

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

5. LEASE DESIGNATION AND SERIAL NO.

SF- 078767

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

Rosa Unit

8. FARM OR LEASE NAME, WELL NO.

171C

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK **DRILL** **DEEPEN**

1b. TYPE OF WELL

OIL WELL

GAS WELL

OTHER

SINGLE ZONE

MULTIPLE ZONE

2. NAME OF OPERATOR

Williams Production Company, LLC

3. ADDRESS OF OPERATOR

c/o Walsh Engineering 7415 E. Main St., Farmington, NM 87402 (505) 327-4892

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

At Surface 720' FSL and 1265' FEL

At proposed Prod. Zone
350' FNL and 550' FEL

9. API WELL NO.

30-039-27241

10. FIELD AND POOL OR WILDCAT

Blanco Mesa Verde

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

p Sec. 6, T31N, R5W

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

28 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)

720'

16. NO. OF ACRES IN LEASE

2518.04

17. NO. OF ACRES ASSIGNED TO THIS WELL

320 231.86

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

1500'

19. PROPOSED DEPTH

6987' (measured depth)

20. ROTARY OR CABLE TOOL COMPLYANCE WITH ATTACHED "GENERAL REQUIREMENTS".

Rotary

21. ELEVATIONS (Show whether DF, RT, GR) **6416' GR**
This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

22. APPROX. DATE WORK WILL START*
June 20, 2002

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#	+/- 250'	~180 cu.ft. Type III with 2% CaCl ₂
8-3/4"	7"	20#	+/- 4824'	~1086cu.ft. 65/35 poz & ~364 cu.ft. Type I
6-1/4"	4-1/2"	10.5#	+/- 4724'-6987'	~101 cu.ft. 50/50 poz & ~199cu.ft. PL HS

Williams Production Company, LLC proposes to drill a directional 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 Independent Contract Archaeology. 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 ~1450' of new access road (see Pipeline & Well Plats #3 & #4). This pad will also be used for directionally drilling the Rosa 41B and Rosa 171C. The well will be accessed by utilizing an existing road that runs NE/NE of section 6, NW/NW, NE/NW of section 5 all of 31N, R5W and the SE/SW of section 32, 32N, 5W where it joins the main "Rosa Road".

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 John C. Thompson TITLE John C. Thompson, Agent DATE 5/23/02

(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 David J. Mankiewicz TITLE _____ DATE JUN 27

***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.

HOLD C104 FOR Directional Survey

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
 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

¹ API Number 30039-27241		² Pool Code 72319	³ Pool Name BLANCO MESAVERDE
⁴ Property Code 17033	⁵ Property Name ROSA UNIT		⁶ Well Number 171C
⁷ OGRID No. 120782	⁸ Operator Name WILLIAMS PRODUCTION COMPANY		⁹ Elevation 6416'

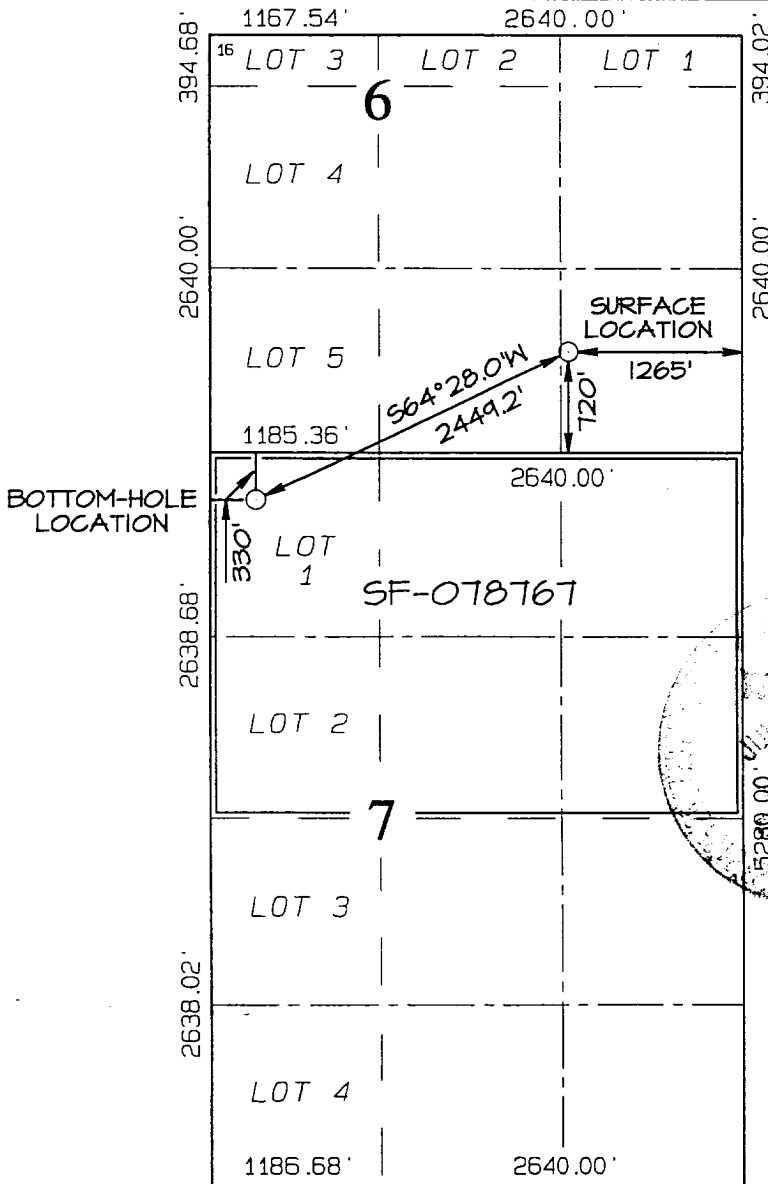
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	6	31N	5W		720	SOUTH	1265	EAST	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
C	7	31N	5W		330	NORTH	330	WEST	RIO ARRIBA

¹² Dedicated Acres 231.86 Acres - (N/2)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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

¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

John C. Thompson
 Signature
 John C. Thompson
 Printed Name
 Agent/Engineer
 Title
 5/23/02
 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.

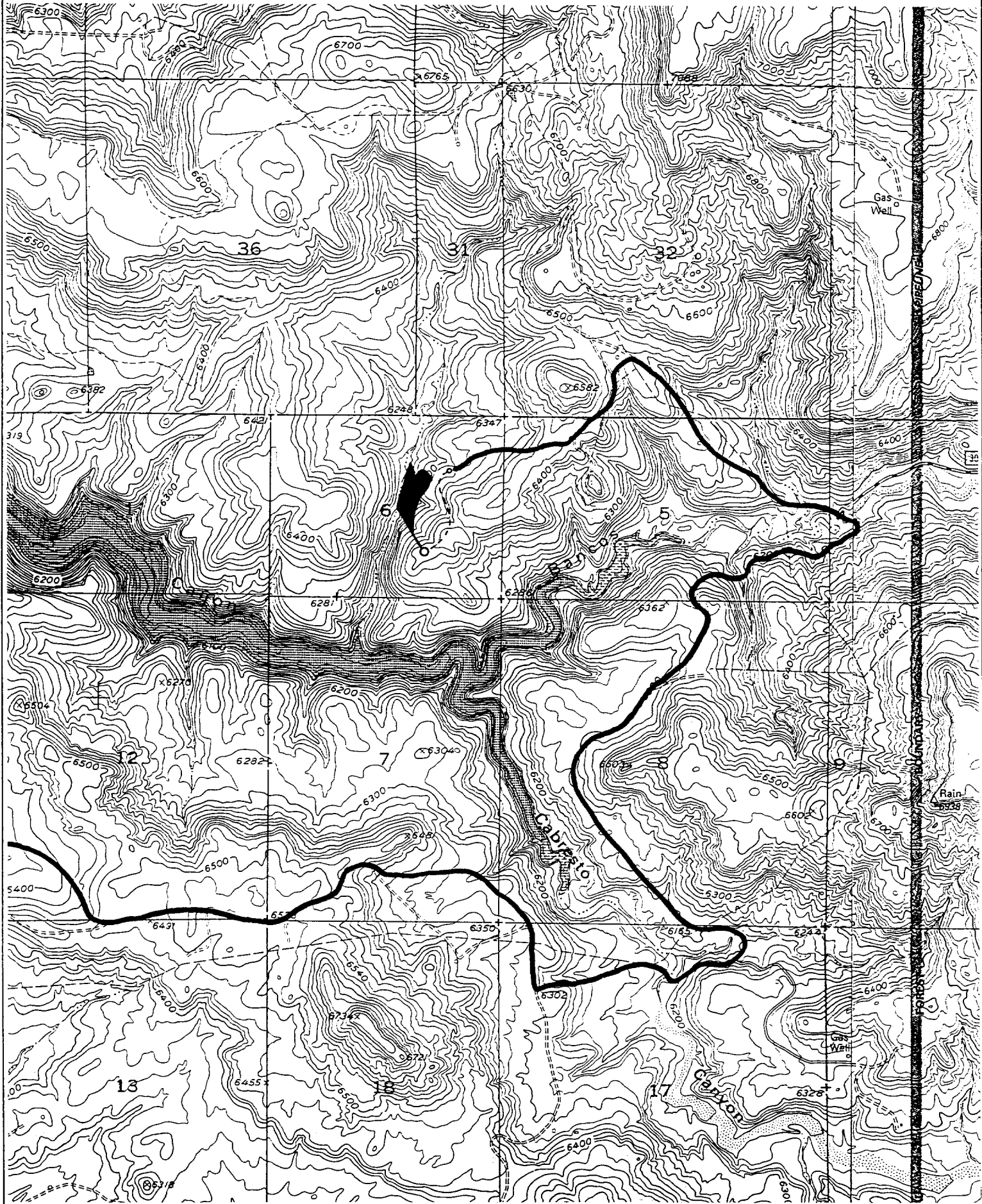
Date of Survey: APRIL 2, 2002

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
 REGISTERED PROFESSIONAL SURVEYOR
 NEW MEXICO
 15269

JASON C. EDWARDS
 Certificate Number 15269

WILLIAMS PRODUCTION COMPANY ROSA UNIT #171C
720' FSL & 1265' FEL, SECTION 6, T31N, R5W, N.M.P.M.
RIO ARriba COUNTY, NEW MEXICO





WILLIAMS PRODUCTION COMPANY

Operations Plan

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

<u>DATE:</u>	5/22/2002	<u>FIELD:</u>	Blanco MV
<u>WELL NAME:</u>	Rosa Unit 171C	<u>SURFACE:</u>	BLM
<u>LOCATION:</u>	SE/4 SE/4 Sec 6-31N-5W Rio Arriba, NM	<u>MINERALS:</u>	Fed
<u>ELEVATION:</u>	6416' GR	<u>LEASE #</u>	SF-078767
<u>MEASURED DEPTH:</u>	6987'		

I. GEOLOGY: Surface formation - San Jose

A. FORMATION TOPS: (KB)

	<u>TVD</u>	<u>MD</u>		<u>TVD</u>	<u>MD</u>
Ojo Alamo	2493'	2947'	Cliff House	5468'	6297'
Kirtland	2598'	3089'	Menefee	5513'	6342'
Fruitland	3058'	3711'	Point Lookout	5708'	6537'
Pictured Cliffs	3258'	3981'	Mancos	6038'	6867'
Lewis	3553'	4348'	Total Depth	6158'	6987'

B. LOGGING PROGRAM: DIL from intermediate casing to TD. CNL/FDC over intervals of interest.(selected intervals by on-site Geologist). *Subject to change as wellbore conditions dictate.*

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. 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.

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. & GRADE</u>
Surface	12-1/4"	250'	9-5/8"	36# K-55
Intermediate	8-3/4"	4824'	7"	20# K-55
Prod. Liner	6-1/4"	4724'-6987'	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: 140sx (180 cu.ft.) of "Type III" + 2% CaCl₂ + ¼ # of cello-flake/sk (Yield = 1.39 cu.ft./sk, Weight = 14.5 #/gal.). The 125% excess should circulate cement to the surface. WOC 12 hours. Test csg to 1500psi.
2. INTERMEDIATE: Lead: 520sx (1086 ft³) of "Type III" 65/35 poz + 8% gel + ¼ # cello-flake/sk (Yield = 2.09 ft³/sk, Weight = 12.1 #/gal.). Tail: 265x (364 ft³) of class "Type III" + ¼ # cello-flake/sk. (Yield = 1.39 ft³/sk, Weight = 14.5#/gal.). The 100% excess in lead and tail should circulate cement to the surface. Total volume = 1450 ft³. WOC 12 hours. Run a temperature survey after 8 hours if cement is not circulated to the surface. Test csg. to 1500psi.
3. PRODUCTION LINER: Scavenger: 30sx of Premium Light HS + 1% FL-52 + .3% CD-32 + 2% KCl (Weight = 11 #/gal). Lead: 50sx (101 ft³) of Premium Light HS + 1% FL-52 + .3% CD-32 + 2% KCl. (Yield = 2.02 cu.ft./sk, Weight = 12.5 #/gal.). Tail: 100 sx (199 ft³) of Premium Light HS + 1% FL-52 + .3% CD-32 + 2% KCl + .25 #/sk Celloflake + 4% Phenoseal. (Yield = 2.02 ft³/sk, Weight = 12.5 #/gal.). Displace cement at a minimum of 8 BPM. The 30% excess in lead and tail should cover liner top. Total volume 301ft³. WOC 12 hours.

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

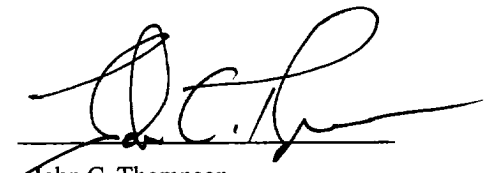
1. Pressure test 7" & 4-1/2" casing to 3300# for 15 minutes.

C. STIMULATION

1. Stimulate with approximately 80,000# of 20/40 sand in slick water.
2. Isolate Point Lookout with a DBP.
3. Perforate the Menefee/Cliff House as determined from the open hole logs.
4. Stimulate with approximately 80,000# of 20/40 sand in slick water.
5. 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.



John C. Thompson
Engineer

Williams Production Company, LLC

Well Control Equipment Schematic for 2M Service

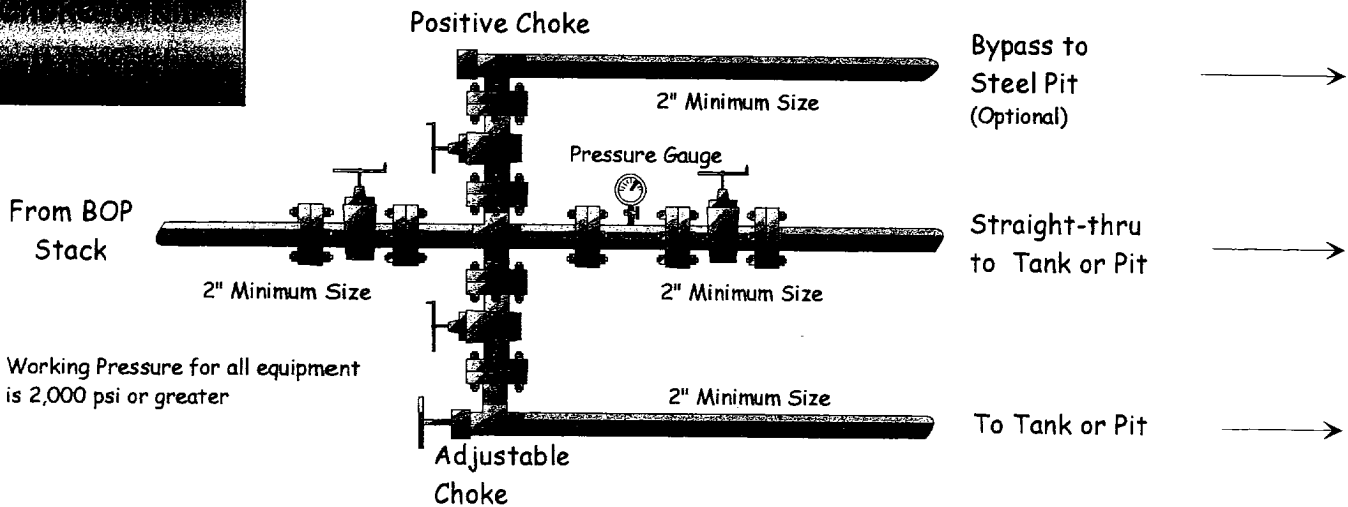
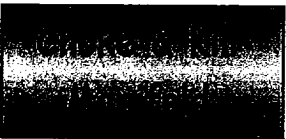
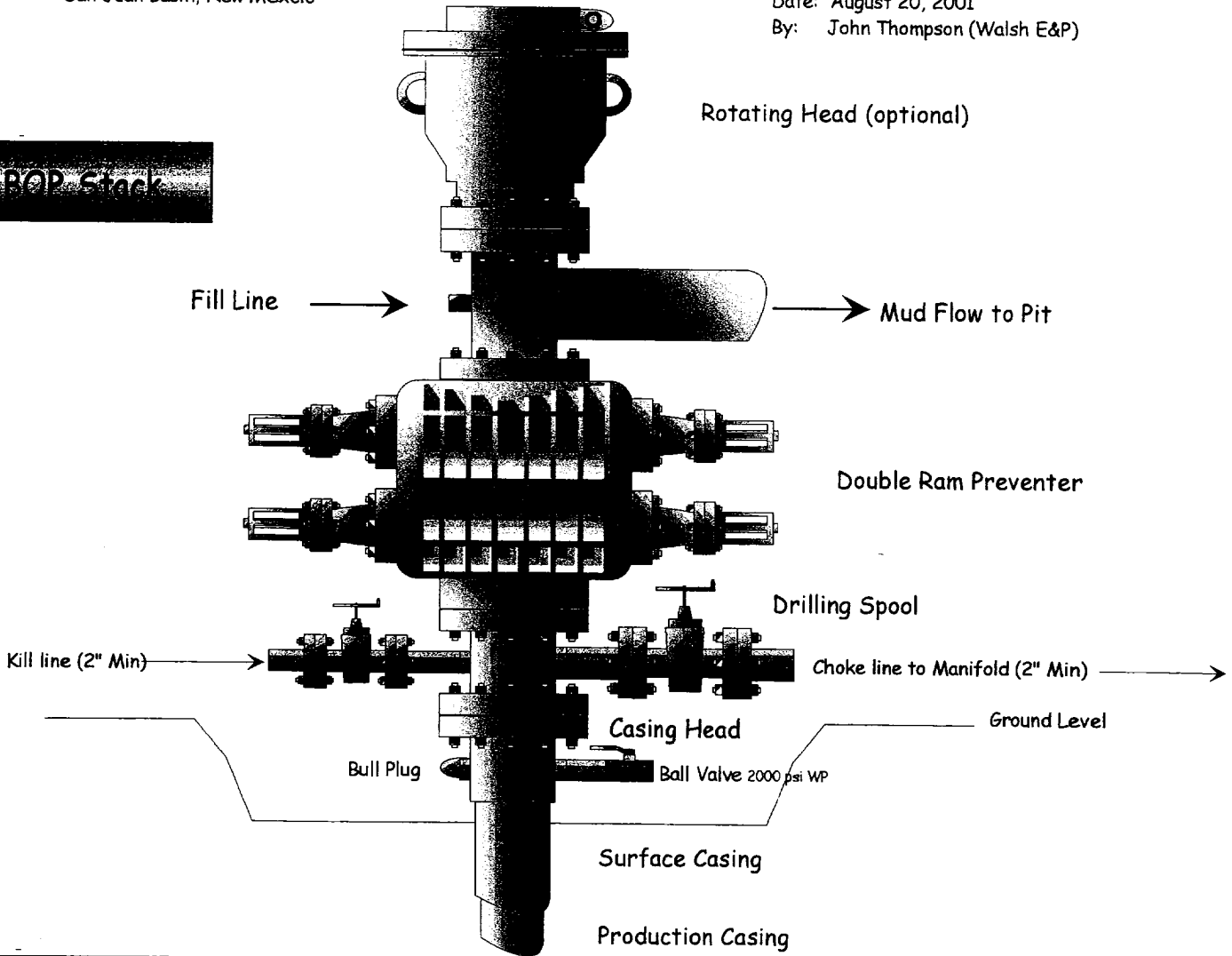
Attachment to Drilling Technical Program

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