



DUAL INDUCTION LOG

Pioneer Energy Services

Company BLACKSTONE OIL & GAS (KS), LLC
Well MDNR NO. 1-3
Field REICHEL EAST
County RUSH
State KANSAS

Company BLACKSTONE OIL & GAS (KS), LLC
Well MDNR NO. 1-3
Field REICHEL EAST
County RUSH State KANSAS

Location: API #: 15-165-22, 121-00-00

467' FNL & 467' FEL

SEC 3 TWP 18S RGE 16W

Permanent Datum GROUND LEVEL Elevation 1971'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Other Services
CNL/CDL
MEL
Elevation
K.B. 1977'
D.F. N/A
G.L. 1971'

Date	2/14/2016		
Run Number	ONE		
Depth Driller	2600'		
Depth Logger	2599'		
Bottom Logged Interval	2598'		
Top Log Interval	1000'		
Casing Driller	8.625" @ 1024'		
Casing Logger	1019'		
Bit Size	7.875"		
Type Fluid in Hole	CHEMICAL		
Salinity, ppm CL	6000		
Density / Viscosity	8.9 57		
pH / Fluid Loss	9.0 12.0		
Source of Sample	Flowline		
Rm @ Meas. Temp	.28 @ 64		
Rmt @ Meas. Temp	.21 @ 64		
Rmc @ Meas. Temp	.38 @ 64		
Source of Rmt / Rmc	Charts		
Rm @ BHT	.18 @ 102		
Operating Rig Time	2 HOURS		
Max Rec. Temp. F	102 DEG F		
Equipment Number	108		
Location	Hays		
Recorded By	J. LONG		
Witnessed By	ROD ANDERSEN		

<<< Fold Here >>>

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.

OTIS, 1 WEST, 1 SOUTH, 100' WEST, SOUTH INTO

Log Measured From: KELLY BUSHING 6 Ft. Above Permanent Datum

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

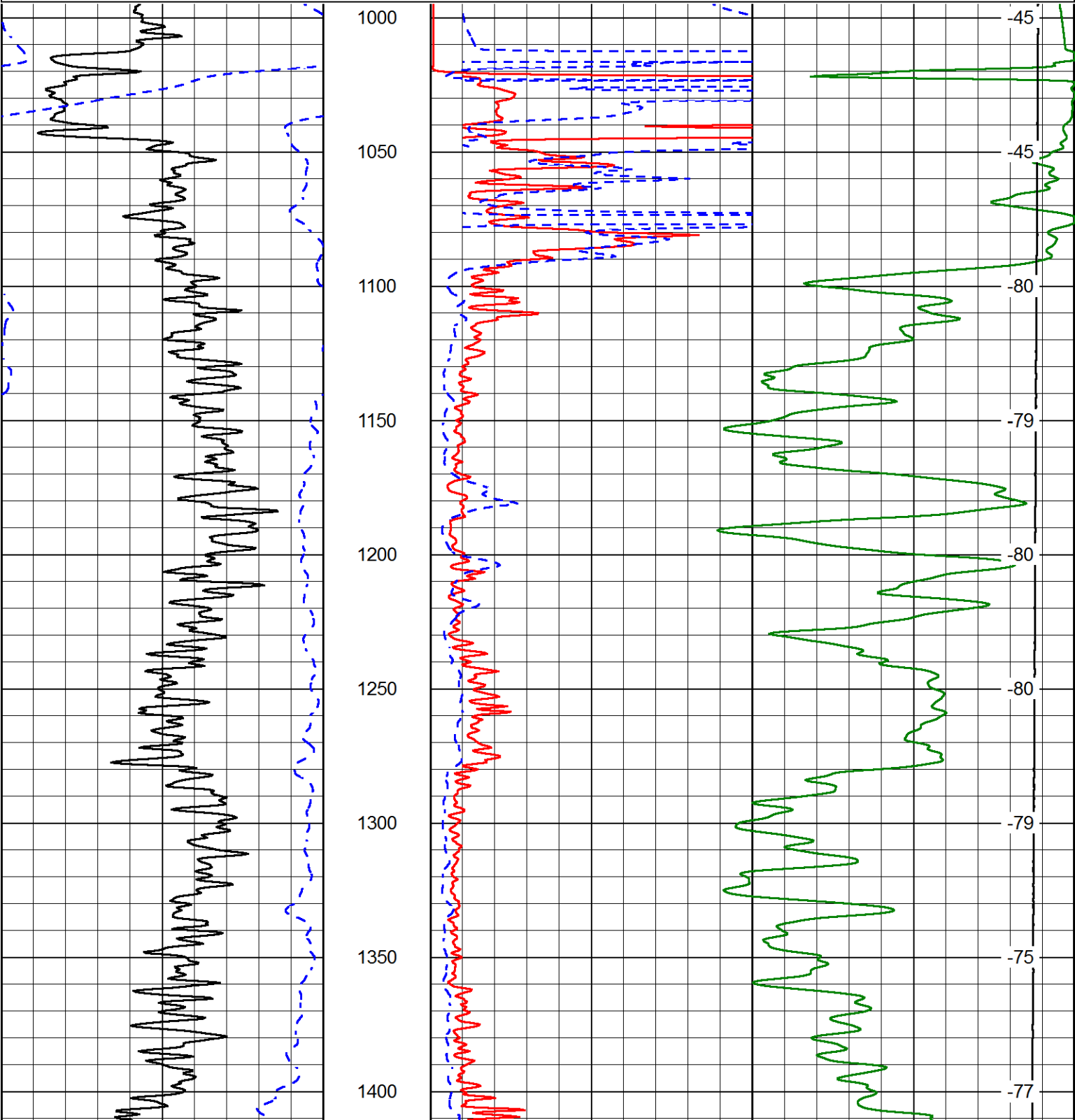
Your Pioneer Energy Services Crew

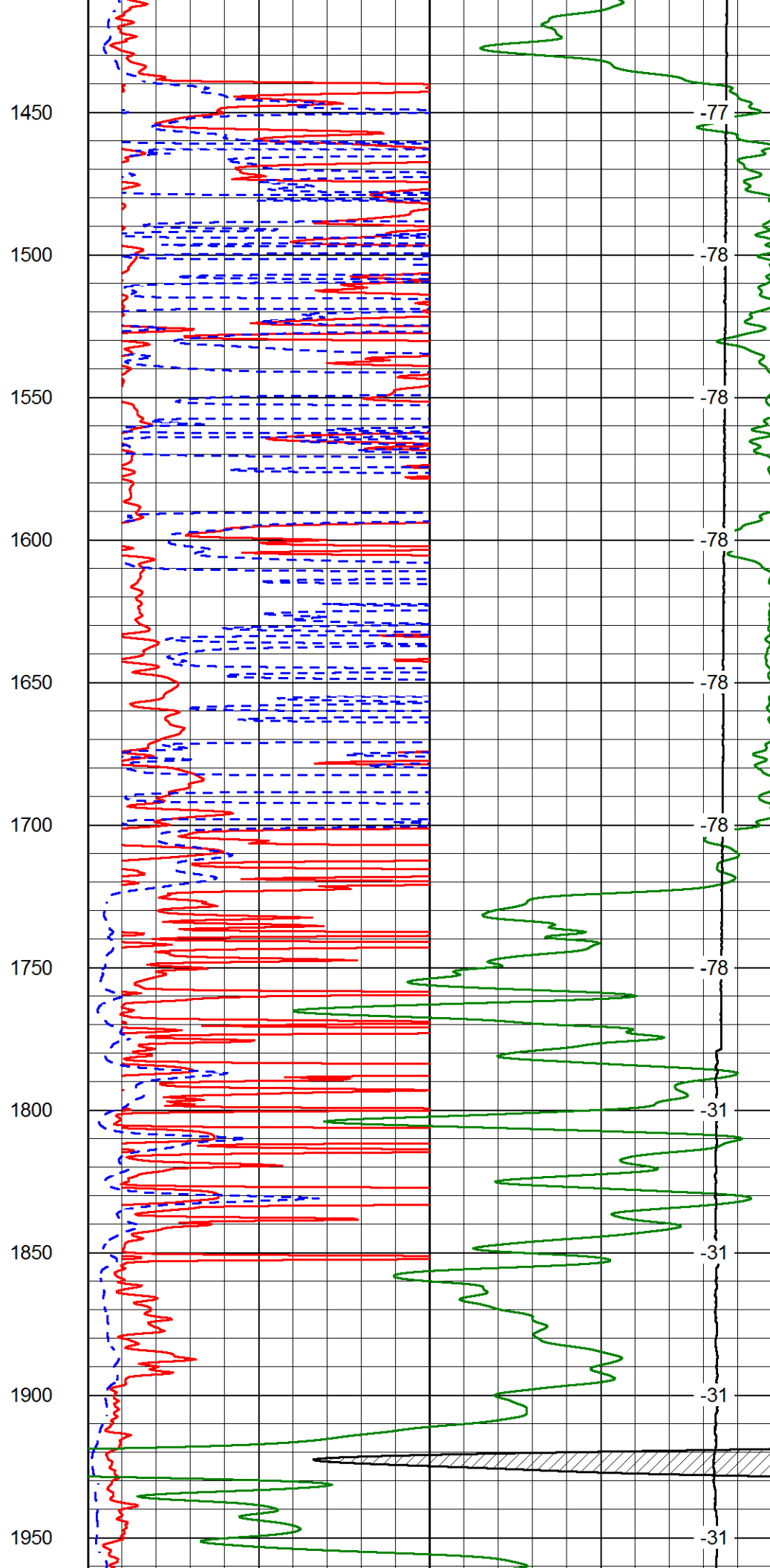
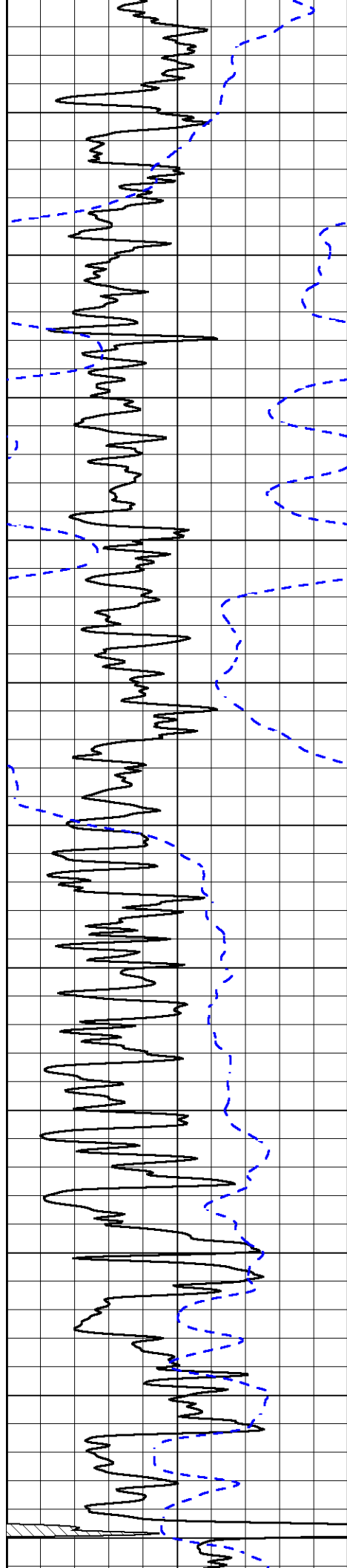
Engineer: J. LONG
Operator:
Operator:
Operator:

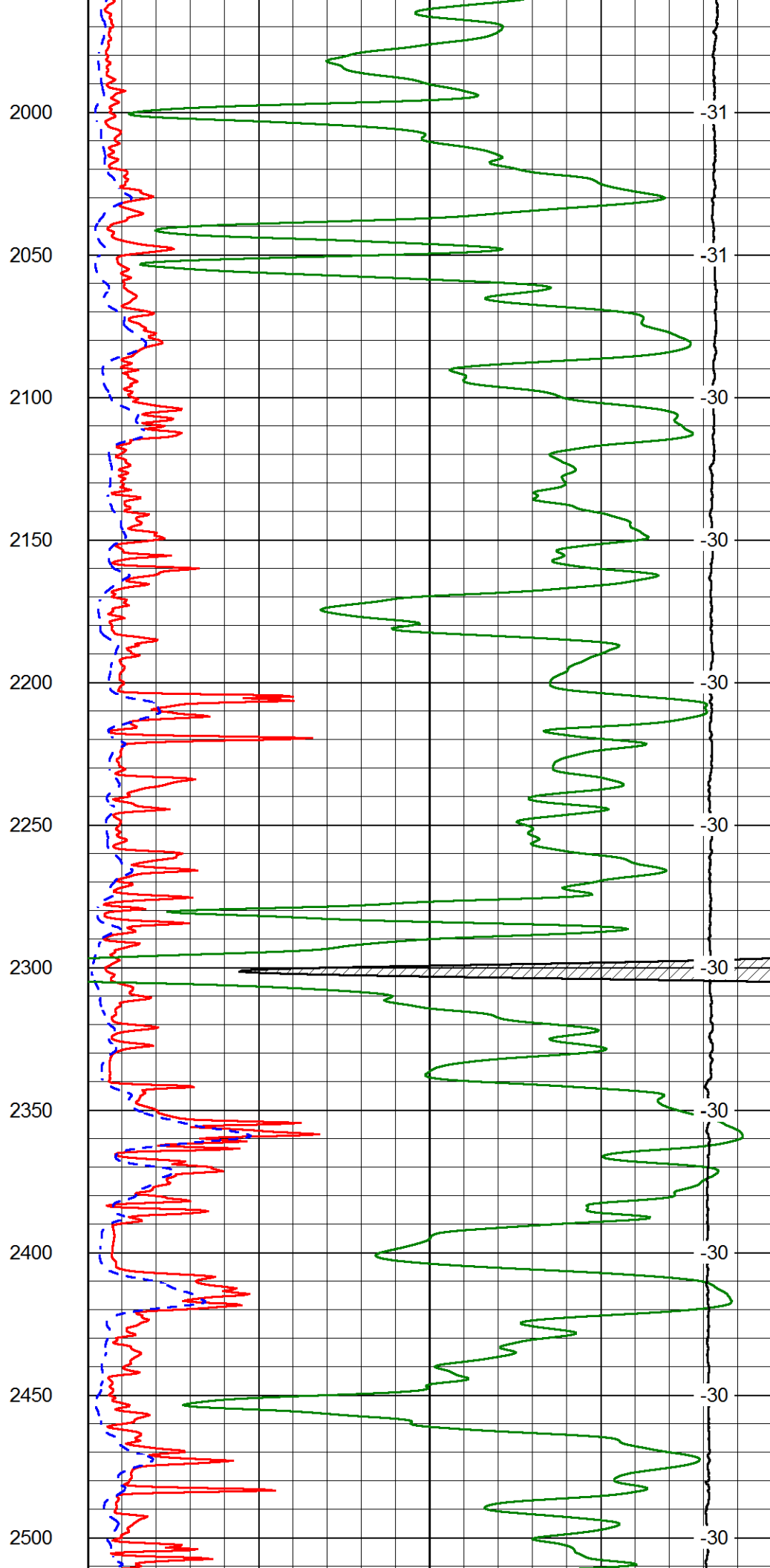
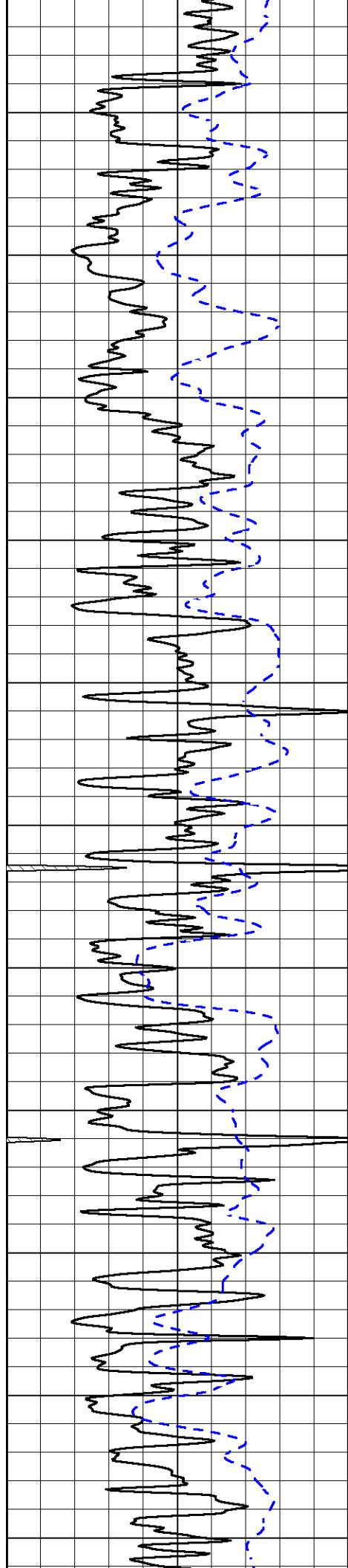
This Log Record Was Witnessed By

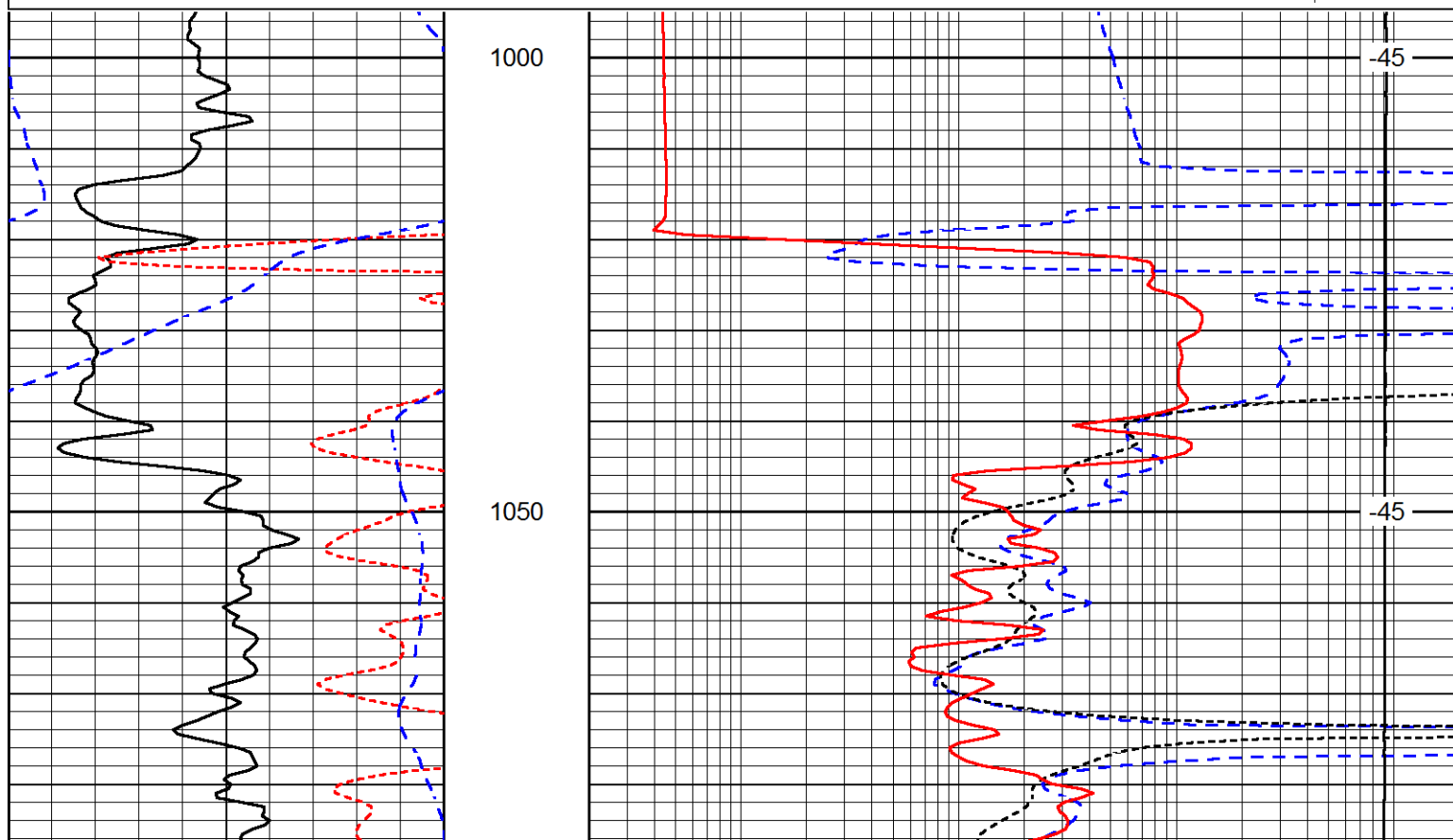
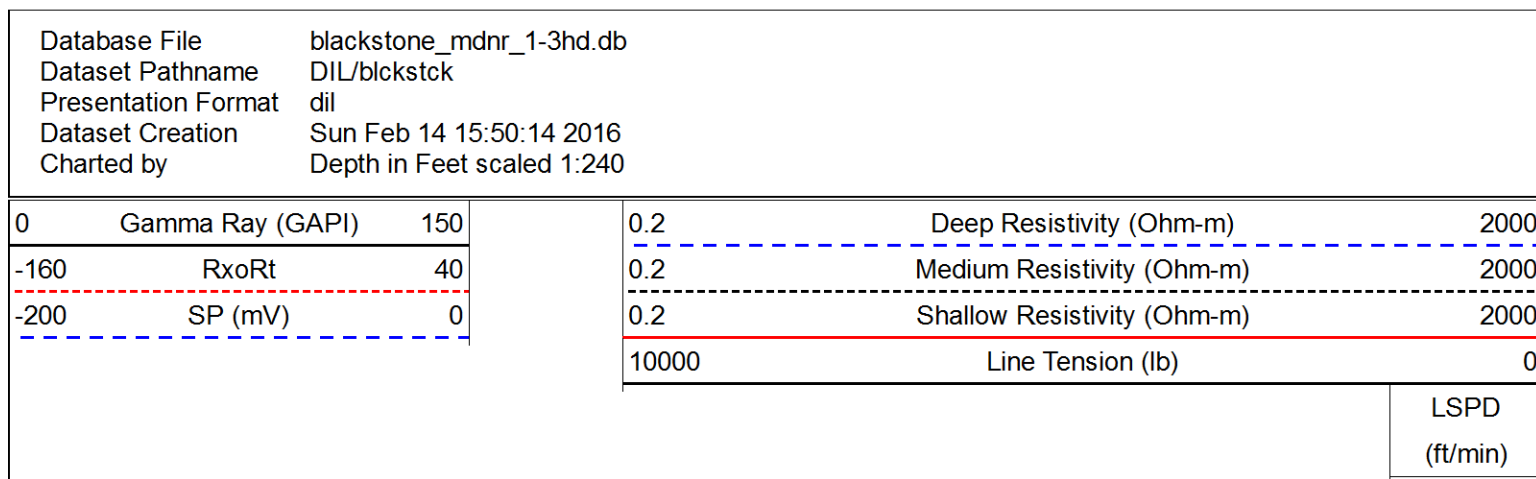
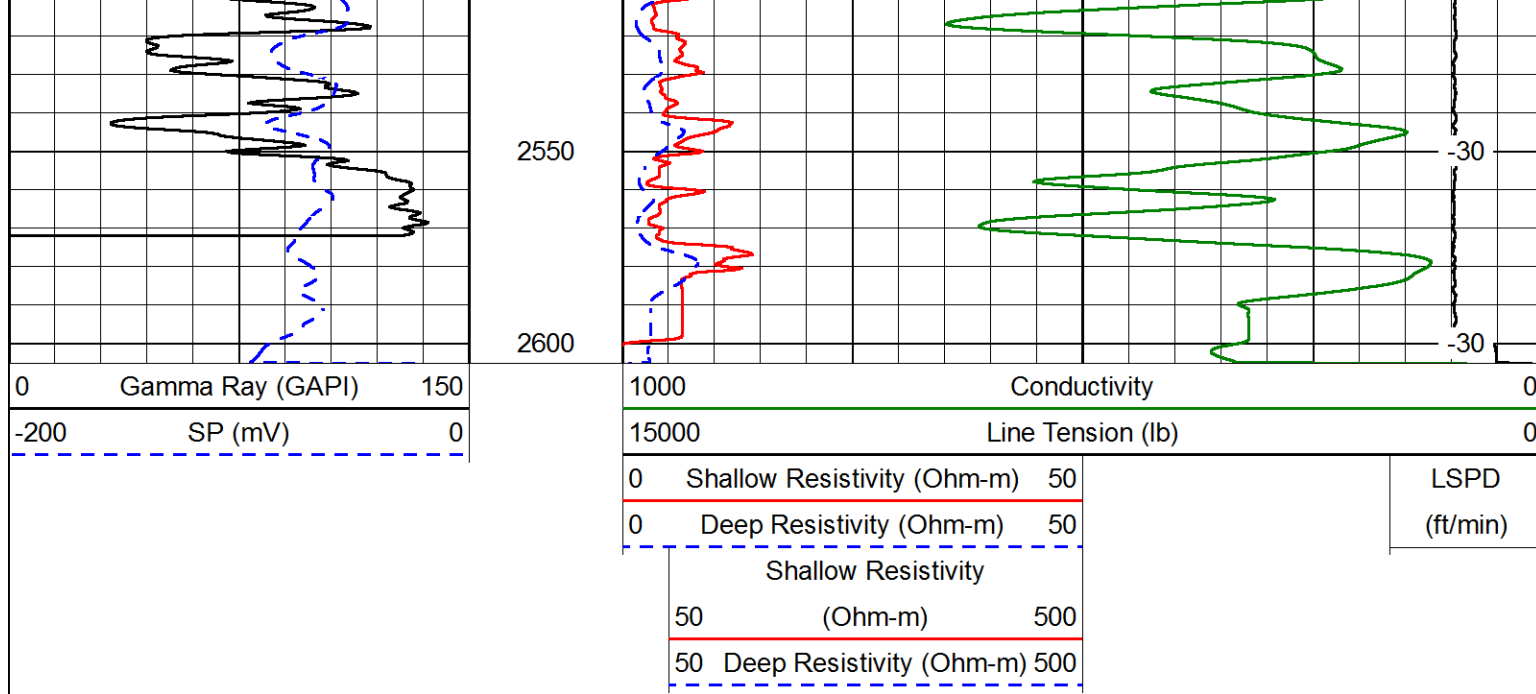
Primary Witness: ROD ANDERSEN
Secondary Witness:
Secondary Witness:
Secondary Witness:

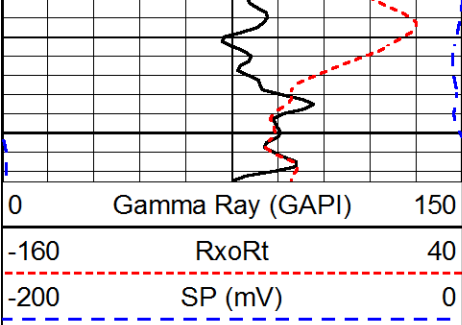
0	Gamma Ray (GAPI)	150	1000	Conductivity	0
-200	SP (mV)	0	15000	Line Tension (lb)	0
			0	Shallow Resistivity (Ohm-m)	50
			0	Deep Resistivity (Ohm-m)	50
			LSPD (ft/min)		
			Shallow Resistivity		
			50	(Ohm-m)	500
			50	Deep Resistivity (Ohm-m)	500



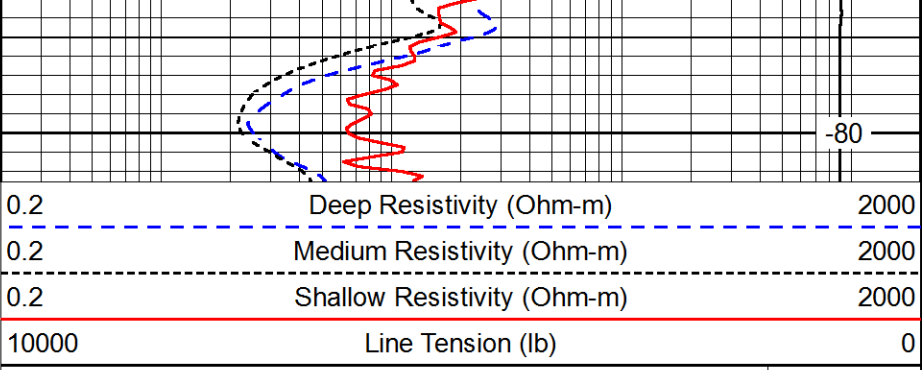






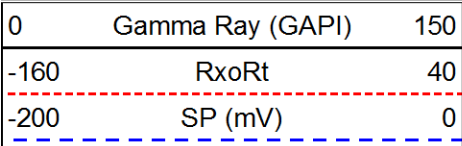


1100

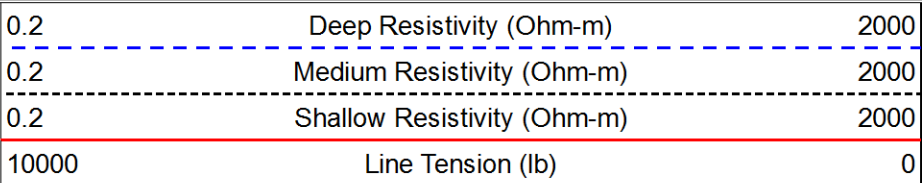


LSPD
(ft/min)

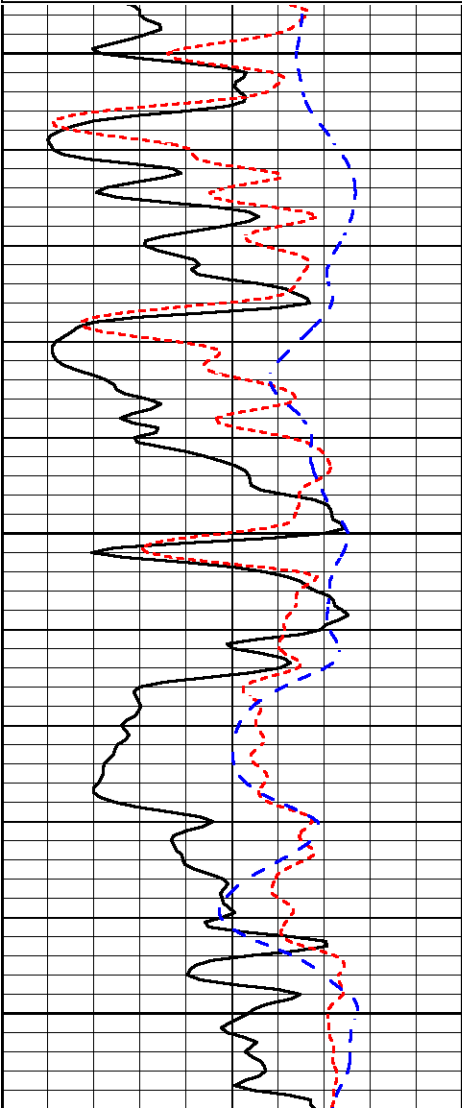
Database File blackstone_mdnr_1-3hd.db
Dataset Pathname DIL/blckstck
Presentation Format dil
Dataset Creation Sun Feb 14 15:50:14 2016
Charted by Depth in Feet scaled 1:240



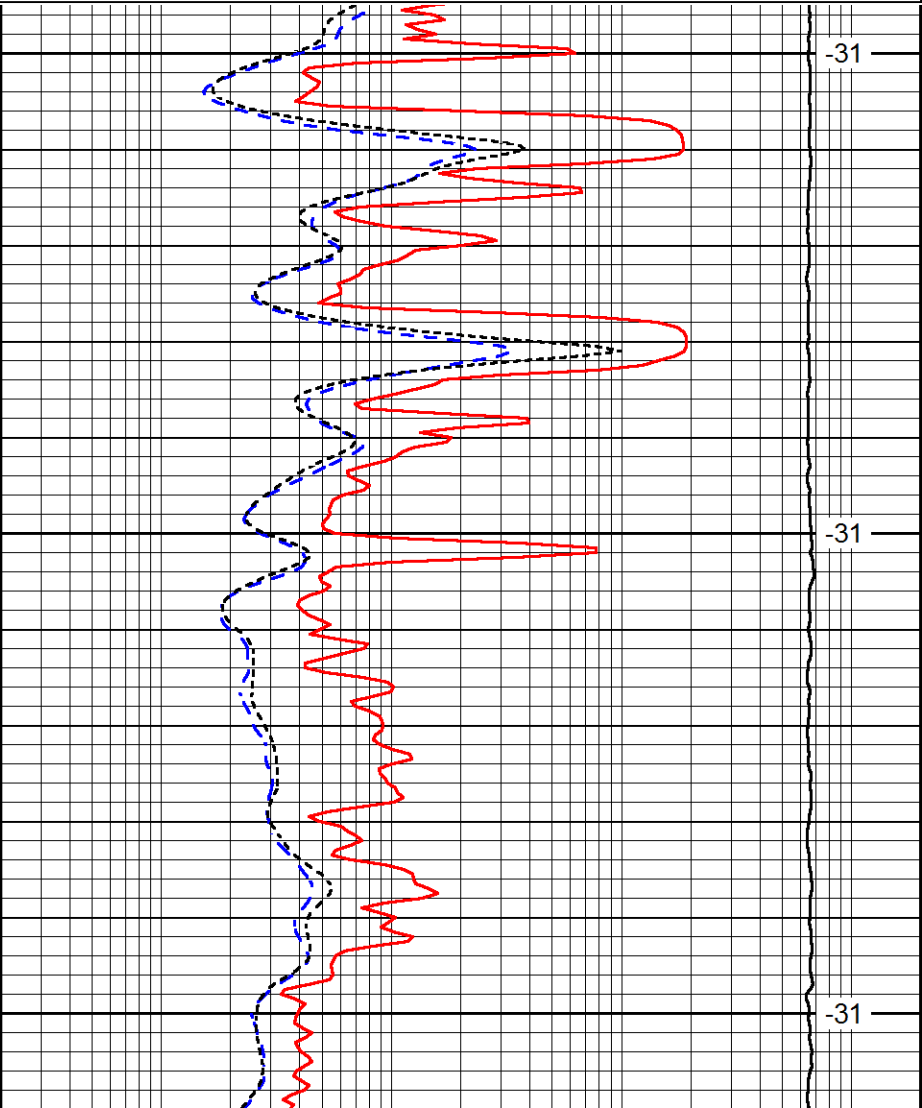
1800



LSPD
(ft/min)



1850

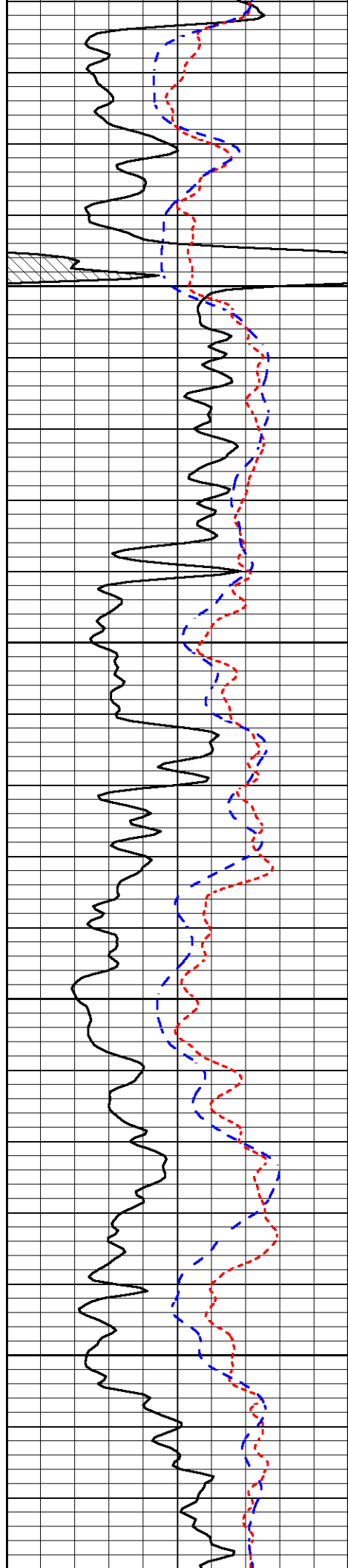


1900

-31

-31

-31

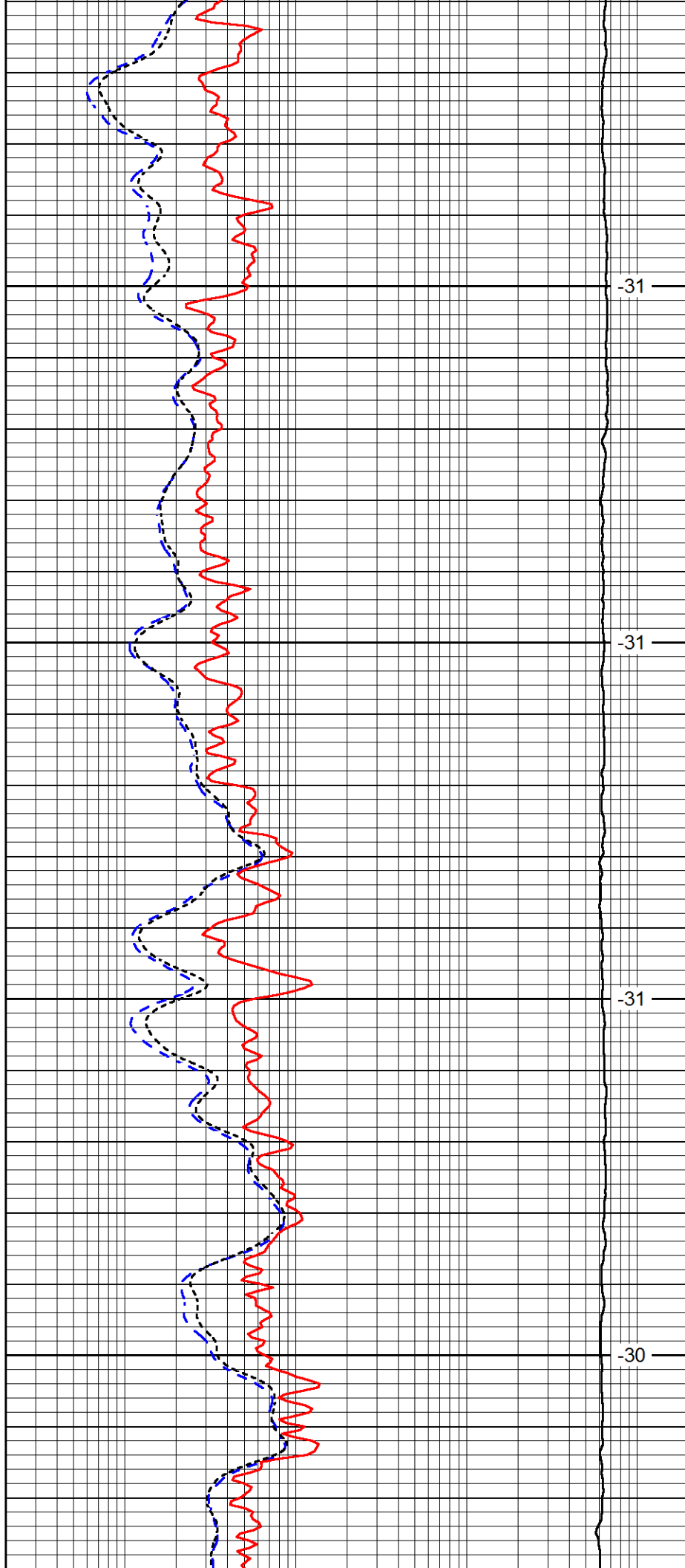


1950

2000

2050

2100

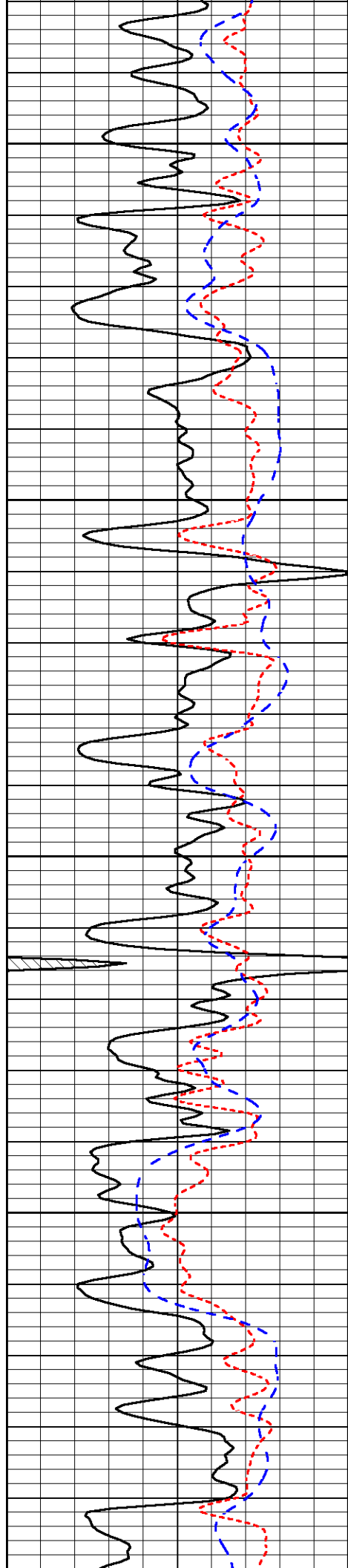


-31

-31

-31

-30



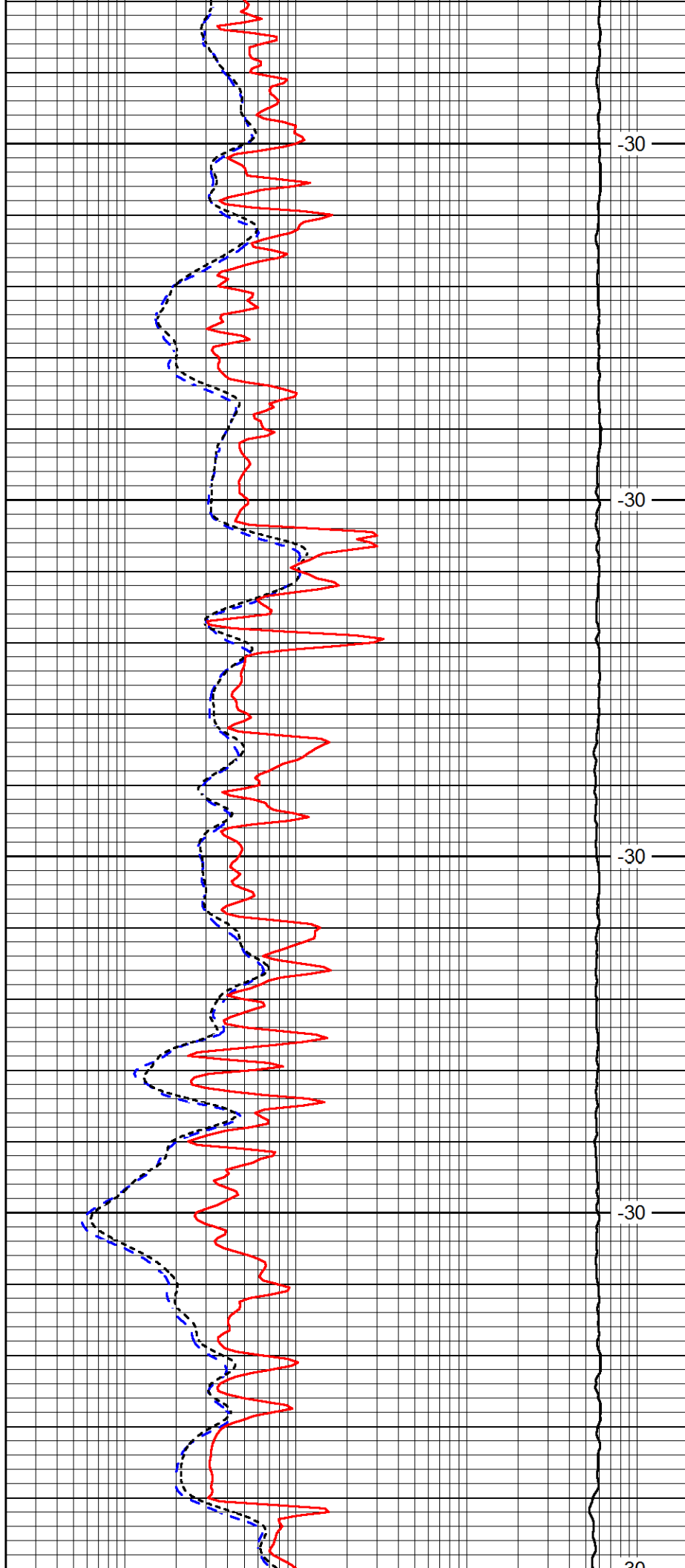
2150

2200

2250

2300

2350



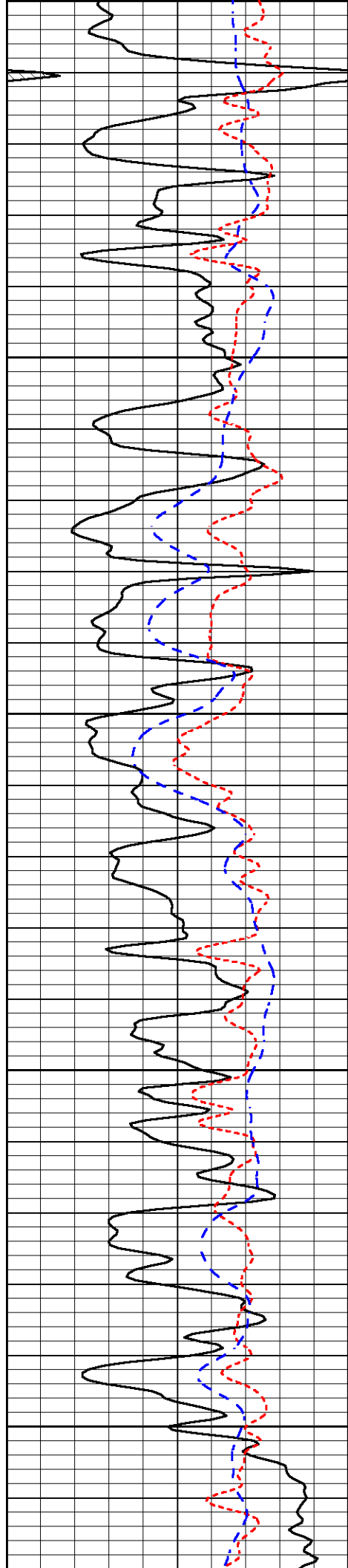
-30

-30

-30

-30

-30



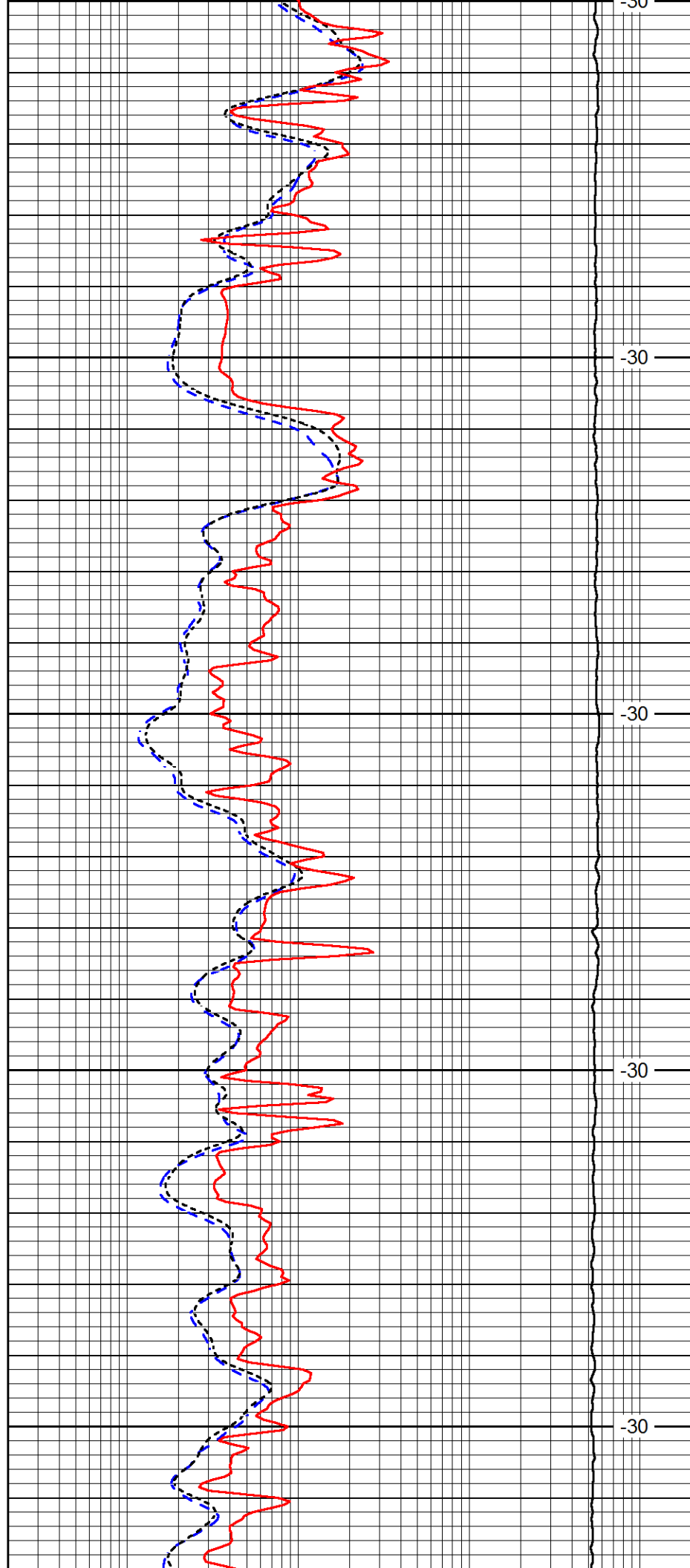
2350

2400

2450

2500

2550



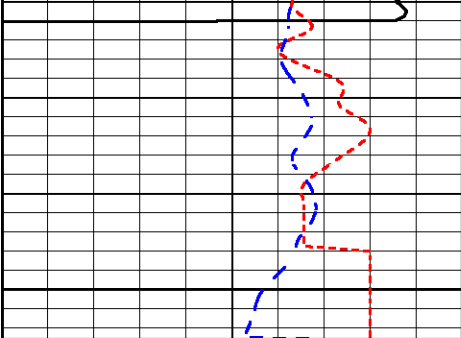
-30

-30

-30

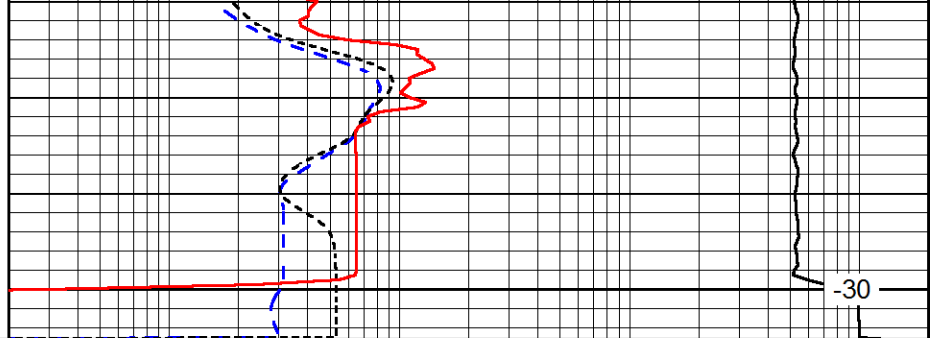
-30

-30



0	Gamma Ray (GAPI)	150
-160	RxoRt	40
-200	SP (mV)	0

2600



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)