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| Sommario/riassunto | This book represents a comprehensive exploration of the intricate intersection between geology and mining through the lens of system-oriented perspectives. Geomining stands at the forefront of modern resource extraction, blending the principles of geology, engineering, transport, and environmental science to optimize the extraction of minerals and other valuable resources from the Earth's crust. It is a |

dynamic field that continually evolves in response to technological advancements, environmental concerns, and economic realities. In this book, we aim to capture the essence of geomining as a holistic system, emphasizing the interconnectedness of its various components and the importance of integrated approaches to resource management. The geomining is a complex of heavy industry sectors that includes the exploration of mineral deposits, the extraction of minerals from the Earth's subsurface, and the enrichment of valuable minerals. Among the main groups of the geomining industry, the following are distinguished—fuel extraction (coal, oil, shale, peat, natural gas extraction); ore mining (iron ore, manganese ore, extraction of non-ferrous ores, precious and rare metals, etc.); mining and chemical industry (extraction of potassium salts, rock salt, apatites, nephelines, bauxites, sulfur, phosphorites, etc.); extraction of mineral raw materials for the construction industry; extraction of mineral raw materials for refractory and ceramic industries; hydromeliorative activities. The concept of a system-oriented view on geomining recognizes that mining activities do not occur in isolation but are part of larger, interconnected systems that encompass geological, environmental, social, and economic dimensions. By adopting a systems perspective, we can better understand the complexities inherent in resource extraction and develop more sustainable and efficient mining practices. This book is divided into 3 parts, each focusing on different aspects of geomining from a systems perspective.