

LATE PALEOZOIC-EARLY MESOZOIC TECTONIC EVOLUTION IN THE EAST MARGIN OF THE
JIAMUSI MASSIF, EASTERN NORTHEASTERN CHINA

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The Jiamusi massif is a major tectonic unit in the eastern part of NE China and composed chiefly of the Early Paleozoic (about 500 Ma) metamorphosed crystalline basement containing Precambrian, even Archean crust and three suites of unmetamorphosed continental marginal sedimentary formations of the Devonian-Lower Carboniferous, the Late Carboniferous- Permian and the Late Triassic, which are similar to those in the Bureya and Khanka massifs in Russia. In the Devonian-Lower Carboniferous, the microcontinent consisting of the Jiamusi and Songnen massifs in China and the Bureya and Khanka massifs in Russia evolved independently, the eastern part of which was a passive continental margin, where a suite of the marine sedimentary-volcanic formation is overlain unconformably on the crystalline basement. The regional stratigraphic break in the middle Carboniferous in the whole northeastern China was related to the collision of the microcontinent with the Argun-Hinggan microcontinent in the west, indicating the formation of a new amalgamated continent (Heilongjiang plate). Therefore, the Late Carboniferous-Permian volcanic-sedimentary formation is the first unitary cover on the Heilongjiang plate. The Late Carboniferous-Permian and the Late Triassic sedimentary formations in the eastern part of the Jiamusi-Bureya-Khanka microcontinent represent the evolutionary features of the eastern continental margin of the Heilongjiang plate. Summarily, the eastern margin of the Heilongjiang plate mainly suffered the following evolution stages from the Late Carboniferous to the Late Triassic: (1) the transform or passive continental margin in the Late Carboniferous, characterized by terrestrial facies clastic rocks with interbedded recoverable coal layers; (2) the active continental margin in the Permian marked by the magmatic arc composed mainly of intermediate-acid volcanics and granites; (3) the transform margin in the Early-Middle Triassic indicated by the simultaneous stratigraphic break, and (4) the passive continental margin in the Late Triassic characterized by the marine-terrigenous facies sedimentary formation.

***Key words:* Jiamusi massif, Heilongjiang plate, continental margin, Northeastern China.**