COMPENSATED DENSITY NEUTRON LOG

Company Patterson Energy LLC.
Well Rolfs #1
Field Lorraine
County Ellsworth State KS

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Field Lorraine
County Ellsworth
State KS

Location: API # : 15 053 21390

2310' FSL & 1320' FEL

SEC 14 TWP 17S RGE 9W

Other Services
ML
DIL

Elevation
K.B. 1795'
D.F. 1794'
G.L. 1787'

Permanent Datum	Ground Level	Elevation 1787'
Log Measured From	KB 8' AGL	
Drilling Measured From	KB	

Date	10/22/23
Run Number	One
Depth Driller	3300'
Depth Logger	3299'
Bottom Logged Interval	3277'
Top Log Interval	2400'
Casing Driller	8 5/8"@340'
Casing Logger	340'
Bit Size	7 7/8"
Type Fluid in Hole	Chemical
Density / Viscosity	8.9/51
pH / Fluid Loss	10.0/8.8
Source of Sample	Pit
Rm @ Meas. Temp	1.7@70degf
Rmf @ Meas. Temp	1.3@70degf
Rmc @ Meas. Temp	2.0@70degf
Source of Rmf / Rmc	Calculated
Rm @ BHT	1.0@103degf
Time Circulation Stopped	5:15 AM
Time Logger on Bottom	8:00 AM
Maximum Recorded Temperature	103degf
Equipment Number	T-605
Location	Hays, KS.
Recorded By	C.Patterson
Witnessed By	Austin Klaus

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Comments

Lorraine, KS 10 Rd1 mi North to Ave. U East 2 mi to 12th Rd.
12th Rd. 0.4 mi West into 0.3 mi.

Thanks for using Gemini Wireline LLC
785-625-1182

MAIN PASS

Database File	perolfs#1oh.db
Dataset Pathname	pass2.1
Presentation Format	digital_kcdnl
Dataset Creation	Sun Oct 22 09:08:00 2023
Charted by	Depth in Feet scaled 1:240

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

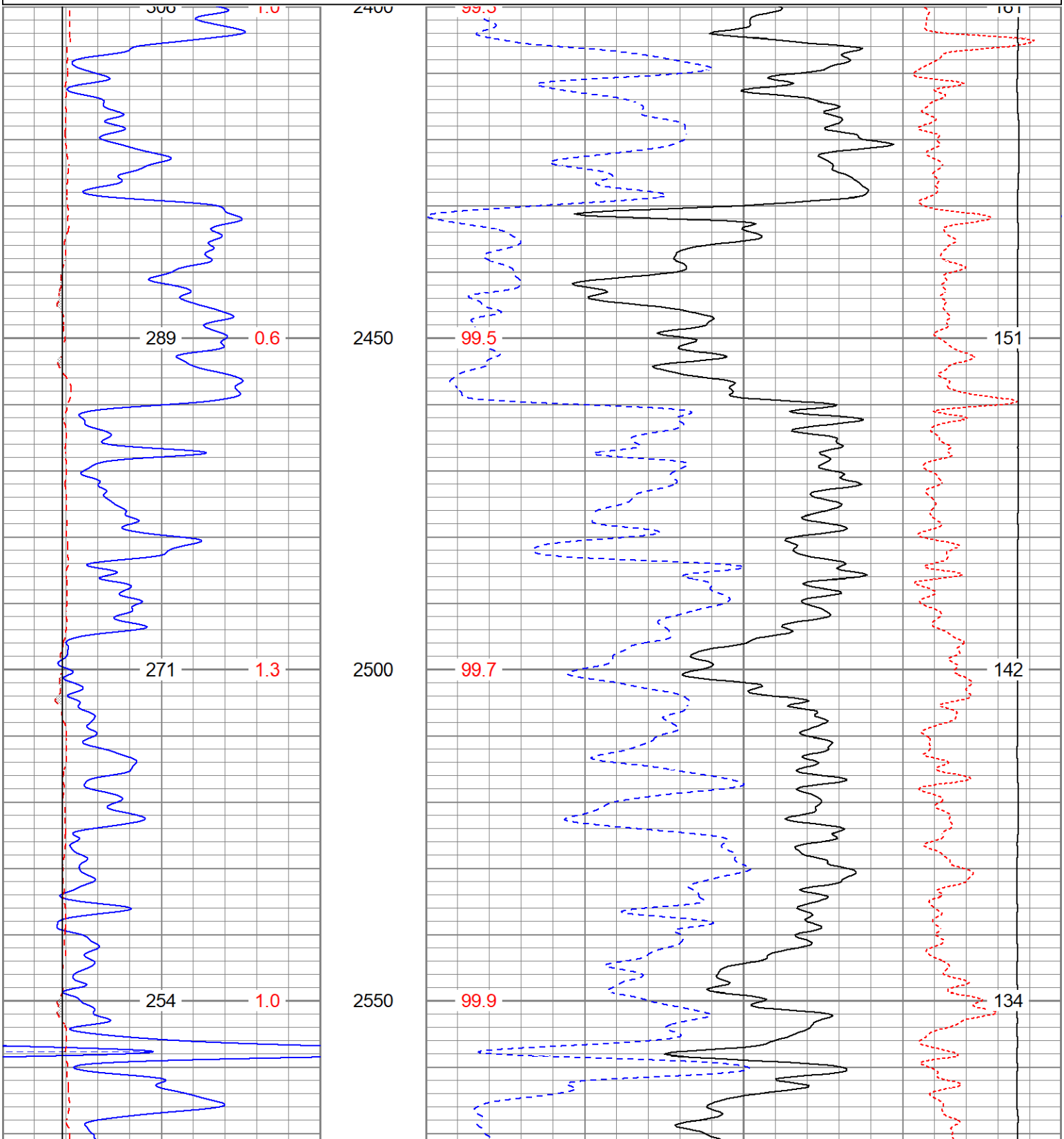
TBHV (ft3) | DEVI (deg)

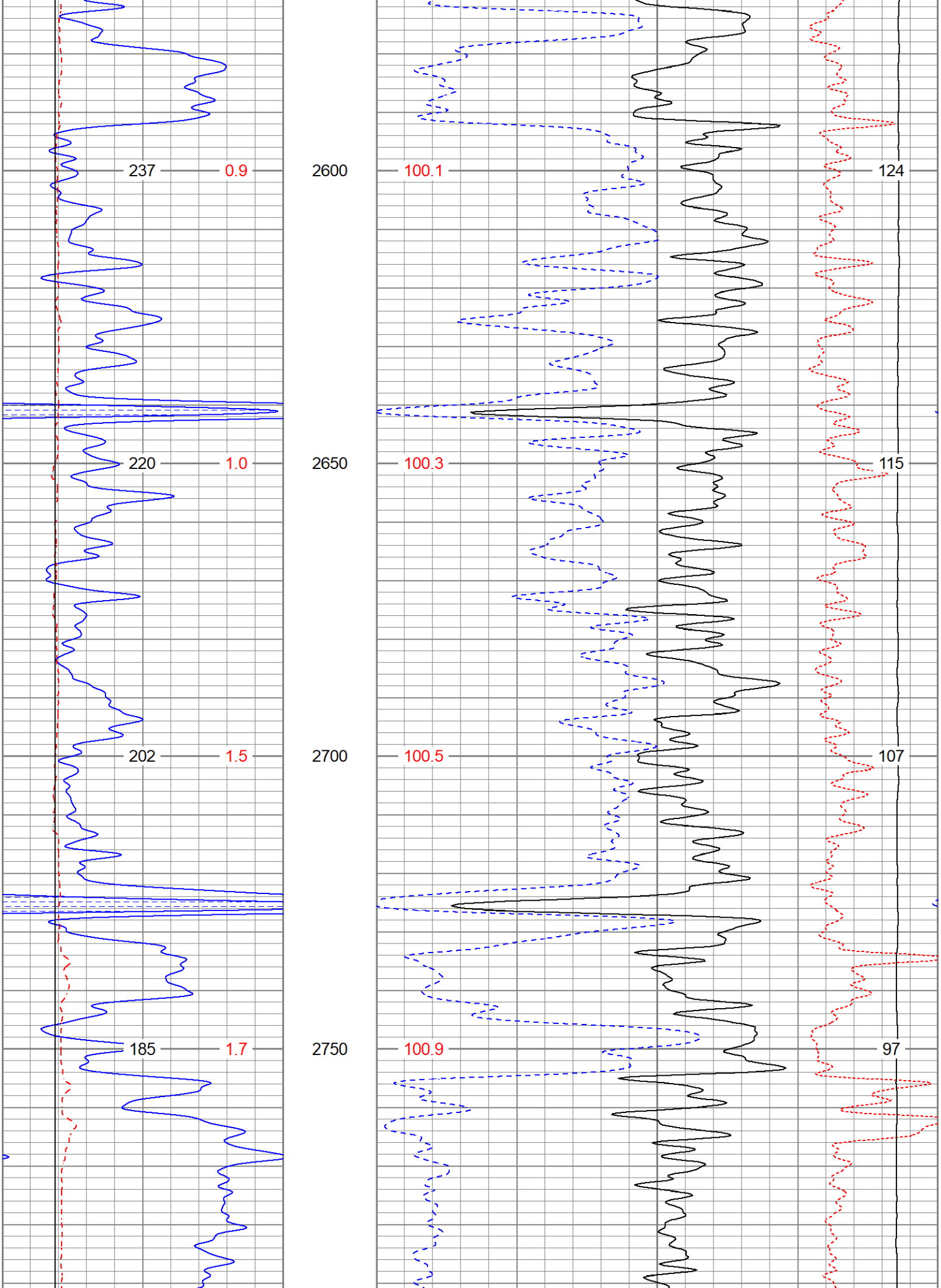
30	NPOR (pu)	-10
30	DPOR (pu)	-10
70	DPOR (pu)	30

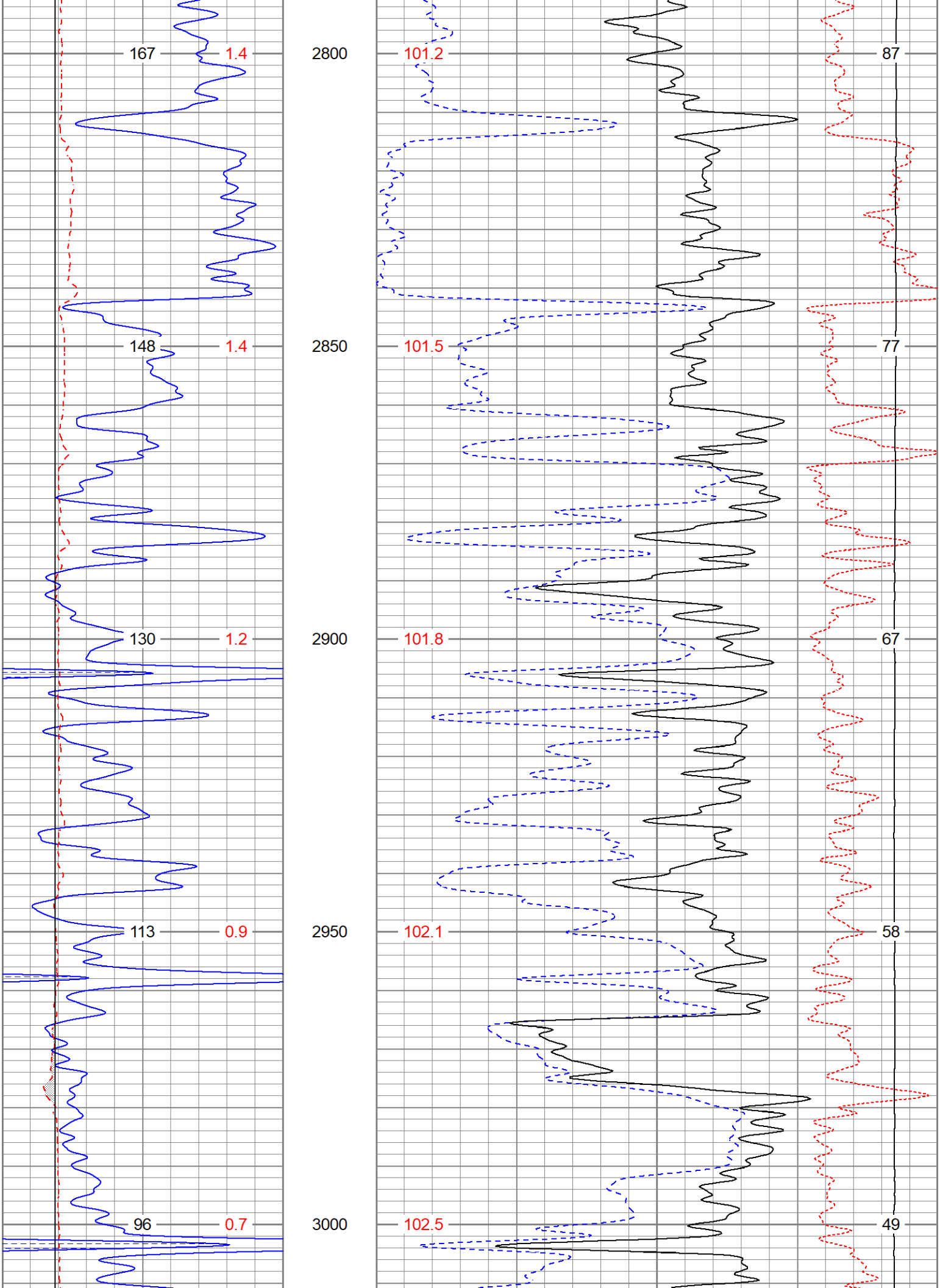
TEMP (degF)

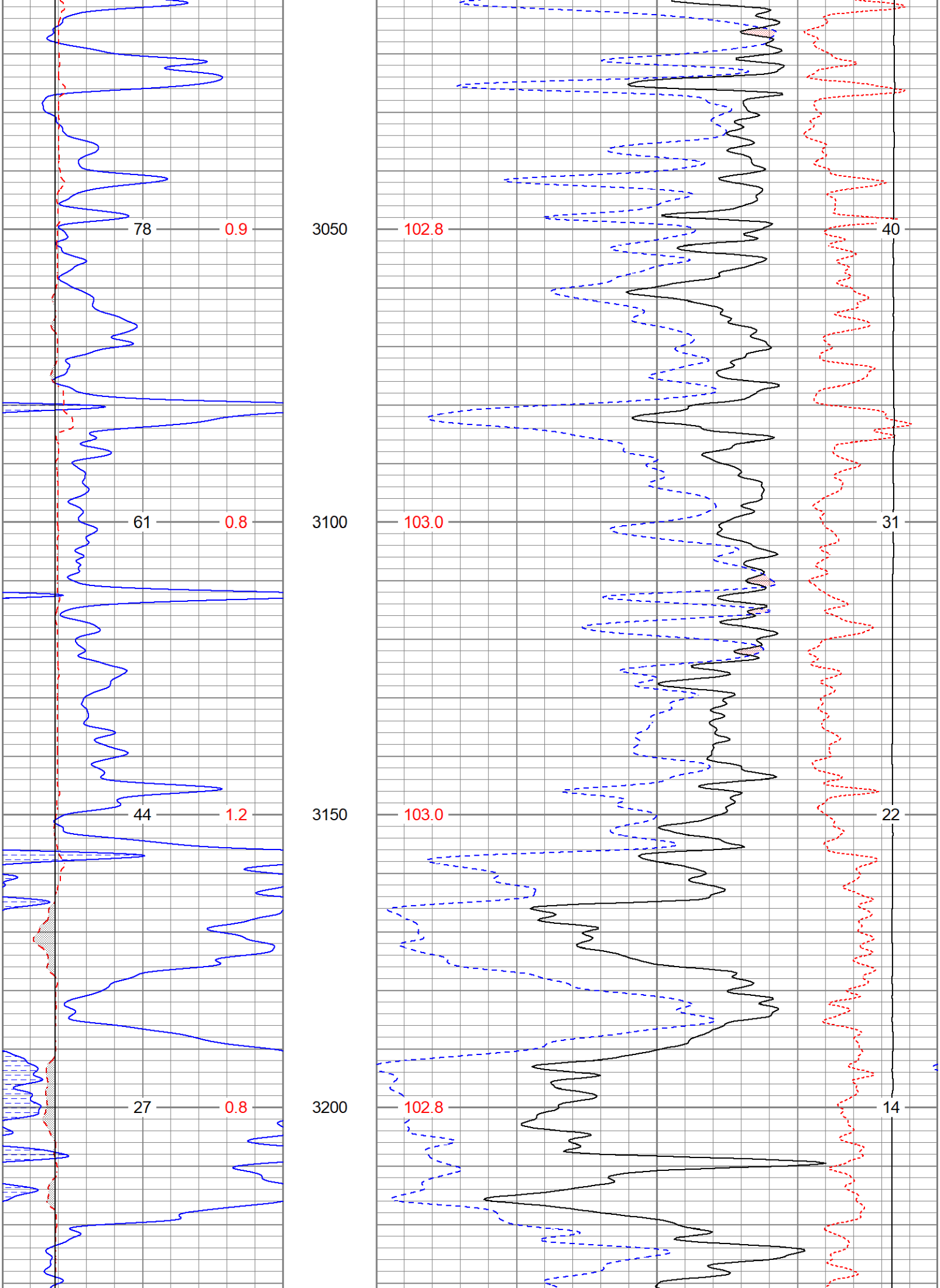
-0.25	RHOC (g/cc)	0.25
8000	LTEN (lb)	0

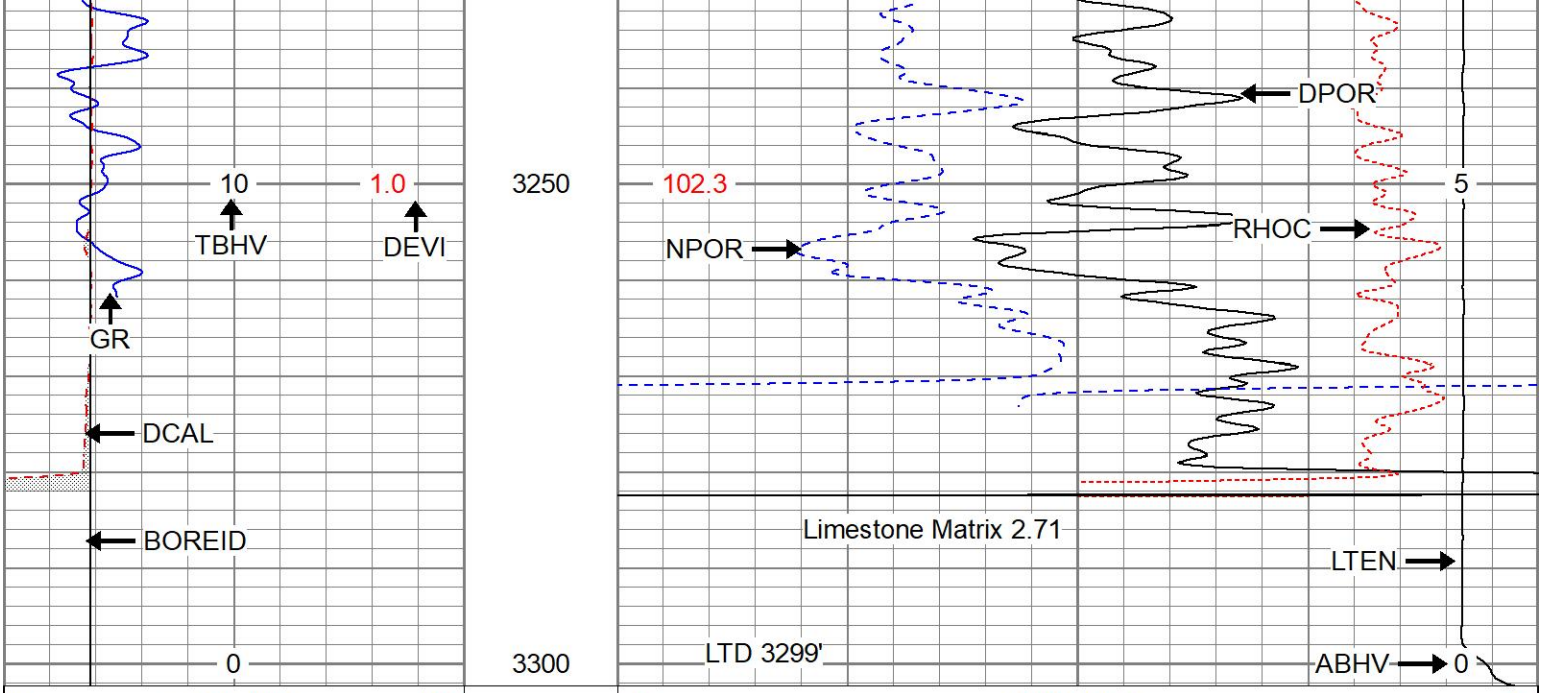
ABHV (ft3)




237
0.9
2600
100.1
124
220
1.0
2650
100.3
115
202
1.5
2700
100.5
107
185
1.7
2750
100.9
97


167
1.4
2800
101.2
87
148
1.4
2850
101.5
77
130
1.2
2900
101.8
67
113
0.9
2950
102.1
58
96
0.7
3000
102.5
49


78
0.9
3050
102.8
40
61
0.8
3100
103.0
31
44
1.2
3150
103.0
22
27
0.8
3200
102.8
14



0	GR (GAPI)	150
6	DCAL (in)	16
6	BOREID (in)	16
	TBHV (ft3) / DEVI (deg)	

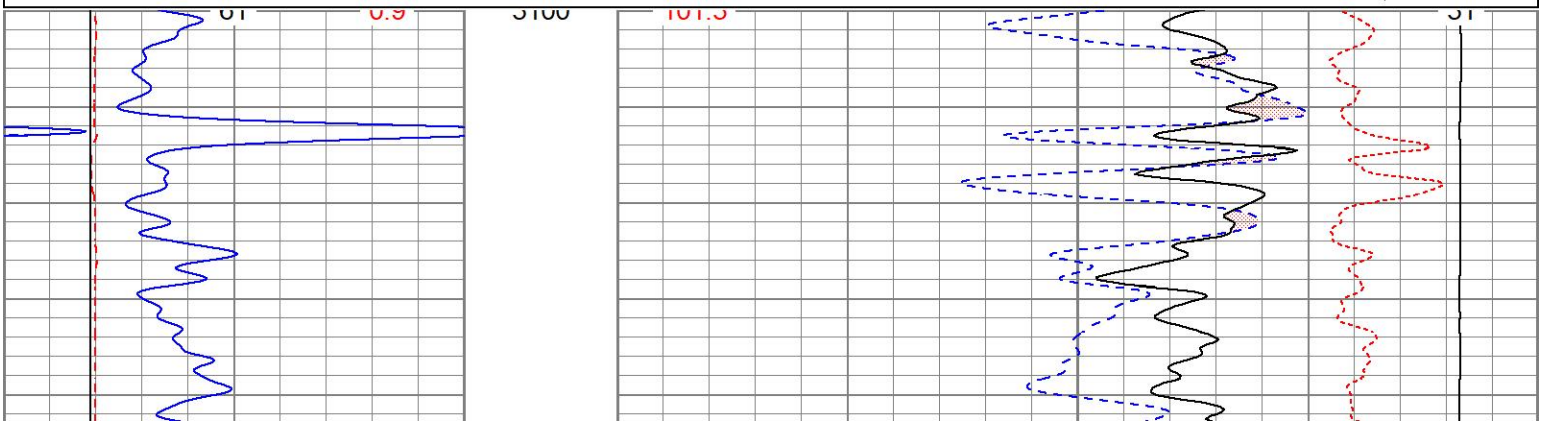
30	NPOR (pu)	-10
30	DPOR (pu)	-10
70	DPOR (pu)	30
TEMP (degF)	-0.25 RHOC (g/cc)	0.25
	8000 LTEN (lb)	0
	ABHV (ft3)	

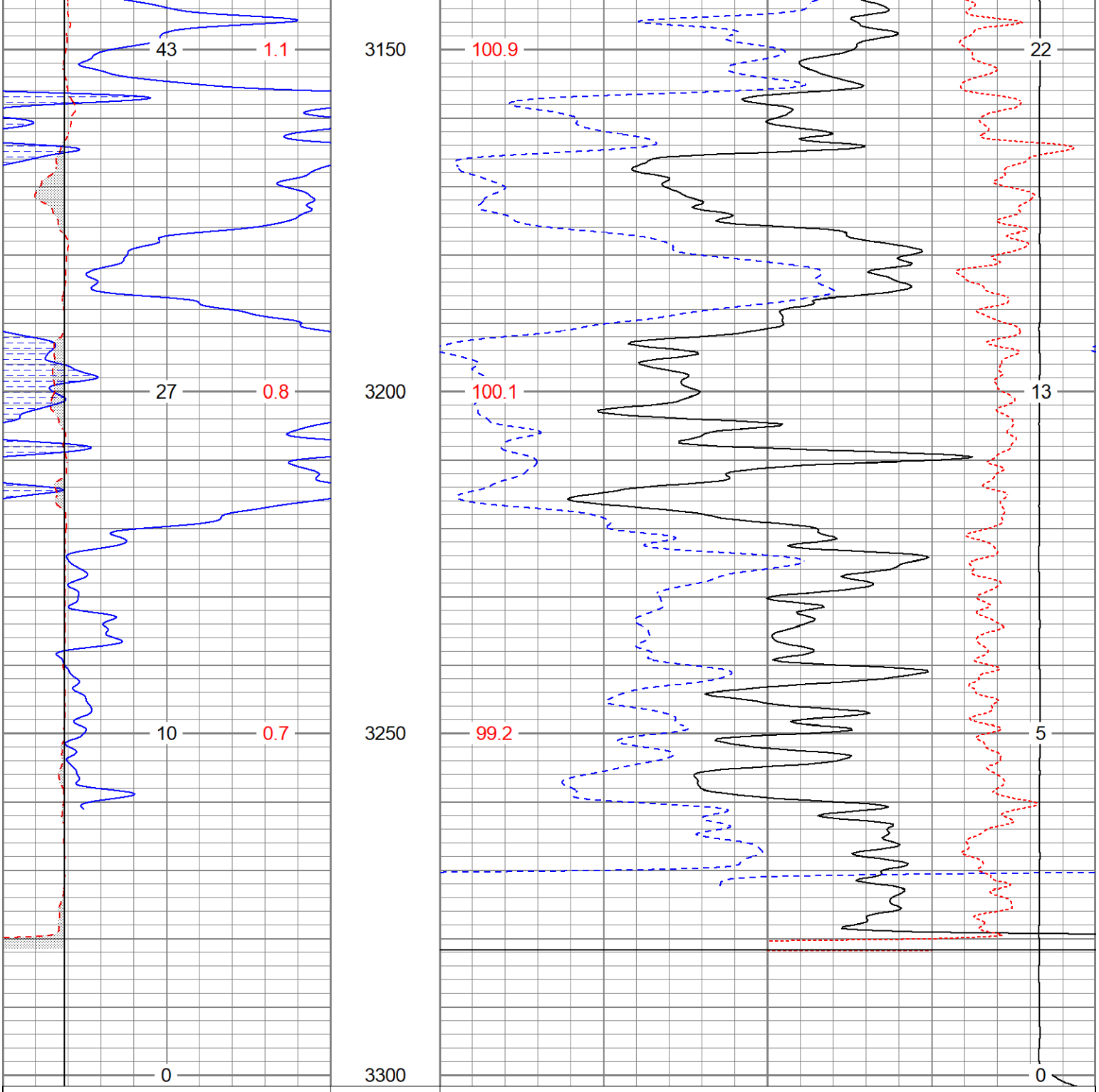
REPEAT SECTION

Database File	perolfs#1oh.db
Dataset Pathname	pass1.1
Presentation Format	digital_kcdnl
Dataset Creation	Sun Oct 22 09:12:15 2023
Charted by	Depth in Feet scaled 1:240

0	GR (GAPI)	150
6	DCAL (in)	16
6	BOREID (in)	16
	TBHV (ft3) / DEVI (deg)	

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)	





Calibration Report

Database File	perolfs#1oh.db
Dataset Pathname	pass2.1
Dataset Creation	Sun Oct 22 09:08:00 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

	Readings			References			Results	
Loop:	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

	Readings			References			Results	
Internal:	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

	Readings			Targets			Results	
Internal:	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:	2388LITHO_C-C
Source:	
Master Calibration Performed:	Wed Jun 14 10:24:55 2023

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	5158.10	4098.81	cps
Aluminium	2.590	g/cc	1460.99	2839.08	cps
Aluminium+Sleeve	2.541	g/cc	1358.84	2495.91	cps

Spine Angle = 73.77 Density/Spine Ratio = 0.670

	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	8.10	in	3.23	V
Large Ring	14.20	in	6.07	V

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

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
GR	38.31		CHD-STD	0.50	1.69	1.00
ACCY	37.15					
ACCX	37.15		ADT-WMC (WithMC) Admyr Telemetry With Mudcell	4.58	3.50	120.00
SSTAT	36.73					
PSTAT	35.90					
ASTAT	35.90					
GRD	35.06		NEU-ADMY5139 (AD5139) Admyer NEU DIGITAL	5.65	3.50	50.00
TEMP	35.06					

NEU	31.03				
LSTAT	21.88				
LS_HV	21.86				
LS8	21.86				
LS7	21.86	ADT1LITH-C (2388LITHO_C) Real Time Litho Tool	9.29	3.50	240.00
LS6	21.86				
LS5	21.86				
NHARD	21.86				
LSD	21.86				
LS2	21.86				
NLITH	21.86				
LSV	21.61				
DCAL	21.61				
SS_HV	21.27				
SSV	21.27				
SS8	21.27	DIL-ADM (1842) Dual Induction	19.71	4.00	300.00
SS7	21.27				
SS6	21.27				
SS5	21.27				
SS4	21.27				
SSD	21.27				
SS2	21.27				
SS1	21.27				
SP	10.60				
CILD	10.60				
CILM	6.89				
RLL3	1.70				
TR_Mon	0.00				

Dataset:	perolfs#1oh.db: field/well/run1/pass2.1
Total length:	39.73 ft
Total weight:	711.00 lb
O.D.:	4.00 in