STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-122
Revised 10-1-78

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test: [X] Initial [ ] Annual [ ] Special			Test Date: 8/10/83	
Company: HNG Oil Company		Connection: Transwestern Pipeline		
Pool: Pitchfork Ranch		Formation: Morrow		Unit: J
Completion Date	Total Depth: 15290'	Plug Back TD: 15075'	Elevation: 3500'GL	Farm or Lease Name: Madera 29 Federal
Csg. Size: 4½" Liner / Wt.: 13.5 / d: / Set At: 15290'		Perforations: From 14894 To 14944		Well No.: 1
Tbg. Size: 2 7/8" / Wt.: / d: / Set At: 12967'		Perforations: From Open To Ended		Unit: J / Sec.: 29 / Twp.: 24s / Rge.: 34e
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single		Packer Set At: 12967'		County: Lea
Producing Thru: Tbg.	Reservoir Temp. °F: 223 @ 14919'	Mean Annual Temp. °F: 60°	Baro. Press. – P_a: 13.2	State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
14919	14919	.5782	.677	.180			4.026	Flg.

FLOW DATA / TUBING DATA / CASING DATA

NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	Tubing Press. p.s.i.g.	Tubing Temp. °F	Casing Press. p.s.i.g.	Casing Temp. °F	Duration of Flow
SI							6293				
1.	4	X	1.625	730	5.0	84	5909	63			36.0 hrs
2.	4	X	1.625	730	11.0	86	5704	63			1.0 hr
3.	4	X	1.625	740	22.0	86	5400	63			1.0 hr
4.	4	X	1.625	750	40.0	86	4975	63			1.0 hr
5.											

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	12.79	60.96	743.2	.9777	1.315	1.052	1055
2	12.79	90.42	743.2	.9759	1.315	1.051	1560
3	12.79	128.73	753.2	.9759	1.315	1.051	2221
4	12.79	174.72	763.2	.9759	1.315	1.052	3017
5							

NO.	P_t	Temp. °R	T_t	Z
1	1.11	544	1.55	.904
2	1.11	546	1.56	.906
3	1.12	546	1.56	.905
4	1.14	546	1.56	.904
5				

Gas Liquid Hydrocarbon Ratio: Dry Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: Deg.
Specific Gravity Separator Gas: .5782 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 672 P.S.I.A. P.S.I.A.
Critical Temperature: 350 R R

P_c *6423.7 P_c^2 41264.0

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	7608.2	6032.1	36385.8	4878.2
2	7396.2	5842.3	34132.3	7131.7
3	7055.2	5537.1	30659.4	10604.6
4	6547.2	5090.3	25911.1	15352.9
5	8051.2	S.I.P.		

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.688$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2.375$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 7166$

Absolute Open Flow: 7166 Mcfd @ 15.025 Angle of Slope θ: 48.75 Slope, n: .875

Remarks: CALCULATED FROM BOTTOM HOLE BOMBS SET @ 14919'

Approved By Division	Conducted By:	Calculated By:	Checked By:
	JARREL WELL TESTING INC.	Rick Pagan	Rick Pagan