



PIONEER
Pioneer Energy Services

DUAL INDUCTION LOG

Company PALOMINO PETROLEUM, INC.
Well KUNTZ #1
Field WILDCAT
County GOVE
State KANSAS

Company PALOMINO PETROLEUM, INC.
Well KUNTZ #1
Field WILDCAT
County GOVE State KANSAS

Location: API #: 15-063-22321-00-00

Other Services

NE SW NW SW
1831' FSL & 370' FWL
SEC 11 TWP 14S RGE 26W

CNL/CDL
MEL

Permanent Datum GROUND LEVEL Elevation 2478'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Elevation
K.B. 2483'
D.F. 2481'
G.L. 2478'

Date 1/14/2018

Run Number	ONE		
Depth Driller	4431'		
Depth Logger	4430'		
Bottom Logged Interval	4429'		
Top Log Interval	200'		
Casing Driller	8.625" @ 218'		
Casing Logger	217'		
Bit Size	7.875"		
Type Fluid in Hole	CHEMICAL		
Salinity, ppm CL	5000		
Density / Viscosity	9.1 41		
pH / Fluid Loss	10.0 7.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.3 @ 65		
Rmt @ Meas. Temp	0.23 @ 65		
Rmc @ Meas. Temp	0.41 @ 65		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	0.16 @ 120		
Operating Rig Time	3 HOURS		
Max Rec. Temp. F	120 DEG F		
Equipment Number	108		
Location	HAYS		
Recorded By	T. MARTIN		
Witnessed By	RYAN SEIB		

<<< Fold Here >>>

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.

QUINTER, APPX 15 S TO K RD, 3 E, N INTO

Log Measured From: KELLY BUSHING 5 Ft. Above Permanent Datum

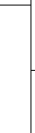
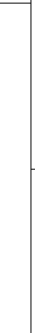
THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneerenergy.com 785-625-3858

Your Pioneer Energy Services Crew

Engineer: T. MARTIN
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: RYAN SEIB
Secondary Witness:
Secondary Witness:
Secondary Witness:

Sensor	Offset (ft)	Schematic		Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58			GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73			CNT-M&W (tk10-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93			CDL-M&W (168-986)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83			ML-PSI STKBL ML (PSI-02) Stackable Microlog Tools	7.58	4.00	65.00
RLL3 RLL3F	15.80 15.79						
CILD	8.00			DIL-M&W (PSI 978)	18.50	3.50	220.00
CILM	4.70						
SP	0.20						
Dataset: palomino_kuntz_#1.db: field/well/stkml/pass3.1 Total length: 43.08 ft Total weight: 685.00 lb O.D.: 4.00 in							

Log Variables

DatabaseC:\ProgramData\Warrior\Data\palomino_kuntz_#1.db
Dataset field/well/stkml/pass3.1/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in	degF	in	in	g/cc	2	g/cc
	7.875	120	5.5	0	1		2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	0	mmho/m	mmho/m	mV	degF	Off	ft
		0	0	-110	30		4430

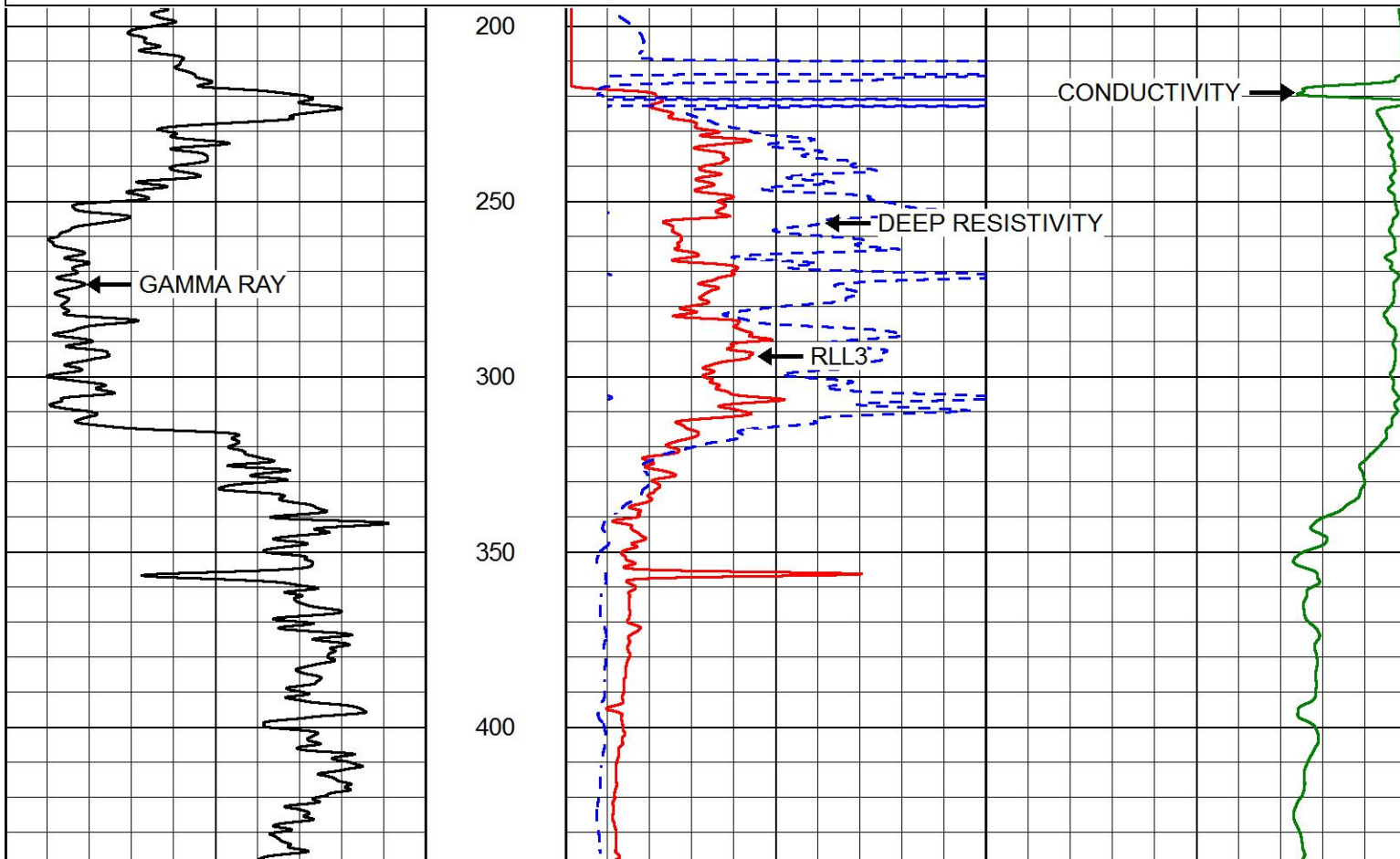


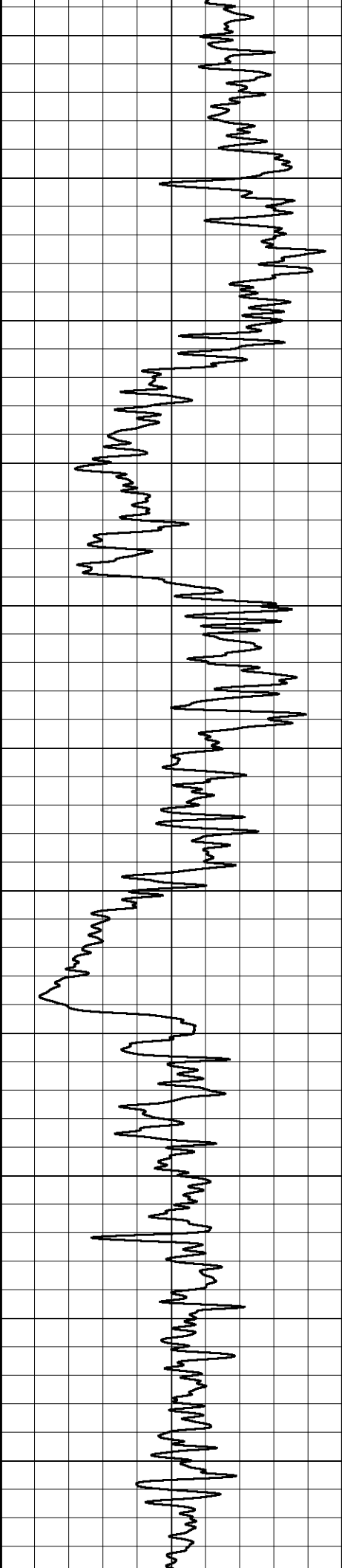
2" SCALE RESISTIVITY

MAIN PASS

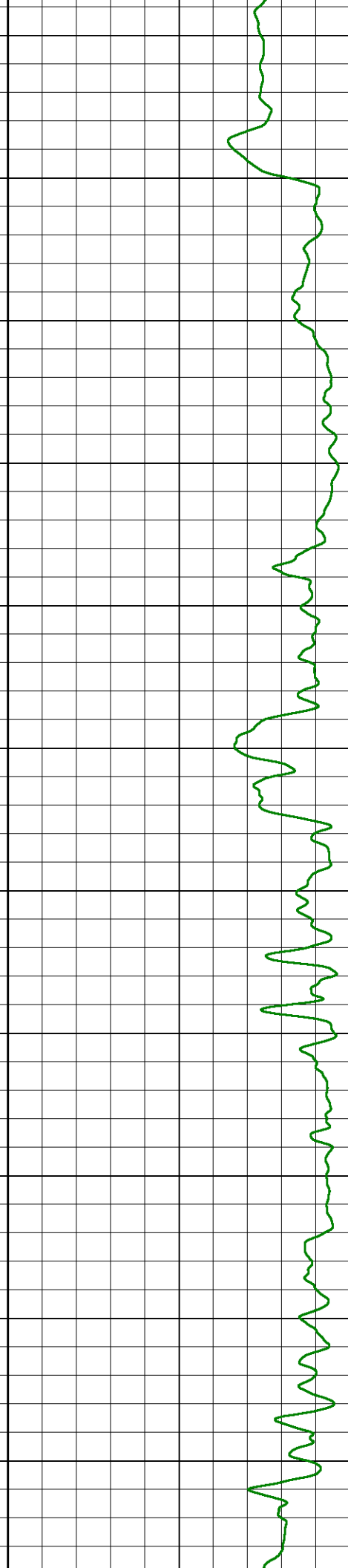
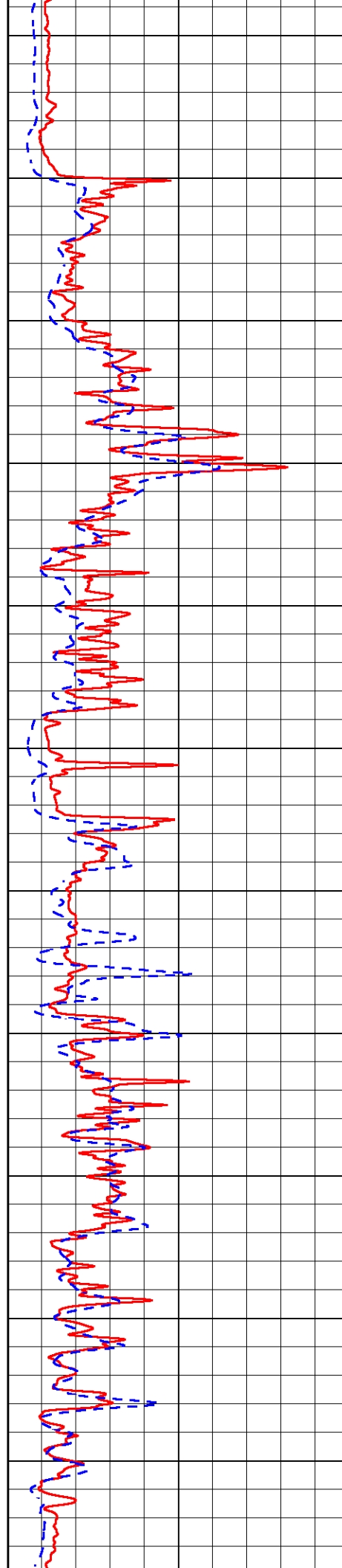
Database File palomino_kuntz_#1.db
Dataset Pathname stkml/pass3.2
Presentation Format dil2in
Dataset Creation Sun Jan 14 09:21:03 2018
Charted by Depth in Feet scaled 1:600

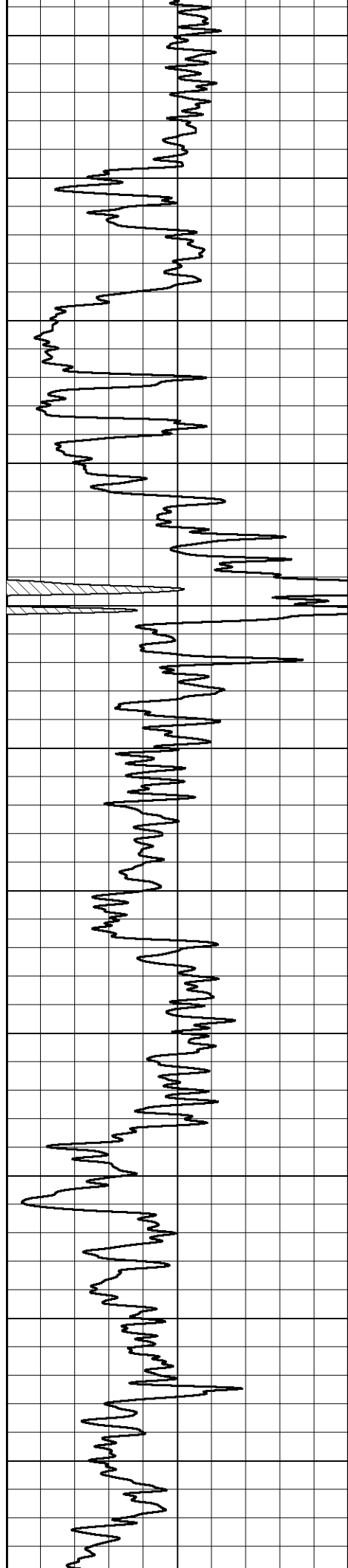
0	GAMMA RAY (GAPI)	150	2000	CONDUCTIVITY (mmho/m)	0
0	RLL3 (Ohm-m)	50	0	DEEP RESISTIVITY (Ohm-m)	50
50	RLL3 (Ohm-m)	500	50	DEEP RESISTIVITY	500
50	(Ohm-m)	500	50	(Ohm-m)	500





450
500
550
600
650
700
750
800
850
900
950





1000

1050

1100

1150

1200

1250

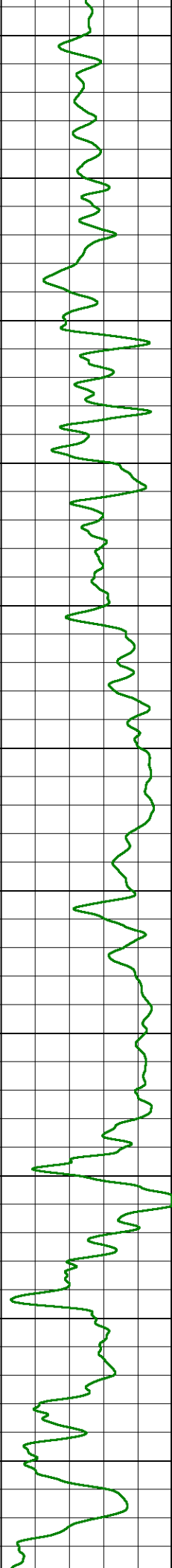
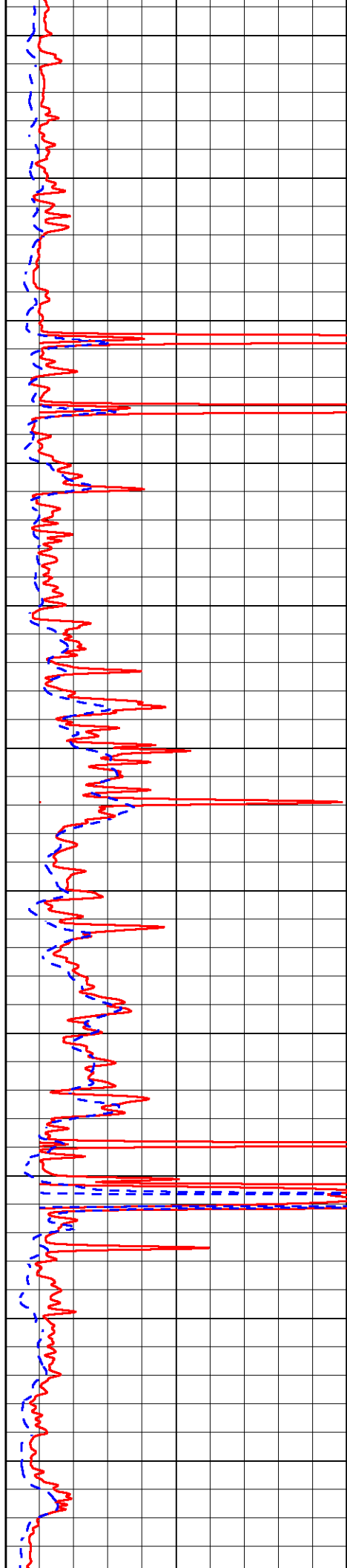
1300

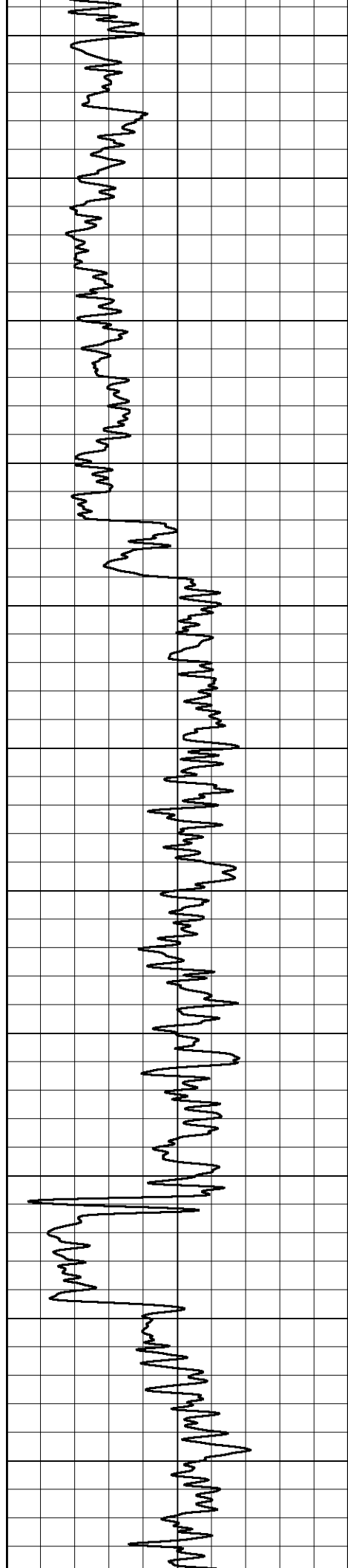
1350

1400

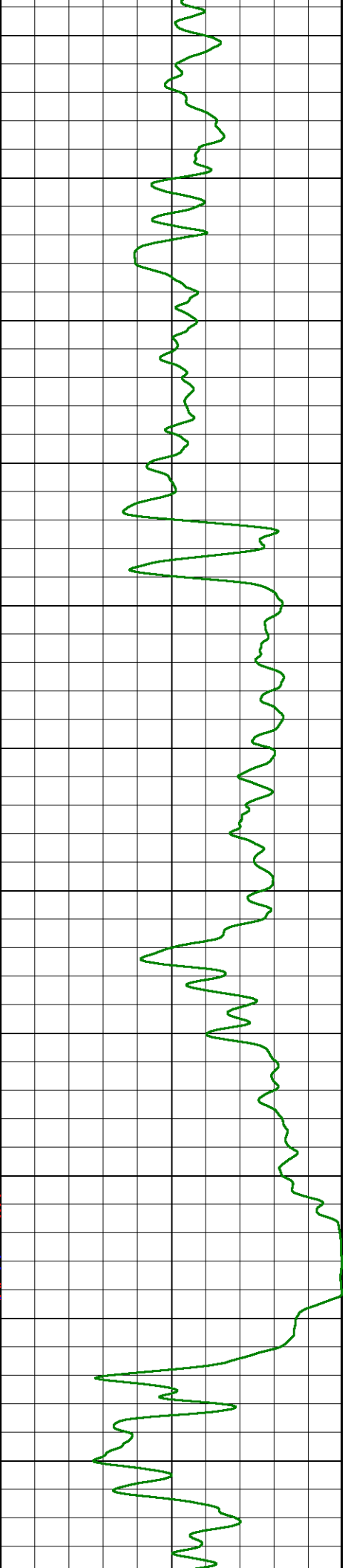
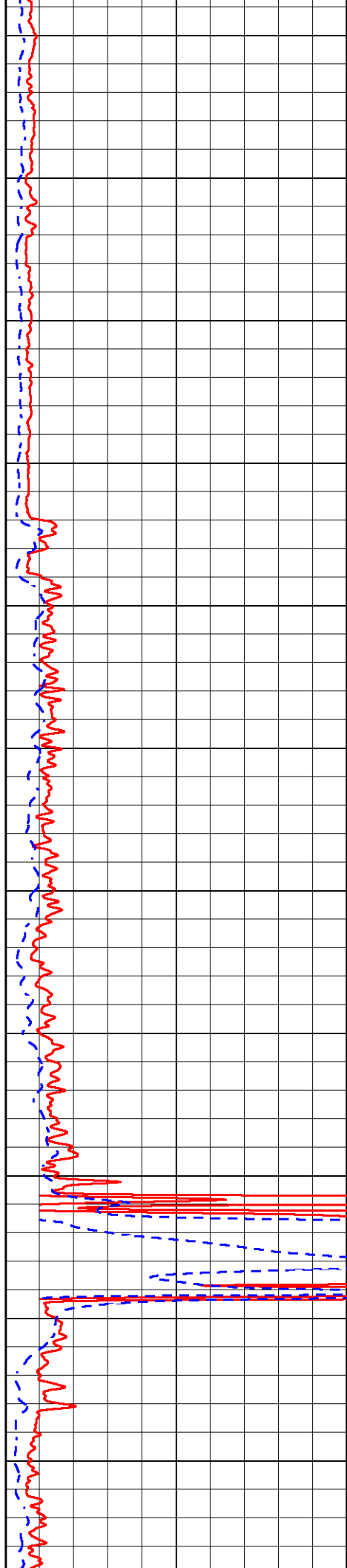
1450

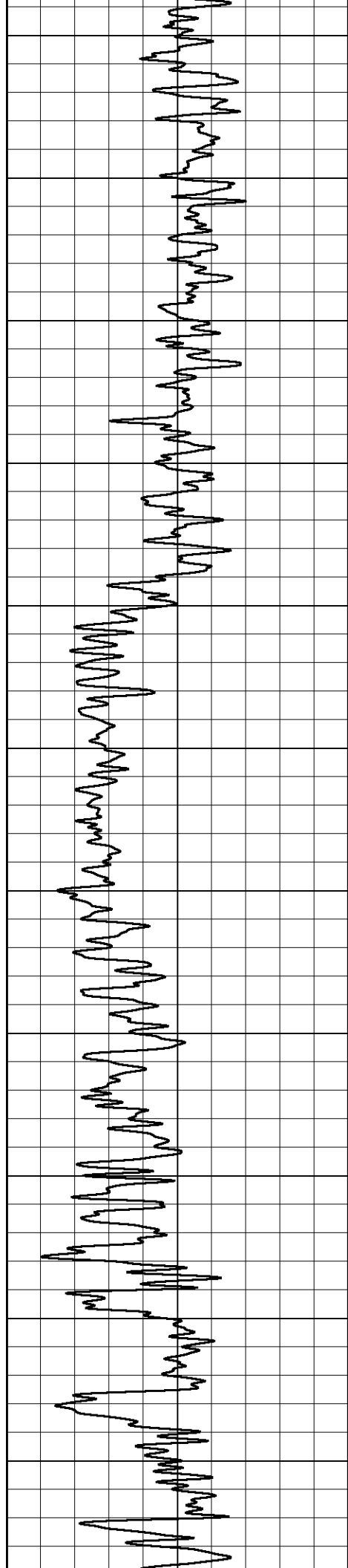
1500





1550
1600
1650
1700
1750
1800
1850
1900
1950
2000
2050





2100

2150

2200

2250

2300

2350

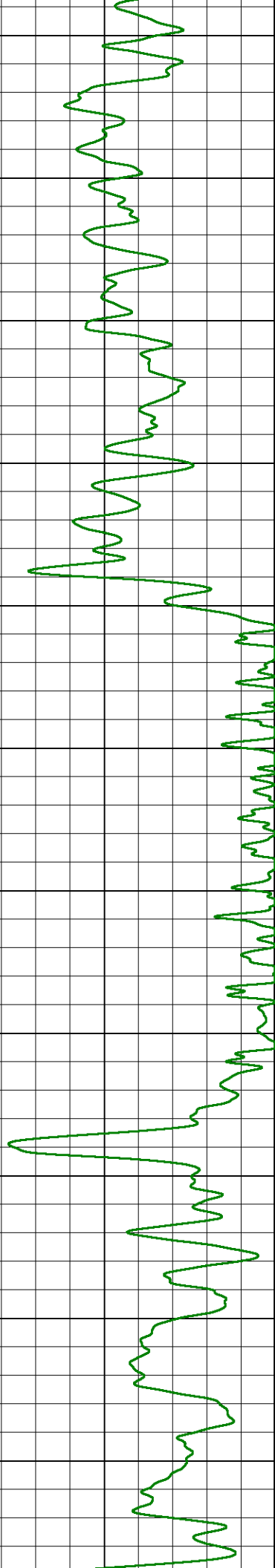
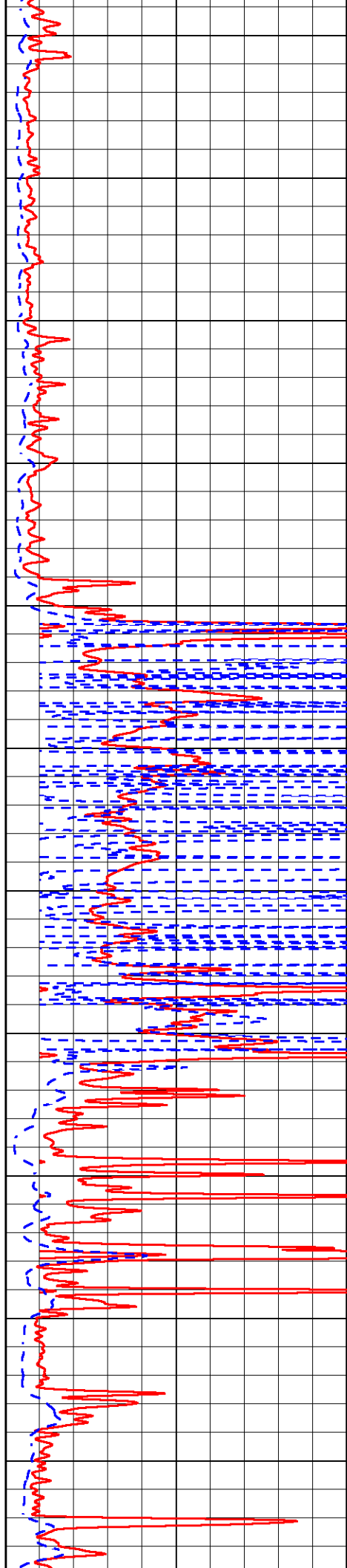
2400

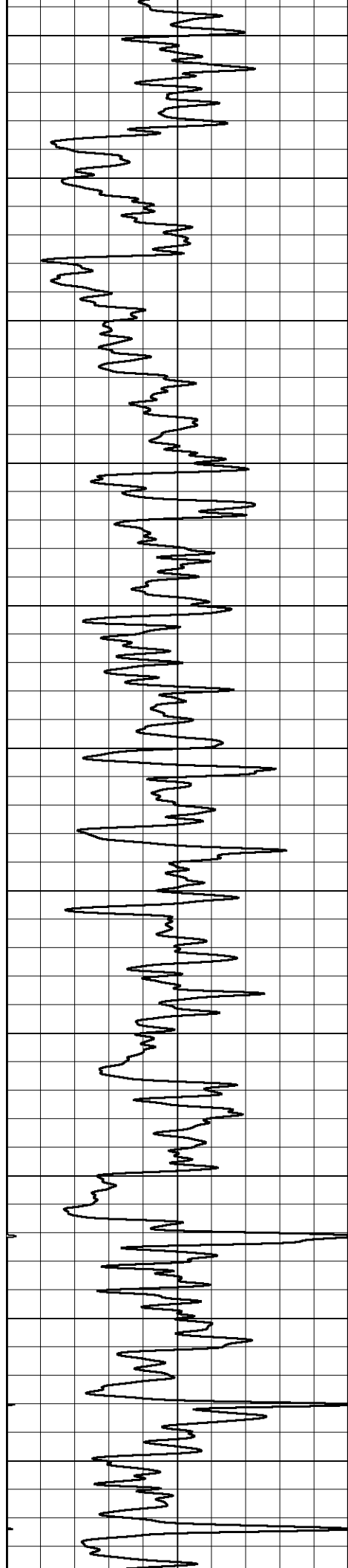
2450

2500

2550

2600





2650

2700

2750

2800

2850

2900

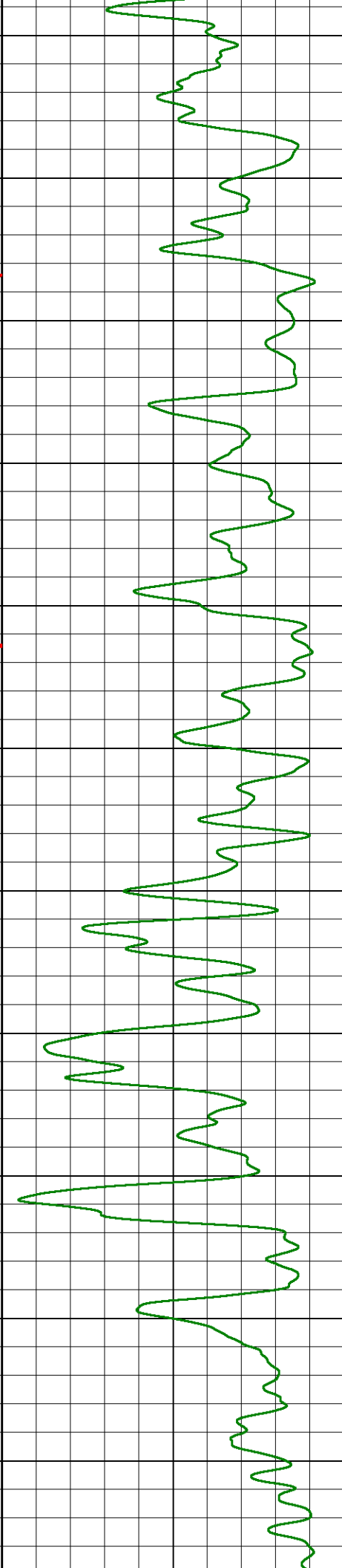
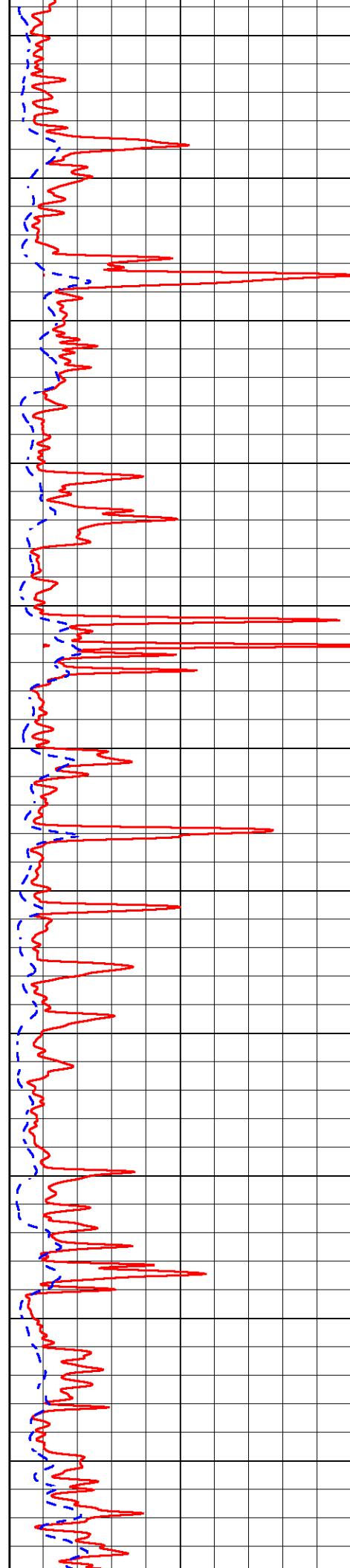
2950

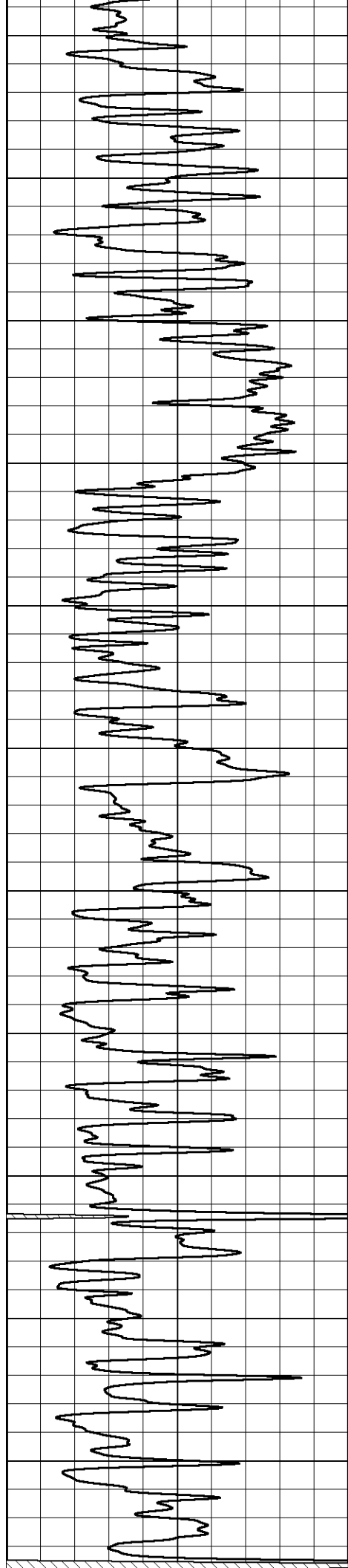
3000

3050

3100

3150





3200

3250

3300

3350

3400

3450

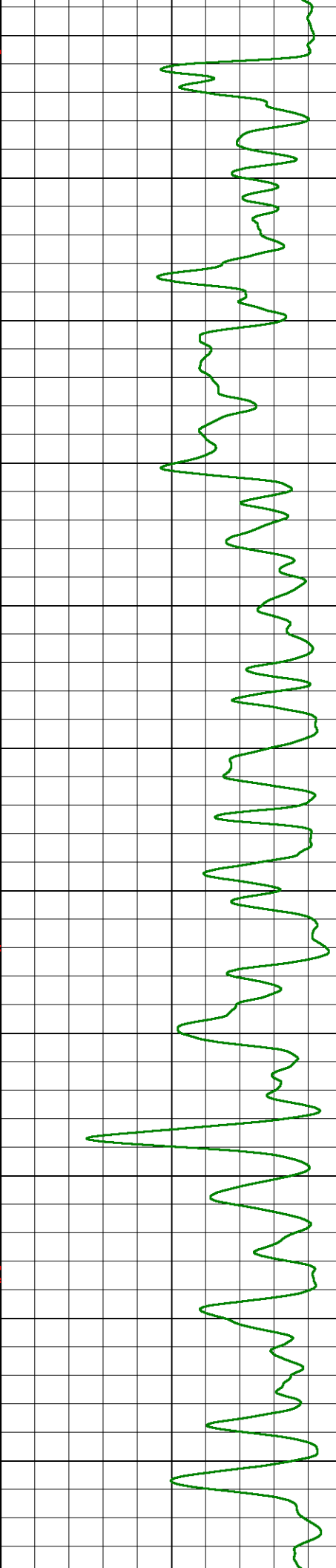
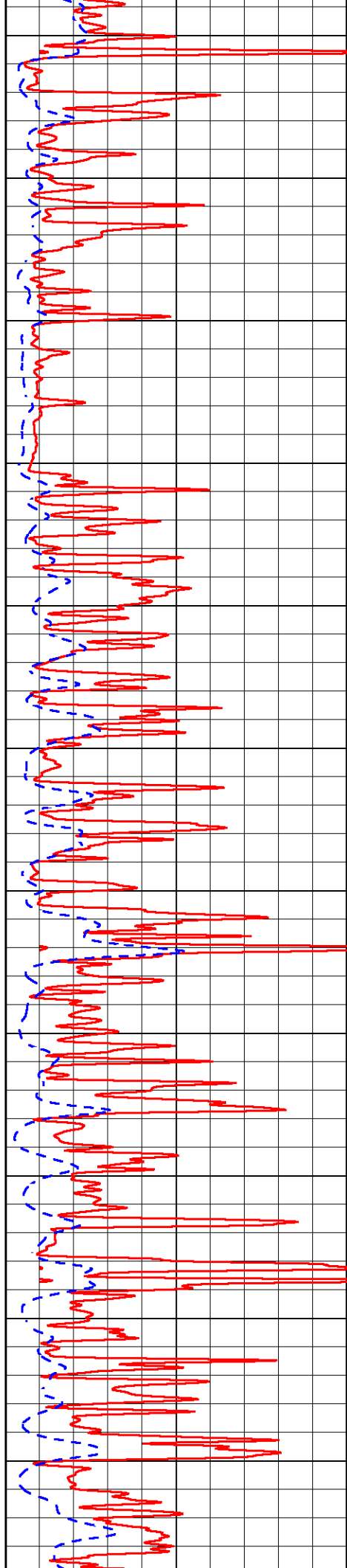
3500

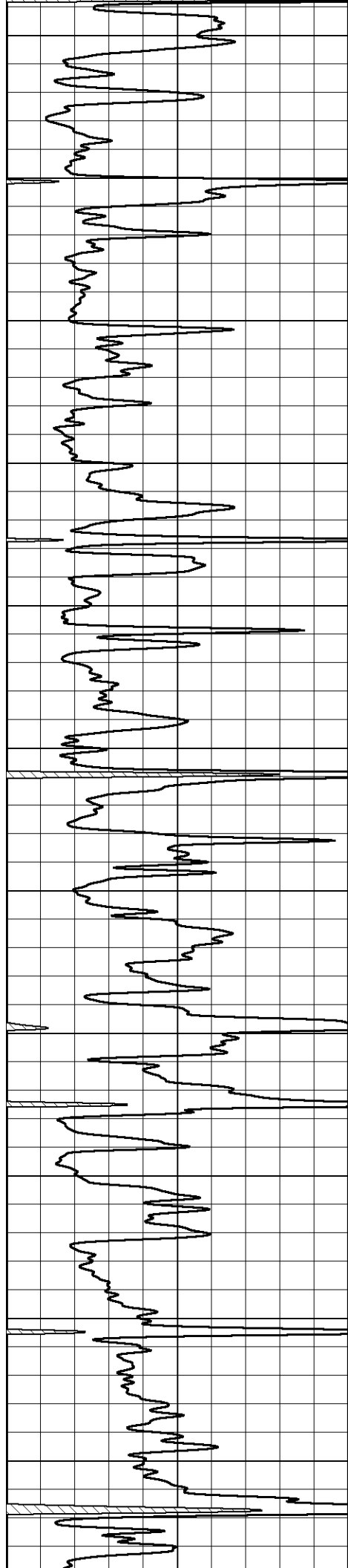
3550

3600

3650

3700





3750

3800

3850

3900

3950

4000

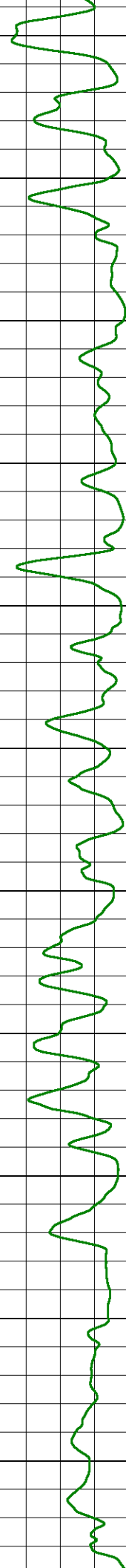
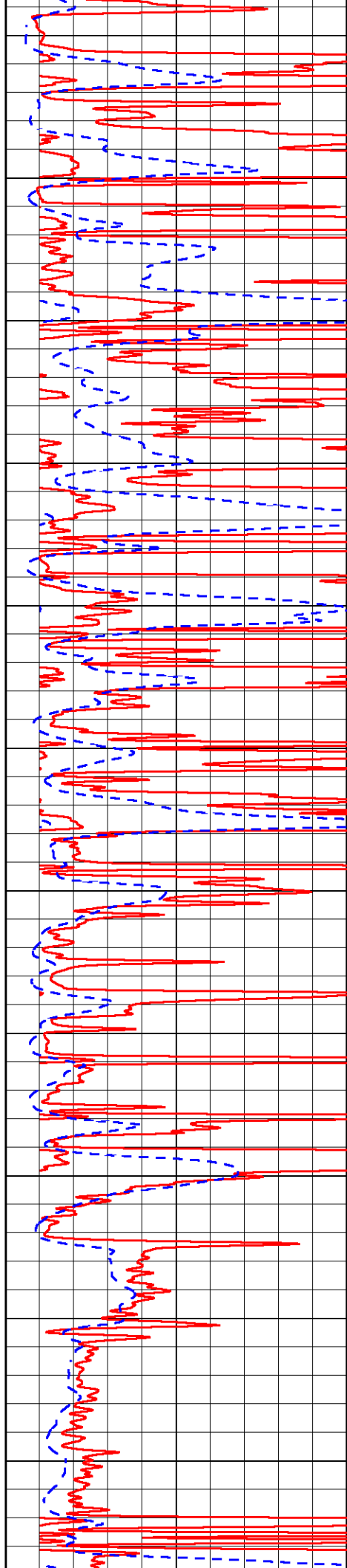
4050

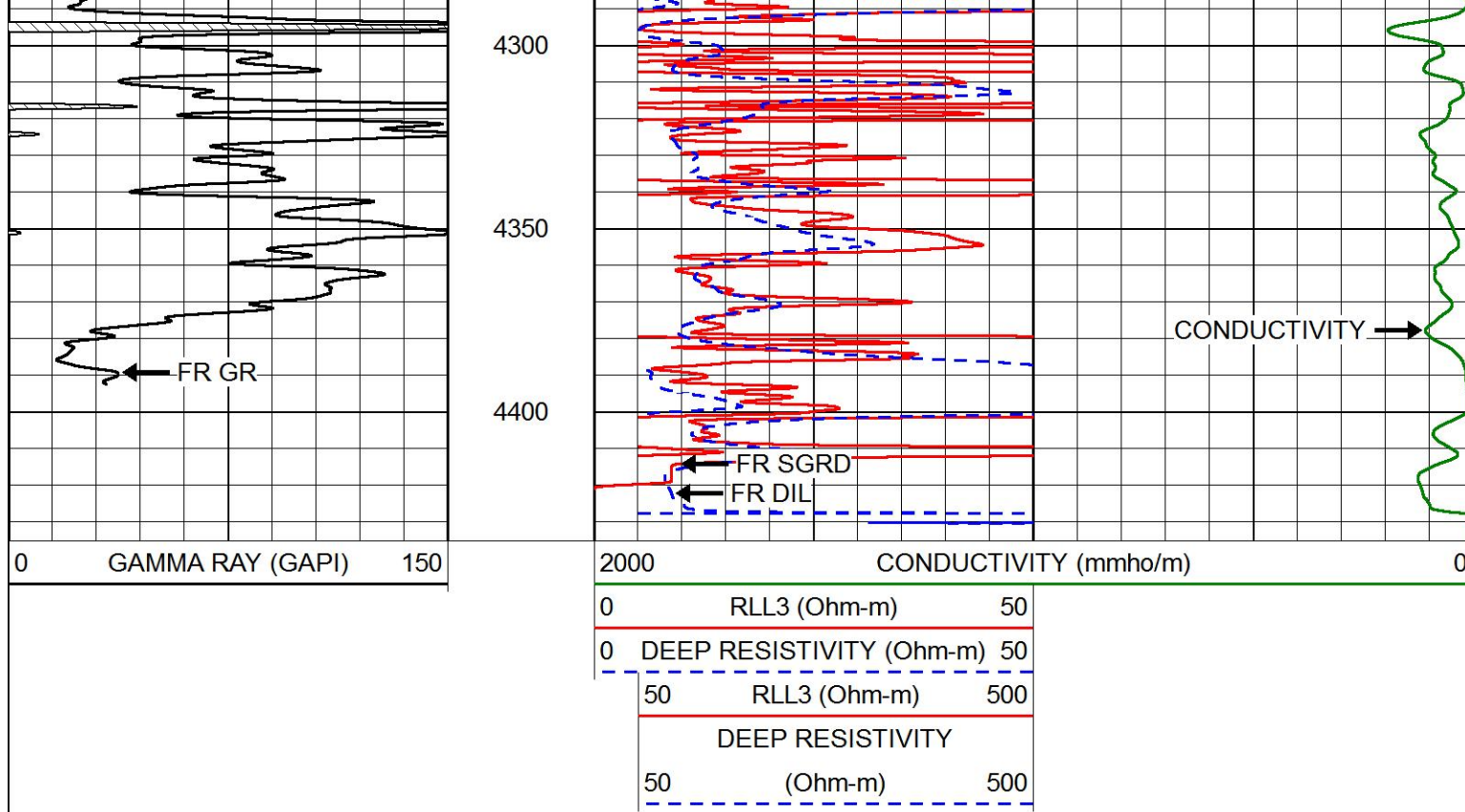
4100

4150

4200

4250







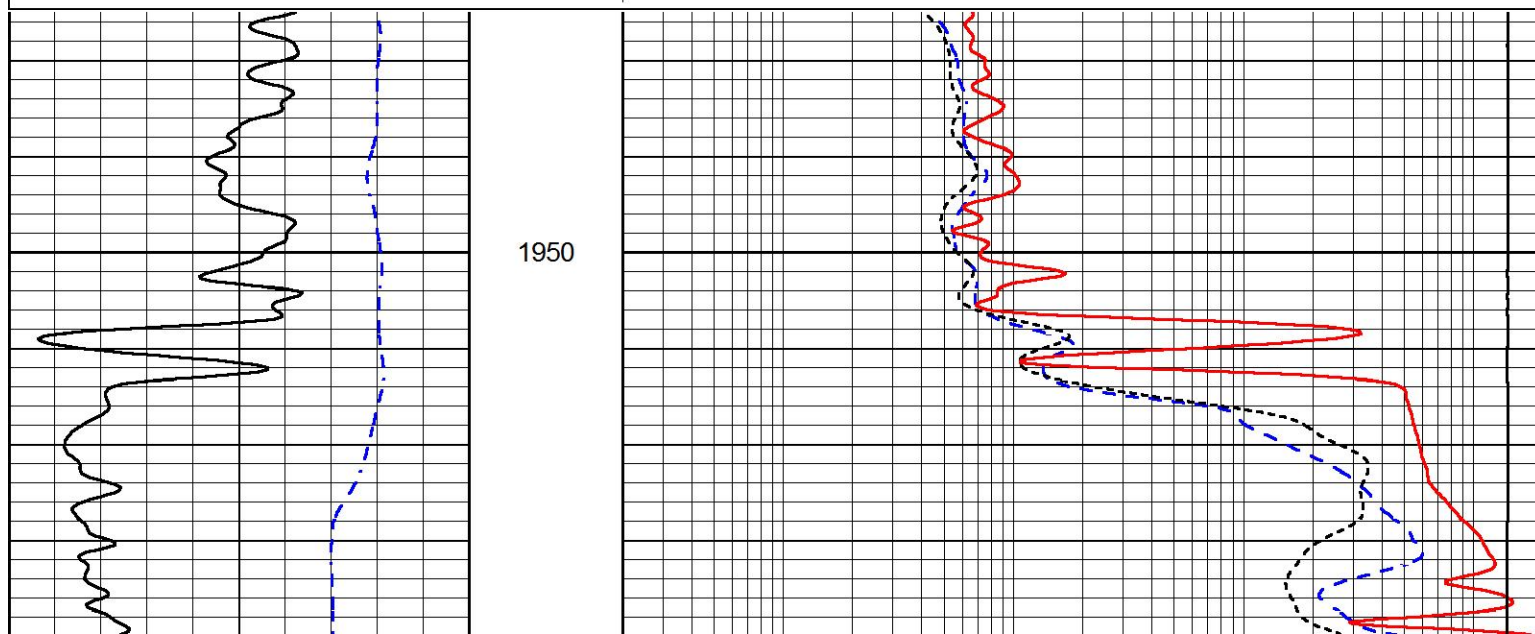
PIONEER
Pioneer Energy Services

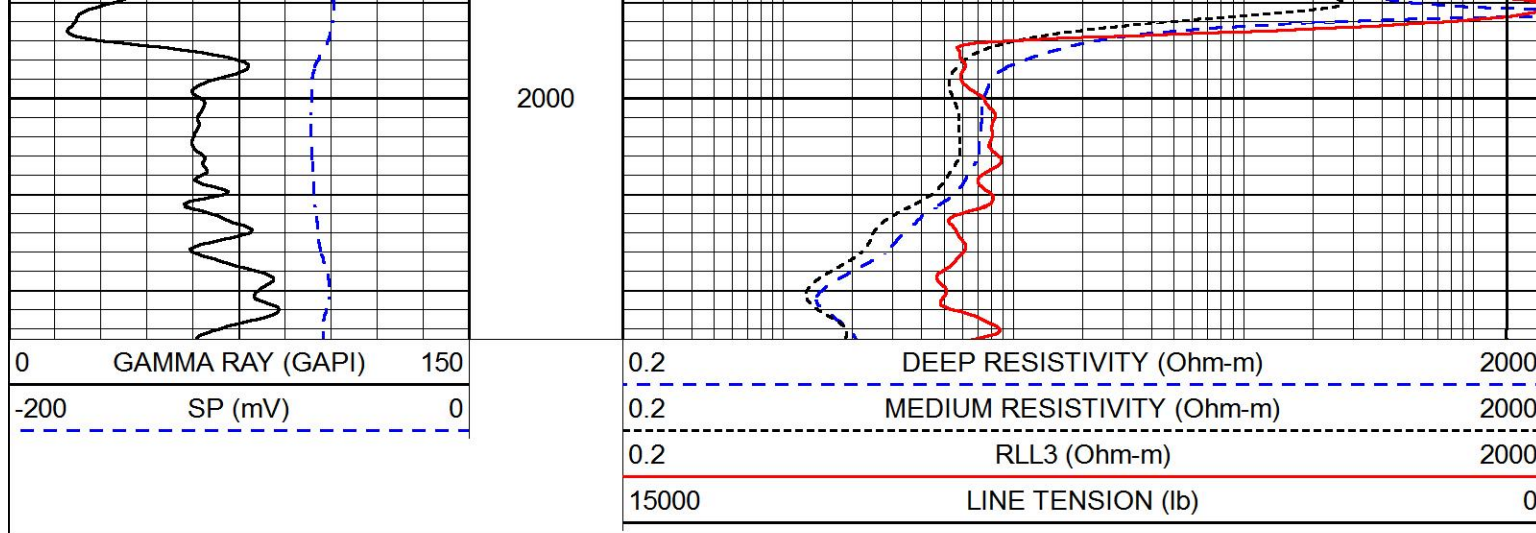
ANHYDRITE SECTION

MAIN PASS

Database File palomino_kuntz_#1.db
 Dataset Pathname stkml/pass3.4
 Presentation Format dil
 Dataset Creation Sun Jan 14 09:00:18 2018
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	0.2	DEEP RESISTIVITY (Ohm-m)	2000
-200	SP (mV)	0	0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
			0.2	RLL3 (Ohm-m)	2000
			15000	LINE TENSION (lb)	0



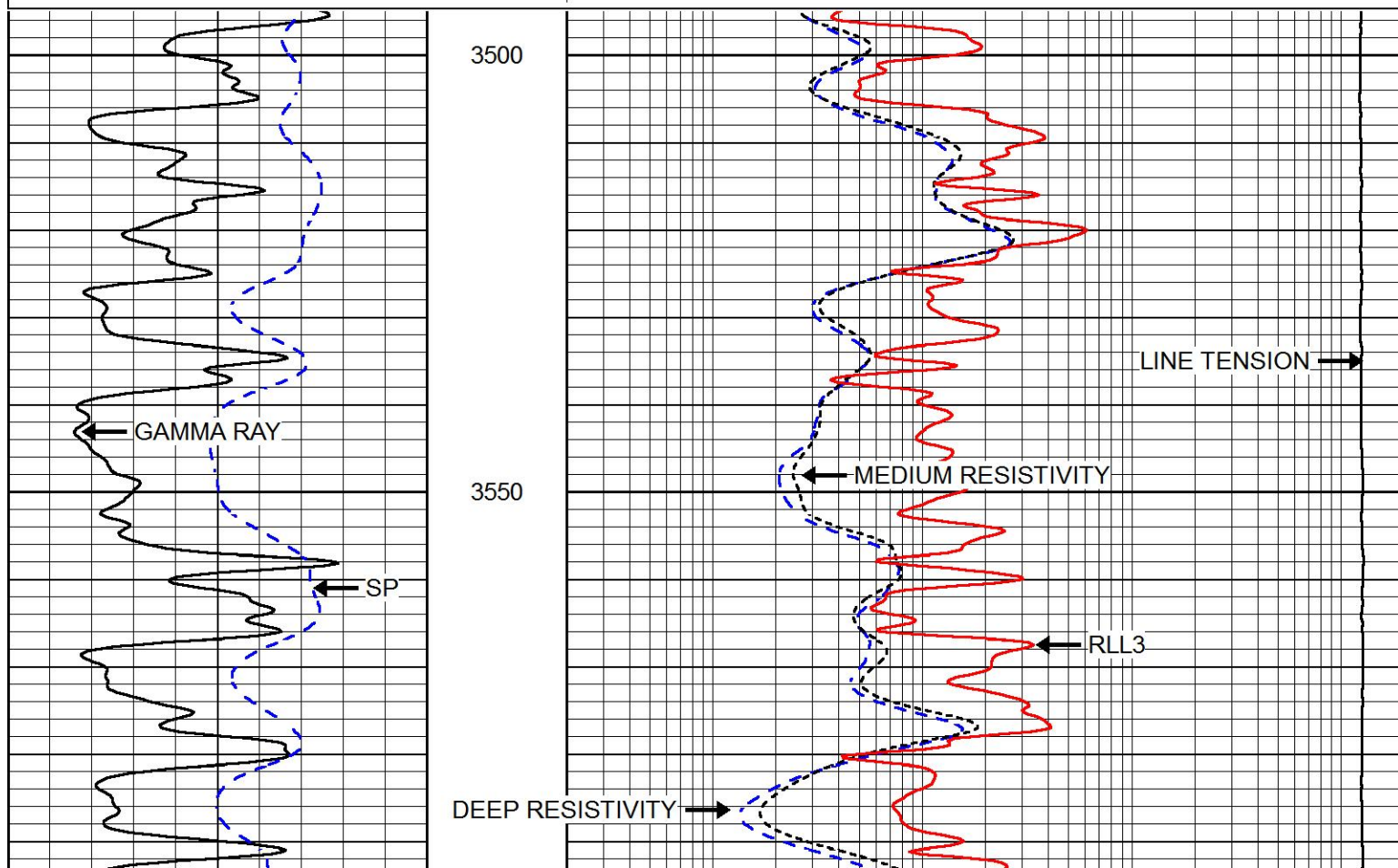
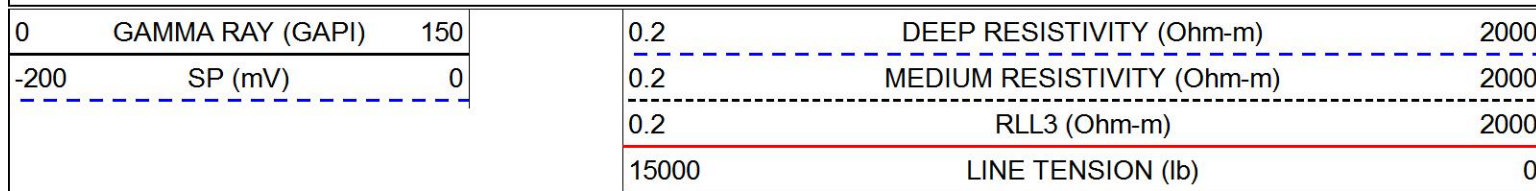


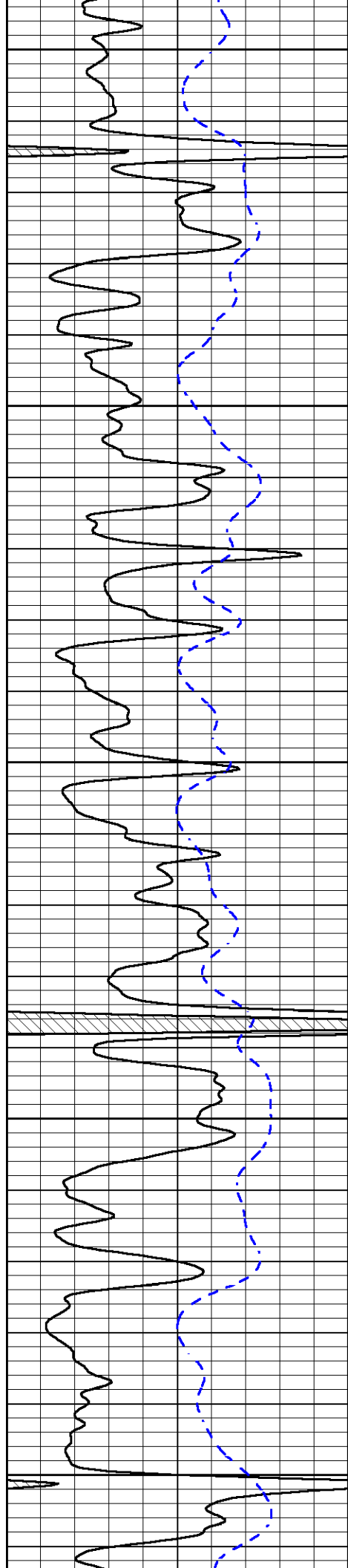


PIONEER
Pioneer Energy Services

MAIN PASS

Database File palomino_kuntz_#1.db
Dataset Pathname stkml/pass3.1
Presentation Format dil
Dataset Creation Sun Jan 14 09:20:52 2018
Charted by Depth in Feet scaled 1:240





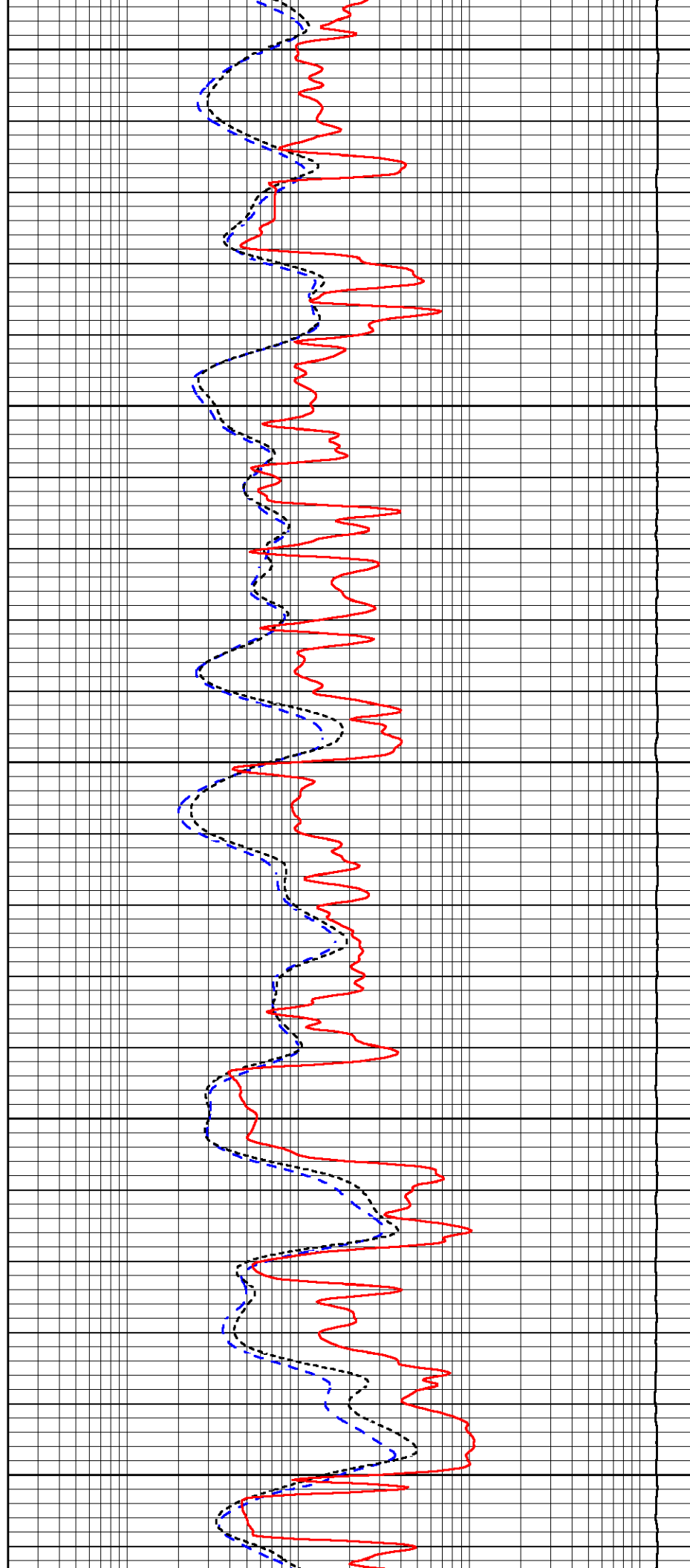
3600

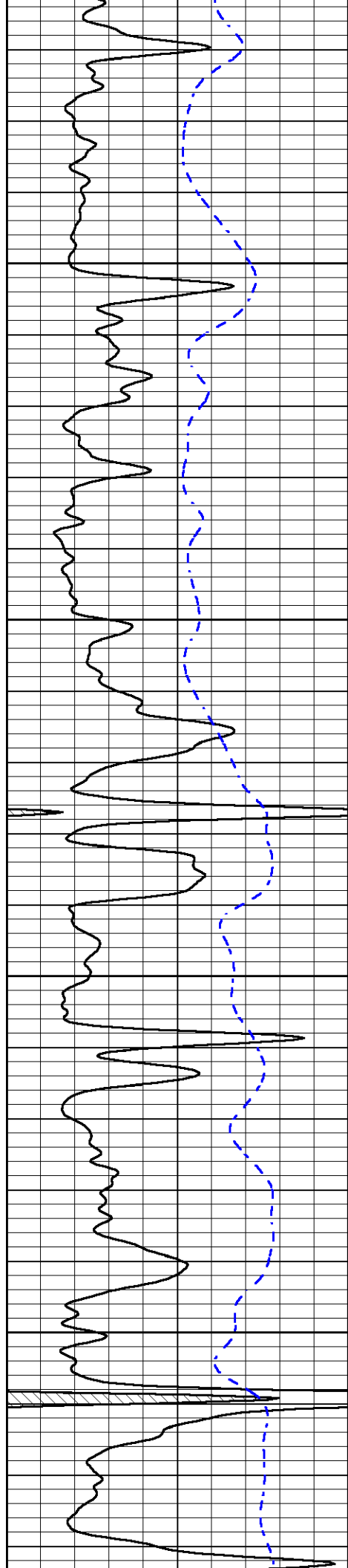
3650

3700

3750

3800



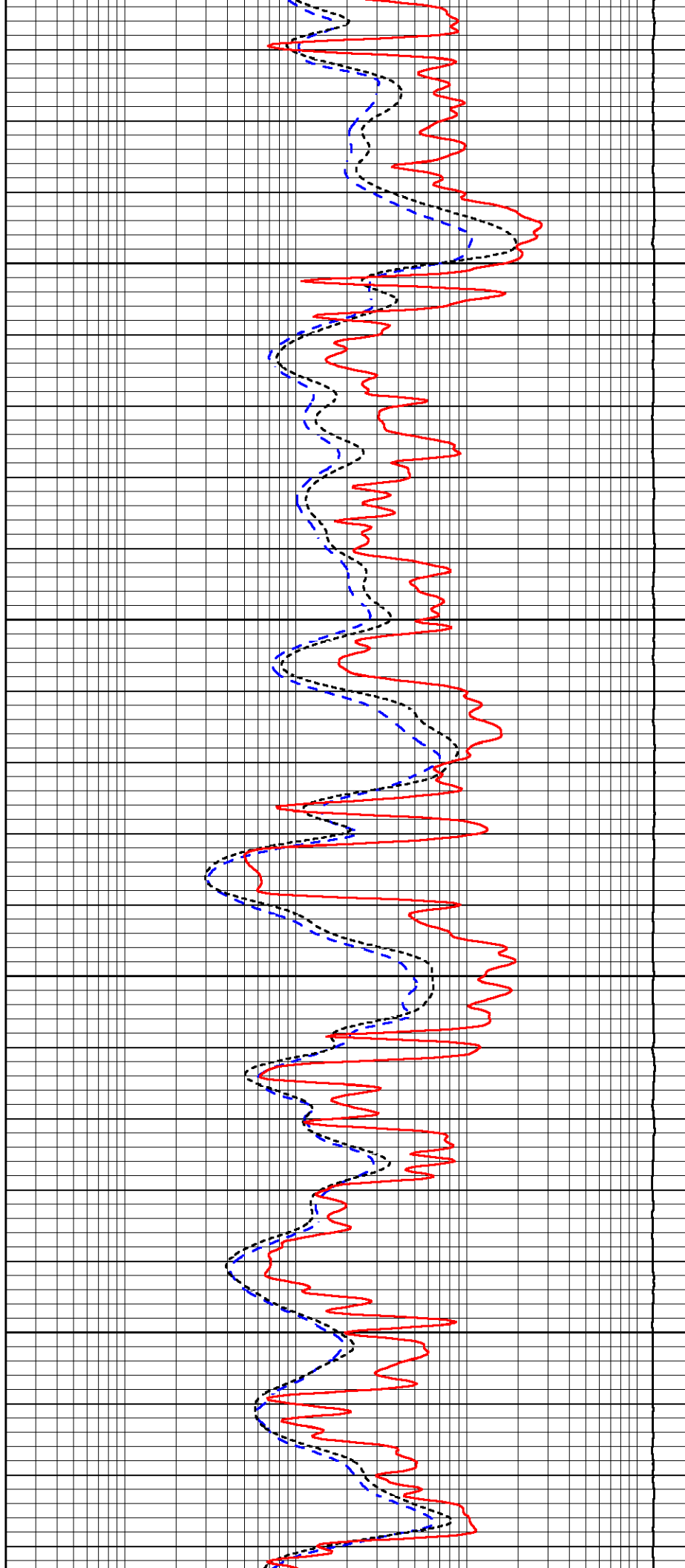


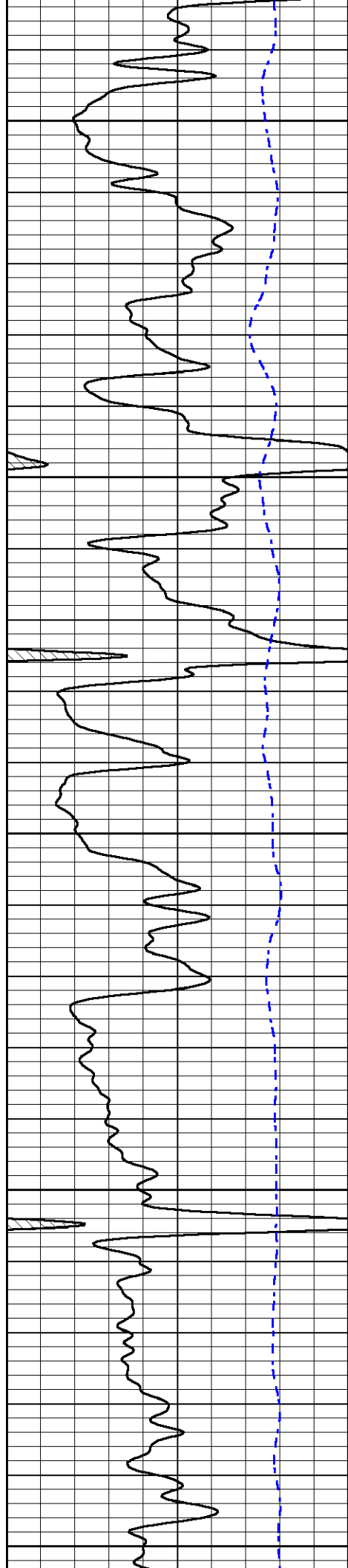
3850

3900

3950

4000





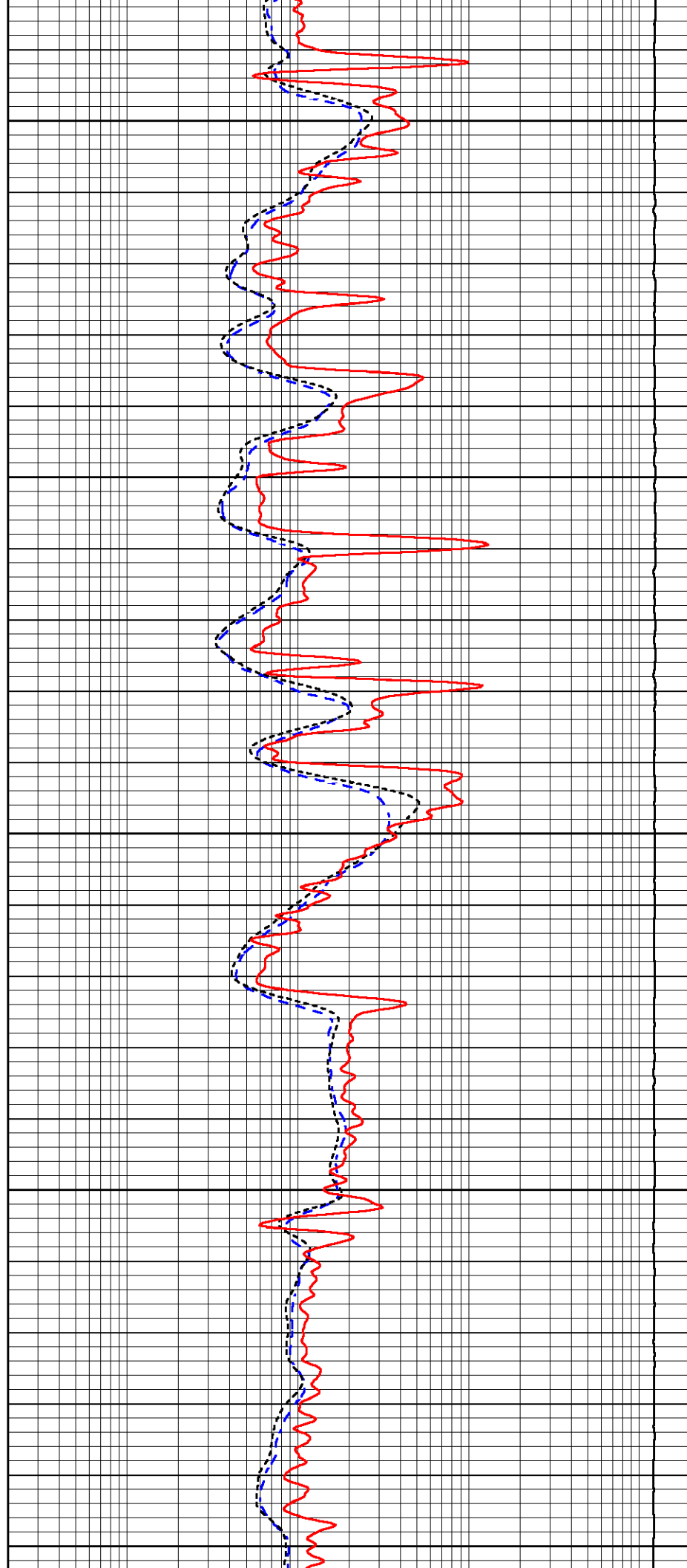
4050

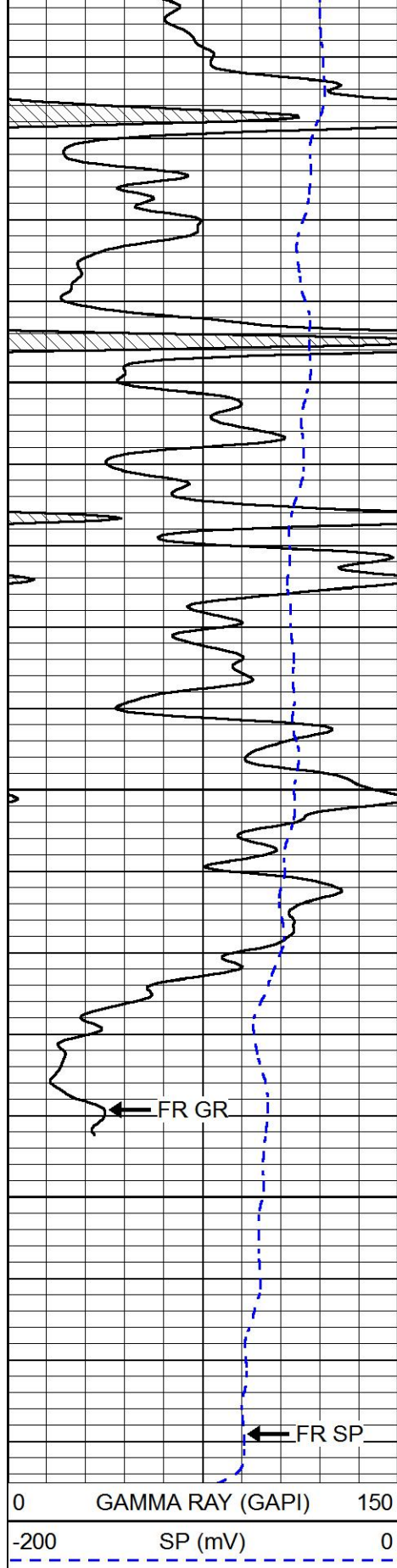
4100

4150

4200

4250

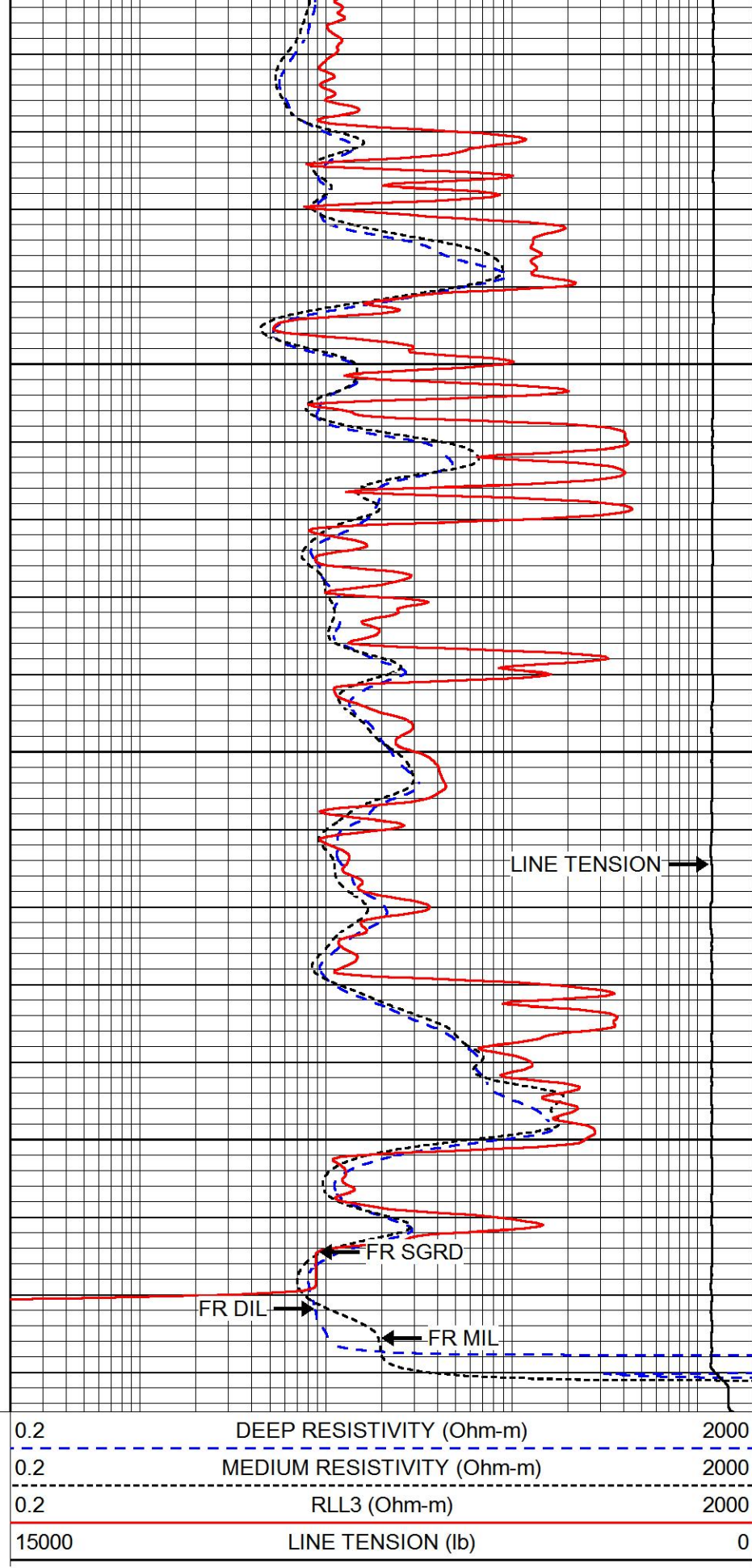




4300

4350

4400

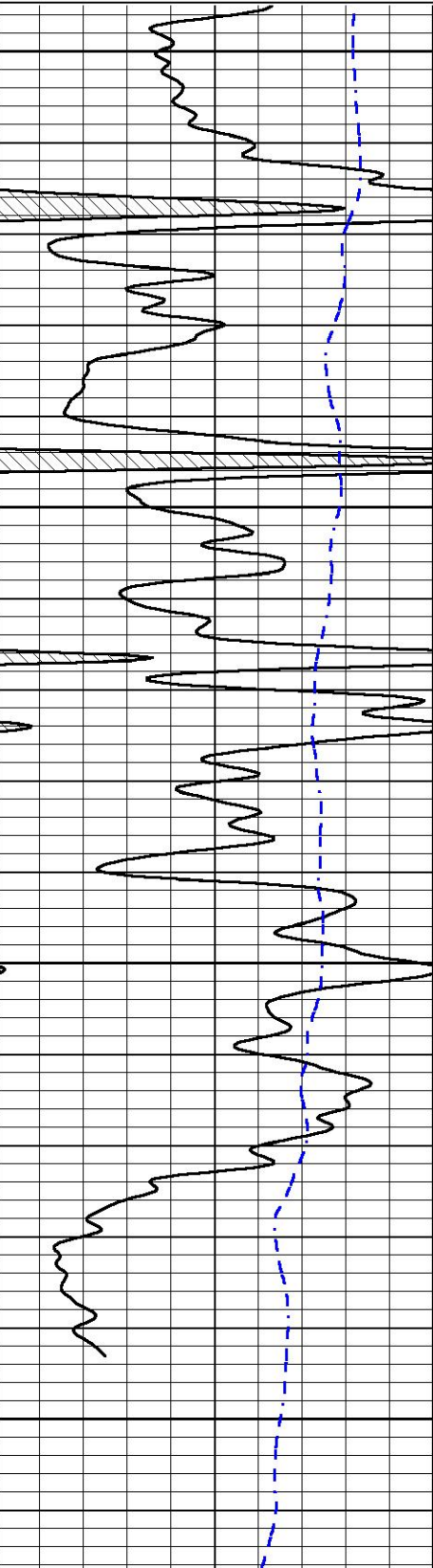


REPEAT SECTION

Database File palomino_kuntz_#1.db
Dataset Pathname stkml/pass2.1
Presentation Format dil
Dataset Creation Sun Jan 14 08:54:56 2018
Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-200	SP (mV)	0

0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
15000	LINE TENSION (lb)	0

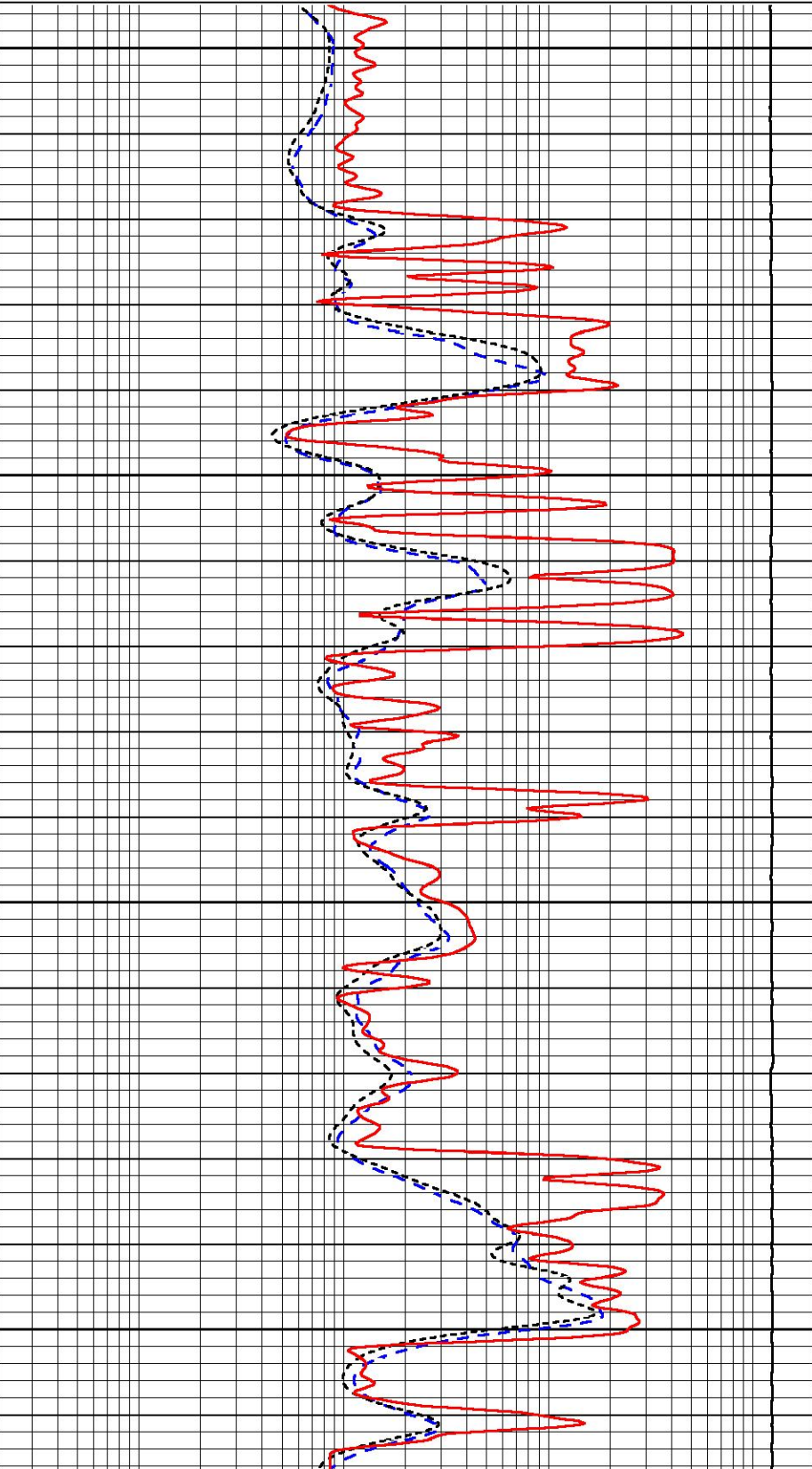


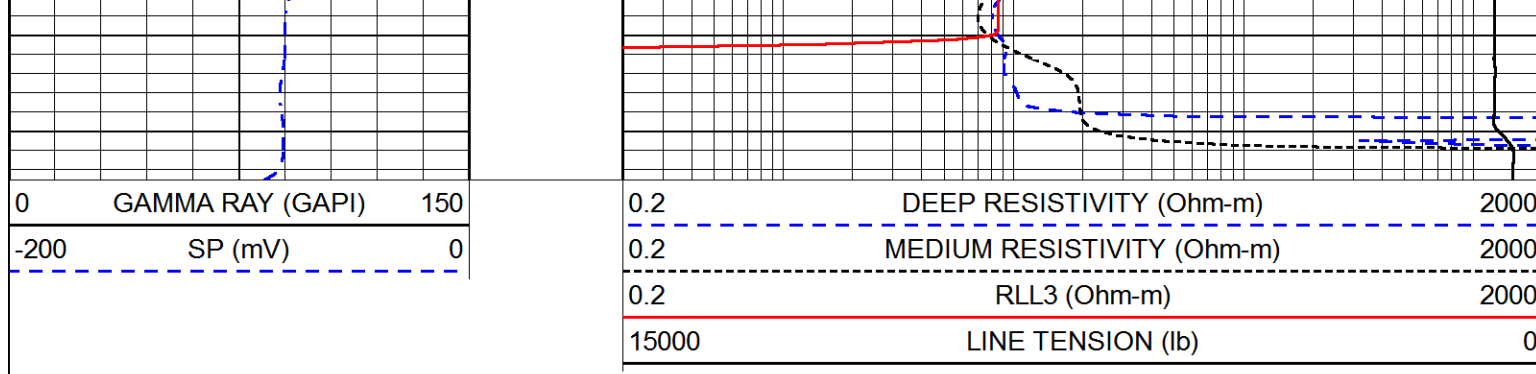
4250

4300

4350

4400





Calibration Report		
Database File	palomino_kuntz_#1.db	
Dataset Pathname	stkml/pass3.1	
Dataset Creation	Sun Jan 14 09:20:52 2018	

Dual Induction Calibration Report

Serial-Model:	PSI 978-M&W
Calibration Performed:	Wed Dec 13 12:45:09 2017

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	178.615	710.235	0.000	255.800	mmho/m	0.570	-41.500
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.420	-37.000

Microlog Calibration Report

Serial-Model:	PSI-02-PSI STKBL ML
Performed:	Fri Jun 23 01:25:19 2017

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0031	0.0043	0.0000	10.0000	Ohm-m	18000.0000	0.0000
Inverse	0.0000	0.0013	0.0000	10.0000	Ohm-m	21000.0000	1.0000
Caliper	1.0020	1.0834	5.5000	16.5000	in	135.1560	-131.4500

Compensated Density Calibration Report

Serial-Model:	168-986-M&W
Source / Verifier:	/
Master Calibration Performed:	Tue Apr 11 17:07:47 2017

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4691.86	4818.19	cps
Aluminum	2.675	g/cc	859.57	3020.22	cps
Spine Angle = 74.61			Density/Spine Ratio = 0.523		
	Size		Reading		
Small Ring	4.00	in	1.00		
Large Ring	14.00	in	1.20		

Compensated Neutron Calibration Report

Serial Number: tk10-MW
Tool Model: M&W
Calibration Performed: Wed Nov 16 11:21:36 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-M&W
Tool Model: M&W
Calibration Performed: Tue Apr 11 17:08:01 2017

Calibrator Value: 1000.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 6.2 cps

Sensitivity: 0.5200 GAPI/cps



Company PALOMINO PETROLEUM, INC.
Well KUNTZ #1
Field WILDCAT
County GOVE
State KANSAS