

MAY 21 1982

C-125 file

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

O.C.D.

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 4-2-82						ARTESIA, OFFICE							
Company Yates Petroleum Corporation						Connection Transwestern Pipeline													
Pool Pecos Slope Abo Gas						Formation Abo						Unit							
Completion Date 2/5/82				Total Depth 4225				Plug Back TD 4135				Elevation 3985.8 GL				Farm or Lease Name Smernoff "NL" St.			
Csg. Size 4 1/2"		Wt. 9.5#		d 4.090		Set At 4209		Perforations: From 3584 To 3851				Well No. #3							
Tub. Size 2 3/8		Wt. 4.7#		d 1.995		Set At 3784		Perforations: From To				Unit D		Sec. 2		Twp. 5S		Rge. 24E	
Type Well - Single - Brdenhead - G.G. or G.O. Multiple Single										Packer Set At -----				County Chaves					
Producing Thru Tubing				Reservoir Temp. °F 104 @ 3717				Mean Annual Temp. °F 62°				Burn. Press. - P _g 13.2				State New Mexico			
L 3784		H 3784		Gg .720		% CO ₂ 5.70		% N ₂ 8.01		% H ₂ S -----		Prover -----		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							917				
1.	2.067	X	.625	170	9.8	59	758	59			24 hrs.
2.	2.067	X	.625	170	26.5	59	675	59			24 hrs.
3.	2.067	X	.625	180	43.0	69	480	59			24 hrs.
4.	2.067	X	.625	180	75.0	66	200	59			24 hrs.
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	1.866	42.4	183.2	1.001	1.179	1.017	95
2	1.866	69.7	183.2	1.001	1.179	1.017	156
3	1.866	91.2	193.2	.9915	1.179	1.016	204
4	1.866	120.4	193.2	.9948	1.179	1.017	268
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio <u>Dry</u> Mcf/bbl.			
1	.27	519	1.42	.967	A.P.I. Gravity of Liquid Hydrocarbons ----- Deg.			
2	.27	519	1.42	.967	Specific Gravity Separator Gas <u>.720</u> X X X X X X X X			
3	.28	529	1.45	.968	Specific Gravity Flowing Fluid <u>X X X X X</u> .720			
4	.28	526	1.44	.967	Critical Pressure <u>679</u> P.S.I.A. 679 P.S.I.A.			
5					Critical Temperature <u>365</u> R 365 R			

$P_c = 930.2$ $P_c^2 = 865.3$					$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.0569$		$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0520$	
NO	P _i ²	P _w	P _w ²	P _c ² - P _w ²				
1	594.7		594.9	270.4				
2	473.6		474.0	391.3				
3	243.2		244.9	620.4				
4	45.5		46.6	818.7				
5								

$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 282 \text{ mcfpd}$

Absolute Open Flow <u>282</u> Mcfd @ 15.025		Angle of Slope θ -----		Slope, n <u>.916</u>	
Remarks: -----					
Approved By Division		Conducted By: David Weaver		Calculated By: Al Springer	
				Checked By:	