

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

Form C-122
Revised 9-1-65

0:5F

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 5-21-80		JUN 16 1980	
Company HOLLY ENERGY CORPORATION				Connection TO AIR		O. C. D.	
Pool EMPIRE				Formation PENN		Unit ARTESIA OFFICE	
Completion Date 5-21-80		Total Depth 10,020		Plug Back TD 8958		Elevation 3553.4	
Csg. Size 4 1/2		Wt. 11.6		Set At 10,020		Perforations: From 9761 To 9783	
Thq. Size 2 3/8		Wt. 4.7		Set At 9739		Perforations: From OPEN To END	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE				Packer Set At 9707		Farm or Lease Name STATE 30	
Producing Thru TUBING		Reservoir Temp. °F 162° @ 9782		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2	
L 9782		H 9782		G _g .672		% CO ₂ 1.1675	
				% N ₂ .782		% H ₂ S	
				Prover		Meter Run 4"	
						Taps FLANGE	

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	
1.	4 X 1.00			200	27	96	2392	70			1 HR.
2.	4 X 1.00			210	43	87	2245	72			1 HR.
3.	4 X 1.00			210	46	78	2167	72			1 HR.
4.	4 X 1.00			210	54	74	2064	72			1 HR.
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.	4.753	75.87	213.2	.9671	1.220	1.019	434
2.	4.753	97.97	223.2	.9750	1.220	1.021	566
3.	4.753	101.33	223.2	.9831	1.220	1.021	590
4.	4.753	109.79	223.2	.9868	1.220	1.022	642
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.	.32	556	1.46	.964	26.571	57.03 @ 60	.672	X X X X X X X X	669	382
2.	.33	547	1.43	.960				X X X X X		
3.	.33	538	1.41	.959						
4.	.32	534	1.40	.958						
5.										

* P _c 2836.9 P _c ² 8048.0				
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1	* 2613.5	6830.4	1217.6	
2	* 2469.2	6096.9	1951.1	
3	* 2389.0	5707.3	2340.7	
4	* 2269.4	5150.2	2897.8	
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 6.610$

ACF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.116$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.571$

Absolute Open Flow	1.116 Mcfd @ 15.025	Angle of Slope °	63.5	Slope, n	500
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Remarks: 3.5 BBLs OF CONDENSATE MADE DURING TEST. BOTTOM HOLE PRESSURES MEASURED WITH KUSTER GAUGE.

* CALCULATED FROM KNOWN BOTTOM HOLE PRESSURES

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	W.S.	R.R.	I.W.W.