**HW#5**

**Assigned: Friday, September 25, 2009**

**Due: Friday, October 2, 2009**

The following equation is the 1-D Buckley-Leverett equation for constant compressibility and porosity.



Where the definition of .

Use .

For  and , .

For this problem, evaluate  at .

Use  and the dip angle 3̊.

1. Create a plot of the capillary pressure curve
2. Calculate 
3. Calculate the value of each of the terms in the 1-D Buckley-Leverett equation evaluated at . Compare the gravity term and the capillary term to the viscous term.

Equations:

 

 

Data:

     

;   

   

  