

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-101
May 27, 2004

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit to appropriate District Office

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

| | | |
|--|---|---|
| ¹ Operator Name and Address WILLIAMS PRODUCTION COMPANY, LLC PO Box 3102, Tulsa, OK 74172 | | ² OGRID Number 120782 |
| ³ Property Code 17033 | ⁴ Property Name ROSA UNIT | ⁵ API Number 30 - 039 - 29581 |
| ⁹ Proposed Pool 1 BASIN FRUITLAND COAL (GAS) 71629 | | ¹⁰ Proposed Pool 2 332A |

7 Surface Location

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|------------|
| E | 22 | 31N | 06W | | 1570 | N | 925 | W | RIO ARriba |

8 Proposed Bottom Hole Location If Different From Surface

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|------------|
| D | 22 | 31N | 06W | | 990 | N | 330 | W | RIO ARriba |

Additional Well Information

| | | | | |
|---|--------------------------------------|---|---|---|
| ¹¹ Work Type Code NEW WELL | ¹² Well Type Code GAS | ¹³ Cable/Rotary | ¹⁴ Lease Type Code FEDERAL Fee | ¹⁵ Ground Level Elevation 6266 |
| ¹⁶ Multiple N | ¹⁷ Proposed Depth 3281 | ¹⁸ Formation FRUITLAND COAL | ¹⁹ Contractor | ²⁰ Spud Date 7/15/05 |
| Depth to Groundwater MORE THAN 100' | | Distance from nearest fresh water well MORE THAN 1000' | | Distance from nearest surface water MORE THAN 500' / LESS THAN 1000' |
| Pit: Liner: Synthetic <input checked="" type="checkbox"/> 12 mils thick Clay <input type="checkbox"/> Pit Volume: 13,963 bbls Drilling Method: Closed-Loop System <input type="checkbox"/> Fresh Water <input checked="" type="checkbox"/> Brine <input type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/> | | | | |

21 Proposed Casing and Cement Program

| Hole Size | Casing Size | Casing weight/foot | Setting Depth | Sacks of Cement | Estimated TOC |
|-----------|-------------|--------------------|---------------|-----------------|---------------|
| 12.25 | 9.625 | 36 | 300 | 190 | 0 |
| 8.75 | 7 | 20 | 3126 | 470 | 0 |
| 6.25 | 5.5 | 15.5 | 3281 | 0 | |
| | | | | | |
| | | | | | |

²² Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

DOUBLE RAM - WORKING PRESSURE IS 2,000 PSI - TEST PRESSURE IS 1,500 PSI

HOLD C104 FOR directional survey



| | | | |
|--|-----------------------|---|--|
| ²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines <input checked="" type="checkbox"/> , a general permit <input type="checkbox"/> , or an (attached) alternative OCD-approved plan <input type="checkbox"/> . | | OIL CONSERVATION DIVISION | |
| Printed name: LARRY HIGGINS <i>Larry Higgins</i> | | Approved: <i>[Signature]</i> | |
| Title: DRILLING COM | | Title: DEPUTY OIL & GAS INSPECTOR, DIST. 40 | |
| E-mail Address: larry.higgins@williams.com | | Approval Date: JUL - 6 2005 Expiration Date: JUL - 6 2006 | |
| Date: 7/6/05 | Phone: (970) 563-3308 | Conditions of Approval Attached <input type="checkbox"/> | |

District I
PO Box 1980, Hobbs, NM 88241-1980

District II
PO Drawer 00, Artesia, NM 88211-0719

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994

Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | | |
|-----------------------------|---|---------------------|------------------------------------|
| *API Number 30-039-29581 | | *Pool Code 71629 | *Pool Name BASIN FRUITLAND COAL |
| *Property Code 17033 | *Property Name ROSA UNIT | | *Well Number 332A |
| *OGRID No. 120782 | *Operator Name WILLIAMS PRODUCTION COMPANY | | *Elevation 6266 |

¹⁰ Surface Location

| UL or lot no. | Section | Township | Range | Lot Ion | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|------------|
| E | 22 | 31N | 6W | | 1570 | NORTH | 925 | WEST | RIO ARriba |

¹¹ Bottom Hole Location If Different From Surface

| UL or lot no. | Section | Township | Range | Lot Ion | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|------------|
| D | 22 | 31N | 6W | | 990 | NORTH | 330 | WEST | RIO ARriba |

| | | | |
|--|-------------------------------|----------------------------------|-------------------------|
| ¹² Dedicated Acres 319.83 320.0 Acres - (W/2) | ¹³ Joint or Infill | ¹⁴ Consolidation Code | ¹⁵ Order No. |
|--|-------------------------------|----------------------------------|-------------------------|

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

| | |
|----------------------|--|
| <p>¹⁶</p> | <p>¹⁷ OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Larry Higgins</i> Signature LARRY HIGGINS Printed Name DRILLING COM Title 7-6-05 Date</p> <p>¹⁸ SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my belief.</p> <p>Date Revised: MARCH 9, 2005 Survey Date: OCTOBER 21, 2004</p> <p>Signature and Seal of Professional Surveyor</p> <p> JASON C. EDWARDS Certificate Number 15269</p> |
|----------------------|--|



WILLIAMS PRODUCTION COMPANY

Operations Plan

(Note: This procedure will be adjusted on site based upon actual conditions)

DATE: 6/28/2005

WELLNAME: Rosa Unit #332A **FIELD:** Basin Fruitland Coal

BH LOCATION: NWNW Sec 22-31N-6W
Rio Arriba, NM **SURFACE:** BLM

SURF. LOCATION: SWNW Sec 22-31N-6W

ELEVATION: 6,266' GR **MINERALS:** ~~BLM~~ STATE

TOTAL DEPTH: 3,281' **LEASE #** STATE/ ~~FED~~
E-289

I. GEOLOGY: Surface formation - San Jose

A. FORMATION TOPS: (KB)

| NAME | TVD | MD | NAME | TVD | MD |
|------------|---------|---------|-----------------|-------|-------|
| San Jose | Surface | Surface | Top Coal | 2,978 | 3,146 |
| Nacimiento | 1,078 | 1,096 | Bottom Coal | 3,113 | 3,281 |
| Ojo Alamo | 2,328 | 2,489 | Pictured Cliffs | 3,118 | 3,286 |
| Kirtland | 2,423 | 2,587 | TD | 3,113 | 3,281 |
| Fruitland | 2,868 | 3,036 | | | |

B. LOGGING PROGRAM: None

C. NATURAL GAUGES: Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

II. DRILLING

- A. MUD PROGRAM:** Clear water with benex to 7" casing point. Treat for lost circulation as necessary. Expect 100% returns prior to cementing. Notify Engineering of any mud losses. If coal is detected before 3,126' (MD) DO NOT drill deeper until Engineering is contacted.
- B. Drilling Fluid:** Coal section will be drilled with Fruitland Coal water. Mud logger will pick TD .
- C. MUD LOGGING PRORAM:** Mud logger will be on location at drill out below 7" casing to TD.

- D. **BOP TESTING:** While drill pipe is in use, the pipe rams and the blind rams will be function tested once each trip. The anticipated reservoir is expected to be less than 1300 psi, so the BOPE will be tested to **250 psi (Low) for 5 minutes** and **1500 psi (High) for 10 minutes**. Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. The drum brakes will be inspected and tested each tour. **All tests and inspections will be recorded in the tour book as to time and results.**

III. MATERIALS

A. CASING PROGRAM:

| <u>CASING TYPE</u> | <u>HOLE SIZE</u> | <u>DEPTH (MD)</u> | <u>CASING SIZE</u> | <u>WT. & GRADE</u> |
|--------------------|------------------|-------------------|--------------------|------------------------|
| Surface | 12-1/4" | +/- 300' | 9-5/8" | 36# K-55 |
| Intermediate | 8-3/4" | +/- 3,126' | 7" | 20# K-55 |
| Prod. Liner | 6-1/4" | +/- 3,026'-3,281' | 5-1/2" | 15.5# K-55 |

B. FLOAT EQUIPMENT:

1. **SURFACE CASING:** 9-5/8" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) joints of Surface Casing.
2. **INTERMEDIATE CASING:** 7" cement nose guide shoe with a self-fill insert float. Place float collar one joint above the shoe. Install (1) Turbulent centralizer on each of the bottom (3) joints and one standard centralizer every (3) joints to 2,500 ft. Run (1) Turbulent centralizer at 2,700 ft., 2,500 ft., 2,300ft., 2,000ft., 1,500 ft., and 1,000 ft. (NTL-FRA 90-1).
3. **PRODUCTION LINER / CASING:** 4-1/2" & 5-1/2" whirler type cement nose guide shoe with a latch collar on top of 20' bottom joint. Place centralizers as needed across selected production intervals.

C. CEMENTING:

(Note: Volumes may be adjusted onsite due to actual conditions)

1. **SURFACE:** Use 190 sx (264 cu.ft.) of "Type III" with 2% CaCl₂ and 1/4# of cello-flake/sk (Yield = 1.41 cu.ft./sk, Weight = 14.5 #/gal.). Use **100% excess** to circulate the surface. WOC 12 hours. Total volume = 264 cu.ft. Test to 1500#.
2. **INTERMEDIATE:** Lead - 420 sx (880 cu.ft.) of "Type III" 65/35 poz with 8% gel, 1% CaCl₂ and 1/4# cello-flake/sk (Yield = 2.09 cu.ft./sk, Weight = 12.1 #/gal.). Tail - 50 sx (70cu.ft.) of "Type III" with 1/4# cello-flake/sk, and 1% CaCl₂ (Yield = 1.4 cu.ft./sk, Weight = 14.5#/gal.). Use **120% excess in Lead Slurry** to circulate to surface. **No excess in Tail Slurry.** Total volume = 950 cu.ft. Bump Plug to 1,500 psi. Notify engineering if cement is not circulated to surface.
3. **PRODUCTION LINER:** Open hole completion. No cement.

IV COMPLETION

A. PRESSURE TEST

Pressure test 7" casing to 3300# for 15 minutes.

B. STIMULATION

Cavitate Well with reciprocation and rotation. Surge wells with water and air and then flow back to pit.
Cavitate for 2 to 3 weeks. Maximum pressure not expected to exceed 2,000 psi.

C. RUNNING TUBING

1. *Fruitland Coal*: Run 2-7/8", 4.7#, J-55, EUE tubing with a SN (1.375" ID) on top of bottom joint. Land tubing approximately 50' above TD.

Gary Sizemore
Sr. Drilling Engineer