

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

ROW/APD

FORM APPROVED  
Budget Bureau No. 1004-0136  
Expires: February 28, 1995

## APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. Type of Work

DRILL ☒DEEPEN ☐

b. Type of Well

Oil Well ☐Gas Well ☒Other ☐Single Well ☒Multiple Zone ☐

2. Name of Operator

Williams Production Company

3. Address and Telephone No

P.O. Box 3102, MS 37-2, Tulsa, OK. 74101

4. Location of Well (Footages)

At Surface

610' FSL 2405' FWL, SESW

proposed prod. zone

14. Distance in Miles and Directions from Nearest Town or Post Office

Approximately 21.3 miles northeast of Navajo Dam Post Office (straight line)

15. Distance from Proposed Location to Nearest

Property or Lease Line, Ft 610'

16. No. of Acres in Lease

2560.0 acres

17. No. of Acres Assigned to This Well

320 acres, W/2

18. Distance from Proposed Location to Nearest Well Drilling, Completed, or Applied for, on this Lease, FT

1430'

19. Proposed Depth

6246' KB

20. Rotary or Cable Tools

Rotary

21. Elevations (Show whether DF, RT, GR, etc)

6469' GR

22. Approximate Date Work will Start

April 1, 2001

## PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE & GRADE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	9-5/8"	36# K-55	250'	130 sx-181 cu ft Type III
8-3/4"	7"	20# K55	3811'	435 sx-907 cu ft Type III 175sx-239 cu ft Type III
6-1/4"	4-1/2"	10.5# K55	3711'-6246'	80sx-116 cu ft 190sx-274 cu ft Class H + 50/50 poz+4%gel

Williams Production Co. proposes to drill a vertical well to develop the Blanco Mesa Verde Formation in the described location above, and in accordance with the attached Operation and Surface Use plans. **The surface is under the jurisdiction of the Bureau of Land Management-Farmington Field Office.** Independent Contract Archaeology has surveyed the proposed location for Cultural Resources, and the report has been submitted to BLM for review. Nelson Consulting has submitted an environmental assessment to BLM-FFO for review.

This proposed well would not require the construction of a new access road (see Pipeline & Well Plats #3 and #4). The proposed 1,629-foot long pipeline would tie into the Williams Gas Gathering System on the Rosa Unit #85A. This proposed well tie pipeline would follow an existing gas field road (see the attached Pipeline Plat Map # 4).

The surface is under the jurisdiction of the Bureau of Land Management-Farmington Field Office. Independent Contract Archaeology has surveyed the proposed location for Cultural Resources, and the report has been submitted to BLM for review. Nelson Consulting has submitted an environmental assessment to BLM-FFO for review.

OPERATIONS AUTHORIZED ARE  
IN ACCORDANCE WITH ATTACHED  
PLANS AND SPECIFICATIONS.

APPROVED: Steve Nelson Title Agent

COPIES: BLM+4, WELL FILE+1  
Date November 27, 2000

(This space for Federal or State office use)

Permit No.

Approval Date

Application approval does not warrant or certify that 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:

/s/ Jim Lovato

TITLE

DATE

MAR 13 2001

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

Form C-102  
Revised February 21, 1994

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-26578		*Pool Code 72319	*Pool Name Blanco Mesaverde
*Property Code 17033	*Property Name ROSA UNIT		*Well Number 31C
*OGRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY		*Elevation 6469'

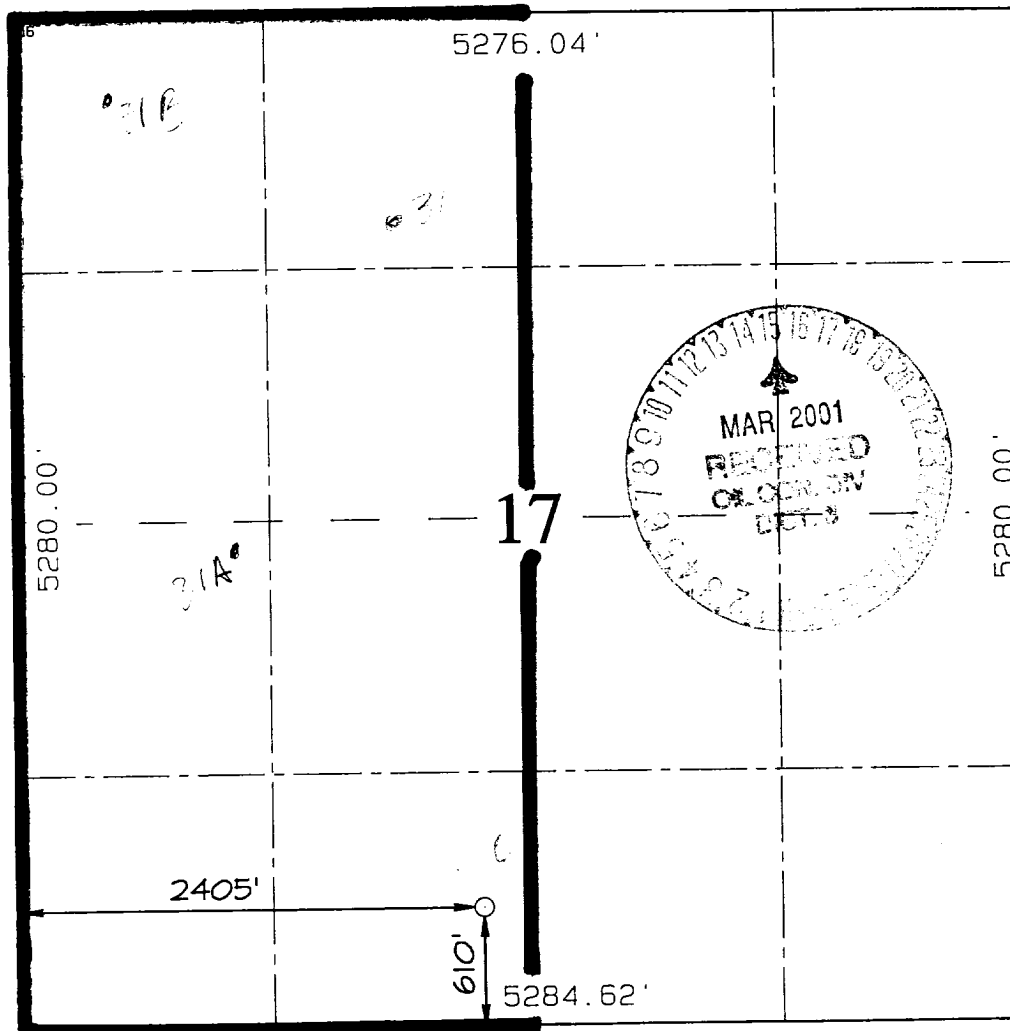
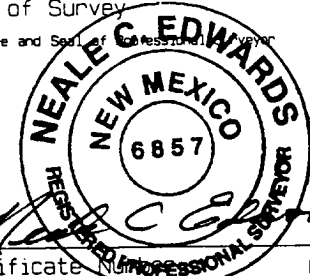
<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	17	31N	5W		610	SOUTH	2405	WEST	RIO ARriba

<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
<sup>12</sup> Dedicated Acres 320 - W/2		<sup>13</sup> Joint or Infill I		<sup>14</sup> Consolidation Code U		<sup>15</sup> 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><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.</p> <p><i>Steve Nelson</i> Signature Steve Nelson Printed Name Agent, Nelson Consulting Title November 27, 2000 Date</p>
	<p><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.</p> <p>OCTOBER 17, 2000 Date of Survey Signature and Seal of Professional Surveyor  Certificate No. 6857</p>



## **WILLIAMS PRODUCTION COMPANY**

### **Operations Plan**

<b><u>DATE:</u></b>	11/9/2000	<b><u>FIELD:</u></b>	Blanco MV
<b><u>WELL NAME:</u></b>	Rosa Unit #31C	<b><u>SURFACE:</u></b>	BLM
<b><u>LOCATION:</u></b>	SE/4 SW/4 Sec 17-31N-5W Rio Arriba, NM	<b><u>MINERALS:</u></b>	Federal
<b><u>ELEVATION:</u></b>	6469' GR	<b><u>LEASE #</u></b>	SF-078769
<b><u>MEASURED DEPTH:</u></b>	6246'		

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

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

	<b><u>MD</u></b>		<b><u>MD</u></b>
Ojo Alamo	2591'	Cliff House	5526'
Kirtland	2741'	Menefee	5571'
Fruitland	3116'	Point Lookout	5796'
Pictured Cliffs	3336'	Mancos	6121'
Lewis	3621'	Total Depth	6246'

##### **B. LOGGING PROGRAM:** IND/GR, CDL/SNL. Log the Mesa Verde from TD Intermediate Casing shoe.

##### **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. 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.

##### **B. BOP TESTING:** While drill pipe is in use, the pipe rams will be tested not less than once each day. The blind rams will be tested once each trip. 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:**

<b><u>CASING TYPE</u></b>	<b><u>HOLE SIZE</u></b>	<b><u>DEPTH</u></b>	<b><u>CASING SIZE</u></b>	<b><u>WT. &amp; GRADE</u></b>
Surface	12-1/4"	250'	9-5/8"	36# K-55
Intermediate	8-3/4"	3811'	7"	20# K-55
Prod. Liner	6-1/4"	3711'-6246'	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 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:**

1. SURFACE: Slurry: 130sx (181 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 125% excess should circulate cement to the surface. WOC 12 hours. Test csg to 1500psi.
2. INTERMEDIATE: Lead: 435sx (907 ft<sup>3</sup>) of "Type III" 65/35 poz + 8% gel + 1% CaCl<sub>2</sub> + 1/4 # cello-flake/sk (Yield = 2.09 ft<sup>3</sup>/sk, Weight = 12.1 #/gal.). Tail: 175sx (239 ft<sup>3</sup>) of class "Type III" + 1% CaCl<sub>2</sub> + 1/4 # cello-flake/sk. (Yield = 1.39 ft<sup>3</sup>/sk, Weight = 14.5#/gal.). The 100% excess in lead and tail should circulate cement to the surface. Total volume = 1146 ft<sup>3</sup>. WOC 12 hours. Run a temperature survey after 8 hours if cement is not circulated to the surface. Test csg. to 1500psi.
3. PRODUCTION LINER: Lead: 80sx (116 ft<sup>3</sup>) of Class-H + 50/50 poz + 4 % gel + 0.4% FL-52. (Yield = 1.45 cu.ft./sk, Weight = 13.2 #/gal.). Tail: 190sx (274 ft<sup>3</sup>) of Class-H + 50/50 poz + 4 % gel + 0.4% FL-5 + 1/4# celloflake/sk and 4% Phenoseal (Yield = 1.45 ft<sup>3</sup>/sk, Weight = 13.2 #/gal.). Displace cement at a minimum of 8 BPM. The 50% excess in lead and tail should cover liner top. Total volume 390 ft<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.

**B. PRESSURE TEST**

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

**C. STIMULATION**

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

WILLIAMS PRODUCTION COMPANY ROSA UNIT #31C

610' FSL & 2405' FWL, SECTION 17, T31N, R5W, N.M.P.M.  
RIO ARriba COUNTY, NEW MEXICO

