



Pioneer Energy Services

Dual Compensated Porosity Log

API No.	15-101-22,460-00-00		
Company	Larson Engineering, Inc.		
Well	Cleo #1-20		
Field	Cowdery		
County	Lane		
Location	NE SE SW SE 345' FSL & 1397' FEL		
	Sec: 20	Twp: 18S	Rge: 30W
			Elevation 2891
			K.B. 2898
			D.F. 2891
			G.L. 2891
Other Services	DILMEL		

Permanent Datum	Ground Level	9/23/2013	One
Log Measured From	Kelly Bushing		CNL / CDL
Drilling Measured From	Kelly Bushing		4614
			4612
			4591
Bottom Logged Interval			3600
Top Logged Interval			Chemical
Type Fluid In Hole			3000
Salinity, PPM CL			9.2
Density			Full
Level			122
Max. Rec. Temp. F			4 Hours
Operating Rig Time			15 Days
Equipment -- Location			D Kerr
Recorded By			Vern Schrag
Witnessed By			

Borehole Record				Casing Record			
Run No.	Bit	From	To	Size	Wgt.	From	To
One	12.25	00	276	8.625	23#	00	276
Two	7.875	276	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

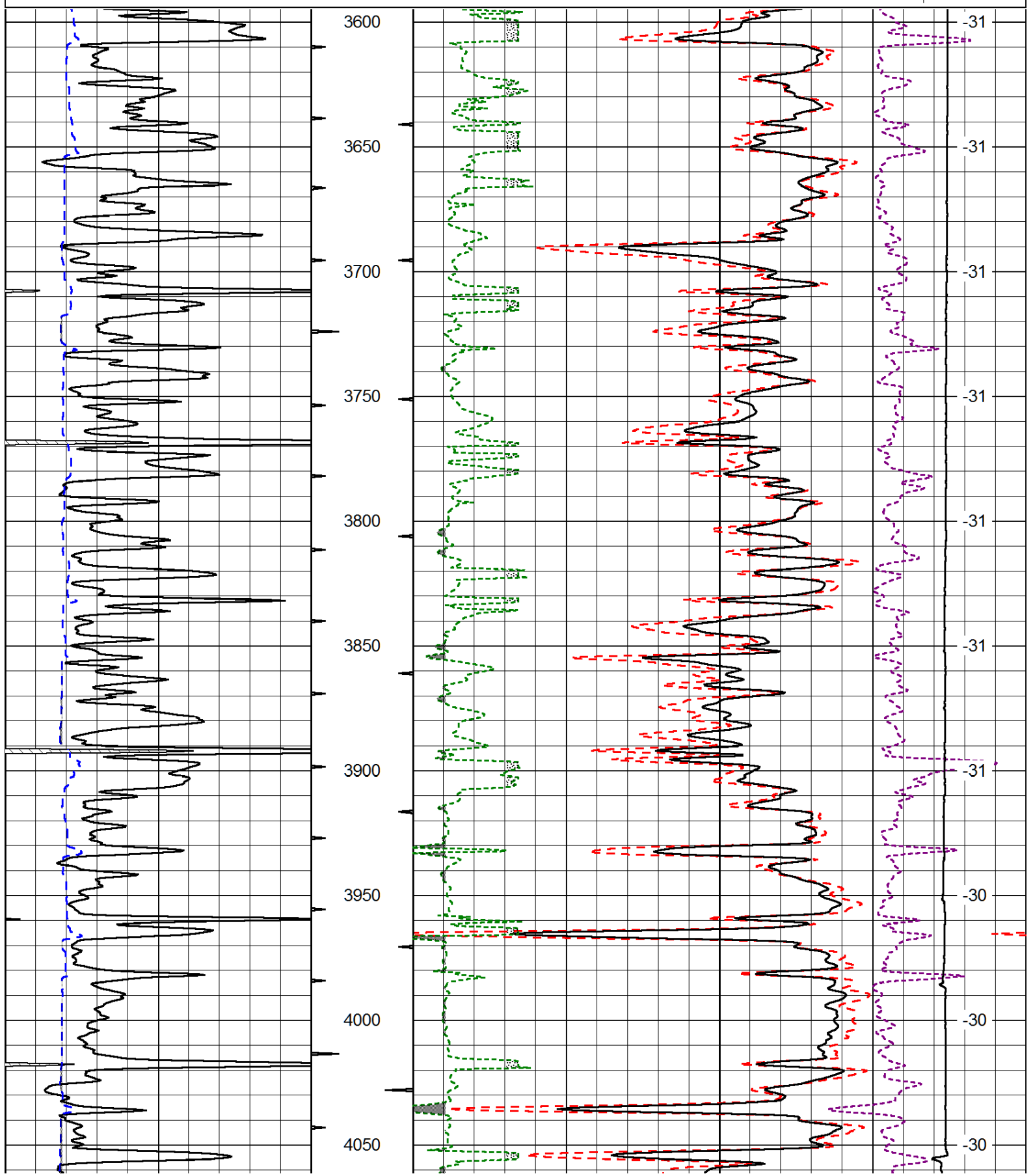
Dighton KS, 10 West to Bison Rd,
1 South, 1/8 West, North Into

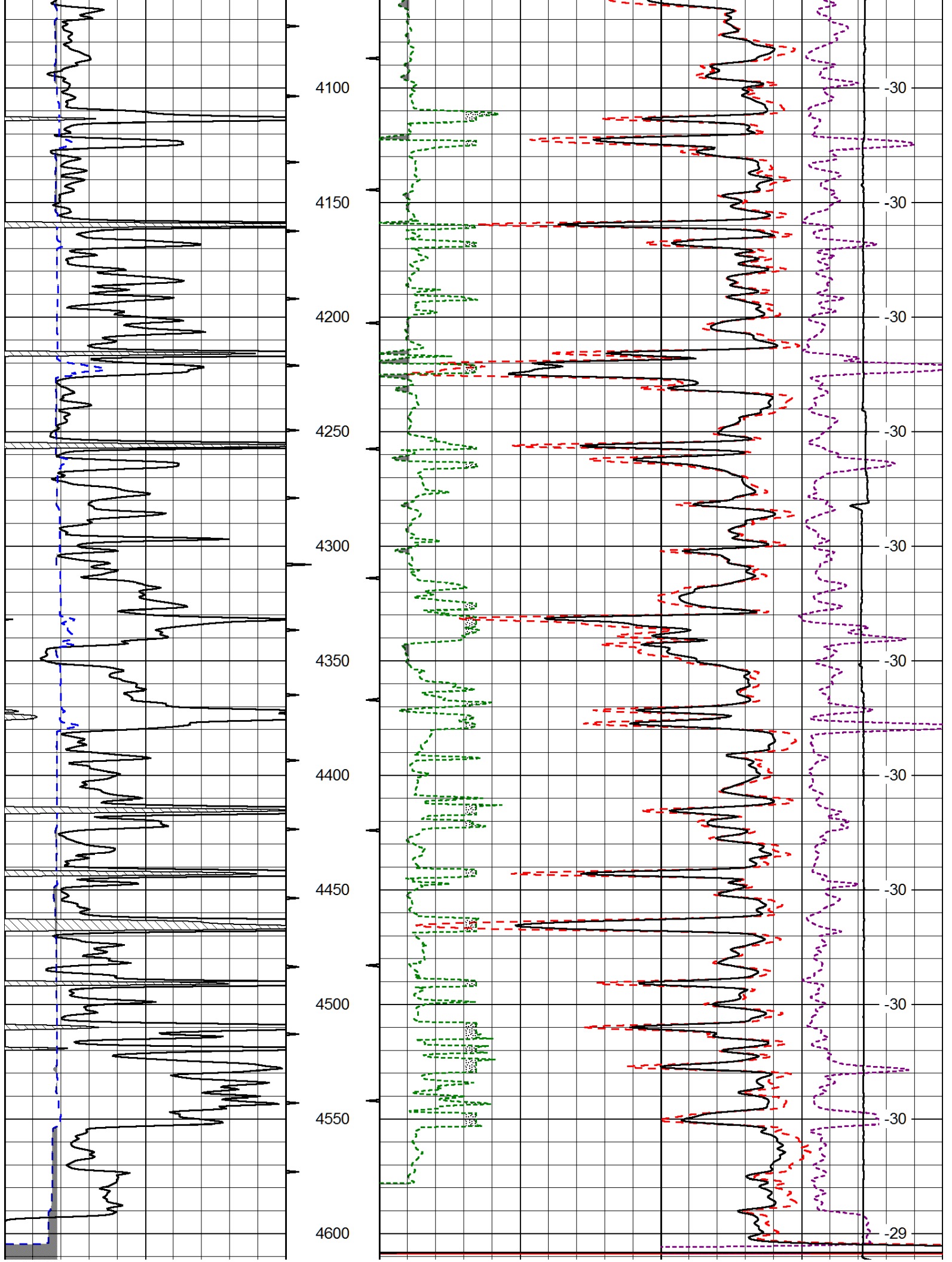
Database File: laron_cleo_1_20hd.db
 Dataset Pathname: DIL/larstk
 Presentation Format: cdl
 Dataset Creation: Tue Sep 24 01:11:42 2013
 Charted by: Depth in Feet scaled 1:600

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)





0	Gamma Ray (GAPI)	150	30	Compensated Density (pu)			-10	
6	Caliper (in)	16	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: laron_cleo_1_20hd.db
 Dataset Pathname: DIL/larstk
 Presentation Format: cndlspec
 Dataset Creation: Tue Sep 24 01:11:42 2013
 Charted by: Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150	30	CNLS (pu)			-10	
6	Caliper (in)	16	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)								

