

GIANT ASTROBLEMS:KEY TO OIL AND GAS FIELDS DISTRIBUTION

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In Kazakhstan a number of giant astroblems - giablems have been identified, with which sedimentary oil and gas bearing basins are often associated. One of them is the late Triassic - early Jurassic North Caspian Mangyshlak Mountains Structure. The central uphill of the Structure is the Mangyshlak and Buzachi Peninsular zone and the relict of the crater depression is the North Caspian «horse shoe» area. The radial faults of the Structure coincide with the parts of the Ural, Volga, Emba and Kuma river-beds extensions of which intersect in one point in the Mangyshlak Mountains. The Structure covers the 1650 - 1750 km - diameter area including more ancient Precaspian Basin. Within this area, there has been identified the regular interchange of concentric equally wide zones high and low density of all 175 discovered oil fields. The number of fields in the high density zones amounts to 119, whereas in the low density zones are 56 fields. Also, almost all hydrocarbon reserves are concentrated in the high oil field density zones. So, half of the considered Structure does not actually contains commercial hydrocarbon reserves. Similar observations have been made for the West Siberian, Jungarian, Tarim and the Gulf of Mexico sedimentary basins. The author's methodology is aimed at optimization of oil exploration strategy within many other giablen - associated sedimentary basins of the Earth