NABORS COMPLETION & PRODUCTION SERVICES CO.

GAMMA RAY CCL
CEMENT BOND VDL

| | |
|---|---|
| Company | NOBLE ENERGY INC. |
| Well | STATE 02-36 |
| Field | WATTENBERG |
| County | WELD |
| State | COLORADO |

Company: NOBLE ENERGY INC.
Well: STATE 02-36
Field: WATTENBERG
County: WELD
State: COLORADO
API #: 5123723810000
Location: SEC 36 TWP 4N RGE 67W
Elevation: KB 4742 DF 4741 GL 4729
Permanent Datum: Ground Level
Log Measured From: KB 1 Ft. Above Permanent Datum
Drilling Measured From: KB
Elevation: KB 4742 GL 4729

| | Depth | Size | Type |
|---|---|---|---|
| Date | 06/21/2013 | | |
| Depth Driller | 7060 | | |
| Depth Logger | 7062 | | |
| Bottom Logged Interval | 7062 | | |
| Top Log Interval | 5000 | | |
| Open Hole Size | 8.75 | | |
| Density / Viscosity | 9.4 | 48 | |
| Max Recorded Temp. | 164 | | |
| Estimated Cement Top | 5000 | | |
| Time Logger on Bottom | 2:34 AM 06/22/2013 | | |
| Equipment / Location | 43 | | |
| Recorded By | PETE BOWEN | | |
| Witnessed By | | | |

Run Number: 1
Run No: 1
Depth-Driller: 7060
Depth-Logger: 7062
Bottom Logged Interval: 7062
Top Log Interval: 5000
Casing Driller: Size 4.5 Weight 11.6 From 0 To 7060
Casing Logger: Size 4.5 Weight 11.6 From 0 To 7062
Bit Size: 7.875
Type Fluid in Hole: WBM
Density / Viscosity: 9.4 48
Max Recorded Temp: 164
Estimated Cement Top: 5000
Time Logger on Bottom: 2:34 AM 06/22/2013
Equipment / Location: 43
Recorded By: PETE BOWEN
Witnessed By:

Logging Record
Pump Out
Pump Data
Logging Disk
Lower Interval
Upper Interval
Max Rec. Temp.
Equipment No.
Location
Recorded By
Witnessed By

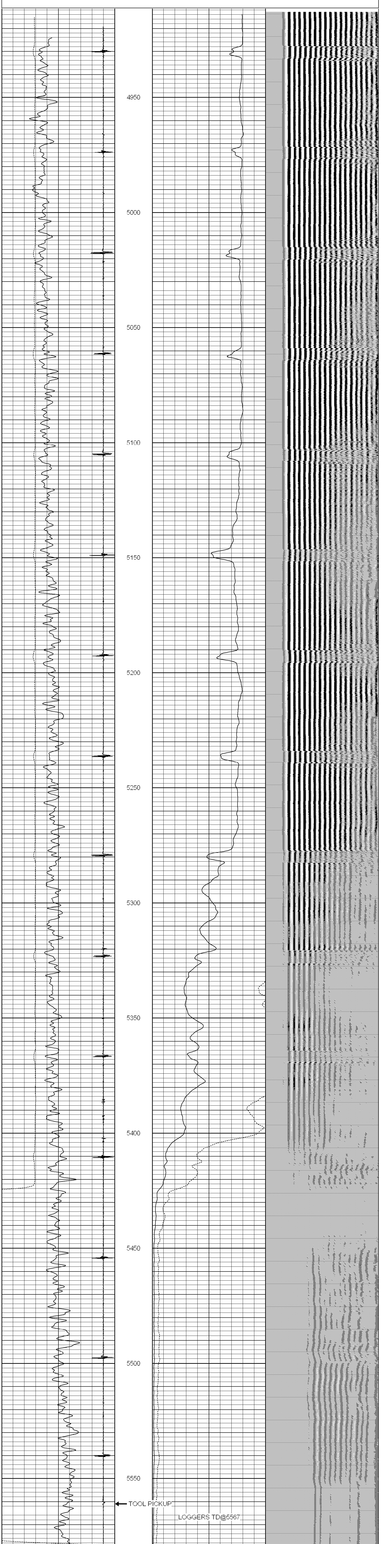
<<< Fold Here >>>

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

Database File: cbl nbole state 2-36pcr.db
Dataset Pathname: pass3
Presentation Format: noble en
Dataset Creation: Wed Jun 26 15:40:08 2013 by Log SCH 120430
Charted by: Depth in Feet scaled 1:240

| | | | | | |
|---|---|---|---|---|---|
| 50 | CCL | -5.5 | 0 | Amplified Amplitude (mV) | 30 200 Variable Density 1200 |
| 0 | Gamma Ray (GAPI) | 150 | 0 | Amplitude (mV) | 100 |
| 400 | TT3 (usec) | 0 | | | |




50 CCL -5.5 | 0 Amplified Amplitude (mV) 30 200 Variable Density 1200
0 Gamma Ray (GAPI) 150 | 0 Amplitude (mV) 100
400 TT3 (usec) 0

## Calibration Report

Database File: cbl nbole state 2-36pcr.db
Dataset Pathname: pass3
Dataset Creation: Wed Jun 26 15:40:08 2013 by Log SCH 120430

### Gamma Ray Calibration Report

Type / Serial: Probe2TSdgi / 101010

SHOP CALIBRATION — Wed Jun 26 09:43:21 2013

| | Counts/Sec. | Gain | Offset | Jig | Units |
|---|---|---|---|---|---|
| Background | 0.0 | | | | cps |
| Calibrator | 1.0 | | | | cps |
| | | 0.4800 | | | 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: | Probe2TSDigital | | |
| Performed: | Wed Jun 26 15:27:05 2013 | | |
| Depth: | 966.558 | ft | |
| Casing Diameter: | 4.5 | in | |
| | 3' Spacing | 5' Spacing | |
| Signal Zero: | 0.7 | 0 | mV |
| Calibrated Amplitude: | 81.1961 | 81.1961 | mV |
| Reading at Signal Zero: | -0.00576172 | -0.00563965 | V |
| Reading in Free Pipe: | 2.4907 | 2.38525 | V |
| Gain: | 32.1667 | 34.0318 | |
| Offset: | 0.685336 | 0.191927 | |