

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

RECEIVED BY

AUG 03 1984

Form C-122
Revised 10-1-78

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 7/27/84	
Company HNG Oil Company		Connection Llano	
Pool Happy Valley <i>Morrow</i>		Formation Morrow	
Completion Date 11/5/83		Total Depth 11660'	Plug Back TD 11582'
Elevation 3588' GL		Farm or Lease Name McKittrick 30 Federal	
Csg. Size 5 1/2"	Wt. 17.5	d 4.892	Set At 10190
4 1/2"	13.5	3.920	11655'
Perforations: From 11334' To 11554'		Well No. 1	
Tub. Size 2 3/8"	Wt. 4.7	d 1.995	Set At 10190'
Perforations: Open Ended		Unit C Sec. 30 Twp. 22s Rge. 26e	
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single		Packer Set At 10170'	County Eddy
Producing Thru Tubing	Reservoir Temp. °F -	Mean Annual Temp. °F 60	Baso. Press. - P _g 13.2
State New Mexico		Prover Meter Run 2.900 Taps F	
L	H	G _g 0.5875	% CO ₂ 0.914 % N ₂ 1.471 % H ₂ S

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							3253	62	PACKER		24.0 hr
1.	2.90		1.000	560	2	93	2915	62			1.0 hr
2.	2.90		1.000	560	6	93	2563	62			1.0 hr
3.	2.90		1.000	560	12	93	2065	62			1.0 hr
4.	2.90		1.000	560	22	93	1405	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, F _{sp}	Rate of Flow Q, Mscf/d
1	4.801	33.86	573.2	0.9697	1.305	1.033	212.50
2	4.801	58.64	573.2	0.9697	1.305	1.033	368.02
3	4.801	82.94	573.2	0.9697	1.305	1.033	520.53
4	4.801	112.30	573.2	0.9697	1.305	1.033	704.79
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Dry Gas	Mcf/ubl.
1	0.85	553	1.61	0.937	A.P.I. Gravity of Liquid Hydrocarbons		
2	0.85	553	1.61	0.937	Specific Gravity Separator Gas	0.5875	XXXXXX
3	0.85	553	1.61	0.937	Specific Gravity Flowing Fluid	XXXXX	
4	0.85	553	1.61	0.937	Critical Pressure	673	P.S.I.A.
5					Critical Temperature	343	R

P _r 4343.2	P _w 18863.4					
NO.	P _i	P _w *	P _w ²	P _r ² - P _w ²	(1) $\frac{P_r^2}{P_r^2 - P_w^2} = 1.326$	(2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 1.269$
1	3921	3934.2	15477.9	3385.5		
2	3523	3536.2	12504.7	6358.7		
3	2921	2934.2	8609.5	10253.9		
4	2140	2153.2	4636.3	14227.1		
5						

AOF = Q $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 894.38$

Absolute Open Flow	894	Mcf/d @ 15.025	Angle of Slope @ 49° 48'	Slope, n 0.845
--------------------	-----	----------------	--------------------------	----------------

Remarks: ** BHP @ (-7856) 11444' USED FOR PRESSURE CALCULATIONS

Approved By Division _____ Conducted By: _____ Calculated By: _____ Checked By: _____