

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator Williams Production Company					Lease or Unit Name Rosa Unit				
Test Type X Initial Annual Special			Test Date 7/30/2002		Well Number #77B				
Completion Date 7/23/2002		Total Depth 6219'		Plug Back TD 6193'		Elevation 6502'		Unit N	
Casing Size 4 1/2"		Weight 10.5#		Set At 6219'		Perforations: 4532' - 5692'		County Rio Arriba	
Tubing Size 2-3/8"		Weight 4.7#		Set At 6010'		Perforations: 5765' - 5891'		Pool Blanco MV	
Type Well - Single-Bradenhead-GG or GO Multiple					Packer Set At		Formation MV		
Producing Thru Tubing		Reservoir Temp. oF		Mean Annual Temp. oF		Barometer Pressure - Pa		Connection	
L	H	Gq 0.6	%CO2	%N2	%H2S	Prover 3/4"	Meter Run	Taps	

FLOW DATA					TUBING DATA		CASING DATA		
NO	Prover Line Size	X Orifice Size	Pressure p.s.i.q	Temperature oF	Pressure p.s.i.q	Temperature oF	Pressure p.s.i.q	Temperature oF	Duration of Flow
SI	2" X 3/4"				650	98	965		0
1					275	66	900		0.5 hr
2					300	68	865		1.0 hr
3					295	69	840		1.5 hrs
4					285	71	825		2.0 hrs
5					280	72	800		3.0 hrs

RATE OF FLOW CALCULATION									
NO	Coefficient (24 Hours)			hwPm	Pressure Pm	Flow Temp. Factor Fl	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	9.604				292	0.9887	1.29	1.034	3698
2									
3									
4									

NO	Pr	Temp. oR	Tr	Z	Gas Liquid Hydrocarbon Ration	Mcf/bbl.
1					A.P.I Gravity of Liquid Hydrocabrons _____	Deq.
2					Specific Gravity Separator _____	XXXXXX
3					Specific Gravity Flowing Fluid xxxxxxxxxxxx	
4					Critical Pressure _____ p.s.i.a.	____ p.s.i.a.
5					Critical Temperature _____ R	____ R

Pc	977	Pc2	954529
NO	Pt1	Pw	Pw2
1		812	659344
2			
3			
4			

Absolute Open Flow 8918		Mcf/d @ 15.025	Angle of Slope _____	Slope, n 0.75
--------------------------------	--	----------------	----------------------	----------------------

Remarks:			
Approved By Commission:	Conducted By: Larry Higgins	Calculated By: Tracy Ross	Checked By: