c/SF File

Form C-122
Revised 9-1-65

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

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 10/20/82	
Company: Yates Petroleum Corporation			Connection: Transwestern Pipeline		
Pool: Pecos Slope - Abo Gas			Formation: Abo		Unit
Completion Date: 5/28/82	Total Depth: 4225'		Plug Back TD: 4158'	Elevation: 3926' GL	Farm or Lease Name: Grafa "RW" Federal
Csg. Size: 4 1/2" / Wt.: 9.5# / d: 4.090 / Set At: 4208'			Perforations: From 3676 To 3844		Well No.: 2
Tbg. Size: 2 3/8" / Wt.: 4.7# / d: 1.995 / Set At: 3626'			Perforations: From To		Unit: P / Sec.: 35 / Twp.: 5S / Rge.: 24E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single			Packer Set At: 3626'		County: Chaves
Producing Thru: Tubing	Reservoir Temp. °F: 102 @ 3625'		Mean Annual Temp. °F: 62	Baro. Press. – P_a: 13.2 psi	State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
3626'	3626'	.641	.06	5.08	0	--	2"	Flanged

	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					959				
1.	2.067 x 1.375	355	18.0	72	891	62			24 hr.
2.	2.067 x 1.375	360	20.7	72	885	62			24 hr.
3.	2.067 x 1.375	370	22.8	72	876	62			24 hr.
4.	2.067 x 1.375	410	25.0	72	870	62			24 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	10.20	81.5	368.2	.9887	1.249	1.030	1057
2	10.20	87.8	373.2	.9887	1.249	1.030	1139
3	10.20	93.5	383.2	.9887	1.249	1.032	1216
4	10.20	102.9	423.2	.9887	1.249	1.035	1341
5							

NO.	P_t	Temp. °R	T_r	Z
1	.56	532	1.49	.942
2	.56	532	1.49	.942
3	.58	532	1.49	.939
4	.64	532	1.49	.934
5				

Gas Liquid Hydrocarbon Ratio: Dry Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: -- Deg.
Specific Gravity Separator Gas: .641 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX .641
Critical Pressure: 661 P.S.I.A. 661 P.S.I.A.
Critical Temperature: 358 R 358 R

P_c 972.2 P_c^2 945.2

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	817.6		831.5	113.7
2	806.8		822.9	122.3
3	790.7		809.1	136.1
4	780.0		802.5	142.7
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 6.624$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 5.958$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 7990$

Absolute Open Flow: 7990 Mcfd @ 15.025 Angle of Slope θ: Slope, n: .944

Remarks:

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	David Weaver	Andie Alderson	