



DUAL INDUCTION LOG

Company: RESSLER WELL SERVICE, INC.
 Well: SCHMIDT FRIESEN NO. 30-1
 Field: HOLLOW-NIKKEL
 County: HARVEY
 State: KANSAS

Company: RESSLER WELL SERVICE, INC.
 Well: SCHMIDT FRIESEN NO. 30-1
 Field: HOLLOW-NIKKEL
 County: HARVEY
 State: KANSAS

Location: API #: 15-079-20716-00-00
 330' FNL & 1980' FEL
 SEC 30 TWP 22S RGE 3W
 Permanent Datum: GROUND LEVEL Elevation 1448'
 Log Measured From: KELLY BUSHING
 Drilling Measured From: KELLY BUSHING
 Other Services: CNL/CDL
 Elevation: K.B. 1454', D.F. N/A, G.L. 1448'

Date	11/29/2017
Run Number	ONE
Depth Driller	2616'
Depth Logger	2610'
Bottom Logged Interval	2609'
Top Log Interval	300'
Casing Driller	13.375" @ 300'
Casing Logger	299'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	700
Density / Viscosity	8.7 46
pH / Fluid Loss	11.0 9.2
Source of Sample	FLOWLINE
Rm @ Meas. Temp	1.2 @ 58
Rmt @ Meas. Temp	.90 @ 58
Rmc @ Meas. Temp	1.62 @ 58
Source of Rmf / Rmc	CHARTS
Rm @ BHT	.68 @ 102
Operating Rig Time	1 1/2 HOURS
Max Rec. Temp. F	102 DEGF
Equipment Number	108
Location	HAYS
Recorded By	J. HENRICKSON
Witnessed By	LARRY RESSLER
	TERRY MCLEOD

<<< 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.
 BURRTON KANSAS
 NORTH TO CR 60, 1 1/2 WEST, SOUTH INTO

Log Measured From: KELLY BUSHING 6 Ft. Above Permanent Datum

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


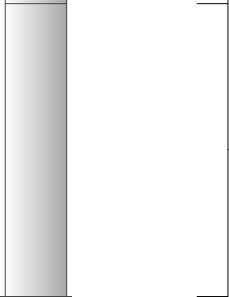
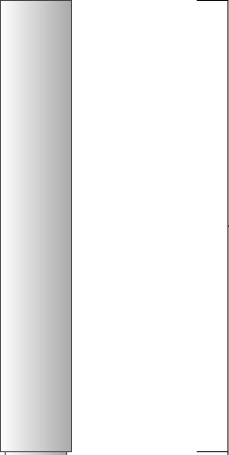

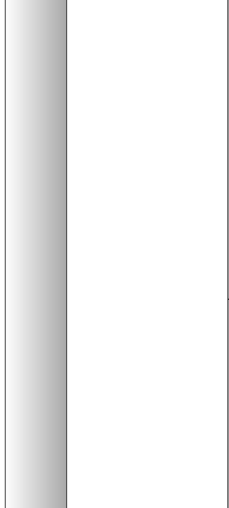
Your Pioneer Energy Services Crew		This Log Record Was Witnessed By	
Engineer:	J. HENRICKSON	Primary Witness:	LARRY RESSLER
Operator:		Secondary Witness:	TERRY MCLEOD
Operator:		Secondary Witness:	
Operator:		Secondary Witness:	

Log Variables

DatabaseC:\ProgramData\Warrior\Data\ressler_schmidt_friesen_30_1.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	104	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	-200	0	Off	2610

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	33.00		GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC CNSSC	29.90 29.15		CNT-M&W (tk10-MW)	5.50	3.50	100.00
LSD DCAL SSD	20.85 20.83 20.35		CDL-M&W (168-986)	8.50	4.00	250.00
RLL3 RLL3F	15.80 15.79					
CILD	8.00		DIL-M&W (1987)	18.50	3.50	220.00

CILM 4.70

SP 0.20

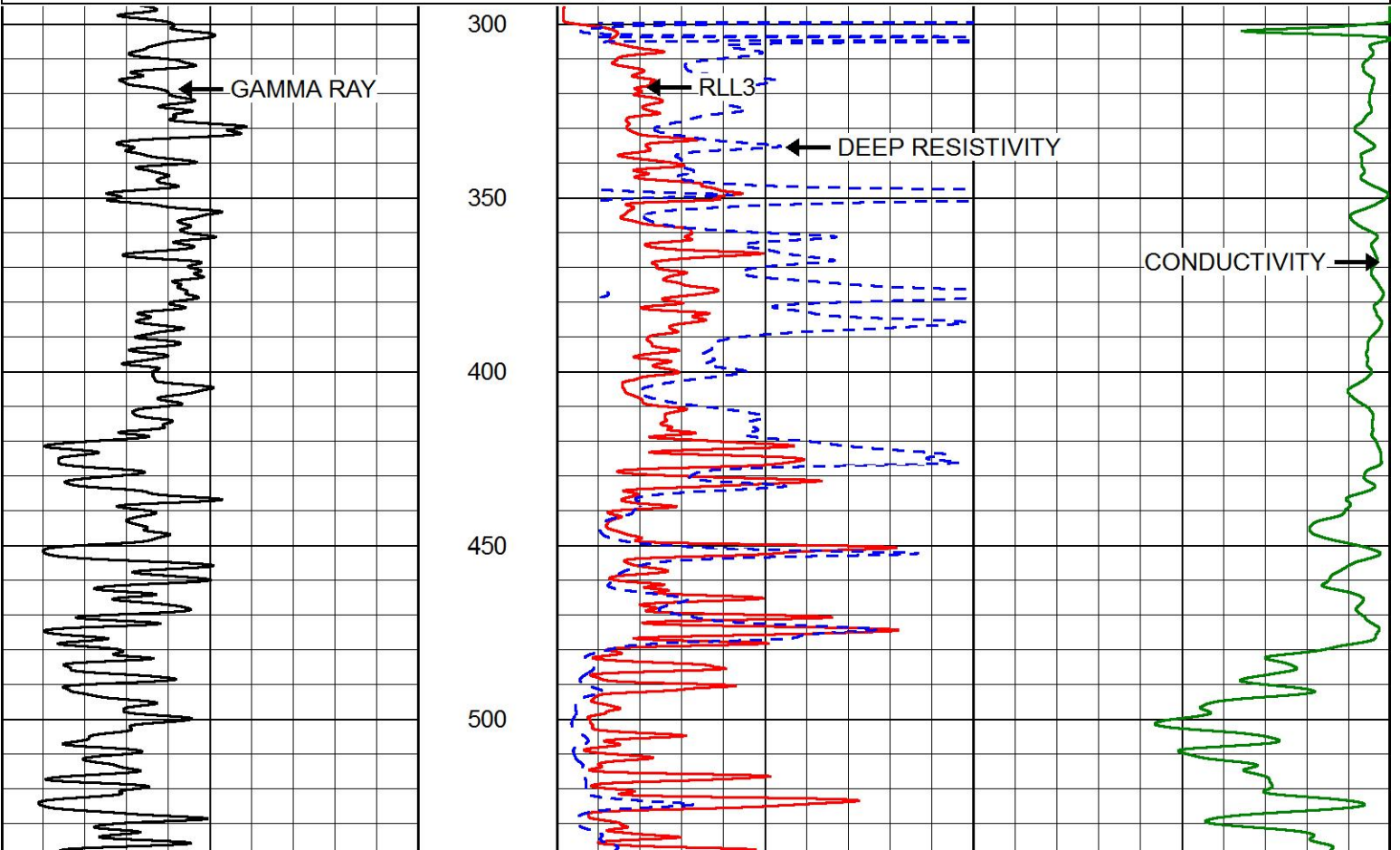
Dataset: resler_schmidt_friesen_30_1.db: field/well/stack/pass3.1
 Total length: 35.50 ft
 Total weight: 620.00 lb
 O.D.: 4.00 in

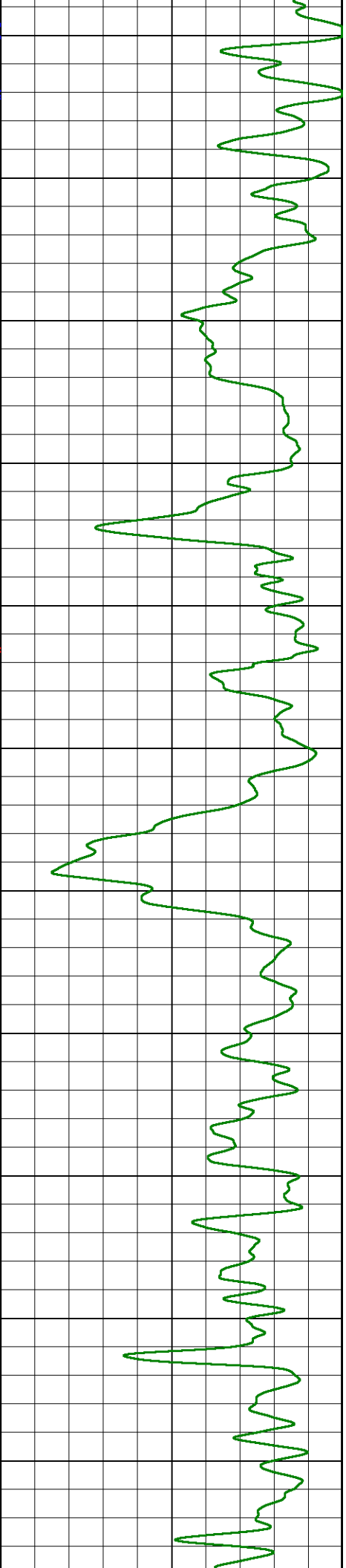
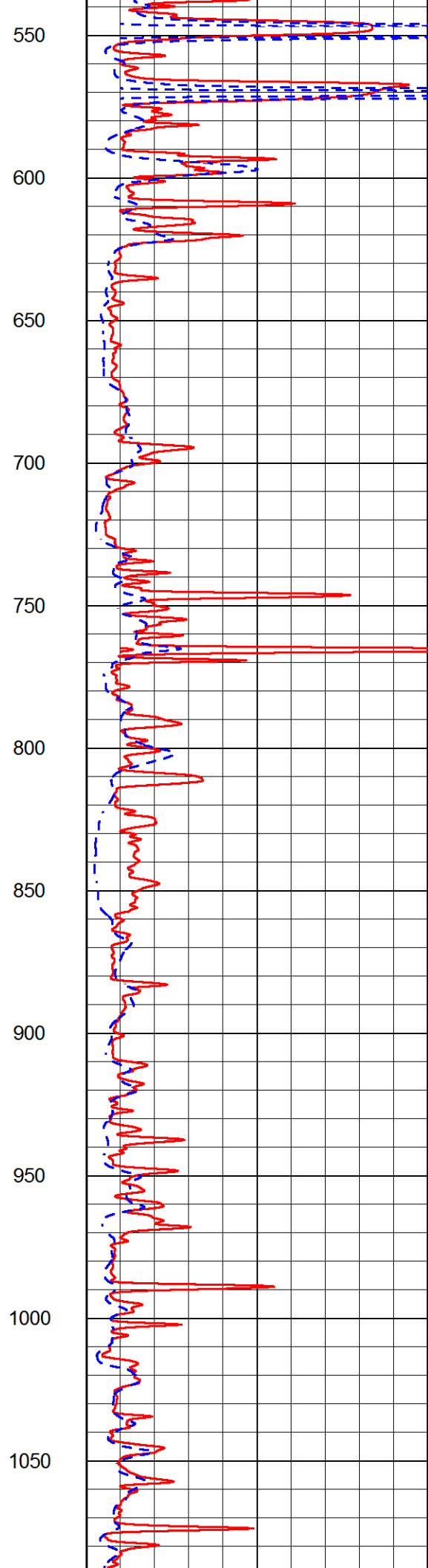
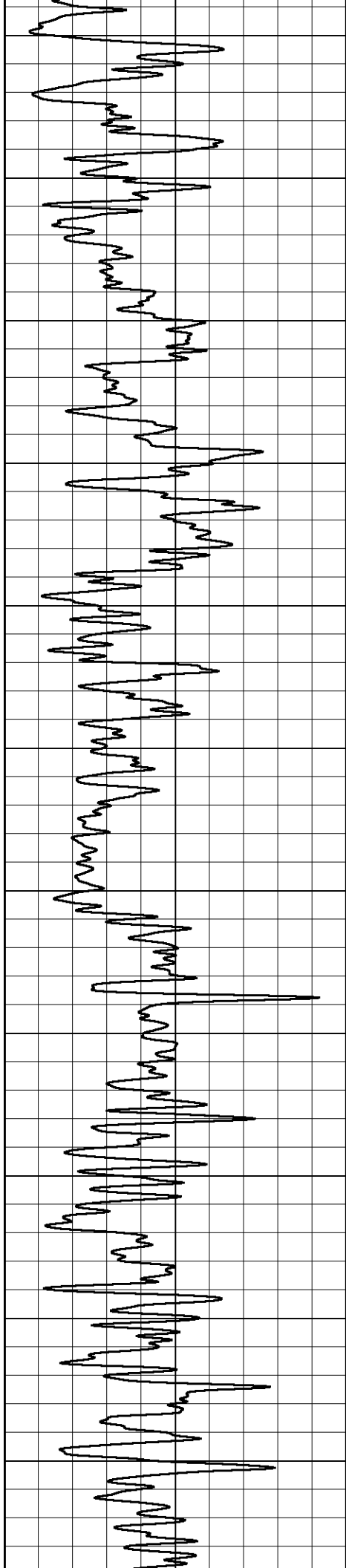


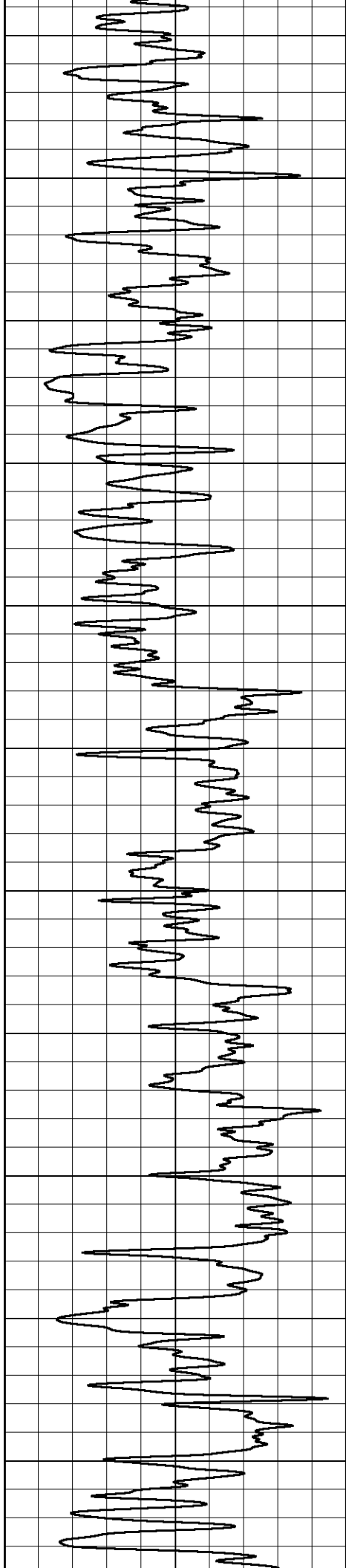
MAIN PASS

Database File resler_schmidt_friesen_30_1.db
 Dataset Pathname stack/pass3.1
 Presentation Format dil2in
 Dataset Creation Wed Nov 29 07:17:50 2017
 Charted by Depth in Feet scaled 1:600

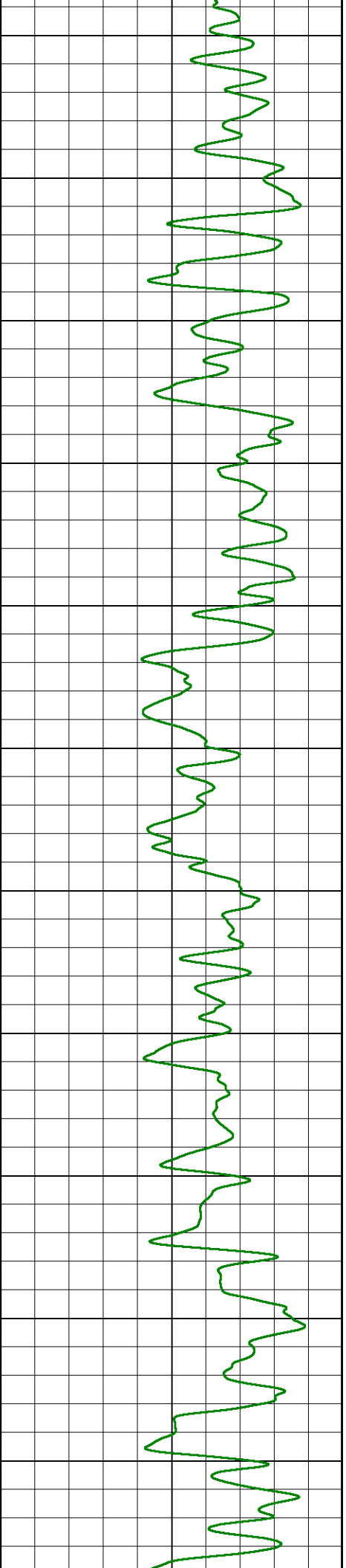
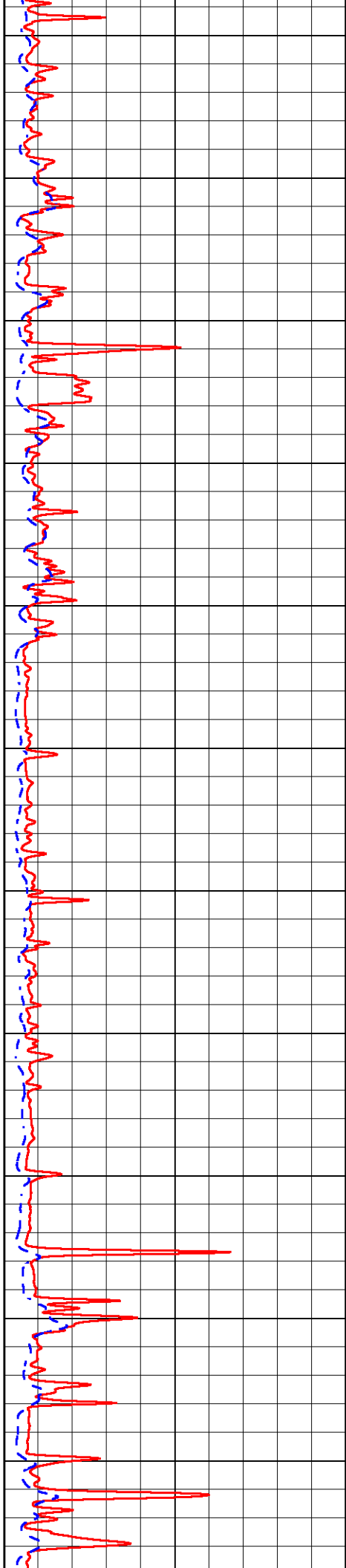
0	GAMMA RAY (GAPI)	150	2000	CONDUCTIVITY (mmho/m)	0
			0	RLL3 (Ohm-m)	50
			0	DEEP RESISTIVITY (Ohm-m)	50
			50	RLL3 (Ohm-m)	500
				DEEP RESISTIVITY	
			50	(Ohm-m)	500

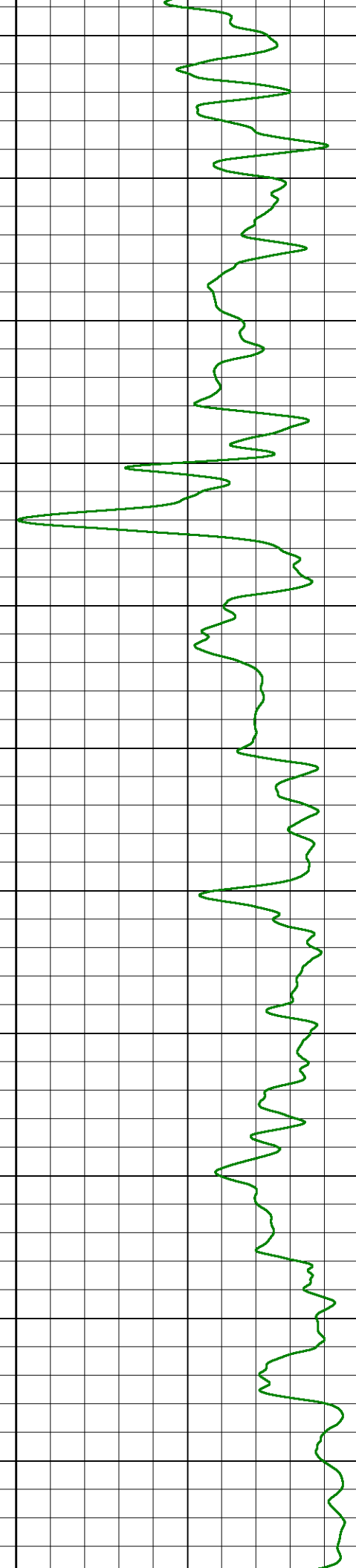
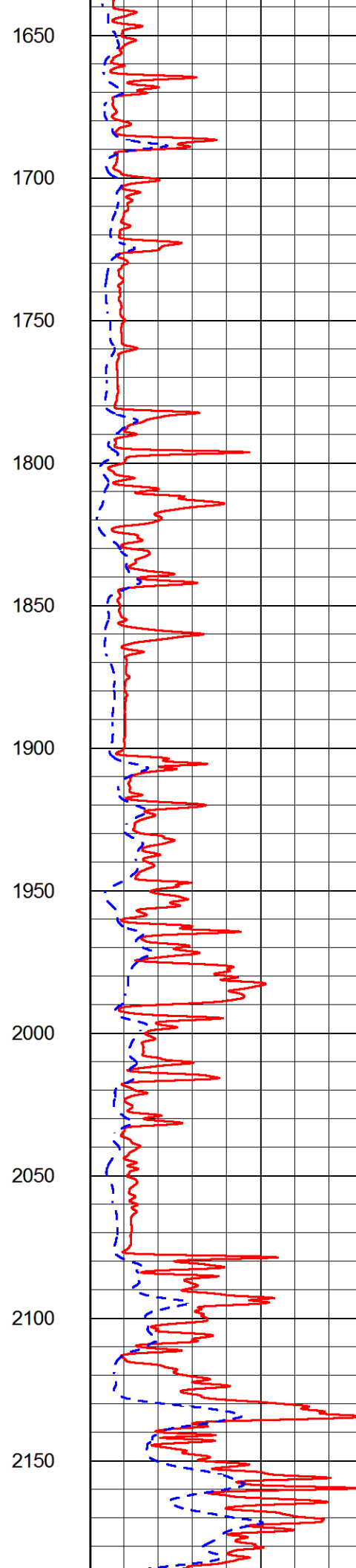
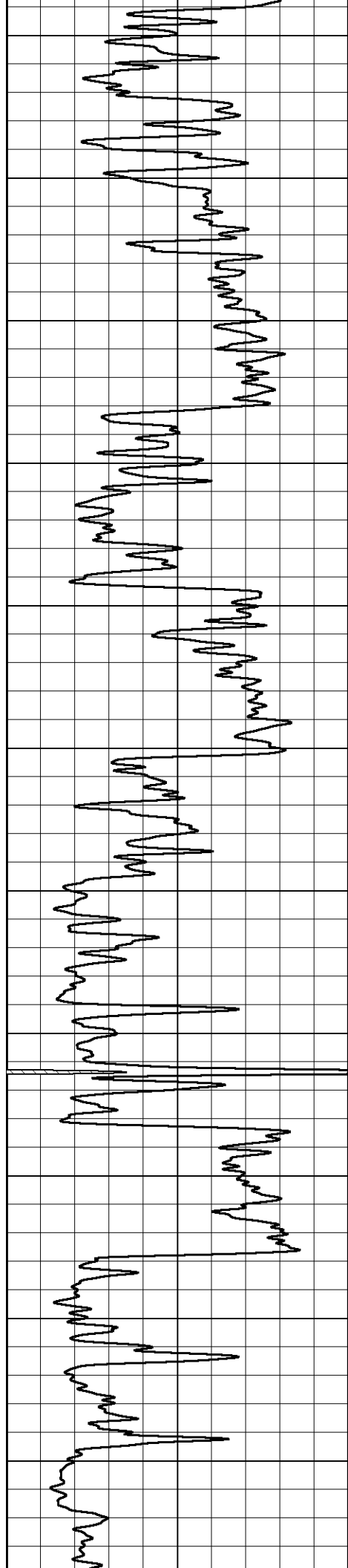


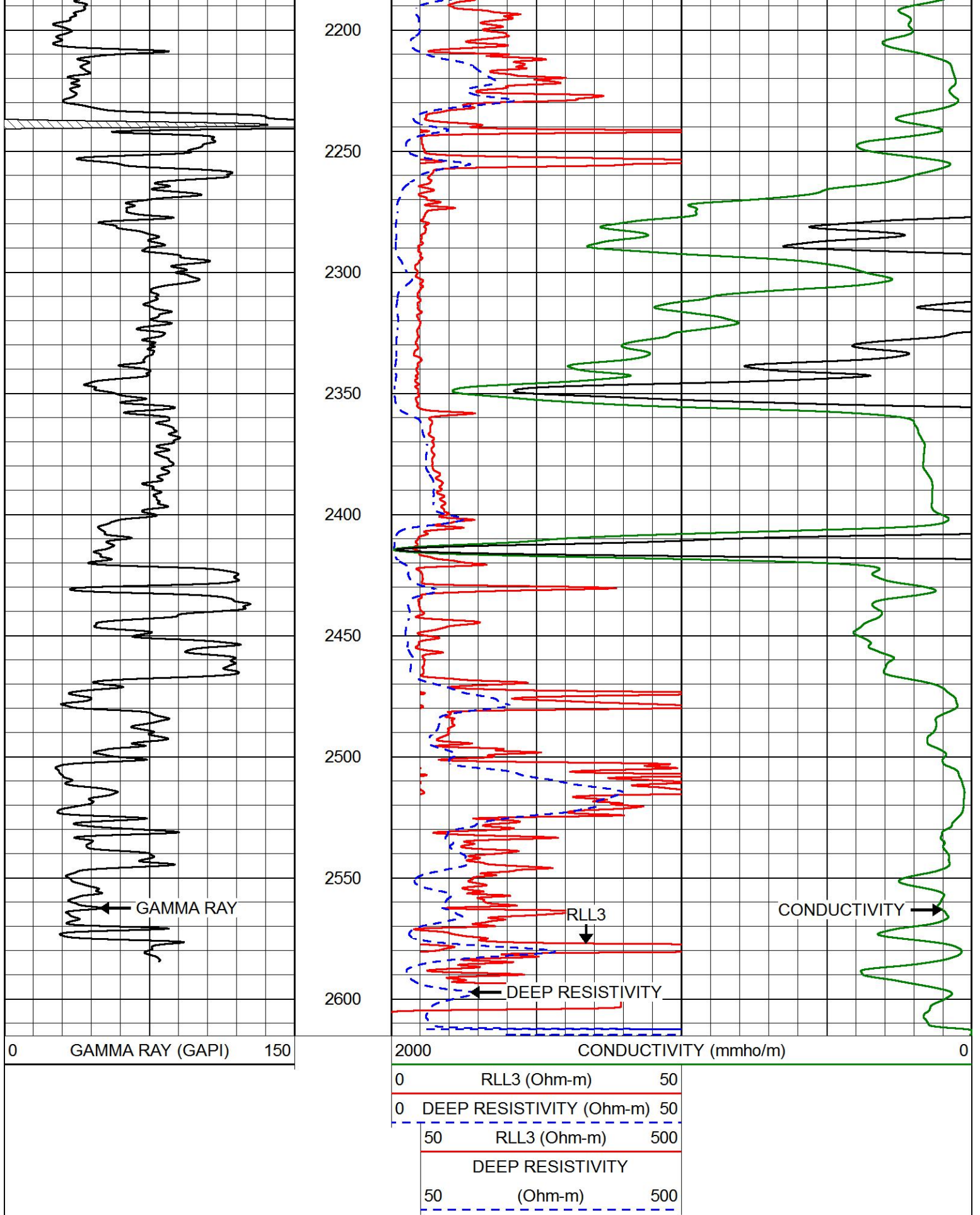




1100
1150
1200
1250
1300
1350
1400
1450
1500
1550
1600





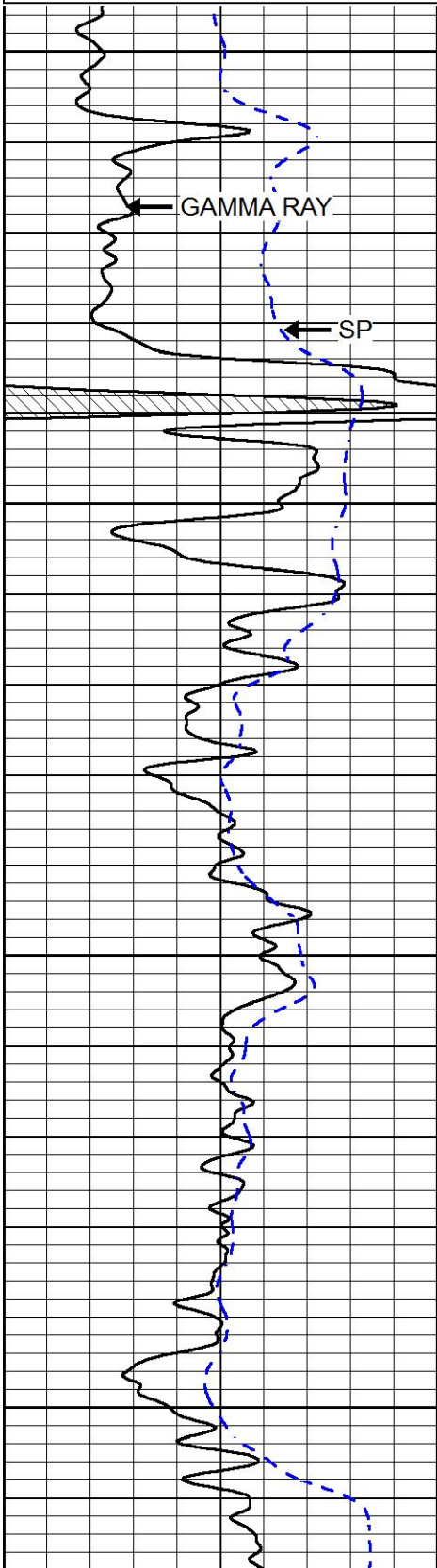


MAIN PASS

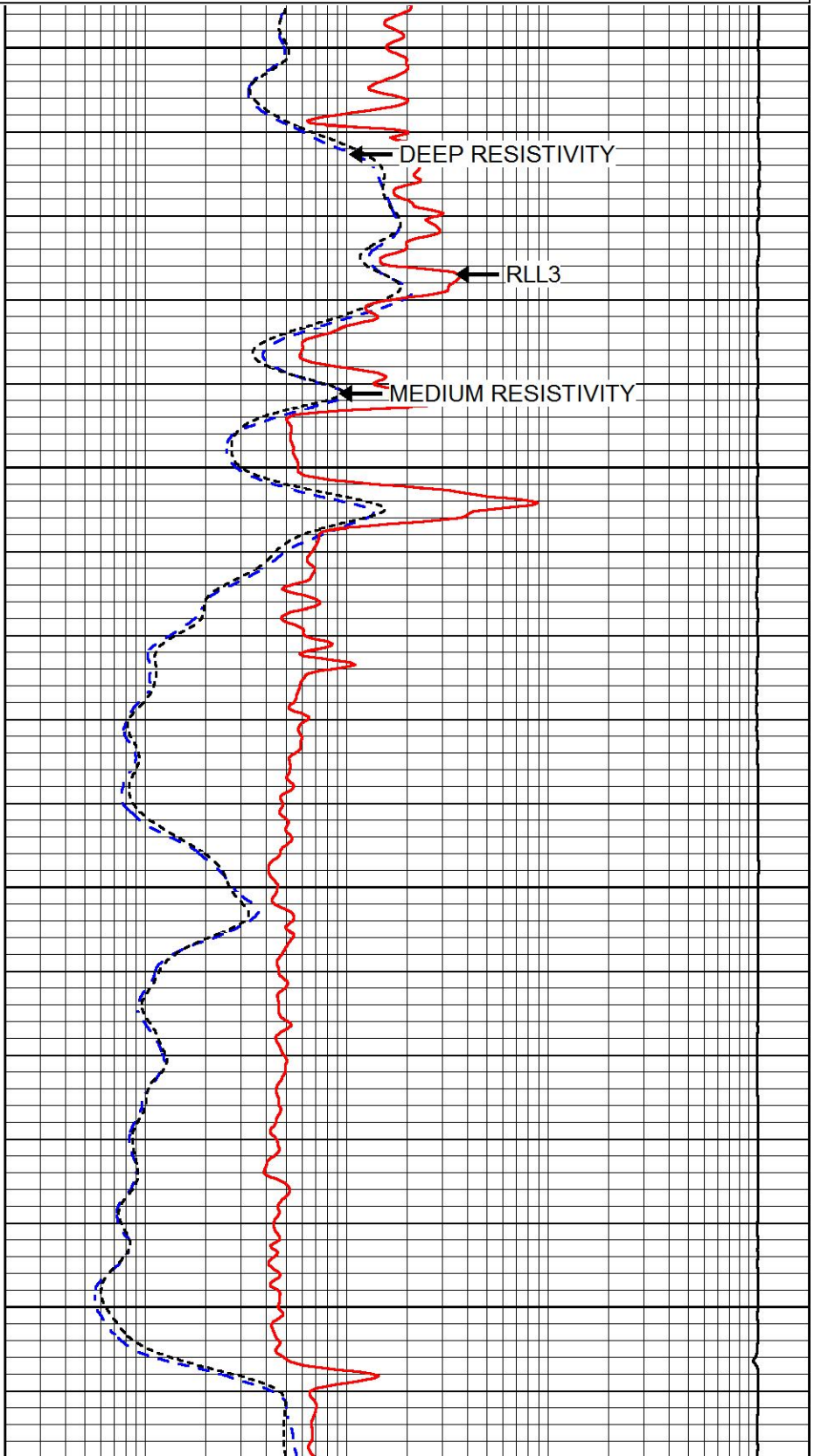
Database File ressler_schmidt_friesen_30_1.db
 Dataset Pathname stack/pass3.1
 Presentation Format dil
 Dataset Creation Wed Nov 29 07:17:50 2017
 Charted by Depth in Feet scaled 1:240

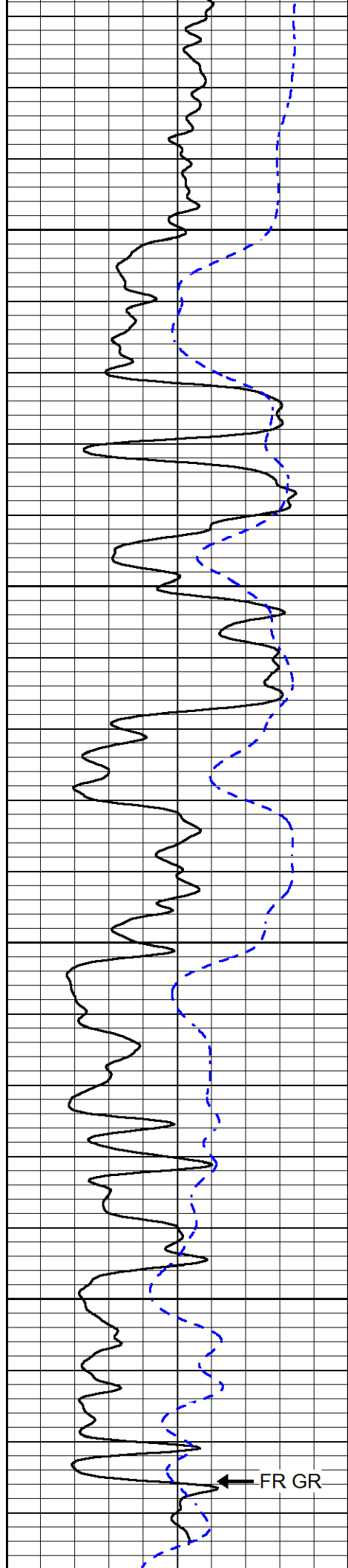
0	GAMMA RAY (GAPI)	150
-200	SP (mV)	0

0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
15000	LINE TENSION (lb)	0



2200
2250
2300
2350



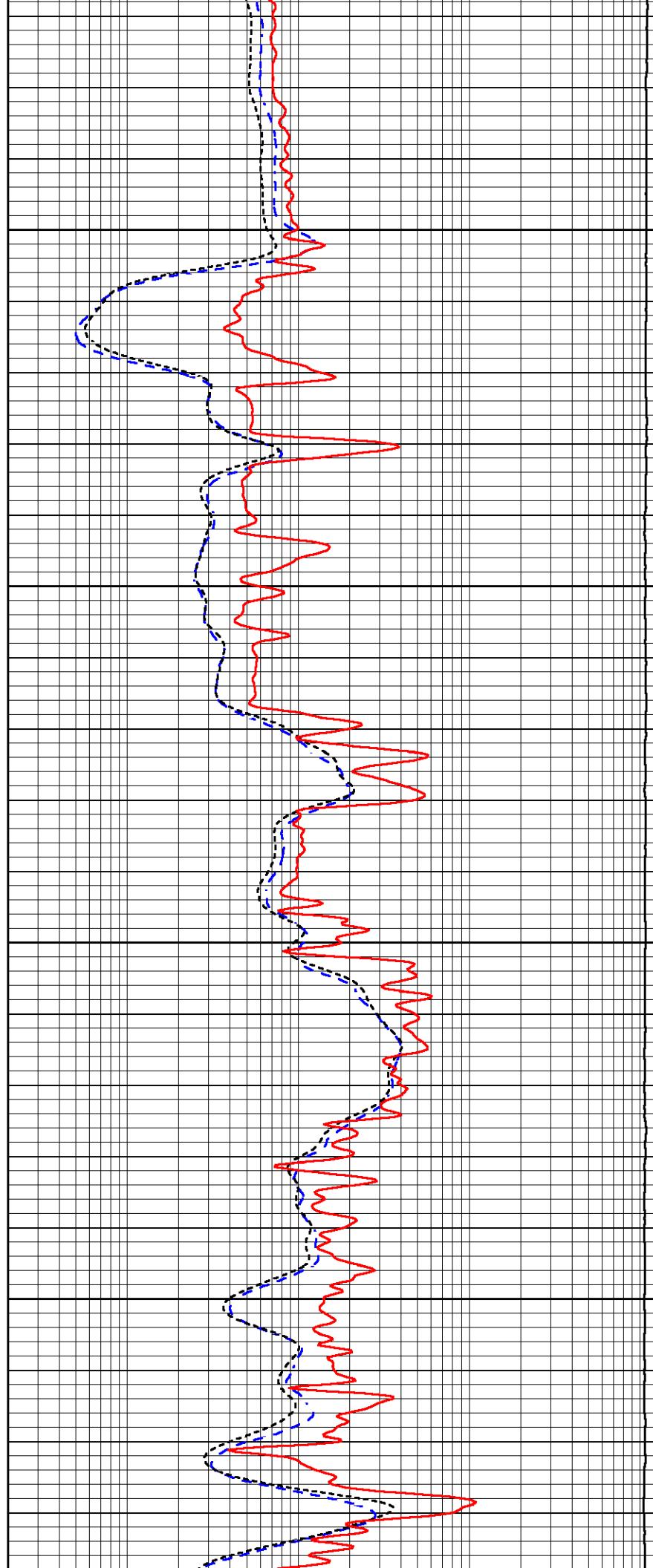


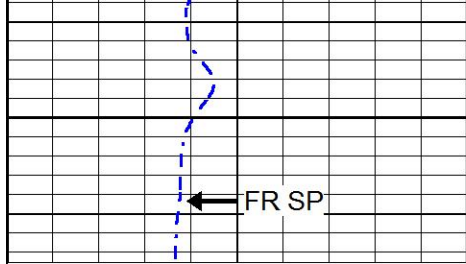
2400

2450

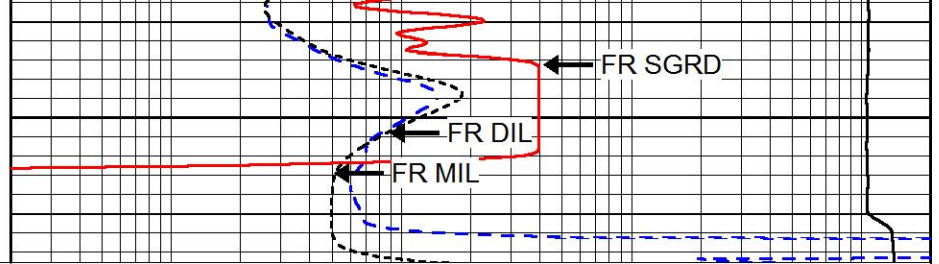
2500

2550





2600



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

15000 LINE TENSION (lb) 0



REPEAT SECTION

Database File resser_schmidt_friesen_30_1.db
 Dataset Pathname stack/pass2.1
 Presentation Format dil
 Dataset Creation Wed Nov 29 07:18:00 2017
 Charted by Depth in Feet scaled 1:240

0 GAMMA RAY (GAPI) 150

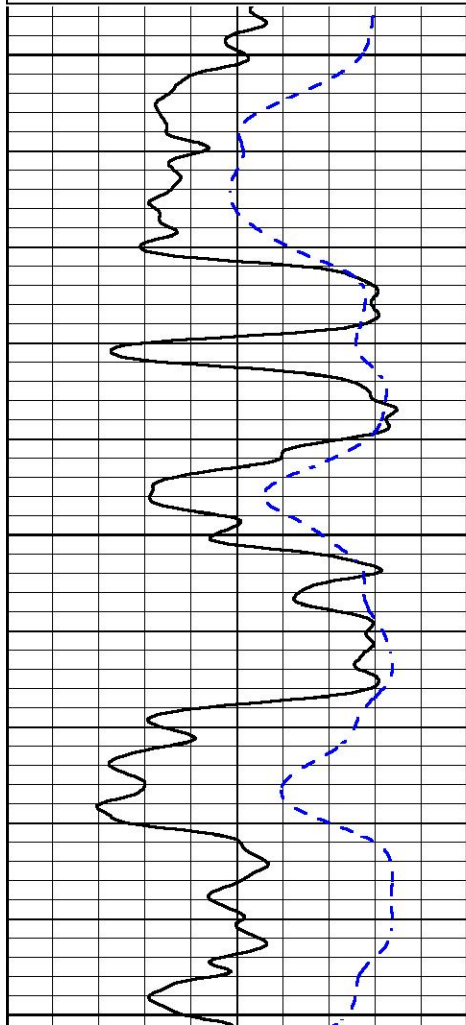
-200 SP (mV) 0

0.2 DEEP RESISTIVITY (Ohm-m) 2000

0.2 MEDIUM RESISTIVITY (Ohm-m) 2000

0.2 RLL3 (Ohm-m) 2000

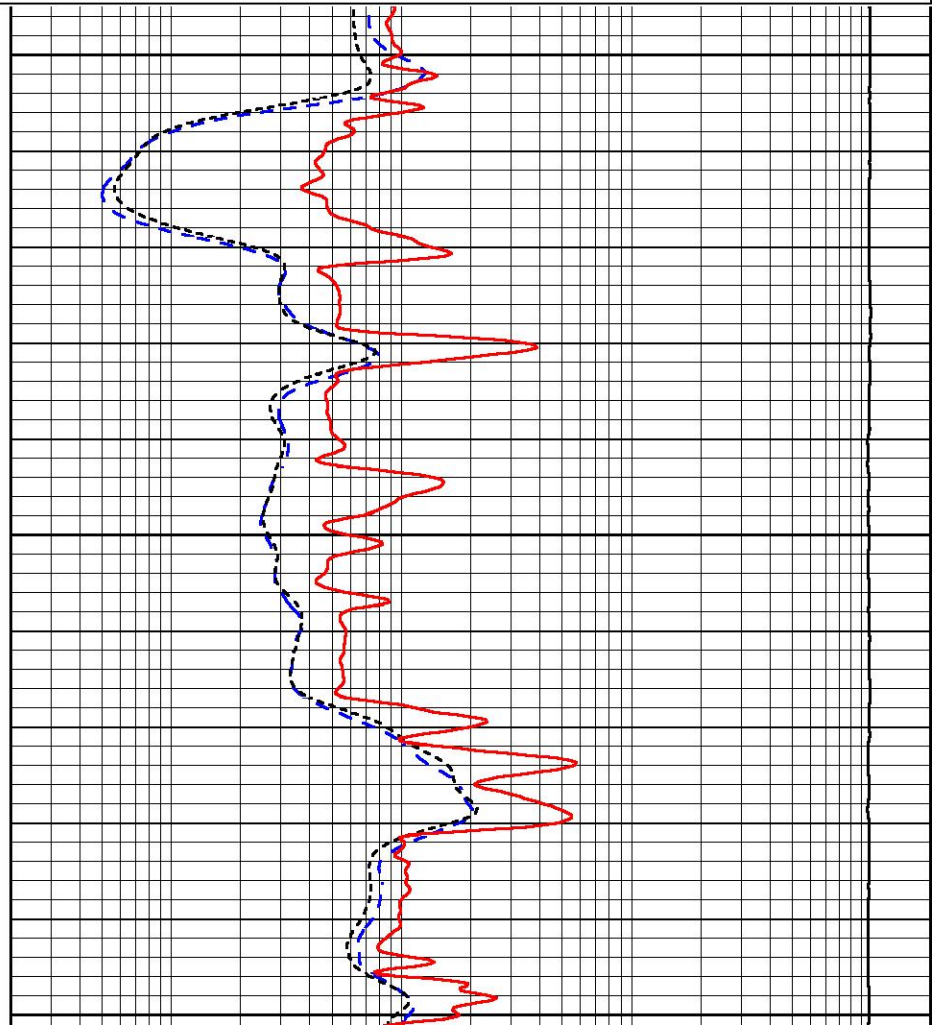
15000 LINE TENSION (lb) 0



2400

2450

2500



Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4691.86	4818.19	cps
Aluminum	2.695	g/cc	859.57	3020.22	cps
Spine Angle = 74.61			Density/Spine Ratio = 0.534		
	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
 Tool Model: M&W
 Calibration Performed: Tue Apr 11 17:08:01 2017

Calibrator Value: 1000.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 6.2 cps

Sensitivity: 0.5200 GAPI/cps



PIONEER
 Pioneer Energy Services

Company RESSLER WELL SERVICE, INC.
 Well SCHMIDT FRIESEN NO. 30-1
 Field HOLLOW-NIKKEL
 County HARVEY
 State KANSAS