

Submit 3 Copies  
To Appropriate  
District Office  
DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-103  
Revised 1-1-89

**OIL CONSERVATION DIVISION**

2040 South Pacheco  
Santa Fe, NM 87505

DISTRICT II  
811 South First, Artesia NM 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

WELL API NO.

30-039-07960

5. Indicate Type of Lease  
STATE ☐ FEE ☐

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement  
Name:

ROSA UNIT

8. Well No.

#18

9. Pool name or Wildcat  
PICTURED CLIFFS/  
BLANCO MESAVERDE

**SUNDRY NOTICES AND REPORTS ON WELLS**

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A  
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH  
PROPOSALS

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

2. Name of Operator

WILLIAMS PRODUCTION COMPANY

3. Address of Operator

P O BOX 3102, MS 25-4, TULSA, OK 74101

4. Well Location (Surface)

Unit letter H : 1470 feet from the NORTH line & 800 feet from the EAST line Sec 22-31N-R6W RIO ARRIBA, NM

10. Elevation (Show whether DF, RKB, RT, GR, etc.  
6275' GR

Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

**NOTICE OF INTENTION TO:**

**SUBSEQUENT REPORT OF:**

PERFORM REMEDIAL  
WORK

PLUG AND ABANDON

REMEDIAL WORK

ALTERING CASING

TEMPORARILY ABANDON

CHANGE PLANS

COMMENCE DRILLING OPNS.

PLUG AND  
ABANDONMENT

PULL OR ALTER CASING

CASING TEST AND CEMENT JOB

X OTHER: COMMINGLE

OTHER: \_\_\_\_\_

12. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). Data below to satisfy NM OCD Rule 303.C.3 (b) (i)-(vii)

- Pre-approved Pool Division Order R-12991.
- Pools to be commingled: Blanco MV 72319, Pictured Cliffs 96175.
- Perforated intervals: Blanco MV 5272' - 5678', Pictured Cliffs 3088' - 3171'.
- Fixed percentage allocation based upon production data of 12% Blanco MV and 88% Pictured Cliffs. See attached information for a detailed summary page from the completion profile analysis.
- Commingling will not reduce the value of reserves.
- Notification of working, royalty, and overriding royalty interest owners; no notice is required per R-12991.
- The BLM has been notified and has approved the work on sundry notice form 3160-5.

RCVD MAY 13 '10  
OIL CONS. DIV.  
DIST. 3

Please see attached for commingle procedure.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Rachel Lipperd TITLE: Engineering Technician II DATE: May 11, 2010

Type or print name Rachel Lipperd

Telephone No: (918) 573-3046

(This space for State use) APPROVED

BY [Signature] TITLE

Deputy Oil & Gas Inspector,  
District #3

MAY 18 2010  
DATE

Conditions of approval, if any:

R



EXPLORATION & PRODUCTION

## COMMUNICATION REPAIR & COMINGLING PROCEDURE

ROSA #18  
T31N, R6W, SECT. 22  
ELEVATION: 6275' GR  
PBSD:5740' MD

### WELLBORE STATUS:

MV 1-1/2", 2.9 #/FT EUE, To 5665' MD

PC 1-1/2", 2.9 #/FT EUE, To 3153' MD

5" BAKER MODEL D PACKER @ 4000' MD

### OBJECTIVE: Remove failed packer and commingle MV and PC

1. Pull Pictured Cliffs tubing
2. Pull Mesa Verde tubing
3. Remove Production packer
4. Clean out to PBSD
5. Acid stimulate each formation if needed.
6. Run completion profiler for allocation purposes.
7. Complete with single string 2-3/8" tubing, landed @ 5600', below MV perms
8. Install plunger lift system.
9. Remove one set of wellhead facilities
10. Return to production as PV/MV comingling

### PRIOR TO PRIMARY JOB

- 1) Test rig anchors.
- 2) Verify location is OK for rig operations.
- 3) Ensure JSA, ECP's and lockout procedures are in place for the flowline and other energized piping or equipment.
- 4) Acquire 6000' of 2-3/8" N-80 or stronger work string.
- 5) Acquire ~5700' of 2-3/8", EUE, 8rd, 4.7 #/ft J-55 tubing.
- 6) Acquire wellhead and convert from dual tubing string to a single, 2-3/8" tubing string.
- 7) Acquire 2-3/8", I.D. Type X or XN type nipple.

- 8) **KCL** on location to treat kill water as needed.

### **SAFETY NOTICE**

PERSONNEL SAFETY IS THE NUMBER ONE JOB.

NO EXCEPTIONS!!!

**PLEASE FOLLOW APPROPRIATE WILLIAMS CONTRACTOR  
PROTOCOLS FOR THIS JOB PLAN**

Please see your Williams Business Representative if you have any questions; Contractor protocols can be located in the Williams E&P Contractor Guide

### **PRIMARY JOB**

**Note:** Safety meetings shall be held each morning before work and subsequent "tailgate" safety meetings are to be held during the day when operation objectives shift in nature and intent (i.e. beginning/ending fishing operations, squeeze jobs, rigging down, perforating, etc.) Please ensure these are documented per section 2.2.7 of the Williams E&P Contractor Guide

1. MI and spot equipment to include fluid pumps and tanks.
2. MIRU.
3. ND/NU killing well with KCL water as necessary
4. Test the BOP's to 2500 psig minimum. If they fail, then rebuild and retest. If they cannot pass tests **DO NOT PROCEED** and notify Production Engineer.
5. Pick up on long string (MV) to determine if the long string will pull.
6. If long string will release, then POOH with short string (PC) and proceed to step # 7. If the long string will not release, proceed with sub-steps 6.1 through 6.3 below:
  - 6.1. POOH with short string one or two joints to confirm ability to move.
  - 6.2. Pick up additional joints of 1-1/2" pipe and wash to top of packer at 4000' using heavy air mist. Wash as necessary until returns clean up to approximately ¼ cup of sand in 5 gallons of water returns.
  - 6.3. After returns clean up, POOH with pipe laying down string.
7. Spear or screw in and POOH with 1-1/2" 2.9 #/ft long string (MV) string using straight pull to pull out of Baker Model D packer seal assembly up to 40,000 #'s.
8. POOH with lay down tubing 1-1/2" 2.9# J-55 and seal assembly.
9. NU additional pipe ram for work string or replace pipe ram with annular preventer.
10. Pick up work string.

11. Pick up Baker Model D packer millover & pulling tool, using DC's and assembly as necessary and RIH on work string to mill over Baker Model D packer @ 4000' MD and RIH on work string. If work string not inspected prior to work do not exceed 70% of joint strength of the work string pipe when pulling.
12. Millover and attempt to pluck Baker Model D packer at 4000' MD. If using 4.7 #/ft work string, weight of dry string above packer is 18.8k #s. If using 6.5 #/ft work string, dry string weight will be 26k #'s. When attempting to pull packer and tail pipe determine work string weight and do not pull more than 70% of joint strength.
13. POOH with packer and lay down work string, tools and packer.
14. RIH w/ work string.
15. Clean out to 5740' PBTD using a bit, scraper, and air unit package. Acid stimulate if needed.
16. TOOH w/ work string.
17. TIH with 2-3/8" production string to 2940' (+/- 150 above top PC perf @ 3088').
18. MIRU slickline
19. TIH w/ gauge ring/dummy assembly w/ to PBTD.
  - 19.1. Ensure slickline unit can run @ 30 to 150 fpm
20. Allow flow to stabilize overnight.
21. RIH w/ completion profiler and log the production intervals per ProTechnics procedures.
22. TIH w/ completion profiler and **record final wellhead pressure.**
23. TIH w/ blanking plug and set a blanking plug in the F-nipple to isolate tubing from well.
24. TOH w/ slick line and bleed tubing pressure down to zero.
25. RD slick line

**Note:** Only use pipe dope on the pins. Do not dope the couplings.

26. RIH w/ tubing and set @ 5600' w/ seat nipple & standing valve, testing tubing to 1000 psi every 900'. Report leaks and replace.

**Note:** This well should be dead and the BOP's shall be closed and locked at the end of daily operations

27. Ensure tubing is not plugged prior to releasing the rig

28. N/D BOP's and N/U wellhead.

29. Return well to production.

30. R/D, move off location.

31. Return well to production.



Exploration & Production

## **Production Allocation Recommendation Rosa #18 (PC/MV)**

**WELLNAME:** Rosa #18  
**LOCATION:** SE/4 NE/4 Sec.22, T31N, R06W  
**API No.:** 03-039-07960

**FIELD:** Rosa Blanco  
**COUNTY:** Rio Arriba, NM  
**Date:** March 4, 2010

**Current Status:** The Rosa 18 is currently a dual completion well producing from the Pictured Cliff and Mesa Verde formations. The packer assembly at 4000' has failed and repair is mandatory. Williams recommends comingling this well for two reasons; packer repair, and production optimization. A plunger lift system will be installed to help unload this well successfully.

### **Commingle Procedure:**

1. Pull Pictured Cliffs tubing
2. Pull Mesa Verde tubing
3. Remove Production packer
4. Clean out to PBTD
5. Acid stimulate each formation if needed.
6. Complete with single string 2-3/8" tubing, landed @ 5600', below MV perms
7. Install plunger lift system.
8. Remove one set of wellhead facilities
9. Return to production as PV/MV comingle

**Allocation Method:** Historical production data was gathered and analyzed. Average production was considered to calculate baseline allocations. Williams will run a completion profiler once well is comingled to re-evaluate allocation percentages.

Average production used for baseline allocation:

Total Production from well = 245 MCFD  
Total Production from PC = 200 MCFD  
Total Production from MV = 45 MCFD

PC allocation = PC prod / Total prod = 200 MCFD / 245 MCFD = **82%**

MV allocation = MV prod / Total prod = 45 MCFD / 245 MCFD = **18%**



## Results

The following table summarizes the production from each producing interval.

GAS / WATER PRODUCTION PROFILE						
Flow Rates Reported at STP						
Zone Intervals	Q-Water	Qp-Water	Percent of Total	Q-Gas	Qp-Gas	Percent of Total
feet	BFPD	BFPD		MCFD	MCFD	
Surface to 3088	10 bpd		100 %	130 Mcf/d		100 %
Pictured Cliffs			67 %			88 %
3088 to 3101	10 bpd	3 bpd	30 %	130 Mcf/d	30 Mcf/d	23 %
3101 to 3112	7 bpd	0 bpd	2 %	101 Mcf/d	5 Mcf/d	4 %
3115 to 3124	7 bpd	0 bpd	3 %	96 Mcf/d	11 Mcf/d	8 %
3130 to 3142	7 bpd	0 bpd	1 %	85 Mcf/d	3 Mcf/d	2 %
3142 to 3152	7 bpd	3 bpd	24 %	83 Mcf/d	45 Mcf/d	34 %
3159 to 3171	4 bpd	1 bpd	7 %	38 Mcf/d	23 Mcf/d	17 %
Mesaverde			33 %			12 %
5272 to 5288	3 bpd	0 bpd	3 %	15 Mcf/d	0 Mcf/d	0 %
5316 to 5330	3 bpd	0 bpd	5 %	15 Mcf/d	2 Mcf/d	2 %
5342 to 5350	3 bpd	1 bpd	11 %	12 Mcf/d	4 Mcf/d	3 %
5352 to 5368	1 bpd	0 bpd	3 %	8 Mcf/d	1 Mcf/d	1 %
5402 to 5408	1 bpd	0 bpd	1 %	8 Mcf/d	0 Mcf/d	0 %
5454 to 5458	1 bpd	0 bpd	1 %	7 Mcf/d	2 Mcf/d	2 %
5500 to 5504	1 bpd	0 bpd	2 %	5 Mcf/d	1 Mcf/d	1 %
5550 to 5560	1 bpd	0 bpd	3 %	4 Mcf/d	1 Mcf/d	1 %
5564 to 5618	0 bpd	0 bpd	1 %	3 Mcf/d	0 Mcf/d	0 %
5636 to 5648	0 bpd	0 bpd	1 %	2 Mcf/d	0 Mcf/d	0 %
5656 to 5660	0 bpd	0 bpd	2 %	2 Mcf/d	1 Mcf/d	1 %
5668 to 5678	0 bpd	0 bpd	0 %	1 Mcf/d	1 Mcf/d	1 %

## Analysis Summary

1. The average daily water rate was reported to be 36 bpd. Based on the density response above the fluid level (4,950 ft) in the casing and tubing the well appeared to be make less than 36 bpd downhole.

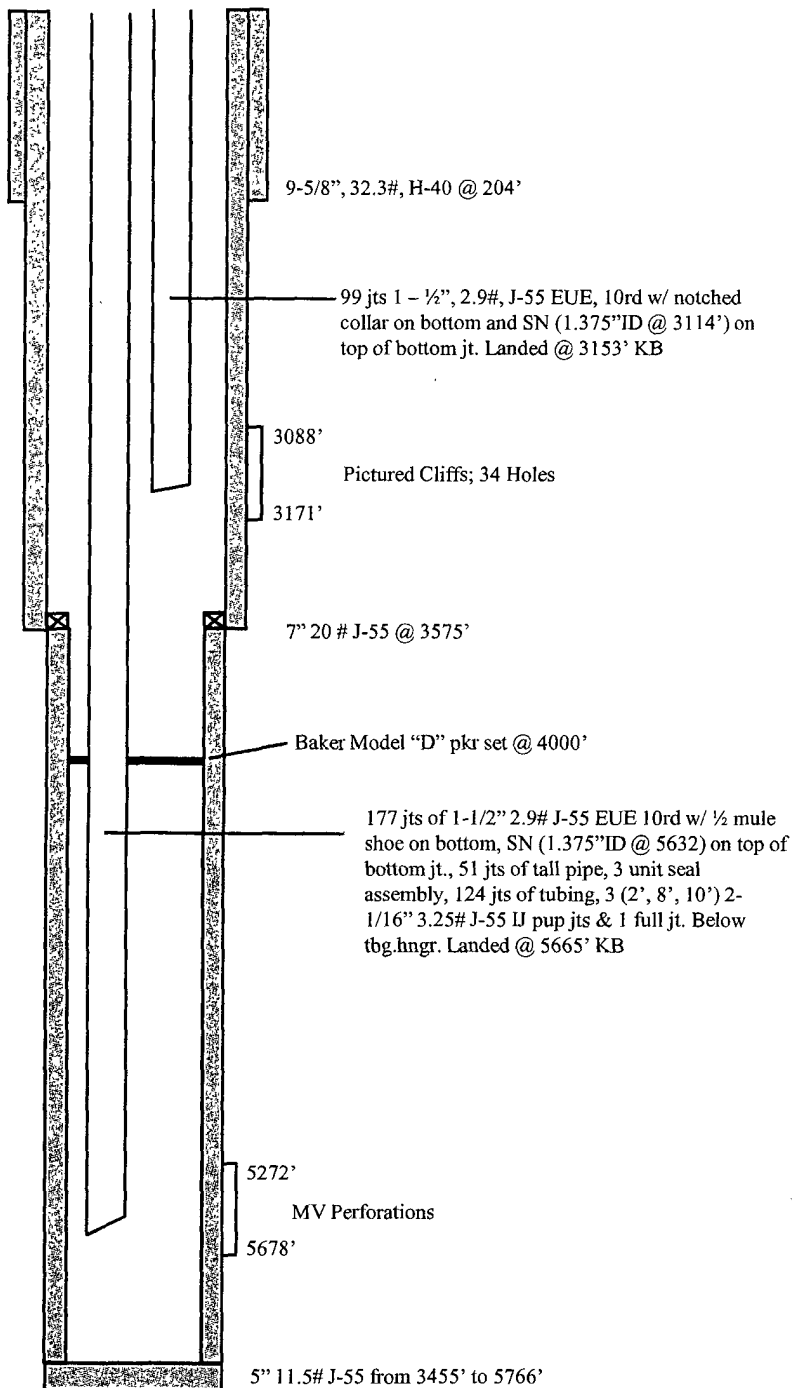
# WELLBORE DIAGRAM

## ROSA UNIT #18 MV

**Location:** SE/4 NE/4 Sec. 22  
T31N, R06W, Rio Arriba Co., NM

**Elevation:** 6275' GR  
KB = 12'

<i>Tops</i>	<i>Depth</i>
Nacimiento	N/A
Ojo Alamo	2310'
Kirtland	2411'
Fruitland	2908'
Pictured Cliffs	3082'
Lewis	3475'
Cliff House	5210'
Menefee	5307'
Point Lookout	5544'



### STIMULATION

#### PC: 3088' to 3171'

110,000# 20 / 40 in 12,180 gals of 30# X-Link gel in a 70 quality foam.

#### MV:

- 50,000# of sand in 75,000 gals of water. Dropped 193 balls
- Re-frac: 151,200 gals of water & 625 balls.

Hole Size	Casing	Cement	Volume	Top Of CMT
13 - 3/4"	9-5/8", 32.3#	175 sx	207 cu. ft.	surface
8 - 3/4"	7", 20#	200sx	347 cu. ft.	2255'(calc)
6 - 1/4"	5", 11#	150 sx	177 cu. ft.	4615'(calc)