

N MEXICO OIL CONSERVATION COMM: ON
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-222
Revised 5-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 3-31-78		APR 14 1978	
Company Southland Royalty Company					Connection Undesignated			
Pool <u>Undesignated</u> (Morrow)					Formation Morrow		Unit O.C.C. ARTEZIA, OFFICE	
Completion Date 2-10-78		Total Depth 11,100'		Plug Back TD 10,950'		Elevation 3508'		Farm or Lease Name State "19" Comm.
Csg. Size 4.5000	Wt. 11.60#	d	Set At 11,100'	Perforations: From 10,863' To 10,892'		Well No. 1		
Tbg. Size 2.3750	Wt. 4.70#	d	Set At 10,655'	Perforations: From - To -		Unit Sac. Twp. Rye. F 19, 19-S, 28-E		
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single					Packer Set At 10,655'		County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 168 @ 10,878'		Mean Annual Temp. °F 60		Baro. Press. - P _g 13.20 psia		State New Mexico
L 10,878	H 10,878	G _g 0.626	% CO ₂ 0	% N ₂ 0	% H ₂ S 0	Prover 0	Meter Run 2.1	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							3250	60			172.0
1.	2.07 x 0.750			464	27.8	81	2910	69	0	0	1.0
2.	2.07 x 0.750			510	76.4	79	2315	71	0	0	1.0
3.	2.07 x 1.250			450	14.6	67	1870	70	0	0	1.0
4.	2.07 x 1.250			480	20.6	63	1680	68	0	0	1.0
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	2.71	115.18	477.2	0.9808	1.2639	1.0403	402
2	2.71	199.93	523.2	0.9826	1.2639	1.0448	703
3	8.12	82.24	463.2	0.9937	1.2639	1.0432	875
4	8.12	100.80	493.2	0.9971	1.2639	1.0470	1080
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.	0.71	541	1.47	0.924	0	0	0.626	X X X X X X X X	671	367
2.	0.78	539	1.47	0.916				X X X X X		
3.	0.69	527	1.44	0.919						
4.	0.73	523	1.43	0.912						
5.										

NO.	P _c	P _w	P _c ²	P _w ²	P _c ² - P _w ²
1	3263.2	2913	10,648	8487	2162
2		2319		5376	5272
3		1880		3536	7112
4		1696		2877	7771
5					

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.3703$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1379$$

$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.2766$$

Absolute Open Flow 1379 Mcfd @ 15.025	Angle of Slope θ	Slope, n .792
Remarks:		
Approved By Commission:	Conducted By: F. Justiss	Calculated By: Don Craig
		Checked By: Don Craig