

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 1/4/2005		Well Number (API #) #169C (API # 30-039-27717)				
Completion Date 12/8/2004		Total Depth 6350'		Plug Back TD		Elevation 6403'		Unit Sec Twp Rng P 03 31N 6W	
Casing Size 4 1/2"		Weight 10.5#		Set At 6346'		Perforations: 4869' - 5849'		County Rio Arriba	
Tubing Size 2-3/8"		Weight 4.7#		Set At 6280'		Perforations: 5879' - 6251'		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"				680	53	1005		0
1					265	57	910		0.5 hr
2					235	56	875		1.0 hr
3					225	57	850		1.5 hrs
4					220	57	835		2.0 hrs
5					210	57	805		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					222	1.0029	1.29	1.018	2808
2										
3										
4										

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

Pc	1017	Pc2	1034289	
NO	Ptl	Pw	Pw2	Pc2-Pw2
1		817	667489	366800
2				
3				
4				

(1) $Pc2 = \underline{2.8197628}$		(2) $Pc2^n = \underline{2.1760027}$	
$Pc2 - Pw2$		$Pc2 - Pw2$	
$AOF = Q \quad Pc2^n = \underline{6110}$ $Pc2 - Pw2$			

Absolute Open Flow	6110	Mcf @ 15.025	Angle of Slope _____	Slope, n	0.75
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Remarks:			
Approved By Commission:	Conducted By: Sherry Brooks	Calculated By: Tracy Ross	Checked By:

**ROSA UNIT #169C
BLANCO MESAVERDE**

Surface Location:

150' FSL and 315' FWL
SW/4 SW/4 Sec 02(M), T31N, R6W
Rio Arriba, NM

Bottom Hole Location:

993' FSL and 382' FEL
SE/4 SE/4 Sec 03(P), T31N, R 6W
Rio Arriba, NM

Elevation: 6403' GR
API # 30-039-27717

Spud: 10-25-04

Completed: 12-08-04

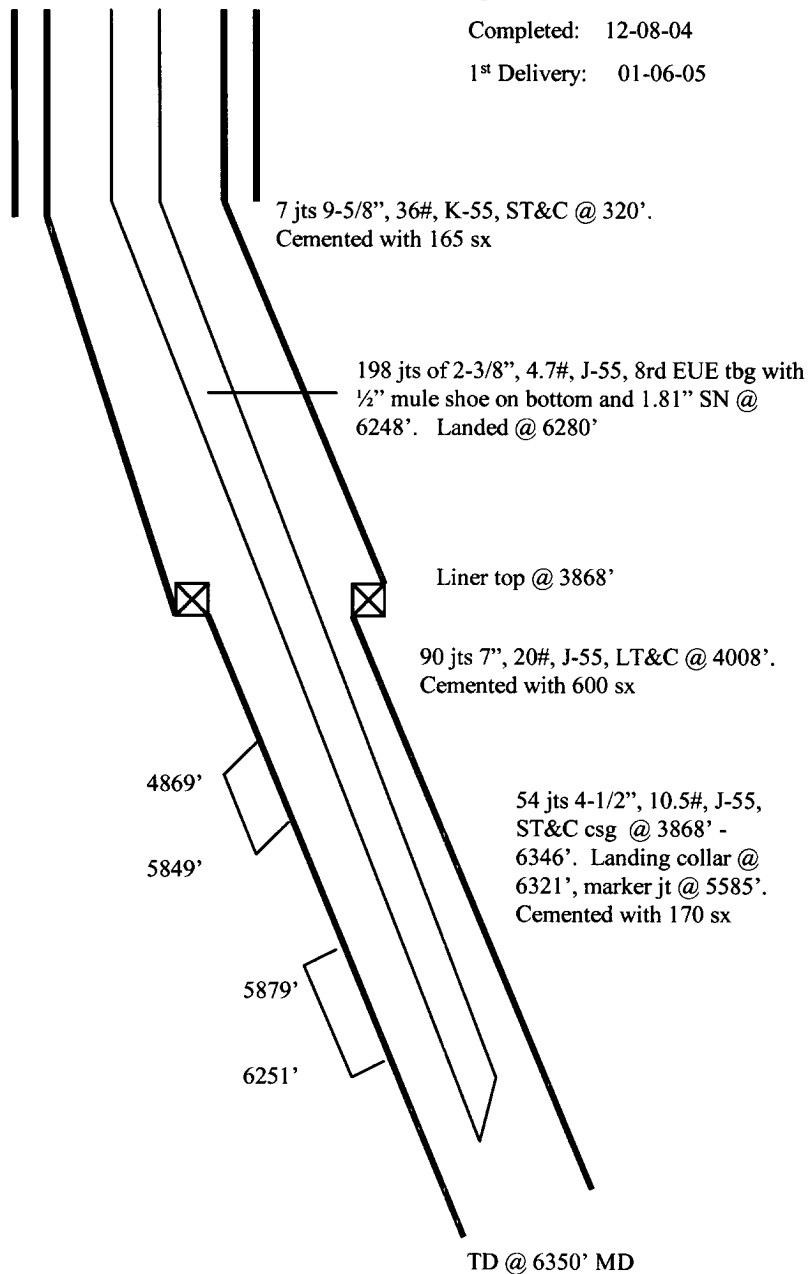
1st Delivery: 01-06-05

Top	MD Depth
Lewis	3706'
Cliffhouse Ss.	5633'
Menefee	5676'
Point Lookout	5877'

Stimulation:

CH/Menefee: Frac with 9300# Lite
Prop 125 followed w/ 5000# Brown
sand in 2136 bbls slick water. Total
42 (0.31") holes

Point Lookout: Frac with 9300# Lite
Prop 125 followed w/ 5000# Brown
sand carried in 2108 bbls slick water.
Total 45 (0.31") holes



Hole Size	Casing	Cement	Volume	Top of Cmt
12-1/4"	36# K-55	165 sx	229 cu. ft.	Surface
8-3/4"	20# J-55	600 sx	1185 cu. ft.	Surface
6-1/4"	10.5# J-55	170 sx	279 cu. ft.	4400'