

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0136
Expires January 31, 2004

5. Lease Serial No.
NMSF-078763
6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

2005 AUG 2 PM 12

58 If Unit or CA Agreement, Name and No.

Rosa

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

☒ Single Zone ☐ Multiple Zone

8. Lease Name and Well No.
80C

2. Name of Operator

070 FARMINGTON

9. API Well No.

30-039-29610

Williams Production Company, LLC

3a. Address

P.O. Box 640 Aztec, NM 87410

3b. Phone No. (include area code)

(505) 634-4208

10. Field and Pool, or Exploratory

Blanco Mesaverde

4. Location of Well (Report location clearly and in accordance with any State requirements. *)

At surface lot no. N: 1095' FSL & 1670' FWL

At proposed prod. zone lot no. L: 1650' FSL & 330' FWL

11. Sec., T., R., M., or Blk. and Survey or Area

N Section 8. 31N. 5W

14. Distance in miles and direction from nearest town or post office*

approximately 17 miles northeast of Navajo City, New Mexico

12. County or Parish

Rio Arriba

13. State

NM

15. Distance from proposed*

location to nearest
property or lease line, ft.
(Also to nearest drig. unit line, if any)

1650'

16. No. of Acres in lease

2,544.64

17. Spacing Unit dedicated to this well

320.00 (W/2)

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

325'

19. Proposed Depth

6,384'

20. BLM/BIA Bond No. on file

UT0847

21. Elevations (Show whether DF, KDB, RT, GL, etc.)

6,259' GR

22. Approximate date work will start*

August 31, 2005

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

Title

Drilling COM

Approved by (Signature)

Title

Name (Printed/Typed)

Larry Higgins

Date

8/1/05

Name (Printed/Typed)

Office

Date

8/30/05

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 Production Company, LLC, proposes to drill a well to develop the Blanco Mesaverde Formations at the above described location in accordance with the attached drilling and surface use plans.

The surface is under jurisdiction of the Bureau of Land Management, Farmington Field Office.

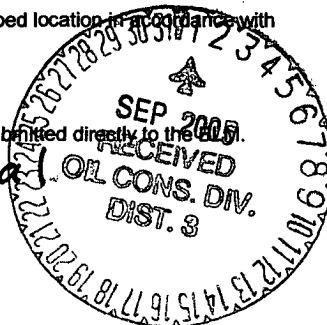
This location has been archaeologically surveyed by La Plata Archaeological Consultants. Copies of their report have been submitted directly to the BLM.

A 99.708-foot pipeline tie would be required for this location.

HOLD C104 FOR directional
Survey

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS".

This action is subject to technical and
procedural review pursuant to 43 CFR 3165.3
and appeal pursuant to 43 CFR 3165.4



NMOCD

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

2005 HUG 2 PM 12:58 AMENDED REPORT

RECEIVED

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number		*Pool Code 72319	*Pool Name BLANCO MESAVERDE
*Property Code 17033	*Property Name ROSA UNIT		*Well Number 80C
*GRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY		*Elevation 6259

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
N	8	31N	5W		1095	SOUTH	1670	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
L	8	31N	5W		1650	SOUTH	330	WEST	RIO ARriba

¹² Dedicated Acres 320.0 Acres - (W/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

<p>¹⁶</p> <p>LEASE SF-078767</p> <p>LEASE SF-078763</p> <p>BOTTOM HOLE</p> <p>SURFACE LOCATION</p> <p>1452.7'</p> <p>N67°40.5'W</p> <p>5276.04'</p> <p>5280.00'</p> <p>1670'</p> <p>1650'</p> <p>330'</p>	<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>DRILLING CO M Title</p> <p>9-1-05 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>Survey Date: FEBRUARY 9, 2005</p> <p>Signature and Seal of Professional Surveyor</p> <p> JASON C. EDWARDS 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.

5. Indicate Type of Lease FEDERAL ☒ X
STATE ☐ FEE ☐

6. State Oil & Gas Lease No.
Federal NMSF-0078763

7. Lease Name or Unit Agreement Name

Rosa Unit

8. Well Number 80C

9. OGRID Number 120782

10. Pool name or Wildcat
Blanco Mesaverde

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

3. Address of Operator
P.O. Box 640 Aztec, NM 87410

4. Well Location

Unit Letter N: 1095 feet from the south line and 1670 feet from the west line

Section 8 Township 31N Range 5W NMPM County Rio Arriba

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
6,259' GR

Pit or Below-grade Tank Application ☒ or Closure ☐

Pit type reserve Depth to Groundwater >100' Distance from nearest fresh water well >1,000' Distance from nearest surface water >1,000'

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.

Reserve pit to be constructed in accordance with NMOCD Interim Pit and Below-grade Tank Guidelines

Reserve pit to be located approximately 40 feet northeast of the well head, in the northwest corner of the well pad

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 Drilling COM DATE 8/1/2005

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

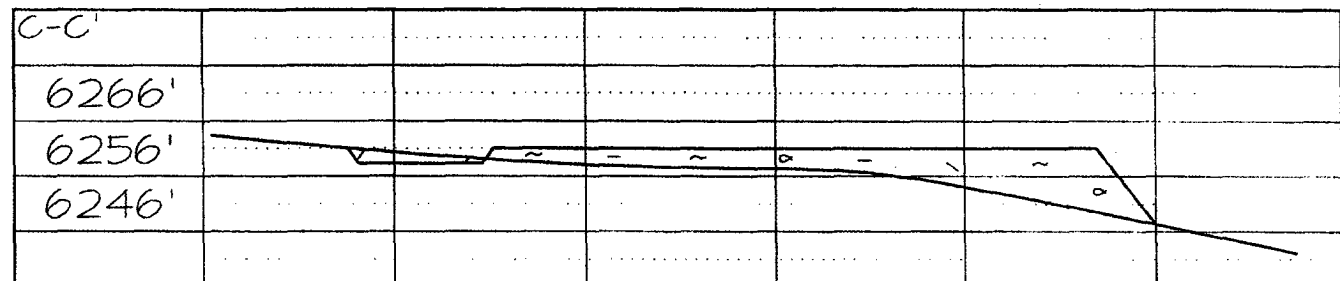
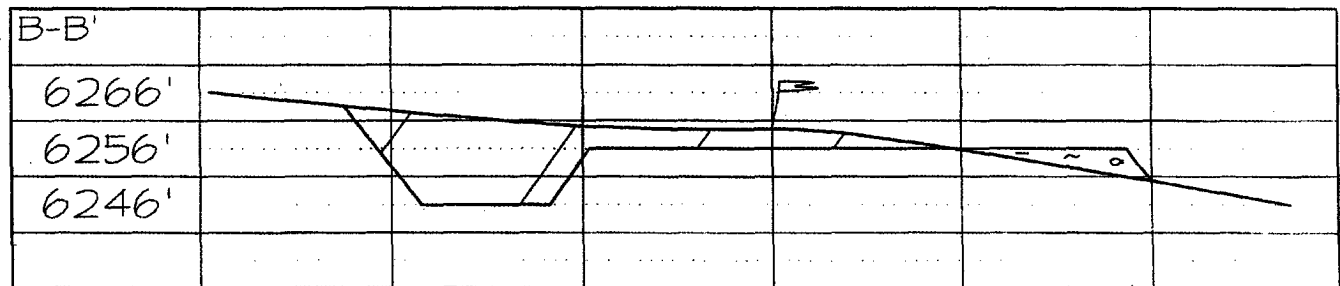
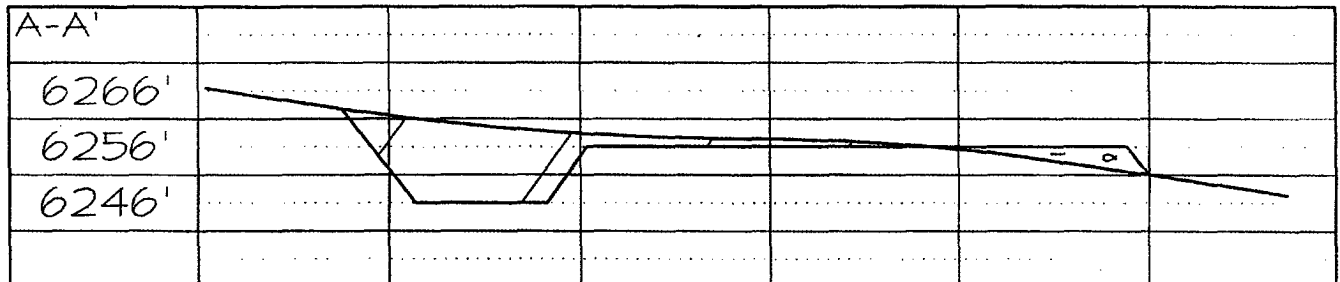
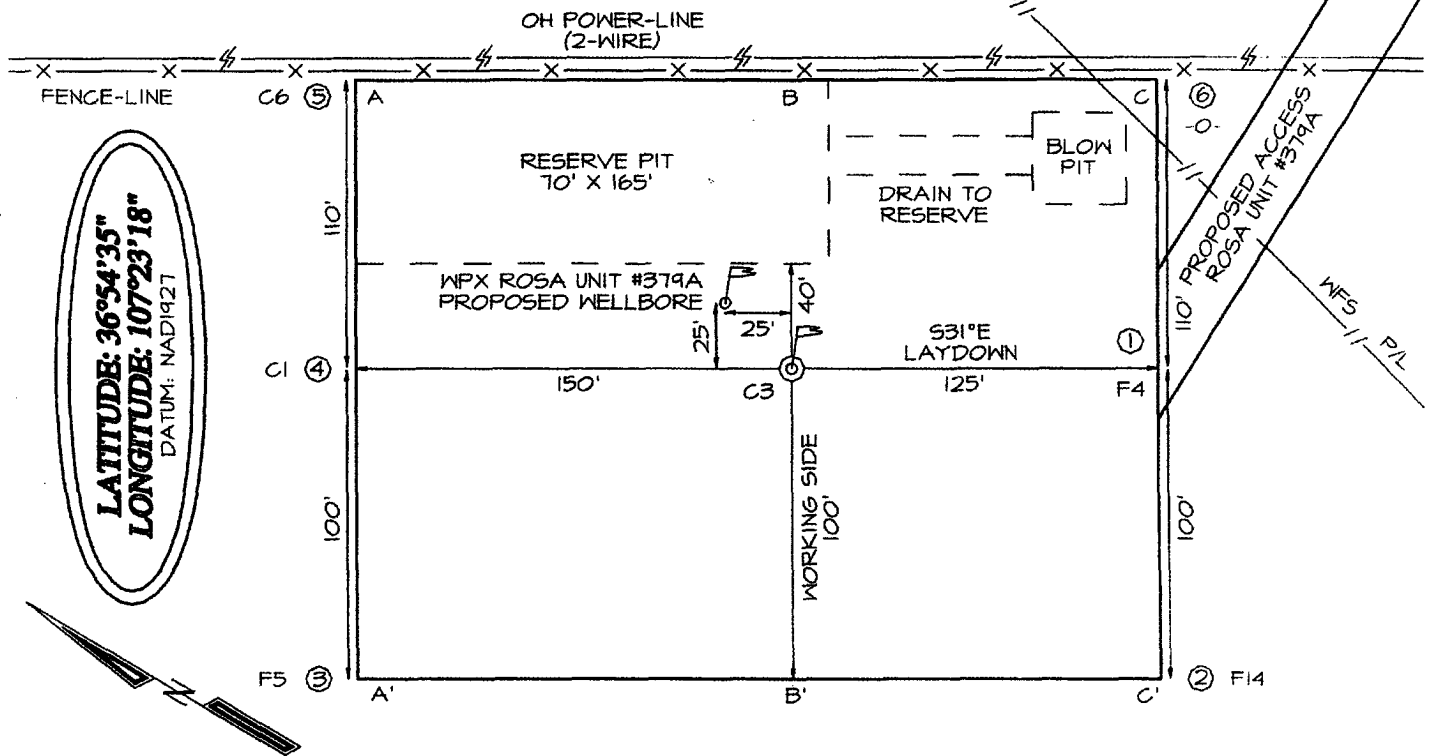
For State Use Only

APPROVED BY: [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. IV DATE SEP 01 2005

Conditions of Approval (if any):

WILLIAMS PRODUCTION COMPANY ROSA UNIT #80C
1095' FSL & 1670' FWL, SECTION 8, T31N, R5W, NMPM
RIO ARriba COUNTY, NEW MEXICO ELEVATION: 6259'

Plot #1: Well Location Layout





WILLIAMS PRODUCTION COMPANY

Operations Plan

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

<u>DATE:</u>	8/1/2005	<u>FIELD:</u>	Blanco MV
<u>WELL NAME:</u>	Rosa #80C	<u>SURFACE:</u>	BOR
<u>SURF LOCATION:</u>	SESW Sec 8-31N-5W Rio Arriba, NM	<u>MINERALS:</u>	FED
<u>BH LOCATION:</u>	NWSW Sec 8-31N-5W		
<u>ELEVATION:</u>	6,259' GR	<u>LEASE #</u>	SF-078763
<u>MEASURED DEPTH:</u>	6,384'		

I. GEOLOGY: Surface formation - San Jose

A. FORMATION TOPS: (KB)

Name	TVD	MD	Name	TVD	MD
Ojo Alamo	2,368	2,606	Cliff House	5,313	5,667
Kirtland	2,478	2,735	Menefee	5,358	5,712
Fruitland	2,868	3,190	Point Lookout	5,553	5,907
Pictured Cliffs	3,088	3,429	Mancos	5,928	6,282
Lewis	3,423	3,776	TD	6,028	6,384

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:

<u>CASING TYPE</u>	<u>HOLE SIZE</u>	<u>DEPTH (MD)</u>	<u>CASING SIZE</u>	<u>WT. & GRADE</u>
Surface	12-1/4"	+/- 300'	9-5/8"	36# K-55
Intermediate	8-3/4"	+/- 3,919'	7"	20# K-55
Prod. Liner	6-1/4"	+/- 3,819'-6,384'	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 (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 LINER / CASING: 4-1/2" & 5-1/2" 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.

C. CEMENTING:

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

1. SURFACE: Slurry: 155sx (205 cu.ft.) of "Type III" + 2% CaCl₂ + 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 - 435 sx (900 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 - 100 sx (139cu.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 = 1,039 cu.ft. Bump Plug to 1,500 psi. Notify engineering if cement is not circulated to surface. 1049
3. PRODUCTION LINER: 10 bbl Gelled Water space. Lead: 50sx (130ft³) 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: 100 sx (215 ft³) 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 ft³/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 313 ft³. WOC 12 hours 345

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

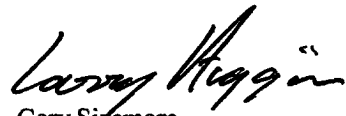
1. Pressure test 7" & 4-1/2" casing to 3300# for 15 minutes.

C. STIMULATION

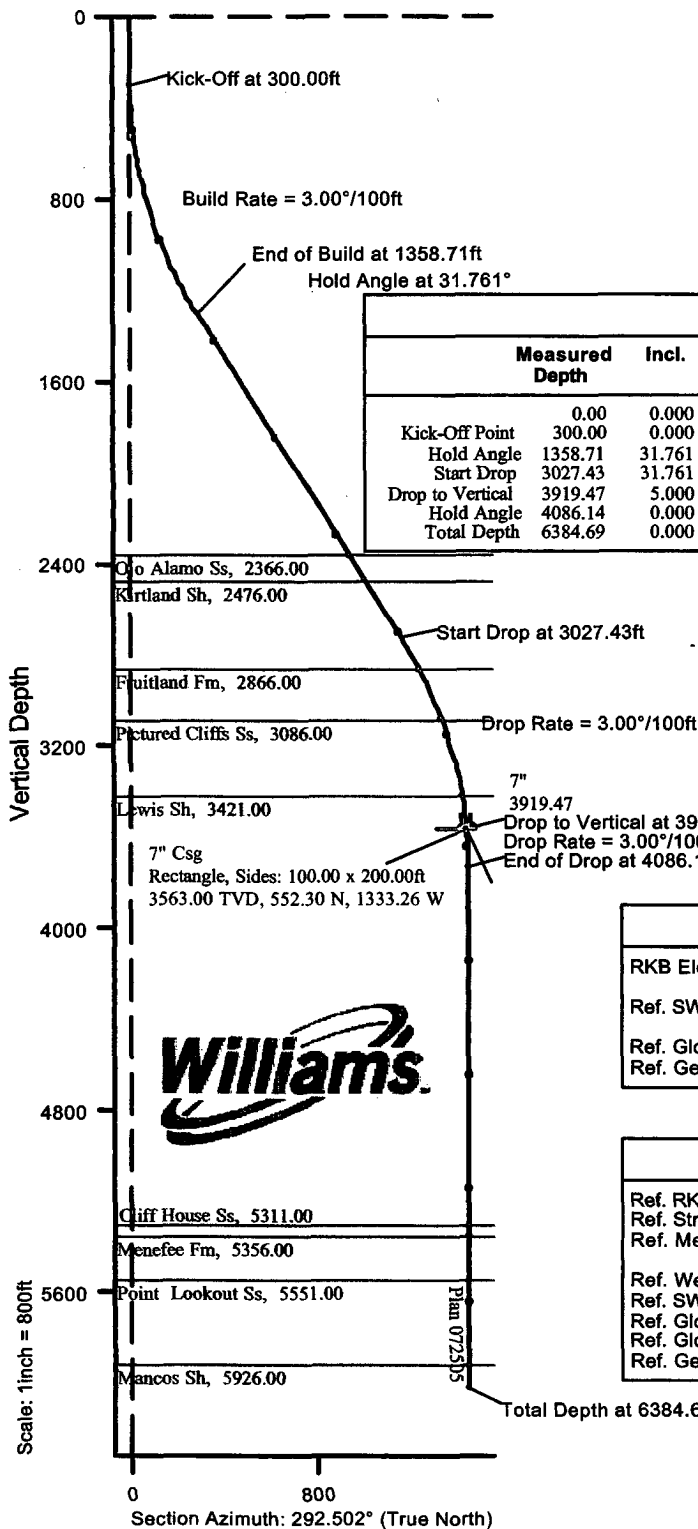
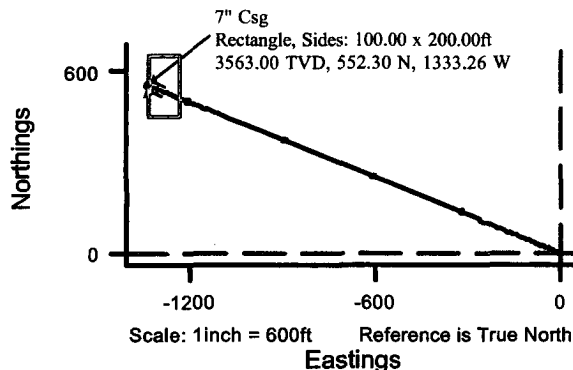
1. Perforate the Point Lookout as determined from the open hole logs.
2. Stimulate with approximately 80,000# of 20/40 sand in slick water.
3. Isolate Point Lookout with a CIBP.
4. Perforate the Menefee/Cliff House as determined from the open hole logs.
5. Stimulate with approximately 80,000# of 20/40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

New Mexico
Rio Arriba County
Sec. 08-T31N-R05W
Rosa Unit #80C
Plan 072505



Plan 072505 Proposal Data

	Measured Depth	Incl.	Azm.	Vertical Depth	Northings	Eastings	Vertical Section	Dogleg Rate
Kick-Off Point	0.00	0.000	0.000	0.00	0.00 N	0.00 E	0.00	0.00
Hold Angle	300.00	0.000	0.000	300.00	0.00 N	0.00 E	0.00	0.00
Start Drop	1358.71	31.761	292.502	1305.32	109.46 N	264.23 W	286.01	3.00
Drop to Vertical	3027.43	31.761	292.502	2724.14	445.62 N	1075.74 W	1164.39	0.00
Hold Angle	3919.47	5.000	292.502	3563.00	552.30 N	1333.26 W	1443.13	3.00
Total Depth	4086.14	0.000	0.000	3729.46	555.08 N	1339.97 W	1450.40	3.00
	6384.69	0.000	0.000	6028.00	555.08 N	1339.97 W	1450.40	0.00

Rosa Unit #80C Surface Location

RKB Elevation:	6271.00ft above Mean Sea Level
Ref. SW Cor Sec 8:	1095.00 N, 1670.00 E
Ref. Global Coordinates:	2150706.79 N, 630100.61 E
Ref. Geographical Coordinates:	36° 54' 35.0000" N, 107° 23' 18.0000" W

Plan 072505 Bottom Hole Location

Ref. RKB(6259'+12'KB):	6028.00ft
Ref. Structure:	6016.00ft
Ref. Mean Sea Level:	-243.00ft
Ref. Wellhead:	555.08 N, 1339.97 W (True North)
Ref. SW Cor Sec 8:	1650.00 N, 329.99 E (True North)
Ref. Global Coordinates:	2151255.62 N, 628758.06 E
Ref. Geographical Coordinates:	36° 54' 40.4886" N, 107° 23' 34.4999" W

Williams Production Company, LLC
Well Control Equipment Schematic for 2M Service

Attachment to Drilling Technical Program

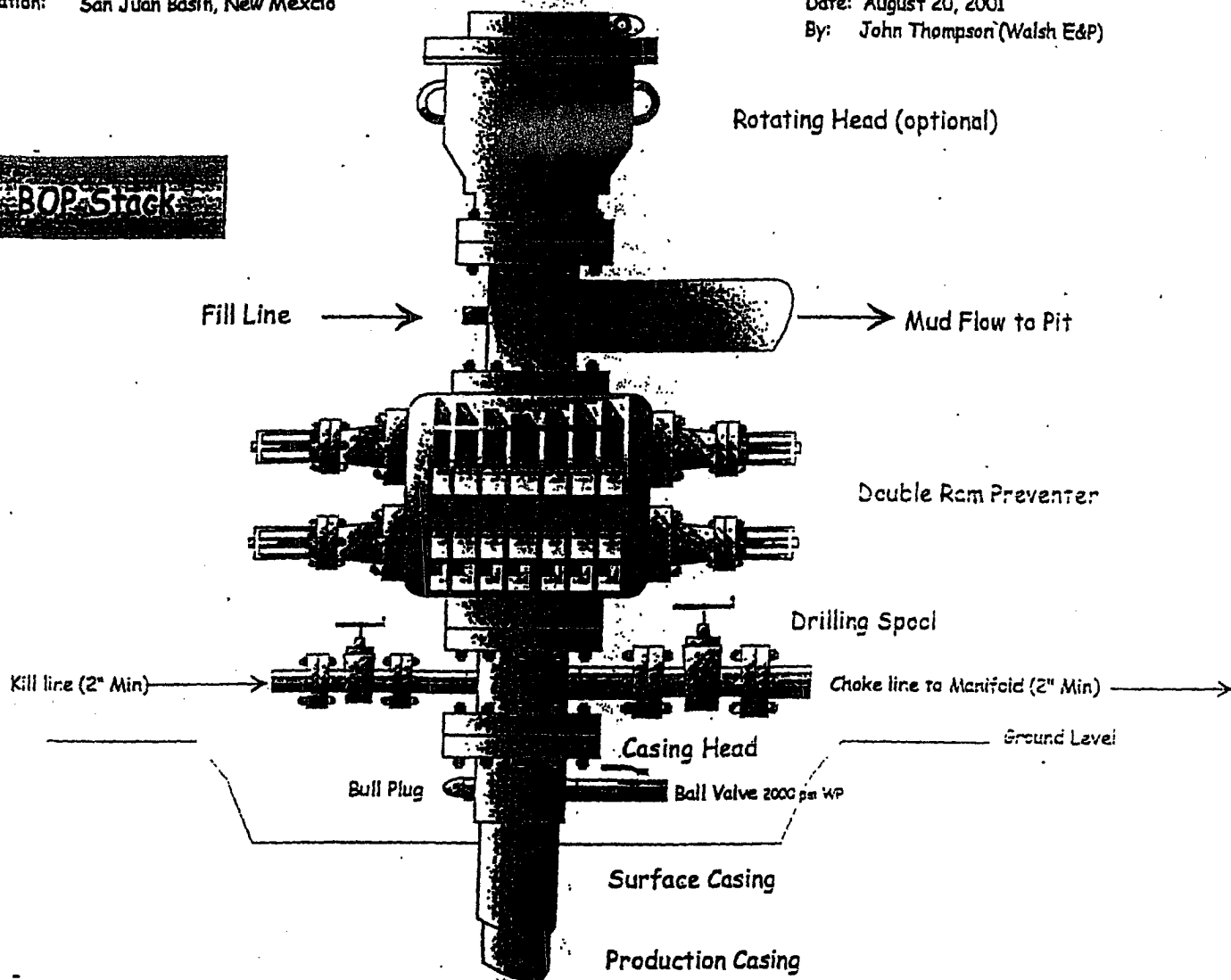
Typical BOP setup

Location: San Juan Basin, New Mexico

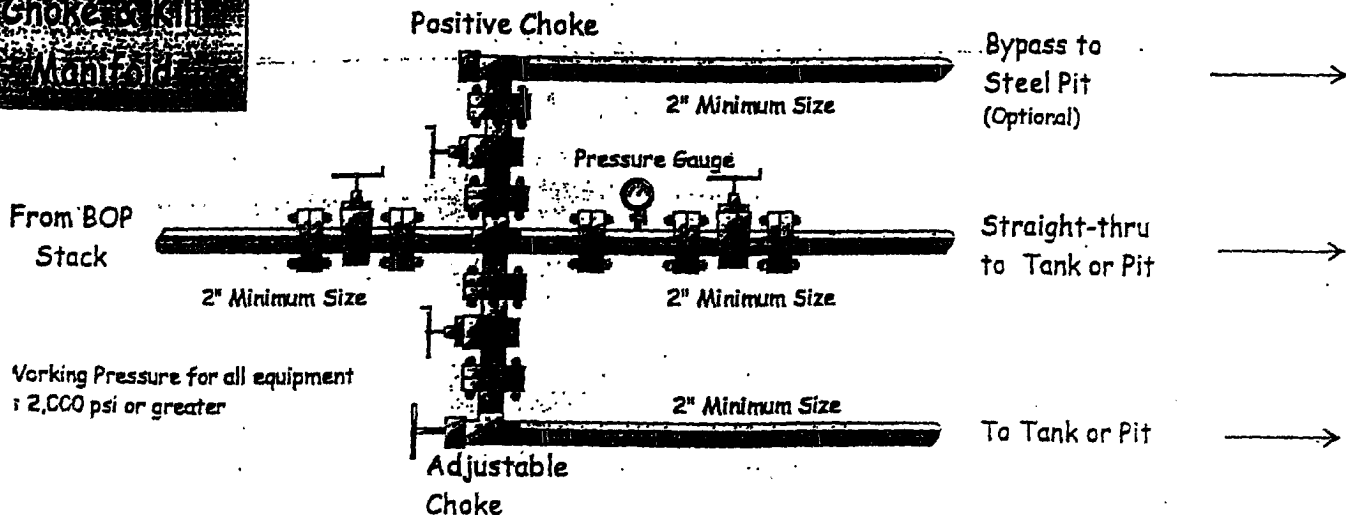
Date: August 20, 2001

By: John Thompson (Walsh E&P)

BOP Stack



Choke & Kill Manifold



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