SUPERIOR WELL SERVICES

# CEMENT BOND LOG
# GAMMA RAY C C L
# V D L

| | |
|---|---|
| Company | Noble Energy INC. |
| Well | GUTTERSEN D03-27 |
| Field | Wattenberg |
| County | Weld |
| State | Colorado |

Company Noble Energy INC.
Well GUTTERSEN D03-27
Field Wattenberg
County Weld State Colorado

Location: API #: 05123300740000
150' FSL & 1320' FEL
SW SE
SEC 34 TWP 4N RGE 64W

Other Services

| | | | |
|---|---|---|---|
| Permanent Datum | GL | Elevation 4696 | Elevation<br>K.B. 4711<br>D.F. 4710<br>G.L. 4696 |
| Log Measured From | KB 15' | | |
| Drilling Measured From | KB | | |

| | | |
|---|---|---|
| Date | August 3, 2012 | |
| Run Number | One | |
| Depth Driller | 7018 | |
| Depth Logger | 6943 | |
| Bottom Logged Interval | 6942 | |
| Top Log Interval | 485 | |
| Casing Size | 4 1/2" | |
| Type Fluid | Water | |
| Max. Recorded Temp. | 235 deg F | |
| Estimated Cement Top | 863 | |
| Time Well Ready | Crane | |
| Time Logger On Bottom | AM | |
| Unit Number | 4367 | 3839 |
| Tool Size / ID Number | 2.75 Probe 101010 | 2.75 Probe 110802 |
| Location | 45 | Platteville, CO |
| Recorded By | K. Monaghan | |
| Witnessed By | T. Settle | |

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

| Casing Record | Size | Wgt/Ft | Top | Bottom |
|---|---|---|---|---|
| Surface String | 8 5/8" | 24 lb/ft J-55 | Surface | 686.1 |
| Prot. String | | | | |
| Production String | 4 1/2" | 11.6 lb/ft M-80 | Surface | 6997 |
| Liner | | | | |

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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

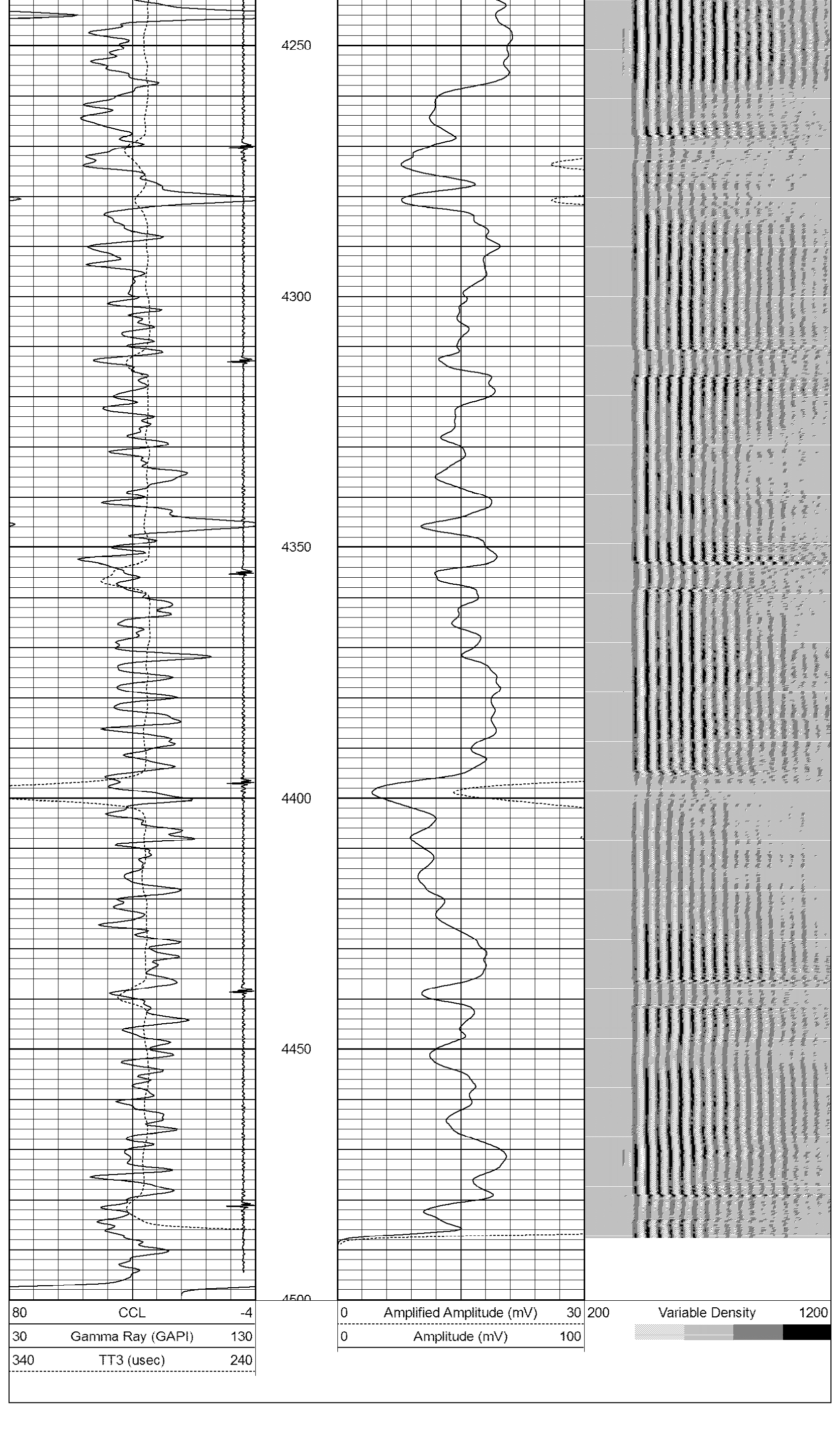
Thank You For Choosing Superior Well Services!!!
API# 05-123-30074-0000
Correlated to PSI's
Compensated Density / Compensated Neutron / Microlog
Dated: May 11, 2012
Directions: 40 & 57, S 3/4, W 1/10, S 1/10, SW Into

| | |
|---|---|
| Database File: | cblguttersen d03-27.db |
| Dataset Pathname: | pass3 |
| Presentation Format: | noble en |
| Dataset Creation: | Fri Aug 03 08:29:23 2012 by Log SCH 120430 |
| Charted by: | Depth in Feet scaled 1:240 |

80 CCL -4
30 Gamma Ray (GAPI) 130
340 TT3 (usec) 240

0 Amplified Amplitude (mV) 30
0 Amplitude (mV) 100

200 Variable Density 1200



Database File: cblguttersen d03-27.db
Dataset Pathname: pass2
Presentation Format: noble en
Dataset Creation: Fri Aug 03 08:05:36 2012 by Log SCH 120430
Charted by: Depth in Feet scaled 1:240

## Calibration Report

Database File: cblguttersen d03-27.db
Dataset Pathname: pass3
Dataset Creation: Fri Aug 03 08:29:23 2012 by Log SCH 120430

### Gamma Ray Calibration Report

Type / Serial: Probe275dig / 101010

SHOP CALIBRATION Thu Aug 02 08:46:02 2012

| | 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 |

### Cement Bond Log Calibration Report

| | | | |
|---|---|---|---|
| Serial Number: | 110802 | | |
| Tool Model: | Probe275Digital | | |
| Performed: | Thu Aug 02 08:30:28 2012 | | |
| Depth: | 825.317 | ft | |
| Casing Diameter: | 4.5 | in | |
| | 3' Spacing | 5' Spacing | |
| Signal Zero: | 0.9 | 0 | mV |
| Calibrated Amplitude: | 81.1961 | 81.1961 | mV |
| Reading at Signal Zero: | 0.0135254 | 0.0135498 | V |
| Reading in Free Pipe: | 2.49839 | 2.40039 | V |
| Gain: | 32.3141 | 34.0182 | |
| Offset: | 0.462939 | -0.46094 | |