In Lie	u of
Form	3160
(June	1990)

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## UNITED STATES DEPARTMENT OF INTERIOR BUREAU OF LAND MANAGEMENT

PO BOX 3102 MS 25-2, TULSA, OK 74101 (918) 573-6254

1720' FSL & 990' FWL, NE/4 SW/4 SEC 30-31N-5W

Location of Well (Footage, Sec., T., R., M., or Survey Description)

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

BASIN FRUITLAND COAL

County or Parish, State

RIO ARRIBA, NM

	THE HELLINED		Expires: March 31, 1993	
SUNDRY NOTICE AND REPORTS ON Do not use this form for proposals to drill or to deepen or reenty to a diffe	WELLS	5. 9	Lease Designation and Serial No. SF-078764	
TO DRILL! for permit for such propos	als 070 Farmington, NA	6.	If Indian, Allottee or Tribe Name	i.
SUBMIT IN TRIPLICATE		7.	If Unit or CA, Agreement Designation ROSA UNIT	特法
Type of Well Other	(36780)	8.	Well Name and No. ROSA UNIT #233	
Name of Operator WILLIAMS PRODUCTION COMPANY	JUN 20	9.	API Well No. 30-039-24440	
Address and Telephone No.	000	40.	Field and Pool, or Exploratory Area	1

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

TYPE OF SUBMISSION	SSION TYPE OF ACTION	
Notice of Intent	Abandonment	Change of Plans
	Recompletion	New Construction
X Subsequent Report	Plugging Back	Non-Routine Fracturing
	Casing Repair	Water Shut-Off
Final Abandonment	Altering Casing	Conversion to Injection
* 	X Other <u>Cavitation Complete</u>	Dispose Water
	The control of the co	(Note: Report results of multiple completion on
er en		Well Completion or Recompletion Report and
90 0		Log form \

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.)\*

<u>04-16-2004</u> MIRU rig & all equipment, took awhile because location was to short for rig & ramp. Blow well down, 480 psi csg, 320 psi tbg. ND WH, NU BOP stack & lay out & NU blooie line. Had trouble unscrewing lock bolts for tbg hanger, C/O to 2 3/8" pipe rams, TOOH w/ 100 jts 2 3/8" tbg. Pull 2 7/8" DC's & DP out of basket, prepare to trip for liner in the morning.

<u>04-17-2004</u> SICP = 420 psi. Blow well down, 420 psi. PU & MU TIW screw in sub. Change back to 2 7/8" rams, tally <u>DP & TIH, tag liner</u> 2 2738', tie back on single line, screw into liner top, pull 90K, liner came free, LD 15 its DP, change back to two lines, trip to surface w/ liner, wait on csg crew. RU San Juan Csg, LD 11 its 5.5", N-80 csg, RD csg crew. Tally & caliper DC's, TIH w/ bit, set bit @ 2762', SDFN.

<u>04-18-2004</u> SICP 400 psi, blow well down, C/O old stripper rubber. PU 12 jts 2 7/8" DP off rack, tag @ 3132'. Break circ w/ 12 bph a/s mist & 1 gallon soap per 10 bbls wtr, pump three 4 bbl soap sweeps to get circulation. CO fill from 3132' to 3144' & lost circulation, pump two 5 bbl soap sweeps, LD 3 jts DP to get above shoe to try & establish circulation, cheater pipe broke & hit one rig hand in the left knee. Inspect knee, slight abrasion, he could walk on it, LD last jt, SWIFN, wait on safety man to look @ accident, transport rig hand to town. SDFN.

<u>04-19-2004</u> SICP-400 PSI. Circulate, CO to TD 3254', returns-light coal fines in brown wtr, had 20' of fill on bottom. Circulate @ PBTD, returns-light coal fines in brown wtr. LD 9 jts DP, bit in 7" csg, RU lights. Surge 4 times w/ air mist, pressures 700 psi to 900 psi, 1.5 hrs pump time, returns-light small coal and wtr.

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14.	I hereby certify that the foregoing is true and correct			
	Signed Tracy Ross	Title Sr. Production Analyst	Date May 21, 2004 FOR RECORD	
	(This space for Federal or State office use)		JUN 0 7 2004	
	Approved by	Title	FARMINGTON FIELD OFFICE	
	Conditions of approval, if any:			

04-20-2004 Surge 1 time w/ air mist, pressures 900 psi, 1.5 hrs pump time, returns-light small coal and water, SI well @ 0300 hrs for natural surge, pressure @ 0700 hrs-470 psi. Hold safety meeting. Release natural surge, pressure-470 psi, returns-light coal fines & mist. PU 5 jts DP, tag fill @ 3120', 135' of fill. CO to TD, had some tight hole. Circulate @ TD, returns-light to medium coal fines in black water. LD 9 jts DP, bit in 7" csg, SWI to surge w/ air mist. Surge 4 times w/ air mist to 850 psi, 1.5 hrs pump time, returns-light coal and mist.

04-21-2004 Surge 1 time w/ air mist to 850 psi, 1.5 hrs pump time, returns-light coal and mist. SWI, 4 hr SI pressure-450 psi. Hold safety meeting. Release surge, returns-light coal & mist. TIH, tag fill @ 3120', 135' of fill. CO to 3180', returns-light 1/8" coal and med coal fines in black water. CO @ 3180', tight spot @ 3180'. CO to TD-3254', returns-light coal fines in black wtr. Pull into 7" csg. Surge 4 times w/ air mist, pressure to 850 psi, returns-light coal fines in black wtr.

04-22-2004 Surge 4 times w/ air mist, pressure to 850 psi; returns-light coal fines in black water. St well for natural surge, pressure 450 psi; Safety meeting; release surge, returns-light coal fines and mist. PU 6 jts DP, tag @ tight spot @ 3150'; unload w/ air mist. Try working through tight spot @ 3150' to 3180', returns-medium coal fines in black water. CO to TD @ 3254', returns-medium to light coal fines in black to brown water. LD 9 jts DP, hang back swivel, start out of hole; tongs broke on first stand, work on tongs; could not repair, will get parts or replacement tongs in AM. Surge 2 times natural, 3 hr build up to 450 psi; returns-light coal, no water.

04-23-2004 Surge 1 time natural, 3 hr build up to 450 pst, returns-light coal; no water. St for 4-hrs, pressure to 460 pst. Safety meeting, release natural surge, returns-light coal, no water. Replace power tongs. TOOH, check bit, ok. Change top pipe rams to 4 3/4", close on bit sub, start to pressure up, rams leaked. Change ram rubbers on 2 7/8" rams, install 2 7/8" rams in place of 4 3/4" rams, close rams around DP w/ bit sub in BOP. Surge w/ air mist 5 times, 2 hr pump time, pressures to 950 pst, returns-light coal and heavy mist

<u>04-24-2004</u> Surge w/ air mist 3 times, 2 hr pump time, pressures to 900 psi, returns-light coal and heavy mist. SI for natural surge, 3 hr SI pressure-420-returns-light coal fines and mist. Surge w/ air mist 3 times, 3 hr pressure build, max pressure-920 psi, returns-light coal and heavy mist.

<u>04-25-2004</u> Surge w/ air mist 1 time, 3 hr pressure build, max pressure-900 psi, returns-light coal and heavy mist. Booster broke down, natural surge well w/ one 3 hr natural, and two 2 hr natural surges to 290 psi, returns-light coal. fines and black water. Booster repaired-surge w/ air mist 3 times, pressure to 1150 psi, returns-light coal, heavy dust and water

04-26-2004 Surge w/ air mist, pressure to 1150 psi, returns-light coal, heavy dust and water. SI well for natural surge, pressure-450 psi. Release natural surge, returns-light coal fines and mist. TIH, tag @ 3107°. CO to 3150°, returns-light %" coal and shale in brown water. Work pipe from 3150° to 3200°, returns-light 1/8" coal to fines in brown water, hole problems seem to be caused by shale, returns reduced to very light coal. LD a total of 9 jts DP, bit in 7" csg. Surge 2 times w/ air and 10 bph water, 3 hr pump time, pressure to 1030 psi, returns-light coal and light water.

<u>04-27-2004</u> Surge 1 time w/ air and 10 bph water, 3 hr pump time, pressure to 920 psi, returns-light coal and light water. Well SI for natural surge, rig crew had safety meeting in Aztec till 0700 hrs. Release surge, pressure-480 psi, returns-coal fines and mist. Surge w/ air mist, pump air 1 hr w/ 10 bph water, pressure-860 psi, pump 10 bbl pad, pump air and 10 bph water 1 hr, pressure-980 psi, pump 10 bbl pad, pump air and 10 bph water 1 hr, pressure-1130 psi. Release surge, returns-coal fines and water. Surge w/ air mist, pump air 2 hrs w/ 10 bph water, pressure-940 psi. Release surge, returns-coal dust and heavy mist. TOOH, will under ream in AM. Surge 2 times w/ air mist, 3 hr pump time w/ 10 bph mist, pressure-1125 psi and 1100 psi, returns-light 1/8" coal and heavy mist

<u>04-28-2004</u> Surge 1 time w/ air mist, 3 hr pump time w/ 10 bph mist, pressure-1100 psi, returns-light 1/8" coal and heavy mist. SI well for natural surge. Release natural surge, pressure-510 psi, returns-light 1/8" coal and mist. PU Baker tri cone under reamer, MU shock sub. TIH to 2998'. RU 3.5 Bowen power swivel. Break circulation @ 3050', open under reamer. Under ream from 3050' to 3140', good circulation, returns-light coal fines. Under ream to 3150', well unloaded heavy 1/8" coal and heavy fines. Under ream to 3178', hole tight, poor circulation, very little returns. LD 14 jts DP, bit in &" casing, SWI, SDFN.

<u>04-29-2004</u> Release natural surge, pressure-460 psi, returns-light coal and mist. TIH to 2850', break circulation. Under ream from 2850' to 3110', did not tag anything, hole had been under reamed 4-5 years ago. Clean out and work tight spots w/ under reamer from 3110' to 3196', medium coal and shale returns about half the time, had some trouble maintaining circulation. Pipe became stuck @ 3188', work pipe for 20 minutes, no movement, SI well, pressure built to 220 psi in 25 minutes, work pipe, pipe came free. Pipe drug for 40', LD 14 jts DP, under reamer is in 7" casing, SI well for natural surge.

<u>04-30-2004</u> Release natural surge, pressure-420 psi. TIH to 3090', establish circulation. Underream, work tight hole from 3126' to 3173', returns-heavy 1/8" coal and shale at times, not continuous returns. LD swivel. TOOH, under reamer shows wear on nose and arms, cut rite worn off nose blades.

<u>05-01-2004</u> Change drilling line. Blow down well, casing pressure-460 psi. TIH w/ 6 1/4" bit, tag @ 3107'. CO from 3107' to 3170', had good circulation, returns-fines in brown water. CO from 3170' to 3185', had good circulation, running 10 to 20 bph mist w/ soap and shale inhibitor, returns-fines in brown water, 3.5 power swivel would stall out, LD 14 jts DP, bit in 7" casing, SI well for natural surge build up overnight.

05-02-2004 Release natural surge, pressure 460 psi, returns-coal dust. TIH, tag. 3107, break circulation. CO 3107 to 3140, through 30 coal interval from 3110 to 3140, put rig pump on hole w/ air, pumping 3 bpm water w/ soap and shale inhibitor, returns-heavy 1/8" coal and shale (50/50) in brown water, returns reduced to light 1/8" coal and shale. PU 14' jt DP, drill hard shale to 3155', hole had been under reamed but cleaning out was slow, high torque. LD 14 jts DP, bit in 7" casing, SI well for natural surge

<u>05-03-2004</u> Release natural surge, pressure-460 psi, returns-coal dust. TIH, tag @ 3131'. CO from 3131' to 3170', returns-heavy 1/16" coal and shale (60/40) to coal fines in brown water. CO hard shale from 3170' to 3195', returns-heavy 1/16" coal and shale (60/40) to coal fines in brown water. CO from 3195' to 3254'-TD, returns-light 1/16" coal and shale in brown water. TOOH, bit in BOP. Surge well 3 times w/ air mist, 1 hr pump time to 740 psi, returns-light coal and water.

<u>05-04-2004</u> Surge well 1 time w/ air mist, 1 hr pump time to 740 psi, returns-light coal and water. SI for natural surge. Release surge, pressure-640 psi, returns-light coal dust. Surge 3 times w/ air mist, 1 hr pump time, pressure to 760 psi, returns-light coal and water. Surge 3 times w/ air mist, pump air/mist 1 hr, then 10 bbl water, air/mist 1 hr then 10 bbl water, air mist 1 hr for a total of 3 hrs pump time, pressures to 1000 psi, returns-light coal and water.



05-05-2004 Surge 1 time w/ air mist, pump air/mist 1 hr, then 10 bbl water, air/mist 1 hr then 10 bbl water, air mist 1 hr for a total of 3 hrs pump time, pressures to 1050 psi, returns-light coal and water. SI well for natural surge. Release natural surge-pressure-460 psi, returns-light coal and mist. TIH, well unloaded while TIH, making small stream of water all while TIH. PU power swivel, tag @ 3107'. CO to 3254', TD, returns-light to medium coal fines in brown water. Pull bit into 7" csg. Natural surge 4 times w/ 2 hr SI's and 1/2 hr flow, pressure to 300 psi on first 2, 325 psi on second 2 surges, returns-light coal and mist

<u>05-06-2004</u> Natural surge w/ 2 hr SI and ½ hr flow, pressure to 400 psi, returns-light coal and mist. SI for natural surge. Release natural surge, pressure-640 psi, returns-light coal fines and mist. TIH w/ swivel, tag @ 3107', unload w/ air mist. CO from 3107' to 3254', hard cleaning from 3160' to 3185' and 3245' to 3254', returns light to medium coal fines in brown water. TOOH, lock bit in BOP. Surge 6 times w/ air mist, 1 hr pump time w/ 8 bph water, ½ hr flow, pressure to 600 psi, returns-light coal and water, started making some ¼" coal on last two surges.

<u>05-07-2004</u> Surge 2 times w/ air mist, 1 hr pump time, pressure to 650 psi, 1/2 hr flow, returns-light to medium ¼" coal in medium wtr. SWI for natural surge. Release natural surge-pressure-460 psi, surge blew down then brought up water and light ¼" coal. Pressure surge w/ 5 bbl water slug, 1 hr air to 600 psi, 5 bbl water slug, 1 hr air to 750 psi, release surge, returns-light to medium coal fines and water. Pressure surge 6 times w/ 1 hr air and 8 bph mist, pressure to 580 psi, returns-medium to heavy 3/8" coal to fines and heavy water, well would unload large amount of water and coal every 15 minutes, flow well for 1 hr

<u>05-08-2004</u> Pressure surge 1 time w/ 1 hr air and 8 bph mist, pressure to 600 psi, returns-medium to heavy 3/8" coal to fines and heavy water, well would unload large amount of water and coal every 15 minutes, flow well for 1 hr. SWI for natural surge. Release natural surge, pressure-640 psi, returns-coal fines and light water. TIH, PU swivel, tag @ 3107'. CO to TD-3254', hard shale from 3170' to 3195', returns-light coal fines in brown water, had problems w/ the power swivel, call mechanic. LD 14 jts DP, pull into 7" csg. Flow well to blow pit, 20' to 30' flare and small stream of water.

05-09-2004 Flow well to blow pit in attempt to heal shale, 20' to 30' flare and 1" stream of water.

<u>05-10-2004</u> Flow well to blow pit in attempt to heal shale, 20' to 30' flare and ½" stream of water. TIH, tag @ 3107'. CO to TD-3254', returns-light 1/8" coal to fines in brown water. Circulate on bottom, returns-light coal fines in light brown water. Shut off mist, dry hole. TOOH, bit in 7" csg. Flow well to blow pit.

<u>05-11-2004</u> Flow well to blow pit. TIH, tag @ 3118'. CO to TD-3254', returns-light coal fines in brown water. Circulate on bottom, returns-light coal fines in brown water. LD 2 jts DP, pulled into a tight spot, bit @ 3190'. Work pipe, had circulation, gained some movement down, SI well for 45 minutes, pressure built to 300 psi, gained more movement down, drilled up one inch at a time for 10', bit came free @ 3180'. Circulate @ 3110', well making medium 3/8" coal in dark brown water. Pull bit into 7" csg. Flow well to blow pit.

<u>05-12-2004</u> Flow well to blow pit. TIH, tag @ 3117'. CO to 3140', returns-heavy ½" and smaller coal and fines in brown water, coal ran for about 30 minutes. CO from 3140' to 3190', returns-light coal fines in brown water. Lost 50' of hole, back to 3140', returns-light 1/8" coal to fines in brown water. CO from 3107' to 3140', returns-light 1/8" coal to fines in brown water, had heavy coal returns for 30 minutes. Dry well for 15 minutes, pull into 7" csg. Flow well to blow pit.

<u>05-13-2004</u> Flow well to blow pit. TIH, tag @ 3110'. CO to 3190', returns-light coal fines in brown water. CO @ 3190', could not get below 3190'. LD 12 jts DP, hang swivel back, TOOH. PU full gauge button bit, TIH, PU power swivel. Flow well to blow pit.

<u>05-14-2004</u> Flow well to blow pit, hold safety meeting. TIH, tag @ 3110'. CO to 3254', TD, returns-light coal fines in brown water. Make short trip, LD 5 jts DP. Work back to bottom, returns-light coal fines in brown water. TOOH, RU San Juan Casing crew. Ran 11 jts new 5 1/2" 17# N-80 casing, had trouble making up casing, would hit max make up torque before threads were completely made up, appeared that pin threads were not cut properly, had to lay down 2 jts and pick up 2 jts from liner that was pulled from well, ran bit sub w/ float and 6 1/4" bit on bottom of liner. RD csg crew. TIH to window in 7" casing, flow well to blow pit

<u>05-15-2004</u> Flow well to blow pit, hold safety meeting. Finish TIH, tag @ 3130'. Circulate and rotate liner to TD. Ran 11 jts (480.47') 5 1/2", 17#, N-80 LT&C casing, set liner @ 3254', release from liner w/ H latch release tool, top of liner is 2774', 42' of overlap, bit sub and 6 ¼" bit on bottom. RD power swivel, LD DP, LD DC's. Rig up Computalog. Perforate, shot from 3252' to 3212' w/ 4 spf, 3165 to 3145' w/ 4 spf, 3145 to 3105' w/ 4 spf for a total of 400 shots, hole dia-0.5", RD perforators. RD BJ tongs, RU to run tubing, SI well, secure location, SDON

<u>05-16-2004</u> Blow well down, pressure-450 psi. Strap tubing in hole, reran 102 jts (3227.22') 2 %", 4.7#, J-55, EUE 8rd w/ sawtooth collar on bottom @ 3241', 1.81" ID F nipple on jt up @ 3208'. Tubing landed @ 3241'. Rig down floor, ND BOP and blooie line, NUWH. Turn well to production department, release rig @ 1500 hrs.

## **ROSA UNIT #233 BASIN FRUITLAND COAL**

Spud: 09/12/90

Completed: 04/18/91

Sidetrack & Cavitate: 09/03/98

1st Delivery: 12/10/92 Location: 1720' FSL and 990' FWL NE/4 SW/4 Sec 30(K), T31N R5W Rio Arriba, New Mexico Re-Cavitated: 05/16/04 Elevation: 6400' GR API # 30-039-24440 5 jts 9-5/8", 36#, K-55 csg. Set @ 224'. Top Depth Ojo Alamo 2550' Kirtland 2650' Fruitland 3100' TIW JGS Liner Hanger @ 2738' Sidetrack hole from 2833' - 3254' Top of Whipstock @ 2816' BP set @ 2828 102 jts 2-3/8", 4.7#, J-55, EUE, 8rd tbg with sawtooth collar on bottom @ 3241', 1.81" ID "F" nipple one jt up @ 3208'. Landed tbg @ 6 4-3/4" DC's (2852' - 3042') 3241'. New tubing 9-04-1998 3105' 71 jts 7", 23#, K-55 csg. Set @ 3085'. 3165' Inset float valve @ 3040' 11 jts 5-1/2", 17#, N-80, LT&C 5-1/2" Liner csg with 6-1/4" bit & bit sub on (3072' - 3223') bottom. Set @ 2774' - 3254'. 3212' (New Liner 5/14/2004) Did not cement. 3252 Open Hole to 3253' Re-Cavitated: 05/16/04 400 shots total, 0.5" dia

Sidetrack & Perforated 9-03-1998

Could not get original liner out of hole. Set whipstock and sidetracked hole. Perforated intervals 3205' - 3250' and 3105' - 3165' with 4 spf, 0.75" dia.

Original TD 3254'

New TD 3254'

Hole Size	Casing	Cement	Volume	Top of Cmt
12-1/4"	9-5/8", 36#	160 sx	188 cu. ft.	Surface
8-3/4"	7", 23#	782 sx	1188 cu. ft.	Surface
6-1/4"	5-1/2", 17#	Did Not Cmt	Daniero : 2000 (200) (2000 (200) (2000 (200) (2000 (2000 (200) (2000 (2000 (200) (2000 (2000 (200) (2000 (200) (2000 (200) (2000 (2000 (200) (2000 (200) (2000 (200) (200) (2000 (200) (2000 (200) (2000 (200) (200) (2000 (200) (20	