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Pioneer Energy Services

MICRORESISTIVITY LOG

Company RJM COMPANY
Well GROSSARDT NO. 3
Field KRAFT-PRUSA
County BARTON State KANSAS

Location: API # : 15-009-26184-00-00
2310' FNL & 1300' FWL
E2-SE-SW-NW
SEC 10 TWP 17S RGE 11W

Other Services
CNL/CDL
DIL/BHCS

Elevation
K.B. 1863'
D.F. N/A
G.L. 1855'

Permanent Datum GROUND LEVEL Elevation 1855'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Date	9/15/2017			
Run Number	TWO			
Depth Driller	3372'			
Depth Logger	3370'			
Bottom Logged Interval	3369'			
Top Log Interval	2700'			
Casing Driller	8.625" @ 346'			
Casing Logger	347'			
Bit Size	7.875"			
Type Fluid in Hole	CHEMICAL			
Salinity,ppm CL	6,000			
Density / Viscosity	9.2	48		
pH / Fluid Loss	9.5	8.8		
Source of Sample	FLOWLINE			
Rm @ Meas. Temp	.75 @ 62			
Rmf @ Meas. Temp	.56 @ 62			
Rmc @ Meas. Temp	1.01 @ 62			
Source of Rmf / Rmc	CHARTS			
Rm @ BHT	.42 @ 110			
Operating Rig Time	4 HOURS			
Max Rec. Temp. F	110			
Equipment Number	108			
Location	HAYS			
Recorded By	J. HENRICKSON			
Witnessed By	WYATT URBAN			

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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.

CLAFLIN KANSAS
5 NORTH, EAST INTO

Log Measured From: KELLY BUSHING 8 Ft. Above Permanent Datum

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

Your Pioneer Energy Services Crew	This Log Record Was Witnessed By
Engineer: J. HENRICKSON	Primary Witness: WYATT URBAN
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

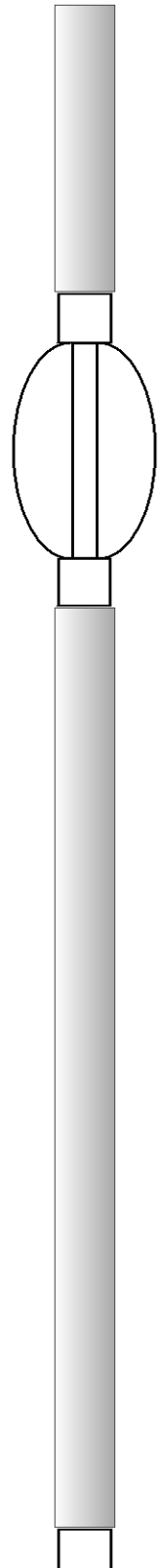
Log Variables

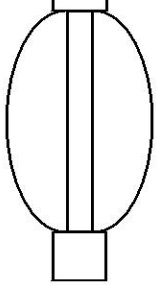
DatabaseC:\ProgramData\Warrior\Data\rjm_grossardt_3.db
Dataset field/well/stack/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	110	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	-120	65	Off	3370

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
			ML-Armadillo (Armadillo-4) Pengo micro log tool mandrel with Armadillo Electronics	5.00	3.50	100.00
MCAL	28.00					
MI	28.00					
MN	28.00					
			CENT-PENGO	5.50	3.00	70.00
WVF4	13.50		SLT-PENGO (0001)	16.00	3.50	300.00
WVF1	13.50					
WVF3	11.50					
WVF2	11.50					



			CENT-PENGO	5.50	3.00	70.00

Dataset:	rjm_grossardt_3.db: field/well/SONMEL/pass3
Total length:	32.00 ft
Total weight:	540.00 lb
O.D.:	3.50 in

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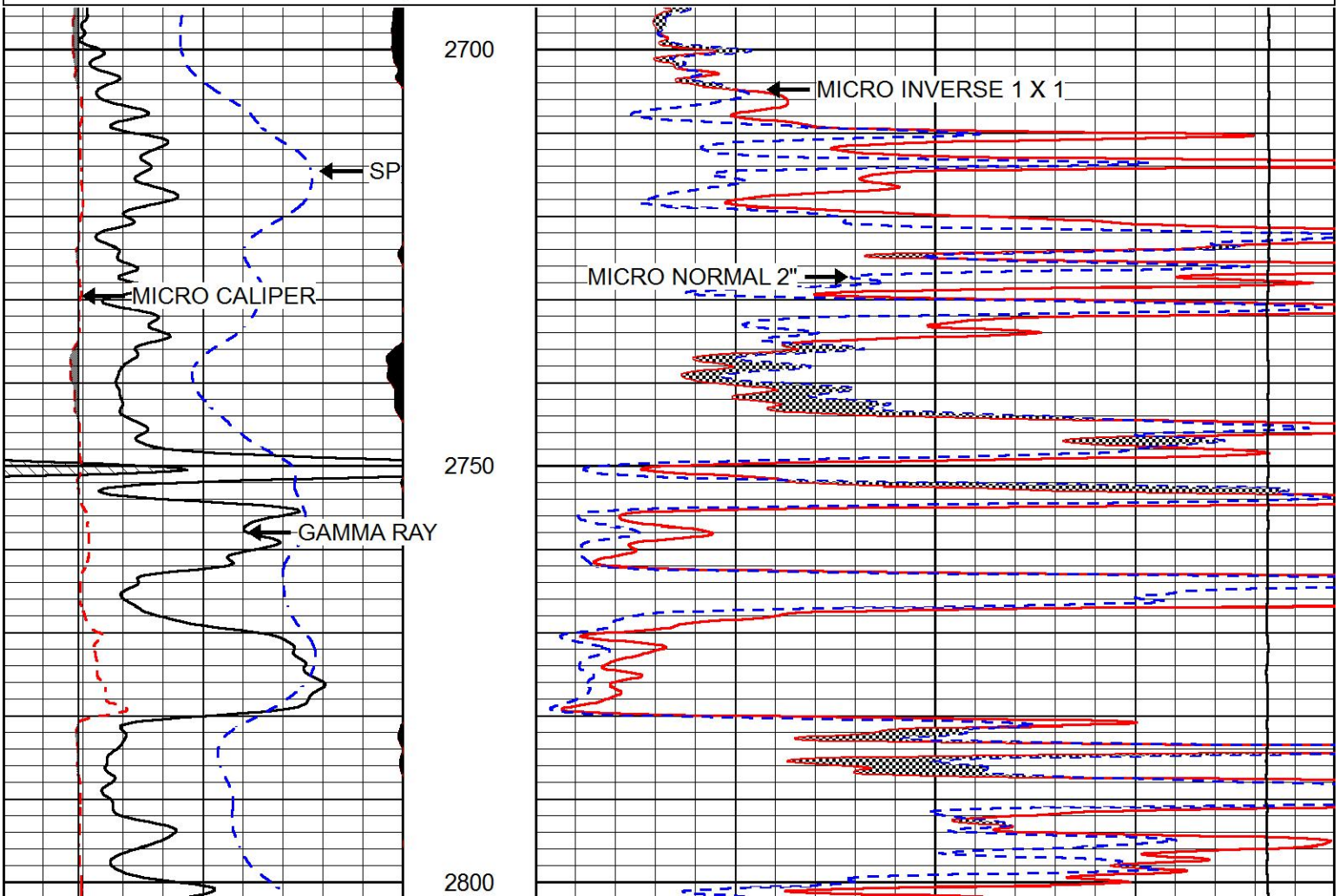
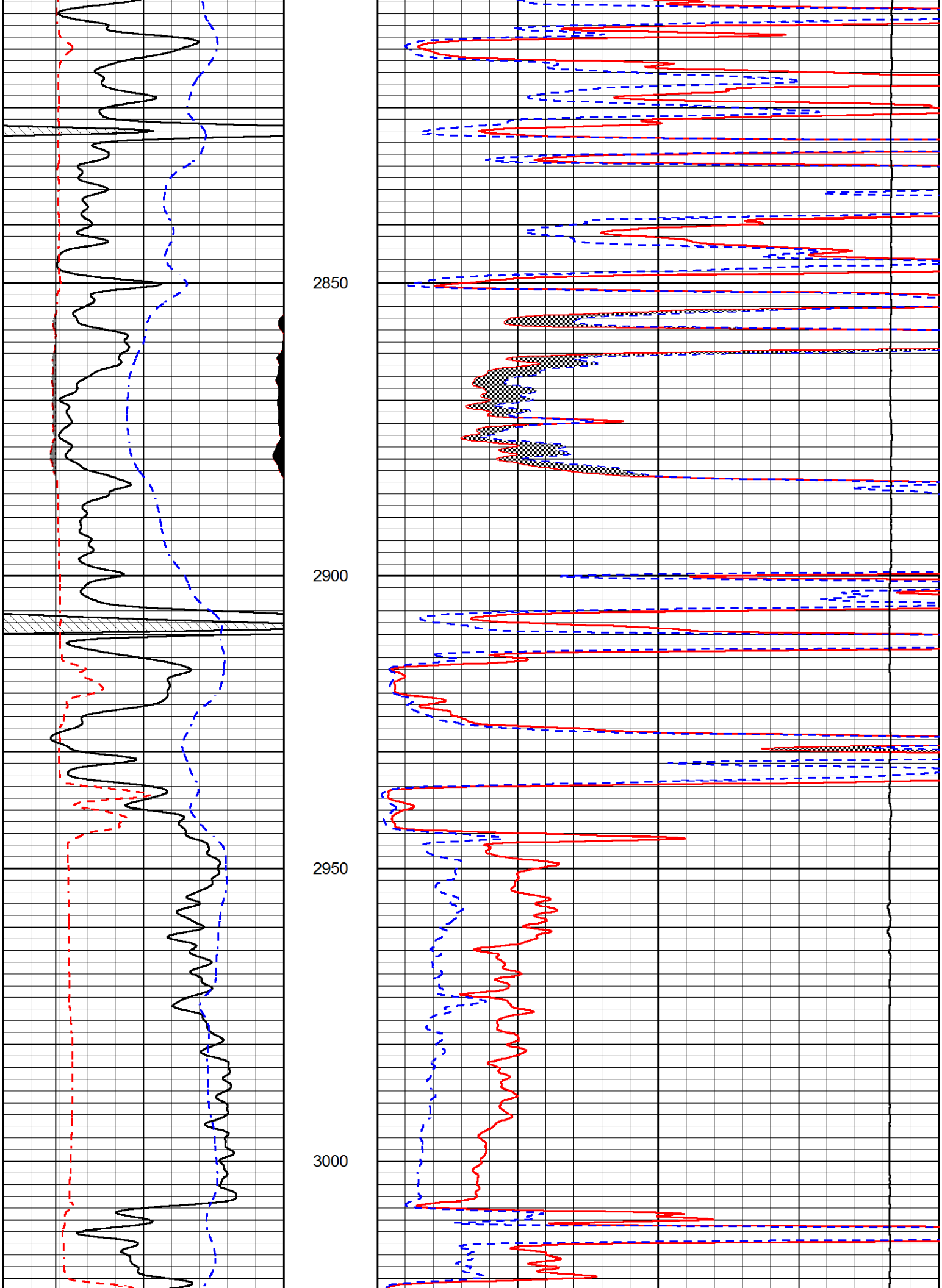
MAIN PASS

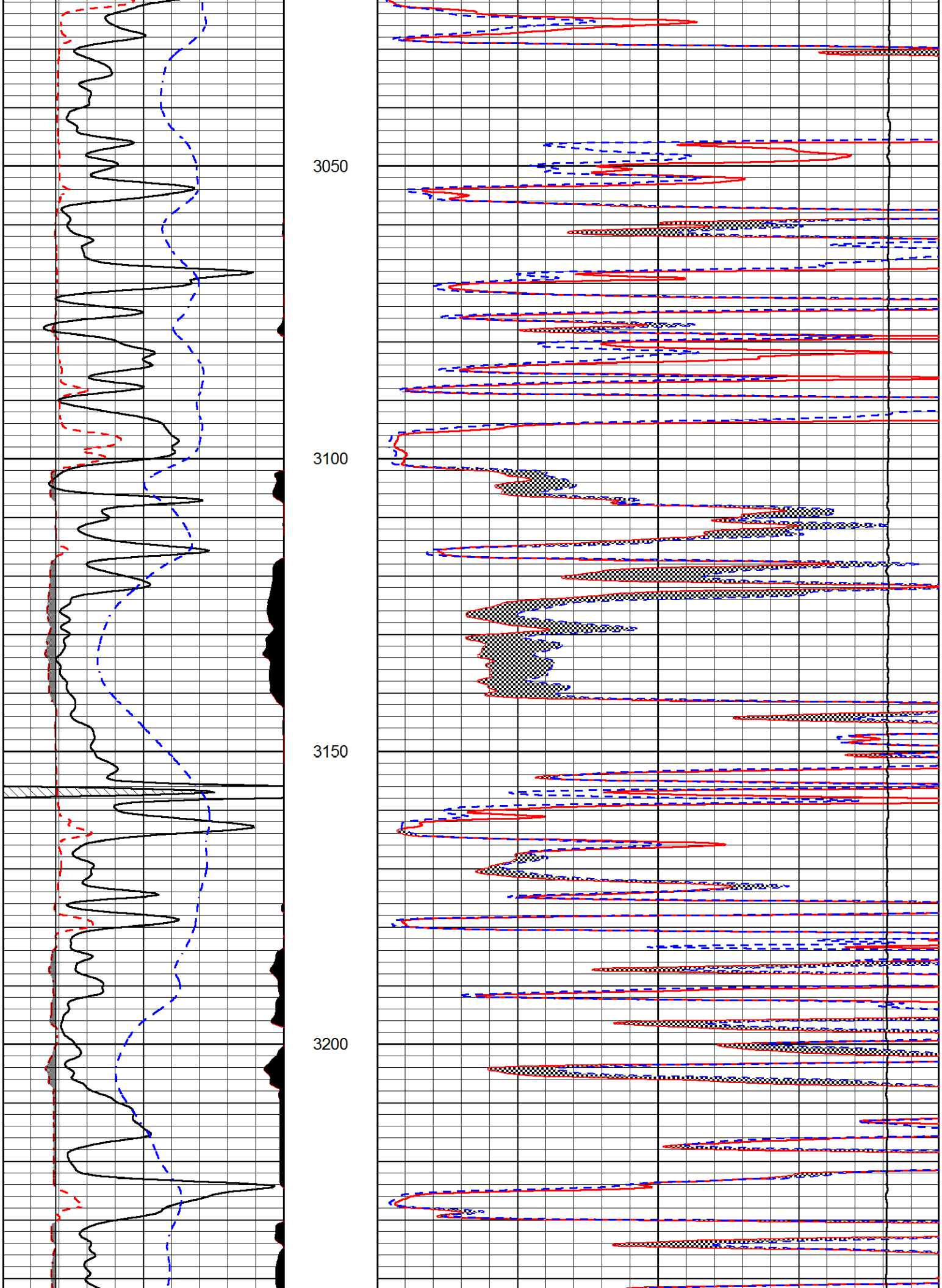
Database File	rjm_grossardt_3.db
Dataset Pathname	stack/pass3.1
Presentation Format	micro
Dataset Creation	Fri Sep 15 05:04:03 2017
Charted by	Depth in Feet scaled 1:240

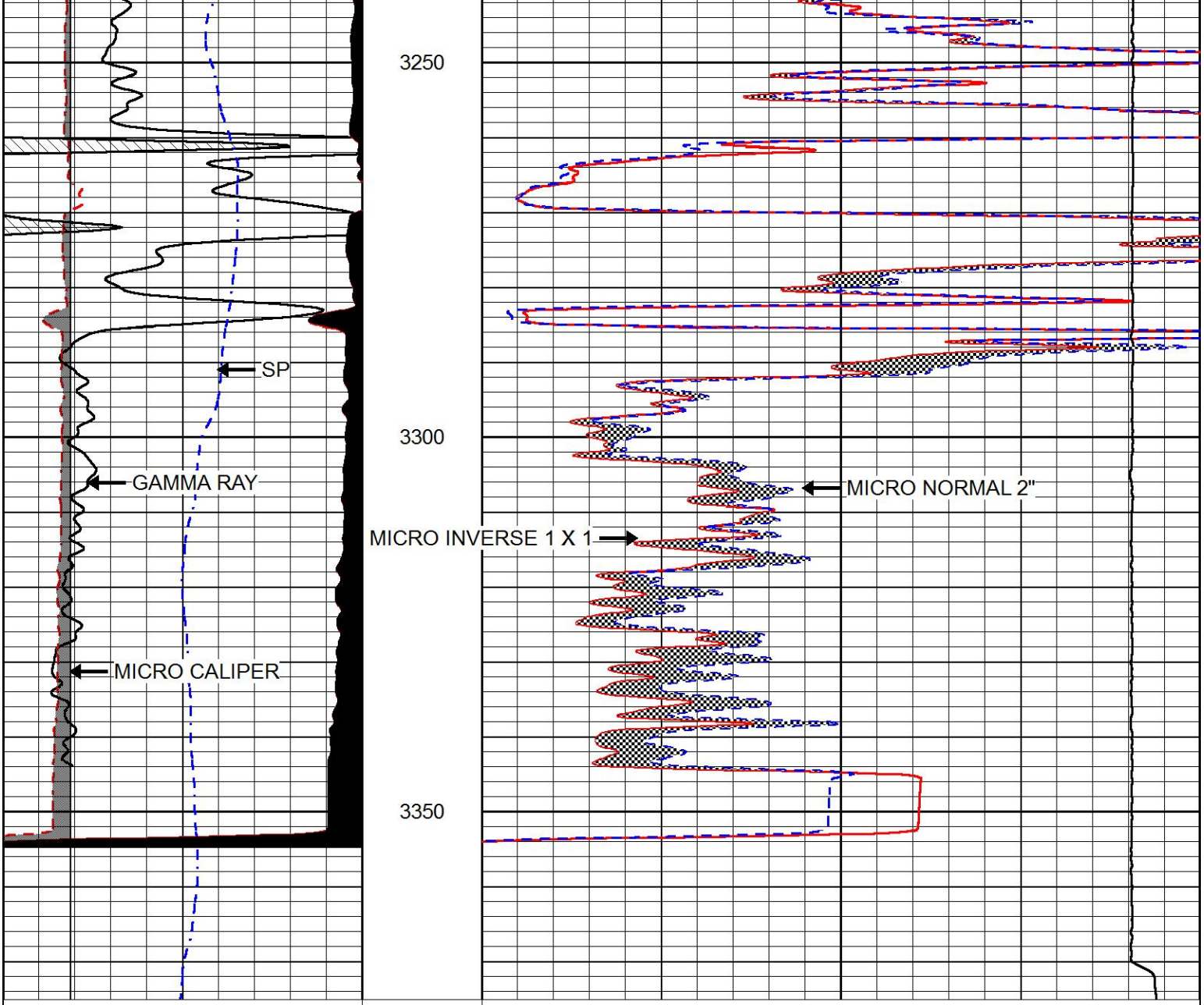
0	GAMMA RAY (GAPI)	150
6	MICRO CALIPER (in)	16
6	BIT SIZE (in)	16
-200	SP (mV)	0

0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40
15000	LINE TENSION (lb)	0




2850
2900
2950
3000


3050
3100
3150
3200



0	GAMMA RAY (GAPI)	150
6	MICRO CALIPER (in)	16
6	BIT SIZE (in)	16
-200	SP (mV)	0

0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40
15000	LINE TENSION (lb)	0

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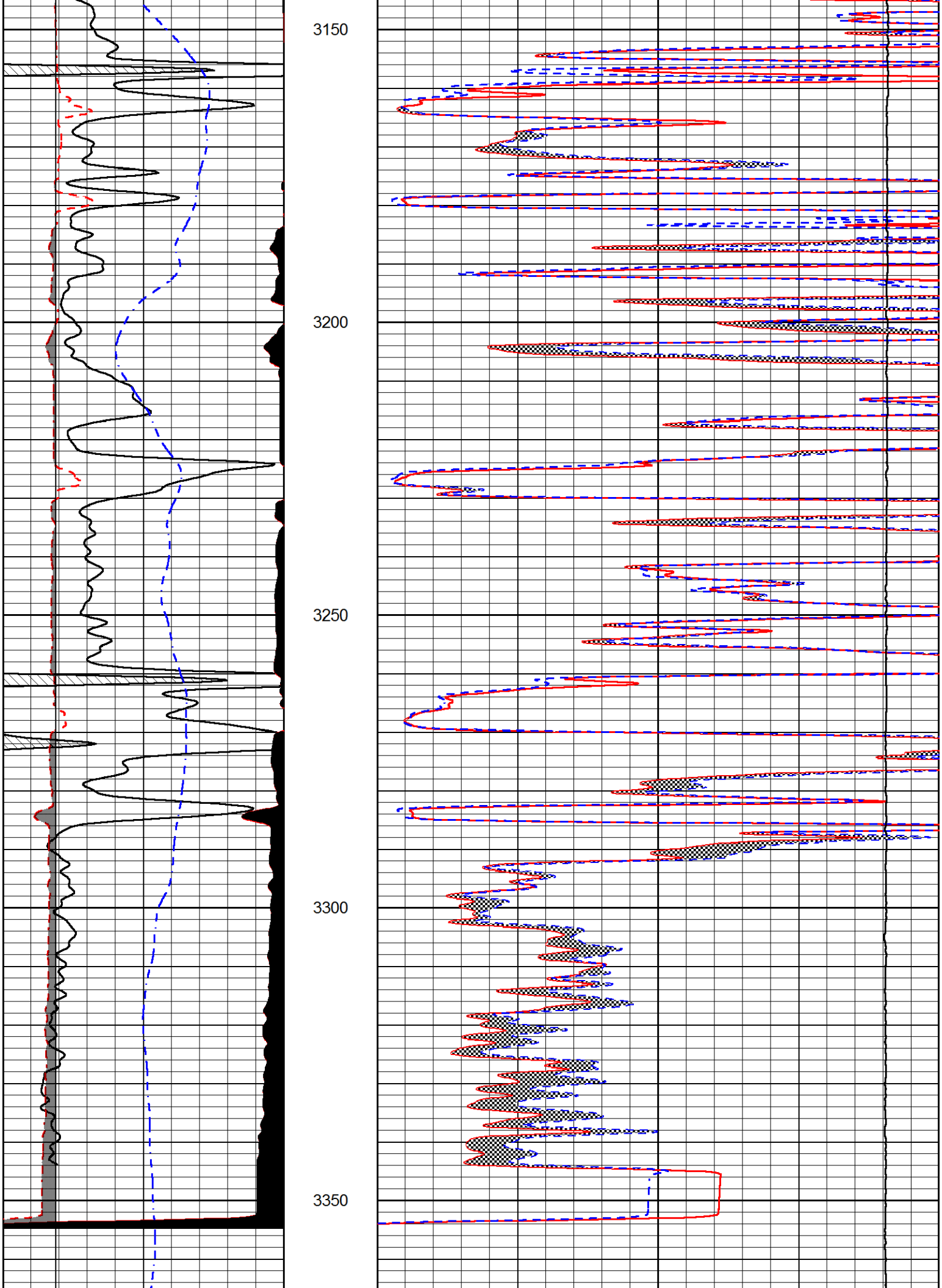
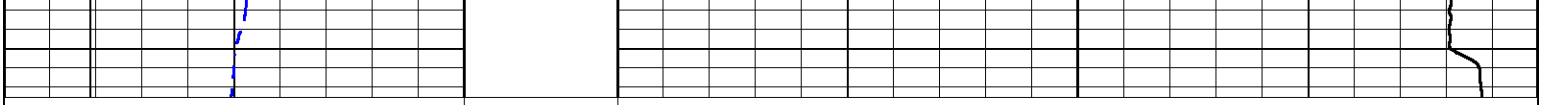
REPEAT SECTION

Database File	rjm_grossardt_3.db
Dataset Pathname	stack/pass2.1
Presentation Format	micro
Dataset Creation	Fri Sep 15 04:32:30 2017
Charted by	Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
6	MICRO CALIPER (in)	16
6	BIT SIZE (in)	16
-200	SP (mV)	0

0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40
15000	LINE TENSION (lb)	0


3150
3200
3250
3300
3350



0	GAMMA RAY (GAPI)	150
6	MICRO CALIPER (in)	16
6	BIT SIZE (in)	16
-200	SP (mV)	0

0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40
15000	LINE TENSION (lb)	0

Calibration Report

Database File rjm_grossardt_3.db
Dataset Pathname stack/pass3.1
Dataset Creation Fri Sep 15 05:04:03 2017

Dual Induction Calibration Report

Serial-Model: 1987-M&W
Calibration Performed: Tue Apr 11 16:07:38 2017

	Readings		References			Results	
Loop:	Air	Loop	Air	Loop		Gain	Offset
Deep	178.615	710.235	0.000	255.800	mmho/m	0.530	-36.500
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.440	-110.500

Compensated Density Calibration Report

Serial-Model: 168-986-M&W
Source / Verifier: /
Master Calibration Performed: Tue Apr 11 16:07:47 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	1.03
Large Ring	14.00	in	1.23

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

Serial Number:	89-M&W	
Tool Model:	M&W	
Calibration Performed:	Tue Apr 11 16:08:01 2017	
Calibrator Value:	1000.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	6.2	cps
Sensitivity:	0.5200	GAPI/cps

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Company	RJM COMPANY
Well	GROSSARDT NO. 3
Field	KRAFT-PRUSA
County	BARTON
State	KANSAS