PIONEER
Pioneer Energy Services

DUAL INDUCTION LOG

Company CARODEN ENERGY, LLC
Well THELMA #1
Field STOLTENBERG
County ELLSWORTH State KANSAS

Location: API #: 15-053-21345-00-00
1400' FSL & 1020' FWL
SEC 1 TWP 17S RGE 10W

Other Services: CNL/CDL, MEL

Permanent Datum: GROUND LEVEL Elevation 1804'
Log Measured From: KELLY BUSHING
Drilling Measured From: KELLY BUSHING

Elevation: K.B. 1812', D.F. N/A, G.L. 1804'

Company CARODEN ENERGY, LLC
Well THELMA #1
Field STOLTENBERG
County ELLSWORTH
State KANSAS

Date	5/17/2016			
Run Number	ONE			
Depth Driller	3360'			
Depth Logger	3362'			
Bottom Logged Interval	3361'			
Top Log Interval	300'			
Casing Driller	8.625" @ 322'			
Casing Logger	323'			
Bit Size	7.875"			
Type Fluid in Hole	CHEMICAL			
Salinity,ppm CL	3800			
Density / Viscosity	9.4 59			
pH / Fluid Loss	9.5 8.0			
Source of Sample	FLOWLINE			
Rm @ Meas. Temp	0.40 @ 60			
Rmf @ Meas. Temp	0.30 @ 60			
Rmc @ Meas. Temp	0.54 @ 60			
Source of Rmf / Rmc	CHARTS			
Rm @ BHT	0.22 @ 110			
Operating Rig Time	3 HOURS			
Max Rec. Temp. F	110			
Equipment Number	91			
Location	COLBY			
Recorded By	D. SCHMIDT			
Witnessed By	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.

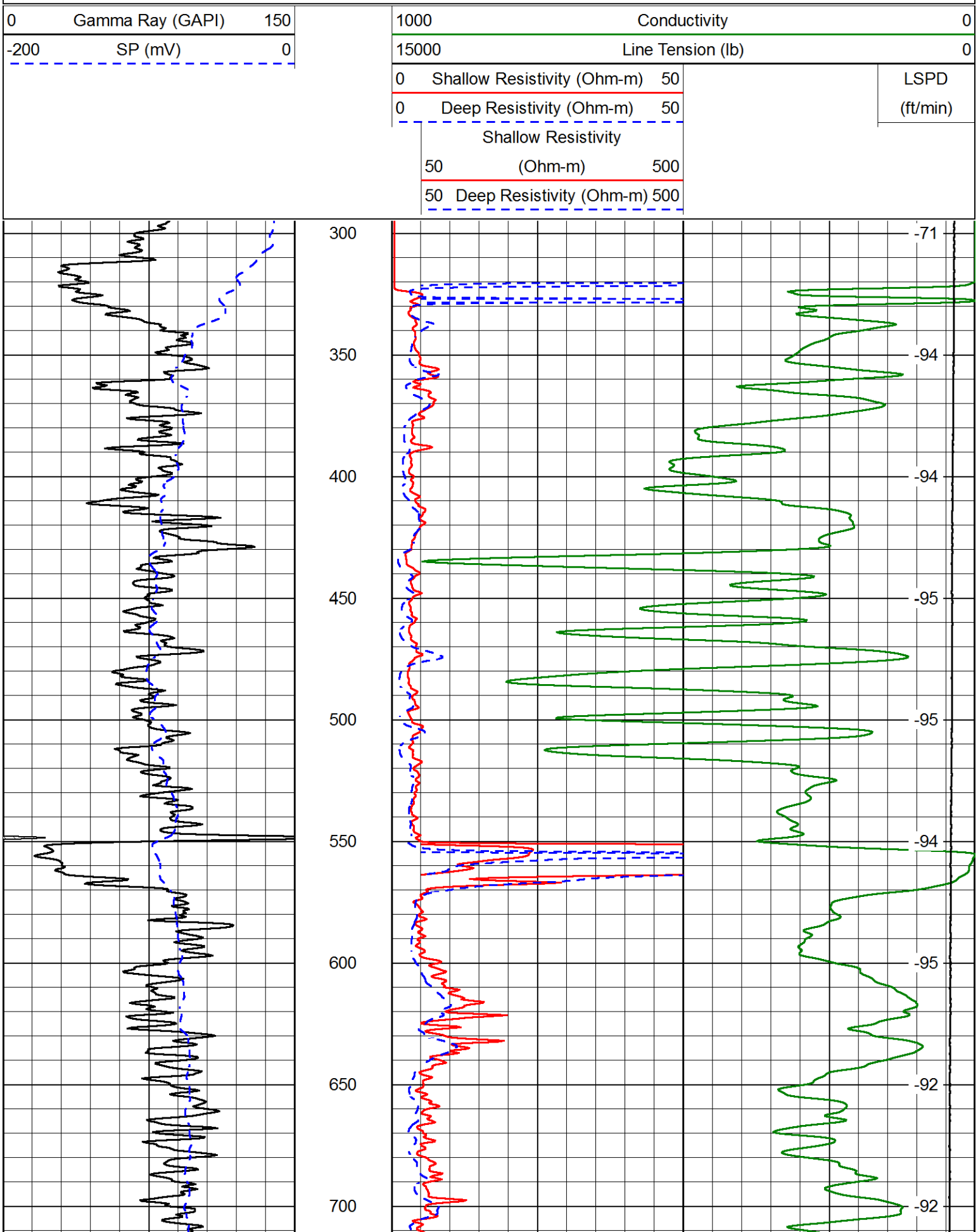
HOLLYROOD,
1 1/2 EAST ON AVE T, NORTH INTO

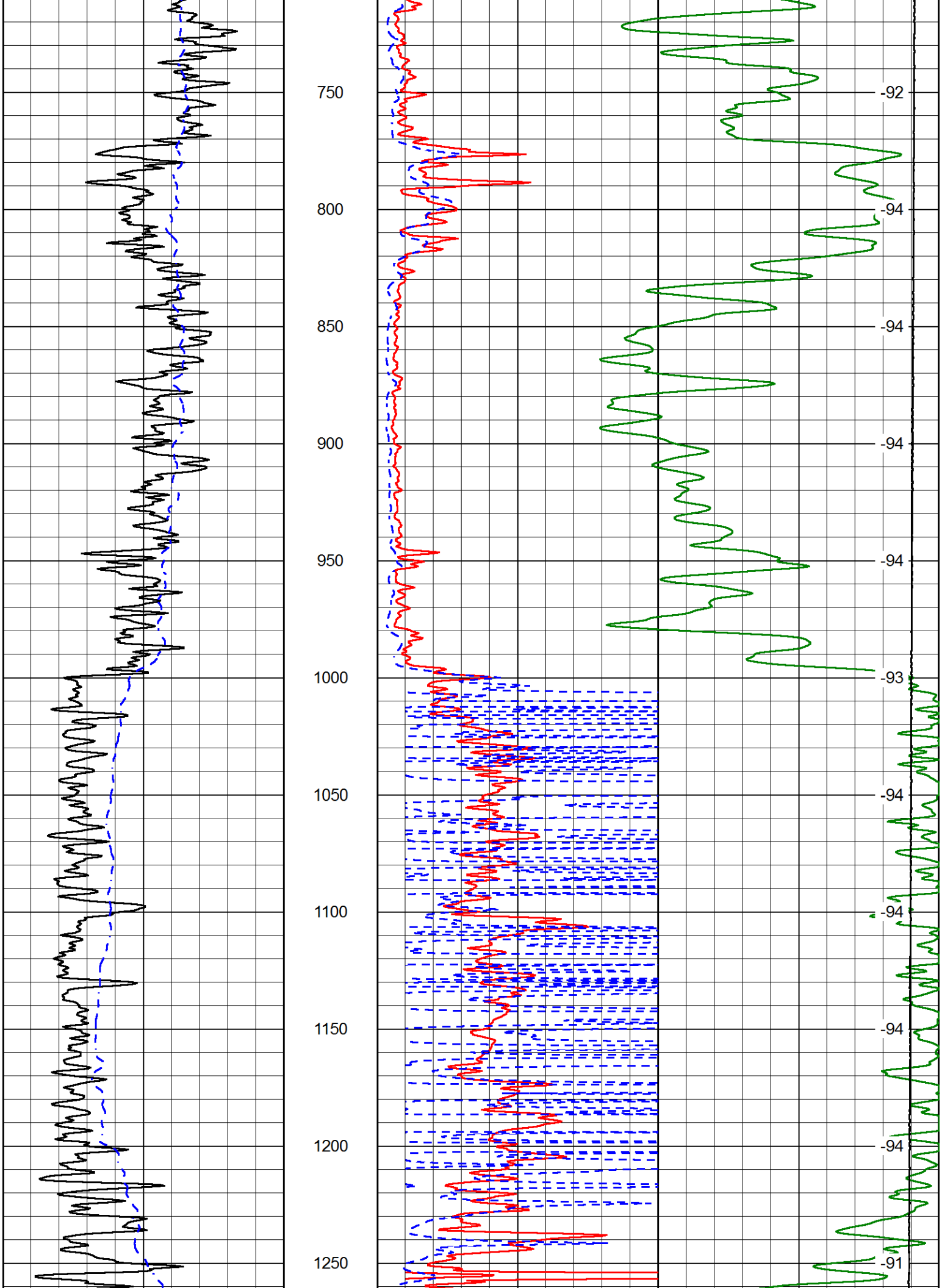
Log Measured From: KELLY BUSHING 8 Ft. Above Permanent Datum

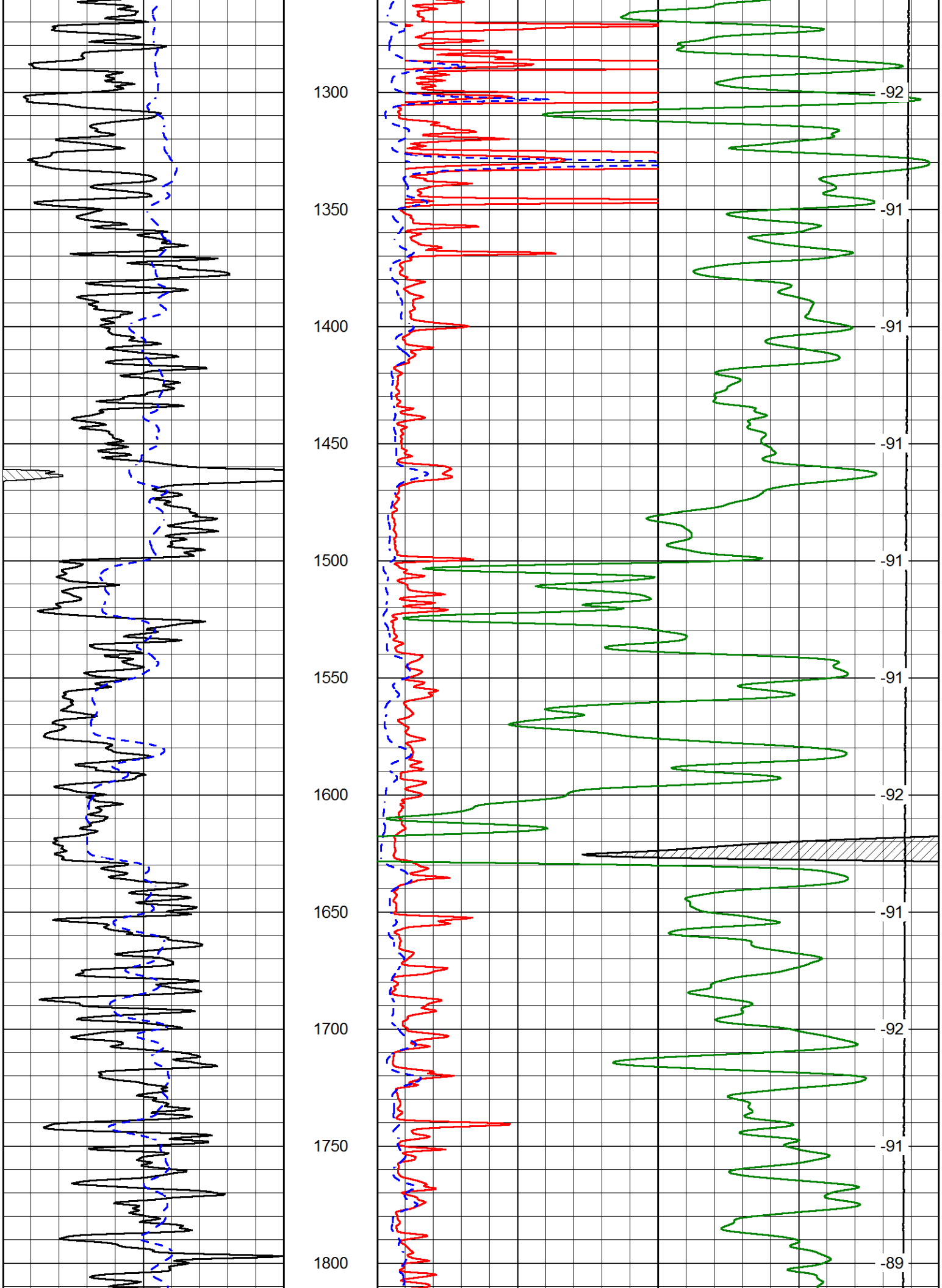
THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneeres.com 785-625-3858

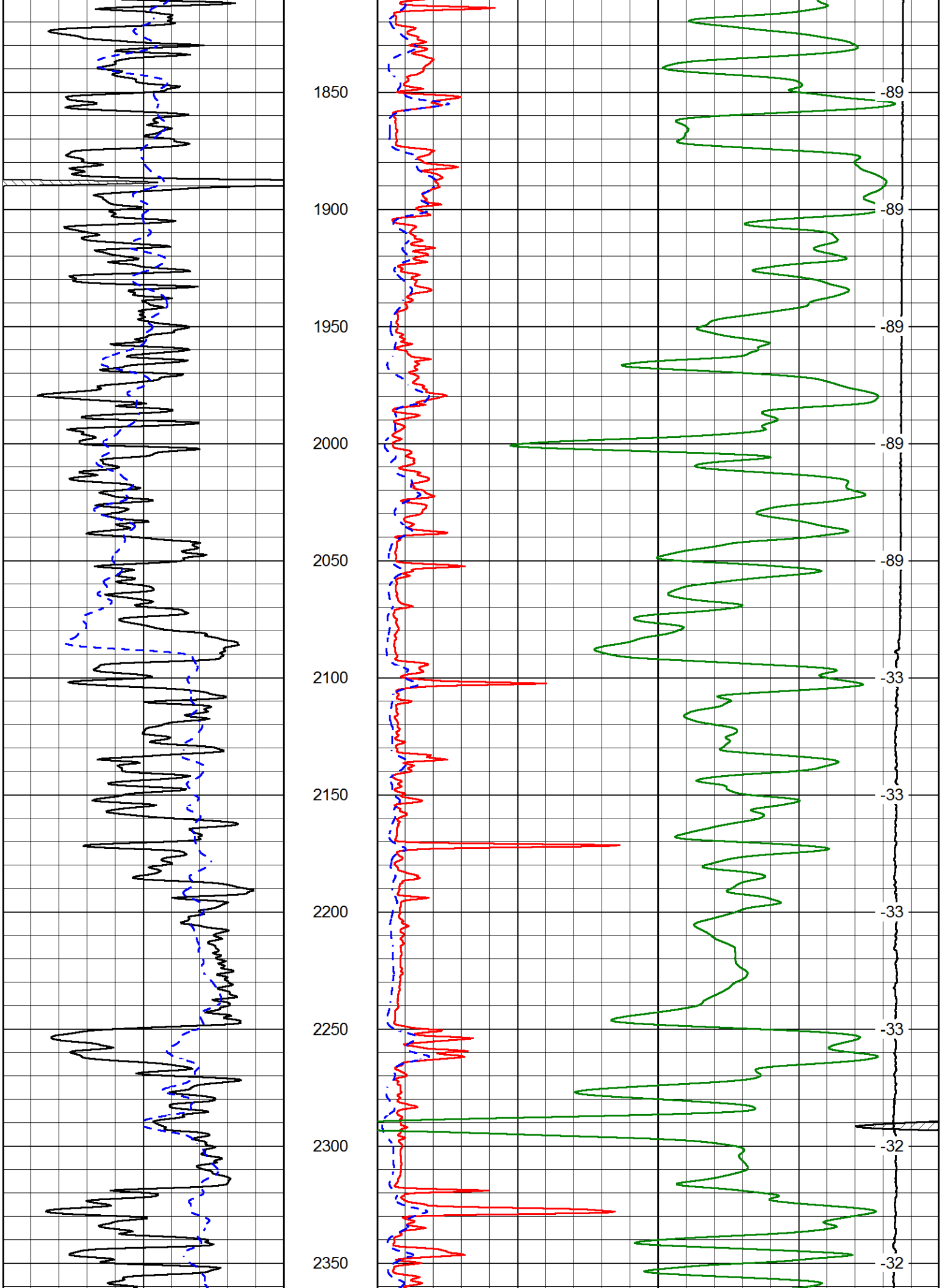
Your Pioneer Energy Services Crew	This Log Record Was Witnessed By
Engineer: D. SCHMIDT	Primary Witness: HERB DEINES
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

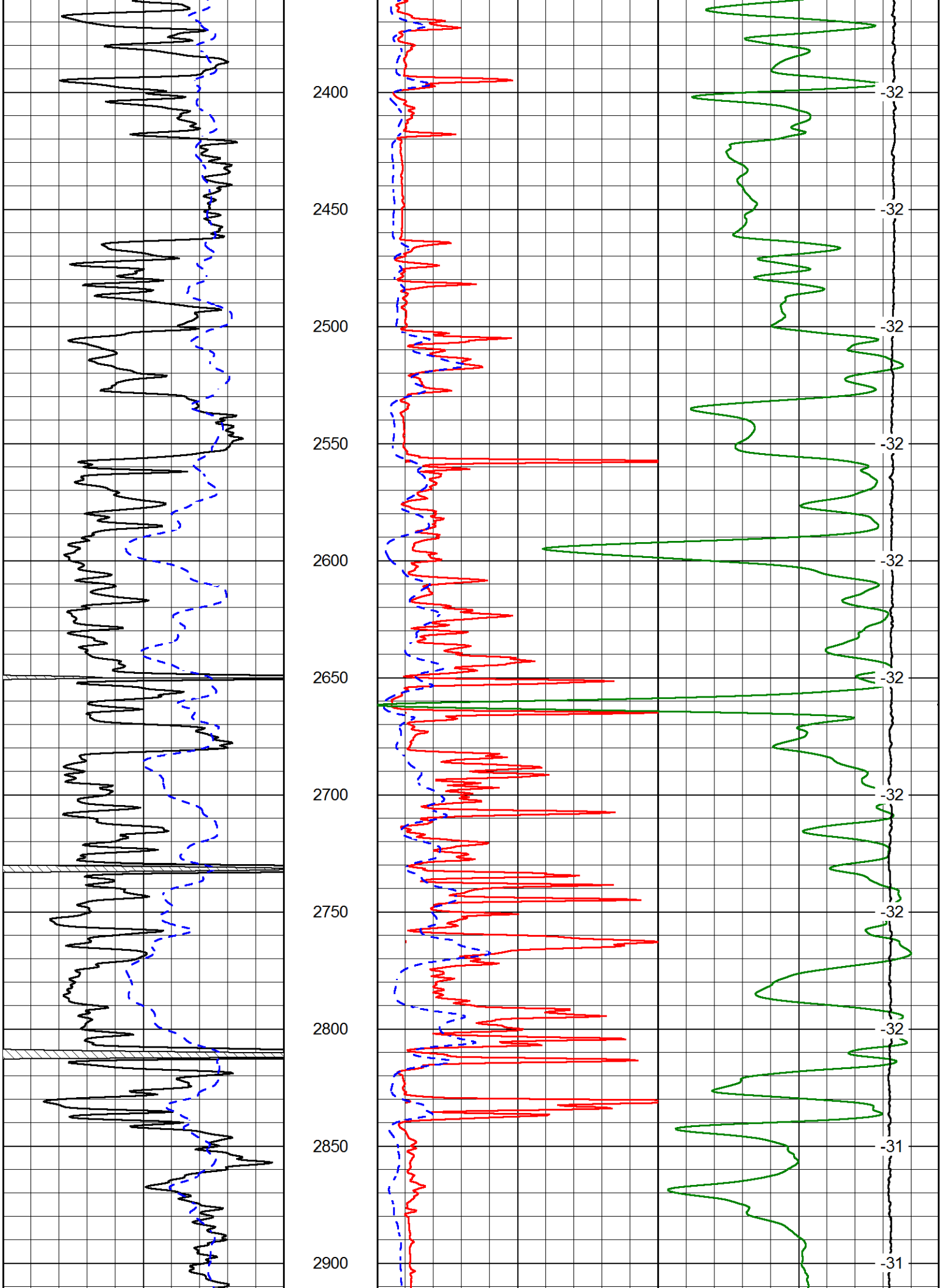
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Presentation Format	dil2in
Dataset Creation	Wed May 18 00:04:48 2016
Charted by	Depth in Feet scaled 1:600

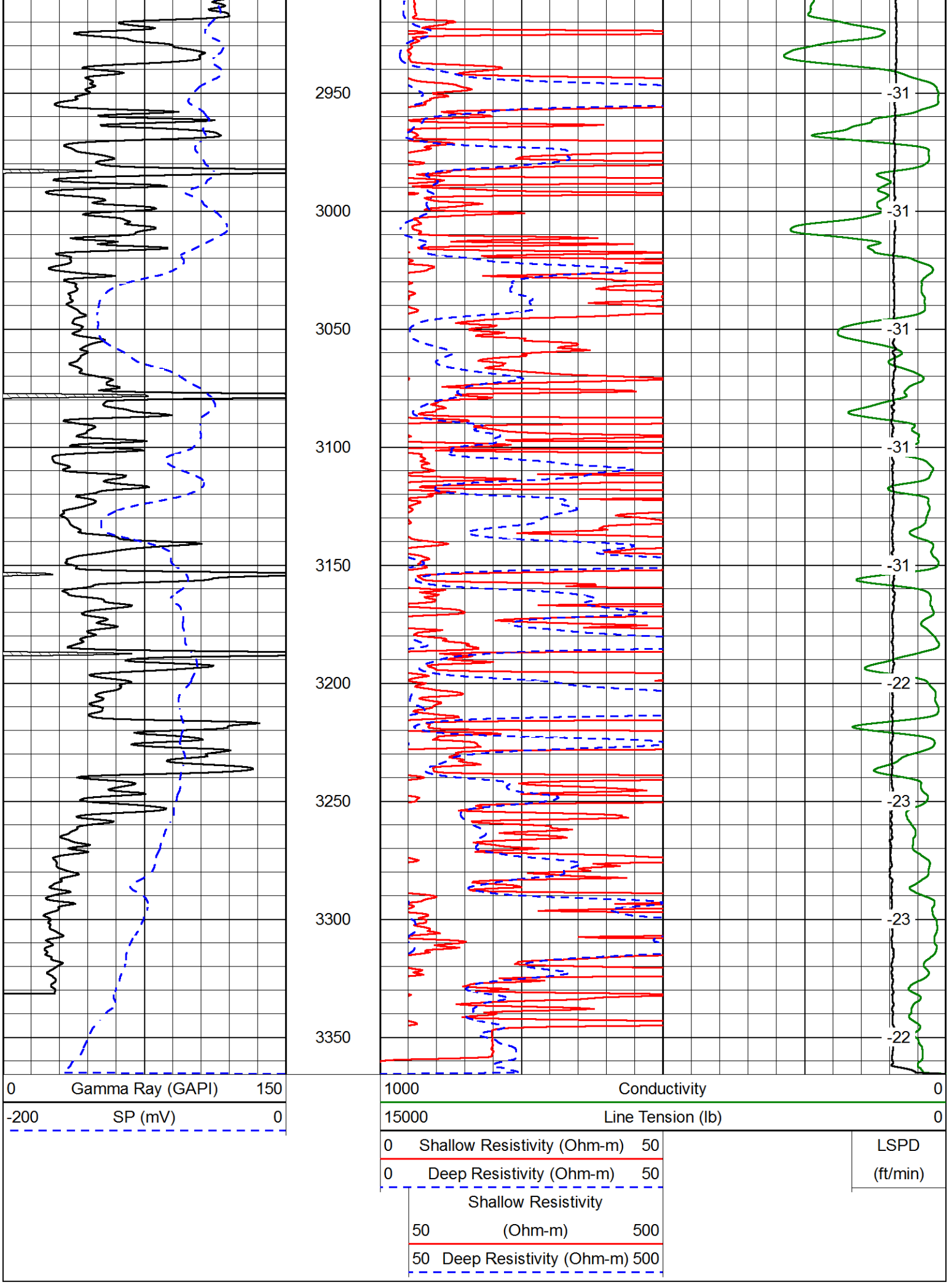



750
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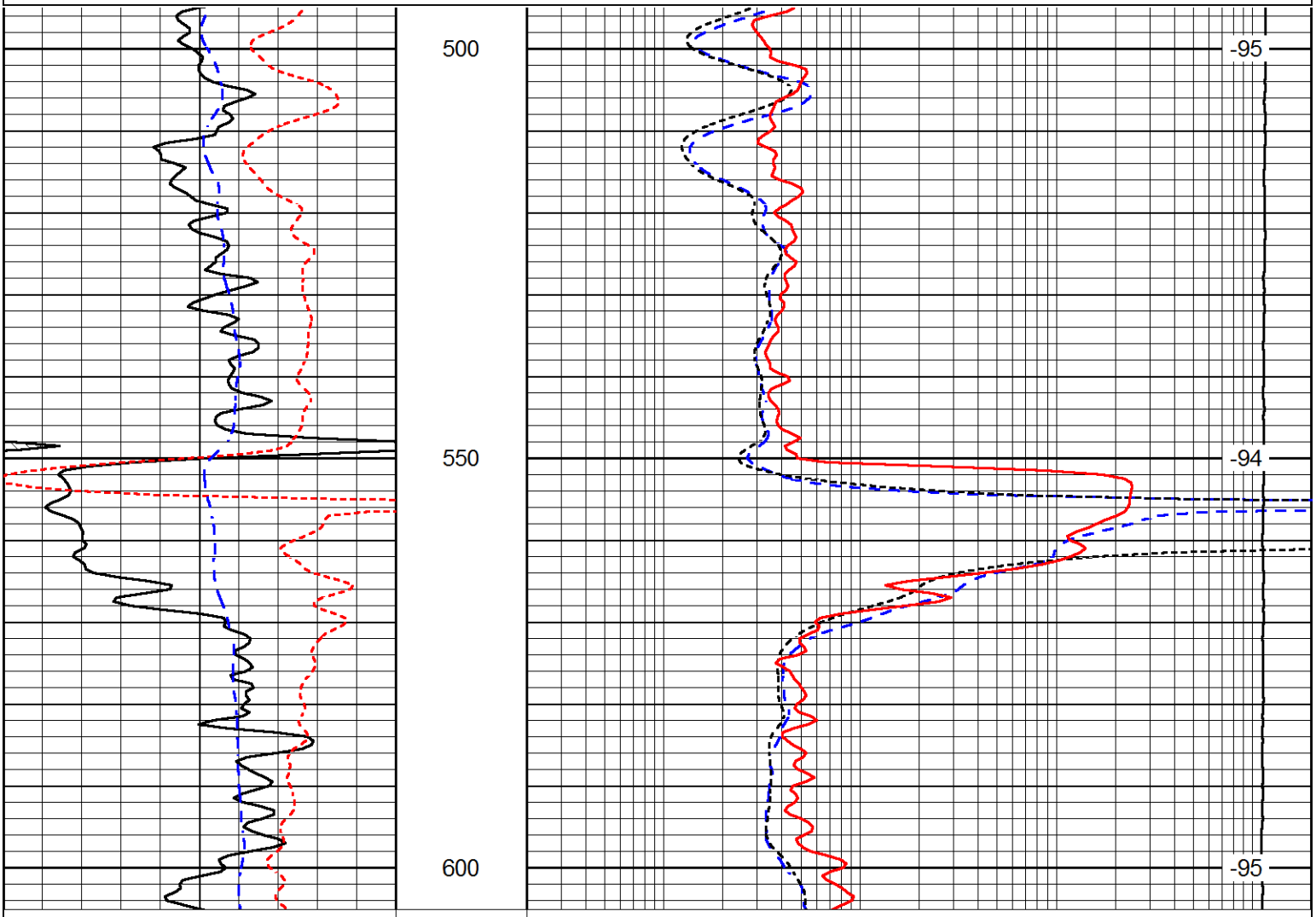

2950
3000
3050
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3150
3200
3250
3300
3350
-31
-31
-31
-31
-22
-23
-23
-22
0 Gamma Ray (GAPI) 150
-200 SP (mV) 0
1000 Conductivity 0
15000 Line Tension (lb) 0
0 Shallow Resistivity (Ohm-m) 50
0 Deep Resistivity (Ohm-m) 50
LSPD
(ft/min)
Shallow Resistivity
50 (Ohm-m) 500
50 Deep Resistivity (Ohm-m) 500

Database File	caroden_thelma_1hd.db
Dataset Pathname	DIL/castkml
Presentation Format	dil
Dataset Creation	Wed May 18 00:04:48 2016
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

LSPD
(ft/min)

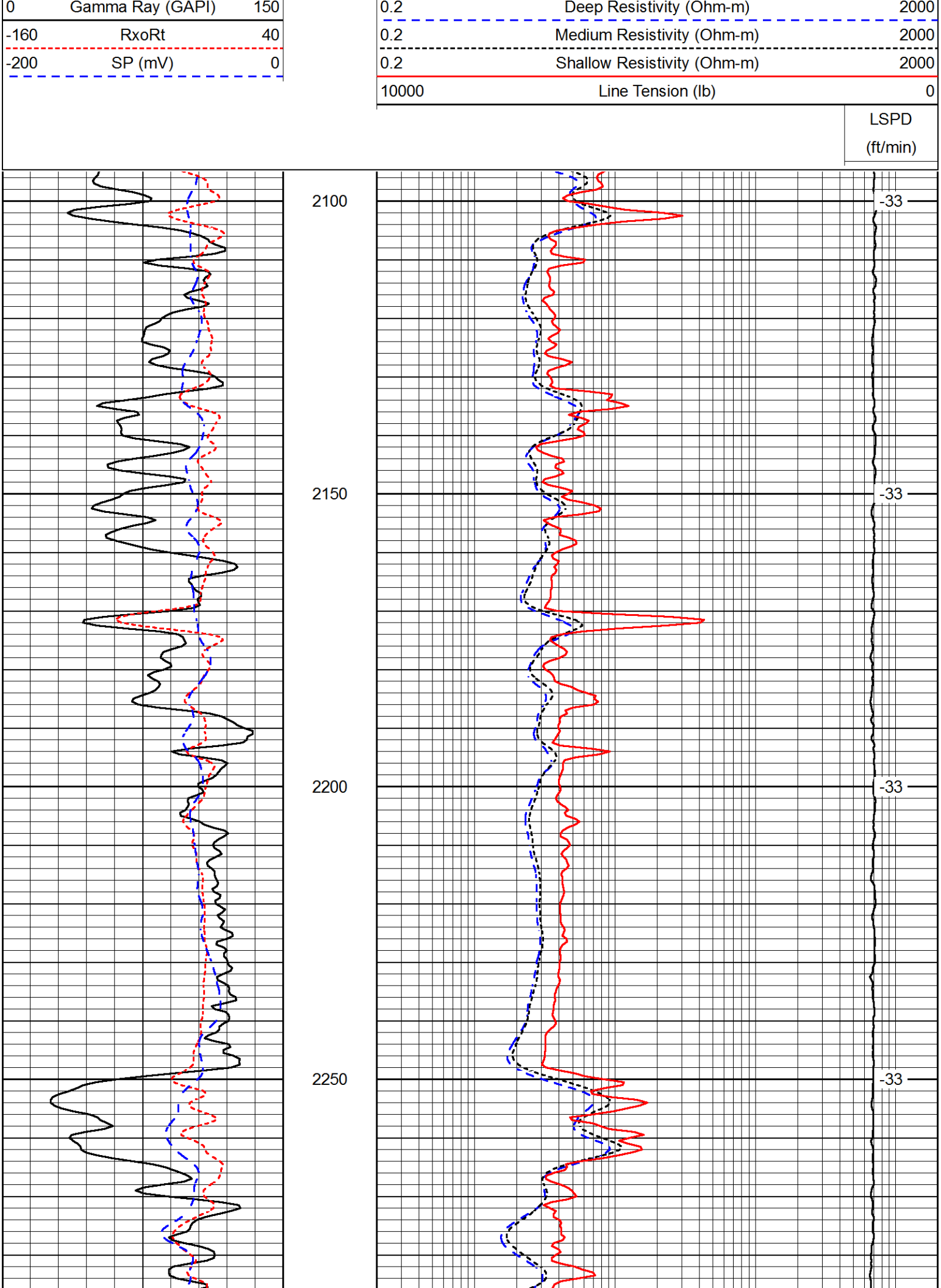


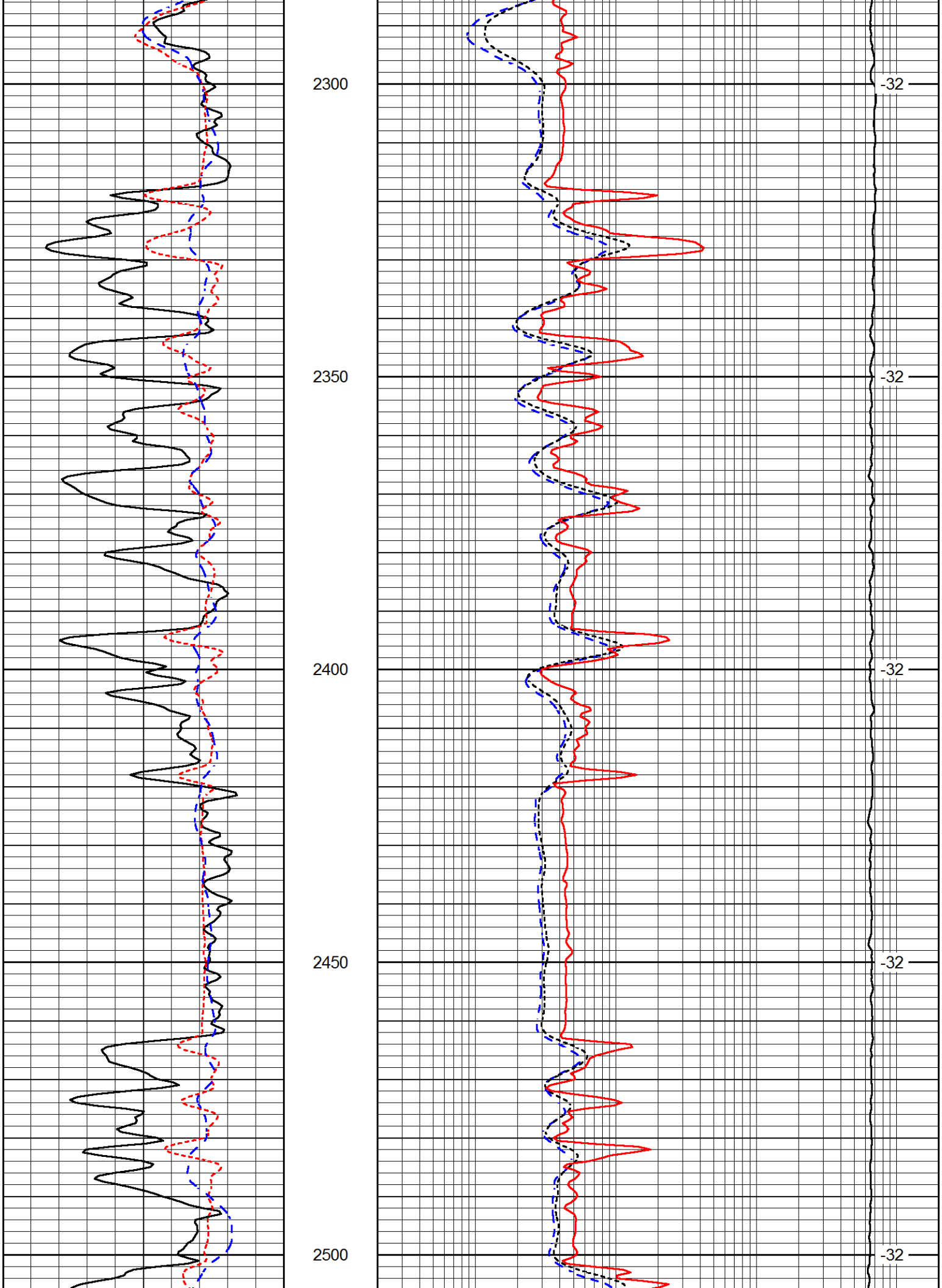
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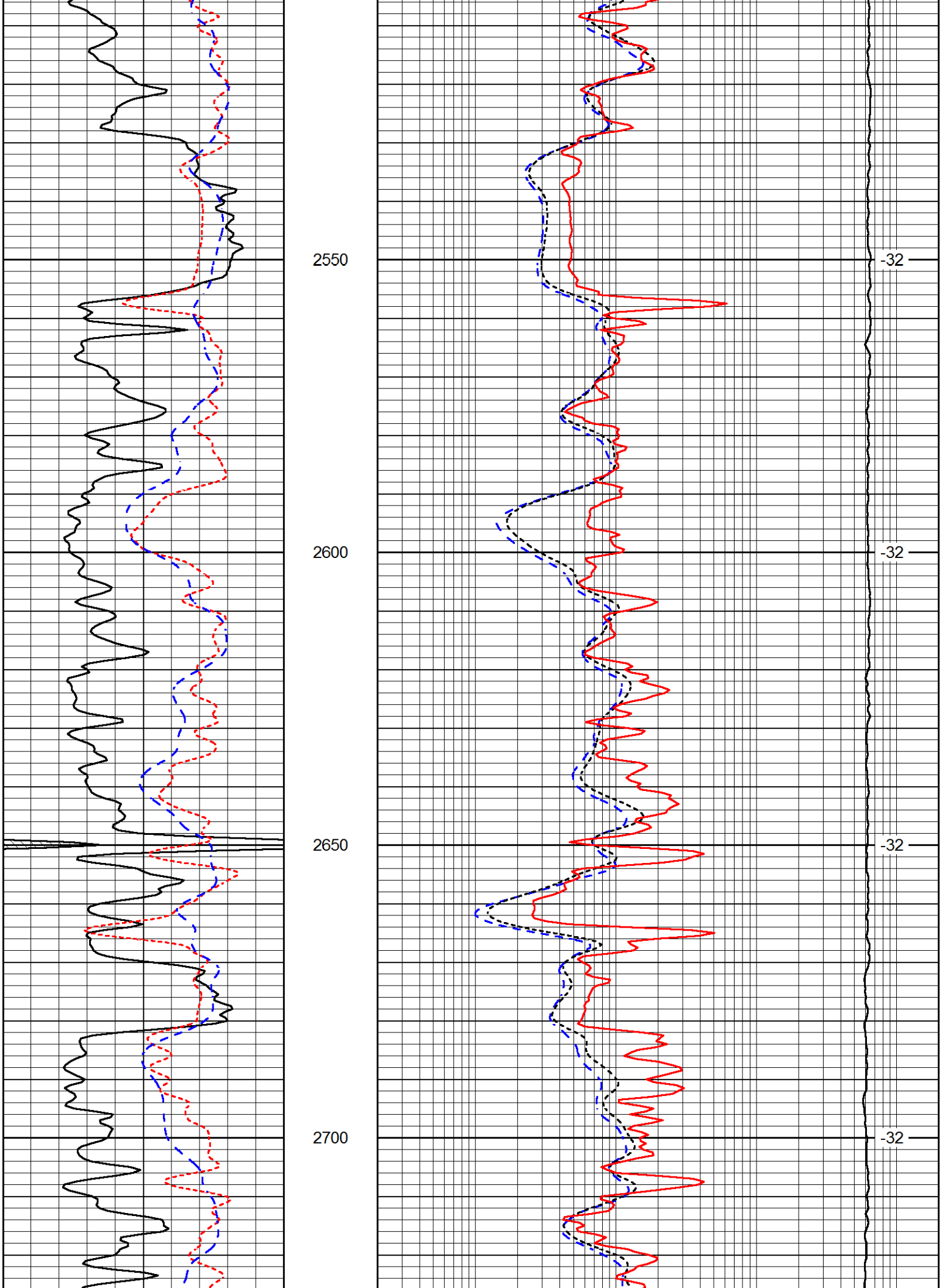
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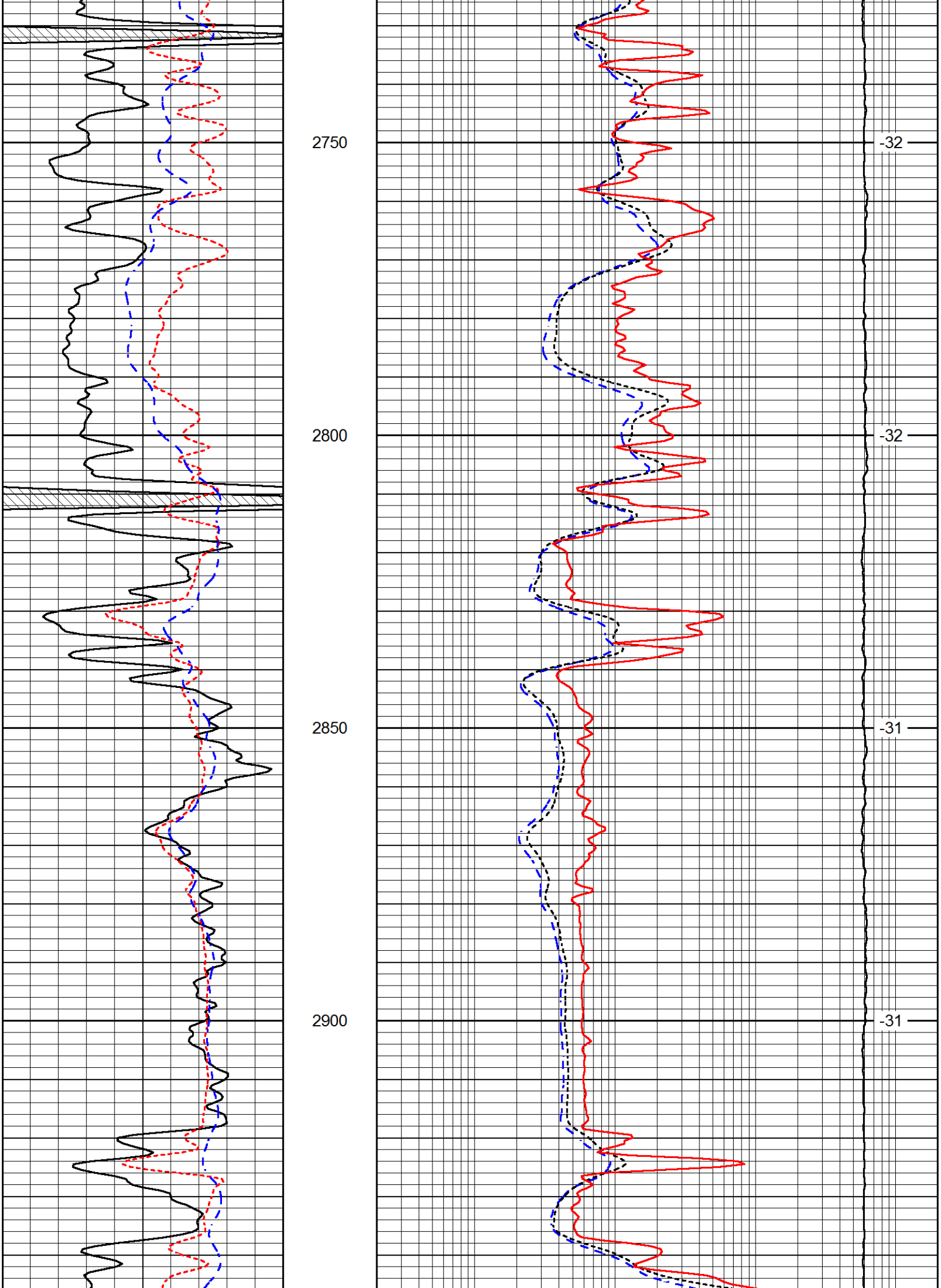
LSPD
(ft/min)

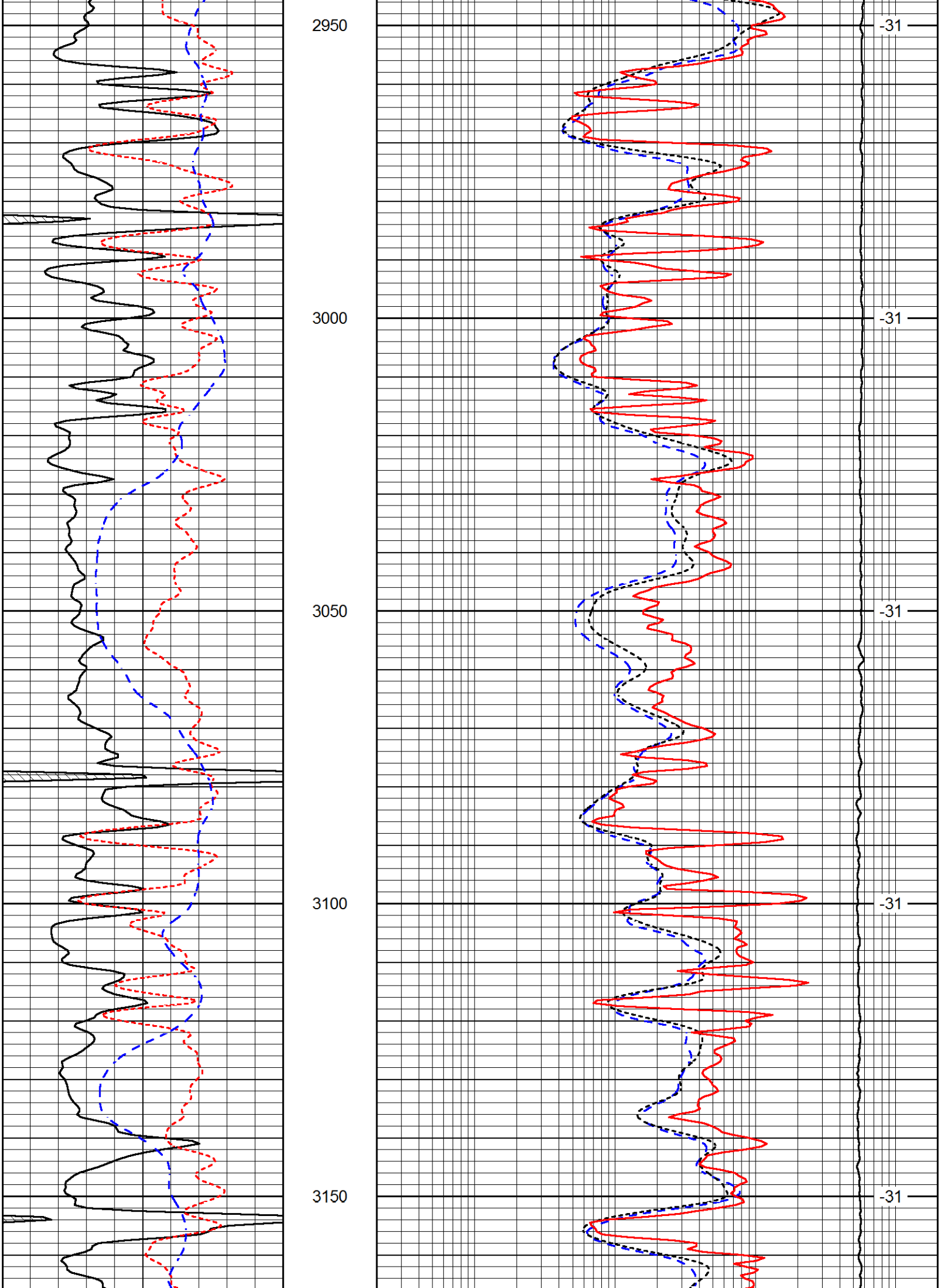
Database File	caroden_thelma_1hd.db
Dataset Pathname	DIL/castkml
Presentation Format	dil
Dataset Creation	Wed May 18 00:04:48 2016
Charted by	Depth in Feet scaled 1:240

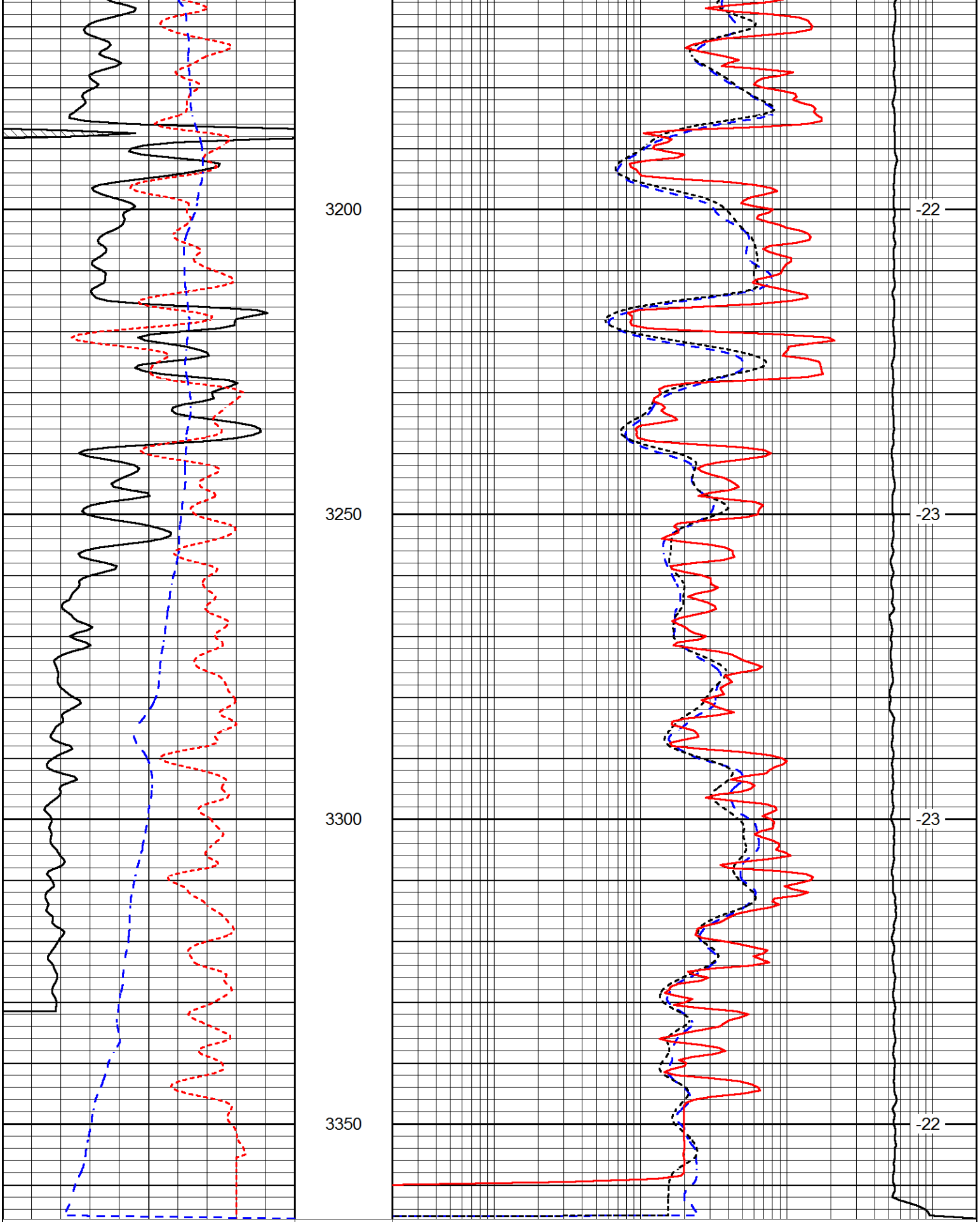

0
Gamma Ray (GAPI)
150
-160
RxoRt
40
-200
SP (mV)
0
0.2
Deep Resistivity (Ohm-m)
2000
0.2
Medium Resistivity (Ohm-m)
2000
0.2
Shallow Resistivity (Ohm-m)
2000
10000
Line Tension (lb)
0
LSPD
(ft/min)
2100
2150
2200
2250
-33
-33
-33
-33


2300
2350
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2500
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LSPD (ft/min)