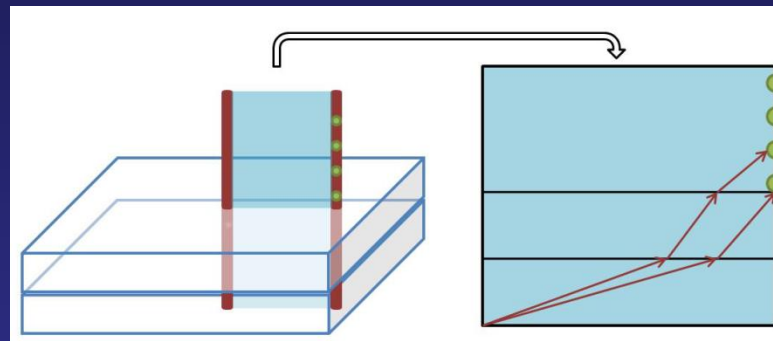


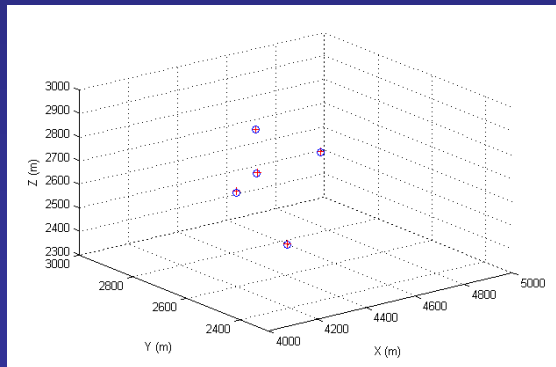
Accurate Hydraulic Fracture Characterization using Microseismic and Production/Welltest Data

Jingyi Chen, Department of Geosciences, The University of Tulsa

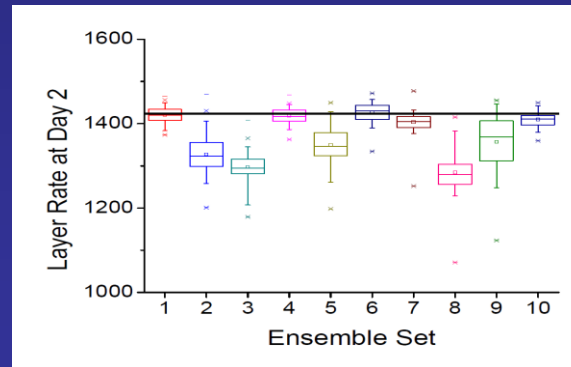
Two-layer homogenous cases are studied with a producer in the middle of reservoir. The 12 geophones are located in the monitoring well. The test results show that microseismic and welltest data are complementary and integration of both data can improve reservoir characterization. The microseismic event locations are also studied by locating geophones at surface and well.



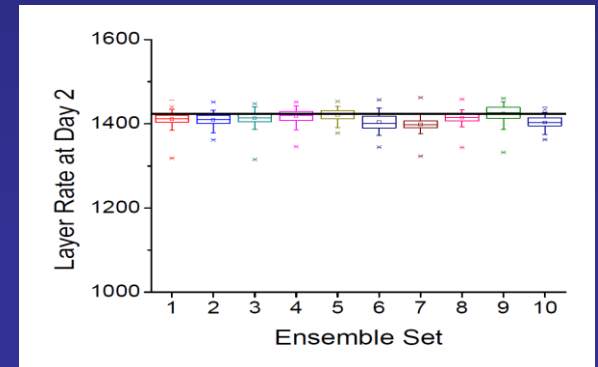
Microseismic diagram



The blue circles are true event locations
The red crosses are predicted event locations



Assimilating pressure data



Assimilating pressure and Microseismic data