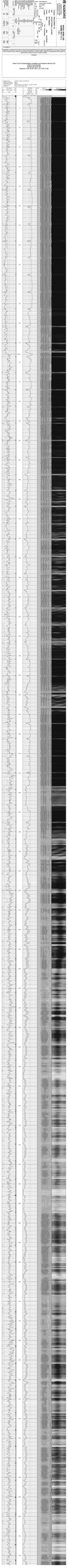

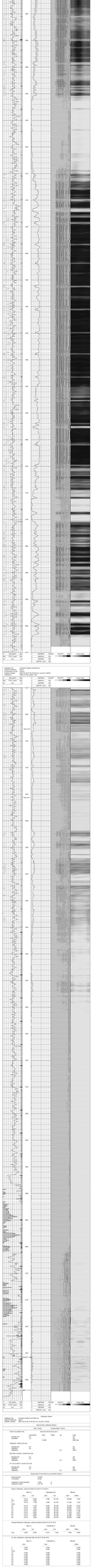

Company	NOBLE ENERGY INC.
Well	CASTOR FEDERAL LC23-62HN
Field	WATTENBERG
County	WELD
State	COLORADO

NABORS
COMPLETION
& PRODUCTION
SERVICES CO.

RADIAL BOND LOG
GAMMA RAY C C L
V D L

Company	NOBLE ENERGY INC.		
Well	CASTOR FEDERAL LC23-62HN		
Field	WATTENBERG		
County	WELD	State	COLORADO

Location: API #: 05123363920000
SW SW
BHL: 660' FSL & 660' FEL
SEC 23 TWP 9N RGE 59W

Other Services

				Elevation
Permanent Datum	GL	Elevation	4847	K.B. 4871
Log Measured From	KB 24'			D.F. 4870
Drilling Measured From	KB			G.L. 4847

Date	February 6, 2013	
Run Number	One	
Depth Driller	10,278	
Depth Logger	6319	
Bottom Logged Interval	6318	
Top Log Interval	Surface	
Casing Size	7.00"	
Type Fluid	Water	
Max. Recorded Temp.	199 deg F	
Estimated Cement Top	570 est.	
Time Well Ready	Crane	
Time Logger On Bottom	AM	
Unit Number	4367	4515
Tool Size / ID Number	2.75 Probe 101020	2.75 Probe 101010
Location	45	Platteville, CO
Recorded By	K. Monaghan	
Witnessed By	Chummy	

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	9.625"	36 lb/ft J-55	Surface	672.7
Prot. String				
Production String	7.00"	26 lb/ft P-110	Surface	6433.5
Liner	4.50"	11.6 lb/ft P-110	6298.5	10,252.1

<<< Fold Here >>>

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 Nabors Completion and Production Services CO!!
API# 05-123-36392-0000
Wireline Zero @ 24' KB
Directions: 119 & 104, W 1.2mi. S 1/2, E 2/10, S Into

Database File:	scblcastor federal lc23-62hn.db
Dataset Pathname:	pass3
Presentation Format:	sector2
Dataset Creation:	Wed Feb 06 08:14:56 2013 by Log SCH 120430
Charted by:	Depth in Feet scaled 1:240

Database File: scblcastor federal lc23-62hn.db
Dataset Pathname: pass2
Presentation Format: sector2
Dataset Creation: Wed Feb 06 07:59:16 2013 by Log SCH 120430
Charted by: Depth in Feet scaled 1:240

Calibration Report

Database File: scblcastor federal lc23-62hn.db
Dataset Pathname: pass3
Dataset Creation: Wed Feb 06 08:14:56 2013 by Log SCH 120430

Gamma Ray Calibration Report

Type / Serial: Probe275dig / 101010

SHOP CALIBRATION Wed Feb 06 08:04:02 2013

	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	1.0				cps
		0.5200			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:	512.183	ft

Master Calibration, performed Wed Feb 06 07:41:30 2013:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.012	0.997	0.900	62.165	60.696	1.627
CAL	-0.012	1.402				
5'	-0.012	1.168	0.900	62.165	51.924	1.524
SUM						
S1	-0.012	1.108	0.000	62.165	55.522	0.674
S2	-0.012	1.097	0.000	62.165	56.055	0.675
S3	-0.012	1.044	0.000	62.165	58.885	0.712
S4	-0.012	0.942	0.000	62.165	65.169	0.786
S5	-0.012	0.853	0.000	62.165	71.878	0.871
S6	-0.012	0.852	0.000	62.165	71.962	0.874
S7	-0.012	0.967	0.000	62.165	63.485	0.754
S8	-0.012	1.085	0.000	62.165	56.656	0.689

Internal Reference Calibration, performed Wed Feb 06 07:41:07 2013:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.012	1.402	1.000	0.000

Air Zero Calibration, performed Wed Feb 06 07:36:24 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