In Lieu Form 3 (June 1	160 DEPARTM	TED STATES ENT OF INTERIOR LAND MANAGEMENT RECEIVED		FORM APPROVED Budget Bureau No. 1004-0135 Expires: March 31, 1993
Do not	SUNDRY NOTICE ANI use this form for proposals to drill or to deepen TO DRILL" for perm	5.	Lease Designation and Serial No. SF-078767	
	TO DRIEL TO PER		If Indian, Allottee or Tribe Name	
	SUBMIT IN	7.	If Unit or CA, Agreement Designation ROSA UNIT	
1.	Type of Well ☐ Oil Well ■ Gas Well	□ Other	8.	Well Name and No. ROSA UNIT #225
2.	Name of Operator WILLIAMS PRODUCTION COMPANY		9.	API Well No. 30-039-24499
3.	Address and Telephone No. PO BOX 3102 MS 37-4, TULSA, OK 7410	10.	Field and Pool, or Exploratory Area BASIN FRUITLAND COAL	
4.	4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 1035' FSL & 990' FWL, SW/4 SW/4, SEC 12 T31N R6W			County or Parish, State RIO ARRIBA, NM
	CHECK APPROPRIA	TE BOX(s) TO INDICATE NATURE OF NOTICE, R	EPORT, OR	ROTHER DATA
	TYPE OF SUBMISSION	OF ACTIO	ON	
	■ Notice of Intent	□ Abandonment		☐ Change of Plans
	☐ Subsequent Report	□Recompletion □ Plugging Back □ Casing Repair		 □ New Construction □ Non-Routine Fracturing □ Water Shut-Off
	☐ Final Abandonment	□ Altering Casing		☐ Conversion to Injection

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.)*

■Other <u>Cavitation</u>

Williams Production Company plans to cavitate this well as per the attached procedure. Estimated start date is June 1, 1998.



☐ Dispose Water

and Log form.)

(Note: Report results of multiple completion on Well Completion or Recompletion Report

14.	I hereby certify that the foregoing is true and correct Signed SUSANGRIGUHN	Title CLERK Date February 12, 1998
	(This space for Federal or State office use) Approved by Conditions of approval, if any:	Title Octing Team Lead Date 4/19/98

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 225

Purpose: To cavitate the Fruitland Coal zone.

- Notify BLM 24 hours to moving in. Notify Dante Vescovi with T.I.W. Dig pit.
- 2. 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.

NOTE: Unusual tubulars configuration of this well.

- TIH w/ tubing and check for fill. TOH with tbg and LD.
- 4. If needed, pickup 2-3/8" tbg w/ notched collar. TIH and clean out to PBTD. 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 2883'. Thread setting tool into liner hanger and pull straight out to release hanger and liner. TOH with liner and drill pipe.
- 6. Recondition 4" liner as necessary. Order new pipe if necessary. Recondition JGS liner hanger.
- 7. If liner recovery with setting tool was unsuccessful, mill it out as follows.

 Pickup rotary shoe, bumper sub, jars, 4-3/4" mill and drill collars on 3-1/2" drill pipe and TIH. Mill the top hold down slips off the JGS 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/ 4" Liner and LD. Repair liner if necessary.
- 9. PU 4-3/4" bit on 3-1/2" DP and TIH. Clean out to 3245'. TOOH.
- PU Baker #4 Locomatic undereamer (roller cones or bear claws to 8-1/2" OD. Undeream from 3060' to 3245'. TOOH.
- 11. Install three 750 cfm rated compressors with boosters and one 750 cfm compressor with booster for backup on location.
- 12. TIH w/ 4-3/4" bit on 3-1/2" DP and circulate out fill. Cavitate well! Run 10 to 5 bbl sweeps using 1 GPB of soap if necessary.
- 13. PU bit and drill pipe inside 5-1/2". Pressure up hole to 3000 psi (Max pressure=3500 psi) 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/ bit on 3-1/2" DP.
- PU original 4" 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 @ 3244' with $\pm 60'$ overlap in 5-1/2". TOOH w/ 3-1/2" DP and LD.

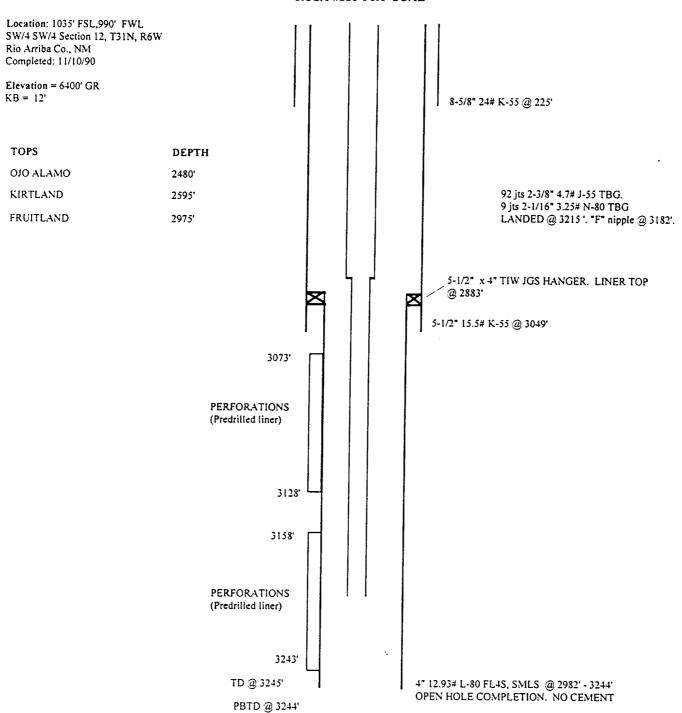
If new 4" is run, perforation depths will be picked as per engineering, approximately 3024'-3162'.

- 17. PU 2-3/8", 4.7#, J-55, 8rd, EUE tbg and RIH. Land tubing @ \pm 3215'.
- 18. ND BOP and NU wellhead. Shut well in for buildup.
- 19. Cleanup location and release rig.

Senior Engineer

WELLBORE DIAGRAM

ROSA #225 FRT COAL



HOLE SIZE	CASING	CEMENT	TOP OF CMT
12-1/4"	8-5/8" 24.0#	210 sx	SURFACE
7-7/8"	5-1/2" 15.5#	750 sx	SURFACE
4-3/4"	4" 12.93#	N/A	N/A

PERTINENT DATA SHEET

WELLNAME: Rosa #225

FIELD: Basin Fruitland Coal

LOCATION: 1035'FSL, 990'FWL, Sec 12, T31N, R6W

ELEVATION:

6400' GL TD: 3245'

KB: 12'

PBTD: 3244'

COUNTY: Rio Arriba

STATE: New Mexico

DATE COMPLETED: 11/12/90

	ASING SIZE	HOLE V	WEIGHT & GRADE	DEPTH	CEMENT	TOP
Surface Intermediate Casing Production Liner	8-5/8" 5-1/2" 4"	12-1/4" 7-7/8" 4-3/4"	24.00#, K-55 15.5#, K-55 12.93#, L-80, <u>FL4S</u> smls	3049'	7	surface surface NT

4" Rucker Atlas Bradford FL-4S (tbg), tubular ID=3.34", drift=3.215", joint ID=3.265", jt OD=4"

TUBING EQUIPMENT 92 jts, 2-3/8", 4.7#, J-55, 8 rd

9 jts 2-1/16", 3.25#, IJ, N-80 (1 jt 10 rd, EUE, 8 jts Buttress thread, 1 2-1/16 x 2-3/8 x-over)

landed @ 3215'. "F" nipple @ 3182', one jt off bottom.

WELLHEAD:

Casing Head:

Tubing Head

FORMATION TOPS:

Ojo Alamo 2480' Kirtland 2595' Fruitland 2975'

LOGGING RECORD:

Mud log.

PERFORATIONS:

3073' - 3128', 3158' - 3243', pre perfed liner

STIMULATION:

circulated and ran sweeps for 3-1/2 days

CURRENT PRODUCTION: 150 MCFD Cumulative: 37MMCF