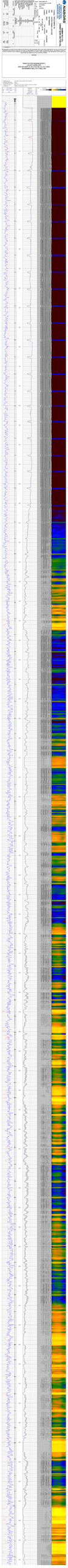

NABORS
COMPLETION & PRODUCTION SERVICES CO.

GAMMA RAY CCL
CEMENT BOND SECTOR VDL

Company NOBLE ENERGY INC.
Well CASTOR FEDERAL LD15-72HN
Field WATTENBERG
County WELD

Company NOBLE ENERGY INC.
Well CASTOR FEDERAL LD15-72HN
Field WATTENBERG
County WELD State COLORADO

Location: API #: 0512337433
BHL: 660' FSL & 660' FEL
NE/NE
SEC 15 TWP 9N RGE 58W

Other Services

Permanent Datum GL Elevation 4704
Log Measured From KB
Drilling Measured From KB

Elevation
K.B. 4728
D.F.
G.L. 4704

Date	JANUARY 13, 2014		
Run Number	ONE		
Depth Driller	9861		
Depth Logger	5981		
Bottom Logged Interval	5981		
Top Log Interval	SURFACE		
Open Hole Size	8-3/4		
Type Fluid	WATER		
Density / Viscosity	N/A		
Max. Recorded Temp.	207°F		
Estimated Cement Top	1062		
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	24	1232.6
Prot. String				
Production String	7	26# P-110	24	6037.9
Liner	4-1/2	11.6# P-110	5977.6	9846

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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 104 & WCR 127, N1.5, E.25, SE.4, S.2, E.3, S INTO
EASTERNMOST WELL OF A 3 WELL PAD

Database File: cbl noble castor federal ld15-72hn.db
Dataset Pathname: pass3
Presentation Format: sector2
Dataset Creation: Mon Jan 13 09:29:31 2014 by Log SCH 120430
Charted by: Depth in Feet scaled 1:240

Database File:	cbl noble castor federal ld15-72hn.db
Dataset Pathname:	pass2
Presentation Format:	sector2
Dataset Creation:	Mon Jan 13 09:20:58 2014 by Log SCH 120430
Charted by:	Depth in Feet scaled 1:240

Calibration Report

Database File:	cbl noble castor federal ld15-72hn.db
Dataset Pathname:	pass2
Dataset Creation:	Mon Jan 13 09:20:58 2014 by Log SCH 120430

Gamma Ray Calibration Report

Type / Serial: Probe275dig / 110785

SHOP CALIBRATION	Counts/Sec.	Gain	Offset	Jig	Units
		Fri Nov 08 09:38:30 2013			
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:	132.858	ft

Master Calibration, performed Mon Jan 13 09:04:42 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.008	1.031	1.500	62.165	59.318	1.032
CAL	0.008	1.201				
5'	0.008	1.100	1.500	62.165	55.574	1.054
SUM						
S1	0.008	1.184	0.000	62.165	52.877	-0.416
S2	0.008	1.155	0.000	62.165	54.169	-0.423
S3	0.008	1.062	0.000	62.165	58.972	-0.469
S4	0.008	0.955	0.000	62.165	65.650	-0.502
S5	0.008	0.868	0.000	62.165	72.262	-0.572
S6	0.008	0.872	0.000	62.165	71.902	-0.555
S7	0.008	1.001	0.000	62.165	62.592	-0.499
S8	0.008	1.145	0.000	62.165	54.665	-0.438

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	1.201	1.000	0.000

Air Zero Calibration, performed Mon Jan 13 09:02:32 2014:

	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