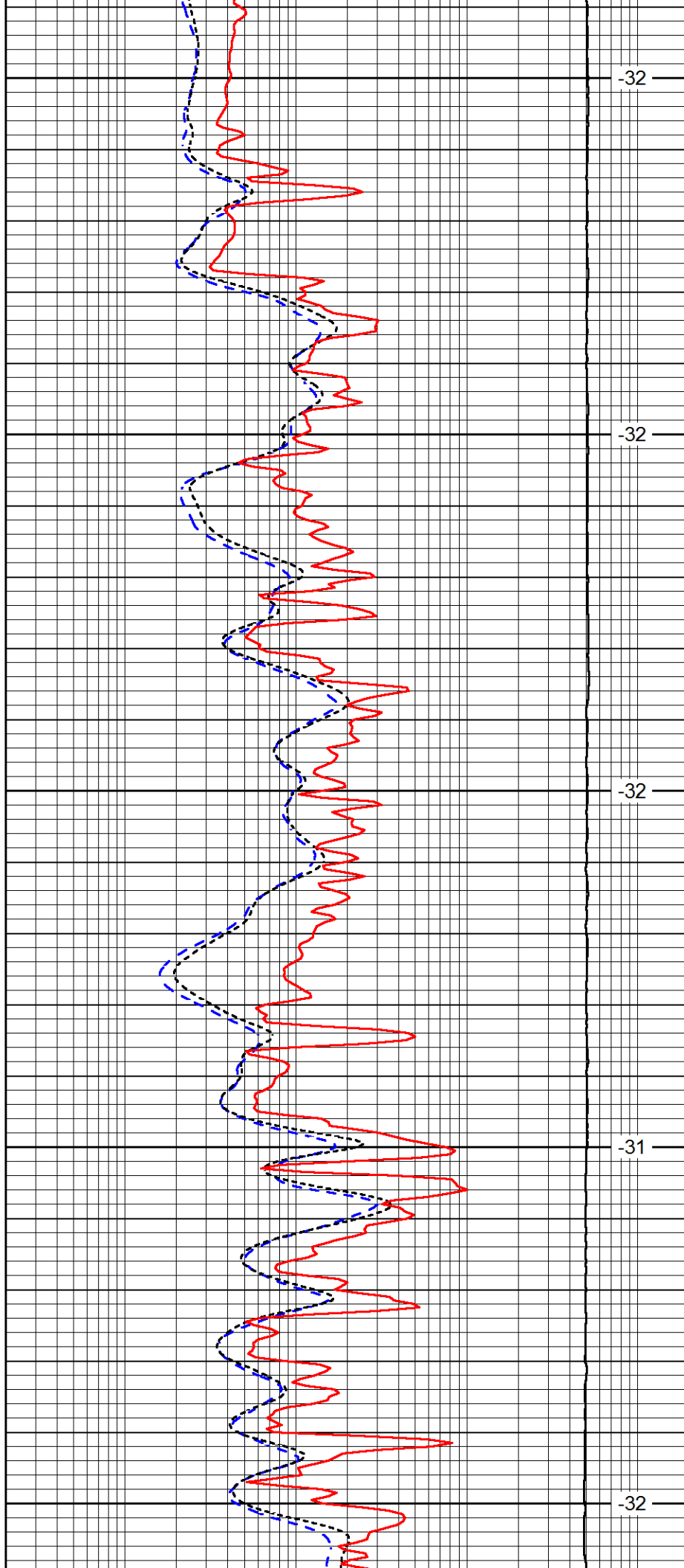
3200

3250

3300

3350

3400



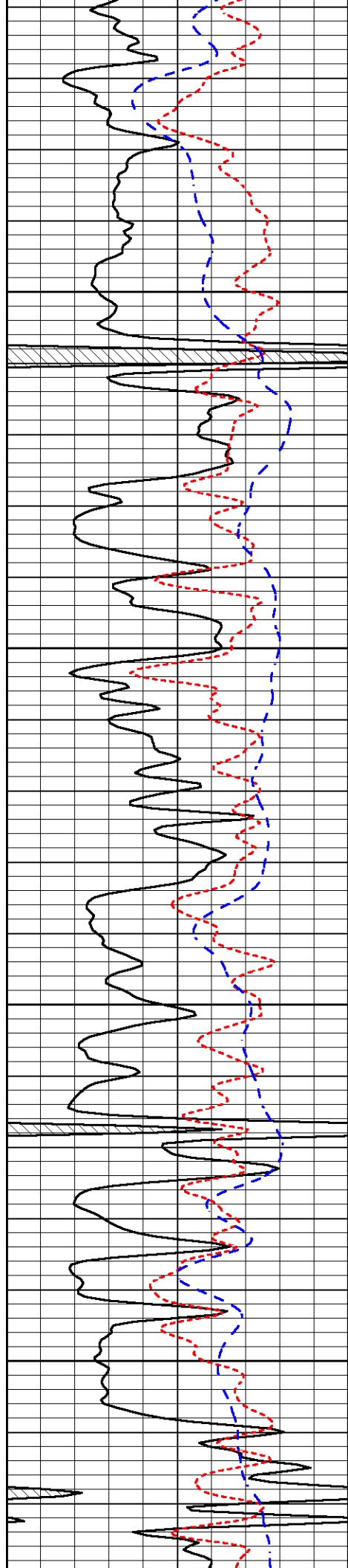
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-32

-32

-31

-32

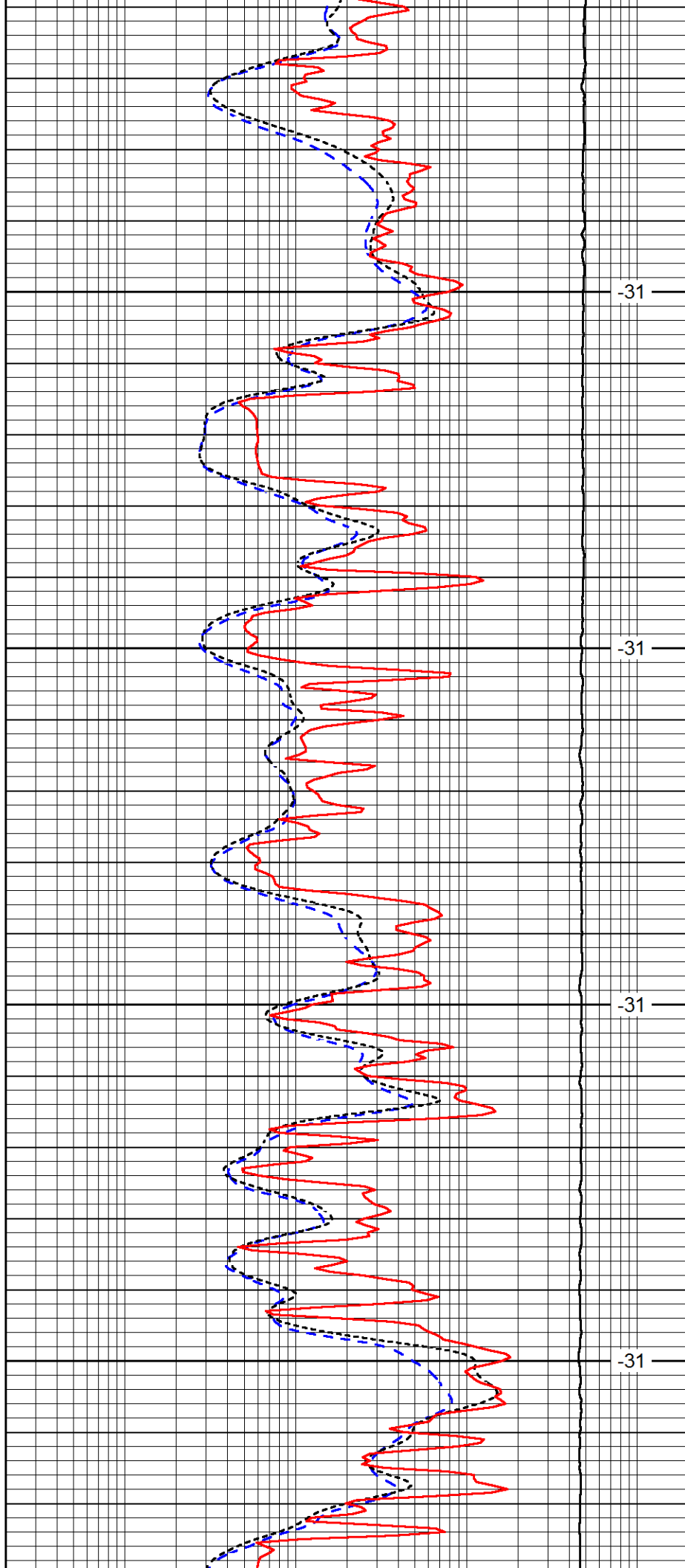


3450

3500

3550

3600

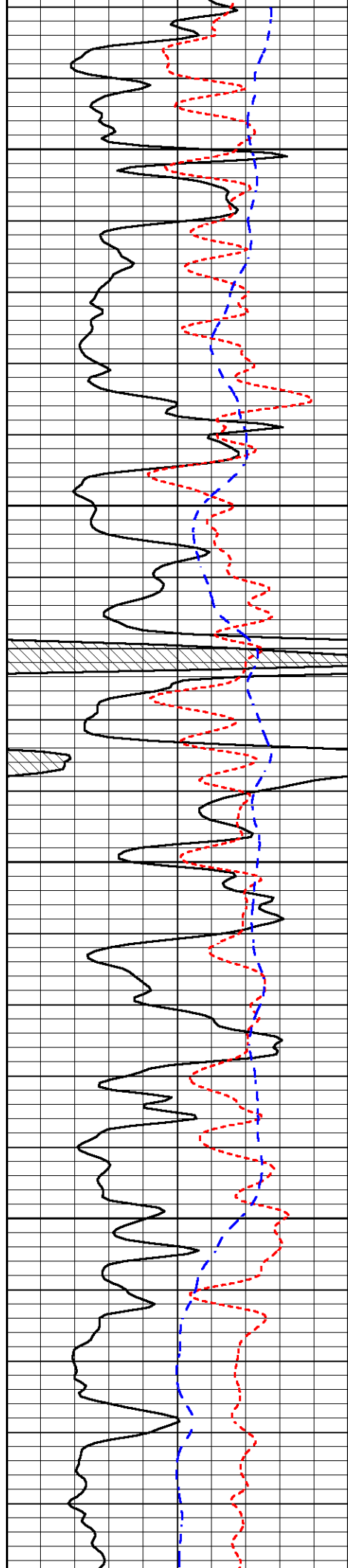


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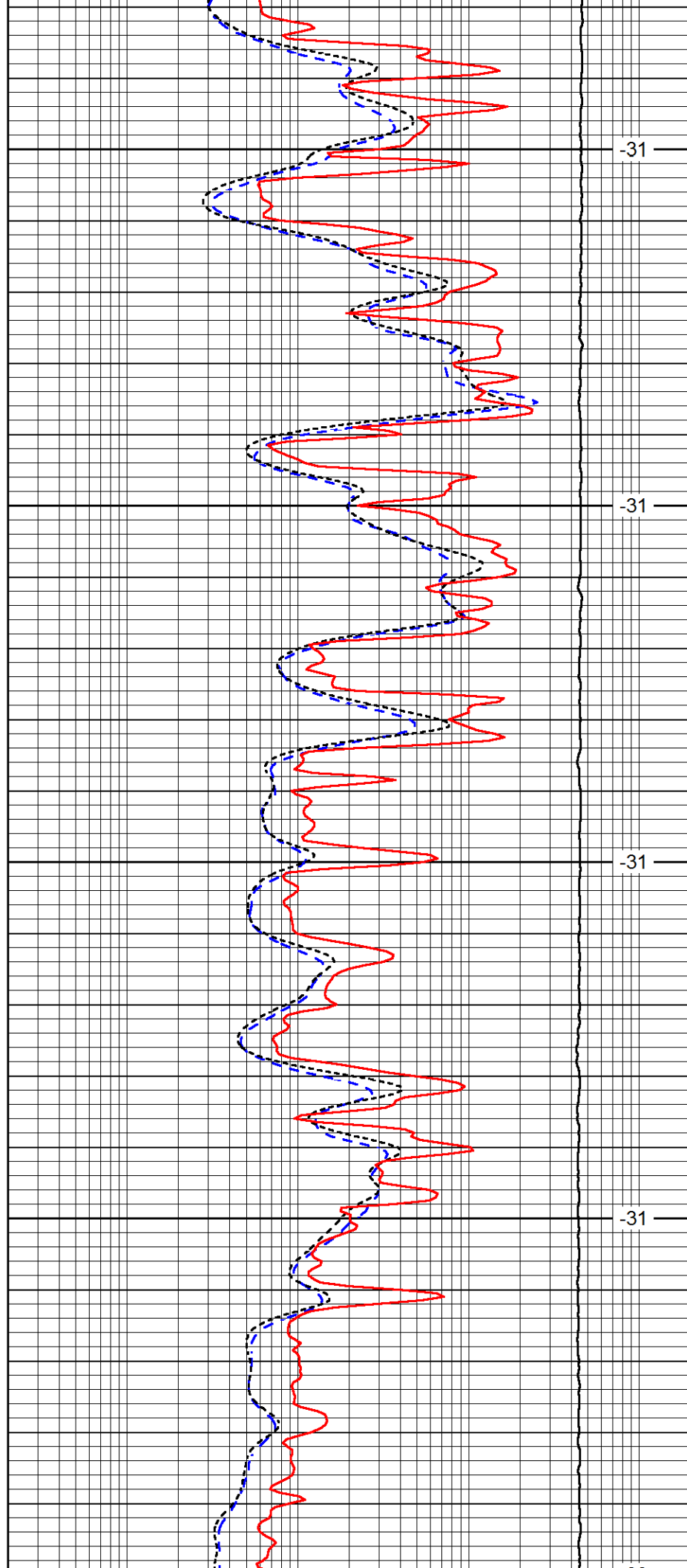


3650

3700

3750

3800

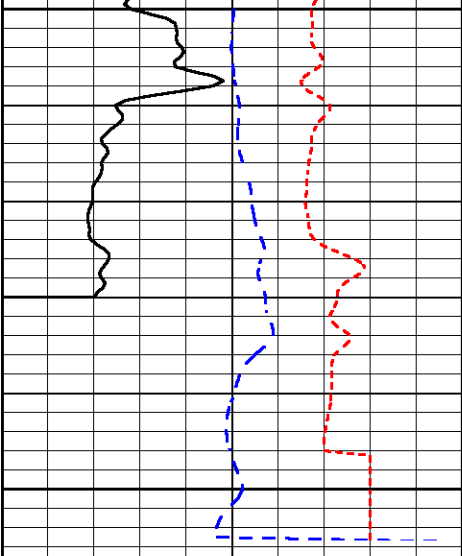


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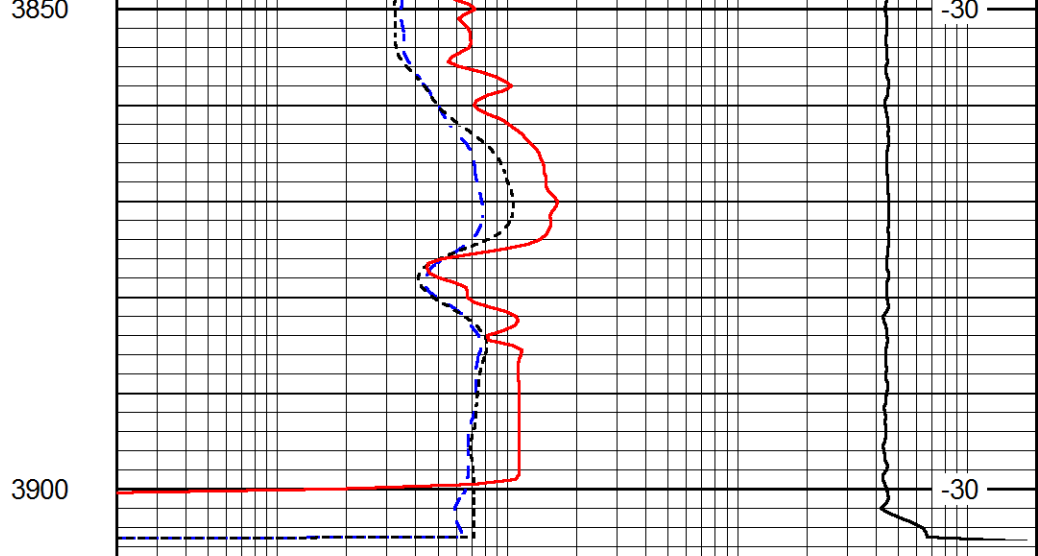
-31

-31

-31



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)