

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

CORRECTED COPY

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 7/16-20/79	
Company ARCO Oil & Gas Company				Connection El Paso Natural Gas Company			
Pool Langley Devonian Gas				Formation Devonian		Unit	
Completion Date 6/2/79		Total Depth 16,302		Flow Back To 14,673		Elevation 3527.9	
Form or Lease Name Langley Greer Com.		Well No. 1					
Coq. Size 7	Wt. 29	d 6.184	Set At 16,302	Perforations: From 12,381 To 12,606		Unit Sec. Twp. Rge. F 21 22S 36E	
Trq. Size 2.875	Wt. 6.5	d 2.441	Set At 12,340	Perforations: From Open To Ended		County Lea	
Type well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 12,310		State New Mexico	
Producing Thru Tbg.		Reservoir Temp. °F 173 @ 12494		Mean Annual Temp. °F 60		Buro. Press. - P _g 13.2	
L 12494	H 12494	Gg 0.751	% CO ₂ 2.33	% N ₂ 2.71	% H ₂ S 0.77	Prover -	Meter Run 4"
Taps Flg.							

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
51							2853		Pkr.		162 Hrs
1.	4 x 2.250			558	3.24	74	2564	79			24 Hrs
2.	4 x 2.250			553	7.84	57.5	2429	78			24 Hrs
3.	4 x 2.250			567	18.50	64	2215	78			24 Hrs
4.	4 x 2.250			550	29.20	64	2022	79			24 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, Mhd
1	25.64	43.02	571.2	0.9868	1.154	1.067	1340
2	25.64	66.63	566.2	1.0025	1.154	1.075	2125
3	25.64	103.60	580.2	0.9962	1.154	1.073	3277
4	25.64	128.24	563.2	0.9962	1.154	1.071	4048
5							

NO.	P _g	Temp. °R	T _g	Z	Gas Liquid Hydrocarbon Ratio	7.55 Mcf/bbl.
1.	0.85	534	1.36	0.879	A.P.I. Gravity of Liquid Hydrocarbons	53.6 Deg.
2.	0.84	517.5	1.31	0.866	Specific Gravity Separator Gas	0.751 XXXXXXXXX
3.	0.86	524	1.33	0.869	Specific Gravity Flowing Fluid	XXXXX 1.106
4.	0.84	524	1.33	0.871	Critical Pressure	674 P.S.I.A.
5.					Critical Temperature	394 R 510 R

NO.	P _g	P _w	P _w ²	P _g ² - P _w ²	(1) $\frac{P_g^2}{P_g^2 - P_w^2} = 2.7293$	(2) $\left[\frac{P_g^2}{P_g^2 - P_w^2} \right]^n = 2.2621$
1		4720.2	22280.3	2085.8	AOF = Q $\left[\frac{P_g^2}{P_g^2 - P_w^2} \right]^n = 9157.$	
2		4511.2	20350.9	4015.2		
3		4215.2	17767.9	6598.2		
4		3929.2	15438.6	8927.5		
5						

Absolute Open Flow	9157	Mhd @ 15.025	Angle of Slope @	50.9	Slope, n	0.813
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Remarks: Well produced 1429 BO & 44 BW during 4 day test. BHP was recorded at mid point of perforations at 12494.

Approved By Commission:	Conducted By: R. Pagan	Calculated By: J. Cogburn	Checked By: L. C. Hudry
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