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N MEXICO OIL CONSERVATION COMM

Form C-122
Revised 9-1-65

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

DEC 26 1972

O. C. C.
ARTESIA, OFFICE

Type Test: ☐ Initial ☐ Annual ☒ Special				Test Date: 12-6-71	Fed. Lse #NM0540701-A
Company: Phillips Petroleum Company			Connection: El Paso Natural Gas Co.		
Pool: Carlsbad, South (Atoka) Gas			Formation: Atoka		Unit
Completion Date: 5-16-72	Total Depth: 11875		Plug Back TD: 11806	Elevation: 3217' Gr. 3237' DF	Farm or Lease Name: Drag "A"
Csg. Size: **5-1/2	Wt.: 17#, 20#	d: 3.434	Set At: 11875	Perforations: From 10686 To 10799	Well No.: 1
Tbg. Size: --	Wt.: --	d: --	Set At: --	Perforations: From --- To ---	Unit: C Sec.: 18 Twp.: 23-S Rge.: 27-E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: G. G. Multiple			Packer Set At: 11470		County: Eddy
Producing Thru: **annulus	Reservoir Temp. °F: 176 @ 11800		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
10688	10688	.6003	.0147	.007	--		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					Morrow		2300		24 hrs.
1.	4.026 x 1.25	504	6.76	76	zone		600	76	24 hrs.
2.					producing				
3.					thru				
4.					tubing				
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	7.469	58.37	517.3	.9850	1.288	1.041	575
2							
3							
4							
5							

NO.	P_t	Temp. °R	T_f	Z
1	.77	536	1.50	.923
2				
3				
4				
5				

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
Specific Gravity Separator Gas .6003 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure 671 P.S.I.A. _____ P.S.I.A.
Critical Temperature 358 R _____ R

P_c 2313.2 P_c^2 5350.8

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	376.0	613.2	376.0	4974.8
2				
3				
4				
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{5350.8}{4974.8}$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.0641$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 612$

* "n" established by Multipoint Back-Pressure test dated 5-25-72.

Absolute Open Flow 612 Mcfd @ 15.025 Angle of Slope θ 49.5° Slope, n .853*

Remarks: Calculations made by Electronic Calculator. Program based on New Mexico Manual for Back-Pressure testing of gas wells.

Approved By Commission:	Conducted By:	Calculated By: D. E. Simpson	Checked By: W. J. Mueller
		D. E. Simpson	W. J. Mueller