SUPERIOR WELL SERVICES

GAMMA RAY C.C.L.
CEMENT BOND V.D.L.

Company	NOBLE ENERGY INC.
Well	STATE C 16-20D
Field	WATTENBERG
County	WELD
State	COLORADO

Company NOBLE ENERGY INC.
Well STATE C 16-20D
Field WATTENBERG
County WELD State COLORADO

Location: API # : 05.123.34266
SHL: 1788' FSL & 907' FWL NWSW
BHL: 2550' FSL & 1200' FWL NWSE
SEC 16 TWP 4N RGE 64W

Other Services

Permanent Datum	GL	Elevation	4684
Log Measured From	KB ---------- 14FT		
Drilling Measured From	KB		

Elevation
K.B. 4698
D.F. 4698
G.L. 4684

Date	12.28.2011
Run Number	ONE
Depth Driller	7108
Depth Logger	7034
Bottom Logged Interval	7033
Top Log Interval	1440
Open Hole Size	7-7/8"
Type Fluid	WATER
Density / Viscosity	N/A
Max. Recorded Temp.	244° F
Estimated Cement Top	1800
Time Well Ready	LEED RIG 725
Time Logger on Bottom	2-3/4 PROBE 110803
Equipment Number	3342
Location	STERLING
Recorded By	GREG NOLAN
Witnessed By	CARL SWFT

Borehole Record

Run Number	Bit	From	To

Tubing Record

Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	8-5/8"	24.00 / J-55	SURFACE	693.7
Prot. String				
Production String	4-1/2"	11.60 / M-80	SURFACE	7095.0
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 USING SUPERIOR WELL SERVICES.
CORRECTED UP HOLE 4' TO HALLIBURTONS TRUE RESISTIVITY LOG DATED
24-NOV-11
EAST WELL OF A 2 WELL PAD

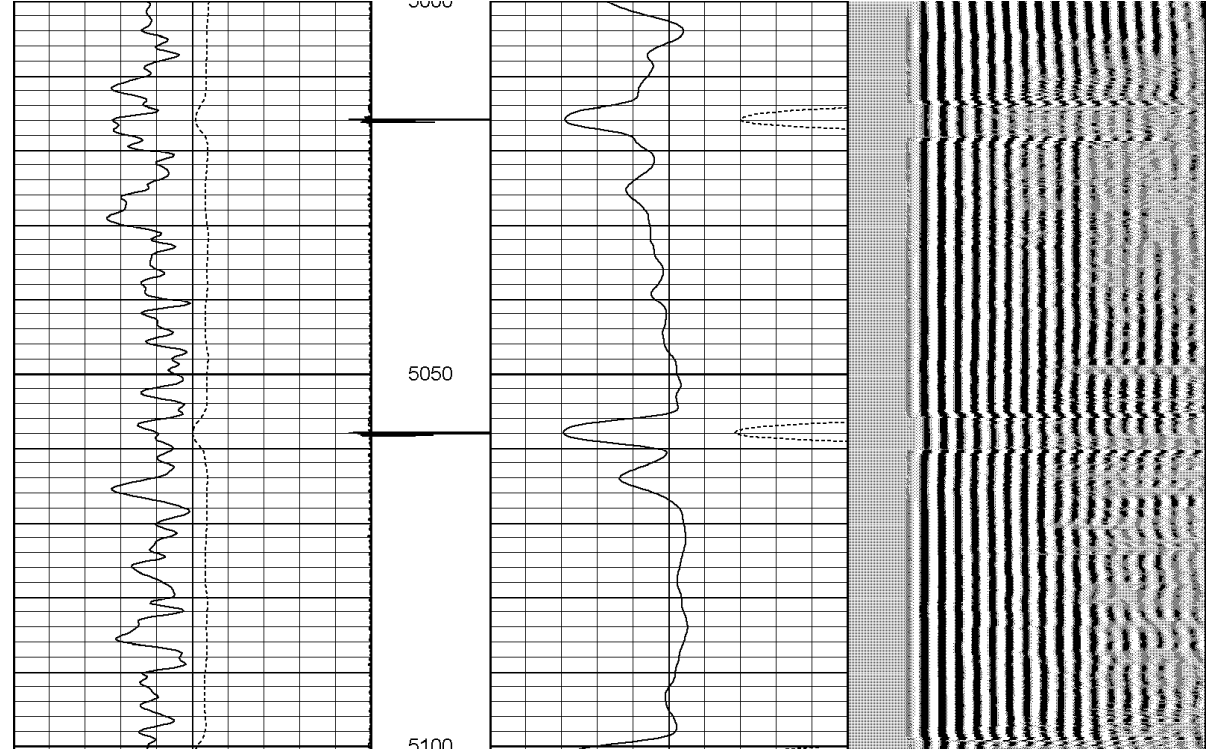
Database File:	statec16-20d.db
Dataset Pathname:	pass2
Presentation Format:	cbl_sr
Dataset Creation:	Mon Dec 19 09:50:34 2011 by Log Std Casedhole 10081
Charted by:	Depth in Feet scaled 1:240

400 Travel Time (usec) 200 | 0.5 CCL 1 | 0 Amplitude (mV) 100 | 200 Variable Density 1200
30 Collar Locator -0.05
0 Gamma Ray (GAPI) 250

400 Travel Time (usec) 200 | 0.5 CCL 1 | 0 Amplitude (mV) 100 | 200 Variable Density 1200
30 Collar Locator -0.05
0 Gamma Ray (GAPI) 250

Database File:	statec16-20d.db
Dataset Pathname:	pass4
Presentation Format:	bond
Dataset Creation:	Wed Dec 28 10:15:50 2011 by Log Std Casedhole 10081
Charted by:	Depth in Feet scaled 1:240

30 CCL -0.005 | 0.5 CCL 1 | 0 Amplitude (mV) 100 | 200 VDL 1200
0 Gamma Ray (GAPI) 250 | | 0 Amplified Amplitude (mV) 30
400 TT3 (usec) 200
200 GR (GAPI) 400



Calibration Report

Database File: statec16-20d.db
Dataset Pathname: pass4
Dataset Creation: Wed Dec 28 10:15:50 2011 by Log Std Casedhole 10081

Gamma Ray Calibration Report

Type / Serial: Probe275dig / 110809

SHOP CALIBRATION	Mon Nov 21 09:21:51 2011				
	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	1.0				cps
		0.8000			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: Wed Dec 28 09:57:53 2011

Depth: 1109.18 ft
Casing Diameter: 4.5 in

	3' Spacing	5' Spacing	
Signal Zero:	0.8	0	mV
Calibrated Amplitude:	81.1961	81.1961	mV
Reading at Signal Zero:	0.00839844	0.00827637	V
Reading in Free Pipe:	2.4894	2.43245	V
Gain:	32.4046	33.4944	
Offset:	0.527852	-0.277212	