



PIONEER
Pioneer Energy Services

MICRORESISTIVITY LOG

Company	CASINO PETROLEUM, LLC
Well	UKENS #2
Field	WELCH-BORNHOLDT
County	MCPHERSON
State	KANSAS
Location:	API #: 15-113-21391-00-00
Permanent Datum	GROUND LEVEL
Log Measured From	KELLY BUSHING
Drilling Measured From	KELLY BUSHING
SEC 18 TWP 20S RGE 5W	1650' FSL & 1650' FWL
Other Services	CNL/CDL DIL
Elevation	1553'
K.B.	1563'
D.F.	N/A
G.L.	1553'
Date	2/18/2018
Run Number	ONE
Depth Driller	3350'
Depth Logger	3350'
Bottom Logged Interval	3349'
Top Log Interval	2450'
Casing Driller	8.625" @ 273'
Casing Logger	272'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	6900
Density / Viscosity	9.2 53
pH / Fluid Loss	9.5 8.0
Source of Sample	FLOWLINE
Rm @ Meas. Temp	0.40 @ 50
Rmf @ Meas. Temp	0.30 @ 50
Rmc @ Meas. Temp	0.54 @ 50
Source of Rmf / Rmc	CHARTS
Rm @ BHT	0.18 @ 110
Operating Rig Time	3 HOURS
Max Rec. Temp. F	110
Equipment Number	91
Location	HAYS
Recorded By	D. SCHMIDT
Witnessed By	TODD MORGENSTERN

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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.

LYONS,
EAST TO PLUM AVE (31ST RD),
5 SOUTH TO P AVE, 1/4 EAST,
NORTH INTO

Log Measured From: KELLY BUSHING

Ft. Above Permanent Datum

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

Your Pioneer Energy Services Crew

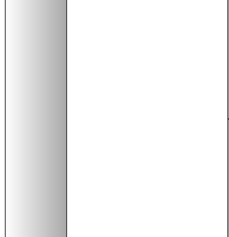
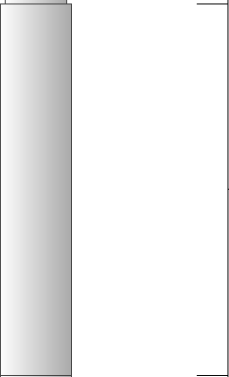
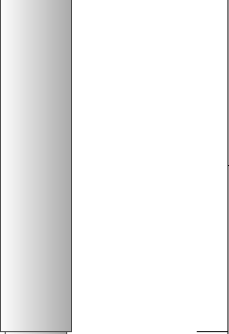
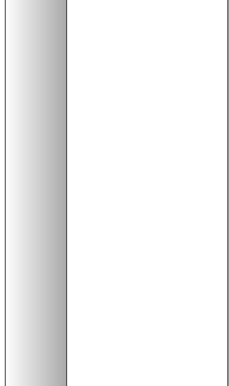
Engineer: D. SCHMIDT
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: TODD MORGENSTERN
Secondary Witness:
Secondary Witness:
Secondary Witness:

Top - Bottom

M	A	SZCOR	NPORSEL	FLUIDDEN g/cc	MATRXDEN g/cc	SPSHIFT mV	SNDERRM mmho/m
2	1	Off	Limestone	1	2.71	-225	0
SNDERR mmho/m	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
0	40	0	5.5	0	3350	110	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 (182-152)	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					

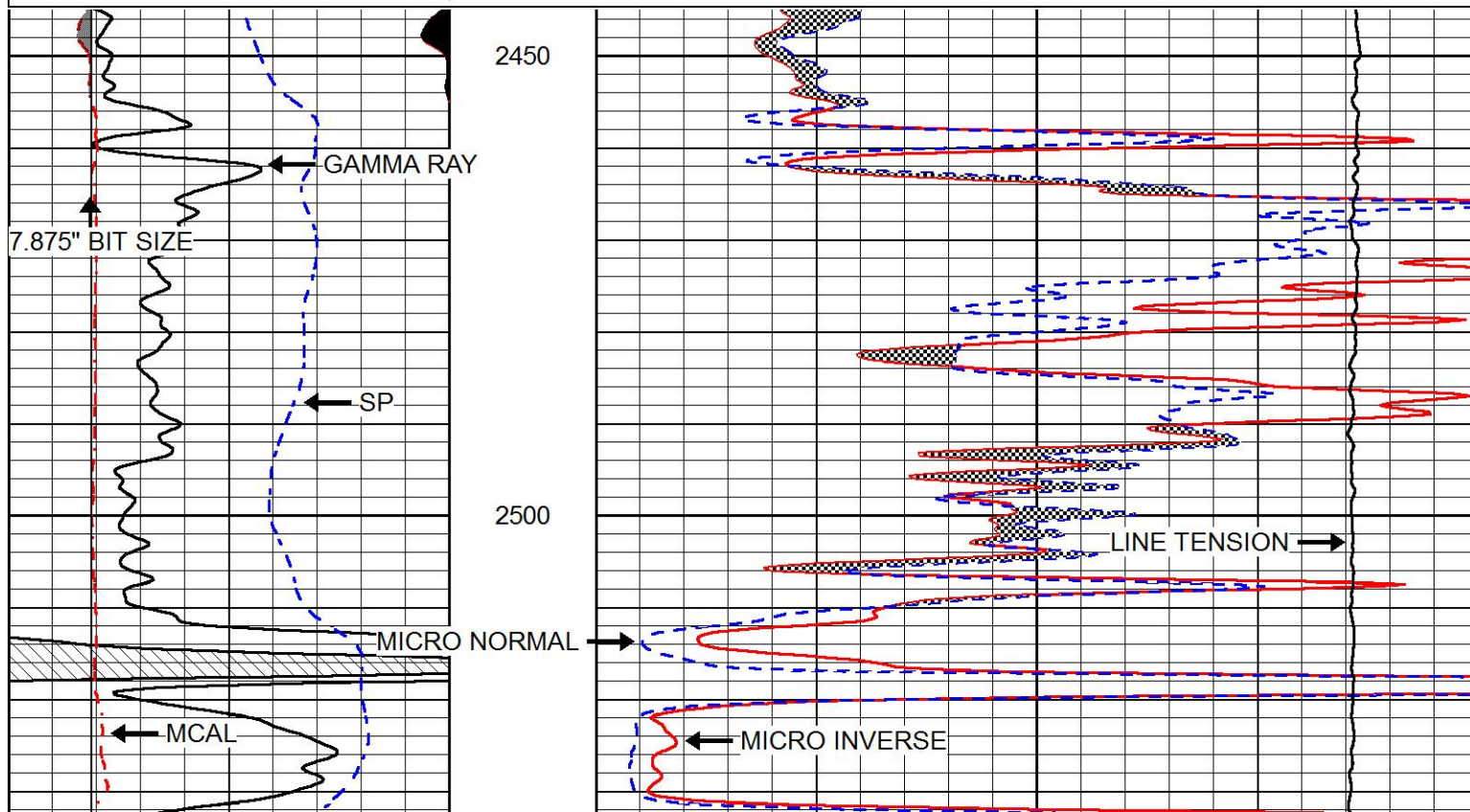
			DIL-PSI HIGH TEMP (933 (HT))	18.50	3.50	220.00
CILD	8.00					
CILM	4.70					
SP	0.20					
Dataset: casino_ukens 2.db: field/well/STKML/pass3.2 Total length: 43.08 ft Total weight: 685.00 lb O.D.: 4.00 in						

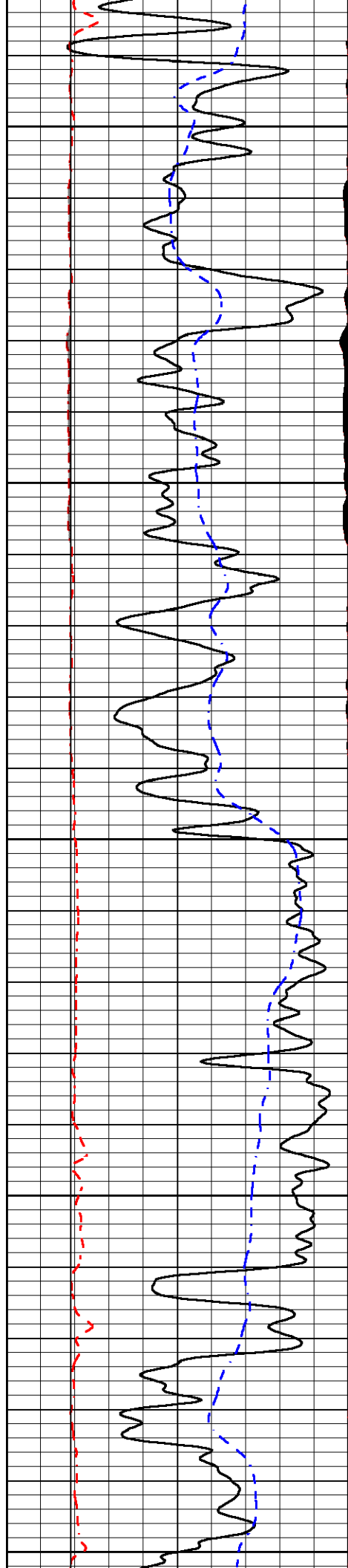


MAIN PASS

Database File	casino_ukens 2.db
Dataset Pathname	STKML/pass3.1
Presentation Format	micro
Dataset Creation	Sun Feb 18 08:57:26 2018
Charted by	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150	0	Micro Inverese 1 X 1 (Ohm-m)	40
6	MCAL (in)	16	0	Micro Normal 2" (Ohm-m)	40
2.875	mcal (in)	7.875	10000	Line Weight (lb)	0
6	Bit Size (in)	16			
-200	SP (mV)	0			





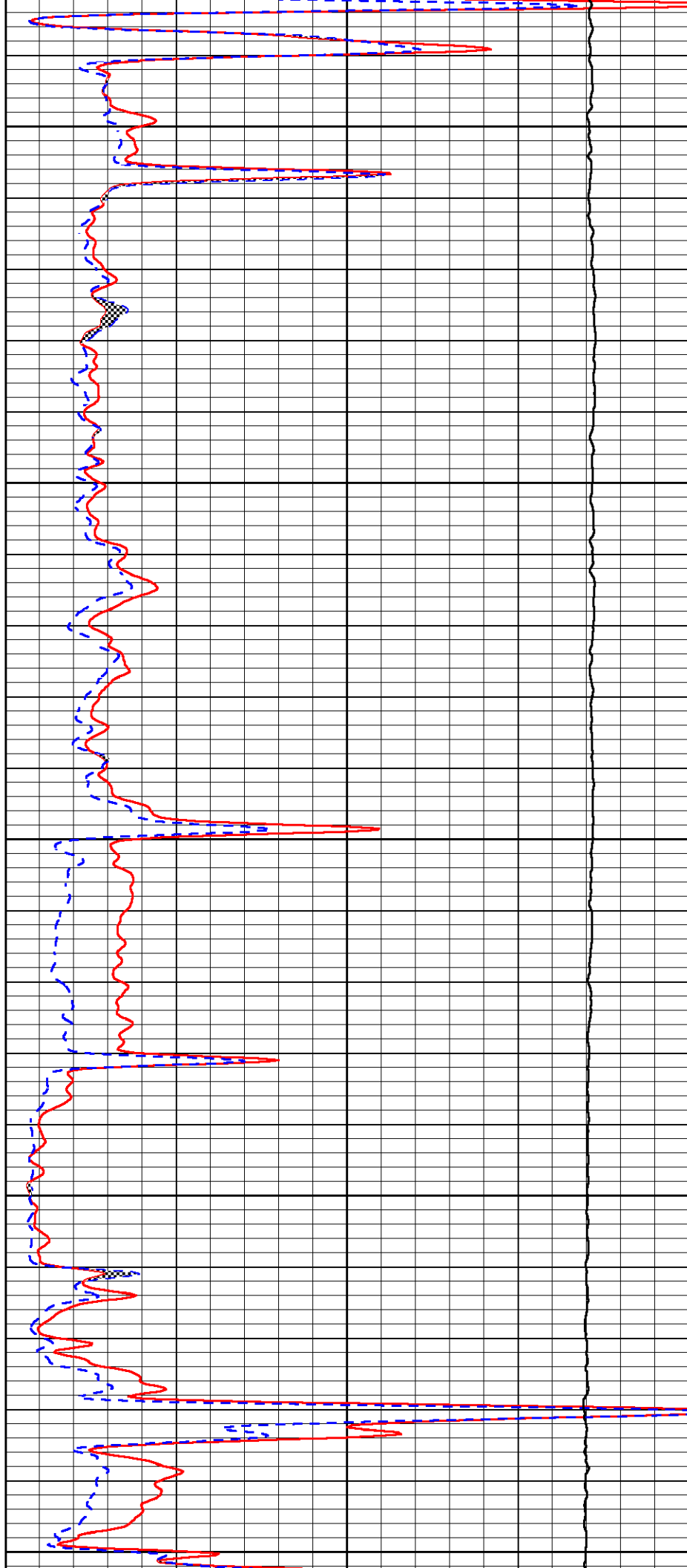
2550

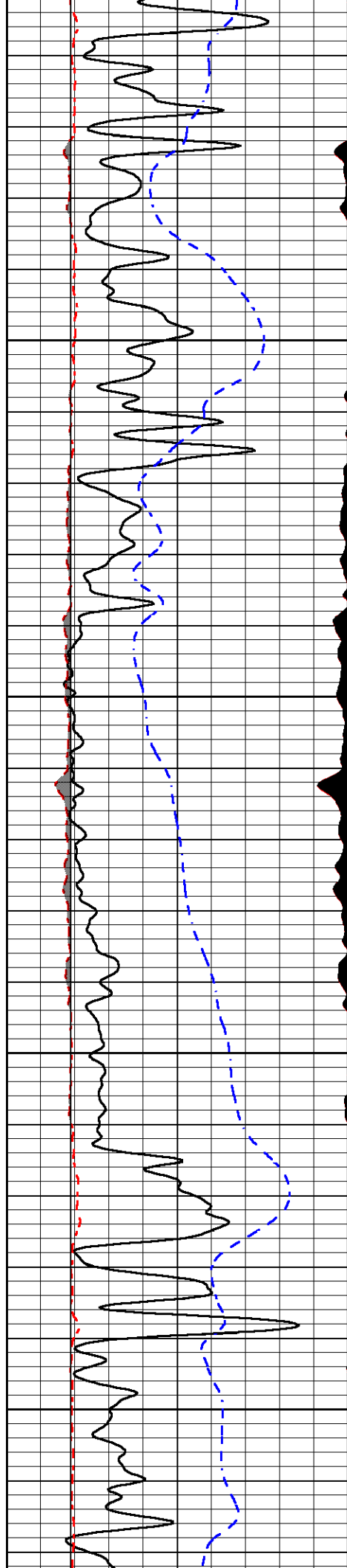
2600

2650

2700

2750



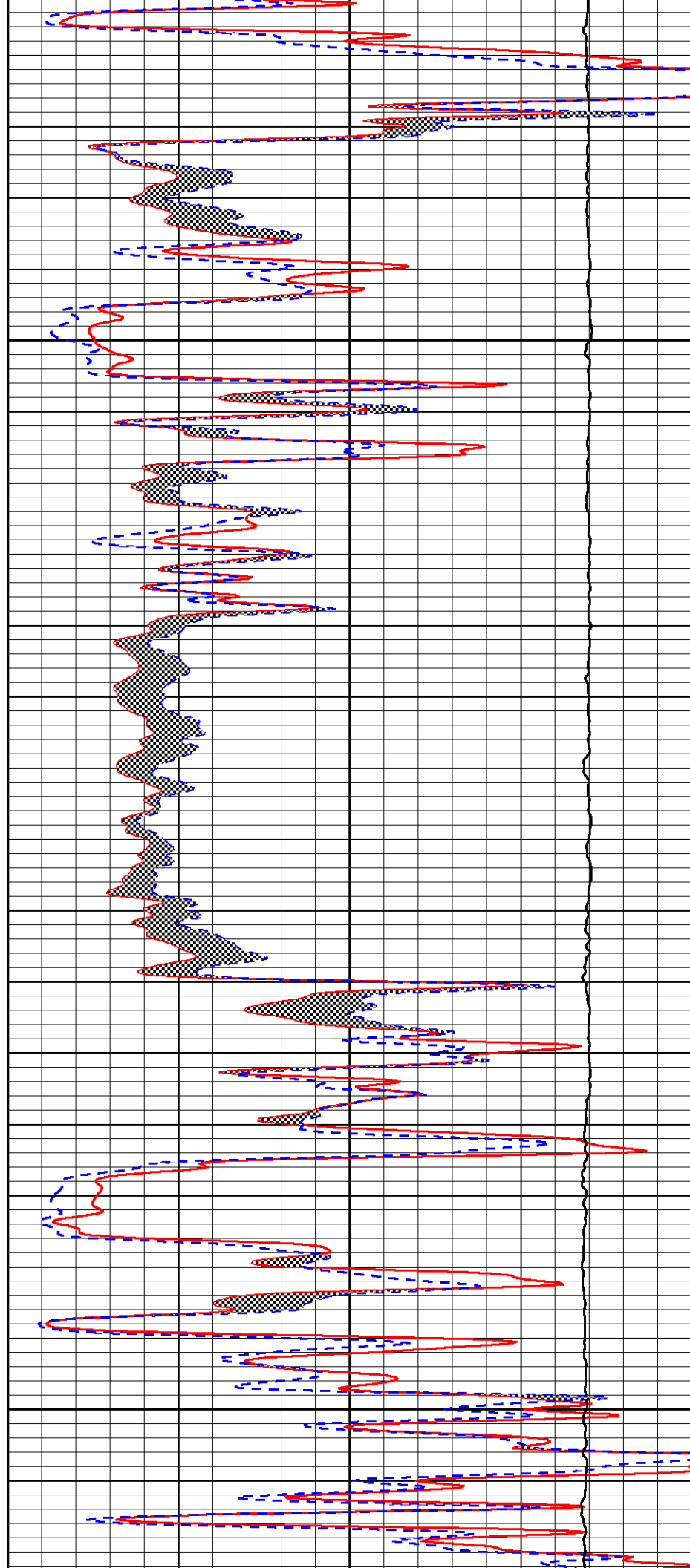


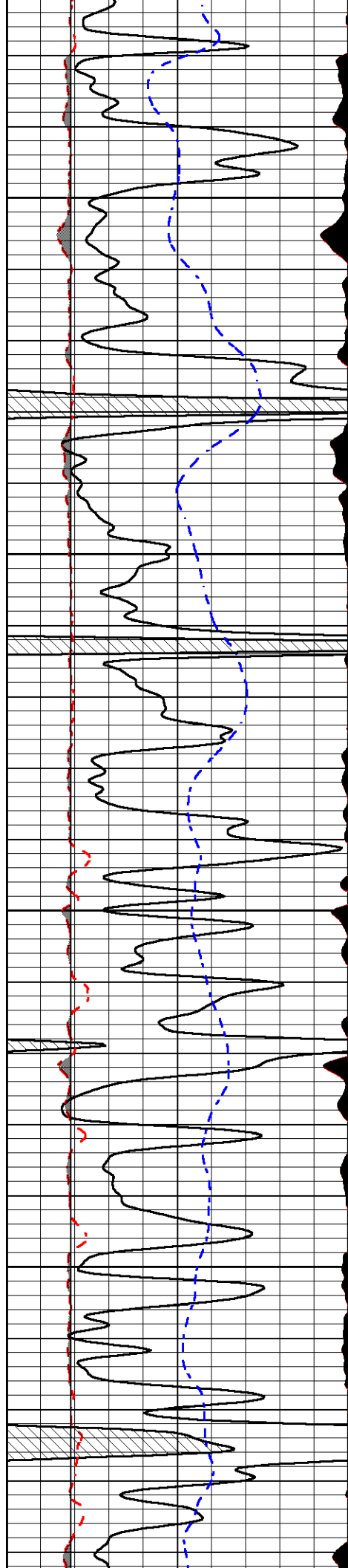
2800

2850

2900

2950



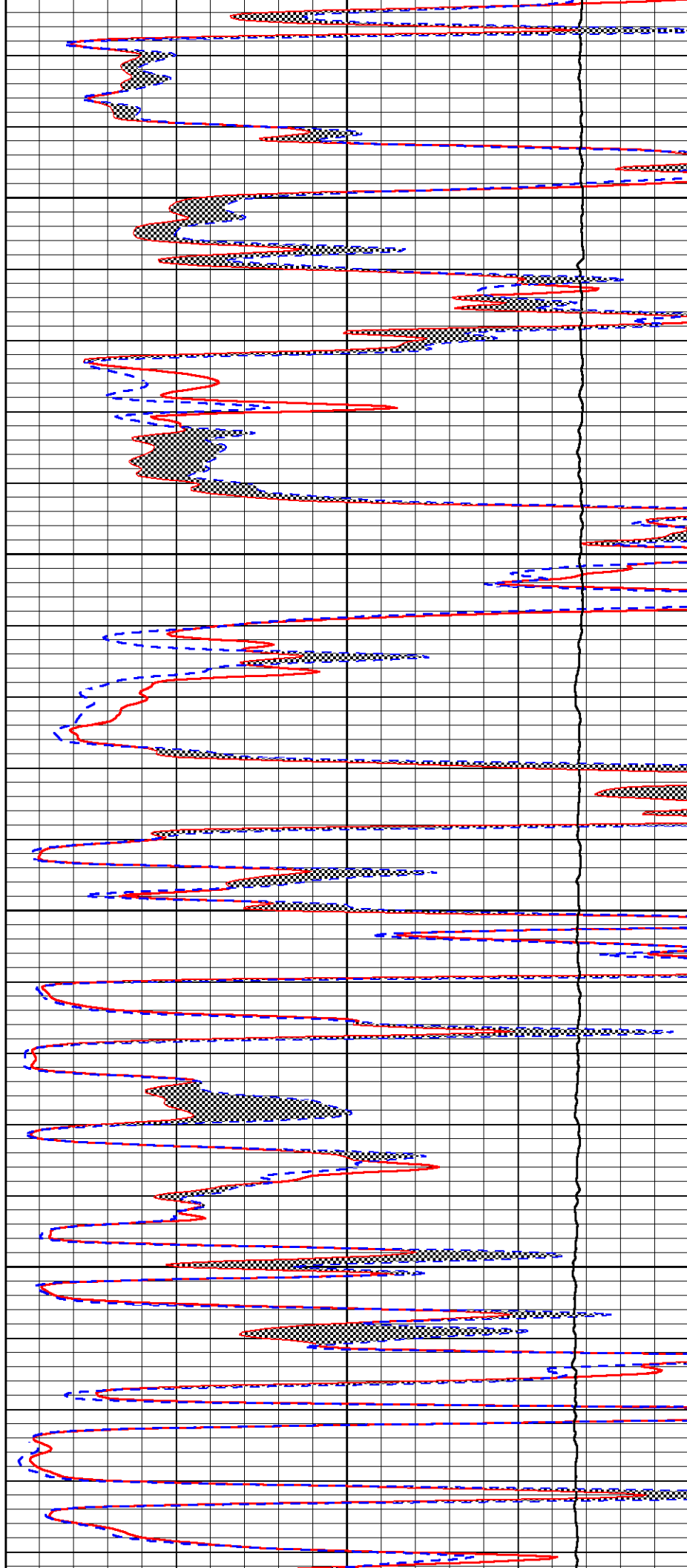


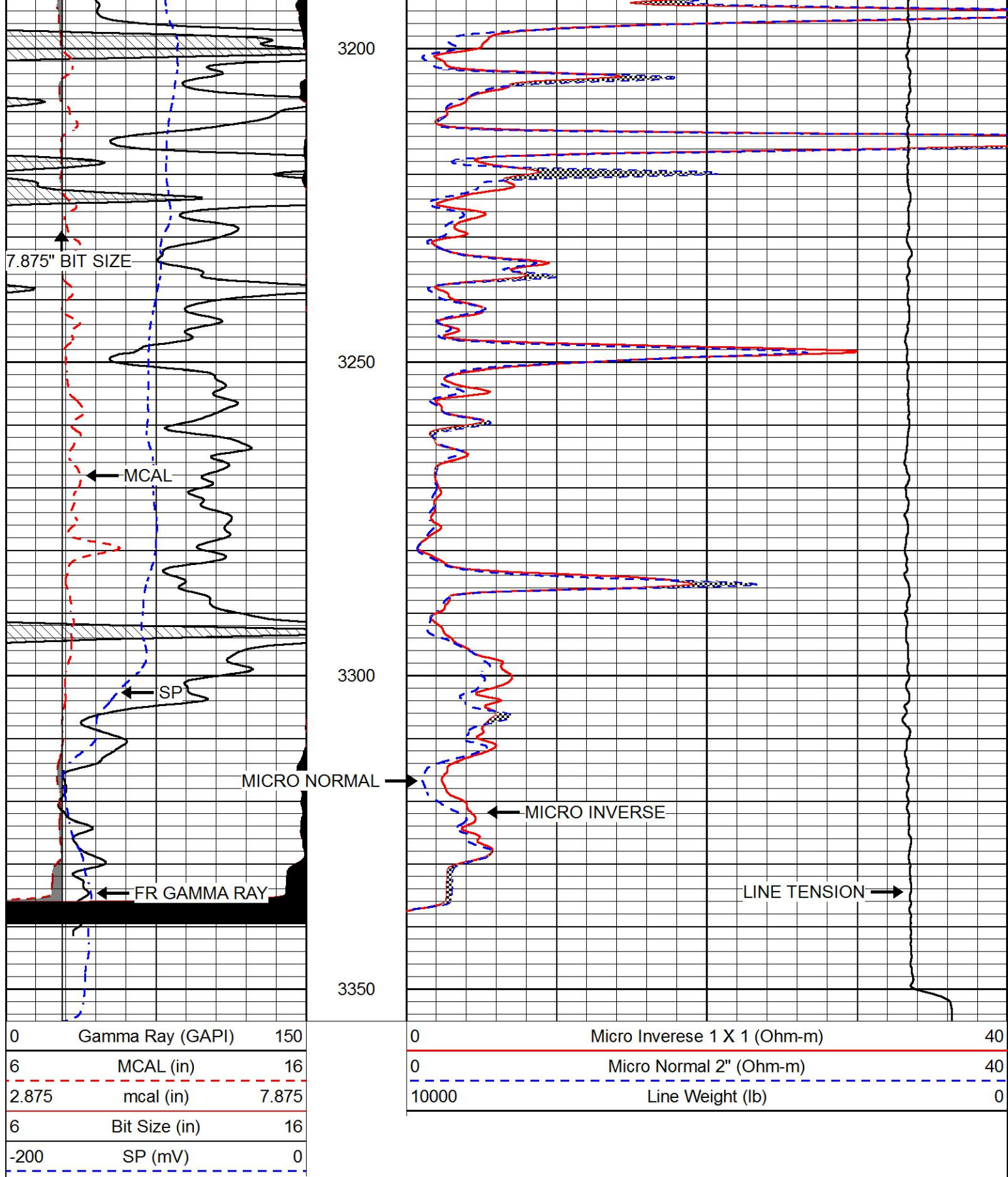
3000

3050

3100

3150

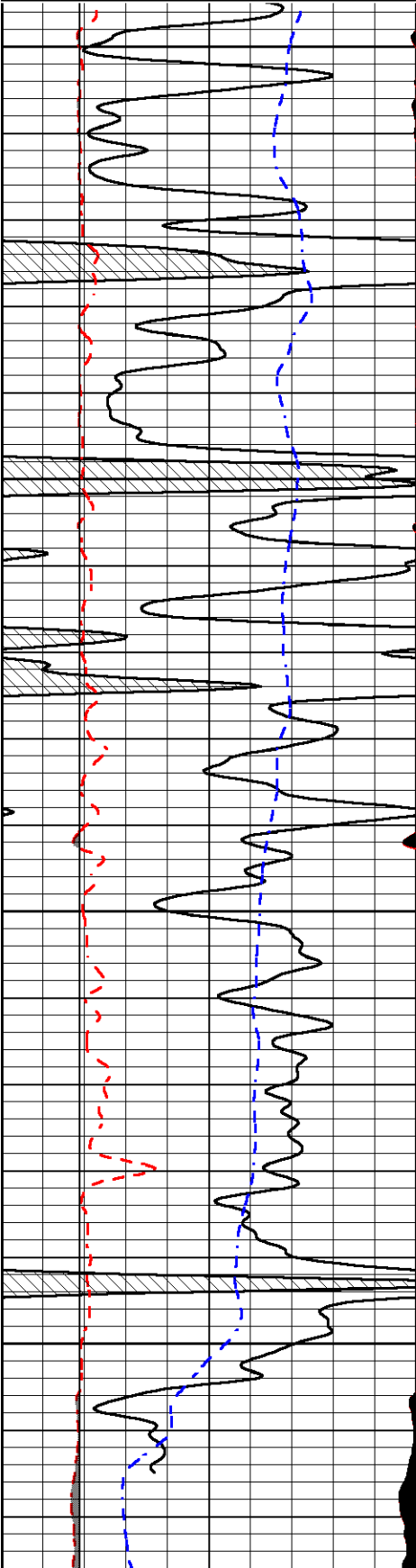




REPEAT SECTION

0	Gamma Ray (GAPI)	150
6	MCAL (in)	16
2.875	mcals (in)	7.875
6	Bit Size (in)	16
-200	SP (mV)	0

0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0

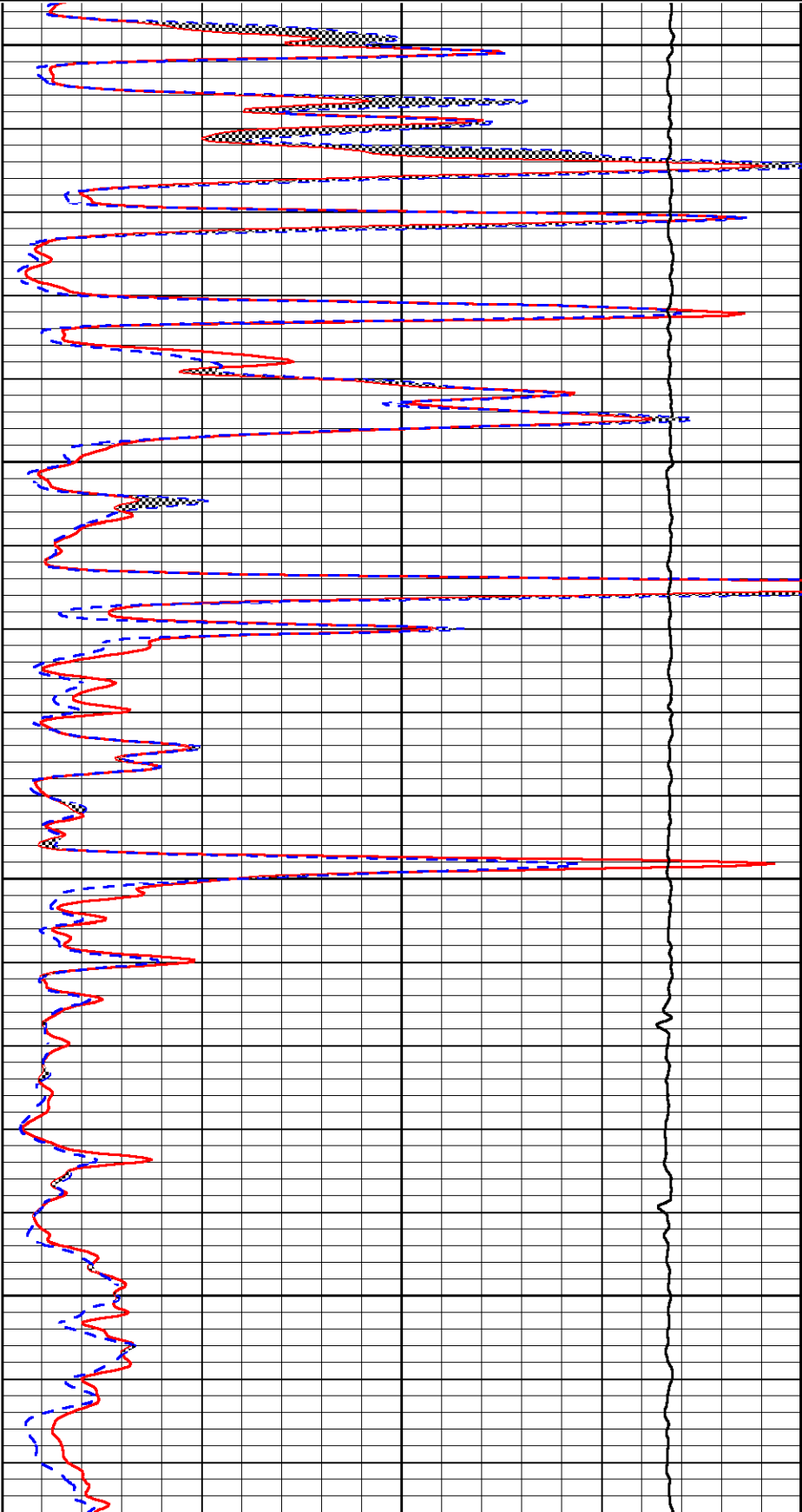


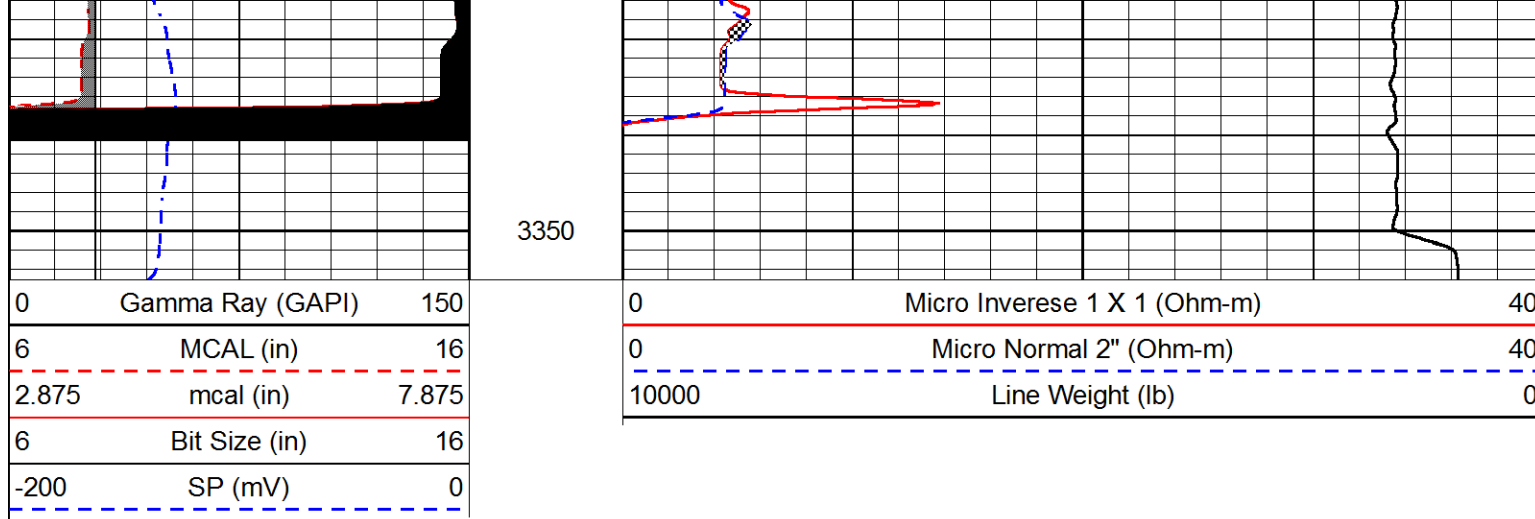
3150

3200

3250

3300





Calibration Report								
Database File	casino_ukens 2.db							
Dataset Pathname	STKML/pass3.2							
Dataset Creation	Sun Feb 18 07:40:29 2018							
Dual Induction Calibration Report								
Serial-Model:				933 (HT)-PSI HIGH TEMP				
Calibration Performed:				Mon Feb 12 17:16:25 2018				
Loop:	Readings		References			Results		
	Air	Loop	Air	Loop		Gain	Offset	
	Deep	167.000	835.000	0.000	255.000	mmho/m	0.700	-18.350
Medium	142.000	1349.000	0.000	255.000	mmho/m	0.560	-63.000	
Microlog Calibration Report								
Serial-Model:				PSI-01-PSIML				
Performed:				Mon Jan 15 11:19:55 2018				
	Readings		References			Results		
	Zero	Cal	Zero	Cal		m	b	
	Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	25000.0000	-1.0000
	Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	31000.0000	-0.6000
Caliper	1.0001	1.1397	6.5000	18.5000	in	100.0000	-97.3550	
Compensated Density Calibration Report								
Serial-Model:				182-152-M&W				
Source / Verifier:				16955B / 2ci				
Master Calibration Performed:				Mon Feb 12 16:20:26 2018				

Master Calibration						
	Density			Far Detector	Near Detector	
Magnesium	1.755	g/cc		4992.81	6098.44	cps
Aluminum	2.675	g/cc		945.67	3945.60	cps
Spine Angle = 75.33			Density/Spine Ratio = 0.535			

	Size		Reading
Small Ring	4.50	in	1.09
Large Ring	15.00	in	1.03

Compensated Neutron Calibration Report

Serial Number:	207-MW
Tool Model:	M&W
Calibration Performed:	MON JAN 15 10:30:30 2018

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:	Mon Jan 15 11:20:44 2018	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.6000	GAPI/cps

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	Well	UKENS #2
	Field	WELCH-BORNHOLDT
	County	MCPHERSON
	State	KANSAS