



Pioneer Energy Services

## Dual Compensated Porosity Log

API No.	15-065-23,965-00-00		
Company	H & C Oil Operating, Inc.		
Well	Griffith Unit No. 2 - 1		
Field	Wildcat		
County	Graham		
State	Kansas		
Location	990' FSL & 100' FWL		
Sec: 2	Tw: 8 S	Rge: 22 W	Other Services DIL MEI/BHCS
Permanent Datum	Ground Level	Elevation 2139	Elevation
Log Measured From	Kelly Bushing	8 Ft. Above Perm. Datum	K.B. 2147
Drilling Measured From	Kelly Bushing		D.F. G.L. 2139

Date	8/16/2013
Run Number	One
Type Log	CNL / CDL
Depth Driller	3770
Depth Logger	3771
Bottom Logged Interval	3750
Top Logged Interval	3000
Type Fluid In Hole	Chemical
Salinity, PPM CL	400
Density	9.0
Level	Full
Max. Rec. Temp. F	114
Operating Rig Time	5 Hours
Equipment -- Location	108 Hays
Recorded By	D. Martin
Witnessed By	Marc Downing

Borehole Record				Casing Record			
Run No.	Bit	From	To	Size	Wgt.	From	To
One	12.25	00	220	8.625	23#	00	220
Two	7.875	220	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

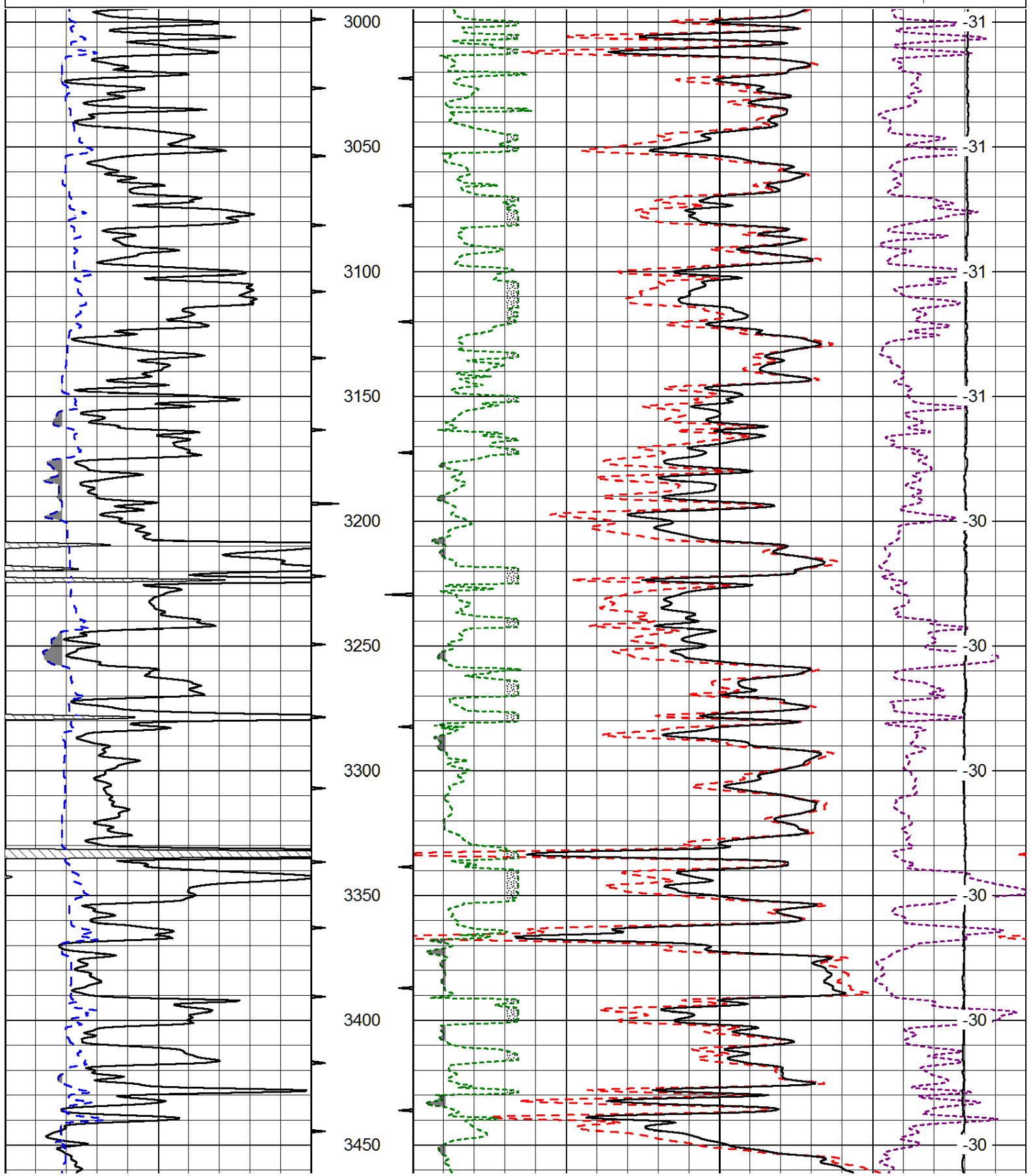
Bogue, KS  
N to Hwy 24, 3 W to 320 Rd.,  
1/4 N, E Into

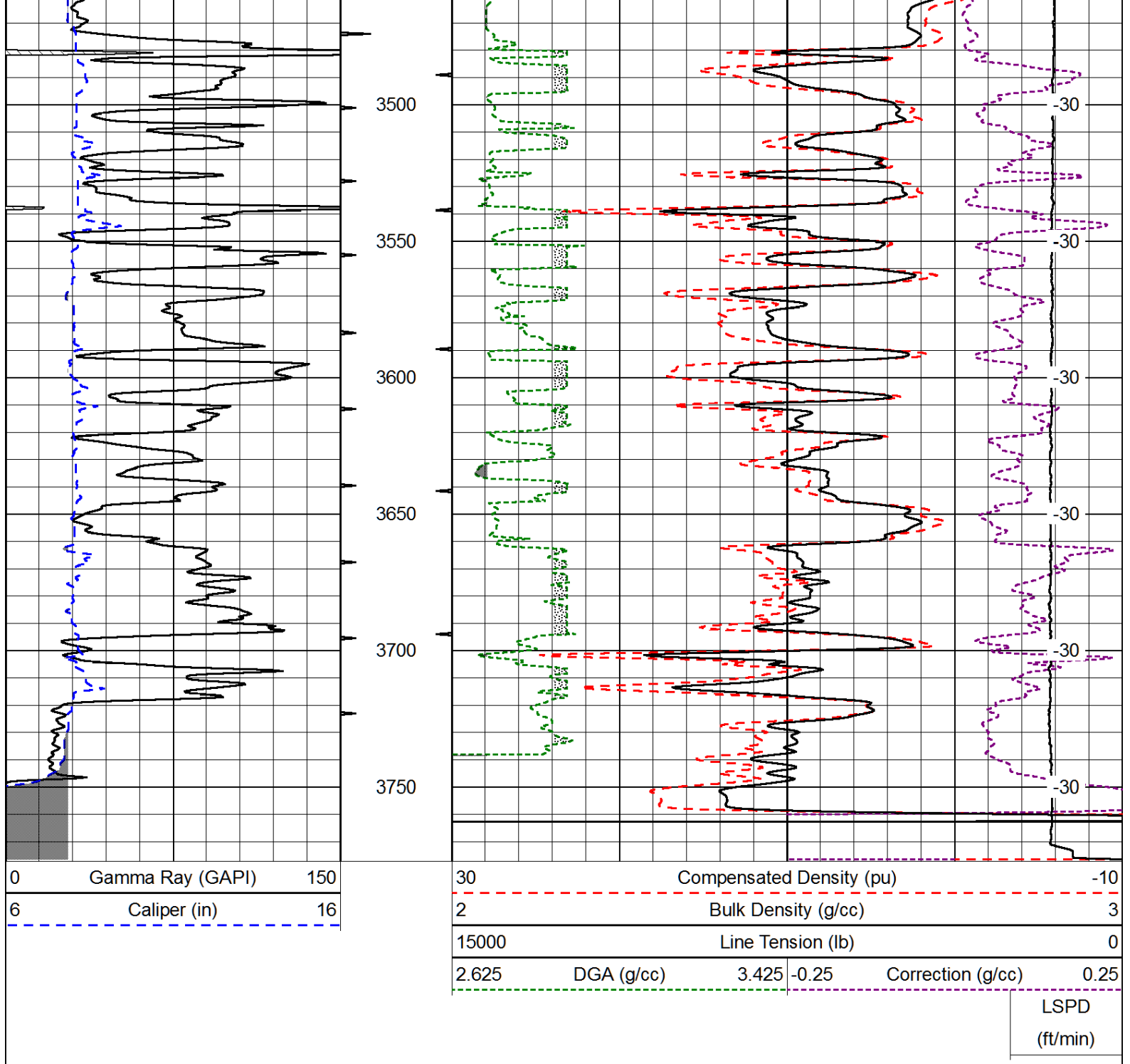
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 Dataset Pathname: dil/h&cstk  
 Presentation Format: cdl  
 Dataset Creation: Fri Aug 16 10:55:21 2013  
 Charted by: Depth in Feet scaled 1:600

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

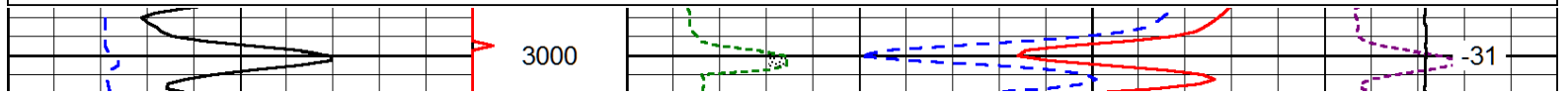
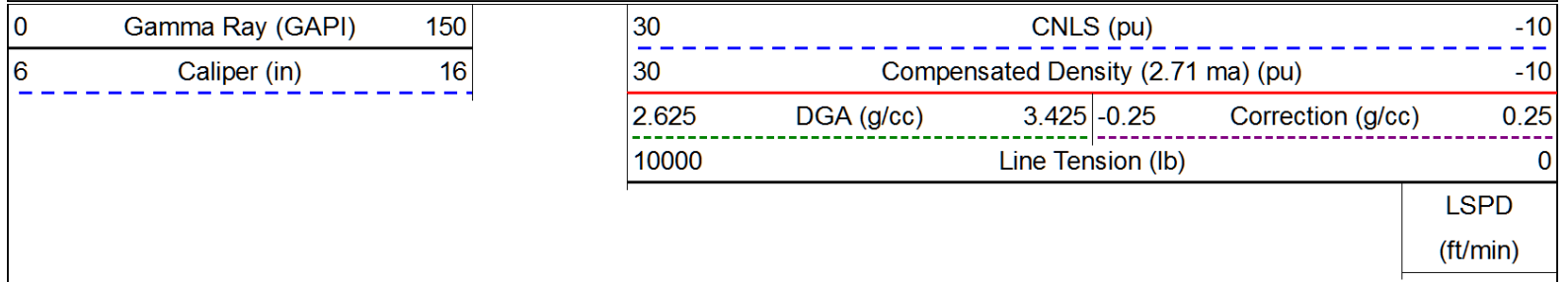
30	Compensated Density (pu)		-10
2	Bulk Density (g/cc)		3
15000	Line Tension (lb)		0
2.625	DGA (g/cc)	3.425	-0.25
		Correction (g/cc)	0.25

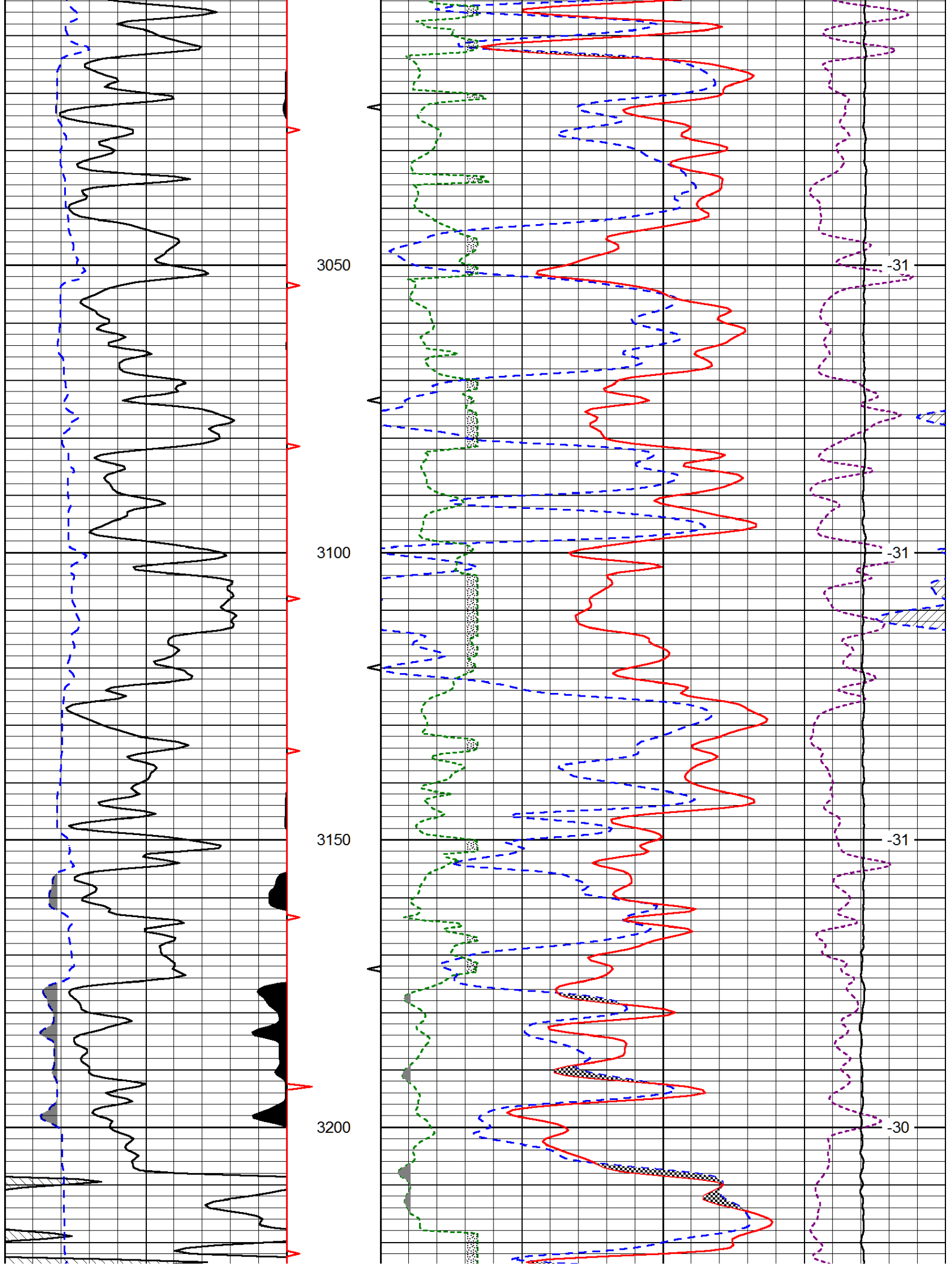
LSPD  
(ft/min)

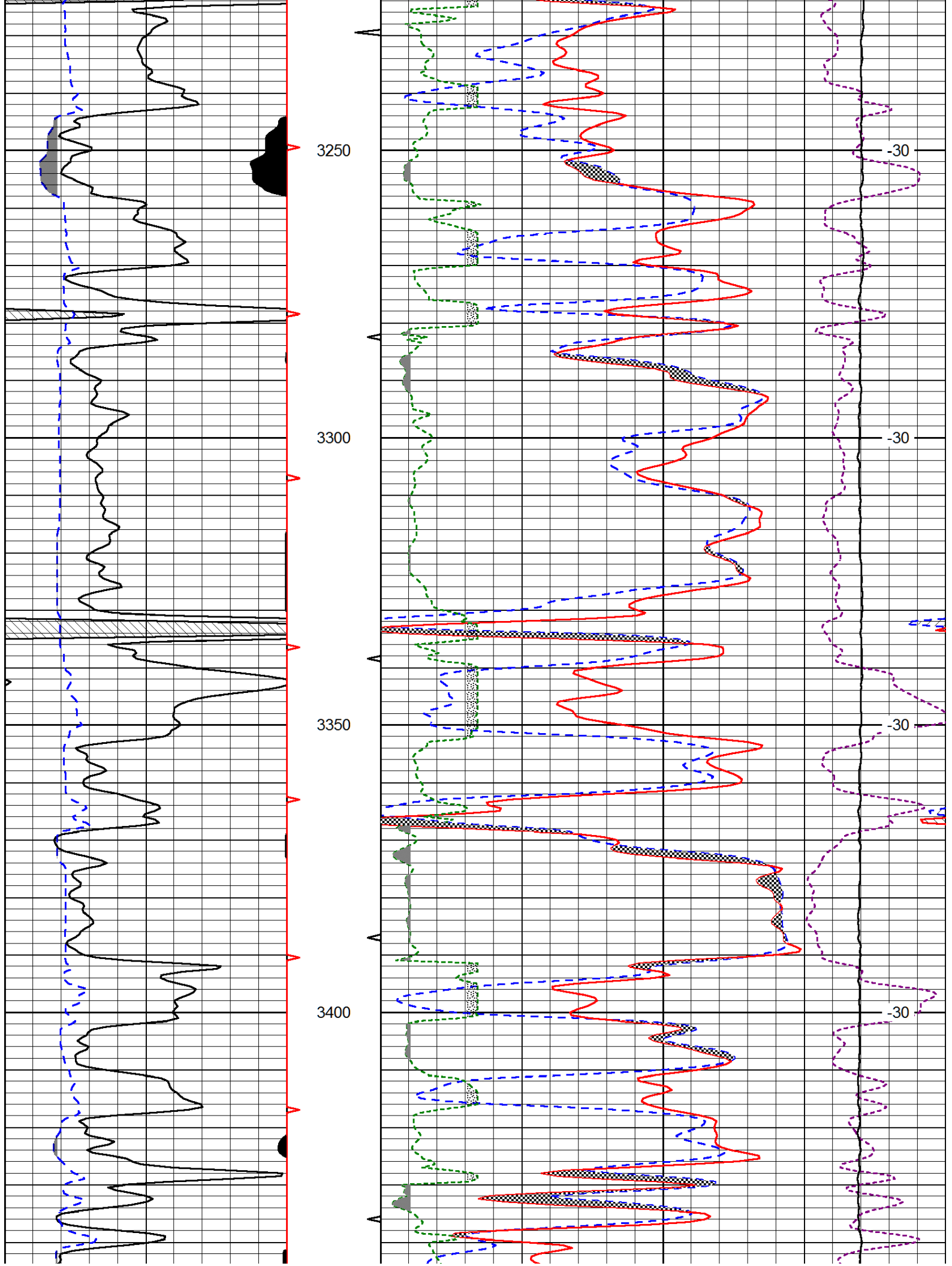


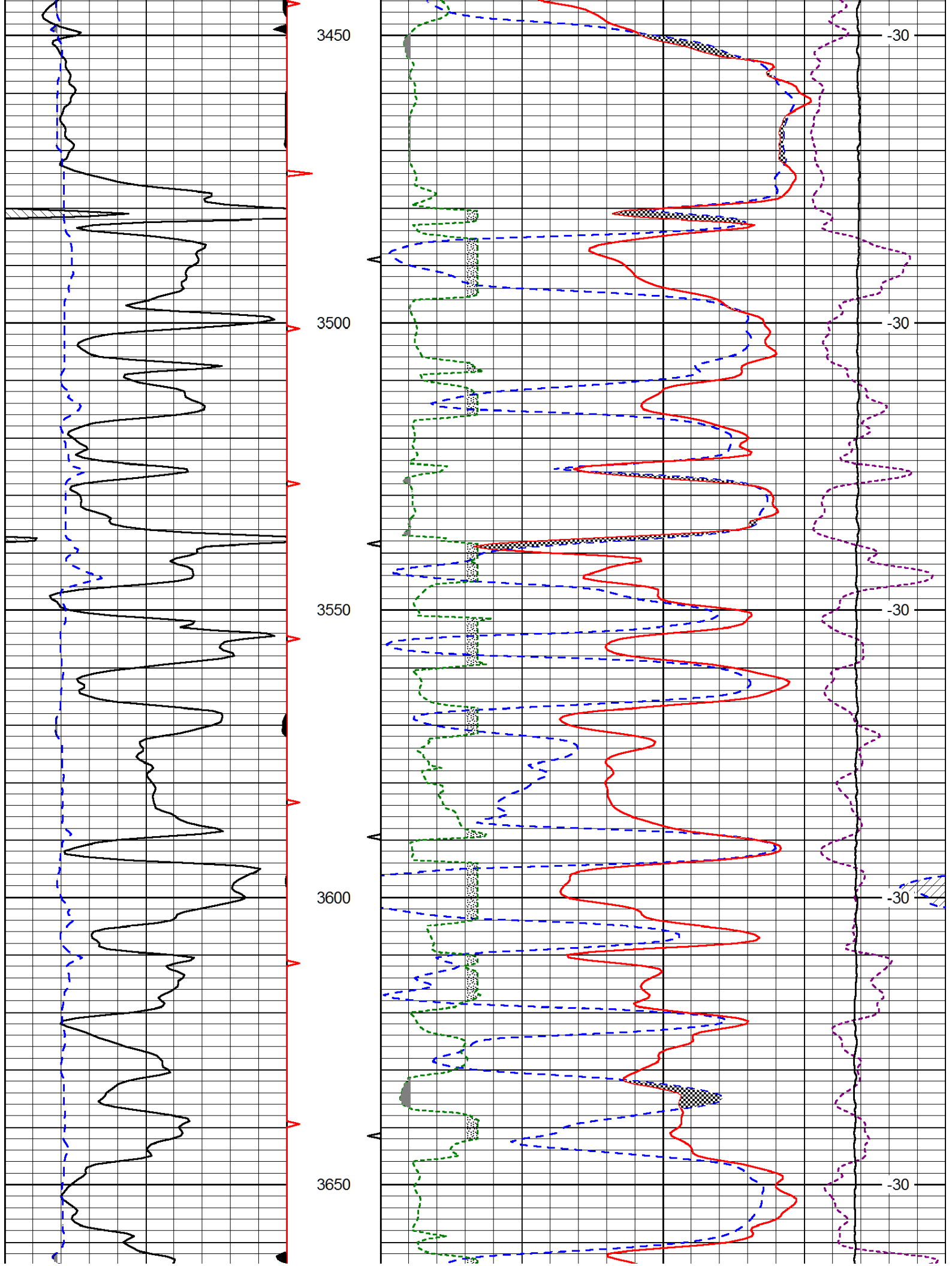


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 Dataset Pathname: dil/h&cstk  
 Presentation Format: cndlspec  
 Dataset Creation: Fri Aug 16 10:55:21 2013  
 Charted by: Depth in Feet scaled 1:240





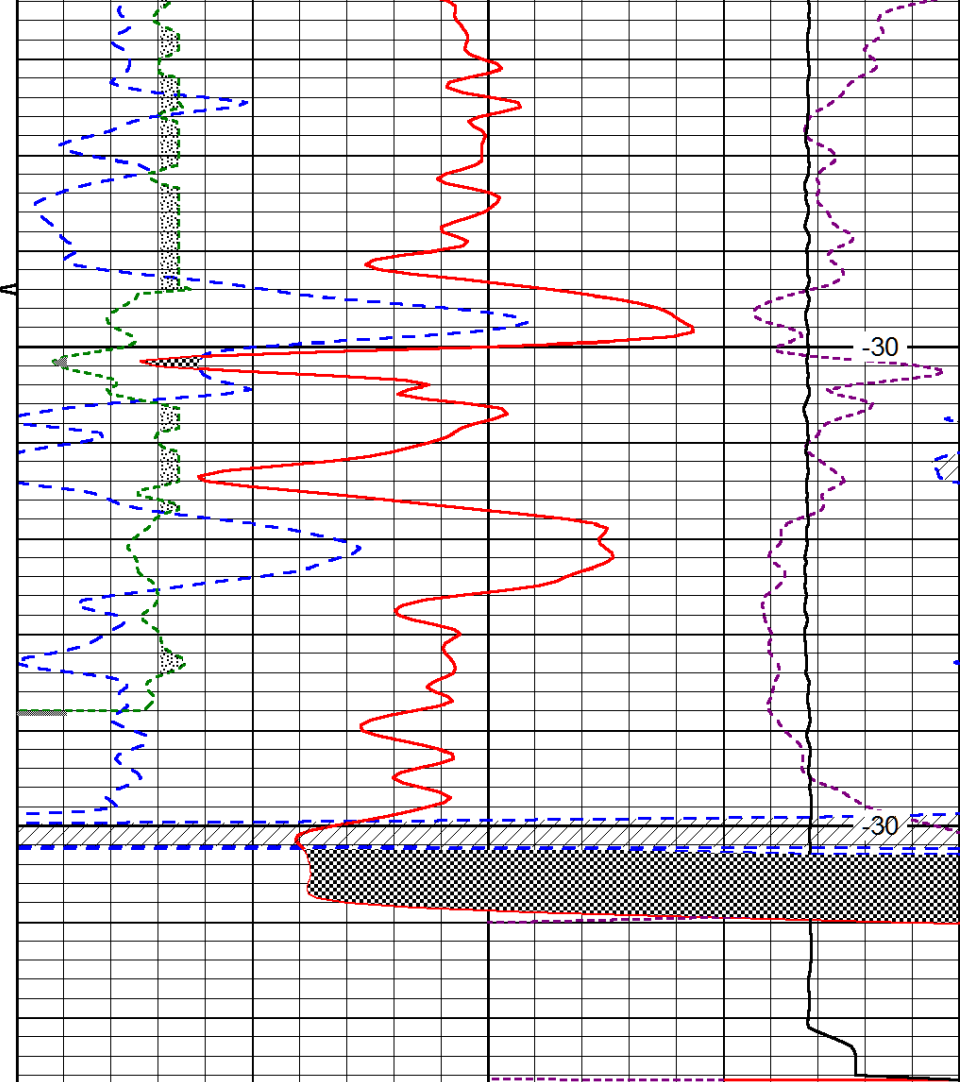






3700

3750



-30

-30

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

30	CNLS (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)