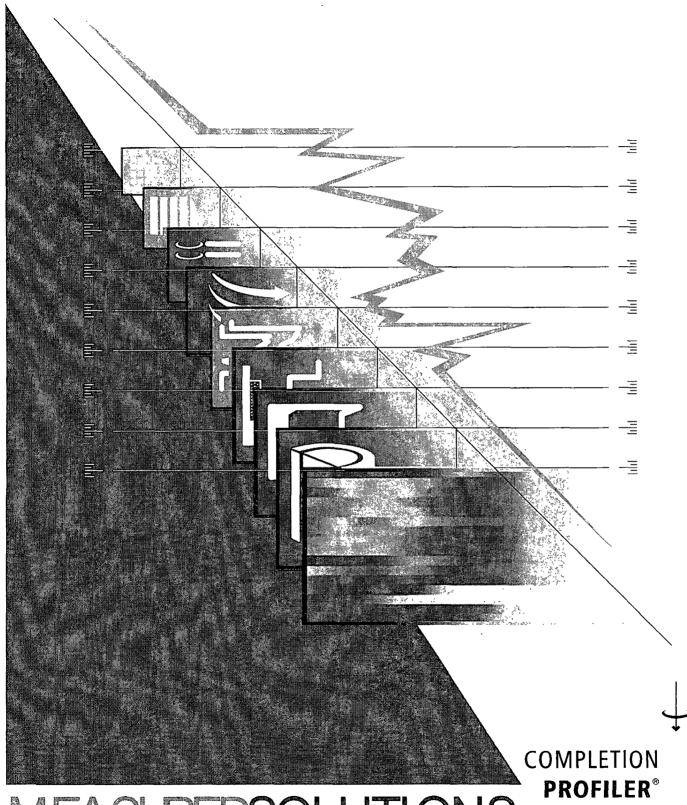
X							
in Lieu of Form 3160 (June 1990)	DEPARTM	ED STATES ENT OF INTERIOR AND MANAGEMENT		FORM APPROVED Budget Bureau No. 1004-0135 Expires March 31, 1993			
Do not use thi	SUNDRY NOTICE AND s form for proposals to drill or to deepen o	REPORTS ON WELLS or reentry to a different reservoir Use "APPLICATION"	5 N	5 Lease Designation and Serial No NMSF-078765			
	TO DRILL" for perm	t for such proposals		If Indian, Allottee or Tribe Name			
	SUBMIT IN 1	TRIPLICATE	7.	If Unit or CA, Agreement Designation Rosa Unit			
	e of Well Well Gas Well X Other		8	Well Name and No Rosa Unit 180D			
	ne of Operator LIAMS PRODUCTION COMPANY		9.	API Well No. 30-045-34988			
	lress and Telephone No. Box 640 Aztec, NM 87410-0640 505-63	4-4208	10.	Field and Pool, or Exploratory Area BLANCO MV/BASIN DK/BASIN MC			
SU	ation of Well (Footage, Sec , T., R , M., or RF. 935' FSL & 1935' FWL L: 2303' FSL & 1863' FWL SEC 9 31N		11	County or Parish, State San Juan, New Mexico			
	CHECK APPROPRIA	TE BOX(s) TO INDICATE NATURE OF NOTICE, I	REPORT,	OR OTHER DATA			
	TYPE OF SUBMISSION	TY	PE OF AC	CTION			
x	Notice of Intent Subsequent Report Final Abandonment	Abandonment Recompletion Plugging Back Casing Repair Altering Casing X Other REALLOCATION	٠	Change of Plans New Construction Non-Routine Fracturing Water Shut-Off Conversion to Injection Dispose Water			
				(Note Report results of multiple complete on Well Completion or Recompletion Rep and Log form.)			
dıre Williams E&	ctionally drilled, give subsurface locations	Clearly state all pertiment details, and give pertinent date and measured and true vertical depths for all markers on profiler tool for allocation purposes on t	and zones	s pertinent to this work)* a Unit #180D. Based on the results obta			
M	1esaverde	51% 5	56 Mc	cf/d AFOR			
M	lancos	20% 22	20 Mc	cf/d (S)			
D	akota	29% 3	12 M	Act/d Of CONS DIV P.			
T	otal	100%	088 M	cef/d cef/d cef/d Acef/d Acef/			
4 I he	reby certify that the foregoing is true and c	orrect					
Sign	Larry Higgins	Title PERMIT SUPRV	Date	7/20/11			
	s space for Federal or State office use)	A		N - A			
App	proved by You Hewin	Title 640		Date 7-22-11			

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.

Williams Production Company Rosa Unit #180D



MEASUREDSOLUTIONS





Company Williams Production Company

Well Name Rosa Unit #180D

Field Blanco Mesaverde/Basin Dakota

Location | San Juan County, New Mexico

Customer Name | Michael Andrews

Date of Survey | May 24, 2011

Date of Analysis | May 31, 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.





Table of Contents

Survey Objectives
Logging Procedures
Well Information
Tool String
Well Log History
Results
Analysis Summary
Brief Description of Process
Model Results With Recorded Data
Production Rates At Surface Conditions
Flow Model at Downhole Conditions With Comparison of Theoretical Response to Recorded Data
Overlay of all Log Data
Apparent Fluid Velocity Derived from Spinner
Spinner Calibration Plots Relationship between R.P.S. and Fluid Velocity (fpm)
Well Information
Parameters used for Analysis
Definitions





Survey Objectives

- Identify the source of water production.
- · Check for plug leak or channel.
- Identify gas producing intervals.
- Quantitative production profile.

Logging Procedures

Date .	Time	Comment
05/24	06:20	Arrive on location
05/24	05:40	Gauge run start
05/24	06:20	Gauge run stop
05/24	07:54	Program Completion Profile String
05/24	08:06	Start GIH pass
05/24	08:36	Stop GIH pass
05/24	08:43	Start logging passes
05/24	12:08	Stop logging passes
05/24	12:14	Start out of well pass
05/24	12:36	Stop out of well pass
05/24	12:43	Start download
05/24	13:05	Stop download
05/24	13:30	Rig down

Interval Logged:

[From 5,644 to 8,319 ft.]

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





Well Information

5.5" 17.0 lb/ft surface to 7,968 ft Casing: 7,746 ft to 8,413 ft PBTD: 8,415 ft 3.5" Liner: 9.5 lb/ft Tubina: 2.375" 4.7 lb/ft surface to 5.580 ft Perforations: 5,778; 5,780; 5,782; 5,784; 5,786; 5,788; 5,790; 5,792; 5,794; 5,796; 5,798; 5,800; 5,802; 5,804; 5,806; 5,808; 5,810; 5,812; 5,814; 5,816; 5,818; 5,820; 5,822; 5,824; 5,856; 5,858; 5,860; 5,862; 5,864; 5,866; 5,868; 5,870; 5,872; 5,874; 5,876; 5,878; 5,880; 5,882; 5,892; 5,894; 5,910; 5,930; 5,944; 5,946; 5,948; 5,952; 5,960; 5,964; 5,980; 5,982; 5,984; 5,986; 5,988; 5,990 ft (Stage 5 – Cliffhouse/Menefee) 6,020; 6,024; 6,028; 6,032; 6,036; 6,040; 6,044; 6,048; 6,052; 6,056; 6,060; 6,064; 6,068; 6,072; 6,076; 6,080; 6,084; 6,088; 6,092; 6,096; 6,100; 6,104; 6,108; 6,112; 6,116; 6,120; 6,124; 6,130; 6,136; 6,140; 6,152; 6,156; 6,172; 6,174; 6,178; 6,183; 6,197; 6,199; 6,234; 6,236; 6,238; 6,240; 6,260; 6,262; 6,264; 6,266; 6,268; 6,278; 6,280; 6,282; 6,288; 6,290; 6,292; 6,294; 6,296; 6,298; 6,300; 6,302; 6,310; 6,312; 6.314: 6.322: 6.324: 6.326: 6.340: 6.342: 6.344: 6.366: 6.368: 6.395: 6.414: 6.416: 6.418 ft (Stage 4 - Point Lookout) 7,200; 7,210; 7,220; 7,230; 7,240; 7,250; 7,260; 7,270; 7,280; 7,290; 7,300; 7,310; 7,320; 7,330; 7,340; 7,350; 7,360; 7,370; 7,380; 7,390; 7,400; 7,410; 7,420; 7,430; 7,440; 7,450 ft (Stage 3 – Upper Mancos) 7,517; 7,523; 7,531; 7,539; 7,550; 7,560; 7,570; 7,580; 7,590; 7,598; 7,610; 7,616; 7,620; 7,630; 7,640; 7,650; 7,660; 7,666; 7,670; 7,680; 7,690; 7,700 ft (Stage 2 - Lower Mancos) 8,272; 8,276; 8,280; 8,284; 8,288; 8,292; 8,312; 8,316; 8,320; 8,324; 8,328; 8,332; 8,336; 8,340; 8,344; 8,348; 8,352; 8,358; 8,362; 8,366; 8,378; 8,382; 8,386; 8,390 ft (Stage 1 - Dakota)





Flowing tubing pressure at the time of logging: 142 psi

Daily average surface production reported at the time of logging:

gas: 1,080 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.

Well Log History

Log Date	Type of Survey			1 : :
06/18/10	Completion Profiler			





Results

The following table summarizes the production from each producing zone.

				GAS / WATER PR	ODUCTION F	ROFILE		
				Flow Rates I	Reported at STF			
Zone	Inter	vals	Q-Gas	Qp-Gas	Percent of	Q-Water	Qp-Water	Percent of
	feet		MCFD	MCFD	Total	BFPD	BFPD	Total
Surface	to	5778	1087 Mcf/d		100 %	5 bpd		100 %
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ 	ا ج. ج. ج	Stage 5	÷Cliffhouse/Menef	ee jjiji	18 %			18.%
5778	to	5990	1087 Mcf/d	196 M cf/d		5 bpd	1 bpd	
and the state of	1 45 75	Stag	e 4 ⇒Point Lookout		33%			33%
6020	to	6418	891 Mcf/d	360 Mcf/d		4 bpd	2 bpd	
	1500	Stage	- 3∵,Üpper Mancos		5%		Same Same of the Same Same	5 %
7200	to	7450	531 Mcf/d	58 Mcf/d		2 bpd	0 bpd	
	, R.	Stage	2Lower Mancos	S S Comple	15 %			E 215.%
7517	to	7700	473 Mcf/d	162 Mcf/d		2 bpd	1 bpd	
1 2 1 86 4			tage 1 - Dakota		(* 20 %*)		(1) 10 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	20 %
8272	to	8316	311 Mcf/d	223 M cf/d		1 bpd	1 bpd	
, Flow C	ontri	Ďùţiờn fi	om Below Log Der	oth	8%			
8319	to	Below	89 Mcf/d		8 %	0 bpd		8 %