

N MEXICO OIL CONSERVATION COMM ON
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 4-21-78		SEP 15 1978	
Company Yates Petroleum Corp. ✓				Connection Transwestern Pipeline Co.			O. C. C.	
Pool Eddy Undesignated				Formation Chester			Unit ARTESIA, OFFICE	
Completion Date 4-9-78		Total Depth 9450' KB		Plug Back TD 9416'		Elevation 3563' KB		Farm or Lease Name Ross 15 Federal
Csg. Size 4 1/2"	Wt. 11.6#	d 4.000	Set At 9441' KB	Perforations: From 9374 to 9384' KB		Well No. 1		
Tbg. Size 2-3/8"	Wt. 4.7#	d 1.995	Set At 9329' KB	Perforations: From To		Unit Sec. Twp. Rge. K 20 19S 25E		
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 9329' KB		County Eddy		
Producing Thru Tubing		Reservoir Temp. °F 156 @ 9370		Mean Annual Temp. °F 62		Baro. Press. - P _a 13.2		State New Mexico
L 9370	H 9370	G _g 0.577	% CO ₂ 0.95	% N ₂ 0.28	% H ₂ S Nil	Prover	Meter Run 2"	Taps Flange

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
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
SI							2424	66			
1.	2.067	x 0.625		300	10	66	2200	67			1 hour
2.				301	24	66	2046	67			1 hour
3.				303	41	66	1899	68			1 hour
4.				305	68	66	1685	69			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 F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	1.866	55.96	313.2	0.9943	1.316	1.025	140
2	1.866	86.84	314.2	0.9943	1.316	1.025	217
3	1.866	113.86	316.2	0.9943	1.316	1.025	285
4	1.866	147.10	318.2	0.9943	1.316	1.025	368
5							

NO.	P _t	Temp. °R	T _t	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1	0.463	522	1.504	.9527	A.P.I. Gravity of Liquid Hydrocarbons	Deg.
2	0.465	522	1.504	.9525	Specific Gravity Separator Gas	0.577
3	0.468	522	1.504	.9522	Specific Gravity Flowing Fluid	X X X X X X X X
4	0.471	522	1.504	.9519	Critical Pressure	676 P.S.I.A.
5					Critical Temperature	347 R

NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1			7494	1590
2			6486	2598
3			5583	3501
4			4387	4697
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.934$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 657 \text{ mcfpd}$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.7849$

Absolute Open Flow	657 Mcfd @ 15.025	Angle of Slope @	48° 43"	Slope, n	0.8784
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Remarks: Static pressures by Bennett Wireline, flowing pressures by DWT.
Calculation worksheet attached.

Approved By Commission:	Conducted By: David Weaver	Calculated By: Eddie M. Mahfood	Checked By:
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