

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. SF- 078767	
1b. TYPE OF WELL OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> SINGLE <input checked="" type="checkbox"/> MULTIPLE <input type="checkbox"/> WELL <input type="checkbox"/> WELL <input type="checkbox"/> ZONE <input type="checkbox"/> ZONE <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Rosa Unit	
2. NAME OF OPERATOR Williams Production Company, LLC		7. UNIT AGREEMENT NAME Rosa Unit	
3. ADDRESS OF OPERATOR c/o Walsh Engineering 7415 E. Main St., Farmington, NM 87402 (505) 327-4892		8. FARM OR LEASE NAME, WELL NO. 10 C	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements) At Surface 1005' FNL and 900' FWL At proposed Prod. Zone		9. API WELL NO. 30-039-26918	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 26 miles NE of Blanco, NM		10. FIELD AND POOL OR WILDCAT Blanco Mesaverde	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 900'		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA 0 Sec. 13, T31N, R6W	
16. NO. OF ACRES IN LEASE 2518.04		12. COUNTY OR PARISH Rio Arriba	
17. NO. OF ACRES ASSIGNED TO THIS WELL 320		13. STATE NM	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE, FT. 1900'		19. PROPOSED DEPTH 6126'	
20. ROTARY OR OTHER TOOL COMPLETION WITH ATTACHED "GENERAL REQUIREMENTS" Rotary		21. APPROX. DATE WORK WILL START* April 1, 2002	
22. APPROX. DATE WORK WILL START* April 1, 2002			
23. PROPOSED CASING AND CEMENTING PROGRAM			
SIZE OF HOLE	SIZE OF CASING	WEIGHT/FOOT	SETTING DEPTH
12-1/4"	9-5/8"	36.0#	+/- 250'
8-3/4"	7"	20.0#	+/- 3676'
6-1/4"	4-1/2"	10.5#	+/- 6126'
QUANTITY OF CEMENT			
~180 cu.ft. Type III with 2% CaCl ₂			
~832 cu.ft. 65/35 poz & ~273 cu.ft. Type I			
~157 cu.ft. 50/50 poz & ~250 cu.ft. PL HS			

Williams Production Company proposes to drill a vertical well to develop the Mesa Verde 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 approximately 2100' of new road. The new access road will follow an existing pipeline ROW. (see Pipeline & Well Plats #3 & 4). The new access road will originate from the Rosa Unit #67 well pad which is accessed by an existing road that crosses the NE/NE and SW/NE of section 14, T31N, R6W where it joins the main "Rosa Road".

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 [Signature] TITLE John C. Thompson, Agent DATE 2/1/02

(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 [Signature] TITLE [Signature] DATE 6-23-05

*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.

AMOCU

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 30-039-26918		*Pool Code 72319	*Pool Name Blanco Mesaverde
*Property Code 17033	*Property Name ROSA UNIT		*Well Number 10C
*OGRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY		*Elevation 6359'

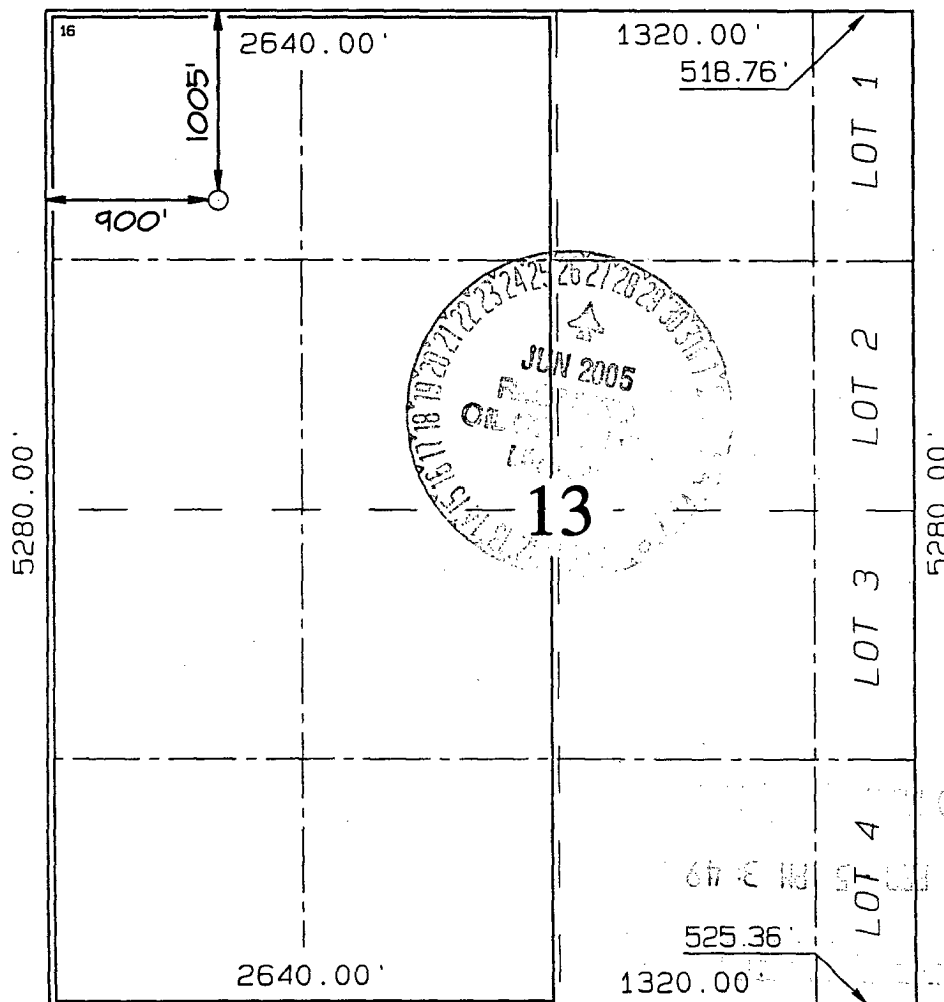
¹⁰ Surface Location

UL or lot no. D	Section 13	Township 31N	Range 6W	Lot Idn	Feet from the 1005	North/South line NORTH	Feet from the 900	East/West line WEST	County RIO ARriba
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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
¹² Dedicated Acres 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



¹⁷ OPERATOR CERTIFICATION

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

Signature

John C. Thompson

Printed Name

Agent/Engineer

Title

2/1/02

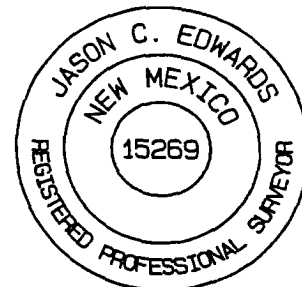
Date

¹⁸ 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.

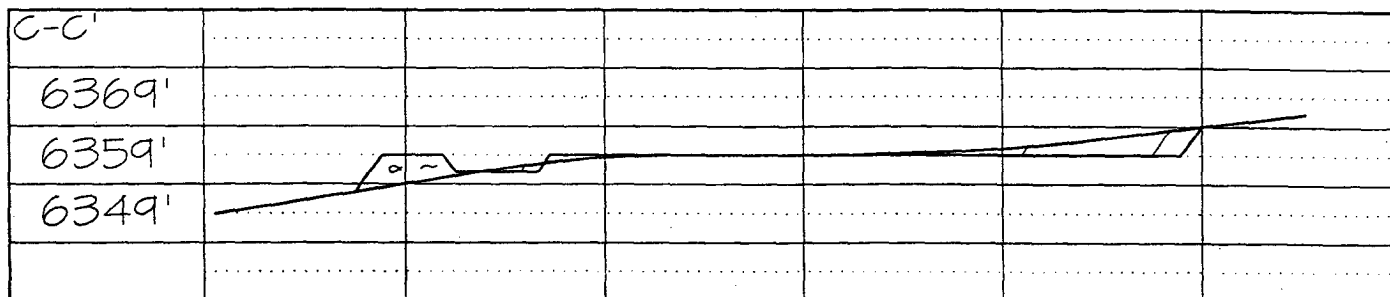
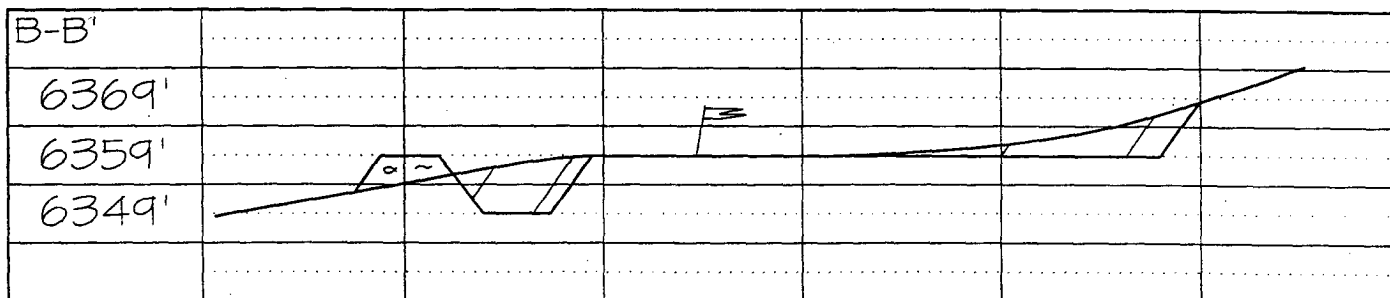
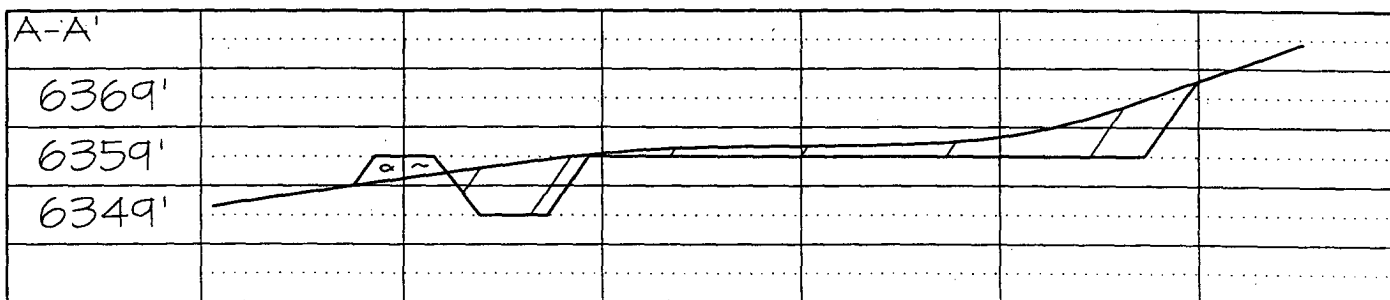
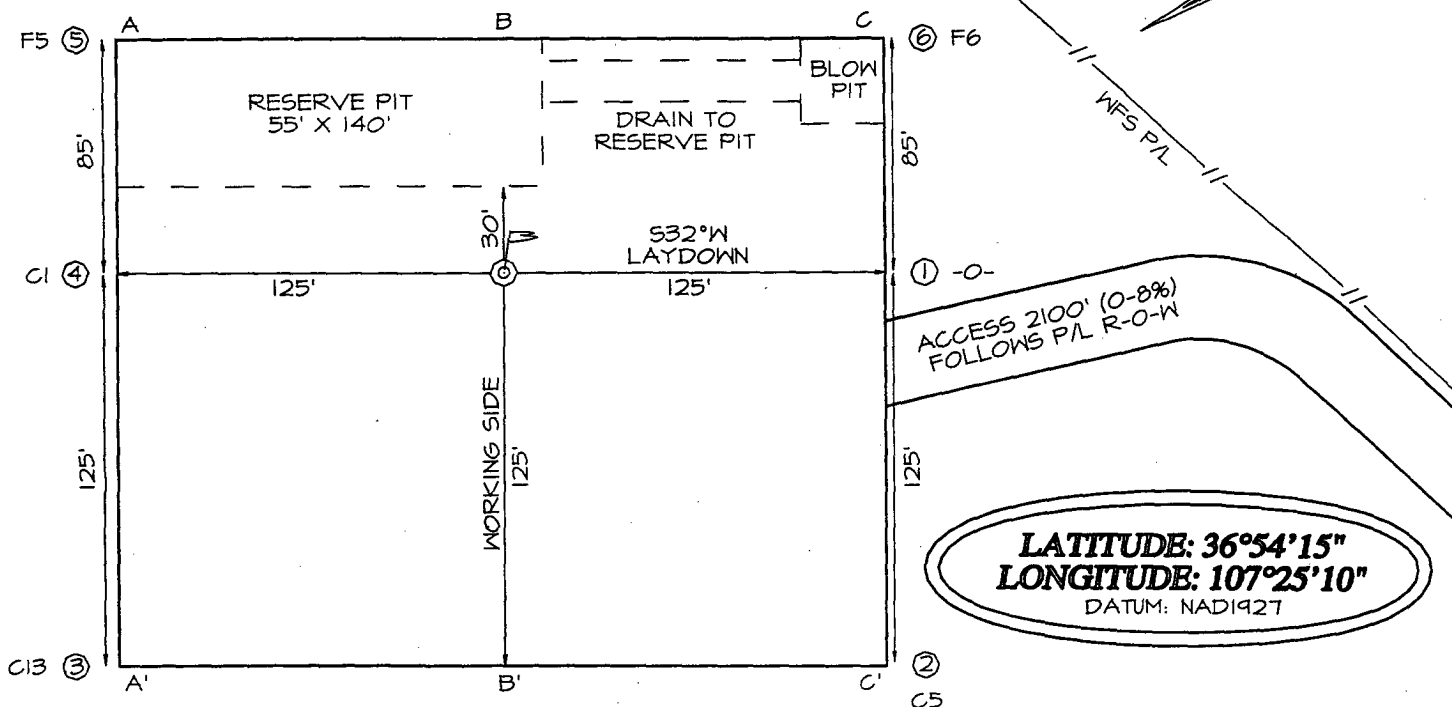
Survey Date: NOVEMBER 21, 2001

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

WILLIAMS PRODUCTION COMPANY ROSA UNIT #10
1005' FNL & 900' FWL, SECTION 13, T31N, R6W, NMPM
RIO ARriba COUNTY, NEW MEXICO
GROUND ELEVATION: 6359'





WILLIAMS PRODUCTION COMPANY

Operations Plan

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

<u>DATE:</u>	1/30/2002	<u>FIELD:</u>	Blanco MV
<u>WELL NAME:</u>	Rosa Unit 10C	<u>SURFACE:</u>	BLM
<u>LOCATION:</u>	NW/4 NW/4 Sec 13-31N-6W Rio Arriba, NM	<u>MINERALS:</u>	BLM
<u>ELEVATION:</u>	6359' GR	<u>LEASE #</u>	SF-78767
<u>MEASURED DEPTH:</u>	6126'		

I. GEOLOGY: Surface formation - San Jose

A. FORMATION TOPS: (KB)

	<u>MD</u>		<u>MD</u>
Ojo Alamo	2436'	Cliff House	5406'
Kirtland	2546'	Menefee	5461'
Fruitland	2866'	Point Lookout	5676'
Pictured Cliffs	3201'	Mancos	6006'
Lewis	3481'	Total Depth	6126'

B. LOGGING PROGRAM: IND/GR, CDL/SNL. Log the Mesa Verde from TD Intermediate Casing shoe. (selected intervals by on-site Geologist). *Subject to change as wellbore conditions dictate.*

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 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 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"	3676'	7"	20# K-55
Prod. Liner	6-1/4"	3576'-6126'	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:

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

1. SURFACE: Slurry: 140sx (180 cu.ft.) of "Type III" + 2% CaCl₂ + 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: 400sx (832 ft³) of "Type III" 65/35 poz + 8% gel + 1% CaCl₂ + 1/4 # cello-flake/sk (Yield = 2.09 ft³/sk, Weight = 12.1 #/gal.). Tail: 195x (273 ft³) of class "Type III" + 1% CaCl₂ + 1/4 # cello-flake/sk. (Yield = 1.39 ft³/sk, Weight = 14.5#/gal.). The 100% excess in lead and tail should circulate cement to the surface. Total volume = 1105 ft³. 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: Scavenger: 30sx (157 ft³) of Premium Light HS + 0.65% FL-52 + .32% CD-32 (Weight = 11 #/gal). Lead: 80sx (157 ft³) of Premium Light HS + 0.65% FL-52 + .32% CD-32. (Yield = 1.96 cu.ft./sk, Weight = 12.5 #/gal.). Tail: 125sx (250 ft³) of Premium Light HS + 0.65% FL-52 + .32% CD-32 + .25 #/sk Celloflake + 4% Phenoseal. (Yield = 1.98 ft³/sk, Weight = 12.5 #/gal.). Displace cement at a minimum of 8 BPM. The 50% excess in lead and tail should cover liner top. Total volume 407ft³. 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. Stimulate with approximately 80,000# of 20/40 sand in slick water.
2. Isolate Point Lookout with a DBP.
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.
5. 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.


John C. Thompson
Engineer

Walsh Engineering & Production

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

