THE OIL SECTOR OF KAZAKSTAN:
Some Prospects for Land Lock Breaking

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Abstract

The paper summarises recent developments occurred in Kazakhstan while transition to the market-oriented economy, especially in the industrial sector. The comparative analysis of various options for solution of problem of Kazak crude oil exports from landlocked Central Asia to global markets is given.

Introduction

One subject of global importance in the foreseeable future is the extraction of rich oil and gas resources in the Central Asian countries and the potential effect of that process on the re-establishment of international links and markets. The present paper illuminates some key aspects of the current development of oil and gas industry of Kazakhstan1, one of the most economically significant states in the region, and the role that country could play in regional and international affairs in view of the newly emerging geopolitical situation around the Caspian oil.

Several factors make the future of Central Asia’s external dynamics particularly challenging.

First, the potential economic significance of the region, especially the

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1. The spelling of Kazakhstan was revised by an August 1995 nation-wide referendum. The former English spelling Kazakhstan was approximated to the indigenous pronunciation by removing the 'h'. This change was recognised by the United Nations.
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extremely rich oil and gas resources in the Caspian basin.

Second, the geographical contiguity of Central Asia with the Middle East and Southwest Asian regions has automatically enhanced its geopolitical significance and sensitivity to both regional (i.e. Iran, Turkey, Russia, China) and extra-regional (i.e. the United States, Western Europe and Japan) players. This once obscure and isolated heartland part of Eurasia now constitutes a new bridge between Middle East and Far East.

Third, the significance of this geographical contiguity has been complemented and magnified by the region’s “natural” cultural, ethnic, linguistic and religious confluence with Southwest Asia from one side, and with Russia - from another side. It is just the characteristic, which may, at least for the immediate future, give such prominence to Central Asian geopolitical considerations.

Finally, it seems that Sub-Caspian region will be a major test site for the ultimate shape which Russian foreign policy will take in the post-Soviet period. Relations with the new independent states in Central Asia will not only be an indication of Moscow’s general attitude towards the other states of FSU, but will also reflect Russia’s self-perception of her magnitude and proper place in the post-Soviet space.

Analysis has been carried out on the base of available information sources of Ministry of Economy, State Statistical Committee, and various academic and business periodic of Kazakstan, Central Asia, Russia, other countries of the former Soviet Union (FSU) and the world.

Outline of Economic Performance

The deep depression of output in Kazakstan as well as in the other CIS countries continued in 1995, but the fall in output slowed considerably, and there are expectations of an upturn beginning to emerge in more in 1996. Such a possibility, however, will very much depend on what happens in Russia with which economic links are still very close for many Kazakstan industries. Kazakstan’s GDP fell by 8.9% in 1995 (comparing with 25.4% in 1994), and this was no more than government expected at the beginning of that year. There are hopes that if the slight progress made with economic stabilisation last year can be maintained, Kazakstan’s output might stabilise in the course of 1996. But it must be stressed that the uncertainties are considerable and that the range of forecasts for 1996 also includes a further decline in output.
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The gap between expectations and outcomes underlines yet again the difficulties of making forecasts during and after a period of rapid structural change. This is true of the Western market economies, where the short-term forecasting models still do not seem to have absorbed the consequences of the extensive deregulation that occurred in the 1980s. But it is even more valid for those countries undergoing complete systemic transformation and large-scale restructuring of their economies.

Virtually all government and independent forecasts failed to anticipate the depth and length of the depression that followed the onset of the transition process in 1992 and after. Most of the forecasts made for the transition economies are at best informed judgments and in some cases little more than working, or hopeful, assumptions. This is not surprising and, indeed, is unavoidable.

The recovery in Kazakstan has been based to a very large extent on the revival of extractive industry. Although the development of the service sector is one of the most important and conspicuous aspects of the transition process, its weight in the economy of Kazakstan is still relatively small. Industry, on the other hand, was excessively large in the economy before 1992, and although parts of the capital stock may be economically redundant, it still had the capacity to recover sooner and more quickly than other sectors. On average industrial production continued to fall, however the drop in industrial output in 1995 was much smaller than in 1994: -7.9% as compared with -28.5%.

In this context it should also be noted that the evidence is that although the private sector is playing a leading role in this process, the recovery is not confined to private enterprises. Anticipated productivity gains will be also due to general improvements in efficiency resulting from the restructuring of output, the shedding of redundant labour, and the adoption of new production methods. Those are often going in conjunction with investment in new and more up-to-date machinery and equipment and with broadening usage of advanced methods of management. Assessing the relative importance of these various factors is a matter for separate research. But it seems reasonable to assume that the supply-side improvements in industry would be an important pre-condition for Kazakstan being able to take advantage of the new opportunities for rapid export growth to the international markets.

Another important development in the transitional economy of Kazakstan in 1995 was a sharp decline in rate of inflation, by much more than was a year
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ago. Annual inflation is proving to be 60.9%, as compared with 1,258% in 1994.

Since inflation appears to have monetary nature it is amenable to monetary stabilisation policy, as modern studies of transition in Eastern Europe and FSU have shown. The current rate of inflation in 1996 (about 2.5% per month) does not, for example, appear to be a serious constraint on fixed investment. The deceleration of inflation was clearly helped to, among other factors, the rise in output and productivity in extracting sector.

By the beginning of 1995 net foreign capital flow into Kazakhstan reached $3.111 billion. From those direct investments amounted to $0.519 billion, mid- and long-term credits - $1.340 billion, financial and technical aid in the form of long-term loans - $1.06 billion and grants - $0.192 billion. Annual volume of foreign investments used amounted to $380 million in 1994, including the direct investments $291 million.

Foreign investments in Kazakhstan’s mineral and raw material sectors increased by 20 times from 1992 through 1995.

This seems to confirm the view that foreign investors are attracted to economies when reforms and stabilisation policies are in place and credible, and when the prospects for growth seem reasonably firm. Such large inflow of foreign capital may create problems for domestic monetary control and there is an additional risk of sudden and disruptive outflow of short-term capital. However, the inflows into Kazakhstan consist of a wide range of types of capital, from FDI, through portfolio investment to medium- and long-term bank credits. Short-term obligations appear to be a small proportion of the total and easily covered by reserves.

Considerable progress was made in 1995 with stabilising the Kazak economy, and the increasing optimism about the possibility of a return to growth in 1996 seems to be supported by a slightly emerged recovery of industrial output in summer and early autumn. In the mid-1996 Kazak authorities have reached an agreement with the IMF on granting an Extended Fund Facility (EFF) - a three-year loan which differs from standard IMF packages by including structural reform elements. The size of facility will be total $500-600 million. Kazakstan’s performance in the first quarter of 1996 under a one-year, $290 million stand-by facility issued in June 1995, was taken into account. The IMF is co-operating with the World Bank in backing structural adjustment programmes to help boost
banking sector efficiency and government tax collection. Kazakhstan has already had two one-year stand-by deals with the IMF. The EFF package would go in step with a three-year government economic programme aimed at establishing steady economic growth and cutting annual inflation to between 9% and 12% by 1998 from 60.9% last year. The medium-term programme also envisages completing privatisation and restructuring of the banking system. Under the programme, Kazakhstan is aiming for economic growth of 0.4% in 1996, 0.9% next year and 2.8% in 1998. Inflation is projected to fall to 25.9% this year, 15% next year and 9% in 1998, from 60.4% last year.

Industry at a Glance

Economy of the Republic is highly industrialised. In 1994, gross industrial production constituted 33.5% of total GDP. Major industries are associated with the processing of raw materials, including metal-processing, fuel, power, chemicals, machine-building, textiles and food-processing industries.

Industrial production fell 7.9% in 1995 (28.5% in 1994, 14.8% in 1993 and 13.8% in 1992). The sectors most affected have been light industry, machine building, metalworking and the production of construction materials, with decreases ranging from 45% to 55% (in 1994).

Along with a sharp decline in industrial output between 1992 and 1994, industry’s share in GDP fell from 42% to less than 34% over the same period. The fact that industry now doesn’t account for the largest share of Kazakhstan’s economic output reflects not only the sharp contraction in some sectors of the industrial economy, but the increases in the shares of trade and services. Probably, that phenomenon brings some evidence of progress to the market economy.

However, in the foreseen perspective the economy is forced to be increasingly oriented towards the exploitation and processing of the country’s raw materials, and extracting industrial sector should maintain its dominant position. Obviously, such situation taking shape, as the strengthening orientation of the economy towards the production of raw materials to the detriment of production of final goods does not promote the conversion of potentially rich Kazakhstan into a state with profitable economy based on the principles of high technology.

The State of Energy Sector

After Russia and Ukraine, Kazakhstan is the third largest energy producer
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among the former Soviet Republics. Its share of the FSU's overall energy production in the eighties stood at about 5.5%. The major primary energy source is coal, which accounts for 50-55% of the primary energy consumed in the Republic. Petroleum takes second place with about one-third of the total, followed by natural gas with some 13-15%.

Thus far, 169 hydrocarbon deposits have been discovered in the Republic, of which 87 are oil fields, 17 gas fields, 30 gas and oil, 25 oil and gas condensate, and 10 oil condensate. These are concentrated in Western Kazakstan. Besides the known oil and gas basins, there are several sedimentary basins in Kazakstan which have either been inadequately examined, or not surveyed at all. These include northern Turgai, Aral, central Syr-Darya, Shu-Sarysu, Ili, Balkhash, South Dzhungar, Alakol, Zaisan and the Irtysh depression.

Despite being rich in indigenous energy sources and an important fuel and power producer, Kazakstan is a net importer of energy. This anomalous situation is the result of three main factors.

Firstly, Kazakstan’s energy sector is highly integrated with the neighbouring Republics. Energy distribution was not planned in terms of the requirements for an “internal market” for Kazakstan, but rather to satisfy demand at the closest consumption area, anywhere in the FSU.

Secondly, as a result of the investment priorities drawn up in Moscow as well as the lack of hard currency, the oil and gas industry was increasingly unable to obtain access to the most modern technology. As a consequence, old equipment and the inadequate maintenance of the existing infrastructure increased inefficiency and resulted in Kazakstan producing far below its potential.

Thirdly, the price structure for energy was highly distorted. This weakened the incentive to focus on energy savings and effectively subsidised the inefficient use of available resources.

The government has consequently decided on a programme which should make the country energy self-sufficient by the year 2000. This will be done by an all-round improvement in energy management: identifying more efficient ways of meeting the country’s energy needs and increasing the local exploration of energy sources. However at the present time Kazakstan is importing missing amounts of energy from Russia and Kyrgyzstan.
Oil and Gas: Landlocked with Treasures

Kazakhstan's annual oil production (Fig. 1) was over 20 million tons in recent years. Fig. 2 presents the distribution of crude oil and natural gas liquids production among the FSU countries. The Republic consumed some 15-18 million tones of oil per year in the period 1990-1995 and is, therefore, a net oil exporter.

Fig. 3 contains the comparative data about proven oil reserves in selected countries of the world, including Kazakhstan.

At the end of 1995, Kazakhstan had proven oil and gas condensate reserves of 3 billion tons (21.9 billion 137-litre barrels). Forecast evaluations of reserves achieve 7 billion tons of oil. Most of the reserves are concentrated in relatively few fields, with the ten biggest fields representing around 90% of known oil reserves. Given the low level of exploration done during the Soviet period, more areas are thought to contain oil and are being examined.

The huge oil deposits found on the shelf of the Caspian Sea are becoming an unprecedented challenge for further development. The Caspian Sea is a true reservoir of natural treasures. Marine waters of the north-eastern part of the Caspian Sea conceal the greater of possible oil reserves of Kazakhstan.
Figure 2. Breakdown of crude oil and natural gas liquids production among countries of the FSU. Total FSU's production: 6,960 thousand bpd (1995).

Figure 3. Proven oil reserves at the end of 1992. * - 1991 figures
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In March 1993, the state-owned company Kazak Caspiy Shelf (KCS) was set up to oversee the exploration and development of oil and gas resources in Kazakstan’s 103,000 sq. km share of the Caspian Sea. In June, a consortium consisting of the Italian company Agip, British Petroleum and British Gas, Mobil, Total (France), Shell and Norway’s StatOil signed the agreement calls for a three-year geological study of the region’s oil potential, with KCS expecting exploratory drilling to begin in 1997 and production to start by 2000.

Recently the international consortium KCS has completed its survey of Kazakstan’s offshore oilfields on the Caspian Sea shelf. That was the first stage of the surveying project. The research work will be completed by May 1997. A new consortium will be created for the next stage of the project, which involves prospecting, operational drilling and extracting hydrocarbons from the oilfields. Preliminary negotiations on this are currently being held with foreign firms.

Although no exhaustive survey of the region’s oil potential has yet been done, preliminary data suggest that there is a lot of oil. Estimates range from 26 billion to 60 billion barrels. The low end of the estimate would more than double Kazakstan’s current reserves, placing the Republic in the same league as Russia. At the high end of the estimate, Kazakstan would have the equivalent of over 85% of Kuwait’s current oil reserves. The area is also thought to contain 2 trillion cubic metres of gas, which would more than double the Republic’s current gas reserves. The efficient development of these deposits call for the use of advanced equipment and technology, and will require huge investments. The cost of the survey is expected to be around $200 million, while the development costs could exceed $30 billion.

Two urgent problems should be emphasised which are to be solved first of all to ensure the clear long-run development perspectives. The first has political nature and reduces to the determination of legal status of the Caspian Sea, i.e. to the issues of ownership of oil fields on the shelf. The second relates to investment in the broad sense, especially to building and development of extracting and processing facilities and to construction of pipelines (including reasonable choice of route of destination).

The official view of Russia is that, due to its unique natural characteristics, the Caspian Sea should be considered as a lake, and therefore the common legal norms consisted in the 1982 UN Convention on Maritime Laws, are not applicable to the five countries bordering the sea. Russians insist on the off-
shore part of the Caspian Sea must become a free zone where each nation that borders the sea has equal rights in developing the oil reserves. Kazakhstan does not agree with the Russian position on the Caspian Sea considering it inadequately grounded and adheres to the opinion that the Caspian status whether it is a sea or a lake needs further thorough determination.

It seems however that actually partition of the Caspian Sea by national economic zones has already taken place. And any attempts of revision of the existing Caspian’s territorial division would undermine traditional good-neighbour relations in the region and neither of the states involved is likely to risk any confrontation.

In April 1993, in the biggest deal of its kind between a CIS member and a major oil company, Chevron and Kazakhstan created the joint oil venture, Tengizchevron. The 40-year agreement is expected to make the Republic a major oil exporter within 10 years. The joint venture, which will exploit the Tengiz and Korolev oil fields, plans to increase annual output from the two fields from the current 3.25 million tons (65,000 barrels per day, bpd) to over 35 million tons (700,000 bpd) by 2007. In all, Tengizchevron plans to extract between 6 billion and 9 billion barrels of oil over the life span of the project.

Oil and gas deals have also been concluded with several other companies, including Elf Aquitaine (France), Agip (Italy) and British Gas, the Turkish companies BMB and Turkiye Petrolleri, the Oman Oil Company, Japan Petroleum Exploration Co. Ltd. (JAPEX) and trading house Sumitomo Corp. In all, the government has plans for the development of more than 40 oil fields with foreign companies. Elf is involved in five-year exploration programme at the Temir field, between Karachaganak and Tengiz, which can be extended to 30 years.

The three biggest agreements concluded so far will result in significant investment in Kazakhstan: about $20 billion by Chevron over 40 years, $6 billion by British Gas and Agip over a ten-year period and possibly up to $3 billion from Elf. Most of the funds will be spent on drilling and production facilities, but a portion will be invested in environmental protection measures and local social development projects.
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Table 1. Production of Oil in Kazakhstan by Producers in 1993-1996, thousands bpd

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Joint ventures:
- Arman: -


Condensate:


Note: 1996 - estimates

Table 1 presents data about the outputs of main oil producers in Kazakhstan in 1993-1996.

By the year 2000, as a consequence of the deals signed so far, Kazakhstan's oil exports are likely to be more than triple the 1992 level, which should result in additional hard currency inflows of close to $3 billion annually.

In the recent years production of oil in the Republic refrains on more or less stable level thanks to investments, which were made on replacement of obsolete oil equipment. This was also promoted by conclusion of contracts with international companies and adoption of legislative act packages for settlement of transactions with foreign investors. In 1995, Kazakhstan adopted a new oil and gas law which will serve as a crucial shift in attracting foreign investment. Particularly, the law provides a broad possibilities for competitive price offering on energy projects. Besides, according to the law, the Kazak authorities may grant exploration rights by means of tender, as well as through direct negotiations. Transactions may be contracted through establishment of joint ventures, production-sharing arrangements and various service agreements.
PRESENTLY, PRACTICALLY EACH A LITTLE BIT ATTRACTIVE PROJECT FOR MASTERING ANY OIL DEPOSIT ON THE TERRITORY OF THE REPUBLIC HAS AN INTERNATIONAL PARTNER. NEVERTHELESS DEVELOPMENT GOES WITH HARDLY NOTICEABLE PACE. THIS IS BECAUSE KAZAKSTAN STILL DID NOT FIND PROFITABLE VERSION OF AN ACCESS TO INTERNATIONAL MARKETS OF OIL AND DID NOT MAKE A DECISION RELATING TO THE PROJECTS OF OIL REFINERY, WHICH ARE CONSIDERED AS ALTERNATIVE.

GEOLoGICALY, BOWLS OF KAZAKSTAN CONTAIN COUNTLESS WEALTH, HOWEVER GEOGRAPHICALLY, FROM THE POSITION OF OIL TRANSPORTATION TO INTERNATIONAL MARKETS, THE REPUBLIC IS LOCATED EXTREMELY UNFAVOURABLE. KAZAKSTAN IS LANDLOCKED. OTHER UNFAVOURABLE CIRCUMSTANCE IS THAT CONSIDERABLE PART OF OIL AND GAS RESOURCES IS DISTANT FROM REFINERY ENTERPRISES AND SUFFERS FROM THE LACK OF DOMESTIC PIPELINES. RESOURCES ARE LOCATED IN THE WESTERN PART OF THE REPUBLIC, MAINLY IN SUB-CASPian REGION AND PARTIALLY IN CENTRAL KAZAKSTAN (KUMKOL), THOUSANDS OF KILOMETRES FAR AWAY FROM THE MAIN CENTRES OF THEIR CONSUMPTION AT THE NORTH-EAST AND SOUTHEAST. FROM 120 OF EXPLORED OIL DEPOSITS 112 ARE ON THE WEST, MAINLY IN AKTAU AND AYTURA REGIONS, NEAR EASTERN COAST OF THE CASPIAN SEA.

DIFFICULTIES WITH CRUDE OIL TRANSPORTATION FROM KAZAKSTAN ARE CONDITIONED BY AT LEAST TWO REASONS.

ONE OF THEM IS CONNECTED IMMEDIATELY WITH PIPELINES. CURRENTLY PUMPING KAZAK AND RUSSIAN OIL ON THE TERRITORY OF THE REPUBLIC IS REALISED BY FOUR PIPELINES. THE FIRST IS LAID EASTWARD AND WEST-SIBERIAN OIL FROM RUSSIA COMES THROUGH IT TO PAVLODAR AND SHYMKEHT REFINERY FACTORIES. BY THE SECOND, KAZAKSTAN’S OIL FROM AKTYUBINSKNEFT SUPPLIER IS FED TO ORSK FOR RUSSIAN REFINERS (SUPPLIES ALONG THIS ROUTE ARE REGARDED ONLY AS COMPENSATIONS, LIKE PAYMENTS FOR WEST-SIBERIAN OIL RECEIVED BY KAZAKSTAN). THE THIRD DELIVERS OIL FROM WESTERN KAZAKSTAN TO SAMARA, THE CENTRE OF RUSSIAN CONDUIT SYSTEM. FROM SAMARA CRUDE OIL MAY BE FORWARDED NORTHWARD, TO EXPORT TERMINALS ON THE BALTIc SEA, WESTWARD, THROUGH PIPELINE OF “DRUZHBA” TO CENTRAL EUROPE, AND SOUTHWARD, TO THE BLACK SEA. THE FOURTH LINE RUNS OUT FROM AYTURA REGION TO ASTRAKHAN IN DELTA OF VOLGA, AND IN FUTURE MAY BE USED FOR CONSTRUCTION OF TRANSPORTATION SYSTEM FROM WESTERN KAZAKSTAN TO EXPORT TERMINAL OF NOVOROSSIYSK ON THE BLACK SEA.

THE OTHER PROBLEM, PARTLY BEING A CONSEQUENCE OF THE FIRST ONE, CONCERNS QUOTAS. NOW, EVERY YEAR KAZAKSTAN IS FORCED TO APPLY TO THE RUSSIAN MINISTRY OF FUEL AND ENERGY TO RECEIVE QUOTAS, QUANTIFYING THE OIL, WHICH RUSSIAN OPERATOR TRANSNEFT WILL PASS THROUGH PIPELINE TO SAMARA. ONE QUOTA IS GRANTED FOR THE
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export of crude oil outside of CIS, and the second one for delivery of oil to consumers in Russia and the FSU states. Since prices on oil in the countries of the FSU are, as a rule, lower than in the West and buyers in these countries often do not pay for supplies in due course, the export to “near abroad” scarcely may be a kind of tempting option. Therefore it is clear, that one, controlling physical export of oil, always aspires to reserve the greater share of export quotas, allocated for “remote abroad”, for himself.

In 1995 year Kazakstan received an export quota amounted in 3.5 million tons (70,000 bpd). In addition, the Republic was given a permission for transportation of 2.5 million tons of crude oil (50,000 bpd) to the refiners of Russia and “near abroad”. Theoretically, the above-mentioned export quotas are intended for all producers, including foreign joint ventures, operating in Kazakstan. But during the last years Chevron’s project of exploitation of giant Tengiz deposit won the lion’s share of quota for export. Other foreign joint ventures are forced to content by remainders.

Hardly somebody is satisfied with the situation. Even Chevron itself, having capacities to extract up to 6 million tons of oil a year (120,000 bpd), could be able to forward to foreign markets only a part of its production. Actually, domestic Kazakstan producers do not have shares in export quota and are strongly upset by this matter. However, what options are seen in the solution of the transportation problem?

Consider the westward direction. In the Soviet epoch Kazakstan was dispatching around 3 million tons (60,000 bpd) of oil from port Aktau through the Caspian Sea to Baku (Azerbaijan), as well as to Makhachkala and Astrakhan. Now the volume of Trans-Caspian transportation decreased to 1 million tons (20,000 bpd), since Azerbaijan offers extremely low prices for oil and refiners from Baku are oversupplied with crude oil. Moreover, at least $50 million are needed in order to port Aktau would continue to operate as an oil terminal. (The sum does not include inevitable additional expenditures for strengthening the coastline at the port in view of permanent increasing of the Caspian Sea level). Therefore this variant does not seem to be one of the profitable ones for the time being.

Kazak producers, including Chevron, also consider a possibility of constructing a pipeline under Caspian Sea to Baku. From Azerbaijan oil could enter the pipeline designed by consortium Azerbaijan International Operating
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Company (AIOC)\textsuperscript{2} for handling export through the two lines. The first will carry crude from Baku to Grozny (Chechnya, Russia) and then on to Novorossiysk on the Black Sea. The second line runs from Baku through to Georgia’s Black Sea port of Poti. Both pipelines need upgrading and modernising. The estimated investment required by the first route line is some $50 million, while the second route needs nearer $200 million. A key aspect of this dual pipeline decision is security of supply, in that the pipelines pass through some volatile areas.

In 1992 Russia, Kazakhstan and Oman Oil Company established Caspian Pipeline Consortium (CPC) with plans to build and to equip a line for transportation of oil from the Tengiz region. Financing of project is appraised to be $1.2 to $2 billion. The total length of the new pipeline from the Kazak oil fields to the terminals in Novorossiysk is 1,600 km, with a capacity of 56 million tons a year. Chevron also participates in the project as a guarantor for transportation of oil along this way. List of participants of the project underwent changes several times. Last updates in the list and in breakdown of shares were made in April of 1996. Originally, the founders of the Consortium, Russia, Kazakhstan and Oman Oil Company had equal shares, however later the co-founders of the CPC have had their combined share cut to 50%, with the other 50% shared between Russian, Kazak, European, and USA oil and gas companies. CPC now also unites other oil companies for implementation of the project of pipeline construction, which is estimated to cost $2 billion. Their shares are distributed as follows: Kazakhstan 19%; Russia 24%; Oman 7%; MunaiGas 1.75%; LukOil 12.5%; Rosneft 7.5%; Chevron 15%; Mobil 7.5%; British Gas 2%; Agip 2%; and Oryx 1.75%. Ultimately it became that Russia possesses with 44% of shares in Caspian Pipeline Consortium, and the American companies follow it. After hot debates Russian transport company of Transneft became an operator of the project and will direct it in the financial issues. American company of Wilmex will be a general contractor of the project. Pipeline, intended to connect Caspian and Black seas, will come into operation in two years and a half. Latest agreements, signed as a result of negotiations, will allow to finish

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\textsuperscript{2} AIOC is made up of a consortium of 11 Western oil companies. They are developing the Azeri and Chirag fields as well as a deepwater part of the Gunashli fields in the Caspian Sea as part of a production agreement signed with the Azerbaijan government in September 1995.
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construction of the first section of pipeline Kropotkin-Novorossiysk at the end of 1997 or in the very beginning of 1998.

Obviously, in the short- and middle-run Kazak oil will be transmitted mainly through the Russian territory toward terminals of Novorossiysk. However, in the long-run, as the volumes of oil extraction in Kazakstan increase, capacities of Russia to transport Kazak oil will decrease. This circumstance is brought about both by the limited technological capacities of pipelines and by natural economic competition. Exports of crude will remain the major source of budget revenues of Russian economy in foreseeable future, and therefore Russia objectively is not likely to be interested in unlimited promotion of her competitors on the international oil market. Bearing this in mind, Kazakhstan should not put all her eggs in one basket, and it would be useful to consider alternative routes for transportation of oil. The following principles for selection of specific route may serve as guiding ones: reliable investment, security issues, competition with other oil producers and geopolitics.

The alternative to Baku-Novorossiysk way is the Baku-Ceyhan pipeline which has been proposed by Turkey as a route to Turkey’s Mediterranean coast. Its length is planned to be 1,650 km and to pass through Azerbaijan and Georgia. The pipeline, first proposed in 1993 but later overshadowed by another deal for a pipeline via Georgia to the Black Sea by an international consortium to develop Caspian oilfields, could cost about $2 billion. Competing with Russia and taking objective environmental issues as a pretext, Turkey is attempting to promote the pipeline to prevent further oil movement via her narrow Bosphorus and Dardanelles straits, through which up to 32 million tons of mostly Russian oil is shipped annually. Current Central Asian and Caspian oil development projects involve the Black Sea, and therefore the straits, as the only outlet for the oil, carrying 62 million tons per year at full stream. Turkey offers Baku-Ceyhan proposal to become a feasible gateway for the Caspian oil. Baku-Ceyhan line was designed to carry up to 45 million tons of crude annually.

3. Ceyhan has been idle since the twin Kirkuk-Yumurtalik pipeline was closed in 1990.
4. According to the Turkish estimates the oil traffic through the straits could be increased by a maximum 20%, because the current annual oil passage has been posing a danger to the 12 million people living in Istanbul. To prevent further oil tanker movements Turkey restricted tanker navigation through the straits after a fire caused by a collision in the Bosphorus in 1994.

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Responding to the Turkish challenge and not willing to lose the increasing profits from the transportation of Caspian oil through her territory, Russia together with Bulgaria and Greece put forward the initiative of constructing the Burgas-Alexandropolis pipeline. The essence of their project is to bypass the Bosphorus and the Dardanelles, thus evading imposed limits on the passage of large-capacity tankers, and deliver oil from Novorossiysk to the Bulgarian port of Burgas by tanker, and from there pump it over the pipelines to Greek terminals in Alexandropolis. Between 40-60 million tons of oil are expected to be carried annually and there will be storage facilities at both ports. The pipeline’s length will be about 300 km and it will cost up to $700 million. According to estimates the construction can be completed within three years.

It is likely that neither Turkish and Greek variants of pipeline are met with unambiguous enthusiasm, since each of them bears obvious shortcomings. From one hand, it is true, that the Greek pipeline is much shorter than the Turkish one and it will run through the quiet countries, while some parts of the Turkish pipeline will be built in turbulent areas of Transcaucasia and rebel Kurdish territories. Besides, complex orography makes cost per kilometre of the Turkish pipeline more expensive as compared with the Greek one. But from the other hand, in case of the Greek project, transportation includes usage of tankers from Novorossiysk to Burgas which ultimately increases its cost. And finally, the part of the route leading to Novorossiysk runs across not completely controllable Russian Northern Caucasus. Appraisals of economic efficiency of both projects given by their initiators contradict each other. Russia, Bulgaria and Greece assure that their pipeline will be at least ten times cheaper, while Turkey insists that delivery of Kazak crude through her system to European consumers will cost twice less expensive.

The southward transport window through the Northern Iran might serve as another variant for export of substantial volumes of Kazak crude oil to international market.

Refiners of Teheran, Tabriz, Arak and Isfahan are distant from Arabic Gulf and experience shortages in crude. They might go over to Kazakstan’s oil, and the equal volumes of its own oil Iran would ship from Kharg Island to international market. Iran already builds terminals on Caspian shore to conduct such trade.

In August of 1996 the two countries signed an agreement on the export of
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Kazak oil to international markets via Iran. Under the accord on the oil swap deal Kazakhstan will deliver 2 million tons of oil annually to Iran's Caspian Sea ports, and Iran will deliver the same amount of oil to Kazakhstan's customers in Iran's Gulf ports. Iran will refine the Kazak crude oil at local refineries for domestic use. Project designing for construction of 100 km pipeline, connecting Northern Iranian refiners with their Caspian terminals of Enzeli, is already under way.

Meanwhile Iran can independently solve the problem of shortages at her north. Recent exploration of deposits at the southern part of Caspian Sea raised hopes, that offshore resources could serve as viable sources of domestic crude. Besides, similar to Russia, Iran herself is one of the main world oil exporter and that implies the possibilities of promotion of Kazak exports from her side also suffer from inevitable restrictions. Moreover, search for large-scale financing such schemes may be impeded without improvements of American-Iranian relations. Therefore, it seems that the option described above should be considered as undoubtedly useful, but temporary, short-run, palliative measure.

However, analysing various projects proposed, it should be taken into account that Moscow, explicitly or implicitly, will be against any schemes, involving oil export not through the Russian pipelines.

As to the eastward direction, Kazakhstan examines possibilities to lay pipeline to the Chinese shore of the Pacific. It is expected that Japan, China and countries of the Southeast Asia might become the main consumers of Kazakhstan's hydrocarbon raw materials in the next century. The proposed Trans-Asian pipeline will be the longest in the world. According to the various estimates the construction would require a sum from $8 to $12 billion. The necessary preconditions to implementation of such unprecedented large-scale construction will be laid just in the very near future, after completion of well-developed network of domestic pipelines connecting oil-producing West of Kazakhstan with her industrial East. Memorandum of understanding about establishing joint venture engaged in construction of internal pipelines signed in 1995 by MunaiGas and Saudi Arabian International Pipeline Company points to some progress in this issues. We think the future Trans-Asian pipeline might be also used for delivery of certain volumes of the Russian oil from the West Siberian fields to Far Eastern consumers in exchange for transportation of Kazak oil through Russian pipelines to Europe.
The lack of export pipeline outward the Republic hinders to majority of investors to launch any important expensive program in oil sector. Direct investments to oil industry since 1991 exceeded $1.5 billion. The share of Tengizchevroil amounts to $700 million. But now Chevron shelved its early extended plans for the best times, when export problems will be resolved.

Other joint ventures are not in a hurry to increase their expenses. Apart from Chevron there really act about 10 foreign projects. But their production output amounts by little more than 620,000 tons/year.

Kazakstan’s oil refinery enterprises are badly equipped and need modernisation. New projects are not attractive from the financial side. Especially disappointing is looking the postponement of plans for construction of new enterprise in Mangystau, intended for recycling oil from Buzachi Peninsula, annual extraction of which is appraised to be 6 million tons, that makes about 30% of Kazakstan’s total production. Oil of Buzachi is very viscous and should be heated or mixed with light one before transportation through pipeline. However, since oil is also extracted in other regions, in particular at Tengiz and is sold on more high prices, the oil of Buzachi is actually excluded from the export quotas, to great disappointment of local producers. In the beginning of 1993 a group of Japanese companies, in which number are Toyo Engineering, Mitsui and Mitsubishi, won tender on construction of refining factory in Mangystau. The first phase of the project includes installation of unit with output capacity 3 million tons a year and estimated cost of about $1.5 billion, but the construction still not begun till now.

So, if relevant resolute investments are to be made Kazakstan may boost up her oil production to substantial level in foreseeable future.

Completing the discussion of oil sector we should pay attention to another important issue - urgent necessity of shift towards the more deep processing of oil, rather than promote traditional refinery technology. That is much more profitable in view of expensive transportation from landlocked Kazakstan. For instance, ethylene and ethylene oxide might become prospective semi-products for new high-tech industrial oil chemistry. In this connection close co-operation with such chemically advanced countries as Japan seems of great importance in view of further organising the efficient export of competitive synthetic materials.

There is significant potential for the further development of Kazakstan’s gas industry. The Republic consumes some 15-16 billion cubic metres of gas
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annually, but produces less than half of this volume (Fig. 4). In 1995 gas output was just over 4.8 billion cubic metres, of which Kazakgaz produced 2.58 billion and MunaiGas over 2.2 billion. The rest is covered by imports from Uzbekistan, Turkmenistan and Russia. It is projected that the demand for gas within the country could reach 28 billion cubic metres by the year 2000. As in the case of oil, Kazakhstan’s gas is produced mainly in the north-western part of the Republic, while the main consumption areas are in the south. Fig. 5 presents proven gas reserves of Kazakhstan and some other gas-extracting countries of the world. The main producing field is Karachaganak, one of the largest in the world. Karachaganak is located in the north-west of Kazakhstan. Recoverable reserves are estimated at 1.33 trillion cubic metres of natural gas, 644 million tonnes of gas condensate and 189 million tons of crude. The field is across the border of Russia’s Orenburg gas field, and due to its location and the inadequate processing facilities, the gas is presently exported to Russia. Current output is rather small: about 13 million cubic metres a day in gas and 85,000 bpd in liquids. This is set to increase significantly, however, following the deal with British Gas and Agip to exploit the field. Recently Russian LukOil has taken a 15% stake, while the remaining 85% will be split between Italy’s Agip and British Gas.

Conclusion

Kazakhstan today is a country in flux. And it is premature to judge the current strategy unequivocally either a success or a failure. What is clear is that Kazak leaders are constrained by a quite different set of concerns than those guiding policy in Russia, let alone in the Eastern or Central Europe. Like all nations in transition, Kazakhstan is groping for policies that will fill general functions of reforming in a manner compatible with local realities.

We believe that finding the reasonable routes for delivering crude oil from the rich deposits of land-locked Central Asia to the international markets and resolution of the pending status of Caspian Sea must be recognised as essential constituents of Eurasian security as a whole.

Foreign economic investment in Kazakhstan reflects a growing Western awareness of her importance and prospects. Republic received almost $2.9 billion in foreign investment from 1993-1995. Most of the foreign investment in Kazakhstan has been in joint ventures, with 746 such companies from 72 countries worked in Republic by the first quarter of 1996. The fact that Western
Figure 4. Gas production in Kazakhstan in 1970-1994

Figure 5. Proven gas reserves in Kazakhstan and selected countries at the end of 1992.

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corporations and governments are showing great interest in Kazakhstan, bodes well for the development of the country as a sovereign, stable, democratic and free-market oriented nation. Such trend may turn the Republic into a strong and secure anchor state which might fix a potentially unstable region, and could thereby further encourage the development of other neighbouring New Independent States as democratic countries.

The map of existing and proposed export oil routes