

MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 1/9/81		JAN 22 1981	
Company HNG Oil Company ✓				Connection None		O. C. D.	
Pool West Malaga				Formation Morrow		Unit ARTESIA, OFFICE	
Completion Date 12/26/80		Total Depth 13,000'		Plug Back TD 12,915'		Elevation 3037' GL	
Farm or Lease Name Vasquez 4 Com.				Well No. 1			
Csg. Size 7" 4 1/2"	Wt. 26 & 23 lb 6.276 13.5#	Set At 3.920	10,996'	Perforations: From 11644 To 11653			
Tng. Size 2-3/8"	Wt. 4.7	Set At 1.995	10761'	Perforations: Open ended From To		Unit Sec. Twp. Rge. H 4 24S 28E	
Type Well - Single - Brazenhead - G.G. or G.O. Multiple Single				Packer Set At 10761'		County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 60		Mean Annual Temp. °F 13.2		State New Mexico	
L .11649'	H -	Gg 0.5768	% CO ₂ 0.493	% N ₂ 1.168	% H ₂ S -	Prover 6"	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 _w	Temp. °F	Press. p.s.i.g. DWT	Temp. °F	Press. p.s.i.g.	
SI							5735		Packer	
1.	2.5/64	1.750	400	6	91	5562	60			1.0 hr.
2.	5.5/64	1.750	400	15	82	4917	60			1.0 hr.
3.	7/64	1.750	400	29	78	4303	60			1.0 hr.
4.	9/64	1.750	400	38	93	3481	60			4.0 hrs.
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 Compress. Factor, F _{pv}	Rate of Flow Q, Mc/d
1	14.61	49.79	413.2	0.9715	1.316	1.023	951.41
2	14.61	78.73	413.2	0.9795	1.316	1.025	1519.76
3	14.61	109.47	413.2	0.9831	1.316	1.026	2122.98
4	14.61	125.31	413.2	0.9697	1.316	1.023	2390.04
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Dry Gas	Mcf/bbl.
1.	0.61	551	1.63	0.955	A.P.I. Gravity of Liquid Hydrocarbons	-	Deg.
2.	0.61	542	1.60	0.951	Specific Gravity Separator Gas	0.5678	X X X X X X X X
3.	0.61	538	1.59	0.950	Specific Gravity Flowing Fluid	X X X X X	
4.	0.61	553	1.63	0.955	Critical Pressure	673	P.S.I.A. - P.S.I.A.
5.					Critical Temperature	339	R - R

NO.	P _r ²	P _w	P _w ²	P _r ² - P _w ²
1		6694.2	44812.3	5458.6
2		6218.2	38666.0	11604.9
3		5530.2	30583.1	19687.8
4		4592.2	21088.3	29182.6
5				

$$(1) \frac{P_r^2}{P_r^2 - P_w^2} = 2.553$$

$$AOF = Q \left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 3807$$

$$(2) \left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 1.793$$

Absolute Open Flow 3807 Mc/d @ 15.025		Angle of Slope 58°5'	Slope, n 0.623
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Remarks: *BOTTOM HOLE PRESSURE (-8612) 11649' USED FOR PRESSURE CALCULATIONS

Approved By Commission:	Conducted By: JARREL SERVICES, INC.	Calculated By: Joe A. Coleman	Checked By: PE #2208 Joe A. Coleman
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