



Pioneer Energy Services

## Dual Compensated Porosity Log

15-063-22, 155-00-00

API No.

Company **Cobalt Energy, LLC**  
 Well **Zerr 'A' #1-18**  
 Field **Q-B West**  
 County **Gove** State **Kansas**

Location **1262' FSL & 1403' FEL**  
 Sec: **18** Twp: **11S** Rge: **26W**

Other Services  
 DIL  
 MEL

Permanent Datum **Ground Level** Elevation **2657**  
 Log Measured From **Kelly Bushing** 11 Ft. Above Perm. Datum  
 Drilling Measured From **Kelly Bushing**

Elevation  
 K.B. 2668  
 D.F.  
 G.L. 2657

Date	11/29/2013
Run Number	One
Type Log	CNL / CDL
Depth Driller	4615
Depth Logger	4620
Bottom Logged Interval	4599
Top Logged Interval	3600
Type Fluid In Hole	Chemical
Salinity, PPM CL	2,900
Density	9.4
Level	Full
Max. Rec. Temp. F	122
Operating Rig Time	4 Hours
Equipment -- Location	17 Days
Recorded By	C. Desaire
Witnessed By	Bob Stolzle

Borehole Record		Casing Record					
Run No.	Bit	From	To	Size	Wgt.	From	To
1	12.25	00	275	8.625	24#	00	275
2	7.875	275	4615				

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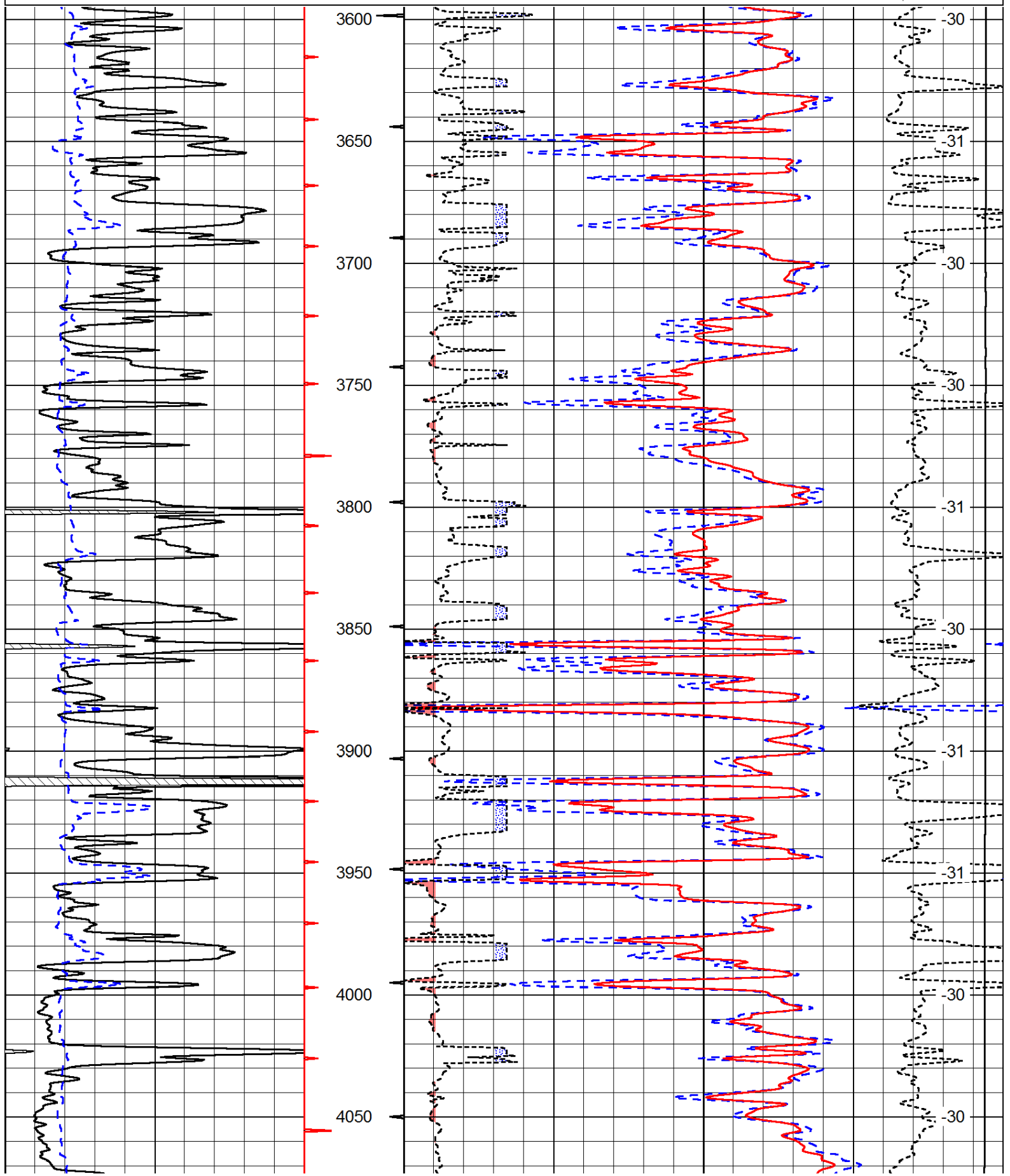
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

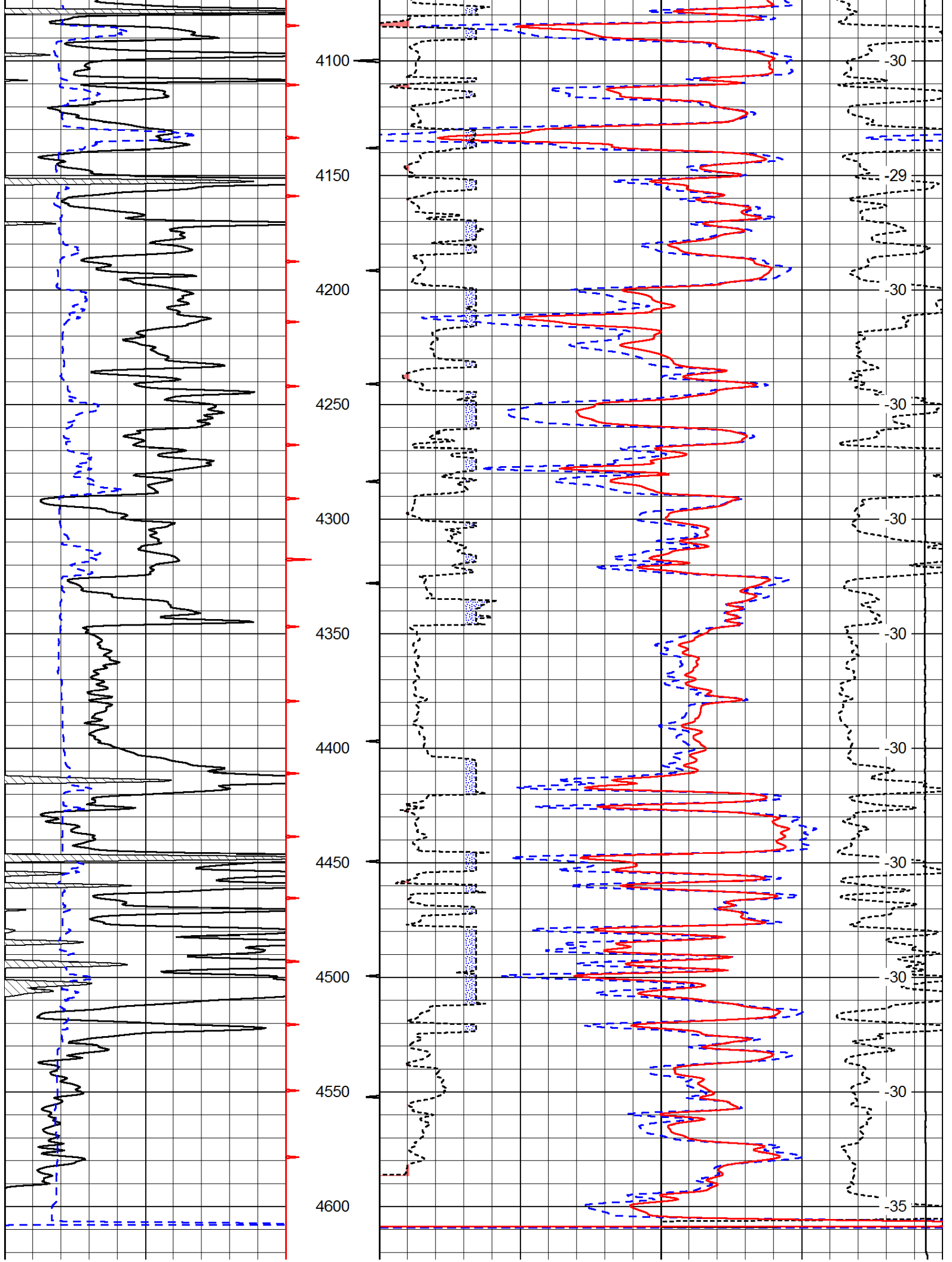
### Comments

Thank you for using Pioneer Energy Services  
[www.pioneerres.com](http://www.pioneerres.com)  
 785 625 3858  
  
 Quinter KS, N to Stop Sign,  
 1 N to BB Rd, 1/4 W, N Into

Database File: c:\warrior\data\cobalt\_zerr 'a' #1-18\cobalthd.db  
 Dataset Pathname: dil/cobstk  
 Presentation Format: cdl  
 Dataset Creation: Fri Nov 29 22:52:55 2013  
 Charted by: Depth in Feet scaled 1:600

0	Gamma Ray	150	30	Compensated Density		-10
6	Caliper (GAPI)	16	2	Bulk Density		3
			15000	Line Tension		0
			2.625	DGA	3.425 -0.25	Correction 0.25
						LSPD





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: c:\warrior\data\cobalt\_zerr 'a' #1-18\cobalthd.db  
 Dataset Pathname: dil/cobstk  
 Presentation Format: cndlspec  
 Dataset Creation: Fri Nov 29 22:52:55 2013  
 Charted by: Depth in Feet scaled 1:240

0	Gamma Ray	150
6	Caliper (GAPI)	16

30	Compensated Neutron (Limestone)			-10
30	Compensated Density (Limestone)			-10
2.625	DGA	3.425	-0.25	Correction 0.25
15000	Line Tension			0
				LSPD

