

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

2004 AUG 24 05 09

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK <b>DRILL</b> <input checked="" type="checkbox"/> <b>DEEPEN</b> <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. <b>SF- 0787R</b>	
1b. TYPE OF WELL <b>OIL</b> <input type="checkbox"/> <b>GAS</b> <input checked="" type="checkbox"/> <b>OTHER</b> <input type="checkbox"/> <b>SINGLE ZONE</b> <input checked="" type="checkbox"/> <b>MULTIPLE ZONE</b> <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME <b>Rosa Unit</b>	
2. NAME OF OPERATOR <b>Williams Production Company, LLC</b>		7. UNIT AGREEMENT NAME <b>Rosa Unit</b>	
3. ADDRESS OF OPERATOR <b>P. O. Box 361, Ignacio, CO 81137 (505) 563-3308</b>		8. FARM OR LEASE NAME, WELL NO. <b>237A</b>	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. *) <b>At Surface 450' FSL &amp; 1965' FEL</b> <b>At proposed Prod. Zone 1450' FSL &amp; 2310' FEL</b>		9. API WELL NO. <b>30-045-32558</b>	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* <b>approximately 23 miles NE of Blanco, NM</b>		10. FIELD AND POOL OR WILDCAT <b>Basin Fruitland Coal</b>	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest dtdg. unit line, if any) <b>1190</b>		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA <b>Surface - Sec. 4, T31N, R6W (O)</b> <b>Bottom Hole - Sec. 4, T31N, R6W (J)</b>	
16. NO. OF ACRES IN LEASE <b>2552.71</b>		12. COUNTY OR PARISH <b>San Juan</b> <input checked="" type="checkbox"/>	
17. NO. OF ACRES ASSIGNED TO THIS WELL <b>345.77 347.48 ALL</b>		13. STATE <b>NM</b>	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE, FT. <b>115</b>		19. PROPOSED DEPTH <b>3490'</b>	
20. ROTARY OR CABLE TOOLS <b>Rotary</b>		21. APPROX. DATE WORK WILL START* <b>September 30, 2004</b>	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) <b>6460' GR</b>		22. APPROX. DATE WORK WILL START*	
23. PROPOSED CASING AND CEMENTING PROGRAM			
SIZE OF HOLE	SIZE OF CASING	WEIGHT/FOOT	SETTING DEPTH
12-1/4"	9-5/8"	36.0#	+/- 300'
8-3/4"	7"	20.0#	+/- 3090'
6-1/4"	5-1/2"	15.5#	+/- 2990'-3470'
QUANTITY OF CEMENT			
~264 cu.ft. Type III with 2% CaCl <sub>2</sub>			
~1032 cu.ft. 65/35 poz & ~70 cu.ft. Type II			
Open hole completion - no cement			

Williams Production Company proposes to drill a vertical well to develop the Fruitland Coal formation at the above described location in accordance with the attached drilling and surface use plans.

This location has been archaeologically surveyed by Independent Contract Archaeology. Copies of their report have been submitted directly to your office.

This APD also is serving as an application to obtain BLM road and pipeline right-of-ways. This well will require no new access road (see Pipeline & Well Plats #3 & #4). This existing road crosses the N/2 of Sec. 9 T31N R6W. This APD also is serving as an application to obtain BLM road and pipeline right-of-ways.

**HOLD C104 FOR directional survey**

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM : If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED Larry Higgins TITLE Larry Higgins, Drlg COM DATE 8/23/2004

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

Application approval 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.

CONDITIONS OF APPROVAL, IF ANY

APPROVED BY

TITLE

DATE

\*See Instructions On Reverse Side

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.

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

NMOC

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".

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

District II  
PO Drawer DD, 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

Lease - 4 Copies

Lease - 3 Copies

**RECEIVED**

**AUG 24 2004**

AMENDED REPORT

**Bureau of Land Management  
Farmington Field Office**

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30045 37558</b>		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 17033	*Property Name ROSA UNIT COM		*Well Number 237A
*GRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY		*Elevation 6460'

<sup>10</sup> Surface Location

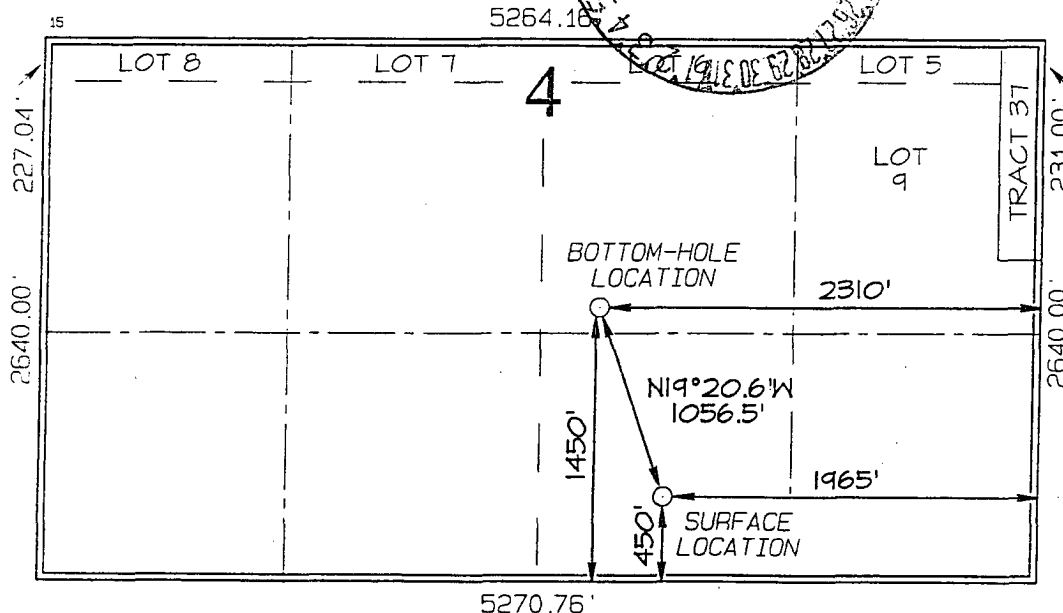
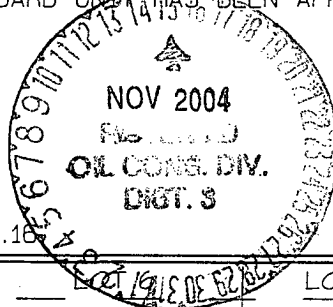
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	4	31N	6W		450	SOUTH	1965	EAST	SAN JUAN

<sup>11</sup> 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
J	4	31N	6W		1450	SOUTH	2310	EAST	SAN JUAN

<sup>12</sup> Dedicated Acres <b>347.48 - A11</b>	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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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



**FINAL**  
**8-2-04**  
**LA**

<sup>17</sup> OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

Signature

**LARRY HIGGINS**

Printed Name

**DARLINE COM**

Title

**8-23-04**

Date

<sup>18</sup> SURVEYOR CERTIFICATION

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.

Date Revised: AUGUST 1, 2004

Date of Survey: JULY 13, 2004

Signature and Seal of Professional Surveyor



**JASON C. EDWARDS**

Certificate Number 15269

Submit 3 Copies To Appropriate District  
Office  
District I  
625 N. French Dr., Hobbs, NM 88240  
District II  
301 W. Grand Ave., Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., 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-103  
May 27, 2004

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

WELL API NO.
5. Indicate Type of Lease <b>Federal</b>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name <b>Rosa Unit</b>
8. Well Number <b>237A</b>
9. OGRID Number <b>120782</b>
10. Pool name or Wildcat Basin Fruitland Coal

SUNDRY NOTICES AND REPORTS ON WELLS  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A  
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH  
PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☒ Other

2. Name of Operator  
**Williams Production Coampany**

3. Address of Operator  
**P.O. Box 316, Ignacio, CO 81137-0316**

4. Well Location  
Unit Letter **O** **450'** feet from the **South** line and **1965'** feet from the **East** line  
Section **4** Township **31N** Range **6W** NMPM County **San Juan**  
11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
**6450'**

Pit or Below-grade Tank Application ☒ or Closure ☐

Pit type **Drilling** Depth to Groundwater **>100'** istance from nearest fresh water well **.1000'** Distance from nearest surface water **.1000'**

Pit Liner Thickness: **12** mil Below-Grade Tank: Volume \_\_\_\_\_ bbls; Construction Material \_\_\_\_\_

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐  
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐  
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐  
COMMENCE DRILLING OPNS. ☐ P AND A ☐  
CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Reserve pit to be constructed in accordance with NMOCD Interim Pit and Below-Grade Tank Guidelines.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Larry Higgins TITLE Drilling Com DATE August 23, 2004

Type or print name Larry Higgins E-mail address: larry.higgins#williams.com Telephone No. 970/563/3308

For State Use Only

APPROVED BY: [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 2 DATE NOV 15 2004

Conditions of Approval (if any):

Submit 3 Copies To Appropriate District  
Office  
District I  
625 N. French Dr., Hobbs, NM 88240  
District II  
301 W. Grand Ave., Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
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1220 S. St. Francis Dr., Santa Fe, NM  
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5. Indicate Type of Lease <b>Federal</b>
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7. Lease Name or Unit Agreement Name <b>Rosa Unit</b>
8. Well Number <b>237A</b>
9. OGRID Number <b>120782</b>
10. Pool name or Wildcat <b>Basin Fruitland Coal</b>

SUNDRY NOTICES AND REPORTS ON WELLS  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A  
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PROPOSALS.)

1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other
2. Name of Operator <b>Williams Production Company</b>
3. Address of Operator <b>P.O. Box 316, Ignacio, CO 81137-0316</b>
4. Well Location Unit Letter <b>O</b> <b>450'</b> feet from the <b>South</b> line and <b>1965'</b> feet from the <b>East</b> line Section <b>4</b> Township <b>31N</b> Range <b>6W</b> NMPM County <b>San Juan</b>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) <b>6450'</b>

Pit or Below-grade Tank Application X or Closure <input type="checkbox"/>
Pit type <b>Production</b> Depth to Groundwater <b>&gt;100'</b> Distance from nearest fresh water well <b>.1000'</b> Distance from nearest surface water <b>.1000'</b>
Pit Liner Thickness: <b>mil</b> Below-Grade Tank: Volume <b>120 bbls</b> ; Construction Material <b>Fiberglass</b>

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
OTHER: <input type="checkbox"/>		OTHER: <input type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Below-grade tank to be constructed in accordance with NMOCD Interim Pit and Below-Grade Tank Guidelines.

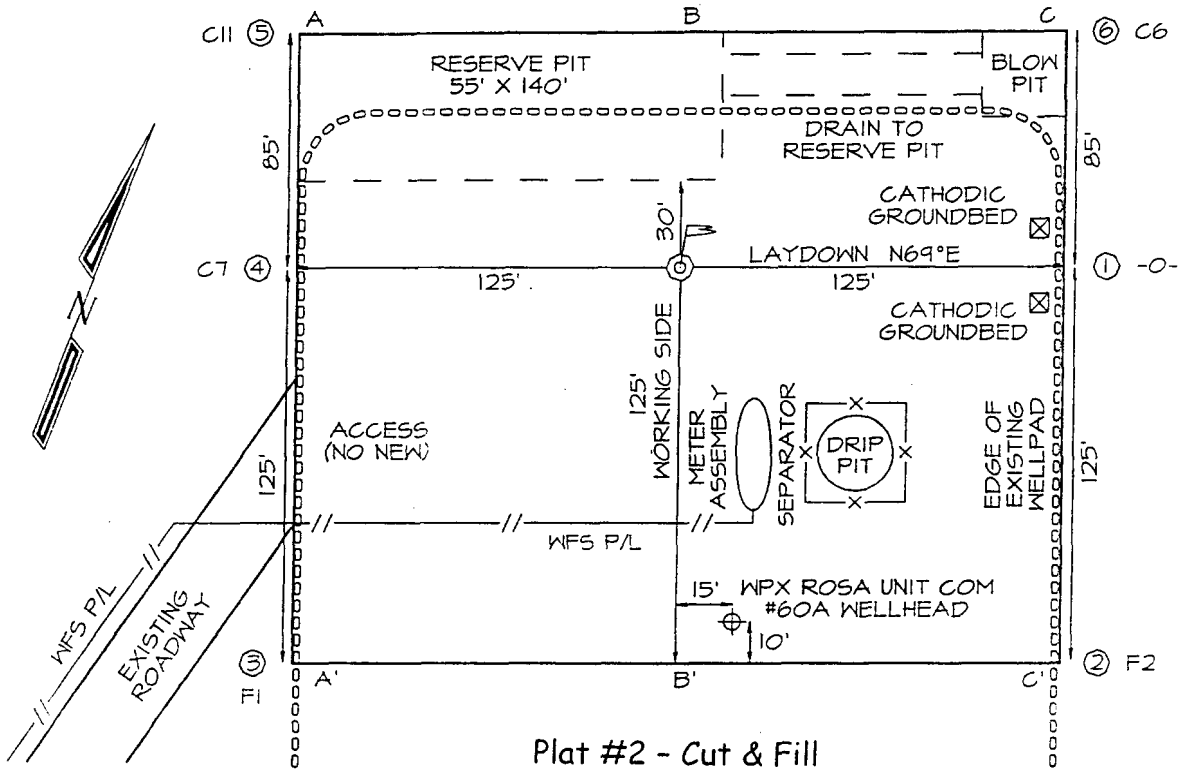
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SIGNATURE Larry Higgins TITLE Drilling Com DATE August 23, 2004

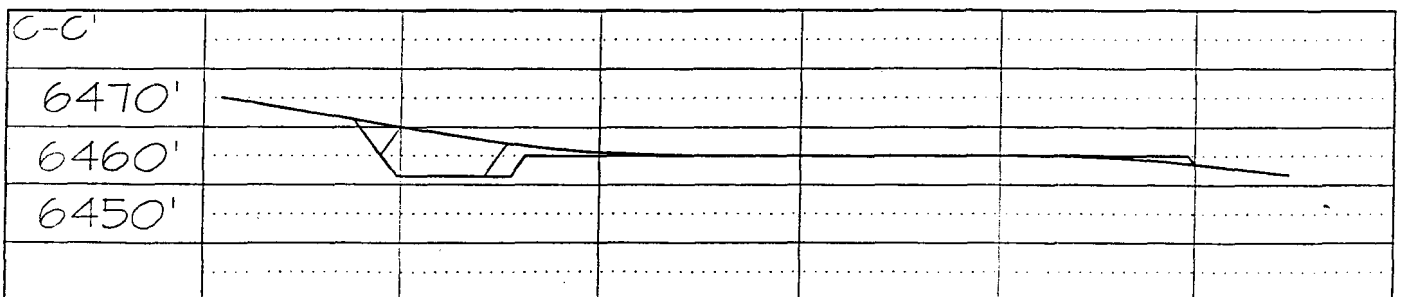
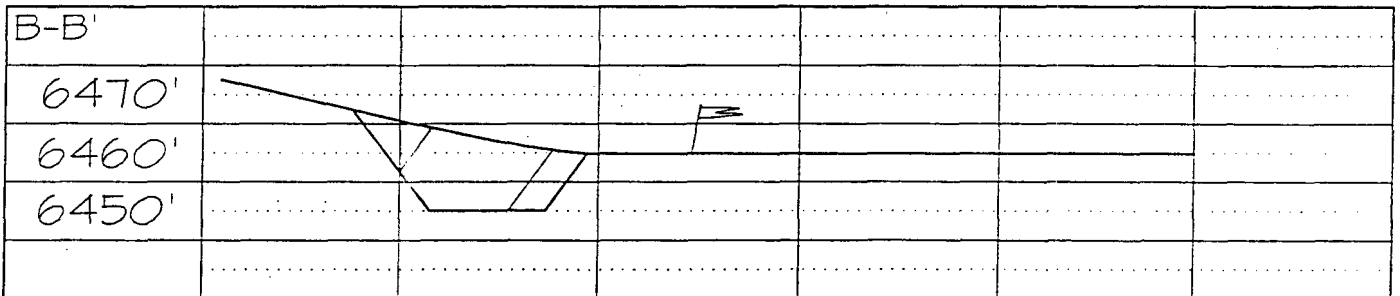
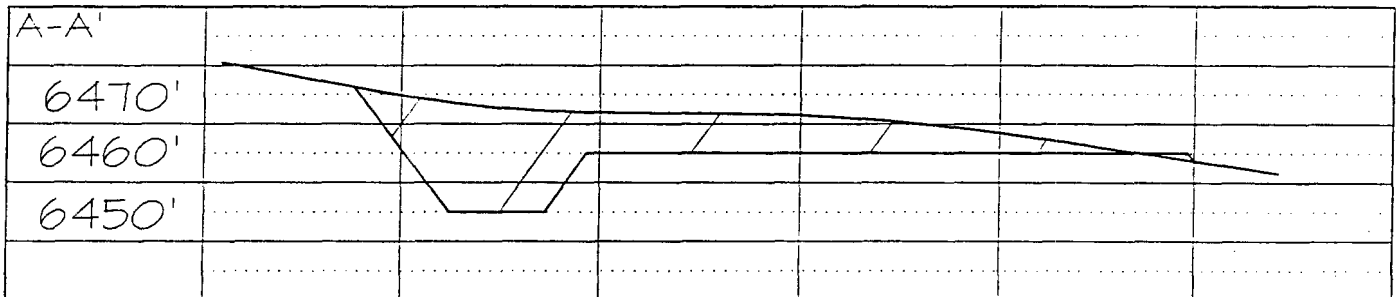
Type or print name **Larry Higgins** E-mail address: **larry.higgins@williams.com** Telephone No. **970/563/3308**  
**For State Use Only**

APPROVED BY: [Signature] TITLE \_\_\_\_\_ DATE \_\_\_\_\_

**WILLIAMS PRODUCTION COMPANY ROSA UNIT COM #237A**  
**450' FSL & 1965' FEL, SECTION 4, T31N, R6W, NMPM**  
**SAN JUAN COUNTY, NEW MEXICO**  
**GROUND ELEVATION: 6460'**



**Plat #2 - Cut & Fill**





## WILLIAMS PRODUCTION COMPANY

### Operations Plan

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

**DATE:** 8/23/2004

**WELLNAME:** Rosa Unit #237A      **FIELD:** Basin Fruitland Coal

**BH LOCATION:** NWSE Sec 4-31N-6W  
San Juan, NM      **SURFACE:** BOR

**SURF. LOCATION:** SWSE Sec 4-31N-6W

**ELEVATION:** 6460' GR      **MINERALS:** FED

**TOTAL DEPTH:** 3,490'      **LEASE #** SF-078772

**I. GEOLOGY:** Surface formation - San Jose

**A. FORMATION TOPS:** ( KB)

NAME	TVD	MD	NAME	TVD	MD
San Jose	Surface	Surface	Top Coal	3,130	3,370
Nancimiento	1,075	1,089	Bottom Coal	3,230	3,470
Ojo Alomo	2,420	2,632	Pictured Cliffs	3,230	3,470
Kirtland	2,535	2,757	TD	3,250	3,490
Fruitland	3,040	3,280			

**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 3,090' 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 at +/- 3,490'.

**C. MUD LOGGING PRORAM:** Mud logger will be on location at drill out below 7" casing to TD.

**C. 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 rams will be tested to 1500 psi. The surface and intermediate casing strings will be pressure tested to 1500 psi in conjunction with the BOP test before drilling out cement. The drum brakes will be inspected and tested each tour. All tests, inspections and SPR's 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. &amp; GRADE</u>
Surface	12-1/4"	+/- 300'	9-5/8"	36# K-55
Intermediate	8-3/4"	+/- 3,090'	7"	20# K-55
Prod. Liner	6-1/4"	+/- 2,990-3,470'	5-1/2"	15.5# K-55

#### **B. FLOAT EQUIPMENT:**

1. SURFACE CASING: 9-5/8" notched regular pattern guide shoe.
2. INTERMEDIATE CASING: 7" cement nose guide shoe with a self- fill insert float. Place float one(1) joint above the shoe and five(5) centralizers, spaced every other joint, starting with the float collar. Place turbulent centralizers, at 120' intervals, starting at 1585' to the surface. Total centralizers = 5 regular and 14 turbulent.
3. PRODUCTION LINER: 5-1/2"liner with notched collar on bottom.

#### **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% CaCl<sub>2</sub> 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 - 460 sx (962 cu.ft.) of "Type III" 65/35 poz with 8% gel, 1% CaCl<sub>2</sub> 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% CaCl<sub>2</sub> (Yield = 1.4 cu.ft./sk, Weight = 14.5#/gal.). Use **100% excess in Lead Slurry** to circulate to surface. **No excess in Tail Slurry.** Total volume = 1,032 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.

# Williams Production Company, LLC

## Well Control Equipment Schematic for 2M Service

Attachment to Drilling Technical Program

### Typical BOP setup

Location: San Juan Basin, New Mexico

Date: August 20, 2001

By: John Thompson (Walsh E&P)

