The passage describes the geology of the Big Muddy River area in Illinois, focusing on coal deposits and mining history. The passage discusses the formation and composition of various rock types, such as shale, siltstone, and sandstone, and their distribution within the Big Muddy Valley. It also mentions the presence of coal seams and their thickness, as well as historical data from underground coal mines. The text includes a table listing 25 coal holes drilled in 1947, with details such as operator, lease number, location, and other information. The passage ends with a section on economic geology, discussing coal resources and mining operations in the area. Additional references are provided at the end of the text.