

Globalization in mining.
Global, regional, local mining review.
Comparative analysis with Kazakhstan mining.

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Abstract

The article contains comparative analysis of global, regional, local mining review in comparison with the Republic of Kazakhstan. At the article is considered the condition, production and consumption raw materials in the world. For Kazakhstan this branch is one of the most important, which is defining not only the level of the economic development of the country, but also its economical safety, export potential, opportunities for further development. The article represents practical interest for students, masters, doctors, and experts of the branch.

Keywords: Kazakhstan, mining, raw materials

Globalization has meant that people's lives all over the world are ever more closely interconnected. The common responsibility of all states for stable economic development for the benefit of everyone is becoming increasingly apparent. And in view of the political conflicts it is truer more than ever today to say that trade and a dense network of economic links create trust and stabilize international relations (Mineral resources of Kazakhstan, 2000).

Before independence 90% of Kazakhstan's trade was with Russia. After

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independence, the government committed itself to establishing the conditions for integration into the international market. These steps included price liberalization, through the reduction of subsidies and the deregulation of prices, as well as a balanced government budget through increases in taxes and cuts in government spending (Mineral resources of Kazakhstan, 2001).

The government also instituted a tight monetary policy through an increase in the Central Bank interest rate and encouraged foreign trade liberalization by lifting export and import licenses, granting permission to all firms to engage in foreign trade, and lifting tariffs (Mineral resources of Kazakhstan, 2000).

Kazakhstan also devalued the domestic currency to bring it down to the domestic market rate, and privatized and restructured state monopolies. The government sought to create a market environment through the legislative and regulatory reform of banking, capital markets, civil and contract law, and dispute adjudication (www1). In order to cushion the social impact of these sweeping economic structural transformations, the government developed a social safety net.

The main export industry is oil, it accounted for 65% of total exports in 2004. With Kazakhstan having become an important supplier of high quality oil, the country's export of crude oil and condensate have risen to 1.15m b/d, up from 810,000 b/d in mid-2002, 650,000 b/d in 2001 and 473,000 b/d in 2000.

Mining industry is multinational and can contribute directly to investment, human resources, technology, trade, and the environment (Daniels, Radebough, Sullivan, 1992). With economic development Kazakhstan entailed simultaneous increase of volume of external trade. Kazakhstan is now engaged in commerce with 177 countries. Trading and economic agreements have been concluded with more than 50 countries, most of which benefit from Most-Favoured Nations (MFN) regime in trade. Kazakhstan has established free trade area. Also, Kazakhstan continue its work on deepening the integration process within the framework of Eurasian Economic Community (EurAsEC) comprises, along with Kazakhstan, Russian Federation, Byelorussia, Kyrgyzstan, Tajikistan Formulating foreign trade policies that advance the economic interests of their citizen is an important task facing

most national governments (www1).

The largest copper ore producer and processor in Kazakhstan is Kazakhmys (Samsung Deutschland GmbH), which incorporated Zhezkazgantsvetmet, Balkhashmys, East-Kazakhstan copper and chemical plant, and Zhezkent mining and concentrating plant. Despite the overall production, investments in copper ore production had reduced by 1.5 times. Investments in geological exploration works decreased by 15 times and are practically reduced to zero. If maintained at this level we can see that this production rate will result in the depletion of the mineral sources in the copper sector (Mineral resources of Kazakhstan, 2000).

In Kazakhstan, complex ores are mined by the Zyryanovsk plant, Kazzinc, the East-Kazakhstan copper and chemical plant, Finconcord, and the Leninogorsk plant. A slightly reduction of the investments in this sector (Mineral resources of Kazakhstan, 2000) has been accompanied by annual increase in production of lead, zinc and polymetals. The two third of gold produced in Kazakhstan annually is extracted from complex ores. However, reserves have not been replenished due to the lack of the investments in geological exploration works (Mineral resources of Kazakhstan, 2001).

The gold fields are operated by such large companies as Maikainzoloto, ABS - Balkhash, Pustynnoye GMP, Altyn Tobe, Altynalmas, Ken, Alel, Bakyrchik, Charaltyn, and AndasAltyn. These companies provide 90% of the overall investments in the sector, first of all 88% of investments in production. The investments in exploration have reduced by 10 times, while the investments in production were only a half. A cut of the investments in Kazakhstan gold mining is explained by decreasing in the world gold prices and a consequent outflow of private investors from the sector. The percentage of the private investments in gold mining in Kazakhstan decreased to 26% in 1999 from the level of 60% in 1996. Furthermore, the scope of geological prospecting was insufficient due to the slashed budget financing. At present, some gold mining enterprises operations are suspended, while others have gone bankrupt (Mineral resources of Kazakhstan, 2000).

Chrome ore production is carried out by the Donskoi Mining and Concentrating Plant (Japan Chrome Corporation). It is remarkable that almost

all of the investments made in chrome ore mining, which has increased by 1.5 times as compared to 1996. The lack of the investments in geological prospecting, chromites reserves are enough to provide for the load of enterprises in this sector for many years (Mineral resources of Kazakhstan, 2001).

Uranium deposits are mined by Kazatomprom. Production rates are proportional to the investments in it. The expenditure for geological prospecting has been cut. The uranium sector can be developed at the expense of secondary sources recycling from extracted residual fuel elements.

In the middle of 1990s, a tendency toward the economic growth was seen in Kazakhstan. In 2000 the GDP increased to \$18.3 bln. from \$416.9 bln. in 1999.

The share of mining and metallurgy in the GDP rose from 5% in 1997 to 9.8% in 2000. The number of mining and smelting enterprises also grew (585 to 644). This, however, had a little impact on the growth of employment in the mining and metallurgical sector being only 700 people (Mineral resources of Kazakhstan, 2001).

<Table 1> Production in physical terms in Kazakhstan

| ORE PRODUCTION | Unit measurement | 1997 | 1998 | 1999 | 2000 |
|--------------------------|------------------|---------|---------|---------|---------|
| Iron ore (commercial) | thousand tones | 13132.6 | 9335.8 | 9616.7 | 16156.8 |
| Non - sintered iron ores | thousand tones | | | 1997.4 | 2328.3 |
| Sintered iron ores | thousand tones | 4634.7 | 4759.0 | 7619.3 | 13828.5 |
| Iron ore pellets | thousand tones | 6520.0 | 2864.0 | 2814.0 | 6640.0 |
| Iron ores | thousand tones | 31382.0 | 31043.5 | 28773.2 | 32751.2 |
| Copper concentrate | thousand tones | 1187.6 | 1266.9 | 1403.7 | 1670.0 |
| Copper zinc ore | thousand tones | 2704.9 | 3490.7 | 4146.5 | 5116.5 |
| Aluminum ore (bauxite) | thousand tones | 3416.0 | 3436.8 | 3606.5 | 3729.6 |
| Gold bearing ore | thousand tones | 688.6 | 867.8 | 1267.6 | 4458.2 |
| Gold bearing concentrate | thousand tones | 32.8 | 32.2 | 53.9 | 92.8 |
| Lead zinc ore | thousand tones | 5519.0 | 4890.4 | 4852.2 | 5639.2 |
| Lead concentrate | thousand tones | 41.0 | 53.7 | 58.2 | 71.3 |
| Zinc concentrate | thousand tones | 428.2 | 465.2 | 555.5 | 625.6 |
| Manganese ore | thousand tones | 402.4 | 634.1 | 944.0 | 1201.9 |
| Manganese concentrate | thousand tones | 234.4 | 349.8 | 576.9 | 664.6 |
| Barite ore | thousand tones | 24.1 | 12.7 | 115.0 | 1.0 |
| Barite concentrate | thousand tones | 30.9 | 8.9 | 51.2 | 15.2 |
| Chrome ore | thousand tones | 1795.9 | 1602.7 | 2405.6 | 2606.6 |

(Source: Mineral resources of Kazakhstan, 2001)

<Table 2> NON FERROUS PRODUCTION

| | | | | | |
|---|----------------|--------|--------|--------|--------|
| Unrefined silver, semi refined silver, silver powder | kg | 691326 | 726321 | 904644 | 927110 |
| Refined silver | kg | 389576 | 535987 | 645609 | 895077 |
| Unrefined gold, semi refined gold, gold powder | kg | 18746 | 18120 | 20236 | 28171 |
| Refined gold | kg | 9659 | 8929 | 9655 | 1159 |
| Unrefined aluminum; alumina | thousand tones | 1094.2 | 1084.5 | 1157.7 | 1216.7 |
| Unrefined lead | tones | 103108 | 118634 | 158890 | 185812 |
| Refined lead | tones | 81975 | 99720 | 122417 | 166123 |
| Lead bullion | tones | 92964 | 107971 | 149041 | 19689 |
| Unrefined zinc | tones | 188996 | 240728 | 248754 | 262570 |
| Blister copper | tones | 327397 | 351336 | 383457 | 413859 |
| Refined copper | tones | 301056 | 324763 | 361890 | 394723 |
| Unrefined cadmium(including waste and scrap) and cadmium powder | tones | 949 | 1622 | 1246 | 257 |

(Source: Mineral resources of Kazakhstan, 2001)

Global, regional, local mining review

The dynamic development of the international trade exchange transforms the national economy in constant partner and simultaneously adversary striving to finding of the most acceptable forms of mutual cooperation. Entering in world economy for Kazakhstan is defined by degree of openness and development of its facilities, contents of the export potential, efficiency of the use in economy and trade relations of different resources.

Kazakhstan's embedding in the sphere of modern world relations must be carefully weighted, scientifically motivated, realized with consideration of long-term prospects. Kazakh exports of petroleum liquids may reach anywhere between independent forecasts of 3.6m b/d and a local prediction of 7.5m b/d by 2020 (www4).

Kazakhstan's main export products include oil, base metals, chemicals, food and agriculture.

The increasing competition does not allow making the economic liberty and the value of raw materials forming of the economic growing does not give a base for this.

The priority choice of development must be built on firm bases under constant searching of breakout point on perspective directions, which are providing permanent stability of the national economy.

The strategic aims of Kazakhstan's development in modern conditions predestine the expansion of sales market goods created for the first time, and also there is a need of the maximum use of such traditional advantages of the republic in an economy, as natural wealth and mineral-raw materials resources stocks, efficient development of the oil and gas sector, mining and metallurgical complexes.

As it is well known, the world championship both on absolute stocks resources and on mining some of them including calculation per capita belongs to Kazakhstan. Food grain is one of components of exports of the Republic of Kazakhstan. Export of grain among total exports takes up about 5-7%. Production of grain in Kazakhstan, depending on climatic and weather conditions, as well as technical equipment of agricultural producers, varies on the average from 7 to 17 million tons a year. In the first half of 1999 export of grain in comparison with the same period previous was reduced by 56% and has made up 73 million USD. The specific weight in the structure of the total export was reduced by 2% additionally. About 90% of grain in Kazakhstan is annually exported to CIS countries.

The Russian Federation is traditionally the basic importer of Kazakhstan wheat. Export of wheat to Russia in 1998 in comparison with 1997 was reduced by 30% and has made about 1 million tons. Tajikistan, Kyrgyzstan and Turkmenistan also remain the traditional consumers of Kazakhstan grain (www3). In recent years Kazakhstan has remarkably improved its infrastructure to facilitate grain shipments to world markets. In particular, a new seaport was built in Aktau, and it has been operational since May 2001. In yearly July, the first shipment of 3,000 tons of grain to Iran ushered in a new face of transport links between the two countries. The bilateral contract states that Kazakhstan will export 2 million tons of grain to Iran through the Aktau seaport.

However, in the first half of 1999 export of wheat to Russia in comparison with the same period in the previous year has increased insignificantly and has made up more than 350 thousand tons or 54% of the total grain export. This year in the structure of grain export the export of wheat has increased as follows: to Tajikistan by 8%, to Ukraine by 5%, and to Kyrgyzstan and Turkmenistan by 1%. The restriction of the offer of grain to the Caucasian

countries from Russia and Ukraine can increase demand on Kazakhstan grain. On the grain crop of 1999 Kazakhstan has signed the appropriate agreements with Uzbekistan and Iran.

In Kazakhstan are concentrated more than 50 percents of the world tungsten stocks, 25 % of uranium stocks, 23% of chromium ore, 19% of lead stocks, 13% of zinc stocks, 10 percents of copper and ferric stocks.

Kazakhstan occupies the first place on zinc, tungsten and vanadium ore stocks, the second place on uranium, chromic ore stocks, the third place on asbestos, wollastonites, rhenium, manganese stocks, the fourth place on lead stocks, the sixth place on phosphorus stocks, the seventh place on iron ore and silver, the ninth place on oils, coal, copper and gold.

Kazakhstan falls into group of the top ten countries, which are disposing 90 percents of all world phosphate reserves.

In commercial scales Kazakhstan possesses as well natural stocks of 3 ferrous metals, 29 non-ferrous metals, 2 noble, 84 types of industrial minerals, as power systems.

Kazakhstan is the largest producer on the world of rhenium (first - second places), beryllium (first - fourth places), chrome ore, ferrochrome, titanium sponge (the second place), manganese ore, ferroalloy, tantalum, asbestos, niobium, gallium, technical thallium, arsenic (the third place), uranium (the fourth place), vanadium (the fifth place), bismuth (the sixth place), refined copper, zinc, cadmium, boron, sulfur (the seventh place), magnesium (the eighth place), alumina and silver (the ninth place), copper, refined lead (the tenth place), coal, iron ore, refined zinc (the eleventh place), molybdenum (the sixteenth place).

First of all it is necessary to restore and consolidate traditionally developed geological, mountain deal, provide the development of modern technologies on conversion of ores and metals exhibitions.

The general volume of investments on mining-metallurgical complex in 2000-2005, which are intended by investors in \$2 billions per annum and more, must consolidate the position of the deals in these spheres.

The state policy including industrial-innovation program must absorb in itself the complex of the measures on increasing of efficiency of the use of the raw materials potential.

Taking into account that main risks on mastering new productions are connected with intrusion of new technologies and issue of new product, there is a sense to create the insurance fund for the second level banks investments assurance in this enough extremely risk sector of the economy.

Possibly, there is a need to use for these goals a part of resources of created the export assurance foundation.

The second level banks could create the syndicated investment pool for joint financing of innovation projects, having selected on these purposes till 1-5 percents of the credit portfolio.

On the world the attitude to raw materials forming of the national economy is not negative. Agriculture is another growing industry in Kazakhstan, grain and livestock being the most important commodities. Kazakhstan is the sixth largest producer in the world of grain. Agricultural land occupies more than 84.6 million hectares. Chief livestock products are dairy goods, leather, meat and wool. The country's major crops include wheat, barley, cotton and rice. Wheat exports, a major source of hard currency, ranked among the leading commodities in Kazakhstan's export trade. In 2003 Kazakhstan harvested 17.6 million tons of grain in gross, 2.8% higher compared to 2002 (www2).

From the most 200 largest world companies to the raw materials sector belong 90 of them, which have more than 80 percents of the soled production' s total volume of all participants rating.

Thirteen companies of Kazakhstan are at the list of the largest producers on the world.

"Zhezkazganredmet" enterprise has occupied the first - the fourth places in the world on rhenium production, Ust-Kamenogorsk titanium-magnesium combine (UK TMK) has occupied the second place of the titanium sponge production, Donskoy mining-concentrator combine (GOK) has occupied the second place on mining of chrome ore, Ulba metallurgical plant (UMZ) has occupied the second place on beryllium production, the third place on tantalum production, "Kazakhstan' s Aluminum" has occupied a third place on gallium production, the ninth place on alumina producing, Eurasian industrial association has occupied the third place on ferroalloy producing, "Kustanaiasbest" has occupied the third place on the asbestos production, "Kazatomprom" company has occupied the fourth place on uranium mining, "Zhayremskiy mining-

concentrator combine" (GOK) has occupied the fifth place on manganese ore mining, "Yuzhpolimetal" has occupied the sixth place on bismuth production, "Kazzink" Llp has occupied the seventh place on the refined zinc producing, "Kazahmys" Llp has occupied the tenth place on refined copper production, and Sokolovsko-Sarbayaskiy mining-production association occupies the fifteenth place on iron ore mining.

The leaders in the world production of mineral resources are the largest countries on the world as USA, Australia, South Africa, Canada, China and Russia.

The trade of raw materials resources is not reflecting of the state backwardness or the Government's incompetence.

The high level of the economic development in majority of the countries with the rich natural resources is reached at the expense of mining and conversions intensification.

The experience of the states like Canada and Australia is indicate significant influence on the rational use of given potential on volume of the gross domestic product (GDP).

In Kazakhstan mineral-raw materials complex was quickly adapted to requirements of the world market that is reflected in the structure of the export.

The data are indicated on leading position of raw materials and semi-products in rating of the Kazakhstan's export.

In spite of instability of the world conjuncture, when fluctuations of prices are reflected on amount of the sale, this market continues to remain stable.

For Kazakhstan's economy coal branch is traditional. Kazakhstan's coal branch expects the second birth in the years ahead.

On the end of 2002 the reliable coal stocks on the world have formed 984, 5 billions tons.

Under modern level of the mining and technologies the coal stocks are sufficient for development during more than two hundred years.

According to "BP Statistical Review of World Energy" on the end of 2002 Kazakhstan with 34 billions tons of reliable coal stocks has occupied the ninth place on the world after the USA (250 bill. tons), Russia (157 bill. tons), China (114, 5 bill. tons), India (84,4 bill. tons), Australia (82,1 bill.

tons), Germany (66 bill. tons), South Africa (49,5 bill. tons), and Ukraine (34,2 bill. tons).

The big part of Kazakhstan's coal stocks (67 percents) is presented by anthracite and stone coals.

Prognosis resources are valued in 90 bill. tons.

The most large coal stocks are found in Karaganda coal pool (in total 52 bill. tons, reconnoitered 14 bill. tons), in Ekibastuz (12 bill. tons), and Ubagan (Turgay) lignite basin (40 bill. tons).

Kazakhstan's coal export reached 24, 8 mln. tons in 1997, in 1999 dropped to 16,8 mln. tons, however already in 2000 it went up to 25, 1; in 2001 went up to 27, 9; in 2002 fell till 24,3 mln. tons, in 2004 went up to 30-35 mln.tons.

The fluctuations in volume of the shipment are basically connected with coal policy of the Russia.

The serious influence on export, made for Russia in general, has rendered the reluctance of Russian coal miners.

However, in the following restrictions on import of coal were skimmed, and on way of the Kazakhstan coal export no barriers at the present time.

On European market 684 thous. tons were delivered in 2001, in 2002 -1 342,6 thous. tons of Kazakhstan's coal.

In 2001 Finland has bought 318,5 thous. tons, Netherlands - 144,6, Romania - 60, Poland - 47,1 thous. tons.

In 2002 leadership on bulk purchase has altered by sawing to Romania, which has gained 799,6 thous. tons, and Poland - with volume in 281 thous. tons.

In 2003 Kazakhstan coals have begun to buy by the Czech and Turkey.

The new railway Altynsarino - Hromtau through ports Aktau and Potty can do the more profitable supply of Kazakhstan's coal on Turkish and Romanian markets. It is necessary to prepare to master of the Chinese market. In the years ahead, supposedly with 2006, in connection with closing the unprofitable coal mines, according to the experts' opinion, China will become from the exporter of coal to the largest importer.

Kazakhstan follows attentively to study the given problem and takes into account in its export policy.

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