In the system characterized by the following diagram, the barometric pressure is 14.0 psi, and the water exits as a free jet at the end of the 6-in pipe. Determine the pipe diameter at the constriction that will cause cavitation to occur. On a copy of the diagram, draw the HGL between a spot in the reservoir far enough away from the outlet that the velocity is negligible to a spot a few feet to the right of the pipe.