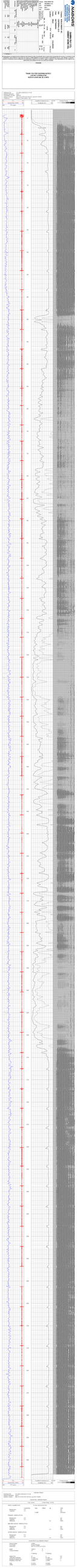

NABORS COMPLETION & PRODUCTION SERVICES CO.

GAMMA RAY CCL
CEMENT BOND VDL

Company	NOBLE ENERGY INC.
Well	CENTENNIAL 32-33
Field	WATTENBERG
County	WELD
State	COLORADO

Company NOBLE ENERGY INC.

Well CENTENNIAL 32-33

Field WATTENBERG

County WELD State COLORADO

Location: API #: 0512321239

SW/NE

SEC 33 TWP 5N RGE 63W

Other Services

Permanent Datum	GL	Elevation	4530	Elevation
Log Measured From	KB			K.B. 4542
Drilling Measured From	KB			D.F. G.L. 4530

Date	OCTOBER 20, 2014
Run Number	ONE
Depth Driller	7409
Depth Logger	3000
Bottom Logged Interval	3000
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	440
Time Well Ready	LEED RIG
Time Logger on Bottom	2-3/4 PROBE
Equipment Number	4838
Location	45
Recorded By	GREG NOLAN
Witnessed By	JON HALL

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

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	8-5/8	24# J-55	12	401
Prot. String				
Production String	4-1/2	11.6# N-80	12	7365
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 NCPS!!!!
LOG NOT CORRELATED
WCR 61 & WCR 380, E3, S INTO

Database File:	cbl noble centennial 32-33.db
Dataset Pathname:	pass3
Presentation Format:	noble en
Dataset Creation:	Mon Oct 20 08:24:53 2014 by Log SCH 120430
Charted by:	Depth in Feet scaled 1:240

50 CCL -5.5
0 Gamma Ray (GAPI) 150
400 TT3 (usec) 0

0 Amplified Amplitude (mV) 30
0 Amplitude (mV) 100

200 Variable Density 1200

50 CCL -5.5
0 Gamma Ray (GAPI) 150
400 TT3 (usec) 0

0 Amplified Amplitude (mV) 30
0 Amplitude (mV) 100

200 Variable Density 1200

Calibration Report

Database File:	cbl noble centennial 32-33.db
Dataset Pathname:	pass3
Dataset Creation:	Mon Oct 20 08:24:53 2014 by Log SCH 120430

Gamma Ray Calibration Report

Type / Serial: Probe275dig / 110785

SHOP CALIBRATION Fri Nov 08 09:38:30 2013

	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	1.0				cps
		0.4400			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:	Mon Oct 20 08:22:16 2014

Depth:	2348.57	ft
Casing Diameter:	4.5	in

	3' Spacing	5' Spacing	
Signal Zero:	0.7	0	mV
Calibrated Amplitude:	81.1961	81.1961	mV
Reading at Signal Zero:	-0.00551758	-0.00561523	V
Reading in Free Pipe:	2.48806	2.24453	V
Gain:	32.2814	36.0848	
Offset:	0.878115	0.202625	