In Lieu of Form 316 (June 199 Do not us	0 DEPARTME 0) BUREAU OF LA SUNDRY NOTICE AND	r reenty to a different reservoir. Use "APPLICATION	5. Lease D SF-0787	ORM APPROVED t Bureau No. 1004-0135 pires: March 31, 1993 esignation and Serial No. 666 t, Allottee or Tribe Name				
	SUBMIT IN T	7. If Unit or CA, Agreement Designation ROSA UNIT						
1.	Type of Well ☐ Oil Well ☐ Gas Well ☐ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	8. Well Name and No. ROSA UNIT #277						
2.	Name of Operator WILLIAMS PRODUCTION COMPANY		9. API Well No. 30-045-28346					
3.	Address and Telephone No. PO BOX 3102 MS 37-4, TULSA, OK 74101	10. Field and Pool, or Exploratory Area BASIN FRUITLAND COAL						
4.	Location of Well (Footage, Sec., T., R., M., o 1930' FSL & 1850' FWL, NE/4 SW/4, SEC	r Survey Description) 7 T31N R6W		or Parish, State AN, NM				
	CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA							
	TYPE OF SUBMISSION		E OF ACTION					
	■ Notice of Intent	☐ Abandonment ☐Recompletion	☐ Change of Plans ☐ New Construction					
☐ Subsequent Report		□ Plugging Back□ Casing Repair	□ Non-Routine Fracturing□ Water Shut-Off					
	☐ Final Abandonment	□ Altering Casing ■ Other <u>CAVITATE</u>	 □ 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.)*							
Williams Production Company plans to cavitate this well as per the attached procedure.								
		OUL COS Dunce	La DEVA	RECEIVED BLM 58 FED -9 PM 1: 09 070 FARMINGTON, NM				
14.	I hereby certify that the foregoing is true and Signed SUSAN GRIGUHN		Date February 6	, 1998				
	(This space for Federal or State office use) Approved by Conditions of approval, if any:	CNCSK Title		Date <u>FEB</u> 1 2 1998				

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.

WILLIAMS PRODUCTION COMPANY CAVITATION PROGNOSIS ROSA 277

Purpose: To cavitate the Fruitland Coal zone.

- Notify BLM 24 hours to moving in. Notify Dante Vescovi with T.I.W. Dig pit.
- MIRUSU. Nipple up BOP's, 2 blooie lines, hydraulic valves, working valves and 2" relief line. Test BOP's.
 Fill rig pit with produced water. Do not filter water unless necessary.
- 3. RIH w/ tubing and check for fill. TOH with tbg and LD.
- 4. Pickup 3-1/2" drill pipe w/ 4-3/4" bit. TIH w/drill pipe and clean out to PBTD @ 3218'. TOOH.
- 5. Notify Dante Vescovi with T.I.W. to be on location with liner setting/retrieving tool. TIH with T.I.W. setting tool on 3-1/2" drill pipe. Tag liner top at 2912'. Thread setting tool into liner hanger and pull straight out to release hanger and liner. TOH with liner and drill pipe.
- 6. Recondition 5-1/2" liner as necessary. Order new pipe if necessary. Recondition JGS liner hanger with left hand threads.
- 7. If liner recovery with setting tool was unsuccessful, mill it out as follows. Pickup rotary shoe, bumper sub, jars, 6-1/4" mill and 4-3/4" drill collars on 3-1/2" drill pipe and TIH. Mill the top hold down slips off the JGS, Steel Sleeve, Right Hand Release liner hanger. TOOH. Pick up a spear and the fishing tool assembly and TIH. Spear into the liner top and jar liner loose.
- 8. TOOH w/ 5-1/2" Liner and LD. Repair liner if necessary.
- 9. PU 6-1/4" bit on 3-1/2" DP and TIH. Clean out to 3221', TOOH.
- 10. PU 7" X 9-1/2" Underreamer and underream from 3000' to 3221'. TOOH.
- 11. Install three 750 cfm rated compressors with boosters and one 750 cfm compressor with booster for backup on location.
- 12. TIH w/ 6-1/4" bit on 3-1/2" DP and circulate out fill. Cavitate well! Run 5 to 10 bbl sweeps using 1 GPB of soap if necessary.
- 13. PU bit and drill inside 7". Pressure up hole to 3000 psi (Max pressure) then surge. Do this repeatedly. S.I. and measure pressure buildup. Pitot gauge flow.
- 14. Repeat 2-3 weeks or until gas production no longer increases.
 - NOTE: Accurate guages will be essential in determining the success of each step.

- 15. TOH w/ 6-1/4" bit on 3-1/2" DP.
- PU original 5-1/2" Liner on 3-1/2 DP. Run in with reconditioned JGS liner hanger with left hand 16. threads and L A set shoe on bottom of liner. Rotate down if necessary. Land liner @ 3221' with 70' overlap in 7". TOOH w/ 3-1/2" DP and LD.

If new 5-1/2" is run, perforation depths will be picked as per engineering, approximately 3020'-50, 3080'-3220'.

- PU 2-3/8", 4.7#, J-55, 8rd, EUE tbg and RIH. Land tubing @ 3158'. 17.
- 18. ND BOP and NU wellhead. Shut well in for buildup.
- 19. Cleanup location and release rig.

Sterg Katirgis Senior Engineer

PERTINENT DATA SHEET

WELLNAME: Rosa #277

FIELD: Basin Fruitland Coal

LOCATION: 1930'FSL, 1850'FWL, Sec 17, T31N, R6W

ELEVATION:

6409' GL TD: 3221'

KB: 12'

PBTD: 3218'

COUNTY: Rio Arriba

STATE: New Mexico

DATE COMPLETED: 11/25/90

CASING TYPE	CASING SIZE	HOLE SIZE	WEIGHT & GRADE	DEPTH	CEMENT	ТОР
Surface	9-5/8"	12-1/4"	36.00#, K-55	231'	189 ft3	surface
Intermediate Car	sing 7"	8-3/4"	23.0#, K-55	2990'	1010 ft3	surface
Production Liner	5-1/2"	6-1/4"	15.5#, K-55	2912'-3220'	NO CEMENT	00000

TUBING EQUIPMENT 100 jts, 2-3/8", 4.7#, J-55, 8 rd, landed @ 3190'. SN nipple one jt off bottom.

WELLHEAD:

Casing Head: 9-5/8" X 11" 3000#

Tubing Head 7-1/16" 3000#

FORMATION TOPS:

Ojo Alamo

2370'

Kirtland

2485'

Fruitland

22989'

LOGGING RECORD:

Mud log.

PERFORATIONS:

3006'-3218', pre perfed liner

STIMULATION:

circulated and ran sweeps for 1 day

CURRENT PRODUCTION: 40 MCFD Cumulative: 9 MMCF

SGK 2/4/98

WELLBORE DIAGRAM

ROSA #277

