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DUAL INDUCTION LOG

Company RJM COMPANY
Well REIF #2
Field WILDCAT
County BARTON State KANSAS

Location: API # : 15-009-26275-00-00
2252' FSL & 1238' FWL
SE - NE - NW - SW
SEC 1 TWP 17S RGE 12W

Other Services: CNL/CDL, MEL

Elevation: K.B. 1887', D.F. N/A, G.L. 1878'

Permanent Datum: GROUND LEVEL Elevation 1878'
Log Measured From: KELLY BUSHING
Drilling Measured From: KELLY BUSHING

Company	RJM COMPANY			
Well	REIF #2			
Field	WILDCAT			
County	BARTON			
State	KANSAS			
Date	9/26/2019			
Run Number	ONE			
Depth Driller	3353'			
Depth Logger	3355'			
Bottom Logged Interval	3354'			
Top Log Interval	300'			
Casing Driller	8.625" @ 350'			
Casing Logger	350'			
Bit Size	7.875"			
Type Fluid in Hole	CHEMICAL			
Salinity,ppm CL	6000			
Density / Viscosity	9.2	54		
pH / Fluid Loss	8.5	10.4		
Source of Sample	FLOWLINE			
Rm @ Meas. Temp	0.40 @ 72			
Rmf @ Meas. Temp	0.30 @ 72			
Rmc @ Meas. Temp	0.54 @ 72			
Source of Rmf / Rmc	CHARTS			
Rm @ BHT	0.26 @ 110			
Operating Rig Time	3 HOURS			
Max Rec. Temp. F	110			
Equipment Number	P-24			
Location	HAYS			
Recorded By	IAN MABB			
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.

ODIN, KS.
3 1/2 MILES NORTH,
EAST INTO

Log Measured From: KELLY BUSHING 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: IAN MABB	Primary Witness: WYATT URBAN
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\rjm_feif_2.db
Dataset field/well/stackmel/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	100	5.5	0	1	2	2.71

NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	15	18	248	0	Off	3355

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
			GR-M&W (233-M&W)	3.00	3.50	50.00
GR	40.58					
CNLSC	37.48		CNT-M&W (207-MW)	5.50	3.50	100.00
CNSSC	36.73					
			CDL-M&W (817-947)	8.50	4.00	250.00
LSD	28.43					
DCAL	28.42					
SSD	27.93					
			ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00
MCAL	19.83					
MI	19.83					
MN	19.83					
RLL3F	15.80					
RLL3	15.80					
			DIL-PSI HIGH TEMP (1039)	18.50	3.50	220.00
CILD	8.00					

CILM	4.70	
SP	0.20	

Dataset:	rjm_feif_2.db: field/well/stackmel/pass3.1
Total length:	43.08 ft
Total weight:	685.00 lb
O.D.:	4.00 in

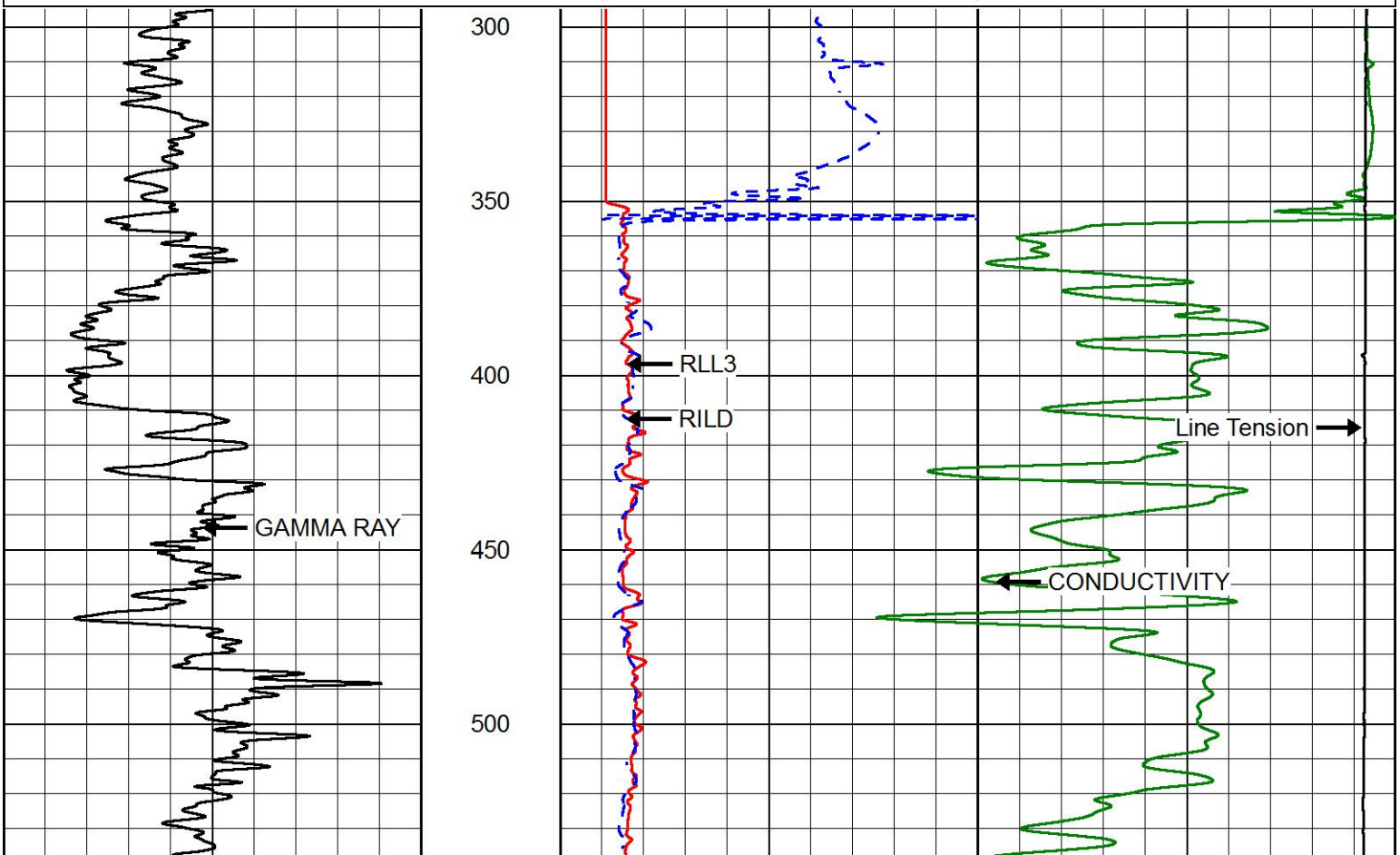
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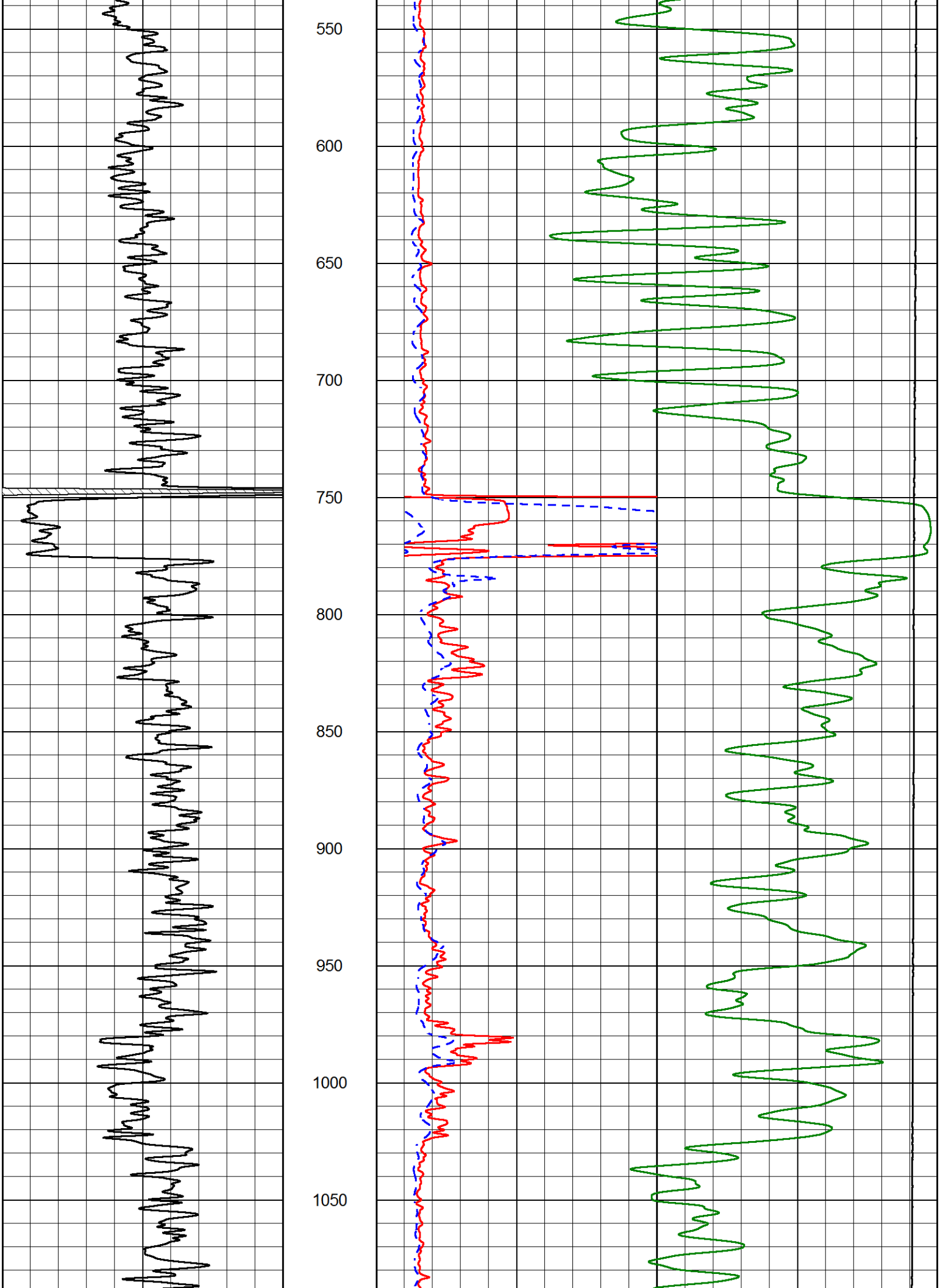
MAIN PASS

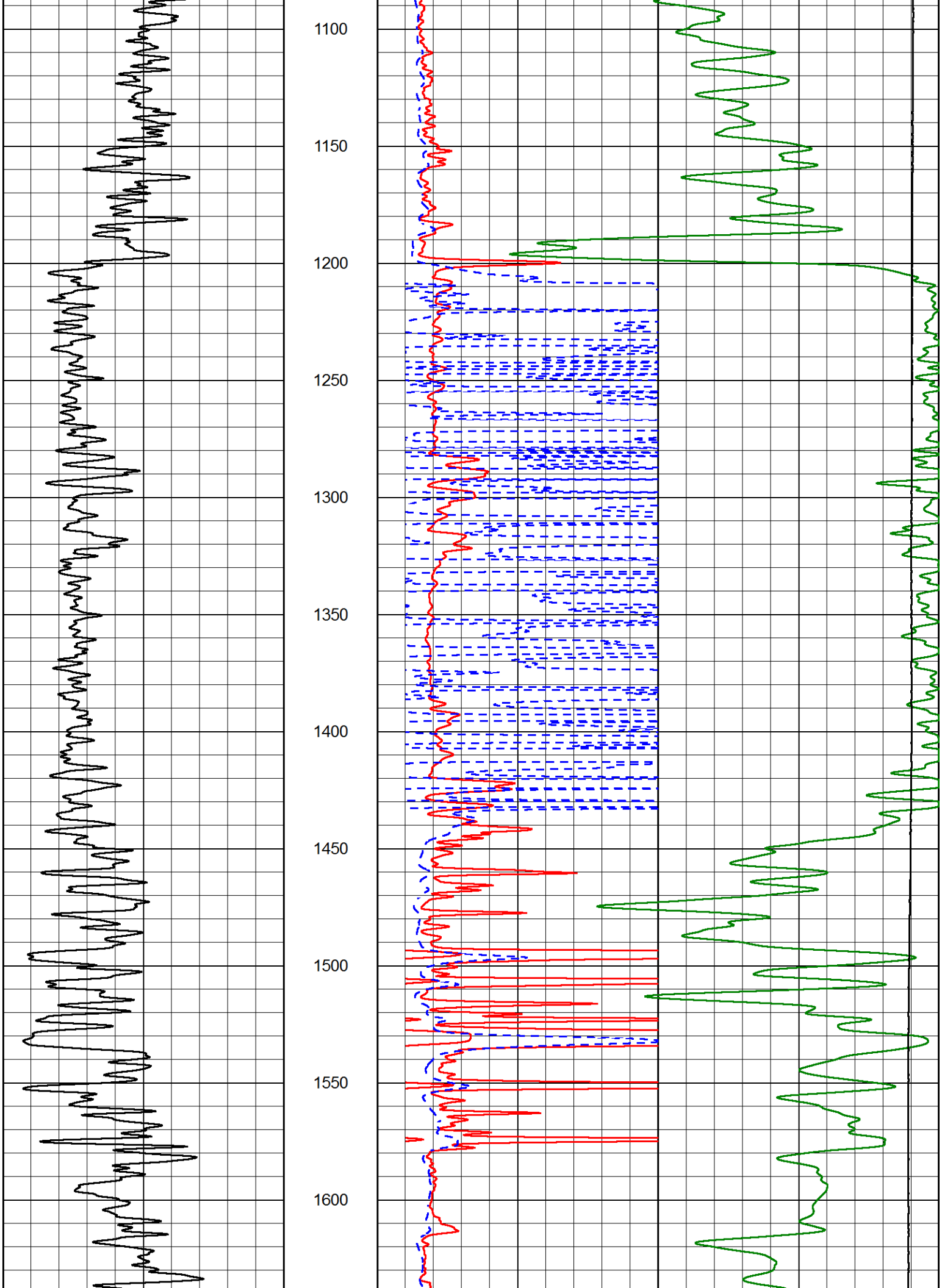
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Dataset Pathname	stackmel/pass4.1
Presentation Format	_dil2in
Dataset Creation	Thu Sep 26 10:29:48 2019
Charted by	Depth in Feet scaled 1:600

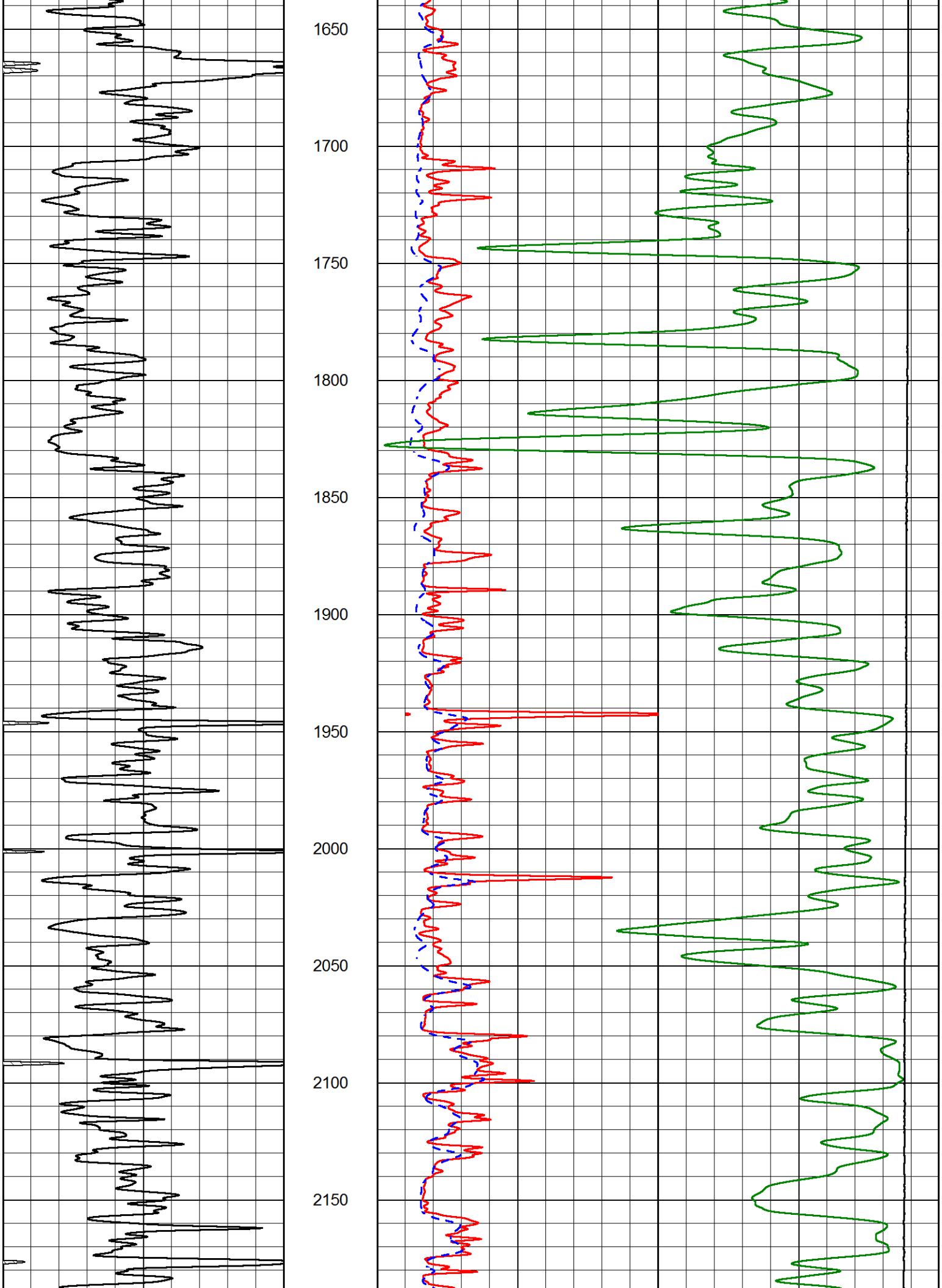
GAMMA RAY
0 (GAPI) 150

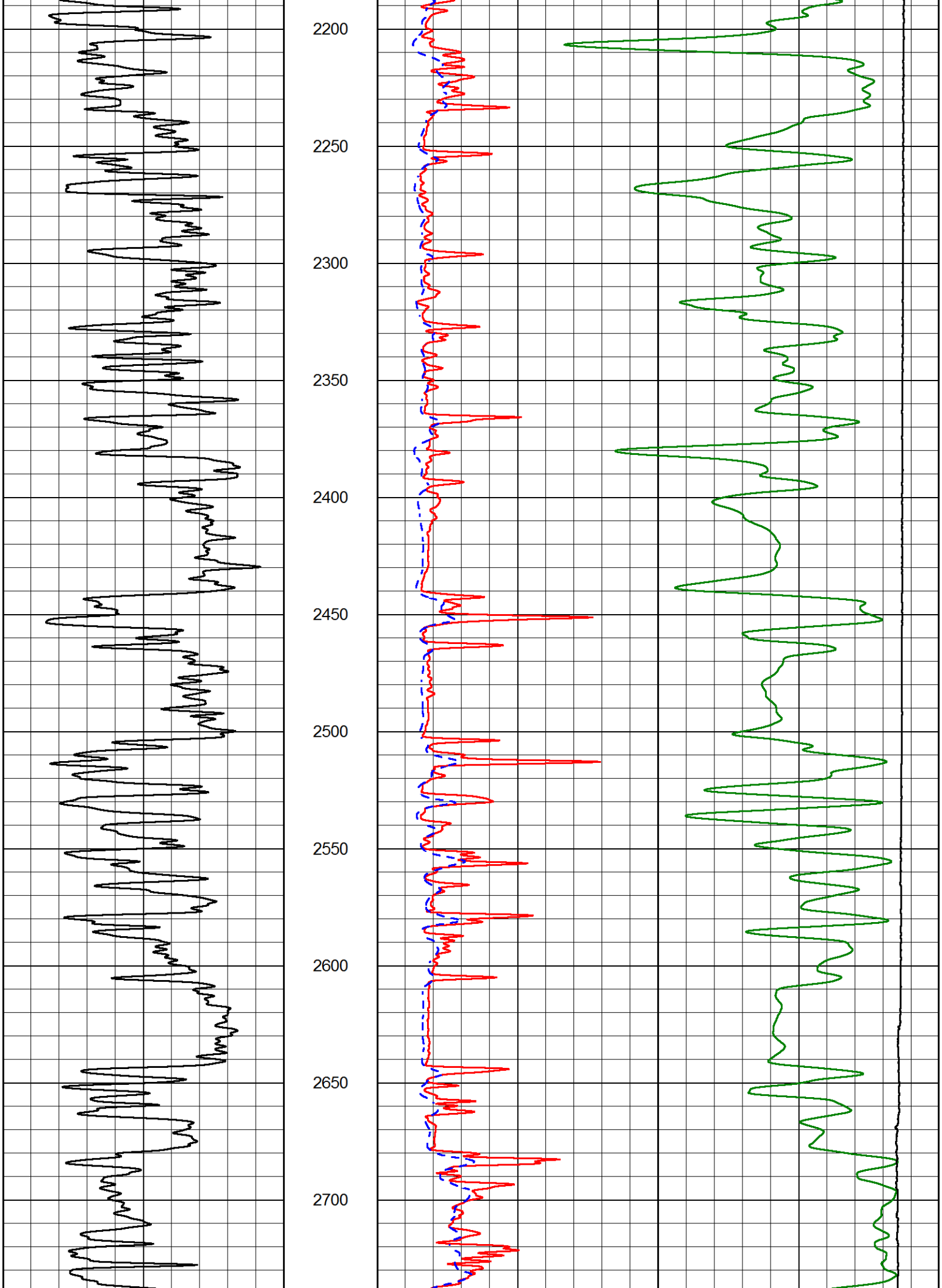
1000 CONDUCTIVITY (mmho/m) 0
15000 Line Tension (lb) 0
0 RLL3 (Ohm-m) 50
50 RLL3 (Ohm-m) 500
0 RILD (Ohm-m) 50
50 Deep Resistivity (Ohm-m) 500

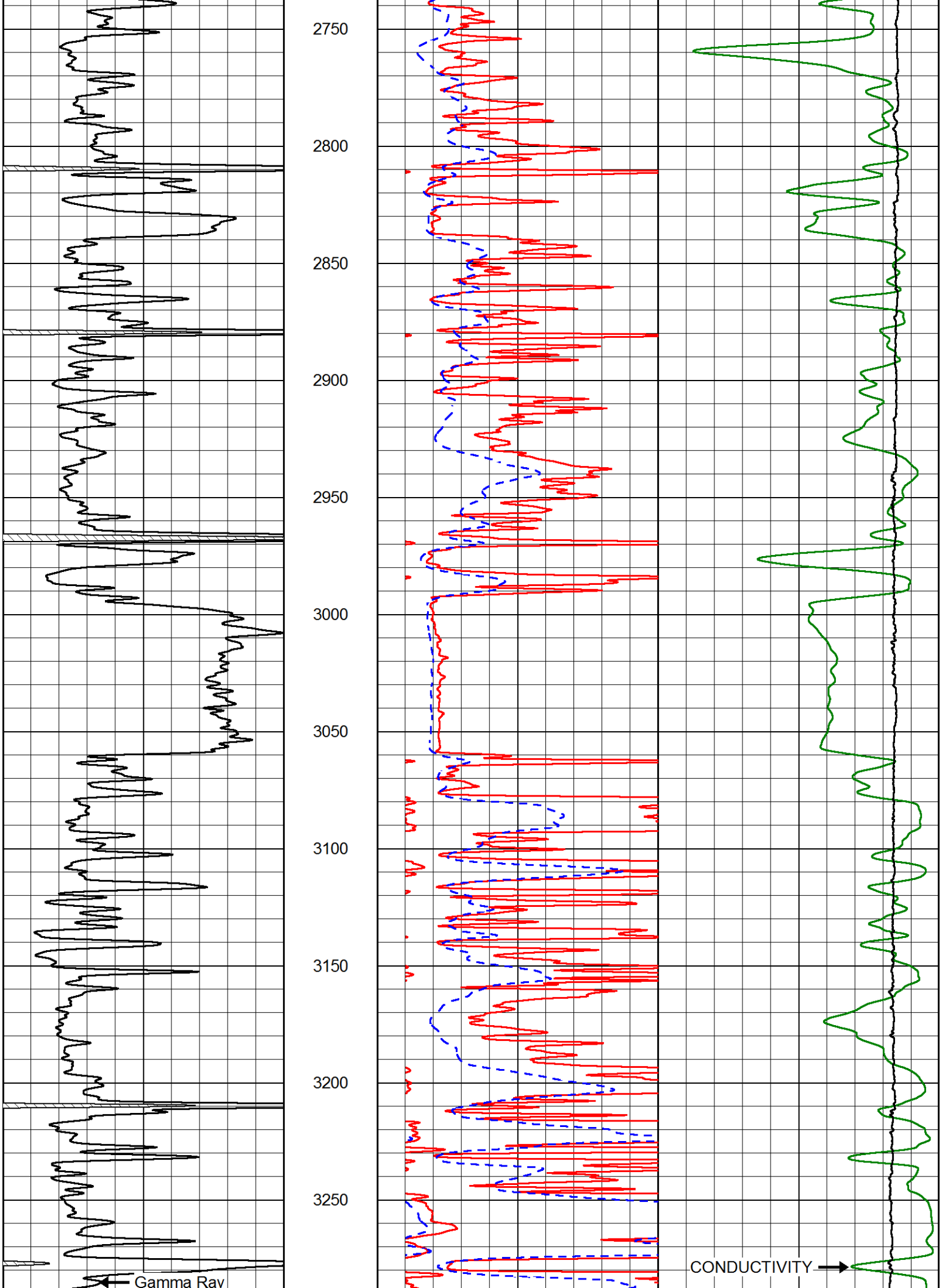


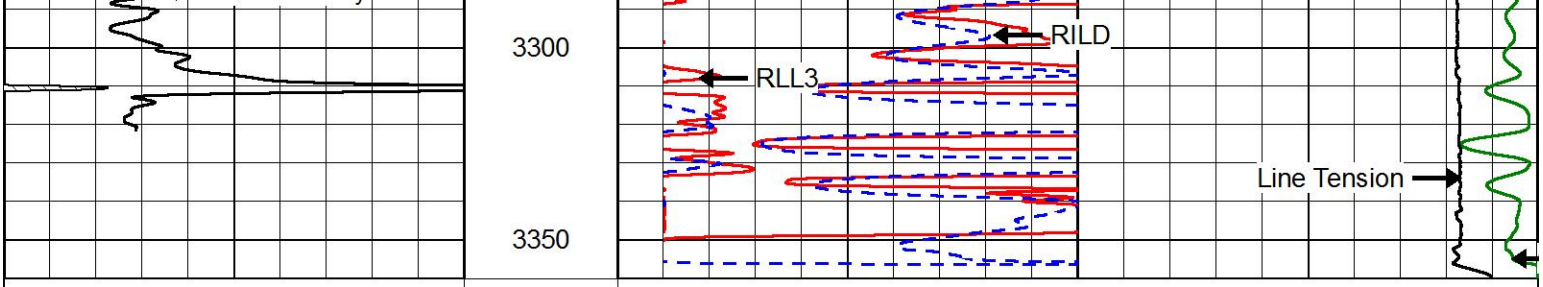

550
600
650
700
750
800
850
900
950
1000
1050


1100
1150
1200
1250
1300
1350
1400
1450
1500
1550
1600


1650
1700
1750
1800
1850
1900
1950
2000
2050
2100
2150


2200
2250
2300
2350
2400
2450
2500
2550
2600
2650
2700


2750
2800
2850
2900
2950
3000
3050
3100
3150
3200
3250
Gamma Ray
CONDUCTIVITY



GAMMA RAY		
0	(GAPI)	150

1000	CONDUCTIVITY (mmho/m)	0
15000	Line Tension (lb)	0

0	RLL3 (Ohm-m)	50
50	RLL3 (Ohm-m)	500
0	RILD (Ohm-m)	50
50	Deep Resistivity (Ohm-m)	500

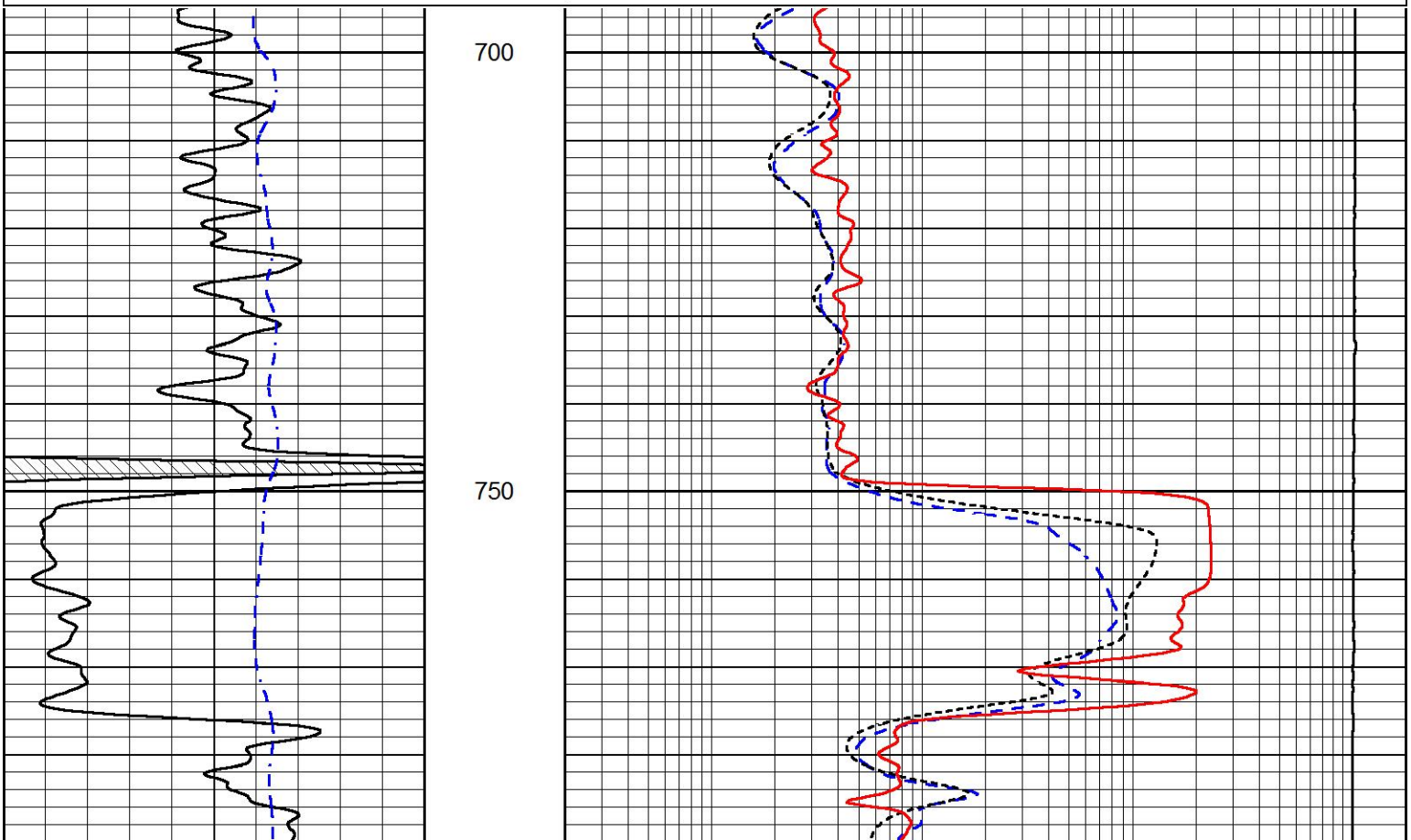
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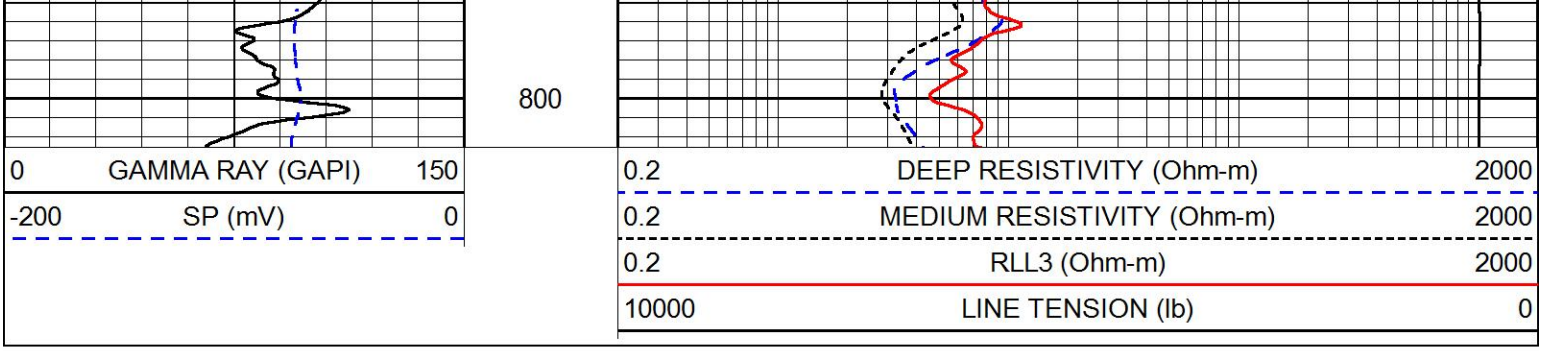
MAIN PASS

Database File	rjm_feif_2.db
Dataset Pathname	stackmel/pass4.1
Presentation Format	_dil
Dataset Creation	Thu Sep 26 10:29:48 2019
Charted by	Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-200	SP (mV)	0

0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	LINE TENSION (lb)	0

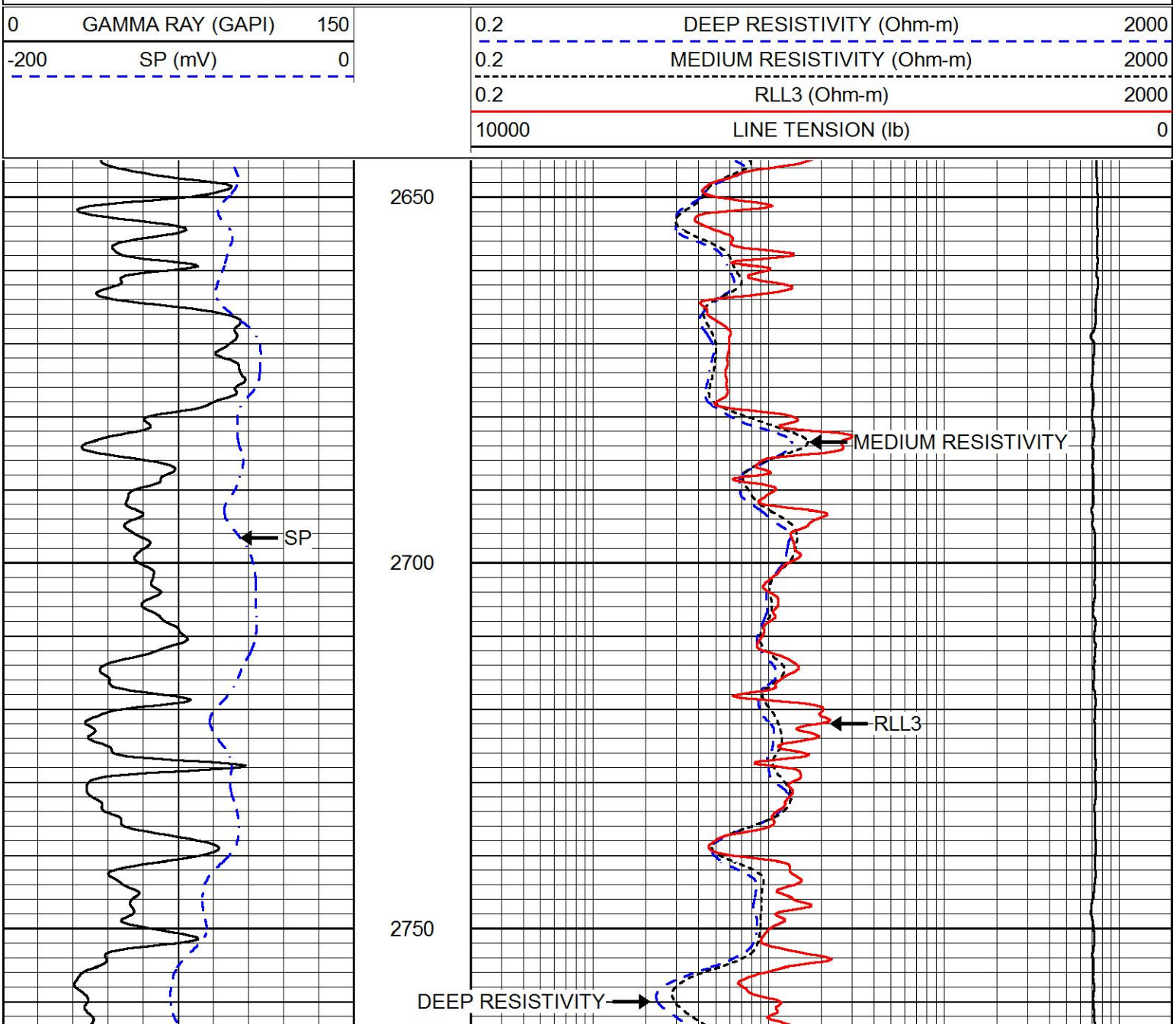


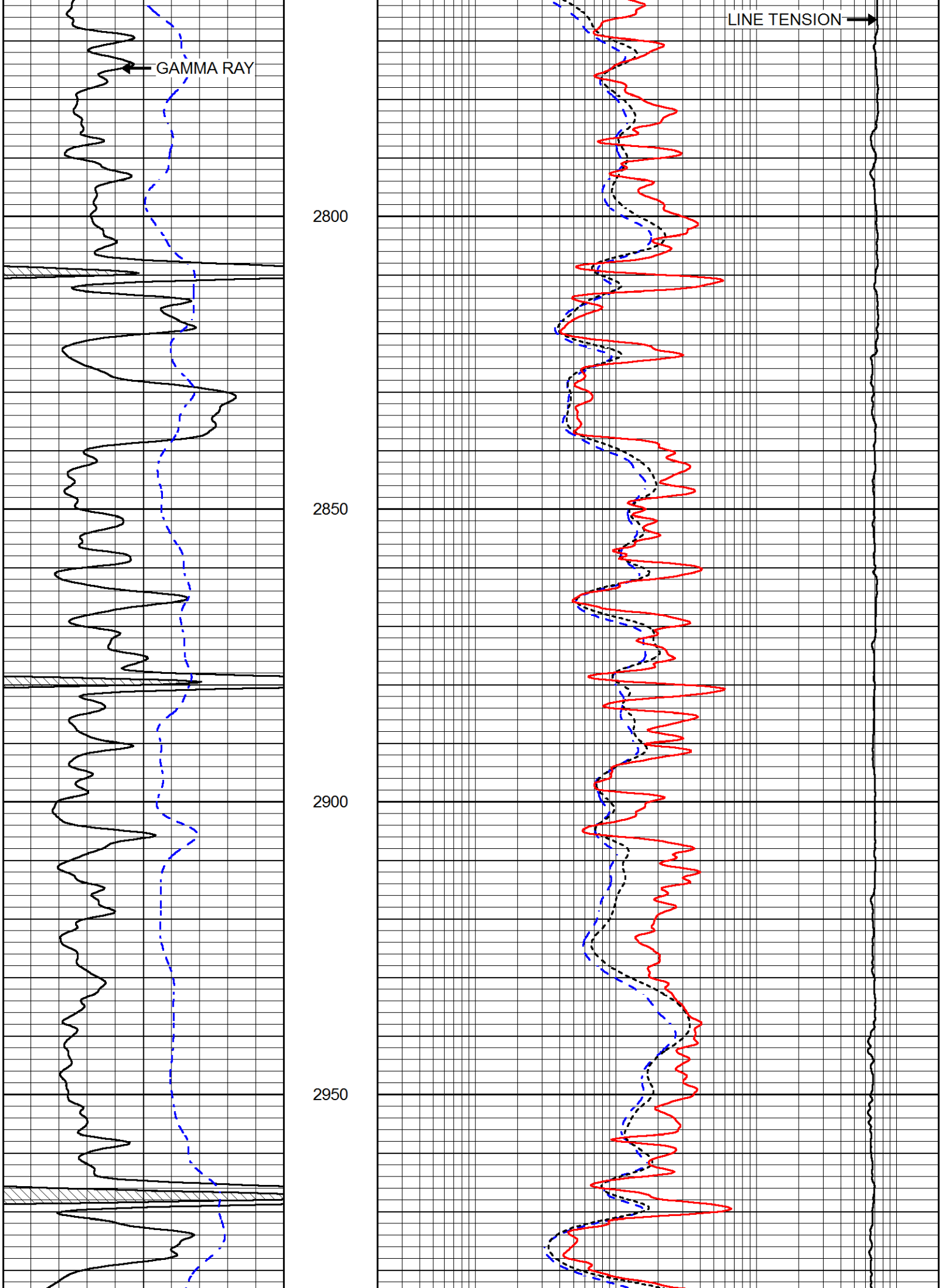


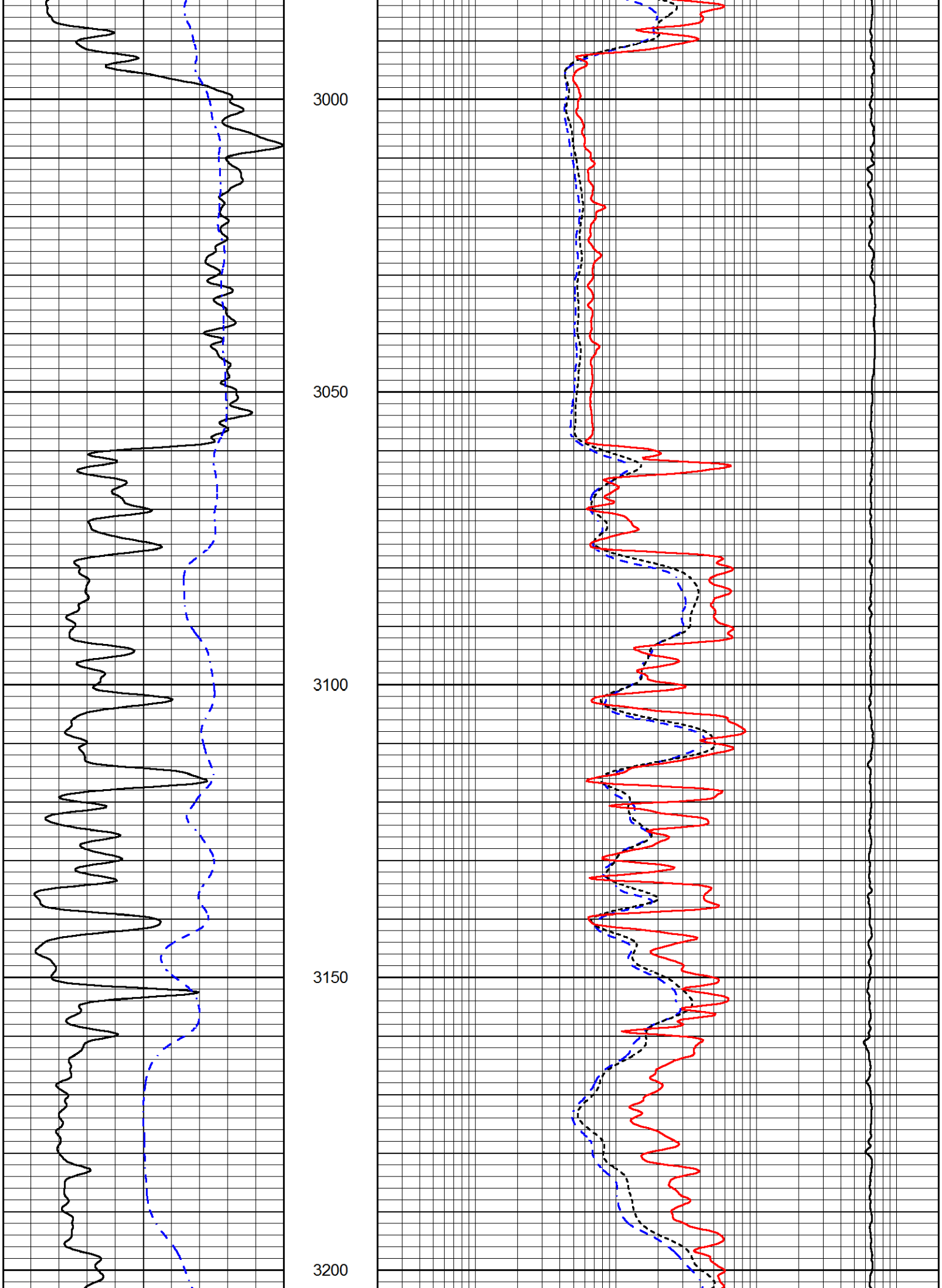
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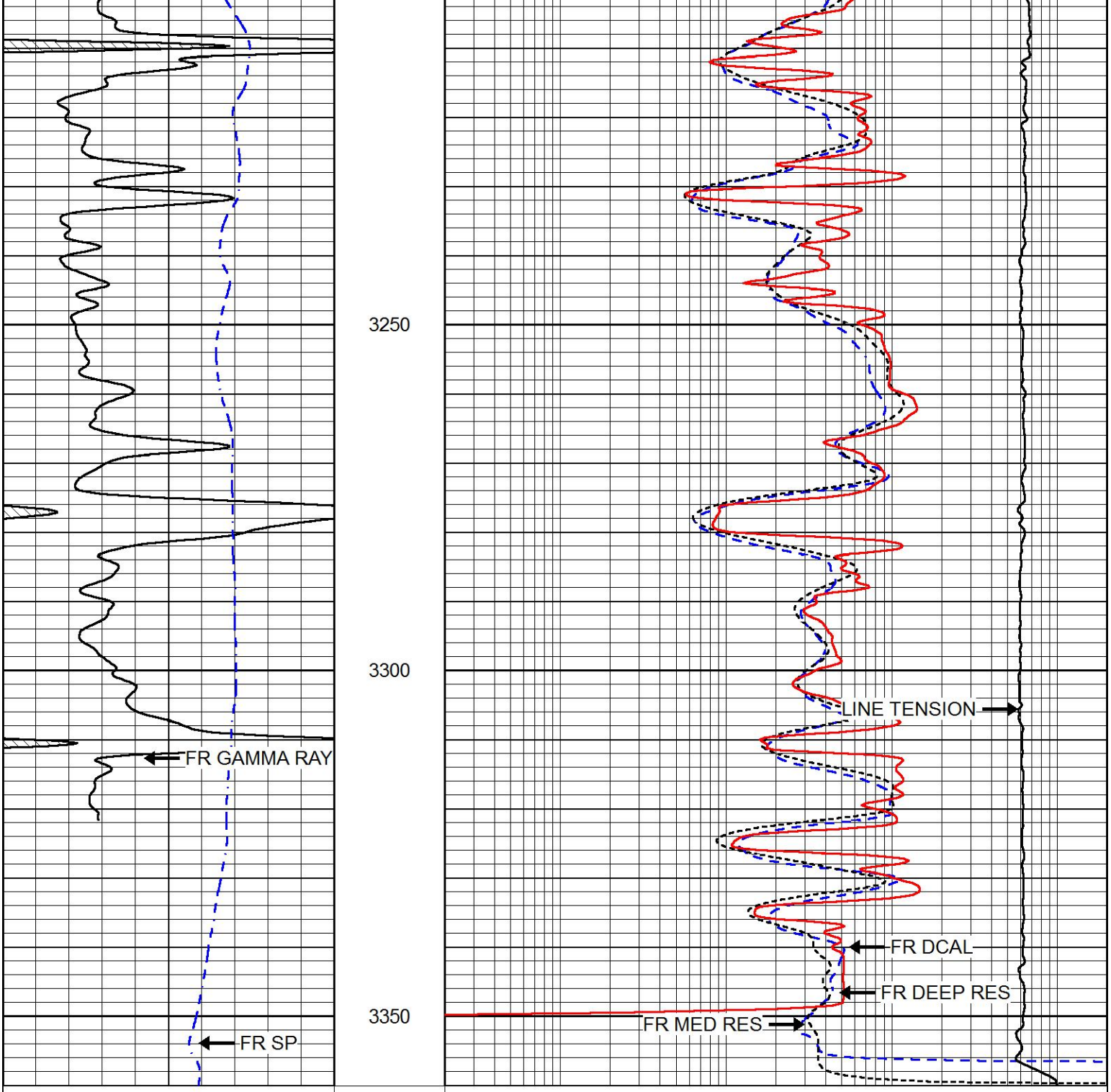
MAIN PASS

Database File	rjm_feif_2.db
Dataset Pathname	stackmel/pass3.1
Presentation Format	_dil
Dataset Creation	Thu Sep 26 10:14:32 2019
Charted by	Depth in Feet scaled 1:240




GAMMA RAY
LINE TENSION
2800
2850
2900
2950

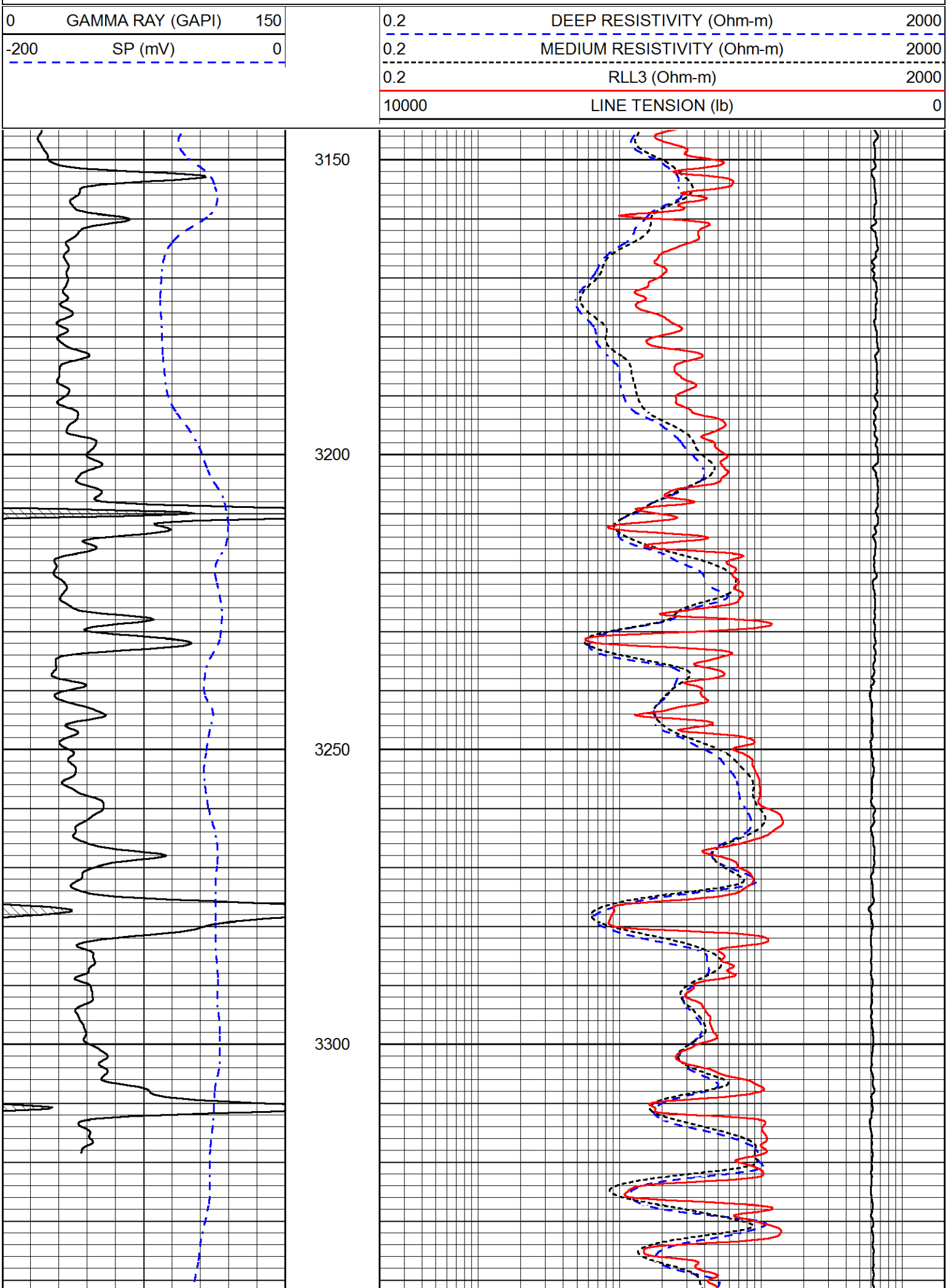

3000
3050
3100
3150
3200

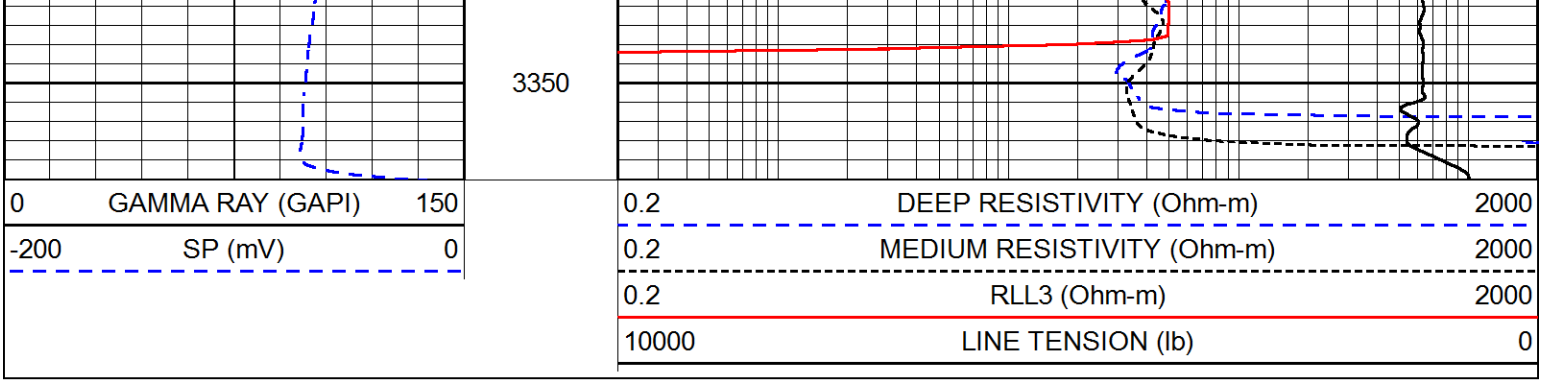


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REPEAT SECTION

Database File	rjm_feif_2.db
Dataset Pathname	stackmel/pass2.1
Presentation Format	_dil
Dataset Creation	Thu Sep 26 09:42:33 2019
Charted by	Depth in Feet scaled 1:240


0 GAMMA RAY (GAPI) 150
-200 SP (mV) 0
0.2 DEEP RESISTIVITY (Ohm-m) 2000
0.2 MEDIUM RESISTIVITY (Ohm-m) 2000
0.2 RLL3 (Ohm-m) 2000
10000 LINE TENSION (lb) 0
3150
3200
3250
3300



Calibration Report

Database File	rjm_feif_2.db
Dataset Pathname	stackmel/pass3.1
Dataset Creation	Thu Sep 26 10:14:32 2019

Dual Induction Calibration Report

Serial-Model:	1039-PSI HIGH TEMP
Calibration Performed:	Tue Sep 10 08:34:01 2019

	Readings		References			Results	
Loop:	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.800	mmho/m	0.450	-51.000
Medium	0.000	1348.000	142.000	255.800	mmho/m	0.365	-49.000

Microlog Calibration Report

Serial-Model:	PSI-01-PSIML
Performed:	Thu Aug 01 07:57:13 2019

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	18000.0000	-0.7000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	18000.0000	-0.6000
Caliper	1.0001	1.1397	6.5000	18.5000	in	70.0000	-64.2500

Compensated Density Calibration Report

Serial-Model:	817-947-M&W
Source / Verifier:	16955B / 2ci
Master Calibration Performed:	Tue Sep 24 21:18:50 2019

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	6127.15	5922.31	cps
Aluminum	2.680	g/cc	1141.85	3762.09	cps

Spine Angle = 74.89

Density/Spine Ratio = 0.532

	Size		Reading
Small Ring	4.50	in	1.02
Large Ring	15.00	in	1.34

Compensated Neutron Calibration Report

Serial Number: 207-MW
Tool Model: M&W
Calibration Performed: WED FEB 13 10:30:30 2019

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: 233-M&W
Tool Model: M&W
Calibration Performed: Fri Feb 07 01:42:40 2014

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.5500 GAPI/cps

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