

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 1/11/85	
Company HNG Oil Company		Connection LLANO	
Well Undesignated WJC <i>Att</i>		Formation Atoka	
Completion Date 9/5/84	Total Depth 12,119'	Plug Back TD 12,083'	Elevation 2917' GL
Farm or Lease Name Craft 25		Com	
Csg. Size 4 1/2	Wt. 13.5	Set At 3.920	Perforations: From 12,003 To 12,037
Trg. Size 2 3/8	Wt. 4.7	Set At 11,128	Perforations: From Open To Ended
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single		Packer Set At 11,128	County Eddy
Producing Thru TBG	Reservoir Temp. °F 187# 12020	Mean Annual Temp. °F 60	Baro. Press. - P _a 13.2
State New Mexico			
L 12020	H -	G _g 0.578	% CO ₂ 0.573
% N ₂ 0.486		% H ₂ S -	Prover -
Meter Run 3.068		Taps FLG	

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.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI							4614		PACKER		24 hrs.
1.	3.068	**	1.250	480	4	75	4220	62			1.0 hr.
2.	3.068		1.250	480	7	72	4078	63			.75 hrs.
3.	3.068		1.250	480	16	71	3590	63			1.0 hr.
4.	3.068		1.250	480	25	72	2992	62			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, Mscf/d
1	7.577	44.42	493.2	0.9859	1.315	1.033	450.75
2	7.577	58.76	493.2	0.9887	1.315	1.033	597.96
3	7.577	88.83	493.2	0.9896	1.315	1.034	905.66
4	7.577	111.04	493.2	0.9887	1.315	1.033	1129.97
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Dry Gas	Mcf. bbl.
1	0.73	535	1.56	0.937	A.P.I. Gravity of Liquid Hydrocarbons	-	Deg.
2	0.73	532	1.56	0.937	Specific Gravity Separator Gas	0.5777	X X X X X X X X X
3	0.73	531	1.55	0.935	Specific Gravity Flowing Fluid	X X X X X	
4	0.73	532	1.56	0.937	Critical Pressure	675	P.S.I.A.
5					Critical Temperature	342	°R

NO.	P _r ²	P _w	P _r ²	P _r ² - P _w ²
1		5461.2	29824.7	5604.0
2		5304.2	29134.5	7294.2
3		4641.2	21540.7	13888.0
4		3952.2	15619.9	19808.8
5				

(1) $\frac{P_c^2}{P_r^2 - P_w^2} = 1.789$

AOF = Q $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 1624.897$

(2) $\left[\frac{P_c^2}{P_r^2 - P_w^2} \right]^n = 1.438$

Absolute Open Flow	1625	Mcf/d @ 15.025	Angle of Slope @	58° 0'	Slope, n	0.625
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Remarks: *Bottom Hole Pressures @ (-9103) 12020' used for Pressure Calculations
**Diaphragm Actuated Choke

Approved By Division	Conducted By: Jarrel Services, Inc.	Calculated By: D. Dickerson	Checked By: D. Dickerson
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