

**NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TESTS FOR GAS WELL**

Form C-122
Revised 9-1-65

Type Test: ☒ Initial ☐ Annual ☐ Special					Test Date: 3/28/85	
Company: HNG OIL CO.				Sponsor: Transwestern Pipeline Co.		
Pool: PITCHFORK RANCH				Formation: MORROW		Unit: K
Completion Date: 12-17-84		Total Depth: 15,360'		Plug back TD: 15,314'		Elevation: 3456'
Form or Lease Name: DIAMOND 31 FED. COM						
Csg. Size: 4.5	Wt.: 15.10	d: 4.082	Set At: 15360'	Perforations: From 15203 To 15242		Well No.: #1
Tub. Size: 2 7/8	Wt.: 6.5	d: 2.441	Set At: 12885	Perforations: From OPEN To ENDED		Unit: 31 Sec.: 24S Twp.: 34E
Type well - Single - Protthead - G.G. or G.O. Multiple				Pecker Set At: 12885		County: LEA
Producing Thru: TUBING		Reservoir Temp. °F: 226 @ 15220		Mean Annual Temp. °F: 60°		State: NEW MEXICO
L: 15220	H: 15220	Gg: .577	% CO ₂ : .67	% N ₂ : .22	% H ₂ S: .NIL	Prover: Meter Run: 4.026 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	
51							5340				72 HRS.
1.	4.026 X 1.000			820	8.0	90	4855				1HR.
2.	4.026 X 1.000			820	12.0	93	4310				1HR.
3.	4.026 X 1.000			840	18.0	88	3702				1HR.
4.	4.026 X 1.000			845	28.0	88	3050				1HR.
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 Compres. Factor, F _{pv}	Rate of Flow Q, Mscf
1	4.753	81.64	833.2	.9723	1.316	1.053	522
2	4.753	99.99	833.2	.9697	1.316	1.051	637
3	4.753	123.93	853.2	.9741	1.316	1.055	797
4	4.753	155.01	858.2	.9741	1.316	1.055	996
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NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Met/bbl.
	1	1.24	550	1.59	.902	A.P.I. Gravity of Liquid Hydrocarbons
	2	1.24	553	1.60	.906	Specific Gravity Separator Gas: .577
	3	1.27	548	1.59	.899	Specific Gravity Flowing Fluid: X X X X X
	4	1.28	548	1.59	.899	Critical Pressure: 672 P.S.I.A. Critical Temperature: 346 R
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P _c 5432.3 P _w 29510.0				(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.596$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.343$	
NO.	P _c	P _w	P _c ² - P _w ²		
1		4964.7	24648.1	4861.9	
2		4476.4	20038.2	9471.8	
3		3913.3	15314.2	14195.8	
4		3318.9	11015.3	18494.7	
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Absolute Open Flow: 1,338		Mscf @ 15,025		Angle of Slope: 57.75		Slope, n: .631	
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Remarks: ALL PRESSURES OBTAINED FROM BOTTOM HOLE BOMB SET AT 15220. MADE NO FLUID DURING TEST	
Approved By: _____	Conducted By: _____
DUKE SERVICES INC.	BOB Mc MURRAIN