PIONEER
Pioneer Energy Services

DUAL INDUCTION LOG

Company JAMES PRODUCTION, INC.
Well BEST #1-1
Field WILDCAT
County SHERIDAN State KANSAS

Location: API # : 15-179-21462-00-00
335' FNL & 1294' FEL
SEC 1 TWP 7S RGE 29W

Other Services
CNL/CDL
MEL/BHCS

Elevation
K.B. 2830'
D.F. N/A
G.L. 2825'

Company JAMES PRODUCTION, INC.
Well BEST #1-1
Field WILDCAT
County SHERIDAN
State KANSAS

Permanent Datum GROUND LEVEL Elevation 2825'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Date	7/31/2019			
Run Number	ONE			
Depth Driller	4270'			
Depth Logger	4267'			
Bottom Logged Interval	4266'			
Top Log Interval	250'			
Casing Driller	8.625" @ 305'			
Casing Logger	302'			
Bit Size	7.875"			
Type Fluid in Hole	CHEMICAL			
Salinity,ppm CL	1500			
Density / Viscosity	8.7 49			
pH / Fluid Loss	9.0 9.2			
Source of Sample	FLOWLINE			
Rm @ Meas. Temp	1.20 @ 73			
Rmf @ Meas. Temp	0.90 @ 73			
Rmc @ Meas. Temp	1.62 @ 73			
Source of Rmf / Rmc	CHARTS			
Rm @ BHT	0.74 @ 119			
Operating Rig Time	4 HOURS			
Max Rec. Temp. F	119			
Equipment Number	P-24			
Location	HAYS			
Recorded By	IAN MABB			
Witnessed By	JARRED LEIS			

<<< Fold Here >>>

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

HOXIE, KS.
6 MILES NORTH TO RD 70N, 3 MILES WEST TO RD 30,
2 MILES NORTH & WEST INTO

Log Measured From: KELLY BUSHING 5 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: JARRED LEIS
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\james_production_best_1_1.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	119	5.5	0	1	2	2.71

NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	2	-3	255	0	Off	0

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 (96-916)	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: james_production_best_1_1.db: field/well/stackmel/pass3.1
Total length: 43.08 ft
Total weight: 685.00 lb
O.D.: 4.00 in

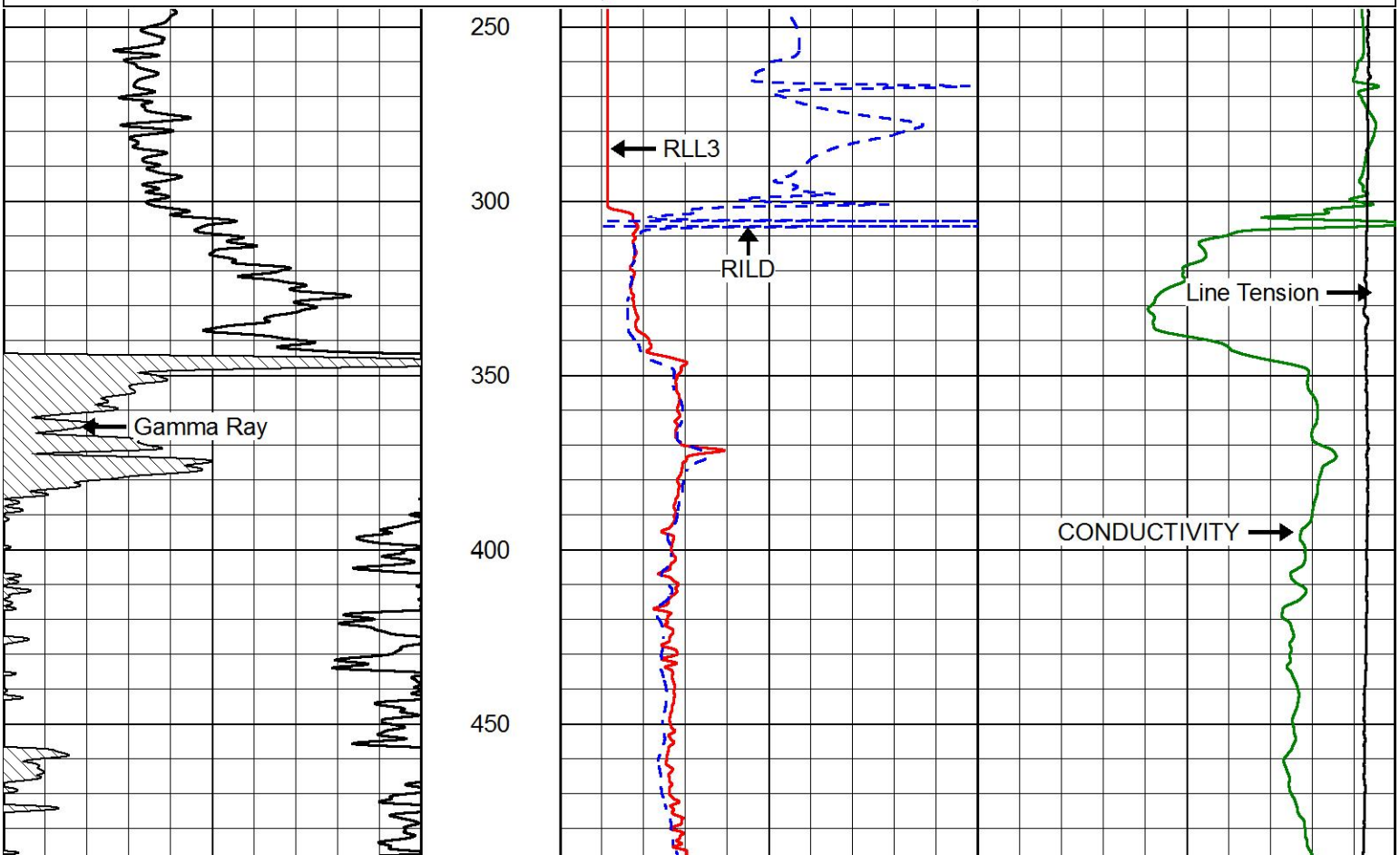
PIONEER
Pioneer Energy Services

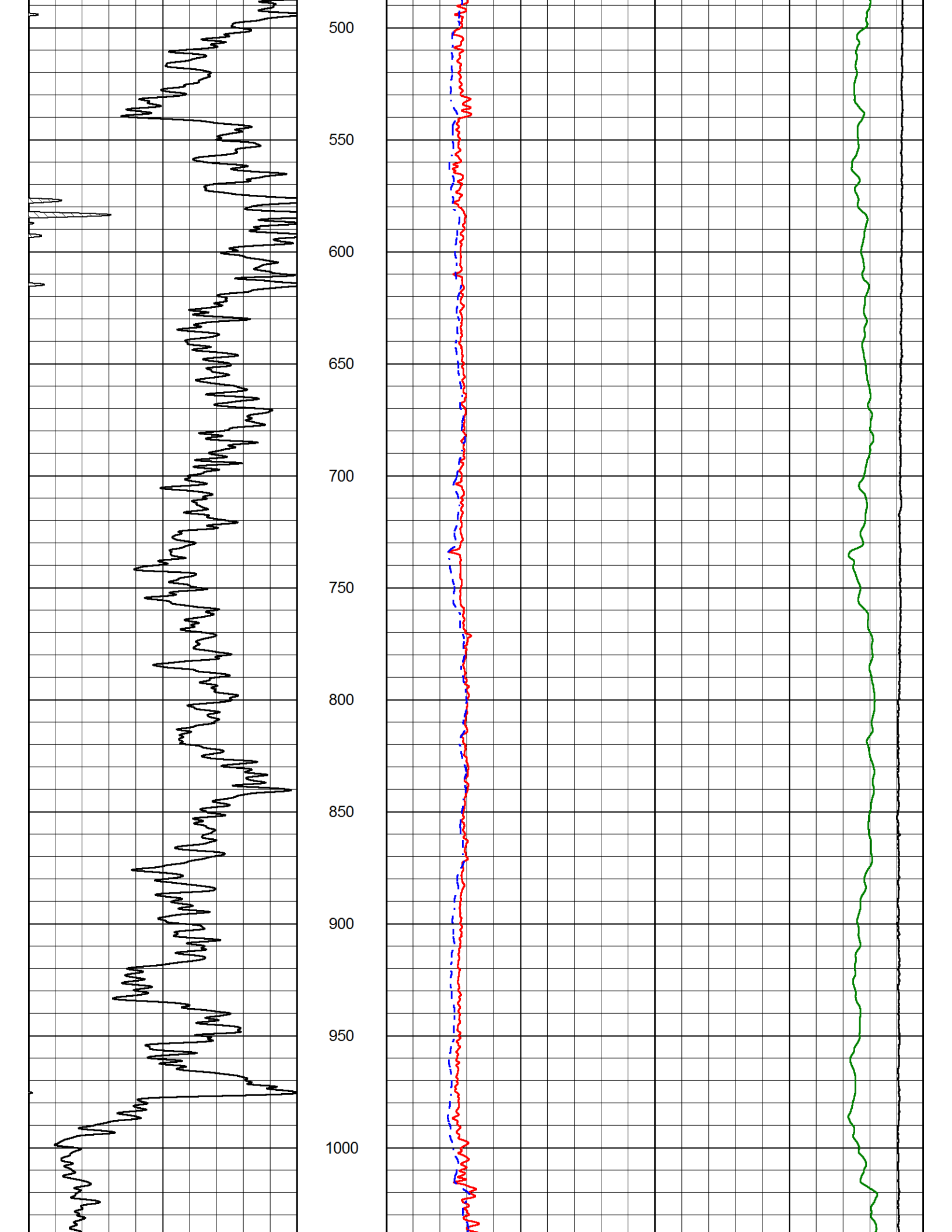
MAIN PASS

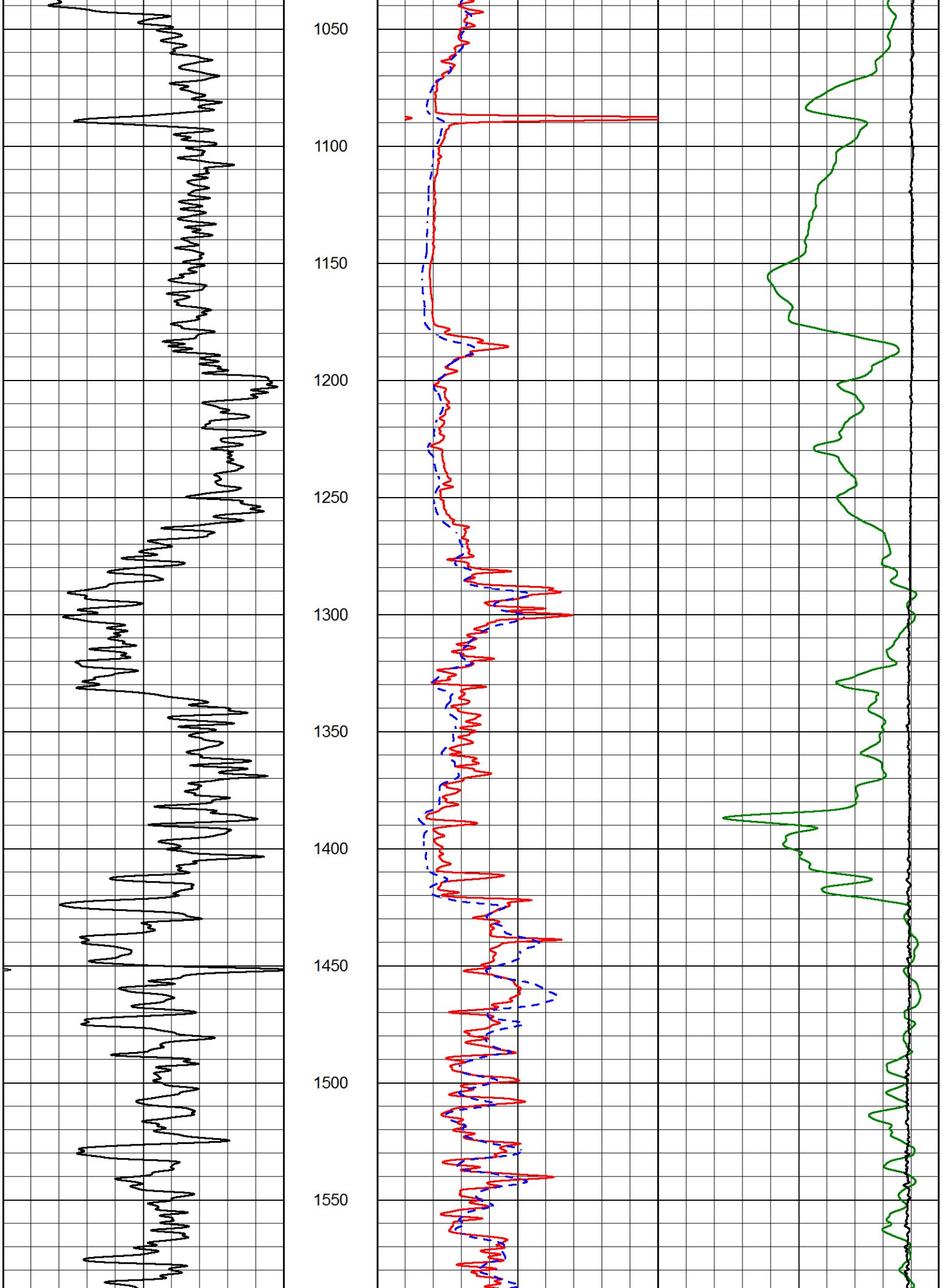
Database File	james_production_best_1_1.db
Dataset Pathname	stackmel/pass4.1
Presentation Format	_dil2in
Dataset Creation	Wed Jul 31 02:39:33 2019
Charted by	Depth in Feet scaled 1:600

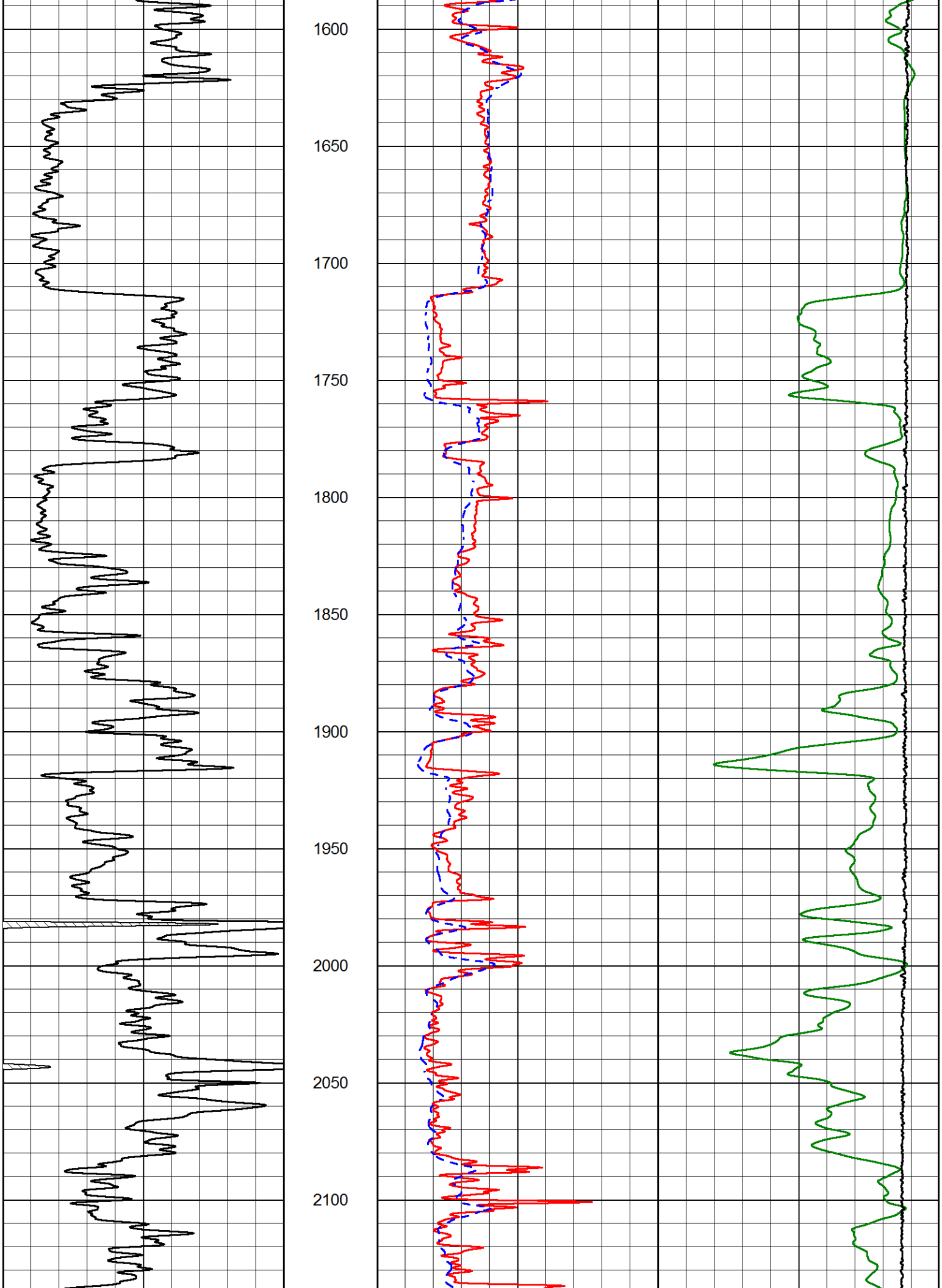
GAMMA RAY
0 (GAPI) 150

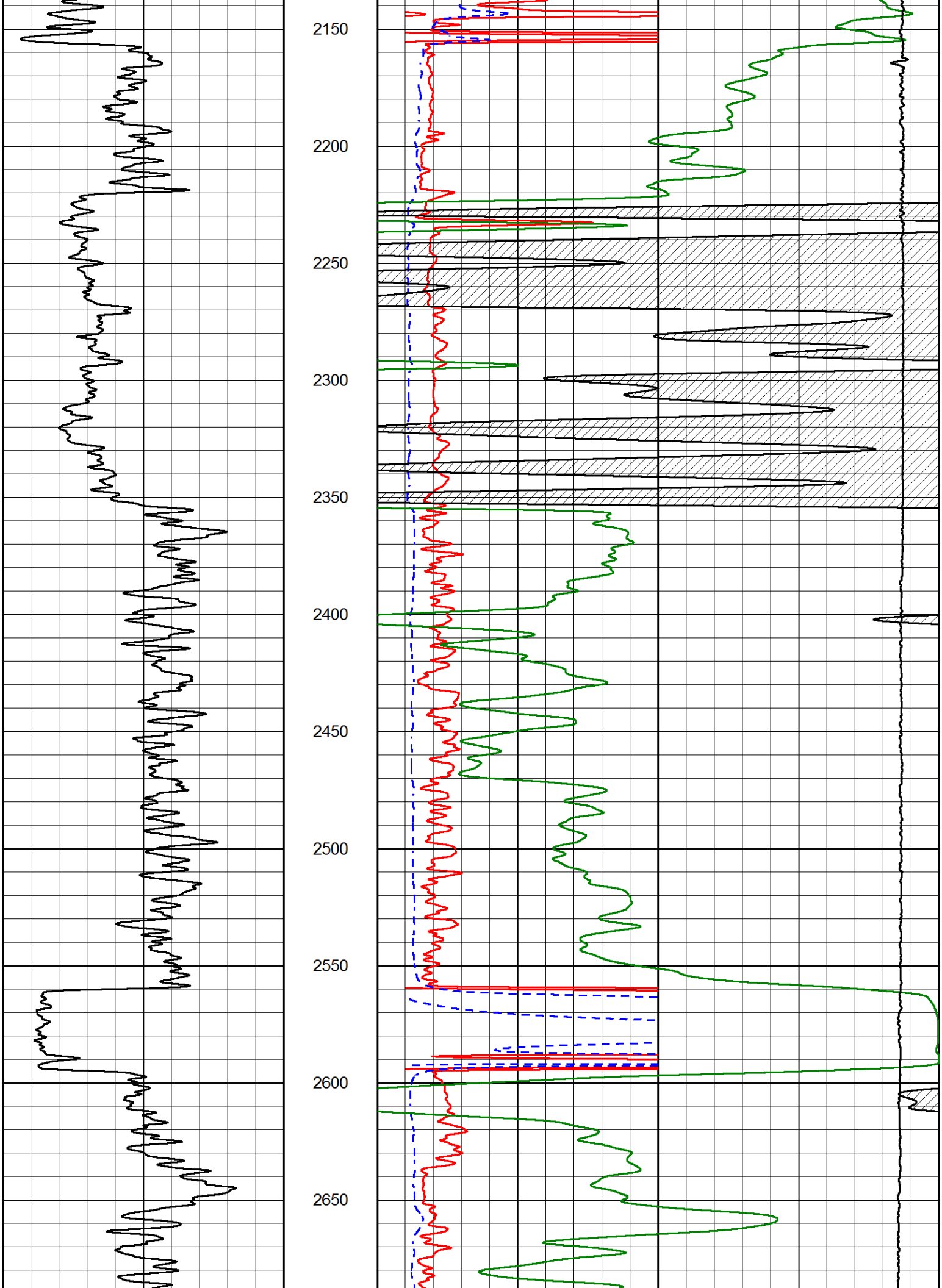
1000 CONDUCTIVITY (mmho/m) 0
15000 Line Tension (lb) 0
0 RLL3 (Ohm-m) 50
50 RLL3 (Ohm-m) 500
0 RILD (Ohm-m) 50
50 Deep Resistivity (Ohm-m) 500

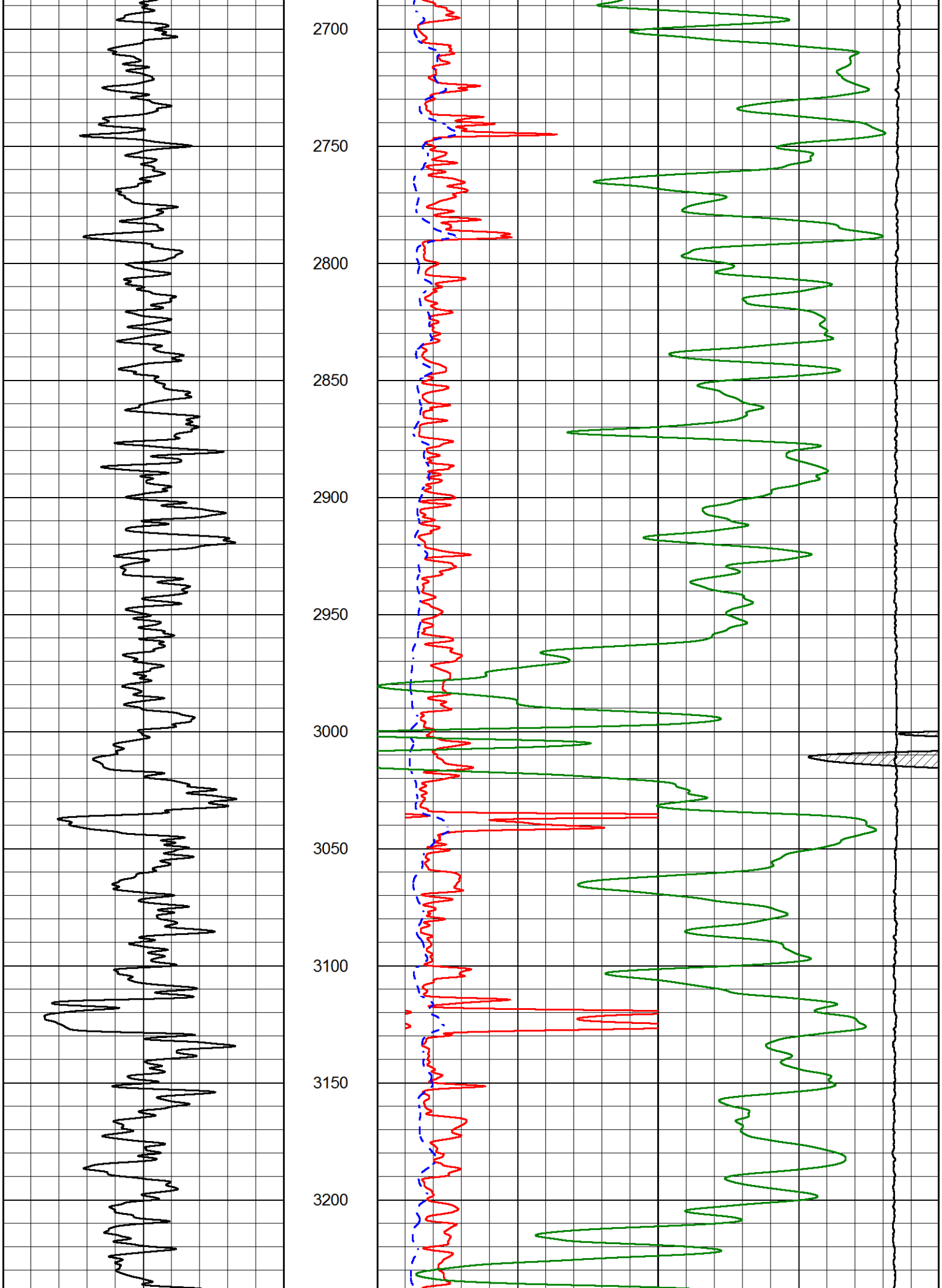


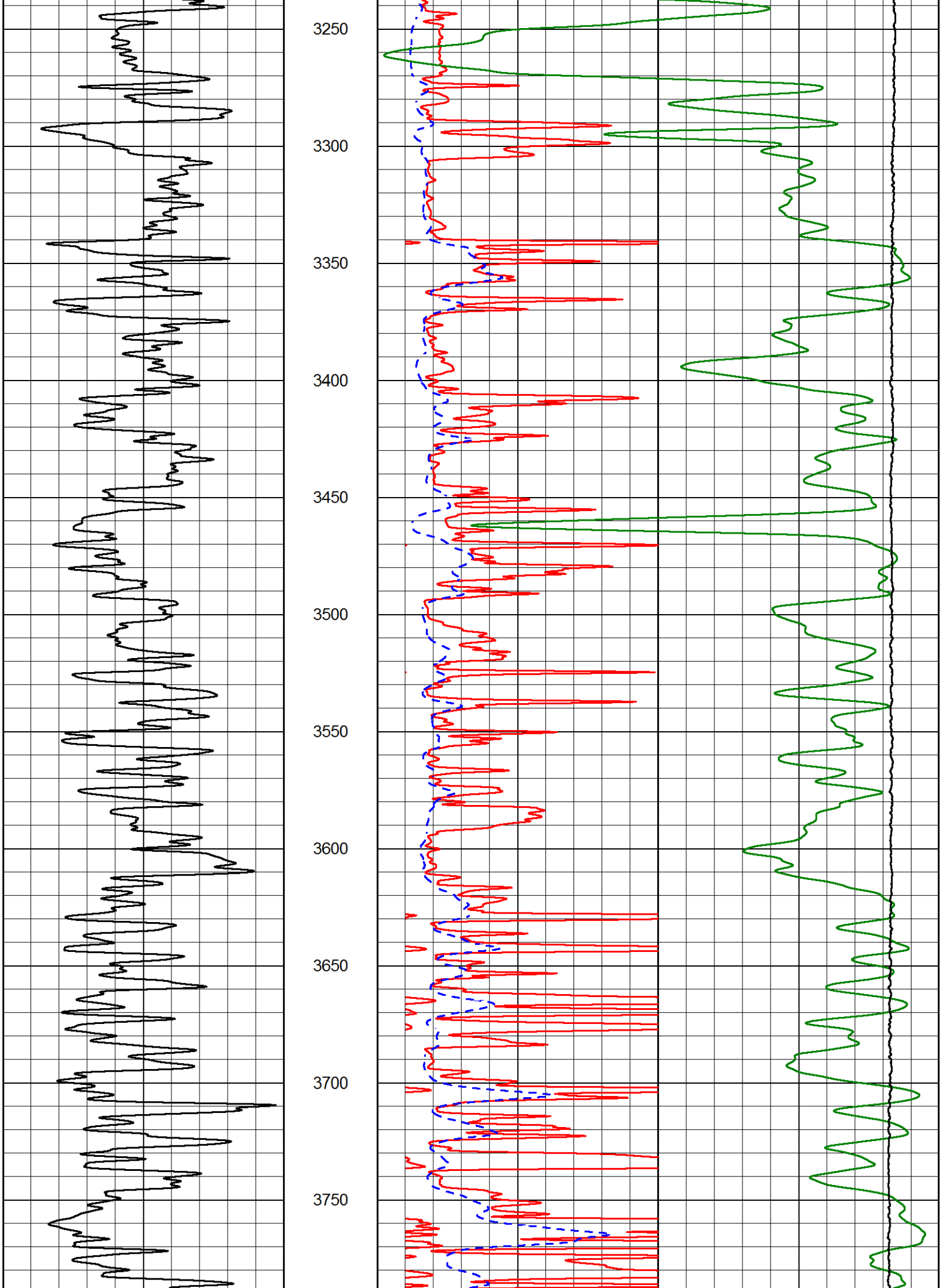

500
550
600
650
700
750
800
850
900
950
1000

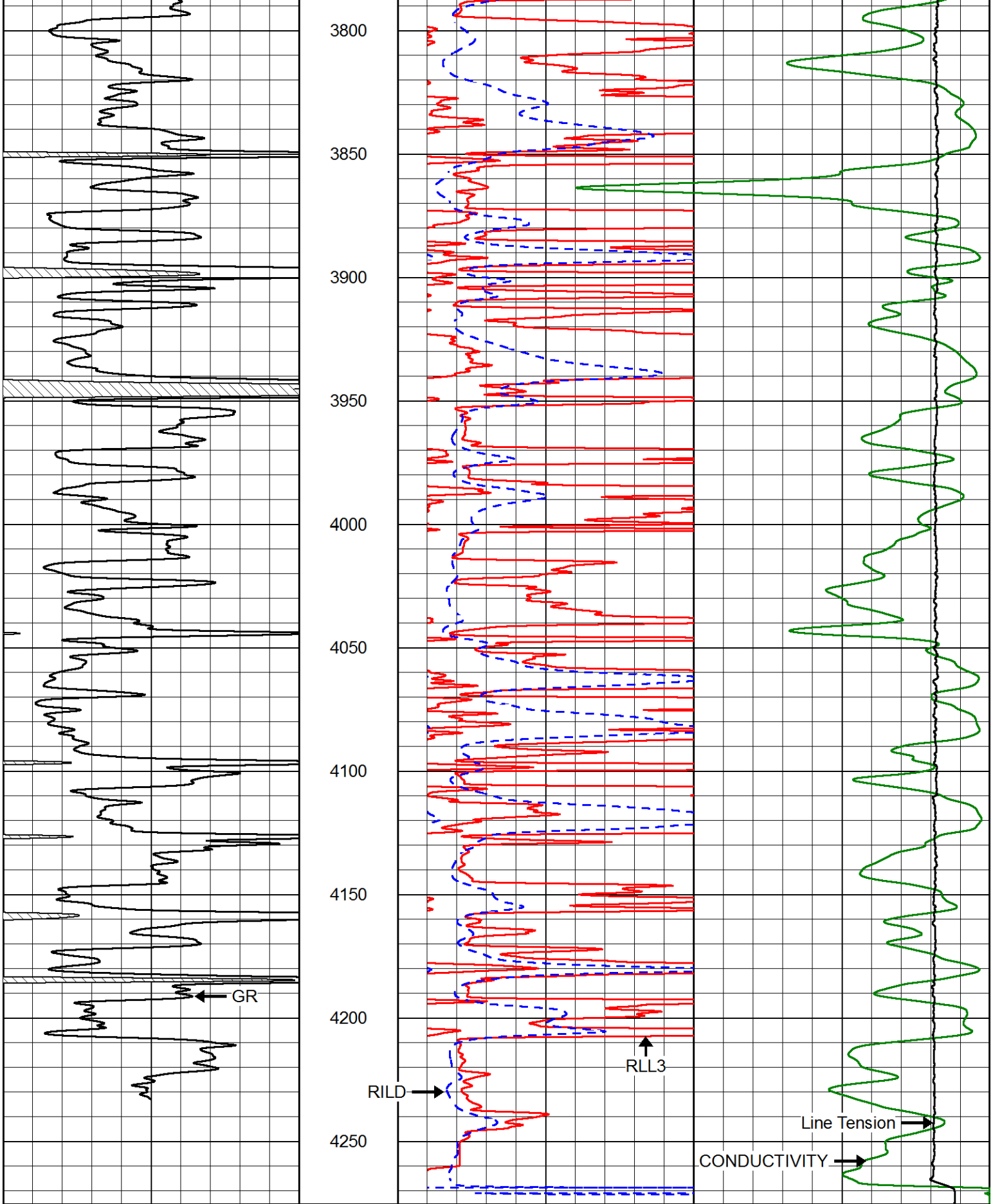

1050
1100
1150
1200
1250
1300
1350
1400
1450
1500
1550


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
3300
3350
3400
3450
3500
3550
3600
3650
3700
3750


3800
3850
3900
3950
4000
4050
4100
4150
4200
4250
GR
RILD
RLL3
Line Tension
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

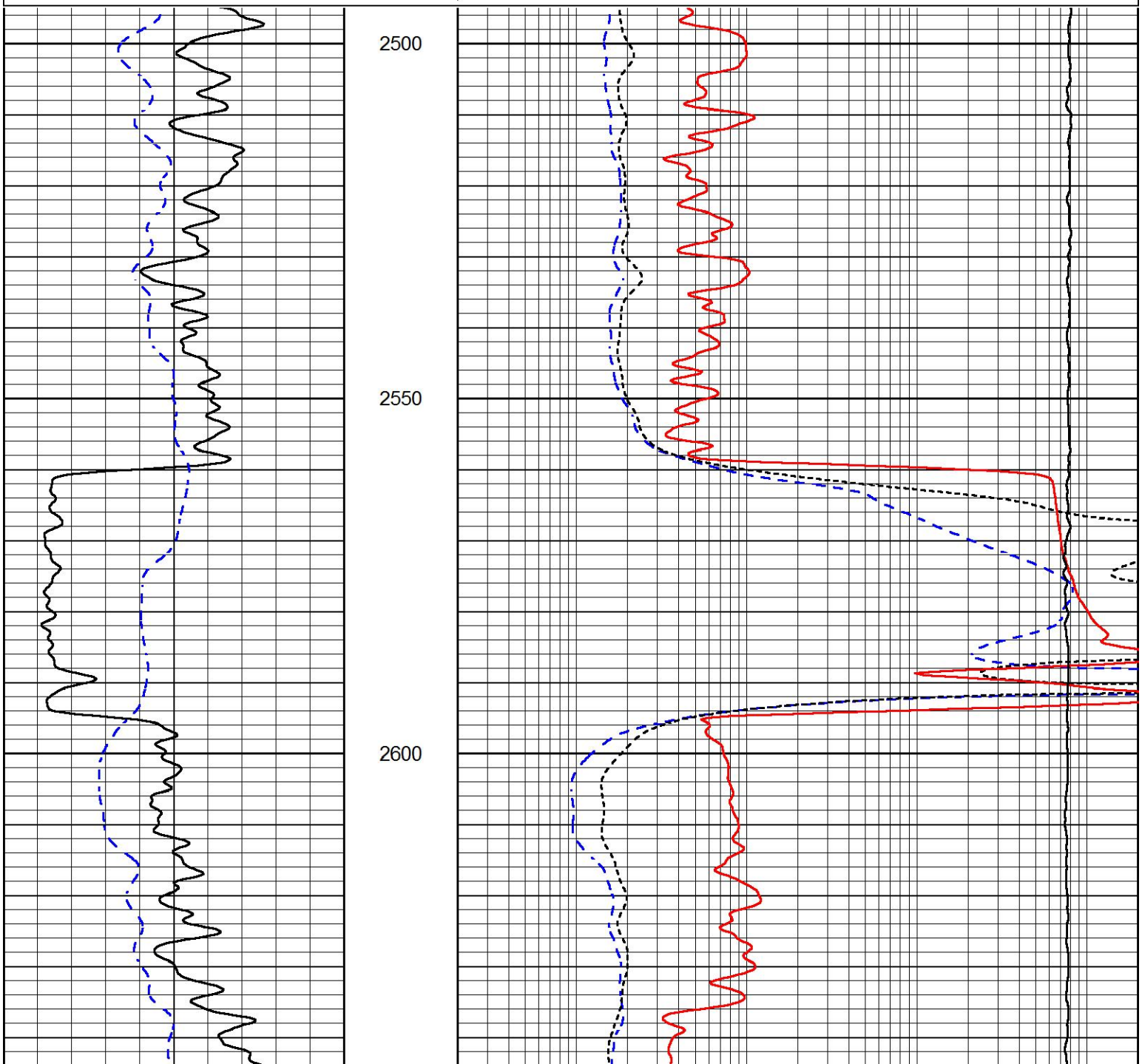
PIONEER
Pioneer Energy Services

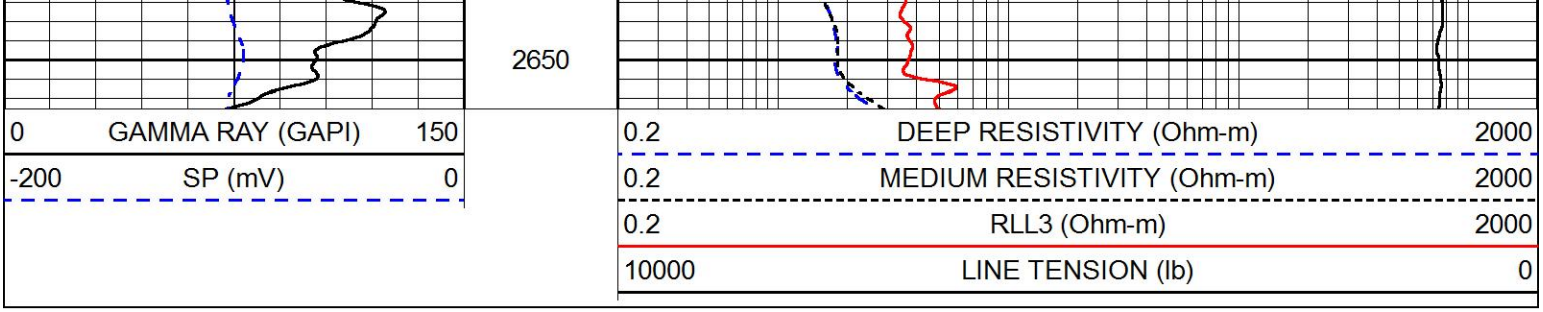
MAIN PASS

Database File	james_production_best_1_1.db
Dataset Pathname	stackmel/pass4.1
Presentation Format	_dil
Dataset Creation	Wed Jul 31 02:39:33 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

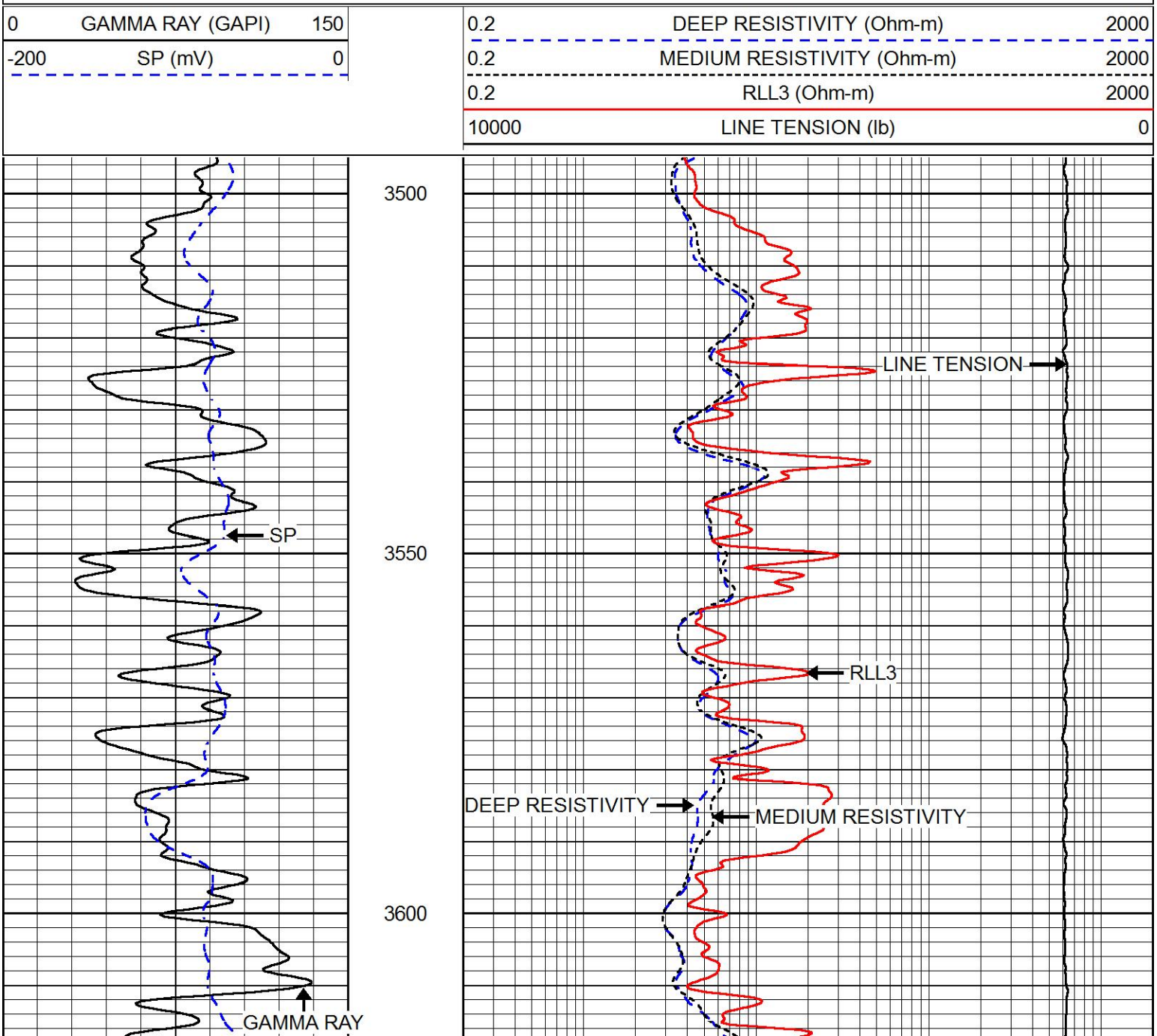


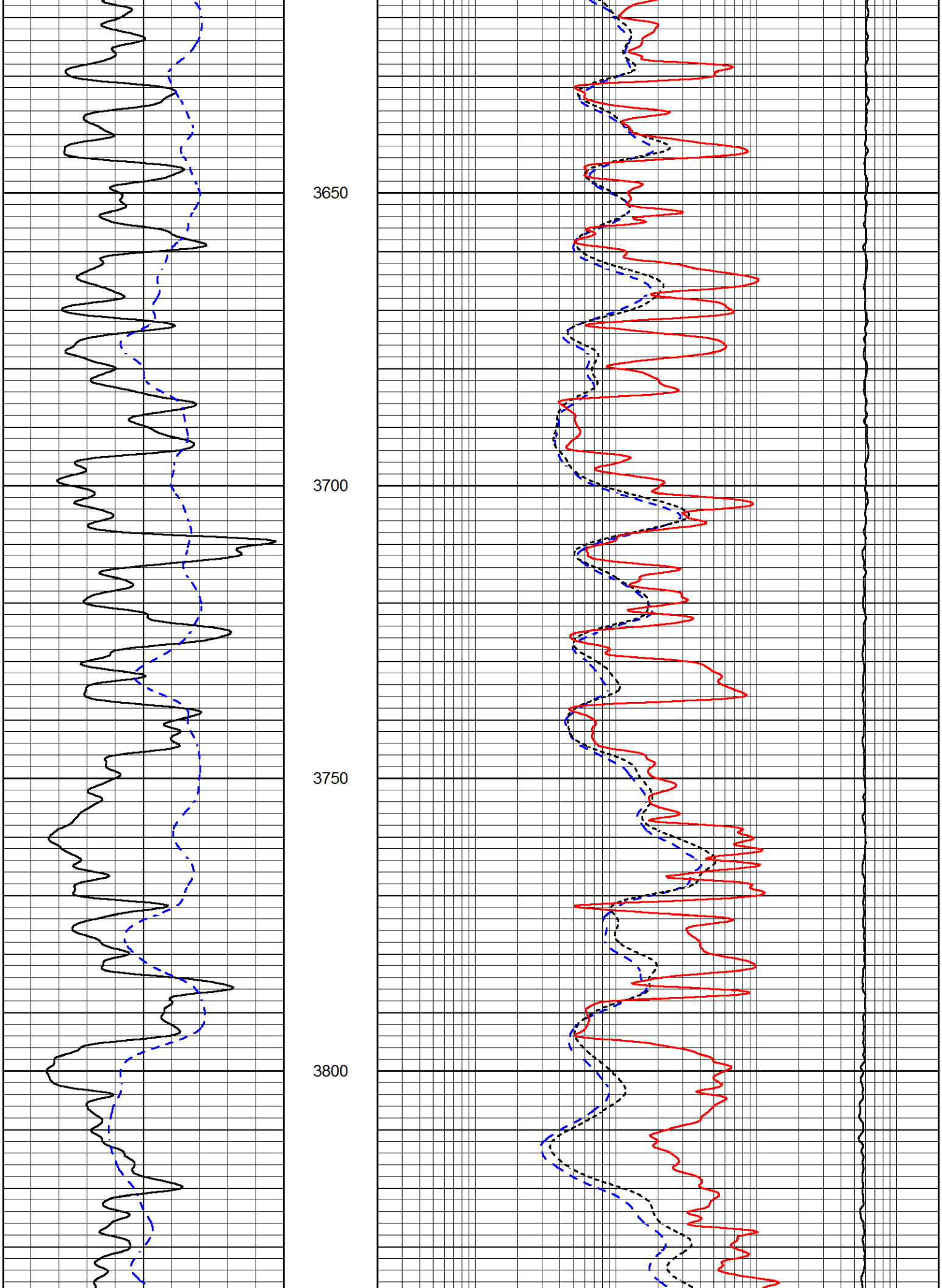


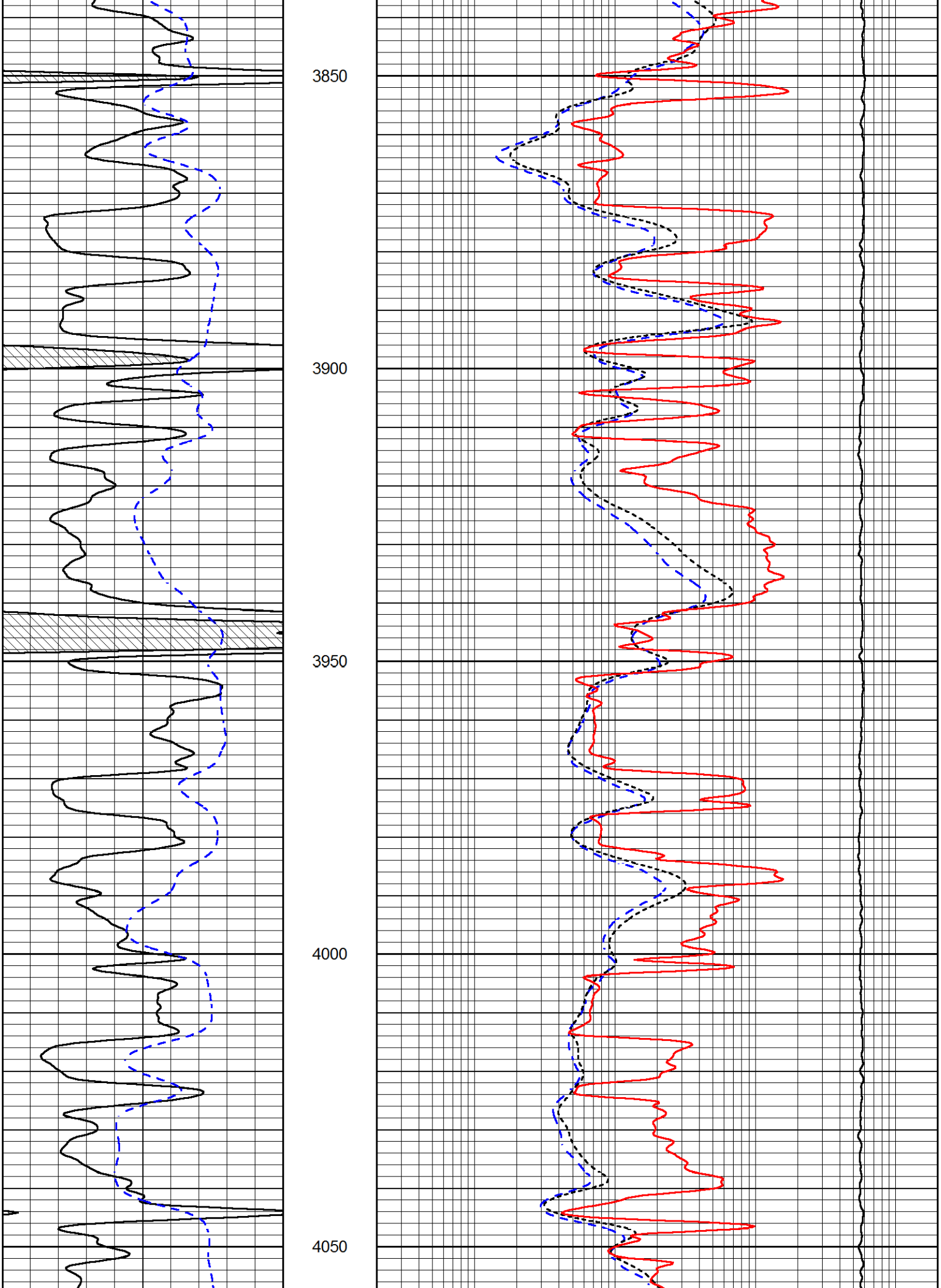
PIONEER
Pioneer Energy Services

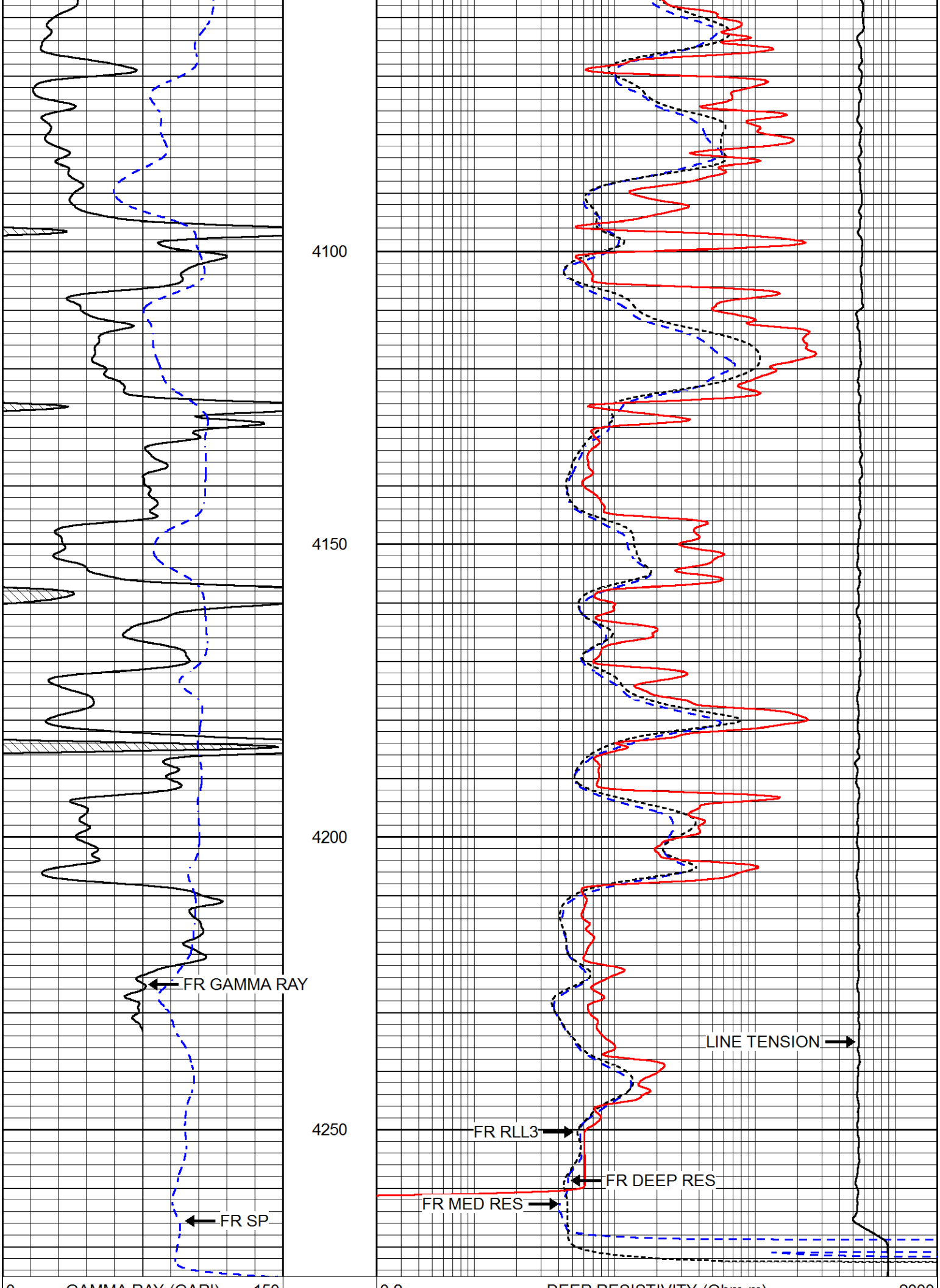
MAIN PASS

Database File	james_production_best_1_1.db
Dataset Pathname	stackmel/pass3.1
Presentation Format	_dil
Dataset Creation	Wed Jul 31 01:52:37 2019
Charted by	Depth in Feet scaled 1:240




3650
3700
3750
3800


3850
3900
3950
4000
4050


4100
4150
4200
4250
FR GAMMA RAY
FR SP
LINE TENSION
FR RLL3
FR DEEP RES
FR MED RES

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

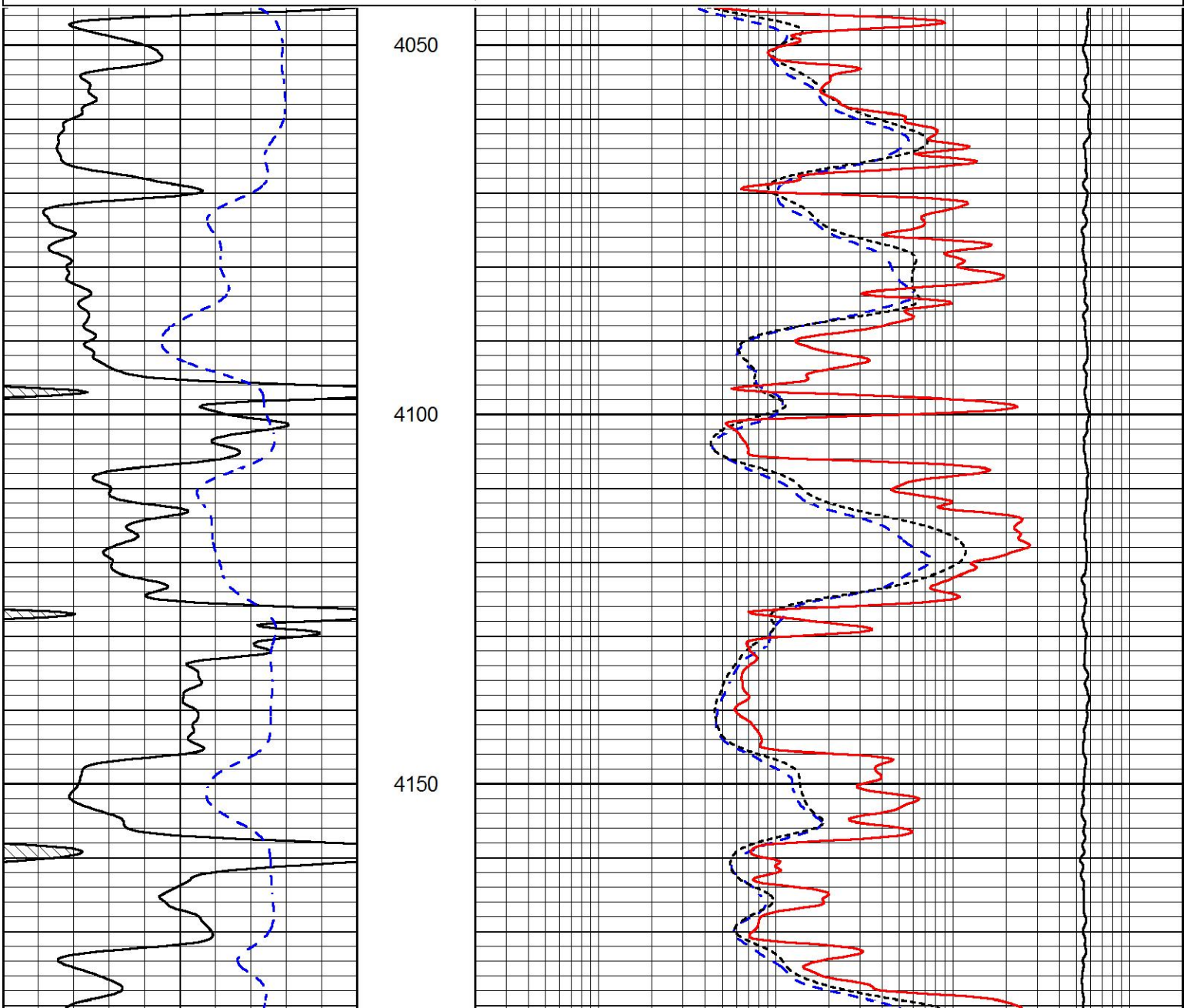
PIONEER
Pioneer Energy Services

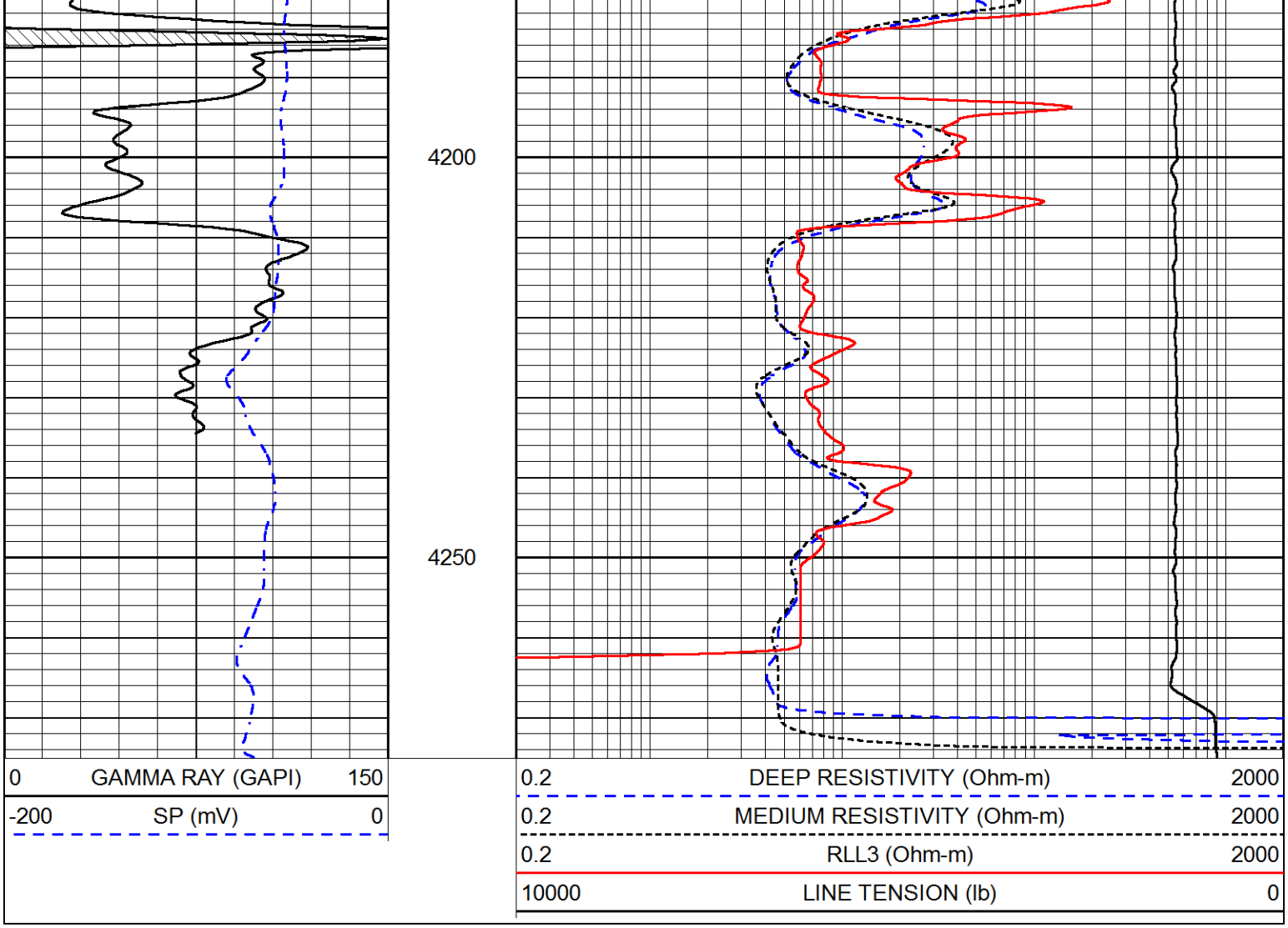
REPEAT SECTION

Database File	james_production_best_1_1.db
Dataset Pathname	stackmel/pass2.1
Presentation Format	_dil
Dataset Creation	Wed Jul 31 01:38:11 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





Calibration Report

Database File	james_production_best_1_1.db
Dataset Pathname	stackmel/pass3.1
Dataset Creation	Wed Jul 31 01:52:37 2019

Dual Induction Calibration Report

Serial-Model:	1039-PSI HIGH TEMP
Calibration Performed:	Tue Jul 09 07:46:05 2019

	Readings		References			Results	
Loop:	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.800	mmho/m	0.430	-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:	Tue Jul 23 20:18:27 2019

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	12000.0000	-0.7000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	13000.0000	-0.6000

Caliper	1.0001	1.1397	6.5000	18.5000	in	70.0000	-64.1500

Compensated Density Calibration Report

Serial-Model:	96-916-M&W
Source / Verifier:	16955B / 2ci
Master Calibration Performed:	Wed Mar 27 11:00:53 2019

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	8943.64	10054.60	cps
Aluminum	2.655	g/cc	1595.61	6242.82	cps

Spine Angle = 74.54 Density/Spine Ratio = 0.503

	Size		Reading
Small Ring	6.00	in	1.75
Large Ring	16.00	in	1.46

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

PIONEER
Pioneer Energy Services

Company	JAMES PRODUCTION, INC.
Well	BEST #1-1
Field	WILDCAT
County	SHERIDAN
State	KANSAS