

NE. MEXICO OIL CONSERVATION COMMS. JN
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 3-25-80	
Company ARCO Oil & Gas Company				Connection El Paso Natural Gas Company		
Pool Langley Devonian Gas				Formation Devonian		Unit
Completion Date		Total Depth 15671		Plug Back TD 15590		Elevation 3515.6 GL
Farm or Lease Name Langley Deep		Well No. 1				
Cas. Size 7	Wt. 32	d 6.094	Set At 15670	Perforations: From 12386 To 12525		Unit C
Tbg. Size 2.375	Wt. 4.7	d 1.945	Set At 12215	Perforations: From Open To Ended		Sec. 28
Type Well - Single - Bradenhead - G.G. or G.O. Multiple				Packer Set At 12217		Twp. 22S
Producing Thru Tbg. 12226				Baro. Press. - P _a 13.2		Rye. 36E
Dual				State New Mexico		County Lea
Reservoir Temp. °F 175		Mean Annual Temp. °F 60		Prover -		Meter Run 4"
G _g 0.795		% CO ₂ 2.03		% N ₂ 1.93		Taps Flg.
% H ₂ S 0.95						

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
SI							2610		Pkr.		92 Hrs.
1.	4" x 2.250			54	2.56	81	2361	68			2 Hrs.
2.	4" x 2.250			57	6.25	92	2112	71			2 Hrs.
3.	4" x 2.250			61	19.8	86	2021	72			2 Hrs.
4.	4" x 2.250			69	73.96	61	1836	72			2 Hrs.
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 _{pv}	Rate of Flow Q, Mcfd
1	25.64	13.12	67.2	0.9804	1.122	-	370
2	25.64	20.95	70.2	0.9706	1.122	-	585
3	25.64	38.33	74.2	0.9759	1.122	-	1076
4	25.64	77.97	82.2	0.9990	1.122	-	2241
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature	Rate of Flow
1	0.10	541	1.32	Nil.	10.788	51.5	0.795	XXXXXX	675	410	370
2	0.10	552	1.35	-							585
3	0.11	546	1.33	-							1076
4	0.12	521	1.27	-							2241
5											

$P_c = 4206.2$ $P_c^2 = 17692.1$				$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 4.3032$		$(2) \left[\frac{1 + P_c^2}{P_c^2 - P_w^2} \right]^n = 4.3032$	
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²			
1		4130.2	17058.6	633.5			
2		4071.2	16574.7	1117.4			
3		3953.2	15627.8	2064.3			
4		3685.2	13580.7	4111.4			
5							

$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 9643$			
Absolute Open Flow 9643		Angle of Slope $\theta = 45^\circ$	
Slope, n = 1.000			

Remarks: BHP measured at mid point of perforations at 12410.5. Well produced 0 BW and 33 BO during test.			
Approved By Commission:	Conducted By: D. Cellars	Calculated By: J. Cogburn	Checked By: L.C. Hudry