



Dual Induction Log

Pioneer Energy Services

API No.	Company American Warrior, Inc.		
	Well Grubb Unit #1-5		
	Field Stollenberg		
	County Ellsworth	State	Kansas
15-053-21,300-00-00	Location	NE NE SE SW 1171' FSL & 2610' FWL	
	Sec: 5	Twp: 16S	Rge: 10W
	Permanent Datum	Ground Level	Elevation 1818
	Log Measured From	Kelly Bushing	8 Ft. Above Perm. Datum
Drilling Measured From Kelly Bushing			K.B. 1826 D.F. 1818 G.L. 1818
Date	1/9/2014		
Run Number	One		
Depth Driller	3407		
Depth Logger	3407		
Bottom Logged Interval	3406		
Top Log Interval	350		
Casing Driller	8.625 @ 394		
Casing Logger	385		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	8500		
Density / Viscosity	9.6 67		
pH / Fluid Loss	9.5 8.0		
Source of Sample	Flowline		
Rm @ Meas. Temp	0.43 @ 60		
Rmf @ Meas. Temp	0.32 @ 60		
Rmc @ Meas. Temp	0.58 @ 60		
Source of Rmf / Rmc	Charts		
Rm @ BHT	0.25 @ 110		
Operating Rig Time	3 1/2 Hours		
Max Rec. Temp. F	110		
Equipment Number	15		
Location	Hays		
Recorded By	D. Kerr		
Witnessed By	Clint Musgrove		

<<< Fold Here >>>

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 Pioneer Energy Services
www.pioneerres.com
785 625 3858

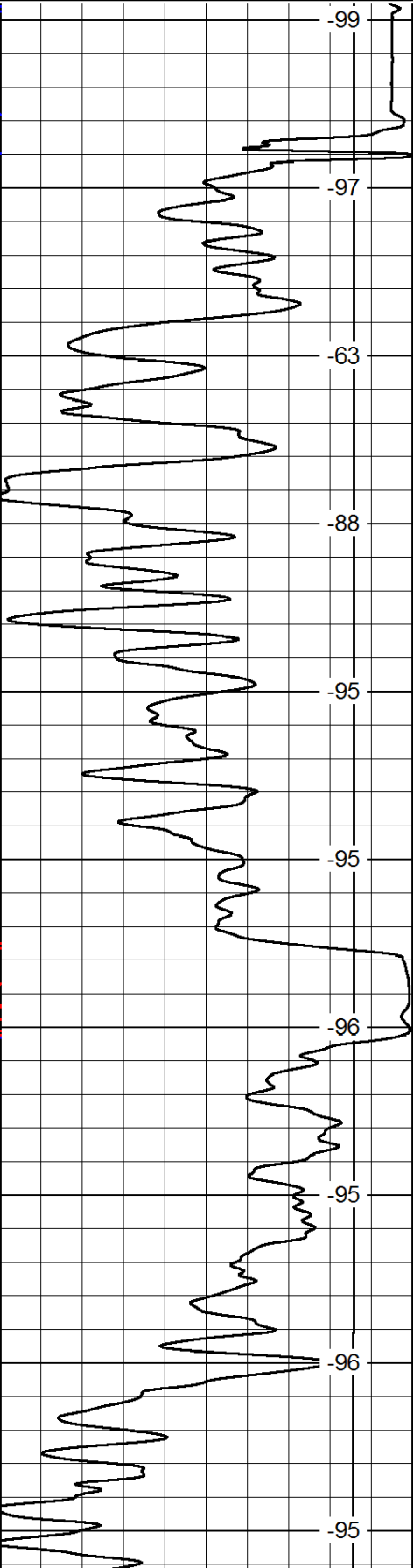
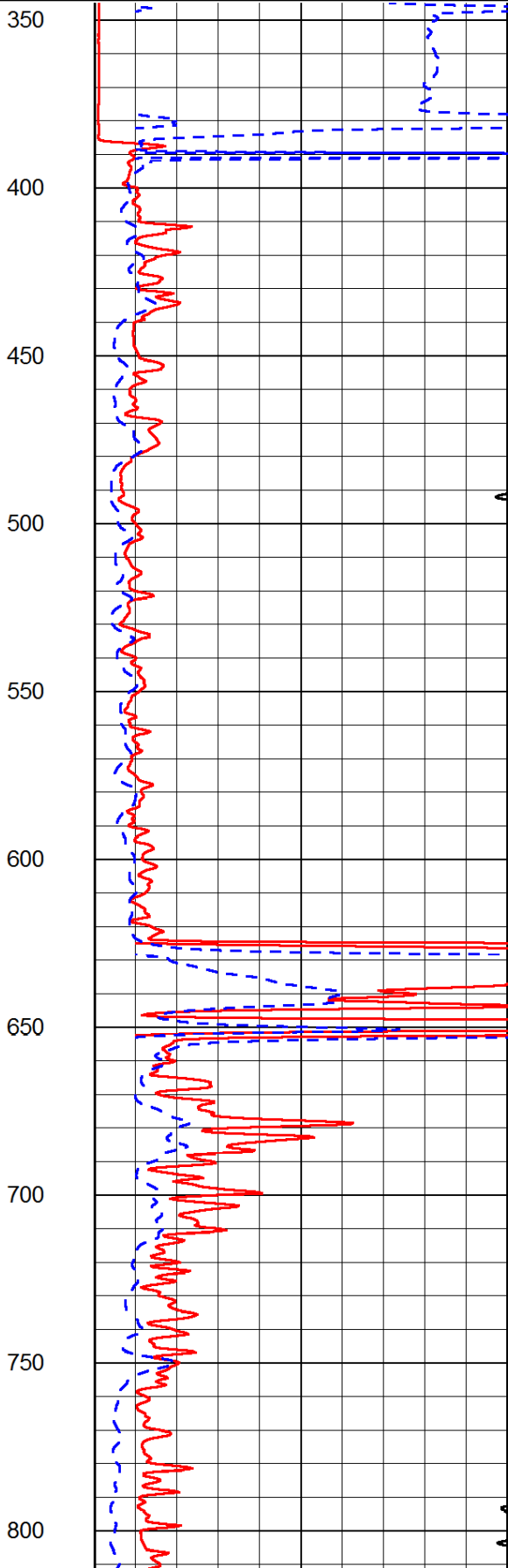
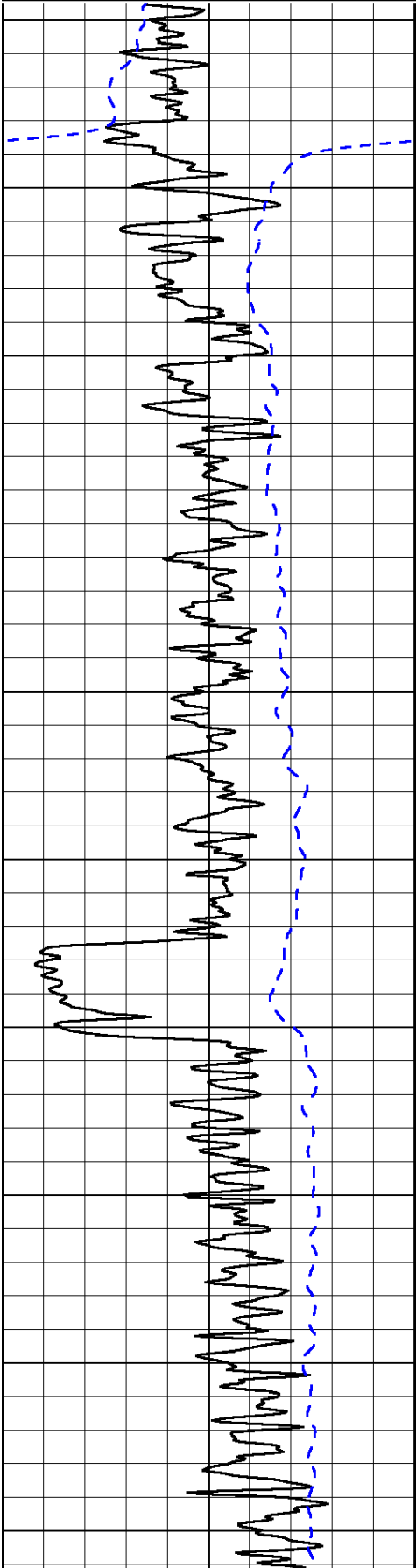
Wilson KS, 10 South,
1 1/2 East, North Into

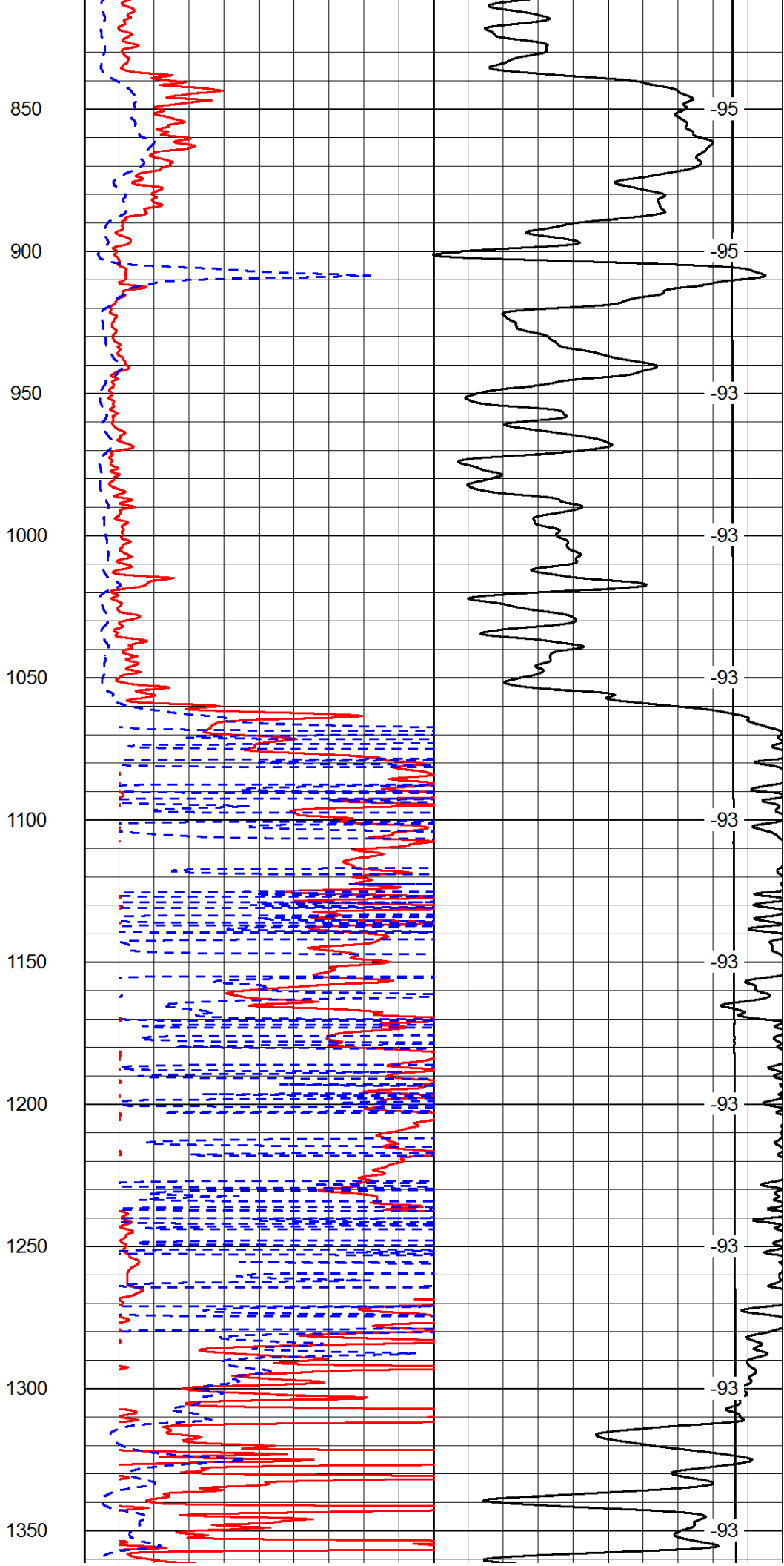
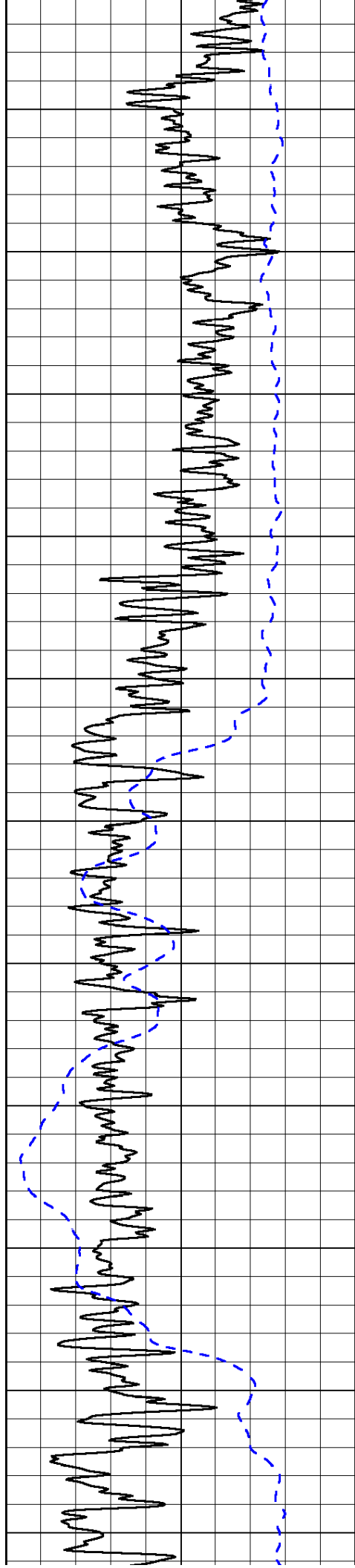
Database File: c:\warrior\data\amwar_grubb unit #1-5\amwarrior_grubbunit_1_5hd.db
Dataset Pathname: DIL\awstk
Presentation Format: dil2in
Dataset Creation: Thu Jan 09 12:45:53 2014
Charted by: Depth in Feet scaled 1:600

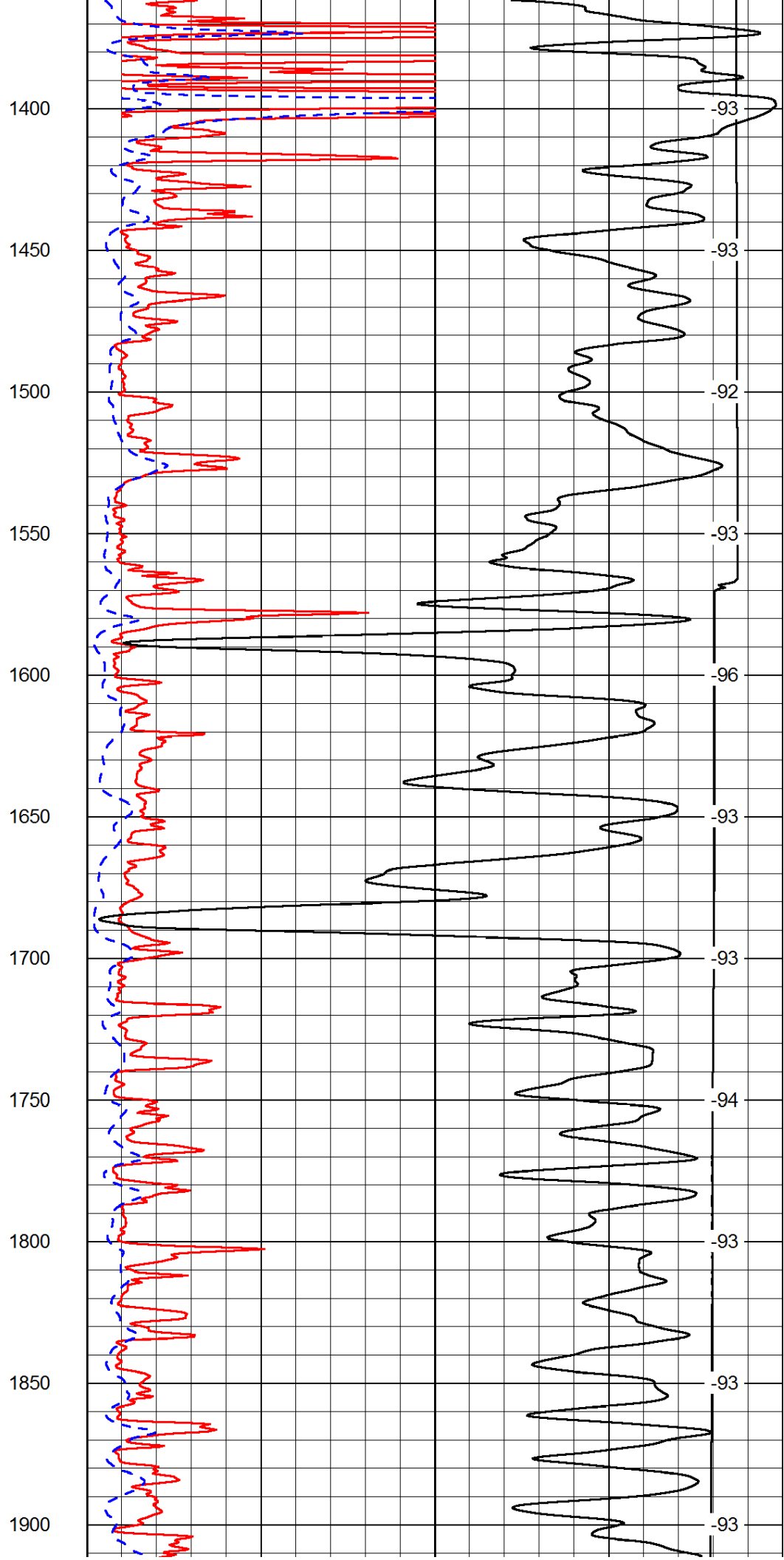
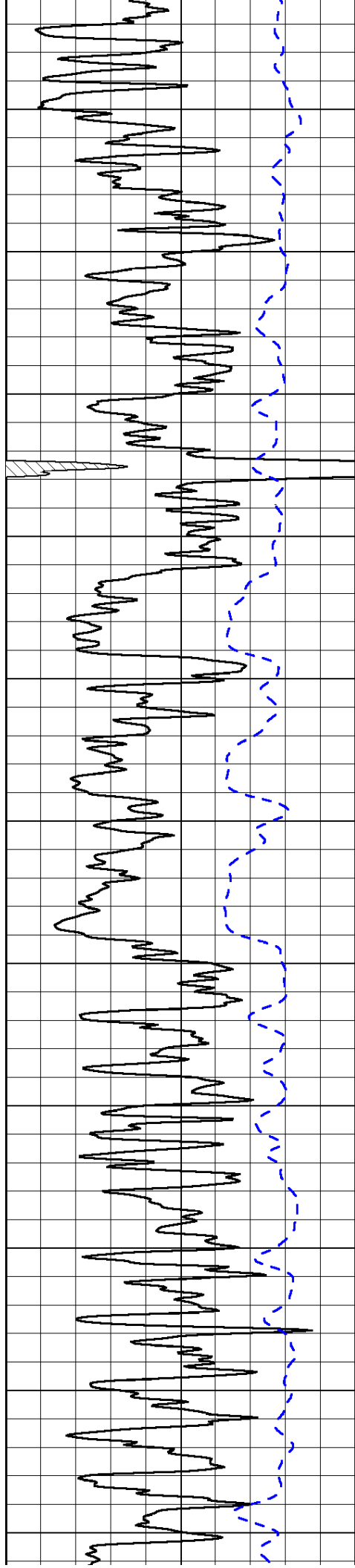
0	Gamma Ray	150
-200	SP (mV)	0

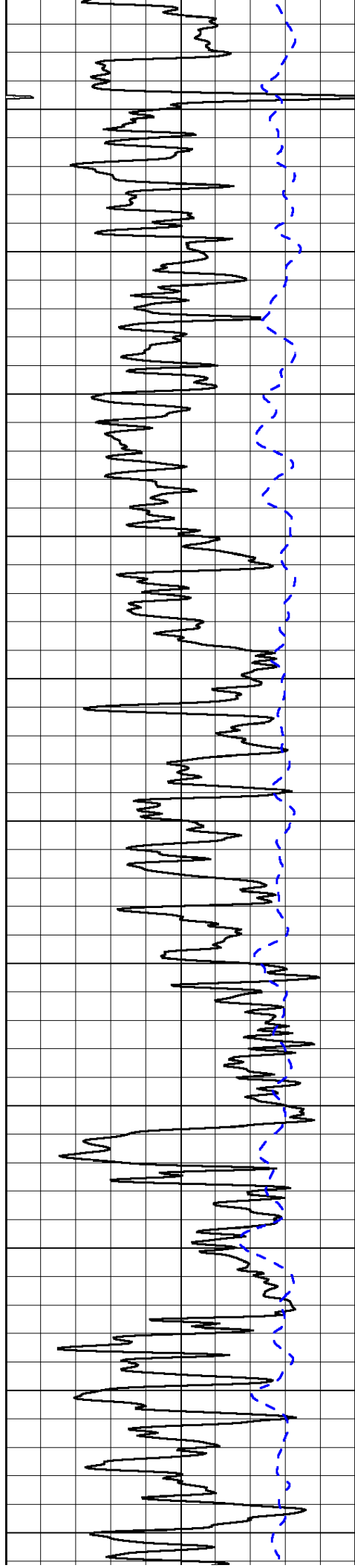
0	Shallow Resistivity	50
0	Deep Resistivity	50
1000	Conductivity	0
15000	Line Tension	0
50	Shallow Resistivity	500
50	Deep Resistivity	500

LSPD
0
0

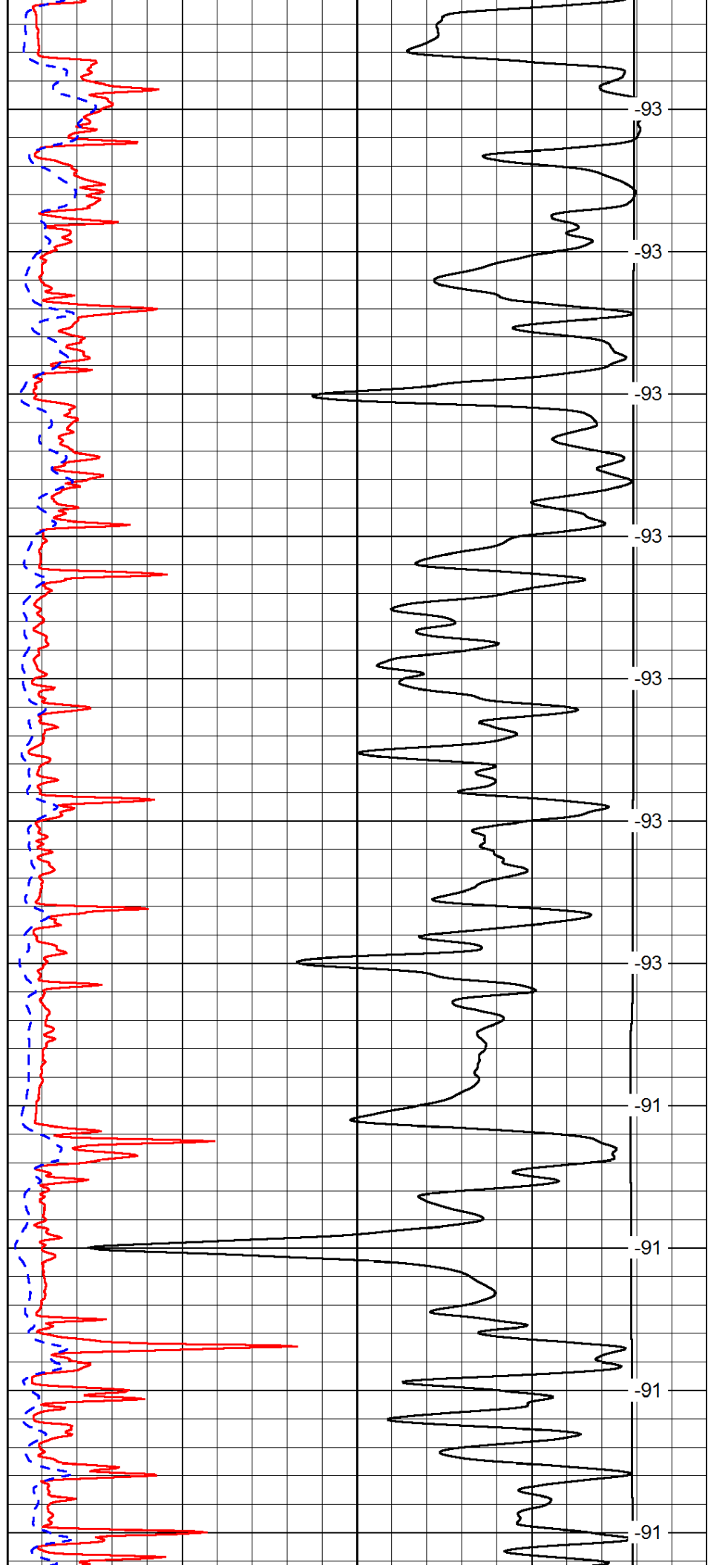


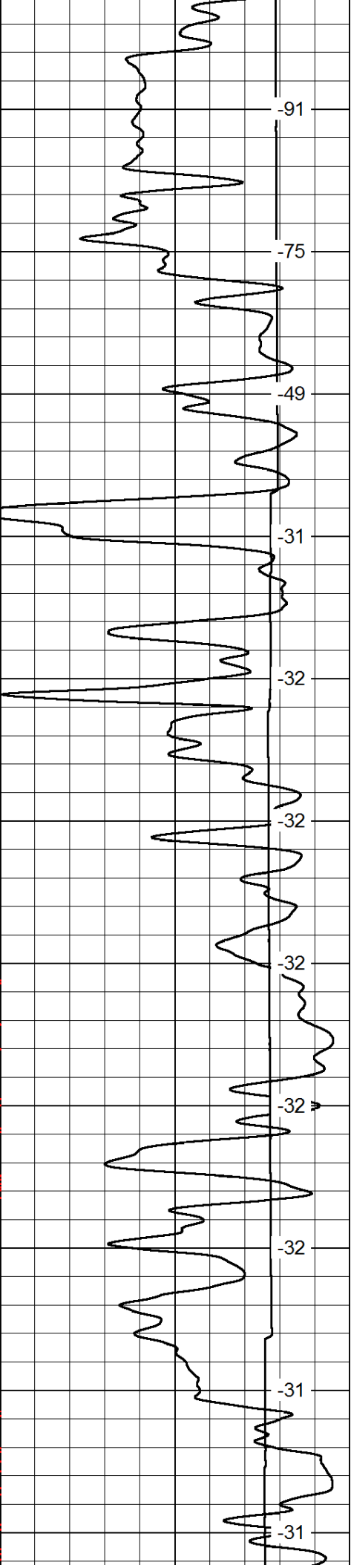
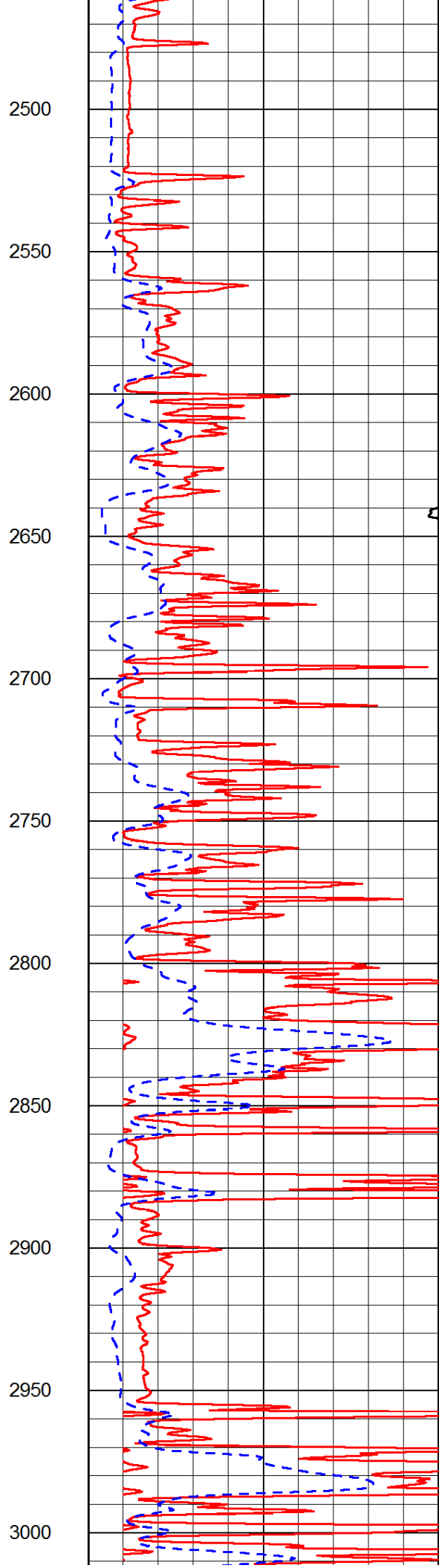
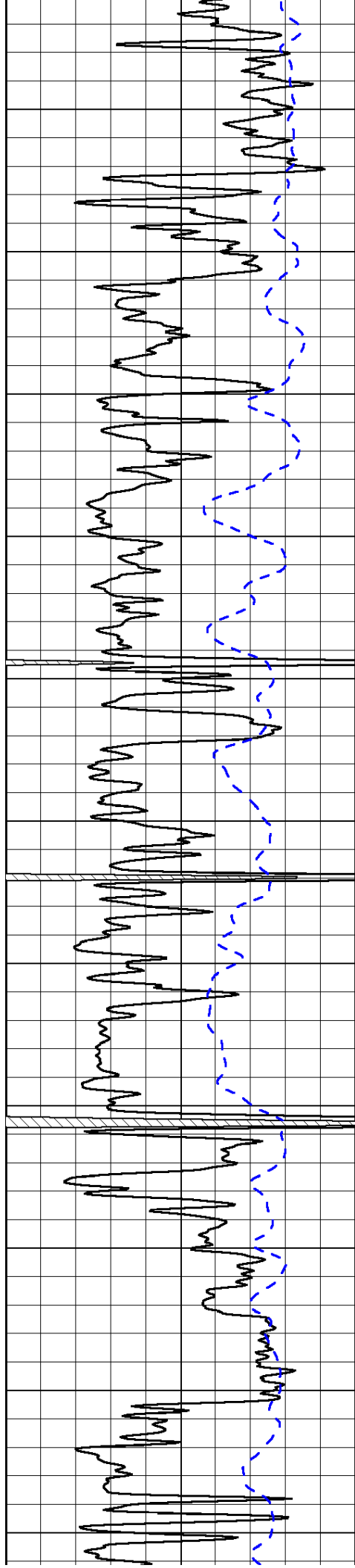


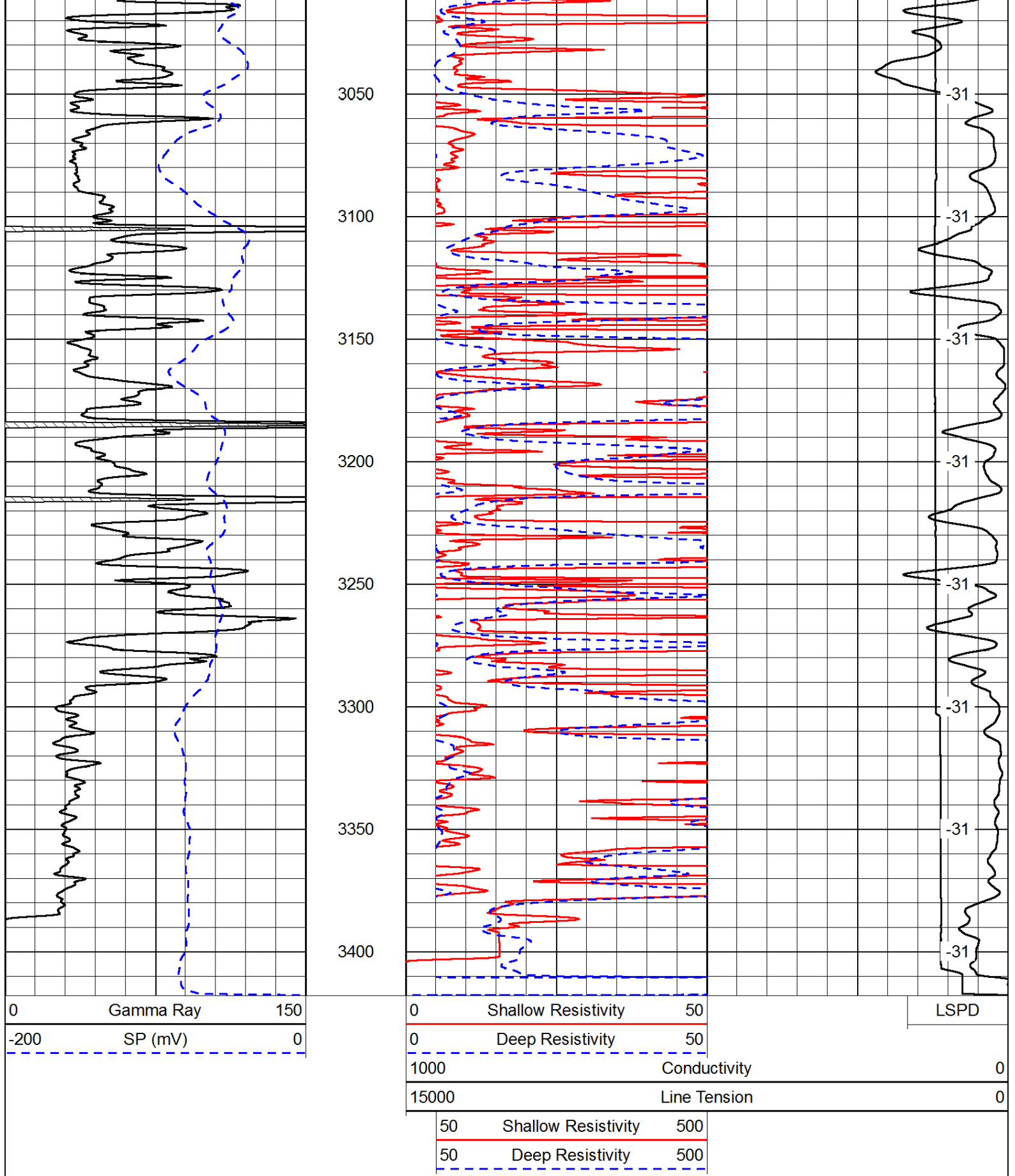




1950
2000
2050
2100
2150
2200
2250
2300
2350
2400
2450

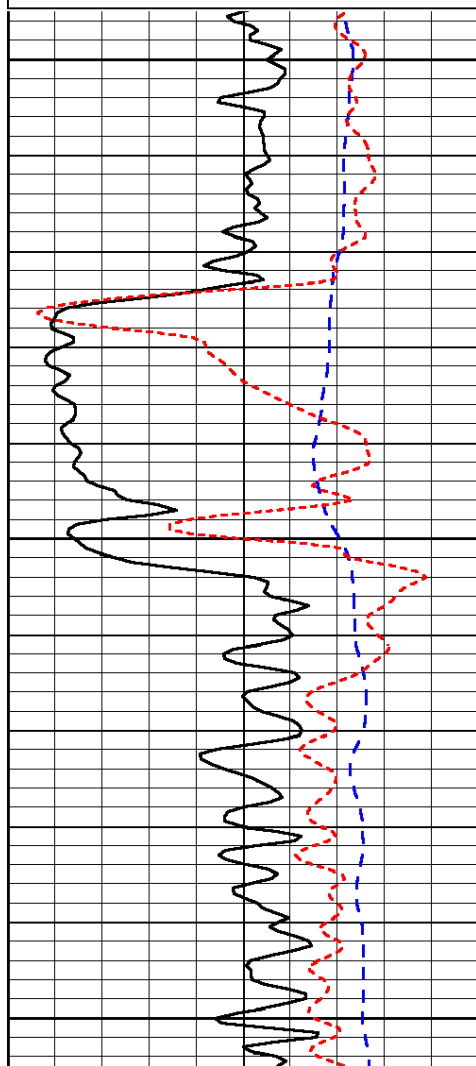






Database File: c:\warrior\data\amwar_grubb unit #1-5\amwarrior_grubbunit_1_5hd.db
 Dataset Pathname: DIL/awstk
 Presentation Format: dil
 Dataset Creation: Thu Jan 09 12:45:53 2014
 Charted by: Depth in Feet scaled 1:240

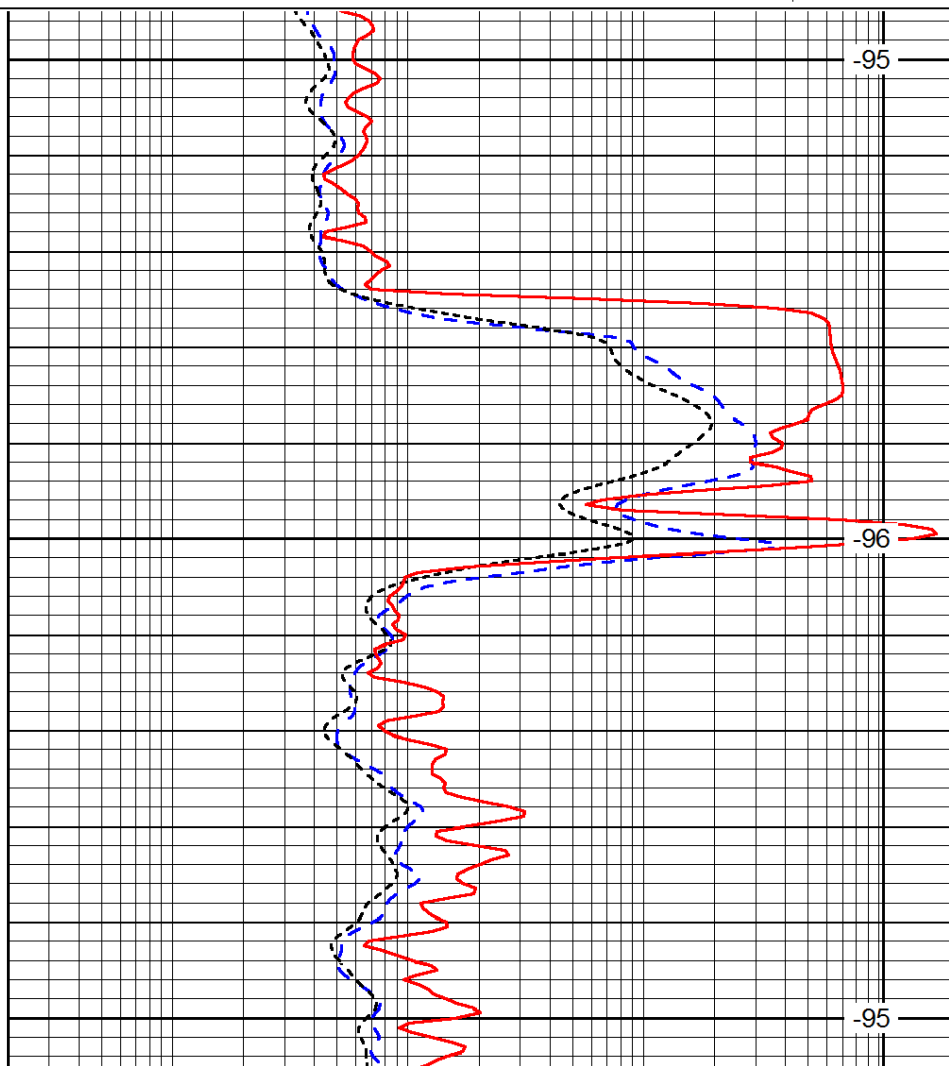
0	Gamma Ray	150
-200	SP (mV)	0
-160	RxoRt	40



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

0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
15000	Line Tension	0

LSPD

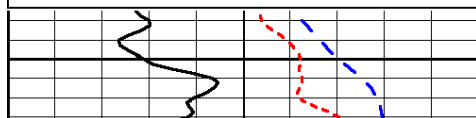


0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
15000	Line Tension	0

LSPD

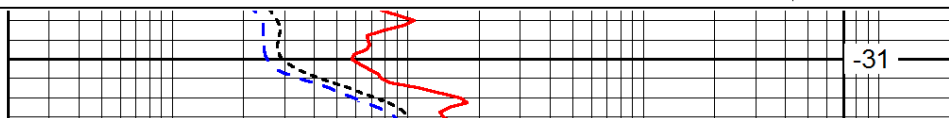
Database File: c:\warrior\data\amwar_grubb unit #1-5\amwarrior_grubbunit_1_5hd.db
Dataset Pathname: DIL\awstk
Presentation Format: dil
Dataset Creation: Thu Jan 09 12:45:53 2014
Charted by: Depth in Feet scaled 1:240

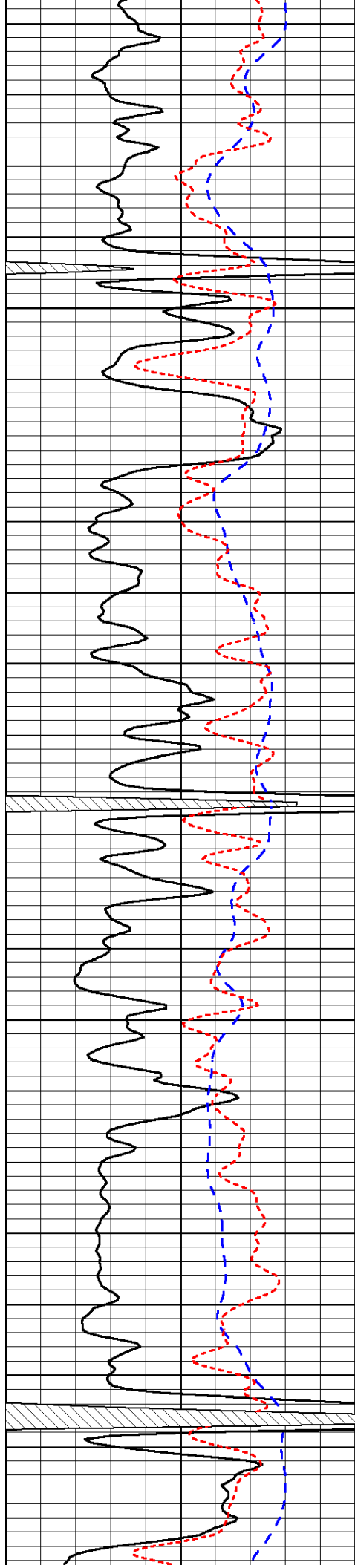
0	Gamma Ray	150
-200	SP (mV)	0
-160	RxoRt	40



0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
15000	Line Tension	0

LSPD



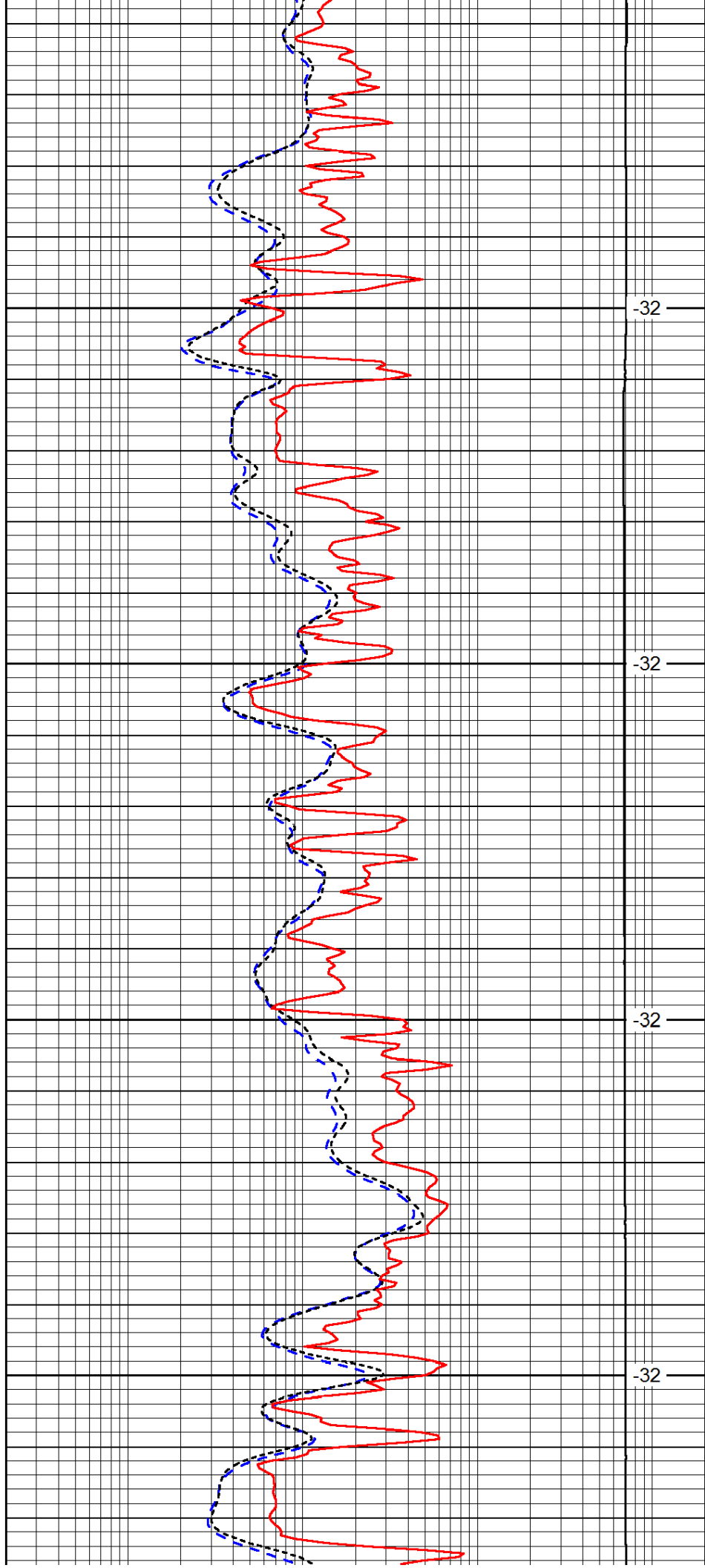


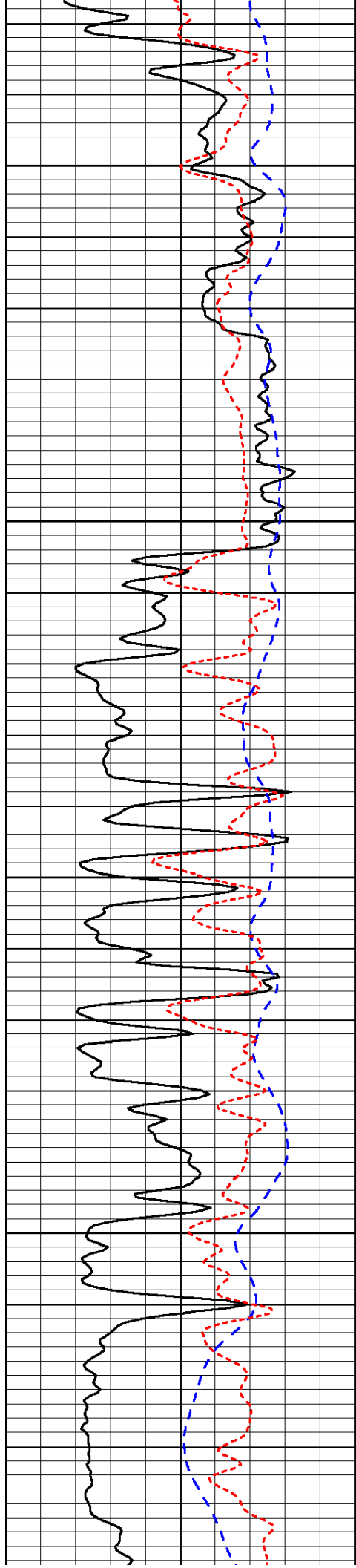
2700

2750

2800

2850



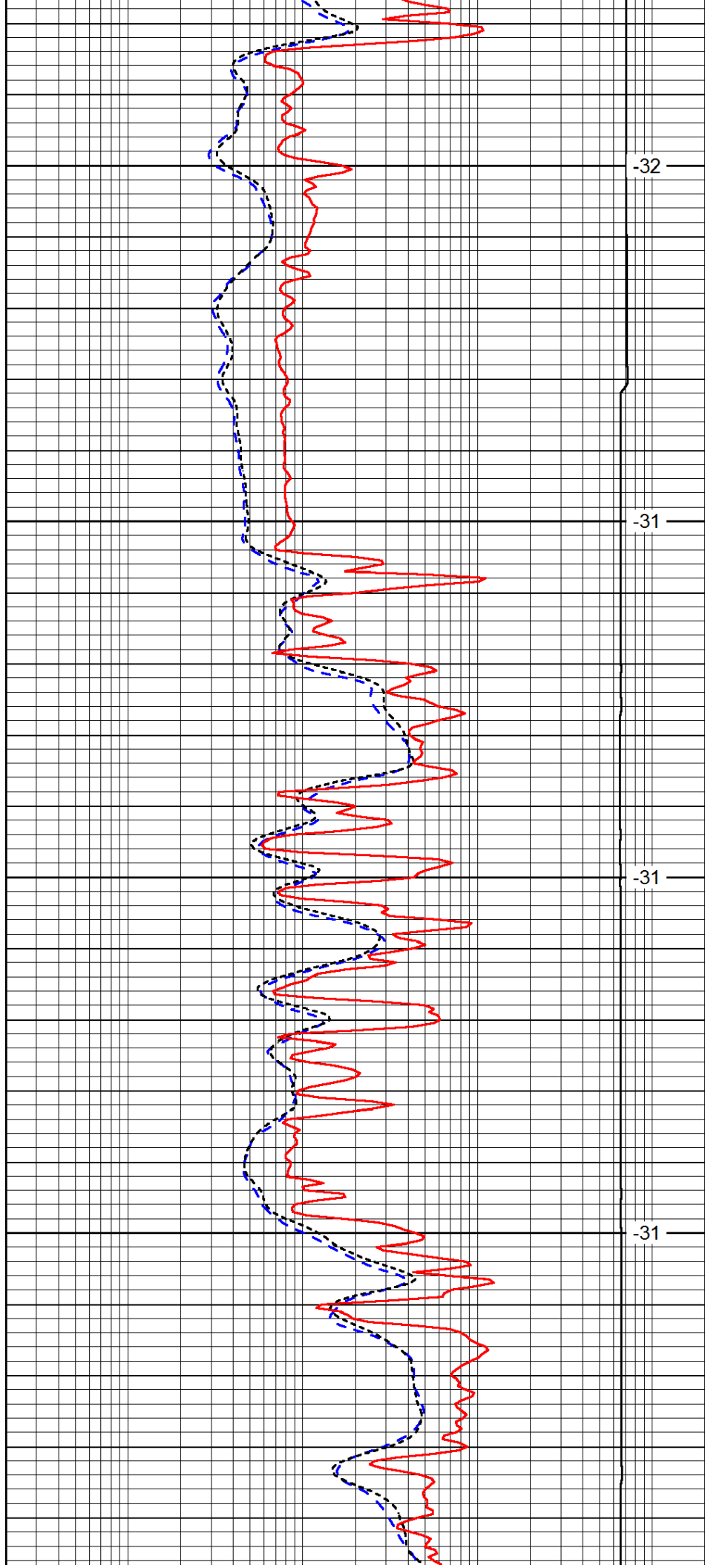


2900

2950

3000

3050

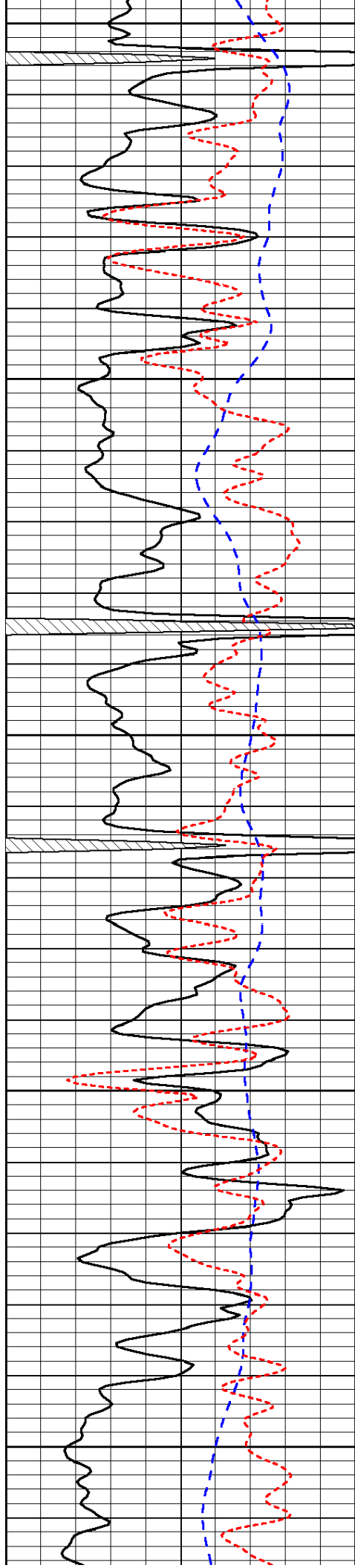


-32

-31

-31

-31



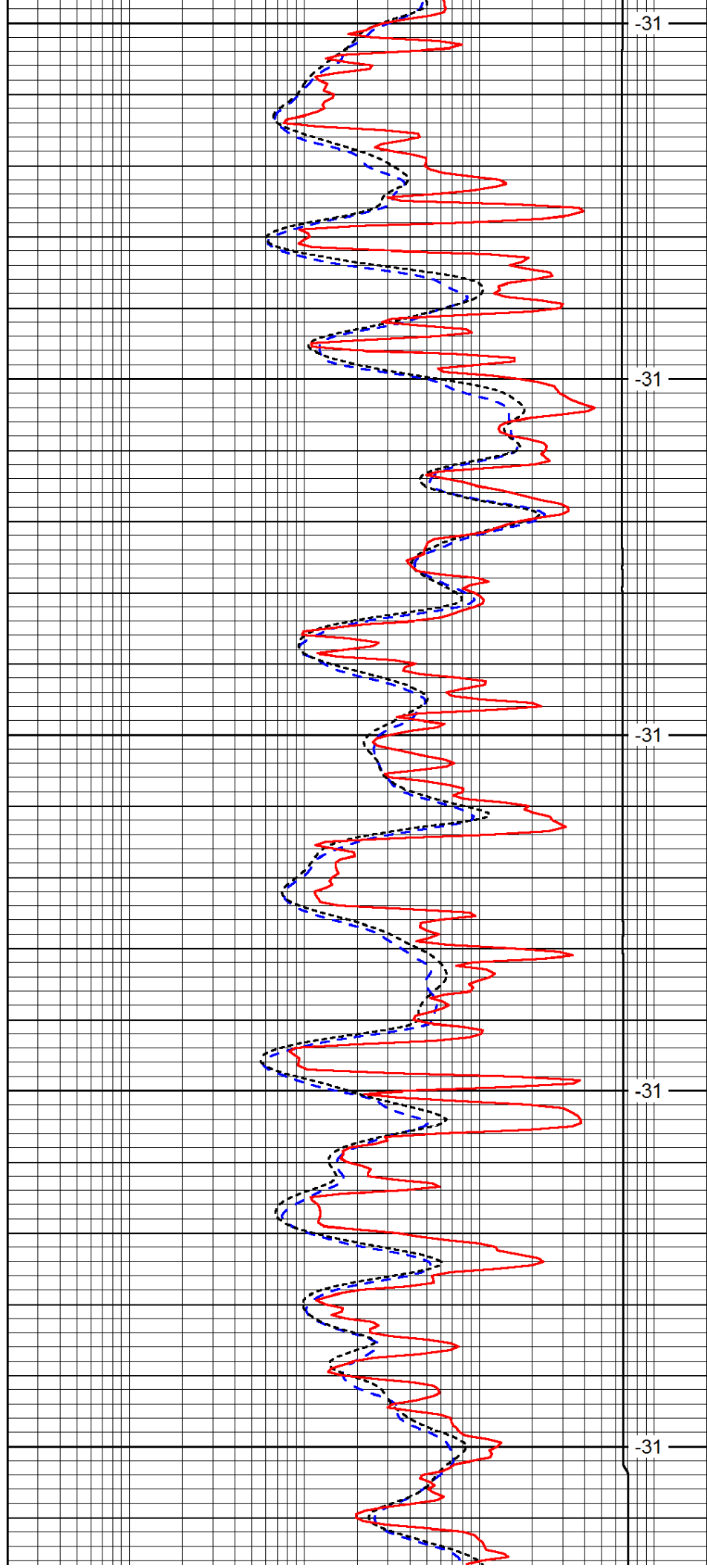
3100

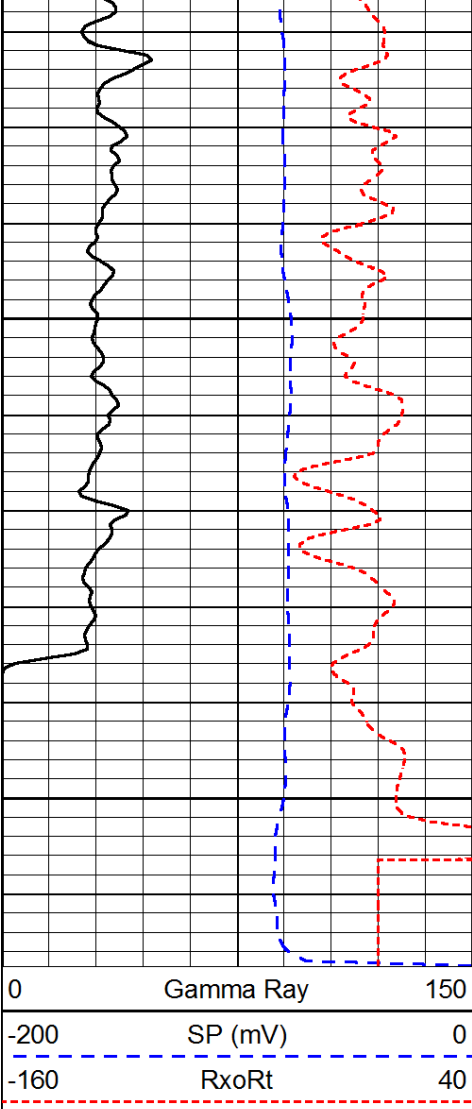
3150

3200

3250

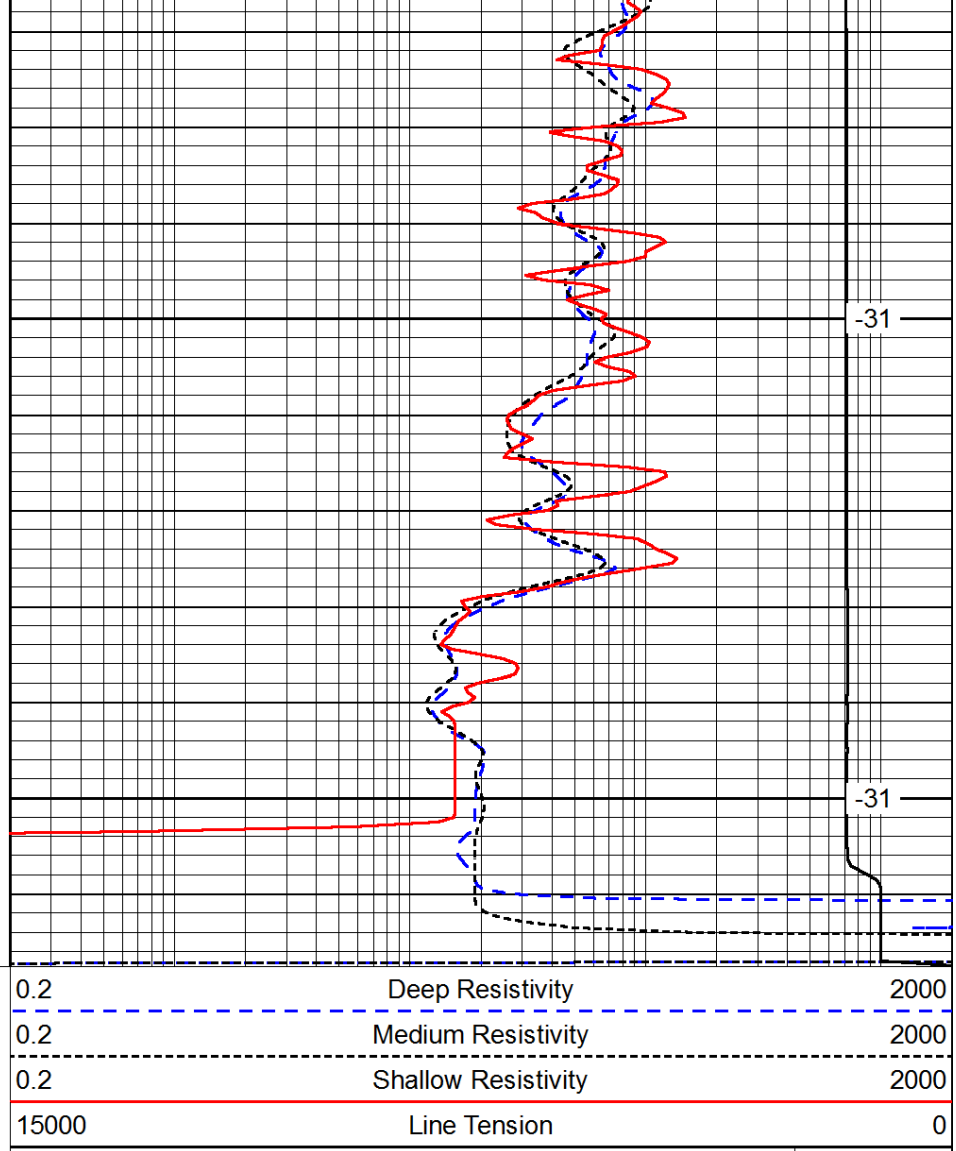
3300





3350

3400



-31

-31

LSPD