

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0136
Expires January 31, 2004

5. Lease Serial No.

NMSF-078765

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.

Rosa Unit

8. Lease Name and Well No.

12C

9. API Well No.

30-039-29486

10. Field and Pool, or Exploratory

Blanco Mesaverde

11. Sec., T., R., M., or Blk. and Survey or Area

A Section 15, 31N, 6W

12. County or Parish

Rio Arriba

13. State

NM

17. Spacing Unit dedicated to this well

320.00 (E/2)

20. BLM/BIA Bond No. on file

UT0847

23. Estimated duration

1 month

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification.
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature

Name (Printed/Typed)

Date

Title

Larry Higgins

3/02/05

Drilling COM

Approved by (Signature)

Name (Printed/Typed)

Date

Title

Office

Wayne Townsend

7/20/05

FFO

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, are attached.

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 reverse)

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

The surface is under jurisdiction of the United States Bureau of Reclamation.

This location has been archaeologically surveyed by La Plata Archaeological Consultants. Copies of their report have been submitted directly to the BLM.

This location is proposed to be twinned with the proposed Rosa Unit 181A well.

This APD is also serving as an application to obtain a pipeline right-of-way. A 140.00-foot pipeline tie would be required for this location.

HOLD C104 FOR directional Survey

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

NMOCD

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

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

*APT Number 30039-29486		*Pool Code 72319	*Pool Name BLANCO MESAVERDE
*Property Code 17033	*Property Name ROSA UNIT		*Well Number 12C
*GRID No 120782	*Operator Name WILLIAMS PRODUCTION COMPANY		*Elevation 6268'

10 Surface Location

UL or Lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	15	31N	6W		1270	NORTH	730	EAST	RIO ARriba

11 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
G	15	31N	6W		1650	NORTH	2310	EAST	RIO ARriba

*Dedicated Acres 320.0 Acres -- (E/2)	*Joint or Infill	*Consolidation Code	*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

	<p>16</p> <p>LOT 1</p> <p>5253.60'</p> <p>1650'</p> <p>1270'</p> <p>730'</p> <p>2310'</p> <p>5280.00'</p> <p>5258.88'</p> <p>LEASE SF-078765</p> <p>TRACT 39</p> <p>TRACT 40</p> <p>RECEIVED JUL 4 2005</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</p> <p>LARRY HIGGINS Printed Name</p> <p>DRILLING COM Title</p> <p>3-2-05 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>Survey Date: SEPTEMBER 25, 2004</p> <p>Signature and Seal of Professional Surveyor</p> <p></p> <p>JASON C. EDWARDS Certificate Number 15269</p>	

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 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

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

WELL API NO.	
5. Indicate Type of Lease FEDERAL <input checked="" type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>	
6. State Oil & Gas Lease No. Federal NMSF-0078765	
7. Lease Name or Unit Agreement Name Rosa Unit	
8. Well Number	12C
9. OGRID Number	120782
10. Pool name or Wildcat Blanco Mesaverde	

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 Exploration and Production Company

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

4. Well Location

Unit Letter A: 1270 feet from the north line and 730 feet from the east line

Section 15 Township 31N Range 6W NMPM County Rio Arriba

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
6,268' GR

Pit or Below-grade Tank Application ☒ or Closure ☐

Pit type reserve Depth to Groundwater >100' Distance from nearest fresh water well >1,000' Distance from nearest surface water >1,000'

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

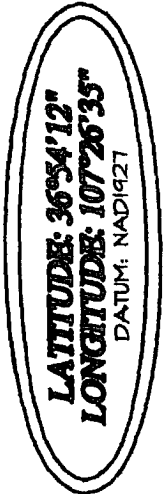
Rserve pit to be located approximately 30 feet west of the well head, in the west corner of the well pad

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 3-03-2005-2005

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. # DATE JUL 22 2005
Conditions of Approval (if any):

~~Plat 1 Location Layout~~



WILLIAMS PRODUCTION COMPANY

Operations Plan

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

DATE: 3/3/2005 **FIELD:** Blanco MV
WELL NAME: Rosa #12C **SURFACE:** FED
SURF LOCATION: NENE Sec 15-31N-6W **MINERALS:** FED
Rio Arriba, NM
BH LOCATION: SWNE Sec 15-31N-6W
ELEVATION: 6,268' GR **LEASE #** SF-078765
MEASURED DEPTH: 6,511'

I. GEOLOGY: Surface formation - San Jose

A. FORMATION TOPS: (KB)

Name	TVD	MD	Name	TVD	MD
Ojo Alamo	2,315	2,677	Cliff House	5,300	5,786
Kirtland	2,430	2,822	Menefee	5,345	5,831
Fruitland	2,830	3,286	Point Lookout	5,575	6,061
Pictured Cliffs	3,105	3,581	Mancos	5,880	6,366
Lewis	3,385	3,869	TD	6,025	6,511

B. MUD LOGGING PROGRAM: None

C. LOGGING PROGRAM: Cased Hole Logs Only

D. 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. 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. & GRADE</u>
Surface	12-1/4"	+/- 250'	9-5/8"	36# K-55
Intermediate	8-3/4"	+/- 4,066'	7"	20# K-55
Prod. Liner	6-1/4"	+/- 3,966'-6,511'	4-1/2"	10.5# 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 (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 (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 marker joint above 5,400'. Place centralizers as needed across selected production intervals.

C. CEMENTING:

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

1. SURFACE: Slurry: 150sx (205 cu.ft.) of "Type III" + 2% CaCl₂ + 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 - 450 sx (944) 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 - 100 sx (139cu.ft.) of "Type III" with 1/4# cello-flake/sk, and 1% CaCl₂ (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 = 1,083 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. Lead: 50sx (130ft³) of Premium Light HS + 1% FL-52 + .2% CD-32, 0.1% R-3, 3 #/sk CSE, 1/4 #/sk cello flake. (Yield = 2.59 cu.ft./sk, Weight = 11.6 #/gal.). Tail: 100 sx (215 ft³) 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 ft³/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 313 ft³. 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 is not circulated to surface.

B. PRESSURE TEST


1. Pressure test 7" & 4-1/2" casing to 3300# for 15 minutes.

C. STIMULATION

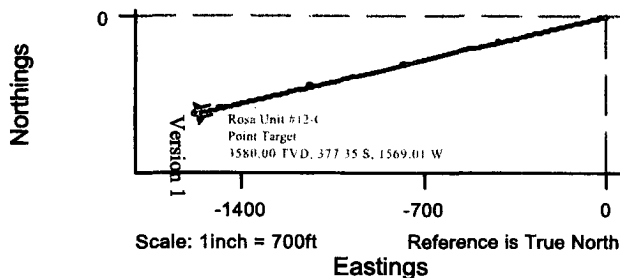
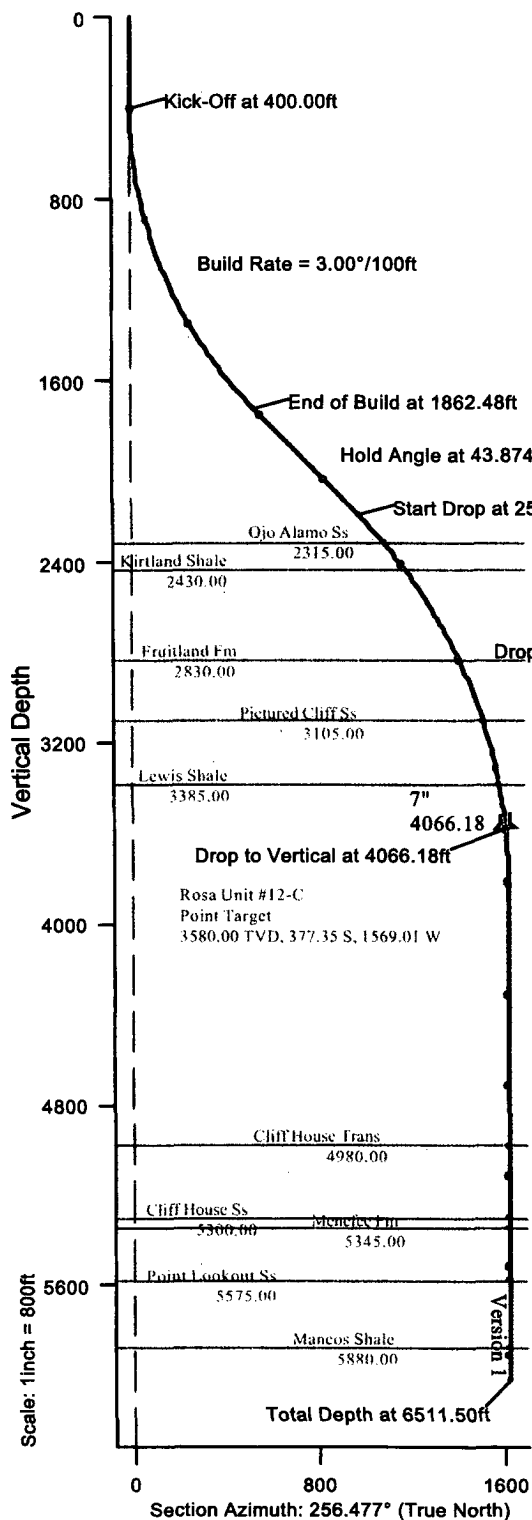
1. Perforate the Point Lookout as determined from the open hole logs.
2. Stimulate with approximately 80,000# of 20/40 sand in slick water.
3. Isolate Point Lookout with a CIBP.
4. Perforate the Menefee/Cliff House as determined from the open hole logs.
5. Stimulate with approximately 80,000# of 20/40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

D. RUNNING TUBING

1. Mesa Verde: Run 2-3/8", 4.7#, J-55, EUE tubing with a SN (1.91" ID) on top of bottom joint. Land tubing approximately 25' above the bottom Point Lookout perforation.


for Gary Sizemore
Sr. Drilling Engineer

New Mexico
Rio Arriba County
Sec. 15-T31N-R06W
Rosa #12-C
Version 1



Rosa #12-C Surface Location

RKB Elevation: 6280.00ft above Mean Sea Level

Ref. NE Corner of Sec. 10: 1270.00 S, 730.00 W

Ref. Global Coordinates: 1503726.12 N, 296942.15 E

Ref. Geographical Coordinates: 35° 07' 52.4382" N, 108° 30' 44.7888" W

Version 1 Proposal Data

Measured Depth	Incl.	Azlm.	Vertical Depth	Northings	Eastings	Vertical Section	Dogleg Rate
0.00	0.000	0.000	0.00	0.00 N	0.00 E	0.00	0.00
Kick-Off Point 400.00	0.000	0.000	400.00	0.00 N	0.00 E	0.00	0.00
Hold Angle 1862.48	43.874	256.477	1723.68	124.66 S	518.33 W	533.11	3.00
Start Drop 2511.21	43.874	256.477	2191.33	229.80 S	955.49 W	982.74	0.00
Drop to Vertical 4066.18	5.000	256.477	3580.00	377.35 S	1569.01 W	1613.75	2.50
Hold Angle 4317.18	0.000	0.000	3830.68	379.91 S	1579.65 W	1624.70	1.99
Total Depth 6511.50	0.000	0.000	6025.00	379.91 S	1579.65 W	1624.70	0.00

Version 1 Bottom Hole Location

Ref. RKB(6268' + 12' KB): 6025.00ft

Ref. Wellhead: 379.91 S, 1579.65 W (True North)

Ref. NE Corner of Sec. 10: 1649.87 S, 2309.66 W (True North)

Ref. Global Coordinates: 1503356.99 N, 295359.94 E

Ref. Geographical Coordinates: 35° 07' 48.6800" N, 108° 31' 03.8066" W