NEW M. CO OIL CONSERVATION COMMSSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

TEST NO. 2 OF 2

Type Test: *XX Initial ☐ Annual ☐ Special				Test Date: 1-16-75	
Company: Phillips Petroleum Company		Connection: Not connected			
Pool: Undesignated-Atoka-Gas		Formation: Atoka		Unit: —	
Completion Date: 5-20-75	Total Depth: 10,925	Plug Back TD: 10,879	Elevation: 4269' Gr.	Farm or Lease Name: Marg "B" "COM"	
Csg. Size: 5½" / Wt.: 15.5 & 17# / d: / Set At: 10,925		Perforations: From 10,705 To 10,811		Well No.: 1	
Tbg. Size: 2-3/8" / Wt.: 4.7 / d: 1.995 / Set At: 10,520		Perforations: From To		Unit: C, Sec.: 36, Twp.: 9-S, Rge.: 32-E	
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single		Packer Set At: 10,520		County: Lea	
Producing Thru: tubing	Reservoir Temp. °F: 168@ 10,900	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
10,520	10,520	.712	1.20	1.79			4	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
SI						2,185	48	PACKER		7 days
1.	4.00	2.50	25.2	24.0	10	1,300	50			1 hr.
2.	4.00	2.50	24.0	10.9	56	305	54			1½ hr.
3.	4.00	2.50	24.0	9.61	62	305	60			1 hr.
4.	4.00	2.50	24.0	6.25	59	472	62			1 hr.
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	32.64	30.36	38.4	1.052	1.185	1.021	1,261
2	32.64	20.14	37.2	1.004	1.185	1.015	794
3	32.64	18.91	37.2	.9981	1.185	1.015	741
4	32.64	15.25	37.2	1.001	1.185	1.015	599
5							

NO.	P_t	Temp. °R	T_r	Z
1	.06	470	1.21	.960
2	.06	516	1.32	.970
3	.06	522	1.34	.971
4	.06	519	1.33	.970
5				

Gas Liquid Hydrocarbon Ratio: 24,500 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: 56 Deg.
Specific Gravity Separator Gas: .712 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX .827
Critical Pressure: 669 P.S.I.A. 666 P.S.I.A.
Critical Temperature: 389 R 416 R

P_c 2198.2 P_c^2 4832

NO	P_t	P_w	P_w^2	$P_c^2 - P_w^2$
1	1,724	1330.5	1,770	3,062
2	101	350.8	123	4,709
3	101	350.8	123	4,709
4	235	499.1	249	4583
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{4832}{3062}$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.58$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1,992$

Absolute Open Flow: 1,992 Mcfd @ 15.025 Angle of Slope θ: 45 Slope, n: 1

Remarks: Calculation made by Electronic Calculator. Program based on New Mexico Manual for Back-Pressure testing of gas wells. Test will be rerun after connection due to nonalignment of points.

Approved By Commission:	Conducted By:	Calculated By: D. E. Simpson	Checked By: W. J. Mueller
	Don Throp-Robert Lee	D. E. Simpson	W. J. Mueller