

GIS APPLICATION IN LITHOFACIES PALAEOGEOGRAPHIC RESEARCH%00

1 Dou Jianwei, 2 Shao Longyi, 1 Huang Shutao 1.Beijing Research Institute of Uranium Geology, Beijing,P.R.China; 2.Beijing Graduate School, China University of Mining & Technology, Beijing,P.R.China%00

Various geological information in lithofacies palaeography research is all highly relative to its geographic positions, its main space topological types are classified into: point, line, and area, its data structures mainly consist of value, descriptive word and image. All this characteristics of lithofacies paleography information and GIS's powerful space analysis capacity make GIS 's application in lithofacies palaeography research feasible and effective. Taking research on lithofacies palaeography of later Palaeozoic in southern Hebei Province as an example, the general application procedure are introduced: (1) Collection and conversion of geological information, creation of database,. (2) Processing of geological information, automatic generation and output of single factor palaeography map. (3) Secondary development and customization of general GIS software. ?4?Fusion and synthesis analysis of various geological information, generation of three dimensional lithofacies palaeography map and simulation of palaeography dynamic development. Application research show that GIS can play a powerful role in every stage of lithofacies palaeography research.%00