HW #6

Assigned: 1/22/2009

Due: 1/29/2009

Please review the following articles on packing of uniform-sized spheres.

Weisstein, Eric W. "Sphere Packing." From *MathWorld*--A Wolfram Web Resource. http://mathworld.wolfram.com/SpherePacking.html

Weisstein, Eric W. "Hexagonal Close Packing." From *MathWorld*--A Wolfram Web Resource. http://mathworld.wolfram.com/HexagonalClosePacking.html

Weisstein, Eric W. "Cubic Close Packing." From *MathWorld*--A Wolfram Web Resource. http://mathworld.wolfram.com/CubicClosePacking.html

Based on the equations presented in these articles. Use the values provided in class as needed. Assume a sphere radius of 10 micrometers. In the following, include the changes to the porosity, the changes to the rock matrix, and the changes to the fluid.

a) Discuss the effects of increasing the pore pressure by 1000psi
b) Discuss the effects of decreasing the pore pressure by 1000psi
c) Discuss the effects of increasing the temperature of the whole system by 100F
d) Discuss the effects of decreasing the temperature of the whole system by 100F
e) Discuss the effects of increasing the pore pressure by 1000psi and increasing the temperature of the whole system by 100F
f) Discuss the effects of decreasing the pore pressure by 1000psi and decreasing the temperature of the whole system by 100F