In Lie	u of
Form	3160
Clune	1990)

UNITED STATES DEPARTMENT OF INTERIOR BURFALLOF LAND MANAGEMENT

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

Date >-28-11

(June 199	0) BUREAU OF	LAND MANAGEMENT		Expires March 31, 1993
Do not u	se this form for proposals to drill or to deepen	D REPORTS ON WELLS or reentry to a different reservoir. Use "APPLICATION raint for such proposals" Farmingson Field Of	1	Lease Designation and Serial No NMSF-078769
	10 DRILL 101 per	Bureau of Land Manag	316! ⊜ ⊓.	If Indian, Allottee or Tribe Name
	SUBMIT IN	TRIPLICATE	7.	If Unit or CA, Agreement Designation Rosa Unit
1	Type of Well Oil Well Gas Well X Other		8	Well Name and No. Rosa Unit#146B
2.	Name of Operator WILLIAMS PRODUCTION COMPANY		9.	API Well No. 30-039-29833
3.	Address and Telephone No. PO Box 640 Aztec, NM 87410-0640 (505)	534-4208	10.	Field and Pool, or Exploratory Area BLANCO MV/BASIN DK/BASIN MANCOS
4.	Location of Well (Footage, Sec, T, R., M., on 1980 FSL & 800 FWL sec 28, T31N, R5W	, ,	11	County or Parish, State Rio Arriba, New Mexico
	CHECK APPROPRIA	ATE BOX(s) TO INDICATE NATURE OF NOTICE, REP	ORT, OR O	THER DATA
	TYPE OF SUBMISSION	TYPE	OF ACTION	I
	Notice of Intent	Abandonment		Change of Plans
	x Subsequent Report	Recompletion Plugging Back		New Construction Non-Routine Fracturing
	Final Abandonment	Casing Repair Altering Casing X Other REALLOCATION	Dispose W	Water Shut-Off Conversion to Injection
ψ		The state of the s	-	(Note Report results of multiple completion on Well Completion or Recompletion Report and Log form)
13		(Clearly state all pertinent details, and give pertinent dates, in s and measured and true vertical depths for all markers and		
	s E&P has run Protechnic's Complet is proposes the following allocation:	ion profiler tool for allocation purposes on the	Rosa Unit	
				2011 OH CONS. DIV. DIST. 3 2011 OH CONS. DIV. DIST. 3 2011 OH CONS. DIV. DIST. 3
	Mesaverde	34% 141	Mcf/d	ON MECENTER ON
	Mancos	24% 98	Mcf/d	2011
	Dakota	42% 175	Mcf/d	AL CONS. DIV. DIST. 3
	Total	100% 414	Mcf/d	252 47 67 69 1011 69 1
14.	I hereby certify that the foregoing is true and Signed Heather Riley	Title Regulatory Specialist, Sr. D	ate <u>7/27/</u>	
······	(This space for Federal or State office use)	\bigcirc	=======================================	

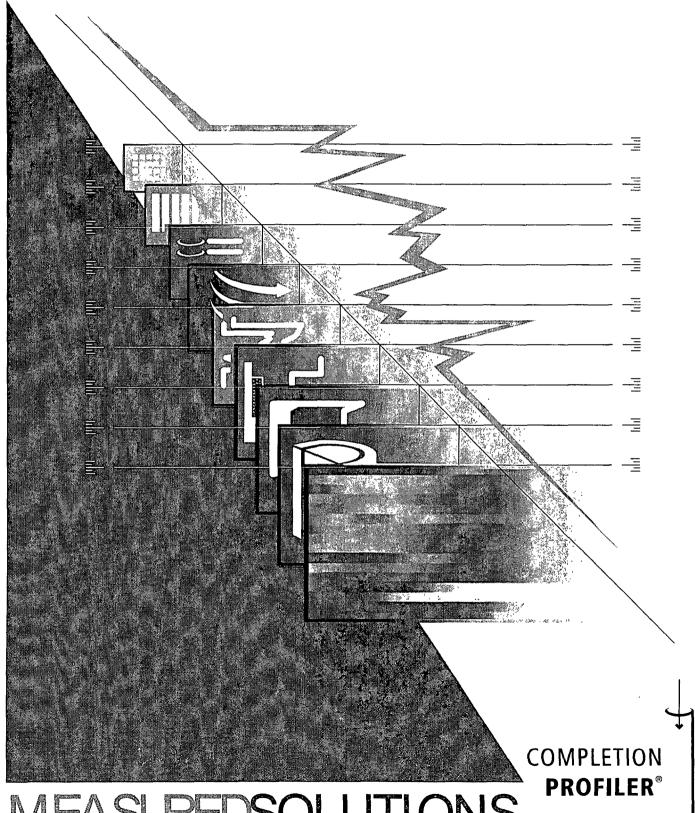
Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

Title

Conditions of approval, if any:

Gco

Williams Production Company Rosa Unit #146B







Company | Williams Production Company

Well Name | Rosa Unit #146B

Field | Blanco Mesaverde/Basin Dakota

Location | Rio Arriba County, New Mexico

Customer Name | Michael Andrews

Date of Survey June 9, 2011

Date of Analysis | July 15, 2011

Logging Engineer | Loren Healy

Analyst | Cole Hutchings

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
06/09	09:30	Arrive on location
06/09	09:30	Gauge run start
06/09	10:30	Gauge run stop
06/09	10:27	Program Completion Profile String
06/09	10:37	Start GIH pass
06/09	10:57	Stop GIH pass
06/09	11:03	Start logging passes
06/09	13:40	Stop logging passes
06/09	13:46	Start out of well pass
06/09	14:04	Stop out of well pass
06/09	14:12	Start download
06/09	14:35	Stop download
06/09	14:50	Rig down

Interval Logged: [From 5,192 to 8,012 ft.]

60 ft/min 90 ft/min





Well Information

Casing:

5.5" 17.0 lb/ft

surface to 8,104 ft

Tubing:

2.375" 4.7 lb/ft

surface to 5,120 ft

Perforations:

5,278; 5,289; 5,295; 5,299; 5,304; 5,308; 5,312; 5,316; 5,322; 5,326; 5,334; 5,340; 5,346; 5,361; 5,369; 5,376; 5,384; 5,394; 5,400; 5,408; 5,420; 5,430; 5,440; 5,450; 5,460; 5,470; 5,480; 5,490; 5,500; 5,510; 5,520; 5,532; 5,536; 5,540; 5,544; 5,548; 5,552; 5,556; 5,560; 5,566;

5,574; 5,578; 5,582; 5,586; 5,590; 5,594; 5,598; 5,602; 5,606;

5,610 ft

(Stage 3 – Upper Mesaverde)

5,770; 5,773; 5,776; 5,780; 5,784; 5,788; 5,792; 5,796; 5,800; 5,804; 5,808; 5,812; 5,818; 5,822; 5,828; 5,834; 5,839; 5,843; 5,847; 5,851; 5,858; 5,869; 5,878; 5,887; 5,891; 5,894; 5,900; 5,905; 5,910; 5,917; 5,924; 5,928; 5,934; 5,944; 5,954; 5,960; 5,968; 5,978; 5,986; 5,990;

6,004; 6,008 ft

(Stage 2 – Lower Mesaverde)

6,920; 6,930; 6,980; 6,995; 7,010; 7,025; 7,040; 7,055; 7,070; 7,085;

7,100; 7,130; 7,145; 7,160; 7,175 ft

(Stage 5 – Upper Mancos)

7,225; 7,235; 7,245; 7,255; 7,265; 7,275; 7,285; 7,295; 7,315; 7,325;

7,335; 7,345; 7,365; 7,375; 7,385 ft

(Stage 4 – Lower Mancos)

7,983; 7,987; 7,991; 7,995; 8,000; 8,008; 8,016; 8,024; 8,032; 8,036;

8,040; 8,044; 8,048; 8,053; 8,057; 8,061; 8,065; 8,069; 8,072 ft

(Stage 1 – Dakota)

Flowing tubing pressure at the time of logging: 77-88 psi

Daily average surface production reported at the time of logging:

gas: 378-467 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 producing zone.

زادان				GAS / WATER PR	ODUCTION F	PROFILE	: .	
				Flow Rates	Reported at STI	P		
Zone	Inter	vals	Q-Gas	Qp-Gas	Percent of	Q-Water	Qp-Water	Percent of
	feet		MCFD	MCFD	Total	BFPD	BFPD	Total
Surface	to	5278	415 Mcf/d		100 %	5 bpd		100 %
		Stage	3 - Upper Mesavero	le	12 % 💢			15%
5278	to	5610	415 Mcf/d	50 Mcf/d		5 bpd	1 bpd	
() E () ()		Stage	 2 - Lower Mesavero	je ka karangan	22 %			28.%
5770	to	6008	365 Mcf/d	91 Mcf/d		4 bpd	1 bpd	
	ام المراجعة المراجعة المراجعة المراجعة المراجعة	Stag	e 5 ≩Üpper Mancos		16% (0			21%
6920	to	7175	274 Mcf/d	66 Mcf/d		3 bpd	1 bpd	
	g raje	Stage	4 - Lower Mancos		8 %	The state of the second st		11.%
7225	to	7385	208 Mcf/d	32 Mcf/d		2 bpd	1 bpd	
A 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		<u> </u>	tage 1 - Dakota 🔭		20 %			12%
7983	to	8008	176 Mcf/d	84 Mcf/d		1 bpd	1 bpd	
Flow	ontri	bution fi	rom Below Log Dei	oth (**)	22%			13:%
8012	to	Below	91 Mcf/d		22 %	1 bpd		13 %