

PALEOBASINS OF TIEN SHAN AND THEIR PERSPECTIVES FOR HYDROCARBONS

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Last 20 years new data on stratigraphy, sedimentology and tectonic on the Late Precambrian and the Lower Paleozoic of Tien-Shan were received. These data allowed to compose the maps of distribution of lithological – facies complexes based on modern tectonic concepts. Presence of three sedimentary basins in the Late Riphean-Vendian time which are separated by ancient sutures was established. North Tien-Shan sedimentary basin was formed on the of Kokchetav-North-Tien-Shan microcontinent. Clastic sedimentation occurred in the continental environments. Talas-Karatau basin is characterized by continental lacustrine and shallow sea-water coarse-grain clastic and volcanic –clastic sedimentation followed by tillite. Tarim basin represented a shelf margin deposition broken by riftogenic processes. The rift troughs was filled up by sandstones, gritstones, conglomerates, bimodal volcanic rocks and tillites. The rocks contain large gold deposits. These sedimentary basins belong to huge continental blocks of the broken East Gondwana. Kyrgyz-Terskey branch of Central Asian paleo-ocean existed between the above mentioned continental blocks in the Late Vendian and Early Paleozoic. The following sedimentary basins were formed on the passive margin of the continental blocks: Kokchetav-North-Tien-Shan microcontinent with carbonate and clastic-carbonate sediments on the external and internal shelves; the Talas-Karatau block of carbonate platform with a belt of phosphorites deposition ; the Tarim margin was marked by a zone of accumulation of black shales, with content of U, V, W, Mo, P. Sinian and Early Paleozoic series of the internal part of Tarim sedimentary basins contain oil and gas deposits. Oil showings were discovered in many locations of South Tien-Shan. They are embodied in Cambrian-Ordovician rock deposited on the slope of the Paleotarim.