

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 7/28/81			
Company HNG Oil Company				Connection None					
Pool Undesignated				Formation Morrow				Unit	
Completion Date 6/6/81		Total Depth 13160'		Plug Back TD 13118'		Elevation 4062' GL + 20'		Farm or Lease Name Henson 6 Com	
Coq. Size 5 1/2"	Wt. 17	d 4.892	Set At 12810	Perforations: From 13020 To 13070		Well No. 1			
7" 4 1/2"	13.5	3.920	13160						
Trq. Size 2 1/16"	Wt. 3.25	d 1.751	Set At 12805	Perforations: Open Ended		Unit Sec. Twp. Rge. M 6 16s 35e			
Type Well - Single - Brodenhead - G.C. or G.O. Multiple Dual				Packer Set At 12805		County Lea			
Producing Thru Tubing		Reservoir Temp. °F 190 ^a 11900'		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		State New Mexico	
L 13045	H -	G _a 0.6324	% CO ₂ 0.576	% N ₂ 0.738	% H ₂ S -	Prover -	Meter Run 4 X 1.500	Type F	

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. DWI	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI							4792		PACKER		1 month
1.	4	X	1.500	240	6	80	4072	60			1.0 hr
2.	4	X	1.500	240	12	90	3663	60			1.0 hr
3.	4	X	1.500	240	24	80	2905	60			1.0 hr
4.	4	X	1.500	240	30	70	2245	60			1.0 hr
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, Mcf/d
1	10.84	38.98	253.2	0.9813	1.258	1.021	532.57
2	10.84	55.12	253.2	0.9723	1.258	1.020	745.45
3	10.84	77.95	253.2	0.9813	1.258	1.021	1065.01
4	10.84	87.16	153.2	0.9905	1.258	1.023	1204.36
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NO.	R	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	0.38	540	1.48	0.959	49.27	49 @ 80	0.6324	X X X X X	673	364
2	0.38	550	1.51	0.962				X X X X X		
3	0.38	540	1.48	0.959						
4	0.38	530	1.46	0.956						
5										

P _c 6579.2 P _c ² 43285.9		(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.381$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.261$	
NO.	P ₁ ²	P _w	P _w ²	P _c ² - P _w ²	
1		5768.2	33272.1	10013.8	
2		5215.2	27198.3	16037.6	
3		4295.2	18448.7	24837.2	
4		3454.2	11931.5	31354.4	
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Absolute Open Flow 1519		Mcf/d @ 15.025		Angle of Slope α 54° 16'		Slope, n 0.720	
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Remarks: * BOTTOM HOLE PRESSURE @ (-8983) 13045' USED FOR PRESSURE CALCULATIONS
PRODUCED 3.0 BD in 4.0 HRS = 18.0 BD/D

Approved By: Donnie Dickerson	Conducted By: JARREL WELL TESTING, INC	Calculated By: Donnie Dickerson	Checked By: Donnie Dickerson
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