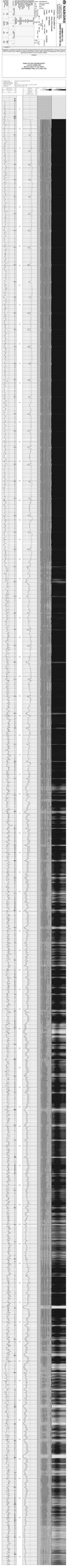

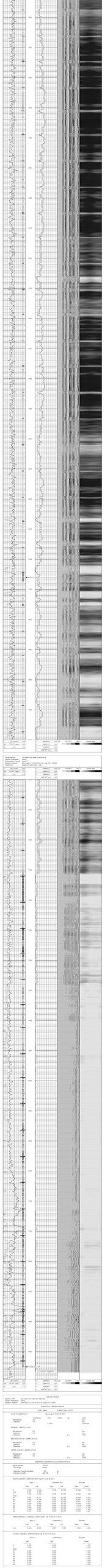

NABORS
COMPLETION & PRODUCTION SERVICES CO.

GAMMA RAY CCL CEMENT BOND SECTOR VDL

Company	NOBLE ENERGY INC.
Well	ROHN STATE LD04-65HN
Field	WATTENBERG
County	WELD
State	COLORADO

Company NOBLE ENERGY INC.
Well ROHN STATE LD04-65HN
Field WATTENBERG
County WELD State COLORADO

Location: API #: 0512337445
2640' FNL & 660' FWL
SE/NE
SEC 4 TWP 9N RGE 58W

Other Services

				Elevation
Permanent Datum	GL	Elevation	4703	K.B. 4727
Log Measured From	KB			D.F.
Drilling Measured From	KB			G.L. 4703

Date	AUGUST 19, 2013
Run Number	ONE
Depth Driller	9648
Depth Logger	5982
Bottom Logged Interval	5982
Top Log Interval	SURFACE
Open Hole Size	6-1/8
Type Fluid	WATER
Density / Viscosity	N/A
Max. Recorded Temp.	223°F
Estimated Cement Top	1205
Time Well Ready	PORTABLE MAST
Time Logger on Bottom	2-3/4 PROBE 101020
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	24	1207.6
Prot. String				
Production String	7	26# P-110	24	6131
Liner	4-1/2	11.6# P-110	6024.4	9633

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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 127 & WCR 110, S.25, W INTO
SOUTHERNMOST WELL OF A 4 WELL PAD

Database File:	cbl noble rohn state ld04-65hn.db
Dataset Pathname:	pass3
Presentation Format:	sector2
Dataset Creation:	Mon Aug 19 13:11:06 2013 by Log SCH 120430
Charted by:	Depth in Feet scaled 1:240

Database File: cbl noble rohn state ld04-65hn.db
Dataset Pathname: pass2
Presentation Format: sector2
Dataset Creation: Mon Aug 19 12:59:55 2013 by Log SCH 120430
Charted by: Depth in Feet scaled 1:240

Calibration Report

Database File: cbl noble rohn state ld04-65hn.db
Dataset Pathname: pass2
Dataset Creation: Mon Aug 19 12:59:55 2013 by Log SCH 120430

Gamma Ray Calibration Report

Type / Serial: Probe275dig / 101010

SHOP CALIBRATION Mon Aug 19 11:52:10 2013

	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	1.0				cps
		0.5200			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: 485.542 ft

Master Calibration, performed Mon Aug 19 12:42:48 2013:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.008	1.014	1.500	62.165	60.286	1.039
CAL	0.007	1.253				
5'	0.008	1.132	1.500	62.165	53.936	1.089
SUM						
S1	0.007	1.127	0.000	62.165	55.506	-0.412
S2	0.008	1.118	0.000	62.165	55.987	-0.433
S3	0.007	1.063	0.000	62.165	58.907	-0.434
S4	0.008	0.959	0.000	62.165	65.366	-0.502
S5	0.007	0.858	0.000	62.165	73.114	-0.547
S6	0.008	0.851	0.000	62.165	73.727	-0.556
S7	0.008	0.965	0.000	62.165	64.905	-0.487
S8	0.007	1.092	0.000	62.165	57.310	-0.427

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	0.007	1.253	1.000	0.000

Air Zero Calibration, performed Mon Aug 19 12:37:42 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