

Expires December 31, 1991

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

reverse side)

## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK <b>DRILL</b> <input checked="" type="checkbox"/> <b>DEEPEN</b> <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. <i>Jicarilla Apache Contract #93</i>	
1b. TYPE OF WELL <b>OIL</b> <input type="checkbox"/> <b>GAS</b> <input checked="" type="checkbox"/> <b>OTHER</b> <input type="checkbox"/> <b>SINGLE ZONE</b> <input checked="" type="checkbox"/> <b>MULTIPLE ZONE</b> <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME <i>Jicarilla Apache Nation</i>	
2. NAME OF OPERATOR <i>Williams Production Company LLC</i>		7. UNIT AGREEMENT NAME	
3. ADDRESS OF OPERATOR <i>P.O. Box 316 - Ignacio, CO 81137 (970) 563-6398</i>		8. FARM OR LEASE NAME, WELL NO. <i>Jicarilla 93 #2A</i>	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. *) At Surface <i>2595' FSL &amp; 765' FEL</i> At proposed Prod. Zone		9. API WELL NO. <i>30-039-27837</i>	
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA <i>I Sec. 34. T27N, R3W</i>		10. FIELD AND POOL OR WILDCAT <i>Blanco Mesa Verde</i>	
12. COUNTY OR PARISH <i>Rio Arriba</i>		13. STATE <i>NM</i>	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* <i>16 miles NE of Lindrith, NM</i>		15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) <i>765</i>	
16. NO. OF ACRES IN LEASE <i>2560</i>		17. NO. OF ACRES ASSIGNED TO THIS WELL <i>320 E/2</i>	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE, FT. <i>1560'</i>		19. PROPOSED DEPTH <i>6507'</i>	
20. ROTARY OR CABLE TOOLS <i>Rotary</i>		21. ELEVATIONS (Show whether DF, RT, GR, etc.) <i>7224' GR</i>	
22. APPROX. DATE WORK WILL START* <i>February 15, 2004</i>			

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#	~250 ft	~205 cu.ft. Type III with 2% CaCl <sub>2</sub>
8-3/4"	7"	20.0#	~4330 ft	~1023 cu.ft. 65/35 poz & ~139 cu.ft. Type III
6-1/4"	4-1/2"	10.5#	~4230'-6507 ft	~290 cu.ft. Premium Light w/ additives

Williams Production Company proposes to drill a vertical well to develop the Mesa Verde formation at the above described location in accordance with the attached drilling and surface use plans.

This location has been archaeologically surveyed by Velarde Energy Service. Copies of their report have been submitted directly to your office.

This APD also is serving as an application to obtain BLM road and pipeline right-of-ways. This well will require approximately 1200' of new access road. This road proceeds East in through the SE qtr sec 34, and the SW qtr sec 35 where it joins an existing road. This road then proceeds north in the NW qtr sec 35. The NE qtr of sec 34 and the SE qtr of sec 27, T27N, R3W where it joins NM hwy #537.

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 12/16/2003

(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 /s/ David R. Sitzler

Assistant Field Manager

DATE JUL 23 2004

\*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 00, 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

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Form C-102  
Revised February 21, 1991  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30-039-27837</b>		*Pool Code <b>72319</b>	*Pool Name <b>BLANCO MESAVERDE</b>
*Property Code <b>17029</b>	*Property Name <b>JICARILLA 93</b>		*Well Number <b>2A</b>
*CGRID No. <b>120762</b>	*Operator Name <b>WILLIAMS PRODUCTION COMPANY</b>		*Elevation <b>7224'</b>

<sup>10</sup> Surface Location

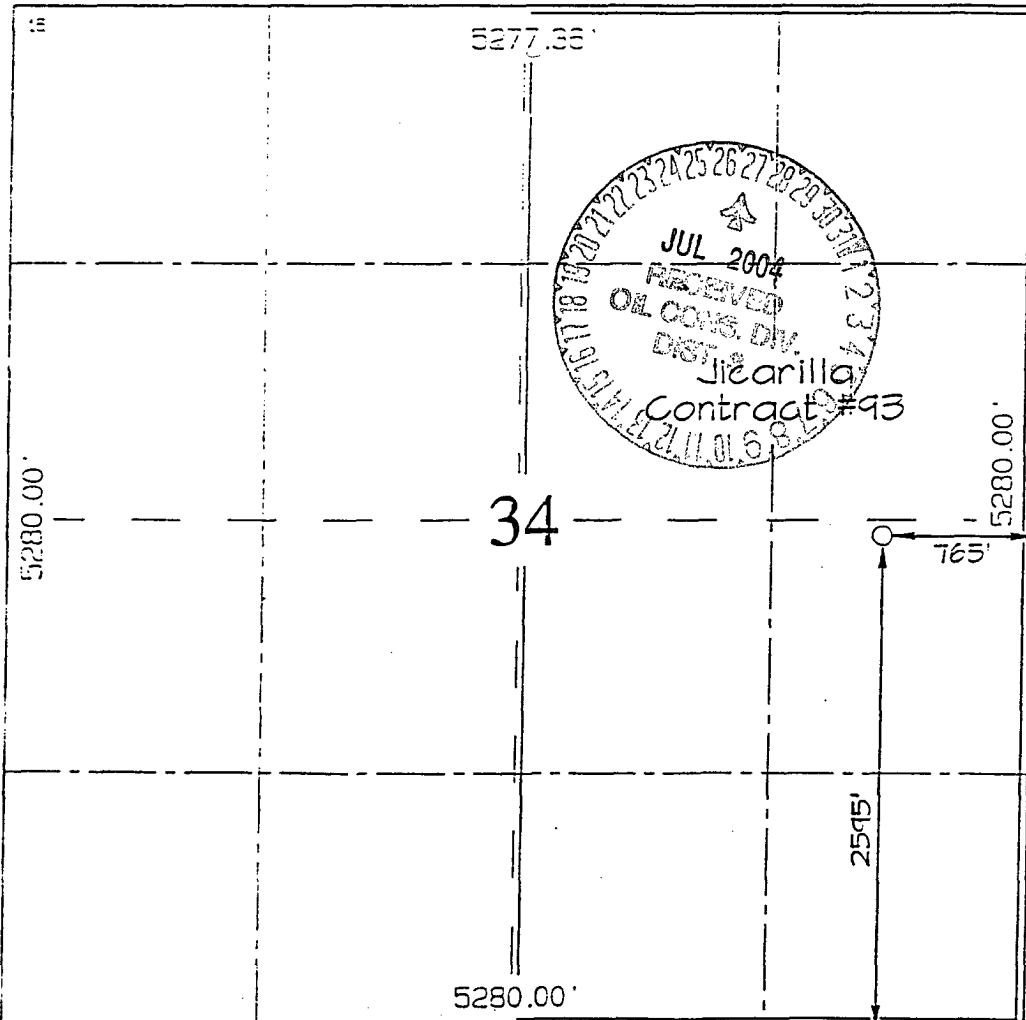
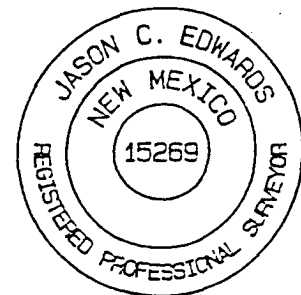
Lot or Lot No.	Section	Township	Range	Lot 10	Feet from the	North/South line	Feet from the	East/West line	County
I	34	27N	3W		2595	SOUTH	765	EAST	RIO ARriba

<sup>11</sup> Bottom Hole Location If Different From Surface

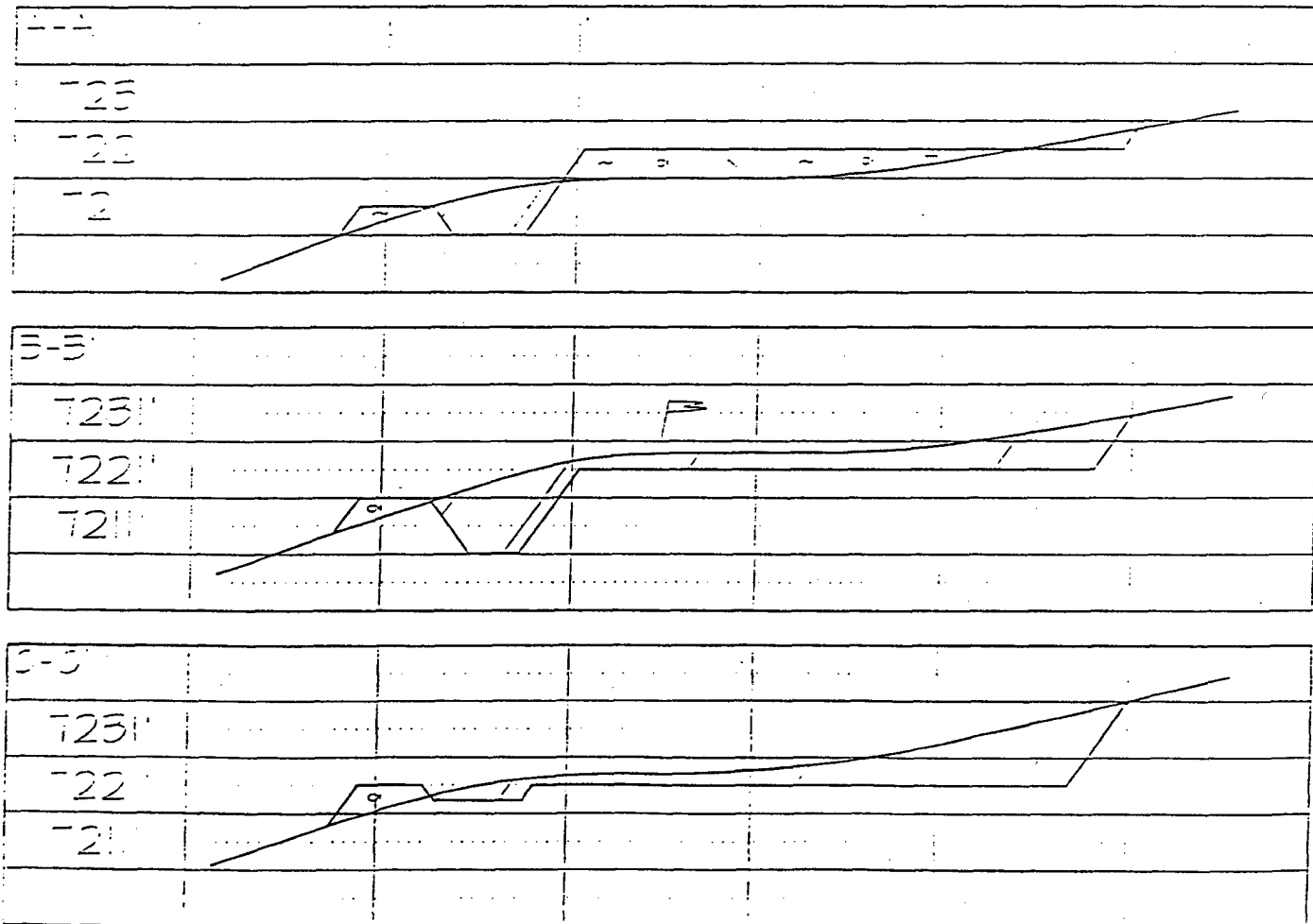
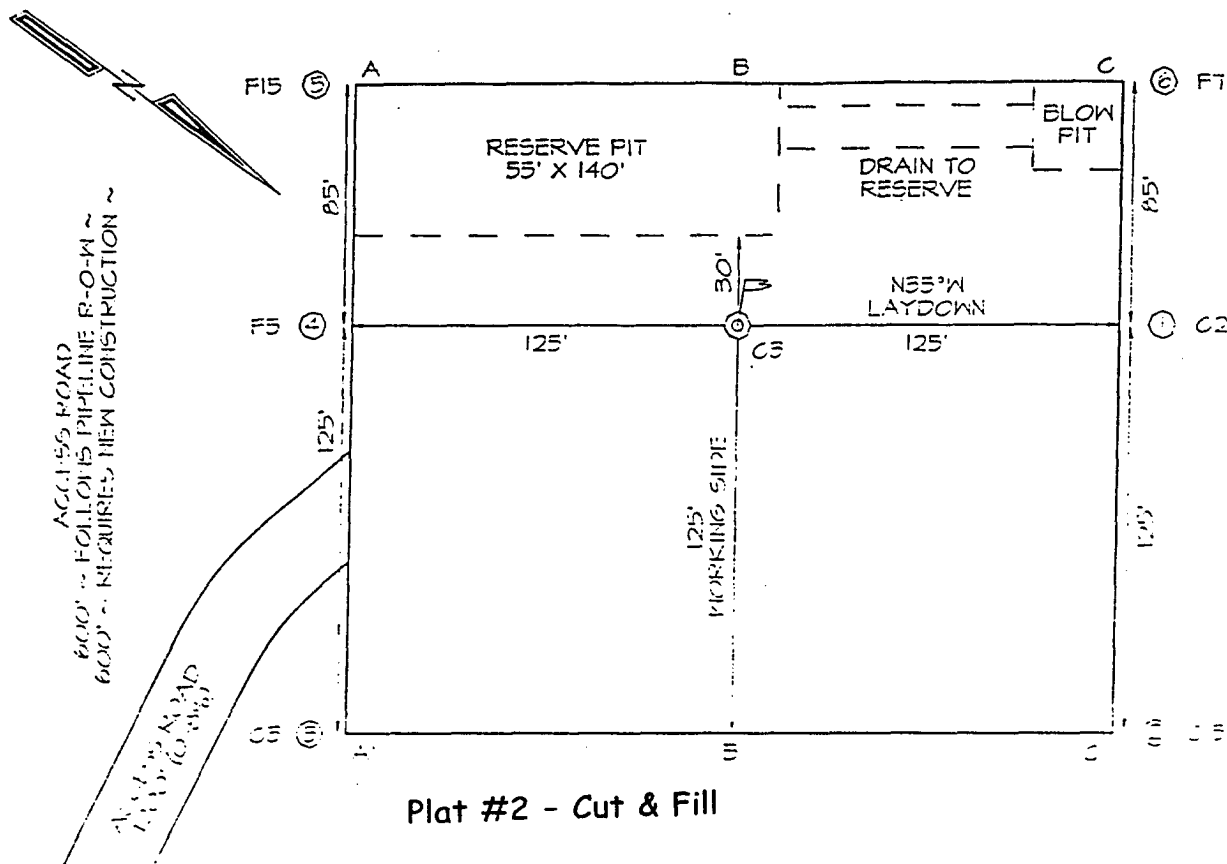
Lot or Lot No.	Section	Township	Range	Lot 10	Feet from the	North/South line	Feet from the	East/West line	County

*Dedicated Acres <b>320.0 Acres - (E/2)</b>	*Joint or Infill	*Consolidation Code	*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>12</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>Larry Higgins</i> Signature <b>LARRY HIGGINS</b> Printed Name <b>DRILLING CO</b> Title <b>12-16-03</b> Date</p>
	<p><sup>13</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: <b>AUGUST 21, 2003</b></p> <p>Signature and Seal of Professional Surveyor</p> <div data-bbox="1161 1617 1461 1911"></div> <p><b>JASON C. EDWARDS</b> Certificate Number 15269</p>

2595' FSL & 765' FEL, SECTION 34, T27N, R3W, NMPM  
RIO ARriba COUNTY, NEW MEXICO ELEVATION: 7224'





## WILLIAMS PRODUCTION COMPANY

### Operations Plan

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

<b><u>DATE:</u></b>	12/15/2003	<b><u>FIELD:</u></b>	Jicarilla MV
<b><u>WELL NAME:</u></b>	Jicarilla 93 #2A	<b><u>SURFACE:</u></b>	Jicarilla
<b><u>LOCATION:</u></b>	NE/4 SE/4 Sec 34-27N-3W Rio Arriba, NM	<b><u>MINERALS:</u></b>	Jicarilla
<b><u>ELEVATION:</u></b>	7224' GR	<b><u>LEASE #</u></b>	Jicarilla Apache Contract #93
<b><u>MEASURED DEPTH:</u></b>	6507'		

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

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

	<b><u>MD</u></b>		<b><u>MD</u></b>
Ojo Alamo	3592'	Cliff House	5677'
Kirtland	3673'	Menefee	5757'
Fruitland	3673'	Point Lookout	6057'
Pictured Cliffs	3915'	<b>Total Depth</b>	<b>6507'</b>
Lewis	4080'		

- B. MUD LOGGING PROGRAM:** Mud logger on location from approximately 3,000' to intermediate casing point.
- C. 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.
- 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 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 (MD)</u>	<u>CASING SIZE</u>	<u>WT. &amp; GRADE</u>
Surface	12-1/4"	+/- 250'	9-5/8"	36# K-55
Intermediate	8-3/4"	+/- 4330'	7"	20# K-55
Prod. Liner	6-1/4"	+/- 4230'-6507'	4-1/2"	10.5# K-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 one Turbulent centralizer on each of the bottom (3) joints and one standard centralizer every (4) joints to the surface casing. Total centralizers = (26) regular and (3) turbulent.
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 5630'. Place one positive standoff turbolizer every other joint. Total turbolizers is 34.

#### C. 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> + 1/4 # 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 - 490 sx (1023) cu.ft.) of "Type III" 65/35 poz 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 - 100 sx (139cu.ft.) of "Type III" with 1/4# cello-flake/sk, and 1% CaCl<sub>2</sub> (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 = 1158 cu.ft. Bump Plug to 1,500 psi. Notify engineering if cement is not circulated to surface.
3. PRODUCTION LINER: 10 bbl Gelled Water space. Lead: 50sx (130ft<sup>3</sup>) of Premium Light HS + 1% FL-52 + .2% CD-32, 0.1% R-3, 3 #/sk CSE, 1/4 #/sk cello flake. (Yield = 2.59 cu.ft./sk, Weight = 11.6 #/gal.). Tail: 80 sx (160 ft<sup>3</sup>) of Premium Light HS + 1% FL-52 + .2% CD-32, 0.1% R-3, 3 #/sk CSE, 1/4 #/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 293ft<sup>3</sup>. WOC 12 hours

# 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)

