Short Course #2: Sedimentology, stratigraphy and resource potential of tight gas sandstone and shale: a Core Workshop on the Greenhorn Formation, Codell Sandstone and Niobrara Formation, Wattenberg Gas Field, Denver Basin, Colorado

---

Date: ……Friday, July 11, 2008, 1:00-5:00pm
Instructor: ……...Gus Gustason (El Paso Exploration and Production Company);
Marshall Deacon, EnCana Oil & Gas (USA)
Location: ……..United States Geological Survey, Core Facility
Fee: ……..$50 (includes snacks and course notes)
Limit: ……..30 persons
Sponsors: …….....Rocky Mountain Association of Geologists

The Wattenberg Gas Field, in northeastern Colorado, has produced more than 2 TCF and 100 MMBO from the Lower Cretaceous (Albian) J Sandstone and Upper Cretaceous (Turonian) Codell Sandstone. Although the J Sandstone has been the primary target in Wattenberg Field, the Codell Sandstone and the underlying and overlying fine-grained source rocks are an attractive secondary objective. The Codell Sandstone, an overpressured, tight gas sandstone, continues to yield oil and gas after multiple fracs because it is sandwiched between 700 feet of organic-rich, fine-grained, source rocks that are currently generating hydrocarbons. In ascending order, these "shales" include the Graneros Shale, Greenhorn Formation, Niobrara Formation, and Sharon Springs Member of the Pierre Shale. The shales are marine, have relatively high total organic carbon content (2-10% TOC and predominantly type II kerogen). Thermal maturity (> 0.8 Ro), gas saturation, anomalously high pressure gradients and EURs are related to the Wattenberg "hot spot". Participants will have an opportunity to examine core of the Greenhorn Formation, Codell Sandstone and Niobrara Formation. We will use core analysis, log analysis, fall-off injection tests, and production tests in several new wells to evaluate the remaining gas resource potential in Wattenberg Gas Field.