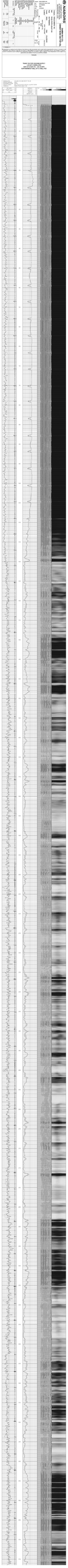

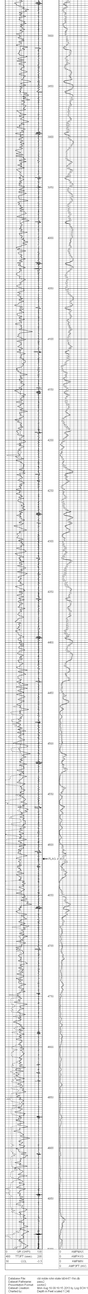

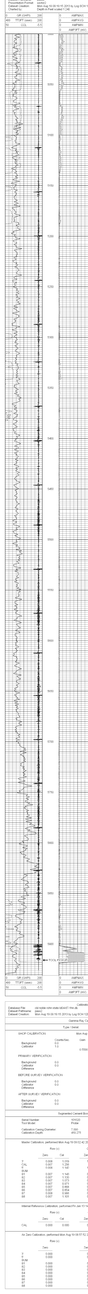

NABORS
COMPLETION & PRODUCTION SERVICES CO.

GAMMA RAY CCL
CEMENT BOND SECTOR VDL

Company NOBLE ENERGY INC.
Well ROHN STATE LD04-67-1HN
Field WATTENBERG
County WELD
State COLORADO

Company NOBLE ENERGY INC.
Well ROHN STATE LD04-67-1HN
Field WATTENBERG
County WELD State COLORADO
Location: API #: 0512337480
1650' FNL & 660' FWL
SE/NE
SEC 4 TWP 9N RGE 58W
Other Services

Permanent Datum GL Elevation 4707
Log Measured From KB
Drilling Measured From KB

Elevation
K.B. 4731
D.F.
G.L. 4707

Date	AUGUST 19, 2013
Run Number	ONE
Depth Driller	9583
Depth Logger	5924
Bottom Logged Interval	5924
Top Log Interval	SURFACE
Open Hole Size	6-1/8
Type Fluid	WATER
Density / Viscosity	N/A
Max. Recorded Temp.	213°F
Estimated Cement Top	1094
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	1189.2
Prot. String				
Production String	7	26# P-110 IC	24	5996.9
Liner	4-1/2	11.6# P-110	5891.6	9573

<<< 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 YOU FOR CHOOSING NCPS!!!!
LOG NOT CORRELATED
WCR 127 & WCR 110, S.25, W INTO
NORTHERNMOST WELL OF A 4 WELL PAD

Database File:	cbl noble rohn state ld04-67-1hn.db
Dataset Pathname:	pass3
Presentation Format:	sector2
Dataset Creation:	Mon Aug 19 09:28:16 2013 by Log SCH 120430
Charted by:	Depth in Feet scaled 1:240

Database File: cbl noble rohn state ld04-67-1hn.db
Dataset Pathname: pass2
Presentation Format: sector2
Dataset Creation: Mon Aug 19 09:19:15 2013 by Log SCH 120430
Charted by: Depth in Feet scaled 1:240

Calibration Report

Database File: cbl noble rohn state ld04-67-1hn.db
Dataset Pathname: pass2
Dataset Creation: Mon Aug 19 09:19:15 2013 by Log SCH 120430

Gamma Ray Calibration Report

Type / Serial: Probe275dig / 101010

SHOP CALIBRATION Mon Aug 19 09:03:59 2013

	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	1.0				cps
		0.5500			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:	410.275	ft

Master Calibration, performed Mon Aug 19 09:02:42 2013:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.008	1.019	1.500	62.165	60.008	1.045
CAL	0.007	1.256				
5'	0.008	1.142	1.500	62.165	53.488	1.098
SUM						
S1	0.007	1.143	0.000	62.165	54.722	-0.399
S2	0.007	1.130	0.000	62.165	55.390	-0.414
S3	0.007	1.073	0.000	62.165	58.357	-0.430
S4	0.007	0.971	0.000	62.165	64.489	-0.479
S5	0.007	0.868	0.000	62.165	72.200	-0.538
S6	0.007	0.854	0.000	62.165	73.420	-0.547
S7	0.008	0.966	0.000	62.165	64.835	-0.489
S8	0.007	1.101	0.000	62.165	56.851	-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	0.007	1.256	1.000	0.000

Air Zero Calibration, performed Mon Aug 19 08:57:52 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