

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 7-30-73		AUG 6 1973	
Company The Superior Oil Company				Connection Llano			
Pool South Carlsbad				Formation Morrow		Unit O. C. C. ARTESIA, OFFICE	
Completion Date 5-22-73		Total Depth 11,914'		Plug Back TD 11,855'		Elevation KB: 3230'	
Csg. Size 5-1/2"		Wt. 20# & 17#		Set At 4.892		Perforations: From 11,666' To 11,676'	
Tbg. Size 2-7/8"		Wt. 6.5#		Set At 2.441		Perforations: From None To	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 11,348'		Farm or Lease Name Stephens "A"	
Producing Thru Tubing		Reservoir Temp. °F 177 @ 11,911		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
L 11,388		H 11,671		G _g 0.59		Prover 3"	
				% CO ₂ ---		% H ₂ S ---	
				% N ₂ ---		Meter Run 3"	
						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							3600		Pkr	---	70 min
1.	3.068 x 2.000			725	10.2	78	3579	80	---	---	30 min
2.	3.068 x 2.000			730	20.2	72	3550	80	---	---	35 min
3.	3.068 x 2.000			750	30.4	82	3519	80	---	---	70 min
4.	3.068 x 2.000			765	40.1	75	3489	80	---	---	75 min
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	21.32	86.773	738.2	.9831	1.302	1.055	2,498
2	21.32	122.526	743.2	.9887	1.302	1.059	3,561
3	21.32	152.320	763.2	.9795	1.302	1.056	4,373
4	21.32	176.652	778.2	.9859	1.302	1.060	5,125
5.							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	1120 Mcf/bbl.
1.	1.10	538	1.52	.898	A.P.I. Gravity of Liquid Hydrocarbons	52 Deg.
2.	1.11	532	1.50	.892	Specific Gravity Separator Gas	0.59
3.	1.14	542	1.53	.897	Specific Gravity Flowing Fluid	0.593
4.	1.16	535	1.51	.890	Critical Pressure	672 P.S.I.A.
5.					Critical Temperature	354 R

P _c 3613.2 P _c ² 13055.2					
NO	P _t ²	P _w	P _w ²	P _c ² - P _w ²	$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 74.858$ $(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 5.450$ $AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 19,407$
1	12903.9	3603.2	12983.1	72.1	
2	12696.4	3586.2	12880.8	174.4	
3	12476.4	3565.2	12710.7	344.5	
4	12265.4	3549.2	12596.8	458.4	
5					

Absolute Open Flow	19,407	Mcfd @ 15.025	Angle of Slope θ	75.7°	Slope, n	0.393
Remarks:						

Approved By Commission:	Conducted By: James C. Willner	Calculated By: James C. Willner	Checked By:
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