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Sustainable Productivity

Dear Readers,

Our team at Global Business Reports is delighted to present the following cross-industry analysis of Kazakhstan’s mining, power, and chemical sectors. After months on the ground in Almaty, Astana, Karaganda and Ust Kamenogorsk, we have heard from the country’s most prominent executives, officials and thought leaders across three distinct but interlinked value chains.

The Central Asian state is endowed with a rich store of natural resources, including oil and a host of metals and minerals. Strategically located at the frontiers of Russia and China, and bearing healthy relations with trade partners across the world including the United States and Western Europe, Kazakhstan has relied on raw material exports to fuel its economy for decades. Yet a fall in oil prices coupled with slowing global growth and geopolitical uncertainty has prompted the state to invest in alternative sources of income and pursue economic diversification. According to the World Bank, the country is likely to grow at an estimated 1.3% this year, down from 4.3% in 2014, highlighting the need for strong policy directives.

The state has articulated its commitment to reform, outlining steps to achieve large-scale development and modernization through two programs of accelerated industrial and innovative development. Furthermore, the Kazakh economic policy, known as Nurly Zhol, outlines plans to stimulate the economy through targeted investments in domestic transport, energy, and industrial and social infrastructure. Following through on these objectives will be key in overcoming the downturn in oil prices and increasing the country’s visibility in the global arena. The upcoming Expo 2017, to be hosted in Kazakhstan’s capital city of Astana, will be a timely test of the country’s commitment to change, as well as an opportunity to showcase the country’s non-oil sectorial potential.

Kazakhstan Mining, Power & Chemicals 2016 Industry Explorations strives to provide insights into Kazakhstan’s largely undiscovered potential, specifically within the mining, power, and chemical sectors. We hope that investors and policymakers alike will gain insights from our research on the country’s ongoing exploration, its commitment to the adoption of renewable energy, and its burgeoning chemical production within newly established special economic zones. Kazakhstan’s primary goal to rank among the world’s 30 most developed nations by the year 2050 hinges on the success of all three of these key sectors.

We would like to heartily thank all of our interviewees, as well as the companies, associations and individuals that we have met with for their support and insights.

Sincerely,

Katya Koryakovtseva, Project Director
Lubo Novak, Journalist
Neha Ghanshamdas, Journalist
Kazakhstan's Equipment and Service Supply Chain

70. Seeking Quality and Infrastructure
71. Interview with Atlas Copco Central Asia
72. Interview with Bonar Makina Kazakhstan
73. Interview with Sandvik Mining and Construction Kazakhstan
74. Interview with Kazzinc
75. Interview with Metso Kazakhstan
76. Innovative Service Solutions for Miners in Kazakhstan
77. Interview with National Center on Complex Processing of Mineral Raw Materials, Republic of Kazakhstan
78. Interview with KazGorechem
79. Interview with SGS Kazakhstan and Caspian Sub-Region
80. Interview with RDC Group
81. Interview with Orica Kazakhstan
82. Interview with MICROMINE & Interview with GeoMineProject (GMP)
83. Interview with Laszlo-Geosystems and Hexagon Mining Divisions

A Rough Road to Diversification: Kazakhstan’s Chemical Industry

96. Kazakhstan Invests in its Chemical Sector
97. Interview with Kazakhstan Petrochemical Enterprises (KPEC)
98. Interview with Dow Kazakhstan
99. Interview with Comacx Jaypee
100. Interview with Evonik Chimia
101. Interview with Chemie & Technology
102. Interview with BASF Central Asia
103. Interview with RJC Group
104. Interview with 3M Kazakhstan & Interview with Dow Kazakhstan

Into the Future

108. The Way Forward for Kazakhstan and the Global Mining Industry
109. Interview with Canada Eurasia Russia Business Association (CERBA)
110. Final Thoughts
111. Company Index
112. Final Thoughts

Expert Opinion

Government officials, association heads, and industry executives discuss their organizations’ strategies and provide insight into the Kazakhstani economy and heralded mining sector.

16, 17, 24, 25, 38, and many more

Quantitative Data and Maps

Quantitative data and maps help readers to better understand the underlying trends across all levels of the value chain in Kazakhstan’s power, mining, and chemical industries.

8, 9, 12, 13, 22, 23, 56

Editorial Content

Global Business Reports’ journalists provide unique insights into all aspects of the power, mining, and chemical industries in Kazakhstan by working on the ground for months.

12, 22, 32, 40, 48, 56, 70, 82, 96, 108

Future Outlook

Kazakhstan’s variety and depth of mineral reserves makes it one of the most important mining regions on the planet. Companies share their visions for the future of the industry.

112, 113
“2015 will be a difficult year for the mining industry and the Kazakh economy in general. The current difficulties will reveal those companies who are properly prepared to withstand the challenges presented by the global economy. Amendments to the Subsoil Law and development of a mining code will be crucial for the development of the mining industry in Kazakhstan.”

- Albert Rau, Vice Minister, Ministry of Investment and Development, Republic of Kazakhstan
CANNY KAZAKHSTAN
A Brief Political and Economic Overview

KAZAKHSTAN AT A GLANCE
Source: CIA World Factbook
Population: 18,071,123 (July 2015 est.)
Land Area: 2,724,900 sq km
Official Language: Kazakh
Capital: Astana
Chief of State: President Nursultan Nazarbayev (since 1991)
Head of Government: Prime Minister Karim Masimov (since 2 April 2014)
Prime Minister Karim Masimov (since 2 April 2014)
Head of Government: Prime Minister Karim Masimov (since 2 April 2014)
GDP (PPP): $418.3 billion (2014 est.)
GDP per Capita: $24,000 (2014 est.)
GDP Composition by Sector:
- 4.9% agriculture, 29.5% industry, 65.6% services (2014 est.)
GDP Growth Rate: 3.3% (2014 est.)
GDP per Capita: $24,000 (2014 est.)
GDP Composition by Sector: 4.3% agriculture, 29.5% industry, 65.6% services (2014 est.)
Exports: $87.23 billion (2014 est.): oil and oil products, natural gas, ferrous metals, chemicals, machinery, motor vehicles, metals, coal
Imports: $173.6 billion (2014 est.): machinery and equipment, metal products, foodstuffs
Major Trade Partners: Russia, China, Germany, France, Italy, Greece, Romania

KAZAKHSTAN GROWTH VS. INFLATION (2007 TO 2016)

KAZAKHSTAN OIL AND GAS PRODUCTION (1992 TO 2014)

KAZAKHSTAN MINING, POWER & CHEMICALS 2016

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Kazakhstan is no stranger to international attention for its raw materials, and it knows how to play the game. This massive country at the heart of Asia is not only replete with natural resources, including oil and gas and, as this report highlights, minerals, but it also has vast experience of trading and working with outsiders. Moreover, Kazakhstan has already demonstrated that it can produce healthy economic growth without depending on its vast subterranean wealth. In 2014, GDP growth was 4.3%, despite the plunge in world oil prices. Growth is expected to slow to 1.3% in 2015, but the World Bank and International Monetary Fund both predict recovery in 2016 and 2017. Now, Kazakhstan is embarking on a strategy to further diversify its economy from raw materials into other value-added industries.

Yet oil and gas will still constitute the bulwark of Kazakhstan’s economy in the medium term. Kazakhstan first began producing oil in 1911, when it was part of the Russian Empire, but production mostly stagnated for the next several decades, barely eclipsing the 500,000-barrels per day (bpd) mark. The dissolution of the Soviet Union in 1991, however, refocused the attention of international oil companies (IOCs) on the newly independent states in Central Asia, including Kazakhstan, in the hopes of gaining a foothold in the forthcoming bonanza of oil and gas production. In 1992, Kazakhstan produced 443,000 barrels per day (bpd) of oil but by 2015, this figure had climbed 1.7 million bpd. During the same period, gas production rose from 286 billion cubic feet (bcf) to 720 bcf. Kazakhstan’s 30 billion proved barrels of oil reserves ranks second among former Soviet republics after Russia, and its oil production ranks 18th in the world.

Having become a major oil and gas-exporting country has given Kazakhstan weight in global energy markets and attracted the interest of world powers in search of energy security. China and Western Europe are excellent markets for consuming Kazakh hydrocarbon exports; Russia also seeks to cooperate and collaborate with Kazakhstan on energy. Transnational oil pipelines allow Kazakhstan oil to reach China, Russia, and the Black Sea, and transnational gas pipelines link Kazakh gas to Russia, and ultimately Ukraine, as well as Uzbekistan and Turkmenistan. Plans to build additional gas pipelines to China and India are still in the proposal stages, but speak to the country’s ambitions as well as the global thirst for energy. Most forecasts predict that world demand for natural gas will continue to rise, and, if these plans come to fruition, Kazakhstan will be better positioned to compete for market share than more expensive liquefied natural gas coming from Qatar or Australia, or the United States.

Kazakhstan has experienced political stability since independence, which has been a key ingredient in its two-decade rise in economic competitiveness in other spheres. In office since 1991, President Nursultan Nazarbayev was reelected in April 2015 with nearly 98% of the vote. The continuity of leadership will ensure that Nazabayev’s Kazakhstan 2050 Strategy, a series of economic, social, and political reforms that were launched in 2012 and designed to make Kazakhstan one of the world’s 30 largest economies, continues. A key pillar of this strategy is identifying new sectors for the country to develop and attract foreign investment and new partnerships for Kazakhstan to grow its exports. Then, in 2014, Nazarbayev introduced “Nurly Zhol” (Bright Path), a new economic policy that envisions massive state investment in infrastructure over the next several years. The top-down approach has yielded success in managing the economy in the past, and casting reforms over such a long period of time could either be the right approach for fostering gradual reform, or devolve into inaction. Only time will tell.

In its trade relations, Kazakhstan is also building outward. In May 2014, it joined the Eurasian Economic Union (EEU) with Belarus and Russia, with Armenia and Kyrgyzstan adding to the union in 2015. The EEU represents a single, integrated market of 183 million people and has provisions to expand from a trading bloc into a monetary union in the future. Kazakhstan is already a member of the Commonwealth of Independent States, the Economic Cooperation Organization, and the Shanghai Cooperation Organization. The same shrewd and patient decisionmaking and alliance building that has characterized the country’s first 25 years is likely to continue for the foreseeable future and help Kazakhstan to continue to increase its production of raw materials, bolster its ancillary services, and develop entirely new homegrown industries. In one of the oldest parts of the world, time is on Kazakhstan’s side. •
The mining industry in Kazakhstan is governed by the Ministry of Investment and Development. What does this say about the importance of this sector for the country’s economy? The Ministry of Investment and Development governs the mining industry for the past five years. It continuously supports the industry and provides a resource base and energy resources, works on lowering tariffs, and railway transportation, and provides other incentives for further development of the mining sector. Moreover, the Ministry is continuously improving legislation, so that it can reduce unnecessary administrative barriers.

Historically, the mining industry has played a special role in the social life of Kazakhstan. Many mining facilities and processing plants are located in mono-cities, which treat built around mining deposits, and this system is firmly dependent on the mining industry. There are 60 mono-cities in Kazakhstan, and the government has prioritized their development, as well as the mining facilities, over the past couple of years. The development of the cities relates directly to the development of a competitive mining industry.

The government amended the Law on the Subsoil and Subsoil Use in January 2015. What specific problems did the amendments address and why were they made at this time? In January 2015, new changes were implemented to the Law on the Subsoil and Subsoil Use. These changes sought to strengthen the legislation governing the mining industry, improve the investment climate, and attract foreign direct investment in the mining sector. The main new features of the law are the simplified process of granting rights, based on the Australian method, for unexplored pieces of land (not more than two square kilometers per one block). We expect to see the first contracts based on this scheme in the second and third quarter of 2015 and to auction at least 100 areas in total this year. The law will also simplify access to geologic data. We want to dramatically decrease the time required to obtain such information from 240 days to one day. Moreover, we simplified the procedure for granting exploration contracts and small deposits, to remove extra administrative barriers. In the near future, the new law will increase transparency in decisionmaking and remove administrative barriers on all levels. These changes should boost the development of junior companies and simplify procedures for all mining companies.

Another revolutionary change was the introduction of a mining code, which will reflect the specificity of minerals more clearly. The code will also create an impetus to switch to international resource estimation standards.

What does Kazakhstan need to do to attract international investment? We work on several events to attract international investors and companies to work in Kazakhstan. For the last six years, we have organized the international “Astana Mining & Metallurgy” (AMM) Congress. Recently, Kazakhstan received the right to host International Mining Congress in 2018. After EXPO 2017, we will have the infrastructure in place to host an event of such magnitude and with so many international guests. Kazakhstan remains largely undervalued by the international mining community, which is why such events help to increase the country’s visibility and recognition.

Mining companies globally have difficulties related to lack of government and local universities address this problem? It is a challenge to find the right talent, and indeed within the Exploration and Mining Works Program 2015-2019, we emphasized the importance of staff issues, training, attracting young people to work to improve the image of mining professions, and increasing the competitive advantage of Kazakhstan in the international reduction of training. In this regard, we work closely with the Ministry of Education and Science of the Republic of Kazakhstan. In the new school year, the ministry will start new master’s programs in geology, hydrogeology, and geophysics. We identified 10 institutes and universities for technical industrialization and are planning to have 532 graduates from bachelor’s programs in geology, including 21 “Bolashak” graduates. We always try to attract students from mono-cities to these programs because they will be the ones who will come back to the mining towns and continue to work in the industry.

Together with the assistance of Ministry of Education and Development, the Association of Mining Companies and Association of Petroleum Geologists created a corporate fund called Zhas Geolog. This fund will invest in a career field and will attract more young school children and student to study geology. Also, in 2015, 60 special programs in geology, geocology and geophysics will be introduced to the 1030 employees will train with Geotech, and 60 employees will train with Buka Resources.

What changes to the mining industry do you expect in the next three years? 2015 will be a difficult year for the mining industry and the Kazakh economy in general. The main difficulties will reveal those companies who are properly prepared to withstand the challenges presented by the global economy. Amendments to the Subsoil and Subsoil Use Law and development of a mining code will be crucial for the development of the mining industry in Kazakhstan.

Today Kazakhstan generates enough power to meet demands of 90% of the population, but continues to import electricity to offset supply gaps and regulate frequency. What actions are being taken to promote energy efficiency in the country? Kazakhstan has sufficient energy sources to meet domestic demand and does not need to import power. Electricity is generated by 76 power plants, with a total capacity of 16.9 gigawatts. However, it is necessary to ensure stable power supply during peak electricity load hours, which is done by a multitiered system of power generation. In 2014, the total amount of imported power reached 454.2 million (kilowatt hours) kwh, while exported power totalled 291.5 million kWh. It is necessary to mention that Kazakhstan’s power sector has export potential. Existing power plants are being revamped and construction of new power plants is soon to begin. The national power grid is also being revamped, along with regional power grids. In line with the national Nurly Zhol program, new transmission lines will be built to ensure consistent power supply and connect Ekibastuz, Semey and Ur-Kamenogorsk and Semey, Aktogay, Taldykorgan and Almaty. At the same time, the government’s policy in the electric energy sector aims to promote the transition to renewable energy.

What is the estimated amount of foreign direct investment in the reconstruction and modernization of power generating facilities? As of today, such foreign investment is not substantial. Kazakhstan creates mechanisms to attract domestic investment to revamp existing power plants and construct new facilities.

What role will Kazakhstan play in developing the greater CIS region’s power market? The role of the Ministry of Energy is one of the key departments within the Ministry of Energy of Kazakhstan. The main aim of the department is to define and implement the government’s policy in the electric energy sector. Functions of the department include: ensuring definition and implementation of government policy in the electric energy sector; developing and implementing regulations regarding the implementation of government policy in the electric energy sector; developing strategic programs to achieve goals in the electric energy sector; and developing program documents within the department’s competence.

Today Kazakhstan generates enough power to meet demands of 90% of the population, but continues to import electricity to offset supply gaps and regulate frequency. What actions are being taken to promote energy efficiency in the country? Kazakhstan has sufficient energy sources to meet domestic demand and does not need to import power. Electricity is generated by 76 power plants, with a total capacity of 16.9 gigawatts. However, it is necessary to ensure stable power supply during peak electricity load hours, which is done by a multitiered system of power generation. In 2014, the total amount of imported power reached 454.2 million (kilowatt hours) kwh, while exported power totalled 291.5 million kWh. It is necessary to mention that Kazakhstan’s power sector has export potential. Existing power plants are being revamped and construction of new power plants is soon to begin. The national power grid is also being revamped, along with regional power grids. In line with the national Nurly Zhol program, new transmission lines will be built to ensure consistent power supply and connect Ekibastuz, Semey and Ur-Kamenogorsk and Semey, Aktogay, Taldykorgan and Almaty. At the same time, the government’s policy in the electric energy sector aims to promote the transition to renewable energy.

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What role will Kazakhstan play in developing the greater CIS region’s power market? Kazakhstan has enormous export potential. The treaty forming the Eurasian Economic Union was signed in May 2014, and a common power market was scheduled to be created in 2019. To achieve this, a conception on the common power market was adopted in May 2015, and a program for the creation of a common power market will be developed by July 1, 2016. Parties to the law will create the legal framework to be implemented in 2016, with free access to power grids until 2019 in order to ensure transmission between all the member states. All of these factors create premises to increase Kazakhstan’s export potential within the common market.

Kazakhstan is the world’s largest uranium producer and has recently approved the plan to revamp a power plant this past May. What role will nuclear power play in Kazakhstan’s energy future? The country’s large uranium deposits in spite great potential for the development of nuclear power generation. Furthermore, the drive for the development of nuclear science and high technologies, as well as the projected positive impact on the environment, is backed by the government. In the event of hazardous emissions, all make it necessary to build a nuclear power station in Kazakhstan.

The government of Kazakhstan has set a 3% renewables target by the year 2030. Given that coal-fired plants generate approximately 65% of the power in the country currently, what measures are in place to promote the transition to renewable energy? Kazakhstan’s government has set a number of targets to drive the development of a renewable energy segment, which could implement for measuring requirements. However, given that these energy sources rely heavily on weather conditions and are not reliable, their use requires a sensible approach.

How do you think the power sector will develop in the coming three to five years? In 2014, Kazakhstan adopted the 2030 Energy Strategy, which according to this vision, further modernization of the power market will ensure sustainable development of the sector. The vision’s prerequisite is to ensure transparent and adequate tariffs in the long run and will improve the sector’s attractiveness to investors. Power plants and the overall grid will be further revamped, new power plants launched, ties between northern and southern grids strengthened, and local talent and good practices further developed. In line with the ministry’s estimates, it is necessary to attract significant capital over the period from 2016 to 2020, as demand for power is expected to increase by 2030.
Kazakhstan, the largest land-locked country in the world, is sparsely populated and mostly covered by flat steppe. Yet in the last two decades, the country has come to play an outsized role in the global economy due to its abundant reserves of oil and gas. Unsatisfied to languish as a petrol-state, Kazakhstan is now looking to grow and diversify its economy and escape the middle-income trap and the mining, power, and chemical industries offer strong opportunities for the government to achieve this goal. Of these three, the mining industry offers the strongest prospects and is the focus of this report, but power and chemicals should not be overlooked in their own right, not least because they are intertwined with Kazakhstan’s mining and oil and gas industries.

There are sound reasons to believe that Kazakhstan will succeed, as the country has demonstrated a steady arc of economic growth and development over the past two decades. In 2002, Kazakhstan became the first CIS country to be labeled investment-grade by a major credit rating agency. Its GDP currently stands at about $200 billion making it the largest in Central Asia. Kazakhstan pursues a multi-vector foreign policy approach, meaning that it aims to develop friendly relations with all of the world’s powers. China accounts for 22.7% of exports with Russia and Germany at 8% each. On January 1, 2015 the Treaty on the Eurasian Economic Union (EEU) came into force. The EEU has an integrated single market of 183 million people and a GDP of over $4 trillion. The union introduces the free movement of goods, capital, services, and people and provides for common transport, agriculture, and energy policies. Kazakhstan also finalized negotiations to join the World Trade Organization and has become a full-fledged member on July 27, 2015. In 2017, its capital, Astana, will host the International Exposition, EXPO 2017, helping to further increase the country’s image on the world stage.

Looking Underneath

Kazakhstan has long been overlooked as a major mining destination, but with vast, unmapped riches, it seems destined to become the next mining hotspot. The mining and metals sector already contributes around 20% to the country’s GDP and represents about 19% of its overall exports. It is the fourth largest copper producer with 40 million metric tons (mt) in proven reserves and has the world’s ninth largest proven gold reserves and substantial reserves of zinc. Almost all gold mining companies and properties have been fully privatized in Kazakhstan. The country is estimated to contain 30% of the world’s reserves of chrome, 25% of manganese, 10% of iron ore, 10% of copper and 13% of lead and zinc.

KAZAKHSTAN’S WORLD RANKING FOR NATURAL RESOURCES RESERVES
Source: Government of Kazakhstan

<table>
<thead>
<tr>
<th>Resource</th>
<th>Rank</th>
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<tbody>
<tr>
<td>Oil</td>
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<td>Coal</td>
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<td>Iron Ore</td>
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<tr>
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<td>Bauxite</td>
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<td>Molybdenum</td>
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<td>Copper</td>
<td>13</td>
</tr>
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<td>Lead</td>
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Source: Government of Kazakhstan

KAZAKHSTAN’S WORLD RANKING FOR NATURAL RESOURCES RESERVES

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Monetary Metals, USA

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Can Minerals Help Kazakhstan Diversify Away from Oil and Gas?

KAZAKHSTAN MINING, POWER & CHEMICALS 2016

EDITORIAL

Industry Explorations
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- 11 -
Kazakhstan is also the largest producer of uranium as of 2009, and was responsible for 38% of global production in 2013. To top all this, Kazakhstan’s substantial mineral resources include the world’s largest vanadium, bismuth and fluorine deposits, while the country is also richly endowed with chromium, bauxite, coal, phosphates, titanium and tungsten. Despite these prodigious resources, Kazakhstan has seen little exploration in the last 30 years, with the last large-scale exploration happening in the 1950s. The Soviet-era data is still available and, although of excellent quality, is not always complete. The government has recognized that Kazakhstan, already harnessing its oil and gas resources, can become a major mining destination that could rival countries such as Canada, Australia and Russia; however, new exploration projects and substantial changes to its mining laws as well as the investment environment are needed. “Investors do not want to know that reputedly all the elements of the periodic table can be found in Kazakhstan, but rather what the investor benefits are, and most importantly what is the difference that would make Kazakhstan a more appealing investment target than another destination,” said Tony Thornton, general director of SRK Consulting.

Overall, the lack of new exploration is the biggest problem facing Kazakhstan’s mining industry. One recent announcement, however, may encourage others to enter the country. Rio Tinto and Kazgeology are investing $6 million in the exploration of copper porphyry ore in the Korgantas area in the Karaganda province. While other mining majors have left Kazakhstan after encountering significant challenges, Rio Tinto has decided to stay and continues to conduct exploration activities. If this is successful and the Kazakh government commits to further improve the investment climate for the mining industry, more international players can be expected to enter and re-enter the market, which is Kazakhstan’s ultimate goal. The Kazakh government has allocated close to $1 billion to aid exploration before 2019 and is looking to develop mining laws similar to those found in Australia and Canada. Additionally, Kazakh national companies will invest another $3.3 billion in geological exploration in areas with good potential. Tau-Ken Samruk, which consolidates all of the state-owned mining holdings with the goal of increasing efficiency and investment in exploration, will be responsible for much of this expenditure. Partnering with Tau-Ken opens doors to dealing directly with the government that can certainly help speed up a new entrant’s approval process. Kazakhstan is mainly focused on the extraction and export of its raw materials, with higher value-added processing done abroad, but this has been slowly changing. Although Russia has been Kazakhstan’s main partner historically, China is currently the main off-take market for its mining exports, despite the recent minor slowdown in China, which is causing some uncertainty among Kazakh companies. “In 2014, the share of export to China was about 80% of the total volume. Today, this share has decreased to 64%, and we see that the situation has changed in China mainly due to internal politics and external factors. In this light, we are looking for new off-take markets,” said Bakhtiyar Krykpyshev, general director of Kazalchyns Corp.

As mentioned previously, Kazakhstan has been working on details of a new mining law that will make it easier for foreigners to tap the nation’s riches and plans to award 50 to 100 exploration licenses in 2015. White & Case law firm reports: “Kazakhstan will continue to roll out reforms at an ambitious pace. Several state authorities have already begun preliminary hearings to consider approvals for a draft code scheduled for the end of 2015 and a new framework to be implemented in early 2016. If the reforms pass as envisioned, they will enable international arbitration as a mechanism for dispute resolution, adopt international standards for calculating and reporting reserves, introduce retention rights, bring in simplified state-control procedures and modify the tendering process, increase access to information including geological data, cut expert review requirements and approval times further and implement a comprehensive field development plan.” Kazakhstan’s mining industry is set to grow in value, reaching $30 billion by 2017, even when accounting for the decline in commodity prices. Coal, copper and gold are expected to be the main drivers of growth, but Kazakhstan will need substantial foreign investment to make this a reality; capital, as well as technology and technical know-how, will be necessary to bring about these developments. Inadequate infrastructure is another reason why Kazakhstan lags behind other mining destinations. The country is well developed in its urban centers, but, as many new deposits are located in remote areas, a comprehensive infrastructure plan must be put in place. Transport routes, both road and rail, will be needed as well as sources of power and water. “It is very difficult to work in remote areas very far from the cities. To overcome this challenge, Kazdrilling is trying to work closer to the three main cities where we have our branches and to provide services not further than 500 km from these three cities. Often the limitations of infrastructure increase the price of the services that we can provide,” said Yermat Sargsanov, CEO of Kazdrilling, an Almaty-based blasting-services provider. As Kazakhstan prepares to undertake changes to its legislation, new explorers are expected to enter the country and in combination with its natural riches, Kazakhstan is on the road to great prosperity. **

**

In 2014, the share of export to China was about 80% of the total volume. Today, this share has decreased to 64%, and we see that the situation has changed in China mainly due to internal politics and external factors. In this light, we are looking for new off-take markets. - Bakhtiyar Krykpyshev, General Director, Kazalchyns Corp.
Kazakhstan is holding a number of events, such as the Astana Mining and Metallurgy Congress in June 2015, Mining World Central Asia in September 2015, and Minex Central Asia in April 2016 to increase its visibility on the world stage. Significant work remains to be done to transform the country into a booming mining destination, ranging from legislative and regulatory framework to ensuring continued political stability in the foreseeable future, as well as the development of infrastructure in the more remote regions. The Kazakh government is taking positive steps toward change and is working hard to present itself as an investment-friendly destination. Once an upturn in the prices of commodities occurs hopefully in the not-too-distant future, Kazakhstan is looking to greatly benefit from an improved investment climate, as a result of its government’s hard work.

The summer of 2015 will be remembered in Kazakhstan for its unbearable high temperatures; the mysterious deaths of the country’s most beloved animals, the saigaks; and Thursday August 20, the day that the Kazakh tenge lost 26.2% of its value against the U.S. dollar overnight, falling to 255.26. Such was the response to the Central Bank’s decision to no longer control the currency and let it float freely in currency markets, which it justified as increasing the competitiveness of Kazakh exports and thus helping to grow the overall economy.

This devaluation was not at all unexpected, and speculation had been rife that there is an impact on imported goods and materials, which we are expecting to see very soon. Previously, Kazakh industry suffered from a weaker Russian rouble and a decrease in demand for locally produced goods, as production in Russia became significantly cheaper. Evidently, devaluation of the tenge will bring more balance into this equation and more demand back to Kazakhstan. According to Alexandra Tuzhilina, finance manager of Linde Gas Kazakhstan, “Our market is now competitive with Russia again, meaning that our local consumers will shift from Russian products to local products. This is beneficial, because some of our customers were buying products from Russia. We also expect more activities from export-oriented local producers.”

Mining and exploration companies’ balance sheet will be affected, but perhaps not as strongly as one might anticipate. With the majority of the profits denominated in tenge, and major investment in U.S. dollars, the income will essentially remain unchanged, meaning imports will not become more expensive for these companies. What will change, however, are labor costs, which have become cheaper, and most of Kazakhstan’s petrol is imported from Russia, hence the new price will depend on the rouble’s behavior in the medium-term. This will create more pressure for local producers and the price advantage created by devaluation might just as well disappear thanks to the higher transportation cost.

The long-term impact of the devaluation is unknown, but the short-term effects are fairly obvious. Kazakhstan’s export goods became significantly cheaper on foreign markets. Given that mining and metallurgical products account for about 20% of country’s total exports, the industry will profit, and some companies have already raised their share prices. Kaz Minerals, for example, showed a 13.9% rise on the day of devaluation. The euphoria was short-lived, however, as the share price fell to 77.75 by September 29. Naturally, cheaper exports are only one side of the story. For a country like Kazakhstan, which imports most of the equipment used in mining, the cost-pressure will be felt very soon. Gerard Fries, general director of Kazakh-French JV Katco confirmed: “As far as devaluation is concerned, there are two sides. Given that Katco is selling a commodity at price in U.S. dollars and costs are mainly denominated in tenge, devaluation mathematically improves our cost of production. However, not all equipment is local, implying that there is an impact on imported goods and materials, which we are expecting to see very soon.”

One of the biggest issues in Kazakhstan prior to the devaluation was the incredibly high cost of transportation due to the country’s vast territory and lack of a well-developed infrastructure. “For now, costs have remained the same. The government will try to keep prices at the current level, but we know this is temporary. In one or two months transportation costs will increase, especially given the free floating cost of fuel,” said Aikyn Urkimbaev, managing director of Agility Kazakhstan. U.S. dollar-denominated petrol became less expensive, but most of Kazakhstan’s petrol is imported from Russia, hence the new price will depend on the rouble’s behavior in the medium-term. This will create more pressure for local producers and the price advantage created by devaluation might just as well disappear thanks to the higher transportation cost.

The economics of the 2015 devaluation are not as unfavorable to the mining industry as the 2014 devaluation, and the currency crisis may serve as a catalyst to improve efficiency and achieve greater cost optimization in the mining sector. Kazakh mining practices are often described as too labor-intensive, and automation might be the next big step for local companies.
How would you assess the willingness of international companies to enter Kazakhstan? Currently, the government is reviewing the subsoil legislation and we are looking to ensure that it is in accordance with international standards. We are drastically changing the situation with the right of priority which the government has when it comes to geological exploration. Previously, the government had the right to refuse the right to explore to a company, but now the government cannot do that.

What steps should be taken to attract investment in geological exploration, apart from the new subsoil code? Geological exploration remains one of the least developed sectors in Kazakhstan. The government and industry accept the fact that Kazakhstan is an underexplored country. In the past 20 years, companies have focused on Soviet geological information, which, though of high quality, is not enough to unlock the country’s true mineral potential. After the collapse of the Soviet Union, there was no exploration in Kazakhstan, as companies were more interested in developing other industries and technologies. Luckily the situation has changed. First of all, the government created Karzgeology, an organization responsible for geological exploration in the country. Secondly, a special state organization was created, and now the government spends money on geological exploration.

These changes make it easier for private companies to take part in geological exploration, and, at the same time, gain rights to geological exploration. This year, the Ministry is supposed to ensure that it is in accordance with international standards. Therefore, during 2014, a joint committee of the relevant Kazakhstani and Russian officials understood that investors are not obliged to pay for everything.

How do you see the mining industry developing in the next five years? We remain optimistic about the future of the mining industry in Kazakhstan, thanks to the numerous changes. The government has introduced a number of measures, namely (but not limited to): most importantly, it has undertaken reforms, namely to: increase the efficiency of the traditional mining sector; adopt new approaches to integration of new technology and training specialists so that it will be easier for private companies. This will also help attract additional investment. The ministry is closely working with universities, which prepare mining specialists and metallurgists.

One of the key challenges is the lack of qualified professionals. What is the government doing to change this? For a long time, it was not considered prestigious to work in the mining industry, and today there is a serious lack of specialists. The government understands how crucial it is to develop the mining sector, including mining, processing and services. We are working hard to change the perception of the mining industry and to show that Kazakhstan that working for a mining company is a prestigious career.

Many companies in Kazakhstan often hire non-Kazakhs for highly qualified positions. The government needs to invest in educating and training specialists so that it will be easier for local companies. These changes make it easier for private companies. This will also help attract additional investment.

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In summary and in overview, it can be seen that the key purpose of the reforms is to substantially improve the existing laws and procedures. The Code is planned to incorporate and to provide for the best world practices in the mining industry. The government has already started joint-exploration projects with JSC Kazzkugozmetall, the state-owned exploration company, to explore some of the promising territories in Kazakhstan, in copper and other minerals, etc., so that the early signs are promising. 

President Nazarbayev renewed his term and introduced a new program where he outlines five institutional tasks, one of which is concerned with the improvement of the mining sector. In the framework of this program, a new subsoil code will be created based on Australia’s, which will simplify the process of acquiring exploration licenses, clarify tax regime, and make Kazakhstan more attractive for international investors.

Legal Reforms in Kazakhstan’s Mining Sector

Michael E. Wilson, Director, and Yermek K. Aubakirov, Senior Lawyer

On January 17, 2014, the President of the Republic of Kazakhstan, Mr. Nursultan Abishuly Nazarbayev outlined his program “Kazakhstan’s Way – 2050: One Goal, One Interest, One Future,” which called for major reforms in various fields and industries. One of the major areas of concern was an insufficient level of foreign investments into the subsoil sector, and the program pointed out the major directions in which the state should embark and the areas in which it should undertake reforms, namely: to increase the efficiency of the traditional mining sector; adopt new approaches to integration of new technology and training specialists so that it will be easier for private companies. This will also help attract additional investment. The ministry is closely working with universities, which prepare mining specialists and metallurgists.

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Michael Wilson & Partners, Ltd. (MWLP) is a full service law firm that is closely involved in these legislative reform into the mining sector in Kazakhstan. MWLP is a member of the two number groups for the Code managed by both the Ministry for Investments and Development and the OECD Panel. MWLP has been carrying on business since 1979, now has 20 partners and has offices in both Kazakhstan and Azerbaijan, and is also active throughout the Region.

As was also mentioned in the Concept, exploration is one of the most important, but still underdeveloped sectors in terms of applicable laws and regulations. Accordingly, the Code pushes forward reforms to open Kazakhstan’s exploration market to foreign investors.

Incentives for them to bring finance and technology would include: - providing for the right to own geological data and information that they obtain, in the course of their work, and to dispose of it at their discretion; - supporting investors at local levels: providing land use rights and delivering all necessary data and information. In summary and in overview, it can be seen that the key purpose of the reforms is to substantially improve the existing laws and procedures. The Code is planned to incorporate and to provide for the best world practices in the mining industry. The government has already started joint-exploration projects with JSC Kazzkugozmetall, the state-owned exploration company, to explore some of the promising territories in Kazakhstan, in copper and other minerals, etc., so that the early signs are promising.
“Building new gas-fired combined-cycle power plants would be environmentally very sound. The only problem is the price of gas, which is a social issue. Power generated from natural gas as opposed to coal has generally had a higher price, making it a major issue for the government, as this differential somehow has to be paid for or subsidized. Various interest groups will lobby against the transition to gas, but, from our standpoint, renewable energy and gas-fired energy are options of the future.”

- Stephen Tomczak, Managing Director, ILF Consulting Engineers
For decades Kazakhstan has fueled its energy-intensive economy with coal-fired power. The country’s immense coal deposits and large coal-fired power plants are located in the north and power the majority of its economy concentrated in the south. Today, according to the Central Asian Electric Power Corporation (CAEPCO), 64% of Kazakhstan’s power is generated from coal. The remaining 16.1% is fueled by gas and marat, 12% by hydropower, 7.4% by gas, and 0.5% by renewables.

Kazakhstan’s major coal-fired power plants, including Ekibastuz CHP-1, Ekibastuz CHP-2 and the Eurasian Energy Corporation’s Akso Power Plant, are located in the northern region of Pavlodar. Historically, Kazakhstan’s northern region has been home to the bulk of the country’s electricity generation, and, according to CAEPCO, hosts 70.4% of generation facilities today. Within this area, 43% of electricity is generated in Pavlodar. Major players such as state-owned Samruk Energy and CAEPCO occupy 30% and 6.47% of total market share, respectively. Currently, coal remains the most important source of electricity, primarily due to its low cost. With an abundance of coal reserves, a strong lobby, and longstanding coal-fired power plants, there are few incentives for Kazakhstan to adopt alternative forms of energy.

The second largest source of power, gas and mazut, is generated primarily from deposits in the northwestern Mangistau region of Kazakhstan. This region remains largely isolated from the main Soviet-era grid, which runs from the north to the south, and is home to the country’s colossal oil and gas reserves. Utilizing its gas reserves would not only promote a cleaner source of energy, but also capitalize on Kazakhstan’s existing resources. A recent law on the restriction of gas flaring was passed to ensure sustainable development, turning to existing gas reserves seems to be more worthwhile than opting for alternative sources of energy such as nuclear power. Kazakhstan’s immense uranium reserves have prompted the government to propose plans to construct the country’s first nuclear power plant by the year 2025. Focusing on gas and using the country’s gas resources is a more productive objective than trying to develop a very expensive nuclear capacity that begs heavy reliance on overseas partners,” said partner at Deloitte, Anthony Nicholas Mahon.

The country’s third largest source of electricity, hydropower, is harvested mainly along the Irtysh river, which flows from China through Siberia and Kazakhstan. Local hydropower plants include AES’ Shulbinskaya and Ust-Kamenogorsk hydroelectric power plants (HPPs), Bishkek HPP, Shanyrak HPP, and Moinkar HPP. Lastly, renewable sources of energy including wind and solar power comprise a small fraction of Kazakhstan’s power genera-
tion mix. Yet the Central Asian state has made it clear that it is committed to the development of a green economy, evidenced by the nation’s 2050 Strategy and the decision to host the World Expo 2017, which will be centered around renewable energy. Stagnation in this sector can largely be attributed to unstable tariffs. The recent devaluation has also made returns in the sector much less attractive, so many projects have been cancelled or put on hold while investors wait for new tariffs to be ratified. However, strides have been made to further the green economy, particularly by AECOM. The American giant has launched a wind farm concept-design project, in partnership with Kazatomprom and Toshiba, which it plans to sell as a completed design package with financing from the EBRD. AECOM’s entrance into the market may be just what Kazakhstan needs to attract additional foreign investors into the country. “Kazakhstan is investing time and money to develop this type of energy in the country and has the perfect natural conditions for renewables,” said country manager at AECOM, Marina Kostanian.

Other players are also attracted by the country’s natural conditions and have taken steps towards project implementation. An Indian firm has plans to construct a 50-MW solar power plant in Aktau and another 100-MW plant in Shymkent. Locally registered German firm KB-Enterprises has finalized its approvals for the construction of a 100-MW solar power plant 35 kilometers from the capital city of Astana. Samruk Green Energy has recently moved its operations from the capital, in order to manage an upcoming 2-MW solar power plant project near Kapshagai reservoir in Almaty region. Kazakhstan’s current energy mix, however, remains far from the targets that the government outlined in its 2050 Strategy. Attracting and securing private investment in Kazakhstan’s power sector are heavily dependent on legislation. With ambitious goals of 3% renewable generation by the year 2030, and 50% by the year 2050, the state needs to make concerted efforts to reach them. •

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- Anthony Nicholas Mahon, Partner, Deloitte

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Source: Ministry of Energy of the Republic of Kazakhstan

KASAKHSTAN MINING, POWER & CHEMICALS 2016

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- Editorial
AES is a global company with a long-standing presence in Kazakhstan. What did the company enter the market in? AES is a global company with representation in 18 countries across four continents. Investment commenced was developed in terms of its industrial sector, especially in the oil and gas and mining and metals sectors. Naturally, all of the companies in those sectors consume a great deal of electricity; and gas and mining and metals sectors. Its industrial sector, especially in the oil

AES Kazakhstan is approaching its 20th anniversary. What are your strategic priorities for the upcoming five years? We are aiming to achieve a zero lost-time incident for at least the next five years. All incidents can be avoided by having an efficient safety management system. AES’ priorities include the improvement of the quality of operations of our power plants. We have a program targeted at continuous improvement and every year we develop more than 100 projects in this area. All goals are linked to AES’ vision that we have of improving the lives of people in every market where we operate. We have been in Kazakhstan for many years and believe that we can continue to contribute to the improvement of peoples’ lives by providing safe, reliable, and sustainable energy solutions in every market we serve.  

What changes have you observed in the power sector over the past couple of years? Kazakhstan’s power sector has been evolving significantly. In the 2000s, the country’s economy showcased a good growth rate, which also resulted in an annual growth of 5% to 7% in energy consumption. At that time, it was becoming apparent that there was a deficit of power production in the country. Additionally, most power was being generated using outdated equipment. To solve this problem, the government introduced a program called “Tariff in exchange for investment” program in 2008. Within this program’s framework, all power companies were divided into 13 groups, each of which received a fixed tariff for the following seven years. The annual tariff increase was 10% to 20%. The program provided strong incentives for the introduction of new generation capacity and the modernization of existing equipment. As a result, production capacity increased by 30%. The “Tariff in exchange for investment” program was designed for 2008-2015, and as of January 1st, 2016, we were supposed to adopt new legislation, or the so-called Electricity Market, to help develop new generation capacity and create new power plants. However, in recent years, the growth of energy consumption has significantly slowed, and the government prolonged the introduction of the legislation for another three years. Thus, the tariffs for 2016-2018 will be fixed at the same level as those of 2015. With regards to CAEPCO, in 2007 we began working with the European Bank for Reconstruction and Development (EBRD). EBRD became a large shareholder, owning 24% of CAEPCO’s shares in 2009. Working with such a large institutional investor allowed us to implement an investment program to modernize our assets.

How attractive are current tariffs for international investors? The tariffs are calculated based on operational costs. Every player in the market signs an investment agreement with the Ministry of Energy that specifies an amount that will be produced and the amount that will be sold, as well as the level of investment. In the following three years, the investment component of the tariff will be gradually reduced, taking into consideration the level of inflation. CAEPCO is satisfied with the current tariffs. We are expecting the wear-and-tear rate of equipment will be reduced from 80% in 2008 to 39% in 2018. In the coming three years, we will continue to improve this rate. In the past years, our operational costs were growing at the same rate as inflation, and the investment component grew much faster, which is why our rate of investment in 2015 is significant enough to finish our development plans.

Please tell us more about CAEPCO’s investment program. During the process of developing our investment program with the EBRD, CAEPCO focused on modernizing its generation capacity, which currently consumes amounts to 940 megawatts. Our program has three key directions. First, we will replace our generators (our newest power station is 10 years old) and lower, which makes us the largest transmission and distribution company in Kazakhstan in terms of grid capacity. The third pillar of our investment program is focused on environmental. However, we are able to treat significant decrease harmful waste and currently we are one of the leading companies in terms of environmentally friendly production.

Is CAEPCO planning to export electricity in the near future? Thanks to our access to retailers, CAEPCO is able to sell everything it produces. At the same time, we are one of the few players on the Kazakh power market that has the technological capacity to export to Russia, avoiding the national grid operator. However, incident target for all of our Russian neighbors is about 25%, which is incredible compared to Europe, thanks to our access to retailers, CAEPCO is able to sell everything it produces. At the same time, we are one of the few players on the Kazakh power market that has the technological capacity to export to Russia, avoiding the national grid operator. However, incident target for all of our Russian neighbors is about 25%, which is incredible compared to Europe. Thanks to our access to retailers, CAEPCO is able to sell everything it produces. At the same time, we are one of the few players on the Kazakh power market that has the technological capacity to export to Russia, avoiding the national grid operator. However, incident target for all of our Russian neighbors is about 25%, which is incredible compared to Europe. Thanks to our access to retailers, CAEPCO is able to sell everything it produces. At the same time, we are one of the few players on the Kazakh power market that has the technological capacity to export to Russia, avoiding the national grid operator. However, incident target for all of our Russian neighbors is about 25%, which is incredible compared to Europe.
Could you tell about the projects that Batys Transit is working on?

We are expecting to see up to 420 megawatts (MW) of power transmitted through the North Kazakhstan-Aktobe region interregional power transmission line (hereafter PTL-500 kV) once the smelting facility No.4 of a branch of Akobe’s ferroalloy plant TNC Kazchrome JSC reaches its full capacity in 2020. Although PTL-500 kV has the capacity to transport 640 MW, the transmission line is limited to 380 MW by the system administrator to ensure reliability and maintain the static stability of the Akobe power center.

This is because the flow in the 220-500 kV transmission line between Akobe region and Orenburg region of Kazakhstan and Orenburg region of Russian Federation is limited to 500 MW. To cover the expected power deficit on PTL-500 kV and increase the load of the grid, it is necessary to build new or revamp one or several of the old international 220-kV transmission lines that connect the Akobe region with the energy system of the Russian Ural, in order to steady power supply and cut down on the expenses of purchasing power to cover technological losses, the new power transmission line will be erected on its own power plant and received a $74,400,000 grant from the U.S. Trade and Development Agency for a feasibility study.

How will the power sector develop in the next three to five years?

Could you tell about the development of the company since its inception?

The majority of generation capacity of Kazakhstans unified power grid (SDPP-1, SDPP-2, Aksu SDPP) is located in north Kazakhstan's unified power grid (SDPP-1, SDPP-2, Aksu SDPP) is located in north Kazakhstan in Aktobe region. Historically, power deficit in Aktobe region was covered by expensive power that was imported from Russia, Kazakhstan was cut off from the power systems of its nearest neighbor and potential market for power—Russia and Kazakhstan, power plants have historical, due to an amendment to the law from wells. Thanks to new gas turbine stations, west Kazakhstan is becoming largely independent. In 2009, a special program was put forth to rehabilitate existing power plants. The government introduced investment tariffs, which meant that power plants had a sufficient margin on tariffs to reinvest in reconstruction. Currently, because of a drop in commodity prices along with the general economic situation in Russia and Kazakhstan, power plants have overcapacity.

How is the government addressing the problem that 15% of electricity is lost in transmission due to worn out equipment?

BB: The power sector is the engine of the economy. However, without demand the sector is difficult to do business, especially in the power sector, which requires constant investment. If other industries are healthy, then the power sector is planning to erect its own power company is planning to erect its own power plant.

The economic situation in Russia, our closest neighbor and potential market for power export, is not good, so exporting power to Russia will be difficult. Exporting to developing western China could be an alternative, but will require some investment. Transmission companies have tariffs through which they are committed to invest in rehabilitation and replacing existing networks, but the level of investment is not sufficient yet. In our largest region, Almaty, local transmission companies are investing a significant amount to replace old network to provide reliable electricity to consumers. The power sector, which requires constant investment, ambitious plans to introduce smart metering systems to decrease losses and better control the network. What are some other challenges to securing growth and development in Kazakhstan?

KB: The main issue now is currency devaluation, because while Kazakhstan does have some of its currency value by proportion. The value of these comprises about 70% of our practice in Kazakhstan as a whole. The government plans for the adoption of renewable energy and construct new power and nuclear power plants. The current situation has changed dramatically, and the government and industry need time to digest and draft a new agenda for the next five years. *
Jo Hulbaekdal & Dana Medukhanova

How has DNV GL evolved in Kazakhstan over the past three years since we met with you last? DM: DNV GL has expanded its staff quite significantly. To build a sustainable business here, you need competent, local resources. Traditionally, there was a lack of local competence in our core services areas, like risk management, so we had to develop them ourselves. All our local engineers have completed a two-year, on-the-job assignment in Norway or the UK before being reappointed to Kazakhstan. The main reason behind DNV GL’s entrance into Kazakhstan was to contribute to the development of the offshore oil and gas resources. While Kazakhstan is an experienced oil and gas country in terms of exploration onshore, it is taking the first steps offshore developing the Kashagan field. Given the in-depth experience our company has in developing oil and gas resources offshore and in arctic conditions, we were convinced that we could provide valuable support in handling the significant risks and developing Kashagan in a safe and environmentally friendly manner. An increasing concern over safety and environmental aspects, as well as a greener approach, is driving our local customers and we hope that we can progress also in other directions than oil and gas.

DNV GL works within other sectors. How do you see your Kazakhstan office developing in the future with regards to other business lines? DM: Our services are still focused on offshore oil and gas activities. Following the mergers with KEMA (in 2011) and GL (in 2013) DNV GL has gained additional resources and competence as a global energy consultancy. We were involved in writing the Grid Code for Kazakhstan and since 2013 we have been working with the Government of Kazakhstan to set up a renewable energy legislative framework cooperatively with the World Bank and EBRD. We see a significant potential for developing renewable energy sources in Kazakhstan, in particular wind and solar power, and we have substantial competence and capabilities to support these developments.

With Expo 2017 around the corner and the government’s 3% target for renewables by 2020, and 10% by 2030, in how do you see renewable energy developing in Kazakhstan? DM: Having passed a Law on Renewable Energy (RE) in 2013, which established the basic RE support framework, Kazakhstan, together with the investor community and other stakeholders are engaged in putting this framework into practice. In August 2014 favorable feed-in-tariffs (FT) were established. However, while the RE support system is in principle designed in line with international experience and despite the FT being in place for nearly 12 months, no large international RE developer has reached financial closure for any significant project. The main reasons are substantial problems in practical implementation of the existing RE legal framework and the overall macro-economic situation, such as low oil prices and a recent sharp devaluation of the national currency tenge. Even the focus of the Expo 2017 program has changed as a result of economic conditions, change of the government’s priorities and overall less interest in renewable energy. Hence, all private investors are waiting to see what will happen. Kazakhstan will need to implement their renewable projects, but timing is uncertain.

DNV GL is known for promotion of safety across all industries. How do you promote a safer attitude in doing business, and more efficient operations here in Kazakhstan? JH: There is to be several approaches to this. Firstly, it begins with the individual; by raising personal awareness of safety, you can change peoples’ attitudes. Within the industry in Kazakhstan as a whole, there is no tradition for performing risk assessments to prevent accidents from happening. DNV GL is advocating a proactive risk management approach, where we would assess risks and prevent accidents from happening rather than mitigate consequences after they have happened. DNV GL is currently working on a project with key oil industry partners and authorities in Kazakhstan to modernize the technical regulatory regime for the oil and gas sector. There is widespread acknowledgement that the current technical legislation in Kazakhstan, developed partly during Soviet times and mainly for onshore application, is not appropriate for developing oil and gas resources offshore. The environmentally vulnerable Caspian Sea and harsh environmental conditions combined with high risk factors—such as toxic gases and high reservoir temperatures and pressures—pose a great risk. In the ongoing feasibility study we compare the current Kazakh regulatory regime with those of the UK and Norway, which is widely regarded as best industry practice.

Stephen Tomczak & Kairat Kinzhebayev

Please introduce us to ILF Consulting Engineers’ presence in Kazakhstan, and its role in the country’s power sector. ST: ILF is a family of companies that provide engineering, design, consulting and project management consultancy services (PMCS) in different markets. About 90% of the company’s revenue is oil and gas, while 50% of the company’s turnover is generated from infrastructure projects. Historically ILF has been active in power projects, which comprises the three main areas: generation, transmission, and distribution, both in conventional and renewable energy. In Kazakhstan, ILF has pursued various opportunities in conventional energy, but often investment has not been sufficient to build new capacity. ILF has been following power-generation prospects, as the majority of capacity is quite old. Samruk Energety’s heat and power plant (HPP-1) in Almaty has been converted to gas, but HPP-2 is over 40 years old and continues to operate on coal, with burners below grade and in need of replacement. ILF has expressed interest to Samruk Energy in becoming involved in new power plant next to the existing one and eventually switch from the old to the new plant. In Southern Kazakhstan, there is high demand for electricity, and hence always a host of potential technical solutions. Sometimes they run up against financial and commercial issues. On transmission projects, ILF participated in the Eskene Kuryk oil pipeline with the design and survey work of an electrical transmission system for the pipeline going from Kashagan to Kuryk, south of Axt. Within distribution, ILF has been active in the context of substations and power lines and distribution systems. We have bid for a significant amount of conventional energy work, and been in contact with KEGOC, the national grid operator. On the renewable energy front ILF has been actively bidding to companies such as Samruk Green Energy, who had a 2-megawatts (MW) solar plant project near Kapshagai reservoir along with an expansion project 50MW + 50MW solar power plants would be environmentally sound. The only problem is that the power generated from natural gas as opposed to coal generally has a higher price.

Where do you see ILF in the next three to five years in Kazakhstan? ST: ILF supports transitioning to gas as a fuel, for example through the conversion of Samruk Energy’s HPP-2 power plant. We could assist the client in surveying, designing and managing a project to build such a new generation facility. There is a significant amount of natural gas in Kazakhstan, and to fully exploit this potential we would be environmentally friendly. The main obstacles are that the project is in line with government’s priorities and overall less interest in renewable energy projects, which is in line with the political program of Expo 2017.
Kazakhstan, which provided us authorization to connect to the grid. The last stage was acceptance to energy to be provided by KB to local grid. I would say it has been a long process. Nevertheless, it has been a learning curve for us and next project will be a lot smoother to execute.

The second stage of our project will involve BioMass based on city waste management, which is absolutely vital. Residues from the cities are important sources of energy while helping a clean environment. Although, Recycling is not well known in depth here in Kazakhstan, it is our duty to inform society about the vital importance of renewable energy sources. KB Enterprises has also plants to install number of windmills on the side. Astana is a pilot project for us and under normal circumstances, we are expecting our project to be completed about the end of 2016 nine months later. Our 100-MW photovoltaic project is vital for the region to attract new investments and energy for new industries. The plant will probably be a tourist site for those who visit Astana for Expo 2017.

Solar power, however, is the first step for KB Enterprises. Our ultimate goal is to develop and implement the project adapted to rules and regulations of local grid operator in order to have our tails of our project, which we needed, for attachment to Astana.

Please introduce KB Enterprises to our readers. What was the reason behind the company’s entrance into the Kazakh market?

KB Enterprises registered as a local company in 2013 to build solar power plants in Kazakhstan. We have offices in Frankfurt, Germany, where we organize and manage all our operations. Management of our company has extensive knowledge on International Supply Chain Management, Corporate Finance with minimum of 25 years of experience in European & North American markets.

Kazakhstan is one of the most important emerging markets to western institutions where there is major appetite for western institutions entering the market. Highly populated countries and potential markets border Kazakhstan such as China, Russia and India, and Kazakhstan boasts 2.5 billion square km of unused land. Both water and energy are required to turn land into habitable and agricultural areas, and hence solar is absolutely necessary in the short and long term. Solar power has the advantage of being able to be generated quickly. You do not have to wait for the grid, which takes ages with a high bill attached to, while we can literally execute a 10-MW solar power plant to be constructed in one year.

Is KB Enterprises planning to work on additional projects in the region and in other parts of Kazakhstan?

In our pipeline we would like to launch projects in the Karaganda, Almaty, Taraz, Shymkent, and Kyzylorda regions. KB Enterprises has already put a system together and is optimistic about local network capabilities. We will be working closely with the Ministry of Energy as well as local municipalities. There is a highly influential project that we are planning to implement in Zhetisai, a small city south of Shymkent near the Uzbekistan border. Ideally we would like to power this city using 100% renewable energy sources, a combination of solar, wind, and biomass. The city’s mayor approached us with a vision for the city, which is extremely sunny and small, to be Central Asia’s first green city. In order to do so, we would like to install a separate smart grid, and I hope we can get enough support from the central government for this project. When this project is finalized as pilot project, we will be able to implement the same structure to various cities in Kazakhstan, which will have a positive impact on the state budget.

In a few years KB Enterprises aims to be the leading renewable company in Kazakhstan, we are confident that we can achieve this target. We believe in Kazakhstan.
The development of a regulatory regime that is stable, transparent, and takes full advantage of the experience and expertise of companies with global reach represents an important step in attracting the type of foreign investment that the President and Prime Minister have prioritized for Kazakhstan. Achieving the right policy and regulatory settings will help ensure the long-term development of Kazakhstan’s highly prospective minerals sector.

-Alison Morley, Country Manager, Iluka Resources
KAZAKHSTAN AIMS TO HARNESs ITS SOVIET TIES AND LEGACY

Creating an Optimal Mining Jurisdiction

Kazakhstan aims to harness its Soviet ties and legacy in creating an optimal mining jurisdiction.

MARKET STRUCTURE

The state of the mining industry in Kazakhstan can be characterized as a privatized version of previously state-owned enterprises from the Soviet era. The main companies on the market are Kazzinc Holdings, now 70% owned by Glencore and 30% by Sanyuk-Kazyna, Kazakhstan’s sovereign wealth fund; Kazakhmys Corp.; KAZ Minerals; Eurasian Resources Group (ERG), previously ENRC; and Kazatomprom, the national uranium mining company. These players, although still manpower intensive in their operations, have been continuously investing in their production processes to increase efficiency, particularly in light of the ongoing slump in commodity prices.

They are also restructuring to increase performance. “In 2014, we witnessed a restructuring, as a result of which Kazakhmys was split into two companies, a public company, KAZ Minerals, and a private company, Kazakhmys Corp. The biggest change brought about by this split was the projects that each company is working on. KAZ Minerals is now working on several projects in the east, and is also developing the Bozshakol and Akkoyg deposits in Kazakhstan and Boyzynchak in Kyrgyzstan. Kazakhmys Corp. is working on projects in Zhezkazgan, Balkhash and Karaganda regions. Zhezkazgan area is the most important one for the company, as it accounts for 75% of the total volume of production. Restructuring of the company has not changed the quality of the work environment and human resources approach. The main goal of Kazakhmys Corp. now is increasing the profitability of non-core projects and working on new projects,” said Bakhtiyar Krykpyshev, general director of Kazakhmys Corp.

Similarly, ERG has undergone its own reorganization. “In terms of internal processes, the company is now going through a transformation. We adopted a different approach to corporate governance; currently a lot of attention is allocated to tactical strategy and operations management. Apart from that, the company moved away from one, two and five year planning. There is instead a special program developed in ERG that allows for modeling various market situations and measuring the impact of fluctuations in commodity prices on the entire company’s operations,” said Azamat Bokhybayev, ERG’s vice president for production.

Besides these large players, there are a number of other significant companies present in the mining sector in Kazakhstan. Some of these include international names such as AcercorMittal and Camco, which are already producing, and Rio Tinto, which is currently exploring. In addition to international players, there are a number of local Kazakh companies that have an equally important role to play. Some names in this category include Bogatyr Coal, Kazakhaltnyn, and Kazphosphate. Just as in other mining jurisdictions, there are also a number of exploration companies present. These include a mix of both domestic and international players such as Kazakh Minerals, Osu Metals, Frontier Mining, Alty Polymetals, EuroChem, but also established international players looking to set up their presence in Kazakhstan, such as Buka Resources of Australia and Kores, a Korean government-owned entity.

On the services and equipment supply side, Kazakhstan is continuing to attract new companies seeing good future prospects in the country. Already long present in Kazakhstan, companies like Kazgiprotsvetmet, Iskander, Gornoe Buro and Antal are complemented by the interest of other EPCM service companies, like TOMS of Russia, who are keen to expand within Kazakhstan’s mining regions such as Karaganda.

Kazakh companies, especially the smaller players, are still rather concerned with price as opposed to quality when it comes to the equipment they use. This causes a continued interest in equipment from Russia and China, but a recent trend has emerged that Western equipment suppliers, given the right flexibility in the financing solutions that they provide, can count on Kazakhstan to be a significant source of business for them. These providers include Atlas Copco, Bomsan Makina, AK Machinery, Tamoz Machinery, and Sandvik, amongst others.

As the interest grows in using more efficient equipment that requires less maintenance and with significantly longer durability, Kazakhstan presents an interesting opportunity for international equipment suppliers not yet present in this country.

MARKET STRUCTURE

Transition to Privatization, Maintaining Historical Assets

In Kazakhstan, the government wants to focus its search for mineral deposits around single-industry cities, so-called mono-cities. Towns like Arkalyk, however, are becoming uninhabitable due to depletion of reserves of bauxite and the possibility of companies like ERG leaving the area. Yet a billion metric tons of iron ore was discovered north of Arkalyk, in a town called Yesil, and now the state mining company Tungsten is looking to develop the deposit and possibly bring the 1,500 workers working in bauxite mines to the new location over a period of eight years, the time when bauxite is supposed to run out.

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In 2012, President Nazarbayev instructed the government to develop similar pro-
grams for the development of mono-cities elsewhere. 27 such towns were selected for a combined total population of over 500,000 people. The largest ones to par-
ticipate are Temirtau, Balkhash and Zhez-
kauz in Karaganda region. Ekibastuz in Pav-
lodar region, and Kudysh in Kostanai region. 
Zhinaozen in Mangitau region. These towns will receive significant support and investment to help their people.

There are 60 mono-cities in Kazakhstan, and sup-
port and promotion of these cities, as well as further development of mining facilities, has been one of the top priorities for the government of the past couple of years. The development of these cities relates directly to the development of a competitive mining industry," said Albert Rau, the Vice Minis-
ter of Investment and Development.

The case of Temirtau, a center of coal min-
ing in the Karaganda region, is explored in 
depth in the coal section.

Temirtau, a center of coal mining, has a large and significant chromite 
reserves, which are also known as "new" or "future" iron ore. Temirtau is a major 
producer of chromite, which is used in the production of stainless steel.

In 2012, President Nazarbayev instructed the government to help their 
people, but private companies can make a significant impact on the communities in which they operate. "People are our greatest asset, and we have to invest not just into training our staff, but also in improving the quality of their lives. Unlike most of the mining projects in the country, we employ only local people. So we do not have to fly in and fly out workers to do basic jobs. Our workers come from the nearby Terekty village. We invested $34.5 million in electrification of the village, where we have constructed and reconstruct-
ed multiple power-supply facilities. We constructed more than 6,000 square meters of accommodation for our future employ-
ees, as well as sports facilities, a canteen, a swimming pool, etc. The reconstruction of the school and kindergarten is still in progress. Various study groups and activi-
ties were organized and musical and sports equipment was purchased for the children. The works on redevelopment of the streets of the Terekty village are being carried out as well. Additionally, a regular water sup-
ply was implemented; garbage containers and garbage removal trucks were purchased for the removal of household waste. More new jobs for residents of the village and the surrounding area are constantly being cre-
atd," said Rashid Yan, chairman of the su-
pervisory board and owner of the company.

Russia’s presence in Kazakhstan should not come as a surprise to anybody as Ka-
zakhstan and Russia are long-term partners dating back many decades. Furthermore, Kazakhstan looks to benefit tremendously from being a part of the Eurasian Economic Union along with Russia, Belarus, and Ar-
menia, a region with a population of 176 million. In fact, a lot of Russian compa-
nies, bitter by sanctions imposed on Rus-
sia over its actions in Ukraine, are looking to Kazakhstan as a good place to expand or move their operations entirely. On the other hand, low oil prices have greatly contrib-
uted to the deteriorating value of the Rus-
sian rouble, making Russian goods cheaper and thus ready to flood the Kazakh market. This has increased competition for Kazakh firms struggling to meet lower prices from abroad. The weak Russian rouble has also had some welcome benefits for Kazakh companies. “A positive factor for us is the current situation with the Russian rouble, which has helped us to decrease costs of transportation and thus exports to Euro-
pean markets became more profitable,” said Krypyshov of Kazakhstan Corp.

Russian companies like RJC Group have had a very positive experience in Kazakh-
stan and plan on further expanding here. “In 2011, RJC partned with a major mining com-
pany in Central Asia, where we were approached by Kazakhmys Exploration, who offered us to work with them at several deposits, which allowed us to enter the Kazakh market. In order to optimize our operations and focus on further development of the local market, we opened a representative office, TOO RJC Kazgorsk. Geological exploration has great potential and it opens many opportu-
nities for local and international companies. RJC aims to carve its niche in the sphere of servicing geological exploration projects in Kazakhstan," said Andrey Kharlashin, di-
rector of geology at RJC Group.

Kazakhstan’s Soviet legacy in terms of mono-cities and its interconnectedness with Russia present a number of challenges for the advancing nation, which if exploited smartly can be turned into advantages.

Cozyol y old about ERG’s major running projects in Kazakhstan?

To date, in terms of output, ERG is the larg-
est ferrochrome producer, as well as one of the largest iron ore and aluminium producers in the world. ERG accounts for one-third of Kazakhstan’s metallurgical and mining in-
dustry, ERG’s major assets in Kazakhstan include Kazchrome, SSGPO, Aluminium of Kazakhstan, Kazakhstan Aluminium Smelting (KAS), Eurasian Energy Corpora-
tion (EEC), Shubarkol Komir, and a trans-
port company, Transcom. Kazchrome represents the ferroalloys divi-
sion, which has also been known as ‘Molodezhnaya’ and ‘Yuzhny’ pits. Mangai-
nese ore is extracted in ‘Tur’ mine. Aktobe ferroalloys plant completed construction of fourth smelting shop, which is also known as NEW Aktobe ferroalloys plant. The cost of construction is estimated to be about $850 million. Once the shop reaches full capac-
ity, we are hoping to produce 440,000 met-
ric tons (mt) of high-grade chromite alloy per year.

The iron ore division is represented by So-
kolov-Sarbit Mining Production Association (SSGPO) which comprises four large pits, one underground mine, an enrichment plant, and a pelletizing plant. There also are non-core assets - dolomite and limestone open pits. We produce about 40 million mt of ore and 16 mt of iron ore produces a year. Given the current market situation, we are planning to extract about 32 million mt of ore and produce about 12 million mt of iron ore materials.

The aluminium division of ERG comprises the Kazakhstan Aluminium Smelting (KAS) and Aluminium of Kazakhstan (Aok), which represent the entire aluminium cluster in the region. aluminium is produced at Pavlodar alum-
inum plant, which is a part of Alumini-
um of Kazakhstan.’ Kraasnoyaksky and ‘Torgaysky’ mines’ processing facilities supply PAP with bauxite. This year, alu-
minal output will reach about 1,400,000 mt. Part of the aluminium is exported, and the rest is used to produce primary aluminium ingot, which is then sold to companies. For example, the company produces 220,000 mt of primary aluminium Energy division comprises ‘Vostochny’ coal mine at Ekibastuz basin and Akso power 
station that generates about 14.3 billion kilowatt hours, which makes it the second-
largest power station in Kazakhstan.

What are the company’s plans regarding 
geochemical exploration of existing depos-
ts? o? Our company is running geological explo-
ration works during 2012 and 2013 resulted in the growth of the iron ore reserves at the Sokolovsky open pit by 70 million mt. ERG was awarded a contract for the explora-
tion of South-Kempirsai ore field, where it is most likely to discover commercially significant amounts/reserves of chrome ore, iron ore, manganese, and bauxite. We are currently ascertaining the reserves of the Tausorniskore. Once the geo-
logical exploration is completed, we will decide about production.

How have export markets changed over the last one to two years? One of the major changes for our company is drop in demand for iron ore products in China. ERG’s social and cultural projects.

What is ERG doing to improve the social and economic situation in par-
ticular cities where it operates? ERG is a socially oriented business. Over 
the past five years, the company invested almost $100 billion tenge in social programs, both in social security for our employees and development of the regions; we also contribute to other charity projects across the country. ERG set up sports centers in Chornotas, Akso, as well as some mosques, churches and synagogues in various re-
Innions of the world. ERG engages in a number of cultural and charity activities, including the establishment of a charity that supports vulnerable social stra-
ties, and cultural projects.

What are the company’s goals for the next three to five years? Given the current situation, it is important to note that we are not planning on reducing the output or downsizing. Despite the nega-
tive outlook for demand for iron ore materi-
als, we are planning to maintain production at about 32 million mt. At the same time, we are planning to increase ferroalloys, aluminium and Shubarkol coal output.

-37-
In recent years, investments in the Karaganda region have significantly increased, and several large-scale industrial projects have been finalized. What are your expectations for investments in 2015?

In recent years, there have been increasing volumes of investment, which is related to the large-scale projects in the region. Since these projects have been finalized and the financial situation is weak globally, we expect a lower level of investment for 2015 than in 2014. According to our estimates, we will receive over 380 billion tenge for investment in the region, which is 3% to 4% lower than in 2014. Nonetheless, we will continue to work to attract more. The processing industry is a key sector where we want to increase investment. This is related to ArcelorMittal Temirtau’s program for modernizing and upgrading production capacities at Kazakhmys Corp., and other construction projects within the industrialization program. For these projects, we are planning to attract 400 billion tenge in 2016.

In 2014, several production facilities were brought back into operation, including production of silicon and barite concentrate in Saran. What other manufacturing capacities are you planning to bring back online this year?

In 2014, we also restarted production at the Zhezkazgan copper smelting facility, which has been closed for reconstruction over a year. Together with this facility, total production volumes in the region increased by 10% in the first quarter of 2014, and the processing industry increased by 12%.

In 2015, we are planning to restart operations at a brick production plant in Temirtau, which used to produce 35 million pieces of brick a year. To ensure stable production at this facility, we are looking for new investments and we are hoping to finalize this process this year. In 2016, we are planning to start production of synthetic diamonds in Shalkhtinsky. This facility has been closed for quite some time because of problems with financing, but we are hoping to solve these issues soon.

ArcelorMittal Temirtau plans to continue investing in Karaganda. How important is the presence of large international companies in the region and how are you working on attracting more international players?

We are very interested in attracting new international companies to the region. ArcelorMittal Temirtau is important for Karaganda, and we are interested in seeing it increase its production capabilities. Moreover, we are offering new projects to it, which can be mutually beneficial. For example, we initiated an extensive program to modernize its production processes and increase its efficiency. Since the entire economy of Temirtau depends on this facility, this has had a positive effect on the well-being of the town and the region. In 2015, the company finalized reconstruction of the third blast furnace, and now the power of the furnace is 20% more than before, which will allow the company to produce up to 6 million metric tons (Mt) of steel a year. We also see that ArcelorMittal Temirtau is actively working to minimize the negative impact of its work on the environment and decrease the volume of emissions.

Kazakhstan’s government is looking to introduce a new code. How is new legislation helping to attract new investors in Karaganda?

The changes that will be introduced in subsoil legislation will help us increase the investment attractiveness of the mining sector through shorter approval times and streamlined processes of getting permits, approvals. We hope that the new code will help attract investors to explore deplet-ed deposits, which will be a very positive move that will introduce new technology and processes. We hope that our foreign counterparts will be able to teach our local professionals new methods of working.

Production of coal in Kazakhstan is expected to reach 150 million Mt by 2020. What role will the region play in reaching this target?

The Karaganda region is one of the largest coal mining regions in the CIS countries. Unfortunately, mining facilities do not operate at 100% capacity, which means that we require to ensure the running of the operation. In the past twenty years since ArcelorMittal Temirtau first acquired the plant we invested $5 billion in the business, including modernizing our coal and iron ore mines. Over the last four years, we have invested more than $1.5 billion in our operations in Kazakhstan and, as a result of this investment, our operations are more efficient and technologically advanced than at any other time in our history.

Safety in our mines is our top priority. One of the safest companies is ArcelorMittal Temirtau, which has been the main challenge, but the country has always been open to foreign investors, particularly in the mining industry. Geophysical surveys confirm the presence of large subsoil resources; in the northwest, we can extract iron ore two meters from the surface. The home- owner rights and non-subsidy taxation are among the positive things that will help attract investors to this region. We are planning to attract 400 billion tenge in construction projects within the industrialization program. For these projects, we will introduce a subsoil code. How will this new legislation help to attract new investors in Karaganda?

The acquisition of Temirtau was important for ArcelorMittal and complemented our portfolio of assets. Steelmaking and mining are capital-intensive businesses, which means that high levels of investment are required to ensure the running of the operation. In the past twenty years since ArcelorMittal Temirtau first acquired the plant we invested $5 billion in the business, including modernizing our coal and iron ore mines. Over the last four years, we have invested more than $1.5 billion in our operations in Kazakhstan and, as a result of this investment, our operations are more efficient and technologically advanced than at any other time in our history.

Safety in our mines is our top priority. One of the main investments done was alleviating the problem of methane pots in our coal mines; these methane pots are unique to the Karaganda region.

How supportive has the local Karaganda government been?

ArcelorMittal is the only integrated steel company in Kazakhstan. The government has always been supportive of the steel and mining industry. In the economic downturn of 2008, it was necessary for ArcelorMittal to carry out cost optimization, an action counters tenanced by the government. Support from the government is ongoing. Karaganda is the prime industrial region for Kazakhstan.

Strategically, how important is Kazakhstan globally for ArcelorMittal?

Kazakhstan is very important to ArcelorMittal. It is a politically stable country, which welcomes and encourages foreign investment. ArcelorMittal has proved to be one of the safest locations to invest. And also there is close engagement with the government to attract foreign investments. So, it is ideal place.

Can you give details of the overhaul and turnaround that you have achieved in Temirtau?

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Safety in our mines is our top priority. One of the main investments done was alleviating the problem of methane pots in our coal mines; these methane pots are unique to the Karaganda region.

How does your company manage the drop in the Russian ruble and the increase in operational costs combined with lower commodity prices?

The market that we are operating in is challenging: falling demand, a significant increase in imports, uncompetitive raw materials costs and a very challenging export market. To address these challenges and to offset higher operational costs, we regularly review our operations and have strong cost- containment and improvement programs, but never compromise on safety. We benchmark our prices against competitors and build into our cost structure the fluctuating commodity price.

What is your assessment of Kazakhstan’s future investment profile and its impact on mining investments?

Mining locations are remote, but rail access in Kazakhstan is always nearby and is operational around the clock, even at temperatures of -40 degrees Celsius; ArcelorMittal has never had issues with the movement of resources from mines. Today, rail infrastructure is over-loaded; it is designed to cope with the freight volume of 10 to 15 years ago. For movement of all goods, road construction is required to alleviate rail-traffic congestion; the rail system also needs to be updated to facilitate high-speed rail, which would reduce logistic costs, and production processes are different in companies. Kazakhstan is land-locked and rail is its only means of moving bulk material.

What changes do you anticipate the new mining code will bring and what are the main challenges for investors coming to the country?

The current mining and labor codes are old and require changes; modifying will bring the country in line with other global mining codes. This new mining code will give a level playing field for international investors. In the recent past, the geopolitical situation in Kazakhstan would have been the main challenge, but the country has always been open to foreign investors, particularly in the mining industry. Geological surveys confirm the presence of large subsoil resources; in the northwest, we can extract iron ore two meters from the surface. The homeowner rights and non-subsidy taxation are among the positive things that will help attract investors to this region. We are planning to attract 400 billion tenge in construction projects within the industrialization program. For these projects, we will introduce a subsoil code.
Kazakhmys now is to increase the profit and HR approach. The main goal of the company worked on. KAZ Minerals is now working on several projects in the east, and are also developing the Bozshakol and Pillar mining method at them, which allows us to mine all the ore that we have, but which is also very expensive. We will now be moving towards using in-between room tallings with high metal content and those copper cathodes will be of higher quality.

We are working on several other programs to optimize processes and reduce costs. Where it is necessary, we are increasing our production or the quality of the copper, we are looking to use more efficient equipment. In 2015, the copper price reached record lows, so we understand that we need to change our methods to remain profitable.

Mining companies across the world are struggling to find qualified talent. How is Kazakhmys addressing this problem? We are certainly having difficulty finding the right talent. At the same time, we are working hard to ensure that we have a reserve of talent, which is why we are trying to decrease the deficit of qualified people and are looking to continuously train them. Kazakhmys has two training facilities: one in the Balkhash region, where we are training metallurgists, and the other one in the Zhezkazgan region, where we are preparing specialists for mining and beneficiation. The training process lasts three years. For the duration, our students receive scholarships and are then hired by the company. Kazakhmys pays for the entire course of education. We are also working with the leading institutes in Kazakhstan and neighboring countries, including close collaborations with the Mining Institute in Saint Petersburg and the National University of Science and Technology in Moscow. We are sending our students to study there as well as follow internship programs at different companies, where they can gain valuable experience.

Historically, the main market for Kazakhmys’ copper has been China. How has this situation changed over the past couple of years? At our Zhezkazgan facility, we have an option to convert copper cathode to copper wire. The production capacity is 50,000 metric tons per year (mt/y). We produce this for our clients in Kazakhstan and China. In 2014, the share of exports to China was about 80% of total volume. Today, this share has decreased to 64%, as the situation has changed in China mainly due to internal politics and external factors. In this light, we are looking for new off-take markets.

A positive factor for us is the current situation with the Russian ruble, which helps us to decrease our cost of transportation and makes exports to European markets more profitable.

Kazakhmys pays special attention to industrial safety. Can you please tell us about the various programs that you have in place to promote this? In 2012, we identified a five-year program to decrease the number of accidents at our facilities. Every year, we invest significant amount of money to support this cause. This money is invested into modernization of industrial processes, creation of safe conditions, purchasing of the most innovative personal protective gear, etc. Our goal is to improve all the indicators of industrial safety. We strive to achieve zero fatal accidents and reduce work accidents by 40%. We are improving our medical-help standards as well.

What are your plans for the next three to five years? We are planning to start operations at a new Zhiltzinsky deposit in the Zharkent region, which will begin operations in 2016 and will achieve full production capacity by 2021. Close to Zhezkazgan we also have Zhambat-Asht deposit, which will become operational in 2016. In the Karaganda region, we are planning to start production at Nurkazgan GOK, producing 3.4 million mt/y at first and reaching 4 million mt/y in 2017. Also, we are planning to expand all of our existing deposits and increase their efficiency. Finally, we are looking to integrate hydrometallurgical processes for a more efficient extraction of ore.
Can a new mining code bring Kazakhstan's regulatory framework in line with international jurisdictions?

Kazakhstan's subsoil regulations continue to be a major impediment for the country's mining industry to grow and attract foreign investment. Although minor changes have already been implemented, the current regulations are still cumbersome and need upgrading. In 2014, lawmakers put forth an ambitious plan to bring Kazakhstan's subsoil regulations into line with other international mining jurisdictions. In consultation with law firms operating in Kazakhstan, this article will outline both the recent and proposed changes to the country's subsoil regulations.

In 2014, Kazakhstan’s President Nazarbayev described the mining sector as vital to the country’s economy, but lacking foreign investment. Michael Wilson & Partners, a law firm operating in Kazakhstan, reported that a joint committee of the relevant ministries prepared a draft Concept of the new Subsoil Use Code later that year. The expected timeline is: “The Concept will be approved by the Government of Kazakhstan by mid-2015, and the draft Subsoil Use Code will then be prepared and referred to the parliament of Kazakhstan for further approval by 2016, so that the Code is in place and takes effect during 2016.”

Michael Wilson & Partners also says that some amendments to the existing subsoil laws were made in 2014: “The existing Law on Subsoil and Subsoil Use was amended in 2014, with effect from 2015 to implement new and to amend existing definitions, namely (but not limited to) mostly unexplored territories, and subsoil use rights associated therewith; auction procedures; sample subsoil use contracts; technological mineral formations and strategic resources. For example, mostly unexplored territories are defined as territories that have preliminarily valued forecast resources. The exploration rights for such territories are granted in a simplified manner. Auction procedures were introduced as simplified procedures to choose an investor with the highest signing bonus proposal, provided that the same met all auction prequalification obligations.”

Some of the major changes have already been incorporated into the Concept, which include: “First Come, First Served” basis to apply for the right to explore, develop and mine currently vacant and unallocated territory (mostly unexplored); economic incentives: land and property tax exemption, the application of international accounting standards for tax purposes, no signing and commercial discovery bonuses, royalty exemptions, etc.; open access to all available geological data and information,” according to Michael Wilson & Partners.

Most of the majors, like BHP Billiton and Vale, have come and gone, but Kazakhstan is working hard to lure them back along with smaller players such as Iluka Resources, who have only recently ventured into Kazakhstan. “The development of a regulatory regime that is stable, transparent, and takes full advantage of the experience and expertise of companies with global reach, such as Iluka, represents an important step in attracting the type of foreign investment that the President and Prime Minister have prioritized for Kazakhstan. Achieving the right policy and regulatory settings will help ensure the long-term development of Kazakhstan’s highly prospective minerals sector, and Iluka looks forward to working with the government as it undertakes reform of the mining code,” said Alison Morley, country manager of Iluka Resources in Kazakhstan.

There are, indeed, great expectations for the new mining code, as highlighted by Albert Rau, the vice minister of Investment and Development: “The main new feature of the law is the simplified process of granting rights, based on the Australian method; for unexplored pieces of land (not more than two square kilometers per one block). We expect to see the first contracts based on this scheme in the second and third quarter of 2015 and to auction at least 100 areas in total this year. The law will also simplify access to geological data. We managed to dramatically decrease the time required to obtain such information from 240 days to one day. Moreover, we simplified the procedure for granting exploration contracts and small deposits to remove extra administrative barriers. Overall, the new law will increase transparency in decision-making and remove administrative barriers on all levels. These changes should boost the development of junior companies and simplify procedures for all mining companies.”

Environmental Standards in Kazakhstan

“Subsoil users in Kazakhstan are subject to extensive environmental protection regulation. The Ministry of Environmental Protection of the Republic of Kazakhstan (MEP) is the principal State authority in the sphere of environmental protection. Among other things, it issues environmental permits and licenses and establishes the limits for environmental emissions. Individuals and legal entities that use the environment (e.g., subsoil users) are subject to state environmental control. MEP carries out such control by organizing state environmental inspections. Various aspects of business activities are subject to environmental requirements. For example, a positive state environmental expert evaluation must be obtained in relation to projects involving an environmental impact before such projects may begin. Enterprises engaged in environmentally hazardous business activities are subject to the mandatory requirement of obtaining environmental insurance covering potential damage as a result of environmental contamination,” according to Baker & McKenzie, a law firm.

Despite having detailed laws related to environmental protection, these standards are still behind other international mining jurisdictions. Kazakhstan’s environmental laws are often poorly enforced yet the new code alone will not act as a magic wand to reawaken Kazakhstan’s mining sector. “Arguably, legal acts alone cannot produce a surge of exploration activity in Kazakhstan. Global commodity prices and new investments are major contributors towards stimulating the mining industry. If commodity prices are depressed and capital expenditures for a new mining project are high, there will be little movement in the market. Harmonization of Kazakhstan’s mining code will be of great benefit when there is an upturn in the mining market. When the upturn occurs, we anticipate investor interest predominantly from the Asian or Gulf regions,” said Umid Aripdjanov, partner at Colbit Law. “A further change will be the creation of a financial and arbitration center in Astana. It is planned to invite 500 foreign English-speaking judges/arbitrators with English law governing the arbitration, giving investors more confidence to file a claim,” added Aripdjanov.

As these changes are taking place, anticipation and great expectations are building among investors and, indeed, when the upturn in the global mining industry occurs, Kazakhstan should be well positioned to deal with higher demand for its mineral wealth.

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Resources in Kazakhstan that were discovered by the Soviet Union in the 1950s and 1960s are becoming depleted, as is the State balance, and new exploration is required. Since the demise of the Soviet Union, only a relatively small amount of exploration has taken place in Kazakhstan. The Government is now addressing this problem and is taking action to replenish the reserve base leading to the reform of the mining sector. Within the reform, Kazgeology has been created to gather mining data, digitize it and possibly making it available to mining companies. The Government has made funds available to Kazgeology to carry out its own exploration, and to cooperate with sound foreign geological companies.

There are two stages to the reform. Phase one, the easy reforms, currently being undertaken, i.e. to take away the state preemptive rights (except for listed projects of national significance); introduce new definitions and concepts, allow the rapid concession of mostly unexplored territories, simplify and conclude the auction procedures, introduce better sample subsoil use contracts. The rationale behind the changes is to expedite the approval procedure for the farm-in and farm-out of exploration blocks. There is also some streamlining of the taxes that have to be paid. A big issue is that there is no cost-free guarantee that an exploration company will be granted the rights to develop a block after the initial exploration phase; formerly, there was a complex license for subsoil use contract with procedure outlines and embracing both exploration and development.

Phase two of the reform will be a new subsoil use code, incorporating new practices and provisions, i.e. the availability of territory on a ‘first come, first served’ basis; new preliminary exploration, guarantees for the rights to carry out subsequent operations (e.g. development after exploration), easy access to the local stock market, third-party arbitration agreements, open access to all available geological data and information, tax exemptions and other. Currently the new subsoil use code is in a draft concept form, not officially available in English. The timing for the introduction of the new subsoil use code is uncertain; it is suggested that it will be introduced by the end of 2015 and approved in 2016. The primary question is to what extent will the system change in practice, i.e. whether the old Soviet underground mining regulations will be updated; and will the guarantee of development rights be granted. Investors are interested in Kazakhstan but international mining companies have yet to address this jurisdiction; albeit, there are national companies very active in Kazakhstan, i.e. KazZinc, KazChrome, Aluminum Kazakhstan, Tau-Ken Samruk, Kazgeology, Kazatomprom, KazMunayGas - most of these projects are privatized versions of Soviet mines. The lack of an equity market in Kazakhstan is holding back the development of its resources.

Can you give an example of a mining project that MWP has worked on? The firm worked on the financing of the gold-copper mine at Varvarinskoye now owned by Polymetal; our brief was from the first joint venture in 1994 through to project financing and mine construction, commissioning and completion of the plant itself and all infrastructure and the eventual take-over of the mine by Polymetal from Oyu Metals Corporation. MWP’s most recent big deal in the mining sector was in 2012 when it assisted with the dispute between KazakhGold and Polymetal, acting for KazakhGold. The firm has also recently assisted Balansa company, a part of Ferro-Alloy Resources Ltd., on its vanadium project (the largest in the world) and is heavily involved in the Jeromy Project in Kyrgyzstan.

What role do you envisage for MWP in the Kazakh mining sector over the next five years? Over the next five years, MWP will play a very significant role. We are members of the two working groups for the new sub-soil use code, managed by both the Ministry of Investments and Development, and the OECD members panel. There are fascinating opportunities in the mining sector, but arbitration agreements, open access to all available geological data and information, tax exemptions and other. Currently the new subsoil use code is in a draft concept form, not officially available in English. The timing for the introduction of the new subsoil use code is uncertain; it is suggested that it will be introduced by the end of 2015 and approved in 2016. The primary question is to what extent will the system change in practice, i.e. whether the old Soviet underground mining regulations will be updated; and will the guarantee of development rights be granted. Investors are interested in Kazakhstan but international mining companies have yet to address this jurisdiction; albeit, there are national companies very active in Kazakhstan, i.e. KazZinc, KazChrome, Aluminum Kazakhstan, Tau-Ken Samruk, Kazgeology, Kazatomprom, KazMunayGas - most of these projects are privatized versions of Soviet mines. The lack of an equity market in Kazakhstan is holding back the development of its resources.

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Can you outline the changes that have taken place in Kazakhstan’s subsoil law? UA: The new subsoil code came into effect in January 2015. Prior to the changes, the government had the priority right-to-buy with any transfer of subsoil use right or “associated objects”, including shares. The amendment states that the government still has the right-to-buy but only for strategic deposits and areas, i.e. project of strategic importance to the state that may have an impact on national security (typically major deposits), which included to the list approved by the Government. Furthermore, there were excluded one of the grounds to termination of subsoil use contract as for breaching of the obligation under project document, but was included breaching financial obligations by more than 70% for two consecutive years. The other change is the obtaining the subsoil use right, new method has been added as an alternative to the existing process – auction, which is based on signing bonus bids.

Will the new subsoil code encompass all mining and petroleum activities? UA: The new subsoil code encompasses all mining and petroleum activities predominantly from the Asian or Gulf regions.

AM: To improve the business climate, the following will be required: less bureaucracy, a new package of conditions to acquire mining contracts, therefore fewer amendments. Public contracts are always subject to many amendments. Civil contracts will ensure more investment security as agreed parameters of a contract are observed throughout its lifespan and not subject to change through the public law. However, in some terms such subsoil use contracts still have special status distinct from the ordinary civil contracts.

Can you introduce Iluka Resources on a global level? UA: Iluka is an Australian-listed public company based in Perth and ranked in the top 100 companies on the Australian Stock Exchange. The company has been involved in mineral sands exploration, mining, processing, and marketing for over 60 years and has operations across Australia and in the United States, as well as a globally distributed sales and marketing network. Iluka possesses the largest global market share of zircon production and also is a major producer of high-grade titanium dioxide. The company employs approximately 900 people worldwide and contracts a similar number for its mining and processing activities.

What are your plans for the next five years within Kazakhstan’s mining sector? UA: Many global mining firms are experiencing difficulty in securing the right personnel; prevalent in the CIS region. Practices in Russia are shrinking, and Kazakhstan is part of the Customs Union. There could be a trend for global firms to re-enter the market; if this happens, Colibri Law Firm will be standing-by for new legal associates to attract new clients; and is the legal framework the same across the stans? UA: Kazakhstan is a dynamic market for Colibri Law Firm; it has most growth po- tential of the Soviet stans and the company is expanding its Kazakhstan practice and employing more personnel. Colibri Law Firm’s only international competition is in Kazakhstan; in the other stans competition is predominantly national. To attract new clients, the firm embraces the whole region and not individual jurisdictions; it concen- trates on specialization, for example, sub- soil throughout the stans which are catego- rized as mining and energy. There is a CIS model for civil code, which is followed by nearly all the stans, so there are many com- mon features. However, there are signifi- cant divergences among those jurisdictions that nonetheless can be easily managed with qualified personnel.

What innovation has Iluka introduced to the market in the last two years? In 2014, Iluka launched eight new products into the market, all to defined product speci- fications that have significant and unique – with ensuing benefits for the economy over the essential knowledge, cul- tural understanding, and goodwill of the local population. The key is creating an operating environment where the company has the flexibility and in- vestment certainty to collaborate for the long- term in partnership with local people, govern- ment, and education institutions.

What are Iluka’s expectations for the next three years, if the new Mining Code is im- plemented in 2015? The key to attracting the right investment is the right policy and regulatory set- ting. If there is a right policy and regulatory set- ting, the hope for a substantial discovery, and promised reform efforts are implemented and that mining professionals in the field. In addition to Iluka, the company is expecting to sign agreements with Kazakhstan government agencies to facilitate on-ground exploration later this year.

What innovations has Iluka introduced to the market in the last two years? In 2014, Iluka introduced new products into the market, all to defined product speci- fications that have significant and unique; and Iluka’s core products are used primarily in the metal, nanomaterials, zirconium metal and room and kitchen facilities, sporting goods, healthcare, industrial welding, and aviation.

Can you give an update on your partner- ship with Kazgeology? Iluka has been engaging with Kazgeology since its initial visit to Kazakhstan in March 2013, and the relationship has developed substantially since that time. Kazakhstan is a new jurisdiction for Iluka, different from those where it has traditionally operated, so it is important that the company draw on cred- ible, well-regarded sources of in-country ex- pertise. Iluka has signed a number of memorandums of understanding with Kazgeology with the aim of building a closer relationship and transfer of technical and knowledge and access to geological data. This relationship will also provide Kazgeology the opportunity to observe and learn from Iluka’s highly experienced exploration and mining professionals in the field.

What impact will the new mining code have on the mining industry and what can the government do to improve the business climate? UA: Harmonization of Kazakhstan’s min- ing code, which is followed by nearly all the stans, so there are many com- mon features. However, there are signifi- cant divergences among those jurisdictions that nonetheless can be easily managed with qualified personnel. Iluka is predominantly national. To attract new clients, the firm embraces the whole region and not individual jurisdictions; it concen- trates on specialization, for example, sub- soil throughout the stans which are catego- rized as mining and energy. There is a CIS model for civil code, which is followed by nearly all the stans, so there are many com- mon features. However, there are signifi- cant divergences among those jurisdictions that nonetheless can be easily managed with qualified personnel.

What are your competitive advantages over other global mining firms? UA: Iluka has a number of memorandums of understanding with Kazakhstan’s government agencies to facilitate on-ground exploration later this year.

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Negotiations with Kazgeology have been concluded and an agreement signed for an exploration project in the Korgantas area in the Karaganda province in central Kazakhstan. Discussions are ongoing with Kazgeology for a further project in central Kazakhstan-Balkhash-Saryshagan. Once projects are agreed, we will be in a position to commence grass-roots exploration.

Gary Hodgkinson,
Director, Central Asia District,
Rio Tinto
SLOWLY ATTRACTING INTERNATIONAL PLAYERS

Mineral Exploration in Kazakhstan

The lack of exploration may be the largest obstacle to growing the mining industry in Kazakhstan. In 2008, the government imposed a moratorium on new exploration to prevent speculation from undermining its mineral properties. Although the ban has now been lifted, new exploration remains limited. Yet most of the country’s current reserves are becoming depleted, so Kazakhstan needs to increase exploration, and one key development in recent years was the creation of Kazgeology, a state-owned company responsible for geological exploration. “Geological exploration remains one of the least developed sectors in Kazakhstan. The government and industry accept the fact that Kazakhstan is underexplored. In the past 20 years, companies have logical exploration remains one of the least developed sectors in development in recent years was the creation of Kazgeology, a state-owned company responsible for geological exploration in the country. Secondly, a special state organization was founded, and the government now spends money on geological exploration. These changes make it easier for private enterprise to take part in geological exploration, and, at the same time, there is a realization that now these companies have the rights to those deposits that they are exploring,” explained Nikolay Radostovets, chairman of the Association of Mining and Metallurgical Enterprises (AGMP). One multinational conducting exploration activities is Rio Tinto. “Our global strategy is to build local partnerships; this supports understanding with Kazgeology with the aim of benefitting from country expertise. Iluka has signed a number of memorandums of knowledge. In some jurisdictions local joint ventures are mandated by government legislation, a scenario with which we are comfortable. Our objective in Kazakhstan is to run a profitable mine that will give healthy investor return. In 2010, we commenced negotiations with Tau-Ken Samruk; after lengthy negotiations, in 2013 we stepped back from the opportunity, as no viable commercial arrangement could be reached. After consultation with government officials, it was suggested that we work with Kazgeology, as their mandate mirrored our aspirations for the Kazakhstan project. Negotiations with Kazgeology have been concluded and an agreement signed for an exploration project in the Korgantau area in the Karaganda province in central Kazakhstan. Discussions are on going with Kazgeology for a further project in central Kazakhstan-Balkhash-Saryshagan. Once projects are agreed, we will be in a position to commence grass-roots exploration,” said Gary Hodgkinson, director of Central Asia district at Rio Tinto. Iluka Resources, a Perth-based company that possesses the largest global market share of zinc production and is a major producer of high-grade titanium dioxide also set its sights on Kazakhstan. Having only recently established a presence in the country, Iluka’s new country manager, Alison Morley, said: “Iluka has been engaging with Kazgeology since its very first visits to Kazakhstan in March 2013 and the relationship has developed substantially since that time. Kazakhstan is a new jurisdiction for Iluka, different from those where it has traditionally operated, so it is important that the company draw on credible, well-regarded sources of industry expertise. Iluka has signed a number of memorandums of understanding with Kazgeology with the aim of benefiting from its considerable local knowledge and access to geological data. This relationship will also provide Kazgeology the opportunity to observe and learn from Iluka’s highly experienced exploration and mining professionals in the field. In addition to Kazgeology, Iluka is expecting to sign agreements with Kazakhstan government agencies to facilitate on-ground exploration later this year.” In addition to Rio Tinto and Iluka Resources, Kores or Korea Resources Corp., a Korean government-owned company, is another player interested in Kazakhstan’s potential. “South Korea is among the top 10 largest mineral resources consumers worldwide and Kores, as a government-owned entity, is tasked with ensuring a steady supply of raw materials for our resource-hungry economy. Kores is involved in numerous projects around the world, the most notable of which are the Ambatovy nickel project in Madagascar and the Boleo copper project in Mexico. It is in this capacity that Kores is also greatly interested in working in Kazakhstan. In 2014, Kores signed an agreement with Kazgeology for a project for complex ores exploration at Dyussembuy area in the Karaganda region. Other areas of interest are potential deposits of copper, zinc, and rare metals in the northern and eastern parts of Kazakhstan,” said Jong In Kim, chief representative of Kores in Kazakhstan. The low level of exploration in Kazakhstan is an ongoing issue, but as the government is keen to attract foreign investors, the country may have a very different industry makeup in 10 years in terms of juniors and other exploration companies. •
What is unique about the Koktaszhal project, we can still have a good margin, technology and improved economics of the tent of about 0.4%, however thanks to the 2015. We have around 92 metric tons (mt) ing at the deposit in 2011, and production Koktaszhal is a copper-gold deposit locat – ect to our readers?

Can you introduce the Koktaszhal proj –

Can you tell us about your involve-

What strategic plans do you have for Al-

How significant is your Korgantas proj –

How significant is Kazakhstan to Rio Tinto compared to mining jurisdictions like China or Mongolia?

There are two considerations for Kazakh-

How significant is your Korgantas proj –

How can you give an update on your 50-50 joint venture with Tau-Ken Samruk for a copper project in northern Kazakhstan today?

How will the change in the mining code affect the industry?
Can you give a brief introduction to Sryymbet and its deposit? The Sryymbet deposit was first discovered in the late 1980s by Soviet geologists. A great deal of money was spent on drilling in the 1990s, yielding high-grade tin samples and outlining the size of the deposit. Around the turn of the century, Lancaster Group bought the deposit and became the new license holder. The previous exploration was good by Soviet geological standards. However, the deposit is located in a national park, which may cause problems on the environmental side, so we have been working with Golden Associates and a local consulting company Terra since 2013 to assess the environmental impact of the project. It looks like it should not have any negative impact on the surrounding environment and local population due to usage of environmentally friendly technology. We have a good relationship with the local and provincial government, who support the project and understand that the mine will have a great social impact for the area. The area already has solid infrastructure, such as a railway located 30 kilometers (km) from the property site. Additionally, the government has committed to investing $10 million in 24 km of an 110-kilowatts power line, which has been under construction since April 2015. Working so closely with the state and local governments reduces the political risk of the project and increases the confidence of investors.

How do you expect the demand for and price of tin to evolve in the future? The market can be unpredictable; for example, no one expected the recent price drop. Looking at the fluctuation of the past 10 years, tin increased to $30,000 per metric ton (mt), but now it is below $18,000/mt. Twenty years ago, the price dropped to nearly $3,500/mt, bankrupting most of the old Soviet and western tin producers. Prices are rising again because it is becoming harder to find tin deposits with strong potential. Additionally, tin consumption is stable and continues to rise. At the same time, the deposits of major players like Indonesia and Bolivia are becoming depleted and decreasing in grade. For example, Indonesia’s production dropped from 120,000 mt/y 10 years ago to 65,000 mt/y last year. We know the current and future world demand and tin supply shortage. Kazakhstan and FSU countries are almost 100% importing tin from Asia. Sryymbet mine can cover this gap.

How does Sryymbet plan to finance the construction of the mine? Strategically, we have a short list of potential investors. Tin is still in stable on the London Metal Exchange and well known in Asia, Australia, and South America, so it does not have the same position in Europe and North America. We have discussed with the prospect of entering the North American market with ITRI. We plan to do an IPO, but not in the near future. First, we will start production so we can show the real potential of Sryymbet. All of our geological, mining, and metallurgical reports are distributed to investors so that they can do their own math and see the potential of the project. Once we start construction, we will allocate a project cost of approximation $230 million. Local banks can finance this, so money is potentially available. Interest is increasing among Western and Chinese companies and local institutions, but they are waiting until the pre-feasibility study has been completed. They want to see the final project numbers produced by international standards before discussing the details. We know that Sryymbet is a feasible world-class deposit, with low mining and processing costs, well-developed and efficient technology, and strong economics, so we are confident in the project’s future.

Do you have a final message about Sryymbet? Looking at most of the other mining projects in Kazakhstan, many companies try to rush through development in an effort to save money and then must spend millions to correct their earlier mistakes on the project development stage. We do not want to find ourselves in this position, which is why we are investing our resources and taking our time to do the job right. Sryymbet has a strong and promising future; we want it to serve as an example of a successful mining project in Kazakhstan done by international standards.

Tony Thornton
General Director
SRK CONSULTING KAZAKHSTAN

When SRK entered Kazakhstan in 2010, you made the country the base for Central Asia. What is Kazakhstans’ significance in this setting? SRK Consulting was opened in Almaty to be present on the ground for clients in Central Asia. Kazakhstan has the domestic economy and mining business in the region. Almaty is also well connected with all regions to flights to other regions. In 2010, SRK entered with only five consultants and the company has now grown to 25 consultants. Currently, SRK’s work is recruiting several more senior level consultants with extensive international experience in resource geology, and mining engineering to give the company more in house capabilities. SRK’s aim is to grow to about 30 consultants and to service the needs of our clients here. As part of the SRK model, the company brings in expertise from our sister companies around the world, depending on the nature of the project. SRK prides itself in delivering international expertise with a local context.

To what extent did SRK have to rely on global expertise and how much did the company have to adapt to the local conditions in Kazakhstan? SRK provides expert opinion and technical solutions based on internationally recognized best practices. If technical advice on local requirements is needed, SRK collaborates with local design institutes. These local requirements differ significantly from the international approaches, but we have become quite familiar with managing the two approaches in parallel, minimizing the cost for the client, and avoiding duplication of work. For example, in the field of geotechnical engineering, precisely calculating the final safe pit slope for an open-pit project can result in a major savings on stripping costs. These calculations are based on direct observed rock mass characteristics taken as part of a geotechnical investigation of the project site. The local requirement, however, would be for a generalized approach derived through application of rock standard types. The problem is that the final slope design is therefore a prescriptive result, which can be overly conservative, rather than an engineered study specific to the project, that we can produce with the subsequent cost-saving benefits. With the client’s agreement, SRK will enhance the design and the engineering processes that we use are adapted to meet local requirements.

How have mining standards in Kazakhstan been harmonized with the international system? Work is still in progress, but there is some advancement. SRK has been working with Kazageology to advise the government on how to introduce the Committee for the Revision of the Country’s Geology Revising Standards. This is a result of the government’s initiative to attract foreign direct investment (FDI) into mining. So clearly in time there are going to be significant changes to the current situation. But it needs to be anticipated at all levels in government that attracting foreign investment is a highly competitive process. Investors do not want to know that reputedly all the mining in a certain area is located underground in Kazakhstan, but rather what are the benefits, and, most importantly, what makes Kazakhstan a more appealing destination than somewhere else? The current marketing model of Kazakhstan does not promote the $230 million Syrymbet project and its various agencies charged with attracting FDI could be more pro-active in terms of seeking out investors and bringing them to Kazakhstan.

What is SRK doing to help its clients overcome the challenges of infrastructure and logistics in Kazakhstan? Compared to other mining jurisdictions, infrastructure is not a major challenge in Kazakhstan. In terms of the environmental impact management, SRK has an environmental science department. SRK is involved in several projects with clients who want industry best practices in environmental management of mines applied to their operations here. An area that is not adequately addressed in Kazakhstan is mine closure and mining sustainability. Kazakhstan would benefit from remediation projects to clear up some legacy issues. SRK sees mine closure as an important part of the international model of mining practices in Kazakhstan. The government is currently seeking advice on what is considered best practices around the world and financial mechanisms that can be applied to avoid future legacy problems.

Do you have a final message about SRK? SRK is a global company with a variety of service offerings to the mining industry. We work and succeed in some of the remotest corners of the world. As for Kazakhstan, SRK would like to steadily expand and bring in more service capabilities in different technical areas like hydrology, for example. SRK is continuously looking for new talented individuals to join our team as well as new clients to join our growing clientele. We are committed to Kazakhstan, as it is a country of huge natural riches and enormous opportunities. We will be proud to be a part of what will be a flourishing business opportunity.
We are very interested in attracting new international companies to the region. ArcelorMittal Temirtau is important for Karaganda, and we are interested in seeing its increase in production capabilities. Moreover, we are offering new projects to it, which can be mutually beneficial.

- Nurmukhambet Abdibekov, Akim (Governor), Karaganda Region
Kazakhstan has vast reserves of a wide range of minerals and metals. As stated above, virtually all elements of the periodic table are present in a country with a relatively small population. This section showcases some of them in greater detail as well as highlights new and exciting projects currently being undertaken.

Uranium

“Kazakhstan contains 12% of the world’s uranium resources and an expanding mining sector, producing about 22,830 metric tons (mt) in 2014, and planning for further increase before 2018. In 2009, it became the world’s leading uranium producer, with almost 28% of worldwide production, then 33% in 2010, 36% in 2011, 36.5% in 2012, and 38% in 2013. Kazakhstan has a major plant making nuclear fuel pellets and aims eventually to sell value-added fuel rather than just uranium. Of its 17 mine projects, five are wholly owned by Kazatomprom and 12 are joint ventures with foreign equity holders, and some of these are producing under nominal capacity. In 2013, 9,402 mt was attributable to Kazatomprom itself, which was 16% of world production and put it slightly ahead of Cameco, Areva and ARMZ-Uranium One,” according to the World Nuclear Association.

Kazakhstan currently has no operational nuclear reactors after its only one in Aktau was decommissioned in 2001; however, the government plans to begin construction of two new plants in 2018. Besides Russia, Kazakhstan is also cooperating with the likes of Japan, China, India, and South Korea. China in particular presents an important export market for Kazakhstan as it consumes roughly 50% of the world’s tin. Consumption has been heating production for the past several years, as old mines close and reserves are being depleted. The latest numbers by the U.S. Geological Survey estimate that the world tin supply to be 4.8 million mt, which is a decline in reserves since 1990. This has pushed up the price of the mineral, and new deposits and production capacities are badly needed. One major development in Kazakhstan’s and, for that matter, the world’s tin market has been a company that is a shining example of how local businesses have successfully navigated Kazakhstan’s business landscape and brought about thriving projects. Syrymbet, the exploration and mining company, is a shining example of how local businesses have successfully navigated Kazakhstan’s business landscape and brought about thriving projects. Syrymbet, the exploration and mining company, is a shining example of how local businesses have successfully navigated Kazakhstan’s business landscape and brought about thriving projects. Syrymbet, the exploration and mining company, is a shining example of how local businesses have successfully navigated Kazakhstan’s business landscape and brought about thriving projects. 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Kazakhstan has enormous coal reserves with 37.5 billion mt of recoverable coal, the biggest in Central Asia and representing 3.8% of the world total. The country has more than 40 coal deposits, of which a third are classified as brown coal or lignite deposits. Karaganda has traditionally been Kazakhstan’s main coal producing region and to the northeast of it are the Ekbastuz coalfields, some of the largest in Kazakhstan. The other locations include Mayakinskoye as well as Kushinskoye, Borlinskoye, Shubarkol, Karazhyrinskoye fields and several other smaller deposits. Russia is the largest export market, followed by Ukraine. However, since independence, Kazakhstan’s coal production has decreased by 35%. Some of the causes of this can be attributed to a poor safety record, but the more important issue is the lack of foreign investment in this sector. Kazakhstan’s largest coal producer, Bogatyr Coal, owned by the American company Access Industries Inc., produces 35% of Kazakhstan’s total coal output and develops northern Kazakhstan’s Bogatyr and Severny coal fields. It is also Kazakhstan’s largest exporter to Russia. This coal is mostly used in power plants in southern Russia. Production of coal in Kazakhstan is expected to reach 150 million mt by 2020 and Karaganda will play a crucial role. “Unfortunately, mining facilities do not operate at 100% capacity, which also means that we will be able to step up our production if necessary,” said Nurmukhambet Abdibekov, governor of Karaganda region.

PROVED COAL RESERVES

One of the biggest investors in Temirtau, a small mining town in Karaganda, is ArcelorMittal and the company has a great interest in further development of this industry. “ArcelorMittal Temirtau initiated an extensive program to modernise its production processes and increase efficiency. Since the entire economy of Temirtau depends on this facility, this has a great positive effect on the well being of the town and the region. In 2015, the company realised reconstruction of the third blast furnace, and now the power of the furnace is 20% more than what it used to be before, which will allow the company to produce up to six million mt of steel a year,” added Abdibekov.

Kazakhstan has enormous coal reserves, which can be used for both export and to power the country’s industrial base.

Phosphates

Kazakhstan is in the top ten of countries with significant phosphate reserves. The country’s long history with phosphates dates back to Soviet times when it was the center of production for the region. The main producer is Karazhyrinskoye with an annual capacity of 120,000 mt. Most of the deposits are in the Karatau basin. Kazakh companies are also interested in making more value-added products and are slowly moving away from the dig-and-ship mentality. “Karazhyrinskoye is looking to upgrade its processing capabilities in order to create a range of value-added products, which will allow us to export them to new markets,” said Mukash Iskandirov, general director of Karazhyrinskoye.

In 2013 Russia’s EuroChem received a mining license to develop phosphate deposits in Zhambyl region that may affect Kazphosphate’s dominance in the market. “There are 45 explored phosphate deposits in the south of Kazakhstan; Kazphosphate is working on six of them. EuroChem has a license for the development of two deposits. We are happy to see new players coming to Kazakhstan, because we understand that they improve the overall economic wealth of the country. We think that in the near future we will see more players from Russia and other countries entering the market,” added Iskandirov.

EuroChem has ambitious plans in Kazakhstan. “We are developing mining of phosphate ores and will continue the development and construction of the deposit until 2018 when we will reach our production capacity of 640,000 mt. Current development of the base for raw material will allow us to do so. We want to finish the first phase of the project by the end of 2015 and begin production of phosphate rock. We are planning to finalize construction of the chemical plant by 2018 and begin production in 2019,” said Dmitriy Valihev, general director of EuroChem-Karatu.

Kazakhstan’s considerable reserves of phosphate are attracting new investors leading to the diversification of its market players.

LEAD AND ZINC

Kazakhstan is fourth in the world in terms of its proven reserves of zinc and third in lead. The on-balance reserves are 35 million mt of zinc and 17 million mt of lead. These polymetals are concentrated in East Kazakhstan, Karaganda, and Kyzylorda regions. Zhairem, Kazzin, Karazhyrinskoye, Shalkiyu zinc and NC SEC Saryarka are the biggest developers. Estimated reserves are 136 million mt of zinc and 58 million mt of lead according to Dr. Dzhantureyeva. New exploration is badly needed, as the currently developed deposits’ reserves life does not exceed 10 to 15 years. Exploration is best conducted on nine sites around Kazakhstan and the increase in reserves was one million mt and 1.9 million mt of zinc and lead respectively over the last 15 years. The output in 2014 was 93,000 mt of lead and 447,000 mt of zinc. 2015’s investments in the production of lead and zinc will grow to $1.13 billion, of which $3.2 million will go to exploration according to Dr. Dzhantureyeva. The biggest investors are Kazmine, Zostoksuzmet, Kazakhmys, Nova-Zinc and Shaimerden.

PROVED LEAD RESERVES

PROVED ZINC RESERVES

CHROMIUM AND MANGANESE

Kazakhstan holds the world’s second largest reserves of chromium behind South Africa and also has the third largest reserves of manganese. ERG is the main player in this market in Kazakhstan. “Kazchrome represents the ferroalloys division which comprises four “unfortunated” mining objects and two metallurgical plants. Chromium ore extraction is carried out in 10th Anniversary of Kazakhstan’s Independence Molodezhnaya and Yuzhny mines. Manganese ore is extracted in Erdenet, with record-breaking performance in mine output, plant efficiency, machine uptime and finally sellable product output. Intense collaboration was achieved between Yildirim’s mining team and the already existing mechanized mining contractor at Voskhod,” said Azamat Bektybayev, ERG’s vice president for production.

The 2013 acquisition of Voskod Chrome, a chrome mine and processing plant in northwestern Kazakhstan, by Istanbul-based Yildirim Group from Russian mining giant Mechfel represents a significant development. “Voskod Chrome’s integration process into YILMADEN Holding was flawlessly executed, and the results have progressively improved almost every single month, further development on site, with record-breaking performance in mine output, plant efficiency, machine uptime and finally sellable product output. Intense collaboration was achieved between Yildirim’s mining team and the already existing mechanized mining contractor at Voskhod,” said Alp Malazgirt, CEO of YILMADEN Holding.

Yildirim’s investment signifies an increased interest from investors outside the CIS, a trend that is likely set to continue. •
KAZAKHSTAN MINING, POWER & CHEMICALS 2016

INTERVIEW

Please introduce us to KATCO and any historical milestones that have shaped its presence in Kazakhstan today.

KATCO is a joint venture between a Swiss state company and the government of Kazakhstan (51%), and Kazatomprom NAC JSC (49%). KATCO signed a subsoil use contract in 1999 for 40 years until 2039. We were active in the South Kazakhstan Oblast, in the Sozak District. Almost all currently operating uranium mines are located in South Kazakhstan and Kyzylorda Oblasts except one in North-East Kazakhstan. After industrial production start in 2005, an agreement was signed allowing KATCO to produce 4,000 tons of uranium per year, which we did successfully in 2013 and 2014, and are continuing to do so. KATCO is the largest In Situ Recovery (ISR) mine in the world since 2009, and represents 6% of the world’s production.

How do you maintain profitability given the low price of uranium and how has the recent devaluation affected your operations, if at all?

First of all being profitable is necessary for KATCO’s shareholders. We are striving to optimize each process, but there is no miracle solution. KATCO is involved in R&D, as both AREVA and Kazatomprom are interested in developing innovative technologies and solutions. There are major or minor savings, but rather a day-to-day fight to improve our operations. There are two sides to devaluation. Given that KATCO is selling a commodity, the price in U.S. dollars and costs are mainly denominated in tenge, devaluation mathematically improves our cost of system. However, not all equipment are local, implying that there is an impact on imported goods and materials, which we are expecting to see very soon. As far as social stability is concerned, we have a permanent dialog with our employees and we take into consideration the social impact of the devaluation in our regular discussions with the staff and the employees representatives.

What could help attract foreign mining companies to Kazakhstan?

KATCO’s strategy, there are no plans to increase production facilities. The management of the company constantly fights to improve our operations. We have observed regrowth of surface vegetation, implying no environmental issues. KATCO takes care to protect the surface of the mine as the ecological aspect of our business is very important to us. For the subsurface, the wells plugged with cement after operation to prevent any leakage, and we ensure no contact is made with potable water aquifers. KATCO is equipped with tools to control all chemical parameters and radioactive content to prevent any contamination. Kazakhstani regulations are extremely stringent and will probably be tightened in the future and of course we respect them.

Does KATCO have difficulty searching for new reserves for exploitation that will be extracted in the future?

Lasting for half a century. On areas that have been operated then closed and remediated, we have observed regrowth of surface vegetation, implying no environmental issues. KATCO takes care to protect the surface of the mine as the ecological aspect of our business is very important to us. For the subsurface, the wells plugged with cement after operation to prevent any leakage, and we ensure no contact is made with potable water aquifers. KATCO is equipped with tools to control all chemical parameters and radioactive content to prevent any contamination. Kazakhstani regulations are extremely stringent and will probably be tightened in the future and of course we respect them.

Please tell us about JV Betpak Dala LLP and about its role in the holding of NAC Kazatomprom JSC?

The enterprise was established in 2004 on the basis of the Akdala mine, and the development of the South Inkay mine began in 2007. These mines are located in Sozak Region in southern Kazakhstan. Initially, it was planned to get 1,800 metric tons per year (mt/y) of uranium at Akdala mine, and 2,000 mt/y of uranium at South Inkay mine. Since 2012, JV Betpak Dala LLP reached design capacity production and began to extract 3,000 mt/y of uranium. Akdala mine was the first mine in the world which extracted in one year 1,000 mt/y of uranium by method of drill hole in-situ leach (ISL). In 2014, Kazakhstan extracted 22,300 mt of uranium, with JV Betpak Dala LLP extracting approximately 13% of this amount.

How does KATCO minimize the negative impact of mining on the environment?

KATCO utilizes technology that has existed for half a century. On areas that have been operated then closed and remediated, we have observed regrowth of surface vegetation, implying no environmental issues. KATCO takes care to protect the surface of the mine as the ecological aspect of our business is very important to us. For the subsurface, the wells plugged with cement after operation to prevent any leakage, and we ensure no contact is made with potable water aquifers. KATCO is equipped with tools to control all chemical parameters and radioactive content to prevent any contamination. Kazakhstani regulations are extremely stringent and will probably be tightened in the future and of course we respect them.

How does the present price of uranium impact the company’s plans to increase production?

According to the company’s development strategy, there are no plans to increase production. Actual reserves at Akdala mine will be enough for five years; in addition, prospecting works were started to increase the raw materials source in 2015. The contract on uranium production at South Inkay is valid until 2027 and prolongation of the contract is planned for more than 10 years, in connection with new reserves discovery. The low spot price of uranium has an impact on production economy, but we have continued to make profit by optimizing expenses and applying new technologies.

In 2018, Kazakhstan plans to begin constructing two nuclear power plants. Will production of uranium increase as a result?

Kazakhstan has been the world’s leading producer of uranium since 2009 and now exports 35% of total world uranium production. In 2007, Kazakhstan was the third largest producer after Canada and Australia, and today exports more than 55% of its uranium to China and South Korea.

What are the company’s plans for the next five years?

In 2014, the partnership launched a satellite monitoring system, which was completed in 2015. A rotation camp for 120 places at South Inkay was constructed, and now all extracted uranium is reprocessed at own production facilities. The management of the company constantly works to improve the everyday life of its mine employees. In 2015, a rotation camp for 120 places at uranium mill will pass, the inducting rotation camp at South Inkay was expanded to 80 places. The partnership has been working on advanced methods, and new technologies. The geological department of the company produced and analyzed the uranium reserves at site No. 4 of Inkay and Akdala. The main work of all technical personnel is directed at cost saving of production and maximizing the profit. **

KAZAKHSTAN MINING, POWER & CHEMICALS 2016

INTERVIEW

INTERVIEW

INTERVIEW

- 63 -  - 64 -
In 2013, in accordance with the working program of our mining contract, we began mining and extraction of phosphate ore at Araltobe site at the Kok-Djon deposit. We mined 5,000 metric tons (mt) of ore and transported 239,191 cubic meters (cmt) in 2014. We extracted 175,000 mt and transported 816,768 cmt of ore. In 2014, we extracted 175,000 mt and transported 816,768 cmt of ore. In 2013, we finalized construction of a sulfuric acid plant by 2018 and begin production in 2019.

Tell us about the progress at Kok-Djon for phosphate? 

In October 2013, in accordance with the working program of our mining contract, we began mining and extraction of phosphate ore at Araltobe site at the Kok-Djon deposit. We mined 5,000 metric tons (mt) of ore and transported 239,191 cubic meters (cmt) in 2014. We extracted 175,000 mt and transported 816,768 cmt of ore. In 2014, we extracted 175,000 mt and transported 816,768 cmt of ore. In 2013, we finalized construction of a sulfuric acid plant by 2018 and begin production in 2019.

How does Kok-Djon differ from EuroChem’s assets in other jurisdictions? 

Kok-Djon is one of the largest deposits in Karatau phosphate basin. It is divided into four parts: Kiz-Tas, Keskitobe, Aknam and Aralotobe. The length of each is 11.2 km, 12.5 km, 7.8 km, and 9.5 km, respectively. At this stage, EuroChem-Fertilizers is developing the Aralotobe area and plans to move on to Keskitobe in the near future. One of the key features compared to other deposits in Karatau basin is the fact that both of the above-mentioned areas are abandoned in P2O5. According to GKZ the total reserve at Aralotobe is 27,567 million tons with an average content of P2O5 28.2%. Before beginning to work in Kazakhstan, EuroChem had only one phosphorous deposit in Murmansk region, Russia. - Kovdorskii GOK. Unlike the Karatau deposits, where there is only phosphate, the Kovdorskii deposit has three minerals, namely iron ore, apatite, and baddeleyite.

What are the unique features of the technology that you are using? 

We decided not to use a traditional scheme of beneficiation phosphate after mining, and because of the fact that Karatau basin phosphates are difficult to beneficiate, we have very little waste material. This is why we designed a special technology and the final production will be a discalcius. This technology has never been applied at this scale. Depending on the type of the final product, extraction of P2O5 will be between 89% and 95% without prior beneficiation and concentration of phosphates. Thus, in order to receive the planned amount of the final product, we will need to produce around 1.5 million mt of ore. If we were to use traditional technology, we would have to produce 50% more. We want to make this resource as long as possible and one of our key focuses is to recycle all the raw material into good quality production and be able to sell it to our customers. After we began working in the region, the population increased, and many people returned. One of our companies is registered in Zhambyl, which means we are paying taxes to the local budget. Also according to our subsoil contract, we are supposed to restore 100% of the deposit before the company expires for socio-economic development of the city and revamping its existing infrastructure. From 2012 to 2014, we transferred $15 million for the development of Karatau and Zhambyl. We develop a special program together with the local authorities, where we identified key strategic investment areas where this money was most needed. Thanks to the money that we transferred to Zhambyl region, many houses for local residents were restored and it focused on young specialists. A large amount of abandoned buildings were either destroyed or renovated, the roads now have hot and cold heating has been restored. Many schools and kindergartens have been renovated in Zhambyl and Karatau.

What do you think about the mining conditions in the south of Kazakhstan? 

Kazakhstan has gone through in the past couple of years? In 2014 Kazphosphate celebrated its 15th anniversary. The company has gradually developed into a full-fledged producer with a focus on exports, and achieved its market production capacity. We are now prepared to grow even further. Currently, we have a turnover of $400 million, and by 2020 we want to reach $1 billion. Kazphosphate supplies their products to over 30 countries around the world. We export to the European Union and the CIS. In recent years, we began exploring the US market, and today American exports account for 7% of the total export volume of the company. The company’s activities cover three main segments: mining and sale of phosphate, production of yellow phosphorous, and production of mineral fertilizers. Phosphates have low value, which is why we only sell it domestically and to the neighboring countries, keeping our transportation costs as low as possible. Our key export markets are Russia, Uzbekistan and Turkmenistan. Kazphosphate is looking to upgrade its processing capabilities in order to create a range of value-added products, which will allow us to export them to new markets. In 2011, Kazphosphate began developing production of fertilizers out of phosphate ores through modernization and upgrade process of its equipment. We bought 13 Belay dump-trucks with 130 tons and purchased new excavators and other equipment. We plan to completely renew our equipment in the next four to five years. In 2013 we finalized construction of a sulfuric acid plant which will allow us to produce 650,000 mt of monobutyrate. In order to assimilate production of sulfuric acid, Kazphosphate has also started reconstruction of production of wet-processed phosphoric acid, which is crucial for production of phosphate fertilizers. By 2016, we should be able to produce up to 500,000 mt of phosphate fertilizers, and by 2020 we will reach one million mt for local and foreign markets.

How do you assess the competitiveness of Kazphosphate on local and international markets? 

In 2013, Russia’s EuroChem received a mining license for developing two phosphate de­posits in the Zhambyl region. How the ar­ival of a new player changed the market for phosphate fertilizers? 

There are 45 explored phosphate deposits in the south of Kazakhstan; Kazphosphate is working on six of them. EuroChem has a lic­ense for the development of two deposits. In addition to this, they will also need to construct a processing plant, as their nearest facility is located in Russia. This will require additional investment and may affect the final price of the product. We are happy to see new players in the market, but we have to under­stand that they improve overall economic wealth of the country. In the near future, we will see more players from Russia and other countries entering the market.

How do you approach the transportation of phosphates and mineral fertilizers, which often requires specific logistical solutions? 

Transportation of some products from pro­cessed phosphates is indeed a highly speci­alized equipment, which in turn has an effect on the final price of the product. We need spe­cial railway tanks and other equipment to ensure safe transportation. We have over 500 tank containers that we use for trans­portation of our product to Europe and the United States, so we are not dependent on third parties. Kazphosphate was able to maximize the efficiency of its logistical op­erations, allowing us to maintain a competi­tive price for our products. Regardless on our efforts, up to 25% of the price compo­nent for the transportation, consump­tion cost, and we do hope to reduce this share in the future.

Historically, Kazphosphate has been very active in its CSR commitments. Could you tell us about some of your recent initiatives to help the local community? 

Kazphosphate employs over 6,000 people; the average age of our employees is between 40 and 45 years. Having such a young em­ployee base means that the company must pay special attention to education and train­ing. We support our young employees, and offer additional training programs and summer camps as well as support their children’s education. Over the past five years, we built housing facilities for our specialists, a camp, sports complex, school buildings, and kindergartens and their families to make sure they enjoy a comfortable life outside working hours.

What are Kazphosphate’s strategic plans for the next five years? 

CEO Dmitry Valishev Industry Explorations}

On average, we have comfortable lives, and we will keep in­vesting in improving conditions at our sites and nearby towns.
Can you give us a general introduction to YILMADEN Holding? YILMADEN Holding was established in 2013 in order to consolidate YILDIRIM Group’s Metals & Mining subsidiaries under one roof. The holding is currently comprised of five companies in four countries: Turkey, Sweden, Kazakhstan, and Russia. Together, these subsidiaries make up YILMADEN, the fourth biggest player in the global chromium industry as well as the only company to produce chrome ore and high-quality high carbon ferrochrome (HCFCr) in four countries.

YILMADEN’s focus is on exploring, mining, and processing mineral resources with minimal impact on the environment. The Holding exports high-quality materials to customers in more than 50 countries via well-located distribution centers all over the world. Headquartered in Istanbul, Turkey and actively engaged in many projects in Europe and Asia, YILMADEN plans to expand its global network to include Africa and Latin America. The Holding continues to hunt for international opportunities and investments to develop its capabilities and productivity while placing sustainability at the heart of all its strategies, decisions, and actions impacted by the global decline in mining.

Can you talk us about your planned exploration activities? In 2014, operational exploration, grade control, and reconfiguration projects comply with international standards were completed at the Voskhod mine, while the deposit’s resources and reserves were reevaluated in compliance with the JORC code. As a result of these efforts, an additional 1.5 million mt were added to the mine’s reserve. For this reason alone, Voskhod Chrome’s total amount of remaining chrome ore reserves to nearly 20 million mt.

Can you please highlight the improvements achieved in beneficiation techniques? In 2014, Voskhod Chrome conducted tests with new beneficiation equipment such as shaking tables to modify the spirals currently used at the plant. The results indicated that it is possible to increase the yield by another 5 to 8% while achieving a reduction in tailings loss. The tailings pond currently has about 600,000 mt of material that can be recovered to obtain chrome concentrate with a grade of 53% chromium oxide (Cr2O3). In order to reprocess the tailings with an improved beneficiation circuit, Voskhod Chrome signed a contract with the Kazmekhanobr State Scientific Research Institute, who are currently finalizing engineering in Almaty.

How successfully have you been able to mine YILMADEN’s Voskhod Chrome into the Holding? Voskhod Chrome’s integration process into YILMADEN Holding was flawlessly executed, and the results have progressively improved almost every single month, with record-breaking performance in mine output, plant efficiency, machine uptime and overall cost efficiency. The ore currently used at the plant is a high-grade concentrate with shaking tables to modify the spirals currently used at the plant. The results indicated that it is possible to increase the yield by another 5 to 8% while achieving a reduction in tailings loss. The tailings pond currently has about 600,000 mt of material that can be recovered to obtain chrome concentrate with a grade of 53% chromium oxide (Cr2O3). In order to reprocess the tailings with an improved beneficiation circuit, Voskhod Chrome signed a contract with the Kazmekhanobr State Scientific Research Institute, who are currently finalizing engineering in Almaty.

What are your plans and expectations for the next few years? Previously, Voskhod Chrome’s beneficiation and drilling done at Voskhod Chrome’s Karagash deposit have revealed four million mt of resources that comply with JORC standards and can already be sold. A $50-million capex program was initiated at Voskhod Chrome’s Voskhod site. As a result, Voskhod Chrome has signed a contract with the Kazmekhanobr State Scientific Research Institute, who are currently finalizing engineering in Almaty. As a result, Voskhod Chrome has signed a contract with the Kazmekhanobr State Scientific Research Institute, who are currently finalizing engineering in Almaty.

Can you give us a brief overview of Deloitte’s Energy and Resources division in Kazakhstan and its evolution? Energy and Resources (E&R) represent one-third of our business in Kazakhstan; however, when our other service lines are included, such as consulting, internal audit, tax advice, this jumps to 50%. The division’s business is cyclical; currently, we are experiencing a downturn, but with the big players considering acquisitions, we are not far from an upturn. Kazakhstan has been openly encouraging foreign investment into its E&R sector, and to date, this has been more successful in oil and gas than mining projects. Having said that, mining projects have progressed via local companies joint venturing with government entities.

In which segment of your business within E&R are you seeing the greatest demand, and where do you see the most resource growth in mining? There is demand across all our service lines. M&A is showing signs of increased activity; the auditing business is constant; and we currently have some very large consulting projects with the big mining players. One of the key minerals in Kazakhstan is uranium, and China, due to its 15-year policy of building and commissioning domestic nuclear reactors, is actively interested in exploiting that. Japan also has reactors they are looking to start up. For this reason alone, the demand for uranium is expected to increase in China and Japan should create a surge in the demand for uranium. Copper is another key mineral in Kazakhstan where demand globally is outstripping supply. Iron ore is also an important mineral for the country; however, there is supply competition from Australia. Kazakhstan also has a wealth of gold, silver, zinc and coal.

What changes has the updating of Kazakhstan’s mining code brought to the mining industry? From our viewpoint, the changes to the code, which were designed to encourage foreign investment, have yet to affect the mining industry. Any change will probably be seen when we carry out our 2015 audit. To date, mining has generally been seen as a “second-class citizen” with oil and gas receiving all the attention. Arguably, however, reductions in oil prices should increase the profile of the mining sector. If we want to see real development in Kazakhstan mining, the big international mining corporations are going to have to start investing in the country’s resources.

What other steps could the government take to encourage international investment? Historically, Kazakhstan’s government has an excellent record in joint ventures with international oil and gas and uranium players. This gave leverage for the Rio Tinto/Kazakhstan borax joint ventures and the oxide copper porphyry ore exploration in the Karaganda province of Kazakhstan and should encourage other international mining companies to invest in the country’s resources.

How does Almaty compare to Australia and Canada in terms of mining innovation? For innovation, Kazakhstan is a follow-up to Canada and should benefit from the country’s rich history of mining innovation. There is demand across all our service lines. M&A is showing signs of increased activity; the auditing business is constant; and we currently have some very large consulting projects with the big mining players. One of the key minerals in Kazakhstan is uranium, and China, due to its 15-year policy of building and commissioning domestic nuclear reactors, is actively interested in exploiting that. Japan also has reactors they are looking to start up. For this reason alone, the demand for uranium is expected to increase in China and Japan should create a surge in the demand for uranium. Copper is another key mineral in Kazakhstan where demand globally is outstripping supply. Iron ore is also an important mineral for the country; however, there is supply competition from Australia. Kazakhstan also has a wealth of gold, silver, zinc and coal.

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“We may say that geochemical tests are in fashion, which is attributed to the active geological performance of local mining companies including junior companies funded by foreign enterprises. Though in terms of revenue and the bottom line performance, the trade inspections as well as technological inspections are more attractive.”

- Azer Mammadov, Managing Director, SGS Kazakhstan and Caspian Sub-Region
SEEKING QUALITY AND INFRASTRUCTURE
The Evolving Market for Supplying Mining Equipment in Kazakhstan

As Kazakhstan is looking to attract new international players to join the ranks of its main domestic players like Kazinc, SBG, Kazakhmys Corp. and Kazatomprom, services and equipment suppliers are never far behind. Already boasting a presence of successful operation, local providers like Kaigorodovmet, Vostokshakhn, Ixkander and Vostok Prom Gru have a clear advantage in terms of being domestic which facilitates forming partnerships and knowing the local culture. However, these domestic companies must not feel too comfortable as tough international competition has not only already established itself in Kazakhstan, but further players are already eying the market as it could become the next destination with a mining boom.

As local companies are more skilled in the Kazakh customs, it may be a good idea for foreign players to partner with local ones in order to increase their chances of success in penetrating the market.

Equipment Supply
Kazakhstan’s equipment supply market has been characterized by companies being more concerned with price rather than the quality and durability of their equipment. However, a change is underway as companies are adopting Western methods of operating. Today some of the main equipment providers are, indeed, Western. Some examples are Sandvik and Atlas Copco. “In 1997, Sandvik entered the Kazakh market by acquiring Tamrock, one of the world leaders at the time in supply of equipment for mining operations whose office was established in Kazakhstan. Through this acquisition, Sandvik initially entered the mining sector in Kazakhstan, but further players are already eying the market as it could become the next destination with a mining boom,” said Dmitry Vorozhtsov, general manager of Sandvik.

Atlas Copco has extensive experience in the Kazakh market and has introduced cutting edge technology to Kazakhstan. “In 2013, Atlas Copco expanded its product portfolio by acquiring MEYCO Equipment. Due to the downturn in mining activity, there will be some rationalization and changes to the product line. The MEYCO factory has been transferred to Sweden with the competence center remaining in Austria. Atlas Copco has sold a MEYCO Potenza to Tajikistan and also introduced this technology in Kazakhstan at Ust-Kamenogorsk,” said George Apostolopoulos, general manager of Atlas Copco.

There has been some concern over the entrance of Chinese equipment providers and their impact on the market in terms of increasing competition; however, this may be truer for other Central Asian nations rather than Kazakhstan. “Chinese competition in Kazakhstan has not impacted much on Atlas Copco’s mining business, but has been dominant in Uzbekistan, the rationale being a historic relationship between China and Uzbekistan. Competition in Kazakhstan is of an international source, e.g. Sandvik and Caterpillar. It is difficult to define precisely Atlas Copco’s market share in Kazakhstan, there being many different sectors of equipment: for example, surface; underground; drilling consumables; and products that Atlas Copco offers but its competitors do not, and vice versa. Sandvik, due to its longevity in the market, is ahead of Atlas Copco on underground equipment; but Atlas Copco is ahead of Sandvik for the surface sector and drilling consumables. Over the three sectors, Atlas Copco has a market share of 35%, plus or minus 3%. Atlas Copco's after-market support is a great aid for maintaining its client base and securing new clients,” said George Apostolopoulos, general manager of Atlas Copco.

As the needs of Kazakhstan’s companies are changing, the desire for quality products is rising and this presents a good growth potential for Western equipment providers looking to expand to new markets.

Transportation and Heavy Goods Equipment
In 2014, President Nazarbayev introduced “Nurly Zhol” (Bright Path), a new economic policy that envisions massive state investment in infrastructure over the next several years. This is in response to geopolitical challenges such as low oil prices and sanctions on Russia. The funds for the projects will originate from Kazakhstan’s National Fund, similar to Norway’s Petroleum Fund, created with the sole purpose of saving for a rainy day. The fund has so far accumulated $76 billion from Kazakhstan’s exports revenues. The infrastructure plan looks to develop transport networks and logistics infrastructure to connect the country’s macro-regions through roads, railways and even airlines. The greatest focus will be given to implementing major road projects: Western China – Western Europe; Astana – Almaty; Astana – Ust-Kamenogorsk; Almaty – Aktobe – Atyrau; Almaty – Ust-Kamenogorsk and Karaganda – Zhetkazgan – Kyzylorda; Atyrau – Astana. The government is also looking to explore opportunities to build or lease terminal facilities and dry ports and seaports in China, Iran, Russia and the European Union according to the Astana Times. More specifically for railways, the European Bank for Reconstruction and Development and a number of commercial banks are providing a syndicated financing package of $300 million in support of a comprehensive modernization and restructuring program of Kazakhstan Temir Zholy, the country’s rail operator, also according to the Astana Times.

In 2014, a railway connecting Kazakhstan, Turkmenistan and Iran was inaugurated opening up access to the Middle East and its ports in Iran for Kazakhstan and Turkmenistan, Iran and Turkmenistan, on the other hand, gain access to ports in China through railway connections leading through Kazakhstan. What has also received significant amounts of attention has been China’s New Silk Road project that aims to connect China to Europe by reviving the ancient trading routes. While Kazakhstan is undergoing a number of exciting changes on the infrastructure front, companies operating as heavy goods equipment providers in the country are also expanding and are likely to grow further in number and size as the industry continues to develop. Transportation and heavy goods equipment providers in Kazakhstan include Tamoz Machinery, Liebherr,

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KAZAKHSTAN MINING, POWER & CHEMICALS 2016
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Volvo, Turkuaz Machinery, AK Machinery and others. One leader that stands out and has been present in Kazakhstan since 1999 is Borusan Makina, the representative of Caterpillar. “Borusan is a Caterpillar (CAT) dealer in Kazakhstan and Kyrgyzstan, and is part of a Turkish conglomerate for CAT operating in Turkey, Azerbajan, Georgia, and the far east of Russia. Borusan is one of the biggest dealers of CAT in the CIS region. In 2011, we established a Components Rebuild Center (CRC) in Karaganda, and in 2013, we completed our equipment rebuild shop and further expansion is planned. Borusan enjoys over 50% market share in the mining sector for equipment supply within the model size with which we are in competition. We have an excellent customer portfolio for greenfield projects for varying commodities which allow for peaks and troughs,” said Aman Shakeshin, mining division director at Borusan Makina Kazakhstan.

“Since 2010, delivery times for CAT mining equipment have improved due to the opening of two CAT facilities in Russia - Tosno, St. Petersburg and Novoibirsk. As these trucks come from within the Customs Union, they have a price advantage over our competitors. Delivery of equipment is enhanced by the excellent railway infrastructure in Kazakhstan,” added Shakeshin.

One important sheet of the country does present a challenge for a number of companies. One example is the Almaty-based distributor of chemical solutions, Chemie & Technology. The company offers acids and drill fluids used at all stages of production. “Undeveloped infrastructure certainly poses several challenges for us, and mainly affects the time of delivery. In turn, this can have a negative effect on operations of the mining companies we work with. We always try to work efficiently, process all orders in record time and minimize lead times. Because of the cost of our products includes delivery costs, we make sure we deliver the product in very short time,” said Mazak Bekov, executive director of Chemie & Technology.

As Kazakhstan aims to further upgrade its infrastructure and heavy goods equipment providers are expanding in the country, the mining sector certainly looks to benefit from improvements in both transportation infrastructure and wider service offerings from equipment providers.

Arguably, it is not only the fluctuating mineral prices responsible for the mining downturn, but mining houses have allowed cost structures to become inflated; cost structures need to be looked at and reduced. 2017 could be a year of recovery for the exploration market; it would have suffered a three-to-four-year downturn and the market’s cyclical nature would suggest an improvement, supported by a McKinsey report on mining and construction.

How important is Kazakhstan to Atlas Copco in the CIS region and globally?

Atlas Copco Kazakhstan is the company’s hub for six countries: Armenia, Tajikistan, Kyrgyzstan, Uzbekistan, Kazakhstan, and Mongolia. This group of countries places Atlas Copco Central Asia in the top 15 of Atlas Copco’s mining customer centers globally.

Has Atlas Copco been affected by competition from Chinese equipment suppliers?

What is your market share in Kazakhstan?

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Can you outline your commitment to sustainable productivity?

Atlas Copco’s policy is that sustainable productivity is the foundation for any investment; the environment, health and safety issues and quality of work are the keys to its operations. Arguably, Atlas Copco leads the way in creating a corporate social responsibility (CSR) too. Notwithstanding, Kazakhstan has yet to embrace the importance of CSR and health and safety.

Can you outline your commitment to sustainability?

Arguably, the Soviet influence has installed the thought process that unless the government imposes rules and regulations, they have no importance. Government could be doing a lot more. It is still up to the individual companies to educate and train personnel to be conscious about health and safety in the workplace.

Do you offer financing options for purchasing your equipment?

Atlas Copco’s products give value for money: it promotes the importance of equipment life cycle cost, efficiency and safety. We do offer finance packages at competitive interest rates to assist our customers. We aim to be flexible when it comes to the individual needs of every one of our clients, helping them acquire the necessary equipment to ensure that their operations run as smoothly as possible.

What are Atlas Copco’s short-term plans in Kazakhstan?

In the short term, Atlas Copco has to traverse the bottom of the downturn in mining activity, look for an improvement in its business through focusing on after-market, become even more efficient, maintain close relationships with its customers, and be prepared for an upturn in mining activity.
Aman Shakenov

Mining Division Director
BORUSAN MAKINA
KAZAKHSTAN

Can you give a brief overview of Borusan Makina?
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How much has your market share grown from 2010 to 2015? On a global scale, how important is Kazakhstan to Borusan?
Our market share of over 50% has remained constant between 2010 and 2015; we anticipate that it will stay at this figure for the next five years. Outside of Turkey, Kazakhstan is one of the most important investments for Borusan. One example is the expenditure of $30 million for our components/equipment rebuild complex in Karaganda.

What is your strategy for staying ahead of your competitors and is your service offering comparable to Turkuz Machinery?
Our CAT brand is powerful and we have a diversity of product offerings; our strategy is to offer a better service and build stronger customer relations. Turkuz focuses on the excavator business, whereas Borusan can supply all equipment for the mining site, i.e. drills, mining trucks, mining shovels, wheel loaders, lighting towers, water pumps. Borusan’s competitive advantage is that it offers a one-stop-shop for mining equipment requirements. CAT has a financing division; Borusan can supply a whole fleet of CAT machines, service and recondition equipment for a second life in our CRC facility together with CAT certification.

What financing options do you provide?
CAT Finance offers credit loans or a subsidised lease and offers mining companies enabling them to forward plan with more confidence. The new Code will make investment more stable and attract international mining companies, i.e. Rio Tinto and contract miners like Thiess.

Have you found mining companies reluctant to embrace new technologies and working practices?
CAT has a strong reputation in the mining industry with a proven record of reliability. Borusan is forming a new group within its mining team dedicated to introducing new technologies to the mining community, for example: tele-remote operation for LHDs improving safety in the workplace. We have recently introduced this to Kazzinc mining company. Borusan’s objective is to take operators out of underground mines. We are also working on managing traffic for open-pit mines. Customers are more agreeable to change once feasibility studies prove that innovation is beneficial.

What are Borusan Makina’s plans for the next five years?
Borusan Makina’s five-year strategy plan is: work on efficiency; further improve its safety culture; increase customer support; and grow its market share for the introduction of new technology. Arguably, over the next five years, we expect steady growth in the mining sector in Kazakhstan; we will focus on work-efficiency of equipment with our customers. The versatility of CAT’s portfolio enables us to diversify into other markets, i.e. engines to support energy, transportation and smelting works. We offer mining customers a one-stop-shop service.

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Have you found mining companies reluctant to embrace new technologies and working practices?
CAT has a strong reputation in the mining industry with a proven record of reliability. Borusan is forming a new group within its mining team dedicated to introducing new technologies to the mining community, for example: tele-remote operation for LHDs improving safety in the workplace. We have recently introduced this to Kazzinc mining company. Borusan’s objective is to take operators out of underground mines. We are also working on managing traffic for open-pit mines. Customers are more agreeable to change once feasibility studies prove that innovation is beneficial.

What are Borusan Makina’s plans for the next five years?
Borusan Makina’s five-year strategy plan is: work on efficiency; further improve its safety culture; increase customer support; and grow its market share for the introduction of new technology. Arguably, over the next five years, we expect steady growth in the mining sector in Kazakhstan; we will focus on work-efficiency of equipment with our customers. The versatility of CAT’s portfolio enables us to diversify into other markets, i.e. engines to support energy, transportation and smelting works. We offer mining customers a one-stop-shop service.
What are the main types of equipment that Kazzincmash produces and who are your main clients? First and foremost we produce equipment for mining, processing and metallurgical sectors. Our products include cone crushers, drum mills, ball mills, separators, pumps, special shovels for steel, spaceports, etc. We also supply equipment for the energy sector. We have our own laboratory and specialized equipment, which allows us to know the exact properties of metal and set the current characteristics required by the client. We work with Kazzinc, as well as with other companies in the region. We work with Corporation Kazzincmash, and are looking to also create partnerships with Domosky GOK. In the south of the country we work with road construction companies. In the beginning of 2015 we won a tender to supply crushers to First Non-Metal Company in Russia. Our prices and lead times were more attractive for the client. We were able to supply this crusher within four months. Our production has almost no waste. Thus, we are also maintaining our competitiveness because we have our own technology for production of equipment and highly qualified staff. At Kazzincmash we are using Russian, German, Japanese and Czech equipment.

Kazzincmash was the first company in Kazakhstan to produce an ultra-fine grinding mill. What is the advantage of this type of equipment? Ultra-fine grinding has been used extensively among beneficiating companies as a method to recover valuable components. It allows for a higher degree of extraction. It is essential among beneficiating companies as a method to recover valuable components.

How important is Kazzinc to Sandvik and how important are other mining companies in Kazakhstan? We have our own laboratory and specialized equipment, which allows us to know the exact properties of metal and set the current characteristics required by the client. We work with Kazzinc, as well as with other companies in the region. We work with Corporation Kazzincmash, and are looking to also create partnerships with Domosky GOK. In the south of the country we work with road construction companies. In the beginning of 2015 we won a tender to supply crushers to First Non-Metal Company in Russia. Our prices and lead times were more attractive for the client. We were able to supply this crusher within four months. Our production has almost no waste. Thus, we are also maintaining our competitiveness because we have our own technology for production of equipment and highly qualified staff. At Kazzincmash we are using Russian, German, Japanese and Czech equipment.

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Can you please give a brief overview of AK Machinery and its developments in the last three to five years?

AK Machinery began in 2007 in Kazakhstan and was the first serious dealer for Volvo Construction Equipment investing not only in sales but also after-sales and parts services. In 2014, AK Machinery ended its association with Volvo and took over a dealership with Hidromek from Turkey; the rationale being that Hidromek had more desire to invest in the construction and mining sector in Kazakhstan as part of its global expansion. Hidromek recently purchased 97% of the factory in Thailand and has inaugurated extension into Uzbekistan and Kyrgyzstan. AK Machinery has enlarged its product offer-

What percentage of AK Machinery’s business comes from mining and con-
struction?

Currently, the mining business is 30% and construction is 70%. After the marketing of mining and mining sectors, the company has exist-

What is AK Machinery’s competitive advantage?

AK Machinery’s competitive advantage will be its one-stop-shop, supported by a network of local agents in Kazakhstan with at least one in each city to facility customer satisfaction have develop-

Where do you see AK Machinery in Kazakhstan in three to five years?

AK Machinery will have greatly increased its turnover, expanded its mining business; they will provide a network of local agents in Kazakhstan, with at least one in each city to keep customer satisfaction high. They will have a service provider for entrepreneurs coming to the mining sector. The government’s new Mining Code will help stimu-
late mining activity, any company entering the mining sector will need the type of expertise/consultation that AK Machinery can offer. Its strategy will be to segment the market and focus on mining and specialists for construction.

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late mining activity, any company entering the mining sector will need the type of expertise/consultation that AK Machinery can offer. Its strategy will be to segment the market and focus on mining and specialists for construction.
Can you please give a brief overview of Volvo Group Kazakhstan and the rationale behind its presence in the region and its association with Renault?

AK: In 2008, Volvo Group was established in Almaty, Kazakhstan and today, it has offices in central, west and south Kazakhstan. The rationale behind Volvo’s presence in Kazakhstan is that it is a developing country with many opportunities for truck producers. In 2013, Renault Trucks (merged globally in 2001) were introduced into the Volvo Group Kazakhstan portfolio as well. Previously, the French truck producer was represented by another dealer, Turkuaz.

What percentage of your business comes from the mining sector and what is your market share?

YP: Competition in the mining industry is tough, i.e. from Scania, a company that is well-established in Kazakhstan’s truck market, offering service workshops and financial solutions for its customers; however, Volvo Group’s mining product portfolio is one of the best in the world. Volvo Group’s market-share target in Kazakhstan is 20%; Scania’s market share has risen from 10% to 26% year-over-year.

What kind of financing and leasing options does Volvo Group offer?

AK: Volvo Group has a relatively solid installed base in Kazakhstan, selling more trucks and recruiting more local people.

What are Volvo’s plans for the next five years?

AK: To further expand business in Kazakhstan, selling more trucks and recruiting more local people.

What after-sales service and maintenance do you offer to your customers?

DI: Mining companies prefer to have on-site maintenance, Volvo Group will arrange a mobile workshop. The geographic size of Kazakhstan and the remoteness of mining projects does not facilitate servicing equipment. Metso is following global trends. When metal prices and investor interest are high, we receive as many orders for capital equipment as for services. When they are low, the services share prevails.

What is Metso’s market share for the sale of mining equipment in Kazakhstan?

DI: Expand business especially in the trans- port sector in tandem with the construction of the new Silk Road, the Western Europe-Asia sector in Kazakhstan. •

How would you characterize the investment climate in Kazakhstan, specifically in the context of mining?

AK: The government dedicates a lot of attention to the mining sector and serves as the pri- mary driver of the industry here. The adop- tion of the JORC, for example, signifies their commitment to attract and diversify the range of investment. The country was the first in the CIS to do so, making the trans- port from local to international standards a giant step. This move is a positive trend and demonstrates the administration’s focus, which is important for the mining community. From our perspective, Kazakh- stan is open to change.

Where do you see Metso in the next three to five years?

DI: Metso has a relatively solid installed base in Kazakhstan, which may take existing this installed base and improve it as much as we can. Since metal prices are low at the moment, investors are reluctant. Metso continue to focus on its aftermarket activities, which are built from technologi- cal excellence, experience, and the highest safety standards. Additionally, there are in- frastructure projects underway due to presi- dential programs. Most sites are located in remote areas, making infrastructure develop- ment crucial. In the current global situation, the Kazakh government will con- tinue to develop projects, which provides Metso with opportunities. Additionally, there are many greenfield projects that Met- so is working on, which may take anywhere from one to five years to complete. Thank- fully, there remains a significant amount of work to be done, and Metso is putting all of its resources and knowledge forward to keep going strong.
INNOVATIVE SERVICE SOLUTIONS FOR MINERS IN KAZAKHSTAN

Service companies are providing a wide range of software, technology, engineering, laboratory, consulting, and financial solutions to support the resurgence of Kazakhstan’s mining industry.

Mining Software

Foreign companies usually provide mining software, although some local or Russian ones also play a part. Some of the companies operating in the country are MICROMINE, BGC Group, Geovia (part of Dassault Systèmes), and GeoMineProject. It has been noted that international software providers should lower their prices for smaller Kazakh companies, as they may find them somewhat out of their price range.

“The biggest issue related to the integration of new technologies and software in Kazakhstan is the poor awareness of these technologies among the older generation of specialists. At the same time, young specialists that have the skills to work with new technology do not have the experience of working at mine sites, thus they have no experience in integration of such technologies,” explained Georgiy Freiman, chairman of mining project.

To address this problem, companies can become involved with education and training. “MICROMINE also works with local service companies and educational institutions where it supplies solutions free-of-charge to benefit students studying geology of mining. For example: in the coming months, MICROMINE will be traveling to East Kazakhstan’s technical college to instruct lecturers on its solutions. When a company purchases a MICROMINE software solution it effectively gains in-house expertise, a training program is obligatory to maintain standards,” said Arman Anapiyev, business development manager at MICROMINE.

International software providers not already in the country should keep Kazakhstan in mind as the country is well on its path to become the foremost industrial center in Central Asia. “At the moment, not all requirements for this certification are implemented in the country for only about a year, is already greatly in demand by the most important companies,” said Said Sultanov, director of KazGeotech.

Another interesting provider of innovative services that has just recently entered the Kazakh market through a joint venture with Kazgeoology is the Canadian company GeoTech. The new venture, named KazaGeoTech, is a provider of geophysical airborne surveys and, despite being in the country for only about a year, is already greatly in demand by the most important companies. “The technology KazaGeoTech uses is patented by GeoTech. Z-Tripper Axis Electromagnetic system; and Vertilite Time Domain Electromagnetic system. KazaGeoTech has recently introduced a fixed-wing aircraft survey for Rio Tinto in Kazakhstan,” said Said Sultanov, director of GeoMineProject.

Thane Teknik is yet another example of an innovative solutions provider, one that has had a long presence in Russia, but has only entered the Kazakh market fairly recently. “Thane’s portfolio has their main products: sensor-based sorting for ore, fine screening, and paste technology. Sensor based sorting for ore offers bigger capacity and considerable savings by sorting out waste rock before it enters the beneficiation plant. The new technology in the beneficiation plant is milling traditionally used with cyclones; however, this method generates low efficiency and Thane has now introduced a fine screening concept to replace cyclones. The energy saved from the screening concept will give a 30% to 50% increase in capacity, or from a green perspective, liberate the energy for other uses,” said Nils Thrane, the company’s president.

Kazakh companies and institutes are themselves initiating improvements with a wide range of applications, notably in Kazakhstan’s biggest industries such as oil and gas and, increasingly, mining.

Innovative Solutions

Despite the country finding itself in need of foreign investment both financial and technological, Kazakhstan’s people are well educated and hungry to succeed. Since Soviet times, the country has fallen behind in terms of innovation and creativity, but, nevertheless, pockets of local innovation continue to thrive. One example of locally researched and produced innovative solutions is the Complex Processing of Mineral Raw Material of the Republic of Kazakhstan. The Center is committed to helping the mining industry in Kazakhstan develop. They strive to cooperate with both local and international players and enjoy substantial success in providing their technology to their clients. “Our Center unites academic and industrial institutes into the sphere of mining and mineral processing in Kazakhstan. It was considered that the Soviet organizations were not working efficiently in terms of industrial application of scientific developments and the role of our Center was to improve this situation, ensure scientific development, strengthen the scientific and technical potential of the country and thus aim for technological breakthroughs in Kazakhstan. At the beginning of the process, there was not enough capital to support all the scientific projects within the Center; similarly, our clients, both private and governmental organizations, also did not have the money to invest in such projects. Finally, we are now acting as producers, and thus can create perfect solutions, and think of every single detail when it comes to developing new products. Secondly, we implemented dozens of projects, and developed innovative solutions in Kazakhstan that are now also being used across the world. Thanks to this we can now communicate better with our clients and we now speak the same ‘language,’” said Abdurasul Zhamarov, general director of the National Center on Complex Processing of Mineral Raw Materials of the Republic of Kazakhstan.

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Engineering, Laboratory and Consulting Services

There is a slow but steady trend among companies in Kazakhstan to use EPCM providers, which has not been the case historically. Local companies like KZSP are partnering with international ones that have extensive experience. These types of partnerships are crucial to help develop Western practices in Kazakhstan. “There are large companies that have access to the newest technology and have the capacity to invest. Shareholders of both KZSP and GeoMineProject continue to a new level and to begin collaboration with Fleur, a large international engineering firm. Fleur was happy to work with us and now we are working together on the TengizChevOil project. For us this is a very new format of work and we are very much looking to earn the respect of our American partners,” said Abzal Akhmetzhanov, first deputy general director of KZSP.

Another area of expertise necessary to develop and grow the market is testing and laboratory services. SGS has a well-established presence in Kazakhstan. “We may say that geotechnical tests are in fashion, which is attributed to the active geological performance of local mining companies including junior companies funded by foreign enterprises. Though in terms of revenue and the bottom line performance, the trade inspections as well as technological inspections are more attractive,” said Azer Mamadov, managing director of SGS Kazakhstan and Caspian Sub-region.

SGS also offers the Belarus-Kazakhstan-Russia Customs Union conformity assurance certificate. This has proved a popular service, especially since the Eurasian Economic Union continues to have a positive impact on the whole of CIS. “The key advantage for our customers obtaining such certificates rests with overcoming technical barriers upon entry to the Eurasian Economic Union (EEU), which includes Kazakhstan, Russia, Belarus, Kyrgyzstan and Armenia. The common rules and requirements practiced on the territory of the EEU allow use of these certificates in any EU country without any additional authorization procedure. At the moment, not all requirements for this certification are being harmonized but intensive work is being conducted to form and set common requirements,” added Mamadov.

Yet another step to help in bringing outside investors to conduct exploration is the transition of Kazakhstan from its own GKZ to the JORC standard in line with the international community. “In December 2014, Kazakhstan accepted an analog of the Russian code for auditing, NAEN, ‘Kazakhstan CRIRSCO’. The accepted code is an adapted version of JORC, which allows public audit as well as GKZ reports, but under the condition that GKZ reports have the priority. Of course, this system will simplify work for a lot of companies, but at the same time we do hope that JORC is still going to enter the systems of mining companies in Kazakhstan very soon. Having two standards is excessive and complicates the understanding of the resource base among investors,” said Freiman of GeoMineProject.

There are a number of consulting companies present in Kazakhstan that provide services ranging from exploration to mine closure. These companies are an important element in developing the industry and their presence and expertise helps to reduce delays and other services is required by the international players looking to invest in Kazakhstan. Kazakh companies understand that adhering to international standards is of vital importance to demonstrate to the world mining community that they can conform to its high standards. “SRK provides expert opinion and technical solutions based on internationally recognized best practices. If technical advice on local requirements is needed, SRK collaborates with local design institutes that are more specialized in interpreting local design requirements. These local requirements differ significantly from international approaches, but we have become quite familiar with managing the two approaches in parallel, to minimize cost for the client and avoiding duplication of work where possible. A good example of this is in the field of geotechnical engineering. Precisely calculating the final safe pit slope for an open-pit project can result in a major saving of stripping costs,” said Tony Thornton, general director of SRK Consulting.

Ruslan Sevostyanov, general director at Wardell Armstrong agrees: “The mine design and mineral resource estimation standards and methods currently used in the EEU were inherited from the Soviet era and, having originally been tailored to Soviet economic realities,
do not sufficiently cover the economic aspects of a mining project being developed in the modern economic environment. This has led to a situation when FSU companies seeking foreign investments have to significantly rework and amend their projects to meet international standards. Therefore, our role in this process is to help them understand their geological, mining, metallurgical and environmental expertise to advise their clients on how to ensure international compliance of their businesses and meet the requirements of international investors.”

A variety of service providers are already in the country for both producers and explorers, but as the industry continues to grow, others should continue to enter this already expanding sector.

Professional and Financial Services

The limited options provided by the Kazakh Stock Exchange (KASE) have been of particular concern among investors in the country’s mining industry. Historically, the KASE has been used as an instrument to further shares by the government in larger companies. “We would normally become involved in financing at the initial public offering stage. Currently, there is little activity for us in this sphere. The Kazakh government is planning to make its stock exchange more effective by insisting that companies who list overseas have their business end here and now list on it, with the rationale being to add value to the Kazakh stock market,” said Aaron Crouch, audit partner at Deloitte.

“The local market is still underdeveloped as it is not the place where you can accommodate startup companies, although it is looking at ways to accommodate this. Mid-tier mining companies are still struggling to raise local finance. The local banking system is not robust or experienced enough to provide us with bespoke financing packages for developing mining companies,” said Tony Thornton, general director of SRK Consulting.

Kazakhstan boasts a very small, but thriving private equity market. Centurion Resource Group has actively pursued investors from abroad, especially the United States, to invest in projects in Kazakhstan. One of their investments was BAST’s Maktur copper-nickel project, which was the first small-cap equity company listed on the KASE. Investors have enjoyed a 40% return on their capital and the production at Maktur is expected to begin in 2015. One way to acquire financing besides the KASE or commercial banks can be through the Eurasian Development Bank (EIBD), founded by Russia and Kazakhstan in 2006 and including many Central Asian nations as its members. “One of the bank’s first projects was the development of the Zarechnoye Uranium Deposit, implemented by a joint venture between Russian and Kazakhstani entities. The EIBD provided $65 million to fund the project. Current production capacity of the mine is 300 metric tons per year of uranium. Later in 2006, the EIBD, in syndicate with two German banks, West LB and Bayernische Hypo- und Vereinsbank, opened a $120 million credit facility to finance the development of the Vorkholom chalcocite deposit in Akzhayuk oblast. The EIBD’s share was $60 million,” said Galyzhan Tajiyakov, director of Project Finance Group at the Eurasian Development Bank.

Meanwhile, the European Bank for Reconstruction and Development (EBRD) has invested roughly $7 billion in the mineral sector. Half of these investments focused on the private sector including loans to mining projects. Some of the projects agreed to this year have been a 70 million euro loan to the first solar plant in Kazakhstan and a 42.5 million euro loan to upgrade Astana airport’s infrastructure. This brings EBRD’s investment in Kazakhstan to $420 million in 2015 alone. The lack of financing options should not put off international investors from being able to develop along with the industry. There are, nevertheless, other issues that the government has to influence to help create a more accommodating business climate, including stable tax regulations. “Action by the government for the further development of legislation to provide more guarantees on the stability of legislation in respect of subsoil use and taxation in particular is needed. The government should establish an absolute limit for the maximum tax burden for a mining company, which would provide for more assurance to investors that regardless of different interpretation of tax legislation there will be an absolute limit above which their investments will not be taxable,” said Sergey Dementyev, audit partner at KPMG Kazakhstan and Central Asia. Changes like this will send positive signals to the business climate and help boost investors’ confidence.

Abdurasul Zharmenov
General Director
NATIONAL CENTER ON COMPLEX PROCESSING OF MINERAL RAW MATERIALS, REPUBLIC OF KAZAKHSTAN

Can you please tell us about the role that the center has played since its inception? The inception of the center dates to 1992, when the President of Kazakhstan left a decree that a network of national centers was to be created covering the priority sectors of the economy. Mining and metallurgical energy were among these key sectors. The first center created under this decree was the National Nuclear Center, which undertook scientific programs, and managed various projects, assesses new technologies and their industrial potential. Within the central office, we have research laboratories, design-construction departments, test- ing and experimental section, which work on scientific and technological products develop- ment as well as branches, which also work on the creation of scientific products.

Can you tell us about your portfolio of clients? We cooperate with many local companies, such as Samruk-Kazyna, Arcelor Mittal Temirtau, Karaganda Metallurgical Combine, and foreign companies, such as POSCO, Thys- senKrupp, Hanwa Co., SMS Siemag, and others. For example, we have developed technology for a lead factory for the Cana- dian company Teck Cominco. We have also worked on the full of 2015. At the moment, we have close relations with ThysenKrupp and POSCO, which is funding the construction of a production fa- cility in Kyrgyzstan.

Can you give us an example of a technol- ogy that was developed and you are most proud of? We have created technology for smelting of the ferro-aluminum-silicon and the ‘Kazakhstani’ alloy high melting point, modifi- cation and alloying of steel, based on the use of off-grade carbonaceous feed, which is a truly revolutionary one. Current technol- ogy is patented in 15 countries - Kazakh- stan, Ukraine, Russia, Kyrgyzstan, United States, European Union, Algeria, Mexico, South Africa, China, South Korea, Hong Kong, Australia, and Japan. Another example is KIVCET technology for processing lead-containing raw materials, based on the combined process of batch burning, smelt- ing as a spray type with oxygen, recovering 97% of lead layer of carbonaceous slag, and defending of depleted melt in an elec- tric furnace, continuously carried out in a single unit of original design. This technol- ogy is patented in Kazakhstan, Russia, Chi- na, India, Mexico, Brazil, and Chile. We also proposed a new technology for the production of ferro-silicon, which allows us to reduce the percentage of aluminum and titanium in the final product. At this stage in the implementation of the roadmap for the development of mining and metallurgical complex in Kyzylorda region. we are plan- ning to construct a ferrosilicon factory for the production of ferro-silicon with low content of aluminum and titanium. How do you assess the current situation for foreign investors, and what are your future plans? Today, foreign investors are not as eager to work in Kazakhstan as they were a couple of years ago. Despite the fact that the gov- ernment is making certain amendments in the legislation of ferro-silicon, there is work for foreign companies, it has also become stricter in some respects with international inves- tors. By 2020, we are planning to increase the share of international sales to 50%. Today, only 5% to 10% of our sales come from abroad.

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KAZAKHSTAN MINERAL POWER & CHEMICALS 2018 - 46 -

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KAZAKHSTAN MINERAL POWER & CHEMICALS 2018 - 47 -

Industry Explorations

GLOBAL BUSINESS REPORTS

INTERVIEW

Industry Explorations

GLOBAL BUSINESS REPORTS
Said Sultanov

Director
KAZGEO TECH

Can you please give a brief overview of KazGeotech?

KazGeotech was presented to President Nazarbayev on Industrialization Day, 2nd July 2014, and registered on July 30th, 2014. Equipment was brought into Kazakhstan at the beginning of September 2014, and the first surveys took place mid-October. Since then, projects have been conducted for mining companies in eastern Kazakhstan. The technology that KazGeotech uses is patented by Geotech: Z-Tipper Axis Electromagnetic (ZTEM) system; and Versatile Time Domain Electromagnetic (VTEM) system. KazGeotech has been able to move quickly because of efficient management style, less bureaucracy and the assistance of the Ministry of Investment and Development.

What are the advantages of having a joint venture with Kazgeology rather than being solo?

It is important to have a partner who is familiar with Kazakh regulations and employing local personnel within a multinational company; in these circumstances, joint venturing is the most efficient way of providing a service in Kazakhstan. A great example is Air Astana, which is 51% Samruk Kazayna, and 49% BAE Systems.

Which of your technologies are most applicable for Kazakhstan and what is the market demand for airborne surveys in the region?

Initially, fixed-wing surveys where big areas can be mapped are the most applicable for Kazakhstan. Once the client identifies prospective mining areas, the helicopter ZTEM and VTEM surveys can be used. From a VTEM survey, drilling can be carried out; this setup has been successfully used in Africa. Gravity survey is another available service for the oil industry. The demand for airborne surveys is growing; good results in identifying mining opportunities will stimulate further interest. Currently, it is the majors, i.e. Rio Tinto and Kazazinc, which are benefitting from the surveys.

When were your technologies patented and how long have they been available globally?

Airborne surveys came on-stream in the western world about 20 years ago. In Kazakhstan, these surveys were used in the Soviet Union. Technologies have advanced and today airborne surveys afford a better understanding of the geology; ZTEM technology gives the ability to see up to 2 kilometers (km) beneath the surface. During Soviet times, Kazakhstan was explored on the surface, but after a lull in activity during the 1990s, exploration has been increasing, especially for airborne surveys.

What is the cost of an airborne survey and how is it calculated?

The cost of an airborne survey is usually provided per line km. The cost depends on a number of factors, such as the size and the shape of the area, the type of the aircraft used; etc. The cost of the fixed-wing magnetometer/spectrometer surveys under “normal” conditions is usually in the range of $28 to $35 per line km; for VTEM surveys, $125 to $180 per line km; and for ZTEM, $180 to $210 per line km.

Are there any other geographical areas of Kazakhstan that you are focusing on in addition to eastern Kazakhstan?

In 2015, KazGeotech will continue its operations in eastern Kazakhstan during August. In the center of Kazakhstan, the company will conduct fixed-wing airborne surveys for Rio Tinto, and in the south surveys are being carried out on behalf of the government. Western Kazakhstan is still to be part of KazGeotech’s portfolio; it is a known location for minerals.

What type of training programs do you have in place?

KazGeotech’s programs are practical; its senior geophysicist teaches interns, who are university students and have a basic knowledge of electronics/engineering. Interns are carefully chosen; the current two interns are already operating solo the ZTEM project and are able to assemble and test the system before the geophysicist takes over. From September 2015, the company will be training interpretation geophysicist with the aid of software and accompanying instructor from Canada; only qualified geophysicists would be appropriate for this training.

What are KazGeotech’s plans for the next five years?

KazGeotech plans to increase the mineral resources base of the country, train as many local people as possible in all its services (field operators, geophysicist, data interpretation, airborne survey pilots), transfer the technology into Kazakhstan and create more local jobs.

Over the next five years, with the financial assistance of the World Bank, KazGeotech’s plan is to fly 2.7 million sq. km of Kazakhstan; this initiative is supported by Kazakhstan’s government. For 2016, KazGeotech plans to create its own aviation company, bringing in two fixed-wing aircraft and two Eurocopter B3s, making it a vertically integrated company. Currently, the company has one fixed-wing aircraft from Geotech, and when using ZTEM and VTEM, helicopters are chartered from Sky Services who has the only Eurocopter B3 in the country. Although we have an excellent relationship and I would always recommend Sky Service, we do not want to be dependent on someone else when it comes to providing a good-quality service to our clients.

KAZAKHSTAN MINING, POWER & CHEMICALS 2016 – 50 –

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INTERVIEW

INTERVIEW
business growth especially in emerging and allows achieving economies of scale and ment strategies, hence operating globally market. Geographical expansion is also part variety of services to different segments in the diversification. Thus we ensure growth of the need of market development with service operate in different segments is attributed to

In 2010, SGS forecasted a substantial increase of international companies’ in- vesting activity in the mining sector in Kazakhstan. To what extent have these predictions come true and what is your current expansion strategy here?

Unfortunately we did not witness increased investors’ activity in the mining sector. Though exploration budgets from 2010 to 2012 were growing, they have since been declining. At the moment the Kazakhstān exploration budget is almost the same as in 2010. There might be plenty of reasons for that including different macro-economic factors but the most obvious one is both legal and tax issues that foreign investors think of when entering this geographical re-

ing. Keeping this in mind the government is revisiting the concept of the local Mining Code which shall now resemble some simi-

larities to the Australian mine code. As a company, we have our own mind and long-term visions and objectives, which also imply the investment of tangible resources to ensure that we deliver the exact types of solutions for our customer that at the end of the day will add value. When we say tangible resources we mean certain capital expenditure that we do for our customers in order to facilitate development of a certain stage in the project. Our expansion strategy is or-

Since 2001, SGS has a structure of 10 business segments operating in 10 geo-graphical regions. Can you give us more background on this arrangement? This coincides with the vision of the company, i.e. to be the most competitive and most efficient company in the market. Geographical expansion is also part of building our competitive strengths for years and we obtained skills, knowledge and finance resources to deliver high-quality ser-

How are your plans in Kazakhstan for the next five years? We are looking to earn the respect of our Ameri-

can partners. Parallel to working on various projects with Fluor, we are also working on creating a corporate center for training of our staff. Thanks to the fund created by Fluor we were able to provide several stu-

dents with grants.

What level of interaction do you have with the mining industry in Kazakhstan and which of your services are most in demand?

We operate in business-to-business industry and building long-term relationships with our customers is paramount, therefore in most cases we are partners to our customers, and this partnership has been built for years. We do interact with different companies in different market segments like geochemical and metallurgical tests, trade inspections, mobile on site laboratories, technological inspections etc. Speaking of demand, we may say that geochemical tests are in trend, which is attributed to active geological per-

ance audits) contribute to make the min- ing industry healthier and safer. The purpose of this standard is to prevent accidents at work; this standard is especially applicable to high-risk mining operations. In Kazakh-

How important is the mining industry for KPSP? Mining companies are our main clients, and include Kazakhmys, AcheerMittal Temir-
tau and other important players. Howev-

er, in recent years prices for metals have significantly decreased, and consequently there was a decrease in investments in the mining sector. For this reason, regardless of the fact that we are based in Karaganda it is the heart of Kazakhstan’s mining indus-

try, we are forced to explore other sectors, and now we are also involved in the con-

struction process of a port in western Kaz- akhan.

Could you give us an example of a proj- ect you worked on recently? We are working on developing a project for a tailings storage facility for AcheerMittal at Vostochnyya facility close to Alby city. We also designed an oxygen station for LindeGas at AcheerMittal. We work with Kazakhmys as subcontractors and develop a design for reconstruction of a beneficia-

tion plant in Nurkazan for processing of copper ore.

KPSP offers EPC services. How would you assess the readiness of Kazakh com- pany to work just one contractor? The EPC format is an international standard of work in many countries, but Kazakhstan remained an exception to this rule. Luckily we are now moving towards it. KPSP be-

Ivan Mammadov Managing Director SGS KAZAKHSTAN AND CASPIAN SUB-COMMISSION First Deputy General Director KPSP First Deputy General Director KPSP How are your plans in Kazakhstan for the next five years? We are looking to earn the respect of our Ameri-

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What are your plans for the next five years? We would like to see a solid EPC company to follow industry trends. We want to become a model for a highly qualified organization using innovative technologies, so that we can react to our clients’ requests in a fast and flexible fashion. We want our clients to know that KPSP can solve any tasks and overcome any presented challenge. What is also important is that we want for our company to be a good and interesting place for our employees to work. •

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dents with grants.
In 2015, RJC significantly increased its presence in Kazakhstan. What are your plans for further development? Indeed, in 2015 RJC significantly increased its presence in Kazakhstan by strengthening the local management team and actively participating in various marketing activities. We are strongly focused also on improving quality control, which allowed us to win new contracts at the Doloinoye and Shakhiorok deposits. RJC participates in many regional exhibitions, which allows us to broaden its network of potential clients. Moreover, we are improving existing technology. We offer solutions for managing geological exploration and create data banks for geological data, which are very popular among our clients.

Can you introduce the AGR system and tell us about the advantages it offers to mining companies?

AGR 3.0 system is designed to assist mining projects in their different stages, during the exploration as well as drilling phases. AGR software consists of several programs, including work with templates, documentation, and data management. The design of this software allows the user to scale data management systems easily, and add new projects, deposits, and mining companies whenever necessary; thus, the client has a high-tech base for automation and organization of geological data. Application of AGR 3.0 system is a secure method to increase the effectiveness of mining operations through automatization of collections and processing of primary geological data, as well as the reduction of large volumes of data storage or the accessibility to this data becomes easier through the Internet. It also allows information to flow at a faster pace from site to project directors, which of course increases the speed at which executive decisions are made. Finally, our technology allows us to avoid mistakes related to human factors and simplifies operations at deposits where people work in different languages. AGR 3.0 software can be used to its full potential, from documentation of geological exploration data to data management. Today, six companies are using this system.

What are your future plans in Kazakhstan?

We hope the mining industry in Russia and Kazakhstan will begin to recover from the current crisis. In the coming year, we are planning to strengthen our presence in Russia, Kazakhstan, and other countries. We will keep on improving our AGR system. One of our most ambitious projects is the acceptance of our work standards as national standards of primary geological documentation in Kazakhstan, and as well the creation of a national bank of geological data.

Can you please give us a brief introduction to Orica and tell us about the reasons behind the decision to enter the Kazakh market?

Orica Kazakhstan was established in 2000. It was registered in Almaty first in order to apply for all legal permissions and get all approvals for its further activities. Later on, in 2002 a branch of Orica-Kazakhstan was created in Ust-Kamenogorsk city, where the construction of the plant was started later the same year. In 2012 Orica purchased Minova, which included its branch in Kazakh market.

Can you give us an example of a new technology that has been introduced in Kazakhstan?

At Orica, we are committed to continually investing in R&D and constantly looking for new ways to enhance our customers’ businesses. A couple of recent examples of technologies newly introduced to Kazakhstan includes electronic detonators, which help to form a blast in a completely different manner, equipment for underground charging and blasting; and underground blasting subsystems, which helps to charge up-holes and achieve high results in effectiveness and safety.
Which of your service offerings are most commonly used in Kazakhstan? AA: MICROMINE exploration and mine design software is the majority of service offerings used in Kazakhstan; the most diverse software package encompassing ten models which would be of interest to production companies and geologists. Where will we find MICROMINE in Kazakhstan’s mining market in five years? AA: Within the next five years, MICROMINE’s strategy for Central Asia will be to extend its service offering to other countries. MICROMINE has made tentative approaches to Iran via mining exhibitions where it received a positive response to its service offerings.

Do you have a final message about MICROMINE’s development strategy for the Kazakhstan’s mining market in five years? AA: Another important aspect of MICROMINE’s Kazakh office is that it has a development department and a part of our product is developed here in Almaty. The Kazakhstan office employs local developers, taking part in the development of software recognized all over the world. •

Marina Kochetova, Alan Bradford

MK: Managing Director, Leica Geosystems Kazakhstan
AB: Regional Manager Business Development Central Asia

LEICA GEOSYSTEMS AND HEXAGON MINING DIVISION

Could you introduce GMP and its rationale behind entering the Kazakhstani mining market prior to 2008, distributors carried out work for mining companies in Kazakhstan? AA: GMP was established in 1986 in Piter, Western Australia and is a global company with 20 offices, one of which is in Kazakhstan, which opened in 2008. It is the hub for doing business in Central Asia covering Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan and Turkmenistan. The rationale behind MICROMINE entering Kazakhstan is the region's exceptional resource potential; prior to 2008, distributors carried out work in Central Asia. There are no local compa- nies in Kazakhstan selling software packages similar to MICROMINE; competition is international.

How important is Kazakhstan to MICROMINE on a global level? AA: MICROMINE works with more than 12,000 companies globally. Especially in Kazakhstan, all mining companies use MICROMINE's software solutions in the production process, for example, subsalt and service companies, and companies providing local consulting at international standards.

Does MICROMINE have any expansion plans for the Central Asia region? AA: MICROMINE has two types of business: providing and producing solutions for mining companies; and consulting by international standards. In addition to MI- Cromine exploration and mine design software, it also has GeoBank, a geological data base management system, and Pitram for mining solutions. With input from cli- ents, MICROMINE’s solutions are continu- ously being updated.

Could you introduce you to GMP and its current projects? GMP was created in 2009. Our employees are specialists in geology and mining with a lot of experience in the field as well as consulting. GMP focuses on developing innovative methodologies for resource ex- traction, promotion of software products among mining and engineering companies, and development of our own software for resource estimation according to Kazakh standards. Today, GMP represents a group of companies and in-cludes GMP Russia, GMP Canada and GMP’s head office in Kazakhstan. In 2014 we opened offices in Canada and Russia. Also in 2014 we created GeoMineSoft, as a separate division within the company, which develops mining software.

What mining software is the most in de- mand in Kazakhstan? Datamine is not flexible enough, and Micro- mine is far better. About two years ago, Leapfrog software was introduced, but it is too early to judge in popularity. Around the same time a new Chinese product 3DMiner was introduced, as which is the cheapest on the market and could develop a niche.

Often, price is the most important factor that affects choice of software. Currently, the most expensive product is Minesight, but because of its high price there is only one license currently in use in Kazakhstan. Datamine and Surpac are much cheaper, while Micromine is even lower on the price range compared to several processes in mines. Micromine is the cheapest, but Datamine is even lower.

What is GMP’s development strategy for the next five years? Our main task will be to expand the geog- raphy of our projects. We would like to in- crease the number of our projects in Canada and Russia. GMP will also continue to de- velop new software such as GeoSearch and MineVision. These programs will be tran- slated into English, and we will be able to use them outside of Kazakhstan. •

What are Leica’s plans for the next five years in Kazakhstan? MK: Leica has been in Kazakhstan for al- most 20 years. The business has been very successful and Leica has kept the number one position in the Kazakhstan market for the level of service and quality of products over time. The reason for entering the Kazakh market was to grow the busi- ness in this strategically important region. Currently Leica is the only company covering the whole cycle of all mining processes. Leica is in very close contact with our customers and the company is also taking care of its own people by running several development projects. Leica also recently introduced innovative and revolutionary new solutions that will optimize and im- prove our current products. Leica expects these new solutions to improve our customers’ capability through market feed- back the company can only improve more.

Are Kazakh companies receptive to the new technologies that Leica/Hexagon have to offer? AB: In this region we are seeing a gen- eration change happening with companies not being satisfied older technologies and there is no status quo. These companies are led by the strong leaders and manag- ers who realize the market and industry is and has changed, and also in a cost ef- fective manner, realize a strategic alliance with Hexagon/Leica to access to current and emerging technologies. This is what Hexagon/Leica offer. A true partnership, the world’s best technologies, strong and skilled local support and commercial flexi- bility that allows all Kazakh companies the opportunity to access Hexagon’s research and proven capabilities.

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“Today, the volumes of production of chemicals are fairly low in Kazakhstan. However, we see that the government is actively working on increasing production levels and investing in the sector.”

- Maxat Bekov, Executive Director, Chemie & Technology
KAZAKHSTAN INVESTS IN ITS CHEMICAL SECTOR

A sense of optimism drives Kazakhstan’s nascent chemical industry, identified by the state as a strategic growth sector, but major challenges remain.

Known for its colossal oil and gas reserves and abundant hard rock minerals, Kazakhstan is not typically associated with the production of chemicals. Beginning in 2014, however, the government has been supporting the sector as part of its efforts to diversify the country’s economy. An industrialization program drafted in 2014 by the Ministry of Investment and Development identified chemicals as a key sector for development, and from 2015 to 2019, the government plans to invest public funds to support local chemical production. “Today, the volumes of production of chemicals are fairly low in Kazakhstan. However, we see that the government is actively working on increasing production levels and investing in the sector,” said Mazat Bekov, executive director of Almaty-based chemical distributor Chemie & Technologie.

In the first half of 2014, Kazakhstan’s imports of chemical products amounted to nearly $1.1 billion, compared to exports of $470 million. During this period, the most exported products included yellow phosphorus, chrome oxide and hydrosulphuric acid, phosphate fertilizers and other agrochemicals. The majority of production is limited to base chemicals manufactured by three state-owned refineries in Pavlodar, Atyrau and Shymkent. Other chemical producers include the Aktoke plant producing chromium compounds, the Uba metallurgical plant, Kustik, Orica Kazakhstan, the Ternirtau Electro-metallurgical Complex, Irysh Rare Earth Co., KazAzot, KazPhos, phosphoric acid, and Nephtechn. Major chemical factories are strategically located to provide easy access to the CIS countries, China, and, with continuously developing infrastructure, the Middle East.

While Kazakhstan’s rich resource base and proximity to large export markets serve as advantages for becoming a major value-added chemical producer, several problems arrest the industry’s growth. The most often cited challenge is outdated equipment. “There are several obstacles that impede the growth of the sector. First of all, this obsolete equipment has been in use since the Soviet times and does not allow companies to implement effective production strategies,” said Bekov.

More than 80% of the country’s fixed assets for chemical production are worn out. In order to counteract this weakness, the government is assisting in the modernization of major chemical plants as well as state-owned refineries in Atyrau, Shymkent, and Pavlodar to increase chemical production there. Projected investment in refinery modernization will total 720.9 billion Kazakhstani Tenge by the end of 2019. Related to the problem of outdated equipment is the lack of qualified human resources to operate new equipment. This is due to the emigration of trained professionals from the country over recent decades, as well as a gap in the education of specialists during the 1990s. Yet many of the companies that are established in Kazakhstan are transferring their knowledge to local specialists and students. “We constantly support local universities, schools and charity funds. All our social projects are aimed at helping either the younger generation or elderly people to learn more about chemistry, science, improve people’s lives, and develop their skills and knowledge,” said country manager of Dow Kazakhstan, Igo Giumyk.

Forming partnerships with international companies such as Dow and BASF can also help address the shortage of talent. “BASF invests in its human resources. The level of education is good here, but many Kazakh students do not have the opportunity to travel abroad. BASF is working with key decision makers to help link Kazakh talent to the company’s global network. ’’said managing director and head of country cluster Central Asia at BASF, Xavier Verfaillie. Bringing foreign companies to Kazakhstan is a priority and the government is holding negotiations with Lanxess, GreenDay, In- duxGroup, and others to realize some of the pending projects slat ed for the chemical industry.

The third and most recognized problem is the lack of investment. The government is hoping to bridge this gap in financing through the special economic zone (SEZ) in southern Kazakhstan, Chemical Park Taraz. The park will offer its members ready-made infrastructure, tax breaks and hiring assistance. Two additional zones designated for chemical production are also under construction in Atyrau and Pavlodar. The former will capitalize on proximate sources of feedstock from the Khashagou gas field to produce petrochemicals for export. “Kazakhstan is continuing to place its bets on petrochemicals as the new driver of its economy. Sooner or later we will have unlimited reserves of feedstock, and after 10 or 15 years, KPI and the SEZ will be booming,” said chairman of the board at Kazakhstan Petrochemical Industries (KPI), Saduakhas Meraliyev.

In line with its goal to diversify its national economy, Kazakhstan’s government is keen on developing a range of industries including agriculture, mining, and construction, all of which require intensive use of chemical products. Hydrogen peroxide, for example, is heavily used by the mining industry. “Kazakhstan imported 20,000 mt of hydrogen peroxide last year, up by 10% from 2013. This implies strong demand and consequently huge potential for Evonik. We also produce cyanide, which is used by 99% of local gold mining companies in their processes,” said head of the representative office Kazakhstan at Evonik, Sohrabek Sarbekov. In a similar vein, German industrial gas manufacturer Linde Gas came to Kazakhstan because of mining major Arcelor Mittal. “Linde Gas entered the Kazakh market in 2015 to industrialize in the mining sector in Kazakhstan, not withstanding low prices for commodities,” said Verfaillie.

Other international chemical companies, such as BASF, recognize the sector’s potential, and are looking to capitalize on the country’s strong mining industry in the near future. “Mining will be a new challenge for BASF in 2016. However, we are already in close contact with Kaz Minerals for their main projects, Bozbahok and Aktongay. Frankly speaking, we are optimistic about the future of the mining sector in Kazakhstan, not withstanding low prices for commodities,” said Verfaillie.

Other opportunities may arise as a result of the Kazakh state program of accelerated industrial and innovative development, which calls for the reconstruction of various outdated plants as well as general infrastructure development. These upcoming infrastructure projects will also stimulate domestic consumption of chemicals. “As part of [the second phase of the industrial development program] some public funds will be put towards the continued construction of the shipyard near Aktau. [Italian company] Eni will begin construction of the shipyard, which will allow Evonik the opportunity to market its paints and coatings of marine containers and ships,” said Sarbekov.

Kazakhstan is home to a unique mineral resource base suitable for production of any chemical, boasts low labor costs, and a strategic geographical position to serve international markets. Both the government and the industry are working hard to revitalize chemical production, but without the entrance of international giants into the market, this process will take more time than expected. It is now time for both local and international players to recognize that the fruits of Kazakhstan’s industrial wealth have yet to be harvested.

Kazakhstan imported 20,000 tons of hydrogen peroxide last year, up by 10% from 2013. This implies strong demand and consequently huge potential.

- Serikzhan Sarbekov, Head, Representative Office, Kazakhstan, Evonik Chimia
- Saduakhas Meraliyev, Chairman of the Board, Kazakhstan Petrochemical Industries (KPI)
How developed is the petrochemical cluster, or National Industrial Technopark? KPI is just one participant within the petrochemical sector. KPI is the largest member, and its expected production is significantly greater than that of KPI, with a volume of 5 million metric tons of polypropylene per year. Second plant is one that is already in operation in Polymer Production, producing polymeric substances such as packing materials. A third plant is in early stages. KPI is at approximately the same stage as KPLP.

Will KPI’s petrochemical plant meet international standards in terms of safety and quality? The plant will certainly meet all international and local standards. We are looking to build a plant with mechanical availability of 97%. To achieve this target we have to be flexible and stable. KPI has purchased all of its technology from leading vendors in the United States. We have visited several plants across the world including in the United States and China.

Which export markets will KPI primarily focus on? The main share of KPI’s production will be exported to Europe. Kazakhstan will consume about 50,000-100,000 tons of polypropylene, or 10% of our total production. We will try to sell to China as well, but given Kazakhstan’s large territory, logistics to China are extremely costly. Another problem is that western China is not heavily populated, meaning we would have to ship to southeast China, which is 5,000 km further and would increase transportation costs even more.

What are some other opportunities for the development of the petrochemical cluster? There are many ongoing projects in our own country, and Kazakhstan is full of opportunities and ideas in the context of petrochemical production. Last week, Atyrau refinery started to produce 130,000 metric tons of benzene. Benzene is made into ethylene, which is then processed into styrene and polyethylene. Years ago, there was a petrochemical plant in Aktau producing ethylene and later styrene and polyethylene. Similarly in Atyrau there used to be a polypropylene plant with a small capacity of 40,000 mt. Frankly we have experience in Kazakhstan in this field.

Are you optimistic about the growth of the sector in the next three to five years? Where do you hope KPI will be in this timeframe? In four years, KPI should be a full-fledged production company. If this is the case there will be only one problem: product placement. If KPI successfully launches operations, with high safety standards and proper quality, this will be our great challenge left to overcome. Russia has produced 700,000 metric tons of polypropylene and in addition two years ago launched the same technology with a capacity of 500,000 mt. Six to eight years ago, there were no difficulties with product placement. Now problems have arisen and getting worse. But Kazakhstan is continuing to place its bets on petrochemicals as the new driver of our economy. When Kashagan operations begin, KPI will have the ability to source feedstock from a distance of only 15 km, given Kashagan’s proximity to our site. Currently they plan to produce electricity by burning liquid, but this is quite a luxury. Sooner or later, we will have unlimited reserves of feedstock, and, after 10 or 15 years, KPI and its petrochemical economic zone will be booming.

The subsidiary Corrocoat Caspian was established in Kazakhstan in 2012. Please begin by introducing us to Corrocoat’s presence here.

Corrocoat itself is a large international company based in Leeds in the United Kingdom (UK). It is one of the leading engineering and manufacturing companies in coating. Corrocoat focuses on industrial coating, which protects industrial equipment, tanks, reservoirs and pipelines. In 2012, Corrocoat entered the Kazakh market through a joint venture. The company was launched at the end of 2013, but due to the seasonal nature of the business caused by harsh climatic conditions in Kazakhstan, operations began in the summer of 2014.

Corrocoat Caspian manufactures 16 of the company’s range of 70 coatings. Every product is locally certified, demonstrating high local content. (This refers to the percentage of goods, works and services of Kazakhstanz origin within the overall cost structure.) Local content allows us certain preferences when we go for tenders with national and oil companies, and currently our products boost an impressive 70% to 77% of local content. Corrocoat Caspian is the only high-tech coatings manufacturer in Kazakhstan. We compete with international companies such as PPG, Hempel, YC and Jotun. Our business is divided into manufacture and supply of materials, and application. We provide application and repair services for a wide range of companies in different industries, such as oil and gas, mining, chemical, food and beverage, power, piping and marine. We supply materials to two types of companies: end users with their own application units (big oil and pipe companies) and service companies who work in application and have been dealing with imported materials of our competitors. However, our product is sophisticated, and we invest significantly in research and development. Globally, our main strength is product formula. While the majority of our coatings are vinyl Ester resins, we are also manufacturers of acrylic, polyurethane and epoxy-based materials. All have glass flake fillings, of which Corrocoat is one of the leading manufacturers in this world. These protect water molecules from getting to the surface, prolonging service life of equipment and protecting against corrosion. Equipment coated with our product can remain operational for over 25 years.

Corrocoat Caspian is unique in that it locally produces innovative corrosion-resistant coatings in Kazakhstan. Why did Corrocoat set up production facilities here?

Initially Corrocoat was interested in launching solely an application business in Kazakhstan. However, because of the good market potential in Kazakhstan, we made a decision to establish a joint venture to create more than just a service facility. We imported the latest technology and set up a manufacturing facility. Currently we are slowly trying to reform the overarching market structure. Government officials as well as state-owned Samruk-Kazyna management are working to resolve them. Given the current crisis, the government needs to bolster local industry.

Where do you see Corrocoat Caspian in three years?

Our target is to become the number one supplier of anti-corrosion coating materials in Kazakhstan in three years. To achieve this we entered the Kazakh market through a joint venture with Samruk-Kazyna and the National Chamber of Commerce to provide us with support as a local manufacturer. Secondly, we are working on a case-by-case basis with all of our clients. Corrocoat Caspian has passed pre-qualification tests for all major international companies. Now it is matter of participating in tenders and being competitive.

Kazakhstan’s Ministry of Investment and Development has identified chemicals as a strategic growth sector and plans to invest 80 billion tenge to support it. How effective have the government’s efforts been in supporting the chemical sector?

The government has identified the chemical industry as a priority for development and created a free economic zone in Taraz. However, companies are not permitted to purchase land within these zones. They are government-owned, meaning that terms need to be renegotiated after a given number of years. There are also different types of government support programs, and we are trying to take advantage of some of them. Corrocoat Caspian is part of the government’s industrialization road map for example, which allows us financing preferences.

However, the government requires other types of support. One of the main concerns among small and medium-sized enterprises (SMEs) is import substitution. We are requesting that preference be given to local manufacturers to be granted contracts by national companies. As a local manufacturer, I am able to ensure contracts with international companies that recognize the Corrocoat name and quality. However, state companies are required to enter into contracts for the supply of local SMEs contracts. Corruption is rampant within these institutions, where there is a prevalence of informal schemes that are not sustainable. As a local manufacturer we compete with international competitors as well as state-owned Samruk-Kazyna management are working to resolve them. Given the current crisis, the government needs to bolster local industry.

Chairman of the Board of KAZAKHSTAN PETROCHEMICAL INDUSTRIES (KPI) INC.

Meraliyev

KAZAKHSTAN INDUSTRIAL EXPLORATIONS 2016

Global Business Reports Global Business Reports INTERVIEW

Please introduce us to KPI’s development in Kazakhstan’s National Industrial Technopark.

KPI is a small company located approximately 45 kilometers (km) north of the city of Atyrau, within a special economic zone. Polymers, such as polypropylene, were produced as a product of a polypropylene plant with a capacity of 500,000 metric tons (mt) of polypropylene production per year. Propane feedstock for production will be sourced from Kashagan reservoirs and pipelines. In 2012, Corrocoat Caspian entered the Kazakh market through a joint venture. The company was launched at the end of 2013, but due to the seasonal nature of the business caused by harsh climatic conditions in Kazakhstan, operations began in the summer of 2014. Corrocoat Caspian manufactures 16 of the company’s range of 70 coatings. Every product is locally certified, demonstrating high local content. (This refers to the percentage of goods, works and services of Kazakhstan origin within the overall cost structure.) Local content allows us certain preferences when we go for tenders with national and oil companies, and currently our products boost an impressive 70% to 77% of local content. Corrocoat Caspian is the only high-tech coatings manufacturer in Kazakhstan. We compete with international companies such as PPG, Hempel, YC and Jotun. Our business is divided into manufacture and supply of materials, and application. We provide application and repair services for a wide range of companies in different industries, such as oil and gas, mining, chemical, food and beverage, power, piping and marine. We supply materials to two types of companies: end users with their own application units (big oil and pipe companies) and service companies who work in application and have been dealing with imported materials of our competitors. However, our product is sophisticated, and we invest significantly in research and development. Globally, our main strength is product formula. While the majority of our coatings are vinyl Ester resins, we are also manufacturers of acrylic, polyurethane and epoxy-based materials. All have glass flake fillings, of which Corrocoat is one of the leading manufacturers in this world. These protect water molecules from getting to the surface, prolonging service life of equipment and protecting against corrosion. Equipment coated with our product can remain operational for over 25 years. Corrocoat Caspian is unique in that it locally produces innovative corrosion-resistant coatings in Kazakhstan. Why did Corrocoat set up production facilities here?

Initially Corrocoat was interested in launching solely an application business in Kazakhstan. However, because of the good market potential in Kazakhstan, we made a decision to establish a joint venture to create more than just a service facility. We imported the latest technology and set up a manufacturing facility. Currently we are slowly trying to reform the overarching market structure. Government officials as well as state-owned Samruk-Kazyna management are working to resolve them. Given the current crisis, the government needs to bolster local industry.

Where do you see Corrocoat Caspian in three years?

Our target is to become the number one supplier of anti-corrosion coating materials in Kazakhstan in three years. To achieve this we entered the Kazakh market through a joint venture with Samruk-Kazyna and the National Chamber of Commerce to provide us with support as a local manufacturer. Secondly, we are working on a case-by-case basis with all of our clients. Corrocoat Caspian has passed pre-qualification tests for all major international companies. Now it is matter of participating in tenders and being competitive.

Kazakhstan’s Ministry of Investment and Development has identified chemicals as a strategic growth sector and plans to invest 80 billion tenge to support it. How effective have the government’s efforts been in supporting the chemical sector?

The government has identified the chemical industry as a priority for development and created a free economic zone in Taraz. However, companies are not permitted to purchase land within these zones. They are government-owned, meaning that terms need to be renegotiated after a given number of years. There are also different types of government support programs, and we are trying to take advantage of some of them. Corrocoat Caspian is part of the government’s industrialization road map for example, which allows us financing preferences.

However, the government requires other types of support. One of the main concerns among small and medium-sized enterprises (SMEs) is import substitution. We are requesting that preference be given to local manufacturers to be granted contracts by national companies. As a local manufacturer, I am able to ensure contracts with international companies that recognize the Corrocoat name and quality. However, state companies are required to enter into contracts for the supply of local SMEs contracts. Corruption is rampant within these institutions, where there is a prevalence of informal schemes that are not sustainable. As a local manufacturer we compete with international competitors as well as state-owned Samruk-Kazyna management are working to resolve them. Given the current crisis, the government needs to bolster local industry.
Serikzhan Sarbekov

What led Evonik to establish a representative office in Almaty, given its strong presence and production facilities in Russia?

Evonik constantly seeks to diversify and expand globally. Our Kazakhstan office belongs to the company’s eastern European division, and is officially part of Evonik Russia, known as Evonik Chimia. The office here in Almaty was established in 2008 and is responsible for the whole of Central Asia. Until 2012, we primarily focused on agriculture, specifically in food additives, which comprised more than 90% of our business in the region. Since 2013, the main objective has been to diversify our activity. At present, we are involved in additional industries: agriculture, mining, oil and gas, paints and coatings, road construction and general construction. In Uzbekistan, we are also involved in the textile industry.

What trends are driving Evonik’s business in Kazakhstan?

The Kazakh government has been effective in promoting quite a number of national programs. For example, we are currently in the second stage of the industrial development program of Kazakhstan. As part of this program, some public funds will be put towards the continued construction of the shipyard near Aktau. One year ago an agreement was signed between Italian company Eni and KazMunayGas, and the former will begin construction of the shipyard, which will allow Evonik the opportunity to market its paints and coatings of marine containers and ships. Kazakhstan has a significant fleet of 300,000 tons. Secondly, the upcoming Expo 2017 is interesting for us in terms of construction. Polymers, paints and coatings are to be used in this industry, spurring demand for our products. Furthermore, the development of the chemical park in Taraz is also promising for Evonik. The chemical industry in Kazakhstan has a lot of potential, especially given that the state has funds to develop it.

Where do you see Evonik in the next three to five years?

Evonik will continue to be a strong player in mining, agriculture, paints and coatings, and construction. We have an expansive product line for oil and gas extraction as well as polymers for oil and gas pipelines. We are approaching the Ministry of Investments and Development in the context of their development program, given the plan for cross-country specification, diversification and investment. We are also negotiating with another player to become the second alternative supplier of specialty chemicals to national companies. Evonik is interested in pursuing opportunities Turkmenistan, and the textile market in Uzbekistan, and has also recently become a part of the German Economy’s Union in Central Asia, which we plan to use as another channel to approach the chemical industry in the region.
However, we do see that the government is actively working on increasing production levels and investment in the sector. There are several obstacles that impede the growth of the sector. First of all, this is obsolete equipment, which has been in use since the Soviet times, and which does not allow companies to implement effective production strategies. Fortunately, many companies have already started to modernize their equipment. The second problem is finding the right staff. It is very difficult to find qualified staff in the chemical sector, therefore training is of key importance for our industry. Our company invests a lot in different training for our employees.

How important is the mining industry for Chemie & Technology? The mining industry is one of the most important sectors for Chemie & Technology. Currently, our mining clients represent 35% of our total volume of orders. Our clients are companies such as Kazakhmys and Kaz Minerals. We also closely work with uranium mining companies. Our products are used at all stages of mining from extraction to beneficiation and mineral processing. Mainly, we offer mining companies acids and drill fluids. Also, we offer our clients technical solutions, which allow them to save up to 30% during drilling projects. Thus, we do not just offer chemicals to our clients, but allow them to make use of our complex solutions. Last year, Chemie & Technology took part in the Mining Week exhibition in Karaganda. What products did you exhibit there? Chemie & Technology is a distributor of a German brand ESCO, and we also exhibit its products at different exhibitions. Also, we showcased a unique cleaning product Glanz. We are the only company in Kazakhstan that has the rights to this product, which is ideal for removing rust from metal surfaces and is therefore an ideal solution for mining, chemical and oil and gas industries. This product can also be used to clean the insides of pipes and boilers.

What international brands do you represent on the market? We work with producers from Russia, China and USA. This year we began working with Belarus. We can distribute these products at a very competitive price in Kazakhstan. Apart from distribution of international producers, we also export products from local producers. We export drilling fluids to Kyrgyzstan and Tajikistan. We pay very close attention to quality when working with our suppliers. This is very important because we are creating reliable products for our clients to serve the Kazakh market and export our products to Russia. Also, we continue to develop our sales offering in Kazakhstan: Linde Gas brings an ultimate quality advantage to the local market by producing high purity gases while having high safety standards. Linde Gas’ products are used in a diverse range of applications in almost all industries. How important is the chemical industry to your business? VR: So far Linde Gas Kazakhstan is not present in the local chemical sector. Most of our customers are in the fields of manufacturing, machinery and metallurgy, and we are currently making our entrance in the food sector. Though the chemical industry is not quite developed in Kazakhstan, we observe potential in this area. We are open for interesting projects and we are ready to contribute to the development of the Kazakh chemical sector. How have you seen demand evolve for Linde Gas’ products in Kazakhstan? AT: Since Linde Gas entered the Kazakh market, it has showed stable growth, which we expect to increase in the future as well. VR: We definitely see future demand in the chemical industry. It is usually challenging to enter a new market, but, thanks to our high-quality products and innovative technologies, we will gain the chemical industry’s confidence. As an international company, are there specific safety regulations that you have to follow which are different from those of local companies? AT: There is a certainly tremendous difference between international and local standards for everything from transporting liquids, to employees and documentation. Therefore, we always try to efficiently, process all orders in record times, and minimize lead times. Because the cost of our products includes delivery costs, we make sure that we deliver the product in a very short time. Besides that, we are also responsible for the quality of the products, and we do everything to ease our clients’ work. What are your plans for strategic development in the next five years? Chemie & Technology will continue to develop and expand the geography of its clients. We plan to increase the number of representative offices across the country to be closer to our clients. We will also look into providing more products for the mining and other industries. We hope to increase the number of products that we offer and clients that we serve.

Please introduce us to Linde Gas Kazakhstan. What are some important historical milestones since the company’s establishment here in 2009 that have shaped Linde Gas’ presence today? AT: Linde Gas entered the Kazakh market in 2013 with a big project – an air separation unit (ASU) for Arcelor Mittal’s plant in Temirtau. New ASU is huge: its capacity is 62,000 normal cubic meters per hour. Having such a big plant allows us to serve the Kazakh market and export our products to Russia. Also we continue to develop our sales offering in Kazakhstan: Linde Gas brings an ultimate quality advantage to the local market by producing high purity gases while having high safety standards. Linde Gas’ products are used in a diverse range of applications, in almost all industries. How important is the chemical industry to your business? VR: The big challenge for us is to compete with old ASUs which are still operating in many industries. Many of them have to be renewed or replaced by new ones due to safety, technical and economic reasons. Unfortunately we are observing today that many customers are reluctant to make changes in this area, especially due to large investments concerns. In order to accommodate this, Linde offers its customer supply contracts that do not require any investment efforts from their side. Linde builds and operates gas production units on-site, meaning that the production capacity is placed at our customer’s disposal. We can also work with producers in several plants. For example, we can have a variety of products, which are connected to a pipeline network which serve a number of customers located within the same industrial cluster or geographically.

Where do you see Linde Gas Kazakhstan in the next three to five years? VR: We are going to develop our exports, perhaps to Siberia, because Linde is not present there yet. This would be appropriate very competitive. Our main competitors are in Russia, Belarus and China. This year we began working with Belarus. We can distribute these products in Belarus and clients that we serve. A

Can you introduce Chemie & Technology to our readers? Chemie & Technology was founded five years ago in Almaty, where we have our main office and warehouse. Currently, there are 25 people working for the company. We supply chemical products from world-famous manufacturers to our clients. At every stage of this process we carefully monitor the quality of the products, and technologically used for their production, and also monitor the quality of the products, and we always try to work efficiently, process all orders in record times, and minimize lead times. Because the cost of our products includes delivery costs, we make sure that we deliver the product in a very short time. Besides that, we are also responsible for the quality of the products, and we do everything to ease our clients’ work.

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How has the recent devaluation of the tenge affected Linde Gas Kazakhstan’s business? VR: Considering we have export markets as well, we hope that the devaluation will bring good developments. Firstly, our market is now competitive with Russia, meaning that local consumers will shift from Russian products to local products. This is beneficial, because some of our customers were buying products from Russia. We also expect more activities from export-oriented local producers. Who does Linde Gas Kazakhstan compete against here? AT: Local producers themselves to be the market leader here. Our production unit is modern, efficient, and safe, and we are already exporting to many countries. Many of them have to be renewed or replaced by new ones due to safety, technical and economic reasons. Unfortunately we are observing today that many customers are reluctant to make changes in this area, especially due to large investments concerns. In order to accommodate this, Linde offers its customer supply contracts that do not require any investment efforts from their side. Linde builds and operates gas production units on-site, meaning that the production capacity is placed at our customer’s disposal. We can also work with producers in several plants. For example, we can have a variety of products, which are connected to a pipeline network which serve a number of customers located within the same industrial cluster or geographically.
Three years ago, BASF began developing its activities in polyurethanes, gas treatment, and more recently in mining and paints for the decorative and automotive industries. Currently, we are focusing on regional market development and the implementation of a new established concept, which outlines a strategy to triple the company’s turnover in Kazakhstan by 2020. Within the strategy, we are concentrating on four main industries: oil and gas, construction, agriculture, and mining. Graphically, we are targeting and expanding our presence in Astana in order to be alongside our main customers and decision makers. Also, we are developing our presence Aytyau to cover the oil and gas industry. Presently, our company has close contact with the main oil and gas companies in order to expand our fruitful partnership and the sale of our gas treatment products, oil additives, and catalysts.

Given low commodity prices, are you optimistic that the mining sector will drive BASF’s growth?

Mining will be a new challenge for BASF in 2016. However, we are already in constant contact with KAZ Minerals and their mining project’s Assistant General Director for foreign companies to locate production facilities in Kazakhstan. In addition, we are preparing our entry into the country, which was very timely and helped us prepare good education projects for the mining sector. In future, our staff of 30 focuses on the infrastructure and mining sector.

What is BASF’s double-digit growth strategy in Kazakhstan?

First, BASF invests in its human resources. The level of education is good here, but many Kazakh students do not have the opportunity to travel abroad. BASF is working with the key decision makers to help link Kazakhstan to BASF and promote technology transfer from Germany. Secondly, we work to enhance the quality and sustainability of our product. With Expo 2017 just around the corner, BASF hopes to be involved with the wind energy sector.

Are there any specific goals BASF would like to achieve within the next three to five years?

Our main goal is to create brand awareness in the country’s infrastructure, industry, and construction sectors. We do not want to be only known for our involvement in construction. BASF boasts a range of many other products that we would like to make visible in the market. In the next four years, we have many projects in the oil and gas, pipeline, automotive, catalysis, mining and coal protection industries. If everything goes according to plan, BASF will make substantial production in Kazakhstan. We have a great deal of plans to be fulfilled within the next few years and despite the devaluation and difficult economic environment, BASF is continuing to experience double-digit growth. Hence, I am confident that we will achieve our 2020 goal.
“For a long time, it was not considered prestigious to work in the mining industry, which is why today there is a serious lack of specialists in this sector. The government understands how crucial it is to develop talent across many spheres, mining, processing and services. We are working hard to change the perception of the mining industry in Kazakhstan; we aim to show Kazakhs that working for a mining company is a prestigious career.”

- Nikolay Radostovets,
Chairman,
Association of Mining and Metallurgical Enterprises (AGMP)
THE WAY FORWARD FOR KAZAKHSTAN AND THE GLOBAL MINING INDUSTRY

A number of issues are affecting mining companies, ranging from low commodity prices to mining safety to finding well-trained personnel. How Kazakhstan addresses these will shape the future of its mining industry.

**Mining Safety**

Mining safety is a problematic area for Kazakhstan, which in the past has had a poor record with health and safety in the mining sector, especially coal. As previously mentioned, the mining sector in Kazakhstan is labor-intensive, which increases the chances of workers getting injured. Kazzinc Holdings is one important player that has been strongly committed to improving workers’ safety at its facilities. “SafeWork is a corporate program that has been rolled out over the last two years in all of Glencore’s assets. Historically, these assets have had their own safety policies, and the SafeWork program is designed to unify safety policy in all aspects of the job, i.e. working at heights, electrical installations, with moving objects, etc. Any work fatalities at Kazzinc’s operations will be brought to the attention of its entire workforce to improve training and prevent accidents from occurring again. The observation of the SafeWork policy is continuously monitored by Kazzinc and on-the-job safety training is constant,” explained Nick Popovic, chairman of the board of directors of Kazzinc Holdings.

Despite a poor historical record, companies operating in Kazakhstan are addressing the issue head-on. • In 2012, we identified a five-year program to decrease the number of accidents and fatalities commonly found in Western countries. “In 2012, despite a poor historical record, companies operating in Kazakhstan are addressing the issue head-on,” said Bakhtiyar Krykypyshev, general director of Kazzinc Coop.

It is not only the local producers that are apprehensive about improving our medical help standards as well,” said Bakhtiyar Krykypyshev, general director of Kazzinc Coop.

**Finding Talent**

Globally, mining companies are experiencing a lack of qualified personnel, and the same can be said of Kazakhstan. One thing that is clear is that various incentives and schemes must be implemented to encourage young people to study geology. “For a long time, it was not considered prestigious to work in the mining industry, which is why today there is a serious lack of specialists in this sector. The government understands how crucial it is to develop talent across many spheres - mining, processing and services. We are having hard to change the perception of the mining industry in Kazakhstan; we aim to show Kazakhs that working for a mining company is a prestigious career,” said Nikolay Radostovets, chairman of the Association of Mining and Metallurgical Enterprises (AGMP).

“We certainly see a problem with finding the right talent, and indeed within the Exploration and Mining Works Program 2015-2019, we emphasized the importance of staff issues, training, attracting young people to work in mining, improving the image of mining professions and increasing the competitive advantage of Kazakhstan on the international arena for engineering talent. In this regard, we work closely with the Ministry of Education and Science of the Republic of Kazakhstan. In the new school year, the ministry will start new master’s programs in the fields of geology, hydrogeology and geophysics. We always try to attract students from mono-cities to these programs because they will be the ones who will come back to the mining towns and continue to work in the industry. Also in 2015, 60 specialists from Kazgeology will go through a training process at Rio Tinto. 10 employees will train with Geotech, and 16 employees will train with Iluka Resources,” said Albert Rau, vice minister of Investment and Development.

One company with a long history in Kazakhstan and focused around Ridder, a mono-city, is Kazcincrum. It is not an easy task to bring in specialists from out of town, which is why training them locally is indeed very necessary. “There are many families where people have been working at our production plant for generations, and we highly support this tradition. We are always happy to see our employees bring their children and grandchildren to the factory. Thanks to the continuous modernization of our equipment and the technology that we use, we can offer more interesting positions to our employees,” said Alexandr Anchugin, director of Kazcincrum.

Finding qualified personnel has been an ongoing problem for mining companies globally and Kazakhstan has been no exception, but as a new generation is entering the sector, their skills are more in line with international standards. With further training being provided, Kazakh companies and universities are addressing the issue head-on. •
A large number of the world’s mining companies are listed in Toronto. Canada is world renowned for its mining sector and the country has a great reputation for mining technology and finance as a result. Like all mining companies, Canadian miners are always looking for new reserves and opportunities to grow their businesses. Until recently, Kazakhstan was an unknown commodity to many mining companies as the legislative conditions required for large-scale investment were not present. This is changing and the new mining laws expected in late 2015 or early 2016 should provide some comfort to potential investors in the sector. Conventions like PDAC certainly helped to open up Kazakhstan to Canadian mining companies by educating companies about the potential.

Rio Tinto, along with Kazgeology, recently invested $6 million into the exploration of copper in Karaganda. What other steps should the government take to encourage similar deals? Exploration is always the first and most important step in any successful venture in the extractive industry. Many of the country’s assets were identified in the Soviet days but there is significant interest in and need for new discoveries. Kazakhstan needs international mining companies with more up to date technologies on hand to accomplish this goal. The government needs two things to happen if it wants to catch the international mining industry’s attention. One is that they need to see that new discoveries being made. The second is a handful of test cases for the new legislation that shows the rule of law and sanctity of contract. Once these two events are married together we will see an increase in companies looking to invest in Kazakhstan’s mining sector.

Kazakhstan is looking to upgrade its mining code. What changes will this bring? Again, the legislation has not been approved and signed into law as yet so we are still in the waiting phase. However, in preparation for its enactment, we are seeing more interest in the country’s potential with people coming to town for preliminary discussions.

What are some of the major challenges that foreign investors will face in Kazakhstan?

There is a general recognition that there are certain skill sets that the country needs to import, as it does not have the expertise yet. This challenge still exists to some degree in the oil industry though significant progress has been made there given the size of investment that has already been made by the multinationals. In terms of the government’s efforts in developing local content, a similar effort needs to be made by foreign mining companies. The law on local content is very complicated and, in many instances, misunderstood and improperly applied. Infrastructure also poses a challenge for the mining industry, as typically the projects are located in remote areas with minimal access to transport routes. Transport infrastructure will have to catch up as will social infrastructure if you assume the growth in workforce, both foreign and national, that is needed to exploit any deposits discovered. The education system and current industry have their flaws but if investment in the people and institutions are made you will see significant results as the Kazakh people are only waiting for the opportunity to show their talents.

There is a significant amount of Canadian service providers in Kazakhstan. How do these companies enter the industry, operate here and what is the climate for them? CERBA seeks to support both Canadian and Kazakh companies in their cross border business activities. The best thing we can do is to promote dialogue between companies that are already doing business in Kazakhstan and/or Canada. Once the lines of communication are open we have accomplished our mission and look ahead to the next opportunity for us.

How do you see CERBA’s role developing over the next five years? In Moscow, half to two thirds of CERBA’s members are Canadian companies. In five years, CERBA Kazakhstan will see the reverse, with more Kazakh companies as members than Canadian companies. That said, we could see a substantial increase in Canadian interest, if the mining industry in Kazakhstan grows as we hope that it will.
“American Appraisal sees great potential in Kazakhstan, which it will be actively working to develop; it is confident that Kazakhstan will become a very business friendly country, and its future looks very positive. New mining legislation is expected to bring in more investors in this sector, but other sectors are set to grow alongside it, bringing jobs and further investment to Kazakhstan.”

- Yerlan Yeszhanov, General Director, American Appraisal

“Given the current situation, it is important to note that we are not planning on reducing the output or downsizing. Despite the negative outlook for demand for iron ore materials, we’re planning to maintain production to 32 million metric tons. At the same time, we’re planning to increase ferroalloys, aluminium and Shubarkol coal output.”

- Azamat Bektybayev, Vice President, Production, Eurasian Resources Group (ERG)

“We support the change of the system to international JORC. This change should have happened a long time ago. It is a difficult process, and we hope that the results will become visible soon. In December 2014, Kazakhstan accepted an analog of the Russian code for auditing NAEN, ‘Kazakhstan CRIRSCO’. The accepted code is an adapted version of JORC, which allows public audit as well as GKZ reports, but under the condition that GKZ reports have priority. Of course, this system would simplify work for a lot of companies, but at the same time we do hope that JORC is still going to enter the systems of mining companies in Kazakhstan very soon. Having two standards is excessive and complicates the understanding of the resource base among investors.”

- Georgiy Freeman, Chairman, Board of Directors, GeoMineProject (GMP)

“As of today, there are many greenfield exploration projects in Kazakhstan being developed by both local companies and joint ventures, although exploration budgets have been reduced in the last few years, mirroring the global economic crisis. Still, the government is encouraging exploration to discover new deposits and increase the mineral resource inventory of the country. To this end, a few joint ventures with foreign investors were established to undertake geological prospecting and exploration in Kazakhstan, and Wood is extensively involved in one of these projects.”

- Ruslan Sevostyanov, General Director, Wardell Armstrong

“3M established the first representative office here in Kazakhstan in 1995. The Kazakh market is very interesting for us because of the country’s mining and oil and gas sectors. It is a very promising country, and there is a great deal of opportunity here.”

- Andrei Lyman, General Director, 3M Kazakhstan

“Nowadays, the Kazakh government realizes that prospecting and exploration should be a joint effort between private companies and the state. We can see that the Kazakh government is heading in the right direction today by preparing and implementing more liberal mining and exploration legislation for Kazakhstan, allocating funds to invest in risky early-stage project development, prospecting/ exploration, and establishing state companies that can facilitate exploration and mining activities on behalf of the government.”

- Adil Assantov, Technical Director, WorleyParsons

“One cannot discount the natural attributes that Kazakhstan has for renewable projects. A large number of foreign investors are also looking at solar and wind and are significantly interested in developing the sector. The new incentive laws passed in 2014 theoretically make it possible to access an interesting return via tax reliefs from some of these renewables projects, but we have yet to see much of the like. The state has made efforts to make these projects more attractive but more is needed; there is a lot of interest but extremely limited execution.”

- Anthony Nicholas Mahon, Partner, Tax & Legal, Deloitte

“Kazakhstan is one of the most important emerging markets to western institutions where there is major appetite for government-supported projects. Having said that, we seized the opportunity and have gathered all components in order to be able to execute our projects. Therefore, KB Enterprises has signed an agreement with Siemens as an EPC contractor exclusively, in addition to securing the finance towards the project.”

- Taylan Karamanli, Managing Director, KB Enterprises

“There are still many exploration and development blocks to be licensed in Kazakhstan. The government invests in the infrastructure to facilitate private investments. The challenge is that the mining sector currently faces some barriers and regulatory restraints. Investors want clarity and to be secured in their investment.”

- Galymzhano Tajiyanov, Director, Project Finance Group, Eurasian Development Bank

“With a local presence in Kazakhstan, we see significant opportunities to match our technologies to specific market needs, as Kazakhstan pursues its stated goal of becoming one of the world’s top ten oil and gas producers and exporters. We view this as a very exciting time for both Dow and the Kazakhstan oil and gas industry, as it takes critical steps toward global leadership, including the development of the Kashagan oil and gas field in the Caspian Sea, the renovation of its three refineries, and the ongoing expansion of its internal and export pipeline network.”

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“Nowadays, the Kazakh government realizes that prospecting and exploration should be a joint effort between private companies and the state. We can see that the Kazakh government is heading in the right direction today by preparing and implementing more liberal mining and exploration legislation for Kazakhstan, allocating funds to invest in risky early-stage project development, prospecting/ exploration, and establishing state companies that can facilitate exploration and mining activities on behalf of the government.”

- Adil Assantov, Technical Director, WorleyParsons

“With a local presence in Kazakhstan, we see significant opportunities to match our technologies to specific market needs, as Kazakhstan pursues its stated goal of becoming one of the world’s top ten oil and gas producers and exporters. We view this as a very exciting time for both Dow and the Kazakhstan oil and gas industry, as it takes critical steps toward global leadership, including the development of the Kashagan oil and gas field in the Caspian Sea, the renovation of its three refineries, and the ongoing expansion of its internal and export pipeline network.”

- Igor Gorinyk, Country Manager, Dow Kazakhstan

“One cannot discount the natural attributes that Kazakhstan has for renewable projects. A large number of foreign investors are also looking at solar and wind and are significantly interested in developing the sector. The new incentive laws passed in 2014 theoretically make it possible to access an interesting return via tax reliefs from some of these renewables projects, but we have yet to see much of the like. The state has made efforts to make these projects more attractive but more is needed; there is a lot of interest but extremely limited execution.”

- Anthony Nicholas Mahon, Partner, Tax & Legal, Deloitte

“Kazakhstan is one of the most important emerging markets to western institutions where there is major appetite for government-supported projects. Having said that, we seized the opportunity and have gathered all components in order to be able to execute our projects. Therefore, KB Enterprises has signed an agreement with Siemens as an EPC contractor exclusively, in addition to securing the finance towards the project.”

- Taylan Karamanli, Managing Director, KB Enterprises

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- Galymzhano Tajiyanov, Director, Project Finance Group, Eurasian Development Bank
This list contains those companies interviewed during the course of research for this publication and as such represents only a limited selection of the companies operating in the power, mining and chemicals industry of Kazakhstan. It should not be considered a comprehensive guide. GBR holds an exclusive and extensive database for Kazakhstan and the wider region. For further information on database access packages, please contact info@gbreports.com or call +44 20 7812 4511.

GOVERNMENT AND ASSOCIATIONS

AGMP - ASSOCIATION OF MINING AND METALLURGICAL ENTERPRISES
CERBA - CANADA EURASIA RUSSIA BUSINESS ASSOCIATION
GKR - GOVERNMENT OF KARAGANDA REGION
MINISTRY OF ENERGY - REPUBLIC OF KAZAKHSTAN
MINISTRY OF INVESTMENT AND DEVELOPMENT - REPUBLIC OF KAZAKHSTAN

LEGAL AND CONSULTING

CHAMBERS

POWER

BATYS TRANSIT
CAEPCO - CENTRAL ASIAN ELECTRIC POWER CORPORATION
CNV - CENTRAL NORWEGIAN VERITAS
KB ENTERPRISES
AES CORP., KAZAKHSTAN
ARCELORMITT TEMIRTAU
ALTAY POLYMETALS
BETPAK DALA
ERG - EURASIAN RESOURCES GROUP
EUROCHEM-KARATAU
ILUKA RESOURCES
KATCO JV
KAZAKHMYS CORP.
KAZPHOSPHATE
KAZZINC HOLDINGS
KB ENTERPRISES
RIO TINTO
SYRYMBET
YILMADEN HOLDING

SERVICES

AMERICAN APPRAISAL
GIOMARK
GEOMINEPROJECT (GMP)
KAZDRILLING
KAZGEOTECH
KPSP
LEICA GEOSYSTEMS AND HEXAGON MINING DIVISION
MICROMINE
NATIONAL CENTER ON COMPLEX PROCESSING OF MINERAL RAW MATERIALS, REPUBLIC OF KAZAKHSTAN
ORICA KAZAKHSTAN
RJC GROUP
SGS KAZAKHSTAN AND CASPIAN SUB-REGION
WORLEYPARSONS

CHEMICALS

3M KAZAKHSTAN
BASF
CHEMIE & TECHNOLOGY
CORROCOAT CASPIAN
DOW KAZAKHSTAN
EVONIK CHIMIA
KPI - KAZAKHSTAN PETROCHEMICAL INDUSTRIES INC.
LINDE GAS KAZAKHSTAN LLP
ORICA KAZAKHSTAN
RJC GROUP
SGS KAZAKHSTAN AND CASPIAN SUB-REGION
WORLEYPARSONS

EDITORIAL AND MANAGEMENT TEAM

Project Director: Kanya Koryakovtseva (kanya@gbreports.com)
Journalist: Lubo Novak (lnovak@gbreports.com)
Executive Editor: John Bovles (jbovles@gbreports.com)
Graphic Designer: Gonzalo Da Cunha (gdc@d-signa.com)

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MINISTRY OF INVESTMENT AND DEVELOPMENT OF THE REPUBLIC OF KAZAKHSTAN
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