Company	NOBLE ENERGY INC.
Well	THISTLE DOWN STATE PC F36-65HN
Field	WATTENBERG
County	WELD
State	COLORADO

NABORS
COMPLETION & PRODUCTION SERVICES CO.

GAMMA RAY CCL CEMENT BOND VDL

Company NOBLE ENERGY INC.
Well THISTLE DOWN STATE PC F36-65HN
Field WATTENBERG
County WELD State COLORADO

Location: API #: 0512335677
BHL: 2450' FNL & 635' FWL
SE/NE
SEC 36 TWP 5N RGE 65W

Other Services

Permanent Datum	GL	Elevation 4770	Elevation	K.B. 4788
Log Measured From	KB			D.F.
Drilling Measured From	KB			G.L. 4770

Date	MARCH 15, 2013
Run Number	ONE
Depth Driller	11127
Depth Logger	7122
Bottom Logged Interval	7122
Top Log Interval	SURFACE
Open Hole Size	8-3/4
Type Fluid	WATER
Density / Viscosity	N/A
Max. Recorded Temp.	218 DEG. F
Estimated Cement Top	1201
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	BRIAN PEARSON

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	16	626
Prot. String				
Production String	7	26# P-110	16	7262
Liner	4-1/2	11.6# P-110	7108.8	11127

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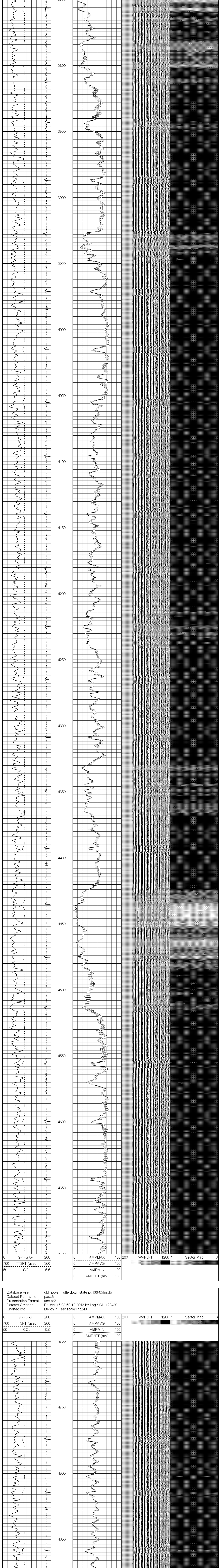
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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 52 & WCR 49, S.4, W200', S INTO
CENTER WELL OF A 3 WELL PAD

Database File:	cbl noble thistle down state pc f36-65hn.db
Dataset Pathname:	pass4
Presentation Format:	sector2
Dataset Creation:	Fri Mar 15 09:12:50 2013 by Log SCH 120430
Charted by:	Depth in Feet scaled 1:240



Database File:	cbl noble thistle down state pc f36-65hn.db
Dataset Pathname:	pass3
Presentation Format:	sector2
Dataset Creation:	Fri Mar 15 08:50:12 2013 by Log SCH 120430
Charted by:	Depth in Feet scaled 1:240

Calibration Report

Database File:	cbl noble thistle down state pc f36-65hn.db
Dataset Pathname:	pass3
Dataset Creation:	Fri Mar 15 08:50:12 2013 by Log SCH 120430

Gamma Ray Calibration Report

Type / Serial: Probe275dig / 110785

SHOP CALIBRATION	Thu Mar 07 06:39:34 2013				
	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	1.0				cps
		0.5000			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:	688.192	ft

Master Calibration, performed Fri Mar 15 08:31:51 2013:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.008	1.010	1.500	62.165	60.523	1.031
CAL	0.008	1.419				
5'	0.008	1.160	1.500	62.165	52.667	1.090
SUM						
S1	0.008	1.128	0.000	62.165	55.479	-0.418
S2	0.008	1.098	0.000	62.165	57.008	-0.443
S3	0.008	1.040	0.000	62.165	60.241	-0.458
S4	0.008	0.948	0.000	62.165	66.153	-0.518
S5	0.008	0.855	0.000	62.165	73.349	-0.564
S6	0.008	0.864	0.000	62.165	72.626	-0.565
S7	0.008	0.995	0.000	62.165	62.977	-0.489
S8	0.008	1.119	0.000	62.165	55.936	-0.425

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	1.419	1.000	0.000

Air Zero Calibration, performed Fri Mar 15 08:32:22 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	0.008	0.000	0.000
S2	0.008	0.000	-0.000
S3	0.008	0.000	-0.000
S4	0.008	0.000	0.000
S5	0.008	0.000	0.000
S6	0.008	0.000	-0.000
S7	0.008	0.000	0.000
S8	0.008	0.000	-0.000