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

File 122 Yates

Form C-122
Revised 9-1-65

RECEIVED
DEC 3 - 1979
O. C. C.
ARTESIA, OFFICE

Type Test: XX Initial ☐ Annual ☐ Special			Test Date: 9-27-79	
Company: Yates Petroleum Corp.	Connection: Transwestern Pipeline Company			Unit
Pool: POW - Morrow	Formation: Morrow			
Completion Date: 3-9-77	Total Depth: 8050' KB	Plug Back TD: 7928' KB	Elevation: 3391' KB	Farm or Lease Name: Friendly Frenchman "HB
Csg. Size: 4-1/2" / Wt.: 11.6# / d: 4.000 / Set At: 7960' KB		Perforations: From 7803 To 7893' KB		Well No.: 1
Tbg. Size: 2-3/8" / Wt.: 4.7# / d: 1.995 / Set At: 7752' KB		Perforations: From To		Unit: P / Sec.: 32 / Twp.: 16S / Rge.: 26E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single		Packer Set At: 7752' KB		County: Eddy
Producing Thru: Tubing	Reservoir Temp. °F: 136 @ 7860	Mean Annual Temp. °F: 62	Baro. Press. – P_a: 13.2	State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
7860	7860	.667	1.57	1.48	Nil		2"	Flange

NO.	Prover Line Size X Orifice Size	FLOW DATA Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA Press. p.s.i.g.	Temp. °F	CASING DATA Press. p.s.i.g.	Temp. °F	Duration of Flow
SI					1944	53			Months
1.	2.067 x 0.375	480	10	90	1712	59			1 hour
2.		480	21	90	1546	64			1 hour
3.		480	42	90	1327	68			1 hour
4.		480	77	90	894	72			1 hour
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	0.6689	70.23	493.2	.9723	1.232	1.0386	58
2.	0.6689	101.77	493.2	.9723	1.232	1.0386	85
3.	0.6689	143.92	493.2	.9723	1.232	1.0386	120
4.	0.6689	194.88	493.2	.9723	1.232	1.0386	162
5.							

NO.	P_t	Temp. °R	T_r	Z
1.	0.730	550	1.4885	0.927
2.	0.730	550	1.4885	0.927
3.	0.730	550	1.4885	0.927
4.	0.730	550	1.4885	0.927
5.				

Gas Liquid Hydrocarbon Ratio	344.400 Mcf/bbl.	
A.P.I. Gravity of Liquid Hydrocarbons	58.3 Deg.	
Specific Gravity Separator Gas	.659	xxxxxxxxx
Specific Gravity Flowing Fluid	xxxxx	.667
Critical Pressure	675 P.S.I.A.	731 P.S.I.A.
Critical Temperature	369.5 R	392 R

P_c 3181.2 P_c^2 10120

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1			8820	1300
2			7991	2129
3			7047	3073
4			5640	4480
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.2589$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.9695$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 319$

Absolute Open Flow 319 Mcfd @ 15.025 Angle of Slope θ 50.25 deg Slope, n 0.83174

Remarks: Static pressures by Bennett Wireline; Flowing pressures by DST.
Static fluid at 6100', did not unload during test.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	Don Weaver	Eddie Mahfood	