

SUBMIT IN TRIPLICATE*
(Other instructions on
reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires December 31, 1991

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

2003 SEP -2 PM 4:02

5. LEASE DESIGNATION AND SERIAL NO.

SF-078889

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

7. UNIT AGREEMENT NAME

Rosa Unit

1b. TYPE OF WELL

OIL ☐
WELL

GAS ☒
WELL

OTHER ☐

SINGLE ☒
ZONE

MULTIPLE ☐
ZONE

8. FARM OR LEASE NAME, WELL NO.

380

2. NAME OF OPERATOR

Williams Production Company, LLC

9. API WELL NO.

3003927491

3. ADDRESS OF OPERATOR

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

10. FIELD AND POOL OR WILDCAT

Basin Fruitland Coal

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

At Surface 2600' FSL and 750' FWL

At proposed Prod. Zone

11. SEC., T., R., M., OR BLK.
AND SURVEY OR AREA

L Sec. 20, T31N, R4W

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

33 miles NE of Blanco, NM

12. COUNTY OR PARISH

Rio Arriba

13. STATE

NM

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

750'

16. NO. OF ACRES IN LEASE

1253.24

17. NO. OF ACRES ASSIGNED TO THIS WELL

320 W/2

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

2700'

19. PROPOSED DEPTH

3695'

20. ROTARY OR CABLE TOOLS

Rotary

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

6705' GR

22. APPROX. DATE WORK WILL START*

April 1, 2004

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT/FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	9-5/8"	36.0#	+/- 300'	~206 cu.ft. Type III with 2% CaCl ₂
8-3/4"	7"	20.0#	+/- 3495'	~866 cu.ft. 65/35 poz & ~70 cu.ft. Type I
6-1/4"	5-1/2"	15.5#	+/- 3395' - 3695'	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 United States Forest Service (USFS), Jicarilla Ranger District of the Carson National Forest. 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 approximately 2600' of new access road (see Pipeline & Well Plats #3 & #4). This well will be accessed by an existing road that crosses the SE of sec 19, T31N, R4W, where it joins FS road #309 in the NW qtr of sec 30.

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

9/8/2003

(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

[Signature]

TITLE

ACM

DATE

4/12/06

*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.

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 30-039-27491		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 17033 ✓	*Property Name ROSA UNIT		*Well Number 380 ✓
*OGRID No. 120782 ✓	*Operator Name WILLIAMS PRODUCTION COMPANY		*Elevation 6705' ✓

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	20	31N	4W		2600	SOUTH	750	WEST	RIO ARriba

¹¹ Bottom Hole Location If Different From Surface

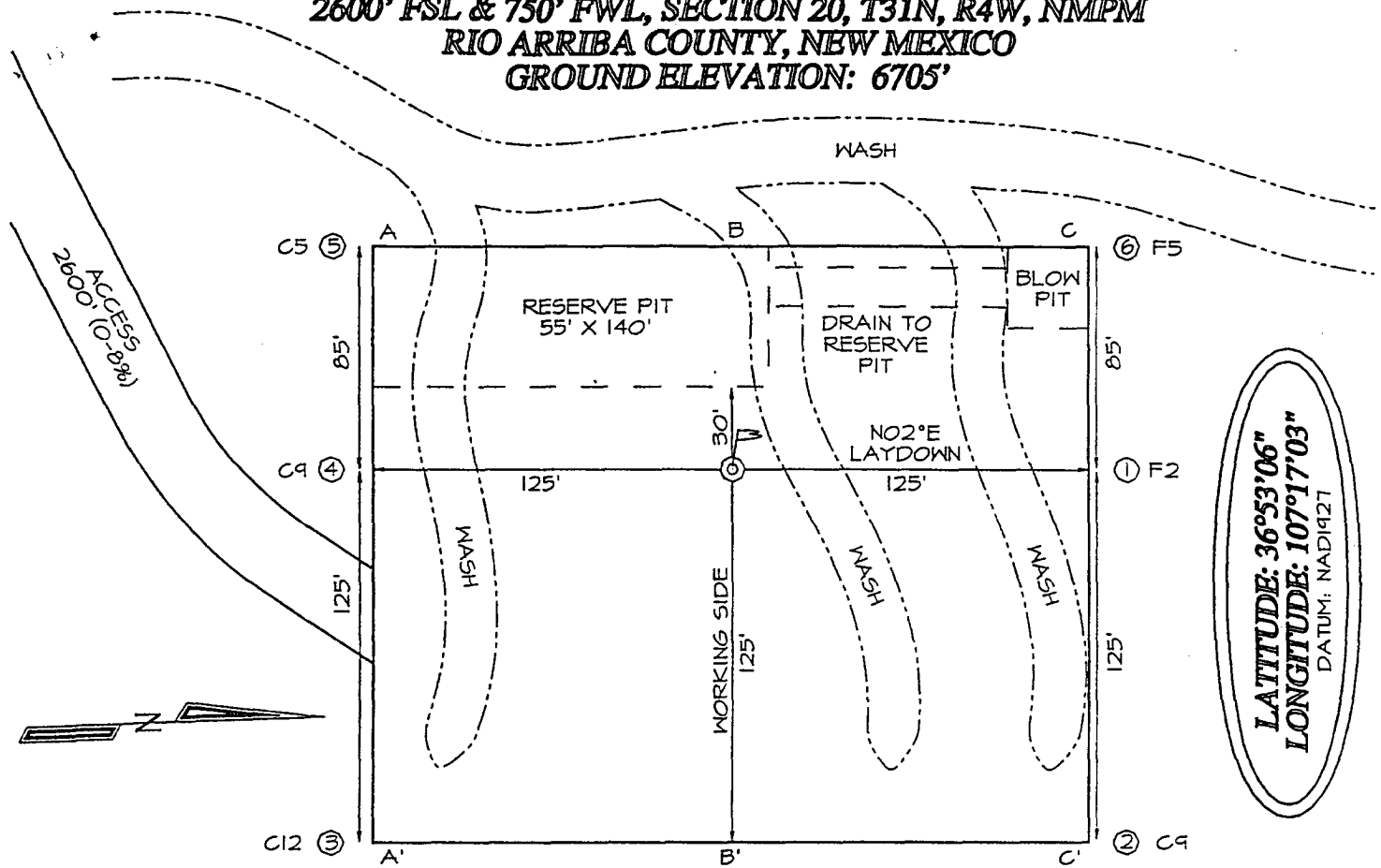
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
¹² Dedicated Acres 320.0 Acres - (W/2)					¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.		

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

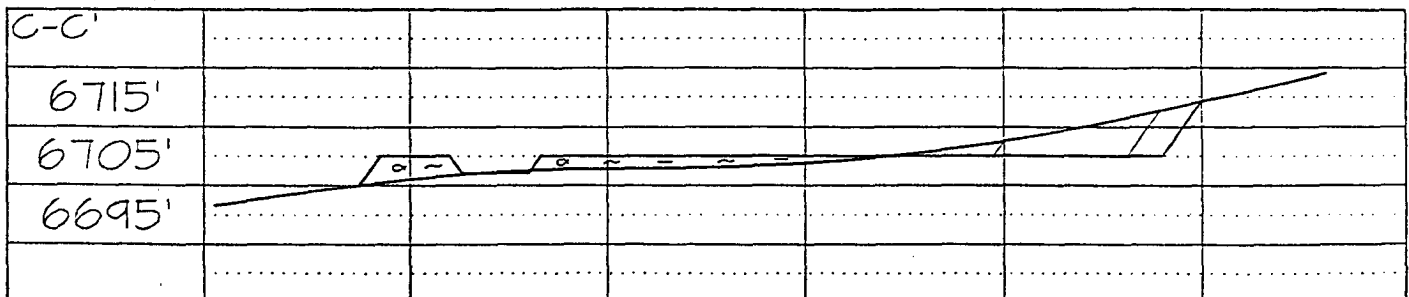
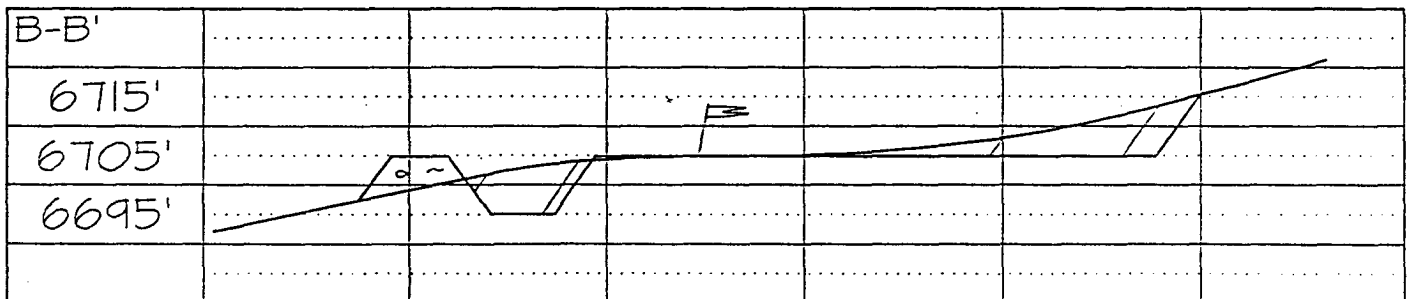
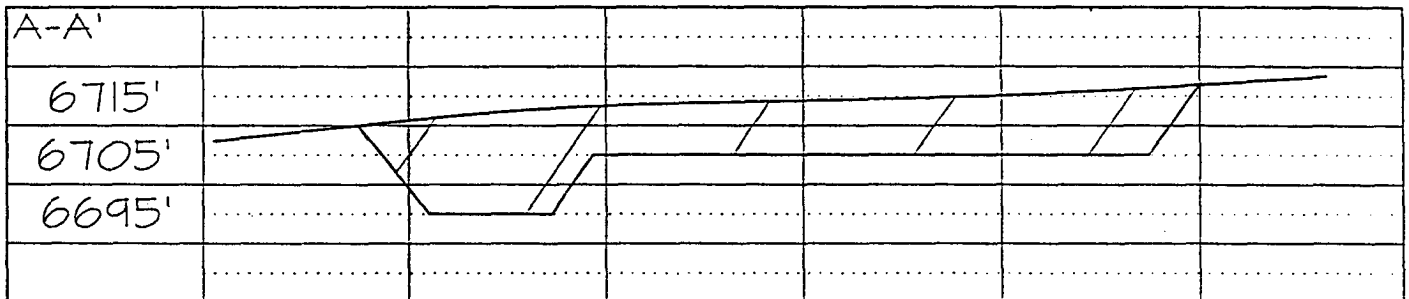
<div><p>¹⁶</p><p>SF-078889</p><p>20</p><p>750'</p><p>2600'</p><p>5277.36'</p><p>5280.00'</p><p>5280.00'</p></div>	<p>¹⁷ OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <p><i>Larry Higgins</i> Signature</p> <p>LARRY HIGGINS Printed Name</p> <p>DRLE COM Title</p> <p>9-8-03 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>Date of Survey: MAY 12, 2001</p> <p>Signature and Seal of Professional Surveyor</p> <div><p>JASON C. EDWARDS Certificate Number 15269</p></div>

RECEIVED
2003 SEP - 8 PM 4: 02
O/O Farmington, NM

WILLIAMS PRODUCTION COMPANY ROSA UNIT #380
2600' FSL & 750' FWL, SECTION 20, T31N, R4W, NMPM
RIO ARriba COUNTY, NEW MEXICO
GROUND ELEVATION: 6705'



Plat #2 cut/fill





WILLIAMS PRODUCTION COMPANY

Operations Plan

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

<u>DATE:</u>	9/5/2003		
<u>WELLNAME:</u>	Rosa #380	<u>FIELD:</u>	Basin Fruitland Coal
<u>LOCATION:</u>	NW/4 SW/4 Sec. 20, T31N, R4W Rio Arriba, NM	<u>SURFACE:</u>	Forest
<u>ELEVATION:</u>	6705' GR	<u>MINERALS:</u>	Federal
<u>TOTAL DEPTH:</u>	3695'	<u>LEASE #</u>	SF-078889

I. GEOLOGY: Surface formation - San Jose

A. FORMATION TOPS: (KB)

Ojo Alamo	2970'
Kirtland	3075'
Fruitland	3400'
Top of Coal	3515'
Base of Coal	3590'
Pictured Cliffs	3595'
Total Depth	3695'

B. LOGGING PROGRAM: High resolution SDL from TD to Intermediate casing. DSN from TD to surface casing.

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 3515' 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 +/- 3695'.

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:

<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"	+/- 3495'	7"	20# K-55
Prod. Liner	6-1/4"	+/- 3395-3695'	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 (206 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 = 206 cu.ft. Test to 1500#.
2. INTERMEDIATE: Lead - 435 sx (910 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 (70cu.ft.) of "Type III" with 1/4# cello-flake/sk, and 1% CaCl₂ (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 = 981 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

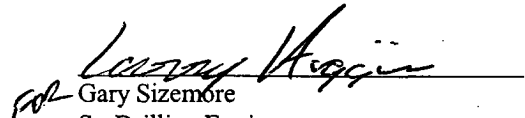
Pressure test 7" casing to 3300# for 15 minutes.

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.


Gary Sizemore
Sr. Drilling Engineer

file:380ARosaOP

Williams Production Company, LLC

Well Control Equipment Schematic for 2M Service

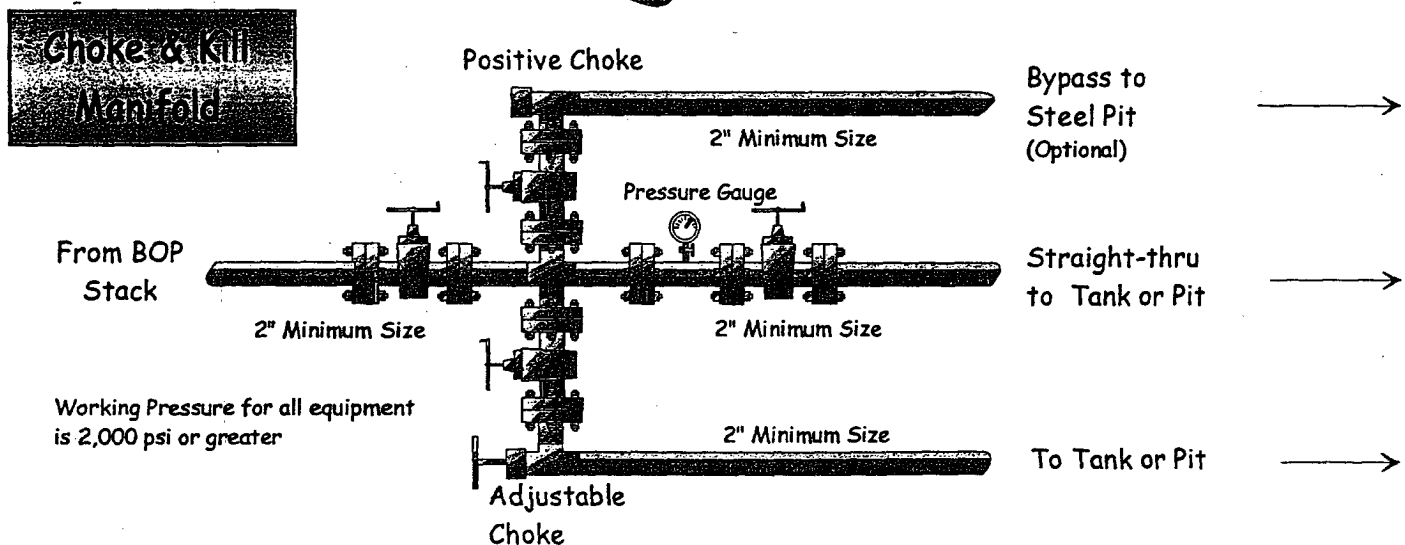
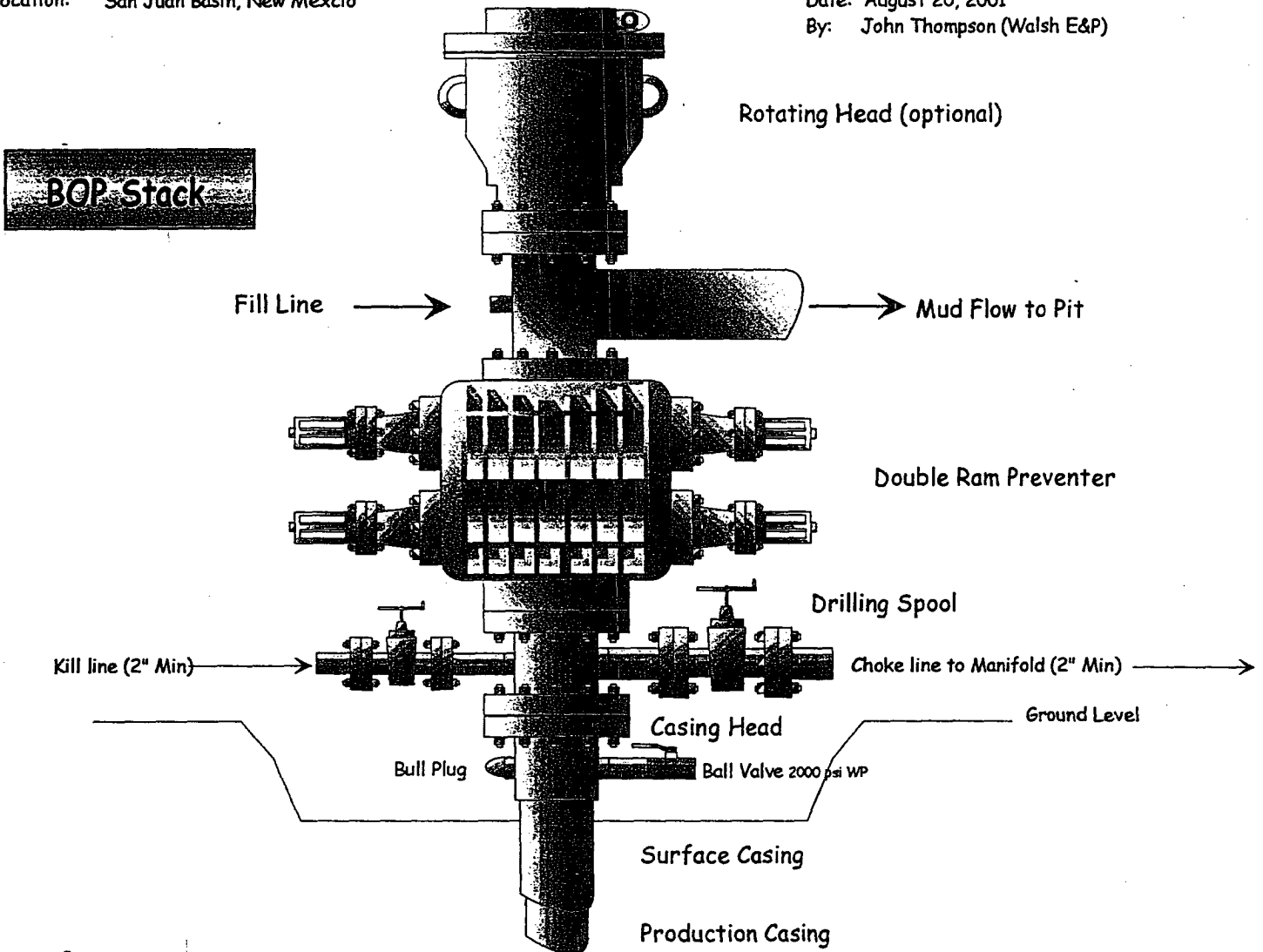
Attachment to Drilling Technical Program

Typical BOP setup

Location: San Juan Basin, New Mexico

Date: August 20, 2001

By: John Thompson (Walsh E&P)



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

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.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: November 30, 2000

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

2006 APR 11

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other		5. Lease Serial No. NMSF-078889
2. Name of Operator Williams Production Company		6. If Indian, Allottee or Tribe Name
3a. Address P.O. Box 640 Aztec, NM 87410	3b. Phone No. (include area code) (505) 634-4208	7. If Unit or CA/Agreement, Name and/or No. Rosa Unit
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 2600 FSL 750 FWL, T. 31N., R. 4W., NMPM		8. Well Name and No. Rosa Unit No. 380
		9. API Well No. 3003927491
		10. Field and Pool, or Exploratory Area Basin Fruitland Coal
		11. County or Parish, State Rio Arriba, New Mexico

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, A Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Change of access road. Access road for the Rosa Unit 380 will come from the existing Rosa Unit 354A well location, as shown on attached map and plat.



14. I hereby certify that the foregoing is true and correct	
Name (Printed/Typed) Larry Higgins	Title Drilling COM
Signature <i>Larry Higgins</i>	Date April 11, 2006
THIS SPACE FOR FEDERAL OR STATE OFFICE USE	
Approved by <i>Brian Press</i>	Title EPS
Conditions of approval, if any, are attached. Approval of this notice 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 operation thereon.	Date 4/11/06
Title 18 U.C.S. Section 1001 and Title 43 U.S.C. Section 1212, makes it a crime for any person knowingly and willfully to make any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.	Office FFO

NMOCD