

Form C-122
Revised 9-1-65

MEXICAN OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS

NOV 8 1966

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 11-1-66		O. C. C. ARTESIA, OFFICE	
Company Atlantic Richfield Company				Connection Indian Hills Gas System, Ltd.			
Pool Golden Eagle - Morrow Gas				Formation Morrow		Unit	
Completion Date 12-27-65		Total Depth 11,365'		Plug Back TD 10,367'		Elevation 3332 K.B.	
Farm or Lease Name Pure Federal				Well No. 1			
Csg. Size 7"	Wt. 26	d 6.276	Set At 10,720'	Perforations: Open hole-side track From 9995' To 10,367'		Unit Sec. Twp. Rge. K 11 21S 25E	
Tbg. Size 2-3/8"	Wt. 4.7	d 1.995	Set At 9976'	Perforations: From Open To Ended		County Eddy	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 9914'		State New Mexico	
Producing Thru Tubing		Reservoir Temp. °F 162° @ 10,000		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
L 9976	H 9976	Gg 0.589	% CO ₂ 1.0	% N ₂ 0.24	% H ₂ S 0	Prover 4"	Meter Run Flange

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							2952.0		Pkr.		24 hr.
1.	4.020 x	1.750	406.8	4	4	2296.0	52				1 hr.15 min.
2.	4.020 x	1.750	406.8	11	7	2022.0	60				1 hr.50 min.
3.	4.020 x	1.750	451.8	22	30	1395.0	60				3 hr.15 min.
4.	4.020 x	1.750	466.8	44	48	948.0	64				1 hr. 5 min.
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	14.93	40.980	420.0	1.059	1.303	1.052	888
2	14.93	67.965	420.0	1.055	1.303	1.050	1465
3	14.93	101.12	465.0	1.030	1.303	1.048	2123
4	14.93	145.33	480.0	1.012	1.303	1.042	2981
5.							

NO.	P _t	Temp. °R	T _t	Z	Gas Liquid Hydrocarbon Ratio	No liquids	Mcf/bbl.
1.	0.62	464	1.33	0.904	A.P.I. Gravity of Liquid Hydrocarbons	No liquids	Deq.
2.	0.62	467	1.34	0.907	Specific Gravity Separator Gas	0.589	XXXXXXX
3.	0.69	490	1.40	0.912	Specific Gravity Flowing Fluid	XXXXX	0.589
4.	0.71	508	1.46	0.922	Critical Pressure	675 P.S.I.A.	675 P.S.I.A.
5.					Critical Temperature	349 R	349 R

NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1	5332.4	2313.7	5353.2	3439.2
2	4142.0	2050.1	4202.9	4589.5
3	1983.0	1452.0	2108.3	6684.1
4	923.9	1088.9	1185.7	7606.7
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.156$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.244$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3708$

Absolute Open Flow 3708 Mcfd @ 15.025 Angle of Slope θ Slope, n 1.531

Remarks: Drawing a line with a slope of 1.0 through the point corresponding to the highest flow rate gives an absolute open flow of 3446 MCFD.

Approved By Commission: <u>11/21/66</u>	Conducted By: R.F. Baker Ed Ingram Norman Truitt	Calculated By: R. F. Baker	Checked By:
--	--	-------------------------------	-------------