RESERVOIR MODELING BREAKOUT SESSION

Priority Group A:

1) New models needed to better describe CBM /CSEQ behavior. Existing modified black oil or compositional models cannot explain all behaviors.

2) Better description of rock mechanics effects caused by CO2 injection. Matrix shrinkage, swelling, fracture system dilatancy.

3) Verification of model numerical descriptions. More modeling of controlled laboratory experiments before upscaling to field conditions.

Priority Group B:

1) Modeling of larger scale behavior. Include and account for caprock integrity, overburden, in-situ stress changes, basin hydrology.

2) Relative significance of new, poorly understood phenomena. Estimate which effects are more important to describe among concerns such as swelling, geochemical effects, non-ideal fluid behavior, changing diffusion rates and others.

3) Description of hydraulic fracturing, both intentional and unintentional. Important to understand how/where injected CO2 is initially distributed or directed.

Priority Group C:

1) Accuracy of primary recovery processes. Accurate modeling of depletion is sometimes difficult. Should determine if this is due to software limitations or experience level of users.

2) Characterization of in-seam heterogeneities. Most modeling assumes uniform properties vertically and laterally.

Priority Group D:

1) Long-term diffusion effects.

2) Long-term geochemical effects.

3) Non-isothermal conditions in near-wellbore areas.