

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 7/20/81		JUL 27 1981		
Company The Superior Oil Company					Connection None		O. C. D.		
Pool <i>S. Sand Deenas Lower Perm</i> Undesignated					Formation Atoka		Unit ARTESIA, OFFICE		
Completion Date 3-24-81		Total Depth 15,620'		Plug Back TD 14,460'		Elevation 3526' GL		Farm or Lease Name Soto Federal	
Csg. Size 5"	Wt. 18	d 4.276	Set At 15,618'	Perforations From 14,174 To 14,363		Well No. 1			
Tbg. Size 2 7/8"	Wt. 6.5	d 2.441	Set At 13700'	Perforations Open Ended		Unit F		Sec. 12	Twp. 24s
Type Well - Single - Brodenhead - G.C. or G.O. Multiple Single					Packer Set At 13700'		County Eddy		
Producing Thru Tubing		Reservoir Temp. °F 204 @ 13700'		Mean Annual Temp. °F 60°		Baro. Press. - P _g 13.2		State New Mexico	
L .14270	H -	Gg 0.5928	% CO ₂ 1.712	% N ₂ 2.436	% H ₂ S -	Prover -	Meter Run 2.900	Tops 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
SI							6143	60	PACKER		56 Days
1.	2.900 X 1.500			465	4"	106	5531	60			1.0 Hr.
2.	2.900 X 1.500			460	10"	90	4736	60			1.0 Hr.
3.	2.900 X 1.500			480	16"	98	3985	60			1.0 Hr.
4.	2.900 X 1.500			480	23"	92	3057	60			1.0 Hr.
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 _{sp}	Rate of Flow Q, Mcfd
1	11.230	43.74	478.2	.9585	1.299	1.025	626.88
2	11.230	68.79	473.2	.9723	1.299	1.028	1003.02
3	11.230	88.83	493.2	.9653	1.299	1.028	1285.89
4	11.230	106.51	493.2	.9706	1.299	1.029	1551.80
5.							

NO.	R	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Dry Gas	Mcf/bbl.
1	0.71	566	1.65	0.951	A.P.I. Gravity of Liquid Hydrocarbons		
2	0.70	550	1.61	0.946	Specific Gravity Separator Gas 0.5928		X X X X X X X X
3	0.73	558	1.63	0.947	Specific Gravity Flowing Fluid X X X X X		
4	0.73	552	1.61	0.944	Critical Pressure 675	P.S.I.A.	- P.S.I.A.
5.					Critical Temperature 342	R	- R

NO.	P _r	P _w	P _r ²	P _w ²	P _r ² - P _w ²
1	7938.2	63015.0			
1		7118.2	50668.8	12346.2	
2		6226.2	38765.6	24249.4	
3		5628.2	31676.6	31338.4	
4		5097.2	25981.4	37033.6	
5					

$$(1) \frac{P_r^2}{P_r^2 - P_w^2} = 2.011$$

$$(2) \left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 2.011$$

$$AOF = Q \left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 2586$$

$$AOF = Q$$

Absolute Open Flow 2586 Mcfd @ 15.025	Angle of Slope @ 45° 0'	Slope, n 1.000
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Remarks: BOTTOM HOLE PRESSURE @ (-10744) 14270' USED FOR PRESSURE CALCULATIONS
 WELL PRODUCED NO FLUID DURING 4-POINT TEST

Approved By Commission:	Conducted By: JARREL WELL TESTING INC.	Calculated By: B. R. DUKE	Checked By: LARRY BOHOT <i>L. Bohot</i>
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