



COMPENSATED DENSITY NEUTRON LOG

Company Ressler Well Service, Inc.

Well McLeod #10-1

Field Spivey-Grabs-Basil

County Kingman State KS

Location: API #: 15 095 22300

SEC 10 TWP 30S RGE 8W

Permanent Datum Ground Level Elevation 1501'

Log Measured From KB 10' AGL

Drilling Measured From KB

Elevation K.B. 1511'

D.F. 1510'

G.L. 1501'

Other Services

ML

DIL

Date 10-10-15

Run Number One

Depth Driller 4280'

Depth Logger 4282'

Bottom Logged Interval 4259'

Top Log Interval 3100'

Casing Driller 220'

Casing Logger 220'

Bit Size 7 7/8"

Type Fluid in Hole Chemical Mud

Density / Viscosity 9.5/44

pH / Fluid Loss 10/11.2

Source of Sample Pit

Rm @ Meas. Temp 1.4@62degf

Rmf @ Meas. Temp 1.05@62degf

Rmc @ Meas. Temp 1.68@62degf

Source of Rmf / Rmc Calculated

Rm @ BHT .72@120degf

Time Circulation Stopped 6:45 a.m.

Time Logger on Bottom 8:45 a.m.

Maximum Recorded Temperature 120 degf

Equipment Number T127

Location Hays, KS.

Recorded By Gus Pfannenstiel

Witnessed By Mr. Terry McLeod

Mr. Larry Ressler

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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 Gemini Wireline
785-625-1182

Zenda East 6 Miles, North 1 mile,
West 1/3 mile, South into after bridge.



Main Pass

Database File rwmcleod#10-10h.db
 Dataset Pathname pass2.1
 Presentation Format kcdnl
 Dataset Creation Sat Oct 10 09:20:06 2015
 Charted by Depth in Feet scaled 1:240

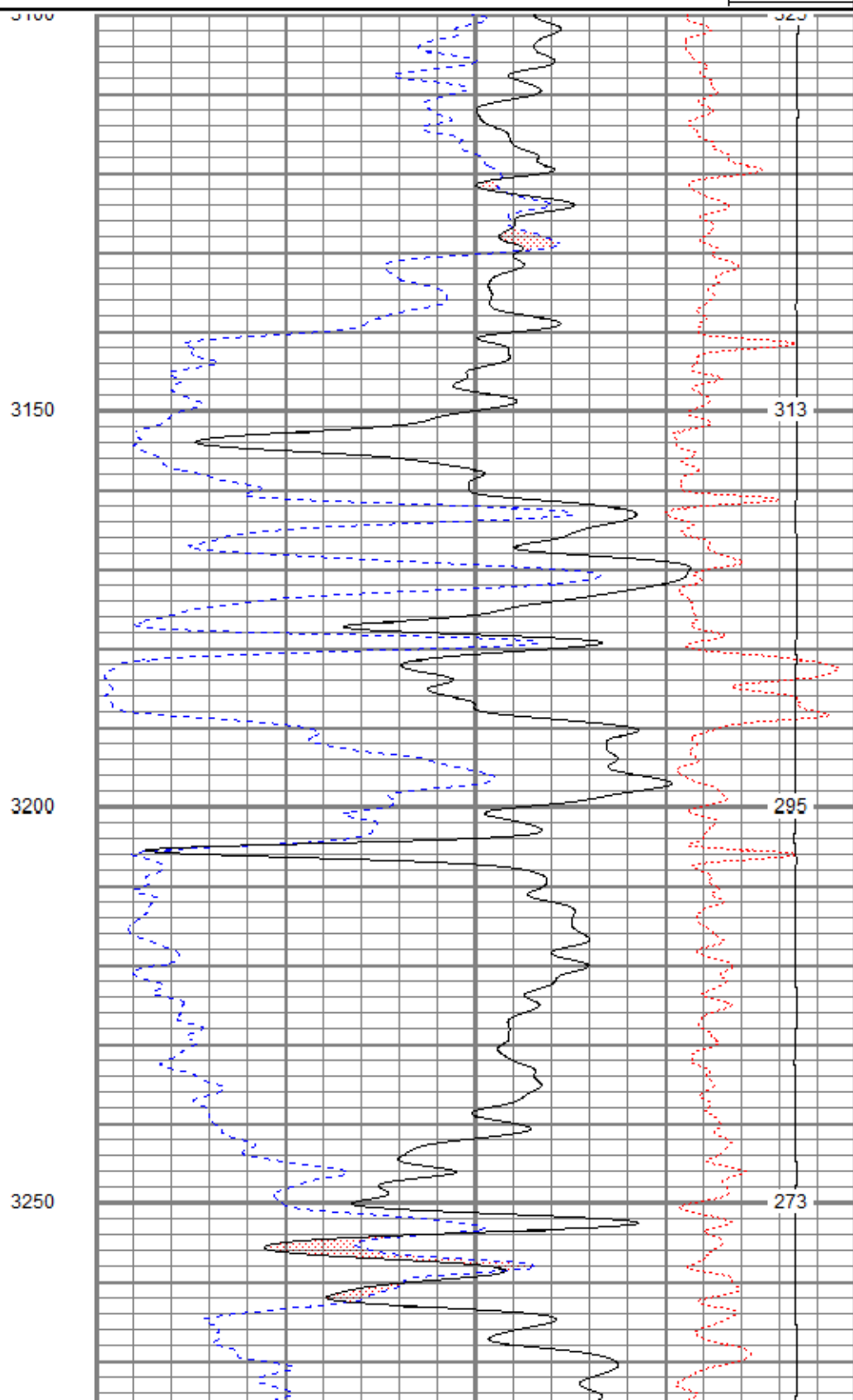
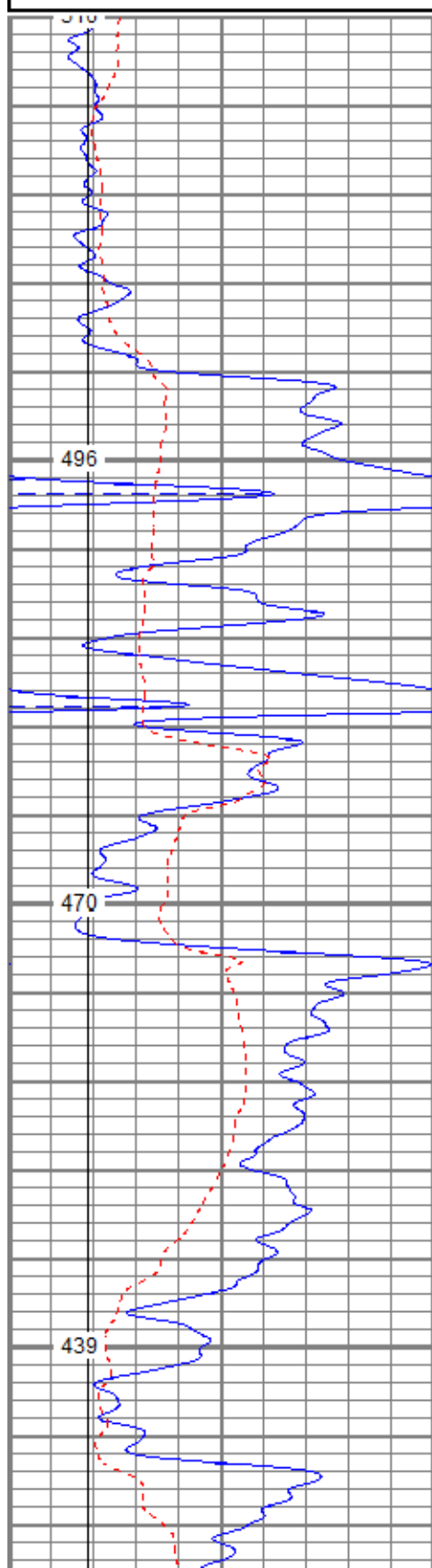
0	GR (GAPI)	150
6	DCAL (in)	16
6	BOREID (in)	16

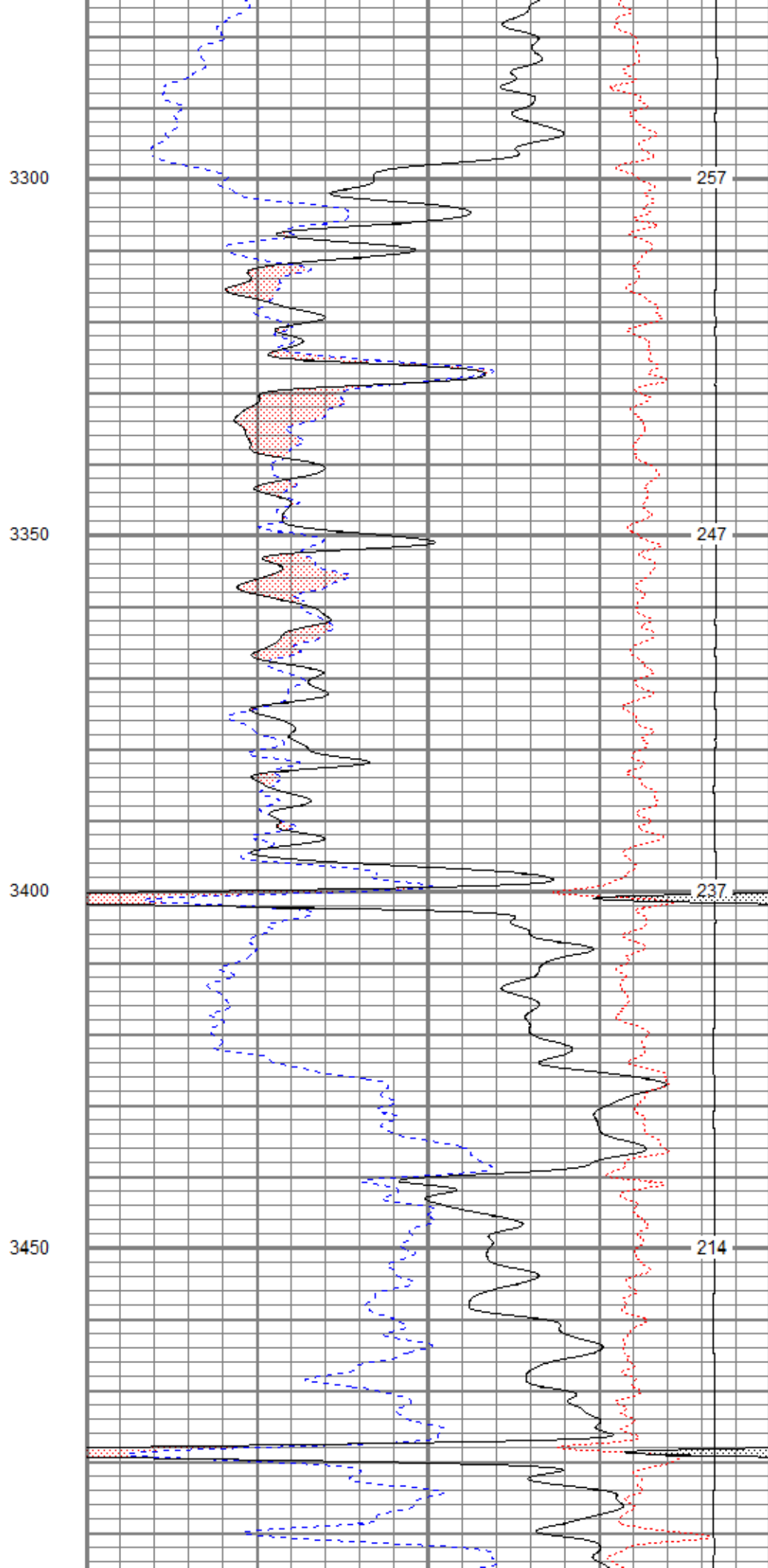
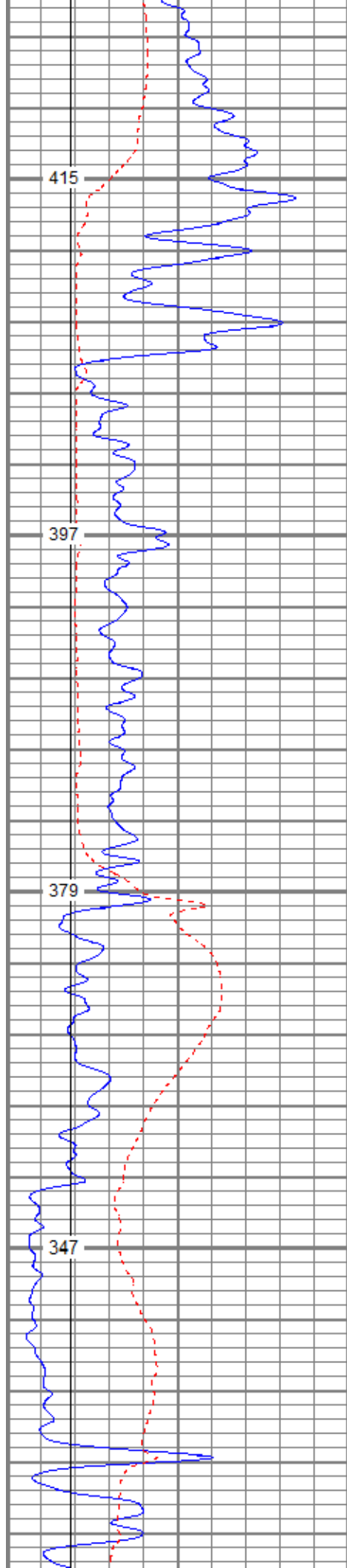
30	NPOR (pu)	-10
30	DPOR (pu)	-10
70	DPOR (pu)	30

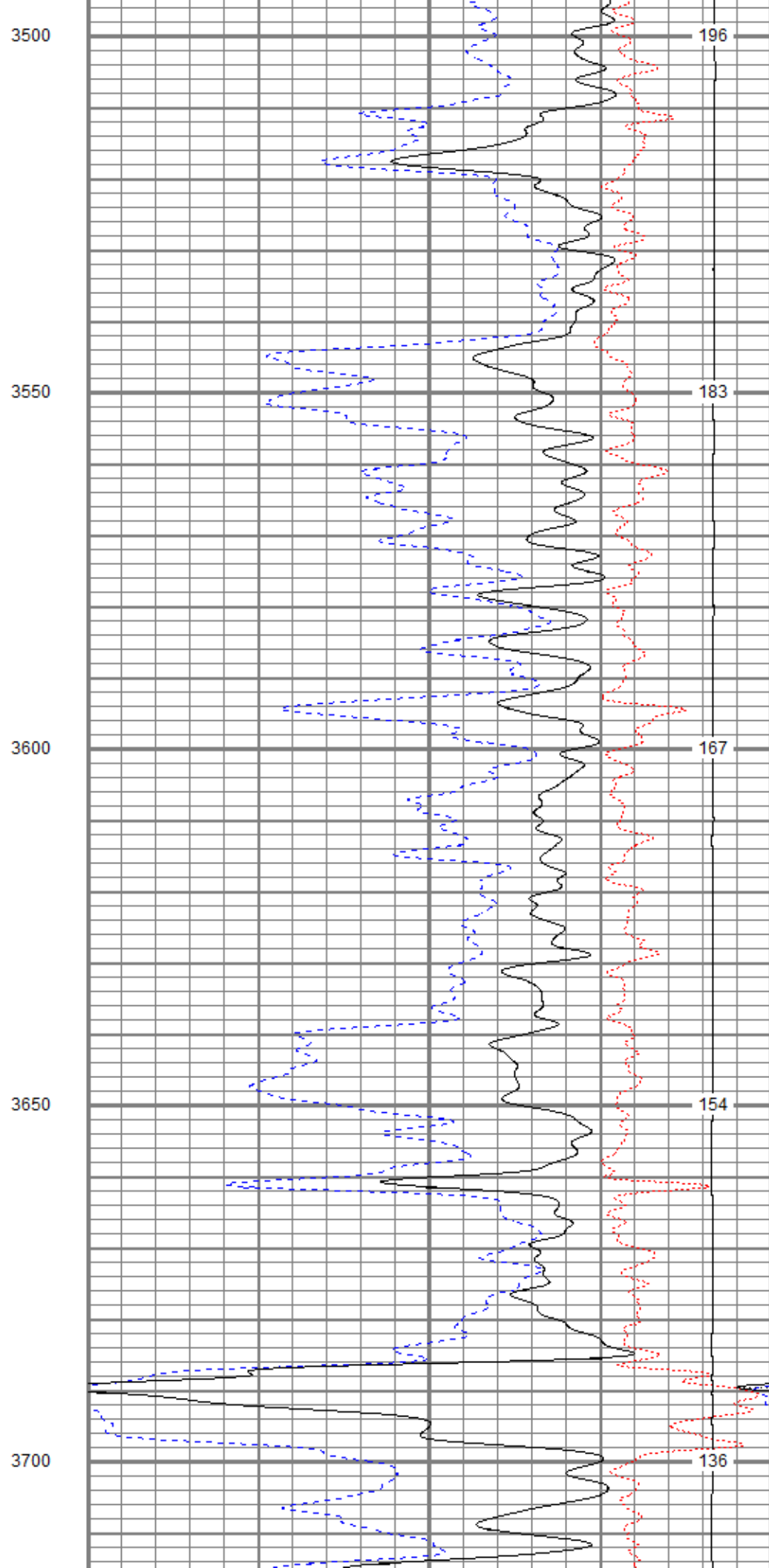
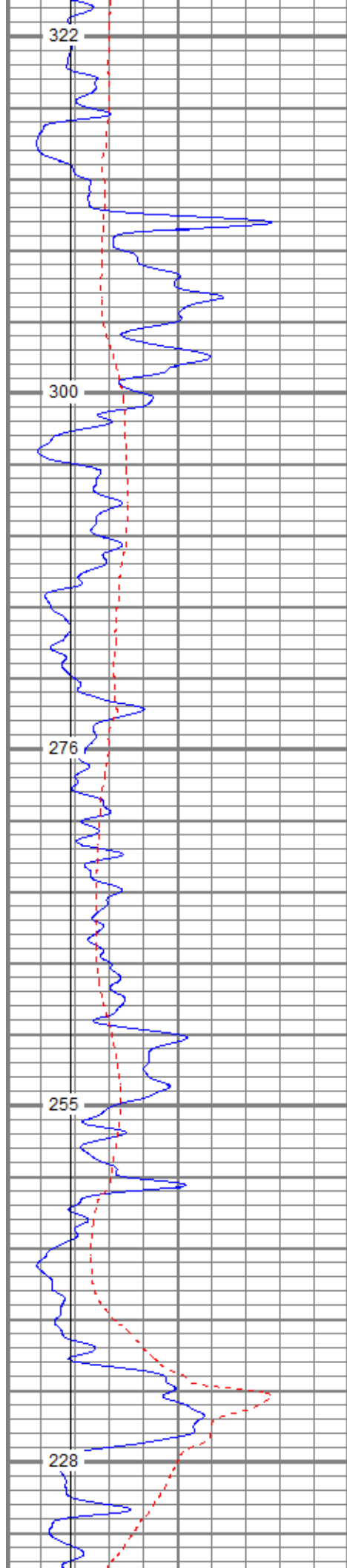
TBHV (ft3)

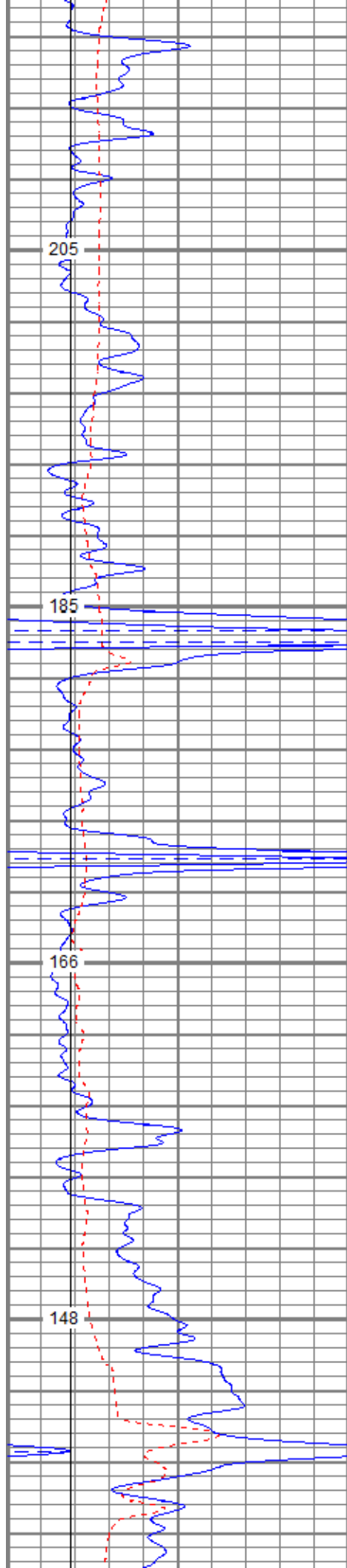
-0.25	RHOC (g/cc)	0.25
8000	LTEN (lb)	0

ABHV (ft3)







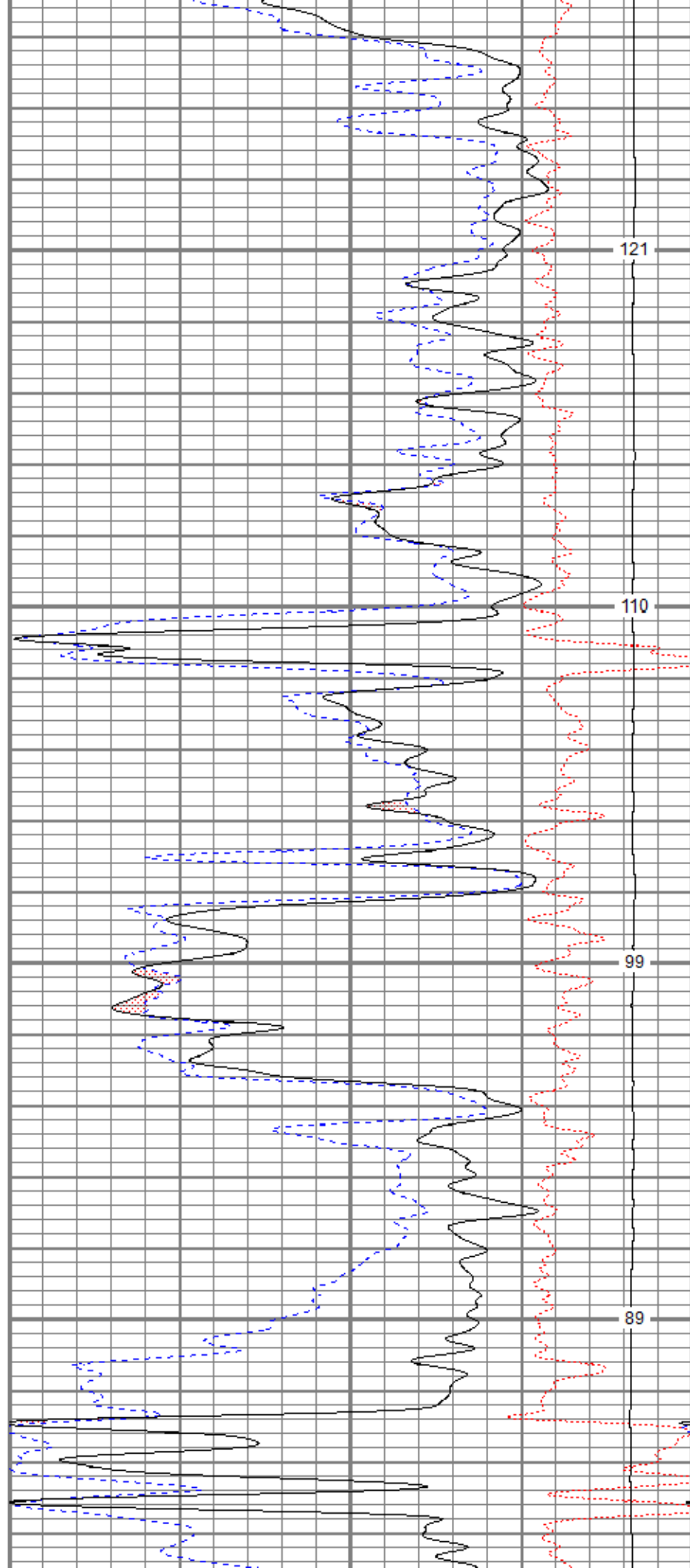


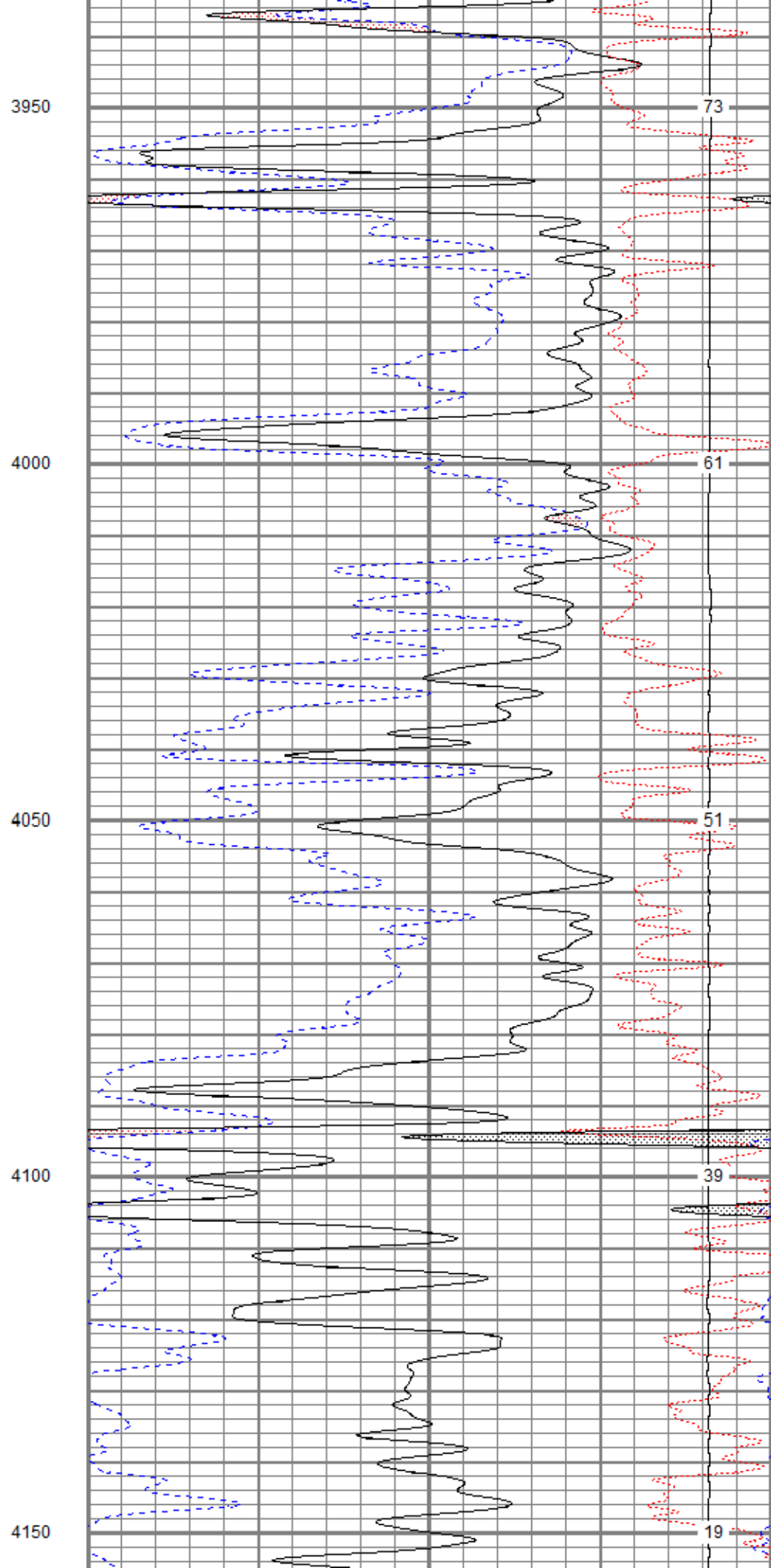
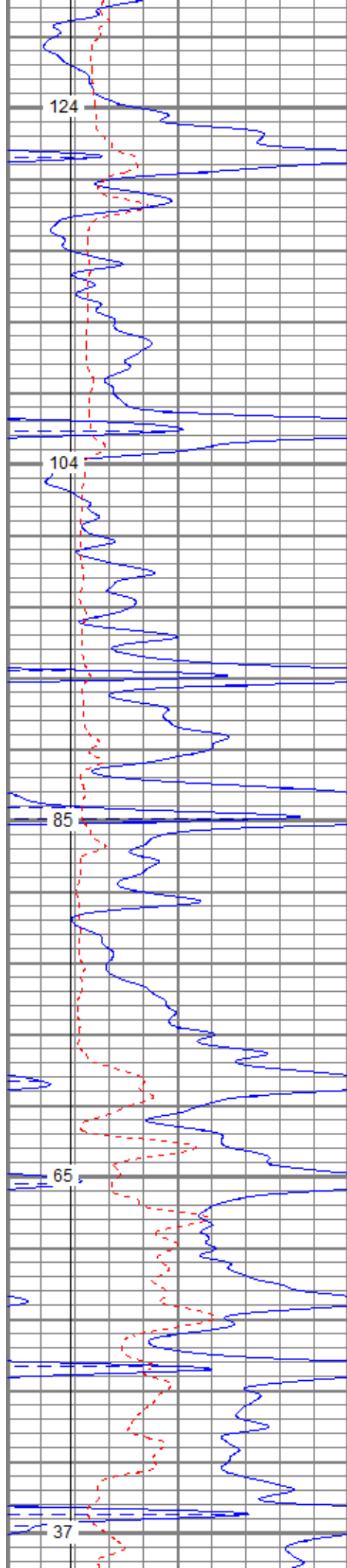
3750

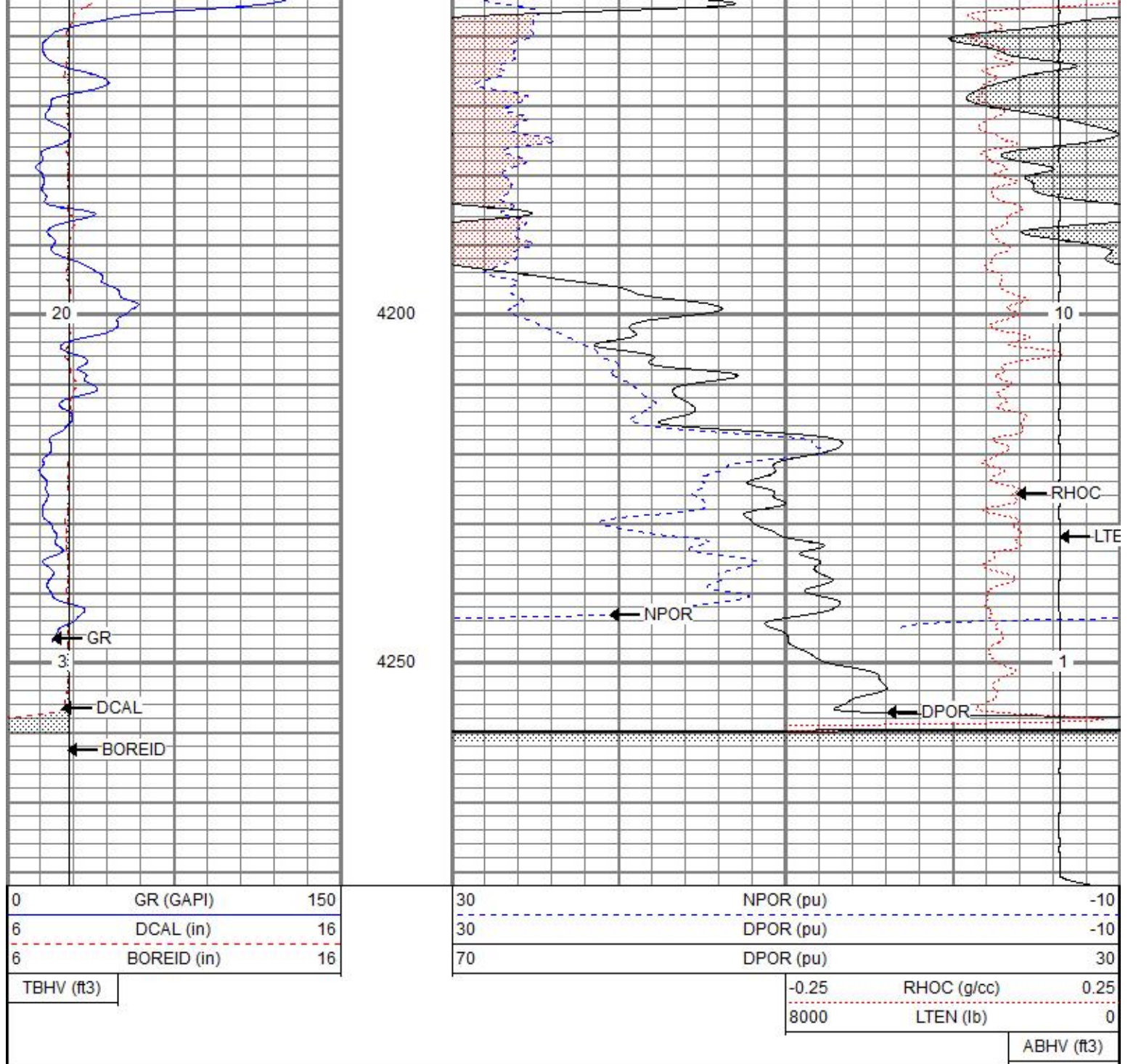
3800

3850

3900



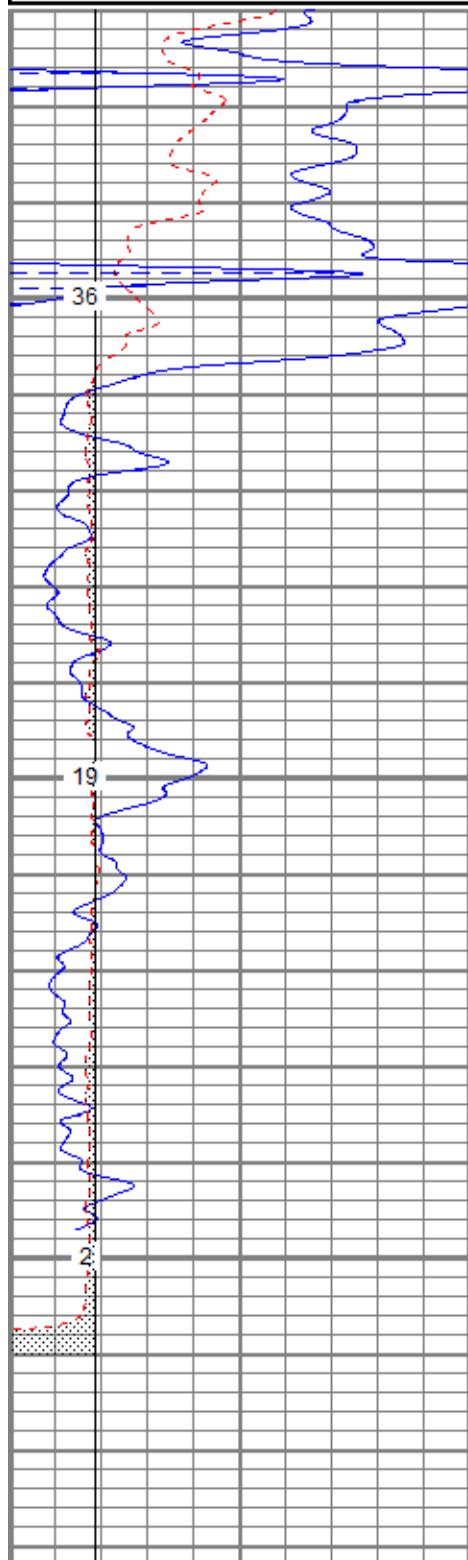




Repeat Pass

Database File rwmcleod#10-1oh.db
 Dataset Pathname pass1.1
 Presentation Format kcdnl
 Dataset Creation Sat Oct 10 09:03:04 2015
 Charted by Depth in Feet scaled 1:240

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)			-0.25	RHOC (g/cc)	0.25
			8000	LTEN (lb)	0



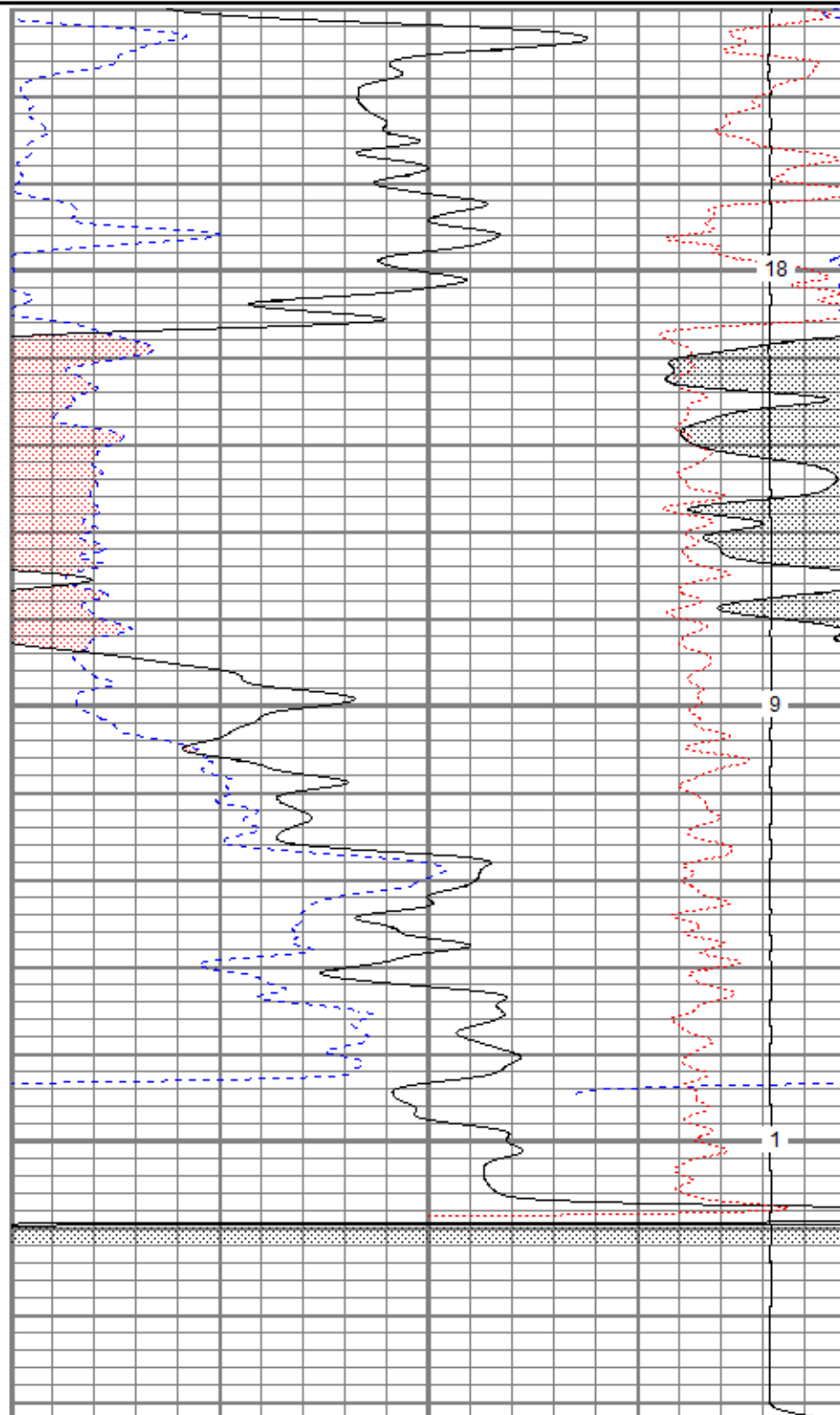
0	GR (GAPI)	150
6	DCAL (in)	16
6	BOREID (in)	16

TBHV (ft3)

4150

4200

4250



30	NPOR (pu)	-10
30	DPOR (pu)	-10
70	DPOR (pu)	30

-0.25	RHOC (g/cc)	0.25
8000	LTEN (lb)	0

ABHV (ft3)

Calibration Report

Database File rwmcleod#10-1oh.db
 Dataset Pathname pass1.1
 Dataset Creation Sat Oct 10 09:03:04 2015

5375-G
Sat Oct 10 08:33:18 2015
Sat Oct 10 08:33:23 2015
Sat Oct 10 08:33:27 2015

Surface Calibration

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.007	0.642	V	0.000	350.000	mmho/m	551.294	-3.816
Medium	0.010	0.728	V	0.000	400.000	mmho/m	556.531	-5.391
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.007	0.642	V	0.000	350.000	mmho/m	550.717	-3.768
Medium	0.010	0.729	V	0.000	550.000	mmho/m	764.510	-7.354

Downhole Calibration

Readings				References			Results	
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.145	350.239	mmho/m	-0.044	350.323	mmho/m	1.001	-0.189
Medium	0.435	400.472	mmho/m	-0.037	400.340	mmho/m	1.001	-0.473
Shallow	2.440	0.018	V	500.000	2.000	Ohm-m	185.553	0.000

After Survey Verification

Readings				Targets			Results	
Internal:	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.145	350.239	mmho/m	1.001	-0.189
Medium	0.000	0.000	mmho/m	0.435	400.472	mmho/m	1.001	-0.473
Shallow	0.000	0.000	Ohm-m	500.000	2.000	Ohm-m	1.000	0.000

Compensated Density Calibration Report

Serial-Model: 2501DHT-DHT
Source / Verifier: csv-j12 /
Master Calibration Performed: Sat Oct 10 08:33:44 2015
Before Survey Verification Performed:
After Survey Verification Performed:

Master Calibration

	<u>Density</u>		<u>Far Detector</u>	<u>Near Detector</u>	
Magnesium	1.750	g/cc	711.36	284.22	cps
Aluminum	2.660	g/cc	133.07	180.42	cps
Spine Angle = 74.83			Density/Spine Ratio = 0.524		
	<u>Size</u>		<u>Reading</u>		
Small Ring	7.60	in	5749.57		
Large Ring	14.00	in	9401.93		

Before Survey Verification

Target	Measured
g/cc	g/cc
g/cc	g/cc
g/cc	g/cc

After Survey Verification

Target	Measured
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g/cc
g/cc
g/ccg/cc
g/cc
g/cc

Gamma Ray Calibration Report

Serial Number: 2001
 Tool Model: OH
 Performed: Sat Oct 10 08:34:00 2015

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 0.2400 GAPI/cps

Neutron Calibration Report

Serial Number: 5108
 Tool Model: PROBE
 Performed: Sat Oct 10 08:34:02 2015

Calibrator Value: 1 NAPI

Calibrator Reading: 1 cps

Sensitivity: 1 NAPI/cps

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
NEU	38.26		None	0.75	1.50	5.00
			NEU-PROBE (5108) Probe	4.92	3.63	85.00
GR	32.32		GR-OH (2001) 2001	3.56	3.25	40.00
			DHT (2501DHT) Digital High Temp CDL Tool	9.69	4.00	201.00
LSD	23.78					
DCAL	23.49					
SSD	23.24					
HEADVOLT	21.47					
SP	10.60		DIL-G (5375) Gearhart	21.47	4.00	345.00
CILD	10.60					
CILM	6.89					

