A California-type Transform Continental Margins in the Russian Far East

KHANCHUK A.I. Far East Geological Institue, Far Eastern Branch, Russian Academy of Sciences, Vladivostok, Russia

A California-type geodynamic setting with oblique subduction of a spreading zone beneath a continental margin is reconstructed for the Russian Far East. Characteristic geological complexes of this type of paleo-transform continental margin are: (1) continental margin turbidite terranes as markers of gliding zones between continental and oceanic lithospheric plates; and (2) alkaline and bimodal magmatic series and granitoid plutonic belts that are coeval with major strike-slip faults. In the Russian far east, various transform continental margins occurred: (1)along the southern edge of the North Asian Craton in the Jurassic; (2) along the north-eastern edge of the North Asian Craton in the Late Jurassic-Early Cretaceous; and (3) along the eastern margin of Asia in the Early Cretaceous and Cenozoic. The Central Sikhote Alin, Tanakura and the Median Faults of Japan are parts of an Early Cretaceous transform fault system and are similar to the San Andreas fault system in California. In the Russian Far East, during sinistral or dextral translations along transform plate boundaries, accretionary prism and island arc terranes were accreted onto the continental margin and transformed into giant S-shaped fold belts, along with coeval regional metamorphism and continental lithosphere growth.