

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

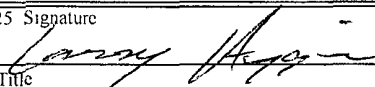
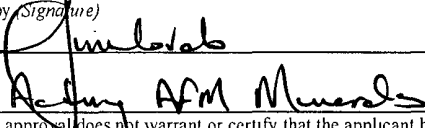
FORM APPROVED  
OMB No. 1004-0136  
Expires January 31, 2004

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		2006 NOV 1 PM 5 23	
1b. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		<input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone	
2. Name of Operator Williams Production Company, LLC			
3a. Address P.O. Box 640 Aztec, NM 87410		3b. Phone No. (include area code) (505) 634-4208	
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface 1110' FSL & 1830' FWL At proposed prod zone same			
14. Distance in miles and direction from nearest town or post office* 16 miles from Lindrith, NM		17. Spacing Unit dedicated to this well 320 (W/2)	
15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any) 1110'		16. No. of Acres in lease 320	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 3000'		19. Proposed Depth 8,386'	
21. Elevations (Show whether DF, KDB, RT, GL, etc) 6,927' GR		20. BLM/BIA Bond No. on file B001576	
22. Approximate date work will start* February 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 	Name (Printed/Typed) Larry Higgins	Date 11-1-06
Title Drilling COM		
Approved by (Signature) 	Name (Printed/Typed) Rafael ARM Munoz	Date 7/11/08
Title Asst. Mgr. ARM Munoz		

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

No new access road will be needed to access this well

**NOTIFY AZTEC OCD 24 HRS.  
PRIOR TO CASING & CEMENT**

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

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

JUL 17 2008

NMOCD

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

RCVD JUL 14 08  
OIL CONS. DIV.  
DIST. 3

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesian, 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 & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised June 10, 2003  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

070 FARMINGTON NM

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

1 APL Number <b>30-039-30102</b>		2 Pool Code <b>72319 / 71599</b>	3 Pool Name <b>BLANCO MESAVERDE / BASIN DAKOTA</b>
4 Property Code <b>17031</b>	5 Property Name <b>INDIAN I</b>		6 Well Number <b>4A</b>
7 OGRID No. <b>120782</b>	8 Operator Name <b>WILLIAMS PRODUCTION COMPANY</b>		9 Elevation <b>6927</b>

**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	34	28N	3W		1110	SOUTH	1830	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

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 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

16 5289.02	5273.30	5282.18	<b>17 OPERATOR CERTIFICATION</b> I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. <i>Larry Higgins</i> Signature <b>LARRY HIGGINS</b> Printed Name <b>DRILLING CO</b> Title and E-mail Address <b>11-1-06</b> Date
			<b>18 SURVEYOR CERTIFICATION</b> 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. MARGAL B. TUDOR Date of Survey Signature and Seal of Professional Surveyor 9672 REGISTERED PROFESSIONAL LAND SURVEYOR
	1830'		1110'



## WILLIAMS PRODUCTION COMPANY

### Operations Plan

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

**DATE:** 10/25/2006 **FIELD:** Basin DK/ BlancoMV  
**WELL NAME:** Indian I #4A **SURFACE:** BOIA  
**BH LOCATION:** SESW Sec 34-28N-3W **MINERALS:** Jicarilla #61  
Rio Arriba, NM  
**ELEVATION:** 6,927' GR **LEASE #** Jicarilla #61  
**MEASURED DEPTH:** 8,386'

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

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

Name	MD	Name	MD
Nacimiento	2,106	Cliff House	5,546
Ojo Alamo	3,211	Menefee	5,591
Kirtland	3,366	Point Lookout	5,891
Fruitland	3,366	Mancos	6,171
Pictured Cliffs	3,571	Gallup	6,941
Lewis	3,821	Greenhorn	7,851
Huerfano Bentonite	4,311	Graneros	7,916
		Dakota	8,061
		Morrison	8,286
		<b>TD</b>	<b>8,386</b>

- B. MUD LOGGING PROGRAM:** Mudlogger on location at 300' above Ojo Alamo SS to TD. Mud logger to pick TD.
- C. LOGGING PROGRAM:** High Resolution Induction log from surface shoe to TD. SDL/DSN/DSEN over zones of interest. Onsite geologist will pick Density/ Neutron log intervals on 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	14 3/4	300	10 3/4	26.4	K-55 H-40
Intermediate	9 7/8	4,066	7 5/8	32.75	K-55
Longstring	6 3/4	8,386	5 1/2	17	N-80

32.75 lb/ft

26.4 lb/ft

**B. FLOAT EQUIPMENT:**

1. SURFACE CASING: 10 3/4" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) joints of Surface Casing.
2. INTERMEDIATE CASING: 7 5/8" 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: 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: 255sx (356 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 - 705 sx (1,468) cu.ft.) of "Premium Light with 8% gel 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, (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 = 1,607 cu.ft. Bump Plug to 1,500 psi. Notify engineering if cement is not circulated to surface.
3. PRODUCTION CASING: 10 bbl Gelled Water space. Cement: 205 sx (443 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 443ft<sup>3</sup>. WOC 12 hours

**IV. 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 not circulated to surface..

**B. PRESSURE TEST**

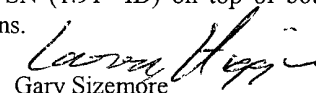
1. Pressure test 7 5/8" & 5-1/2" casing to 3300# for 15 minutes.

**C. STIMULATION**

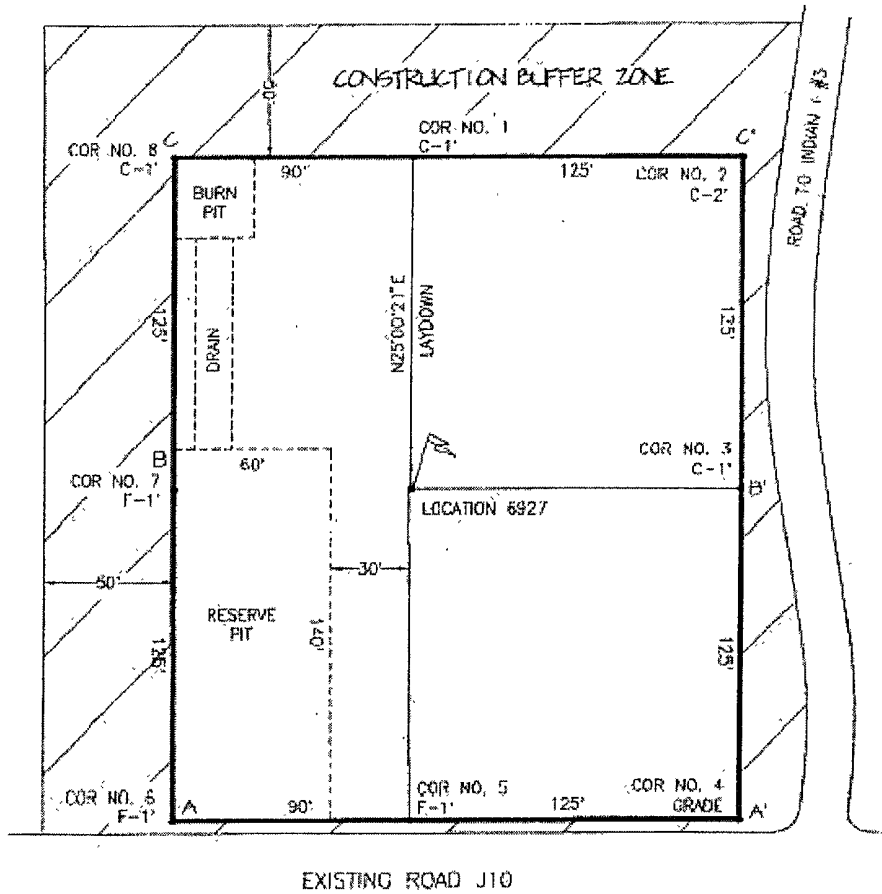
1. Stimulate Dakota with approximately 70,000# of 20/40 sand in x-link foam.
2. Isolate Dakota with a RBP.
3. Stimulate Point Lookout with approximately 9300# of 14/30 LiteProp™ in slick water.
4. Isolate Point Lookout with a RBP.
5. Perforate the Menefee/Cliff House as determined from the open hole logs.
6. Stimulate with approximately 9300# of 14/30 LiteProp™ in slick water.
7. Test each zone before removing bridge plugs.

**D. RUNNING TUBING**

1. Dakota: Run 2-1/16", 3.25#, J-55, IJ tubing with 1/2 mule shoe on bottom, SN with pump-out plug on top of adeem joint and 5 Seal Units. Land tubing approximately 100' below top Dakota perf.
2. Mesa Verde: Run 2-1/16", 2.9#, J-55, EUE tubing with a SN (1.91" ID) on top of bottom joint. Land tubing approximately 25' above the bottom Point Lookout perforations.

  
for Gary Sizemore  
Sr. Drilling Engineer

WILLIAMS PRODUCTION COMPANY  
 INDIAN I #4A  
 1110 FSL & 1830 FWL  
 SECTION 34 T20N R3W NMPM  
 RIO ARriba COUNTY, N.M.  
 ELEVATION: 6927



LATITUDE: 36°35'30" N  
 LONGITUDE: 107°08'26" W  
 WGS 84  
 VERT. DATUM: NAD 1927

A-A'		
6937		
6927		
6917		
B-B'		
6937		
6927		
6917		
C-C'		
6937		
6927		
6917		

FILENAME: CEMENT

SHEET 2 OF 3

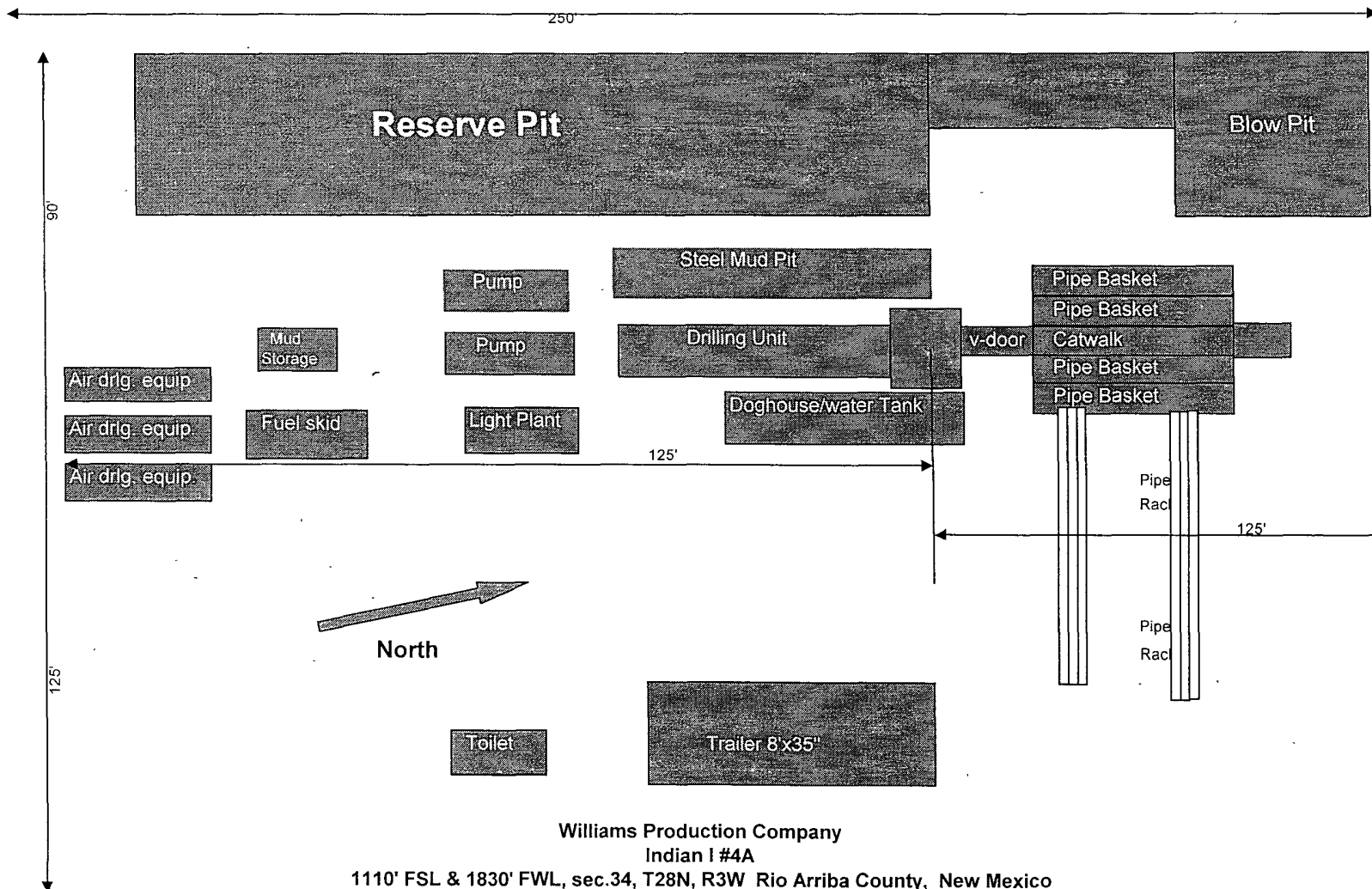
High Country Surveys

DRAWN BY: CRT

CHECKED BY: CBT

# Plat #3 Location Diagram

Location Dimensions 215' X 250'



Williams Production Company  
Indian I #4A  
1110' FSL & 1830' FWL, sec.34, T28N, R3W Rio Arriba County, New Mexico

No new access; pad borders J-10 main road

# 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)

