

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

Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 12/1/71		FEB 2 1972	
Company Corinne Grace				Connection None			
Pool South Carlsbad				Formation Morrow		Unit O.C.C. ARTESIA, OFFICE	
Completion Date 9/1/71		Total Depth 11,965		Plug Back TD 11,854		Elevation 3244 GR	
Farm or Lease Name Gradonoco <i>Com</i>				Well No. 1			
Csg. Size 4 1/2	Wt. 13.5#	d 3.920	Set At 11,964	Perforations: From 11,656 To 11,686			
Thg. Size 2 3/8	Wt. 4.70	d 1.995	Set At 11,318	Perforations: From To		Unit Sec. Twp. Rge. H 2 23S 26E	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 11,211		County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 187 @ 11,300		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2	
State New Mexico							
L 11,318	H 11,318	Gg .585	% CO ₂ 1.08%	% N ₂ 0.3%	% H ₂ S -	Prover X	Meter Run Flg

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
1.	3	X	2.00	618	8.3	72	3308	70			72
2.	3	X	2.00	647	22.2	93	3052	70			1
3.	3	X	2.00	680	44.2	85	2735	70			1
4.	3	X	2.00	800	57.0	94	1909	70			1
5.							1179	70			1

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, F _{pv}	Rate of Flow Q, Mcfd
1.	21.90	72.38	631.2	.9887	1.307	1.048	2147
2.	21.90	121.06	660.2	.9697	1.307	1.043	3505
3.	21.90	175.04	693.2	.9768	1.307	1.048	5129
4.	21.90	215.30	813.2	.9688	1.307	1.052	6281
5.							

NO.	P _f	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio TSTM	Mcf/bbl.
1.	0.93	532	1.51	.910	A.P.I. Gravity of Liquid Hydrocarbons	Deg.
2.	0.97	553	1.57	.919	Specific Gravity Separator Gas .585	XXXXXXX
3.	1.02	545	1.55	.911	Specific Gravity Flowing Fluid 677.2*	XXXXXX
4.	1.20	554	1.58	.904	Critical Pressure 351.2* P.S.I.A.	P.S.I.A.
5.					Critical Temperature R	R

P ₃ 3321.2 P _c ² 11030				
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1.		3090.5	9551	1479
2.		2821.1	7959	3071
3.		2126.5	4522	6508
4.		1642.1	2696	8334
5.				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.323$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 7543$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.201$

Absolute Open Flow	7543	Mcf/d @ 15.025	Angle of Slope θ	Slope, n	0.655
Remarks: * From gas analysis					
Approved By Commission:		Conducted By: <i>H. L. Smith</i>	Calculated By: <i>Wanda Walker</i>	Checked By: <i>H. L. Smith</i>	