

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMSF-078765
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator Williams Production Company, LLC		7. If Unit or CA Agreement, Name and No. Rosa Unit
3a. Address P.O. Box 640 Aztec, NM 87410		8. Lease Name and Well No. 75B
3b. Phone No. (include area code) (505) 634-4208		9. API Well No. 30-045-33748
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1815' FSL & 755' FWL ~ L Lot 2 At proposed prod. zone 1980' FNL & 1960' FWL - F		10. Field and Pool, or Exploratory Blanco Mesaverde
14. Distance in miles and direction from nearest town or post office* approximately 30 miles northeast of Blanco, New Mexico		11. Sec., T., R., M., or Blk. and Survey or Area L Section 10. 31N. 6W
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1815'	16. No. of Acres in lease 2,460.23	12. County or Parish San Juan
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 750	19. Proposed Depth 6,670	13. State NM
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,294' GR	22. Approximate date work will start* June 1, 2006	17. Spacing Unit dedicated to this well 319.36 320-0 (W/2)
24. Attachments		20. BLM/BIA Bond No. on file UT0847 WTB 000178
		23. Estimated duration 1 month

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification.
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature <i>Larry Higgins</i>	Name (Printed/Typed) Larry Higgins	Date 5-16-06
Title Drilling COM		
Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed)	Date 6/6/06
Title AFU	Office 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 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.

*(Instructions on reverse)

Williams Exploration and Production Company, LLC, proposes to drill a well to develop the Blanco Mesaverde formation at the above described location in accordance with the attached drilling and surface use plans.

The surface is under jurisdiction of the Bureau of Land Management, Farmington Field Office.

This location has been archaeologically surveyed La Plata Archaeological Consultants. Copies of their report have been submitted directly to FFO/BLM.

A 173.5-foot pipeline tie would be required for this location. Williams Field Services has filed a plat for the pipeline. The pipeline would be owned and operated by Williams Field Services.

HOLD C104 FOR directional survey

RECEIVED
JUN 2006

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

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

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

RECEIVED
MAY 16 PM 12 03
C/O FARMINGTON NM
AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-33748		*Pool Code 72319	*Pool Name BLANCO MESAVERDE
*Property Code 17033	*Property Name ROSA UNIT		*Well Number 75B
*OGRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY		*Elevation 6294'

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
L	10	31N	6W	(2)	1815	SOUTH	755	WEST	SAN JUAN

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
F	10	31N	6W		1980	NORTH	1960	WEST	SAN JUAN

¹² Dedicated Acres 319.36 320.0 ACRES - (W/2)	¹³ Joint or Infill	¹⁴ Consolidation Code	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

<p>LEASE SF-078765</p> <p>BOTTOM-HOLE LAT: 36.91590°N LONG: 107.45247°W DATUM: NAD1983</p> <p>1960'</p> <p>N38°53.6'E 1914.0'</p> <p>LOT 2</p> <p>LOT 1</p> <p>10</p> <p>SURFACE LOCATION LAT: 36.91182°N LONG: 107.45660°W DATUM: NAD1983</p> <p>755'</p> <p>1915'</p> <p>TRACT 38</p> <p>2626.80'</p> <p>5280.00'</p> <p>5252.28'</p> <p>H.E. 4709</p> <p>2626.80'</p>	<p>¹⁷ OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <p><i>Larry Higgins</i> Signature</p> <p>LARRY HIGGINS Printed Name</p> <p>DEKLINE CORP Title</p> <p>5-16-06 Date</p> <p>¹⁸ SURVEYOR CERTIFICATION</p> <p>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>Survey Date: JANUARY 6, 2006</p> <p>Signature and Seal of Professional Surveyor</p> <p> JASON C. EDWARDS Certificate Number 15269</p>
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Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. <u>30-045-33748</u>	
5. Indicate Type of Lease FEDERAL <input checked="" type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>	
6. State Oil & Gas Lease No. SF-078765	
7. Lease Name or Unit Agreement Name Rosa Unit	
8. Well Number	75B
9. OGRID Number	120782
Blanco Mesaverde	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 6,294' GR	
Pit or Below-grade Tank Application <input checked="" type="checkbox"/> or Closure <input type="checkbox"/>	
Pit type <u>reserve</u> Depth to Groundwater <u>>100'</u> Distance from nearest fresh water well <u>>1,000'</u> Distance from nearest surface water <u>>1,000'</u>	
Pit Liner Thickness: 12 mil	Below-Grade Tank: Volume _____ bbls; Construction Material _____

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☒ Other

2. Name of Operator

Williams Production Company, LLC

3. Address of Operator

P.O. Box 640 Aztec, NM 87410

4. Well Location

Unit Letter L: 1815 feet from the south line and 755 feet from the west line

Section 10 Township 31N Range 6W NMPM County San Juan

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
6,294' GR

Pit or Below-grade Tank Application ☒ or Closure ☐

Pit type reserve Depth to Groundwater >100' Distance from nearest fresh water well >1,000' Distance from nearest surface water >1,000'

Pit Liner Thickness: 12 mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐ CHANGE PLANS ☒

PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐ P AND A ☐

CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Drilling/Completion pit to be located approximately 50 to 75 feet from well head. Pit multi-use drilling and completion to avoid additional site disturbance and pit will be considered out of service once production tubing set. Pit to be constructed, operated and closed in accordance with NMOCD guidelines and Williams procedures.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Larry Higgins TITLE Drilling COM DATE 5-11-2006

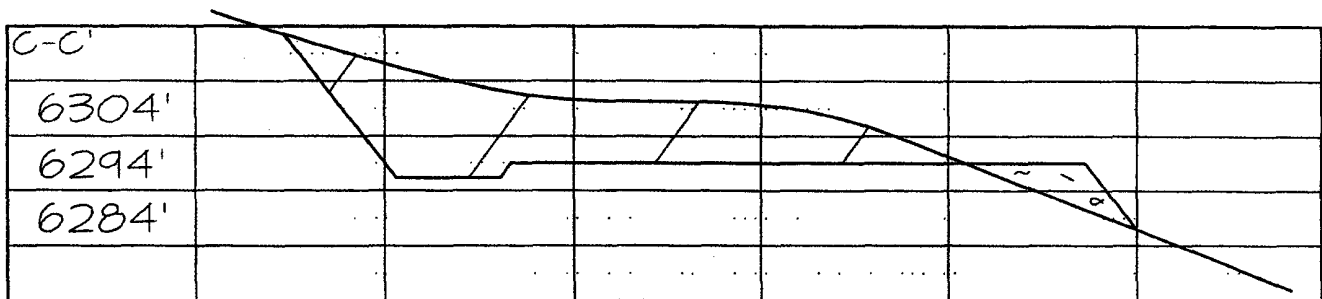
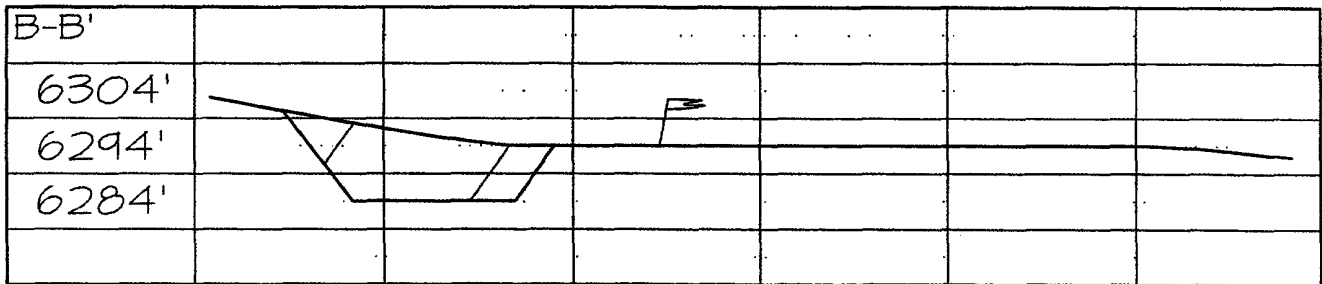
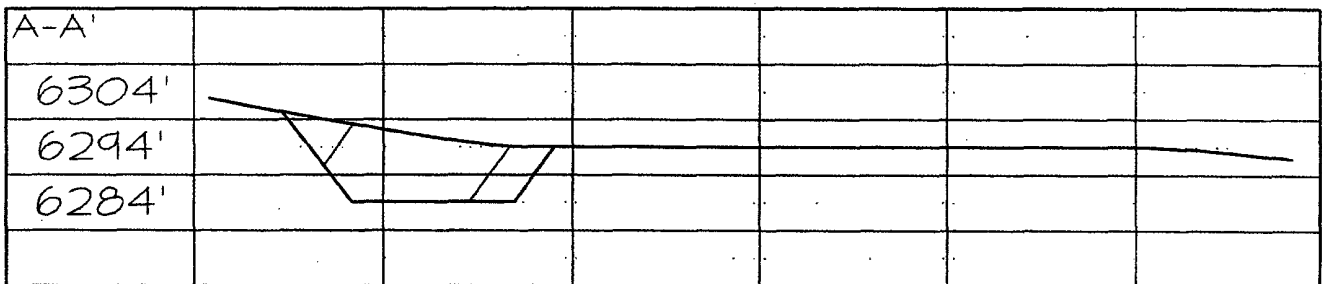
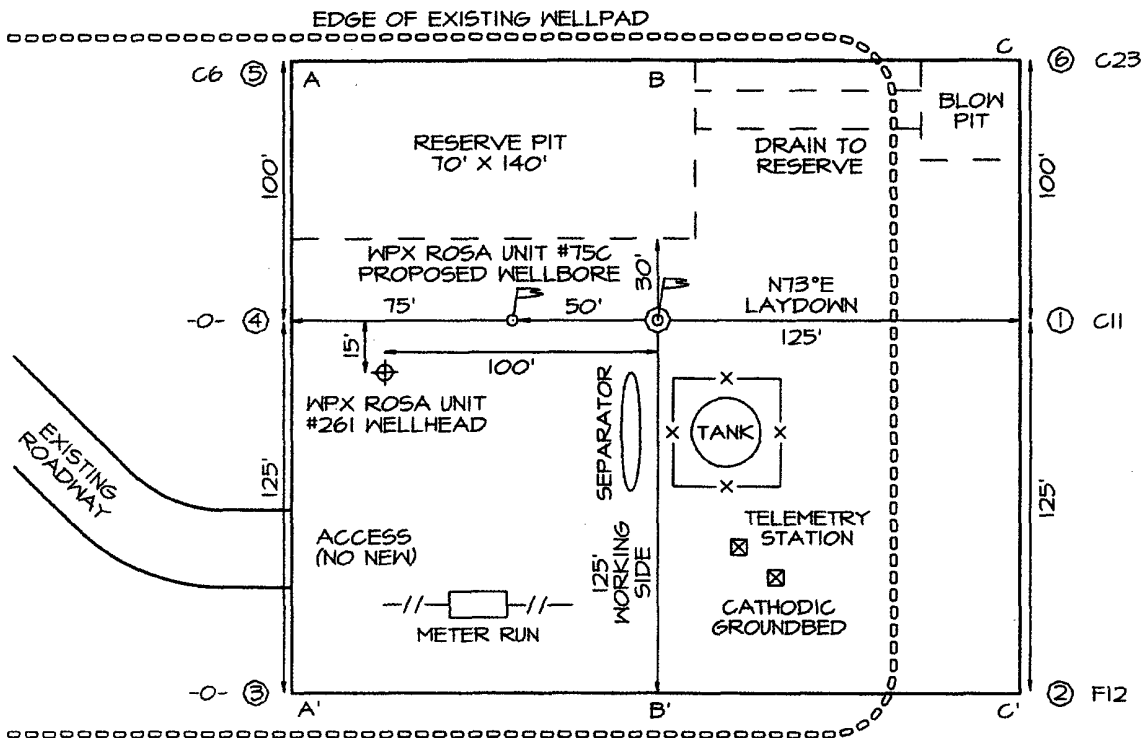
Type or print name Larry Higgins E-mail address: larry.higgins@williams.com Telephone No. (505) 634-4208

For State Use Only

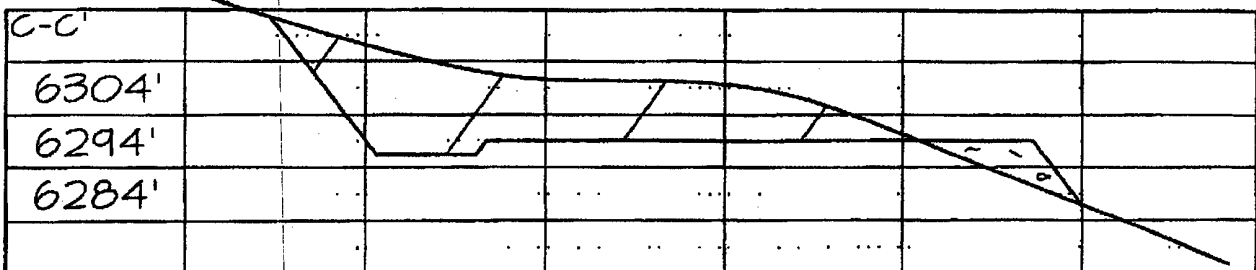
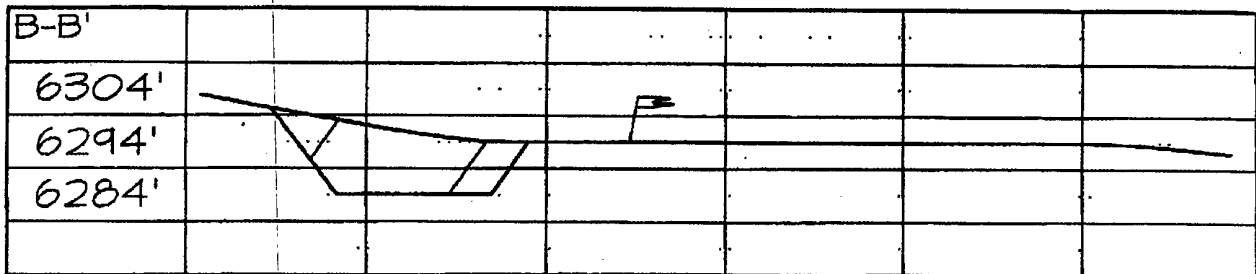
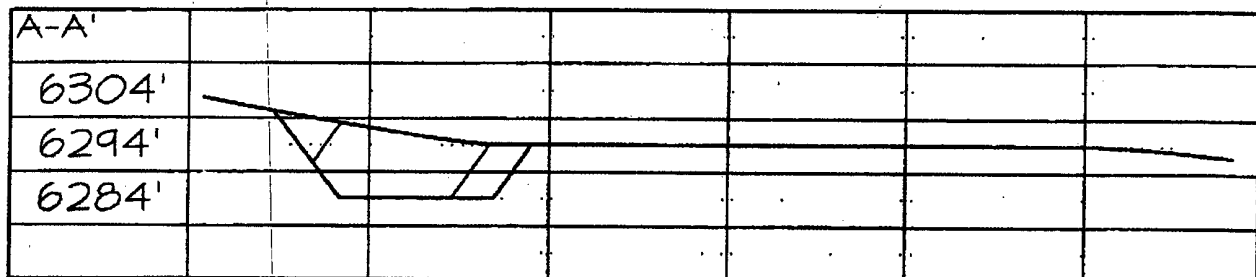
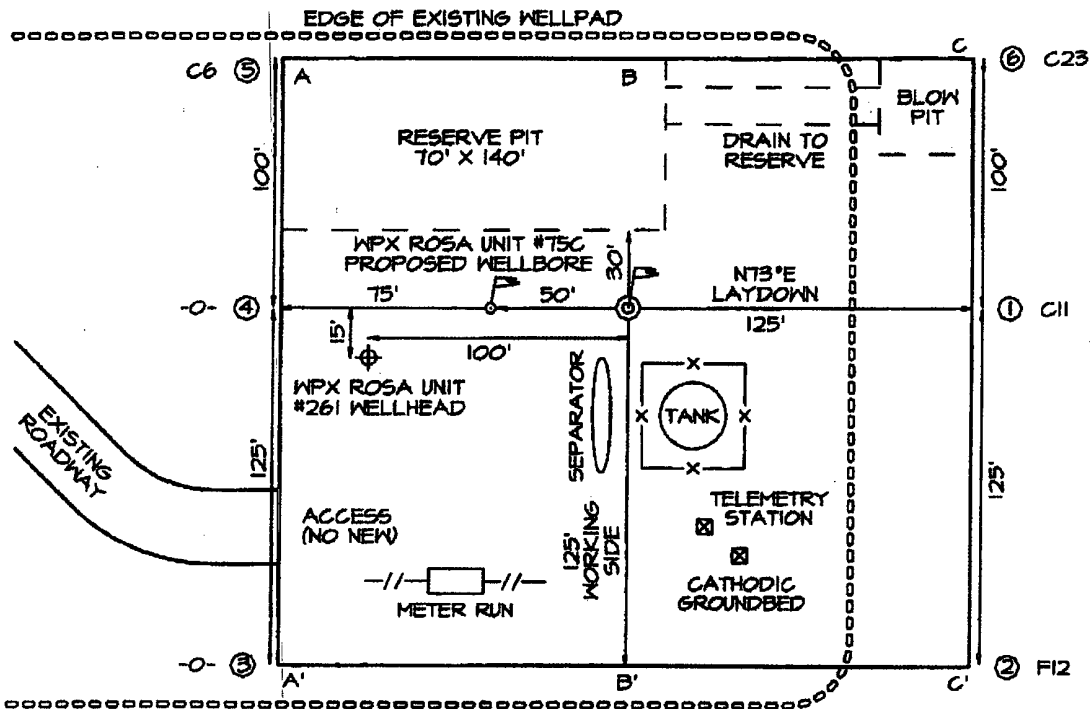
APPROVED BY: [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 4 DATE JUN 08 2006

Conditions of Approval (if any):

LATITUDE: 36.91182° N
LONGITUDE: 107.45660° W



LATITUDE: 36.91182° N
LONGITUDE: 107.45660° W



GENERAL ROSA DRILLING PLAN

Rosa Unit boundaries:

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
Nacimiento	Interbedded shales, siltstones and sandstones	Possible	Possible	No	No	No
Ojo Alamo	Sandstone and conglomerates with lenses of shale	Fresh	No	No	No	No
Kirtland	Shale W/interbedded sandstones	No	Possible	No	No	No
Fruitland	Inter, SS, SiltSt, SH & Coals w/carb, SS, SiltSt, SH	Yes	Yes	No	Possible	Possible
Pictured Cliffs	Massive Sandstone w/thin interbedded shales	Possible	Yes	Possible	No	Possible
Lewis	Shale w/thin interbedded sandstones and siltstones	No	Possible	No	No	No
Cliff House	Transgressive sandstones	Possible	Yes	No	No	No
Menefee	Sandstones, carb shales and coal	Possible	Yes	No	No	No
Point Lookout	Regressive coastal barrier sandstone	Possible	Yes	Possible	No	Yes
Mancos	Marine shale and interbedded sandstone	No	Possible	Possible	No	Possible
Upr Dadota	Marine sand and shales	No	Yes	Possible	No	Possible
Lwr Dakota	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:

1. 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.
3. 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.



WILLIAMS PRODUCTION COMPANY

Operations Plan

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

DATE: 5/10/2006 **FIELD:** Blanco MV
WELL NAME: Rosa #75B **SURFACE:** BLM
BH LOCATION: SENW Sec 10-31N-6W **MINERALS:** BLM
SURF LOCATION: NWSW Sec 10-31N-6W
San Juan, NM **LEASE #** SF-078765
ELEVATION: 6,294' GR
MEASURED DEPTH: 6,670'

I. GEOLOGY: Surface formation - San Jose

A. FORMATION TOPS: (KB)

Name		TVD	MD		Name		TVD	MD
Ojo Alamo		2,298	2,716		Cliff House		5,313	5,935
Kirtland		2,428	2,885		Menefee		5,358	5,980
Fruitland		2,913	3,503		Point Lookout		5,598	6,220
Picture Cliffs		3,123	3,735		Mancos		5,918	6,540
Lewis		3,423	4,044		TD		6,048	6,670

B. MUD LOGGING PROGRAM: none

C. LOGGING PROGRAM: Cased hole logs only.

D. 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. Use air w/Air Hammer from 7 in. csg.to TD.

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 BOPE will be tested to **250 psi (Low) for 5 minutes** and **1500 psi (High) for 10 minutes**. Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. The drum brakes will be 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 (MD)</u>	<u>CASING SIZE</u>	<u>WT. & GRADE</u>
Surface	12-1/4"	+/- 300'	9-5/8"	36# K-55
Intermediate	8-3/4"	+/- 4,222'	7"	20# K-55
Prod. Liner	6-1/4"	+/- 4,122'-6,670'	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 (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 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.

IV. CEMENTING:

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

1. SURFACE: Slurry: 150sx (205 cu.ft.) of "Type III" + 2% CaCl₂ + 1/4 # of cello-flake/sk (Yield = 1.39 cu.ft./sk, Weight = 14.5 #/gal.). The 100% excess should circulate cement to the surface. WOC 12 hours. Test csg to 1500psi.
2. INTERMEDIATE: Lead - 540 sx (1,129) cu.ft.) of "Premium Light with 8% gel, 1% CaCl₂ and 1/4# cello-flake/sk (Yield = 2.09 cu.ft./sk, Weight = 12.1 #/gal.). Tail - 50 sx (70cu.ft.) of "Type III" with 1/4# cello-flake/sk, and (Yield = 1.4 cu.ft./sk, Weight = 14.5#/gal.). Use **100% excess in Lead Slurry** to circulate to surface. **No excess in Tail Slurry**. Total volume = 1,199 cu.ft. Bump Plug to 1,500 psi. Notify engineering if cement is not circulated to surface.
3. PRODUCTION LINER: 10 bbl Gelled Water space. Lead: 50sx (130ft³) of Premium Light HS + 1% FL-52 + .2% CD-32, 0.1% R-3, 3 #/sk CSE. (Yield = 2.59 cu.ft./sk, Weight = 11.6 #/gal.). Tail: 100 sx (215 ft³) of Premium Light HS + 1% FL-52 + .2% CD-32, 0.1% R-3, 3 #/sk CSE, 1/4 #/sk cello flake and 4% Phenoseal. (Yield = 2.15 ft³/sk, Weight = 12.3 #/gal.). Displace cement at a minimum of 8 BPM. The 20% excess in lead and tail should cover 100 ft into intermediate casing. Total volume 326 ft³. WOC 12 hours

V. 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.



ROSA UNIT #75B
SEC 10 T 31N R 6W
1815 FSL & 755 FWL
SAN JUAN COUNTY, NM

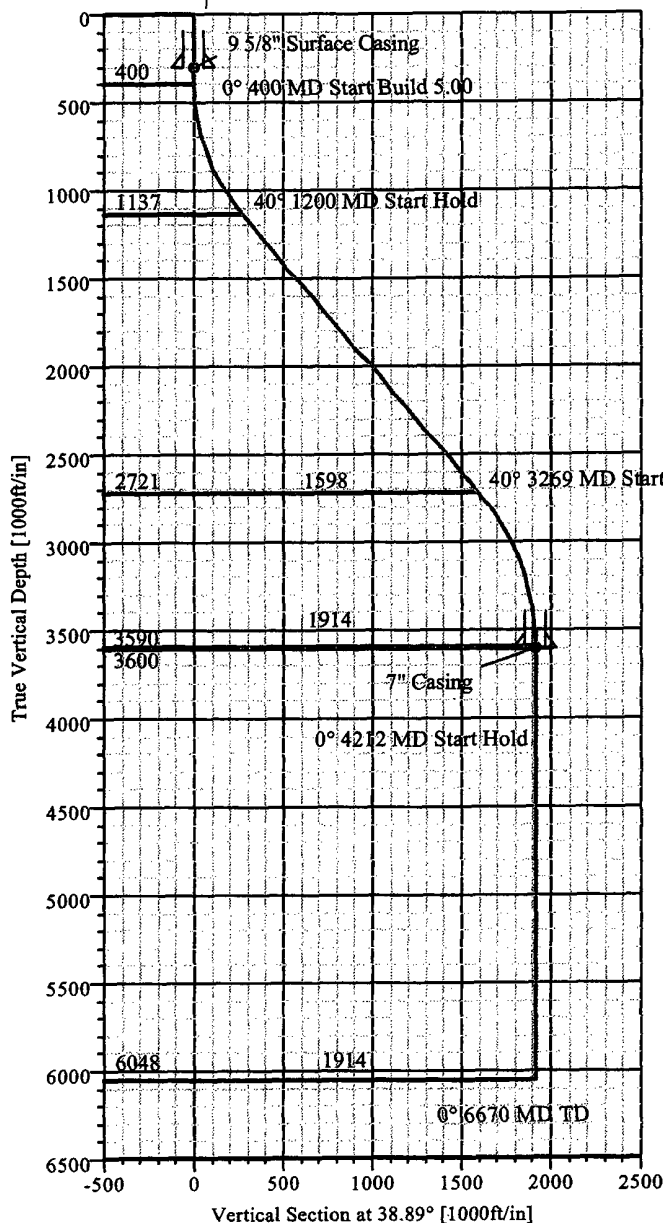
SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	38.89	0.00	0.00	0.00	0.00	0.00	0.00	KOP
2	400.00	0.00	38.89	400.00	0.00	0.00	0.00	0.00	0.00	HOLD
3	1200.00	40.00	38.89	1136.58	208.67	168.32	5.00	38.89	268.09	HOLD
4	3268.67	40.00	38.89	2721.27	1243.66	1003.15	0.00	0.00	1597.81	HOLD
5	4212.19	0.00	38.89	3590.00	1489.77	1201.66	4.24	180.00	1914.00	HOLD
6	4222.19	0.00	38.89	3600.00	1489.77	1201.66	0.00	0.00	1914.00	Int. Cs. Pt.
7	6670.19	0.00	38.89	6048.00	1489.77	1201.66	0.00	38.89	1914.00	TOTAL DEPTH

WELL DETAILS							
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Rosa Unit #75B	0.00	0.00	2151451.29	2833233.66	36°54'42.552N	107°27'23.760W	N/A

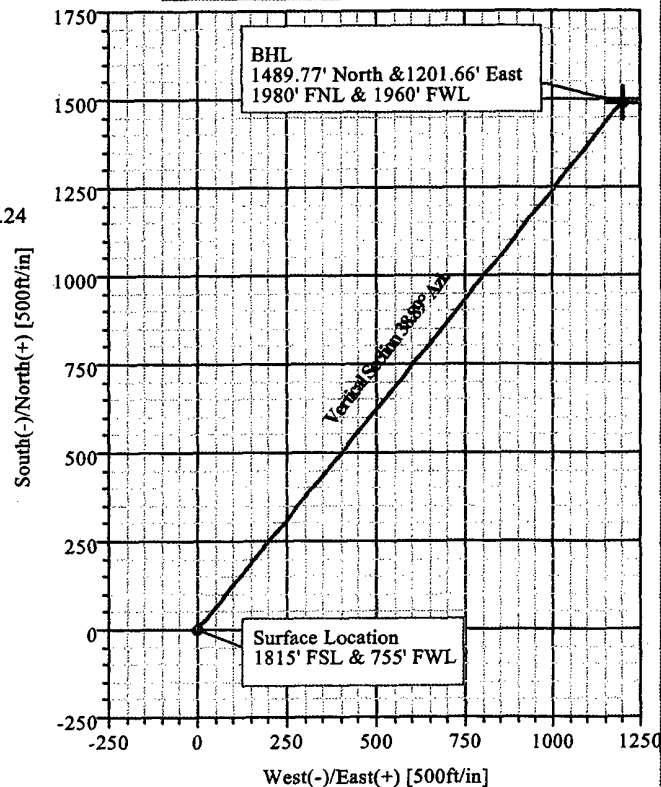
TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Int. Cs. Pt.	3600.00	1489.77	1201.66	2152945.79	2834429.42	Point

T
M
Azimuths to True North
Magnetic North: 10.40°
Magnetic Field
Strength: 51449nT
Dip Angle: 63.79°
Date: 5/8/2006
Total Correction 10.40 Model: igrf2005

KB ELEVATION: 6308'
GR ELEVATION: 6294'



FORMATION TOP DETAILS				
No.	TVDPath	MDPath	Formation	
1	2298.00	2716.13	Ojo Alamo	
2	2428.00	2885.83	Kirtland	
3	2913.00	3503.11	Fruitland	
4	3123.00	3735.36	Pictured Cliffs	
5	3423.00	4044.77	Lewis	
6	4998.00	5620.19	Cliff House Trans	
7	5313.00	5935.19	Cliff House	
8	5358.00	5980.19	Menefee	
9	5598.00	6220.19	Point Lookout	
10	5918.00	6540.19	Mancos	



Plan: Plan #1 (Rosa Unit #75B)
Created By: Jose Perez
Weatherford Drilling Services
Granbury Office
3611 Plaza East Court
Granbury, TX 76049
(817) 573 8500 Main
(817) 573 8001 Fax
Date: 5/9/2006



GEOLOGIC PROGNOSIS

Company: Williams Production Company, LLC
Project: 2006 Drilling Plan
Area: Rosa Unit

Operator: Williams Production Company, LLC
Well Name: Rosa Unit No. 75B (Kmy-Directional)
Location: NWSW 10-31N-06W
Footage: 1815' FSL & 0755' FWL
County/State: San Juan/New Mexico

Surveyed GL: 6294 Estimate (14') KB: 6308

<u>Formation</u>	<u>Thickness</u>	<u>TVD</u>	<u>Struct. Elev.</u>
San Jose Fm.	2298	Surface	6294
Ojo Alamo Ss.	130	2298	4010
Kirtland Sh.	485	2428	3880
Fruitland Fm.	210	2913	3395
Pictured Cliffs Ss.	300	3123	3185
Lewis Sh.	175	3423	2885
<u>Intermediate Casing Depth</u>	1400	<u>3598</u>	2710
Cliff House Ss. Trans.	315	4998	1310
Cliff House Ss.	45	5313	995
Menefee Fm.	240	5358	950
Point Lookout Ss.	320	5598	710
Mancos Sh.	130	5918	390
<u>Total Depth</u>	NA	<u>6048</u>	260

Mechanical Logs: Cased hole (TMDL, CBL) logs only

Correlation Logs: Rosa Unit No. 156 (NENE 09-31N-06W)

Notes: This well will be directionally drilled to a BHL
1980' FNL & 1960' FWL 10-31N-06W

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)

