



COMPENSATED DENSITY NEUTRON LOG

Company	Grunder Oil, LLC	Location:	API # : 15 151 22579	Other Services
Well	Grunder #4		4290' FSL & 440' FEL	ML DIL SON
Field	Randle			
County	Pratt			
State	KS			
Permanent Datum	SEC 5 TWP 26S RGE 14W			Elevation
Log Measured From	Ground Level			K.B. 2012'
Drilling Measured From	KB 7' AGL			D.F. 2011'
	KB			G.L. 2005'
Date	11/04/2023			
Run Number	One			
Depth Driller	4550'			
Depth Logger	4550'			
Bottom Logged Interval	4528'			
Top Log Interval	3200			
Casing Driller	8 5/8"@430'			
Casing Logger	430'			
Bit Size	7 7/8"			
Type Fluid in Hole	Chemical			
Density / Viscosity	9.2/55			
pH / Fluid Loss	9.0/10.4			
Source of Sample	Pit			
Rm @ Meas. Temp	0.9@70degf			
Rmf @ Meas. Temp	0.7@70degf			
Rmc @ Meas. Temp	1.2@70degf			
Source of Rmf / Rmc	Calculated			
Rm @ BHT	0.5@110degf			
Time Circulation Stopped	2:15 P.M.			
Time Logger on Bottom	6:00 P.M.			
Maximum Recorded Temperature	116degf			
Equipment Number	T-605			
Location	HAYS, KS.			
Recorded By	COLBY DREILING			
Witnessed By	KEATON JONES			

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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

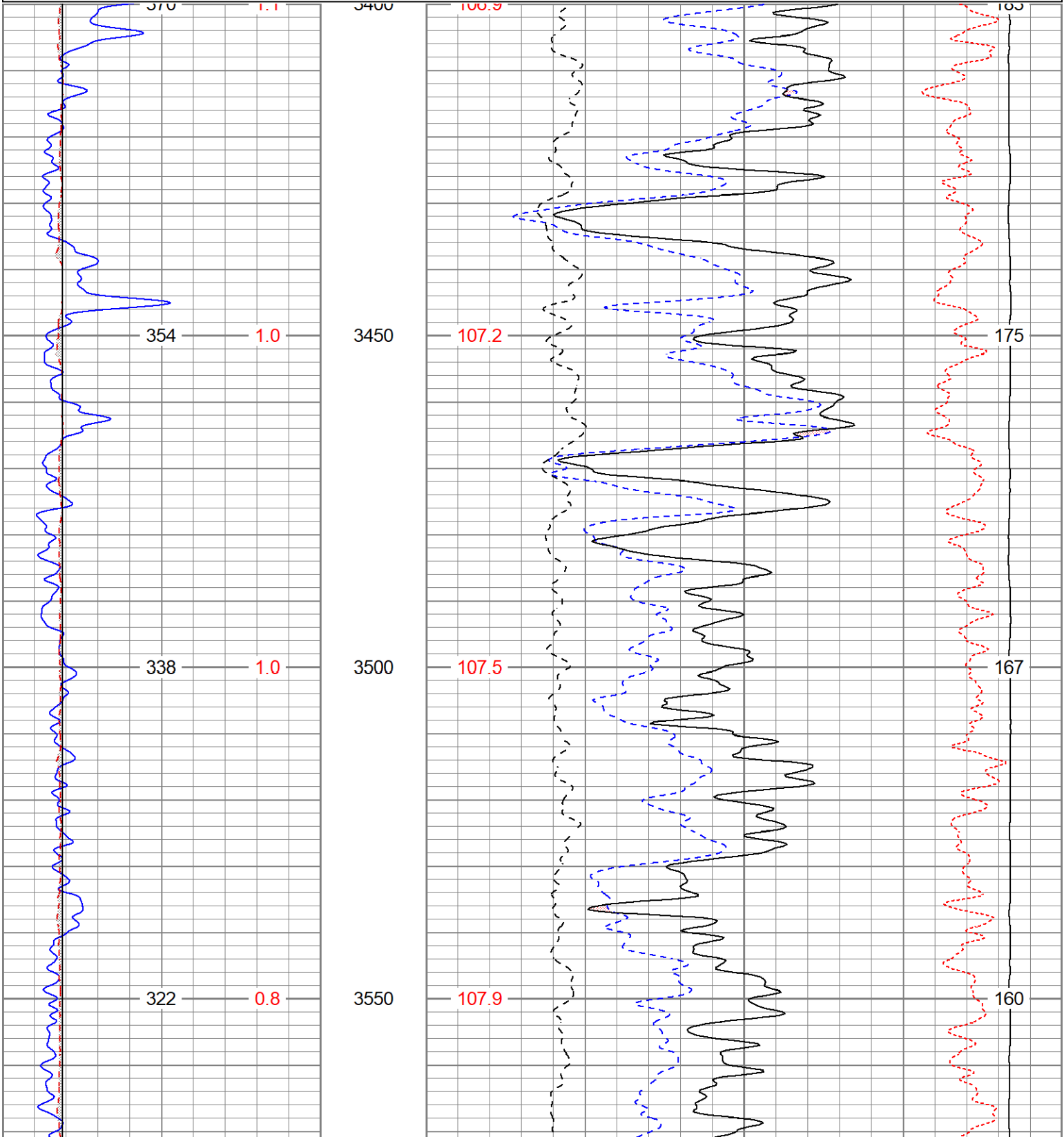
Byers, KS Main Street.(NW 70th Ave.) 2 Mi. North. West Into.

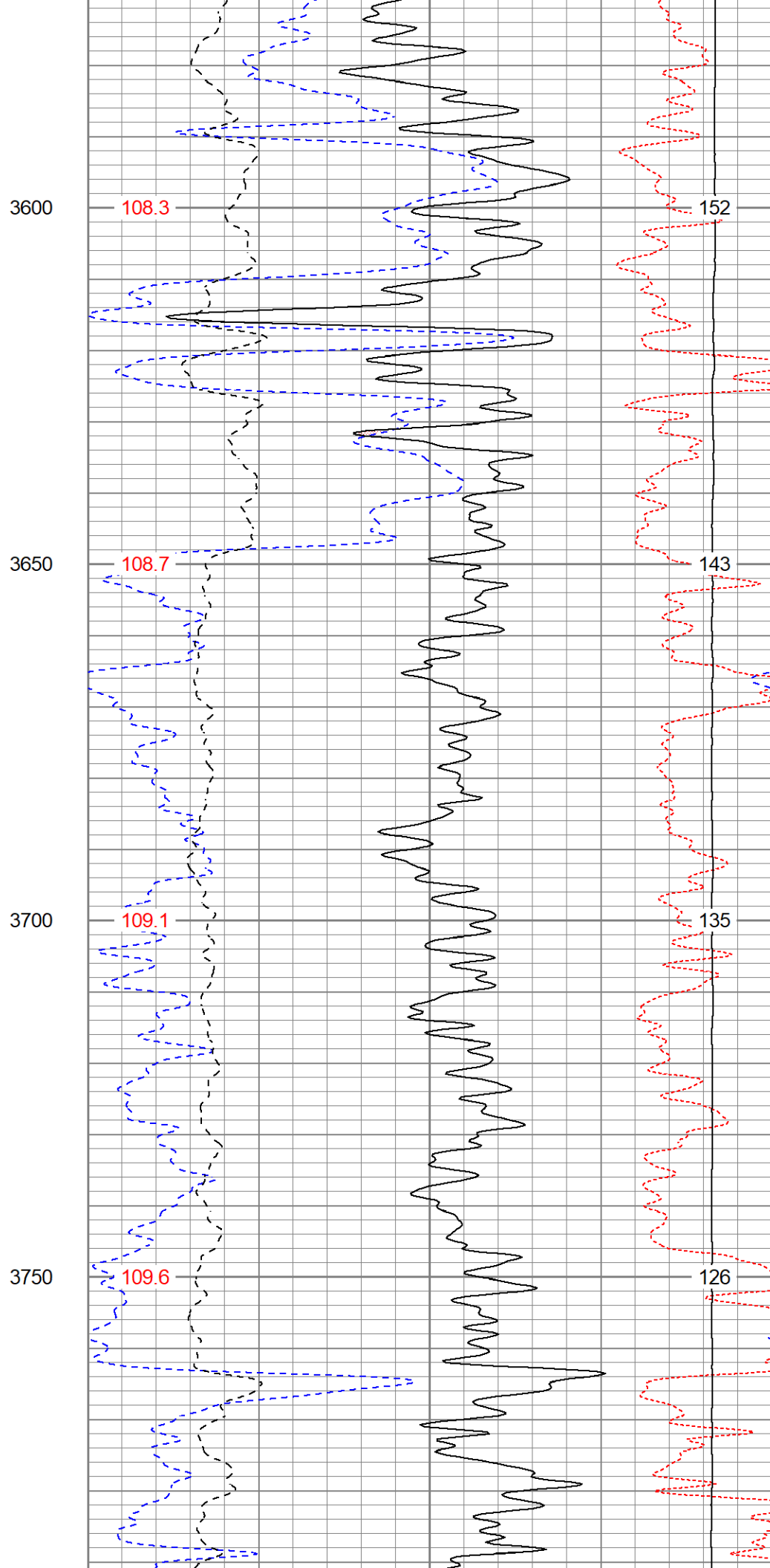
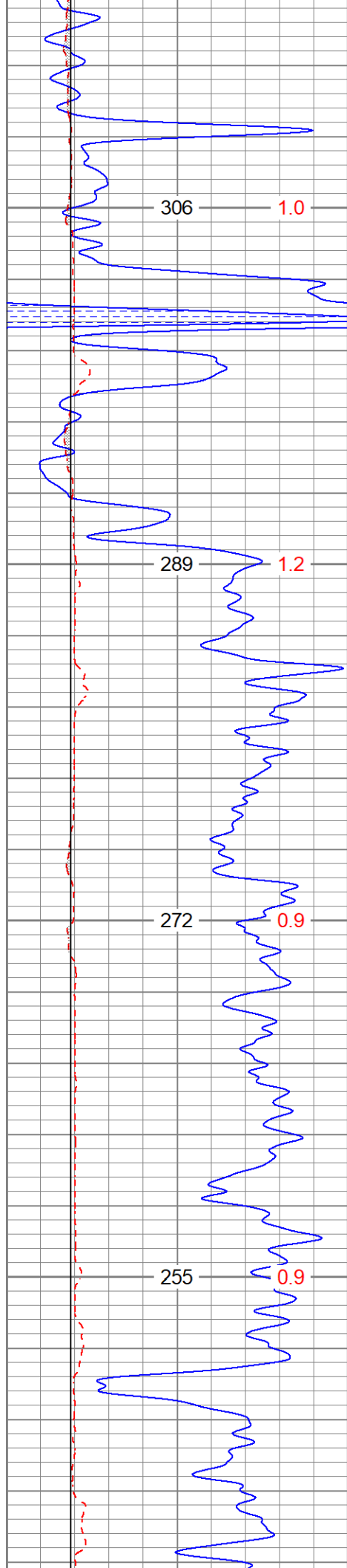
Thanks for using Gemini Wireline LLC
785-625-1182

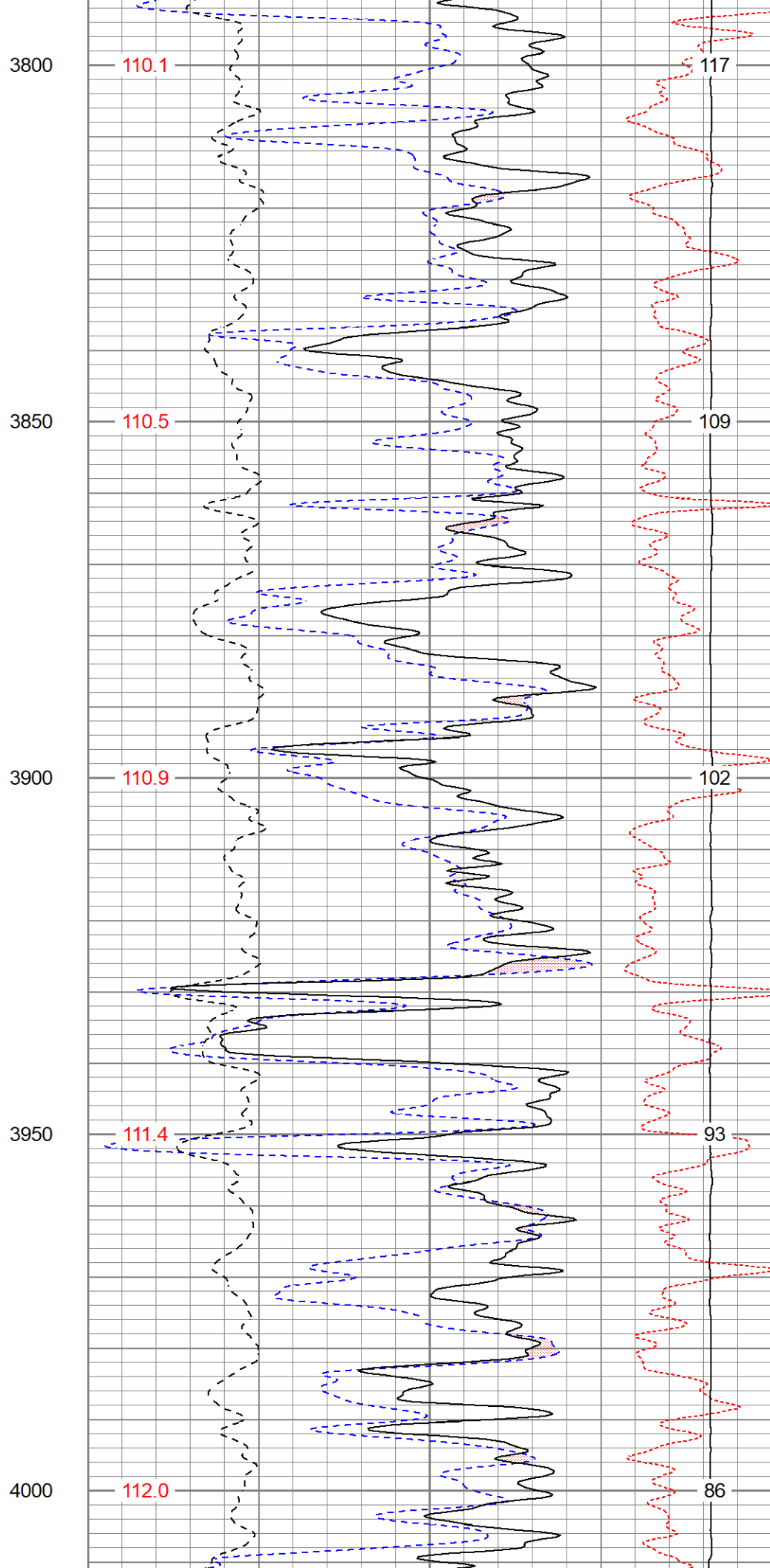
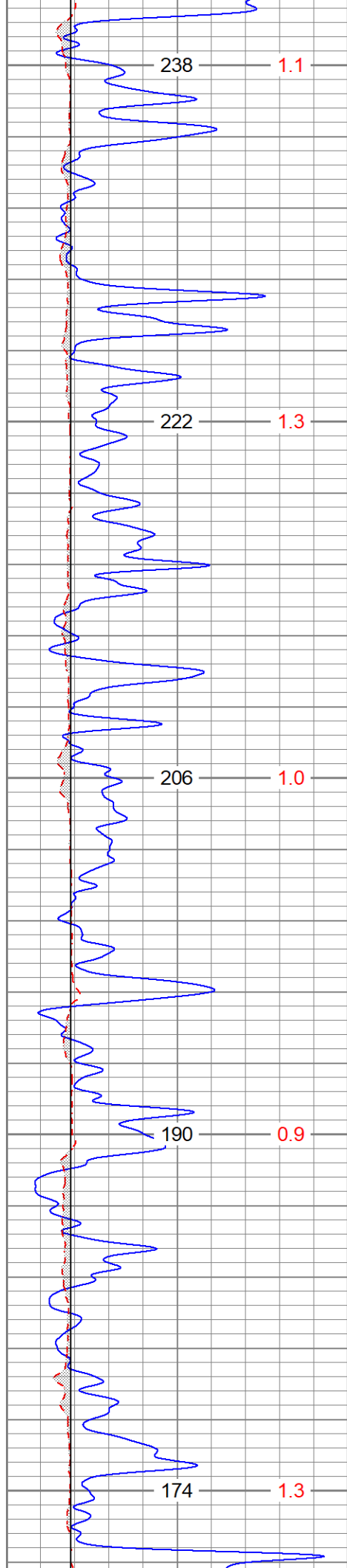


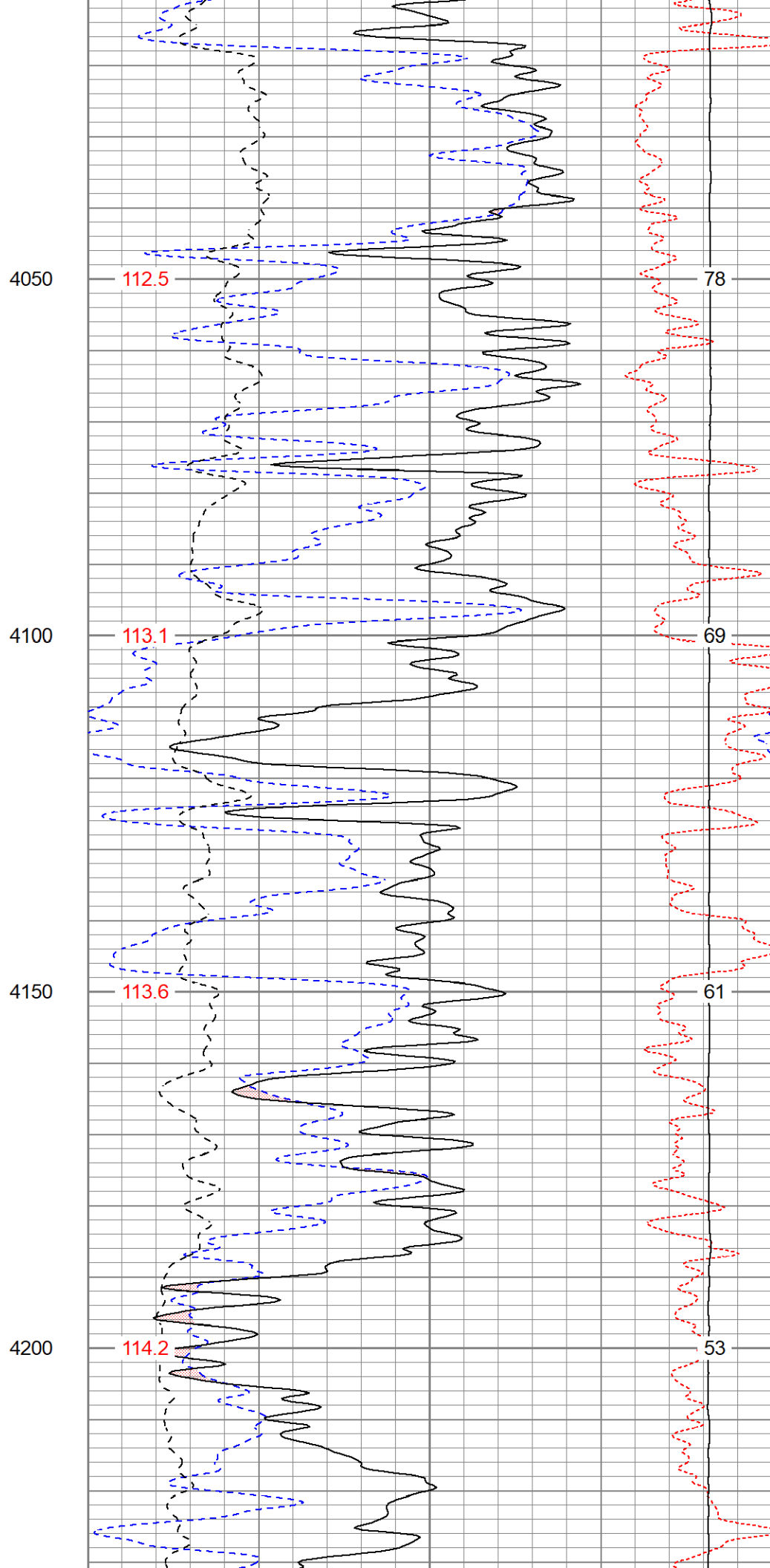
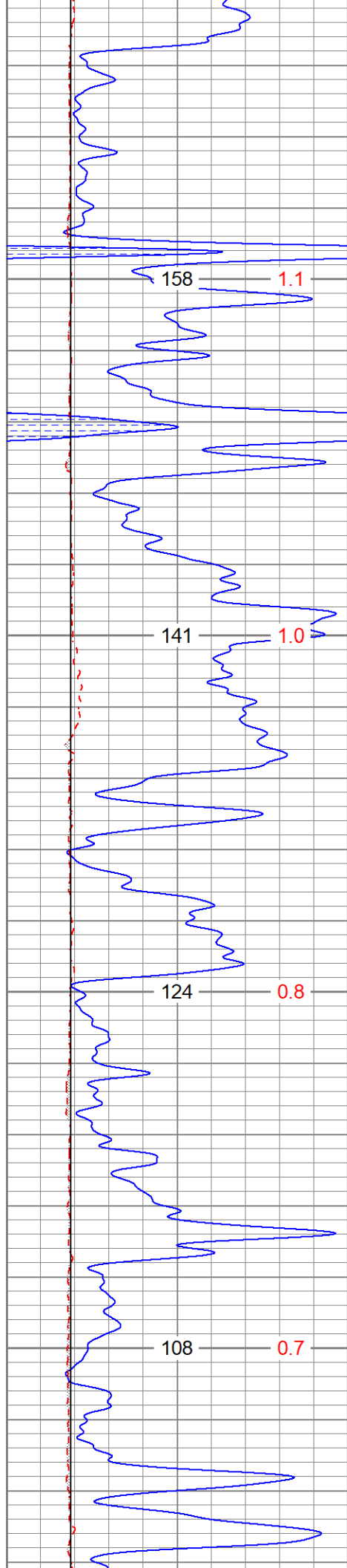
MAIN PASS

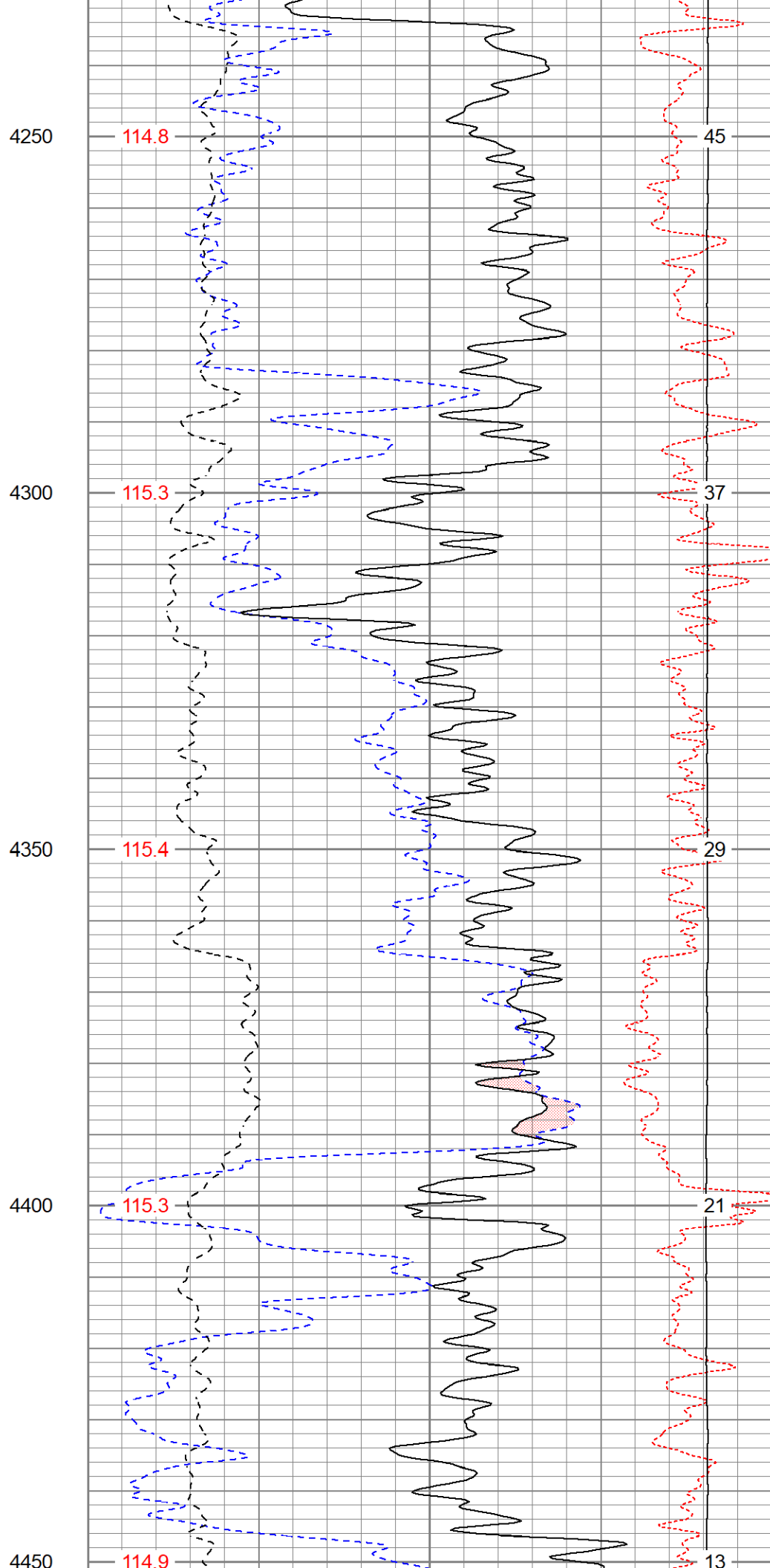
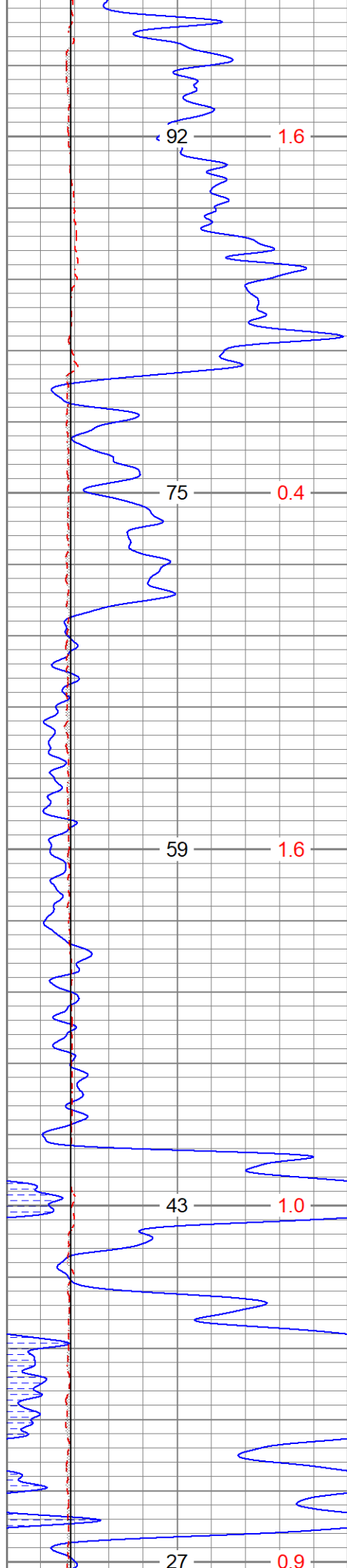
0	GR (GAPI)	150	30	NPOR (pu)		-10
6	DCAL (in)	16	30	DPOR (pu)		-10
6	BOREID (in)	16	70	DPOR (pu)		30
	TBHV (ft3)	DEVI (deg)	0	Pe (barn)	10	-0.25
			TEMP (degF)		8000	RHOC (g/cc)
						0.25
						LTEN (lb)
						0
						ABHV (ft3)

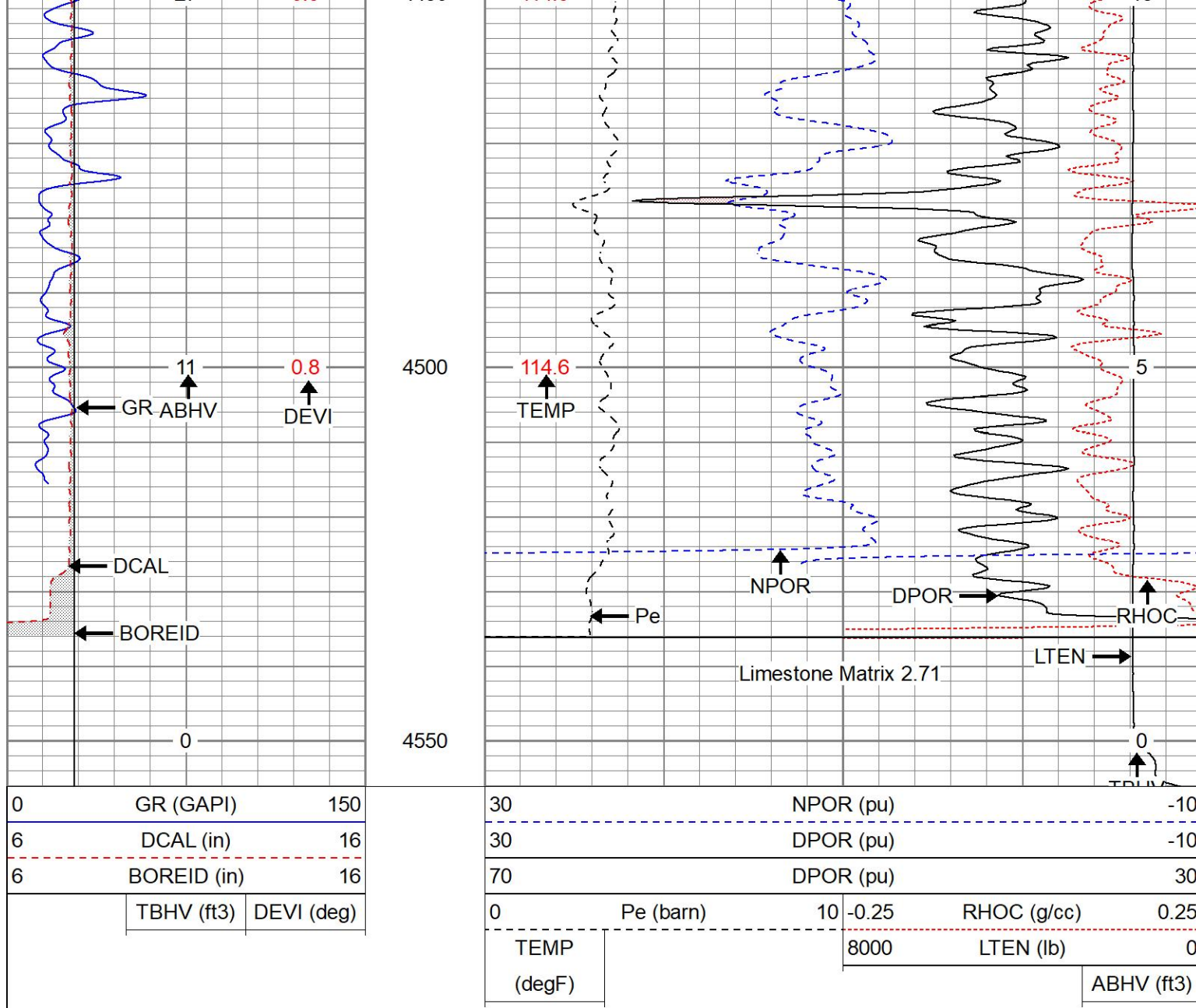








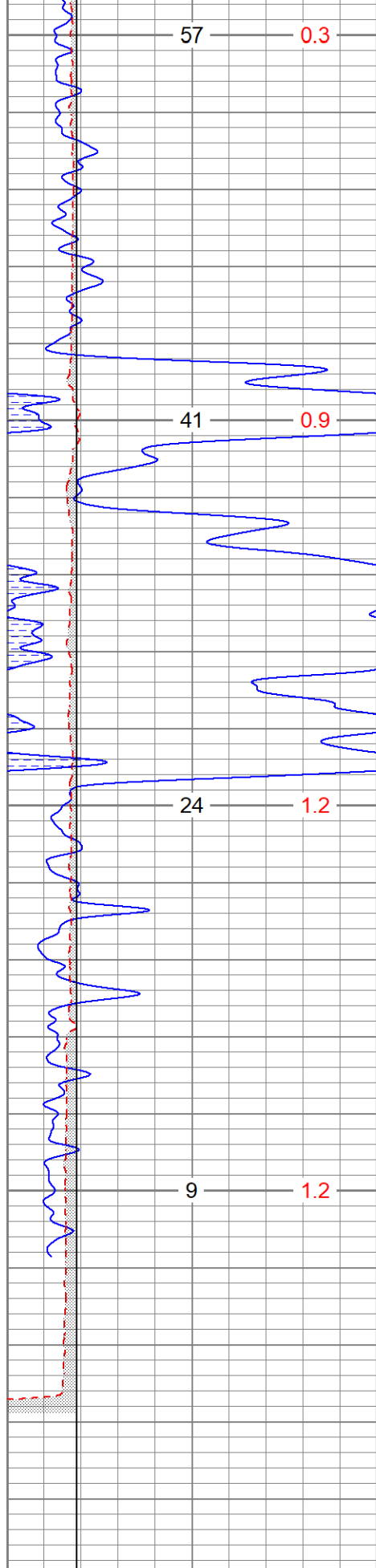




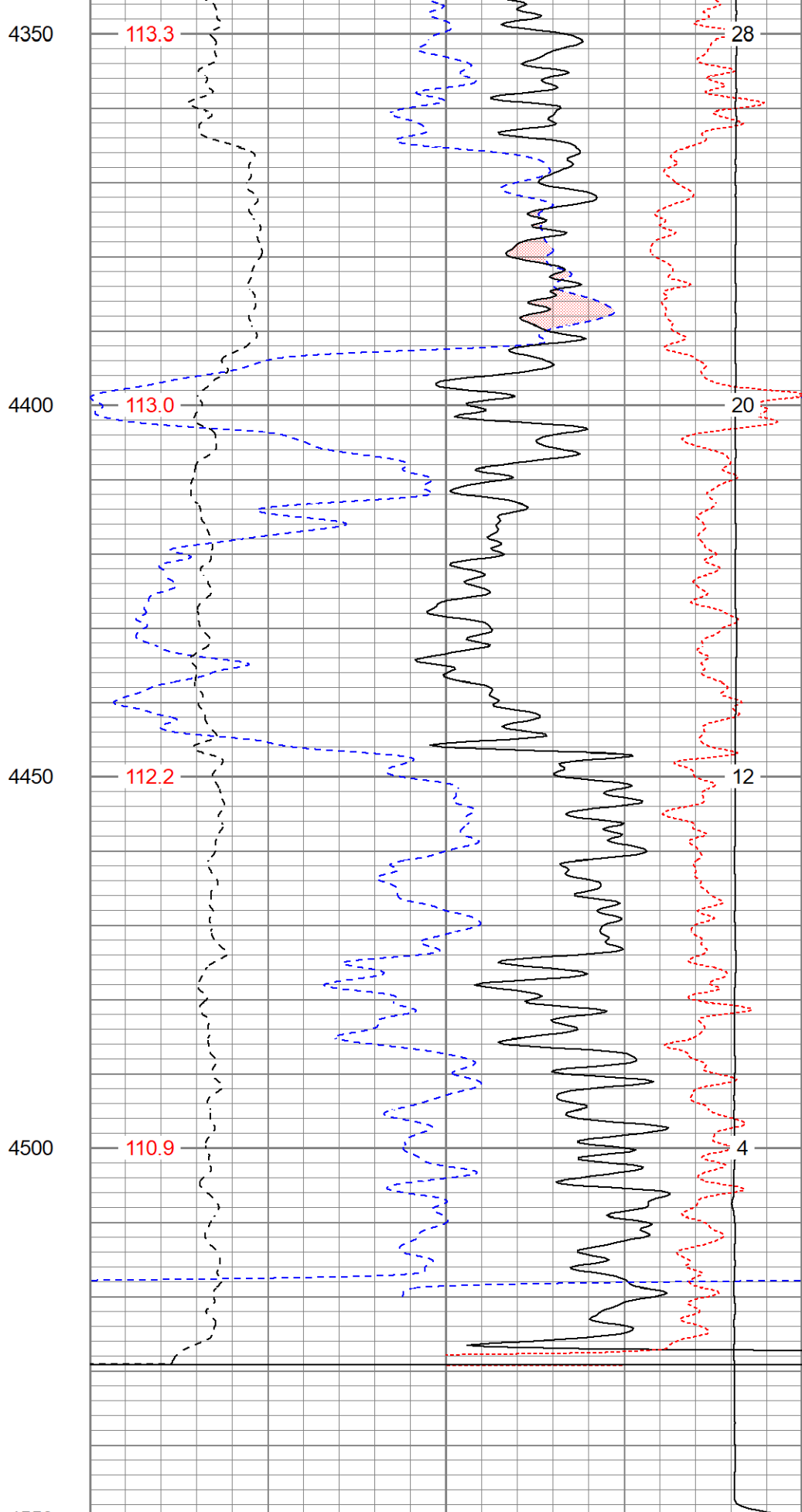
REPEAT SECTION

Database File gogrunder#4oh.db
 Dataset Pathname pass1.1
 Presentation Format digital_kcdnl
 Dataset Creation Sat Nov 04 19:50:53 2023
 Charted by Depth in Feet scaled 1:240

0GR (GAPI)150			30NPOR (pu)-10		
6DCAL (in)16			30DPOR (pu)-10		
6BOREID (in)16			70DPOR (pu)30		
TBHV (ft3)DEVI (deg)			0Pe (barn)10-0.25RHOC (g/cc)0.25		
			TEMP8000LTEN (lb)0		
			(degF)ABHV (ft3)		



0	GR (GAPI)	150
6	DCAL (in)	16
6	BOREID (in)	16
	TRIM (#2)	DEM/L (deg)



30	NPOR (pu)	-10
30	DPOR (pu)	-10
70	DPOR (pu)	30
0	DP (bpm)	10
0.25	DPOR (g/sec)	0.25

ABHV (ft3)	DEVI (deg)	TEMP (degF)	8000	LTEN (lb)	0	ABHV (ft3)
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Calibration Report	
Database File	gogrunder#4oh.db
Dataset Pathname	pass2.1
Dataset Creation	Sat Nov 04 19:53:38 2023

Dual Induction Calibration Report

Serial-Model:	1842-ADM
Surface Cal Performed:	Mon Sep 20 22:00:42 2021
Downhole Cal Performed:	Thu Sep 14 13:06:48 2023
After Survey Verification Performed:	Thu Sep 14 13:02:29 2023

Surface Calibration								
Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.018	0.672	V	0.000	350.000	mmho/m	535.475	-9.896
Medium	0.003	0.769	V	0.000	400.000	mmho/m	522.607	-1.745
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.018	0.672	V	0.000	350.000	mmho/m	535.240	-9.549
Medium	0.003	0.768	V	0.000	550.000	mmho/m	718.637	-2.088

Downhole Calibration								
Internal:	Readings			References			Results	
	Zero	Cal		Zero	Cal		m	b
Deep	-0.210	349.810	mmho/m	-0.343	349.810	mmho/m	1.000	-0.133
Medium	6.952	396.760	mmho/m	-0.226	399.745	mmho/m	1.026	-7.360
Shallow	2.495	0.026	V	500.000	2.000	Ohm-m	201.711	-3.319

After Survey Verification								
Internal:	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	32.030	5.643	mmho/m	1.000	-0.133
Medium	0.000	0.000	mmho/m	6.952	396.760	mmho/m	1.026	-7.360
Shallow	0.000	0.000	Ohm-m	500.000	2.000	Ohm-m	1.000	0.000

Admyr Lithodensity Calibration Report

Serial-Model:	1C-C
Source:	Blue2
Master Calibration Performed:	Tue Aug 30 10:20:37 2022

Master Calibration						
	Density			Far Detector	Near Detector	
Magnesium	1.670	g/cc		6362.49	3546.71	cps
Aluminium	2.640	g/cc		1733.54	2362.69	cps
Aluminium+Sleeve	2.617	g/cc		1657.01	2197.69	cps
Spine Angle = 72.65				Density/Spine Ratio = 0.712		

	PE		NLITH	NHARD	
Magnesium	2.000	barn	2520.00	1620.00	cps
Aluminium	3.000	barn	1926.00	1699.00	cps
Aluminium+Sleeve	5.000	barn	915.00	1230.00	cps
	M = 0.370		B = -0.079	R = 0.999	
	Size		Reading		
Small Ring	8.00	in	8.61	V	
Large Ring	14.30	in	12.40	V	

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Neutron Calibration Report

Serial Number:	AD5139	
Tool Model:	ADMY5139	
Performed:	(Not Performed)	
Calibrator Value:	1	NAPI
Calibrator Reading:	1	cps
Sensitivity:	1	NAPI/cps

Temperature Calibration Report

Serial Number:	WithMC			
Tool Model:	WMC			
Performed:	Fri Apr 19 12:15:04 2019			
	Reference		Reading	
Low Reference:	0.00	degF	0.00	degF
High Reference:	1.00	degF	1.00	degF
Gain:	1.00			
Offset:	0.00			
Delta Spacing	1			

Inclinometer Calibration Report

Performed:	Wed May 5 19:20:48 2021				
	Low Read.	High Read.	Low Ref.	High Ref.	
X Accelerometer	205.00	1843.00	-1.00	1.00	gee
Y Accelerometer	205.00	1843.00	-1.00	1.00	gee
Z Accelerometer					gee

Gamma Ray Calibration Report

Serial Number:	WithMC	
Tool Model:	WMC	
Performed:	(Not Performed)	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.0000	GAPI/cps

SENSITIVITY. 10000 GAFF/CPS