

Panning for Gold: Kumtor Gold Operations and the Kyrgyz Republic (B)

In May of 1998, a truck crashed through a bridge near the village of Barskoon and dumped over 1.7 tons of sodium cyanide and 935 kg of cyanide into the Barskoon River. The company did not notify residents of Barskoon, who use the water for drinking and irrigation, until 5 hours after the accident. As a result, over 2,500 people were poisoned, 850 people were hospitalized and at least four of those patients died.



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For weeks, villagers exposed to the cyanide -- and to the sodium hypochlorite that was used to treat the water and soil after the spill -- reported skin rashes, sores, and other ailments. Panic spread among the affected communities due to a lack of reliable public information about the impacts of these chemicals. Revenues sharply declined at nearby Lake Issyk-Kul, Kyrgyzstan's most popular tourist attraction amid fears of contamination. Though estimates of the total damage resulting from the spill ranged from US \$20 to 42 million, the Kumtor Operating Company (KOC) reached an agreement with the Kyrgyz government to pay US \$4.5 million in compensation for the spill.

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This settlement has become controversial among the stakeholders of the Kumtor Mine. The International Finance Corporation (IFC) is the private-equity investment wing of the World Bank; it has invested capital in Kumtor. It sees the negotiations between the KOC and the local populations of Issyk-Kul in the aftermath of the spill as a great success for biodiversity. One product of that negotiation was the Community and Business Forum; IFC (undated) provides a description of the Forum's efforts to protect the snow leopard. Norlen (2000) provides a less positive account of the negotiations and the IFC's role.

Ownership and Governance.

The Kyrgyz state corporation tasked with exploiting the economy's gold resources is named Kyrgyzaltyn. On 5 January 5 2004, Cameco Corporation and Kyrgyzaltyn announced their agreement to combine the assets of Cameco Gold (including the Kumtor Gold Company (KGC) that owns the exploitation rights for the Kumtor Mine) with additional gold-mining concessions worldwide. These combined holdings will be incorporated as Centerra Gold. Centerra Gold is jointly owned: Cameco Corporation holds 84 percent of the ownership of Centerra Gold, with Kyrgyzaltyn owning the remaining 16 percent. Centerra Gold is a publicly traded corporation on the Toronto Stock Exchange.

The ownership structure of Centerra Gold raised questions in the Kyrgyz Republic from the beginning. Kyrgyzaltyn owned 67 percent of the KGC, but after this new agreement owned only 16 percent of Centerra Gold.¹ In 2009, Cameco and Kyrgyzaltyn renegotiated the terms agreement of Centerra Gold. Cameco agreed to transfer to Kyrgyzaltyn common shares of Centerra Gold sufficient to raise the Kyrgyzaltyn share of the equity in Centerra Gold to 33 percent.

Kyrgyz Political and Economic Evolution

The political leadership of the Kyrgyz Republic has been somewhat unstable in the years since Barskoon. President Akayev remained in his position until 2005, when a term limit led to the election of another President. Unrest followed his efforts to swing the election toward his family members, and he fled the country during the Tulip Revolution demonstrations. He subsequently resigned as President. His successor, Kurmanbek Bakiyev, was elected in 2005 and re-elected in 2009. His tenure was marked throughout by opposition demonstrations and unrest. He left the Kyrgyz Republic in April 2010 after demonstrations in Bishkek brought down his government. After an interim President in 2010, Almazbek Atambayev became President of the Kyrgyz Republic in 2011 through a decisive election victory. Atambayev had been prime minister pressuring for the renegotiations of ownership terms of Centerra Gold in 2009.

The Role of Kumtor in the Kyrgyz Economy

Since its beginnings in 1997, the Kumtor mining operation has become an important source of income and foreign exchange for the Kyrgyz economy. As Table 4 illustrates for the period 2009-2013, the Kumtor mining operation has accounted for between 6.5 and 11.4 percent of total Kyrgyz GDP. It is nearly half of the industrial output of the country in any given year, and contributes between one-third and one-half of the total value of exports by the country.

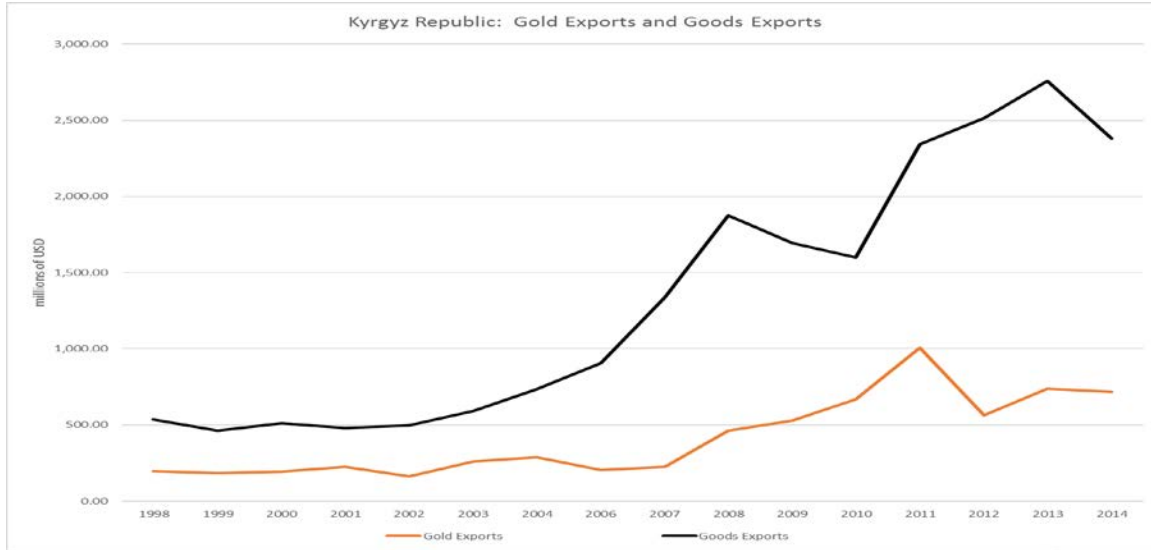
¹ The Kumtor Gold Company represented about 90 percent of the total assets of Cameco Gold, with the Mongolian Boroo concession making up the balance of the value.

Table 4: Key Economic Indicators of Kumtor

	2009	2010	2011	2012	2013
Gross Value Added					
Billion Kyrgyz som	13.6	19.9	32.5	20.2	32.4
Percent of Kyrgyz GDP	6.8	9.0	11.4	6.5	9.1
Industrial Output					
Billion Kyrgyz som	45.6	62.6	88.0	50.7	80.2
Percent of Kyrgyz industrial output	46.0	49.4	53.5	37.0	48.6
Gold Exports from the Kyrgyz Republic					
Million USD	529.5	668.3	1006.2	562.3	736.8
Percent of total value of exports	36.7	44.9	50.8	33.6	41.2
Share of Kumtor in total gold production	96.0	97.7	97.3	94.9	96.8
Capital Expenditures					
Million USD	73.4	186.5	180.7	208.4	88.9
Employment					
Kumtor	3120	3250	3350	3225	3190
Share of total Kyrgyz labor force	0.1	0.1	0.1	0.1	0.1
State budget contributions					
In millions of US \$	77	119	204	134	120
Percent of government revenue	5.1	8.0	10.3	6.1	4.9

Source: International Monetary Fund

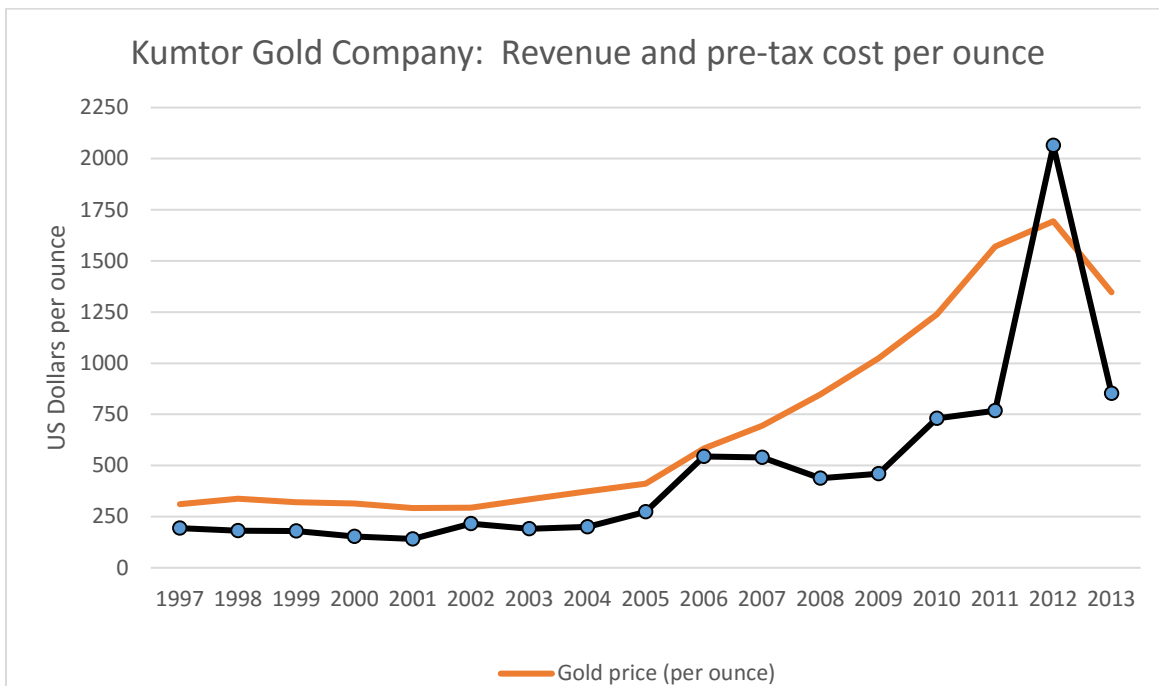
Despite this outsized impact on production and international trade, the Kumtor mine employs relatively few. Its work force in any given year is just over 3000 workers, which is only 0.1 percent of the Kyrgyz Republic labor force.



Source: Centerra Gold Annual Reports, various years

The profitability of Kumtor to Centerra Gold, Inc.

The Kumtor mine has been profitable from the beginning in pre-tax terms, as indicated in the following graph. The gold line represents the price per ounce at which Kumtor gold was sold, while the black line indicates the pre-tax operating costs of the mine per ounce of gold produced. In 2012 a glacier spilled into the mine face, leading to many months of clearing activities – costs without an accompanying production of gold.



Source: Centerra Gold Annual Reports

When the mine was originally opened in 1997, the forecast economic life of the mine was eighteen years (i.e., until 2014). Over time, however, the price of gold on world markets has risen sharply. This allows the KOC to exploit less-rich veins of gold in the mine and extends the economic life of the mine. At current gold prices, the mine is expected to continue operations through 2026.

Kumtor’s Contribution to the State Budget.

In 2013, the Kumtor Gold Company makes contributions to the Kyrgyz state budget through four channels each year.

- A revenue-based tax at the rate of 14 percent of revenues from sales of gold.
- A contribution to the Issyk-Kul Development Fund at the rate of one percent of revenues.
- Dividends paid to the budget through Kyrgyzaltyn as shareholder of Centerra Gold.
- An annual pollution fee of US\$ 310,000 per annum.

Table 4 indicates the size of these payments in aggregate. As Mogilevskii et al. (2015) report, 61.1 percent of total Kumtor contributions to the state budget in 2013 came through the revenue-based tax. The Issyk-Kul Development Fund contributed 6.5 percent of the total, and dividends from Centerra Gold represented 9.9 percent. The remainder accrued through Kumtor’s contributions for employee income tax and social fund.

It is not possible to ascribe a causal connection between Kumtor’s contributions to the State Budget and the economic and social development of the Kyrgyz Republic. However, the trends in social development over the lifetime of the Kumtor mine suggest that the population as a whole observed improvements in the standard of living. Table 5 reports the evolution of seven “macro” indicators for the country as a whole from 2000 to 2013.

Table 5: Indicators of Social Development in the Kyrgyz Republic

Indicator	Value in 2000	Value in 2012/2013
Poverty rate (percent of population below poverty line)	62.6	37.0
Net secondary school enrollment (percent of those aged 7-15 who are in school)	95.9	97.7
Female to male wage ratio	67.6	74.3
Under-5 mortality rate (per 1000 live births)	33.2	23.4
Maternal mortality ratio (per 100,000 live births)	45.5	49.1
TB prevalence rate (per 100,000 population)	150.9	104.3
Life expectancy at birth (in years)	68.5	70.2

Source: Mogilevskii, et al. (2015)

Kumtor's Impact on the Environment

While the Kumtor mine contributes significantly to the economy each year, it also has an environmental impact. The mining technique used at Kumtor is open pit mining. The miners cut away a “bench” (or shelf) from the mountainside (as in the picture below) and then search for gold in the entire content of that bench.



Kumtor mine, Flickr photographer, anonymous.

In Table 6 below we can see a measure of the magnitude of this operation. “Waste” refers to the physical volume of rock and ice taken from the mountainside that did not include exploitable amounts of gold. It is not of interest to the miners, and the waste is transferred to a waste dump on the side of the mountain. The “ore” is the gold-bearing vein of rock uncovered in this process; it is crushed, mixed with water (to create the slurry) and then passed through the chemical separation regimen. When the gold is separated from the rest of the ore slurry, the rest – known as “tailings” – is pumped into a series of man-made holding pools. These tailing pools include cyanide and other dangerous chemicals; their contents are treated until they once again meet Kyrgyz and Canadian health and safety standards. Once sanitized, the water content is released into the Kumtor River. As is evident from the magnitudes in Table 6, it takes many tons of waste and ore to obtain ounces of refined gold. The waste must be relocated from the mine pit. The tailings must be treated and toxic chemicals removed before it can be disposed.

Table 6: Mining Activity at Kumtor

	Gold refined (thousands of ounces)	Ore Mined (thousands of tons)	Waste mined (thousands of tons)
2009	525	4464	111600
2010	568	5765	144125
2011	583	6020	150500
2012	315	4955	123875
2013	601	7289	182225

Source: *Kumtor Gold Company Annual Reports, various years*

On 18 February 1992, the Kyrgyz Republic and its neighbors Kazakhstan, Uzbekistan, Tajikistan and Turkmenistan signed an agreement on cooperation, joint management and protection of trans-boundary water resources. The signatories committed not to allow any operations in their respective territories that would harm the interests of the other states parties, that would inflict damage on them and lead to the contamination of their water resources. Satke et al. (2014) conclude that “[T]he negative effects of mining at Kumtor on Kyrgyzstan's glaciers raise questions about the legality of Centerra's operations in view of the existing conditions that do harm source of the regional water resources.”

In 2013, the CEE Bankwatch Network issued a report on the environmental impacts of Kumtor gold mining. It noted that the mining activity was taking place within and adjacent to two glaciers (the Davidov and the Petrov) and concluded:

- “The most severe impact (to the two glaciers) has happened by storing waste rock on these glaciers, aggravating their melting. The rock placed on the glaciers heats up to about 30 degrees Celsius in the summer, and heats up even in the winter when air temperatures reach -40 degrees Celsius.”
- “According to an analysis of wastewater samples from the State Agency for Environmental Protection, high levels of sulphate and suspended solids in the effluent drainage were identified in the runoff from the mine pit, waste dumps and in the effluent from the glacial moraine.”
- The initial agreement with Centerra prohibited the exploitation of gold ore in the Sarychat-Ertash National Park. “However, the boundaries of the national reserve have been changed (by the legislature) to further explore the Kumtor mine: 4380 hectares of the park’s territory including the Petrov glacier.”
- “Petrov Lake has grown by more than 92,000 square meters annually in recent years from melting at the Petrov Glacier. The mine tailings are located 85 meters below Petrov Lake and in a worst-case scenario the downstream tailings could easily wash away with unforeseeable impacts on people and the environment.”

- “Local people are already reporting the pollution in the Kumtor River is significantly decreasing the amount of fish in recent years. It is worrying that there has already been a change in status (by the government) of the Kumtor River waters from ‘fishery water’ to ‘cultural and household use’.”

Conflict simmering

In September of 2013, there were protests and road blockades by local groups who feared that the mine is an environmental time bomb. They blame pollution from the mine on birth defects in both human and animal populations, including reports of dwindling fish stocks. They also fear that the toxic tailing ponds could be washed out by the increase in glacial meltwater, and that this could lead to a catastrophic overspill into the rivers and Issyl-kul Lake below. A woman leader of the local opposition to the mine, Eringul Imankojoeva, said that an overflow of Petrov Lake can cause environmental disaster not only for the Kyrgyz Republic, but for Central Asia. "If the lake bursts out for the entire depth of the dam, then the tailing storage facility would be washed out."

Protestors blocked roads and cut power supplies to the mine, and ultimately became violent, taking the governor hostage. The cabinet's envoy to the region, Emil Kaptagaev, was surrounded by dozens of activists on horseback on October 7, and forced into a car. Kaptagaev said protesters poured gasoline on the car and threatened to light it if the police tried to disperse them.

Thousands of protesters demanded better ecological standards and free medical facilities. The government ultimately sent in troops to quell the protests and remove the blockades that had been built. The government has been using the claims of environmental damage to call for an increased share in the wealth generated by the mine. There are no agreements for financial insurance in the case of environmental damage after the mine has closed.

"We have to answer the question: Is the economy a priority, or should we protect the environment?" Kasiyet Karachokolova, a spokeswoman for Kyrgyzstan's state geology and mineral resources agency, said.

Trilling (2013) reports that the Kyrgyz government is debating the nationalization of the Kumtor Mine unless the Centerra Gold Corporation agrees to handing over 2/3 of the equity in the corporation to Kyrgyzaltyn.

Your advice

President Altanbayev wants your advice. Should the Kyrgyz government nationalize the Kumtor mining operations? Why or why not?

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