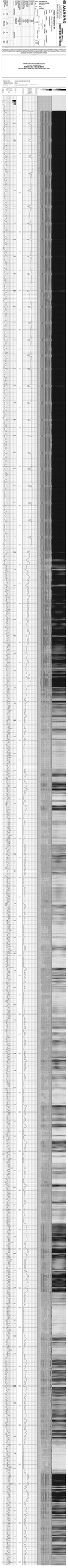

Company NOBLE ENERGY INC.
Well ROHN STATE LD04-66HN
Field WATTENBERG
County WELD
State COLORADO

NABORS
COMPLETION & PRODUCTION SERVICES CO.

GAMMA RAY CCL CEMENT BOND SECTOR VDL

Company NOBLE ENERGY INC.
Well ROHN STATE LD04-66HN
Field WATTENBERG
County WELD State COLORADO

Location: API #: 0512337481
1980' FNL & 660' FWL
SE/SE
SEC 4 TWP 9N RGE 58W

Other Services

Permanent Datum	GL	Elevation	4706	Elevation
Log Measured From	KB			K.B. 4730
Drilling Measured From	KB			D.F.
				G.L. 4706

Date	AUGUST 19, 2013
Run Number	ONE
Depth Driller	9628
Depth Logger	5943
Bottom Logged Interval	5943
Top Log Interval	SURFACE
Open Hole Size	6-1/8
Type Fluid	WATER
Density / Viscosity	N/A
Max. Recorded Temp.	212°F
Estimated Cement Top	1172
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	1188.5
Prot. String				
Production String	7	26# P-110 IC	24	6078.8
Liner	4-1/2	11.6# P-110	5931.8	9613

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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
SECOND WELL FROM THE NORTH OF A 4 WELL PAD

Database File:	cbl noble rohn state ld04-66hn.db
Dataset Pathname:	pass3
Presentation Format:	sector2
Dataset Creation:	Mon Aug 19 10:39:55 2013 by Log SCH 120430
Charted by:	Depth in Feet scaled 1:240

0 GR (GAPI) 130
400 TT3FT (usec) 200
30 CCL -3.3
0 AMPMAX 100
0 AMPAVG 100
0 AMPMIN 100
0 AMP3FT (mV) 100
200 WVF5FT 1200
1 Sector Map 8

0 GR (GAPI) 130	0 AMPMAX 100	200 WVF5FT 1200	1 Sector Map 8
400 TT3FT (usec) 200	0 AMPAVG 100		
30 CCL -3.3	0 AMPMIN 100		
	0 AMP3FT (mV) 100		

Database File: cbl noble rohn state ld04-66hn.db
Dataset Pathname: pass2
Presentation Format: sector2
Dataset Creation: Mon Aug 19 10:29:31 2013 by Log SCH 120430
Charted by: Depth in Feet scaled 1:240

0 GR (GAPI) 200	0 AMPMAX 100	200 WVF5FT 1200	1 Sector Map 8
400 TT3FT (usec) 200	0 AMPAVG 100		
50 CCL -5.5	0 AMPMIN 100		
	0 AMP3FT (mV) 100		

0 GR (GAPI) 200	0 AMPMAX 100	200 WVF5FT 1200	1 Sector Map 8
400 TT3FT (usec) 200	0 AMPAVG 100		
50 CCL -5.5	0 AMPMIN 100		
	0 AMP3FT (mV) 100		

Calibration Report

Database File: cbl noble rohn state ld04-66hn.db
Dataset Pathname: pass2
Dataset Creation: Mon Aug 19 10:29:31 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
		0.5400			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:	357.725	ft

Master Calibration, performed Mon Aug 19 10:14:51 2013:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.008	1.025	1.500	62.165	59.650	1.047
CAL	0.007	1.231				
5'	0.008	1.132	1.500	62.165	53.964	1.094
SUM						
S1	0.007	1.149	0.000	62.165	54.447	-0.402
S2	0.008	1.140	0.000	62.165	54.893	-0.425
S3	0.007	1.079	0.000	62.165	58.017	-0.433
S4	0.008	0.970	0.000	62.165	64.572	-0.489
S5	0.007	0.868	0.000	62.165	72.253	-0.534
S6	0.008	0.861	0.000	62.165	72.857	-0.549
S7	0.008	0.981	0.000	62.165	63.837	-0.488
S8	0.007	1.112	0.000	62.165	56.260	-0.414

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	1.231	1.000	0.000

Air Zero Calibration, performed Mon Aug 19 10:10:04 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