MIDWEST WIRELINE

MICRORESISTIVITY LOG

Company Lachenmayr Oil, LLC
Well Tanner #2
Field Kipp North
County Stafford
State Kansas

Location: API # : 15-185-24124-00-00
1815 FNL & 1980 FWL
SEC 23 TWP 25S RGE 14W

Other Services
CNL/CDL
DIL

Permanent Datum Ground Level Elevation 1971
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing

Elevation
K.B. 1984
D.F.
G.L. 1971

Date	12/2/2022		
Run Number	One		
Depth Driller	4350		
Depth Logger	4350		
Bottom Logged Interval	4349		
Top Log Interval	3400		
Casing Driller	8.625 @ 414		
Casing Logger	412		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity,ppm CL	8000		
Density / Viscosity	9.3 / 48		
pH / Fluid Loss	10.0 / 9.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.30 @ 76		
Rmf @ Meas. Temp	0.23 @ 76		
Rmc @ Meas. Temp	0.41 @ 76		
Source of Rmf / Rmc	CHARTS		
Rm @ BHT	0.19 @ 120		
Operating Rig Time	3 Hours		
Max Rec. Temp. F	120		
Equipment Number	P-108		
Location	HAYS		
Recorded By	D. Schmidt		
Witnessed By	Keaton Jones		

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Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

St. John,
South to 70 Rd, 5 West, 1/2 North,
East into

Log Measured From: Kelly Bushing 13 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: D. Schmidt	Primary Witness: Keaton Jones
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
GR	40.33		GR-M&W (103)	3.00	3.50	50.00
CNLSC	37.23		CNT-M&W (210)	5.00	3.50	100.00
CNSSC	36.48					
			CDL-M&W (303-03)	8.50	4.00	250.00
LSD	28.18					
DCAL	28.17					
SSD	27.68					
			ML-PSI STKBL ML (402)	7.58	4.00	65.00
MCAL	19.58					
MI	19.58					
MN	19.58					
RLL3F	15.50					
RLL3	15.50					
			DIL-M&W (505 HT)	18.25	3.50	220.00
CILD	8.33					
CILM	4.50					
SP	0.20					

Dataset: lachenmayr_tanner 2.db: field/well/stkml/pass3.5
Total length: 42.33 ft
Total weight: 685.00 lb
O.D.: 4.00 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\lachenmayr_tanner 2.db
Dataset field/well/stkml/pass3.5/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	121	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	370	50	Off	4350

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

MIDWEST WIRELINE

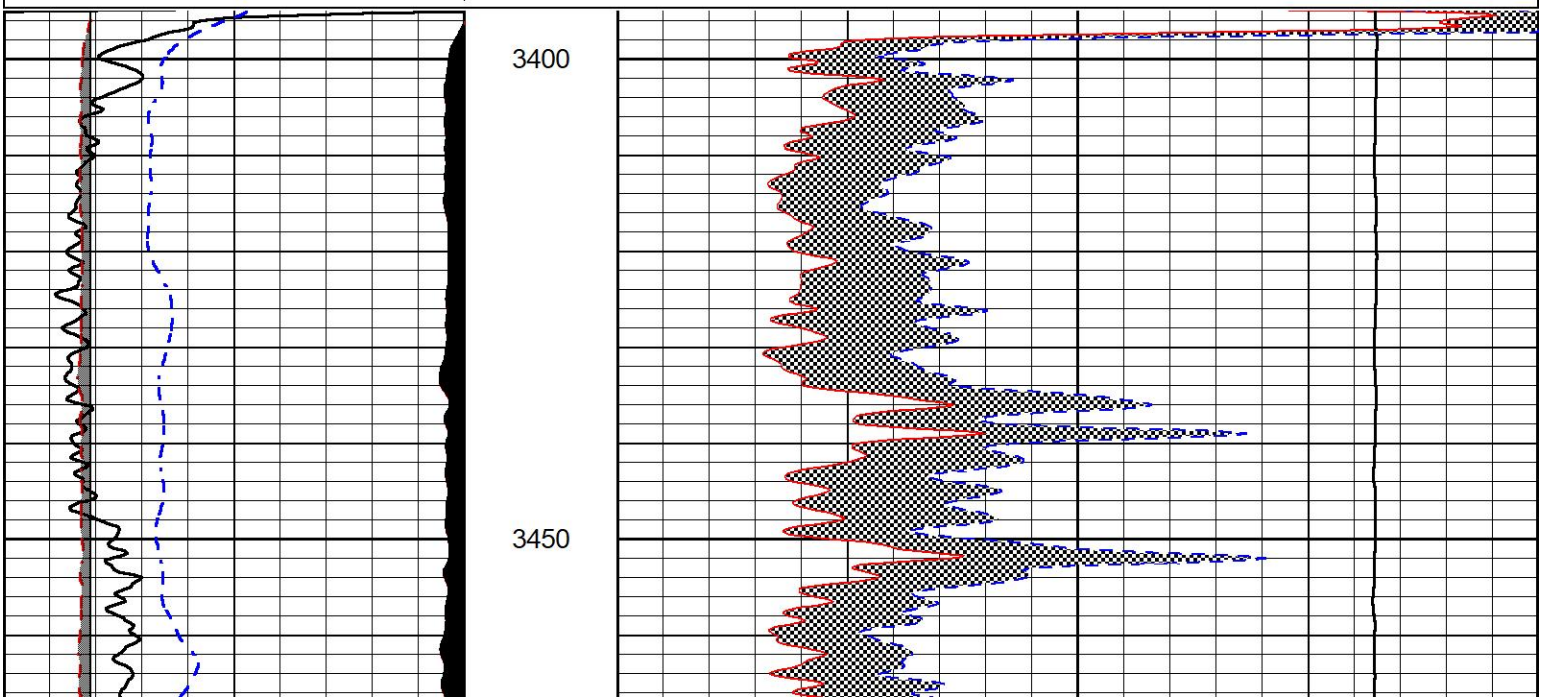
DETAIL SECTION

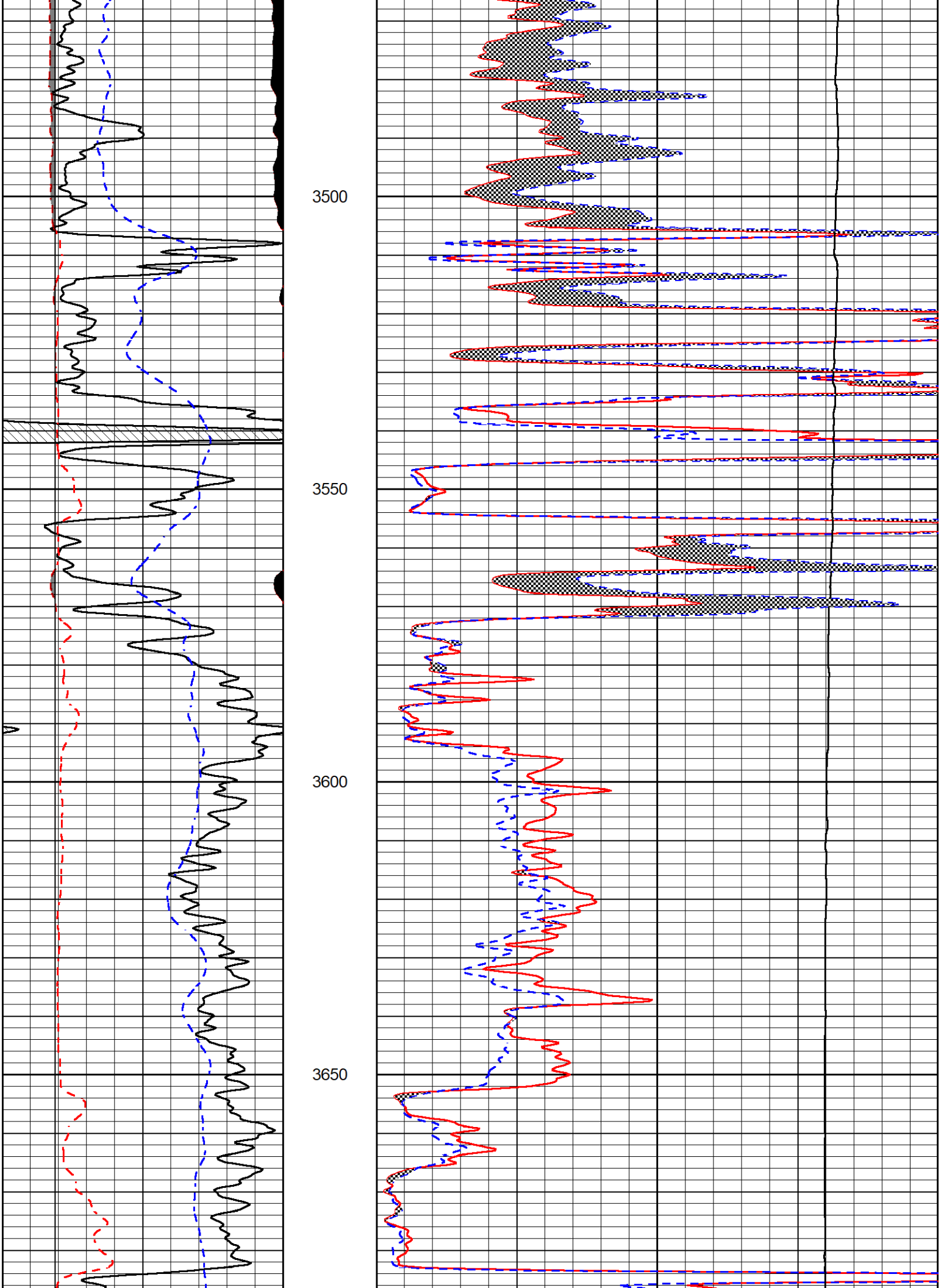
MAIN PASS

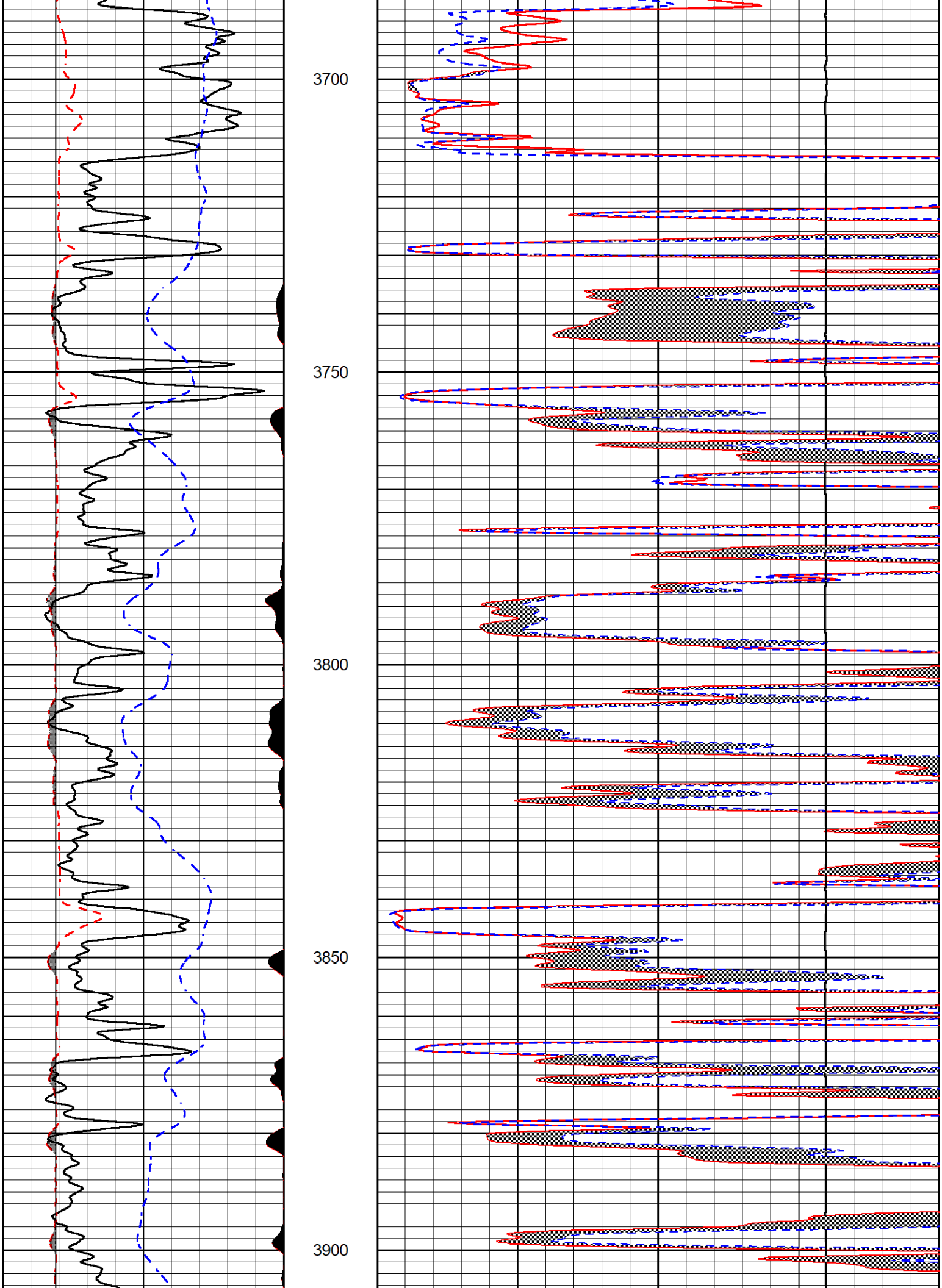
Database File	lachenmayr_tanner 2.db
Dataset Pathname	stkml/pass3.1
Presentation Format	_micro
Dataset Creation	Fri Dec 02 18:22:46 2022
Charted by	Depth in Feet scaled 1:240

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




3500
3550
3600
3650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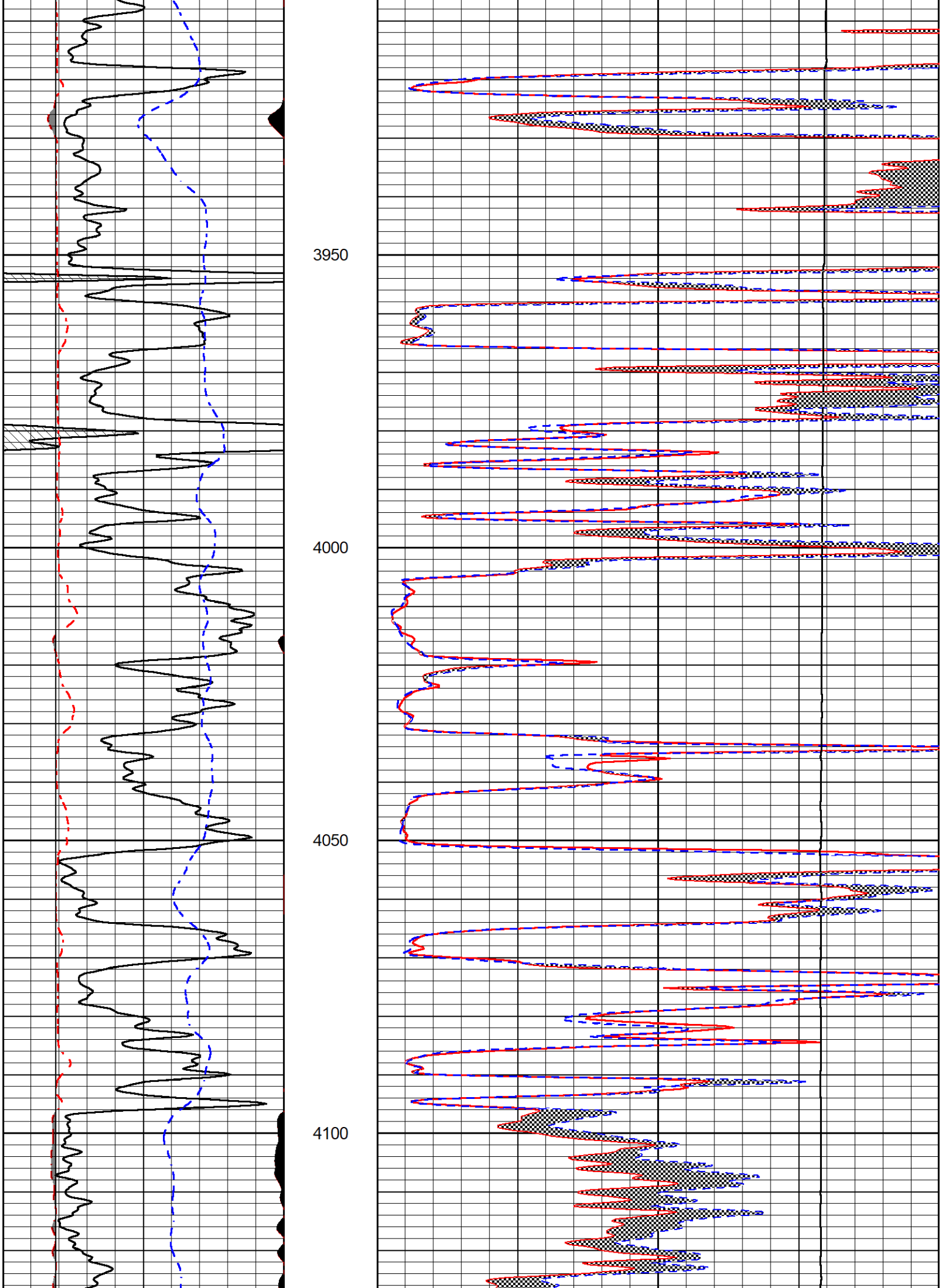
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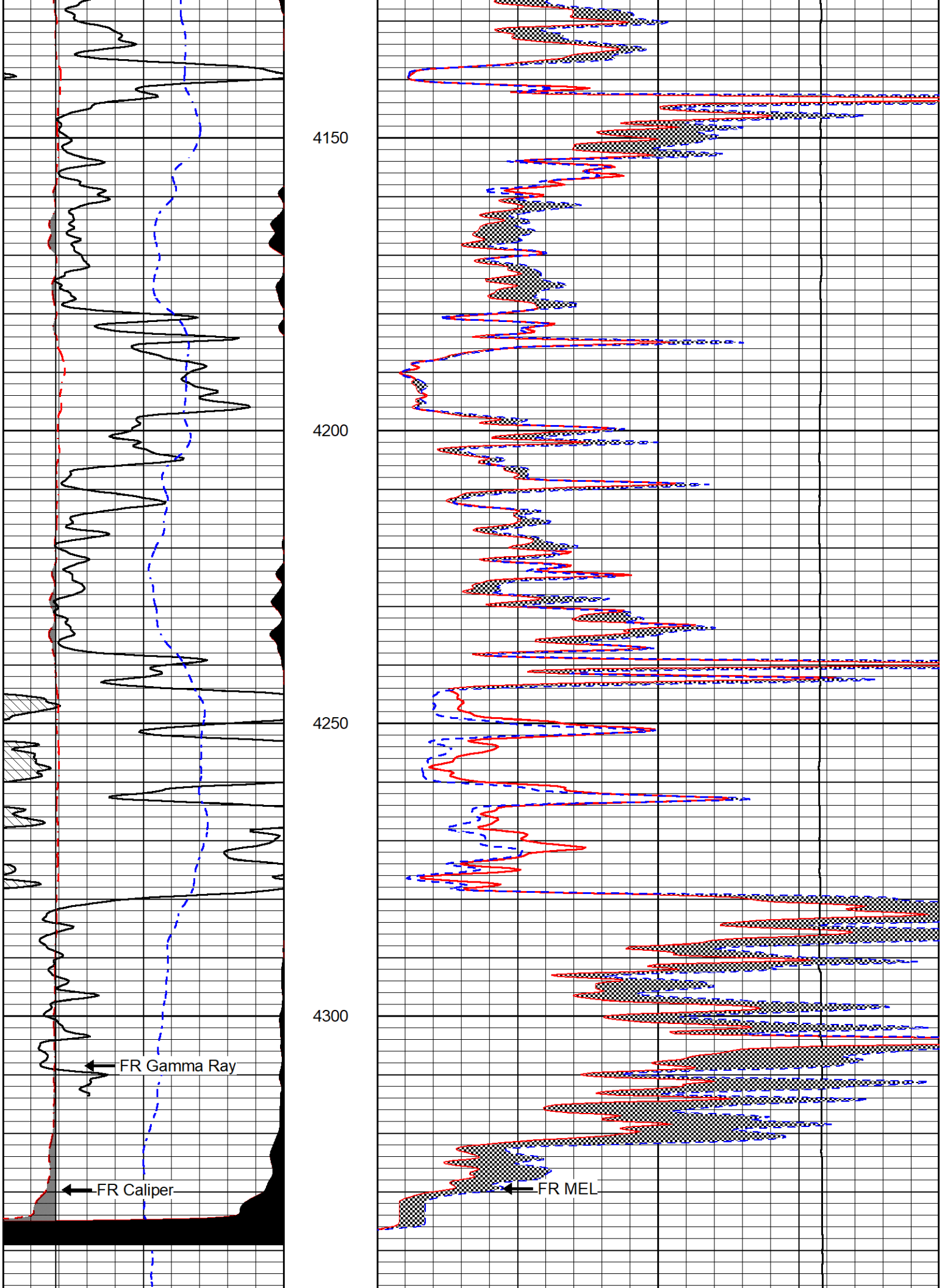
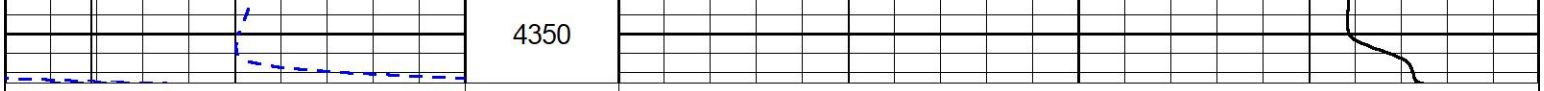
4000
4050
4100


4150
4200
4250
4300
FR Gamma Ray
FR Caliper
FR MEL



0	Gamma Ray (GAPI)	150	0	Micro Inverse 1 X 1 (Ohm-m)	40
6	Caliper (in)	16	0	Micro Normal 2" (Ohm-m)	40
2.875	mcal (in)	7.875	10000	Line Weight (lb)	0
-200	SP (mV)	0			

4350

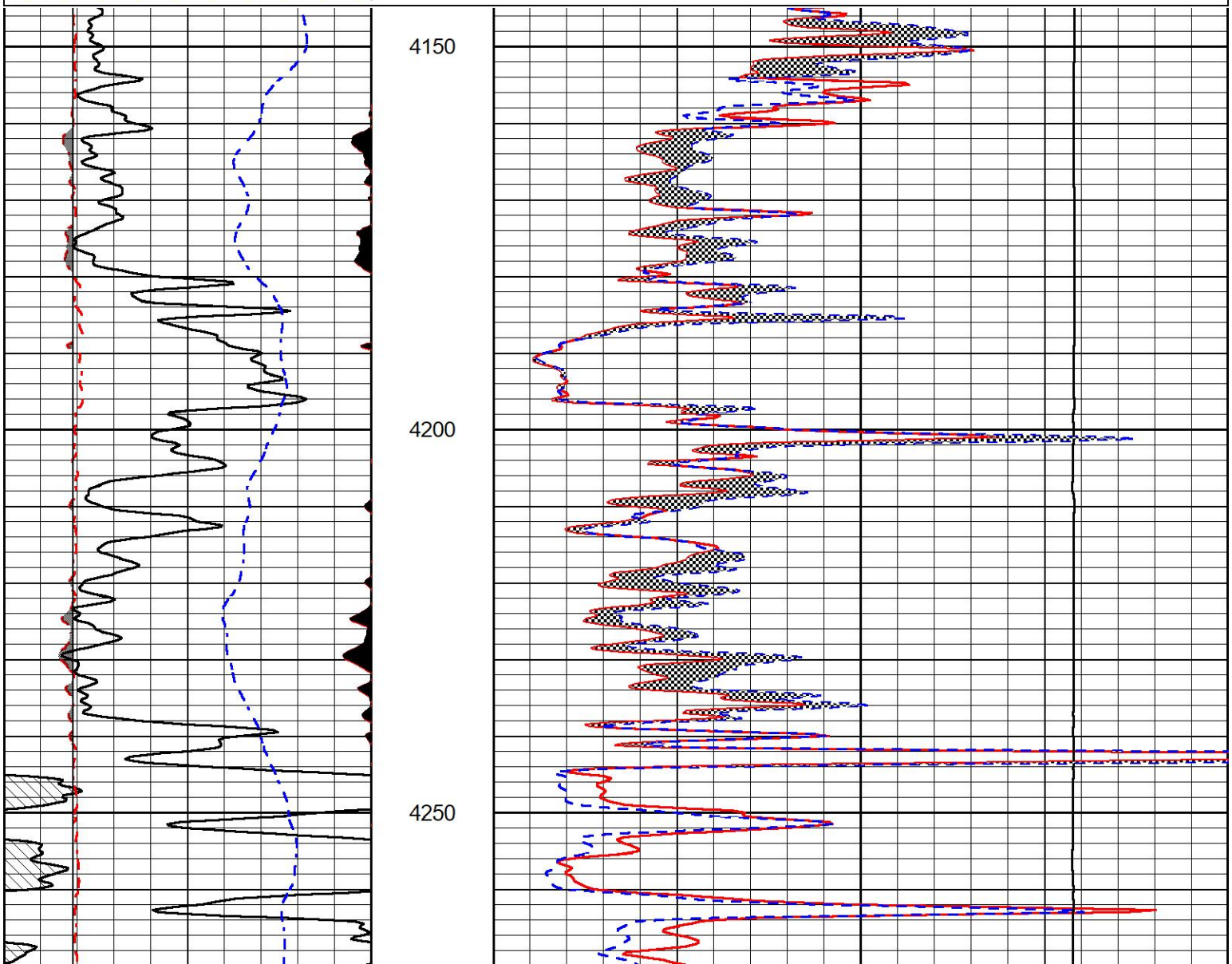
MIDWEST WIRELINE

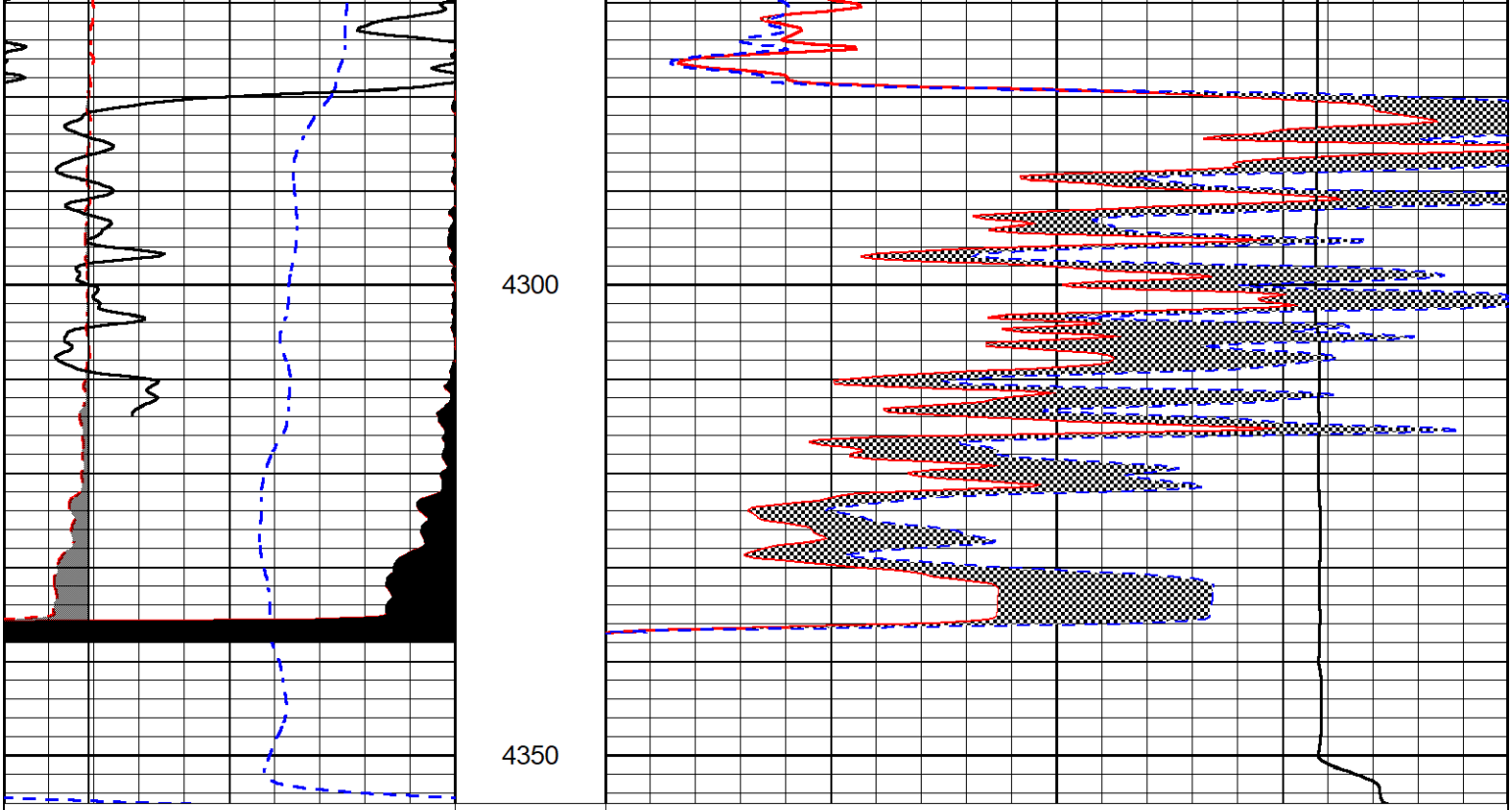
REPEAT SECTION

REPEAT PASS

Database File	lachenmayr_tanner 2.db
Dataset Pathname	stkml/pass2.1
Presentation Format	_micro
Dataset Creation	Fri Dec 02 17:51:10 2022
Charted by	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150	0	Micro Inverse 1 X 1 (Ohm-m)	40
6	Caliper (in)	16	0	Micro Normal 2" (Ohm-m)	40
2.875	mcal (in)	7.875	10000	Line Weight (lb)	0
-200	SP (mV)	0			





Calibration Report

Database File	lachenmayr_tanner 2.db
Dataset Pathname	stkml/pass3.5
Dataset Creation	Fri Dec 02 17:53:25 2022

Dual Induction Calibration Report

Serial-Model:	505 HT-M&W
Surface Cal Performed:	Mon Nov 14 06:05:40 2022

	Readings		References			Results	
Loop:	Air	Loop	Air	Loop		m	b
Deep	167.000	835.000	0.000	255.800	mmho/m	0.480	-53.000
Medium	1348.000	1348.000	0.000	255.800	mmho/m	0.390	-49.500

Microlog Calibration Report

Serial-Model:	402-PSI STKBL ML
Performed:	Fri Nov 25 03:22:18 2022

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0037	0.0043	0.0000	10.0000	Ohm-m	38000.0000	-1.8000
Inverse	0.1208	0.0013	0.0000	10.0000	Ohm-m	42000.0000	-1.0000
Caliper	1.0046	1.1419	5.5000	20.0000	in	105.5890	-102.7500

Compensated Density Calibration Report

Serial-Model:	303-03-M&W
Source #:	21170B
Master Calibration Performed:	Mon Oct 17 15:14:24 2022

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3841.78	5151.73	cps
Aluminum	2.650	g/cc	700.98	3068.49	cps

Spine Angle = 73.06 Density/Spine Ratio = 0.503

	Size		Reading
Small Ring	4.00	in	1.17
Large Ring	14.00	in	1.04

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

MIDWEST WIRELINE

Company	Lachenmayr Oil, LLC
Well	Tanner #2
Field	Kipp North
County	Stafford
State	Kansas