J-W WIRELINE COMPANY

# CEMENT BOND
# GAMMA RAY
# COLLAR CORELATION LOG

|  |  |
|---|---|
| Company | NOBLE ENERGY INC. |
| Well | LYSTER E 26-22D |
| Field | GREELEY |
| County | WELD |
| State | COLORADO |

Company NOBLE ENERGY INC.
Well LYSTER E 26-22D
Field GREELEY
County WELD State COLORADO

Location: API #: 05-123-31936-00
SHL: 2037' FSL & 658' FEL NE/SE
BHL: 2290' FSL & 1629' FEL NW/SE
SEC. 26 TWP. 6N RGE. 65W

Other Services: NONE

SEC TWP RGE

Permanent Datum GROUND LEVEL Elevation 4688
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Elevation
K.B. 4701
D.F. 4701
G.L. 4688

|  |  |
|---|---|
| Date | 16-DECEMBER-2010 |
| Run Number | ONE |
| Depth Driller | 7280 |
| Depth Logger | 7193 |
| Bottom Logged Interval | 7186 |
| Top Log Interval | 2050 |
| Open Hole Size | 7 7/8 |
| Type Fluid | WATER |
| Density / Viscosity | -- |
| Max. Recorded Temp. | 240 |
| Estimated Cement Top | 2230 |
| Time Well Ready | -- |
| Time Logger on Bottom | -- |
| Equipment Number | 2405/YELLOW |
| Location | BRIGHTON |
| Recorded By | HAYES |
| Witnessed By | MR. CASEY RUPPEL |

| 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 # | SURFACE | 628 |
| Prot. String |  |  |  |  |
| Production String | 4.5 | 11.6 # | SURFACE | 7273 |
| Liner |  |  |  |  |

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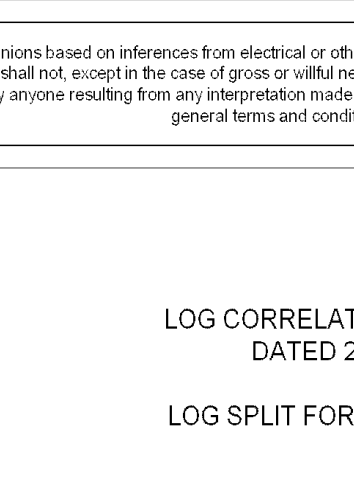
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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

LOG CORRELATED TO DI,GL,GR LOG LOG
DATED 27-NOVEMBER-2010

LOG SPLIT FOR CORELATION PURPOSES

| Sensor | Offset (ft) | Schematic | Description | Len (ft) | OD (in) | Wt (lb) |
|---|---|---|---|---|---|---|
|  |  |  | CENT-A (1) | 3.00 | 1.69 | 10.00 |
| CCL | 13.25 |  | CCL-GR_1_3/8 (001)<br>1 3/8 titan ccl | 1.00 | 1.38 | 11.00 |
| GR | 11.49 |  | GR-s_t001 (t001) | 2.52 | 1.69 | 30.00 |
| WVF5 | 7.34 |  |  |  |  |  |
| WVF3 | 6.34 |  | CBL-3_5 (001) | 7.23 | 2.44 | 127.00 |
|  |  |  | CENT-B (2) | 3.00 | 1.69 | 10.00 |

Dataset: lyster e 26-22d.db: field/well/run1/pass2
Total Length: 16.75 ft
Total Weight: 188.00 lb
O.D. 2.44 in

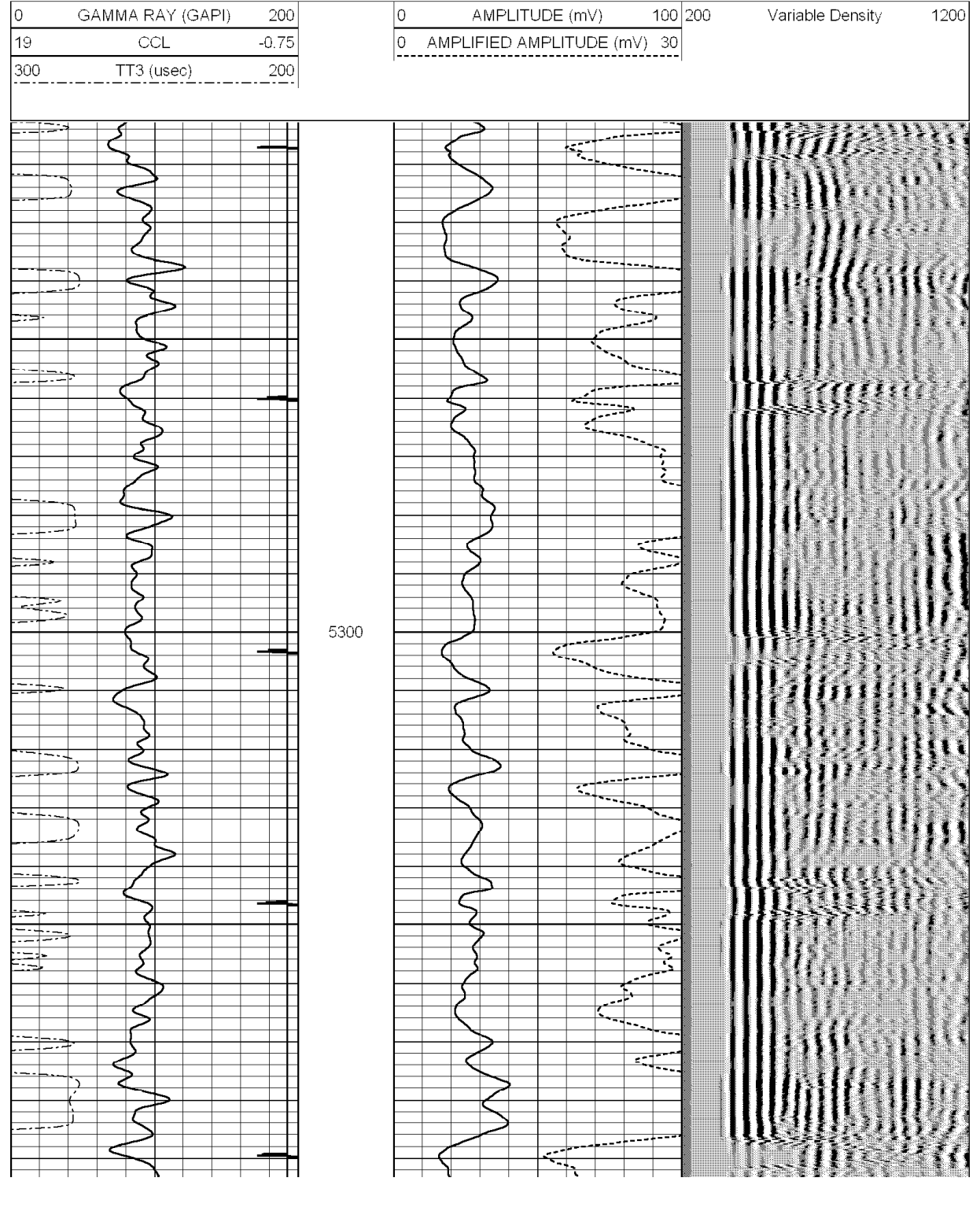
Database File: lyster e 26-22d.db
Dataset Pathname: pass2
Presentation Format: cblx
Dataset Creation: Thu Dec 16 14:03:36 2010 by Log Std Casedhole 08121
Charted by: Depth in Feet scaled 1:240

| 30 GAMMA RAY (GAPI) 130 | 0 AMPLITUDE (mV) 100 | 200 Variable Density 1200 |
|---|---|---|
| 19 CCL -0.75 | 0 AMPLIFIED AMPLITUDE (mV) 30 |  |
| 300 TT3 (usec) 200 |  |  |

| 30 GAMMA RAY (GAPI) 130 | 0 AMPLITUDE (mV) 100 | 200 Variable Density 1200 |
|---|---|---|
| 19 CCL -0.75 | 0 AMPLIFIED AMPLITUDE (mV) 30 |  |
| 300 TT3 (usec) 200 |  |  |

Database File: lyster e 26-22d.db
Dataset Pathname: pass1
Presentation Format: cblx
Dataset Creation: Thu Dec 16 13:31:40 2010 by Log Std Casedhole 08121
Charted by: Depth in Feet scaled 1:240

| 0 GAMMA RAY (GAPI) 200 | 0 AMPLITUDE (mV) 100 | 200 Variable Density 1200 |
|---|---|---|
| 19 CCL -0.75 | 0 AMPLIFIED AMPLITUDE (mV) 30 |  |
| 300 TT3 (usec) 200 |  |  |



## Calibration Report

| | |
|---|---|
| Database File: | lyster e 26-22d.db |
| Dataset Pathname: | pass2 |
| Dataset Creation: | Thu Dec 16 14:03:36 2010 by Log Std Casedhole 08121 |

### Cement Bond Log Calibration Report

| | | | |
|---|---|---|---|
| Serial Number: | 001 | | |
| Tool Model: | 3_5 | | |
| Performed: | Thu Dec 16 13:16:35 2010 | | |
| Depth: | 1820.57 | ft | |
| Casing Diameter: | 4.5 | in | |
| | 3' Spacing | 5' Spacing | |
| Signal Zero: | 3 | 3 | mV |
| Calibrated Amplitude: | 81.1961 | 81.1961 | mV |
| Reading at Signal Zero: | 0 | 0 | V |
| Reading in Free Pipe: | 2.5 | 1.99463 | V |
| Gain: | 31.2784 | 39.2033 | |
| Offset: | 3 | 3 | |

### Gamma Ray Calibration Report

| | | |
|---|---|---|
| Serial Number: | t001 | |
| Tool Model: | s_t001 | |
| Performed: | Sun Jun 13 13:33:21 1993 | |
| Calibrator Value: | 1.0 | GAPI |
| Background Reading: | 0.0 | cps |
| Calibrator Reading: | 1.0 | cps |
| Sensitivity: | 1.0000 | GAPI/cps |