



DUAL INDUCTION LOG

Company CHARLES N. GRIFFIN
Well WOOD NO. 2
Field TROUSDALE NORTHEAST
County EDWARDS **State** KANSAS

Company CHARLES N. GRIFFIN
Well WOOD NO. 2
Field TROUSDALE NORTHEAST
County EDWARDS
State KANSAS

Location: API #: 15-047-21656-00-00
 330' FNL & 2310' FEL
 SEC 27 TWP 26S RGE 16W
 Permanent Datum GROUND LEVEL Elevation 2078'
 Log Measured From KELLY BUSHING
 Drilling Measured From KELLY BUSHING

Other Services
 CNL/CDL

Date	2/1/17
Run Number	ONE
Depth Driller	4650'
Depth Logger	4652'
Bottom Logged Interval	4651'
Top Log Interval	400'
Casing Driller	8.625" @ 406'
Casing Logger	403'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	4,000
Density / Viscosity	9.3 58
pH / Fluid Loss	10.5 8.8
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.95 @ 58
Rmt @ Meas. Temp	.71 @ 58
Rmc @ Meas. Temp	1.28 @ 58
Source of Rmf / Rmc	CHARTS
Rm @ BHT	.45 @ 123
Operating Rig Time	2 HOURS
Max Rec. Temp. F	123 DEGF
Equipment Number	108
Location	COLBY
Recorded By	J. HENRICKSON
Witnessed By	BRUCE 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.
 TROUSDALE KANSAS
 1/2 SOUTH, 2 EAST TO 290, 3 1/2 SOUTH, 1/2 WEST INTO

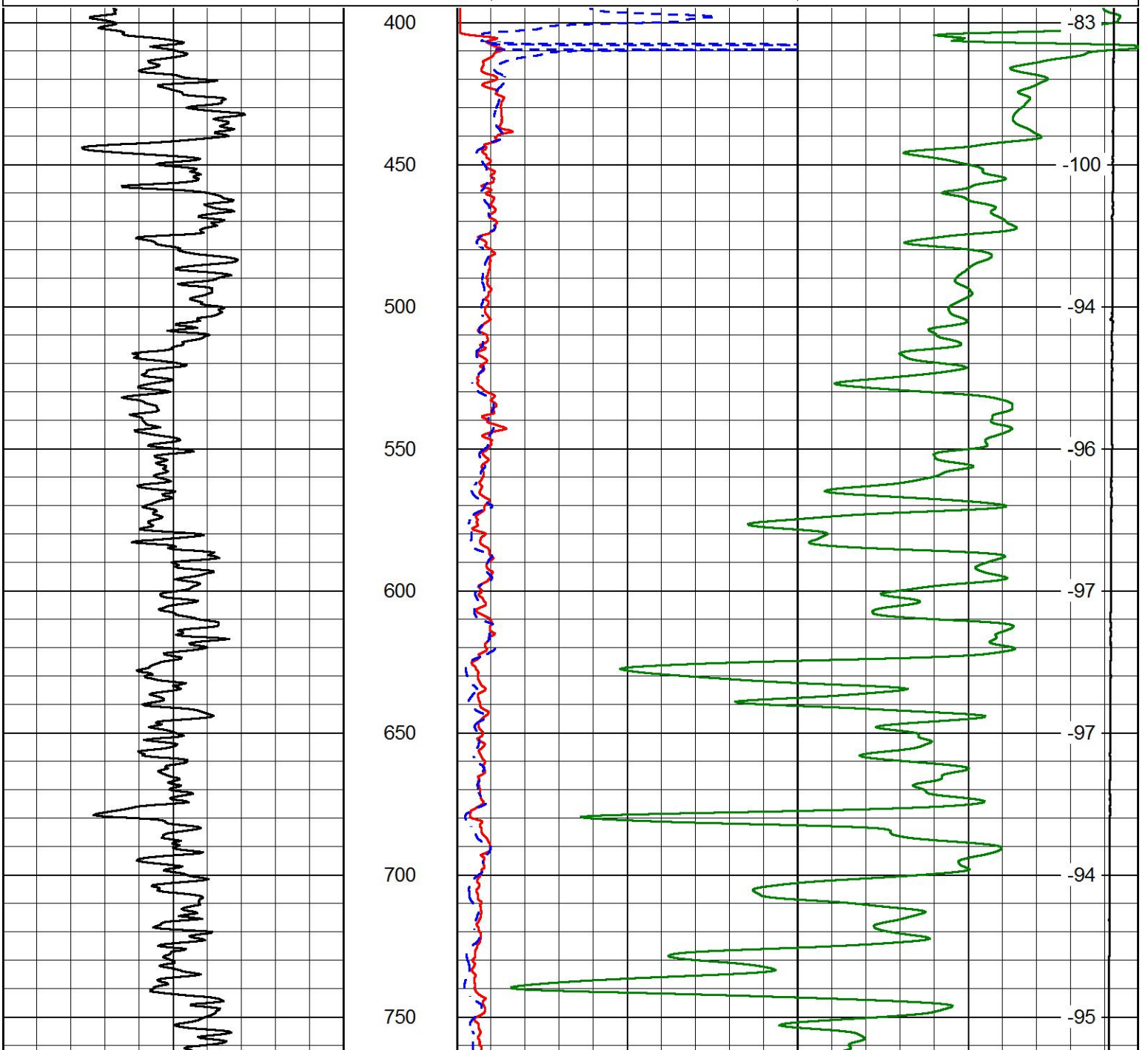
Log Measured From: KELLY BUSHING 5 Ft. Above Permanent Datum

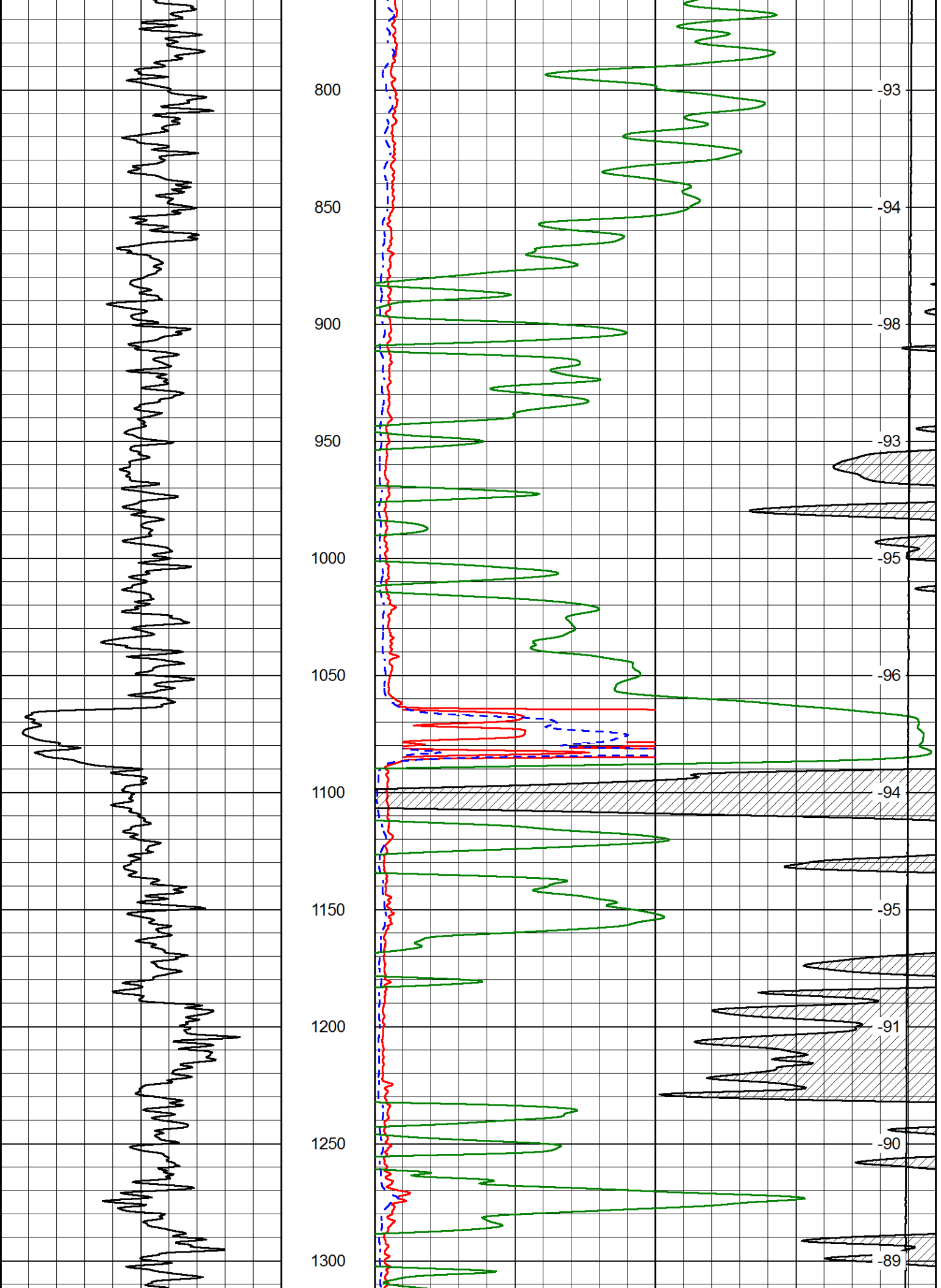
THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneerenergy.com 785-625-3858

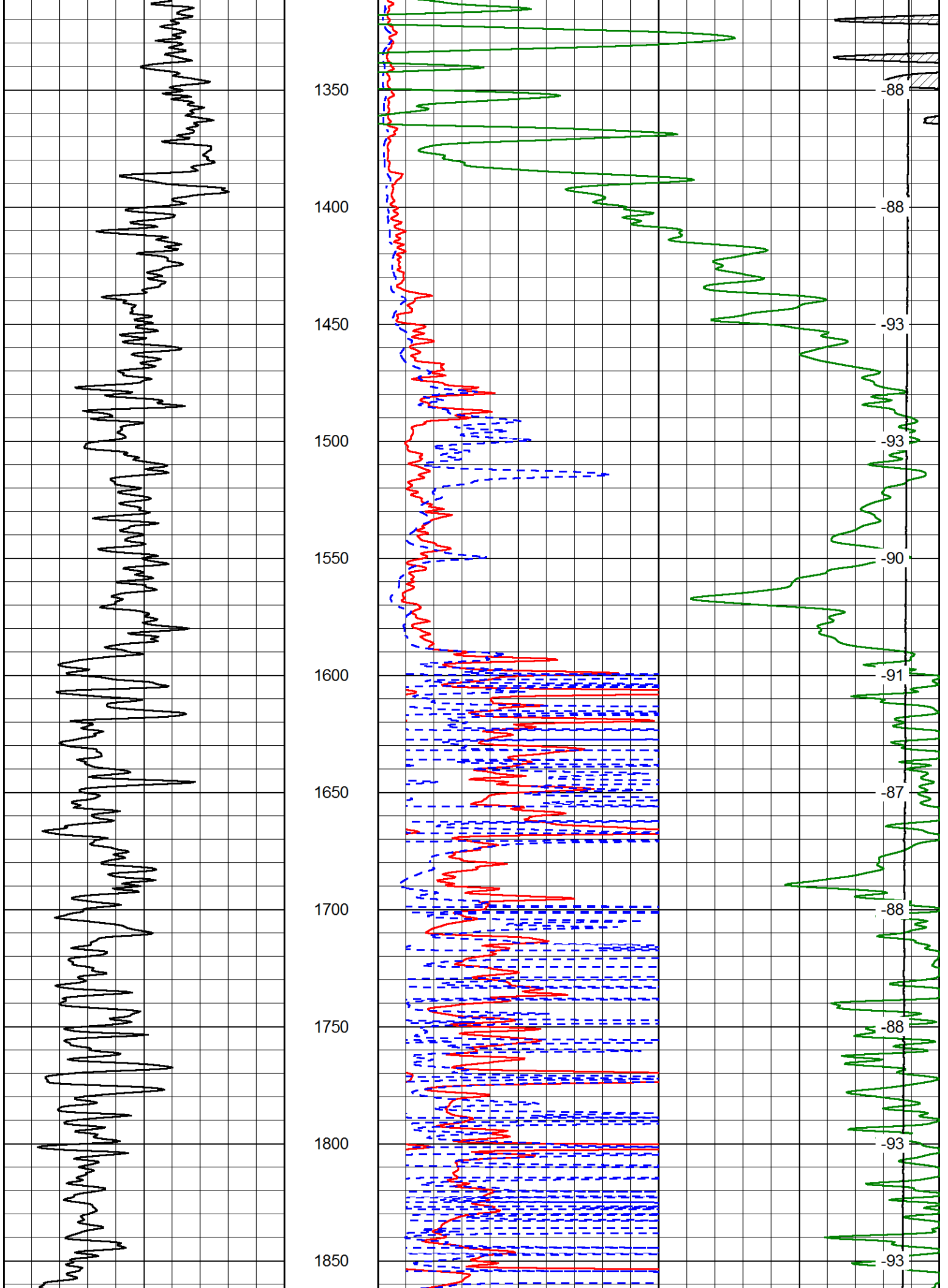
Your Pioneer Energy Services Crew Engineer: J. HENRICKSON Operator: Operator: Operator: C. PFEIFER	This Log Record Was Witnessed By Primary Witness: BRUCE REED Secondary Witness: Secondary Witness: Secondary Witness:
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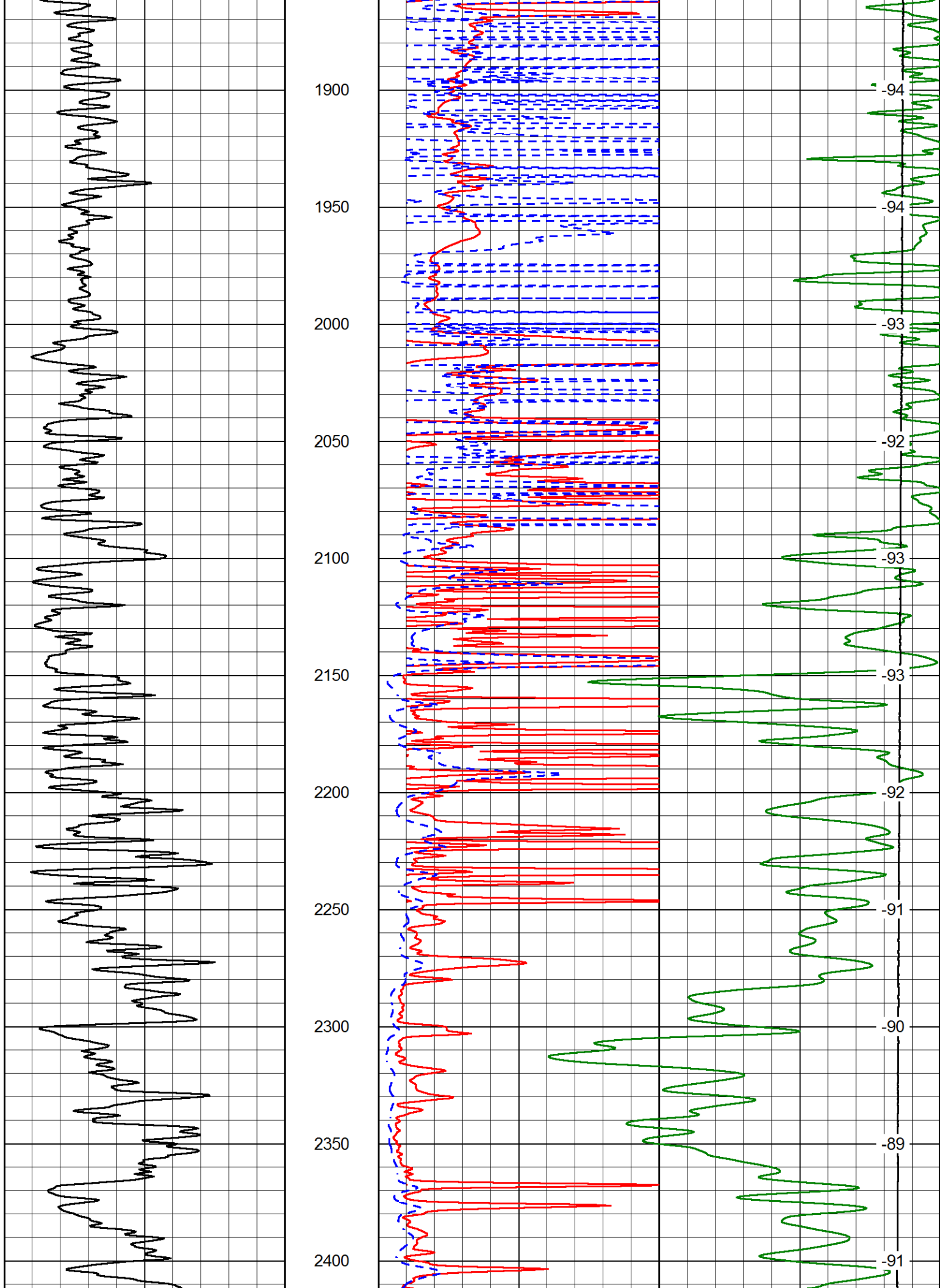
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 Presentation Format dil2in
 Dataset Creation Wed Feb 01 17:09:08 2017
 Charted by Depth in Feet scaled 1:600

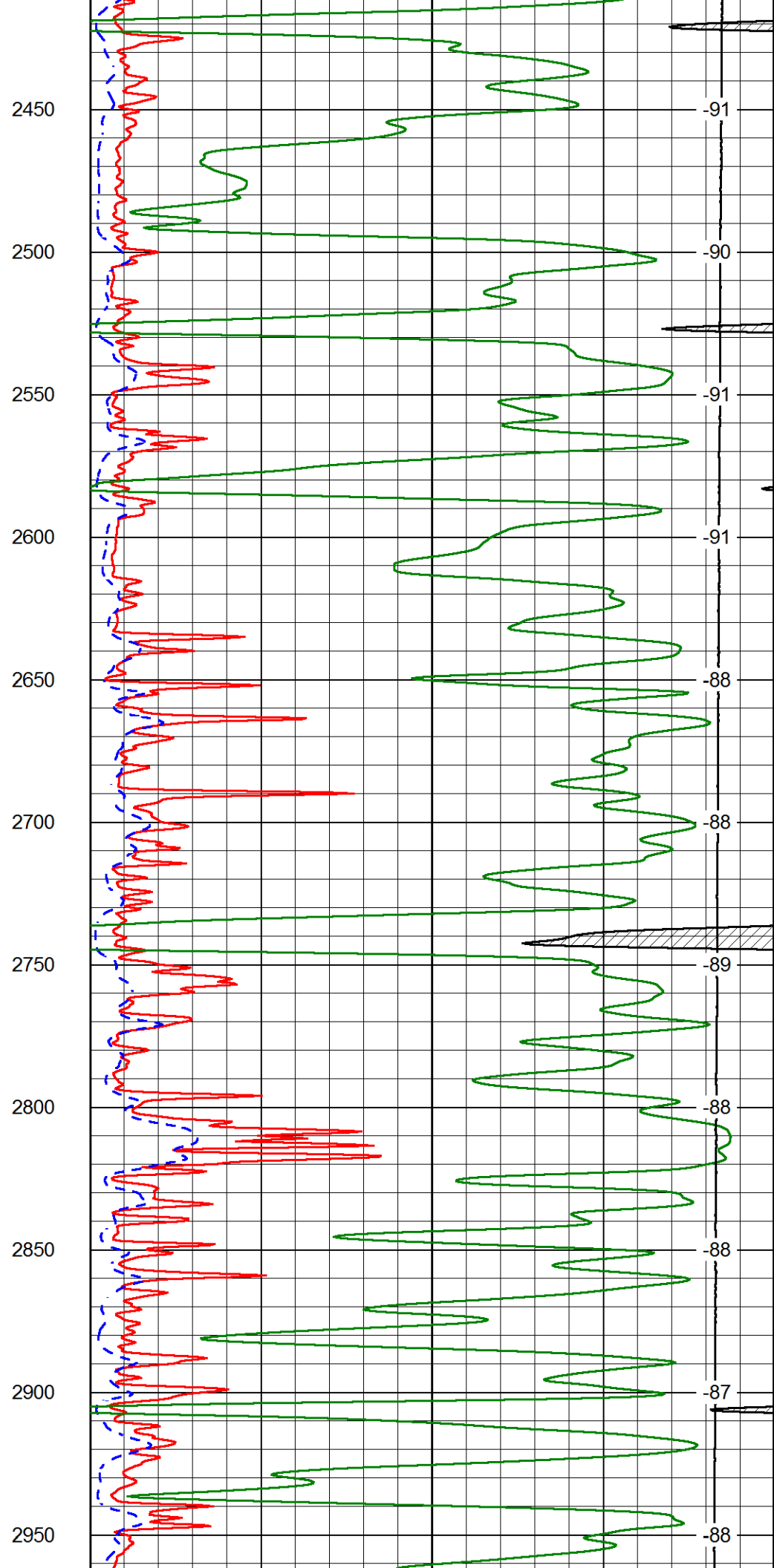
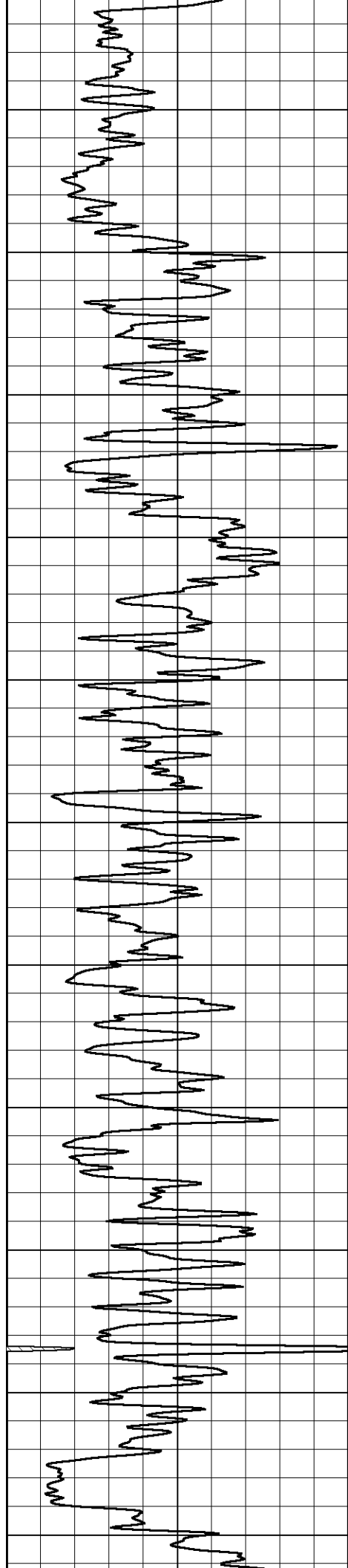
0	Gamma Ray (GAPI)	150	1000	Conductivity	0
			15000	Line Tension (lb)	0
0	Shallow Resistivity (Ohm-m)	50			LSPD
0	Deep Resistivity (Ohm-m)	50			(ft/min)
	Shallow Resistivity				
50	(Ohm-m)	500			
50	Deep Resistivity (Ohm-m)	500			

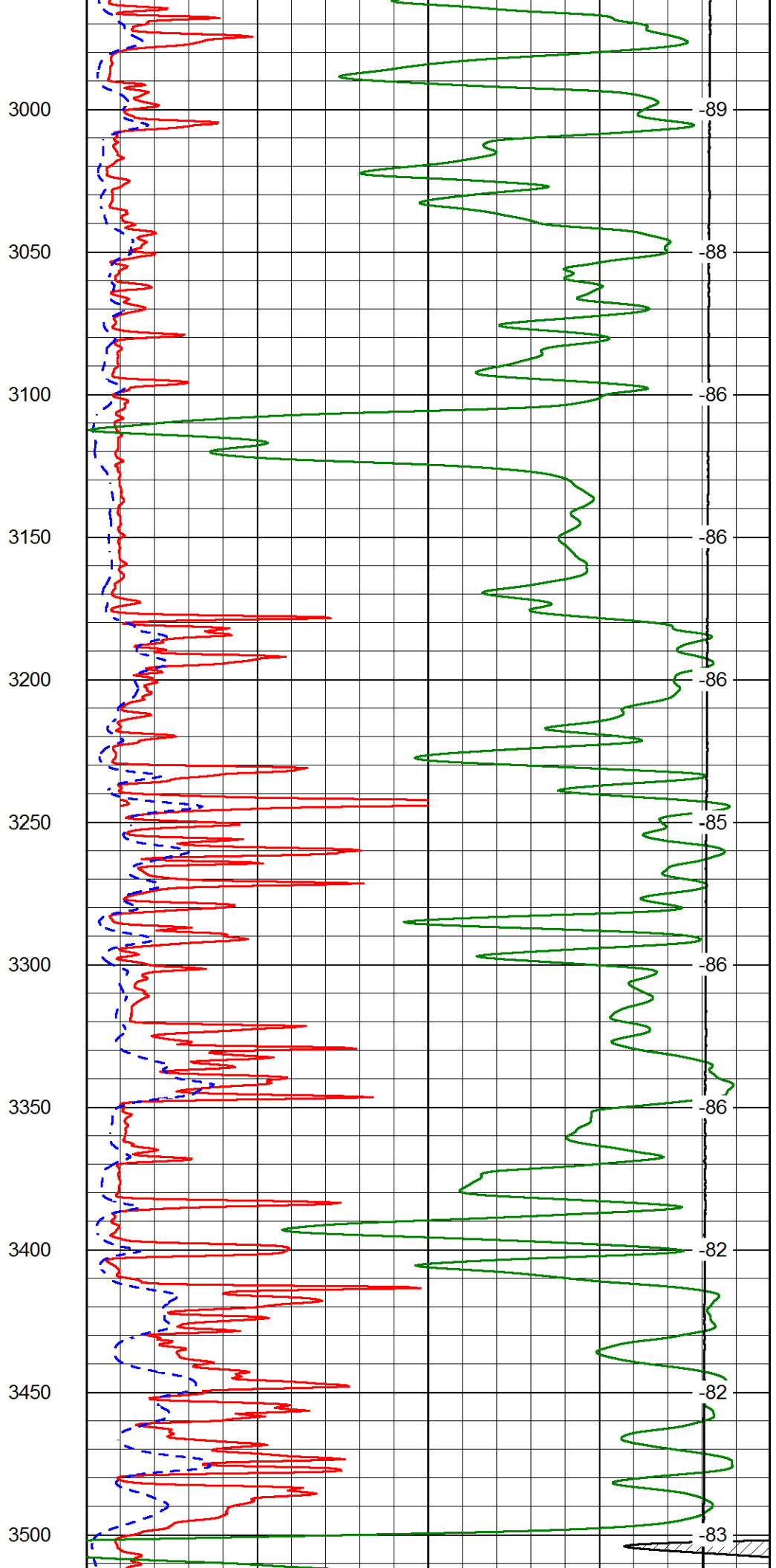
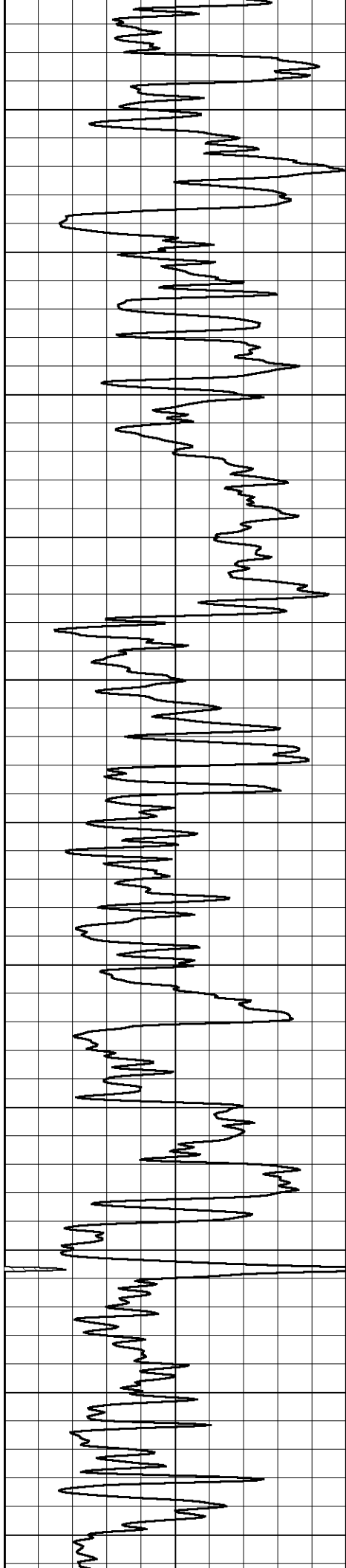


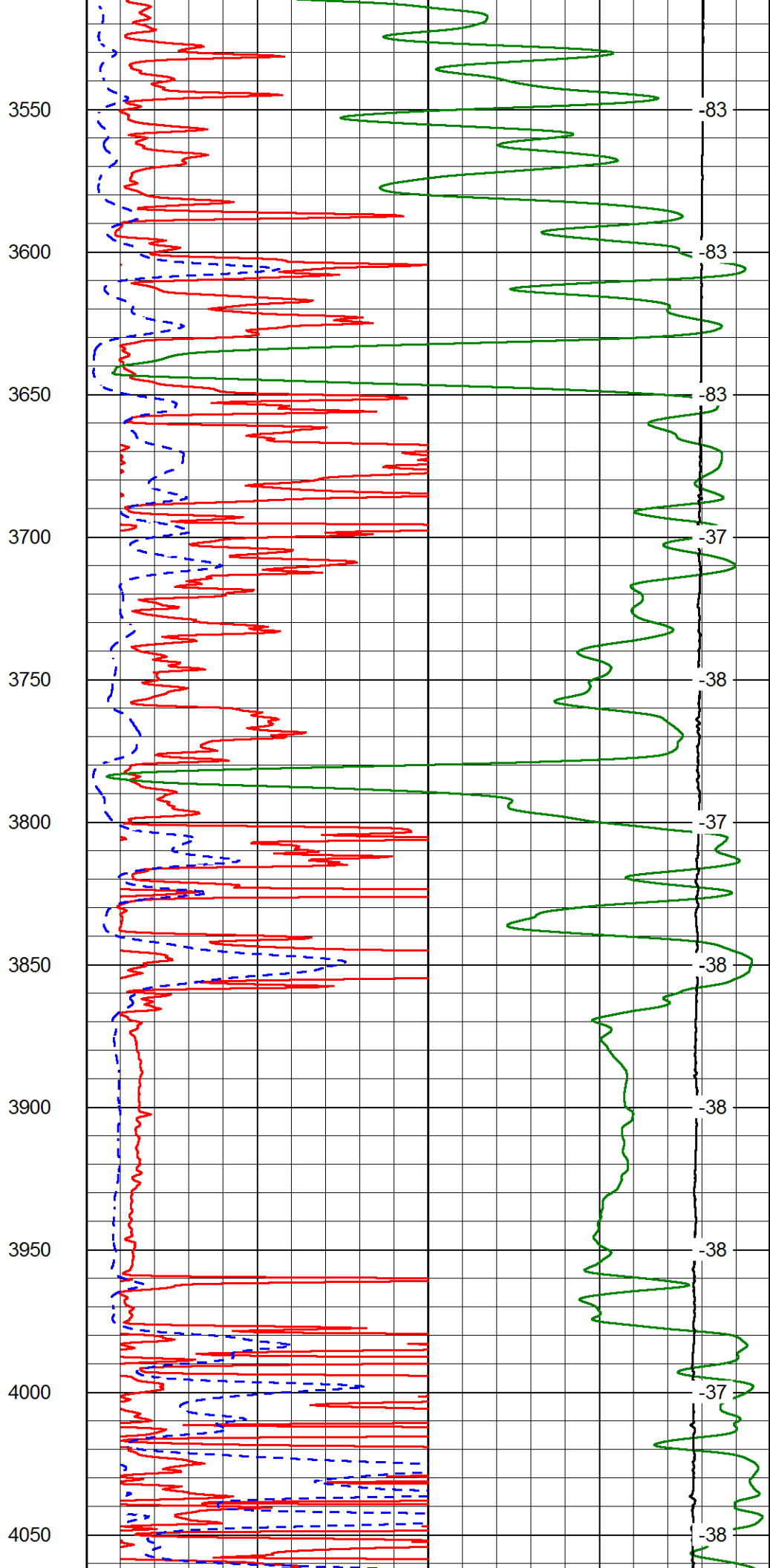
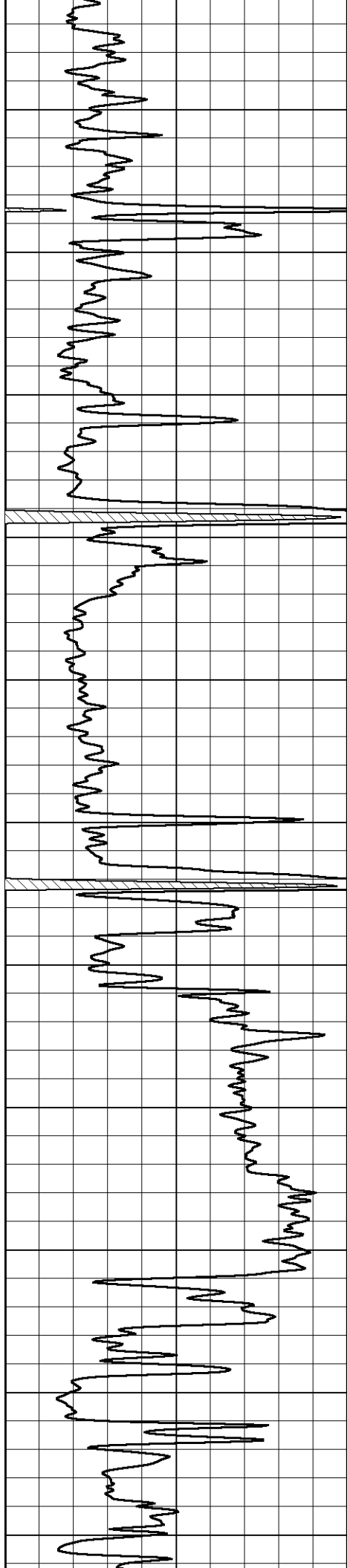


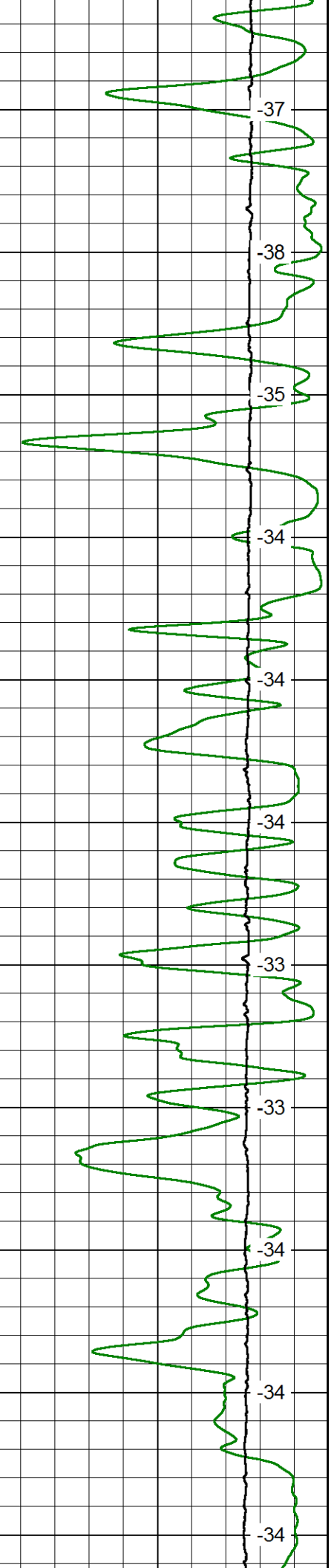
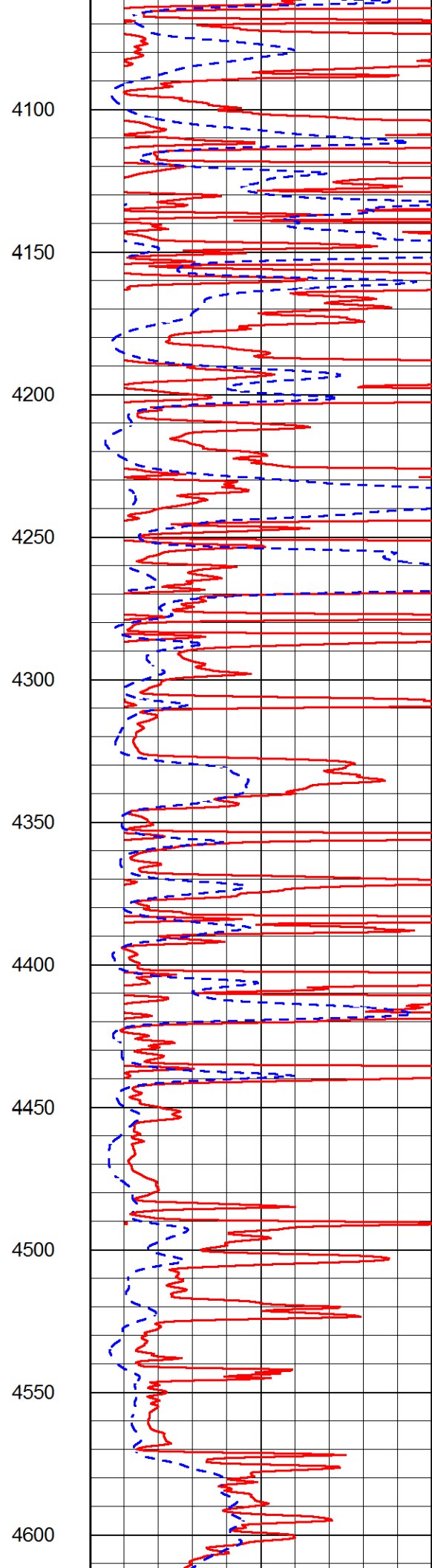
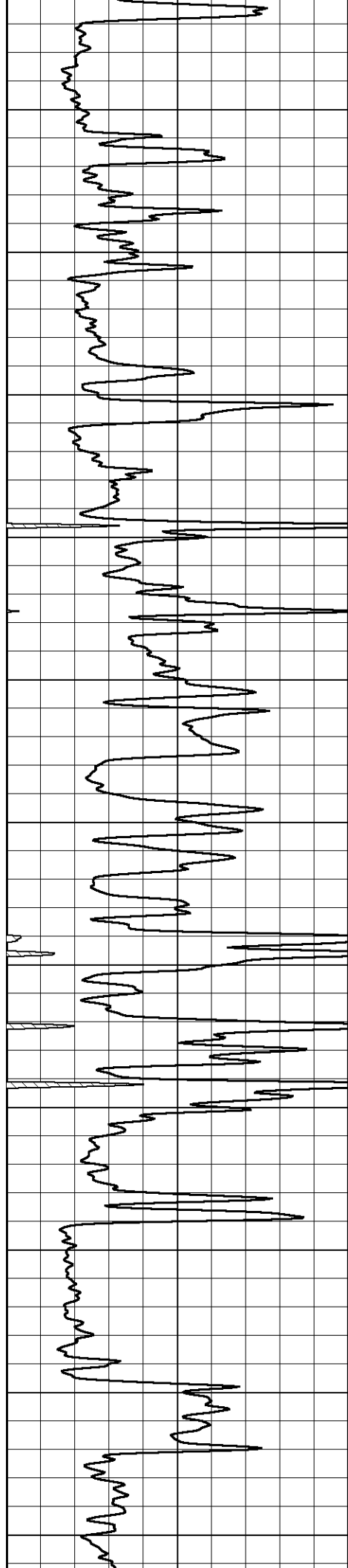


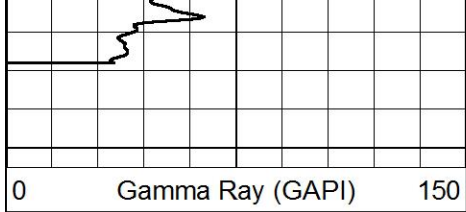




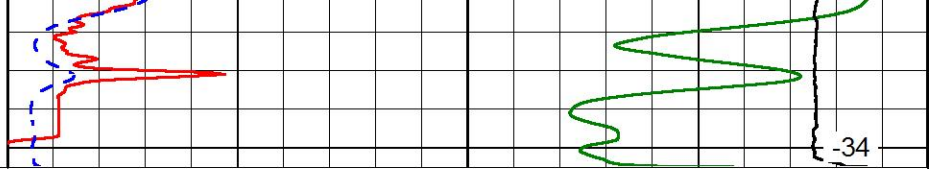








4650



-34

0 Gamma Ray (GAPI) 150

1000 Conductivity 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 griffin_wood_2hd.db
 Dataset Pathname DIL/griffin_wood_no2
 Presentation Format dil
 Dataset Creation Wed Feb 01 17:09:08 2017
 Charted by Depth in Feet scaled 1:240

0 Gamma Ray (GAPI) 150

-200 SP (mV) 0

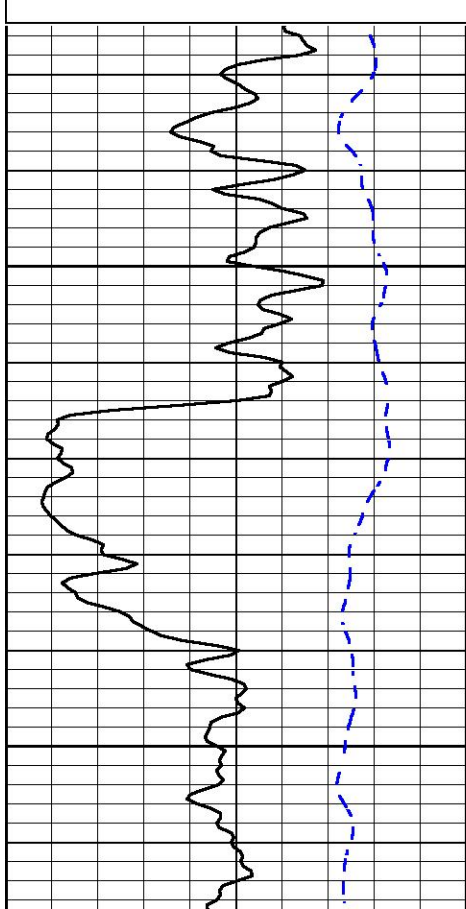
0.2 Deep Resistivity (Ohm-m) 2000

0.2 Medium Resistivity (Ohm-m) 2000

0.2 Shallow Resistivity (Ohm-m) 2000

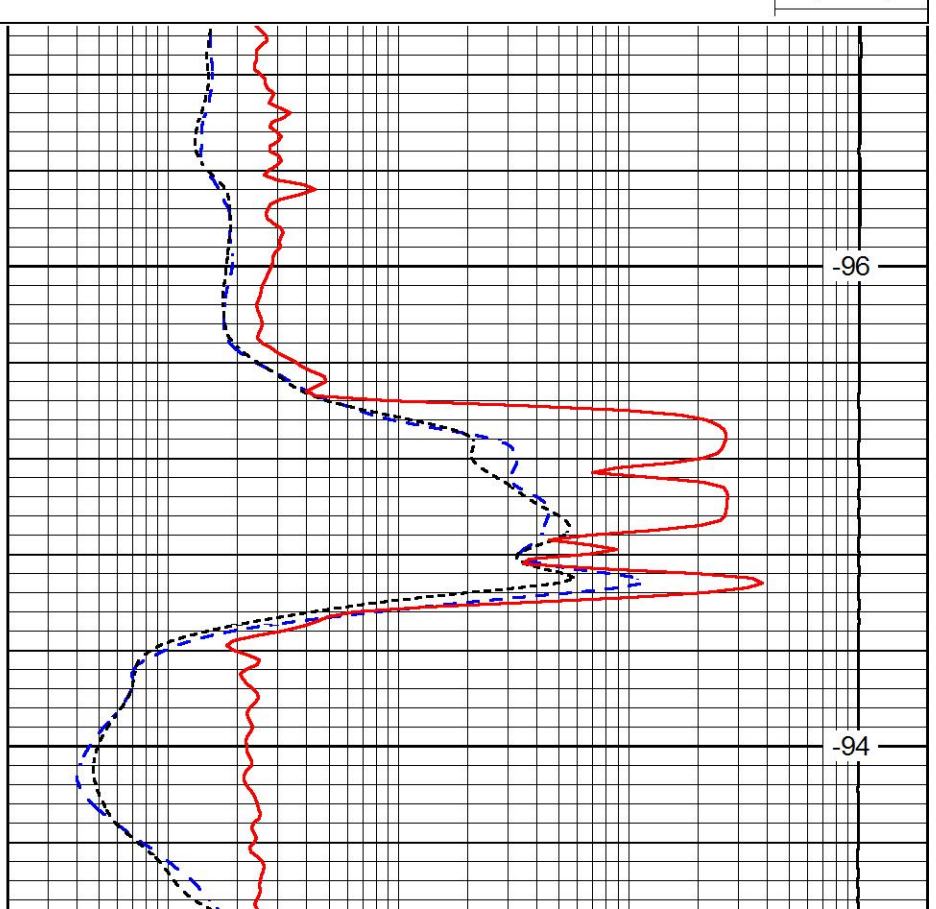
10000 Line Tension (lb) 0

LSPD (ft/min)



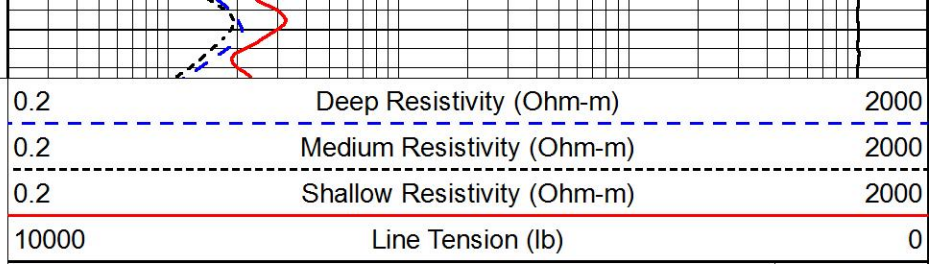
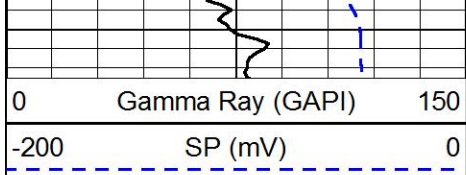
1050

-96



1100

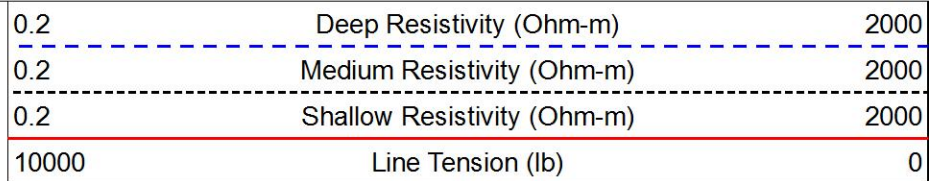
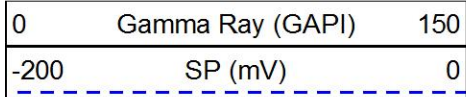
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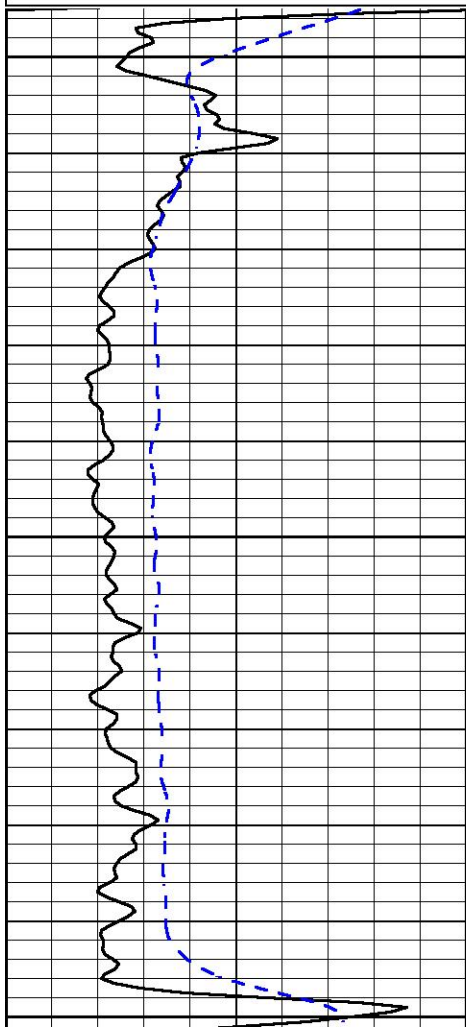
LSPD
(ft/min)



Database File griffin_wood_2hd.db
 Dataset Pathname DIL/griffin_wood_no2
 Presentation Format dil
 Dataset Creation Wed Feb 01 17:09:08 2017
 Charted by Depth in Feet scaled 1:240



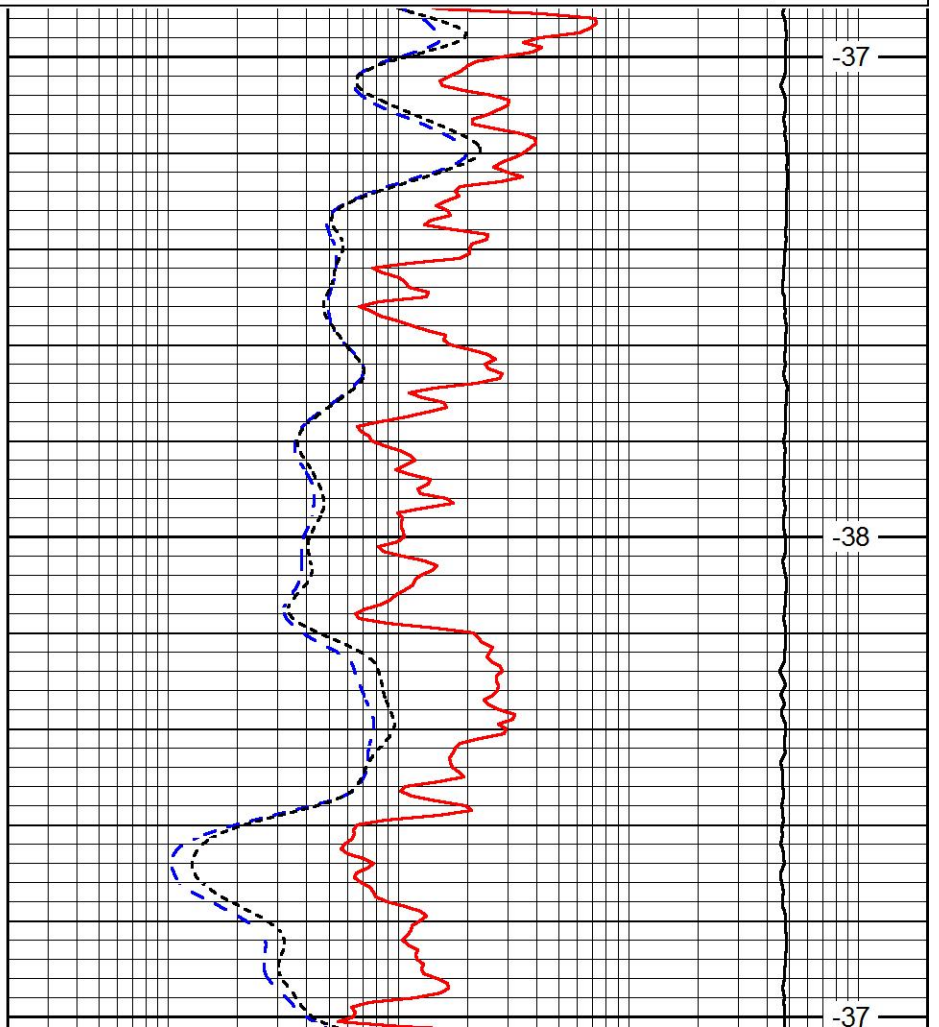
LSPD
(ft/min)



3700

3750

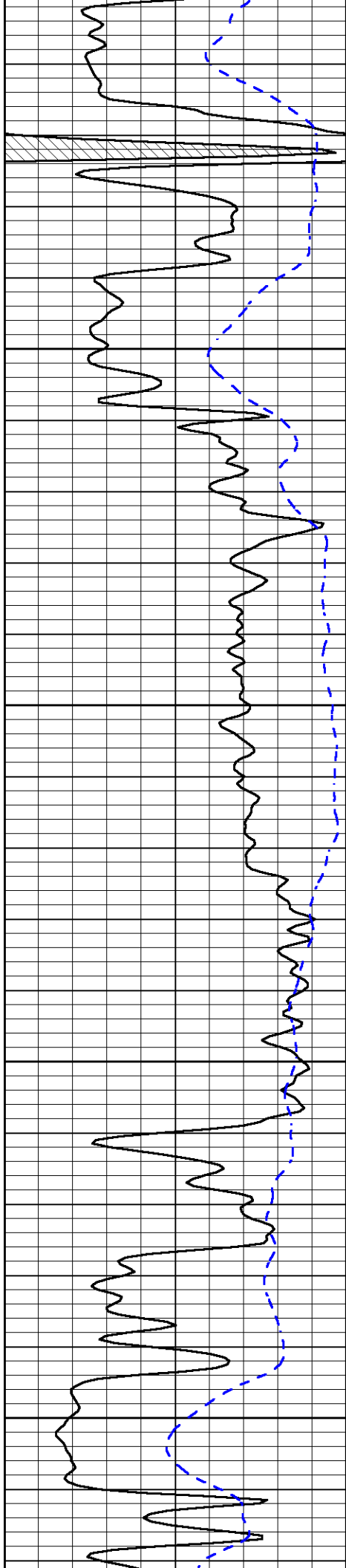
3800



-37

-38

-37

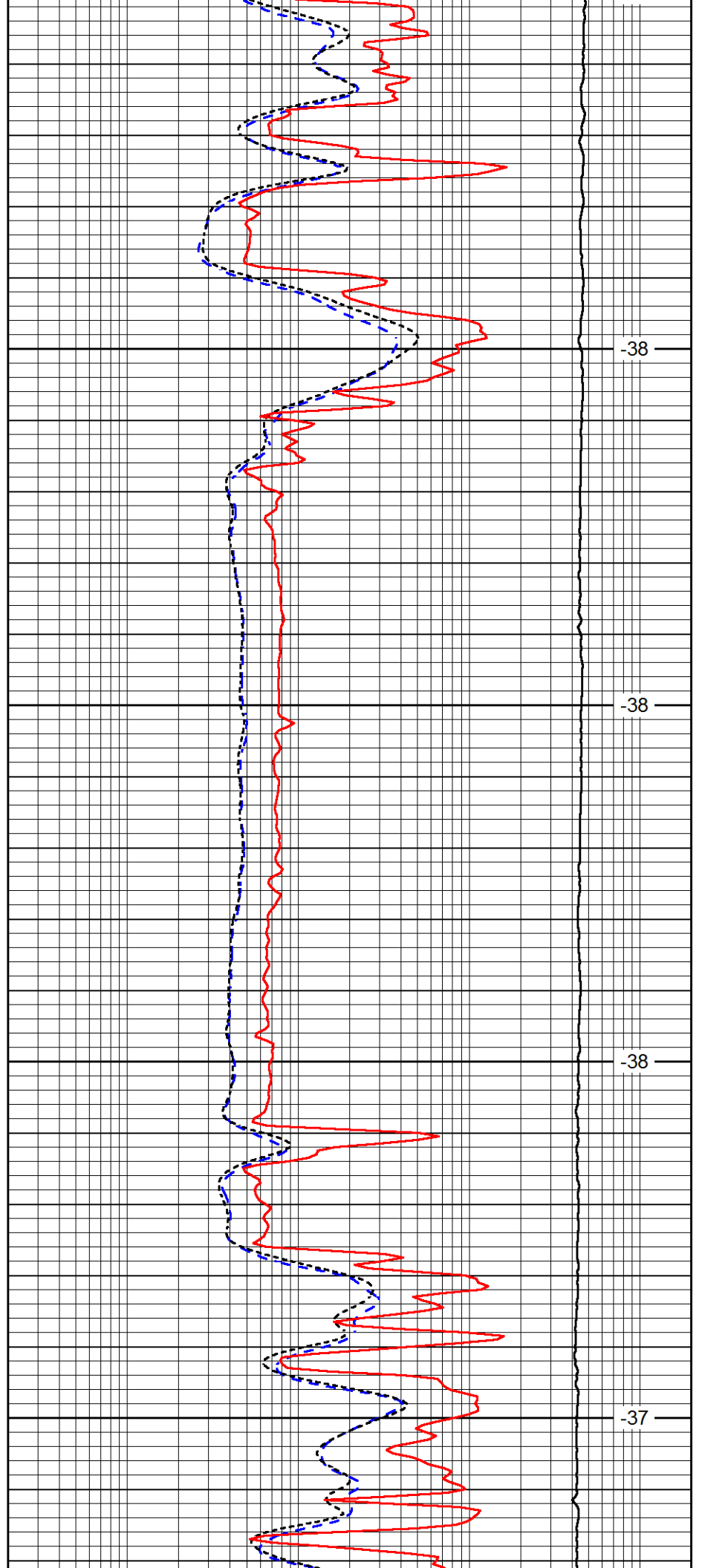


3850

3900

3950

4000

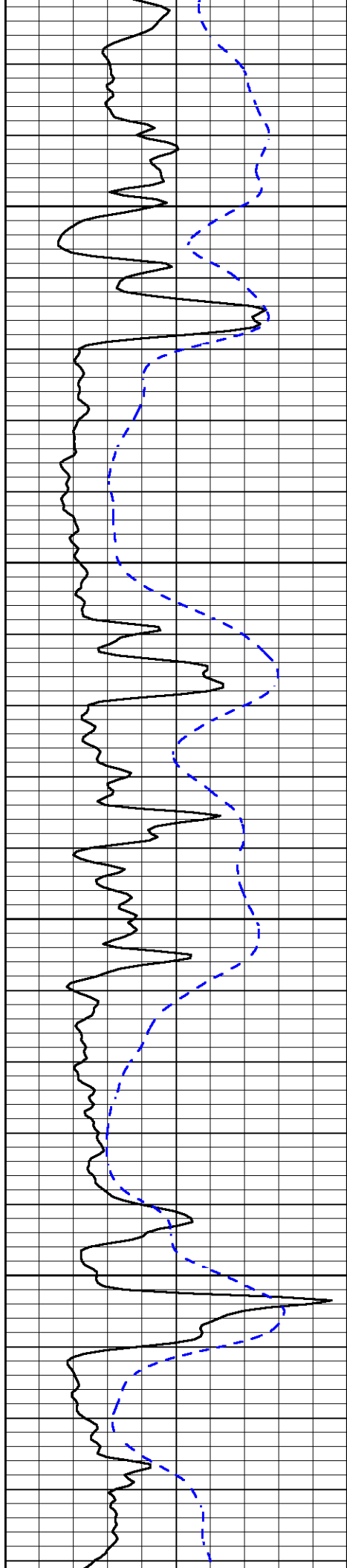


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-38

-38

-37

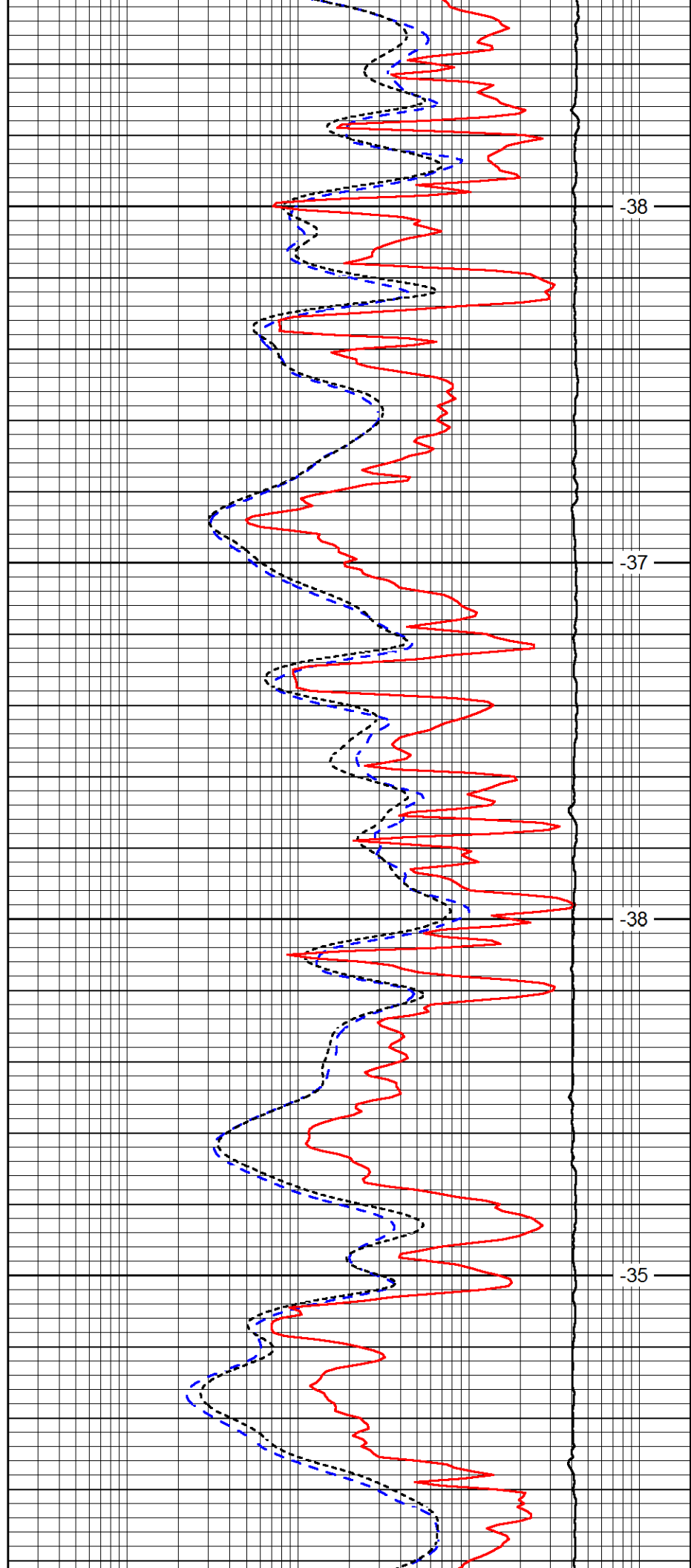


4050

4100

4150

4200

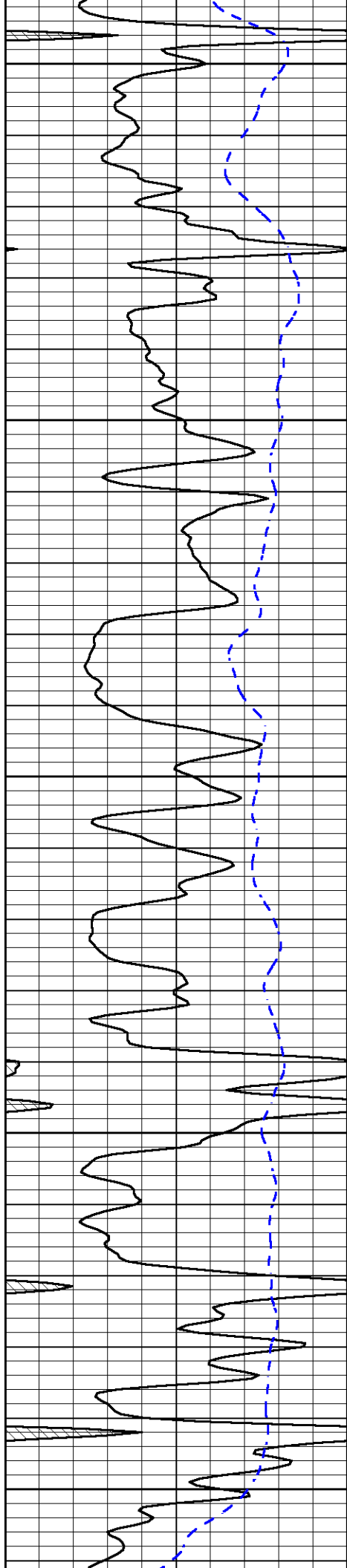


-38

-37

-38

-35



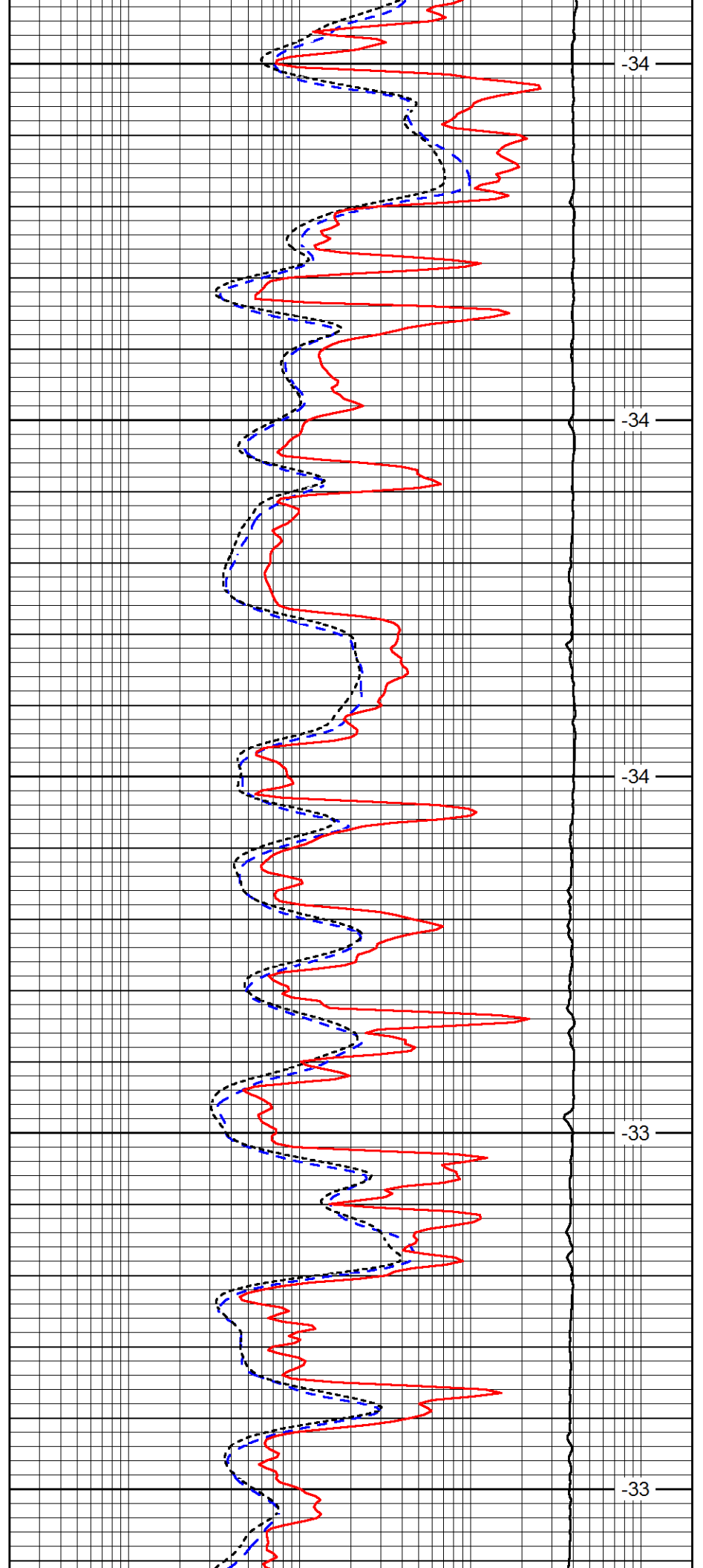
4250

4300

4350

4400

4450



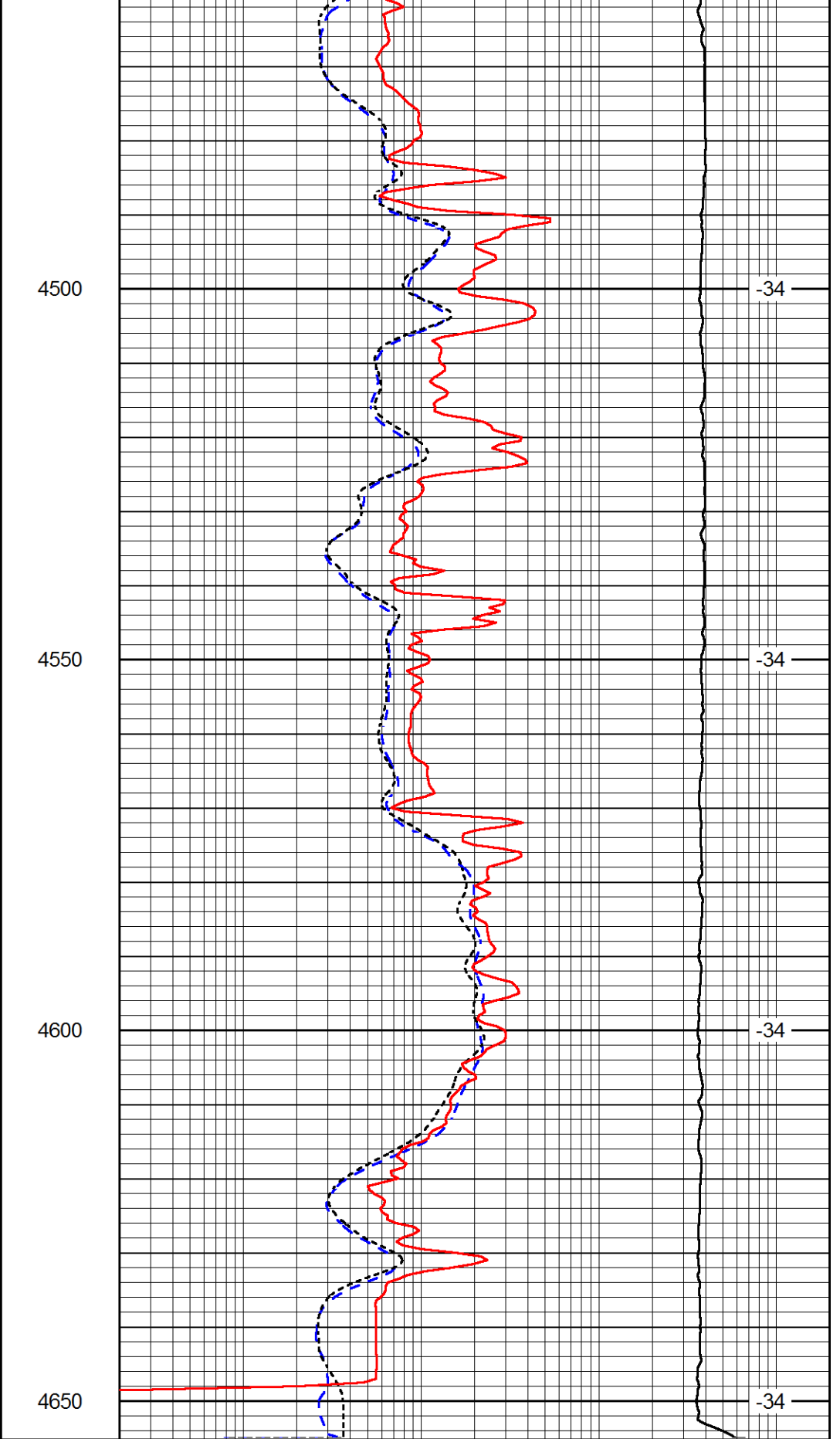
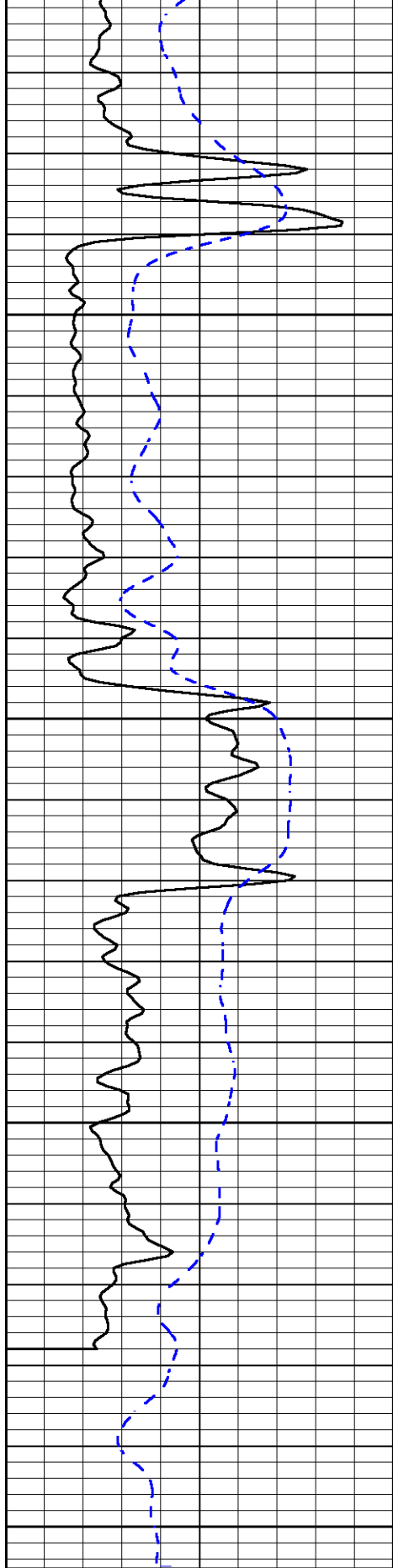
-34

-34

-34

-33

-33



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

LSPD
(ft/min)

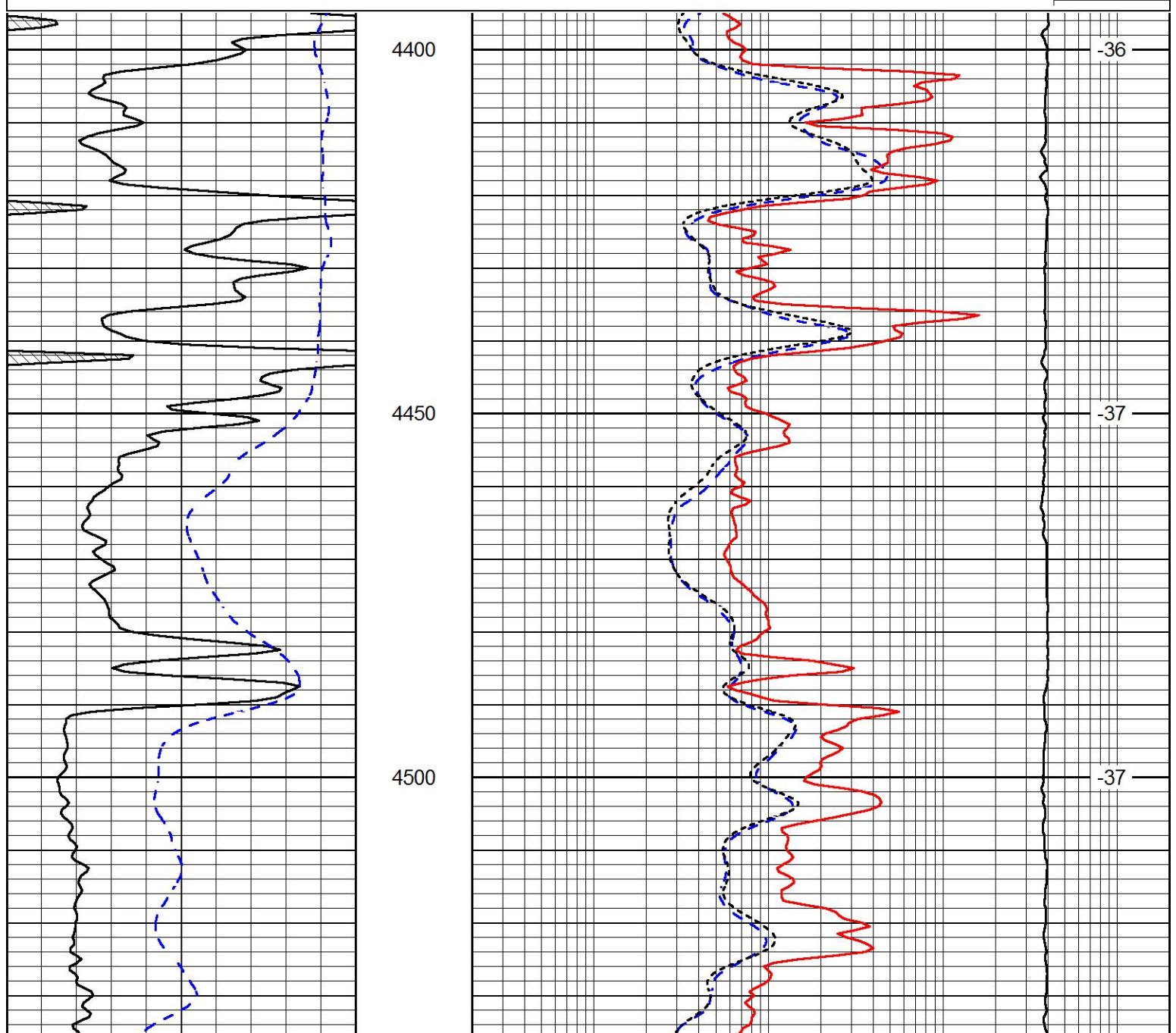


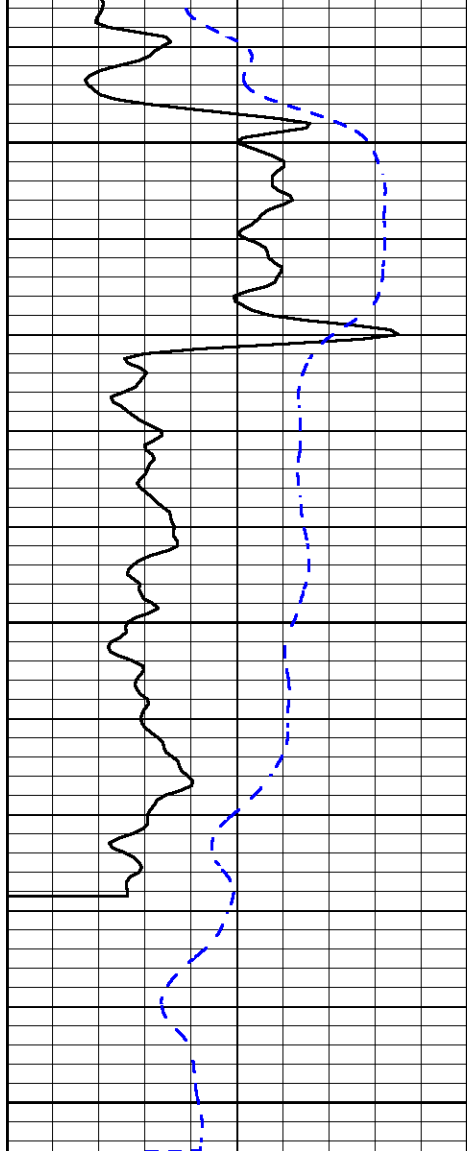
REPEAT SECTION

Database File griffin_wood_2hd.db
 Dataset Pathname DIL/griffrep
 Presentation Format dil
 Dataset Creation Wed Feb 01 16:07:23 2017
 Charted by Depth in Feet scaled 1:240

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-200	SP (mV)	0	0.2	Medium Resistivity (Ohm-m)	2000
			0.2	Shallow Resistivity (Ohm-m)	2000
			10000	Line Tension (lb)	0

LSPD
(ft/min)



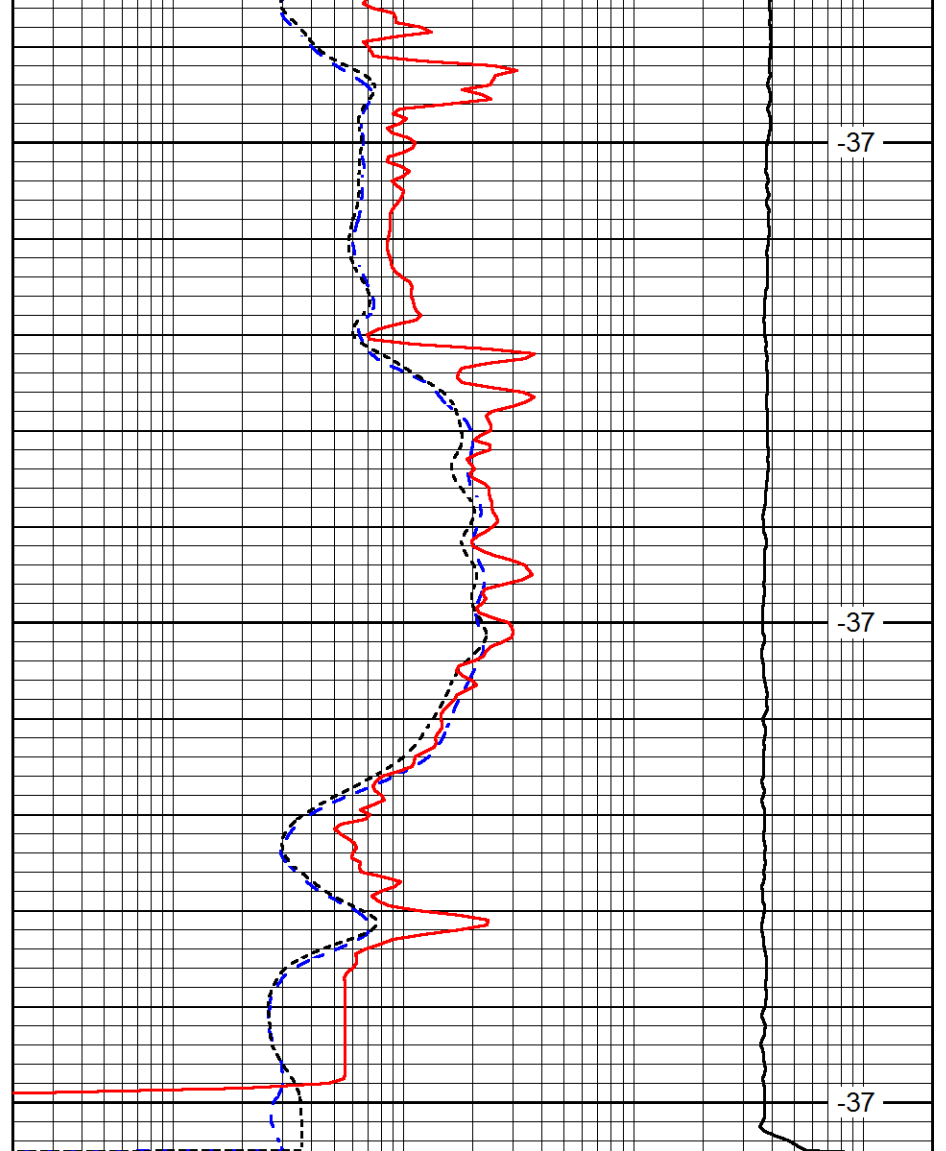


4550

4600

4650

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



-37

-37

-37

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)