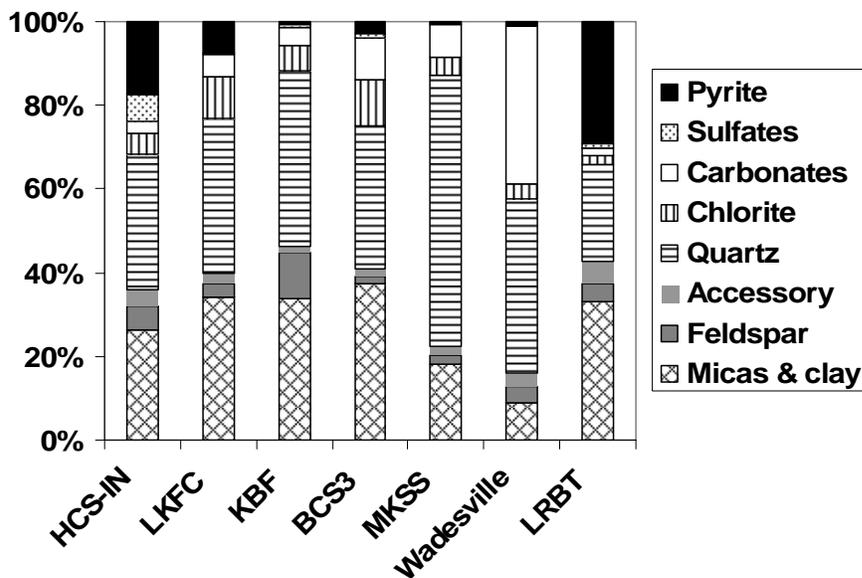


Low-temperature ash determinations as well as optical and scanning-electron microscopy show that organic material is a significant component of the Houchin Creek Shale and the Leechburg Coal Refuse. Minor amounts of organic material are observed in other samples. The



Carbonate Mineralogy (XRD)

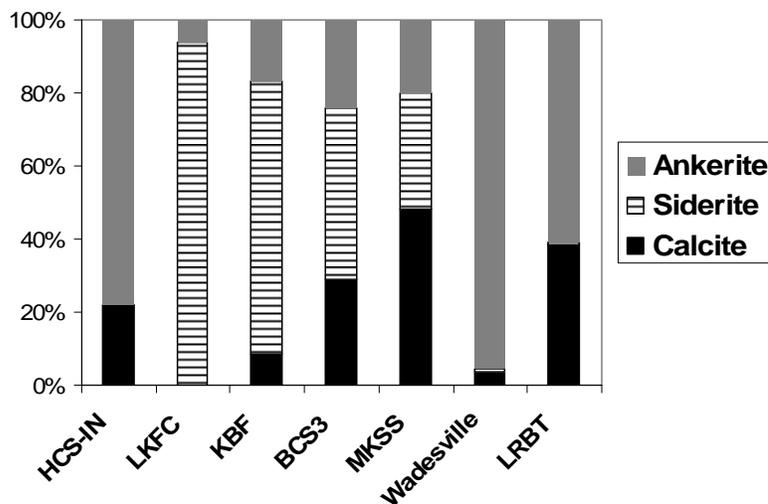


Figure 5.40. Bar charts showing relative percentages of different minerals in the crystalline parts of the samples based on quantitative x-ray powder diffraction (XRD). The bottom chart shows the relative percentages of different carbonate minerals. For example, the Houchin Creek Shale (HCS-IN) has only 3 weight percent total carbonate minerals. The carbonate mineral makeup of that 3 weight per cent is: 0% siderite, 78% ankerite, and 22% calcite.