The Petroleum Geology of the Democratic People's Republic of Korea

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Tertiary, Mesozoic and probably Palaeozoic Petroleum Systems are present in the DPRK. Working Tertiary plays are restricted to the coast of the East Sea, whose evolution began as a back arc basin during the Palaeocene. Richly oil- and gas-prone source rocks of older Tertiary age are present in the coastal Anju Basin in the NW of the country. Since the fields of the prolific Bohai Basin of China to the west are Tertiary sourced, Tertiary oils may also be present offshore downdip in the adjacent West Sea. To date only Jurassic lacustrine sourced oils are known from this region, the age of the source being confirmed by source-oil typing and age-related sterane ratios. Cretaceous lacustrine sources related to those of the Songliao Basin of China may exist in the NE. In the onshore Zaeryong Basin to the SSE of Pyongyang the source of the shows and seeps is considered to be a Jurassic rift basin. However, the geological setting of one seep within a Cambro-Ordovician cored syncline makes a Jurassic source unlikely and a Lower Palaeozoic source may be required. Bituminous limestones and dolomites of the right age are present, but the subsequent tectonics were thought to have been too severe to permit the preservation of oil accumulations. Finally, Permo-Carboniferous coals in the onshore Pyongyang Basin are a probable gas source.