SUPERIOR WELL SERVICES

CEMENT BOND LOG
GAMMA RAY C C L
V D L

Company	Noble Energy INC.
Well	DINNER 01-01-19
Field	Wattenberg
County	Weld
State	Colorado

Company Noble Energy INC.
Well DINNER 01-01-19
Field Wattenberg
County Weld State Colorado
Location: API #: 051232816600
1433' FNL & 2471' FEL
SW NE
SEC 1 TWP 4N RGE 65W

Other Services

Permanent Datum	GL	Elevation 4776	Elevation K.B. 4792 D.F. 4791 G.L. 4776
Log Measured From	KB 16'		
Drilling Measured From	KB		

Date	December 10, 2010
Run Number	One
Depth Driller	7250
Depth Logger	7166
Bottom Logged Interval	7165
Top Log Interval	1650
Casing Size	4 1/2"
Type Fluid	Water
Max. Recorded Temp.	250 deg F
Estimated Cement Top	1820
Time Well Ready	Mast Truck
Time Logger On Bottom	PM
Unit Number	3344
Tool Size / ID Number	2.75 Tool 1 BLK
Location	Platteville, CO
Recorded By	K. Monaghan
Witnessed By	S. Armstrong

Borehole Record			Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String				
Prot. String				
Production String	4 1/2"	11.6 lb/ft M-80	Surface	7234
Liner				

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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 Choosing Superior Well Services!!!
API# 05-123-28166-00
Correlated to P.S.I's
Compensated Density / Compensated Neutron / Gamma Ray Microlog
Dated: December 4, 2010
Directions: 48&49, W 1/2, N THROUGH TANK BATTERY 7/10, INTO

Database File:	cbldinner 01-01-19.db
Dataset Pathname:	pass4
Presentation Format:	nuexbond
Dataset Creation:	Fri Dec 10 14:34:20 2010 by Log Std Casedhole 10081
Charted by:	Depth in Feet scaled 1:240

30 Gamma Ray (GAPI) 130
30 CCL -1.5
340 TT3 (usec) 240

0 Amplified Amplitude (mV) 20
0 Amplitude (mV) 100

200 VDL 1200

30 Gamma Ray (GAPI) 130
30 CCL -1.5
340 TT3 (usec) 240

0 Amplified Amplitude (mV) 20
0 Amplitude (mV) 100

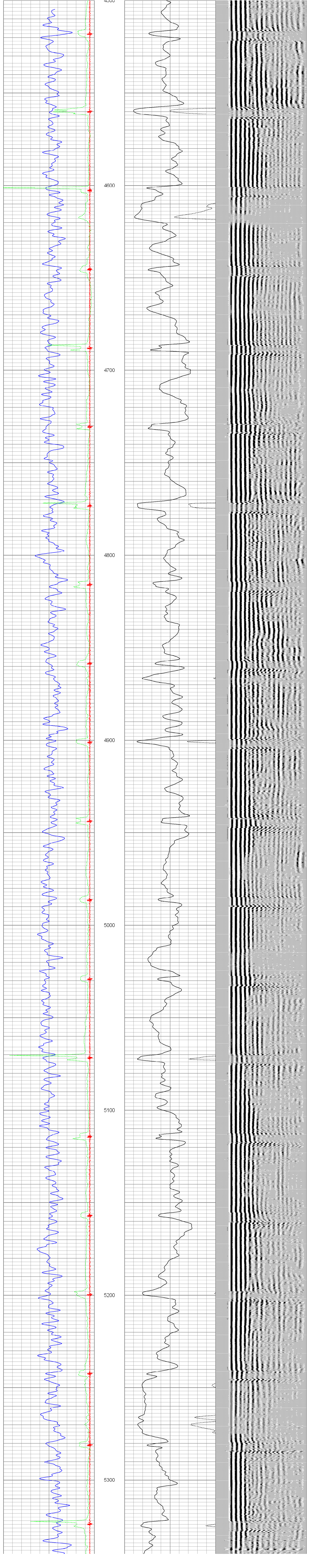
200 VDL 1200

Database File:	cbldinner 01-01-19.db
Dataset Pathname:	pass3
Presentation Format:	nuexbond
Dataset Creation:	Fri Dec 10 14:10:26 2010 by Log Std Casedhole 10081
Charted by:	Depth in Feet scaled 1:240

0 Gamma Ray (GAPI) 150
30 CCL -1.5
340 TT3 (usec) 240

0 Amplified Amplitude (mV) 20
0 Amplitude (mV) 100

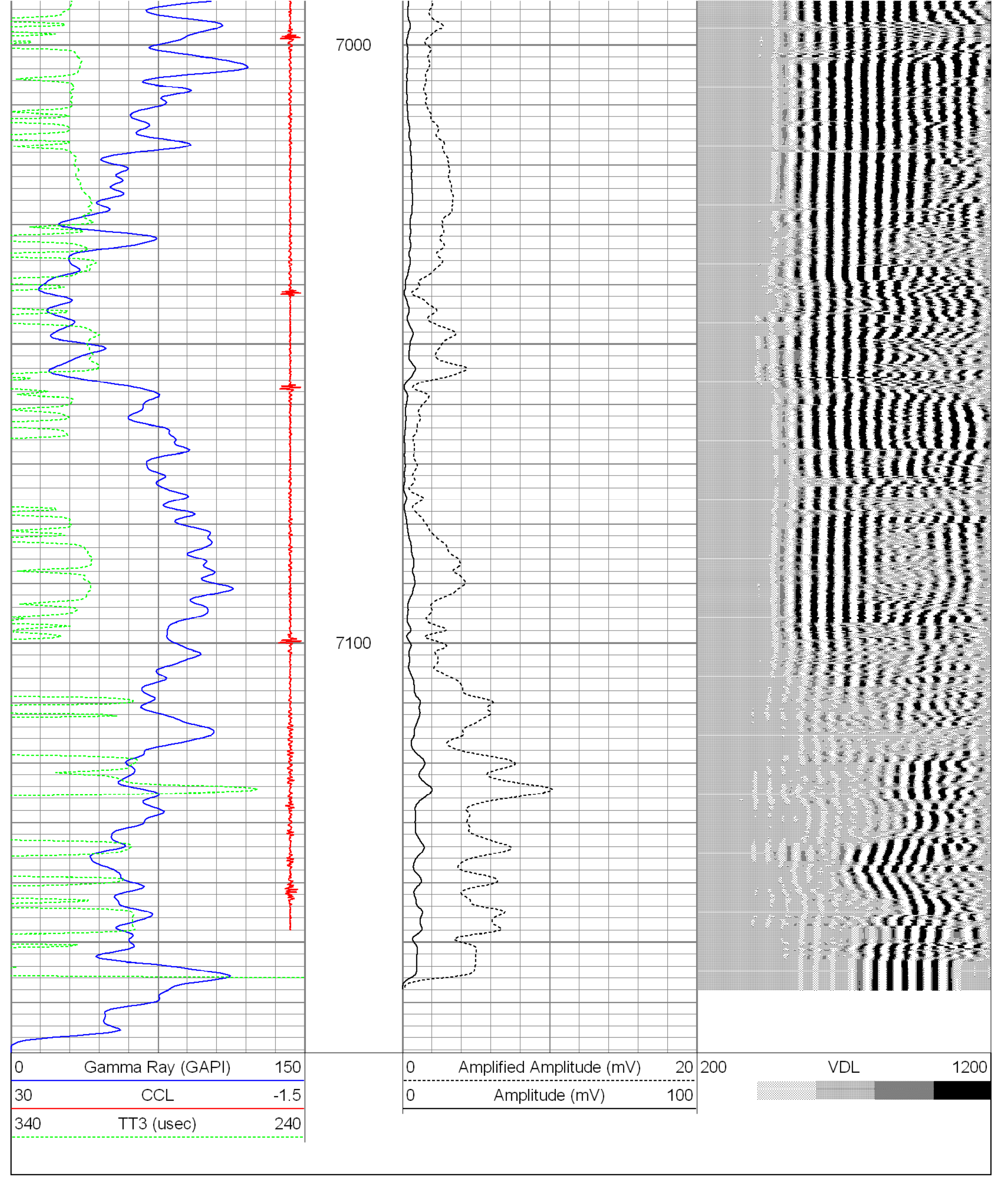
200 VDL 1200



SUPERIOR WELL SERVICES

Repeat Pass

Database File: cbldinner 01-01-19.db
Dataset Pathname: pass2
Presentation Format: nuexbond
Dataset Creation: Fri Dec 10 14:07:11 2010 by Log Std Casedhole 10081
Charted by: Depth in Feet scaled 1:240



Calibration Report

Database File: cbldinner 01-01-19.db
Dataset Pathname: pass4
Dataset Creation: Fri Dec 10 14:34:20 2010 by Log Std Casedhole 10081

Gamma Ray Calibration Report

Serial Number:	234GR-328	
Tool Model:	TekcoGR	
Performed:	Thu Aug 02 12:04:45 2007	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.8000	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	234B35C-8013	
Tool Model:	TEKCO	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	332.175	ft

Master Calibration, performed Fri Dec 10 13:49:43 2010:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.010	2.488	0.500	81.196	32.558	0.179
CAL	-0.016	0.941				
5'	-0.007	2.500	0.500	81.196	32.193	0.714
SUM						
S1						
S2						
S3						
S4						
S5						
S6						
S7						
S8						

Internal Reference Calibration, performed Fri Dec 10 13:50:33 2010:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	-0.016	0.945	-0.016	0.941	0.995	0.000

Air Zero Calibration, performed Thu Dec 09 12:50:40 2010:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.000	0.000	0.000
5'	0.000	0.000	0.000
SUM			
S1			
S2			
S3			
S4			
S5			
S6			
S7			
S8			