THE ORE-FORMING PROCESS IN THE PASSIVE CONTINENTAL MARGIN BASIN OF LATE SINIAN- EARLY CAMBRIAN, YANGTZE PLATFORM, CHINA

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Black shales are widely distributed in the upper Sinian and lower Cambrian of the southeastern margin of the Yangtze Platform, China. There are two series of black shales, one is in the Upper Sinian Doushantuo Formation as the hosted rock of the phosphorite, and the other is in the Lower Cambrian Niutitang Formation, as the hosted rock of the barite and V, Ni, Mo deposits. The analysis methods include the ICP-MS, PGE-Au, C stable isotope, main element analysis, and micropetrology. Advances can be summarized as follows:The black shale of the upper Sinian - lower Canibrian gcnerated from the anoxic event, and the organic matter source is algae and fungal. The organic matter can be preserved well under the anoxic enviromnent, and especially for the lipids. Black shales are also the indicators of the oceamc anoxic event. After the orgamsms degrade slowly, the orgamc matter absorbed and complexed many elements. At the early diagenesis stage, the orgamc matter decomposed, and some element relaxed, i.e. the element accumulated by many stages, so the elements exist in many style. The key factor is the adsorbtion of orgamsm and the complexion of the orgamc matter. The generation of Ni-Mo, coal stone, barite and phosphorite deposits are controlled by the sea-level change, and the ore-beanng sets developod in the transgressive systems tract and oondensed section. The ore-bearing characteristics controlled by the two aspects of the abundant source of orgamc matter from algae and fungi and the preserved and transverse conditions of the organic matter in the anoxic enviromnent.