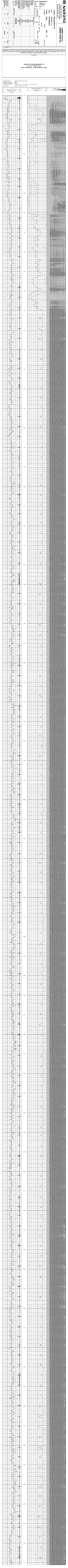

NABORS
COMPLETION & PRODUCTION SERVICES CO.

GAMMA RAY CCL CEMENT BOND VDL

Company	NOBLE ENERGY INC.
Well	GEMINI B 31-13
Field	WATTENBERG
County	WELD
State	CO

Company NOBLE ENERGY INC.
Well GEMINI B 31-13
Field WATTENBERG
County WELD State CO
Location: API #:
SW/ SW
SEC 31 TWP 5N RGE 64W
Other Services

Permanent Datum GL Elevation 4790
Log Measured From KB
Drilling Measured From KB

Elevation
K.B. 4801
D.F. 4800
G.L. 4790

Date	FEBRUARY 25, 2013
Run Number	ONE
Depth Driller	7214
Depth Logger	5230
Bottom Logged Interval	5230
Top Log Interval	SURFACE
Open Hole Size	7-7/8
Type Fluid	WATER
Density / Viscosity	N/A
Max. Recorded Temp.	N/A
Estimated Cement Top	SURFACE
Time Well Ready	BOHLER
Time Logger on Bottom	2-3/4 PROBE 110803
Equipment Number	4838
Location	45
Recorded By	GREG NOLAN
Witnessed By	TONY MATHIAS

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	4.5	15.1	SURFACE	TD
Liner				

<<< Fold Here >>>

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 FOR CHOOSING NCPS!!!!!!!!
LOG NOT CORRELATED
WCR 49 & WCR 50, N.100 YARDS & E. INTO

Database File:	cbl noble gemini b31-13.db
Dataset Pathname:	pass3
Presentation Format:	noble en
Dataset Creation:	Mon Feb 25 09:20:19 2013 by Log SCH 120430
Charted by:	Depth in Feet scaled 1:240

Calibration Report

Database File:	cbl noble gemini b31-13.db
Dataset Pathname:	pass3
Dataset Creation:	Mon Feb 25 09:20:19 2013 by Log SCH 120430

Gamma Ray Calibration Report

Type / Serial: Probe275dig / 101011

	Counts/Sec.	Gain	Offset	Jig	Units
SHOP CALIBRATION	Wed May 04 08:11:02 2011				
Background	0.0				cps
Calibrator	1.0				cps
		0.7000			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:	110803		
Tool Model:	Probe275Digital		
Performed:	Mon Feb 25 09:07:48 2013		
Depth:	821		ft
Casing Diameter:	4.5		in
	3' Spacing	5' Spacing	
Signal Zero:	1.5	0	mV
Calibrated Amplitude:	81.1961	81.1961	mV
Reading at Signal Zero:	-0.00585938	-0.00588379	V
Reading in Free Pipe:	2.49312	2.2699	V
Gain:	31.8915	35.6783	
Offset:	1.68686	0.209924	