

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 -078763</b>
1b. TYPE OF WELL OIL WELL <input type="checkbox"/> <input checked="" type="checkbox"/> OTHER SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
2. NAME OF OPERATOR <b>Williams Production Company</b>		7. UNIT AGREEMENT NAME <b>Rosa Unit</b>
3. ADDRESS OF OPERATOR <b>c/o Walsh Engineering, 7415 E. Main St. Farmington, NM 87402</b>		8. FARM OR LEASE NAME, WELL NO. <b>350</b>
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At Surface <b>1570' FNL and 1070' FEL</b> At proposed Prod. Zone		9. API WELL NO. <b>30-C39-26223</b>
10. FIELD AND POOL OR WILDCAT <b>Basin Fruitland Coal</b>		11. SEC. T, R, M, OR BLK. AND SURVEY OR AREA <b>Sec. 10, T31N, R5W</b>
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* <b>35 miles NE of Blanco, NM</b>	12. COUNTY OR PARISH <b>Rio Arriba</b>	13. STATE <b>NM</b>
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) <b>1070'</b>	16. NO. OF ACRES IN LEASE <b>2544.64</b>	17. NO. OF ACRES ASSIGNED TO THIS WELL <b>E/ 320</b>
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE, FT. <b>3000'</b>	19. PROPOSED DEPTH <b>3455'</b>	20. ROTARY OR CABLE TOOLS <b>Rotary</b>
21. ELEVATIONS (Show whether DF, RT, GR, etc.) <b>6601' GR</b>		22. APPROX. DATE WORK WILL START* <b>April 15, 2000</b>

23. PROPOSED CASING AND CEMENTING PROGRAM				
SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	9-5/8"	36# K-55	250'	176 cu ft. Cl "B" w/ 3% CaCl <sub>2</sub>
8-3/4"	7"	20# K-55	3340'	1062cuft. Cl "B" 65/35 poz & 60cuft w/ 2% CaCl
6-1/4"	5-1/2"	15.5# K-55	3240' - 3455'	None

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

This location has been archaeologically surveyed by Moore Anthropological Research. 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 be accessed by a new road which is 20' wide by 300' long and an improved road which is 3000' long which crosses the NE/NE, NW/NE, and NE/NW of Sec. 10, T31N, R5W, where it joins Forest Road #308B  
The pipeline route is described on Plat #4.

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 Paul C. Thompson TITLE Paul Thompson, Agent DATE 12/1/99

(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 Chip Hamada TITLE Acting Team Lead DATE 1/24/00

\*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 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

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 30-039-26223		*Pool Code 71629	*Pool Name Basin Fruitland Coal
*Property Code 17033	*Property Name ROSA UNIT		*Well Number 350
*OGRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY		*Elevation 6601'

10 Surface Location

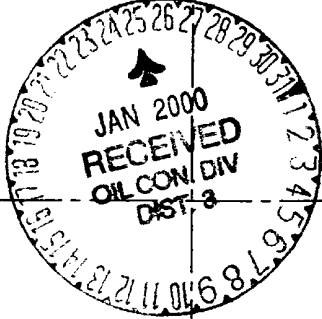

UL or lot no. H	Section 10	Township 31N	Range 5W	Lot Idn	Feet from the 1570	North/South line NORTH	Feet from the 1070	East/West line EAST	County RIO ARriba
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11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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12 Dedicated Acres 320	13 Joint or Infill Y	14 Consolidation Code U	15 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

16	5280.00'	5280.00'	5280.00'	5281.98'		<b>OPERATOR CERTIFICATION</b> I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  Paul C. Thompson Signature Paul C. Thompson Printed Name Agent Title 9/14/99 Date
						<b>18 SURVEYOR CERTIFICATION</b> 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.  MAY 27, 1999 Date of Survey Signature and Seal  Certificate Number 6857

**WILLIAMS PRODUCTION COMPANY**  
**Operations Plan**

**DATE:** 07/1/99

**WELLNAME:** Rosa 350      **FIELD:** Basin Fruitland Coal

**LOCATION:** SE/4 NE/4 Sec. 10, T31N, R5W      **SURFACE:** Forest  
 Rio Arriba, NM

**ELEVATION:** 6600' GR      **MINERALS:** Fed

**TOTAL DEPTH:** 3455'      **LEASE #** SF-078763

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

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

Ojo Alamo	2790'
Kirtland	2900'
Fruitland	3280'
Base of Coal	3455'
Total Depth	3455'

**B. LOGGING PROGRAM:** No logging anticipated. Mud logger will be present to determine TD.

**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. Treat for lost circulation as necessary. Expect 100% returns prior to cementing. Notify Engineering of any mud losses. If coal is detected before 3340' DO NOT drill deeper until Engineering is contacted.

**B. Drilling Fluid:** Coal section will be drilled with Fruitland Coal water. Mud logger will pick TD at +/- 3455'.

**C. 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 inspected and tested each tour. All tests and inspections 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. &amp; GRADE</u>
Surface	12-1/4"	250'	9-5/8"	36# K-55
Intermediate	8-3/4"	3340'	7"	20# K-55
Prod. Liner	6-1/4"	3240-3455'	5-1/2"	15.5# K-55

**B. FLOAT EQUIPMENT:**

1. **SURFACE CASING:** 9-5/8" notched regular pattern guide shoe.

2. **INTERMEDIATE CASING:** 7" 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 1585' to the surface. Total centralizers = 5 regular and 14 turbulent.

Rosa #350  
Drilling Prognosis  
Page #2

3. PRODUCTION LINER: 5-1/2" liner with notched collar on bottom.

**C. CEMENTING:**

1. SURFACE: Use 150 sx (176 cu.ft.) of class "B" with 3% CaCl<sub>2</sub> and 1/4# of cello-flake/sk (Yield = 1.19 cu.ft./sk, Weight = 15.6 #/gal.). Use 125% excess to circulate the surface. WOC 12 hours. Test to 1500#.

2. INTERMEDIATE: Lead - 510 sx (1062 cu.ft.) of class "B" 65/35 poz with 8% gel, 2% CaCl<sub>2</sub> and 1/4# cello-flake/sk (Yield = 2.09 cu.ft./sk, Weight = 12.1 #/gal.). Tail - 50 sx (60 cu.ft.) of class "B" with 2% CaCl<sub>2</sub> and 1/4# cello-flake/sk, (Yield = 1.19 cu.ft./sk, Weight = 15.6 #/gal.). Use 125% excess in lead and tail to circulate to surface. Total volume = 1122 cu.ft. WOC 12 hours. Run a temperature survey after 8 hours if cement is not circulated. Test to 1500#.

3. PRODUCTION LINER: Open hole completion. No cement.

**IV COMPLETION**

**A. PRESSURE TEST**

Pressure test 7" casing to 3300# for 15 minutes.

**B. STIMULATION**

Cavitate Well with reciprocation and rotation. Surge wells with water and air and then flow back to pit. Cavitate for 2 to 3 weeks. Maximum pressure not expected to exceed 2,000 psi.

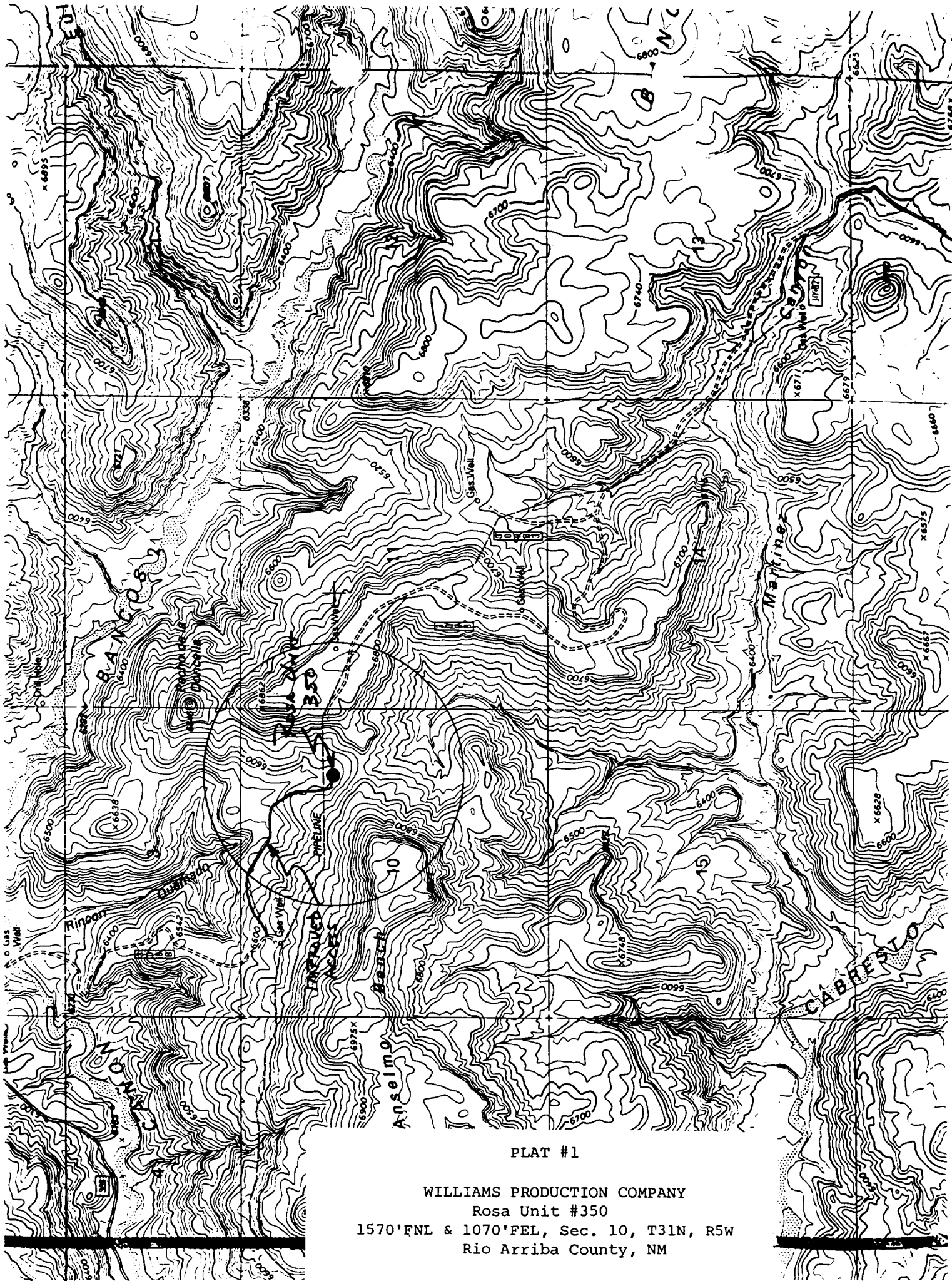
**C. RUNNING TUBING**

1. Mesa Verde: Run 2-3/8", 4.7#, J-55, EUE tubing with a SN (1.375" ID) on top of bottom joint. Land tubing approximately 50' above TD.

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Lance A. Hobbs  
Engineer, Production & Drilling

file:350Rosa



PLAT #1

WILLIAMS PRODUCTION COMPANY  
Rosa Unit #350  
1570'FNL & 1070'FEL, Sec. 10, T31N, R5W  
Rio Arriba County, NM