Past, Present, and Future of Mobility and Conformance Control

A Literature Review and Survey of Lab-scale, Pilot-Scale, and Field-scale Techniques (other than WAG) to Improve CO$_2$ Flooding, and Suggestions on Future Research Directions

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2 Reasons for this Report

1. Provide a comprehensive review of advanced mobility control and conformance control techniques (e.g. surfactant-stabilized foams, gels, foam gels, direct CO\textsubscript{2} thickeners, pre-formed swellable polymer particles, nanoparticle-stabilized foams)

2. To provide a “baseline” document for upcoming DOE Funding Opportunity Announcements on Advanced Mobility and Conformance Control
Why Am I Bothering You?

1. **Past** - The DOE NETL wants to find out why some technologies that appeared to be promising in published reports were not developed

2. **Present** - The DOE NETL wants to have an accurate idea about what technologies are currently in use

3. **Future** - The DOE NETL is interested in funding research that will, if successful, provide a new tool that will be of interest to operators
What Am I Asking You to Do?

Please respond to a short survey that asks three questions summarizing
1. Your **past** experience with advanced mobility and conformance control techniques
2. Your **present** involvement with these technologies
3. What you think researchers should work on to improve **future** field operations
4. Please give me your business card or fill out the form at the back of the room if you are interested