



DUAL INDUCTION LOG

PIONEER
Pioneer Energy Services

Company AINSWORTH OPERATING CO.
Well DAVIS #5
Field RED SUN
County GRAHAM
State KANSAS

Company AINSWORTH OPERATING CO.
Well DAVIS #5
Field RED SUN
County GRAHAM State KANSAS

Location: API #: 15-065-24140-00-00

1005' FNL & 2300' FWL

SEC 33 TWP 6S RGE 22W

Permanent Datum GROUND LEVEL Elevation 2283'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Other Services
CNL/CDL
MEL
Elevation
K.B. 2290'
D.F. N/A
G.L. 2283'

Date 7/19/2017

Run Number ONE

Depth Driller 3900'

Depth Logger 3901'

Bottom Logged Interval 3900'

Top Log Interval 200'

Casing Driller 8.625" @ 222'

Casing Logger 220'

Bit Size 7.875"

Type Fluid in Hole CHEMICAL

Salinity, ppm CL 500

Density / Viscosity 8.7 48

pH / Fluid Loss 10.0 8.4

Source of Sample FLOWLINE

Rm @ Meas. Temp 0.60 @ 80

Rmf @ Meas. Temp 0.45 @ 80

Rmc @ Meas. Temp 0.81 @ 80

Source of Rmf / Rmc CHARTS

Rm @ BHT 0.42 @ 115

Operating Rig Time 3 HOURS

Max Rec. Temp. F 115

Equipment Number 91

Location HAYS

Recorded By D. SCHMIDT

Witnessed By RANDY KILIAN

<<< Fold Here >>>

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.

HILL CITY,
4 EAST TO 310 RD, NORTH TO Z RD, 1/4 EAST,
SOUTH INTO

Log Measured From: KELLY BUSHING 7 Ft. Above Permanent Datum

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

Your Pioneer Energy Services Crew

Engineer: D. SCHMIDT
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: RANDY KILIAN
Secondary Witness:
Secondary Witness:
Secondary Witness:

Top - Bottom

M	A	FLUIDDEN g/cc	MATRXDEN g/cc	SPSHIFT mV	SNDERRM mmho/m	SNDERR mmho/m	SZCOR
2	1	1	2.71	130	0	0	Off
NPORSEL	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
Limestone	80	0	5.5	0	3901	115	7.875

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (89)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73		CNT-M&W (207-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93		CDL-M&W (90-1031)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00
RLL3F RLL3	15.80 15.80					

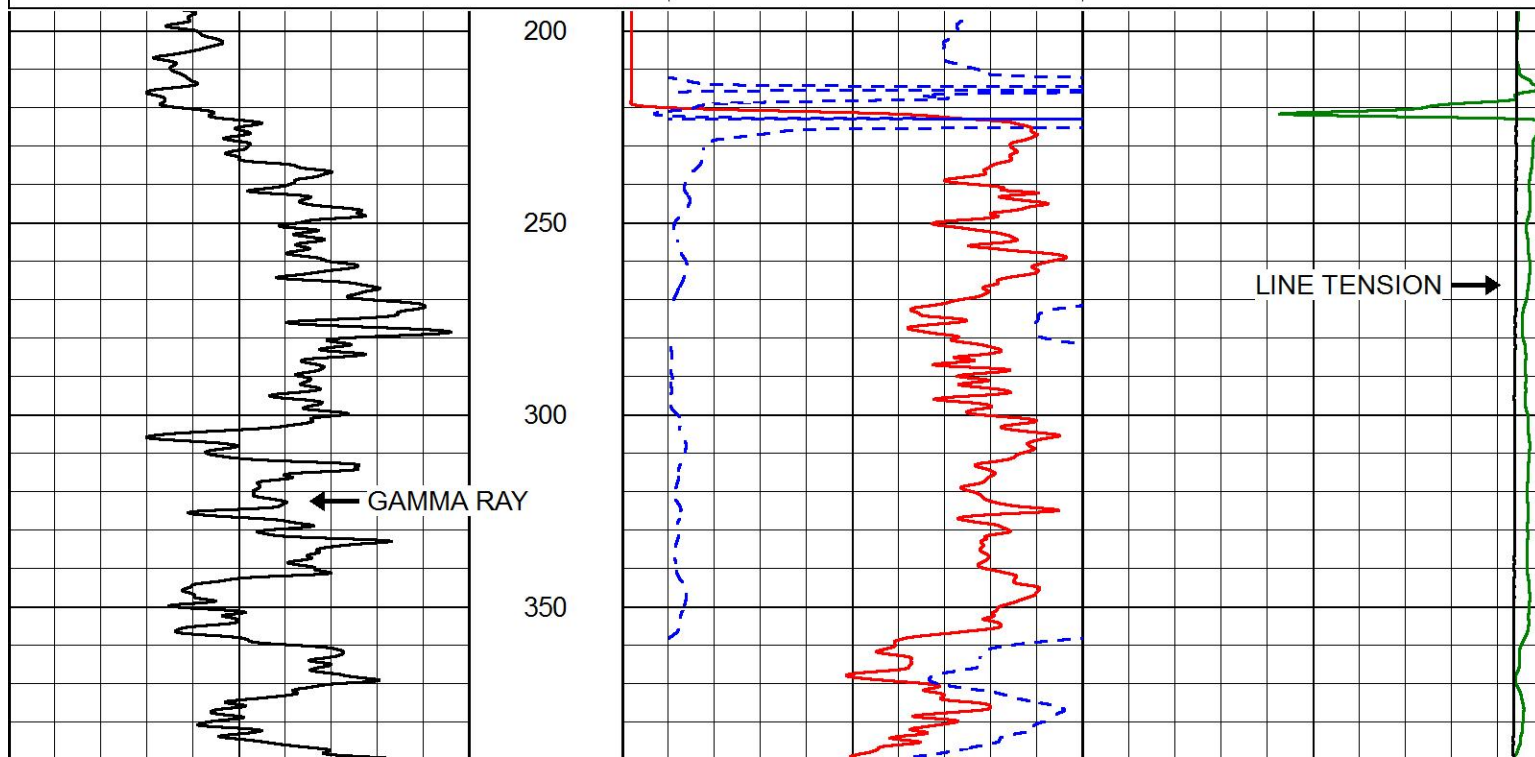
			DIL-M&W (PSI 91)	18.50	3.50	220.00
CILD	8.00					
CILM	4.70					
SP	0.20					
Dataset: ainsworth_davis_5.db: field/well/STKML/pass3.1 Total length: 43.08 ft Total weight: 685.00 lb O.D.: 4.00 in						

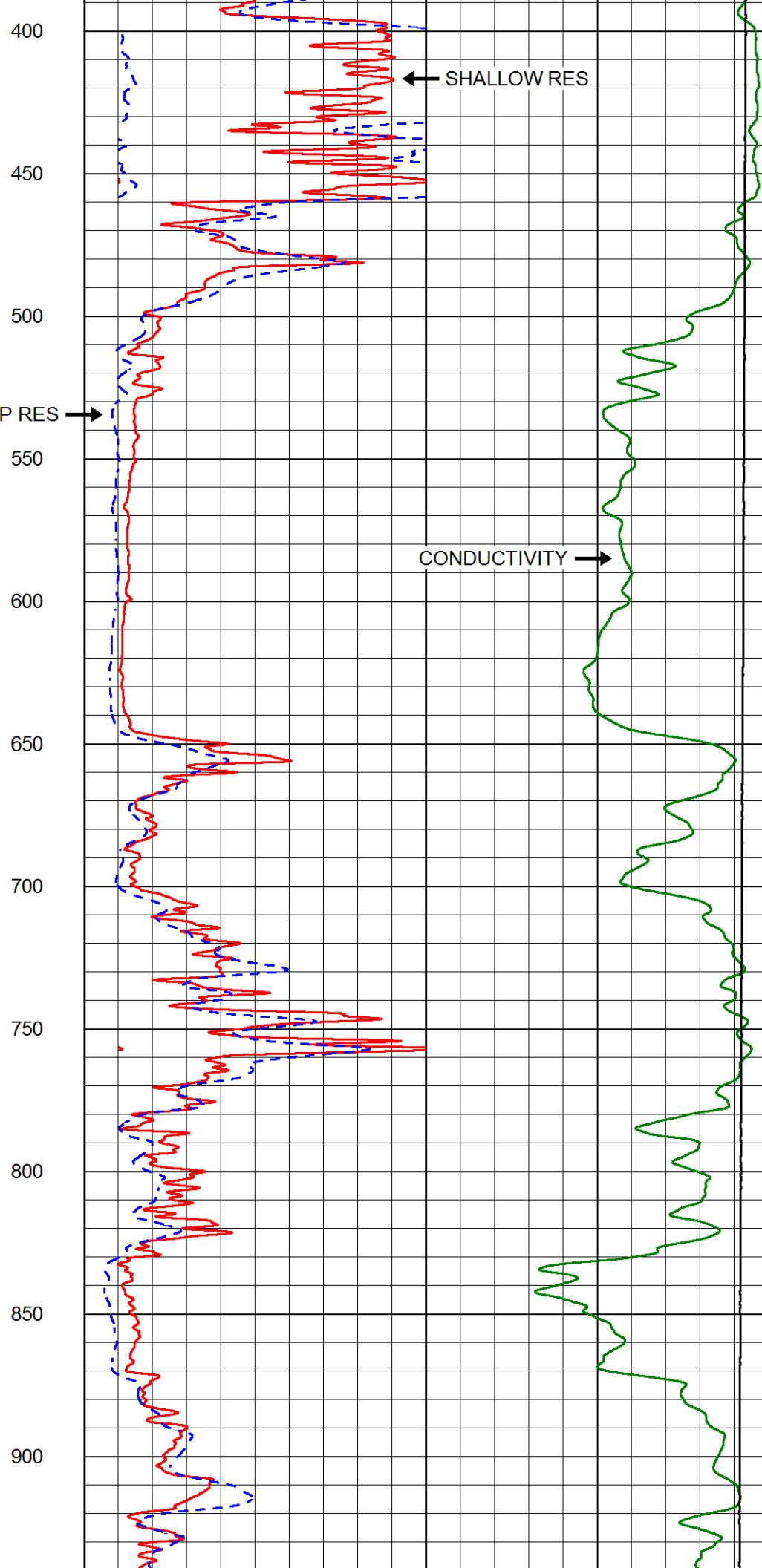
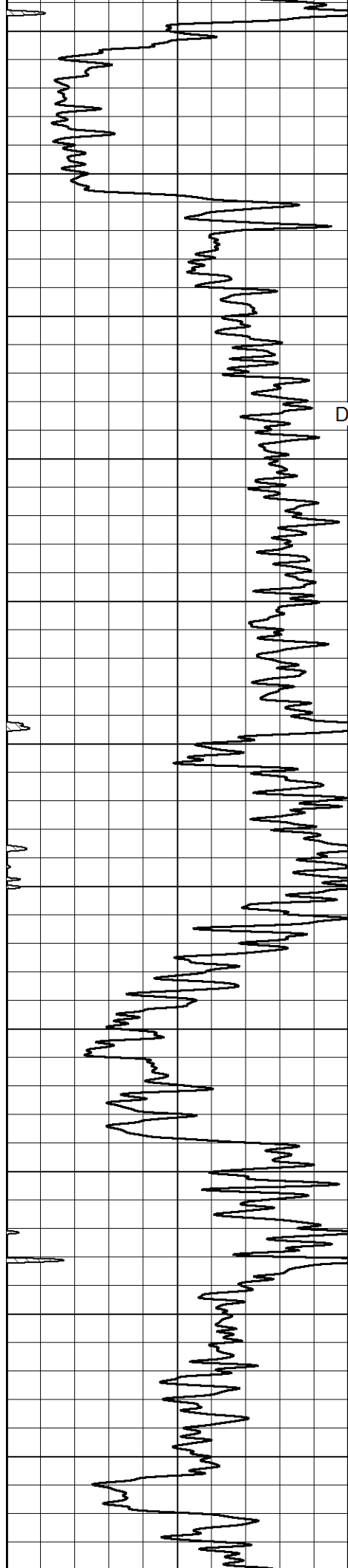


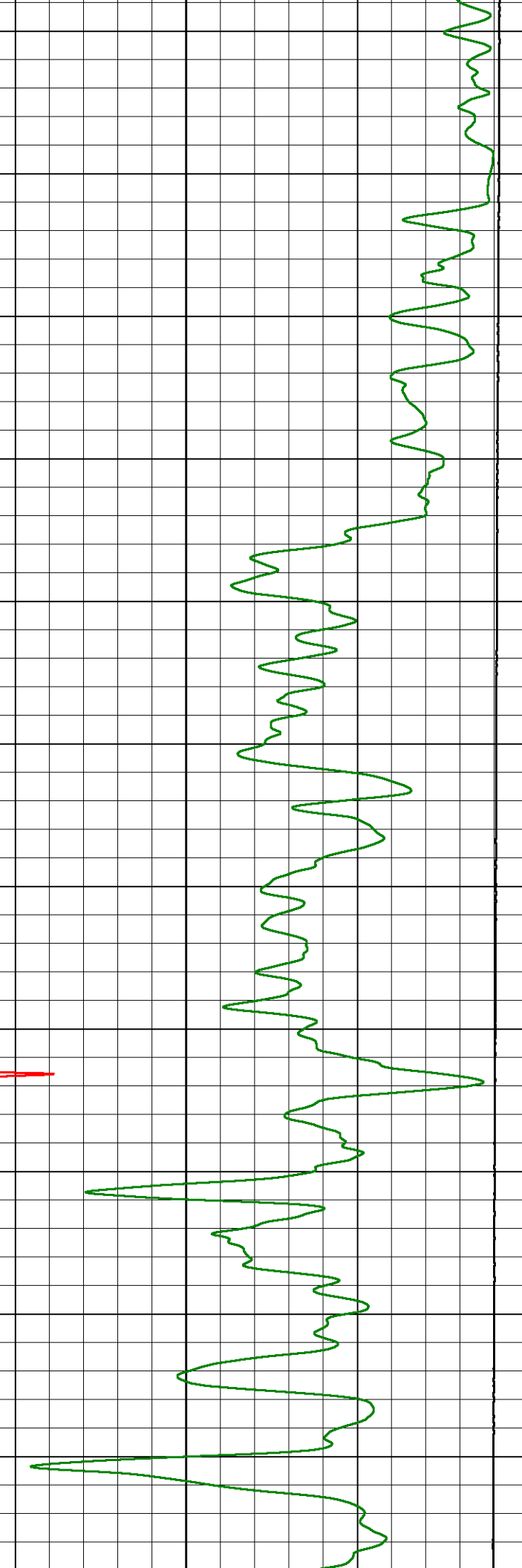
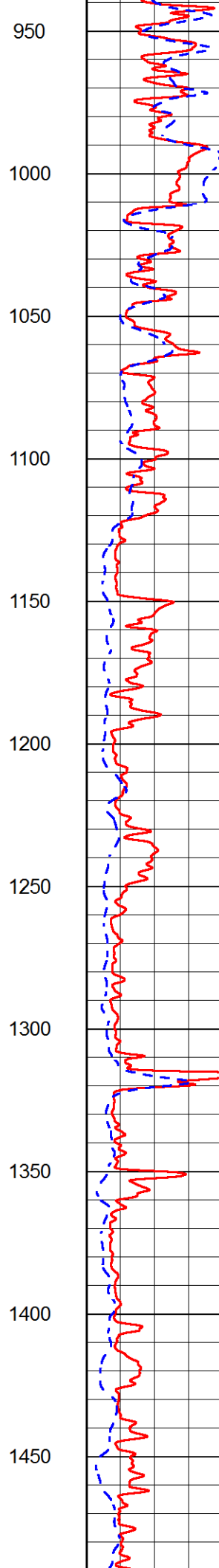
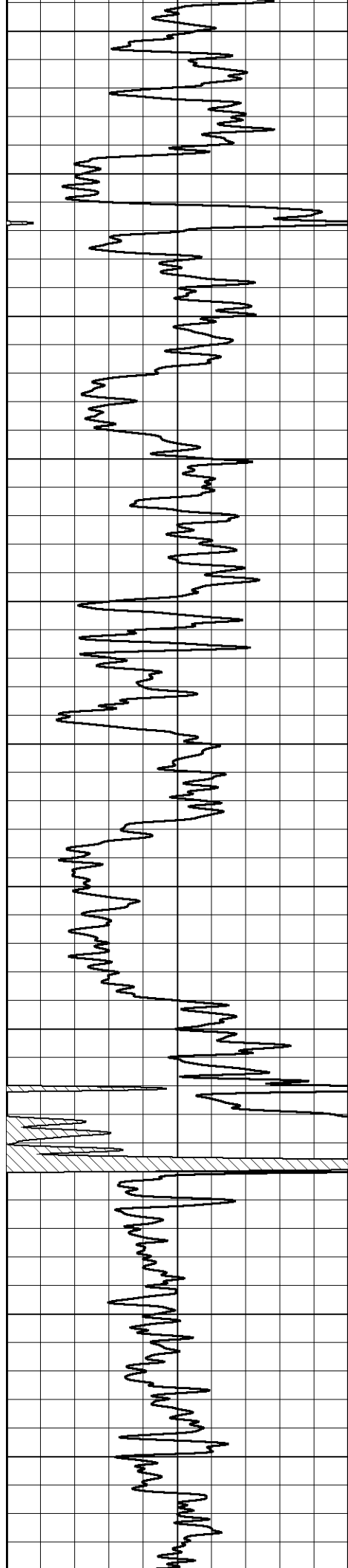
MAIN PASS

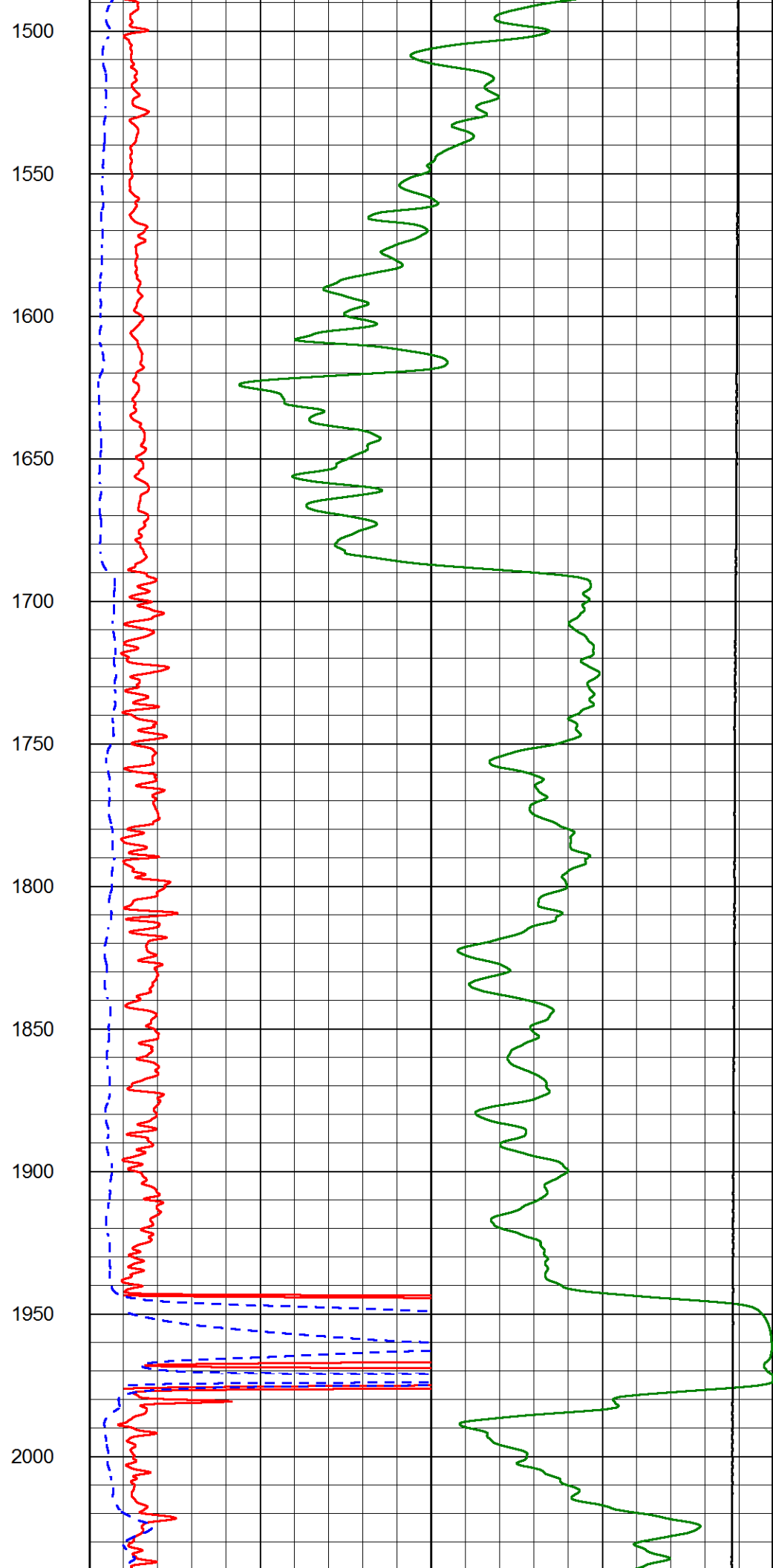
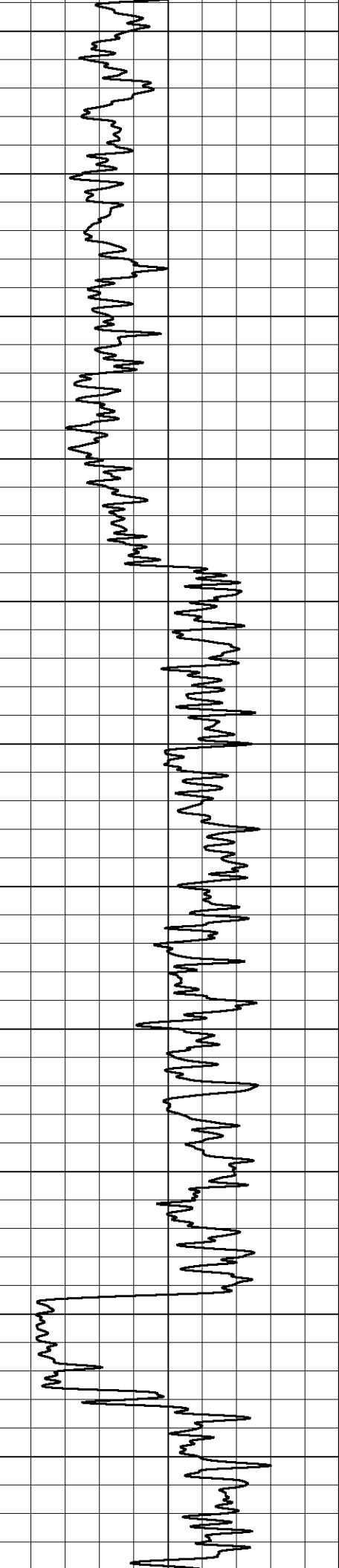
Database File	ainsworth_davis_5.db
Dataset Pathname	STKML/pass4.1
Presentation Format	dil2in
Dataset Creation	Wed Jul 19 05:30:07 2017
Charted by	Depth in Feet scaled 1:600

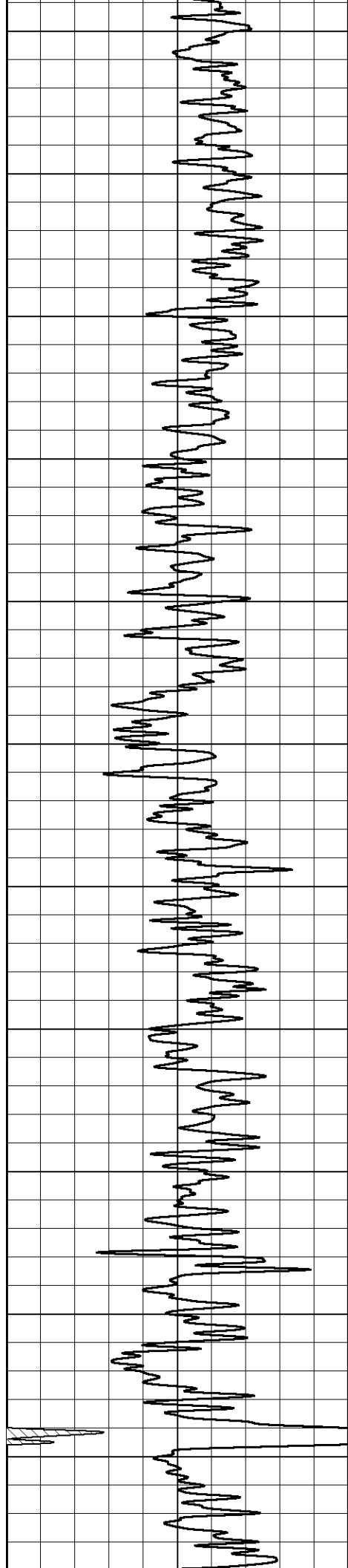
0	Gamma Ray (GAPI)	150	1000	Conductivity (mmho/m)	0
			15000	Line Tension (lb)	0
			0	Shallow Resistivity (Ohm-m)	50
			0	Deep Resistivity (Ohm-m)	50
				Shallow Resistivity	
			50	(Ohm-m)	500
			50	Deep Resistivity (Ohm-m)	500



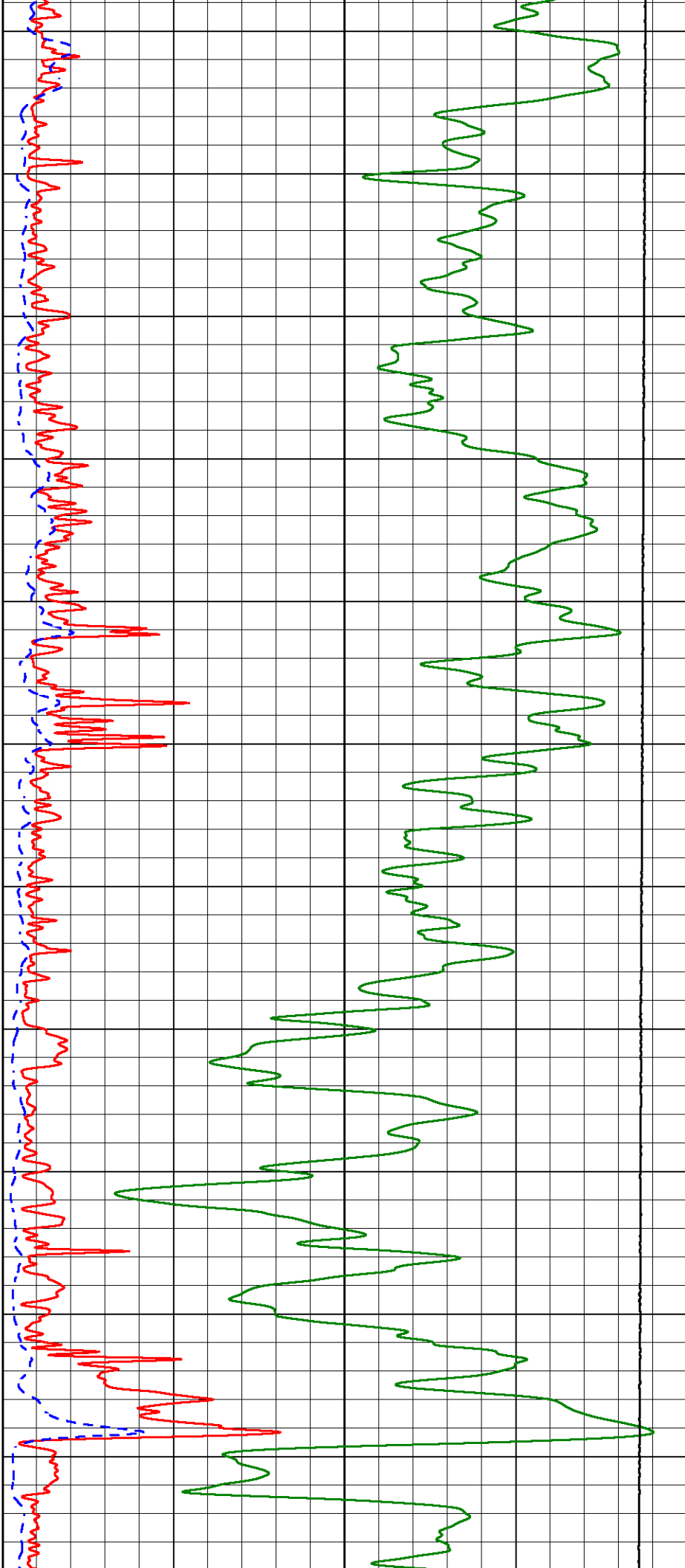


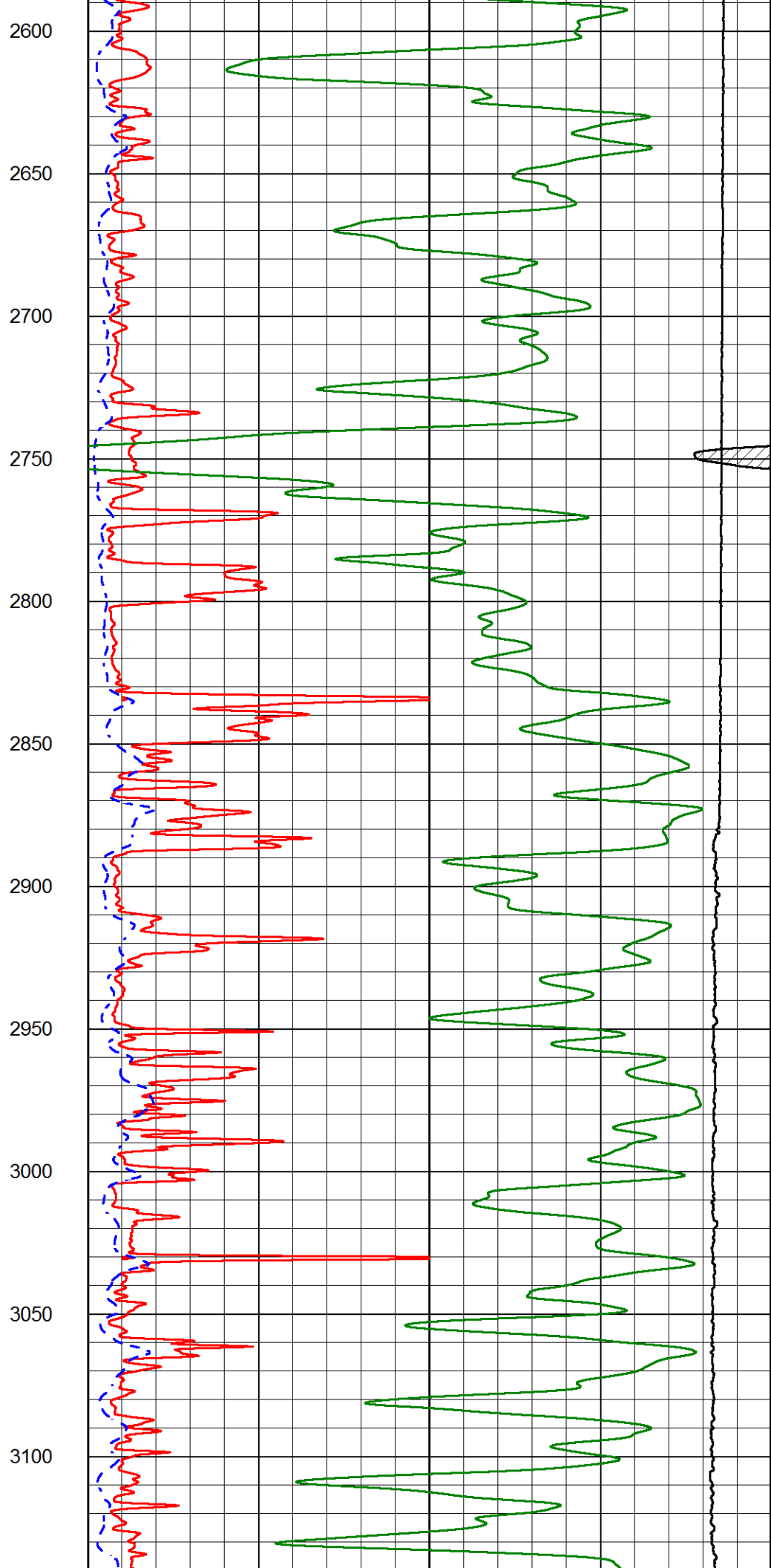
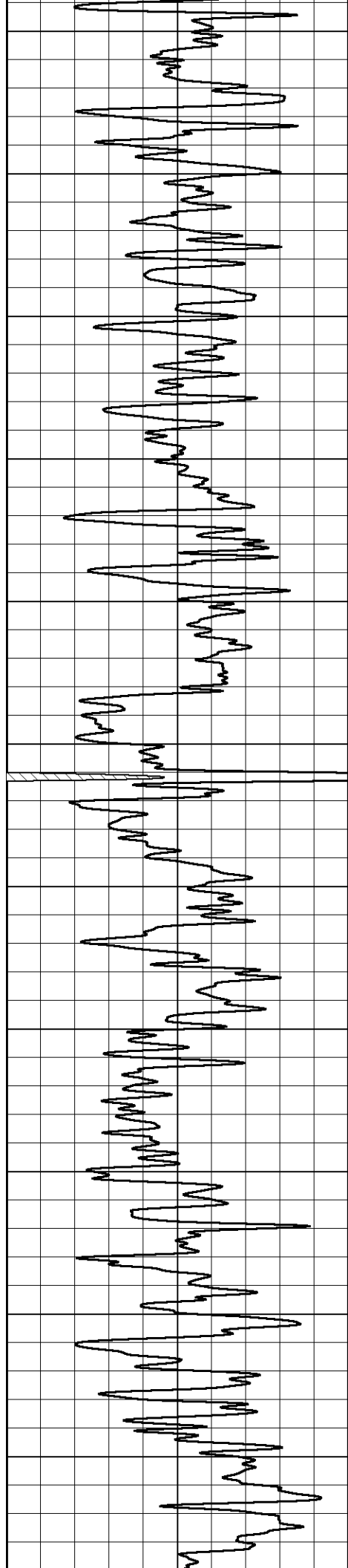


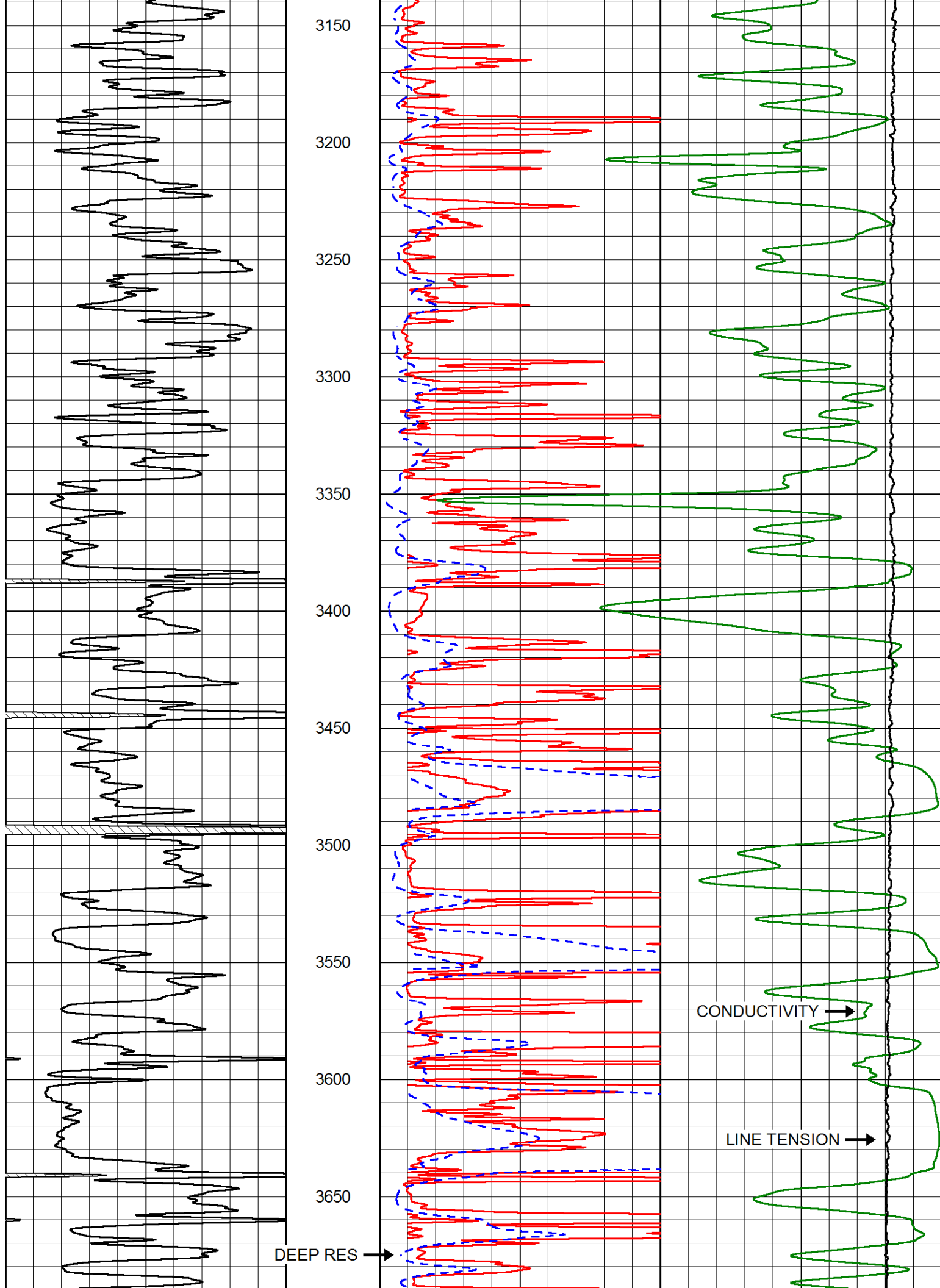


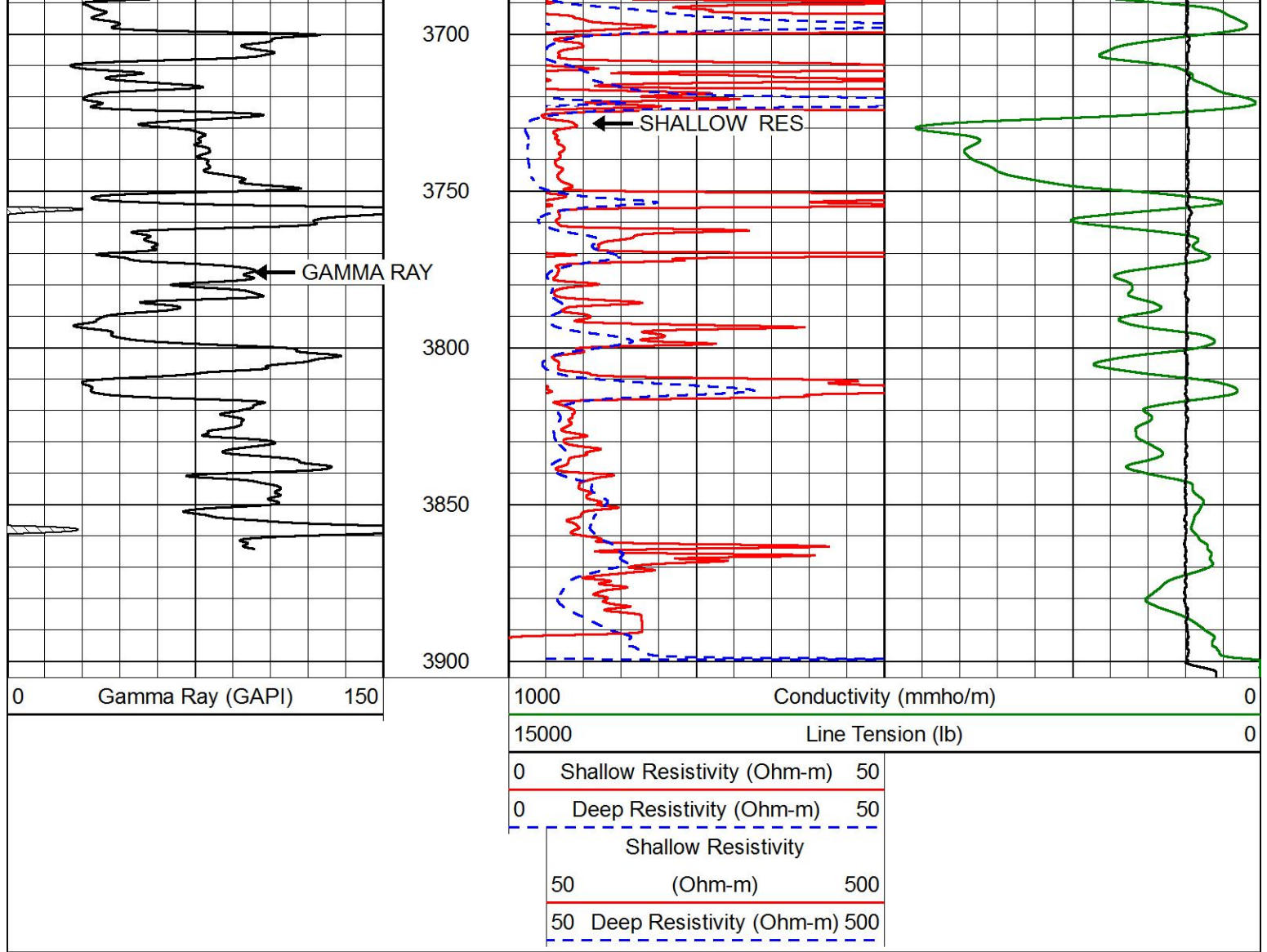


2050
2100
2150
2200
2250
2300
2350
2400
2450
2500
2550









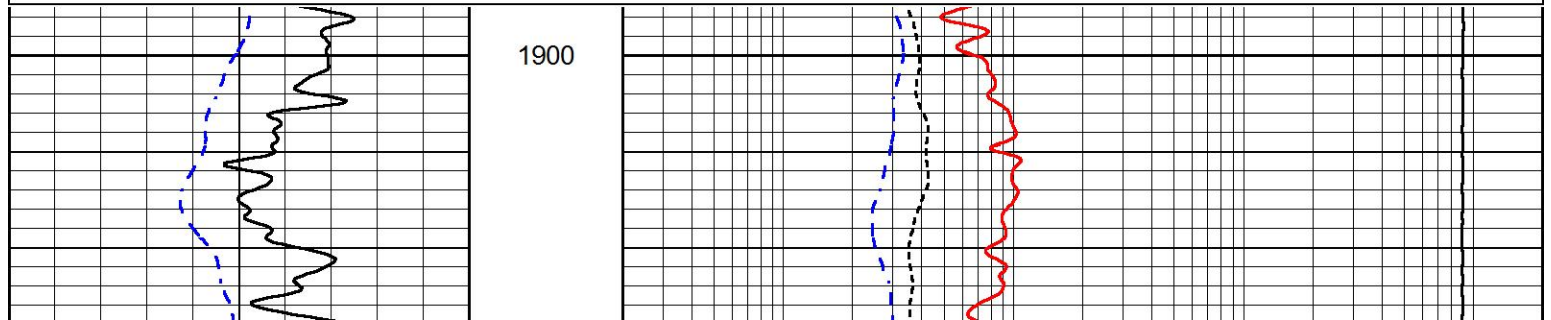


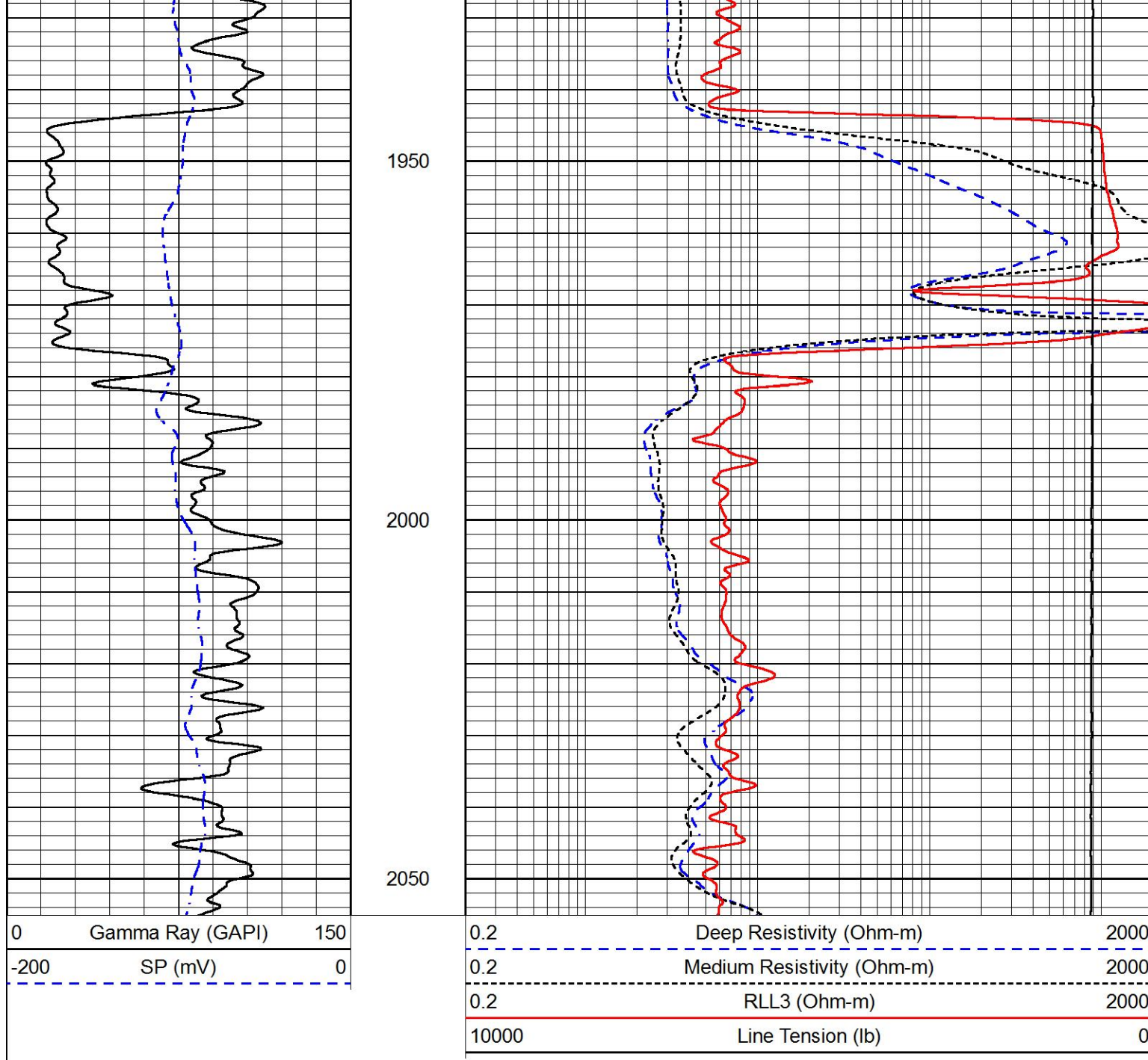
PIONEER
Pioneer Energy Services

MAIN PASS

Database File	ainsworth_davis_5.db
Dataset Pathname	STKML/pass4.1
Presentation Format	dil
Dataset Creation	Wed Jul 19 05:30:07 2017
Charted by	Depth in Feet scaled 1:240

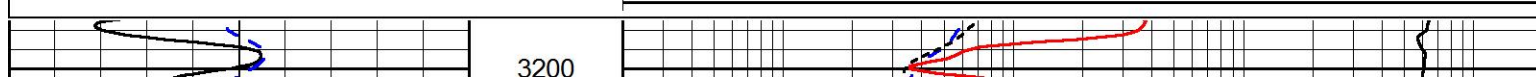
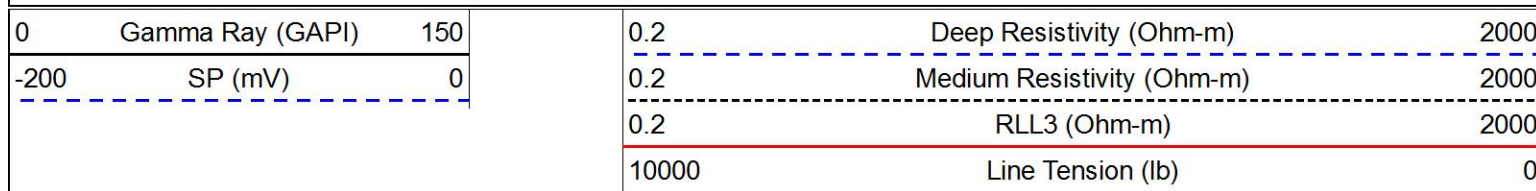
0	Gamma Ray (GAPI)	150
-200	SP (mV)	0
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0

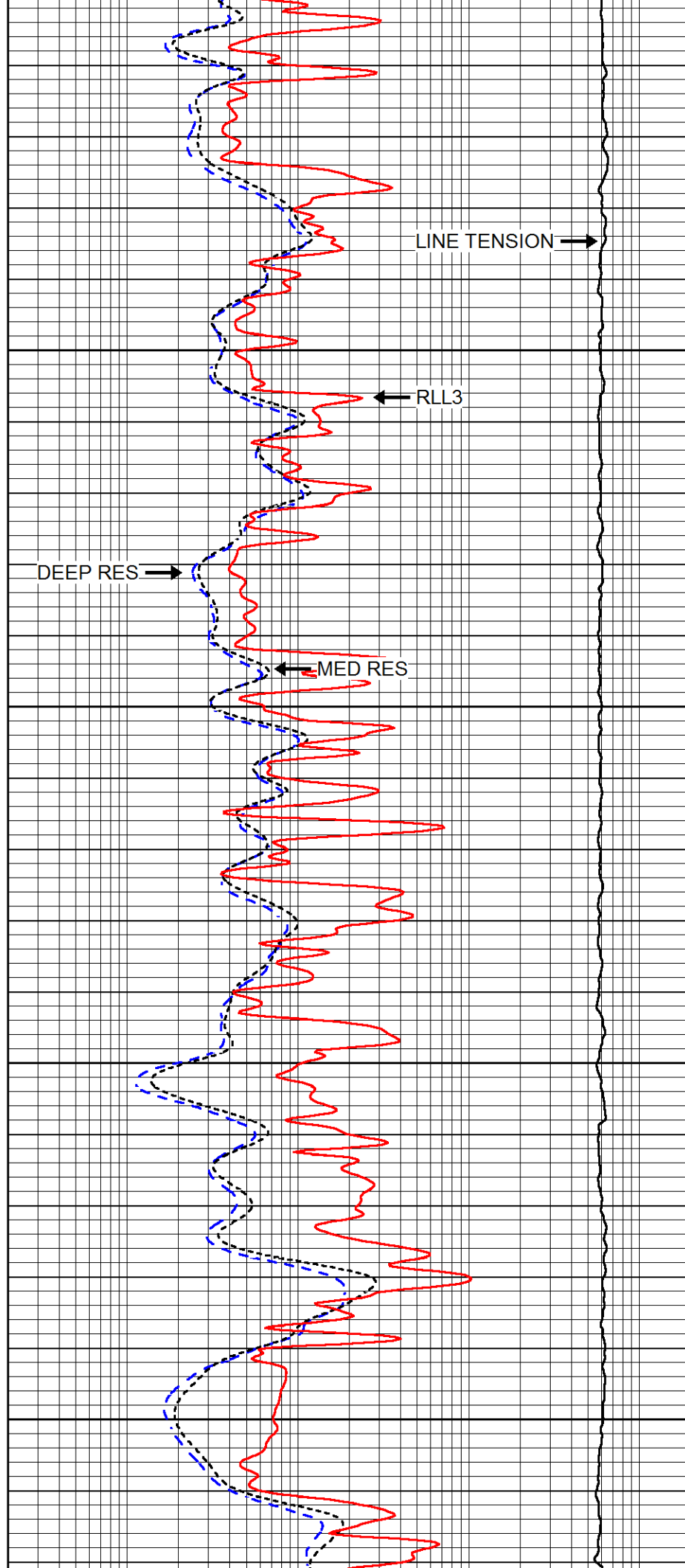
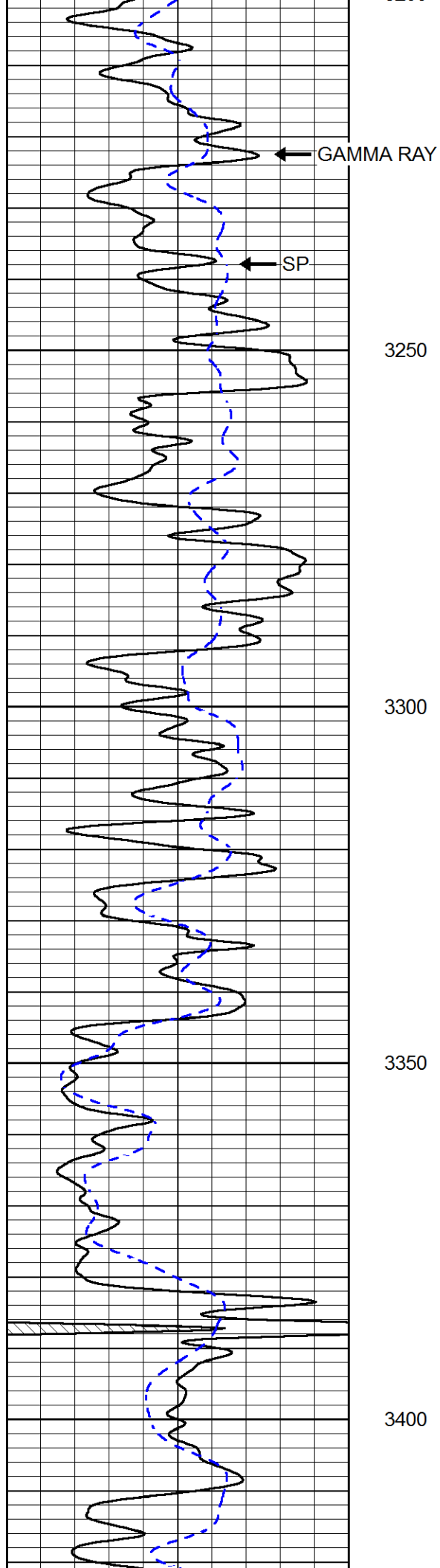


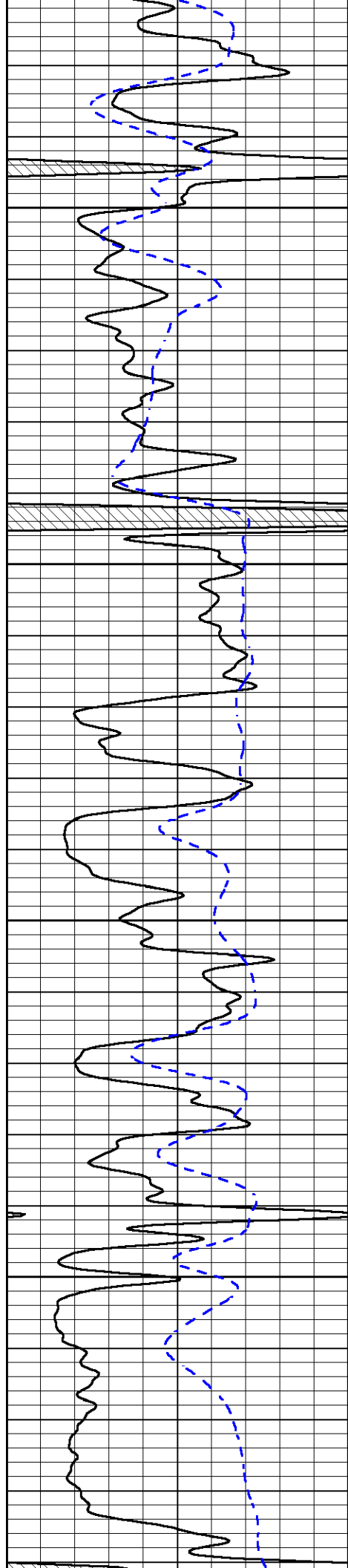


MAIN PASS

Database File	ainsworth_davis_5.db
Dataset Pathname	STKML/pass3.1
Presentation Format	dil
Dataset Creation	Wed Jul 19 04:57:51 2017
Charted by	Depth in Feet scaled 1:240





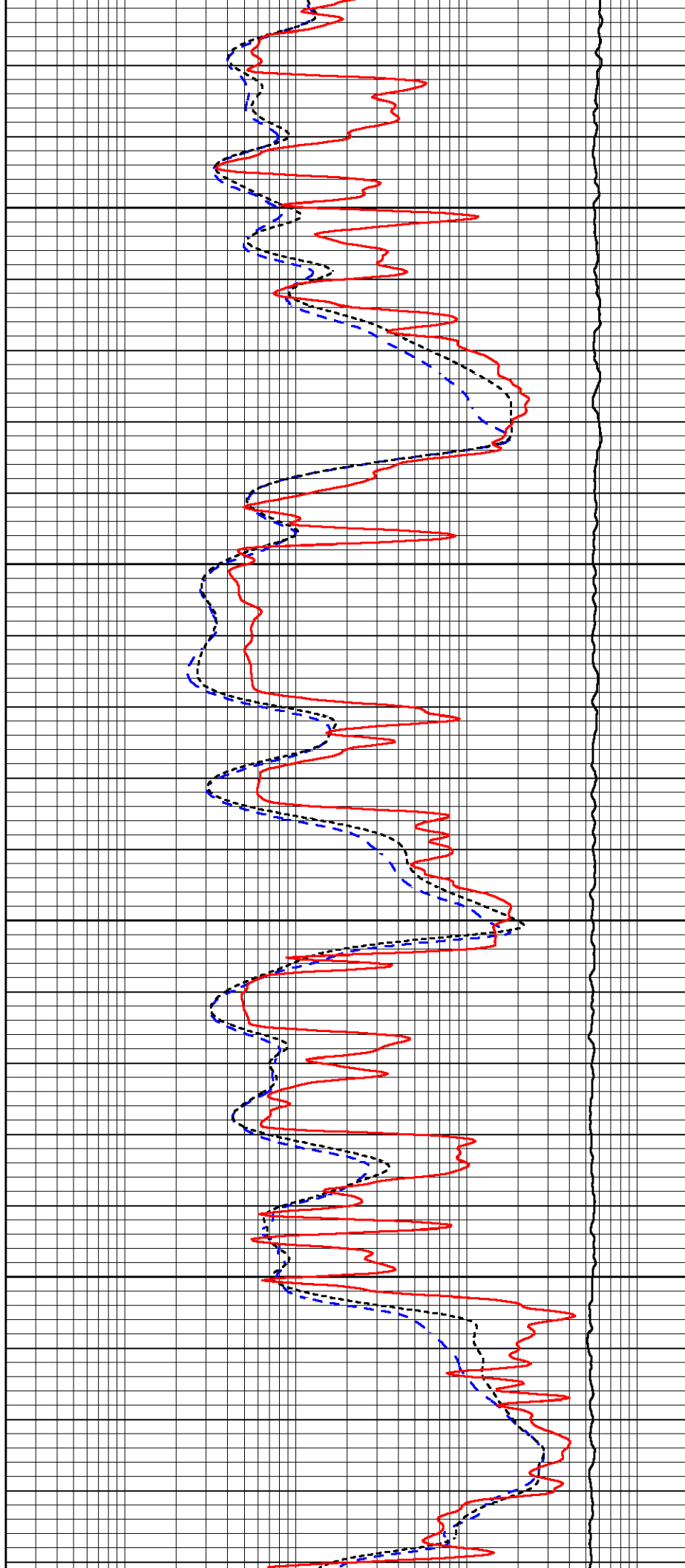


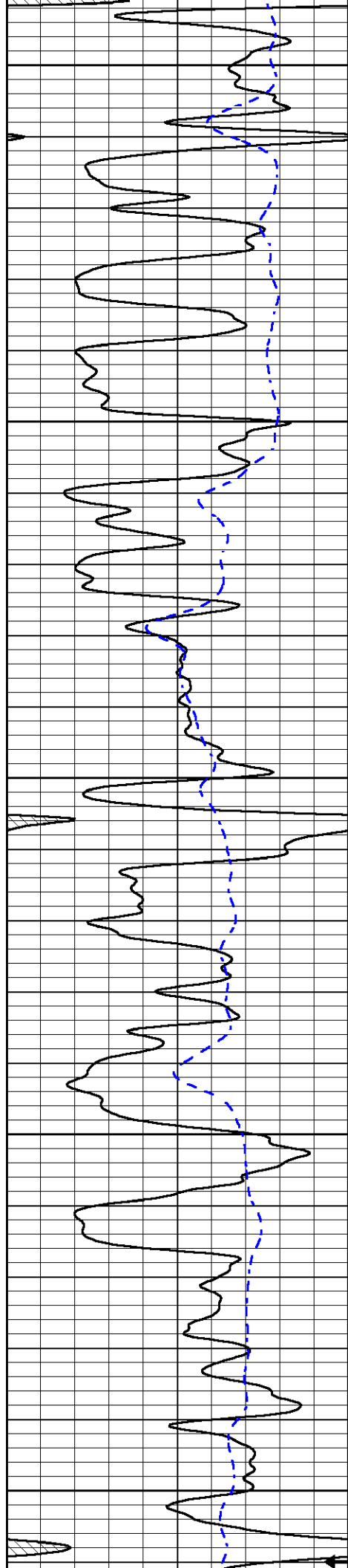
3450

3500

3550

3600





3650

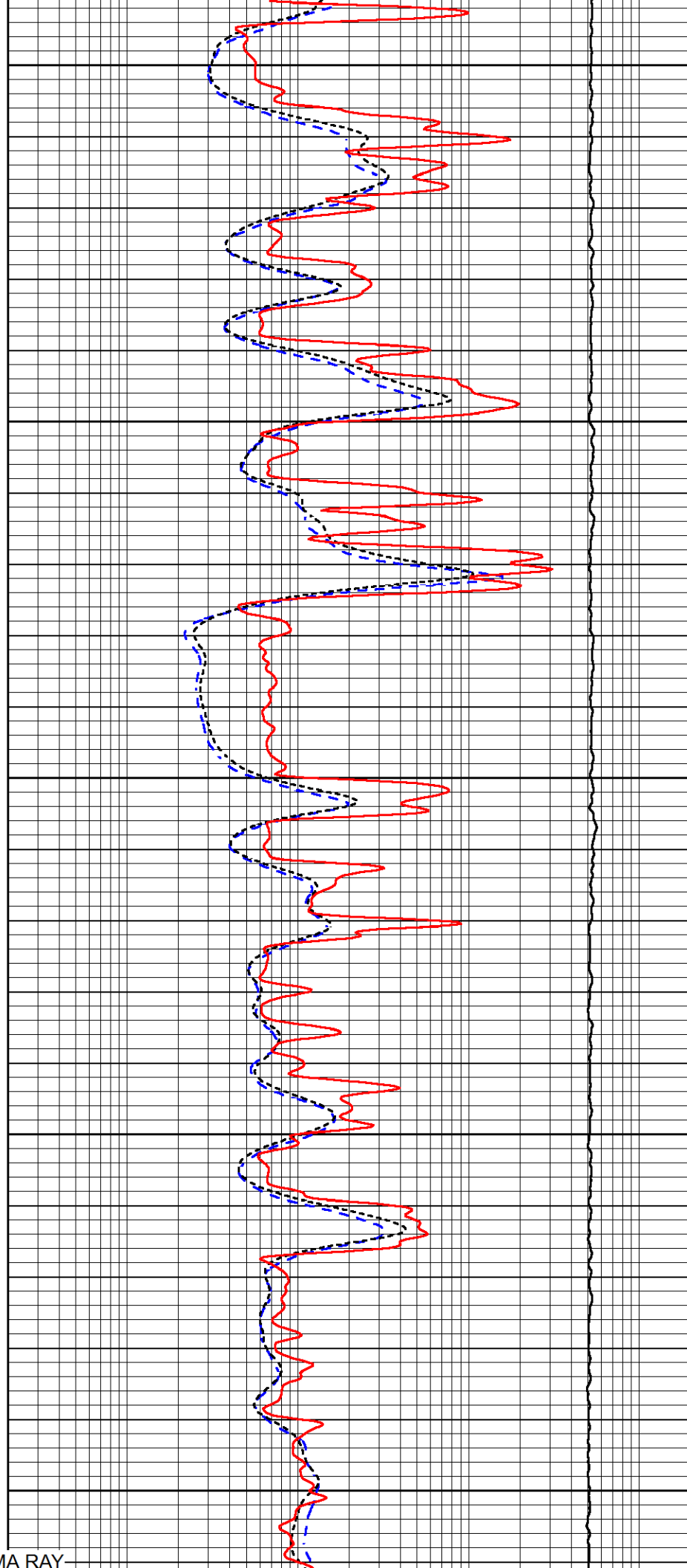
3700

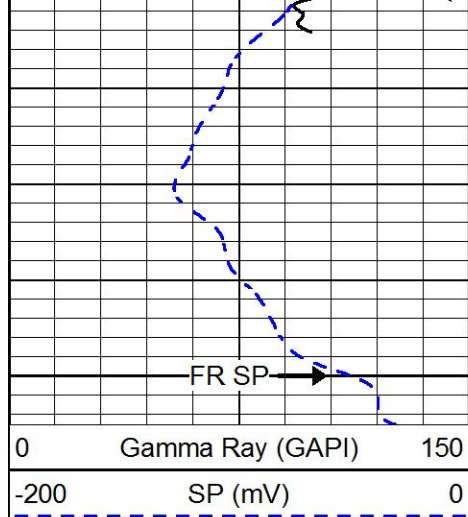
3750

3800

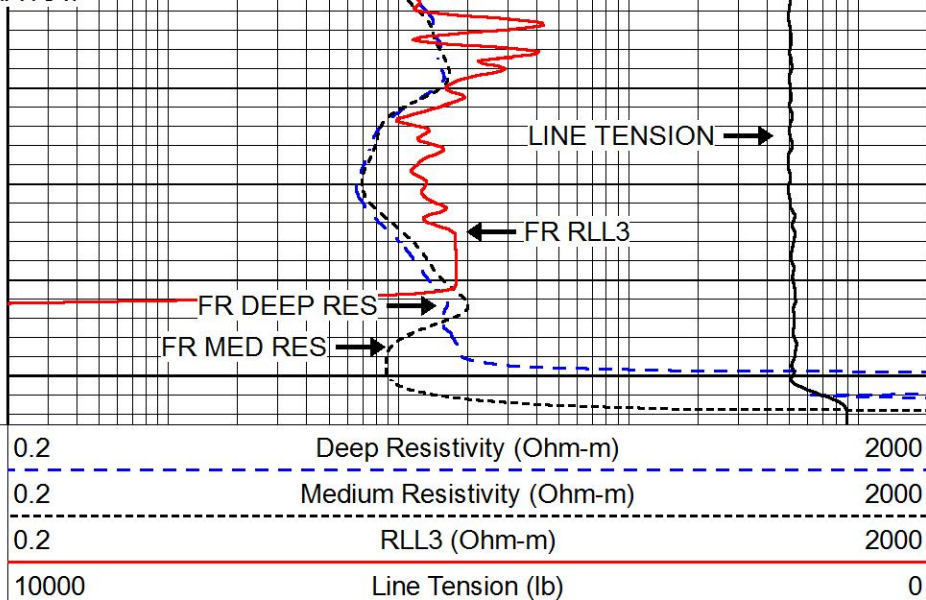
3850

FR GAMMA RAY



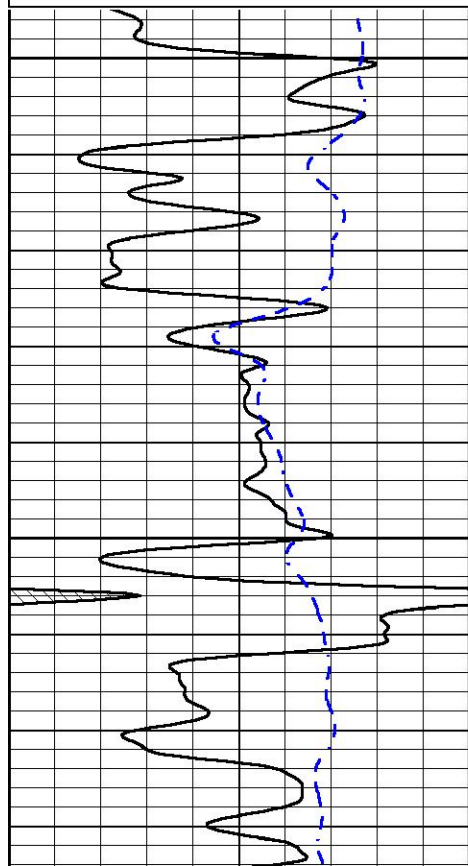
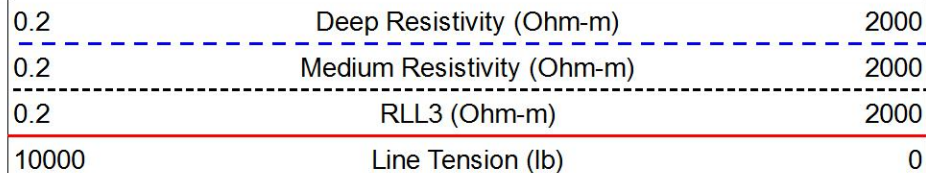
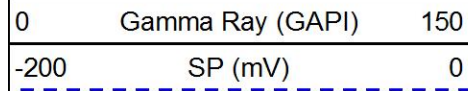


3900



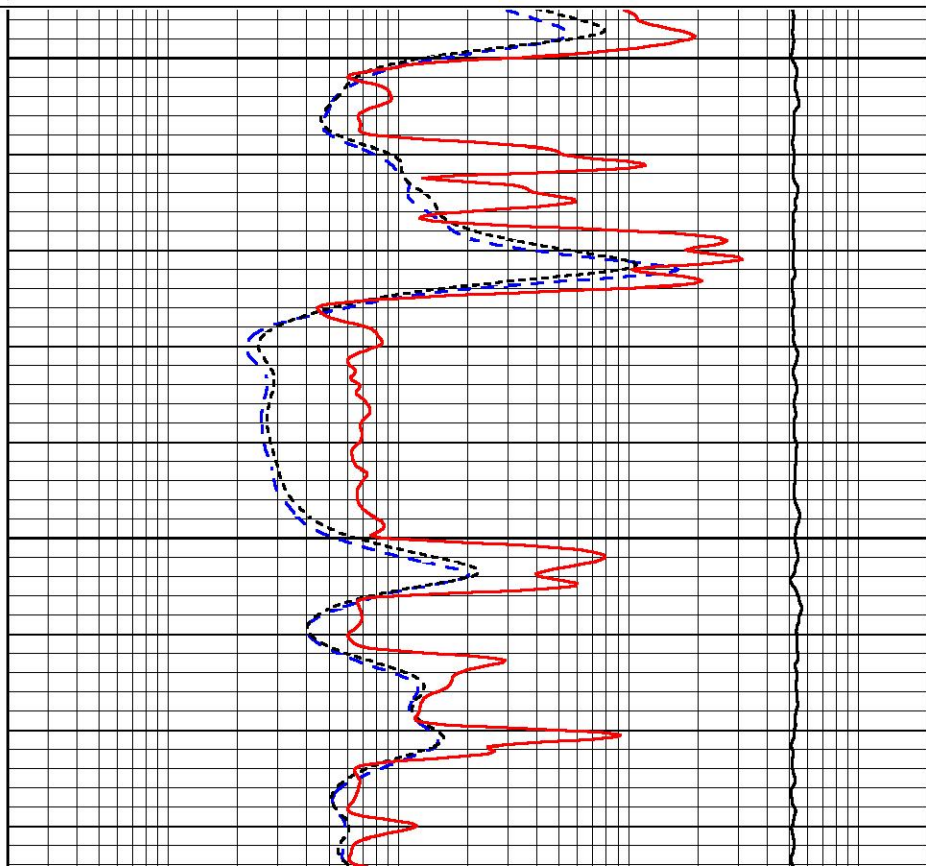
REPEAT SECTION

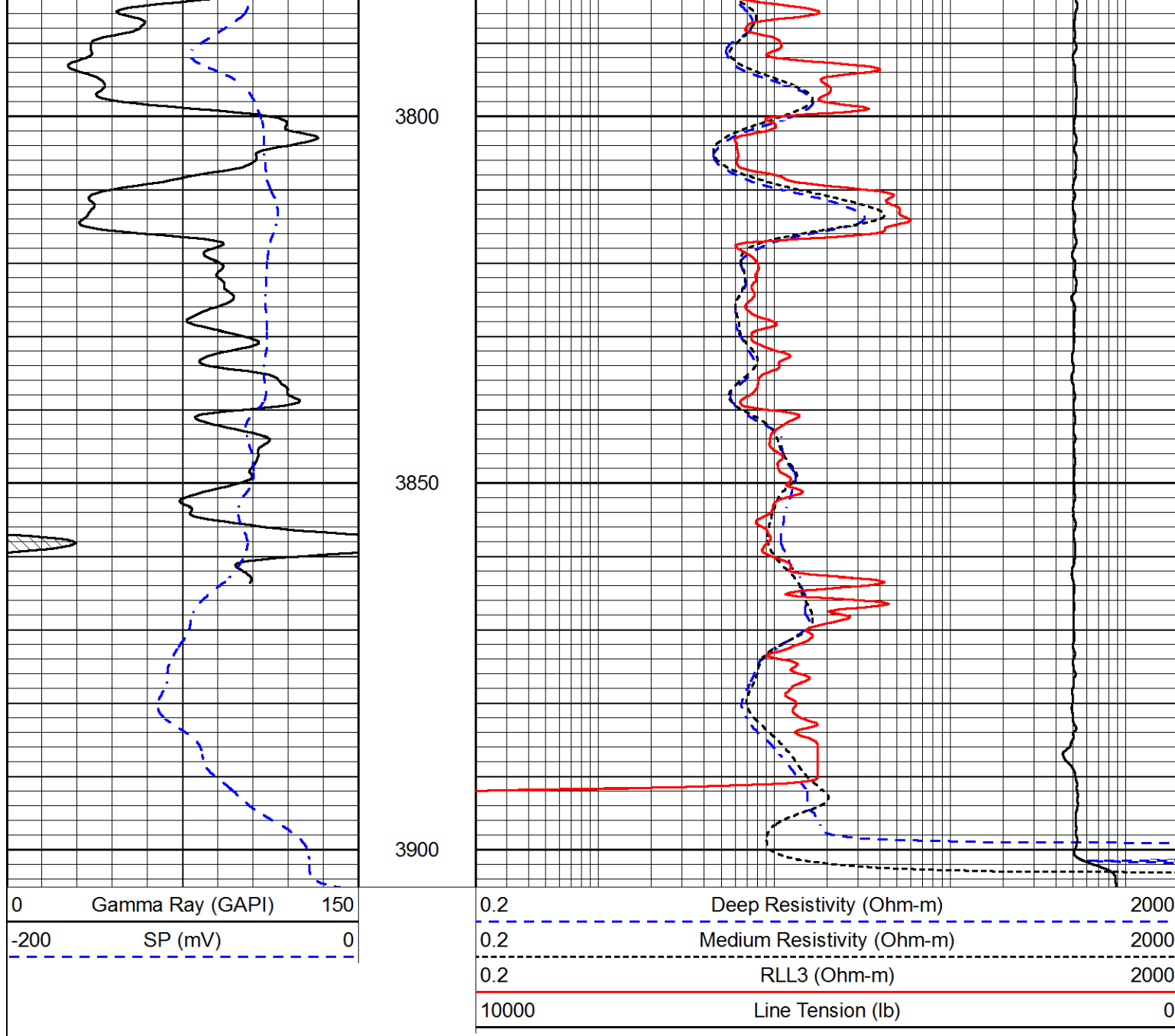
Database File ainsworth_davis_5.db
Dataset Pathname STKML/pass2.1
Presentation Format dil
Dataset Creation Wed Jul 19 04:56:00 2017
Charted by Depth in Feet scaled 1:240



3700

3750





Calibration Report

Database File ainsworth_davis_5.db
 Dataset Pathname STKML/pass3.1
 Dataset Creation Wed Jul 19 04:57:51 2017

Dual Induction Calibration Report

Serial-Model: PSI 91-M&W
 Calibration Performed: Thu Jul 13 13:00:25 2017

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	166.796	835.089	0.000	255.800	mmho/m	0.430	-32.850
Medium	142.009	1348.560	0.000	255.800	mmho/m	0.360	-31.000

Microlog Calibration Report

Serial-Model: PSI-01-PSIML

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	12500.0000	-0.5500
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	14000.0000	-0.3000
Caliper	1.0001	1.1397	6.5000	18.5000	in	100.0000	-97.3000

Compensated Density Calibration Report

Serial-Model: 90-1031-M&W
 Source / Verifier: 16955B / 2ci
 Master Calibration Performed: Thu Jul 13 13:00:48 2017

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4903.44	6153.79	cps
Aluminum	2.685	g/cc	934.50	4021.31	cps
Spine Angle = 75.61			Density/Spine Ratio = 0.543		
	Size		Reading		
Small Ring	8.00	in	1.84		
Large Ring	22.00	in	1.46		

Compensated Neutron Calibration Report

Serial Number: 207-MW
 Tool Model: M&W
 Calibration Performed: Sat Jun 17 10:30:30 2017

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
 Tool Model: M&W
 Calibration Performed: Thu Jul 13 13:01:02 2017
 Calibrator Value: 1.0 GAPI
 Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps
 Sensitivity: 0.6000 GAPI/cps



Company AINSWORTH OPERATING CO.
 Well DAVIS #5
 Field RED SUN
 County GRAHAM
 State KANSAS

