## Akshoky III deposit (Western and Eastern veins) Ulytau region



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**Location:** in the Ulutau district, 45 km north-northeast of the Aktas settlement and 45 km from the Zhezdy railway station; discovered by N.N. Voronov in 1939.

**Brief geological description:** The Akshoky-3 deposit is composed of effusive and sedimentary rocks of Early -Middle Devonian age, represented by andesitic porphyrites, individual layers of fine-grained polymictic sandstones with a significant admixture of tuff material. Quartz veins form a latitudinal zone with a total length of up to 2 km and are expressed in relief by a chain of hills with a relative excess of up to 30 m. The zone is formed by two large quartz veins (Eastern and Western) and a number of small quartz bodies and veinlets of different strike, length, thickness and differing in the structure of vein quartz. The shape of the vein bodies is irregularly slab-shaped and lenticular, complicated by swellings and constrictions both along the dip and along the strike. The maximum depth of occurrence of quartz veins in the traced intervals is 75 m.

The veins are composed of medium- and coarse-grained massive quartz of milky-white and greyish-white colour. In some places , druse , translucent coarse-crystalline and columnar quartz are noted, as well as druse brushes and individual crystals of rock crystal. Crystals of prismatic habitus, mostly cloudy, up to 6-8 cm in size along the long axis.

**The Western vein** is located 0.5 km to the west of the Eastern vein and in relief forms a hill with a relative elevation of up to 40 m, extended in the latitudinal direction. The vein zone is represented here by three powerful (3-6 m) and a number of smaller bodies of plate-like and lenticular forms. The total length of the zone is up to 160 m. The total thickness is up to 15 m. The length of the bodies is from 120 to 140 m.

**The eastern vein** is an irregularly slab-shaped body complicated by bulges and constrictions, extending in the latitudinal direction for 1 km. The vein is traced down to a depth of 200-260 m. The vein thickness is on average 8-10 m (this is about 2 million m3 or 5 million tons of quartz raw material).

Extract from the state inventory records as of 01.01.2024.		
Useful component	Balance reserves	Off-balance sheet reserves
Milky white quartz	C1 – 1796 thousand tons ( <i>Reserves are indicated for the Akshoky - III deposit</i> )	-



