

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS

WELL RECEIVED BY

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 4-6-84		JUN 07 1984 O. C. D. ARTESIA, OFFICE			
Company Harper Oil Company				Connection N.G.P.L.							
Pool Unallocated <i>w/c Perm</i>				Formation Penn							
Completion Date 10-10-82		Total Depth 7270'		Plug Back TD 6980'		Elevation <i>3992.8</i> 3993+		Unit NM-55806			
Csg. Size 5.50		Wt. 15.50		d 4.95		Set At 7269'		Perforations: From 6762' To 6834'		Well No. 1	
Thq. Size 2.875		Wt. 6.50		d 2.441		Set At 6660'		Perforations: From To		Unit Sec. Twp. Rge. K 11 5S 27E	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single						Packer Set At 6660'		County Chaves			
Producing Thru Tubing		Reservoir Temp. °F 124 @ 6798'		Mean Annual Temp. °F 60		Baro. Press. - P _a 14.40		State New Mexico			
L 6798		H 6798		Cg .642		% CO ₂ 1.21		% N ₂ 4.71		% H ₂ S 0	
								Prover 0		Meter Run 4.0	
										Taps Flange	

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							1251	50			24
1.	4.00 x .875			594	7.8	68	738	68	0	0	24
2.											
3.											
4.											
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, Mcfd
1	3.72	69.06	608.4	.9924	1.2481	1.0509	335
2.							
3.							
4.							
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	.91	528	1.48	.905	16.724	60	.642	.792	668	357
2.										
3.										
4.										
5.										

NO.	P _i ²	P _w ²	P _r ²	P _c ² - P _w ²
1		750	563	1060
2.				
3.				
4.				
5.				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.5310$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.4362$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 481$

Gas Liquid Hydrocarbon Ratio 16.724 Mcf/bbl.

A.P.I. Gravity of Liquid Hydrocarbons 60 Deg.

Specific Gravity Separator Gas .642 XXXXXXXXXX

Specific Gravity Flowing Fluid .792 XXXXXX

Critical Pressure 668 P.S.I.A. 660 P.S.I.A.

Critical Temperature 357 R 404 R

Absolute Open Flow <u>481</u> Mcfd @ 15.025		Angle of Slope @ <u>49.6</u>		Slope, n <u>.850</u>	
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Remarks: Well produced 11.6 BO on a 12/64" choke.

Approved By Division	Conducted By: Harper Oil	Calculated By: Garrett	Checked By: Mike Maly <i>AM</i>
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