

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## 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- 078764</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</b> <input type="checkbox"/> <b>MULTIPLE</b> <input checked="" type="checkbox"/> <b>WELL</b> <input type="checkbox"/> <b>WELL</b> <input checked="" type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME <b>070 Farmington, NM</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 316 - Ignacio, Colorado 81137 - Phnoe (970) 563-3308</b>		8. FARM OR LEASE NAME, WELL NO. <b>23C</b>																					
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) <b>At Surface 2060' FSL and 220' FWL</b> <b>At proposed Prod. Zone</b>		9. API WELL NO. <b>3003927609</b>																					
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* <b>26 miles NE of Blanco, NM</b>		10. FIELD AND POOL OR WILDCAT <b>Blanco MV/Basin DK</b>																					
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) <b>220'</b>		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA <b>L Sec. 29, T31N, R5W</b>																					
16. NO. OF ACRES IN LEASE <b>2507.3</b>		12. COUNTY OR PARISH <b>Rio Arriba</b>																					
17. NO. OF ACRES ASSIGNED TO THIS WELL <b>320 W/2</b>		13. STATE <b>NM</b>																					
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE, FT. <b>1300'</b>		19. PROPOSED DEPTH <b>8178'</b>																					
20. ROTARY OR CABLE TOOLS <b>Rotary</b>		21. ELEVATIONS (Show whether DF, RT, GR, etc.) <b>6399'</b>																					
22. APPROX. DATE WORK WILL START* <b>April 15, 2004</b>		23. PROPOSED CASING AND CEMENTING PROGRAM																					
<table border="1"><thead><tr><th>SIZE OF HOLE</th><th>SIZE OF CASING</th><th>WEIGHT/FOOT</th><th>SETTING DEPTH</th><th>QUANTITY OF CEMENT</th></tr></thead><tbody><tr><td>14-3/4"</td><td>10-3/4"</td><td>32.75#</td><td>+/- 300'</td><td>~356 cu.ft. Type III w/ 2% CaCl<sub>2</sub></td></tr><tr><td>9-7/8"</td><td>7-5/8"</td><td>26.4#</td><td>+/- 3743'</td><td>~1190 cu.ft. 65/35 poz &amp; ~209 cu.ft. Type</td></tr><tr><td>6-3/4"</td><td>5-1/2"</td><td>17.0#</td><td>+/- 8178'</td><td>~454 cu.ft. Prem. Lite HS w/ additives</td></tr></tbody></table>				SIZE OF HOLE	SIZE OF CASING	WEIGHT/FOOT	SETTING DEPTH	QUANTITY OF CEMENT	14-3/4"	10-3/4"	32.75#	+/- 300'	~356 cu.ft. Type III w/ 2% CaCl <sub>2</sub>	9-7/8"	7-5/8"	26.4#	+/- 3743'	~1190 cu.ft. 65/35 poz & ~209 cu.ft. Type	6-3/4"	5-1/2"	17.0#	+/- 8178'	~454 cu.ft. Prem. Lite HS w/ additives
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Williams Production Company proposes to drill a vertical well to develop the Mesa Verde and Dakota formations 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 150' 150' of new access road (see Pipeline & Well Plats #3 & #4). This new road joins FS Road 309 in the SW qtr of sec 29, T31N, R5W ..

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 <u>Larry Higgins</u> TITLE <u>Larry Higgins, Drlg COM</u> DATE <u>2/13/2004</u>	
(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 <u>David J. Mankiewicz</u>	
APPROVED BY _____	TITLE _____ DATE <u>MAR 11 2004</u>

\*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.

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  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30-039-27609</b>		*Pool Code <b>72319 / 71599</b>	*Pool Name <b>BLANCO MESAVERDE / BASIN DAKOTA</b>
*Property Code <b>17033</b>	*Property Name <b>ROSA UNIT</b>		*Well Number <b>23C</b>
*GRID No. <b>120782</b>	*Operator Name <b>WILLIAMS PRODUCTION COMPANY</b>		*Elevation <b>6399'</b>

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Ion	Feet from the	North/South line	Feet from the	East/West line	County
L	29	31N	5W		2060	SOUTH	220	WEST	RIO ARriba

<sup>11</sup> 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

<sup>12</sup> Dedicated Acres <b>320.0 Acres (W/2) - MV</b> <b>320.0 Acres (S/2) - DK</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

<div><p>15</p><p>5280.00'</p><p>220'</p><p>2060'</p><p>5282.64'</p><p>29</p><p>RECEIVED</p><p>2004 MAR -1 PM 4:23</p><p>070-Admington, NM</p></div>	<div><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></p><p>Signature</p><p><b>LARRY HIGGINS</b></p><p>Printed Name</p><p><b>Drilling Com</b></p><p>Title</p><p><b>3-1-04</b></p><p>Date</p></div>
	<div><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>Survey Date: <b>NOVEMBER 25, 2003</b></p><p>Signature and Seal of Professional Surveyor</p><div><p>JASON C. EDWARDS</p><p>NEW MEXICO</p><p>REGISTERED PROFESSIONAL SURVEYOR</p><p>15269</p></div><p><b>JASON C. EDWARDS</b></p><p>Certificate Number 15269</p></div>

UNITED STATES  
DEPARTMENT OF INTERIOR  
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICE AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir. Use "APPLICATION TO DRILL" for permit for such proposals

RECEIVED

204 MAR -1 PM

070 Farmington, NM

5. Lease Designation and Serial No.  
**SF-078764**

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation  
**Rosa**

8. Well Name and No.  
**Rosa Unit #23C**

9. API Well No.  
**3003927609**

10. Field and Pool, or Exploratory Area  
**BlancoMV/BasisDK**

11. County or Parish, State  
**Rio Arriba, New Mexico**

SUBMIT IN TRIPLICATE

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

2. Name of Operator  
**WILLIAMS PRODUCTION COMPANY**

3. Address and Telephone No.  
**PO BOX 316 Ignacio, Colorado 81137 (970)563-3308**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**2060 FSL & 220 FWL, Sec 29, T31N, R5W**

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

TYPE OF SUBMISSION

Notice of Intent  
☒ Subsequent Report  
Final Abandonment

TYPE OF ACTION

Abandonment  
Recompletion  
Plugging Back  
Casing Repair  
Altering Casing  
☒ Other see below

Change of Plans  
New Construction  
Non-Routine Fracturing  
Water Shut-Off  
Conversion to Injection  
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.)\*

Sundry submitted to correct dedicated acreage for Dakota per attached revised C-102.



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

Signed Larry Higgins  
Larry Higgins

Title Drilling C.O.M.

Date 3-1-04

(This space for Federal or State office use)

Approved by /s/ David J. Mankiewicz

Title \_\_\_\_\_

Date MAR 11 2004

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.

NMOCD

## II. DRILLING

- A. **MUD PROGRAM:** Clear water with benex to 7" casing point. Convert to a LSND mud to log and run pipe. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses. Use air w/Air Hammer from 7 in. csg.to TD.
- B. **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	14-3/4"	+/- 300'	10-3/4"	32.75# H-40
Intermediate	9-7/8"	+/-3743'	7-5/8"	26.4# K-55
Prod. Casing	6-3/4"	+/- 8178'	5-1/2"	17.0# N-80

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

1. **SURFACE CASING:** 9-5/8" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (3) 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 one Turbulent centralizer on each of the bottom (3) joints and one standard centralizer every (4) joints to the surface casing. Total centralizers = (26) regular and (3) turbulent.
3. **PRODUCTION CASING:** 4-1/2" whirler type cement nose guide shoe with a latch collar on top of 20" bottom joint. Place marker joint above 5630'. Place one positive standoff turbolizer every other joint. Total turbolizers is 34.

**C. CEMENTING:**

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

1. SURFACE: Slurry: 255sx (356 cu.ft.) of "Type III" + 2% CaCl<sub>2</sub> + 1/4 # of cello-flake/sk (Yield = 1.39 cu.ft./sk, Weight = 14.5 #/gal.). The 100% excess should circulate cement to the surface. WOC 12 hours. Test csg to 1500psi.
2. INTERMEDIATE: Lead - 570 sx (1190) 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 - 150 sx (209cu.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 = ~~1,476~~ <sup>1,400</sup> cu.ft. Bump Plug to 1,500 psi. Notify engineering if cement is not circulated to surface.
3. PRODUCTION LINER: 10 bbl Gelled Water space. Scavenger: 50sx (130ft<sup>3</sup>) of Premium Light HS + 1% FL-52 + .2% CD-32, 0.1% R-3, 3 #/sk CSE, 1/4 #/sk cello flake and 4% Phenoseal. (Yield = 2.59 cu.ft./sk, Weight = 11.6 #/gal.). Cement: 210 sx (454 ft<sup>3</sup>) of Premium Light HS + 1% FL-52 + .2% CD-32, 0.1% R-3, 3 #/sk CSE, 1/4 #/sk cello flake and 4% Phenoseal. (Yield = 2.15 ft<sup>3</sup>/sk, Weight = 12.3 #/gal.). Displace cement at a minimum of 8 BPM. The 20% excess in lead and tail should cover 100 ft into intermediate casing. Total volume 454ft<sup>3</sup>. WOC 12 hours

**IV COMPLETION****A. CBL**

1. Run Cement Bond Log across all intervals to be perforated and find Top of Cement behind all casing strings if cement not circulated to surface..

**B. PRESSURE TEST**

1. Pressure test 7 5/8" & 5-1/2" casing to 3300# for 15 minutes.

**C. STIMULATION**

1. Stimulate Dakota with approximately 70,000# of 20/40 sand in x-link foam.
2. Isolate Dakota with a RBP.
3. Stimulate Point Lookout with approximately 80,000# of 20/40 sand in slick water.
4. Isolate Point Lookout with a RBP.
5. Perforate the Menefee/Cliff House as determined from the open hole logs.
6. Stimulate with approximately 80,000# of 20/40 sand in slick water.
7. Test each zone before removing bridge plugs.

**D. RUNNING TUBING**

1. Dakota: Run 2-1/16", 3.25#, J-55, IJ tubing with 1/2 mule shoe on bottom, SN with pump-out plug on top of adeem joint and 5 Seal Units. Land tubing approximately 100' below top Dakota perf.
2. Mesa Verde: Run 2-1/16", 2.9#, J-55, EUE tubing with a SN (1.91" ID) on top of bottom joint. Land tubing approximately 25' above the bottom Point Lookout perforations.

*Larry Sizemore*  
 Gary Sizemore  
 Sr. Drilling Engineer

# Williams Production Company, LLC

## Well Control Equipment Schematic for 2M Service

Attachment to Drilling Technical Program

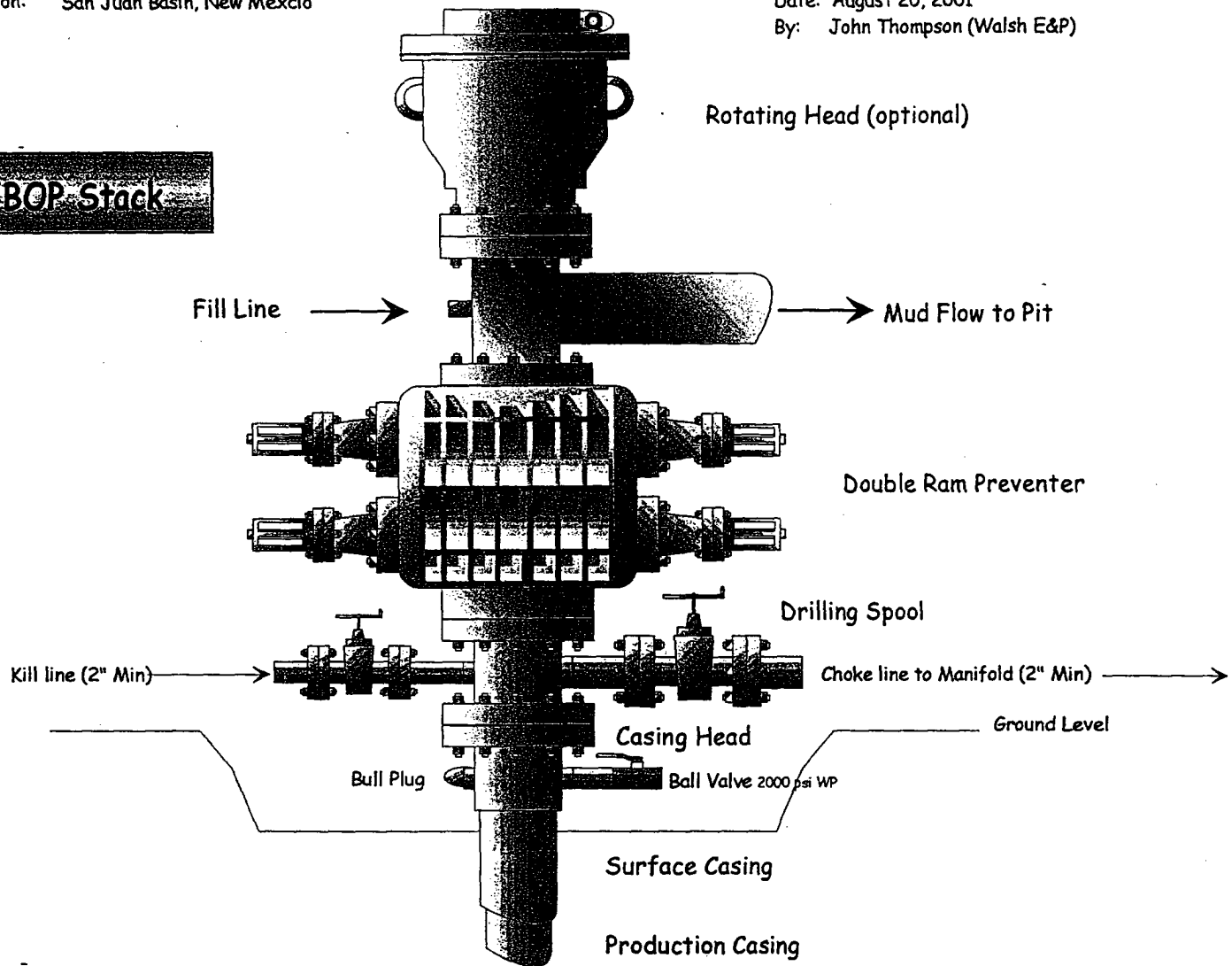
### Typical BOP setup

Location: San Juan Basin, New Mexico

Date: August 20, 2001

By: John Thompson (Walsh E&P)

**BOP Stack**



**Choke & Kill Manifold**

