

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. NM-03189	
1b. TYPE OF WELL OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> SINGLE <input checked="" type="checkbox"/> MULTIPLE <input type="checkbox"/> WELL <input type="checkbox"/> WELL <input type="checkbox"/> ZONE <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME 070 Farmington, NM	
2. NAME OF OPERATOR Williams Production Company, LLC		7. UNIT AGREEMENT NAME Cox Canyon Unit	
3. ADDRESS OF OPERATOR P.O. Box 316 - Ignacio, Colorado 81137 - (970) 563-3308		8. FARM OR LEASE NAME, WELL NO. 204	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At Surface 1920' FSL and 1950' FWL At proposed Prod. Z. 2265' FSL and 10' FWL		9. API WELL NO. 3004532125	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 12 miles NW of Aztec, NM		10. FIELD AND POOL OR WILDCAT Basin Fruitland Coal	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 10'		11. SEC., T., R., M. OR BLK. AND SURVEY OR AREA K Sec. 21, T32N, R11W	
16. NO. OF ACRES IN LEASE 1382.60		12. COUNTY OR PARISH San Juan	
17. NO. OF ACRES ASSIGNED TO THIS WELL 320 W/2		13. STATE NM	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE, FT. 250'		19. PROPOSED DEPTH 5239' (measured depth)	
20. ROTARY OR CABLE TOOLS Rotary		21. APPROX. DATE WORK WILL START* February 15, 2004	
22. ELEVATIONS (Show whether DF, RT, GR, etc.) 6879' GR			

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#	+/- 300'	~206 cu.ft. Type III with 2% CaCl ₂
8-3/4"	7"	20.0#	+/- 3730'	~843 cu.ft. 65/35 poz & ~209 cu.ft. Type
6-1/4"	4-1/2"	10.5#	+/- 3200' - 5239'	Open hole completion - no cement

Williams Production Company proposes to drill a horizontal well to develop the Fruitland Coal 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 road and pipeline right-of-ways. This well will not require any new access road (see Pipeline & Well Plats #3 & #4). The well will be placed adjacent to the CC#5 pad. This well is accessed by an existing road that crosses the West half of sec 21 and the East half of sec 20 where it connects with the Glade road in the SE qtr of sec 20, T32N, R11W.

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 1/8/2004

(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. Markiewicz

DATE _____

*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 30-045-32125		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 17036	*Property Name COX CANYON UNIT		*Well Number 204
*GRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY		*Elevation 6879'

¹⁰ Surface Location

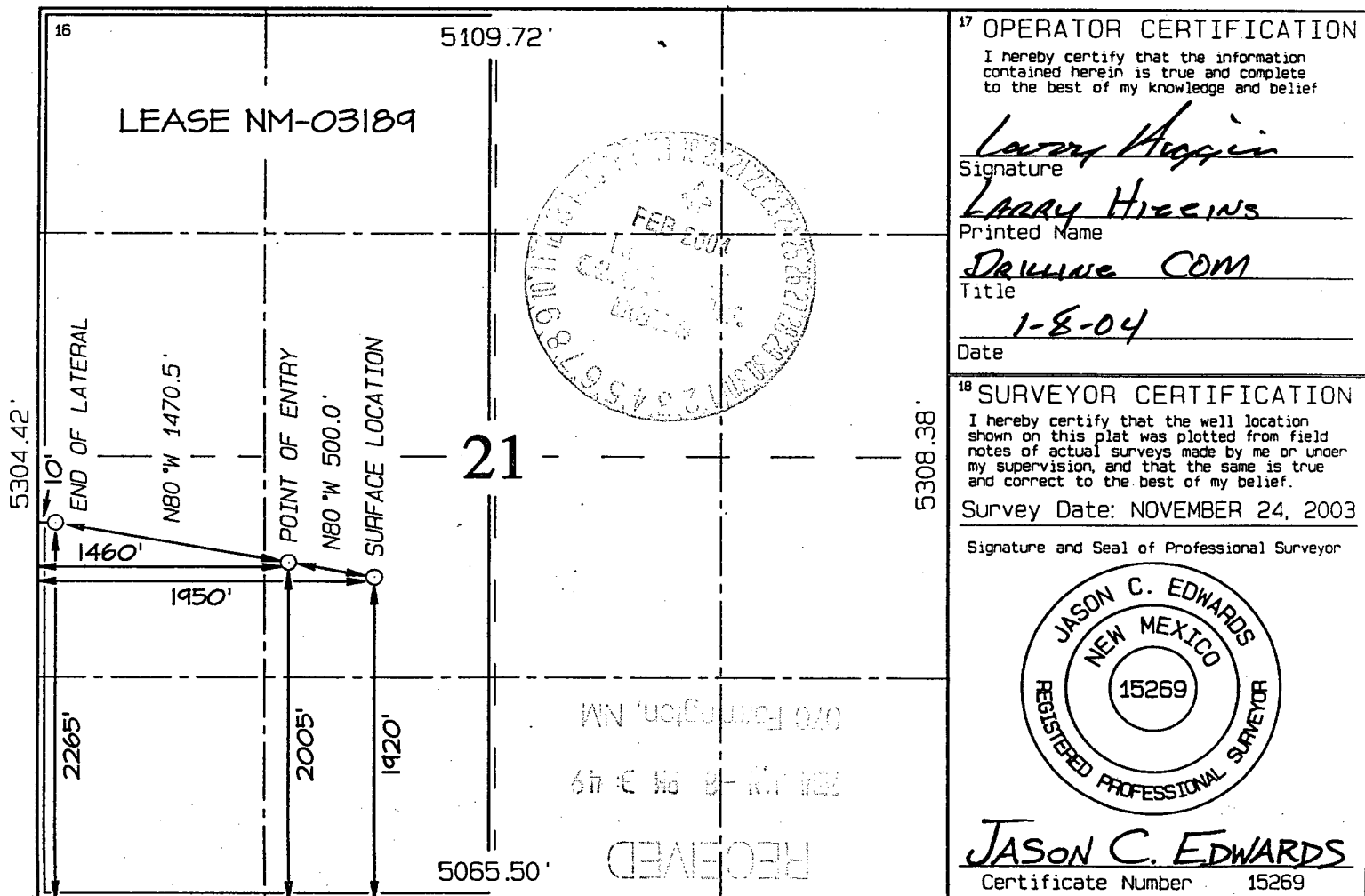
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	21	32N	11W		1920	SOUTH	1950	WEST	SAN JUAN

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
L	21	32N	11W		2265	SOUTH	10	WEST	SAN JUAN

¹² Dedicated Acres 320.0 Acres - (W/2)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. NSL-5002
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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





WILLIAMS PRODUCTION COMPANY

Operations Plan

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

DATE: 1/8/2004

WELLNAME: Cox Canyon #204 **FIELD:** Basin Fruitland Coal

LOCATION: NE/4 SW/4 Sec. 21-T32N-R11W **SURFACE:** Federal
San Juan, NM

ELEVATION: 6879' GR **MINERALS:** Federal

TOTAL DEPTH: 5239' **LEASE #** NM-03189

I. GEOLOGY: Surface formation - San Jose

A. FORMATION TOPS: (KB)

		Pilot Hole	Horizontal Section			Pilot Hole	Horizontal Section
		TVD	MD			TVD	MD
San Jose		Surface	Surface		Top Coal	3,324	3,357
Nancimiento		124	124		Top Target Coal	3,474	3,730
Ojo Alomo		1,239	1,239		Bottom Target Coal	3,484	
Kirtland		1,264	1,264		Base Coal	3,569	
Fruitland		3,129	3,130		Picture Cliffs	3,574	
					TD	3,669	5,239

- **NOTE:** Well will be vertically drilled to 95' into Picture Cliff, logged through the PC, plug back the PC and 8-3/4" hole to 200 ft. above adjusted KOP. Dress / Kick-off cement plug and horizontally drill through the coal.

B. 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.

C. NATURAL GAUGES: Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

D. SURVEYING: Run Single Shot surveys every 500 ft. while drilling the Pilot Hole to 3,469 ft. (MD).

II. DRILLING

A. **MUD PROGRAM:** Clear water with benex to 7" casing point. Treat for lost circulation as necessary. Expect 100% returns prior to cementing. Notify Engineering of any mud losses. If coal is detected before 3459' DO NOT drill deeper until Engineering is contacted.

B. **Drilling Fluid:** Horizontal section will be drilled with Calcium Chloride water. Mud logger will pick TD at +/- 3363'.

C. **MUD LOGGING PRORAM:** Mud logger will pick intermediate casing point and TD.

D. **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</u>	<u>CASING SIZE</u>	<u>WT. & GRADE</u>
Surface	12-1/4"	+/- 300'	9-5/8"	36# K-55
Intermediate	8-3/4"	+/- 3730'	7"	20# K-55
Prod. Liner	6-1/4"	+/- 3200-5239'	4-1/2" perfed	10.5# K-55

*Note: All casing depths are measured depths.

B. **FLOAT EQUIPMENT:**

1. **SURFACE CASING:** 9-5/8" notched regular pattern guide shoe.
2. **INTERMEDIATE CASING:** 7" cement nose guide shoe with a self- fill insert float. Place float one(1) joint above the shoe and five(5) centralizers, spaced every other joint, starting with the float collar. Place turbulent centralizers, at 120' intervals, starting at 1585' to the surface. Total centralizers = 5 regular and 14 turbulent.
3. **PRODUCTION LINER:** 4-1/2" perforated liner with guide shoe on bottom.

C. CEMENTING:

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

1. SURFACE: Use 155 sx (206 cu.ft.) of "Type III" with 2% CaCl_2 and 1/4# of cello-flake/sk (Yield = 1.41 cu.ft./sk, Weight = 14.5 #/gal.). Use **100% excess** to circulate the surface. WOC 12 hours. Total volume = 206 cu.ft. Test to 1500#.
2. INTERMEDIATE: Lead - 405 sx (843 cu.ft.) of "Type III" 65/35 poz with 8% gel, 1% CaCl_2 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_2 (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 = 982 cu.ft. Bump Plug to 1,500 psi. Notify engineering if cement is not circulated to surface.
3. PRODUCTION LINER: Open hole completion. No cement.

IV COMPLETION

A. PRESSURE TEST


Pressure test 7" casing to 3300# for 15 minutes.

B. STIMULATION

None

C. RUNNING TUBING

1. Fruitland Coal: Run 2-3/8", 4.7#, J-55, EUE tubing with a SN (1.375" ID) on top of bottom joint. Land tubing at approximately 3,730'.


Gary Sizemore
Sr. Drilling 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)

