



MIDWEST WIRELINE

GAMMA RAY / CALIPER LOG

Company Darrah Oil Company, LLC
Well Knopp #9-13
Field Bridges Northeast
County Logan State Kansas

Company Darrah Oil Company, LLC
Well Knopp #9-13
Field Bridges Northeast
County Logan
State Kansas

Location: API #: 15-109-21636-00-00
SW SW NW NE
1155 FNL & 2475 FEL
SEC 13 TWP 14S RGE 32W
Permanent Datum Ground Level Elevation 2815
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing
Other Services
CNL/CDL
DIL/MEL
K.B. 2824
D.F.
G.L. 2815

Date 7/19/2022

Run Number One
Type Log BHV
Depth Driller 4665
Depth Logger 4674
Bottom Logged Interval 4653
Top Logged Interval 200
Type Fluid In Hole Chemical
Salinity, PPM CL 3000
Density 9.0
Level Full
Max. Rec. Temp. F 123
Operating Rig Time 3 Hours
Equipment -- Location P-108 HAYS
Recorded By D. Schmidt
Witnessed By Macklin Armstrong

Borehole Record

Casing Record

Run No.	Bit	From	To	Size	Wgt.	From	To
One	12.25	0	232	8.625	23	0	232
Two	7.875	232	TD				

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and Midwest Wireline LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Midwest Wireline 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,
South to Jayhawk Rd, 1 East, 3/4 North,
East and South into

Log Measured From: Kelly Bushing 9 Ft. Above Permanent Datum

THANK YOU FOR USING MIDWEST WIRELINE LLC
785-625-3858

Your Midwest Wireline Crew

Engineer: D. Schmidt
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: Macklin Armstrong
Secondary Witness:
Secondary Witness:
Secondary Witness:

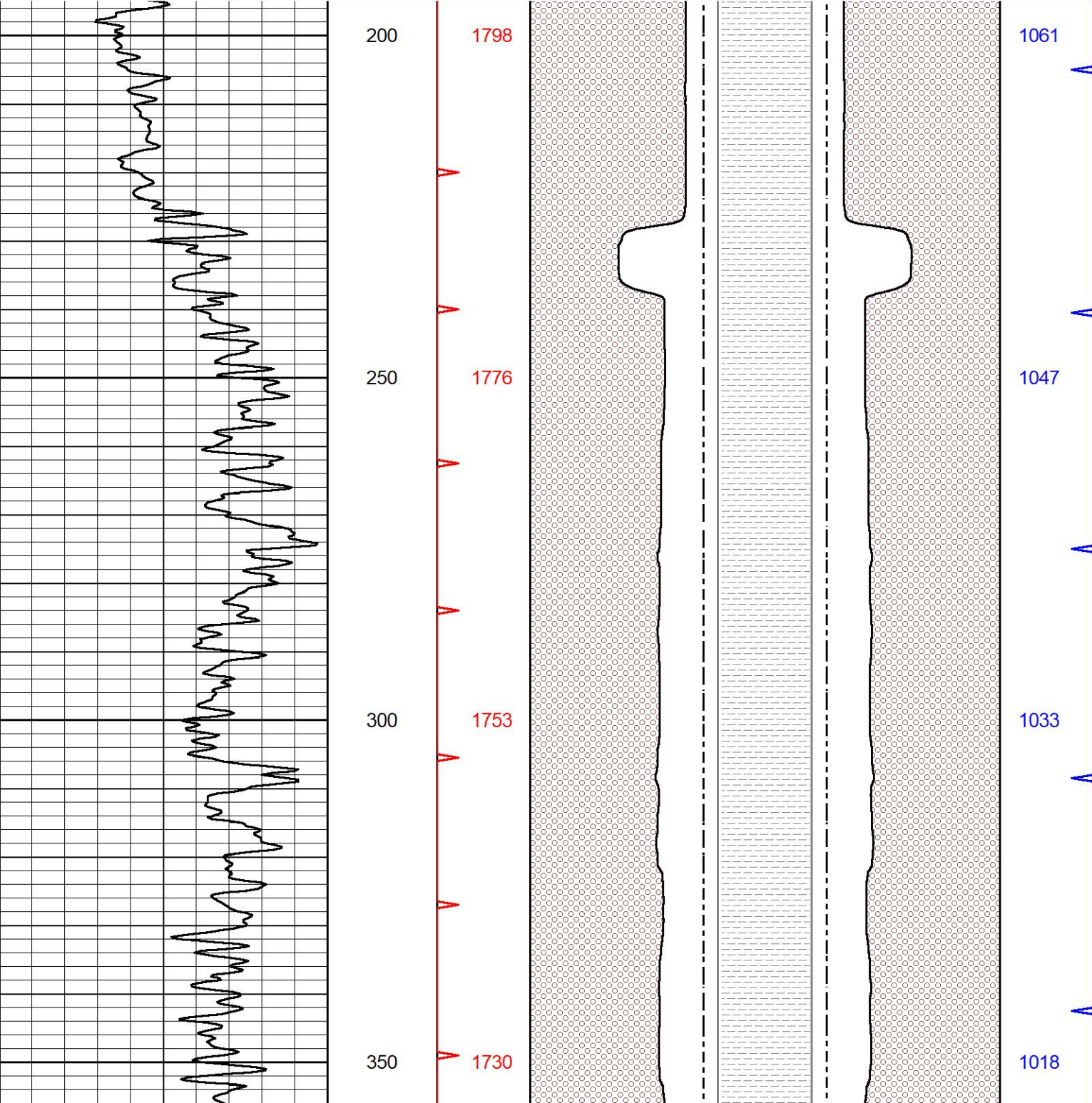


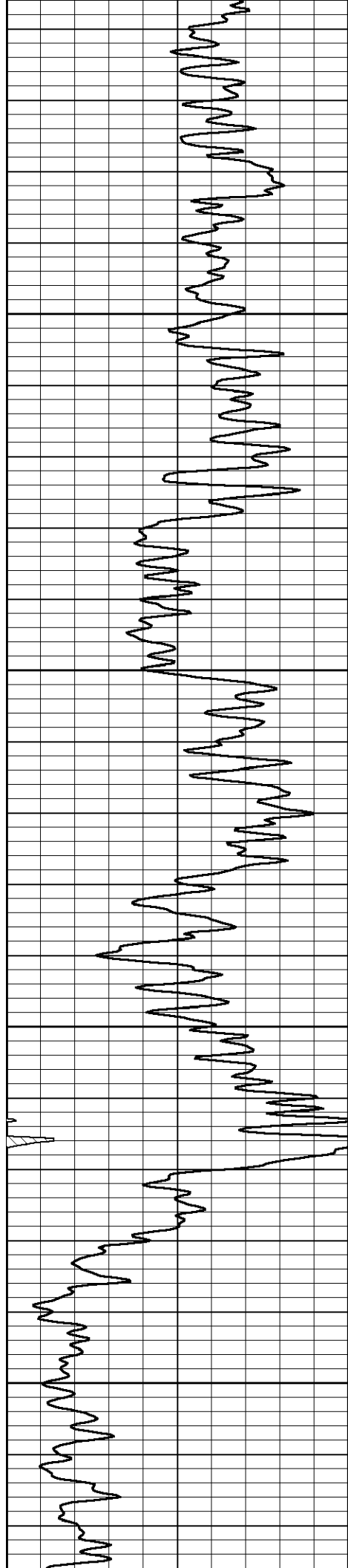
DETAIL SECTION

MAIN PASS

Database File darrah_knopp 9-13.db
Dataset Pathname stack/pass3.1
Presentation Format bhv5half
Dataset Creation Tue Jul 19 08:15:34 2022
Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	16	CALIPER (in)	6	6	CALIPER (in)	16
			16	BIT SIZE	6	6	BIT SIZE	16
			0	BVTX (ft3)	15	15	AVTX (ft3)	0





400

1708

450

1688

500

1668

550

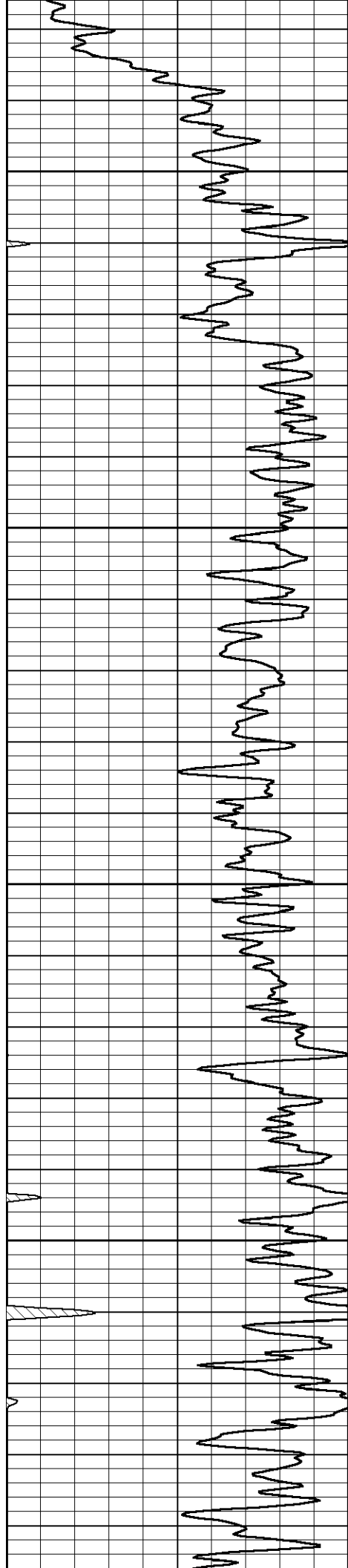
1646

1004

993

981

968



600

1624

650

1603

700

1582

750

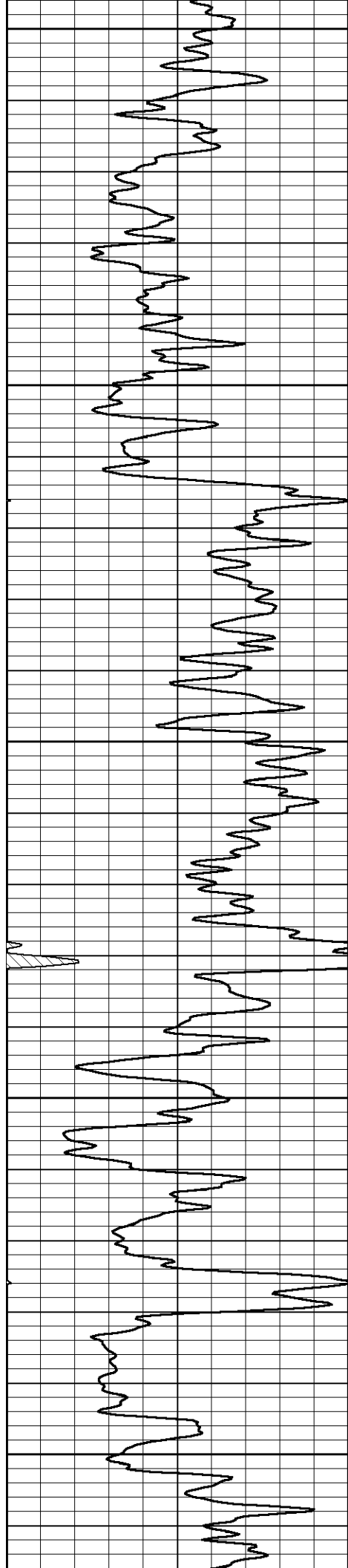
1560

954

941

928

915



800

850

900

950

1000

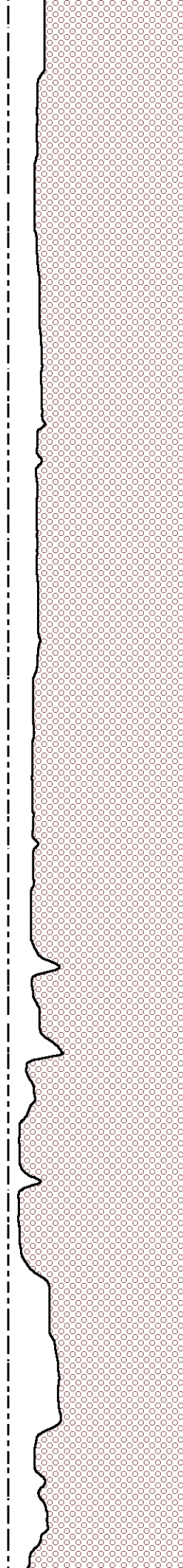
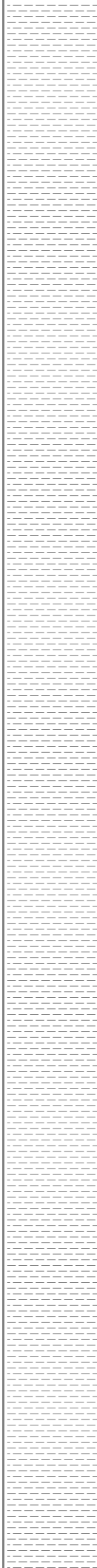
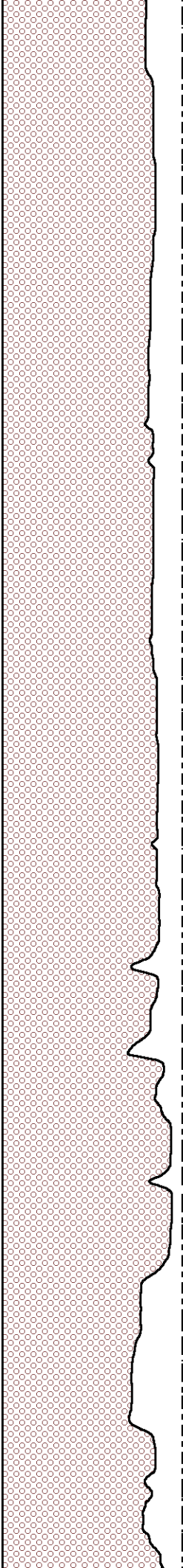
1539

1518

1497

1476

1455



901

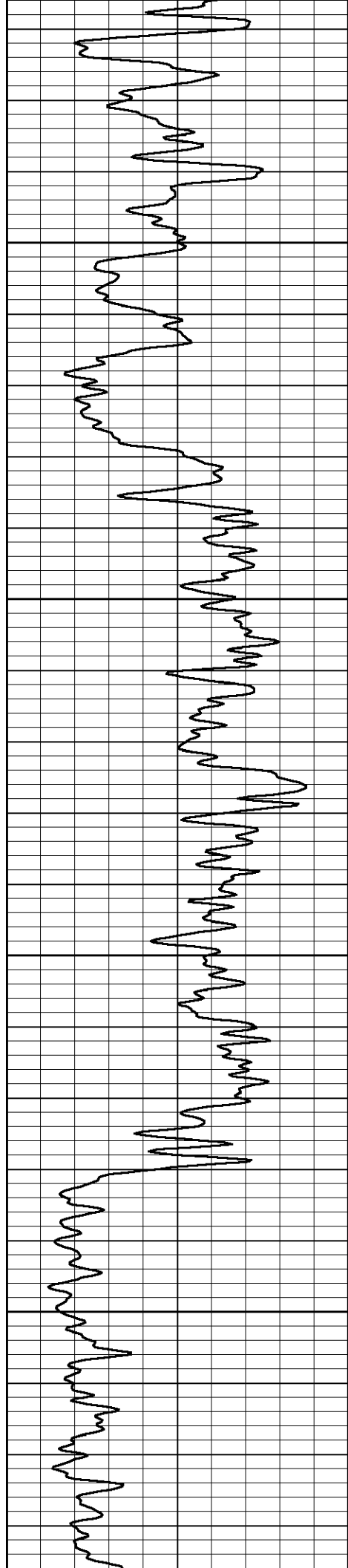
888

876

863

851





1050

1100

1150

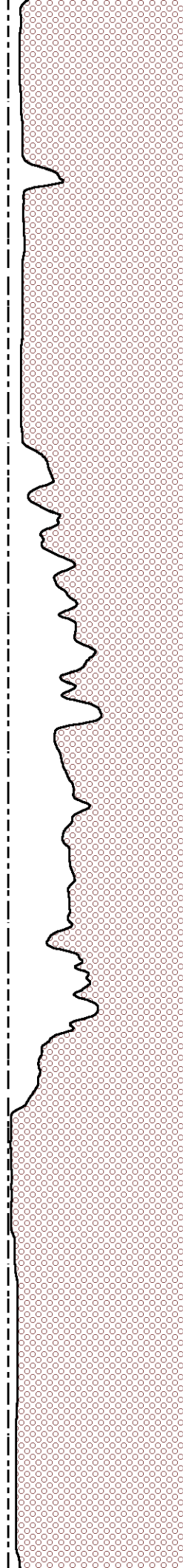
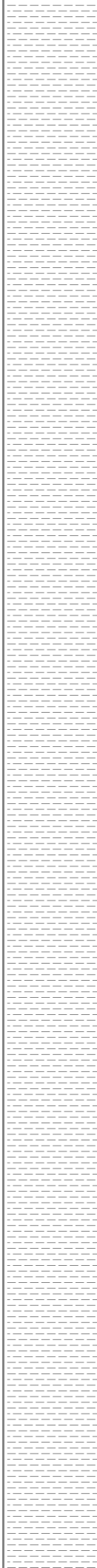
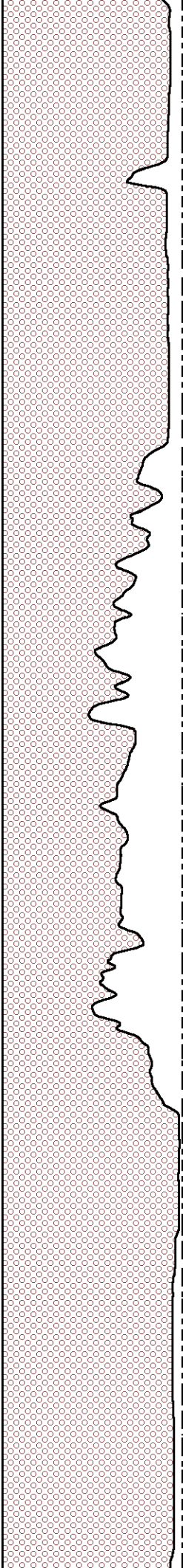
1200

1436

1415

1389

1369

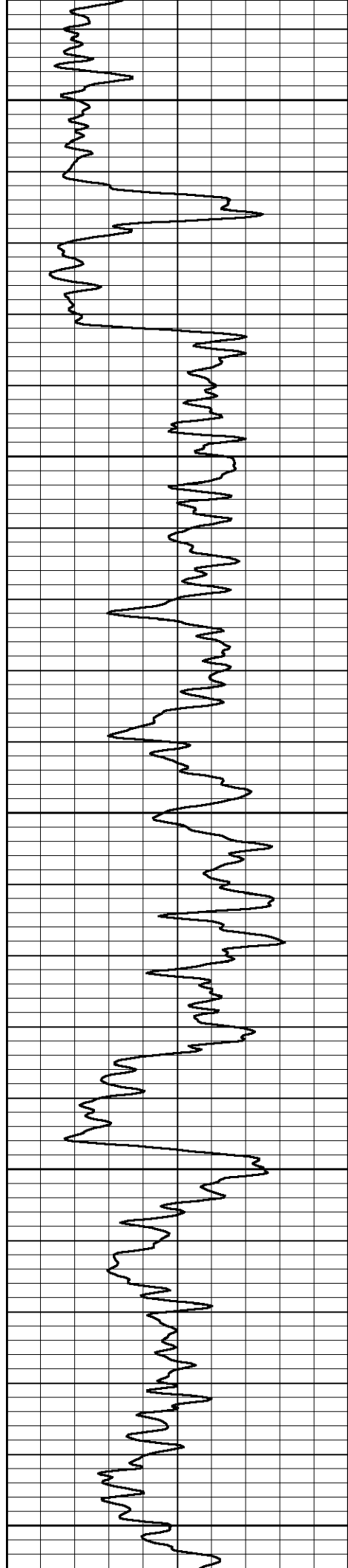


839

827

809

797



1250

1350

1300

1330

1350

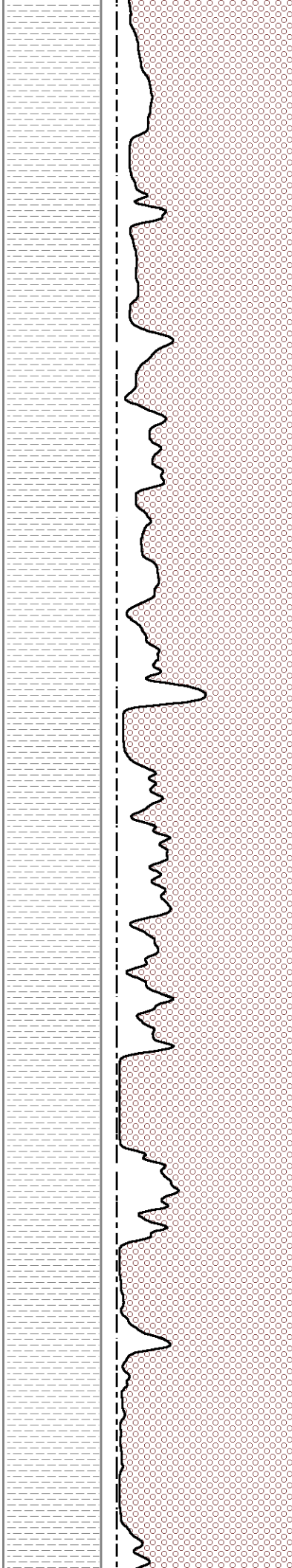
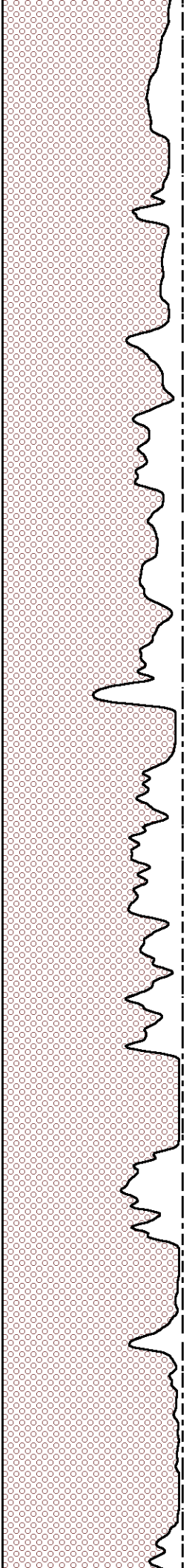
1309

1400

1288

1450

1269



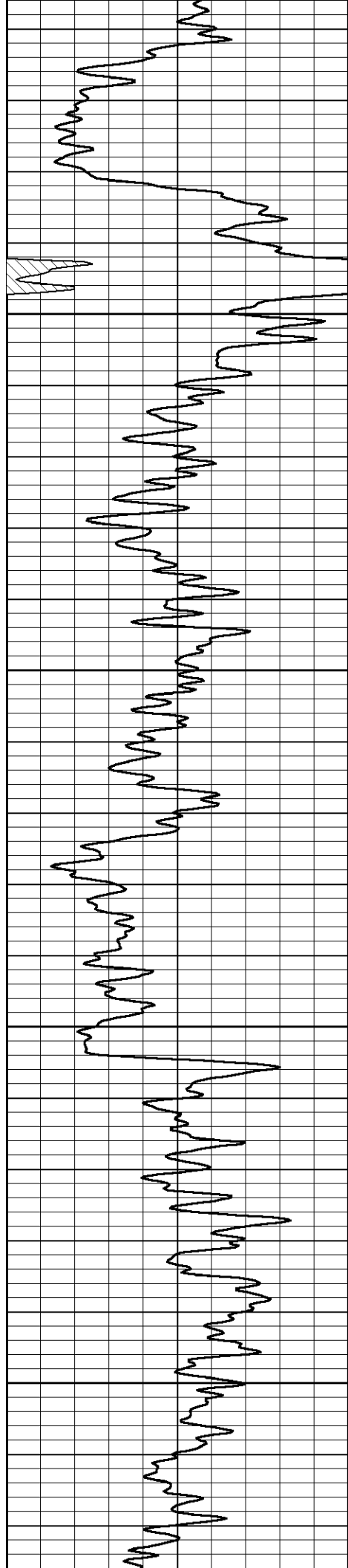
787

775

762

749

739



1500

1550

1600

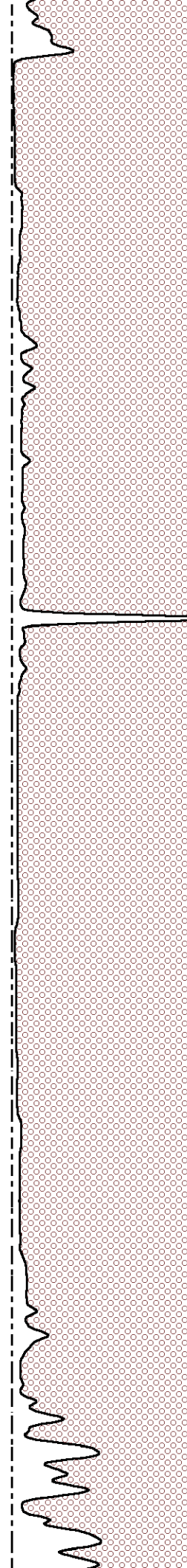
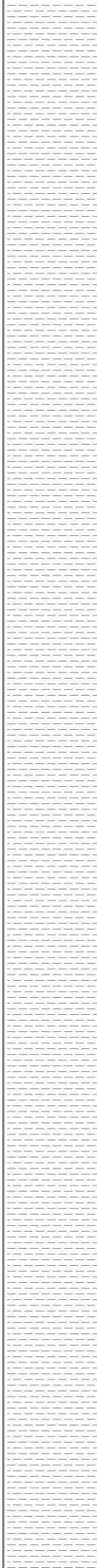
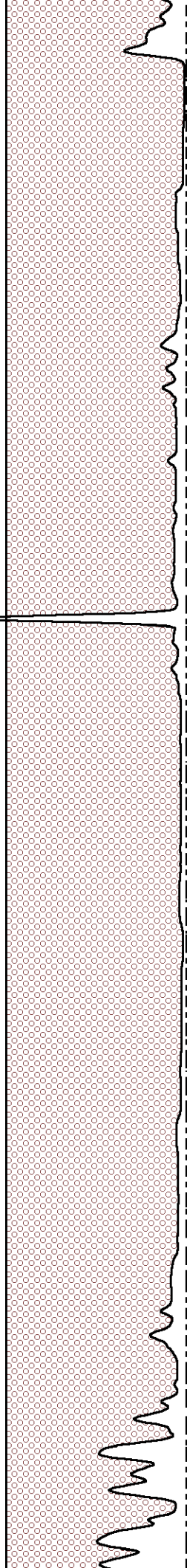
1650

1250

1231

1214

1195



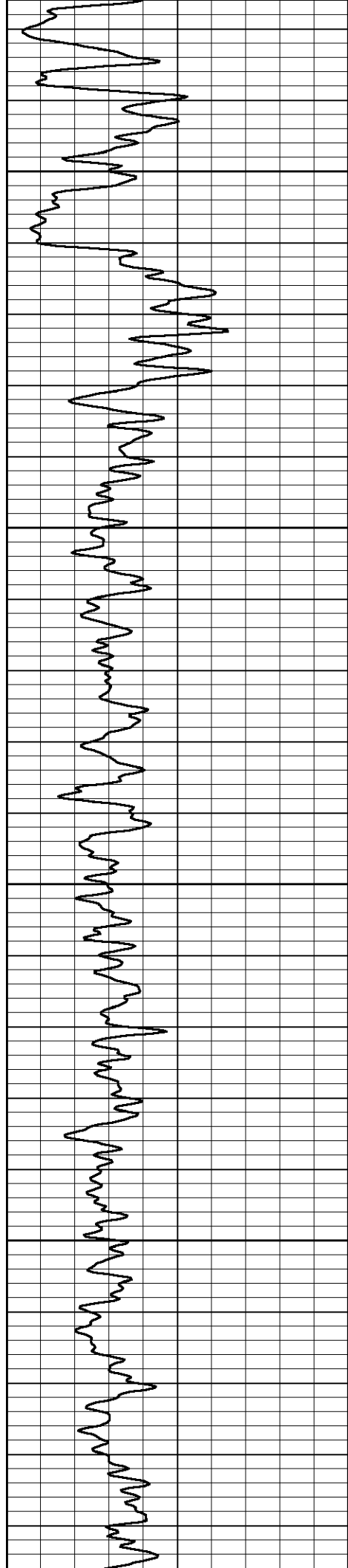
728

717

708

698





1700

1173

1750

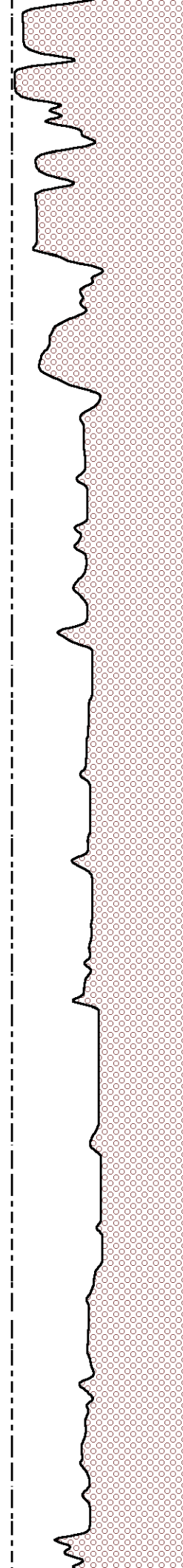
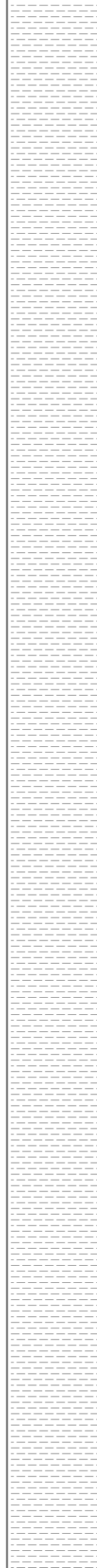
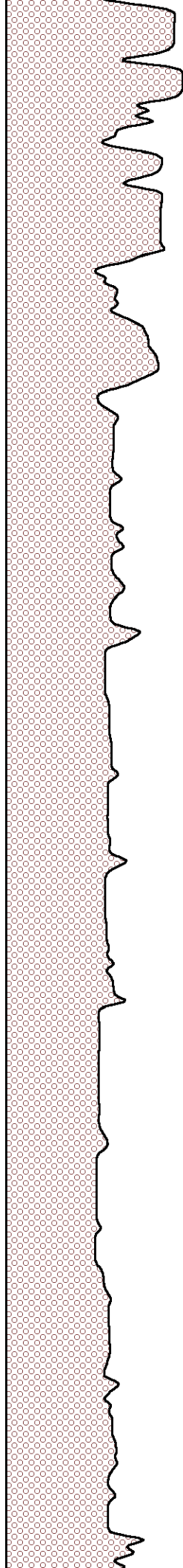
1148

1800

1121

1850

1092

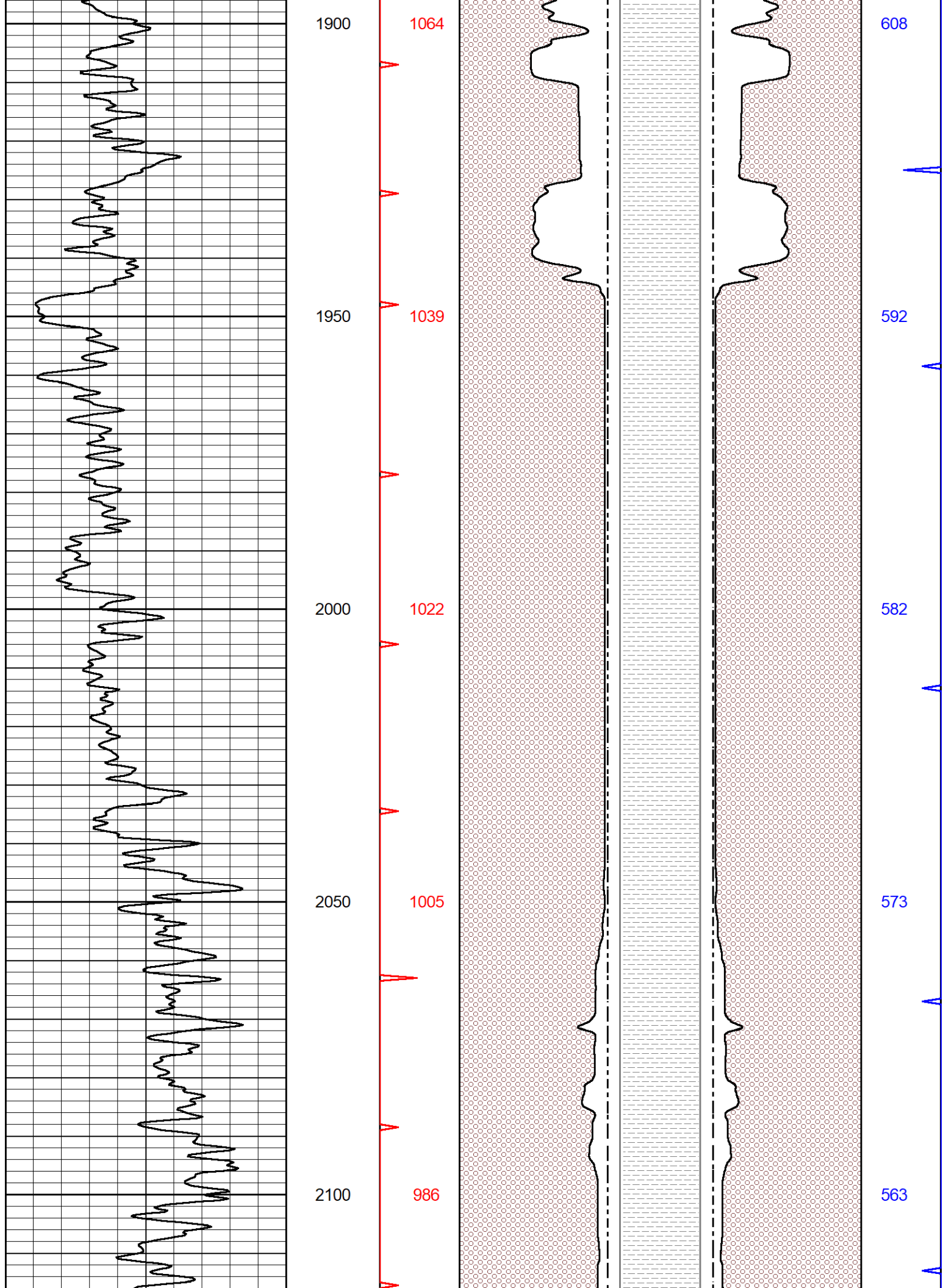


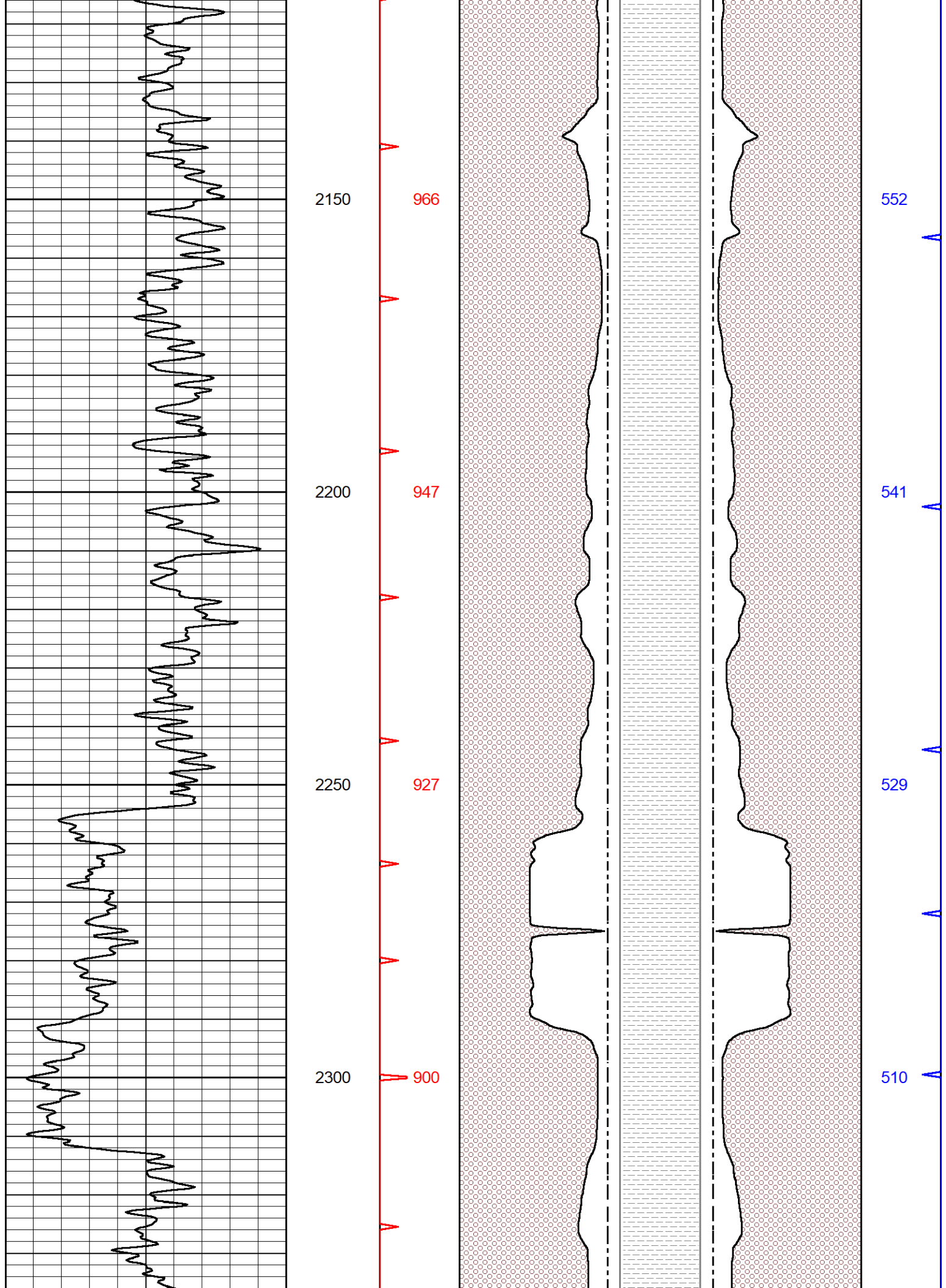
684

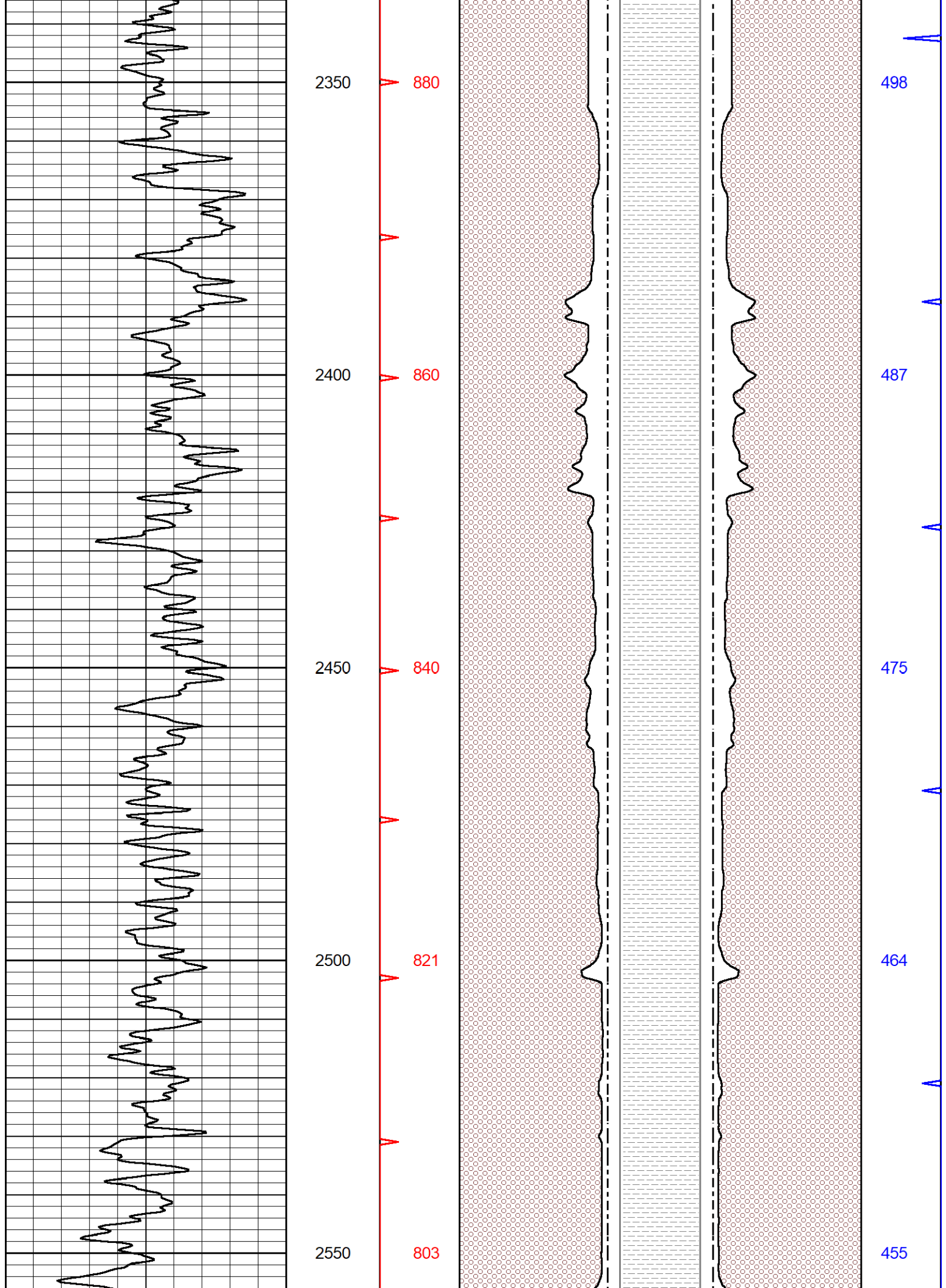
667

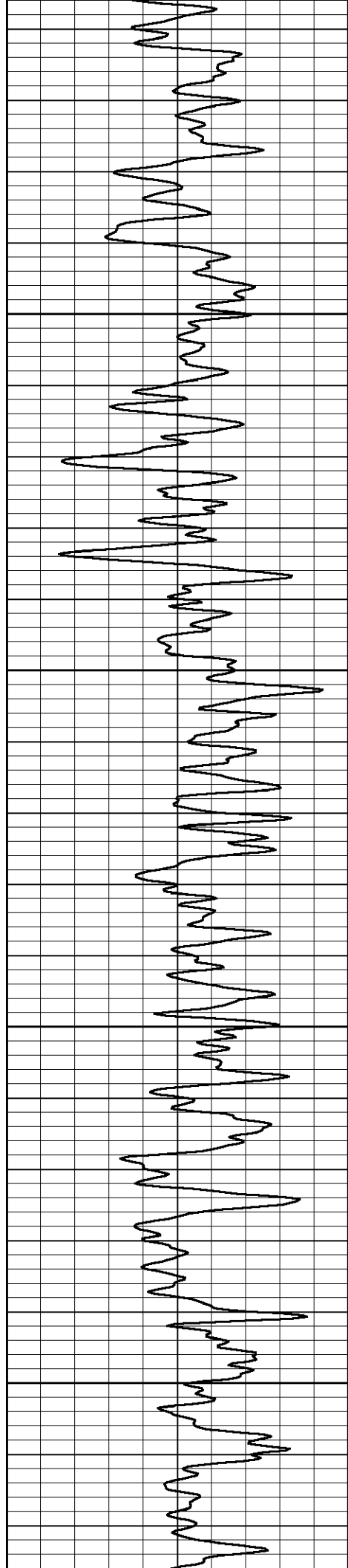
648

627









2600

2650

2700

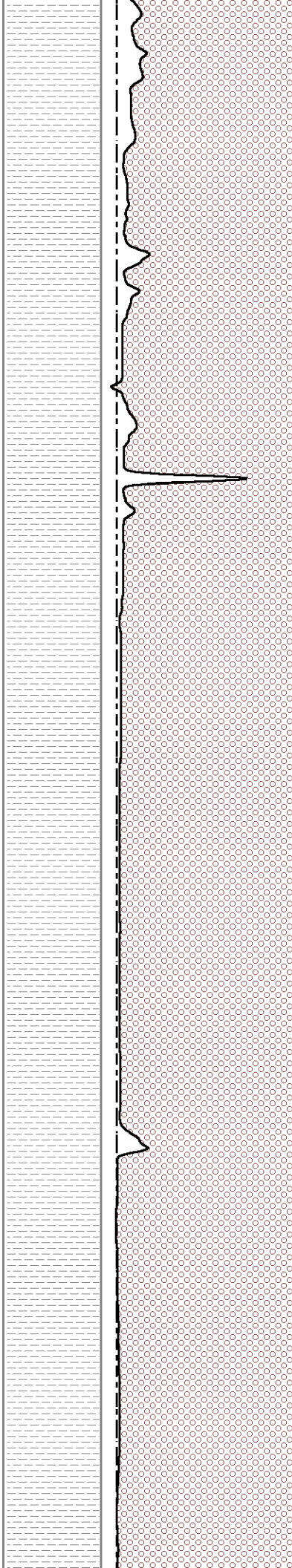
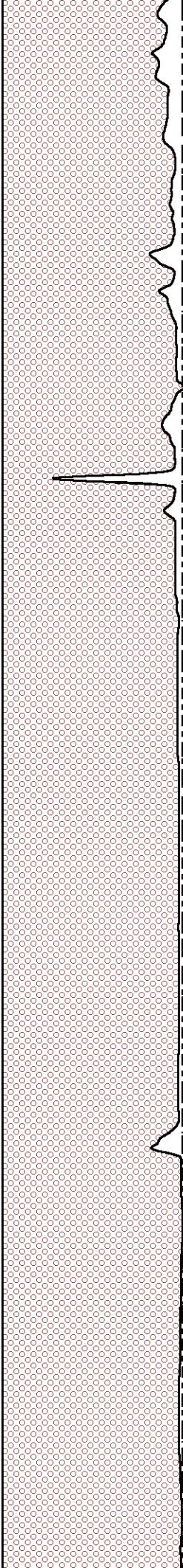
2750

785

766

749

732

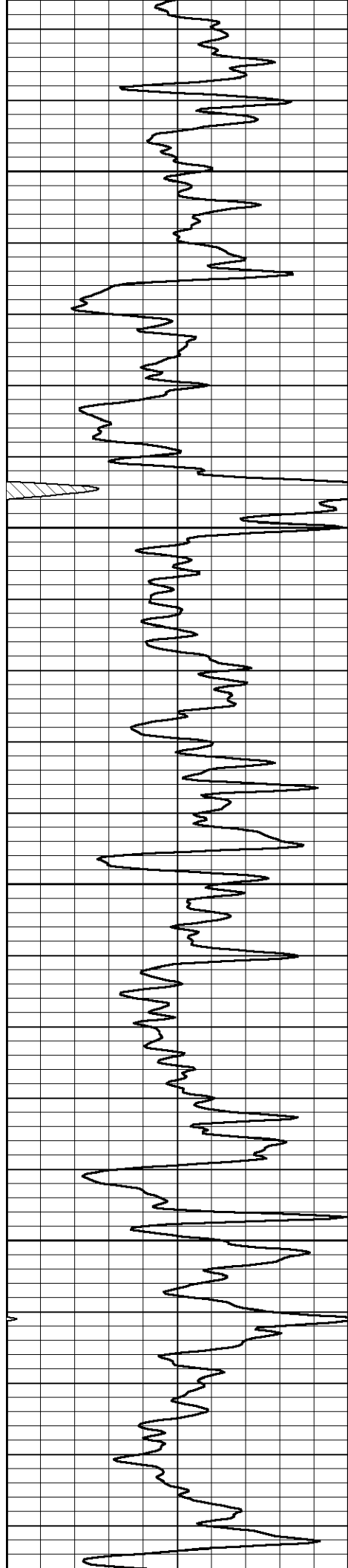


444

434

425

416



2800

714

2850

697

2900

680

2950

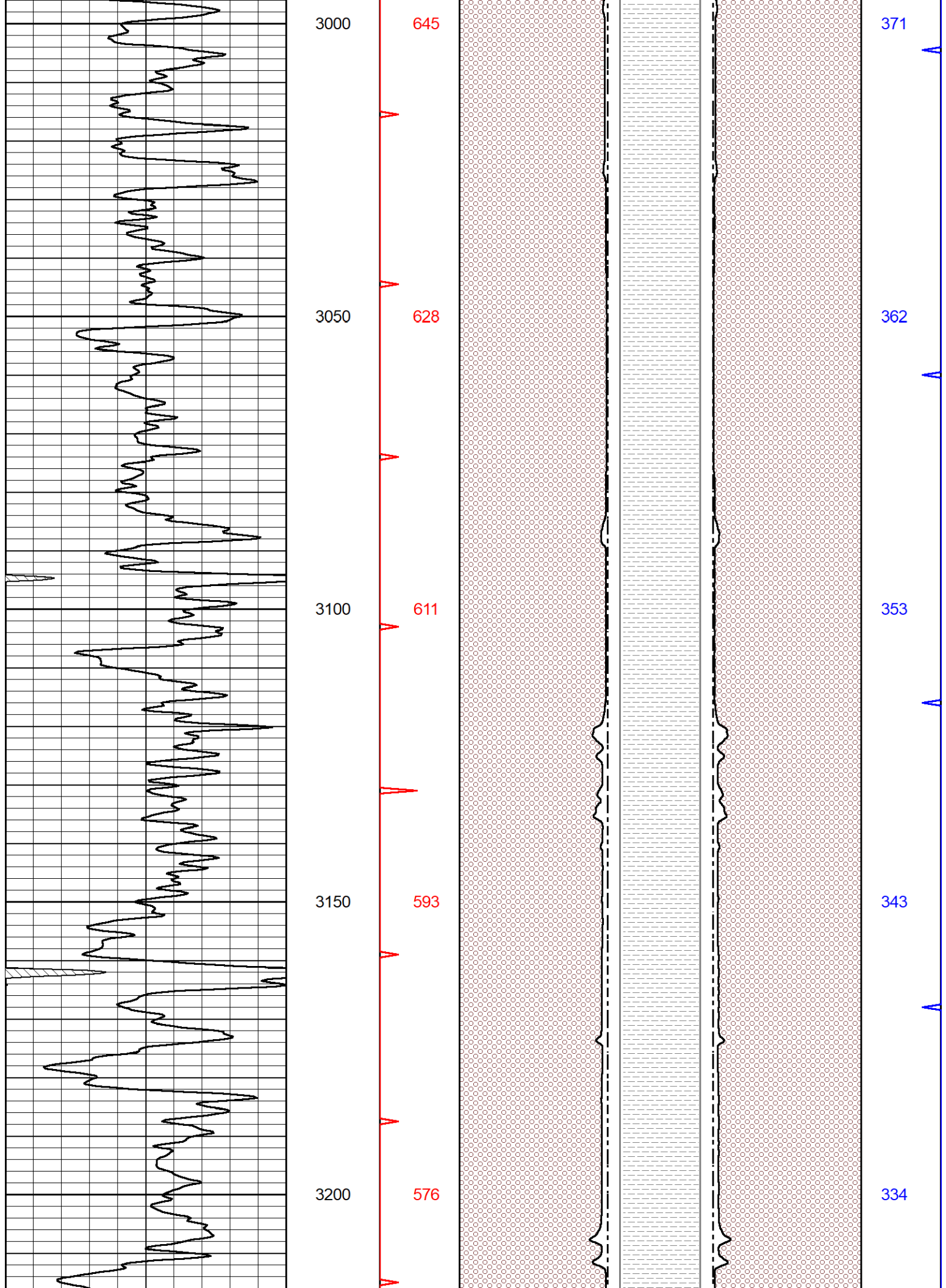
663

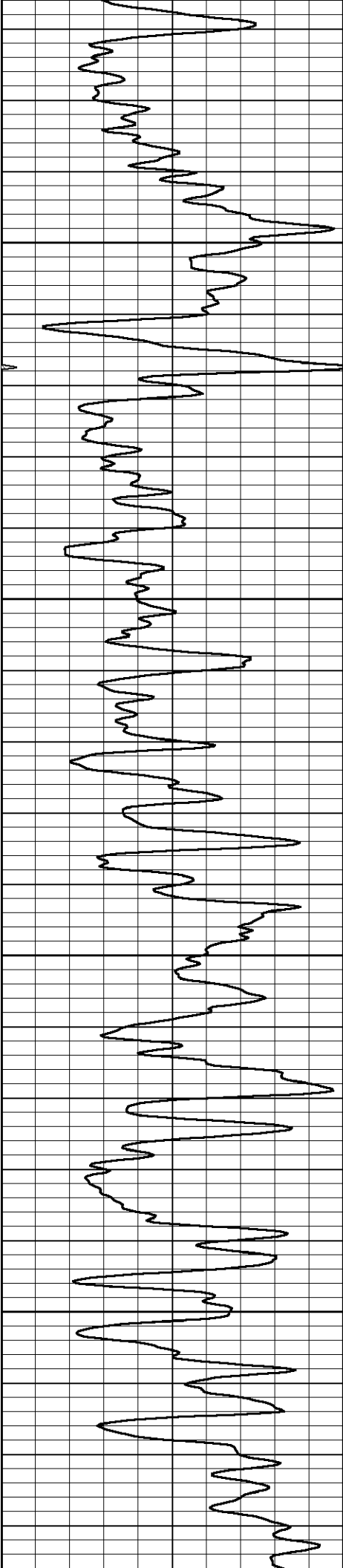
407

398

389

380





3250

3300

3350

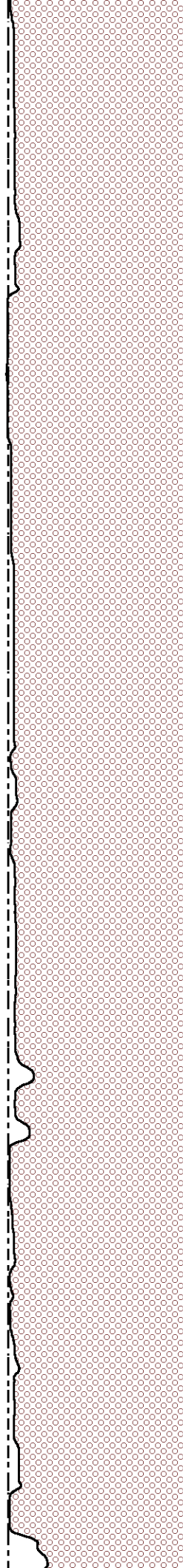
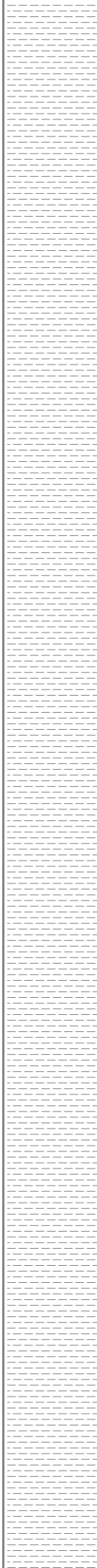
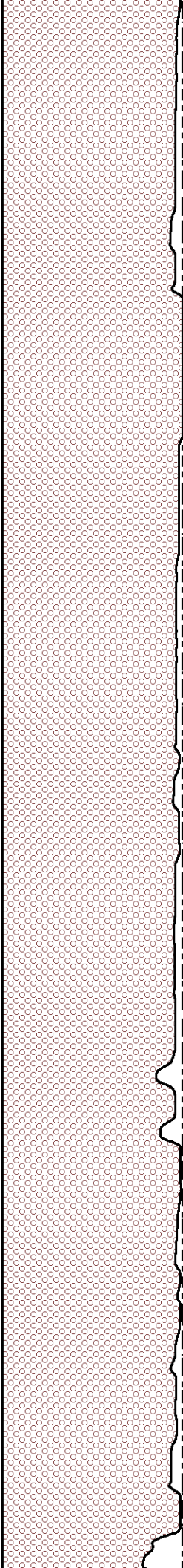
3400

558

540

523

505



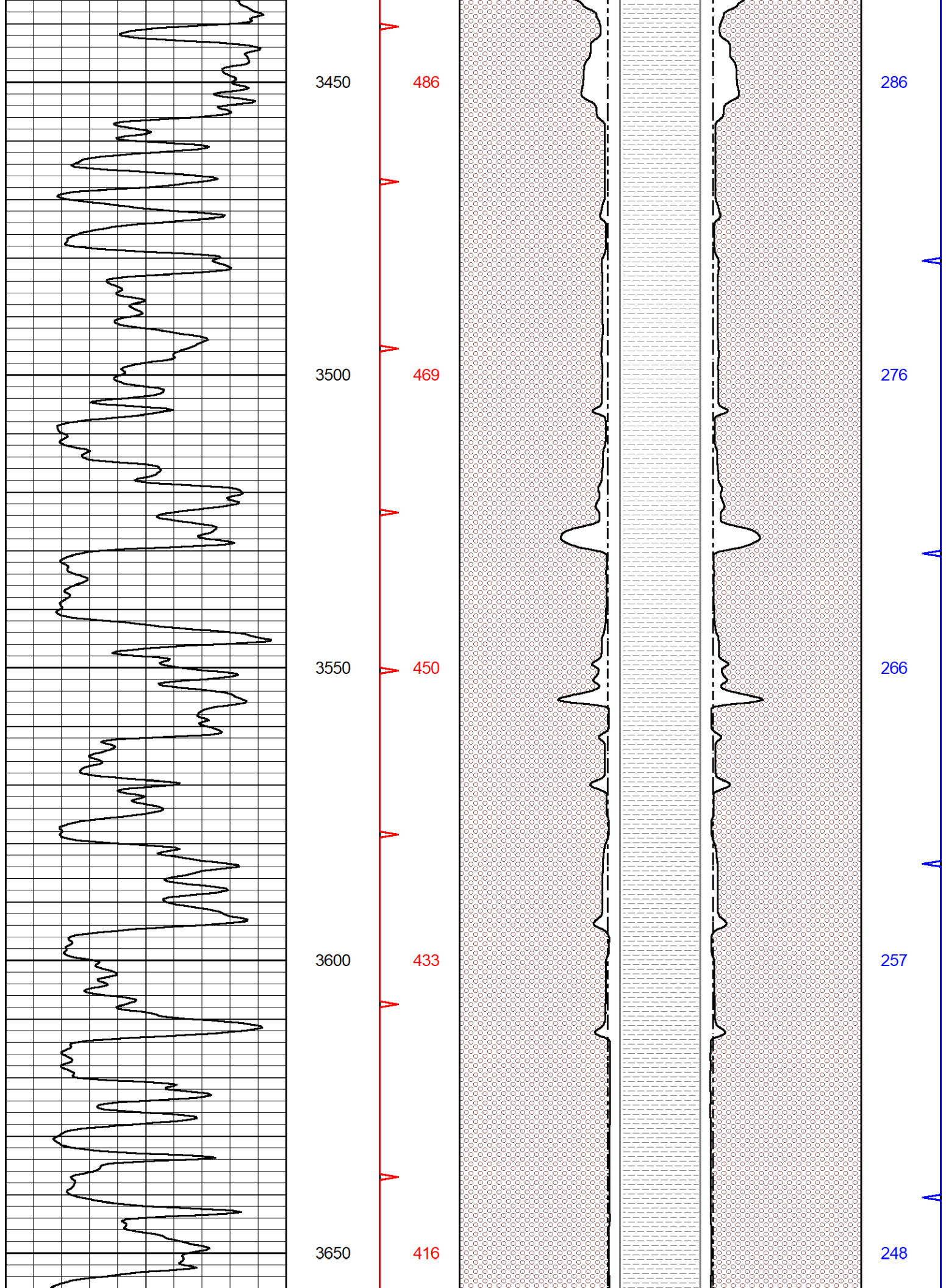
324

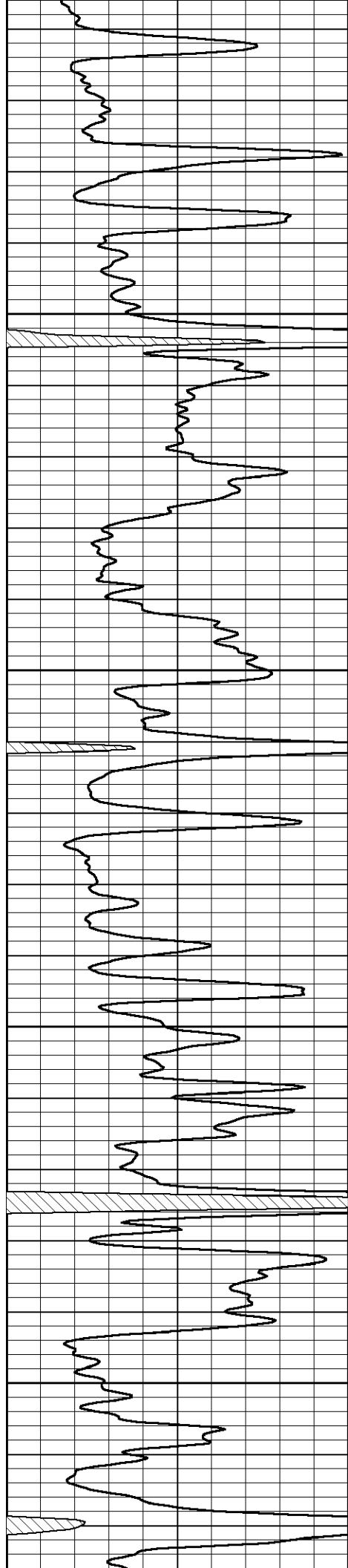
315

306

296







3700

3750

3800

3850

A

A

A

A

A

A

A

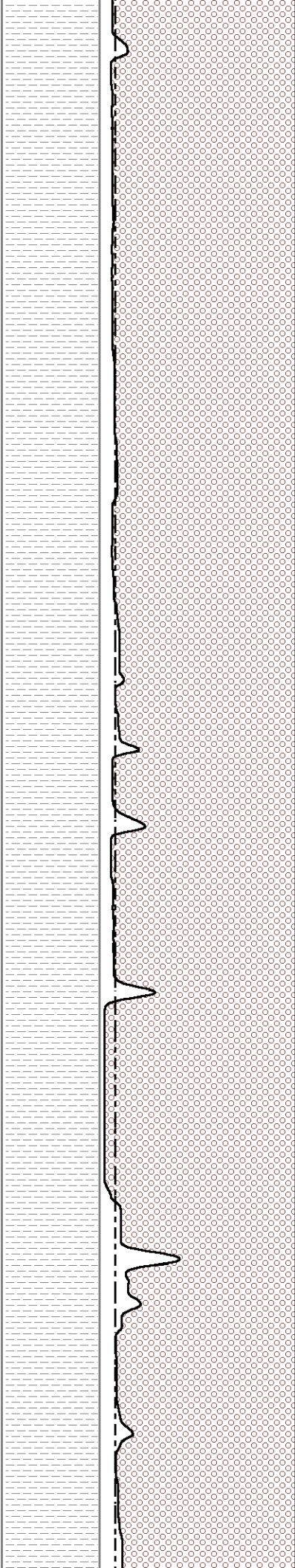
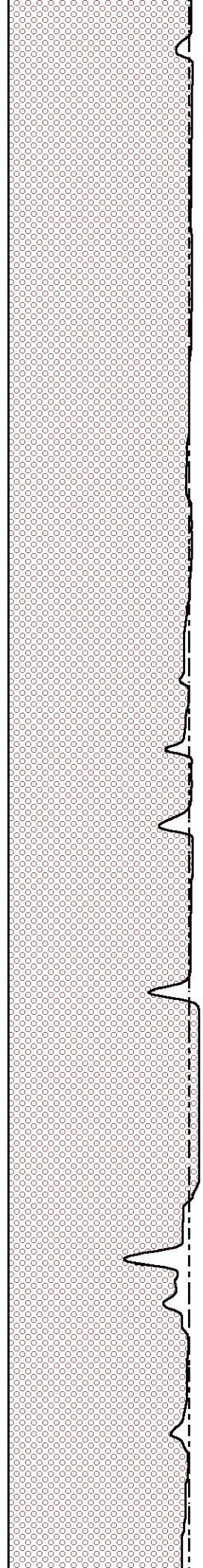
A

399

382

365

348



240

231

222

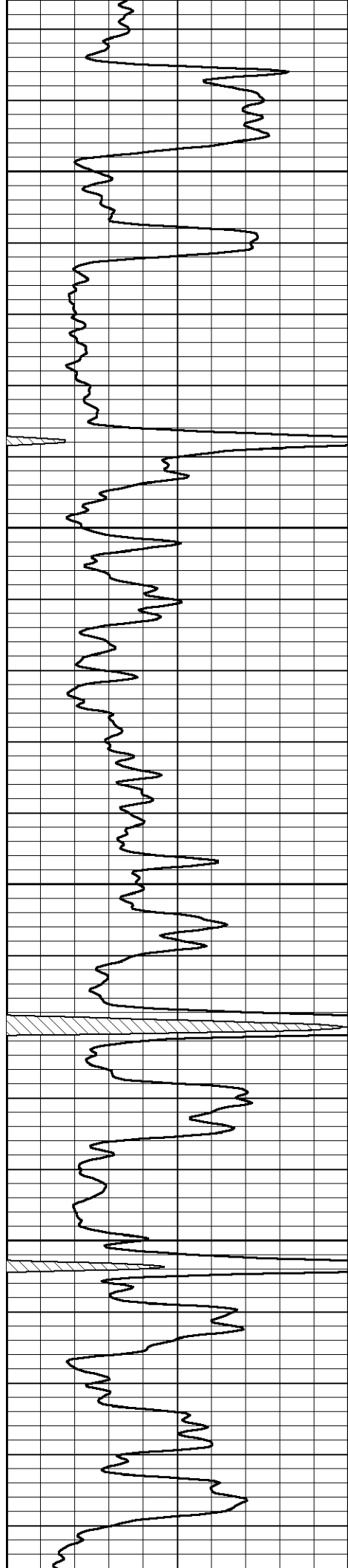
214

A

A

A

A



3900

3950

4000

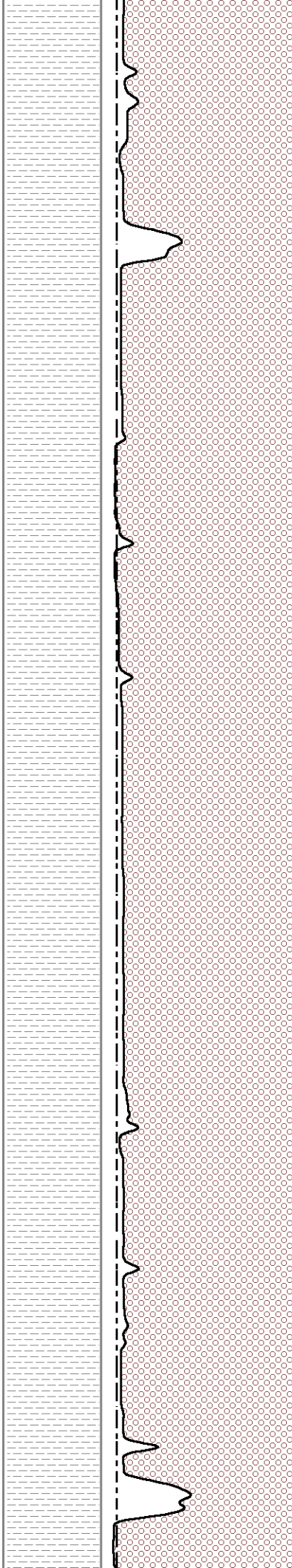
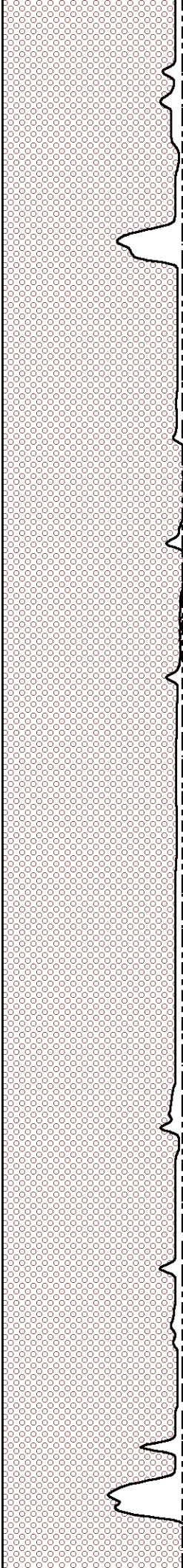
4050

330

312

295

277

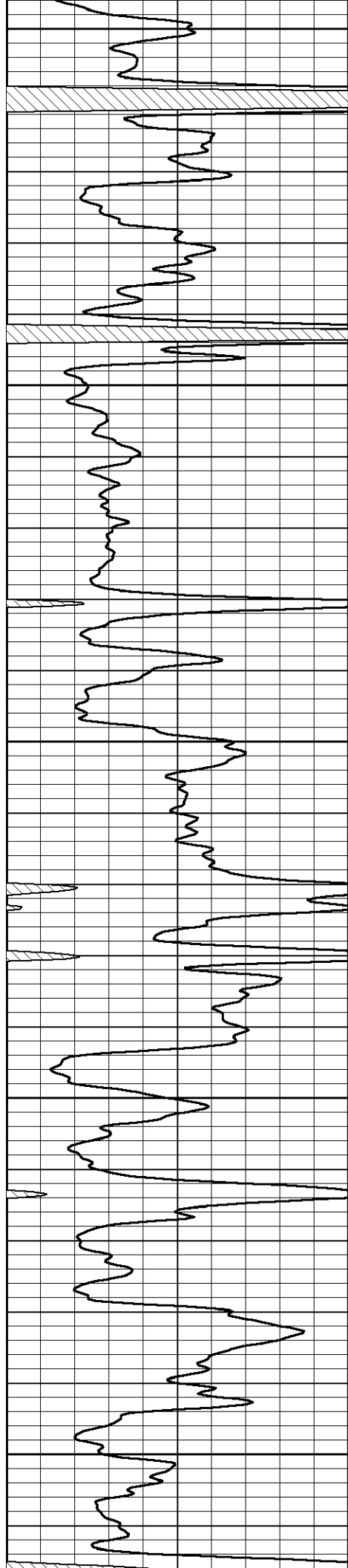


204

194

185

175



4100

258

4150

240

4200

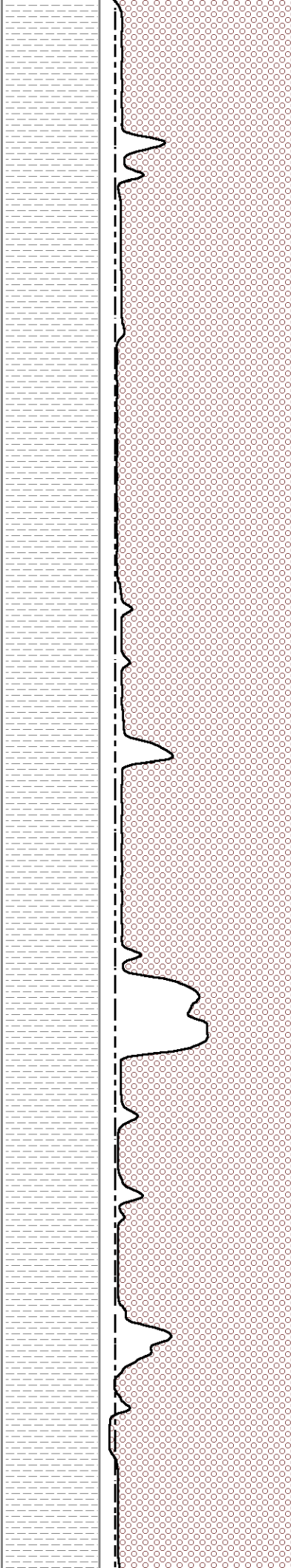
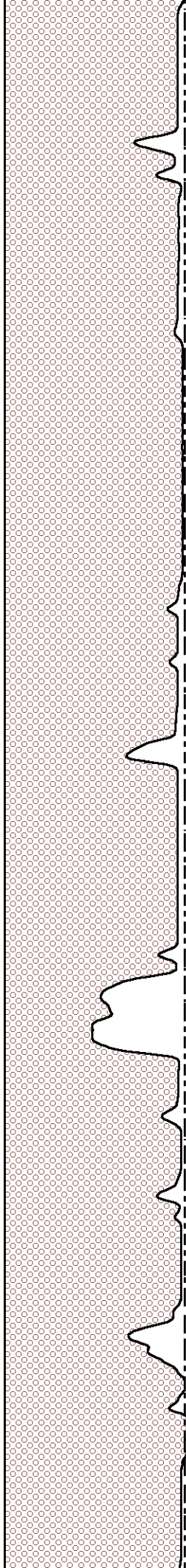
223

4250

202

4300

184



165

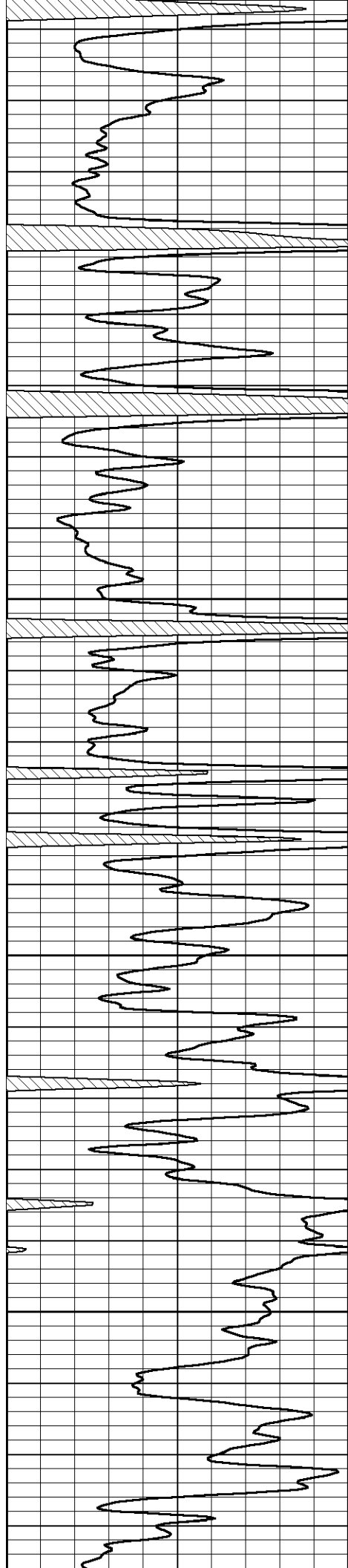
155

146

134

124





4350

4400

4450

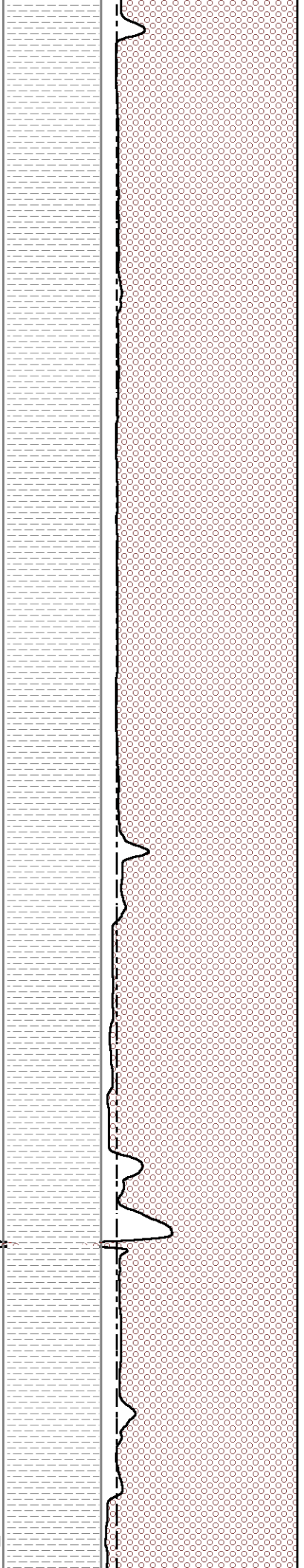
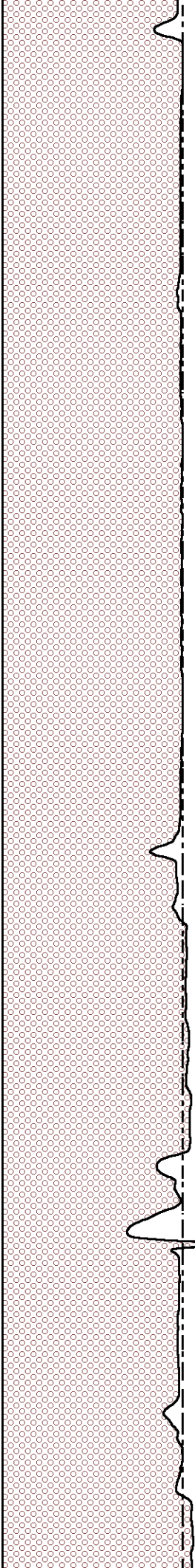
4500

167

149

132

115

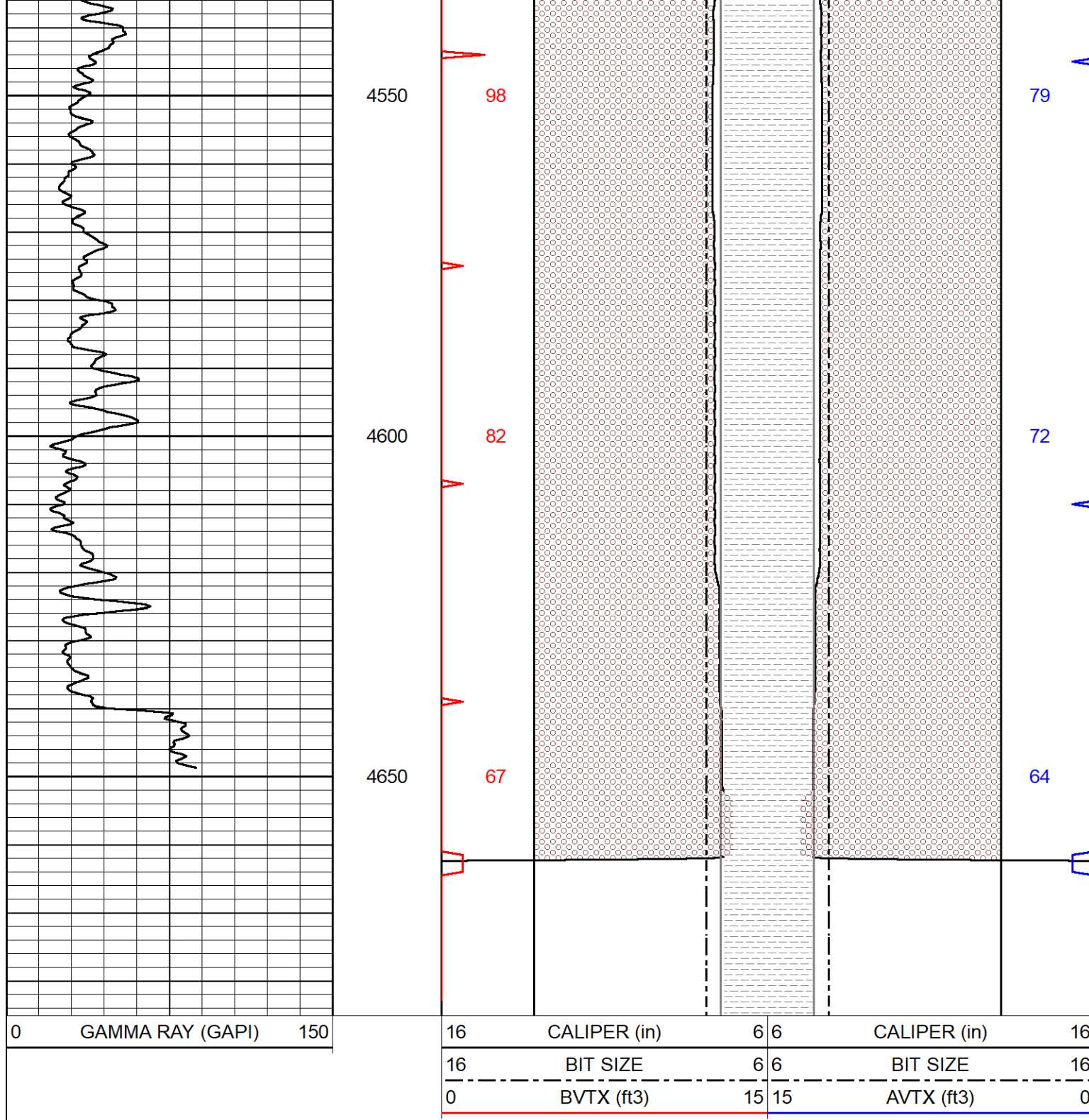


115

106

97

88



Calibration Report						
Database File	darrah_knopp 9-13.db					
Dataset Pathname	stack/pass3.1					
Dataset Creation	Tue Jul 19 08:15:34 2022					
Dual Induction Calibration Report						
Serial-Model:			504 HT-M&W			
Surface Cal Performed:			Wed Jun 29 12:51:29 2022			
Readings			References		Results	
Loop:	Air	Loop	Air	Loop	m	b

Deep	178.615	710.235	0.000	255.800	mmho/m	0.650	-16.000
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.450	-45.000

Compensated Density Calibration Report

Serial-Model: 304-04-M&W
 Source #: 21170B
 Master Calibration Performed: Sun May 29 09:31:45 2022

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	6392.84	8538.69	cps
Aluminum	2.685	g/cc	1184.69	5433.63	cps
Spine Angle = 74.99			Density/Spine Ratio = 0.533		
	Size		Reading		
Small Ring	4.00	in	1.15		
Large Ring	14.00	in	1.02		

Compensated Neutron Calibration Report

Serial-Model: 210-M&W
 Source #: N-1238
 Master Calibration Performed: Fri Dec 3 09:16:24 2021

Master Calibration

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: 103
 Tool Model: M&W
 Performed: Fri Dec 3 12:13:24 2021
 Calibrator Value: 500.0 GAPI
 Background Reading: 28.0 cps
 Calibrator Reading: 986.0 cps
 Sensitivity: 0.5700 GAPI/cps



Company Darrah Oil Company, LLC
 Well Knopp #9-13
 Field Bridges Northeast
 County Logan
 State Kansas