

GEOLOGICAL REVIEW

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新疆西天山地区构造单元划分、地层系统 及其构造演化 点此下载全文

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摘要:

西天山地区是指位于奎屯南的北天山与库车北的南天山间的广大地区。早古生代,该区处于哈萨克斯坦—准噶尔板块东南缘中段与卡拉库姆—塔里木板块西北缘交汇部位,其主缝合带处于长阿吾子—乌瓦门—线。通过各构造单元地层系统及蛇绿混杂岩定年研究,认为本区博罗科洛山南缘霍城—哈希勒根—带为奥陶纪—志留纪的赛里木—准葛尔和乌孙—阿吾拉勒微板块的接合带。塔里木微板块北缘的南天山地区在中奥陶世—志留纪显示多岛洋的构造格局,早古生代板块活动经历了上亿年。晚古生代早期的洋盆较狭窄,生存时间为数千万年。北天山依连哈比尔尕地段隶属于早石炭世微型沟弧盆体系。晚古生代晚期由裂谷转为走滑拉分体制,此时壳—幔岩浆活动及物质交换频繁,为本区主成矿期。中生代进入板内陆块构造堆叠并伴随走滑的动力学环境。新生代受印度板块与欧亚大陆碰撞效应的汇聚作用,导致山体强烈隆升,造就了现今的南、北天山及伊犁盆地相间的地貌景观。

关键词: 构造格局 地层系统 沉积环境 西天山 新疆

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Abstract:

The Western Tianshan Mountains are located between the Northern Tianshan Mountains to the south of Kuitun and the Southern Tianshan Mountains to the north of Kuqa. The area is in the junction of the middle section of southeastern margin of the Kazakhstan— Junggar plate and the northwestern margin of the Karakum—Tarim plate in Early Paleozoic, in which the main suture occurred along the Chang'awuzi—Wuwamen ophiolite belt. Based on the geochronological data of each tectonic unit and the study of stratigraphical stystem and ophiolite mélange, writers suggest that the deep seated Huocheng—Haxilegen fault in the south of the Boluokeluo Maintains be the junction of the two Ordovician—Silurian Sarim—Junggar and Wusun—Awulale microplates. The south Tianshan area in the northern margin of the Tarim microplate reflects archipelago nature during Middle Ordovician to Silurian, and the plate motion continued for several billion years. The ocean basin became more narrow in early Carboniferous micro trench—arc—basin system. In late Late Paleozoic, the rift was turned into strike slip fault and pull apart basin system, and the magmatic activities derived from the crust—mantle interaction were extensively and frequent. This period is also the major period of mineralization in the area. In Mesozoic, the area began a geodynamic regime of intracontinental pile up companied by strike slip fault. In Cenozoic, the whole mountains uplift rapidly due to the collision of Indian plate with Eurasian continent, and formed the current landform with Northern Tianshan, South Tianshan and Ili basin.

Keywords: tectonic framework stratigraphical stystem sedimentary environment west Tianshan Mountains Xinjiang

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