THE CHINESE PRESENCE IN KAZAKHSTAN'S OIL AND GAS INDUSTRY

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ABSTRACT

China's presence in Kazakhstan's oil and gas industry shows that it is primarily interested in developing this country's hydrocarbon fields. Raising the production volumes of Kazakhstan's hydrocarbons will make it possible for China to meet its own energy needs. Chinese companies presently control approximately one quarter of the oil produced in Kazakhstan and one fifth of its petroleum product market. They also occupy a relatively strong niche in such an important segment of Kazakhstan's oil and gas industry as the construction and exploitation of oil and gas pipelines. In the short *and medium term, the nature and scope of China's presence in Kazakhstan's oil and gas industry is unlikely to significantly change. In the long term, much will depend on whether Chinese companies gain access to "big oil" and, correspondingly, "big gas" after developing offshore deposits, primarily within the framework of the North Caspian project.*

KEYWORDS: ***China, Kazakhstan, oil and gas industry, KazMunayGas, Sinopec.***

Introduction

On 3 January, 1992, diplomatic relations were established between the Republic of Kazakhstan (RK) and the People's Republic of China (PRC). Since then, China has regarded Kazakhstan as the main target of its economic and, primarily, energy interests in Central Asia (CA).

An analysis of the Kazakh vector of the PRC's foreign strategy in the post-Soviet period makes it possible to indentify three main stages of its implementation.

- *The first stage* occurred at the beginning and middle of the 1990s. At that time, China assessed the essentially new situation that had developed in the post-Soviet states and determined its energy and other interests in CA related, in particular, to penetration into Kazakhstan's oil and gas industry.
- *The second stage* covered the second half of the 1990s, when the PRC began gaining direct access to Kazakhstan's oil and gas industry, which occurred in the context of stronger trade ties between the two countries. Its project-investment activity in the republic's oil and gas industry was largely generated by the increase in the PRC's energy needs. In 1997, the leading Chinese state energy corporations began to acquire assets in Kazakhstan's oil and gas industry and participate in developing its hydrocarbon fields.
- *The third stage* coincided with the beginning of the 21st century; it was precisely after 2000 that the scope and depth of China's penetration into Kazakhstan began to significantly increase. China engaged in mass purchase of assets in Kazakhstan's oil and gas and energy industries (primarily in the nuclear industry). In so doing, the PRC began pursuing a more active credit policy, financing on privileged terms those projects in which most of the loans were being developed by the Chinese companies themselves.

All of this led to an increase in the Chinese presence in the Kazakh market. Between 2001 and 2008, deliveries of goods from the PRC to the RK increased 11.3-fold—from \$0.74 to approximately \$8.4 billion, while the total goods turnover grew from \$1.25 to around \$16 billion. In 2009, under the influence of the global financial economic crisis, the volumes of Chinese-Kazakh trade decreased by 15.5% and amounted to \$13.5 billion. In subsequent years, the goods turnover of the two countries began to climb again, and in 2011-2012 it stabilized at a level of around \$20 billion. Between 2013 and 2014, a new trend toward an increase in goods turnover was designated, which grew by approximately 35%—from \$20 to 27 billion (see Table 1).

Table 1

Trade between China and Kazakhstan (1992-2014)

Year	Goods Turnover, *\$m*	Deliveries from China to Kazakhstan, *\$m*	Deliveries from Kazakhstan to China, *\$m*
1992	373	245	128
1993	428	189	239

Table 1 (continued)

Year	Goods Turnover, *$m*	Deliveries from China to Kazakhstan, *$m*	Deliveries from Kazakhstan to China, *$m*
1994	219	130	89
1995	392	195	197
1996	495	266	229
1997	489	247	242
1998	432	250	182
1999	556	283	273
2000	825	455	370
2001	1,253	742	511
2002	2,478	1,493	985
2003	2,856 (3,330)	1,546	1,310
2004	3,694 (4,498)	2,060	1,640
2005	6,762 (7,243)	2,980	2,266
2006	8,784 (10,800)	5,130	3,654
2007	12,385 (15,226)	7,005	5,380
2008	15,964 (18,500)	8,362	7,602
2009	9,458 (12,287)	3,569	5,889
2010	14,084 (17,615)	3,962	1,0122
2011	21,313 (24,913)	5,021	16,292
2012	20,568 (23,611)	7,445	13,123
2013	22,365 (24,000)	8,240	14,125
2014	26,767 (28,250)	9,256	17,511

Sources: Data for 1992-2001—Asian Development Bank with reference to the national statistics boards of Kazakhstan (*Key Indicators of Developing Asia and Pacific Countries*, Asian Development Bank, 2002); data for 2002-2014—*Economist Intelligence Unit* with reference to the national statistics boards of Kazakhstan; data in parentheses for 2003-2014—PRC Ministry of Commerce.

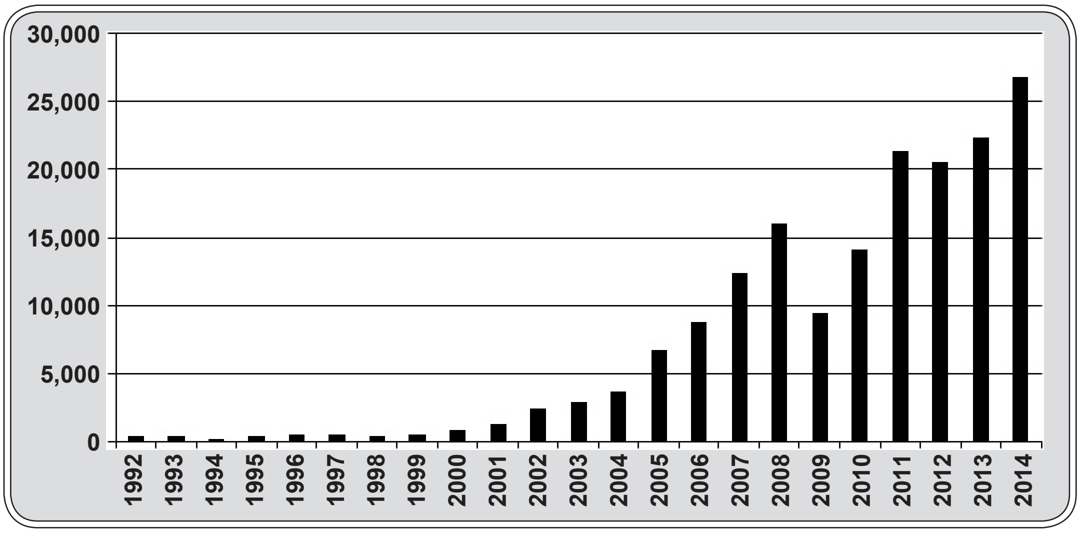
The dynamics of Chinese-Kazakh trade in the post-Soviet period can be traced more graphically in Diagram 1.

At the same time as the increase in the PRC's trade presence in Kazakhstan's consumer market, its credit policy and project-investment activity also intensified, whereby the main target of China's interest continued to be the country's oil and gas industry. Purchasing foreign (mainly Western) assets is, as before, the characteristic feature of the penetration of Chinese companies into this industry.

As of the beginning of 2015, the total volume of financial resources used by China to strengthen its position in Kazakhstan's oil and gas industry is assessed at between $43.5 to $45.7 billion, including around $22,2-24,4 billion in investments, around $16.3 billion in acquired assets, and $5 billion in loans.

Diagram 1

China's Trade with Kazakhstan (1992-2014, *$m*)



Assets

Since the end of the 1990s, China has been insistently and consistently pursuing an essentially expansionist policy in Kazakhstan's oil and gas industry by engaging in fairly large-scale purchase of foreign and partly Kazakh assets. It continues to place the main emphasis on purchasing as many shares as possible in production projects on the mainland.

As for Kazakhstan, it is pursuing an ambiguous policy. On the one hand, Astana encourages China's penetration into its oil and gas industry and is trying to direct it toward purchasing assets in offshore projects, while, on the other, in order not to entirely lose control over the backbone branch of its national economy, it is forced to restrain China's activity to a certain extent.

- *First,* between 1997 and 2014, Chinese companies acquired assets totaling $16 billion. These were mainly shares in operating companies engaged in the development of oil and gas fields on the mainland: 94.47% of the assets of the Kazakh State OAO Aktobemunaygas Company (including 94.47% of the shares of the Zhanazhol gas refineries), 100% of the assets of America's First International Oil Company (FIOC), 48% of the shares in Central Asia Petroleum Ltd., formally an Indonesian offshore company, 11% of the shares in the KazMunayGas Exploration Production (AO) Company, 100% of the shares in the Russian-Indian Caspian Investments Resources Ltd. Company, 50,12% of the private Kazakh OAO Karazhanbasmunay Company, 67% of Canada's PetroKazakhstan Inc. Company (including 50% of the assets of the Shymkent Oil Refinery), and 8.4% of the share in the North Caspian project. In addition, Chinese companies have bought 100% of the shares of small fields located in the southern and central parts of Kazakhstan from KazMunayGas.

  Chinese companies are not participating in the large production projects to develop the Tengiz and Karachaganak fields, at which around 55% of Kazakh oil and up to 90% of its gas are produced. At the same time, China already has shares in essentially all other similar projects, controlling a total of around 24% of the oil produced in Kazakhstan.

However, China has almost no assets in the offshore projects that produce "big oil" and "big gas." At the moment, China's Sinopec Petrochemical Corporation is a formal participant in the Zhambay Iuzhny and Iuzhnoe Zaburunie geological exploration project, in which it owns 50% of the shares.

The assets of Chinese companies in other segments of Kazakhstan's oil and gas industry are relatively small and limited to the following projects:

— reconstruction and modernization of the Shymkent Oil Refinery, in which the China National Petroleum Corporation (CNPC) owns 50% of the assets (the other 50% belong to KazMunayGas. This same corporation owns 94.47% of the assets of three Zhanazhol gas refineries; the rest belong to KazMunayGas);

— the Sinooil Company, which controls from 15% to 20% of the Kazakh petroleum product market.

■ *Second*, China's asset acquisition policy is influenced by contradictory and, often, mutually exclusive factors.

On the one hand, Beijing's striving to buy up as many assets as possible is clearly supported by Astana. What is more, Kazakhstan is essentially lobbying the PRC's purchase of assets being sold by foreign companies. We will note that according to the law, KazMunayGas has priority right to the purchase of the oil and gas assets of foreign companies, which means they cannot be transferred to China without Kazakhstan's participation. This shows that the RK and the PRC are closely coordinating their steps.

On the other hand, there are reasons to presume that Kazakhstan is still trying to restrain China's activity to some extent. In most cases, it is either buying back some of the assets from the Chinese companies, or bargaining for them in exchange for certain preferences. What is more, Kazakhstan is striving to keep hold of the controlling set of shares in its strategic production companies, KazMunayGas Exploration Production (AO) and OAO Mangistaumunaygas; China has only been conceded an 11% share in the first and 48% in the second. Whereby such facilities as the Pavlodar Petrochemical Plant and chain of Helios gas-filling stations have not even been partially transferred to Chinese control (although the PRC, it seems, wanted to and could have bought up all of the above-mentioned assets).

■ *Third,* most likely, in the short term (up to three years) and medium term (up to ten years), China will continue to increase its efforts to acquire assets in Kazakhstan. The main targets of Chinese interests will primarily be the assets of foreign companies in production projects on the mainland, including the development of such large fields as Tengiz and Karachaganak. At the same time, relying on Kazakhstan's support, China will continue its attempts to purchase assets on the shelf of the Caspian Sea.

We should not write off China's interest in the refining segment of Kazakhstan's oil and gas industry (particularly in gas refinery).

It should be noted that the increase in China's presence in any segment of Kazakhstan's oil and gas industry will inevitably entail its purchase of new assets in production projects.

However, there is no guarantee that the PRC will achieve all the goals it has set, particularly since they are extremely ambitious and essentially related to gaining control over the largest or, at least, a significant part of the strategic assets of Kazakhstan's oil and gas industry. As time goes on, it will become increasingly difficult for China to acquire assets in production projects on the mainland (apart from the North Caspian project).

It should be presumed that if China follows its principled interest in penetrating Kazakhstan's oil and gas industry, it will achieve a certain amount success, but only in acquiring the assets of small production projects on the mainland (which, of course, will not lead to any significant increase in China's control over this industry).

Moreover, it is highly improbable that the PRC will gain access to strategically important assets in projects to develop the Tengiz and Karachaganak oil and gas fields in the short and medium term, since Western companies are unlikely to sell them to it.

Theoretically, in time, Beijing will be able to turn a large part of the export flows of Tengiz and Karachaganak oil from Europe to China. This is giving rise to the problem of filling the Tengiz-Novorossiisk oil pipeline (which is not at all in the interests of Kazakhstan and Russia), while deliveries of Kazakh oil to Europe will be dramatically reduced.

Keeping in mind the above, it can be presumed that in the short and medium term, Western companies might consent to sell Chinese companies assets in the Tengiz and Karachaganak projects, but only in extreme cases, such as a deep financial economic crisis in the EU or a dramatic drop in Europe's need for oil. All the same, in the long term (up to twenty years), when the Tengiz and Karachaganak fields will most likely have reached the stage of diminishing production, foreign companies may concede the assets in these projects to China.

This will inevitably awaken China's oil and gas appetite for offshore projects (keeping in mind the PRC's limited opportunities in terms of further purchase of assets in production project on the mainland). Its interests will primarily be aimed at increasing its share in the North Caspian project, in the refining segment of the Kazakh oil and gas industry and, correspondingly, in purchasing retail facilities trading in petroleum products.

Most likely, Chinese companies will try to acquire a share in the assets of Kazakhstan's large oil refining plants. We are talking about the Atyrau Oil Refinery (which refines around 4.7 million tons of oil a year) and the Pavlodar Petrochemical Plant (which refines around 5.2 million tons of oil a year). We will remind you that the CNPC already has a 50% share in the Shymkent refinery.

In terms of its presence in the Kazakh petroleum product market, Chinese efforts will be aimed at taking control of as large a segment as possible and at purchasing infrastructure facilities: gas-filling stations, storehouses, depositories, and so on.

Oil and Gas Production

The main vector of China's policy in developing Kazakhstan's hydrocarbon potential continues to be aimed at comprehensive augmentation of oil production volumes (with the goal of exporting them to the PRC). Against this background, the industry's gas segment, despite some positive dynamics in increasing blue fuel production volumes by Chinese companies, is still of secondary importance. This is explained by the fact that Beijing is more interested in Kazakh gas transit from Turkmenistan.

Nevertheless, the PRC must undertake a cardinal reexamination of its entire former strategy aimed at penetrating the Kazakhstan oil and gas industry, which was based on widespread purchase of assets in mainland production projects from foreign and Kazakh companies. On the one hand, the oil and gas fields under Chinese control (they are all on the mainland) have already reached the stage of diminishing oil production, in other words they have already reached their peak. On the other hand, the prospects for the possible participation of Chinese companies in other production projects (both on the mainland, and on the Caspian shelf) are still very nebulous.

- *First,* since it began its project-investment activity in Kazakhstan's oil and gas industry, China has been consistently increasing the production of hydrocarbons, mainly oil, at the same time as buying up assets. Whereas in 1997, the CNPC owned only 1.6 million tons of the oil produced in Kazakhstan (or around 6% of the total volume of Kazakh oil production), in 2007, it owned around 10.65 million tons (or 16.8%); while at year-end 2014, this figure amounted to almost 20 million tons (or around 25%).

In turn, Chinese companies (mainly OAO CNPC-Aktobemunaygas) have not begun industrial gas production, or to be more precise, its recovery and utilization (Kazakh gas is mainly casing-head gas extracted during oil production) until 2004; their share in Kazakhstan's gas production remains insignificant.

The dynamics of gas production volume increase are also insignificant. For example, in 2004, the CNPC owned 1.6 bcm of the gas produced in Kazakhstan (around 8% of the total volume of gas production), while by 2014, this amount had increased to only 4 bcm (or a little less than 10%). Such a slow rise in gas production was largely related to technical difficulties during its transportation from fields widely scattered across Kazakhstan's huge territory.

- *Second,* China's policy to augment the volume of Kazakh hydrocarbon production is hindered by a whole series of unfavorable factors, a key one being the extremely limited opportunity to purchase new assets in production projects in Kazakhstan. Despite the PRC's high interest in Kazakh oil, the opportunities of Chinese companies to increase oil production volumes by further exploitation of the fields it has already acquired within the framework of the existing projects have essentially been exhausted. As for new large production projects, the possibility of Chinese companies gaining access to them remains dubious.

  Despite the available opportunities for raising gas production, Chinese companies are showing a greater interest in Kazakh oil. They are not particularly striving for an extensive increase in gas production volumes, since this is economically unprofitable. They are engaged in the recovery/utilization of gas only due to technological necessity, as well as to political and environmental demands.
- *Third,* in the short term (up to three years) and medium term (up to 10 years), China will certainly try to increase the production volumes of Kazakh hydrocarbons. Moreover, the PRC will most likely manifest a growing interest in gas production. When striving to increase oil and gas production volumes, Chinese companies will inevitably encounter the objective need to purchase new assets in large projects, both on the mainland, and on the Caspian shelf. They will have this opportunity if they join the projects to develop the Tengiz and Karachaganak fields (where around 55% of Kazakh oil and up to 90% of gas is produced) and/or if the North Caspian project is a success (within the framework of which "big oil" and "big gas" production is expected).

However, in the short and medium term, the PRC will unlikely be able to join the development of the Tengiz and Karachaganak fields or begin extensive hydrocarbon production within the North Caspian project. The main reasons are that Western companies (just like Kazakhstan itself) will not want to permit China to participate in developing the Tengiz and Karachaganak fields, which are relatively important from the commercial and strategic viewpoint.

Nor is it likely that China can participate in hydrocarbon production within the North Caspian project, which it has already joined, due to technological obstacles that are unlikely to be overcome (otherwise, Conoco Phillips would not have sold its assets in the project). In addition, the sharp drop in world oil prices during 2014 has made oil and gas production in this project unprofitable (due to the technological difficulties and financial expenditures), which is dramatically lowering its investment appeal. In this respect, it is unlikely that Chinese companies can expect a significant increase in oil production volumes in the short or medium term.

However, it is highly likely that they will be able to increase the volumes of Kazakh gas production (utilization) slightly. Nevertheless, it is very doubtful that the produced gas will be exported to China, it will be used by the production companies themselves, as well as sold to several Kazakh population settlements located close to the hydrocarbon production sites.

In the long term (up to 20 years), the volumes of oil and gas produced by the PRC in Kazakhstan will directly depend on the participation/non-participation of Chinese companies in developing the Tengiz and Karachaganak fields, on the one hand (although by this time they will most likely have reached the stage of diminishing production), and on the success/non-success of the North Caspian project, as well as on the development of the Darkhan field, which China is probably saving for the future, on the other.

It appears that, whatever the case, we can expect an increase in the volumes of blue fuel production; Chinese companies will be forced to step up their activity (for example, under Kazakhstan's influence or based on technological need) in the recovery and utilization of casing-head gas extracted during oil production. However, a large part of the produced gas, as before, will most likely be sold in the Kazakh market, since collecting it from the numerous fields scattered all over Kazakhstan's vast territory and exporting it to China is highly inexpedient.

Oil and Gas Refinery

The project-investment activity of Chinese companies in hydrocarbon refinery in Kazakhstan is quite noticeable, particularly against the background of the non-participation of other foreign states in this kind of project. On the whole, the scope of Chinese activity in the refining segment of the Kazakh oil and gas industry is still small. While not showing due interest in introducing new oil-refining capacities in Kazakhstan, Chinese companies are paying increasing attention to raising the gas-refining volumes. This is primarily related to the objective need for the utilization of gas extracted during oil production, as well as long-term plans for its export.

- *First,* since 1997, when China began penetrating into Kazakhstan's oil and gas industry, the scope of the PRC's project-investment activity in hydrocarbon refinery was slightly higher than in production.

  At present, the PRC is actively implementing three relatively large hydrocarbon refining projects; its participation in them can be broken down into the following stages:

  — in 1997-2003, the CNPC modernized the first (built in Soviet times) and constructed the second and first string of the third Zhanazhol Gas Refinery, which resulted in an increase in gas-refining capacities from 0.8 to 4.5 bcm a year. At present, the construction of the second refinery is almost complete and preparations are being made to build the third string; this could lead to an increase in the total capacity of the three gas refineries to 8 bcm of gas a year;

  — since 2006, the CNPC has been participating in oil refining (4.5 million tons every year) at the Shymkent Oil Refinery; it owns 50% of the assets of this enterprise;

  — in May 2013, Sinopec began building an aromatic hydrocarbon complex at the Atyrau Oil Refinery; it is to be put into operation at the end of 2015. It is presumed that this complex will produce 133,000 tons of benzene every year and 496,000 tons of paraxylene.

  Nevertheless, China's financing in the above-mentioned enterprises is still small (against the background of investments in production projects) and amounts to approximately \$2.4 billion, including \$1.4 billion in loans for building the aromatic hydrocarbon complex at the Atyrau Oil Refinery and around \$1 billion in investments to modernize/build the Zhanazhol Gas Refinery (\$895 million) and modernize the Shymkent Oil Refinery (from \$20 to 25 million).

  At present, China holds a relatively flimsy place in the refining segment of the Kazakh oil and gas industry. The Chinese share in the total volume of Kazakh oil refining is a little more than 14%, while its share in gas refining is a little less than 10%. The rest of the share in Kazakh hydrocarbon refining belongs to KazMunayGas. What is more, approximately 1/5 of the annual blue fuel production in Kazakhstan is refined by Russia's Orenburg Gas Refinery.

- *Second,* China is, in general, not pursuing an active policy in the refining segment of the Kazakh oil and gas industry. Chinese companies are still not inclined to build new large refining facilities, and Kazakhstan itself is not showing any particular interest in this. For example, it seems that implementation of the construction project for the same Zhanazhol Gas Refinery was most likely dictated by the technological need to utilize the vast amount of gaseous products extracted during oil production and the tough environmental demands rather than by commercial considerations.

  There are no other Chinese projects of this scope in Kazakhstan. As for the plans announced back in 2008-2009 to build an oil refinery on the border between Kazakhstan and the PRC, they have not yet been implemented.

- *Third*, in the short (up to three years) and medium (up to ten years) term, the oil production scope (and, correspondingly, its refinery) by Chinese companies in Kazakhstan is unlikely to significantly increase. Moreover, after the decision made in 2012 by the Kazakhstan Ministry of Oil and Gas about the extensive refining of Kazakh oil (around 1.5 million tons annually) at plants located in the XUAR in accordance with the toll scheme, it appears very unlikely that Chinese companies will build new oil-refining facilities in Kazakhstan.

At the same time, Chinese companies will increase gas-refining volumes in the short term. After the second and third strings of the third Zhanazhol Gas Refinery go into operation, the total capacity of these three plants will increase from the current 4.5 to 8 bcm a year. The resource base for the Zhanazhol Gas Refinery will be additional volumes of gas from the gas caps of the Zhanazhol field.

However, at least in the short term, the gas produced by Chinese companies will be sold in the Kazakh market (as is currently the case). In the medium term, small amounts of gas may theoretically be delivered to the PRC (approximately 4 to 5 bcm a year) via the Beineu-Bozoi-Akbulak-Shymkent gas pipeline, which is to go into operation in 2015. There is also the possibility of it joining up with the Turkmenistan-China gas pipeline.

It is also possible that China is hatching plans to take control of all the refining facilities in Kazakhstan: the Atyrau Oil Refinery and Pavlodar Petrochemical Plant (not counting the Shymkent Oil Refinery it already controls). This is probably the reason that China began building the aromatic hydrocarbon complex at the Atyrau Oil Refinery. The thing is that aromatic hydrocarbons can be used to raise the quality of petroleum products to high European standards (in Kazakhstan they are not used for other purposes). In so doing, Chinese companies will have a good opportunity to carve out a stronger niche for themselves in the refining segments of the Kazakh oil and gas industry.

In the long term (up to 20 years), the increase in the scope of China's participation in refining Kazakhstan's oil and gas will depend directly on two factors.

- The first is the participation/non-participation of Chinese companies in projects to develop the Tengiz and Karachaganak fields (although by this time they will most likely have reached the stage of diminishing production).
- The second consists of the success/non-success of the offshore projects Chinese companies will participate in (primarily the North Caspian project), as well as in the project to develop the Darkhan field, which China is probably saving for the future.

Implementation of the above projects will make it possible for Chinese companies to significantly increase oil and gas production volumes. In this case, we are likely to see common Chinese-

Kazakh interests in building new gas recovery and refining facilities in Kazakhstan. It can also be predicted (although not very confidently) that China will prefer to refine oil mainly in its own territory.

Pipeline Projects

The main goal of China's policy in the Kazakh oil and gas industry is to increase hydrocarbon production volumes and export them to the PRC. This determines one of Beijing's key and permanent priorities—building a pipeline system from Kazakhstan to China.

However, at present, Chinese companies are encountering the problem of filling the present and future oil and gas pipeline system. Despite this, China intends to increase its throughput capacity (at least in the short term), counting primarily on additional transit of Russian oil through Kazakhstan, as well as an increase in deliveries of Turkmen gas to the PRC via the Turkmenistan-China gas pipeline.

- *First,* since 2005, the PRC has been very active in building a pipeline system from Kazakhstan and through Kazakhstan to China. This fully corresponds to China's efforts to purchase assets in Kazakhstan's oil and gas industry and increase hydrocarbon production volumes in Kazakhstan. Between 2005 and 2009, two main oil pipelines were built using Chinese investments: the Kenkiyak-Kumkol and the Atasu-Alashankou, which make it possible to export up to 14 million tons of oil a year to China from the western and central regions of Kazakhstan.

  In addition, between 2008 and 2011, the PRC financed and built two branches of the Turkmenistan-China main gas pipeline, which makes it possible to transit up to 40 bcm of gas every year. In 2015, the third branch with a throughput capacity of 25 bcm a year is to go into operation. What is more, a local gas pipeline, Zhanazhol-KS-13, was built for supplying gas to the enterprises of OAO CNPC-Aktobemunaygas, as well as to the population settlements and economic facilities of the Aktobe Region.

  At present, China continues to finance the development of separate elements of Kazakhstan's gas pipeline system in order to create conditions for increasing deliveries of Turkmen and, in the future, Kazakh gas to the PRC.

  For example, China has financed the construction of the third branch of the main Turkmenistan-China gas pipeline with a throughput capacity of up to 25 bcm a year. The PRC is also financing the construction of another main gas pipeline, Beineu-Bozoi-Akbulak-Shymkent, with a throughput capacity of up to 10 bcm a year; it can be used to deliver gas from the western and southwestern regions of Kazakhstan to the southern, then (by means of the existing gas pipelines) to the country's eastern regions and on (theoretically) to China. In the future, there are plans to increase the throughput capacities of this gas pipeline to 15 bcm a year.

  At the same time, the main pipelines via which oil and gas are transported to the PRC have still not reach their throughput capacity limit. For example, the main Atasu-Alashankou oil pipeline is functioning at 65% of its throughput capacity, falling approximately 8 million tons of oil short. In turn, the main Turkmenistan-China gas pipeline uses up to 75% of its throughput capacity, falling approximately 10 bcm of gas short (in the near future there are plans to fill it to 100%, bringing the total volume of transportable gas up to 40 bcm by means of additional deliveries from Turkmenistan).

- *Second,* China's plans to build pipelines in Kazakhstan and through its territory are calculated for the long term. Despite the existing problems, they are still aimed at increasing the throughput capacity of the main oil and gas pipelines going to China.

The Chinese companies producing around 19 million tons of oil annually in Kazakhstan could theoretically fill the Atasu-Alashankou oil pipeline (designed to pump up to 14 million tons of oil a year). But for several reasons (the geographic location of the oil and gas fields and the existing oil transportation routes among them), China can only send oil from southwest Kazakhstan (from the Kumkol field) via the Atasu-Alashankou pipeline, as well as from the Zhanazhol, Kenkiyak-post-salt, Kenkiyak-pre-salt, and North Truva fields being developed by OAO CNPC-Aktobemunaygas. The total production volume at all the above-mentioned fields amounts to around 12 million tons a year; some of the oil (between 3 and 4 million tons) is sent to the Shymkent Oil Refinery.

There is also a lack of clarity in questions relating to the presumed deliveries of Kazakh gas to the PRC. For example, the projected capacity of the Beineu-Bozoi-Akbulak-Shymkent gas pipeline being built (which could technically join up with the Turkmenistan-China gas pipeline) amounts to 10 bcm a year. This volume (approximately 10-11 bcm of gas) could theoretically be supplied by the oil and gas fields of the Mangistau, Atyrau, and Kyzylorda provinces close to its route. But in practice it will be much lower due to the inevitable technological losses (no less than 30% in Kazakhstan's conditions) during extraction, recovery, and transportation of the gaseous product. What is more, some of the produced gas (at least 2-3 bcm) is essentially intended for the southern regions of Kazakhstan, which are presently buying it from Uzbekistan. Consequently, the theoretically potential export opportunities for transporting Kazakh gas to China presently amount to approximately 4-5 bcm a year.

It seems that it is precisely the lack of clarity about gas deliveries that largely explains why, if the Beineu-Bozoi-Akbulak-Shymkent gas pipeline is built, China will not be investing financial resources (as in the case of the Atasu-Alashankou oil pipeline and the Turkmenistan-China gas pipeline), but will provide Kazakhstan with them in the form of loans.

Nevertheless, despite the problems relating to filling the pipelines, their throughput capacity is systematically increasing in the Chinese direction. In addition, more oil-pumping stations are being built on the Atasu-Alashankou route, and a third branch of the Turkmenistan-China gas pipeline is under construction.

China is also placing the stakes on increasing deliveries of Russian oil via the Omsk-Pavlodar-Shymkent oil pipeline (which joins up with the Atasu-Alashankou oil pipeline at the Atasu station). There are also plans to promote a slight increase in oil deliveries from the Kumkol fields (by means of the same Atasu-Alashankou oil pipeline), which partially belong to Kazakhstan's KazMunayGas Exploration Production (AO) Company. They will most likely be carried out within the framework of Chinese-Kazakh toll operations regarding oil refinery at oil refineries in the PRC.

While striving to provide itself with additional volumes of gas, China is so far showing a priority interest in increasing Turkmen export.

- *Third,* in the short term (up to three years), China will no doubt raise the throughput capacity of the main Atasu-Alashankou oil pipeline from the current 14 to 20 million tons of oil a year, as well as of the Turkmenistan-China gas pipeline from 40 to 65 bcm.

In the medium term (up to 10 years), a further increase in the throughput capacity of the above-mentioned pipelines and the construction of new ones will only be possible if China joins some of the large production projects on the mainland (such as Tengiz and Karachaganak) and/or on the Caspian shelf. We must understand that for China much will depend on the success/non-success of the North Caspian project, the implementation of which depends on overcoming the numerous technological difficulties hindering development of the Kashagan field (not to mention development of several satellite fields that are also part of this project).

In the long term (up to 20 years), expansion of the pipeline system to China will continue to depend directly on the participation/non-participation of PRC companies in projects to develop the mainland fields Tengiz and Karachaganak (although by that time they will most likely have reached the diminishing production stage), on the one hand, and on the success/non-success of offshore projects in which they will be participating/want to participate (primarily, the North Caspian, as well as the project to develop the Darkhan field), on the other.

If Chinese companies succeed in significantly increasing the volumes of hydrocarbon production in any of the large projects, it stands to reason that more extensive (than during the last decade) work will be carried out to increase the throughput capacities of the existing and build new oil and gas pipelines going to the PRC.

The Sale of Petroleum Products

Since the middle of the first decade of this century, Chinese manufacturers of petroleum products have begun making increasingly active probes into the Kazakh market and successfully competing with Russian and even Kazakh companies. For example, the Sinooil Company began operating in 2005, delivering petroleum products and selling them in the Kazakh market. The PRC is essentially carrying out economic trade expansion, which will only increase in the future.

- *First,* although the Chinese presence in the Kazakh petroleum product market emerged relatively recently, its share, nevertheless, amounts to between 15% and 20%, according to different estimates.
- *Second,* in all likelihood, China does not want to rest on its laurels and intends to strengthen its position even more. It appears that one of the ways it hopes to reach this goal is by organizing the production of aromatic hydrocarbons at the Atyrau Oil Refinery and raising the quality of petroleum products to European standards. By possessing a monopoly on the production of aromatics, Chinese companies will have a unique opportunity to take control over a large part of high-quality Kazakh petroleum products (and then strengthen control over the petroleum product market).
- *Third,* in the short, medium, and long term, the penetration of Chinese trade companies into the Kazakh market will undoubtedly only increase. This is favored by the fact that Kazakhstan prefers to import petroleum products from China to building new oil refineries. What is more, Chinese companies will most likely increase production and sales volumes of liquefied natural gas (LNG) in the Kazakh market.

Conclusion

The format of the PRC's presence in Kazakhstan's oil and gas industry is objectively promoting Kazakhstan's energy/resource exhaustion and enforcing its raw appendage status rather than developing comprehensive and full-fledged (primarily industrial-innovation) cooperation between the two countries.

In the short and medium term, the nature and scope of China's presence in Kazakhstan's oil and gas industry is unlikely to significantly change. In the long term, much will depend on whether Chinese companies gain access to "big oil" and "big gas" from the offshore fields, primarily within the framework of the North Caspian project. If "big oil/big gas" is manifested and China is able to take active part in the offshore projects, the scope of its presence in Kazakhstan's oil and gas industry and in all of its segments will increase. In turn, Kazakhstan's energy and strategic significance for the PRC will rise.

However, even in this case, the current format of China's presence in Kazakhstan's oil and gas industry is unlikely to significantly change; the PRC's efforts will continue to be aimed primarily at exporting raw hydrocarbons from Kazakhstan. At the same time, the refining of Kazakh hydrocarbons is unlikely to become one of the main activities of Chinese companies.

The Chinese will undoubtedly build additional facilities for purifying natural gas and its liquidation. Nevertheless, it is very unlikely that the export-raw material orientation of the Kazakh oil and gas industry will drastically change. This is explained by the fact that there are no plans to engage in the deep refining of hydrocarbons entailing the manufacture of petrochemical and gas chemistry products with a high added value under these projects.

It appears that if the PRC's attempts to participate in "big oil/big gas" are unsuccessful, Kazakhstan's importance will significantly diminish in its eyes. In turn, Kazakhstan's share (2-3%), which is miserly anyway in meeting China's oil demands, will decrease even more.

However, whatever happens, China will continue to have an interest in Kazakhstan's oil and gas industry. Even if it does not gain access to "big oil/big gas," the PRC will continue its presence in Kazakhstan, but it will no longer be dictated so much by oil and gas, as by other considerations, including geostrategic.