

PIONEER

**DUAL COMP POROSITY
LOG**

Pioneer Energy Services

Company RANGE OIL COMPANY, INC. Well JACOBSON NO. 2 Field PANTHER RANCH SW County CHASE State KANSAS		Company RANGE OIL COMPANY, INC. Well JACOBSON NO. 2 Field PANTHER RANCH SW County CHASE State KANSAS		Location: API #: 15-017-20,923-00-00 2,350' FNL & 2,195' FWL SEC 31 TWP 19S RGE 6E Permanent Datum GROUND LEVEL Elevation 1462' Log Measured From KELLY BUSHING Drilling Measured From KELLY BUSHING		Other Services DIL/MEL K.B. 1468' D.F. N/A G.L. 1462'	
Date	8/21/2015						
Run Number	ONE						
Type Log	CNL/CDL						
Depth Driller	2326'						
Depth Logger	2322'						
Bottom Logged Interval	2301'						
Top Logged Interval	1300'						
Type Fluid In Hole	CHEMICAL						
Salinity, PPM CL	1300						
Density	9.3						
Level	FULL						
Max. Rec. Temp. F	99						
Operating Rig Time	3 1/2 HOURS						
Equipment -- Location	108 Hays						
Recorded By	J. LONG						
Witnessed By	KEN WALLACE						
Borehole Record		Casing Record					
Run No.	Bit	From	To	Size	Wgt.	From	To
ONE	12.25	00	210	8.625	23#	00	210
TWO	7.875	210	TD				

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All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not 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.

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

 MARION, EAST TO HIGHWAY 56/77 AND HIGHWAY 150 INTERSECTION, 8 1/4 EAST, SOUTH INTO

Log Measured From: KELLY BUSHING
 6 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES
 www.pioneerres.com
 785-625-3858

Your Pioneer Energy Services Crew

Engineer: J. LONG
 Operator:
 Operator:
 Operator:

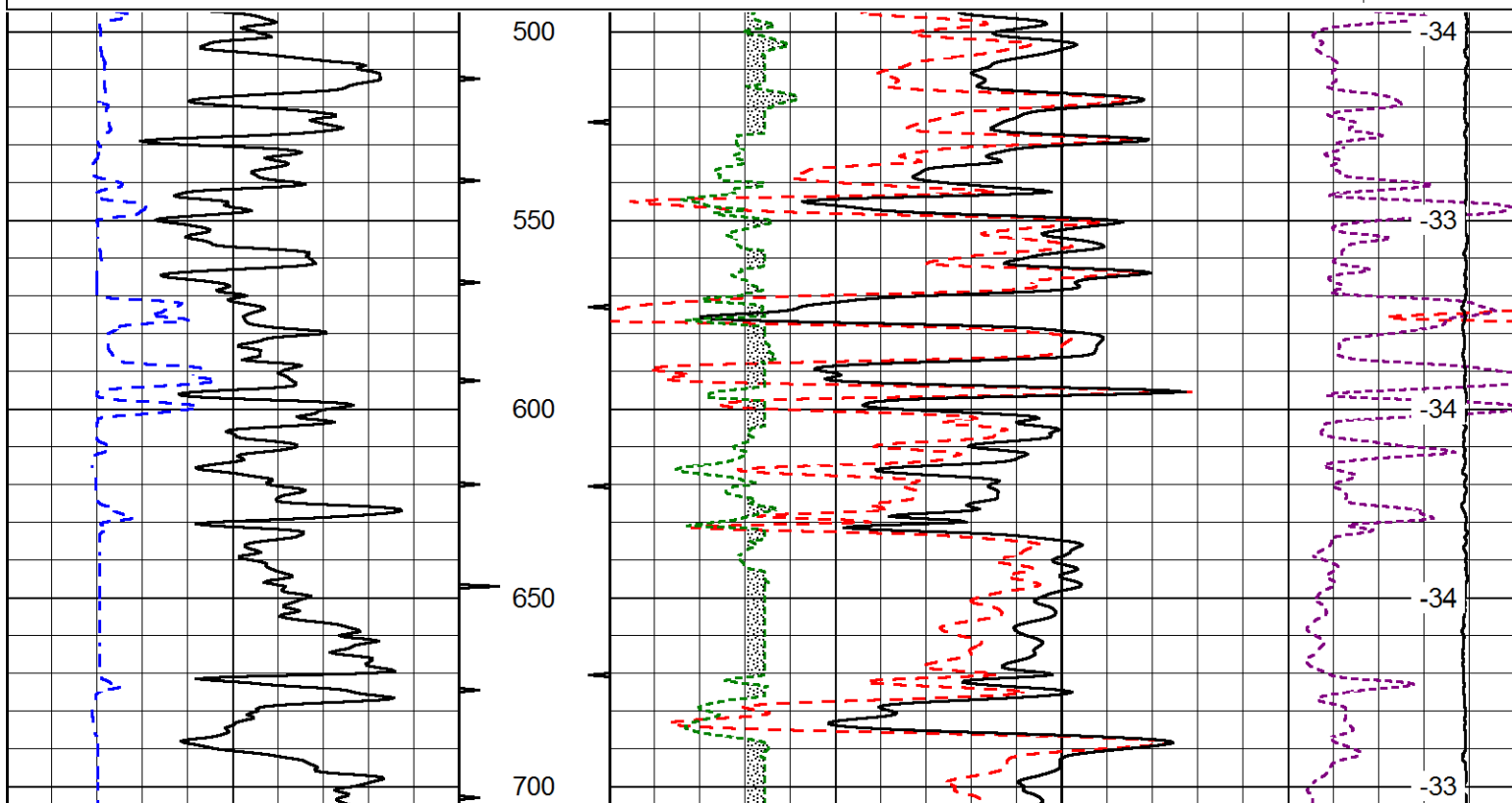
This Log Record Was Witnessed By

Primary Witness: KEN WALLACE
 Secondary Witness:
 Secondary Witness:
 Secondary Witness:

Database File rangeoil_jacobson_2hd.db
Dataset Pathname DIL/rangstck
Presentation Format cdl
Dataset Creation Fri Aug 21 12:47:31 2015
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)



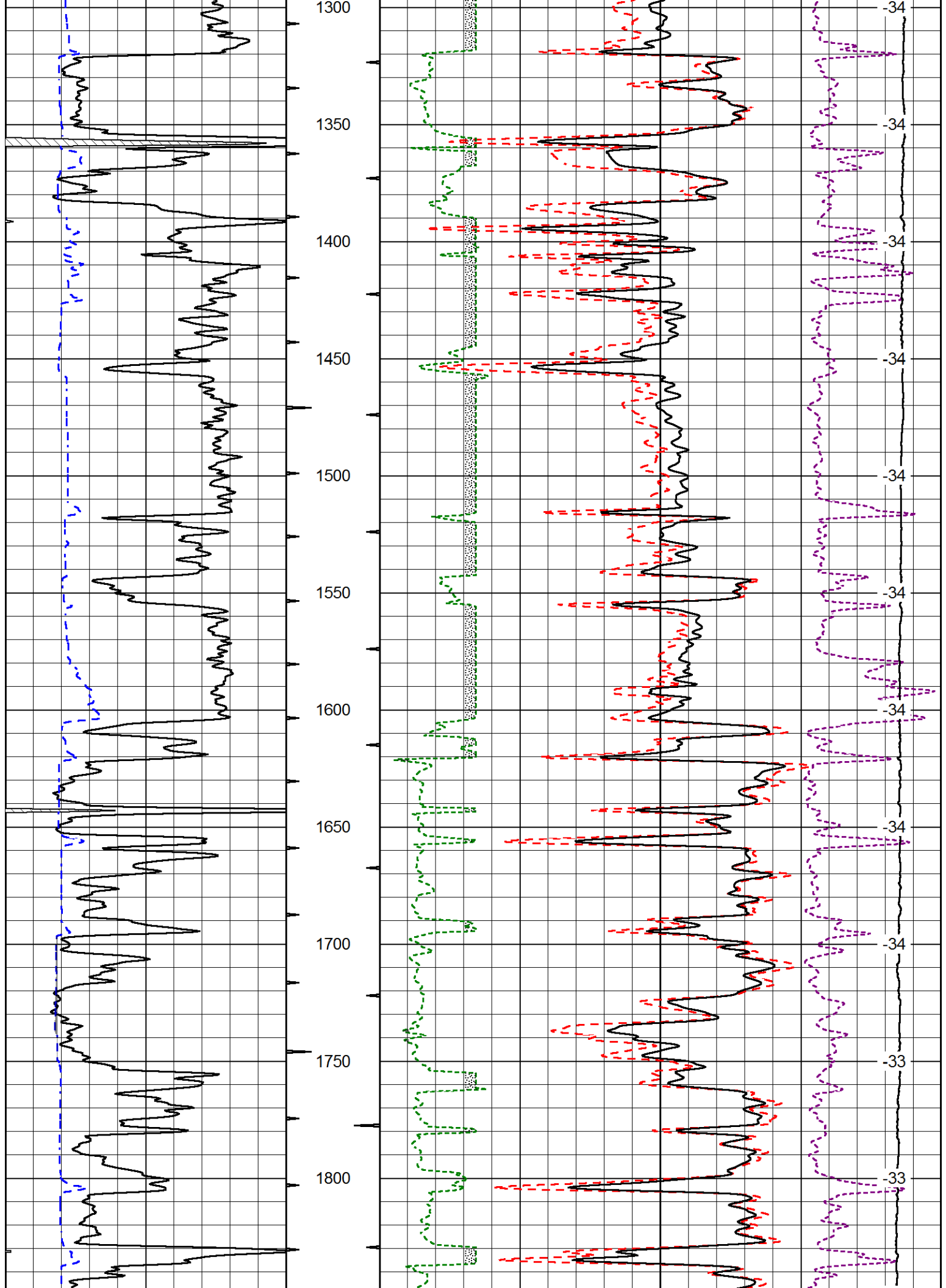
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6 Caliper (in) 16

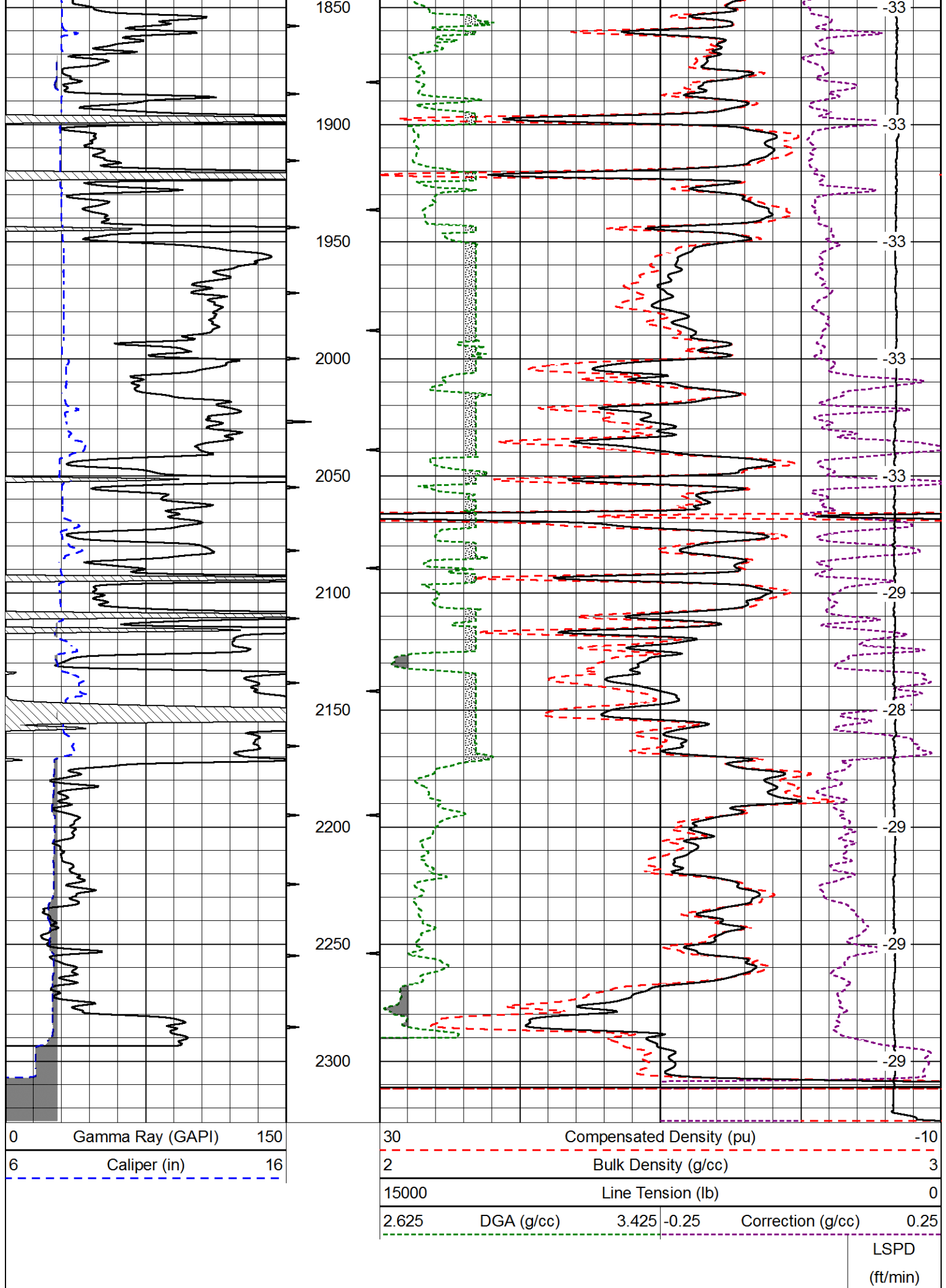
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0 Gamma Ray (GAPI) 150
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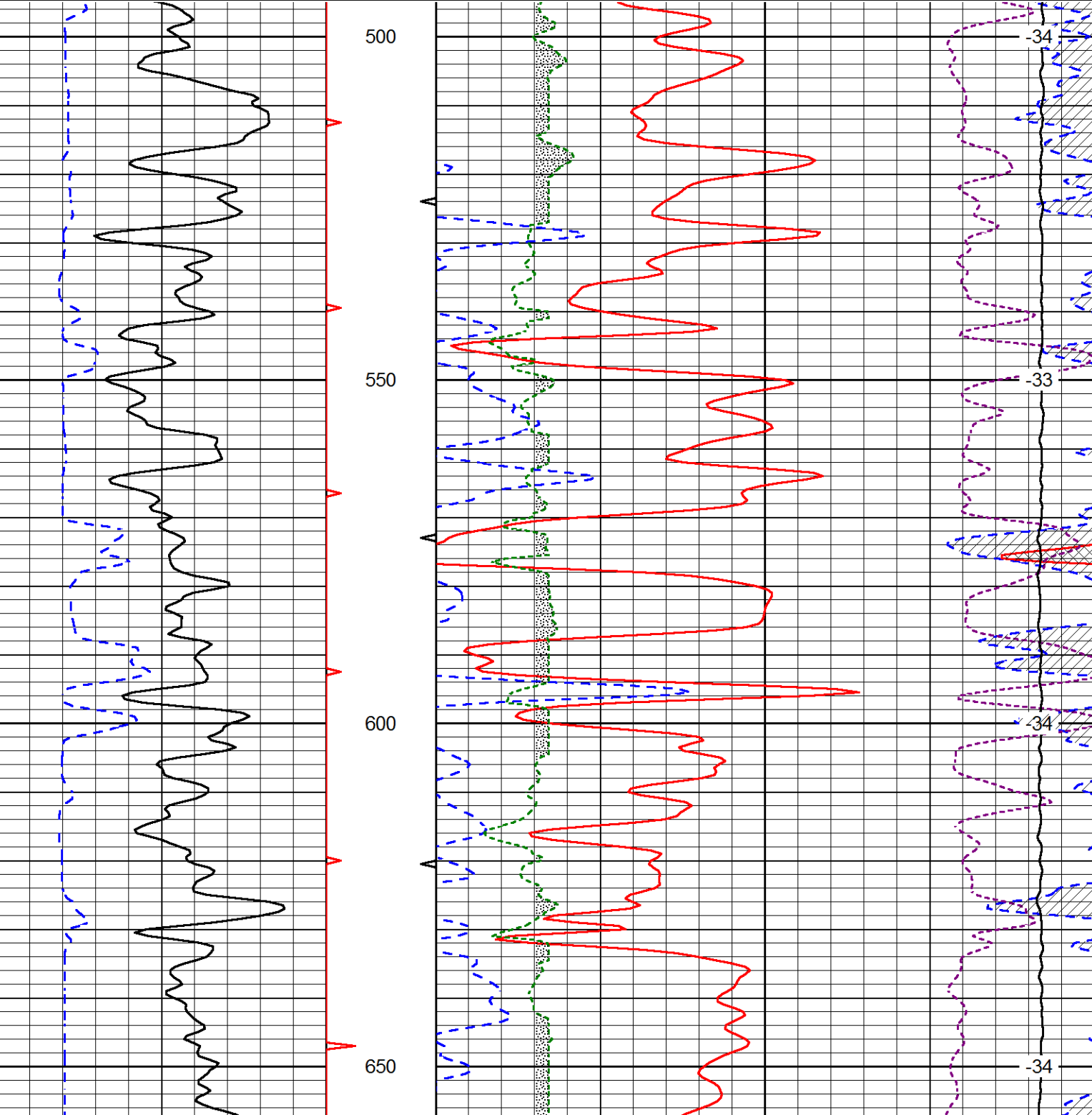
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2 Bulk Density (g/cc) 3
15000 Line Tension (lb) 0
2.625 DGA (g/cc) 3.425 -0.25 Correction (g/cc) 0.25
LSPD
(ft/min)

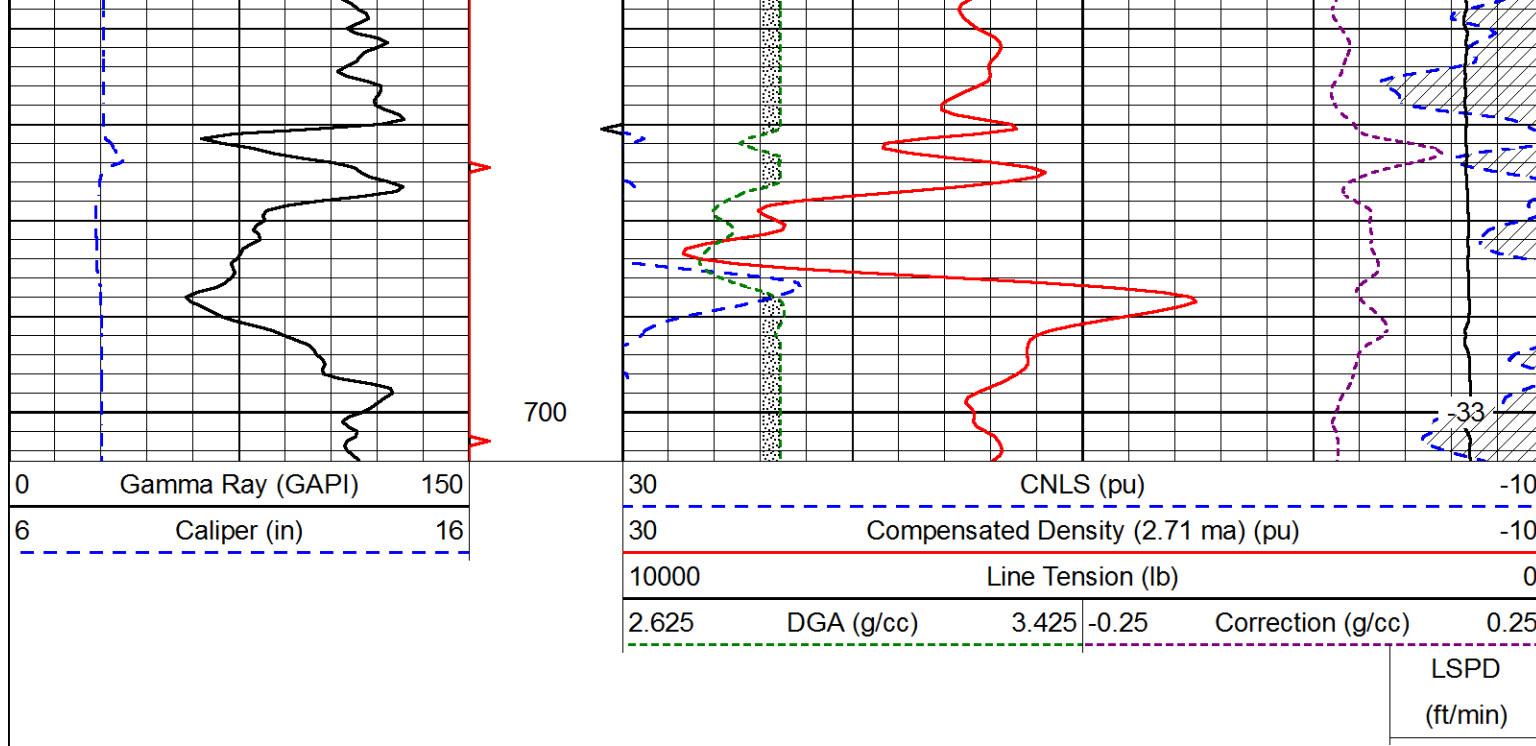




Database File rangeoil_jacobson_2hd.db
Dataset Pathname DIL/rangstck
Presentation Format cndlspec
Dataset Creation Fri Aug 21 12:47:31 2015
Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150				
6	Caliper (in)	16				
			30	CNLS (pu)		-10
			30	Compensated Density (2.71 ma) (pu)		-10
			10000	Line Tension (lb)		0
			2.625	DGA (g/cc)	3.425	-0.25
					Correction (g/cc)	0.25
			LSPD			
			(ft/min)			

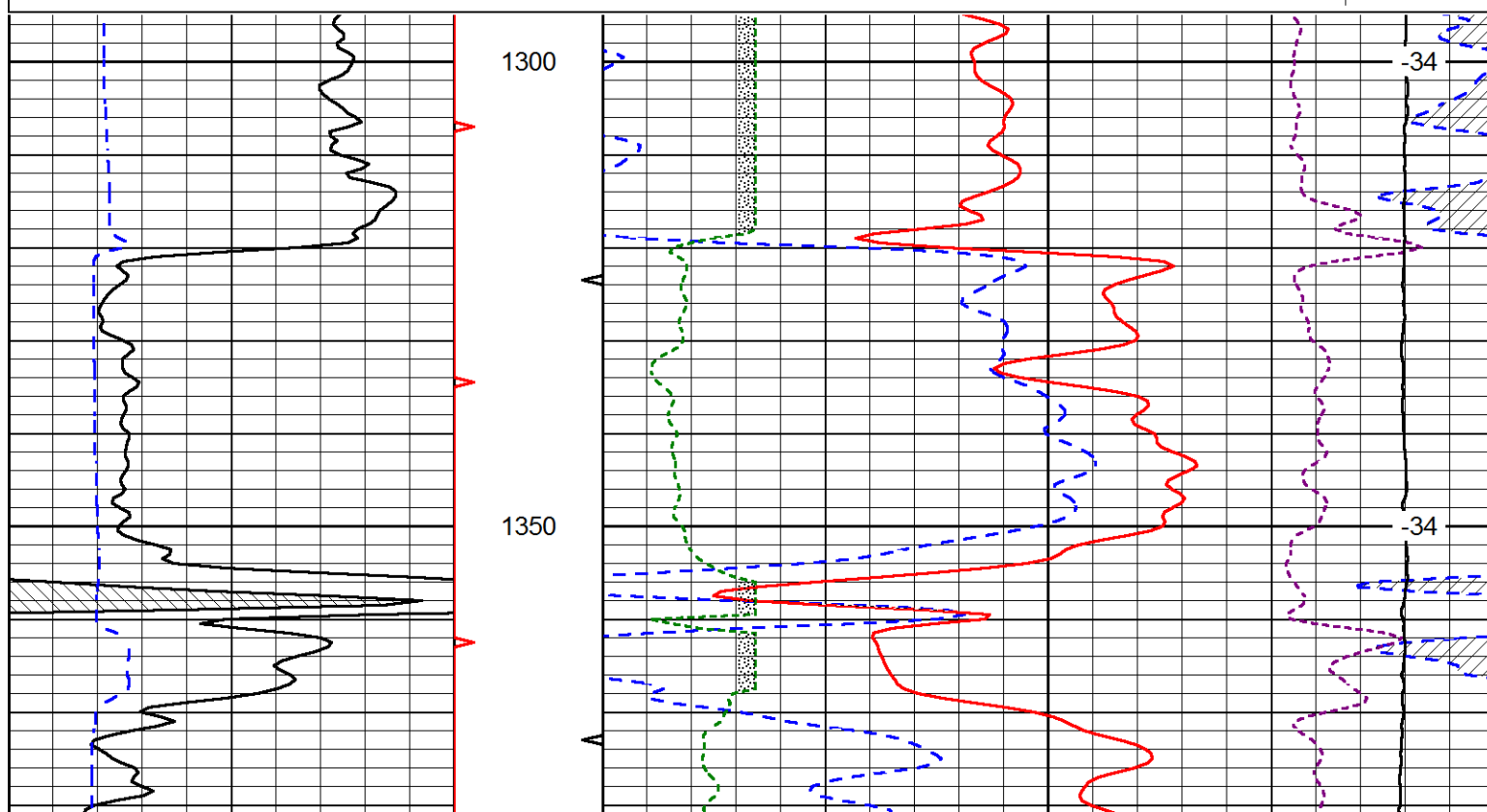


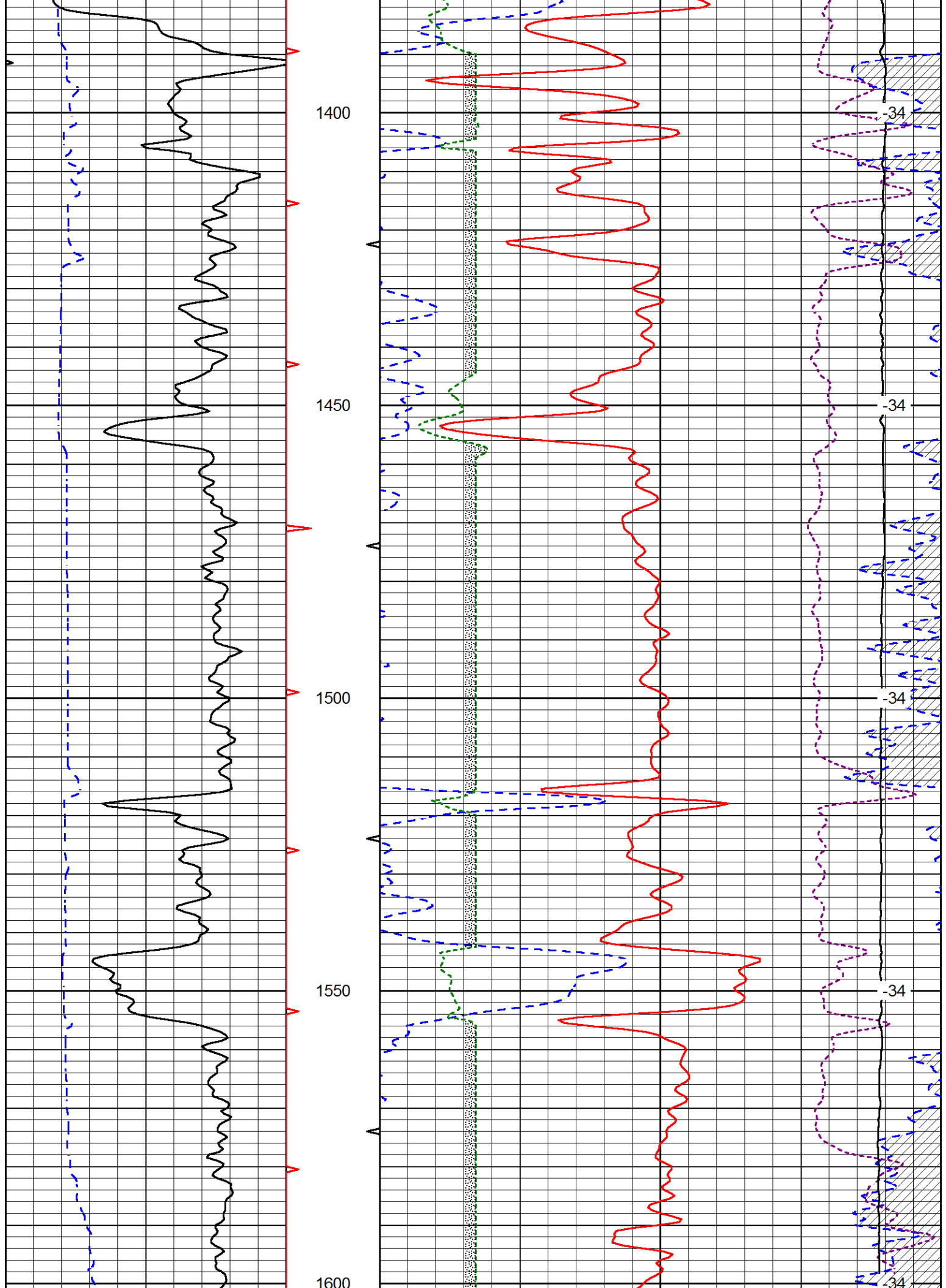


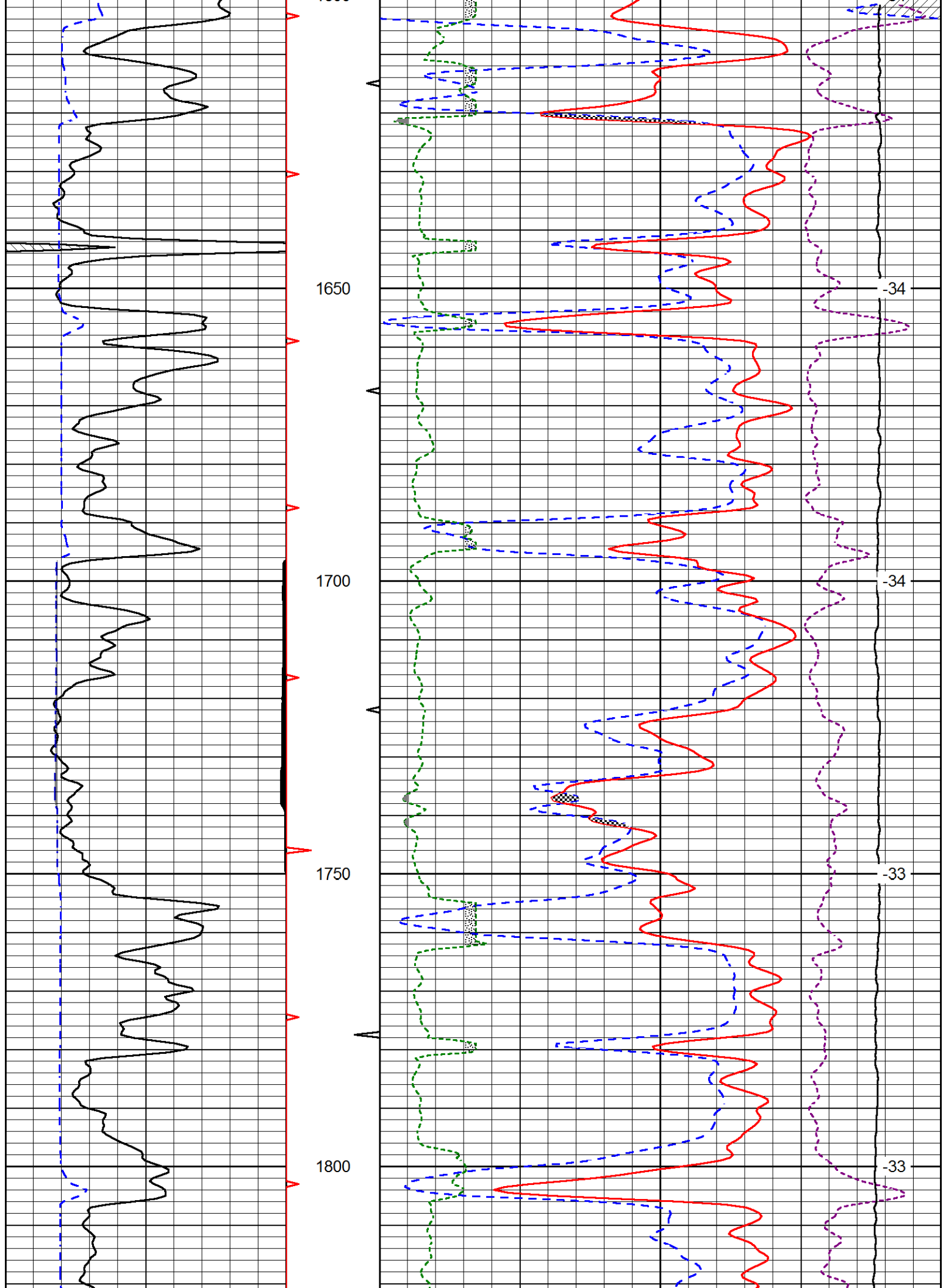
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Presentation Format	cnlspec
Dataset Creation	Fri Aug 21 12:47:31 2015
Charted by	Depth in Feet scaled 1:240

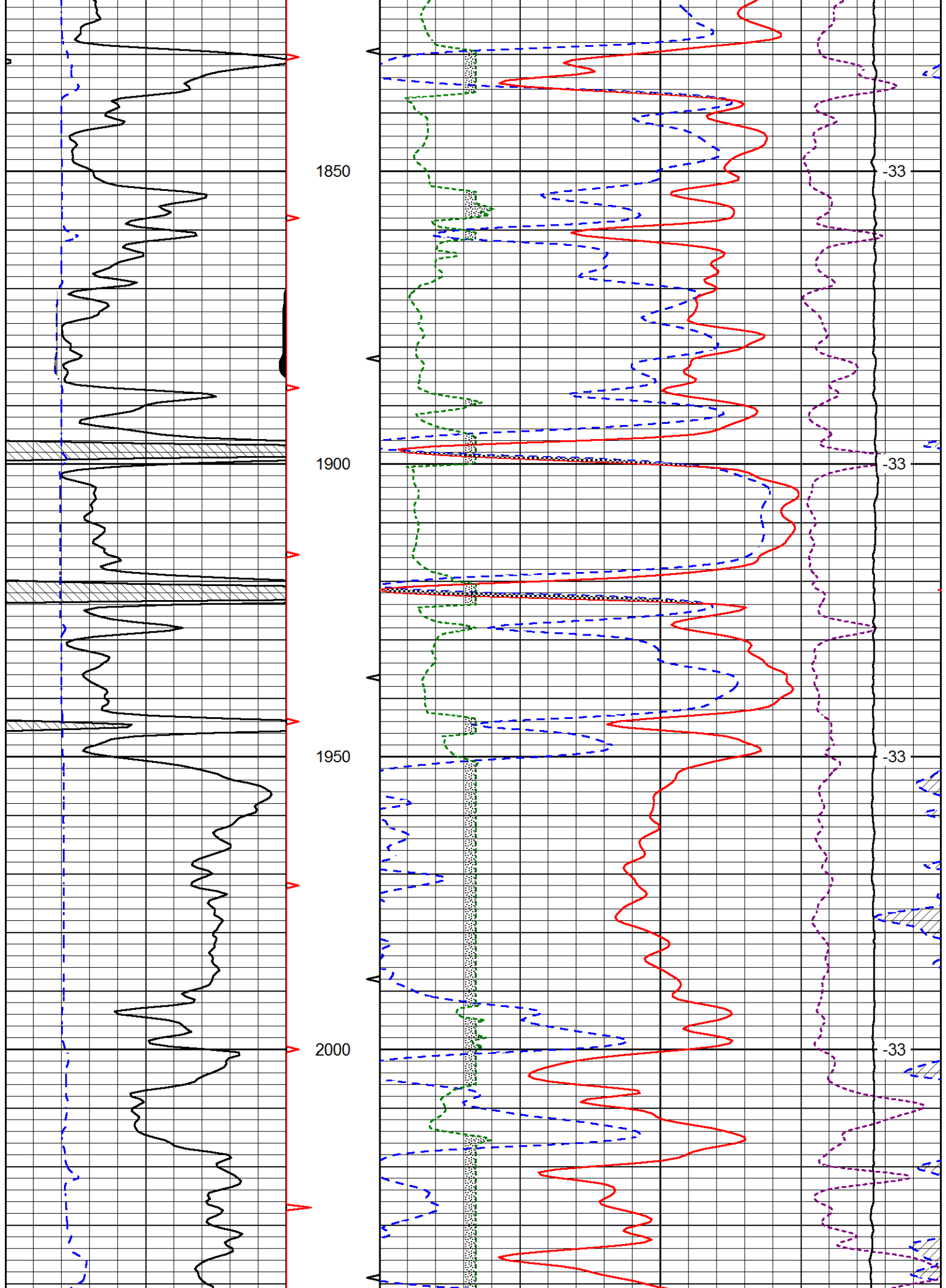
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6	Caliper (in)	16

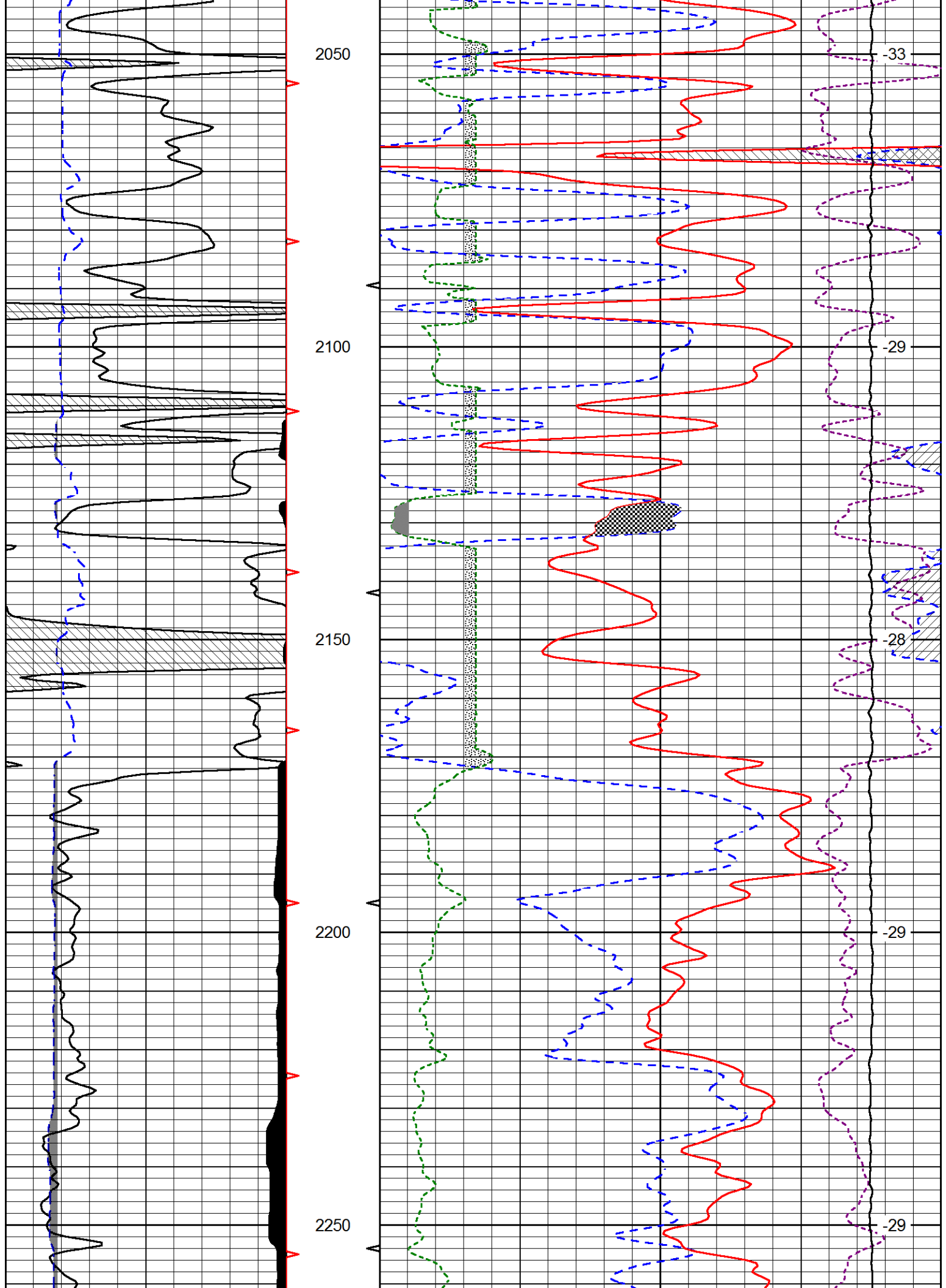
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30	Compensated Density (2.71 ma) (pu)		-10
10000	Line Tension (lb)		0
2.625	DGA (g/cc)	3.425	-0.25
	Correction (g/cc)	0.25	
LSPD (ft/min)			

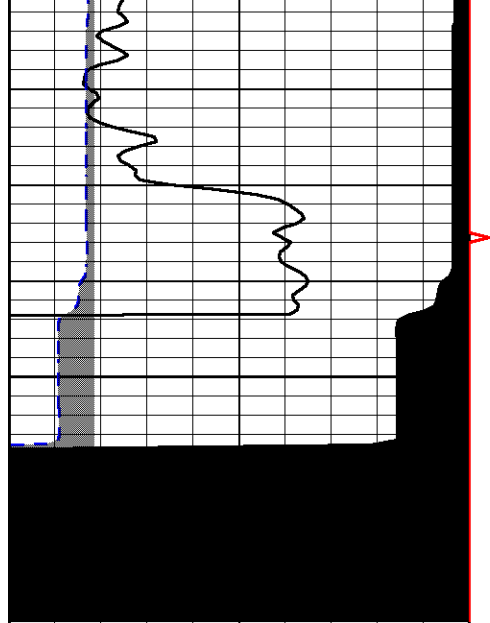




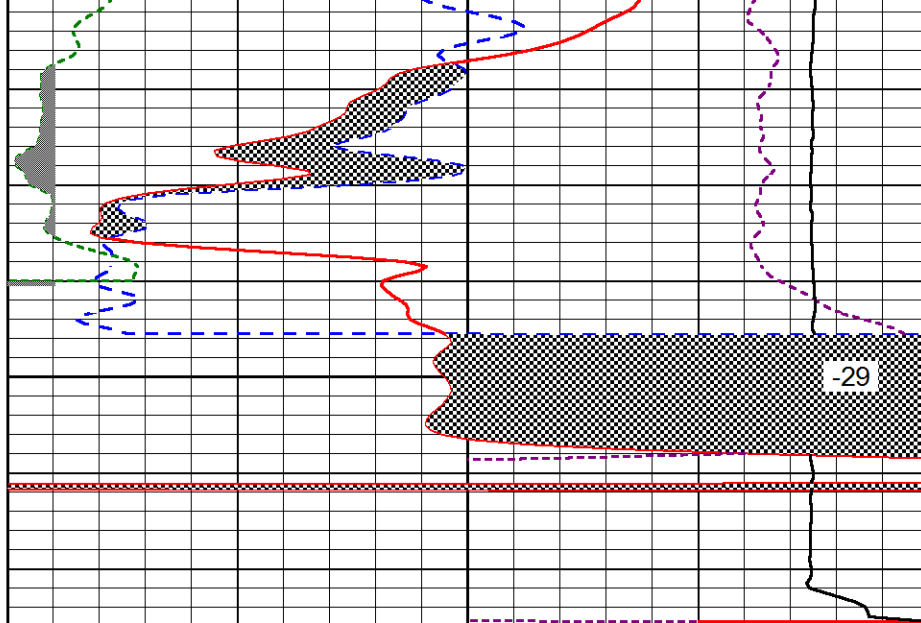








2300



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

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

LSPD
(ft/min)