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Geological processes and mineralization of the continental margin in the Western Pacific Ocean

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In this paper, the authors present some points of view from the Geological Map Series of Central Asia and Adjacent Areas completed by experts from China, Mongolia, Kazakhstan and South Korea. With the exception of the sea-floor spreading of the power system in the eastern Pacific and Indian Ocean, China's mainland and marine power systems formed since Jurassic, which include the northern part of Mongolia -Okhotsk Mesozoic succession of power systems and the power system of the Arctic Ocean sea-floor spreading, have not aroused sufficient attention. Second, according to "fan-power principle"the joint pressure of the power system from the east, west and north to China's mainland and the sea caused upwelling of the asthenosphere materials in China's eastern part and sea waters, which, under the strong Chinese power system, consequently led to the dramatic changes in Cenozoic lithosphere and tectonics in eastern China as well as the occurrence of magmatiam 、rift valley、earthquakes, volcanoes and other complex geological and mineralization phenomena. Finally, the reason why the most strong spreadingunits of the sea-floor in the Pacific Ocean and the Indian Ocean (and the Atlantic) lie mainly within the latitudes of 60° on both sides of the equator seems to be the effects of the centrifugal force of the rotation and revolution of the earth and the extrusion force from the high latitudes to low latitudes on both sides of the equator. Therefore, Instead of forgetting or giving up Li Siguang's contribution to the theories of the rotation and revolution of the earth and the power system structural geology, geologists should incorporate his theory with contemporary theories to explore the spirit of basic geological and metallogenic problem and to resolve these important problems effectively for the purpose of developing a new and practical theory for mineral exploration. The authors' new understanding and points of view can be applied to geology and exploration. they help to search for the hot, dark and quiet zone lying on the interface with the temperature of 100 °C and the depth of 4.25 m. Second, they can also help to explore the central area of the endogenous ore deposits on the basis of the ore-controlling fault systems formed in different periods, in different directions and of different natures of the power system. Finally, they make it possible to forecast earthquakes with the help of the outside temperature of 10-20 km in depth and the effective elasticity of rock, combined with the characteristics of the new generation of active faults.