NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122 C-15 File

MULTIPLE AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 09/03/1993	
Company: Yates Petroleum Corp		Connection: Yates Petroleum Corp			
Pool: Strawn		Formation: NE Happy Valley		Unit:	
Completion Date: 09/02/1993	Total Depth: 11500	Plug Back TD: 10625	Elevation: 3131	Farm or Lease Name: North Carlsbad OK Com	
Csg. Size: 4.500 / Wt.: 11.600 / d: 4.000 / Set At: 11500		Perforations: From 10040 To 10127		Well No.: 1	
Tbg. Size: 2.875 / Wt.: 6.500 / d: 2.441 / Set At: 9977		Perforations: From 10040 To 10127		Unit: B / Sec.: 26 / Twp: 21S / Rge.: 26E	
Type Well: Single		Packer Set At: 9977		County: Eddy	
Producing Thru: Tubing	Resv. Temp. °F: 159 @ 10083	Mean Temp. °F: 62	Baro. Press. - Pa: 13.2	State: New Mexico	

L	H	Gg	%CO_2	%N_2	%H_2S	Prover	Meter Run	Taps
9977	9977	0.629	0.510	0.336	0.000	0.000	2.000	Flange

	FLOW DATA					TUBING DATA		CASING DATA		
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI.	0.000	x	0.000	0	0.0	0	2250	0			0
1.	2.067	x	1.375	575	22.0	87	1250	62			24
2.	2.067	x	1.375	512	24.0	85	1025	62			24
3.	2.067	x	1.375	575	31.0	80	800	62			24
4.	2.067	x	1.375	575	34.0	80	575	62			24
5.		x									

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{hwPm}$	Pressure Pm	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1.	10.200	113.8	588.2	0.9750	1.260	1.046	1492
2.	10.200	112.4	525.3	0.9768	1.260	1.042	1470
3.	10.200	135.0	588.2	0.9813	1.260	1.048	1786
4.	10.200	141.4	588.2	0.9813	1.260	1.048	1871
5.							

NO.	Pr	Temp °R	Tr	Z
1.	0.87	547	1.50	0.914
2.	0.78	545	1.50	0.922
3.	0.87	540	1.48	0.910
4.	0.87	540	1.48	0.910
5.				

Gas Liquid Hydrocarbon Ratio	102 Mcf/bbl.	
A.P.I. Gravity of Liquid Hydrocarbons	58.500 Deg.	
Specific Gravity Separator Gas	0.629	xxxxxxxxxx
Specific Gravity Flowing Fluid	xxxxxxxxxx	0.658
Critical Pressure	673 P.S.I.A.	672 P.S.I.A.
Critical Temperature	364 °R	373 °R

Pc 2263.2 Pc^2 5122.1

NO.	Pt^2	Pw	Pw^2	$Pc^2 - Pw^2$
1.	1595.7	1271.9	1617.7	3504.4
2.	1077.9	1048.8	1100.0	4022.0
3	661.3	833.9	695.4	4426.7
4.	346.0	620.5	385.0	4737.1
5.				

(1) $\frac{Pc^2}{Pc^2 - Pw^2} = 1.157$ (2) $\left[\frac{Pc^2}{Pc^2 - Pw^2}\right]^n = 1.117$

AOF = Q $\left[\frac{Pc^2}{Pc^2 - Pw^2}\right]^n = 1995$

Absolute Open Flow: 1995 Mcfd @ 15.025 | Angle of Slope θ: 37 | Slope, n: 0.757

Remarks:

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	Ed Perry	Andrea Carpenter	