

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

1-81
1-File
1-C122 Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 1-11-79		MAR 12 1979	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Co.			
Pool E. Cottonwood Creek <i>Wolfcamp</i>				Formation Wolfcamp		Unit O.C.C. ARTESIA, OFFICE	
Completion Date 4-28-77		Total Depth 7407'		Plug Back TD 7121'		Elevation 3428' GR	
Csg. Size 4-1/2"		Wt. 15.5		Set At 4.000		Perforations: From 5055 To 5072	
Tbg. Size 2-3/8"		Wt. 4.7		Set At 1.995		Perforations: From To	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Dual-lower completion temp. abandon				Packer Set At 7121' KB		Farm or Lease Name Lizzie Howard "HK"	
Producing Thru Tubing		Reservoir Temp. °F 108@ 5063		Mean Annual Temp. °F 62		Baro. Press. - P _a 13.2	
L 5076		H 5076		Gg 0.661		Prover 2"	
				% CO ₂ 0.03		% H ₂ S Nil	
				% N ₂ 1.49		Meter Run Flange	
FLOW DATA				TUBING DATA		CASING DATA	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Duration of Flow
SI							Days
1.	2.067 x 0.750			180	6	90	1 hour
2.				180	18	90	1 hour
3.				180	33	89	1 hour
4.				180	58	89	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	2.709	34.05	193.2	.9723	1.230	1.0145	112
2	2.709	58.97	193.2	.9723	1.230	1.0145	194
3	2.709	79.85	193.2	.9732	1.230	1.0146	263
4	2.709	105.86	193.2	.9732	1.230	1.0146	348
5.							
NO.	P _t	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.		
1.	0.29	550	1.471	.9717	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.		
2.	0.29	550	1.470	.9716	Specific Gravity Separator Gas 0.661 XXXXXXXXXX		
3.	0.29	549	1.468	.9715	Specific Gravity Flowing Fluid XXXXXX		
4.	0.29	549	1.468	.9714	Critical Pressure 668 P.S.I.A. P.S.I.A.		
5.					Critical Temperature 374 R R		
P _c 1410.2 P _c ² 1989					(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.300$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.1845$		
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 412$		
1			1773	216			
2			1366	623			
3			989	1000			
4			459	1530			
5							
Absolute Open Flow 412 Mcfd @ 15.025					Angle of Slope 53.5 deg		Slope, n 0.6452
Remarks: Static pressures by Bennett Wireline, flowing pressures by dead weight tester. Calculations worksheet C-122D attached.							
Approved By Commission:		Conducted By: Don Weaver		Calculated By: Eddie M. Mahfood		Checked By:	