



Dual Compensated Porosity Log

Pioneer Energy Services

API No.

15-167-23941-00-00

Company Brungardt Oil and Leasing, Inc.

Well Miller #1

Field Dreher

County Russell

State Kansas

Location

1370' FSL & 860' FEL

Other Services
DIL
MEL/BHCS

Sec: 22

Twp: 11S

Rge: 15W

Permanent Datum Ground Level Elevation 1849

Log Measured From Kelly Bushing 5 Ft. Above Perm. Datum

Drilling Measured From Kelly Bushing

K.B. 1854
D.F.
G.L. 1849

Date 10/20/2014

Run Number One

Type Log CNL / CDL

Depth Driller 3390

Depth Logger 3387

Bottom Logged Interval 3366

Top Logged Interval 2350

Type Fluid In Hole Chemical

Salinity, PPM CL 8200

Density 9.2

Level Full

Max. Rec. Temp. F 110

Operating Rig Time 5 Hours

Equipment -- Location 91 Hays

Recorded By D. Schmidt

Witnessed By Roger Fisher

Borehole Record

Casing Record

Run No Bit From To Size Wgt. From To

One 12.25 00 218 8.625 23# 00 218

Two 7.875 218 TD

<<< Fold Here >>>

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.

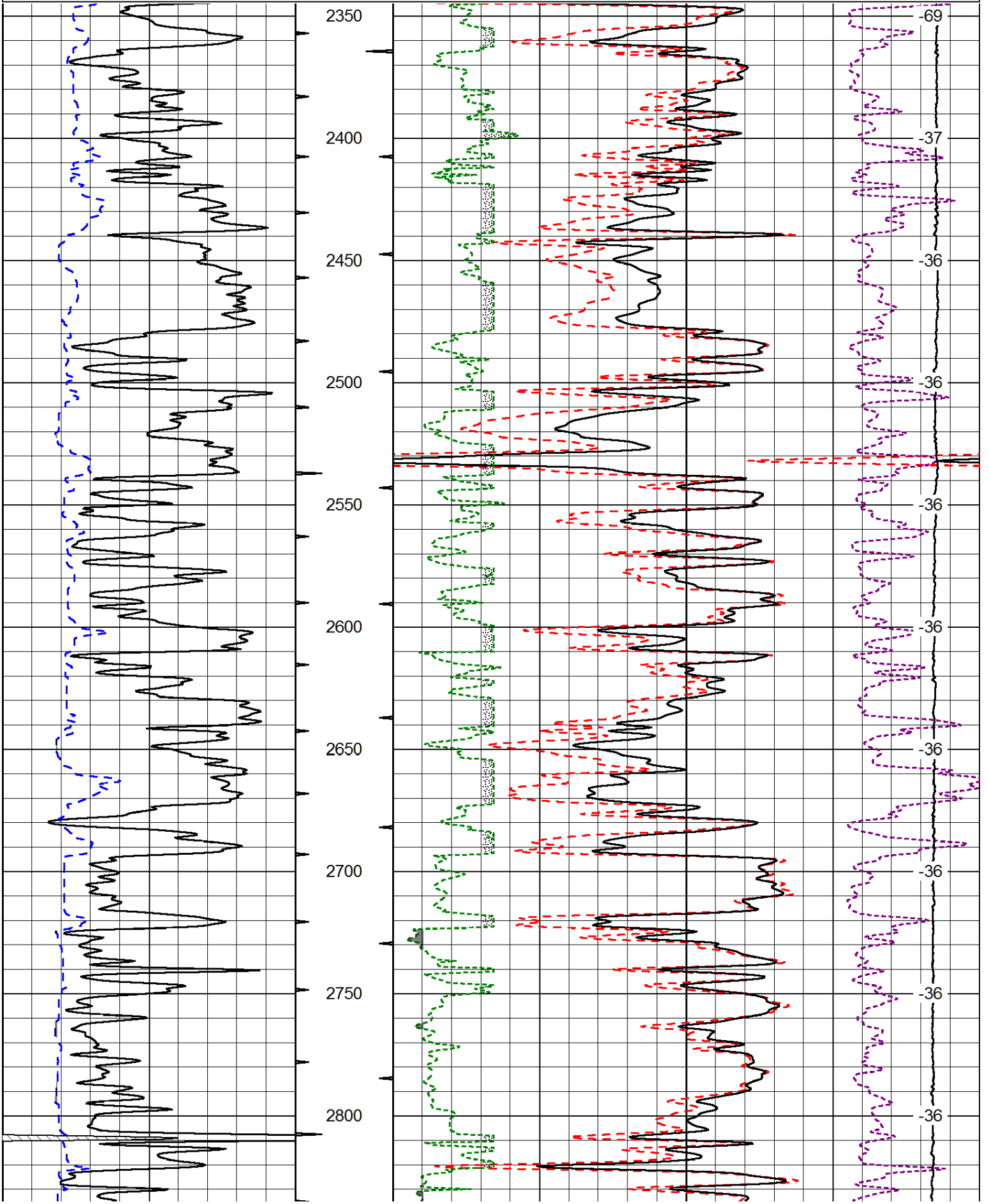
Comments

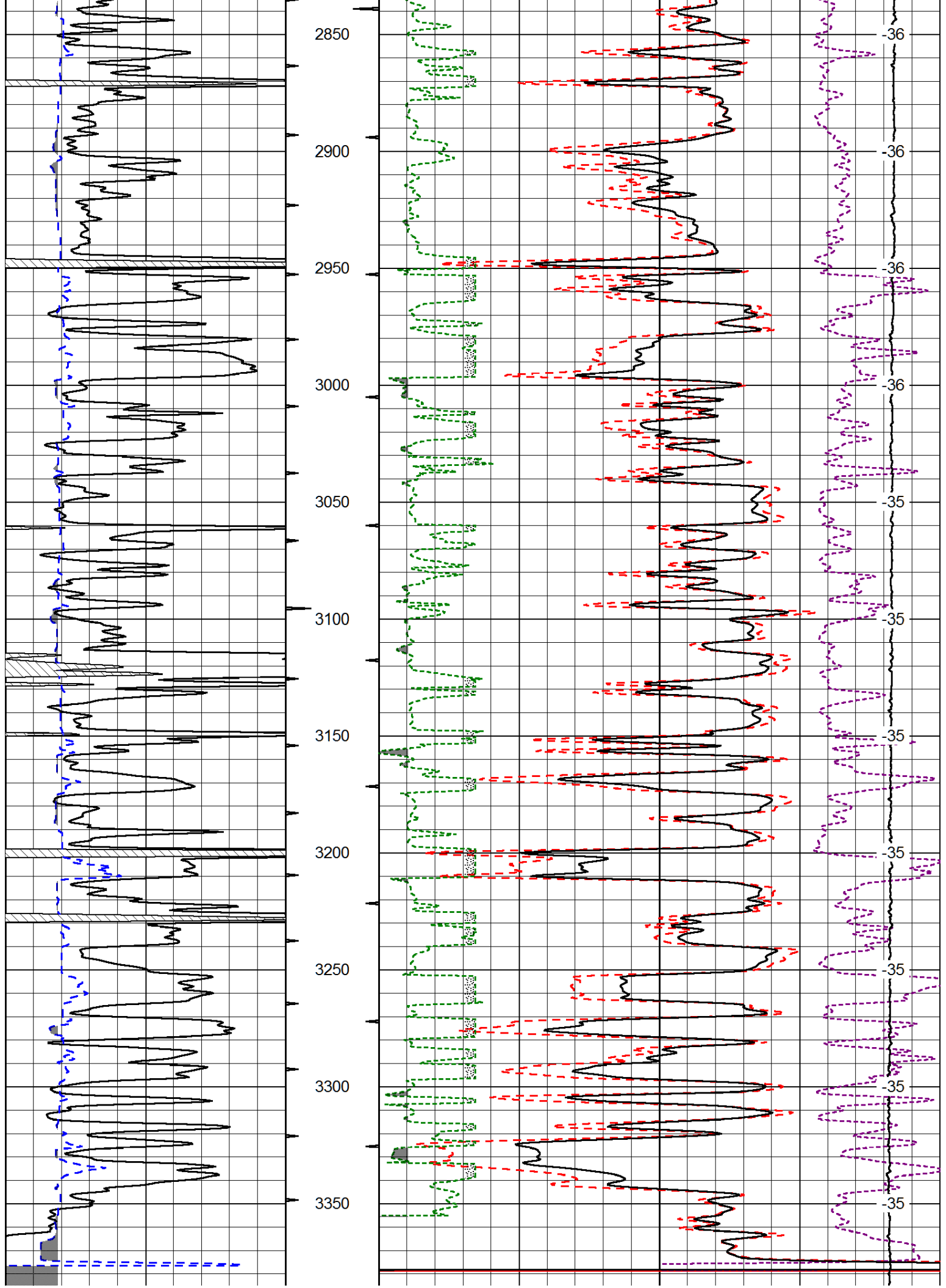
Thank you for using Log-Tech, Inc.
(785) 625-3858
Gorham,
1 East to 177th Rd,
North to Saline Lane,
1/2 East,
North to Fariview Rd, 1 East,
North Into

Database File: brungardt_miller_1hd.db
Dataset Pathname: dil/brstack
Presentation Format: cdl
Dataset Creation: Mon Oct 20 20:28:09 2014
Charted by: Depth in Feet scaled 1:600

0	Gamma Ray	150
6	Caliper (GAPI)	16

30	Compensated Density		-10
2	Bulk Density		3
15000	Line Tension		0
2.625	DGA	3.425	-0.25
Correction			0.25
LSPD			

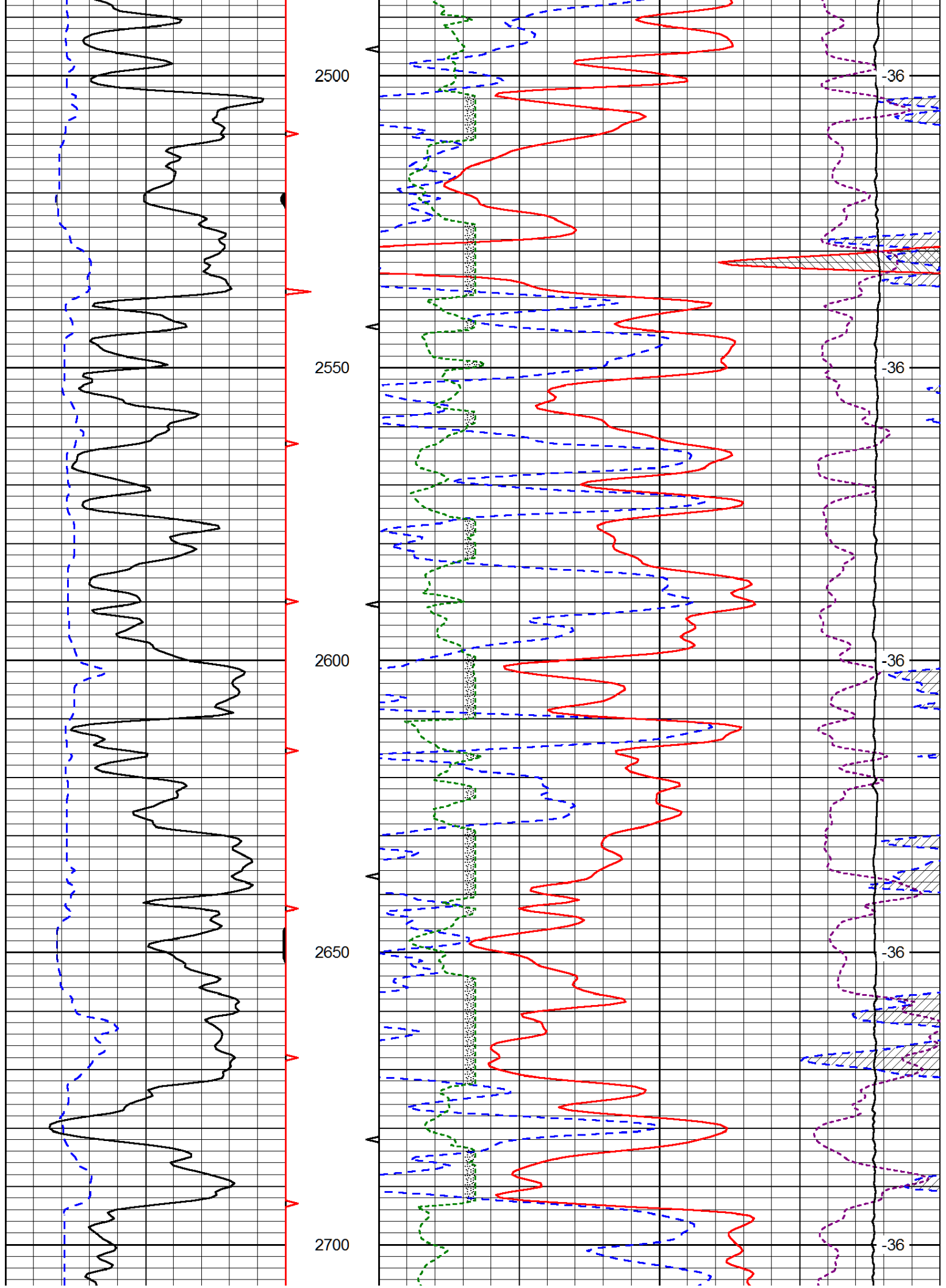


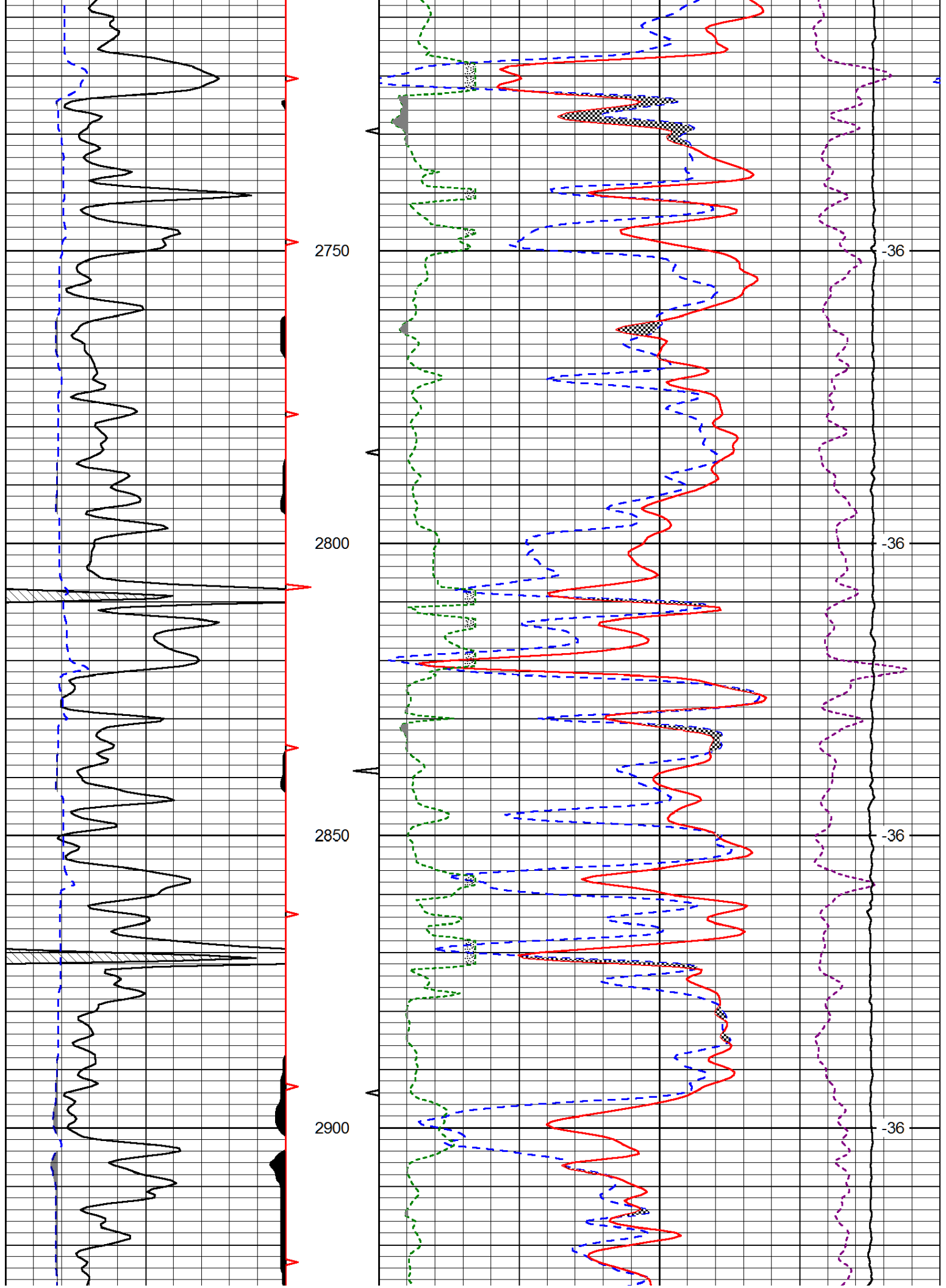


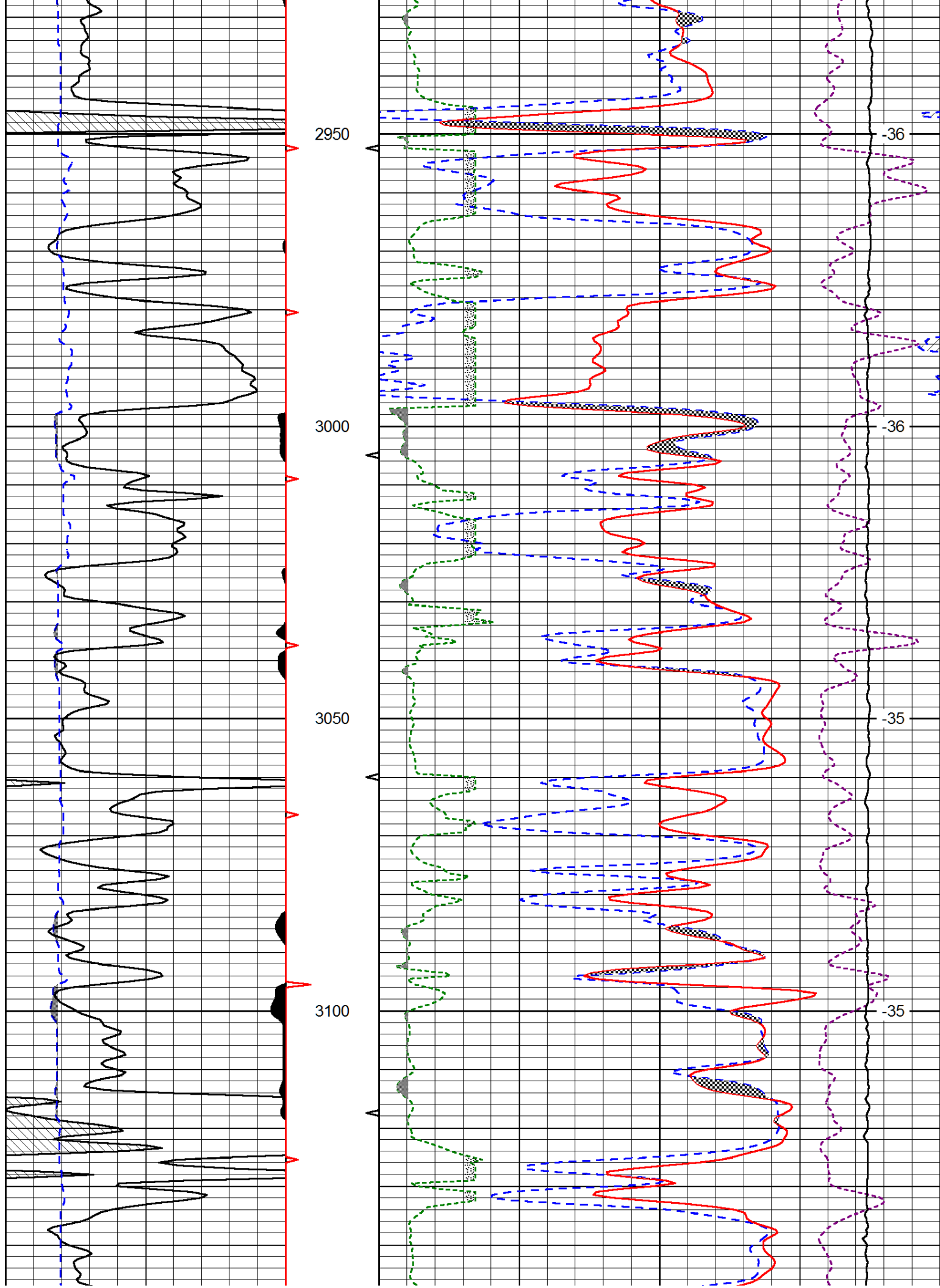
Database File:	brungardt_miller_1hd.db
Dataset Pathname:	dil/brstack
Presentation Format:	cnclspec
Dataset Creation:	Mon Oct 20 20:28:09 2014
Charted by:	Depth in Feet scaled 1:240

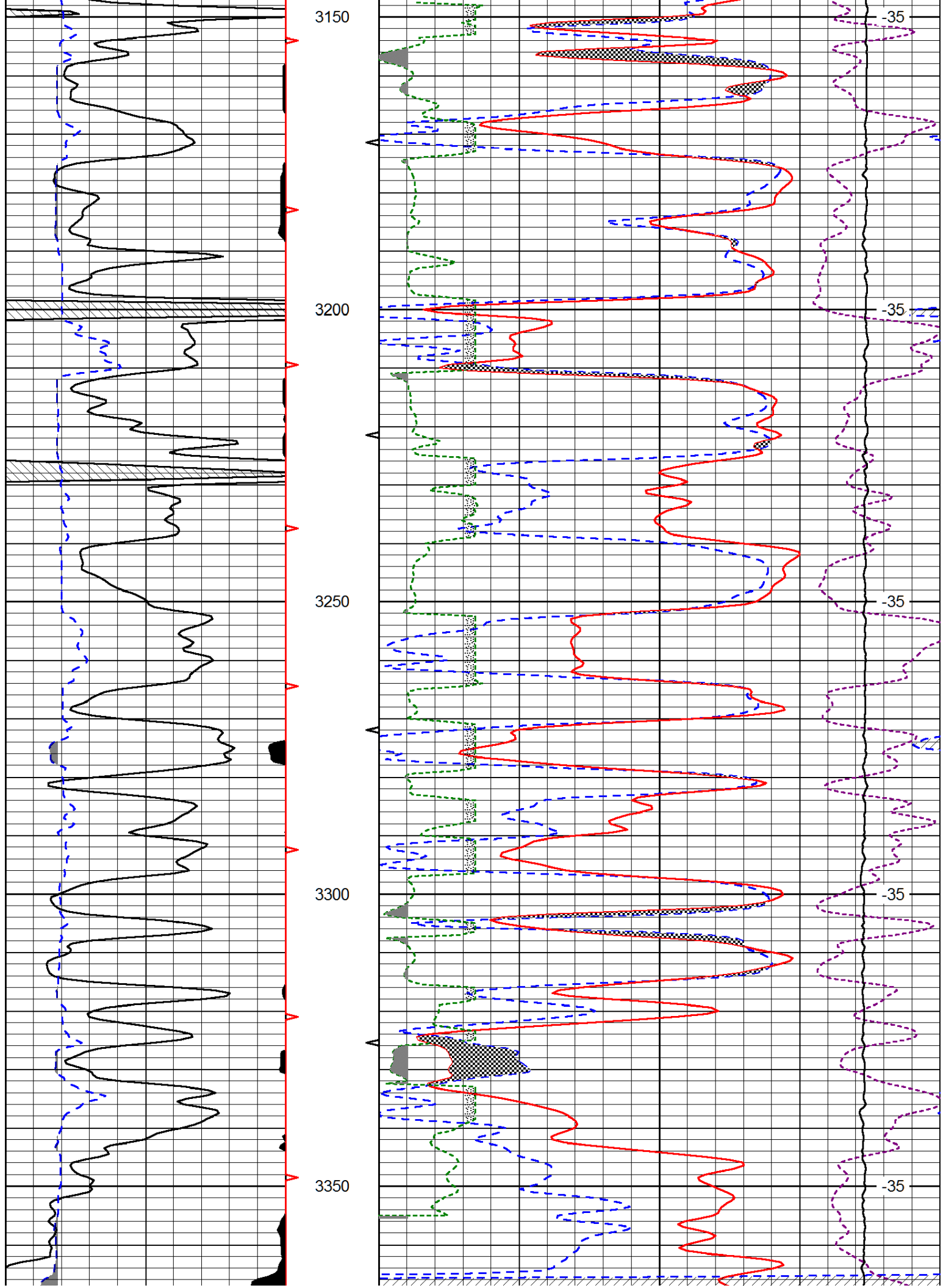
The figure consists of ten vertically stacked panels sharing a common x-axis representing depth from 0 to 2500 meters. The y-axis labels are 0, 500, 1000, 1500, 2000, and 2500. The panels show different physical quantities:

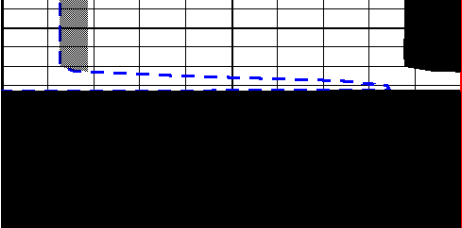
- Panel 1:** Depth vs. Time (yr) for 1980-2000. It shows a solid black line for the time series and a dashed blue line for a model or reference.
- Panel 2:** Depth vs. Temperature ($^{\circ}\text{C}$). It shows a solid red line for the temperature profile.
- Panel 3:** Depth vs. Salinity (psu). It shows a solid green line for the salinity profile.
- Panel 4:** Depth vs. Density (σ_t). It shows a solid blue line for the density profile.
- Panel 5:** Depth vs. Velocity (cm/s). It shows a solid purple line for the velocity profile.
- Panel 6:** Depth vs. Acceleration (g). It shows a solid black line for the acceleration profile.
- Panel 7:** Depth vs. Pressure (hPa). It shows a solid black line for the pressure profile.
- Panel 8:** Depth vs. Tidal Range (m). It shows a solid black line for the tidal range profile.
- Panel 9:** Depth vs. Tidal Current (cm/s). It shows a solid black line for the tidal current profile.
- Panel 10:** Depth vs. Tidal Phase (deg). It shows a solid black line for the tidal phase profile.



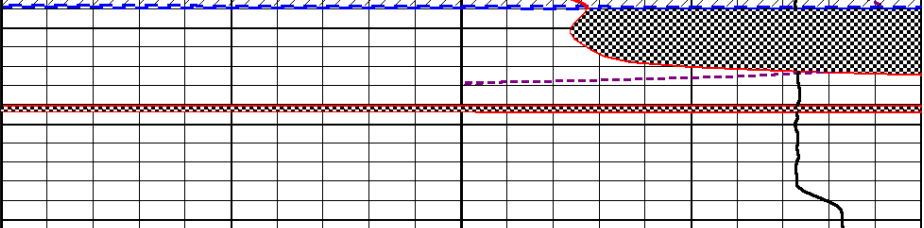








0	Gamma Ray	150
6	Caliper (GAPI)	16



30	CNLS				-10
30	Compensated Density (2.71 ma)				-10
2.625	DGA	3.425	-0.25	Correction	0.25
10000	Line Tension				0

LSPD
