

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT & ONE POINT PRESSURE TEST FOR GAS WELL

Form O-121
Revised 6-1-62

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 12-12-78	
Company HNG Oil Company				Connection National Gas Pipeline Co. of America			
Loc Shoe Bar South				Formation Morrow Alaska		Unit	
Completion Date 11-17-78		Total Depth 13086		Plug Back TD 12644		Elevation 3968.4 GL	
Csg. Size 5 1/2" Wt. 17# d 4.892 Set At 13060		Perforations: From 12458 To 12474				Farm or Lease Name Shoe Bar Ranch Unit 3	
Tag. Size 2 7/8" Wt. 6 1/2# d 2.441 Set At 11000		Perforations: From To				Well No. 1	
Type Well - Single - Brazenhead - G.G. or G.O. Multiple Single				Packer Set At 11017		County Lea	
Producing Thru Tubing		Reservoir Temp. °F 187 @ 12525		Mean Annual Temp. °F 70		Baro. Press. - P _a 13.2	
L 12466		H 12466		G _g 0.650		% CO ₂ % N ₂ % H ₂ S - - -	
				Prover		Meter Run X	
						Tape	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI	93 hrs.						4764		Pkr.	-	
1.	4" X 1.500			734	0.605	56	4611	60	Pkr.	-	1 hr.
2.	4" X 1.500			734	2.205	63	4536	60	Pkr.	-	1 hr.
3.	4" X 1.500			736	7.605	69	4360	60	Pkr.	-	1 hr.
4.	4" X 1.500			736	32.000	66	3827	60	Pkr.	-	1 hr.
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{\frac{h_w P_m}{L-10}}$ 2.449	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	10.84	8.679	747.2	1.0040	1.240	1.083	310.65
2	10.84	16.569	747.2	0.9971	1.240	1.081	587.90
3	10.84	30.810	749.2	0.9915	1.240	1.076	1082.02
4	10.84	62.410	749.2	0.9943	1.240	1.078	2202.06
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1	1.12	516	1.38	0.852	47.94	53	0.650	X X X X X X X X	670	375
2	1.12	523	1.39	0.856						
3	1.12	529	1.41	0.863						
4	1.12	526	1.40	0.860						
5										

NO.	P _r ²	P _w	P _w ²	P _r ² - P _w ²
1		6102.2	37237	2166
2		6019.2	36231	3172
3		5822.2	33898	5505
4		5229.2	27345	12058
5				

(1) $\frac{P_r^2}{P_r^2 - P_w^2} = 3.267789$

ACF = $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 6422.85$

(2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 2.916747$

Absolute Open Flow 6422.85 Mcfd @ 15.025		Angle of Slope @ 47° 53'	Slope, n 0.904025
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Remarks: To test the upper Morrow formation perfs from 12,458 - 12,474

Approved By Commission:	Conducted By: Tefteller, Inc.	Calculated By: Farrest Tefteller	Checked By:
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