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

Form C-122
Revised 9-1-65

MAY 28 1980

O. C. D.
ARTESIA, OFFICE

Type Test: ☒ Initial ☐ Annual ☐ Special				Test Date: 3-28-80	
Company: Yates Petroleum Corp.			Connection: Transwestern Pipeline Company		
Pool: Penasco Draw - Morrow			Formation: Morrow		Unit: LC 067136
Completion Date: 12-12-79	Total Depth: 9063' KB		Plug Back TD: 8823' KB	Elevation: 3541' KB	Farm or Lease Name: Scout "EH" Federal
Csg. Size: 4-1/2" / Wt.: 11.6# / d: 4.000	Set At: 9063' KB		Perforations: From 8792' To 8802' KB		Well No.: 4
Tbg. Size: 2-3/8" / Wt.: 4.7# / d: 1.995	Set At: 8768' KB		Perforations: From To		Unit: L / Sec.: 27 / Twp.: 18S / Rge.: 25E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single			Packer Set At: 8768'		County: Eddy
Producing Thru: Tubing	Reservoir Temp. °F: 147 @ 8797' KB	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
8791	8791	0.627	2.22	0.31	Nil		2"	Flange

	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					2739	43			Days
1.	2.067 x 0.500	270	8	50	2326	50			1 hour
2.		270	15	51	2162	55			1 hour
3.		270	28	52	1884	59			1 hour
4.		270	53	53	1359	62			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	1.189	47.60	283.2	1.010	1.278	1.027	75
2.	1.189	65.18	283.2	1.009	1.278	1.027	103
3.	1.189	89.05	283.2	1.008	1.278	1.027	140
4.	1.189	122.51	283.2	1.007	1.278	1.027	193
5.							

NO.	P_r	Temp. °R	T_r	Z
1.	0.416	510	1.425	.9484
2.	0.416	511	1.427	.9485
3.	0.416	512	1.430	.9486
4.	0.416	513	1.433	.9487
5.				

Gas Liquid Hydrocarbon Ratio: 204.6 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: 52.0 Deg.
Specific Gravity Separator Gas: 0.612 / XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX / .627
Critical Pressure: 680 P.S.I.A. / 698 P.S.I.A.
Critical Temperature: 358 R / 370 R

P_c 3485.2 P_c^2 12148

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1			8811	3337
2			7601	4547
3			5749	6400
4			2946	9202
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.3201$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.2831$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 248$

Absolute Open Flow: 248 Mcfd @ 15.025 | Angle of Slope θ: 48.1 deg | Slope, n: 0.8975

Remarks: Static pressures by Bennett Wireline; Flowing pressure by DWT.
Calculations worksheet C-122D attached.

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