

Mining of Uranium in Kazakhstan.

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Uranium is the general source of nuclear energy. Approximately one-fifth of world uranium reserves are deposited in Kazakhstan.

Kazakhstan is the third country in the world for uranium production volumes.

Dozens of uranium deposits discovered in Kazakhstan are different in terms of genetic conditions and practical use. Common character of geological positions, genetic features and territorial location allow to divide them into six uranium ore provinces: Chu-Sarysuiskaia, Syrdaryinskaia, North Kazakhstan, Mangyshlakskaia, Kendyktas-Chuili-Betpakdalinskaia, Ilyiskaia. Characteristics of uranium mineralization of deposits are given.

The mining companies produce uranium by using the most advanced method - in-situ leaching (ISL) which enables to recover uranium from low-grade ore of sand-stone deposits. ISL technology of uranium is based on selective dissolving of uranium bearing minerals. In-situ leaching method, which is used in Kazakhstan, is literally the lowest-cost and most environmentally safe mining technology among all known. ISL does not affect geological conditions of the subsurface resources since the ore mass is not extracted.

Uranium production includes: natural uranium concentrates, dioxide powders and fuel pellets for VVER, RBMK and BWR reactors and other services of nuclear fuel cycle.

Kazakhstan has been an important source of uranium for more than fifty years. Over 2001-2003 production rose from 2000 to 3300 tones U per year, and further mine development is under way with a view to annual production of 15000 t U by 2010.

All uranium is exported.