



TEASERS BY FIELDS

Republic of Kazakhstan

Astana, 2023

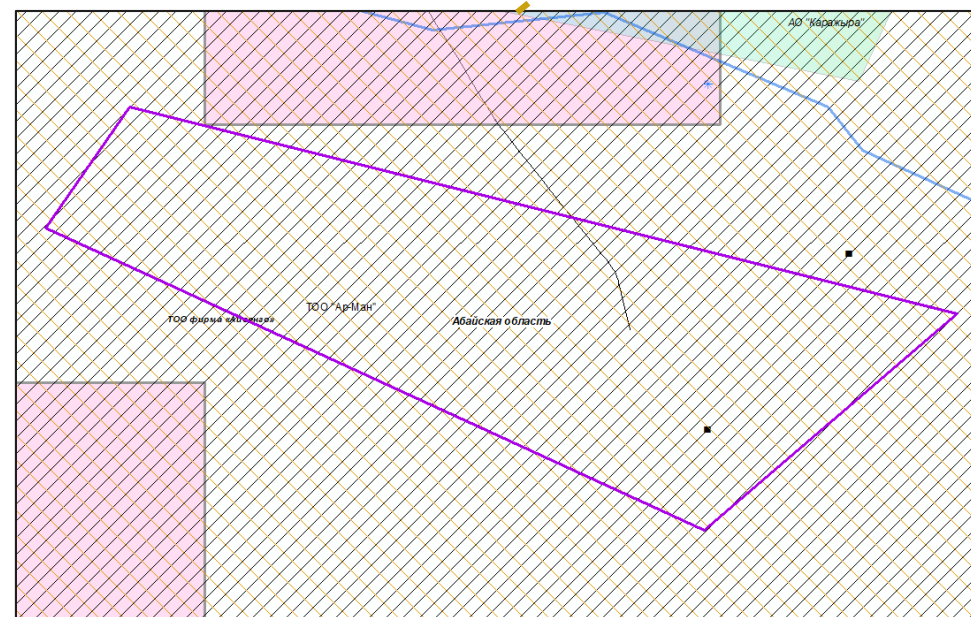
Shorskoye field in the Abay region



Location: located in the Abay region, 130 km southwest of the city of Semipalatinsk.

Brief geological characteristics: In general, the ore-bearing object has the shape of a steeply dipping stockwork elongated to the northwest. Establishment of the boundary of the oxidation zone and identification of ore types was carried out based on the results of phase analyses; Ores with a molybdenum content in oxidized form of more than 75% are classified as oxidized; ores are classified as sulfide - less than 10%; the remaining varieties are classified as semi-oxidized ores. According to the results of phase analyses, the lower boundary of the oxidation zone is located on average at a depth of 9.25 m, and the lower boundary of semi-oxidized ores is found on average at a depth of 13.2 m.

The material composition of copper-molybdenum ores was studied throughout the entire period of study of the deposit. According to the latest data, based on the study of flotation products of process samples, the prospects for further study of selenium and tellurium in the ores of the deposit have been recognized as possible. The issues of extracting rhenium, silver and tungsten from ore processing products and their corresponding study remain open and require a priority solution in the process of ongoing geological exploration. Well flow rates are low 0.02-0.15/sec, water yield of rocks is weak, specific flow rates do not exceed 0.003 l/sec.



- revoked contract territory of Ar- Man LLP ,
 Shorskoye deposit , Vostochny district. Contract
 No. 2452 dated August 21, 2007 for exploration of
 copper and molybdenum.

- TMO centers

Extract from the state inventory accounting as of 01/01/2023

Useful component	Balance reserves	
Copper	A+B+C1 – 4.8 thousand tons	C2 – 2.4 thousand tons
Molybdenum	A+B+C1 – 8260.7 t	C2 – 4122.6 t
Silver	-	S2 -13 t

Masalskoye deposit in Akmola region

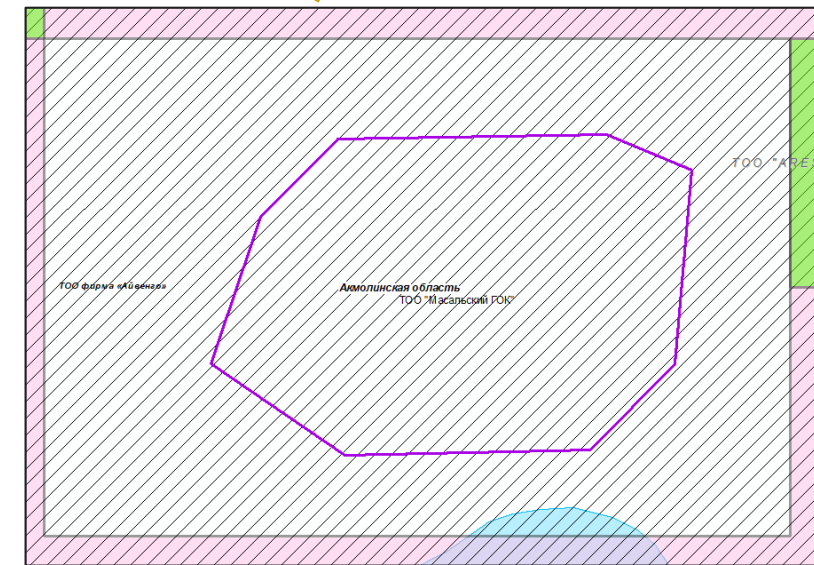



Location : Administratively , the Masala iron ore deposit is located in the Zharkainsky district of the Akmola region, south of the city of Yesil, 16 km east of the railway . Priishimskaya station .

Brief geological characteristics: The Masalskoye deposit is located in the southern part of the Zharkainagach anticlinorium and is confined to a massif of gabbro- pyroxenite composition.

The geological structure of the deposit includes ultrabasic Ordovician rocks, a metamorphosed complex of volcanic-sedimentary rocks and intrusive formations of intermediate basic composition; The mineralization is associated with ultramafic rocks. The volcanic-sedimentary and intrusive rocks have a developed weathering crust of areal and linear types, up to 45 m thick. Mineralization has been traced by wells to a depth of 500 m and is predicted to depths of 1000 m.

The ore-bearing massif has the shape of a stock. The distribution of the useful component in the ore mass is uneven; against the general background of iron content at the level of 10-17%, isolated lenses and small bodies with an iron content of 30-40% are found. The main component of the deposit's ores is iron. The very insignificant non-industrial content of associated components of titanium and vanadium in the concentrate does not deteriorate the quality of the commercial product.



 - revoked contract territory of Masalsky GOK LLP deposit Masala . Contract No. 2519 dated December 24, 2007 for the extraction of iron ore.

Extract from the state inventory accounting as of 01/01/2023

Useful component	Balance reserves,		Off-balance reserves, thousand tons
	A+B+C1 – 528 464	C2 – 200,691.7	
Iron ores	A+B+C1 – 528 464	C2 – 200,691.7	36,795
Titanium			15,624.7

Zhaksylyk deposit in Akmola region

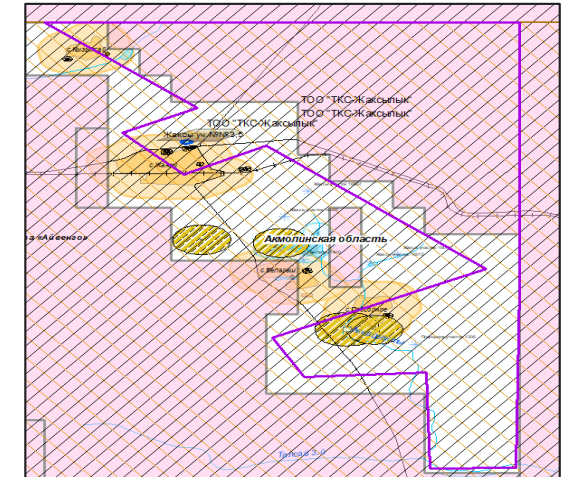









Location : The deposit is located in the Zharkainsky district of the Akmola region, 3-5 km from the Zhaksy station .

Brief geological characteristics: In structural and tectonic terms, the deposit is confined to the northeastern wing of the Zharkainagachsky anticlinorium . In the studied area, two structural stages were identified, differing in the degree of dislocation and metamorphism. The formation consists of red, brownish-red, lilac-brown, grayish-brown, gray and greenish-gray clayey-siliceous, siliceous shales, sometimes hematitized , quartzites, jasper- quartzites , jaspers, rarely quartz and quartz-feldspathic sandstones.

Ore layers are disconnected, separate layers and lens-shaped bodies, with a thickness of 0.1 to 1.0 m, rarely up to 2-3 m. The ore bodies participating in the general folding of the deposit's rocks are not formed as a single thick layer, but consist of numerous thin layers of ore that form an ore-bearing member. The ores of the deposit are represented mainly by psilomelane and braunite , in approximately equal quantities, but more often, braunite slightly predominates (up to 1%, in single samples - up to 8-9%). Iron oxides, pyrite, and chalcopryite are also noted.

Iron-containing minerals are represented by a group of hematite, which forms finely dispersed pigmentation of rock sections with varying degrees of saturation. The impurities in these ores consist mainly of chalcedony, quartz, clay minerals and hydromicas. Hydrogeological development conditions are considered simple. Ore formations of the deposit are represented by oxide minerals: braunite , psilomelane, pyrolusite and hausmannite . Nonmetallic - quartz, chalcedony and clay minerals. A feature of the manganese ores of the deposit is the low content of harmful impurities: phosphorus, sulfur and non-ferrous metals.



-  - revoked contract territory of TKS- Zhaksylyk LLP, Zhaksylyk section . Contract No. 4131 dated July 31, 2012. for manganese exploration.
-  - OPI permissions
-  Zhaksy TPI mine, study No. 3.5 (manganese)
-  - buffer zone (1000m) of cattle burial grounds
-  - PUGFN for solid mineral exploration
-  - populated areas and buffer zones
-  - cemeteries and buffer zones

Extract from the state inventory accounting as of 01/01/2023

Useful component	Balance reserves, thousand tons		Off-balance sheet reserves , thousand tons
Manganese ores	A+B+C1 – 1786.3	S2-414.3	537.6

Mystobe deposit in Karaganda region



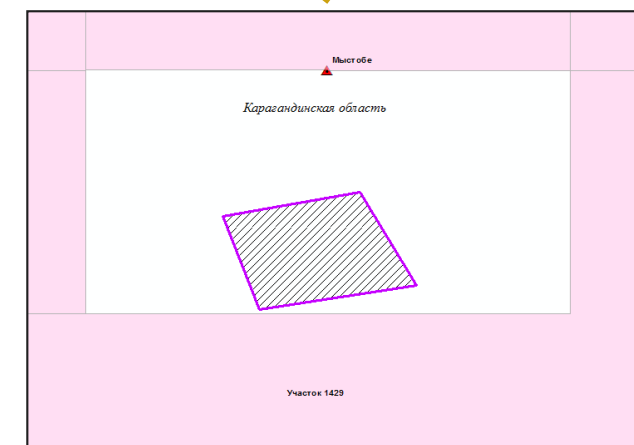
Location : located in the Karaganda region in close proximity to the Almaty-Karaganda railway, 530 km northwest (by road) of Almaty and 120 km west of Balkhash

Brief geological characteristics: Confined to the junction zone of the Kyzylespa anticlinorium and the Western Balkhash synclinorium . The geological structure of the deposit includes Early Carboniferous felsic volcanics and Middle Carboniferous granitoids . A sublatitudinal fault runs through the entire area of the ore field , with which ore bodies of submeridional and northeastern strike are spatially associated. In fault zones, the rocks are intensively altered and are accompanied by halos of silicification , chloritization , epidotization and carbonatization . Ore bodies are confined to quartz-sericite metasomatites .

In total, more than ten ore bodies, represented by tourmaline-pyrite-quartz and sulfide-quartz veins, have been identified at the deposit. The former form a system of intersecting submeridional and sublatitudinal fractures and, as a rule, are weakly gold-bearing . The latter form independent ore-bearing zones of submeridional orientation and complex morphology. Areas of veins with maximum thickness are replaced by constrictions and zones of vein silicification . Their length reaches a few hundred meters. With depth, steeply dipping veins often level out to a horizontal position.

Vein composition: pyrite, chalcopyrite, molybdenite, galena, sphalerite, bismuthite, tetradymite. The main nonmetallic minerals are quartz, carbonates and tourmaline. The gold concentrating mineral is pyrite, and to a lesser extent quartz. The content of ore minerals is 1-3%. Gold content 32.3 g/t, fineness 950-1000.

The deposit has an intensively developed hypergenesis zone with a thickness of up to 10-20 m. Limonite, goethite, malachite, azurite, chrysocolla, covellite , chalcocite, bismuthite and bismuth are widely represented in it (up to 20%).



revoked contract territory of Astana-Time LLP
Mystobe field . Contract No. 5376 dated
09/03/2018 for gold mining

Extract from the state inventory accounting as of 01/01/2023

Useful component	Balance reserves		Off-balance sheet reserves
Gold	A+B+C1-808.7 kg		246.5 kg
Bismuth	A+B+C1- 45.5 t		21.7 t