

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

2006 JUN 27 PM 9 37

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

1a Type of Work. <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No Jicarilla Apache Contract #60	
1b Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other 070 FA <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name Jicarilla Apache Nation	
2 Name of Operator Williams Production Company, LLC		7. If Unit or CA Agreement, Name and No	
3a Address P.O. Box 640 Aztec, NM 87410		8. Lease Name and Well No. Indian H #2A	
3b Phone No (include area code) (505) 634-4208		9. API Well No. 30-039-29978	
4 Location of Well (Report location clearly and in accordance with any State requirements *) At surface 2250' FSL & 1535' FEL At proposed prod zone same		10. Field and Pool, or Exploratory Blanco MV	
14 Distance in miles and direction from nearest town or post office* 16 miles from Lindrith, NM		11. Sec., T, R., M, or Blk. and Survey or Area J Section 22, T28N R3W	
15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drng unit line, if any) 1535'		12 County or Parish Rio Arriba	
16 No. of Acres in lease 320		13 State NM	
17 Spacing Unit dedicated to this well 320 (E/2)		RCVD NOV 4 '08 OIL CONS. DIV.	
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 30000'		20 BLM/BIA Bond No on file B001576	
19 Proposed Depth 6355'		DIST. 3	
21 Elevations (Show whether DF, KDB, RT, GL, etc.) 7006' GR		22. Approximate date work will start* September 1, 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.   | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above)    |
| 2. A Drilling Plan   | 5. Operator certification   |
| 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) | 6. Such other site specific information and/or plans as may be required by the authorized officer |

25 Signature <i>Larry Higgins</i>	Name (Printed/Typed) Larry Higgins	Date 6-26-06
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Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed) AFM	Date 10/31/08
Title Drilling COM	Office FFO	

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 vertical well to develop the Blanco Mesa Verde formation at the above described location in accordance with the attached drilling and surface use plans.

The surface is located on Jicarilla Apache Nation lands

This location has been archaeologically surveyed by Velarde Energy.

A 2529.1 foot pipeline tie would be required for this location and it is also located on Jicarilla Apache Nation Lands.

3390' new access road will be needed to access this well.

A COMPLETE C-144 MUST BE SUBMITTED TO AND APPROVED BY THE NMOC FOR: A PIT, CLOSED LOOP SYSTEM, BELOW GRADE TANK, OR PROPOSED ALTERNATIVE METHOD, PURSUANT TO NMOC PART 19.15.17, PRIOR TO THE USE OR CONSTRUCTION OF THE ABOVE APPLICATIONS.

NOV 07 2006

*Or*

NMOC

NOTIFY AZTEC OCD 24 HRS.  
PRIOR TO CASING & CEMENT

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

RCVD NOV 5 '08  
OIL CONS. DIV.  
DIST. 3  
Form C-102

District I  
1615 N. French Dr., Hobbs, NM 88240  
District II  
1291 W. Grand Avenue, Artesia, NM 88210  
District III  
1100 Rio Bravo Rd., Aztec, NM 87410  
District IV  
1230 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Received June 10, 2005  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number <b>30-039-29978</b>	Pool Code <b>72319</b>	Pool Name <b>BLANCO MESA VERDE</b>
Property Code <b>17030</b>	Property Name <b>INDIAN H</b>	Well Number <b>2A</b>
OCRID No. <b>120782</b>	Operator Name <b>WILLIAMS PRODUCTION COMPANY</b>	Elevation <b>7006</b>

**10 Surface Location**

T or lot no. <b>J</b>	Section <b>22</b>	Township <b>28N</b>	Range <b>3W</b>	Let Idn.	Feet from the <b>2250</b>	North-South line <b>SOUTH</b>	Feet from the <b>1535</b>	East-West line <b>EAST</b>	County <b>RIO ARriba</b>
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**11 Bottom Hole Location If Different From Surface**

T or lot no.	Section	Township	Range	Let Idn.	Feet from the	North-South line	Feet from the	East-West line	County
Dedicated Area: <b>320 Ac. (E/2)</b>		Joint or Trf. E.		Consolidation Code		Order No.			

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

	<b>12 OPERATOR CERTIFICATION</b> I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Signature: <i>Larry Higgins</i> Printed Name: <b>LARRY HIGGINS</b> Title and Email Address: <b>DRLE COM</b> Date: <b>11-5-05</b>
	<b>13 SURVEYOR CERTIFICATION</b> I hereby certify that the well location shown on this plat was plotted from field notes of actual survey made by me or under my supervision, and that the same is true and correct to the best of my belief. Date: <b>November 24, 2005</b> 



## WILLIAMS PRODUCTION COMPANY

### Operations Plan

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

**DATE:** 6/12/2006 **FIELD:** Blanco MV  
**WELL NAME:** Indian H #2A **SURFACE:** ~~BOA~~ BIA  
**BH LOCATION:** NWSE Sec 22-28N-3W **MINERALS:** Jicarilla #60  
Rio Arriba, NM  
**ELEVATION:** 7,006' GR **LEASE #** Jicarilla #60  
**MEASURED DEPTH:** 6,355'

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

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

Name	MD	Name	MD
Ojo Alamo	3,210	Cliff House	5,580
Kirtland	3,365	Menefee	5,635
Fruitland	3,365	Point Lookout	5,905
Picture Cliffs	3,545	Mancos	6,220
Lewis	3,845	TD	6,355

- B. **MUD LOGGING PROGRAM:** Mudlogger on location at 3,100' to intermediate casing TD and intermediate casing to TD.
- C. **LOGGING PROGRAM:** High Resolution Induction/ GR and Density/ Neutron log from surface casing to intermediate casing and 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 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:**

CASING TYPE	OH SIZE (IN)	DEPTH (MD) (FT)	CASING SIZE (IN)	WEIGHT(LB)	GRADE
Surface	12 1/4	300	9 5/8	36	K-55
Intermediate	8 3/4	4,040	7	20	K-55
Liner	6 1/4	3,940 6,355	4 1/2	10.5	J-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 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.

**IV. 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 - 515 sx (1,074 cu.ft.) of "Premium Light" 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 - 50 sx (70cu.ft.) of "Type III" with 1/4# cello-flake/sk (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 = 1,144 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. (Yield = 2.59 cu.ft./sk, Weight = 11.6 #/gal.). Tail: 100 sx (215 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 326 ft<sup>3</sup>. WOC 12 hours

**V. 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 9,300# of 14/30 LiteProp™ 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 9,300# of 14/30 LiteProp™ 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.

  
FDH Gary Sizemore  
Sr. Drilling Engineer

# Well Control Equipment Schematic for 2M Service

Attachment to Drilling Technical Program

## Exhibit #1 Typical BOP setup

Location: San Juan Basin, New Mexico

Date: August 20, 2001

By: John Thompson (Walsh E&P)

