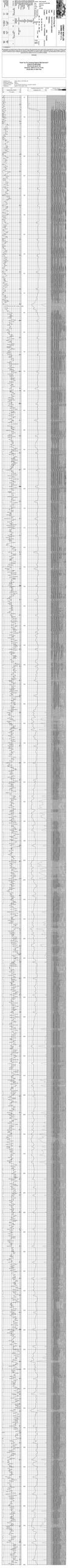

Company Noble Energy INC.
Well SLW STATE PC BB18-65HN
Field Wattenberg
County Weld
State Colorado

SUPERIOR WELL SERVICES

CEMENT BOND LOG
GAMMA RAY C C L
V D L

Company	Noble Energy INC.
Well	SLW STATE PC BB18-65HN
Field	Wattenberg
County	Weld
State	Colorado

Location: API #: 05123346790000
BHL: 2491' FNL & 535' FEL
SEC 18 TWP 5N RGE 63W

Other Services

Permanent Datum	GL	Elevation 4590	Elevation K.B. 4614 D.F. 4613 G.L. 4590
Log Measured From	KB 24'		
Drilling Measured From	KB		

Date	June 22, 2012	
Run Number	One	
Depth Driller	10,986	
Depth Logger	6620	
Bottom Logged Interval	6619	
Top Log Interval	Surface	
Casing Size	7.0"	
Type Fluid	Water	
Max. Recorded Temp.	198 deg F	
Estimated Cement Top	569	
Time Well Ready	Crane	
Time Logger On Bottom	AM	
Unit Number	4367	3839
Tool Size / ID Number	2.75 Probe 101010	2.75 Probe 110802
Location	45	
Recorded By	K. Monaghan	
Witnessed By	B. Mansfield	

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"	36 lb/ft J-55	Surface	585.7
Prot. String	7.0"	26 lb/ft P-110	Surface	6946
Production String				
Liner	4 1/2"	11.6 lb/ft P-110	6851.5	10,978

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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# 05-123-34679-0000
Wireline Zero @ 24' KB
Directions: 388 & 61, N 1/2, E Into
(South Well of 2 Well Pad)

Database File:	cblslw state pc bb18-65hn.db
Dataset Pathname:	pass3
Presentation Format:	noble en
Dataset Creation:	Fri Jun 22 08:57:28 2012 by Log SCH 120430
Charted by:	Depth in Feet scaled 1:240

Database File: cblslw state pc bb18-65hn.db
Dataset Pathname: pass2
Presentation Format: noble en
Dataset Creation: Fri Jun 22 08:44:49 2012 by Log SCH 120430
Charted by: Depth in Feet scaled 1:240

Calibration Report

Database File: cblslw state pc bb18-65hn.db
Dataset Pathname: pass3
Dataset Creation: Fri Jun 22 08:57:28 2012 by Log SCH 120430

Gamma Ray Calibration Report

Type / Serial: Probe275dig / 101010

SHOP CALIBRATION	Fri Jun 22 08:19:14 2012				
	Counts/Sec.	Gain	Offset	Jig	Units
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: Fri Jun 22 07:12:32 2012

Depth: 192.133 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:	0.0134277	0.0134033	V
Reading in Free Pipe:	2.49414	2.3812	V
Gain:	24.6966	26.2544	
Offset:	0.568381	-0.351896	