



PIONEER
Pioneer Energy Services

DUAL INDUCTION LOG

Company **CONCORDE RESOURCES CORP**
Well **MCDANIEL #5-12**
Field **WILDCAT**
County **LOGAN**
State **KANSAS**

Company **CONCORDE RESOURCES CORP**
Well **MCDANIEL #5-12**
Field **WILDCAT**
County **LOGAN** State **KANSAS**

Location: API #: 15-109-21443-00-00

SEC 12 TWP 15S RGE 34W

Permanent Datum **GROUND LEVEL Elevation 2850'**

Log Measured From **KELLY BUSHING**

Drilling Measured From **KELLY BUSHING**

Other Services

CNL/CDL
MEL

Elevation
K.B. 2860'
D.F. N/A
G.L. 2850'

Date 9/19/2016

Run Number ONE

Depth Driller 4560'

Depth Logger 4558'

Bottom Logged Interval 4557'

Top Log Interval 300'

Casing Driller 8.625" @ 308'

Casing Logger 307'

Bit Size 7.875"

Type Fluid in Hole CHEMICAL

Salinity, ppm CL 4500

Density / Viscosity 9.5 58

pH / Fluid Loss 10.0 8.8

Source of Sample FLOWLINE

Rm @ Meas. Temp 0.60 @ 88

Rmf @ Meas. Temp 0.45 @ 88

Rmc @ Meas. Temp 0.81 @ 88

Source of Rmf / Rmc CHARTS

Rm @ BHT 0.43 @ 122

Operating Rig Time 3 HOURS

Max Rec. Temp. F 122

Equipment Number 91

Location COLBY

Recorded By D. SCHMIDT

Witnessed By GARY MOORES

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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.

OAKLEY,
23 SOUTH TO GOLD RD,
5 1/2 WEST TO 390 RD, 2 SOUTH, 4 WEST,
1 NORTH AND WEST INTO

Log Measured From: KELLY BUSHING

10 Ft. Above Permanent Datum

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

Your Pioneer Energy Services Crew

Engineer: D. SCHMIDT
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: GARY MOORES
Secondary Witness: RICHARD BELL
Secondary Witness:
Secondary Witness:

Top - Bottom

M	A	SPSHIFT mV	SNDERRM mmho/m	SNDERR mmho/m	SZCOR	NPORSEL	FLUIDDEN g/cc
2	1	80	0	0	Off	Limestone	1
MATRXDEN g/cc	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
2.71	88	0	5.5	0	4558	122	7.875

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (89)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73		CNT-M&W (207-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93		CDL-M&W (90-1031)	8.50	4.00	250.00
ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics				7.58	4.00	65.00
MCAL MI MN	19.83 19.83 19.83					
RLL3F RLL3	15.80 15.80					

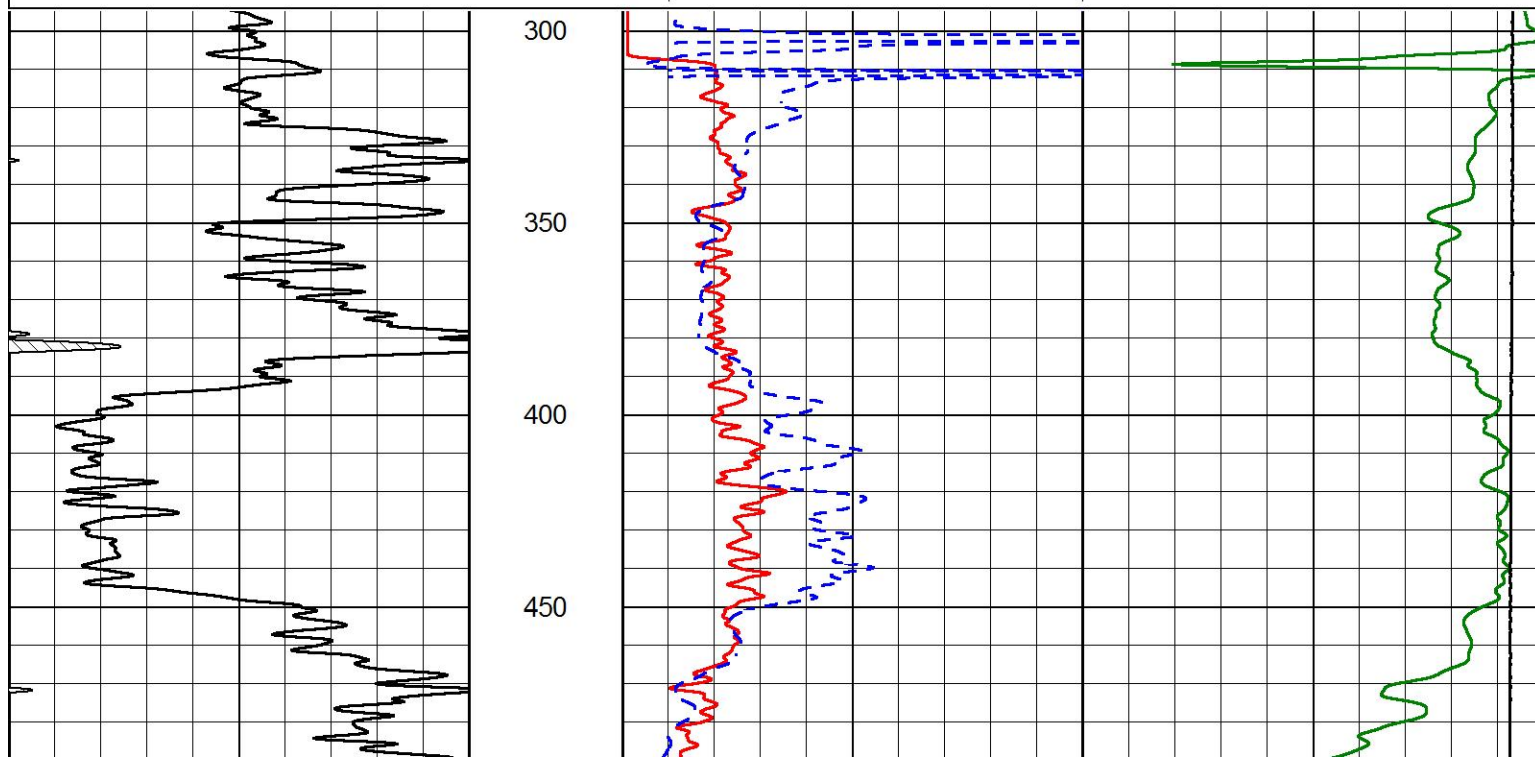
			DIL-PSI HIGH TEMP (PSI 216 HT)	18.50	3.50	220.00
CILD	8.00					
CILM	4.70					
SP	0.20					
Dataset: concorde_mcdaniel_5-12.db: field/well/STKML/pass3.6 Total length: 43.08 ft Total weight: 685.00 lb O.D.: 4.00 in						

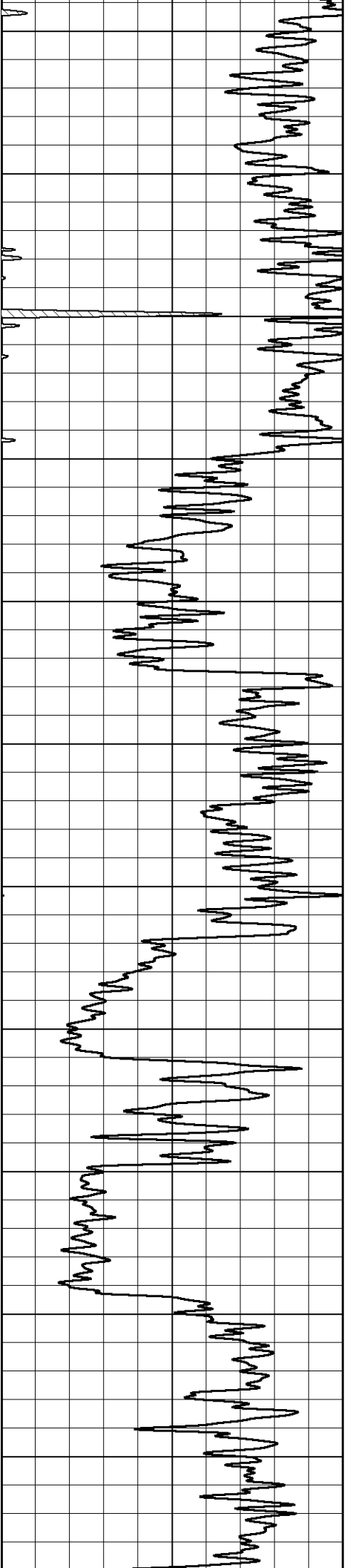
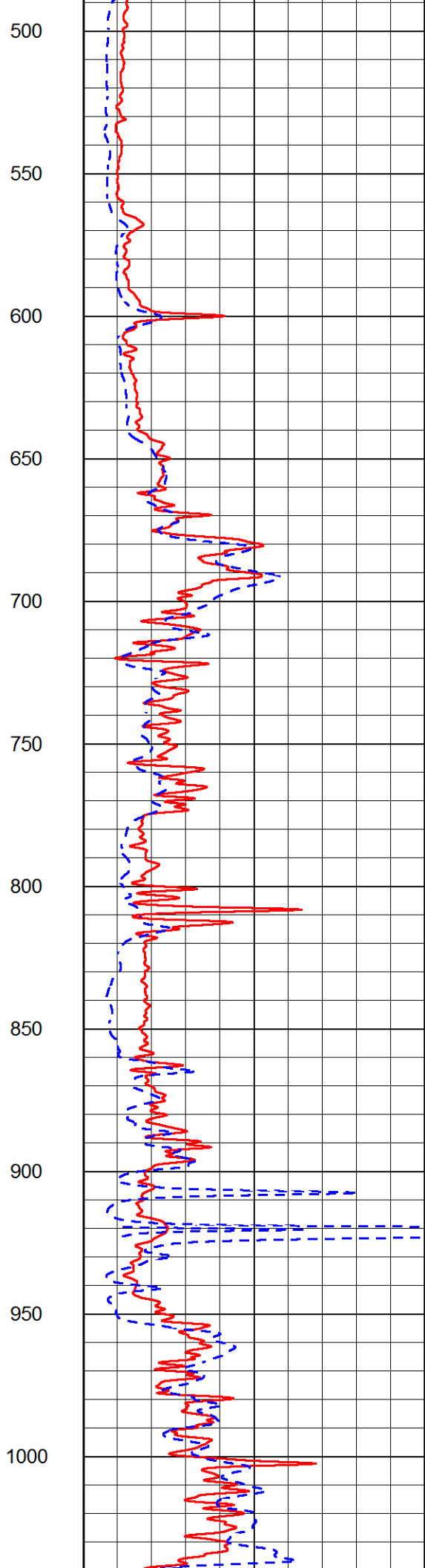
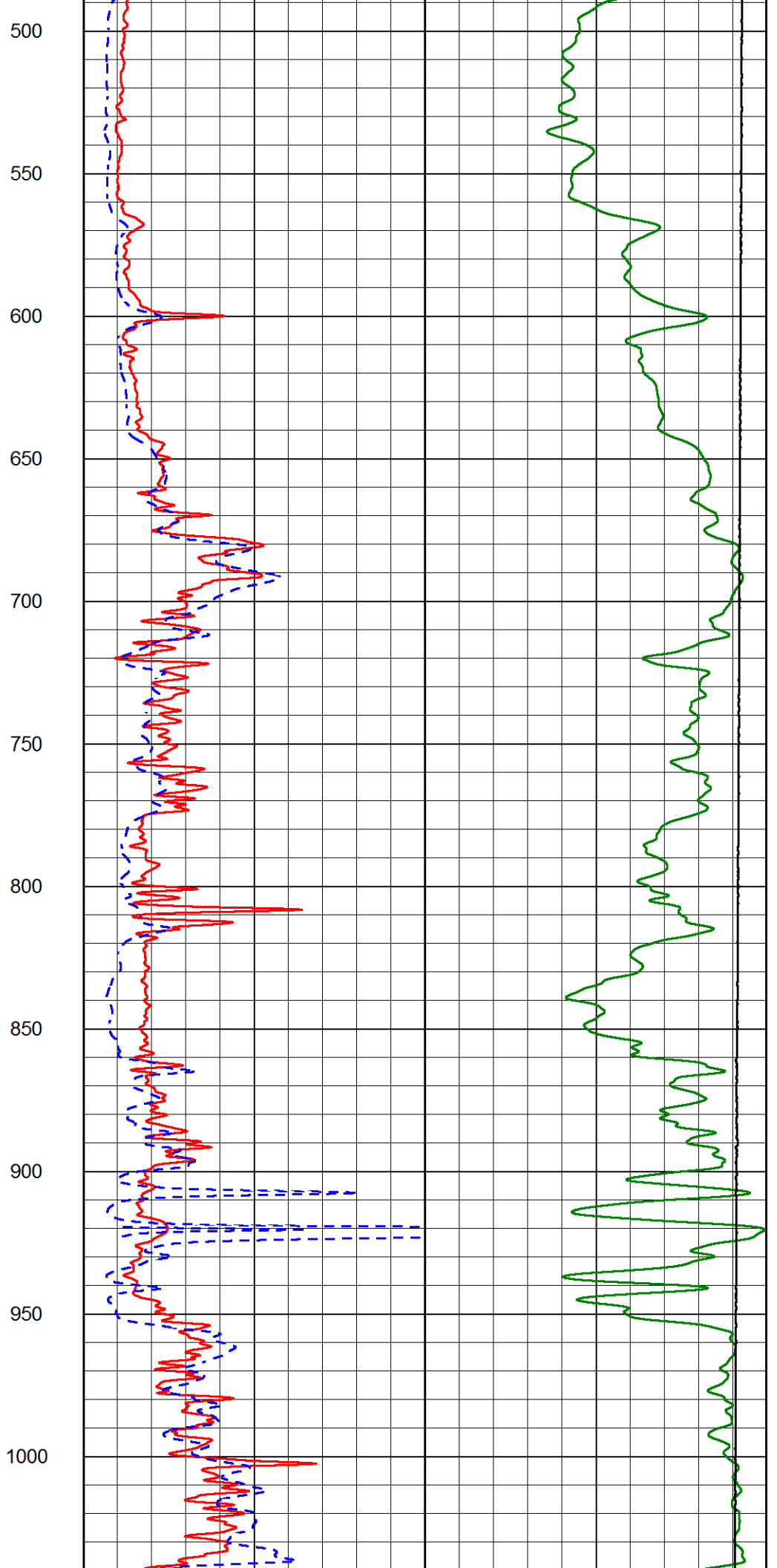


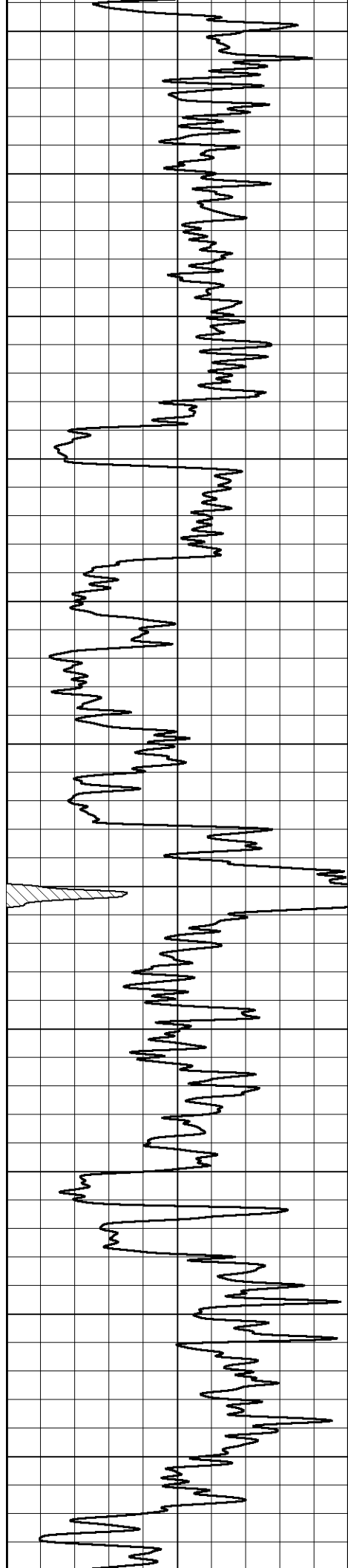
MAIN PASS

Database File	concorde_mcdaniel_5-12.db
Dataset Pathname	STKML/pass6.1
Presentation Format	dil2in
Dataset Creation	Mon Sep 19 16:18:41 2016
Charted by	Depth in Feet scaled 1:600

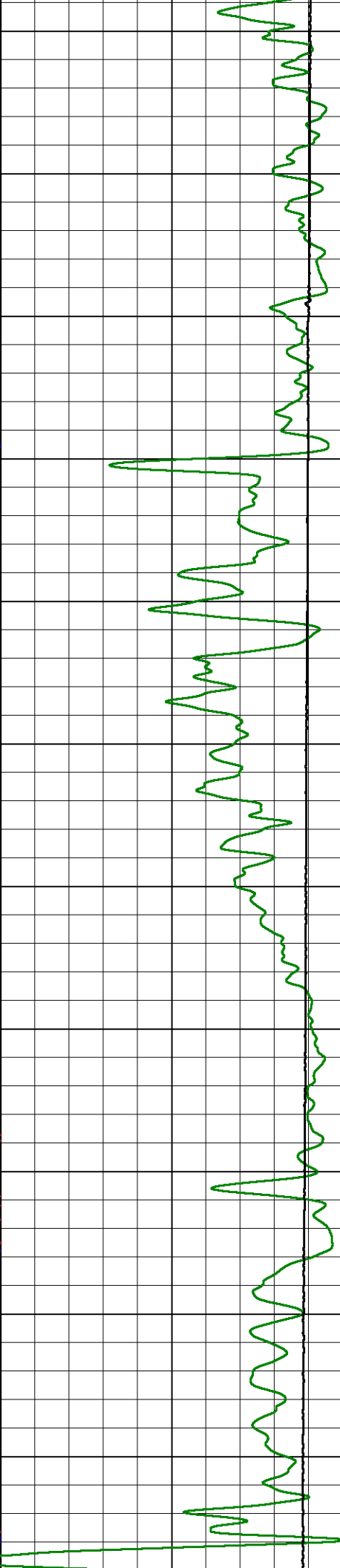
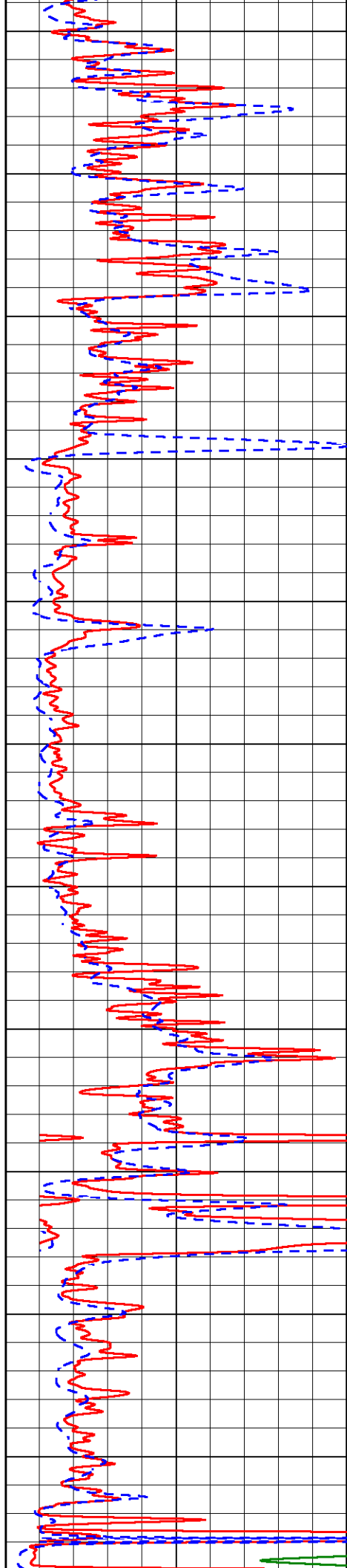
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			15000	Line Tension (lb)	0
			0	Shallow Resistivity (Ohm-m)	50
			0	Deep Resistivity (Ohm-m)	50
				Shallow Resistivity	
			50	(Ohm-m)	500
			50	Deep Resistivity (Ohm-m)	500

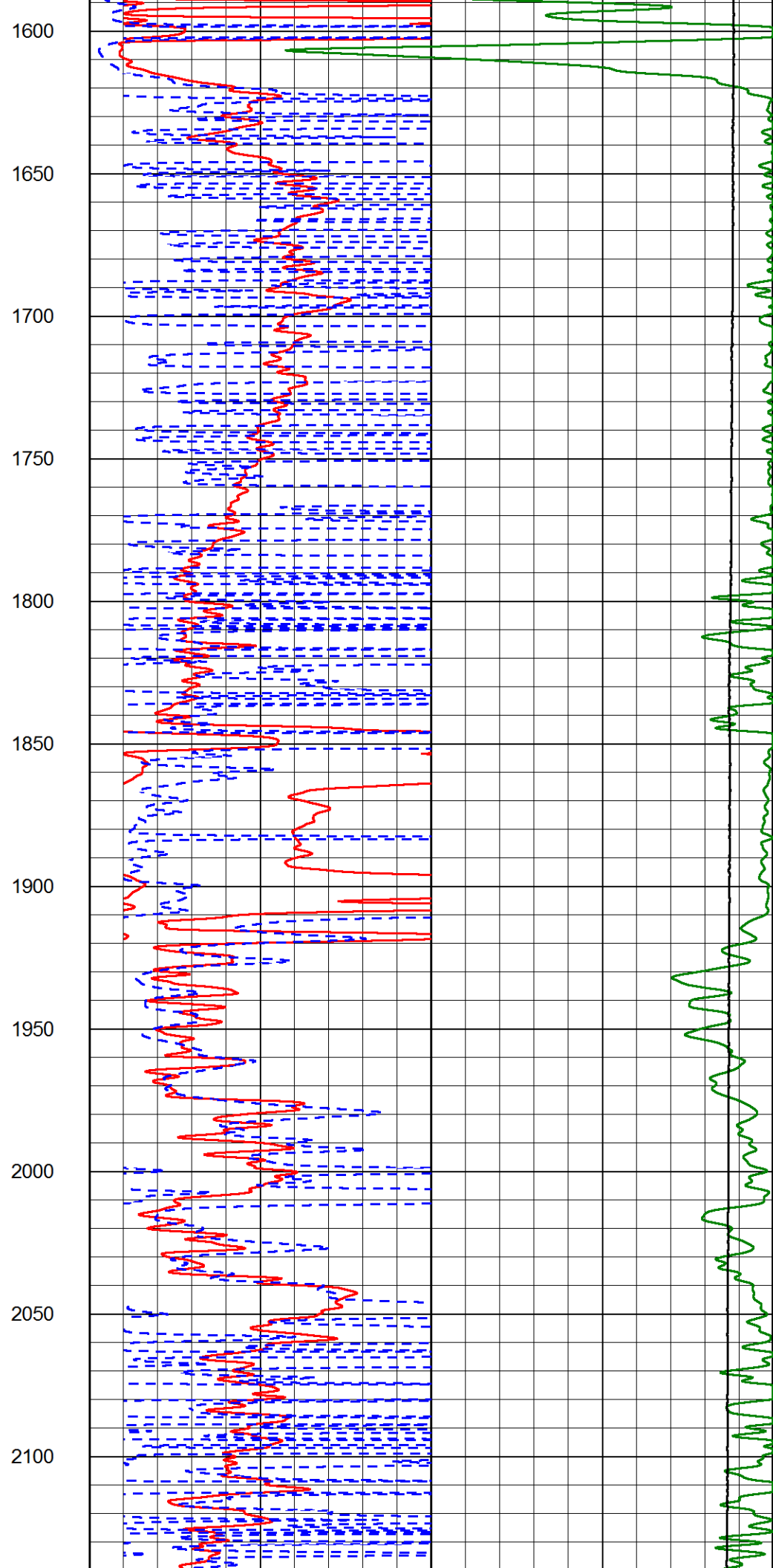
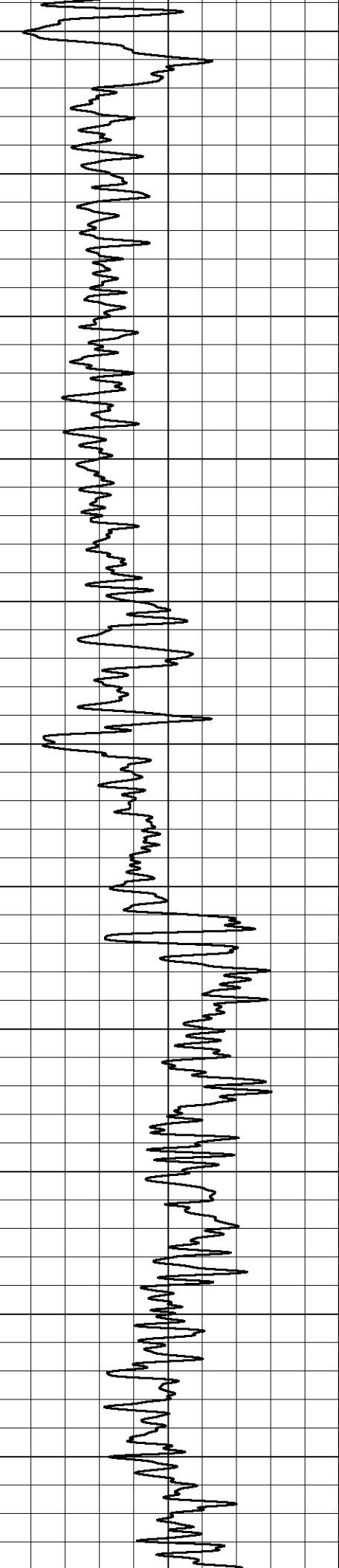


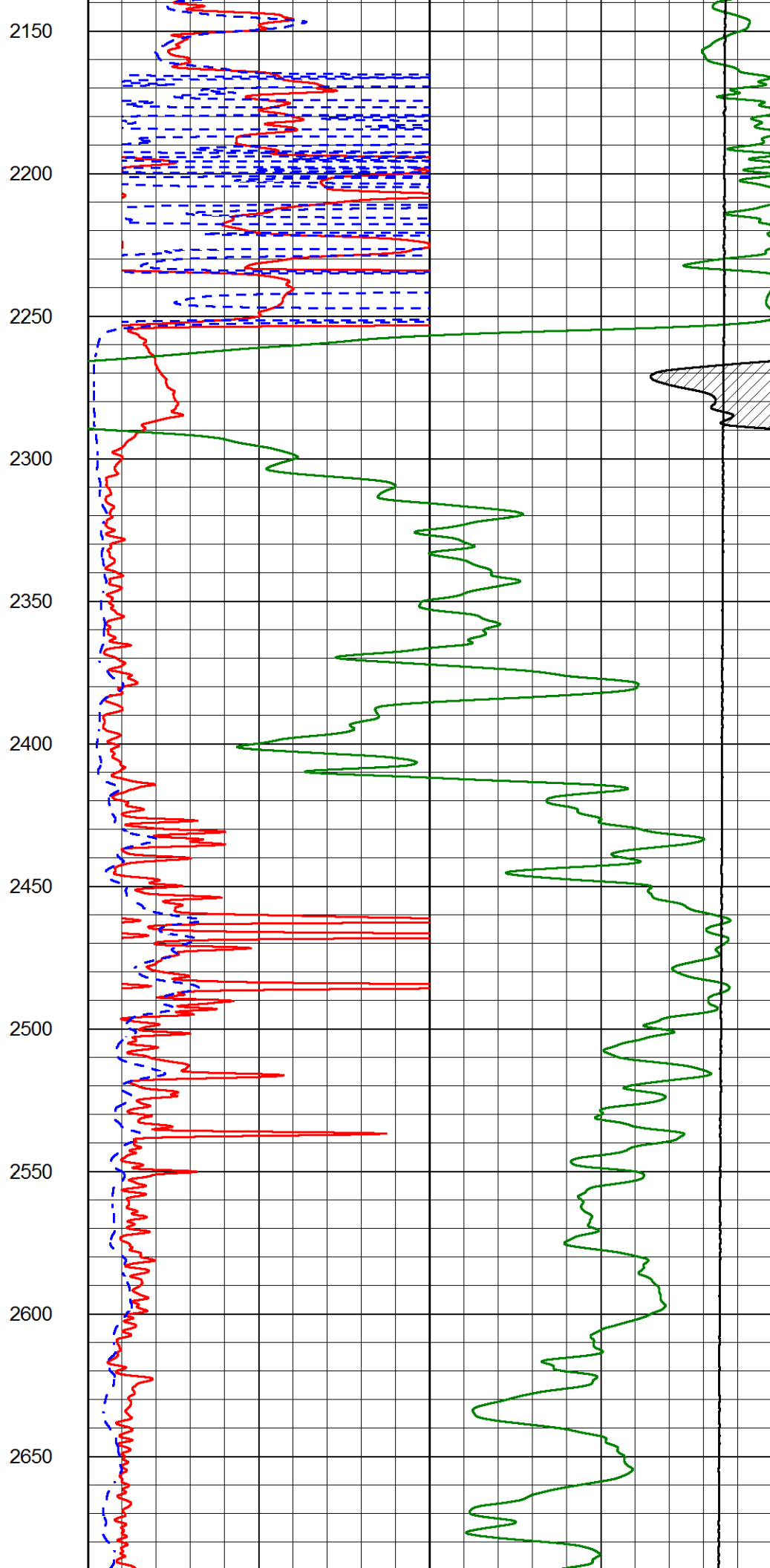
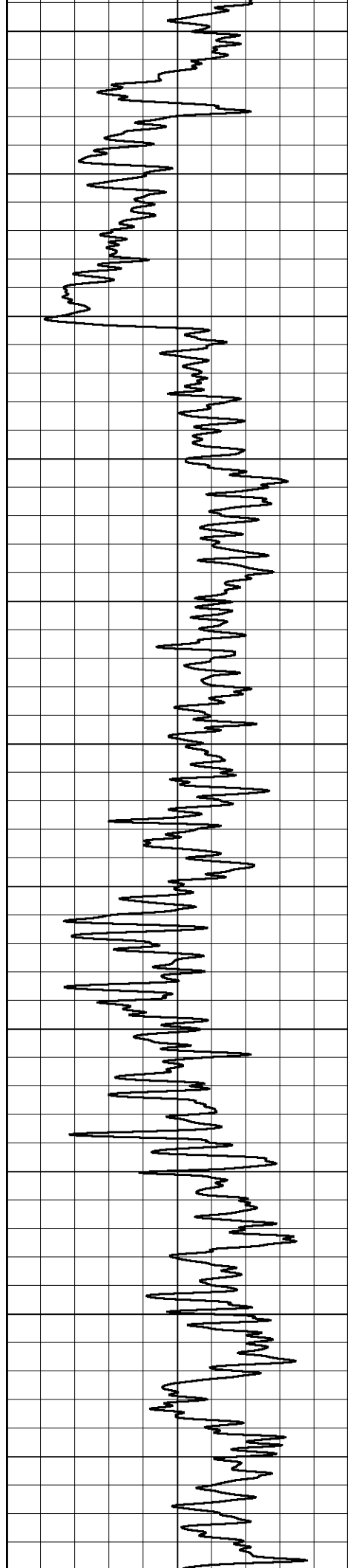


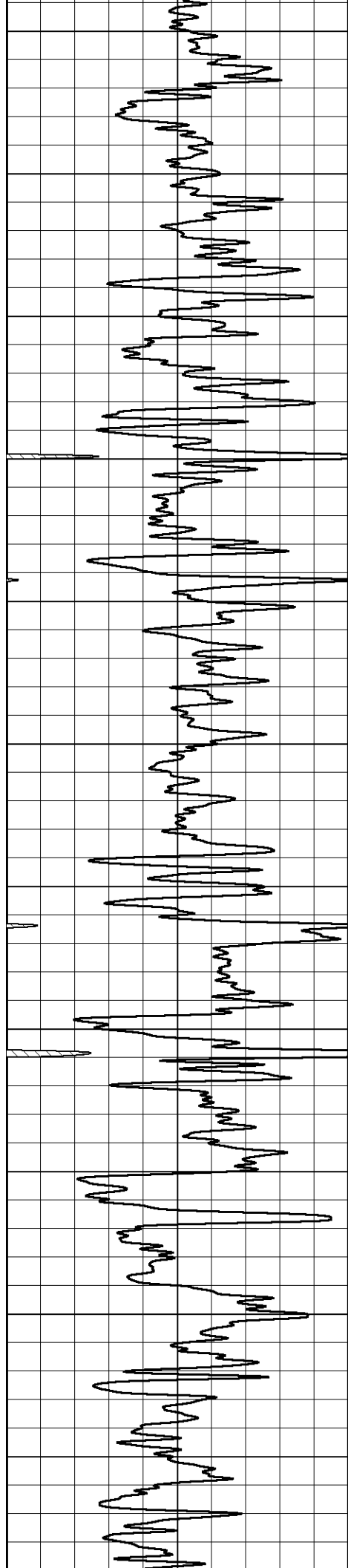


1050
1100
1150
1200
1250
1300
1350
1400
1450
1500
1550

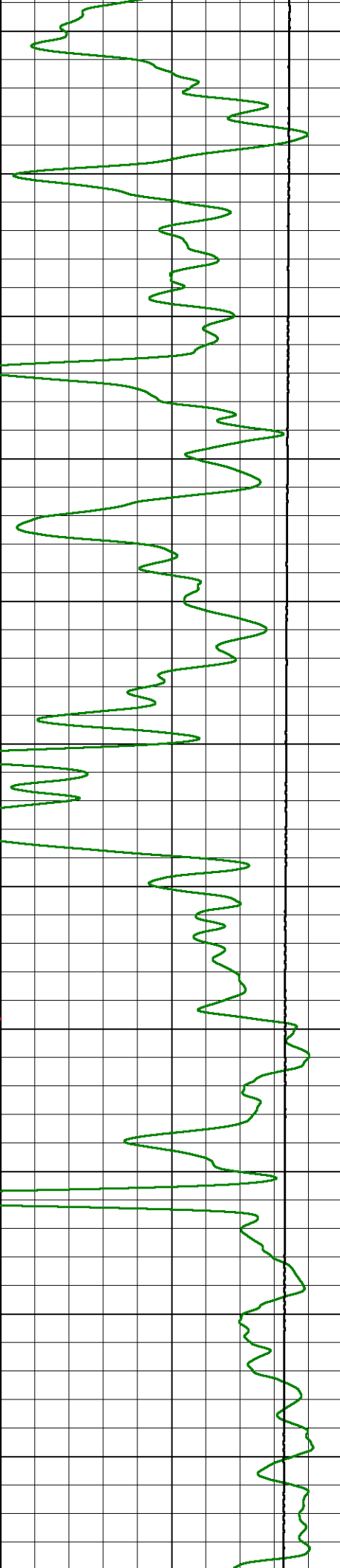
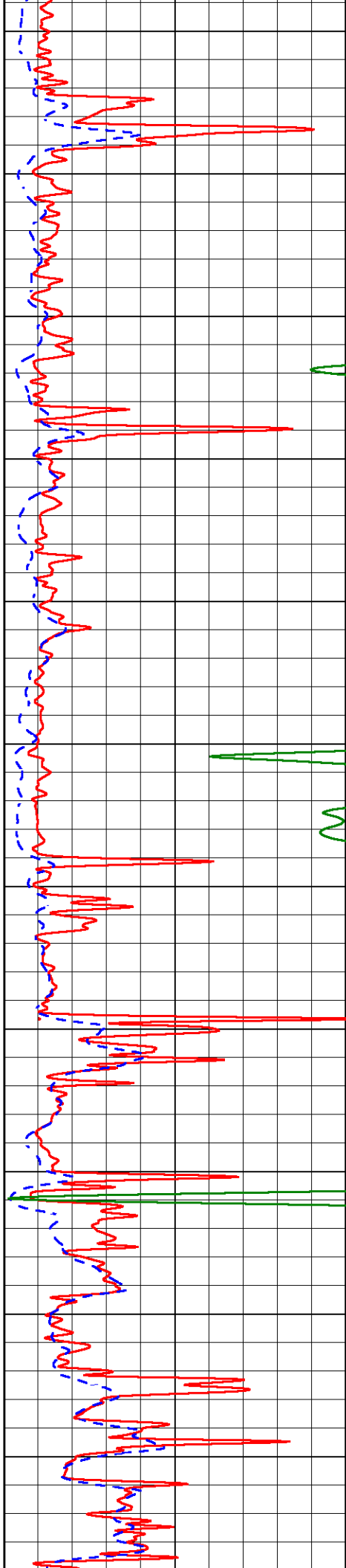


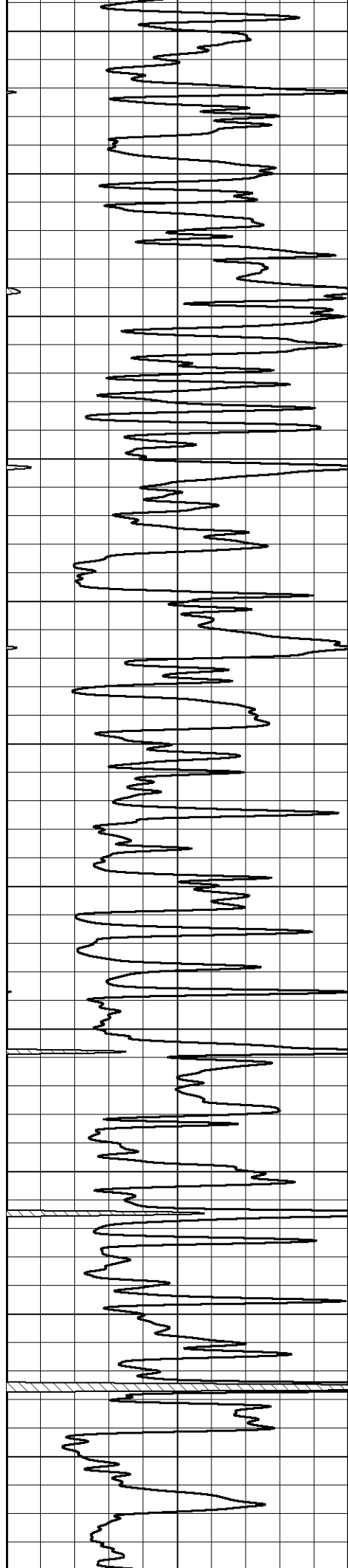




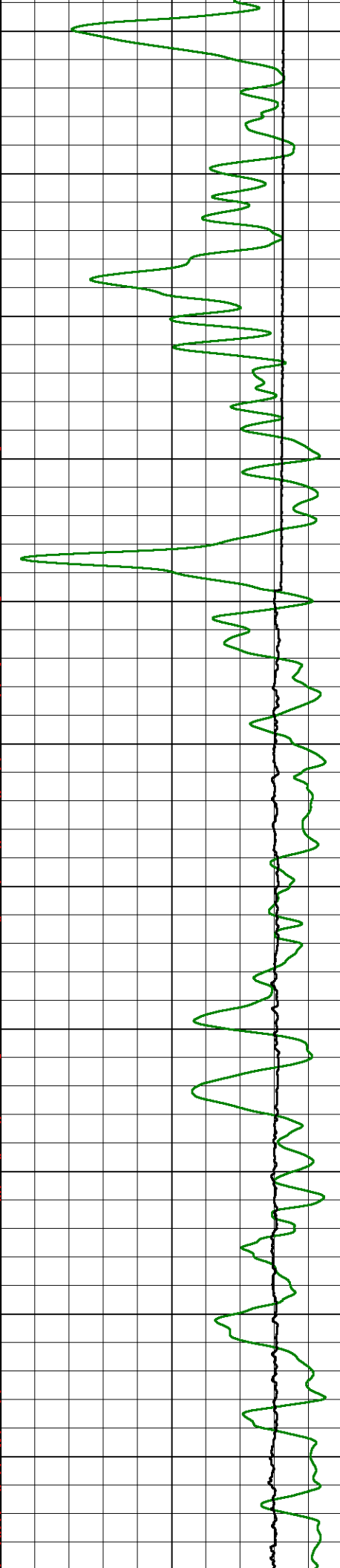
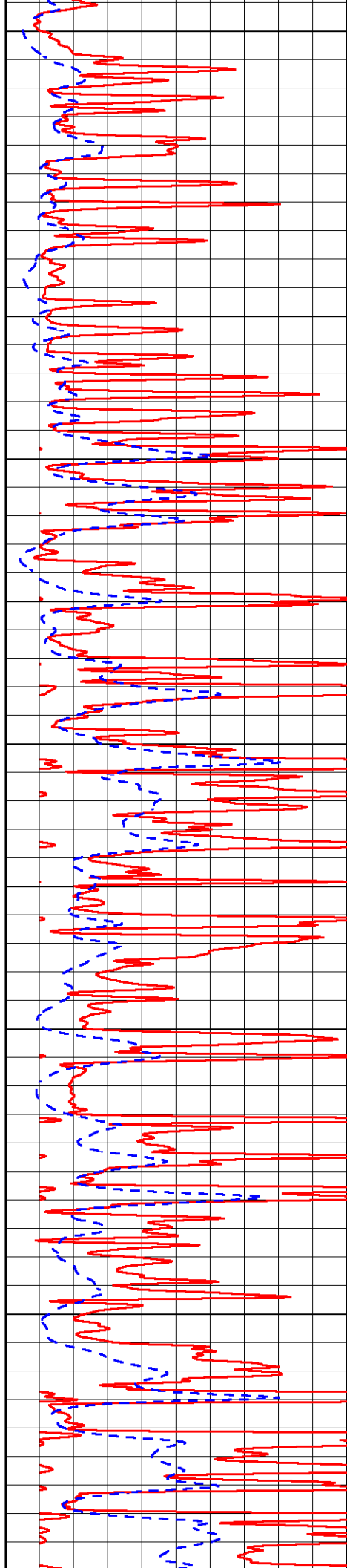


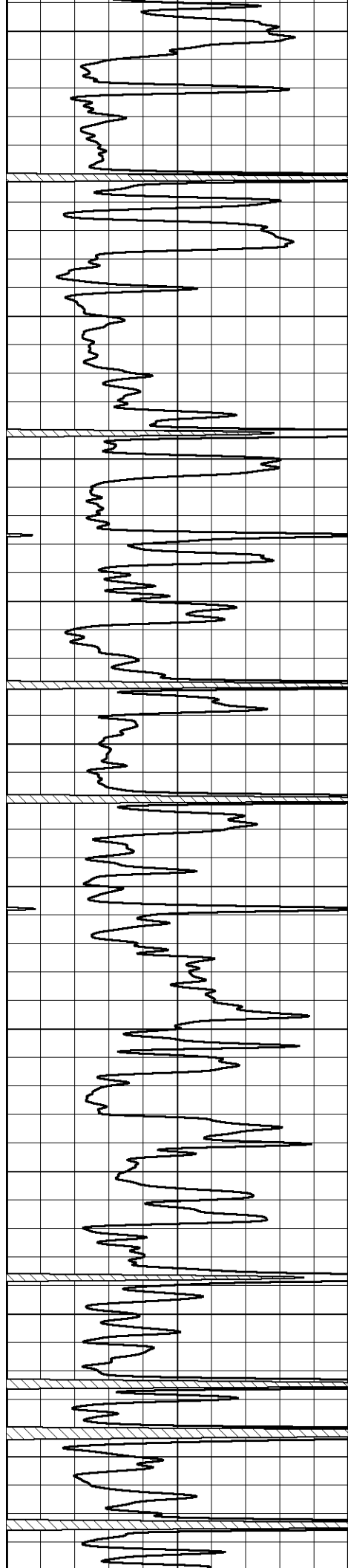
2700
2750
2800
2850
2900
2950
3000
3050
3100
3150
3200





3250
3300
3350
3400
3450
3500
3550
3600
3650
3700
3750





3800

3850

3900

3950

4000

4050

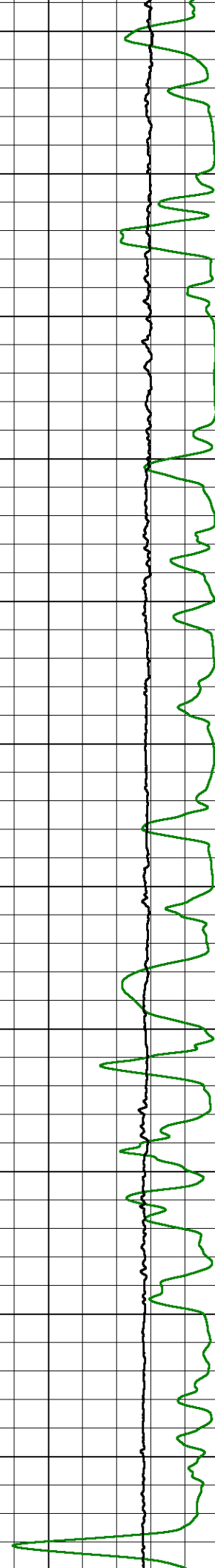
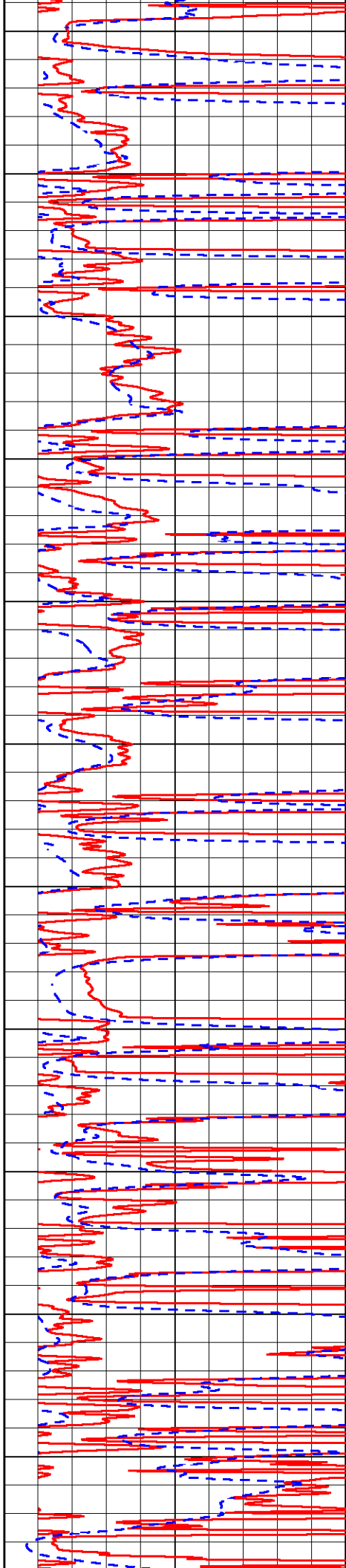
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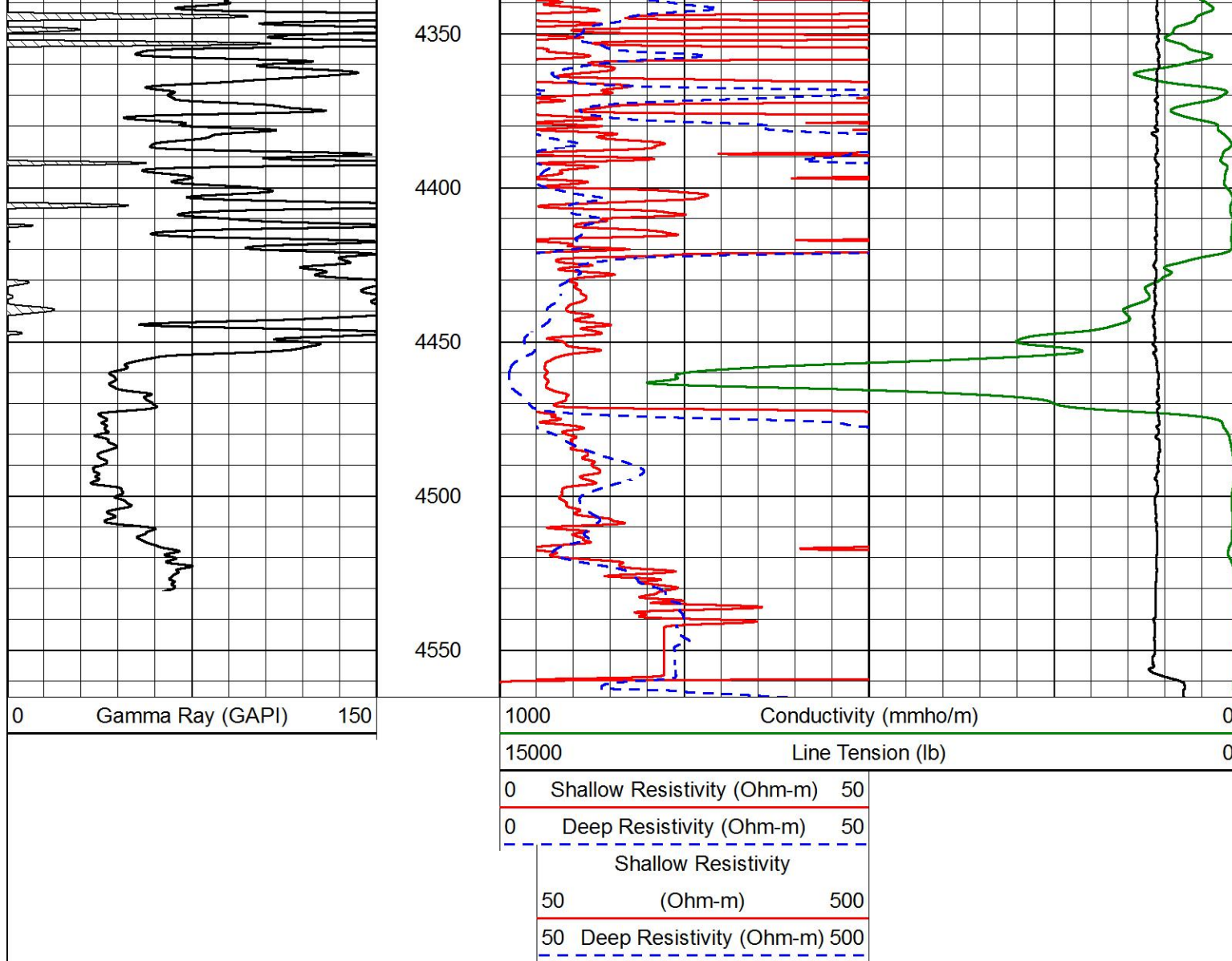
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4200

4250

4300



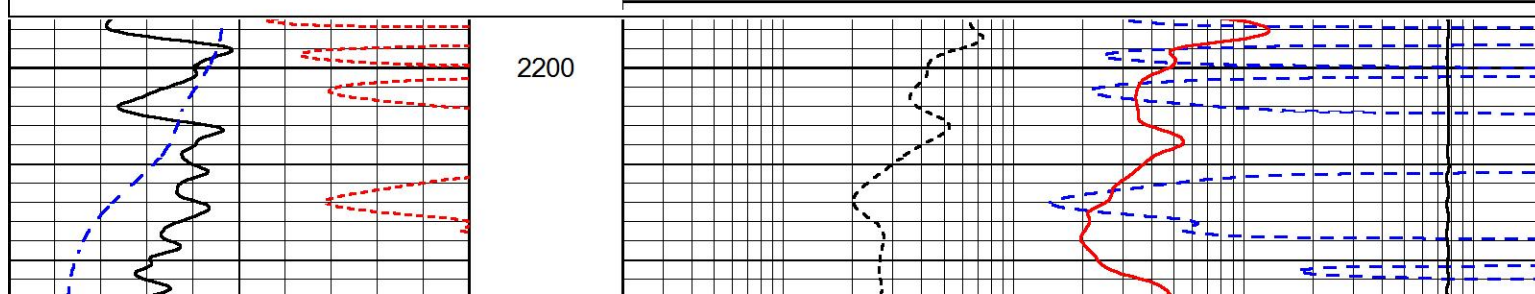


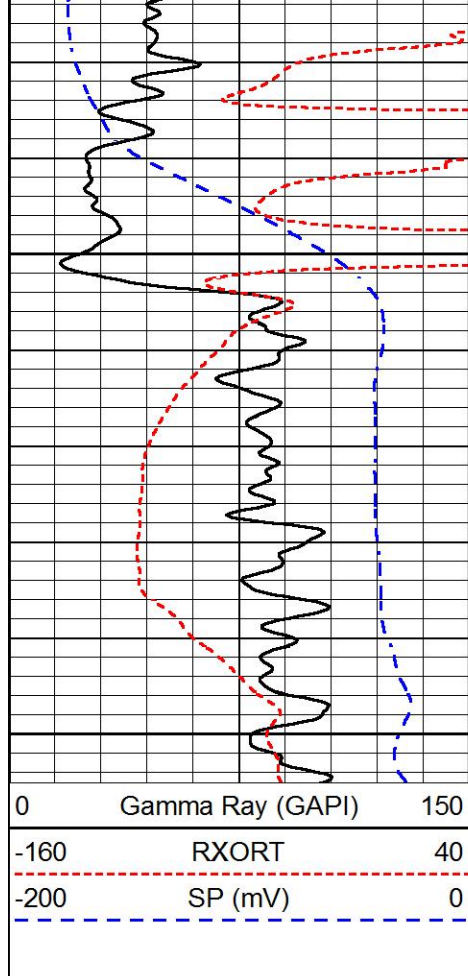
MAIN PASS

Database File	concorde_mcdaniel_5-12.db
Dataset Pathname	STKML/pass6.1
Presentation Format	dil
Dataset Creation	Mon Sep 19 16:18:41 2016
Charted by	Depth in Feet scaled 1:240

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

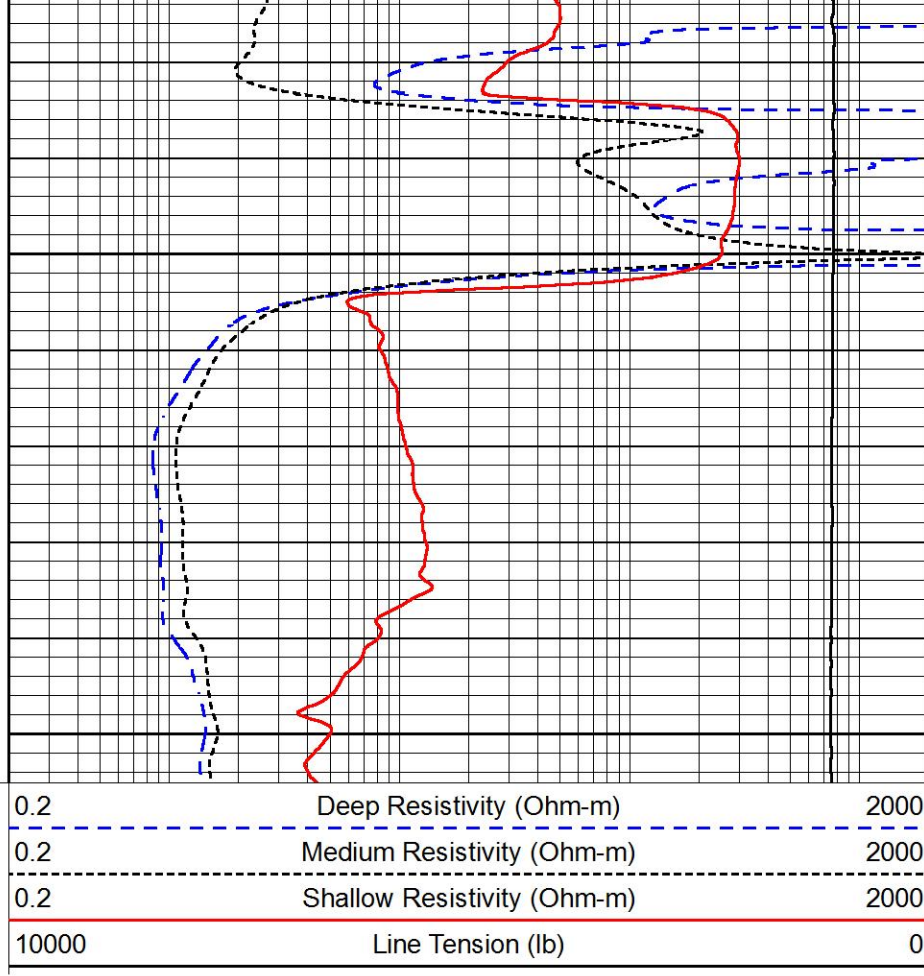
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0





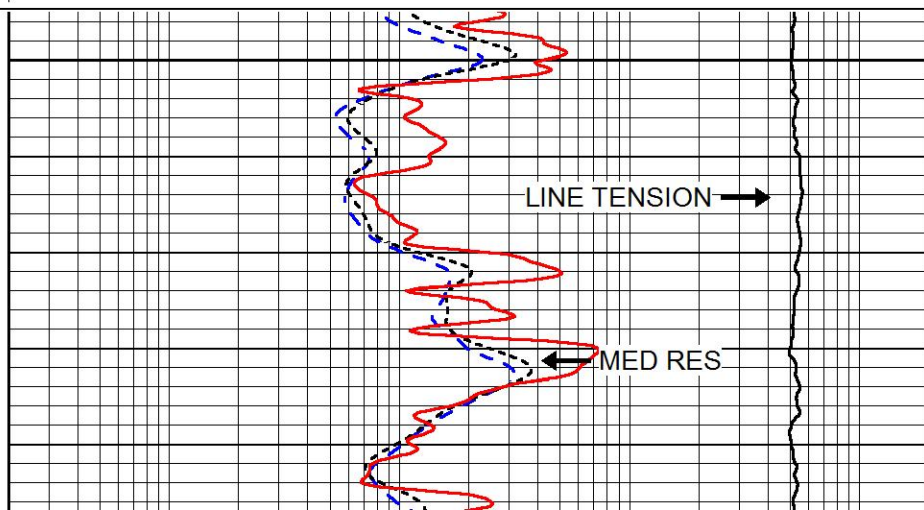
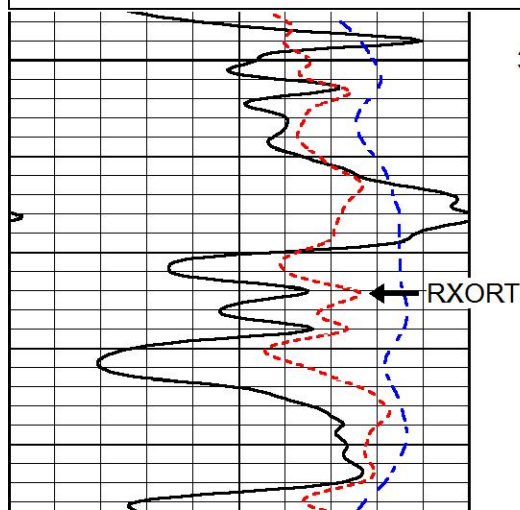
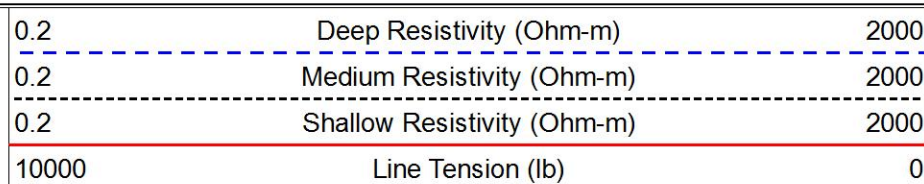
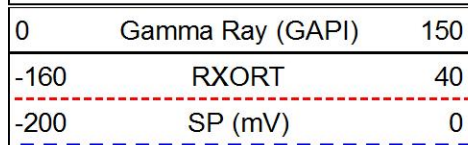
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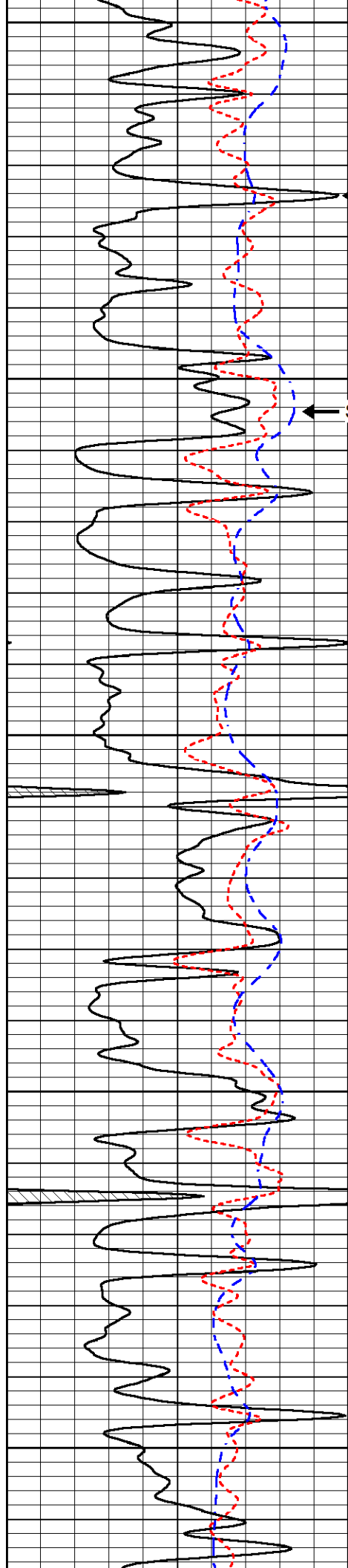
2300



MAIN PASS

Database File: concorde_mcdaniel_5-12.db
 Dataset Pathname: STKML/pass3.7
 Presentation Format: dil
 Dataset Creation: Mon Sep 19 15:44:20 2016
 Charted by: Depth in Feet scaled 1:240





3500

GAMMA RAY

3550

SP

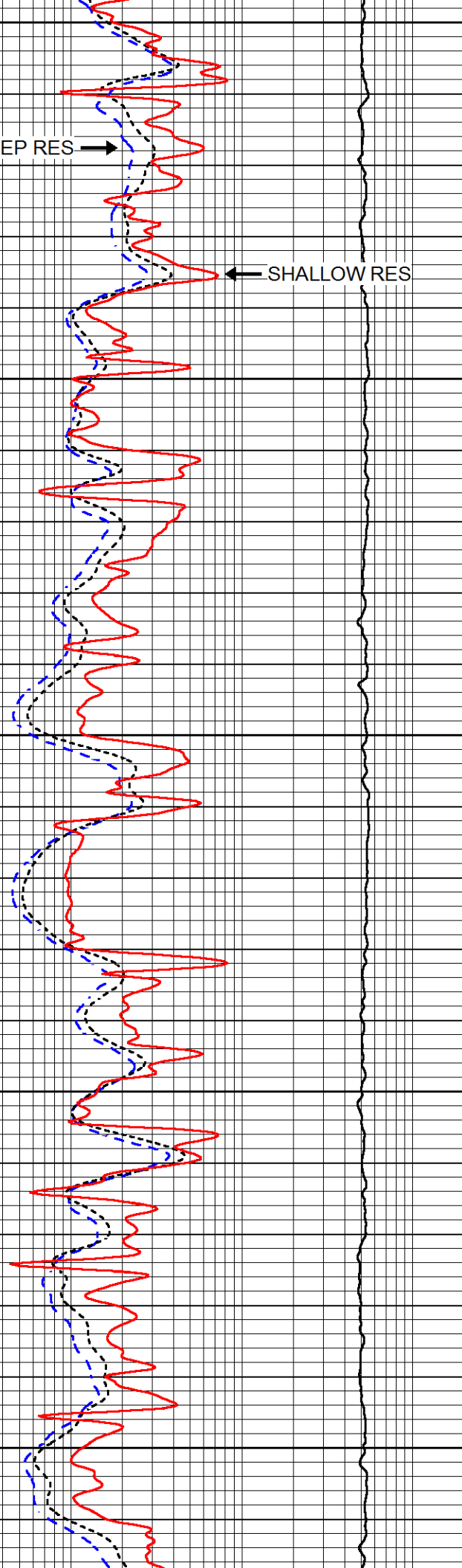
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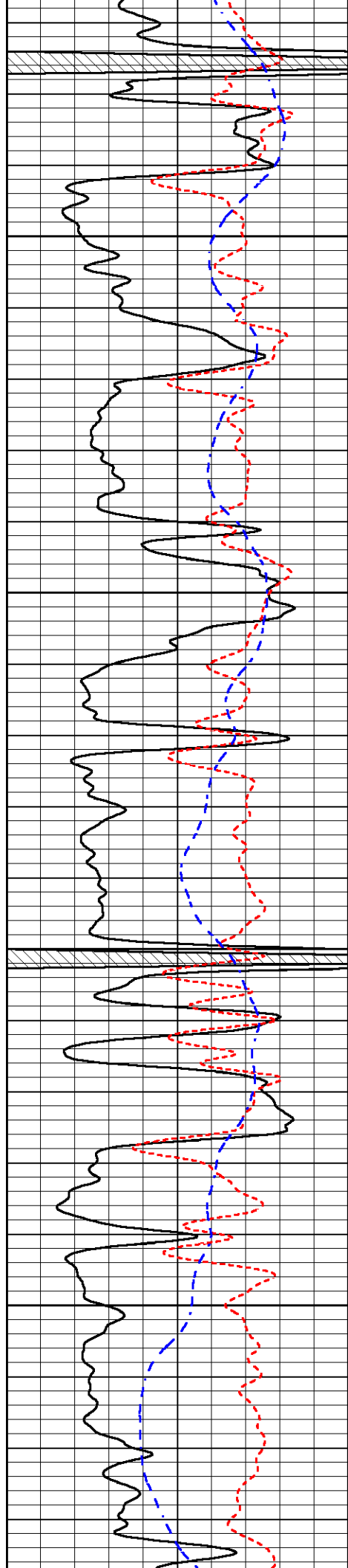
3650

3700

DEEP RES

SHALLOW RES



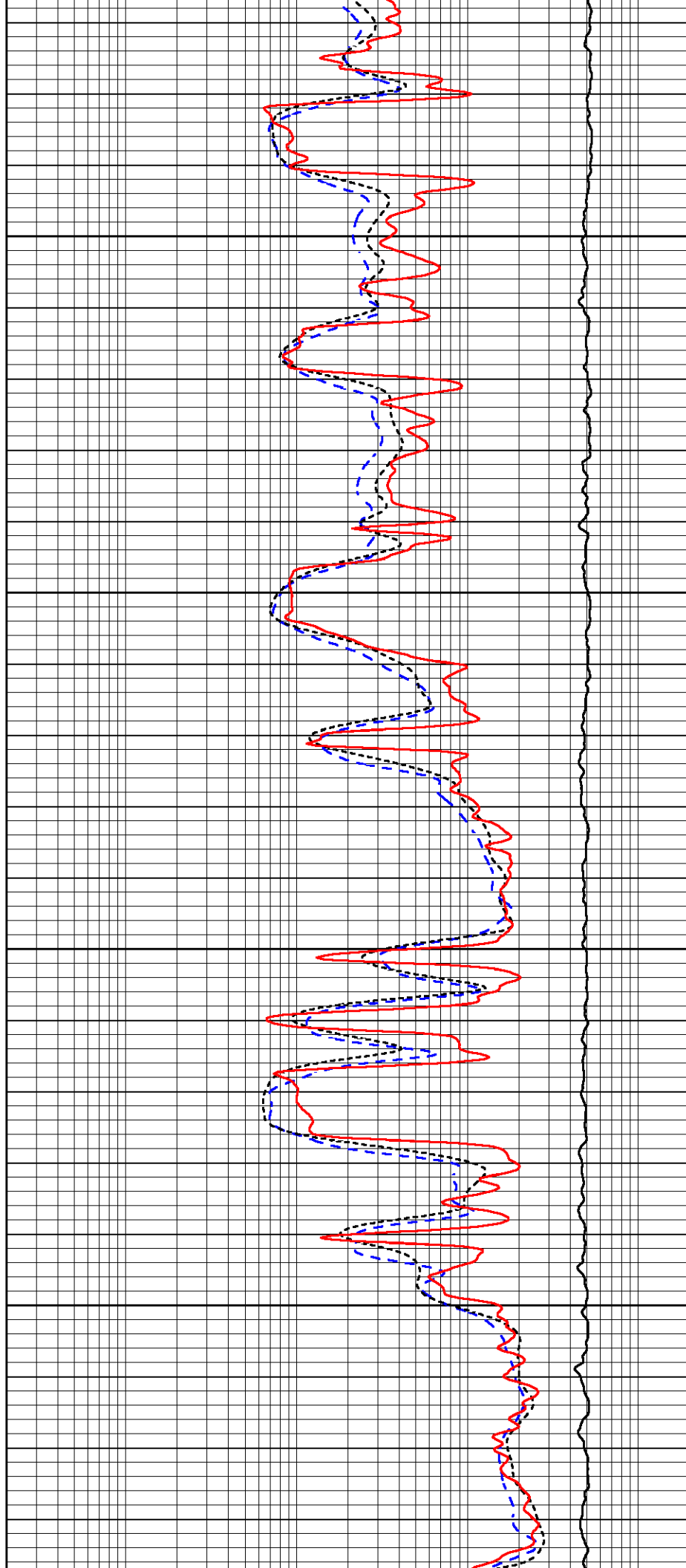


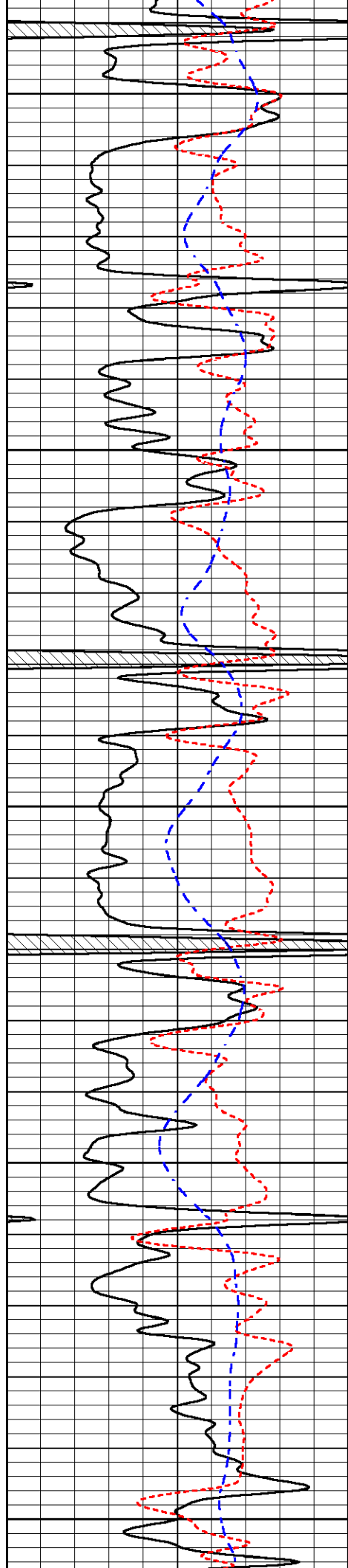
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3800

3850

3900





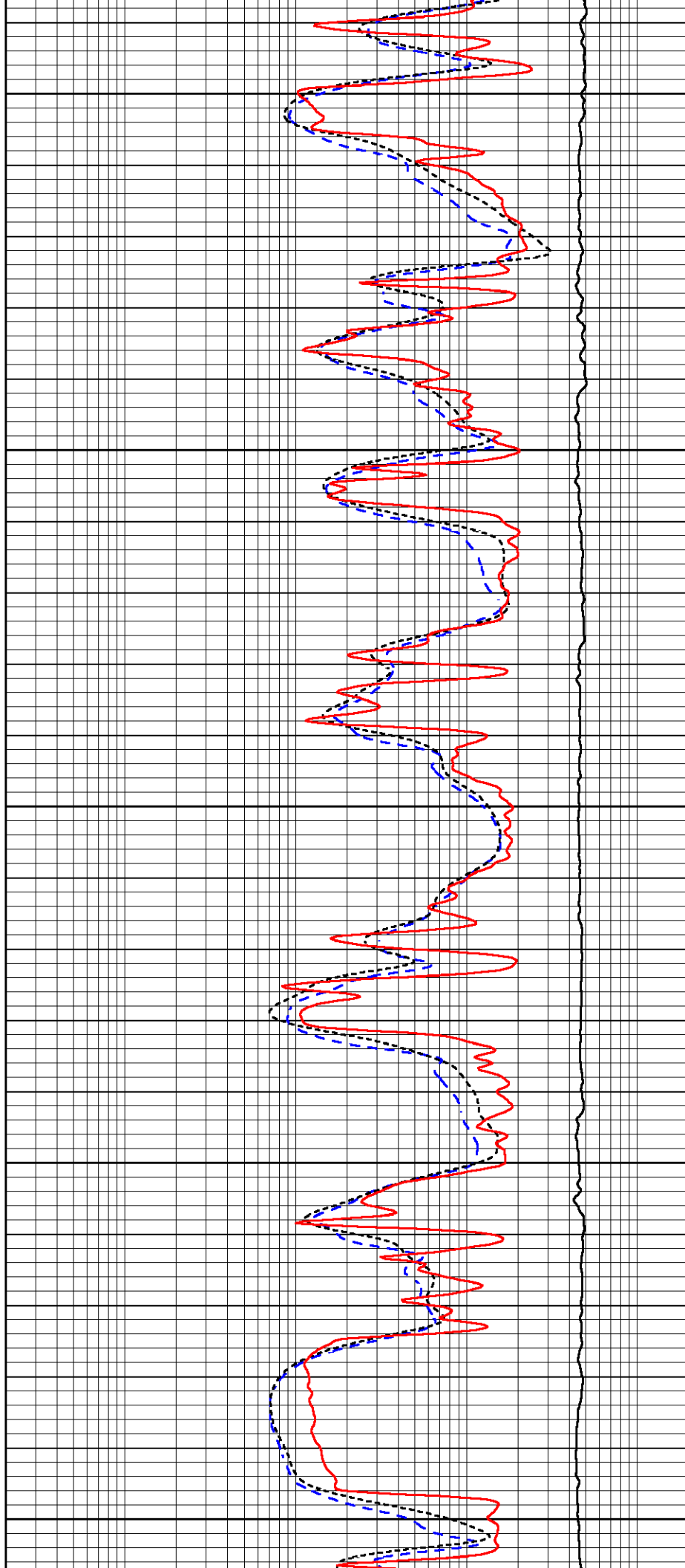
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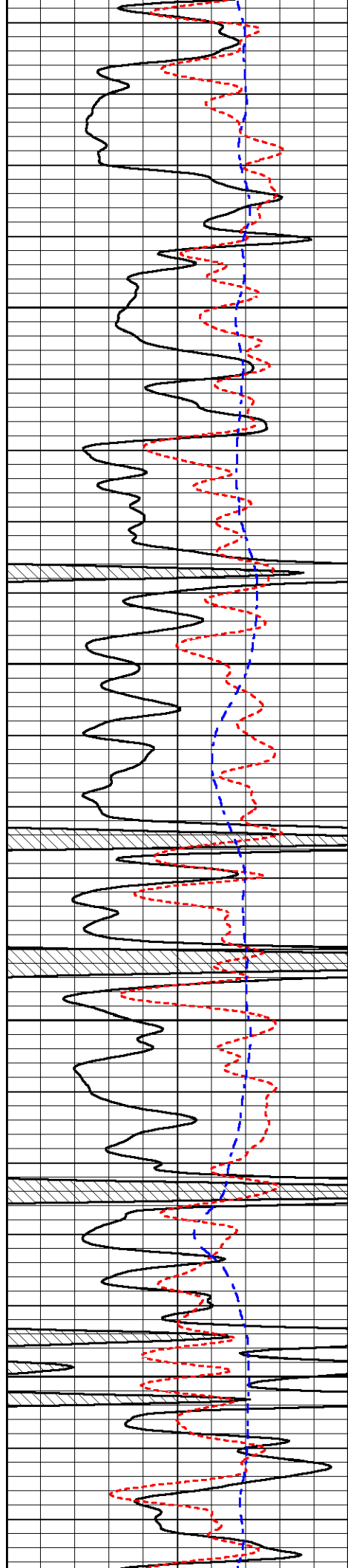
4000

4050

4100

4150



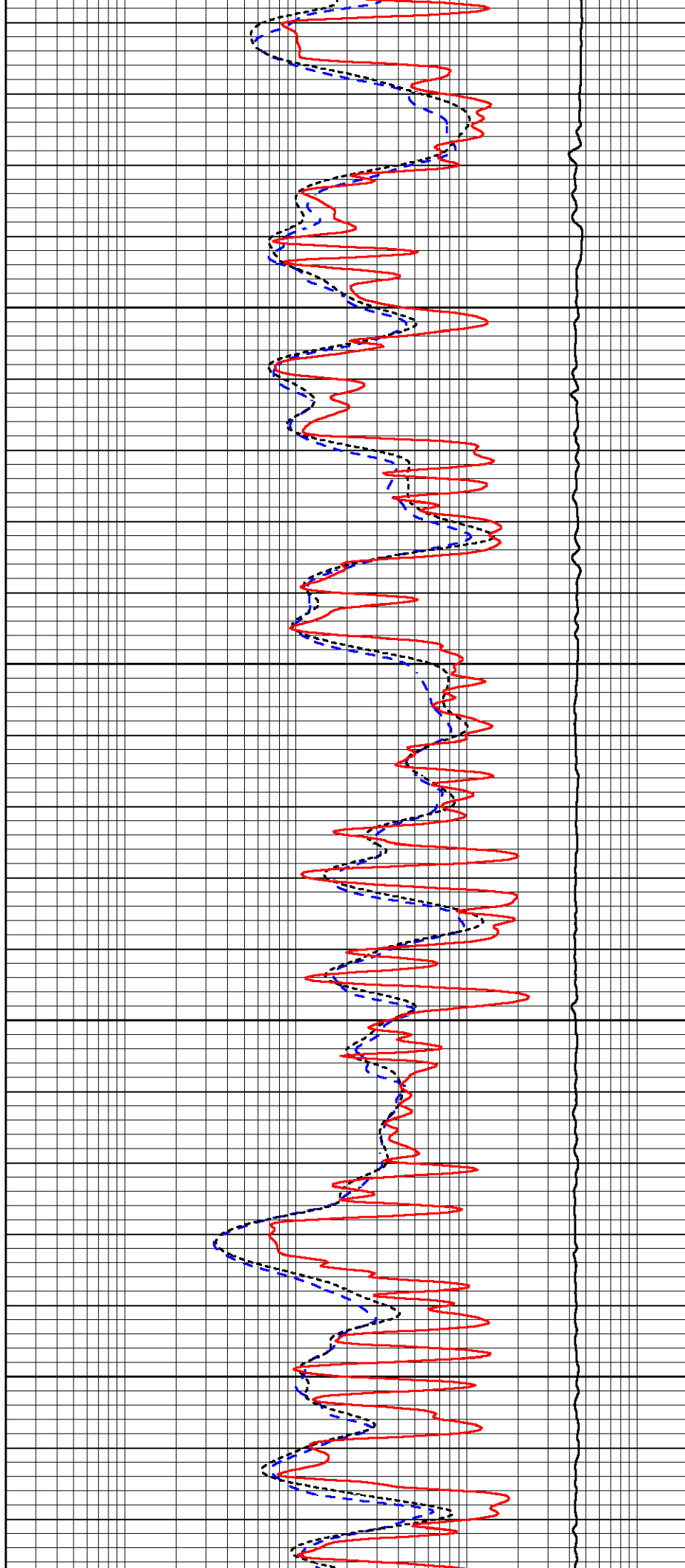


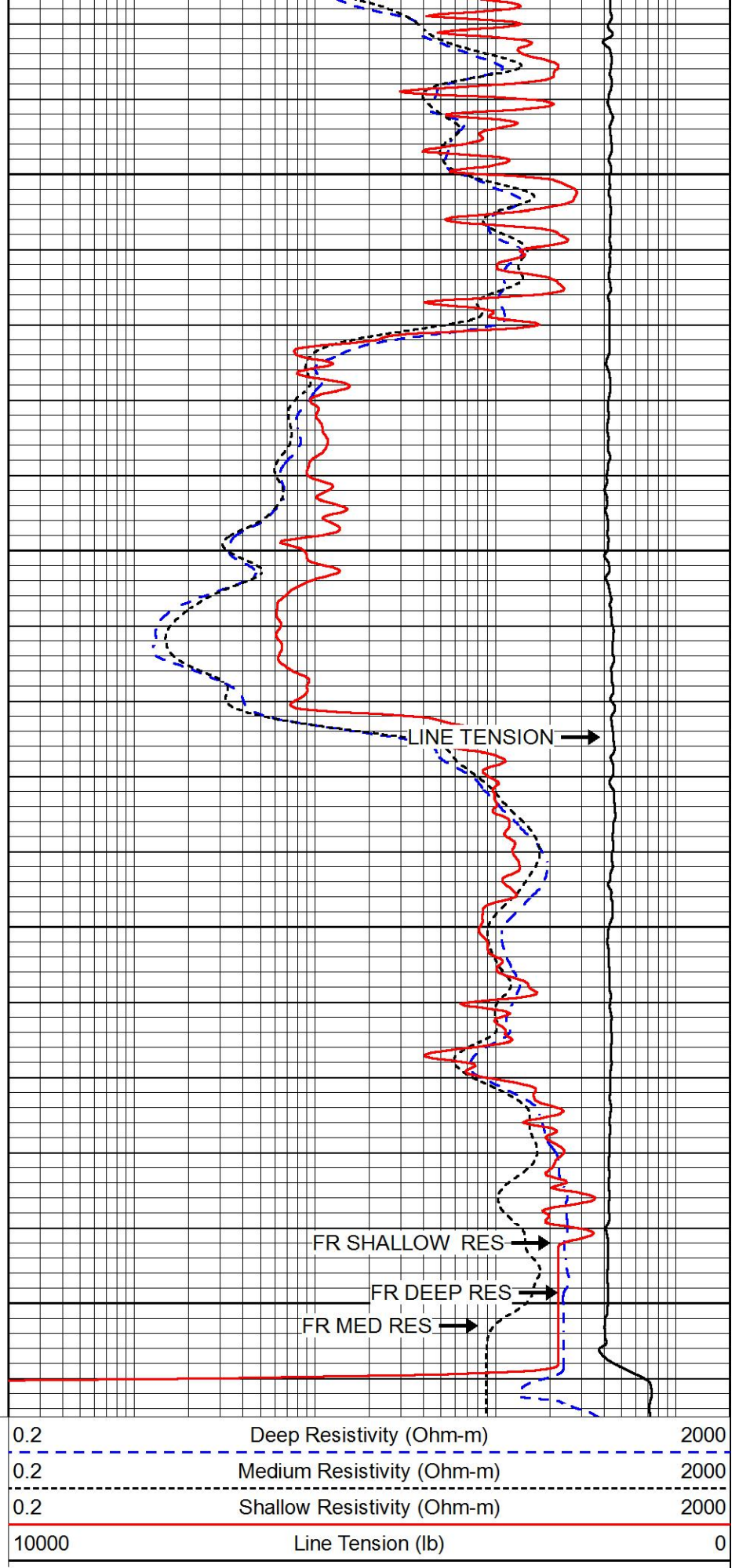
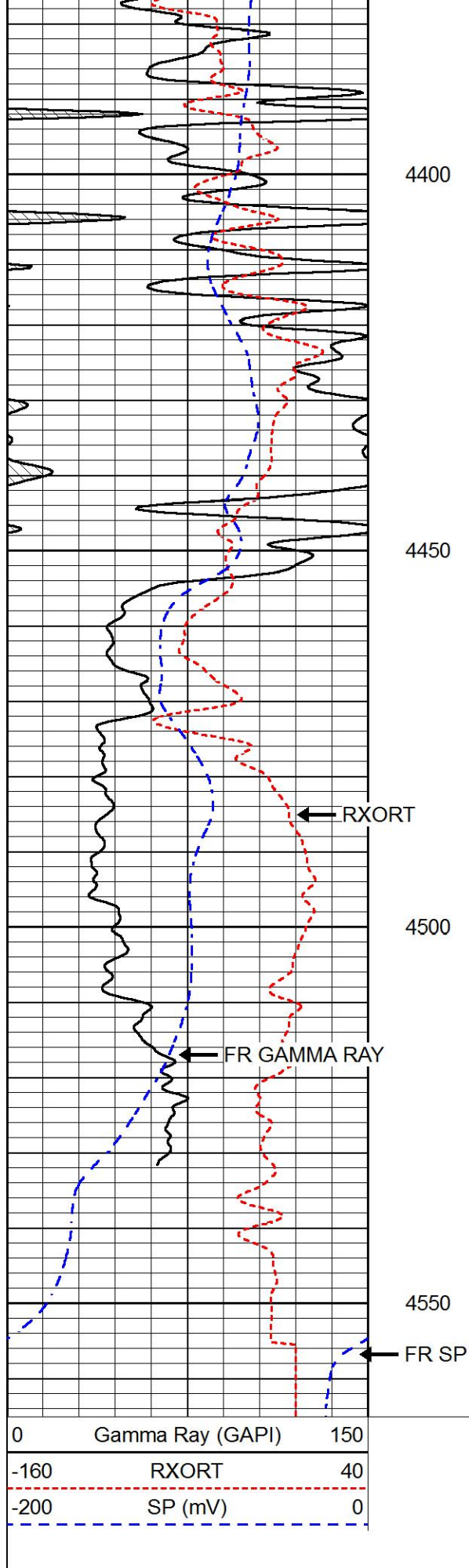
4200

4250

4300

4350

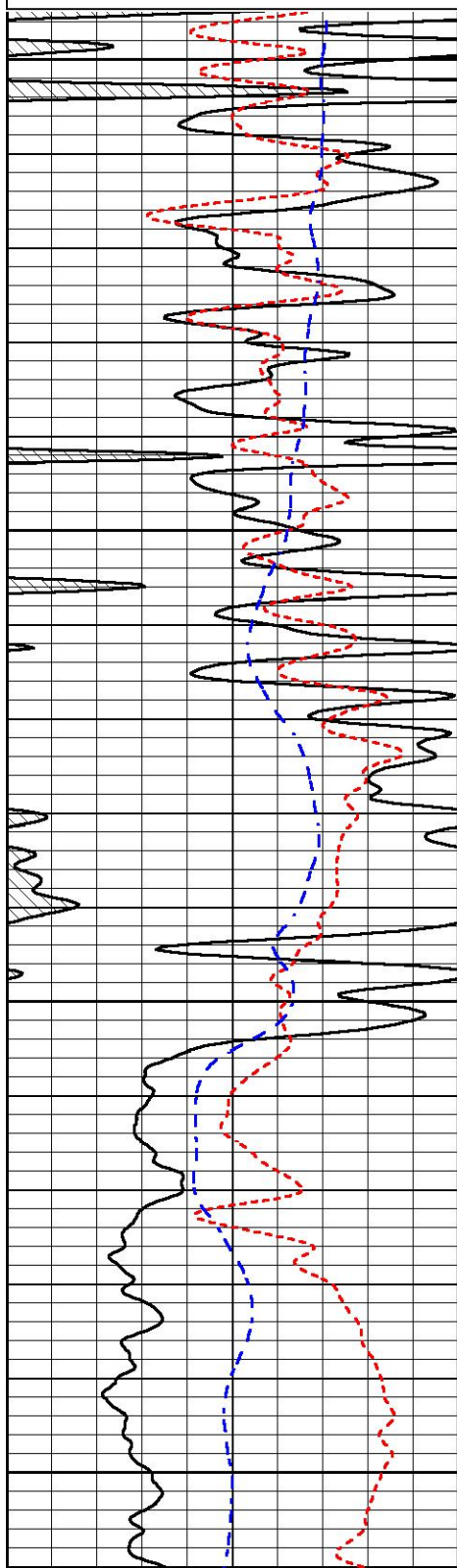




Database File concorde_mcdaniel_5-12.db
 Dataset Pathname STKML/pass2.3
 Presentation Format dil
 Dataset Creation Mon Sep 19 16:03:16 2016
 Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
-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

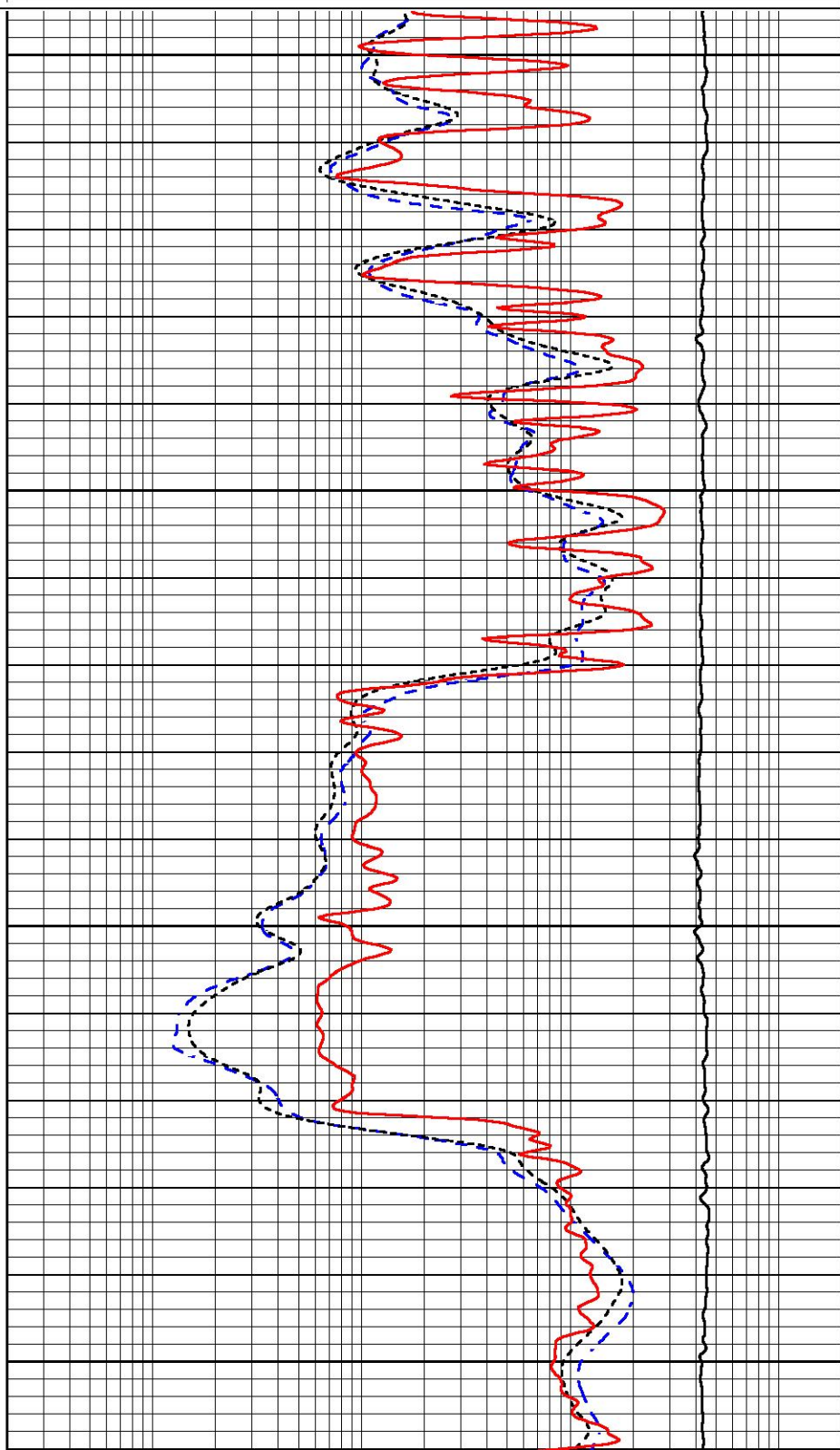


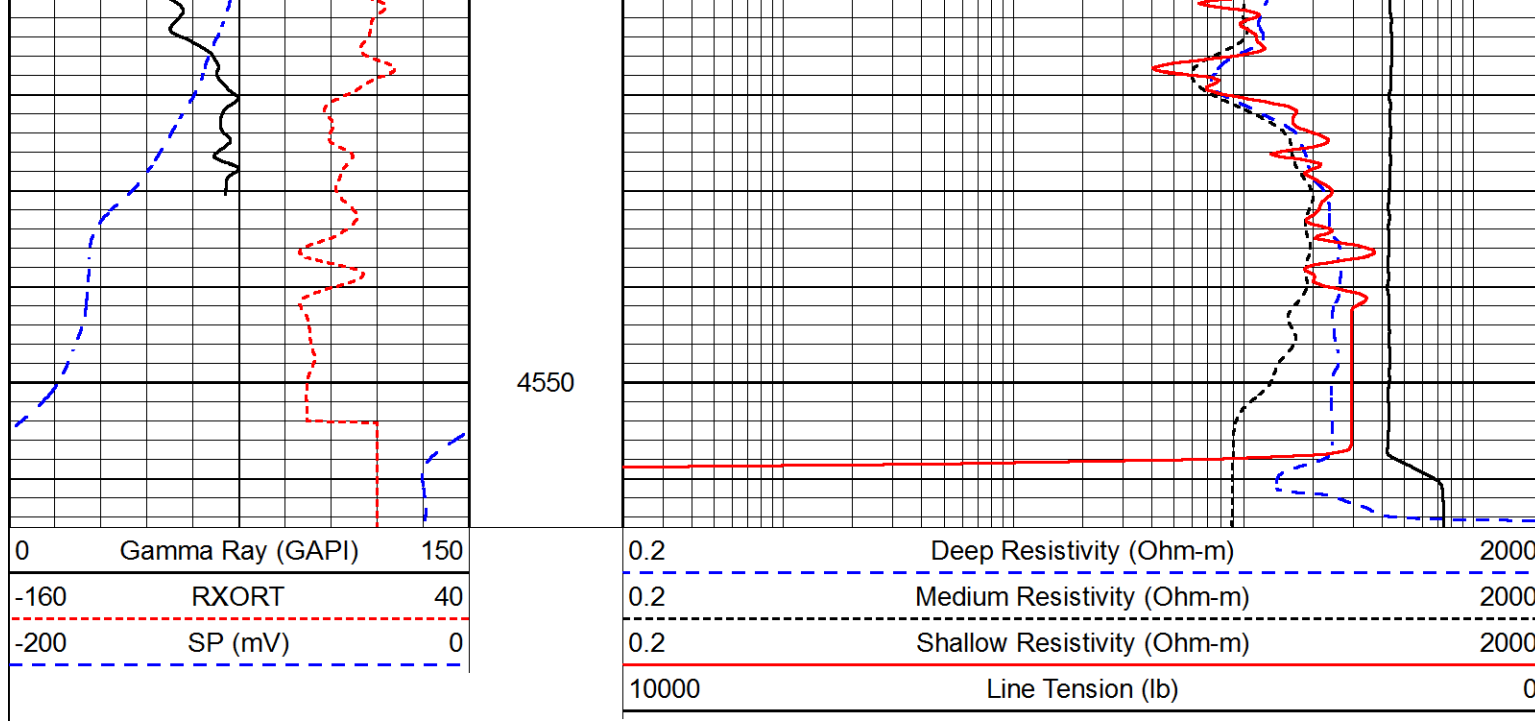
4350

4400

4450

4500





Calibration Report

Database File concorde_mcdaniel_5-12.db
 Dataset Pathname STKML/pass3.7
 Dataset Creation Mon Sep 19 15:44:20 2016

Dual Induction Calibration Report

Serial-Model: PSI 216 HT-PSI HIGH TEMP
 Calibration Performed: Mon Sep 19 14:37:33 2016

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	75.411	495.929	4.000	250.000	mmho/m	0.420	-26.000
Medium	75.269	470.661	0.000	250.000	mmho/m	0.360	-23.500

Microlog Calibration Report

Serial-Model: PSI-01-PSIML
 Performed: Mon Sep 19 14:51:42 2016

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	39000.0000	-1.6000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	42000.0000	-1.1000
Caliper	1.0001	1.1397	6.5000	18.5000	in	70.0000	-65.7000

Compensated Density Calibration Report

Serial-Model: 90-1031-M&W
 Source / Verifier: 16955B / 2ci
 Master Calibration Performed: Wed Aug 24 22:26:37 2016

Master Calibration

	Density			Far Detector	Near Detector
Magnesium	1.755	g/cc		5174.18	6425.27 cps
Aluminum	2.665	g/cc		963.17	4037.42 cps
Spine Angle = 74.55			Density/Spine Ratio = 0.522		
	Size			Reading	
Small Ring	6.00	in		1.83	
Large Ring	16.00	in		1.48	

Compensated Neutron Calibration Report

Serial Number:	207-MW
Tool Model:	M&W
Calibration Performed:	Wed Aug 31 10:30:30 2016

Detector	Readings		Target	Normalization
Short Space	6240.00	cps	1000.00 cps	1.6025
Long Space	460.00	cps	1000.00 cps	1.9500

Gamma Ray Calibration Report

Serial Number:	89	
Tool Model:	M&W	
Calibration Performed:	Wed Aug 24 22:26:53 2016	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.6000	GAPI/cps

	Company	CONCORDE RESOURCES CORP
	Well	MCDANIEL #5-12
	Field	WILDCAT
	County	LOGAN
	State	KANSAS