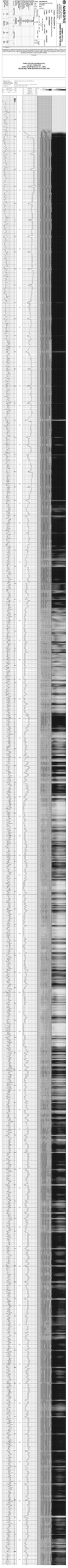

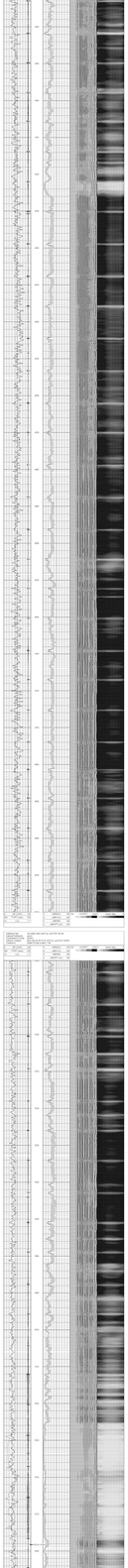

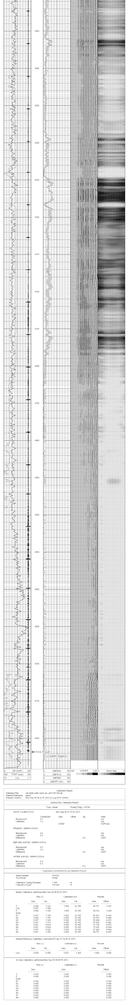

NABORS
COMPLETION & PRODUCTION SERVICES CO.

GAMMA RAY CCL CEMENT BOND SECTOR VDL

Company	NOBLE ENERGY INC.
Well	WELLS RANCH USX AA13-65-1HN
Field	WATTENBERG
County	WELD
State	COLORADO

Company NOBLE ENERGY INC.
Well WELLS RANCH USX AA13-65-1HN
Field WATTENBERG
County WELD **State** COLORADO
Location: API #: 0512336827
BHL: 2280' FSL & 205' FEL
NW/SW
SEC 18 TWP 6N RGE 62W

Other Services

Permanent Datum	GL	Elevation 4831	Elevation K.B. 4855 D.F. G.L. 4831
Log Measured From	KB		
Drilling Measured From	KB		

Date	SEPTEMBER 9, 2013
Run Number	ONE
Depth Driller	11560
Depth Logger	6824
Bottom Logged Interval	6824
Top Log Interval	SURFACE
Open Hole Size	8-3/4
Type Fluid	WATER
Density / Viscosity	N/A
Max. Recorded Temp.	223°F
Estimated Cement Top	880
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	631.9
Prot. String				
Production String	7	26# P-110 IC	24	7059.5
Liner	4-1/2	11.6# P-110	6956.2	11510

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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 67 & WCR 68, E2.3, N.7, E.7, S INTO
SECOND WELL FROM THE NORTH OF A 6 WELL PAD

Database File:	cbl noble wells ranch usx aa13-65-1hn.db
Dataset Pathname:	pass3
Presentation Format:	sector2
Dataset Creation:	Mon Sep 09 08:43:31 2013 by Log SCH 120430
Charted by:	Depth in Feet scaled 1:240

Database File: cbl noble wells ranch usx aa13-65-1hn.db
Dataset Pathname: pass2
Presentation Format: sector2
Dataset Creation: Mon Sep 09 08:25:41 2013 by Log SCH 120430
Charted by: Depth in Feet scaled 1:240

Calibration Report

Database File: cbl noble wells ranch usx aa13-65-1hn.db
Dataset Pathname: pass2
Dataset Creation: Mon Sep 09 08:25:41 2013 by Log SCH 120430

Gamma Ray Calibration Report

Type / Serial: Probe275dig / 110785

SHOP CALIBRATION Mon Sep 09 07:10:53 2013

	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	1.0				cps
		0.6500			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: 518.458 ft

Master Calibration, performed Mon Sep 09 08:09:52 2013:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.008	1.023	1.500	62.165	59.767	1.051
CAL	0.007	1.435				
5'	0.008	1.128	1.500	62.165	54.122	1.094
SUM						
S1	0.007	1.109	0.000	62.165	56.432	-0.418
S2	0.008	1.161	0.000	62.165	53.912	-0.409
S3	0.007	1.129	0.000	62.165	55.434	-0.413
S4	0.007	1.011	0.000	62.165	61.964	-0.462
S5	0.007	0.874	0.000	62.165	71.736	-0.533
S6	0.007	0.834	0.000	62.165	75.165	-0.554
S7	0.007	0.929	0.000	62.165	67.424	-0.504
S8	0.007	1.065	0.000	62.165	58.757	-0.435

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	1.435	1.000	0.000

Air Zero Calibration, performed Mon Sep 09 08:06:55 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