In Lieu of Form 3160 (June 1990)

UNITED STATES DEPARTMENT OF INTERIOR BUREAU OF LAND MANAGEMENT

AUG 03 2011

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

	1100		Explies, Malch 31, 1993			
SUNDRY NOTICE ANI Do not use this form for proposals to drill or to deepen	SUNDRY NOTICE AND REPORTS ON WELLS Farming on Field Office Do not use this form for proposals to drill or to deepen or reentry to a different reservous User APPLICATION TO DRILL" for permit for such proposals					
TO DRILL" for pern	nit for such proposals	6	If Indian, Allottee or Tribe Name			
SUBMIT IN	TRIPLICATE	7.	If Unit or CA, Agreement Designation Rosa Unit			
Type of Well Oil Well Gas Well X Other	,	8.	Well Name and No. Rosa Unit #166B			
2 Name of Operator WILLIAMS PRODUCTION COMPANY		9.	API Well No 30-039-29841			
3. Address and Telephone No PO Box 640 Aztec, NM 87410-0640	Address and Telephone No					
-	Location of Well (Footage, Sec , T., R , M , or Survey Description) 2305' FNL & 2305' FEL Sec 30, T31N, R5W NMPM					
CHECK APPROPRIA	TE BOX(s) TO INDICATE NATURE OF NOTICE, REP	ORT, OR C	OTHER DATA			
TYPE OF SUBMISSION	TYPE	OF ACTION	N			
Notice of Intent	Abandonment		Change of Plans			
x Subsequent Report	Recompletion Plugging Back		New Construction			
	Casing Repair		Non-Routine Fracturing Water Shut-Off			
Final Abandonment	Altering Casing X Other REALLOCATION	Di	Conversion to Injection ispose Water			
			(Note Report results of multiple completion on Well Completion or Recompletion Report and Log form)			
	Clearly state all pertinent details, and give pertinent dates, ir s and measured and true vertical depths for all markers and					
Williams E&P has run Protechnic's Complet Williams proposes the following allocation:	ion profiler tool for allocation purposes on the	Rosa Unji	t #166B. Based on the results obtained,			
			DIST. 3			
Mesaverde	63% 237	Mcf/d	RCVD AUG 4'11			
Mancos	29% 109	Mcf/d	OIL CONS. DIV.			
Dakota	8% 30	Mcf/d				
Total	100% 376	Mcf/d				
14 I hereby certify that the foregoing is true and	correct					
Signed Larry Higgins	Title Permit Supervisor D	ate <u>8/2/1</u>	11			
(This space for Federal or State office use)	7					
Approved by Joe Hewith	Title 640		Date 4-3-17			
Conditions of approval, if any.						

Granillo, Lacey

From:

Goodwin, Robert

Sent: To:

Tuesday, August 02, 2011 10:41 AM Harris, Erin; Higgins, Larry; Granillo, Lacey Allocation - 166B

Subject:

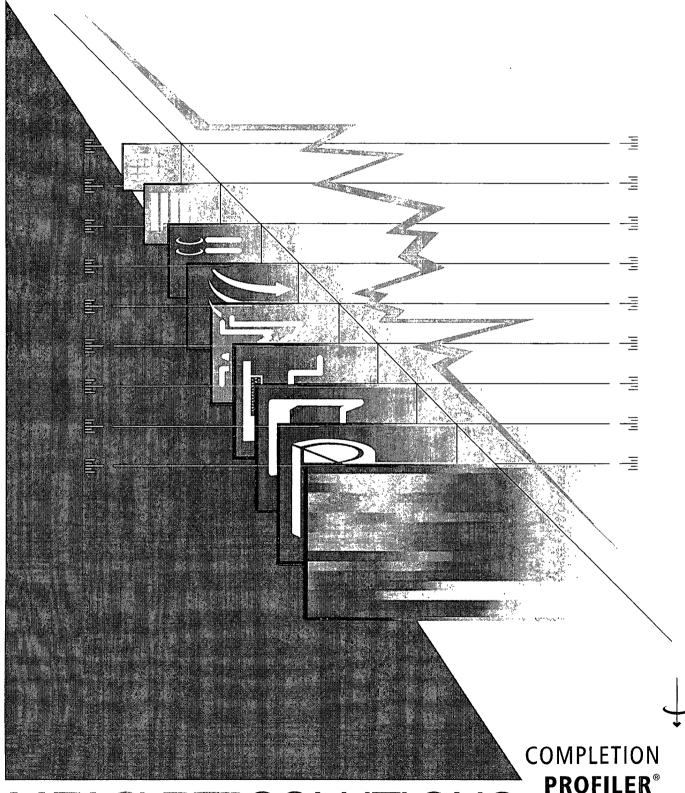
Rosa unit 166B

Allocation date: 6/3/2011

Dakota: 8% Mancos: 29% Mesaverde: 63%

Thanks bobby

Williams Production Company Rosa Unit #166B



PROFILER®





Company | Williams Production Company

Well Name | Rosa Unit #166B

Field Blanco Mesaverde/Basin Dakota

Location | Rio Arriba County, New Mexico

Customer Name | Michael Andrews

Date of Survey June 3, 2011

Date of Analysis | July 29, 2011

Logging Engineer | Loren Healy

Analyst | Derrick George

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful misconduct on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.





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Survey Objectives

- Identify the source of water production.
- Identify gas producing intervals.
- Quantitative production profile.

Logging Procedures

Date	Time	Comment
06/03	10:00	Arrive on location
06/03	10:00	Gauge run start
06/03	11:00	Gauge run stop
06/03	11:04	Program Completion Profile String
06/03	11:13	Start GIH pass
06/03	11:32	Stop GIH pass
06/03	11:45	Start logging passes
06/03	15:11	Stop logging passes
06/03	15:17	Start out of well pass
06/03	15:35	Stop out of well pass
06/03	15:42	Start download
06/03	16:09	Stop download
06/03	16:25	Rig down

Interval Logged:

[From 5,304 to 8,134 ft.]

60 ft/min 90 ft/min 120 ft/min





Well Information

Casing: 5.500" 17.0 lb/ft surface to 8,243 ft PBTD: 8,196 ft

Tubing: 2.375" 4.7 lb/ft surface to 5,240 ft

Perforations: 5,433; 5,434; 5,436; 5,439; 5,443; 5,446; 5,448; 5,450; 5,452; 5,454;

5,486; 5,488; 5,490; 5,492; 5,509; 5,514; 5,518; 5,520; 5,522; 5,558; 5,560; 5,562; 5,581; 5,583; 5,585; 5,587; 5,590; 5,592; 5,594; 5,626;

5,628; 5,630 ft (Stage 12 - Cliffhouse/Menefee)

5,680; 5,682; 5,684; 5,686; 5,688; 5,694; 5,698; 5,700; 5,703; 5,704;

5,705; 5,708; 5,710; 5,712; 5,714; 5,716; 5,718; 5,721; 5,730; 5,736;

5,739; 5,744; 5,753; 5,757; 5,761; 5,765; 5,773; 5,778; 5,783; 5,785;

5,787; 5,796; 5,802; 5,804; 5,806; 5,815; 5,818; 5,820; 5,822; 5,826;

5,828; 5,842; 5,844; 5,846; 5,852; 5,824; 5,884; 5,886; 5,888; 5,892;

5,900; 5,902; 5,904; 5,906 ft (Stage 11 - Point Lookout)

6,290; 6,305; 6,320; 6,335; 6,350; 6,365; 6,380; 6,395; 6,410; 6,425;

6,440; 6,455; 6,470 ft (Stage 10 - Mancos 8th)

6,535; 6,545; 6,555; 6,565; 6,575; 6,585; 6,595; 6,605; 6,615; 6,625;

6,635; 6,645; 6,655 ft (Stage 9 - Mancos 7th)

6,695; 6,705; 6,715; 6,725; 6,805; 6,815; 6,820; 6,825; 6,830; 6,835;

6,840; 6,845; 6,855 ft (Stage 8 - Mancos 6th)

6,923; 6,933; 6,965; 6,975; 6,985; 6,995; 7,005; 7,015; 7,025; 7,045;

7,055; 7,065; 7,075 ft (Stage 7 - Mancos 5th)

7,140; 7,150; 7,160; 7,170; 7,180; 7,190; 7,200; 7,210; 7,230; 7,240;

7,250; 7,255; 7,270; 7,280; 7,293; 7,300; 7,310 ft

(Stage 6 - Mancos 4th)

7,345; 7,350; 7,355; 7,360; 7,365; 7,370; 7,375; 7,380; 7,385 ft

(Stage 5 - Mancos 3rd)

7,425; 7,432; 7,440; 7,448; 7,456; 7,464; 7,472; 7,480; 7,488; 7,494;

7,500 ft (Stage 4 - Mancos 2nd)

7,553; 7,578; 7,593; 7,599; 7,605; 7,614; 7,626; 7,637; 7,642; 7,658;

7,665; 7,672 ft (Stage 3 - Mancos 1st)





7,796; 7,799; 7,800; 7,801; 7,804; 7,805; 7,815; 7,816; 7,819; 7,820; 7,823; 7,825; 7,829; 7,830; 7,833; 7,834; 7,835; 7,839; 7,840; 7,845; 7,849 ft (Stage 2 - Graneros)

7,898; 7,902; 7,906; 7,910; 7,914; 7,922; 7,932; 7,940; 7,948; 7,952; 7,956; 7,960; 7,970; 7,974; 7,984; 7,988; 7,992; 7,996; 8,006; 8,016; 8,022; 8,028; 8,034; 8,040; 8,044; 8,048; 8,052 ft (Stage 1 - Dakota)

Flowing tubing pressure at the time of logging: 72 psi

Daily average surface production reported at the time of logging:

gas: 375 Mscf/d

water: N/A bpd

Tool String

The 1 11/16" Completion Profiler string comprised the following sensors:

Battery housing; RS-232/CCL; Memory/CPU; Gamma Ray; Pressure/Temperature Combo; Centralizer; Induction Collar Locator; Fluid Density; Centralizer; Spinner Flowmeter.





Results

The following table summarizes the production from each frac stage.

				Flow Rates I	Reported at STI	•		
Zone	Inter	vals	Q-Gas	Qp-Gas	Percent of	Q-Water	Qp-Water	Percent o
	feet		MCFD	MCFD	Total	BFPD	BFPD	Total
Surface	to	5433	375 Mcf/d		100 %	2 bpd		100 %
		Stage 12	 Cliffhouse/Mene	fée	∷ ∂38;%∵∵		STATE OF THE PROPERTY.	111 %
5433	to	5630	375 Mcf/d	144 Mcf/d		2 bpd	0 bpd	
	33.15	Stage	11 - Point Lookou		25.%			9%
5680	to	5906	231 Mcf/d	93 Mcf/d		2 bpd	0 bpd	
ا آیاد پارس کید هی	Žķi.	Stag	e 10 - Mancos 8th		5.%			20%
6290	to	6470	138 Mcf/d	18 Mcf/d		2 bpd	0 bpd	100000000000000000000000000000000000000
. (2,50,70 (1, 2,50,70	14.0.12	Sta	ge 9 - Mancos 7th		1.%			
6535	to	6655	121 Mcf/d	3 Mcf/d		1 bpd	0 bpd	
	~ \$°.355	ا گار Stag	ge 8 - Manços 6th		1,%	The state of the s		7 %
6695	to	6855	118 Mcf/d	3 Mcf/d		1 bpd	0 bpd	
Romanista Victoria		: Sta	ge:7, - Mancos 5th					8,%
6923	to	7075	115 Mcf/d	29 Mcf/d		1 bpd	0 bpd	
Y KA		 Stag	ge 6 - Manços 4th		;;; <u>;</u> 9%; ;;			
7140	to	7310	86 Mcf/d	35 Mcf/d		1 bpd	0 bpd	
10,535.1	77 g	∵ Sta	je 5 - Mancos 3rd		4 %		The state of	3.%
7345	to	7385	51 Mcf/d	17 Mcf/d		1 bpd	0 bpd	
1000	(1) (c)	्रि Stag	le 4 - Mancos 2nd		0;%;		A Commence of the commence of	4.%
7425	to	7500	35 Mcf/d	1 Mcf/d	· · · · · · · · · · · · · · · · · · ·	1 bpd	0 bpd	
o maka Maka		Sta	ge 3 - Mancos 1st					6%
7553	to	7672	34 Mcf/d	1 Mcf/d		0 bpd	0 bpd	





	ı	St	age 2 - Graneros		1 %	٠.	w ,	6 %
7796	to	7849	32 Mcf/d	2 Mcf/d		0 bpd	0 bpd	
· · ·		S	tage/1 - Dakota		8 %			. 10,% .
7898	to	8052	30 Mcf/d	30 Mcf/d		0 bpd	0 bpd	