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E-122

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Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 11-10-75		JAN 21 1976	
Company Cotton Petroleum Corp.				Connection To Air			
Pool South Carlsbad <i>Morrow</i>				Formation Morrow			
Completion Date 11-10-75		Total Depth 12,003'		Plug Back TD 11,960		Elevation 3162 Gr. <i>Morrow</i>	
Csg. Size 4 1/2"		Wt. 11.6#		Set At 12,003		Perforations: From 11,339 To 11,925'	
Tub. Size 2 3/8"		Wt. 4.7#		Set At 11,251'		Perforations: From open To ended	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 11,251'		County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 184 @ 11,922'		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
L 11922		H 11922		Gg 0.584		% CO ₂ 1.48	
				% N ₂ 0.29		% H ₂ S -0-	
				Prover -----		Meter Run 4"x0.500	
						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							2680.0		Packer		24 Hr.
1.	4"	x	0.500"	300.0	13.0	76	2592.0	68			1 Hr.
2.	4"	x	0.500"	300.0	28.0	78	2557.0	66			1 Hr.
3.	4"	x	0.500"	300.0	56.0	76	2485.0	65			1 Hr.
4.	4"	x	0.500"	300.0	96.0	74	2400.0	60			1 Hr.
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.	1.182	63.81	313.2	.9850	1.309	1.023	99.5
2.	1.182	93.65	313.2	.9831	1.309	1.023	145.7
3.	1.182	132.44	313.2	.9850	1.309	1.023	206.5
4.	1.182	173.40	313.2	.9868	1.309	1.023	270.8
5.							

NO.	P _f	Temp. °R	T _f	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.	0.46	536	1.52	.955	T.S.I.M.		0.584	X X X X X X X X	679	352
2.	0.46	538	1.53	.956						
3.	0.46	536	1.52	.955						
4.	0.46	534	1.52	.955						
5.										

NO.	P _f	P _s	P _f ²	P _s ²	P _f ² - P _s ²
1.	6787	3383.2	11446	784	
2.	6606	3339.2	11150	1080	
3.	6241	3250.2	10564	1666	
4.	5824	3136.2	9836	2394	
5.					

(i) $\frac{P_f^2}{P_f^2 - P_s^2} = 5.1086$

ACF = Q $\left[\frac{P_f^2}{P_f^2 - P_s^2} \right]^n = 995$

(2) $\left[\frac{P_f^2}{P_f^2 - P_s^2} \right]^n = 3.528$

Absolute Open Flow		995	Mcf @ 15.025	Angle of Slope @	52.3°	Slope, n	0.773
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Remarks: Bottom Hole Pressures measured with Amerada Gauge @ 11,922 feet.

Approved By Commission:	Conducted By: G.J.P.	Calculated By: R.L.W.	Checked By: J.W.W.
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