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Russian Oil and Gas Projects and Investments in Central Asia

Dr Vladimir Paramonov & Dr Aleksey Strokov

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This report is based on research carried out in 2006-2007 but it is not possible to present all the results because of their significant volume. Therefore only a short review of the current condition of the project and investment activity of Russia and Russian companies is given here; however, the assessment of new trends is shown in full, as are also the main conclusions drawn from the results of all the research.

Key Points

* The actual size of the Russian investment presence in Central Asian oil and gas sectors is fairly modest, at approximately 4 to 5 billion [US] dollars. By far the greatest share (in the order of 80-85%) is concentrated in Kazakhstan; there is a smaller share in Uzbekistan and a so far insignificant amount in Turkmenistan, Tajikistan and Kyrgyzstan. Russian companies aim to invest between 14 and 16 billion dollars over the next five years: primarily in the search for and development of oil and gas fields, but also in the pipeline infrastructure of the region.

* The following trends add a significant amount of uncertainty: the appearance of Kazakhstan as an independent player in the oil and gas sphere; the development of liquefied natural gas and alternative means of transporting hydrocarbons; the formation of alliances.

* Furthermore, the extraction and export of hydrocarbons, upon which Russia and Russian companies are laying their main emphasis today, does not form a stable foundation for long term relationships. Russia is helping the countries of the region to just "consume" their reserves, at the same time as their national industry is experiencing unsatisfied demand for these strategic resources. This in turn leads to the destruction of a whole range of processing [refining] branches of industry both in Russia and the region. Increasing the volume of exports will almost certainly lead to an acute deficit of hydrocarbons on these states' markets.

* The clearly expressed "raw material export orientation" of the project and investment activity of Russia makes its future position extremely vulnerable, especially given increasing international competition for hydrocarbons. The Russian monopoly on transportation of oil and gas from Central Asia to external markets is already breaking up.

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Introduction

In the 1990s Russian investments were mainly in Kazakhstan, in the "Tengiz-Novorossiysk" oil pipeline and the opening of the "Karachaganak" gas condensate field. The interest of Russia in the other countries of Central Asia remained minimal. With the coming to power of Vladimir Putin in 2000 and the steady rise of prices for hydrocarbons, the importance to Moscow of the Central Asian region grew sharply. A consequence of this was the marked increase in activity of Russia and Russian oil and gas companies, not only in Kazakhstan but now also in Turkmenistan and Uzbekistan. Furthermore, it is typical that recently Moscow has begun to show a greater interest in two other states of the region – Kyrgyzstan and Tajikistan, notwithstanding their minimal oil and gas potential.

Against this background, the project and investment activity of individual countries of Central Asia in the oil and gas sectors of Russia remains extremely low for the time being. The single exception is the Russo-Kazakh project on the Orenburg (Russia) gas processing facility for the processing of Kazakh raw material and the joint sale of natural gas on external markets. In its turn, investment cooperation in the oil and gas sphere between the individual countries of Central Asia also remains weak for the time being, although in the coming years one can expect an increase in Kazakh activity in the oil and gas sectors of the other regional states.

1. Present Situation

At present, Russian strategic interests mainly concern the three Central Asian states that possess commercial reserves of hydrocarbons: Kazakhstan, Turkmenistan and Uzbekistan. As yet no reserves of hydrocarbons in commercial quantities have been discovered in the other two countries of the region – Tajikistan and Kyrgyzstan, and for this reason Russian interests there are little concerned with questions of extracting and importing hydrocarbons but are mainly aimed at opening the market for petroleum products.

At the end of 2007, the total volume of Russian investments in the oil and gas sectors in the countries of Central Asia was between 4 and 5.2 billion dollars.[1] By far the greatest share (in the order of 80-85%) is concentrated in Kazakhstan (from approximately 3.4 to 4.1 billion dollars); there is a smaller share in Uzbekistan (from 0.5 to 1 billion dollars) and a so far insignificant amount in Turkmenistan, Tajikistan and Kyrgyzstan (50 million dollars in total). Russian companies aim to invest approximately between 14 and 16 billion dollars over the next five years:

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primarily in the search for and development of oil and natural gas fields throughout Central Asia, but also in the pipeline infrastructure of the region.

The interest in Central Asia is to a large extent explained by the fact that the extraction of hydrocarbons in the conditions of the region is technically simpler and economically more advantageous than in the north of Russia where the overwhelming majority of Russian oil and gas fields are concentrated. Russia is striving to drag as large a part as possible of the hydrocarbon resources of Central Asia into its own fuel-energy balances in order to support internal consumption, without simultaneously lowering the volumes of its own hydrocarbon exports to external markets, first and foremost to Europe.

Kazakhstan[2]

Russian companies such as Lukoil, Gazprom and Rosneft are active in Kazakhstan at the present time. At the end of 2007, total Russian investments in the oil and gas sectors of Kazakhstan amounted to an estimated 3.4 to 4.1 billion dollars. By the end of 2012, Russia plans to invest an additional sum of between 6.7 and 7.5 billion dollars. It is suggested that this will be mainly invested in geological survey projects and the opening of promising oil and gas fields as well as in the development of the pipeline system.

Projects for Geological Survey and Development of Oil and Gas Fields

Development[3] of the "Karachaganak" gas condensate field (Province of Western Kazakhstan in northwestern Kazakhstan). This field is one of the largest in Kazakhstan: proven reserves comprise about 1.35 trillion m^3 of natural gas and 1.2 billion tonnes of oil. From 1997 to 2037, companies from several countries are involved in working the field. Russia's Lukoil has a 15% share (750 million dollars).

Development of the "Kumkol Severnyy" oil and gas field (Kyzylorda province in central southern Kazakhstan). Reserves of oil are estimated to be 42 million tonnes and 4.5 billion m^3 of gas. The working of the field began in 1996 by Turgai-Petroleum Ltd (traded as Kumkol-Lukoil Ltd until 2000), now owned on a parity basis by the Kazakh-Sino PetroKazakhstan[4] and Lukoil.

Development of the "Severnyye Buzachi" oilfield (Mangistau province in western Kazakhstan). Estimated oil reserves are approximately 80 million tonnes. The working of the oilfield began in 1999. Since 2003, this field has been owned on a parity basis by the Canadian company Nelson Resources and the Chinese National Petroleum Company. In 2005, Lukoil acquired 100% of the shares of Nelson Resources for two billion dollars.[5]

Development of the "Alibekmola" and "Kozhasai" oil and gas condensate field (Aktobe province in the north–western part of Kazakhstan). Oil reserves of these fields are estimated at 70 million tonnes with approximately 13 thousand tonnes of gas condensate. The Kazakh state company Kazakhoil-Aktobe began working the "Alibekmola" field in 2001 and the "Kozhasai" field in 2003. In 2000 after opening the above fields, Kazakhoil-Aktobe sold 50% of its assets to the Canadian company Nelson Resources, which became a subsidiary enterprise of Lukoil in 2005.

Development of the "Karakuduk" oilfield (Mangistau province, western Kazakhstan). Oil reserves are estimated at approximately 45 million tonnes, which have, since 2000, been worked by Karakudukmunay (100% subsidiary of Lukoil).

Geological survey and subsequent development of the oil and gas condensate fields "Tyub-Karagan" and "Atashskaya" (central part of the Kazakh section of the Caspian Sea offshore shelf). Reserves of oil (including gas condensate) of the "Tyub-Karagan" field are estimated at 324 million tonnes of ideal crude, and of the "Atashkaya" field at 249 million tonnes. The project is being managed by Lukoil together with the Kazakh Maritime Oil Company KazMunayTeniz (100% subsidiary of KazMunayGaz) from 2003 to 2043. Drilling of the first exploratory wells is planned between 2008 and 2010.

Geological survey and subsequent development of the "Kurmangazy" oil and gas condensate field (southern part of the Kazakh section of the Caspian Sea offshore shelf). Estimates of the reserves of oil and gas condensate of the field vary widely, from 500 million tonnes to 1.8 billion tonnes. The work is being carried out by Rosneft together with the Kazakh Ministry of Energy and Mineral Resources, over the period 2005-2060. Drilling of the first exploratory wells on the field is planned to be done by 2012.

Geological survey and subsequent development of the "Zhambay" oil and gas field (on the Caspian Sea offshore shelf). As yet, reserves of oil and gas are unknown. In 2006, agreement was reached for KazMunayGaz to transfer 25% shares in the project each to Lukoil and Spanish Repsol. Up to and including 2007, a seismographic survey of the fields was conducted, the results of which are undergoing analysis. Preparatory works and drilling of the first exploratory well are planned for 2008-2009.

Preparation for geological survey and subsequent development of the "Imashevskoe" gas condensate field (Atyrau province, western Kazakhstan and Astrakhan province, Russia). Reserves are estimated at 129 billion m^3 of natural gas and 21 million tonnes of gas concentrate.[6] Work on the oilfield should begin in the near future. The Kazakh part of the work will be carried out by KazMunayGaz, but a Russian developer (with rights to subsoil use) has not yet been identified.

Preparation for geological survey and subsequent development of "Khvalinskoe" and "Tsentralnoe" oil and gas fields (northern Caspian, Russian and Kazakh sections of the offshore shelf). Hydrocarbon reserves of "Khvalinskoe" are estimated at 480 million tonnes of oil equivalent, including 300 million tonnes of oil;[7] "Tsentralnoe" is estimated to contain 522 million tonnes of oil and 92 billion m^3 of associated petroleum gas.[8] Work on the fields has not yet started but should begin in 2008. The Kazakh part of the work will be carried out by KazMunayGaz. The Russian work on "Khvalinskoe" oilfield will be done by Lukoil and on the "Tsentralnoe" field by Lukoil and Gazprom.

Projects for Processing Raw Gas

Joint gas and gas condensate processing at the Orenburg (Russia) gas processing plant (GPZ). In October 2006, Russia and Kazakhstan signed an inter-governmental agreement on the creation of a joint venture to process gas at this GPZ. The project is being implemented by Gazprom and KazMunayGaz. In 2007, a purchase-sale agreement was signed for the delivery of gas from "Karachaganakskoe" to the Orenburg GPZ for 15 years (2007-2022). It is expected that until 2010 the rate of gas processing will be 8 billion m^3, in 2011 it will be 12 billion m^3 [9] and from 2012, not less than 15 billion m^3 annually.

Preparations for the building of a Caspian gas-chemical complex (GKKh) near the "Khvalinskoe" oil and gas field (Atyrau province, western Kazakhstan). In 2006, a working group of representatives from KazMunayGaz and Lukoil was formed to manage the construction project. It is planned that the GKKh will process approximately 14 billion m³ of gas annually. Matters relating to the Russian and Kazakh percentage shares in the project are being resolved and the timelines of the development are also the subject of discussions.

Pipeline Projects

Preparations for upgrading the throughput capacity of the oil pipeline "Atyrau-Samara".[10] The project is being implemented on the basis of the inter-governmental agreement on oil transfer signed between Russia and Kazakhstan in 2002. The operator of the Kazakh section will be the National Oil Transportation Company KazTransOil. The operator of the Russian section will be Transneft.

By 2017 (expiry of the agreement on oil transfer) Russia and Kazakhstan plan to increase the throughput capacity of the oil pipeline from the present 15 to 25 million tonnes annually.[11] Terms and conditions of the agreement package on the project to expand the pipeline are under negotiation. It is proposed that part of the oil (some 17 million tonnes from Kazakhstan alone) will go via the planned "Burgas-Alexandroupolis" pipeline (Bulgaria-Greece), avoiding the Turkish straits.[12]

Planned increase in throughput capacity of the "Tengiz-Novorossiysk" oil pipeline.[13] The operator of the pipeline will be the Caspian Pipeline Consortium (CPC). The Russian state share in CPC is 24% (625 million dollars), while Russian companies own a further 20% (520 million dollars).[14] Russia and Kazakhstan plan to increase the throughput capacity of the pipeline from the present 32 to 67 million tonnes per year (including up to 50 million tonnes of Kazakh oil).[15] However, the prospects and outline dates for completion of the project to increase throughput capacity are unclear as yet.

Collaboration on the transfer of Turkmen and Uzbek gas through the "Central Asia-Centre" [Russian acronym SATs][16] and "Bukhara-Ural"[17] pipelines **and also the transfer of Russian gas** via the "Orenburg-Novopskov" and "Soyuz" pipelines.[18]

The above cooperation is proceeding on the basis of the 2001 international base treaty on collaboration in the gas sector. In 2005, two medium-term agreements covering 2006-2010 were signed between Gazprom and the operator of the Kazakh arterial gas pipelines, the "Intergaz Central Asia" company (100% owned subsidiary of KaztransGaz). The first determined a rise by 2010 in the volume of Russian gas being transferred across the Ural province of Kazakhstan to 70 billion m³ annually through the "Soyuz" and "Orenburg-Novopskov" pipelines.[19] The second agreement provided for volumes of transfer of up to 55 billion m³ of Central Asian gas across Kazakh territory via the SATs system annually.[20]

Today, the actual throughput capacity of the Kazakh section of the SATs gas pipeline is roughly about 60 billion m³ annually. The "Bukhara-Ural" pipeline can transfer up to 7 billion m³, while the "Orenburg-Novopskov" and "Soyuz" pipelines (aggregated) can carry 47 billion m³. By 2010, following modernisation of the SATs gas pipeline, Kazakhstan plans to increase its throughput capacity to 80 billion m³ per annum, and in the near future even up to 100 billion m³.

As a whole, all modernisation work on the arterial gas pipelines traversing Kazakhstan is being executed by KazMunayGaz and KazTransGaz independently,

without investment or other participation of Russia or Russian companies. However, inasmuch as the Kazakh gas transportation system is objectively a component part of the gas transportation system of the whole post-Soviet space, then cooperation with Russia on matters of gas transfer is realistically unavoidable.

Plans to link up "Druzhba" and "Adriya" oil pipelines.[21] Moscow and Astana are now examining the possibility of creating a new export route for the transfer of oil from Russia and Kazakhstan to world markets through Europe and the sea port of Omishal (Croatia). It is planned that after the oil pipelines "Druzhba" and "Adriya" are joined up the oil export volumes from Russia and Kazakhstan to Europe will increase by 15 million tonnes of oil annually. However the prospects and outline dates of the venture are still unclear.

Projects for Sales of Petroleum Products

Gazprom plans to develop the Kazakh market for petroleum products with its own production. Gazprom Neft (a Gazprom subsidiary) leases 11 oil depots in Kazakhstan and intends to expand its network of fuel stations. From 2008, Gazprom plans to supply approximately 25 – 30 thousand tonnes of petroleum products monthly and, correspondingly, 300 – 620 thousand tonnes annually. According to preliminary calculations, this will allow Gazprom to secure about 3% of the Kazakh market for petroleum products.[22]

Turkmenistan[23]

At present, such companies as Gazprom and the ITERA International Group of Companies are working in Turkmenistan. Project and investment activity of Russia and Russian companies in the oil and gas sectors of Turkmenistan is still extremely low; it encompasses only the gas transportation area and the volume of Russian investments at the end of 2007 was barely in the region of 25 million dollars. [24] These investments were directed towards the supply from Russia of technical equipment for the gas sector of Turkmenistan, the renovation and modernization of gas pipelines, compression and distribution stations, etc.

Nevertheless, considering the significant hydrocarbon and, above all, the gas reserves of Turkmenistan, one can with great certainty assume that in the near future the investment activity of Russian companies will increase dramatically. Up to and including 2012, Gazprom alone plans to invest not less than 2 billion dollars in the gas sector of Turkmenistan (primarily in the development of gas fields, but also in the expansion of the SATs arterial pipeline).[25] Furthermore, it is most likely that other Russian or joint companies can be expected to appear in Turkmenistan, in the first instance Lukoil and TNK–BP.

At the present time, Russia does not yet have any actual projects in the oil and gas sectors of Turkmenistan, if cooperation on matters relating to the supply of Turkmen gas to Russia and in the direction of Russia is not considered as a "project". Considering that the export potential of oil from Turkmenistan is insignificant and is of no importance to Russia, Russian interests in Turkmenistan are limited to the gas sector. At present Gazprom is linking the possibility of offering investments with control of the Turkmen national gas transportation system.[26] In May 2007, Gazprom had already secured agreement to have transferred to it[27] the operational control functions of the pipeline on the Turkmen

section of the regional gas transportation system (following modernisation and expansion).

In addition, the following are Moscow's priority project directions:

Modernization of Turkmen gas infrastructure. It is planned to implement the project in accordance with the "Agreement on Gas Sector Cooperation" (2003-28) which in part proposes construction of modern equipment for improving the quality of natural gas. However, the type, scale and timelines of the undertaking are not yet clear.

Modernization and increase of throughput capacity of the SATs gas pipeline. This project, like the previous one, is proposed for implementation in accordance with the "Agreement on Gas Sector Cooperation".

Bearing in mind that Russia attaches exceptionally great importance to increasing the volumes of imported Turkmen gas, the major expansion of gas transportation capabilities of Turkmenistan in the direction of Russia is crucially important. The throughput capacity of the Turkmen section of SATs today is about 50 billion m^3 per year and it has practically reached full capacity. However, the nature, scale and timelines for the project of reconstruction and modernization of the Turkmen gas pipelines with Russian participation are as yet unclear.

Apart from this, ITERA is at present planning the implementation of a project to open a number of oil and gas fields in Turkmenistan. Today, ITERA is the only Russian company to be allowed to develop Turkmen hydrocarbon fields on land. At the end of 2007 in Ashgabad (Turkmenistan), the Turkmen President, G Berdymukhamedov, held talks with the Chairman of the Board of Directors of ITERA, I Makarov, during which a number of subjects were discussed, including the prospects for developing oil and gas fields in the Central Karakum and on the Caspian Sea offshore shelf. It is believed that the relevant agreement between the Turkmen government and ITERA could be signed soon. ITERA has obvious advantages over remaining Russian companies, as it has been active in the country since 1994 and owns assets in various business sectors of Turkmenistan (not just in the oil and gas sectors).[28]

On the whole it would not be an exaggeration to say that for the time being one can only discuss Russian project and investment activity in the oil and gas sectors of Turkmenistan in the future tense. This is linked to the fact that the extraction of hydrocarbons on land has until now been controlled by the Turkmen government (the only exceptions were made for the Chinese CNPC, ITERA and, possibly, might be made for the Kazakh KazMunayGaz). Foreign investors only have access to the development of the offshore shelf oilfields on the Turkmen section of the Caspian Sea littoral under production sharing agreement conditions.

On the whole, however, Russian companies are not showing any special interest in the development of the offshore oil and gas fields. This is largely because the offshore fields that interest Russia are found near the Turkmen-Iranian maritime border. The status of the Caspian Sea has not yet been defined, and Iran is insisting on an increase in the size of its section. In addition, the opening of offshore fields is technically more difficult than on land and is therefore more expensive.

Uzbekistan[29]

At present Russian companies such as Gazprom and Lukoil are active in Uzbekistan. At the end of 2007, Russian investments in the oil and gas sectors of Uzbekistan amounted to between 520 and 1050 million dollars. By 2012, Russia plans to invest a suggested 4.7 to 6.2 billion dollars into the oil and gas sectors of Uzbekistan. These resources are to be put into geological survey and opening of oil and gas fields projects as well as into the modernization of pipeline infrastructure.

Projects for Geological Survey and Development of Oil and Gas Fields

Development of "Shakhpakhty" gas condensate field (Karakalpakstan Republic, Ustyurt Plateau, western Uzbekistan). The field was discovered in 1962 and its commercial reserves are estimated at approximately 46.5 billion m^3 of gas (including gas condensate) and 7.7 million tonnes of oil. The field is being developed by Gazprom and the National Holding Company "Uzbekneftegaz" over 2004–19.

Development and geological survey of the "Kandym – Khauzak – Shady" gas condensate fields (Bukhara province, central Uzbekistan) **and the "Kungrad" field** (Karakalpakstan Republic). Overall gas reserves of these fields are assessed as approximately 283 – 329 billion m^3 (the largest fields of the Kandym group are estimated at over 150 billion m^3) with oil reserves of 8 million tonnes. Development work is being carried out by Lukoil and Uzbekneftegaz over 2004–39. Extraction of raw gas and delivery to the Mubarek gas processing plant (Uzbekistan) began from the "Khauzak" field at the end of 2007.

Geological survey and subsequent development of the "Zhambay" oil and gas fields in the Uzbek section of the Aral Sea. The gas reserves of these fields are estimated at approximately 1 trillion m^3 with somewhere in the region of 150 million tonnes of oil. The project is being implemented over 2005–40 by an international consortium that includes Lukoil which owns 10% of the overall future yield.

Exploration and subsequent development of a series of oil and gas fields in the south western part of Gissar Region (on the border between the Kashkadarya and Surkhandarya provinces, southern Uzbekistan, near Karshi City) **and Central Ustyurt** (Karakalpakstan Republic). Estimated reserves of gas of these fields (two oil and seven gas condensate fields) are in the region of 150 billion m^3 of gas and approximately 50 million tonnes of oil.[30] The project is run by the Russian Investment and Financial Group SoyuzNefteGaz and Uzbekneftegaz over 2007–48. In February 2008, Lukoil acquired controlling shares in SoyuzNefteGaz, including the latter's projects in Uzbekistan.

Exploration of a series of other gas condensate fields on the Ustyurt Plateau. Projected reserves of only a few of the largest fields ("Urga", "Kuanysh" and the Akhchalak group) are estimated to be in the region of 1 – 1.27 trillion m^3 of gas. Since 2007, Gazprom, on the basis of agreements signed in 2006 with the Uzbek government and Uzbekneftegaz[31] has been carrying out geological studies of seven investment blocks on the Ustyurt Plateau.

Projects for Processing of Raw Gas

Plans for the production of liquefied gas and benzine at the Mubarek gas processing plant (GPZ) (Mubarek, Uzbekistan). The project was implemented in 2006 by Gazprom and Uzbekneftegaz as a joint venture and anticipates the construction and operation of production facilities to process 12 billion m³ of gas annually. Apart from marketable methane (the major component in volume of natural gas) the GPZ will produce approximately 270,000 tonnes of liquefied gas and 70,000 tonnes of stable gas condensate.[32] Production is expected to start in 2009.

Preparations for the construction of the Kandym gas processing works (GPK) near the "Kandym" field. This is a Lukoil project with the first part of the GPK expected to come on stream by 2011 with a capacity of 6 to 8 or, according to some assessments, up to 10 billion m³ annually.

Pipeline Projects

Cooperation on the transfer of Turkmen and supply of Uzbek gas. This project is being implemented by Uztransgaz (subsidiary of Uzbekneftegaz) on the basis of a 2005 agreement between Gazprom and Uztransgaz for the years 2006–10. The aim of the agreement was to organize the supply of Central Asian gas (from Turkmenistan and Uzbekistan) using the SATs and "Bukhara-Ural" gas transportation systems, that both cross Uzbekistan. The whole of the Uzbek gas transportation system (SATs-1, 2, 3, 4, 5 and "Bukhara-Ural" is in a satisfactory condition, and is capable of transferring not less than 55 billion m³ annually.

Plans to modernize and increase the throughput capacity of the Uzbek sections of the gas pipelines SATs and "Bukhara-Ural".[33] Work on expansion and repair of the Uzbek sections of the SATs and "Bukhara-Ural" pipelines are carried out regularly by Uztransgaz. Gazprom intends to increase the throughput capacity of the Uzbek sections of these arterial gas pipelines, however, neither the nature nor the timelines for possible activity on Uzbek territory are yet clear. As a result the future throughput capacity of the Uzbek sections of the SATs and "Bukhara-Ural" pipelines is unclear.

Tajikistan

At present, Gazprom is the only real presence in Tajikistan. So far, no significant commercial reserves of oil and gas have been revealed. The high price of hydrocarbons is stimulating Gazprom's interest, firstly in the Tajik market for petroleum products and only secondly in the potential gas reserves of the country. Amongst the main directions of Russian activity in the oil and gas sectors of Tajikistan, two stand out:

Sales of petroleum products. Gazprom plans to secure the market in Tajikistan with its own petroleum products. Gazprom Neft (a subsidiary of Gazprom) already leases 4 oil depots and intends to develop its network of fuel stations. For 2008, the Gazprom share of the Tajik market for petroleum products is expected to be 30-35%.[34]

Exploration of gas fields on the "Sargazon" sites (Dangarinskiy region of Khatlon province) **and "Rengan"** (near Dushanbe). Promising reserves of gas in these fields are estimated at 65 billion m³.[35] In December 2006, Gazprom concluded an

agreement with the government of Tajikistan to carry out seismic survey work in 2007. In January 2008, the survey work was completed on the "Sargazon" site.

Gazprom is also studying the possibilities of prospecting for oil on Tajik territory.[36] Apart from Gazprom, some interest in the oil and gas sectors of Tajikistan is also being shown by Lukoil.

Kyrgyzstan

At present in Kyrgyzstan, there is only one Russian company – Gazprom. No commercial reserves of oil and gas have been discovered so far in Kyrgyzstan.

An agreement on cooperation in the gas sector was reached between Gazprom and the government of Kyrgyzstan in 2003. At that time, Moscow and Bishkek planned, following geological survey of a number of the most promising fields, to "prepare a technical-economic evaluation of opening the fields, on the basis of which a decision would be reached whether it would be worth while creating a joint venture for the development of the fields identified".[37]

Nothing concrete was done about this plan. Negotiations continue, but geological survey work by Gazprom is being directly linked to the acquisition of assets of the Kyrgyz oil and gas sectors: Kyrgyzgaz (100% of shares owned by the government) and Kyrgyzneftegaz (85% of shares owned by the government).

At the beginning of 2008, the Chairman of Gazprom, A Miller, had a series of negotiations with the Kyrgyz Prime Minister, I Chudinov. As a result of the meeting in February 2008, agreement was reached that Gazprom would begin geological survey work on gas fields in the south of Kyrgyzstan and that the government of Kyrgyzstan would allow Gazprom access to the privatization of Kyrgyzgaz and Kyrgyzneftegaz. However, the privatization of these assets will become possible only after approval by the Kyrgyz parliament.

To summarize, the following projects and project directions are the present priorities for Gazprom:

Preparations for acquisition of assets in the oil and gas sectors of Kyrgyzstan. Gazprom plans to gain ownership of the government's shares of Kyrgyzgaz and Kyrgyzneftegaz following Kyrgyz parliamentary approval of the law on privatization of these assets. This is supposed to happen in the autumn of 2008.

Exploration of a number of gas fields. In February 2008, Gazprom received a licence for geological surveys of gas fields in the southern part of Kyrgyzstan. From 2008 to 2010, Gazprom plans to invest 300 million dollars into geological surveys, but the scale of future extraction is estimated as approximately 300 million m^3 annually.[38]

Sales of petroleum products. At present this is the only realistic Russian project in the oil and gas sectors of Kyrgyzstan. Gazprom Neft began operations in the Republic in the middle of 2006 and already has a network of 73 fuel stations (mainly in the north of the country). Gazprom today has only a 2% share of the domestic market in retail sales of petroleum products (mainly petrol). However, by 2011, Gazprom plans to increase its share of that market to 35-41%.[39]

2. New Trends

The nature of the project and investment activity of Russia and Russian companies in the region, as well as the prospects for Russo-Central Asian cooperation in the oil and gas sectors, could be affected by the following new trends:

- the rise of Kazakhstan as an independent player on the oil and gas markets of the post-Soviet space, individual European countries, and also western China;

- the development in the region of liquefied natural gas (LNG) production and also alternatives to pipeline transport and delivery of hydrocarbons;

- the formation of oil and gas (or energy as a whole) alliances.

The Rise of Kazakhstan as an Independent Player

Kazakhstan, already having accumulated substantial financial resources from the sale of its hydrocarbons, intends to play an ever more serious part in the implementation of various oil and gas projects in its own high priority directions: acquisition of assets in Kazakhstan itself (from foreign companies), in countries of Central Asia, in Russia, in the Caucasus, Central and Eastern Europe and also in China. The main priorities of Astana appear to be the acquisition of assets such as oil refining plants, gas distribution networks, shares in pipeline and other transportation projects.

In 2004, KazTransGaz had already set up a joint venture KyrKazGaz on a parity basis with Kyrgyzgaz (Kyrgyzstan). The main aim of creating the joint venture was to maintain in a good technical condition the arterial gas pipeline "Bukhara gas fields – Tashkent – Bishkek – Almaty" section of the gas transportation system that crosses Kyrgyz territory and supplies the north of Kyrgyzstan and contiguous Kazakh provinces, including the city of Almaty, with gas.

In 2006, KazTransOil (a subsidiary structure of KazMunayGaz) set up a joint venture Batumi Terminals, together with Greenoak Holdings (Denmark) which owned a series of strategic assets in Georgia, including the Batumi oil terminal, that became the first foreign oil transportation asset of Kazakhstan with direct access to the sea. Additionally in 2006, Kazakh KazTransGaz acquired the municipal gas distribution company Tbilgaz (serving Tbilisi, the capital of Georgia).

Shortly after this in 2007, Kazakh KazMunayGaz acquired 75% of the shares of the Rompetrol Group – the Romanian oil refinery operator and distributor of processed petroleum products (with 2 oil refineries and access to 639 fuel stations in countries such as Romania, Moldova, Bulgaria, Georgia, Spain and France).[40]

In addition, KazMunayGaz shortly intends to begin a survey of oil structures in Turkmenistan offshore along the Turkmen section of the Caspian Sea shelf. The possibility cannot be excluded of them also surveying on dry land along the right bank of the Amu Darya River, from where the transport of gas to China is being proposed.

All this supports the idea that matters of cooperation with Kazakhstan are today taking on a much greater importance not only for Russia, but also for other forces interested in securing their position in the Central Asian countries, and also in a range of other states.

However, it is reasonable to assume that the strengthened influence of Astana will hardly help the intensification of the project and investment activities of Russia in the oil and gas sectors of Kazakhstan. On the contrary, it is a logical assumption that Kazakh companies, as their financial opportunities strengthen in the future, will seek to take control over the hydrocarbon resources of their own country. If national companies can achieve a financial and technological level that will allow them to independently develop oil and gas fields then there will be no sense in Kazakhstan attracting foreign partners to participate in oil and gas extraction. In this case, Astana can head towards a gradual squeezing out of foreign (including Russian) companies from its oil and gas sectors by buying out their assets in Kazakhstan.

Development of the Production of LNG, Alternative Methods and Means of Transporting Hydrocarbons

Today, the share of LNG being traded on the world hydrocarbon markets is increasing. This is leading to a growth in foreign investments in the production of LNG in Central Asia and to a certain lowering of the role of pipelines in the future.

At the same time, there is a growth in tanker shipping, terminals and other infrastructure on the Caspian Sea. Of especial significance is the example of Kazakhstan in implementing a complex programme to create and develop the so called Caspian Oil Transportation System which, in the assessment of a number of Western experts, appears to act as a counterweight to present policies of a number of other countries of the Caspian Sea Basin, notably Russia and Iran.[41]

All this will result in a certain heightening of the role of maritime (Caspian Sea) and rail transport in the transfer of hydrocarbons. In the medium term that could affect the balance of power and interests in the region, beginning with the production and gas transportation markets and slightly diminishing the importance of Russian and other pipelines, and pipeline politics as a whole.

The formation and further development of the LNG market in the countries of the region may reduce their reliance on the Russian gas transportation system. Moreover, neighbouring China and also countries of the Asia-Pacific region might become the most realistic external customers for LNG. In this respect over the next few years, we can expect Asian energy companies to become more active in the region regarding the increase in production of LNG. It is obvious that such activity will not help strengthen Russian positions in the oil and gas sectors of the Central Asian states.

Forming Alliances

Considering that hydrocarbon resources of the region are the subject of international interest, there is a growing likelihood that certain alliances will form in and around Central Asia.

The manifestation of this trend is already visible today in the framework of the Shanghai Cooperation Organisation (SCO). The settlement of disputes related to the more than probable conflicts of interest between producer states of hydrocarbons and customer states, was the main reason for the appearance of the idea of forming the SCO "Energy Club". This idea was officially floated by President V Putin at the SCO summit in Shanghai (China) in 2006, but raised earlier at the analyst level within the framework of a series of expert meetings: an international scientific working conference "The Central Asian energy market: trends and prospects" (Tashkent, December 2005) and a round table "Prospects for the formation of an Energy Club within the SCO" (Tashkent, February 2007) organized by the Centre for Political Studies (Uzbekistan) with the support of the SCO Secretariat.

In the most recent version of the idea from the Russian Ministry of Industry and Energy, the "Energy Club" of the SCO should, as a first stage, become a non-governmental consultative organ. Its main task is envisaged as "the creation of an information and discussion arena for the detailed consideration of the energy strategies of SCO member states regarding their positions on and proposals for improvements in energy security".[42]

However, it is still too early to make prognoses about how effective the future activity of the "Club" will be: this may become clear only after the implementation of several "pilot" projects on the regulation at a multilateral level of the interests of one or other country in a situation where international competition has intensified for the energy resources of the region. On the other hand, it is obvious that further development of the idea of an "Energy Club" within the SCO could lead to a general change in the character of the Central Asian oil and gas cooperation with Russia and China, and also to a significant amendment of Moscow's energy strategy.

In addition, the appearance of other energy alliances with the Central Asian countries is also possible. However, the strategic interests of all the major external forces will, most probably, only touch upon increasing the volumes of extraction and transportation of hydrocarbons from Central Asia. For this reason, the forming of alliances for energy interests will only assist in strengthening the raw material export orientation of the oil and gas sectors of the countries of the region while, at the same time, weakening the Russian position there.

Conclusions

Oil and gas projects in Kazakhstan, Uzbekistan and Turkmenistan are priorities of strategic importance for Russia and Russian companies. Today, each state plays a more or less equally important role for Russia. For this reason it is possible to suggest with a high degree of certainty that, in the medium term, the present gap between the scales of project activity of Russia in the oil and gas sectors of Kazakhstan, on the one hand, and Uzbekistan and Turkmenistan on the other, will reduce sharply.

In the coming 5 years, Russian companies intend to invest between 14 and 18 billion dollars in the search for and development of oil and natural gas fields in Central Asia, primarily in Kazakhstan, Turkmenistan and Uzbekistan, but also in the pipeline infrastructure of the region.

Theoretically, should Russian projects and investments justify themselves and support the growth in extraction of hydrocarbons in the volumes planned by Russia and the countries of the region (this especially relates to the "large oil reserves" of the Caspian Sea offshore shelf) then the scales of Russian-Central Asian gas and oil trade are more than likely to increase significantly in comparison to their present level and will reach the following indices:

> **For oil:** by 2010 – up to 12-13 million tonnes, by 2015 – up to 14-17 million tonnes, by 2020 – up to 23-45 million tonnes;
>
> **For gas:** by 2010 – up to 70 billion m^3, by 2015 – up to 80 billion m^3, by 2020 – up to 110 billion m^3.

In their turn, the transfer of hydrocarbons from Central Asia across Russian territory could reach the following volumes:

> **For oil:** by 2010 – up to 40 million tonnes, by 2015 – up to 55 million tonnes, by 2020 – up to 65 million tonnes;
>
> **For gas:** by 2010 – up to 77 billion m^3, by 2015 – 90-100 billion m^3, by 2020 – up to 110-120 billion m^3.

In reality, however, it remains unclear whether all joint projects will indeed be totally supported financially and also whether the Russian investments (should they be forthcoming) would be able to support the growth in extraction of hydrocarbons and their transport, specifically to Russia or in the Russian direction, in the volumes planned in Moscow. The most important reasons for this uncertainty are a number of negative factors in the Russian-Central Asian cooperation in the oil and gas sectors.

Firstly, Russia and the countries of the region are paying very little attention to the question of extended processing of oil and gas in order to obtain products with a high rate of added value. This leads to an ineffective use of hydrocarbon resources from the point of view of the long term interests of Russia and the countries of the region. As a result, Russia is helping those countries to "consume" their hydrocarbons, at the same time as national sectors of industry of all the states are experiencing an unsatisfied need for these strategic resources. This in turn leads to the simple and gradual destruction of a whole series of refining sectors of industry, both in Russia and in the countries of the region.

Secondly, the increase in volumes of export of oil and gas planned by Russia and these countries will not only jeopardise the prospects for their development of industry and new technology, but also creates a time bomb for the security of these states. Undoubtedly, hydrocarbons play an exceptionally important role in the fuel-energy balance of Russia and the countries of the region (and also of other countries of the CIS) – of much greater importance than in most countries of the world. It is quite possible that in the long and even in the medium term the domestic markets of Russia and the Central Asian states will experience a sharp fall in availability of hydrocarbons (mainly natural gas) as a result of the increase in volumes of their export.

Thirdly, the extraction and export of hydrocarbons themselves create a fairly brittle base on which to build long term and lasting inter-governmental relations in the oil and gas and other sectors. Although in most Western countries the energy industry

makes its decisions on a commercial basis, separate from government, this is not the case in the countries we are discussing here. Whilst some, such as Gazprom, remain technically not state assets, their activities are largely government-directed. Others, particularly in Central Asia, remain wholly state-owned. As regards the region under discussion, it is therefore permissible to equate state and commercial policy in the international energy sphere to a large extent.

It is to a great extent for these reasons that the present project and investment activity of Russia and Russian companies in Central Asia and the tendency for growth in volumes of hydrocarbon trading do not give a comprehensive answer to the question of the future character of oil and gas cooperation.

It appears from the above conditions that the factor of international competition for hydrocarbon resources makes Russia's position in Central Asia extremely vulnerable. In particular, the project and investment activity of Asian countries (China, Japan, Korea and Malaysia) is already growing in the region. The crisis of mutual understanding between Russia and the European Union on questions of energy security is weakening the positions of both Moscow and Brussels. The more so as the Russian monopoly on the transportation of hydrocarbons from Central Asia to external (European) markets is already crumbling.

Taking into account all the above, international competition for hydrocarbon resources will remain the single most important factor capable of affecting the long term character and course of development of Russian-Central Asian cooperation in the oil and gas sphere. The distribution of global forces and interests will predetermine the future of Russia and Central Asia and their role and place in the newly-forming system of international relations and global economy.

In order to ensure its long-term position in the Central Asian oil and gas sectors, Russia and Russian companies will find it expedient to diversify their project and investment activity by moving the emphasis onto increased processing of oil and gas on the territory of the region.

Endnotes

[1] Calculations are made on the basis of published reports on the amount of investment in each project, in each country of the region. There is a certain subjective and objective vagueness about the actual volumes of investments. Firstly, the specifics of cooperation in such a strategic sphere as oil and gas cause a lack of many exact figures in open sources. Secondly, there exists a propagandist factor in the oil and gas sphere. On one side, countries importing hydrocarbons make many political promises in the hope of receiving concessions from the countries exporting oil and gas. On the other hand, the countries producing the hydrocarbons, in conditions of international competition, try to show their oil and gas sectors as more attractive to investors than they actually are. Thirdly, information on the volumes of Russian (and also other foreign) investments in the oil and gas sector of the countries of the region varies greatly depending on the source. The greatest difficulty is caused by the fact that when the assessments are made of foreign investments, the majority of official sources also take into account the volume of credits that are attracted by companies and/or governments of the countries of the region to one or other of the oil and gas projects.

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[3] Here and hereafter: "development" means that the field is at the stage of commercial exploitation.

[4] PetroKazakhstan until 1996 was the state company Yuzhneftegaz created in 1993. In 1995 Lukoil and Yuzhneftegaz set up a joint venture to open Kumkol-Severnyy. In 1996, the Canadian company Hurricane Hydrocarbons acquired 89.5% of the shares of Yuzhneftegaz, after which that company was renamed PetroKazakhstan. At present PetroKazakhstan belongs to Chinese PetroChina and KazMunayGaz.

[5] P. Grudnitskiy, "Lukoil is expanding", Electronic publishing site "Expert-Online" (Russia), Moscow, 10 October 2005, No 21, http://www.expert.ru/printissues/kazakhstan/2005/21/21ka-keco/print

[6] In November, Astrakhan plans to set up a joint venture with a British firm to develop the Imashevsk field with a major British company; Astrakhan City site (Russia), Astrakhan, 28 June 2005, http://www.arws.ru/a/1979

[7] "Lukoil and KazMunayGaz signed an agreement for the development of the Khvalinskoe field", Site of the investment company Financial Bridge (Russia), Moscow, 21 April 2004, http://www.superbroker.ru/news.aspx?NewsId=4035

[8] Interview of Kazakh Ambassador to Russia to *World Energy*, Official Kazakh Embassy site – Moscow, 3 March 2005, http://www.kazembassy.ru/issue/?issueId=234

[9] A. Kisykbasova, "Gas Sector. The Creation of a Kazakh-Russian enterprise for gas processing acquires concrete outlines", Newspaper *Liter* (Kazakhstan), 23 May 2007, http://www.centrasia.ru/newsA.php4?st=1180004580

[10] Oil is transferred through this pipeline from fields in the western part of Kazakhstan to Samara province of Russia; length 697 km, working since 1970.

[11] Interview of Kazakh Ambassador to Russia to *World Energy,,*/ Official Kazakh Embassy site – Moscow, 3 March 2005, http://www.kazembassy.ru/issue/?issueId=234

[12] L. Podobedova, "Kazakh Guarantees. Burgas-Alexandropolis will receive 17 million tonnes of oil from Central Asia", Daily business newspaper *RBK Daily* (Russia) – Moscow, 27 November 2007, http://www.centrasia.ru/newsA.php4?st=1196232780

[13] Oil is transferred through this pipeline (length 1510 km, working since 2001) from the "Tengiz" field in Western Kazakhstan to the Russian port of Novorossiysk (then by tanker through the Bosphorus and Dardanelles).

[14] LUKARCO BV, Russia – 12.5% (326 million dollars), Rosneft – Shell Caspian Ventures Ltd, Russia – 7.5% (195 million dollars).

[15] Interview of Kazakh Ambassador to Russia to *World Energy,* Official Kazakh Embassy site – Moscow, 3 March 2005, http://www.kazembassy.ru/issue/?issueId=234

[16] The arterial gas pipeline "Central Asia – Centre", length over 3000km, was built (1966 to 1985) in Soviet times and earmarked for the transfer of Turkmen and Uzbek gas across Kazakhstan into Russia and a number of other Soviet republics. The arterial pipeline consists of 5 threads: SATs-1,2,3,4,5. All 5 pipelines start on Turkmen territory. SATs 3

crosses Turkmen, Kazakh and Russian territory while the other pipelines cross Turkmenistan, Uzbekistan, Kazakhstan and Russia.

[17] The arterial pipeline "Bukhara-Ural" is about 4500km long and began to transfer gas in 1965. It was earmarked for delivery of Uzbek gas from the "Gazli" field (Bukhara province, Uzbekistan) to industrial centres in the southern Urals of Russia. The pipeline consists of 2 threads which cross Uzbek, Kazakh and Russian territory.

[18] The arterial pipelines "Soyuz" and "Orenburg-Novopskov" are 760km long and were built in Soviet times (1976 - "Orenburg-Novopskov" and 1978 – "Orenburg-Soyuz"). Gas is transferred from Orenburg province to Saratov province in Russia across the Ural province of Kazakhstan.

[19] When first built the arterial pipelines "Soyuz" and "Orenburg-Novopskov" had an aggregated annual throughput capacity of 42 billion m³. In 2004, their realistic annual throughput capacity was about 30 billion m³, due to the deterioration of the infrastructure. However, in 2004, Kazakhstan began a renovation and modernisation of these pipelines. Today the aggregate annual throughput capacity of the pipelines is 47 billion m³. This is the planned amount of gas to be transferred in 2008.

[20] S. Smirnov, "Step on the gas! Prospects for the Kazakh gas sector", Site of the international business journal of Kazakhstan – No3, 2006,
http://www.investkz.com/journals/48/81.html

[21] The oil pipeline "Druzhba" entered service in 1964, has a length of approximately 6000km, carries oil from Russia to countries of Europe. The oil pipeline "Adriya" has two sections: the Hungarian one crosses Hungary from Százhalombatta to the Hungaro-Croatian border; the second section from there to the port of Omišalj (Croatia) – the Adria pipeline – crosses Croatia. The overall distance for the proposed oil transfer route from Samara across Russia, Belarus, Ukraine, Slovakia, Hungary and Croatia to the Adriatic Coast is 3087km.

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http://www.centrasia.ru/newsA.php4?st=1187851620

[23] Main sources: F. Akhmedov, "Central Asian Gas: Who's satisfied, who's whole", Electronic publishing site of the Russian Press Ministry; V. Milov, "Turkmen Gas: Geopolitics and Business", *Bolshaya Igra* Journal – Moscow: Laboratory for the Analysis of Tajikistan, Turkmenistan, Uzbekistan, Kazakhstan and Kyrgyzstan, No 2, February 2007; V. Paramonov, *The Future of gas supplies from Central Asia to Russia: an expert assessment* – ARAG, UK Defence Academy 08/05, February 2008; D. Dokuchayev, "The Struggle for Turkmen Gas",Latest news section of *Prognozirovanie* journal (Russia), 21 February 2007; L. Slavinskaya, "Turkmenistan: acceleration on the way", *Neftegazovaya Vertikal* journal (Russia) – Moscow, January 2007, No 1; CPS Project Study "Energy Potential of Central Asia: Problems of calculating reserves, development and transportation of oil and natural gas", *The Energy Market of Central Asia: trends and prospects*, Proceedings of the Science and Business Conference, Tashkent, 6-7 December 2005 – Tashkent: Patent-Press, 2006.

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Vladimir Paramonov and Aleksey Strokov are independent analysts in Tashkent, Uzbekistan.

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