PIONEER

Pioneer Energy Services

Dual Induction Log

API No. 15-147-20701-00-00

Company Bach Oil Production

Well Candy Krafft #1

Field Woodruff

County Phillips State Kansas

Location 1000' FSL & 330' FWL

Sec: 12 Twp: 1S Rge: 19W

Other Services
CNL/CDL
MEL

Elevation
K.B. 2070
D.F.
G.L. 2065

Permanent Datum Ground Level Elevation 2065
Log Measured From Kelly Bushing 5 Ft. Above Perm. Datum
Drilling Measured From Kelly Bushing

Date	2/11/2013			
Run Number	One			
Depth Driller	3547			
Depth Logger	3550			
Bottom Logged Interval	3549			
Top Log Interval	200			
Casing Driller	8.625 @ 209			
Casing Logger	210			
Bit Size	7.875			
Type Fluid in Hole	Chemical			
Salinity,ppm CL	400			
Density / Viscosity	8.7 58			
pH / Fluid Loss	10.5 5.6			
Source of Sample	Flowline			
Rm @ Meas. Temp	0.70 @ 43			
Rmf @ Meas. Temp	0.53 @ 43			
Rmc @ Meas. Temp	0.95 @ 43			
Source of Rmf / Rmc	Charts			
Rm @ BHT	0.23 @ 113			
Operating Rig Time	4 Hours			
Max. Rec. Temp. F	113			
Equipment Number	91			
Location	Hays			
Recorded By	D. Schmidt			
Witnessed By	Bob Petersen			

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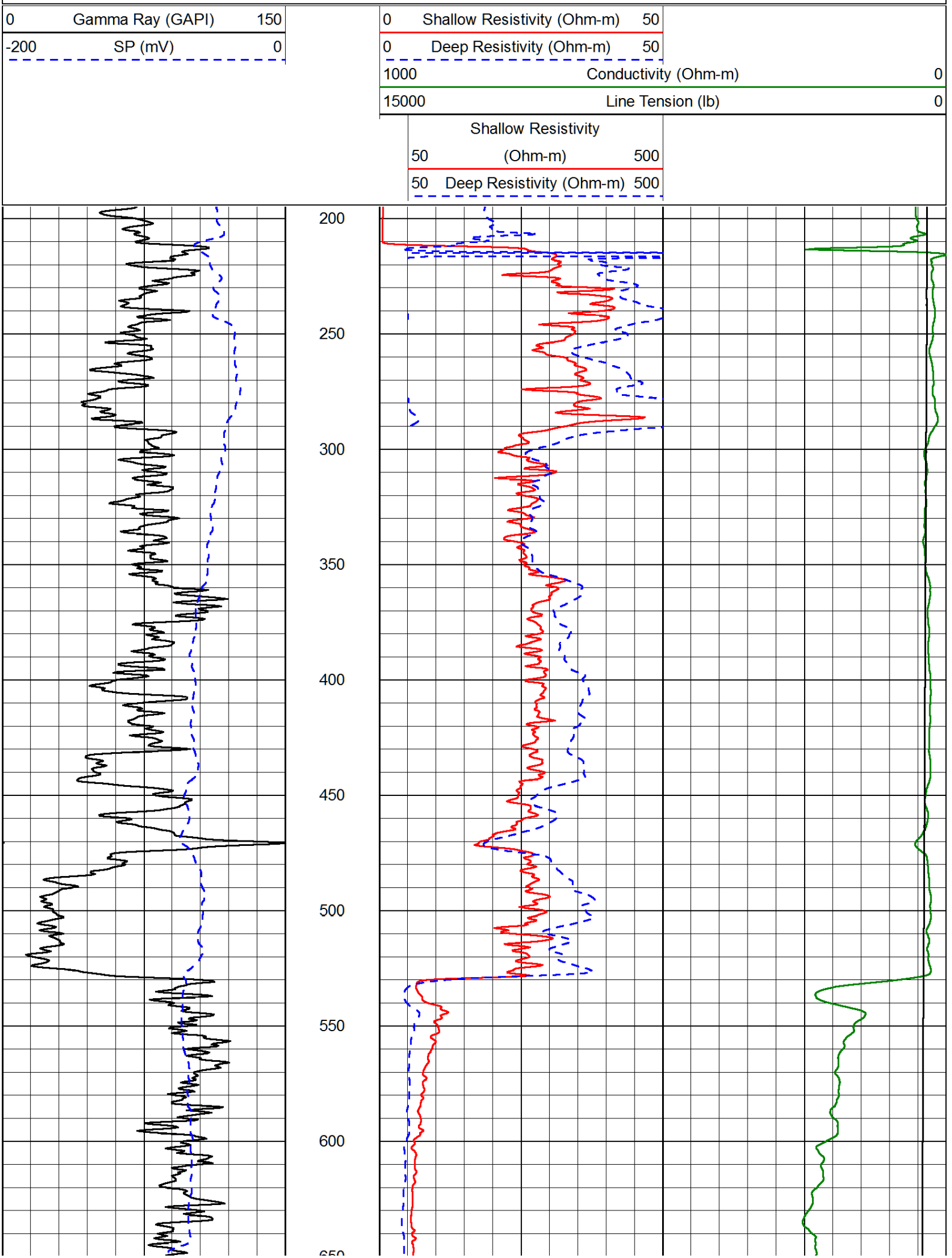
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

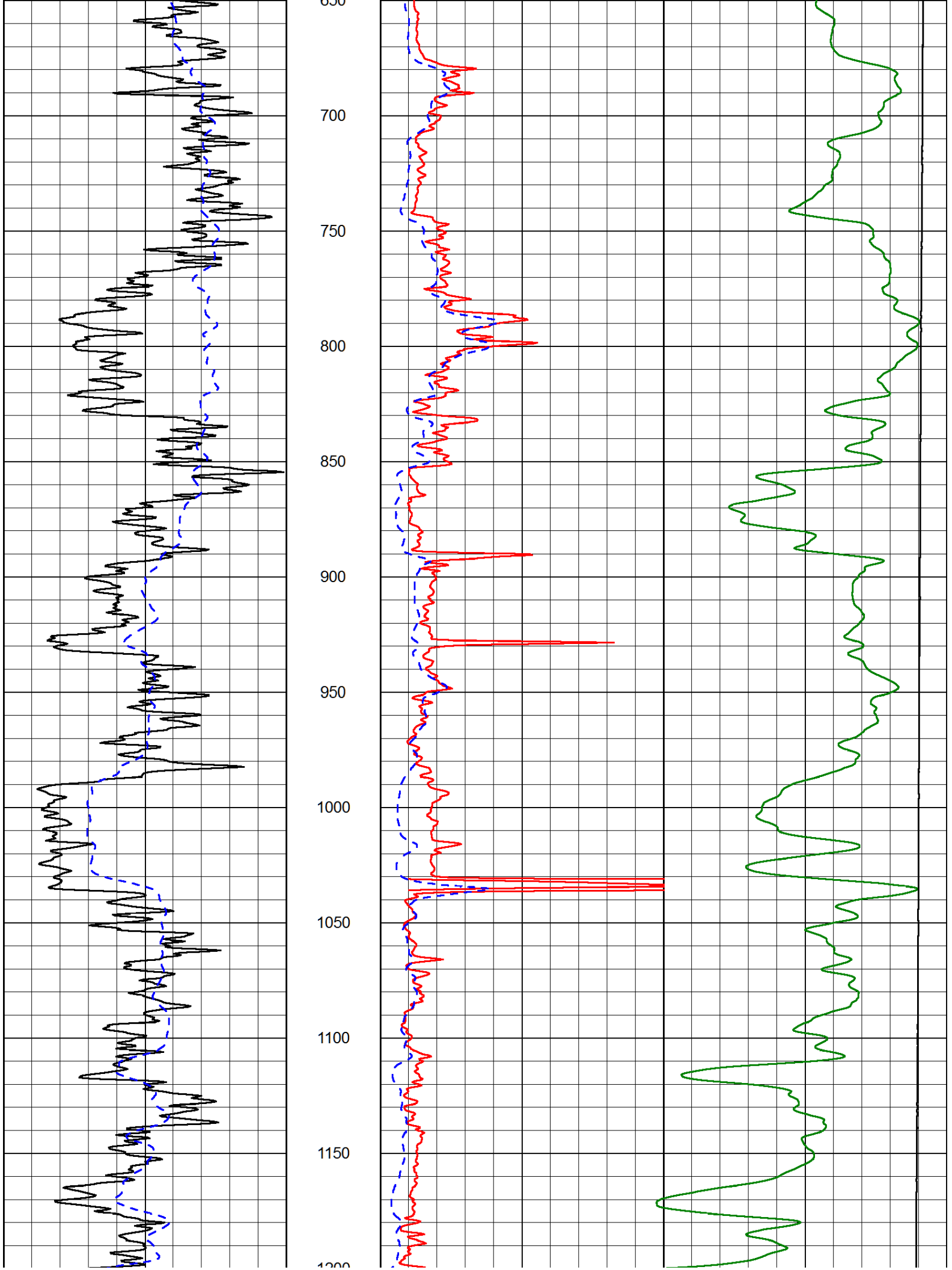
Comments

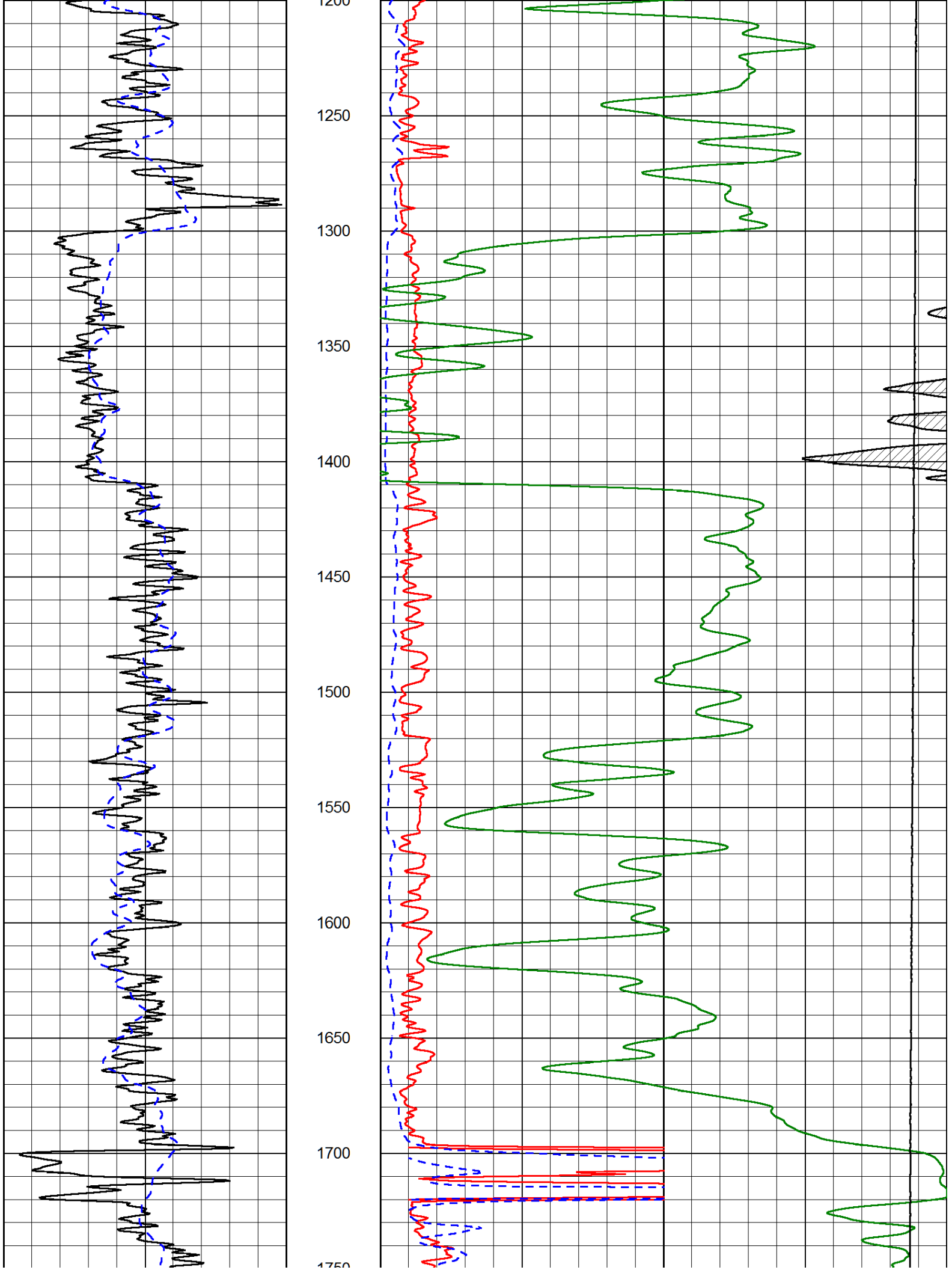
Thank you for using Log-Tech, Inc.
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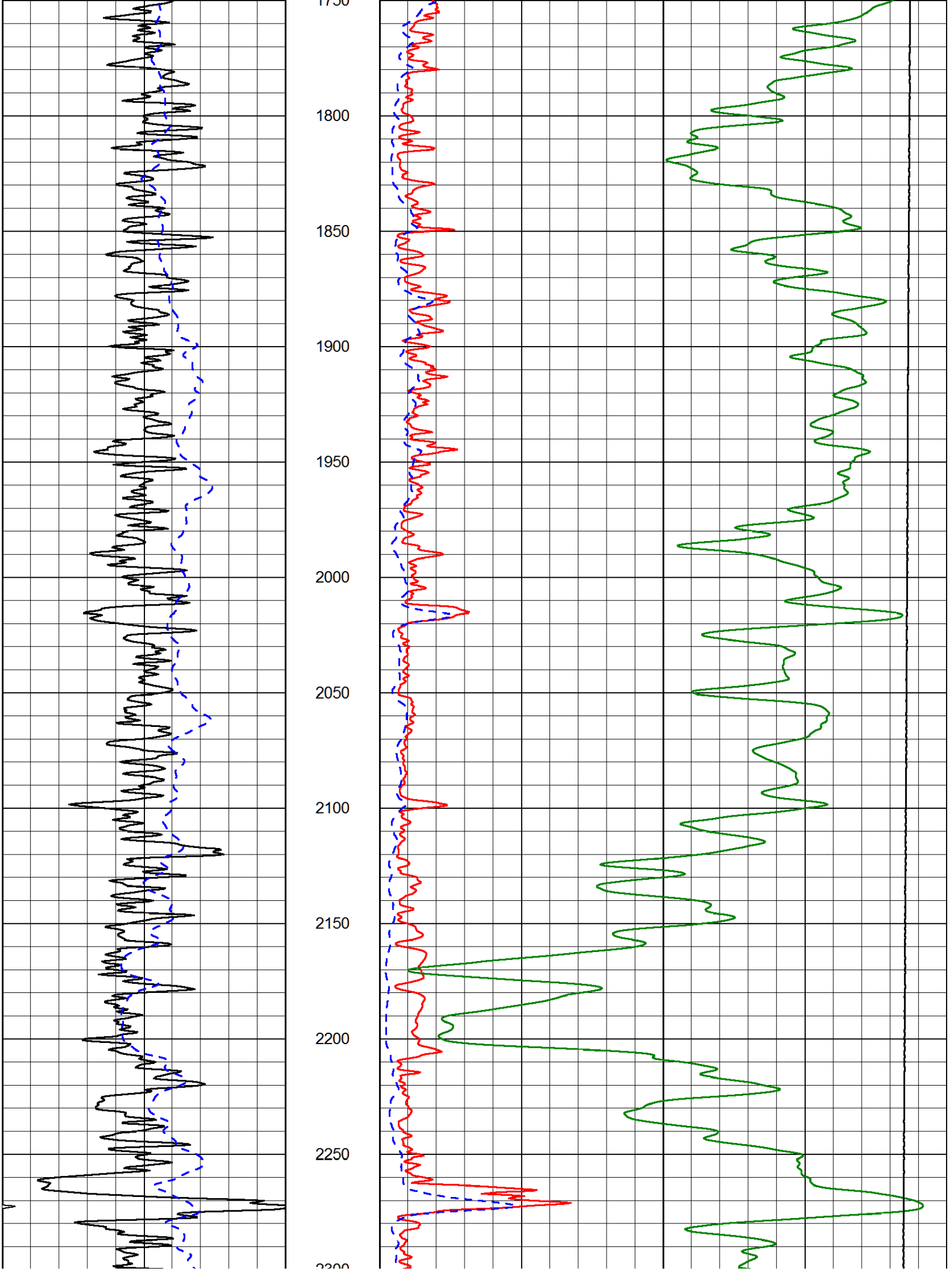
Phillipsburg,
North to Hwy 383, 3 West to 500th, 1 South,
East & South into

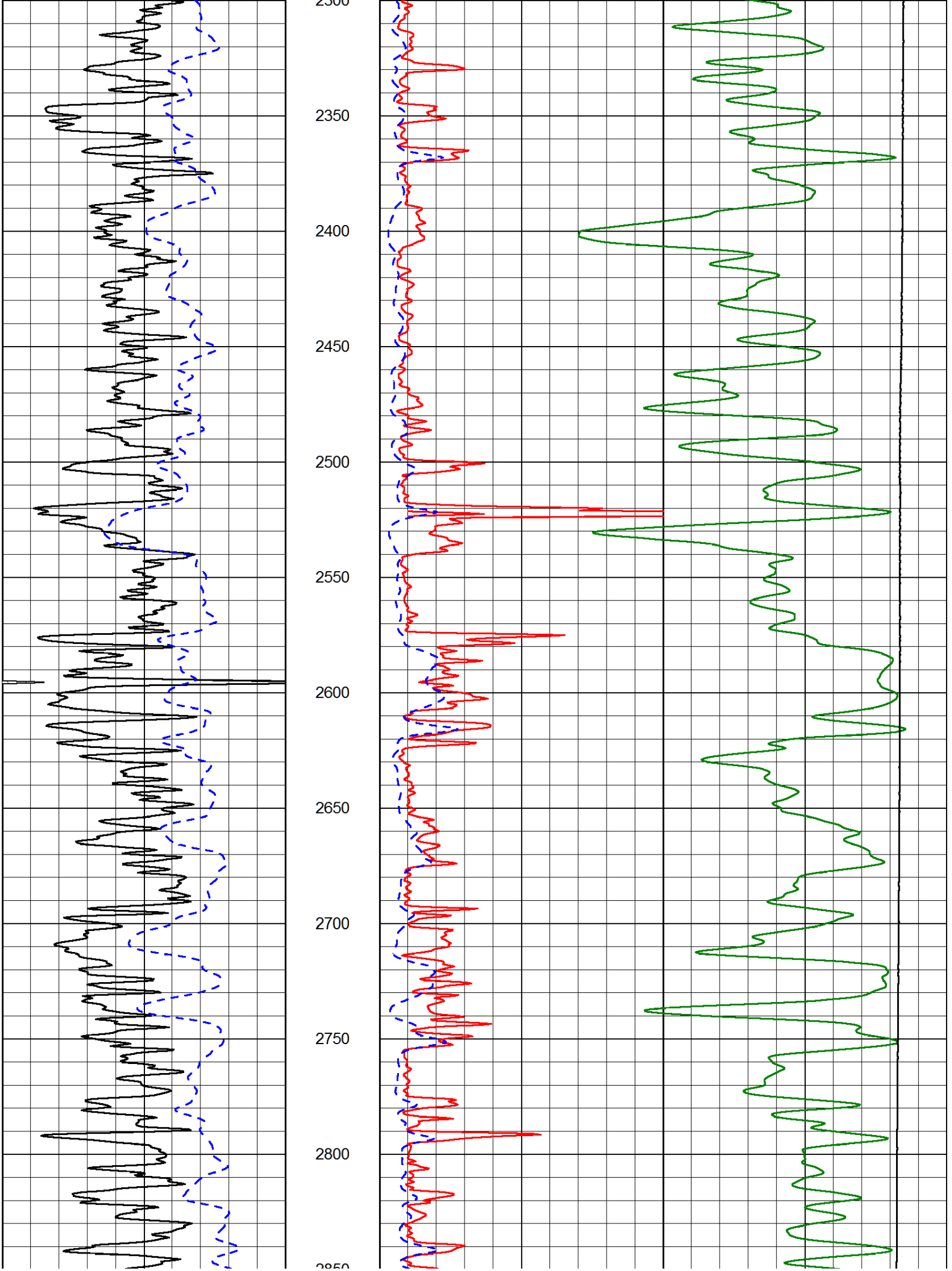
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Charted by:	Depth in Feet scaled 1:600

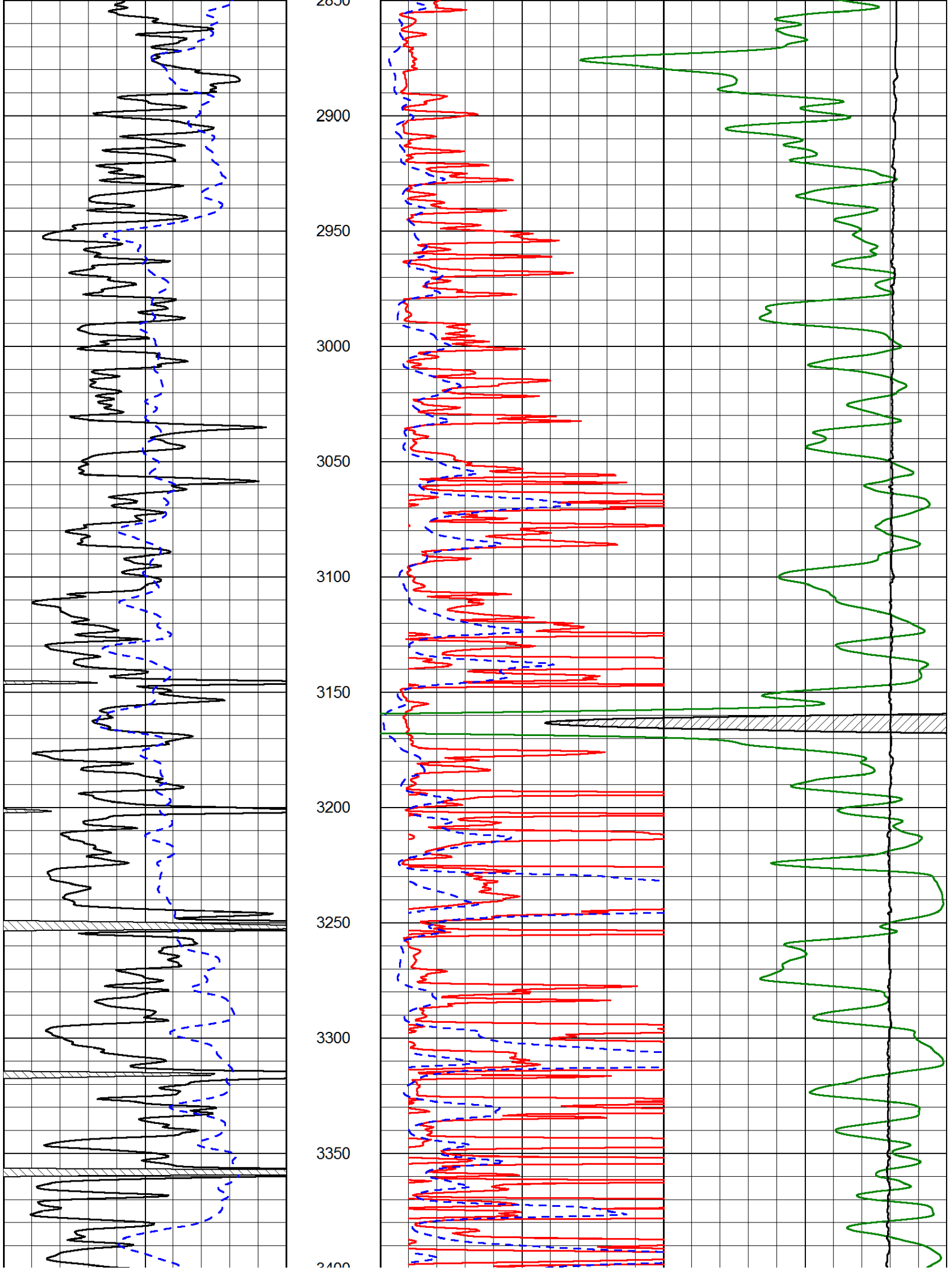

0 Gamma Ray (GAPI) 150
-200 SP (mV) 0
0 Shallow Resistivity (Ohm-m) 50
0 Deep Resistivity (Ohm-m) 50
1000 Conductivity (Ohm-m) 0
15000 Line Tension (lb) 0
Shallow Resistivity
50 (Ohm-m) 500
50 Deep Resistivity (Ohm-m) 500
200
250
300
350
400
450
500
550
600
650

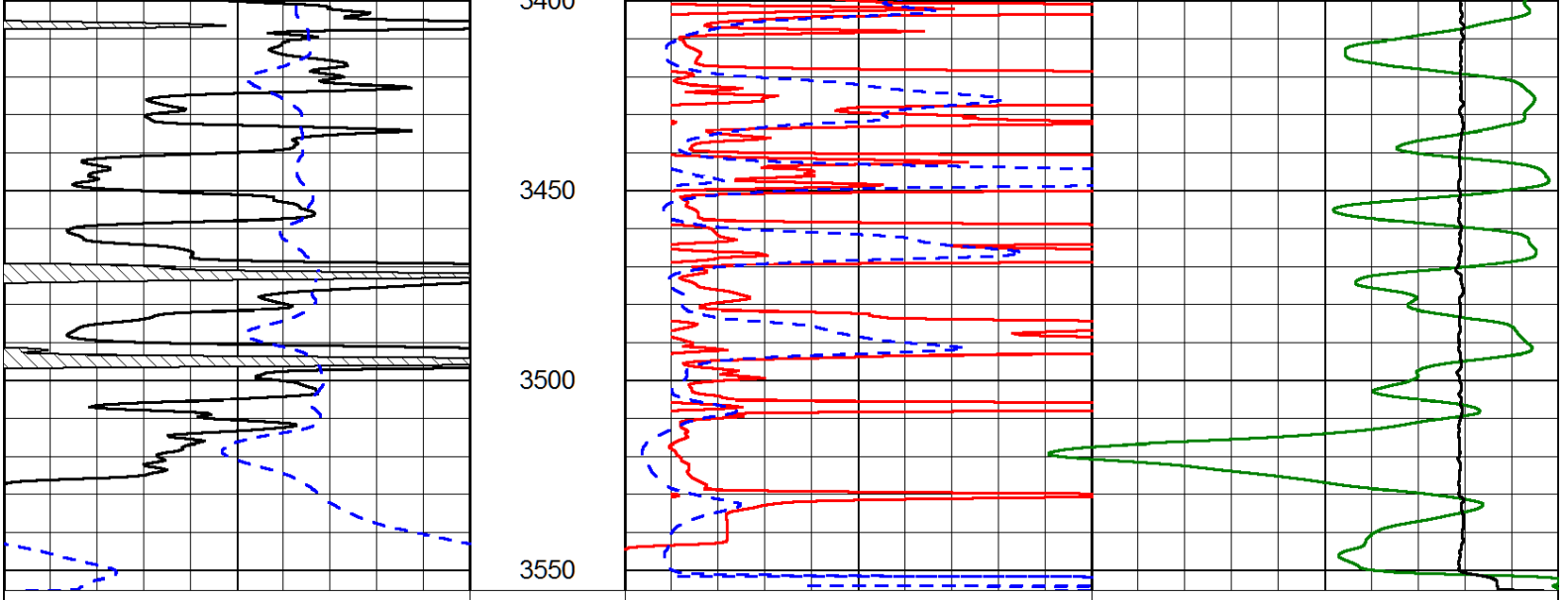

650
700
750
800
850
900
950
1000
1050
1100
1150
1200


1200
1250
1300
1350
1400
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1500
1550
1600
1650
1700
1750

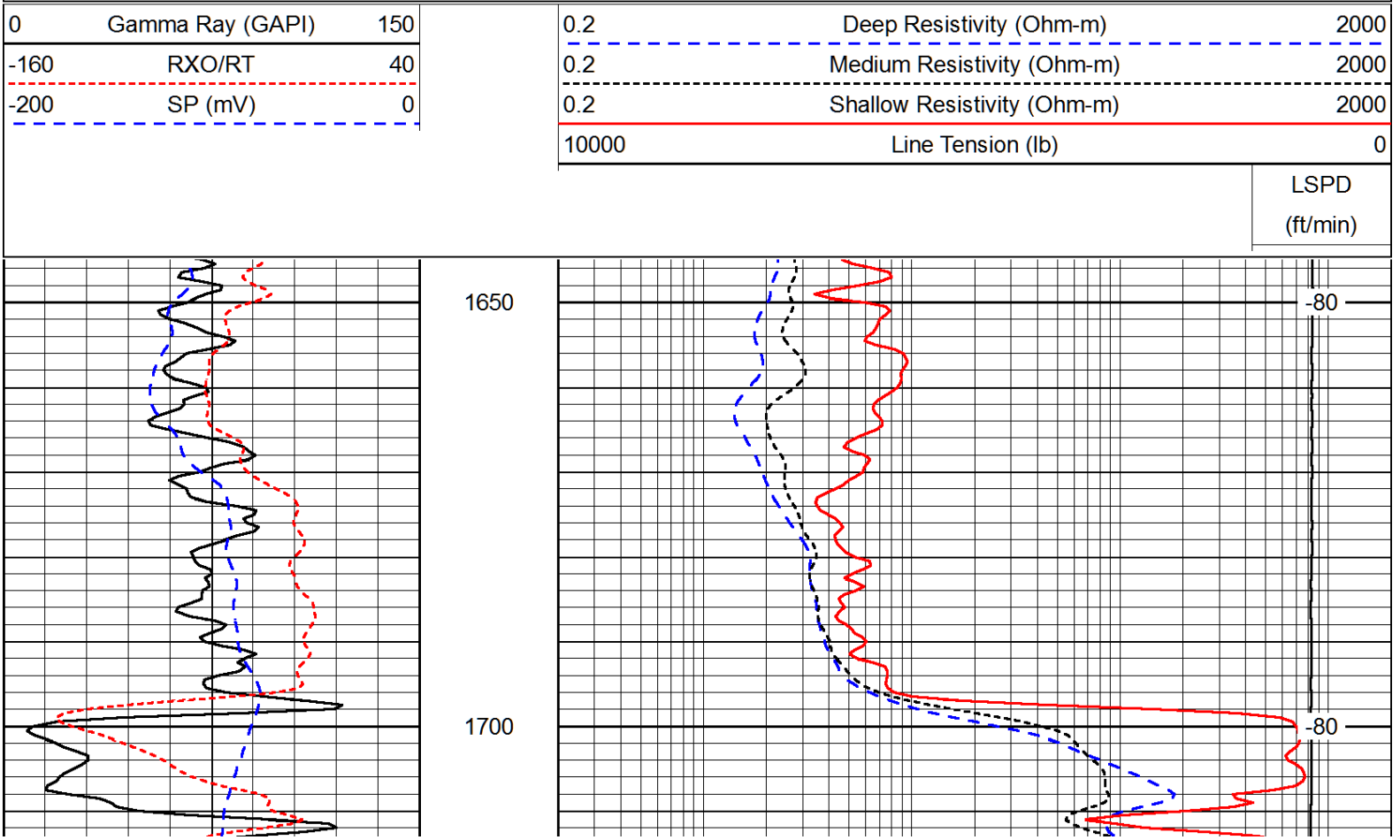

1750
1800
1850
1900
1950
2000
2050
2100
2150
2200
2250
2300

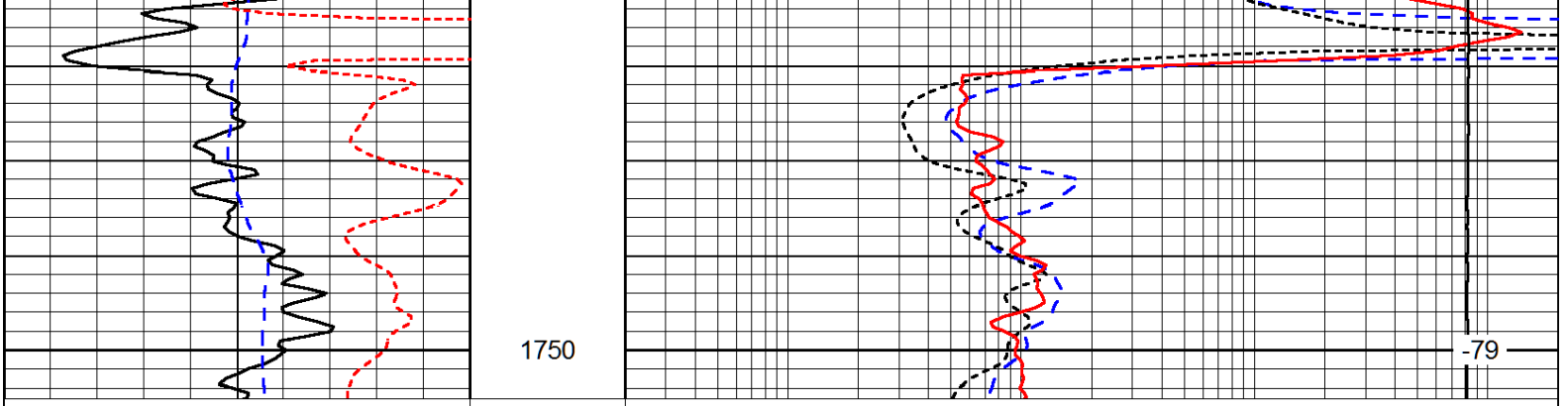

2350
2400
2450
2500
2550
2600
2650
2700
2750
2800


2850
2900
2950
3000
3050
3100
3150
3200
3250
3300
3350
3400



Database File: bach_021013hd.db
Dataset Pathname: dil/bchstck
Presentation Format: dil
Dataset Creation: Mon Feb 11 09:22:41 2013
Charted by: Depth in Feet scaled 1:240





0	Gamma Ray (GAPI)	150
-160	RXO/RT	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

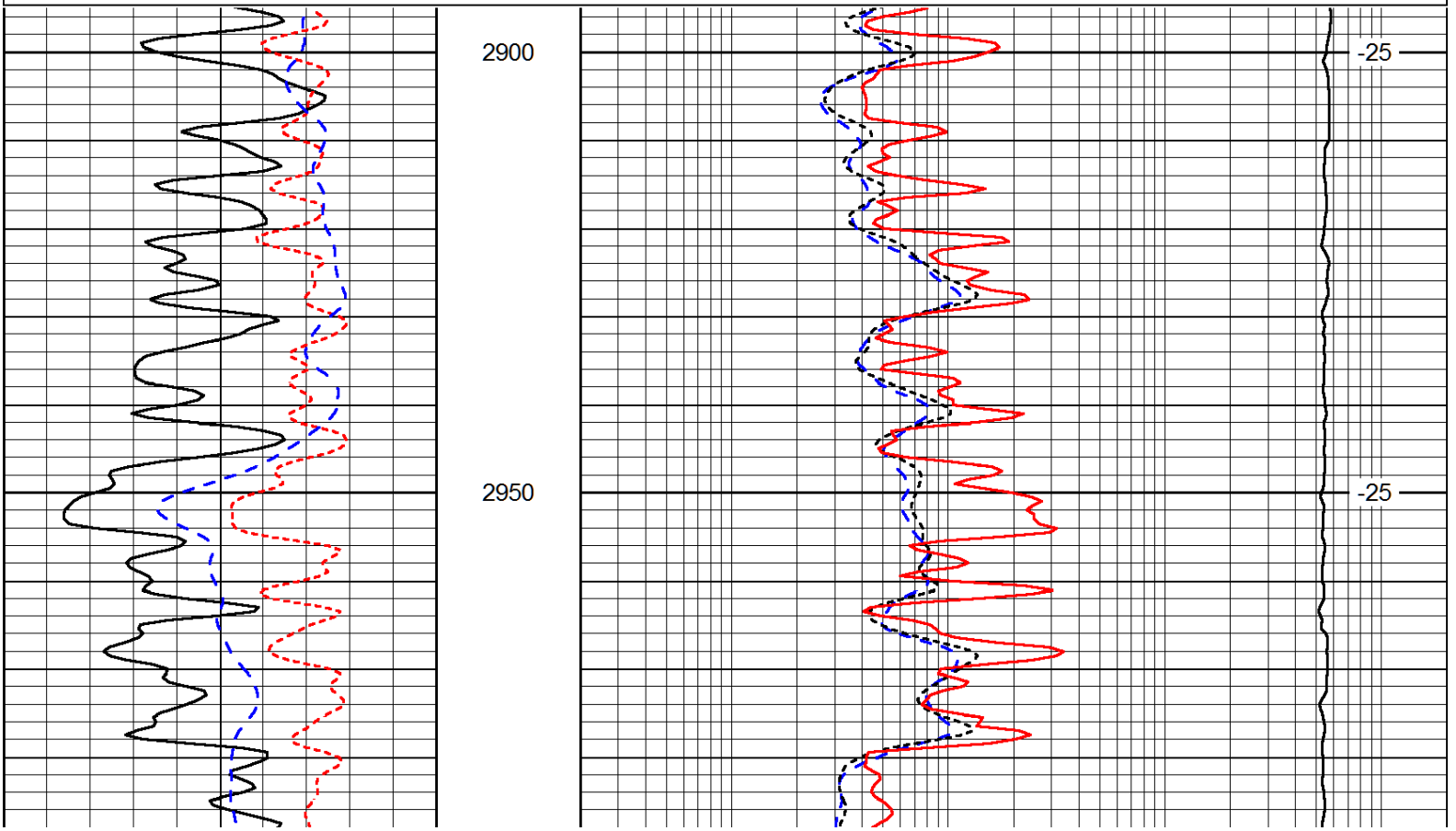
LSPD (ft/min)

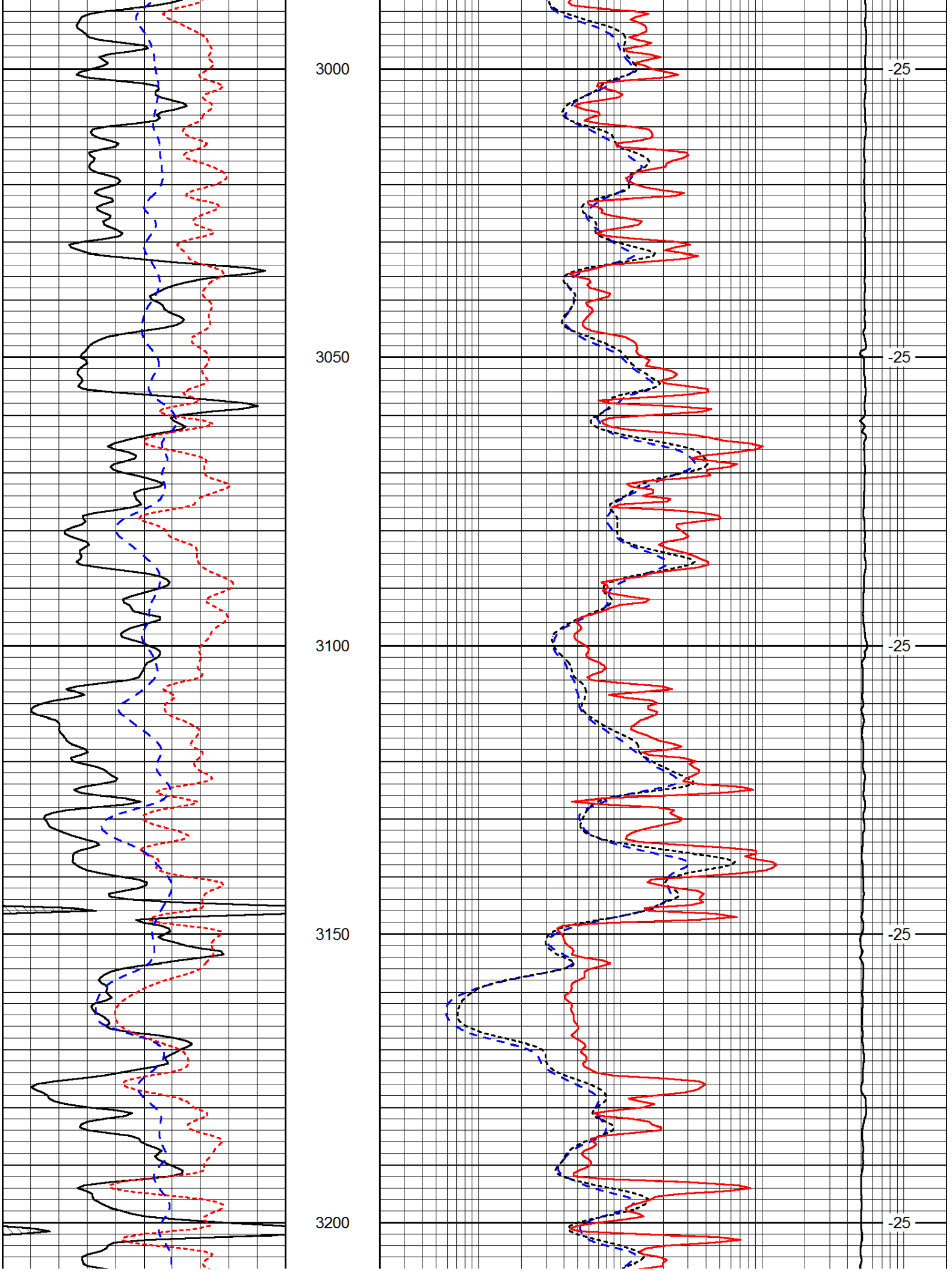
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Charted by:	Depth in Feet scaled 1:240

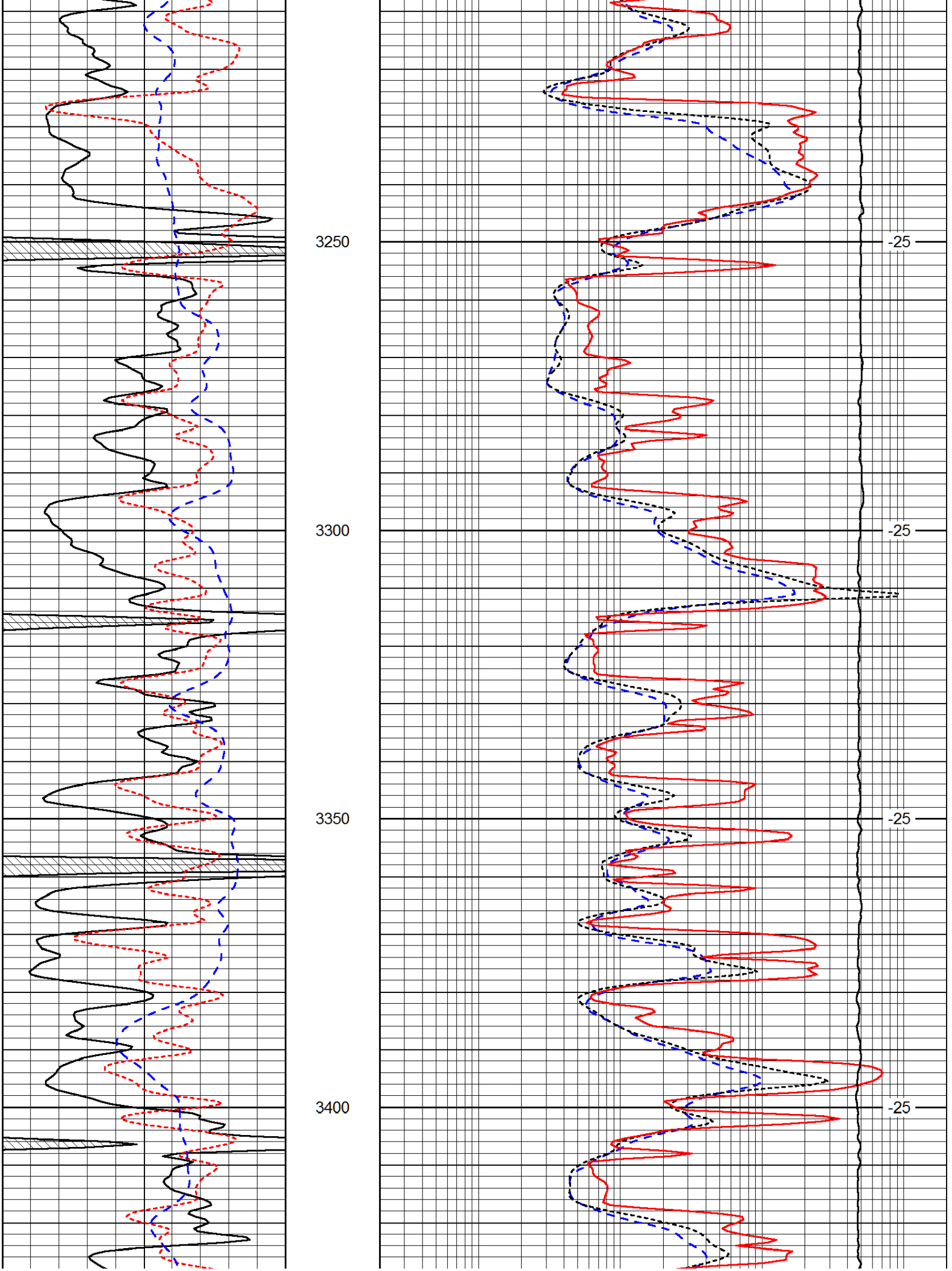
0	Gamma Ray (GAPI)	150
-160	RXO/RT	40
-200	SP (mV)	0

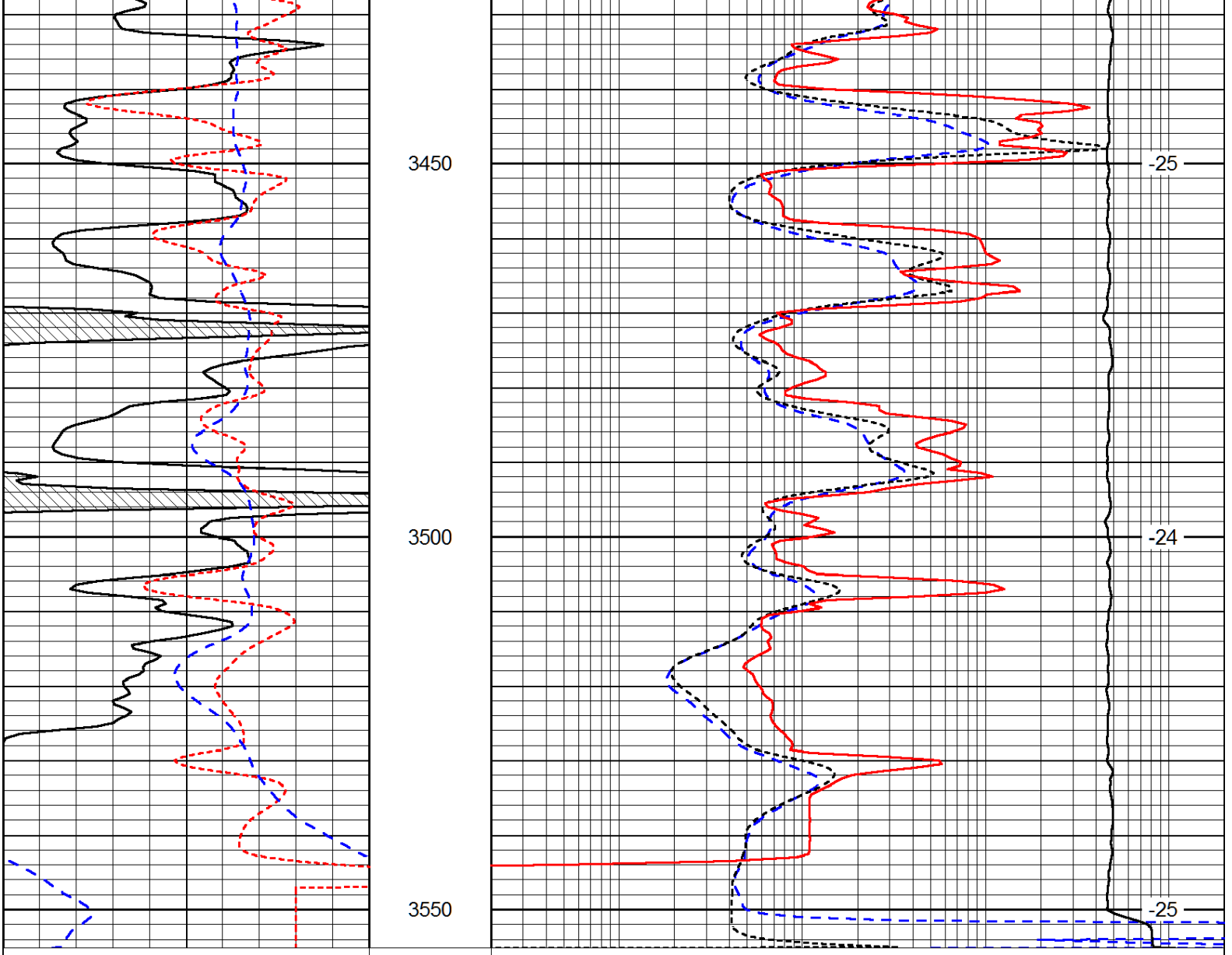
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0

LSPD (ft/min)




3000
3050
3100
3150
3200
-25
-25
-25
-25


3250
3300
3350
3400
-25
-25
-25
-25



0	Gamma Ray (GAPI)	150
-160	RXO/RT	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)