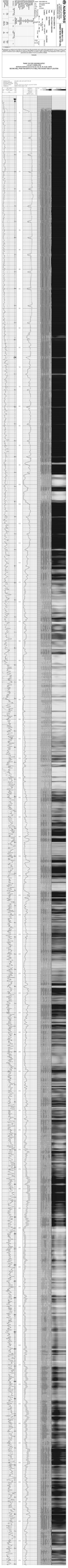

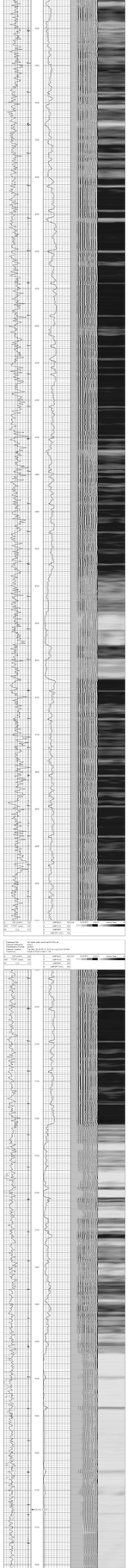

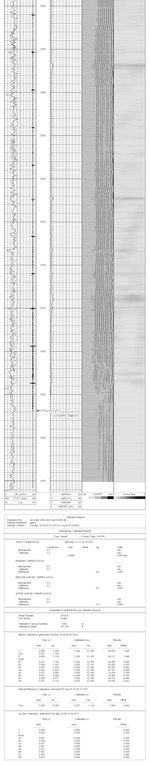

NABORS
COMPLETION & PRODUCTION SERVICES CO.

GAMMA RAY CCL CEMENT BOND SECTOR VDL

Company	NOBLE ENERGY INC.
Well	WELLS RANCH AE05-63HN
Field	WATTENBERG
County	WELD
State	COLORADO

Company NOBLE ENERGY INC.
Well WELLS RANCH AE05-63HN
Field WATTENBERG
County WELD State COLORADO
Location: API #: 0512336770
BHL: 1320' FSL & 535' FEL
SE/SE
SEC 6 TWP 6N RGE 62W
Other Services

				Elevation
Permanent Datum	GL	Elevation	4945	K.B. 4969
Log Measured From	KB			D.F.
Drilling Measured From	KB			G.L. 4945

Date	MAY 28, 2013
Run Number	ONE
Depth Driller	11101
Depth Logger	6274
Bottom Logged Interval	6274
Top Log Interval	SURFACE
Open Hole Size	8-3/4
Type Fluid	WATER
Density / Viscosity	N/A
Max. Recorded Temp.	215°F
Estimated Cement Top	611
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	627.4
Prot. String				
Production String	7	26# P-110	24	7157.3
Liner	4.5	11.6# P-110	7049	11101

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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 69 & WCR 68, E1.25, N1.25, E1, N.5, E1, N1, W.25, S INTO
SECOND WELL FROM THE NORTH OF A 5 WELL PAD ON EAST SIDE OF LOCATION

Database File:	cbl noble wells ranch ae05-63hn.db
Dataset Pathname:	pass3
Presentation Format:	sector2
Dataset Creation:	Tue May 28 09:18:41 2013 by Log SCH 120430
Charted by:	Depth in Feet scaled 1:240

Database File: cbl noble wells ranch ae05-63hn.db
Dataset Pathname: pass2
Presentation Format: sector2
Dataset Creation: Tue May 28 09:05:21 2013 by Log SCH 120430
Charted by: Depth in Feet scaled 1:240

Calibration Report

Database File: cbl noble wells ranch ae05-63hn.db
Dataset Pathname: pass2
Dataset Creation: Tue May 28 09:05:21 2013 by Log SCH 120430

Gamma Ray Calibration Report

Type / Serial: Probe275dig / 110785

SHOP CALIBRATION Mon May 13 11:26:24 2013

	Counts/Sec.	Gain	Offset	Jig	Units
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:	477.783	ft

Master Calibration, performed Tue May 28 08:50:47 2013:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.008	1.005	1.500	62.165	60.841	1.042
CAL	0.007	1.314				
5'	0.008	1.125	1.500	62.165	54.271	1.086
SUM						
S1	0.007	1.150	0.000	62.165	54.416	-0.405
S2	0.008	1.107	0.000	62.165	56.558	-0.425
S3	0.007	1.030	0.000	62.165	60.807	-0.452
S4	0.008	0.933	0.000	62.165	67.167	-0.506
S5	0.007	0.843	0.000	62.165	74.368	-0.556
S6	0.007	0.842	0.000	62.165	74.469	-0.555
S7	0.008	0.977	0.000	62.165	64.101	-0.489
S8	0.007	1.125	0.000	62.165	55.605	-0.413

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	1.314	1.000	0.000

Air Zero Calibration, performed Tue May 28 08:51:04 2013:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.008	0.000	-0.000
5'	0.008	0.000	0.000
SUM			
S1	0.007	0.000	0.000
S2	0.008	0.000	-0.000
S3	0.007	0.000	0.000
S4	0.007	0.000	0.000
S5	0.007	0.000	0.000
S6	0.007	0.000	-0.000
S7	0.008	0.000	0.000
S8	0.007	0.000	0.000