Eyyyy yooo! Do I need to double check that my equations are properly in psia vs psig / etc.? Maybe that is part of the problem with undercalculating the reservoir drawdown:

Nomenclature

Dimensionless Numbers

Fr Froude Number

Ma Mach Number

Re Reynolds Number

Fluid Conditions

 ρ Density, lb_m/ft^3

c Speed of sound, ft/s

E Energy, ft^2/s^2

p Pressure, psia

t Temperature, ${}^{\circ}F$

V Velocity, ft/s

Mechanical Conditions

A Area, ft^2

D Diameter, ft

k Friction Factor, unitless

Subscripts

di Diffuser

ni Nozzle Inlet

nz Nozzle

su Suction

te Throat Entry

tm Throat Mixture