

MULTIPOINT AND ONE POINT BACK PRESSURE TEST, FOR GAS WELL

SF
File ✓
Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 11-9-79		NOV 26 1979																																																	
Company Tenneco Oil Company				Connection None		O.C.C.																																																	
Pool <i>Willcox</i> Undesignated (Atoka)				Formation Atoka		Unit ARTESIA, OFFICE																																																	
Completion Date Temp. SI 11-9-79		Total Depth 11961		Plug Back TD 11421 11214		Elevation 3377' GR, 3397' KB																																																	
Casing Size 5 1/2"		ID 15.5#		Set At 11464		Well No. 1																																																	
Tubing Size 27/8"		WT 6.5#/ft.		Set At 10724'		Perforations From 10800 To 10814																																																	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 10730		Form or Lease Name State HL 11																																																	
Producing thru Tubing		Reservoir Temp. °F a		Mean Annual Temp. °F 60°		Buro. Press. - P _a 13.2																																																	
L 10807		H --		G _g 0.7659		% CO ₂ 0.252																																																	
				% N ₂ 6.34		% H ₂ S 0.00																																																	
				Prover Pos. choke		Meter Run X																																																	
						F _g F																																																	
FLOW DATA																																																							
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	TUBING DATA		CASING DATA		Duration of Flow																																												
							Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F																																													
SI				3750			3750		Packer		69 hrs																																												
1.	6.00" x 8/64"			3590		62°	3590	62°	"		30 min																																												
2.	6.00" x 10/64"			3560		63°	3560	63°	"		30 min																																												
3.	6.00" x 12/64"			3265		62°	3265	62°	"		30 min																																												
4.	6.00" x 14/64"			3048		65°	3048	65°	"		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 F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mscf/d																																																
1	0.2618		3603.2	0.9980	1.140	1.146	1230																																																
2	0.4173		3573.2	0.9971	1.140	1.138	1929																																																
3	0.6101		3278.2	0.9980	1.140	1.166	2653																																																
4	0.8419		3061.2	0.9952	1.140	1.178	3444																																																
5																																																							
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>NO.</th> <th>P_t</th> <th>Temp. °R</th> <th>T_r</th> <th>Z</th> <th>Gas Liquid Hydrocarbon Ratio</th> <th>Dry Gas</th> <th>Mcf/Ubl.</th> </tr> <tr> <td>1</td> <td>5.468</td> <td>522</td> <td>1.348</td> <td>0.774</td> <td>A.P.I. Gravity of Liquid Hydrocarbons</td> <td>Dry Gas</td> <td>Deg.</td> </tr> <tr> <td>2</td> <td>5.341</td> <td>523</td> <td>1.355</td> <td>0.772</td> <td>Specific Gravity Separator Gas</td> <td>0.7659</td> <td>X X X X X X X X</td> </tr> <tr> <td>3</td> <td>4.900</td> <td>522</td> <td>1.352</td> <td>0.736</td> <td>Specific Gravity Flowing Fluid</td> <td>X X X X X</td> <td></td> </tr> <tr> <td>4</td> <td>4.576</td> <td>525</td> <td>1.360</td> <td>0.721</td> <td>Critical Pressure</td> <td>P.S.I.A.</td> <td>P.S.I.A.</td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td></td> <td>Critical Temperature</td> <td>°F</td> <td>°F</td> </tr> </table>								NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Dry Gas	Mcf/Ubl.	1	5.468	522	1.348	0.774	A.P.I. Gravity of Liquid Hydrocarbons	Dry Gas	Deg.	2	5.341	523	1.355	0.772	Specific Gravity Separator Gas	0.7659	X X X X X X X X	3	4.900	522	1.352	0.736	Specific Gravity Flowing Fluid	X X X X X		4	4.576	525	1.360	0.721	Critical Pressure	P.S.I.A.	P.S.I.A.	5					Critical Temperature	°F	°F
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$AOI = Q \left[\frac{P_t^2}{P_t^2 - P_w^2} \right]^n = 4836$																																																							
Absolute Open Flow 4836				Mscf @ 15.025		Angle of Slope 63.1°																																																	
						Slope, n 0.507																																																	
Remarks: Used element No. 18449 for test and it was set at 10,700'																																																							
Approved By Commission:		Conducted By:		Calculated By:		Checked By:																																																	
		John West Engineering		Mark Jacoby																																																			