

CBM Gas Composition Trends—Central and Northern Appalachian Basin, Michael G. McClure and Matthew W. Frost, Marshall Miller & Associates, 534 Industrial Park Rd., P.O. Box 848, Bluefield, VA 24605, mike.mcclure@mmal.com, matt.frost@mmal.com

As analysis of coalbed gas (CBM) content within the Carboniferous coal-bearing strata of the Central and Northern Appalachian Basin has progressed during the past decade, gas composition data (fractional analyses and a few carbon isotopes) have likewise become available. Utilizing public and proprietary sources, data from approximately 30 coal beds within five states (Virginia, West Virginia, Ohio, Pennsylvania, and Maryland) and 25 counties provide a glimpse into some regionally observable patterns. Seams analyzed extend from the stratigraphically deepest Pocahontas No. 3 seam (Pocahontas Formation) to the uppermost Jollytown seam (Dunkard Group). Gas components of interest within this investigation include: methane, ethane, carbon dioxide, and nitrogen. Preliminary assessment of the data suggests: (1) apparent relationships to both thermal maturity (coal rank) and depth, and (2) a thermogenic origin for CBM within the coal beds analyzed.