

**OIL CONSERVATION DIVISION**

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT

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**

**RECEIVED**

Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special				Test Date 11/25/81		<b>DEC 22 1981</b>					
Company HNG Oil Company				Connection None							
Pool Undesignated				Formation Atoka		Unit O. C. D. ARTESIA, OFFICE					
Completion Date 11/21/81		Total Depth 12,700'		Plug Back TD 11,870'		Elevation 3111'GL		Farm or Lease Name Smith 11 Com			
Casing Size 4 1/2" Liner		ID 3.920		Set At 12,697'		Perforations: From 11802' To 11861'		Well No. 1			
Tubing Size 2 3/8"		ID 1.995		Set At 10247'		Perforations: Open Ended		Unit Sec. Twp. Rge. C 11 24s 27e			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 10247'		County Eddy					
Producing Thru Tbg		Reservoir Temp. *F 174 @ 10200		Mean Annual Temp. *F 60		Baro. Press. - P <sub>a</sub> 13.2		State New Mexico			
L 11832		H -		G <sub>g</sub> 0.5945		% CO <sub>2</sub> 1.783		% N <sub>2</sub> 1.721			
						% H <sub>2</sub> S -		Prover 4"			
								Meter Run F			
FLOW DATA					TUBING DATA			CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h <sub>w</sub>	Temp. *F	Press. p.s.i.g. DWT	Temp. *F	Press. p.s.i.g.		Temp. *F
51							4905	60	PACKER		88.5 hrs
1.	4.00	3/64	1.250	540	5	86	4610				1.0 hr
2.	4.00	4/64	1.250	540	10	89	4400				1.0 hr
3.	4.00	7/64	1.250	520	20	91	3890				1.0 hr
4.	4.00	9/64	1.250	540	38	91	3395				1.0 hr
5.											
RATE OF FLOW CALCULATIONS											
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P <sub>m</sub>	Flow Temp. Factor Ft.	Gravity Factor F <sub>g</sub>	Super Compress. Factor, F <sub>sp</sub>	Rate of Flow Q, Mcfd				
1	7.469	52.59	553.2	0.9759	1.297	1.035	514.58				
2	7.469	74.38	553.2	0.9732	1.297	1.034	725.07				
3	7.469	103.27	533.2	0.9715	1.297	1.032	1003.00				
4	7.469	144.99	553.2	0.9715	1.297	1.033	1409.56				
5											
NO.	F <sub>1</sub>	Temp. *R	T <sub>r</sub>	Z	Gas Liquid Hydrocarbon Ratio <u>Dry Gas</u> Mcf/bbl.						
1	0.82	546	1.58	0.933	A.P.I. Gravity of Liquid Hydrocarbons <u>-</u> Deg.						
2	0.82	549	1.59	0.935	Specific Gravity Separator Gas <u>0.5945</u> X X X X X X X X X X						
3	0.79	551	1.60	0.939	Specific Gravity Flowing Fluid <u>X X X X X</u>						
4	0.82	551	1.60	0.937	Critical Pressure <u>677</u> P.S.I.A. <u>-</u> P.S.I.A.						
5					Critical Temperature <u>345</u> R <u>-</u> R						
P <sub>c</sub> 6193.2    P <sub>c</sub> <sup>2</sup> 38355.7											
NO.	P <sub>w</sub> *	P <sub>w</sub> <sup>2</sup>	P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 6.039$ (2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 5.62$							
1	5893.2	34729.8	3625.9	AOF = Q $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4075$							
2	5657.2	32003.9	6351.8								
3	5432.2	29508.8	8846.9								
4	5037.2	25373.4	12982.3								
5											
Absolute Open Flow <u>4075</u> Mcfd @ 15.025		Angle of Slope @ <u>46° 10'</u>			Slope, n <u>0.960</u>						
Remarks: * BOTTOM HOLE PRESSURE @ (-8721)11832' USED FOR PRESSURE CALCULATIONS											
Approved by Division			Conducted By: JARREL WELL TESTING, INC			Calculated By: Joe A. Coleman			Checked By: PE #2208 Joe A. Coleman		