

SUBMIT IN TRIPLICATE*
(Other instructions on
reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires December 31, 1991

**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- 078773	
1b. TYPE OF WELL OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
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. 147 B	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At Surface 940' FNL and 2255' FEL At proposed Prod. Zone		9. API WELL NO. 30-039-26960	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 25.5 miles NE of Blanco, NM		10. FIELD AND POOL OR WILDCAT Blanco Mesa Verde/DK	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 940'		11. SEC., T., R., M., OR BLK AND SURVEY OR AREA B Sec. 33, T31N, R5W	
16. NO. OF ACRES IN LEASE 1920		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. 100'		20. ROTARY OR CABLE TOOLS DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS" April 30, 2002	
21. ELEVATIONS (Show whether DF or CF) 6513'		19. PROPOSED DEPTH 8255'	

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT/FOOT	SETTING DEPTH	QUANTITY OF CEMENT
14-3/4"	10-3/4"	32.75#	+/- 250'	~313 cu.ft. Type III w/ 2% CaCl ₂
9-7/8"	7-5/8"	26.4#	+/- 3870'	~1311 cu.ft. 65/35 poz & ~352 cu.ft. Type
6-3/4"	5-1/2"	17.0#	+/- 8255'	~575 cu.ft. Prem. Lite HS w/ additives

Williams Production Company, LLC 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. The surface is under the jurisdiction of the United States Forest Service (USFS), Jicarilla Ranger District of the Carson National Forest. 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 not require any new access (see Pipeline & Well Plats #3 & #4). The well will be placed on the same well pad as the Rosa Unit #268 which is next to Forest Road 309 in the NW/NE of section 33, 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 John C. Thompson TITLE John C. Thompson, Agent DATE 3/18/02

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE 4/30/02

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 David J. Mankiewicz TITLE _____ DATE APR 30 2002

***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.

NMOC

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 30-039-26960		*Pool Code 72319 / 71599		*Pool Name Blanco Mesaverde / Basin Dakota	
*Property Code 17033		*Property Name ROSA UNIT			*Well Number 147B
*OGRID No. 120782		*Operator Name WILLIAMS PRODUCTION COMPANY			*Elevation 6513'

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
B	33	31N	5W		940	NORTH	2255	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

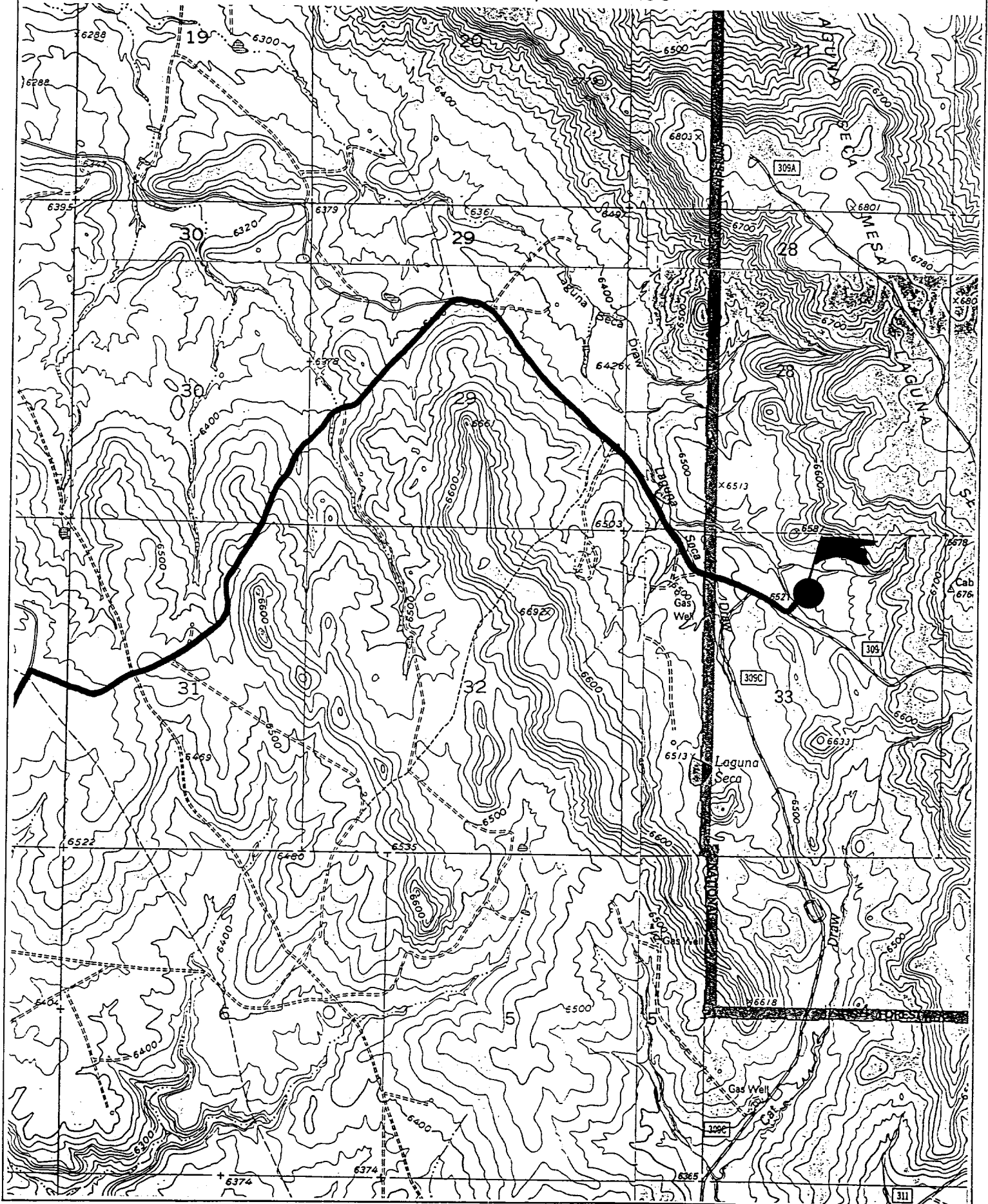
¹² Dedicated Acres 320.0 Acres - (N/2)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
--	-------------------------------	----------------------------------	-------------------------

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

¹⁶ SF-078773 33 5280.00'	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 3/18/02 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: FEBRUARY 5, 2001 Revised: JANUARY 22, 2002 Signature and Seal of Professional Surveyor JASON C. EDWARDS Certificate Number 15269

WILLIAMS PRODUCTION COMPANY ROSA UNIT #147B

940' FNL & 2255' FEL, SECTION 33, T31N, R5W, N.M.P.M.
RIO ARriba COUNTY, NEW MEXICO





WILLIAMS PRODUCTION COMPANY

OPERATIONS PLAN

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

DATE: 3/18/2002

WELL NAME: Rosa Unit 147B **FIELD:** Basin Blanco MV/DK

SURFACE LOCATION: NW/4 NE/4 Sec. 33-T31N-R5W **SURFACE:** FOREST
Rio Arriba, NM

ELEVATION: 6513' GR **MINERALS:** Federal

LEASE # SF-078773

MEASURED DEPTH: 8255'

I. GEOLOGY: Surface formation - San Jose

A. FORMATION TOPS: (KB)

	<u>MD</u>		<u>MD</u>
Ojo Alamo	2645'	Mancos sh	6105'
Kirtland sh	2735'	Gallup ss	7105'
Fruitland cl	3150'	Greenhorn ls	7830'
Pictured Cliffs ss	3395'	Graneros sh	7880'
Lewis sh	3670'	Dakota ss	8005'
Cliff House ss	5575'		
Menefee	5625'		
Point Lookout ss	5810'	Total Depth	8255'

- B. LOGGING PROGRAM:** DIL from TD to the Intermediate Casing Shoe. CNL/FDC over intervals of interest (selected intervals by on-site Geologist). *Subject to change as wellbore conditions dictate.*
- C. NATURAL GAUGES:** Gauge any noticeable increases in gas flow. Gauge well @ 5800' and before TOH for logs. Record all gauges in Tour book and on morning reports.

II. DRILLING

- A. MUD PROGRAM:** Clear water with benex to 7" casing point. LSND 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 function tested not less than once each day. 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</u>	<u>CASING SIZE</u>	<u>WT. & GRADE</u>
Surface	14-3/4"	+/- 250'	10-3/4"	32.75# H-40
Intermediate	9-7/8"	+/-3870'	7-5/8"	26.4# K-55
Prod. Casing	6-3/4"	+/- 8255'	5-1/2"	17.0# N-80

B. FLOAT EQUIPMENT:

1. SURFACE CASING: 10-3/4" notched regular pattern guide shoe. Run (1) Standard centralizer on each of the bottom (3) Joints.
2. INTERMEDIATE CASING: 7-5/8" 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 1500' to the surface. Total centralizers (5 regular and 13 turbulent).
3. PRODUCTION CASING: 5-1/2" whirler type cement nose guide shoe with a latch collar on top of 20' bottom joint. Place 20' marker joint on top of 10 th joint and one above 5100'.

C. CEMENTING:

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

1. SURFACE: Use 230sx (313cu.ft.) of class "Type III" with 2% CaCl₂ and 1/4# of cello-flake/sk (Yield = 1.39 cu.ft./sk, Weight = 14.5 #/gal.). 125% excess to circulate the surface. WOC 12 hours. Test to 1500#.
2. INTERMEDIATE: Lead: 630sx (1311cu.ft.) of class "Premium Lite" 65/35, Type III/Poz with 8% gel and 1/4# cello-flake/sk (Yield = 2.09 cu.ft./sk, Weight = 12.1 #/gal.). Tail: 255sx (352cu.ft.) of class "Type III" with 1/4# cello-flake/sk (Yield = 1.39 cu.ft./sk, Weight = 14.5#/gal.). 100% excess in lead and tail to circulate to surface. Total volume = 1633 cu.ft. WOC 12 hours. Run a temperature survey after 8 hours if cement is not circulated.
3. PRODUCTION CASING: 30 sks Scavenger of Premium Light HS + 1% FL-52 + .3% CD-32 + 2% KCl + .25 #/sk Celloflake + 4% Phenoseal + .3% R3. (Weight = 11 #/gal.). Cement Slurry: 225 sx (575 ft³) of Premium Light HS + 1% FL-52 + .3% CD-32 + 2% KCl + .25 #/sk Celloflake + 4% Phenoseal + .1% R3. (Yield = 1.99 ft³/sk, Weight = 12.5 #/gal.). Displace cement at a minimum of 8 BPM. Use 20% excess in calculation to raise cement 100' into intermediate casing. Total volume 449 ft³. WOC 12 hours.

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)

