

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENTP.O. BOX 2088
SANTA FE, NEW MEXICO 87501Form C-122
Revised 10-1-78
RECEIVED

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

JUL 8 1981

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 6/10/81		JUL 8 1981	
Company HNG Oil Company ✓				Connection None		O. C. D. ARTESIA, OFFICE	
Pool Loving North <i>Morrow</i>				Formation Morrow		Unit	
Completion Date 6/7/81		Total Depth 12900'		Plug Back TD 12799		Elevation 3114.3' GR	
Csg. Size 4 1/2"		Wt. 13.5		Set At 12900'		Perforations: From 12213' To 12649'	
Tub. Size 2 3/8"		Wt. 4.7		Set At 10308'		Perforations: Open Ended	
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single				Packer Set At 10308		Form or Lease Name Loving 1 State	
Producing Thru Tubing		Reservoir Temp. °F -		Mean Annual Temp. °F 60		Well No. 1	
L 12431		H -		Gg 0.5803		Unit Sec. Twp. Hgt. B 1 24s 27e	
%		% CO ₂ 1.357		% N ₂ 0.975		County Eddy	
%		%		%		State New Mexico	
%		%		%		Meter Run 6.065	
%		%		%		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							4205		PACKER		72.0 hrs
1.	6.065	4/64	1.25	520	6	95	4058	60			1.0 hr
2.	6.065	5/64	1.25	510	12	98	3937	60			1.0 hr
3.	6.065	7/64	1.25	510	24	97	3761	60			1.0 hr
4.	6.065	8.5/64	1.25	490	45	92	3473	60			1.0 hr
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _L	Gravity Factor F _g	Super Compress. Factor, F _{sp}	Rate of Flow Q, Mcf/d
1	7.405	56.56	533.2	0.9680	1.313	1.031	548.82
2	7.405	79.24	523.2	0.9653	1.313	1.030	766.01
3	7.405	112.06	523.2	0.9662	1.313	1.030	1084.29
4	7.405	150.48	503.2	0.9706	1.313	1.030	1462.67
5							

NO.	P _r	Temp. °R	T _r	Z	Gas-Liquid Hydrocarbon Ratio	Dry Gas	Mcf/bbl.
1	0.79	555	1.61	0.940	A.P.I. Gravity of Liquid Hydrocarbons	-	Deq.
2	0.77	558	1.62	0.943	Specific Gravity Separator Gas	0.5803	X X X X X X X X
3	0.77	557	1.62	0.943	Specific Gravity Flowing Fluid	X X X X X	
4	0.74	552	1.60	0.943	Critical Pressure	679	P.S.I.A.
5					Critical Temperature	344	R

NO.	P _r	P _w *	P _w ²	P _r ² - P _w ²	(1) $\frac{P_r^2}{P_r^2 - P_w^2} =$	(2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n =$
1		5194.2	26979.7	2009.9	3.623	2.660
2		5054.2	25544.9	3444.7		
3		4858.2	23602.1	5387.5		
4		4581.2	20987.4	8002.2		
5						

Absolute Open Flow 3891		Mcf @ 15.025		Angle of Slope @ 52° 46'		Slope, n 0.760	
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Remarks: * BOTTOM HOLE PRESSURE @ (-9317) 12431' USED FOR PRESSURE CALCULATIONS	
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Approved By Division	Conducted By: JARREL SERVICES, INC.	Calculated By: Joe A. Coleman	Checked By: Joe A. Coleman PE #2208
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