SUNDRY NOTICE AND REPORTS ON WELLS       5.       Less Designation and Serial No.         Do not use this form for proposals to diff or to despen or recently to a different reservoir. Use "APPLICATION       5.       If Indian, Allottee or Tribe Name         10       Type of Well       0.       SUBMIT IN TRIPLICATE       7.       If Unit or CA, Agreement Designation         1.       Type of Well       0.0 ther       AUG 1 4 1939       9.       API Well No.         2.       Name of Operator       0.0 ther       AUG 1 4 1939       9.       API Well No.         3.       Address and Telephone No.       DOBL COUND DDIC.       DDIC.       10.       Field and Pool, or Exploratory Area         4.       Location of Well (Footage, Sec. T. R. M., or Surrey Description)       11.       County or Parish, State       RIO ARKIRA, NM         2.065 FSL & 1610 FWL, NE# SW4, SEC 4T DIN RSW       TYPE OF ACTION       11.       County or Parish, State         7.       PO BOX SILE MSIGN       TYPE OF ACTION       11.       County or Parish, State         7.       PO BOX SILE MSIGN       TYPE OF ACTION       In Charge of Plans       Non-Routine Fracturing         9.       API Well No.       0.0 Abandonment       Order Contraction       ONe: Report results of multiple completion or Recompletion or Well (Completion or Recompletion Nor Well Completion Proceedure)	In Lieu of Form 3160 (June 1990	D DEPARTME	ED STATES ENT OF INTERIOR AND MANAGEMENT	FORM APPROVED Budget Bureau No. 1004-0135 Expires: March 31, 1993		
	Do not use this form for proposals to drill or to deepen or reenty to a different reservoir. Use "APPLICATION			-		
SUBMIT IN TRIPLICATE       ROSA UNIT         1.       Type of Well       Other       ROSA UNIT #270         2.       Name of Operator       AUG       1       4       1999       9.       API Well No.         3.       Address and Telephone No.       PO BOX 3102 MS 37-2, TULSA, OK 74101 (918) 588-4592       DUTC       10.       Field and Pool, or Exploratory Area         4.       Location of Well (Footage, Sec., T., R, M., or Survey Description)       2057 - 3       11.       County or Parish, State         7.       CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA       TYPE OF SUBMISSION       11.       Change of Plans         Image: Contract of Intent       Image: Contract of Plans       Image: Contract of Plans       Image: Contract of Plans         Image: Subsequent Report       Image: Plange Repair       Image: Contract of Plans       Image: Plange Plans         Image: 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 deptits for all markers and zones pertinent to this work.)*         Villiams plans to restimulate this well by cavitation as per the attached procedure.       Work to begin around 9-1-1998.		TO DRILL" for perm	it for such proposals	6. If Indian, Allottee or Tribe Name		
Oil Well       Gas Well       Other       AUG 1 4 1998       POSA UNIT #270         2.       Name of Operator WILLIAMS PRODUCTION COMPANY       AUG 1 4 1998       9.       API Well No. 30-039-24964         3.       Address and Telephone No. PO BOX 3102 MS 37-2, TULSA, OK 74101 (918) 588-4592       DDDT       10.       Field and Pool, or Exploratory Area BASIN FRUITLAND COAL         4.       Location of Well (Footage, Sec., T., R., M., or Survey Description) 2065' FSL & 1610' FWL, NE4 SW/4, SEC 34 T3IN RSW       11.       County or Parish, State RIO ARRIBA, NM         CHECK APPROPRIATE BOX(s) TO INDI: 'ATE NATURE OF NOTICE, REPORT, OR OTHER DATA         TYPE OF SUBMISSION       TYPE OF ACTION         Image: Notice of Intent       Abandonment       Change of Plans         Image: Dispose Water (Note: Report       Plugging Back       Non-Routine Fracturing         Image: Dispose Water (Note: Report       Dispose Water (Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)       Dispose Water (Note: Report results of multiple completion Report and Log form.)         13.       Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of staring 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.)*         13.       Describe Proposed or Completed Operations (Clearly state all pe		SUBMIT IN T	RIPLICATE			
WILLIAMS PRODUCTION COMPANY       Output       Note of Log (1)       30-039-24964         3.       Address and Telephone No. PO BOX 3102 MS 37-2, TULSA, OK 74101 (918) 588-4592       Io.       Field and Pool, or Exploratory Area BASIN FRUITLAND COAL         4.       Location of Well (Footage, Sec., T., R., M, or Survey Description) 2065' FSL & 1610' FWL, NE/4 SW/4, SEC 34 T31N R5W       I1.       County or Parish, State RIO ARRIBA, NM         CHECK APPROPRIATE BOX(s) TO INDI: 'ATE NATURE OF NOTICE, REPORT, OR OTHER DATA         TYPE OF SUBMISSION         Intent         Busing Repair       Change of Plans         Busing Repair       Other	1.					
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RIO ARRIBA, NM         CHECK APPROPRIATE BOX(s) TO INDLY ATE NATURE OF NOTICE, REPORT, OR OTHER DATA         TYPE OF SUBMISSION         TYPE OF SUBMISSION         TYPE OF ACTION         Image: Notice of Intent       Image: Abandonment         Image: Subsequent Report       Image: Abandonment         Image: Subsequent Report       Image: Plugging Back         Image: Subsequent Report       Image: Plugging Back         Image: Subsequent Report       Image: Casing Repair         Image: Subsequent Report results of multiple completion on Weil 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.)*	3.	-	(918) 588-4592 DIST 3			
TYPE OF SUBMISSION       TYPE OF ACTION         In Notice of Intent       Abandonment       Change of Plans         Subsequent Report       Plugging Back       Non-Routine Fracturing         In Final Abandonment       Casing Repair       Water Shut-Off         Image: Final Abandonment       Image: Altering Casing       Conversion to Injection         Image: Water Shut-Off       Image: Altering Casing       Conversion to Injection         Image: Work to begin around 9-1-1998.       Williams plans to restimulate this well by cavitation as per the attached procedure.	4.	• •	· · ·			
<ul> <li>Notice of Intent</li> <li>Subsequent Report</li> <li>Final Abandonment</li> <li>Casing Repair</li> <li>Other <u>Cavitation</u></li> <li>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.)*</li> <li>Williams plans to restimulate this well by cavitation as per the attached procedure. Work to begin around 9-1-1998.</li> </ul>		CHECK APPROPRIA	TE BOX(s) TO INDECATE NATURE OF NOTICE, REF	ORT, OR OTHER DATA		
Image: Subsequent Report       Image: Recompletion       Image: New Construction         Image: Subsequent Report       Image: Plugging Back       Image: Non-Routine Fracturing         Image: Subsequent Report       Image: Casing Repair       Image: Water Shut-Off         Image: Subsequent Report       Image: Casing Repair       Image: Water Shut-Off         Image: Subsequent Report       Image: Casing Repair       Image: Conversion to Injection         Image: Subsequent Report       Image: Casing Casing       Image: Conversion to Injection         Image: Subsequent Report       Image: Casing Casing       Image: Conversion to Injection         Image: Subsequent Report       Image: Casing Casing       Image: Conversion to Injection         Image: Subsequent Report       Image: Casing Casing       Image: Conversion to Injection         Image: Subsequent Report       Image: Casing Casing       Image: Conversion to Injection         Image: Subsequent Report       Image: Casing Casing       Image: Conversion to Injection         Image: Subsequent Report       Image: Casing Casing       Image: Casing Casing       Image: Casing Conversion to Injection         Image: Subsect Report results of multiple completion or Recompletion or Recompletion or Recompletion or Recompletion Report       Image: Casing		TYPE OF SUBMISSION	DF ACTION			
<ul> <li>Final Abandonment</li> <li>Casing Repair</li> <li>Altering Casing</li> <li>Other <u>Cavitation</u></li> <li>Water Shut-Off</li> <li>Conversion to Injection</li> <li>Dispose Water (Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)</li> <li>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.)*</li> <li>Williams plans to restimulate this well by cavitation as per the attached procedure. Work to begin around 9-1-1998.</li> </ul>			□ Abandonment □ Change of Plans □Recompletion □ New Construction			
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14.	I hereby certify that the foregoing is true and correct Signed SUSAN GRIGUHN	Title <u>CLERK</u> Date July 28, 1998
	(This space for Federal or State office use)	AUG !   1998
	Approved by <b>S/ Duane W. Spencer</b>	AUG     1000 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.

7/22/98

## WILLIAMS PRODUCTION COMPANY CAVITATION PROGNOSIS ROSA 270

Purpose; To cavitate the Fruitland Coal zone.

- Dig and line blow pit. Check and replace rig anchors. Notify BLM 24 hours to moving in. Notify Dante Vescovi with T.I.W.
- MIRUSU. Nipple up BOP's, 2 blooie lines, hydraulic valves, working valves and 2" relief lines. Test BOP's.
   Fill rig pit with produced water. Filter water only if necessary.
- 3. RIH w/ tubing and check for fill. TOH with tbg and LD.
- 4. If there is a lot of fill clean out. Pickup 3-1/2" drill pipe w/ 4-3/4" bit. TIH w/drill pipe and clean out to PBTD @ 3595'. 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 3330'. 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 if possible. Order new pipe if necessary. Recondition JGS liner hanger with left hand threads.
- 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. Re use liner if possible.
- 9. PU 6-1/4" bit on 3-1/2" DP and TIH. Clean out to TD. TOOH.
- 10. PU 7" X 9-1/2" Underreamer and underream from 3420' to 3597'. TOOH.
- 11. Install three 750 cfm rated compressors with boosters and one 750 cfm compressor with booster for backup on location, or equivalent
- 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.
- PU bit and drill inside 7". Pressure up hole to 2500 psi if possible (Max pressure) then surge. Do this repeatedly.
   S.I. and measure pressure buildup. Pitot gauge flow through ¾" choke. 4 readings during 1 hour flow.

- 14. Repeat 14-17 weeks or until gas production no longer increases.
- 15. TOH w/ 6-1/4" bit on 3-1/2" DP.
- 16. PU 5-1/2" liner on 3-1/2" DP. Run in with reconditioned or new JGS liner hanger with left hand threads and L A set shoe on bottom of liner. Rotate down if necessary. Land liner @ 3597' with minimum of 60' 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 90' at 4 - 0.50" JSPF.

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- 17. PU 2-3/8", 4.7#, J-55, 8rd, EUE tbg and TIH. Land tubing @ ±3560'.
- 18. ND BOP and NU wellhead. Shut well in for buildup.
- 19. Cleanup location and release rig.

Sterg Katingis Senior Engineer

## ROSA UNIT #270 FRUITLAND COAL



HOLE SIZE	CASING	CEMENT	TOP OF CMT
12-1/4"	9-5/8" 36#	160 sx	SURFACE
8-3/4"	7" 20#	770 sx	SURFACE
6-1/4"	5-1/2" 15.5#	Did Not Cement	N/A

## PERTINENT DATA SHEET

WELLNAME: Rosa #270	FIELD	Basin Frui	tland Coal
LOCATION: 2065' FSL, 1610' FWL,Sec 34,T31N,R5W	ELEVATION: KB: 12'	6727 GL	<u>TD:</u> 3597' PBTD: 3595'

STATE: New Mexcio COUNTY: Rio Arriba

.

DATE SPUDDED: 10/18/90

CASING TYPE	CASING SIZE	HOLE SIZE	WEIGHT & GRADE	DEPTH	CEMENT	TOP
Surface	9-5/8"	12-1/4"	36.00#, K-55	228'	160 sx	surface
Intermediate Ca	ising 7"	8-3/4"	20.0#, K-55	3414'	770 sx	surface
Production Line		6-1/4"	15.5#, K-55	3330'-3597	NO CEMENT	

TIW 7" x 5-1/2" JGS, LH set liner hanger @ 3330'.

TUBING EQUIPMENT 112 jts, 2-3/8", 4.7#, J-55, 8rd, landed @ 3521'. F nipple one jt off bottom. Expendable check.

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WELLHEAD:	Casing Head: 9-5/8"	X 11" 3000#	Tubing Head 7-1/16" 3000#			
FORMATION TOPS	Ojo Alamo Kirtland Fruitland	2854' 3034' 3389'	<del>و</del> .			
LOGGING RECORD	3421-3461', 3	3508-3551', 3554-3594				
STIMULATION:	circulated an	circulated and ran sweeps for 2 days				

WORK OVER HISTORY First Delivered

SGK 7/22/98