

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 1-20-75		FEB 4 1975	
Company Yates Petroleum Corp.				Connection None		O.C.C.	
Pool Richardson-Knob				Formation Morrow		Unit 320	
Completion Date 3-21-74		Total Depth 8671		Plug Back TD 8503		Elevation 3612	
Farm or Lease Name Federal C 7				Well No. 1			
Csg. Size 1 1/2	Wt. 10.5	d 4.052	Set At 8535	Perforations: From 8338 To 8388		Unit Sec. Twp. Rge. B 8 18 25	
Tbg. Size 2 3/8	Wt. 4.7	d 1.995	Set At 8245	Perforations: From open ended			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Gas Gas Dual				Packer Set At CO @ 6500		County Eddy	
Producing Thru Annulus		Reservoir Temp. °F 139 @ 8300		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
State New Mexico							
L 8363	H 8363	Gg 0.612	% CO ₂ 2.20	% N ₂ 0.31	% H ₂ S 0.00	Prover -	Meter Run 3
						Taps Flange	

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI							2386.0		Pkr	Choke	
1.	3"	X	2.00"	465.0	30.0	54	1958.0	62		21/64"	5 1/2 Hrs
2.	3"	X	2.00"	420.0	10.0	65	2105.0	62		17/64"	1 Hr
3.	3"	X	2.00"	420.0	4.0	74	2170.0	62		10/64"	1 Hr
4.	3"	X	2.00"	420.0	2.0	74	2228.0	58		10/64"	1 Hr
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.	21.32	119.77	478.2	1.006	1.278	1.045	3430
2.	21.32	65.82	433.2	0.9952	1.278	1.038	1853
3.	21.32	41.63	433.2	0.9868	1.278	1.035	1158
4.	21.32	16.32	133.2	0.9868	1.278	1.011	444
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	0.71	514	1.43	.916	A.P.I. Gravity of Liquid Hydrocarbons	— Deg.
2.	0.64	525	1.46	.929	Specific Gravity Separator Gas	0.612 XXXXXXXXXX
3.	0.64	534	1.49	.934	Specific Gravity Flowing Fluid	XXXXXX
4.	0.20	534	1.49	.979	Critical Pressure	678 P.S.I.A.
5.					Critical Temperature	359 R

NO.	P _r ²	P _w	P _w ²	P _r ² - P _w ²	(1) $\frac{P_r^2}{P_r^2 - P_w^2} =$	(2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n =$
1.	3885.6	1977.4	3910.1	1846.1	3.1180	3.1180
2.	4486.8	2120.2	4495.2	1261.0		
3.	4766.4	2184.2	4770.7	985.5		
4.	5023.0	2241.2	5023.0	733.2		
5.	*Friction Negligible 4th rate					

Absolute Open Flow	10,695	Mcf/d @ 15.025	Angle of Slope	45.0°	Slope, n 1000 Limit
Remarks: Slope in excess of 1000					
Approved By Commission:		Conducted By: Coleman Petr. Engr.		Calculated By: R. West	
				Checked By: Joe A. Coleman	