

S.S. well file
NM 0472258
C-132 file

N. M. O. C. C. COPY
NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

-122
Revised 9-1-65

MAR 17 1972

RECEIVED

Type Test ☐ Initial ☐ Annual ☒ Special		Test Date 3/10/72	
Company Black River Corporation		Connection ARTESIA, OFFICE	
Pool Washington Morrow		Formation Morrow	
Completion Date 9/8/1971		Total Depth 7975	
Plug Back TD 7050		Elevation 3721 KB	
Farm or Lease Name Cities-Federal		Well No. 2	
Csq. Size 5-1/2	Wt. 14-15.5	Set At 7120	Perforations: From 6858 To 6890
Req. Size 2-7/8	Wt. 6.5	Set At 6805	Perforations: From To
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single		Packer Set At 6805	
Producing Thru Tubing		Baro. Press. - P _a 13.2	
Reservoir Temp. °F 148 @ 6874		Mean Annual Temp. °F 60	
Casing Size 6874		Casing Size 6874	
Gg 0.570		% CO ₂ 0.60	
% N ₂ 0.26		% H ₂ S -	
Prover 4		Meter Run 4	
Tape Flange		County Eddy	
State New Mexico		State New Mexico	

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. in. H ₂ O	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI	72 hr. SI						2540				
1.	4 x	2.250		656.1	6.25	70	2450	76	Packer		1
2.	4 x	2.250		685.6	10.24	72	2405	76	Packer		1
3.	4 x	2.250		688.9	17.81	72	2329	80	Packer		1
4.	4 x	2.250		693.9	28.52	74	2225	80	Packer		12
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, Fpv	Rate of Flow Q, Mcfd
1	25.64	64.7	669.3	0.9905	1.325	1.051	2,288
2	25.64	84.6	698.8	0.9887	1.325	1.051	2,987
3	25.64	111.8	702.1	0.9887	1.325	1.051	3,947
4	25.64	142.0	707.1	0.9868	1.325	1.052	5,008
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Dry	Mcf/bbl.
1	0.992	530	1.52	0.906	A.P.I. Gravity of Liquid Hydrocarbons	-	Deg.
2	1.035	532	1.53	0.905	Specific Gravity Separator Gas	0.570	XXXXXXX
3	1.040	532	1.53	0.905	Specific Gravity Flowing Fluid	XXXXXX	
4	1.048	534	1.53	0.904	Critical Pressure	675	P.S.I.A.
5					Critical Temperature	348	R

NO.	P _r	P _w	P _w ²	P _r ² - P _w ²
1	2553.2	6518.8		
1	6067.4	2467.8	6090.0	428.8
2	5847.7	2430.3	5906.5	612.3
3	5485.9	2366.2	5598.8	920.0
4	5009.5	2276.9	5184.2	1334.6
5				

(1) $\frac{P_r^2}{P_r^2 - P_w^2} = 4.8845$		(2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 3.015$	
$AOF = Q \left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 15,099$			

Absolute Open Flow 15,099 Mcfd @ 15.025		Angle of Slope 55°	
Slope, n 0.695			

Remarks: Well commenced producing into El Paso Natural Gas Line on February 1, 1972 - Produced 171.5 M ² CF prior to test.			
Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	J. T. Berry	J. T. Berry	