

## **Uzbekistan's mining leaders' investment debut in London**

Currently, mining represents 7.5% of all expected foreign direct investment and credits in Uzbekistan. Almost all the planned foreign investment in mining is concentrated in Uzbekistan's two state-owned mining groups – Almalyk and Navoi Mining companies. The combined contribution of Almalyk and Navoi mining companies to the Uzbek economy in 2022 is expected to be \$4.6 billion, which is equivalent to 31% of the entire state's income for 2022. These contributions are far greater than the equivalent payments received from state oil and gas companies. Over the next three years, the Uzbek state aims to secure up to \$ 6.7 billion in loans from foreign and domestic financial institutions to finance the modernisation and expansion of these companies. The ongoing modernisation is focused on increasing mineral reserves and resources and improving operational efficiency at all production stages. A key pillar of this Uzbekistan's mining strategy is to substantially increase the percentage of raw materials that are processed for both domestic and overseas industries, notably the automotive and consumer electronics industries.

Uzbekistan is undergoing a series of reforms to accelerate the transition to a market economy. While Russia and China remain Uzbekistan's key trade and investment partners, there are indicators that the Government is actively seeking alternative partners to develop its mining sector. The syndicated loan of \$1.2 billion in July 2022 agreed with the group of international banks and Navoi Mining company is a significant step in opening opportunities for attracting finance and capital from Western and Global investment markets.

Uzbekistan is open to foreign investors and since 2019 has implemented significant reforms to its mining industry. At the start of the reforms, the Government anticipated there would be more interest from the major global mining groups to acquire exploration licenses. This did not happen partly because the exploration licenses and existing mining assets put up for auction were not sufficiently attractive. Global investors were also cautious and wanted to assess the actual impact of a succession of important legislative changes affecting the mining industry and investor protection rights that have been enacted over the past three years.

Experts foresee that FDI activities will scale up after the business transformation and initial public offerings of our Navoi and Almalyk Mining Companies expected in 2025 or 2026.

MINEX Eurasia conference became the first international event introducing the transformation of two major mining companies from Uzbekistan Navoi Mining and Metallurgical Company (NGMK) and Almalyk Mining and Metallurgical Company (AMMC).

In May 2023 MINEX Forum is planning to organise a trade and investment event in Tashkent.

## **Transformation program of Navoi Mining and Metallurgical Company**

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**Eugene Antonov**, Chief Transformation Officer of Navoi Mining and Metallurgical Company presented transition plans for one of the largest mining enterprises in Central Asia. Mr Antonov has previously worked in senior management roles in large international mining companies, such as Teck Corporation, and Kinross Gold, and most recently served as the COO of Trans-Siberian Gold Plc., the UK-listed gold producer.

Until recently, like many other state-owned companies, NGMK has been closed and tightly regulated. With the average ore grade of 1.2 g per ton in 2021, the large-scale operation and significant margins contribute to NGMK's healthy profits. In 2021 the company's revenue was almost \$5 billion.

The company's main asset is Muruntau – one of the largest open pit mines in the world with a production lifespan of 50 years. It's located in the Qizilqum Desert and stretches up to 4 km and over 600 m in depth. The company also operates several satellite deposits. Muruntau mine currently produces over two million ounces of gold per year and has estimated reserves and resources of over 100 million ounces of gold. The mine is equipped with one of the world's largest conveyor systems which transport the ore to the surface at 37 degrees angle. The ore is processed by the mill which has a 50 million tons annual capacity. In the first six months of 2022, NGMK produced over 1.4 million ounces of gold making it the fourth-largest producer in the world. The target production level is over 2.7 million ounces before the end of the year.

The company is undergoing stage five of mine expansion at Muruntau to access new zones. By 2030 through an ambitious expansion program, the company is planning to reach over 3 million ounces per year.

In terms of resources and reserves, NGMK holds third place in the world with over 158 million ounces of gold resources. NGMK holds the second place as the lowest-cost producer (total cash cost per ton) and is considered the world's number one low-cost producer if measuring all sustaining costs. All efforts are aimed at keeping low-cost production which is especially important in an unpredictable gold price market. A strong balance sheet and financial ratios, especially debt to equity, allow the company to receive preferential financing to fund its ambitious expansion program.

Being the national industry champion the company's objective is to become a global leader. In 2019 NGMK separated non-core assets and uranium business so that it could focus entirely on gold production.

NGMK is carrying out initiatives to achieve operational excellence such as the introduction of fleet management systems. It started an ambitious digital transformation and mine control programme to excel in its operations.

The company is developing a very ambitious exploration program to expand a vast mineral resource base. The program will focus on the extension of current major deposits and prospecting of the surrounding areas within the proximity of the existing mines. The new exploration program will start in 2023. The company is planning to spend up to 2% of its revenue on exploration in line with international practices.

The company has also started a transition of corporate culture to align with the best international practices. NGMK is currently reviewing corporate governance and performance management system to meet the company's strategic goals and develop internal competencies. The company is bringing broad expertise to assist to achieve its objectives.

The ESG program plays an important role in the company's transformation. The program is focused on renewable energy sources, and water management systems which are vital given the company's desert location. Water is one of the main constraints of expansion plans.

During the conference and participation in other events, the company's representatives held talks and meetings with over 100 international investors, financiers, commodities, and stock exchanges to discuss the company's global IPO and ambitious development plans in Uzbekistan and Central Asia.

Being one of the largest mining enterprises in Central Asia, NGMK will be working alongside the Government of Uzbekistan to create a favourable business climate and drive foreign direct investment in mineral exploration, modernisation of mining infrastructure, and transition to a Zero carbon economy.

## **NGMK's mineral resources development strategy**

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**Liubov Egorova**, Director for Mineral Resources of Navoi Mining and Metallurgical Company presented NGMK's strategy for developing mineral resources. NGMK was created in 1958 as a uranium mining company. The same year the company's geologists discovered large gold and phosphate deposits. Until 2021 NGMK operated as an integrated gold, uranium and phosphate producer.

The first uranium processing plant started production in 1964 and the first gold plant began production in 1967.

In 1997 the joint venture Newmont – Zaravshan started heap leaching of Muruntau low-grade gold ore. Between 2010 and 2021 the company commissioned three refractory plants. GMZ-4 plant was built in 2010 at the Zarmitan deposit. The GMZ-7 processing plant was commissioned in 2020 at Muruntau mine and GMZ-5 was launched at the Auminzo-Amantpy cluster in 2021.

In 2021 NGMK National Holding was transformed into a joint stock company. Its uranium and gold assets were separated. NGMK became a gold and silver producer. Uranium assets are managed by the newly created NavoiUranium mining company.

NGMK's productions are located in Uchkuduk, Zarafshan, Navoi and Samarkand clusters.

The total mineral resources of NGMK exceed 150 million ounces of gold. In January 2020 company's gold ore reserves were evaluated at around 40 mln tonnes.

NGMK's mineral resources development strategy is aimed at increasing total resources and confidence in the mineral resource base.

The company is carrying out internal training and retraining programs to increase the quality of the resource and reserves estimation using 3D modelling, among many other technologies.

The company plans to validate its resource base with internal and independent audits and also to extend the existing deposits.

Currently, there's a big difference between reserves and mineral resources. This is because not all required studies have been carried out. The company is starting an extensive program of geological studies of all its assets.

To decrease geotechnical and mining safety risks, the company is auditing open pit and underground methods.

The ore reserves development strategy includes the following steps:

- Conversion of the inferred resources into higher categories
- Detailed geotechnical studies and modelling
- Pre-feasibility studies or conversion of existing mining projects into PFS study and minimisation of conversion limitations
- Evaluation of the potential for decreasing the cut-off grade.

The strategy for evaluating the potential of the low-grade non-refractory ore includes aims to:

- Determine resources for the low-grade material (including historical dumps)
- Metallurgical studies on the low-grade material
- Economical assessment
- The expected result is to produce PFS-level studies for the mining and processing of low-grade material from non-refractory ores.

The 5-year exploration program is aimed at prospecting around NGMK's world-class deposits and processing facilities. The exploration budget is targeted at around 2% of revenue.

At the end of the program, the company is planning to increase ore reserves with the potential increase of production rates and extend the lifespan of its mining assets.

## **Almalyk Mining & Metallurgical Complex on the Road to Transformation**

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**Abdulla Azizov**, Deputy Chairman of the Board of JSC "Almalyk MMC" presented Transformation at AMMC.

Almalyk Mining and Metallurgical Complex (AMMC) was established 70 years ago. The company employs more than 35,000 people. In 2021 its revenue was \$3 billion.

The company is producing over 100 manufactured products. AMMC's non-gold export is 1.1 bln USD per annum.

AMMC produces over 90% of Uzbekistan's copper or 148.500 tons per annum. Additionally, the company annually produces 17 tons of gold, 196 tons of silver and 110 000 tons of zinc.

The company operates three open-pit and four underground mines. Underground mines are mainly used for gold production. Ores are processed at five plants and then shipped to metallurgical complexes.

About 39% of the revenue is coming from copper and 34% is coming from gold. Zinc makes up 8% of the revenue. 19% of revenue comes from other products and commodities.

According to JORC estimates, AMMC has over 45 million tons of copper, over 5 thousand tons of gold, over 900 000 tons of molybdenum and 348 000 tons of silver. Total resources are estimated at around 19.5 billion tons of ore in Kalmakyr and Yoshlik-1 open-pit mines, which could last for 350 years at the current production capacity. The company is massively increasing its production capacity in the next 6-8 years.

Current copper production of 148,500 tons will increase to 400,000 tons in 2028 and will reach 500,000 tons per annum by 2030. Even at that production level, current resources will be enough for 110 years.

The company's objective is to maintain low-cost production and increase its profit. To achieve this goal, the company and the Government of Uzbekistan have created a portfolio of investment projects for 15 bln USD up to 2030.

Until recently the AMMC was heavily regulated by the government and all the data related to the company's activity was not publicly available. This has changed and the company is now actively working with many international partners on the development of its mineral resource base and modernising and expanding its production.

At the Yoshlik – 1 investment project (11 bln USD) established in 2017, the company has already spent over 400 mln USD on purchasing mining equipment. Since 2021 the company has begun EPC contracts for building a new copper processing plant. Current investment in Yoshlik – 1 project reached USD 1.9 bln.

AMMC has been building new electricity substations to meet the forecasted demand of 2 GW of electricity consumption by 2028. Solar plants or renewable energy are an imperative part of the expansion plan of electricity production. An international tender is currently open for companies wishing to participate in the development of renewable energy capacity.

AMMC has started the two-phase expansion of the metallurgical complex. The first phase of expansion will be finished by 2026 and the second phase by 2028.

Deliverables will increase from 148,000 to 400,000 tons of copper cathodes, gold production from 17 to 50 tons and silver from 161 to 270 tons per annum by 2028.

ESG considerations are the highest on the priority list in the company's agenda. AMMC is spending 5-8% of net profits on Environmental, Social and Governance improvement projects.

To remain the world's top low-cost production the company is focusing on increasing operational efficiency, digitizing and automating the business processes and saving costs by using cheaper electricity.

Recycling, pollution reduction, and water resource management have significant importance in the company's transformation strategy. Currently, we are cooperating with institutes such as Dresden Technical University, Freiburg Mining Academy, and organisations such as Copper Mark and others on several ESG-related projects.

The transformation of AMMC began in 2017 with its objective of opening to the global markets and diversifying from raw materials exporter to a producer of value-added and finished products. In 2022 the copper cluster was established with various incentives provided by the government to boost the manufacturing of semi-finished and finished products from copper. Development strategy 2030 has been developed for the copper cluster. The government and AMMC are actively supporting private investors and joint-venture projects.

At the end of the presentation, Abdulla Azizov invited investors to take part in the international tenders for the [right to use subsoil plots and strategic types of minerals](#) organised by the Government's Geology Committee.