



PIONEER

Pioneer Energy Services

Microresistivity Log

API No.	15-135-25870-00-00		
Company	LARSON ENGINEERING, INC.		
Well	LIVINGSTON-KSU NO. 1-26		
Field	ARNOLD		
County	NESS	State	KANSAS
Location	N/2-NE-NE-NE 157' FNL & 330' FWL		
Sec: 26	Twp: 16S	Rge: 25W	Other Services CNL/CDL DIL
Permanent Datum	GROUND LEVEL	Elevation 2566	Elevation
Log Measured From	KELLY BUSHING	9 Ft. Above Perm. Datum	K.B. 2575
Drilling Measured From	KELLY BUSHING		D.F. 2566
Date	5/27/15		
Run Number	TWO		
Depth Driller	4605		
Depth Logger	4603		
Bottom Logged Interval	4602		
Top Log Interval	3600		
Casing Driller	8.625 @ 254		
Casing Logger	256		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL		
Salinity, ppm CL	3,700		
Density / Viscosity	9.4 57		
pH / Fluid Loss	9.5 8.0		
Source of Sample	Flowline		
Rm @ Meas. Temp	.68 @ 75		
Rmf @ Meas. Temp	.51 @ 75		
Rmc @ Meas. Temp	.92 @ 75		
Source of Rmf / Rmc	Charts		
Rm @ BHT	.42 @ 122		
Operating Rig Time	4 HOURS		
Max Rec. Temp. F	122		
Equipment Number	15		
Location	Hays		
Recorded By	J. HENRICKSON		
Witnessed By	VERN SCHRAG		

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, 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. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

Thank you for using Pioneer Energy Services
785.625.3858

ARNOLD KANSAS
3/4 WEST, SOUTH INTO(RIGHT OFF HIGHWAY)

Log Variables

DatabaseC:\ProgramData\Warrior\Data\larson_livingston_ksu_1_26.db
Dataset field/well/micro/pass3/_vars_

Top - Bottom

M	A	SZCOR	NPORSEL	FLUIDDEN a/cc	MATRXDEN a/cc	SPSHIFT mV	SNDEERM mmho/m
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2	1	Off	Limestone	1	2.71	0	0
SNDERR mmho/m 0	SRFTEMP degF 0	CASETHCK in 0	CASEOD in 5.5	PERFS 0	TDEPTH ft 0	BOTTEMP degF 100	BOREID in 7.875

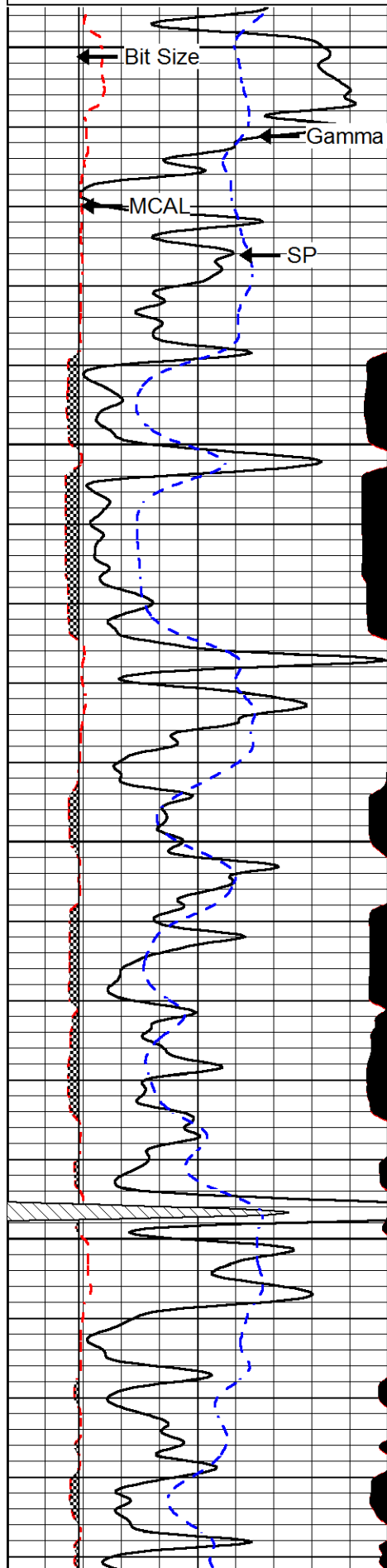
Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
MCAL MI MN	1.00 1.00 1.00		ML-GO (G002)	5.00	3.50	100.00
Dataset: laronLivingston_ksu_1_26.db: field/well/micro/pass3 Total length: 5.00 ft Total weight: 100.00 lb O.D.: 3.50 in						



MAIN PASS

Database File laronLivingston_ksu_1_26.db
 Dataset Pathname stack/pass3.1
 Presentation Format micro
 Dataset Creation Wed May 27 04:14:48 2015
 Charted by Depth in Feet scaled 1:240

6	MCAL (in)	16
2.875	mcal (in)	7.875
6	Bit Size (in)	16
-200	SP (mV)	0



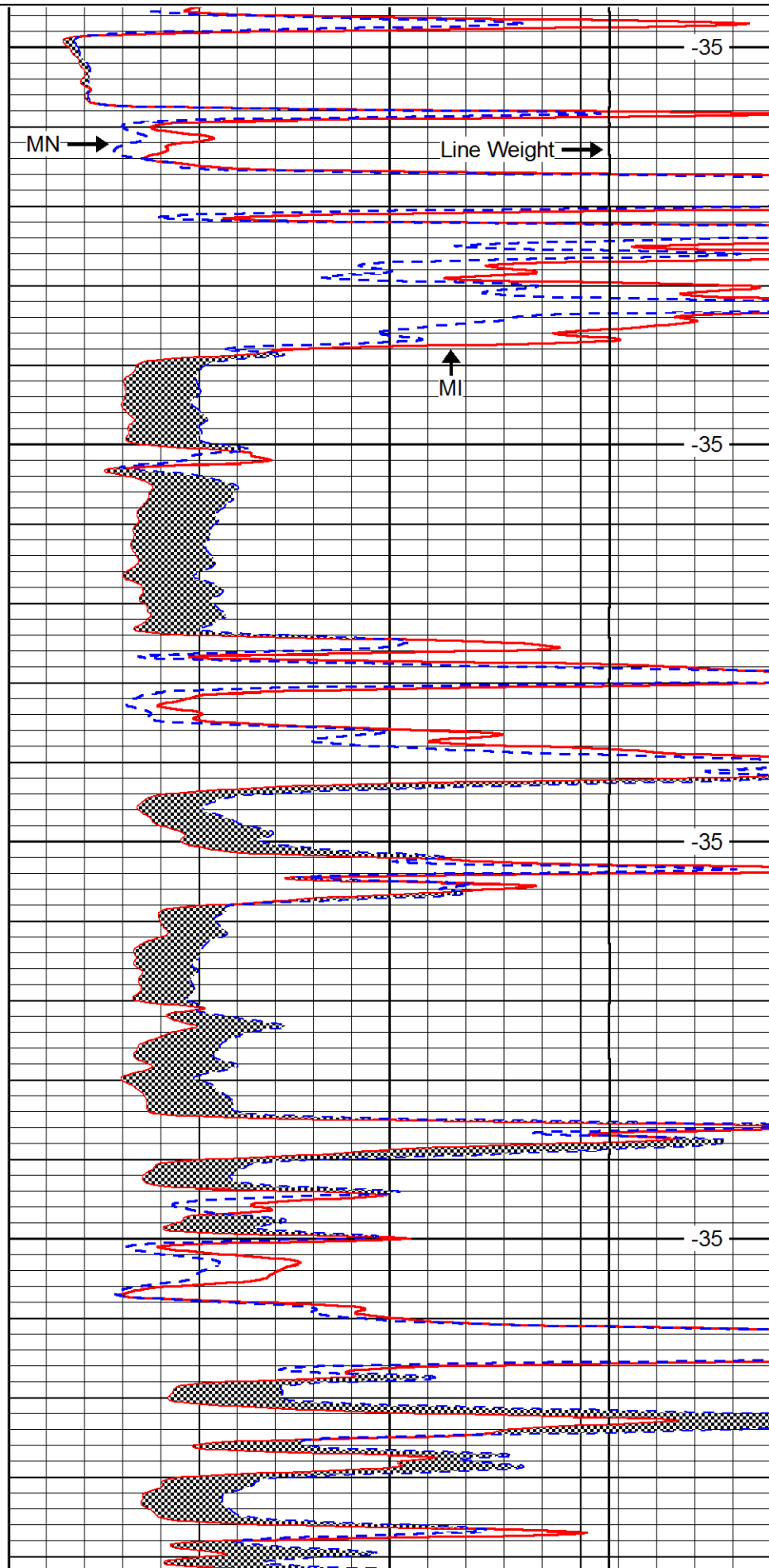
3600

3650

3700

3750

0	Micro Inverse T X T (Ohm-Ft)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0
		LSPD (ft/min)



MN

Line Weight

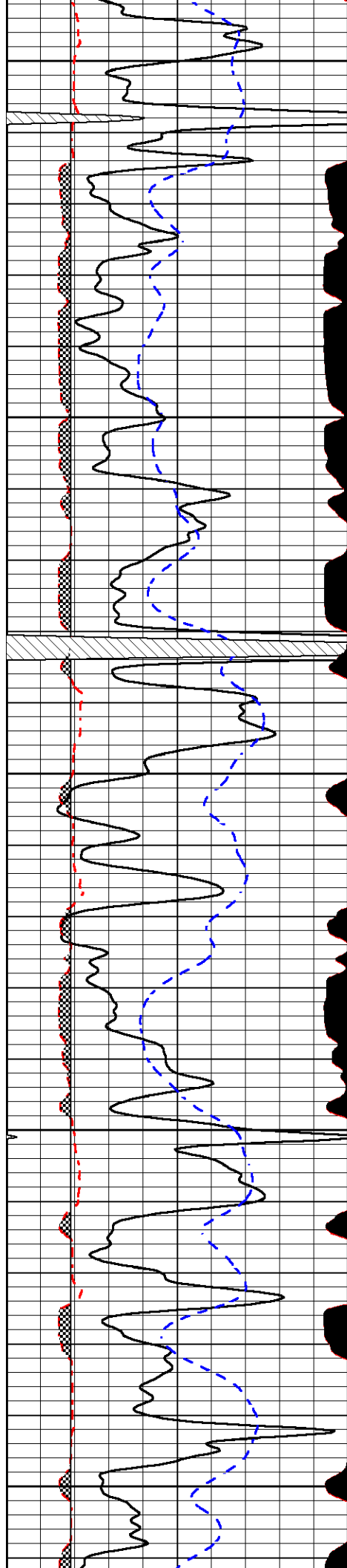
MI

-35

-35

-35

-35



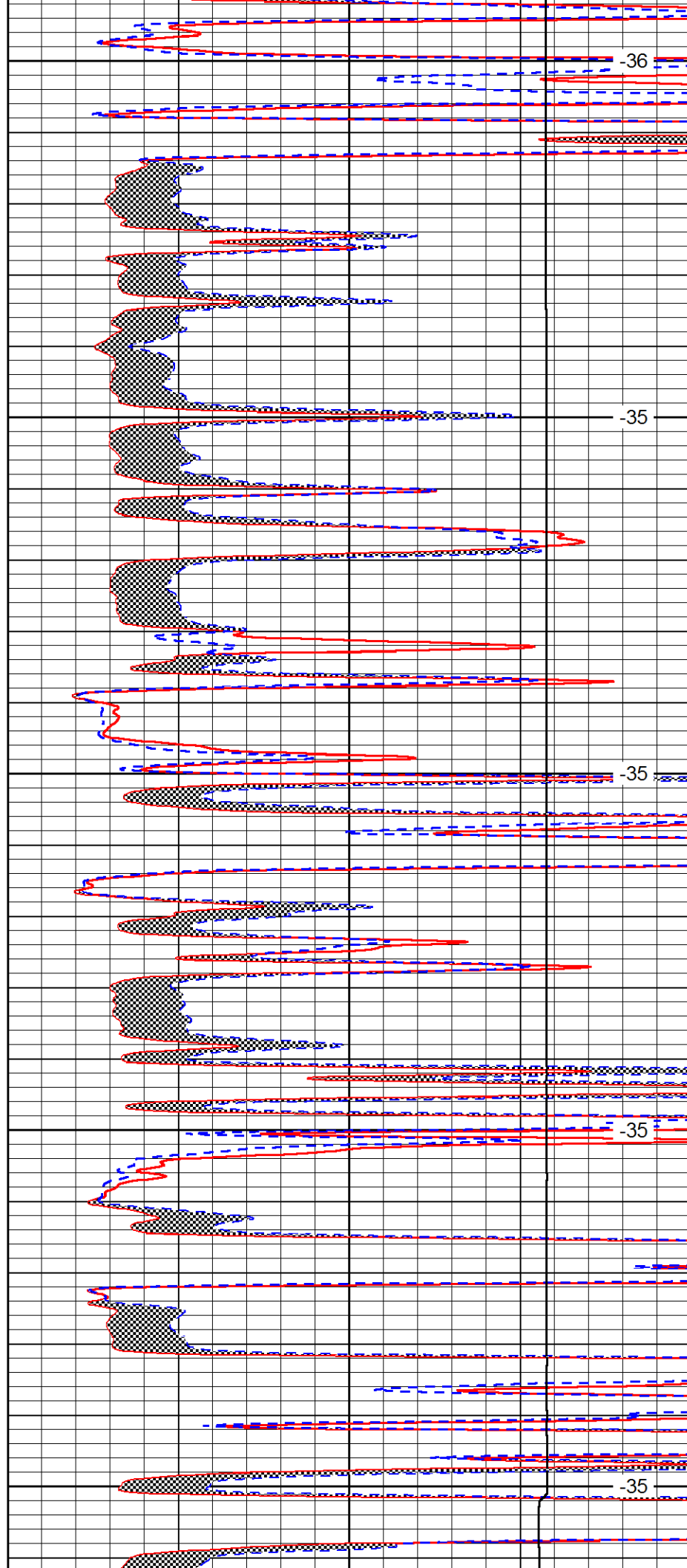
3800

3850

3900

3950

4000



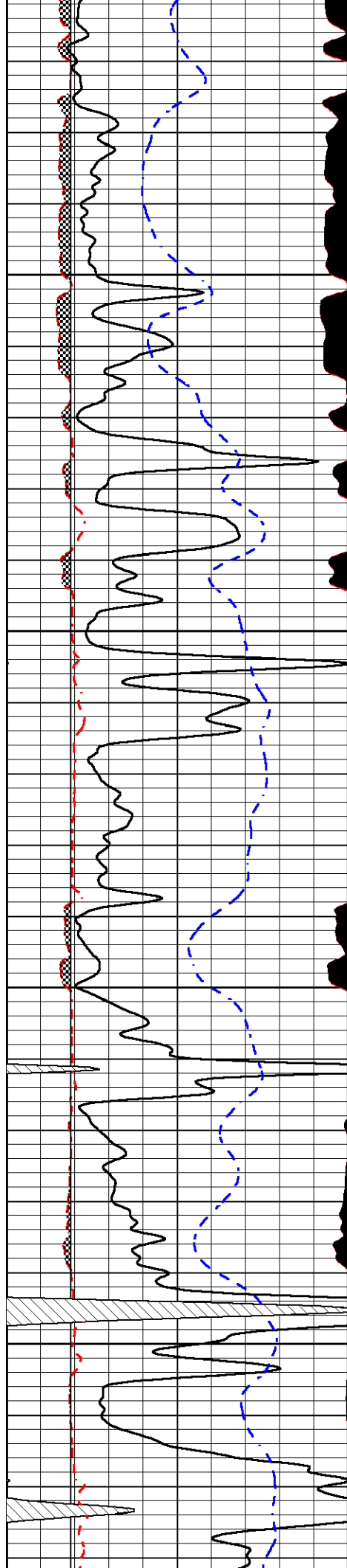
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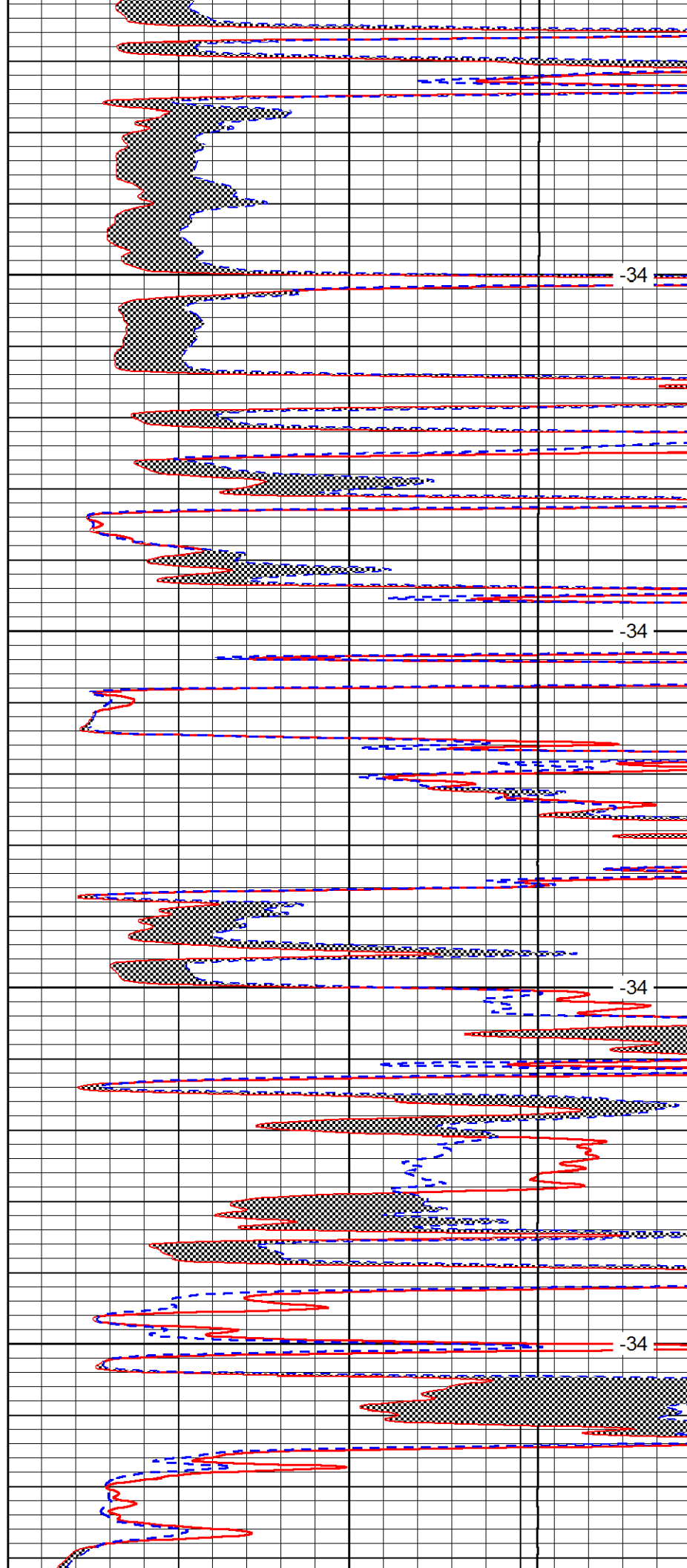


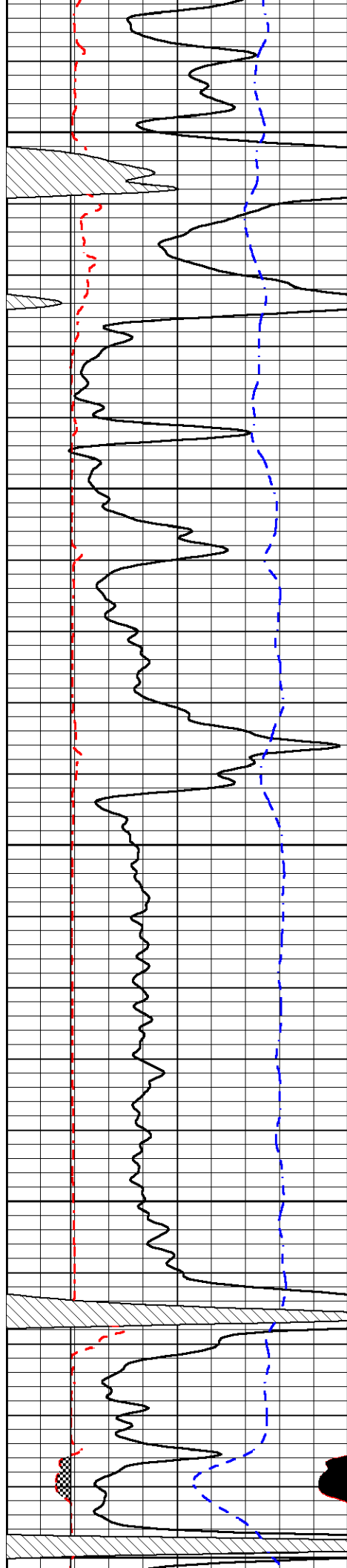
4050

4100

4150

4200





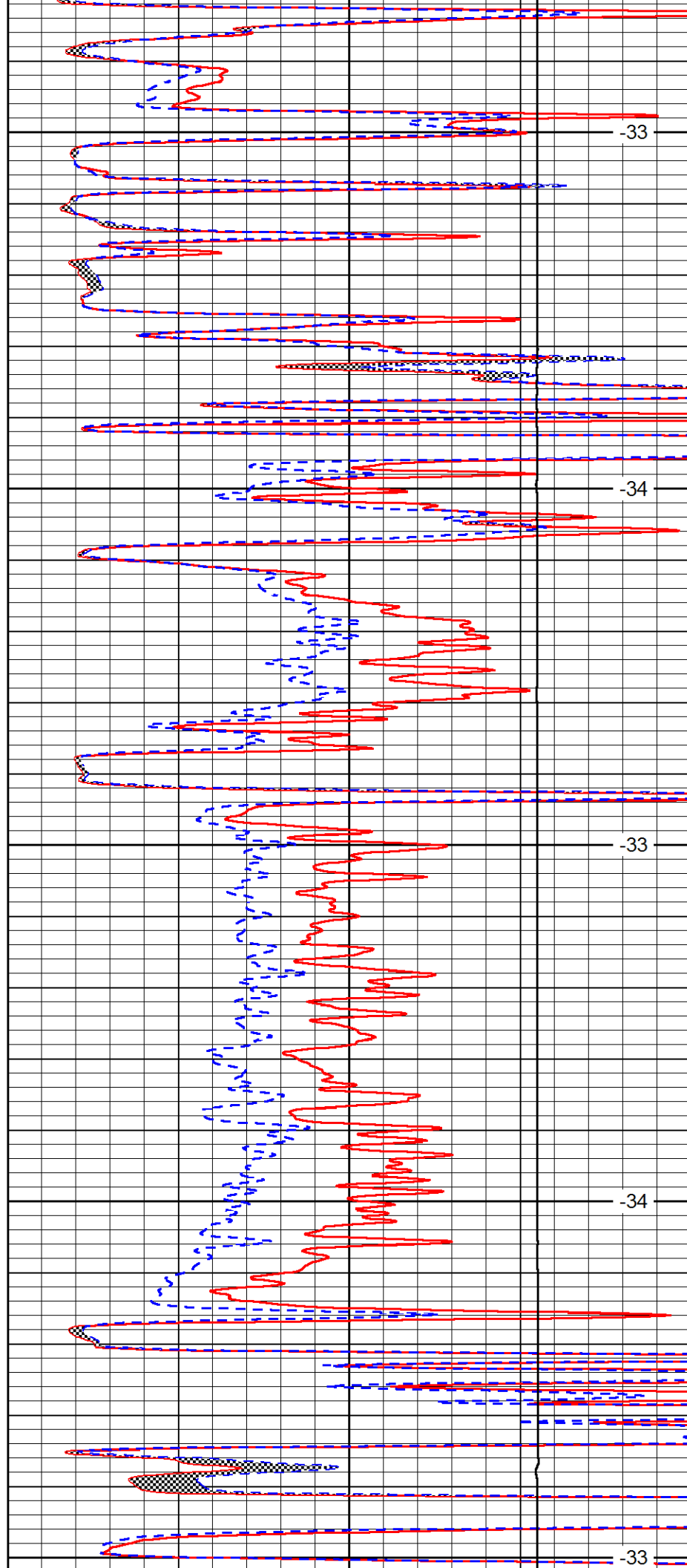
4250

4300

4350

4400

4450



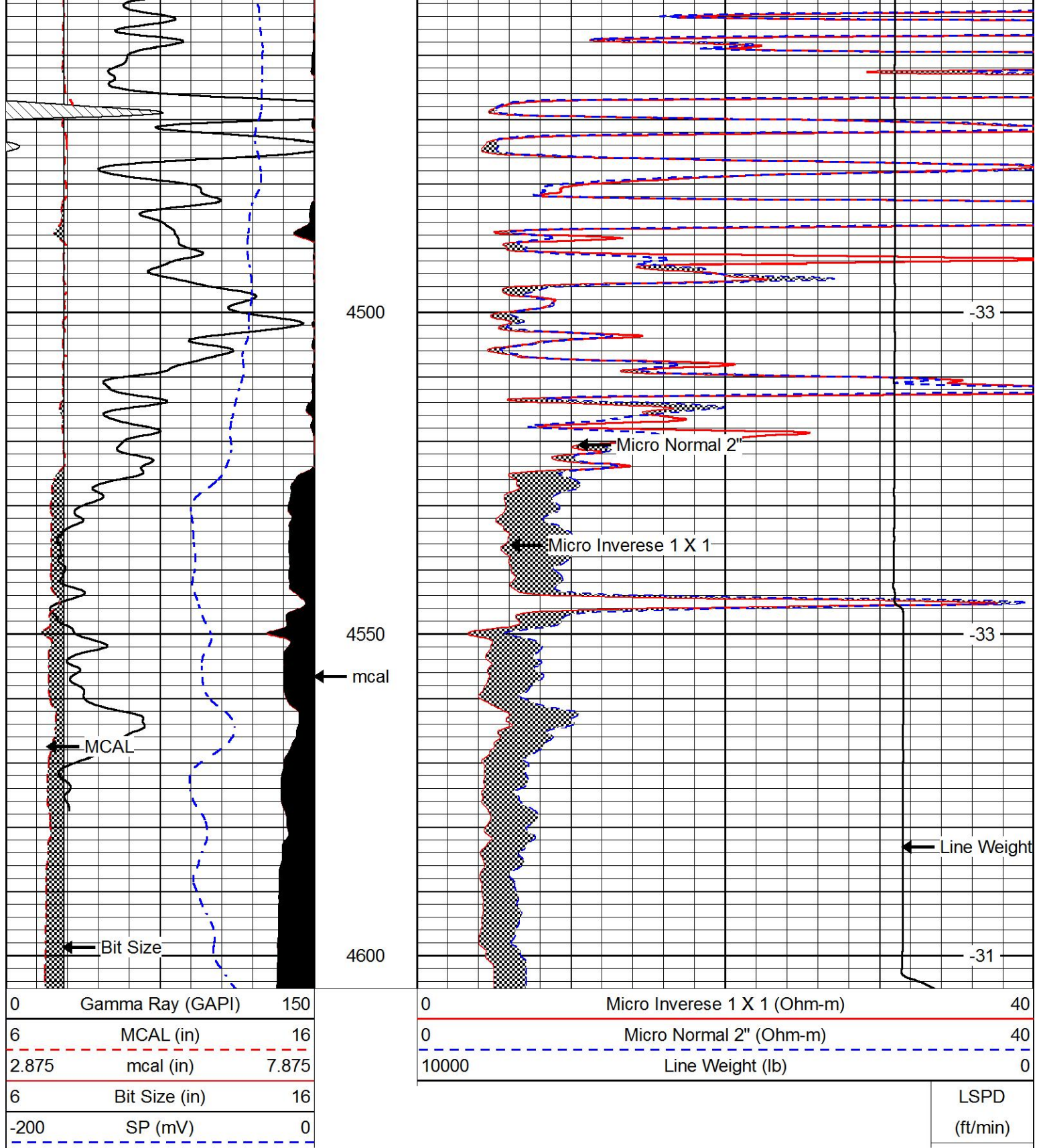
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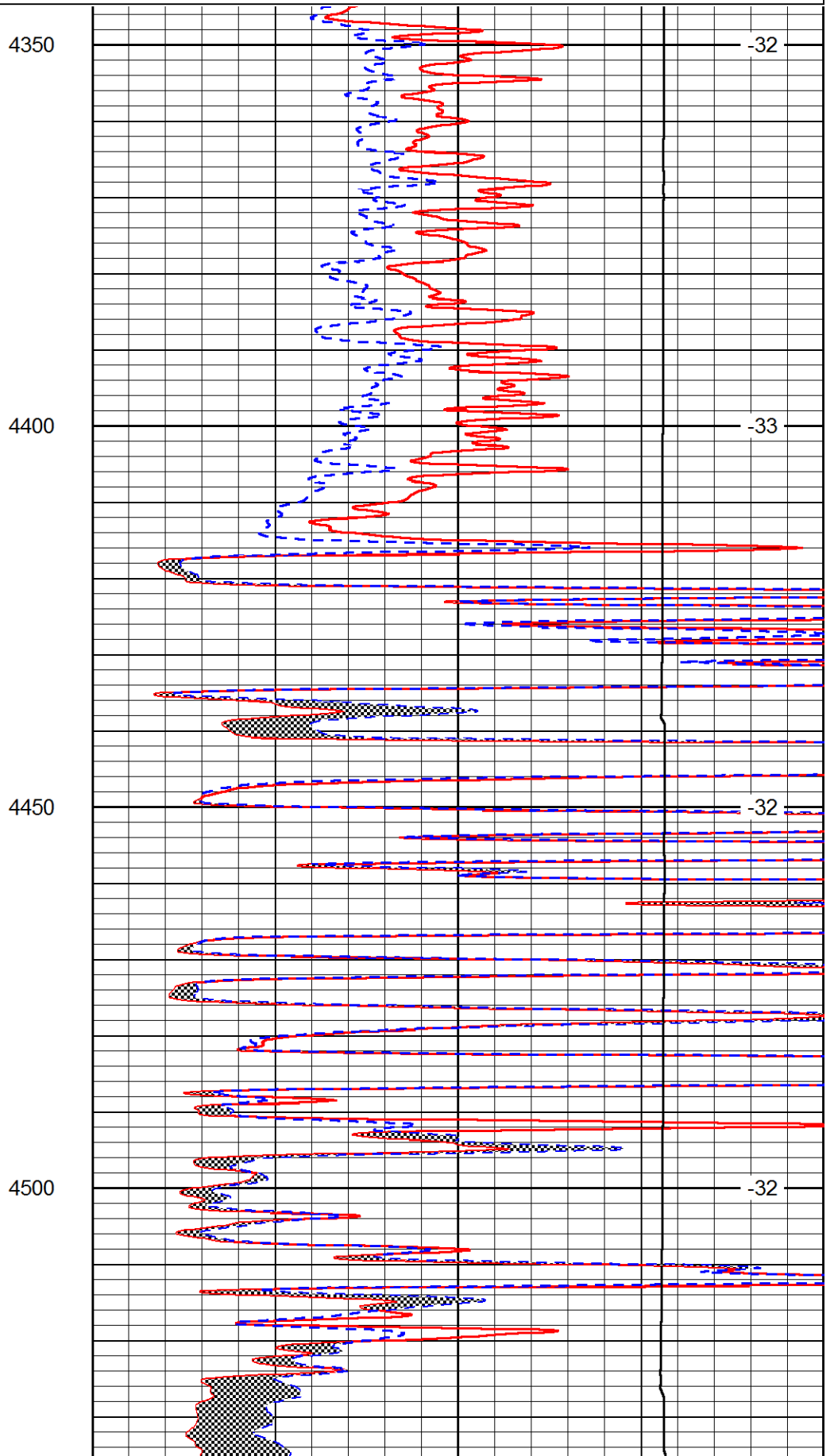
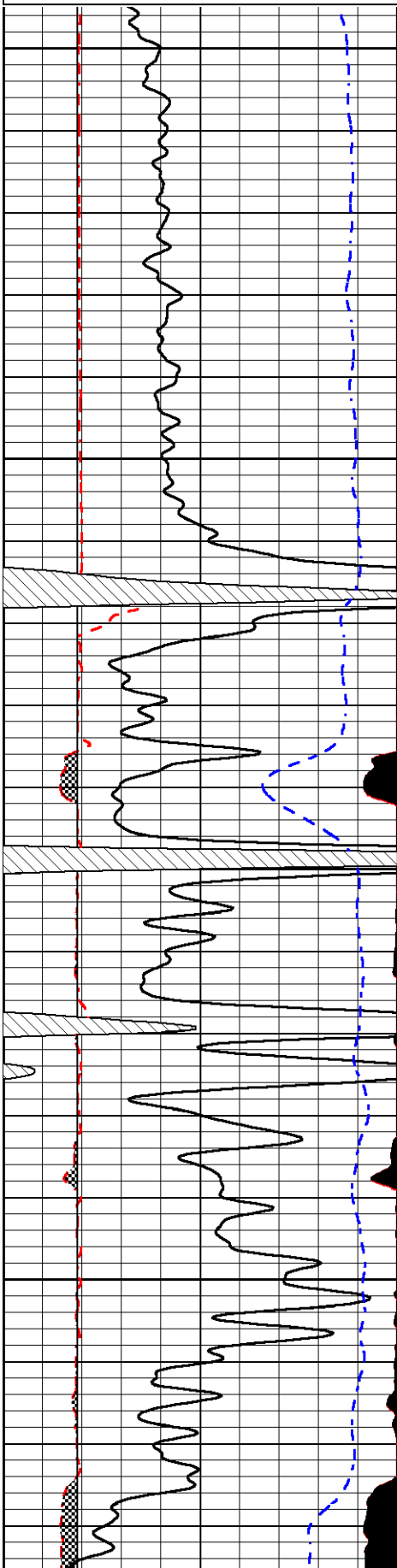
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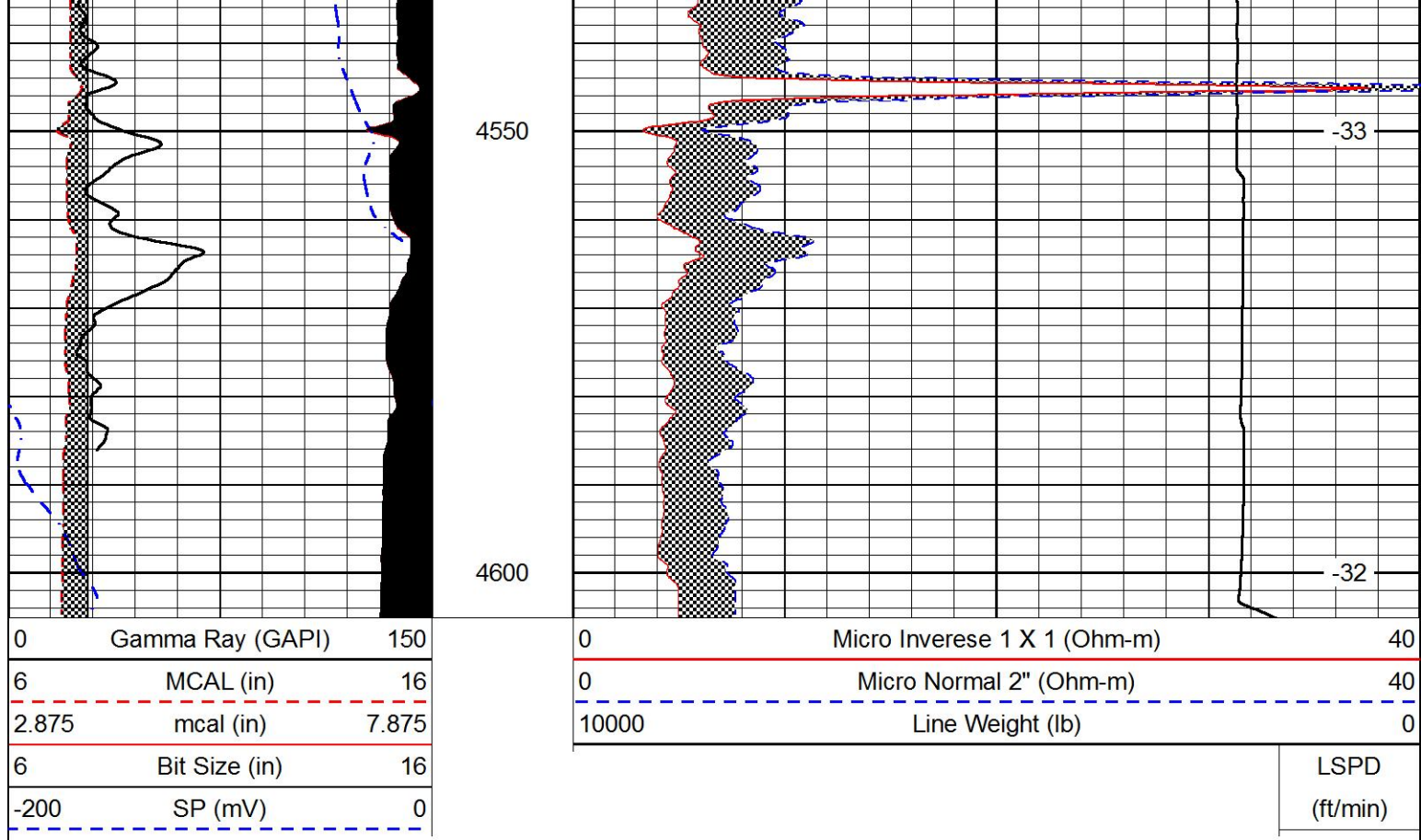


REPEAT SECTION

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

0	Micro Inverese 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0
		LSPD (ft/min)





Calibration Report

Database File: laron_livingston_ksu_1_26.db
 Dataset Pathname: micro/pass3
 Dataset Creation: Wed May 27 04:59:43 2015

Microlog Calibration Report

Serial-Model: G002-GO
 Performed: Thu May 07 11:11:17 2015

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m	b
Normal	0.0395	0.6884	V	0.0000	10.0000	Ohm-m	20.5000	0.0000
Inverse	0.0134	0.8993	V	0.0000	10.0000	Ohm-m	15.5000	0.0000
Caliper	1.1223	7.4722	V	5.0000	20.0000	in	2.3623	3.0000



Company: LARSON ENGINEERING, INC.
 Well: LIVINGSTON-KSU NO. 1-26
 Field: ARNOLD
 County: NESS
 State: KANSAS