

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

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK **DRILL** ☒ **DEEPEN** ☐

1b. TYPE OF WELL

OIL ☐
WELL

GAS ☒
WELL

OTHER ☐

SINGLE ☒
ZONE

MULTIPLE ☐
ZONE

2. NAME OF OPERATOR

Williams Production Company, LLC

3. ADDRESS OF OPERATOR

P. O. Box 316 - Ignacio, CO 81137 (970) 563-3308

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*

At Surface *95' FSL & 1415' FEL*

At proposed Prod. Zone *575' FSL & 1555' FEL to 1980' FSL & 1980' FEL*

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

30 miles NE of Blanco, NM

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)

575

16. NO. OF ACRES IN LEASE

2,560.00

17. NO. OF ACRES ASSIGNED TO THIS WELL

320.0 (E/2)

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE, FT.

5,000

19. PROPOSED DEPTH

5954'

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

6,671' GR

22. APPROX. DATE WORK WILL START*

April 1, 2005

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT/FOOT	SETTING DEPTH	QUANTITY OF CEMENT
<i>12-1/4"</i>	<i>9-5/8"</i>	<i>36.0#</i>	<i>+/- 300'</i>	<i>~206 cu.ft. Type III with 2% CaCl₂</i>
<i>8-3/4"</i>	<i>7"</i>	<i>20.0#</i>	<i>+/- 3742'</i>	<i>~1,070 cu.ft. 65/35 poz & ~139 cu.ft. Type III</i>
<i>6-1/4"</i>	<i>4-1/2"</i>	<i>10.5#</i>	<i>+/- 3200'-7164'</i>	<i>Open hole completion - no cement</i>

Williams Production Company 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 surface is under the jurisdiction of the Carson National Forest, Jicarilla Ranger District.

This location has been archaeologically surveyed by La Plata Archaeological Consultants.

Copies of their report have been submitted directly to the Jicarilla Ranger District of the Carson National Forest.

This APD also is serving as an application to obtain a pipeline right-of-way. No new access road will be required by this well.

A pipeline tie of approximately 8,218.80 feet will be required by this action.

The pipeline begins at the existing Rosa #371 well in the SW 1/4, Section 13, T. 31N., R. 5W.

and extends to the proposed Rosa #382 well.

HOLD C104 FOR Directional Survey

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

Larry Higgins

TITLE *Larry Higgins, Drlg COM*

DATE

11/19/2004

(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

B. J. Mankiewicz

TITLE

AFM

DATE

6-8-05

***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.

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

NMOC

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

District II
PO Drawer DD, Artesia, NM 88211-0719

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
PO Box 2088, Santa Fe, NM 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-29364		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 17033	*Property Name ROSA UNIT		*Well Number 382
*OGRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY		*Elevation 6671'

¹⁰ Surface Location

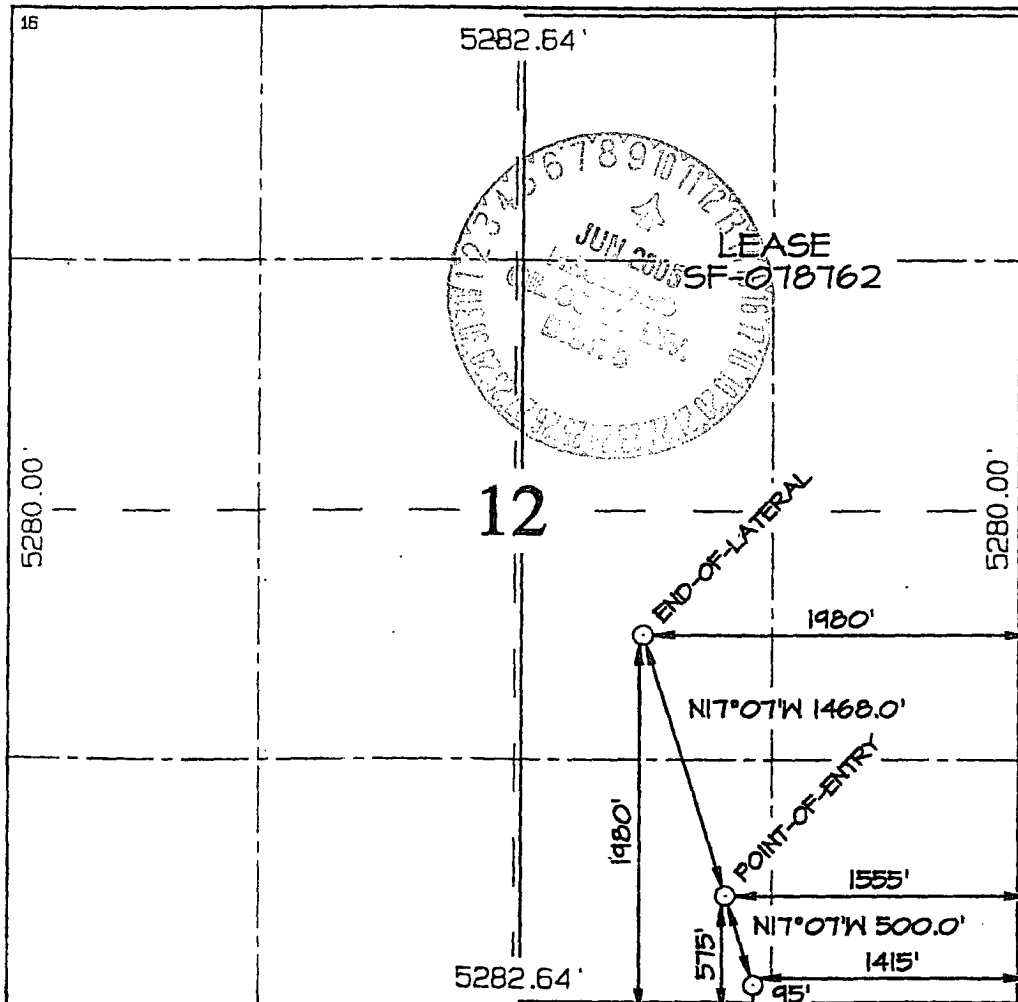
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	12	31N	5W		95	SOUTH	1415	EAST	RIO ARriba

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
J	12	31N	5W		1980	SOUTH	1980	EAST	RIO ARriba

¹² Dedicated Acres 320.0 Acres - (E/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



¹⁷ OPERATOR CERTIFICATION

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

Larry Higgins
Signature

Larry Higgins
Printed Name

DRILLING COM
Title

12-3-04
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.

Date of Survey: **JUNE 21, 2004**

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number **15269**

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.
5. Indicate Type of Lease FEDERAL STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. Federal NMSF-0078762
7. Lease Name or Unit Agreement Name Rosa Unit
8. Well Number 382
9. OGRID Number 120782
10. Pool name or Wildcat Basin Fruitland Coal

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 Exploration and Production Company

3. Address of Operator
P.O. Box 316, Ignacio, CO 81137

4. Well Location

Unit Letter O: 95 feet from the south line and 1415 feet from the east line

Section 12 Township 31N Range 5W NMPM County Rio Arriba

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
6,671' GR

Pit or Below-grade Tank Application ☒ or Closure ☐

Pit type drilling 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.

Below-grade Tank to be constructed in accordance with NMOCD Interim Pit and Below-grade Tank Guidelines

Production pit to be located approximately 50 feet west of the well head.

Reserve pit to be located approximately 30 feet east of the well head.

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 11-22-2004

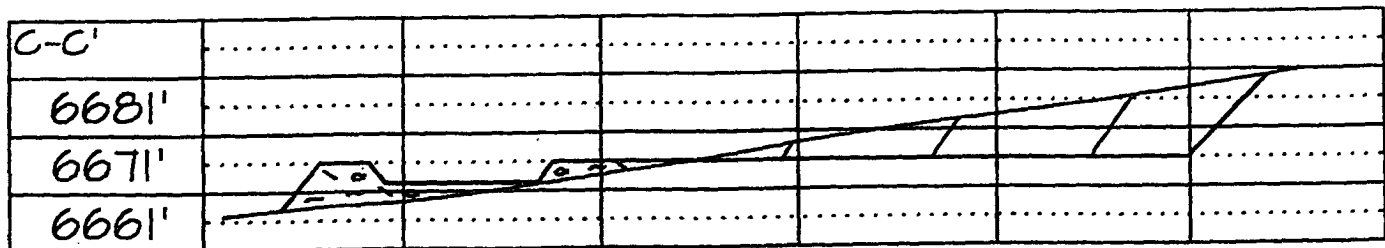
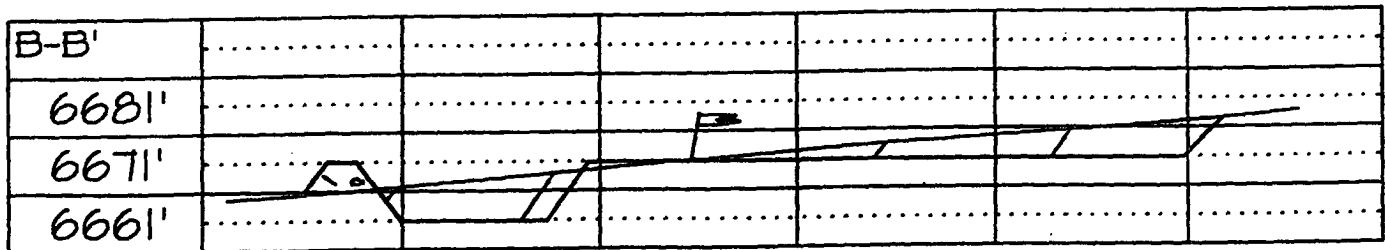
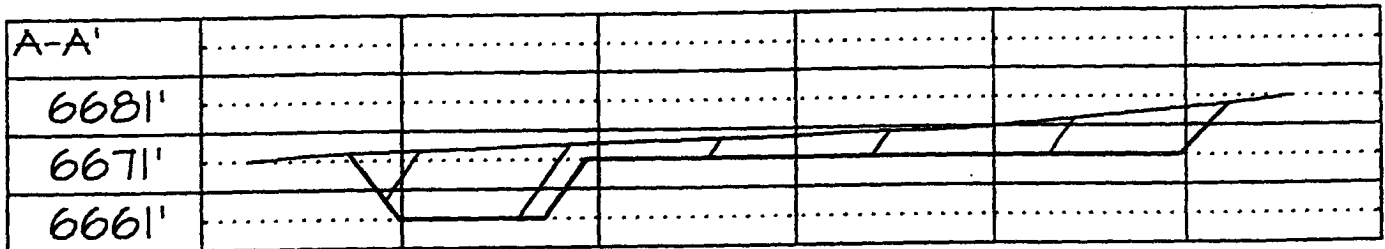
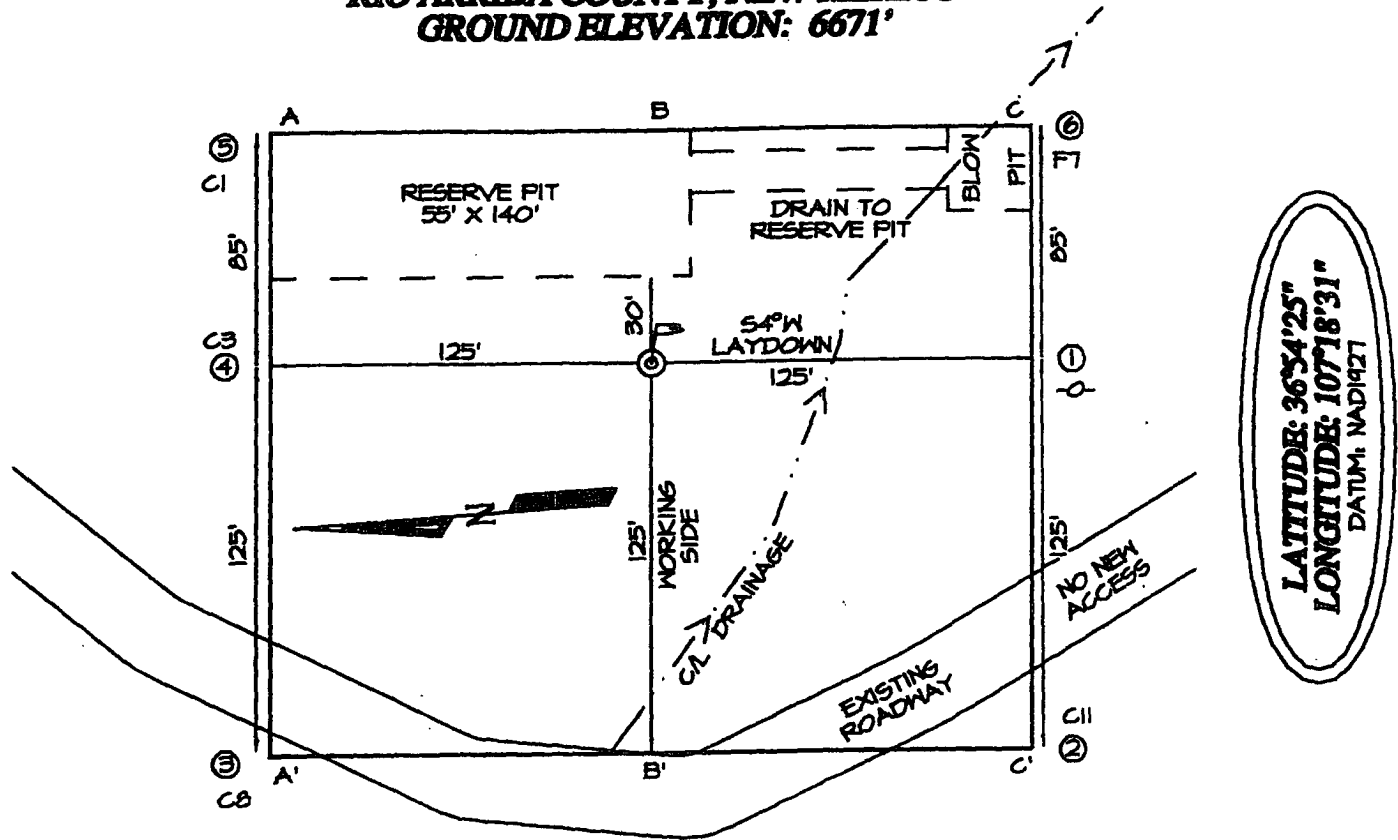
Type or print name Larry Higgins E-mail address: larry.higgins@williams.com Telephone No. (970) 563-3308

For State Use Only

APPROVED BY: [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 60 DATE JUN 10 2005

Conditions of Approval (if any):

**WILLIAMS PRODUCTION COMPANY ROSA UNIT #382
95° FSL & 1415° FEL, SECTION 12, T31N, R5W, NMPM
RIO ARriba COUNTY, NEW MEXICO
GROUND ELEVATION: 6671'**





WILLIAMS PRODUCTION COMPANY

Operations Plan

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

<u>DATE:</u>	10/19/2004		
<u>WELLNAME:</u>	Rosa #382	<u>FIELD:</u>	Basin Fruitland Coal
<u>SURF LOCATION:</u>	SWSE Sec. 12-T31N-R5W San Juan, NM	<u>SURFACE:</u>	Forest
<u>BH LOCATION</u>	NWSE Sec 12-31N-5W		
<u>ELEVATION:</u>	6,671' GR	<u>MINERALS:</u>	Federal
<u>TOTAL DEPTH:</u>	5,954'	<u>LEASE #</u>	SF-078762

I. GEOLOGY: Surface formation - San Jose

A. FORMATION TOPS: (KB)

		Pilot Hole	Horizontal Section				Pilot Hole	Horizontal Section
		TVD	MD				TVD	MD
San Jose		Surface	Surface		Top Coal		3,391	3,451
Nancimiento		1,586	1,586		Top Target Coal		3,486	3,742
Ojo Alomo		2,866	2,866		Bottom Target Coal		3,491	
Kirtland		2,976	2,976		Base Coal		3,501	
Fruitland		3,321	3,349		Picture Cliffs		3,506	
					TD		3,601	7,164

- **NOTE:** Well will be vertically drilled to 100' into Picture Cliff, logged through the PC, plug back the PC and 8-3/4" hole to 200 ft. above adjusted KOP. Dress / Kick-off cement plug and horizontally drill through the coal.

B. LOGGING PROGRAM: High Resolution Induction/ GR and Density/ Neutron log from surface to intermediate casing point and High Resolution Induction/ GR and Density/ Neutron log from intermediate shoe to TD. Onsite geologist will pick Density/ Neutron log intervals on both logging runs.

C. NATURAL GAUGES: Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

D. SURVEYING: Run Single Shot surveys every 500 ft. while drilling the Pilot Hole to 3,469 ft. (MD).

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 3459' DO NOT drill deeper until Engineering is contacted.

B. **Drilling Fluid:** Horizontal section will be drilled with Calcium Chloride water.

C. **MUD LOGGING PRORAM:** Mud logger will pick intermediate casing point and TD.

D. **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 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:

<u>CASING TYPE</u>	<u>HOLE SIZE</u>	<u>DEPTH</u>	<u>CASING SIZE</u>	<u>WT. & GRADE</u>
Surface	12-1/4"	+/- 300'	9-5/8"	36# K-55
Intermediate	8-3/4"	+/- 3,742'	7"	20# K-55
Prod. Liner	6-1/4"	+/- 3,200-7,164'	4-1/2" perfed	10.5# K-55

*Note: All casing depths are measured depths.

B. FLOAT EQUIPMENT:

1. **SURFACE CASING:** 9-5/8" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) 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 LINER:** 4-1/2" perforated liner with guide shoe on bottom.

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 3459' DO NOT drill deeper until Engineering is contacted.

B. **Drilling Fluid:** Horizontal section will be drilled with Calcium Chloride water.

C. **MUD LOGGING PRORAM:** Mud logger will pick intermediate casing point and TD.

D. **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 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.

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Prod. Liner	6-1/4"	+/- 3,200-7,164'	4-1/2" perfed	10.5# K-55

*Note: All casing depths are measured depths.

B. FLOAT EQUIPMENT:

1. **SURFACE CASING:** 9-5/8" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) 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 LINER:** 4-1/2" perforated liner with guide shoe on bottom.

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 3459' DO NOT drill deeper until Engineering is contacted.

B. Drilling Fluid: Horizontal section will be drilled with Calcium Chloride water.

C. MUD LOGGING PRORAM: Mud logger will pick intermediate casing point and TD.

D. 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 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.

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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 LINER:** 4-1/2" perforated liner with guide shoe on bottom.

C. CEMENTING:

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

1. SURFACE: Use 155 sx (206 cu.ft.) of "Type III" with 2% CaCl_2 and 1/4# of cello-flake/sk (Yield = 1.41 cu.ft./sk, Weight = 14.5 #/gal.). Use **100% excess** to circulate the surface. WOC 12 hours. Total volume = 206 cu.ft. Test to 1500#.
2. INTERMEDIATE: Lead - 445 sx (931 cu.ft.) of "Type III" 65/35 poz with 8% gel, 1% CaCl_2 and 1/4# cello-flake/sk (Yield = 2.09 cu.ft./sk, Weight = 12.1 #/gal.). Tail - 100 sx (139 cu.ft.) of "Type III" with 1/4# cello-flake/sk, and 1% CaCl_2 (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 = 1,070 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.

IV COMPLETION

A. PRESSURE TEST

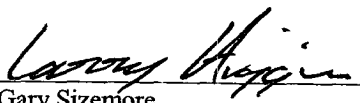
Pressure test 7" casing to 3300# for 15 minutes.

B. STIMULATION

None

C. RUNNING TUBING

1. Fruitland Coal: Run 2-3/8", 4.7#, J-55, EUE tubing with a SN (1.375" ID) on top of bottom joint. Land tubing at approximately 3,730'.


for Gary Sizemore
Sr. Drilling Engineer

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)

BOP Stack

Rotating Head (optional)

Fill Line

Mud Flow to Pit

Double Ram Preventer

Drilling Spool

Kill line (2" Min)

Choke line to Manifold (2" Min)

Ground Level

Casing Head

Bull Plug

Ball Valve 2000 psi WP

Surface Casing

Production Casing

**Choke & Kill
Manifold**

Positive Choke

Bypass to
Steel Pit
(Optional)

2" Minimum Size

Pressure Gauge

From BOP
Stack

Straight-thru
to Tank or Pit

2" Minimum Size

2" Minimum Size

Working Pressure for all equipment
is 2,000 psi or greater

2" Minimum Size

To Tank or Pit

Adjustable
Choke

