

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

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

RECEIVED

Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special		Test Date 11-2-78									
Company Yates Petroleum Corporation		Connection Transwestern Pipeline Co.									
Pool Siegest Draw Morrow Wideat Morrow		Formation Morrow									
Unit D. C. G. ARTERIAL OFFICE		Form or Lease Name Siegest "JS" State									
Completion Date 7-28-78	Total Depth 8643'	Plug Back TD 8551' KB	Elevation 3526' KB								
Csq. Size 5-1/2"	Wt. 17#	Set At 4.892	8602'								
Perforations: From 8435' To 8462'	Well No. 1										
Tbg. Size 2-3/8"	Wt. 4.7#	Set At 1.995	8433'								
Perforations: From 8421' To 8424'	Unit C 30		Soc. 19								
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single		Backer Set At 8418' KB	County Eddy								
Producing Thru Tubing 8440	Reservoir Temp. °F 141 @ 8440'	Mean Annual Temp. °F 62	Baro. Press. - P _a 13.2								
State New Mexico											
L 8440	H 8440	G _g 0.604	% CO ₂ 0.58								
% N ₂ 0.48	% H ₂ S Nil	Prover 2"	Meter Run Flange								
FLOW DATA											
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	TUBING DATA		CASING DATA		Duration of Flow
							Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI							2684	51			Days
1.	2.067 x 1.375		254	11	66	2433	56				1 hour
2.			255	23	66	2262	60				1 hour
3.			255	42	66	2033	64				1 hour
4.			256	64	66	1770	67				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	10.20	54.21	267.2	0.9943	1.293	1.023	727				
2	10.20	78.54	268.2	0.9943	1.293	1.023	1054				
3	10.20	106.13	268.2	0.9943	1.293	1.023	1424				
4	10.20	131.26	269.2	0.9943	1.293	1.023	1761				
5											
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	509.2	Mcf/bol.				
1	0.397	526	1.473	.956	A.P.I. Gravity of Liquid Hydrocarbons	56.3	Deg.				
2	0.3985	526	1.473	.956	Specific Gravity Separator Gas	500	XXXXXX				
3	0.3985	526	1.473	.956	Specific Gravity Flowing Fluid	XXXXX	604				
4	0.400	526	1.473	.956	Critical Pressure	673	P.S.I.A. 673 P.S.I.A.				
5					Critical Temperature	355	R 357 R				

| P_c 3333.2 P_w² 11110 | | | |

NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1			9181	1929
2			7960	3150
3			6459	4651
4			4930	6180
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.7977$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.562$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2750$

Absolute Open Flow		2750	Mcf/d @ 15.025	Angle of Slope	52.75 deg.	Slope, n	0.7604
Remarks: Static pressures by Bennett Wireline; Flowing pressures by DWT. Calculations worksheet C-112D attached.							
Approved By Commission:		Conducted By: Don Weaver		Calculated By: Eddie M. Mahfood		Checked By:	