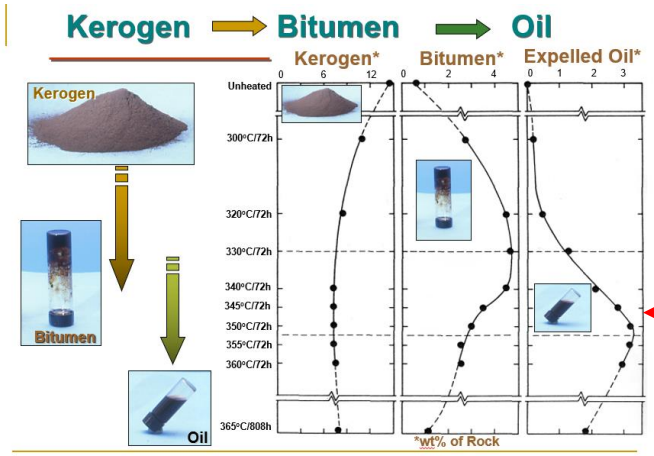
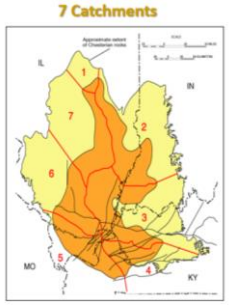
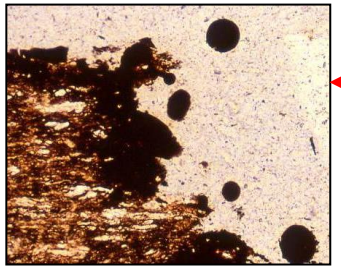
Management and Staff Classes on New insights on Petroleum Formation and Geochemistry

Three half-day (3- to 4-hour) workshop on new insights on Petroleum Formation and Geochemistry to train managers and geological staff on new concepts and approaches to source rock characterization including thermal maturation, stages of petroleum formation, determining petroleum charge from and retained petroleum in maturing source rocks, and timing and extent of petroleum formation in petroleum systems. Overall objective will give managers and staff a common jargoon to discuss these topics and evaluate prospect and play concepts in a standardized jargoon and an up-to-date state-of-the art manner. Specific issues may be presented and discussed for resolution in the classes.

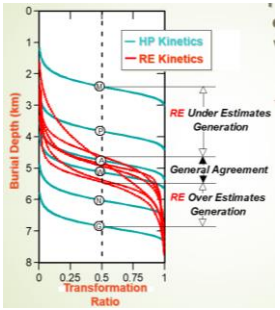


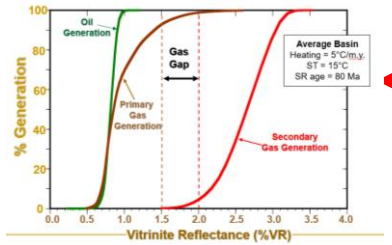
Stages of Petroleum Formation- Three-hour workshop (including two 15-min breaks) going over the current understanding of bitumen formation, oil generation and expulsion, primary gas generation from source rocks, and secondary gas generation from the cracking of oil. In addition to presenting the various stages, geochemical parameters (%VR, Tmax, HI, PI, atomic H/C, etc.) for determining them will be presented. This workshop would be a prerequisite for the following workshop.





Determining Petroleum Charge and retained oil- Two-hour workshop (including one 15-min break) reviewing the various methods for determining original TOC of a mature source rock and its petroleum charge at different thermal maturities in a petroleum system. Oil and gas expulsion models will be presented along with suggested TOC and maturity limits . The objective is to provide petroleum geologists with a uniform method of determining petroleum charge, original TOC of source rocks within their areas of interest, and amounts of retained oil in mature source rocks by low-temperature hydrous pyrolysis.





Timing and Extent of Petroleum Formation- Three-hour workshop (including two15-min breaks) reviewing how timing and extent of petroleum formation is determined in 1-D models. This will include historical review and hands-on exercises starting with simple 1-D burial histories and advancing to more complex burial histories and the various kinetic parameters that can be used. The workshop will provide the basic knowledge for attendees to recognize issues and ask prudent questions to resolve them.