

SUBMIT IN TRIPPLICATE*
(Other instructions on
reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires December 31, 1991

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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 ☐

5. LEASE DESIGNATION AND SERIAL NO.
NM-03189

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
070 Smith, NM

7. UNIT AGREEMENT NAME
Cox Canyon

8. FARM OR LEASE NAME, WELL NO.
#4B

2. NAME OF OPERATOR
Williams Production Company LLC

9. API WELL NO.
3004532186

3. ADDRESS OF OPERATOR
P.O. Box 316 - Ignacio, Colorado 81137 - Phone (970) 563-3308

10. FIELD AND POOL OR WILDCAT
Blanco Mesa Verde

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At Surface **1550' FNL & 2030' FWL**
At proposed Prod. Zone **2320' FNL & 2215' FEL**

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 21, T32N, R11W

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
12 miles North of Aztec, NM

12. COUNTY OR PARISH
San Juan

13. STATE
NM

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT (Also to nearest drlg. unit line, if any)
2215'

16. NO. OF ACRES IN LEASE
1384.60

17. NO. OF ACRES ASSIGNED TO THIS WELL
320 E/2

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE, FT.
~50'

19. PROPOSED DEPTH
6607'

20. ROTARY OR CABLE TOOLS
Rotary

21. ELEVATIONS (Show whether DF, RT, GB, etc.)
6880' 6898'

22. APPROX. DATE WORK WILL START*
March 1, 2004

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 ft	222 ~205 cu.ft. Type III with 2% CaCl ₂
8-3/4"	7"	20#	~4060 ft	897-875 cu.ft. 65/35 poz & ~139 cu.ft. Type III
6-1/4"	4-1/2"	10.5#	~3950 ft - 6607 ft	410 ~363 cu.ft. Premium Light HS 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 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 no new road. This well will be accessed by an existing road that crosses the NW qtrsec 21, the SW qtr sec 16, W/2 sec 17, SE qtr sec 8, S/2 sec 9, T32N, R11W (NM), the SE qtr sec 24, T32N, R10W (Colo), where it joins San Juan County road #2300 in the SE qtr sec 10, T32N, R11W (NM).

HOLD C104 FOR Directional Survey

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 2/16/2004

(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 MAR - 5 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.

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

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

*API Number 30-045-32186		*Pool Code 72319	*Pool Name BLANCO MESAVERDE
*Property Code 17036	*Property Name COX CANYON UNIT		*Well Number 4B
*GRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY		*Elevation 6898'

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
F	21	32N	11W		1550	NORTH	2030	WEST	SAN JUAN

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
G	21	32N	11W		2320	NORTH	2215	EAST	SAN JUAN

¹² Dedicated Acres 320.0 Acres - (E/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>SURFACE LOCATION</p> <p>BOTTOM-HOLE LOCATION</p> <p>21</p> <p>RECEIVED</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 COM Title</p> <p>2-10-04 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: DECEMBER 16, 2003</p> <p>Signature and Seal of Professional Surveyor</p> <p> JASON C. EDWARDS Certificate Number 15269</p>



WILLIAMS PRODUCTION COMPANY

Operations Plan (REV)

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

<u>DATE:</u>	2/16/04	<u>FIELD:</u>	Blanco MV
<u>WELL NAME:</u>	Cox Canyon #4-B	<u>URFACE:</u>	FED
<u>LOCATION:</u>	SWNE Sec 21-32N-11W San Juan, NM	<u>MINERALS:</u>	FED
<u>ELEVATION:</u>	6,880' GR	<u>LEASE #</u>	NM-6801
<u>TOTAL DEPTH:</u>	6,607 ft. (MD)		

I. GEOLOGY: Surface formation - San Jose

A. FORMATION TOPS: (KB)

Name	TVD	MD	Name	TVD	MD
Ojo Alamo	1,757	1,823	Cliff House	5,397	5,612
Kirtland	1,807	1,877	Menefee	5,487	5,702
Fruitland	3,122	3,309	Point Lookout	5,842	6,057
Picture Cliffs	3,592	3,804	TD	6,392	6,607
Lewis	3,747	3,961			

- 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. & GRADE</u>
Surface	12-1/4"	+/- 250'	9-5/8"	36# K-55
Intermediate	8-3/4"	+/- 4060'	7"	20# K-55
Prod. Liner	6-1/4"	+/- 3950'-6607'	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: ~~160sx~~ ²²² (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 - ~~430 sx~~ ⁸⁹⁹ (875 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~~ ¹⁰²⁹ (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 = ~~1014~~ ¹⁹²⁹ 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 (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: 130 ~~sx~~ (233 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 ~~363~~ ⁴¹⁰ ft³. WOC 12 hours

Williams Production Company, LLC

Well Control Equipment Schematic for 2M Service

Attachment to Drilling Technical Program

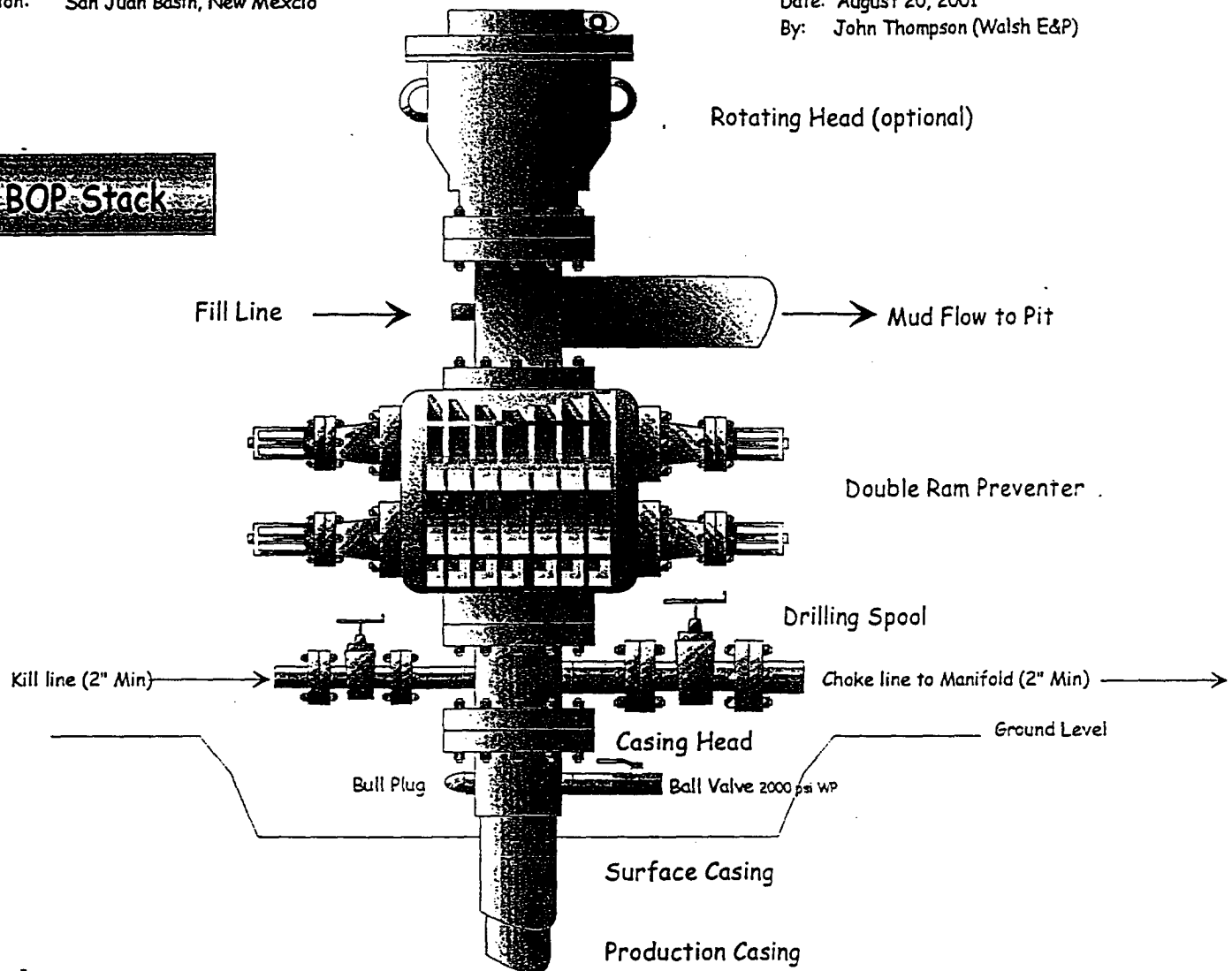
Typical BOP setup

Location: San Juan Basin, New Mexico

Date: August 20, 2001

By: John Thompson (Walsh E&P)

BOP Stack



Choke & Kill Manifold

