C-122

NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test: ☐ Initial ☐ Annual ☒ Special				Test Date: 1/10/73	
Company: Penroc Oil Corporation		Connection: Phillips Petroleum Company			U. S. G. ARTESIA, OFFICE
Pool: Winchester Morrow		Formation: Morrow			Unit:
Completion Date: 6/20/72	Total Depth: 11,300		Plug Back TD: 11,266	Elevation: 3285 GR	Farm or Lease Name: Dero Federal
Csg. Size: 4 1/2 / Wt.: 11.6 13.5 / d: / Set At: 11,300			Perforations: From 10,769 To 11,208		Well No.: 1
Tbg. Size: 2 3/8 / Wt.: 4.70 / d: 1.995 / Set At: 10,700			Perforations: From To		Unit: P / Sec.: 35 / Twp.: 19S / Rge.: 28E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single			Packer Set At: 10,700		County: Eddy
Producing Thru: Tubing	Reservoir Temp. °F: 174 @ 11,000	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
10,700	10,700	.609	-	-	-		X	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						2814				72
1.	4	x 2.75	25	*	58	2505	68			1
2.	4	x 2.75	25	*	60	2104	69			1
3.	4	x 2.75	25	*	60	1774	71			1
4.	4	x 2.75	25	*	61	1326	70			1
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	41.10	13.0 *	38.2	1.002	1.281	1.000	485
2	41.10	19.3 *	38.2	1.000	1.281	1.000	719
3	41.10	23.1 *	38.2	1.000	1.281	1.000	860
4	41.10	26.4 *	38.2	.9990	1.281	1.000	982
5							

NO.	P_t	Temp. °R	T_r	Z
1	2 below limits of table			
2				
3				
4				
5				

Gas Liquid Hydrocarbon Ratio: TSTM Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: Deg.
Specific Gravity Separator Gas: .609 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 671 P.S.I.A. P.S.I.A.
Critical Temperature: 358 R R

P_c 2827.2 P_c^2 7993

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		2518.2	6341	1152
2		2119.2	4491	3502
3		1787.2	3194	4799
4		1350.8	1825	6168
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.296$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.154$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1133$

Absolute Open Flow: 1133 Mcfd @ 15.025 | Angle of Slope θ: | Slope, n: .562

Remarks: * 50" 1000 meter, L-10 factor 0.7071
Friction negligable - see rate 4 attached.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	M. Roberts	B. D. Dailey	