NATIONAL GEOLOGICAL SURVEY

TEASERS FOR DEPOSITS OF THE REPUBLIC OF KAZAKHSTAN PLANNED FOR AUCTION

ASTANA 2025

LIST OF DEPOSITS

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3	Mamontovskoe	VKO
4	Kaindinskoe	AKTOBE
5	Geophysical 3	AKTOBE
6	Geophysical 4	AKTOBE
7	Drozhilovskoe	KOSTANAY
8	Zhezdinskoe	ULYTAU
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10	Zhaksy (section 3.5)	AKMOLA
11	Togay-1	KARAGANDA
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15	Zhila 31	ABAY
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No.	NAME OF DEPOSIT	REGION
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40	Maybulak East	ZHAMBYL
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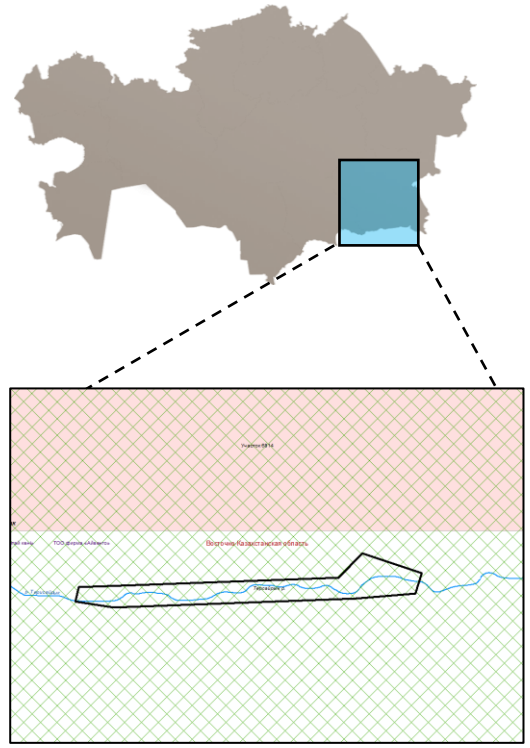
42	Shakhansky area	KARAGANDA
43	Berezovskoye	AKMOLA
44	Sharyk	ABAY
45	Belogorskoe	VKO
46	Senim	ZHETYSU
47	Sugatovskoe	VKO

Tersayryk deposit r.
East Kazakhstan region

1

Location: The deposit is located in the Tarbagatai district of the Abay region, 24 km west of the village of Zharyk and 24 km northeast of the village of Zharma.

Brief geological characteristics: The deposit is located in a volcano-dome structure composed of volcanogenic-terrigenous rocks of the late Permian-Triassic age. The dome is broken by necks , stocks of basaltic, andesite porphyrites and liparitic porphyry of Triassic age. In the axial part of the structure there are large faults of sublatitudinal and north-eastern strike, controlling hydrothermal metasomatites. propylitic propylitic , kaolinite and sercite composition. The extent of the fault metasomatites 100-2500 m, thickness 10-150 m. Linear zones of quartz veining , bearing gold mineralization, are confined to them . Four ore zones are distinguished - Northern, Central, North-Eastern and Southern. All of them are of north-eastern strike, complex zonal structure without clear contacts with the host volcanics.
At the deposit, a zone of secondary enrichment with gold and silver is manifested to a depth of 20-30 m. In the southern zone, with a thickness of 2.5 m and a length of 230 m, the average gold content is 9 g/t, silver 120 g/t.
The undeveloped blocks contain reserves with an average gold content of 2.19 g/t, silver 35.14 g/t, corresponding to a small deposit. The deposit is poorly explored on the flanks and especially in depth. The deposit is poorly explored on the flanks and especially in depth. The reserves in the future can be increased several times.



Tersayryk field, r.), for further auctioning

- licenses for GIN

- river

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
gold	**C1 – 61.1 kg ; C2 – 28.8 kg**	**-**

Kaskabulak
Abay region

2

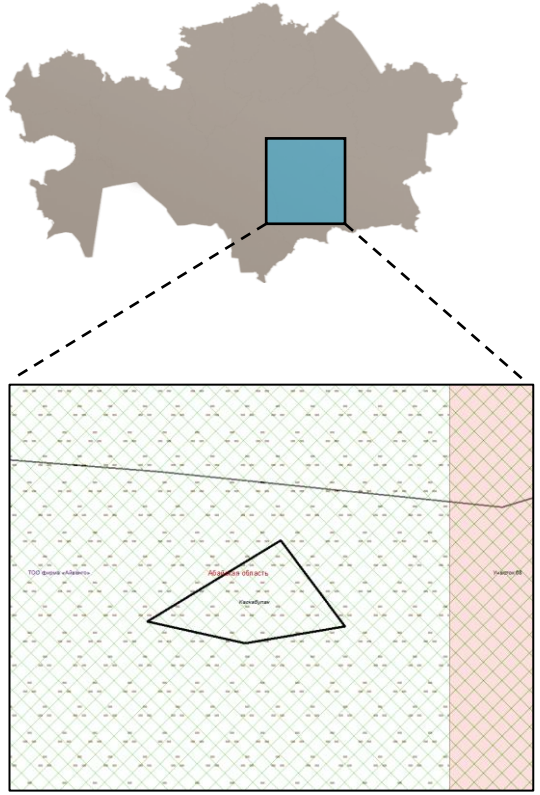
Location: The Kaskabulak deposit is located in the Abay region, 77 km east of Ayagoz.

Brief geological characteristics: The ore-bearing rock complex is represented by volcanogenic and volcanogenic-sedimentary formations of the Upper Ordovician-Lower Silurian, covered by a terrigenous-carbonate layer of the Upper Silurian. Mesozoic deposits are developed in intermontane depressions and on slopes; they are represented by Neogene clays and Quaternary formations of deluvial-proluvial genesis.

The deposit is represented by two oxidized ore deposits: the Stockwork zone and the Main zone. The Stockwork zone is a sheet-shaped deposit in plan, 320 m long, with a width of 20 to 60 m, gently (at angles of up to 30o) falling to the northwest. The Main zone has a ribbon-like shape in plan; its length is about 350 m, with an average width of 5-20 m, with a bulge in the middle part of up to 90 m. Its occurrence is also gentle (5-20o), dipping to the southwest.

The main useful component in the ores is gold. Minor impurities of silver (0.1-1.65 g/t) and copper (0.01-1.0%) are of no industrial significance due to their low contents. Arsenic was not detected in the samples. Sulfur in oxidized ores is represented by the sulfate form.

The ore bodies of the Stockwork and Main zones are characterized by average dip angles from 15 to 30°. Morphologically, they are simple sheet-like deposits with a thickness of 2-10 m with isolated bulges and constrictions. The loss and dilution indicators are adopted by analogy with similar objects in the region and are 6.0% and 8.5%, respectively. The stripping ratios for open-pit mining will be: 1.24 m3/t for the Stockwork zone, 1.79 m3/t for the Main zone.



Kaskabulak field), for further auctioning

- revoked license area of Emikon LLC . License No. 107-EL dated 05/28/2019 for solid mineral exploration. The license was revoked in 2021, the survey report is missing.

- licenses for GIN

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
gold	C2 – 174.2 kg	-

Mamontovskoye deposit
East Kazakhstan region

3

Location: in the north-eastern part of the Zyryanovsky ore region, located on the eastern wing of the Revnyushinskaya anticline structure.

Brief geological characteristics: The area of the deposit is characterized by a wide distribution of sedimentary and volcanic deposits of the Lower Carboniferous age, the development of synvolcanic and postvolcanic intrusive formations, faults of various directions.

The deposit has two ore zones: Eastern and Western.

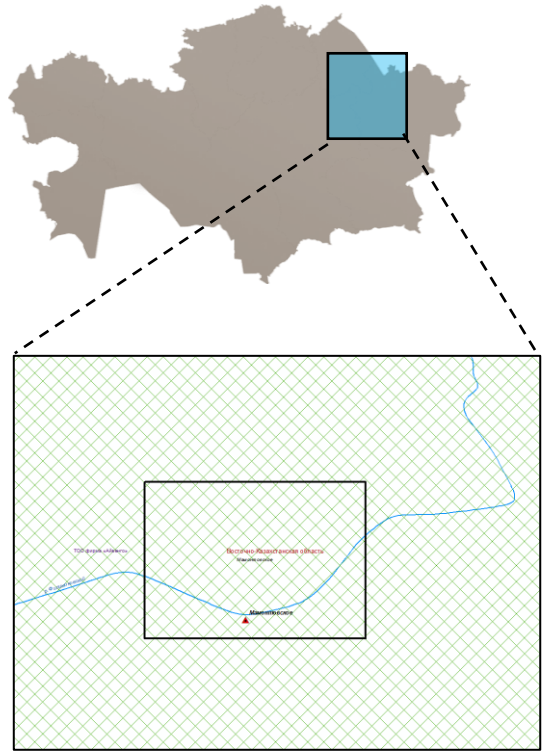
The eastern quartz vein zone extends in an echelon-like manner , with interruptions of up to 70 m to the northwest at an azimuth of 330-340º. Silicification in the zone has a substantially vein-like character. In sections, the veins form a "ladder type" with connecting "net veins". These are linearly elongated in plan and section veins gently lying at an angle of 25-45º with a thickness of up to 40 cm. Along the strike, the length of these veins reaches 125 m, along the dip up to 80 m.

The western zone occurs in aphyric andesitic porphyrites with “roots” in the endocontact of quartz diorites.

Silicification in this zone is vein-like and is represented by the following types of veins: steeply dipping, mesh-like, branching, and staircase-like.

Ore mineralization of the zone is represented by gold, silver, lead, zinc, and copper sulfides. The components are localized in nests, phenocrysts, and admixtures.

All ore bodies of the deposit have no natural boundaries and are outlined according to sampling data . Gold content ranges from 1.0 to 253 g/t, silver from 0.1 to 968 g/t.



- territory included in the State Natural Resources and Natural Resources Act for solid mineral extraction (Mamontovskoye field), for further auction
- licenses for GIN
- river

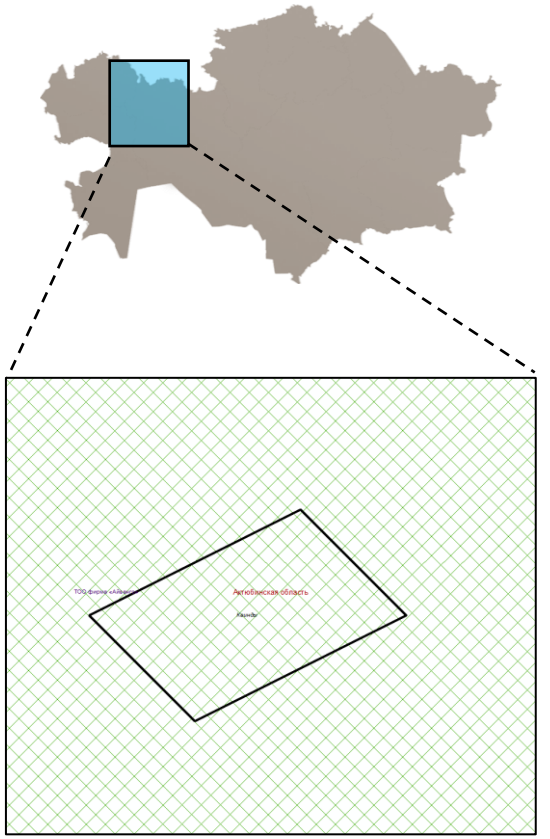
Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
gold	A+B+C1 – 68.0 kg; C2 – 803.0 kg.	-

Kaindinskoye deposit
Aktobe region

Location: in the Mugodzharsky district of the Aktobe region, 700 m northwest of the village of Kaindy on the right and left banks of the river of the same name.

Brief geological characteristics: The deposit is confined to the middle part of the eastern wing of the Karasai anticline, composed of aplito-gneisses , granite-gneisses , biotite gneisses and graphitic quartzites of the Ortokarasai suite of the Precambrian. The strike of the rocks is submeridional , the dip is eastern at an angle of 60-80 °. Pegmatoid lenses and intersecting plagiogranite- porphyry dikes are noted. The weathering crust is widely developed with a thickness of the first meters. The crust is covered by clayey-sandy-gravelly deposits of the Quaternary age with a thickness of 1-1.2 m.

Six asbestos-bearing deposits have been identified hyperbasites , represented by talcified and anthophyllitized metaultramafic rocks . The deposits are 75 x 30 x 30 - 120 x30 x 50 m. The deposits are lenticular, isometrically rounded and tubular. Contacts with the host rocks are clear and sinuous. The ores are stellate in structure, massive, and consist of talc, fibrous and hard anthophyllite, carbonate and, to a lesser extent, actinolite, phlogopite and vermiculite. Serpentinite relics are found. The degree of asbestosization increases towards the hanging wall and towards the southern wedging out of the bodies. The fiber content in class I and III deposits is +0.5 mm - 1.5-10%; in class II deposits +0.5 mm - up to 19.46%, +1.6 mm up to 17.28%.



Kaindinskoye field), for further auctioning

- licenses for GIN

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
asbestos	A+B+C1 - 6.4 thousand tons , C2 - 0.2 thousand tons	-

Geophysical deposit 3
Aktobe region

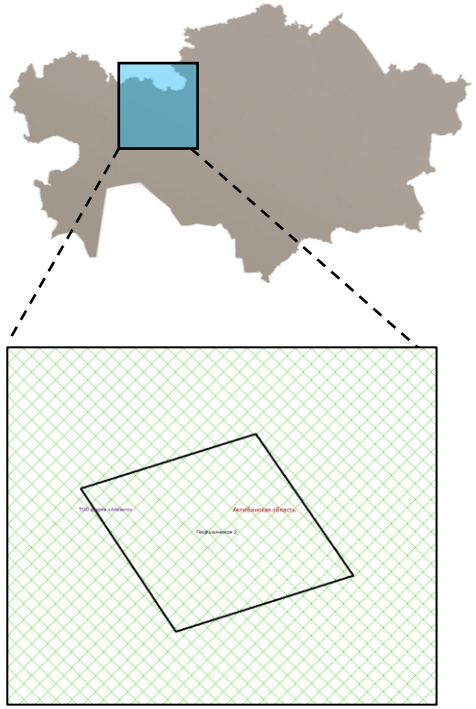
5

Location: located in the Mugodzharsky district of the Aktobe region, 15 km east of the Geophysical I deposit.

Brief geological characteristics: The deposits are confined to the northern periclinal closure of the Karasai anticline, composed of metamorphic rocks of the South Mugodzhar series. The metamorphic rocks are migmatized , with intersecting and conformable granite dikes and quartz veins. Particularly large dikes of porphyritic biotite granite are found at the Geofizicheskoe III deposit. The general strike of the host rocks is submeridional , with an eastern dip of 40-80°. Disjunctive faults are accompanied by silicification , vermiculitization , talcification , etc.

The composition of the host rocks of the hyperbasites is biotite gneisses with layers and lenses of graphitic quartzites and amphibolites. The deposit contains varieties enriched in sillimanite. The graphite content in quartzites is 1-3%. The graphite is finely flaked, uniformly distributed on the planes of schistosity.

At Geophysical III, one deposit 80 m long with a maximum thickness of 21 m was identified. It was traced to a depth of 53 m and was not fully outlined. At Geophysical IV, two subparallel deposits were identified. The larger (eastern) one was traced for 60 m, with an average thickness of up to 60 m. It pinches out at a depth of 20 m. The second deposit (western) is 12 x 30 m in cross-section and was traced to a depth of 10 m. It dips to the east at an angle of 65-70°. The shape is lenticular. The deposits have a talc- anthophyllite composition with an industrial content of asbestos fiber. At the deposit, the fiber content for class +0.5 mm ranges from the cutoff to 18%, for class +1.6 - 0.15-0.8%.



- the territory included in the PUGFN for solid mineral extraction (m- eGeophysical 3), for further auctioning

- licenses for GIN

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
asbestos	A+B+C1 - 1.4 thousand tons , C2 - 0.05 thousand tons	0.3 thousand tons

Geophysical deposit 4
Aktobe region

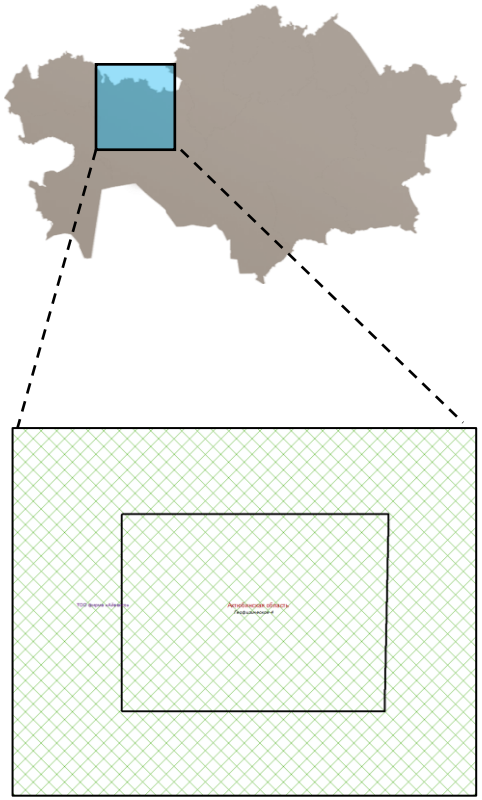
6

Location: The deposit is located in the Mugodzharsky district of the Aktobe region, 15 km east of the Geophysical I deposit.

Brief geological characteristics: The deposits are confined to the northern periclinal closure of the Karasai anticline, composed of metamorphic rocks of the South Mugodzhar series. The metamorphic rocks are migmatized , with intersecting and conformable granite dikes and quartz veins. Particularly large dikes of porphyritic biotite granite are found at the Geofizicheskoe III deposit. The general strike of the host rocks is submeridional , with an eastern dip of 40-80°. Disjunctive faults are accompanied by silicification , vermiculitization , talcification , etc.

The composition of the host rocks of the hyperbasites is biotite gneisses with layers and lenses of graphitic quartzites and amphibolites. The deposit contains varieties enriched in sillimanite. The graphite content in quartzites is 1-3%. The graphite is finely flaked, uniformly distributed on the planes of schistosity.

At the Geofizicheskoe IV deposit, the western talc- anthophyllite deposit is abundantly asbestosized . The average content of class +0.5 mm fiber is 7%.



Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
asbestos	A+B+C1 - 0.5 thousand tons , C2 - 0.05 thousand tons	-

- the territory included in the PUGFN for solid mineral extraction (m- eGeophysical 4), for further auctioning

- licenses for GIN

Drozhilovskoye deposit
Kostanay region

Location: located in the Denisovsky district of the Kostanay region, 50 km southwest of the Zaayatskaya railway station.

Brief geological characteristics: The site is located in the core of an anticline composed of effusive-sedimentary rocks of Silurian age. Mineralization is confined to quartz-vein mineralized zones in chlorite schists.

Two types of ores have been identified at the site: oxidized weathering crust ores and primary ores. They form single ore bodies with a steep southwest dip (65-700). The ore bodies are characterized by small sizes along the strike (first hundreds of meters) and thicknesses (1-4 m). Gold is distributed very unevenly in the ores (variation coefficient 327%). The deposit is classified as belonging to the 3rd group of geological structure complexity for exploration purposes.

From the surface, the quartz-vein mineralized zones of the site were mapped using trenches and outcrops. At depth, gold-bearing ores (oxidized and primary) were exposed by inclined boreholes drilled during the exploration and appraisal period (2010-2012). Mapping drilling in the volume of 5900 running meters established its lower boundary of the weathering crust (at a depth of 12 m from the day surface). Primary ores were studied by a sparse network of exploratory boreholes. The total core yield for ore zones was 97.6%.

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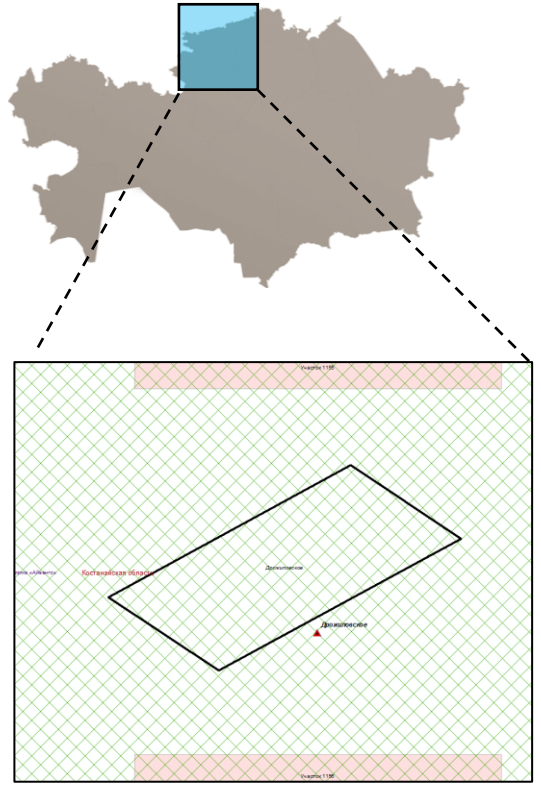


- territory included in the State Budgetary Inspectorate for the extraction of solid minerals (m- e Drozhilovskoye), for further auction
- licenses for GIN

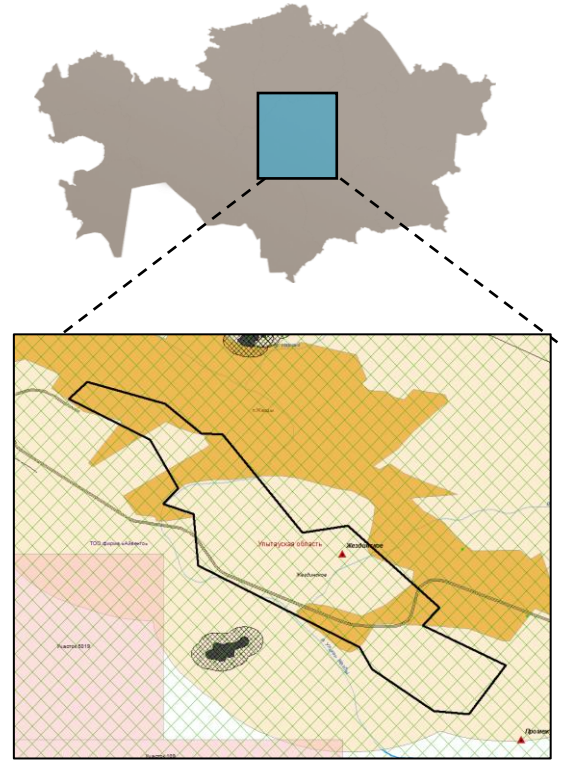
Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
gold	C2 – 2100 kg	-

Zhezdinskoe plot
Ulytau region

8

Location: The deposit is located 40 km NE of the city of Karsakpai.

Brief geological characteristics: The ore deposits are concordant bodies in the thickness of conglomerate sandstones, confined to both wings of the Dzhezdinskaya anticline, along the length of the axis of which the ore bodies are confined to large tectonic faults with associated and feathering cracks.
An increased manganese content is observed in the subsided northeastern block of the deposit as the block subsides to the southeast along the axis of the Dzhezdinskaya anticline, as well as an increase in the manganese content vertically in the lower parts of the ore zone.
Red-colored molasse formation of the Middle-Late Devonian age. Red-colored conglomerate-sandstone sequence of the Uytas suite of the Zhaki -Kon series of the Upper Frasnian , possibly Famennian . Arkose unit of pink and reddish-brown color, composed of gravelites and inequigranular sandstones, less often, conglomerates and siltstones. The total thickness of the rocks of the Uytas suite is 10-1200 m. The thickness of the arkose unit is up to 150 m. The bedding is gentle. A network of tectonic faults is developed.



Zhezdinskoye field), for further auctioning

- settlement and the buffer zone of the settlement - p.Zhezdy

- licenses for GIN

- river

- railway

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
manganese ores	A+B+C1-7491.8 thousand tons , C2 – 194 thousand tons	-

Promezhutochnoye deposit
Ulytau region

9

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

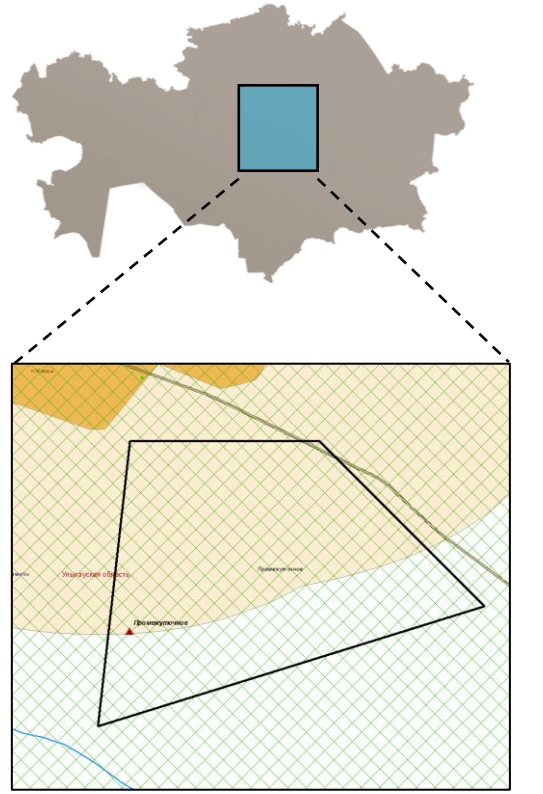
Brief geological description: The deposit is confined to the gently dipping (12-14°) southwestern wing of the Dzhezdinskaya anticline, which is a second-order fold on the southwestern wing of the Esculinsky brachyanticline uplift.

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.



Zhezdinskoye field), for further auctioning

- settlement and the buffer zone of the settlement - p.Zhezdy

- licenses for GIN

- railway

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

Zhaksy deposit (section 3.5)
Akmola region

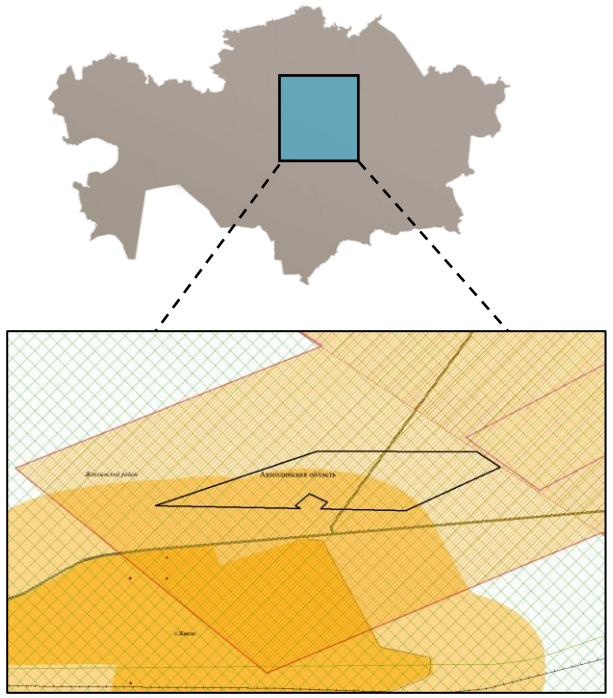
Location: located in Zhaksynsky district, 3 km north of Zhaksy railway station .

Brief geological characteristics: Confined to the southwestern part of Kalmakkul synclinorium . In the red clayey-siliceous shales of the Lower Ordovician, there are numerous thin ore layers. The number of ore layers in ore-bearing packs is from 4 to 20, sometimes up to 80. The thickness of individual layers varies from 5 cm to 2.1 m. Their total thickness reaches 10 m. The most saturated with ore are areas of frequent facies mutual transitions of red shales to violet-gray ones. The thickness of the ore-bearing horizon is 250-280 m. The deposit consists of 6 isolated areas, stretched in the north-west direction for 8 km. In each area, the ore horizon is traced from 100-600 to 1500 m. The ore bodies consist of alternating layers of braunite ores and clay rocks, have a layer- and lens-shaped form, crumpled into narrow folds. In areas where ore layers are wedged out, concretionary (boulder) ores often occur.

Non-metallic minerals include quartz, calcite, chalcedony, chlorite, and sericite. Admixtures of pyrite and chalcopyrite are occasionally recorded.

manganized shales to varying degrees . The degree of mineralization is very different - from rare dissemination to complete replacement of the rock with ore minerals. The manganese content in primary ores is from 7.8 to 53.65% (on average 24.7%); iron 6.21%, phosphorus 0.05%. In ores of the oxidation zone, %: Mn - 30; Fe - 4.05; SiO2 - 34.75; alumina - 4.45; lime - 2.05; magnesia - 1.13; sulfur - 0.006; phosphorus - 0.062.

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
manganese ores	C2-2131.9 thousand tons	-



Zhaksy field), for further auctioning

- terminated contract territory of TKS-Zhaksylyk LLP , Zhaksylyk site . Contract No. 4131 dated July 31, 2012 for manganese exploration, terminated in 2017 (the Company does not have an inspection/liquidation certificate)

- licenses for GIN

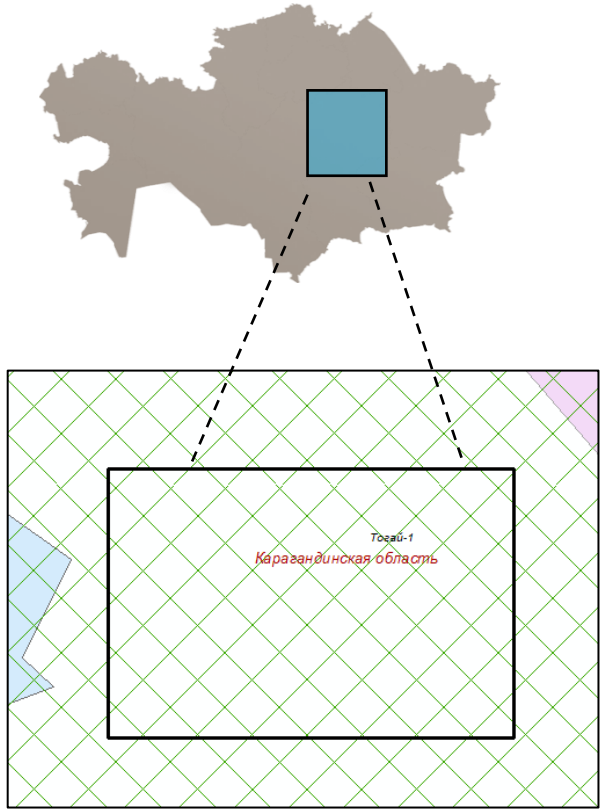
- buffer zone of the settlement of the village of Zhaksy

Togay-1 deposit
Karaganda region

Location: Located 3 km west of Kentobe .

Brief geological characteristics: the ore body is confined to the contact of effusives with shales. The ore-bearing rocks are epidotized skarnoids and skarns. The ore body is lens-shaped and lies conformably with the host rocks, is 200 m long, and is 58-60 m thick on the western flank and 16 m on the eastern flank. It dips north at an angle of 67-75°, and is located at a depth of 0-93 m. The ores are mainly hematite, with a small amount of magnetite (with pockets of musketovite and pyrite) in the central part of the body. In the near-surface part, the ores are enriched with martite . The composition of the primary ores is hematite, magnetite, pyrite, pyrrhotite, chalcopyrite, sphalerite; the oxidized ores are goethite, limonite, martite . The iron content in primary ores is from 42.16 to 53.37%, sulfur 5.7%, phosphorus -0.02%, in oxidized ores - from 44.47 to 59.53% iron, 0.74% sulfur and 0.022% phosphorus. The enrichment of primary ores is average, oxidized ores - without enrichment.

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
iron ores	C2-733 thousand tons	-



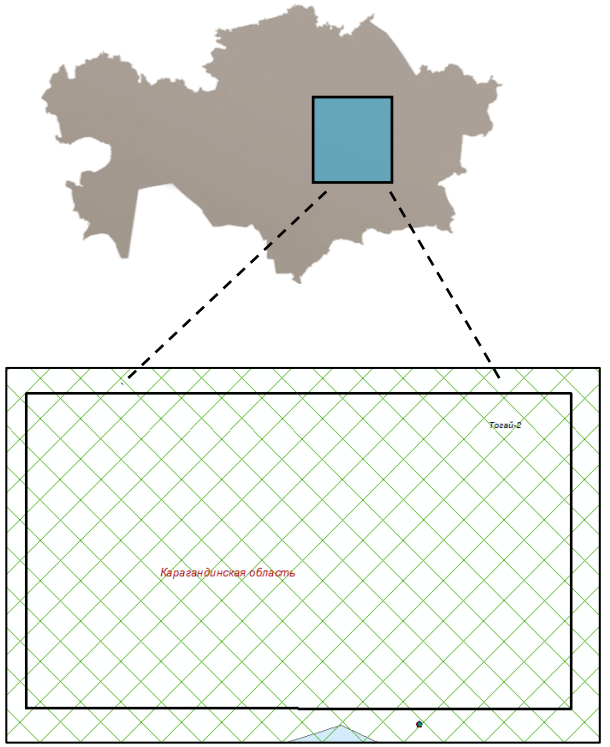
- the territory included in the PUGFN for solid mineral extraction (Togay-1 field), for further auctioning

- licenses for GIN

Togay-2 deposit
Karaganda region

Location: Situated 600 m south of the Togai I site.

Brief geological characteristics: mineralization is localized in a small synclinal fold. Ore-bearing rocks are epidotized skarnoids and skarns. The internal structure of the ore body is similar to Kentoba . Here, too, magnetite ores are enclosed in a "shirt" of skarnoids and skarns no more than 5 m thick, and only in the western part of the body, where the ores wedge out, skarnoids with dissemination and nests of magnetite reach a thickness of 18-20 m. The ore body has a sublatitudinal strike, is lenticular in shape, is 160 m long, and has an average thickness of 18 m.



Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
iron ores	A+B+C1- 639 thousand tons , C2-169 thousand tons	381.7 thousand tons

- the territory included in the PUGFN for solid mineral extraction (Togay-2 field), for further auctioning

- licenses for GIN

Birksey deposit
Karaganda region

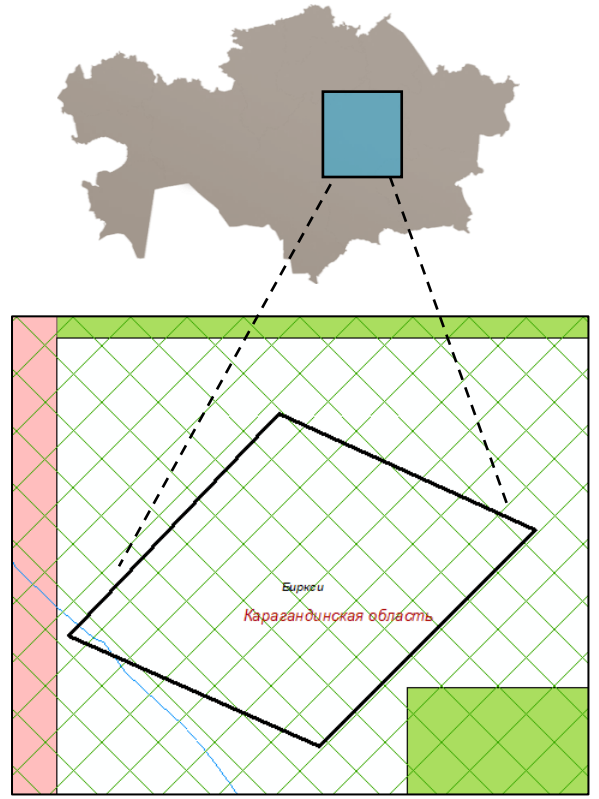
Location: located in the Aktogay district of the Karaganda region, 40-45 km west of the city of Balkhash and 16 km north of the Gulshad mine.

Brief geological characteristics: The Birksi deposit is located within two large tectonic units of the North-Western Pribalkhashye , near the border of Tasaral-Kyzylespinsky anticlinorium and Tokrauskogo synclinorium . In the area of articulation with Tasaral-Kyzylespinsky anticlinorium Tokrauski The synclinorium is composed of magmatites of Carboniferous and Permian age. All rocks that make up the deposit are subject to metasomatic changes (silicification , sericitization , alunization , kaolinization and propylitization) to varying degrees . Andesite porphyrites and their tuffs are particularly intensively altered ; they are transformed into quartz-sericite metasomatites and are broken by a dense network of quartz-vein stockwork. In terms of mineralogy, the polymetallic ores encountered in the Birksey area consist mainly of pyrite, galena, sphalerite, bournonite and enargite are less common , and chalcocite and chalcopyrite are found in isolated cases.

The distribution of lead and zinc in the ore bodies of the Birksi deposit is not uniform. The values of the variation coefficient calculated for the lead and zinc contents in the ore bodies fluctuate within 50-118%. Taking into account the structural and morphological types of ore bodies and the uneven distribution of the useful component in them, the deposit is assigned to group 3 according to the complexity of its geological structure.

Within the deposit, 51 linearly elongated steeply lying ore bodies and 5 ore lenses have been identified, of which 10 contain approximately 74% of the estimated reserves.

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
lead	C2 – 96.69 thousand tons	-
zinc	C2 – 42.62 thousand tons	-
silver	C2 – 525.18 tons	-



Birksi field), for further auction

- licenses for GIN

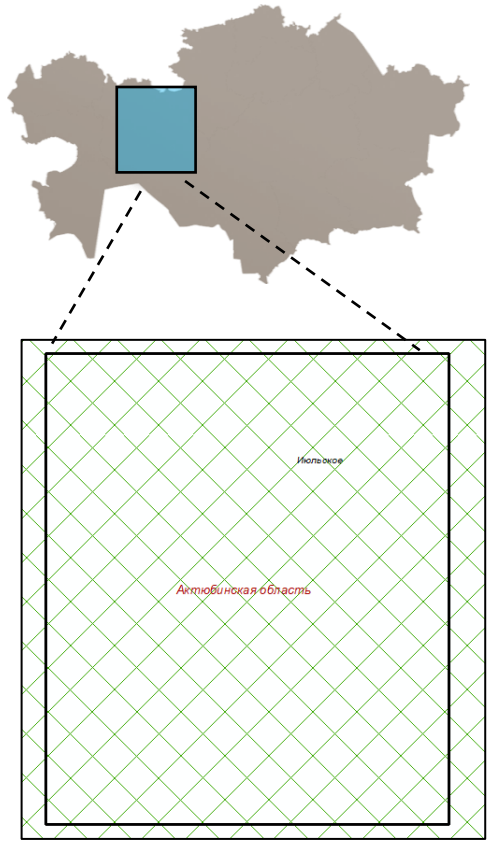
July deposit
Aktobe region

Location: The Iyulskoye deposit is located in the Mugodzharsky district of the Aktobe region, 22 km southwest of the Bugetysayskoye deposit , on the right bank of the Tulepsay River , a right tributary of the Uly -Taldyk River. Discovered by T.G. Pavlova . Studied in 1967-1973 by O.I. Timofeev, V.G. Kuts, G.I. Burd , T.M. Volkhina, and others.

Brief geological characteristics: The deposit is confined to the Karasai anticline. The host rocks are high-alumina two-mica gneisses with thin interlayers of amphibolites and micaceous quartzites - intensively migmatized . Four bodies of asbestos- bearing metaultramafic rocks , forming a bead-like chain about 4 km long. Industrial asbestos contamination has been established only in body 1, which is the largest. Its length is 180 m with a thickness of 55 m in the central part. The extension is submeridional

The core of the body is composed of serpentinites, changing towards the periphery to talc-anthophyllite-carbonate rocks with relicts of serpentinites, then talc- anthophyllite ; the marginal parts are talc-vermiculite - actinolite and vermiculite rocks. Chloritization is noted in the altered zones . The zones of talc -anthophyllite and talc-anthophyllite-carbonate rocks, developed in the near-surface part of the body and in its hanging wall, are productive. The ores of the deposit are tangled-fibrous, paniculate; the fiber in the near-surface part is colored with iron hydroxides. The average fiber content of class +0.5 mm is 5.3%, class +1.6 is 0.4%.

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
asbestos	A+B+C1 – 6.5 thousand tons	1.3 thousand tons



- territory included in the State Natural Resources and Natural Resources Management Plan for solid mineral extraction (Iyulskoye field), for further auctions for GIN

- territory of licenses

Zhila 31 deposit
Abay region

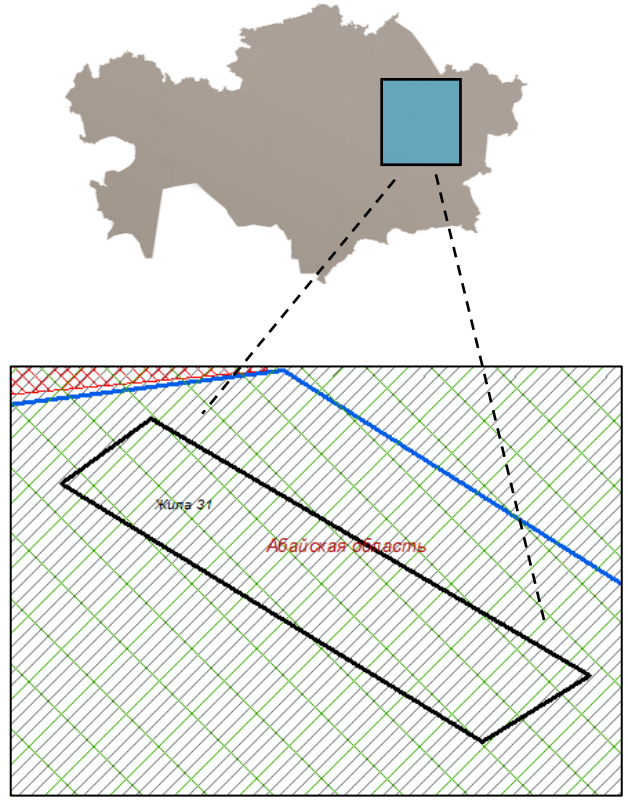
15

Location: The site of the Zhila No. 31 Bakyrchik ore field is located in the Zharminsky district, 51 km east of the Shar railway station.

The site was discovered during geological exploration in 1953-1972 within the Kyzylovskaya shear zone of the Alaigyr ore field.

Brief geological characteristics: The site is confined to the Alaigyr ore field, which is a component of the larger Bakyrchik ore field. The main ore-controlling role is played by the south-eastern tectonic faults, conjugated with the Kyzylovskaya shear zone. The geological structure of the area includes Paleozoic deposits, represented mainly by terrigenous-sedimentary rocks of the Carboniferous system. From the surface, Paleozoic formations are transformed into weathering crusts. Oxidized gold-bearing ores, which are hypergene -altered rocks of quartz-carbonate composition with vein-disseminated gold-sulfide mineralization. The oxidized ore zone, the lower boundary of which is located at a depth of 20-40 m, is confined to the siltstone -sandstone layer, covered by a thin cover of eluvial-deluvial deposits of the Cenozoic. The boundary of the oxidation zone was determined based on a visual inspection of the core and sludge samples. The shape of the ore bodies is lenticular.

According to the complexity of the geological structure, the Zhila No. 31 site is assigned to group 3. The material composition of oxidized ores was studied using three large process samples in the laboratory of the VNIITsVETMET State Research Institute of Mineral Resources. The ores are characterized by quartz-sericite and quartz-chlorite-sericite composition with an admixture of kaolinite and oxidized ore minerals. Native gold is unevenly distributed and is in a microscopic or submicroscopic state, forming inclusions in quartz and limonite-goethite- scorodite mass. Based on the results of testing small process samples (31 samples) for the degree of gold leaching with sodium cyanide, the extraction rates for different samples ranged from 40% to 93%. Process studies on the processing of oxidized ores were carried out using the chemical enrichment method based on leaching gold with a solution of sodium cyanide and precipitating it with activated carbon. The maximum possible degree of gold extraction into the solution for the studied technological samples was: with a gold content of 0.3 g/t - 60%; with a content of 0.5 g/t - 67.2%; with a content of 0.8 g/t - 83.6%.



Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
gold	A+B+C1 – 161.2; C2 – 19.8 kg	15.0 kg

- the territory included in the PUGFN for solid mineral extraction (Zhila 31 field), for further auctioning

- licenses for GIN

Novo-Berezovskoye deposit
East Kazakhstan region

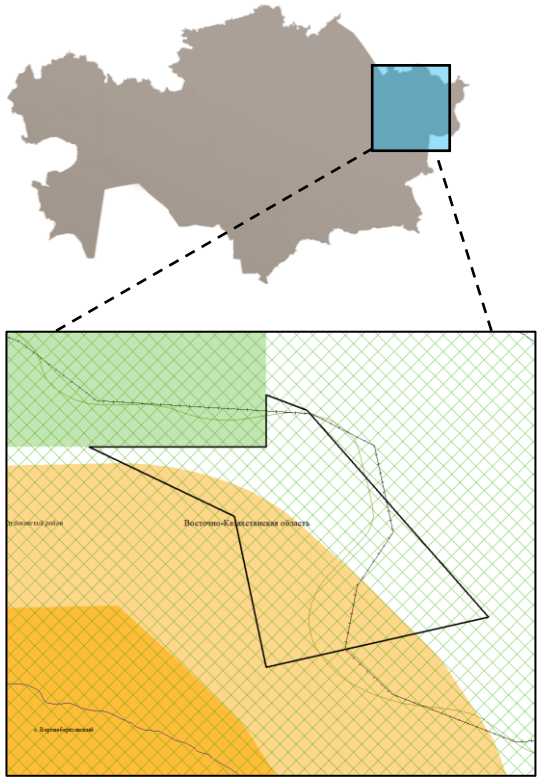
16

Location: located in the Glubokovsky district, 48 km northwest of Ust-Kamenogorsk, 8 km northwest of the Predgornaya railway station.

Brief geological description: The deposit is confined to an extended narrow tectonic block of the Irtysh shear zone, which crosses the southwestern limb of the Aley anticlinorium . The area of the deposit is composed of porphyroids with interbeds of tuffs, lenses of terrigenous rocks and limestones of the Irtysh suite of the Givetian- Frasnian and porphyroids after quartz porphyry and tuffs of dacitic composition of the Famennian . The rocks are crushed into narrow isoclinal folds of northwestern strike with a steep (75-85°) southwestern dip of the limbs. Devonian deposits are intruded by lens-shaped stocks of quartz diorites of the Middle-Late Carboniferous and numerous dikes. Among the latter, two groups are distinguished - early and late. The early group - microdiorites , diorite and quartz diorite porphyrites. They are intensely sheared . The late group of dykes includes diorite porphyrites and dacite porphyries of massive appearance. The occurrence of rocks is complicated by numerous faults, among which extended zones of increased schistosity and plastic flow of rocks stand out. At intervals of repeated crushing of tectonic schists, these zones include the bulk of mineralization.

The main body of the deposit is confined to a zone of increased shear in the footwall of a quartz diorite intrusion. The zone has been traced for more than two kilometers. It dips steeply to the southwest at an angle of 75-85°, and declines to the northwest at an angle of 35-45°. Eight ribbon-shaped ore bodies have been identified. Ore composition: pyrite, pyrrhotite, sphalerite, chalcopyrite, galena, marcasite, magnetite, arsenopyrite, fahlore , wittechinite, bismuthinite, galenobismuthite , quartz, sericite, chlorites, and barite. The main ore types are pyrite-chalcopyrite- sphalerite and pyrrhotite- chalcopyrite-sphalerite . Polymetallic and barite-polymetallic ores are of subordinate importance . Ore textures: massive, vein-disseminated, spotted, banded, lenticular-banded. Average copper content is 1.67%, zinc - 4.85%, lead - 1.67%, gold - 0.3 g/t, silver - 17.8 g/t.

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
gold	A+B+C1 – 161.0 kg; C2 – 1482.0 kg	150 kg
silver	A+B+C1 – 9.8 tons; C2 – 56.6 tons	12.3 tons
copper	A+B+C1 – 10.1 thousand tons ; C2 – 78.4 thousand tons	4.2 thousand tons
lead	A+B+C1 – 1.1 thousand tons ; C2 – 4.9 thousand tons	0.2 thousand tons



- territory included in the State Natural Resources and Natural Resources Act for solid mineral extraction (Novo-Berezovskoye field), for further auctioning

- licenses for GIN

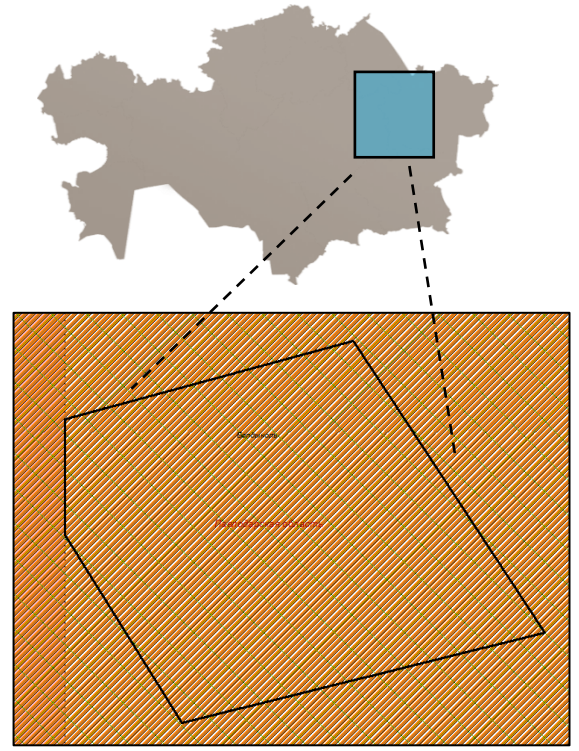
- buffer zone of the settlement of Verkhneberezovsky

Boldykol deposit
Pavlodar region

Location: Situated within the Semipalatinsk test site, on the border of the East Kazakhstan and Pavlodar regions, 100 km west of the city of Semipalatinsk and 26 km north of the village of Balapan .

Brief geological description: The deposit was discovered in 1965 (Kempir site), as a result of advanced geophysical work carried out by the Gornostaevskaya AGE party. In the period 1974-1977 , prospecting work was carried out within the Boldykol ore field by the Gornostaevskaya and Kulundzhunskaya parties, as a result of which the Boldykol and Mysh'yakovy sites were discovered. Prospecting work was continued at the Boldykol site in 1990-1994 . In 2003, in accordance with the contractual obligations of the Altyn-Tobe Mining and Processing Company, prospecting and evaluation work was carried out. The results of this work were submitted for consideration to the State Reserves Committee. Only the reserves of the main ore bodies were submitted for approval to the State Reserves Committee. In addition, the deposit has estimated predicted resources of primary gold-sulfide ores of category P1 in the amount of 407.0 thousand tons , 837.0 kg of gold with a content of 2.06 g/t.

The completed consolidated technical and economic calculations indicate the possibility of processing oxidized ores from the Boldykol deposit using the heap leaching method with a fairly high internal rate of return of 38.2% and a payback period of 1.5 years.



Boldykol field), for further auction

- licenses for GIN

- SIYAP

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
gold	C2 – 198.5 kg	-

Zagadka deposit (Bakyrchik ore field)
Abay region

Location: Situated in the Zharminsky District, 3 km west of the deposit and the Bakyrchik mining enterprise of the same name , 51 km east of the Shar railway station, 160 km southeast of Semipalatinsk and 90 km southwest of the regional centre of Ust-Kamenogorsk. **Brief geological description:** The history of geological exploration of the ore zone of the Zagadka site is closely linked to the exploration of the Kyzylovskaya shear zone and the discovery of the Bakyrchik deposit . Exploration (search and exploration work) of the site was carried out from 1962 to 1974 , in 1996 verification work was carried out at the site to check the data obtained during previously conducted geological exploration work. In terms of geological and structural position, control of mineralization, and mineral composition of ores, the ore zone of the Zagadka site is a complete analogue of the Bakyrchik deposit . Six ribbon-shaped ore bodies and 12 lenses have been identified on the site.

According to the degree of complexity of the geological structure, the Zagadka site is classified as group 3.

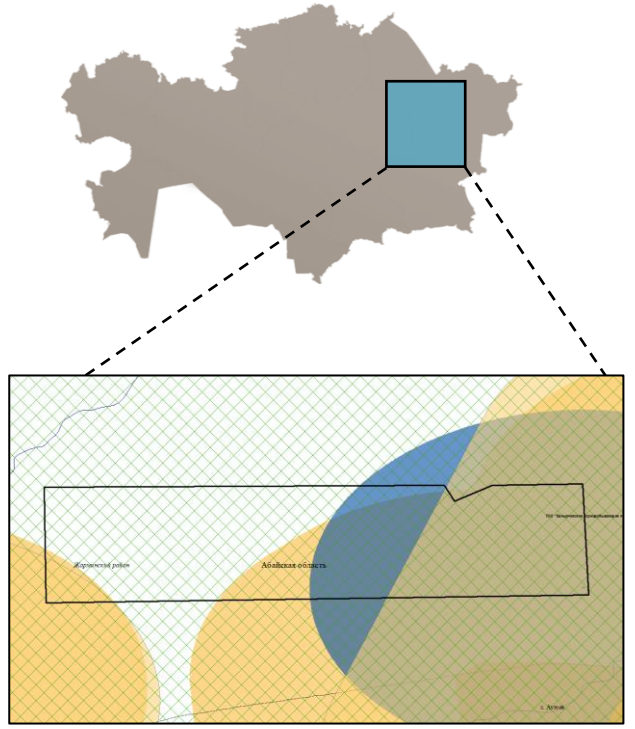
The bulk density of oxidized ores at the Zagadka deposit was determined by selecting pillars, followed by waxing of the samples. Four samples were selected. The bulk density of the waxed samples was 2.42 t/m3.

The bulk density of oxidized ore for calculating reserves, taking into account the natural moisture content determined from 30 samples and equal to 1.5%, is taken to be 2.48 t/m3

The results of technological experiments show the possibility of processing oxidized ores of the Zagadka deposit using the cyanidation method with high gold extraction (90-92%), while the gold content in the enrichment tailings is 0.35 g/t.

Engineering and geological conditions are adopted similar to those of the surveyed mining quarries of the region (Chalobai , Bakyrchik , Alaigyr sections) with a depth of up to 25 m and a standing time of 15–25 years, and are characterized as simple.

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
gold	C2 – 105.0 kg	-



- the territory included in the PUGFN for solid mineral extraction (Zagadka field (Bakyrchik ore field), for further auctioning
- licenses for GIN
- buffer zone of a populated area
- buffer zone of the cattle burial ground

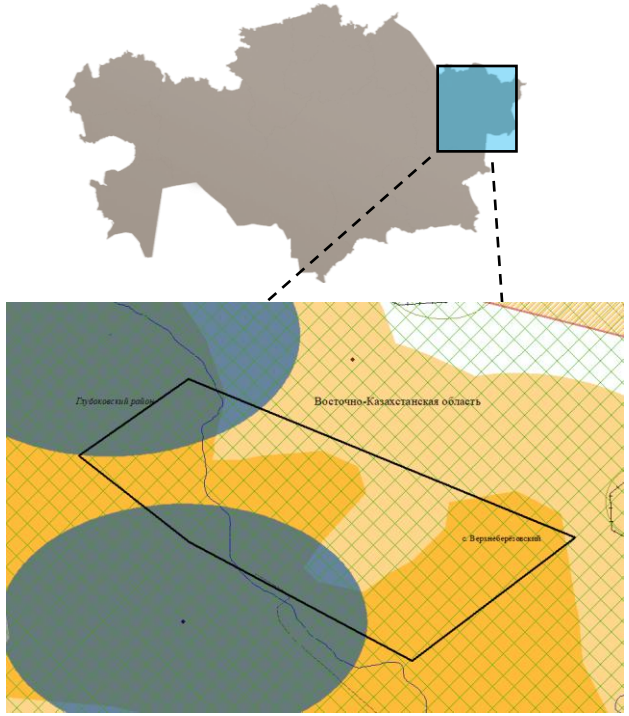
Berezovskoye deposit
East Kazakhstan region

19

Location: Situated in the Glubokovsky District of the East Kazakhstan Region, 49 km northwest of Ust-Kamenogorsk, 160 km southeast of the Zashchita railway station. Coordinates: longitude 82°12', latitude 50°16'. Discovered: in 1730.

Brief geological description: The deposit is located in the Berezovsko-Belousovskoye ore field, which is a block of the Ore-Altai block involved in the Irtysh deep fault zone. The ore field is composed of sericite-chlorite, chlorite-quartz, carbonaceous-clayey and siliceous shales, dolomitized limestones and rhyolites of the Shipulinskaya Givetian suite . Five ore deposits have been identified (Main, South-East, South-West, North-West and Parallel), including a large number of ore bodies. The shape of the ore bodies is irregular, ribbon- and lens-shaped with an echelon-like arrangement. The ores are polymetallic. The ratio of copper, zinc and lead is 1.02:4.5:1. Three types of ores are distinguished: lead-zinc, copper-zinc, copper- pyrrhotite . The average lead content is 1.0%, zinc - 4.9%, copper - 1.8%, gold - 1.09 g / t, silver - 76 g / t. Ore composition: pyrite, sphalerite, chalcopyrite, galena, pyrrhotite, fahlore, melnikovite -pyrite, arsenopyrite, bournonite, magnetite, quartz, dolomite, ankerite, sericite, albite, breunnerite . Trace elements: gold, silver, cadmium, indium, selenium, tellurium. Ore textures: massive, banded, disseminated. Wall-ore alterations: silicification , chloritization , sericitization , dolomitization. The oxidation zone is developed to a depth of 40-50 m. Monheimite , malachite, azurite, limonite, smithsonite, cerussite, jarosite, cuprite, chrysocolla, gold, etc. are widespread in it. The zone of secondary sulphide enrichment is traced to a depth of 60-80 m. It contains chalcocite, covellite, argentite, marcasite, etc. Degree of development: the deposit is reserve.

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
copper	A+B+C1 – 0.1 thousand tons , C2 – 1.8 thousand tons	0.1 thousand tons
silver	-	0.6 tons
lead	A+B+C1 – 0.4 thousand tons , C2 – 0.1 thousand tons	0.1 thousand tons



- territory included in the State Natural Resources and Natural Resources Act for solid mineral extraction (Berezovskoye field), for further auction
- licenses for GIN
- settlements and buffer zones s. Verkhneberezovsky
- buffer zone of the cattle burial ground
- river

Batamshinskoye deposit
Aktobe region

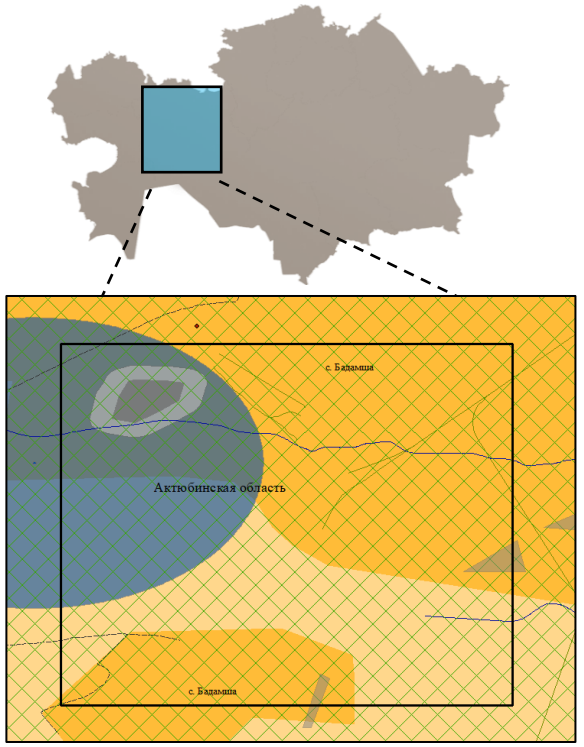
Location: 2 km south of the urban-type settlement Batamshinsk , Aktobe region. Discovered in 1933 during the search for silicate nickel deposits.

Brief geological description: The deposit is located in the middle part of the Kempirsay massif of hyperbasites in the zone of its eastern contact with the host gabbro-amphibolites, in the area of development of sublatitudinal gabbro-diabase dikes. Mineralization is localized in the weathering crust of serpentinites that make up the watershed upland. The weathering crust consists of three zones (from bottom to top): leached nontronitized serpentinites, nontronite clays, ochers and ochristo- nontronite rocks. The total thickness of the eluvium is on average 50 m. Industrial cobalt-nickel mineralization is noted within all zones. Two deposits have been identified at the deposit, combining 7 ore bodies, 6 of which have been developed by the Yuzhuralnickel plant to date. The horizontally occurring ore bodies have a sheet-like shape with a wavy roof and uneven base, complicated by pocket-like depressions. The length of the ore bodies is 225-1900 m, the width is 15-150 m, the thickness is 1-29.6 m, on average 4.8 m. The depth of the roof of the ore bodies varies from 0.3 to 45 m. From the surface they are covered by a cover of Neogene-Quaternary deposits. The ratio of lithological types of ores is as follows: ocher and ochre-bearing nontronites - 10.9%, nontronite clays - 38.8%, nontronitized serpentinites - 36.6%, leached serpentinites - 13.7%.

The main ore minerals are nontronite and garnierite, the secondary ones are kerolite , nickel-containing chlorite and asbolane . Nontronite is present in all types of ores in quantities of up to 80% in the form of lumpy, wax-like, yellow-green clusters with a greasy luster. Garnierite occurs in the form of dense, matte, green crusts and thin, branching veins.

The content of the main useful components in the ores: nickel - 0.87%; cobalt - 0.037%. Harmful impurities: copper - 0.038%; chromium oxide - 3.5%. According to the content of the main slag-forming components, the ores belong to the magnesite-ferrous type.

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
nickel	A+B+C1 – 2.2 thousand tons	0.6 thousand tons
cobalt	A+B+C1 – 104 tons	27 tons



- territory included in the State Natural Resources and Natural Resources Act for solid mineral extraction (Batamshinskoye field), for further auction
- licenses for GIN
- TMO polygon
- settlement and buffer zone of the village of Badamsha
- buffer zone of the cattle burial ground
- cemetery and buffer zone
- river

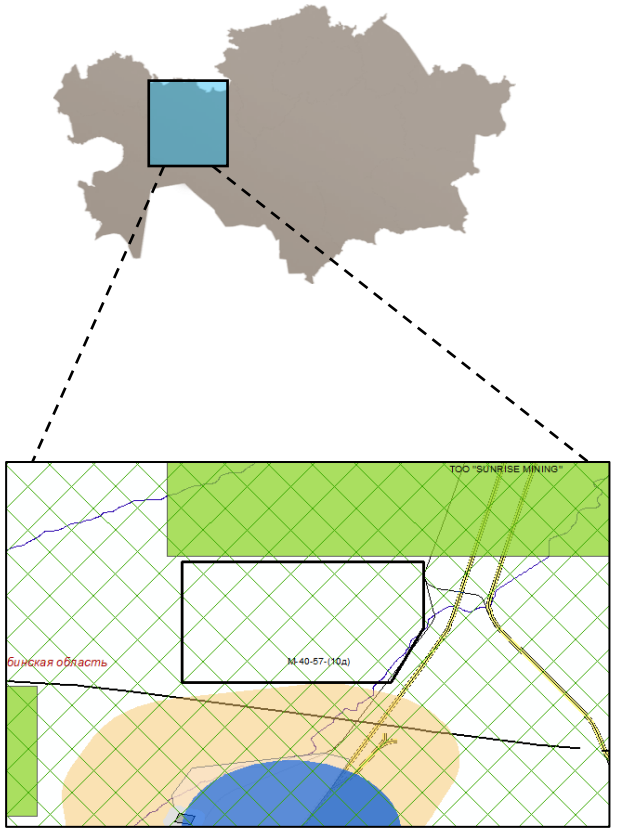
Shelektinskoye
Aktobe region

Location: 3.5 km northeast of the Nikel-Tau railway station and 16 km southwest of the Batamshinsky urban-type settlement in the Aktobe region. Discovered in 1933 during a study of the deposit's natural mineral dyes.

Brief geological characteristics: Cobalt-nickel mineralization is confined to the weathering crust of apodunite serpentinites that make up the watershed surface. The weathering crust is represented by a reduced profile, in which only two zones are distinguished: leached and nontronitized serpentinites and a zone of ocher. Industrial mineralization is noted in both zones. Within the deposit, 8 deposits of commercial ores have been identified, uniting 16 ore bodies ranging in length from 25 to 750 m with an average thickness of 3.3-6.8 m. The depth to the roof of the ore bodies varies from 0.2 to 19 m. All ore bodies of the deposit are tabular in shape and horizontal in occurrence with high variability in thickness. The shape of the bodies in plan is irregular. The areas of individual ore bodies reach 213,515 sq. m. In addition to industrial ones, the deposit contains eight small-sized substandard ore bodies with low nickel and cobalt contents.

The main ore minerals are nontronite and nickel-containing chlorite; the secondary ones are kerolite , garnierite and asbolane . The amount of nontronite does not exceed 40-50% of the rock volume, chlorite 10-30%. They occur as aggregate clusters of scaly green grains. Asbolane forms thin veins in leached serpentinites and dense crusts in rock cavities. Its amount in the ore is about 1%.

The deposit's ores are divided into two technological types by chemical composition: ferrous, which makes up about 75% of the reserves, and ferrous-magnesian, which makes up 25% of the reserves. The average nickel content in the ore is 1.27%, cobalt - 0.05%, copper - 0.048%, chromium oxide - 2.5%.



Shelektinskoye field), for further auctioning

- licenses for GIN

- river

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
nickel	A+B+C1 – 3.5 thousand tons	6.1 thousand tons
cobalt	A+B+C1 – 247 tons	220 tons

Chuuldak deposit, plot 1
Aktobe region

Location: located in the Mugodzharsky district of the Aktobe region.

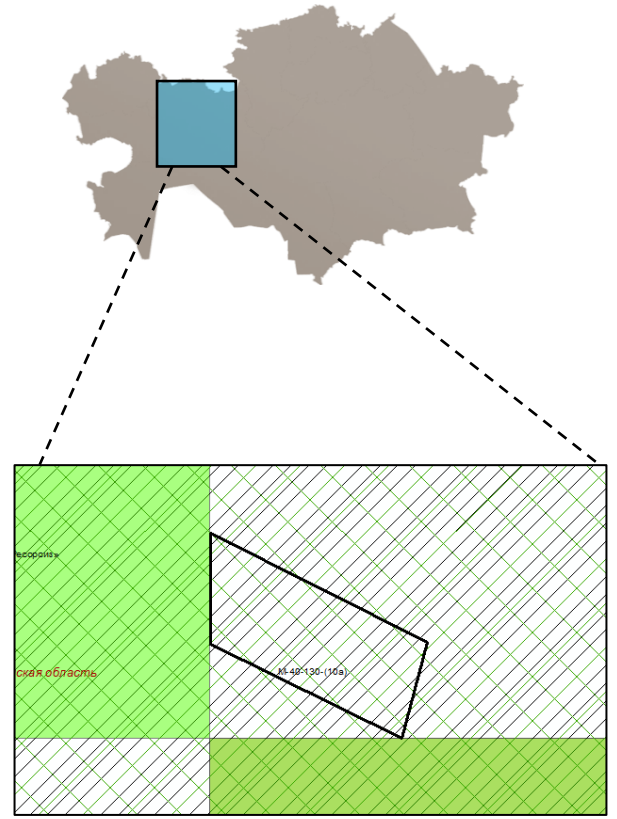
Brief geological characteristics: Horizons, lenses and interlayers of manganese ores and manganized rocks are localized within the Shuldak horizon at its contact with deposits of the Milyashinskaya and Ulutau suites, associating with siliceous and clay-sandy-gravel formations. Industrial mineralization is controlled by the northern fragment of the Berchogur trough in its centricolinal closure. The eastern wing of the structure, where the main ore deposits are located, is characterized by a gentle bedding of rocks and ores at an angle of 20-40° to the horizon in the direction of the trough center. Fragments of ore bodies and the ore bodies themselves are subject to structural-tectonic control, localizing along the eastern edge of the syncline, and are dammed by effusive formations of the Middle Devonian.

Manganese mineralization localized within the Shuldak horizon is traced in the submeridional direction at a distance of up to 2-2.3 km. The main ore zones characterizing this horizon are the North-West, Central and South-East ore zones.

According to the material composition, the ore of the Chuuldak deposit belongs to the pyrolusite- psilomelane series of the silicate-manganese formation. In most cases, the ore is represented by pyrolusite, which is replaced by psilomelane to varying degrees.

The content of the useful component within the zones of manganese mineralization varies from 0.2-0.3 to 49.4-52.7%, and for the identified ore bodies, it fluctuates from 10.1 to 52.7%, averaging 20.41% for the deposit.

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
manganese ores	A+B+C1 – 47.9 thousand tons , C2 – 49.8 thousand tons	37.9 thousand tons



Chuuldak field, plot 1), for further auctioning

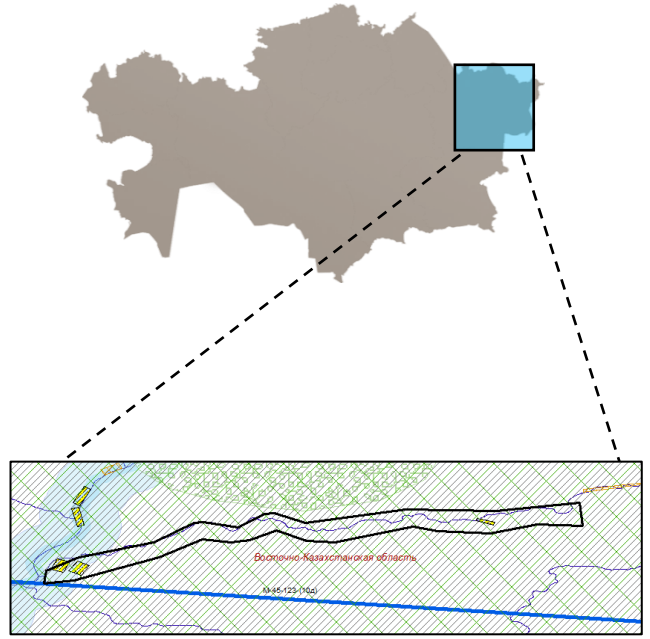
Chuuldak field . Contract No. 2052 dated 01.06.2006 for manganese exploration was terminated in 2017 (the submitted survey report states that the territory requires liquidation work)

- licenses for GIN

Chandy -Bulak deposit
East Kazakhstan region

Location: located in the Kurchum district of the East Kazakhstan region, 30 km south-southeast of the village of Bolshenarymskoye and 20 km northwest of the village of Maralikha . Discovered in 1895. Developed from 1895 to 1920.

Brief geological characteristics: Valley-type placer, Quaternary age. The length of the Chandy -Bulak stream is 500 m. The valley has a trapezoid shape, with slopes of 30-50 steepness. The bottom (floodplain) has a width of 100 to 260 m, the width of the channel is 3-8 m, the depth is up to 0.4 m. The thickness of the floodplain deposits is 1.5-5.6 m. The primary sources of gold are gold-bearing quartz veins, zones of contiguous quartz veins and silicified Listvenites , Peat is represented by boulder-pebble material with sandy-loamy filler, boulder ratio is 10%. Peat thickness is 1.2-6.7 m. The raft is composed of metamorphosed sandstones, siltstones and listvenites of the Middle Devonian. Sands are represented by sandy-boulder-pebble alluvium. The granulometric composition of sand is close to the composition of peat, but there is no loam fraction. Placer is localized in the near-raft part of gold-bearing deposits and on the raft. Its shape is ribbon-like, discontinuous, length is 160-210 m, thickness is 0.2 to 1.2 m. Distribution of gold in the placer is uneven. The gold is predominantly small (0.5-1.0 mm), lamellar, medium rounded , with a fineness of 900. The minerals that accompany gold are rutile, cassiterite, scheelite, and pyrite. The gold content in the sands is uneven and ranges from 0.354 to 8.26 mg/m3. There are separate areas of sand with a nested distribution of gold content. The average gold content is 1.517 g/m3. Degree of development: The deposit is reserve.



Chandy-Bulak field), for further auctioning

- licenses for the State Inspectorate
- licenses for GIN
- prospecting licenses
- water protection zone
- river

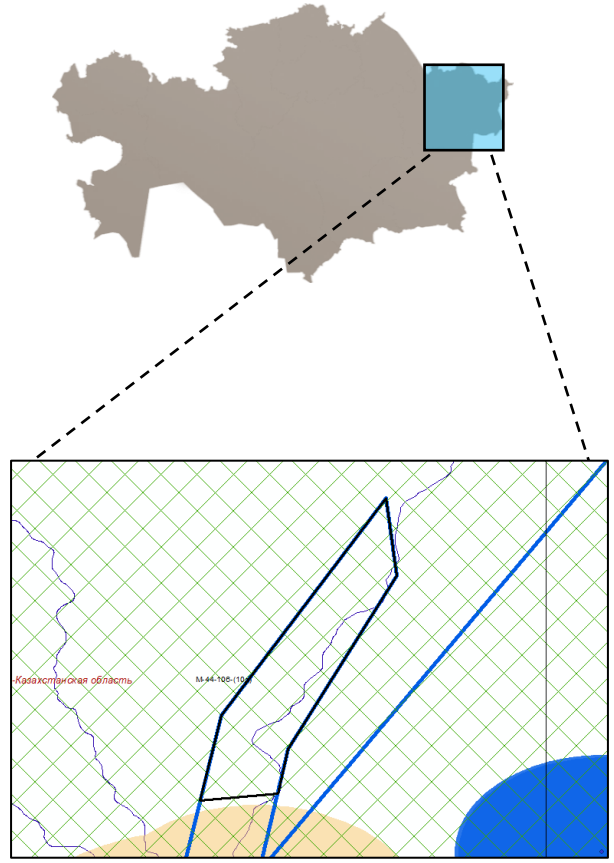
Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
gold	A+B+C1 – 43.3 kg	-

Bolshaya Bukon deposit
East Kazakhstan region

Location: located in the Zharma district of the East Kazakhstan region, 42.5 km northwest of the village of Zhumba and 40 km northeast of the village of Kokpekty .

In 1942 and 1948, small-scale geological exploration work was carried out by the GRB of the Dzhambul mine. In 1953, exploration was carried out by the South Kalachinskaya GRP. Gold content is associated with the deposits of the first terrace of the B. Bukon River .

Brief geological characteristics: The geological profile is represented by: peats, composed of a soil-vegetation layer (0.5-0.8 m), gray loams containing small amounts of gravel and sand (1-5 m). The peat thickness is 3.0 m, the sands are represented by sandy- gravel-pebble deposits with pebbles up to 6-15 cm and boulders up to 30 cm in diameter. The raft is composed of sandstones interbedded with siltstones. The placer has been traced for 4.2 km and is generally not outlined. Its width reaches 100-250 m. The thickness of the gold-bearing layer is 0.5-3 m.



Bukon field), for further auctioning

- licenses for GIN

- river

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
gold	A+B+C1 – 57.0 kg, C2 – 36.0 kg	-

Miyaly deposit
Abay region

Location: located in the Zharminsky district, 90 km west of the city of Ust-Kamenogorsk.

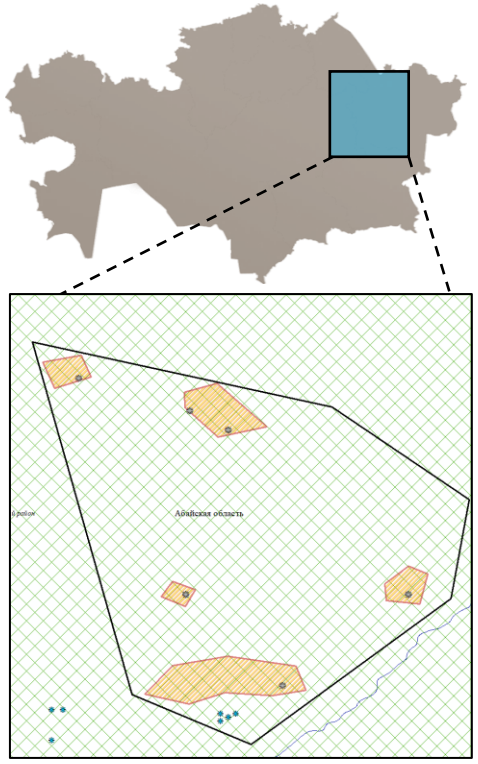
Brief geological characteristics: The deposit was discovered in 1949 during gold prospecting in the Muldy - Bulak and Karaozek river basins ; prospecting and exploration work was carried out on its territory in 1949-1965; preliminary exploration was carried out in 1985-1988. The deposit is located in the central part of the Zaisan folded system in the Miyalinsky fault zone. The geological structure of the deposit includes terrigenous deposits of the Bashkirian stage of the Lower-Middle Carboniferous. The gold-bearing part of the deposit is composed of sandstones, siltstones with interlayers of ash tuffs and lenses of porphyrites and limestones of the Bashkirian stage.

The ore bodies of the deposit do not have clearly defined boundaries and are distinguished based on sampling data. According to the complexity of the geological structure, the Miyaly deposit is classified as group 3.

The mining and geological conditions and mining and technical features of the deposit are characterized with sufficient completeness and are assessed as simple. Within the deposit, one technological type of ore has been identified - oxidized gold-bearing ores in kaolinite-hydromica weathering crusts .

In terms of mineral composition, oxidized ores are characterized by the following indicators: quartz - 45%, nontronite -kaolinite 26%, sericite + feldspar - 8%, hydromica - 10%, iron hydroxides - 1-2%, jarosite - 1%, etc.

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
gold	C2 – 380.5 kg	-



- the territory included in the State Natural Resources and Natural Resources Act for solid mineral extraction (Miyaly field), for further auctioning

- revoked contract of NPP Marganets LLP, waste heaps. Contract No. 5283 dated 20.04.2018 for gold mining terminated in 2022 (the Company does not have an inspection/liquidation certificate)

- licenses for GIN

- TMO centers

- PV wells

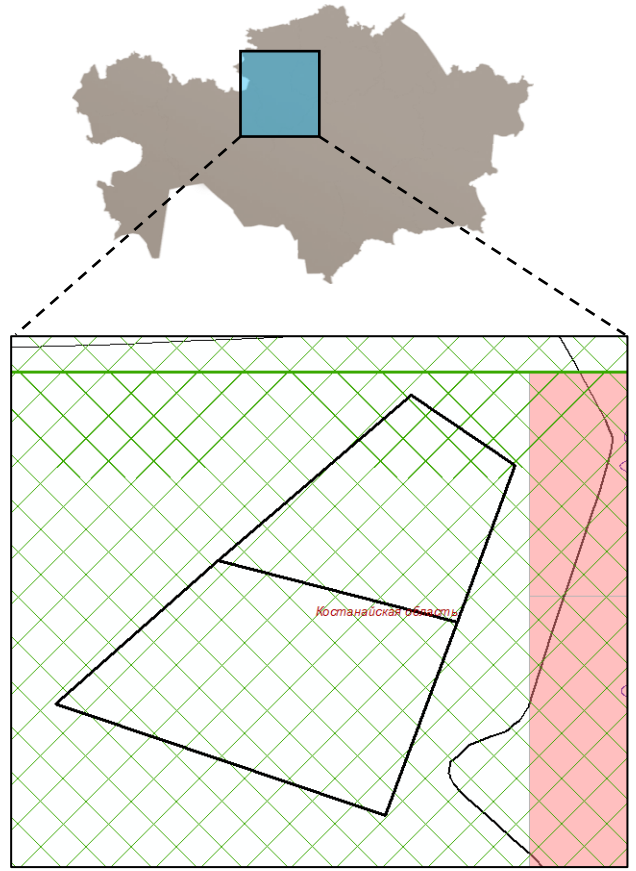
Kharkovskoye deposit (sections 1, 2, 3, 4)
Kostanay region

Location: in the Auliekol district of the Kostanay region, 20 km southwest of the Kushmurun railway station . Its northeastern part adjoins the Kushmurun deposit.

Brief geological characteristics: The deposit was explored in detail in 1947-50 (A.P. Tyurin, M.V. Bunina, G.T. Yukhno).

The coal-bearing deposits of the Kushmurun suite form a gently sloping brachysynclinal structure of north-eastern strike and contain 16 coal seams lying at a depth of 70 to 180 m. Their maximum thickness (in total) is 33 m. The most powerful seams are Moshchny, 4, 5 and 12. The coals are brown (B2), with an ash content of up to 22%, low-sulfur (0.8%), with a heat of combustion of combustible mass of 0.7 thousand kcal/kg.

The small thickness of the coal seams and their considerable depth make open-pit mining of the deposit impossible.



- territory included in the State Natural Resources and Natural Resources Management Plan for solid mineral extraction (Kharkovskoye field, plots 1, 2, 3, 4), for further auction
- licenses for GIN

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
coal	A+B+C1 – 16782 thousand tons , C2 – 324 thousand tons	4482 thousand tons

Akshoky III deposit (Western and Eastern veins)
Ulytau region

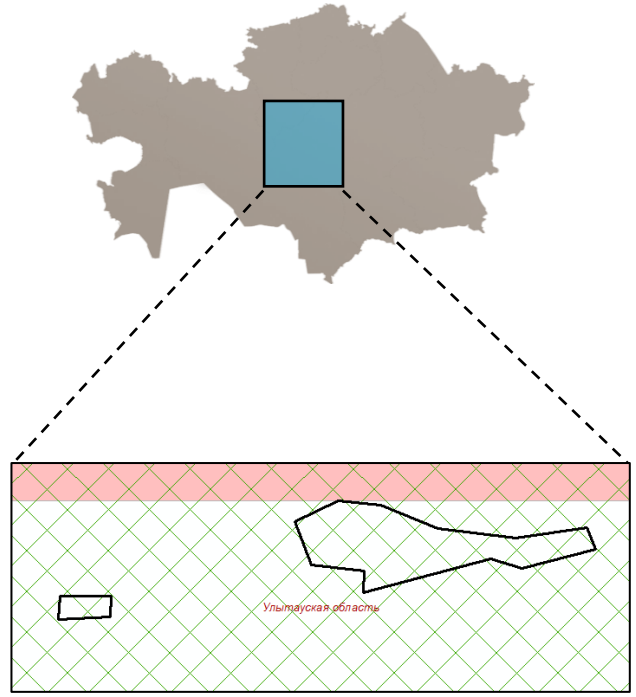
Location: in the Ulutau district, 45 km north-northeast of the Aktas settlement and 45 km from the Zhezdy railway station ; discovered by N.N. Voronov in 1939.

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 (*Reserves are indicated for the Akshoky - III deposit)*	-

Akshoky III field , western and eastern veins), for further auctioning

- licenses for GIN

Shcherbakovskoye deposit
Aktobe region

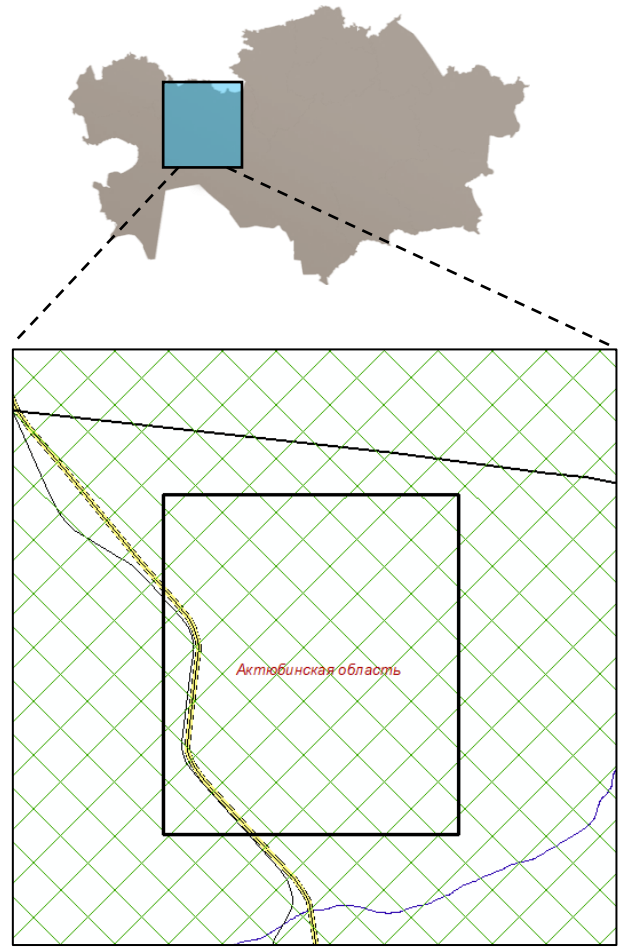
Location: The Shcherbakovskoye deposit was discovered in 1955 during drilling testing of magnetometric anomalies. It is located 3 km east of the Nikel-Tau railway station and 20 km south of the Batamshinsky urban settlement in the Aktobe region.

Brief geological characteristics: Industrial mineralization is localized in the weathering crust developed at the contact of apoperidotite serpentinites and gabbro-amphibolites and preserved as separate spots on gentle slopes of the watershed surface. The weathering crust is represented by a reduced profile in which two zones are distinguished: nontronitized serpentinites and ocherous weathering products. The eluvium thickness does not exceed 30 m. The deposit is represented by three ore bodies spaced 30-100 m from each other. The shape of the ore bodies in plan is irregular with sinuous outlines. In the section, the ore bodies have a sheet-like shape, horizontal occurrence and high variability of thickness due to the complex configuration of the base of the ore bodies with pocket-like depressions. The extent of the ore bodies along the strike varies within 70-1760 m with an average width of 85 m, thickness from 1 to 26 m, on average 6.9 m. The total area of the ore bodies is 472955 sq. m, the depth of the roof from 0.2 to 28 m. According to the cutoff nickel content of 0.5%, four ore bodies with off-balance reserves of an area from 14 to 525 thousand sq. m are outlined.

The main ore minerals are nontronite , nickel-containing chlorite, and the secondary ones are kerolite , garnierite, and asbolane . Notronite makes up about 40% of the rock in the form of aggregate clusters of scaly grains of green and brown color. Chlorite forms dense massive aggregates and individual small scales. The amount of asbolane in the ore is about 1%. It occurs in the form of drip crusts and thin veins.

Three technological types of ores have been identified at the deposit: ferrous, which make up 85% of the reserves, magnesite - 13% and siliceous - 2%. The nickel content in balance ores is on average 1.1%, cobalt - 0.04%, copper - 0.03%, chromium oxide - 2.5%. Technological tests have shown unsatisfactory sintering of the ores and the need to add them to ores from other deposits.

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
nickel	A+B+C1 – 1.4 thousand tons ,	17.1 thousand tons
cobalt	A+B+C1 – 80 tons	829 thousand tons



Shcherbakovskoye field), for further auctioning

- licenses for GIN

TMO Sludge collector No. 1
East Kazakhstan region

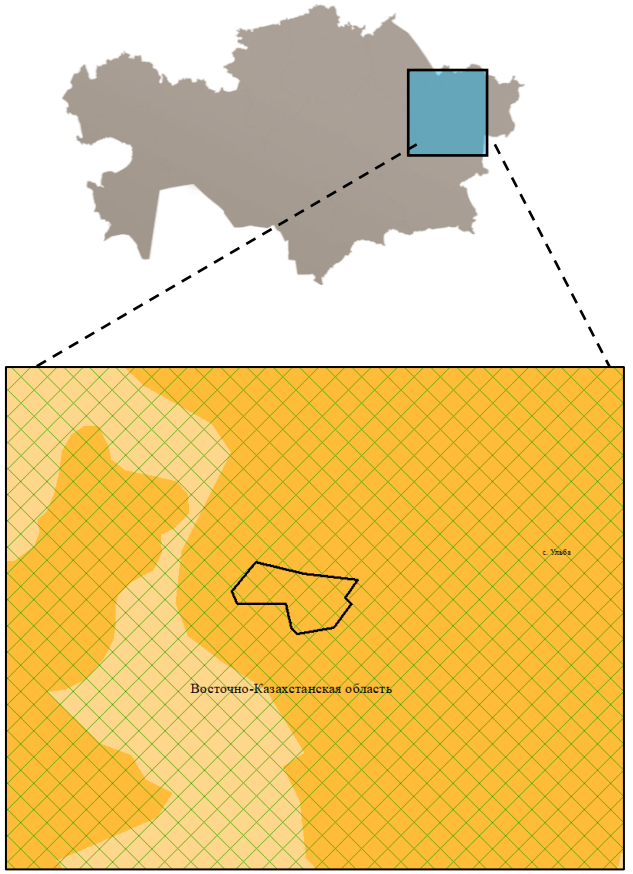
Location: Sludge pond No. 1 of the crushing and pre-enrichment shop in heavy environments (hereinafter referred to as CPP) of the beneficiation plant of the Ridder Mining and Processing Plant (RGOK) is administratively located on the territory subordinated to the Ridder city maslikhat of the East Kazakhstan region. The sludge pond is located 16 km from the city of Ridder on the industrial site of the Tishinsky mine of the RGOK of TOO Kazzinc and 104 km from the regional center - Ust-Kamenogorsk.

Brief geological characteristics: The filling of Sludge Accumulator No. 1 with sludge from washing sulphide polymetallic ores of the Tishinskoye deposit during their processing in the crushing and partial enrichment shop in heavy environments was carried out in the period 1982-2002. The accumulated sludge, containing significant amounts of non-ferrous metals, was subjected to oxidation processes under the influence of natural factors. Atmospheric precipitation, seeping through technogenic mineral formations (TMF), dissolves and carries non-ferrous metals into groundwater and into the surface runoff of the Ulba River.

Geological exploration work at Sludge Accumulator No. 1 was carried out in 2003 and 2011 by drilling wells from the surface of the stored sludge.

The mineralogical composition of the sludge is fahlore -galena-chalcopyrite-sphalerite-pyrite and is generally similar to the original ore of the Tishinskoye deposit. Of the non-metallic minerals, quartz, carbonate, sericite, and chlorite predominate. Of the rare minerals, gold with a size of 0.003×0.015 mm was found. Technogenic impurities in the sludge include ferrosilicon, magnetite, granulated slag , cement, and charcoal. Cement significantly complicates the flotation of sludge, forming cement sludge during regrinding, which acts as depressants and reduces the flotation of galena.

At the same time, the sludges have an increased amount of oxidized forms of minerals, which is not typical for primary ores and is associated with the long presence of stale sludges in dumps. In general, stale sludges are characterized as difficult-to-enrich raw materials.



- the outline of the TMO Shlamonakopiteli No. 1 deposit , included in the PUGFN for solid mineral extraction, for auction

- license for GIN

- settlement of the village of Ulba

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
Gold	A+B+C1 – 536.0 kg	-
copper	A+B+C1 – 2.8 thousand tons	-
silver	A+B+C1 – 7.2 tons	-

TMO Sludge collector No. 2
East Kazakhstan region

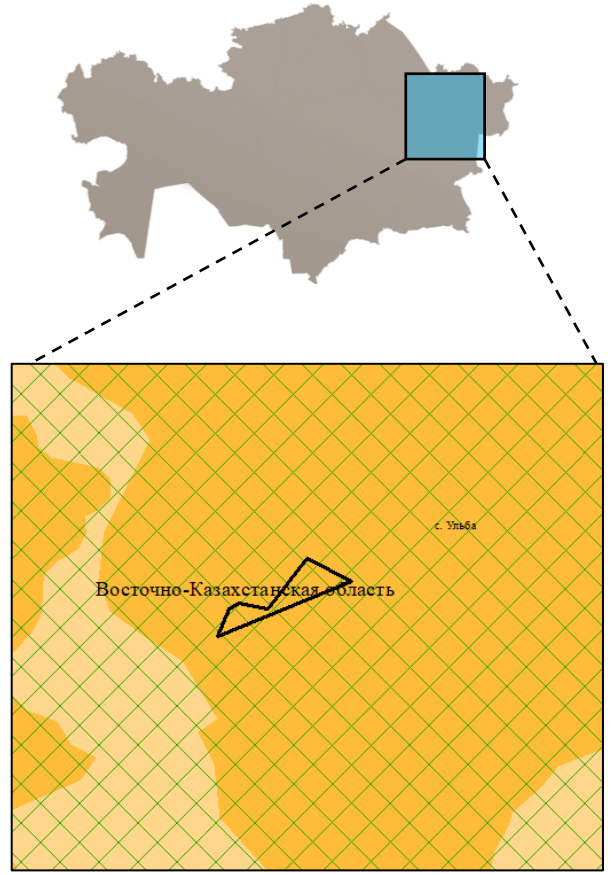
Location: Sludge pond No. 2 of the crushing and pre-enrichment shop in heavy environments (hereinafter referred to as CPP) of the beneficiation plant of the Ridder Mining and Processing Plant (RGOK) is administratively located on the territory subordinated to the Ridder city maslikhat of the East Kazakhstan region. The sludge pond is located 16 km from the city of Ridder on the industrial site of the Tishinsky mine of the RGOK of TOO Kazzinc and 104 km from the regional center - Ust-Kamenogorsk.

Brief geological characteristics: The filling of Sludge Accumulator No. 2 with sludge from washing sulphide polymetallic ores of the Tishinskoye deposit during their processing in the crushing and partial enrichment shop in heavy environments was carried out in the period 1982-2002. The accumulated sludge, containing significant amounts of non-ferrous metals, was subjected to oxidation processes under the influence of natural factors. Atmospheric precipitation, seeping through technogenic mineral formations (TMF), dissolves and carries non-ferrous metals into groundwater and into the surface runoff of the Ulba River.

Geological and economic assessment of the estimated reserves was not carried out and the profitability of sludge development was not assessed due to the fact that reclamation of the sludge pond is assumed regardless of the economic effect, due to environmental necessity. Utilization of sludge from sludge pond No. 2 will significantly reduce the negative impact on groundwater and surface runoff of the Ulba River.

The reserves are calculated within the natural boundaries of the TMO, conditions for calculating the sludge reserves have not been developed. The reserves of sludge pond No. 2 calculated as of 01.11.2008 are divided into reserves of the sludge pond accumulated before 01.09.2011, separately accumulated before 01.06.1992, owned by the state, and formed after the specified date and owned by Kazzinc LLC.

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
Gold	A+B+C1 – 181.5 kg	-
copper	A+B+C1 – 1.2 thousand tons	-
silver	A+B+C1 – 12.2 tons	-



- the outline of the TMO Shlamonakopiteli No. 2 deposit , included in the PUGFN for solid mineral extraction, for auction

- license for GIN

- settlement of the village of Ulba

Chelak -Karasu deposit
Karaganda region

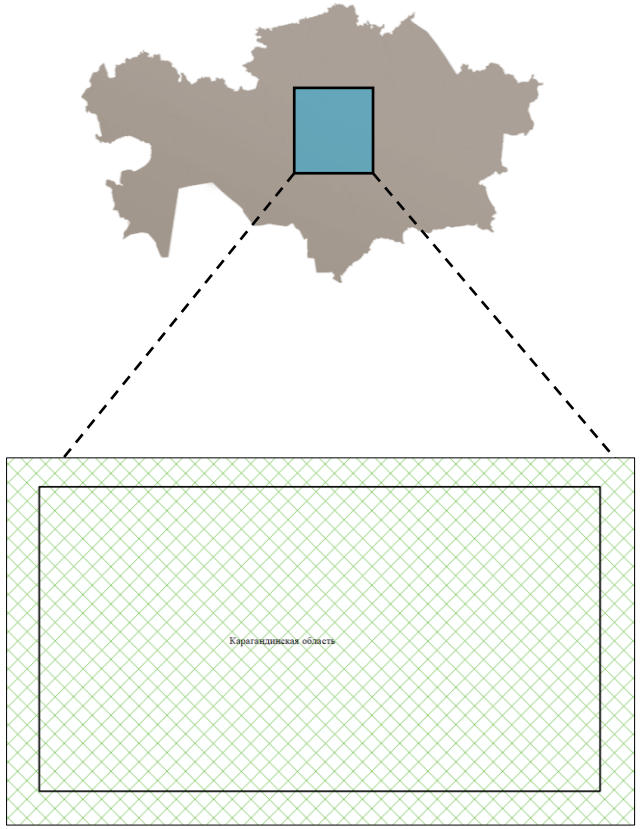
31

Location: The Chelak -Karasu barite deposit is located in the Osakarovsky district of the Karaganda region, 43 km north of the Molodezhny workers' settlement and 5.5 km northwest of the Rodnikovsky settlement. The site is located 150 km northeast of Karaganda .

Brief geological characteristics: In 1957–1959, the deposit was evaluated by the Maykainskaya geological exploration expedition for gold-silver mineralization by digging trenches, shallow pits, and individual boreholes. As a result of these works, two barite veins were identified and traced, of which vein No. 1 is the most persistent. Based on the exploration work, it was concluded that the barite ore bodies wedged out at a depth of 30–40 m, and the gold and silver contents in them did not reach industrial values.

The quality of barite ores explored at the Chelak -Karasu deposit has been studied using 14 routine samples. Given the high content of barite in the ore and the insignificant amount of harmful impurities, it was decided to evaluate the quality of barite ores according to the requirements for the quality of barite concentrate (GOST 4682–84), i.e. to consider barite ores of vein No. 1 as natural barite concentrate.

In terms of barite content in the ore in individual ore intersections, in the calculation blocks and in vein No. 1 as a whole, the ore corresponds to the KB-2 grade (not less than 92%). In terms of the content of harmful impurities - iron oxide, water-soluble salts, silicon dioxide and the reaction of the aqueous extract - the ore corresponds to the KB-1 class A grade. In terms of the content of the sum of calcium and magnesium in terms of calcium oxide, the ore corresponds to the KB-2 class A grade. In terms of the total compliance with quality requirements, the barite ores of vein No. 1 are classified as natural barite concentrates of the KB-2 class A grade.



- the outline of the Chelak -Karasu deposit, included in the PUGFN for solid mineral extraction, for auction

- license for GIN

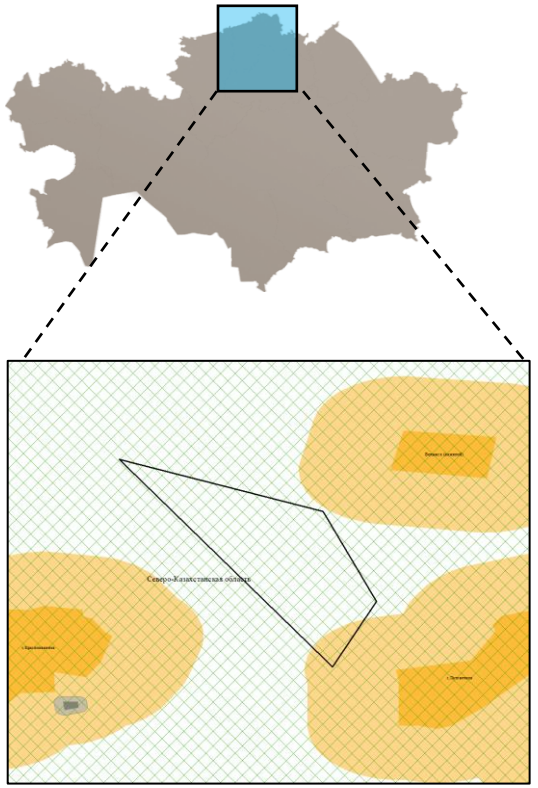
Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
barite	C2 – 8.0 thousand tons	-

Letovochnaya placer deposit
North Kazakhstan region

Location: The deposit is located 60 km northwest of Kokshetau in the North Kazakhstan region. The nearest railway station, Azat, is 45 km east of the deposit.

Brief geological characteristics: The Chegan deposits, which contain productive sands, lie on an uneven surface of eroded weathering crust. The ore-bearing sands are represented by well-sorted fine- and fine-grained varieties. Within the explored area, two ore-bearing sand deposits have been identified - Upper and Lower, as well as a number of individual lenses. Useful minerals are ilmenite, rutile and zircon. Quartz makes up 85% of the total mass of sands. The deposit is characterized by an increased zircon content. The deposit has been studied by wells along a network of 800x400 and 400x200 m, in the southeast 1600x400 m. The upper ore-bearing deposit has been traced along the strike in the northwest direction for 5.8 km with a width of 0.8 to 1.5 km. The thickness fluctuates from 0.5 to 2.5 m, the depth of occurrence - from 2.5 to 9.0 m. The lower deposit is located in the southern part of the area, traced for 2.2 km with a width of 0.4 to 0.7 km. Individual lenses are opened by wells, have dimensions not exceeding 0.2x0.4 km). Sands of the Chegan suite are flooded, the waters are unconfined, occur at a depth of 9 to 15 m. Flow rates by wells from 0.1 to 1.6 l / sec, with drawdowns of 1.6-6.3 m. Water inflows into the quarry were estimated at 21.4 m3 /hour.

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
titanium	C2 – 138.0 thousand tons	-
zirconium	C2 – 117 thousand tons	-



- the outline of the Letovochnaya placer deposit, included in the PUGFN for solid mineral extraction, for auction

- license for GIN

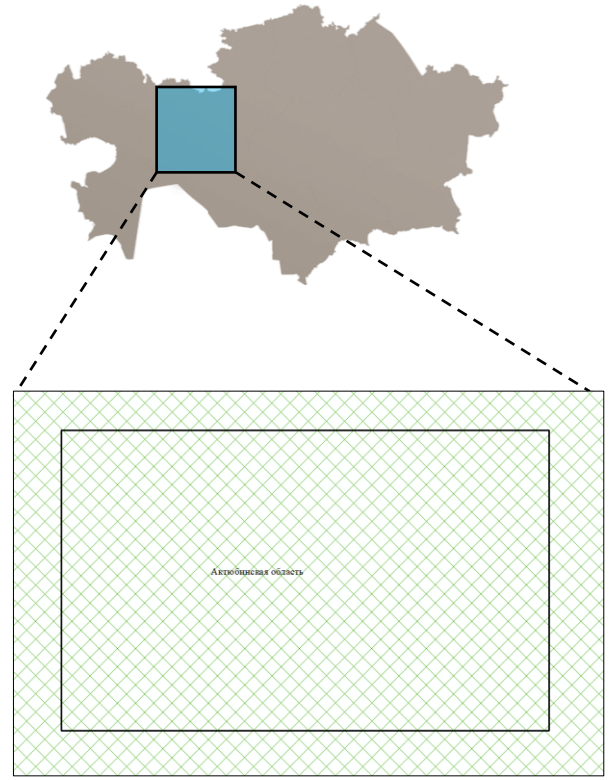
Vostochno-Shandashinskoye deposit
Aktobe region

Location: 5 km south of the Nikel-Tau railway station in the Aktobe region. The Vostochno- Shandashinskoye deposit was discovered in 1957 during specialized searches for silicate nickel deposits.

Brief geological characteristics: Nickel-cobalt industrial mineralization is confined to the weathering crust of apodunite and apoperidotite serpentinites at their contact with the body of gabbroids within the South-West anticlinal uplift of the Kempirsay hyperbasite massif. The ancient ore-bearing weathering crust has been preserved from erosion on the slopes of a gentle watershed elevation. Three mineral zones are distinguished in the eluvium section (from bottom to top): leached weakly nontronitized serpentinites, nontronite clays, ocher weathering products. Rocks of all three zones contain industrial concentrations of nickel and cobalt. The deposit is a single horizontally lying ore body with a north-eastern strike, 520 m long, 130 m wide and a thickness of 1 to 21.6 m, averaging 6.1 m. The depth of the ore body varies from 0.8 to 35 m. Three small bodies of substandard ores with low contents of useful components have been identified on the periphery of the deposit.

The main ore mineral - nontronite is contained in the ore in the amount of 40-90% of the rock volume in the form of homogeneous clay masses and nest-shaped finely scaly clusters of green color. Asbolan is present in the form of veins and dense black drip crusts. Its amount does not exceed 1-1.5%. Kerolite , nickel-containing chlorite and garnierite are present in insignificant amounts.

According to the chemical and mineral composition of the ore, the deposits are divided into three technological types: ferrous - 68% (ocher, nontronite), magnesian - 24.7% (leached and weakly nontronitized serpentinite) and siliceous - 7.3% (siliceous-ocher formations and opalized serpentinite). The average nickel content is 1.41%, cobalt - 0.05%, copper - 0.019%, chromium oxide - 1.85%.



- the outline of the Vostochno -Shandashinskoye deposit , included in the PUGFN for solid mineral extraction, for auction

- license for GIN

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
nickel	A+B+C1 – 1.0 thousand tons	3.2 thousand tons
cobalt	A+B+C1 – 27.0 tons	241.0 tons

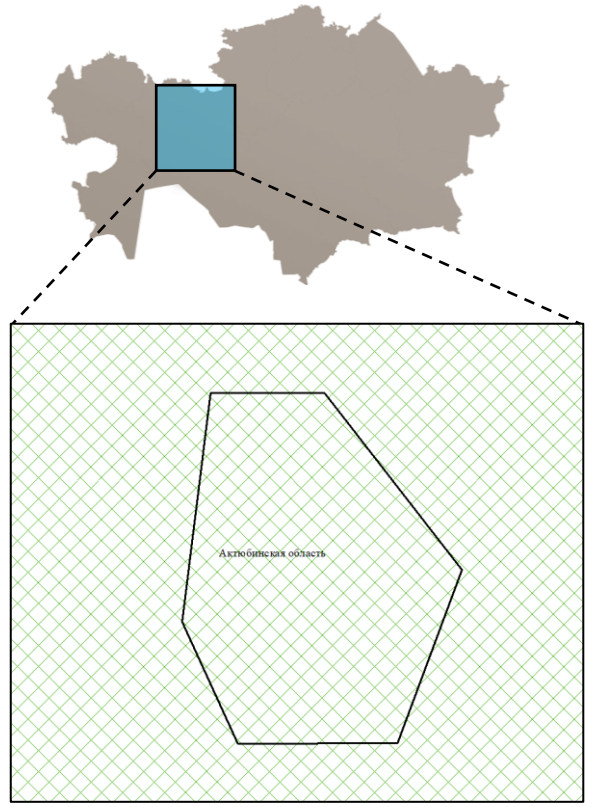
Novo-Shandashinskoye deposit
Aktobe region

Location: The Novo -Shandashinskoye deposit was discovered in 1937 during exploration for cobalt-nickel silicate ore deposits within the Kempirsay massif of hyperbasites . It is located 5 km south of the Nikel-Tau railway station in the Aktobe region.

Brief geological characteristics: The deposit is confined to the remnants of the ancient serpentine weathering crust within the South-Eastern uplift of the Kempirsay massif, which are geomorphologically confined to a flat watershed upland. It consists of five deposits, uniting 26 ore bodies with a strike length of 10 to 1500 m and a width of 10-1000 m. The thickness of the ore bodies is from 1 to 19.4 m, the roof depth is 0.1-29 m. In plan, the ore bodies have sinuous outlines with constrictions and bulges. In section, they are represented by subhorizontal stratified deposits with variable thickness and complex contours. In addition to industrial deposits, 76 bodies of substandard ores of no practical interest have been identified at the deposit.

The main ore minerals are nontronite and kerolite , which make up about 90% of the ore, and are present in the form of nest-shaped finely flaky clusters or solid earthy masses. Asbolan is found in small quantities . The average content of nickel in the ores is 1.14%, cobalt - 0.053%, copper - 0.006%, chromium oxide - 1.22%.

The technological properties of the ores have not been studied.



- the outline of the Novo -Shandashinskoye deposit , included in the PUGFN for solid mineral extraction, for auction

- license for GIN

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
nickel	A+B+C1 – 218.5 thousand tons	99.0 thousand tons
cobalt	A+B+C1 – 27.0 tons	241.0 tons

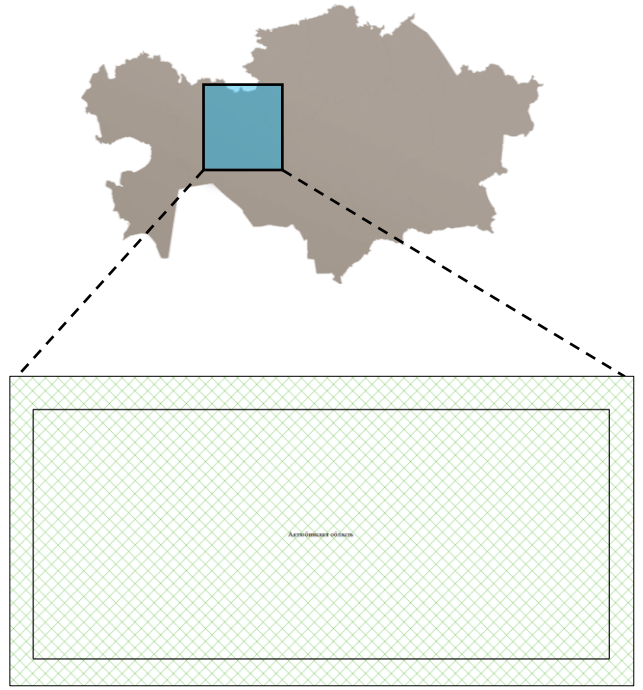
Kzyl-Kainskoye deposit
Aktobe region

Location: The Kzyl -Kainskoye deposit was discovered in 1935 during geological survey work on a scale of 1:100000. It is located 8 km southeast of the Nikel-Tau railway station in the Aktobe region.

Brief geological characteristics: Industrial concentrations of cobalt and nickel are associated with the weathering crust of serpentinites that make up the Kara -Agash syncline within a gentle watershed upland. The deposit comprises four ore deposits of a sheet-like shape and horizontal occurrence with high variability in thickness and a complex configuration of the roof and base. The length of the ore bodies along the strike is 100-900 m with an average width of 76 m, the thickness from 0.8 to 22.3 m, on average for the deposit is 5.4 m. The depth of the roof of the ore bodies varies within the range of 0.2-15.7 m. The total area of ore bodies on the surface is 396.9 thousand sq. m. In addition, four ore bodies with off-balance reserves of substandard ores with a cut-off nickel content of 0.5% have been identified. Their occurrence pattern is similar to the main industrial deposits.

Nontronite is present in the ore in the amount of 40-90%. It forms fine-flaky aggregates and solid earthy masses. Nickel-containing chlorite (1-40%) occurs in the form of dense massive formations. The amount of kerolite is inconstant and varies within 1-10%. It occurs in the form of white and green veins. Veins, drips and dense crusts of asbolane do not exceed 1-1.5%.

The deposit ores are divided into two technological types: ferrous and magnesian. The first is represented by ochristo -nontronite ores, the second by leached and nontronitized serpentinites. The most effective ore processing is by electric smelting to produce ferronickel. In this case, nickel extraction is 90%, cobalt - 75-80%. The average ore contains (%): nickel - 1.13, cobalt - 0.057, copper - 0.019%, chromium oxide - 4.79%.



- the outline of the Kzyl -Kainskoye deposit, included in the PUGFN for solid mineral extraction, for auction

- license for GIN

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
nickel	C2 – 1.5 thousand tons	6.4 thousand tons
cobalt	C2 – 37 tons	656 tons

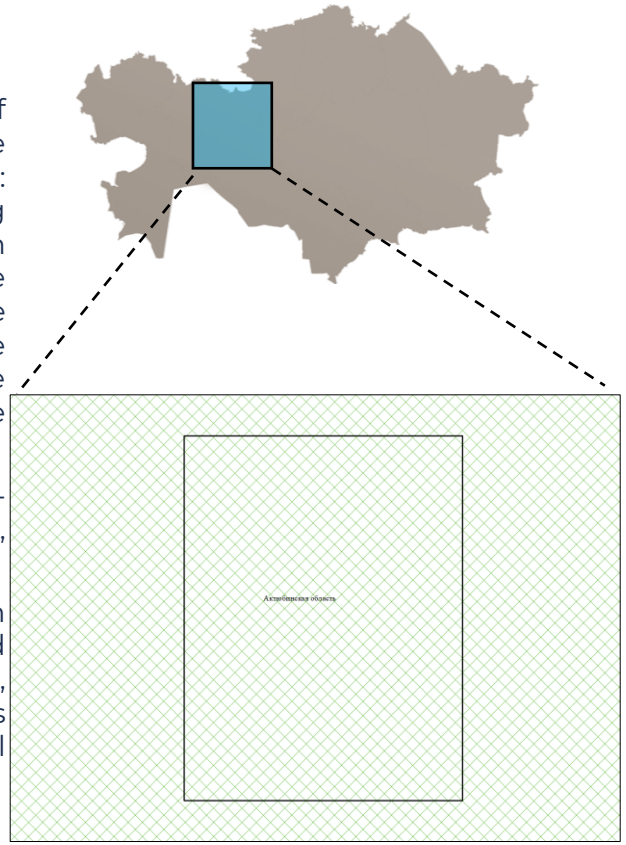
Kokpektinskoye deposit
Aktobe region

Location: located 12 km west of the city of Khromtau and 8 km southeast of the Nikel-Tau railway station in the Aktobe region.

Brief geological characteristics: The deposit is confined to the weathering crust of serpentinites at their contact with the body of gabbroids that make up the Tygashasay anticline. Remnants of the weathering crust have been preserved on the slopes of a gentle watershed upland. Three mineral zones are distinguished in the section of the ore-bearing eluvium (from bottom to top): disintegrated and leached weakly nontronitized serpentinites, nontronite clays, ocherous weathering products and ochre-bearing clays. nontronites . All lithological varieties of eluvium are industrial ores of silicate nickel. The deposit consists of four ore bodies with a strike length of 70 to 1310 m and a width of 20-490 m with a thickness of 1 to 28.3 m, averaging 4.4 m. The depth of the roof of the ore bodies varies within 0.8-19.4 m. Their shape is isometric and irregular in plan with sinuous outlines, stretched in the submeridional direction according to the strike of the contact of serpentinites with gabbroids . In the section, the ore bodies are tabular deposits lying horizontally with a variable thickness due to pocket-like depressions at their base. On the periphery of ore body No. 1, seven bodies of substandard cobalt-nickel ores measuring from 20x40 to 40x80 m with a thickness of 1.7-8.8 m have been identified. Due to the low content of useful components, these ores are classified as off-balance.

The main ore mineral, nontronite, makes up about 90% of the rock and occurs as a homogeneous brown-green clay mass or wax-like clusters in the form of nests. Secondary minerals , kerolite , nickel-bearing chlorite, asbolane, and cobalt-bearing psilomelane, make up 2-3% of the rock volume. They occur in the form of nests, veins, and drip crusts in the leaching voids of serpentinites.

According to the chemical composition of the ore, the deposits are divided into two technological types: ferrous-magnesian, which makes up about 65% of the cobalt-nickel ore reserves, and ferrous - 35%. The first type includes ocherous weathering products and nontronites , the second - weakly nontronitized and leached serpentinites. The ores are distinguished by a high silica content, averaging 48.3% and a low iron content - 23.5%, which necessitates their blending with low-melting ferrous ores from other deposits and limestone. At the same time, the extraction of nickel into commercial products is 70.9%, cobalt - 28.5%. The average nickel content in the ore is 1.22%, cobalt - 0.061%, copper - 0.005%, chromium oxide - 1.19%.



- the outline of the Kokpektinskoye deposit, included in the PUGFN for solid mineral extraction, for auction

- license for GIN

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
nickel	A+B+C1 – 3.3 thousand tons	0,1 thousand tons
cobalt	A+B+C1 – 181 tons	29.0 tons

Bogembay deposit
Akmola region

Location: located in the Ermentau district of the Akmola region, 4 km southwest of the village of Bogembay, 18 km east of the Aksu railway station.

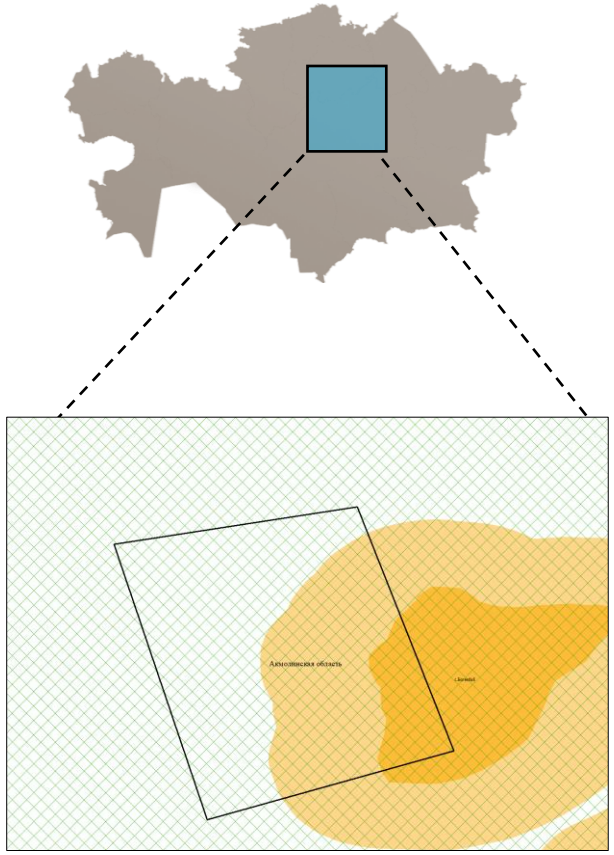
Brief geological characteristics: the geological structure of the deposit includes terrigenous sedimentary deposits of the Lower Carboniferous age (gray sandstones, siltstones, argillites, coal seams), which form a relatively small, synclinal structure (4x11 km), dissected by a tectonic fault into two troughs (Northern and Southern). According to the position in the section, lithological composition, fauna, and the nature of coal content, these deposits, by analogy with the Karaganda basin, are divided into three suites.

Industrial coal content is associated with the Karaganda suite, at the base of which one complex coal seam with a thickness of 1-5 m is established.

The seam consists of two layers, of which the lower one, 2.5 m thick, is of practical importance. The thickness of the upper layer sometimes increases from 0.6 m to 2 m, but it usually pinches out or is replaced by carbonaceous argillites. The maximum depth of the coal seam is 400 m.

The coals of the deposit are hard, humus, high-ash and very difficult to beneficiate. The ash content of the coal mass is 35-45%, the sulfur content is 1.0-1.5%, phosphorus is 0.01-0.02%, the combustion heat per combustible mass is 8000-8500 kcal/kg, the lower working fuel is 4500-5500 kcal/kg, the yield of volatiles is 20-22%. The coals are weakly sintered, the thickness of the plastic layer is 8-12 mm. They belong to the OS brand and are suitable only as energy fuel.

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
coal	A+B+C1 – 5134 thousand tons	14700 thousand tons



- the outline of the Bogembay deposit, included in the PUGFN for solid mineral extraction, for auction
- license for GIN
- settlement and buffer zone of the village of Bogenbai

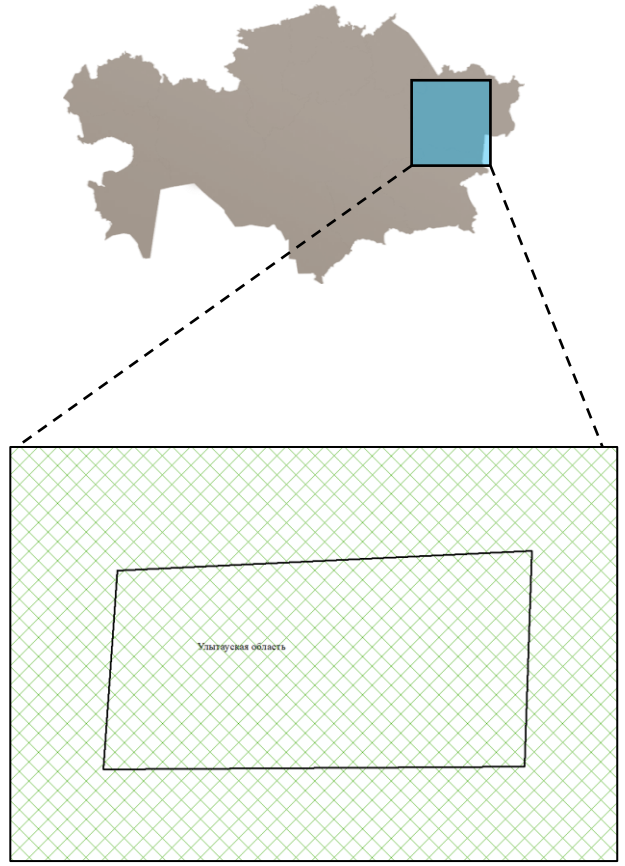
Ushbulak deposit
East Kazakhstan region

Location: in the western part of Central Kazakhstan in the Zhezdinsky district of the Karaganda region, 40 km southwest of the Zhezkazgan mine, 5 km from the Kumola deposit.

Brief geological characteristics: the deposit was discovered and studied by N. N. Vedernikov and O. B. Beiseyev in 1956-1962. In 1981-1983, work continued at the deposit with the aim of further exploration and preparation for industrial development.

The deposit is confined to the Kumolinskaya syncline, composed of Upper Paleozoic deposits, the section of which is crowned by Permian rocks. The deposit is a typical stratiform deposit . Mineralization has a clearly expressed stratified character. Two ore bodies (upper and lower) are distinguished, located in the upper third of the section of deposits of favorable facies of the Ushbulak suite. The ore bodies consist of inseparably linked two or three horizons. The angles of dip of the ore body are rather unstable and vary from 3-5 to 90 degrees.

of rhodusite asbestos fiber showed that in the pilot batch of FMB-RL filter cardboard it has unstable quality and does not meet the stricter requirements of GOST B-20988-83. The problem of using fiber is also complicated by the tendency to replace blue asbestos with brittle chrysotile asbestos glass fiber in special products.



- the outline of the Ushbulak deposit , included in the PUGFN for solid mineral extraction, for auction

- license for GIN

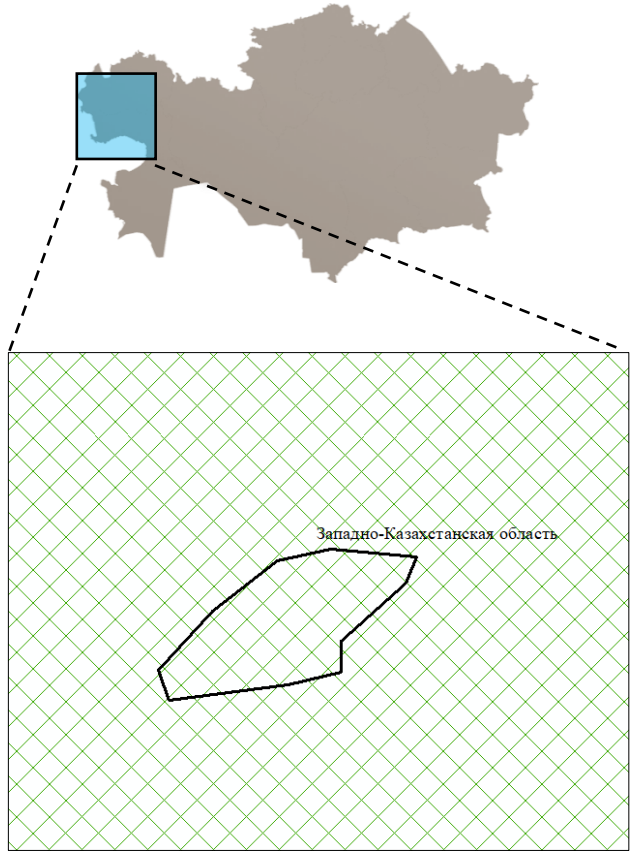
Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
asbestos	A+B+C1 – 6.7 thousand tons , C2 – 2.2 thousand tons	2.7 thousand tons

Deposit 94
West Kazakhstan region

Location: located 15 km southeast of the village of Inderborsky .

Brief geological characteristics: The area of the deposit is composed of salt strata, eluvial gypsum cap formations and Neogene-Quaternary sediments. According to the conditions of formation, two tiers of rocks can be distinguished at the deposit: primary salt deposits and gypsum cap rocks. Marine terrigenous formation, Khvalynsky horizon; eluvial gypsum cap formations of late Permian -Quaternary age along the boron-potassium horizon of the Shchushaktau member of the Kurgantau suite of the early Permian. Average roof thickness is 40 m.

The bulk of the reserves are located below the aquifer. The deposit is being developed by open-pit mining. The flooded ore body, according to the experience of the Inder mine, will be mined without draining the quarry. The overburden and ore body-enclosing rocks are represented by white and gray gypsum, anhydrite and clays, as well as sandy-clayey deposits brought in by ancient and modern karst.



- contour Deposit 94, included in the PUGFN for solid mineral extraction, for auction

- license for GIN

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
boron ores	C1 – 11.6 thousand tons	-

Maybulak Vostochny deposit
Zhambyl region

Location: The Maybulak Vostochny deposit is located in the Zhambyl region, 40 km from the Otar railway station.

Brief geological characteristics: The deposit was discovered in 1966. The bulk of gold-bearing zones and gold-ore veins lie within the intrusion of the diorites of the Maibulak complex, rarely at their contact with the metamorphosed sandstones of the Shcherbakty suite.

The genesis of mineralization is hydrothermal plutonogenic under conditions of medium temperatures, low-sulfide ore formation, gold-pyrite -quartz mineral type.

The wallrock alterations are represented by intensive sericitization , pyritization - 10-20 m; weak hematization - 5-10 m.

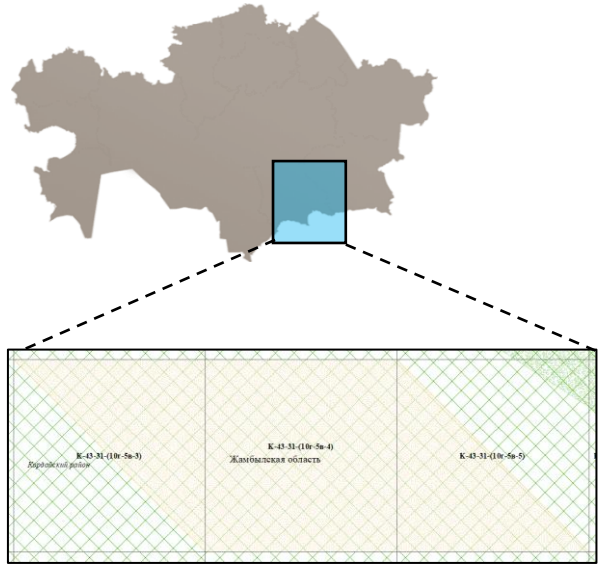
The main mass of gold-bearing zones and gold-ore veins lie within the intrusion of the diorites of the Maibulak complex, rarely at their contact with the metamorphosed sandstones of the Shcherbakty suite. The near-surface changes of the bodies are poorly developed and are represented by deposits and films on cracks of iron and copper hydroxides due to the oxidation of sulfides.

Non-industrial ore bodies are represented by thin and discontinuous quartz veins and zones of silicified hematite-sericite-quartz rocks. The ores consist of 90-95% quartz and 3-5% sulphides; the ore texture is massive, the disseminated structure is granular, colloform ; the bulk density is 2.6. Gold is contained in quantities from traces to 163.3 g / t, in the form of small 0.1-1.5, rarely up to 2 mm inclusions of irregular, less often lamellar shape in quartz, sulphides and iron hydroxides.

M- nie III classification group.

Maybulak River , which flows 4 km from the facility.

The ores are supposed to be processed as fluxes at metallurgical plants. An increase in reserves of 800 kg is possible due to exploration of deeper horizons of veins 1, 1a, 3b of the Novy II site.



- the contour of the deposit is Mvibulak East

- licenses for GIN

Extract from the state inventory records as of 01.01.2024.			
Type of mineral	**Balance reserves**		**Off-balance sheet reserves**
Gold	A+B+C1 – 306 kg.	C2 – 419 kg.	

Severo-Leonidovskoye deposit
Kostanay region

41

Location: The Severo -Leonidovskoye deposit is located in the Denisovsky district of the Kostanay region.

Brief geological characteristics: The Severo -Leonidovskoye ore occurrence was discovered during geological survey work at a scale of 1:50,000 sheets N-41-111-A, B (V.I. Maksimenko et al., 1976). In 1976-79, as a result of generalizing geological, geochemical and geophysical materials at a scale of 1:200,000, the Zhanatalapskaya prospective area was allocated for gold prospecting (V.Ya. Klimov et al.). In 1980-84, general prospecting work for gold was carried out within the Zhanatalapskaya gold-promising area, based on the results of the work, gold-promising zones of the North -Leonidovsky site were identified and recommended for further study (V.M. Tishchenko et al., 1984). The calculation of reserves of oxidized ores was carried out according to temporary (estimated) conditions, the parameters of which were adopted by analogy with similar deposits in Kazakhstan, and in general were confirmed by technical and economic calculations (TER) on the possible industrial significance of the North- Leonidovsky deposit. The parameters of conditions recommended by the authors for calculating reserves of oxidized ores for open-pit mining conditions are as follows:

- cut-off gold content in the sample for delineating balance reserves of ore - 0.3 g/t;

- minimum intersected industrial capacity of ore bodies included in the calculation of reserves - 1.0 g/t,

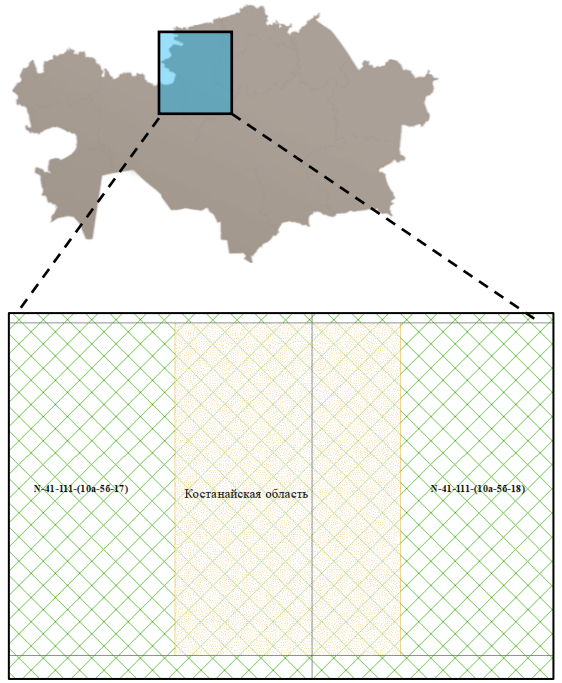
for lower power but high gold content, use the corresponding metrogram ;

- maximum thickness of layers of waste rock and substandard ores – 3.0 m.

The assessment of the predicted gold resources in the primary formations of the Severo -Leonidovskoye deposit was made based on the analysis of materials from deep exploration and exploration and evaluation core holes. The predicted resources were estimated according to category P1 to a depth of 170 m of ore bodies 1-3, 5, 9, 11, 17, 23 and amount to 3.3 million tons of ore and 3,698 kg of gold with an average grade of 1.12 g/t.

The enlarged technical and economic performance indicators for the development of oxidized ore reserves at the Severo - Leonidovskoye deposit indicate the possibility of efficient operation of the future enterprise.

Deposit: TOO " Akhsual ", based on license No. 729-EL dated 06.08.20.



- the contour of the deposit is Severo - Leonidovskoye

- licenses for GIN

Extract from the state inventory records as of 01.01.2024.			
Type of mineral	**Balance reserves**		**Off-balance sheet reserves**
Gold		C2 –1004 kg.	

Field Shakhansky area
Karaganda region

Location: The Shakhasnky deposit is located in the industrially developed Cherubaynurinsky coal-bearing region of the Karaganda coal basin.

Brief geological characteristics: In 1970-1972, in accordance with the tasks of the Karagandaugol combine, additional exploration of the D8-D6 layers was carried out within the fields of the Shakhanskaya , Stepnaya and Molodezhnaya mines.

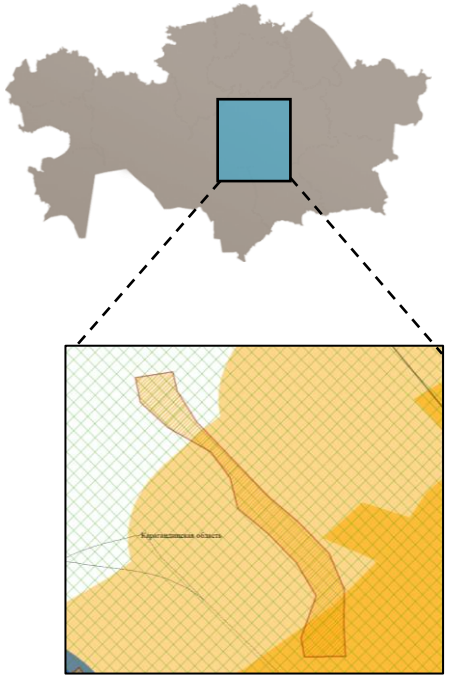
All the wells drilled at the sites are located on exploratory profiles oriented mainly across the strike of the coal-bearing strata. Exploratory wells were drilled using ZIF-650A and ZIF 1200A rigs. Alluvium, Neogene and Paleogene deposits were drilled with diameters of 152-131 mm and cased with pipes of diameters of 146/137 and 127/118 mm to a depth of 15-70 m. In Carboniferous deposits, a diameter of 92 mm was mainly used for drilling. Coal seams were cut by single and double core barrels of the Daineko I.I. and Kulikov I.F. systems. The average yield of coal core in the fields of the Shakhanskaya , Stepnaya and Molodezhnaya mines is 62%.

Mine " Shakhanskaya "

The field is extended meridionally along the strike of the layers for 5.5 km. The width of the field is 1.6-1.7 km. In the west, the Shakhanskaya mine borders the Stepnaya mine along reverse fault 1, in the south with the Molodezhnaya mine – along reverse faults 30 and 30a.

Of the 22 faults identified by geological exploration, 18 are concentrated in the northern and northeastern parts and only four in the south. In the northern part of the field, the largest faults, both in length and amplitude, are of the nature of unconformable reverse faults. The remaining faults, no more than 1 km long, are conformable reverse faults and normal faults. Almost all faults have a strike conformable to the strike of the rocks. The mine field is divided into five separate blocks by disjunctive faults: 1 - central, 2 - western, 3 - northeastern, 4 - eastern and 5 - southeastern.

Extract from the state inventory records as of 01.01.2024.			
Type of mineral	**Balance reserves**		**Off-balance sheet reserves**
Coal		C2 – 1133 thousand tons .	



- revoked contract of Shakhan Komir LLP , deposit of coal seam outcrops D6 in the Molodezhny, Stepnoy, Shakhansky sections , **Shakhansky section** (coal). Contract No. 4321 dated 25.07.2016 for mining (revoked in 2020, the inspection report is missing from the Company)

- licenses for GIN

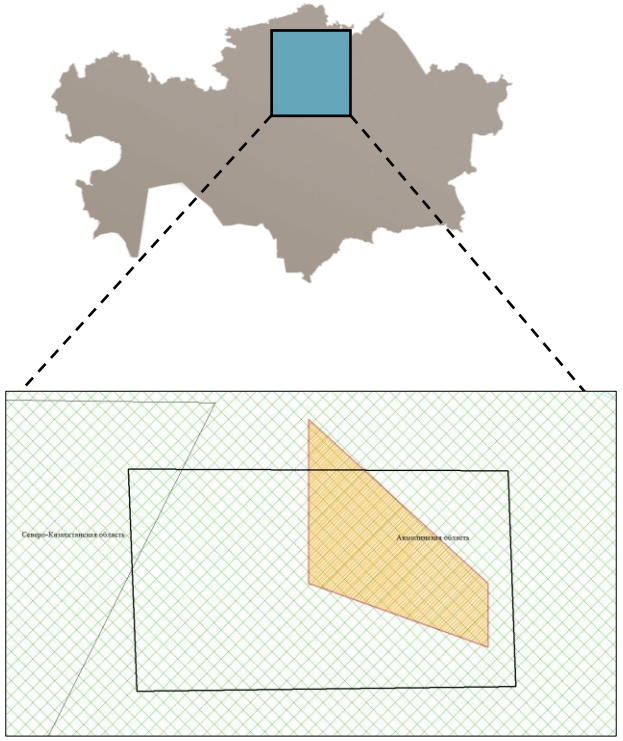
- settlement and buffer zone

Berezovskoye deposit
Akmola and North Kazakhstan regions

Location: 60 km northwest of Kokshetau in the North Kazakhstan region. The nearest railway station, Azat, is 45 km east of the field.

Brief geological characteristics: The Chegan deposits, which contain productive sands, lie on an uneven surface of eroded weathering crust. The ore-bearing sands are represented by well-sorted fine- and fine-grained varieties. Within the explored area, two ore-bearing sand deposits have been identified - Upper and Lower, as well as a number of individual lenses. Useful minerals are ilmenite, rutile and zircon. Quartz makes up 85% of the total mass of sands. The deposit is characterized by an increased zircon content. The deposit has been studied by wells along a network of 800x400 and 400x200 m, in the southeast 1600x400 m. The upper ore-bearing deposit has been traced along the strike in the northwest direction for 5.8 km with a width of 0.8 to 1.5 km. The thickness fluctuates between 0.5 and 2.5 m, the depth is from 2.5 to 9.0 m. The lower deposit is located in the southern part of the area, traced for 2.2 km with a width of 0.4 to 0.7 km. Individual lenses are opened by wells, have dimensions not exceeding 0.2x0.4 km. Sands of the Chegan suite are flooded, the waters are unconfined, they occur at a depth of 9 to 15 m. Well flow rates are from 0.1 to 1.6 l/sec, with drawdowns of 1.6-6.3 m. Water inflows into the quarry were estimated at 21.4 m3 /hour.

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
gold	A+B+C1 – 221.04 kg, C2 – 64.81 kg.	-
silver	A+B+C1 – 11.64 tons, C2 – 1.17 tons	-
lead	A+B+C1 – 0.36 thousand tons , C2 – 0.00 thousand tons	-
zinc	A+B+C1 – 1.77 thousand tons , C2 – 0.12 thousand tons	-



- the outline of the Berezovskoye deposit

- revoked contract of TOO "GPK Gorizont", Berezovskoye deposit (gold). Contract No. 2720 dated 21.07.2008 for exploration (revoked in 2022, there is a survey report dated 04.07.2024, the territory is not accepted, liquidation is required)

- license for GIN

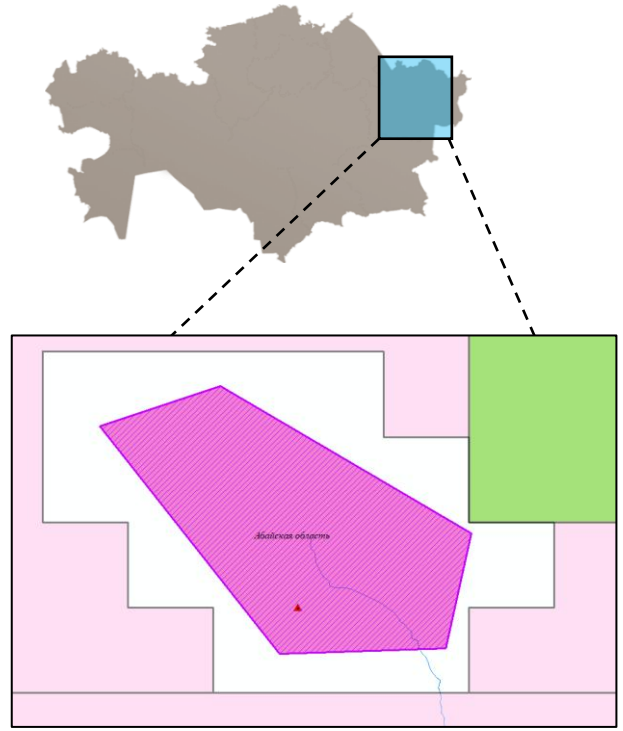
Sharyk deposit
Abaysk region

Location: The deposit is 100 km NE from the Sayak railway station, Ayagoz district, Abay region.

Brief geological characteristics: The deposit is confined to the peripheral part of a volcano -tectonic structure complicated by ring faults and cracks. The largest quartz veins and vein-like quartz-adularia-sericite bodies gravitate toward cracks of submeridional and latitudinal strike. About 50 veins, vein zones and vein-like bodies, which have arc-shaped and ring-shaped forms in plan, have been discovered over an area of about 1.8 km2. Six industrial ore bodies have been identified, outlined according to sampling data among three veins No. 1-3 of north-eastern and submeridional strike, the length of which varies from 70 m (vein No. 3) to 400 m (vein No. 1). The length of ore bodies within vein zones varies from 13 to 92.5 m, the average thickness of ore bodies is from 1.0 to 3.5 m. Gold is distributed very unevenly and occurs as single grains and clusters in quartz.

The deposit was developed by the Altayzoloto plant using the open-pit method in 1972-73. The depth of development for the first ore body is 5-7 m.

The object needs to be further studied .



- the territory included in the PUGFN for solid mineral extraction, for auction, as well as the terminated contract territory of TOO "GRK" Sharyk " Sharyk deposit (Contract No. 4243 dated 16.07.2013 for gold exploration. The Company does not have data on the Survey/Liquidation Act)

Extract from the state inventory records as of 01.01.2024.			
Type of mineral	**Balance reserves**		**Off-balance sheet reserves**
Gold		C2 – 501 kg.	

Belogorskoye deposit
East Kazakhstan region

Location: The Belogorskoye deposit is located 108 km from Ust-Kamenogorsk, with the latter it is connected by an asphalt road (80 km) to the village of Asu-Bulak and further (28 km) - with a gravel surface. The area is economically developed.

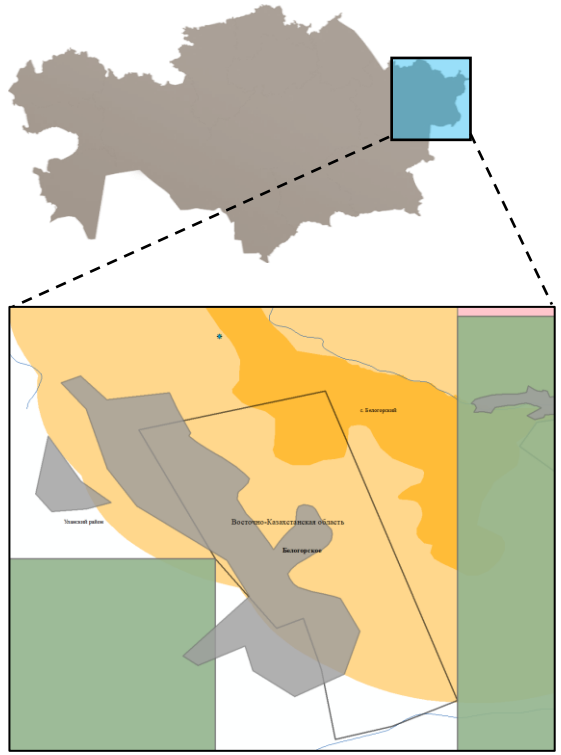
Brief geological characteristics: The deposit is located in the endocontact of the Belogorsk granite massif, limited: in the north by large faults of the Pervomaysko -Belogorsk fault of northwest strike; in the southeast by a series of faults of the Chebunda fault of north and northeast direction.

The deposit is bounded from the north and northeast by sedimentary-metamorphic rocks of the Takyr suite, from the west and southwest by aplite-pegmatite dikes. Rare- metal mineralization is spatially and genetically related to the vein phase of granitoids. Kalbinsky complex (batholith formation).

The host rocks for most of the ore bodies of the deposit are medium- and fine-grained biotite granites with a porphyry structure. On the northern flank of the deposit, sedimentary-metamorphic rocks of the Takyr suite are widespread, represented by hornfelsed and sandy -clayey shales in the form of remnants and xenoliths.

The material composition of the ores includes more than 40 minerals, the main rock-forming minerals are: albite-30-75%, microcline-25-40, quartz-15-30%, muscovite-1-11%, etc. in small quantities, less than 1%. The main ones are: tantalite-columbite, cassiterite, beryl, spodumene, petalite , pollucite, etc. The ores are considered strong and stable according to their physical and mechanical properties.

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
Beryllium	A+B+C1 – 1358 tons , C2 – 341 tons	2816 tons
tin	A+B+C1 – 617 tons, C2 – 157 tons	502 tons
tantalum	A+B+C1 – 243 tons, C2 – 42 tons	299 tons
niobium	A+B+C1 – 244 tons, C2 – 57 tons	-



- the **Belogorskoye deposit contour,** included in the PUGFN for solid mineral extraction , for further auction

TMO contours (Rock dump, Belaya Gora Mine, passport number 192/1)

- settlement and the buffer zone of the settlement - s. Belogorskoe

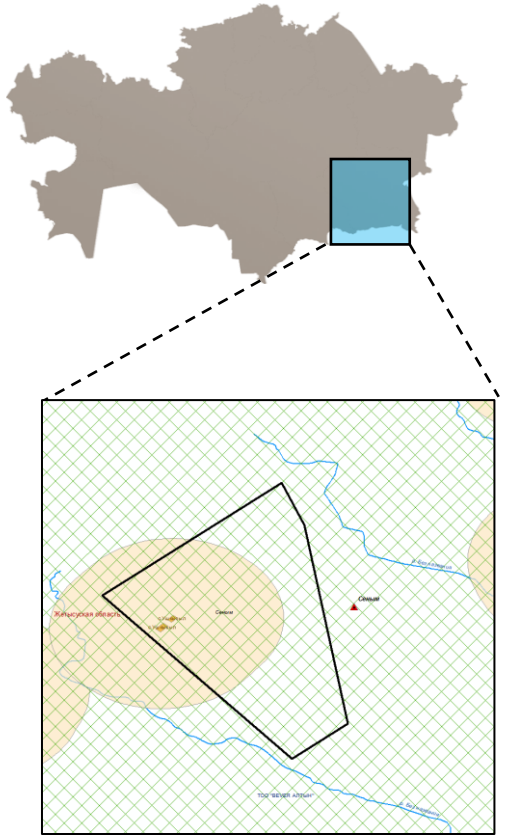
Senim
Zhetysu region

Location: located in Panfilov district, 20 km north of the Almaty-Panfilov highway.

Brief geological description: The deposit is located at the intersection of the through north-eastern, local north-western and sublatitudinal faults. The ore field is confined to a subsided block of volcanic rocks of average composition, broken by small intrusive bodies of variegated composition (from gabbro-diorite to syenite -granite) of the South Dzungarian Triassic complex. Quartz veins and veinlet zones are spatially gravitated to the latter . The host rocks are hydrothermally altered to secondary quartzites. Quartz veins are weakly gold-bearing and are of no industrial interest. Vein silicification zones are gold-bearing. Composition of ore bodies: quartz, hematite, fluorite , gold, pyrite, chalcopyrite, chalcocite, cerargyrite, wulfenite, cerussite, malachite, jarosite, barite, bismoclitite .

Four ore bodies have been traced, ranging in length from 20 to 70 m, with a thickness of 0.6 to 2.7 m, and a gold content of 3 to 63 g/t (average 6-7 g/t). The ore is weakly silvery (up to 10 g/t).

The flanks and deep horizons of the deposit have not been studied.



- the territory included in the State Natural Resources and Natural Resources Management Plan for solid mineral extraction (Senym field), for further auctioning

- settlement and the buffer zone of the settlement - s.Ushkyzyl

- licenses for GIN

Extract from the state inventory records as of 01.01.2024.		
Useful component	**Balance reserves**	**Off-balance sheet reserves**
gold	C1 - 69 kg	-

Sugatovskoye deposit
East Kazakhstan region

Location: Sugatovskoye deposit , 18 km northwest of the Shemonaikha railway station.

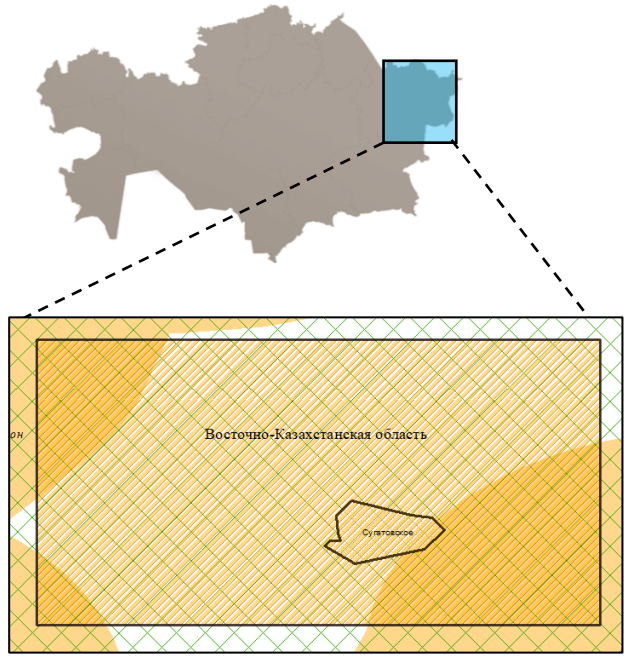
Brief geological characteristics: The site is the extreme western part of the single ore-bearing band Sugatovka-Vydrikha . Mineralization is confined to the intersection of two faults of the latitudinal and north-eastern directions and is localized in the endocontact part of the intrusive plagiogranite -porphyry with rocks of the Talovskaya suite. The stock- shaped ore body narrows at the bottom and pinches out at a depth of 102 m, the average length of the stock is 120 m, the average width is 80 m, the average thickness is 35 m.

The oxidation zone is developed to a depth of 45-50 m, the ores of the oxidation zone are worked out. The zone of secondary sulphide enrichment is encountered at a depth of 40-47 m, its thickness was 1.5-2.5 m.

The geochemical halos identified in the area of the site are of a supra-ore nature and indicate the possibility of the presence of coulisse- like ore bodies with a general dip to the northwest. In order to increase reserves, drilling is necessary on the northern and eastern flanks of the ore occurrence.

Deposit: TOO SP Aksu Zoloto, based on contract K-4416 dated 25.07.16.

Extract from the state inventory records as of 01.01.2024.			
Type of mineral	**Balance reserves**		**Off-balance sheet reserves**
Gold, kg		C2 –4145.00	



- the outline of the Sugatovskoye deposit , included in the PUGFN for solid mineral extraction, for auction

- revoked contract of JV Aksu Zoloto LLP, Sugatovskoye deposit (gold). Contract No. 5204 dated 22.11.2017 for exploration (revoked in 2023, the survey report is missing from the Company)

- deposit contour – Sugatovskoye (OPI)

- licenses for GIN

- settlement and buffer zone