

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

Form C-122
 Revised 9-1-65

Type Test ☐ Initial ☐ Annual ☒ Special		Test Date 4-5-73		APR 1973	
Company Elwyn C. Hale ✓			Connection Southern Union Gas Company		
Pool Dos Hermanos Morrow Gas POOL (Extension)			Formation Morrow Gas		
Completion Date 5-19-73		Total Depth 12530'		Plug Back TD 12488'	
Csg. Size 5 1/2		Wt. 20		Elevation 3311' KB	
Tbg. Size 2 3/8"		Wt. 4.70		Perforations: 11837' To 12213'	
		Set At 12523'		From 12140' To 12074'	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single			Packer Set At 11765' & 12066'*		
Producing Thru Tubing		Reservoir Temp. °F 176° 12000'		Mean Annual Temp. °F 60	
Baro. Press. - P _a 13.2		State New Mexico		County Eddy	
L 12025'		H -		G _g 0.635	
% CO ₂ 0.77		% N ₂ 0.00		% H ₂ S 0.00	
Prover -		Meter Run X		Taps F	

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI							1614		PACKER		45.0 Hrs
1.	4	21/64	1.75	300	35	68	629	62	-	-	2.0
2.	4	18/64	1.75	300	24	70	746	69	-	-	2.0
3.	4	15/64	1.75	300	14	70	944	70	-	-	1.0
4.	4	12/64	1.75	290	6	78	1252	70	-	-	1.0
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	14.93	104.70	313.2	0.9924	1.255	1.029	2003.4
2	14.93	86.70	313.2	0.9905	1.255	1.029	1655.7
3	14.93	66.22	313.2	0.9905	1.255	1.029	1264.6
4	14.93	42.64	303.2	0.9831	1.255	1.027	806.6
5.							

NO.	P _t	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
1.	0.47	528	1.44	0.945	311.435	53.9	0.635	XXXXXXX	666	367
2.	0.47	530	1.44	0.945						
3.	0.47	530	1.44	0.945						
4.	0.46	538	1.47	0.949						
5.										

P _c 2192.2 P _c ² 4805.7			
NO.	P _t ²	P _w +	P _w ²
1	-	1036.2	1073.7
2	-	1322.2	1748.2
3	-	1598.2	2554.2
4	-	1845.2	3404.8
5			

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.288$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2536$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.266$

Absolute Open Flow	2536	Mcfd @ 15.025	Angle of Slope @	46° 59'	Slope, n	0.933
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Remarks: * Csg. Perfs. separated by Packer @ 12066' Csg. Perfs. 11837-11980' produced Via open sleeve @ 12063'. Csg. Perfs 12140-12143' produced Via Tbg Perfs @ 12070-12074'. Van Guns hung 12140-12213'. Prod. PKR (top) 11765'

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	COLEMAN PET.ENG.CO.	JOE A. COLEMAN	JOE A. COLEMAN

+BHP @ (-8714') 12025' used for pressure calculations