



**COMPENSATED DENSITY
NEUTRON
LOG**

Company	Patterson Energy	Company	Patterson Energy
Well	Habiger #2	Well	Habiger #2
Field	Bloomer	Field	Bloomer
County	Rice	County	Rice
State	Kansas	State	Kansas
Location:	API # : 15 159 22883 900' FNL & 1400' FEL		Other Services
Permanent Datum	SEC 5	TWP 18S	RGE 10W
Log Measured From	Ground Level	Elevation	1775'
Drilling Measured From	KB 8' AGL		
	KB		
		Elevation	K.B. 1783' D.F. 1782' G.L. 1775.
Date	5/1/22		
Run Number	One		
Depth Driller	3500'		
Depth Logger	3500'		
Bottom Logged Interval	3478'		
Top Log Interval	2700'		
Casing Driller	8 5/8" @ 394'		
Casing Logger	394'		
Bit Size	7 7/8"		
Type Fluid in Hole	Chemical	Chlorides	6500 PPM
Density / Viscosity	9.1/53		
pH / Fluid Loss	9.5/9.2		
Source of Sample	Pit		
Rm @ Meas. Temp	1.2@73degf		
Rmf @ Meas. Temp	0.9@73degf		
Rmc @ Meas. Temp	1.44@73degf		
Source of Rmf / Rmc	Calculated		
Rm @ BHT	0.83@104degf		
Time Circulation Stopped	8:00 a.m		
Time Logger on Bottom	10:15 a.m		
Maximum Recorded Temperature	104degf		
Equipment Number	T-605		
Location	Hays, KS.		
Recorded By	Casey Patterson		
Witnessed By	Mr. Austin Klaus		

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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

East of Claflin, KS Apporx 4 mi.
Then South Into Location

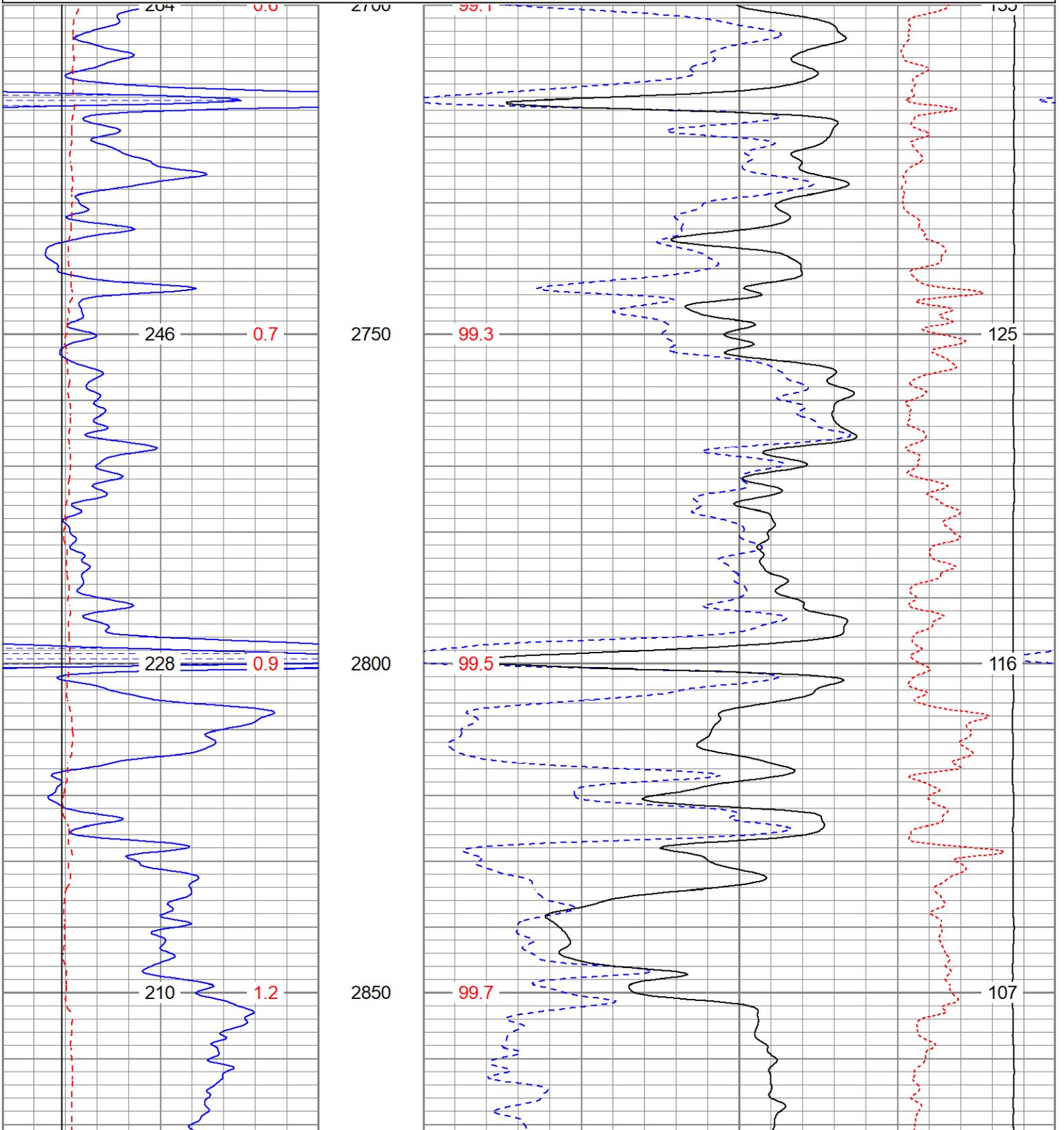
Thanks for using Gemini Wireline LLC
785-625-1182

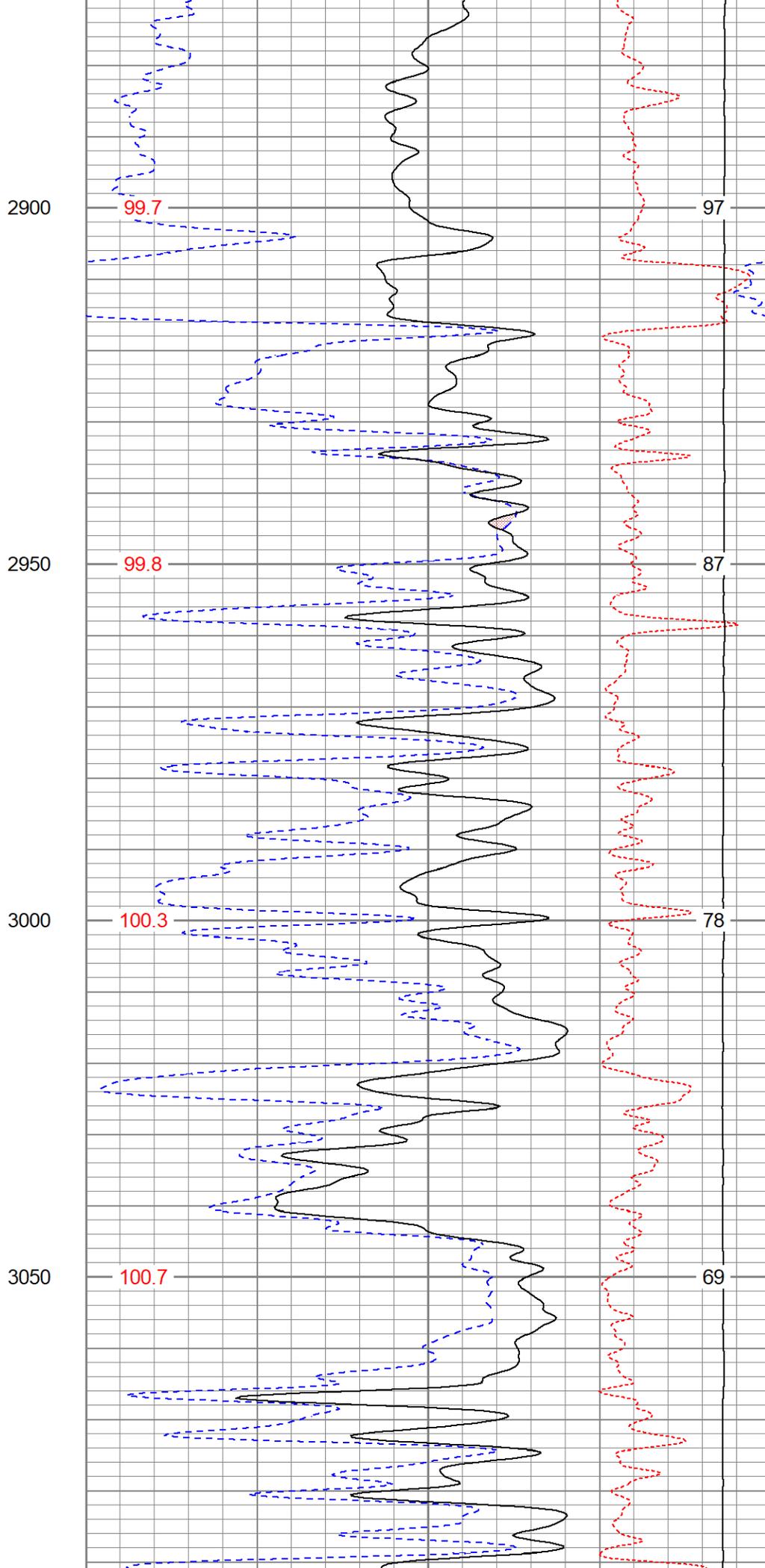
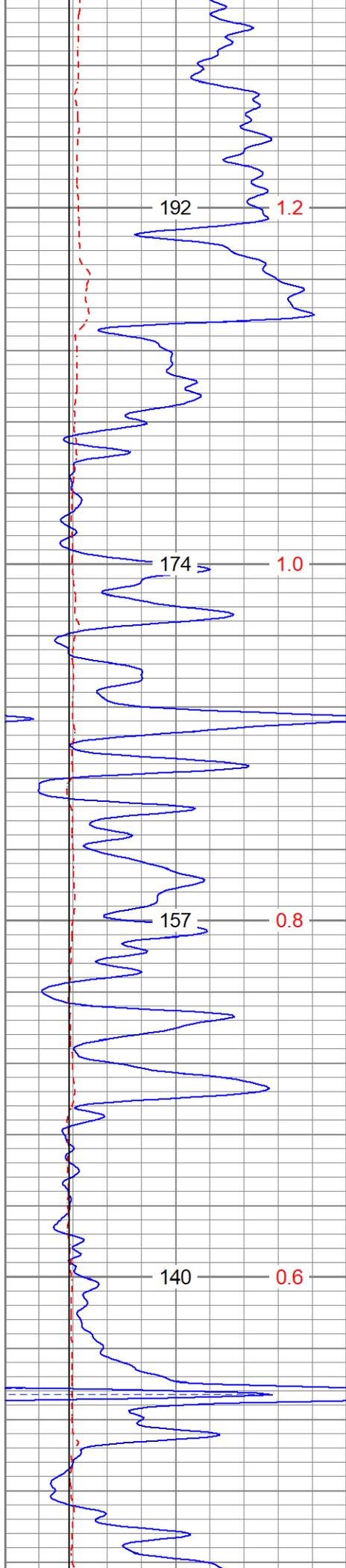


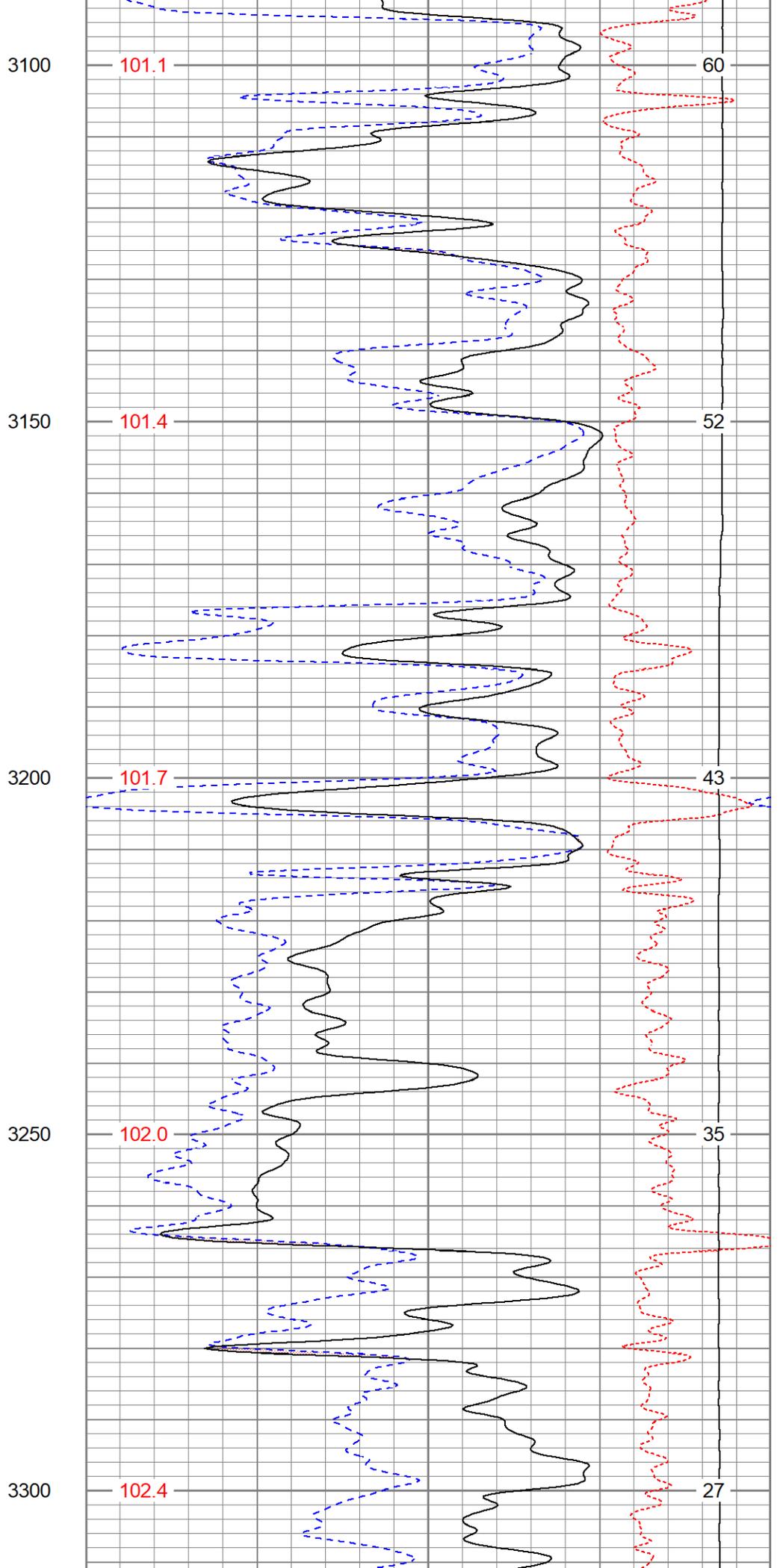
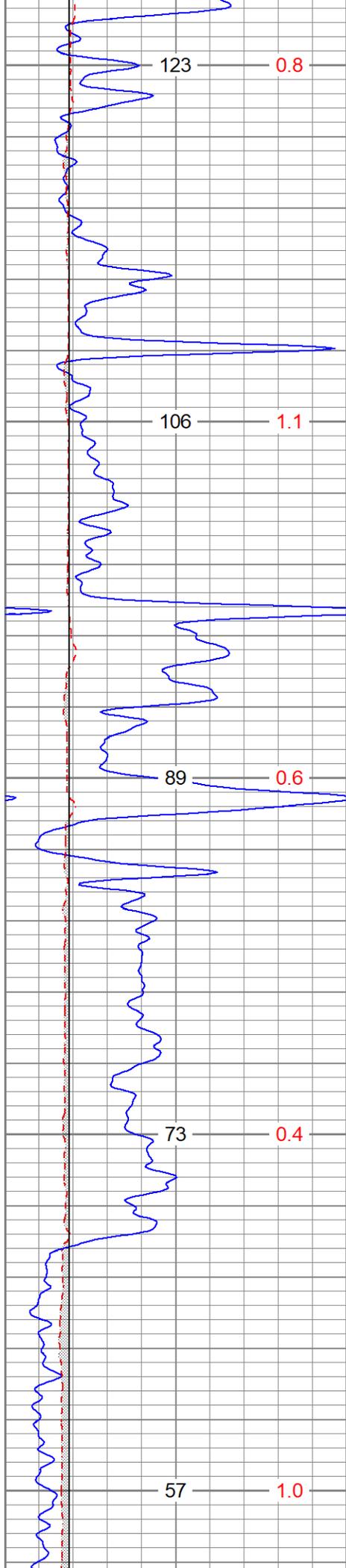
MAIN PASS

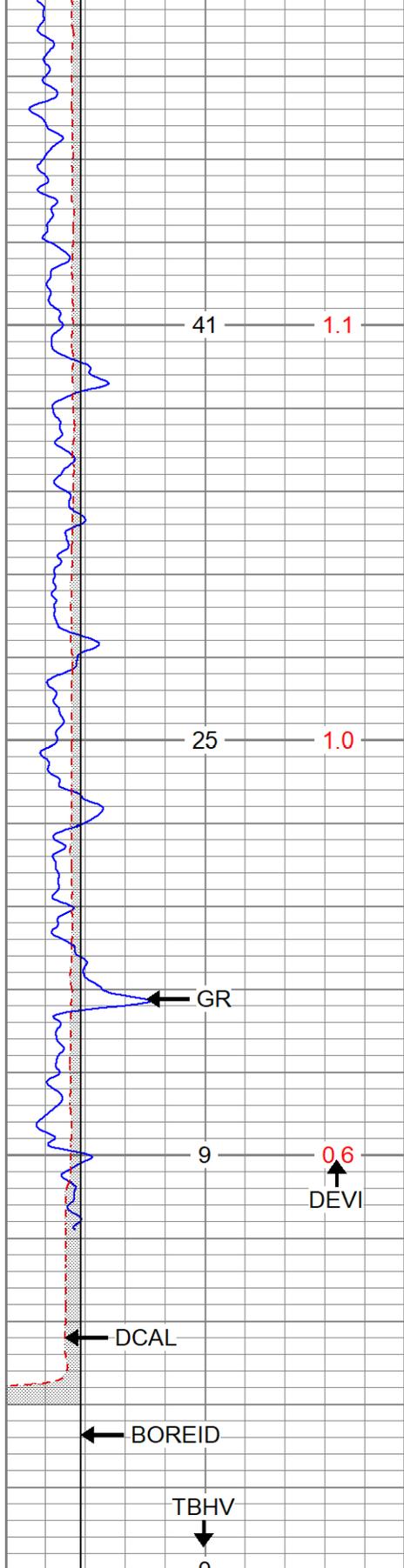
Database File pehabiger#2oh.db
 Dataset Pathname pass3.1
 Presentation Format digital_kcdnl
 Dataset Creation Sun May 01 11:32:49 2022
 Charted by Depth in Feet scaled 1:240

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)	DEVI (deg)	TEMP (degF)	-0.25	RHOC (g/cc) 0.25
				8000	LTEN (lb) 0
					ABHV (ft3)



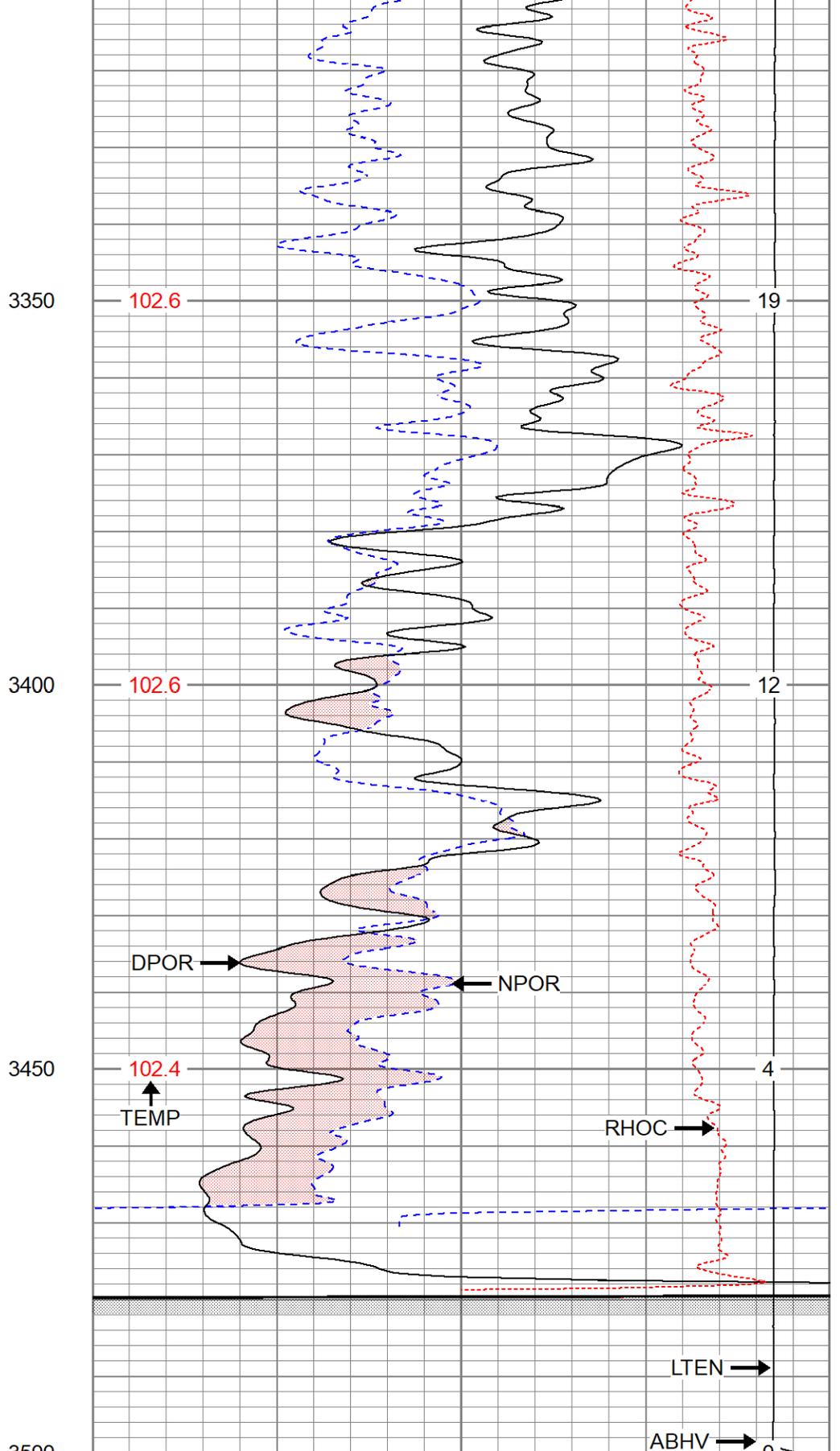






0	GR (GAPI)	150
6	DCAL (in)	16
6	BOREID (in)	16

TBHV (ft3)	DEVI (deg)
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30	NPOR (pu)	-10
30	DPOR (pu)	-10
70	DPOR (pu)	30

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

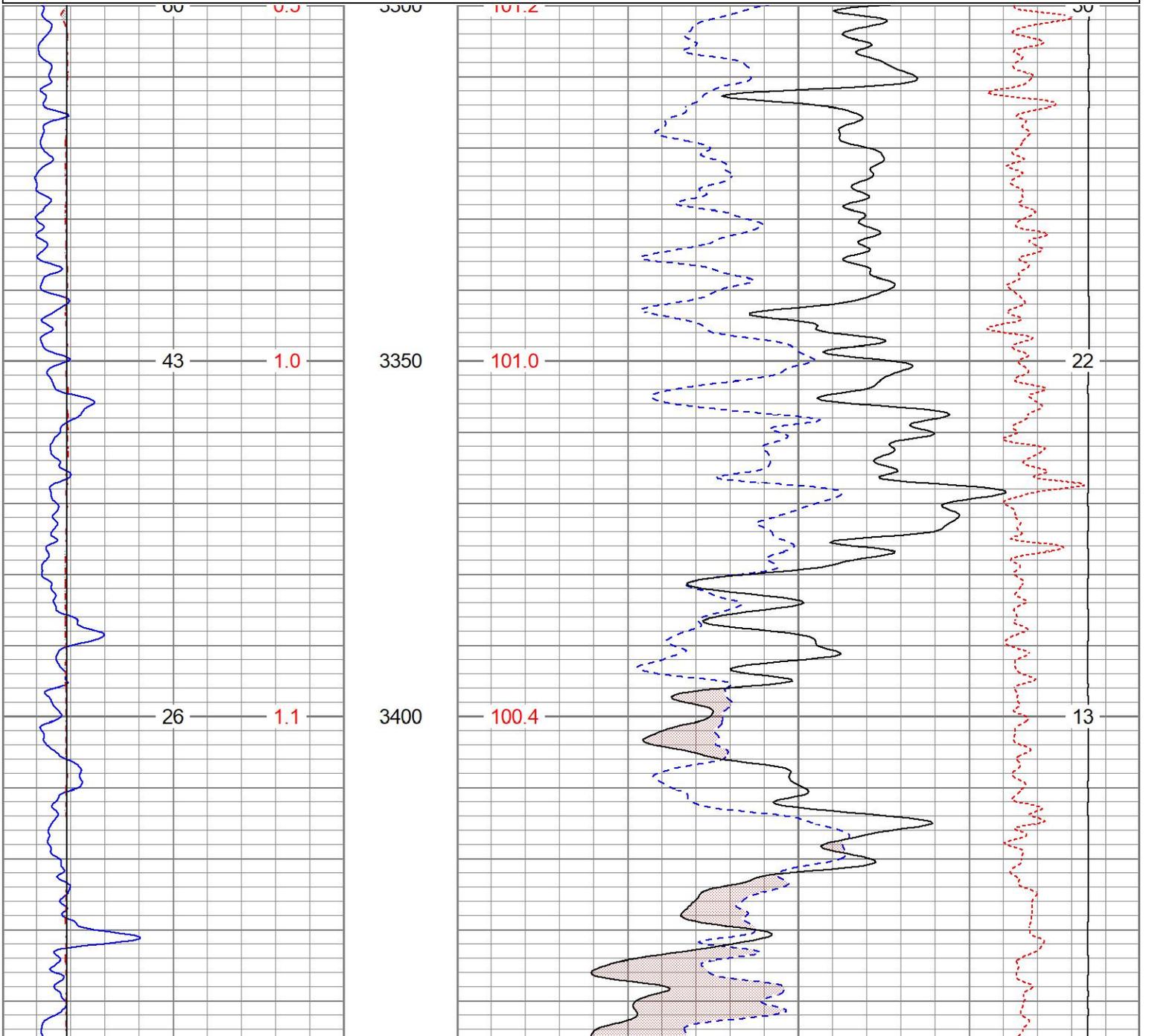
ABHV (ft3)

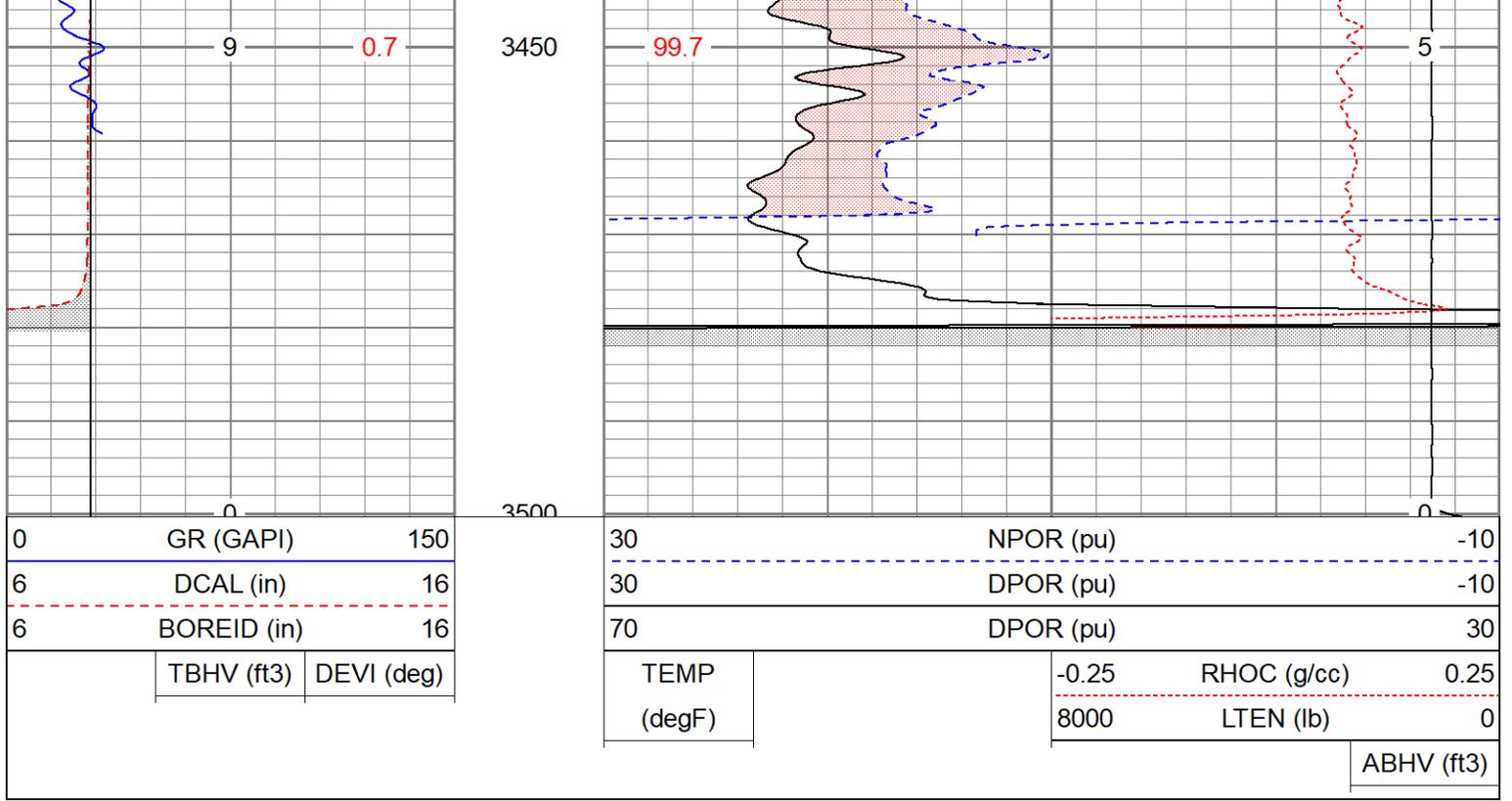


REPEAT SECTION

Database File pehabiger#2oh.db
 Dataset Pathname pass2.2
 Presentation Format digital_kcdnl
 Dataset Creation Sun May 01 11:15:53 2022
 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)	DEVI (deg)	TEMP (degF)	-0.25	RHOC (g/cc) 0.25
				8000	LTEN (lb) 0
					ABHV (ft3)





Calibration Report

Database File pehabiger#2oh.db
 Dataset Pathname pass3.1
 Dataset Creation Sun May 01 11:32:49 2022

Dual Induction Calibration Report

Serial-Model: 1842-ADM
 Surface Cal Performed: Mon Sep 20 22:00:42 2021
 Downhole Cal Performed: Mon Sep 20 22:00:24 2021
 After Survey Verification Performed: Mon Sep 20 22:05:52 2021

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop	V	Air	Loop	mmho/m	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	V	Zero	Cal	mmho/m	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	V	Zero	Cal	mmho/m	m	b
Deep	-0.219	349.905	mmho/m	-0.343	349.810	mmho/m	1.000	-3.124
Medium	-0.118	399.722	mmho/m	-0.226	399.745	mmho/m	1.000	-3.108
Shallow	2.536	0.025	V	500.000	2.000	Ohm-m	180.330	-1.504

After Survey Verification

Readings Targets Results

Internal:	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	-0.219	349.905	mmho/m	1.000	-3.124
Medium	0.000	0.000	mmho/m	-0.118	399.722	mmho/m	1.000	-3.108
Shallow	0.000	0.000	Ohm-m	500.000	2.000	Ohm-m	1.000	0.000

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:	Wed May 5 19:21:08 2021	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.0000	GAPI/cps

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	38.71		CHD-STD	0.50	1.69	1.00
ACCY	37.54		ADT-WMC (WithMC) Admir Telemetry With Mudcell	4.58	3.50	120.00

ACCX 37.54
 SSTAT 37.13
 PSTAT 36.29
 ASTAT 36.29
 GRD 35.46
 TEMP 35.46
 NEU 31.43

LSD 22.02
 DCAL 21.73
 SSD 21.48

SP 10.60
 CILD 10.60

CILM 6.89

RLL3 1.70



Admyr Telemetry with Mudcell

NEU-ADMY5139 (AD5139)
 Admyr NEU DIGITAL

CDL-GEARHART (2501)

DIL-ADM (1842)
 Dual Induction

5.65 3.50 50.00

9.69 4.00 240.00

19.71 4.00 300.00

Dataset: pehabiger#2oh.db: field/well/run1/pass3.1
 Total length: 40.13 ft
 Total weight: 711.00 lb
 O.D.: 4.00 in