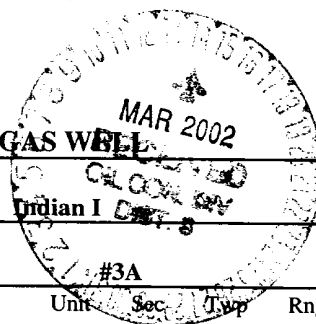


**NEW MEXICO OIL CONSERVATION COMMISSION  
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL**



Operator <b>Williams Production Company</b>					Lease or Unit Name <b>Indian I</b>				
Test Type <b>X Initial      Annual      Special</b>			Test Date <b>2/25/2002</b>			Well Number <b>#3A</b>			
Completion Date <b>2/13/2002</b>		Total Depth <b>6260'</b>		Plug Back TD <b>6234'</b>		Elevation <b>6955'</b>		Unit Sec Typ Rng <b>P 34 28N 03W</b>	
Casing Size <b>4 1/2"</b>		Weight <b>10.5#</b>	d	Set At <b>6260'</b>	Perforations: <b>5601' - 5838'</b>		County <b>Rio Arriba</b>		
Tubing Size <b>2 3/8"</b>		Weight <b>4.7#</b>	d	Set At <b>6026'</b>	Perforations: <b>5893' - 6056'</b>		Pool <b>Blanco MV</b>		
Type Well - Single-Bradenhead-GG or GO Multiple					Packer Set At		Formation <b>MV</b>		
Producing Thru <b>Tubing</b>		Reservoir Temp. oF		Mean Annual Temp. oF		Barometer Pressure - Pa		Connection	
L	H	Gq <b>0.6</b>	%CO2	%N2	%H2S	Prover <b>3/4"</b>	Meter Run	Taps	

FLOW DATA					TUBING DATA		CASING DATA		
NO	Prover Line Size	X Orifice Size	Pressure p.s.i.q	Temperature oF	Pressure p.s.i.q	Temperature oF	Pressure p.s.i.q	Temperature oF	Duration of Flow
SI	<b>2" X 3/4"</b>				<b>640</b>	<b>31</b>	<b>1550</b>		<b>0</b>
1					<b>190</b>	<b>56</b>	<b>1415</b>		<b>0.5 hr</b>
2					<b>390</b>	<b>58</b>	<b>1335</b>		<b>1.0 hr</b>
3					<b>440</b>	<b>59</b>	<b>1285</b>		<b>1.5 hrs</b>
4					<b>440</b>	<b>60</b>	<b>1245</b>		<b>2.0 hrs</b>
5					<b>420</b>	<b>61</b>	<b>1190</b>		<b>3.0 hrs</b>

RATE OF FLOW CALCULATION										
NO	Coefficient (24 Hours)				hwPm	Pressure Pm	Flow Temp. Factor Fl	Gravity Factor Fq	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	<b>9.604</b>					<b>432</b>	<b>0.999</b>	<b>1.29</b>	<b>1.040</b>	<b>5561</b>
2										
3										
4										

NO	Pr	Temp. oR	Tr	Z	Gas Liquid Hydrocarbon Ration			Mcf/bbl.
1					A.P.I Gravity of Liquid Hydrocabrons _____			Deq.
2					Specific Gravity Separator _____			XXXXXXX
3					Specific Gravity Flowing Fluid xxxxxxxxxxxx			
4					Critical Pressure _____ p.s.i.a.			_____ p.s.i.a.
5					Critical Temperature _____ R			_____ R

Pc	<b>1562</b>	Pc2	<b>2439844</b>	
NO	Pt1	Pw	Pw2	Pc2-Pw2
1		<b>1202</b>	<b>1444804</b>	<b>995040</b>
2				
3				
4				

(1) $\frac{Pc2}{Pc2-Pw2} = \underline{2.4520059}$		(2) $\frac{Pc2^n}{Pc2-Pw2} = \underline{1.9594814}$	
AOF = Q $\frac{Pc2^n}{Pc2-Pw2} = \underline{10896}$			

Absolute Open Flow	<b>10896</b>	Mcf/d @ 15.025	Angle of Slope _____	Slope, n	<b>0.75</b>
--------------------	--------------	----------------	----------------------	----------	-------------

Remarks:			
Approved By Commission:	Conducted By: <b>Larry Higgins</b>	Calculated By: <b>Tracy Ross</b>	Checked By:



**LTR**



**Job separation sheet**

# INDIAN I #3A BLANCO MESAVERDE

Spud date: 01/04/02

Completed: 02/13/02

Location:

660' FSL and 1035' FEL  
SE/4 SE/4 Sec 34(P), T28N R3W  
Rio Arriba, New Mexico  
Elevation: 6955' GR

<u>Top</u>	<u>Depth</u>
Pictured Cliffs	3557'
Lewis	3827'
CliffHouse	5566'
Menefee	5623'
Point Lookout	5893'

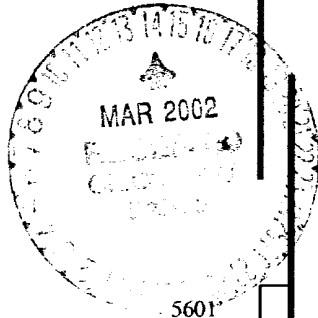
6 jts 9-5/8", 36#, K-55, ST&C csg. Landed @ 290'  
Cemented with 140 sx cmt

85 jts 7", 20#, K-55, ST&C csg. Landed @ 4034'.  
Float @ 3985'. Cemented with 640 sx cmt.

Top of Liner @ 3883'

192 jts 2-3/8", 4.7#, J-55, EUE, 8rd tbg w/  
exp check on bottom and SN 1 jt up.  
Landed @ 6026'

52 jts 4-1/2", 10.5#, K-55 ST&C csg. Landed @ 3883' -  
6260'. Latch collar @ 6234' & marker jt @ 5558'.  
Cemented with 110 sx cmt



STIMULATION

CH/Men: 5601' - 5838' (16, 0.38"  
holes) Frac with 77,000# 20/40 sand  
in 1821 bbls slick water.

Point Lookout: 5893' - 6056' (23,  
0.38" holes) Frac with 83,000# 20/40  
sand in 1793 bbls slick water.

TD @ 6260'  
PBTD @ 6234'

Hole Size	Casing	Cement	Volume	Top of CMT
12-1/4"	9-5/8", 36#	140 sx	195 cu ft.	Surface
8-3/4"	7", 20#	640 sx	1215 cu ft.	Surface
6-1/4"	4-1/2", 10.5#	110sx	217 cu ft.	3900'

✓



**LTR**



**Job separation sheet**

UNITED STATES  
DEPARTMENT OF INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

SUNDRY NOTICE AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir. Use "APPLICATION TO DRILL" for permit for such proposals

5. Lease Designation and Serial No.  
JICARILLA APACHE CONTRACT #61

6. If Indian, Allottee or Tribe Name  
JICARILLA APACHE NATION

7. If Unit or CA, Agreement Designation

SUBMIT IN TRIPLICATE

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

2. Name of Operator  
WILLIAMS PRODUCTION COMPANY

3. Address and Telephone No.  
PO BOX 3102 MS 37-2, TULSA, OK 74101 (918) 573-6254

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
660' FSL & 1035' FEL, SE/4 SE/4 SEC 34-28N-03W

8. Well Name and No.  
INDIAN I #3A

9. API Well No.  
30-039-26871

10. Field and Pool, or Exploratory Area  
BLANCO MV

11. County or Parish, State  
RIO ARRIBA, NM

CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
Notice of Intent	Abandonment
X Subsequent Report	Recompletion
Final Abandonment	Plugging Back
	Casing Repair
	Altering Casing
	X Other <u>COMPLETION OPERATIONS</u>
	Change of Plans
	New Construction
	Non-Routine Fracturing
	Water Shut-Off
	Conversion to Injection
	Dispose Water
	(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

02/04/2002 MIRU rig & spot equip. NDWH, NUBOP's & swing. Tongs not working, attempt to repair, load out tongs

02/05/2002 RU tongs, NU blooie line, flowback line & yellow dog. Tally in w/3 7/8" bit & 198 jts 2 3/8" tbg to float collar @ 6234'. Circulate hole clean w/fresh water. Pressure test csg to 2000 psi & held. LD 6 jts, bit @ 6056'. Drain pump & lines

02/06/2002 RU BJ, pres test csg to 3600 psi & held. Spot 500 gals 15% HCl acid across Point Lookout, TOOH w/bit. Perforate Point Lookout top down in acid 1 spf w/ 3 1/8" SFG, 0.38" dia, 13.52" pent & 1 gram charges @ the following intervals: 5893', 96', 99', 5902', 05', 09', 14', 18', 23', 36', 43', 46', 49', 54', 56', 63', 68', 92', 94', 6015', 19', 24' & 56', all fired (23 holes total) RD. ND swing drain pump & lines

02/07/2002 RU BJ, pres test lines. Acidz Point Lookout w/1000 gals acid & 40 balls, ball off @ 3600 psi. Recover 40 balls w/22 hits. Frac Point Lookout w/83,000 lbs 20/40 Az. WL set 4 1/2" CIBP @ 5860'. Dump bail 18 gals 28% acid @ 5838'. Pres test CIBP to 3600 psi & held. Perf CH/Men bottoms up in acid w/ 1 spf w/ 3 1/8" SFG, 0.38" dia, 13.52" pent & 11 gram charge @ the following intervals: 5601', 05', 07', 13', 15', 21', 51', 54', 5813', 16', 18', 20', 28', 31', 36' & 5838' (16 holes total). Break down & ball off CH/Men w/1000 gals 15% HCl acid & 30 balls, ball off @ 3600 psi. Recover 30 balls w/15 hits. Frac CH/Men w/77,000 lbs 20/40 Az. RD BJ

Continued on reverse side

14. I hereby certify that the foregoing is true and correct

Signed Tracy Ross  
Tracy Ross

Title Production Analyst

Date March 12, 2002

(This space for Federal or State office use)

Approved by [Signature]

Lands and Mineral Resources  
Title [Signature]

Date 3/12/02

Conditions of approval, if any:

02/08/2002 Thaw out BOP, NU swing & stripper head. Stage in w/bit, tag 40' of fill @ 5820' (1 compressor down & no help f/well). CO to CIBP @ 5860' w/air only, run 6 bbl sweep. Blow well w/air only, ret's heavy water, heavy sand & lt gas. PU bit to 3850', drain pump & lines. Flow natural & unload well w/air only f/3850'

02/09/2002 TIH, tag 28' of fill @ 5832'. CO to CIBP @ 5860'. Blow well w/air only, bucket test = 39 bph & extra heavy sand, sand went from 6 cups to ½ cup. Well making to much wtr to attempt gauge, est 300 – 400 mcf. Drill out CIBP @ 5860'. Drill on & push bottom ½ of CIBP to PBTD @ 6234', run 6 bbl sweep. RD power swivel. TOOH w/75 jts, bit @ 3860'. Drain pump & lines, RU yellow dog. Turn over to flowback, flow natural evaporate pit. (Point Lookout looks impressive)

02/11/2002 Gauge well on 2" open line, all gauges lite mist = 2684 mcf. TIH & tag 43' of fill @ 6191'. CO to PBTD @ 6234', run two 6 bbl sweeps. Blow well w/air only, bucket test = 8 bph water & lite sand. TOOH w/75 jts, bit @ 3860'. Drain pump & lines, turn over to flow back, flow natural evaporate pit

02/12/2002 Gauge well on 2" open line, all gauges lt mist = 2551 mcf. TIH & tag 22' of fill @ 6212'. CO to PBTD @ 6234', w/air only, run 6 bbl sweep. Land tbg in hanger @ 6026' KB as follows: exp check on bottom, 1 jt 2-3/8" 4.7# yellow band tbg, 1.81"SN & 191 jts 2-3/8", 4.7# yellow band tbg (192 jts total). RD rig floor, ND swing & BOP's, NUWH. Drain pump pit & lines, RD rig & equipment, release rig @ 1630 hrs. Turn well over to production department



**LTR**



**Job separation sheet**

In Lieu of  
Form 3160  
(June 1990)

UNITED STATES  
DEPARTMENT OF INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

SUNDRY NOTICE AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir. Use "APPLICATION TO DRILL" for permit for such proposals

SUBMIT IN TRIPPLICATE		5. Lease Designation and Serial No. JICARILLA APACHE CONTRACT #61
		6. If Indian, Allottee or Tribe Name JICARILLA APACHE NATION
		7. If Unit or CA, Agreement Designation
1. Type of Well Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/>	8. Well Name and No. INDIAN I #3A	
2. Name of Operator WILLIAMS PRODUCTION COMPANY	9. API Well No. 30-039-26871	
3. Address and Telephone No. PO BOX 3102 MS 37-2, TULSA, OK 74101 (918) 573-6254	10. Field and Pool, or Exploratory Area BLANCO MV	
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 660' FSL & 1035' FEL, SE/4 SE/4 SEC 34-T28N-R03W	11. County or Parish, State RIO ARriba, NM	

CHECK APPROPRIATE BOX(es) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
Notice of Intent	Abandonment
X Subsequent Report	Recompletion
Final Abandonment	Plugging Back
	Casing Repair
	Altering Casing
	Other <u>Drilling Completion</u>
	Change of Plans
	New Construction
	Non-Routine Fracturing
	Water Shut-Off
	Conversion to Injection
	Dispose Water
	(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

01-04-2002 MIRU. Drill rat & mouse holes. Spud 12-1/4" surface hole @ 0245 hours 1/4/02 w/ bit #1 (12-1/4" HTC, SJ-4). Drill to 70' w/ bit # 1. MU bit #2 (12-1/4" RTC, R-1). Drill from 70' to 250'. Drilling @ 250', 80' hour @ report time

01-05-2002 Drill from 250' to 300' w/ bit #2 (12-1/4" RTC, R-1). Circulate @ TD, TOOH. RU csg crew & run 6 jts of 9-5/8", 36 #, K-55, ST&C csg, 276.04', set @ 290' KB. Wash csg 20' to bottom & circulate clean. Cement w/ 140 sx (195 cu ft) Type III cement + 2 % CaCl + 1/4 # Celloflake sk. Plug down @ 1045 hours, circulated 7 bbl's of cement to surface. WOC & NU BOP's. Pressure test csg & surface equipment to 1500 psi-tested OK. MU bit #3 (8-3/4" HTC), TIH. Tag cement @ 275'. Drill cement. Begin drilling 8-3/4" hole. Drilling @ 850', 55' hour @ report time

01-06-2002 Drill from 655' to 2160' w/ bit #3 (8-3/4" HTC, HAT-527). Drilling @ 2160', 40' hour @ report time

01-07-2002 Drill from 2160' to 2989' w/ bit #3 (8-3/4" HTC, HAT-527). Drilling @ 2989', 30' hour @ report time

Continued on Back

14. I hereby certify that the foregoing is true and correct

Signed

Tracy Ross  
Tracy Ross

Title Production Analyst

Date January 17, 2002

(This space for Federal or State office use)

Approved by

Title

Date

Conditions of approval, if any:

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.



## Blowout Preventer Equipment (BOPE)

ABHP = 1050 PSI; TVD = 6,251 Feet; Mud Weight = NA\*

\*Air drilled hole for production casing.

Operator's Gradient (ABHP / TVD) = 0.168 PSI/Ft is / is not appropriate and

does / does not coincide with the Anticipated Mud Weight for each drilled interval.

The most credible ABHP is 0.168 PSI/Ft.

Mud Weight x 0.05195 = Gradient

NA\* X 0.05195 = #VALUE!

ABHP - (0.22 x TVD) = ASP

1050 - ( 0.22 X 6251 ) = -325 psi

Operator's proposed BOPE of 3 M exceeds / does not exceed the ASP and is therefore adequate / not adequate.

Note ASP - Anticipated Surface Pressure

ABHP - Anticipated Bottom Hole Pressure

01-08-2002 Drilling from 2989' to 3264' w/ bit #3 (8-3/4" HTC, HAT-527), TOOH. MU bit #4 (8-3/4" HTC, GT09C), TIH. Wash & ream 45' to bottom. Resume drilling. Drilling @ 3377', 25' hour @ report time

01-09-2002 Drilling from 3377' to 3880' w/ bit #4 (8-3/4" HTC, GT09C). Drilling @ 3880', 25' hour @ report time

01-10-2002 Drilling from 3880' to 4031' w/ bit #4 (8-3/4" HTC, GT09C). Circulate @ intermediate TD. Short trip to DC's. Circulate & condition hole for logs, TOOH. RU HLS & log. RD loggers & TIH. Circulating @ report time

01-11-2002 TOOH & LDDC's. Change rams & RU csg crew. Ran 85 jts. (4019.59') of 7", 20#, K-55, ST&C csg landed @ 4034' KB. Float at 3985'. Cmt w/ 475 sx (991 cu.ft.) of Type III 65/35 poz w/ 8% gel, 1% CaCl<sub>2</sub> & 1/4# celloflake/sk. Tailed w/ 165 sx (224 cu.ft.) of Type III w/ 1/4# celloflake/sk & 1% CaCl<sub>2</sub>. Displaced plug w/ 161 bbls of water. Plug down @ 1845 hrs 1/10/02. Lost returns @ 50 bbl's into displacement. Got partial returns @ 159 bbl's into displacement. Final lift pressure @ 750 psi. BLM on location prefers bond log to temperature survey. Agreeable to running 7" & 4-1/2" bond logs. WOC, NU blooie line. Pressure test BOPs and csg to 1500# - held OK. X-O to 3-1/2" tools @ report time

01-12-2002 Finish X-O to 3-1/2" tools. Test air hammer. PU 4-3/4" DC's off pipe rack. TIH, tag cement @ 3960'. Unload hole w/ air. Drill cement & float equipment w/ air & mist. Dry hole to dust w/ air. Begin drilling 6-1/4" hole w/ bit #4 (6-1/4" STC, H41R6R2). Drilling @ 5331', 120' hour @ report time

01-13-2002 Drill from 5331' to 6277' w/ bit #4 (6-1/4" STC, H41R6R2). Blow hole, TOOH for logs. RU HLS & log. RD HLS. TIH, LDDP & DC's

01-14-2002 LDDC's. RU csg crew & change rams. Ran 52 jts (2377.31') of 4-1/2", 10.5#, K-55, ST&C csg, landed @ 6260' KB. Latch collar @ 6234' KB & marker joint @ 5558' KB. Top of liner at 3883' - 149' of overlap into 7". RU BJ, hold safety meeting. Cement w/ 30 sx (60 cu.ft.) of Premium Lite w/ 0.65 % FL-52 + .32 % CD-32. Lead w/ 80 sx (157 cu ft) of Premium Lite + 0.65 % FL-52 + .32 % CD-32. Tail w/ 110 sx (218 cu.ft.) of Premium Lite + 0.65% FL-55 + .32% CD-32 + 1/4#/sk celloflake + 4 % Phenoseal. Displaced plug w/ 67 bbls of water. Plug down @ 1345 hrs 1/13/02. Set pack-off & circulate out 15 bbls of cement. LDDP & TIW setting tool. ND BOP's. Rig released at 2000 hrs 1/13/02

10. The minimum specifications for pressure control equipment which are to be used, a schematic diagram thereof showing sizes, pressure ratings (or) API series and the testing procedure and testing frequency are enclosed within the APD packet.
11. Drilling Mud Prognosis: Surface - spud mud on surface casing.  
Intermediate - spud mud generated from natural clays with gel sweeps pretreated w/LCM before entering coal interval.  
Below Intermediate - air or gas drilled.
12. The testing, logging, and coring programs are as follows:  
D.S.T.s or cores: \_\_\_\_\_  
Logs: GR/CCL/CBL & GSL over zones of interest
13. Anticipated no abnormal pressures or temperatures to be encountered or any other potential hazards such as Hydrogen Sulfide Gas. Low risk H<sub>2</sub>S equipment will be used.  
  
Estimated Bottomhole pressure:  
Mesaverde - 1050 psi
14. The anticipated starting date is approximately July 6, 2002 with duration of drilling / completion operations for approximately 20 days thereafter.