“Uzbekistan's Critical Minerals: Unlocking Investment Opportunities for the Clean Energy Transition”

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The Republic of Uzbekistan is a double landlocked country located in Central Asia.

Uzbekistan has a rich history dating back to ancient times. It was a significant part of the Silk Road trade route, connecting Asia and Europe.

Uzbekistan has a diversified economy, including agriculture, mining, manufacturing, and services.
WHO WE ARE

Ministry of Mining Industry and Geology
Established in December 2022

**Vision**
Creating a geological and mining-metallurgical industry that is the basis for sustainable economic growth through the rational use of mineral resources and becoming a regional leader in the field

**Mission**
Ensuring sustainable development of the mining industry and geology, effective exploration, extraction and management of mineral resources

**KEY FUNCTIONS**
- Development and restoration of the base of mineral raw materials
- Sustainable growth of mineral extraction volumes
- Subsoil use oversight and ensuring industrial safety
- Broad involvement of local and foreign investors in the industry
- Development of science and personnel training in the field

**PRIORITy ACTIVITIES**
- Geological research and exploration
- Development of the mining and metallurgical industry
- Providing quality public services
- Supporting education and innovation
1. NEW MINING CODE

Expected by the first half of 2024

1. New Mining code
2. Investor friendly taxation
3. World class market players
4. Vast geological and mining potential

Implementation of block system for exploration works on principle "First come - First served"
Optimization of the tax policy, including reductions and abolitions of certain tax rates
Licenses based on tenders:
1. technical qualification.
2. commercial proposals.
Transition to JORC code, support for junior mining, ownership rights guarantee, ESG

2. INVESTOR FRIENDLY TAXATION SYSTEM

<table>
<thead>
<tr>
<th>Country</th>
<th>Tungsten</th>
<th>Gold</th>
<th>Iron</th>
<th>Copper</th>
<th>Uranium</th>
<th>Corporate income tax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uzbekistan</td>
<td>2.2%</td>
<td>7%</td>
<td>2%</td>
<td>7%</td>
<td>8%</td>
<td>15%</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>2.7%</td>
<td>6%</td>
<td>4.8</td>
<td>8%</td>
<td>8%</td>
<td>20%</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>7.8%</td>
<td>7.5%</td>
<td>3.64%</td>
<td>8.55%</td>
<td>6%</td>
<td>20%</td>
</tr>
<tr>
<td>Australia</td>
<td>2.7%</td>
<td>2.5% - 5.0%</td>
<td>2.75% - 7.5%</td>
<td>2.5% - 7.5%</td>
<td>5%</td>
<td>25% - 30%</td>
</tr>
</tbody>
</table>
3. World class market players

**Navoi mining and metallurgical company**
- **Au** Gold 92 tons
- **Ag** Silver 20.4 tons
- Ranked fourth in global gold production
- 5+ B USD revenue

**Almalyk mining and metallurgical complex**
- **Cu** Copper 148,500 tons
- **Au** Gold 17.5 tons
- **Zn** Zinc 76 tons
- **Ag** Silver 163 tons
- 2.5 B USD revenue

**“Navoiuranium” State Company**
- **U** Uranium 4.0 M tons
- 0.5 B USD revenue

Production volume increase by 2030
- **Gold** 175 tons
- **Uranium** 10 K tons
- **Silver** 600 tons
- **Coal** 10 M tons
- **Copper** 500 K tons
4. Geological and mining potential of Uzbekistan

Main production minerals

Copper
Reserve: 24.8 M tons

Silver
Reserves: 27 K tons

Uranium
Reserve: 95.2 K tons

Gold
Reserve: 6,76 K tons

Coal
Reserve: 1.5 B tons

31 minerals

Critical minerals

Germanium
74.6 tons

Tungsten
2.6 K tons

Vanadium
112.7 tons

Indium
38.9 tons

Lithium
178.5 K tons

Rhenium
804.2 tons

Tellurium
2.8 K tons

Graphite
1.3 M tons

Molybdenum
373.4 K tons

Selenium
26.3 K tons
Mineral resources and mining industry development strategy 2030

1. Prioritizing reconnaissance surveys
   - in the conduct of state policy in the field of geological exploration, priority should be given to determining the types of mineral-raw materials important for reconnaissance surveys (up to detailed survey) and the development of national industry.

2. Integration to international standards
   - introduction of international standards in geological prospecting and evaluation of mineral reserves, transformation of national standards for quality increase developing the market for services in the field.

3. Improving operational efficiency and profitability in mining and metallurgical companies
   - radically improving technical procedures, increasing operational efficiency, reducing product costs, increasing production volume by implementing short-term and long-term investment programs.

4. Critical, rare metals and rare earth elements sector development
   - acceleration of geological research work on critical, rare metals and rare earth elements, application of innovations in the introduction of mining and enrichment technology, development of mining of rare metals and rare earth elements at the expense of modern scientific research;

5. Promotion of Investment Potential in Mining and Geology
   - Active promotion of investment potential based on the experience of leading foreign countries in the field of mining and geology, further improvement of the investment environment due to the introduction of an attractive and competitive tax regime for investors.
The investment portfolio consists of 20 projects and is expected to be valued at $1.7 billion.
Integration to international standards

All work and any economic activity must comply with environmental standards established in Uzbekistan and International standards, primarily the Law “On Environmental Protection”. The law establishes the legal, economic and organizational basis for environmental protection and rational use of natural resources.

- **Sustainable development reports** based on GRI standards in mining companies have been publishing.
- **Realization of action plans to get ESG ratings by 3 mining companies.**
- Construction **Solar and wind power plants**, shifting to **EV** in mining operations.

To ensure **sustainable mining** in Uzbekistan, alignment to **CRIRSCO** standards for exploration reporting and reserve estimates will protect the environment while satisfying investors through increased project confidence and compliance.

- **27 instructions and methodological recommendations were integrated to the JORC code and approved by the DZK.**
- **48 specialists were trained according to the JORC Code.**
Challenges

Where we are:

1. **Limited domestic manufacturing capabilities**
   - *Uzbekistan currently has a limited industrial base for manufacturing clean energy components and technologies, which creates a strong reliance on imports.*

2. **Infrastructure constraints and geographical limitations of Uzbekistan**
   - *Upgrading roads, railways, and power grids will be crucial but can be capital-intensive and time-consuming.*

3. **Skill gaps and workforce development**
   - *Lack of highly skilled internationally experienced specialists*
   - *Gap between education institutions and companies R&D*
4.1 Challenges

What we are planning:

1. **Diversification of domestic manufacturing capabilities**
   - **Copper cluster**: increasing domestic manufacturing of copper (*300 thousand tons* by 2030) and produce cable and wire products, electronic devices, copper foils
   - **Lithium-ion batteries**: Uzbekistan has an estimated 60-70% of the mineral resources needed to produce lithium-ion batteries domestically

2. **Infrastructure improvement**
   - implementation of 18 major projects based on partnership, covering *1.6 thousand kilometers* of roads of international and national significance.

3. **Capacity building**
   - Cooperation with international and foreign universities in R&D;
   - Implementing training programs to build relevant skills;
   - Upskilling and reskilling current employees.
“Nurlikon” lithium project

Resume of the project

An investment project is being implemented by the Ministry of Mining Industry and Geology in order to develop the Nurlikon lithium mine.

The Nurlikon lithium deposit was discovered and explored in detail in the 1990. Lithium is currently being considered by the government of Uzbekistan as a strategic resource.

The project plan provides for open-pit mining. Processing plant and tailings pond will be located in an industrial area.

Main mineralogical composition

<table>
<thead>
<tr>
<th></th>
<th>Lithium oxide</th>
<th>Rubidium oxide</th>
<th>Cesium oxide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Li₂O</td>
<td>0.51%</td>
<td>0.037%</td>
<td>0.015%</td>
</tr>
</tbody>
</table>

Ore characteristics:

97% of lithium contains in clay-mica materials, in the form of the mineral polylithionite, and 3% in the form of the mineral tainiolite.

Works performed within the “Nurlikon” lithium project

- A project (MRE) was developed based on JORC standards *(September, 2023)*
- A prefeasibility study condition project was developed for estimating the reserves of the Nurlikon lithium mine *(November, 2023)*
- Laboratory research based on a new method of processing lithium-containing ores was conducted.
“Nurlikon” lithium project.

Parameters of (PFS) project

<table>
<thead>
<tr>
<th>Resources and geological parameters</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ore reserve</td>
<td>26.7 M.t</td>
</tr>
<tr>
<td>Lithium &quot;Li&quot; Concentration</td>
<td>0.51% Li₂O</td>
</tr>
<tr>
<td>Lithium &quot;Li&quot; Reserves</td>
<td>178.5 thousand tonnes Li₂O</td>
</tr>
<tr>
<td>Depth</td>
<td>0-250 m</td>
</tr>
<tr>
<td>Occurrence conditions</td>
<td>Stratiform deposits, dip angle 10-40°</td>
</tr>
</tbody>
</table>

Potential production parameters

<table>
<thead>
<tr>
<th>Potential production parameters</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ore processing per year</td>
<td>1500 thousand ton.</td>
</tr>
<tr>
<td>Li₂CO₃ Potential annual production of carbonate lithium</td>
<td>14 thousand ton.</td>
</tr>
<tr>
<td>Project lifetime</td>
<td>20 years</td>
</tr>
<tr>
<td>Construction period</td>
<td>2 years</td>
</tr>
</tbody>
</table>

Next steps of the project

- Basic engineering development 2024
- Project implementation 2025-2026

FURTHER OPPORTUNITY

- The damp rock formed as a result of quarrying contains iron and silicon oxides, which can be further utilized in the production of construction materials such as gravel and cement.
“Taskazgan” graphite project.

Parameters of the project

<table>
<thead>
<tr>
<th>Area</th>
<th>Ore (thousand tons)</th>
<th>Average grade (%)</th>
<th>Resources/reserves (thousand tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Taskazgan</td>
<td>912</td>
<td>14</td>
<td>800 (category P₁)</td>
</tr>
<tr>
<td>South Taskazgan</td>
<td>9 171.3</td>
<td>14.8</td>
<td>1 325.4 (category C₁)</td>
</tr>
</tbody>
</table>

Location and infrastructure:
The Taskazgan field is a graphite ore deposit located in the Peshku district of the Bukhara region.

Works performed within the “Taskazgan” graphite project

- Topographic picture of the mine *(February 2024)*
- Evaluation of the results of laboratory studies *(May, 2024)*

Next steps of the project

- Completion of drilling operations: wells – 15 400 m *(June, 2024)*
- Development of PFS *(September, 2024)*
- Project implementation 2025-2026
THANK YOU FOR YOUR ATTENTION

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