Form 3160-5
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

## SUNDRY NOTICES AND REPORTS ON WELLS

***Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.***

***SUBMIT IN TRIPLICATE- Other instructions on reverse side.***

5. Lease Serial No.
**NMSF-078095 A**

6. If Indian, Allottee or Tribe Name
**N/A**

7. If Unit or CA/Agreement, Name and/or No.
**N/A**

1. Type of Well
☐ Oil Well ☑ Gas Well ☐ Other

8. Well Name and No.
**HORTON 1 D**

2. Name of Operator **QUESTAR EXPLORATION & PRODUCTION CO.**

9. API Well No.
**30-045-33065**

3a. Address
**1050 17TH STREET, SUITE 500 DENVER, CO 80265**

3b. Phone No. *(include area code)*
**303-672-6900**

10. Field and Pool, or Exploratory Area
**Blanco Mesa V., Basin Dakota**

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
**1418 FSL & 1267 FEL 7-31N-11W, NMPM**

11. County or Parish, State
**SAN JUAN, NM**

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | | |
|---|---|---|---|---|
| ☐ Notice of Intent | ☐ Acidize | ☐ Deepen | ☐ Production (Start/Resume) | ☐ Water Shut-Off |
| ☐ Subsequent Report | ☐ Alter Casing | ☐ Fracture Treat | ☐ Reclamation | ☐ Well Integrity |
| ☐ Final Abandonment Notice | ☐ Casing Repair | ☐ New Construction | ☐ Recomplete | ☐ Other |
| | ☐ Change Plans | ☐ Plug and Abandon | ☐ Temporarily Abandon | |
| | ☐ Convert to Injection | ☐ Plug Back | ☐ Water Disposal | |

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

**CASING & CEMENTING INFO:**
**09/07/05**
**12.250", 9-5/8" 36#, SURFACE-219'**
**125SX 50/50 POZ, 28.2 BBL SLURRY VOL.**
**9/11/05**
**8.750", 7" 26#, SURFACE-3450'**
**360SX "G", 167.0 BBL SLURRY VOL.**
**09/15/05**
**6.250", 4-1/2", 13.5#, 3071'-7397'**
**230SX TXI LT WT.,**
**85.4 BBL SLURRY VOL.**
**100SX 50/50 POZ, 22.2 BBL SLURRY VOL.**

Circ. Press. 235 psi

NOV 2005
RECEIVED
OIL CONS. DIV.
DIST. 3

14. I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)* **SCOTT A. GOODWIN, JR.** Title **SR. PETROLEUM ENGINEER**

Signature Scott A. Goodwin Date **11/09/2005**

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

ACCEPTED FOR RECORD

Approved by _____ Title _____ Date NOV 15 2005

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office FARMINGTON FIELD OFFICE
BY

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*(Instructions on page 2)*

NMOCD

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# Cementing Report

| | | | | | |
|---|---|---|---|---|---|
| Legal Well Name: | HORTON 1D | | | Spud Date: | 9/5/2005 |
| Common Well Name: | HORTON 1D | Report #: | 1 | Report Date: | 9/11/2005 |
| Event Name: | DRILLING | Start: | 9/5/2005 | End: | 9/16/2005 |

## Cement Job Type: Primary

| Primary | Squeeze Open Hole | Squeeze Casing | Plug |
|---|---|---|---|
| Hole Size: 8.750 (in) | Hole Size: | Hole Size: | Hole Size: |
| TMD Set: 3,450.00 (ft) | SQ TMD: (ft) | TMD Set: | Top Set: (ft) |
| Date Set: 9/11/2005 | SQ Date: | Date Set: | BTM set: (ft) |
| Csg Type: INTERMEDIATE CASI | SQ Type: | Csg Type: | Plug Date: |
| Csg Size: 7.000 (in) | | SQ TMD: | Plug Type: |
| | | SQ Date: | Drilled Out: |
| Cmtd. Csg: OPEN HOLE | Cmtd. Csg: | Cmtd. Csg: | Cmtd. Csg: |

Cement Co: DOWELL SCHLUMBERGER  Cementer: SHAWN  Pipe Movement: NO MOVEMENT

## Pipe Movement

| | | | | | |
|---|---|---|---|---|---|
| Rot Time Start: : | Time End: : | RPM: | Init Torque: (ft-lbf) | Avg Torque: (ft-lbf) | Max Torque: (ft-lbf) |
| Rec Time Start: : | Time End: : | SPM: | Stroke Length: (ft) | Drag Up: (lb) | Drag Down: (lb) |

## Stage No: 1 of 1

| | | | |
|---|---|---|---|
| Type: STAGE 1 | Start Mix Cmt: : | Disp Avg Rate: 5.00 (bbl/min) | Returns: 100 |
| Volume Excess %: 50.00 | Start Slurry Displ: : | Disp Max Rate: 5.00 (bbl/min) | Total Mud Lost: (bbl) |
| Meas. From: | Start Displ: : | Bump Plug: Y | Cmt Vol to Surf: (bbl) |
| Time Circ Prior | End Pumping: 09:30 | Press Prior: 782 (psi) | |
| To Cementing: 1.00 | End Pump Date: 9/6/2005 | Press Bumped: 1,332 (psi) | Ann Flow After: N |
| Mud Circ Rate: 210 (gpm) | Top Plug: Y | Press Held: (min) | Mixing Method: |
| Mud Circ Press: 500 (psi) | Bottom Plug: Y | Float Held: Y | Density Meas By: |

## Mud Data

Type: FRESH WATER Density: (ppg) Visc: 41 (s/qt)  PV/YP: 16 (cp)/14 (lb/100ft²) Gels 10 sec: 2 (lb/100ft²) Gels 10 min: 8 (lb/100ft²)
Bottom Hole Circulating Temperature: (°F)  Bottom Hole Static Temperature: (°F)
Displacement Fluid Type:  Density: (ppg)  Volume: (bbl)

## Stage No: 1 Slurry No: 1 of 2

**Slurry Data**

| | | | | | |
|---|---|---|---|---|---|
| Fluid Type: LEAD | Description: NEAT | | Class: CLASS G | | Purpose: CEMENT INT |
| Slurry Interval: 800.00 (ft) To: 3,450.00 (ft) | Cmt Vol: 360 (sk) | Density: 11.7 (ppg) | Yield: 2.61 (ft³/sk) | | Mix Water: 15.80 (gal/sk |
| Water Source: RIG WATER | Slurry Vol:167.0 (bbl) | Water Vol: 135.4 (bbl) | Other Vol:15.0 (bbl) | | Foam Job: N |

**Test Data**

| | | | Time | Temp | Pressure |
|---|---|---|---|---|---|
| Thickening Time: | Temperature: (°F) | Compressive Strength 1: | | (°F) | (psi) |
| Free Water: (%) | Temperature: (°F) | Compressive Strength 2: | | (°F) | (psi) |
| Fluid Loss: (cc) | Temperature: (°F) | | | | |
| Fluid Loss Pressure: (psi) | | | | | |

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# Cementing Report

| | | | | | |
|---|---|---|---|---|---|
| Legal Well Name: | HORTON 1D | | | Spud Date: | 9/5/2005 |
| Common Well Name: | HORTON 1D | Report #: | 1 | Report Date: | 9/11/2005 |
| Event Name: | DRILLING | Start: | 9/5/2005 | End: | 9/16/2005 |

## Stage No: 1 Slurry No: 2 of 2

**Slurry Data**

| | | | | | |
|---|---|---|---|---|---|
| Fluid Type: TAIL | | Description: 50/50 POZ | | Class: CLASS G | Purpose: CEMENT INT |
| Slurry Interval: 18.00 (ft) | To: 800.00 (ft) | Cmt Vol: 125 (sk) | Density: 13.5 (ppg) | Yield: 1.27 (ft³/sk) | Mix Water: 5.20 (gal/sk) |
| Water Source: RIG WATER | | Slurry Vol 28.2 (bbl) | Water Vol: 15.4 (bbl) | Other Vol: (bbl) | Foam Job: N |

| **Test Data** | | | **Time** | **Temp** | **Pressure** |
|---|---|---|---|---|---|
| Thickening Time: | Temperature: (°F) | Compressive Strength 1: | | (°F) | (psi) |
| Free Water: (%) | Temperature: (°F) | Compressive Strength 2: | | (°F) | (psi) |
| Fluid Loss: (cc) | Temperature: (°F) | | | | |
| Fluid Loss Pressure: (psi) | | | | | |

| Casing Test | Shoe Test | Liner Top Test |
|---|---|---|
| Test Press: (psi) | Pressure: (ppge) | Liner Lap: |
| For: (min) | Tool: | Pos Test: (ppge) Tool: |
| Cement Found between | Open Hole: (ft) | Neg Test: (ppge) Tool: |
| Shoe and Collar: | Hrs Before Test: | Hrs Before Test: |
| | | Cement Found on Tool: |

| Log/Survey Evaluation | Interpretation Summary |
|---|---|
| CBL Run: | Cement Top: (ft) |
| Under Pressure: (psi) | How Determined: |
| Bond Quality: | TOC Sufficient: |
| Cet Run: | Job Rating: |
| Bond Quality: | If Unsuccessful Detection Indicator: |
| Temp Survey: | Remedial Cementing Required: |
| Hrs Prior to Log: | Number of Remedial Squeezes: |

## Remarks

30 bbls cement to surface

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# Cementing Report

| | | | | | |
|---|---|---|---|---|---|
| Legal Well Name: | HORTON 1D | | | Spud Date: | 9/5/2005 |
| Common Well Name: | HORTON 1D | Report #: | 2 | Report Date: | 9/15/2005 |
| Event Name: | DRILLING | Start: | 9/5/2005 | End: | 9/16/2005 |

## Cement Job Type: Primary

| Primary | Squeeze Open Hole | Squeeze Casing | Plug |
|---|---|---|---|
| Hole Size: 6.125 (in) | Hole Size: | Hole Size: | Hole Size: |
| TMD Set: 4,326.42 (ft) | SQ TMD: (ft) | TMD Set: | Top Set: (ft) |
| Date Set: 9/15/2005 | SQ Date: | Date Set: | BTM set: (ft) |
| Csg Type: PRODUCTION CASIN | SQ Type: | Csg Type: | Plug Date: |
| Csg Size: 4.500 (in) | | SQ TMD: | Plug Type: |
| | | SQ Date: | Drilled Out: |
| Cmtd. Csg: PRODUCTION CASIN | Cmtd. Csg: | Cmtd. Csg: | Cmtd. Csg: |

Cement Co: DOWELL SCHLUMBERGER  Cementer: MARK STEWART  Pipe Movement: RECIPROCATING

## Pipe Movement

| | | | | | | |
|---|---|---|---|---|---|---|
| Rot Time Start: : | Time End: : | RPM: | Init Torque: (ft-lbf) | Avg Torque: (ft-lbf) | | Max Torque: (ft-lbf) |
| Rec Time Start:19:00 | Time End: 21:00 | SPM: | Stroke Length: 10.0 (ft) | Drag Up: 10,000 (lb) | | Drag Down: 10,000 (lb) |

## Stage No: 1 of 1

| | | | | | |
|---|---|---|---|---|---|
| Type: STAGE 1 | Start Mix Cmt: : | Disp Avg Rate: (bbl/min) | Returns: 100 | | |
| Volume Excess %: 35.00 | Start Slurry Displ: : | Disp Max Rate: (bbl/min) | Total Mud Lost: (bbl) | | |
| Meas. From: CALIPER LOG | Start Displ: : | Bump Plug: N | Cmt Vol to Surf: (bbl) | | |
| Time Circ Prior | End Pumping: 21:00 | Press Prior: (psi) | | | |
| To Cementing: 2.00 | End Pump Date: 9/15/2005 | Press Bumped: (psi) | Ann Flow After: N | | |
| Mud Circ Rate: 1,800 (gpm) | Top Plug: N | Press Held: (min) | Mixing Method: | | |
| Mud Circ Press: 400 (psi) | Bottom Plug: N | Float Held: N | Density Meas By: | | |

## Mud Data

Type: FRESH WATER Density: 8.3 (ppg) Visc: 41 (s/qt) PV/YP: 16 (cp)/14 (lb/100ft²) Gels 10 sec: 2 (lb/100ft²) Gels 10 min: 8 (lb/100ft²)
Bottom Hole Circulating Temperature: (°F)  Bottom Hole Static Temperature: (°F)
Displacement Fluid Type:  Density: (ppg)  Volume: (bbl)

## Stage No: 1 Slurry No: 1 of 2

**Slurry Data**

| | | | | | |
|---|---|---|---|---|---|
| Fluid Type: LEAD | Description: TXI LIGHT WEIGHT | | Class: CLASS G | | Purpose: CEMENT PR |
| Slurry Interval: 2,995.00 (ft)To: 6,536.00 (ft) | Cmt Vol: 230 (sk) | Density: 11.4 (ppg) | Yield: 2.28 (ft³/sk) | | Mix Water: 12.70 (gal/sk |
| Water Source: WATER HAULED IN | Slurry Vol:85.4 (bbl) | Water Vol: 69.5 (bbl) | Other Vol: (bbl) | | Foam Job: N |

**Test Data**

| | | | Time | Temp | Pressure |
|---|---|---|---|---|---|
| Thickening Time: | Temperature: (°F) | Compressive Strength 1: | | (°F) | (psi) |
| Free Water: (%) | Temperature: (°F) | Compressive Strength 2: | | (°F) | (psi) |
| Fluid Loss: (cc) | Temperature: (°F) | | | | |
| Fluid Loss Pressure: (psi) | | | | | |

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# Cementing Report

| | | | | | |
|---|---|---|---|---|---|
| Legal Well Name: | HORTON 1D | | | Spud Date: | 9/5/2005 |
| Common Well Name: | HORTON 1D | Report #: | 2 | Report Date: | 9/15/2005 |
| Event Name: | DRILLING | Start: | 9/5/2005 | End: | 9/16/2005 |

## Stage No: 1 Slurry No: 2 of 2

**Slurry Data**

| | | | | | |
|---|---|---|---|---|---|
| Fluid Type: TAIL | Description: 50/50 POZ | | Class: CLASS G | Purpose: CEMENT PR | |
| Slurry Interval: 6,535.00 (ft) | To: 7,400.00 (ft) | Cmt Vol: 100 (sk) | Density: 13.5 (ppg) | Yield: 1.25 (ft³/sk) | Mix Water: 5.48 (gal/sk) |
| Water Source: WATER HAULED IN | Slurry Vol: 22.2 (bbl) | Water Vol: 13.0 (bbl) | Other Vol: (bbl) | Foam Job: N | |

| **Test Data** | | | **Time** | **Temp** | **Pressure** |
|---|---|---|---|---|---|
| Thickening Time: | Temperature: (°F) | Compressive Strength 1: | | (°F) | (psi) |
| Free Water: (%) | Temperature: (°F) | Compressive Strength 2: | | (°F) | (psi) |
| Fluid Loss: (cc) | Temperature: (°F) | | | | |
| Fluid Loss Pressure: (psi) | | | | | |

| Casing Test | Shoe Test | Liner Top Test |
|---|---|---|
| Test Press: (psi) | Pressure: (ppge) | Liner Lap: |
| For: (min) | Tool: | Pos Test: (ppge) Tool: |
| Cement Found between | Open Hole: (ft) | Neg Test: (ppge) Tool: |
| Shoe and Collar: | Hrs Before Test: | Hrs Before Test: |
| | | Cement Found on Tool: |

| Log/Survey Evaluation | Interpretation Summary |
|---|---|
| CBL Run: | Cement Top: (ft) |
| Under Pressure: (psi) | How Determined: |
| Bond Quality: | TOC Sufficient: |
| Cet Run: | Job Rating: |
| Bond Quality: | If Unsuccessful Detection Indicator: |
| Temp Survey: | Remedial Cementing Required: |
| Hrs Prior to Log: | Number of Remedial Squeezes: |