

JAN 31 1983

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 1/19/83	
Company HNG Oil Company ✓		Connection El Paso Pipeline Co.	
Pool Undesignated North Loving		Formation Morrow	
Completion Date 1/19/83		Total Depth 12680'	Plug Back TD 12174'
Elevation 3110' KB-21'		Farm or Lease Name Pardue 30. Com	
Cq. Size 4 1/2"	Wt. 13.5	d 3.920	Set At 12678'
Perforations: From 12070' To 12160'		Well No. 1	
Tq. Size 2 3/8"	Wt. 4.7	d 1.995	Set At 10,196'
Perforations: From Open To Ended		Unit E 30 23s 28e	
Type Well - Single - Dradenhead - G.G. or G.O. Multiple Single		Pecker Set At 10,196'	County Eddy
Producing Thru Tubing	Reservoir Temp. °F 200 • 12115'	Mean Annual Temp. °F 60	Baro. Press. - P _a 13.2
State New Mexico			
L 12115'	H -	G _g 0.5773	% CO ₂ 0.828
% N ₂ 0.906		% H ₂ S -	Prover -
Meter Run 3.068		Taps F	

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g. DWT	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI							4436	62	PACKER		7 Months
1.	3.068	**	1.500	525	6	71	3865	62			8.25 hrs
2.	3.068		1.500	510	11	70	3752	62			5.75 hrs
3.	3.068		1.500	510	22	72	3682	62			2.75 hrs
4.	3.068		1.500	510	42	74	3504	62			2.00 hrs
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	11.13	56.83	538.2	0.9896	1.316	1.038	855.04
2	11.13	75.86	523.2	0.9905	1.316	1.036	1140.19
3	11.13	107.29	523.2	0.9887	1.316	1.035	1608.11
4	11.13	148.24	523.2	0.9868	1.316	1.035	2217.61
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Dry Gas	Mcf/bbl.
1	0.80	531	1.55	0.929	A.P.I. Gravity of Liquid Hydrocarbons	-	Deq.
2	0.78	530	1.55	0.931	Specific Gravity Separator Gas	0.5773	X X X X X X X X
3	0.78	532	1.56	0.933	Specific Gravity Flowing Fluid	X X X X X	
4	0.78	534	1.56	0.933	Critical Pressure	675	P.S.I.A.
5					Critical Temperature	342	R

NO.	P _t ²	P _w ²	P _w ²	P _t ² - P _w ²
1	5583.2	31172.1	5497.2	30219.2
2			5443.2	29628.4
3			5349.2	28613.9
4			5179.2	26824.1
5				

(1) $\frac{P_t^2}{P_t^2 - P_w^2} = 12.185$		(2) $\left[\frac{P_t^2}{P_t^2 - P_w^2} \right]^n = 4.892$	
AOF = Q $\left[\frac{P_t^2}{P_t^2 - P_w^2} \right]^n = 7866.87$			

Absolute Open Flow		Angle of Slope	
7867	Mcf @ 15.025	57° 35'	Slope, n = 0.635

Remarks: * BOTTOM HOLE PRESSURE @ (-9005) 12115' USED FOR PRESSURE CALCULATIONS
** PRODUCTION UNIT HAS DIAPHRAM ACTUATED CHOKE

Approved By Division	Conducted By:	Calculated By:	Checked By:
	JARREL WELL TESTING, INC	Joe A. Coleman	Joe A. Coleman