

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test		Initial		Annual		Special		8/3/82							
Company Petroleum Development Corp.				Connection MAY 19 1983											
Pool Pecos Slope Abo				Formation Abo				O. C. D. ARTESIA, OFFICE							
Completion Date 8/1/82		Total Depth 4738		Plug Back TD 4587 458 41		Elevation 3818		Farm or Lease Name Lauralea							
Csg. Size 4 1/2"		Wt. 10.5		Set At 4587 458 41		Perforations: From 4523 To 4537		Well No. #2							
Thg. Size 2 3/8"		Wt. 4.70		Set At 4499		Perforations: From To		Unit Sec. Twp. Rge. W 35 7S 26E							
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single				Packer Set At No Packer				County Chaves							
Producing Thru Tubing		Reservoir Temp. °F 100°		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.20		State NM							
L 4530		H 4530		Cg .660		% CO ₂ .12		% N ₂ 6.81							
						% H ₂ S 0		Prover 2.0							
								Meter Run 0							
								Taps							
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									1126	100	25.0				
1.	2.00		.250	830		68	0	0	1075	100	1.0				
2.	2.00		.437	420		59	0	0	1005	100	1.0				
3.	2.00		.437	471		63	0	0	956	100	1.0				
4.	2.00		.437	525		64	0	0	906	100	1.0				
5.															
RATE OF FLOW CALCULATIONS															
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{spv}	Rate of Flow Q, Mcfd								
1	1.08	0	843.2	.9924	1.2309	1.0726	1198								
2	3.39	0	433.2	1.0010	1.2309	1.0402	1884								
3	3.39	0	484.2	.9971	1.2309	1.0435	2104								
4	3.39	0	538.2	.9962	1.2309	1.0480	2346								
5															
NO.	η	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio 0 Mcf/bbl.			A.P.I. Gravity of Liquid Hydrocarbons 0 Deg.							
1	1.28	528	1.47	.869	Specific Gravity Separator Gas 660			XXXXXXX							
2	.66	519	1.45	.924	Specific Gravity Flowing Fluid XXXXX			660							
3	.74	523	1.46	.918	Critical Pressure 658 P.S.I.A.			658 P.S.I.A.							
4	.82	524	1.46	.911	Critical Temperature 359 R			359 R							
5															
P_c^2					$\frac{P_c^2}{P_c^2 - R_w^2} = 2.9043$										
P_w^2					$\left[\frac{P_c^2}{P_c^2 - R_w^2} \right]^n = 1.7088$										
NO.	P ₁ ²	P _w	P ₂ ²	P _c ² - P _w ²	AOF = Q $\left[\frac{P_c^2}{P_c^2 - R_w^2} \right]^n = 4010$										
1	964		929	87											
2	903		815	201											
3	860		739	277											
4	816		666	350											
5															
Absolute Open Flow 4010 Mcfd @ 15.025					Angle of Slope 63.3			Slope, n .503							
Remarks:															
Approved By Division Pedco				Conducted By Don Bennett				Calculated By Bennett & Cathey				Checked By Don Bennett			

8-3-82



$$\begin{array}{r} \log Q_1 \quad 3.8451 \\ \log Q_2 \quad 3.3421 \\ \hline 72 \quad .503 \end{array}$$