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济阳坳陷稀土元素特征及其在物源对比中的应用 点此下载全文

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摘要:

物源是控制沉积物中REE组成最主要的因素,济阳坳陷区岩石稀土元素特征表明:①济阳坳陷古生界与华北地台其他地区同时代地层岩石的REE分布特征具有极大的相似性,这体现了晚古生代济阳坳陷区所处的整个华北地台区为一稳定的克拉通沉积盆地,地层横向分布稳定,具有一致的物源和构造背景;②济阳坳陷古生界为中生界的物源,反映了济阳坳陷区由古生代稳定地台型沉积到中生代山间盆地沉积的转变,中生代洼陷区的沉积主要来自对附近凸起区古生代地层的剥蚀;③新生界样品与中生界样品的REE分布模式具有很大的相似性,从一个侧面反映了济阳坳陷中生代与新生代的构造格局的转变,中生代接受沉积的部分洼陷区至古近纪成为供给物源的凸起区。

关键词: 济阳坳陷 稀土元素 分布模式 物源分析

Geochemistry of Rare Earth Elements and Its Application in the Source Identification in the Jiyang Depression $\underline{\text{Download Fulltext}}$

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Abstract:

The source of sediments is a principal factor that determines the constitution of rare earth elements (REE) in deposits. The REE distribution of rocks in the Jiyang Depression indicates the following; Firstly, the REE distribution of the Paleozoic in Jiyang Depression has very similar features with that of the rocks in the same formation in the other parts of the North China Platform (NCP), indicating that the whole NCP where the Jiyang Depression lies on was a stable craton basin of deposition that had laterally stable formations, a common source and the same geological setting during the Late Paleozoic; Secondly, the provenance of the Mesozoic came from the Paleozoic in the Jiyang Depression, implying the conversion of a stable platform during the Paleozoic to an intermountain basin during the Mesozoic, and the sediment in that Mesozoic sag mainly came from the denudation of the Paleozoic formation of the near a swell; Thirdly, the REE distribution from samples of the Cenozoic and Mesozoic is greatly similar, suggesting that the conversion of geological patterns occurred from the Mesozoic to Cenozoic and some sags of the Mesozoic became arch area of source in the Paleogene.

Keywords: Jiyang depression rare earth elements distribution pattern provenance analysis

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