NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test: [X] Initial [ ] Annual [ ] Special — Test Date: 5-11-80

Company: Union Oil Co. of California	Connection:	
Pool: Undesignated (Gem Morrow Gas)	Formation: Morrow	Unit:
Completion Date: 5- 9-80	Total Depth: 13,620'	Plug Back TD: 13,570'
Elevation: 3576' GR.	Farm or Lease Name: Maduro Unit	
Csg. Size: 5-1/2" OD / Wt.: 17# / d: 4.892 / Set At: 13,620'	Perforations: From 13,478' To 13,487'	Well No.: 2
Tbg. Size: 2-7/8" OD / Wt.: 6.5# / d: 2.441 / Set At: 13,350'	Perforations: From To	Unit: C / Sec.: 32 / Twp.: 19-S / Rge.: 33-E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single	Packer Set At: 13,350'	County: Lea
Producing Thru: Tubing	Reservoir Temp. °F: 174 @ 13,478'	Mean Annual Temp. °F: 60
Baro. Press. – P_a: 13.2	State: New Mexico	

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
13,478'	13,478'	.660	.59	.48	0.0	0.0	4.0	Flange

	FLOW DATA					TUBING DATA		CASING DATA		
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 Hrs.
SI						3900	60			
1.	4.00	1.250	500	93	75	1450	60	0	0	18
2.										4
3.										
4.										
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	7.47	218.47	513.2	.9859	1.2309	1.0489	2,077
2.							
3.							
4.							
5.							

NO.	P_t	Temp. °R	T_r	Z
1.	.76	535	1.43	.909
2.				
3.				
4.				
5.				

Gas Liquid Hydrocarbon Ratio 11.458 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 48.5 Deg.
Specific Gravity Separator Gas .660 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX .888
Critical Pressure 671 P.S.I.A. 660 P.S.I.A.
Critical Temperature 375 R 446 R

P_c ____ P_c^2 ____

NO	P_t	P_w	P_w^2	$P_c^2 - P_w^2$
1		1473	2171	13143
2				
3				
4				
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.1652$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.1652$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2,421$

Absolute Open Flow 2,421 Mcfd @ 15.025 Angle of Slope θ 45.0 Slope, n 1.000

Remarks: Calculations completed using Garrett Computing System's AOF program.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	C. A. Bagley	M. F. Standifer	L. H. Pardue