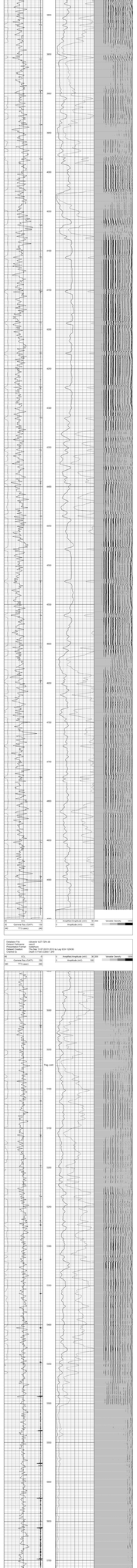

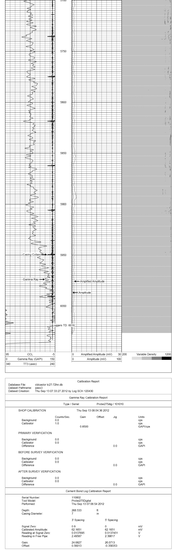

SUPERIOR WELL SERVICES

CEMENT BOND LOG
GAMMA RAY C C L
V D L

Company	Noble Energy INC.
Well	CASTOR LC27-72HN
Field	Wattenberg
County	Weld
State	Colorado

Company Noble Energy INC.
Well CASTOR LC27-72HN
Field Wattenberg
County Weld State Colorado

Location: API #: 05123332380000
BHL: 638' FNL & 638' FEL
SEC 27 TWP 9N RGE 58W

Other Services

Permanent Datum GL Elevation 4816
Log Measured From KB 30'
Drilling Measured From KB

Elevation
K.B. 4846
D.F. 4845
G.L. 4816

Date	September 13, 2012	
Run Number	One	
Depth Driller	10,320	
Depth Logger	6019	
Bottom Logged Interval	6018	
Top Log Interval	Surface	
Casing Size	7.00"	
Type Fluid	Water	
Max. Recorded Temp.	198 deg F	
Estimated Cement Top	903	
Time Well Ready	Crane	
Time Logger On Bottom	AM	
Unit Number	4367	4515
Tool Size / ID Number	2.75 Probe 101010	2.75 Probe 110802
Location	45	Platteville, CO
Recorded By	K. Monaghan	
Witnessed By		

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

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	9 5/8"	36lb/ft J-55	Surface	628.5
Prot. String				
Production String	7.0"	26 lb/ft P-110	Surface	6452.8
Liner	4.50"	11.6 lb/ft P-110	6352.2	10,035

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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# 05-123-33238-0000
Wireline Zero @ 30' KB
Directions: HWY 14 & 115, N 6.5mi, E 9/10, N Into

Database File:	cblcastor lc27-72hn.db
Dataset Pathname:	pass3
Presentation Format:	noblehozo
Dataset Creation:	Thu Sep 13 07:33:27 2012 by Log SCH 120430
Charted by:	Depth in Feet scaled 1:240

95	CCL	-5	0	Amplified Amplitude (mV)	30	200	Variable Density	1200
30	Gamma Ray (GAPI)	130	0	Amplitude (mV)	100			
340	TT3 (usec)	240						

Database File:	cblcastor lc27-72hn.db
Dataset Pathname:	pass2
Presentation Format:	noblehozo
Dataset Creation:	Thu Sep 13 07:22:01 2012 by Log SCH 120430
Charted by:	Depth in Feet scaled 1:240

95	CCL	-5	0	Amplified Amplitude (mV)	30	200	Variable Density	1200
0	Gamma Ray (GAPI)	150	0	Amplitude (mV)	100			
340	TT3 (usec)	240						

95	CCL	-5	0	Amplified Amplitude (mV)	30	200	Variable Density	1200
0	Gamma Ray (GAPI)	150	0	Amplitude (mV)	100			
340	TT3 (usec)	240						

Calibration Report

Database File:	cblcastor lc27-72hn.db
Dataset Pathname:	pass3
Dataset Creation:	Thu Sep 13 07:33:27 2012 by Log SCH 120430

Gamma Ray Calibration Report

Type / Serial: Probe275dig / 101010

	Counts/Sec.	Gain	Offset	Jig	Units
SHOP CALIBRATION	Thu Sep 13 08:04:36 2012				
Background	0.0				cps
Calibrator	1.0				cps
		0.8500			GAPI/cps
PRIMARY VERIFICATION					
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI
BEFORE SURVEY VERIFICATION					
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI
AFTER SURVEY VERIFICATION					
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI

Cement Bond Log Calibration Report

Serial Number:	110802		
Tool Model:	Probe275Digital		
Performed:	Thu Sep 13 07:06:54 2012		
Depth:	268.533	ft	
Casing Diameter:	7	in	
	3' Spacing	5' Spacing	
Signal Zero:	0.9	0	mV
Calibrated Amplitude:	62.1651	62.1651	mV
Reading at Signal Zero:	0.0137695	0.0137451	V
Reading in Free Pipe:	2.49587	2.39817	V
Gain:	24.6827	26.0713	
Offset:	0.56013	-0.358353	