COMPENSATED DENSITY NEUTRON LOG

Company Bickle Energies, LLC.
Well Willie Z #1
Field N/A
County Logan State KS

Location: API # : 15 109 21460

1870' FNL & 535' FEL

SEC 36 TWP 11S RGE 33W

Other Services

DIL

Elevation

K.B. 3090'
D.F. 3089'
G.L. 3080'

Permanent Datum Ground Level Elevation 3080'
Log Measured From KB10' AGL
Drilling Measured From KB

Date	5-4-16		
Run Number	One		
Depth Driller	4730'		
Depth Logger	4734'		
Bottom Logged Interval	4711'		
Top Log Interval	3500'		
Casing Driller	230'		
Casing Logger	230'		
Bit Size	7 7/8"		
Type Fluid in Hole	Chemical Mud		
Density / Viscosity	9.5/50		
pH / Fluid Loss	9.7/8.0		
Source of Sample	Pit		
Rm @ Meas. Temp	2.3@60degf		
Rmf @ Meas. Temp	1.72@60degf		
Rmc @ Meas. Temp	2.76@60degf		
Source of Rmf / Rmc	Calculated		
Rm @ BHT	1.21@114degf		
Time Circulation Stopped	12:15 a.m.		
Time Logger on Bottom	2:30 a.m.		
Maximum Recorded Temperature	114 degf		
Equipment Number	T127		
Location	Hays, KS.		
Recorded By	Gus Pfanenstiel		
Witnessed By	Mr. Garet Dinkel	Mr. Cole Robben	Mr. Eli Felts

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Comments

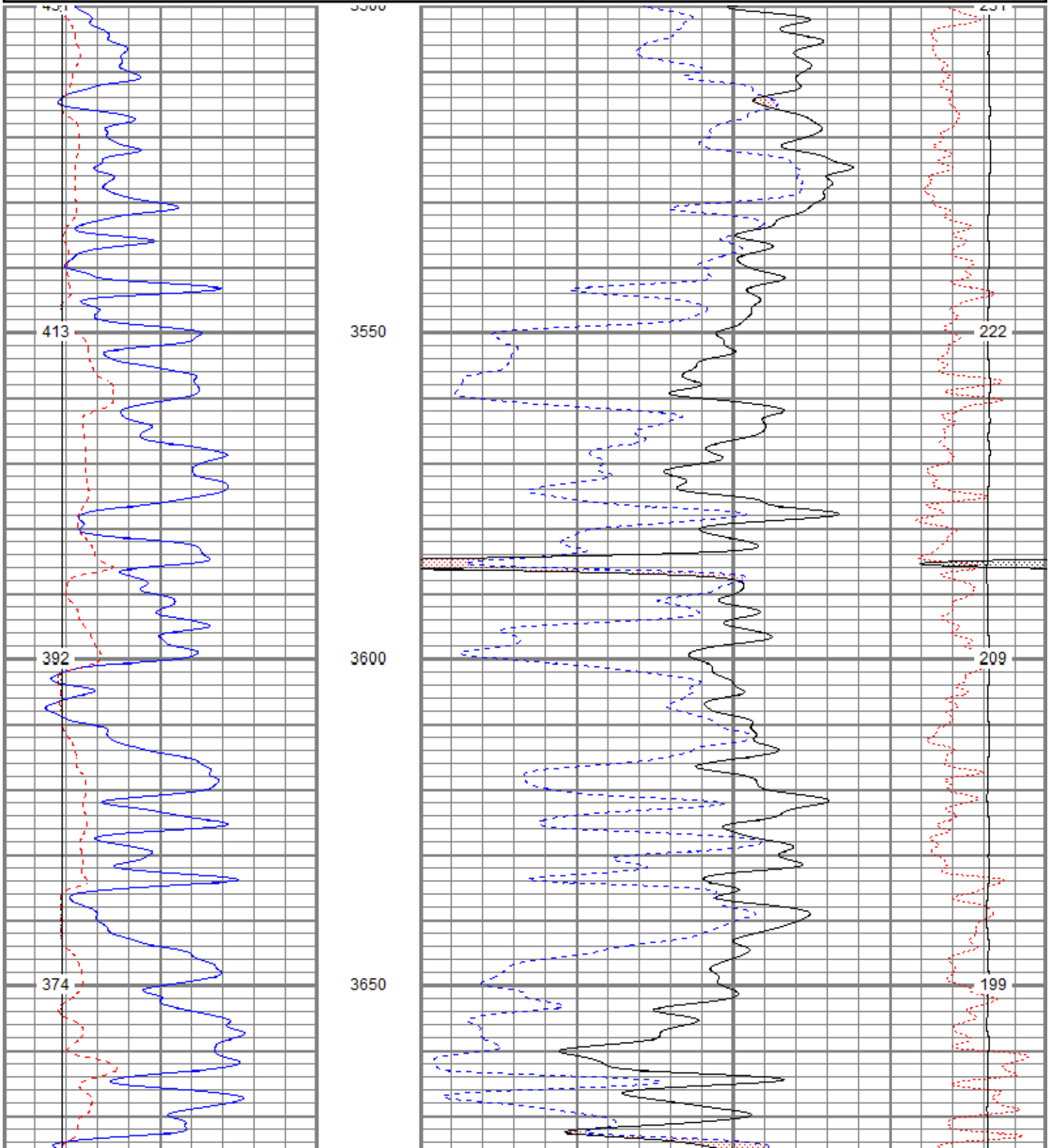
Thank you for using Gemini Wireline
785-625-1182

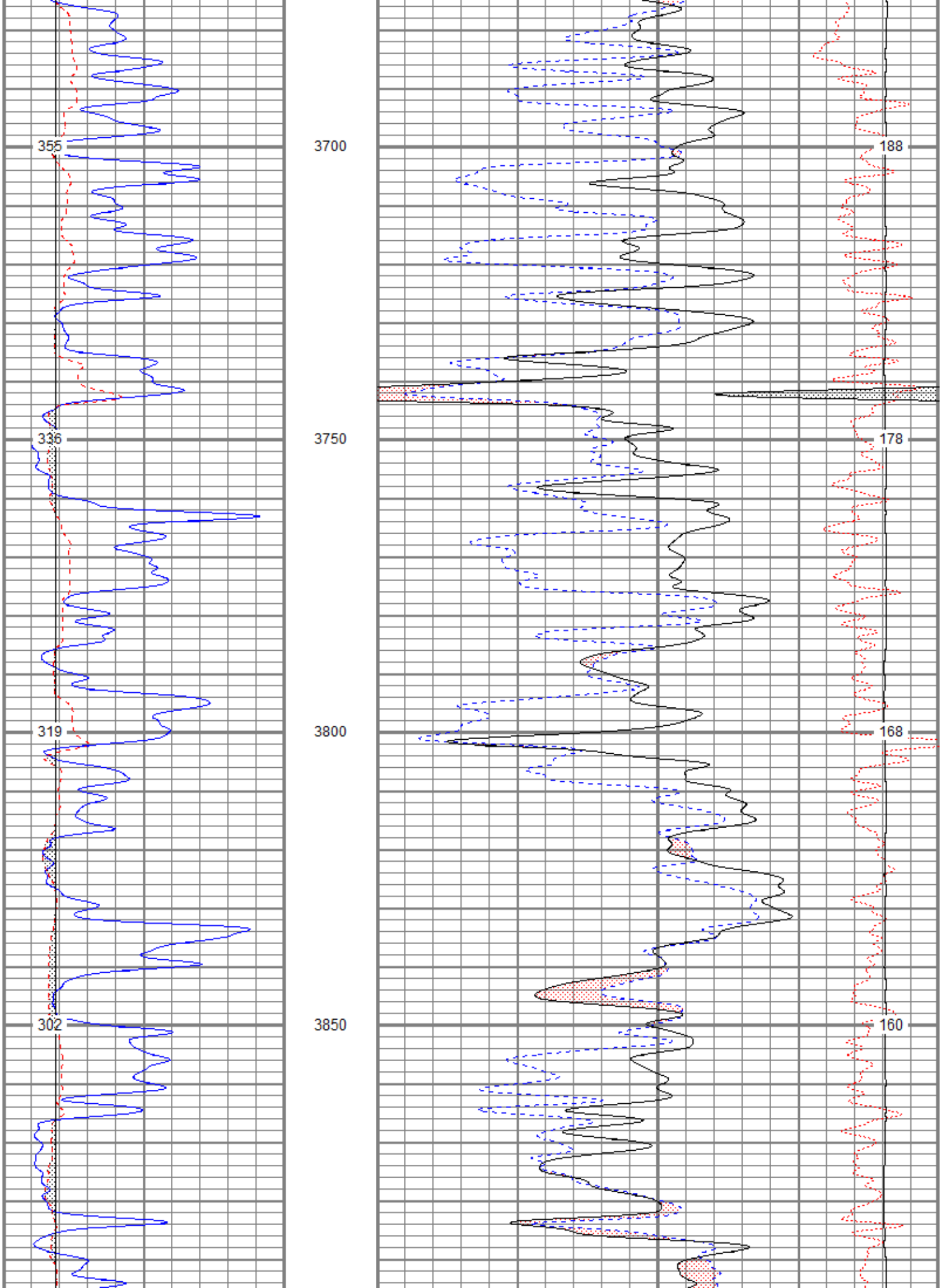
Main Pass

Database File	bewilliez#1oh.db
Dataset Pathname	pass2
Presentation Format	kcdnl
Dataset Creation	Wed May 04 02:36:54 2016
Charted by	Depth in Feet scaled 1:240

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

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)		

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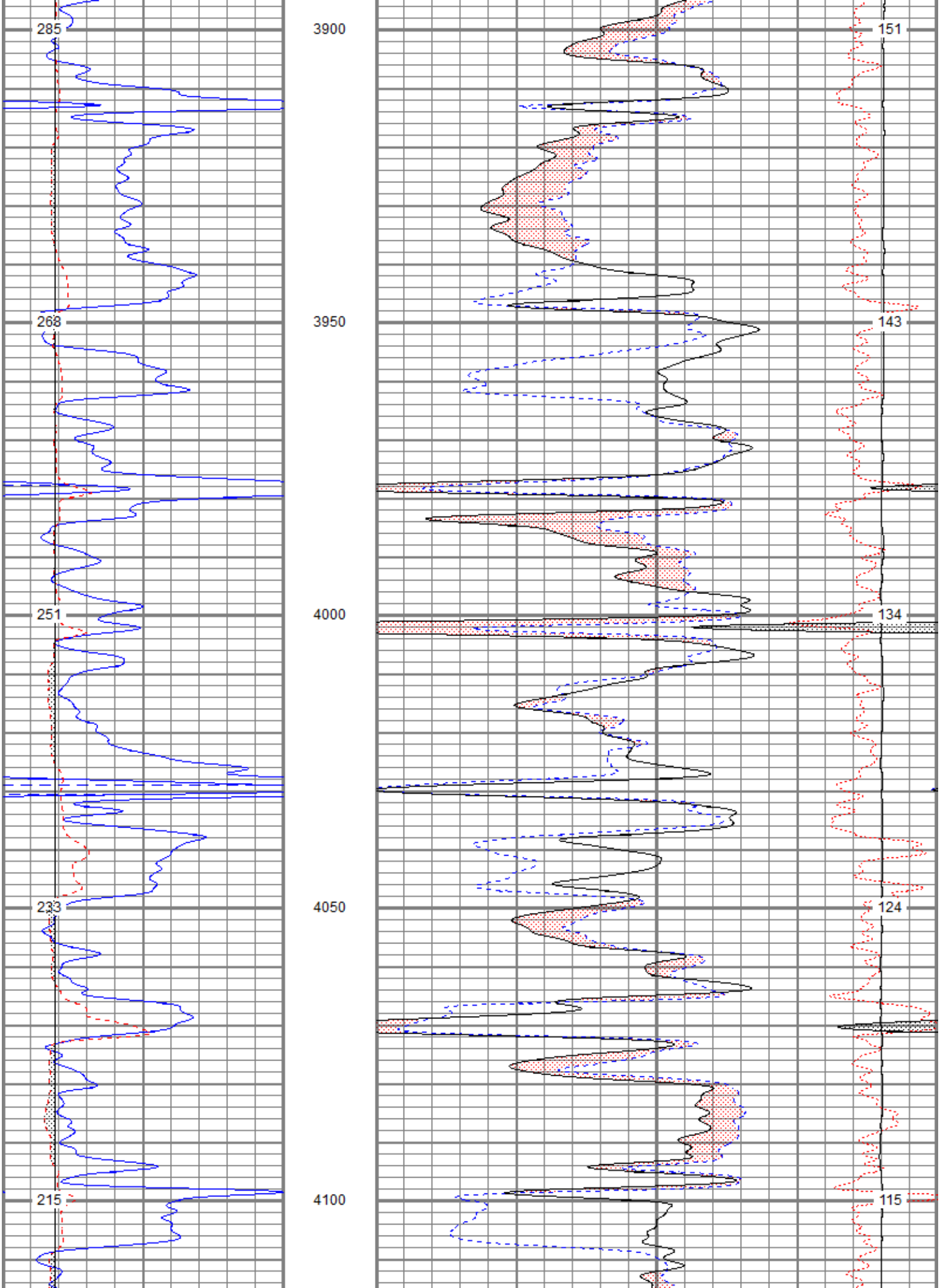
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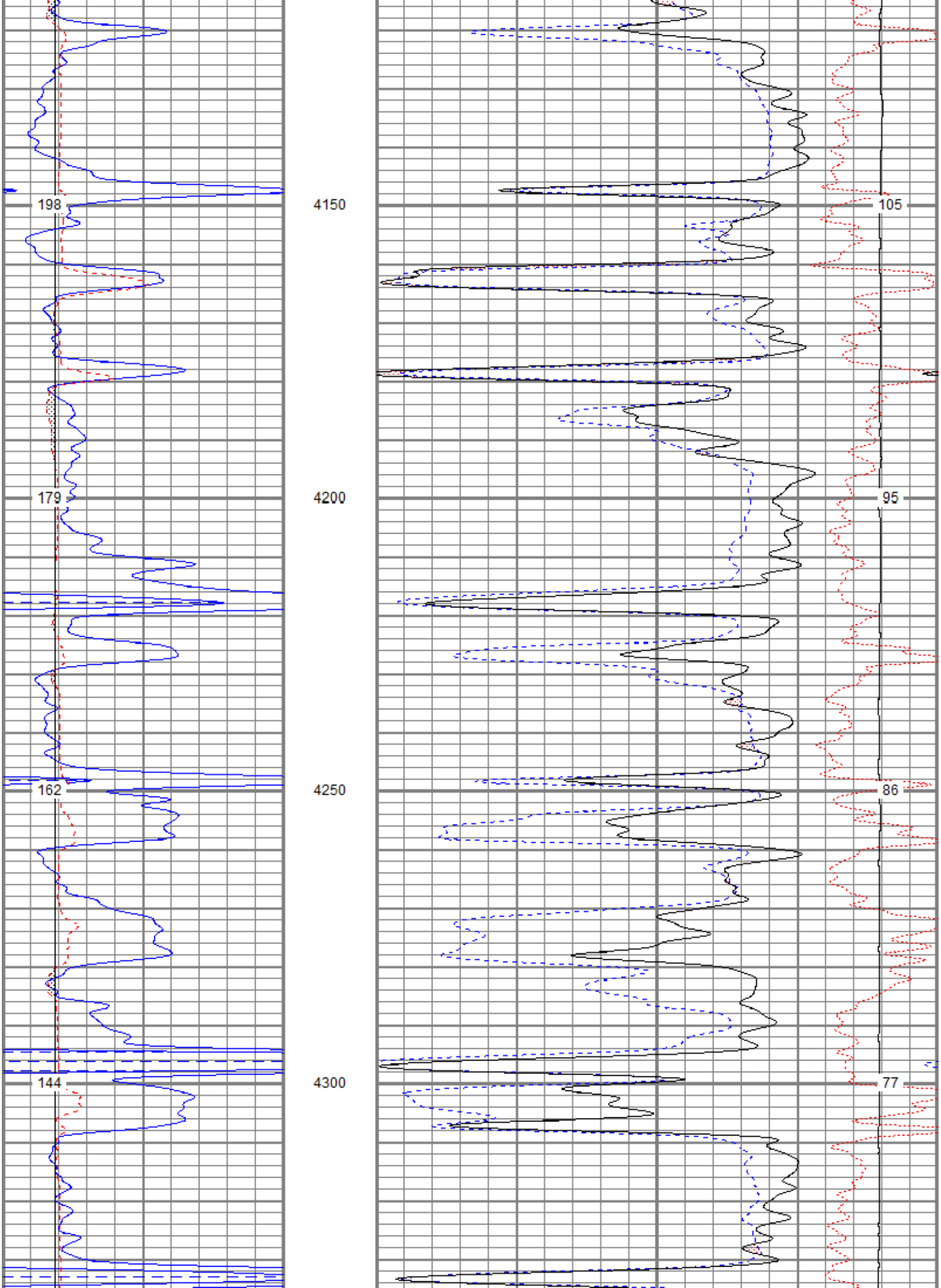
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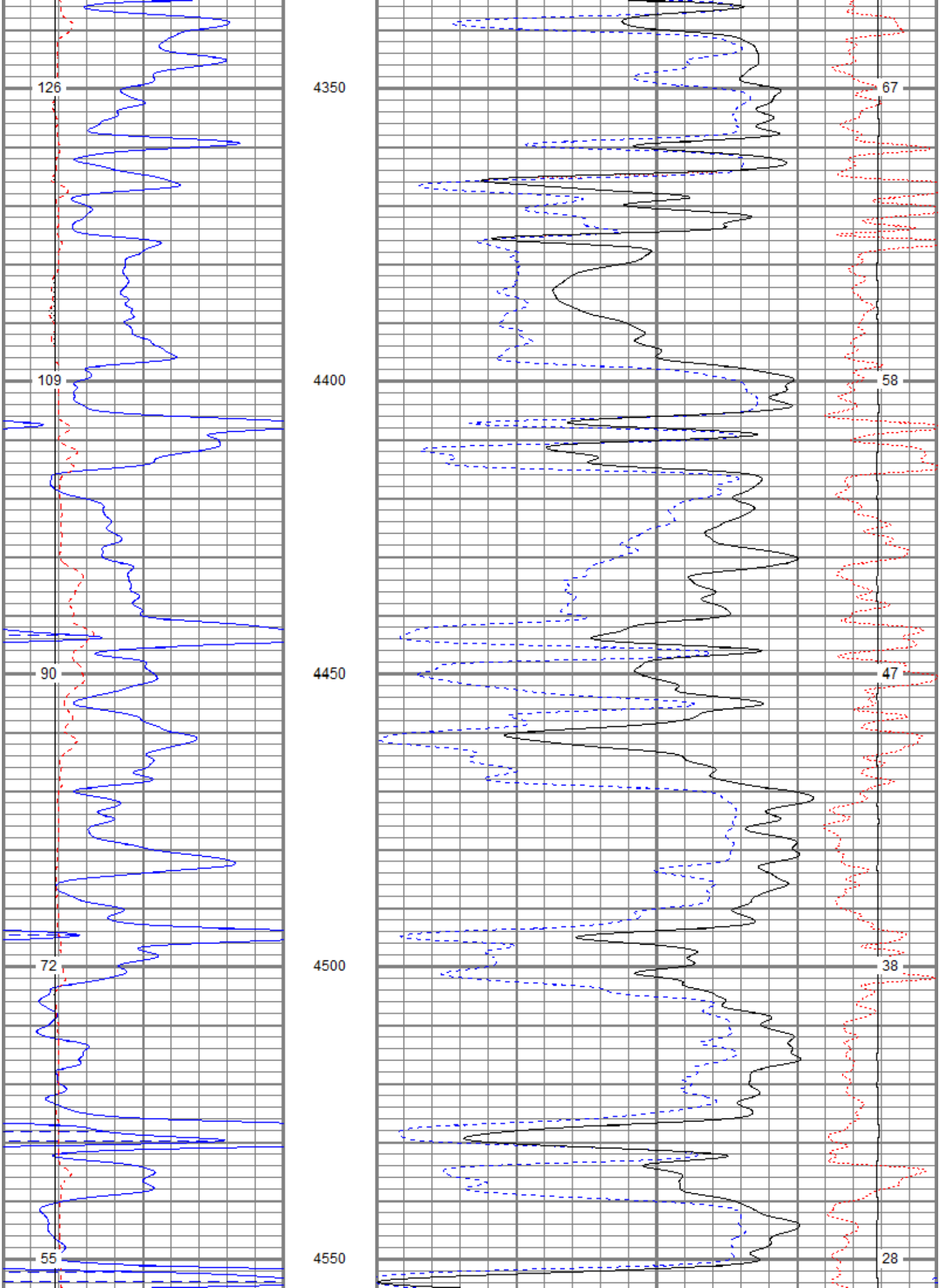
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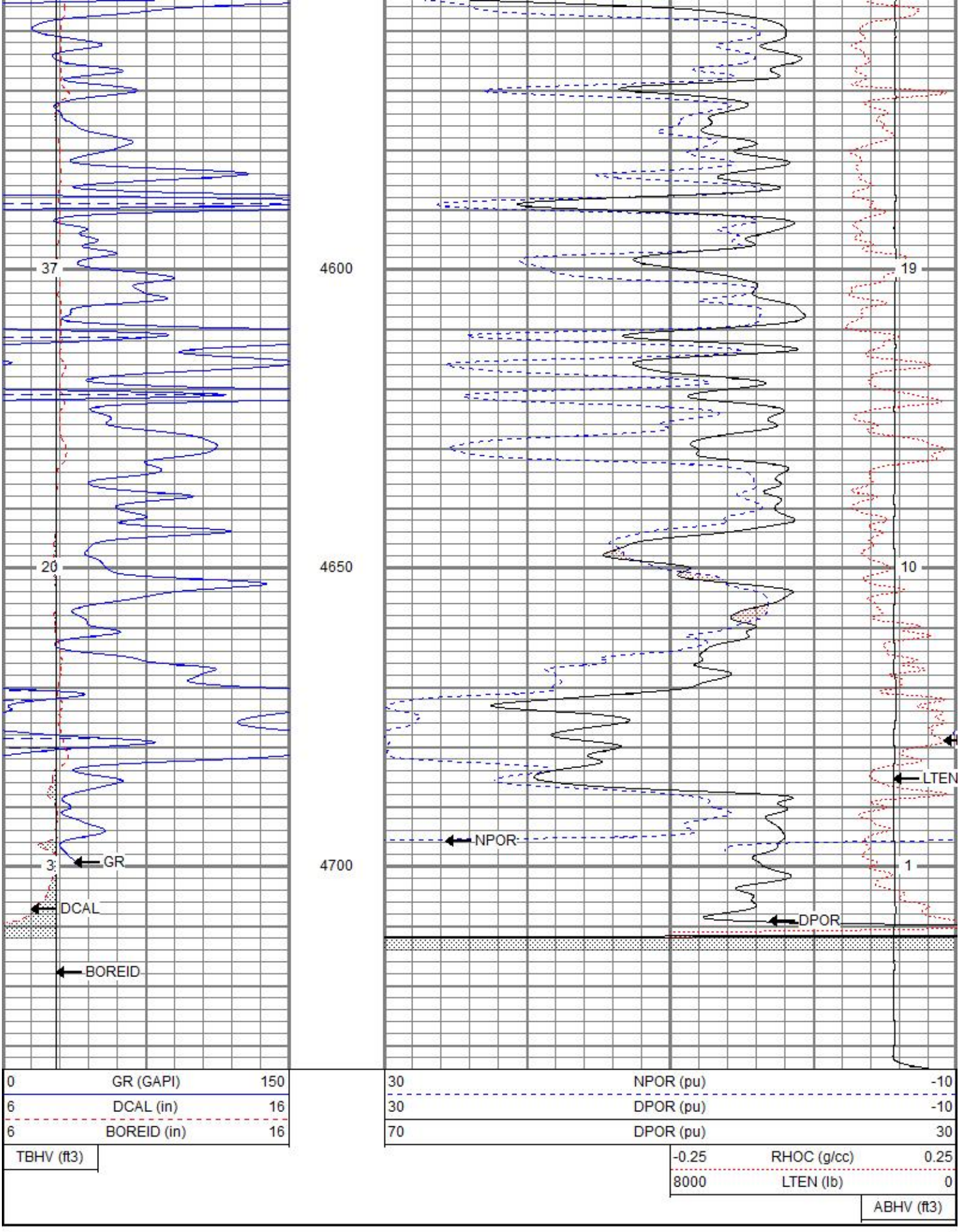


GEMINI

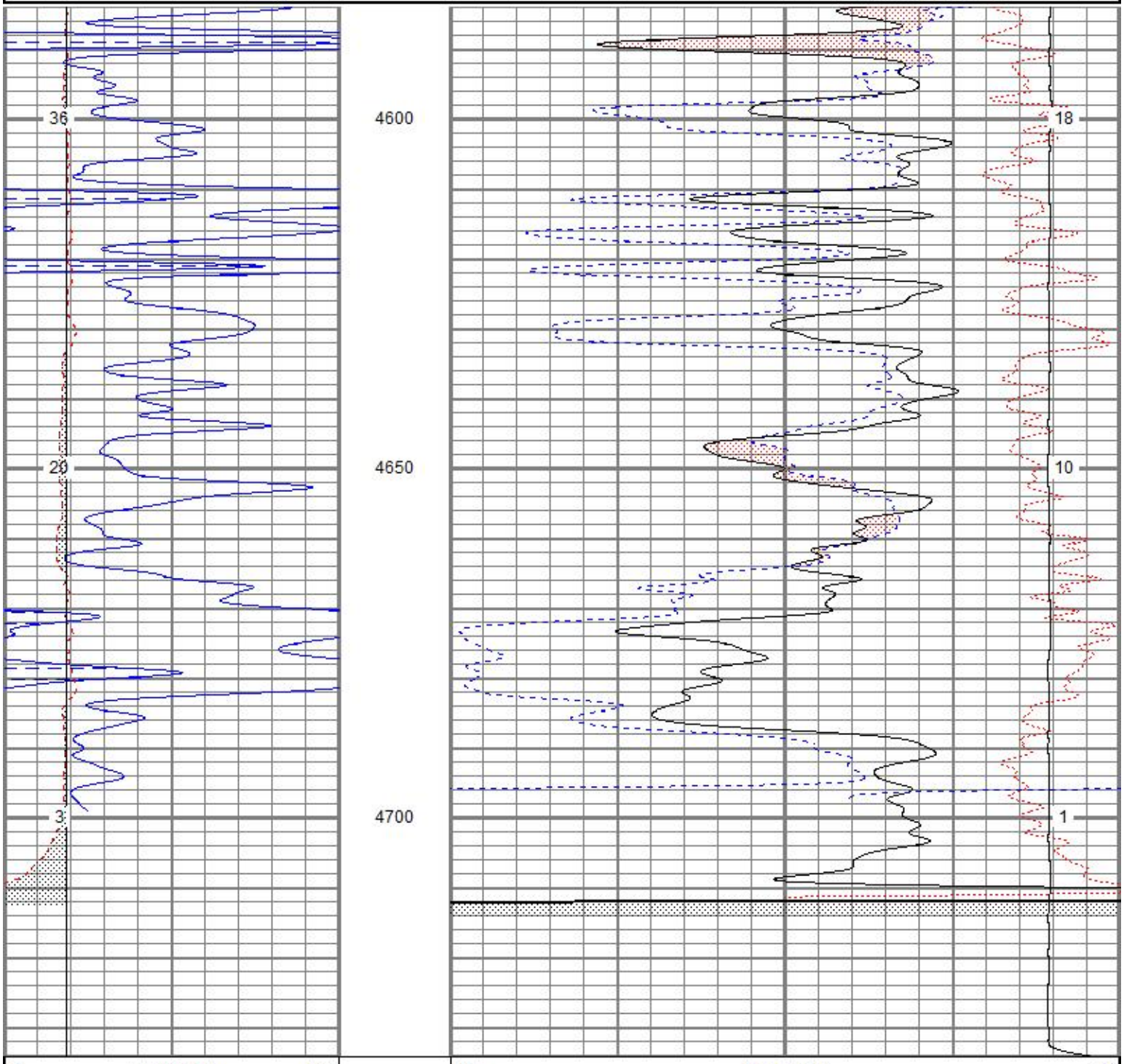
Repeat Pass

Repeat Pass

Database File	bewilliez#1oh.db
Dataset Pathname	pass1.1
Presentation Format	kcdnl
Dataset Creation	Wed May 04 02:43:08 2016
Charted by	Depth in Feet scaled 1:240

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

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)	



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)

Calibration Report

Database File bewilliez#1oh.db
Dataset Pathname pass1.1
Dataset Creation Wed May 04 02:43:08 2016

Dual Induction Calibration Report

Serial-Model: 080522-Probe
Surface Cal Performed: Mon Mar 14 11:26:37 2016
Downhole Cal Performed: Mon Mar 14 11:26:40 2016
After Survey Verification Performed: Mon Mar 14 11:26:42 2016

Surface Calibration

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	-0.040	0.651	V	0.000	400.000	mmho/m	578.981	22.871
Medium	-0.028	0.742	V	0.000	464.000	mmho/m	602.582	16.690
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	-0.016	0.653	V	0.000	400.000	mmho/m	598.311	9.396
Medium	-0.025	0.747	V	0.000	464.000	mmho/m	601.262	14.808

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	6.834	401.088	mmho/m	13.778	400.855	mmho/m	0.982	7.068
Medium	-2.964	468.230	mmho/m	1.850	466.869	mmho/m	0.987	4.775
LL3		7.145	V		750.000	Ohm-m		
		0.016	V		12.000	Ohm-m		
		-7.248	V		3745.000	mmho-m		

After Survey Verification

	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	6.834	401.088	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	-2.964	468.230	mmho/m	1.000	0.000
LL3		0.000	Ohm-m		750.000	Ohm-m		
		0.000	Ohm-m		12.000	Ohm-m		
		0.000	mmho-m		3745.000	mmho-m		

Compensated Density Calibration Report

Serial-Model: 2501DHT-DHT
Source / Verifier: csv-j12 /
Master Calibration Performed: Thu Jan 21 09:35:41 2016
Before Survey Verification Performed:
After Survey Verification Performed:

Master Calibration

	Density		Far Detector	Near Detector	
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

Size	Reading

Small Ring	7.70	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	
	g/cc		g/cc
	g/cc		g/cc
	g/cc		g/cc

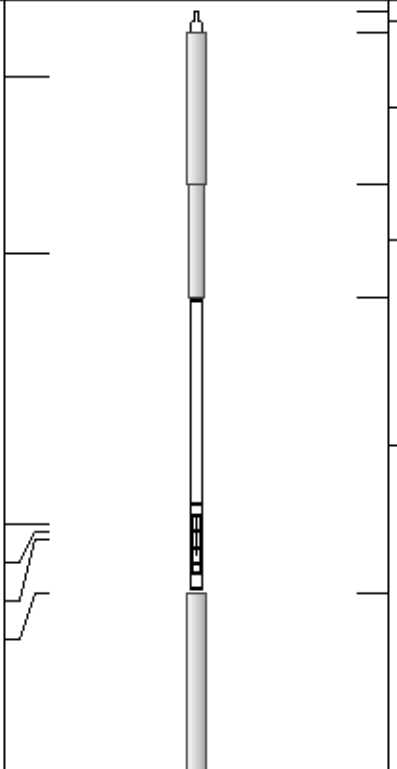
Gamma Ray Calibration Report

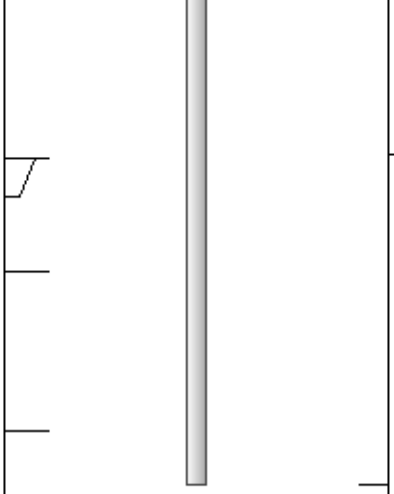
Serial Number:	2000	
Tool Model:	P2000	
Performed:	Sun Dec 13 16:43:47 2015	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.2200	GAPI/cps

Neutron Calibration Report

Serial Number:	5108	
Tool Model:	PROBE	
Performed:	Thu Jan 21 09:36:17 2016	
Calibrator Value:	1	NAPI
Calibrator Reading:	1	cps
Sensitivity:	1	NAPI/cps

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			CHD-None	0.75	1.50	5.00
NEU	38.37		NEU-PROBE (5108) Probe	4.92	3.63	85.00
GR	32.57		GR-P2000 (2000)	3.67	3.25	40.00
			CDL-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 CILD CILM RLL3	10.60 10.60 6.89 1.70		DIL-Probe (080522) Probe Dual Induction	21.47	4.00	345.00

Dataset:	bewilliez#1oh.db: field/well/run1/pass1.1
Total length:	40.49 ft
Total weight:	676.00 lb
O.D.:	4.00 in