



Pioneer Energy Services

# Dual Induction Log

API No.	15-051-26,400-00-00	
Company	Hertel Oil Company, LLC	
Well	Larry No. 1	
Field	Unnamed	
County	Ellis	State
Location	1635' FNL & 330' FEL	
Sec: 15	Twp: 15 S	Rge: 19 W
Other Services	CNL/CDL MEL	
Permanent Datum	Ground Level	Elevation 2004
Log Measured From	Kelly Bushing	8 Ft. Above Perm. Datum
Drilling Measured From	Kelly Bushing	
Elevation	K.B. 2012 D.F. G.L. 2004	

Date	10/9/2012
Run Number	One
Depth Driller	3700
Depth Logger	3701
Bottom Logged Interval	3700
Top Log Interval	1200
Casing Driller	8.625 @ 1219
Casing Logger	1217
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	4500
Density / Viscosity	9.4 54
pH / Fluid Loss	10.5 7.8
Source of Sample	Flowline
Rm @ Meas. Temp	.60 @ 70
Rmf @ Meas. Temp	.45 @ 70
Rmc @ Meas. Temp	.81 @ 70
Source of Rmf / Rmc	Charts
Rm @ BHT	.37 @ 113
Operating Rig Time	3 1/2 Hours
Max Rec. Temp. F	113
Equipment Number	15
Location	Hays
Recorded By	D.Kerr
Witnessed By	Herb Deines

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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.

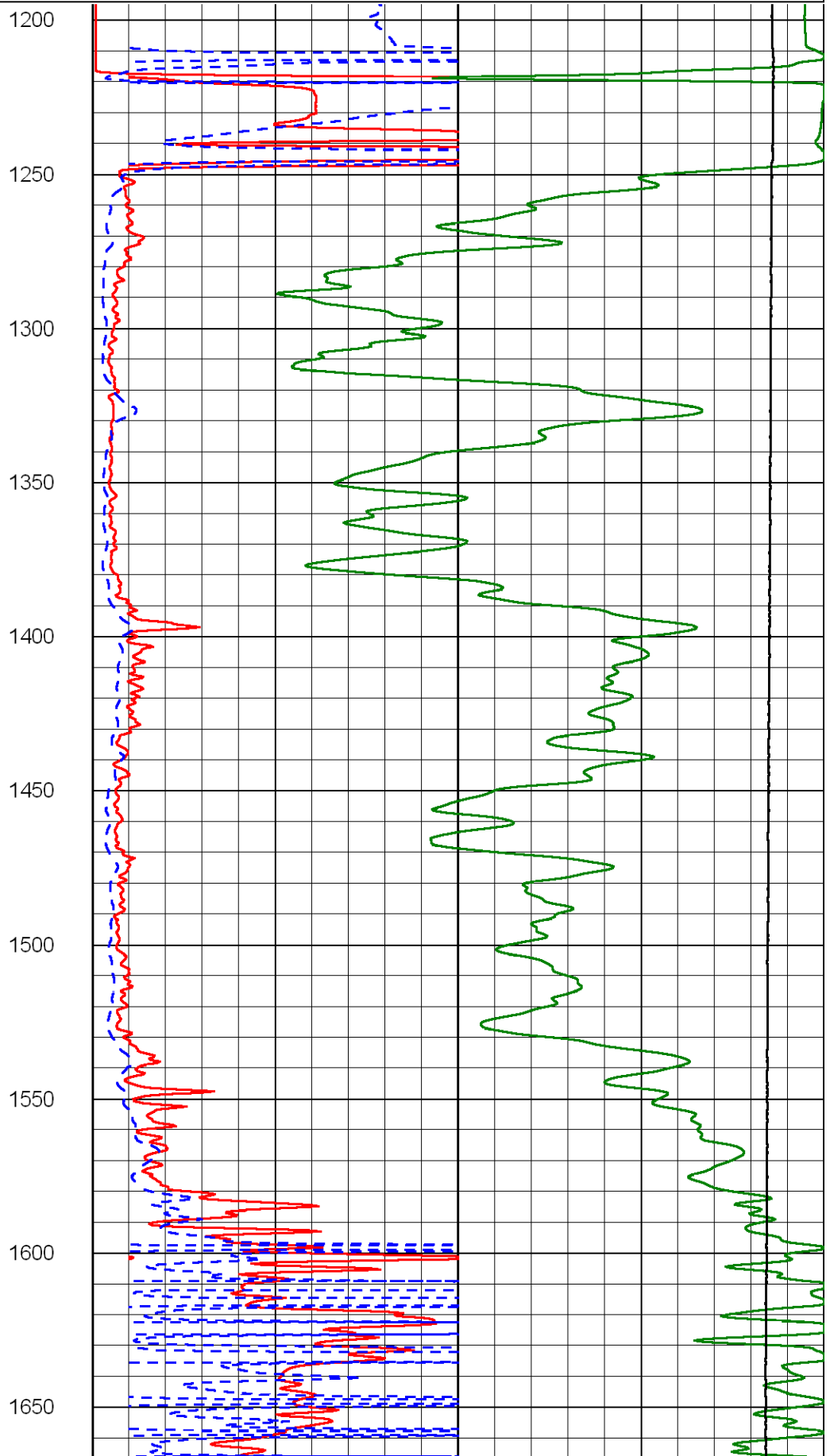
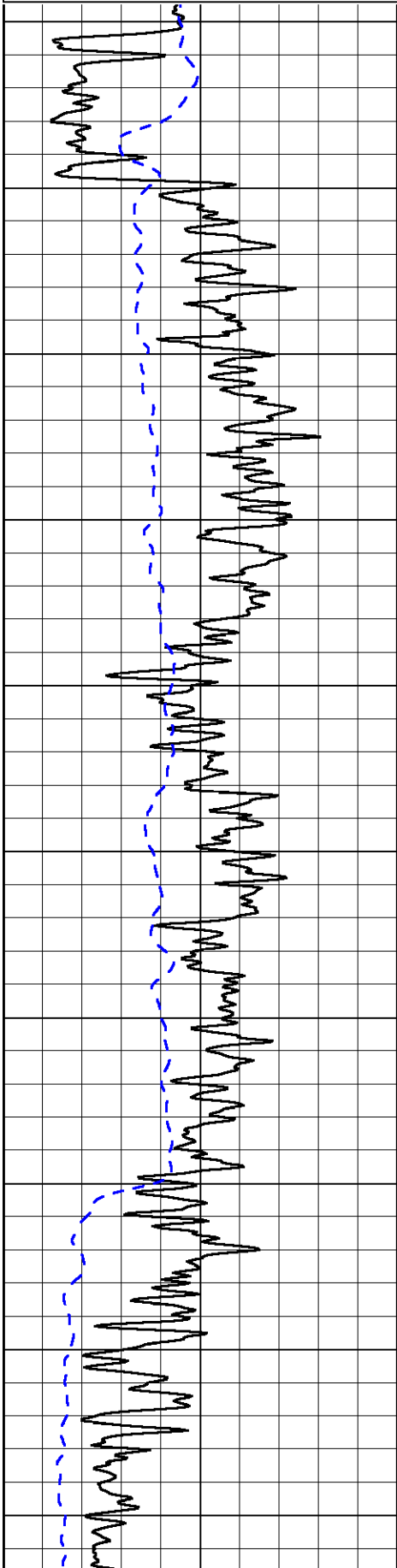
### Comments

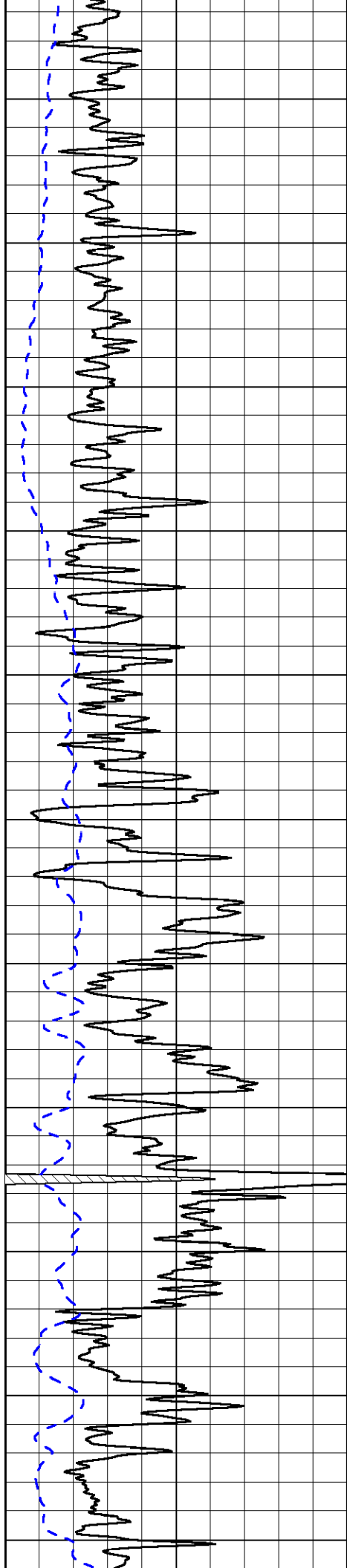
Thank you for using Log-Tech, Inc.  
 (785) 625-3858  
 Antonino KS, 1 West,  
 2 1/2 South, West North Into

Database File: hertel\_larry\_1hd.db  
 Dataset Pathname: DIL/hertstk  
 Presentation Format: dil2in  
 Dataset Creation: Tue Oct 09 07:53:06 2012  
 Charted by: Depth in Feet scaled 1:600

0 Gamma Ray 150  
-200 SP 0

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





1700

1750

1800

1850

1900

1950

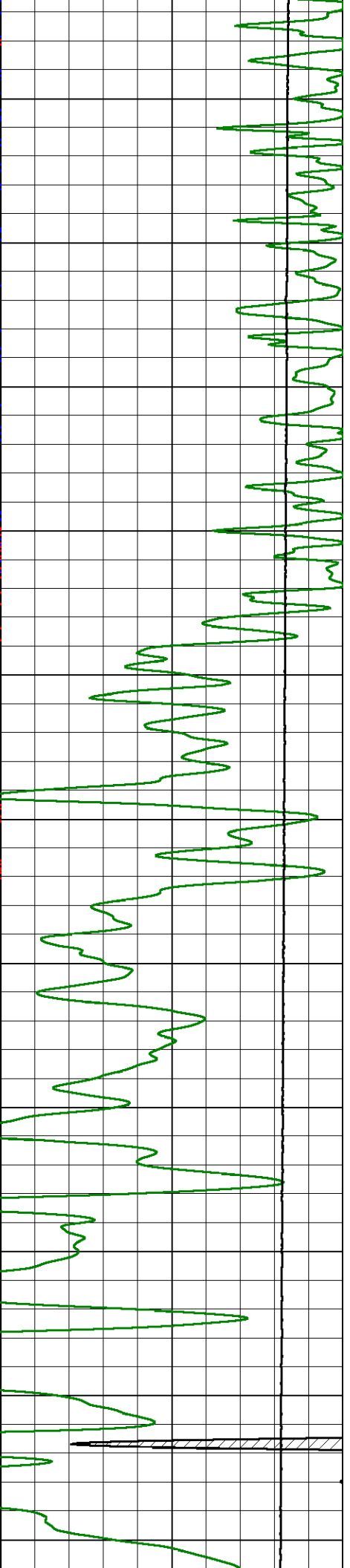
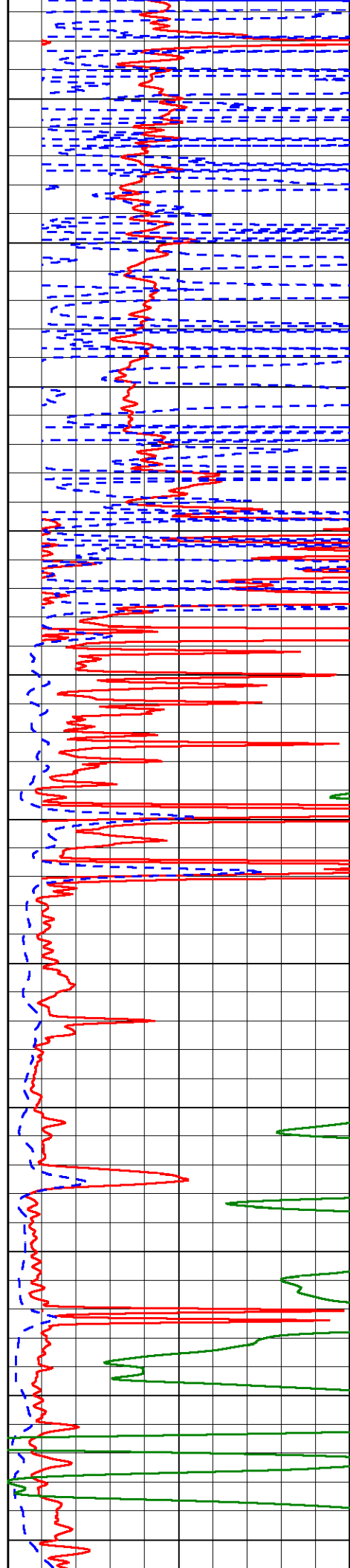
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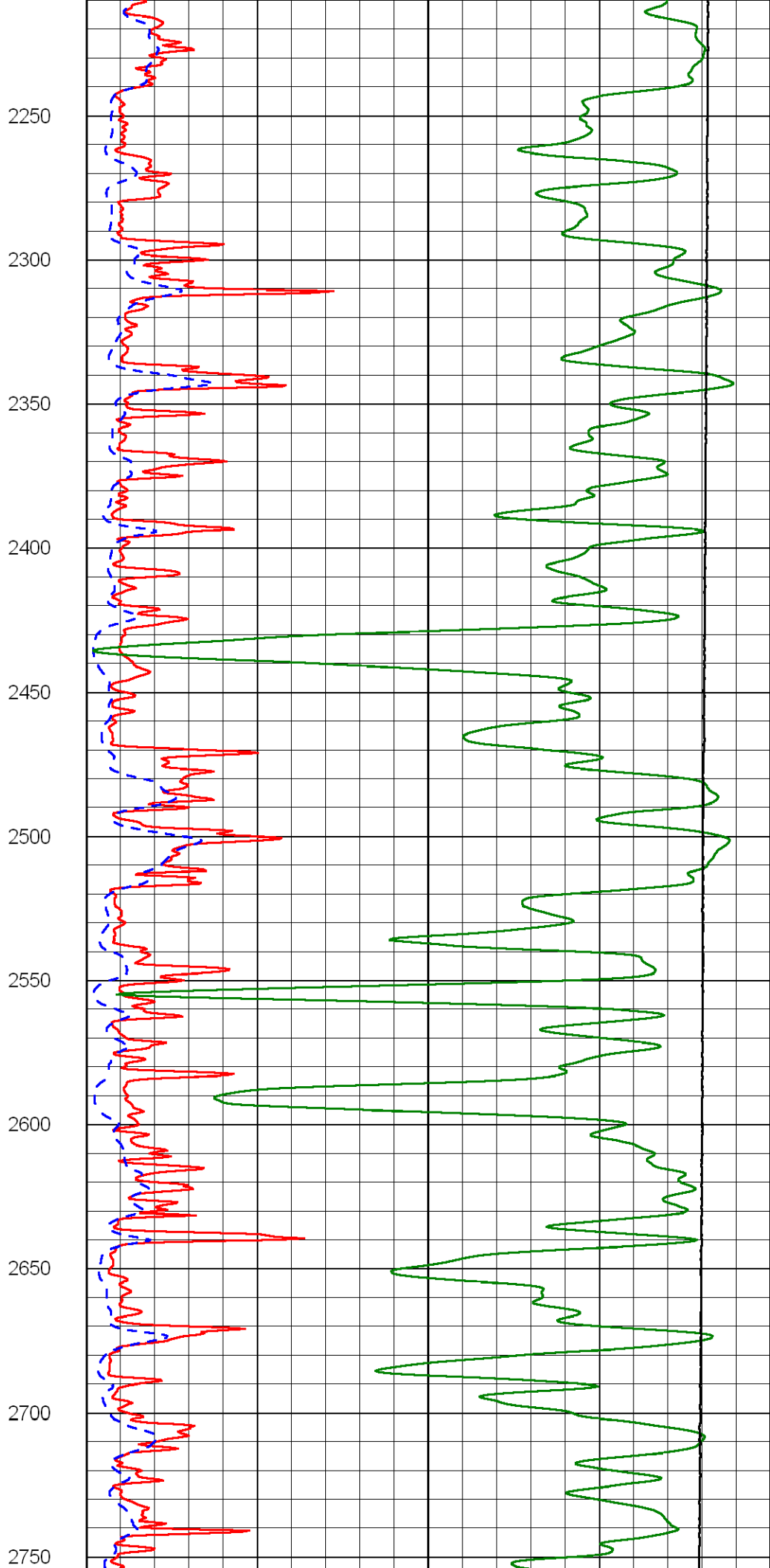
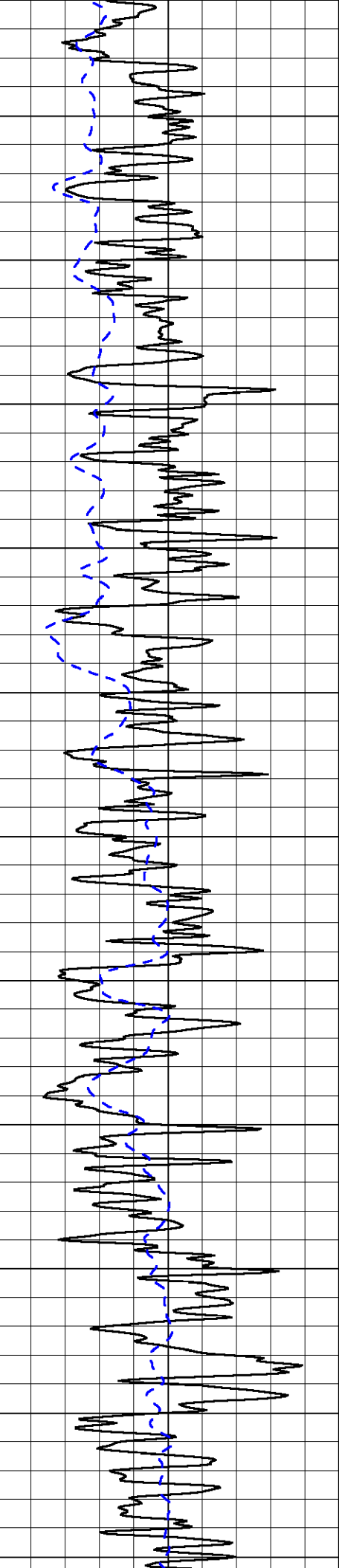
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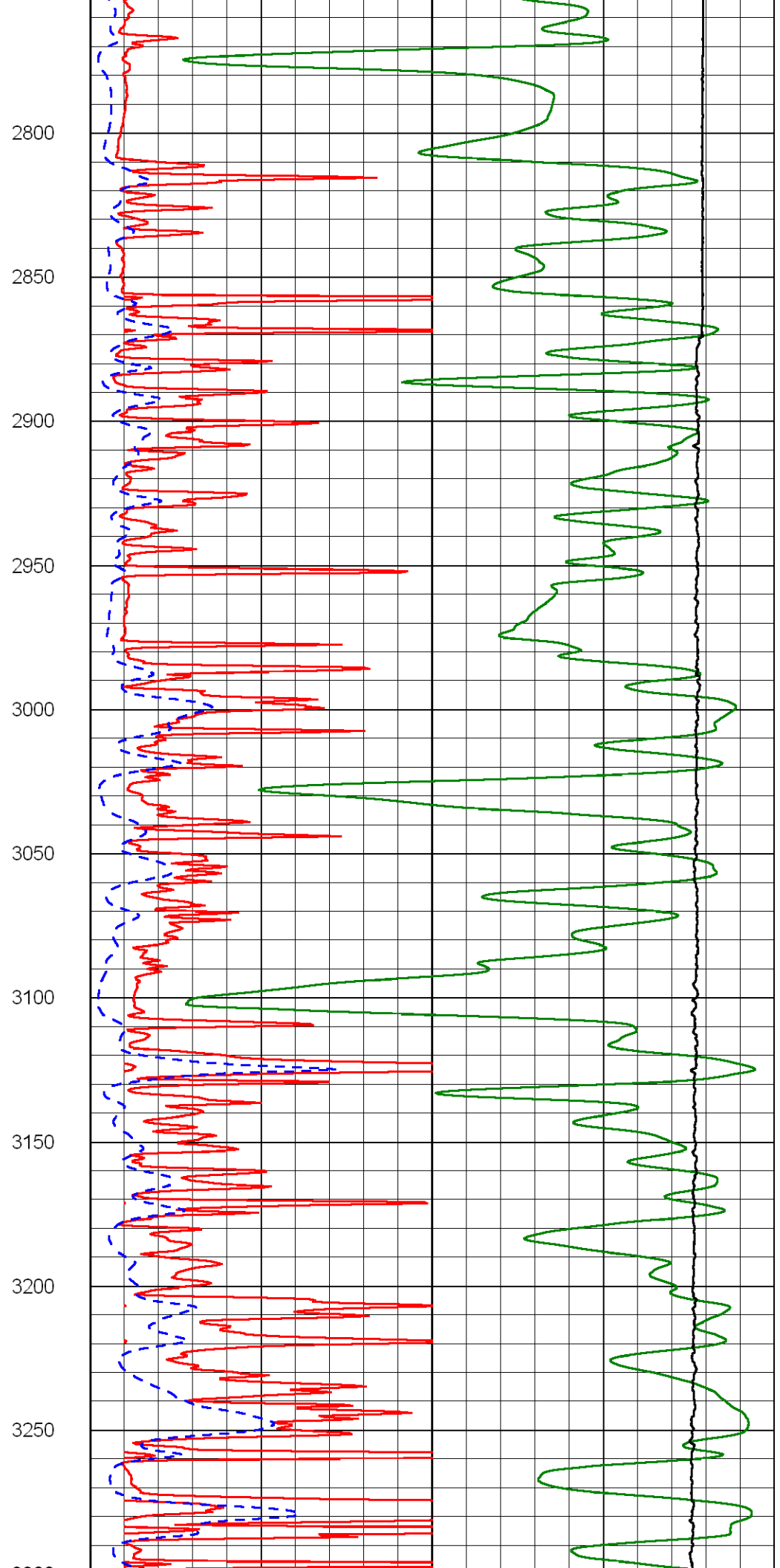
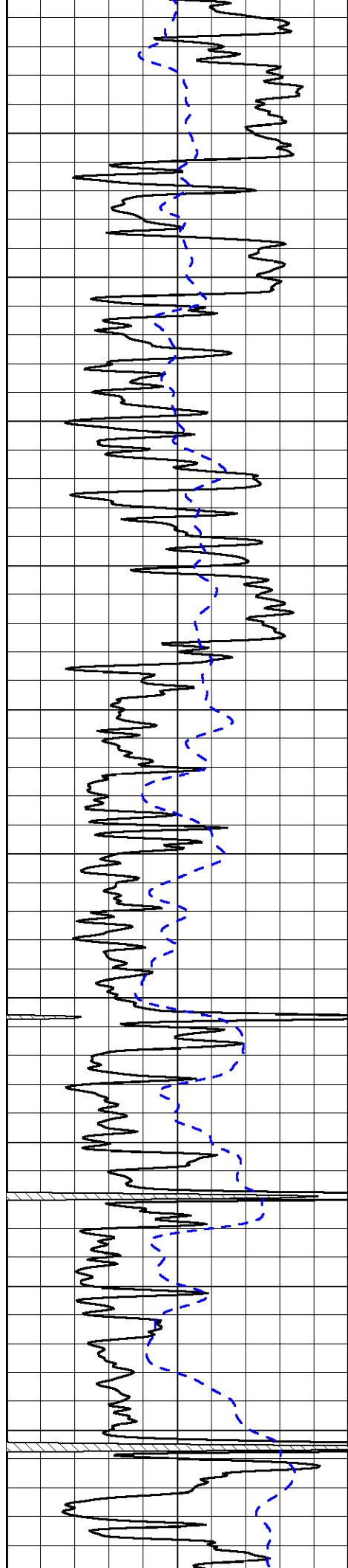
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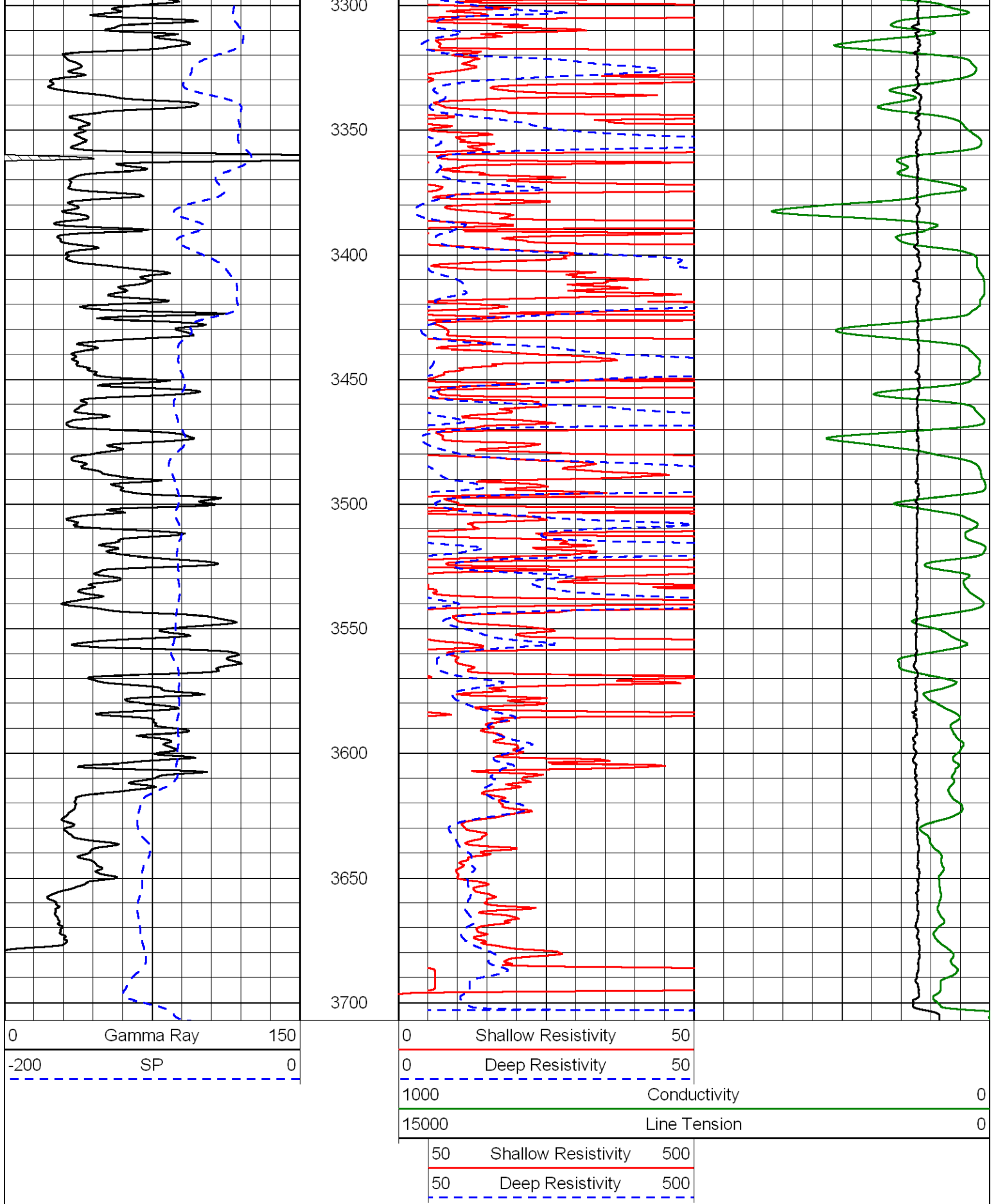
2150

2200







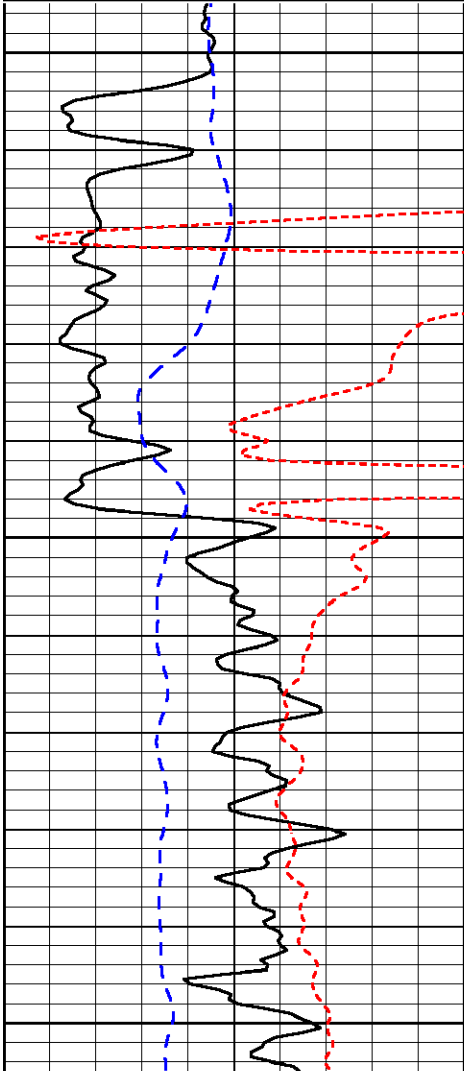


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 Dataset Pathname: DIL/hertstk  
 Presentation Format: dil  
 Dataset Creation: Tue Oct 09 07:53:06 2012  
 Charted by: Depth in Feet scaled 1:240

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

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

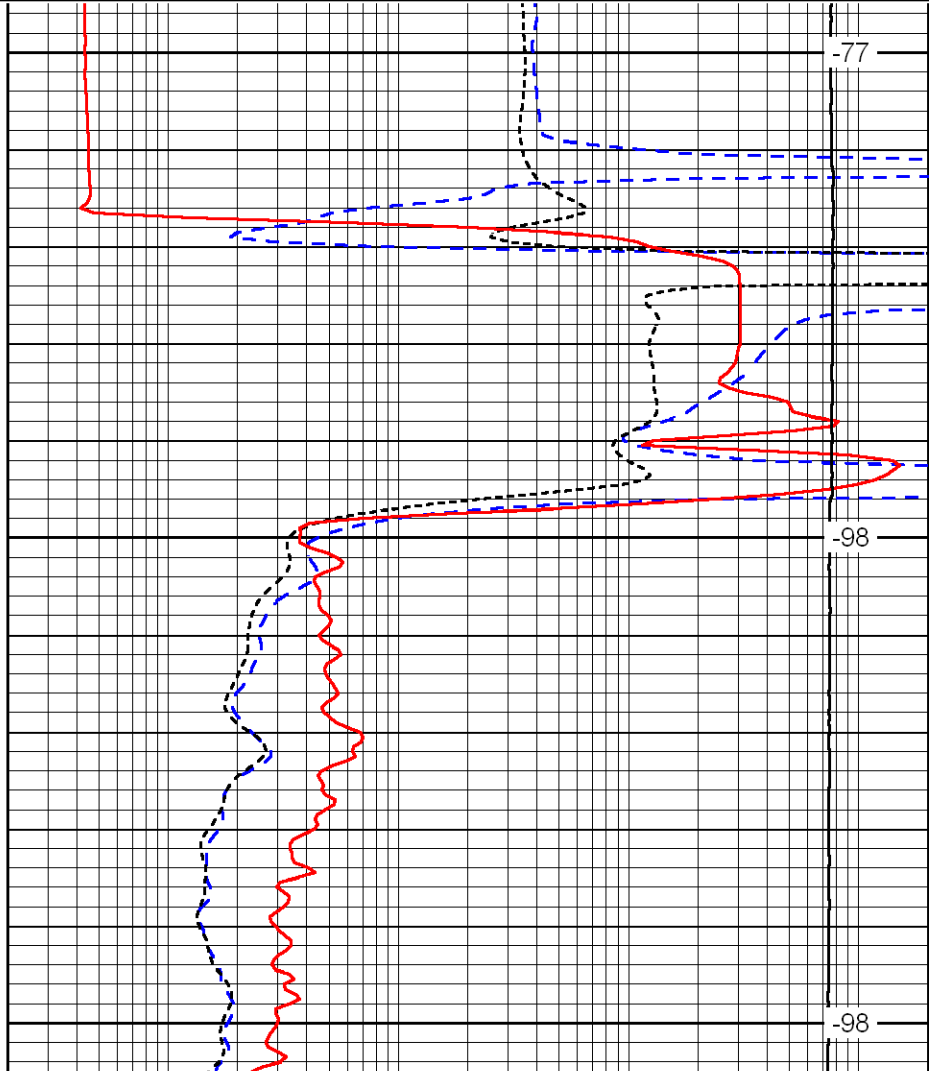
LSPD



1200

1250

1300



-77

-98

-98

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

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

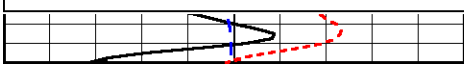
LSPD

Database File: hertel\_jarry\_1hd.db  
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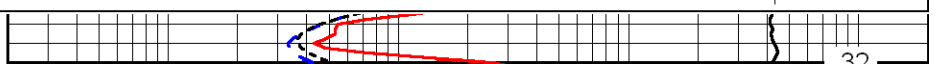
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-160	RXO/RT	40
-200	SP	0

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

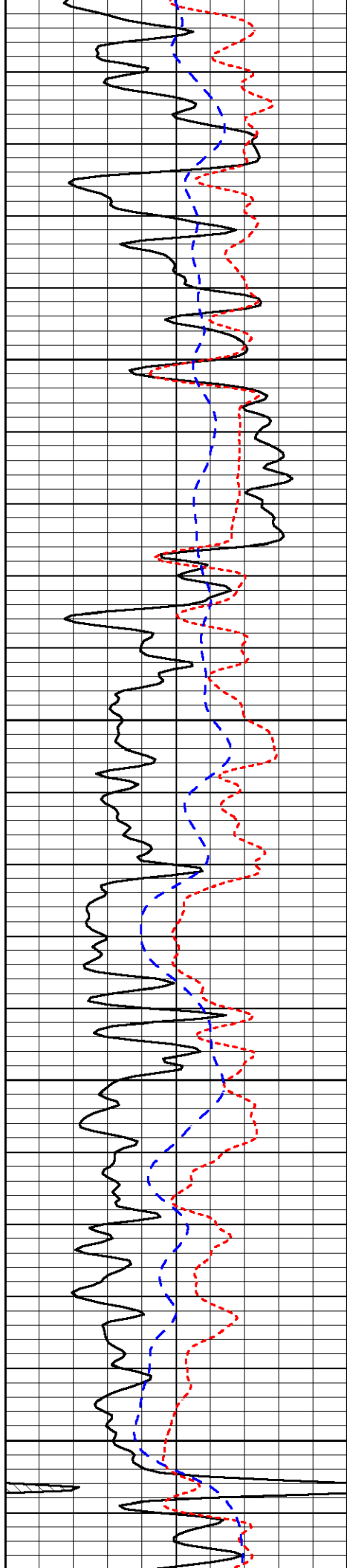
LSPD



2900



32



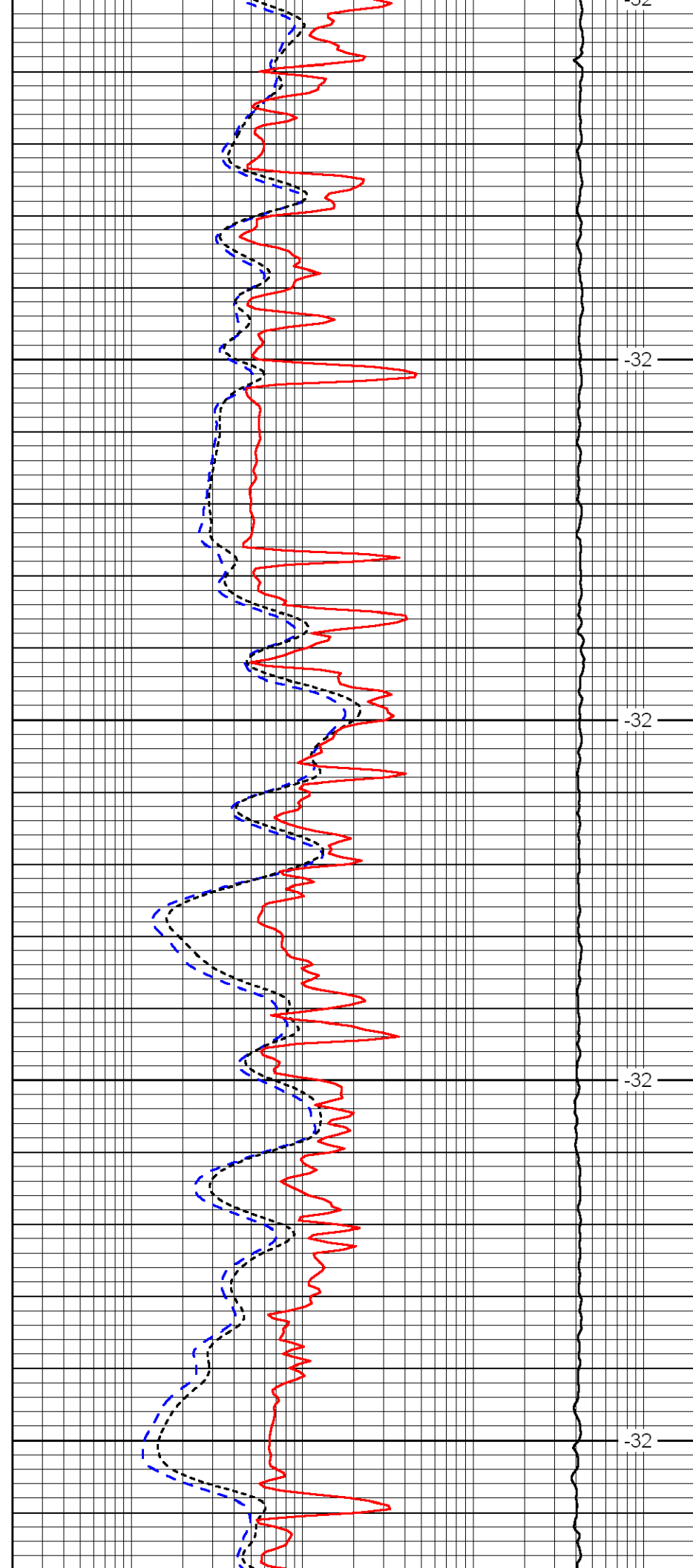
2900

2950

3000

3050

3100



-32

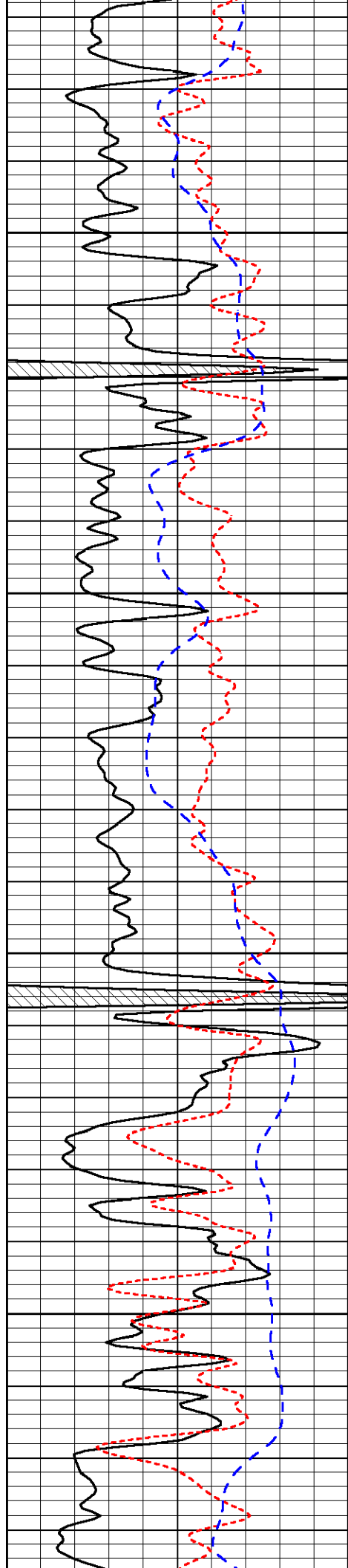
-32

-32

-32

-32



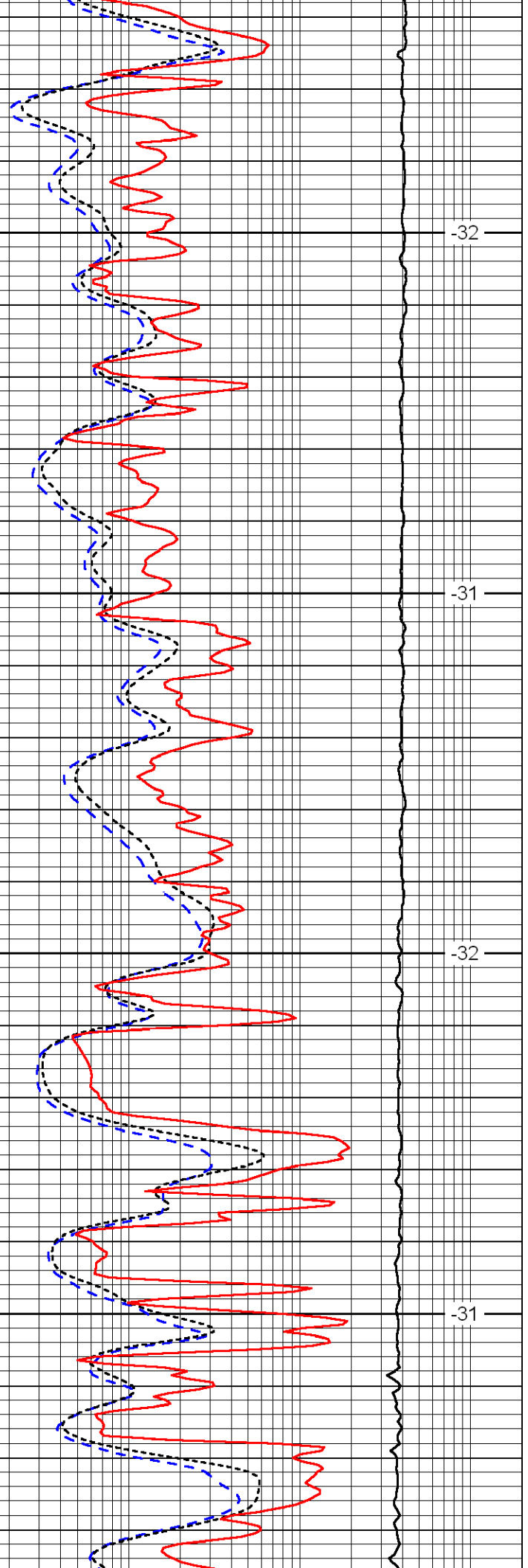


3150

3200

3250

3300

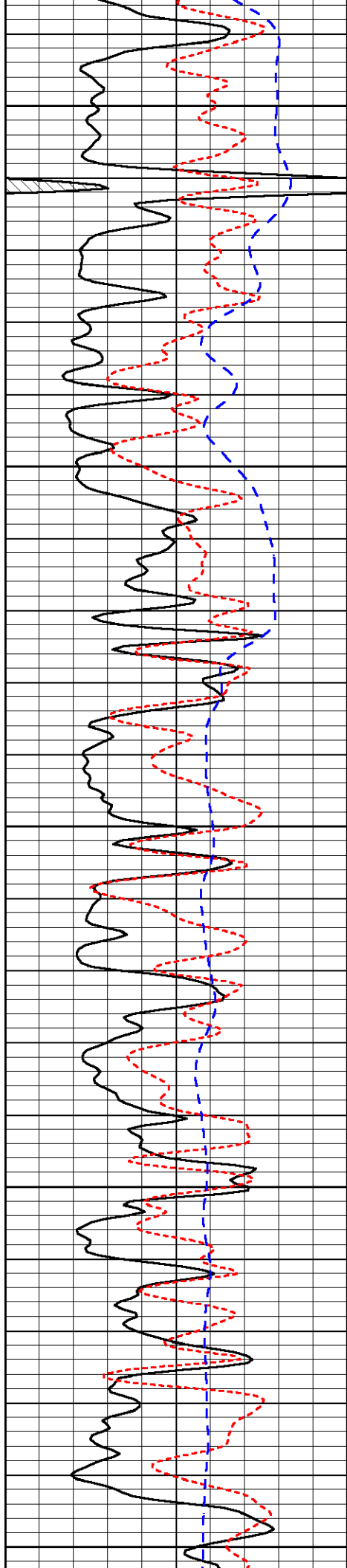


-32

-31

-32

-31



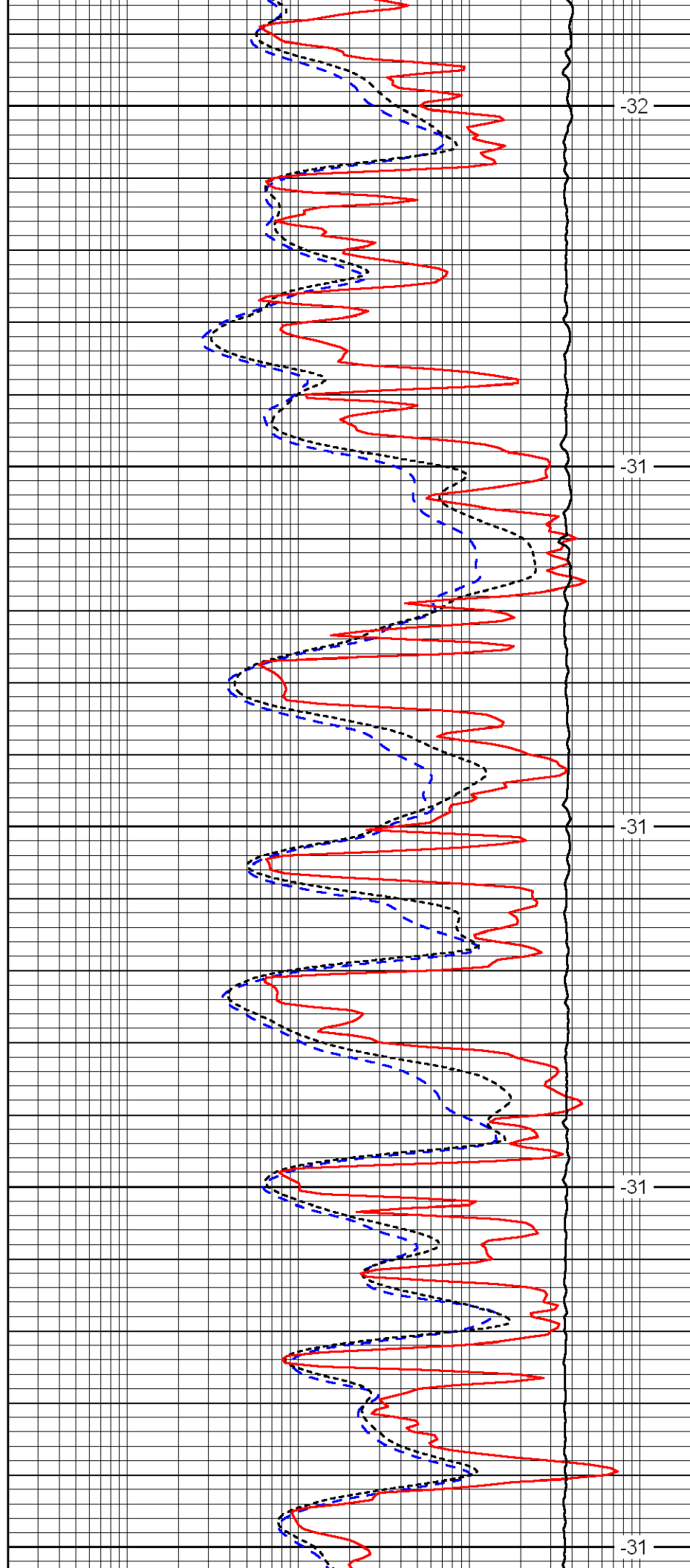
3350

3400

3450

3500

3550



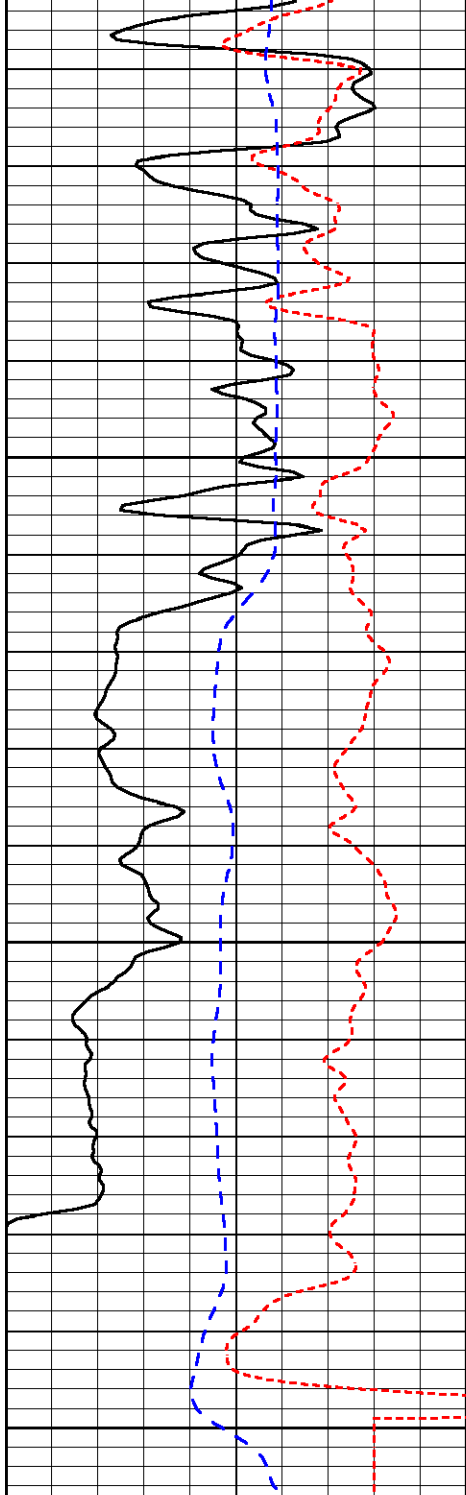
-32

-31

-31

-31

-31

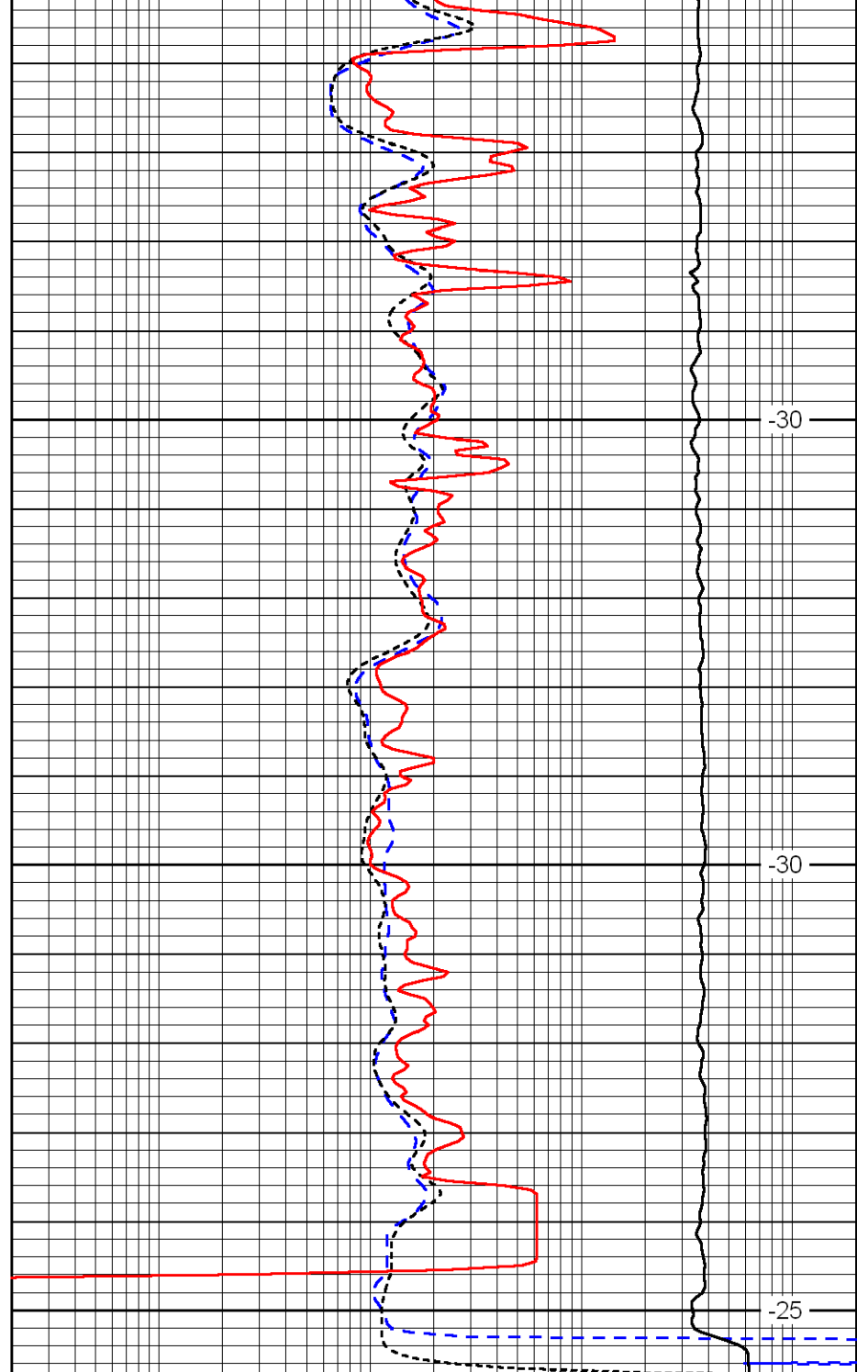


3600

3650

3700

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



-30

-30

-25

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

LSPD