



АГЕНТСТВО РАЗВИТИЯ  
МЕЖДУНАРОДНОГО  
ФИНАНСОВОГО ЦЕНТРА

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## All the Periodic Table Is Here!

Underground resources in Kyrgyzstan hold many deposits with a good commercial development potential.

The Soviet Union, in the course of exploring for gold and Uranium, had covered the territory of the Soviet Kyrgyzia with a very dense exploration grid — much more intensive than in any other USSR region. Because of that the Soviet geological archives held in the Kyrgyz Republic are still a very valuable source of ideas for mining investors.

Kyrgyzstan is famous among the ex-USSR States for the unique openness of geological information and licensing data. The archives are available for research subject to the payment of a modest fee. All the license owners and license descriptions are on a public database accessible by internet.

The most promising mineral to explore and mine in Kyrgyzstan is gold — both alluvial and hardrock deposits are available. This business has already attracted dozens of companies, including a regional giant — TSX-listed Centerra Gold Inc. which manages one of the biggest gold mines in the region with reserves and resources of hundreds of tons of gold.

The country's mining resources also contain rare earths, uranium, antimony, mercury, iron and other minerals. Kyrgyzstan holds vast resources of coal which is of superior quality compared to many deposits in the region; the only challenge to their full scale development being the remoteness of the resources from the transport grid.

A number of foreign public companies that operate in Kyrgyzstan maintain listings on AIM (LSE), TSX, ASX and other exchanges. The list of public companies whose main assets are in Kyrgyzstan can be reviewed here.

## Where to start

You can get your first introduction to Kyrgyzstan's investment potential in the mining sphere by briefly reviewing the full list of prospecting, exploration and production licenses currently active in Kyrgyzstan. This is a very open country, and even telephone numbers of the company's managers are a matter of public record. The list is in Russian and available here, from the website of the country's mining regulator.

By reading this register you will get an idea of which minerals attract most of investor interest in the country.

A full list of mineral deposits and mineral occurrences (exploration prospects), of over 200 pages, in Russian, can be downloaded here. In case it does not load from the website of the Industry Committee (this happens), here is the download link for a copy of the list saved in January 2018.

## **Licensing regulations**

Large mineral deposits of strategic value to the country can only be licensed through tenders organized by the Government. The list is adopted by the Government and can be downloaded here (official text in Russian).

Other prospects and fields are split into two categories. The first is a list adopted and reviewed from time to time by the mining regulator, the State Committee on Industry, Energy and Mining. It contains all the more or less valuable deposits and exploration areas which can be licensed only through an auction.

Any prospect which is not on either the 'strategic', or 'auction' list can be licensed by direct application to the mining regulator. The law gives 30 days for this procedure, and if during that period a competing application for the same prospect is received, the mining regulator will have to call an auction.

Unfortunately, the auction system is far from perfect. It presumes that the regulator itself decides on what prospects to auction first, and due to that you may be waiting for a chance to compete for a license of interest to you for a very long time. We hope that this issue will be resolved in the course of the legislative reform.

The list of auction prospects can be viewed here. It is also downloadable in a single file from here.

## **Most important minerals and natural resources**

### **Gold**

The most exciting mineral to mine in Kyrgyzstan is gold — the country has both hard rock and placer deposits. Dozens of companies are active in gold production, including a regional giant — Centerra Gold Inc., listed on the Toronto Stock Exchange, which controls the Kumtor mine producing over 500,000 oz of gold per annum.

Possibilities of investing into gold exploration and production in Kyrgyzstan are discussed in more detail in «Gold Mining: Investing From 300,000\$ to Hundreds of Millions».

### **Oil and gas**

In Kyrgyzstan almost all the explored oil reserves are located in the Fergana Valley and slightly southwards. In fact, Soviet Kyrgyzstan «received» only a small fraction of the Fergana basin petroleum reserves, while their bulk is located in the neighbouring Uzbekistan whose territory includes the main part of the Fergana Valley.

Most of the Kyrgyz oilfields are in their final stages of production and the yield of the wells is constantly declining. In an attempt to intensify the yield, the State-owned KyrgyzNeftegaz which controls the bulk of the oil production in the country now engages a number of foreign service companies to perform hydraulic fracturing and other 'deathbed manipulations' with the oil wells.

Besides KyrgyzNeftegaz, a number of private oil companies are active in the Fergana Valley and the southern provinces of Kyrgyzstan, several of them foreign-owned. However, their achievements are even poorer than those of the State-owned oil company. They 'torture' the wells drilled in the times of the Soviet Union not even attempting to discover new deposits.

The oil industry (if you can call it that) can in no way solve the problem of Kyrgyzstan's dependence on foreign oil and fails to supply enough raw product for the country's refineries. As a result, petroleum products including gasoline are an important item on the Kyrgyz Republic's import list.

Kyrgyzstan's total reserves are 10 million tonnes of oil and around 5 billion cubic metres of natural gas which is roughly equivalent to the reserves of a single mid-size Siberian oilfield.

From the geological point, the discovery of significant new reserves in Kyrgyzstan may be a viable idea.

Practically all the intermontane basins and valleys in the country have the potential to contain large reserves of hydrocarbons.

In the past 20 years a number of companies undertook early stage exploration in several of those areas, but it was done so sluggishly that no promising results were achieved. A company with Chinese capital drilled two parametric wells in the Alay valley (Alay intermontane basin) which most likely proved to be dry (no results reported). Several companies acquired exploration licenses in the Chui Valley but their exploration program hardly even reached the seismic stage.

A Chinese-backed company acquired a license to explore for oil on the bottom of the Issyk Kul lake but never started works. Which is good news because no hydrocarbon reserves may be found there for geological reasons, and the exploration could have only damaged the lake's resort area.

## **Coal**

Kyrgyzstan has significant reserves of coal (around a billion tons in general). Its quality is on average much better than what can be found in the neighbouring Kazakhstan. The problem, however, is the lack of a viable export transportation route.

Many coal deposits were explored by the USSR: in the very south (Sulyukta — The Batken Region), near Osh (Uzgen basin), further north near Tash Kumyr and in the Central Tien-Shan (Kara-Keche mine in the Naryn Region).

The Soviet Union planned to build a coal power plant at the Kara-Keche mine (to balance the hydro power supply in the low-water years), but the country collapsed before the plans could materialize.

As a result, the coal business in Kyrgyzstan now is the domain of small producers whose market is mainly municipal power stations and retail customers buying coal for heating.

From time to time Chinese companies engage the Government of the Kyrgyz Republic in discussions of allowing them to build a railway linking China with the coal-rich regions of Kyrgyzstan. Construction of such a railway would immediately open up the Chinese market to the Kyrgyz coal producers. At the same time, we all understand that Chinese companies come into the developing world with very far-reaching plans and then never leave. And before Kyrgyzstan will agree to the «railroad for resources»

deal the Kyrgyz leadership will have to take a strategic decision which will determine the fate of the country for generations ahead. At the moment the country is not ready for it, and we are sure this is for the better.

Potential investment opportunities in the Kyrgyz coal sector can be developed along the following three lines:

- 1.** Develop a transport route for the high quality local coal and export it;
- 2.** Invest into power generation on the basis of the local coal;
- 3.** Do the same as the locals, only more efficiently (extract and sell the coal «as is» or with a slight consumer finishing — eg. in briquettes).

Kyrgyzstan has a variety of unlicensed coal properties; some owners of the licensed ones are ready to agree a farm-in or are ready to sell their license, so there is a good choice of potential targets for investment.

## **Uranium**

The Soviet Union successfully explored and developed to depletion all the more or less large Uranium properties in the country. A good deal of atomic bomb charges for the Soviet military was made of the Kyrgyz Uranium.

At present the Soviet Uranium mines are in conservation, and from the investment point of view are hardly of interest, unless a workable technology is found to reprocess their tailings and dumps (please see below).

There are very few untapped Uranium prospects in Kyrgyzstan.

The biggest ones are — one in the Sary-Jaz river valley (hard rock deposit containing reserves plus resources = 9.5 thousand tonnes with an average Uranium content of 0,022%), and one in the East of the country — the Kyzyl-Ompul Uranium-Thorium alluvia (12.8 thousand tonnes of Uranium with an average content of Uranium of 0,032%).

In the Chui Valley, not far from the Manas airport, there is a promising Uranium underground deposit, however because of its location within fertile agricultural land we are very skeptical of its development potential — it will be virtually impossible to agree with the local residents for it to even be intensively explored, let alone mine.

The problem with the Kyzyl-Ompul alluvia is the presence of Thorium which is much more toxic than Uranium and will require specialized equipment for processing. Kyrgyzstan does not have it, not even at the Kara-Balta plant which was used to process Uranium ores.

## **Tailings and Dumps**

Over the Soviet years Kyrgyzstan accumulated an enormous volume of tailings from the processing of various ores. There are huge fields of rock-hard tailings from Uranium processing around the Kara-Balta Uranium processing plant about 100 km westward of Bishkek. Similar Uranium tailings surround the town of Maili-Say in the South-West. There are numerous tailings left from the production of gold, rare earths, mercury, antimony etc. etc. Almost all of them still contain potentially valuable elements, but

their content is by definition small.

These tailings and dumps wait for the arrival of a miner able to find the technology to economically extract the useful minerals.

There were attempts to do that already. An Australian public company Nimrodel Resources obtained licenses for the tailings and dumps of Maili-Say, but failed to do anything with them apart from issuing several optimistic press-releases for its investors (the company closed its Kyrgyz presence several years ago and changed its name to Walkabout Resources). There were attempts to work over the tailings of the Kara-Balta plant, but the technology to extract residual gold had not been tested successfully.

## **Antimony**

Combined reserves of Antimony in Kyrgyzstan are around 264 thousand tonnes, contained in seven deposits, two of which are quite large (Kadamzhay and Khaidarkan).

The beneficiation of the Kyrgyz Antimony ores is complicated (Arsenium is present and the ores are oxydized). Development of this business in Kyrgyzstan awaits the introduction of new technologies.

The Kadamzhay Antimony Plant is working mainly on the raw material from Russia, with very unstable shipments.

## **Rare Earths**

The Soviet Union successfully developed a number of rare earths deposits on the Kyrgyz territory. At present there are no active projects in this mineral category here.

Several years ago Stans Energy, a publicly listed Canadian miner, invested into the rehabilitation of the Kutessay-II mine where certain reserves were left over from the USSR production. However, the project was frozen following the company's conflict with the Kyrgyz Government.

## **What Else Do We Have**

Tungsten, Tin, Beryllium, Aluminum, Copper, Lead, Zinc, Iron — there are good quality deposits of these minerals in Kyrgyzstan. Some of them are licensed and some are yet to be auctioned off.