

UNITED STATES  
DEPARTMENT OF INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

SUNDRY NOTICE AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir. Use "APPLICATION TO DRILL" for permit for such proposals

RECEIVED

JUN 22 2010

SUBMIT IN TRIPLICATE

Bureau of Land Management  
Farmington Field Office

1. Type of Well  
Oil Well Gas Well X Other

2. Name of Operator  
WILLIAMS PRODUCTION COMPANY

3. Address and Telephone No.  
PO BOX 640 Aztec, NM 87410-0640

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
Surface: 2275' FNL & 135' FWL Sec. 25, T31N, R5W  
BHL: 1650' FNL & 990' FEL Sec. 26, T31N, R5W

5. Lease Designation and Serial No.  
Fee

6. If Indian, Allottee or Tribe Name  
N/A

7. If Unit or CA, Agreement Designation  
Rosa Unit / CA # NMNM 112631

8. Well Name and No.  
Rosa Unit COM #377

9. API Well No.  
30-039-30974

10. Field and Pool, or Exploratory Area  
Basin Fruitland Coal

11. County or Parish, State  
Rio Arriba, NM

CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

X Notice of Intent  
Subsequent Report  
Final Abandonment

TYPE OF ACTION

Abandonment  
Recompletion  
Plugging Back  
Casing Repair  
Altering Casing  
X Other Surface Use

X Change of Plans  
New Construction  
Non-Routine Fracturing  
Water Shut-Off  
Conversion to Injection  
Dispose Water  
(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Williams Production Company, LLC. hereby requests authorization to drill the above well from a surface location in the NW corner of section 25, T31N, R5W on USFS land. The well will be directionally drilled to a BHL location in the NE corner of section of 26, T31N, R5W. The location in section 26 cannot be reached due to archaeology. The surface location is under USFS authority. There was a site visit 9-4-2008 with USFS personnel. All agreed that this was the best site for surface location. This well has been permitted with the NMOCD (copy attached).

RCWD DEC 8 '10

OIL CONS. DIV.

DIST. 3

14. I hereby certify that the foregoing is true and correct

Signed Larry Higgins  
Larry Higgins

Title Permit Supervisor Date 6-22-10

(This space for Federal or State office use)

Approved by [Signature]

Title Petr. Eng.

Date 12/1/10

Conditions of approval, if any:

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.

NMOCD

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

RECEIVED

Form C-101  
June 16, 2008

Oil Conservation Division

JUN 22 2010

Submit to appropriate District Office

1220 South St. Francis Dr., Santa Fe, NM 87505  
Bureau of Land Management  
Farmington Field Office

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

<sup>1</sup> Operator Name and Address Williams Production Company, L.L.C. P.O. Box 640 Aztec, NM 87410		<sup>2</sup> OGRID Number 120782
		<sup>3</sup> API Number 30 - 039 - 30974
<sup>4</sup> Property Code <del>17033</del> 17212	<sup>5</sup> Property Name Rosa Unit COM	<sup>6</sup> Well No 377
<sup>9</sup> Proposed Pool 1 Basin Fruitland Coal		<sup>10</sup> Proposed Pool 2

<sup>7</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	25	31N	5W		2275	North	135	West	Rio Arriba

<sup>8</sup> Proposed 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
II	26	31N	5W		1650	North	990	East	Rio Arriba

Additional Well Information

<sup>11</sup> Work Type Code N	<sup>12</sup> Well Type Code G	<sup>13</sup> Cable/Rotary R	<sup>14</sup> Lease Type Code P	<sup>15</sup> Ground Level Elevation 6432'
<sup>16</sup> Multiple No	<sup>17</sup> Proposed Depth 3728'	<sup>18</sup> Formation Basin Fruitland Coal	<sup>19</sup> Contractor	<sup>20</sup> Spud Date August 2010

<sup>21</sup> Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12.250"	9.625"	36#	300'	160	surface
8.750"	7"	20#	3513'	490	surface
6.250"	5.5"	15.5#	3413'-3628'	none	

<sup>22</sup> Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone.  
Describe the blowout prevention program, if any. Use additional sheets if necessary.  
A 2M (double ram) blowout preventer will be installed & pressure tested to 1500 psi. A 2" kill line & 2" line to a choke manifold will also be installed.  
This will be a cavitated completion in the Basin Fruitland Coal

RCVD JUN 8 '10  
OIL CONS. DIV.

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief

Signature:

*Larry Higgins*

Approved by:

*[Signature]*

Printed name:

Larry Higgins

Title

Deputy Oil & Gas Inspector,  
District #3

Title:

Permit Supervisor

Approval Date:

JUN 11 2010

Expiration Date:

12-11-2011

E-mail Address

Larry.higgins@williams.com

Date: Jun. 7, 2010

Phone: 505 634 4208

Conditions of Approval Attached ☐

Hold C104

JUN 11 2010

NOTIFY AZTEC OGD 24 HRS.  
PRIOR TO CASING & CEMENT

for Directional Survey  
and "As Drilled" plat

District I  
1625 N. French Dr., Hobbs, NM 88240

District II  
1301 W Grand Avenue, 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 & Natural Resources Department

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

Form C-102  
Revised October 12, 2005  
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 <b>30.039.30974</b>		*Pool Code <b>71629</b>	*Pool Name <b>BASIN FRUITLAND COAL</b>
*Property Code <b>-47033 17212</b>	*Property Name <b>ROSA UNIT COM</b>		*Well Number <b>377</b>
*OGRID No. <b>120782</b>	*Operator Name <b>WILLIAMS PRODUCTION COMPANY</b>		*Elevation <b>6432'</b>

#### <sup>10</sup> Surface Location

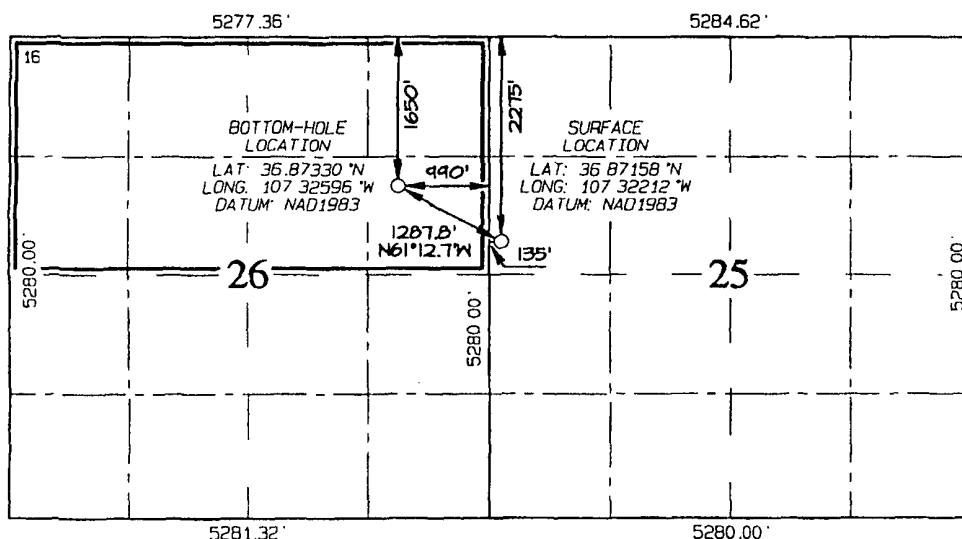
UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	25	31N	5W		2275	NORTH	135	WEST	RIO ARriba

#### <sup>11</sup> 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
H	26	31N	5W		1650	NORTH	990	EAST	RIO ARriba

<sup>12</sup> Dedicated Acres <b>320.0 Acres - N/2</b>	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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



#### <sup>17</sup> OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division

*Larry Higgins* 6-7-10  
Signature Date  
*Larry Higgins*  
Printed Name

#### <sup>18</sup> 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

Survey Date: SEPTEMBER 7, 2005

Signature and Seal of Professional Surveyor



**JASON C. EDWARDS**  
Certificate Number 15269



## WILLIAMS PRODUCTION COMPANY

### Operations Plan

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

**DATE:** 1/16/2007

**WELLNAME:** Roša Unit #377      **FIELD:** Basin Fruitland Coal

**BH LOCATION:** SENE Sec. 26-T31N-5W      **SURFACE:** USFS

**SURF LOCATION:** SWNW Sec 25-31N-5W      **MINERALS:** FEE  
Rio Arriba, NM

**ELEVATION:** 6,432' GR      **LEASE #** FEE

**TOTAL DEPTH:** 3,728'

I. **GEOLOGY:** Surface formation - San Jose

A. **FORMATION TOPS:** ( KB)

NAME		TVD	MD		NAME		TVD	MD
San Jose		Surface	Surface		Top Coal		3,171	3,533
Nacimiento		1,366	1,433		Bottom Coal		3,266	3,628
Ojo Alamo		2,631	2,983		Pictured Cliffs		3,266	3,628
Kirtland		2,761	3,119		TD		3,366	3,728
Fruitland		3,091	3,453					

B. **LOGGING PROGRAM:** none

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

D. **MUD LOGGING PRORAM:** Mud logger will be on location at drill out below 7" casing to TD. Mud Logger to pick TD

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 3,513', **DO NOT** drill deeper until Engineering is contacted.

B. **DRILLING FLUID:** Coal section will be drilled with Fruitland Coal water.

- 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 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:

CASING TYPE	OH SIZE (IN)	DEPTH (MD) (FT)	CASING SIZE (IN)	WEIGHT(LB)	GRADE
Surface	12 1/4	300	9 5/8	36	K-55
Intermediate	8 3/4	3,513	7	20	K-55
Liner	6 1/4	3,413   3,628	5 1/2	15.5	J-55

#### B. FLOAT EQUIPMENT:

- SURFACE CASING:** 9-5/8" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) joints of Surface Casing.
- 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)**.
- PRODUCTION LINER / CASING:** 5-1/2" whirler type cement nose guide shoe

#### C. CEMENTING:

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

- SURFACE:** Use 160 sx (224 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 100% excess** to circulate the surface. WOC 12 hours. Total volume = 206 cu.ft. Test to 600# for 30 minutes.
- INTERMEDIATE:** Lead - 440 sx (916 cu.ft.) of "Premium Light" 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 (70cu.ft.) of "Type III" with 1/4# cello-flake/sk (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 = 976 cu.ft. Bump Plug to 1,500 psi. Notify engineering if cement is not circulated to surface. 7" casing will be tested at completion.
- PRODUCTION LINER:** Open hole completion. No cement.

IV. COMPLETION

A. PRESSURE TEST

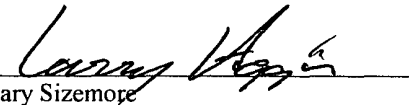
1. Pressure test 7" casing to 1500# for 30 minutes.

B. STIMULATION

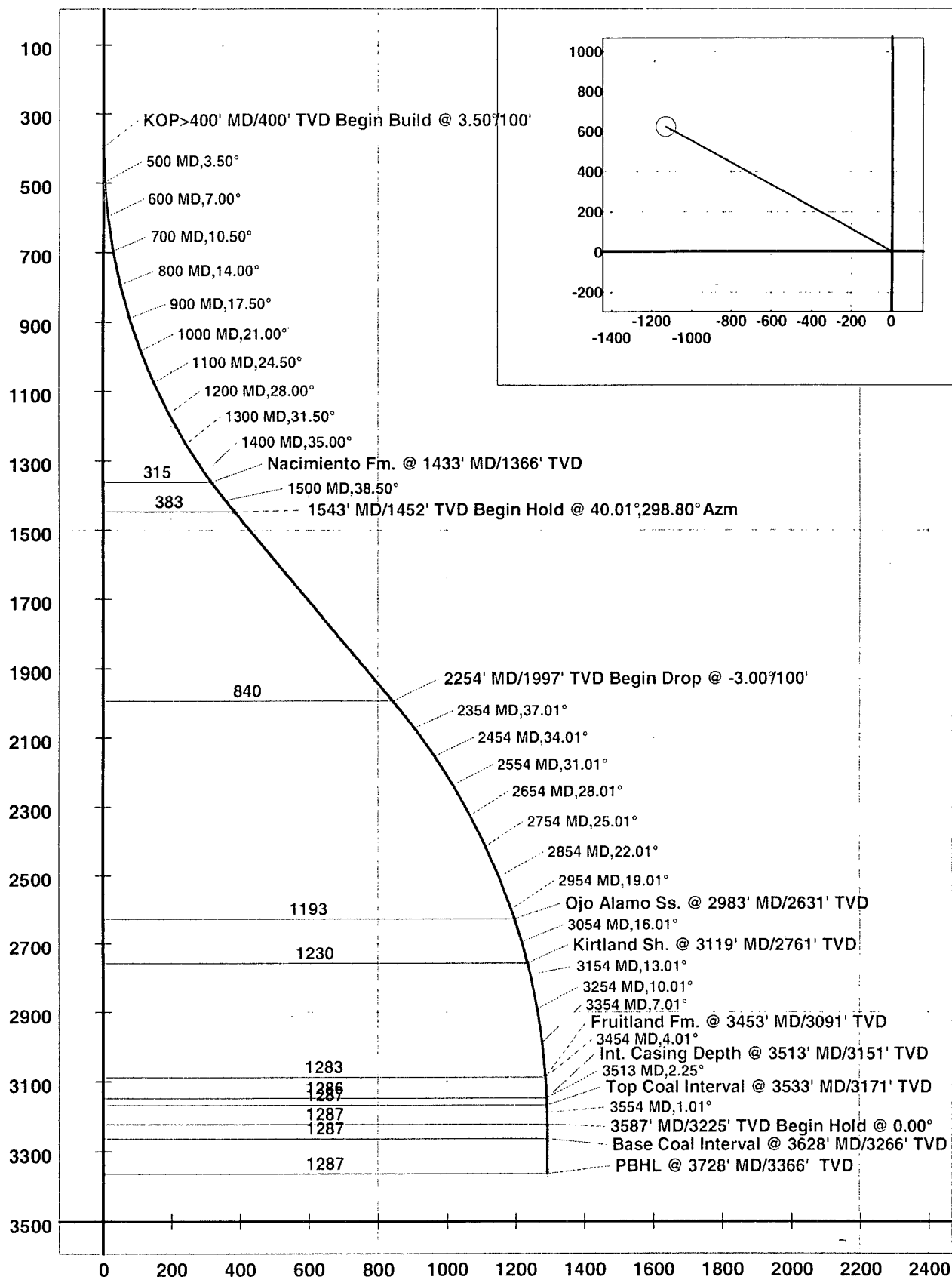
1. Cavitate well with reciprocation and rotation. Surge wells with water and air and then flow back. Cavitate for 2 to 3 weeks. Maximum pressure not expected to exceed 2,000 psi.

C. RUNNING TUBING

1. Fruitland Coal: Run 2-7/8", 6.5#, J-55, EUE tubing with a SN on top of bottom joint. Land tubing approximately 50' above TD.

*for*   
Gary Sizemore  
Sr. Drilling Engineer

Company: Williams Production  
Lease/Well: Rosa # 377 FC  
Location: Rio Arriba County  
State/Country: NM



# Well Control Equipment Schematic for 2M Service

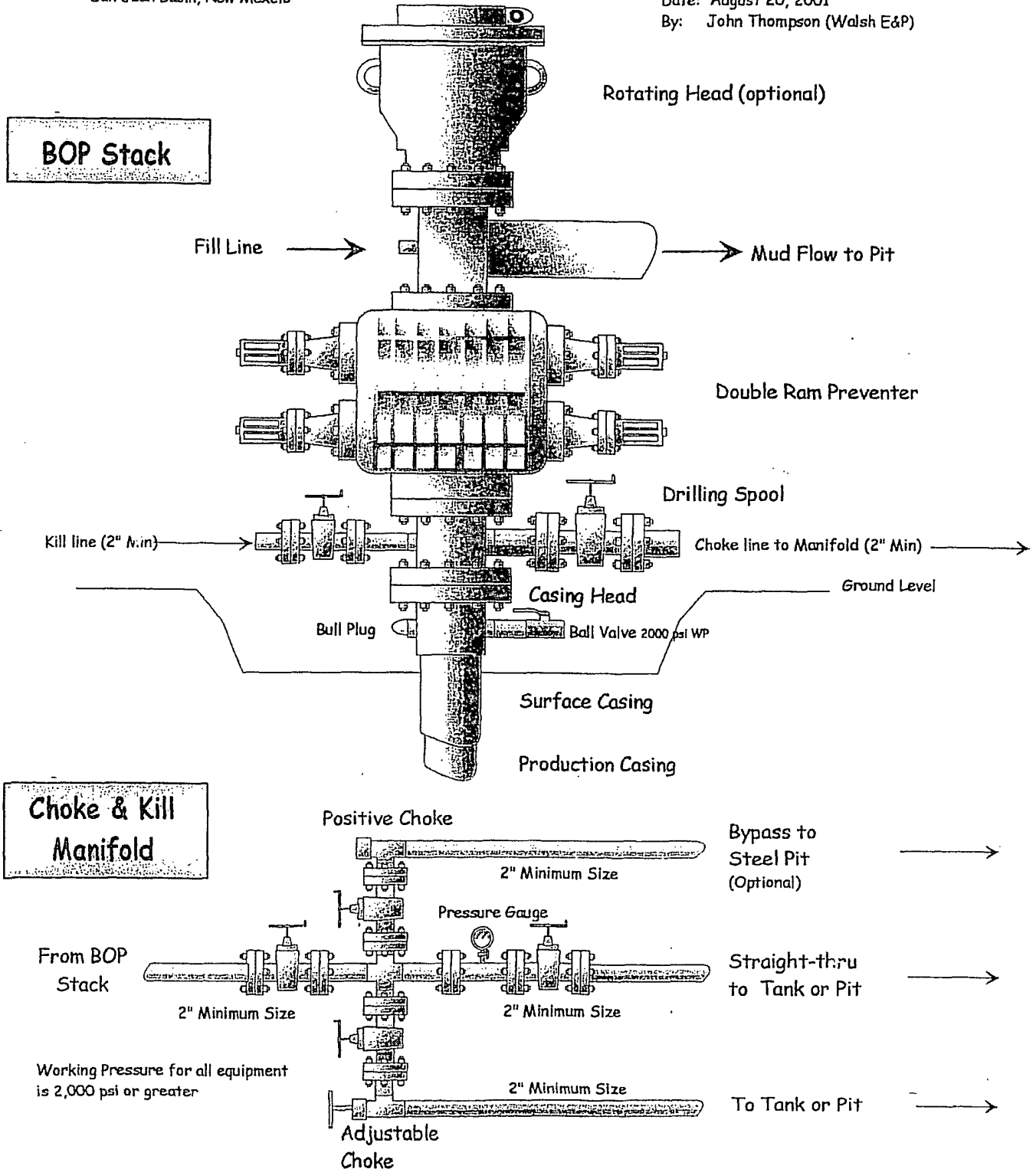
Attachment to Drilling Technical Program

## Exhibit #1 Typical BOP setup

Location: San Juan Basin, New Mexico

Date: August 20, 2001

By: John Thompson (Walsh E&P)





## 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
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

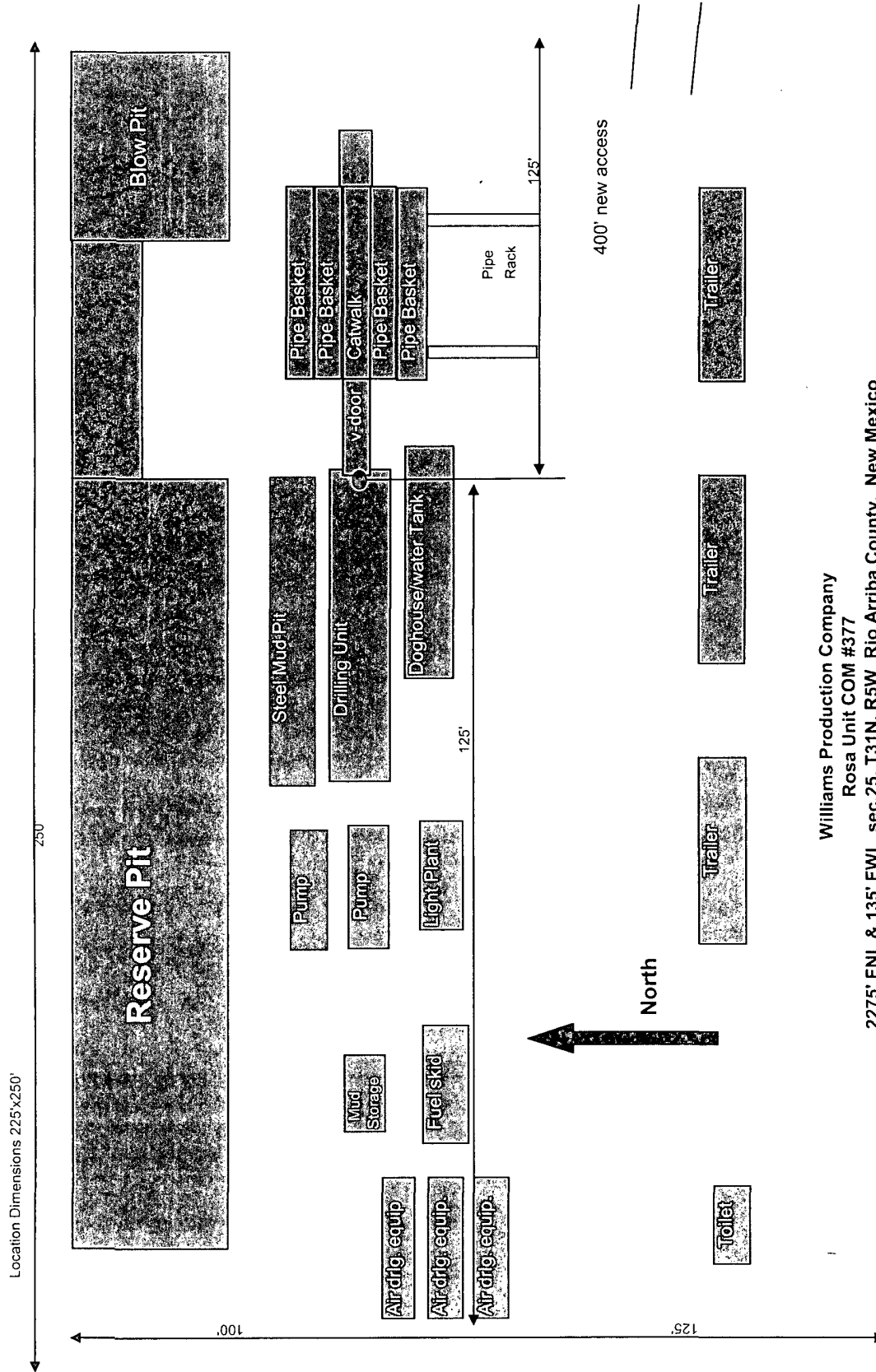
### Potential Hazards:

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.

Plat #3 Location Diagram



Williams Production Company  
Rosa Unit COM #377  
2275' FNL & 135' FWL, sec.25, T31N, R5W Rio Arriba County, New Mexico