

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 8-30-89	
Company MANZANO Oil Corp		Connection AIR	
Pool		Formation ATOKA	
Completion Date 8 25 89		Total Depth 13703	Plug Back TD 13640
Elevation 3685		Farm or Lease Name WYNELL FEDERAL	
Coq. Size 5.500	Wt. 23.0	d 4.670	Set At 13703
Perforations: From 12630 To 12637		Well No. 1	
Thd. Size 2.375	Wt. 4.7	d 1.995	Set At 12484
Perforations: From To		Unit Sec. Twp. Rye. 15 19S 33E	
Type Well - Single - Bradenhead - G.C. or G.O. Multiple SINGLE GAS		Packer Set At 12484	County LEA
Producing Thru TUBING	Reservoir Temp. °F 188 @ 12633	Mean Annual Temp. °F 60°	Buro. Press. - P _g 13.2
State NM			
L 12633	H 12633	G _g .698	% CO ₂ .31
% N ₂ 2.04	% H ₂ S	Prover	Meter Run 4.0
Taps FLANGE			

FLOW DATA					TUBING DATA		BHP 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.
SI							4920	70	7254	188
1.	4.03X2.500			290	11.0	75	4740	60	7165	188
2.	4.03X2.500			300	22.0	78	4620	60	7122	188
3.	4.03X2.500			300	42.0	66	4420	60	7038	188
4.	4.03X2.500			300	80.0	60	4100	60	6911	188
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 _{sp}	Rate of Flow Q, Mcfd
1	32.64	57.75	303.2	.9859	1.1969	1.0308	2293
2	32.64	83.01	313.2	.9831	1.1969	1.0312	3288
3	32.64	114.69	313.2	.9943	1.1969	1.0338	4606
4	32.64	158.29	313.2	1.000	1.1969	1.0353	6402
5							

NO.	P ₁	Temp. °R	T ₁	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1	46	535	1.40	.941	5.2	
2	47	538	1.40	.940	47.7	
3	47	526	1.37	.936		
4	47	520	1.36	.933		
5						

A.P.I. Gravity of Liquid Hydrocarbons 47.7 Specific Gravity Separator Gas .698 Specific Gravity Flowing Fluid X X X X X Critical Pressure 665 P.S.I.A. Critical Temperature 383 R					XXXXXXXXXX 1.145 643 523
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$P_c = 4799.4$ $P_c^2 = 23034$	$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 7.7192$	$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 5.0772$																														
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>NO</th> <th>P₁</th> <th>P_w</th> <th>P_w²</th> <th>P_c² - P_w²</th> </tr> <tr><td>1</td><td>51521</td><td>4715</td><td>22232</td><td>802</td></tr> <tr><td>2</td><td>50917</td><td>4675</td><td>21860</td><td>1174</td></tr> <tr><td>3</td><td>49719</td><td>4596</td><td>21126</td><td>1908</td></tr> <tr><td>4</td><td>47950</td><td>4478</td><td>20050</td><td>2984</td></tr> <tr><td>5</td><td></td><td></td><td></td><td></td></tr> </table>	NO	P ₁	P _w	P _w ²	P _c ² - P _w ²	1	51521	4715	22232	802	2	50917	4675	21860	1174	3	49719	4596	21126	1908	4	47950	4478	20050	2984	5					$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 32,504$	
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Absolute Open Flow	32,504	Mcf @ 15.025	Angle of Slope @	51.5	.795
Slope, n					

Remarks: CHOKE SIZE 1ST RATE 10.5/64 2ND RATE 12/64 3RD RATE 14/64 4TH RATE 17/64

SEP 11 1989

ORIGINAL SIGNED BY JERRY SEX FOR

DISTRICT 1 SUPERVISOR

Inspected By:

BENNETT CATHEY

Calculated By:

MATT LEE

Checked By: