



MIDWEST WIRELINE

MICRORESISTIVITY LOG

Company: Petroleum Property Services, Inc.
 Well: Richards-Fund A #4
 Field: McClain
 County: Nemaha
 State: Kansas

Company: Petroleum Property Services, Inc.
 Well: Richards-Fund A #4
 Field: McClain
 County: Nemaha
 State: Kansas

Location: API #: 15-131-20248-00-00
 SW SE NW SE
 1436 FSL & 1958 FEL
 SEC 7 TWP 4S RGE 14E
 Permanent Datum: Ground Level Elevation 1241
 Log Measured From: Kelly Bushing
 Drilling Measured From: Kelly Bushing
 Other Services: CNL/CDL DIL/BHCS
 Elevation: K.B. 1249, D.F., G.L. 1241

Date	10/11/2022
Run Number	Two
Depth Driller	3740
Depth Logger	3736
Bottom Logged Interval	3735
Top Log Interval	2450
Casing Driller	8.625 @ 381
Casing Logger	388
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	1200
Density / Viscosity	8.9 55
pH / Fluid Loss	9.5 9.0
Source of Sample	Flowline
Rm @ Meas. Temp	1.5 @ 72
Rmt @ Meas. Temp	1.13 @ 72
Rmc @ Meas. Temp	2.03 @ 72
Source of Rmf / Rmc	Charts
Rm @ BHT	0.92 @ 118
Operating Rig Time	4 Hours
Max Rec. Temp. F	118
Equipment Number	P-24
Location	Hays
Recorded By	T. Martin
Witnessed By	Curtis Covey

<<< 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.

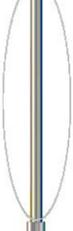
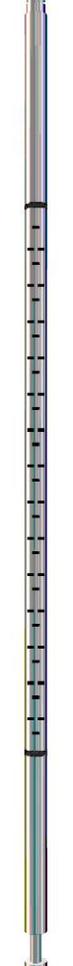
Wetmore, KS, 5 W on Hwy 9 to South Rd,
 4 N to 80th Rd, 1/2 E, N into

Log Measured From: Kelly Bushing 8 Ft. Above Permanent Datum

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

Your Midwest Wireline Crew		This Log Record Was Witnessed By	
Engineer: T. Martin	Operator:	Primary Witness: Curtis Covey	Secondary Witness:
Operator:	Operator:	Secondary Witness:	Secondary Witness:
Operator:		Secondary Witness:	

Operator	Offset (ft)	Substrate	Description	Length (ft)	C.D. (in)	Weight (lb)
----------	-------------	-----------	-------------	-------------	-----------	-------------

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
MCAL MI MN	25.50 25.50 25.50		ML-Pengo (Pengo1)	5.50	3.50	100.00
			CENT-PENGO (4-PENGO)	4.25	3.00	70.00
WVF4 WVF1	12.25 12.25		SLT-PENGO (603) 3 1/2 BHC Sonic	16.00	3.50	300.00
WVF3 WVF2	10.25 10.25					
			CENT-PENGO (3-PENGO)	4.25	3.00	70.00

Dataset: ppsi_richards-fund a #4.db: field/well/SonMel/pass3
 Total length: 30.00 ft
 Total weight: 540.00 lb
 O.D.: 3.50 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\ppsi_richards-fund a #4.db
 Dataset field/well/Stack/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	118	5.5	0	1	2	2.71
NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	0	0	-40	80	Off	3736

Variable Description

A : Cement Factor (a)
 BOREID : Borehole I.D.
 BOTTEMP : Bottom Hole Temperature
 CASEOD : Casing O.D.
 CASETHCK : Casing Thickness
 FLUIDDEN : Fluid Density
 M : Cement Exp (m)
 MATRXDEN : Matrix Density

NPORSEL : Neutron Porosity Curve Select
 PERFS : Perforation Flag
 SNDERR : Deep Sonde Error Correction
 SNDERRM : Medium Sonde Error Correction
 SPSHIFT : S.P. Baseline Offset
 SRFTEMP : Surface Temperature
 SZCOR : CN Size Cor. ?
 TDEPTH : Total Depth



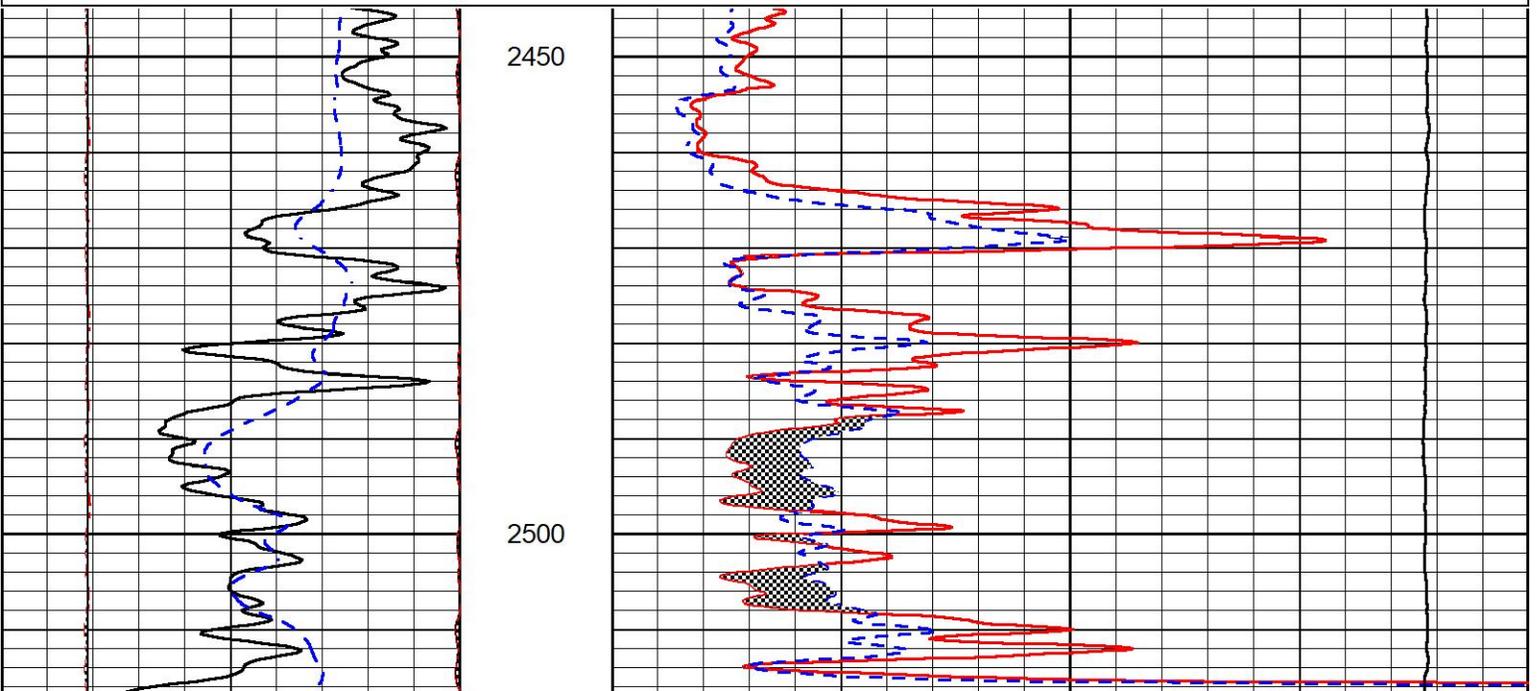
DETAIL SECTION

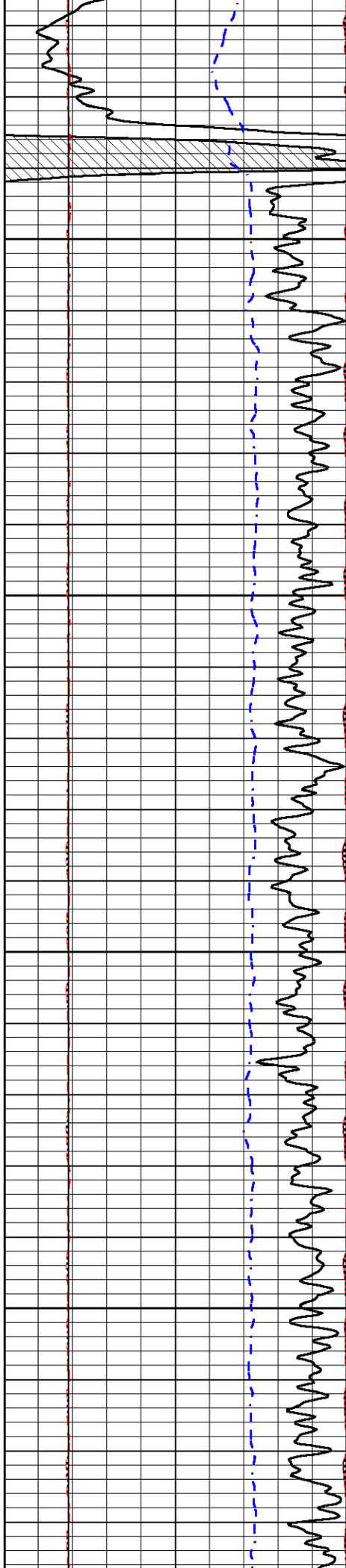
MAIN PASS

Database File ppsi_richards-fund a #4.db
 Dataset Pathname Stack/pass3.1
 Presentation Format _micro
 Dataset Creation Tue Oct 11 21:23:03 2022
 Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	sp (mV)	0

0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0



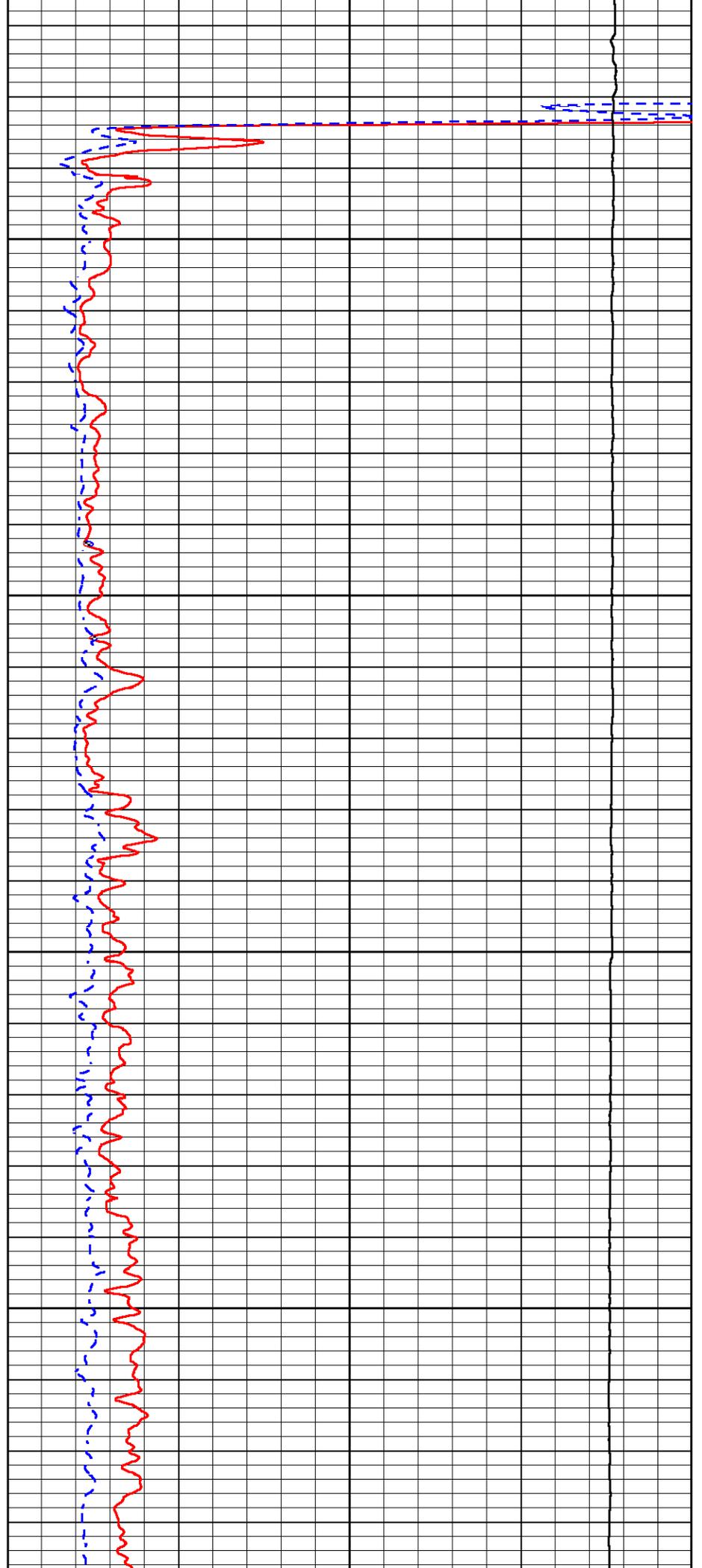


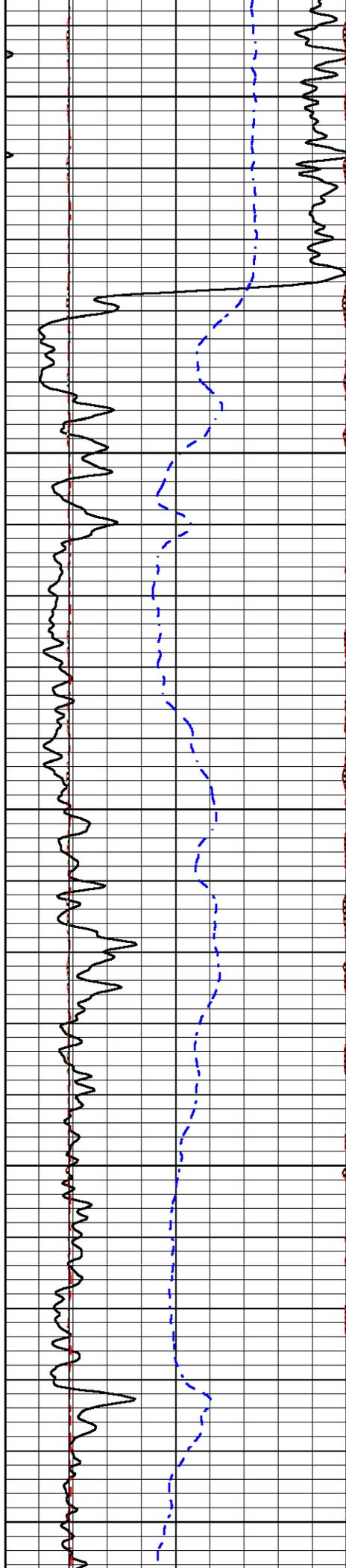
2550

2600

2650

2700





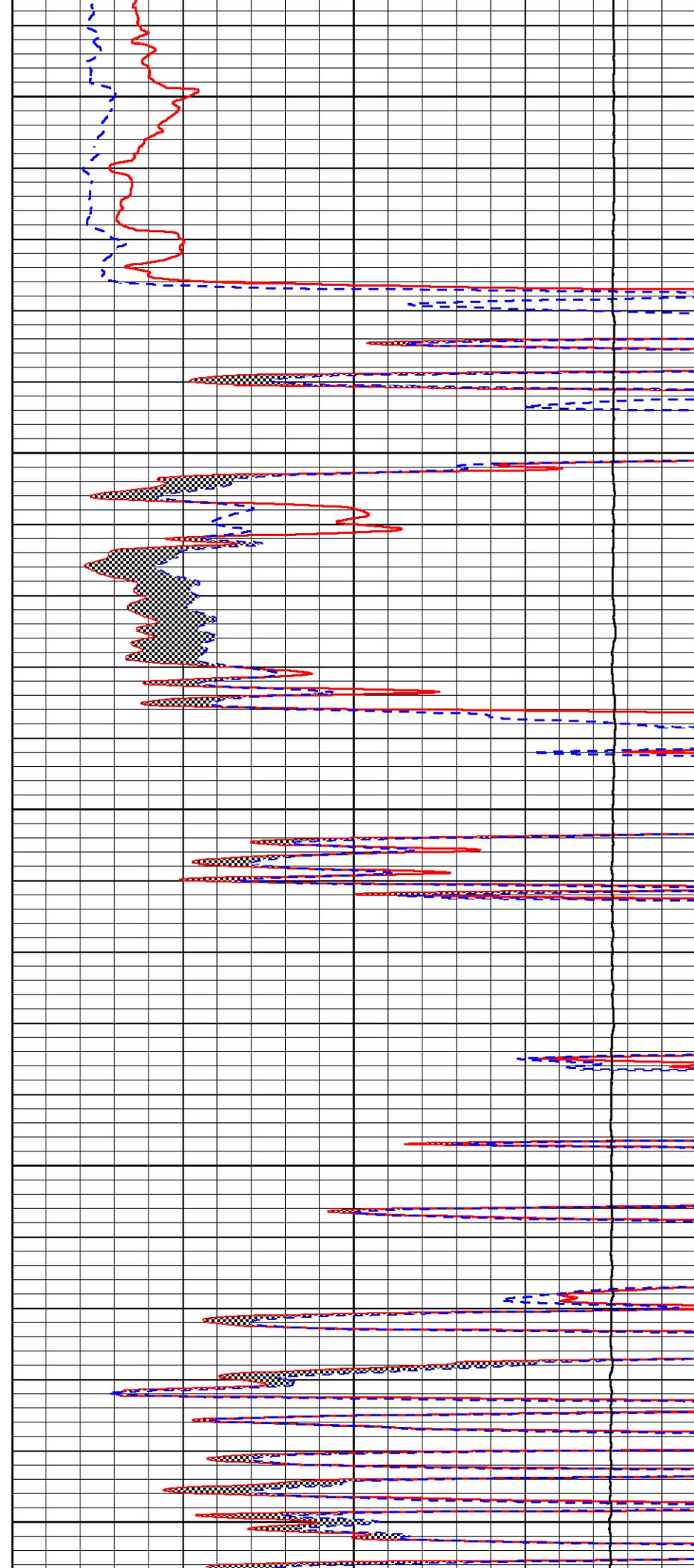
2750

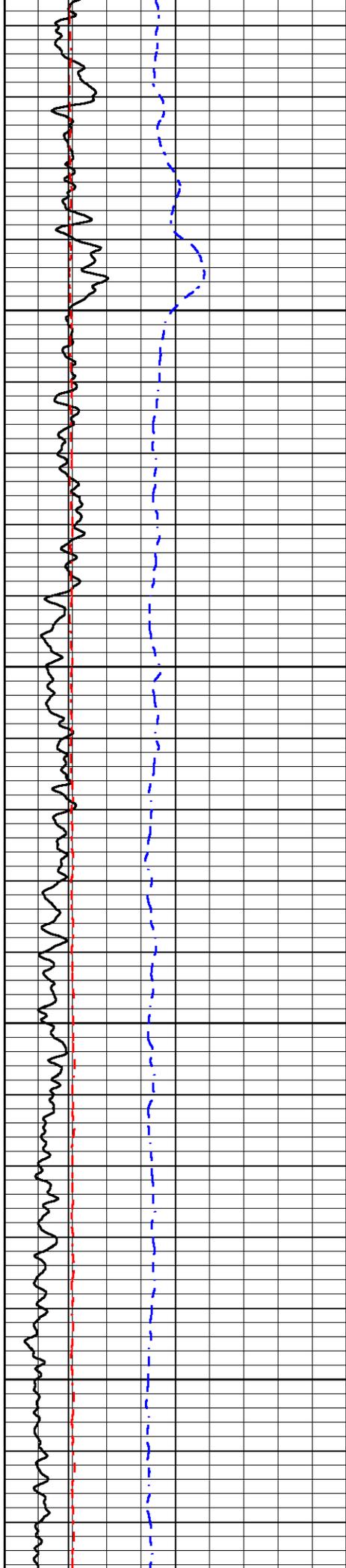
2800

2850

2900

2950



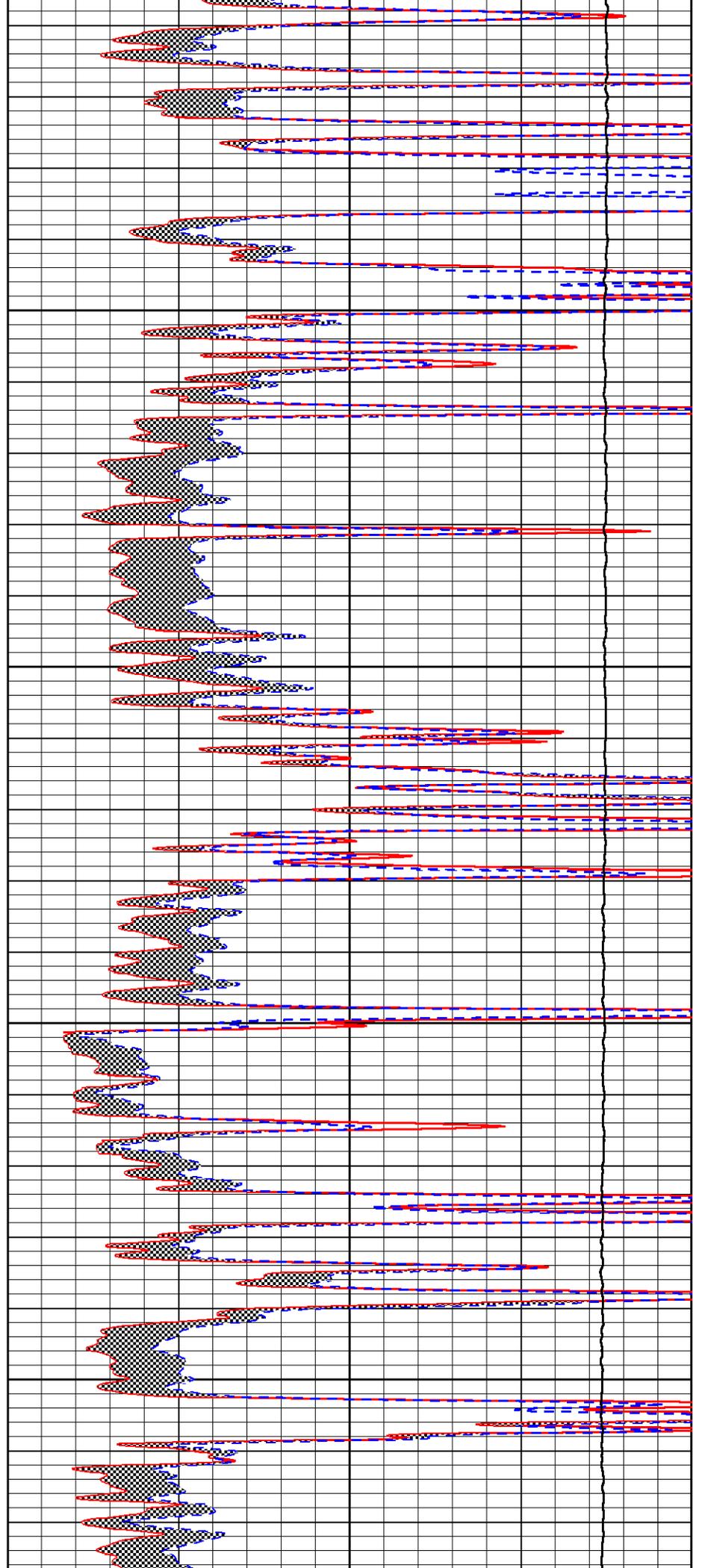


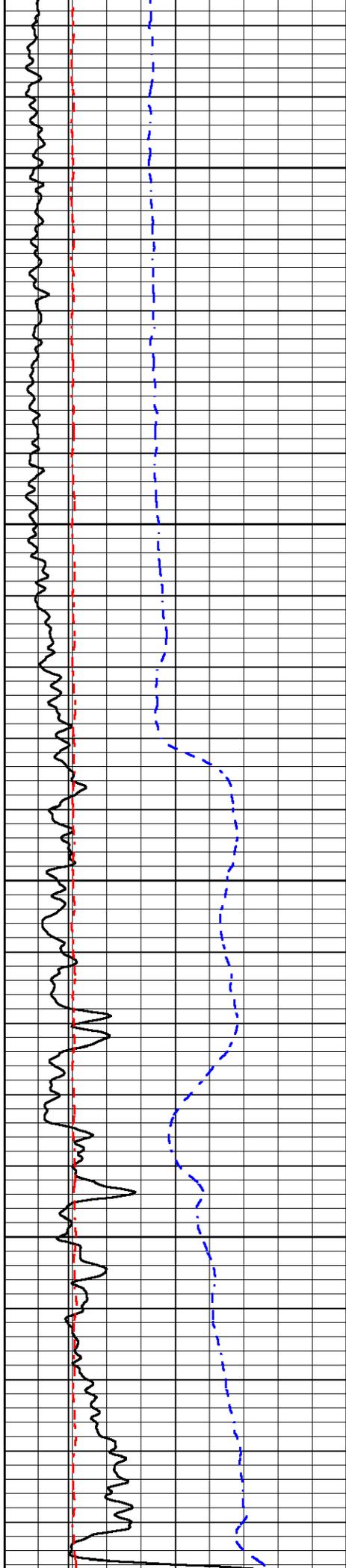
3000

3050

3100

3150



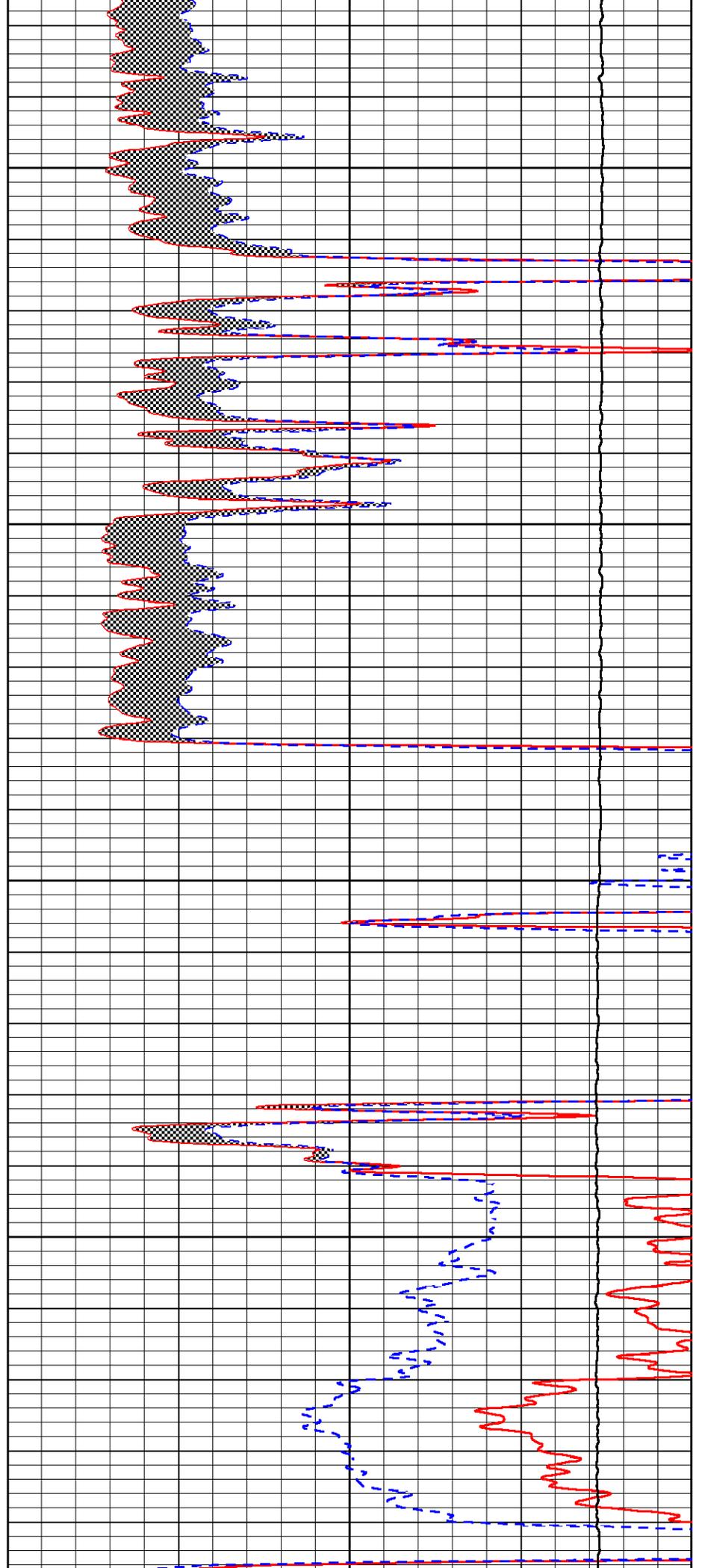


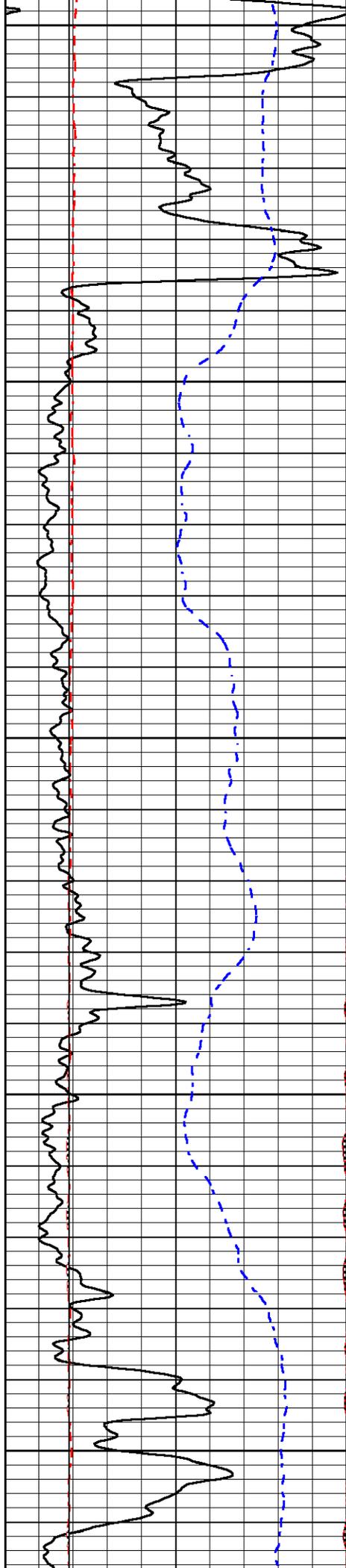
3200

3250

3300

3350





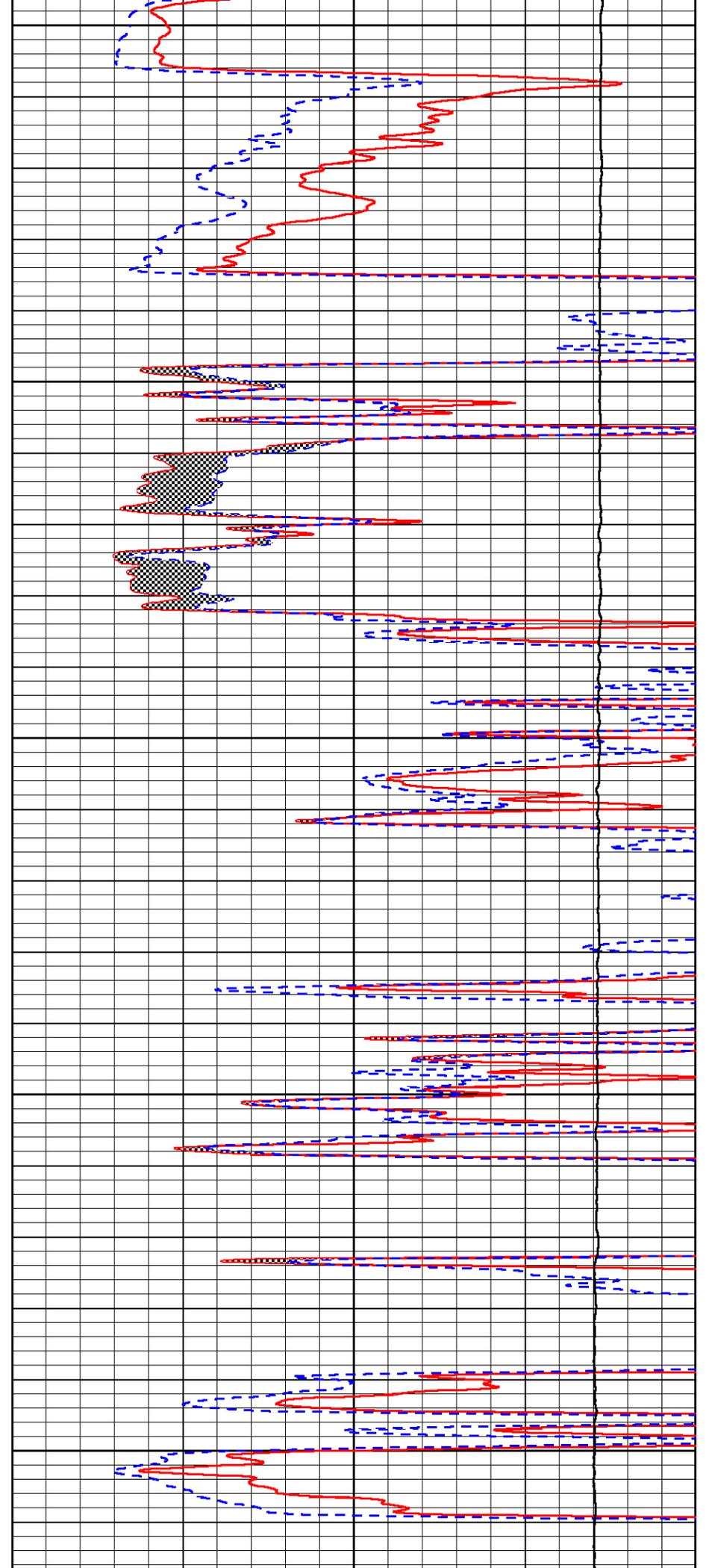
3400

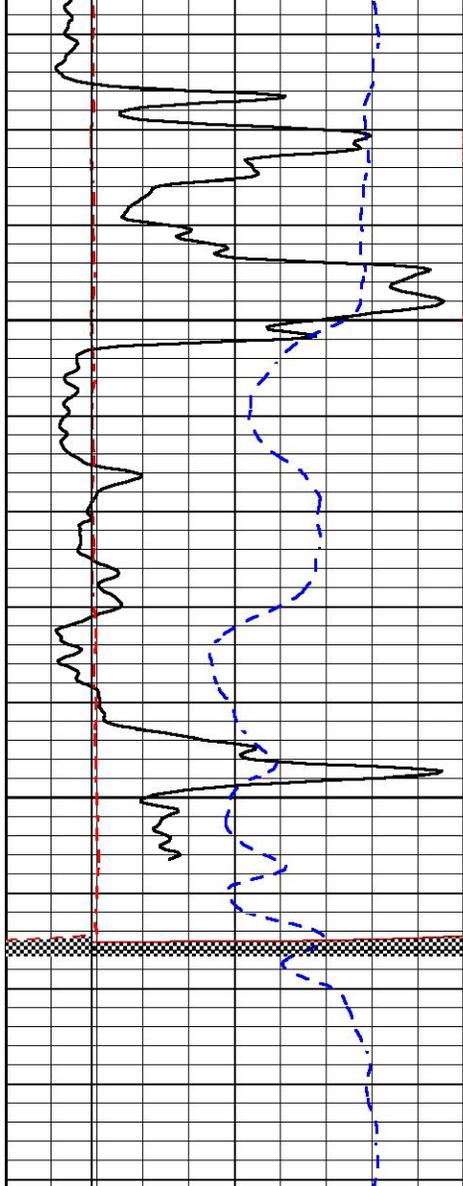
3450

3500

3550

3600

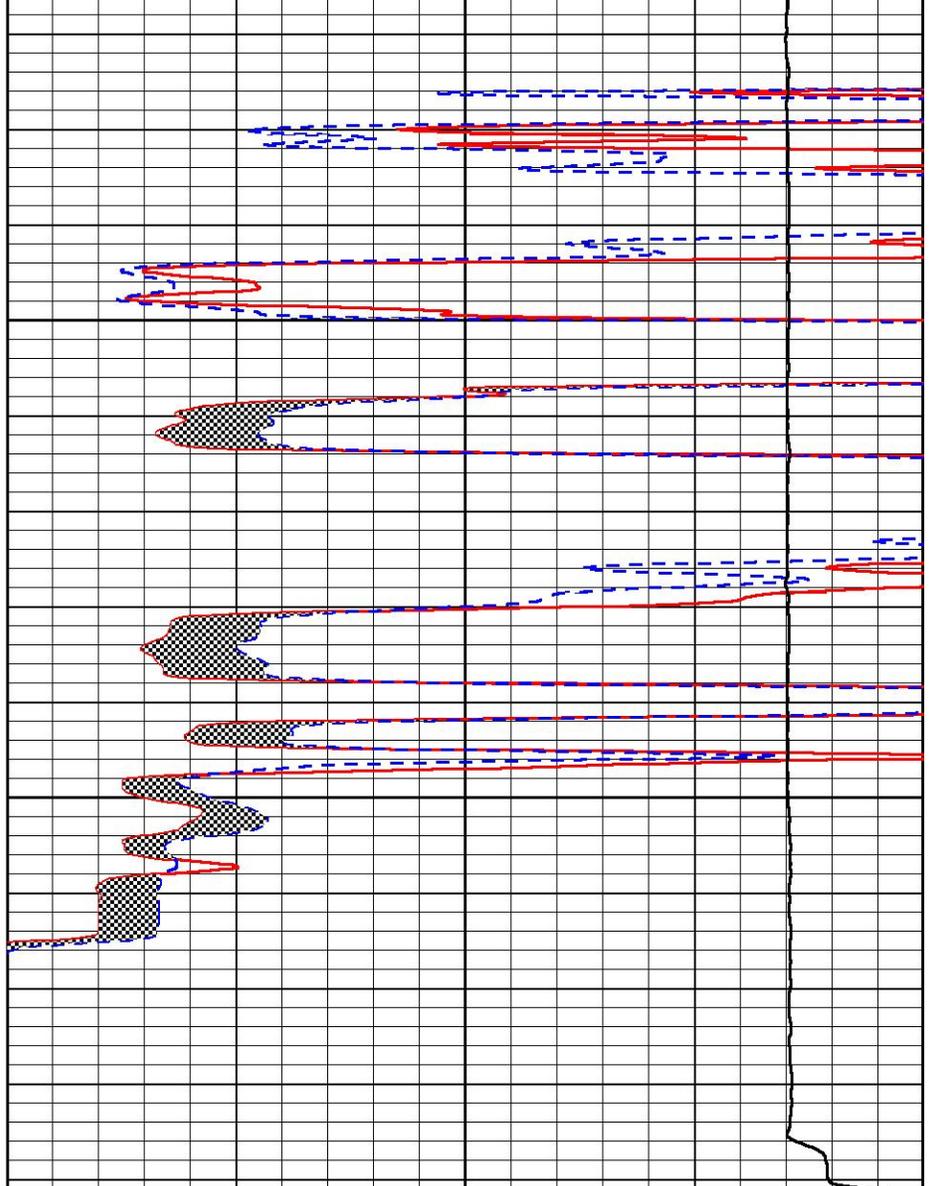




3650

3700

0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	sp (mV)	0



0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0



REPEAT SECTION

REPEAT PASS

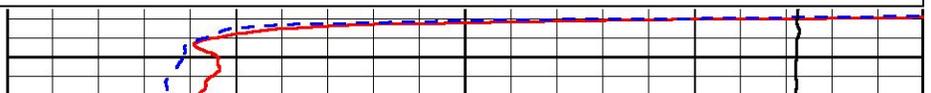
Database File ppsi_richards-fund a #4.db
 Dataset Pathname Stack/pass2.1
 Presentation Format _micro
 Dataset Creation Tue Oct 11 20:37:40 2022
 Charted by Depth in Feet scaled 1:240

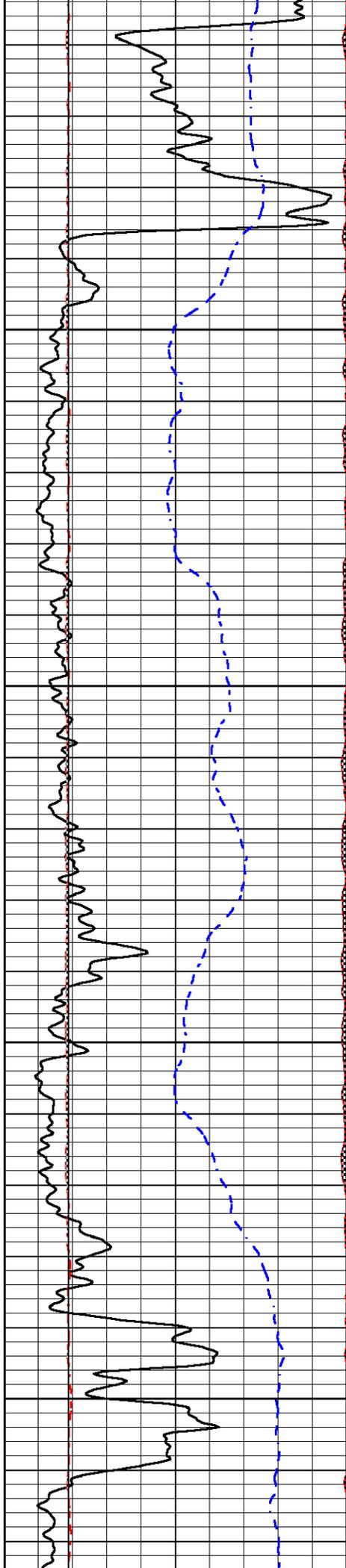
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	sp (mV)	0

0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0



3400



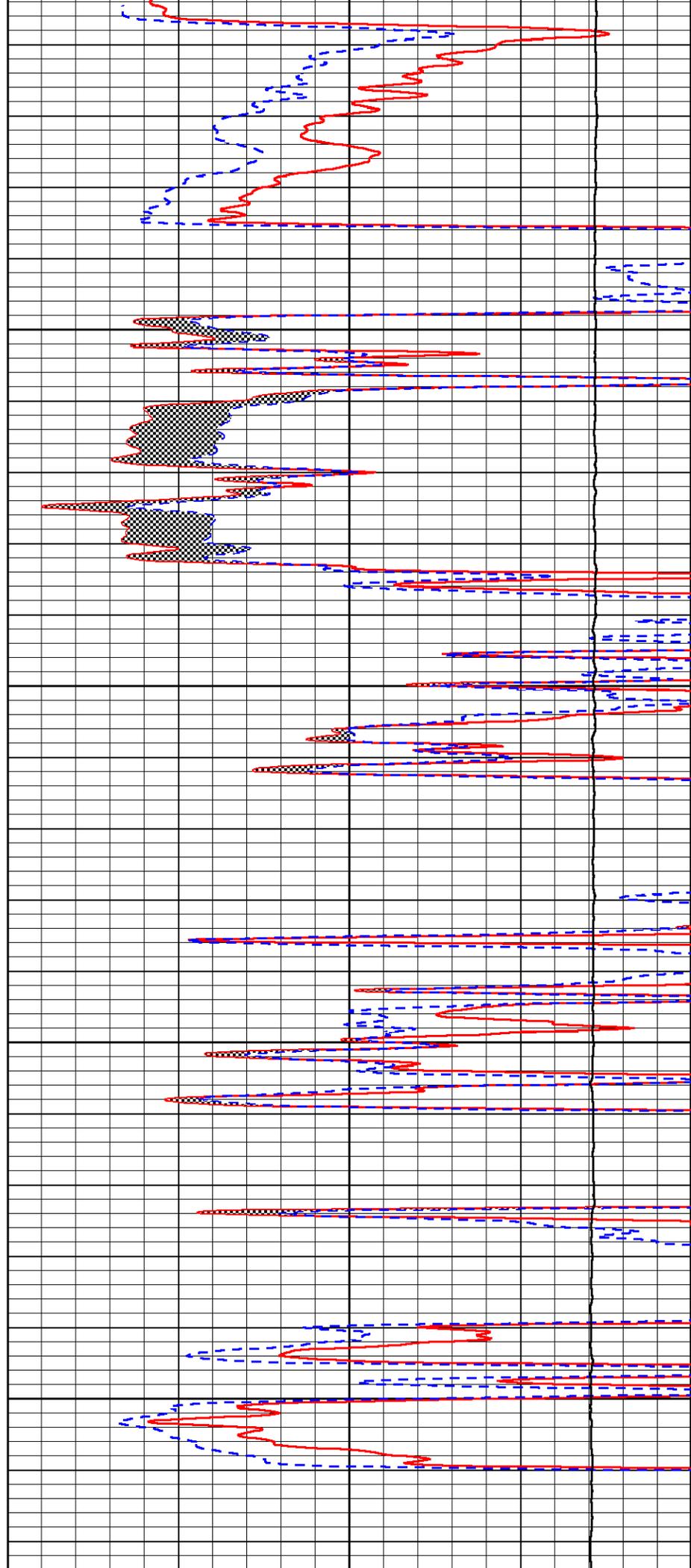


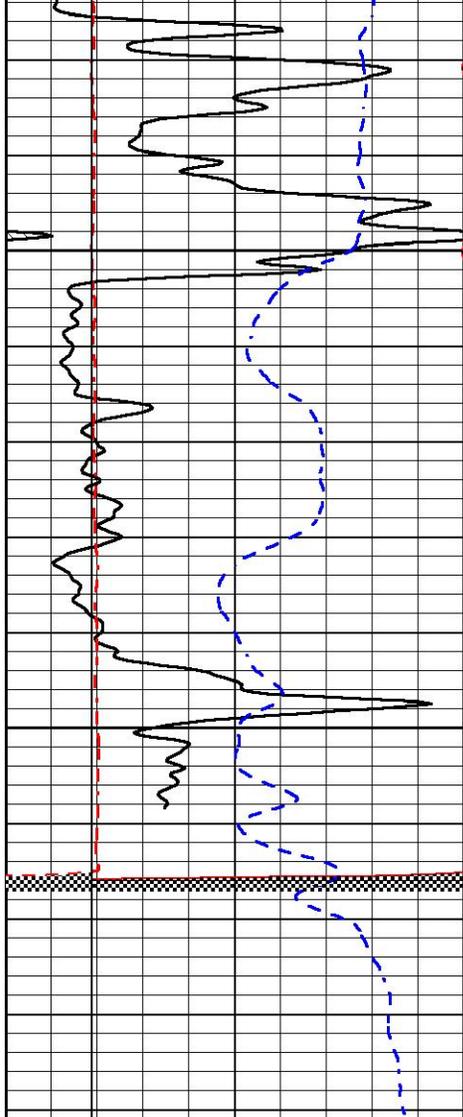
3450

3500

3550

3600

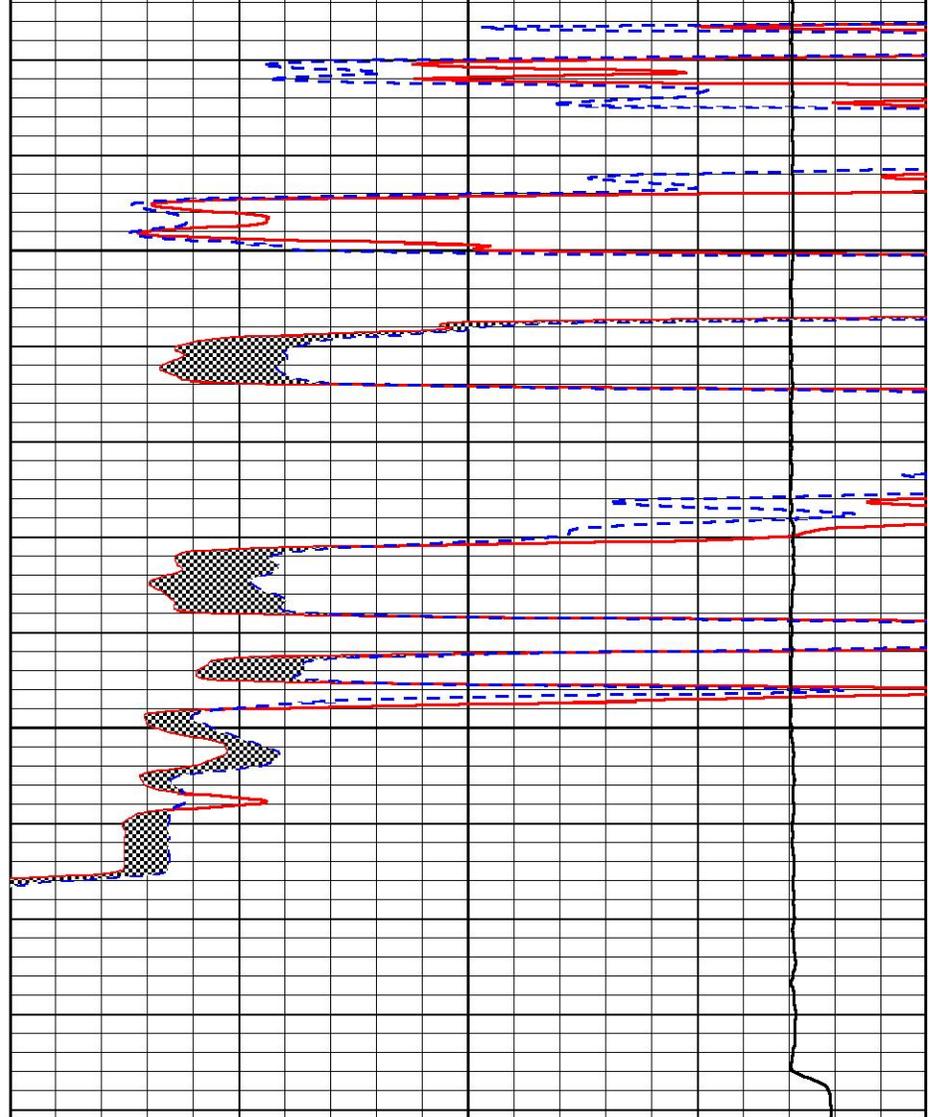




3650

3700

0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	sp (mV)	0



0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0



MIDWEST WIRELINE

Company Petroleum Property Services, Inc.
 Well Richards-Fund A #4
 Field McClain
 County Nemaha
 State Kansas