

NEW MEXICO OIL CONSERVATION COMMISSION
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 2-5-76		FEB 17 1976	
Company Yates Petroleum Corporation				Connection None		O.C.C. ARTESIA, OFFICE	
Pool Richards Knob				Formation Cisco - Canyon		Unit	
Completion Date 12-17-75		Total Depth 8515'		Plug Back TD 6871'		Elevation 3565' KB	
Farm or Lease Name Sowers FE				Well No. 1			
Csg. Size 4 1/2	Wt. 11.6	d 4.000	Set At 6940	Perforations: From 6773 To 6777		Unit Sec. Twp. Rys. E 34 17s 25e	
Tbg. Size 2 3/8	Wt. 4.70	d 1.995	Set At 6772	Perforations: From 6720 To 6722			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 6717		County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 78 @ 6750		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
State New Mexico							
L 6775	H -	Gg 0.668	% CO ₂ 0.022	% N ₂ 1.520	% H ₂ S 0.000	Prover	Meter Run X
						Taps F	

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. DWT	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI							1900		Packer		1152.0
1.	3	4/64	1.00	290	6	64	1855	60			1.0
2.	3	7/64	1.00	290	12	72	1785	64			1.0
3.	3	9/64	1.00	290	25	78	1700	64			1.0
4.	3	11/64	1.00	290	46	84	1580	64			1.0
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	4.789	42.64	303.2	0.9962	1.224	1.029	256.2
2	4.789	60.32	303.2	0.9887	1.224	1.028	359.4
3	4.789	87.07	303.2	0.9831	1.224	1.027	515.3
4	4.789	118.09	303.2	0.9777	1.224	1.026	694.4
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio Dry Gas Mcf/bbl.	
1	0.45	524	1.41	0.944	A.P.I. Gravity of Liquid Hydrocarbons	-
2	0.45	532	1.43	0.946	Specific Gravity Separator Gas	0.668
3	0.45	538	1.45	0.948	Specific Gravity Flowing Fluid	X X X X X
4	0.45	544	1.47	0.950	Critical Pressure	671
5					Critical Temperature	371

P _c 2358.2 P _c ² 5561.1			
NO.	P _t ²	P _w ²	P _c ² - P _w ²
1	2275.2	5176.5	384.6
2	2227.2	4960.4	600.7
3	2134.2	4554.8	1006.3
4	2012.2	4048.9	1512.2
5			

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 14.459$

ACF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1796$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 7.01$

Absolute Open Flow	1796	Mcf/d @ 15.025	Angle of Slope @ 53° 56'	Slope, n 0.728
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Remarks: * BHP @ (-3210) 6775' used for pressure calculations

Approved By Commission:	Conducted By: Coleman Petr. Engr. Co.	Calculated By: Joe A. Coleman	Checked By: Joe A. Coleman
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