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Form C-122
Revised 9-1-65

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

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 1-14-79		FEB 5 1979	
Company Southland Royalty Company				Connection Undesignated				
Pool Willcox <i>San Juan</i>				Formation Morrow				Unit O.C.G. ARTESIA, OFFICE
Completion Date 1-11-79		Total Depth 11,524'		Plug Back TD <i>11,490</i> 11,470'		Elevation 3353		Farm or Lease Name State "16" Comm.
Csq. Size 4.500	Wt. 11.6	d 4.000	Set At 11,524'	Perforations: From 11,115 To 11,255'		Well No. 1		
Tbg. Size 2.375	Wt. 4.7	d 1.995	Set At 10,550'	Perforations: From 0 To 0		Unit Sec. Twp. Rje. F 16 19 29		
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single					Packer Set At 10,550'		County Eddy	
Producing Thru Tbg.		Reservoir Temp. °F 160 @ 11,185		Mean Annual Temp. °F 60.0		Baro. Press. - P _a 13.2		State New Mexico
L 11185	H 11185	G _g 0.648	% CO ₂ 0.43	% N ₂ 0.47	% 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							2760	60			72.0
1.	2.07 x 1.250			320	8.2	94	2420	68	0	0	1.0
2.	2.07 x 1.250			320	21.6	92	2120	70	0	0	1.0
3.	2.07 x 1.250			320	40.2	86	1760	70	0	0	1.0
4.	2.07 x 1.250			320	60.8	83	1560	71	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 F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	8.12	52.27	333.2	0.9688	1.2426	1.0270	525
2	8.12	84.84	333.2	0.9706	1.2426	1.0275	854
3	8.12	115.74	333.2	0.9759	1.2426	1.0289	1173
4	8.12	142.33	333.2	0.9786	1.2426	1.0296	1447
5							

NO.	P _t	Temp. °R	T _t	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	0.50	554	1.49	0.948	0	
2.	0.50	552	1.49	0.947	A.P.I. Gravity of Liquid Hydrocarbons 57.7	Deg.
3.	0.50	546	1.47	0.945	Specific Gravity Separator Gas 0.648	X X X X X X X X
4.	0.50	543	1.46	0.943	Specific Gravity Flowing Fluid X X X X X	0.648
5.					Critical Pressure 671 P.S.I.A.	671 P.S.I.A.
					Critical Temperature 371 R	371 R

P _c 2773.2 P _c ² 7691				
NO.	P _t ²	P _w ²	P _w ²	P _c ² - P _w ²
1	5920	2425	5882	1809
2	4551	2127	4524	3167
3	3144	1772	3141	4550
4	2475	1580	2498	5193
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.4809$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.4587$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2111$

Absolute Open Flow 2111 Mcfd @ 15.025		Angle of Slope 46.1	Slope, n 0.962
Remarks:			
Approved By Commission:	Conducted By: B-J Testers	Calculated By: Don Craig	Checked By: Don Craig