



DUAL INDUCTION LOG

PIONEER
Pioneer Energy Services

Company **PIONEER RESOURCES**
Well **MAIER NO. 1**
Field **WILDCAT**
County **ELLIS** State **KANSAS**

Location: API #: 15-051-26840-00-00

Other Services

SEC 33 TWP 12S RGE 19W
620' FNL & 1,520' FWL

CNL/CDL
MEL

Permanent Datum GROUND LEVEL Elevation 2135'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Elevation
K.B. 2142'
D.F. N/A
G.L. 2135'

Date	10/15/2016		
Run Number	ONE		
Depth Driller	3885'		
Depth Logger	3884'		
Bottom Logged Interval	3883'		
Top Log Interval	200'		
Casing Driller	8,625" @ 232'		
Casing Logger	232'		
Bit Size	7.875"		
Type Fluid in Hole	CHEMICAL		
Salinity, ppm CL	6000		
Density / Viscosity	9.1 52		
pH / Fluid Loss	10.0 9.6		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.62 @ 80		
Rmt @ Meas. Temp	.47 @ 80		
Rmc @ Meas. Temp	.84 @ 80		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	.43 @ 115		
Operating Rig Time	2 1/2 HOURS		
Max Rec. Temp. F	115		
Equipment Number	108		
Location	COLBY		
Recorded By	J. LONG		
Witnessed By	JANEL STAAB		

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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.

YOCEMENTO (I-70 EXIT), 3 1/2 NORTH TO HOPEWELL ROAD, 2/3 WEST, SOUTH INTO

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

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

Your Pioneer Energy Services Crew

Engineer: J. LONG
Operator: C. PFEIFER
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: JANEL STAAB
Secondary Witness:
Secondary Witness:
Secondary Witness:

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 115	in 5.5	in 0	g/cc 1	2	g/cc 2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	0	mmho/m 0	mmho/m 0	mV -365	degF 81	Off	ft 3884

Sensor	Offset (ft)	Schematic		Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58			GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC	37.48			CNT-M&W (tk10-MW)	5.50	3.50	100.00
CNSSC	36.73						
LSD DCAL SSD	28.43 28.42 27.93			CDL-M&W (71-914)	8.50	4.00	250.00
ML-PSI STKBL ML (PSI-02) Stackable Microlog Tools	7.58				7.58	4.00	65.00
MCAL	19.83						
MI	19.83						
MN	19.83						
RLL3	15.80						
RLL3F	15.79						
CILD	8.00			DIL-M&W (1987)	18.50	3.50	220.00

CILM	4.70								
SP	0.20								
Dataset: pioneerresources_maier_1.db: field/well/stackmel/pass1 Total length: 43.08 ft Total weight: 685.00 lb O.D.: 4.00 in									

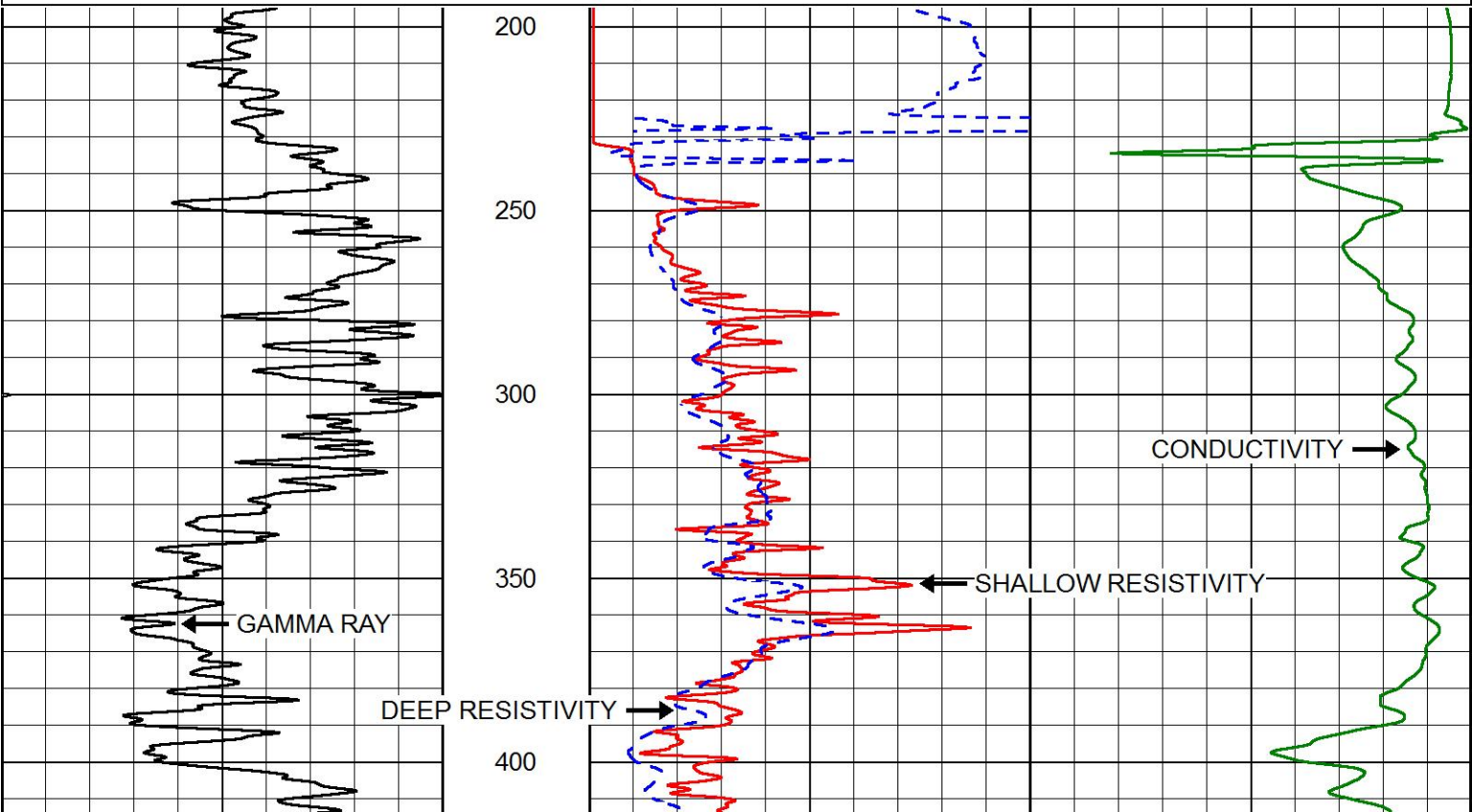


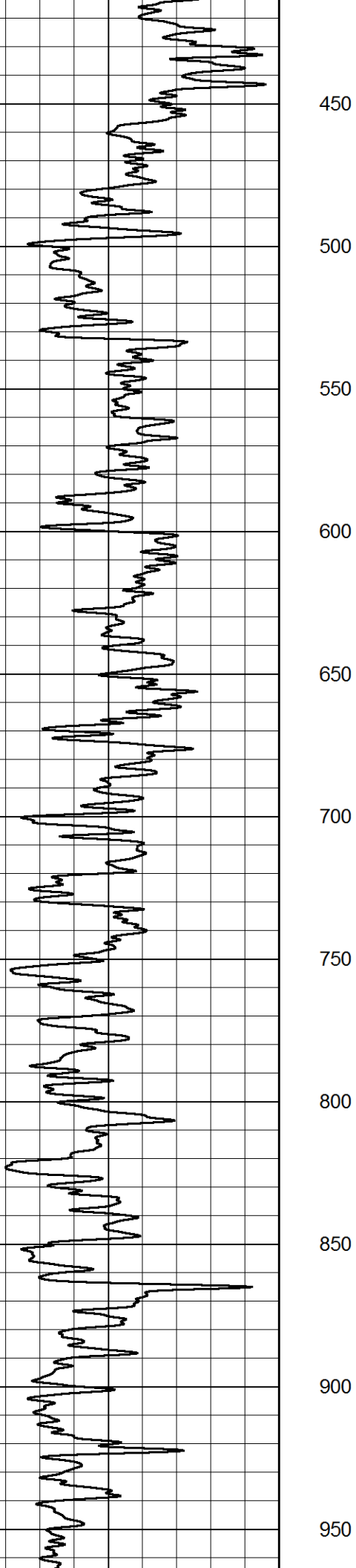
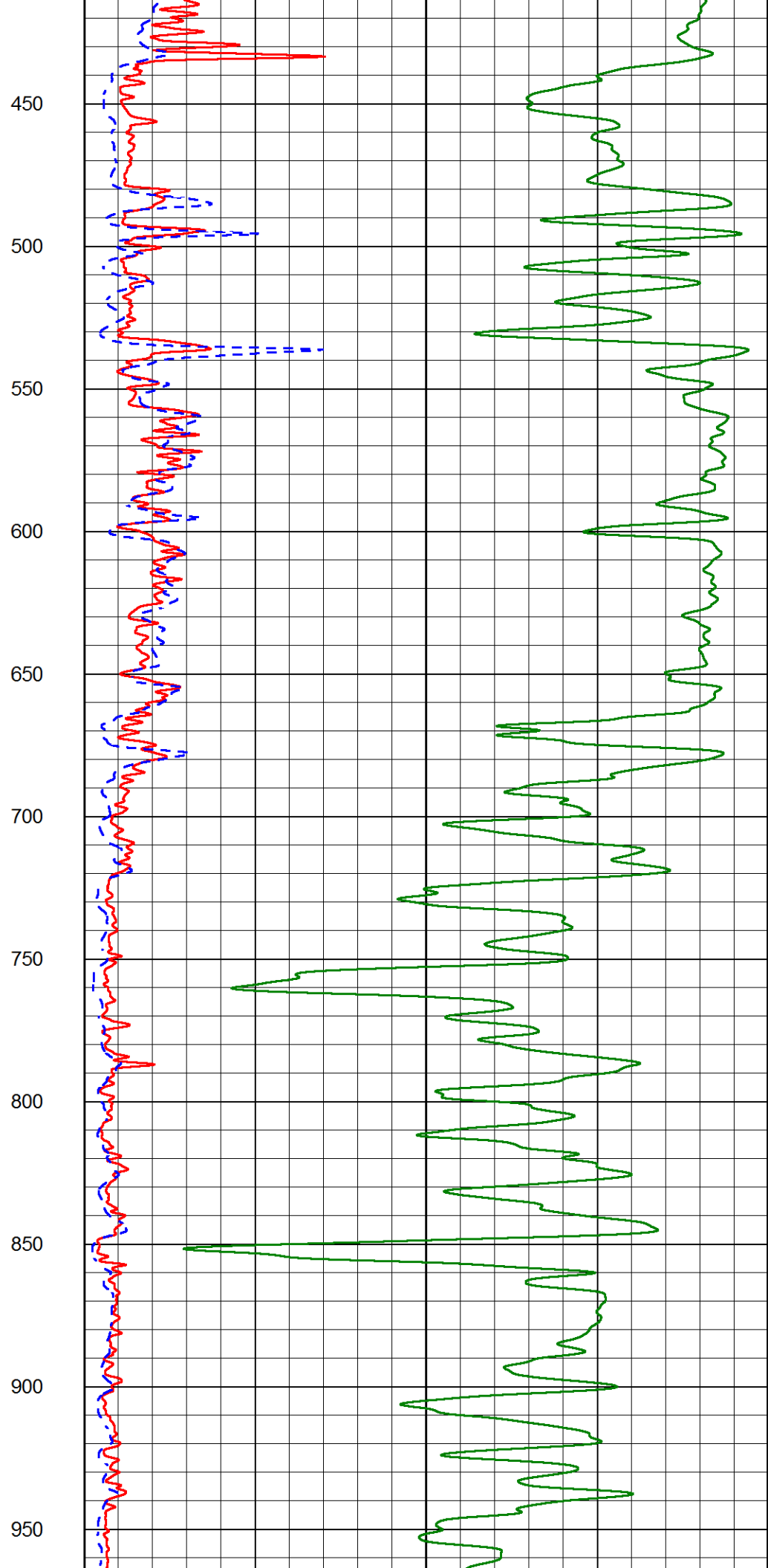
MAIN PASS

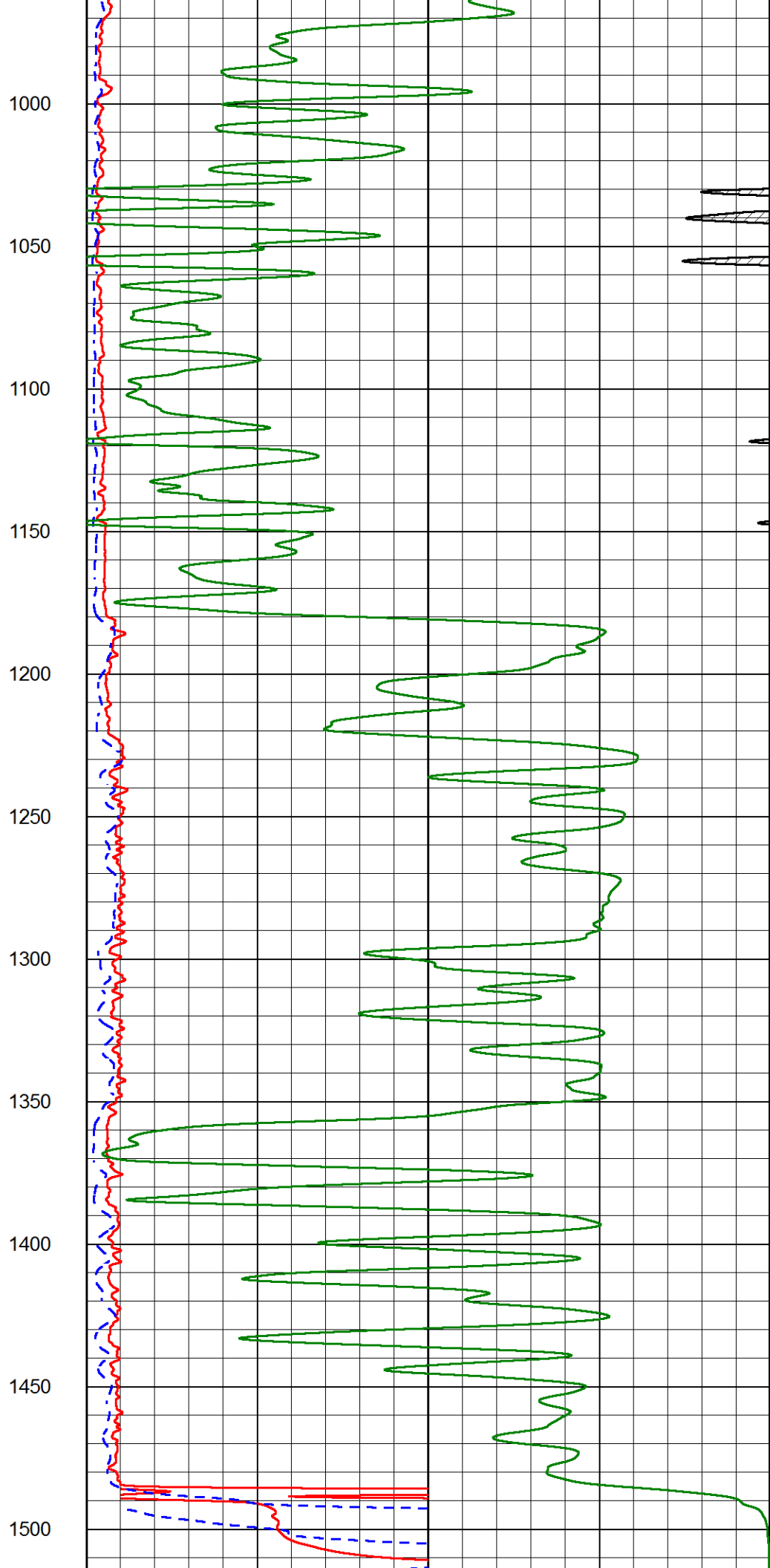
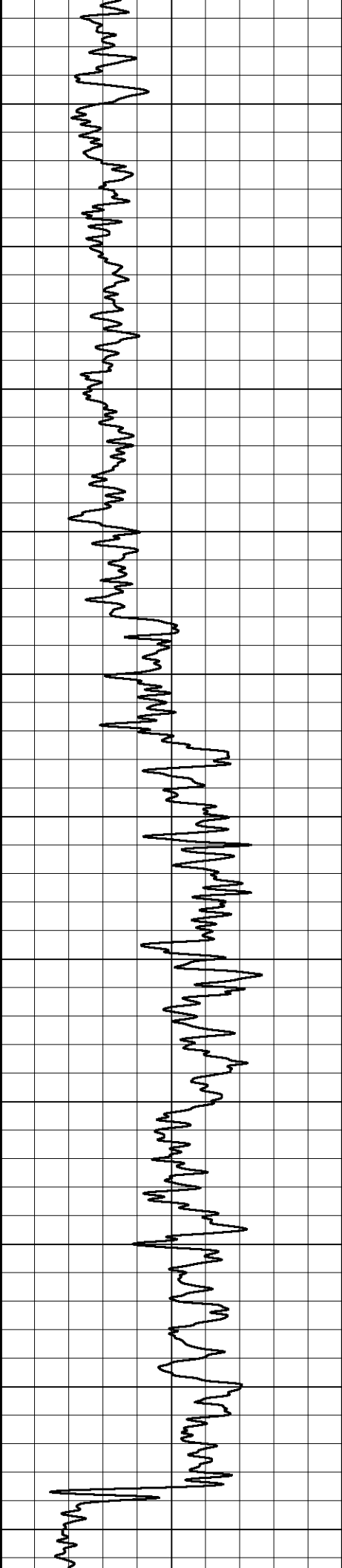
2" SCALE RESISTIVITY

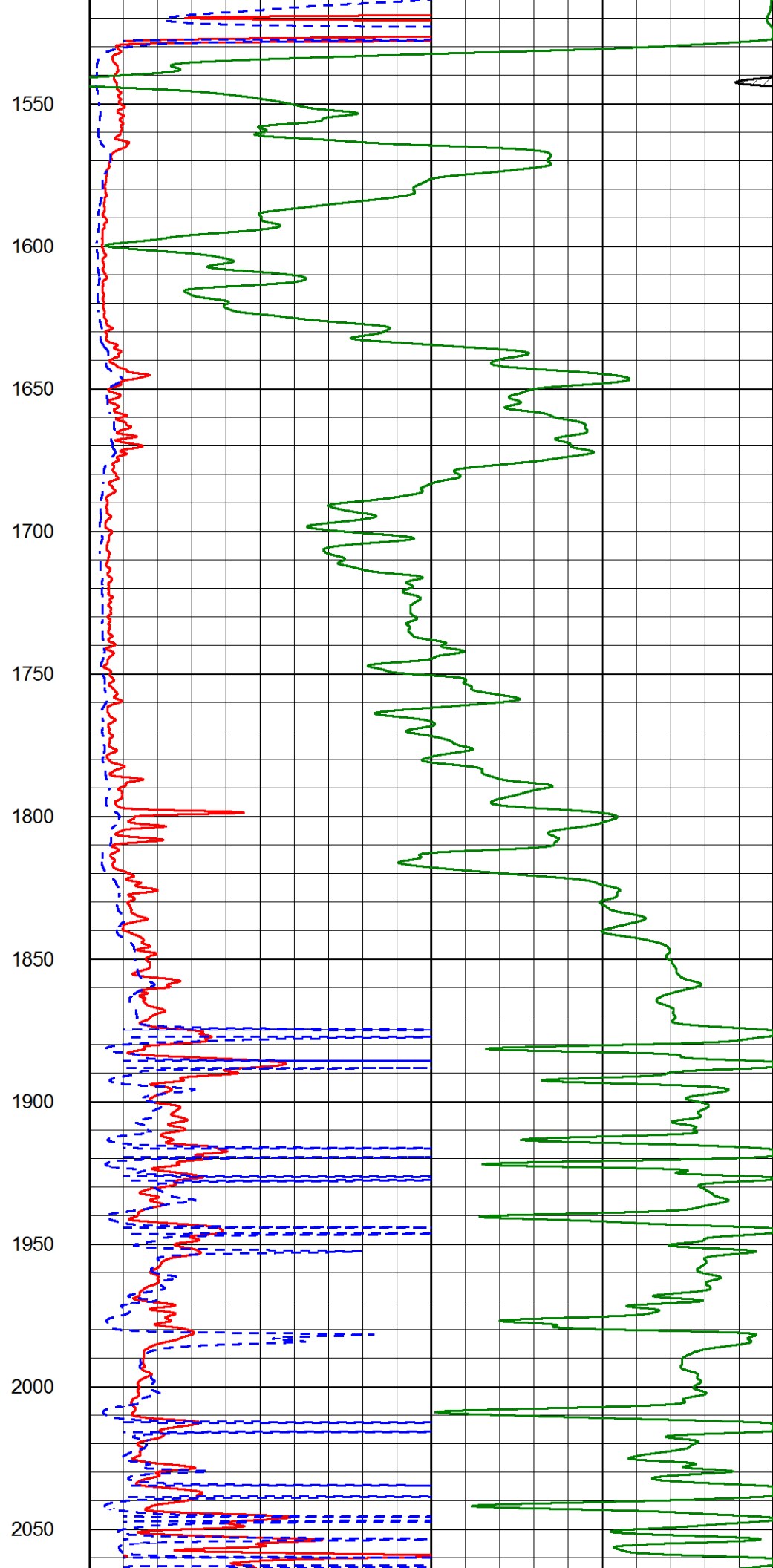
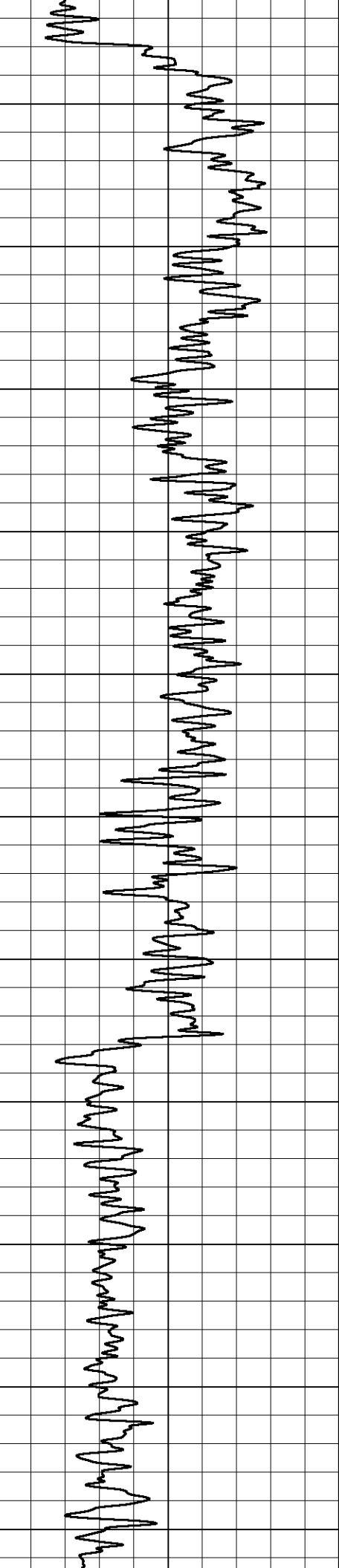
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Dataset Pathname	stackmel/pass4.2
Presentation Format	dil2in
Dataset Creation	Sat Oct 15 19:00:42 2016
Charted by	Depth in Feet scaled 1:600

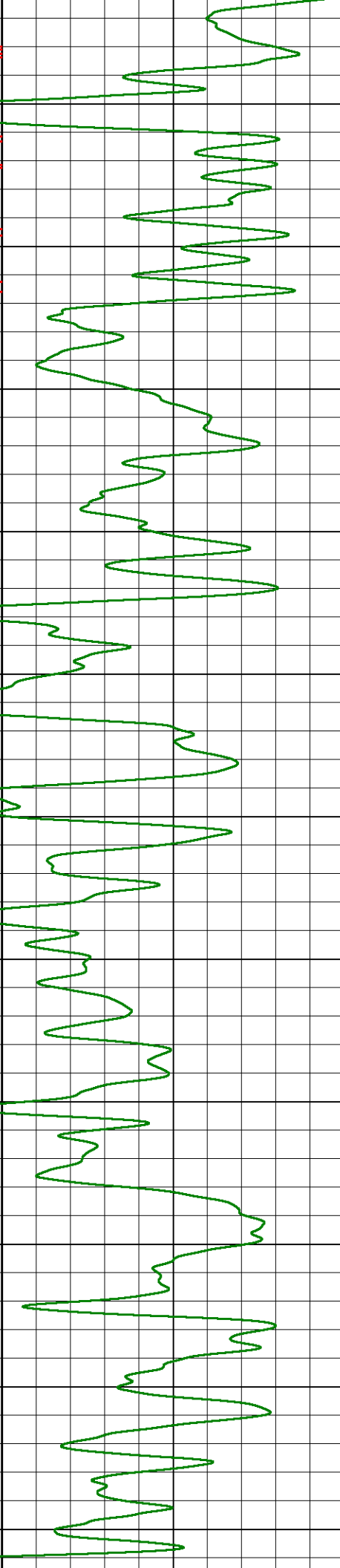
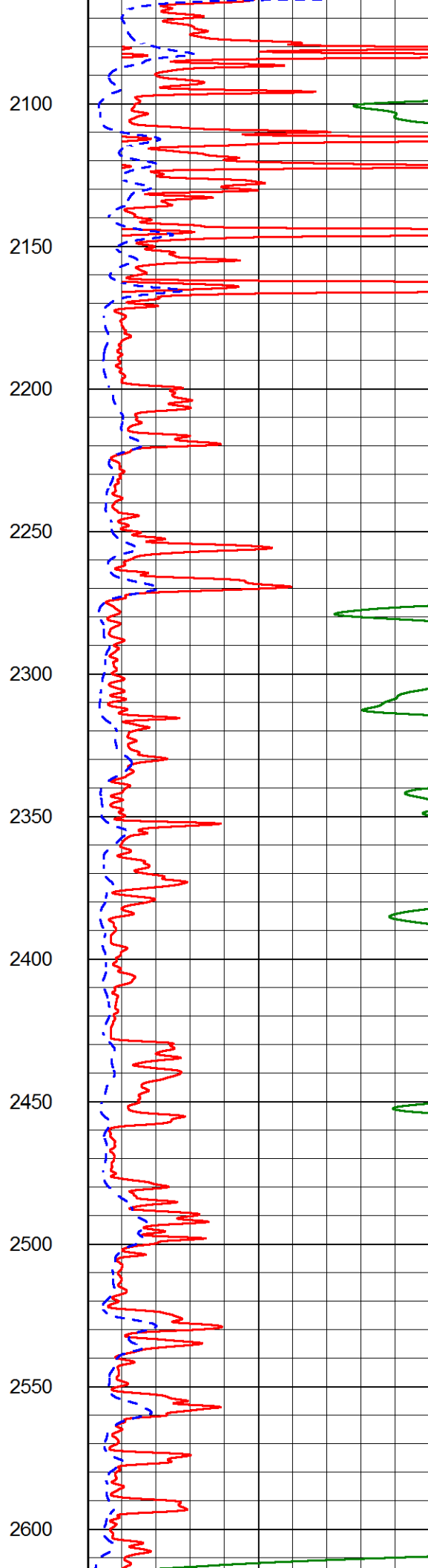
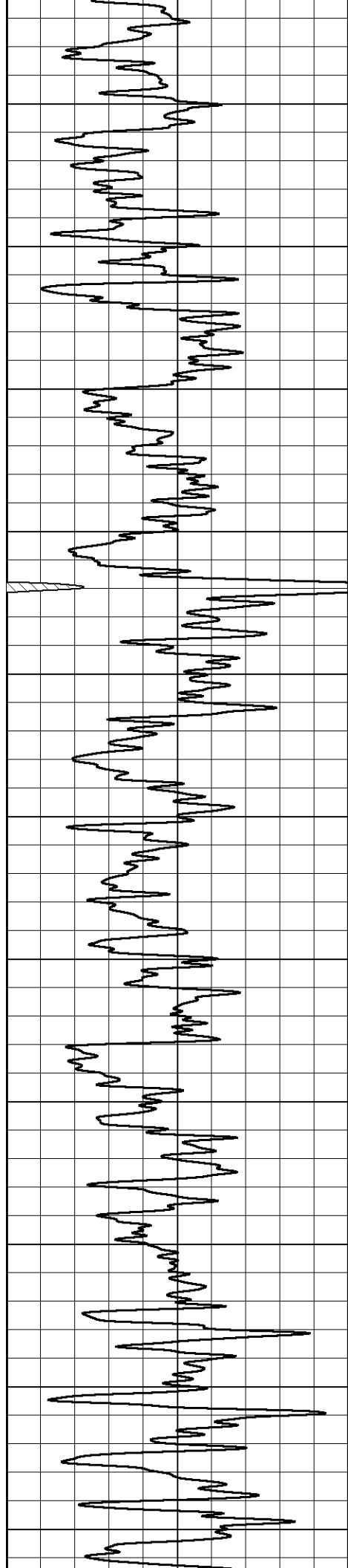
0	GAMMA RAY (GAPI)	150	1000	CONDUCTIVITY (mmho/m)	0
			SHALLOW RESISTIVITY 0 (Ohm-m) 50 0 DEEP RESISTIVITY (Ohm-m) 50		
			SHALLOW RESISTIVITY 50 (Ohm-m) 500 DEEP RESISTIVITY 50 (Ohm-m) 500		











2650

2700

2750

2800

2850

2900

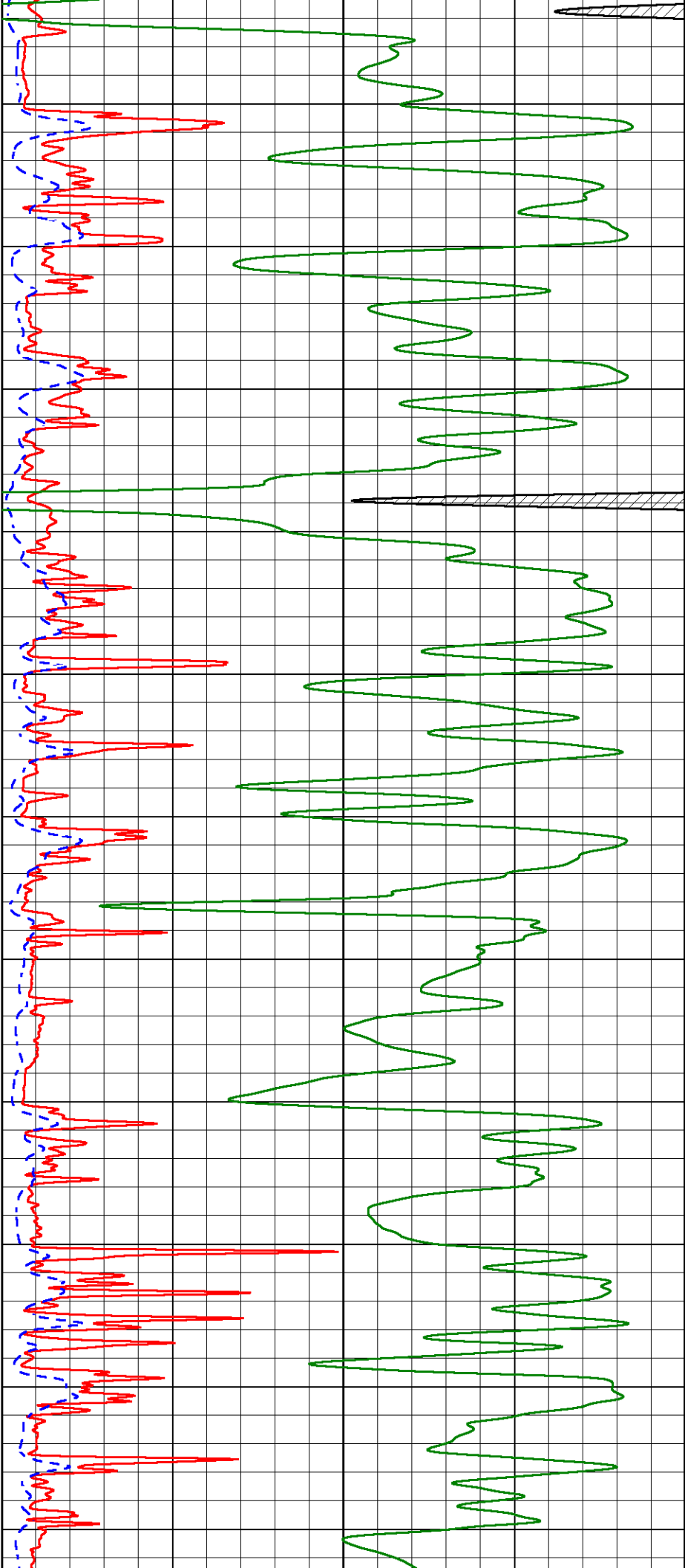
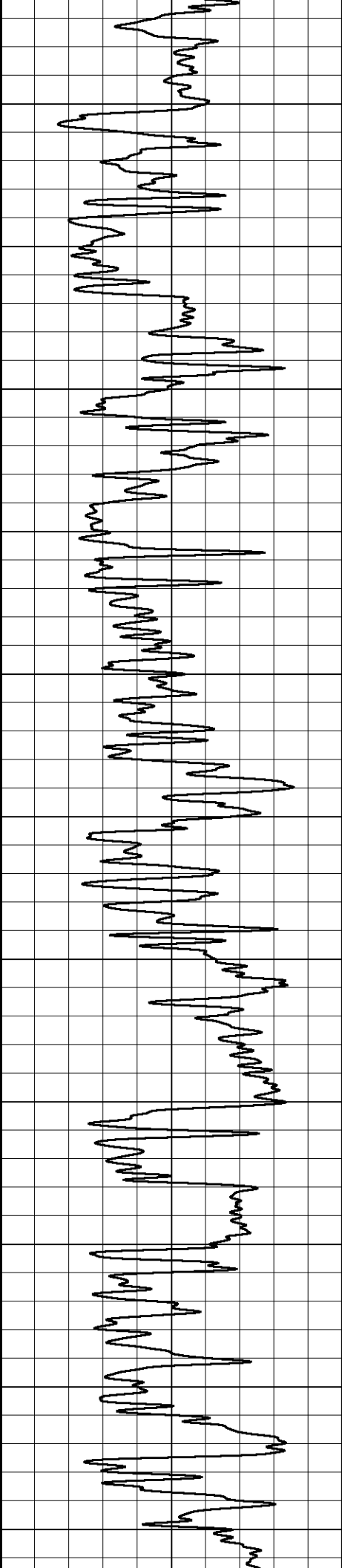
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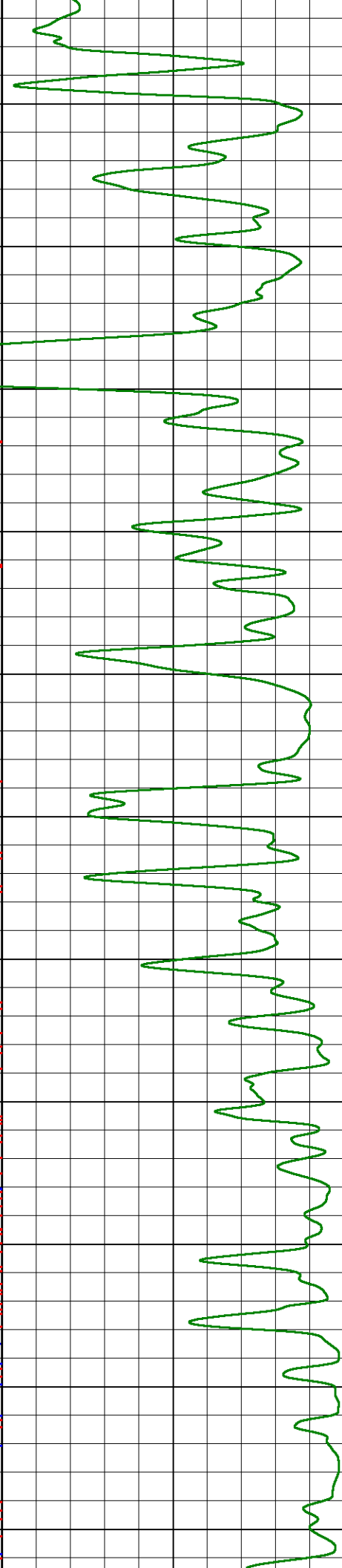
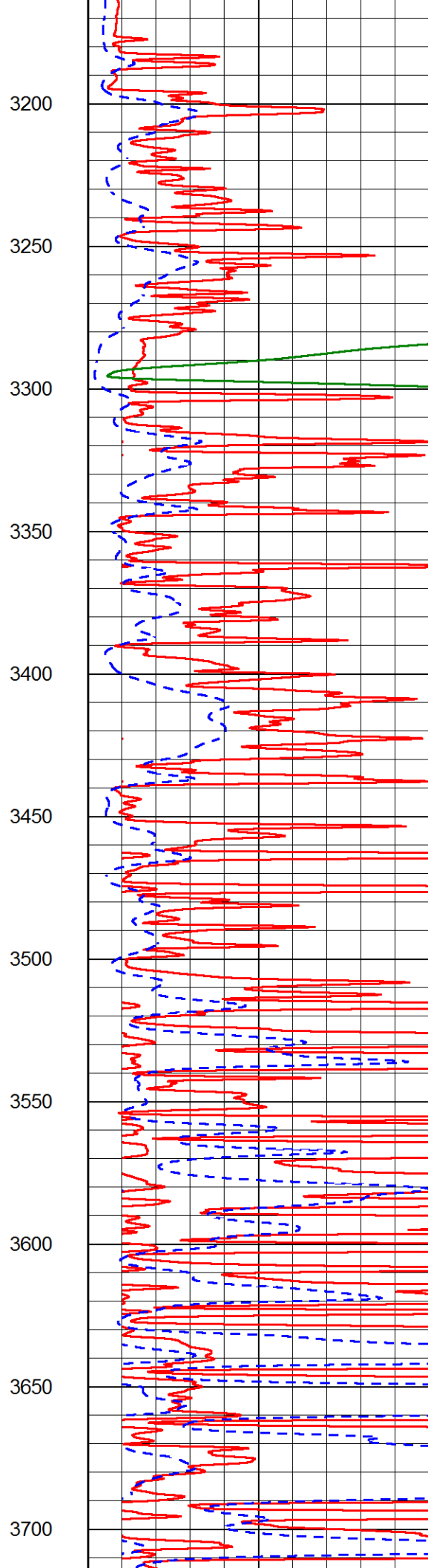
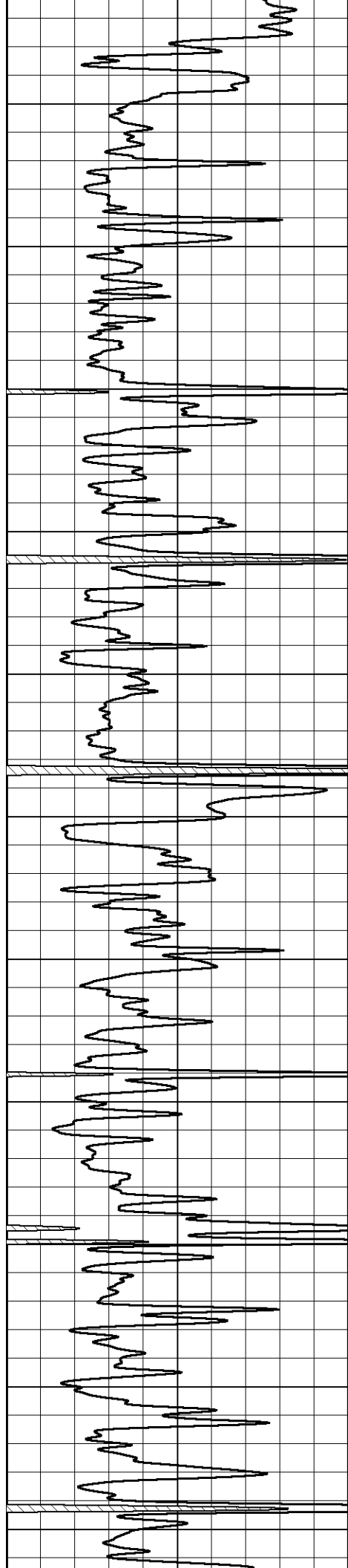
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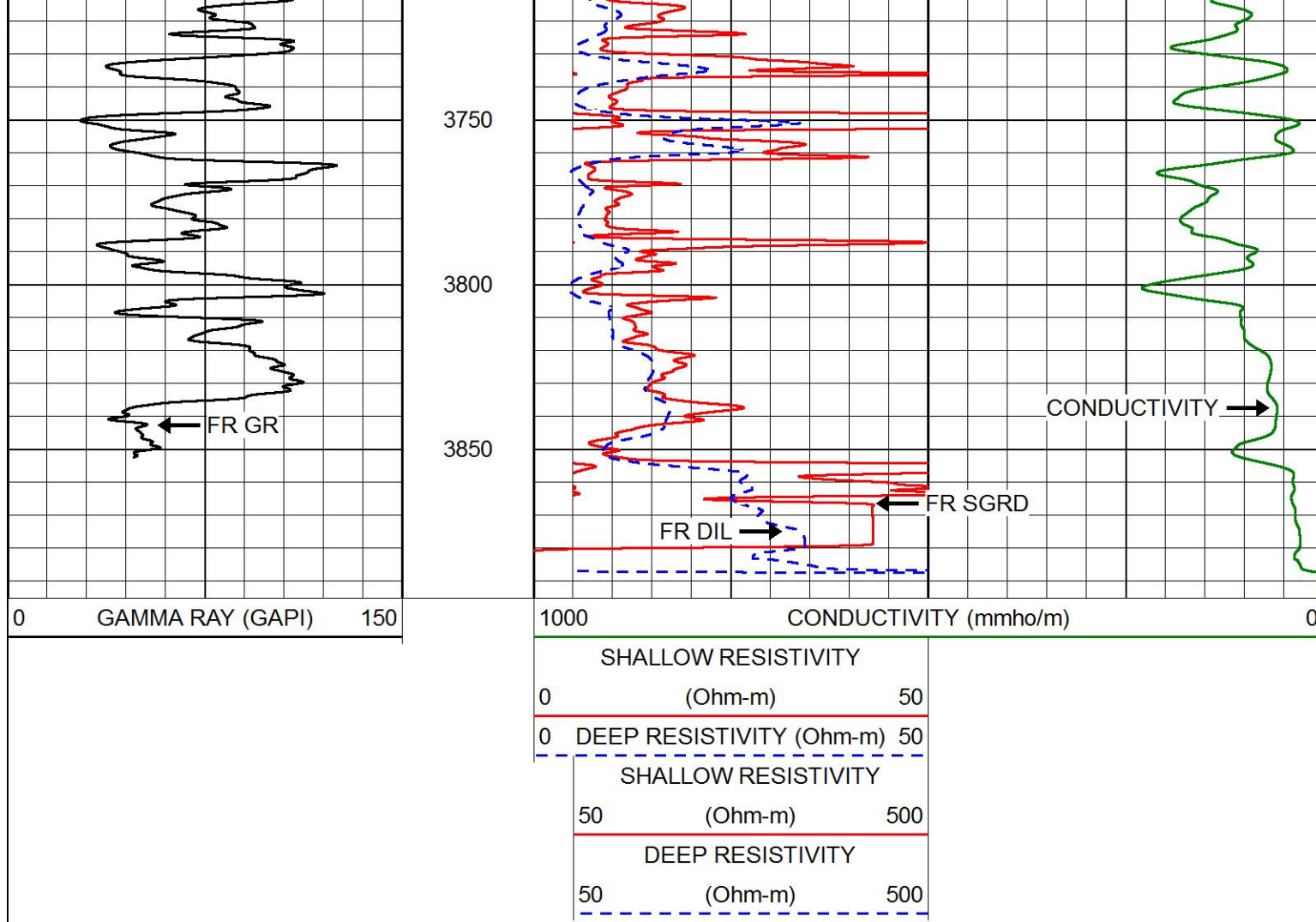
3050

3100

3150









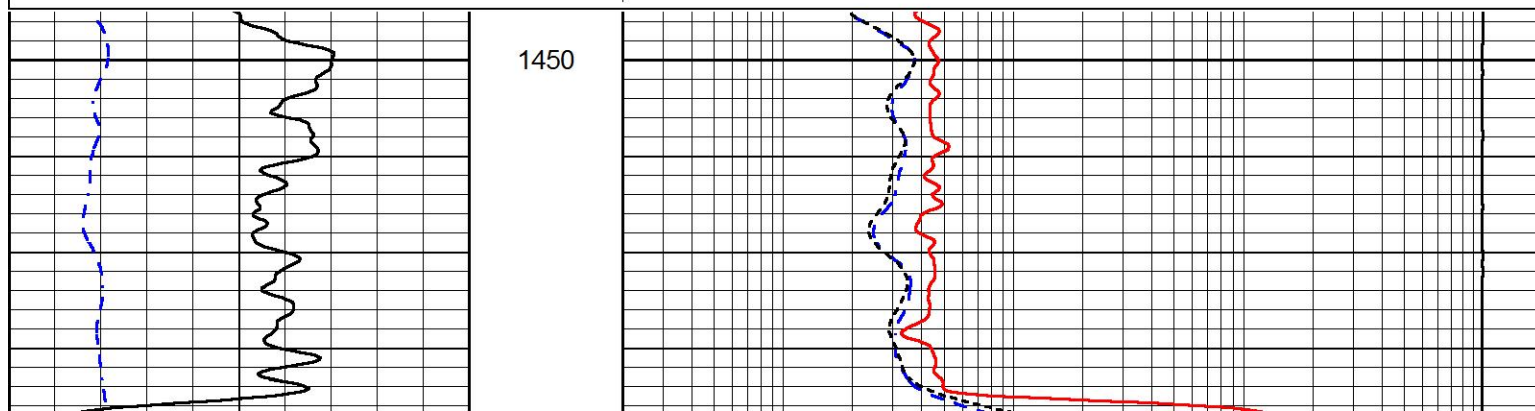
PIONEER
Pioneer Energy Services

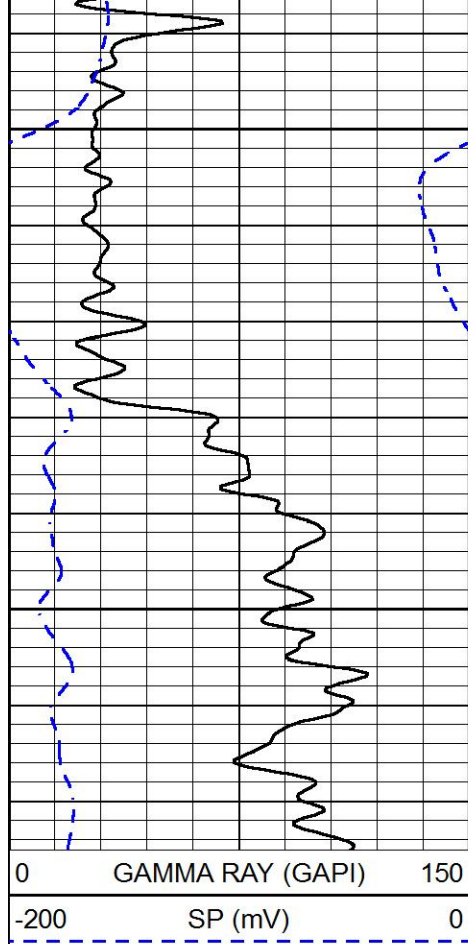
MAIN PASS

ANHYDRITE SECTION

Database File pioneerresources_maier_1.db
 Dataset Pathname stackmel/pass4.4
 Presentation Format dil
 Dataset Creation Sat Oct 15 18:50:09 2016
 Charted by Depth in Feet scaled 1:240

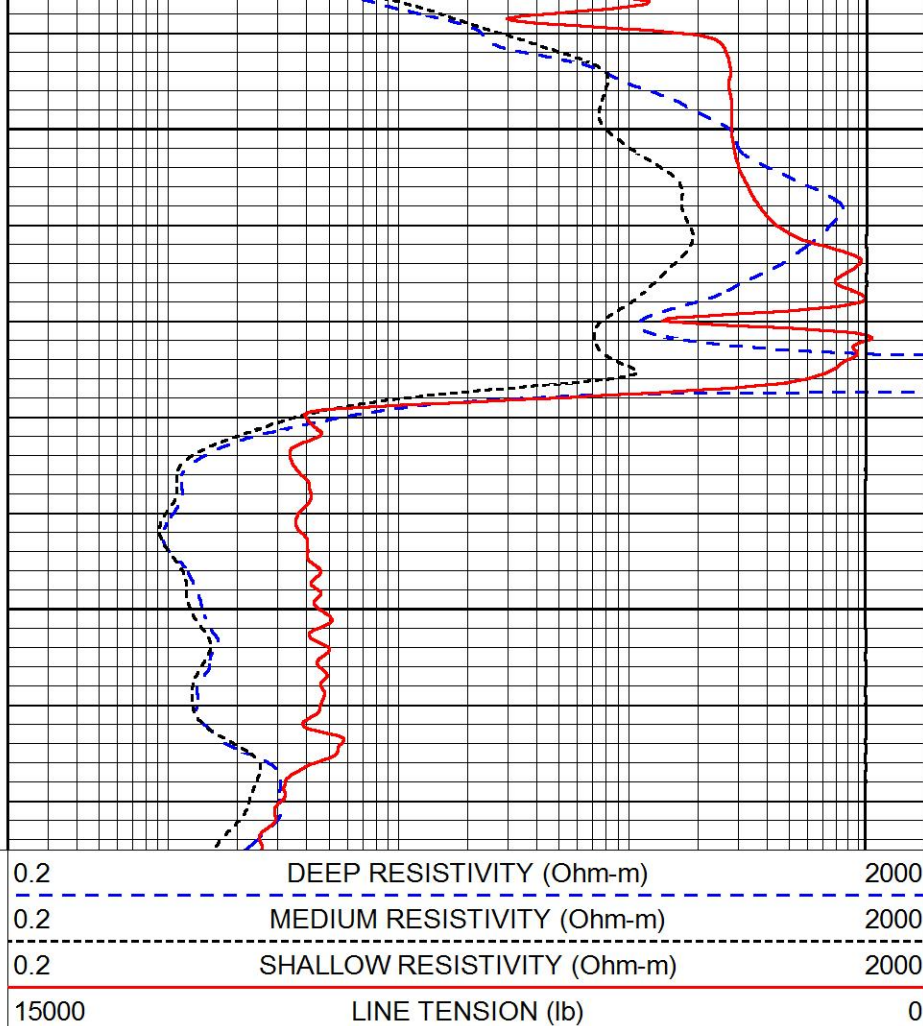
0	GAMMA RAY (GAPI)	150	0.2	DEEP RESISTIVITY (Ohm-m)	2000
-200	SP (mV)	0	0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
			0.2	SHALLOW RESISTIVITY (Ohm-m)	2000
			15000	LINE TENSION (lb)	0





1500

1550

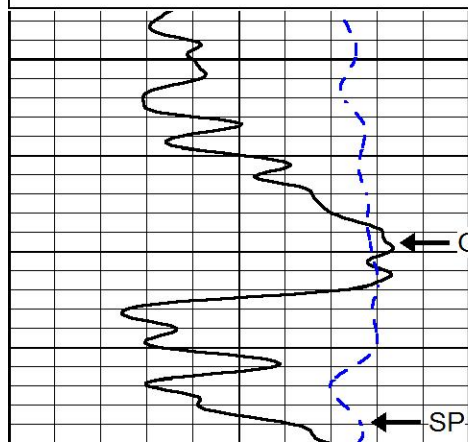
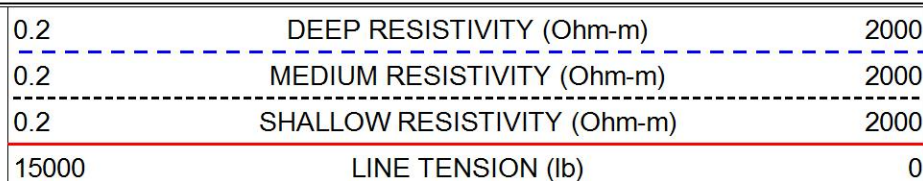
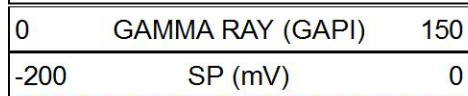


PIONEER

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MAIN PASS

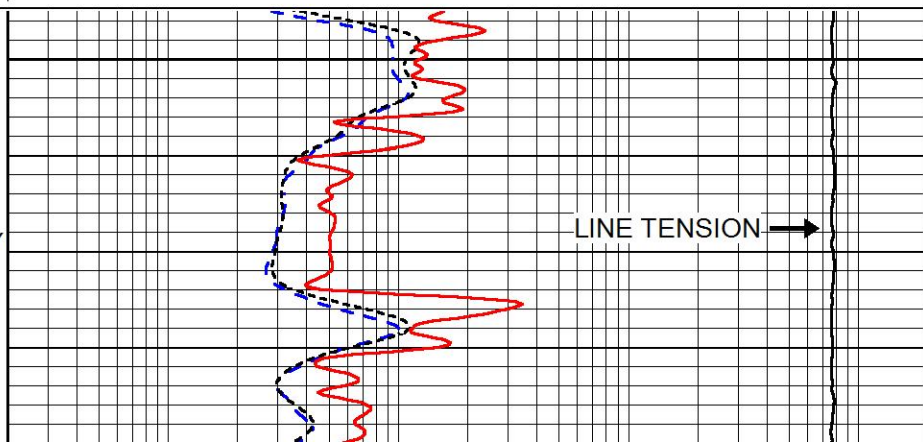
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 Dataset Pathname stackmel/pass4.1
 Presentation Format dil
 Dataset Creation Sat Oct 15 18:39:35 2016
 Charted by Depth in Feet scaled 1:240



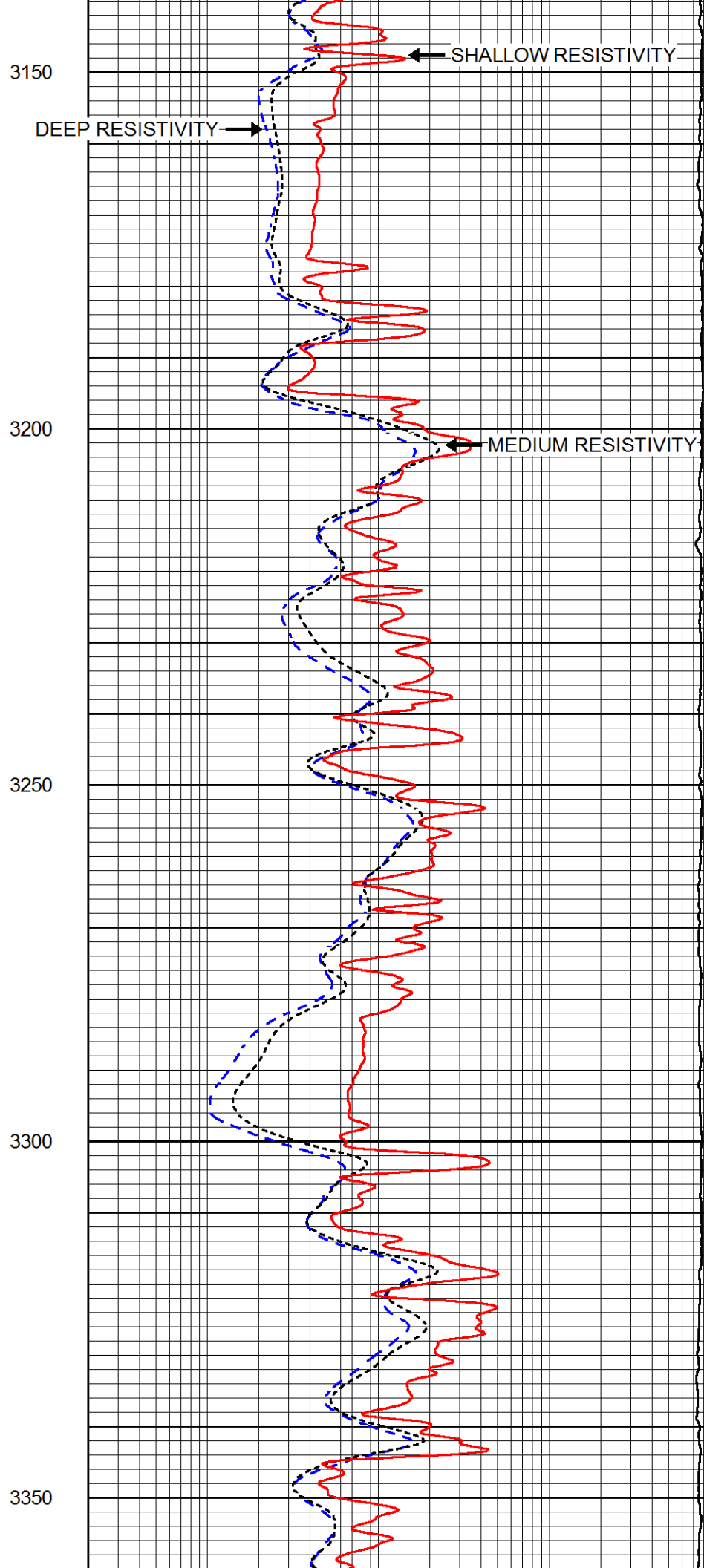
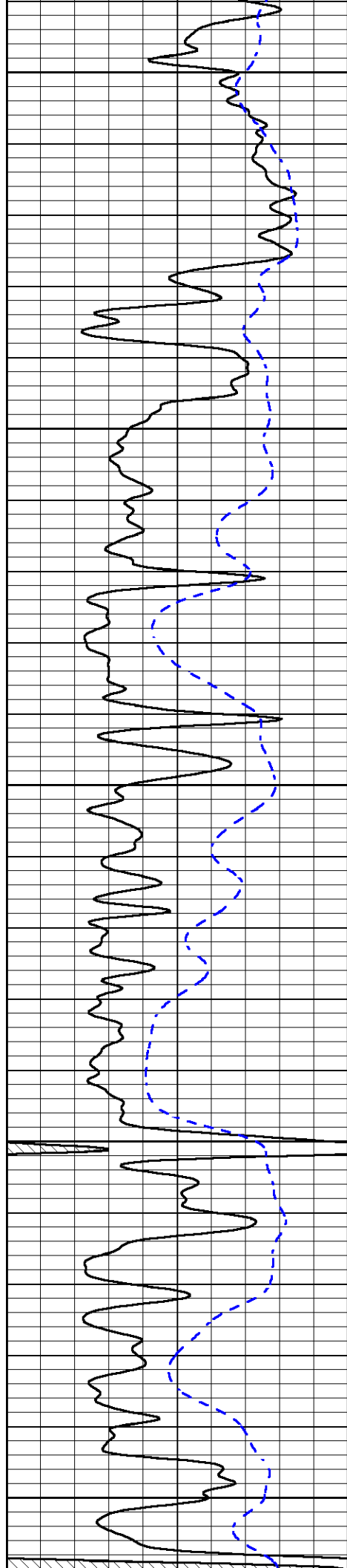
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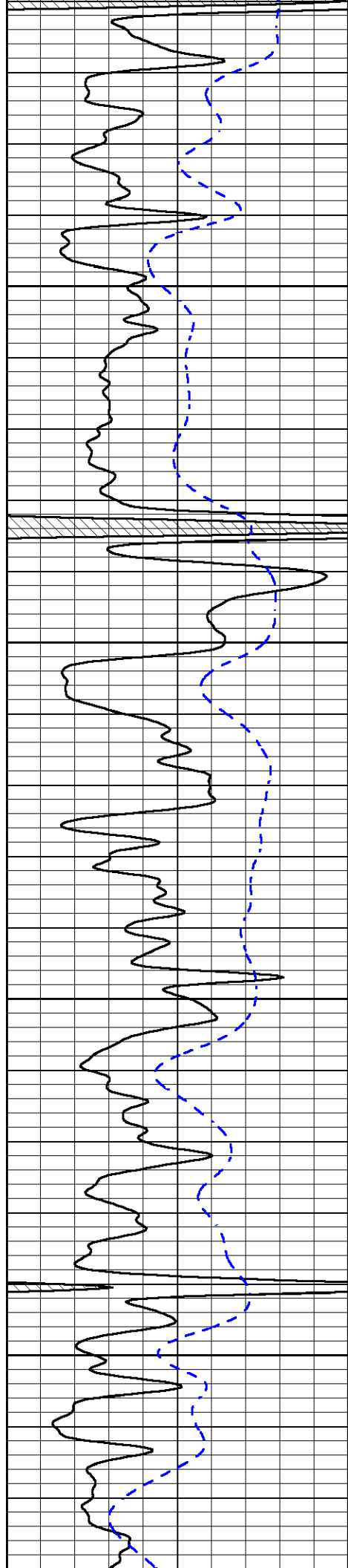
← GAMMA RAY

← SP



LINE TENSION →



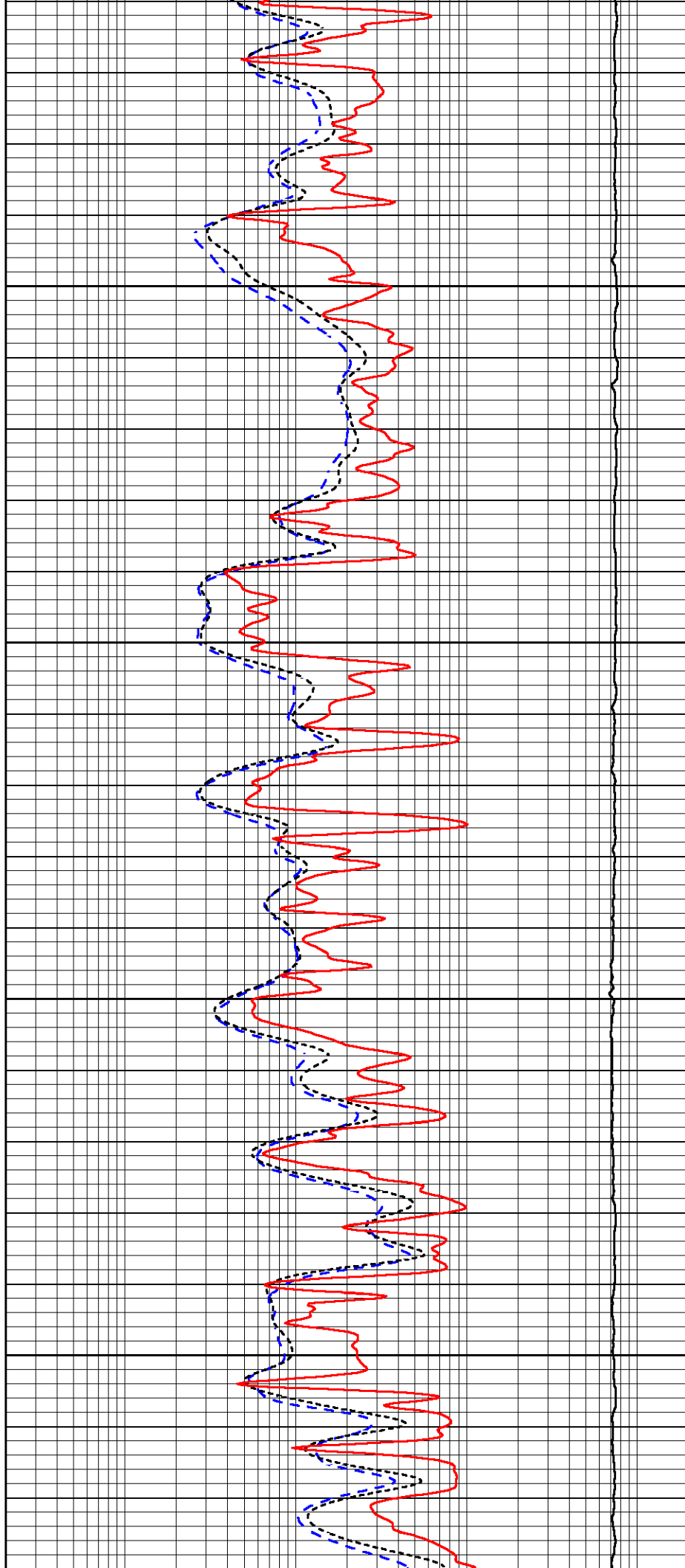


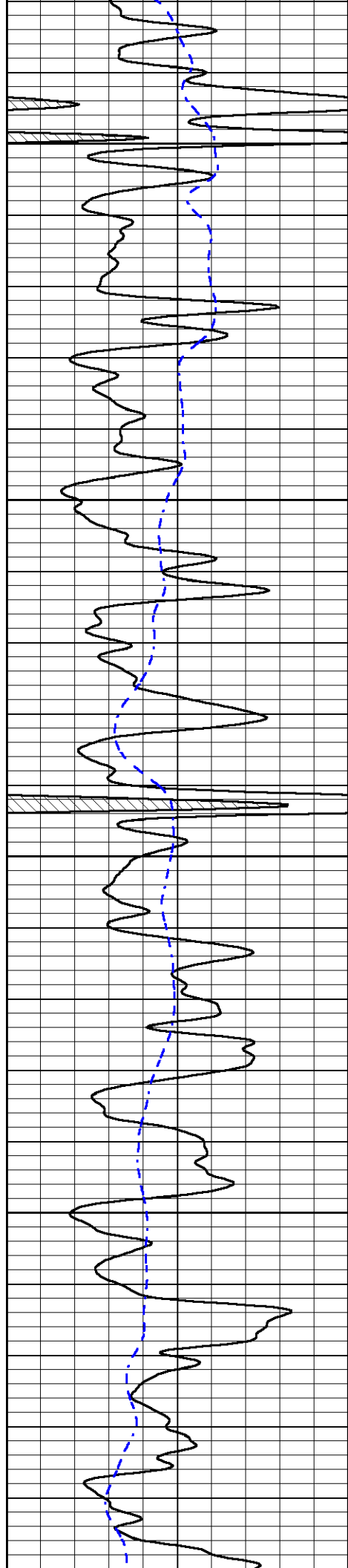
3400

3450

3500

3550





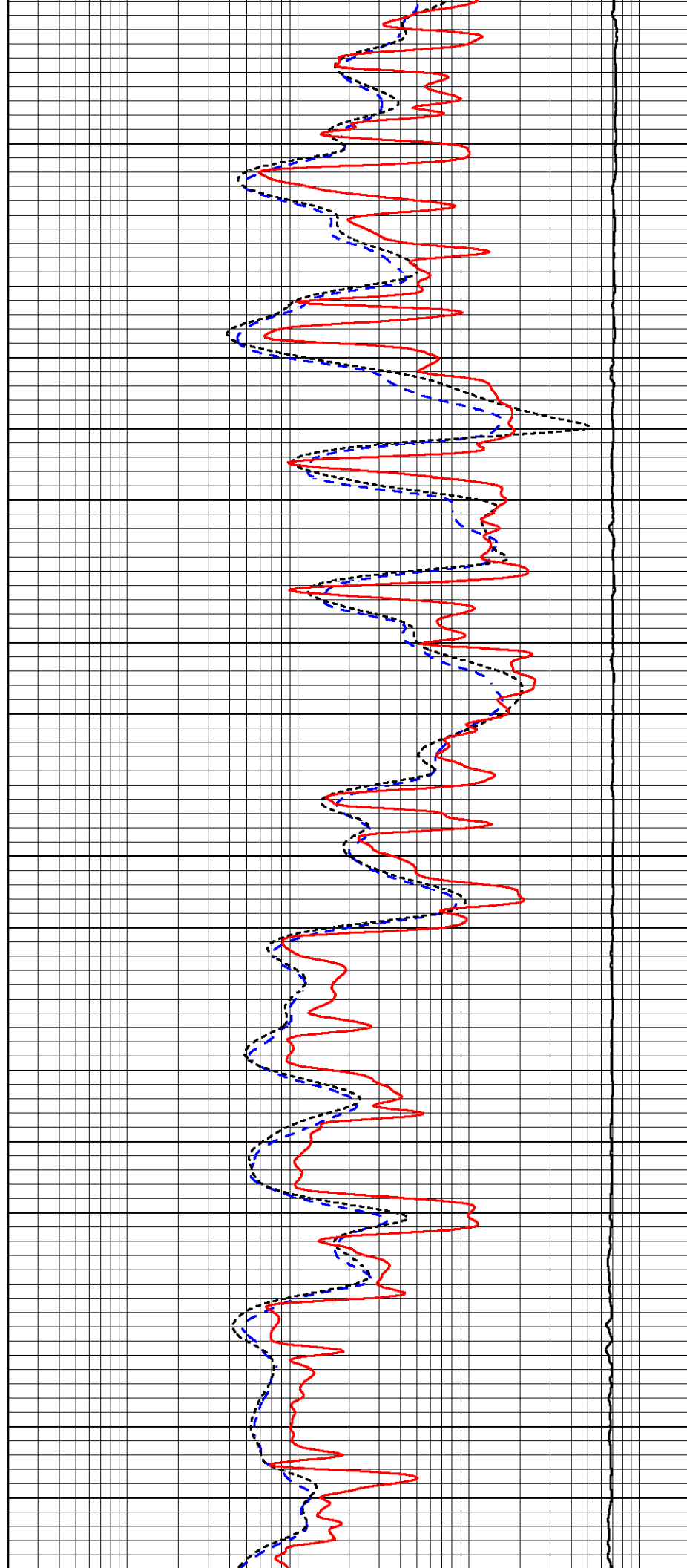
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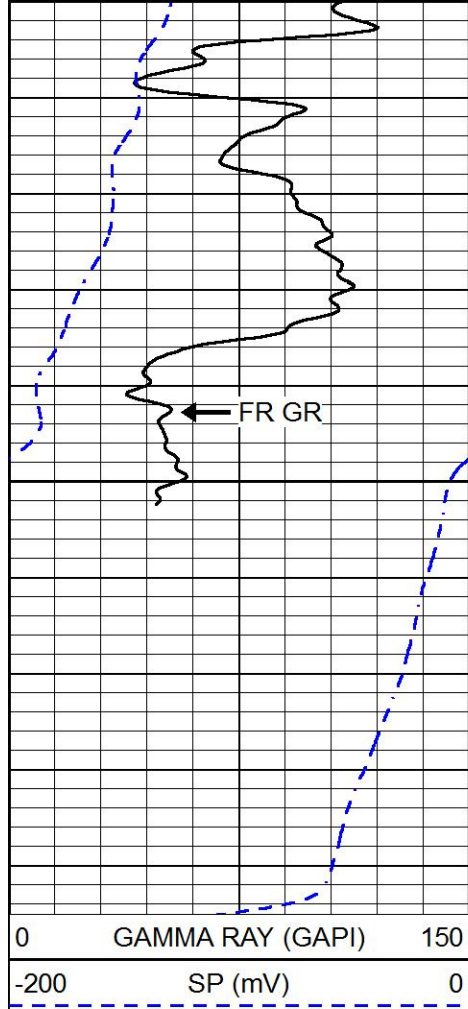
3650

3700

3750

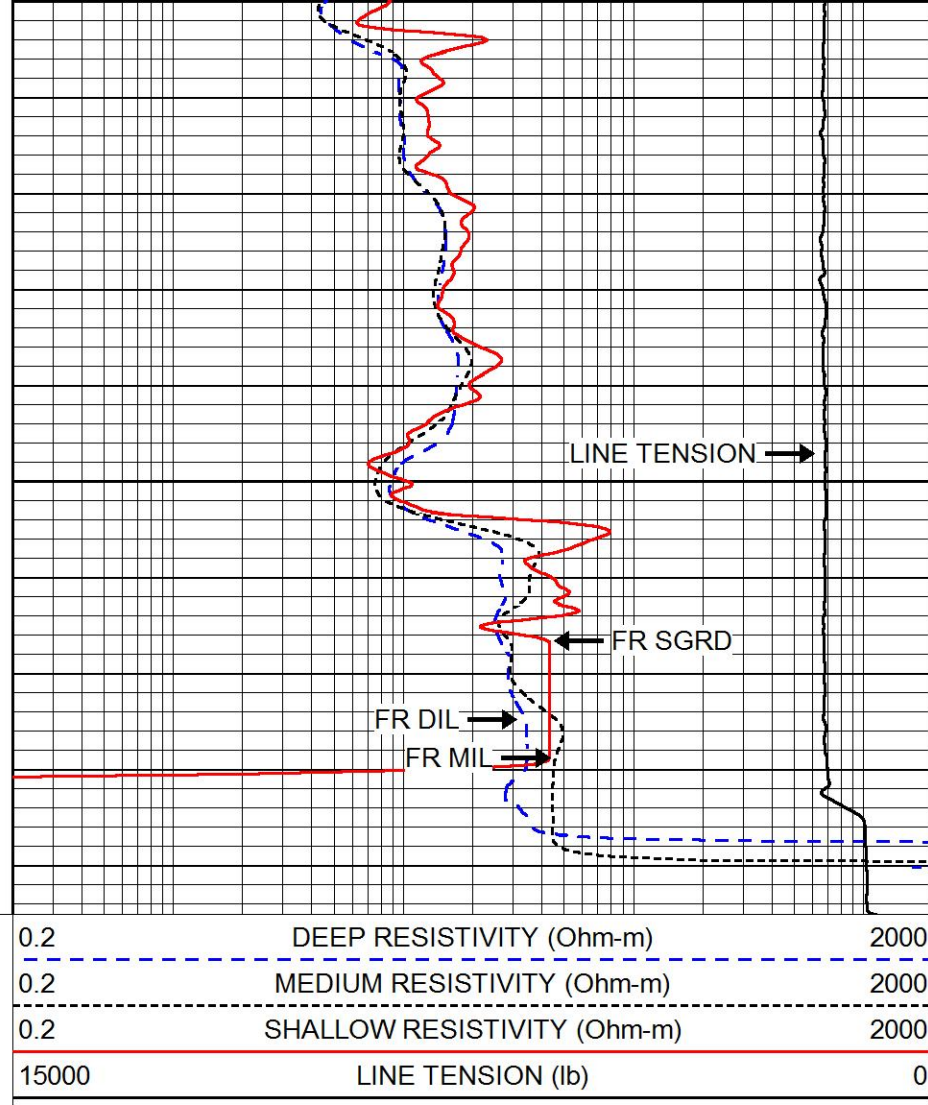
3800





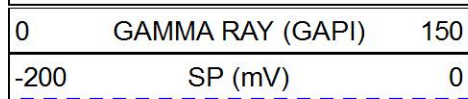
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3850

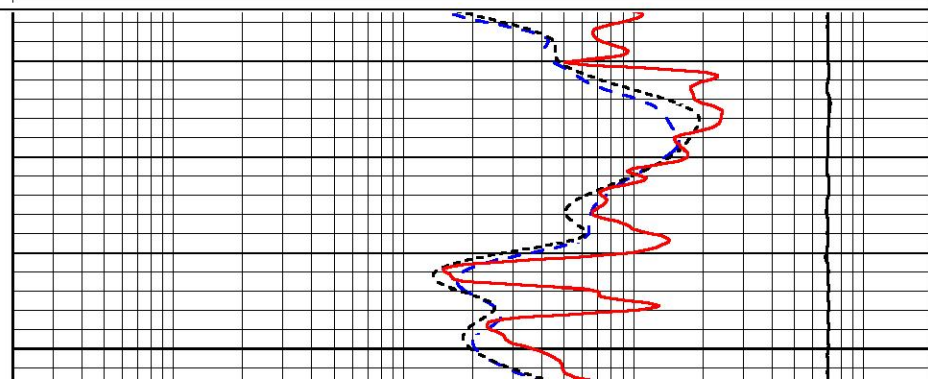
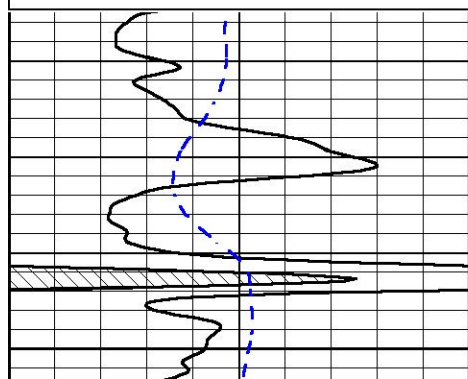
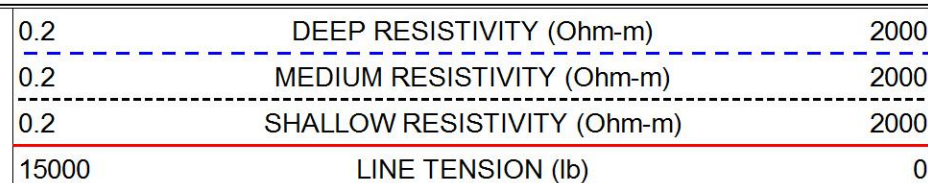


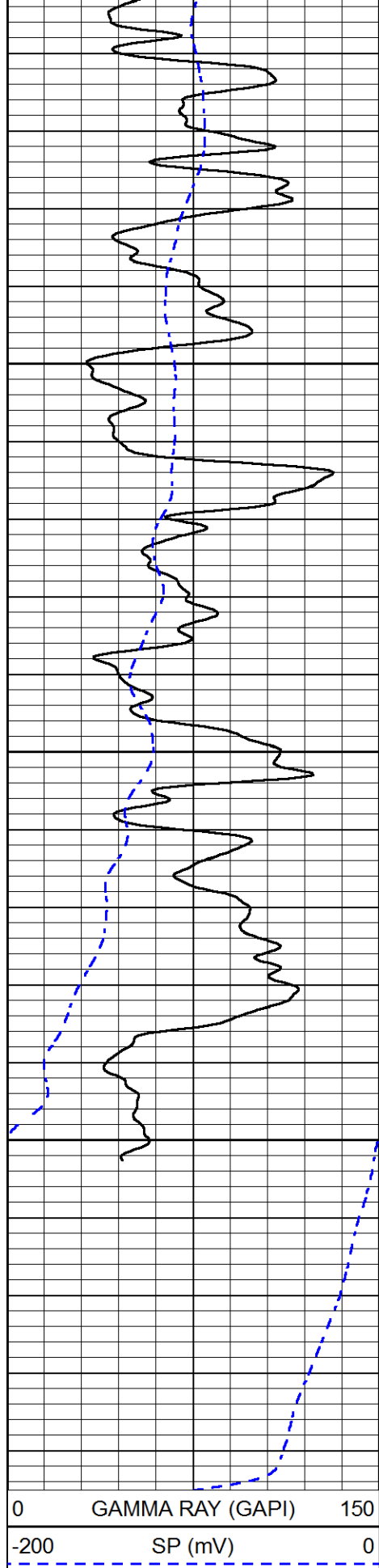
REPEAT SECTION

Database File pioneerresources_maier_1.db
Dataset Pathname stackmel/pass3.1
Presentation Format dil
Dataset Creation Sat Oct 15 18:39:05 2016
Charted by Depth in Feet scaled 1:240



3700

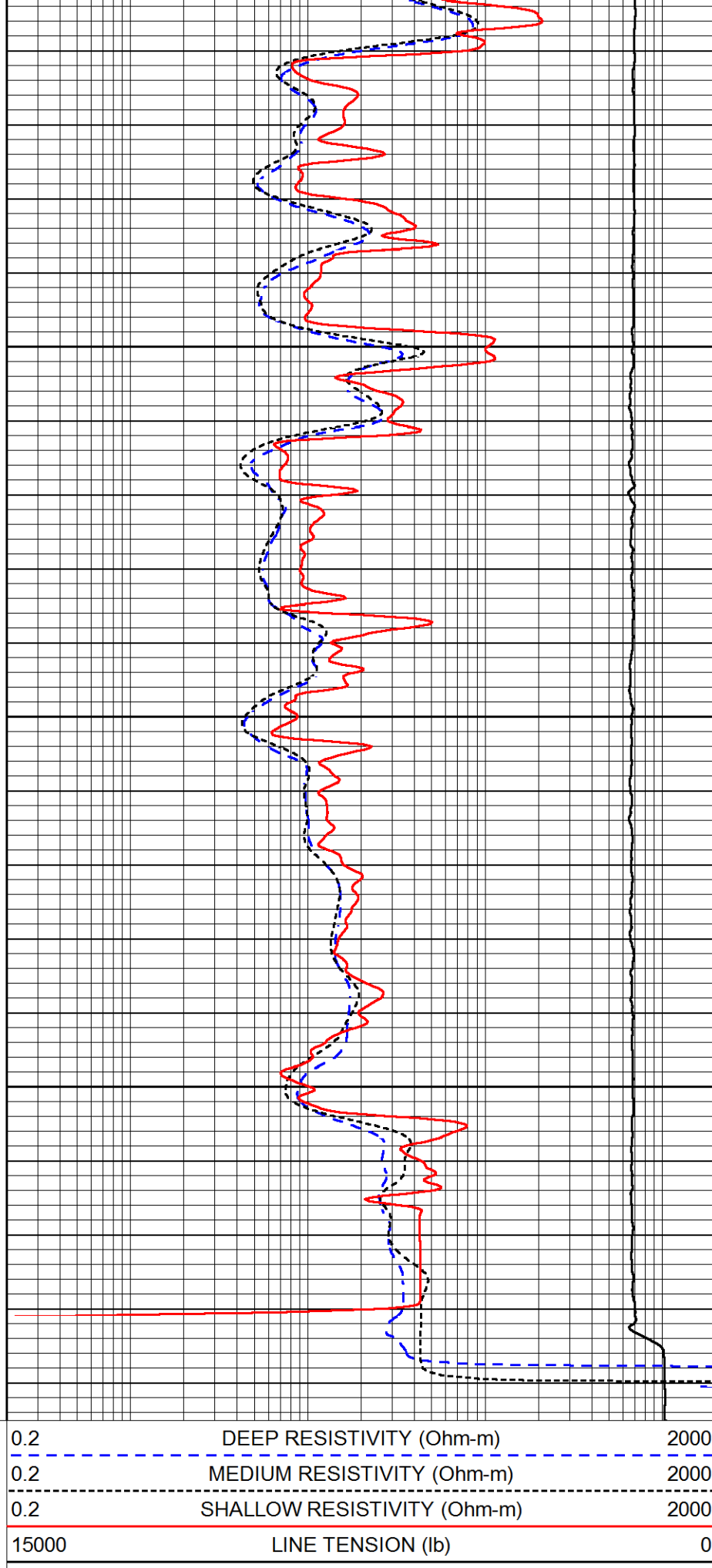




3750

3800

3850



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

Calibration Report

Database File pioneerresources_maier_1.db
 Dataset Pathname stackmel/pass1
 Dataset Creation Sat Oct 15 15:46:47 2016

Dual Induction Calibration Report

Serial-Model: 1987-M&W
 Calibration Performed: Tue Aug 30 16:23:58 2016

Loop:	Readings		References			Results	
	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: 71-914-M&W
 Source / Verifier: /
 Master Calibration Performed: Fri Oct 07 08:39:26 2016

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4314.49	5307.52	cps
Aluminum	2.675	g/cc	822.19	3456.36	cps
Spine Angle = 75.49			Density/Spine Ratio = 0.537		
	Size		Reading		
Small Ring	4.00	in	1.16		
Large Ring	14.00	in	1.57		

Compensated Neutron Calibration Report

Serial Number: tk10-MW
 Tool Model: M&W
 Calibration Performed: Sat Oct 1 10:01:53 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: Fri Sep 30 22:06:47 2016

Calibrator Value: 1000.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 6.2 cps

Sensitivity: 0.5200 GAPI/cps



Company	PIONEER RESOURCES
Well	MAIER NO. 1
Field	WILDCAT
County	ELLIS
State	KANSAS