

Expires December 31, 1991

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JUL 23 PM 3 (2 reverse side)

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-078763	
1b. TYPE OF WELL OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> SINGLE <input checked="" type="checkbox"/> MULTIPLE <input type="checkbox"/> WELL <input type="checkbox"/> WELL <input type="checkbox"/> ZONE <input type="checkbox"/> ZONE <input 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 P. O. Box 316 - Ignacio, CO 81137 (970) 563-3308		8. FARM OR LEASE NAME, WELL NO. 379A	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements) At Surface 1130' FSL & 1680' FWL At proposed Prod. Zone		9. API WELL NO. 3003927843	
10. FIELD AND POOL OR WILDCAT Basin Fruitland Coal		11. SEC., T., R., M., OR BLK AND SURVEY OR AREA Sec. 8, T31N, R5W (N)	
12. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 25 miles NE of Blanco, NM		13. COUNTY OR PARISH Rio Arriba	
14. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 1130'		15. NO. OF ACRES IN LEASE 2544.64	
16. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE, FT. 1050'		17. NO. OF ACRES ASSIGNED TO THIS WELL 320 (S/2) R-12274	
18. ELEVATIONS (Show whether DF, RT, GR, etc.) 6258' GR		19. PROPOSED DEPTH 2977'	
20. ROTARY OR CABLE TOOLS Rotary		21. APPROX. DATE WORK WILL START* August 14, 2004	
23. PROPOSED CASING AND CEMENTING PROGRAM			
SIZE OF HOLE	SIZE OF CASING	WEIGHT/FOOT	SETTING DEPTH
12-1/4"	9-5/8"	36.0#	+/- 300'
8-3/4"	7"	20.0#	+/- 2802'
6-1/4"	5-1/2"	15.5#	+/- 2702'-2957'
QUANTITY OF CEMENT			
~206 cu.ft. Type III with 2% CaCl ₂			
~783 cu.ft. 65/35 poz & ~70 cu.ft. Type III			
Open hole completion - no cement			

Williams Production Company proposes to drill a well to develop the 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 Bureau of Land Management (BLM).

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 road and pipeline right-of-ways. This well will require 150' of new access road. This road will join the main "Rosa Road" in the SW qtr sec 8, 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 <u>Larry Higgins</u> TITLE <u>Larry Higgins, Drlg COM</u> DATE <u>7/23/2004</u>	
(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 <u>Jim Lohr</u> TITLE <u>Acting Field Manager - Minerals</u> DATE <u>3/9/05</u>	

*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.

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
GENERAL REQUIREMENTS

NMOC

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

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 30-039-27843		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 17033	*Property Name ROSA UNIT		*Well Number 379A
*OGRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY		*Elevation 6258'

¹⁰ Surface Location

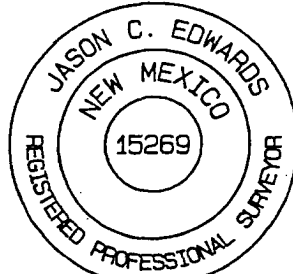
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	8	31N	5W		1130	SOUTH	1680	WEST	RIO ARriba

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 - (S/2)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-12274
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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 5276.04' 5280.00' 2004 JUL 23 PM 3:02 RECEIVED OIL CONSERVATION DIV. DIST. 3 MAR 2005 5276.04' 8 1680' 1130' LEASE SF-078763 5276.04'	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief <i>Larry Higgins</i> Signature LARRY HIGGINS Printed Name DRILLING COM Title 7-23-04 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. Revised: JUNE 25, 2004 Date of Survey: MAY 7, 2004 Signature and Seal of Professional Surveyor  JASON C. EDWARDS Certificate Number 15269

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

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

Form C-103

May 27, 2004

<p>WELL API NO.</p>	
<p>5. Indicate Type of Lease Federal</p>	
<p>6. State Oil & Gas Lease No.</p>	
<p>7. Lease Name or Unit Agreement Name Rosa Unit</p>	
<p>8. Well Number 379A</p>	
<p>9. OGRID Number 120782</p>	
<p>10. Pool name or Wildcat Basin Fruitland Coal</p>	
<p>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.)</p>	
<p>1. Type of Well: Gas Well <input checked="" type="checkbox"/> <input type="checkbox"/></p>	
<p>2. Name of Operator Williams Production Company</p>	
<p>3. Address of Operator P.O. Box 316, Ignacio, CO 81137</p>	
<p>4. Well Location Unit Letter N : 1130 feet from the South line and 1680 feet from the West line Section 8 Township 31N Range 5W NMPM County Rio Arriba</p>	
<p>11. Elevation (Show whether DR, RKB, RT, GR, etc.) 6258' GR</p>	
<p>Pit or Below-grade Tank Application <input checked="" type="checkbox"/> <input type="checkbox"/></p>	
<p>Pit type <u>Drilling</u> Depth to Groundwater <u>>100'</u> Distance from nearest fresh water well <u>>1000'</u> Distance from nearest surface water <u>>1000'</u></p>	
<p>Pit Liner Thickness: <u>12</u> mil Below-Grade Tank: Volume <u> </u> bbls; Construction Material <u> </u></p>	

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 ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: ☐

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.

Reserve pit to be constructed in accordance with NMOCD Interim Pit and Below-Grade Tank Guidelines

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 XX, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Larry Higgins TITLE Drilling COM DATE 7-23-2004

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. IV DATE MAR 11 2005

Conditions of Approval (if any):

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

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name

Rosa Unit

8. Well Number 379A

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: Gas Well ☒

2. Name of Operator

Williams Production Company

3. Address of Operator

P.O. Box 316, Ignacio, CO 81137

4. Well Location

Unit Letter N : 1130 feet from the South line and 1680 feet from the West line

Section 8 Township 31N Range 5W NMPM County Rio Arriba

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

6258' GR

Pit or Below-grade Tank Application ☒

Pit type Production Depth to Groundwater >100' Distance from nearest fresh water well >1000' Distance from nearest surface water >1000'

Pit Liner Thickness: mil Below-Grade Tank: Volume 120 bbls; Construction Material Fiberglass

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

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 XX, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Larry Higgins TITLE Drilling COM DATE 7-23-2004

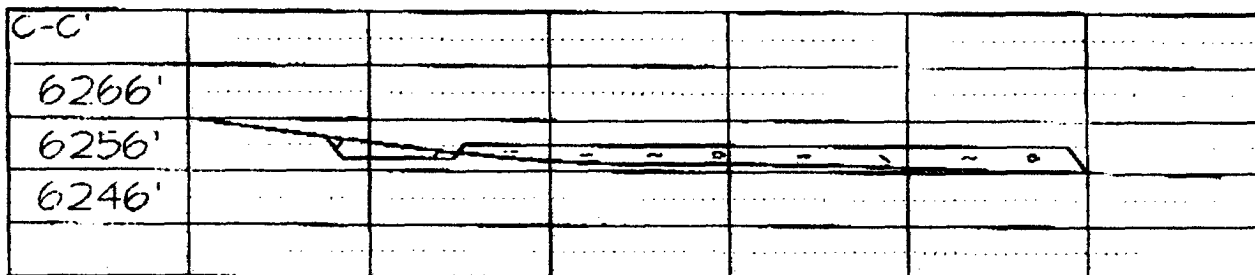
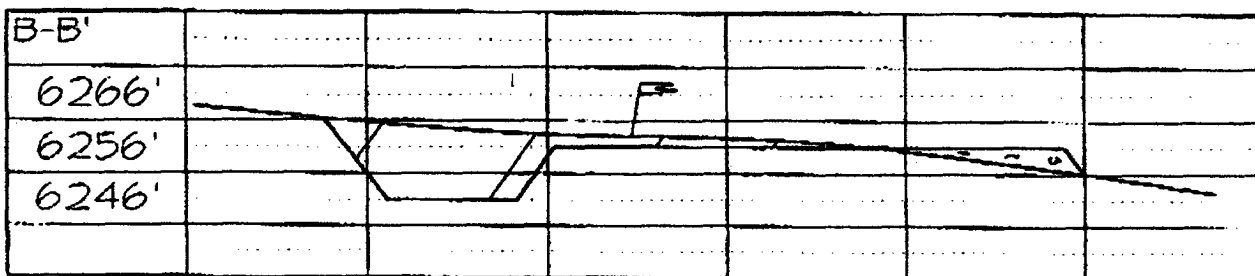
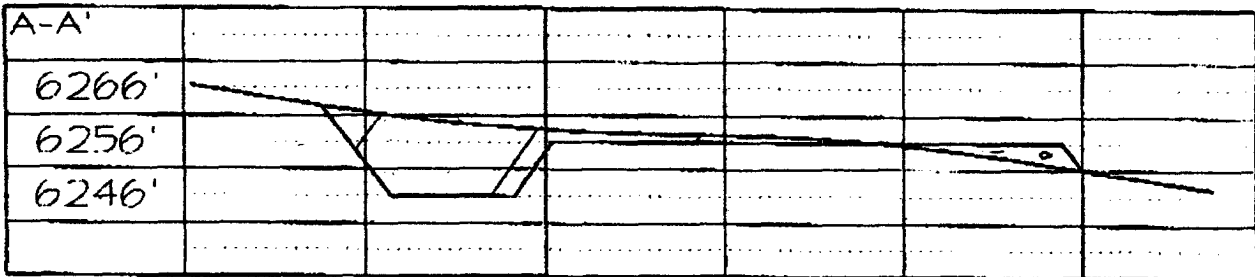
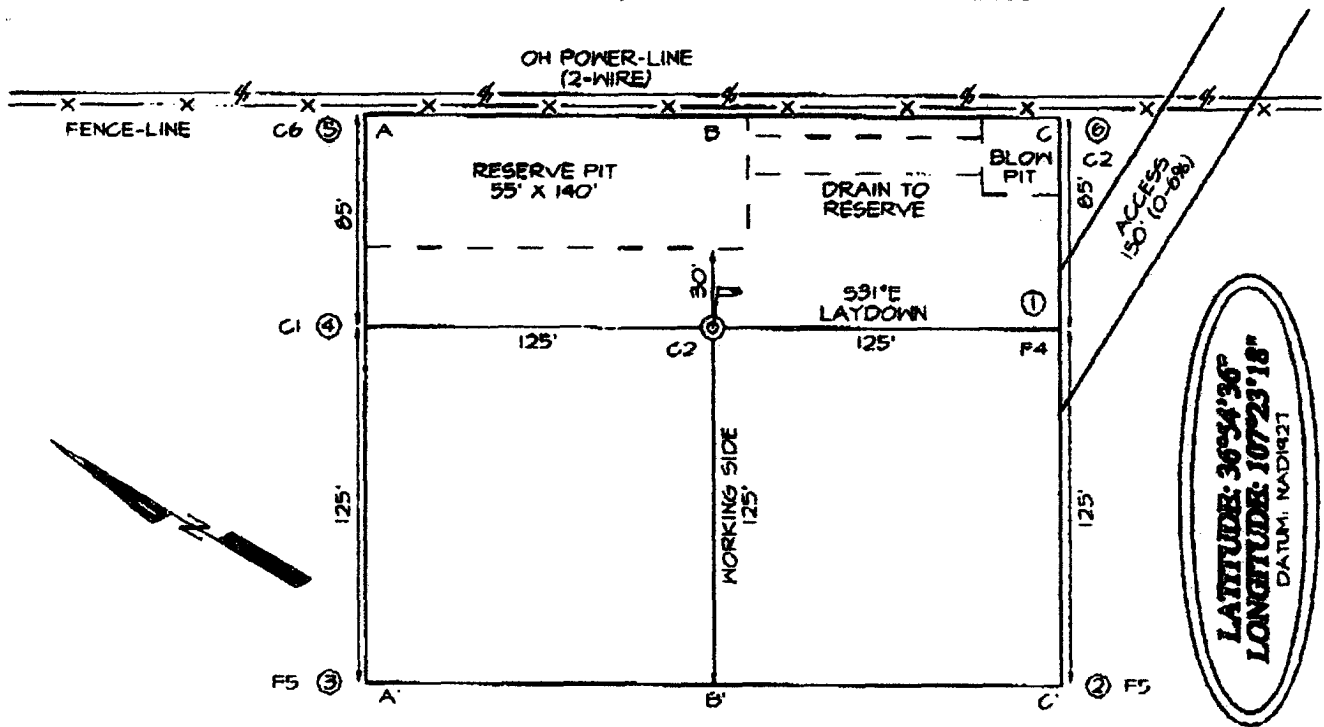
Type or print name Larry Higgins E-mail address: larry.higgins@williams.com Telephone No. (970) 563-3308

For State Use Only

APPROVED BY: [Signature] TITLE DATE

Conditions of Approval (if any):

WILLIAMS PRODUCTION COMPANY ROSA UNIT #379A
1130' FSL & 1680' FWL, SECTION 8, T31N, R5W, NMPM
RIO ARriba COUNTY, NEW MEXICO ELEVATION: 6258'



FILENAME: 3150KT

SHEET 2 OF 9

NCE SURVEYS, INC.

DRAWN BY: EDO

CHECKED BY: JCE



WILLIAMS PRODUCTION COMPANY

Operations Plan

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

DATE: 7/12/2004

WELLNAME: Rosa Unit #379A **FIELD:** Basin Fruitland Coal

LOCATION: SESW Sec. 8-T31N-5W **SURFACE:** BLM
Rio Arriba, NM

ELEVATION: 6,258' GR **MINERALS:** Federal

TOTAL DEPTH: 2,977' **LEASE #** SF-078763

I. GEOLOGY: Surface formation - San Jose

A. FORMATION TOPS: (KB)

NAME	DEPTH	NAME	DEPTH
San Jose	Surface	Top Coal	2,822
Nancimiento	987	Bottom Coal	2,957
Ojo Alamo	2,207	Pictured Cliffs	2,957
Kirtland	2,317	TD	2,977
Fruitland	2,717		

B. LOGGING PROGRAM: None

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 2,802' 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.

C. 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:

CASING TYPE	HOLE SIZE	DEPTH	CASING SIZE	WT. & GRADE
Surface	12-1/4"	+/- 300'	9-5/8"	36# K-55
Intermediate	8-3/4"	+/- 2,802'	7"	20# K-55
Prod. Liner	6-1/4"	+/- 2,702'- 2,957'	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.
3. PRODUCTION LINER: 5-1/2" liner with notched collar on bottom.

C. CEMENTING:

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

1. SURFACE: Use 155 sx ²⁰⁹206 cu.ft.) of "Type III" with 2% CaCl₂ 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 = ²⁰⁹206 cu.ft. Test to 1500#.
2. INTERMEDIATE: Lead - 380 sx ⁷⁸³783 cu.ft.) of "Type III" 65/35 poz with 8% gel, 1% CaCl₂ and 1/4# cello-flake/sk (Yield = 2.09 cu.ft./sk, Weight = 12.1 #/gal.). Tail - 50 sx ²⁰⁹70 cu.ft.) of "Type III" with 1/4# cello-flake/sk, and 1% CaCl₂ (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 = ²⁰⁹853 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

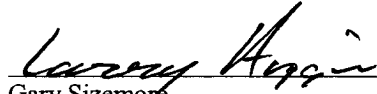
Pressure test 7" casing to 3300# for 15 minutes.

B. STIMULATION

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. 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 approximately 50' above TD.


for Gary Sizemore
Sr. Drilling Engineer

file:Rosa379A

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)

