

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

Form C-127
Revised 9-65

Type of Test ☒ Initial ☐ Annual ☐ Special				Test Date 9-6-80	
Company HOLLY ENERGY CORPORATION				To AIR	
Field South Empire				MORROW	
Completion Date 9-6-80		Well No. 11029 11037		Elevation 10,950 3539 GL	
Well Size 5 1/2 17.00		Set At 4.892 10,950		Perforations: From 10,709 To 10,743	
Well Size 2 3/8 4.70		Set At 2.593 10,654		Perforations: From OPEN To END	
Type Well - Single - Broadhead - G.O. or G.O. Multiple SINGLE				Packer Set At 10,659	
Producing Thru TUBING		Reservoir Temp. °F 181° @ 10,659		Mean Annual Temp. °F 60°	
				Baro. Press. - P _a 13.2	
L 10,659		H 10,659		Prover 4"	
G _g .672		% CO ₂ 2.423		% H ₂ S .552	
Meter Run 4"		Taps FLANGE		County EDDY	
State NEW MEXICO					

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. in. H ₂ O	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
1	4 X 1.500			460	1	80	3147				1 HR.
2	4 X 1.500			500	33	73	3047				1 HR.
3	4 X 1.500			500	50	80	2592				1 HR.
4	4 X 1.500			500	46	60	2280				1 HR.
5	4 X 1.500			500	94	92	2140				1 HR.

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	10.84	21.75	473.2	.9813	1.216	1.047	295
2	10.84	130.14	513.2	.9877	1.216	1.052	1782
3	10.84	160.19	513.2	.9813	1.216	1.051	2178
4	10.84	153.65	513.2	1.000	1.216	1.060	2147
5	10.84	219.64	513.2	.9706	1.216	1.046	2939

NO. P _t Temp. °R T _r Z				Gas Liquid Hydrocarbon Ratio 25.947 Mcf/bbl.		
				A.P.L. Gravity of Liquid Hydrocarbons 58.3 @ 60° Deg.		
1	.71	540	1.41	.912	Specific Gravity Separator Gas .676	XXXXXXXXXX
2	.77	533	1.40	.903	Specific Gravity Flowing Fluid XXXXX	G MIX .683
3	.77	540	1.41	.905	Critical Pressure 669 P.S.I.A.	669 P.S.I.A.
4	.77	520	1.36	.890	Critical Temperature 382 R	385 R
5	.77	552	1.45	.914		

$P_c = 3160.2$ $P_c^2 = 9986.9$				$\frac{P_c^2}{P_c^2 - P_w^2} = 1.442$ $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.280$	
NO.	P _t	P _w	P _w ²	P _c ² - P _w ²	
1		3060.7	9367.7	619.2	
2		2624.7	6888.9	3098.0	
3		2325.3	5406.8	4580.1	
4		2186.1	4779.2	5207.7	
5		1750.0	3062.5	6924.4	

Angle of Slope 3.763		Mcf/d @ 15.025		Angle of Slope 56		Slope, n .675	
Remarks: 15 BBLS FLUID DURING TEST							

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