



DUAL INDUCTION LOG

Company RANGE OIL COMPANY, INC.	
Well	JACOBSON NO. 2
Field	PANTHER RANCH SW
County	CHASE
State	KANSAS
Company RANGE OIL COMPANY, INC.	
Well	JACOBSON NO. 2
Field	PANTHER RANCH SW
County	CHASE
State	KANSAS
Location:	API #: 15-017-20,923-00-00
2,350' FNL & 2,195' FWL	
SEC 31 TWP 19S RGE 6E	GROUND LEVEL Elevation 1462'
Permanent Datum	GROUND LEVEL Elevation 1462'
Log Measured From	KELLY BUSHING
Drilling Measured From	KELLY BUSHING
Date	8/21/2015
Run Number	ONE
Depth Driller	2326'
Depth Logger	2322'
Bottom Logged Interval	2321'
Top Log Interval	200'
Casing Driller	8.625" @ 210'
Casing Logger	208'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	1300
Density / Viscosity	9.3 49
pH / Fluid Loss	9.0 9.5
Source of Sample	Flowline
Rm @ Meas. Temp	.98 @ 78
Rmt @ Meas. Temp	.74 @ 78
Rmc @ Meas. Temp	1.32 @ 78
Source of Rmt / Rmc	Charts
Rm @ BHT	.77 @ 99
Operating Rig Time	3 1/2 HOURS
Max Rec. Temp. F	99
Equipment Number	108
Location	Hays
Recorded By	J. LONG
Witnessed By	KEN WALLACE

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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.

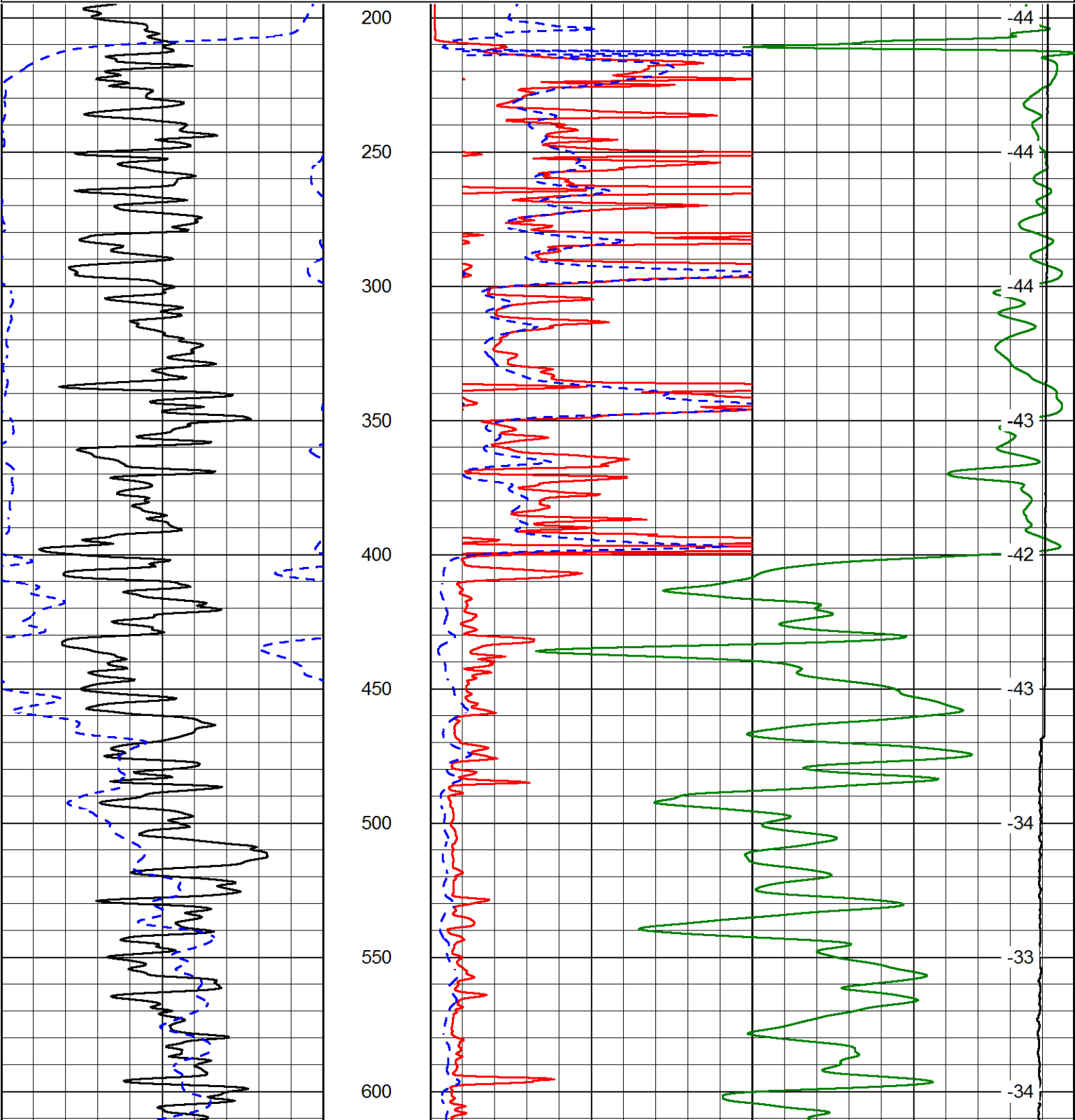
MARION, EAST TO HIGHWAY 56/77 AND HIGHWAY 150 INTERSECTION, 8 1/4 EAST,
SOUTH INTO

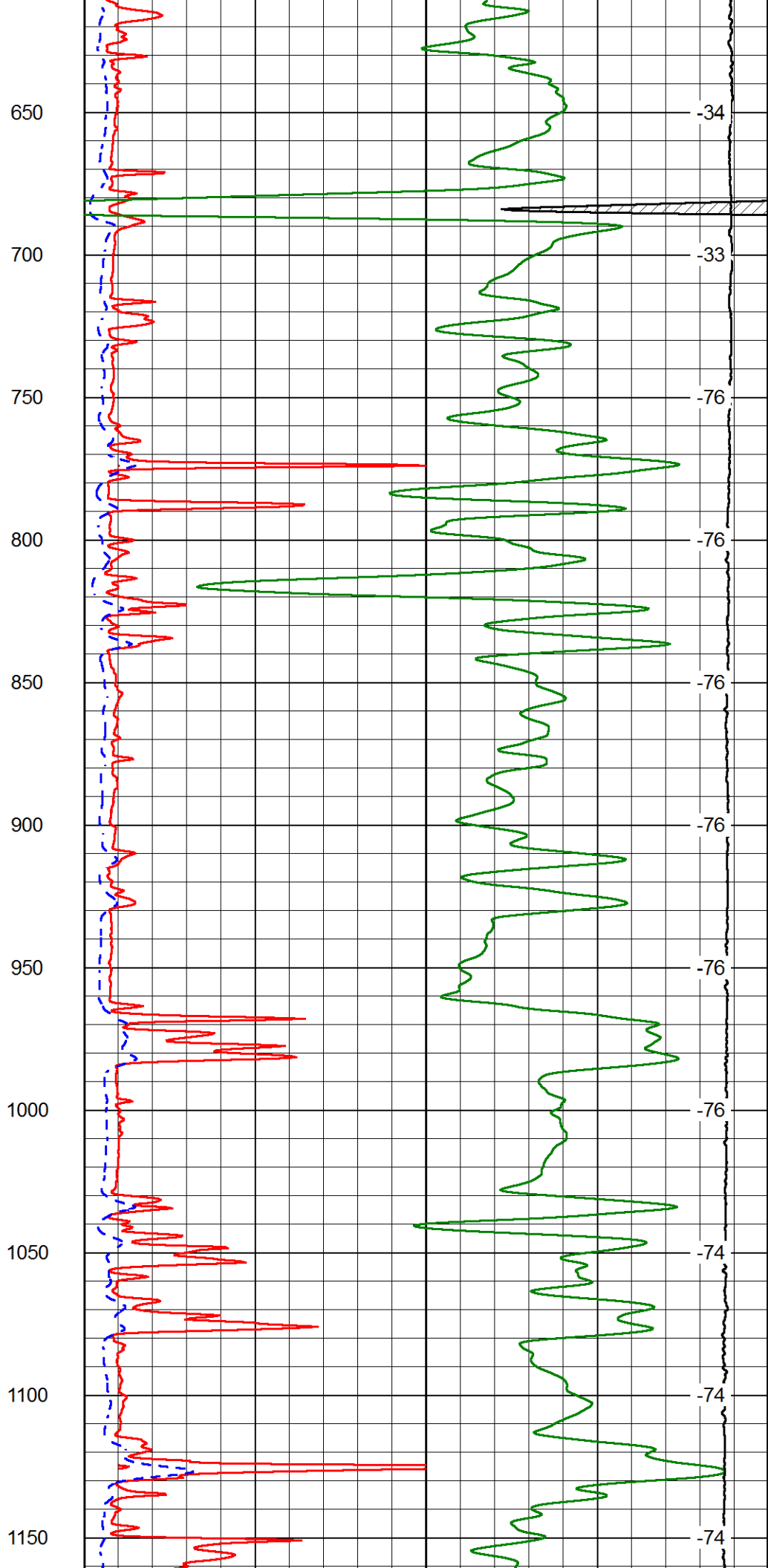
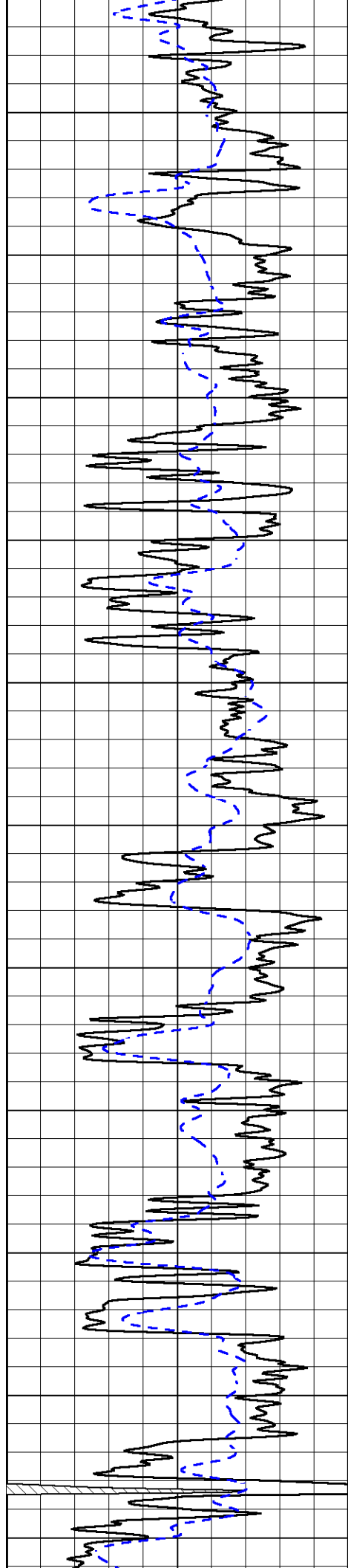
Log Measured From: KELLY BUSHING 6 Ft. Above Permanent Datum

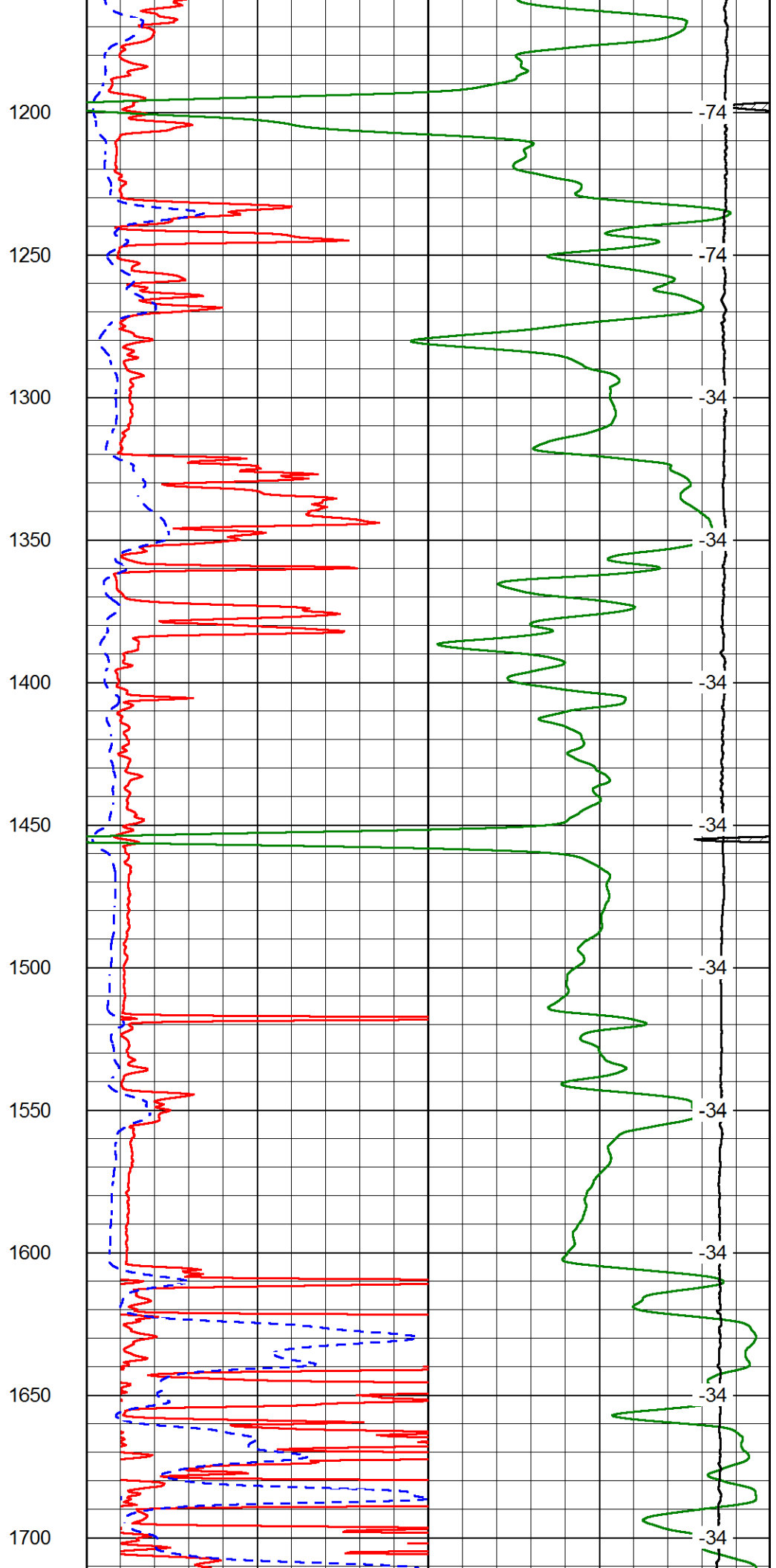
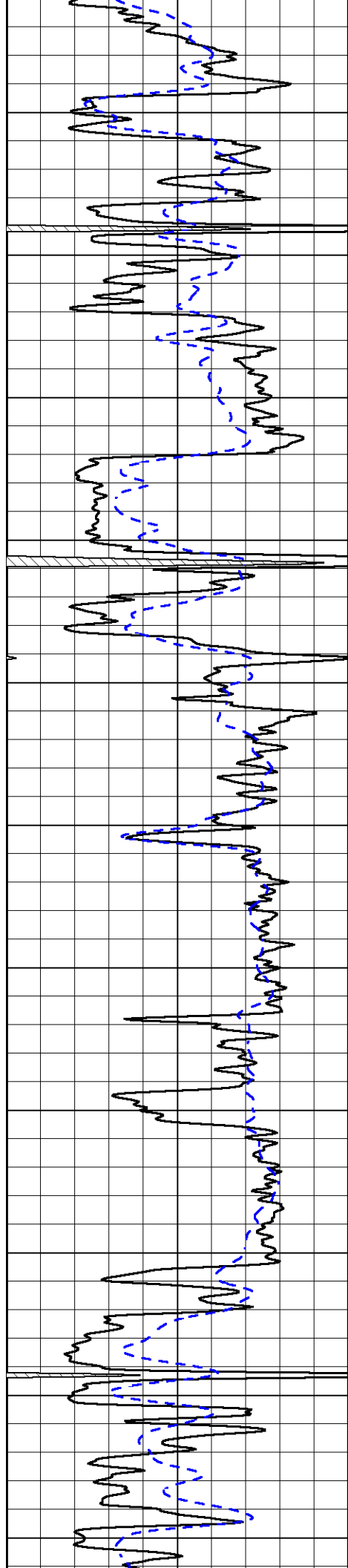
THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneerenergy.com 785-625-3858

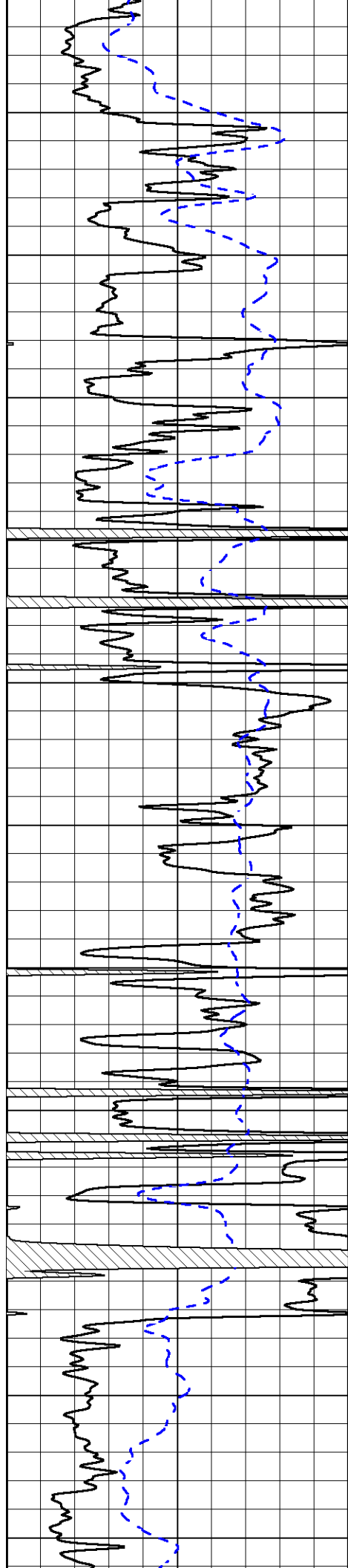
Your Pioneer Energy Services Crew	This Log Record Was Witnessed By
Engineer: J. LONG	Primary Witness: KEN WALLACE
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

0	Gamma Ray (GAPI)	150	1000	Conductivity	0
-200	SP (mV)	0	15000	Line Tension (lb)	0
			0	Shallow Resistivity (Ohm-m)	50
			0	Deep Resistivity (Ohm-m)	50
			Shallow Resistivity		LSPD (ft/min)
			50	(Ohm-m)	500
			50	Deep Resistivity (Ohm-m)	500









1750

1800

1850

1900

1950

2000

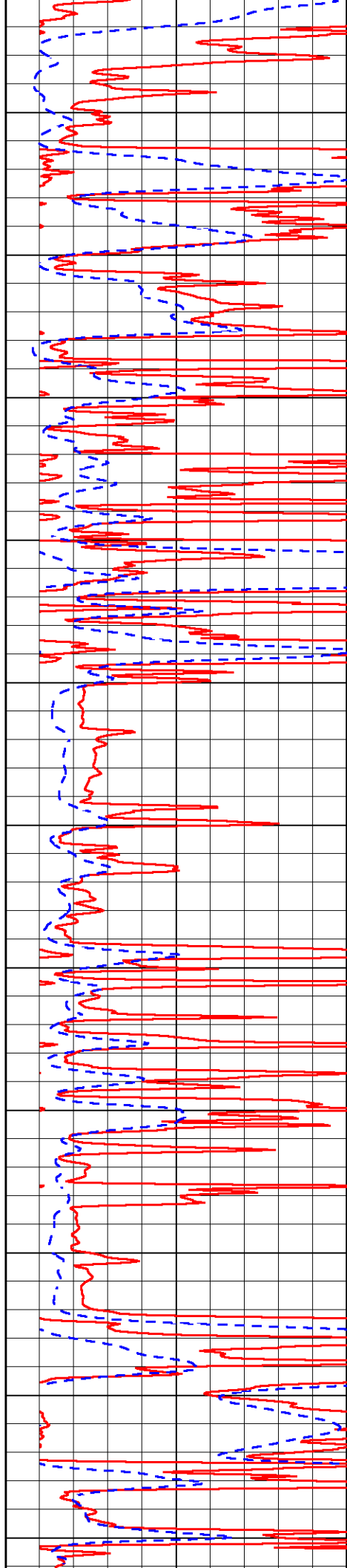
2050

2100

2150

2200

2250



-33

-33

-33

-33

-33

-33

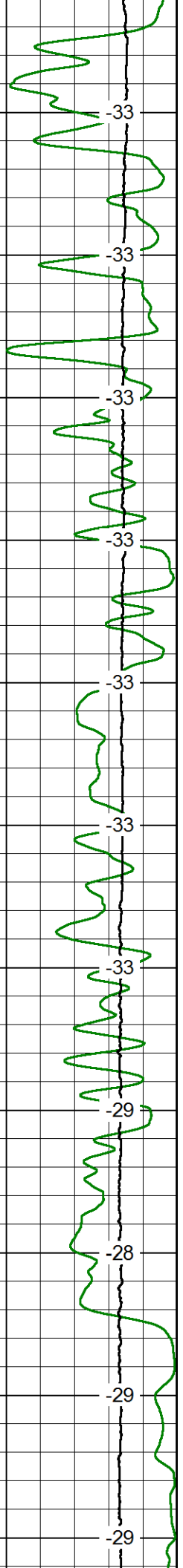
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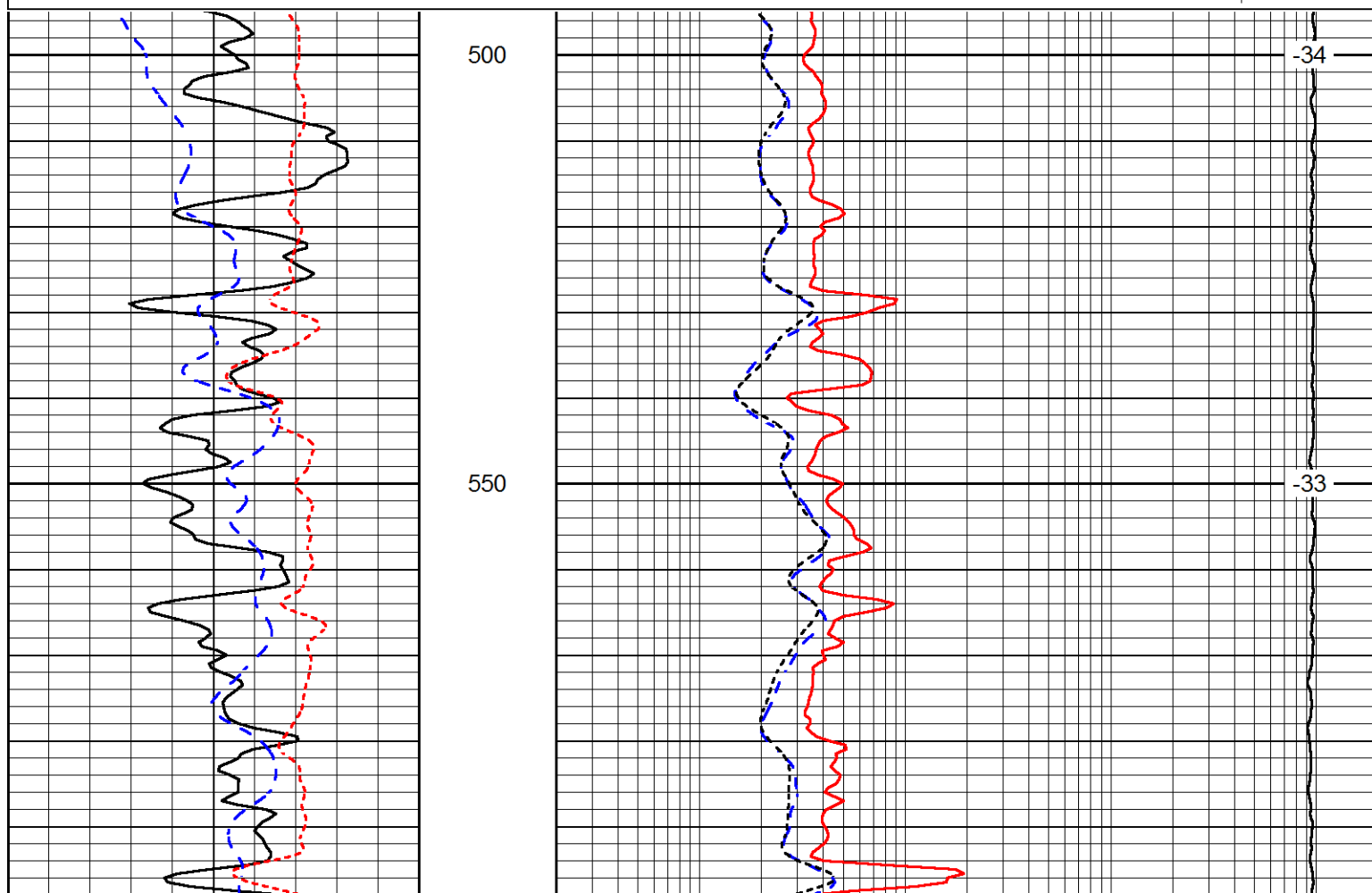
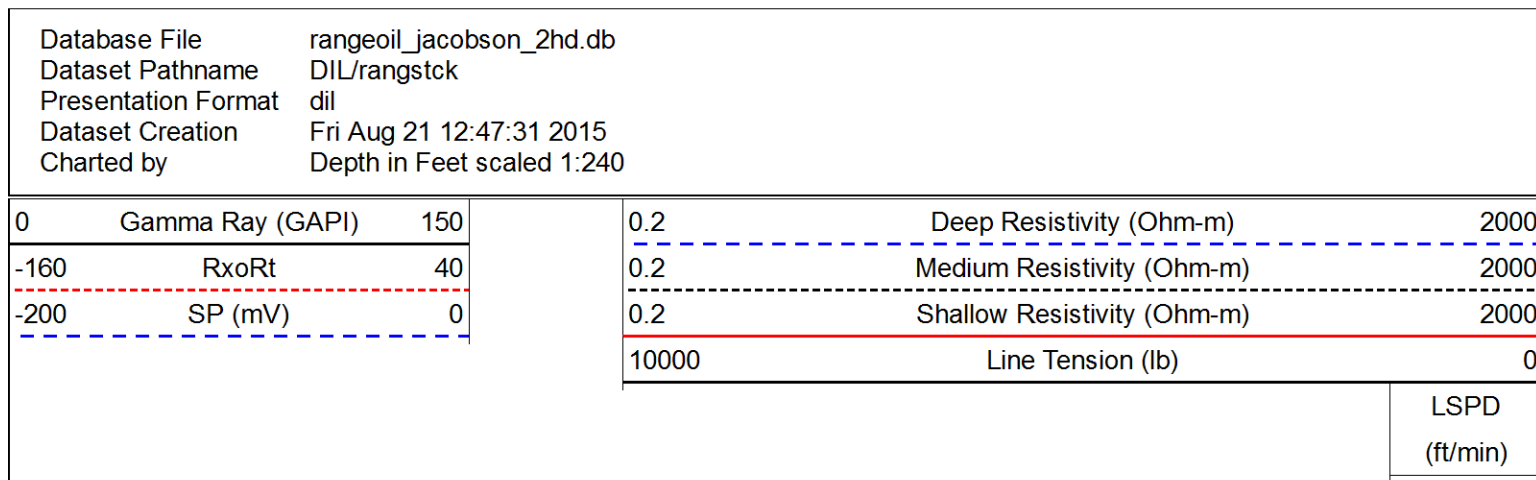
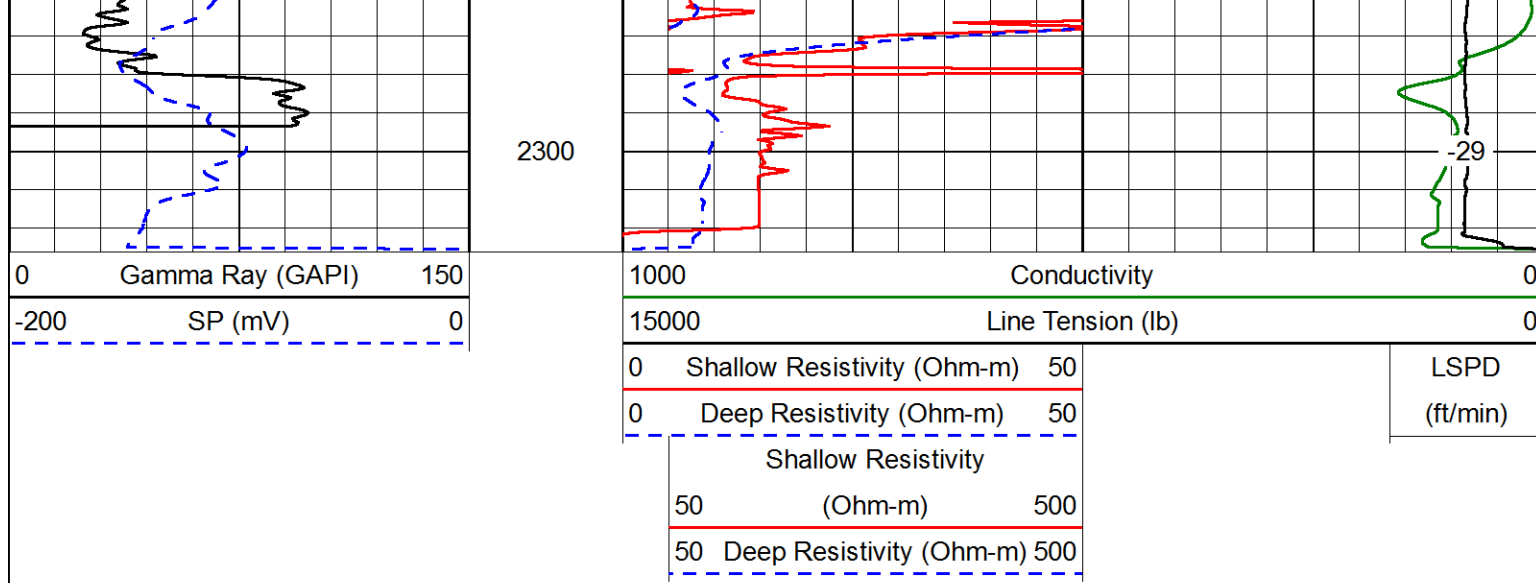
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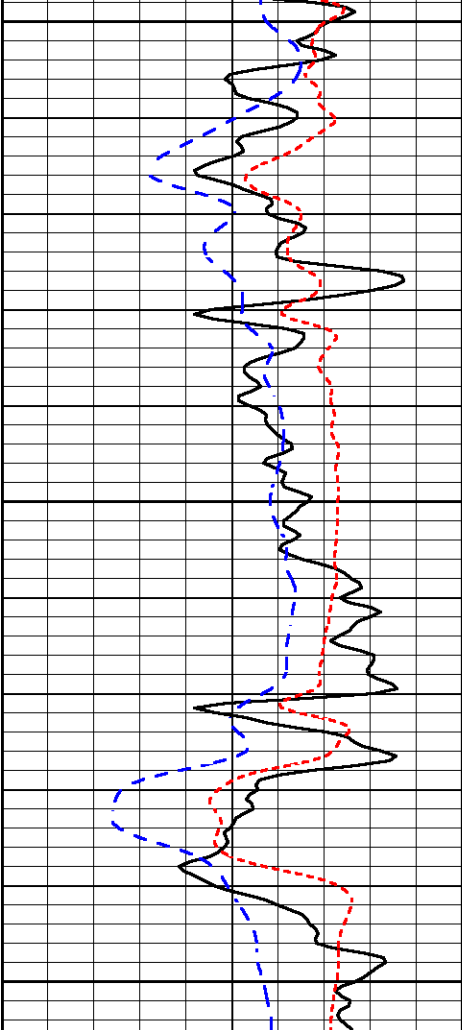
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-29

-29

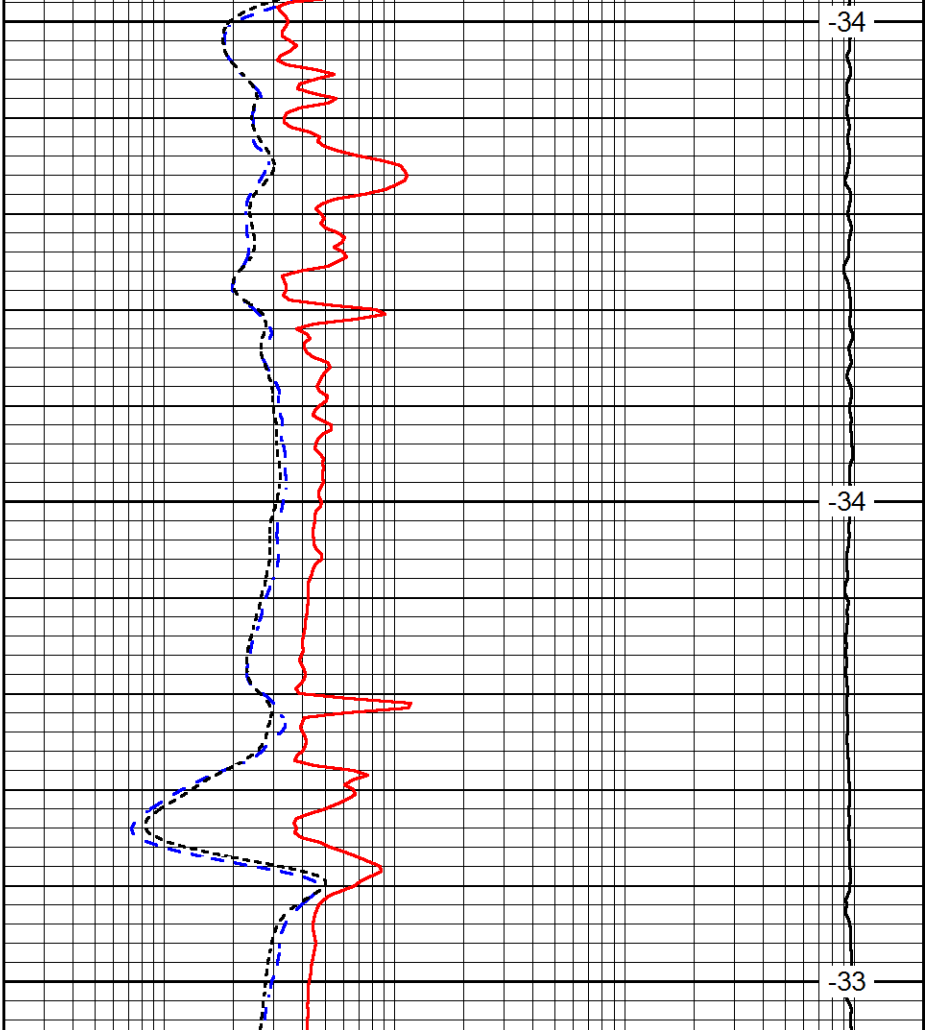






0	Gamma Ray (GAPI)	150
-160	RxoRt	40
-200	SP (mV)	0

600
650
700



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

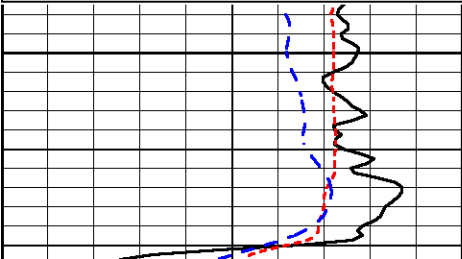
LSPD
(ft/min)

Database File rangeoil_jacobson_2hd.db
Dataset Pathname DIL/rangstck
Presentation Format dil
Dataset Creation Fri Aug 21 12:47:31 2015
Charted by Depth in Feet scaled 1:240

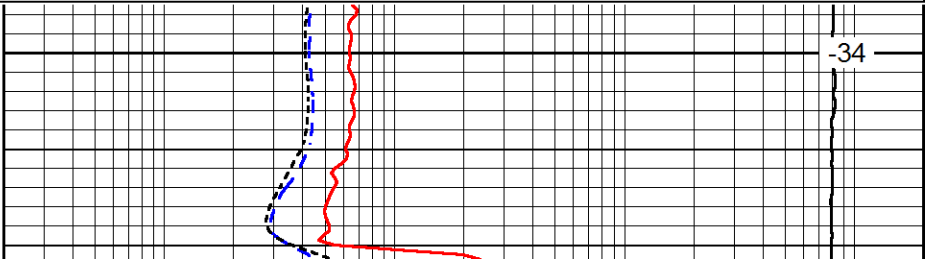
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-160	RxoRt	40
-200	SP (mV)	0

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

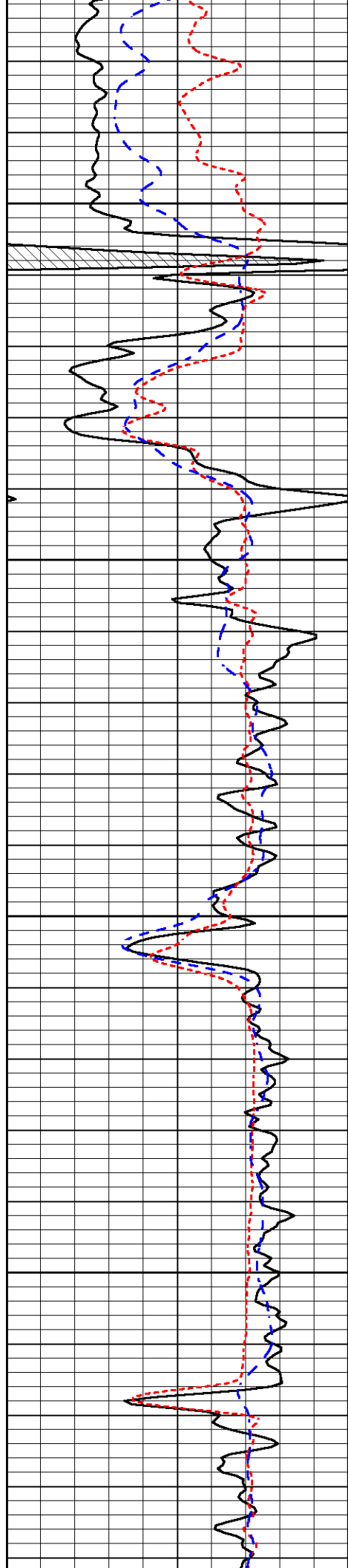
LSPD
(ft/min)



1300



-34

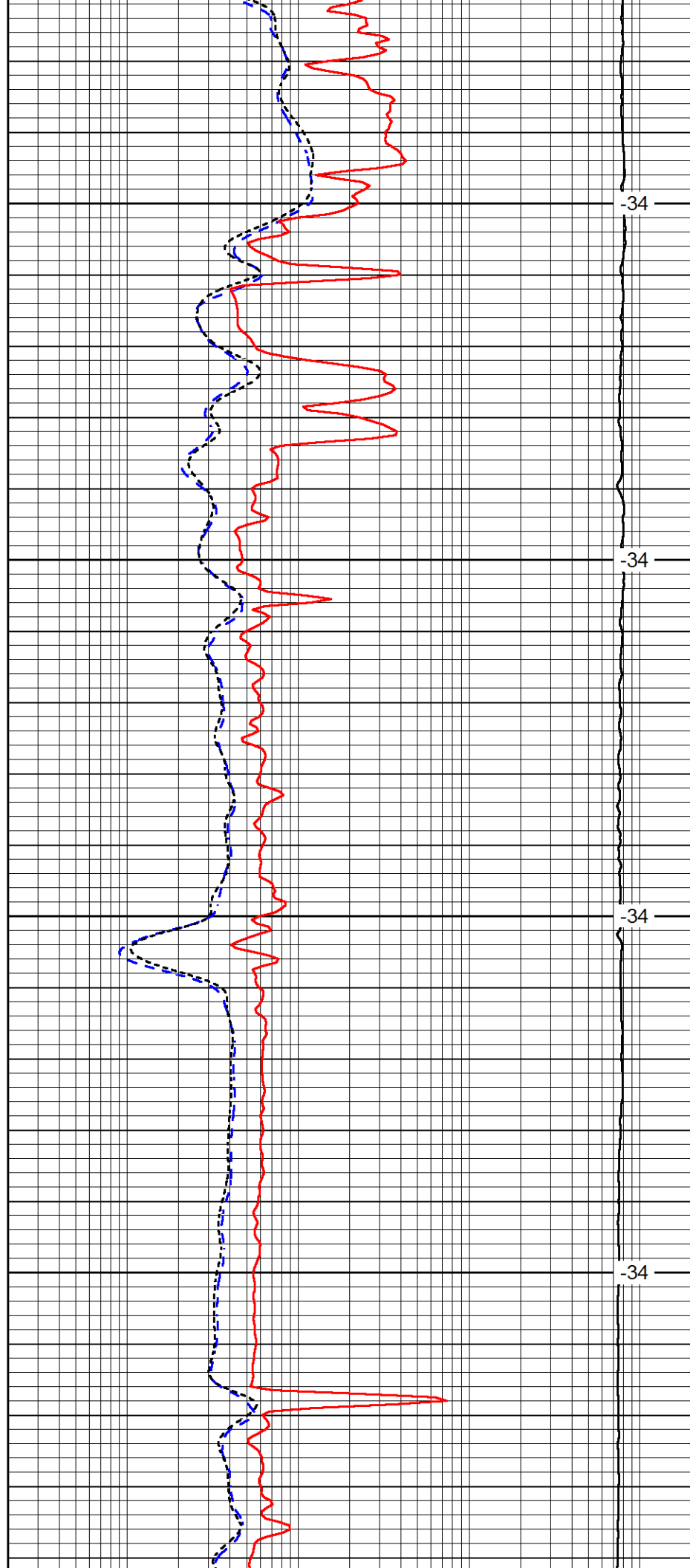


1350

1400

1450

1500

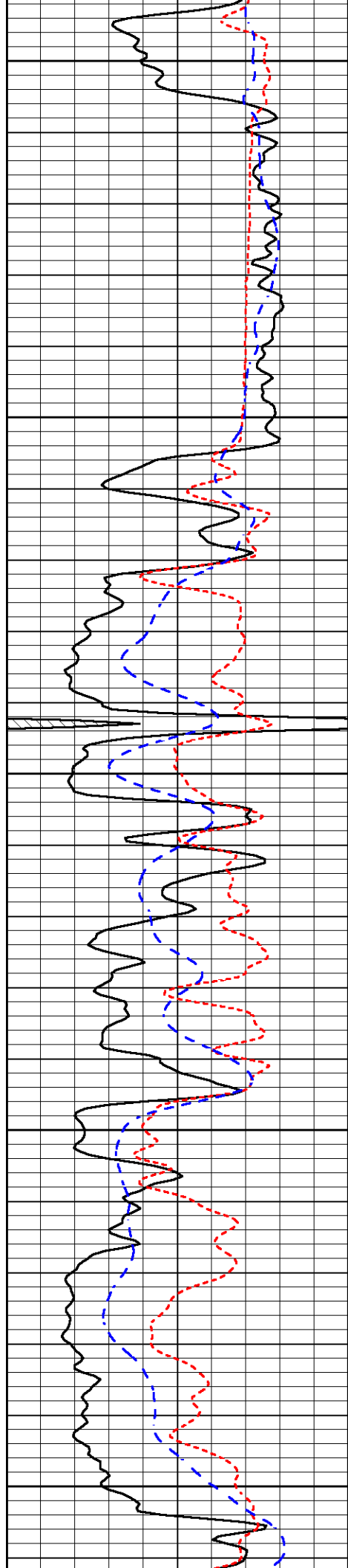


-34

-34

-34

-34



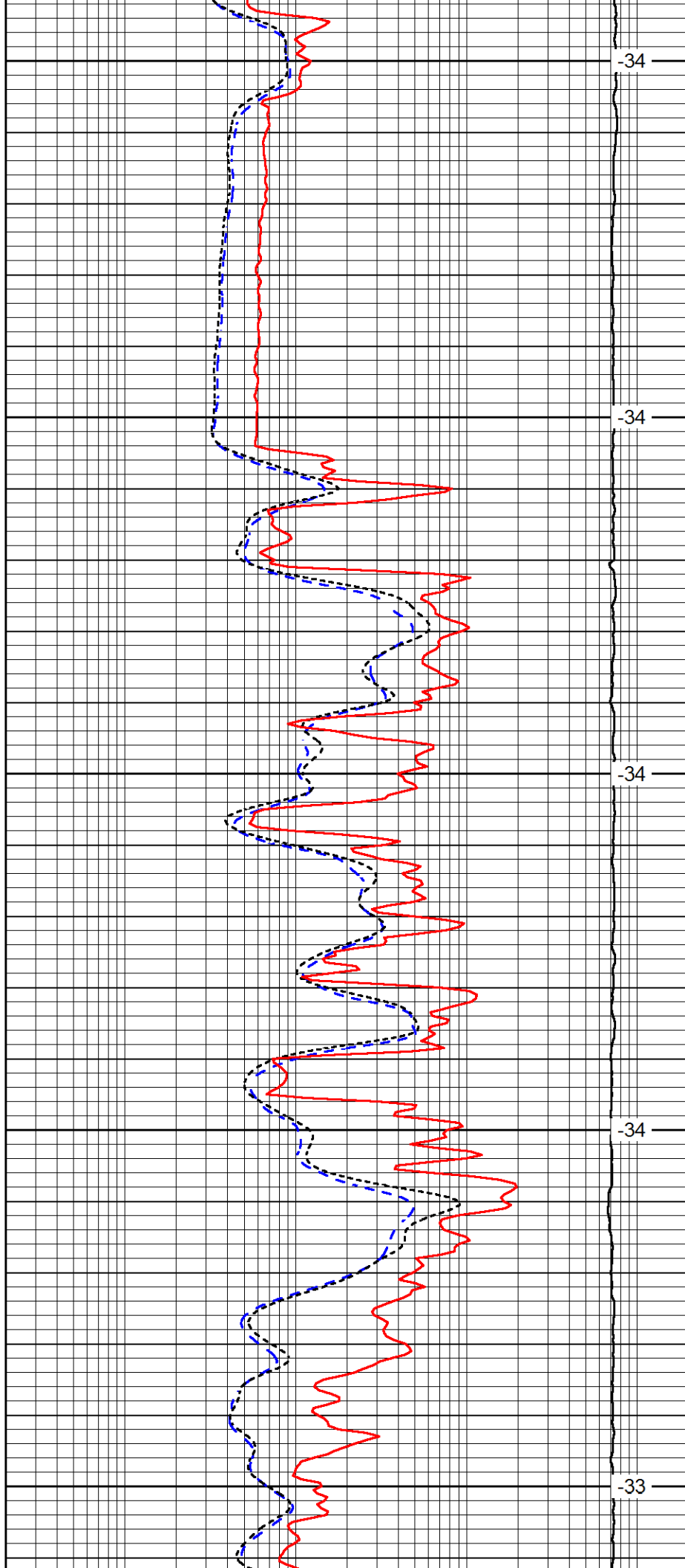
1550

1600

1650

1700

1750



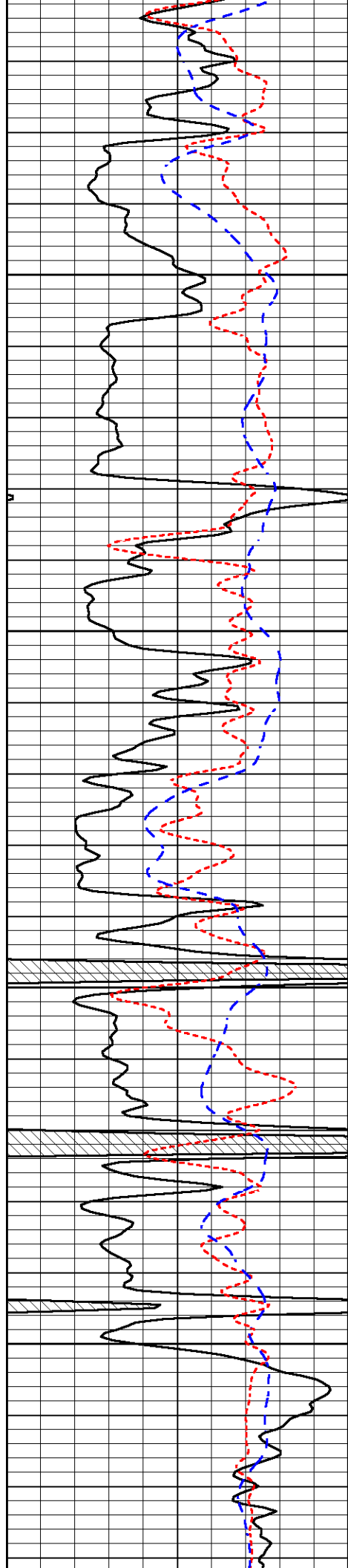
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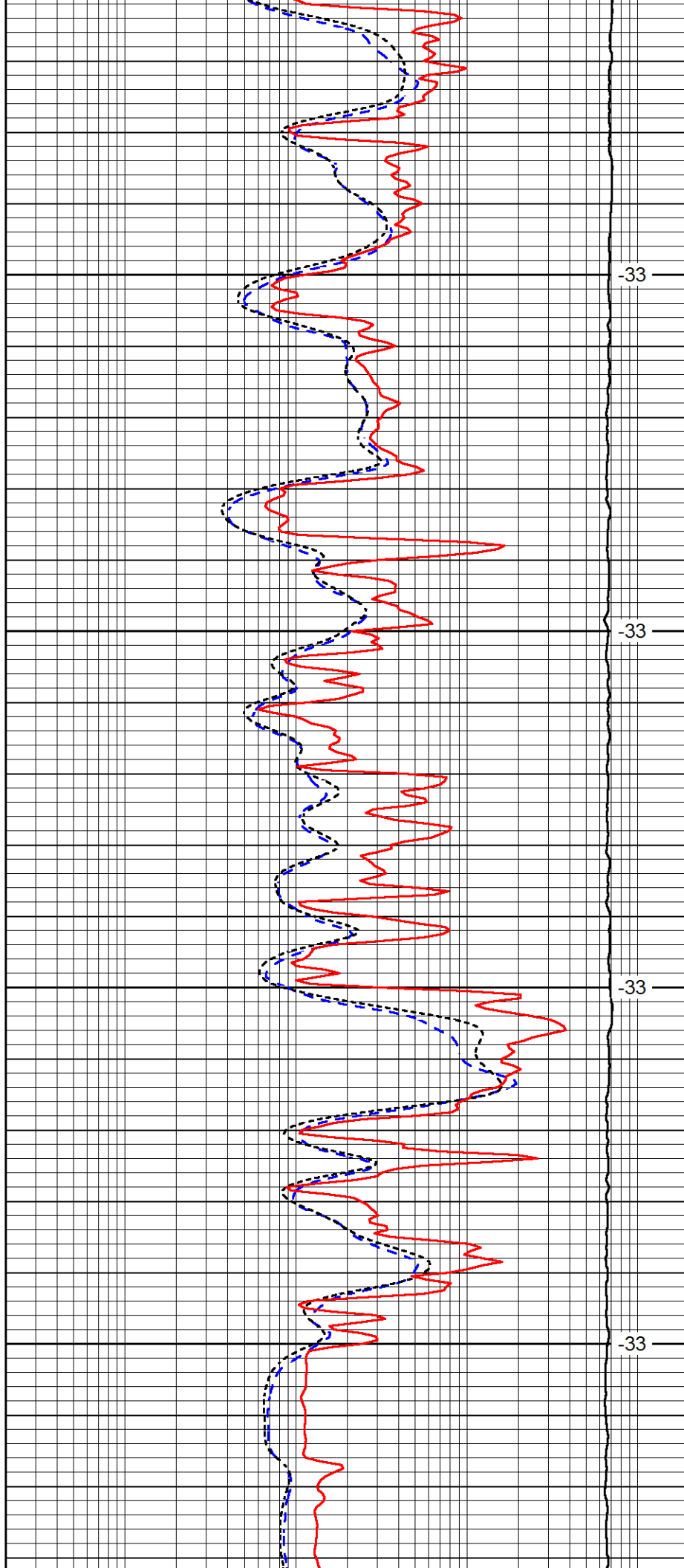


1800

1850

1900

1950

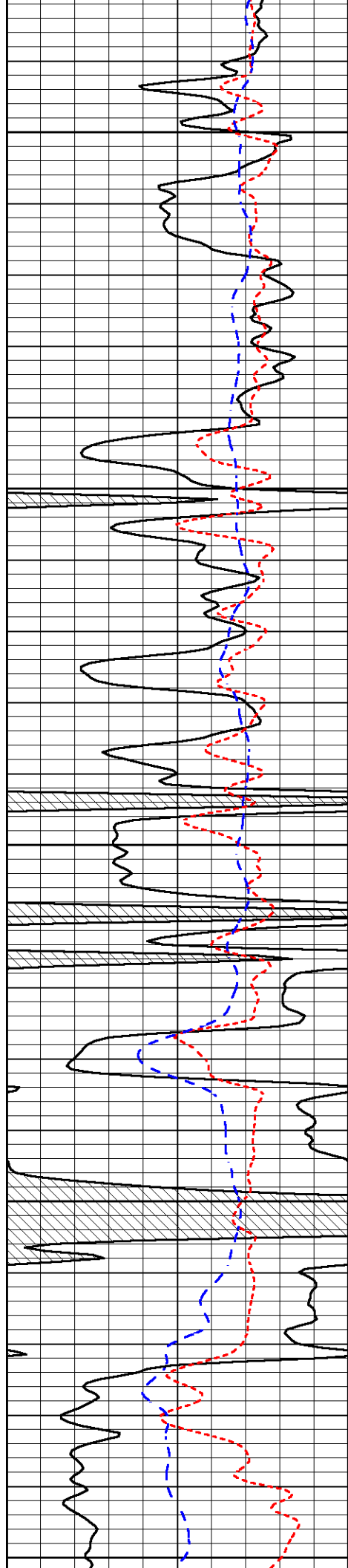


-33

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-33



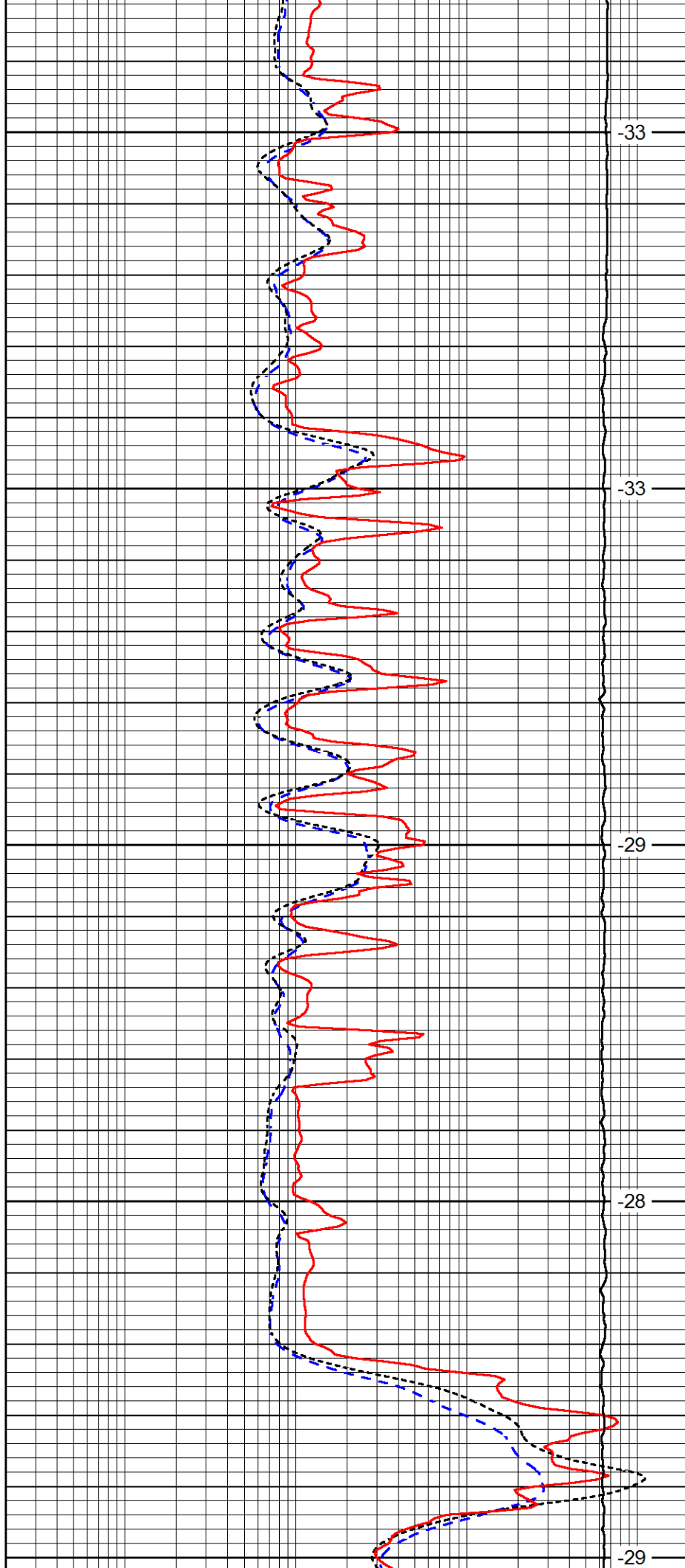
2000

2050

2100

2150

2200



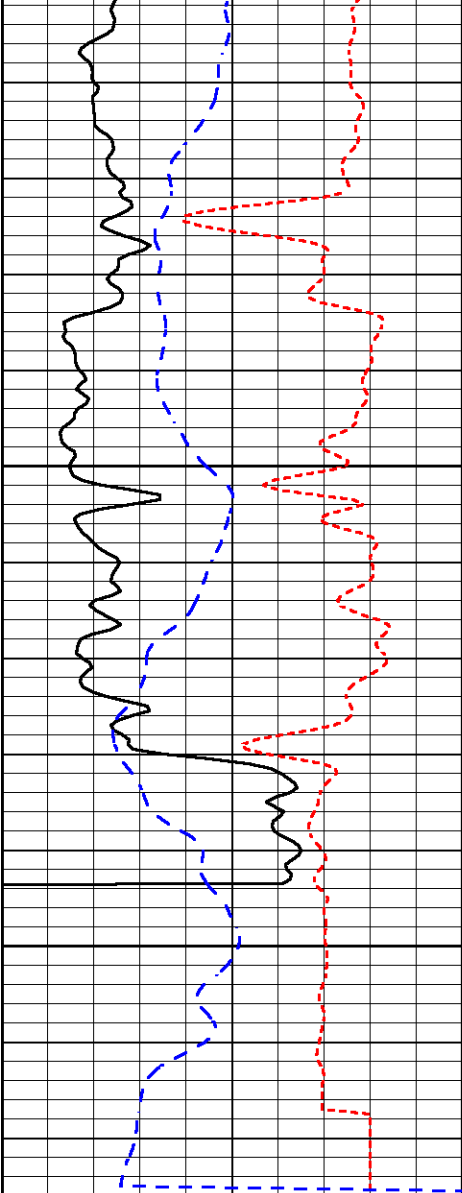
-33

-33

-29

-28

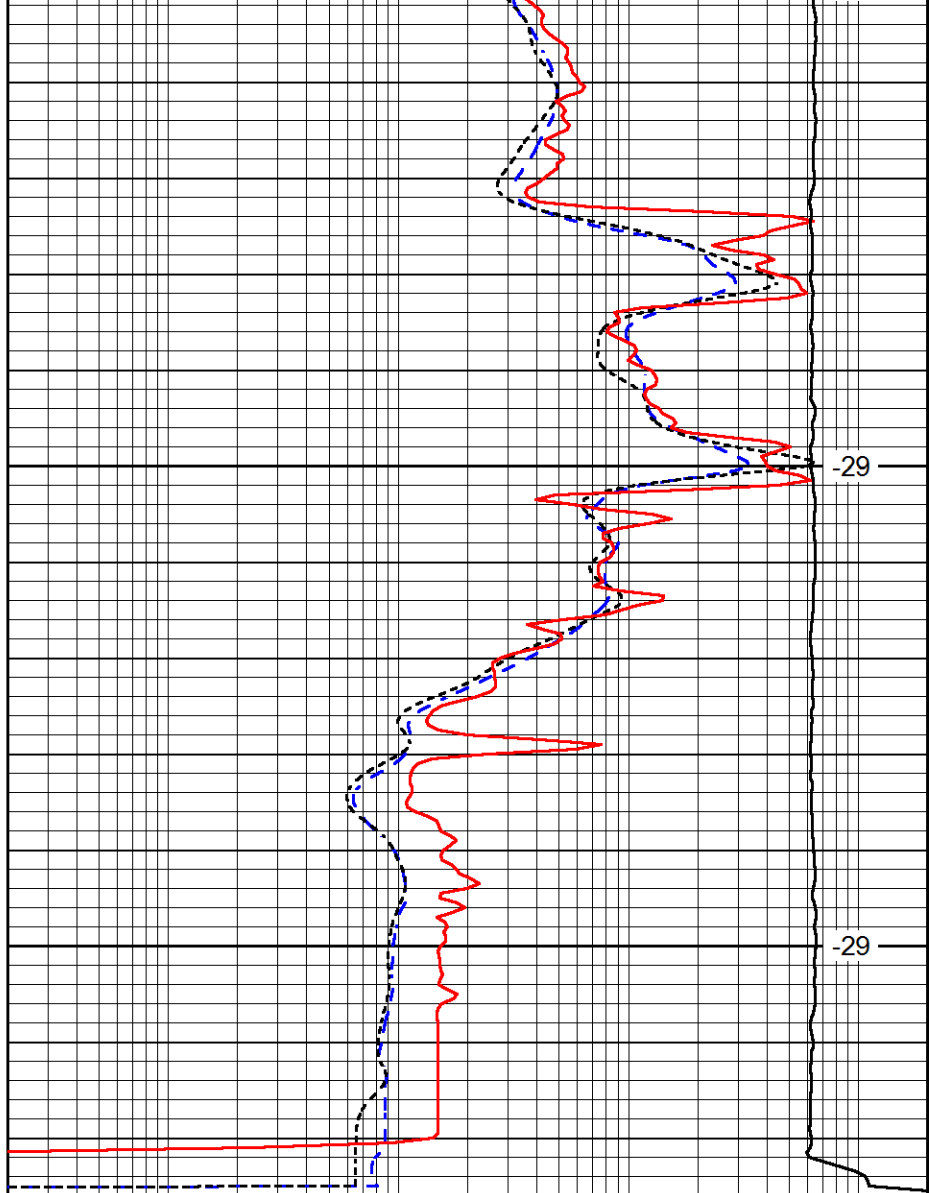
-29



2250

2300

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



2250

2300

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)