

Development Project of the Karatas II and Kokzaboy Deposits



BALQAS

Project passport



Deposits location:

- The Karatas II deposit is located some 25 km north of the northern shore of lake Balkhash and 100 km by road, west of the town Balkhash and about 350 km south of the city of Karaganda; the distance by road from Almaty is about 600 km. A 20 km dirt road joins the site to the main national road between Almaty and Astana.
- The Kokzaboy deposit is located in the northwestern part of the Balkhash region, 95 kilometers west of the city of Balkhash.
- The distance between Karatas II and Kokzaboy deposits is less than 10 kilometers, allowing for shared infrastructure use.

| Karatas II | | | Kokzaboy | | |
|-------------------|-------------------|-----------------|-------------------|-------------------|--|
| Northern latitude | Eastern longitude | The coordinates | Northern latitude | Eastern longitude | |
| 46°39'50"N | 73°50'05"E | of vortices of | 73°56′0″N | 46°39'40"E | |
| 46°39'20"N | 73°50'45″E | denosite | 73°56′0″N | 46°38'0"E | |
| 46°39'30"N | 73°51'05"E | deposits | 73°58′0″N | 46°38'0"E | |
| 46°40'0"N | 73°50'25"E | | 73°58′0″N | 46°39'40"E | |

License terms

The right to extract solid mineral reserves at the Karatas II and Kokzaboy deposits belongs to the 'Balqash Resources' LLP.

License terms:

- The Karatas II licence was signed on 9 December 2021 and is valid for 25 years, till 2046.
- The Kokzaboy licence was signed on 11 December 2021 and is valid for 15 years, till 2038.

Both licenses contains the work programs with expected product plan, performance parameters and various other information, such as commitment **to build ore beneficiation and processing complexes** for non-ferrous and iron metal refining based on the deposit.

Karatas II exploration information



Exploration drilling of the Karatas II deposit was done by the Soviet Union through 1960th to 1980th.

The absolute height of the deposit is between 400 and 415 meters. In the studied area, the coordinates of 362 boreholes are available, of which 149 boreholes were observed in the cross-sections drown by the Soviet Union. A view of all the boreholes (green color are extracted heoles) is shown in Figures.



Figure 6-5-A 3D view of 3D iron orebody

Table 6-13- Tonnage-grade data of total mineral resource based on cut-off grade of the Fe

| CUTOFF FE% | VOLUME (M ³) | TONNES (M Ton) | DENSITY (Ton/M ³) | Ave. FE% | Ave. FET% | Ave. MO_PPM |
|------------|--------------------------|----------------|-------------------------------|----------|-----------|-------------|
| 0 | 8,392,000 | 30.46 | 3.63 | 21.60 | 32.12 | 109.08 |
| 5 | 8,178,125 | 29.69 | 3.63 | 22.07 | 32.53 | 107.86 |
| 10 | 6,948,625 | 25.22 | 3.63 | 24.58 | 34.80 | 98.60 |
| 15 | 5,137,250 | 18.65 | 3.63 | 28.87 | 38.82 | 88.11 |
| 20 | 3,806,125 | 13.82 | 3.63 | 32.89 | 42.69 | 79.17 |
| 25 | 2,936,625 | 10.66 | 3.63 | 35.99 | 45.52 | 71.67 |
| 30 | 2,190,125 | 7.95 | 3.63 | 38.92 | 48.01 | 65.39 |
| 35 | 1,490,375 | 5.41 | 3.63 | 41.93 | 50.44 | 59.44 |
| 40 | 857,875 | 3.11 | 3.63 | 45.18 | 52.90 | 55.44 |
| 45 | 360,625 | 1.31 | 3.63 | 49.05 | 56.03 | 39.77 |
| 50 | 122,875 | 0.45 | 3.63 | 52.72 | 58.72 | 27.99 |
| 55 | 20,625 | 0.07 | 3.63 | 55.64 | 61.16 | 22.23 |



Chart 6-26- Tonnage-grade curve of total mineral resource versus cut-off grade of the Fe

Chart 6-26 shows the total resource of the model for different grades of Fe. As can be seen, regardless of the grade, the amount of mineral resource will be equal to **30.46 Mt with an average grade of 21.6% Fe, 32.12% Fe-Total and 109.08 g/ton Mo.** Also, according to the different zones, the grade-tonnage table related to these sections and the general table according to the categories are given in Table 6-13.

Kokzaboy exploration information



Geological exploration at the deposit was conducted in three stages.

The **first stage**, from 1958 to 1964, saw the drilling of 49 boreholes up to 56 meters. Technological samples were collected and analyzed, estimating reserves of Category C2. Geological-economic evaluations were carried out in 1983 and 1990, proving a high profitability (32.6-42.6 with capital investment payback) for processing the deposit.

The **second stage**, from 1991 to 1996, involved exploration of ore bodies through drilling, allowing estimation of reserves under Category C1.

The **third stage**, from 2000 to 2001, included exploratory trenches around ore bodies, estimating the balance reserves under Category C1+C2.

| NoNo oro | | | Grade dat | a of mineral | resources | based on cu | t-off grade | | |
|----------------|------|---------|-----------|--------------|-----------|-------------|-------------|---------------|-------|
| | | Lead, % | | | Zinc % | | S | ilver, gr/toi | าร |
| Doules | from | to | avg | from | to | avg | from | to | avg |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 | 0.03 | 11.38 | 1.9 | 2.57 | 22.86 | 7.81 | 3 | 248 | 69.3 |
| 1 ^a | 0.1 | 18.8 | 2.45 | 3.07 | 21.17 | 9.69 | 9.8 | 660.1 | 118.7 |
| 1 ⁶ | 0.06 | 12.91 | 3.57 | 1.09 | 12.11 | 5.38 | 8.2 | 548.9 | 146.2 |
| 3 | 0.13 | 10.4 | 3.16 | 2.97 | 16.81 | 8.2 | 27.4 | 651.4 | 79 |
| 3ª | 0.26 | 5.26 | 2.29 | 1.17 | 15.25 | 7.45 | 31.5 | 260.4 | 152.9 |
| 4 | 0.17 | 14.55 | 7.56 | 1.29 | 27.51 | 20 | 12.08 | 717.1 | 383.7 |
| 5 | 0.39 | 5.38 | 2.26 | 3.43 | 16.39 | 7.84 | 20 | 509.2 | 155.6 |
| 5 ^a | 0.18 | 3 | 0.48 | 3.01 | 13.39 | 4.42 | 41.2 | 78 | 45.2 |
| 6 | 2.29 | 4.68 | 2.75 | 4.23 | 8.74 | 5.95 | 43.5 | 56.4 | 49.3 |



Karatas II reserves

The reserves of the Karatas II deposit, approved by the State Committee for Reserves of the USSR (Protocol No. 8868 dated November 4, 1981), are accounted for in the following quantities:

| Indiantara | Measurement | Balanced reserves | | Off-balance sheet |
|----------------|---------------|-------------------|-------|-------------------|
| Indicators | units | C1 | C2 | reserves |
| Total ore* | Thousand tons | 24 718 | 2 430 | 7 010 |
| Copper | Thousand tons | 89,6 | 5,5 | 20,92 |
| Molybdenum | Tons | 2 261 | 1 042 | 444 |
| Magnetite iron | Thousand tons | 5 134,1 | 63,3 | 1 610 |
| Sulfide sulfur | Thousand tons | 879 | - | - |
| Silver | Tons | 165,85 | - | - |
| Gold | Kilograms | - | 474 | - |
| Cobalt | tons | - | 845,7 | - |

*Karatas II consists Magnetite ore, where main economic value lies in magnetite; Cu ore, where main value is in Cu (plus Mo).

Kokzaboy reserves

The reserves of the Kokzaboy deposit, approved by the Committee of Geology and Subsoil Protection under the Ministry of Energy and Mineral Resources Republic of Kazakhstan (Protocol No. 132-02-KU dated January 16, 2002), are accounted for in the following quantities:

| Indicators | Measurement | Balanced reserves | | Off-balance sheet | |
|-------------------|---------------|-------------------|---------|-------------------|--|
| | units | C1 | C2 | reserves | |
| Total ore | Thousand tons | 427,70 | 1 691,9 | 76,1 | |
| Lead | Thousand tons | 15,08 | 29,7 | 1,89 | |
| Zinc | Thousand tons | 27,67 | 128,01 | 2,68 | |
| Silver | Tons | 40,66 | 121,55 | 2,91 | |
| Cadmium | Tons | - | 640,64 | 30,17 | |
| Bismuth | Tons | - | 688,16 | - | |
| Average contents: | | | | | |
| Lead | % | 3,53 | 1,76 | 2,47 | |
| Zinc | % | 6,47 | 7,57 | 3,52 | |
| Silver | gram/tons | 95,10 | 71,8 | 38,24 | |
| Cadmi | um % | - | 0,030 | 0,040 | |
| Bism | uth % | - | 0,032 | - | |

<u>License</u> <u>Commitments:</u>

Definition of the type of ore processingproduction complexes For the implementation of the ore enrichment technology and possible subsequent processing of ores, it is advisable to construct new ore dressing plants at the Karatas II and Kokzaboy deposits.

Ores of the deposits:

- Karatas II are molybdenum-copper-iron ores.
- Kokzaboy are polymetallic (lead, zinc)
- The plants should be built according to the technological regulations of the ores from the Karatas II and Kokzaboy deposits.
- The most straightforward and well-studied enrichment method for the deposits is as follows:
- Karatas II flotation process with a scheme for processing sulfide ores, extracting conditioned iron concentrate from flotation tails.
- Kokzaboy flotation process with multiple stages of enrichment and processing.

The most feasible types of products to be obtained are as follows:

- Molybdenum product
- Copper concentrate
- Pyritic concentrate
- Magnetite iron concentrate
- Lead concentrate
- Zinc concentrate

Ore market prices review

Karatas II

| Products | Price per ton in \$ | Volume in tons | Total amount in \$ |
|--------------------------|---------------------|----------------|--------------------|
| Copper concentrate (25%) | 1 700 | 95 100 | 161 670 000 |
| Iron concentrate (65%) | 149 | 5 197 000 | 774 353 000 |
| Molybdenum product | 42 260 | 4 303 | 181 844 780 |
| Silver | 745 816 | 166 | 123 805 406 |

Kokzaboy

| Products | Price per ton in \$ | Volume in tons | Total amount in \$ |
|----------|---------------------|----------------|--------------------|
| Lead | 2 086 | 44 780,0 | 93 411 080 |
| Zinc | 2 641 | 155 680,0 | 411 150 880 |
| Silver | 745 816 | 162,21 | 120 978 765 |

- Approximate cost, considering potential enrichment at the ore dressing plant up to concentrate.
- Data from open sources indicate an increasing demand for most metals from the deposit, which affects the rise in prices.

Project roadmap

| Project Name | Construction of an ore processing and production complex for processing non-ferrous metals and iron based on deposits |
|--|---|
| Project Implementation Period | Launch timeline of the ore processing plant: 2.5 - 3 years |
| Preparatory Stages | Obtaining a land plot for construction |
| from 6 months to 12 months Main Implementation Stages 1.5 | Conducting topographic and engineering-geological surveys for the construction of the ore processing plant, modifying mining plans, preparing utilities |
| | Undergoing independent external construction expertise of the construction project |
| | Confirmation drilling, Building a 3D model, development of regulations, recalculation of Mineral Resources, development of Technical and Economic Feasibility Study (TEFS) Selection (manufacturing) of equipment for the plant |
| - 2.5 years* | Development of the ore processing plant project |
| | Construction of the ore processing and production complex, including network preparation, equipment installation, establishment of a laboratory Launch of the ore processing and production complex, conducting mining operations |
| Construction Expenses | Costs range from \$30,000,000 to \$50,000,000* |

* Depending on the equipment choice - acquisition of ready-made solutions or development and manufacturing

Prospects for project expansion

- Additional reserves have been approved for the deposits:
- Karatas II
 - Sulfate sulfur 3.56%
 - Pyritic sulfur 3.29%
 - Selenium (1.01 g/t)
 - Tellurium (0.56 g/t)
 - Rhenium (0.008 g/t)
 - Indium (0.19 g/t)
- o Kokzaboi
 - Silver (95.1 g/t)

which also have market demand

- The non-metallic waste of empty rocks can potentially be used as construction aggregate, amounting for construction purposes.
- The Karatasskaya group deposits, combined with the Karatas II, Kokzaboy deposit, will expand the resource base. These deposits include Karatas I, Karatas IV, Karatas West, Koskuduk, provided that an ore beneficiation plant is constructed. The approved reserves of the group amount to 42 million tons of iron.

THANK YOU FOR YOUR ATTENTION



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