## 9

**Location:** located in the Zhezdinsky district, 4.5 km east of the village of Zhezdy and 40 km northwest of the Zhezkazgan mine.

**Brief geological description:** The deposit is confined to the gently dipping (12-14°) southwestern wing of the Dzhezdinskaya anticline, which is a second-order fold on the southwestern wing of the Esculinsky brachyanticline uplift.

The ore-bearing red-colored sandy-conglomerate Devonian strata overlies with a stratigraphic unconformity the Precambrian strata, broken through by Caledonian granites. The ore horizon is confined to the lower part of the Upper Devonian, composed of coarse-grained arkose sandstones with rare interlayers of conglomerates in the upper part. The maximum thickness of the horizon is 66-75 m.

The red-colored strata contain three conformably occurring layers of manganese ores with a thickness of 5 m. In the zones of tectonic faults and in the southeastern half of the deposit, an increase in the thickness of the ore deposits is observed. The strike of the layers is northwestern, the dip is southwestern. The dimensions along the strike are 500 m (Eastern deposit) and 300 m (Western deposit). The length of the ore bodies is 550 m. There are swellings, constrictions and rock interlayers in the ore layers. The wedging out of the layers is gradual.

The main ore minerals are braunite (60-80%), psilomelane (20-40%); secondary ones are pyrolusite, rhodochrosite, manganite, hematite; rare ones are jacobsite, friedelite, rhodonite; non-metallic ones are quartz, biotite, less often kaolinite, calcite, barite.

Manganese oxides are developed in the cement of conglomerates and sandstones, forming conglomerate, cement, spotted and porous textures.

Extract from the state inventory records as of 01.01.2024.		
Useful component	<b>Balance reserves</b>	Off-balance sheet reserves
manganese ores	A+B+C1 - 589 thousand tons	11 thousand tons







- railway



