

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special				Test Date 2/10/90							
Company Mercury Exploration Co.			Connection Transwestern								
Pool Wildcat			Formation Atoka			Unit					
Completion Date 2/13/90		Total Depth 15,119		Plug Back TD 14,200		Elevation GR 3728					
Farm or Lease Name Connally Federal		Well No. 1									
Coq. Size 5"	Wi. 23#	d	Set At 15,119	Perforations: From 13,814 To 13,636							
Thq. Size 2-3/8"	Wi. 4.7#	d	Set At 13,558	Perforations: From To		Unit Sec. Twp. Rge. J 15 22S 32E					
Type Well - Single - Drdndhead - G.C. or G.O. Multiple				Packer Set At 13,558		County Lea					
Producing Thru Tubing		Reservoir Temp. °F 225°		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2					
State New Mexico											
L	H	G _g .597	% CO ₂ .617	% N ₂ .523	% H ₂ S 0	Prover	Meter Run 2.00"				
Taps Flange											
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	Duration of Flow
SI				--	--		6150				choke
1.	2.00"	x	.500	580	2	65°	750#	60°	0	4/64	1 hr.
2.	2.00"	x	.500	580	5	65°	690#	60°	0	6/64	1 hr.
3.	2.00"	x	.500	580	8	75°	630#	60°	0	8/64	1 hr.
4.	2.00"	x	.500	580	10	75°	600#	60°	0	10/64	1 hr.
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 _{pv}	Rate of Flow O, Mcfd				
1	1645	34	595	0.9952	1.0041	1.077	60,193				
2	1645	54	595	0.9952	1.0041	1.077	95,601				
3	1645	69	595	0.9859	1.0041	1.077	121,015				
4	1645	77	595	0.9859	1.0041	1.077	135,046				
5											
NO.	R ₁	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio <u>dry gas</u> Mcf/bbl.		A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.				
1					Specific Gravity Separator Gas <u>.597</u> XXXXX XXXX						
2					Specific Gravity Flowing Fluid <u>XXXXX</u>						
3					Critical Pressure _____ P.S.I.A.		_____ P.S.I.A.				
4					Critical Temperature _____ R		_____ R				
5											
NO.	P _c	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} =$ _____		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$ _____				
1		7516	5649								
2		1230	151	5498							
3		1170	137	5512							
4		1110	123	5526							
5		1070	115	5534							
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$ _____											
Absolute Open Flow <u>140</u>		Mcf @ 15.025			Angle of Slope @ <u>45</u>		Slope, n <u>1.000</u>				
Remarks: _____											
Approved By Division			Conducted By:			Calculated By:		Checked By:			

RECEIVED

JUL 27 1990

6-11-90