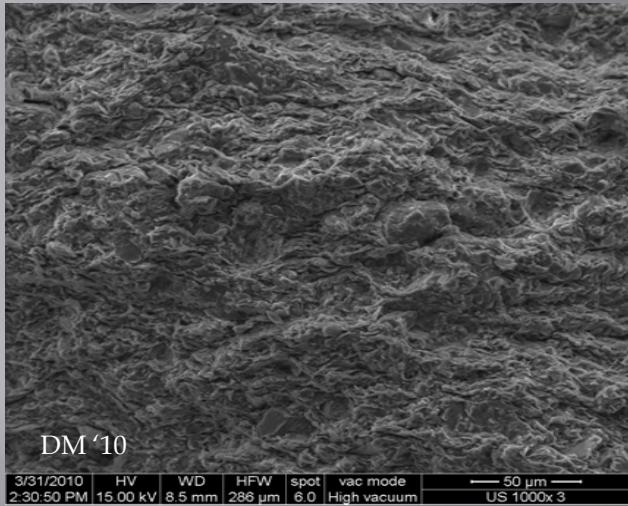


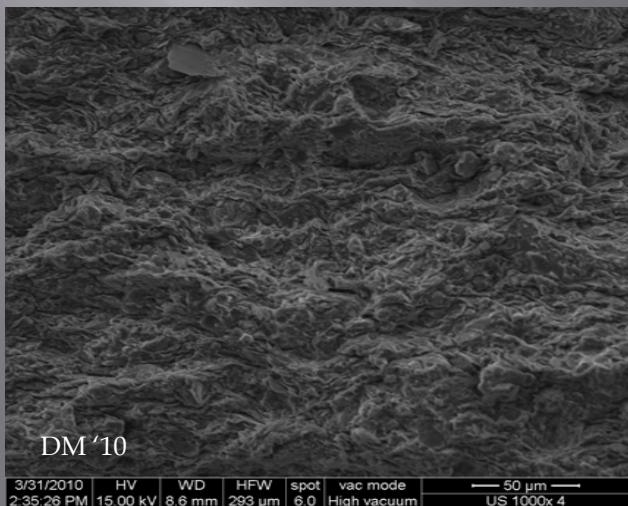
# GEOCHEMISTRY AND TEXTURE OF ARGILLACEOUS HYDROCARBON SOURCE ROCKS

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- Union Springs Member:
  - Weak preferred orientation
  - Clay flakes
  - Silt-sized quartz grains
  - Palynomorphs
- Cherry Valley Member:
  - Random orientation
  - Very fine-grained
  - Few, silt-sized grains
  - Shell fragments
  - Limited porosity

## Textural features of the Marcellus Shale



- Union Springs Member:
  - Random orientation
  - Large clay flakes
  - Silt-grains
  - Pyrite-magnetite framboids
  - Strong bioturbation
- Oakta Creek Member:
  - Random orientation
  - Large clay flakes
  - Bioturbation evident
  - Abundant porosity

