

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

SF
file
Form C-122
Revised 9-1-63
C-122 file

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 10-2-81		RECEIVED	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline		DEC 3 1981	
Pool Undesignated Abo				Formation Abo		Unit	
Completion Date 4-28-81		Total Depth 4450		Perforations 4392		Form or Lease Name Williamson "LC" Fed.	
Cas. Size 5 1/2"	Wt. 14#	d 5.012"	Set At 4400"	Perforations: From 2 holes To 35 3925'		Well No. #2	
Tub. Size 2 3/8"	Wt. 4.7#	d 1.995"	Set At 3896'	Perforations: From 3608 To 3805		Unit Sec. Twp. Rge. P 9 8S 25E	
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single				Packer Set At 3896		County Chaves	
Producing Thru Tubing		Reservoir Temp. °F 96 @ 3927'		Mean Annual Temp. °F 62		Baro. Press. - P _a 13.2	
L 3925		H 3925		C _g .657		Prover 2"	
		% CO ₂ 0.14		% H ₂ 9.95		% H ₂ S 0	
						Meter Run 2"	
						Taps Flanged	

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											Days
1.	2.067 X 0.750			300.0	72.0	75	500.0	69			24 hrs.
2.	2.067 X 0.750			290.0	49.3	75	648.0	69			24 hrs.
3.	2.067 X 0.750			285.0	32.7	73	738.0	69			24 hrs.
4.	2.067 X 0.750			275.0	16.7	72	835.0	69			24 hrs.
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	2.709	150.2	313.2	.9859	1.234	1.023	506
2	2.709	122.3	303.2	.9859	1.234	1.022	412
3	2.709	98.8	298.2	.9877	1.234	1.022	333
4	2.709	69.4	288.2	.9887	1.234	1.021	234
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1	.48	535	1.54	.955	A.P.I. Gravity of Liquid Hydrocarbons	Deg.
2	.46	535	1.54	.957	Specific Gravity Separator Gas	.657
3	.46	533	1.54	.957	Specific Gravity Flowing Fluid	XXXXXX
4	.44	532	1.53	.959	Critical Pressure	653
5					Critical Temperature	347

P _r 988.2 P _c 976.5				
NO.	P _r ²	P _w ²	R _w ²	P _c ² - R _w ²
	263.4		267.2	709.3
	450.5		452.9	
	564.3		565.9	410
	719.4		720.2	256

(1) $\frac{P_c^2}{P_r^2 - R_w^2} = 1.3767$ (2) $\left[\frac{P_r^2}{P_r^2 - R_w^2} \right]^n = 1.2673$

ACF = $\left[\frac{P_r^2}{P_c^2 - R_w^2} \right]^n = 6.41$

Absolute Open Flow 641		Mcf @ 15.025		Angle of Slope Φ		Slope, n .741	
Remarks:							
Approved By Commission:		Conducted By: David Weaver		Calculated By: Al Springer		Checked By:	