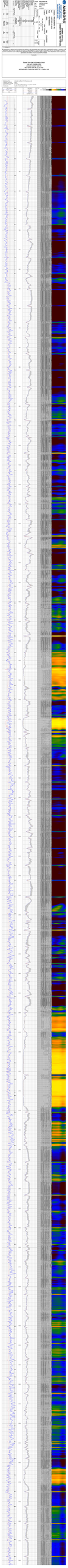

NABORS
COMPLETION & PRODUCTION SERVICES CO.

GAMMA RAY CCL
CEMENT BOND SECTOR VDL

Company	NOBLE ENERGY INC.
Well	LOEFFLER K01-65HN
Field	WATTENBERG
County	WELD
State	COLORADO

Company	NOBLE ENERGY INC.			
Well	LOEFFLER K01-65HN			
Field	WATTENBERG			
County	WELD	State	COLORADO	
Location:	API #: 0512337739 BHL: 2554' FNL & 535' FEL SW/NW			Other Services
	SEC 1 TWP 4N RGE 66W			Elevation
Permanent Datum	GL	Elevation	4666	K.B. 4682 D.F. G.L. 4666
Log Measured From	KB			
Drilling Measured From	KB			

Date	DECEMBER 6, 2013
Run Number	ONE
Depth Driller	11544
Depth Logger	5500
Bottom Logged Interval	5500
Top Log Interval	157
Open Hole Size	8-3/4
Type Fluid	WATER
Density / Viscosity	N/A
Max. Recorded Temp.	211°F
Estimated Cement Top	370
Time Well Ready	PORTABLE MAST
Time Logger on Bottom	2-3/4 PROBE 101020/785
Equipment Number	4838
Location	45
Recorded By	GREG NOLAN
Witnessed By	BILL 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# J-55	16	635.5
Prot. String				
Production String	7	26# P-110-IC	16	7404
Liner	4-1/2	11.6# P-110	7330.6	11534

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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
LOGGED UNDER 1200 PSI
WCR 394 & WCR 35, S.3, E INTO
SECOND WELL FROM THE WEST OF A 5 WELL PAD

Database File:	cbl noble loeffler k01-65hnpressure.db
Dataset Pathname:	pass2
Presentation Format:	sector2
Dataset Creation:	Fri Dec 06 03:48:59 2013 by Log SCH 120430
Charted by:	Depth in Feet scaled 1:240

Calibration Report

Database File: cbl noble loeffler k01-65hnpressure.db
Dataset Pathname: pass2
Dataset Creation: Fri Dec 06 03:48:59 2013 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

Segmented Cement Bond Log Calibration Report

Serial Number: 101020
Tool Model: Probe

Calibration Casing Diameter: 7.000 in
Calibration Depth: 286.050 ft

Master Calibration, performed Fri Dec 06 03:24:05 2013:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.008	1.016	1.500	62.165	60.188	1.039
CAL	0.008	1.629				
5'	0.008	1.299	1.500	62.165	46.984	1.135
SUM						
S1	0.008	1.113	0.000	62.165	56.248	-0.424
S2	0.008	1.049	0.000	62.165	59.700	-0.451
S3	0.008	0.967	0.000	62.165	64.806	-0.491
S4	0.008	0.894	0.000	62.165	70.119	-0.527
S5	0.008	0.886	0.000	62.165	70.743	-0.534
S6	0.007	0.936	0.000	62.165	66.959	-0.499
S7	0.008	1.068	0.000	62.165	58.651	-0.450
S8	0.008	1.151	0.000	62.165	54.373	-0.418

Internal Reference Calibration, performed Fri Jan 13 14:30:16 2012:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.008	1.629	1.000	0.000

Air Zero Calibration, performed Thu Dec 05 21:16:14 2013:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.000	0.000	0.000
5'	0.000	0.000	0.000
SUM			
S1	0.000	0.000	0.000
S2	0.000	0.000	0.000
S3	0.000	0.000	0.000
S4	0.000	0.000	0.000
S5	0.000	0.000	0.000
S6	0.000	0.000	0.000
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000