



West Virginia Geological and Economic Survey Colloquium Series

Presents

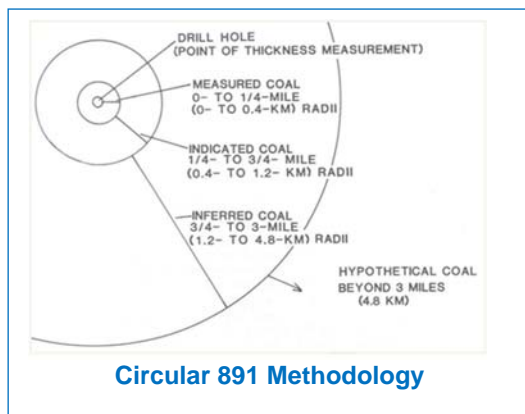
**Ricardo A. Olea, James A. Luppens, and
Susan J. Tewalt**
United States Geological Survey (USGS)

Date: **Monday November 09, 2009**

Place: [West Virginia Geological Survey, 1 Mont Chateau Rd, Morgantown, WV](#)

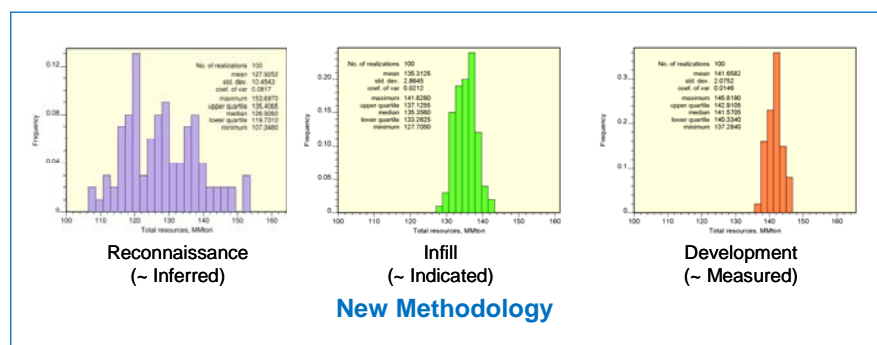
Presentation: **Begins at 1 pm**

New Methodology for Quantifying Geological Uncertainty in Coal Assessments with an Application to a U.S. Gulf Coast Deposit



The current USGS coal resource assessment methodology follows USGS Circular 891 (Wood and others, 1983). It handles uncertainty in terms of distance from a site to the closest drill hole and uses drill hole spacing as the sole criteria for defining geological assurance on coal resource estimations. Circular 891 groups estimates into a few reliability categories without any quantification of expected error. Because geological assurance is more than just thickness variability between drill holes, evaluation of uncertainty should be based on models integrating drill data at different spacings, coal bed structure, and surface topography.

The objective of this study is to review the Circular 891 methodology and explore the advantages of stochastic methods, which allow probabilistic assessments.



Wood, G.H., Jr., Kehn, T.M., Carter, M.D., and Culterton, W.C., 1983, Coal resource classification system of the U.S. Geological Survey: U.S. Geological Survey Circular 891, 65 p.