

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.  
Use "APPLICATION FOR PERMIT - " for such proposals

|  |  |  |
|--|--|--|
| 1. Type of Well<br><input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other |  | 5. Lease Designation and Serial No.<br><b>NOO-C-14-20-3601</b> |
| 2. Name of Operator<br><b>Amoco Production Company</b>   |  | 6. If Indian, Allottee or Tribe Name                           |
| Attention:<br><b>Julie L. Acevedo</b>  |  | 7. If Unit or CA, Agreement Designation                        |
| 3. Address and Telephone No.<br><b>P.O. Box 800, Denver, Colorado 80201</b>  |  | 8. Well Name and No.<br><b>Nocki #1E</b>                       |
| 4. Location of Well (Footage, Sec., T., R., M., or Survey Description)<br><b>1815FNL 1080FEL Sec. 4 T 25N R 11W</b>              |  | 9. API Well No.<br><b>3004529086</b>                           |
|  |  | 10. Field and Pool, or Exploratory Area<br><b>Basin Dakota</b> |
|  |  | 11. County or Parish, State<br><b>SAN JUAN NEW MEXICO</b>      |

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

| TYPE OF SUBMISSION                                   | TYPE OF ACTION  |
|--|---|
| <input checked="" type="checkbox"/> Notice of Intent | <input type="checkbox"/> Abandonment                        |
| <input type="checkbox"/> Subsequent Report           | <input type="checkbox"/> Recompletion                       |
| <input type="checkbox"/> Final Abandonment Notice    | <input type="checkbox"/> Plugging Back                      |
|  | <input type="checkbox"/> Casing Repair                      |
|  | <input checked="" type="checkbox"/> Altering Casing         |
|  | <input checked="" type="checkbox"/> Other <b>Revise APD</b> |
|  | <input type="checkbox"/> Change of Plans                    |
|  | <input type="checkbox"/> New Construction                   |
|  | <input type="checkbox"/> Non-Routine Fracturing             |
|  | <input type="checkbox"/> Water Shut-Off                     |
|  | <input type="checkbox"/> Conversion to Injection            |
|  | <input type="checkbox"/> Dispose Water                      |

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Amoco Production Company requests your approval of the attached casing and cementing revisions for the application for permit to drill approved on February 9, 1994.

**CONFIDENTIAL**

DEC 15 1994  
11:14 AM  
89-0100-0100-0000

14. I hereby certify that the foregoing is true and correct

Signed Julie L. Acevedo Title Sr. Staff Assistant Date 12-15-1994

(This space for Federal or State office use)

Approved by \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_  
Conditions of approval, if any: \_\_\_\_\_

Title 18 U.S.C. Section 1001, makes 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.

**APPROVED**

**DEC 20 1994**

**DISTRICT MANAGER**

**AMOCO PRODUCTION COMPANY**  
**DRILLING and COMPLETION PROGRAM**

File No.: Nocki1e.xlw

Date: 12/8/94

Lease: Nocki Well No. #1E  
County: San Juan County, New Mexico Surface Location: 1815' FNL & 1080' FEL of Section 4, T25N, R11W  
Former name: Basin Dakota Field:

|   |                            |  |                    |                               |
|---|----------------------------|--|--------------------|-------------------------------|
| <b>OBJECTIVE:</b> Develop Dakota Gas formation. |                            |  |                    |                               |
| <b>METHOD OF DRILLING</b>                       |                            | <b>APPROXIMATE DEPTHS OF GEOLOGICAL MARKER</b> |                    |                               |
| <b>TYPE OF TOOLS</b>                            | <b>DEPTH OF DRILLING</b>   | Actual GL.....Estimated KB                     |                    |                               |
| Rotary  | Ground Level - TD          | 6348 6361                                      |                    |                               |
|   |                            | <b>Marker</b>                                  | <b>Depth (ft.)</b> | <b>SS Elev. (ft.)</b>         |
| <b>LOGGING PROGRAM</b>                          |                            | Ojo Alamo                                      | 381                | 5,980                         |
| <b>TYPE</b>                                     |                            | PC   | 1361               | 5,000                         |
|   |                            | Lewis Shale                                    | 1511               | 4,850                         |
| SP-GR-Cal-HRI-SDL-DSN (Triple Combo)            |                            | Cliff House                                    | 2,841              | 3,520                         |
| <b>DEPTH</b>                                    |                            | Menefee Shale                                  | 2,911              | 3,450                         |
| Minimum run required                            |                            | Point Lookout                                  | 3,826              | 2,535                         |
|   |                            | Mancos   | 4,061              | 2,300                         |
|   |                            | Gallup   | 4,861              | 1,500                         |
| <b>REMARKS:</b>                                 |                            | Greenhorn                                      | 5,743              | 618                           |
|   |                            | Dakota **                                      | 5,856              | 505                           |
|   |                            | <b>TOTAL DEPTH</b>                             | 6,156              | 205                           |
| * Possible pay                                  |                            |  |                    |                               |
| ** Probable completion                          |                            |  |                    |                               |
| Ojo Alamo is possible usable water              |                            |  |                    |                               |
| <b>SPECIAL TESTS</b>                            |                            | <b>DRILL CUTTING SAMPLES</b>                   |                    | <b>DRILLING TIME</b>          |
| <b>TYPE</b>                                     | <b>DEPTH INTERVAL, ETC</b> | <b>FREQUENCY</b>                               | <b>DEPTH</b>       | <b>FREQUENCY</b> <b>DEPTH</b> |
| None  |                            |  |                    | Geolograph Int - TD           |
| <b>Remarks:</b>                                 |                            | <b>Remarks:</b>                                |                    |                               |
|   |                            | Mud Logging Program: None                      |                    |                               |
|   |                            | Coring Program: None                           |                    |                               |

**MUD PROGRAM:**

| Approx. Interval   | Type Mud | Weight, #/g | Vis, sec/qt                           | W/L, cc's/30 min. |
|--------------------|----------|-------------|---------------------------------------|-------------------|
| 0 - 250'           | Spud     |             |                                       |                   |
| 250' - 3500' (1)   | Water    | 8.6 - 8.8   | Sufficient to clean hole              | N/C               |
| 3500' - TD (2) (3) | LSND     | 8.8 - 9.2   | Sufficient to clean hole and run logs | As required       |

**REMARKS:**

- 1 - The hole will require sweeps to keep unloaded while fresh water drilling. Let hole conditions dictate frequency.
- 2 - Mud up at the top of the Mancos Shale.
- 3 - Sweep the hole as necessary.

**CASING PROGRAM:**

| Casing String | Estimated Depth | Casing Size | Hole Size | Landing Point, Cement, Etc |
|---------------|-----------------|-------------|-----------|----------------------------|
| Conductor     |                 |             |           |                            |
| Surface       | 250'            | 7"          | 8.75"     | 1                          |
| Production    | 6,156           | 2-7/8"      | 6.25"     | 1, 2                       |

**Remarks:**

- 1 - Circulate cement to surface.
- 2 - Production cement to be designed by Denver drilling staff.

**GENERAL REMARKS:**

Business Unit Engineering staff to design completion program.

Form 46 Reviewed by:

Logging program reviewed by:

**PREPARED BY:**  
P. Edwards/Logan/Ovitz

**APPROVED:**

**APPROVED:**

Form 46 7-84bw

For Production Dept

For Exploration Dept.

12/9/94 14:30

Well Name: **Nocki #1E**  
 Location: **1815' FNL X 1080' FEL, Sec 04, T25N, R11W**  
 County: **San Juan**  
 State: **New Mexico**

Field: **Basin Dakota**  
 API No.  
 Well Flac  
 Formation: **Dakota**  
 KB Elev. (est.) **6361 ft.**  
 GL Elev. (est.) **6348 ft.**

**Casing Program:**

| Casing String | Est. Depth<br>(ft.) | Hole Size<br>(in.) | Casing Size<br>(in.) | Casing Weight<br>(lb/ft.) | Casing Grade | Thread   | TOC<br>(ft.) |
|---------------|---------------------|--------------------|----------------------|---------------------------|--------------|----------|--------------|
| Surface       | 250                 | 8.75               | 7.000                | 23                        | J-55         | 8R, LT&C | Surface      |
| Production    | 6,156               | 6.25               | 2.875                | 6.5                       | N-80         | 8R, EUE  | Surface      |

**Casing Properties:**

(No Safety Factor Included)

| Casing String | Casing Weight<br>(lb/ft.) | Burst<br>(psi.) | Collapse<br>(psi.) | Joint St.<br>(1000 lbs.) | Capacity<br>(bbl/ft.) | Torque(ft. lbs.)<br>Opt/Min/Max | Drift<br>(in.) |
|---------------|---------------------------|-----------------|--------------------|--------------------------|-----------------------|---------------------------------|----------------|
| Surface       | 23                        | 4360            | 3270               | 313                      | 0.0393                |                                 | 6.241          |
| Production    | 6.4                       | 10570           | 11160              | 144                      | 0.00579               |                                 | 2.347          |

**Mud Program:**

| Apx. Interval<br>(ft.) | Mud Type | Mud Weight<br>(lb/gal) |
|------------------------|----------|------------------------|
|------------------------|----------|------------------------|

**Recommended Mud Properties Prior Cementing:**

|          |      |         |            |
|----------|------|---------|------------|
|          |      | PV      | < 20       |
|          |      | YP      | < 10       |
| 0 - SCP  | Spud | 8.6-8.8 | Fluid Loss |
| SCP - TD | LSND | 8.8-9.2 | < 15       |

**Cementing Program:**

|                               | Surface | Production(foam) |
|-------------------------------|---------|------------------|
| Excess %, Bit                 | 75      | 60               |
| Excess %, Caliper             | NA      | 15               |
| BHST (est. deg. F)            | 60      | 160              |
| Pipe Movement                 | NA      | Rotate 10-20 rpm |
| Rate, Max. (bpm)              | 1 truck | 6                |
| Rate, Recommended (bpm)       | 8       | 4                |
| Pressure, Max. (psi)          | 200     | 2000             |
| Shoe Joint                    | 40'     | 80               |
| Batch Mix                     | NA      | NA               |
| Circulating prior cmtng (hr.) | 0.5     | 2                |
| Time Between Stages,(hr.)     | NA      | NA               |
| Special Instructions          | 1,6,7   | 2,4,6,8          |

- 1 Do not wash pumps and lines
- 2 Wash pumps and lines.
- 3 Do not reverse out
- 4 Run Blend Test on Cement
- 5 Record Rate , Pressure, and Density on 3.5" disk
- 6 Confirm densometer with pressurized mud scales
- 7 1" cement to surface if cement is not circulated.
- 8 If cement is not circulated to the surface, run temp. survey 10-12 hr. after landing plug.

**Notes:**

- \*\*\* Displace top plug on the production casing job with 0.2% Clay Fix II or 2% KCl water.  
 \*\*\* Do not wash up on top of plug. Wash pumps and lines. We want to do rig less completions.

## CEMENTING PROGRAM

blp

Nocki #1E

Surface:

---

|                         |         |  |            |
|-------------------------|---------|--|------------|
| Preflush                | 20 bbl. | Fresh Water + dye marker   |            |
| Slurry 1<br>TOC@Surface | 100 sk  | Standard Cement<br>+ 2% CaCl <sub>2</sub><br>+ 1/4 lb/sk floccle | 95 cu. ft. |

| Slurry Properties: | density<br>(lb/gal) | yield<br>(ft <sup>3</sup> /sk) | water<br>(gal/sk) |
|--------------------|---------------------|--------------------------------|-------------------|
| slurry 1           | 15.60               | 1.18                           | 5.20              |

Casing Equipment: (Halliburton) 7", 8R, ST&C

- 1 Type M Guide Shoe
- 1 Insert Float w Auto Fill
- 1 Weld A
- 3 S-4 Centralizer
- 1 Top Wooden Plug

# CEMENTING PROGRAM

## Nocki #1E

blp

Production: (Foam Cement)

|                                     |                    |   |             |
|-------------------------------------|--------------------|---|-------------|
| Preflush                            | 20 bbl.<br>40 bbl. | Mud Flush + dye marker + 150 scf/bbl nitrogen<br>Fresh Water + 150 scf/bbl nitrogen                                   |             |
| Lead Cement<br>Slurry 1             |                    | 50/50 Std. Cmt/Poz A + Nitrogen<br>+ 2% gel (total)<br>+ 5 lb/sk gilsonite<br>+ 0.4% Halad-344<br>+ 1/4 lb/sk flocele | 966 cu. ft. |
| Tail Cement<br>Slurry 2<br>TOC@5500 |                    | 50/50 Std. Cmt/Poz A<br>+ 2% gel (total)<br>+ 5 lb/sk gilsonite<br>+ 0.4% Halad-344<br>+ 1/4 lb/sk flocele            | 132 cu. ft. |
| Top Out Cement<br>Slurry 3          | 85 sk              | Standard Cement<br>+ 2% Calcium Chloride  | 100 cu. ft. |

### Slurry Properties:

|          | surf. density<br>(lb/gal) | foam density<br>(lb/gal) | surf. yield<br>(ft3/sk) | foam yield<br>(ft3/sk) | water<br>(gal/sk) | nitrogen rate<br>(scf/bbl) | depth of fill<br>(ft) |
|----------|---------------------------|--------------------------|-------------------------|------------------------|-------------------|----------------------------|-----------------------|
| slurry 1 | 13.50                     | 10.00                    | 1.32                    | 1.82                   | 5.59              | 150                        | 500 - 2500            |
| slurry 1 | 13.50                     | 10.00                    | 1.32                    | 1.78                   | 5.59              | 300                        | 2500 - 4000           |
| slurry 1 | 13.50                     | 10.00                    | 1.32                    | 1.77                   | 5.59              | 430                        | 4000 - 5500           |
| slurry 2 | 13.50                     | NA                       | 1.32                    | NA                     | 5.59              | NA                         | 5500 - TD             |
| slurry 3 | 15.60                     | NA                       | 1.18                    | NA                     | 5.20              | NA                         | 0 - 500               |

Note: The job should be pumped at 6 bpm max FOAM rate. Do not exceed 6 bpm on displacement.  
Slow to 2 bpm for the last 25 bbl of displacement. Displace with 2% KCl or 0.2% Clay Fix II water.  
This is to be a rigless completion.

Casing Equipment: Halliburton 2 7/8", 8R, EUE, (no need to cut long pin)

- 1 Super Seal II Float Shoe
- 25 S-4 Fluidmaster Centralizer 1st 10 centralizers. every other joint, then one every 10 joints,  
1 above and below the Ojo Alamo
- 1 Lock Clamp
- 1 Weld A
- 1 Omega Latch Down Plug and Baffle