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

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

5.	Lease Serial No.	
	NMSF-078767	

APPLICATION FOR PERMIT TO DR			6. If Indian, Allottee or Tribo	e Name
	<u>- 3002 MOD 30</u>	ı cm	9 57	
la. Type of Work: DRILL REENTER			7. If Unit or CA Agreement, l	Name and No.
	RE(	DELLED	Rosa Unit	
1h Type of Well Oil Well Gas Well Other			8. Lease Name and Well No.	
10. Type of Well. — — — — — — — — —	☑ Single Zone ☐ Multir	le Zone	336A	
2. Name of Operator			9. API Well No.	11
Williams Exploration and Production Company, LLC			30-001-270	//
3a. Address	3b. Phone No. (include area code)		10. Field and Pool, or Explorat	ory
P.O. Box 316 Ignacio, CO 81137	(970) 563-3308		Basin Fruitland Coal	
4. Location of Well (Report location clearly and in accordance with any	State requirements. *)		11. Sec., T., R., M., or Blk. an	d Survey or Area
At surface 1580' FNL & 915' FWL		$\Lambda$		
At proposed prod. zone same	(E) All 2005 E		F 0	
14. Distance in miles and direction from nearest town or post office*	(8)		F- Section 8, 31N, 5W 12, County or Parish	13. State
approximately 30 miles northeast of Blanco, New Mexico	<u> </u>	3	•	
15. Distance from proposed*	16. No. of Acres in lease	17 Species	Rio Arriba  Unit dedicated to this well	NM
location to nearest	10. No. of Acres in lease	ji r. Spacing	g Offit dedicated to this well	
property or lease line, ft. (Also to nearest drig, unit line, if any)			00 (110)	
(Also to nearest drig. unit line, it any) 915'  18. Distance from proposed location*	2,518.40 19. Proposed Depth		.00 (N/2) IA Bond No. on file	
to nearest well, drilling, completed,	19. Hoposed Departs	20. DLAVID	TA BOILD NO. On the	
applied for, on this lease, ft.	3.209'	UTO	847	
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will st		23. Estimated duration	
6,299' GR	April 1, 2005		1 month	
	24. Attachments			
The following, completed in accordance with the requirements of Onshor	re Oil and Gas Order No.1, shall be atta	ched to this	form:	
1. W. H. day and C. There are below a second assessment	1			
Well plat certified by a registered surveyor.     A Deithing Plan.	4. Bond to cover the Item 20 above).	e operations	unless covered by an existing	bond on file (see
2. A Drilling Plan.  3. A Surface Lies Plan (if the location is on National Forget System)	5 Onometon contifica	ition.		

- 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- 6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature	Name (Printed/Typed)	Date
larry trans	Larry Higgins	3/29/05
Title		
Drilling COM		
Approved by (Signature)	Name (Printed/Typed)	Date_
Il Mankee of		6-15-05
Title	Office	
HTM	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	e 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.

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 well pad surface is under jurisdiction of the 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 APD is also serving as an application to obtain road and pipeline rights-of-way. A 400-foot road and a 798.50-foot pipeline tie would be required for this location. 325 feet of the access road would be under jurisdiction of the BOR, with the remaining 75 feet under jurisdiction of the FFO/BLM. Approximately 490 feet of the pipeline would be under jurisdiction of the BOR, with the remaining 308.5 feet under jurisdiction of the FFO/BLM.

> This action is subject to technical and procedural review pursuant to 43 CFR 3166.3 and appeal pursuant to 43 CFR 3165.4

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

District I PO Box 1980, Hopbs, NM BB241-1980

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

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 8750452088 30

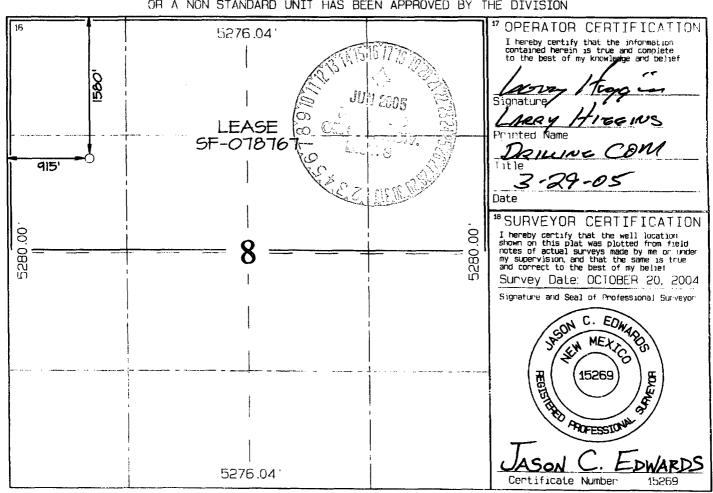
AMENDED REPORT

Form C-102

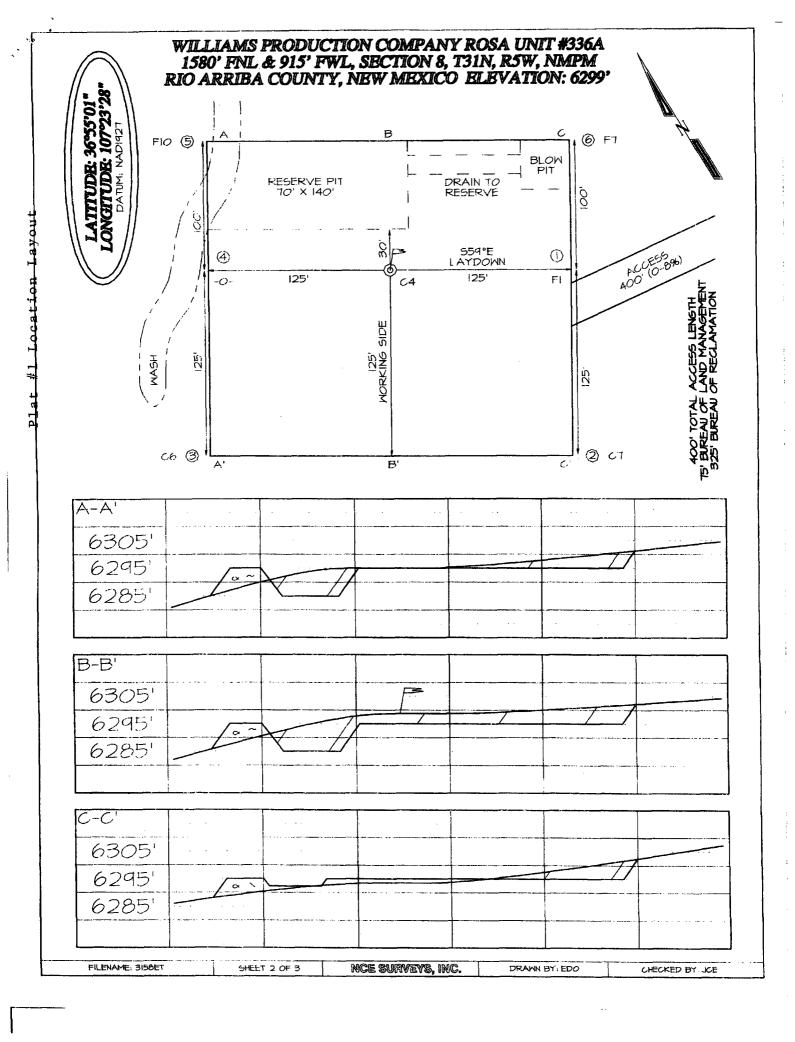
# WELL LOCATION AND ACREAGE DEDICATION PLAT

'API Number						³Pool Nam	-		
30-039-29511 71629 BASIN FRUITLAND CO						AND COAL			
'Property Code					Property Name			*Well Number	
17033					ROSA UNIT			336A	
OGRID No.					*Operator Name			*Elevation	
2			WILLI	IAMS PRODUC	CTION COMPAN	ΙΥ		6299	
<sup>10</sup> Surface Location									
Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line		
8	31N	5W		1580	NORTH	915	WEST	RIO ARRIBA	
<sup>11</sup> Bottom Hole L					f Different	From Surf	асе		
Section	Township	Range	Lot Tan	Feet from the	North/South line	Feet from the	East/West line	County	
12 Dedicated Acres				<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>35</sup> Order No.	<u> </u>		
	Section 8	Section Township 8 31N 11 B Section Township	Section Township Range 8 31N 5W 11 Bottom Section Township Range	Section Township Range Lot Idn  8 31N 5W  11 Bottom Hole L  Section Township Range Lot Idn	Property ROSA ( Decretor VILLIAMS PRODUCE  Section Township Range Lot Idn Feet from the 1580  11 Bottom Hole Location I Section Township Range Lot Idn Feet from the 1580  12 Bottom Hole Location I Section Township Range Lot Idn Feet from the 15 Joint or Infill	*Property Name ROSA UNIT  *Operator Name WILLIAMS PRODUCTION COMPAN  **Section Township Range Lot Idn Feet from the North/South line  **Bottom Hole Location If Different  **Section Township Range Lot Tdn Feet from the North/South line  **Indianal Property Name Rose Location Feet from the North/South line  **Section Township Range Lot Tdn Feet from the North/South line  **Joint or Infill Inf Composited Location Code**	Property Name ROSA UNIT  **Operator Name WILLIAMS PRODUCTION COMPANY  **Operator Name WILLIAMS PRODUCTION  **Operator Name WILLIAM	Property Name ROSA UNIT  "Operator Name WILLIAMS PRODUCTION COMPANY  10 Surface Location Section Township Range Lot Idn Feet from the North/South line Feet from the East/Hest line 8 31N 5W 1580 NORTH 915 WEST  11 Bottom Hole Location If Different From Surface Section Township Range Lot Idn Feet from the North/South line Feet from the East/Hest line  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



Submit 3 Copies To Appropriate District	State of New Mexico	Form C-103
Office District I	Energy, Minerals and Natural Resources	May 27, 2004
1625 N. French Dr., Hobbs, NM 88240		WELL API NO.
<u>District II</u> 1301 W. Grand Ave., Artesia, NM 88210	OIL CONSERVATION DIVISION	5. Indicate Type of Lease FEDERAL X
<u>District III</u> 1000 Rio Brazos Rd., Aztec, NM 87410	1220 South St. Francis Dr.	STATE FEE
District IV	Santa Fe, NM 87505	6. State Oil & Gas Lease No.
1220 S. St. Francis Dr., Santa Fe, NM 87505		Federal NMSF-0078767
	CES AND REPORTS ON WELLS	7. Lease Name or Unit Agreement Name
(DO NOT USE THIS FORM FOR PROPOS	ALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A	
DIFFERENT RESERVOIR. USE "APPLIC PROPOSALS.)	ATION FOR PERMIT" (FORM C-101) FOR SUCH	Rosa Unit
	Gas Well 🛛 Other	8. Well Number 336A
2. Name of Operator		9. OGRID Number 120782
Williams Exploration and Production	n Company	10 P 1 W'll
3. Address of Operator P.O. Box 316, Ignacio, CO 81137		10. Pool name or Wildcat Blanco Mesaverde/Basin Dakota
		Bianco Mesaverde/Dasin Dakota
4. Well Location	d	
	rom the north line and 915 feet from the west line	G B. A. 9
Section 8 Township	31N Range 5W NMPM 11. Elevation (Show whether DR, RKB, RT, GR, etc.	County Rio Arriba
	6,299' GR	
Pit or Below-grade Tank Application 🗵 or		Distance is a second of the se
Pit typereserve_Depth to Groundwate	r>100'_Distance from nearest fresh water well_>1,000'_ Dist	tance from nearest surface water>1,000'
Pit Liner Thickness: 12 mil Below-	Grade Tank: Volumebbls; Construction	Material
12 Check A	ppropriate Box to Indicate Nature of Notice,	Report or Other Data
12. Check 1	ppropriate box to indicate reature of rectice,	Report of Other Data
NOTICE OF IN	TENTION TO: SUE	SSEQUENT REPORT OF:
PERFORM REMEDIAL WORK	PLUG AND ABANDON   REMEDIAL WOF	<del>_</del>
TEMPORARILY ABANDON	<del></del>	RILLING OPNS. P AND A
PULL OR ALTER CASING	MULTIPLE COMPL CASING/CEMEN	IT JOB
OTHER:	□ OTHER:	П
	eted operations. (Clearly state all pertinent details, ar	nd give pertinent dates, including estimated date
	rk). SEE RULE 1103. For Multiple Completions: A	ttach wellbore diagram of proposed completion
or recompletion.		
		•
Reserve pit to be constructed in acco	rdance with NMOCD Interim Pit and Below-grade Ta	ank Guidelines
Rserve pit to be located approximate	ly 30 feet north of the well head, in the northwest corn	ner of the well pad
I hereby certify that the information a	above is true and complete to the best of my knowled closed according to NMOCD guidelines $\boxtimes$ , a general permit $\sqsubseteq$	ge and belief. I further certify that any pit or below-
	according to NATOCD guidelines (2), a general permit	Joi an (attached) alternative OCD-approved plan [].
SIGNATURE MOTOR 1	TITLE_Drilling COM	DATE3-24-2005
Type or print name Larry Higgins	E-mail address: larry.higgins@williams.com	Telephone No. (970) 563-3308
For State Use Only	The second	SPECTOR DIST 38 JUN 17 2005
APPROVED BY:	TITLE TITLE	DATE
Conditions of Approval (if any):		





# **WILLIAMS PRODUCTION COMPANY**

# **Operations Plan**

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

DATE:

3/23/2005

**WELLNAME:** 

Rosa Unit #336A

Rio Arriba, NM

FIELD:

Basin Fruitland Coal

**LOCATION:** 

SWNW Sec. 8-T31N-5W

**SURFACE:** 

BOR

ELEVATION:

6,299' GR

**MINERALS:** 

Federal

**TOTAL DEPTH:** 

3,209'

**LEASE #** 

SF-078767

I. GEOLOGY:

Surface formation - San Jose

## A. FORMATION TOPS: (KB)

NAME	DEPTH	NAME	DEPTH	
San Jose	Surface	Top Coal	2,969	
Nancimiento	1,129	Bottom Coal	3,109	
Ojo Alamo	2,369	Pictured Cliffs	3,109	
Kirtland	2,474	TD	3,209	
Fruitland	2,884			

# B. **LOGGING PROGRAM:** None

C. <u>NATURAL GAUGES:</u> 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 2,949' DO NOT drill deeper until Engineering is contacted.
- B. **Drilling Fluid**: Coal section will be drilled with Fruitland Coal water.
- C. MUD LOGGING PRORAM: Mud logger will be on location at drill out below 7" casing to TD.

D. <u>BOP TESTING:</u> 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:

CASING TYPE	<b>HOLE SIZE</b>	<u>DEPTH</u>	<b>CASING SIZE</b>	WT. & GRADE
Surface	12-1/4"	+/- 300'	9-5/8"	36# K-55
Intermediate	8-3/4"	+/- 2,949	7"	20# K-55
Prod. Liner	6-1/4"	+/- 2,849'- 3,109'	5-1/2"	15.5# K-55

#### **B. FLOAT EQUIPMENT:**

- 1. <u>SURFACE CASING</u>: 9-5/8" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) joints of Surface Casing.
- 2. <u>INTERMEDIATE CASING:</u> 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. <u>CEMENTING:</u>

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

- SURFACE: Use 190 sx (264 cu.ft.) of "Type III" with 2% CaCl<sub>2</sub> and 1/4# of cello-flake/sk (Yield = 1.41 cu.ft./sk, Weight = 14.5 #/gal.). Use 150% excess to circulate the surface. WOC 12 hours. Total volume = 206 cu.ft. Test to 1500#.
- INTERMEDIATE: Lead 400 sx (821 cu.ft.) of "Type III" 65/35 poz with 8% gel, 1% CaCl<sub>2</sub> and 1/4# cello-flake/sk (Yield = 2.09 cu.ft./sk, Weight = 12.1 #/gal.). Tail 50 sx (70 cu.ft.) of "Type III" with 1/4# cello-flake/sk, and 1% CaCl<sub>2</sub> (Yield = 1.4 cu.ft./sk, Weight = 14.5#/gal.). Use 120% excess in Lead Slurry to circulate to surface. No excess in Tail Slurry. Total volume = 891 cu.ft. Bump Plug to 1,500 psi. Notify engineering if cement is not circulated to surface.
- 3. PRODUCTION LINER: Open hole completion. No cement.

# GENERAL ROSA DRILLING PLAN

#### Rosa Unit boundries:

T31N, R4W: all except sections 32-36 T31N, R5W: all except sections 1 & 2

T31N, R6W: all except sections 6,7,18,20, & 27-36

T32N, R6W: sections 32-36

FORMATION	LITHOLOGY	WATER	GAS	OIL/COND	OVER-PRES	LOST CIRC
	Interbedded shales, siltstones and	Possible	Possible	No	No	No
	sandstones			ļ <del> </del>	N	Na
Ojo Alamo	Sandstone and conglomerates	Fresh	No	No	No	No
	with lenses of shale				ļ	
	Shale W/Interbedded sandstones	No	Possible	No	No	No
	Inter, SS, SlitSt, SH &Coals w/carb,	Yes	Yes	No	Possible	Possible
	SS, SiltSt, SH					
	Massive Sandstone w/thin	Possible	Yes	Possible	No	Possible
Cliffs	interbedded shales					
Lewis	Shale w/thin interbedded sandstones	No	Possible	No	No	No
	and siltstones				ļ	
Cliff House	Transgressive sandstones	Possible	Yes	No	No	No
	Sandstones, carb shales and coal	Possible	Yes	No	No	No
	Regressive coastal barrier	Possible	Yes	Possible	No	Yes
Lookout	sandstone					
	Marine shale and interbedded sandstone	No	Possible	Possible	No	Possible
	Marine sand and shales	No	Yes	Possible	No	Possible
	Fluvial sands, shales, & coal	Possible	Yes	Possible	No	Possible

#### DRILLING

#### Potential Hazards:

- 1. There are no overpressured zones expected in this well.
- 2. No H2S zones will be penetrated while drilling this well.

# Mud System:

- Surface The surface hole will be drilled with a low-solids, non-dispersed system with starch and lost circulation material as needed. Expected mud weights will be in the 8.4 to 9.0 lb per gal range. Viscosities will be in the 30 to 60 sec/qrt range as needed to remove drill cuttings.
- 2. Intermediate The intermediate hole will be drilled with clear water and Benex to TD where the well will be mudded up to log and run casing. The mud system will be low-solids, non-dispersed with mud weights in the 9 to 10 lb per gal range as needed to control the well. Viscosities will be in the 45 to 55 range as needed to support any weight material. The weight material will consist of Barite.
- Production The well will be drilled using air from the intermediate casing point to TD. For Fruitland Coal wells, the coal section will be drilled with air/mist.

# ..... company, LLC

# Well Control Equipment Schematic for 2M Service

Attachment to Drilling Technical Program

# Typical BOP setup

