STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Revised 10-1-78

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED
JAN 8 1982
O. C. D.
ARTESIA, OFFICE

Type Test: 4 pt. [XX] Initial [ ] Annual [ ] Special				Test Date: 12-9-81	
Company: SOUTHLAND ROYALTY COMPANY		Connection: TO AIR			
Pool:		Formation: Morrow A		Unit:	
Completion Date: 12-7-81	Total Depth: 10,565		Plug Back TD: 10,130	Elevation:	Farm or Lease Name: Williams State COM
Csg. Size: 4½ / Wt.: 11.6 / d: / Set At:			Perforations: (32 hole) From 9,920 To 10,027		Well No.: 1
Tbg. Size: 2 3/8 / Wt.: 4.7 / d: / Set At: 9,810			Perforations: From To		Unit: K / Sec.: 2 / Twp.: 19S / Rge.: 27E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single			Packer Set At: 9,810		County: Eddy
Producing Thru: Tbg.	Reservoir Temp. °F: 175 @ 10,024	Mean Annual Temp. °F: 60°	Baro. Press. – P_a: 13.2		State: New Mexico

L	h	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
9,810	9,810	.642	.33%	1.62%	.		2"	Flg.

FLOW DATA / TUBING DATA / CASING DATA

NO.	Prover Line Size X 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	Duration of Flow
SI					2991				48 hrs.
1.	2.0 X .750	344	7"	116	2825				1 hr.
2.	2.0 X .750	348	16"	100	2692				1 hr.
3.	2.0 X .750	346	36"	76	2468				1 hr.
4.	2.0 X .750	343	65"	98	2166				1 hr.
5.									

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	2.709	50.00	357.2	.9501	1.248	1.024	164
2.	2.709	76.02	361.2	.9636	1.248	1.028	255
3	2.709	113.72	359.2	.9850	1.248	1.033	391
4.	2.709	152.16	356.2	.9653	1.248	1.028	510
5.							

NO.	P_r	Temp. °R	T_r	Z
1	.53	576	1.56	.953
2.	.54	560	1.51	.946
3.	.54	536	1.44	.937
4.	.53	558	1.50	.946
5				

Gas Liquid Hydrocarbon Ratio: 55.0 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: 59 @ 60° Deg.
Specific Gravity Separator Gas: .642 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX G-MIX .694
Critical Pressure: 670 P.S.I.A. 669 P.S.I.A.
Critical Temperature: 372 R 388 R

P_c 3004.2 P_c^2 9025.2

NO	P_w	P_w^2	$P_c^2 - P_w^2$
1		8056.2	969.0
2		7320.1	1705.1
3		6160.9	2864.3
4		4756.5	4268.7
5			

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.114$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.831$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = .934$

Absolute Open Flow: 934 Mcfd @ 15.025 Angle of Slope θ: 51 Slope, n: .808

Remarks: Made 1 bbl. of Fluid during test.

Approved by Division	Conducted by:	Calculated by:	Checked by:
	EL PASO EXPLORATION CO. Bill Rea	EL PASO EXPLORATION CO. Bill Rea	