

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

2007 JAN 31 AM 7:10

RECEIVED

210-0101-0000

5. Lease Serial No.  
NMSF-078767  
6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.  
Rosa Unit

8. Lease Name and Well No.  
80B

9. API Well No.  
30-039-30184

10. Field and Pool, or Exploratory  
Blanco Mesaverde

11. Sec., T., R., M., or Blk. and Survey or Area  
Section 8, 31N, 5W

12. County or Parish  
Rio Arriba

13. State  
NM

1a. Type of Work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator  
Williams Production Company, LLC

3a. Address  
P.O. Box 640 Aztec, NM 87410

3b. Phone No. (include area code)  
(505) 634-4208

4. Location of Well (Report location clearly and in accordance with any State requirements. \*)  
At surface 1565' FNL & 835' FWL  
At proposed prod. zone 1565' FNL & 330' FWL

14. Distance in miles and direction from nearest town or post office\*  
approximately 34 miles northeast of Blanco, New Mexico

15. Distance from proposed\* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 330'

16. No. of Acres in lease  
2,518.040

18. Distance from proposed location\* to nearest well, drilling, completed, applied for, on this lease, ft. 75'

19. Proposed Depth  
6,103'

21. Elevations (Show whether DF, KDB, RT, GL, etc.)  
6,298' GR

22. Approximate date work will start\*  
April 1, 2007

23. Estimated duration  
1 month

24. Attachments

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

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

25. Signature *Larry Higgins* Name (Printed/Typed) Larry Higgins Date 1-31-07

Title Drilling COM  
Approved by (Signature) *[Signature]* Name (Printed/Typed) Date 2/27/07  
Title AFM 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 develop the Blanco Mesaverde formation at the above described location in accordance with the attached drilling and surface use plans.

The well pad surface is under jurisdiction of the BLM, Farmington Field Office.

This location has been archaeologically surveyed by La Plata Archaeological Consultants. Copies of their report have been submitted directly to the BLM and NMGF.

No access road is needed, as this is a twinned location. A pipeline tie of 237.4 feet would be required for this location. The pipeline would be located on Public lands.

HOLD C104 run *directional survey + BH survey*

3/7 NOTIFY AZTEC OGD IN TIME TO WITNESS *24 hrs 159 and Cement*

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

3/2/07

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

☐ AMENDED REPORT

RCVD FEB28'07

OIL CONS. DIV.

DIST. 3

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30-039-30184</b>	*Pool Code <b>72319</b>	*Pool Name <b>BLANCO MESAVERDE</b>
*Property Code <b>17033</b>	*Property Name <b>ROSA UNIT</b>	*Well Number <b>808</b>
*DGRID No. <b>120782</b>	*Operator Name <b>WILLIAMS PRODUCTION COMPANY</b>	*Elevation <b>6298'</b>

<sup>10</sup> Surface Location

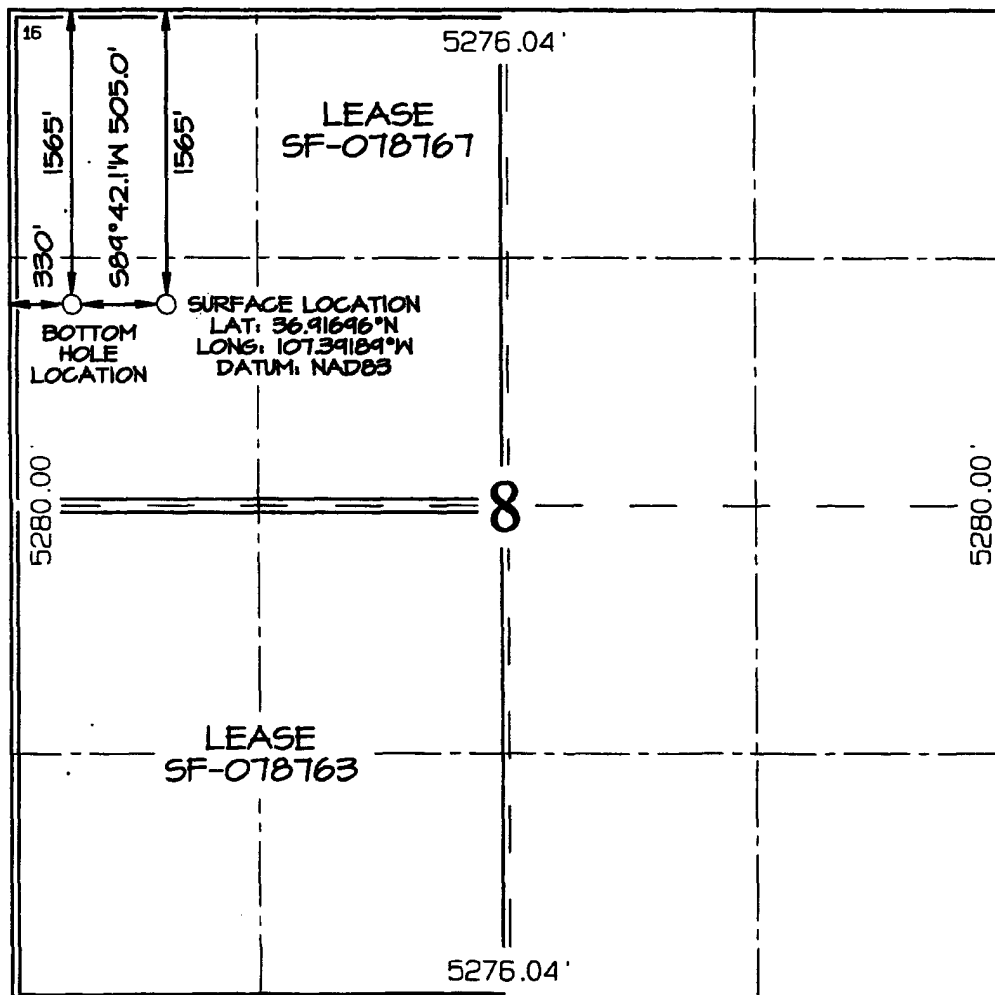
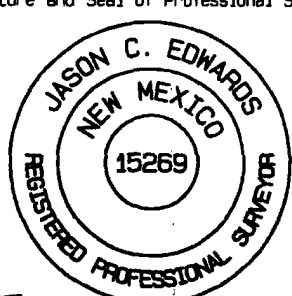
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	8	31N	5W		1565	NORTH	835	WEST	RIO ARriba

<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
E	8	31N	5W		1565	NORTH	330	WEST	RIO ARriba

<sup>12</sup> Dedicated Acres <b>320.0 Acres - (W/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

	<p><sup>17</sup> 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>Lucy Higgins</i> Signature</p> <p><i>Lucy Higgins</i> Printed Name</p> <p><i>DRILLING COM</i> Title</p> <p><i>1-31-07</i> Date</p> <p><sup>18</sup> 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: APRIL 26, 2006</p> <p>Signature and Seal of Professional Surveyor</p> <p></p> <p><i>JASON C. EDWARDS</i> 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. <b>30-039-30184</b>
5. Indicate Type of Lease FEDERAL X STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. <b>NMSF-078767</b>
7. Lease Name or Unit Agreement Name <b>Rosa</b>
8. Well Number <b>80B</b>
9. OGRID Number <b>120782</b>
10. Pool name or Wildcat <b>Blanco Mesaverde</b>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) <b>6,298' GR</b>

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**

4. Well Location: Surface  
Unit Letter **E** : **1565** feet from the **N** line and **835** feet from the **W** line  
Section **8** Township **31N** Range **05W** NMPM County **Rio Arriba**

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
**6,298' GR**

Pit or Below-grade Tank Application ☒ or Closure ☐

Pit type\_Drlg/Completion\_Depth to Groundwater\_>100 ft\_Distance from nearest fresh water well\_>1000 ft\_Distance from nearest surface water\_>500 ft

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 \_\_\_\_\_ DATE 1-31-07

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

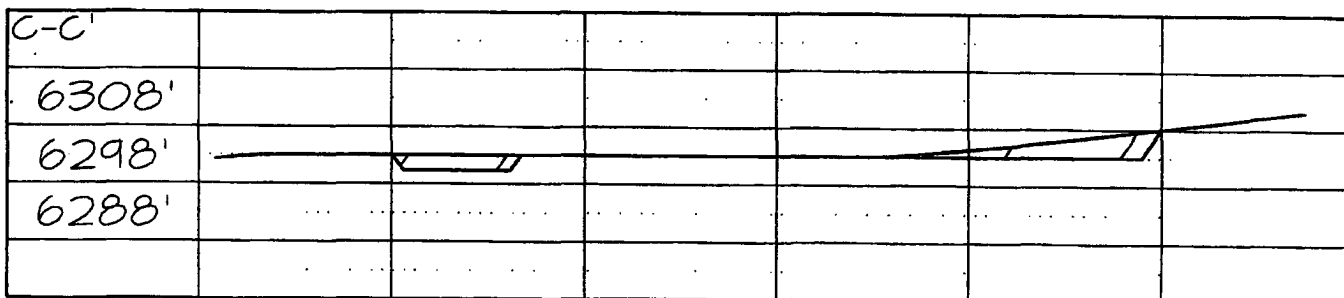
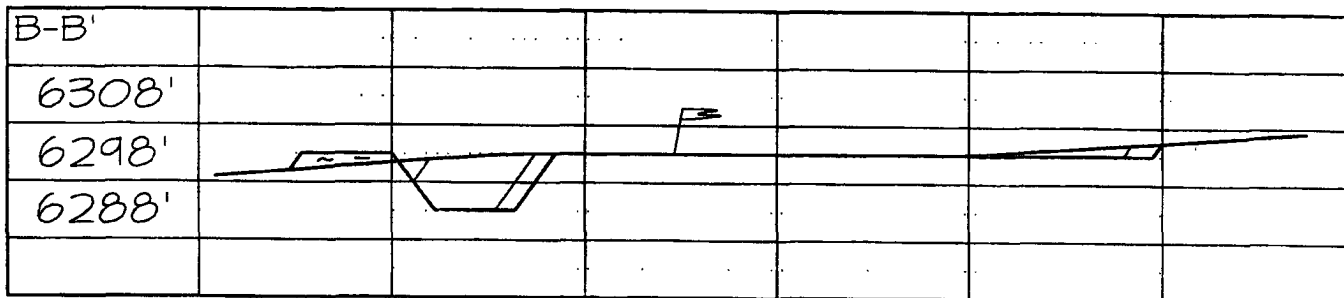
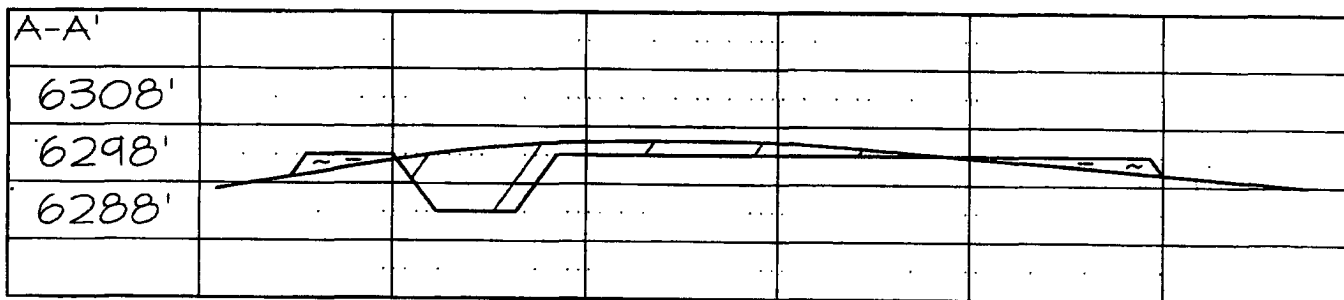
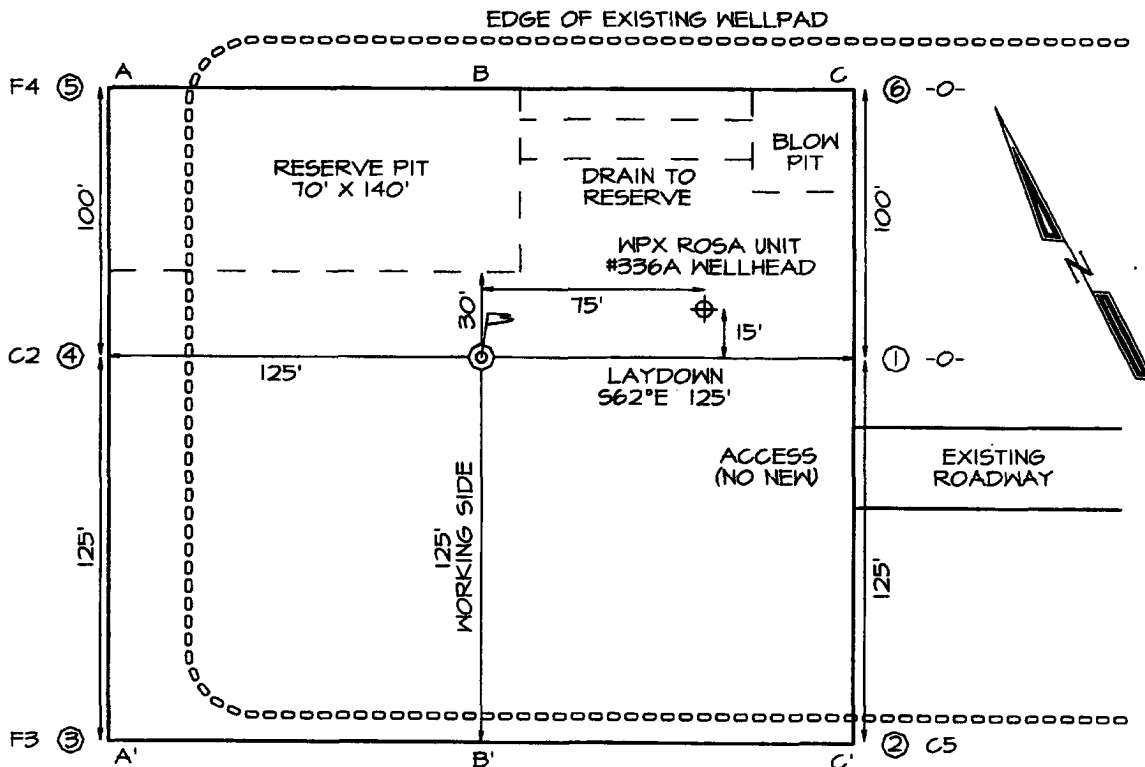
For State Use Only

APPROVED BY: [Signature] TITLE **DEPUTY OIL & GAS INSPECTOR, DIST. 6** DATE 2/28/07

Conditions of Approval (if any): If the time between drilling and completion of the well exceeds the OCD time limit, pit must be closed in compliance with rule 60 unless an extension is granted.

**WILLIAMS PRODUCTION COMPANY ROSA UNIT #80B**  
**1565' FNL & 835' FWL, SECTION 8, T31N, R5W, NMPM**  
**RIO ARriba COUNTY, NEW MEXICO ELEVATION: 6298'**

LATITUDE: 36.91696° N  
 LONGITUDE: 107.39189° W  
 DATUM: NAD1983





## **WILLIAMS PRODUCTION COMPANY**

### **Operations Plan**

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

**DATE:** 1/16/2007 **FIELD:** Blanco MV  
**WELL NAME:** Rosa #80B **SURFACE:** FED  
**BH LOCATION:** SWNW Sec 8-31N-5W **MINERALS:** FED  
Rio Arriba, NM  
**SURF LOCATION:** SWNW Sec 8-31N-5W  
**ELEVATION:** 6,298' GR **LEASE #** SF-078767  
**MEASURED DEPTH:** 6,103

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

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

Name		TVD	MD		Name		TVD	MD
Ojo Alamo		2,397	2,428		Cliff House		5,347	5,392
Kirtland		2,502	2,535		Menefee		5,392	5,437
Fruitland		2,912	2,953		Point Lookout		5,582	5,627
Picture Cliffs		3,117	3,161		Mancos		5,902	5,947
Lewis		3,407	3,452		TD		6,057	6,103

**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:**

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	3,645	7	20	K-55
Liner	6 1/4	3,545   6,103	4 1/2	10.5	J-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" 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% CaCl<sub>2</sub> + ¼ # 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 - 460 sx (956) 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 = 1,026 cu.ft. Bump Plug to 1,500 psi. Notify engineering if cement is not circulated to surface.
3. **PRODUCTION LINER:** 10 bbl Gelled Water spacer. Cement: 155 sx (327 ft<sup>3</sup>) of Premium Light HS + 1% FL-52 + .2% CD-32, 0.1% R-3, 3 #/sk CSE, ¼ #/sk cello flake and 4% Phenoseal. (Yield = 2.15 ft<sup>3</sup>/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 327 ft<sup>3</sup>. 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**

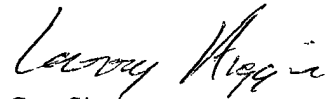
1. Pressure test 7" & 4-1/2" casing to 3300# for 15 minutes.

**C. STIMULATION**

1. Perforate the Point Lookout as determined from the open hole logs.
2. Stimulate with approximately 9,300# of 14/30 LiteProp™ sand in slick water.
3. Isolate Point Lookout with a CIBP.
4. Perforate the Menefee/Cliff House as determined from the open hole logs.
5. Stimulate with approximately 9,300# of 14/30 LiteProp™ sand in slick water.
6. Test each zone before removing bridge plugs.

**D. RUNNING TUBING**

1. Mesa Verde: Run 2-3/8", 4.7#, J-55, EUE tubing with a SN (1.91" ID) on top of bottom joint. Land tubing approximately 25' above the bottom Point Lookout perforation.



Gary Sizemore  
Sr. Drilling Engineer



# Well Control Equipment Schematic for 2M Service

Attachment to Drilling Technical Program

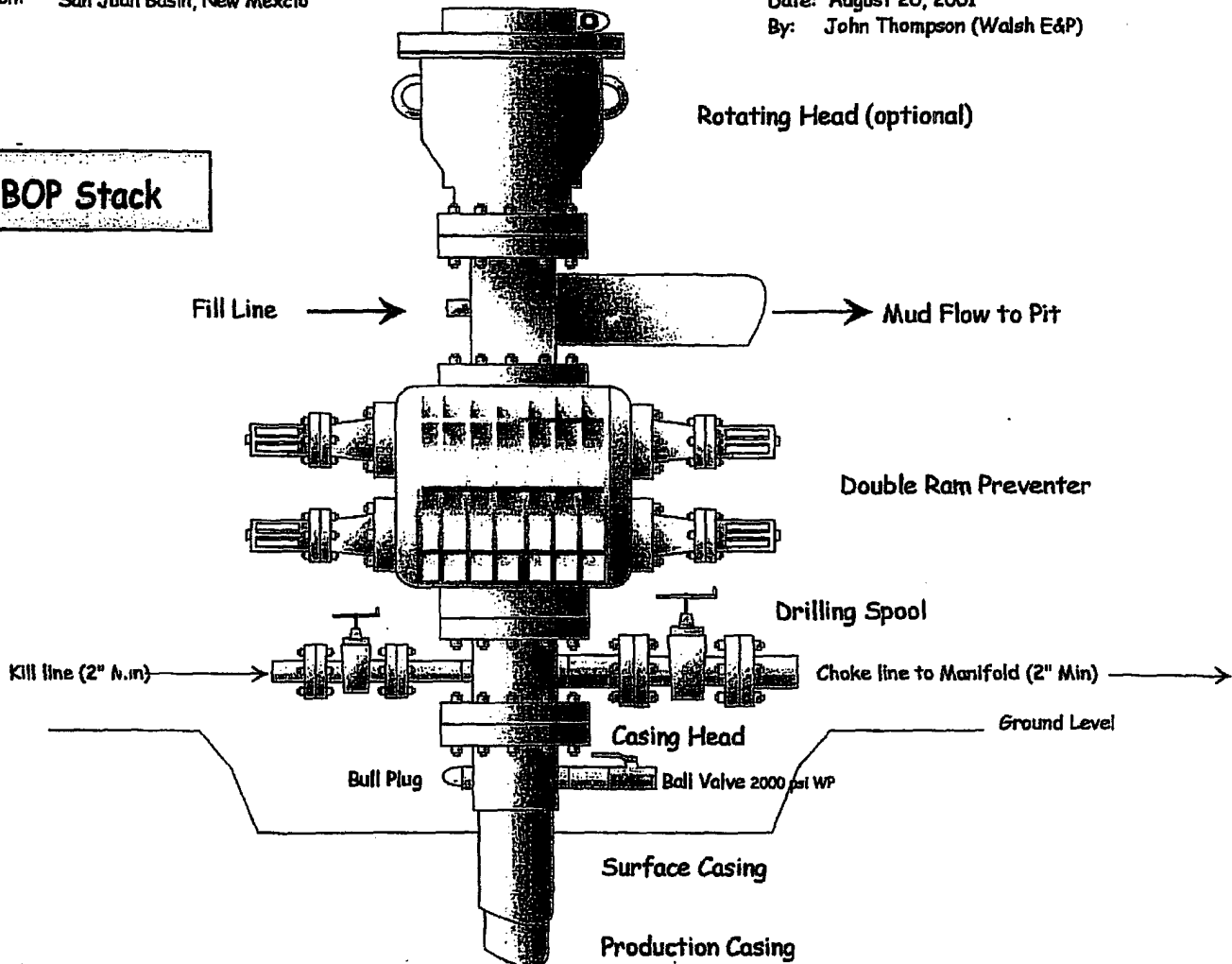
## Exhibit #1 Typical BOP setup

Location: San Juan Basin, New Mexico

Date: August 20, 2001

By: John Thompson (Walsh E&P)

### BOP Stack



### Choke & Kill Manifold

