Submit in duplicate to appropriate district office
See Rule 401 & Rule 1122

State of New Mexico
Energy, Minerals and Natural Resources Department
OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

C-15?

Form C-122
Revised 4-1-1991

30-015-32064

OCT 2002
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OCD - ARTESIA

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator: Chesapeake Operating Inc.				Lease or Unit Name: Will 7A	
Test Type: ☒ Initial ☐ Annual ☐ Special				Test Date: 10/02/2002	Well No.: Fee 1
Completion Date	Total Depth: 12511		Plug Back TD: 12496	Elevation	Unit Ltr - Sec - Twp - Rge.
Csg. Size: 4.500 / Wt.: 13.500	d: 3.920	Set At: 12511	Perforation: From To		County: Eddy
Tbg. Size: 2.375 / Wt.: 4.700	d: 1.995	Set At: 12251	Perforation: From 12392 To 12426		Pool: North Loving
Type Well-Single-Bradenhead-G.G. oG.O. Multiple: single				Packer Set At: 12251	Formation: Morrow
Producing Thru: tubing	Reservoir Temp.F: 200		Mean Annual Temp.F: 70	Baro. Pressure: 15.02	Connection: El Paso
L: 13409 / H: 13409	Gg: .573	% CO_2: 1.12	% N_2: .23	% H_2S:	Prover: Meter Run: Taps: flange

	Flow Data				Tubing Data		Casing Data		
No.	(Prover) Line Size x Orifice Size	Press. PSIG	Diff. h_w	Temp. F	Press. PSIG	Temp. F	Press. PSIG	Temp. F	SIP/Flow Duration (HRS.)
Shut-in Pressure					3950	100			24
1.	4.03 x .13	300.00	6.00	60	3450	88			1
2.	4.03 x .16	300.00	15.00	61	3080	89			1
3.	4.03 x .19	300.00	25.00	62	2725	89			1
4.	4.03 x .23	300.00	36.00	63	2200	90			1

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.	33.965	43.476	315.0	1.0000	1.3211	1.0234	1996.5
2.	33.965	68.741	315.0	.9990	1.3211	1.0233	3153.1
3.	33.965	88.745	315.0	.9981	1.3211	1.0231	4066.2
4.	33.965	106.494	315.0	.9971	1.3211	1.0230	4874.0

No.	P_r	TEMP.	T_r	Z
1.	.465	520	1.504	.9547
2.	.465	521	1.507	.9550
3.	.465	522	1.509	.9553
4.	.465	523	1.512	.9556

Gas-Liquid Hydrocarbon Ratio			Mcf/bbl
API Gravity of Liquid Hydrocarbons			Deg.
Specific Gravity Separator Gas	.573		
Specific Gravity Flowing Fluid		.573	
Critical Pressure	677 PSIA	677	PSIA
Critical Temperature	345 R	345	R

P_C = 3965.0 P_C^2 = 15721.4

No.	Pw	Pw^2	$Pc^2 - Pw^2$
1.	3495.2	12216	3505.121
2.	3175.2	10081	5639.447
3.	2885.8	8328	7393.312
4.	2466.0	6081	9640.061

(1) $\frac{P_C^2}{P_C^2 - P_W^2} = 1.631$ (2) $\left[\frac{P_C^2}{P_C^2 - P_W^2}\right]^n = 1.552$

$AOF = Q\left[\frac{P_C^2}{P_C^2 - P_W^2}\right]^n = 7564$

Absolute Open Flow	7564	Mcfd @ 15.025	Angle of Slope -	48.1	Slope, n .899
Remarks					
Approved By Division:	Conducted By:	Calculated By: BPT System	Checked By:		