

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

JAN 21 1974

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 1-13-74		O. C. C. ARTESIA, OFFICE	
Company Union Oil Co. of California				Connection None		Unit	
Pool Undesignated Morrow Gas				Formation Morrow		Form or Lease Name Wersell	
Completion Date 1-13-74		Total Depth 11815'		Plug Back TD 11786'		Elevation 3131 GR	
Csg. Size 5 1/2"	Wt. 17#	d 4.686	Set At 11815'	Perforations: From 11494 To 11696		Well No. 1	
Thq. Size 2-3/8"	Wt. 4.7#	d 1.901	Set At 11410'	Perforations: From To		Unit Sec. Twp. Rje. C 3 22S 27E	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 11410'		County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 174 @ 11812		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
L 11595		H 11595		G _g .594	% CO ₂ 1.0	% N ₂ 0.79	% H ₂ S 0
				Prover	Meter Run	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	3.826		1.250				4250	70	Pkr	70	84 hrs
1.	3.826		1.250	855	27	104	885	70	Pkr	70	3 hrs
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	7.483	153.106	868.2	0.9602	1.298	1.166	1665
2.							
3.							
4.							
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio dry Mcf/bbl.
1.					A.P.I. Gravity of Liquid Hydrocarbons .594 Deg.
2.					Specific Gravity Separator Gas .594 XXXXXXXX
3.					Specific Gravity Flowing Fluid .594 XXXXXX
4.					Critical Pressure 675 P.S.I.A. P.S.I.A.
5.					Critical Temperature 352 °R °R

$P_c = 5391 * P_c^2 = 29062.9$				
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1		1222*	1493.3	27569.6
2				
3				
4				
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.054$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.054$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1755$

Absolute Open Flow 1755 Mcfd @ 15.025		Angle of Slope θ 450	Slope, n 1.0
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Remarks: ***Flowing & shut-in BHP were calculated using Cullender-Smith method adapted to computer. Print-out attached.**

Approved By Commission:	Conducted By: L. Harmon & F. Pye	Calculated By: Mark H. Griffin	Checked By: John Roe
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