

NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION 2040 South Pacheco Street Santa Fe, New Mexico 87505 (505) 827-7131

July 22, 1999

Williams Production Company Walsh Engineering & Production Corporation c/o 7415 East Main Farmington, New Mexico 87402

W& 238 12227

Attention: **Paul C. Thompson**

> Re: Administrative application to establish a non-standard 352.87acre, more or less, gas spacing and proration unit within the Blanco-Mesaverde Pool comprising all of irregular Section 3, Township 31 North, Range 6 West, NMPM, Rio Arriba and San Juan Counties, New Mexico.

Dear Mr. Thompson:

The applicable rules governing the Blanco-Mesaverde Pool do not allow this type of nonstandard unit to be processed administratively [see Division Order No. R-10987-A and Division Rule 104.D (2)]. However, I have caused this application to be placed on the next available examiner's hearing docket and have it advertised in the following manner:

> "Application of Williams Production Company for a non-standard gas proration, Rio Arriba County, New Mexico. Applicant seeks to establish a non-standard 352.87-acre gas spacing and proration unit within the Blanco-Mesaverde Pool comprising all of irregular Section 3, Township 31 North, Range 6 West, which lays in both Rio Arriba and San Juan Counties and is located approximately 12.5 miles northeast of the Navajo Lake Dam. Blanco-Mesaverde gas production from both the Williams Production Company's: (i) Rosa Unit Well No. 169 (API No. 30-039-26130), located 2375 feet from the South line and 1750 feet from the East line (Unit J) of Section 3; and (ii) Rosa Unit Well No. 169-A (API No. 30-039-26149), located on the surface 2460 feet from the South line and 1695 feet from the East line (Unit J) of Section 3, is to be dedicated to this unit. IN THE ABSENCE OF OBJECTION, THIS APPLICATION WILL BE TAKEN UNDER ADVISEMENT."

I anticipate that an order can be issued at that time without any further information or involvement by Williams Production Company.

Williams Production Company Paul C. Thompson July 22, 1999 Page 2

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Should you have any questions or comments concerning this matter, please contact me in Santa Fe at (505) 827-8185. Thank you.

Sincerely, alu

Michael E. Stogner Chief Hearing Officer/Engineer

cc: New Mexico Oil Conservation Division - Aztec
U. S. Bureau of Land Management - Farmington
Ms. Florene Davidson, NMOCD - Santa Fe
Kathy Valdes, NMOCD - Santa Fe
Ms. Terry Ross, Williams Production Company - Telefax No. (918) 573-1298





ENGINEERING & PRODUCTION CORP.

Petroleum Engineering Consulting Lease Management Contract Pumping 7415 East Main Farmington, New Mexico 87402 (505) 327-4892 • Fax: (505) 327-9834

July 19, 1999

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Ms. Lori Wrotenbery New Mexico Oil Conservation Division 2040 S. Pacheco Santa Fe, NM 87505

Re: Non-Standard Gas Unit Williams Production Company Rosa Unit #169A 2375' FSL, 1750' FEL Section 3, T31N R6W Rio Arriba, NM Blanco Mesa Verde

Dear Ms. Wrotenbery,

This is a request on behalf of Williams Production Company for administrative approval for a non-standard gas unit in the Blanco Mesa Verde pool for the referenced well. The proposed spacing unit is south half of Section 3 and lots 5,6,7,8,9, and 37, T31N, R6W, which is 352.87 acres due to a variation in the legal subdivision of the U.S. Public Land Surveys. This is a directional well which will have a bottom hole location in the southwest quarter of Section 3.

As the Unit Operator of the Rosa Unit, Williams Production is the only offset operator. Attached is a plat indicating the well location and proposed spacing unit.

Thank you for your consideration and approval of this application. If you have any questions please do not hesitate to call upon me.

Sincerely,

Paul C. Thompson, P.E. President, Walsh Engineering

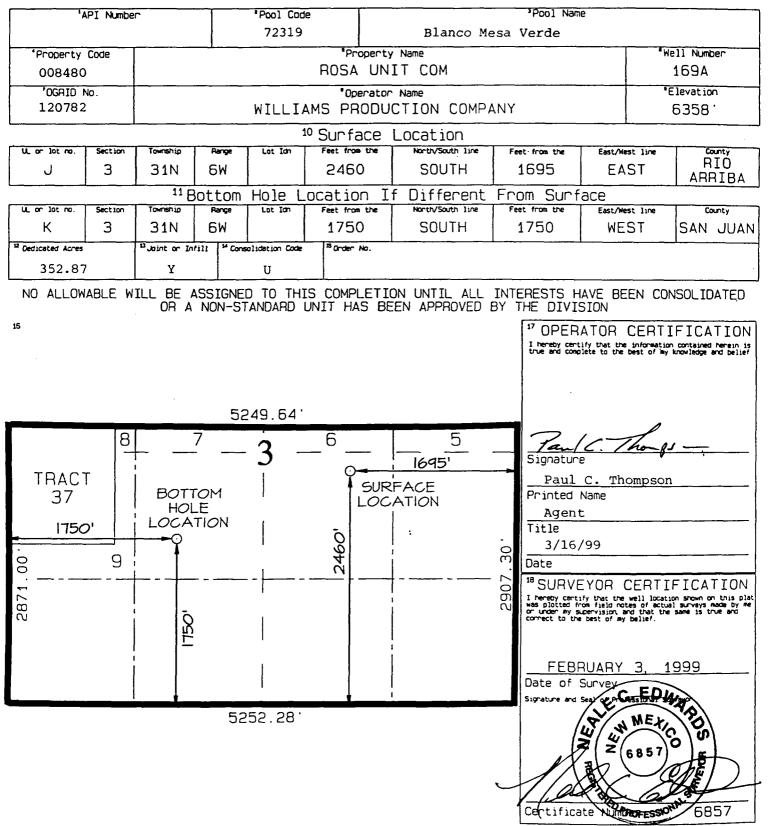
cc: David Spitz, WPC NMOCD Aztec NM BLM Farmington NM District I PO Box 1980, Hobbs, NM 88241-1980

District II PO Drawer DD, Artesia, NM 88211-0719

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

District IV PO Box 2088, Santa Fe, NM 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT



Form C-102 Revised February 21, 1994 Instructions on back Submit to Appropriate District Office State Lease - 4 Copies OIL CONSERVATION DIVISION

AMENDED REPORT

Fee Lease - 3 Copies

State of New Mexico Energy, Minerals & Natural Resources Depart

PO Box 2088

Santa Fe, NM 87504-2088





ENGINEERING & PRODUCTION CORP.

Petroleum Engineering Consulting Lease Management Contract Pumping 7415 East Main Farmington, New Mexico 87402 (505) 327-4892 • Fax: (505) 327-9834

July 19, 1999

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Ms. Lori Wrotenbery New Mexico Oil Conservation Division 2040 S. Pacheco Santa Fe, NM 87505

Re: Non-Standard Gas Unit Williams Production Company Rosa Unit #169 2460' FSL, 1695' FEL Section 3, T31N R6W Rio Arriba, NM Blanco Mesa Verde

Dear Ms. Wrotenbery,

This is a request on behalf of Williams Production Company for administrative approval for a non-standard gas unit in the Blanco Mesa Verde pool for the referenced well. The proposed spacing unit is south half of Section 3 and lots 5,6,7,8,9, and 37, T31N, R6W, which is 352.87 acres due to a variation in the legal subdivision of the U.S. Public Land Surveys.

As the Unit Operator of the Rosa Unit, Williams Production is the only offset operator. Attached is a plat indicating the well location and proposed spacing unit.

Thank you for your consideration and approval of this application. If you have any questions please do not hesitate to call upon me.

Sincerely,

Paul C. Thompson, P.E. President, Walsh Engineering

cc: David Spitz, WPC NMOCD Aztec NM BLM Farmington NM District I PO BOY 1580, Hobbs, NM 88241-1980

District II PO Drawer DD, Artesia, NM 88211-0719

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

State of New Mexico Energy, Minerals & Natural Resources Depart

Form C-102 Revised February 21, 1994 Instructions on back Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

OIL CONSERVATION DIVISION PO Box 2088 Santa Fe, NM 87504-2088

AMENDED REPORT

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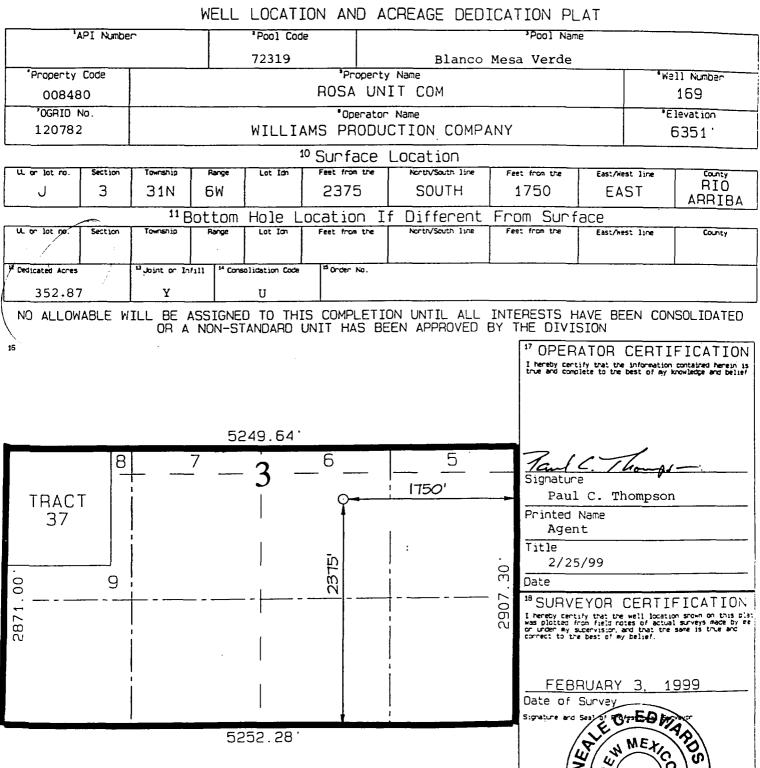
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District IV PO Box 2088, Santa Fe, NM 87504-2088



5252.28

CMD :ONGARDOG5SECTINQUIRE LAND BY SECTIONSec : 03 Twp : 31N Rng : 06WSection Type : NORMAL			07/22/99 13:26:32 OGOMES -TPX8 PAGE NO: 2	
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11.26 35.79	40.00	40.00	40.00	
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Date: 7/22/99 Time: 01:33:21 PM

CMD : OG5SECT

ONGARD INQUIRE LAND BY SECTION

07/22/99 13:26:21 OGOMES -TPX& PAGE NO: 1

Sec : 03 Twp : 31N Rng : 06W Section Type : NORMAL

8 37 0.43 35.79	7.41	 6 7.69 	 5 7.96
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PF01 HELP PF02 PF07 BKWD PF08 FWI		F04 GoTo PF05 F10 SDIV PF11	PF06 PF12

352,87 350,54 350,54 2,33

CMD : OG6IWCM	ONGARD INQUIRE WELL COMPLETIONS	07/22/99 13:35:34 OGOMES -TPX&
Pool Idn : 7	0 39 26130 Eff Date : 07-02-1999 2319 BLANCO-MESAVERDE (PRORATED GAS) 20782 WILLIAMS PRODUCTION COMPANY 17033 ROSA UNIT	WC Status :
Well No : 1 GL Elevation:		Fast/West Prop/Act(P/A)
Lot Identifier: Dedicated Acre: Lease Type :	J 3 31N 06W FTG 2375 F S 386.33	FTG 1750 F E P
	Enter PF keys to scroll	

PF01 HELP	PF02	7	PF04 GoTo	PF05	PF06
PF07	PF08	PF09	PF10 NEXT-WC	PF11 HISTORY	PF12 NXTREC

Page: 1 Document Name: untitled

07/22/99 13:35:49 CMD : ONGARD INQUIRE WELL COMPLETIONS OG6IWCM OGOMES - TPXE API Well No : 30 39 26149 Eff Date : 07-09-1999 WC Status : Pool Idn : 72319 BLANCO-MESAVERDE (PRORATED GAS) OGRID Idn : 120782 WILLIAMS PRODUCTION COMPANY Prop Idn : 17033 ROSA UNIT Well No : 169A GL Elevation: 6358 U/L Sec Township Range North/South East/West Prop/Act(P/A) B.H. Locn : J 3 31N 06W FTG 2460 F S FTG 1695 F E P Lot Identifier: Dedicated Acre: 386.33 Lease Type : F Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) : U M0025: Enter PF keys to scroll

PF01 HELPPF02PF03 EXITPF04 GoToPF05PF06PF07PF08PF09PF10 NEXT-WCPF11 HISTORYPF12 NXTREC

In Lieu of Form 316 (June 1990	DEPARTME DEPARTME BUREAU OF L	ED STATES NT OF INTERIOR AND MANAGEMENT	RECEIVER BLM	5.	FORM APPROVED Budget Bureau No. 1004-0135 Expires: March 31, 1993 Lease Designation and Serial No.
Do not u	SUNDRY NOTICE AND se this form for proposals to drill or to deepen or	reenty to a different reservoi	ir.993eJAPP4CATIPM 12	;. ;:_4 ↓	SF-078772
	TO DRILL" for permi	t for such proposals	070 FARMINGTON	6. , NM	If Indian, Allottee or Tribe Name
	SUBMIT IN T	RIPLICATE		7.	If Unit or CA, Agreement Designation ROSA UNIT
1.	Type of Well Oil Well Gas Well Other	D	Ceive	8.	Well Name and No. ROSA UNIT #169A
2.	Name of Operator WILLIAMS PRODUCTION COMPANY	<u>D</u> C	JUN 1 7 1999	9 _.	API Well No. 30-039-26149
3.	Address and Telephone No. PO BOX 3102 MS 37-2, TULSA, OK 74101 (918) 573-6254	CON. DIV	o ^{10.}	Field and Pool, or Exploratory Area BLANCO MV
4.	Location of Weil (Footage, Sec., T., R., M., or 2460' FSL & 1695' FEL, NE/4 SE/4 SEC 3-31	Survey Description)		11.	County or Parish, State RIO ARRIBA, NM
	CHECK APPROPRIAT	E BOX(s) TO INDICATE N	ATURE OF NOTICE, REPO	ORT, OR C	OTHER DATA
	TYPE OF SUBMISSION		TYPE C	OF ACTION	۱
	Notice of Intent				Change of Plans
	■ Subsequent Report	 Recompletion Plugging Back 	k		□ Non-Routine Fracturing □ Water Shut-Off
	Final Abandonment	□ Casing Repair □ Altering Casir ■ Other <u>Drill</u>	ng		Conversion to Injection Conversion to Injection Conversion to Injection Conversion to Injection 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.)*

5-28-1999 MIRU. Drill rat & mouse holes. Spud 8-3/4" pilot hole at 0230 hrs 5/28/99

5-29-1999 TD surface hole with bit #2 (12-1/4", HTC) at 533'. Circulate and TOH. Ran 12 joints (497.59') of 9-5/8" 36#, K-55, ST&C csg and set at 511.59' KB. BJ cemented with 450 sx (535 cu.ft.) of Cl "B" with 3% CaCl₂ and 1/4# cello-flake/sk. Displaced plug with 31 bbls of water. Plug down at 1900 hrs 5/28/99. Circulated out 15 bbls of cement. WOC. Nipple up BOP'S and pressure test to 1500# - held OK

5-30-1999 Finish pressure test to 1500# - held OK. Re-drill mouse hole. TIH w/ bit #3 (8-3/4", HTC, GTS-09T) & test mud motor. Continue TIH. Tag up on cement. Break circulation & drill out cement. Continue drilling new hole @ report time

5-31-1999 Drilling ahead w/ bit #3 (8-3/4", HTC, GTS-09T)

<u>6-01-1999</u> Drilling ahead w/ bit #3 (8-3/4", HTC, GTS-09T). At MD = 3175', Inc. = 36.1, Az = 244.900, TVD = 2870', 484.69' south & 1011.74' west

6-02-1999 TFB #3 (8-3/4", HTC, GTS-09T) @ 3910'. MD = 3858.51', Inc. = 36, Az = 238.700, TVD = 3422.40', 652.83' south and 1376.39' west

Continued on reverse side

14.	I hereby certify that the foregoing is true and correct Signed <u>Tracy Roso</u> Tracy Ross	Title <u>Production Analyst</u>	Date June 8, 1999
	(This space for Federal or State office use)		CONSIGNATION FOR RECO
	Approved by	Title	Date
	Conditions of approval, if any:		JUN 1 4 1999

<u>6-03-1999</u> TD intermediate hole with bit #4 (8-3/4", HTC, GTS-09T) at 4060'. Circulate hole clean. TOH and LDDP and DC. Change rams and rig up casing crew. Run 7" casing. Currently washing to bottom. Casing details on tomorrow's report

<u>6-04-1999</u> Ran 97 jts. (4060.92') of 7", 20#, K-55, ST&C casing and landed at 4060' KB. Float at 4016'. Rig up BJ and precede cement with 10 bbls of water and 10 bbls of scavenger cement. Cemented with 480 sx (1031 cu.ft.) of Cl "B" 65/35 poz with 10% gel, 2% CaCl₂ and 1/4# celloflake/sk. Tailed with 290 sx (346 cu.ft.) of Cl "B" with 1/4# celloflake/sk, and 2% CaCl₂. Displaced plug with 162 bbls of water. Plug down at 0800 hrs 6/3/99. Circulated out 20 bbls of cement. ND BOP. Set slips w/ #80,000 and cut off casing. Nipple up BOP's and pressure test to 1500# - held OK. TIH with bit #5 (6-1/4", HTC, STR09) and drilled cement. Unloaded well with nitrogen and continued drilling new hole with gas. MD= 4301', Inc. = 19.5, Az = 252.3, TVD = 3814, 741.45' south, 1557.16' west

<u>6-05-1999</u> Drilling ahead bit #5 (6-1/4", HTC, STR09). MD= 5347', Inc = 8.25, Az = 316.3, TVD = 4815.49' 673.21' south, 1826.77' west

<u>6-06-1999</u> TD hole at 6607' with gas and bit #5 (6-1/4", HTC, STR09). Blow hole clean and prepare to TOH. MD= 6607', Inc.= 3.50, Az = 326.30, TVD = 6070.32' 586.84' south, 1985.57' west

<u>6-07-1999</u> TOH and stand back half of drill pipe. Lay down the remainder of the DP and DC. RU casing crew and run 62 jts. (2681.00') of 4-1/2", 10.5#, K-55, ST&C casing and TTW 4-1/2"x7" liner hanger on drill pipe and landed at 6607' KB. Latch collar at 6588' KB and marker joint at 5877' KB. Top of liner @ 3926' - 134' of overlap into 7". Rig up BJ. Precede cement w/ 20 bbls of gel and 10 bbls of fresh water. Cement with 80 sx (110 cu.ft.) of Cl "B" 50/50 poz with 2% Gel, 0.4% FL52, and 2% CaCl₂. Tailed with 245 sx (331 cu.ft.) of Cl "B" 50/50 poz with 2% Gel, 0.4% FL-52, 2% CaCl₂, and 1/4#/sk celloflake. Displaced plug with 70 bbls of water. Plug down at 1700 hrs 6/6/99. Set pack-off and circulate out 12 bbls of cement. Lay down DP and TTW setting tool. ND BOP's. Rig released

Form 3160 DEPARTME	ED STATES ENT OF INTERIOR AND MANAGEMENT RECEIVED	FORM APPROVED Budget Bureau No. 1004-0135 Expires: March 31, 1993
SUNDRY NOTICE AND Do not use this form for proposals to drill or to deepen o		5. Lease Designation and Serial No. SF-078772
Do not use this form for proposals to drill or to deepen o TO DRILL" for permi	it for such proposals 99 JUH - 1 FIT TO THE	6. If Indian, Allottee or Tribe Name
SUBMIT IN T	UIU transmission	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 #169A
2. Name of Operator WILLIAMS PRODUCTION COMPANY	PECEIVER	9. API Weli No. 30-039-26149
3. Address and Telephone No. PO BOX 3102 MS 37-2, TULSA, OK 74101 (918) 573-6254 OTT	10. Field and Pool, or Exploratory Area BLANCO MV
4. Location of Well (Footage, Sec., T., R., M., or 2460' FSL & 1695' FEL, NE/4 SE/4 SEC 3-31		11. County or Parish, State RIO ARRIBA, NM
CHECK APPROPRIAT	E BOX(s) TO INDICATE NATURE OF NOTICE, REPO	DRT. OR OTHER DATA
TYPE OF SUBMISSION	ТҮРЕ С	FACTION
□ Notice of Intent	 Abandonment Recompletion 	□ Change of Plans □ New Construction
Subsequent Report	Plugging Back Casing Repair	Non-Routine Fracturing Water Shut-Off
Final Abandonment	□ Casing Repair □ Altering Casing ■ Other <u>SPUD WELL</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.)*

This well was spudded 0230 hrs 5-28-1999.

APD/ROW

DECENVEN
JUN - 4 1999
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14.	I hereby certify that the foregoing is true and correct		
	Signed Tracy Ross	Title Production Analyst	Date May 28, 1999
	(This space for Federal or State office use)		
	Approved by	Title	Date CORPORE FOR RECORD
	Conditions of approval, if any:		
	8 U.S.C. Section 1001, makes it a crime for any person kno		ment or agency of the United States any false, fictitious or fraudulent

-NMGCD

FORM 3160-3 (December 1990)	DEPART	UNITED STAT MENT OF THE U OF LAND MAN	ES INTERIOR	SUBMIT IN TRIPLICATE* (Other instructions on R L C E V + 5 in P L + 5 inde)		Form approved. Budget Bureau No. 100 Expires December 31, 1 5. LEASE DESIGNATION AND SERIA 1 SF- 078772 6. IF INDIAN, ALLOTTEE OR TRIBE 1	991 L NO.
APPLICA	TION FOR	PERMIT TO DE	RILL, DEEPEN, C			6. IF INDIAN, ALLOITEE OK TRIBE I	NAME
ia. TYPE OF WORK Ib. TYPE OF WELL	DRILL[DEEPEN	0	70 Frankinsaru.N		UNIT AGREEMENT NAME Rosa Unit 5. farm or lease name	17033
	GAS WELL	X OTHER	SINGLE X	MULTIPLE ZONE		• FARM UK LEASE NAME	
2. NAME OF OPERAT		duction Company	· • . • • •			9. WELL NO. 169A API# 30	-639-2-6149
3. ADDRESS OF OPER	ATOR	15 E. Main St. Farr	nington NM 87482	75057 327-4892		10. FIELD AND POOL OR WILDCAT Blanco Mesa Ver	
4. LOCATION OF V At Surface 2	VELL (Report location 460' FSL and	ion clearly and in accordance d 1695' FEL	e with any State reguirements	R 2 9 1999 🖻	,	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA	
At proposed Prod. 2		d 1750' FWL		CON. DIV		J Sec. 3, T31N, R6	**
		FROM NEAREST TOWN OR	POST OFFICE•	DIST. 3	-	12. COUNTY OR PARISH Rio Arriba	13. STATE NM
OR LEASE LINE, I	PROPOSED* LOCAT T.(Also to nearest drig 47	ION TO NEAREST PROPERT ; unit line, if any)		se 1.86		10. OF ACRES ASSIGNED TO THIS WE 352.87 / FLL	ill.
DRILLING, COMP		ON* TO NEAREST WELL, FOR ON THIS LEASE, FT. This comon is	19. PROPOSED DEPTH	9\.# VD: 6648' MD		OTARY OR CABLE TOOLS	<u> </u>
100' This action is subject to tocimitation of TVD; 6648' MD Rotary 21. ELEVATIONS (show whether DF, RT, GR, etc.) procedural review pursuant to 43 GFR 3165.3 22. APPROX. DATE WORK WILL START* 6358' GR and appeal pursuant to 43 GFR 3165.4. May 1999					RT*		
23.			ING AND CEMENTING				
SIZE OF	<u>HOLE</u> 2-1/4"	size of casing 9-5/8"	<u>weight/foot</u> 36#	SETTING DEPTH		QUANTITY OF CEM 312 cu.ft. Cl "H" with 2%	
	-3/4"	7"	20#	3767'	-	885cu.ft.65/35 poz & 217	
6	5-1/4"	4-1/2"	10.5#	3667' - 6648'	-	130cu.ft.50/50 poz & 390	¥

Williams Production Company proposes to drill a directional well to develop the Mesa Verde formation at the above described location in accordance with the attached drilling and surface use plans.

This location has been archaeologically surveyed by Moore Anthropological Research. Copies of their report have been submitted directly to your office submitted directly to your office. SUBJECT TO COMPLIANCE WITH ATTACHED

This APD also is serving as an application to obtain BLM road and pipeline right-of-ways. This well will be accessed by road as the Rosa #169, which crosses the SE/4 of Sec.34, the SW/NW of Sec. 35, E2/NE of Sec. 34, the SE/SE of Sec. 27 the, S/2S/2 of Sec. 26, the S2/S2 of Sec. 25 all of T32N, R6W, the SW/SW of Sec. 30, W2/W2 and SE/SW of Sec. 32 all of T32N, R5W, the NW/SE and NE/se of Sec. 5, T31N, R5W, where it joins the main Rosa Road. The Rosa Road continues SE for 19 miles where it joins the Sims Mesa Highway.

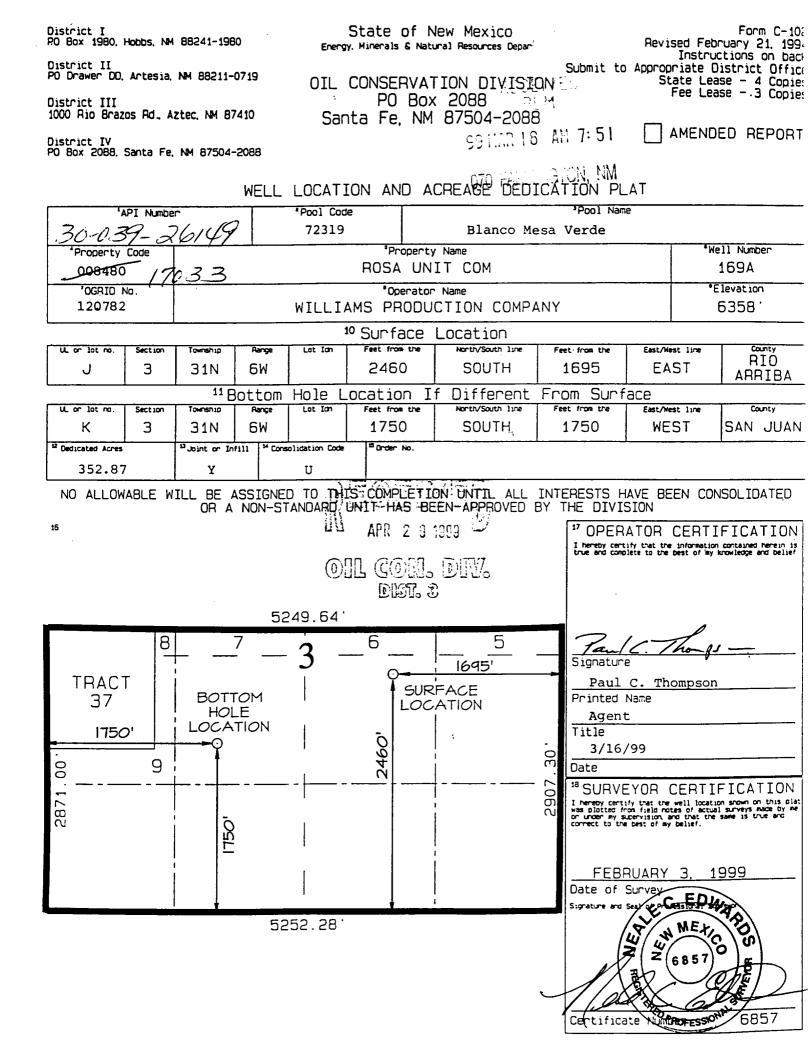
IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM : If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any, 24.

SIGNED Pacel C. Thomas -	TITLE Paul C. Thompson, Ager. DAT	e <i>3/15/99</i>
(This space for Federal or State office use)		
PERMIT NO	APPROVAL DATE	
Application approval does not warrant or certify that the applicant holds leg	al or equitable title to those rights in the subject lease which would entitle the appli	icant to conduct operations thereon.
CONDITIONS OF APPROVAL, IF ANY:	_	
APPROVED BY /S/ Duane W. Spencer	TITLE Team Lead, Petroleum ManagementATI	E <u>APR ∠ 7 1999</u>
	ee Instructions On Reverse Side	

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.

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WILLIAMS PRODUCTION COMPANY OPERATIONS PLAN

DATE:	3/8/99		
WELLNAME:	ROSA #169A	FIELD	Blanco MV
SURFACE LOCATION:	NW4/SE4 Sec. 3, T31N, R06W Rio Arriba, NM	SURFACE:	BOR
BOTTOM HOLE LOCATION	: NE4/SW4 Sec. 3, T31N, R06W Rio Arriba, NM		
ELEVATION:	63 58 ' GR	MINERALS:	Federal
TRUE VERTICAL DEPTH:	6100'	LEASE #	SF-078772
MEASURED DEPTH:	6648'		

I. GEOLOGY: Surface formation - San Jose

A. FORMATION TOPS: (KB)

	TVD	MD		TVD	MD
Ojo Alamo	2349'	2435'	Cliff House	5389'	5900'
Kirtland	2474'	2579'	Menefee	5434'	5947'
Fruitland	2874'	3043'	Point Lookout	5629'	6153'
Pictured Cliffs	3149'	3361'	Mancos	5844'	6589'
Lewis	3454'	3714'	Total Depth	6100'	6648'
			-		

B. <u>LOGGING PROGRAM</u>: IND/GR, CDL/SNL. Log the Pictured Cliffs from TD to the Kirtland. Log the Mesa Verde from TD to 500' above the top of the Cliff House.

C. <u>NATURAL GAUGES</u>: Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

II. DRILLING

A. MUD PROGRAM: Clear water with benex to 7" casing point. LSND to log and run pipe.

B. <u>BOP TESTING</u>: While drill pipe is in use, the pipe rams will be tested not less than once each day. The blind rams will be tested once each trip. The drum brakes will inspected and tested each tour. All tests and inspections will be recorded in the tour book as to time and results.

III. MATERIALS

A. CASING PROGRAM:

CASING TYPE	HOLE SIZE	DEPTH(MD)	CASING SIZE	WT. & GRADE
Surface	12-1/4"	500'	9-5/8"	36# K-55
Intermediate	8-3/4"	3767'	7"	20# K-55
Prod. Liner	6-1/4"	3667'-6648'	4-1/2"	10.5# K-55

B. FLOAT EQUIPMENT:

1. SURFACE CASING: 9-5/8" notched regular pattern guide shoe.

2. <u>INTERMEDIATE CASING:</u> 7" cement nose guide shoe with a self- fill insert float. Place float one(1) joint above the shoe and one centralizer, spaced every joint, starting with the float collar. Place turbulent centralizers, at 120' intervals, starting at 2625' to the surface. Total centralizers = 28 regular and 22 turbulent.

Rosa Unit #1694 Operations Plan Page #2

3. <u>PRODUCTION CASING</u>: 4-1/2" whirler type cement nose guide shoe with a latch collar on top of 20' bottom joint. Place marker joint above 5700'. Place one postive standoff turbolizer every other joint. Total turbolizers is 36.

C. CEMENTING:

1. <u>SURFACE</u>: Use <u>260 sx</u> (312 cu.ft.) of class "H" with 2% CaCl2 and 1/4# of cello-flake/sk (Yield = 1.20 cu.ft./sk, Weight = 15.6 #/gal.). Use 100% excess to circulate the surface. WOC 12 hours. Test to 1500#.

2. INTERMEDIATE: Lead - 435 sx (885 cu.ft.) of class "H" 65/35 poz with 10% gel, 2% CaCl2, and 1/4# cello-flake/sk (Yield = 2.04 cu.ft./sk, Weight = 12.3 #/gal.). Tail - 150 sx (217 cu.ft.) of class "H" 50/50 Poz with 4% gel, 0.4% FI-52, 2% CaCl2, 1/4# cello-flake/sk, (Yield = 1.45 cu.ft./sk, Weight = 13.2#/gal.). Use 100% excess in lead and 75% excess in tail to circulate to surface. Total volume = 1102 cu.ft. WOC 12 hours. Test to 1500#.

3. <u>PRODUCTION LINER</u>: Lead-<u>90sx</u> (130 cu.ft.) of class "H" 50/50 poz with 4 % gel, 0.4% FL-52, 2% CaCl2, (Yield = 1.45 cu.ft./sk, Weight = 13.2 #/gal.) Tail-<u>270 sx</u> (390 cu.ft.) of class "H" 50/50 poz with 4 % gel, 0.4% FL-52, 2% CaCl2, $\frac{1}{4}$ celloflake/sk (Yield = 1.45 cu.ft./sk, Weight = 13.2 #/gal.) Displace cement at a minimum of 8 BPM. Use 70% excess in lead and tail to cover liner top. Total volume 520 cuft. WOC 12 hours.

IV COMPLETION

A. <u>CBL</u>

1. Run Cement Bond Log across all intervals to be perforated and find Top of Cement behind all casing strings.

B. PRESSURE TEST

1. Pressure test 7" & 4-1/2" casing to 3300# for 15 minutes.

C. STIMULATION

1. Stimulate Point Lookout with approximately 80,000# of 20/40 sand in slick water.

- 2. Isolate Point Lookout with a RBP.
- 3. Perforate the Menefee/Cliff House as determined from the open hole logs.
- 4. Stimulate with approximately 80,000# of 20/40 sand in slick water.
- 5. Test each zone before removing bridge plugs.

D. RUNNING TUBING

1. <u>Mesa Verde:</u> Run 2-3/8", 2.9#, J-55, EUE tubing with a SN (1.91" ID) on top of bottom joint. Land tubing approximately 25' above the bottom Point Lookout perforations.

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Proposal Report for Rosa # 169A - Plan 3/3/99 Data Source: Information from Lance Hobbs

Williams Production Company New Mexico

Rio Arriba County Sec. 3-T31N-R06W

Measured			Vertical			Vertical	Dogleg
Depth	Inci.	Azim.	Depth	Northings	Eastings	Section	Rate
(ft)			(ft)	(ft)	(ft)	(ft)	(*/100ft)
			vv	((,	(,	(
0.00	0.000	0.000	0.00	0.00 N	0.00 E	0.00	
800.00	0.000	0.000	800.00	0.00 N	0.00 E	0.00	0.000
900.00	2.000	250.253	899.98	0.59 S	1.64 W	1.75	2.000
1000.00	4.000	250.253	999.84	2.36 S	6.57 W	6.98	2.000
1100.00	6.000	250.253	1099.45	5.30 S	14.77 W		
				5.50 5	14.77 VV	15.69	2.000
1200.00	8.000	250.253	1198.70	9.42 S	26.24 W	27.88	2.000
1300.00	10.000	250.253	1297.47	14.70 S	40.96 W	43.52	2.000
1400.00	12.000	250.253	1395.62	21.15 S	58.92 W	62.60	2.000
1500.00	14.000	250.253	1493.06	28.75 S	80.09 W	85.10	2.000
1600.00	16.000	250.253	1589.64	37.50 S	104.45 W	110.98	2.000
1700.00	18.000	250.253	1685.27	47.37 S	131.97 W	140.21	2.000
1800.00	20.000	250.253	1779.82	58.37 S	162.61 W	172.77	2.000
1900.00	22.000	250.253	1873.17	70.48 S	196.34 W	208.60	2.000
2000.00	24.000	250.253	1965.21	83.68 S	233.11 W	247.67	2.000
2100.00	26.000	250.253	2055.84	97.96 S	272.88 W	289.93	2.000
2200.00	28.000	250.253	2144.94	113.30 S	315.61 W	335.33	
2300.00	30.000	250.253	2232.39	129.68 S	361.24 W	383.81	2.000
2312.28	30.246	250.253	2232.39	129.00 S			2.000
2400.00				146.69 S	367.04 W	389.97	2.000
2400.00	30.246	250.253	2318.80		408.63 W	434.16	0.000
2500.00	30.246	250.253	2405.18	163.70 S	456.03 W	484.53	0.000
2600.00	30.246	250.253	2491.57	180.72 S	503.44 W	534.90	0.000
2700.00	30.246	250.253	2577.96	197.74 S	550.85 W	585.27	0.000
2800.00	30.246	250.253	2664.34	214.76 S	598.26 W	635.64	0.000
2900.00	30.246	250.253	2750.73	231.78 S	645.67 W	686.01	0.000
3000.00	30.246	250.253	2837.12	248.80 S	693.08 W	736.38	0.000
3100.00	30.246	250.253	2923.51	265.82 S	740.49 W	786.75	0.000
3200.00	30.246	250.253	3009.89	282.83 S	787.90 W	837.12	0.000
3300.00	30.246	250.253	3096.28	299.85 S	835.30 W	887.49	0.000
3400.00	30.246	250.253	3182.67	316.87 S	882.71 W	937.86	0.000
3500.00	30.246	250.253	3269.06	333.89 S	930.12 W	988.24	0.000
3600.00	30.246	250.253	3355.44	350.91 S	977.53 W	1038.61	0.000
3700.00	30.246	250.253	3441.83	367.93 S	1024.94 W	1088.98	0.000
3800.00	30.246	250.253	3528.22	384.95 S	1072.35 W	1139.35	0.000
3900.00	30.246	250.253	3614.61	401.96 S	1119.76 W	1189.72	0.000
4000.00	30.246	250.253	3700.99	401.98 S	1167.17 W	1240.09	0.000
	30.240			410.30 3	1107.17 44	1240.09	0.000
4100.00	30.246	250.253	3787.38	436.00 S	1214.57 W	1290.46	0.000
4200.00	30.246	250.253	3873.77	453.02 S	1261.98 W	1340.83	0.000
4300.00	30.246	250.253	3960.16	470.04 S	1309.39 W	1391.20	0.000
4400.00	30.246	250.253	4046.54	487.06 S	1356.80 W	1441.57	0.000
4500.00	30.246	250.253	4132.93	504.08 S	1404.21 W	1491.94	0.000
4600.00	30.246	250.253	4219.32	521.09 S	1451.62 W	1542.31	0.000
4700.00	30.246	250.253	4305.71	538.11 S	1499.03 W	1592.68	0.000
4800.00	30.246	250.253	4392.09	555.13 S	1546.44 W	1643.06	0.000
4900.00	30.246	250.253	4478.48	572.15 S	1593.84 W	1693.43	0.000
4990.12	30.246	250.253	4556.34	587.49 S	1636.57 W	1738.82	0.000

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Proposal Report for Rosa # 169A - Plan 3/3/99 Data Source: Information from Lance Hobbs

Williams Production Company New Mexico

Rio Arriba County Sec. 3-T31N-R06W

Measured Depth (ft)	Inci.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (*/100ft)
5000.00	30.097	250.253	4564.87	589.16 S	1641.24 W	1743.79	1.500
5100.00	28.597	250.253	4652.04	605.72 S	1687.37 W	1792.80	1.500
5200.00	27.097	250.253	4740.45	621.50 S	1731.33 W	1839.51	1.500
5300.00	25.597	250.253	4830.06	636.50 S	1773.10 W	1883.89	1.500
5400.00	24.097	250.253	4920.80	650.70 S	1812.65 W	1925.91	1.500
5500.00	22.597	250.253	5012.61	664.08 S	1849.95 W	1965.53	1.500
5600.00	21.097	250.253	5105.43	676.66 S	1884.98 W	2002.75	1.500
5700.00	19.597	250.253	5199.19	688.41 S	1917.70 W	2037.52	1.500
5800.00	18.097	250.253	5293.82	699.32 S	1948.11 W	2069.82	1.500
5806.50	18.000	250.253	5300.00	700.00 S	1950.00 W	2071.83	1.500
5900.00	18.000	250.253	5388.93	709.76 S	1977.19 W	2100.73	0.000
6000.00	18.000	250.253	5484.03	720.20 S	2006.28 W	2131.63	0.000
6100.00	18.000	250.253	5579.14	730.64 S	2035.36 W	2162.53	0.000
6200.00	18.000	250.253	5674.24	741.08 S	2064.45 W	2193.43	0.000
6300.00	18.000	250.253	5769.35	751.52 S	2093.53 W	2224.34	0.000
6400.00	18.000	250.253	5864.45	761.97 S	2122.62 W	2255.24	0.000
6500.00	18.000	250.253	595 9.56	772.41 S	2151.70 W	2286.14	0.000
6600.00	18.000	250.253	6054.67	782.85 S	2180.79 W	2317.04	0.000
6647.67	18.000	250.253	6100.00	787.82 S	2194.65 W	2331.77	0.000

All data is in feet unless otherwise stated. Directions and coordinates are relative to True North. Vertical depths are relative to RKB. Northings and Eastings are relative to Wellhead.

The Dogleg Severity is in Degrees per 100ft. Vertical Section is from Wellhead and calculated along an Azimuth of 250.253° (True).

Based upon Minimum Curvature type calculations, at a Measured Depth of 6647.67ft., The Bottom Hole Displacement is 2331.77ft., in the Direction of 250.253° (True).

Comments

Measured	Sta	tion Coordi	nates	·
Depth (ft)	TVD (ft)	Northings (ft)	Eastings (ft)	Comment
800.00	800.00	0.00 N	0.00 E	Kick-Off Point - 800.00ft
800.01	800.01	0.00 N	0.00 E	Build 2.0°/100' to 30.246° Inc & 250.253° Azm to 2312.28' md
2312.28	2243.02	131.76 S	367.04 W	Hold 30.246° Inc & 250.253° Azm to 4990.12' md
4990.12	4556.33	587.49 S	1636.57 W	Drop 1.5°/100' & to 18.0° Inc & 250.253° Azm to 5806.50' md
5806.50	5300.00	700.00 S	1950.00 W	Target Intersection Point @ 5806.50' md & 5300' TVD

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Proposal Report for Rosa # 169A - Plan 3/3/99 Data Source: Information from Lance Hobbs

Williams Production Company New Mexico

Rio Arriba County Sec. 3-T31N-R06W

	Measured	Sta	tion Cod	ordina	tes	
	Depth (ft)	TVD (ft)	Northing (ft)	s E	Eastings (ft)	Comment
Com	ments (Con	tinued)				
	5806.51	5300.01	700.00	s	1950.00 W	Hold 18° Inc & 250.253° Azm to 6647.67' md
	6647.67	6100.00	787.82	S	2194.65 W	TD of Well @ 6647.67' md & 6100' TVD
Casi	ng details					
	Fro	m	Т	0	•	
	Measured	Vertical	Measured	Vertical	I	
	Depth	Depth	Depth	Depth	Casing	Detail
	(ft)	(ft)	(ft)	(ft)		

3500.00

Taraata	associated	with	thic	wollnath	
rargeis	associateu	witti	uns	wenpaur	

<Surface>

3767.33

<Surface>

	Target				
Target	TVD	Northings	Eastings	Target	Target
Name	(ft)	(ft)	(ft)	Shape	Туре
Rosa # 169A Target Box	5300.00	1014.40 S	2234.07 W	Polygon	
Rosa #169A Target	5300.00	700.00 S	1950.00 W	Point	

7" Casing

