



PIONEER
Pioneer Energy Services

DUAL INDUCTION LOG

Company RENAISSANCE RESOURCES, LLC
Well BARBARA J. WELLS TRUST NO. 1
Field WILDCAT
County CHASE
State KANSAS

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Location: API #: 15-017-20925-00-00

2,716' FSL & 2,709' FEL
SEC 13 TWP 19S RGE 6E

Permanent Datum GROUND LEVEL Elevation 1238'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Other Services
CNL/CDL
Elevation
K.B. 1248'
D.F. N/A
G.L. 1238'

Date	12/30/2016
Run Number	ONE
Depth Driller	1940'
Depth Logger	1939'
Bottom Logged Interval	1938'
Top Log Interval	200'
Casing Driller	8.625" @ 220'
Casing Logger	220'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	1100
Density / Viscosity	9.0 36
pH / Fluid Loss	10.5 9.2
Source of Sample	FLOWLINE
Rm @ Meas. Temp	1.10 @ 78
Rmt @ Meas. Temp	.83 @ 78
Rmc @ Meas. Temp	1.49 @ 78
Source of Rmt / Rmc	CHARTS
Rm @ BHT	.90 @ 95
Operating Rig Time	2 HOURS
Max Rec. Temp. F	95
Equipment Number	108
Location	COLBY
Recorded By	J. LONG
Witnessed By	JAMES BAUGHMAN
	MICHAEL R. BRYAN
	C.K. MORRISON

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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.

MARION, 9 EAST TO C ROAD, 3.8 NORTH TO MIDDLE CREEK ROAD, 4.2 EAST TO GP ROAD,
1/2 SOUTH, WEST INTO

Log Measured From: KELLY BUSHING

10 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES

www.pioneerenergy.com

785-625-3858

Your Pioneer Energy Services Crew

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

This Log Record Was Witnessed By

Primary Witness: JAMES BAUGHMAN
Secondary Witness: MICHAEL R. BRYAN
Secondary Witness: C.K. MORRISON
Secondary Witness:

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 95	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 -185	degF 51	Off	ft 1939

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			CNT-M&W (tk10-MW)	5.50	3.50	100.00
	29.15						
LSD DCAL SSD	20.85 20.83 20.35			CDL-M&W (168-986)	8.50	4.00	250.00
LSD	20.85						
DCAL	20.83						
SSD	20.35						
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: renaissance_barbarajwellstrust_1.db: field/well/stack/pass6 Total length: 35.50 ft Total weight: 620.00 lb O.D.: 4.00 in									

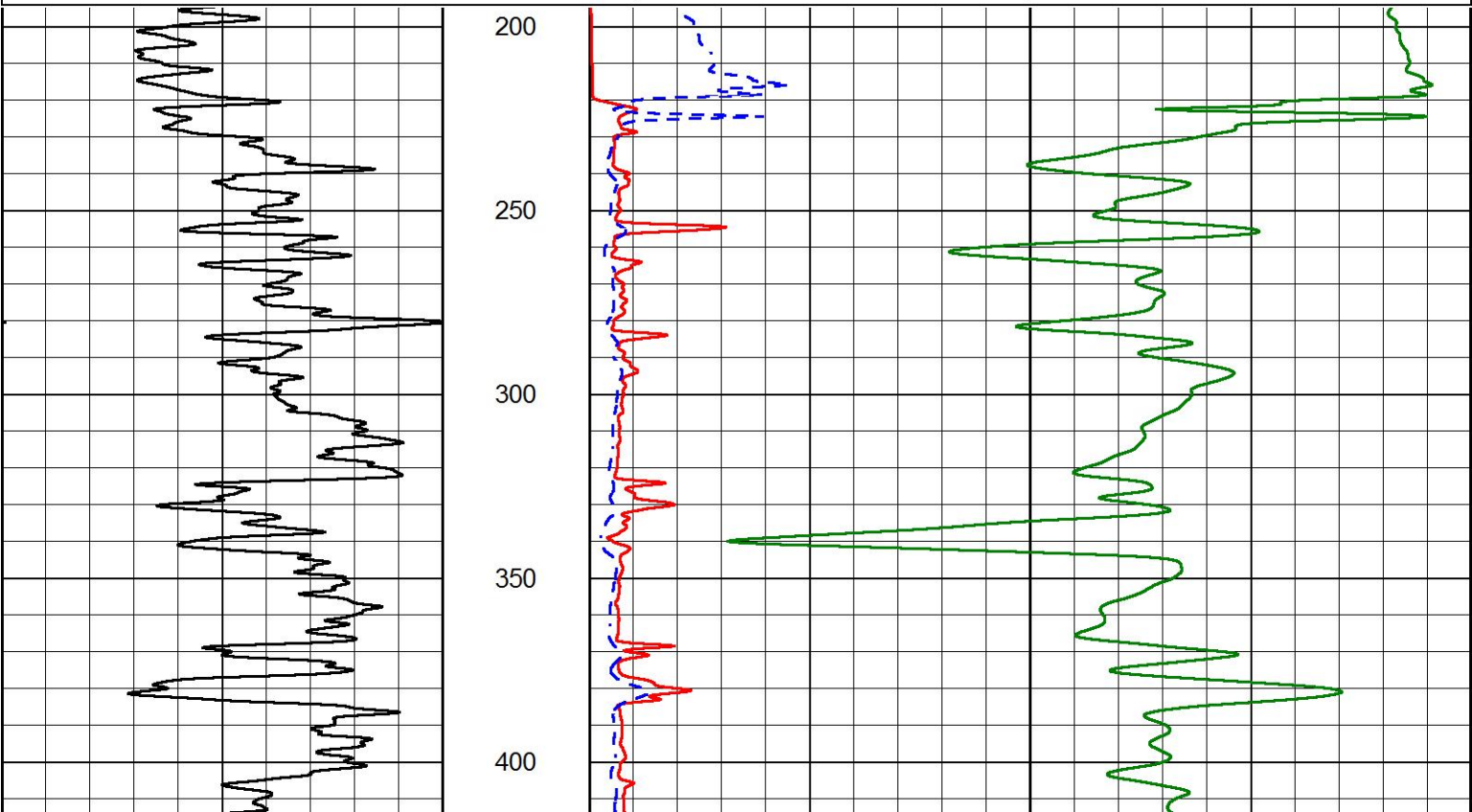


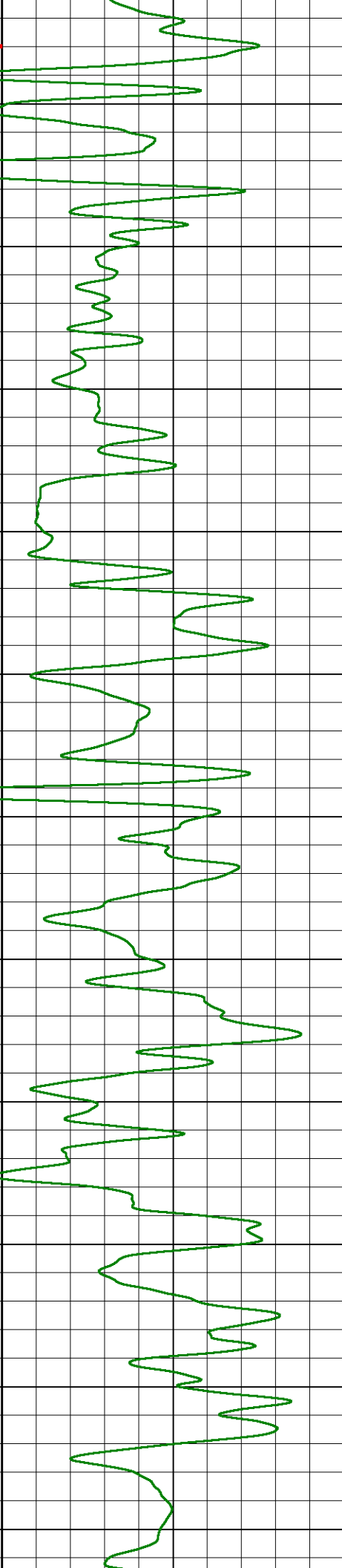
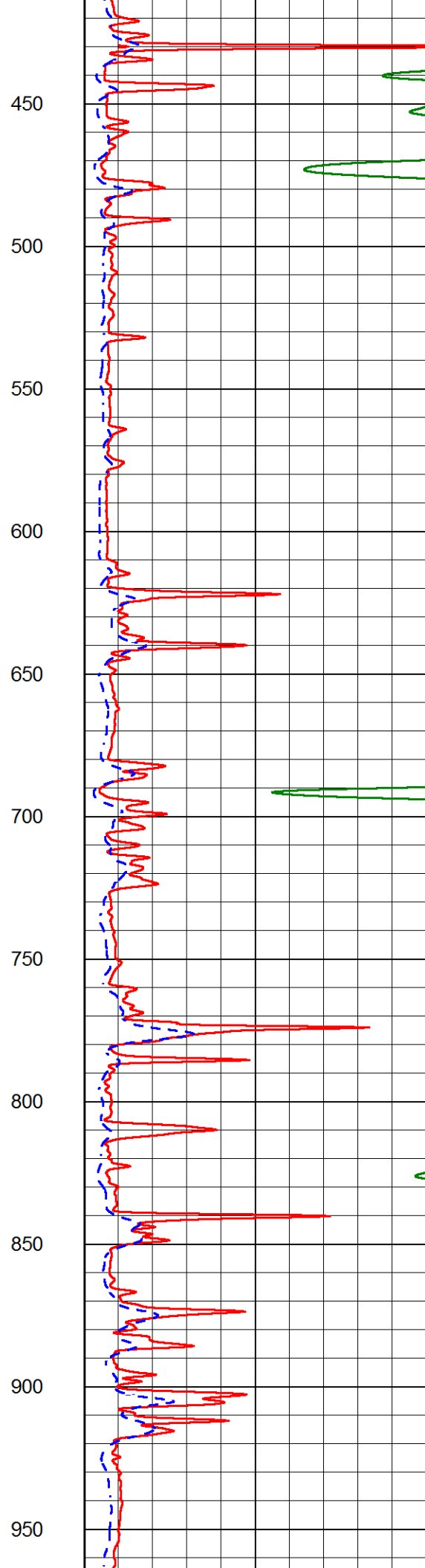
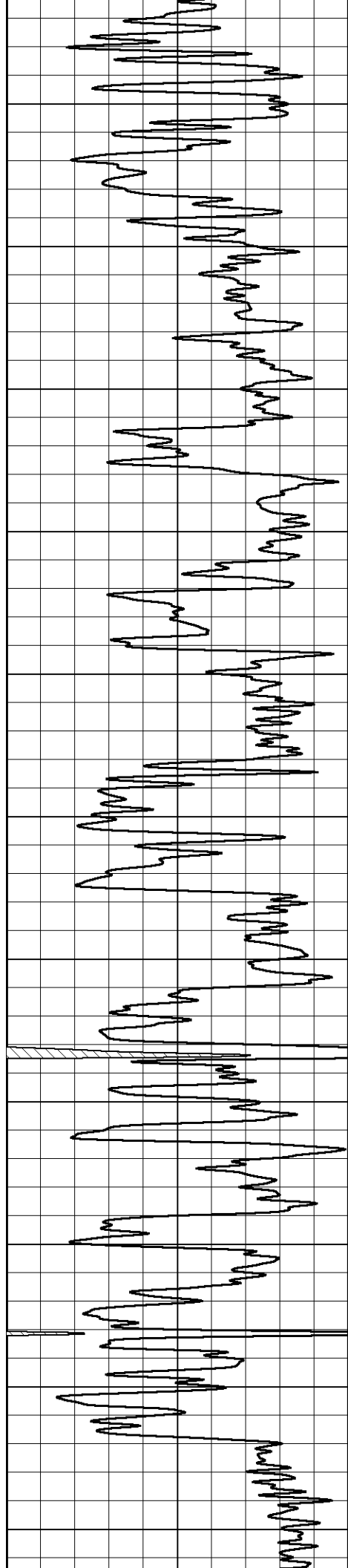
2" SCALE RESISTIVITY

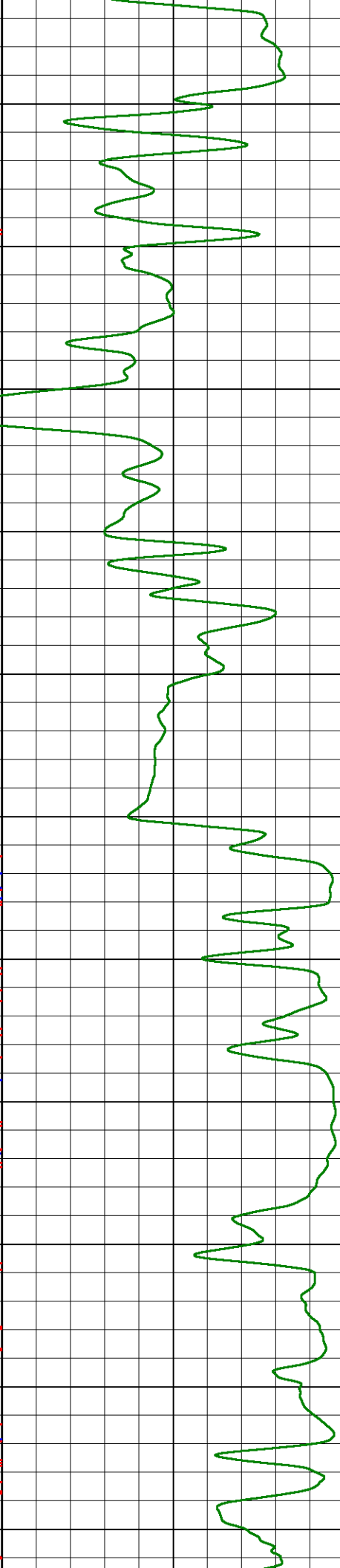
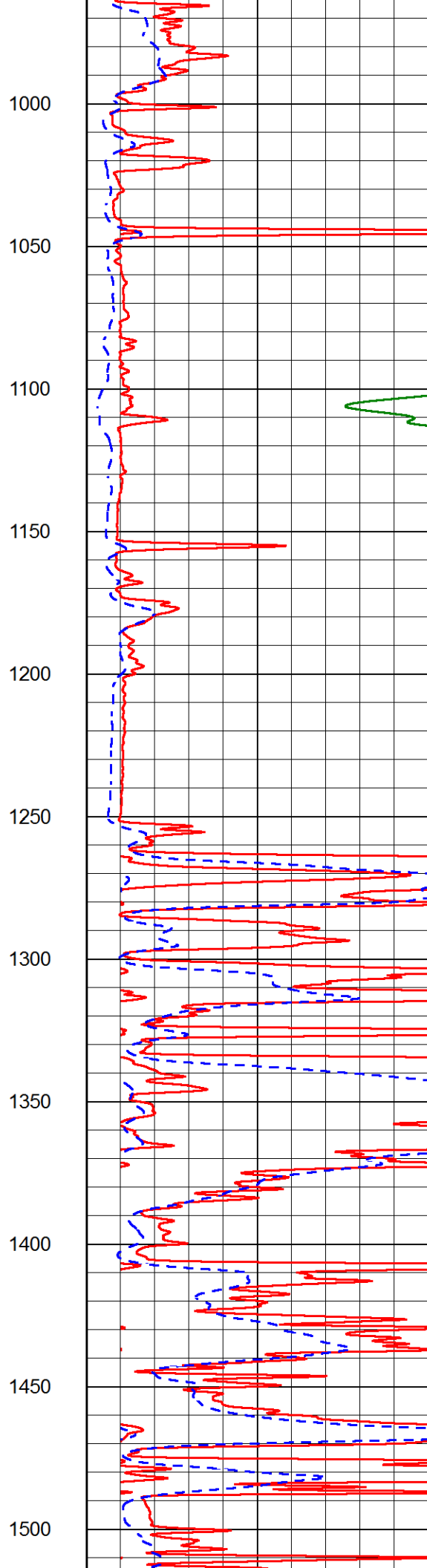
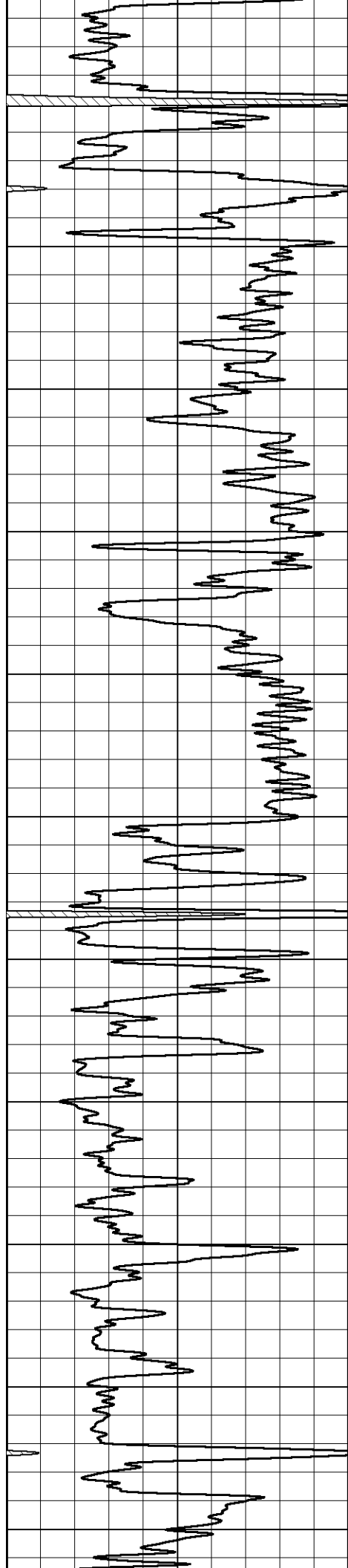
MAIN PASS

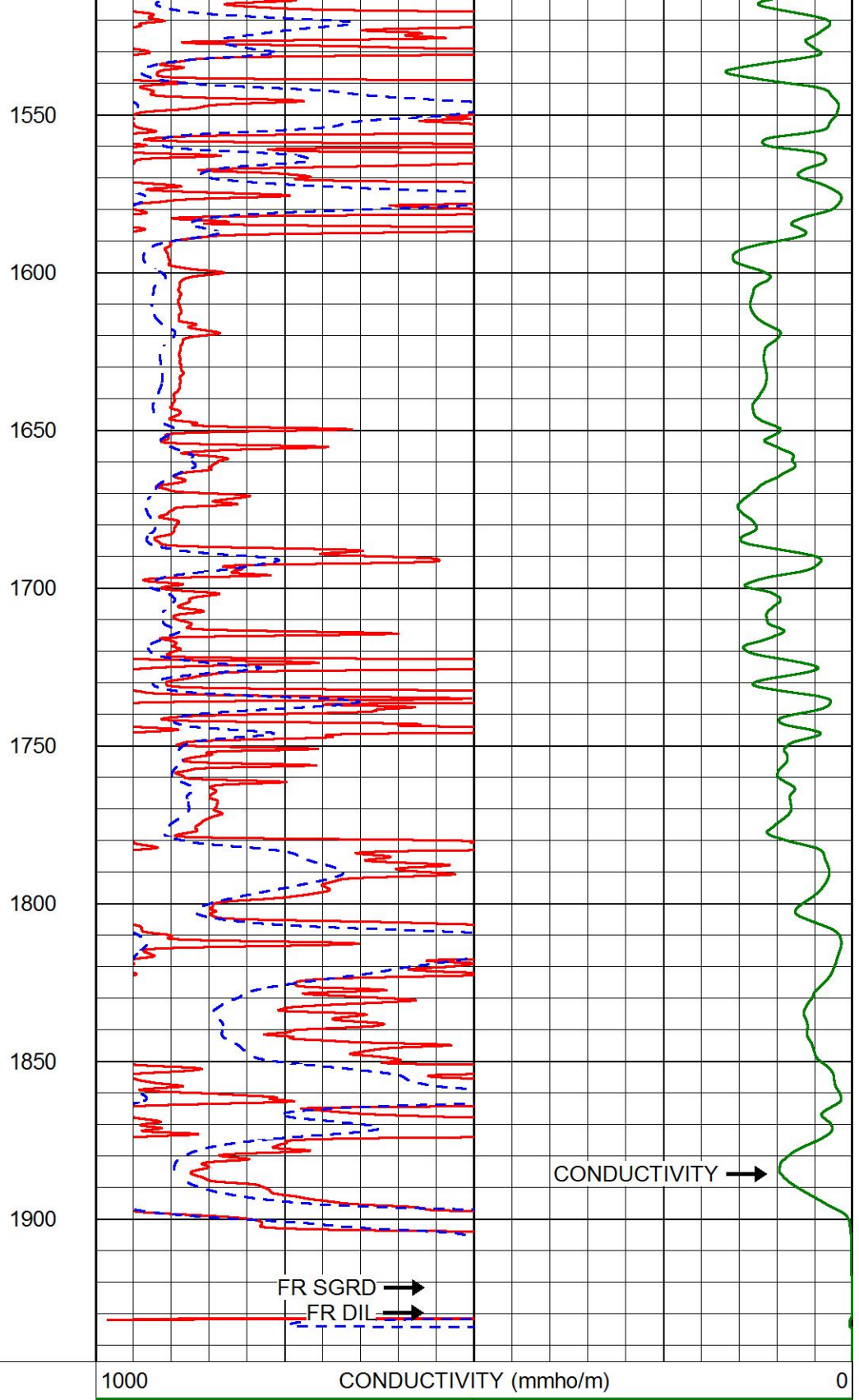
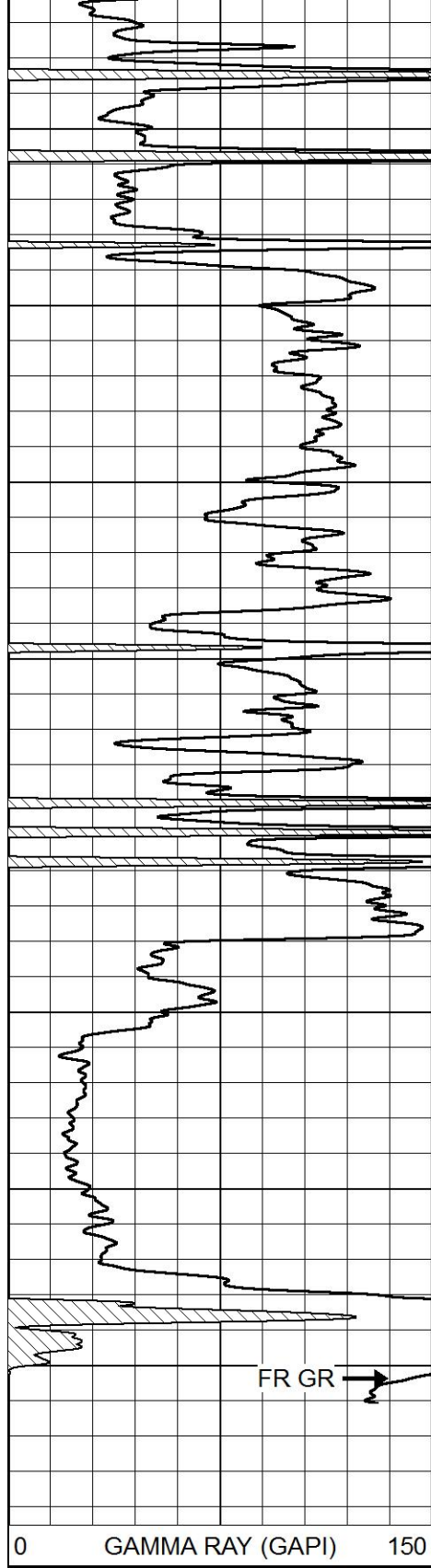
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Dataset Pathname	stack/pass7.2
Presentation Format	dil2in
Dataset Creation	Fri Dec 30 18:11:23 2016
Charted by	Depth in Feet scaled 1:600

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			









SHALLOW RESISTIVITY		
0	(Ohm-m)	50
DEEP RESISTIVITY (Ohm-m)		
50	(Ohm-m)	500
DEEP RESISTIVITY		
50	(Ohm-m)	500

PIONEER

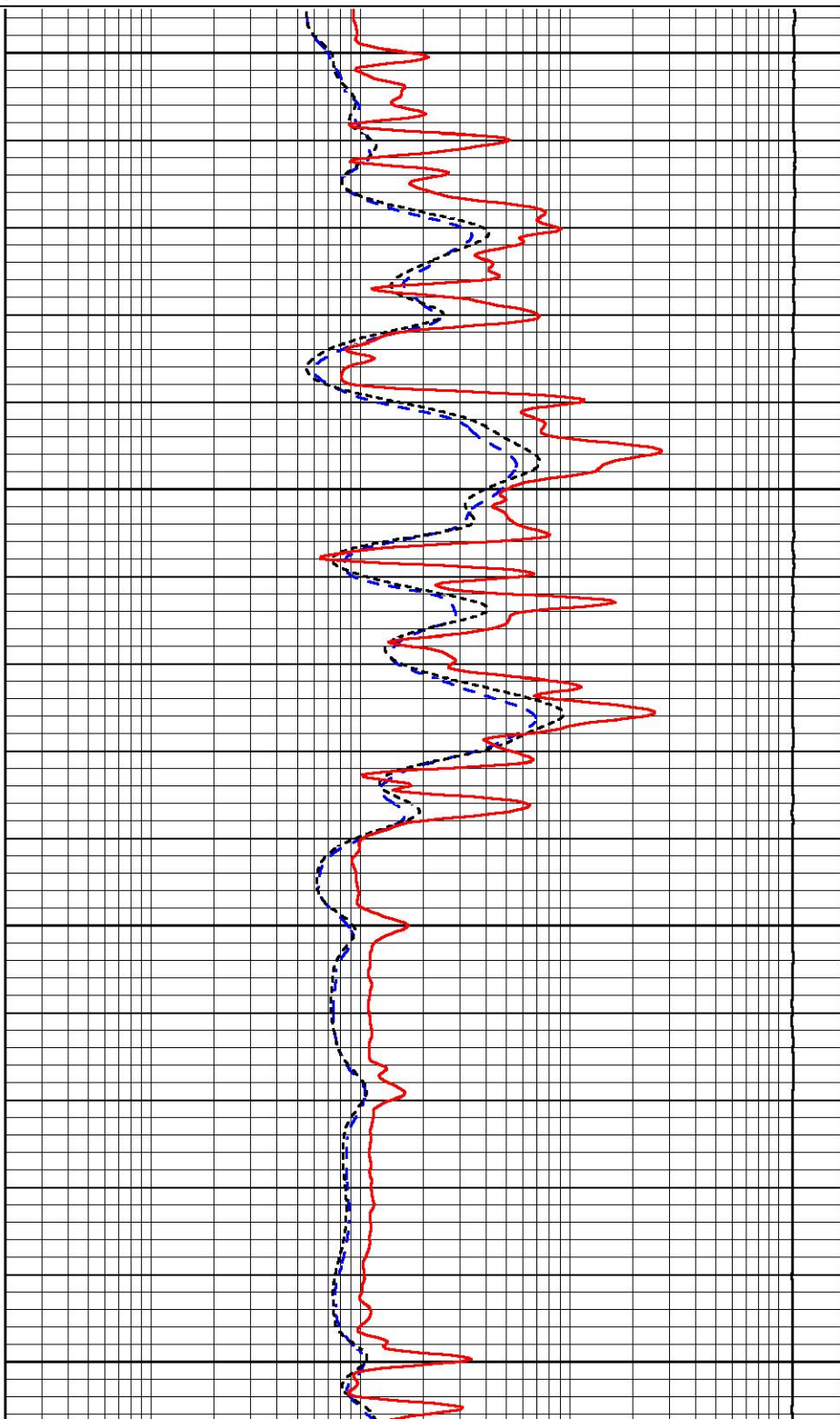
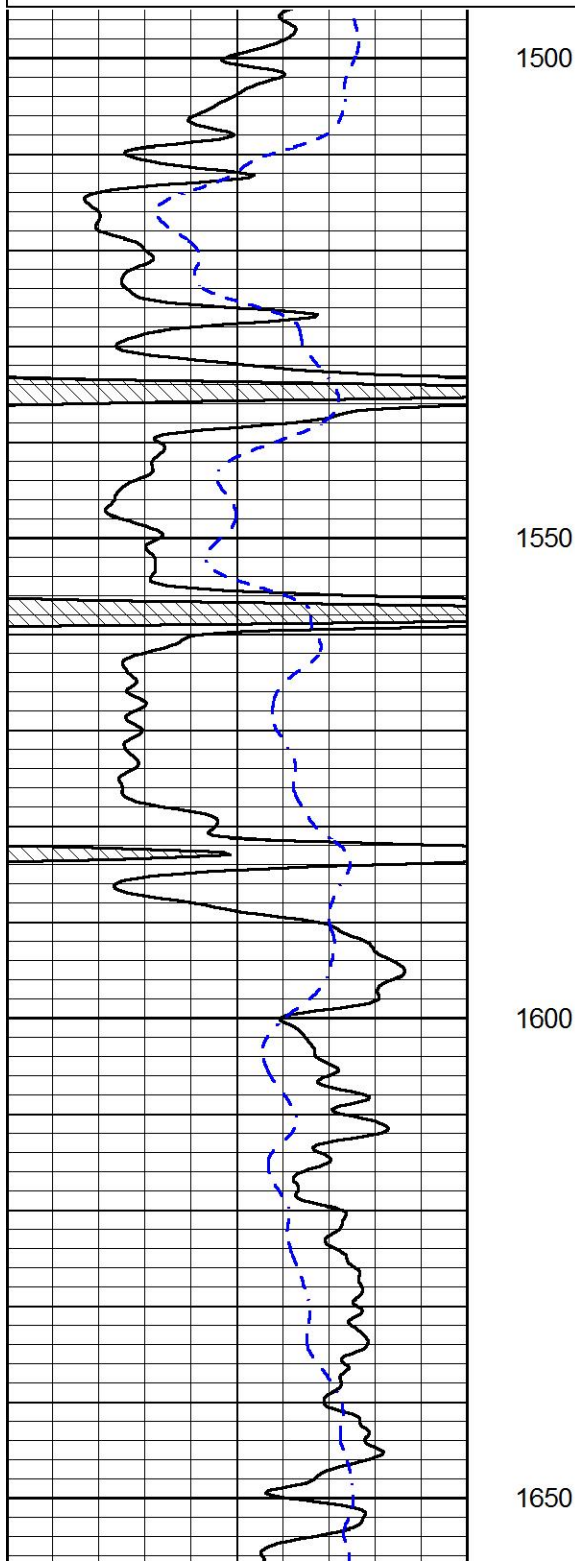
Pioneer Energy Services

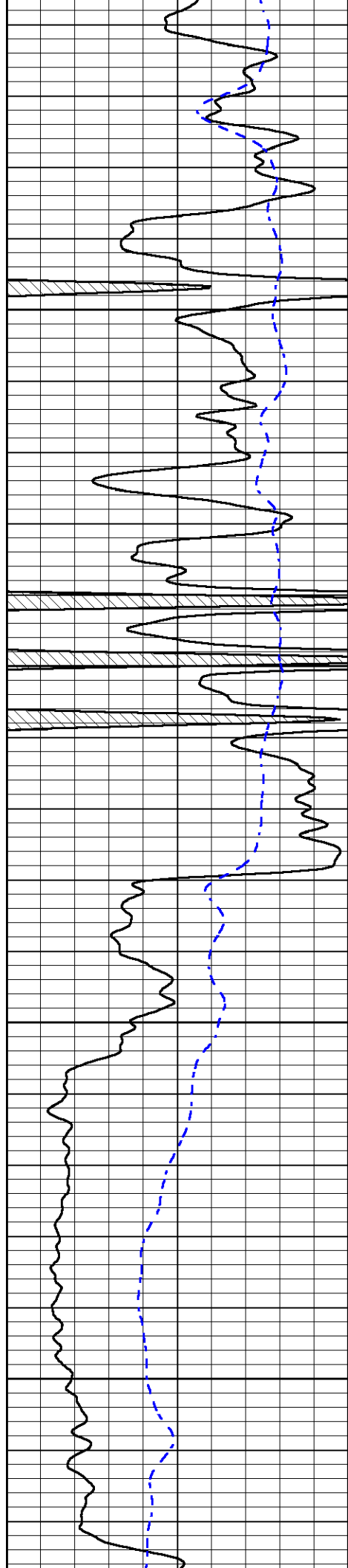
MAIN PASS

Database File renaissance_barbarajwellstrust_1.db
Dataset Pathname stack/pass7.1
Presentation Format dil
Dataset Creation Fri Dec 30 18:11:05 2016
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	SHALLOW RESISTIVITY (Ohm-m)	2000
15000	LINE TENSION (lb)	0



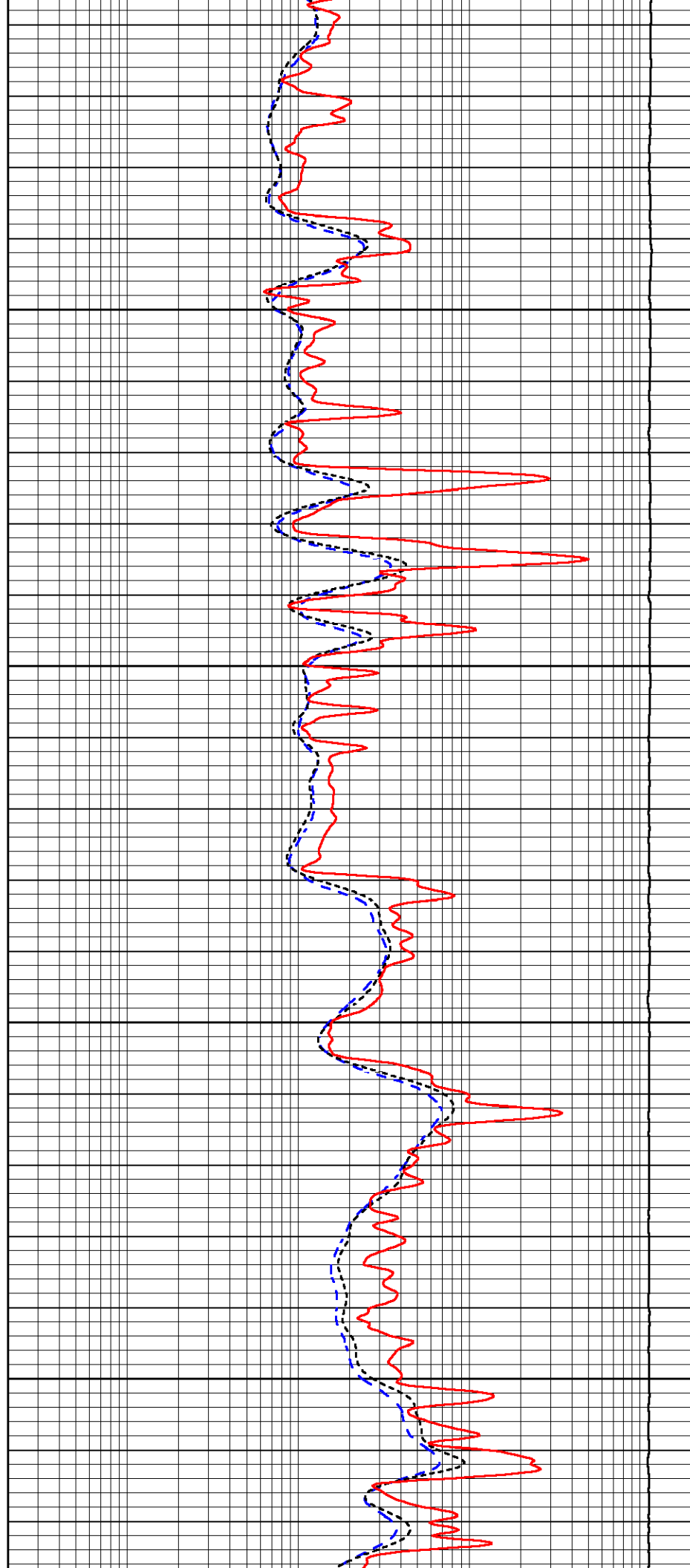


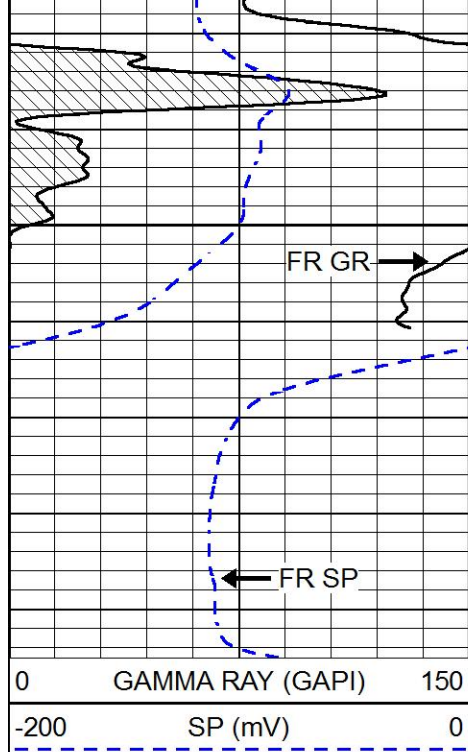
1700

1750

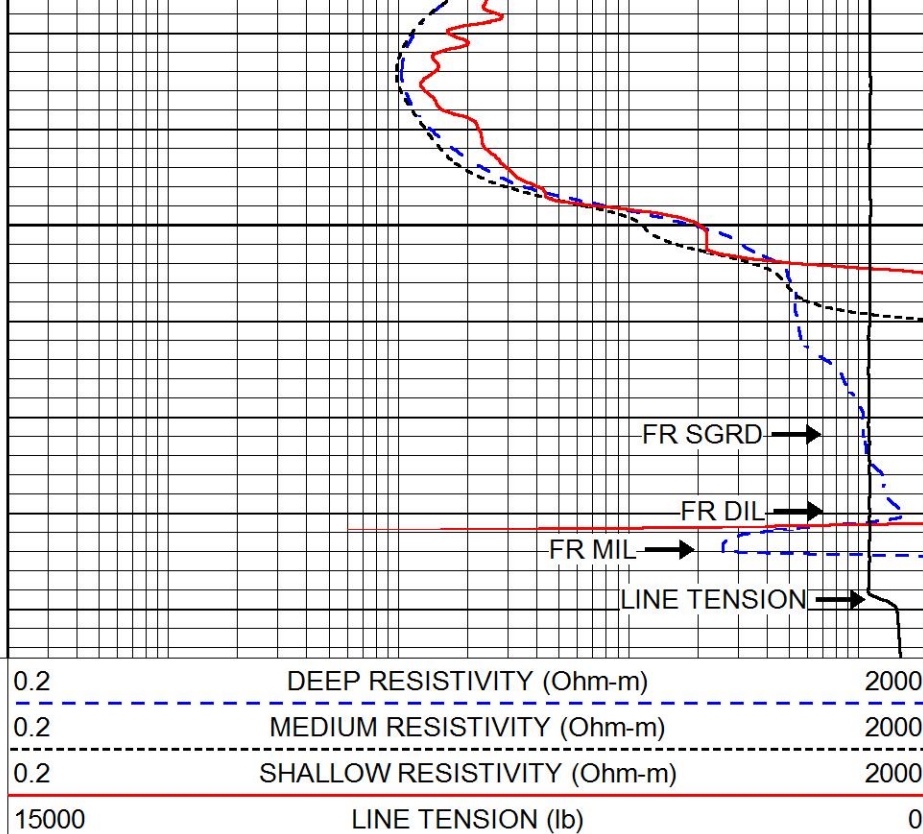
1800

1850



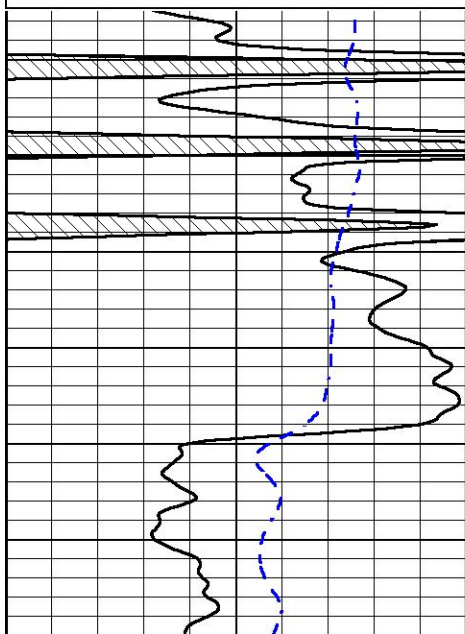
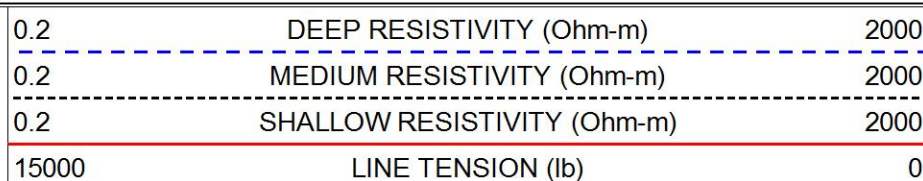
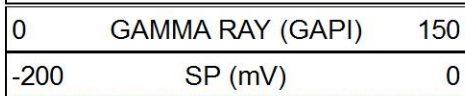


1900

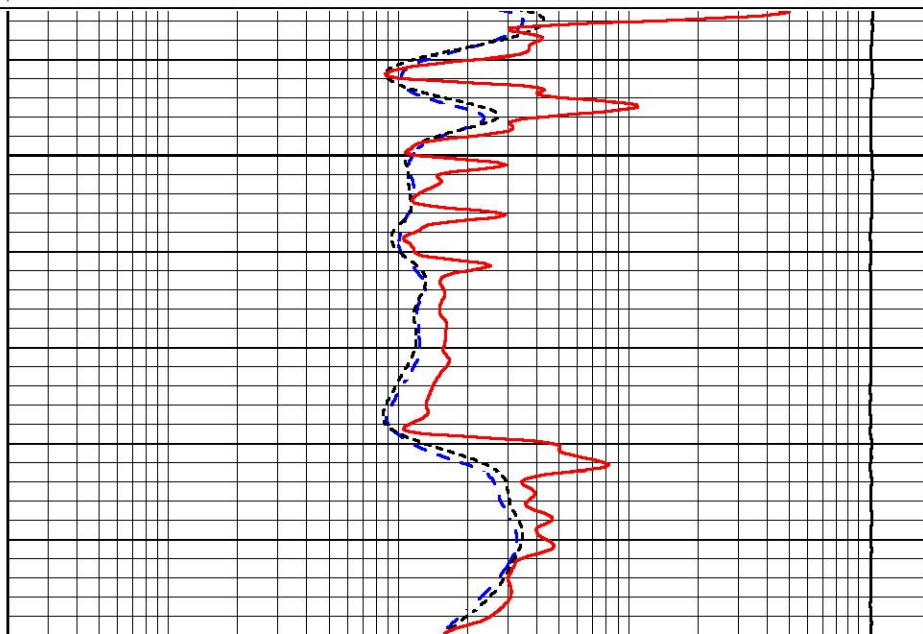


REPEAT SECTION

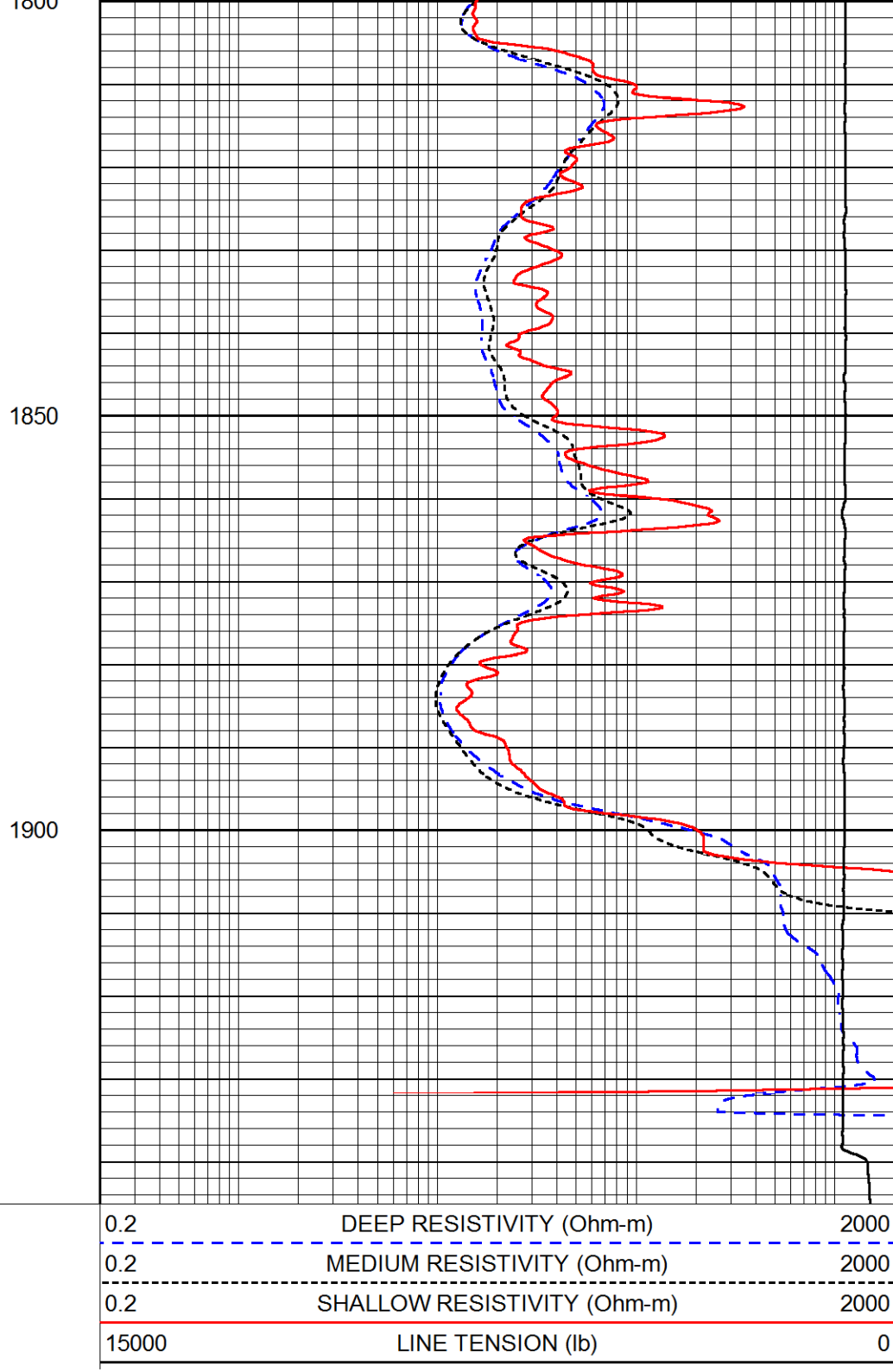
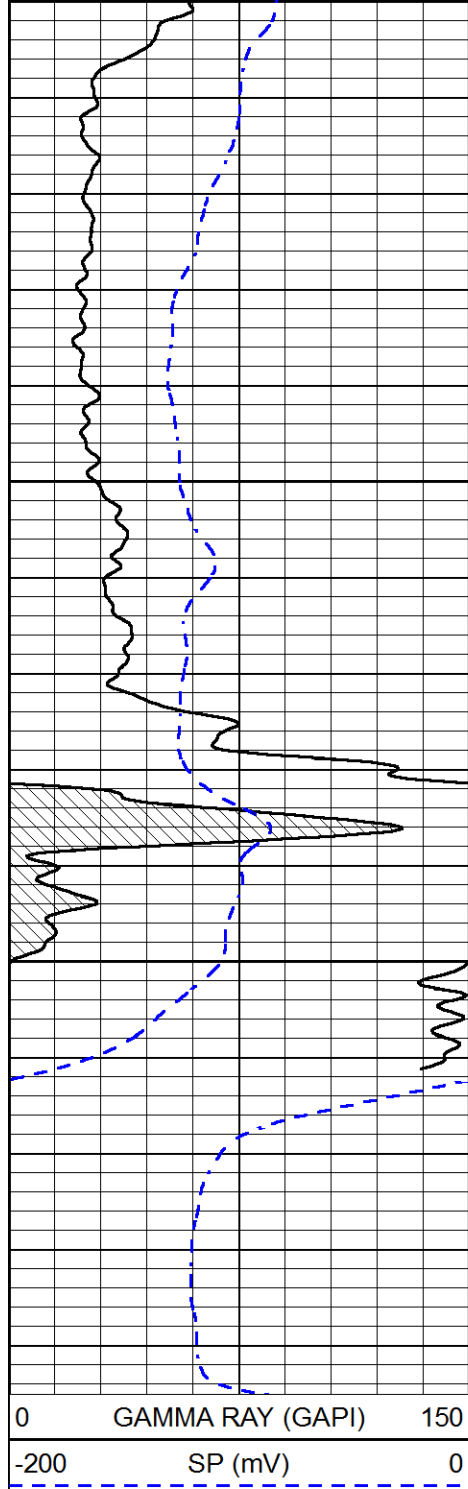
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 Presentation Format dil
 Dataset Creation Fri Dec 30 18:09:52 2016
 Charted by Depth in Feet scaled 1:240



1750



1800



Calibration Report

Database File renaissance_barbarajwellstrust_1.db
 Dataset Pathname stack/pass6
 Dataset Creation Fri Dec 30 17:28:20 2016

Dual Induction Calibration Report

Serial-Model: 1987-M&W
 Calibration Performed: Fri Dec 23 14:41:51 2016

Readings

References

Results

Loop:	Air	Loop	Air	Loop	Gain	Offset
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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: 168-986-M&W
 Source / Verifier: /
 Master Calibration Performed: Fri Nov 18 10:05:18 2016

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4691.86	4818.19	cps
Aluminum	2.675	g/cc	859.57	3020.22	cps

Spine Angle = 74.61 Density/Spine Ratio = 0.523

	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: Fri Dec 23 14:43:38 2016

Calibrator Value: 1000.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 6.2 cps

Sensitivity: 0.5200 GAPI/cps



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