



Pioneer Energy Services

Dual Induction Log

15-165-22084-00-00

API No.	Company Wausau Development Corporation	
	Well Holoperik # 1	
	Field Rush Center SE	
	County Rush	State Kansas
	Location 1080' FNL & 1980' FEL	
	Sec: 36	Twp: 18 S Rge: 18 W
Permanent Datum	Ground Level	Elevation 2023
Log Measured From	Kelly Bushing	7 Ft. Above Perm. Datum
Drilling Measured From	Kelly Bushing	
		Other Services CNL/CDL MEL/BHCS
		Elevation K.B. 2030 D.F. G.L. 2023

Date	07-20-2014
Run Number	One
Depth Driller	3823
Depth Logger	3826
Bottom Logged Interval	3825
Top Log Interval	1150
Casing Driller	8.625 @ 1163
Casing Logger	1163
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	4600
Density / Viscosity	9.2 55
pH / Fluid Loss	9.5 9.6
Source of Sample	Flowline
Rm @ Meas. Temp	0.80 @ 90
Rmf @ Meas. Temp	0.60 @ 90
Rmc @ Meas. Temp	1.08 @ 90
Source of Rmf / Rmc	Charts
Rm @ BHT	0.63 @ 114
Operating Rig Time	4 Hours
Max Rec. Temp. F	114
Equipment Number	17
Location	Hays
Recorded By	Y. Ruiz
Witnessed By	Steve VanBuskink

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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

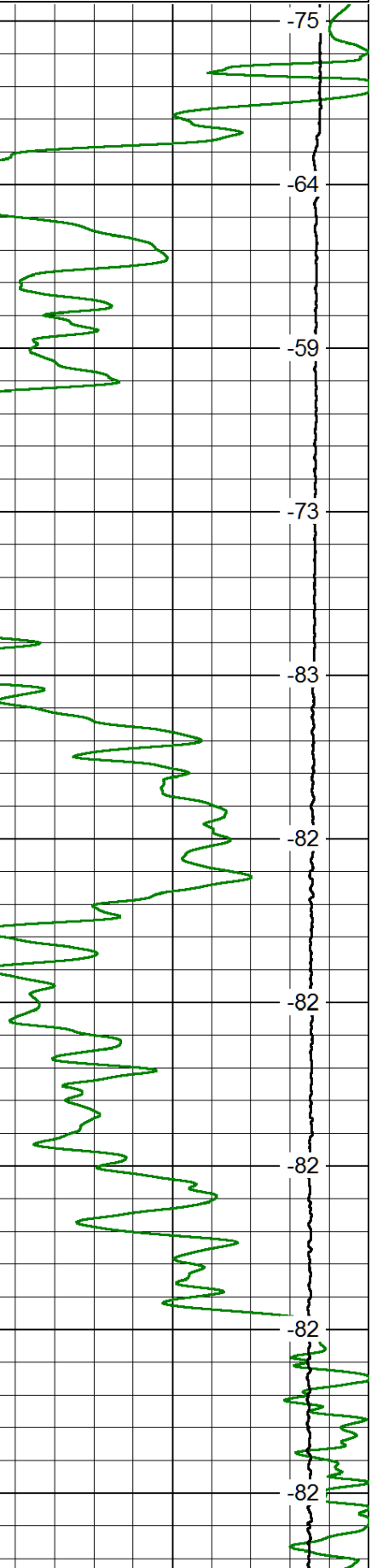
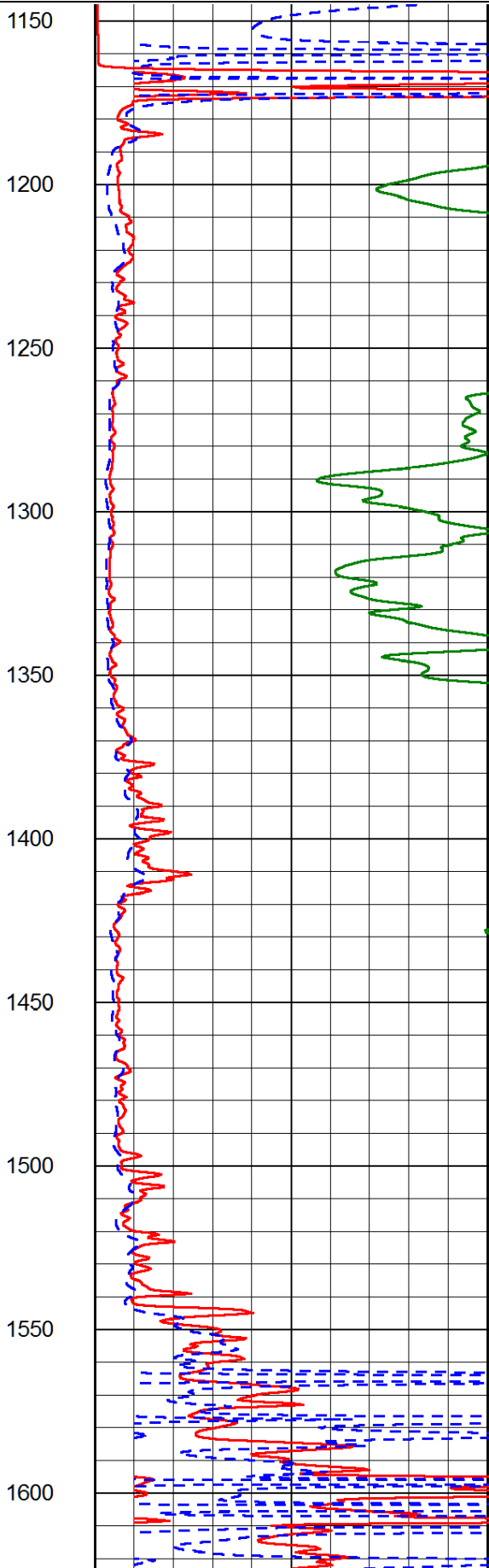
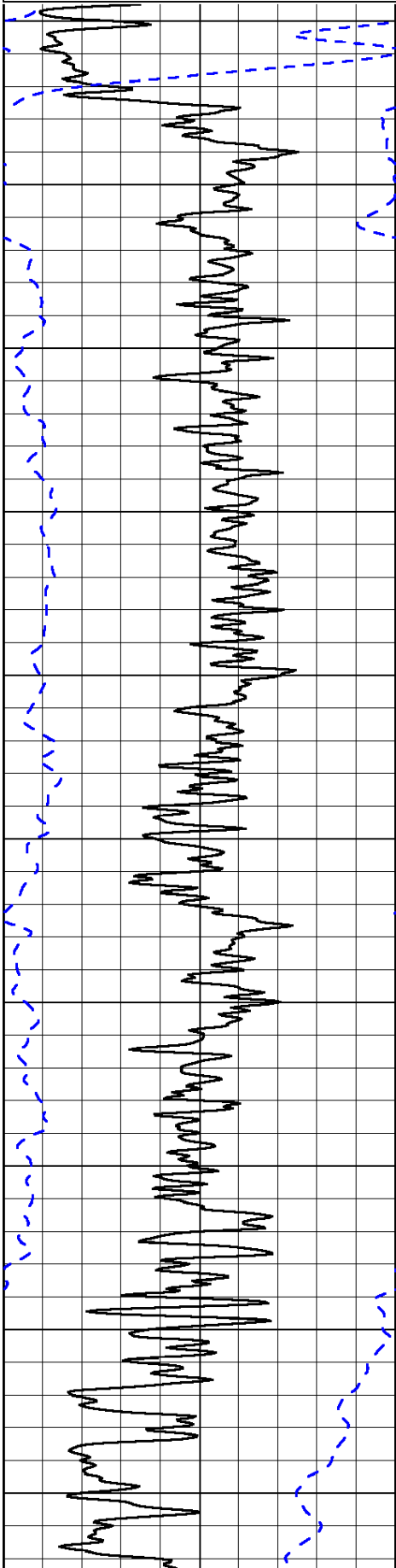
Thank you for using Log-Tech, Inc.
 (785) 625-3858
 Rush Center,
 3 East, 1 South, 1/2 West,
 South into

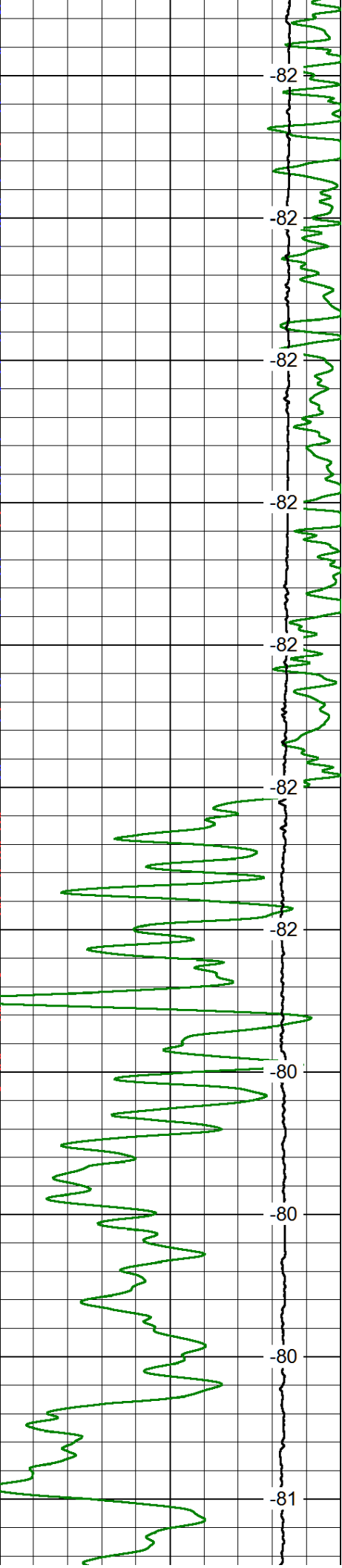
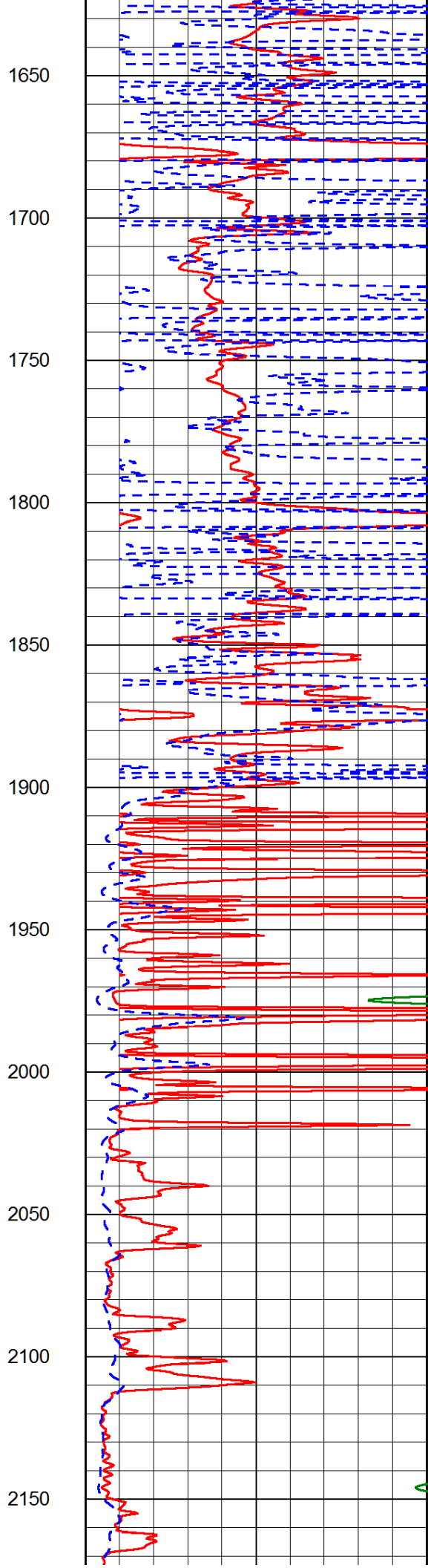
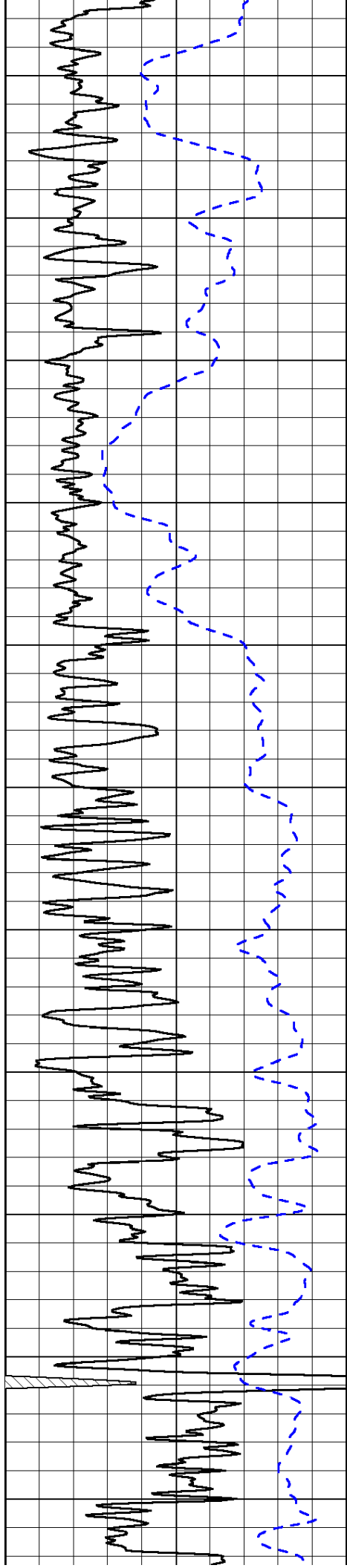
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 Presentation Format: dil2in
 Dataset Creation: Sun Jul 20 20:34:35 2014
 Charted by: Depth in Feet scaled 1:600

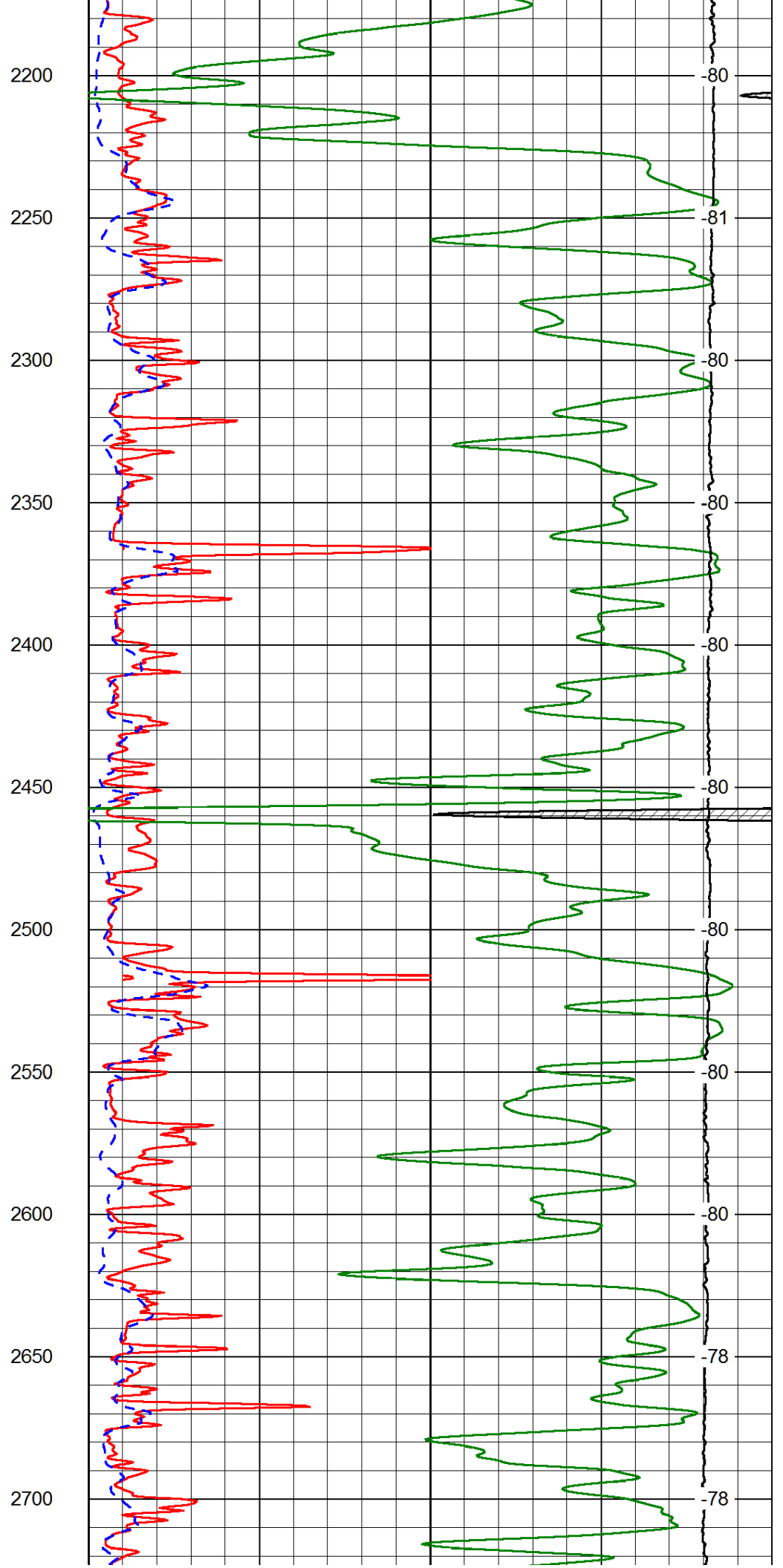
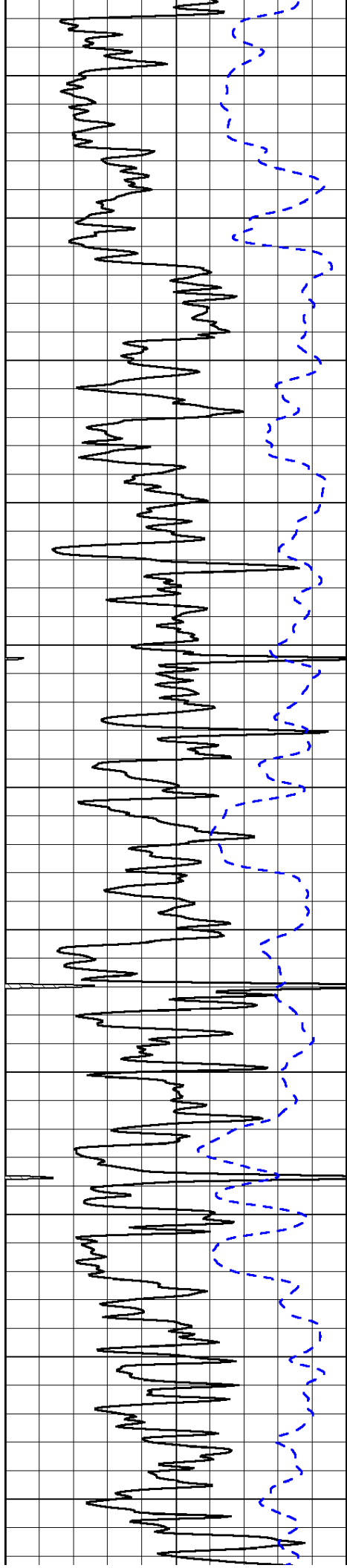
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-200 SP (mV) 0

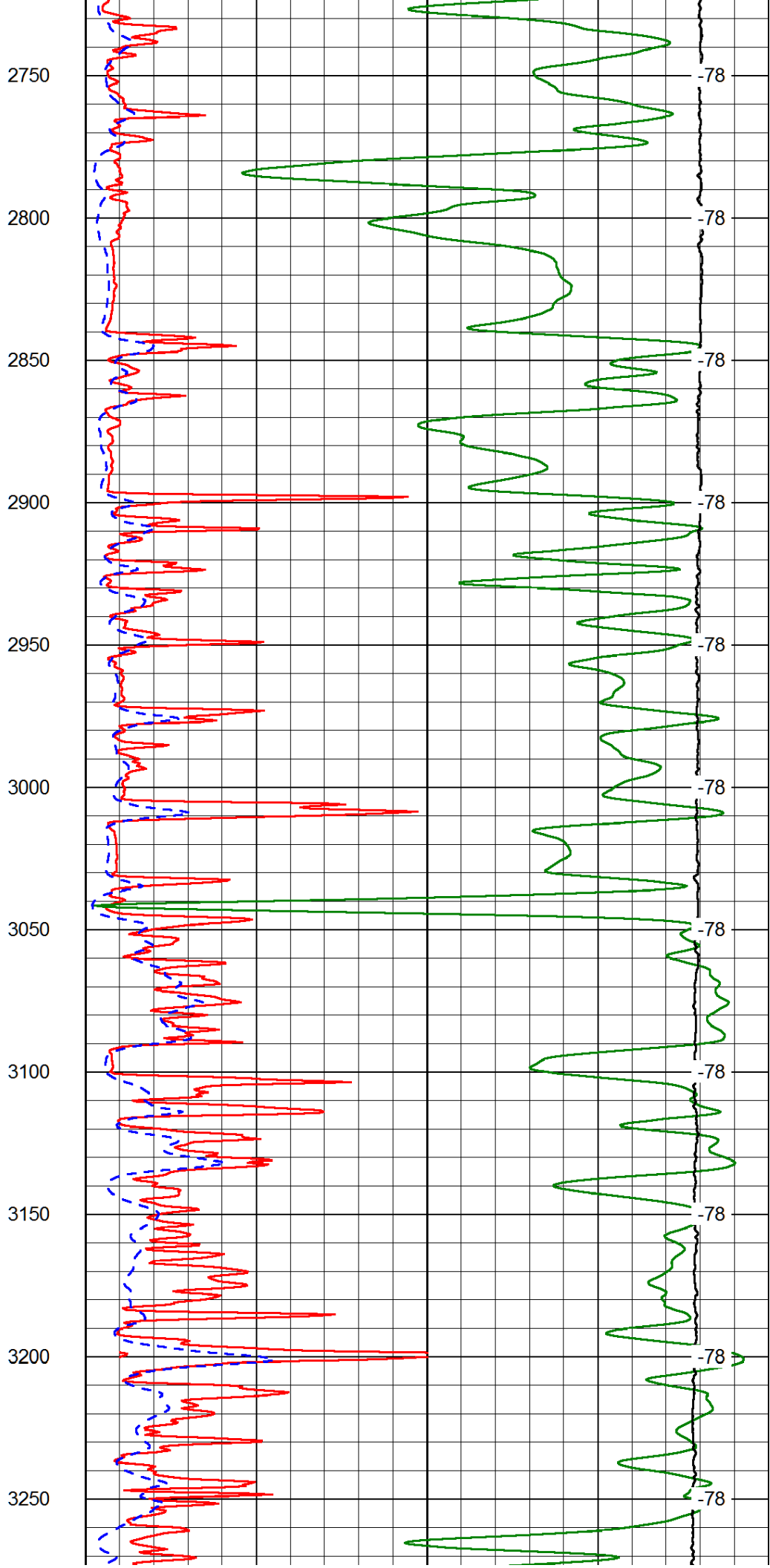
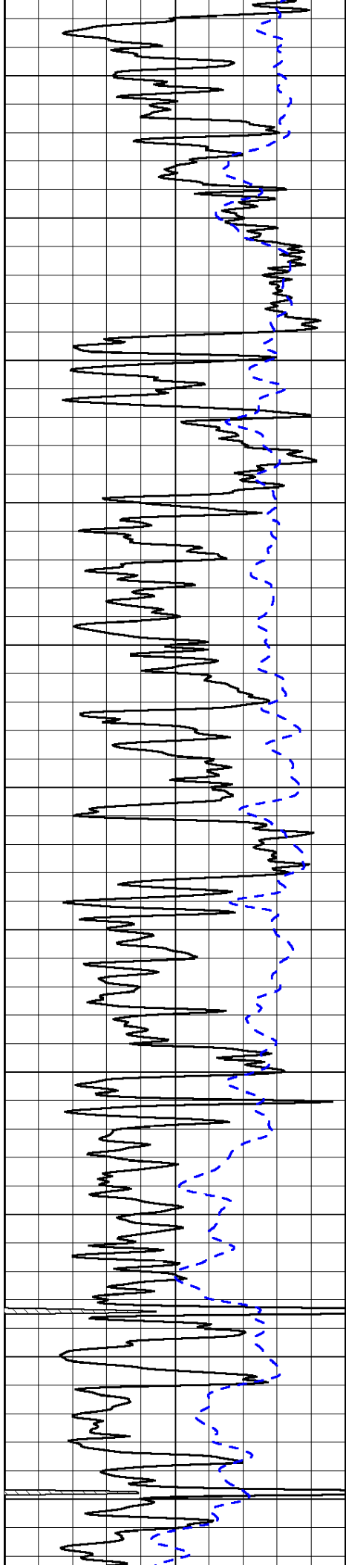
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0 Deep Resistivity 50
1000 Conductivity 0
15000 Line Tension 0
50 Shallow Resistivity 500
50 Deep Resistivity 500

LSPD





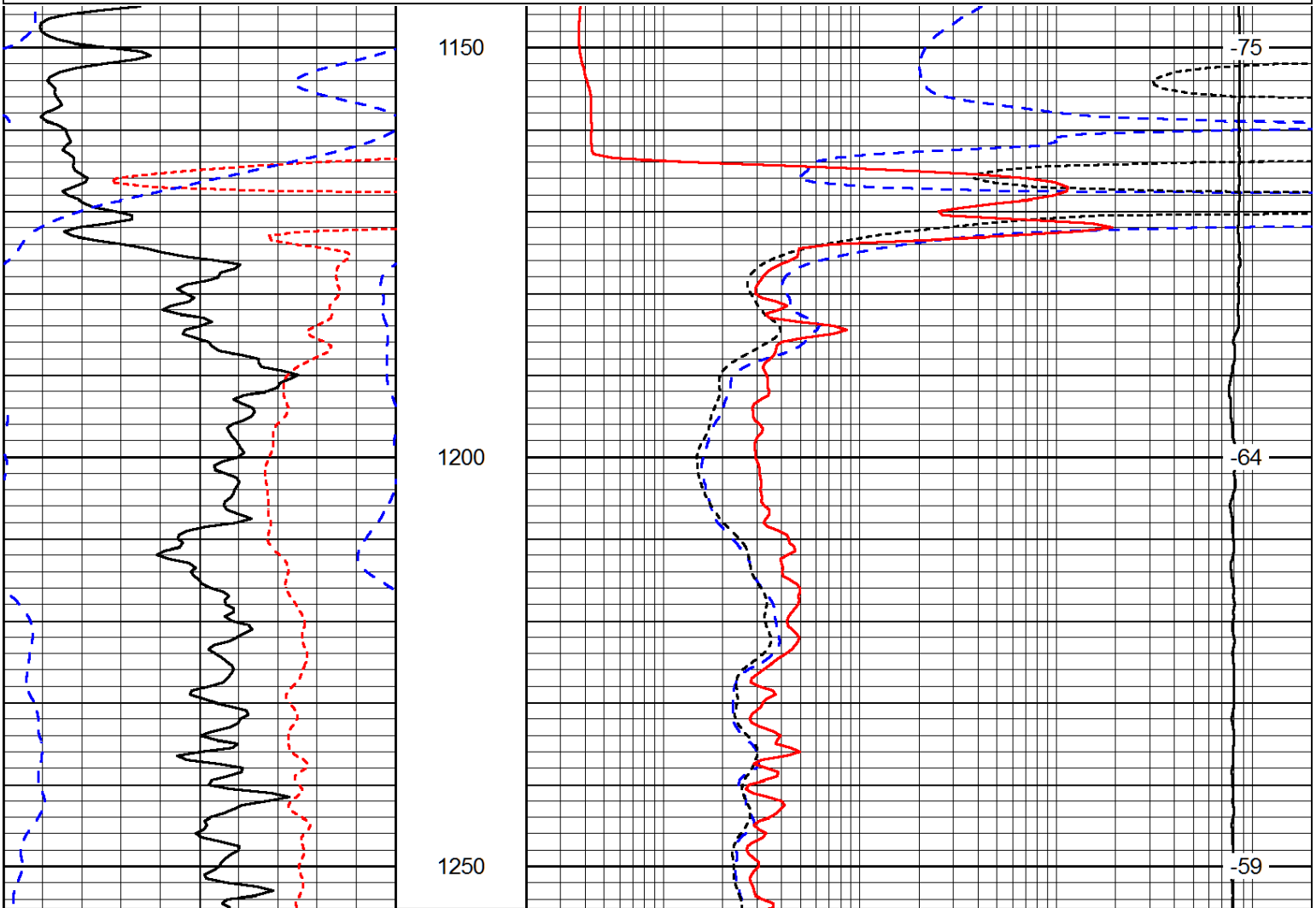




0	Gamma Ray	150	0	Shallow Resistivity	50	LSPD
-200	SP (mV)	0	0	Deep Resistivity	50	
			1000	Conductivity	0	
			15000	Line Tension	0	
			50	Shallow Resistivity	500	
			50	Deep Resistivity	500	

Database File: wausau_holoperik_1_hd.db
 Dataset Pathname: DIL/waustk
 Presentation Format: dil
 Dataset Creation: Sun Jul 20 20:34:35 2014
 Charted by: Depth in Feet scaled 1:240

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-160	RXO/RT	40	0.2	Medium Resistivity	2000	
-200	SP (mV)	0	0.2	Shallow Resistivity	2000	
			10000	Line Tension	0	



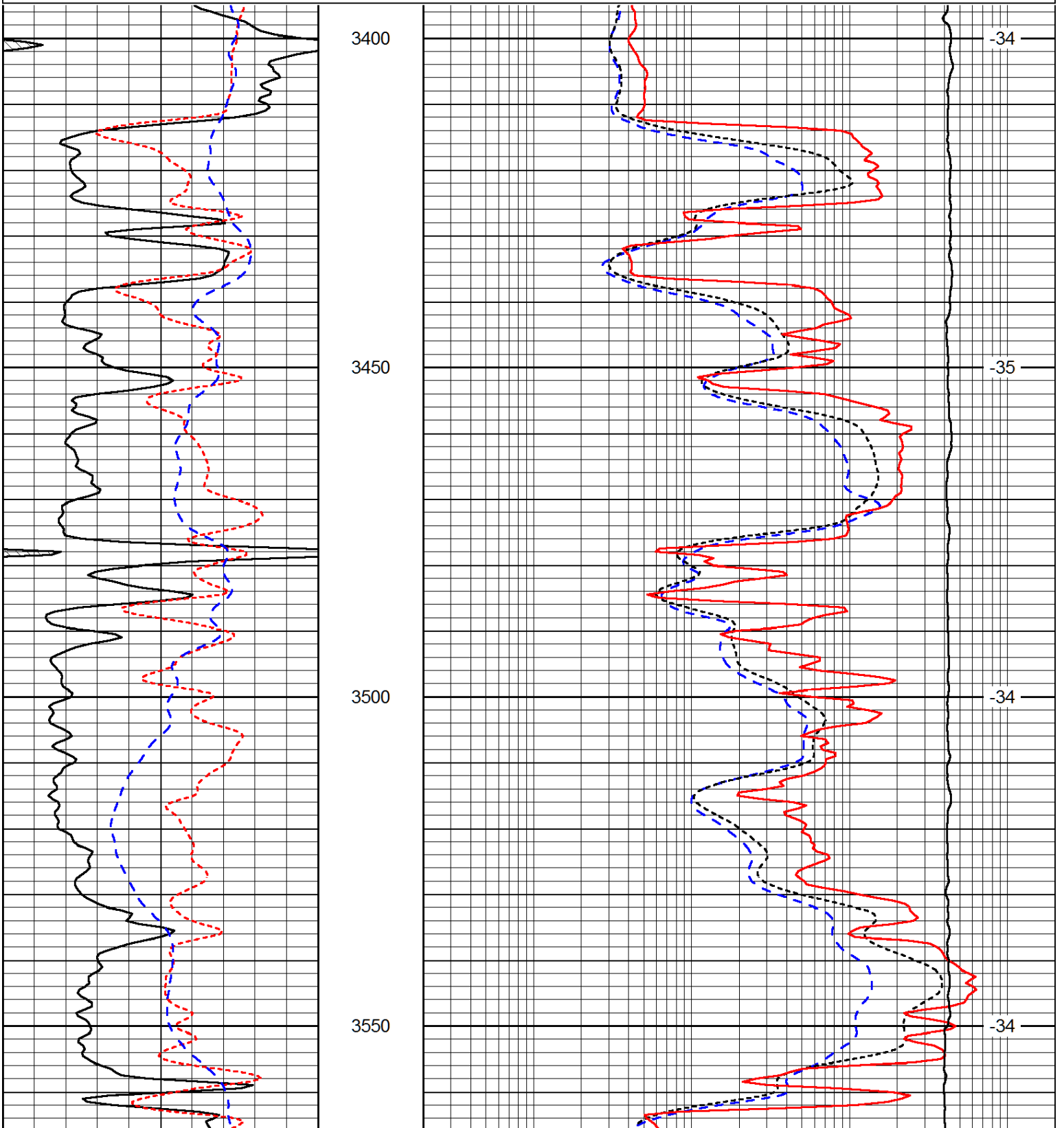
0	Gamma Ray	150	0.2	Deep Resistivity	2000	LSPD
-160	RXO/RT	40	0.2	Medium Resistivity	2000	
-200	SP (mV)	0	0.2	Shallow Resistivity	2000	
			10000	Line Tension	0	

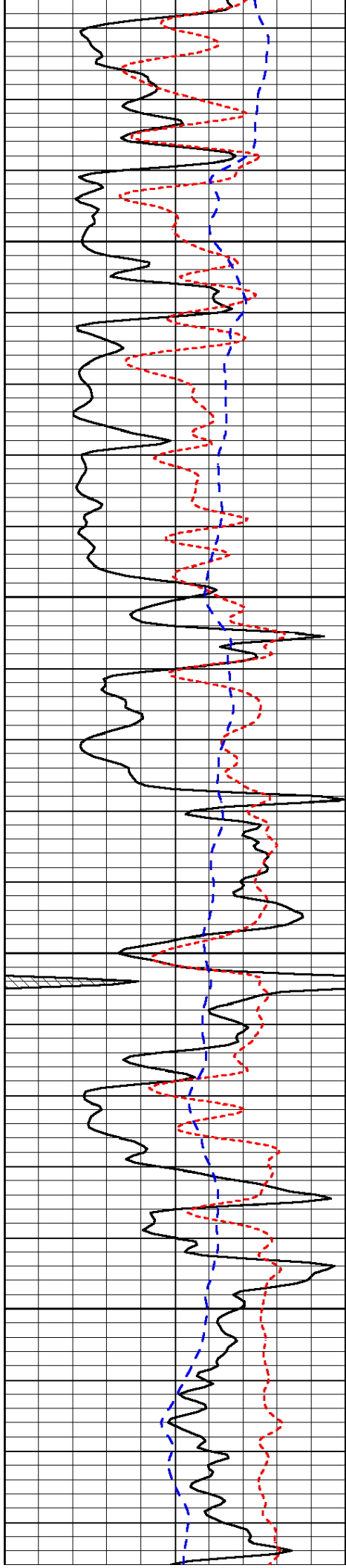
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0	Gamma Ray	150
-160	RXO/RT	40
-200	SP (mV)	0

0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
10000	Line Tension	0

LSPD



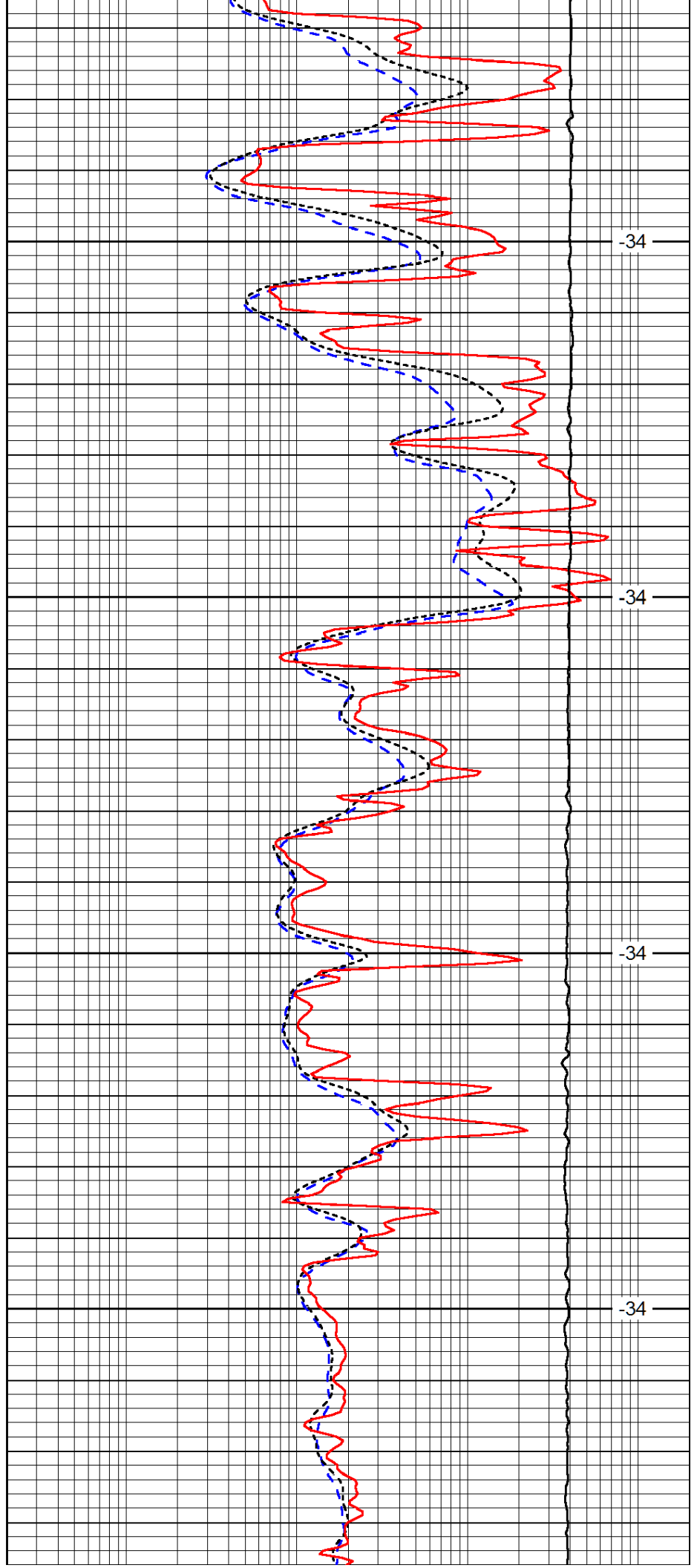


3600

3650

3700

3750

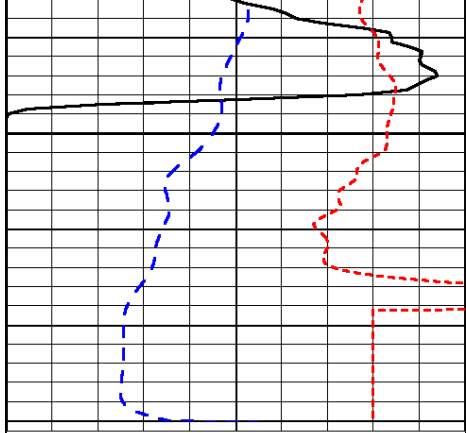


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-34

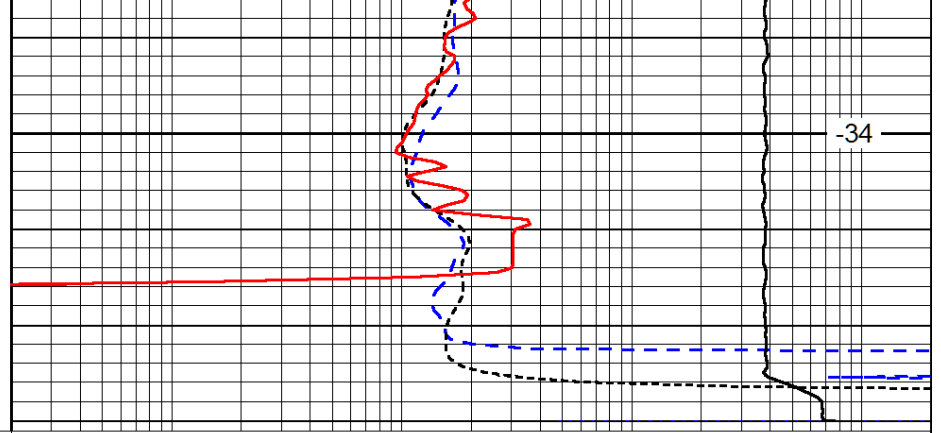
-34

-34



3800

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



-34

0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
10000	Line Tension	0

LSPD