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新疆沙尔布尔提山地区早泥盆-早石炭世沉积相、物源演变及其意义

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摘要:

准噶尔西北部沙尔布尔提山地区下泥盆统到下石炭统的沉积可划分为滨海相和海岸平原相。其中下泥盆统和布克赛尔组底部的乌图布拉克亚组为滨海碎屑岩相, 曼格尔亚组为滨海碎屑岩和碳酸盐岩相, 芒克鲁亚组为滨海碳酸盐岩相。中泥盆统呼吉斯特组为海岸平原相。上泥盆统洪古勒楞组底部为海岸平原相, 向中部过渡为滨海碳酸盐岩相, 顶部为滨海碎屑岩相。下石炭统黑山头组为滨海碎屑岩相。下泥盆统和下石炭统的古流向总体从北向南, 显示研究区以北地区为物源区, 即成吉斯-塔尔巴哈台褶皱带。结合沉积相的研究成果, 本区可能属成吉斯-塔尔巴哈台褶皱带以南的晚古生代陆缘区。物源演变趋势分析揭示早泥盆世成吉斯-塔尔巴哈台带中的早古生代岛弧发生隆起, 为乌图布拉克亚组提供成熟度很低的碎屑物质。随着岛弧被剥蚀殆尽, 中、晚泥盆世呼吉斯特组和洪古勒楞组沉积时转而接受岩屑型再旋回造山带的物源供应, 而早石炭世的物源则为过渡型再旋回造山带区。这种物源变化反映了成吉斯-塔尔巴哈台褶皱带的建造特征和隆起过程。

英文摘要:

The strata from the Lower Devonian to the Lower Carboniferous in Shaerbuerti mountain in Northwest Junggar are mainly offshore and coastal plain facies. The Lower Devonian Hebukesai Formation consists of the Wutubulake, Mangeer and Mangkelu sub-formations that belong to terrigenous detritus offshore facies, terrigenous detritus offshore and carbonic offshore facies, and carbonic offshore facies, respectively. The Middle Devonian Hujiersite Formation is attributed to coastal plain facies. The Upper Devonian Hongguleleng Formation is divided into coastal plain facies, carbonic offshore facies and terrigenous detritus offshore facies from lower to upper. The Lower Carboniferous Heishantou Formation is recognized as terrigenous detritus offshore facies. The paleocurrent data from the Lower Devonian and Lower Carboniferous show the dominant direction from north to south, which may imply that the provenance (the Chengjisi-Taerbahatai fold belt) is on the north. Together with the facies research, the study area is potentially characterized by a Late Paleozoic continental margin. Provenance evolution analysis shows that an arc belt in the Chengjisi-Taerbahatai fold belt uplifted and provided the Wutubulake sub-formation with low maturity detritus during the Early Devonian, which followed by the detritus from the lithic recycled orogen provenance that composed the Hujiersite and Hongguleleng formations during the Middle and Late Devonian. In Early Carboniferous, the provenance changed into a transitional recycled orogen. The change in detritus suggests the composition character and uplift history of the Chengjisi-Taerbahatai fold belt.

关键词: [准噶尔西北部](#) [晚古生代](#) [沉积相](#) [物源演变](#)

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