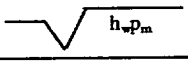


NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 7/15/97			
Company Mallon Oil Company				Connection Atmosphere					
Pool Quail Ridge Morrow				Formation Morrow				Unit	
Completion Date 6/16/97		Total Depth 13,700'		Plug Back TD		Elevation 3,667' GF		Farm or Lease Name Mescalero 30 Federal	
Csg. Size 5-1/2"	Wt. 23#	d 4.670"	Set At 13,700'	Perforations: From 13,227' To 13,374'		Well No. 4			
Tbg. Size 2-3/8"	Wt. 4.6#	d 1.995"	Set At 13,100'	Perforations: From To		Unit Sec. Twp. Rng. G 30 19S 34E			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 13,107'		County Lea			
Producing Thru Tubing		Reservoir Temp. ° F 199		Mean Annual Temp. ° F 60		Baro. Press. - P _a 13.2		State NM	
L 11385	H 11385	Gg 0.701	% CO ₂ 2.24	% N ₂ 0.670	% H ₂ S 0.0	Provor 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.	
SI							2550		pkc	
1.	2" x 0.5"			170		30	2100	78		
2.	2" x 1.25"			75		70	500	76		
3.	2" x 1.25"			40		78	175	76		
4.	2" x 1.25"			40		68	250	76		
5.										

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)		Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1.	4.28		183.2	1.0302	1.154	1.025	989
2.	25.91		88.2	0.9905	1.154	1.010	2731
3.	25.91		53.2	0.9831	1.154	1.005	1627
4.	25.91		53.2	0.9924	1.154	1.005	1642
5.							

NO.	P _r	Temp. ° R	T _r	Z	Gas Liquid Hydrocarbon Ratio	14.0	Mcf/bbl.
1.	0.271	490	1.260	0.951	A.P.I. Gravity of Liquid Hydrocarbons	50.8	Deg.
2.	0.130	530	1.362	0.980	Specific Gravity Separator Gas	0.701	XXXXXXXXXX
3.	0.0787	538	1.383	0.990	Specific Gravity Flowing Fluid	XXXXX	0.909
4.	0.087	528	1.357	0.990	Critical Pressure	676	P.S.I.A. 670 P.S.I.A.
5.					Critical Temperature	389	R 454 R

P_c 2563.2 P_c² 6569994

NO.	P _c ²	P _w	P _w ²	P _c ² - P _w ²
1.	446564	2115	4475102	2095
2.	263347	602	362609	6207
3.	35419	274	74836	6495
4.	69274	330	108792	6461
5.				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.059$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 761$

(2) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.055$

Absolute Open Flow	Mcf @ 15.025	Angle of Slope	Slope, n 0.942
Remarks:			
Flow period 1 and 2 used for N,			
AOF based on following days rate of 721 MCFD @ 590 psi tubing pressure.			
Approved by Commission:	Conducted By:	Calculated By:	Checked By:

ORIGINAL SIGNED BY CHRIS WILLIAMS
DISTRICT SUPERVISOR

SEP 04 1998

