

Abstract Submitted
for the DFD11 Meeting of
The American Physical Society

Optimal constant time injection policy for enhanced oil recovery and characterization of optimal viscous profiles¹ PRABIR DARIPA, Texas A&M University — We numerically investigate the optimal viscous profile in constant time injection policy of enhanced oil recovery. In particular, we investigate the effect of a combination of interfacial and layer instabilities in three-layer porous media flow on the overall growth of instabilities and thereby characterize the optimal viscous profile. Results based on monotonic and non-monotonic viscous profiles will be presented. Time permitting, we will also present results on multi-layer porous media flows for Newtonian and non-Newtonian fluids and compare the results.

¹The support of Qatar National Fund under a QNRF Grant is acknowledged.

Prabir Daripa
Texas A&M University

Date submitted: 12 Sep 2011

Electronic form version 1.4