



**DUAL
INDUCTION
LOG**

Company Palomino Petroleum		Location: 2143' FNL & 445' FEL		Other Services ML CDNL	
Well	Brownie #3	API #: 15 063 22279		Elevation	
Field	Brownie	SEC 7 TWP 14S RGE 30W		K.B. 2779'	
County	Gove	Ground Level		D.F. 2778'	
State	Kansas	Elevation		G.L. 2771'	
Permanent Datum		Log Measured From		Drilling Measured From	
KB 8' AGL		KB		KB	

Date	12-3-15
Run Number	Two
Depth Driller	4597'
Depth Logger	4595'
Bottom Logged Interval	4593'
Top Log Interval	200'
Casing Driller	8 5/8" @ 212'
Casing Logger	212'
Bit Size	7 7/8"
Type Fluid in Hole	Chemical
Density / Viscosity	9.1/56
PH / Fluid Loss	10.5/7.8
Source of Sample	Pit
Rm @ Meas. Temp	.8@60degf
Rmf @ Meas. Temp	.6@60degf
Rmc @ Meas. Temp	.96@60degf
Source of Rmf / Rmc	Calculated
Rm @ BHT	.41@115degf
Time Circulation Stopped	2:15 a.m.
Time Logger on Bottom	4:15 a.m.
Maximum Recorded Temperature	115degf
Equipment Number	T127
Location	Hays, KS
Recorded By	Gus Pfanenstiel
Witnessed By	Mr. Ryan Seib

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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

South of Gove 10 miles, West 10 miles follow curve North 1 3/4 mile.
East into.



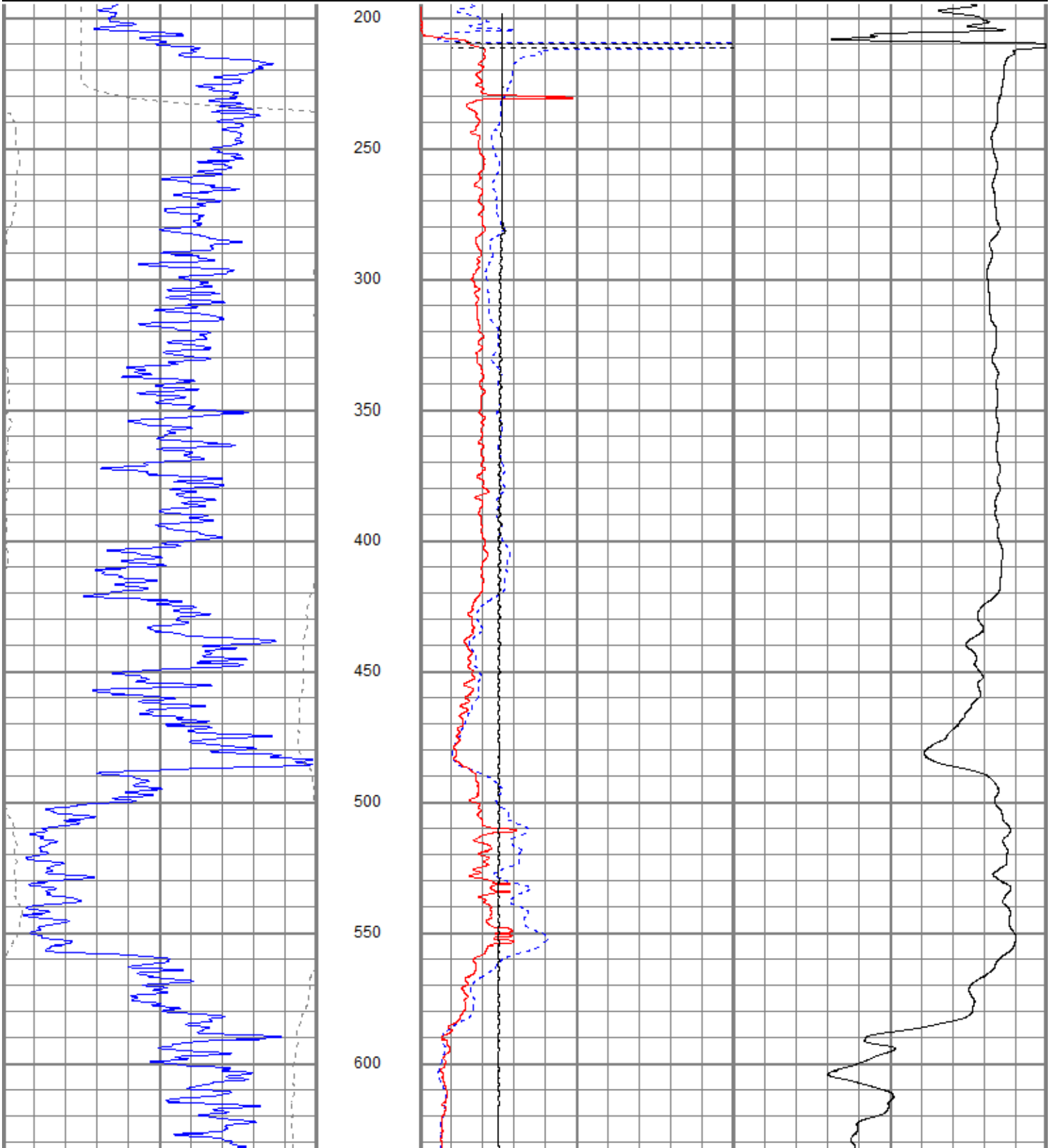
Main Pass

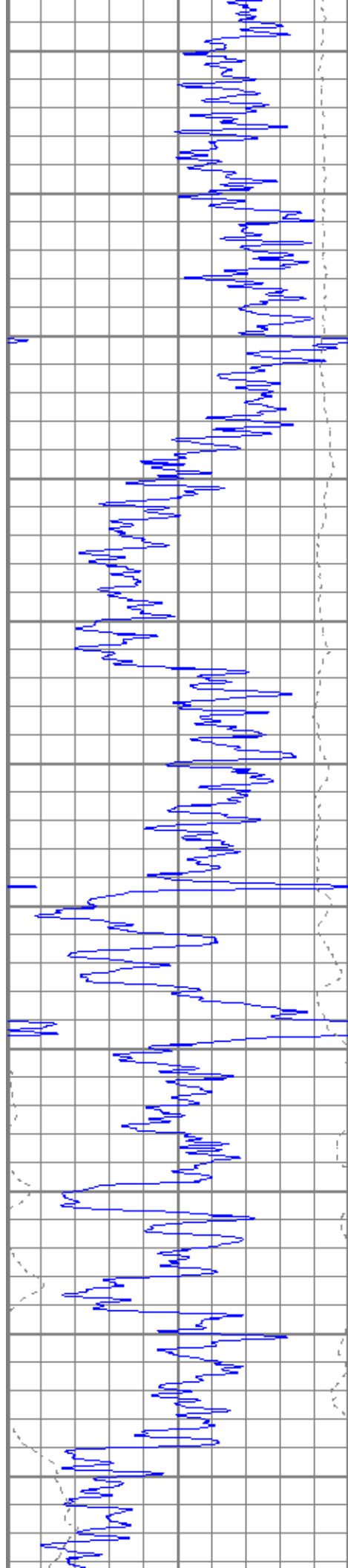
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 Dataset Pathname pass3
 Presentation Format kdrillin2
 Dataset Creation Thu Dec 03 05:20:10 2015
 Charted by Depth in Feet scaled 1:600

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-200	SP (mV)	0

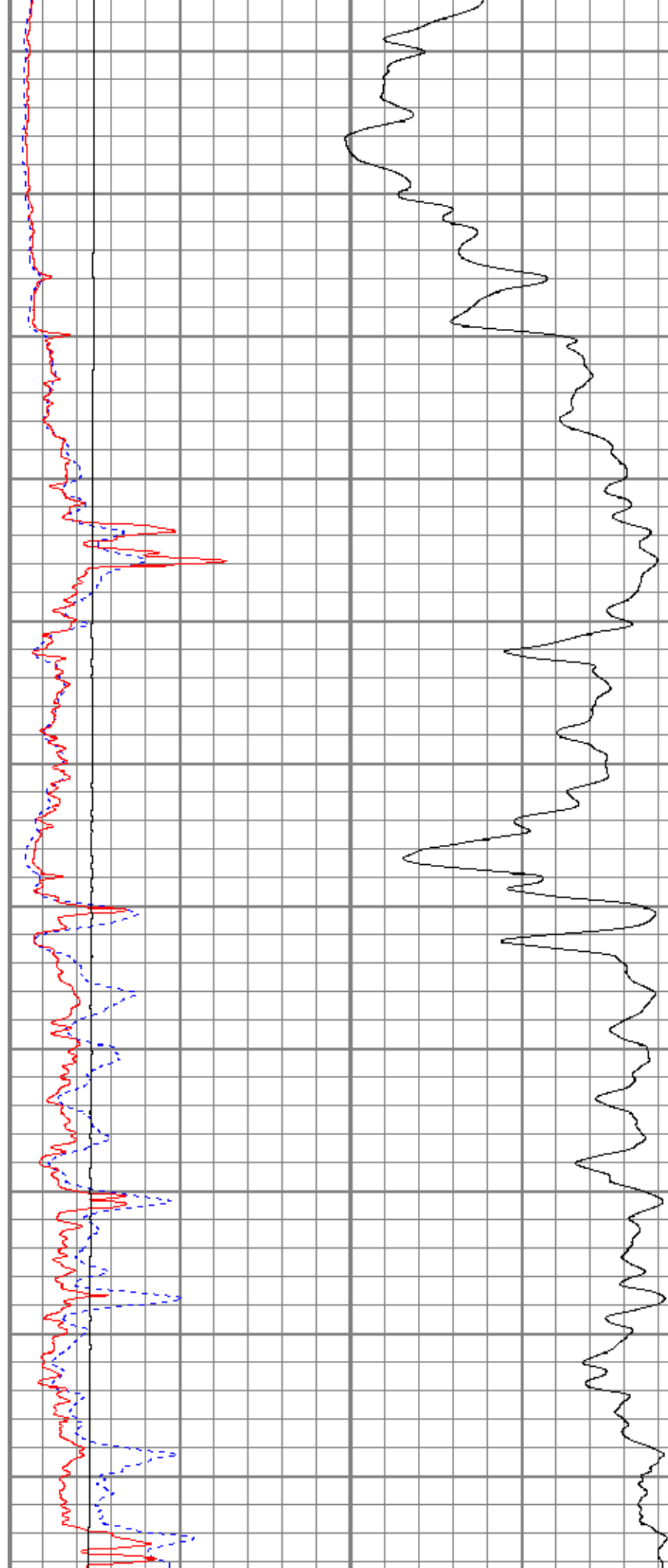
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10000	LTEN (lb)	0

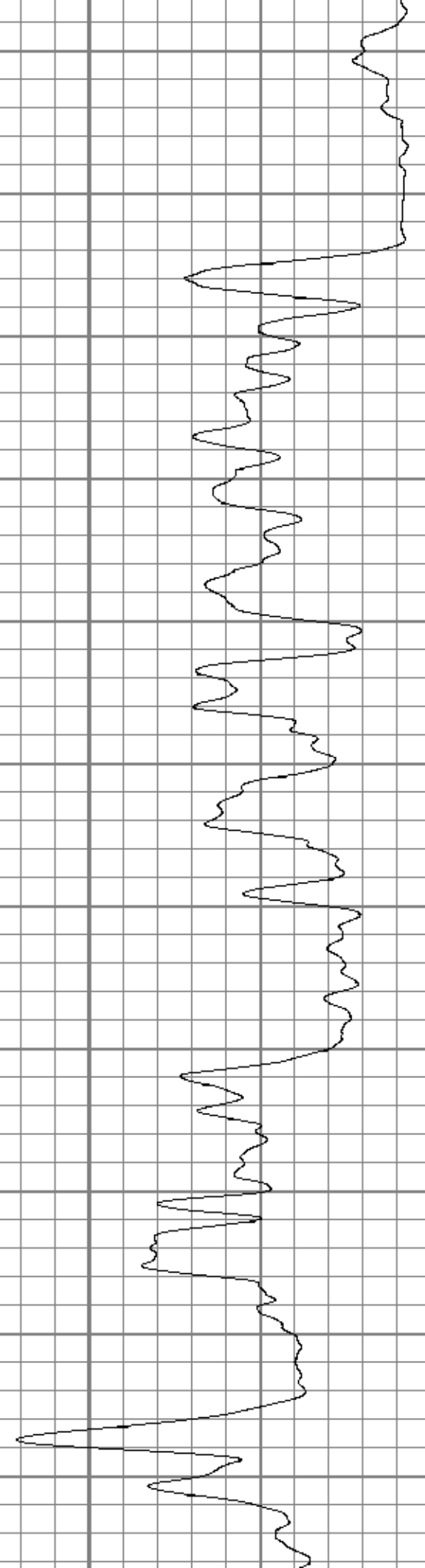
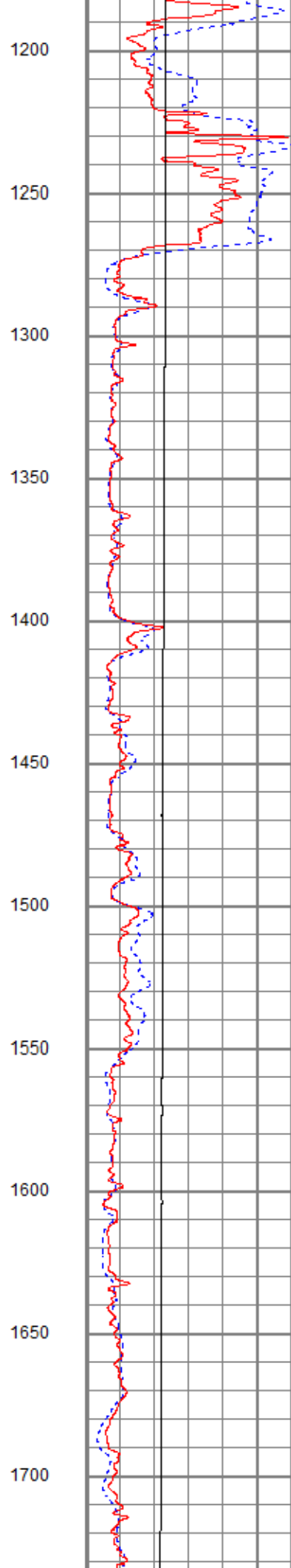
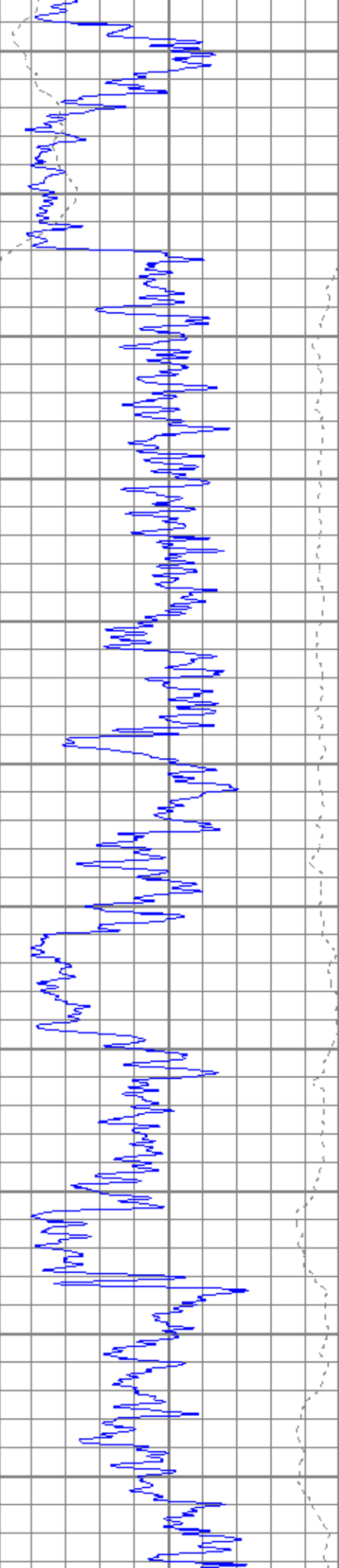
0	RILD (Ohm-m)	50
0	RLL3 (Ohm-m)	50
50	RILD x 10 (Ohm-m)	500
50	RLL3 x 10 (Ohm-m)	500

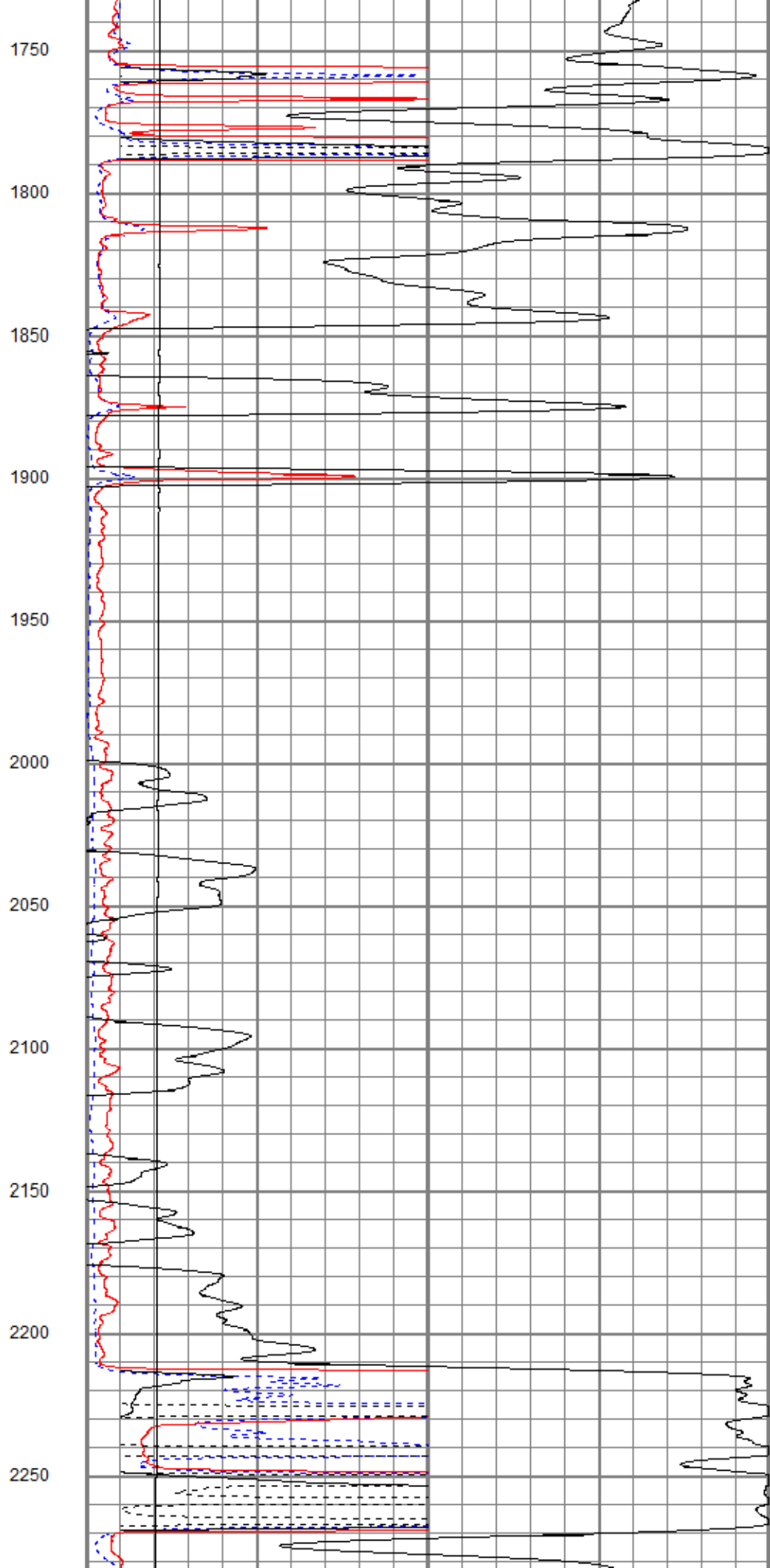
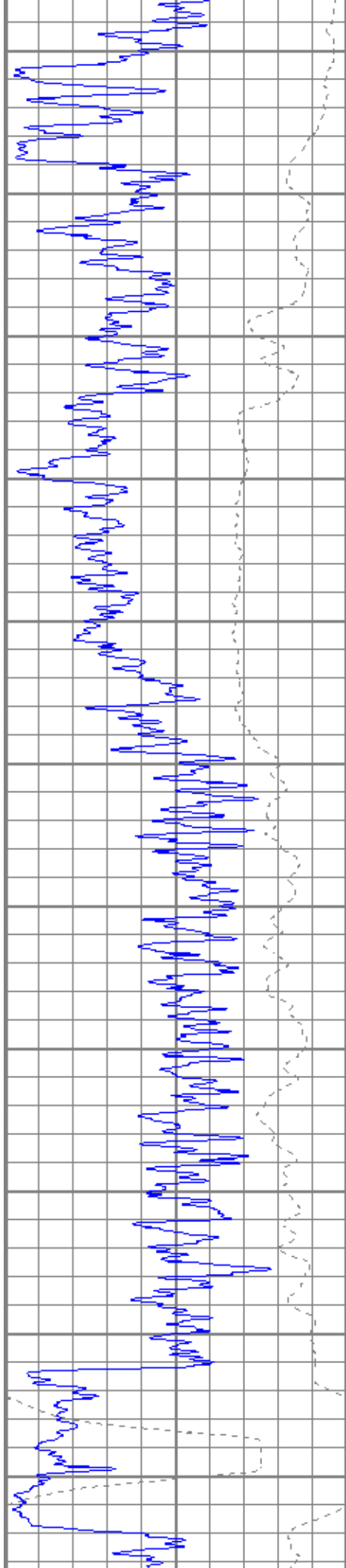


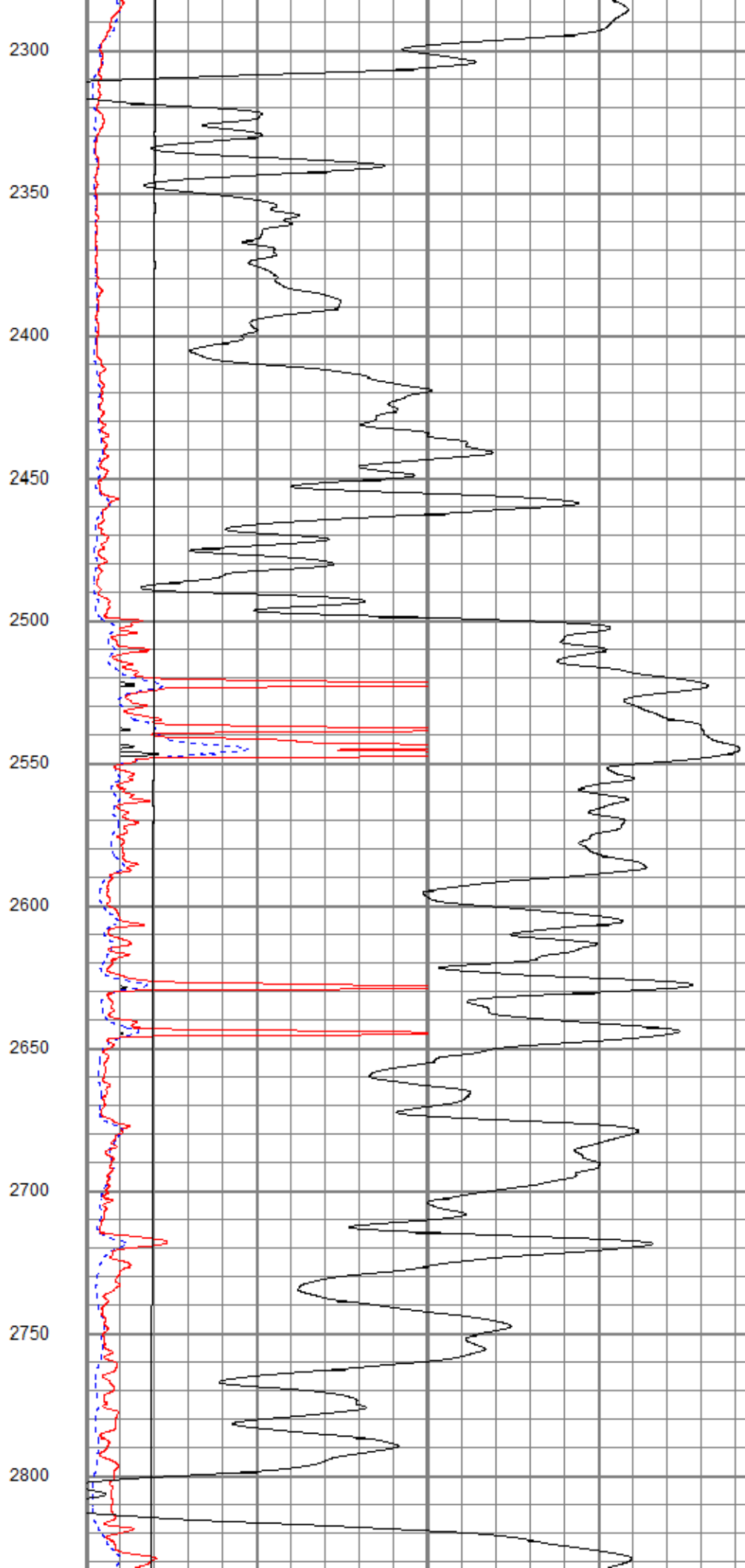
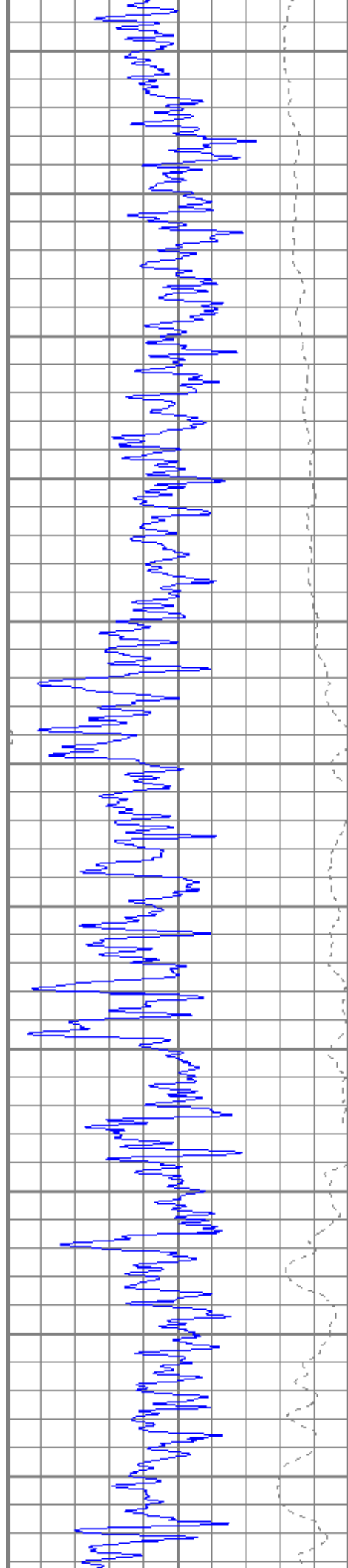


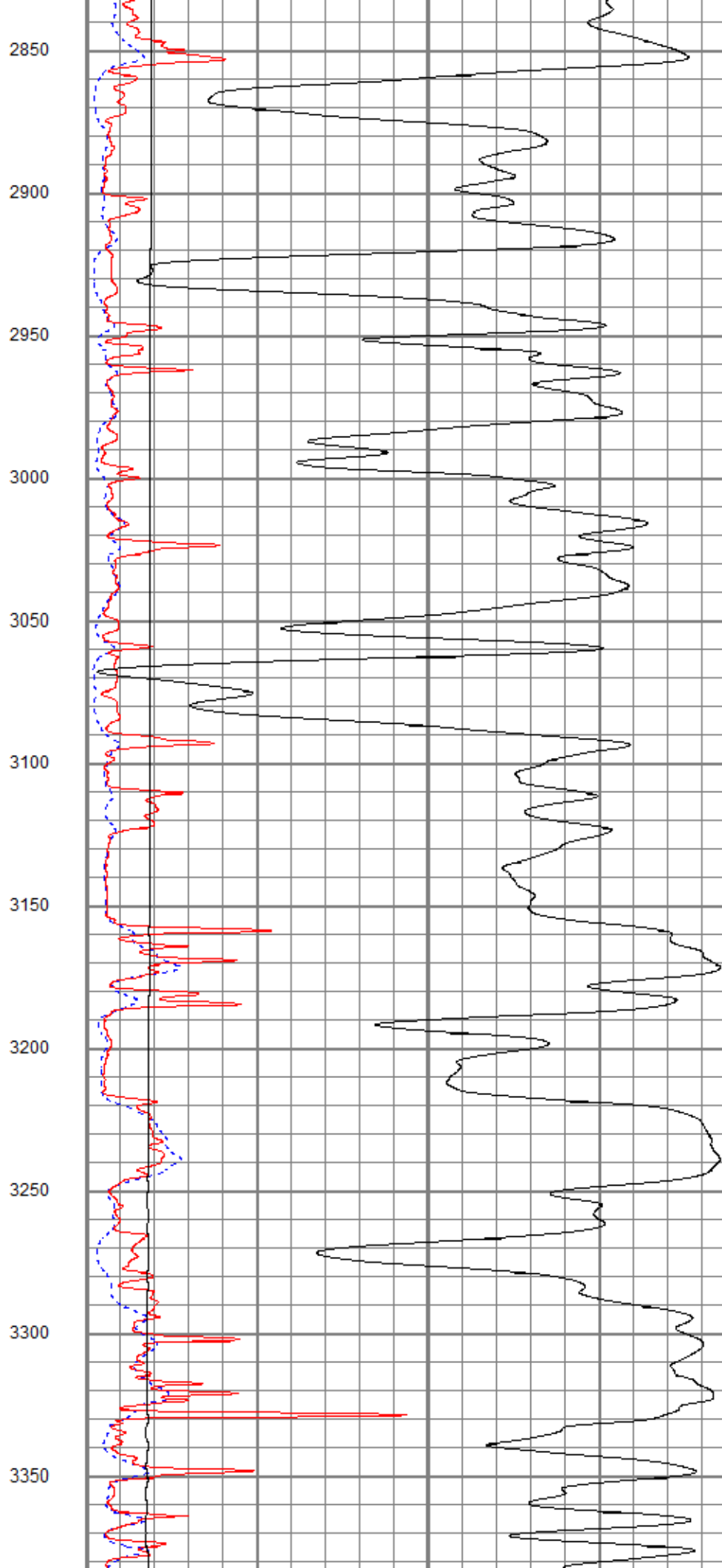
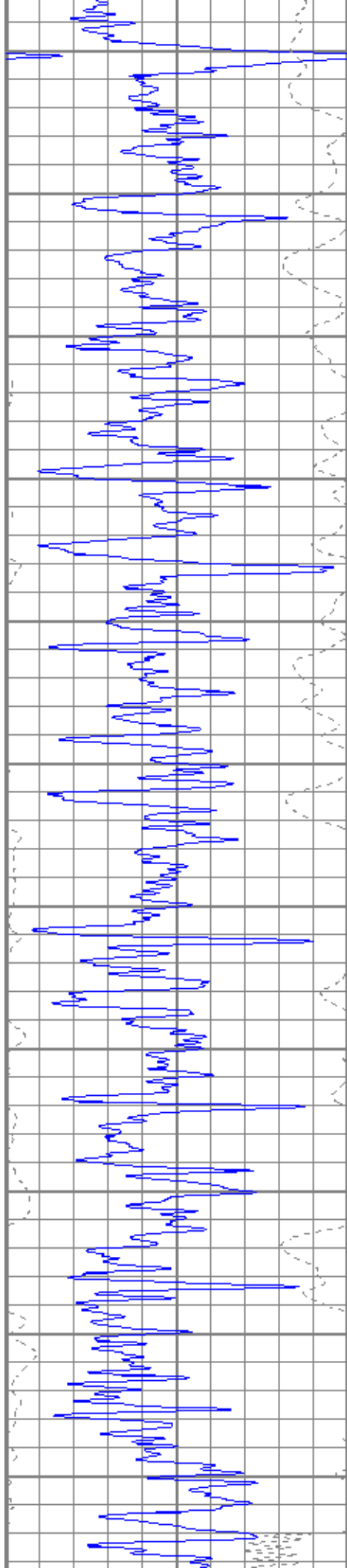
650
700
750
800
850
900
950
1000
1050
1100
1150

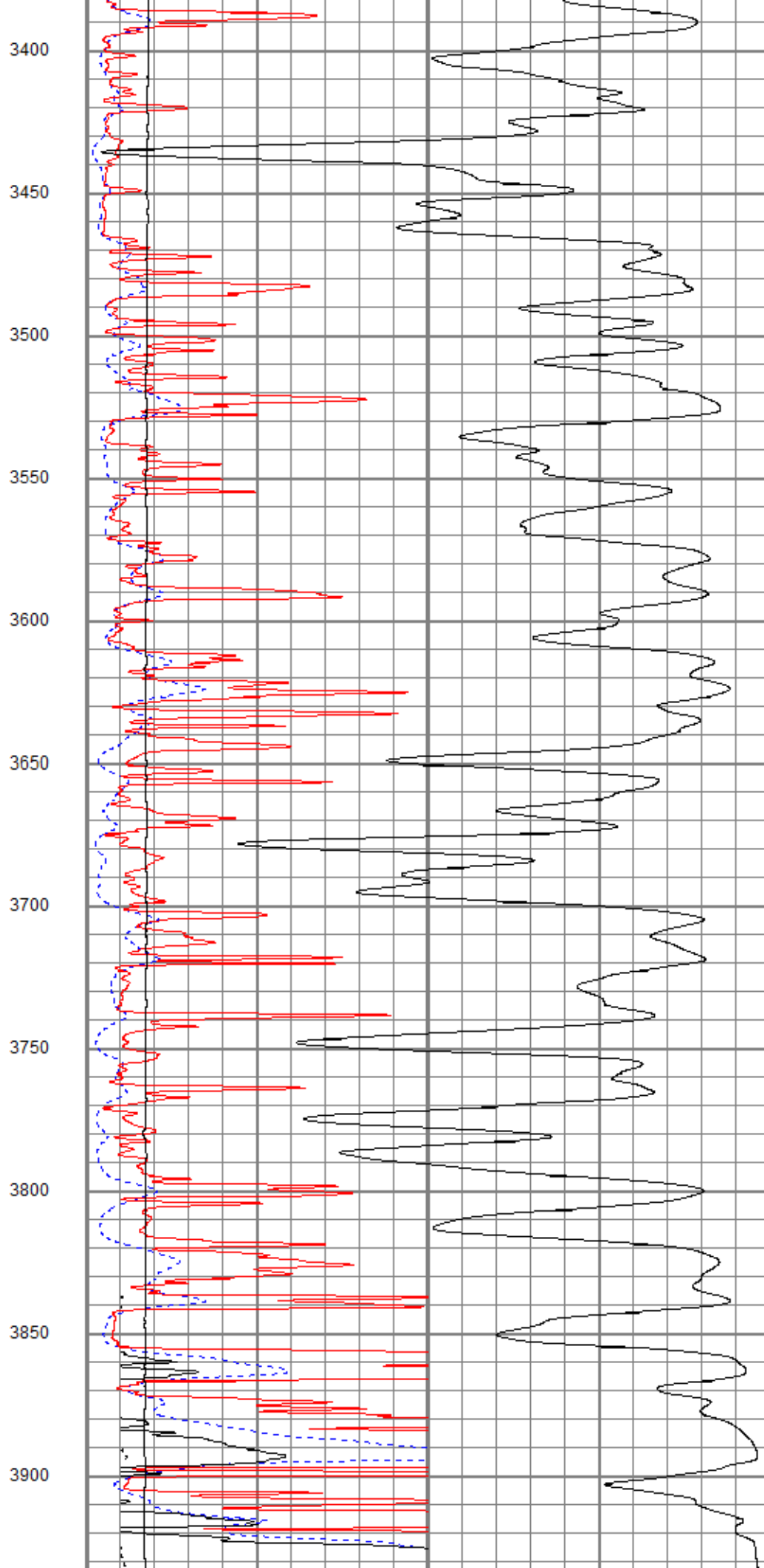
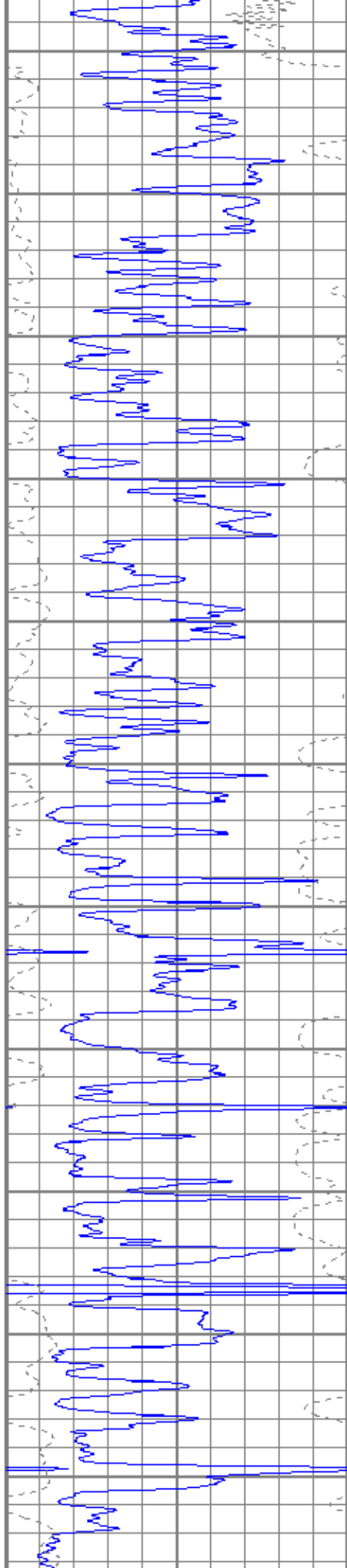


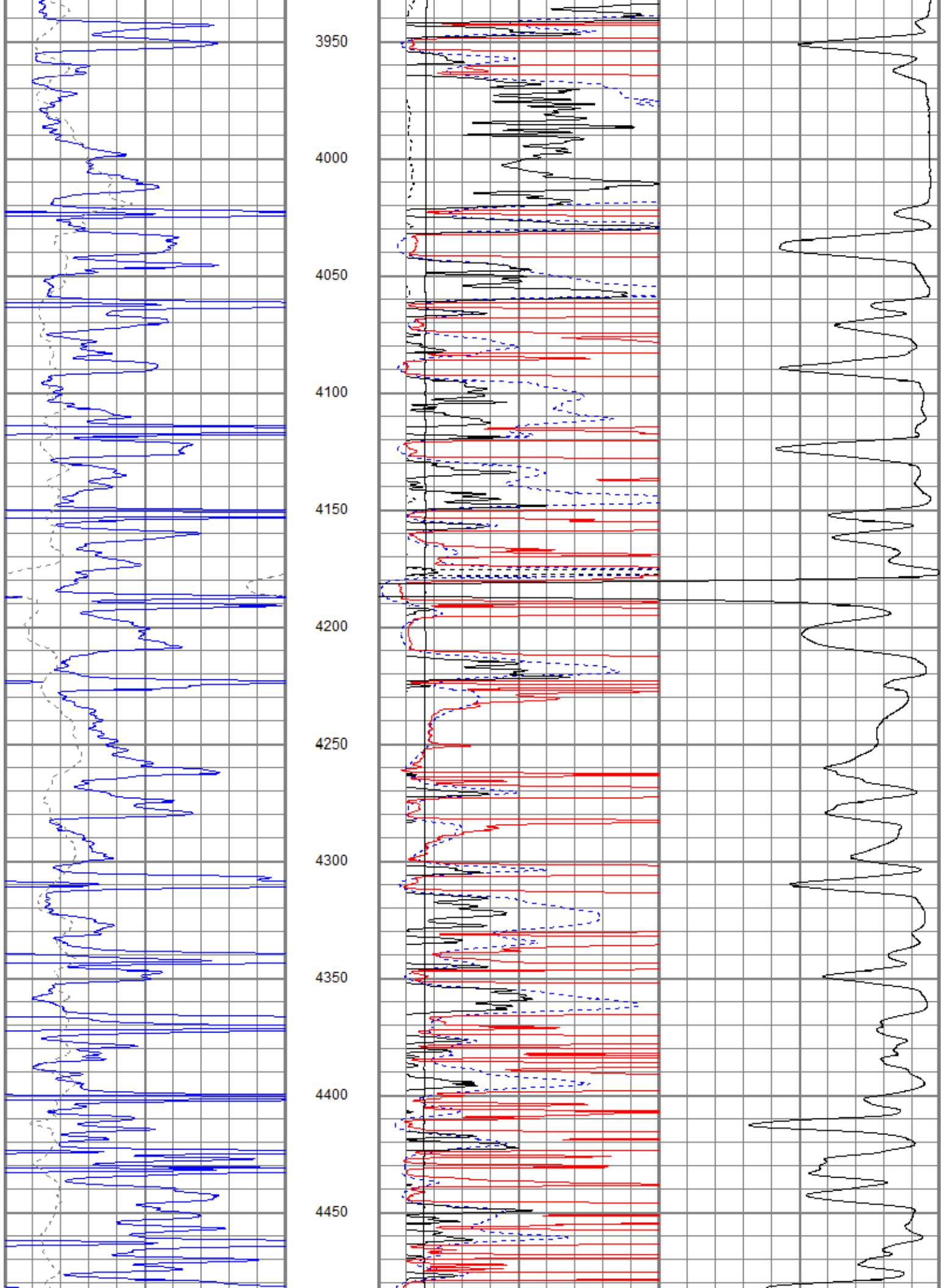


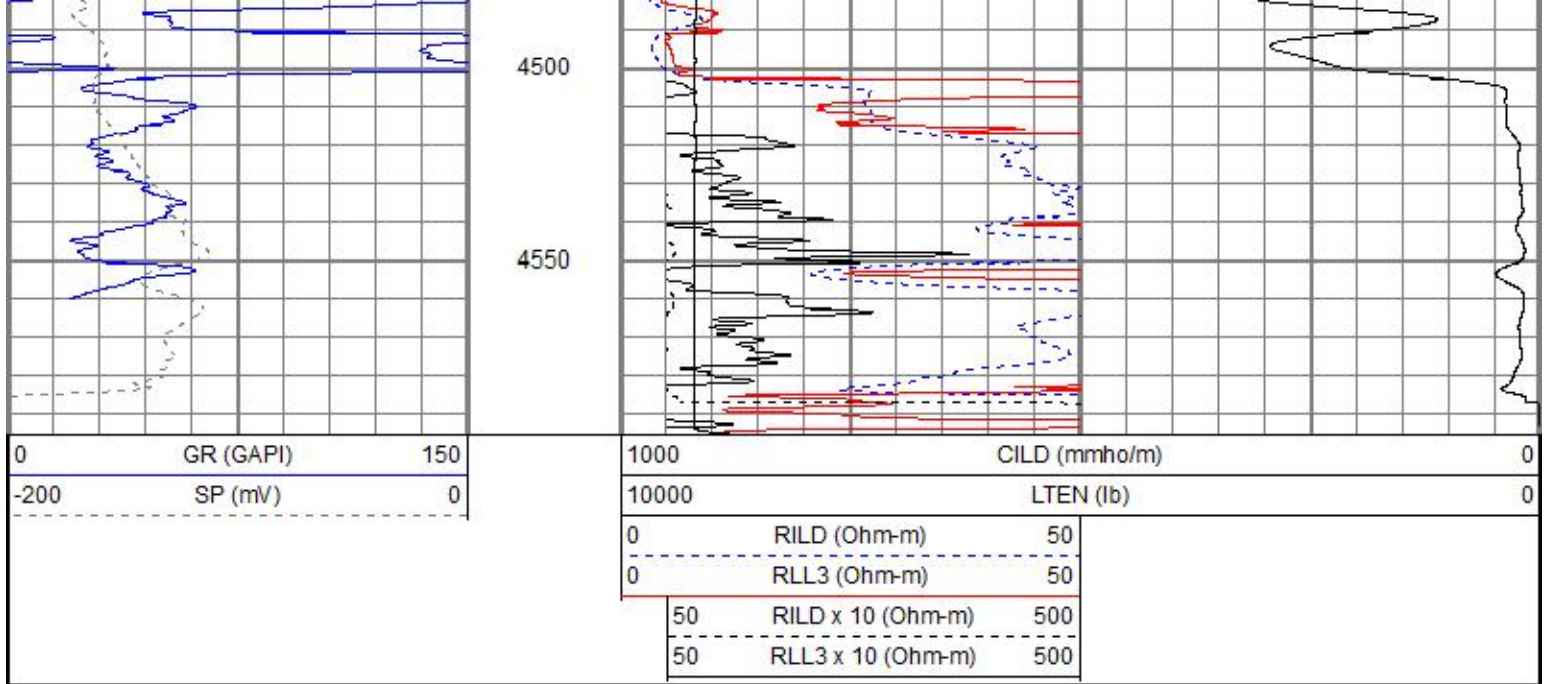








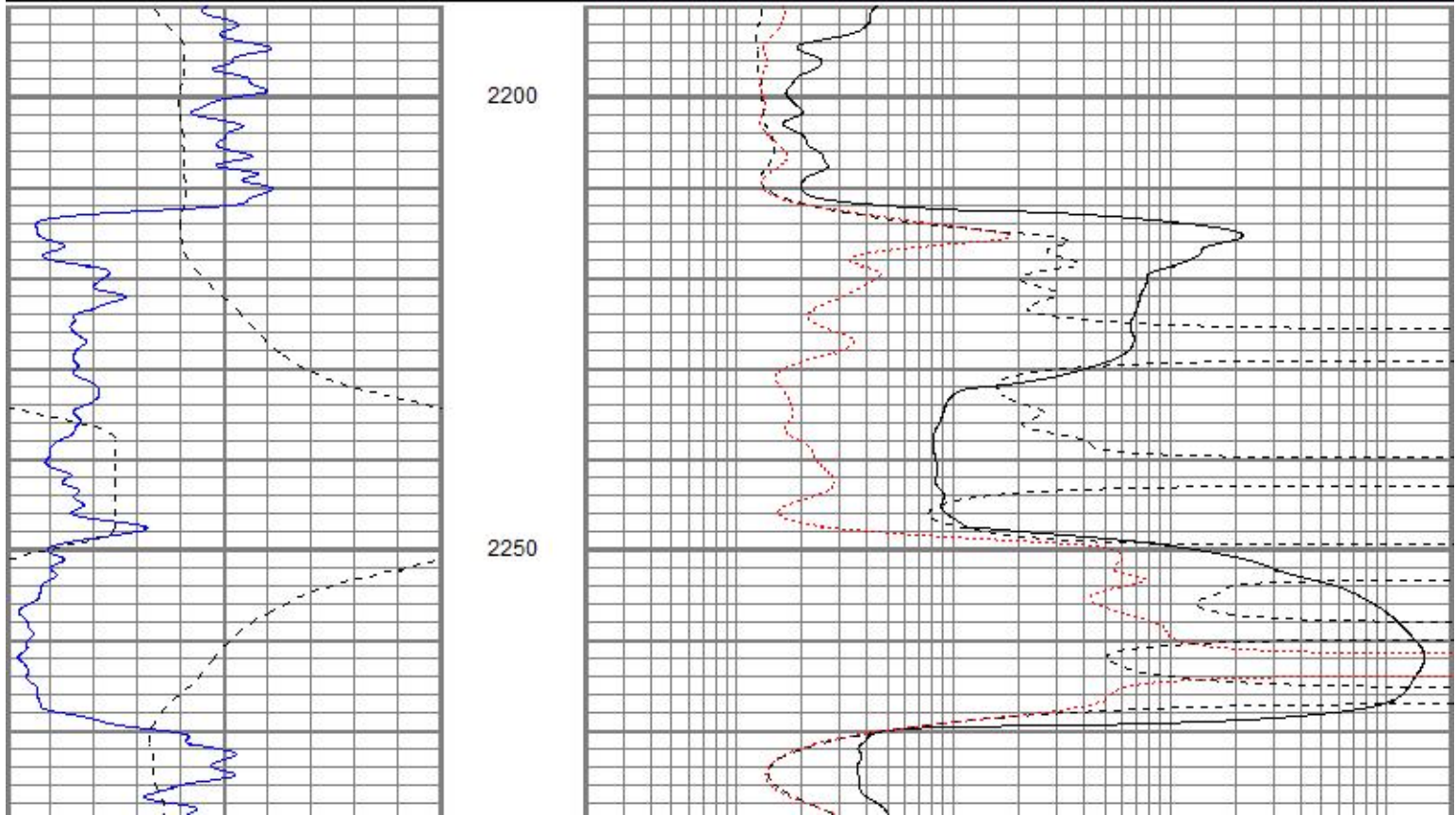


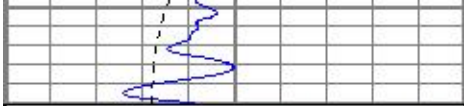


Main Pass

Database File ppbrownie#3oh.db
 Dataset Pathname pass3
 Presentation Format kdil
 Dataset Creation Thu Dec 03 05:20:10 2015
 Charted by Depth in Feet scaled 1:240

0	GR (GAPI)	150	0.2	RILD (Ohm-m)	2000
-100	SP (mV)	100	0.2	RLL3 (Ohm-m)	2000
			0.2	RILM (Ohm-m)	2000





0	GR (GAPI)	150
-100	SP (mV)	100



0.2	RILD (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
0.2	RILM (Ohm-m)	2000

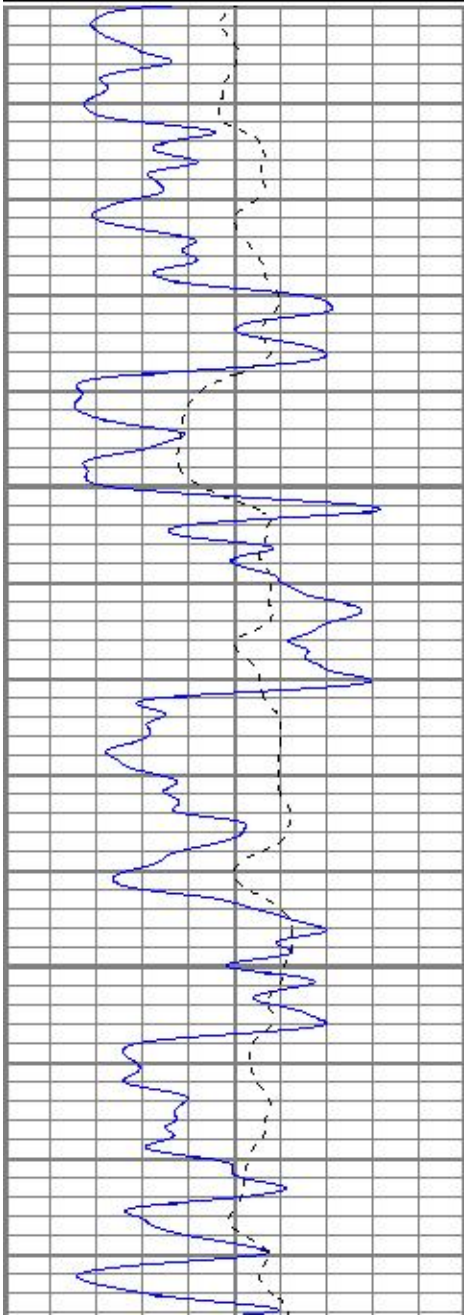


Main Pass

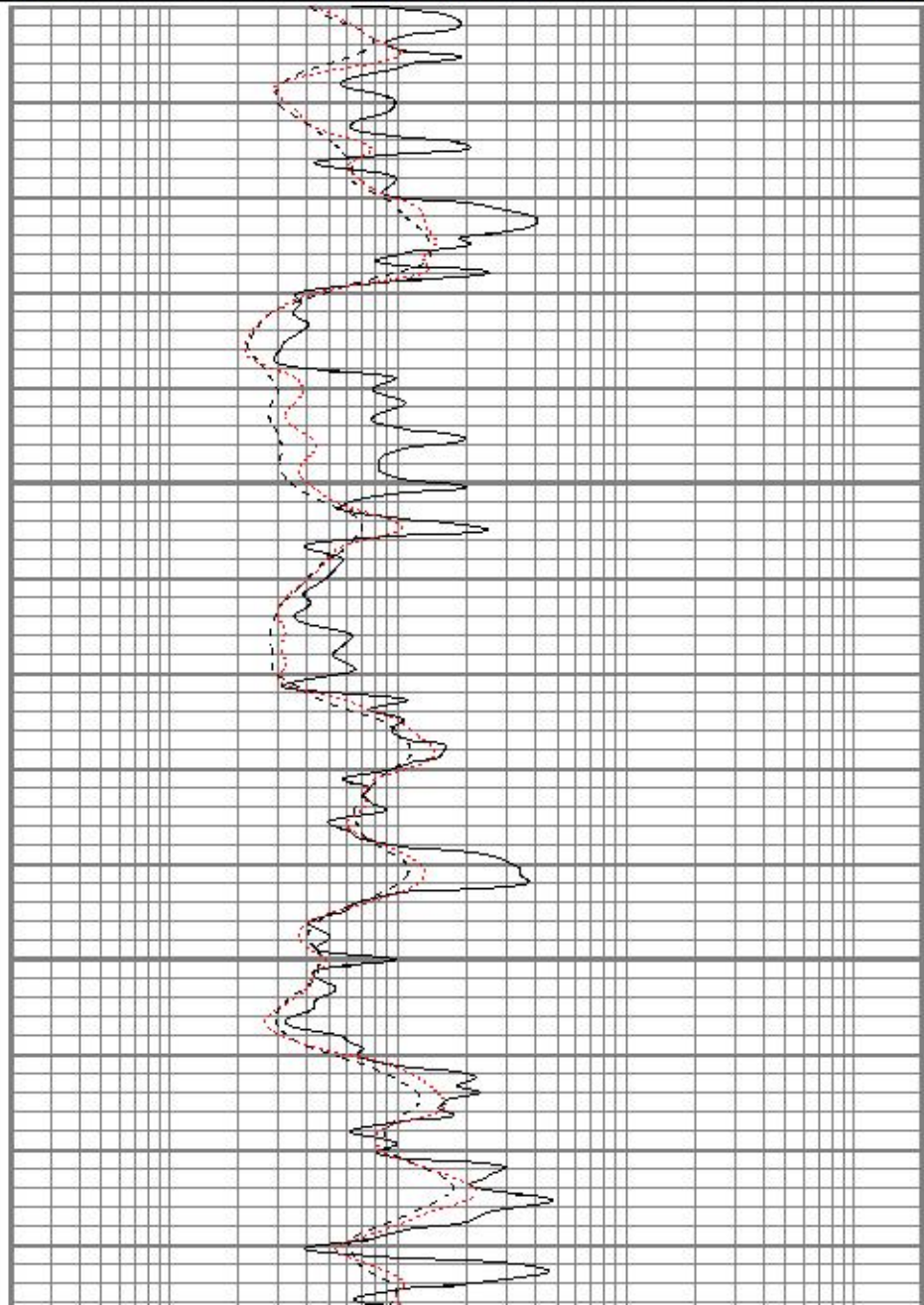
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 Dataset Pathname pass3.1
 Presentation Format kdil
 Dataset Creation Thu Dec 03 05:48:26 2015
 Charted by Depth in Feet scaled 1:240

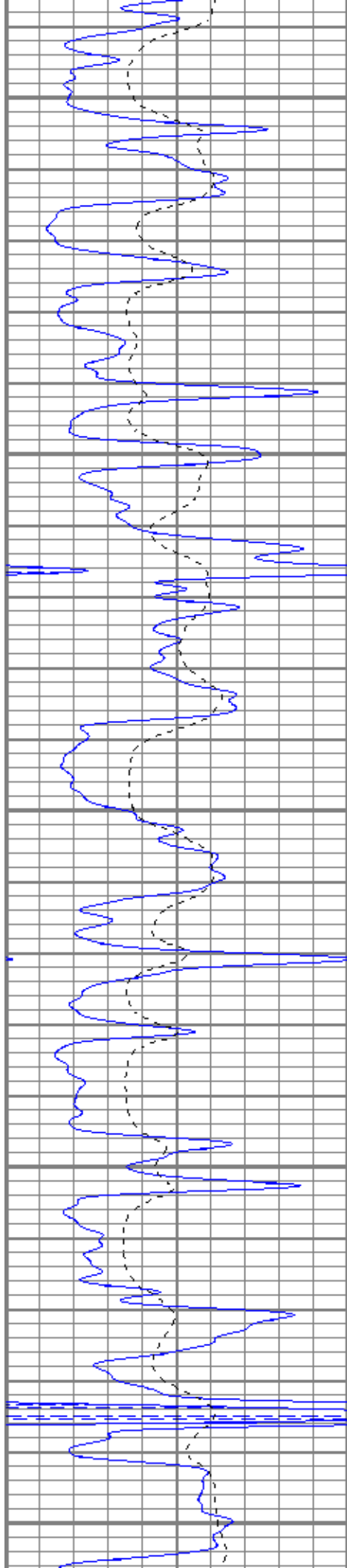
0	GR (GAPI)	150
-100	SP (mV)	100

0.2	RILD (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
0.2	RILM (Ohm-m)	2000



3500
3550
3600





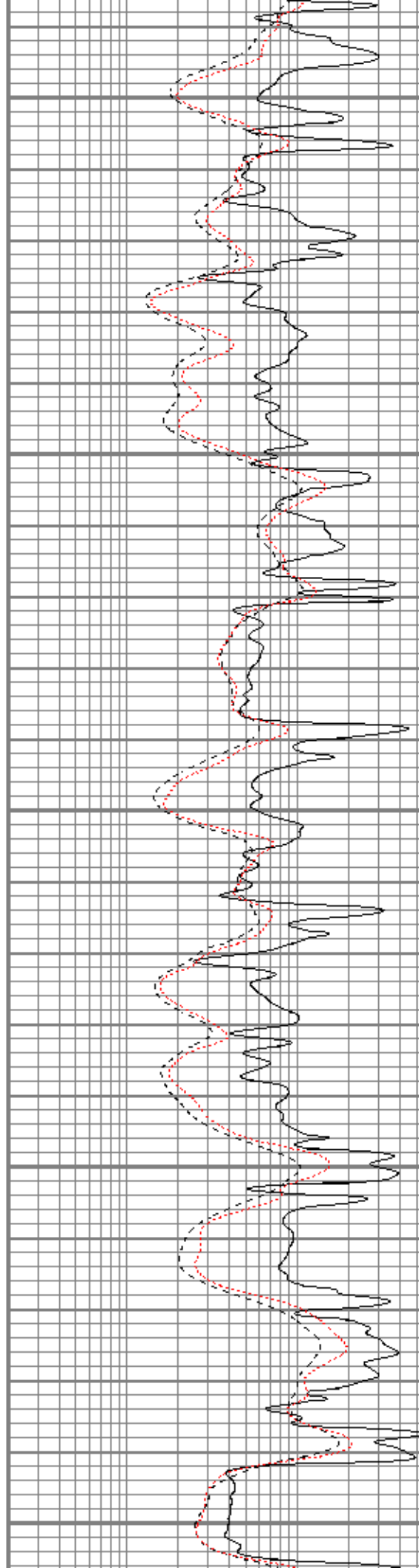
3650

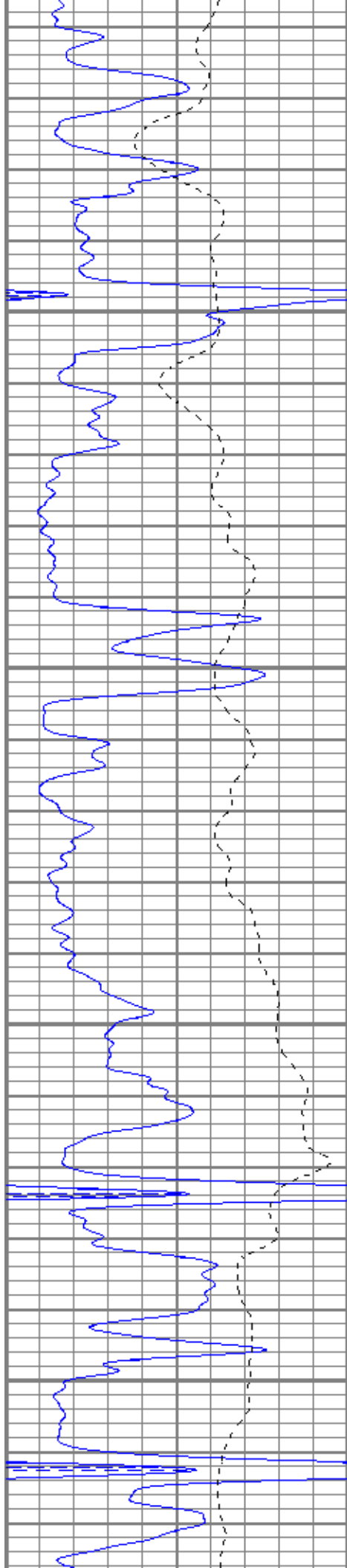
3700

3750

3800

3850



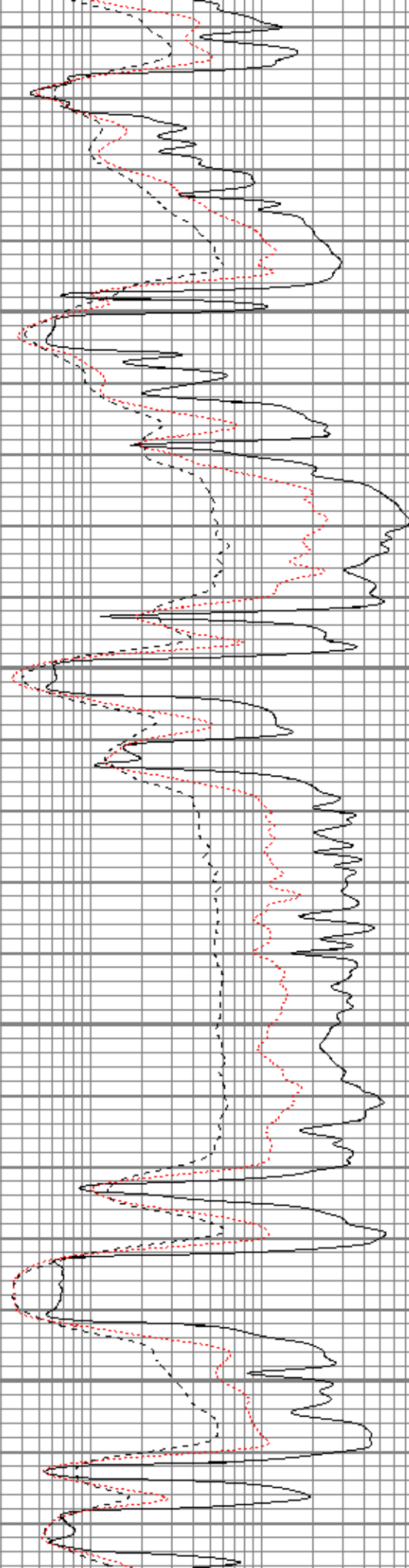


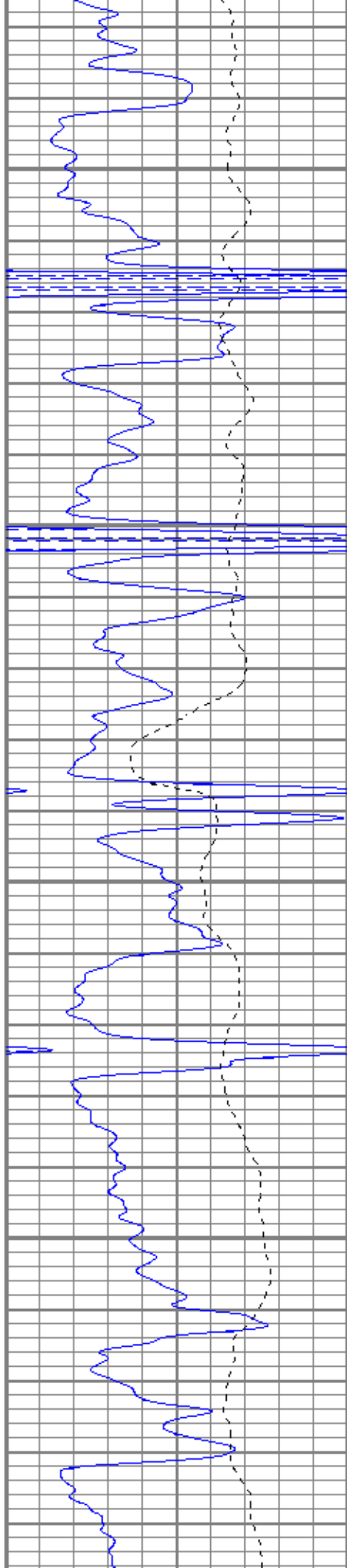
3900

3950

4000

4050



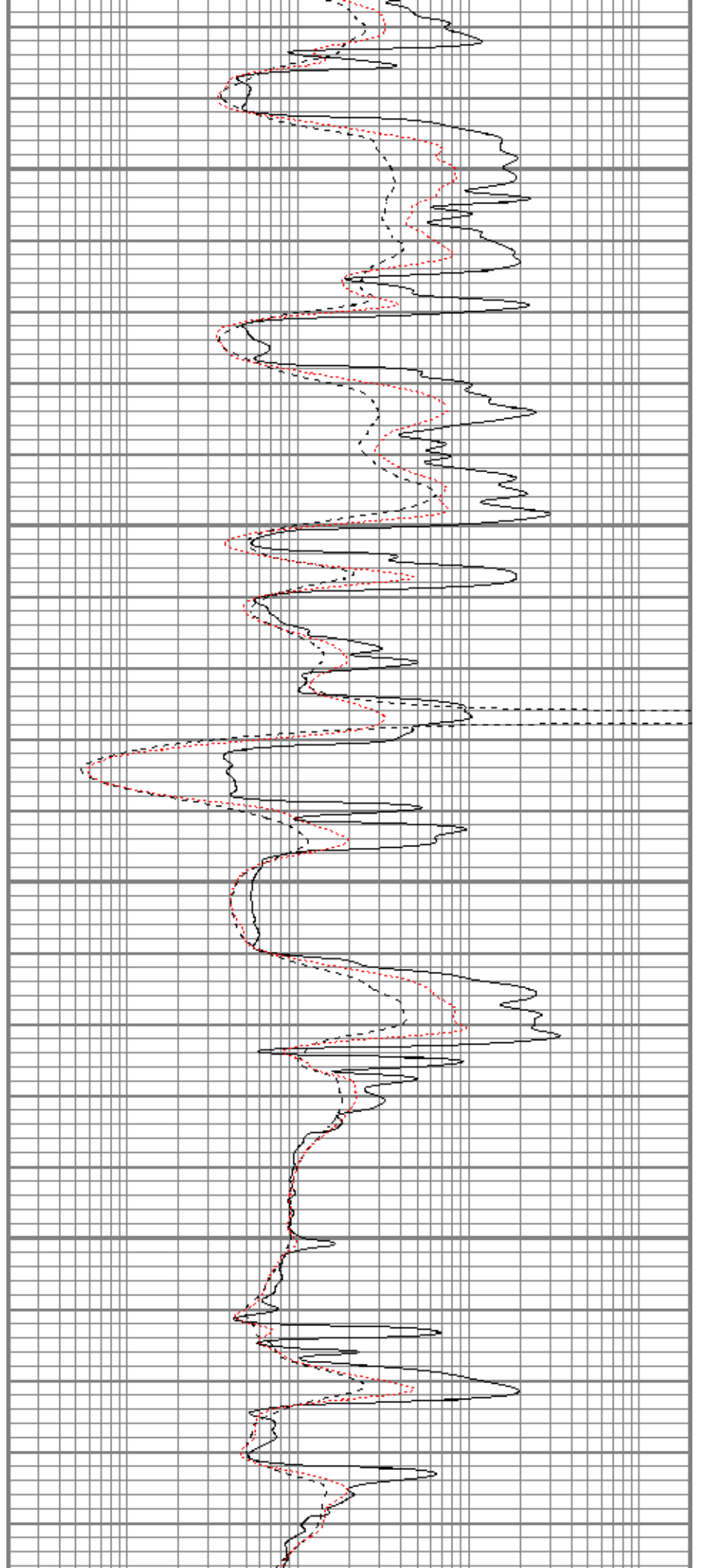


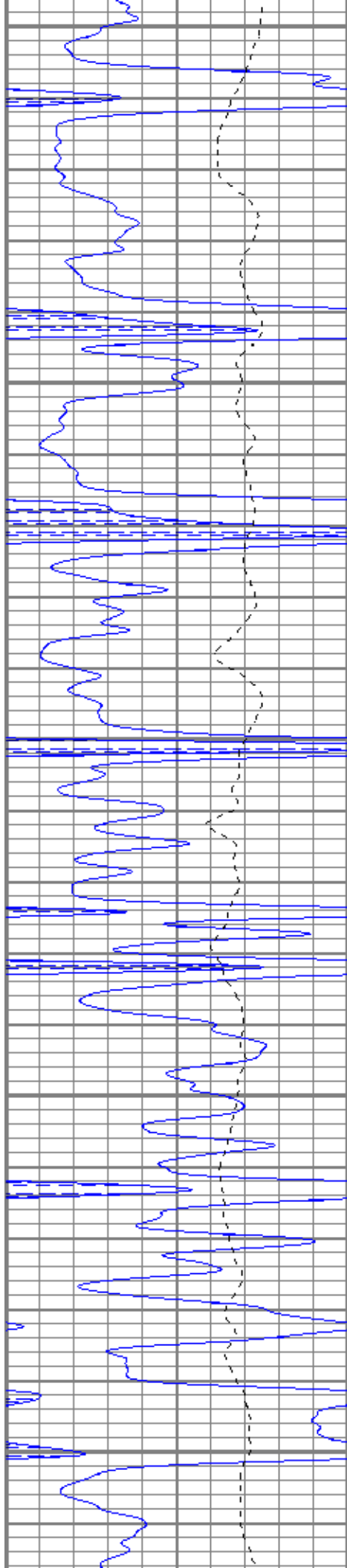
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4150

4200

4250





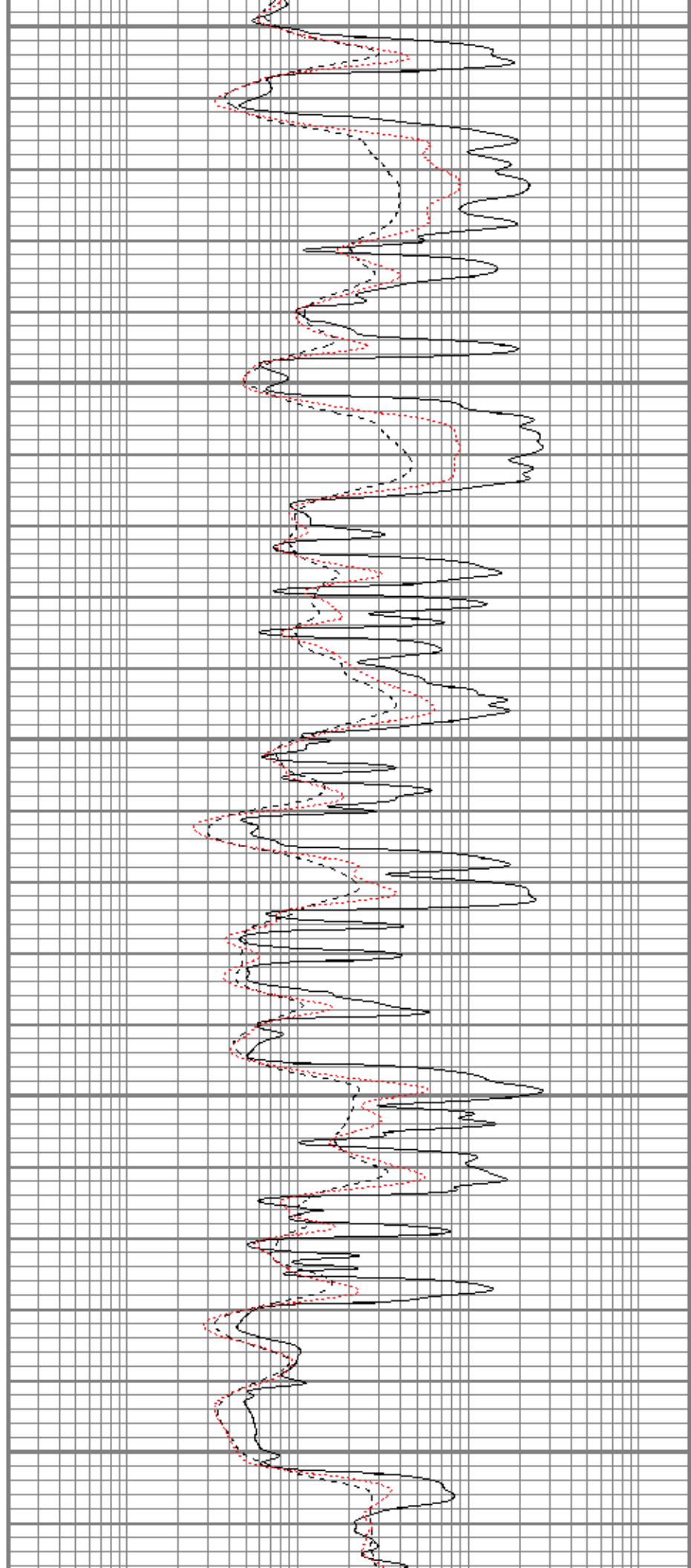
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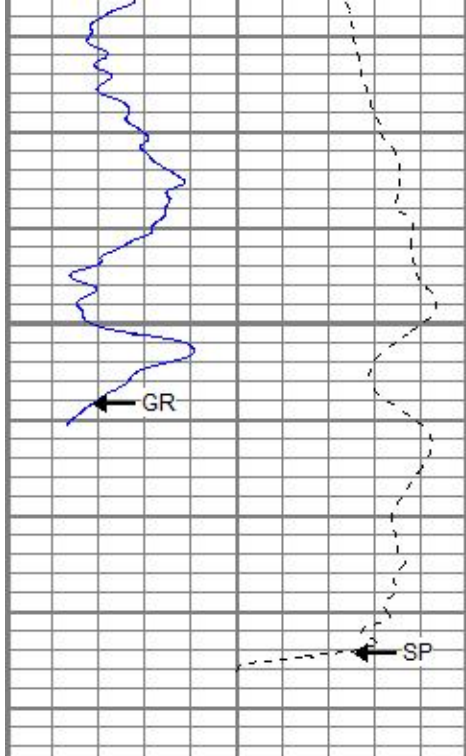
4350

4400

4450

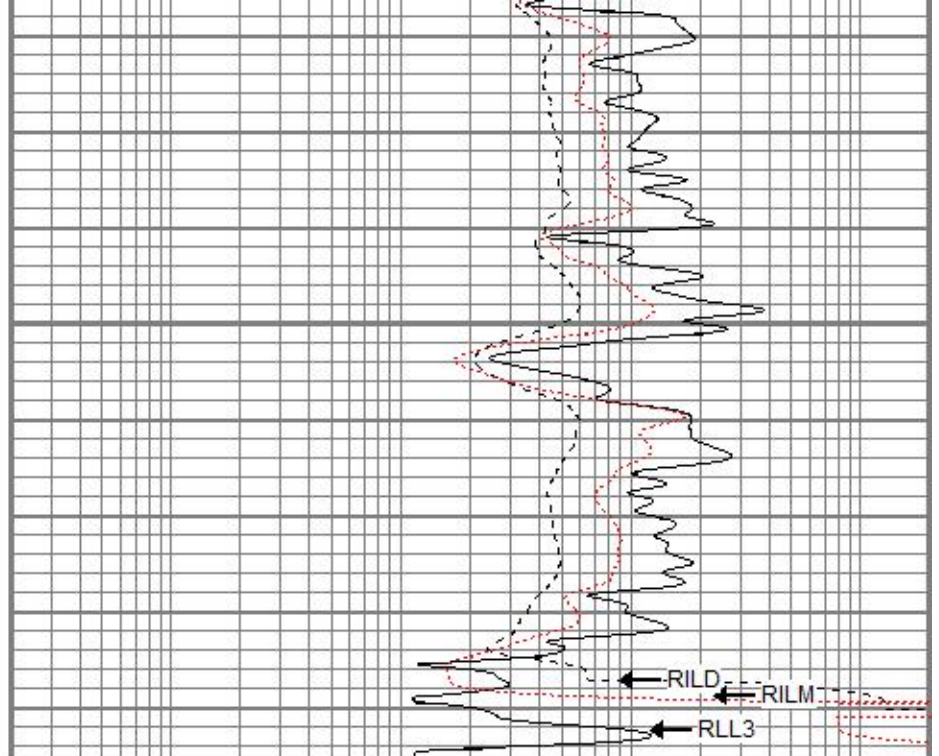
4500





4550

0	GR (GAPI)	150
-100	SP (mV)	100



0.2	RILD (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
0.2	RILM (Ohm-m)	2000

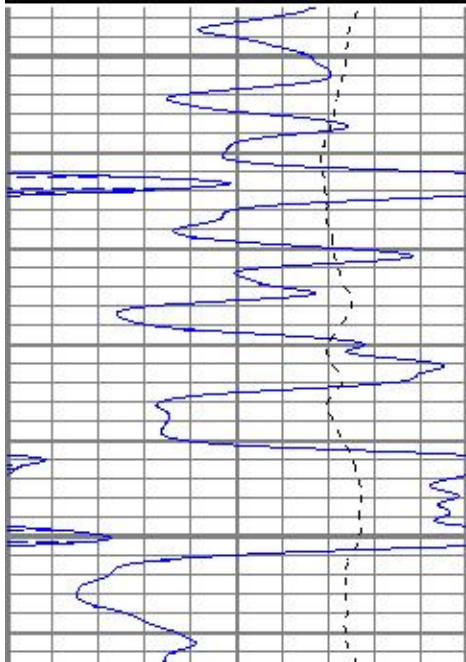


Repeat Pass

Database File ppbrownie#3oh.db
 Dataset Pathname pass2
 Presentation Format kdil
 Dataset Creation Thu Dec 03 05:13:48 2015
 Charted by Depth in Feet scaled 1:240

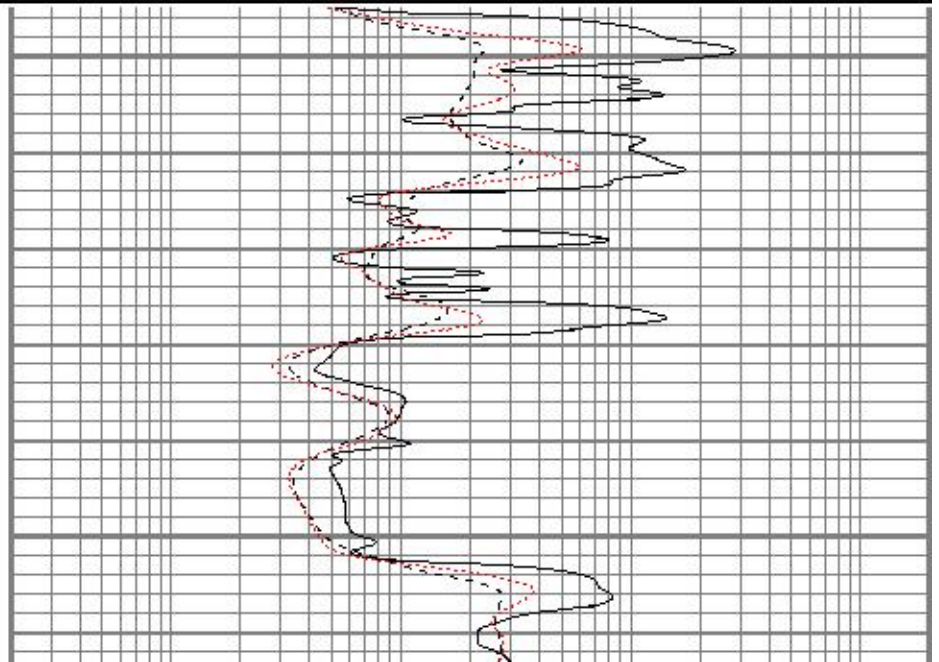
0	GR (GAPI)	150
-100	SP (mV)	100

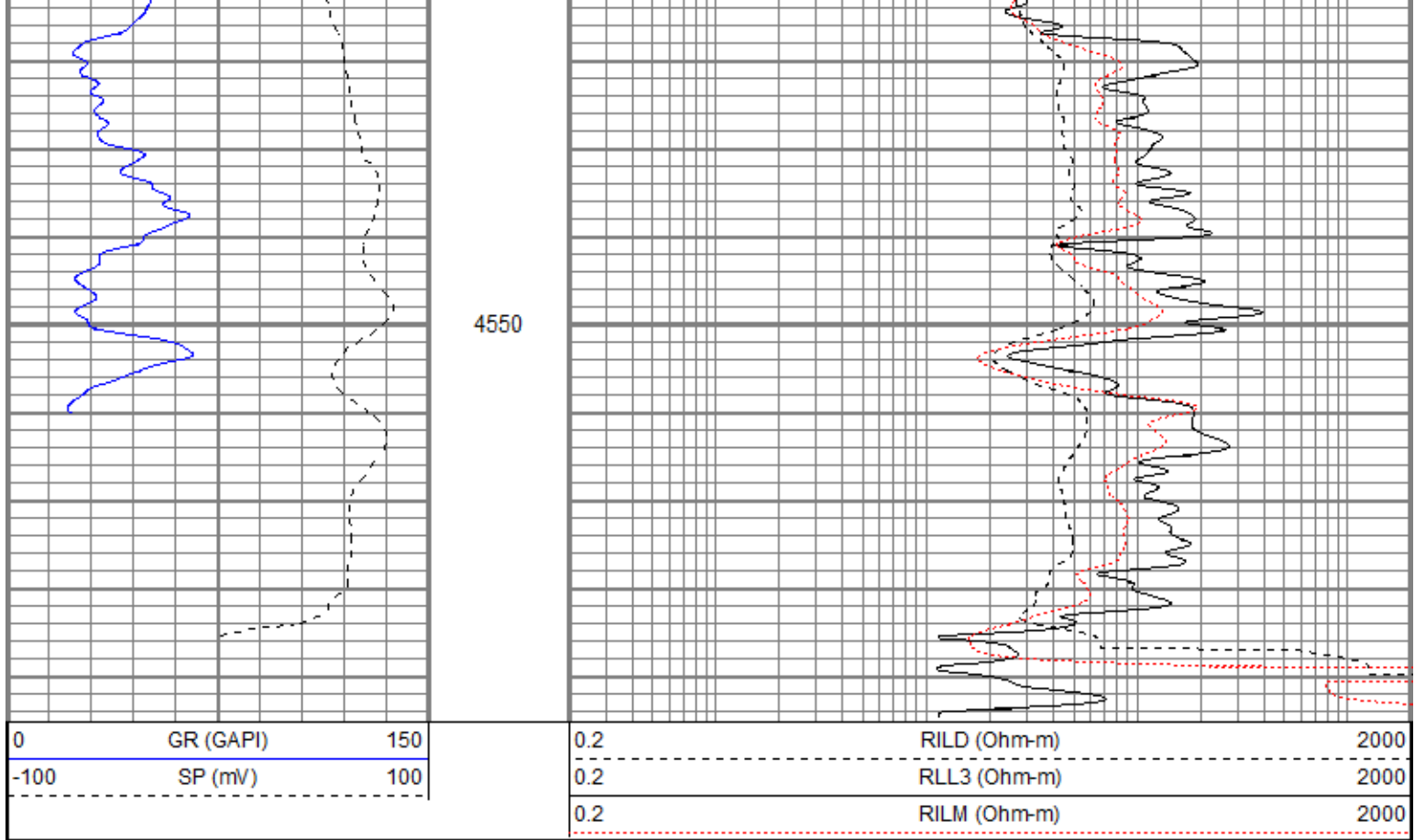
0.2	RILD (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
0.2	RILM (Ohm-m)	2000



4450

4500





Calibration Report

Database File ppbrownie#3oh.db
 Dataset Pathname pass2
 Dataset Creation Thu Dec 03 05:13:48 2015

Dual Induction Calibration Report

Serial-Model: 080522-Probe
 Surface Cal Performed: Thu Nov 12 13:07:19 2015
 Downhole Cal Performed: Thu Nov 12 13:09:55 2015
 After Survey Verification Performed: Thu Nov 12 13:09:55 2015

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.003	0.649	V	0.000	400.000	mmho/m	619.409	-1.732
Medium	0.006	0.744	V	0.000	464.000	mmho/m	628.632	-3.814
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.649	V	0.000	400.000	mmho/m	617.810	-0.943
Medium	0.006	0.744	V	0.000	464.000	mmho/m	628.534	-3.898

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	-1.410	400.435	mmho/m	-0.786	400.250	mmho/m	0.998	0.621
Medium	-0.107	464.272	mmho/m	0.084	464.157	mmho/m	0.999	0.192
LL3		7.262	V		750.000	Ohm-m		
		0.008	V		12.000	Ohm-m		
		-7.297	V		3745.000	mmho-m		

After Survey Verification

Readings	Targets	Results
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	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	-1.410	400.435	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	-0.107	464.272	mmho/m	1.000	0.000
LL3		0.000	Ohm-m		750.000	Ohm-m		
		0.000	Ohm-m		12.000	Ohm-m		
		0.000	mmho-m		3745.000	mmho-m		

Compensated Density Calibration Report

Serial-Model: 2501DHT-DHT
 Source / Verifier: csv-j12 /
 Master Calibration Performed: Thu Nov 12 11:56:11 2015
 Before Survey Verification Performed:
 After Survey Verification Performed:

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.750	g/cc	711.36	284.22	cps
Aluminum	2.660	g/cc	133.07	180.42	cps
Spine Angle = 74.83			Density/Spine Ratio = 0.524		
	Size		Reading		
Small Ring	7.80	in	5749.57		
Large Ring	14.00	in	9401.93		

Before Survey Verification

Target	Measured
g/cc	g/cc
g/cc	g/cc
g/cc	g/cc

After Survey Verification

Target	Measured
g/cc	g/cc
g/cc	g/cc
g/cc	g/cc

Gamma Ray Calibration Report

Serial Number: 2001
 Tool Model: OH
 Performed: Thu Nov 12 11:56:02 2015
 Calibrator Value: 1.0 GAPI
 Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps
 Sensitivity: 0.2400 GAPI/cps

Neutron Calibration Report

Serial Number: 5108
 Tool Model: PROBE
 Performed: Thu Nov 12 11:56:00 2015
 Calibrator Value: 1 NAPI
 Calibrator Reading: 1 cps
 Sensitivity: 1 NAPI/cps

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)	
NEU	38.26		CHD-None	0.75	1.50	5.00	
			NEU-PROBE (5108) Probe	4.92	3.63	85.00	
GR	32.32		GR-OH (2001) 2001	3.56	3.25	40.00	
			CDL-DHT (2501DHT) Digital High Temp CDL Tool	9.69	4.00	201.00	
LSD	23.78						
DCAL	23.49						
SSD	23.24						
HEADVOLT	21.47						
SP	10.60			DIL-Probe (080522) Probe Dual Induction	21.47	4.00	345.00
CILD	10.60						
CILM	6.89						
RLL3	1.70						

Dataset: ppbrownie#3oh.db: field/well/run1/pass2
 Total length: 40.39 ft
 Total weight: 676.00 lb
 O.D.: 4.00 in