

OIL CONSERVATION DIVISION

P.O. Box 2088 Santa Fe, New Mexico 87504-2088

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator SANTA FE ENERGY				Well No. GAUCHO UNIT			
Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special				Test Date 10-28-96		Well No.	
Completion Date		Total Depth		Plug Back TD		Elevation	
Csg. Size 5 1/2		Wt. d 17 4.892		Set At 14198		Perforations: From: 12955 To: 13358	
Tbg. Size 2-3/8		Wt. d 4.7 1.995		Set At 12784		Perforations: From: To:	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple single				Packer Set At 12784		Formation UPPER MORROW	
Producing Thru tbq		Reservoir Temp. °F		Mean Annual Temp. °F 60°		Baro. Press - P _a 13.2	
L 13156.5	H 13156.5	Gg .587	% CO ₂ .48	% N ₂ .43	% H ₂ S -0-	Prover -0-	Meter Run 4.026
Taps 62g							

FLOW DATA					TUBING DATA			CASING DATA			Duration of Flow
NO.	Prover Line Size	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F		
SI						6870	60°	PKR			
1.	4.026 X 1.500		540	4	110°	6500	59°				1 Hr.
2.	4.026 X 1.500		560	18	105°	6180	59°				1 Hr.
3.	4.026 X 1.500		570	26	100°	5830	59°				1 Hr.
4.	4.026 X 1.500		570	38	92°	5360	60°				1 Hr.
5.											

NO.	COEFFICIENT (24 HOUR)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg.	Super Compress. Factor, F pv.	Rate of Flow Q, Mcfd
1.	10.84	47.04	553.2	.9551	1.305	1.030	654
2.	10.84	101.5	573.2	.9594	1.305	1.031	1420
3.	10.84	123.1	583.2	.9636	1.305	1.032	1731
4.	10.84	148.8	583.2	.9706	1.305	1.033	2110
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	.85	570	1.65	.942	123.229	
2.	.84	565	1.64	.941	52.0	Deg.
3.	.83	560	1.62	.939	.587	XXXXXXXXXX
4.	.82	552	1.60	.937	N/A	XXXXXX
5.					675	674 P.S.I.A.
					346	358 P.S.I.A.

NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1.		6619.8	43821.7	3210.4
2.		6192.6	38348.2	8683.9
3.		5864.4	32045.4	14986.7
4.		5432.3	29509.8	17522.3
5.				

1) $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{2.684}{1.95}$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^2 = 1.95$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^2 = 4114.5$

Absolute Open Flow _____ Mcfd @ 15.025 Angle of Slope Θ **55.8** Slope, n **.677**

Remarks: *Calculated from known bottom hole pressure well made 2-BBL 52.0 API gravity.*

Approved By Division _____ Conducted By: _____ Calculated By: _____ Checked By: _____