

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

copy 152 file
Form O-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 6-8-72	
Company Northern Natural Gas Co.				Correlation None			
Pool Wildcat				Morrow			
Completion Date 6-8-72				Total Depth 8932		Plug Back TD 8862	
Casing Size 4 1/2"				Set At 8932		Perforations: From 8698 To 8743	
Tubing Size 2 3/8"				Set At 8645		Perforations: From To	
Type Well - Single - Broadhead - G.O. or G.O. Multiple Single				Packer Set At 8645		Farm or Lease Name Vandagriff Federal	
Producing thru Tubing				Reservoir Temp. °F @		Baro. Press. - P _a 13.2	
L 8645				H 8645		Gg 0.653	
% CO ₂ 0.28				% N ₂ 0.50		% H ₂ S Trace	
Prover 2"				Meter Run --		Taps --	

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							2331.0	76	Pkr.		72.25 Hrs.
1.	2"	X	1/16"	2234.0		83	2234.0	78			4.0 "
2.	2"	X	3/32"	2108.0		79	2108.0	80			4.0 "
3.	2"	X	1/8"	1849.0		70	1849.0	73			4.0 "
4.	2"	X	3/16"	1319.0		64	1319.0	65			4.0 "
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_{in}}$	Pressure P _{in}	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor F _{sp}	Rate of Flow Q, Mcf/d
1	0.06405		2247.2	0.9786	1.237	1.162	202
2	0.1410		2121.2	0.9822	1.237	1.167	424
3	0.2643		1862.2	0.9905	1.237	1.177	711
4	0.6082		1332.2	0.9962	1.237	1.141	1139
5							

NO.	P _i	Temp. °R	Z	Gas Liquid Hydrocarbon Ratio TSTM	Mcf/bbl.
1	3.35	543	1.45	0.740	
2	3.17	539	1.44	0.734	
3	2.78	530	1.41	0.722	
4	1.99	524	1.40	0.768	
5					

P _c 2344.2	P _c ² 5495		
NO.	P _i ²	P _w ²	P _i ² - P _w ²
1	2247.2		
2	2121.2		
3	1862.2	PACKER	
4	1332.2		
5			

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.4896$$

$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.3536$$

$$\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1570$$

Absolute Open Flow	1570	Mcf/d @ 15.025	Angle of Slope	52.5°	Slope, n	0.765
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Remarks:

Approved By Commission:	Conducted By: R. West	Calculated By: R. West	Checked By:
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