Perspectives for Asian countries for entering into Oil and Gas assets of Sakhalin island Shelf and Arctic shelf of Russia

K Volodichev
Moscow State University, Moscow, Russia

k.volodichev@mail.ru

Abstract. The article is devoted to the analysis of the participation of foreign companies in the development of oil and gas projects in the Russian Federation from both a historical and current point of view. The article clearly outlines the basics of the history of the development of the oil industry in the Russian Federation, the experience of involving foreign partners, both from around the World and from Asian countries, in particular, special attention is made to the prospects for Asian countries on joining oil and gas projects offshore Sakhalin island and the Arctic shelf of the Russian Federation, state policy of the Russian Federation and the current geopolitical situation in the World.

1. Introduction
With the onset of the second decade of the 21st century, the international economic system continues to exist and develop along the path determined back in 1944 in result of the Bretton Woods conference, when the global financial system based on the "gold standard" was replaced by a system based on one currency - the US dollar, which supported gold until 1971, while all other currencies of the world were tied to US dollar and had to be exchanged at a certain rate. However, in this form in 1971, after the US dollar had seriously strengthened and became an international currency, US President Richard Nixon canceled the dollar support of the gold. The world monetary system ceased to exist, and the US dollar became the only world reserve currency. Since it was the most circulated currency and in fact it was through this currency that all business operations in the World were carried out, the US dollar therefore remained the currency under which there was no warranty, main world commodity therefore was oil, which was traded for the US dollars also. These facts are unique, especially if we take into consideration the events of the subsequent World Oil Crisis of 1973, when oil prices rose 4 times from 3 to 12 US dollars.

The Soviet Union signed the Bretton Woods Agreement, but never ratified it. This was largely due to a serious distrust of the partnership at that time between the Soviet Union and the United States, which acted as allies in World War II.

At the same time, before the Second World War, the Soviet Union significantly increased oil production to meet the needs of its economy, as well as to increase the supply of product for import. The Caucasus continued to remain the main region of product production from 1923 until the Great Patriotic War in the Soviet Union.

2. Part 1: Foreign investment and the nationalization of the oil industry of the USSR
The history of the development of oil fields in the Caucasus was closely linked to foreign investment in Russia. At the turn of the 19th and 20th centuries, it accounted for at least 30% of all oil production in the World, which potentially made it attractive to foreign investors, whose main task was to make a profit and strengthen the wealth of their countries through replenishment of gold reserves. The first foreign investors to invest in the Russian economy were the Nobel brothers from Sweden. In 1876, they form the Nobel Brothers Oil Production Joint-Stock Company, and the Russian Empire for the first time becomes a direct competitor to the United States in the oil production market. In the XX century, after the fall of the Russian Empire and the formation of the USSR, the entire oil industry was nationalized and already by 1923 the export figure had reached the values recorded before 1917 [1].

The result of nationalization was the merge of the three largest companies: the Oil company, the Nobel Corporation and the Shell Corporation; division into sections was liquidated, a single accounting department appeared (State Economics Archive. fund. 6880. Op. 1 d. 4. page. 21; see also: UFSBVO. Printed fund. 132. pages. 16-1).

The nationalization of foreign property was the result of the development of a public administration system, the birth of which began before 1917. At the beginning of the 20th century production was declining, oil product prices were declining, and the State (Russian Empire) decided that it was necessary to participate in the affairs of the oil industry. The oil crisis was associated with the policies of large oil companies (primarily of foreign origin). This was especially visible during the First World War and the Civil War, which, of course, influenced the decision to nationalize industry in 1918 [2].

Figure 1. Oil production in Russia, 1861-1911 [3]
Figure 2. Oil production in USSR, 1913-1953 [4]

The transfer of control over oil production and revenue from its sale to the Treasury of the State has made it possible to significantly secure one of the strategic instruments of the Soviet Union - its energy resources.

Asian countries should deserve separate attention in the context of this study, which until the end of the Second World War continued to remain colonial territories of Empires that indicated the absence of the possibility of their self-development and significantly contributed to building up the resource potential of Empires, as well as the growth of their gold reserves. Empires, as well as the United States served as the main trading partners of the Soviet Union at that time.

3. Part 2: Asian countries and Russia as a new market for investment

However, already after the Second World War, the collapse of the colonial system and independence of an Asian countries, the priority tasks of the new leaders of such countries were the strengthening the economy, formation of a strategic development path and improvement of the standards of living of society. Fulfillment of their obligations to such countries as China, India, Korea, as well as a number of other countries in Southeast Asia, took 30 to 50 years. Their development was based on the so-called Foreign Direct Investment, which allowed the former metropolitan states to continue increasing their economic strength through the use of low-cost labor of such states, and for countries such as the PRC and India, this significantly accelerated GDP growth and move from the need to purchase energy sources to ensure industrial production capacities in favor of investments in their search, development and production, and to obtain funds from sales.

The Soviet Union in 1991 returned to attracting foreign capital to the oil and gas industry to maintain oil production at a stable high level, as well as improving technological processes.

In November 1992, according to Decree No. 1403, signed by the President of the new state, the Russian Federation B.N. Yeltsin, a procedure was established for the ownership of such enterprises for foreign companies, "The proportion of shares sold to foreign investors should not exceed 15 percent of the shares of a joint-stock company."

Moreover, the state stopped financing the oil and gas industry, and in order to attract foreign investment, it provided significant benefits to joint ventures (JVs), primarily the right to export 100 percent of all oil produced. The early 1990s saw a real boom in the joint venture in the Russian oil industry. By the end of the 1990s, when export preferences were canceled, the joint venture produced more than 20 million tons of oil per year.
4. Part 3: First Joint ventures and the participation of an Asian partners in oil and gas projects of Sakhalin island shelf

At an early stage, joint ventures were created mainly by small foreign companies, but in the early 1990s, leaders of the global oil and gas business came to Russia. In 1994-1995, the Russian government signed three production sharing agreements (PSAs). Two concerned Sakhalin island offshore projects: Sakhalin-1 with Exxon and Sodeco and Sakhalin-2 with Shell, Mitsubishi and Mitsui. The third agreement on the development of the Kharyaga field in the Nenets Autonomous Okrug was signed with the French Total [5].

The first Asian companies to invest in oil and gas assets of the Sakhalin island were the Japanese Mitsubishi and Mitsui. As part of Shell, Gazprom PJSC, Mitsui, Mitsubishi, the Sakhalin Energy joint venture was created to develop the Piltun-Astokhskoye and Lunskoye fields, and in August of the same year a production sharing agreement (PSA) was signed for the development of these fields between the Government of the Russian Federation and administration of the Sakhalin region [6].

These actions not only emphasized the opportunities for Asian companies to invest in the Russian Federation and enter oil and gas projects offshore Sakhalin, but also laid the foundation for international cooperation in the development of oil assets in the Russian Federation as a whole.

Due to the fact that investments in the oil sector are investments related to long-term, significant changes in the presence of companies from Asian countries when developing licensed areas offshore Sakhalin and the Arctic shelf of the Russian Federation did not occur until 2003, when amendments to the legislation of the Russian Federation regarding the joint production sharing were adopted, which complicated the investments of foreign investors.

The next area for exploration and further oil production on the shelf of Sakhalin island after the successfully implemented Sakhalin-1 and Sakhalin-2 was Sakhalin-3, which included the Kirinsky block, licensed by Gazprom, and the operator which is Gazprom dobycha shelf and the Veninsky block licensed by Rosneft OJSC, and operated by the Veninneft joint venture Rosneft OJSC and the Chinese petrochemical corporation Sinopec. In July 20th, 2010, Venineft transferred to the Government of the Russian Federation a certificate of discovery of the Severo-Veninsky gas condensate field.

Currently, among the most promising projects for investors from Asian countries on the Sakhalin island shelf is the development of PJSC Gazprom Neft of Ayashsky license area. In 2017, after the completion of the construction of the Ayashskaya-1 prospecting and appraisal well, with the involvement of the Japanese Hakuryu-5 drilling rig, PJSC Gazprom Neft successfully announced the discovery of the new Neptune oil field. On September 11th, 2018, Gazprom Neft PJSC published an updated assessment of the resources of the Neptune deposit. They amounted to 415.8 million tons of oil in categories C2 + C2, which is 1.6 times higher than the initial estimate.

As stressed by the Chairman of the Management Board of PJSC Gazprom Neft A.V. Dyukov "Neptune" in terms of reserves has become one of the largest assets of Gazprom Neft. The Far East will be a new strategically important region for many years to come, which will allow the company to work more actively in the markets of the Asia-Pacific region. At the same time, Gazprom Neft continues exploration work on the licensed section of the Sakhalin shelf, reserves in this region may still be increased [7].

In 2018, Gazprom Neft PJSC, after constructing another prospecting and appraisal well in the Ayashsky license area, announced the discovery of a new Triton field.

The document was signed on May 24, 2018 at the 22nd St. Petersburg International Economic Forum (SPIEF-2018) by the Senior Executive Director of Mitsui & Co. Ltd. H. Fujiwara and Deputy Director General for Offshore Projects Development of PJSC Gazprom Neft A.N. Patrushev.

Gazprom Neft and Mitsui agreed to consider sharing their competencies and know-how in the field of exploration and production projects in the future [8].

Confirmed oil reserves currently available on offshore Sakhalin fields allows us to conclude that it is possible for Asian states to enter projects, whose energy policy is largely designed to attract resources from other states, and the geographical location of Sakhalin plays a decisive role in this.
According to experts of the International Energy Agency, the PRC has begun revising its energy policy towards the use of renewable energy sources, but the demand for traditional energy sources will remain high in many respects. China may become the second largest natural gas consumer in the world, figures may reach more than 600 billion m³ per year by 2040, while coal consumption will decline by 20% and will comprise 45% of all energy sources used in China. By 2040, up to 130 billion m³ of gas will be delivered annually in the form of LNG to China [9].

This data is also confirmed by experts from the INEI RAN (Institute for Energy Research of the Russian Academy of Sciences) - the Analytical Center under the Government of the Russian Federation.

In their view, global demand for liquid fuels (petroleum products, biofuels, liquid fuels made from coal (CTL) and gas (GTL)) will continue to expand. However, the average annual growth rate of demand in the forecast period until 2040 will be only 0.7% versus 1.1% for the period from 1990 to 2015. In absolute terms, the demand for liquid fuels in the Probable scenario will increase by 12% since 2015 (0.6 billion tons of oil equivalent) and by 2040 it will amount to slightly less than 4.9 billion tons of oil equivalent [10].

The proximity of Sakhalin island shelf, with ongoing exploration and production of hydrocarbons in this region, as well as an established scheme for their transportation to the final consumer, indicate its potential importance for foreign investors from Asia.

At the same time, it is worth noting directly in Asian countries that there has been a significant expansion of economic sectors related to the production, transportation, trade and use of hydrocarbons. The number of companies in Japan, India, countries of Southeast Asia, and China is growing. Potentially, newly formed companies can be set up for cooperation and joint development of the subsoil shelf of Sakhalin island with companies from the Russian Federation.

5. Part 4: Arctic shelf of Russia and Asian countries: perspectives of joint exploration

Another important region for the Russian Federation in terms of hydrocarbon exploration and production is the Continental shelf of the Arctic seas. According to the Central Dispatch Department of the Fuel and Energy Complex of the Russian Federation, there are hydrocarbon reserves on the Russian Arctic shelf, which, according to preliminary estimates, can cost up to $ 20 trillion. They can provide 20-30% of all oil produced by 2050. The initial recoverable total hydrocarbon resources of the Arctic seas are estimated at 120 billion tons of standard fuel.

Such companies as PJSC Gazprom Neft - Prirazlomnoye oil field; PJSC Novatek - Severo-Ob oil field; Rosneft Oil Company JSC - Central-Olginskoye field; PJSC Gazprom, are working to determine the level of oil and gas and their production on the Arctic shelf of the Russian Federation.

Search, evaluation, exploration of the resources of the licensed areas of the Arctic shelf of the Russian Federation will require in the future until the 2030s an application of the most modern technologies, Russian in first instance and those used previously in the construction of wells in Canada, the USA, and Norway. This would allow many foreign companies to make substantial profits, oil and gas companies and owners of licenses to develop them on the Arctic shelf of the Russian Federation, to fulfill their obligations towards Government and gain invaluable experience. Most likely, this field is one of the main ones on which international cooperation will be built when developing licensed areas on the Arctic shelf of the Russian Federation.

Government gives a lot of importance to the Arctic shelf currently. So, in an interview with Interfax, the Plenipotentiary Envoy of the President of the Russian Federation in the Far Eastern Federal District, Y. Trutnev, said: “All the major powers of the world are interested in the Arctic region, they are addressing important issues related to defense and security, resources of the oceans, scientific research. The Arctic is geopolitics, therefore, Russia has consistently maintained its position on substantiating the borders of the continental Arctic shelf” [11].

Fair enough, Russian Government pays serious attention to the issues of the legal status of the Arctic shelf of the Russian Federation, the creation of the necessary conditions for its development, the issue of the economic model of development, social development and environmental balance of one of the most unique places on Earth.
In 2015, Russia submitted an application to the UN to expand the borders of the Continental Shelf by 1.2 million km. On April 3, 2019, the UN Sub-Commission recognized the geological affiliation of the sites in accordance with the application of Russia, as reported by the head of Rosnedr Yevgeny Kiselyov at the board of the agency [12].

Currently, the Russian Federation is considering several models for attracting foreign investors to projects on the Arctic shelf. This and the production sharing agreement (PSA), the creation of territories of advanced development (TOR), other joint models. Yuri Trutnev also noted the following potential ways for foreign investors to join the Arctic projects of the Russian Federation: “The participation of the Government, an authorized state company, the allocation of shares to the investor so that the foreign investor does not own any intermediate company, but has the right to participate in the development of the field” [13].

Basis the successful experience of cooperation with international companies in the implementation of offshore projects offshore Sakhalin island (both from a technological and financial point of view), a similar mechanism can be implemented in the Arctic.

However, due to a number of political reasons, and, in particular, the fact that by 2050 the Russian Federation may occupy up to 30% of the entire oil and gas market in the World, primarily due to the development of deposits on the Arctic shelf, as well as by improving the technology for developing existing deposits on land, the Arctic region has become a tool for imposing sanctions on the Russian Federation, in which international cooperation and the presence of foreign companies, attracting foreign investment in the Russian Federation are significantly more difficult.

The Russian Federation continues to work with foreign investors and seek ways to jointly implement projects to develop license areas on the Arctic shelf of the Russian Federation.

6. Part 5: Sanctions and international cooperation

According to Yuri Trutnev, “At some point, the word “cooperation” can nullify the word “sanctions”. Favorable partnership conditions should be offered to foreign investors. The sanctions may not be cancelled immediately, but the mechanism and algorithms are negotiable” [14].

Even before the implementation of sanctions, Russian companies were actively cooperating with foreign investors in the development of licensed areas and further hydrocarbon deposits. In particular, one of the well-known projects was the creation of the joint venture Shtokman Development AG. The company was created in 2008 by the Norwegian Statoil (24%), the French Total (25%) and PJSC Gazprom (51%) to develop the largest Shtokman gas field in Russia. In 2014, Rosneft, jointly with the American corporation ExxonMobil, through the Karmorneftegaz joint venture, completed the construction of the northernmost well in the Russian Federation, Universitetskaya-1. The start of work was given personally by the President of the Russian Federation - Vladimir Putin, the construction of the well was carried out from the Norwegian West Alpha platform (the owner is the Norwegian company North Atlantic drilling).

There are different opinions of experts regarding the status of an Arctic shelf of Russia, its hydrocarbon reserves, the appropriateness of its development. Given the existing political difficulties caused by the problems of Western companies entering the Russian market for joint work due to sanctions, Asian partners from China and Japan are becoming the main partners in the development of such areas in the Arctic, directly interested in the effective implementation of energy politicians of their countries.

Taking the importance of Vladimir Putin statement about the need for a widespread expansion of the presence of the Russian Federation on the Arctic shelf of the Russian Federation, as well as his belief in the constant growth of the Arctic factor in the country’s economy, it should be concluded that the Russian Federation will take all necessary measures to increase attention to the Arctic region and develop hydrocarbon reserves of the Arctic shelf.

Vladimir Putin, speaking at the “Arctic - Territory of Dialogue” international forum in 2019, stated that “all investment support tools, including those that have already been successfully tested as part of the Far East development programs, will be used to increase investment in the region and launch new
projects regions of Russia. I’m talking, first of all, about preferential rates for profit, about decreasing MET rates and the declarative procedure for VAT refunds, about a simplified procedure for providing land plots and invariable conditions for the implementation of investment projects” [15].

7. Conclusions
Based on the facts described earlier, it should be concluded that the implementation of projects for the development of the Arctic shelf of the Russian Federation in the period 2020-2035 will be accelerated as much as possible under the patronage of the Government of the Russian Federation and personally the President of the Russian Federation. Exploration financing will be expanded, and well construction and other engineering surveys on the Arctic shelf of the Russian Federation will be constantly covered in the media. Such close attention on the part of the State will create conditions in which investors from Asian countries can use the Arctic territories of the Russian Federation as efficiently as possible to make profit and increase their resource potential, and ensure the independence of their country’s energy systems.

At the same time, special attention should be paid to the need to create a full-fledged system in the Russian Federation for investors to join such projects, not only and not so much financially, as technologically and strategically. It is now necessary to start attracting technical means and personnel from Asian countries to develop the Arctic shelf of the Russian Federation, and the term “Territory of Advance Development” as never before reflects the importance of advancing time and the need to develop innovative solutions for such operations, ahead of the normal course of events in this region.

The Russian Federation has unique experience in developing oil and gas deposits on the Arctic shelf and on the island of Sakhalin, and obtaining additional financing, expanding competencies and strengthening international cooperation with companies from Asian countries will significantly accelerate the development of its Arctic shelf and about. Sakhalin. The existing difficulties for Western companies to enter the Russian market in the context of sanctions rhetoric can be mitigated by making separate decisions on each of the projects or lifting sanctions in general. A new stage begins in the development of the oil and gas complex of the Russian Federation and the expansion of its resource base, and in many respects international investments and support from the Partners can play for the common good, as has been proved historically. The future of the global oil and gas industry lies in the development of offshore fields, and in this case, the Russian Federation has a trump card - its Arctic shelf, the island’s shelf. Sakhalin and the shelf of the Baltic, Caspian and Black Sea basins.

References
[1] Energetics and industry of Russia 7(35) Available from: https://www.eprussia.ru/epr/35/2371.htm 23/10/2018 [Accessed 20 March 2020]
[2] Kotornichenko V N 2005 Regarding nationalisation of oil industry in 1918 Economic History Review 10 Available from: http://www.hist.msu.ru/Labs/Ecohist/0B10/STAT/Kostornichenko2.html [Accessed 20 November 2019]
[3] Russian Industrial growth: an estimation of a Production Index 1860-1913 Available from: http://www.eco.nihon-u.ac.jp/center/economic/publication/pdf/05-03suhara.pdf [Accessed 20 March 2020]
[4] 1996 Russian and USSR 1900-1995 (Oxford University press) 44
[5] Web Economy Journal Available from: http://www.webeconomy.ru/index.php?page=cat&cat=mcat&mcat=191&type=news&newsid=1085 [Accessed 20 November 2019]
[6] Sakhalin Energy Available from: http://www.sakhalinenergy.ru/ru/company/history/ [Accessed 20 March 2020]
[7] Gazprom-neft Available from: https://www.gazprom-neft.ru/press-center/news/1823900/ [Accessed 20 March 2020]
[8] Neftegaz.ru Available from: https://neftegaz.ru/news/drill/201291-pmef-2018-gazprom-neft-
mitsui-otsenyat-perspektivy-sotrudnichestva-v-razvitiie-shelfovykh-mestorozh/ [Accessed 20 March 2020]

[9] IEA Available from: https://www.iea.org/weo/china/ [Accessed 20 March 2020]

[10] Analytical center of the Government of Russia Available from: http://ac.gov.ru/files/publication/a/10585.pdf [Accessed 20 March 2020]

[11] Interfax agency Available from: https://www.interfax.ru/interview/652915 [Accessed 20 March 2020]

[12] Interfax agency Available from: https://www.interfax.ru/world/656886 [Accessed 20 March 2020]

[13] Interfax agency Available from: https://www.interfax.ru/interview/652915 [Accessed 20 March 2020]

[14] Interfax agency Available from: https://www.interfax.ru/interview/652915 [Accessed 20 March 2020]

[15] TASS agency Available from: https://tass.ru/ekonomika/6312429 [Accessed 20 March 2020]