

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test: ☒ Initial ☐ Annual ☐ Special						Test Date: 2/17/83	
Company: HNG Oil Company				Connection: Warren Petroleum Company			
Pool: Wildcat				Formation: Morrow			
Completion Date: 11/11/82		Total Depth: 13580'		Plug Back TD: 13508		Elevation: 4089' GL	
Csg. Size: 4 1/2"		Wt.: 13.5		Set At: 13580'		Perforations: From 13304' To 13416'	
Trq. Size: 2 3/8"		Wt.: 4.7		Set At: 11865'		Perforations: Open Ended	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple: Single				Packer Set At: 11865'		County: Lea	
Producing Thru: Tubing		Reservoir Temp. °F: 208		Mean Annual Temp. °F: 60		Baro. Press. - P _a : 13.2	
L: 13360		H: -		G _g : 0.6806		Prover: -	
				% CO ₂ : 0.598		% N ₂ : 0.978	
				% H ₂ S: -		Meter Run: 3.068 X	
						Taps: F	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g. DWI	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI						4770	60	PACKER		72.0 hrs
1.	3.068 **	1.000	200	2	88	4310	60			2.75 hrs
2.	3.068	1.000	200	6	90	3990	60			1.75 hrs
3.	3.068	1.000	195	11	90	3730	60			1.0 hr
4.	3.068	1.000	195	23	90	3320	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, Mcd
1	4.789	20.65	213.2	0.9741	1.212	1.020	119.09
2	4.789	35.77	213.2	0.9723	1.212	1.020	205.91
3	4.789	47.86	208.2	0.9723	1.212	1.019	275.23
4	4.789	69.20	208.2	0.9723	1.212	1.019	397.95
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	0.32	548	1.44	0.962	27.00	52.6	0.6806	X X X X X X X X	672	381
2	0.32	550	1.44	0.962						
3	0.31	550	1.44	0.963						
4	0.31	550	1.44	0.963						
5										

NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1	6062.2	36750.3	7023.8	
2	5585.2	31194.5	12579.6	
3	5148.2	26504.0	17270.1	
4	4853.2	23553.6	20220.5	
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 6.232$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 652.97$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 5.483$

Absolute Open Flow: 653	Mcd @ 15.025	Angle of Slope: 47° 4'	Slope, n: 0.930
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Remarks: * BOTTOM HOLE PRESSURE @ (-9217)13360' USED FOR PRESSURE CALCULATIONS
WELL PRODUCED 2.1 BBL/COND. IN 6.5 HRS = 7.75 BC/D

** DIAPHRAM ACTUATED CHOKE

Approved By Division:	Conducted By: JARREL WELL TESTING, INC	Calculated By: D. Dickerson	Checked By: PE #2208 Joe A. Coleman
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RECEIVED
FEB 25 1983
G.C.D.
MOBBS OFFICE