



Dual Compensated Porosity Log

Pioneer Energy Services

API No.

15-145-21,750-00-00

Company **Castle Resources, Inc.**

Well **Harms No. 1**

Field **Oro**

County **Pawnee**

State **Kansas**

Location **2,310' FSL & 990' FWL**

Other Services
DIL/MEI

Sec: 10 Twp: 20S Rge: 19W

Permanent Datum Ground Level Elevation 2240
Log Measured From Kelly Bushing 5 Ft. Above Perm. Datum
Drilling Measured From Kelly Bushing

Elevation
K.B. 2245
D.F. 2245
G.L. 2240

Date 2/24/2014

Run Number One

Type Log CNL / CDL

Depth Driller 4275

Depth Logger 4275

Bottom Logged Interval 4254

Top Logged Interval 3550

Type Fluid In Hole Chemical

Salinity, PPM CL 7000

Density 9.5

Level Full

Max. Rec. Temp. F 119

Operating Rig Time 4 Hours

Equipment -- Location 108 Hays

Recorded By J. Long

Witnessed By Chris Bean

Borehole Record

Casing Record

Run No. Bit From To Size Wgt. From To

One 12.25 00 532 8.625 23# 00 532

Two 7.875 532 TD

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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

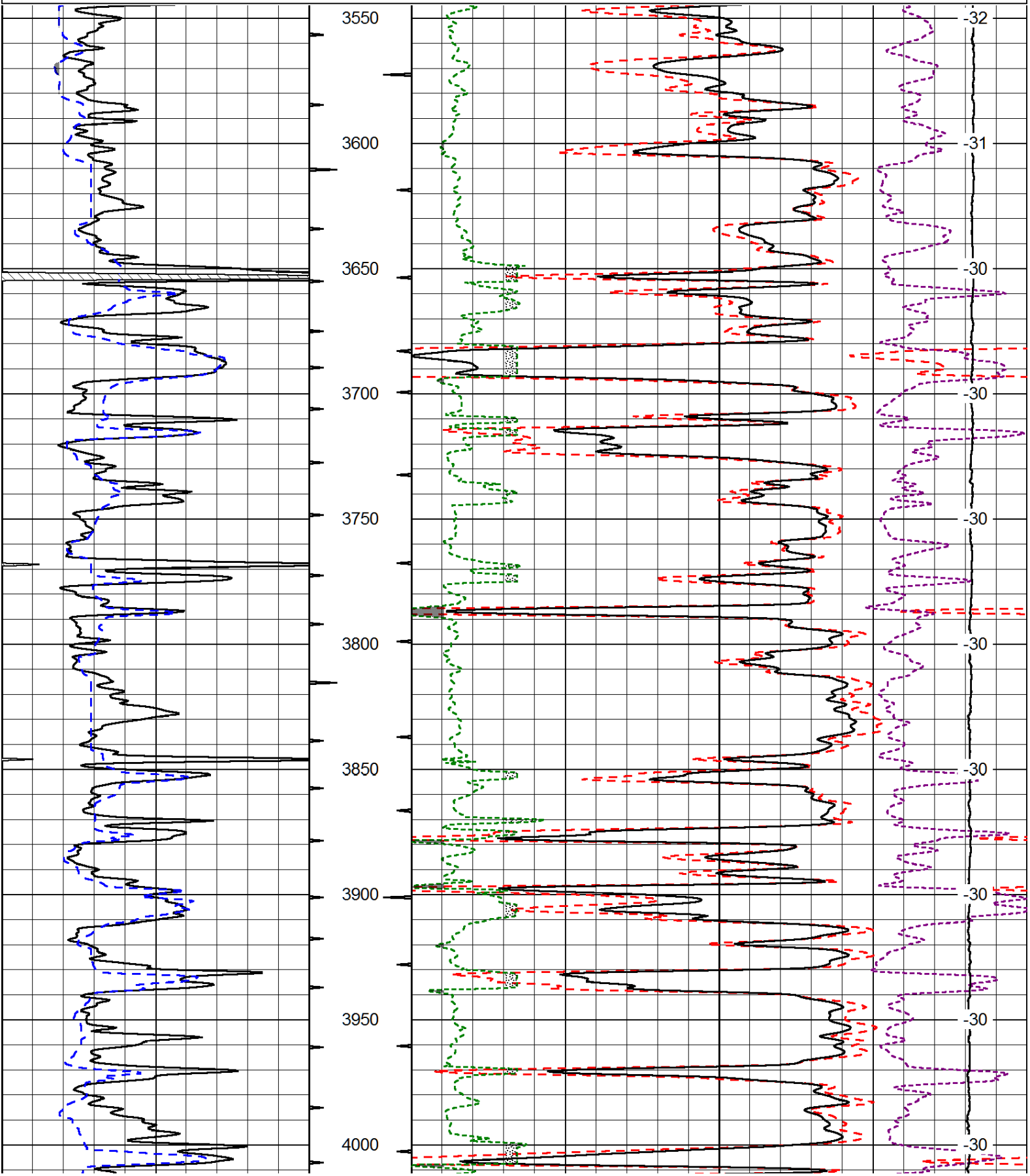
Thank you for using Log-Tech, Inc.
(785) 625-3858

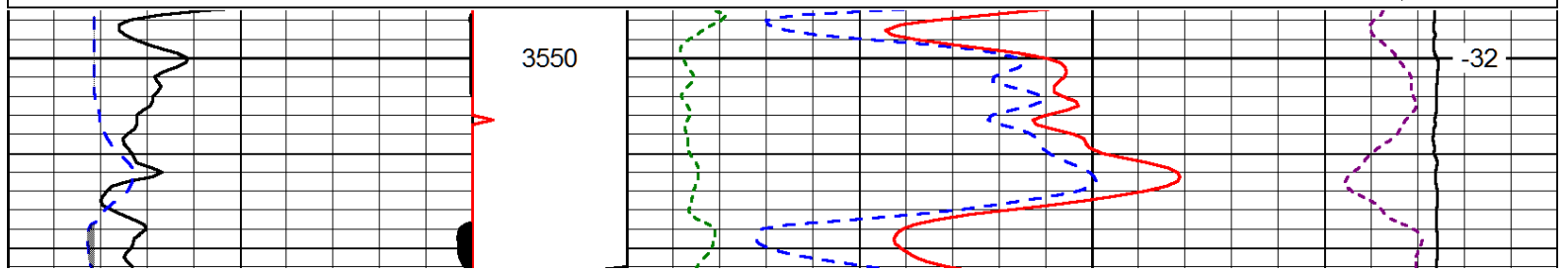
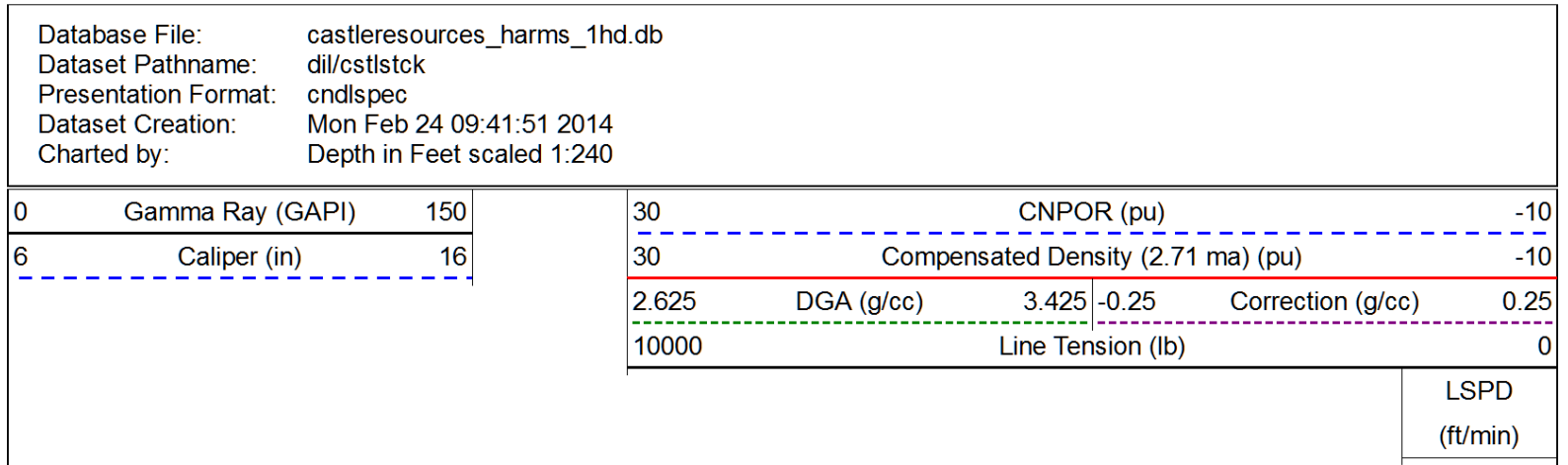
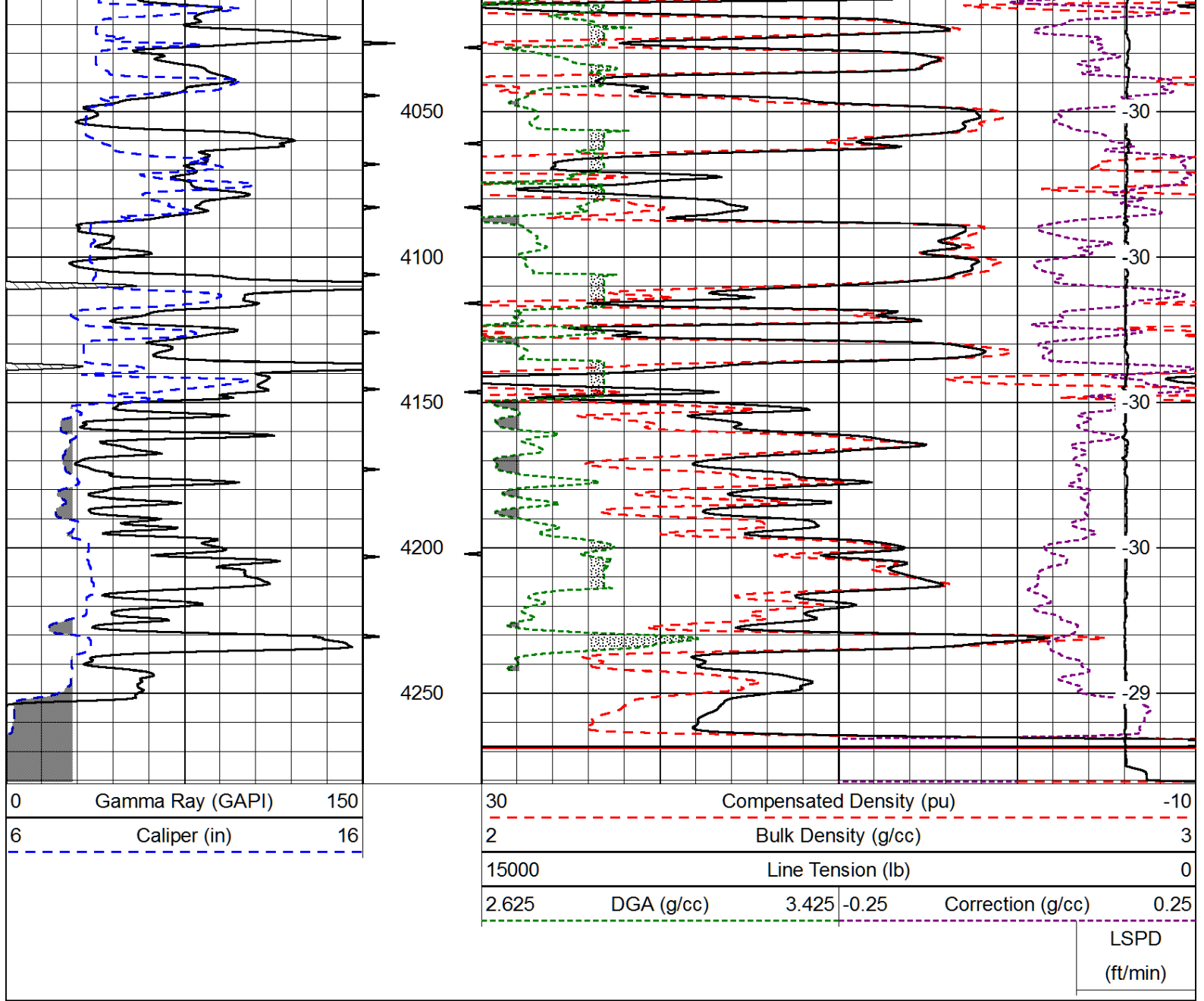
Rush Center, 10 1/2 South to X Road, 6 West, 1/2 North, East Into

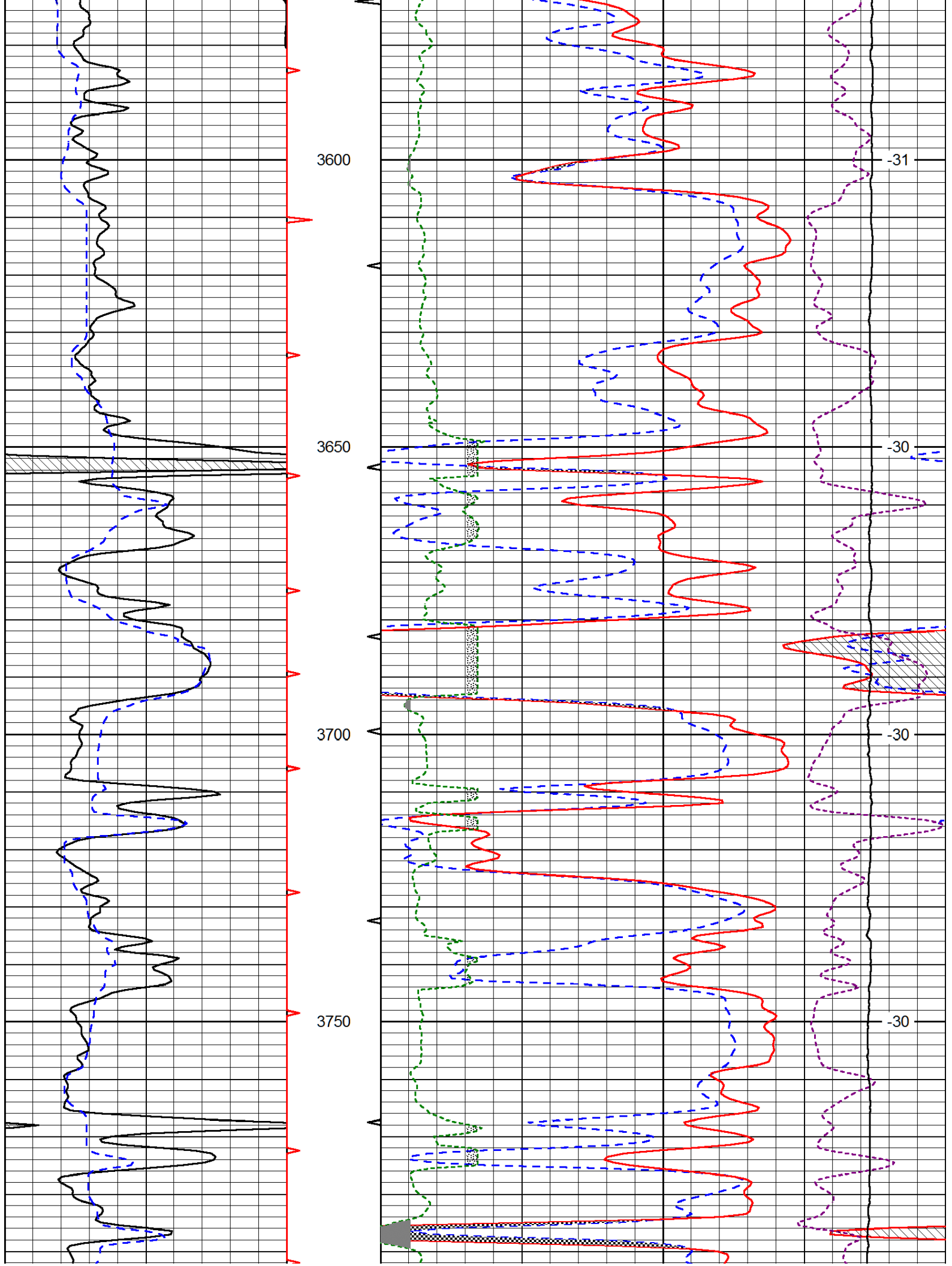
Database File: castleresources_harms_1hd.db
Dataset Pathname: dil/cstlstck
Presentation Format: cdl
Dataset Creation: Mon Feb 24 09:41:51 2014
Charted by: Depth in Feet scaled 1:600

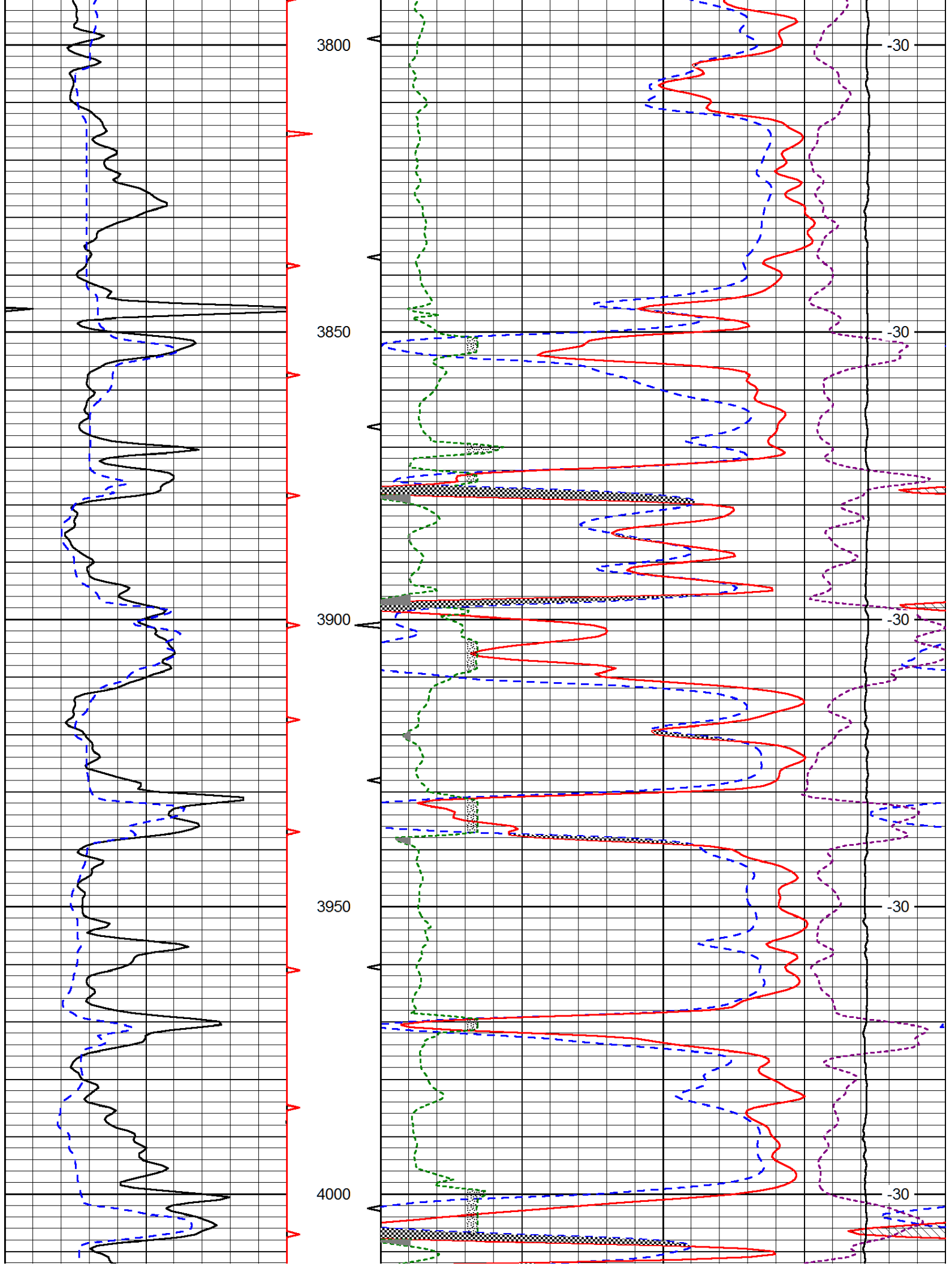
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16

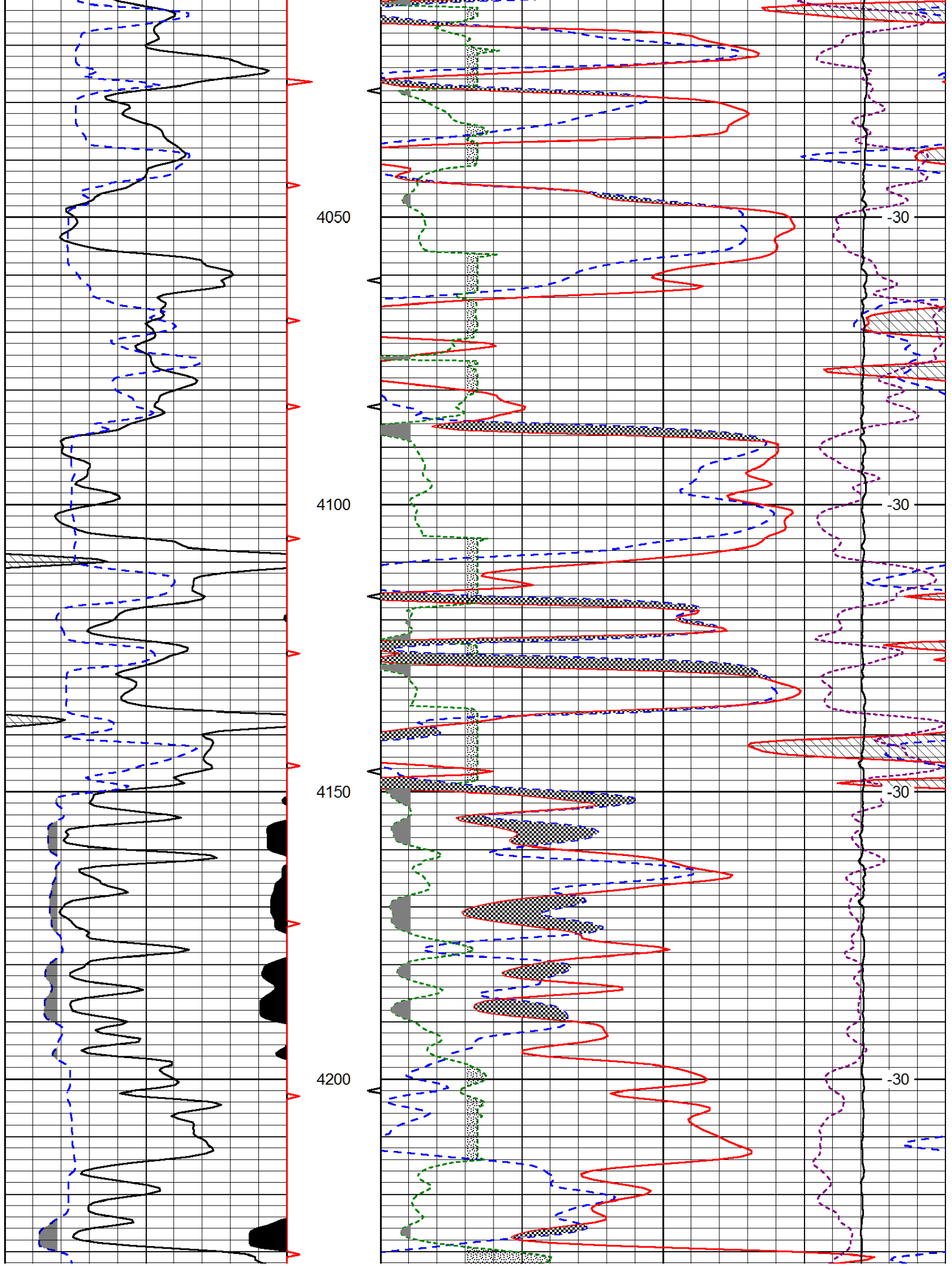
30	Compensated Density (pu)		-10
2	Bulk Density (g/cc)		3
15000	Line Tension (lb)		0
2.625	DGA (g/cc)	3.425	-0.25
	Correction (g/cc)		0.25
	LSPD		(ft/min)







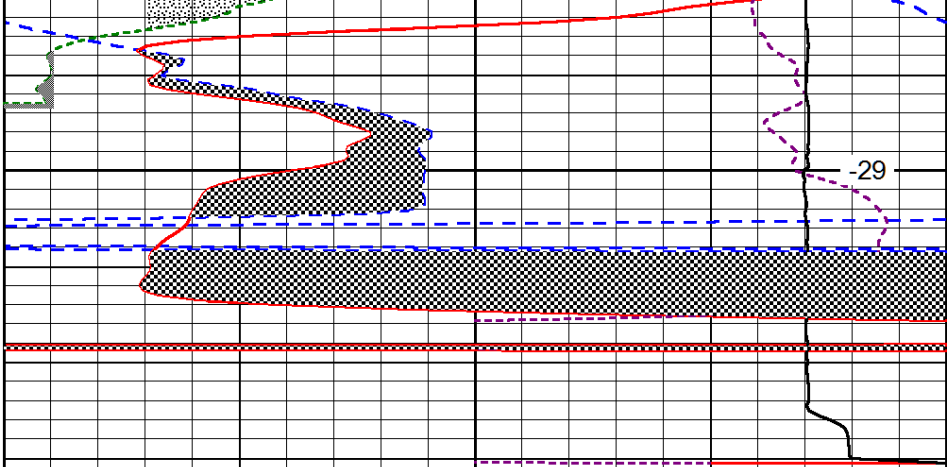






4250

0	Gamma Ray (GAPI)	150
6	Caliper (in)	16



-29

30	CNPOR (pu)		-10
30	Compensated Density (2.71 ma) (pu)		-10
2.625	DGA (g/cc)	3.425	-0.25
	Correction (g/cc)		0.25
10000	Line Tension (lb)		0

LSPD
(ft/min)